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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21.70S×179.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21.76S×179.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22.3S±0.2×179.6W±0.3,h613km±42km,
n22,σ1s15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

ISCJB ***01*** *00:02:52.5±0.3, 14°.72N±0°.04×91°.28W±0°.03, h179km±3km, mb3.8/6, Error ellipse: s-maj=8.1km s-min=3.2km az=30.4*
MEX ***01*** *00:02:53.7±1.0, 14°.64N×91°.34W, h187km±9km, MD4.3*
NEIC ***01*** *00:02:53.7, 14°.64N×91°.34W, h187km, mb4.2/3, MD4.3(MEX), After MEX.*
IDC ***01*** *00:02:54.3±1.3, 14°.78N×90°.99W, h171km±4km, mb3.5/6, mb1 3.6/8, mb1mx3.4/22, mbtmp3.4/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/28, Error ellipse: s-maj=35.9km s-min=15.9km az=57.0*
CASC ***01*** *00:02:55.0±2.7, 14°.44N×91°.14W, h164km±17km, MD3.9, ML4.1, mb4.2(NEIC)*
ISC 01 00:02:53.4±0.3**, 14°.72N**±0°.04×**91°.28W**±0°.03**, h174**km±3km**, n65,** σ**1s.08**/91**, mb3.8**/6**, 2C-7D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	**0.26**	**75**⇓	*e*P	**Pn**	**00 03 17.7**	**+1.0**
TP2				*e*S	**Sn**	**00 03 36.3**	**+1.8**
FG6		**0.41**	**112**⇓	*e*P	**Pn**	**00 03 17.8**	**+0.6**
FUG	**Fuego 3**	**0.50**	**122**⇓	*e*P	**Pn**	**00 03 17.7**	**+0.1**
JAT	**Jato**	**0.53**	**221**⇑	*e*P	**Pn**	**00 03 18.0**	**+0.3**
PCG	**Pacaya**	**0.72**	**116**	*e*P	**Pn**	**00 03 19.0**	**+0.3**
APG	**El Apazote**	**0.84**	**70**	P	**Pn**	**00 03 18.9**	**-0.5**
	334nm,0.3s,baz=250,slow=4.5,SNR=2317						
APG				S	**Sn**	**00 03 38.2**	**-1.1**
	44nm,0.3s,baz=279,slow=22,SNR=20						
NBG	**Las Nubes**	**0.91**	**98**	*e*P	**Pn**	**00 03 20.6**	**+0.8**
IXG	**Ixpaco**	**0.96**	**124**⇑	*e*P	**Pn**	**00 03 20.5**	**+0.2**
THIG		**0.97**	**281**	*i* P	**Pn**	**00 03 19.6**	**-0.8**
THIG				*i* S	**Sn**	**00 03 41.2**	**+0.2**
MRL	**Marmol**	**1.57**	**77**⇓	*e*P	**Pn**	**00 03 26.5**	**+0.8**
MRL				*e*S	**Sn**	**00 03 49.5**	**-0.8**
CCIG	**Comitan**	**1.76**	**332**	*i* P	**Pn**	**00 03 28.2**	**+0.7**
CCIG				*i* S	**Sn**	**00 03 55.2**	**+1.2**
CCIG	**Comitan**	**1.76**	**332**	*i* P	**Pn**	**00 03 28.2**	**+0.7**
CCIG				*i* S	**Sn**	**00 03 55.2**	**+1.2**
PCIG		**2.12**	**298**	*i* P	**Pn**	**00 03 31.8**	**+0.5**
PCIG				*i* S	**Sn**	**00 04 00.3**	**-0.4**
TGIG		**2.71**	**319**	*i* P	**Pn**	**00 03 38.6**	**+0.3**
TGIG				*i* S	**Sn**	**00 04 12.5**	**-0.7**
VSM	**San Miguel**	**3.18**	**113**	*e*P	**Pn**	**00 03 43.3**	**-0.8**
VSM				*e*S	**Sn**	**00 04 22.9**	**-0.6**
CNCH	**Conchagua**	**3.64**	**113**	*e*P	**Pn**	**00 03 49.1**	**-0.7**
CNCH				*e*S	**Sn**	**00 04 33.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.94**	**99**	*e*Pn	**Pn**	**00 03 50.9**	**-2.7**
TGUH				*e*Sn	**Sn**	**00 04 34.6**	**-5.9**
TGUH	**Tegucigalpa,Un**	**3.94**	**99**	*e*P	**Pn**	**00 03 53.0**	**-0.5**
CMIG	**Matias Romero**	**4.20**	**305**	P	**Pn**	**00 03 57.3**	**+0.4**
	10nm,0.3s,baz=139,slow=10.0,SNR=358						
CMIG				S	**Sn**	**00 04 42.2**	**-4.2**
	10nm,0.3s,baz=133,slow=13,SNR=7.5						
CMIG	**Matias Romero**	**4.20**	**305**	*i* P	**Pn**	**00 03 56.6**	**-0.3**
CMIG				*i* S	**Sn**	**00 04 43.6**	**-2.9**
SCIG	**Sabancuy**	**4.23**	**1**	*i* P	**Pn**	**00 03 57.2**	**0.0**
SCIG				*i* S	**Sn**	**00 04 46.7**	**-0.6**
CRIN	**San Cristobal**	**4.57**	**115**	*e*P	**Pn**	**00 04 02.0**	**+0.3**
CRIN				AML	AML	00 04 59.2	
	comp=N,457nm,0.2s						
HUIG	**Huatulco**	**4.78**	**283**	*i* P	**Pn**	**00 04 03.8**	**-0.6**
HUIG				*i* S	**Sn**	**00 04 57.5**	**-2.5**
HUIG	**Huatulco**	**4.78**	**283**	*i* P	**Pn**	**00 04 03.8**	**-0.6**
HUIG				*i* S	**Sn**	**00 04 57.5**	**-2.5**
TELN	**Telica**	**4.80**	**115**	*e*P	**Pn**	**00 04 04.7**	**-0.1**
CNGN	**Cerro Negro**	**4.97**	**116**	*e*P	**Pn**	**00 04 06.1**	**-0.7**
MIRN	**Miramar**	**4.98**	**116**	*e*P	**Pn**	**00 04 07.4**	**+0.3**
MOMN	**Momotombo**	**5.15**	**116**	*e*P	**Pn**	**00 04 10.3**	**+1.1**
COPN	**Copaltepe**	**5.21**	**118**	*e*P	**Pn**	**00 04 09.9**	**-0.2**
CSAN		**5.35**	**117**	*e*P	**Pn**	**00 04 12.4**	**+0.5**
VHO	**Vista Hermosa**	**5.75**	**295**	*i* P	**Pn**	**00 04 15.9**	**-1.2**
VHO				*i* S	**Sn**	**00 05 20.8**	**-2.0**
VHO	**Vista Hermosa**	**5.75**	**295**	*i* P	**Pn**	**00 04 15.9**	**-1.2**
VHO				*i* S	**Sn**	**00 05 20.8**	**-2.0**
BOAB	**BOACO BROADBAN**	**5.90**	**112**	*e*P	**Pn**	**00 04 19.1**	**0.0**
PNIG	**Pinotepa**	**6.81**	**285**	*i* P	**Pn**	**00 04 31.9**	**+0.8**
PNIG				*i* S	**Sn**	**00 05 45.6**	**-2.3**
PNIG	**Pinotepa**	**6.81**	**285**	*i* P	**Pn**	**00 04 31.9**	**+0.8**
PNIG				*i* S	**Sn**	**00 05 45.6**	**-2.3**
UTMO	**Huajuapan**	**6.99**	**297**	*i* P	**Pn**	**00 04 32.7**	**-0.7**
UTMO				*i* S	**Sn**	**00 05 48.9**	**-3.4**
JTS	**JuntasAbangare**	**7.58**	**125**	P	**Pn**	**00 04 41.1**	**-0.2**
	comp=N,21nm,0.3s,baz=315,slow=16,SNR=39						
JTS				S	**Sn**	**00 05 58.7**	**-7.8**
	comp=N,1.3nm,0.3s,baz=282,slow=23,SNR=1.6						
JTS	**JuntasAbangare**	**7.58**	**125**	P	**Pn**	**00 04 41.1**	**-0.2**
JTS				S	**Sn**	**00 05 58.6**	**-7.8**
JCR	**Jicaral**	**7.73**	**128**⇓	*i*P	**Pn**	**00 04 43.8**	**+0.6**
JCR				*e*S	**Sn**	**00 06 05.5**	**-4.4**
CGA2	**Cerro Gallo 2**	**8.13**	**124**	*e*P	**Pn**	**00 04 49.4**	**+0.9**
CGA2				*e*S	**Sn**	**00 06 15.0**	**-4.6**
PPM	**Popocatepetl**	**8.26**	**303**	*i* P	**Pn**	**00 04 52.7**	**+2.5**
PPM				*i* S	**Sn**	**00 06 25.4**	**+2.9**
PPM	**Popocatepetl**	**8.26**	**303**	*i* P	**Pn**	**00 04 52.7**	**+2.5**
PPM				*i* S	**Sn**	**00 06 25.4**	**+2.9**
LAJ	**Bijagual**	**8.49**	**124**	*e*P	**Pn**	**00 04 50.5**	**-2.8**
MEIG	**Mezcala**	**8.62**	**293**	*e*P	**Pn**	**00 04 56.7**	**+1.7**
LCR2	**La Lucha 2**	**8.66**	**124**⇓	*e*P	**Pn**	**00 04 55.9**	**+0.4**
LCR2				*e*S	**Sn**	**00 06 30.0**	**-2.2**
PLIG	**Platanillo**	**8.69**	**296**	*i* P	**Pn**	**00 04 58.3**	**+2.4**
PLIG	**Platanillo**	**8.69**	**296**	*i* P	**Pn**	**00 04 58.3**	**+2.4**
URSC	**Urasca**	**8.79**	**123**⇓	*e*P	**Pn**	**00 04 57.5**	**+0.3**
BAR1		**9.50**	**124**	*e*P	**Pn**	**00 05 06.7**	**+0.1**
PAYG	**Puerto Ayora**	**15.32**	**176**	Pn	**Pn**	**00 06 22.1**	**+1.3**
TXAR	**Lajitas Array**	**18.51**	**324**	P	**P**	**00 07 01.0**	**+4.4**
	comp=N,0.1nm,0.3s,baz=143,slow=11,SNR=4.2						
TXAR				pP		00 07 29.7	
	comp=N,0.0nm,0.3s,baz=161,slow=14,SNR=2.2						
GOGA	**Godfrey**	**19.92**	**19**	*e*P	**P**	**00 07 13.0**	**+1.3**
	comp=N,8.1nm,0.6s						
SDV	**Santo Domingo**	**21.02**	**104**	P	**P**	**00 07 21.4**	**-2.2**
	comp=N,3.9nm,0.4s,mb4.1,baz=333,slow=9.8,SNR=8.6						
SDV	**Santo Domingo**	**21.02**	**104**	*e*P	**P**	**00 07 21.5**	**-2.1**
	comp=N,6.7nm,0.6s,mb4.2						
WVT	**Waverly**	**21.55**	**8**	*e*P	**P**	**00 07 28.4**	**-0.6**
	comp=N,1.2nm,0.6s,mb3.5						
TKL	**Tuckaleechee C**	**21.91**	**17**	P	**P**	**00 07 34.5**	**+1.6**
	comp=N,9.9nm,0.7s,mb4.4,baz=180,slow=11,SNR=18						
TKL	**Tuckaleechee C**	**21.91**	**17**	*e*P	**P**	**00 07 32.8**	**-0.1**
SADO	**Sadowa**	**31.68**	**17**	LR	LR	00 23 12.3	
	comp=N,44nm,19.0s,baz=79,slow=39						
ULM	**Lac du Bonnet**	**35.64**	**355**	P	**P**	**00 09 34.0**	**-0.4**
	comp=N,0.4nm,0.4s,mb3.5,baz=144,slow=8.7,SNR=3.5						
SCHQ	**Schefferville**	**44.31**	**20**	P	**P**	**00 10 45.4**	**-0.4**
	comp=N,2.1nm,0.6s,mb4.0,baz=219,slow=6.8,SNR=6.2						
SCHQ	**Schefferville**	**44.31**	**20**	P	**P**	**00 10 45.4**	**-0.4**
YKA	**Yellowknife Ar**	**50.50**	**346**	P	**P**	**00 11 33.7**	**+0.3**
	comp=N,0.3nm,0.6s,baz=146,slow=7.9,SNR=9.7						
YKA				pP	pP	00 12 12.8	+0.3
	comp=N,1.0nm,0.8s,baz=148,slow=7.6,SNR=8.6						
YKA	**Yellowknife Ar**	**50.50**	**346**	P	**P**	**00 11 33.7**	**+0.3**
YKA				pP	pP	00 12 12.8	+0.3
CPUP	**Villa Florida**	**52.48**	**141**	P	**P**	**00 11 49.3**	**+0.6**
	comp=N,0.5nm,0.4s,mb3.5,baz=338,slow=16,SNR=2.0						
WRA	**Warramunga Arr**	**136.24**	**256**	PKP	PKPdf	00 21 56.7	+1.7
	comp=N,0.4nm,0.8s,baz=42,slow=1.0,SNR=1.4						

IDC 01 00:12:34.9±1.9**, 3°.32S**×**147°.95E, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=124.5km s-min=33.5km az=120.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.20**	**218**	P	P	00 17 21.7	-0.5
	1.0nm,0.8s,baz=42,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**24.36**	**213**	P	P	00 17 55.2	+0.5
	0.8nm,0.8s,baz=39,slow=7.6,SNR=5.9						
YKA	**Yellowknife Ar**	**96.37**	**28**	P	P	00 26 05.3	-0.1
	0.2nm,0.7s,baz=271,slow=4.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**145.25**	**288**	PKPbc	PKPbc	00 32 14.6	-0.8
	0.5nm,1.0s,baz=174,slow=4.3,SNR=1.8						

IDC ***01*** *00:14:18.3±3.6, 6°.24S×151°.74E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/16, mbtmp3.7/3, Error ellipse: s-maj=137.2km s-min=49.4km az=124.0*
ISC 01 00:14:20.7±7.5**, 6°S**±1°×**152°.1E**±0°.3**, h35**km**, n5,** σ**0s.53**/4**, mb3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**21.02**	**140**	*e*P	**P**	**00 19 01.4**	**-0.1**
WRA	**Warramunga Arr**	**21.98**	**230**	P	**P**	**00 19 11.5**	**-0.3**
	0.7nm,0.7s,mb3.2,baz=54,slow=10.0,SNR=2.4						
ASAR	**Alice Springs**	**24.64**	**223**	P	**P**	**00 19 38.5**	**+0.4**
	1.8nm,0.7s,mb3.7,baz=57,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**28.37**	**243**	P	**P**	**00 20 11.7**	**-0.1**
	1.4nm,0.7s,mb3.7,baz=101,slow=18,SNR=2.2						
TORD	**Torodi Ar. Bea**	**150.01**	**286**	PKPbc	PKPbc	00 34 10.8	+2.1
	0.7nm,0.6s,baz=56,slow=1.6,SNR=6.3						

ISCJB ***01*** *00:15:22.8±0.1, 33°.88N±0°.02×48°.50E±0°.02, h10km, mb4.5/86, MS3.8/24, Error ellipse: s-maj=3.0km s-min=1.8km az=16.6*
IDC ***01*** *00:15:22.6±0.6, 33°.97N×48°.55E, h0km, mb4.0/23, mb1 4.2/28, mb1mx4.1/36, mbtmp4.1/28, ML4.0/5, MS3.6/19, Ms1 3.6/19, ms1mx3.4/42, Error ellipse: s-maj=14.8km s-min=11.6km az=155.0*
BJI ***01*** *00:15:23.4, 34°.15N×48°.37E, h7km, mB4.8/13, mb4.6/20, Ms4.4/14, Ms7 4.1/14*
THR ***01*** *00:15:24.6±0.7, 34°.07N×48°.63E, h15km±8km, ML4.8*
MOS ***01*** *00:15:25.4±1.2, 33°.91N×48°.54E, h33km, mb4.5/37, Error ellipse: s-maj=7.6km s-min=4.2km az=120.5*
CSEM ***01*** *00:15:25.0±0.1, 33°.91N×48°.52E, h15km, mb4.4/52, Ms4.6, Error ellipse: s-maj=3.8km s-min=2.7km az=22.0*
TEH ***01*** *00:15:26.2, 33°.86N×48°.61E, h3km*
NEIC ***01*** *00:15:27.4, 33°.86N×48°.59E, h16km, mb4.5/32, ML4.7(THR), MN4.7(TEH), After TEH.*
NEIC More than 100 people injured in Lorestan, including at least 70 people injured at Boroujerd.
SGS ***01*** *00:15:28.1, 33°.81N×48°.32E, h15km*
OMAN ***01*** *00:15:32.2±0.2, 33°.74N×49°.53E, h24km, Error ellipse: s-maj=8.3km s-min=2.5km az=72.0*
ISC 01 00:15:24.8±0.1**, 33°.92N**±0°.02×**48°.51E**±0°.02**, h10**km**, (h17**km±1.3km**:pP-P), n601,** σ**1s.21**/628**, mb4.5**/86**, MS3.8**/24**, 26C-19D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.87**	**287**	Pg	**Pg**	**00 15 41.6**	**0.0**
IKOM				Sg	**Sg**	**00 15 56.3**	**+3.3**
IKOM	**Komasi**	**0.87**	**287**	*e*Pg	**Pg**	**00 15 41.6**	**0.0**
IKOM				*e*Sg	**Sg**	**00 15 56.4**	**+3.4**
IKOM				*e*		00 15 59.7	
	comp=Z,18μm,0.2s						
IKOM	**Komasi**	**0.87**	**287**	*e*Pg	**Pg**	**00 15 41.6**	**0.0**
IKOM				*e*Sg	**Sg**	**00 15 56.4**	**+3.4**
ASAO	**Ashtian**	**1.40**	**63**	*e*Pg	**Pn**	**00 15 48.0**	**-2.4**
ASAO				*e*Sg	**Sn**	**00 16 05.0**	**-4.0**
ASAO	**Ashtian**	**1.40**	**63**	*e*Pg	**Pn**	**00 15 47.9**	**-2.5**
ASAO				*e*Sg	**Sn**	**00 16 05.0**	**-4.0**
ASAO				AML	AML	00 16 12.3	
	comp=N,14μm,0.7s						
ASAO				AML	AML	00 16 12.4	
	comp=E,12μm,0.5s						
SNGE	**Sanandaj**	**1.52**	**321**	*e*Pg	**Pn**	**00 15 53.4**	**+1.4**
SNGE				*e*Sg	**Sg**	**00 16 13.7**	**+0.1**
SNGE	**Sanandaj**	**1.52**	**321**	*e*Pg	**Pn**	**00 15 51.8**	**-0.2**
SHGR	**Shooshtar-Gavs**	**1.82**	**172**	*e*Pg	**Pg**	**00 16 01.0**	**+1.2**
SHGR	**Shooshtar-Gavs**	**1.82**	**172**	*e*Pg	**Pg**	**00 16 00.5**	**+0.6**
SHGR				AML	AML	00 16 31.5	
	comp=E,11μm,0.5s						
SHGR				AML	AML	00 16 37.6	
	comp=N,12μm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.82**	**172**	*e*Pg	**Pg**	**00 16 01.0**	**+1.2**
IRAZ	**Razeghan**	**1.89**	**38**	Pn	**Pn**	**00 15 56.0**	**-1.1**
IRAZ	**Razeghan**	**1.89**	**38**	*e*Pn	**Pn**	**00 15 56.0**	**-1.1**
IRAZ				*e*		00 16 35.7	
	comp=Z,45μm,0.3s						
IRAZ	**Razeghan**	**1.89**	**38**	*e*Pn	**Pn**	**00 15 56.0**	**-1.1**
IPIR	**Pirpir**	**2.34**	**121**	Pn	**Pg**	**00 16 09.3**	**-0.4**
IPIR	**Pirpir**	**2.34**	**121**	*e*Pn	**Pg**	**00 16 09.3**	**-0.4**
GHVR	**GHOM**	**2.37**	**76**	*e*Pg	**Pn**	**00 16 04.8**	**+1.1**
GHVR	**GHOM**	**2.37**	**76**	*e*Pg	**Pn**	**00 16 04.8**	**+1.1**
GHVR				AML	AML	00 16 39.1	
	comp=N,6μm,0.6s						
GHVR				AML	AML	00 16 45.4	
	comp=E,8μm,0.4s						
IMHD	**Mahdasht**	**2.50**	**45**	Pn	**Pn**	**00 16 07.0**	**+1.5**
IMHD				Sn	**Sn**	**00 16 37.4**	**+1.4**
IMHD				Sn	**Sn**	**00 16 38.0**	**+2.0**
IMHD	**Mahdasht**	**2.50**	**45**	*e*Sn	**Sn**	**00 16 38.0**	**+2.0**
IMHD				*e*Pn	**Pn**	**00 16 07.1**	**+1.6**
IMHD				*e*		00 16 43.1	
	comp=Z,32μm,0.3s						
IKLH	**Kolahrood**	**2.63**	**102**	Pn	**Pn**	**00 16 08.1**	**+0.8**
IKLH	**Kolahrood**	**2.63**	**102**	*e*Pn	**Pn**	**00 16 08.2**	**+0.9**
IVRN	**Varamin**	**2.86**	**67**	Pn	**Pn**	**00 16 11.4**	**+0.9**
IVRN	**Varamin**	**2.86**	**67**	*e*Pn	**Pn**	**00 16 11.4**	**+0.9**
IVRN				*e*Pn	**Pn**	**00 16 11.5**	**+1.0**
IVRN				*e*		00 17 03.3	
	comp=Z,33μm,0.3s						
IVRN	**Varamin**	**2.86**	**67**	*e*Pn	**Pn**	**00 16 11.4**	**+0.9**
ISFB	**Sefidab**	**3.12**	**81**	Pn	**Pn**	**00 16 14.5**	**+0.4**
ISFB	**Sefidab**	**3.12**	**81**	*e*Pn	**Pn**	**00 16 14.6**	**+0.5**
ISFB				*e*		00 17 00.5	
	comp=Z,26μm,0.3s						
ISFB	**Sefidab**	**3.12**	**81**	*e*Pn	**Pn**	**00 16 14.6**	**+0.5**
IGAR	**Gharneh**	**3.32**	**116**	*e*Pn	**Pn**	**00 16 17.7**	**+0.8**
IGAR				*e*		00 17 15.4	
	comp=Z,18μm,0.3s						
IDMV	**Damavand**	**3.33**	**59**	Pn	**Pn**	**00 16 18.4**	**+1.4**
IDMV	**Damavand**	**3.33**	**59**	*e*Pn	**Pn**	**00 16 18.4**	**+1.4**
IDMV				*e*		00 17 14.3	
	comp=Z,20μm,0.3s						
IDMV	**Damavand**	**3.33**	**59**	*e*Pn	**Pn**	**00 16 18.4**	**+1.4**
IZEF	**Zefreh**	**3.35**	**107**	Pn	**Pn**	**00 16 17.9**	**+0.7**
IZEF	**Zefreh**	**3.35**	**107**	*e*Pn	**Pn**	**00 16 18.0**	**+0.8**
IZEF				*e*		00 17 13.9	
	comp=Z,12μm,0.2s						
IZEF	**Zefreh**	**3.35**	**107**	*e*Pn	**Pn**	**00 16 18.0**	**+0.8**
BHD	**Baghdad**	**3.51**	**260**	*e*Pn	**Pn**	**00 16 20.0**	**+0.6**
BHD				*e*Sn	**Sn**	**00 17 03.0**	**+2.0**
BHD	**Baghdad**	**3.51**	**260**	*e*Pn	**Pn**	**00 16 20.0**	**+0.6**
BHD				*e*Sn	**Sn**	**00 17 03.0**	**+2.0**
NASN	**Na'in**	**3.76**	**106**	*e*Pn	**Pn**	**00 16 23.9**	**+1.0**
NASN	**Na'in**	**3.76**	**106**	*e*Pn	**Pn**	**00 16 23.4**	**+0.5**
NASN	**Na'in**	**3.76**	**106**	*e*Pn	**Pn**	**00 16 24.0**	**+1.1**
IFIR	**Firoozkooh**	**3.89**	**63**	Pn	**Pn**	**00 16 25.8**	**+1.2**
IFIR	**Firoozkooh**	**3.89**	**63**	*e*Pn	**Pn**	**00 16 25.8**	**+1.2**
IFIR				*e*		00 17 34.6	
	comp=Z,13μm,0.2s						
IFIR	**Firoozkooh**	**3.89**	**63**	*e*Pn	**Pn**	**00 16 25.8**	**+1.2**
IPRN	**Peran**	**3.90**	**52**	Pn	**Pn**	**00 16 26.7**	**+1.9**
IPRN	**Peran**	**3.90**	**52**	*e*Pn	**Pn**	**00 16 26.8**	**+2.0**
IPRN				*e*		00 17 25.4	
	comp=Z,22μm,0.3s						
IPRN	**Peran**	**3.90**	**52**	*e*Pn	**Pn**	**00 16 26.8**	**+2.0**
ISRB	**Sarab**	**3.96**	**350**	Pn	**Pn**	**00 16 27.9**	**+2.3**
ISRB	**Sarab**	**3.96**	**350**	*e*Pn	**Pn**	**00 16 28.0**	**+2.4**
ISRB				*e*		00 17 37.9	
	comp=Z,13μm,0.7s						
ISRB	**Sarab**	**3.96**	**350**	*e*Pn	**Pn**	**00 16 28.0**	**+2.4**
IBST	**Bostanabad**	**4.00**	**341**	Pn	**Pn**	**00 16 28.9**	**+2.8**
IBST	**Bostanabad**	**4.00**	**341**	*e*Pn	**Pn**	**00 16 28.9**	**+2.8**
IBST				*e*		00 16 58.9	
	comp=Z,2μm,0.2s						
IALA	**Alasht**	**4.13**	**57**	Pn	**Pn**	**00 16 28.7**	**+0.7**
IALA	**Alasht**	**4.13**	**57**	*e*Pn	**Pn**	**00 16 28.8**	**+0.8**
IALA				*e*		00 17 31.7	
	comp=Z,12μm,0.4s						
IALA	**Alasht**	**4.13**	**57**	*e*Pn	**Pn**	**00 16 28.8**	**+0.8**
MIB	**Mutribah**	**4.22**	**194**	*e*P	**Pn**	**00 16 31.9**	**+2.7**
MIB				AML	AML	00 17 23.1	
	comp=Z,301nm,0.5s						
MIB	**Mutribah**	**4.22**	**194**	*e*P	**Pn**	**00 16 31.9**	**+2.6**
IAZR	**Azarshahr**	**4.28**	**332**	Pn	**Pn**	**00 16 33.0**	**+3.0**
IAZR	**Azarshahr**	**4.28**	**332**	*e*Pn	**Pn**	**00 16 33.1**	**+3.1**
IAZR				*e*		00 17 01.0	
	comp=Z,6μm,0.3s						
IAZR	**Azarshahr**	**4.28**	**332**	*e*Pn	**Pn**	**00 16 33.1**	**+3.1**
ISHM	**Shahmirzad**	**4.36**	**63**	Pn	**Pn**	**00 16 31.8**	**+0.8**
ISHM	**Shahmirzad**	**4.36**	**63**	*e*Pn	**Pn**	**00 16 31.8**	**+0.8**
ISHM				*e*		00 17 40.3	
	comp=Z,23μm,0.3s						
ISHM	**Shahmirzad**	**4.36**	**63**	*e*Pn	**Pn**	**00 16 31.8**	**+0.8**
UMR	**Umm Al-Rimmam**	**4.41**	**189**	*e*P	**Pn**	**00 16 33.9**	**+2.1**
UMR	**Umm Al-Rimmam**	**4.41**	**189**	*e*P	**Pn**	**00 16 33.9**	**+2.1**
IANJ	**Anjilo**	**4.71**	**69**	Pn	**Pn**	**00 16 35.9**	**0.0**
IANJ	**Anjilo**	**4.71**	**69**	*e*Pn	**Pn**	**00 16 36.0**	**+0.1**
IANJ				*e*		00 18 16.1	
	comp=Z,9μm,0.4s						
IANJ	**Anjilo**	**4.71**	**69**	*e*Pn	**Pn**	**00 16 36.0**	**+0.1**
ITBZ	**Tabriz**	**4.71**	**337**	Pn	**Pn**	**00 16 39.2**	**+3.3**
ITBZ	**Tabriz**	**4.71**	**337**	*e*Pn	**Pn**	**00 16 39.2**	**+3.3**
ITBZ				*e*		00 17 00.8	
	comp=Z,2μm,0.3s						
ITBZ	**Tabriz**	**4.71**	**337**	*e*Pn	**Pn**	**00 16 39.2**	**+3.3**
KBD	**Kabd**	**4.78**	**189**	*e*P	**Pn**	**00 16 39.0**	**+2.1**
KBD				AML	AML	00 17 34.6	
	comp=Z,103nm,0.5s						
KBD	**Kabd**	**4.78**	**189**	*e*P	**Pn**	**00 16 39.0**	**+2.1**
ISAD	**Sadrabad**	**4.79**	**113**	Pn	**Pn**	**00 16 37.1**	**+0.1**
ISAD	**Sadrabad**	**4.79**	**113**	*e*Pn	**Pn**	**00 16 37.2**	**+0.2**
ISAD				*e*		00 18 09.8	
	comp=Z,10μm,0.4s						
ISAD	**Sadrabad**	**4.79**	**113**	*e*Pn	**Pn**	**00 16 37.2**	**+0.2**
IKIA	**Kiasar**	**4.81**	**60**	Pn	**Pn**	**00 16 38.6**	**+1.2**
IKIA	**Kiasar**	**4.81**	**60**	*e*Pn	**Pn**	**00 16 38.7**	**+1.3**
IKIA				*e*		00 18 16.6	
	comp=Z,5μm,0.4s						
IKIA	**Kiasar**	**4.81**	**60**	*e*Pn	**Pn**	**00 16 38.7**	**+1.3**
ISHB	**Shabestar**	**4.95**	**333**	Pn	**Pn**	**00 16 41.9**	**+2.8**
ISHB	**Shabestar**	**4.95**	**333**	*e*Pn	**Pn**	**00 16 41.9**	**+2.8**
ISHB				*e*		00 17 19.6	
	comp=Z,2μm,0.3s						
RDF	**Al-Radifah**	**5.05**	**190**	*e*P	**Pn**	**00 16 43.4**	**+2.8**
RDF				AML	AML	00 17 42.6	
	comp=Z,265nm,0.5s						
RDF	**Al-Radifah**	**5.05**	**190**	*e*P	**Pn**	**00 16 43.4**	**+2.8**
IGLO	**Ghaloghah**	**5.06**	**58**	Pn	**Pn**	**00 16 41.9**	**+1.2**
IGLO	**Ghaloghah**	**5.06**	**58**	*e*Pn	**Pn**	**00 16 41.9**	**+1.2**
IGLO				*e*		00 18 14.2	
	comp=Z,16μm,0.5s						
IGLO	**Ghaloghah**	**5.06**	**58**	*e*Pn	**Pn**	**00 16 41.9**	**+1.2**
MSL	**Mosul**	**5.07**	**301**	*e*Pn	**Pn**	**00 16 40.0**	**-0.9**
MSL				*e*Pg	**Pg**	**00 17 02.0**	**0.0**
MSL				*e*Sn	**Sn**	**00 17 40.0**	**+0.5**
QRN	**Al-Qurain**	**5.18**	**186**	*e*P	**Pn**	**00 16 44.6**	**+2.2**
QRN				AML	AML	00 17 42.6	
	comp=Z,142nm,0.3s						
CUKT	**Cukurca**	**5.20**	**311**	*e*P	**Pn**	**00 16 43.8**	**+1.2**
CUKT	**Cukurca**	**5.20**	**311**	*e*P	**Pn**	**00 16 43.8**	**+1.2**
ICHK	**Chekchek**	**5.22**	**107**	Pn	**Pn**	**00 16 42.7**	**-0.3**
ICHK	**Chekchek**	**5.22**	**107**	*e*Pn	**Pn**	**00 16 42.7**	**-0.3**
ICHK				*e*		00 17 12.5	
	comp=Z,7μm,0.3s						
ICHK	**Chekchek**	**5.22**	**107**	*e*Pn	**Pn**	**00 16 42.7**	**-0.3**
IMRD	**Marand**	**5.29**	**335**	Pn	**Pn**	**00 16 46.9**	**+3.0**
IMRD	**Marand**	**5.29**	**335**	*e*Pn	**Pn**	**00 16 46.9**	**+3.0**
IMRD				*e*		00 17 22.1	
	comp=Z,2μm,0.4s						
IMRD	**Marand**	**5.29**	**335**	*e*Pn	**Pn**	**00 16 46.9**	**+3.0**
HAKT	**HAKKARI**	**5.33**	**314**	*i* P	**Pn**	**00 16 45.9**	**+1.4**
IPAR	**Pars**	**5.60**	**135**	Pn	**Pn**	**00 16 48.4**	**+0.2**
IPAR	**Pars**	**5.60**	**135**	*e*Pn	**Pn**	**00 16 48.4**	**+0.2**
IPAR				*e*		00 18 50.1	
	comp=Z,4μm,0.5s						
IPAR	**Pars**	**5.60**	**135**	*e*Pn	**Pn**	**00 16 48.4**	**+0.2**
IMEH	**Mehriz**	**5.73**	**114**	Pn	**Pn**	**00 16 49.6**	**-0.3**
IMEH	**Mehriz**	**5.73**	**114**	*e*Pn	**Pn**	**00 16 49.7**	**-0.2**
IMEH				*e*		00 17 16.3	
	comp=Z,4μm,0.6s						
IMEH	**Mehriz**	**5.73**	**114**	*e*Pn	**Pn**	**00 16 49.7**	**-0.2**
ISRV	**Sarvestan**	**5.99**	**138**	Pn	**Pn**	**00 16 53.4**	**-0.1**
ISRV				Sn	**Sn**	**00 17 58.1**	**-4.0**
ISRV	**Sarvestan**	**5.99**	**138**	*e*Pn	**Pn**	**00 16 53.4**	**-0.1**
ISRV				*e*Sn	**Sn**	**00 17 58.2**	**-3.9**
ISRV				*e*		00 19 09.6	
	comp=Z,3μm,0.5s						
ISRV	**Sarvestan**	**5.99**	**138**	*e*Pn	**Pn**	**00 16 53.4**	**-0.1**
ISRV				*e*Sn	**Sn**	**00 17 58.2**	**-3.9**
IMOK	**Mouk**	**6.04**	**142**	Pn	**Pn**	**00 16 54.3**	**+0.1**
IMOK				Sn	**Sn**	**00 17 59.9**	**-3.5**
IMOK	**Mouk**	**6.04**	**142**	*e*Pn	**Pn**	**00 16 54.3**	**+0.1**
IMOK				*e*Sn	**Sn**	**00 18 00.0**	**-3.4**
IMOK				*e*		00 18 14.9	
	comp=Z,4μm,0.3s						
IMOK	**Mouk**	**6.04**	**142**	*e*Pn	**Pn**	**00 16 54.3**	**+0.1**
IMOK				*e*Sn	**Sn**	**00 18 00.0**	**-3.4**
VANB	**Van**	**6.24**	**320**	*e*P	**Pn**	**00 16 53.5**	**-3.4**
IBAF	**Bafgh**	**6.38**	**109**	Pn	**Pn**	**00 16 58.6**	**-0.3**
IBAF	**Bafgh**	**6.38**	**109**	*e*Pn	**Pn**	**00 16 58.7**	**-0.2**
IBAF				*e*		00 17 28.0	
	comp=Z,4μm,0.5s						
IBAF	**Bafgh**	**6.38**	**109**	*e*Pn	**Pn**	**00 16 58.7**	**-0.2**
CLDR	**Caldiran**	**6.39**	**326**	*e*P	**Pn**	**00 17 00.2**	**+1.2**
CLDR	**Caldiran**	**6.39**	**326**	*e*P	**Pn**	**00 17 00.2**	**+1.2**
GNI	**Garni**	**6.91**	**335**	*ce*P	**Pn**	**00 17 05.8**	**-0.3**
GNI				pmax	pmax		
	comp=Z,114nm,1.7s						
GNI	**Garni**	**6.91**	**335**	Pn	**Pn**	**00 17 12.2**	**+6.1**
	comp=Z,0.2nm,0.3s,baz=54,slow=1.3,SNR=4.9						
GNI				Pg	**Pg**	**00 17 30.6**	**-6.5**
	comp=Z,0.8nm,0.3s,baz=60,slow=8.1,SNR=5.8						
GNI				Lg		00 19 06.9	
	baz=299,slow=19,SNR=0.9						
GNI	**Garni**	**6.91**	**335**	*e*Pn	**Pn**	**00 17 08.0**	**+1.9**
	comp=Z,94nm,1.1s						
GNI				Pg	**Pg**	**00 17 30.6**	**-6.5**
GNI				Lg		00 19 07.0	
GNI	**Garni**	**6.91**	**335**	*e*P	**Pn**	**00 17 05.8**	**-0.3**
	comp=Z,114nm,1.7s						
GNI	**Garni**	**6.91**	**335**	*e*Pn	**Pn**	**00 17 08.0**	**+1.9**
	comp=Z,94nm,1.1s						
AGRB	**Hanur-Agry**	**7.17**	**323**	*e*P	**Pn**	**00 17 07.5**	**-2.3**
ASYS		**7.33**	**210**	P	**Pn**	**00 17 10.7**	**-1.3**
ASYS		**7.33**	**210**	P	**Pn**	**00 17 10.7**	**-1.3**
DIYA	**Diyarbakir**	**7.89**	**303**	*e*P	Px	00 17 53.0	
KARS	**Kars**	**7.97**	**329**	*e*P	**Pn**	**00 17 19.9**	**-0.8**
BOQSS		**8.06**	**174**	S	**Sn**	**00 18 47.9**	**-5.2**
BOQSS		**8.06**	**174**	P	**Pn**	**00 17 21.9**	**0.0**
HOMI	**Horasan**	**8.08**	**321**	*e*P	Px	00 17 52.8	
TBLG	**Delisi**	**8.35**	**340**	*e*P	**Pn**	**00 17 34.8**	**+8.9**
TBLG	**Delisi**	**8.35**	**340**	P	**Pn**	**00 17 34.8**	**+9.0**
ITEG	**Tejag**	**8.62**	**94**	*e*Pn	**Pn**	**00 17 30.0**	**+0.4**
ITEG				*e*		00 17 51.5	
	comp=Z,864nm,0.4s						
ITEG	**Tejag**	**8.62**	**94**	*e*Pn	**Pn**	**00 17 30.0**	**+0.4**
IKRD	**Kardeh**	**8.65**	**68**	Pn	Px	00 17 41.0	
IKRD	**Kardeh**	**8.65**	**68**	*e*Pn	Px	00 17 41.1	
IKRD				*e*		00 17 49.8	
	comp=Z,321nm,0.3s						
GOR	**Gori**	**8.77**	**338**	P	**Pn**	**00 17 37.7**	**+6.1**
IAKL	**Akhelmad**	**8.79**	**69**	Pn	**Pn**	**00 17 31.7**	**-0.3**
IAKL	**Akhelmad**	**8.79**	**69**	*e*Pn	**Pn**	**00 17 31.8**	**-0.2**
IAKL				*e*		00 17 51.1	
	comp=Z,339nm,0.3s						
DBAD	**Bademkaya**	**8.92**	**325**	*e*P	**Pn**	**00 17 39.7**	**+6.0**
IPAY	**Payeh**	**8.94**	**71**	Pn	**Pn**	**00 17 34.8**	**+0.8**
IPAY	**Payeh**	**8.94**	**71**	*e*Pn	**Pn**	**00 17 34.8**	**+0.8**
IPAY				*e*		00 17 48.9	
	comp=Z,476nm,0.3s						
IPAY	**Payeh**	**8.94**	**71**	*e*Pn	**Pn**	**00 17 34.8**	**+0.8**
ATAB	**Bozova**	**9.03**	**296**	*i* P	Px	00 18 16.6	
KEH	**Kehvi**	**9.12**	**338**	P	**Pn**	**00 17 41.6**	**+5.2**
IMOG	**Moghan**	**9.14**	**73**	Pn	**Pn**	**00 17 38.4**	**+1.6**
IMOG	**Moghan**	**9.14**	**73**	*e*Pn	**Pn**	**00 17 38.5**	**+1.7**
IMOG				*e*		00 17 54.7	
	comp=Z,925nm,0.4s						
IMOG	**Moghan**	**9.14**	**73**	*e*Pn	**Pn**	**00 17 38.5**	**+1.7**
MALT	**Malatya**	**9.26**	**301**	*e*P	**Pn**	**00 17 39.1**	**+0.7**
MALT				pmax	pmax		
	comp=Z,23nm,1.0s						
MALT	**Malatya**	**9.26**	**301**	*e*Pn	**Pn**	**00 17 39.1**	**+0.7**
	comp=Z,23nm,1.0s						
MALT				Sn	**Sn**	**00 19 41.6**	**+19**
MALT	**Malatya**	**9.26**	**301**	*e*P	**Pn**	**00 17 39.1**	**+0.7**
	comp=Z,23nm,1.0s						
SLWS		**9.28**	**168**	P	**Pn**	**00 17 37.9**	**-0.8**
SLWS		**9.28**	**168**	P	**Pn**	**00 17 37.9**	**-0.8**
ISRO	**Mashad**	**9.29**	**72**	*e*Pn	**Pn**	**00 17 38.7**	**-0.1**
ONI	**Oni**	**9.52**	**337**	P	**Pn**	**00 17 49.1**	**+7.1**
ZEI	**Tsey**	**9.55**	**339**	*e*P	**Pn**	**00 17 46.6**	**+4.3**
ZEI				MLR	MLR		
	comp=Z,426nm,10.0s						
IDAH	**Dahanechah**	**9.57**	**94**	*e*Pn	**Pn**	**00 17 42.5**	**-0.2**
IDAH				*e*		00 20 58.4	
	comp=Z,542nm,0.5s						
IDAH	**Dahanechah**	**9.57**	**94**	*e*Pn	**Pn**	**00 17 42.5**	**-0.2**
AKCD	**Akcadag**	**9.62**	**300**	*i* P	**Pn**	**00 17 45.3**	**+2.0**
IMYA	**Miami**	**9.79**	**72**	Pn	**Pn**	**00 17 46.3**	**+0.6**
IMYA	**Miami**	**9.79**	**72**	*e*Pn	**Pn**	**00 17 46.3**	**+0.6**
IMYA				*e*		00 17 54.4	
	comp=Z,467nm,0.2s						

IMYA Miami 9.79 72 ePn Pn 00 17 46.3 +0.6
ASF Jabal al Asfar 9.91 263 Pn Pn 00 17 47.8 +0.5
comp=Z,0.6nm,0.3s,baz=317,slow=8.6,SNR=6.3
ASF Lg 00 20 51.7
comp=Z,0.5nm,0.3s,baz=124,slow=23,SNR=2.0
ASF LR LR 00 22 13.5
comp=Z,78nm,21.2s,baz=128,slow=41
BTHS 10.05 168 P Pn 00 17 47.6 -1.7
BTHS 10.05 168 P Pn 00 17 47.6 -1.6
NAZ Nazwa, Dubai 10.86 143 ⇓P Pn 00 17 57.7 -2.6
SNR=7.1
NAZ Nazwa, Dubai 10.86 143 P Pn 00 17 57.7 -2.6
SNR=7.1
MMAI Mount Meron Ar 10.99 269 Pn Pn 00 18 02.7 +0.6
comp=Z,0.6nm,0.3s,baz=71,slow=18,SNR=4.2
MMAI Lg 00 21 31.5
comp=Z,0.5nm,0.3s,baz=123,slow=32,SNR=4.8
MMAI LR LR 00 23 24.8
comp=Z,183nm,18.1s,baz=90,slow=44
KIV Kislovodsk 10.99 337 eP Pn 00 18 04.0 +1.9
KIV pmax pmax
comp=Z,8.0nm,1.6s
KIV Kislovodsk 10.99 337 ePn Pn 00 18 01.5 -0.7
KIV Kislovodsk 10.99 337 ⇑P Px 00 18 15.2
SNR=5.5
KIV Kislovodsk 10.99 337 ePn Pn 00 18 01.5 -0.6
KIV Kislovodsk 10.99 337 eP Pn 00 18 04.0 +1.9
comp=Z,8.0nm,1.6s
ASUD Al Ashush, Dub 11.00 146 P Pn 00 18 01.4 -0.9
SNR=58
FAQ Al Faqa, Dubai 11.03 144 P Pn 00 18 00.9 -1.8
SNR=26
HATD Hatta, Dubai 11.23 142 ⇑P Pn 00 18 02.6 -2.8
SNR=9.6
HATD Hatta, Dubai 11.23 142 P Pn 00 18 02.6 -2.8
SNR=9.6
SOC Sochi 11.83 327 eP Pn 00 18 13.0 -0.6
SOC e 00 20 25.4
SOC MLR MLR
comp=Z,469nm,13.0s
SOC Sochi 11.83 327 eP Pn 00 18 13.0 -0.6
SOC eS Sn 00 20 25.4 -0.3
comp=Z,469nm,13.0s
LYLS 11.89 186 P Pn 00 18 11.6 -2.8
LYLS 11.89 186 P Pn 00 18 11.6 -2.9
AVNT Avonos 12.03 298 i P Pn 00 18 21.7 +5.4
EIL Elat 12.29 254 Pn Pn 00 18 19.9 0.0
comp=Z,1.0nm,0.3s,baz=69,slow=8.8,SNR=7.9
EIL Lg 00 22 13.2
comp=Z,0.3nm,0.3s,baz=60,slow=12,SNR=4.0
EIL LR LR 00 24 13.3
comp=Z,187nm,18.0s,baz=249,slow=43
EIL Elat 12.29 254 Pn Pn 00 18 19.9 0.0
ARQ Araqi 12.67 144 ⇑P Pn 00 18 22.7 -2.4
SNR=6.6
ARQ Araqi 12.67 144 P Pn 00 18 22.7 -2.4
SNR=6.6
CDAG Cicekdag 12.68 301 i P Pn 00 18 26.7 +1.5
CTKT Corum 12.81 305 i P Pn 00 18 31.1 +4.1
BR131 Keskin Array S 13.24 300 ePn Pn 00 18 36.2 +3.3
BR131 Keskin Array S 13.24 300 ePn Pn 00 18 36.2 +3.3
BRTR Keskin Array B 13.24 300 eP Pn 00 18 36.0 +3.1
BRTR pmax pmax
comp=Z,5.0nm,1.1s
BRTR Keskin Array B 13.24 300 Pn Pn 00 18 35.2 +2.3
comp=Z,0.1nm,0.3s,baz=119,slow=13,SNR=23
BRTR Keskin Array B 13.24 300 Pn Pn 00 18 35.2 +2.3
BRTR Keskin Array B 13.24 300 eP Pn 00 18 36.0 +3.1
comp=Z,5.0nm,1.1s
BALT Daday 14.17 307 i P Pn 00 18 47.8 +2.4
SGKT Sivrigoynuk 14.68 302 i P Pn 00 18 54.4 +1.9
KORT Korkueli 15.12 287 eP Pn 00 18 58.0 -0.4
HENT Hendek 15.59 301 i P Pn 00 19 06.7 +2.1
SIM Simferopol' 15.63 319 deP Pn 00 19 04.3 -0.7
SIM pmax pmax
comp=Z,8.0nm,0.9s
SIM MLR MLR
comp=Z,180nm,22.0s
GOLH Golhisar 15.77 288 eP Pn 00 19 01.9 -5.0
WHFO Wadi Hawf 16.62 162 ⇑P Pn 00 19 19.1 +1.2
SNR=6.3
WHFO Wadi Hawf 16.62 162 P Pn 00 19 19.1 +1.2
SNR=6.3
MANT Manisa 16.73 292 i P Pn 00 19 22.3 +3.0
KBL Kabul 16.99 82 eP Pn 00 19 23.5 +0.9
KBL pmax pmax
comp=Z,28nm,1.0s
KBL Kabul 16.99 82 ePn Pn 00 19 23.5 +0.9
comp=Z,28nm,1.0s
KBL Kabul 16.99 82 eP Pn 00 19 23.5 +0.9
comp=Z,28nm,1.0s
ABTO Aybut 17.05 164 ⇓P Pn 00 19 25.0 +1.6
SNR=8.2
ABTO Aybut 17.05 164 P Pn 00 19 25.0 +1.7
SNR=8.2
RBK Rabkut 17.13 161 ⇓P Pn 00 19 25.4 +1.1
SNR=5.2
RBK Rabkut 17.13 161 P Pn 00 19 25.4 +1.1
SNR=5.2
ABKAR Akbulak array 17.51 26 ePn Pn 00 19 27.3 -1.7
comp=Z,2.6nm,0.5s
ABKAR Akbulak array 17.51 26 ePn Pn 00 19 27.3 -1.7
comp=Z,2.6nm,0.5s
SARR Saratov 17.61 353 i P Pn 00 19 30.5 +0.3
comp=Z,14µm,0.6s
KARP Karpathos 17.63 281 eP Pn 00 19 30.7 +0.2
GCAM G?zelcaml? 17.66 288 i P Pn 00 19 31.4 +0.5
BALY Balya 17.69 295 i P Pn 00 19 30.5 -0.8
AKTK Aktyubinsk 17.92 20 Pn Pn 00 19 32.8 -1.2
AKTK LR LR 00 28 16.2
AKTK Aktyubinsk 17.92 20 P Pn 00 19 32.8 -1.1
comp=Z,84nm,21.1s
AKTO Aktyubinsk 17.92 20 P Pn 00 19 32.8 -1.1
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO MLR MLR
comp=Z,84nm,21.1s
AKTO Aktyubinsk 17.92 20 Pn Pn 00 19 32.8 -1.2
comp=Z,0.6nm,0.3s,baz=208,slow=13,SNR=15
AKTO LR LR 00 28 16.2
comp=Z,84nm,21.1s,baz=193,slow=43
SMG Samos 17.98 288 eP Pn 00 19 38.0 +3.2
VORD Divnogorie 18.32 341 eP Pn 00 19 39.1 +0.2
VORD pmax pmax
comp=Z,6.0nm,1.1s
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD Divnogorie 18.32 341 eP Pn 00 19 39.1 +0.2
comp=E,30nm,0.7s
VSR Storozhevoye 18.58 341 eP Pn 00 19 41.2 -0.8
VSR pmax pmax
comp=Z,5.0nm,0.5s
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR Storozhevoye 18.58 341 eP Pn 00 19 41.2 -0.8
comp=E,5.0nm,0.5s
PRK Paraskevi 18.62 293 eP Px 00 19 55.5
NPS Neapolis 18.90 281 eP Pn 00 19 47.0 +0.9
LAST Lasithi 19.01 280 P Pn 00 19 47.7 +0.2
LAST Lasithi 19.01 280 P Pn 00 19 47.7 +0.2
ALN Alexandroupoli 19.13 298 P Pn 00 19 49.2 +0.4
ALN Alexandroupoli 19.13 298 P Pn 00 19 49.2 +0.4
MUKL Al Mukalla 19.36 178 eP Pn 00 19 51.5 -0.2
IDI Anoyia 19.49 281 P Pn 00 19 52.9 -0.3
comp=E,1.9nm,0.3s,baz=86,slow=9.9,SNR=30
IDI Anoyia 19.49 281 P Pn 00 19 52.9 -0.3
LIA Limnos Island 19.56 295 eP Pn 00 19 54.1 +0.1
RDO Rodhopi 19.57 298 eP Pn 00 19 53.4 -0.6
RDO Rodhopi 19.57 298 P Pn 00 19 53.5 -0.5
RDO Rodhopi 19.57 298 P Pn 00 19 53.5 -0.5
SIVA Sivas 19.57 280 P Pn 00 19 54.5 +0.4
SIVA Sivas 19.57 280 P Pn 00 19 54.5 +0.4
VAM Vamos 20.05 281 eP P 00 19 58.7 +0.7
GVD Gavdhos 20.17 279 ePn P 00 19 59.9 +0.5
comp=E,312nm,1.5s
GVD Gavdhos 20.17 279 ePn P 00 19 59.9 +0.5
comp=E,312nm,1.5s
LBOS 20.18 189 eP P 00 20 00.7 +1.1
KARN Karanos 20.28 281 P P 00 20 00.7 +0.1
KARN Karanos 20.28 281 P P 00 20 00.7 +0.1
PTL Penteli 20.35 289 eP P 00 20 01.9 +0.6
VLY Voula,Athens 20.39 288 eP P 00 20 02.8 +1.0
VRI Vrincioaia 20.46 312 ⇓P P 00 20 02.8 +0.3
VRI Vrincioaia 20.46 312 ⇓iP P 00 20 02.8 +0.3
VRI Vrincioaia 20.46 312 P P 00 20 02.8 +0.3
PLOR Plostina 20.50 312 ⇑P P 00 20 03.8 +0.9
PLOR Plostina 20.50 312 ⇑iP P 00 20 03.8 +0.9
PLOR Plostina 20.50 312 P P 00 20 03.8 +0.9
OUR Ouranopolis 20.55 295 P P 00 20 03.1 -0.3
OUR Ouranopolis 20.55 295 P P 00 20 03.1 -0.3
PAIG Paliouri 20.71 294 P P 00 20 05.4 +0.2
PAIG Paliouri 20.71 294 P P 00 20 05.4 +0.2
MLR Muntele Rosu 20.78 310 P P 00 20 06.5 +0.6
comp=E,3.4nm,0.6s,baz=11,slow=9.3
MLR LR LR 00 30 19.6
comp=E,175nm,18.4s,MS3.5,baz=113,slow=43
MLR Muntele Rosu 20.78 310 ⇑iP P 00 20 08.5 +2.6
MLR Muntele Rosu 20.78 310 P P 00 20 06.5 +0.6
DID Didima 20.82 287 eP P 00 20 06.1 -0.3
DID Didima 20.82 287 P P 00 20 05.9 -0.5
DID Didima 20.82 287 P P 00 20 05.9 -0.5
NVR Nevrokopi 20.84 298 eP P 00 20 06.5 -0.1
PLG Polygyros 20.96 295 eP P 00 20 08.2 +0.3
PLG Polygyros 20.96 295 P P 00 20 08.3 +0.4
PLG Polygyros 20.96 295 P P 00 20 08.3 +0.4
KYTH Kithira 20.96 284 eP P 00 20 08.1 +0.1
SRS Serrai 20.99 297 P P 00 20 09.5 +1.3
SRS Serrai 20.99 297 P P 00 20 09.5 +1.3
VLI Veliai 21.04 285 eP P 00 20 07.3 -1.5
LTK Loutraki 21.05 289 eP P 00 20 09.1 +0.1
LTK Loutraki 21.05 289 P P 00 20 09.5 +0.5
LTK Loutraki 21.05 289 P P 00 20 09.5 +0.5
ATAL Atalanti 21.06 290 P P 00 20 09.5 +0.5
ATAL Atalanti 21.06 290 P P 00 20 09.5 +0.5
SOH Sokhos 21.11 296 P P 00 20 11.1 +1.6
SOH Sokhos 21.11 296 P P 00 20 11.1 +1.6
VOIR 21.33 310 ⇓P P 00 20 13.1 +1.3
VOIR 21.33 310 ⇓iP P 00 20 13.1 +1.3
VOIR 21.33 310 P P 00 20 13.1 +1.3
AML Almayashu 21.41 60 eP P 00 20 13.3 +0.6
comp=E,367nm,1.3s,mb5.5
AML Almayashu 21.41 60 eP P 00 20 13.3 +0.6
comp=E,367nm,1.3s,mb5.5
VLX Vlachokerasia 21.49 287 eP P 00 20 13.4 -0.3
VLX Vlachokerasia 21.49 287 P P 00 20 13.2 -0.5
VLX Vlachokerasia 21.49 287 P P 00 20 13.2 -0.5
GUR Goura 21.54 288 eP P 00 20 14.6 +0.4
GUR Goura 21.54 288 P P 00 20 14.0 -0.2
GUR Goura 21.54 288 P P 00 20 14.0 -0.2
EKS2 Erkin-Say 21.60 59 eP P 00 20 15.3 +0.5
comp=E,11nm,1.1s,mb4.2
EKS2 Erkin-Say 21.60 59 eP P 00 20 15.3 +0.5
comp=E,11nm,1.1s,mb4.2
AGG Agios Georgios 21.63 291 eP P 00 20 16.6 +1.5
AGG Agios Georgios 21.63 291 P P 00 20 14.7 -0.4
AGG Agios Georgios 21.63 291 P P 00 20 14.7 -0.4
KALE Kalithea 21.73 289 P P 00 20 15.7 -0.5
KALE Kalithea 21.73 289 P P 00 20 15.7 -0.5
TRIZ Trizonia 21.78 289 P P 00 20 16.1 -0.6
TRIZ Trizonia 21.78 289 P P 00 20 16.1 -0.6
LAKA Lakka 21.84 289 P P 00 20 17.3 -0.2
LAKA Lakka 21.84 289 P P 00 20 17.3 -0.2
ITM Ithomi 21.85 286 eP P 00 20 16.5 -1.0
ITM Ithomi 21.85 286 P P 00 20 16.5 -1.0
ITM Ithomi 21.85 286 P P 00 20 16.5 -1.0
AKASG Malin Array Be 21.91 326 i P P 00 20 16.7 -1.3
AKASG pmax pmax
comp=Z,11nm,1.0s
AKASG Malin Array Be 21.91 326 P P 00 20 16.4 -1.6
comp=Z,11nm,1.0s,mb4.2,baz=135,slow=9.5,SNR=16
AKASG Malin Array Be 21.91 326 i P P 00 20 16.7 -1.3
comp=Z,11nm,1.0s,mb4.2
AKBB Malin Array Si 21.91 326 eP P 00 20 17.2 -0.8
AKBB Malin Array Si 21.91 326 eP P 00 20 17.2 -0.8
KIEV Kiev 21.91 326 eP P 00 20 16.4 -1.6
KIEV 00 24 14.1
KIEV pmax pmax
comp=Z,11nm,0.8s,mb4.3
KIEV Kiev 21.91 326 eP P 00 20 16.4 -1.6
comp=Z,11nm,0.8s,mb4.3
KIEV PcP PcP 00 24 14.1 -2.8
KIEV Kiev 21.91 326 eP P 00 20 16.4 -1.6
comp=Z,11nm,0.8s,mb4.3
KIEV Kiev 21.91 326 PcP PcP 00 24 14.1 -2.8
EFP Efpalio 21.91 290 eP P 00 20 19.1 +0.9
EFP Efpalio 21.91 290 P P 00 20 17.7 -0.5
EFP Efpalio 21.91 290 P P 00 20 17.7 -0.5
THL Klokotos Trika 21.93 293 eP P 00 20 19.8 +1.4
THL Klokotos Trika 21.93 293 P P 00 20 17.1 -1.3
THL Klokotos Trika 21.93 293 P P 00 20 17.1 -1.3
PYL PYLOS 22.00 285 eP P 00 20 18.2 -0.9
AAK Ala-Archa 22.11 59 ceP P 00 20 18.8 -1.4
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb3.5
AAK Ala-Archa 22.11 59 P P 00 20 20.0 -0.2
comp=Z,0.6nm,0.4s,baz=309,slow=4.2,SNR=4.1
AAK LR LR 00 29 33.4
comp=Z,210nm,21.9s,baz=78,slow=39
AAK Ala-Archa 22.11 59 eP P 00 20 20.0 -0.3
comp=Z,5.8nm,0.9s,mb4.0
AAK Ala-Archa 22.11 59 eP P 00 20 18.8 -1.4
comp=Z,3.0nm,1.7s,mb3.5
BURAR Bucovina Array 22.22 315 ⇑P P 00 20 22.7 +1.4
BURAR Bucovina Array 22.22 315 ⇑iP P 00 20 22.7 +1.4
BURAR Bucovina Array 22.22 315 ⇑iP P 00 20 22.7 +1.4
RLS Riolos of Patr 22.24 288 eP P 00 20 22.1 +0.4
BUR08 Bucovina Ar. S 22.24 315 eP P 00 20 20.9 -0.7
BUR08 Bucovina Ar. S 22.24 315 eP P 00 20 20.9 -0.7
FRU Bishkek 22.25 59 eP P 00 20 27.0 +5.3
FNA Florina 22.58 296 P P 00 20 24.5 -0.8
FNA Florina 22.58 296 P P 00 20 24.5 -0.8
KSH Kashi 22.66 68 eP P 00 20 21.1 -5.1
KSH epP 00 20 25.1
KSH esP sP 00 20 28.0 -2.3
KSH ePP 00 20 46.2
KSH eS S 00 24 16.5 -18
KSH pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
KSH pmax pmax
comp=Z,80nm,3.2s
KSH LR LR
comp=N,480nm,6.9s
KSH LR LR
comp=E,460nm,7.5s
KSH LR LR
comp=Z,410nm,9.9s
BARS Barje 22.66 301 eP P 00 20 25.9 -0.3
KRUS Krusevo 22.77 297 eP P 00 20 27.7 +0.4
KRUS Krusevo 22.77 297 eP P 00 20 27.6 +0.3
OBN Obninsk 22.77 342 ⇑eP P 00 20 25.7 -1.5
OBN i 00 20 49.7
OBN eS S 00 24 37.8 +1.6
OBN pmax pmax
comp=Z,9.0nm,1.2s,mb4.1
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.4
OBN Obninsk 22.77 342 eP P 00 20 27.0 -0.2
OBN S S 00 24 33.1 -3.1
OBN Obninsk 22.77 342 eP P 00 20 25.7 -1.5
comp=Z,9.0nm,1.2s,mb4.1
KFL Anninata 22.78 289 P P 00 20 27.8 +0.4
GZR Gura Zlata 22.79 308 ⇑P P 00 20 27.4 0.0
GZR Gura Zlata 22.79 308 ⇑iP P 00 20 27.4 0.0
GZR Gura Zlata 22.79 308 P P 00 20 27.4 0.0
JAN Janina 22.83 293 eP P 00 20 29.1 +1.1
BOLS Boljevac 22.84 304 eP P 00 20 27.6 -0.4
ATD Arta Tunnel 22.88 194 LR LR 00 30 19.3
comp=Z,264nm,18.8s,MS3.7,baz=132,slow=39
VLS Valsamata 22.93 289 eP P 00 20 27.7 -1.4
VLS Valsamata 22.93 289 P P 00 20 27.5 -1.6
VLS Valsamata 22.93 289 P P 00 20 27.5 -1.6
TKM2 Tokmak 2 22.96 59 eP P 00 20 29.5 +0.2
TKM2 pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
TKM2 Tokmak 2 22.96 59 eP P 00 20 29.5 +0.2
comp=Z,6.7nm,0.9s,mb4.1
TKM2 Tokmak 2 22.96 59 eP P 00 20 29.5 +0.2
comp=Z,7.0nm,0.9s,mb4.1
MOS Moscow 23.09 344 eP P 00 20 32.3 +1.8
MOS e 00 20 59.3
MOS eS S 00 24 40.3 -1.0
MOS eSS 00 25 12.8
MOS pmax pmax
comp=Z,31nm,0.9s,mb4.7
MOS Moscow 23.09 344 eP P 00 20 32.3 +1.8
comp=Z,31nm,0.9s,mb4.7
MOS eS S 00 24 40.3 -1.0
IGT Igoumenitsa 23.22 292 P P 00 20 30.2 -1.9
IGT Igoumenitsa 23.22 292 P P 00 20 30.2 -1.9
DRGR 23.37 311 ⇓P P 00 20 33.9 +0.4
DRGR 23.37 311 ⇓iP P 00 20 33.9 +0.4
DRGR 23.37 311 P P 00 20 33.9 +0.4
ARU Arti 23.55 14 d iP P 00 20 34.2 -1.1
ARU e 00 21 00.8
ARU S S 00 24 48.4 -0.4
ARU SS 00 25 26.8
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.0
ARU Arti 23.55 14 eP P 00 20 34.2 -1.0
comp=Z,27nm,1.1s,mb4.6
ARU Arti 23.55 14 i P P 00 20 34.2 -1.1
comp=Z,12nm,1.7s,mb4.0
ARU S S 00 24 48.4 -0.4
BZS Buzias 23.63 308 ⇑P P 00 20 35.6 -0.6
BZS Buzias 23.63 308 ⇑iP P 00 20 35.6 -0.6
BZS Buzias 23.63 308 P P 00 20 35.6 -0.6
GRUS Gruza 23.71 303 eP P 00 20 36.0 -1.0
TIR Tirane 23.80 297 eP P 00 20 37.4 -0.3
TIR pmax pmax
comp=Z,42nm,0.8s,mb4.9
TIR Tirane 23.80 297 eP P 00 20 37.4 -0.3
comp=Z,42nm,0.8s,mb4.9
TIR Tirane 23.80 297 eP P 00 20 37.4 -0.3
comp=Z,42nm,0.8s,mb4.9
LVV L'vov 24.02 319 eP P 00 20 38.1 -1.6
LVV L'vov 24.02 319 eP P 00 20 38.1 -1.6
DIVS Divibare 24.27 303 eP P 00 20 40.8 -1.3
SVE Sverdlovsk 24.36 16 eP P 00 20 50.1 +7.3
SVE eS S 00 25 04.4 +2.4
SVE pmax pmax
comp=Z,15nm,1.0s,mb4.4
KOLS Kolonicke sedl 24.58 315 eP P 00 20 45.4 +0.6
KOLS pmax pmax
comp=Z,34nm,2.2s,mb4.5
KOLS Kolonicke sedl 24.58 315 eP P 00 20 45.4 +0.6
comp=Z,34nm,2.2s,mb4.5
KOLS Kolonicke sedl 24.58 315 eP P 00 20 45.4 +0.6
KOLS Kolonicke sedl 24.58 315 eP P 00 20 45.4 +0.6
comp=Z,34nm,2.2s,mb4.5
BBLS Lazići 24.63 302 eP P 00 20 43.6 -1.7
BRVK Borovoye 24.64 32 ceP P 00 20 44.1 -1.2
BRVK pmax pmax
comp=Z,11nm,1.0s,mb4.3
BRVK Borovoye 24.64 32 eP P 00 20 45.4 +0.1
comp=Z,16nm,1.2s,mb4.4
BRVK Borovoye 24.64 32 ⇑P P 00 20 47.9 +2.6
SNR=6.2
BRVK ⇑P 00 20 47.9
SNR=6.2
BRVK Borovoye 24.64 32 eP P 00 20 44.1 -1.2
comp=Z,11nm,1.0s,mb4.3
BVAR Borovoye Array 24.66 33 P P 00 20 44.9 -0.6
BVAR pmax pmax
comp=Z,7.0nm,1.0s
BVAR MLR MLR
comp=Z,248nm,20.2s
BVAR Borovoye Array 24.66 33 P P 00 20 44.9 -0.5
comp=Z,6.6nm,0.9s,mb4.1,baz=222,slow=8.0,SNR=31
BVAR LR LR 00 32 04.0
comp=Z,248nm,20.2s,MS3.7,slow=41
BVAR Borovoye Array 24.66 33 P P 00 20 44.9 -0.5
BVAR LR LR 00 32 04.0
BVAR Borovoye Array 24.66 33 P P 00 20 44.9 -0.6
comp=Z,248nm,20.2s
KWP Kalwaria Pacla 24.66 317 eP P 00 20 45.7 +0.1
KWP Kalwaria Pacla 24.66 317 eP P 00 20 45.4 -0.2
comp=Z,14nm,1.0s,mb4.4
KWP Kalwaria Pacla 24.66 317 ⇓iP P 00 20 45.8 +0.2
KWP Kalwaria Pacla 24.66 317 P P 00 20 45.8 +0.2
DDI Dehra Dun 25.23 90 ex x 00 20 49.5
STHS Stebnicka Huta 25.40 316 eP P 00 20 55.4 +3.2
STHS e 00 21 12.3
STHS pmax pmax
comp=Z,1.0nm,0.8s,mb3.4
STHS Stebnicka Huta 25.40 316 eP P 00 20 55.4 +3.2
comp=Z,1.3nm,0.8s,mb3.5
STHS e 00 21 12.3
STHS Stebnicka Huta 25.40 316 eP P 00 20 55.4 +3.2
STHS e 00 21 12.3
KECS Kecovo 25.44 313 eP P 00 20 54.2 +1.6
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
KECS Kecovo 25.44 313 eP P 00 20 54.2 +1.6
comp=Z,3.5nm,0.9s,mb3.9
KECS Kecovo 25.44 313 eP P 00 20 54.2 +1.6
PSZ Piszkesteto 25.57 312 eP P 00 20 53.6 -0.3
comp=Z,10nm,0.9s,mb4.3
PSZ Piszkesteto 25.57 312 ⇓eP P 00 20 55.5 +1.6
PSZ Piszkesteto 25.57 312 ⇓iP P 00 20 55.5 +1.6
PSZ Piszkesteto 25.57 312 P P 00 20 55.5 +1.6
PKSM Moragy 25.79 307 ⇓P P 00 20 54.3 -1.5
PKSM Moragy 25.79 307 ⇓iP P 00 20 54.3 -1.5
PKSM Moragy 25.79 307 P P 00 20 54.3 -1.5
NACGM Naroch 25.90 331 e P 00 21 02.0 +5.3
NIE Niedzica 25.94 315 eP P 00 21 00.4 +3.2
BUD Budapest 25.96 310 ⇓eP P 00 20 59.2 +1.8
BUD Budapest 25.96 310 ⇓eP P 00 20 59.2 +1.8
TIP Timpagrande 25.97 291 eP P 00 20 57.8 +0.2
comp=Z,20nm,1.1s,mb4.6
TIP Timpagrande 25.97 291 eP P 00 20 57.8 +0.3
comp=Z,20nm,1.1s,mb4.6
VYHS Vyhne 26.45 312 eP P 00 21 02.3 +0.5
VYHS pmax pmax
comp=Z,16nm,2.4s,mb4.1
VYHS Vyhne 26.45 312 eP P 00 21 02.3 +0.5
comp=Z,16nm,2.4s,mb4.1
VYHS Vyhne 26.45 312 eP P 00 21 02.3 +0.5
VYHS Vyhne 26.45 312 eP P 00 21 02.3 +0.5
comp=Z,16nm,2.4s,mb4.1
LIKS Likavka 26.50 314 eP P 00 21 02.3 0.0
LIKS pmax pmax
comp=Z,41nm,1.2s,mb4.8
LIKS Likavka 26.50 314 eP P 00 21 02.3 0.0
comp=Z,41nm,1.2s,mb4.8
LIKS Likavka 26.50 314 eP P 00 21 02.3 0.0
LIKS Likavka 26.50 314 eP P 00 21 02.3 0.0
comp=Z,41nm,1.2s,mb4.8
CEL Celeste 26.63 289 eP P 00 21 03.2 -0.4
comp=Z,44nm,0.8s,mb5.0
CEL Celeste 26.63 289 eP P 00 21 03.2 -0.4
comp=Z,44nm,0.8s,mb5.0
ISAL Salakas 26.64 331 eP P 00 21 03.4 +0.1
ISAL Salakas 26.64 331 eP P 00 21 03.4 0.0
IZAR Zarasai 26.72 332 eP P 00 21 04.5 +0.4
IZAR Zarasai 26.72 332 eP P 00 21 04.5 +0.4
KOLL Kolacno 26.75 312 eP P 00 21 07.5 +3.0
KOLL e 00 21 19.8
KOLL Kolacno 26.75 312 eP P 00 21 07.5 +3.0
KOLL epP pP 00 21 19.8 +12
SUW Suwalki 26.88 326 eP P 00 21 05.2 -0.4
SUW Suwalki 26.88 326 eP P 00 21 05.2 -0.4
comp=Z,33nm,0.9s,mb4.9
SUW Suwalki 26.88 326 eP P 00 21 05.2 -0.4
ZST Bratislava 27.42 311 eP Px 00 21 23.6
ZST Bratislava 27.42 311 epP Px 00 21 23.6
KLMR Klimovskoe 27.57 350 eP P 00 21 09.6 -2.1
KLMR pmax pmax
comp=Z,24nm,1.5s,mb4.6
KLMR Klimovskoe 27.57 350 eP P 00 21 09.6 -2.1
comp=Z,24nm,1.5s,mb4.6
SOP Sopron 27.60 309 ⇓eP P 00 21 12.1 0.0
KURK Kurchatov 27.61 43 ceP P 00 21 10.0 -2.2
KURK pmax pmax
comp=Z,5.0nm,1.7s,mb3.9
KURK Kurchatov 27.61 43 P P 00 21 11.2 -1.1
comp=Z,4.4nm,0.9s,mb4.1,baz=248,slow=9.2,SNR=9.7
KURK LR LR 00 33 18.7
comp=Z,185nm,19.1s,MS3.7,baz=250,slow=39
KURK Kurchatov 27.61 43 eP P 00 21 11.2 -1.0
comp=Z,5.9nm,0.8s,mb4.3
KURK Kurchatov 27.61 43 eP P 00 21 10.0 -2.2
comp=Z,5.0nm,1.7s,mb3.9
MORC Moravsky Berou 27.73 314 eP P 00 21 12.8 -0.5
MORC pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
MORC Moravsky Berou 27.73 314 eP P 00 21 12.8 -0.5
comp=Z,1.2nm,0.7s,mb3.6

MORC Moravsky Berou 27.73 314 *eP* **P 00 21 12.8 -0.5**
comp=Z,1.0nm,0.7s,mb3.5
VAE Valguarnera 27.83 287 P **P 00 21 16.9 +2.6**
comp=Z,4.9nm,0.7s,mb4.2,baz=54,slow=19,SNR=2.3
VAE Valguarnera 27.83 287 P **P 00 21 16.9 +2.6**
MK31 Makanchi Array 28.54 53 *eP* **P 00 21 20.6 +0.1**
MK31 Makanchi Array 28.54 53 *eP* **P 00 21 20.6 +0.1**
MKAR Makanchi Array 28.54 53 *ceP* **P 00 21 21.2 +0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 28.54 53 P **P 00 21 20.9 +0.3**
comp=Z,0.8nm,0.9s,mb3.5,baz=241,slow=9.0,SNR=6.8
MKAR LR LR 00 34 35.9
comp=Z,126nm,18.4s,MS3.5,baz=18,slow=40
MKAR Makanchi Array 28.54 53 *eP* **P 00 21 21.2 +0.7**
comp=Z,1.0nm,0.9s,mb3.5
GERES GERESS Array B 29.77 311 P **P 00 21 30.8 -0.7**
comp=Z,0.2nm,0.4s,baz=110,slow=8.5,SNR=5.6
GERES ScP ScP 00 28 23.6 +6.6
comp=Z,0.1nm,0.4s,baz=101,slow=5.1,SNR=3.9
GERES GERESS Array B 29.77 311 P **P 00 21 30.8 -0.6**
DANN Dangsing 30.58 91 *eP* **P 00 21 38.8 0.0**
comp=Z,36nm,0.8s,mb5.2
KOLN Koldanda 30.64 92 *eP* **P 00 21 38.6 -0.8**
comp=Z,7.8nm,0.7s,mb4.6
WTTA Wattenberg 30.71 307 ⇑ *iP* **P 00 21 39.4 -0.3**
comp=Z,8.1nm,1.1s,mb4.5
WTTA Wattenberg 30.71 307 P **P 00 21 39.4 -0.4**
comp=Z,8.1nm,1.1s,mb4.5
JOF Joensuu 30.97 345 *eP* **P 00 21 39.9 -2.0**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
JOF Joensuu 30.97 345 *ep* **P 00 21 39.9 -2.0**
comp=Z,3.5nm,0.5s,mb4.5
JOF Joensuu 30.97 345 *eP* **P 00 21 39.9 -2.0**
comp=Z,4.0nm,0.5s,mb4.5
FINES FINESS Array B 31.08 339 P **P 00 21 42.1 -0.7**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES MLR MLR
comp=Z,90nm,18.1s
FINES FINESS Array B 31.08 339 P **P 00 21 42.1 -0.7**
comp=Z,1.3nm,0.5s,mb4.0,baz=141,slow=7.8,SNR=12
FINES LR LR 00 36 10.4
comp=Z,90nm,18.1s,MS3.5,baz=332,slow=40
FINES FINESS Array B 31.08 339 P **P 00 21 42.1 -0.7**
comp=Z,90nm,18.1s
MOTA Moosalm 31.08 307 ⇑ *iP* **P 00 21 41.8 -1.3**
comp=Z,8.2nm,0.9s,mb4.6
MOTA Moosalm 31.08 307 P **P 00 21 41.8 -1.3**
comp=Z,8.2nm,0.9s,mb4.6
FETA Feichten 31.27 306 ⇑ *iP* **P 00 21 43.9 -0.8**
comp=Z,9.4nm,0.8s,mb4.7
FETA Feichten 31.27 306 P **P 00 21 43.9 -0.8**
comp=Z,9.4nm,0.8s,mb4.7
GKN Gorkha 31.42 91 *eP* **P 00 21 46.4 +0.1**
comp=Z,27nm,0.8s,mb5.1
KAF Kangasniemi 31.55 340 *eP* **P 00 21 44.2 -2.7**
KAF pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
KAF Kangasniemi 31.55 340 *ep* **P 00 21 44.2 -2.7**
comp=Z,1.2nm,0.6s,mb3.9
KAF Kangasniemi 31.55 340 *eP* **P 00 21 44.2 -2.7**
comp=Z,1.2nm,0.6s,mb3.9
VSL Villasalto 31.69 292 *eP* **P 00 21 49.7 +1.3**
VSL Villasalto 31.69 292 *eP* **P 00 21 49.7 +1.2**
DAVOX Davos/Dischmat 31.80 305 P **P 00 21 48.4 -0.9**
comp=Z,3.2nm,0.6s,mb4.4,baz=164,slow=24,SNR=8.8
DAVOX Davos/Dischmat 31.80 305 P **P 00 21 48.5 -0.9**
WMQ Urumqi 31.81 60 *eP* **P 00 21 53.8 +4.3**
DAVOS Davos 31.87 306 P **P 00 21 48.5 -1.5**
DAVOS Davos 31.87 306 P **P 00 21 48.5 -1.5**
DAVA Damuels 31.89 306 ⇑ *iP* **P 00 21 48.8 -1.4**
comp=Z,12nm,0.6s,mb4.9
DAVA Damuels 31.89 306 P **P 00 21 48.8 -1.3**
comp=Z,12nm,0.6s,mb4.9
NVS Novosibirsk 31.96 38 *eP* **P 00 21 57.3 +6.7**
NVS pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
NVS pmax pmax
comp=N,6.0nm,1.6s
KKN Kakani 32.03 91 *eP* **P 00 21 51.0 -0.6**
comp=N,29nm,0.8s,mb5.1
KEST Kesra 32.06 285 P **P 00 21 52.8 +1.0**
comp=N,2.7nm,1.0s,mb4.0,baz=342,slow=2.2,SNR=6.4
PKI Pulchoki 32.21 91 *eP* **P 00 21 52.8 -0.4**
comp=N,19nm,0.8s,mb5.0
ZAA0 Zalesovo Array 32.42 41 *eP* **P 00 21 53.8 -0.9**
ZAA0 Zalesovo Array 32.42 41 *eP* **P 00 21 53.8 -0.9**
ZALV Zalesovo Beam 32.42 41 P **P 00 21 53.6 -1.1**
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
ZALV MLR MLR
comp=Z,106nm,18.0s,MS3.6
ZALV Zalesovo Beam 32.42 41 P **P 00 21 53.6 -1.1**
comp=Z,4.1nm,0.7s,mb4.3,baz=250,slow=8.8,SNR=6.5
ZALV LR LR 00 36 27.1
comp=Z,106nm,18.0s,MS3.6,baz=323,slow=39
ZALV Zalesovo Beam 32.42 41 P **P 00 21 53.6 -1.1**
ZALV LR LR 00 36 27.1
GUN Gumba 32.49 90 *eP* **P 00 21 55.7 +0.1**
comp=Z,66nm,1.0s,mb5.4
JIRN Jiri 32.83 91 *eP* **P 00 21 58.4 -0.2**
comp=Z,24nm,0.5s,mb5.4
SBF Sospel 33.18 300 *eP* **P 00 22 00.8 -0.7**
comp=Z,15nm,0.6s,mb4.8
SBF Sospel 33.18 300 *eP* **P 00 22 00.8 -0.7**
SBF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SBF Sospel 33.18 300 *eP* **P 00 22 00.8 -0.7**
comp=Z,7.7nm,0.6s,mb4.8
SBF Sospel 33.18 300 *eP* **P 00 22 00.8 -0.7**
comp=Z,7.7nm,0.6s,mb4.8
RAMN Ramite 33.42 92 *eP* **P 00 22 02.9 -0.9**
comp=Z,20nm,0.5s,mb5.3
MBDF Montbardon 33.71 301 *eP* **P 00 22 05.2 -0.9**
comp=Z,12nm,0.7s,mb4.6
MBDF Montbardon 33.71 301 *eP* **P 00 22 05.2 -0.9**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MBDF Montbardon 33.71 301 *eP* **P 00 22 05.2 -0.9**
comp=Z,6.1nm,0.7s,mb4.6
MBDF Montbardon 33.71 301 *eP* **P 00 22 05.2 -0.9**
comp=Z,6.1nm,0.7s,mb4.6
FRF La Foret Royal 33.74 299 *eP* **P 00 22 06.1 -0.3**
FRF La Foret Royal 33.74 299 *eP* **P 00 22 06.1 -0.3**
LPG La Plagne 33.79 303 *eP* **P 00 22 05.9 -0.9**
LPG La Plagne 33.79 303 *eP* **P 00 22 05.9 -0.9**
BNI Bardonecchia 33.80 302 *eP* **P 00 22 06.3 -0.6**
BNI pmax pmax
comp=Z,14nm,0.7s,mb5.0
BNI Bardonecchia 33.80 302 *eP* **P 00 22 06.3 -0.6**
comp=Z,14nm,0.7s,mb5.0
BNI Bardonecchia 33.80 302 *eP* **P 00 22 06.3 -0.6**
comp=Z,14nm,0.7s,mb5.0
LPL La Plagne 33.80 303 *eP* **P 00 22 05.9 -1.0**
LPL La Plagne 33.80 303 *eP* **P 00 22 05.9 -1.0**
TAPN Taplejung 34.20 90 *eP* **P 00 22 10.4 -0.2**
comp=Z,40nm,0.8s,mb5.4
ORIF Oris-en-Rattie 34.36 301 *eP* **P 00 22 11.0 -0.7**
ORIF Oris-en-Rattie 34.36 301 *eP* **P 00 22 11.0 -0.7**
CABF La Chapelle 34.36 305 *eP* **P 00 22 10.8 -0.9**
comp=Z,19nm,0.7s,mb4.8
CABF La Chapelle 34.36 305 *eP* **P 00 22 10.8 -0.9**
CABF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
CABF La Chapelle 34.36 305 *eP* **P 00 22 10.8 -0.9**
comp=Z,9.4nm,0.7s,mb4.8
CABF La Chapelle 34.36 305 *eP* **P 00 22 10.8 -0.9**
comp=Z,9.4nm,0.7s,mb4.8
HFS Hagfors 34.66 330 P **P 00 22 13.2 -0.9**
HFS pmax pmax
comp=Z,10.0nm,0.6s
HFS MLR MLR
comp=Z,88nm,21.0s
HFS Hagfors 34.66 330 P **P 00 22 13.2 -1.0**
comp=Z,10nm,0.6s,mb5.0,baz=126,slow=9.3,SNR=41
HFS LR LR 00 37 49.1
comp=Z,88nm,21.0s,MS3.5,baz=126,slow=39
HFS Hagfors 34.66 330 P **P 00 22 13.2 -0.9**
comp=Z,88nm,21.0s
VIVF Saint-Julien-l 35.21 301 *eP* **P 00 22 18.1 -1.0**
VIVF Saint-Julien-l 35.21 301 *eP* **P 00 22 18.1 -1.0**
LASF Ste Croix 35.77 300 *eP* **P 00 22 22.0 -1.9**
comp=Z,27nm,1.2s,mb4.8
LASF Ste Croix 35.77 300 *eP* **P 00 22 22.0 -1.9**
comp=Z,13nm,1.2s,mb4.8
SMF Signal de Mont 35.90 304 *eP* **P 00 22 23.4 -1.6**
comp=Z,8.4nm,0.7s,mb4.5
SMF Signal de Mont 35.90 304 *eP* **P 00 22 23.4 -1.6**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SMF Signal de Mont 35.90 304 *eP* **P 00 22 23.4 -1.6**
comp=Z,4.2nm,0.7s,mb4.5
SMF Signal de Mont 35.90 304 *eP* **P 00 22 23.4 -1.6**
comp=Z,4.2nm,0.7s,mb4.5
NB2 NORSAR Subarra 36.18 330 P **P 00 22 25.8 -1.4**
comp=Z,3.4nm,0.6s,mb4.5,baz=122,slow=8.6
NB2 NORSAR Subarra 36.18 330 P **P 00 22 25.8 -1.4**
comp=Z,3.4nm,0.6s,mb4.5,baz=122,slow=8.3,SNR=6.1
NOA NORSAR Array B 36.18 330 P **P 00 22 25.7 -1.5**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,115nm,20.7s
NOA NORSAR Array B 36.18 330 P **P 00 22 25.7 -1.5**
comp=Z,3.3nm,0.6s,mb4.4,baz=122,slow=8.4,SNR=16
NOA LR LR 00 38 22.1
comp=Z,115nm,20.7s,MS3.6,baz=125,slow=38
NOA NORSAR Array B 36.18 330 P **P 00 22 25.7 -1.5**
comp=Z,115nm,20.7s
NAO01 NORSAR Array S 36.22 330 *eP* **P 00 22 26.4 -1.1**
comp=Z,1.7nm,0.5s,mb4.2
NAO01 NORSAR Array S 36.22 330 *eP* **P 00 22 26.4 -1.1**
comp=Z,1.7nm,0.5s,mb4.2
AVF Avril sur Loir 36.25 305 *eP* **P 00 22 26.2 -1.8**
AVF Avril sur Loir 36.25 305 *eP* **P 00 22 26.2 -1.8**
MTLF Montolieu 36.96 299 *eP* **P 00 22 32.5 -1.6**
MTLF Montolieu 36.96 299 *eP* **P 00 22 32.5 -1.6**
TCF Toulx Ste Croi 37.01 304 *eP* **P 00 22 34.1 -0.4**
TCF Toulx Ste Croi 37.01 304 *eP* **P 00 22 34.1 -0.4**
KEV Kevo 37.81 348 *eP* **P 00 22 39.1 -1.9**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KEV Kevo 37.81 348 *ep* **P 00 22 39.1 -1.9**
comp=Z,0.8nm,0.4s,mb3.8
KEV Kevo 37.81 348 *eP* **P 00 22 39.1 -1.9**
comp=Z,0.8nm,0.4s,mb3.8
ARCES ARCESS Array B 37.89 347 P **P 00 22 39.8 -1.9**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,90nm,18.1s
ARCES ARCESS Array B 37.89 347 P **P 00 22 39.8 -1.9**
comp=Z,3.2nm,0.8s,mb4.1,baz=12,slow=14,SNR=17
ARCES LR LR 00 39 05.2
comp=Z,90nm,18.1s,MS3.6,baz=344,slow=38
ARCES ARCESS Array B 37.89 347 P **P 00 22 39.8 -1.9**
comp=Z,90nm,18.1s
SGMF Saint Gilles 40.33 307 *eP* **P 00 23 00.6 -1.7**
SGMF Saint Gilles 40.33 307 *eP* **P 00 23 00.6 -1.7**
QUIF Quistinic 40.73 306 *eP* **P 00 23 03.6 -2.0**
comp=Z,31nm,1.0s,mb4.6
QUIF Quistinic 40.73 306 *eP* **P 00 23 03.6 -2.0**
QUIF pmax pmax
comp=Z,16nm,1.0s,mb4.6
QUIF Quistinic 40.73 306 *eP* **P 00 23 03.6 -2.0**
comp=Z,16nm,1.0s,mb4.6
QUIF Quistinic 40.73 306 *eP* **P 00 23 03.6 -2.0**
comp=Z,16nm,1.0s,mb4.6
GTA Gaotai 41.06 67 *eP* **P 00 23 10.5 +2.0**
GTA pP pP 00 23 15.4 +3.8
GTA sP sP 00 23 17.9 +5.1
GTA PcP PcP 00 25 13.0 +4.8
GTA S **S 00 29 19.0 -2.1**
GTA pmax pmax
comp=Z,3.0nm,1.3s,mb3.8
GTA LR LR
comp=N,200nm,17.8s,MS4.2
GTA LR LR
comp=E,240nm,21.7s,MS4.2
GTA LR LR
comp=Z,97nm,15.8s
ESDC Sonseca Array 41.92 294 P **P 00 23 14.9 -0.6**
comp=Z,0.4nm,0.4s,mb3.4,baz=80,slow=8.0,SNR=5.0
ESDC Sonseca Array 41.92 294 P **P 00 23 14.9 -0.6**
LZH Lanzhou 44.86 71 *eP* **P 00 23 46.0 +6.7**
LZH pP pP 00 23 51.2 +8.8
LZH sP sP 00 23 53.7 +10
LZH pmax pmax
comp=Z,18nm,1.3s,mb4.7
SONM Songino Array 44.90 54 LR LR 00 43 39.7
comp=Z,100nm,20.3s,MS3.7,baz=77,slow=38
ULN Ulaanbaatar 45.34 54 *eP* **P 00 23 42.6 -0.4**
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ULN Ulaanbaatar 45.34 54 *eP* **P 00 23 42.6 -0.4**
comp=Z,3.9nm,0.9s,mb4.2
ULN Ulaanbaatar 45.34 54 *eP* **P 00 23 42.6 -0.4**
comp=Z,4.0nm,0.9s,mb4.2
CD2 Chengdu 46.26 78 P **P 00 23 52.4 +1.9**
CD2 pP pP 00 23 56.9 +3.3
CD2 sP sP 00 23 59.5 +4.6
CD2 PP PP 00 25 40.9 +2.0
CD2 S **S 00 30 36.8 -0.5**
CD2 sS sS 00 30 45.2 +2.7
CD2 SS SS 00 33 55.0 -7.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,40nm,6.7s
CD2 LR LR
comp=N,210nm,9.5s
CD2 LR LR
comp=Z,110nm,11.8s,MS4.0
TOA0 Torodi Ar. Sit 47.17 256 *eP* **P 00 23 57.3 -0.5**
TOA0 Torodi Ar. Sit 47.17 256 *eP* **P 00 23 57.3 -0.4**
TORD Torodi Ar. Bea 47.17 256 P **P 00 23 57.1 -0.7**
comp=Z,2.8nm,0.9s,mb4.2,baz=72,slow=6.8,SNR=23
TORD LR LR 00 44 21.8
comp=Z,58nm,18.6s,MS3.6,baz=215,slow=37
CHTO Chiang Mai 47.17 95 *eP* **P 00 23 55.7 -2.0**
CHTO Chiang Mai 47.17 95 *eP* **P 00 23 55.7 -2.0**
CMAR Chiang Mai Arr 47.34 96 P **P 00 23 57.4 -1.7**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR MLR MLR
comp=Z,60nm,21.4s
CMAR Chiang Mai Arr 47.34 96 P **P 00 23 57.4 -1.6**
comp=Z,0.9nm,0.5s,mb4.0,baz=293,slow=8.5,SNR=7.2
CMAR LR LR 00 44 28.4
comp=Z,60nm,21.4s,MS3.5,baz=305,slow=37
CMAR Chiang Mai Arr 47.34 96 P **P 00 23 57.4 -1.7**
comp=Z,60nm,21.4s
KMI Kunming 47.53 86 P **P 00 24 03.5 +3.0**
KMI pP pP 00 24 09.7 +6.1
KMI sP sP 00 24 11.8 +6.9
KMI PP PP 00 25 54.3 +2.5
KMI S **S 00 30 56.2 +0.6**
KMI sS sS 00 31 03.1 +2.4
KMI SS SS 00 34 16.6 -6.8
KMI pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KMI pmax pmax
comp=Z,52nm,3.8s
KMI LR LR
comp=N,97nm,19.4s,MS4.1
KMI LR LR
comp=E,170nm,17.0s,MS4.1
KMI LR LR
comp=Z,91nm,20.2s,MS3.7
BOD Bodaibo 49.17 40 *eP* **P 00 24 10.8 -1.8**
BOD pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BOD Bodaibo 49.17 40 *eP* **P 00 24 10.8 -1.8**
comp=Z,4.0nm,0.9s,mb4.5
XAN Xi'an 49.42 72 P **P 00 24 15.7 +0.7**
XAN pP pP 00 24 18.9 +0.8
XAN sP sP 00 24 20.2 +0.9
XAN PP PP 00 26 09.7 +0.8
XAN S **S 00 31 22.6 +0.5**
XAN sS sS 00 31 28.0 +0.7
XAN SS SS 00 34 55.6 +2.0
XAN pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
XAN pmax pmax
comp=Z,10.0nm,5.0s
XAN LR LR
comp=N,100nm,18.4s,MS3.9
XAN LR LR
comp=E,54nm,20.6s,MS3.9
XAN LR LR
comp=Z,36nm,20.6s,MS3.4
HHC Hu-ho-hao-te 49.62 63 *eP* **P 00 24 18.6 +2.2**
HHC pP pP 00 24 23.1 +3.5
HHC sP sP 00 24 25.7 +4.9
HHC S **S 00 31 26.5 +1.8**
HHC ScS ScS 00 34 04.3 -3.9
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,72nm,4.6s
HHC LR LR
comp=N,200nm,21.6s
HHC LR LR
comp=E,130nm,12.3s
HHC LR LR
comp=Z,100nm,19.4s,MS3.8
GYA Guiyang 50.24 82 P **P 00 24 22.7 +1.4**
GYA pP pP 00 24 28.0 +3.5
GYA PP PP 00 26 19.2 +2.6
GYA ScP ScP 00 29 35.4 -0.9
GYA S **S 00 31 32.0 -1.7**
GYA SS SS 00 35 01.3 -5.8
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,80nm,4.9s
GYA LR LR
comp=N,320nm,19.2s,MS4.5
GYA LR LR
comp=E,260nm,20.0s,MS4.5
GYA LR LR
comp=Z,350nm,19.6s,MS4.4
OPO Ambohidratompo 52.21 182 P **P 00 24 36.6 +0.7**
comp=Z,1.8nm,0.7s,mb4.1,baz=72,slow=13,SNR=2.4
OPO Ambohidratompo 52.21 182 P **P 00 24 36.6 +0.7**
LSZ Lusaka 52.62 205 P **P 00 24 38.2 -0.8**
LSZ pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
LSZ Lusaka 52.62 205 P **P 00 24 38.2 -0.8**
comp=Z,1.6nm,0.5s,mb4.2,baz=16,slow=7.6,SNR=4.2
LSZ Lusaka 52.62 205 P **P 00 24 38.2 -0.8**
comp=Z,2.0nm,0.5s,mb4.3
BJI Beijing 53.23 62 P **P 00 24 43.1 -0.3**
BJI S **S 00 32 14.7 +0.2**
BJI pmax pmax
comp=Z,15nm,0.5s,mb5.2
BJI LR LR
comp=N,220nm,21.1s,MS4.2
BJI LR LR
comp=E,120nm,21.8s,MS4.2
BJI LR LR
comp=Z,98nm,25.7s,MS3.8
TIXI Tiksi 55.18 22 *eP* **P 00 24 58.8 +1.6**
TIXI pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
TIXI MLR MLR
comp=Z,140nm,19.0s,MS4.1
TIXI Tiksi 55.18 22 *eP* **P 00 24 58.8 +1.6**
comp=Z,140nm,19.0s
DBIC Dimbokro 56.16 254 P **P 00 25 04.4 -0.6**
DBIC pmax pmax
comp=Z,4.0nm,0.9s
DBIC MLR MLR
comp=Z,63nm,19.7s
DBIC Dimbokro 56.16 254 P **P 00 25 04.4 -0.6**
comp=Z,4.4nm,0.9s,mb4.5,baz=7.1,slow=8.1,SNR=2.7
DBIC LR LR 00 51 36.8
comp=Z,63nm,19.7s,MS3.7,baz=215,slow=39
DBIC Dimbokro 56.16 254 P **P 00 25 04.4 -0.6**
comp=Z,63nm,19.7s
SUMG Summit 57.12 339 *eP* **P 00 25 10.5 -0.5**
comp=Z,5.5nm,0.9s,mb4.6
SUMG Summit 57.12 339 *eP* **P 00 25 10.5 -0.5**
comp=Z,5.5nm,0.9s,mb4.6
NJ2 Nanjing 57.93 71 *eP* **P 00 25 22.1 +4.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CN2 Changchun 58.72 56 *eP* **P 00 25 25.0 +2.3**
MDJ Mudanjiang 61.26 54 P **P 00 25 39.0 -1.1**
MDJ S **S 00 33 56.2 -3.8**
MDJ pmax pmax
comp=Z,9.0nm,1.9s,mb4.6
MDJ pmax pmax
comp=Z,39nm,4.2s
MDJ LR LR
comp=N,180nm,29.1s,MS4.1
MDJ LR LR
comp=E,62nm,29.1s,MS4.1
MDJ LR LR
comp=Z,53nm,21.8s
LBTB Lobatse 62.53 203 *eP* **P 00 25 49.4 +0.7**
LBTB pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LBTB Lobatse 62.53 203 *eP* **P 00 25 49.4 +0.7**
comp=Z,5.5nm,0.8s,mb4.7
LBTB Lobatse 62.53 203 *eP* **P 00 25 49.4 +0.7**
comp=Z,6.0nm,0.8s,mb4.8
KSRS Korea Array 62.74 62 P **P 00 25 48.1 -2.1**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
KSRS Korea Array 62.74 62 P **P 00 25 48.1 -2.1**
comp=Z,0.7nm,0.4s,mb4.1,baz=284,slow=5.4,SNR=3.2
KSRS Korea Array 62.74 62 P **P 00 25 48.1 -2.1**
comp=Z,1.0nm,0.4s,mb4.3
BOSA Boshof 65.98 202 P **P 00 26 11.6 +0.3**
comp=Z,3.9nm,0.7s,mb4.5,baz=32,slow=6.1,SNR=8.1
BOSA Boshof 65.98 202 *eP* **P 00 26 11.7 +0.4**
BOSA Boshof 65.98 202 *eP* **P 00 26 11.7 +0.4**
SEY Seymchan 66.25 29 *eP* **P 00 26 10.9 -1.8**
SEY Seymchan 66.25 29 *eP* **P 00 26 10.9 -1.8**
BILL Bilibino 68.35 21 *eP* **P 00 26 26.0 +0.1**
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
BILL Bilibino 68.35 21 *eP* **P 00 26 26.0 +0.1**
comp=Z,3.0nm,1.2s,mb4.2
YKA Yellowknife Ar 82.96 352 P **P 00 27 47.3 -2.4**
comp=Z,0.4nm,0.5s,mb3.7,baz=11,slow=5.3,SNR=12
YKA Yellowknife Ar 82.96 352 P **P 00 27 47.3 -2.4**
WRAB Tennant Creek 97.55 109 P **P 00 29 00.9 +1.4**

MAN 01 00:16:04, 6°.54N×123°.61E, h31km, mb4.7, ML3.6, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.93**	**43**	⇑ *iP*	Pn	00 16 21.9	+0.9
CTBH				*i* S	Sn	00 16 34.0	+0.8
ZMPH	**Zamboanga City**	**1.59**	**285**	⇓ *iP*	Pn	00 16 30.8	+0.7
ZMPH				*i* S	Sn	00 16 39.4	-10

IDC 01 00:33:21.2±2.1, 31°.91S×179°.43W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.7/15, mbtmp3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/16, Error ellipse: s-maj=61.5km s-min=41.1km az=45.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.95**	**27**	LR	LR	00 34 45.1	
	comp=Z,230nm,18.9s,baz=171,slow=28						
ASAR	**Alice Springs**	**41.84**	**269**	P	P	00 41 12.8	-0.2
	0.8nm,0.8s,baz=104,slow=7.7,SNR=5.5						
WRA	**Warramunga Arr**	**42.96**	**275**	P	P	00 41 22.4	+0.1
	0.5nm,0.6s,baz=114,slow=7.8,SNR=2.9						
QSPA	**South Pole Qui**	**58.20**	**180**	P	P	00 43 16.9	+0.3
	1.0nm,0.7s,baz=25,slow=6.0,SNR=3.8						
FINES	**FINESS Array B**	**146.12**	**338**	PKPbc	PKPbc	00 53 01.7	-0.8
	0.7nm,0.7s,baz=66,slow=11,SNR=2.7						

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*ISCJB **01** 00:43:21.5±0.5, 6°.86N±0°.06×73°.05W±0°.06, h169km±6km, mb3.8/3, Error ellipse: s-maj=11.9km s-min=6.7km az=39.0*

*NEIC **01** 00:43:22.7±0.8, 6°.80N×73°.05W, h168km±9km, Error ellipse: s-maj=15.9km s-min=12.1km az=124.0*

*IDC **01** 00:43:22.9±3.8, 6°.70N×73°.12W, h172km±117km, mb3.5/3, mb1 3.6/4, mb1mx3.1/20, mbtmp3.6/4, Error ellipse: s-maj=214.8km s-min=71.3km az=149.0*

*FUNV **01** 00:43:22.4, 6°.74N×73°.13W, h165km, MW3.5*

ISC 01 00:43:22.5±0.5, 6°.85N±0°.06×73°.04W±0°.06, h163km±6km, n23, σ0°.76/29, mb3.8/3, 7C-1D, Northern Colombia

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**35**	⇑iP	**Pn**	**00 43 51.6**	**+1.1**
CAPV				eS	**Sn**	**00 44 12.6**	**+0.5**
ROSC	**El Rosal**	**2.36**	**213**	P	**Pn**	**00 44 03.4**	**+0.8**
	45nm,0.3s,baz=92,slow=22,SNR=183						
ROSC				S	**Sn**	**00 44 32.6**	**-1.0**
	37nm,0.3s,baz=86,slow=21,SNR=11						
VIGV	**El Vigia**	**2.58**	**40**	⇑iP	**Pn**	**00 44 06.1**	**+0.9**
VIGV				eS	**Sn**	**00 44 38.6**	**+0.3**
SOCV	**Socops**	**2.59**	**56**	⇑iP	**Pn**	**00 44 06.3**	**+1.0**
SOCV				eS	**Sn**	**00 44 37.5**	**-0.9**
SDV	**Santo Domingo**	**3.13**	**50**	ePn	**Pn**	**00 44 12.9**	**+0.9**
SDV				eSn	**Sn**	**00 44 49.7**	**-0.6**
ELOV	**Elorza**	**3.53**	**87**	⇑eP	**Pn**	**00 44 17.8**	**+0.7**
VIRV	**Villa del Rosa**	**3.68**	**10**	⇓iP	**Pn**	**00 44 18.3**	**-0.7**
VIRV				eS	**Sn**	**00 45 01.5**	**-1.6**
QARV	**Quebrada Arrib**	**4.16**	**37**	eP	**Pn**	**00 44 25.0**	**-0.1**
SANV	**Sanarito**	**4.36**	**53**	⇑eP	**Pn**	**00 44 27.7**	**0.0**
CURV	**Curarigua**	**4.38**	**44**	⇑iP	**Pn**	**00 44 28.2**	**+0.2**
TEPV	**Terepaima**	**4.91**	**51**	⇑iP	**Pn**	**00 44 35.3**	**+0.4**
SIQV	**Siquisique**	**4.94**	**40**	eP	**Pn**	**00 44 34.9**	**-0.5**
BAUV	**El Baul**	**5.37**	**67**	eP	**Pn**	**00 44 39.7**	**-1.3**
MONV	**Montecano**	**5.91**	**31**	eP	**Pn**	**00 44 48.8**	**+0.7**
TURV	**Turiamo**	**6.26**	**55**	eP	**Pn**	**00 44 53.2**	**+0.4**
CAOV	**Caicara del Or**	**6.68**	**86**	eP	**Pn**	**00 44 57.0**	**-1.4**
JTS	**JuntasAbangare**	**12.27**	**287**	ePn	**Pn**	**00 46 11.5**	**-0.4**
LPAZ	**La Paz**	**23.50**	**168**	P	**P**	**00 48 17.3**	**-0.4**
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**00 51 39.7**	**+0.3**
	0.9nm,0.4s,mb3.7,baz=135,slow=7.4,SNR=4.4						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**00 51 39.6**	**+0.3**
SCHQ	**Schefferville**	**48.10**	**5**	P	**P**	**00 51 45.6**	**+0.1**
	3.5nm,0.9s,mb4.0,baz=192,slow=13,SNR=3.3						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**00 53 33.8**	**+0.4**
	0.5nm,0.5s,mb3.6,baz=133,slow=6.6,SNR=17						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**00 53 33.8**	**+0.4**

PRE 01 01:05:10.7±0.7**,21°.44S×16°.99E,h10km,ML3.5,Namibia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPI	**Upington**	**7.90**	**152**	eP	Pn	01 07 06.1	+0.5
UPI				eS	Sn	01 08 30.6	-4.5
UPI				AML	AML	01 09 27.8	
	comp=Z,21nm,0.7s						
KOMG	**Komaggas**	**8.33**	**177**	eP	Pn	01 07 12.1	+0.6
KOMG				eS	Sn	01 08 41.9	-3.8
KOMG				AML	AML	01 09 34.8	
	comp=Z,61nm,0.6s						
LBTB	**Lobatse**	**8.67**	**116**	eP	Pn	01 07 18.4	+2.1
LBTB				eS	Sn	01 08 49.3	-4.9
LBTB				AML	AML	01 09 44.5	
	comp=Z,28nm,0.5s						
PKA	**Prieska**	**9.70**	**149**	eP	Pn	01 07 31.4	+1.0
PKA				eS	Sn	01 09 14.7	-4.7
PKA				AML	AML	01 10 21.9	
	comp=Z,6.3nm,0.6s						
KSR	**Koster**	**10.08**	**118**	eP	Pn	01 07 37.6	+2.0
KSR				eS	Sn	01 09 23.5	-5.3
KSR				AML	AML	01 10 39.0	
	comp=Z,48nm,0.6s						
CVNA	**Calvinia**	**10.30**	**167**	eP	Pn	01 07 40.0	+1.5
CVNA				eS	Sn	01 09 29.3	-4.8
CVNA				AML	AML	01 10 56.2	
	comp=Z,37nm,0.7s						
BOSA	**Boshof**	**10.35**	**135**	eP	Pn	01 07 40.3	+1.1
BOSA				eS	Sn	01 09 30.1	-5.2
BOSA				AML	AML	01 10 49.7	
	comp=Z,14nm,0.6s						
PRYS	**Parys**	**10.92**	**122**	eP	Pn	01 07 49.0	+1.9
PRYS				eS	Sn	01 09 44.1	-5.3
PRYS				AML	AML	01 11 14.4	
	comp=Z,10nm,0.5s						
SLR	**Silverton**	**11.20**	**115**	eP	Pn	01 07 52.0	+1.1
SLR				eS	Sn	01 09 50.4	-5.8
SLR				AML	AML	01 11 11.6	
	comp=Z,24nm,0.7s						
SUR	**Sutherland**	**11.41**	**163**	eP	Pn	01 07 55.3	+1.5
SUR				eS	Sn	01 09 56.2	-5.1
SUR				AML	AML	01 11 33.4	
	comp=Z,22nm,0.6s						
SEK	**Senekal**	**11.83**	**127**	eP	Pn	01 08 01.7	+2.1
SEK				eS	Sn	01 10 06.3	-5.4
SEK				AML	AML	01 11 32.2	
	comp=Z,20nm,0.7s						
HVD	**Gariep Dam**	**11.90**	**142**	eP	Pn	01 08 02.6	+2.2
HVD				eS	Sn	01 10 08.1	-5.2
HVD				AML	AML	01 12 09.8	
	comp=Z,14nm,0.6s						
CER	**Ceres**	**12.05**	**171**	eP	Pn	01 08 04.9	+2.5
CER				eS	Sn	01 10 11.1	-5.8
CER				AML	AML	01 11 59.6	
	comp=Z,5.9nm,0.6s						
MSNA	**Messina**	**12.13**	**97**	eP	Pn	01 08 05.4	+1.7
MSNA				eS	Sn	01 10 12.9	-6.2
MSNA				AML	AML	01 11 42.5	
	comp=Z,13nm,0.5s						
LSZ	**Lusaka**	**12.27**	**62**	eP	Pn	01 08 06.8	+1.2
LSZ				eS	Sn	01 10 16.4	-6.1
ELIM	**Elim**	**13.33**	**170**	eP	Pn	01 08 20.9	+1.0
ELIM				eS	Sn	01 10 40.9	-7.3
ELIM				AML	AML	01 12 37.5	
	comp=Z,72nm,0.7s						
SOE	**Somerset East**	**13.56**	**148**	eP	Pn	01 08 25.2	+2.0
SOE				eS	Sn	01 10 47.6	-6.4
SOE				AML	AML	01 12 55.0	
	comp=Z,9.3nm,0.8s						
GRM	**Grahamstown**	**14.52**	**146**	eP	Pn	01 08 39.3	+3.0
GRM				eS	Sn	01 11 10.4	-7.1
GRM				AML	AML	01 13 36.0	
	comp=Z,6.7nm,0.6s						
POGA	**Pongola**	**14.56**	**117**	eP	Pn	01 08 39.7	+2.9
POGA				eS	Sn	01 11 13.3	-5.1
POGA				AML	AML	01 12 59.9	
	comp=Z,6.7nm,0.6s						

*IDC **01** 01:10:46.0±5.7, 36°.81N×71°.71E, h124km±43km, mb3.2/4, mb1 3.3/9, mb1mx3.1/28, mbtmp3.2/9, Error ellipse: s-maj=54.9km s-min=28.6km az=164.0*
*ISCJB **01** 01:10:48.8±0.4, 37°.13N±0°.03×71°.71E±0°.06, h147km±7km, mb3.3/4, Error ellipse: s-maj=8.1km s-min=4.7km az=9.9*
*NEIC **01** 01:10:49.8±0.8, 37°.09N×71°.76E, h143km±9km, mb3.5/2, Error ellipse: s-maj=14.4km s-min=8.0km az=133.0*
*NNC **01** 01:10:57.1±5.8, 37°.68N×71°.62E, h181km±54km, mb2.7, mpv4.2, Error ellipse: s-maj=52.5km s-min=26.9km az=17.0*
ISC 01 01:10:49.8±0.4**,37°.13N**±0°.03×**71°.73E**±0°.07**,h141**km±7km**, n43,σ0.89**/57**,mb3.3**/4**,7C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.30**	**177**	⇑P	**Pn**	**01 11 40.2**	**-0.6**
CEP				S	**Sn**	**01 12 20.0**	**-0.1**
KBL	**Kabul**	**3.38**	**221**	ePn	**Pn**	**01 11 41.6**	**-0.1**
KBL				eSg	**Sn**	**01 12 21.8**	**-0.1**
CHCP	**Chirah Chowk**	**3.69**	**160**	P	**Pn**	**01 11 45.4**	**-0.3**
KSH	**Kashi**	**4.10**	**53**	⇑Pn	**Pn**	**01 11 47.1**	**-4.0**
KSH				Sn	**Sn**	**01 12 26.4**	**-12**
KSH				smax			
	comp=N,490nm,0.4s						
KSH				smax			
	comp=E,390nm,0.4s						
AML	**Almayashu**	**5.22**	**16**	P	**Pn**	**01 12 06.8**	**+0.9**
	SNR=574						
AML	**Almayashu**	**5.22**	**16**	ePn	**Pn**	**01 12 06.9**	**+1.0**
	comp=E,166nm,0.4s						
UCH	**Uchtor**	**5.53**	**22**	P	**Pn**	**01 12 10.7**	**+0.8**
	SNR=84						
UCH	**Uchtor**	**5.53**	**22**	ePn	**Pn**	**01 12 10.9**	**+0.9**
	comp=E,54nm,0.6s						
UCH				eSn	**Sn**	**01 13 11.5**	**-1.0**
KZA	**Kyzart**	**5.64**	**28**	P	**Pn**	**01 12 11.9**	**+0.4**
	SNR=18						
EKS2	**Erkin-Say**	**5.74**	**15**	P	**Pn**	**01 12 13.9**	**+1.0**
	SNR=27						
EKS2	**Erkin-Say**	**5.74**	**15**	ePn	**Pn**	**01 12 13.9**	**+1.0**
	comp=E,37nm,0.2s						
EKS2				eSn	**Sn**	**01 13 17.2**	**-0.6**
AAK	**Ala-Archa**	**5.89**	**20**	P	**Pn**	**01 12 15.9**	**+1.0**
	SNR=43						
AAK	**Ala-Archa**	**5.89**	**20**	P	**Pn**	**01 12 15.7**	**+0.8**
	comp=E,0.2nm,0.3s,baz=166,slow=6.2,SNR=128						
AAK				S	**Sn**	**01 13 20.8**	**-0.6**
	comp=E,0.0nm,0.3s,baz=308,slow=24,SNR=9.0						
AAK	**Ala-Archa**	**5.89**	**20**	ePn	**Pn**	**01 12 16.1**	**+1.1**
	comp=E,41nm,0.4s						
AAK				eSn	**Sn**	**01 13 25.4**	**+4.0**
KK31	**Karatay Array**	**6.04**	**352**	⇓P	**Pn**	**01 12 17.3**	**+0.5**
	comp=E,12nm,0.3s,baz=170,slow=12,SNR=103						
KK31				S	**Sn**	**01 13 21.9**	**-2.9**
	comp=E,18nm,0.3s,baz=179,slow=22,SNR=18						
KBK	**Karagaybulak**	**6.05**	**23**	P	**Pn**	**01 12 18.0**	**+1.0**
	SNR=11						
ULHL	**Ulahol**	**6.18**	**33**	P	**Pn**	**01 12 19.2**	**+0.4**
	SNR=24						
CHMS	**Chumysh**	**6.30**	**21**	P	**Pn**	**01 12 21.1**	**+0.7**
	SNR=18						
USP	**Ospenovka**	**6.49**	**18**	P	**Pn**	**01 12 22.8**	**0.0**
	SNR=27						
TKM2	**Tokmak 2**	**6.50**	**26**	⇑P	**Pn**	**01 12 23.7**	**+0.7**
	comp=E,13nm,0.6s						
TKM2				⇓S	**Sn**	**01 13 34.3**	**-1.7**
	comp=E,3.6nm,0.8s						
TKM2	**Tokmak 2**	**6.50**	**26**	P	**Pn**	**01 12 23.2**	**+0.2**
	SNR=24						
TKM2	**Tokmak 2**	**6.50**	**26**	ePn	**Pn**	**01 12 23.4**	**+0.4**
	comp=E,20nm,0.6s						
DDI	**Dehra Dun**	**8.59**	**140**	ex	**Sn**	**01 14 26.5**	**-0.1**
MK31	**Makanchi Array**	**12.44**	**36**	⇑P	**Pn**	**01 13 41.7**	**-0.1**
	comp=E,0.4nm,0.5s,baz=227,slow=14,SNR=5.8						
MK31	**Makanchi Array**	**12.44**	**36**	ePn	**Pn**	**01 13 42.0**	**+0.2**
MKAR	**Makanchi Array**	**12.44**	**36**	P	**Pn**	**01 13 41.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=227,slow=16,SNR=5.6						
KURK	**Kurchatov**	**14.45**	**18**	⇓P	**Pn**	**01 14 10.5**	**+3.0**
	comp=E,5.1nm,1.6s						
KURK	**Kurchatov**	**14.45**	**18**	P	**Pn**	**01 14 03.3**	**-4.2**
	comp=E,0.0nm,0.3s,baz=204,slow=11,SNR=4.7						
KURK	**Kurchatov**	**14.45**	**18**	ePn	**Pn**	**01 14 07.7**	**+0.2**
	comp=E,1.9nm,0.8s						
AB31	**Akbulak array**	**14.83**	**328**	⇑P	**Pn**	**01 14 12.6**	**+0.3**
	comp=E,0.4nm,0.3s,baz=148,slow=15,SNR=28						
AB31				⇓S	**Sn**	**01 16 43.8**	**-13**
	comp=E,0.7nm,0.4s,baz=145,slow=22,SNR=7.9						
ABKAR	**Akbulak array**	**14.83**	**328**	ePn	**Pn**	**01 14 12.6**	**+0.3**
	comp=E,0.9nm,0.3s						
VOSK	**Vostochnaya**	**15.60**	**358**	⇑P	**Pn**	**01 14 20.1**	**-1.7**
	comp=E,1.7nm,0.8s						
BVA0	**Borovoye Array**	**15.92**	**357**	⇑P	**Pn**	**01 14 26.4**	**+0.6**
	comp=E,0.1nm,0.8s,baz=170,slow=11,SNR=7.2						
BVAR	**Borovoye Array**	**15.92**	**357**	P	**Pn**	**01 14 25.2**	**-0.6**
	comp=E,0.1nm,0.3s,baz=171,slow=12,SNR=6.9						
BVAR				S	**S**	**01 17 18.3**	**-4.7**
	comp=E,0.1nm,0.3s,baz=168,slow=24,SNR=3.1						
AKTK	**Aktyubinsk**	**16.54**	**328**	P	**Pn**	**01 14 34.0**	**+0.7**
AKTK				S	**S**	**01 17 29.4**	**-8.0**
AKTO	**Aktyubinsk**	**16.54**	**328**	⇓P	**Pn**	**01 14 33.8**	**+0.4**
	comp=E,0.5nm,1.1s						
AKTO				⇓S	**S**	**01 17 30.9**	**-6.5**
	comp=E,0.3nm,0.8s						
AKTO	**Aktyubinsk**	**16.54**	**328**	P	**Pn**	**01 14 34.0**	**+0.7**
	comp=E,0.3nm,0.3s,baz=116,slow=13,SNR=3.3						
AKTO				S	**S**	**01 17 29.4**	**-8.0**
	comp=E,0.1nm,0.3s,baz=60,slow=23,SNR=1.4						
ZAA0	**Zalesovo Array**	**19.10**	**24**	ePn	**Pn**	**01 15 02.5**	**-1.3**
ZALV	**Zalesovo Beam**	**19.10**	**24**	P	**P**	**01 15 02.1**	**+0.7**
	comp=E,1.0nm,0.3s,baz=216,slow=11,SNR=16						
SONM	**Songino Array**	**27.50**	**56**	P	**P**	**01 16 22.9**	**+0.2**
	comp=E,0.5nm,0.8s,mb3.2,baz=256,slow=10,SNR=2.2						
ARCES	**ARCESS Array B**	**40.79**	**337**	P	**P**	**01 18 18.0**	**+1.3**
	comp=E,2.5nm,0.9s,mb3.8,baz=97,slow=7.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**66.31**	**269**	P	**P**	**01 21 21.3**	**-2.0**
	comp=E,0.6nm,1.1s,mb3.4,baz=52,slow=4.8,SNR=5.3						
YKA	**Yellowknife Ar**	**80.59**	**3**	P	**P**	**01 22 45.6**	**-0.5**
	comp=E,0.1nm,0.5s,mb2.8,baz=351,slow=5.6,SNR=4.7						

IDC 01 01:18:27.5±1.5**,2°.09N**×**127°.64E,h0km,mb3.9**/5**, mb1 4.1**/5**,mb1mx3.7**/19**,mbtmp4.0**/5**,Error ellipse: s-maj=136.5km s-min=19.2km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**164**	P	P	01 23 33.2	+0.5
	4.0nm,0.5s,baz=343,slow=11,SNR=44						
ASAR	**Alice Springs**	**26.32**	**167**	P	P	01 24 04.9	-0.3
	0.7nm,0.5s,baz=346,slow=7.2,SNR=8.1						
STKA	**Stephens Creek**	**36.29**	**160**	P	P	01 25 32.6	-0.2
	3.4nm,0.7s,baz=328,slow=7.0,SNR=5.1						
MKAR	**Makanchi Array**	**59.41**	**325**	P	P	01 28 32.4	+0.4
	0.5nm,0.4s,baz=117,slow=7.8,SNR=8.6						
KURK	**Kurchatov**	**63.60**	**328**	P	P	01 28 59.9	-0.3
	0.5nm,0.5s,baz=129,slow=6.2,SNR=5.6						

*IDC **01** 01:38:57.6±0.9, 3°.57S×139°.76E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.2/14, mbtmp4.2/10, ML4.9/1, MS3.2/7, Ms1 3.2/7, ms1mx3.0/19, Error ellipse: s-maj=31.5km s-min=19.5km az=102.0*
*NEIC **01** 01:39:06.6±2.1, 3°.70S×139°.56E, h68km±20km, mb4.4/2, Error ellipse: s-maj=17.2km s-min=15.9km az=79.0*
*ISCJB **01** 01:39:07.8±1.0, 3°.73S±0°.05×139°.5E±0°.1, h96km±10km, mb3.9/10, Error ellipse: s-maj=17.5km s-min=7.9km az=6.6*
*DJA **01** 01:39:09, 3°.70S×139°.65E, h77km, mb4.9/5*
ISC 01 01:39:08.3±1.0**,3°.77S**±0°.05×**139°.4E**±0°.1**,h82**km±10km**, n42,σ1.04**/40**,mb3.9**/10**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.89**	**339**	P	**Pn**	**01 39 38.7**	**-0.1**
MMPI	**Merauke**	**4.77**	**168**	P	**Pn**	**01 40 21.3**	**+3.6**
TLE	**Tual**	**6.87**	**254**	P	**Pn**	**01 40 52.0**	**+5.5**
	102nm,1.0s,0.7nm						
SWI	**Sorong**	**8.61**	**289**	P	**Pn**	**01 41 16.6**	**+6.4**
	24nm,0.8s,493nm						
COEN	**Coen**	**10.79**	**160**	eP	**Pn**	**01 41 39.7**	**-0.2**
COEN	**Coen**	**10.79**	**160**	eP	**Pn**	**01 41 40.0**	**+0.2**
	311nm,0.6s						
COEN	**Coen**	**10.79**	**160**	P	**Pn**	**01 41 40.1**	**+0.2**
	222nm,0.6s						
KAKA	**Kakadu**	**11.22**	**217**	eP	**Pn**	**01 41 46.4**	**+0.6**
	229nm,0.6s						
KAKA				eS	**Sn**	**01 43 48.1**	**-1.4**
KAKA	**Kakadu**	**11.22**	**217**	ePn	**Pn**	**01 41 45.8**	**0.0**
	516nm,0.6s						
KAKA				eSn	**Sn**	**01 43 48.2**	**-1.3**
KAKA	**Kakadu**	**11.22**	**217**	P	**Pn**	**01 41 46.0**	**+0.2**
WRAB	**Tennant Creek**	**16.80**	**197**	ePn	**Pn**	**01 42 57.9**	**-0.5**
	36nm,0.6s						
WRAB				eSn	**Sn**	**01 46 03.8**	**-0.8**
WRAB	**Tennant Creek**	**16.80**	**197**	P	**Pn**	**01 42 58.9**	**+0.5**
	62nm,0.8s						
WRA	**Warramunga Arr**	**16.81**	**197**	P	**Pn**	**01 42 58.1**	**-0.4**
	4.8nm,0.3s,baz=16,slow=14,SNR=39						
WRA				S	**S**	**01 45 56.6**	**-14**
	0.9nm,0.3s,baz=15,slow=23,SNR=2.3						
CTA	**Charters Tower**	**17.55**	**158**	P	**Pn**	**01 43 11.2**	**+3.6**
	0.6nm,0.3s,baz=316,slow=12,SNR=4.0						
CTA				LR	LR	01 50 32.7	
	comp=Z,80nm,19.2s,baz=229,slow=40						
FITZ	**Fitzroy Crossi**	**19.59**	**222**	eP	**Pn**	**01 43 32.0**	**-0.1**
	18nm,0.3s						
FITZ				eS	**S**	**01 47 01.1**	**-5.7**
FITZ	**Fitzroy Crossi**	**19.59**	**222**	P	**Pn**	**01 43 31.9**	**-0.1**
	1.1nm,0.3s,baz=46,slow=9.0,SNR=23						
FITZ				S	**S**	**01 47 01.9**	**-4.9**
	4.5nm,0.3s,baz=164,slow=11,SNR=9.6						
FITZ				LR	LR	01 51 47.9	
	comp=Z,85nm,20.7s,baz=30,slow=38						
FITZ	**Fitzroy Crossi**	**19.59**	**222**	eP	**Pn**	**01 43 32.4**	**+0.3**
FITZ				S	**S**	**01 47 01.9**	**-4.9**
FITZ				LR	LR	01 51 47.9	
FITZ	**Fitzroy Crossi**	**19.59**	**222**	P	**Pn**	**01 43 31.6**	**-0.5**
ASAR	**Alice Springs**	**20.47**	**194**	P	**P**	**01 43 40.6**	**+1.2**
	16nm,0.6s,baz=26,slow=9.7,SNR=68						
ASAR				S	**S**	**01 47 24.3**	**+0.2**
	3.2nm,0.6s,baz=14,slow=17,SNR=4.2						
MBWA	**Marble Bar**	**25.76**	**226**	eP	**P**	**01 44 35.5**	**+4.0**
MBWA	**Marble Bar**	**25.76**	**226**	P	**P**	**01 44 36.3**	**+4.8**
STKA	**Stephens Creek**	**28.03**	**176**	P	**P**	**01 44 56.7**	**+5.0**
	1.0nm,0.5s,mb3.6,baz=332,slow=17,SNR=2.6						
STKA				LR	LR	01 56 50.8	
	comp=Z,76nm,20.6s,baz=23,slow=38						
NWAO	**Narrogin (SRO)**	**35.64**	**213**	LR	LR	02 02 54.5	
	comp=Z,98nm,19.0s,baz=329,slow=40						
PSI	**Prapat**	**40.96**	**279**	P	**P**	**01 46 46.1**	**+2.9**
	2.4nm,0.6s,mb4.2,baz=32,slow=9.5,SNR=2.0						
KSRS	**Korea Array**	**42.38**	**346**	P	**P**	**01 46 53.8**	**-0.7**
	1.2nm,0.6s,mb3.8,baz=158,slow=8.8,SNR=6.3						
KSRS				LR	LR	02 02 50.6	
	comp=Z,17nm,18.1s,baz=130,slow=34						
CMAR	**Chiang Mai Arr**	**45.55**	**300**	P	**P**	**01 47 21.9**	**+1.8**
	1.1nm,0.7s,mb3.7,baz=123,slow=6.9,SNR=6.8						
CMAR				LR	LR	02 05 33.8	
	comp=Z,16nm,21.1s,baz=175,slow=35						
PETK	**Petropavlovsk-**	**58.74**	**13**	P	**P**	**01 48 56.1**	**-1.3**
	1.6nm,0.8s,mb4.1,baz=202,slow=7.4,SNR=1.8						
PETK				LR	LR	02 08 48.6	
	comp=Z,18nm,21.9s,baz=96,slow=31						
MKAR	**Makanchi Array**	**71.03**	**322**	P	**P**	**01 50 17.7**	**+0.4**
	1.1nm,0.6s,mb3.9,baz=95,slow=8.2,SNR=9.8						
ZALV	**Zalesovo Beam**	**73.18**	**330**	P	**P**	**01 50 29.0**	**-1.0**
	0.5nm,0.5s,mb3.6,baz=97,slow=9.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**73.18**	**330**	P	**P**	**01 50 29.0**	**-1.0**
BVAR	**Borovoye Array**	**80.56**	**325**	P	**P**	**01 51 11.8**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=92,slow=5.0,SNR=4.9						
KDAK	**Kodiak Island**	**81.68**	**30**	P	**P**	**01 51 16.1**	**-1.2**
	2.8nm,0.5s,mb4.4,baz=300,slow=2.5,SNR=6.9						
ABKAR	**Akbulak array**	**85.96**	**320**	eP	**P**	**01 51 39.5**	**+0.1**
	0.9nm,0.7s,mb3.8						
YKA	**Yellowknife Ar**	**100.70**	**27**	P	Pdif	01 52 44.7	-2.6
	0.3nm,0.9s,baz=281,slow=4.3,SNR=4.2						
GERES	**GERESS Array B**	**115.69**	**323**	PKP	PKPdf	01 57 41.5	+0.4
	0.2nm,0.5s,baz=93,slow=2.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**137.19**	**285**	PKhKP		01 58 11.8	
	0.4nm,0.8s,baz=62,slow=3.4,SNR=4.7						
TORD				PKP	PKPdf	01 58 23.7	+0.7
	1.4nm,0.8s,baz=75,slow=1.9,SNR=8.1						
TORD	**Torodi Ar. Bea**	**137.19**	**285**	PKP	PKPdf	01 58 23.7	+0.7
KIC	**Kosan Boka**	**144.18**	**276**	ePKP2	PKPdf	01 58 34.7	-1.0
	22nm,0.7s						
DBIC	**Dimbokro**	**144.28**	**276**	PKP	PKPdf	01 58 35.4	-0.5
	12nm,0.6s,baz=92,slow=2.8,SNR=36						
TIC	**Toumodi**	**144.44**	**276**	ePKP2	PKPdf	01 58 35.7	-0.5
	70nm,1.1s						
LIC	**Lamto**	**144.47**	**275**	ePKP2	PKPdf	01 58 35.7	-0.5
	58nm,1.0s						
CPUP	**Villa Florida**	**145.98**	**153**	PKPbc	PKPbc	01 58 40.2	+0.9
	1.3nm,0.5s,baz=203,slow=4.0,SNR=6.1						

MAN 01 01:57:41,20°.26N×122°.22E,h10km,mb5.6,ML4.6,MS4.9, Philippine Islands region

IDC 01 02:12:38.6±1.8**,2°.96S**×**147°.46E,h0km,mb3.6**/4**, mb1 3.9**/4**,mb1mx3.6**/16**,mbtmp3.6**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.7**/22**,Error ellipse: s-maj=105.5km s-min=30.2km az=125.0,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.19**	**216**	P	P	02 17 26.9	+1.0
	1.5nm,0.7s,baz=42,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.40**	**211**	P	P	02 17 59.8	+0.9
	0.9nm,0.7s,baz=45,slow=7.6,SNR=7.9						
FITZ	**Fitzroy Crossi**	**26.15**	**233**	P	P	02 18 13.4	-1.4
	1.2nm,0.9s,baz=74,slow=15,SNR=2.1						
FITZ				LR	LR	02 27 34.9	
	comp=Z,71nm,20.5s,baz=263,slow=34						
YKA	**Yellowknife Ar**	**96.28**	**28**	P	P	02 26 08.5	-0.3
	0.2nm,0.7s,baz=270,slow=4.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**144.67**	**289**	PKP	PKPdf	02 32 18.4	0.0
	0.5nm,1.0s,baz=101,slow=1.5,SNR=2.6						

*ISCJB **01** 02:16:30.8±0.5, 40°.13N±0°.03×27°.61E±0°.03, h10km±5km, Error ellipse: s-maj=5.0km s-min=4.0km az=37.0*
*DDA **01** 02:16:30.4, 40°.12N×27°.61E, h18km±1km, Md2.9*
*ISK **01** 02:16:30.6, 40°.12N×27°.58E, h10km, MD2.6*
*CSEM **01** 02:16:31.0±0.1, 40°.12N×27°.59E, h12km, MD2.6, Error ellipse: s-maj=1.6km s-min=1.2km az=48.0*
ISC 01 02:16:31.1±0.4**,40°.12N**±0°.03×**27°.61E**±0°.04**,h13**km±5km**, n28,σ0.42**/42**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNT	**Bandirma**	**0.33**	**46**	ePG	**Pg**	**02 16 37.7**	**-0.2**
BNT				eSG	**Sg**	**02 16 42.8**	**+0.3**
BALY	**Balya**	**0.38**	**179**	i P	**Pg**	**02 16 38.7**	**-0.1**
BALY				i S	**Sg**	**02 16 44.5**	**+0.6**
BALY	**Balya**	**0.38**	**179**	i P	**Pg**	**02 16 38.7**	**-0.1**
BALY				i S	**Sg**	**02 16 44.5**	**+0.6**
KCT	**Karacabey**	**0.59**	**76**	ePG	**Pg**	**02 16 42.8**	**+0.1**
KCT	**Karacabey**	**0.59**	**76**	ePg	**Pg**	**02 16 42.8**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.65**	**330**	ePG	**Pg**	**02 16 43.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.65**	**330**	ePg	**Pg**	**02 16 43.8**	**0.0**
SART	**Tekirdag**	**0.65**	**330**	i P	**Pg**	**02 16 43.7**	**-0.1**
SART				i S	**Sg**	**02 16 52.8**	**+0.4**
SART	**Tekirdag**	**0.65**	**330**	i P	**Pg**	**02 16 43.7**	**-0.1**
SART				i S	**Sg**	**02 16 52.8**	**+0.4**
LPK	**Lapseki**	**0.69**	**291**	ePG	**Pg**	**02 16 44.0**	**-0.7**
LPK				eSG	**Sg**	**02 16 53.8**	**0.0**
LPK	**Lapseki**	**0.69**	**291**	ePg	**Pg**	**02 16 44.0**	**-0.6**
LPK				eSg	**Sg**	**02 16 53.8**	**0.0**
MFT	**Murefte**	**0.71**	**339**	ePG	**Pg**	**02 16 45.1**	**+0.2**
MFT	**Murefte**	**0.71**	**339**	ePg	**Pg**	**02 16 45.1**	**+0.2**
DURS	**Dursunbey**	**0.85**	**128**	i P	**Pg**	**02 16 47.0**	**-0.6**
DURS				i S	**Sg**	**02 16 58.4**	**-0.1**
DURS	**Dursunbey**	**0.85**	**128**	i P	**Pg**	**02 16 47.0**	**-0.5**
DURS				i S	**Sg**	**02 16 58.4**	**-0.2**
DST	**Dursunbey**	**0.94**	**123**	ePG	**Pg**	**02 16 49.5**	**+0.2**
DST	**Dursunbey**	**0.94**	**123**	ePg	**Pg**	**02 16 49.5**	**+0.2**
AYVA	**Ayvalik**	**1.08**	**221**	i P	**Pb**	**02 16 51.2**	**-0.4**
AYVA				i S	**Sb**	**02 17 06.5**	**+0.8**
AYVA	**Ayvalik**	**1.08**	**221**	i P	**Pb**	**02 16 51.2**	**-0.4**
AYVA				i S	**Sb**	**02 17 06.5**	**+0.9**
BOZC	**Bozcaada**	**1.23**	**257**	i P	**Pn**	**02 16 53.1**	**-0.9**
BOZC				i S	**Sb**	**02 17 09.9**	**0.0**
CTKS	**Kestanelik-??a**	**1.30**	**31**	ePN	**Pn**	**02 16 54.9**	**-0.1**
CTKS	**Kestanelik-??a**	**1.30**	**31**	ePn	**Pn**	**02 16 54.9**	**-0.1**
GADA	**Gvkgeada**	**1.31**	**273**	ePN	**Pn**	**02 16 55.2**	**+0.1**
GADA	**Gvkgeada**	**1.31**	**273**	ePn	**Pn**	**02 16 55.2**	**+0.1**
DEMI	**Demirci**	**1.38**	**141**	i P	**Pn**	**02 16 55.5**	**-0.5**
DEMI				i S	**Sn**	**02 17 14.5**	**+0.4**
DEMI	**Demirci**	**1.38**	**141**	i P	**Pn**	**02 16 55.5**	**-0.5**
DEMI				i S	**Sn**	**02 17 14.5**	**+0.4**
EDRB	**Edirne**	**1.84**	**339**	ePN	**Pn**	**02 17 03.1**	**+0.7**
EDRB	**Edirne**	**1.84**	**339**	ePn	**Pn**	**02 17 03.1**	**+0.7**

*IDC **01** 02:32:41.3±0.5, 50°.62N×177°.60W, h0km, mb4.7/29, mb1 4.8/30, mb1mx4.8/32, mbtmp4.7/30, ML3.9/1, MS4.3/24, Ms1 4.3/24, ms1mx4.1/35, Error ellipse: s-maj=16.4km s-min=10.8km az=156.0*
*GCMT **01** 02:32:46.7±0.2, 50°.54N×177°.58W, h23km±1km, MW5.1/93, Moment Tensor Solution. s58,c78; s93,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.16; $M_{\theta\theta}$5.96±.14; $M_{\phi\phi}$-3.74±.13; $M_{r\theta}$0.91±.19; $M_{\theta\phi}$-0.71±.11; $M_{\phi r}$-2.00±.23; Best double couple: $M_0$5.63500×10^{16} NP1:ϕ_s54.00000°, δ61.00000°, λ-159.00000°. NP2: ϕ_s313.00000°, δ72.00000°, λ-31.00000°. Principal axes: T 6.1500, Plg7.0000°, Azm6.0000°; N -1.0300, Plg54.0000°, Azm106.0000°; P -5.1200, Plg34.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 02:32:46.7±1.2, 50°.73N×177°.72W, h27km±8km, mb5.1/172, ML5.0(AEIC) Error ellipse: s-maj=5.9km s-min=2.8km az=185.0*
*MOS **01** 02:32:46.3±1.0, 50°.78N×177°.70W, h33km, mb5.2/124, MS4.2/28, Error ellipse: s-maj=7.2km s-min=4.0km az=93.2*
*ISCJB **01** 02:32:47.5±0.1, 50°.73N±0°.03×177°.64W±0°.02, h46km, mb5.0/273, MS4.3/50, Error ellipse: s-maj=4.3km s-min=1.9km az=178.5*
*BGS **01** 02:32:47.8±1.9, 50°.73N×177°.72W, h33km, mb5.0*
*BJI **01** 02:32:48.5, 51°.30N×178°.32W, h33km, mB5.1/29, mb5.0/48, Ms4.7/39, Ms7 4.3/39*
*SZGRF **01** 02:32:55.4, 51°.82N×179°.14W, h54km, mb5.2, MS4.1, Andreanof Islands, Aleutian Islands, United States*
*DJA **01** 02:33:05, 50°.52N×178°.28W, h175km, mb4.9/16*
ISC 01 02:32:49.5±0.1**,50°.79N**±0°.03×**177°.65W**±0°.02**,h48**km**, h48**km±2.0km**:pP-P,n779,σ0.90**/797**,mb5.0**/273**,MS4.3**/50**, 83C-86D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	1.25	28	P	Pn	02 33 08.6	-1.9
ADK				S	Sn	02 33 27.2	+1.0
GSTR	Great Sitkin T	1.64	37	ePn	Pn	02 33 14.9	-0.9
GSTR				eSn	Sn	02 33 37.9	+2.2
ATKA	Atka Island	2.58	55	P	Pn	02 33 26.1	-2.6
ATKA				S	Sn	02 33 56.8	-2.0
SMY	Shemya	5.48	294	P	Pn	02 34 08.1	-0.4
SMY				S	Sn	02 35 13.1	+2.9
NIKO	Nikolski	5.87	65	P	Pn	02 34 11.5	-2.3
OKFG	Magazine Ridge	6.54	63	P	Pn	02 34 22.0	-1.1
OKFG				S	Sn	02 35 36.4	+0.1
UNV	Unalaska Valle	7.48	62	P	Pn	02 34 34.5	-1.4
SPIA	Saint Paul Isl	7.74	31	P	Pn	02 34 40.5	+1.0
AKGG	Akutan Green G	7.89	60	P	Pn	02 34 40.4	-1.1
AKUT	Akutan	7.99	61	ePn	Pn	02 34 42.7	-0.1
AKUT				eSn	Sn	02 36 09.2	-2.5
FALS	False Pass	9.53	59	P	Pn	02 35 03.0	-0.9
SDPT	Sand Point	11.28	60	ePn	Pn	02 35 24.8	-3.1
SDPT				eSn	Sn	02 37 20.7	-12
GAMB	Gambell	13.40	11	ePn	Pn	02 35 57.1	+0.4
	217nm,1.3s						
PET	Petropavlovsk	14.78	288	eP	Pn	02 36 14.6	-0.7
PET				eS	Sn	02 38 54.9	-2.8
PET				pmax	pmax		
	comp=Z,200nm,17.5s						
PET				pmax	pmax		
	comp=Z,84nm,1.2s						
PET				MLR	MLR		
	comp=Z,800nm,19.0s						
PET				MLR	MLR		
	comp=Z,1µm,19.0s						
PEA0B	Petropavlovsk-	15.36	288	ePn	Pn	02 36 22.1	-0.7
PETK	Petropavlovsk-	15.36	288	P	Pn	02 36 21.0	-1.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	15.36	288	Pn	Pn	02 36 21.0	-1.8
	comp=Z,0.5nm,0.3s,baz=87,slow=12,SNR=24						
TNA	Tin City	15.64	15	ePn	Pn	02 36 26.5	+0.1
	comp=Z,68nm,1.0s						
OHAK	Old Harbor	15.64	56	ePn	Pn	02 36 20.6	-5.9
OHAK				eSn	Sn	02 39 10.3	-8.2
SVW2	Sparrevohn	16.01	41	ePn	Pn	02 36 31.0	-0.1
KDAK	Kodiak Island	16.15	55	Pn	Pn	02 36 27.0	-6.0
	comp=Z,1µm,0.5s,SNR=64						
KDAK	Kodiak Island	16.15	55	eP	Pn	02 36 27.6	-5.4
KDAK				e		02 39 32.4	
KDAK				pmax	pmax		
	comp=Z,110nm,0.5s						
KDAK	Kodiak Island	16.15	55	Pn	Pn	02 36 27.4	-5.5
	comp=Z,15nm,0.3s,baz=256,slow=6.8,SNR=100						
KDAK				Sn	Sn	02 39 29.6	-1.3
	comp=Z,1.4nm,0.3s,baz=322,slow=19,SNR=6.3						
KDAK				LR	LR	02 42 55.1	
	comp=Z,2µm,20.9s,baz=16,slow=38						
KDAK	Kodiak Island	16.15	55	ePn	Pn	02 36 27.6	-5.3
	comp=Z,110nm,0.5s						
KDAK				eSn	Sn	02 39 32.4	+1.5
SKR	Severo-Kuril's	16.59	280	eP	Pn	02 36 27.5	-11
SKR				e		02 39 31.0	
SKR				pmax	pmax		
	comp=E,60nm,0.8s						
SKR				pmax	pmax		
	comp=Z,60nm,0.8s						
SKR				pmax	pmax		
	comp=Z,1µm,2.0s						
SKR				MLR	MLR		
	comp=N,1µm,20.0s						
SKR				MLR	MLR		
	comp=E,2µm,20.0s						
SKR				MLR	MLR		
	comp=Z,1µm,20.0s						
TTA	Tatalina	16.85	36	eP	Pn	02 36 41.1	-0.6
RSO	Redoubt South	16.96	46	ePn	Pn	02 36 42.1	-0.9
PPLA	Purkeypile	18.30	39	eP	Pn	02 36 59.8	+0.3
	comp=Z,167nm,0.8s						
SEW	Seward	18.37	49	eP	Pn	02 36 56.4	-4.0
	comp=Z,37nm,0.6s						
CHUM	Lake Minchumin	18.76	36	eP	Pn	02 37 04.2	-0.8
	comp=Z,82nm,0.7s						
BILL	Bilibino	19.02	341c	iP	Pn	02 37 07.4	-0.7
BILL				iS	S	02 40 40.0	0.0
BILL				pmax	pmax		
	comp=Z,433nm,1.2s						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s						
BILL	Bilibino	19.02	341	eP	Pn	02 37 07.6	-0.6
	comp=Z,309nm,1.0s						
PMR	Palmer	19.02	44	eP	Pn	02 37 06.5	-1.7
PMR				eS	S	02 40 38.0	-2.2
KTH	Kantishna Hill	19.12	38	eP	Pn	02 37 07.6	-1.8
	comp=Z,224nm,0.8s						
TRF	Thorofare Moun	19.33	39	eP	Pn	02 37 09.4	-2.4
	comp=Z,255nm,1.0s						
MID	Middleton Isla	19.72	52	eP	Pn	02 37 13.2	-3.3
MID				pmax	pmax		
	comp=Z,86nm,0.6s						
MID	Middleton Isla	19.72	52	eP	Pn	02 37 13.2	-3.2
	comp=Z,86nm,0.6s						
MCK	McKinley	19.99	39	eP	Pn	02 37 15.3	-4.4
MCK				eS	S	02 40 58.8	-0.7
MCK				pmax	pmax		
	comp=Z,101nm,0.8s						
MCK	McKinley	19.99	39	ePn	Pn	02 37 15.3	-4.3
	comp=Z,101nm,0.8s						
MCK				eS	S	02 40 58.8	-0.8
SEY	Seymchan	20.17	318c	eP	P	02 37 19.0	-0.5
DIV	Divide	20.41	47	eP	P	02 37 21.4	-0.8
	comp=Z,52nm,0.6s						
DIV				eS	S	02 41 03.9	-3.9
BMRM	Bremner River	20.91	48	eP	P	02 37 27.5	-0.1
	comp=Z,143nm,1.0s						
BMRM				eS	S	02 41 12.6	-5.2
COLA	College	20.94	36	eP	P	02 37 27.5	-0.4
COLA				pmax	pmax		
	comp=Z,22nm,0.6s						
COLA	College	20.94	36	eP	P	02 37 27.5	-0.4
	comp=Z,22nm,0.6s						
PAX	Paxson	21.12	42	eP	P	02 37 29.8	0.0
COLD	Coldfoot	21.40	29	eP	P	02 37 32.1	-0.6
	comp=Z,131nm,0.9s,mb5.3						
MENT	Mentasta	21.86	43	eP	P	02 37 37.3	-0.5
PNL	Peninsula	23.25	53	eP	P	02 37 53.0	+0.6
	comp=Z,80nm,0.7s,mb5.3						
EGAK	Eagle	23.53	40	eP	P	02 37 52.9	-2.1
	comp=Z,48nm,0.8s,mb5.0						
DAWY	Dawson	24.05	42	eP	P	02 37 58.3	-1.4
HYT	Haines Junctio	24.30	50	eP	P	02 38 00.9	-1.1
SKAG	Skagway	25.30	54	eP	P	02 38 12.2	+1.1
	comp=Z,20nm,0.8s,mb4.7						
SIT	Sitka	25.36	59	eP	P	02 38 12.7	+1.0
SIT				pmax	pmax		
	comp=Z,61nm,0.7s,mb5.2						
SIT	Sitka	25.36	59	eP	P	02 38 12.7	+0.9
	comp=Z,60nm,0.7s,mb5.2						
YSS	Yuzh-Sakhalins	26.11	277	eP	P	02 38 18.5	-0.1
YSS				eS	S	02 42 43.0	-3.5
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=E,500nm,18.0s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.2						
YSS	Yuzh-Sakhalins	26.11	277	eP	P	02 38 18.7	+0.1
	comp=Z,70nm,1.2s,mb5.1						
CRAG	Craig	26.76	62	eP	P	02 38 27.0	+2.7
	comp=Z,82nm,1.0s,mb5.2						
ASAJ	Asahikawa	27.44	272	P	P	02 38 29.2	-1.4
ASAJ				pmax	pmax		
	comp=Z,21nm,0.8s						
ASAJ	Asahikawa	27.44	272	P	P	02 38 29.1	-1.4
	comp=Z,21nm,0.8s,mb4.7,baz=234,slow=32,SNR=5.6						
INK	Inuvik	27.53	34	eP	P	02 38 29.8	-1.4
INK				e		02 41 48.7	
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	Inuvik	27.53	34	P	P	02 38 29.3	-1.9
	comp=Z,5.4nm,0.6s,mb4.4,baz=250,slow=8.3,SNR=46						
INK	Inuvik	27.53	34	eP	P	02 38 29.8	-1.4
	comp=Z,14nm,0.9s,mb4.6						
INK				ePcP	PcP	02 41 48.7	+0.9
DLBC	Dease Lake	28.08	56	P	P	02 38 38.0	+1.8
	comp=Z,11nm,0.9s,mb4.5,baz=286,slow=7.6,SNR=19						
DLBC				LR	LR	02 50 27.2	
	comp=Z,1µm,19.6s,MS4.5,baz=277,slow=38						
DLBC	Dease Lake	28.08	56	eP	P	02 38 38.2	+2.0
ERM	Erimo	28.13	267	eP	P	02 38 36.6	-0.2
ERM				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.8						
ERM	Erimo	28.13	267	eP	P	02 38 36.6	-0.2
	comp=Z,28nm,1.2s,mb4.8						
YAK	Yakutsk	30.35	312	eP	P	02 38 54.2	-2.1
YAK				ePPP		02 40 01.1	
YAK				e		02 41 57.0	
YAK				eS	S	02 43 50.6	-2.3
YAK				eSSS		02 45 34.0	
YAK				e		02 49 27.3	
YAK				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,13nm,1.2s						
YAK				smax			
	comp=N,108nm,1.9s						
YAK				smax			
	comp=E,22nm,0.9s						
YAK				MLR	MLR		
	comp=Z,506nm,18.0s,MS4.2						
YAK				MLR	MLR		
	comp=N,285nm,18.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,453nm,19.0s,MS4.2						
YAK	Yakutsk	30.35	312	eP	P	02 38 54.9	-1.4
	comp=E,36nm,0.9s,mb5.1						
TIXI	Tiksi	31.51	331	eP	P	02 39 05.0	-1.3
TIXI				eS	S	02 44 09.8	-1.0
TIXI				pmax	pmax		
	comp=Z,31nm,2.1s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,350nm,17.0s,MS4.1						
TIXI	Tiksi	31.51	331	eP	P	02 39 05.4	-1.0
	comp=Z,14nm,1.1s,mb4.7						
KLR	Kul'dur	32.05	287	⇑iP	P	02 39 06.2	-5.1
KLR				e	pP	02 39 20.0	-3.8
KLR				eS	S	02 44 17.5	-2.1
KLR				e		02 46 19.5	
KLR				pmax	pmax		
	comp=E,38nm,1.2s						
KLR				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.2						
KLR				MLR	MLR		
	comp=Z,600nm,13.0s,MS4.5						
CLNS	Chul'man	33.57	303	eP	P	02 39 22.8	-1.7
CLNS				e*PP	pP	02 39 35.4	-1.7
CLNS				e		02 40 36.2	
CLNS				e		02 42 01.2	
CLNS				eS	S	02 44 42.1	-1.1
CLNS				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
CLNS				pmax	pmax		
	comp=E,14nm,0.9s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.9s						
CLNS				smax			
	comp=N,92nm,15.5s						
CLNS				smax			
	comp=E,119nm,14.8s						
CLNS				MLR	MLR		
	comp=E,128nm,17.0s,MS4.0						
CLNS				MLR	MLR		
	comp=N,206nm,18.0s,MS4.0						
CLNS				MLR	MLR		
	comp=Z,193nm,18.0s,MS3.9						
MJAR	Matsushiro Arr	34.42	263	P	P	02 39 31.1	-1.1
	comp=Z,4.4nm,0.6s,mb4.6,baz=49,slow=7.4,SNR=25						
MJAR				PcP	PcP	02 42 05.8	-0.9
	comp=Z,0.6nm,0.3s,baz=95,slow=1.6,SNR=5.4						
MJAR				LR	LR	02 51 07.5	
	comp=Z,315nm,20.1s,MS4.0,baz=70,slow=32						
MAJO	Matsushiro	34.42	263	eP	P	02 39 31.5	-0.6
MAJO				pmax	pmax		
	comp=Z,69nm,1.7s,mb5.3						
MAJO	Matsushiro	34.42	263	eP	P	02 39 31.5	-0.7
	comp=Z,69nm,1.7s,mb5.3						
MAT	Matsushiro	34.42	263	P	P	02 39 31.2	-0.9
MAT				S	S	02 44 57.0	+0.3
YKA	Yellowknife Ar	35.11	46	P	P	02 39 36.9	-0.9
YKA						02 40 55.4	
YKA						02 42 11.9	
YKA	Yellowknife Ar	35.11	46	P	P	02 39 36.8	-1.0
	comp=Z,3.9nm,0.4s,mb4.7,baz=282,slow=8.4,SNR=93						
YKA				PP	PP	02 40 55.3	-2.5
	comp=Z,5.1nm,1.0s,baz=282,slow=8.0,SNR=3.7						
YKA				PcP	PcP	02 42 11.9	+3.7
	comp=Z,2.6nm,0.8s,baz=288,slow=3.1,SNR=6.6						
YKA				ScP	ScP	02 45 59.1	+9.5
	comp=Z,0.5nm,0.7s,baz=276,slow=3.2,SNR=3.5						
YKA				LR	LR	02 56 16.2	
	comp=Z,36nm,19.6s,MS3.1,baz=15,slow=40						
A05A	Maple Falls	35.12	71	⇑P	P	02 39 38.3	+0.3
	baz=35						
GNW	Green Mountain	35.29	73	eP	P	02 39 40.0	+0.5
	comp=Z,9.1nm,0.8s,mb4.8						
E03A	Lebam	35.30	75	⇑P	P	02 39 40.2	+0.7
	baz=35						
MBW	Mount Baker	35.33	71	P	P	02 39 40.3	+0.5
MDJ	Mudanjiang	35.39	281	P	P	02 39 38.7	-1.7
MDJ				sP	sP	02 39 51.2	-7.5
MDJ				PP	PP	02 40 59.8	-1.4
MDJ				PcP	PcP	02 42 11.6	+2.2
MDJ				S	S	02 45 12.3	+0.8
MDJ				sS	sS	02 45 26.2	-6.5
MDJ				PcS	PcS	02 45 56.3	0.0
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,62nm,4.5s						
MDJ				LR	LR		
	comp=N,340nm,34.8s,MS4.0						
MDJ				LR	LR		
	comp=E,240nm,34.8s,MS4.0						
MDJ				LR	LR		
	comp=Z,350nm,34.8s,MS3.9						
JCW	Jim Creek	35.56	72	eP	P	02 39 43.1	+1.3
B06A	Marblemount	35.69	71	⇓P	P	02 39 43.3	+0.4
	baz=36						
RPW	Rockport	35.70	71	eP	P	02 39 44.9	+1.9
D05A	Enumclaw	35.97	74	⇓P	P	02 39 45.4	+0.1
	baz=36,SNR=7.7						
A07A	Ashnola River,	36.12	70	⇓P	P	02 39 46.8	+0.2
	baz=36,SNR=47						
TDL	Tradedollar La	36.21	75	P	P	02 39 52.0	+4.6
LON	Longmire	36.28	74	eP	P	02 39 50.0	+2.0
LON				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
LON	Longmire	36.28	74	eP	P	02 39 50.0	+2.0
	comp=Z,14nm,0.8s,mb5.0						
F04A	Amboy	36.29	76	⇓P	P	02 39 48.3	+0.3
	baz=36						
WPW	White Pass	36.46	74	P	P	02 39 54.6	+5.0
PNT	Penticton	36.46	69	P	P	02 39 49.6	+0.1
B07A	Winthrop	36.53	71	⇑P	P	02 39 50.1	0.0
	baz=36,SNR=21						
G04A	Mulino	36.60	77	⇑P	P	02 39 51.4	+0.7
	baz=36						
D06A	Cle Elum	36.66	73	⇑P	P	02 39 51.4	+0.2
	baz=36,SNR=5.9						
ETW	Entiat	36.78	72	eP	P	02 39 53.3	+1.0
A08A	Turner Farm, O	36.82	69	⇓P	P	02 39 52.4	-0.2
	baz=37,SNR=27						
E06A	Yakima	36.88	74	⇑P	P	02 39 53.4	+0.3
	baz=37						
C07A	Waterville	36.91	72	⇓P	P	02 39 53.2	-0.1
	baz=37,SNR=8.0						
EBG	Ellensburg	36.96	73	P	P	02 39 54.4	+0.6
H04A	Detroit Lake	37.03	77	⇑P	P	02 39 54.5	+0.1
	baz=37,SNR=7.8						
B08A	Colville Reser	37.05	70	⇑P	P	02 39 54.3	-0.2
	baz=37,SNR=38						
D07A	Quincy	37.19	72	⇑P	P	02 39 54.9	-0.8
	baz=37						
A09A	Danville	37.22	69	⇓P	P	02 39 56.0	+0.1
	baz=37,SNR=24						
C08A	Higginbotham F	37.48	71	⇑P	P	02 39 57.5	-0.6
	baz=37						
E07A	Sunnyside	37.56	73	⇑P	P	02 39 58.6	-0.2
	baz=37						
HUMO	Hull Mountain	37.62	81	eP	P	02 40 08.0	+8.5
G06A	Carlson Farm,	37.72	76	⇓P	P	02 39 59.7	-0.5
	baz=38						
B09A	Rice	37.73	70	⇑P	P	02 40 00.0	-0.2
	baz=38,SNR=14						
RSW	Rattlesnake Hi	37.80	73	eP	P	02 40 01.7	+0.9
A10A	Northport	37.83	69	⇓P	P	02 40 00.8	-0.2
	baz=38,SNR=9.1						
F07A	Phinny Hill Vi	37.83	74	⇑P	P	02 40 01.3	+0.2
	baz=38,SNR=6.7						
HAWA	Hanford	37.83	73	eP	P	02 40 02.0	+0.9
	comp=Z,22nm,0.6s,mb5.1						
OD2	Odessa Site #2	37.86	71	P	P	02 40 00.9	-0.5
D08A	Wollman Farm,	37.89	72	⇑P	P	02 40 01.4	-0.2
	baz=38,SNR=5.8						
H06A	Lindquist Farm	38.15	76	⇑P	P	02 40 04.6	+0.8
	baz=38,SNR=8.4						
YBH	Yreka Blue Hor	38.24	82	eP	P	02 40 05.9	+1.2
YBH				pmax	pmax		
	comp=Z,12nm,0.9s						
YBH	Yreka Blue Hor	38.24	82	eP	P	02 40 05.9	+1.3
	comp=Z,12nm,0.9s,mb4.6						
D09A	Jones Farm, Ri	38.26	72	⇓P	P	02 40 04.5	-0.3
	baz=38						
G07A	Ruggs Ranch, H	38.30	75	⇓P	P	02 40 05.2	+0.1
	baz=38						
B10A	Chitwood Farm,	38.33	69	⇓P	P	02 40 05.5	+0.2
	baz=38,SNR=5.4						
CN2	Changchun	38.38	282	eP	P	02 40 04.5	-1.3
CN2				esP	sP	02 40 19.2	-5.0
CN2				eS	S	02 45 55.5	-1.5
CN2				eSS	SS	02 48 34.1	-13
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,600nm,21.0s,MS4.5						
CN2				LR	LR		
	comp=E,500nm,21.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,22.0s,MS4.3						
NEW	Newport	38.41	69	eP	P	02 40 05.8	-0.2
NEW				pmax	pmax		
	comp=Z,36nm,0.6s						
NEW	Newport	38.41	69	eP	P	02 40 05.8	-0.1
	comp=Z,36nm,0.6s,mb5.3						
EDM	Edmonton	38.47	61	eP	P	02 40 06.5	+0.1
CBIJ	Chichi jima	38.51	247	LR	LR	02 52 12.1	
	comp=Z,431nm,21.8s,MS4.2,baz=78,slow=30						
A11A	Hall Mountain,	38.54	68	⇓P	P	02 40 06.8	-0.2
	baz=38,SNR=25						
E09A	Wood Farm, Sta	38.62	72	⇑P	P	02 40 07.2	-0.5
	baz=38						
G08A	Pilot Rock	38.72	75	⇑P	P	02 40 08.3	-0.3
	baz=39,SNR=7.9						
B11A	Sandpoint	38.78	69	⇓P	P	02 40 08.8	-0.2
	baz=39						
LNOR	Lincton Mounta	38.84	73	eP	P	02 40 12.0	+2.3
K05A	Summer Lake	38.85	79	⇓P	P	02 40 10.6	+0.9
	baz=39						
D10A	Wagner Farm, O	38.88	71	⇓P	P	02 40 09.5	-0.4
	baz=39,SNR=25						
BOD	Bodaibo	38.91	308	⇑iP	P	02 40 08.7	-1.4
BOD				e		02 45 59.5	
BOD				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
A12A	Yaak River Ran	38.97	68	⇓P	P	02 40 10.7	0.0
	baz=39						
I07A	Izee	39.00	77	⇑P	P	02 40 11.2	+0.3
	baz=39,SNR=12						
HIA	Hailar	39.18	293	eP	P	02 40 11.7	-0.7
HIA				pmax	pmax		
	comp=Z,54nm,0.8s						
HIA	Hailar	39.18	293	eP	P	02 40 11.7	-0.7
	comp=Z,54nm,0.8s,mb5.3						
B12A	Libby	39.22	68	⇑P	P	02 40 12.5	-0.3
	baz=39						
E10A	Myers Farm, Un	39.26	72	⇑P	P	02 40 13.3	+0.2
	baz=39,SNR=11						
H08A	Prairie City	39.29	75	⇓P	P	02 40 13.3	0.0
	baz=39,SNR=7.9						
F10A	Beach Ranch, E	39.44	73	⇓P	P	02 40 14.3	-0.2
	baz=39,SNR=9.6						
G09A	Cove	39.45	74	⇓P	P	02 40 14.7	0.0
	baz=39,SNR=11						
D11A	Klaveano Farm,	39.45	71	⇓P	P	02 40 13.9	-0.8
	baz=39,SNR=30						
C12B	Naegeli Ranch,	39.65	69	⇓P	P	02 40 16.2	-0.1
	baz=40,SNR=28						
MOD	Modoc	39.66	80	eP	P	02 40 20.5	+4.0
	comp=Z,4.8nm,0.6s,mb4.4						
A13A	Flathead Natio	39.70	67	⇑P	P	02 40 16.3	-0.4
	baz=40						
H09A	Durkee	39.83	75	⇓P	P	02 40 18.6	+0.7
	baz=40						
G10A	Bishop Farm, J	39.84	74	⇓P	P	02 40 17.5	-0.5
	baz=40,SNR=35						
E11A	Bogner Ranch,	39.86	72	⇓P	P	02 40 17.1	-1.0
	baz=40,SNR=10						
B13A	Whitefish	39.93	68	⇑P	P	02 40 18.2	-0.4
	baz=40,SNR=5.9						
WALA	Waterton Lakes	39.93	67	eP	P	02 40 18.4	-0.3
	comp=Z,0.4nm,0.8s						
BMO	Blue Mountains	39.95	74	eP	P	02 40 18.8	-0.1
	comp=Z,6.3nm,0.9s,mb4.3						
RES	Resolute Bay	39.98	24	P	P	02 40 18.0	-0.8
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
RES	Resolute Bay	39.98	24	P	P	02 40 18.0	-0.8
	comp=Z,3.5nm,0.9s,mb4.1,baz=247,slow=12,SNR=18						
RES	Resolute Bay	39.98	24	eP	P	02 40 17.9	-0.9
	comp=Z,5.7nm,0.9s,mb4.3						
BSMT	Bassoo Peak	39.99	69	eP	P	02 40 19.1	0.0
J08A	Circle Bar Ran	40.01	77	⇓P	P	02 40 19.6	+0.1
	baz=40						
D12A	Red Ives Fores	40.03	70	⇑P	P	02 40 19.2	-0.3
	baz=40						
F11A	Grangeville	40.13	72	⇑P	P	02 40 20.3	0.0
	baz=40						
C13A	Hot Springs	40.20	69	⇑P	P	02 40 20.2	-0.6
	baz=40,SNR=20						
E12A	Beaver Dam Sad	40.22	71	⇓P	P	02 40 20.6	-0.4
	baz=40,SNR=30						
A14A	Double T Ranch	40.26	67	⇓P	P	02 40 21.1	-0.3
	baz=40,SNR=40						
G11A	Walters Elk Ra	40.31	73	⇓P	P	02 40 21.4	-0.4
	baz=40,SNR=10						
JTMT	Jette	40.33	69	eP	P	02 40 22.4	+0.4
OHCM	Honcut	40.36	84	eP	P	02 40 25.9	+3.5
KSRS	Korea Array	40.38	272	P	P	02 40 22.2	-0.3
	comp=Z,15nm,0.8s,mb4.8,baz=59,slow=8.2,SNR=51						
KSRS				LR	LR	02 54 31.3	
	comp=Z,213nm,21.3s,MS4.0,baz=57,slow=32						
YBMT	Yellow Bay	40.44	68	eP	P	02 40 23.3	+0.4
J09A	Fry Pan Ranch,	40.46	77	⇑P	P	02 40 23.3	+0.1
	baz=40						
D13A	Huson	40.55	70	⇓P	P	02 40 23.3	-0.5
	baz=40						
SNY	Shenyang	40.60	281	⇓P	P	02 40 23.3	-1.0
SNY				S	S	02 46 24.2	-6.0
SNY				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.6						
SNY				pmax	pmax		
	comp=Z,220nm,3.5s						
SNY				LR	LR		
	comp=N,270nm,19.2s,MS4.3						
SNY				LR	LR		
	comp=E,320nm,16.0s,MS4.3						
SNY				LR	LR		
	comp=Z,320nm,21.2s						
SWMT	Swartz Lake	40.62	69	eP	P	02 40 24.4	+0.1
C14A	Swan Lake	40.64	68	⇑P	P	02 40 23.8	-0.8
	baz=40,SNR=26						
A15A	Johnson Ranch,	40.66	66	⇓P	P	02 40 23.8	-0.8
	baz=40,SNR=8.2						
F12A	Elk City	40.74	72	⇑P	P	02 40 24.8	-0.5
	baz=41,SNR=38						
H11A	Donnelly	40.82	74	⇓P	P	02 40 25.7	-0.4
	baz=41,SNR=9.5						
MSO	Missoula	40.99	70	eP	P	02 40 26.9	-0.5
	comp=Z,12nm,0.5s,mb4.8						
G12A	Big Creek, Yel	41.02	73	⇓P	P	02 40 27.7	0.0
	baz=41,SNR=8.3						
E13A	Victor	41.03	70	⇓P	P	02 40 27.5	-0.3

baz=41,SNR=13
SLMT Seeley Lake 41.05 69 *e*P **P 02 40 27.9 0.0**
B15A Bradely Ranch, 41.07 67 ⇑P **P 02 40 27.7 -0.4**
baz=41,SNR=18
D14A Greenough 41.12 69 ⇓P **P 02 40 27.9 -0.6**
baz=41,SNR=33
D14A ⇓P 02 40 27.9
baz=41,SNR=33
INCN Inchon 41.18 273 *e*P **P 02 40 28.6 -0.5**
comp=Z,15nm,0.6s,mb4.8
I11A Placerville 41.27 75 ⇑P **P 02 40 29.6 -0.2**
baz=41,SNR=12
F13A Darby 41.28 71 ⇓P **P 02 40 28.9 -0.9**
baz=41,SNR=18
C15A Salmond Ranch, 41.31 68 ⇑P **P 02 40 29.7 -0.3**
baz=41,SNR=58
K10A MacKenzie Ranc 41.32 77 ⇑P **P 02 40 29.8 -0.4**
baz=41,SNR=11
A16A West Butte Ran 41.33 66 ⇑P **P 02 40 29.3 -0.9**
baz=41,SNR=17
CHMT Chamberlain Mo 41.35 69 *e*P **P 02 40 30.1 -0.3**
E14A Clinton 41.46 70 ⇓P **P 02 40 30.6 -0.7**
baz=41
PAHR Pah Rah Range 41.47 82 *e*P **P 02 40 32.0 +0.5**
B16A M & M Farms, S 41.52 67 ⇑P **P 02 40 31.1 -0.7**
baz=41,SNR=6.2
MFID Camas Ranch 41.61 75 ⇓P **P 02 40 32.7 +0.1**
baz=42,SNR=6.0
G13A Cobalt 41.70 72 ⇑P **P 02 40 33.0 -0.3**
baz=42,SNR=24
D15A Lincoln 41.72 69 ⇓P **P 02 40 32.9 -0.5**
baz=42,SNR=19
C16A Fuhringer Ranc 41.80 67 ⇑P **P 02 40 33.6 -0.4**
baz=42,SNR=38
CMB Columbia Colle 41.82 85 *e*P **P 02 40 34.9 +0.5**
CMB *e* 02 42 28.0
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.5
CMB Columbia Colle 41.82 85 *e*P **P 02 40 34.9 +0.6**
comp=Z,12nm,1.0s,mb4.5
CMB *e*PcP PcP 02 42 28.0 -1.6
I12A Atlanta 41.84 74 ⇓P **P 02 40 34.6 +0.2**
baz=42,SNR=28
K11A Parker Ranch, 41.84 76 ⇑P **P 02 40 34.4 0.0**
baz=42,SNR=5.6
A17A Triple J Farms 41.85 65 ⇓P **P 02 40 33.8 -0.6**
baz=42,SNR=40
L10A Juniper Basin 41.95 77 ⇓P **P 02 40 35.1 -0.2**
baz=42,SNR=7.5
H13A Challis 41.96 73 ⇑P **P 02 40 34.8 -0.6**
baz=42,SNR=8.6
E15A Deer Lodge 41.96 70 ⇓P **P 02 40 34.9 -0.5**
baz=42,SNR=29
G14A Jackson 42.08 72 ⇓P **P 02 40 36.1 -0.3**
baz=42,SNR=7.8
B17A L&G Farms, Che 42.11 66 ⇑P **P 02 40 35.9 -0.7**
baz=42,SNR=7.8
WAKR Walker 42.14 84 *e*P **P 02 40 41.8 +4.8**
J12A Stokes Ranch, 42.15 75 ⇓P **P 02 40 36.4 -0.6**
baz=42,SNR=8.2
M10A I.L. Ranch, Tu 42.22 78 ⇑P **P 02 40 37.4 -0.1**
baz=42
HRY Holter Researc 42.30 69 *e*P **P 02 40 38.0 -0.1**
D16A Dana Ranch, Ca 42.30 68 ⇓P **P 02 40 37.6 -0.5**
baz=42,SNR=8.3
L11A Cat Creek Ranc 42.34 77 ⇓P **P 02 40 38.4 -0.1**
baz=42,SNR=10.0
F15A Butte 42.35 70 ⇑P **P 02 40 38.5 -0.1**
baz=42,SNR=7.7
A18A Metzger Ranch, 42.35 65 ⇓P **P 02 40 37.8 -0.8**
baz=42
LRM Limekiln Ridge 42.39 70 *e*P **P 02 40 38.5 -0.4**
I13A Wildhorse Cree 42.39 74 ⇑P **P 02 40 38.4 -0.5**
baz=42,SNR=28
HLID Hailey 42.40 74 ⇓P **P 02 40 37.5 -1.5**
baz=42,SNR=21
HLID Hailey 42.40 74 *e*P **P 02 40 39.0 0.0**
comp=Z,8.2nm,0.9s,mb4.4
C17A Wharram Farm, 42.46 67 ⇓P **P 02 40 38.5 -1.0**
baz=42,SNR=12
H14A Leadore 42.47 72 ⇓P **P 02 40 39.3 -0.3**
baz=42,SNR=8.6
E16A East Helena 42.48 69 ⇑P **P 02 40 38.9 -0.8**
baz=42
DLMT Dillon 42.54 71 *e*P **P 02 40 40.8 +0.7**
comp=Z,3.1nm,0.6s,mb4.2
K12A Draper Farm, C 42.61 76 ⇓P **P 02 40 39.9 -0.8**
baz=42,SNR=10.0
J13A Cove Ranch, Pi 42.64 74 ⇑P **P 02 40 40.4 -0.5**
baz=42,SNR=21
B18A Beardsley Farm 42.65 66 ⇓P **P 02 40 40.5 -0.5**
baz=42,SNR=12
MCMT McKenzie Canyo 42.67 72 *e*P **P 02 40 41.6 +0.4**
comp=Z,11nm,0.6s,mb4.8
G15A Dillon 42.71 71 ⇓P **P 02 40 40.8 -0.7**
baz=43,SNR=6.5
D17A Six Diamond Ra 42.75 68 ⇓P **P 02 40 40.8 -0.9**
baz=43,SNR=19
I14A Mackay 42.79 73 ⇓P **P 02 40 40.8 -1.4**
baz=43,SNR=22
L12A House Creek Ra 42.81 76 ⇑P **P 02 40 42.3 0.0**
baz=43,SNR=8.5
EGMT Eagleton 42.85 66 ⇓P **P 02 40 42.1 -0.5**
baz=43,SNR=9.6
EGMT Eagleton 42.85 66 *e*P **P 02 40 41.7 -0.9**
comp=Z,51nm,1.0s,mb5.2
F16A Kennard Place, 42.90 70 ⇓P **P 02 40 42.5 -0.5**
baz=43,SNR=11
NVAR Mina Array Bea 42.90 83 P **P 02 40 42.6 -0.5**
comp=Z,2.8nm,0.8s,mb4.0,baz=279,slow=10,SNR=5.0
NVAR PcP PcP 02 42 33.8 +0.6
comp=Z,0.9nm,0.7s,baz=305,slow=3.2,SNR=2.1
H15A Lima 42.91 72 ⇑P **P 02 40 42.7 -0.4**
baz=43
BOZ Bozeman (W) 42.97 70 ⇓P **P 02 40 43.1 -0.5**
baz=43,SNR=58
BOZ Bozeman (W) 42.97 70 *e*P **P 02 40 43.3 -0.3**
BOZ pmax pmax
comp=Z,13nm,0.6s,mb4.8
BOZ Bozeman (W) 42.97 70 *e*P **P 02 40 43.3 -0.3**
comp=Z,13nm,0.6s,mb4.8
E17A Martinsdale 43.00 69 ⇓P **P 02 40 43.7 -0.2**
baz=43,SNR=13
ALE Alert 43.08 10 P **P 02 40 43.0 -1.1**
comp=Z,187nm,0.6s,mb6.0,SNR=25
G16A Moss Hill, Enn 43.09 71 ⇓P **P 02 40 44.3 -0.2**
baz=43,SNR=24
MTUM Tungsten Hills 43.39 84 *e*P **P 02 40 51.5 +4.4**
QLMT Earthquake Lak 43.52 71 *e*P **P 02 40 48.5 +0.4**
N12A Clover Valley, 43.53 78 *e*P **P 02 40 52.3 +4.2**
comp=Z,18nm,0.9s,mb4.8
M13A Montello 43.78 77 *e*P **P 02 40 53.3 +3.2**
comp=Z,15nm,1.1s,mb4.6
YMR Madison River 43.89 71 *e*P **P 02 40 51.7 +0.6**
comp=Z,21nm,0.8s,mb4.9
FFC Flin Flon 43.90 54 P **P 02 40 50.8 -0.1**
comp=Z,202nm,0.6s,mb6.0,SNR=19
FFC Flin Flon 43.90 54 *e*P **P 02 40 50.4 -0.5**
FFC pmax pmax
comp=Z,24nm,0.8s,mb5.0
FFC Flin Flon 43.90 54 *e*P **P 02 40 50.4 -0.5**
comp=Z,24nm,0.8s,mb5.0
YNR Norris Junctio 44.03 71 *e*P **P 02 40 53.0 +0.8**
comp=Z,19nm,0.9s,mb4.8
N13A Wendover, West 44.04 77 *e*P **P 02 40 55.5 +3.2**
comp=Z,8.9nm,0.8s,mb4.5
GCMT Greycliff 44.06 69 *e*P **P 02 40 52.4 +0.1**
comp=Z,20nm,1.1s,mb4.8
YFT Old Faithful 44.09 71 *e*P **P 02 40 54.7 +2.1**
comp=Z,12nm,0.7s,mb4.8
LKWY Lake 44.28 71 *e*P **P 02 40 55.0 +0.8**
LKWY pmax pmax
comp=Z,17nm,0.7s,mb4.9
LKWY Lake 44.28 71 *e*P **P 02 40 55.0 +0.9**
comp=Z,17nm,0.7s,mb4.9
IMW Indian Meadow 44.33 72 *e*P **P 02 40 54.9 +0.4**
DCID1 Drake Creek 44.34 72 *e*P **P 02 40 56.1 +1.4**
comp=Z,20nm,1.1s,mb4.8
HVU Hansel Valley 44.40 75 *e*P **P 02 40 56.3 +1.2**
HVU pmax pmax
comp=Z,12nm,0.6s,mb4.8
HVU Hansel Valley 44.40 75 *e*P **P 02 40 56.3 +1.2**
comp=Z,12nm,0.6s,mb4.8
RRI2 Red Ridge 44.40 73 *e*P **P 02 40 56.4 +1.3**
comp=Z,8.5nm,0.6s,mb4.7
ISA Isabella 44.49 86 *e*P **P 02 40 57.4 +1.5**
TPAW Teton Pass 44.55 72 *e*P **P 02 40 58.1 +1.9**
comp=Z,41nm,1.6s,mb5.0

REDW Red Top Meadow 44.68 72 *e*P **P 02 40 59.0 +1.7**
SNOW Snow King Moun 44.68 72 *e*P **P 02 40 59.3 +2.0**
comp=Z,9.1nm,0.8s,mb4.7
LOHW Long Hollow 44.69 72 *e*P **P 02 40 57.6 +0.2**
BGU Big Grassy Mou 44.73 77 *e*P **P 02 41 01.3 +3.5**
comp=Z,16nm,1.1s,mb4.8
HWUT Hardware Ranch 45.24 75 *e*P **P 02 41 03.4 +1.6**
comp=Z,8.5nm,0.8s,mb4.6
DUG Dugway 45.29 77 *e*P **P 02 41 02.8 +0.6**
DUG pmax pmax
comp=Z,45nm,1.2s,mb5.2
DUG Dugway 45.29 77 *e*P **P 02 41 02.8 +0.6**
comp=Z,45nm,1.2s,mb5.2
LAO LASA Array 45.60 66 *e*P **P 02 41 04.5 -0.1**
comp=Z,42nm,0.9s,mb5.4
GSC Goldstone 45.77 85 *e*P **P 02 41 08.6 +2.5**
GSC pmax pmax
comp=Z,16nm,0.7s,mb5.1
GSC Goldstone 45.77 85 *e*P **P 02 41 08.6 +2.5**
comp=Z,16nm,0.7s,mb5.1
PDAR Pinedale Array 45.80 72 P **P 02 41 05.6 -0.6**
comp=Z,16nm,0.5s,mb5.2,baz=304,slow=3.3,SNR=42
PDAR LR LR 02 56 43.0
comp=Z,176nm,21.2s,MS4.0,baz=117,slow=32
DGMT Dagmar 45.80 63 *e*P **P 02 41 06.4 +0.2**
comp=Z,38nm,1.0s,mb5.3
FCC Fort Churchill 45.84 46 *e*P **P 02 41 05.6 -0.7**
FCC pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
FCC Fort Churchill 45.84 46 *e*P **P 02 41 05.6 -0.8**
comp=Z,2.3nm,1.3s,mb4.0
NLU North Lily Min 45.89 77 *e*P **P 02 41 10.8 +3.8**
comp=Z,18nm,1.1s,mb4.9
JLU Jordanelle 45.89 76 *e*P **P 02 41 08.9 +1.9**
comp=Z,12nm,0.9s,mb4.8
DAU Daniels Canyon 46.12 76 *e*P **P 02 41 12.5 +3.7**
DAU pmax pmax
comp=Z,40nm,1.3s,mb5.2
DAU Daniels Canyon 46.12 76 *e*P **P 02 41 12.5 +3.7**
comp=Z,40nm,1.3s,mb5.2
BJI Beijing 46.22 283 P **P 02 41 09.4 -0.1**
BJI sP sP 02 41 21.5 -6.6
BJI S **S 02 47 52.1 -0.3**
BJI sS sS 02 48 08.1 -6.0
BJI pmax pmax
comp=Z,31nm,0.7s,mb5.3
BJI LR LR
comp=N,190nm,26.7s,MS4.3
BJI LR LR
comp=E,350nm,22.9s,MS4.3
BJI LR LR
comp=Z,320nm,21.0s,MS4.2
IRK Irkutsk 46.37 304 *e*P **P 02 41 11.0 +0.4**
IRK pmax pmax
comp=Z,21nm,2.1s,mb4.7
MSU Marysvale 46.69 79 *e*P **P 02 41 13.6 +0.3**
MSU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MSU Marysvale 46.69 79 *e*P **P 02 41 13.6 +0.3**
comp=Z,8.7nm,0.8s,mb4.7
TLY Talaya 47.00 303 *e*P **P 02 41 16.5 +1.0**
TLY *e*S **S 02 48 01.7 -1.5**
TLY pmax pmax
comp=Z,18nm,1.5s,mb4.8
TLY MLR MLR
comp=Z,319nm,18.0s,MS4.3
ULN Ulaanbaatar 47.18 297 *e*P **P 02 41 17.0 +0.1**
ULN pmax pmax
comp=Z,23nm,1.0s,mb5.1
ULN Ulaanbaatar 47.18 297 *e*P **P 02 41 17.0 0.0**
comp=Z,23nm,1.0s,mb5.1
SRU San Rafael 47.35 77 *e*P **P 02 41 19.7 +1.3**
SRU pmax pmax
comp=Z,29nm,0.9s,mb5.2
SRU San Rafael 47.35 77 *e*P **P 02 41 19.7 +1.3**
comp=Z,30nm,0.9s,mb5.2
SONM Songino Array 47.56 298 P **P 02 41 20.4 +0.4**
SONM 02 42 48.6
SONM pmax pmax
comp=Z,5.0nm,0.6s
SONM MLR MLR
comp=Z,766nm,20.0s
SONM Songino Array 47.56 298 P **P 02 41 20.4 +0.4**
comp=Z,5.4nm,0.6s,mb4.7,baz=54,slow=8.6,SNR=30
SONM PcP PcP 02 42 48.6 -0.5
comp=Z,2.5nm,0.5s,baz=74,slow=2.7,SNR=5.6
SONM LR LR 03 02 20.4
comp=Z,766nm,20.0s,MS4.7,baz=57,slow=37
RWWY Rawlins 47.84 72 *e*P **P 02 41 23.8 +1.7**
comp=Z,21nm,1.0s,mb5.1
ZAK Zakamensk 47.88 302 ⇓*i*P **P 02 41 22.8 +0.4**
ZAK *e* pP 02 41 35.9 +0.5
ZAK *e* 02 42 48.0
ZAK pmax pmax
comp=Z,13nm,1.3s,mb4.8
TIA Tai'an 47.97 279 P **P 02 41 21.8 -1.4**
RSSD Black Hills 48.31 68 *e*P **P 02 41 24.9 -0.9**
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
RSSD Black Hills 48.31 68 *e*P **P 02 41 24.9 -0.9**
comp=Z,7.6nm,0.6s,mb4.9
MOY Mondy 48.40 305 *e*P **P 02 41 26.6 +0.3**
MOY pmax pmax
comp=Z,31nm,4.0s
HHC Hu-ho-hao-te 48.55 287 *e*P **P 02 41 28.2 +0.5**
HHC pP pP 02 41 38.1 -2.7
HHC sP sP 02 41 42.0 -4.3
HHC PP PP 02 43 20.0 -0.6
HHC ScP ScP 02 46 46.5 +3.1
HHC S **S 02 48 26.1 +0.5**
HHC sS sS 02 48 40.8 -6.7
HHC ScS ScS 02 51 16.1 +0.3
HHC SS SS 02 51 48.3 -7.3
HHC pmax pmax
comp=Z,43nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,130nm,4.1s
HHC LR LR
comp=N,310nm,15.5s,MS4.6
HHC LR LR
comp=E,330nm,15.1s,MS4.6
HHC LR LR
comp=Z,320nm,19.0s,MS4.3
ULM Lac du Bonnet 49.40 57 P **P 02 41 33.1 -0.9**
comp=Z,6.2nm,0.5s,mb4.9,baz=312,slow=8.1,SNR=18
ULM LR LR 03 05 21.5
comp=Z,340nm,18.1s,MS4.4,baz=307,slow=40
SMCO Snowmass 49.50 75 *e*P **P 02 41 36.0 +1.1**
comp=Z,3.3nm,0.5s,mb4.6
NJ2 Nanjing 49.56 273 *e*P **P 02 41 39.4 +3.9**
NJ2 pP pP 02 41 49.4 +0.8
NJ2 sP sP 02 41 53.4 -0.8
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
NJ2 pmax pmax
comp=Z,100nm,5.4s
NJ2 LR LR
comp=N,290nm,17.1s
NJ2 LR LR
comp=E,240nm,23.0s
NJ2 LR LR
comp=Z,390nm,22.8s
BTO Baotou 49.64 288 *e*P **P 02 41 35.5 -0.5**
ISCO Idaho Springs 49.95 73 *e*P **P 02 41 41.3 +3.0**
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ISCO Idaho Springs 49.95 73 *e*P **P 02 41 41.3 +3.0**
comp=Z,6.5nm,0.8s,mb4.7
KBS Kingsbay 50.42 358 *e*P **P 02 41 41.3 -0.1**
KBS pmax pmax
comp=Z,80nm,1.1s,mb5.7
KBS Kingsbay 50.42 358 *e*P **P 02 41 41.3 -0.1**
comp=Z,80nm,1.1s,mb5.7
AGMN Agassiz Refuge 50.52 59 *e*P **P 02 41 41.7 -0.9**
comp=Z,14nm,0.7s,mb5.0
SPB4 Spitsbergen Ar 51.01 356 *e*P **P 02 41 45.4 -0.4**
TUC Tucson 51.52 84 *e*P **P 02 41 50.0 -0.3**
TUC pmax pmax
comp=Z,12nm,0.9s,mb4.8
TUC Tucson 51.52 84 *e*P **P 02 41 50.0 -0.3**
comp=Z,12nm,0.9s,mb4.8
DAG Danmarks Havn 52.01 6 ⇓*i*P **P 02 41 52.5 -0.8**
DAG pmax pmax
comp=Z,13nm,0.8s,mb4.9
DAG Danmarks Havn 52.01 6 ⇓*i*P **P 02 41 52.5 -0.8**
comp=Z,13nm,0.8s,mb4.9

LAZ Ladron 52.43 80 *e*P **P 02 41 59.7 +2.7**
comp=Z,5.6nm,1.0s,mb4.5
ECSD EROS Data Cent 52.84 64 *e*P **P 02 41 58.5 -1.4**
comp=Z,26nm,1.1s,mb5.1
BNM Barren Site 52.91 79 *e*P **P 02 42 02.5 +1.9**
comp=Z,13nm,1.2s,mb4.7
EYMN Ely 53.08 57 *e*P **P 02 42 01.6 0.0**
comp=Z,22nm,0.8s,mb5.2
WHN Wuhan 53.43 275 ⇓P **P 02 42 03.0 -1.4**
WHN pP pP 02 42 17.7 0.0
WHN pmax pmax
comp=Z,75nm,1.2s,mb5.5
WHN LR LR
comp=Z,460nm,19.1s,MS4.5
SUMG Summit 53.69 14 *e*P **P 02 42 06.0 +0.3**
comp=Z,56nm,1.0s,mb5.4
CBKS Cedar Bluff 54.11 71 *e*P **P 02 42 09.2 -0.1**
CBKS pmax pmax
comp=Z,28nm,0.9s,mb5.2
CBKS Cedar Bluff 54.11 71 *e*P **P 02 42 09.2 -0.1**
comp=Z,28nm,0.9s,mb5.2
XAN Xi'an 54.49 282 P **P 02 42 10.9 -1.2**
XAN pP pP 02 42 23.0 -2.4
XAN S **S 02 49 52.9 +5.4**
XAN pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
XAN pmax pmax
comp=Z,18nm,12.2s
XAN LR LR
comp=N,140nm,21.5s
XAN LR LR
comp=E,56nm,28.0s
XAN LR LR
comp=Z,57nm,26.6s
TPUB Ta-pu 54.52 264 *e*P **P 02 42 10.6 -1.9**
comp=Z,51nm,1.1s,mb5.5
ZALV Zalesovo Beam 54.97 314 P **P 02 42 14.1 -1.2**
ZALV 02 43 16.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
ZALV MLR MLR
comp=Z,227nm,20.2s,MS4.2
ZALV Zalesovo Beam 54.97 314 P **P 02 42 14.1 -1.2**
comp=Z,0.8nm,0.5s,mb4.0,baz=46,slow=8.5,SNR=5.5
ZALV PcP PcP 02 43 16.5 -0.1
comp=Z,2.5nm,0.6s,baz=28,slow=6.5,SNR=2.6
ZALV LR LR 03 07 43.3
comp=Z,227nm,20.2s,MS4.2,baz=174,slow=38
ZALV Zalesovo Beam 54.97 314 P **P 02 42 14.1 -1.2**
ZALV PcP PcP 02 43 16.5 0.0
ZALV LR LR 03 07 43.3
NVS Novosibirsk 55.10 316 *e*P **P 02 42 15.7 -0.5**
NVS *e*S **S 02 50 05.3 +10**
NVS *i* 02 52 03.7
NVS pmax pmax
comp=Z,20nm,2.0s,mb4.8
NVS pmax pmax
comp=N,9.0nm,1.9s
MNTX Cornudas Mount 55.33 81 *e*P **P 02 42 17.9 -0.3**
comp=N,12nm,0.9s,mb4.9
COWI Conover 55.49 58 *e*P **P 02 42 18.1 -1.1**
comp=N,15nm,0.6s,mb5.2
SFJD Kangerlussuaq 55.92 22 *e*P **P 02 42 20.9 -1.0**
SFJD pmax pmax
comp=Z,18nm,0.8s,mb5.2
SFJD Kangerlussuaq 55.92 22 *e*P **P 02 42 20.9 -1.1**
comp=Z,18nm,0.8s,mb5.2
SFJD Kangerlussuaq 55.92 22 *i*P **P 02 42 19.9 -2.0**
comp=Z,19nm,0.8s,mb5.2
SCIA State Center 55.93 64 *e*P **P 02 42 21.8 -0.6**
comp=Z,51nm,1.0s,mb5.5
LZH Lanzhou 56.25 287 *e*P **P 02 42 25.2 +0.4**
LZH pP pP 02 42 36.5 -1.6
LZH sP sP 02 42 41.2 -2.4
LZH PcP PcP 02 43 27.8 +6.0
LZH PP PP 02 44 33.0 +2.9
LZH *e*S **S 02 50 03.0 -7.9**
LZH sS sS 02 50 20.5 -13
LZH pmax pmax
comp=Z,35nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,140nm,6.0s
LZH LR LR
comp=N,780nm,13.1s
LZH LR LR
comp=Z,920nm,14.6s,MS5.0
GTA Gaotai 56.46 293 P **P 02 42 26.2 0.0**
GTA pP pP 02 42 35.9 -3.7
GTA sP sP 02 42 40.4 -4.7
GTA PP PP 02 44 33.5 +1.6
GTA S **S 02 50 13.4 -0.3**
GTA sS sS 02 50 29.7 -6.2
GTA pmax pmax
comp=Z,17nm,0.8s,mb5.1
GTA pmax pmax
comp=Z,140nm,6.5s
GTA LR LR
comp=N,340nm,18.7s,MS4.7
GTA LR LR
comp=E,400nm,16.7s,MS4.7
GTA LR LR
comp=Z,230nm,18.4s,MS4.3
JFWS Jewell Farm 56.95 61 *e*P **P 02 42 28.2 -1.4**
JFWS pmax pmax
comp=Z,19nm,0.7s,mb5.2
JFWS Jewell Farm 56.95 61 *e*P **P 02 42 28.2 -1.4**
comp=Z,19nm,0.7s,mb5.2
WMOK Wichita Mounta 57.37 74 *e*P **P 02 42 28.3 -4.4**
WMOK pmax pmax
comp=Z,16nm,1.0s,mb5.0
WMOK Wichita Mounta 57.37 74 *e*P **P 02 42 28.2 -4.4**
comp=Z,16nm,1.0s,mb5.0
SCO Scoresbysund 57.77 9 ⇑*i*P **P 02 42 34.3 -0.7**
SCO pmax pmax
comp=Z,11nm,1.0s,mb4.8
SCO Scoresbysund 57.77 9 ⇑*i*P **P 02 42 34.3 -0.7**
comp=Z,11nm,1.0s,mb4.8
TXAR Lajitas Array 58.02 82 P **P 02 42 35.9 -1.5**
TXAR pmax pmax
comp=Z,5.0nm,0.9s
TXAR MLR MLR
comp=Z,136nm,18.3s
TXAR Lajitas Array 58.02 82 P **P 02 42 35.9 -1.5**
comp=Z,5.4nm,0.9s,mb4.6,baz=296,slow=4.7,SNR=20
TXAR LR LR 03 07 21.9
comp=Z,136nm,18.3s,MS4.1,baz=25,slow=36
KEV Kevo 58.42 350 *e*P **P 02 42 38.7 -0.9**
KEV pmax pmax
comp=Z,18nm,1.0s,mb5.1
KEV Kevo 58.42 350 *e*P **P 02 42 38.7 -0.9**
comp=Z,18nm,1.0s,mb5.0
KEV Kevo 58.42 350 *e*p **P 02 42 37.6 -2.0**
comp=Z,9.8nm,0.8s,mb4.9
GLMI Grayling 58.73 56 *e*P **P 02 42 42.6 +0.5**
comp=Z,42nm,0.6s,mb5.7
ARCES ARCESS Array B 58.79 351 P **P 02 42 41.3 -0.8**
ARCES 02 43 31.7
ARCES pmax pmax
comp=Z,18nm,0.7s
ARCES MLR MLR
comp=Z,157nm,18.4s
ARCES ARCESS Array B 58.79 351 P **P 02 42 41.2 -0.9**
comp=Z,18nm,0.7s,mb5.2,baz=21,slow=7.6,SNR=78
ARCES PcP PcP 02 43 31.7 +0.4
comp=Z,3.4nm,0.6s,baz=28,slow=5.5,SNR=4.4
ARCES LR LR 03 12 34.2
comp=Z,157nm,18.4s,MS4.2,baz=13,slow=41
ARCES ARCESS Array B 58.79 351 P **P 02 42 41.2 -0.9**
ARCES PcP PcP 02 43 31.7 +0.4
ARCES LR LR 03 12 34.2
HDIL Hopedale 59.04 63 *e*P **P 02 42 43.2 -1.1**
comp=Z,90nm,1.0s,mb5.8
LVZ Lovozero 59.19 346 P **P 02 42 44.3 -0.6**
comp=Z,315nm,0.8s,mb6.4,SNR=6.7
LVZ Lovozero 59.19 346 *e*P **P 02 42 43.7 -1.2**
LVZ pmax pmax
comp=Z,57nm,1.0s,mb5.6
CCM Cathedral Cave 59.62 66 *e*P **P 02 42 47.9 -0.4**
CCM pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
CCM Cathedral Cave 59.62 66 *e*P **P 02 42 47.9 -0.4**
comp=Z,5.0nm,0.6s,mb4.7
CD2 Chengdu 59.81 283 P **P 02 42 51.9 +2.1**
CD2 pP pP 02 43 02.0 -1.2
CD2 sP sP 02 43 05.9 -2.7
CD2 S **S 02 50 58.0 +0.4**

CD2 sS sS 02 51 15.0 -5.0
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,50nm,5.3s
CD2 LR LR
comp=N,270nm,17.8s
CD2 LR LR
comp=Z,230nm,20.2s,MS4.3
KURK Kurchatov 59.95 314 P **P 02 42 50.6 +0.2**
comp=Z,78nm,0.5s,mb6.0,SNR=7.4
KURK Kurchatov 59.95 314 *ce*P **P 02 42 50.5 +0.1**
KURK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
KURK Kurchatov 59.95 314 LR LR 03 11 05.9
comp=Z,292nm,20.0s,MS4.4,baz=40,slow=38
KURK Kurchatov 59.95 314 *e*P **P 02 42 50.4 0.0**
comp=Z,6.3nm,0.4s,mb5.0
SCHQ Schefferville 60.01 39 P **P 02 42 50.3 -0.5**
comp=Z,16nm,0.7s,mb5.2,baz=324,slow=6.5,SNR=30
SCHQ LR LR 03 10 42.5
comp=Z,475nm,19.3s,MS4.6,baz=120,slow=38
FVM French Village 60.14 66 *e*P **P 02 42 51.3 -0.6**
FVM pmax pmax
comp=Z,15nm,0.8s,mb5.1
FVM French Village 60.14 66 *e*P **P 02 42 51.3 -0.5**
comp=Z,15nm,0.8s,mb5.1
WMQ Urumqi 60.27 304 *e*P **P 02 42 53.2 +0.5**
WMQ sP sP 02 43 07.6 -4.0
WMQ S **S 02 51 03.0 -0.1**
WMQ sS sS 02 51 18.6 -7.0
WMQ ScS ScS 02 52 37.3 -1.7
WMQ SS SS 02 54 59.5 -0.9
WMQ pmax pmax
comp=Z,15nm,1.1s,mb4.9
WMQ pmax pmax
comp=Z,98nm,3.5s
WMQ LR LR
comp=N,650nm,17.0s,MS4.9
WMQ LR LR
comp=E,370nm,16.0s,MS4.9
WMQ LR LR
comp=Z,360nm,21.0s,MS4.5
MIAR Mount Ida 60.64 70 *e*P **P 02 42 56.6 +1.2**
MIAR pmax pmax
comp=Z,19nm,0.9s,mb5.2
MIAR Mount Ida 60.64 70 *e*P **P 02 42 56.6 +1.2**
comp=Z,19nm,0.9s,mb5.2
OLIL Olney 60.96 63 *e*P **P 02 42 57.6 +0.2**
comp=Z,58nm,0.9s,mb5.7
MK31 Makanchi Array 60.97 309 *e*P **P 02 42 56.6 -0.8**
MKAR Makanchi Array 60.97 309 P **P 02 42 56.5 -0.9**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,254nm,21.0s
MKAR Makanchi Array 60.97 309 P **P 02 42 56.5 -0.9**
comp=Z,2.9nm,0.8s,mb4.5,baz=50,slow=6.2,SNR=13
MKAR LR LR 03 10 48.4
comp=Z,254nm,21.0s,MS4.3,baz=34,slow=37
MKAR Makanchi Array 60.97 309 P **P 02 42 56.5 -1.0**
MKAR LR LR 03 10 48.4
GYA Guiyang 61.11 277 P **P 02 43 01.0 +2.3**
GYA pP pP 02 43 11.8 -0.3
GYA sP sP 02 43 16.7 -0.9
GYA PcP PcP 02 43 44.0 +2.7
GYA PP PP 02 45 18.4 +5.0
GYA ScP ScP 02 47 41.0 +2.5
GYA S **S 02 51 15.2 +0.9**
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,130nm,5.9s
GYA LR LR
comp=N,720nm,19.0s,MS4.9
GYA LR LR
comp=E,560nm,20.2s,MS4.9
GYA LR LR
comp=Z,650nm,19.8s,MS4.8
SOKR Solikamsk 61.50 332 *c i*P **P 02 43 00.7 -0.1**
SOKR S **S 02 51 19.1 +0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
BLO Bloomington 61.55 62 *e*P **P 02 43 01.8 +0.4**
BLO pmax pmax
comp=Z,42nm,0.9s,mb5.6
BLO Bloomington 61.55 62 *e*P **P 02 43 01.8 +0.4**
comp=Z,42nm,0.9s,mb5.6
USIN University of 61.73 64 *e*P **P 02 43 02.8 +0.1**
comp=Z,44nm,0.7s,mb5.7
BVAR Borovoye Array 61.81 321 P **P 02 43 03.3 +0.3**
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BVAR MLR MLR
comp=Z,465nm,20.0s
BVAR Borovoye Array 61.81 321 P **P 02 43 03.3 +0.4**
comp=Z,3.7nm,0.5s,mb4.8,baz=54,slow=6.3,SNR=28
BVAR LR LR 03 12 47.9
comp=Z,465nm,20.0s,MS4.6,slow=39
BRVK Borovoye 61.83 321 *e*P **P 02 43 03.8 +0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
BRVK Borovoye 61.83 321 *e*P **P 02 43 03.8 +0.7**
comp=Z,5.2nm,0.7s,mb4.8
WCI Wyandotte Cave 62.33 63 *e*P **P 02 43 06.8 +0.1**
WCI pmax pmax
comp=Z,19nm,0.8s,mb5.3
WCI Wyandotte Cave 62.33 63 *e*P **P 02 43 06.8 0.0**
comp=Z,19nm,0.8s,mb5.3
SVE Sverdlovsk 62.48 328⇑ *e*P **P 02 43 08.3 +0.9**
SVE *e*S **S 02 51 46.7 +16**
SVE pmax pmax
comp=Z,32nm,1.0s,mb5.4
ACSO Alum Creek Sta 62.77 59 *e*P **P 02 43 10.1 +0.5**
comp=Z,22nm,0.6s,mb5.5
WVT Waverly 62.92 65 *e*P **P 02 43 10.6 -0.1**
WVT pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
WVT Waverly 62.92 65 *e*P **P 02 43 10.6 0.0**
comp=Z,6.1nm,0.8s,mb4.8
ERPA Erie 63.04 56 *e*P **P 02 43 12.0 +0.7**
comp=Z,74nm,1.0s,mb5.8
OXF Oxford 63.13 68 *e*P **P 02 43 10.7 -1.4**
OXF pmax pmax
comp=Z,20nm,0.6s,mb5.4
OXF Oxford 63.13 68 *e*P **P 02 43 10.7 -1.4**
comp=Z,20nm,0.6s,mb5.4
ARU Arti 63.49 329 P **P 02 43 14.5 +0.4**
comp=Z,174nm,0.7s,mb6.3,SNR=11
ARU Arti 63.49 329 *c i*P **P 02 43 14.7 +0.6**
ARU 02 43 49.1
ARU *e* 02 45 31.4
ARU S **S 02 51 47.2 +3.9**
ARU SS SS 02 55 49.6 -0.3
ARU pmax pmax
comp=Z,49nm,1.7s,mb5.4
ARU MLR MLR
comp=Z,245nm,18.0s,MS4.4
ARU Arti 63.49 329 *e*P **P 02 43 14.1 0.0**
comp=Z,16nm,0.6s,mb5.3
PLAL Pickwick Lake 63.58 66 *e*P **P 02 43 15.2 +0.1**
comp=Z,6.6nm,0.6s,mb4.8
LONY Lake Ozonia 63.99 51 *e*P **P 02 43 16.8 -0.8**
comp=Z,11nm,0.8s,mb4.9
JOF Joensuu 64.35 346 *e*P **P 02 43 17.1 -2.6**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.9
JOF Joensuu 64.35 346 *ep* **P 02 43 17.1 -2.6**
comp=Z,11nm,0.8s,mb4.9
QIZ Qiongzhong 64.48 269 P **P 02 43 20.7 -0.4**
QIZ pP pP 02 43 30.9 -3.8
QIZ sP sP 02 43 35.1 -5.0
QIZ pmax pmax
comp=Z,19nm,1.3s,mb5.0
QIZ LR LR
comp=Z,160nm,19.6s,MS4.2
KMI Kunming 64.53 279 P **P 02 43 21.0 -0.4**
KMI pP pP 02 43 32.6 -2.4
KMI sP sP 02 43 37.2 -3.2
KMI PP PP 02 45 41.0 -2.5
KMI S **S 02 51 51.0 -6.2**
KMI sS sS 02 52 14.0 -5.8
KMI SS SS 02 56 08.6 +0.8
KMI pmax pmax
comp=Z,11nm,1.1s,mb4.8
KMI pmax pmax
comp=Z,140nm,3.1s
KMI LR LR
comp=N,180nm,22.2s
KMI LR LR
comp=E,160nm,16.9s
KMI LR LR
comp=Z,160nm,24.0s,MS4.1
NCB Newcomb 64.64 51 *e*P **P 02 43 21.8 -0.1**
comp=Z,6.5nm,0.4s,mb5.0
SWET Sewanee 64.65 65 *e*P **P 02 43 22.2 +0.1**
KLMR Klimovskoe 64.77 341⇑ *i*P **P 02 43 21.7 -0.7**
KLMR *e**PP pP 02 43 34.6 -1.4
KLMR *e* 02 45 42.7
KLMR *e*S **S 02 52 01.1 +2.0**
KLMR pmax pmax
comp=Z,59nm,1.7s,mb5.3
BINY Binghamton 65.05 53 *e*P **P 02 43 24.4 -0.2**
comp=Z,20nm,0.5s,mb5.4
TZTN Tazewell 65.06 62 *e*P **P 02 43 25.1 +0.4**
comp=Z,27nm,1.1s,mb5.2
SSPA Standing Stone 65.20 56 *e*P **P 02 43 26.0 +0.5**
comp=Z,20nm,0.7s,mb5.3
CPCT Cooper Cave 65.30 64 *e*P **P 02 43 27.0 +0.8**
LBNH Lisbon 65.56 49 *e*P **P 02 43 27.8 -0.1**
LBNH pmax pmax
comp=Z,20nm,1.1s,mb5.1
LBNH Lisbon 65.56 49 *e*P **P 02 43 27.8 -0.1**
comp=Z,20nm,1.1s,mb5.1
KAF Kangasniemi 65.84 348 *e*P **P 02 43 26.9 -2.4**
KAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KAF Kangasniemi 65.84 348 *ep* **P 02 43 26.9 -2.4**
comp=Z,8.7nm,0.9s,mb4.8
PKME Peaks-Kenny Pk 66.05 47 *e*P **P 02 43 31.0 +0.1**
comp=Z,12nm,0.9s,mb4.9
ELN Prospectdale 66.13 60 *e*P **P 02 43 31.4 -0.2**
BLA Blacksburg 66.32 60 *e*P **P 02 43 32.8 0.0**
BLA pmax pmax
comp=Z,72nm,1.3s,mb5.5
BLA Blacksburg 66.32 60 *e*P **P 02 43 32.8 0.0**
comp=Z,72nm,1.3s,mb5.5
FINES FINESS Array B 66.52 348 P **P 02 43 32.8 -0.9**
FINES pmax pmax
comp=Z,11nm,0.9s
FINES MLR MLR
comp=Z,122nm,19.8s
FINES FINESS Array B 66.52 348 P **P 02 43 32.8 -0.9**
comp=Z,11nm,0.9s,mb4.9,baz=31,slow=8.9,SNR=25
FINES LR LR 03 16 34.6
comp=Z,122nm,19.8s,MS4.1,baz=154,slow=40
TKM2 Tokmak 2 67.05 310 *e*P **P 02 43 37.9 +0.5**
TKM2 pmax pmax
comp=Z,23nm,1.4s,mb5.0
TKM2 Tokmak 2 67.05 310 *e*P **P 02 43 37.9 +0.5**
comp=Z,23nm,1.4s,mb5.0
USP Ospenovka 67.32 311 P **P 02 43 39.9 +0.8**
SNR=7.9
GOGA Godfrey 67.37 65 *e*P **P 02 43 40.0 +0.5**
GOGA pmax pmax
comp=Z,17nm,0.9s,mb5.1
GOGA Godfrey 67.37 65 *e*P **P 02 43 40.0 +0.4**
comp=Z,17nm,0.9s,mb5.1
KBK Karagaybulak 67.57 310 P **P 02 43 41.6 +0.9**
SNR=5.3
FRU Bishkek 67.59 311 *e*P **P 02 43 39.5 -1.3**
TAOE Nuku Hiva Isla 67.70 139 *e*LR LR 03 04 19.5
comp=Z,96nm,20.6s
AAK Ala-Archa 67.80 311 P **P 02 43 42.3 +0.2**
comp=Z,75nm,0.5s,mb6.0,SNR=5.9
AAK Ala-Archa 67.80 311 P **P 02 43 43.0 +0.8**
SNR=8.1
AAK Ala-Archa 67.80 311 *ce*P **P 02 43 43.1 +1.0**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
AAK Ala-Archa 67.80 311 *e*P **P 02 43 42.8 +0.7**
comp=Z,5.9nm,0.5s,mb4.9
EKS2 Erkin-Say 68.12 311 P **P 02 43 45.1 +0.9**
SNR=5.8
NB2 NORSAR Subarra 68.30 355 P **P 02 43 44.6 -0.3**
comp=Z,46nm,1.2s,mb5.4,baz=6.4,slow=6.5
NOA NORSAR Array B 68.30 355 P **P 02 43 44.5 -0.4**
NOA pmax pmax
comp=Z,11nm,0.8s
NOA MLR MLR
comp=Z,72nm,21.1s
NOA NORSAR Array B 68.30 355 P **P 02 43 44.5 -0.4**
comp=Z,11nm,0.8s,mb5.0,baz=5.4,slow=6.3,SNR=34
NOA LR LR 03 15 39.3
comp=Z,72nm,21.1s,MS3.9,baz=345,slow=38
NOA NORSAR Array B 68.30 355 P **P 02 43 44.5 -0.4**
NOA LR LR 03 15 39.3
LSA Lhasa 68.33 291 *e*P **P 02 43 47.1 +1.5**
AML Almayashu 68.57 311 P **P 02 43 48.5 +1.5**
SNR=6.6
AML Almayashu 68.57 311 *e*P **P 02 43 48.4 +1.5**
comp=Z,6.6nm,0.7s,mb4.7
ABKAR Akbulak array 68.85 324 *e*P **P 02 43 49.1 +0.5**
comp=Z,4.4nm,0.5s,mb4.6
COW Cow Castle Cre 68.96 63 *e*P **P 02 43 52.7 +3.1**
VSU Vasula 69.30 347 *c i*P **P 02 43 50.3 -0.9**
VSU pmax pmax
comp=Z,36nm,1.0s,mb5.3
KSH Kashi 69.44 308 *e*P **P 02 43 56.1 +3.7**
KSH *ep*P pP 02 44 06.7 +0.7
KSH *es*P sP 02 44 10.4 -1.1
KSH *e*PcP PcP 02 44 19.4 +3.9
KSH *e*PP PP 02 46 32.0 +6.2
KSH *e*ScP 02 48 19.1
KSH *e*PcS 02 48 22.0
KSH *e*S S 02 53 00.2 +4.3
KSH *es*S sS 02 53 17.8 -0.9
KSH *e*ScS ScS 02 53 51.1 +1.6
KSH *e*SS SS 02 57 30.3 +7.4
KSH pmax pmax
comp=Z,59nm,1.3s,mb5.4
KSH LR LR
comp=N,270nm,5.2s
KSH LR LR
comp=E,200nm,5.0s
KSH LR LR
comp=Z,310nm,4.8s
NHSC New Hope 69.46 63 *e*P **P 02 43 52.7 +0.1**
comp=Z,115nm,1.3s,mb5.7
MOS Moscow 69.87 340 *e*P **P 02 43 51.2 -3.5**
MOS *e* 02 44 14.8
MOS *e*PPP 02 48 10.7
MOS *e*S S 02 53 08.9 +8.5
MOS pmax pmax
comp=Z,28nm,0.9s,mb5.2
MOS pmax pmax
comp=Z,200nm,2.4s,mb5.6
PMOR Pomariorio Ree 70.50 149 *e*T 04 01 34.7
comp=Z,3.9nm,0.2s
OBN Obninsk 70.68 340 *de*P **P 02 43 59.4 -0.3**
OBN *i* pP 02 44 14.7 +1.3
OBN *i* 02 44 26.4
OBN *e*S S 02 53 13.2 +3.3
OBN pmax pmax
comp=Z,68nm,1.6s,mb5.3
OBN Obninsk 70.68 340 *e*P **P 02 43 59.5 -0.2**
comp=Z,111nm,1.5s,mb5.6
SHL Shillong 70.92 287 *e*P **P 02 44 01.7 +0.1**
MVH1 Achvaich 71.52 4 *e*P **P 02 44 04.5 -0.3**
CHTO Chiang Mai 71.54 277 *e*P **P 02 44 04.3 -1.2**
CHTO pmax pmax
comp=Z,15nm,1.0s,mb4.9
CHTO Chiang Mai 71.54 277 *e*P **P 02 44 04.3 -1.2**
comp=Z,15nm,1.0s,mb4.9
CM31 Chiang Mai Arr 71.80 277 *e*P **P 02 44 06.5 -0.5**
comp=Z,2.7nm,0.4s,mb4.5
CMAR Chiang Mai Arr 71.80 277 P **P 02 44 05.8 -1.3**
CMAR pmax pmax
comp=Z,9.0nm,0.9s
CMAR MLR MLR
comp=Z,125nm,19.1s
CMAR Chiang Mai Arr 71.80 277 P **P 02 44 05.8 -1.2**
comp=Z,8.5nm,0.9s,mb4.7,baz=25,slow=6.6,SNR=32
CMAR LR LR 03 17 16.9
comp=Z,125nm,19.1s,MS4.2,baz=202,slow=37
MCD Coleburn Disti 71.89 3 *e*P **P 02 44 07.4 +0.4**
MDO Dochfour 71.99 4 *e*P **P 02 44 07.5 -0.1**
PPT Papeete 72.40 152 *e*S S 02 53 37.9 +7.5
comp=Z,114nm,29.5s
PPT *e*LR LR 03 05 32.4
comp=Z,228nm,31.5s
PPT *e*T 04 03 57.6
comp=Z,4.9nm,0.2s
PPT Papeete 72.40 152 LR LR 03 12 11.4
comp=Z,350nm,19.1s,MS4.7,baz=327,slow=33
GUN Gumba 72.75 293 *e*P **P 02 44 13.2 +0.6**
comp=Z,84nm,0.6s,mb5.9
MICGM Minsk 72.93 345⇑ *e*P **P 02 44 14.0 +0.8**
MNK Minsk 72.94 345⇑ *e*P **P 02 44 14.0 +0.7**
MUD Monsted U'grnd 72.97 356 *i*P **P 02 44 05.8 -7.6**
MUD pmax pmax
comp=Z,12nm,0.9s,mb4.8
MUD Monsted U'grnd 72.97 356 *i*P **P 02 44 05.8 -7.6**
comp=Z,12nm,0.9s,mb4.8
KKN Kakani 73.19 293 *e*P **P 02 44 15.6 +0.4**
comp=Z,40nm,0.5s,mb5.6
EBH Black Hill 73.22 3 *e*P **P 02 44 14.9 0.0**
EAB Aberfoyle 73.25 4 *e*P **P 02 44 14.5 -0.6**
PKI Pulchoki 73.28 293 *e*P **P 02 44 15.9 +0.1**
comp=Z,20nm,0.6s,mb5.2
PKIN Phulchoki 73.29 293 *e*P **P 02 44 15.4 -0.4**
comp=Z,20nm,0.5s,mb5.3
PKIN Phulchoki 73.29 293 *e*P **P 02 44 15.9 +0.1**
comp=Z,22nm,0.7s,mb5.2
GKN Gorkha 73.41 294 *e*P **P 02 44 16.7 +0.2**
comp=Z,34nm,0.5s,mb5.5
COP Copenhagen 73.56 354 *e*P **P 02 44 07.5 -9.4**
COP pmax pmax
comp=Z,18nm,0.8s,mb5.0
COP Copenhagen 73.56 354 *i*P **P 02 44 07.5 -9.4**
comp=Z,18nm,0.8s,mb5.0
ESY Stoneypath 73.58 3 *e*P **P 02 44 17.0 -0.1**
EAU Auchinoon 73.62 3 *e*P **P 02 44 17.8 +0.6**
DANN Dangsing 73.66 295 *e*P **P 02 44 18.4 +0.5**
comp=Z,83nm,0.8s,mb5.7
VSR Storozhevoye 73.67 337 *e*P **P 02 44 17.5 -0.1**
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,6.0nm,1.2s
VSR pmax pmax
comp=E,4.0nm,0.4s
VORD Divnogorie 73.87 337 *e*P **P 02 44 18.3 -0.5**
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
DZM Mont Dzumac 73.89 195 *e*LR LR 03 07 04.3
comp=Z,364nm,25.0s
BSD Bornholm Skovb 73.95 353 *e*P **P 02 44 10.8 -8.4**
BSD pmax pmax
comp=Z,26nm,1.0s,mb5.1
BSD Bornholm Skovb 73.95 353 *i*P **P 02 44 10.8 -8.4**
comp=Z,26nm,1.0s,mb5.1
SUW Suwalki 74.12 347 *e*P **P 02 44 20.1 -0.1**
ESK Eskdalemuir 74.16 3 *e*P **P 02 44 20.6 +0.2**
ESK AMb AMB 02 44 33.2
comp=Z,60nm,4.1s
ESK Eskdalemuir 74.16 3 *i*P **P 02 44 21.6 +1.2**
KOLN Koldanda 74.19 294 *e*P **P 02 44 21.2 +0.1**
comp=Z,31nm,0.8s,mb5.3
ECK Cauldkaine Hil 74.30 3 *e*P **P 02 44 21.6 +0.3**
GAL1 Galloway 74.55 4 *e*P **P 02 44 22.6 -0.1**
GAL1 AMb AMB 02 44 35.9
comp=Z,55nm,2.3s,mb5.1
XAL Allendale 74.65 3 *e*P **P 02 44 24.0 +0.7**
XDE Dent Fell 74.96 4 *e*P **P 02 44 25.2 +0.1**
DDI Dehra Dun 75.37 300 *ex* **P 02 44 26.0 -1.9**
BSEG Bad Segeberg 75.43 355 *e*P **P 02 44 28.2 +0.4**
comp=Z,50nm,1.2s,mb5.3
BSEG Bad Segeberg 75.43 355 *e*P **P 02 44 28.2 +0.4**
BSEG pmax pmax
comp=Z,50nm,1.2s,mb5.3
AKASG Malin Array Be 76.33 343 P **P 02 44 32.5 -0.5**
comp=Z,2.9nm,0.4s,mb4.6,baz=17,slow=5.6,SNR=40
AKASG LR LR 03 26 05.7
comp=Z,136nm,18.2s,MS4.3,baz=35,slow=42
AKASG Malin Array Be 76.33 343 P **P 02 44 32.5 -0.5**
AKASG LR LR 03 26 05.7
AKBB Malin Array Si 76.33 343 *e*P **P 02 44 33.2 +0.2**
KIEV Kiev 76.34 343 *e*P **P 02 44 32.4 -0.6**
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KIEV Kiev 76.34 343 *e*P **P 02 44 32.4 -0.6**
comp=Z,8.0nm,0.6s,mb4.8
KAKA Kakadu 76.71 230 *e*P **P 02 44 32.3 -3.2**
comp=Z,14nm,0.6s,mb5.1
KAKA *ep*P pP 02 44 47.8 -1.6
KBL Kabul 76.77 309 *e*P **P 02 44 35.3 -0.5**
KBL pmax pmax
comp=Z,31nm,1.0s,mb5.2
KBL Kabul 76.77 309 *e*P **P 02 44 35.3 -0.5**
comp=Z,31nm,1.0s,mb5.2
NRDL Niedersach Rie 76.88 355 *e*P **P 02 44 36.2 +0.1**
comp=Z,20nm,1.1s,mb5.5
HLM1 Long Mynd 76.97 3 *e*P **P 02 44 36.5 -0.1**
KAPI Kappang 77.06 245 P **P 02 44 35.1 -2.5**
comp=Z,3.8nm,0.5s,mb4.6,baz=33,slow=4.7,SNR=3.6
IBBN Ibbenburen 77.18 357 *e*P **P 02 44 38.1 +0.4**
comp=Z,83nm,1.2s,mb5.5
IBBN *ep*P pP 02 44 53.4 +1.8
CTA Charters Tower 77.40 215 P **P 02 44 36.4 -2.8**
CTA pmax pmax
comp=Z,6.0nm,0.9s
CTA Charters Tower 77.40 215 P **P 02 44 36.4 -2.8**
comp=Z,6.2nm,0.8s,mb4.6,baz=193,slow=4.4,SNR=3.7
MCH1 Michaelchurch 77.49 3 *e*P **P 02 44 38.9 -0.5**
MCH1 AMb AMB 02 44 55.3
comp=Z,55nm,1.8s,mb5.2
CLZ Clausthal 77.52 355 *e*P **P 02 44 40.2 +0.6**
comp=Z,48nm,1.2s,mb5.3
CLZ Clausthal 77.52 355 *e*P **P 02 44 40.2 +0.6**
CLZ pmax pmax
comp=Z,48nm,1.2s,mb5.3
WTSB Winterswijk 77.55 357 *e*P **P 02 44 40.2 +0.4**
comp=Z,26nm,1.0s,mb5.1
WTSB Winterswijk 77.55 357 *ex* x 02 44 52.7
comp=Z,28nm,1.1s
HGH Gray Hill 77.86 3 *e*P **P 02 44 42.1 +0.6**
CLL Collm 77.88 353 *e*P **P 02 44 41.2 -0.5**
comp=Z,18nm,1.3s,mb4.8
CLL Collm 77.88 353 *i*P **P 02 44 41.2 -0.5**
CLL *i* pP 02 44 56.6 +1.1
CLL pmax pmax
comp=Z,19nm,1.3s,mb4.9
CLL Collm 77.88 353 *i*P **P 02 44 41.2 -0.5**
comp=Z,19nm,1.3s,mb4.9
CLL *i* pP 02 44 56.6 +1.1
CLL Collm 77.88 353 *i*P **P 02 44 41.2 -0.5**
comp=Z,19nm,1.3s,mb4.9
CLL *es*P sP 02 44 54.0 -6.9
CLL *e* 02 45 09.0
CLL *e*SS SS 02 59 54.0 +24
CLL *e* 03 01 00.0
CLL *e*SSS 03 02 54.0
CLL LmV 03 25 00.0
comp=Z,100nm,19.3s
KSP Ksiaz 78.05 351 *e*P **P 02 44 43.0 +0.4**
KSP Ksiaz 78.05 351 *e*P **P 02 44 42.6 0.0**
BUG Bochum--Univer 78.06 357 *e*P **P 02 44 42.7 0.0**
comp=Z,53nm,1.6s,mb5.2
LVV L'vov 78.07 346 *e*P **P 02 44 42.7 -0.1**
LVV *e* pP 02 45 00.7 +4.1
BRG Berggiesshubel 78.23 353 *e*P **P 02 44 43.5 -0.1**
comp=Z,13nm,1.1s,mb4.8
BRG Berggiesshubel 78.23 353 *e*P **P 02 44 43.5 -0.1**
BRG pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
OJC Ojcow 78.27 349 *e*P **P 02 44 44.0 +0.1**
UPC Upice 78.41 351 *e*P **P 02 44 44.7 +0.1**
UPC *ep*P pP 02 44 55.7 -2.8
KWP Kalwaria Pacla 78.45 347 *e*P **P 02 44 45.3 +0.4**
KWP Kalwaria Pacla 78.45 347 *e*P **P 02 44 45.0 +0.1**
comp=Z,24nm,0.6s,mb5.3
KWP Kalwaria Pacla 78.45 347⇑ *i*P **P 02 44 45.1 +0.2**
DPC Dobruska-Polom 78.54 351 *e*P **P 02 44 45.5 +0.2**
DPC *ep*P pP 02 44 54.9 -4.3
DPC *ex* x 02 45 01.0
DPC AMS AMS 03 21 10.0
comp=Z,100nm,20.6s
UBBA Unterbreizbach 78.56 355 *e*P **P 02 44 45.4 0.0**
comp=Z,31nm,1.7s,mb5.0
MOX Moxa 78.64 354 *e*P **P 02 44 45.9 0.0**
comp=Z,23nm,1.5s,mb4.9
MOX Moxa 78.64 354 *e*P **P 02 44 46.0 +0.1**

comp=Z,15nm,1.3s,mb4.8
MOX *e*pP pP 02 45 01.2 +1.5
MOX Moxa 78.64 354 *e*P **P 02 44 45.9 0.0**
MOX pmax pmax
comp=Z,23nm,1.5s,mb4.9
BEBN Eben Emael 78.75 358 P **P 02 44 47.1 +0.6**
UCC Uccle 78.78 359 P **P 02 44 47.0 +0.4**
HGN Heimansgroeve 78.78 358 *e*P **P 02 44 46.6 0.0**
comp=Z,24nm,1.1s,mb5.0
HGN Heimansgroeve 78.78 358 *e*x pP 02 45 01.5 +1.0
comp=Z,31nm,1.3s
WERD Werda 78.78 354 *e*P **P 02 44 46.8 +0.1**
comp=Z,23nm,1.5s,mb4.9
TANN Tannenbergstha 78.81 353 *e*P **P 02 44 47.0 +0.2**
comp=Z,43nm,2.0s,mb5.0
GUNZ Gunzen 78.87 354 *e*P **P 02 44 47.2 +0.1**
comp=Z,33nm,1.8s,mb5.0
STHS Stebnicka Huta 78.87 348 *e*P **P 02 44 48.8 +1.6**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 78.87 348 *e*P **P 02 44 48.8 +1.6**
comp=Z,7.2nm,0.9s,mb4.6
STHS Stebnicka Huta 78.87 348 *e*P **P 02 44 48.8 +1.6**
MEM Membach 78.93 358 P **P 02 44 48.4 +0.9**
comp=Z,14nm,1.2s,mb4.8
WERN Wernitzgruen 78.94 353 *e*P **P 02 44 47.8 +0.3**
comp=Z,23nm,1.4s,mb4.9
MORC Moravsky Berou 78.97 350 *e*P **P 02 44 48.0 +0.3**
MORC pmax pmax
comp=Z,12nm,1.4s,mb4.6
MORC Moravsky Berou 78.97 350 *e*P **P 02 44 48.0 +0.2**
comp=Z,12nm,1.4s,mb4.6
MORC Moravsky Berou 78.97 350⇑*i*P **P 02 44 47.7 0.0**
NIE Niedzica 78.99 348 *e*P **P 02 44 48.8 +1.0**
PRU Pruhonice 79.06 352 *e*P **P 02 44 48.7 +0.5**
PRU *es*P sP 02 45 03.6 -3.9
PRU AMS AMS 03 24 10.0
comp=Z,100nm,22.3s
SNF Seneffe 79.07 359 P **P 02 44 49.0 +0.8**
comp=Z,14nm,1.7s,mb4.6
BCLA Clavier 79.14 358 P **P 02 44 49.6 +1.0**
comp=Z,18nm,2.0s,mb4.7
KOLS Kolonicke sedl 79.20 347 *e*P **P 02 44 49.6 +0.6**
KOLS pmax pmax
comp=Z,19nm,1.7s,mb4.8
KOLS Kolonicke sedl 79.20 347 *e*P **P 02 44 49.6 +0.6**
comp=Z,19nm,1.7s,mb4.7
KOLS Kolonicke sedl 79.20 347 *e*P **P 02 44 49.6 +0.6**
TNS Taunus Mts 79.23 356 *e*P **P 02 44 49.3 +0.2**
comp=Z,36nm,1.4s,mb5.1
TNS Taunus Mts 79.23 356 *e*P **P 02 44 49.3 +0.2**
TNS pmax pmax
comp=Z,36nm,1.4s,mb5.1
KIV Kislovodsk 79.34 332⇓*e*P **P 02 44 49.8 0.0**
KIV *i* 02 44 58.1
KIV *es*S S 02 54 48.9 +2.4
KIV pmax pmax
comp=Z,12nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.2
KIV Kislovodsk 79.34 332 *e*P **P 02 44 50.9 +1.1**
comp=Z,16nm,0.9s,mb4.9
GIVF Givet 79.47 358 *e*P **P 02 44 50.6 +0.2**
ROTZ Rotzenmuhle 79.47 354 *e*P **P 02 44 50.8 +0.4**
comp=Z,14nm,1.5s,mb4.7
DOU Dourbes 79.47 359 P **P 02 44 51.2 +0.8**
UZH Uzhgorod 79.49 347 *e*P **P 02 44 50.8 +0.2**
UZH *es*S S 02 54 45.0 -3.0
UZH *e* 02 55 41.0
BAIF Baives 79.52 359 *e*P **P 02 44 51.3 +0.6**
comp=Z,38nm,1.0s,mb5.0
BAIF Baives 79.52 359 *e*P **P 02 44 51.3 +0.6**
BAIF pmax pmax
comp=Z,19nm,1.0s,mb5.0
BAIF Baives 79.52 359 *e*P **P 02 44 51.3 +0.6**
comp=Z,19nm,1.0s,mb5.0
VRAC Vranov 79.54 351⇓P **P 02 44 51.7 +0.9**
VRAC Vranov 79.54 351⇓*i*P **P 02 44 51.7 +0.9**
GRA1 Grafenberg Arr 79.61 354 *e*P **P 02 44 51.7 +0.5**
comp=Z,89nm,1.7s,mb5.4
GRA1 *e*pP pP 02 45 06.8 +1.7
GRA1 LR LR
comp=Z,100nm,21.8s,MS4.1
GRF Grafenberg Arr 79.61 354 *e*P **P 02 44 51.7 +0.5**
comp=Z,89nm,1.7s,mb5.4
GRF *e*pP pP 02 45 06.8 +1.7
GRF *e*L 03 24 01.0
comp=Z,95nm,21.8s
GRF Grafenberg Arr 79.61 354 *e*P **P 02 44 51.7 +0.5**
GRF *e**PP pP 02 45 06.8 +1.7
GRF pmax pmax
comp=Z,89nm,1.7s,mb5.4
GRF MLR MLR
comp=Z,100nm,21.8s,MS4.1
GRF Grafenberg Arr 79.61 354 *e*P **P 02 44 51.7 +0.5**
GRF *e**PP pP 02 45 06.8 +1.7
GRF pmax pmax
comp=Z,89nm,1.7s,mb5.4
GRF MLR MLR
comp=Z,100nm,21.8s,MS4.1
TOD Tromm 79.83 356 *e*P **P 02 44 56.2 +3.8**
WLF Walferdange 79.87 357 P **P 02 44 53.9 +1.3**
WLF Walferdange 79.87 357 *e*P **P 02 44 53.2 +0.6**
comp=Z,60nm,1.8s,mb5.2
KECS Kecovo 79.89 348 *e*P **P 02 44 53.9 +1.2**
KECS pmax pmax
comp=Z,12nm,1.8s,mb4.5
KECS Kecovo 79.89 348 *e*P **P 02 44 53.9 +1.2**
comp=Z,12nm,1.8s,mb4.5
KECS Kecovo 79.89 348 *e*P **P 02 44 53.9 +1.2**
TRPA Tarpa 79.94 346⇓*i*P **P 02 44 54.0 +1.0**
KHC Kasperske Hory 80.00 353 *e*P **P 02 44 53.4 +0.1**
comp=Z,19nm,1.4s,mb4.8
KHC Kasperske Hory 80.00 353 *e*P **P 02 44 53.6 +0.3**
KHC *ep*P pP 02 45 01.1 -6.1
KHC *es*P sP 02 45 07.1 -5.5
KHC AMS AMS 03 24 20.0
comp=Z,200nm,20.6s
IAS Iasi 80.01 343 P **P 02 44 54.2 +0.8**
BURAR Bucovina Array 80.02 345⇓P **P 02 44 53.7 +0.2**
BURAR Bucovina Array 80.02 345⇓*i*P **P 02 44 53.7 +0.2**
ZEI Tsey 80.04 330 *e*P **P 02 44 51.9 -1.7**
ZEI pmax pmax
comp=Z,19nm,0.9s,mb5.0
WET Wettzell 80.04 353 *e*P **P 02 44 53.9 +0.4**
comp=Z,27nm,1.9s,mb4.8
WET Wettzell 80.04 353 *e*P **P 02 44 53.9 +0.4**
WET pmax pmax
comp=Z,27nm,1.9s,mb4.8
KOLL Kolacno 80.06 349 *e*P **P 02 44 54.9 +1.3**
KOLL Kolacno 80.06 349 *e*P **P 02 44 54.9 +1.3**
VYHS Vyhne 80.09 349 *e*P **P 02 44 54.1 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
VYHS Vyhne 80.09 349 *e*P **P 02 44 54.1 +0.3**
comp=Z,4.1nm,1.1s,mb4.3
VYHS Vyhne 80.09 349 *e*P **P 02 44 54.1 +0.3**
SMOL Smolenice 80.23 350 *e*P **P 02 44 56.2 +1.6**
SMOL Smolenice 80.23 350 *e*P **P 02 44 56.2 +1.6**
GEC2 GERESS Array S 80.27 352 *e*P **P 02 44 54.7 -0.1**
comp=Z,9.0nm,1.3s,mb4.5
GEC2 GERESS Array S 80.27 352 *e*P **P 02 44 54.7 -0.1**
GEC2 pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
GERES GERESS Array B 80.27 352 P **P 02 44 54.8 0.0**
GERES 02 48 00.0
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,131nm,20.2s
GERES GERESS Array B 80.27 352 P **P 02 44 54.8 0.0**
comp=Z,1.4nm,0.6s,mb4.1,baz=24,slow=5.1,SNR=14
GERES PP PP 02 48 00.0 +3.1
comp=Z,0.4nm,0.6s,baz=31,slow=8.0,SNR=4.1
GERES LR LR 03 25 20.5
comp=Z,131nm,20.2s,MS4.3,baz=98,slow=39
LANF Langenberg 80.50 356 *e*P **P 02 44 56.2 +0.2**
PSZ Piszkesteto 80.52 348 P **P 02 44 57.2 +1.1**
PSZ Piszkesteto 80.52 348 *e*P **P 02 44 56.7 +0.5**
comp=Z,20nm,1.4s,mb4.8
PSZ Piszkesteto 80.52 348⇑*e*P **P 02 44 57.1 +1.0**
PSZ Piszkesteto 80.52 348⇓*i*P **P 02 44 56.8 +0.7**
SOC Sochi 80.55 333*c*/P **P 02 44 56.0 -0.4**
SOC *e**SP sP 02 45 06.7 -9.0
SOC *e* 02 47 59.7
SOC *e*PPP 02 49 52.3
SOC *e*S S 02 54 56.2 -3.0
SOC *e*SSS 03 03 37.0
SOC pmax pmax
comp=Z,14nm,0.9s,mb4.9
LEOM Leova 80.57 342⇓P **P 02 44 57.5 +1.1**
LEOM Leova 80.57 342⇓*i*P **P 02 44 57.5 +1.1**
ZST Bratislava 80.58 350 *e*P **P 02 44 58.0 +1.5**
ZST pmax pmax
comp=Z,12nm,1.5s,mb4.6
ZST Bratislava 80.58 350 *e*P **P 02 44 58.0 +1.5**
comp=Z,12nm,1.5s,mb4.6
ZST Bratislava 80.58 350 *e*P **P 02 44 58.0 +1.5**
STU Stuttgart 80.64 355 *e*P **P 02 44 56.9 +0.1**
comp=Z,17nm,1.1s,mb4.9
EIDS Eidsvold 80.70 208 *e*P **P 02 44 55.7 -1.5**
SIM Simferopol' 80.74 338 P **P 02 44 58.8 +1.4**
SIM S S 02 55 03.7 +2.5
SIM pmax pmax
comp=Z,11nm,0.9s,mb4.8
FLN La Foliniere 80.80 2 *e*P **P 02 44 57.6 0.0**
FLN *e*MLR MLR
comp=Z,158nm,21.0s,MS4.0
FLN La Foliniere 80.80 2 *e*P **P 02 44 57.6 0.0**
FLN LR LR
comp=Z,160nm,21.0s,MS4.3
LDF La Druitiere 80.97 2 *e*P **P 02 44 58.5 -0.1**
comp=Z,28nm,0.7s,mb5.0
LDF La Druitiere 80.97 2 *e*P **P 02 44 58.5 -0.1**
LDF pmax pmax
comp=Z,14nm,0.7s,mb5.0
LDF La Druitiere 80.97 2 *e*P **P 02 44 58.5 -0.1**
comp=Z,14nm,0.7s,mb5.0
CONA Conrad Observa 80.98 351⇑*i*P **P 02 44 59.2 +0.6**
comp=Z,16nm,1.4s,mb4.7,SNR=6.4
BUD Budapest 81.06 349⇑*e*P **P 02 45 00.0 +1.0**
MEZF Maizieres J'vi 81.06 358 *e*P **P 02 44 59.6 +0.6**
comp=Z,28nm,1.0s,mb4.9
MEZF Maizieres J'vi 81.06 358 *e*P **P 02 44 59.6 +0.6**
comp=Z,28nm,1.0s,mb5.2
CDF Champ du Feu 81.09 357 *e*P **P 02 44 59.2 0.0**
FUR Furstenfeldbru 81.13 354 *e*P **P 02 45 00.1 +0.7**
comp=Z,27nm,1.6s,mb4.9
FUR Furstenfeldbru 81.13 354 *e*P **P 02 45 00.1 +0.7**
FUR pmax pmax
comp=Z,27nm,1.6s,mb4.9
ROSF Rostrenen 81.14 4 *e*P **P 02 44 59.7 +0.3**
GRR Gorron 81.16 2 *e*P **P 02 44 59.8 +0.2**
comp=Z,33nm,0.9s,mb5.0
GRR Gorron 81.16 2 *e*P **P 02 44 59.8 +0.2**
GRR pmax pmax
comp=Z,17nm,0.9s,mb5.0
GRR Gorron 81.16 2 *e*P **P 02 44 59.8 +0.2**
comp=Z,16nm,0.9s,mb5.0
SGMF Saint Gilles 81.25 3 *e*P **P 02 45 00.4 +0.4**
comp=Z,28nm,0.8s,mb5.0
SGMF Saint Gilles 81.25 3 *e*P **P 02 45 00.4 +0.4**
SGMF pmax pmax
comp=Z,14nm,0.8s,mb4.9
SGMF Saint Gilles 81.25 3 *e*P **P 02 45 00.4 +0.4**
comp=Z,14nm,0.8s,mb5.0
ECH Echery 81.29 357 *e*P **P 02 44 59.9 -0.3**
THEF They Montfort 81.31 358 *e*P **P 02 45 00.1 -0.3**
VRI Vrincioaia 81.44 343⇓P **P 02 45 02.1 +1.0**
VRI Vrincioaia 81.44 343⇓*i*P **P 02 45 02.1 +1.0**
RJOB Jochberg 81.44 353 *e*P **P 02 45 01.5 +0.4**
comp=Z,9.0nm,1.2s,mb4.6
PLOR Plostina 81.47 343⇑P **P 02 45 02.5 +1.3**
PLOR Plostina 81.47 343⇑*i*P **P 02 45 02.5 +1.3**
HAU Haudompre 81.53 357 *e*P **P 02 45 01.6 +0.1**
HAU *e*MLR MLR
comp=Z,167nm,23.0s,MS4.0
HAU Haudompre 81.53 357 *e*P **P 02 45 01.6 +0.1**
HAU LR LR
comp=Z,170nm,23.0s,MS4.3
QUIF Quistinic 81.56 4 *e*P **P 02 45 01.9 +0.2**
FELD Feldberg im Sc 81.59 356 *e*P **P 02 44 57.5 -4.4**
TLCR 81.69 341⇓P **P 02 45 03.1 +0.7**
TLCR 81.69 341⇓*i*P **P 02 45 03.0 +0.6**
HINF Hinteralfeld 81.70 357 *e*P **P 02 45 02.3 -0.1**
MLR Muntele Rosu 81.95 343⇑P **P 02 45 05.6 +1.8**
MLR Muntele Rosu 81.95 343⇑*i*P **P 02 45 05.6 +1.8**
MOTA Moosalm 81.96 354⇑*i*P **P 02 45 04.3 +0.5**
comp=Z,7.0nm,0.9s,mb4.6
WTTA Wattenberg 82.00 354⇓*i*P **P 02 45 04.8 +0.8**
comp=Z,10nm,0.8s,mb4.8,SNR=5.6
KBA Koelnbreinsper 82.05 352⇑*i*P **P 02 45 05.2 +0.9**
comp=Z,31nm,0.8s,mb5.3,SNR=16
WRA Warramunga Arr 82.10 225 P **P 02 45 01.9 -2.8**
comp=Z,3.4nm,0.7s,mb4.4,baz=35,slow=6.0,SNR=18
WRA LR LR 03 18 32.6
comp=Z,156nm,21.4s,MS4.3,baz=150,slow=34
GNI Garni 82.13 329 *e*P **P 02 45 07.2 +2.4**
GNI pmax pmax
comp=Z,11nm,0.8s
GNI Garni 82.13 329 *e*P **P 02 45 07.2 +2.3**
comp=Z,11nm,0.8s,mb4.8
VOIR 82.16 344 P **P 02 45 06.2 +1.3**
VOIR 82.16 344⇑*i*P **P 02 45 06.8 +1.9**
SOKA Soboth 82.30 351⇑*i*P **P 02 45 06.1 +0.5**
comp=Z,29nm,1.5s,mb5.0
FETA Feichten 82.30 354⇓*i*P **P 02 45 06.2 +0.6**
comp=Z,9.5nm,0.9s,mb4.7,SNR=5.1
HYF Humbligny 82.32 360 *e*P **P 02 45 06.1 +0.4**
PERS Pernice 82.33 351 *e*P **P 02 45 06.2 +0.5**
HARR Harsova 82.34 342⇓P **P 02 45 06.6 +0.7**
HARR Harsova 82.34 342⇓*i*P **P 02 45 06.6 +0.7**
PKSM Moragy 82.36 349⇓*i*P pP 02 45 20.5 +0.6
TIRR Tirgusor 82.47 342 *e*P **P 02 45 06.9 +0.4**
TIRR pmax pmax
comp=Z,20nm,1.0s,mb5.0
TIRR Tirgusor 82.47 342 *e*P **P 02 45 06.9 +0.4**
comp=Z,20nm,1.0s,mb5.0
TIRR Tirgusor 82.47 342⇑*i*P **P 02 45 07.2 +0.7**
OBKA Obir 82.51 352⇑*i*P **P 02 45 07.1 +0.4**
comp=Z,18nm,0.9s,mb5.1,SNR=11
SSF Saint Saulge 82.53 359 *e*P **P 02 45 06.9 +0.2**
comp=Z,81nm,1.3s,mb5.3
SSF Saint Saulge 82.53 359 *e*P **P 02 45 06.9 +0.2**
SSF pmax pmax
comp=Z,41nm,1.3s,mb5.3
SSF Saint Saulge 82.53 359 *e*P **P 02 45 06.9 +0.2**
comp=Z,41nm,1.3s,mb5.3
BZS Buzias 82.54 346⇑*i*P **P 02 45 06.9 +0.1**
GZR Gura Zlata 82.58 346⇑P **P 02 45 08.5 +1.4**
GZR Gura Zlata 82.58 346⇑*i*P **P 02 45 08.5 +1.4**
RKT Rikitea 82.65 141 *e*T 04 16 44.2
comp=Z,1.0nm,0.3s
AVF Avril sur Loir 82.80 359 *e*P **P 02 45 08.2 0.0**
comp=Z,31nm,0.9s,mb5.0
AVF Avril sur Loir 82.80 359 *e*P **P 02 45 08.2 0.0**
AVF pmax pmax
comp=Z,15nm,0.9s,mb5.0
AVF Avril sur Loir 82.80 359 *e*P **P 02 45 08.2 0.0**
comp=Z,15nm,0.9s,mb5.0
CABF La Chapelle 82.93 357 *e*P **P 02 45 09.4 +0.6**
SMF Signal de Mont 82.94 359 *e*P **P 02 45 09.1 +0.2**
comp=Z,34nm,0.8s,mb5.1
SMF Signal de Mont 82.94 359 *e*P **P 02 45 09.1 +0.2**
SMF pmax pmax
comp=Z,17nm,0.8s,mb5.1
SMF Signal de Mont 82.94 359 *e*P **P 02 45 09.1 +0.2**
comp=Z,17nm,0.8s,mb5.1
MFF Saint Martin d 82.97 2 *e*P **P 02 45 09.5 +0.5**
comp=Z,30nm,1.1s,mb5.0
MFF Saint Martin d 82.97 2 *e*P **P 02 45 09.5 +0.5**
MFF pmax pmax
comp=Z,15nm,1.0s,mb5.0
MFF Saint Martin d 82.97 2 *e*P **P 02 45 09.5 +0.5**
comp=Z,15nm,1.0s,mb5.0
LJU Ljubljana 82.97 351 *e*P **P 02 45 10.7 +1.6**
BGF Bois d'Agland 83.03 360 *e*P **P 02 45 09.5 +0.1**
GCIS Gornji Cirnik 83.04 351 *e*P **P 02 45 10.4 +1.0**
TCF Toulx Ste Croi 83.30 0 *e*P **P 02 45 10.9 +0.1**
comp=Z,34nm,1.1s,mb5.0
TCF Toulx Ste Croi 83.30 0 *e*P **P 02 45 10.9 +0.1**
TCF pmax pmax
comp=Z,17nm,1.1s,mb5.0
TCF Toulx Ste Croi 83.30 0 *e*P **P 02 45 10.9 +0.1**
comp=Z,17nm,1.1s,mb5.0
BOJS Bojanci 83.44 351 *e*P **P 02 45 11.4 -0.1**
AGO Saint Agoulin 83.54 359 *e*P **P 02 45 12.6 +0.6**
PYM Petit Puy Mans 83.84 360 *e*P **P 02 45 14.0 +0.4**
LPL La Plagne 84.00 357 *e*P **P 02 45 15.7 +1.3**
LPG La Plagne 84.02 357 *e*P **P 02 45 15.9 +1.4**
RJF Les Rejaudoux 84.28 1 *e*P **P 02 45 15.9 +0.1**
RJF *e*MLR MLR
comp=Z,202nm,21.2s,MS4.2
RJF Les Rejaudoux 84.28 1 *e*P **P 02 45 15.9 +0.1**
RJF LR LR
comp=Z,200nm,21.3s,MS4.5
LBL Lubilhac 84.36 359 *e*P **P 02 45 16.8 +0.6**
BNI Bardonecchia 84.47 357 *e*P **P 02 45 18.3 +1.6**
BNI pmax pmax
comp=Z,22nm,0.9s,mb5.3
BNI Bardonecchia 84.47 357 *e*P **P 02 45 18.3 +1.6**
comp=Z,22nm,0.9s,mb5.3
ORIF Oris-en-Rattie 84.62 357 *e*P **P 02 45 18.5 +0.9**
comp=Z,21nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,130nm,21.2s,MS4.0
ORIF Oris-en-Rattie 84.62 357 *e*P **P 02 45 18.5 +0.9**
ORIF pmax pmax
comp=Z,11nm,0.9s,mb5.0
ORIF Oris-en-Rattie 84.62 357 *e*P **P 02 45 18.5 +0.9**
comp=Z,11nm,0.9s,mb5.0
LFF La Frestale 84.64 1 *e*P **P 02 45 17.9 +0.3**
comp=Z,149nm,1.2s,mb5.7
LFF La Frestale 84.64 1 *e*P **P 02 45 17.9 +0.3**
LFF pmax pmax
comp=Z,74nm,1.2s,mb5.7
LFF La Frestale 84.64 1 *e*P **P 02 45 17.9 +0.3**
comp=Z,74nm,1.2s,mb5.7
CAF Calviac 84.67 0 *e*P **P 02 45 18.2 +0.4**
comp=Z,50nm,1.2s,mb5.2
CAF Calviac 84.67 0 *e*P **P 02 45 18.2 +0.4**
CAF pmax pmax
comp=Z,25nm,1.2s,mb5.2
CAF Calviac 84.67 0 *e*P **P 02 45 18.2 +0.4**
comp=Z,25nm,1.2s,mb5.2
FITZ Fitzroy Crossi 84.68 233 *e*P **P 02 45 16.5 -1.6**
comp=Z,33nm,1.1s,mb5.4
FITZ *ep*P pP 02 45 32.2 +0.1
FITZ Fitzroy Crossi 84.68 233 *e*P **P 02 45 16.6 -1.4**
comp=Z,26nm,1.2s,mb5.2
VIVF Saint-Julien-l 84.71 358 *e*P **P 02 45 18.7 +0.7**
comp=Z,18nm,0.9s,mb4.9
VIVF Saint-Julien-l 84.71 358 *e*P **P 02 45 18.7 +0.7**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
VIVF Saint-Julien-l 84.71 358 *e*P **P 02 45 18.7 +0.7**
comp=Z,9.1nm,0.9s,mb4.9
MBDF Montbardon 84.79 357 *e*P **P 02 45 19.3 +0.9**
comp=Z,25nm,0.8s,mb5.1
MBDF Montbardon 84.79 357 *e*P **P 02 45 19.3 +0.9**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb5.1
MBDF Montbardon 84.79 357 *e*P **P 02 45 19.3 +0.9**
comp=Z,12nm,0.8s,mb5.1
HYB Hyderabad 85.11 291 *i*P **P 02 45 21.0 +0.6**
ARMA Armidale 85.30 206 *e*P **P 02 45 20.1 -0.7**
ARMA *ep*P pP 02 45 35.4 +0.5
TOUF Mont Tournerai 85.48 356 *e*P **P 02 45 22.4 +0.5**
AUTN L'Aution 85.49 356 *e*P **P 02 45 22.0 +0.1**
SAOF Saorge 85.50 356 *e*P **P 02 45 22.0 +0.1**
LASF Ste Croix 85.51 359 *e*P **P 02 45 22.7 +0.7**
comp=Z,67nm,1.5s,mb5.3
ASAR Alice Springs 85.55 223 P **P 02 45 20.4 -1.9**
ASAR pmax pmax
comp=Z,4.0nm,0.9s
ASAR Alice Springs 85.55 223 P **P 02 45 20.4 -1.9**
comp=Z,3.7nm,0.8s,mb4.6,baz=34,slow=5.4,SNR=22
SMRF Simiane la Rot 85.57 358 *e*P **P 02 45 23.3 +1.0**
comp=Z,42nm,1.1s,mb5.3
SMRF Simiane la Rot 85.57 358 *e*P **P 02 45 23.3 +1.0**
comp=Z,42nm,1.1s,mb5.6
LUCF Luceram 85.60 356 *e*P **P 02 45 22.5 +0.1**
MVIF Mont Vial 85.60 357 *e*P **P 02 45 22.7 +0.2**
SBF Sospel 85.62 356 *e*P **P 02 45 22.5 -0.1**
comp=Z,48nm,0.9s,mb5.4
SBF Sospel 85.62 356 *e*P **P 02 45 22.5 -0.1**
SBF pmax pmax
comp=Z,24nm,0.9s,mb5.4
SBF Sospel 85.62 356 *e*P **P 02 45 22.5 -0.1**
comp=Z,24nm,0.9s,mb5.4
REVF Revere 85.75 356 *e*P **P 02 45 24.3 +1.1**
CALN Calern 85.76 357 *e*P **P 02 45 23.3 +0.1**
BRTR Keskin Array B 85.78 336 P **P 02 45 23.9 +0.5**
BRTR 02 48 43.0
BRTR pmax pmax
comp=Z,6.0nm,0.8s
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR MLR MLR
comp=Z,56nm,20.6s
BRTR Keskin Array B 85.78 336 P **P 02 45 23.9 +0.5**
comp=Z,5.8nm,0.8s,mb4.9,baz=48,slow=3.0,SNR=34
BRTR PP PP 02 48 43.0 +0.7
comp=Z,1.7nm,0.9s,baz=23,slow=6.2,SNR=4.0
BRTR LR LR 03 24 01.4
comp=Z,56nm,20.6s,MS4.0,baz=189,slow=36
MALT Malatya 85.78 332 *e*P **P 02 45 24.3 +0.8**
MALT pmax pmax
comp=Z,25nm,1.4s,mb5.2
MALT Malatya 85.78 332 *e*P **P 02 45 24.3 +0.9**
comp=Z,25nm,1.4s,mb5.2
MALT Malatya 85.78 332⇑*i*P **P 02 45 25.3 +1.8**
FRF La Foret Royal 85.96 357 *e*P **P 02 45 24.2 0.0**
comp=Z,35nm,1.1s,mb5.2
FRF La Foret Royal 85.96 357 *e*P **P 02 45 24.2 0.0**
FRF pmax pmax
comp=Z,18nm,1.1s,mb5.2
FRF La Foret Royal 85.96 357 *e*P **P 02 45 24.2 0.0**
comp=Z,18nm,1.1s,mb5.2
LMR La Mourre 86.19 357 *e*P **P 02 45 25.6 +0.2**
comp=Z,25nm,1.1s,mb5.1
LMR La Mourre 86.19 357 *e*P **P 02 45 25.6 +0.2**
LMR pmax pmax
comp=Z,13nm,1.0s,mb5.1
LMR La Mourre 86.19 357 *e*P **P 02 45 25.6 +0.2**
comp=Z,13nm,1.0s,mb5.1
MTLF Montolieu 86.25 0 *e*P **P 02 45 26.2 +0.5**
comp=Z,23nm,1.0s,mb5.1
MTLF Montolieu 86.25 0 *e*P **P 02 45 26.2 +0.5**
MTLF pmax pmax
comp=Z,12nm,1.0s,mb5.1
MTLF Montolieu 86.25 0 *e*P **P 02 45 26.2 +0.5**
comp=Z,12nm,1.0s,mb5.1
SJPF Ste Jean 86.43 3 *e*P **P 02 45 26.8 +0.3**
EPF Esparros 86.54 1 *e*P **P 02 45 26.9 -0.2**
comp=Z,17nm,1.1s,mb4.9
EPF Esparros 86.54 1 *e*P **P 02 45 26.9 -0.2**
EPF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
EPF Esparros 86.54 1 *e*P **P 02 45 26.9 -0.2**
comp=Z,8.7nm,1.1s,mb4.9
ETSF Etsaut 86.66 2 *e*P **P 02 45 27.9 +0.2**
AQU L'Aquila 86.74 352 *e*P **P 02 45 29.1 +1.0**
AQU pmax pmax
comp=Z,36nm,1.0s,mb5.6
AQU L'Aquila 86.74 352 *e*P **P 02 45 29.1 +1.0**
comp=Z,36nm,1.0s,mb5.6
AQU L'Aquila 86.74 352⇑*i*P **P 02 45 30.2 +2.1**
PGF Pioggiola 86.86 355 *e*P **P 02 45 28.7 0.0**
comp=Z,29nm,0.8s,mb5.3
PGF Pioggiola 86.86 355 *e*P **P 02 45 28.7 0.0**
PGF pmax pmax
comp=Z,14nm,0.8s,mb5.2
PGF Pioggiola 86.86 355 *e*P **P 02 45 28.7 0.0**
comp=Z,14nm,0.8s,mb5.3
PVRL Vila Real 87.89 8 *e*P **P 02 45 34.0 +0.3**
comp=Z,36nm,1.8s,mb5.3
MVO Moncorvo 88.06 7 *e*P **P 02 45 34.7 +0.2**
comp=Z,16nm,1.2s,mb5.1
PVIS Viseu 88.43 8 *e*P **P 02 45 35.9 -0.3**
comp=Z,17nm,1.4s,mb5.1
MTE Manteigas 88.78 8 *e*P **P 02 45 37.4 -0.5**
comp=Z,20nm,1.1s,mb5.4
PCBR Castelo Branco 89.34 8 *e*P **P 02 45 40.3 -0.2**
comp=Z,10nm,1.1s,mb5.1
ESDC Sonseca Array 89.74 5 P **P 02 45 41.8 -0.6**
comp=Z,8.9nm,1.0s,mb5.0,baz=349,slow=4.2,SNR=18
PMRV Marv??o 89.75 8 *e*P **P 02 45 42.3 -0.2**
comp=Z,19nm,1.6s,mb5.2
STKA Stephens Creek 89.83 214 *e*P **P 02 45 41.3 -1.3**
comp=Z,11nm,1.1s,mb5.1
STKA *ep*P pP 02 45 56.8 0.0
STKA Stephens Creek 89.83 214 P **P 02 45 41.4 -1.2**
comp=Z,14nm,0.9s,mb5.3,baz=353,slow=6.3,SNR=12
STKA LR LR 03 22 10.3
comp=Z,285nm,18.5s,MS4.7,baz=24,slow=33

STKA	Stephens Creek	89.83	214	P	P	02 45 41.4	-1.2
STKA				LR	LR	03 22 10.3	
YNG	Young	89.86	208	eP	P	02 45 41.7	-1.0
	comp=Z,14nm,0.8s,mb5.3						
YNG				epP	pP	02 45 57.3	+0.5
PESTR	Estremoz	90.29	8	eP	P	02 45 44.7	-0.3
	comp=Z,21nm,1.6s,mb5.2						
KEST	Kesra	93.63	354	P	P	02 45 60.0	-0.5
	comp=Z,1.1nm,0.9s,mb4.3,baz=63,slow=2.3,SNR=3.7						
TORD	Torodi Ar. Bea	116.33	1	PKP	PKPdf	02 51 25.3	-2.5
	comp=Z,0.6nm,0.5s,baz=341,slow=2.0,SNR=7.9						
TORD				PKKPbc	PKKPbc	03 01 51.5	-3.2
	comp=Z,0.6nm,0.6s,baz=176,slow=2.8,SNR=7.6						
TORD	Torodi Ar. Bea	116.33	1	PKP	PKPdf	02 51 25.3	-2.5
TORD				PKKPbc	PKKPbc	03 01 51.5	-3.2
DBIC	Dimbokro	122.43	8	PKIKP	PKPdf	02 51 38.5	-1.1
DBIC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DBIC	Dimbokro	122.43	8	PKP	PKPdf	02 51 38.5	-1.1
	comp=Z,4.9nm,1.1s,baz=219,slow=6.5,SNR=3.4						
CPUP	Villa Florida	128.93	85	PKP	PKPdf	02 51 49.9	-1.7
	comp=Z,0.4nm,0.5s,baz=297,slow=4.5,SNR=2.5						
MAW	Mawson	146.46	217	eP	PKPdf	02 52 22.2	-0.1
	comp=Z,7.2nm,0.6s						
MAW				epP		02 52 37.4	
MAW	Mawson	146.46	217	PKPbc	PKPbc	02 52 22.3	-1.5
	comp=Z,13nm,0.8s,baz=75,slow=3.4,SNR=25						
MAW	Mawson	146.46	217	ePKPbc	PKPbc	02 52 22.6	-1.2
LBTB	Lobatse	148.66	317	ePKP2	PKPbc	02 52 31.1	0.0
BOSA	Boshof	151.91	313	PKIKP	PKPbc	02 52 38.1	-0.7
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BOSA	Boshof	151.91	313	PKPbc	PKPbc	02 52 38.1	-0.7
	comp=Z,6.0nm,0.6s,baz=63,slow=2.4,SNR=24						
BOSA	Boshof	151.91	313	ePKPbc	PKPbc	02 52 38.6	-0.2

*ATH **01** 02:41:52.2, 36°.04N×21°.75E, h5km±2km, MD3.7/13*
*NEIC **01** 02:41:52.2, 36°.04N×21°.75E, h5km, MD3.7(ATH), After ATH.*
*ISCJB **01** 02:41:54.1±0.7, 36°.07N±0°.03×21°.85E±0°.05, h10km, Error ellipse: s-maj=6.1km s-min=4.1km az=143.5*
*CSEM **01** 02:41:55.8±0.5, 36°.16N×21°.97E, h2km, ML3.4/2, Error ellipse: s-maj=12.3km s-min=6.4km az=54.0*
*THE **01** 02:41:56.7, 36°.21N×21°.91E, h0km±3km, ML3.4/2, Error ellipse: s-maj=6.1km s-min=2.0km az=247.0*
ISC 01 02:41:54.7±0.7**, 36°.07N**±0°.03×**21°.84E**±0°.05**, h10**km**, n56, σ1s.21**/76**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.83	355	P	Pg	02 42 08.8	-1.8
PYL	PYLOS	0.83	355	P	Pg	02 42 08.8	-1.8
KYTH	Kithira	0.99	77	ePB	Pg	02 42 12.9	-0.9
KYTH	Kithira	0.99	77	ePb	Pg	02 42 12.9	-0.9
VLI	Veliai	1.10	54	ePG	Pg	02 42 14.4	-1.4
VLI				eSB	Sg	02 42 31.5	+1.4
VLI	Veliai	1.10	54	ePg	Pg	02 42 14.4	-1.4
VLI				eSb	Sg	02 42 31.5	+1.4
ITM	Ithomi	1.11	4	ePB	Pg	02 42 14.1	-1.9
ITM				eSB	Sg	02 42 29.3	-1.1
ITM	Ithomi	1.11	4	P	Pg	02 42 14.0	-2.0
ITM				S	Sg	02 42 29.2	-1.2
ITM	Ithomi	1.11	4	P	Pg	02 42 14.0	-2.0
ITM				eSb	Sg	02 42 29.3	-1.1
VLX	Vlachokerasia	1.37	18	ePG	Pn	02 42 18.9	-0.9
VLX				eSB	Sg	02 42 39.0	+0.3
VLX	Vlachokerasia	1.37	18	P	Pn	02 42 18.6	-1.2
VLX				S	Sb	02 42 37.3	-0.6
VLX	Vlachokerasia	1.37	18	P	Pn	02 42 18.6	-1.2
VLX	Vlachokerasia	1.37	18	ePg	Pn	02 42 18.9	-0.9
VLX				S	Sb	02 42 37.3	-0.6
VLX				eSb	Sg	02 42 39.0	+0.3
KARN	Karanos	1.82	111	P	Pb	02 42 27.6	-0.4
KARN				S	Sg	02 42 53.5	+0.3
KARN	Karanos	1.82	111	P	Pb	02 42 27.6	-0.4
DID	Didima	1.82	38	ePG	Pb	02 42 26.9	-1.2
DID				eSN	Sg	02 42 53.2	0.0
DID	Didima	1.82	38	P	Pn	02 42 26.8	+0.8
DID				S	Sn	02 42 50.5	+1.3
DID	Didima	1.82	38	P	Pn	02 42 26.8	+0.8
DID				S	Sn	02 42 50.5	+1.3
DID				eSn	Sg	02 42 53.2	0.0
GUR	Goura	1.91	12	ePG	Pn	02 42 28.6	+1.4
GUR	Goura	1.91	12	P	Pn	02 42 27.9	+0.7
GUR	Goura	1.91	12	P	Pn	02 42 27.9	+0.7
GUR	Goura	1.91	12	ePg	Pn	02 42 28.6	+1.4
VAM	Vamos	2.03	108	ePN	Pb	02 42 30.8	-0.9
VAM	Vamos	2.03	108	ePn	Pb	02 42 30.8	-0.9
LTK	Loutraki	2.15	25	ePG	Pb	02 42 32.8	-0.9
LTK	Loutraki	2.15	25	P	Pn	02 42 31.3	+0.8
LTK	Loutraki	2.15	25	P	Pn	02 42 31.3	+0.8
LTK	Loutraki	2.15	25	ePg	Pb	02 42 32.8	-0.9
LAKA	Lakka	2.17	3	P	Pn	02 42 33.0	+2.2
LAKA	Lakka	2.17	3	P	Pn	02 42 33.0	+2.2
GVD	Gavdhos	2.21	123	ePn	Pn	02 42 26.2	-5.2
TRIZ	Trizonia	2.30	5	P	Pb	02 42 34.5	-1.7
TRIZ	Trizonia	2.30	5	P	Pb	02 42 34.5	-1.7
VLS	Valsamata	2.33	335	ePN	Pb	02 42 34.8	-1.9
VLS	Valsamata	2.33	335	P	Pn	02 42 33.5	+0.5
VLS	Valsamata	2.33	335	P	Pn	02 42 33.5	+0.5
VLS	Valsamata	2.33	335	ePn	Pb	02 42 34.8	-1.9
KALE	Kalithea	2.33	6	P	Pn	02 42 34.6	+1.6
KALE				S	Sn	02 43 02.7	+1.0
KALE	Kalithea	2.33	6	P	Pn	02 42 34.6	+1.6
KALE				S	Sn	02 43 02.7	+1.0
EFP	Efpalio	2.35	1	ePN	Pb	02 42 35.6	-1.5
EFP				eSN	Sb	02 43 05.8	-0.4
EFP	Efpalio	2.35	1	P	Pb	02 42 35.5	-1.6
EFP	Efpalio	2.35	1	P	Pb	02 42 35.5	-1.6
EFP				eSn	Sb	02 43 05.8	-0.4
IDI	Anoyia	2.60	107	ePn	Pn	02 42 36.6	-0.2
IDI	Anoyia	2.60	107	ePn	Pn	02 42 36.6	-0.2
ATAL	Atalanti	2.78	19	P	Pn	02 42 39.5	+0.2
ATAL	Atalanti	2.78	19	P	Pn	02 42 39.5	+0.2
EVR	Evrytania	2.84	360	ePN	Pn	02 42 42.3	+2.2
EVR	Evrytania	2.84	360	ePn	Pn	02 42 42.3	+2.2
AGG	Agios Georgios	2.97	7	ePN	Pn	02 42 44.2	+2.3
AGG	Agios Georgios	2.97	7	P	Pn	02 42 43.3	+1.4
AGG				S	Sn	02 43 18.8	+1.2
AGG	Agios Georgios	2.97	7	P	Pn	02 42 43.3	+1.4
AGG	Agios Georgios	2.97	7	ePn	Pn	02 42 44.2	+2.3
AGG				S	Sn	02 43 18.8	+1.2
JAN	Janina	3.66	348	ePN	Pn	02 42 52.9	+1.5
JAN	Janina	3.66	348	ePn	Pn	02 42 52.9	+1.5
TIP	Timpagrande	5.09	309	ePn	Pn	02 43 11.4	+0.5
TIP	Timpagrande	5.09	309	ePn	Pn	02 43 11.4	+0.5

JMA 01 02:43:39.3±0.1**, 30°.04N×141°.73E, h56**km**, M3.9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.96	172	P	Pn	02 44 24.9	+1.1
CBIJ				eS	Sn	02 44 58.6	+0.5
JHJ2	Mitsune	3.47	332	eS	Sn	02 45 10.8	+0.2
BSO1	Boso 1	4.64	352	P	Pn	02 44 49.9	+3.0
BSO1				eS	Sn	02 45 41.0	+1.5
BSO4	Boso 4	5.07	347	P	Pn	02 44 57.4	+4.6
JHO	Hitachi	6.62	352	P	Pn	02 45 15.6	+1.6
JHO				eS	Sn	02 46 26.3	-1.8
JFK	Kawauchi	7.34	355	P	Pn	02 45 25.6	+1.8
JFK				eS	Sn	02 46 42.5	-3.2

*ISCJB **01** 02:49:18.9±0.9, 39°.40N±0°.02×33°.14E±0°.04, h1km±7km, Error ellipse: s-maj=4.9km s-min=4.0km az=26.8*
*DDA **01** 02:49:18.7, 39°.40N×33°.18E, h5km±1km, Md3.3*
*CSEM **01** 02:49:19.1±0.1, 39°.39N×33°.12E, h2km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.5km az=106.0*
*ISK **01** 02:49:19.2, 39°.41N×33°.11E, h9km, MD3.4*
ISC 01 02:49:19.5±0.6**, 39°.41N**±0°.02×**33°.12E**±0°.03**, h3**km±5km**, n56, σ0s.83**/71**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBAL	Bala	0.14	3	i P	Pg	02 49 22.0	-0.2
BBAL				i S	Sg	02 49 24.4	+0.3
BBAL	Bala	0.14	3	i P	Pg	02 49 22.0	-0.2
BBAL				i S	Sg	02 49 24.4	+0.3
LOD	Lodumlu	0.56	331	ePG	Pg	02 49 30.0	-0.1
LOD				eSG	Sg	02 49 38.3	+0.9
LOD	Lodumlu	0.56	331	ePg	Pg	02 49 30.0	-0.2
LOD				eSg	Sg	02 49 38.3	+0.9
CDAG	Cicekdag	1.00	77	i P	Pg	02 49 37.0	-1.6
CDAG				i S	Sg	02 49 50.8	-0.8
CDAG	Cicekdag	1.00	77	i P	Pg	02 49 37.0	-1.6
CDAG				i S	Sg	02 49 50.8	-0.7
KIZT	Kizilcal	1.09	242	ePN	Pn	02 49 40.5	-1.2
KIZT	Kizilcal	1.09	242	ePn	Pn	02 49 40.5	-1.2
ELDT	Eldivan	1.11	12	i P	Pg	02 49 39.9	-0.9
ELDT				i S	Sg	02 49 56.0	+0.8
ELDT	Eldivan	1.11	12	i P	Pg	02 49 39.9	-0.9
ELDT				i S	Sg	02 49 56.0	+0.8
KDHN	Kadinhani	1.18	222	i P	Pg	02 49 41.8	-0.3
KDHN				i S	Sg	02 49 59.1	+1.8
KDHN	Kadinhani	1.18	222	i P	Pg	02 49 41.8	-0.3
KDHN				i S	Sg	02 49 59.1	+1.8
SVRH	Sivrihisar-ESK	1.23	272	ePN	Pn	02 49 42.8	-0.9
SVRH				eSN	Sn	02 50 00.6	-0.2
SVRH	Sivrihisar-ESK	1.23	272	ePn	Pn	02 49 42.8	-0.9
SVRH				eSn	Sn	02 50 00.6	-0.2
SULT	Sultanhani-AKS	1.24	165	ePN	Pn	02 49 43.4	-0.4
SULT	Sultanhani-AKS	1.24	165	ePn	Pn	02 49 43.4	-0.4
CANT	Cankiri	1.26	18	ePN	Pn	02 49 43.5	-0.6
CANT				eSN	Sn	02 50 01.1	-0.4
LADK	Ladik-KONYA	1.34	206	ePN	Pn	02 49 44.4	-0.7
LADK	Ladik-KONYA	1.34	206	ePn	Pn	02 49 44.4	-0.7
CORM	Corum	1.40	56	ePN	Pn	02 49 44.7	-1.3
CORM	Corum	1.40	56	ePn	Pn	02 49 44.7	-1.3
AVNT	Avonos	1.49	114	i P	Pn	02 49 48.3	+1.1
AVNT				i S	Sb	02 50 09.5	+2.3
AVNT	Avonos	1.49	114	i P	Pn	02 49 48.3	+1.1
KONT	Konya--Tatoy	1.57	202	ePN	Pn	02 49 47.8	-0.5
KONT	Konya--Tatoy	1.57	202	ePn	Pn	02 49 47.8	-0.5
YOZ	Yozgat	1.72	81	ePN	Pn	02 49 50.2	-0.2
YOZ	Yozgat	1.72	81	ePn	Pn	02 49 50.2	-0.2
TOS	Tosya	1.77	23	ePN	Pn	02 49 50.7	-0.4
TOS	Tosya	1.77	23	ePn	Pn	02 49 50.7	-0.4
MDU	Mudurnu	1.81	307	ePN	Pn	02 49 51.1	-0.4
MDU	Mudurnu	1.81	307	ePn	Pn	02 49 51.1	-0.4
SAFT	Safranbolu	1.86	350	ePN	Pn	02 49 52.6	+0.3
SAFT	Safranbolu	1.86	350	ePn	Pn	02 49 52.6	+0.3
BALT	Daday	2.14	5	i P	Pn	02 49 57.5	+1.4
BALT				i S	Sn	02 50 27.0	+3.8
BALT	Daday	2.14	5	i P	Pn	02 49 57.5	+1.4
BNN	Bunyan	2.19	104	ePN	Pn	02 49 57.0	+0.1
BNN	Bunyan	2.19	104	ePn	Pn	02 49 57.0	+0.1
GULT	Gulveren	2.25	298	ePN	Pn	02 49 58.0	+0.4
GULT	Gulveren	2.25	298	ePn	Pn	02 49 58.0	+0.4
BYBT	Boyabat	2.42	31	ePN	Pn	02 50 00.0	+0.1
BYBT	Boyabat	2.42	31	ePn	Pn	02 50 00.0	+0.1
HDMB	Hadim	2.49	192	ePN	Pn	02 50 00.9	0.0
HDMB	Hadim	2.49	192	ePn	Pn	02 50 00.9	0.0
SUTC	Sutluce-Ispart	2.54	221	ePN	Pn	02 50 01.6	-0.1
SUTC	Sutluce-Ispart	2.54	221	ePn	Pn	02 50 01.6	-0.1
KARA	Karaisali	2.63	144	ePN	Pn	02 50 03.1	+0.3
KARA	Karaisali	2.63	144	ePn	Pn	02 50 03.1	+0.3
BZK	Bozkurt	2.64	15	ePN	Pn	02 50 03.2	+0.2
BZK	Bozkurt	2.64	15	ePn	Pn	02 50 03.3	+0.3
DIKM	Dikmen	2.77	35	ePN	Pn	02 50 05.5	+0.7
DIKM	Dikmen	2.77	35	ePn	Pn	02 50 05.5	+0.7
KOZT	Kozan	2.87	131	ePN	Pn	02 50 06.7	+0.5
SARI	SarD1z-Kayseri	2.88	103	ePN	Pn	02 50 05.5	-0.8
SARI	SarD1z-Kayseri	2.88	103	ePn	Pn	02 50 05.5	-0.8
SVSK	Karacayir	3.04	79	ePN	Pn	02 50 09.5	+1.0
SVSK	Karacayir	3.04	79	ePn	Pn	02 50 09.5	+1.0

IDC 01 03:26:24.8±2.0**, 4°.49N×126°.75E, h0**km**, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/21**, mbtmp3.6**/4**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.6**/22**, Error ellipse: s-maj=115.7km s-min=23.8km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.47	183	P	P	03 31 26.4	+0.6
	0.9nm,0.3s,baz=355,slow=12,SNR=7.4						
WRA	Warramunga Arr	25.40	163	P	P	03 31 53.7	-0.4
	1.2nm,0.4s,baz=341,slow=10,SNR=15						
PSI	Prapat	27.82	268	LR	LR	03 44 31.2	
	comp=Z,129nm,18.8s,baz=225,slow=39						
ASAR	Alice Springs	28.84	166	P	P	03 32 25.1	+0.1
	0.2nm,0.4s,baz=346,slow=7.5,SNR=5.9						
MKAR	Makanchi Array	56.95	325	P	P	03 36 11.9	+0.1
	0.1nm,0.5s,baz=111,slow=7.9,SNR=2.7						

*IDC **01** 03:52:08.7±0.9, 42°.78S×72°.38W, h0km, mb4.2/7, mb1 4.3/8, mb1mx4.1/17, mbtmp4.2/8, ML4.6/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/17, Error ellipse: s-maj=32.9km s-min=16.4km az=115.0*
*NEIC **01** 03:52:08.9, 42°.84S×72°.44W, h2km, mb4.4/8, ML4.2(GUC), After GUC.*
NEIC Felt [IV] at Chaiten.
*GUC **01** 03:52:08.9±0.6, 42°.84S×72°.44W, h2km±4km, ML4.2*
ISC 01 03:52:09.1±1.4**, 42°.80S**±0°.04×**72°.39W**±0°.10**, h1**km±9km**, n28, σ1s.09**/30**, mb4.3**/12**, MS3.6**/3**, 2C, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMCH	Puerto Montt	1.37	344	eP	Pg	03 52 34.1	-1.2
PMCH				i S	Sg	03 52 53.3	+0.3
PLCA	Paso Flores	2.48	34	Pn	Pn	03 52 52.2	+1.7
	33nm,0.3s,baz=217,slow=14,SNR=54						
PLCA				Pg	Pg	03 52 57.0	+0.3
	36nm,0.3s,baz=219,slow=16,SNR=82						
PLCA				Lg		03 53 29.3	
	75nm,0.3s,baz=123,slow=18,SNR=17						
PLCA	Paso Flores	2.48	34	ePn	Pn	03 52 53.0	+2.4
PLCA				ePg	Pg	03 52 57.1	+0.5
PLCA				eSg	Sg	03 53 29.4	+0.6
PLCA	Paso Flores	2.48	34	eP	Pn	03 52 52.3	+1.7
PLCA				eS	Sn	03 53 25.5	+4.0
COYC	Coyhaique	2.78	176	⇑iP	Pn	03 52 54.7	+0.1
COYC				i S	Sn	03 53 29.9	+1.1
COYC	Coyhaique	2.78	176	⇑iP	Pn	03 52 54.7	+0.1
COYC				i S	Sn	03 53 29.9	+1.1
COYC				AML	AML	03 53 38.5	
	comp=E,469nm,0.5s						
VLCH	Valdivia	3.06	347	eS	Sn	03 53 38.1	+2.3
TRQA	Tornquist	9.24	63	Pn	Pn	03 54 22.0	-1.3
USHA	Ushuaia	12.31	169	LR	LR	03 59 10.1	
	comp=E,258nm,20.1s,baz=293,slow=34						
LVC	Limon Verde	20.34	9	P	P	03 56 47.1	+0.4
	comp=E,6.0nm,0.8s,baz=215,slow=9.6,SNR=5.0						
LVC				LR	LR	04 04 48.5	
	comp=E,143nm,21.4s,MS3.3,baz=169,slow=37						
LVC	Limon Verde	20.34	9	eP	P	03 56 46.9	+0.2
	comp=E,9.3nm,0.8s						
PMSA	Palmer Station	22.52	171	LR	LR	04 05 40.5	
	comp=E,272nm,20.6s,MS3.7,baz=82,slow=36						
LPAZ	La Paz	26.68	9	eP	P	03 57 49.4	-0.1
	comp=E,3.2nm,1.1s,mb4.0						
SIV	San Ignacio	28.42	23	P	P	03 58 03.8	-1.4
	comp=E,2.2nm,0.6s,mb4.2,baz=200,slow=8.9,SNR=19						
QSPA	South Pole Qui	47.45	180	P	P	04 00 46.8	+2.1
	comp=E,2.1nm,0.7s,mb4.4,baz=121,slow=1.1,SNR=12						
QSPA	South Pole Qui	47.45	180	eP	P	04 00 45.7	+1.0
	comp=E,16nm,1.6s,mb4.9						
SBA	Scott Base	54.43	193	P	P	04 01 38.1	+0.9
	comp=E,1.7nm,0.9s,mb4.1						
LRAL	Lakeview Retre	76.65	347	eP	P	04 04 00.7	-0.5
	comp=E,3.9nm,0.7s,mb4.7						
TXAR	Lajitas Array	77.33	332	P	P	04 04 05.8	+0.6
	comp=E,1.3nm,0.7s,mb4.2,baz=154,slow=8.8,SNR=13						
TXAR				LR	LR	04 31 30.5	
	comp=E,41nm,18.7s,MS3.8,baz=185,slow=30						
DBIC	Dimbokro	78.39	70	P	P	04 04 10.9	-0.6
	comp=E,2.2nm,0.8s,mb4.3,baz=233,slow=8.6,SNR=3.2						
GDL2	Guadalupe Moun	80.20	333	P	P	04 04 20.9	+0.1
	comp=E,1.0nm,0.4s,mb4.1						
CCM	Cathedral Cave	82.29	345	eP	P	04 04 30.2	-1.6
	comp=E,6.9nm,0.8s,mb4.8						
TORD	Torodi Ar. Bea	87.50	70	P	P	04 04 56.9	-1.7
	comp=E,0.9nm,0.8s,mb4.0,baz=225,slow=5.4,SNR=6.9						
ECSD	EROS Data Cent	88.85	343	eP	P	04 05 03.5	-0.8
	comp=E,4.8nm,0.9s,mb4.7						
PDAR	Pinedale Array	91.50	334	P	P	04 05 16.1	-0.7
	comp=E,0.8nm,0.6s,mb4.2,baz=141,slow=5.0,SNR=7.6						
ABKAR	Akbulak array	146.74	62	ePKPdf	PKPdf	04 11 49.3	-0.9
ABKAR				ePKPbc	PKPbc	04 11 51.0	-1.0
TIXI	Tiksi	149.25	347	ePKPbc	PKPbc	04 11 56.4	-1.6
TIXI				ePKPab	PKPab	04 12 01.8	-0.9
MKAR	Makanchi Array	161.62	69	PKPab	PKPab	04 12 54.8	-1.3
	comp=E,0.8nm,0.8s,baz=268,slow=5.8,SNR=7.1						

*ISCJB **01** 03:55:34.1±0.4, 33°.41N±0°.01×116°.40W±0°.01, h9km±3km, Error ellipse: s-maj=2.5km s-min=1.8km az=20.3*
*IDC **01** 03:55:34.7±2.4, 33°.36N×116°.51W, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/24, mbtmp3.2/4, ML3.6/3, Error ellipse: s-maj=32.6km s-min=13.1km az=49.0*
*NEIC **01** 03:55:35.0, 33°.44N×116°.45W, h11km, ML4.2(PAS), After PAS.*
NEIC Felt [IV] at Anza; [III] at Aguanga, Alpine, Banning, Borrego Springs, Carlsbad, Cathedral City, Coachella, Coronado, Escondido, Hemet, Idyllwild, Indian Wells, Indio, La Jolla, La Quinta, Moreno Valley, Mountain Center, Palm Desert, Palm Springs, Rancho Mirage, San Diego, San Jacinto, Sun City, Temecula, Thermal, Vista, Warner Springs and Winchester; [II] at Bonsall, Del Mar, Desert Hot Springs, El Cajon, El Centro, Julian, La Mesa, Lakeside, Menifee, Murrieta, Oceanside, Poway, Ramona, Redlands, Riverside, San Marcos, Santa Ysabel, Spring Valley and Valley Center. Also felt at Bell, Bonita, Cabazon, Calexico, Campo, Encinitas, Fallbrook, Glendale, Imperial, Imperial Beach, Joshua Tree, Laguna Niguel, Lake Elsinore, Lake Forest, Lemon Grove, Mecca, Nuevo, Pauma Valley, Perris, Santee, Solana Beach, Thousand Palms and White Water.
ISC 01 03:55:35.1±0.3**, 33°.41N**±0°.01×**116°.44W**±0°.01**, h10**km±2km**, n130, σ0s.98**/178**, 85C-51D, Southern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFO	Pinyon Flat Ob	0.20	356	⇑P	Pg	03 55 39.3	-0.1
	baz=0.2,SNR=1000						
PFO				⇑S	Sg	03 55 41.7	-0.5
	baz=0.2						
PFO	Pinyon Flat Ob	0.20	356	ePg	Pg	03 55 39.3	-0.1
PFO				eSg	Sg	03 55 41.8	-0.4
MONP	Monument Peak	0.52	178	⇓P	Pg	03 55 46.2	+0.9
	baz=0.6,SNR=756						
MONP				⇓S	Sg	03 55 53.4	+1.3
	baz=0.6						
MURC	Murrieta	0.67	287	⇑P	Pg	03 55 47.8	-0.2
	baz=0.6						
MURC				⇑S	Sg	03 55 56.4	-0.4
	baz=0.6						
BELC	Belle Mtn.	0.69	32	⇑P	Pg	03 55 48.4	-0.2
	baz=0.7						
BELC				⇑S	Sg	03 55 57.4	-0.2
	baz=0.7						
SWSC	Sam W. Stewart	0.71	131	⇓P	Pg	03 55 49.4	+0.5
	baz=0.7,SNR=399						
SWSC				⇑S	Sg	03 55 59.6	+1.3
	baz=0.7						
BAR	Barrett	0.76	195	ePg	Pg	03 55 50.1	+0.4
BAR				eSg	Sg	03 56 00.2	+0.7
109C	Camp Elliot, M	0.77	227	⇑P	Pg	03 55 49.9	0.0
	baz=0.8						
109C				⇑S	Sg	03 56 00.3	+0.4
	baz=0.8						
DVTC	Desert V Tower	0.80	159	⇓P	Pg	03 55 51.4	+0.8
	baz=0.8,SNR=163						
DVTC				⇑S	Sg	03 56 02.5	+1.4
	baz=0.8						
BC3	Big Chuckw Mtn	0.86	73	⇓P	Pg	03 55 51.6	-0.1
	baz=0.8						
BC3				⇑S	Sg	03 56 03.2	+0.4
	baz=0.8						
BBRC	Big Bear Sol-O	0.94	335	⇓P	Pg	03 55 52.7	-0.5
	baz=0.9,SNR=612						
BBRC				⇓S	Sg	03 56 04.9	-0.6
	baz=0.9						
IRM	Iron Mountain	1.31	55	⇑P	Pn	03 55 58.2	-1.2
	baz=1.3,SNR=463						
IRM				⇓Sb	Sb	03 56 17.0	+0.4
	baz=1.3						
BFSC	Mount Baldy St	1.31	309	⇓P	Pn	03 55 58.7	-0.8
	baz=1.3						
BFSC				⇑S	Sb	03 56 15.6	-1.0
	baz=1.3						
GLA	Glamis	1.40	104	⇑P	Pn	03 55 59.3	-1.3
	baz=1.4,SNR=35						
GLA				⇑S	Sn	03 56 16.9	-2.2
	baz=1.4						
GLA	Glamis	1.40	104	ePn	Pn	03 55 59.3	-1.3
GLA				eSg	Sg	03 56 17.3	-2.7
HEC	Hector,Ludlow	1.42	4	⇑P	Pn	03 56 00.1	-0.9
	baz=1.4,SNR=59						
HEC				⇓Sb	Sb	03 56 20.1	+0.3
	baz=1.4						
GMRC	Granite Mounta	1.51	25	⇑P	Pn	03 56 01.3	-1.0
	baz=1.5,SNR=54						
GMRC				⇑Sb	Sb	03 56 22.3	-0.1
	baz=1.5						
RRX	Edison Barstow	1.54	342	⇓P	Pn	03 56 02.2	-0.4
	baz=1.5,SNR=87						
RRX				⇓Sb	Sb	03 56 23.3	0.0
	baz=1.5						
MWC	Mount Wilson	1.57	301	ePn	Pn	03 56 03.3	+0.2
MWC				eSg	Sg	03 56 24.1	-1.7
FMP	Fort Macarthur	1.58	281	⇓P	Pn	03 56 02.9	-0.2
	baz=1.6						
Y12C	Blythe	1.63	78	⇑P	Pn	03 56 02.6	-1.3
	baz=1.6,SNR=47						
Y12C				⇓Sb	Sb	03 56 26.5	+0.5
	baz=1.6						
PASC	Pasadena Art C	1.64	298	ePb	Pb	03 56 04.2	-1.3
CIS	Catalina Islan	1.65	270	⇑P	Pn	03 56 03.4	-0.7
	baz=1.6						
CIS				⇑Sb	Sb	03 56 26.5	+0.2
	baz=1.6						
DECC	Green Verdugo	1.79	298	⇑P	Pn	03 56 05.6	-0.4
	baz=1.8,SNR=52						
DECC				⇓Sb	Sb	03 56 30.4	+0.1
	baz=1.8						
112A	Yuma	1.79	119	⇑P	Pn	03 56 05.4	-0.6
	baz=1.8						
SCI	San Clemente I	1.82	257	⇑P	Pn	03 56 06.2	-0.2
	baz=1.8						
SCI				⇓S	Sn	03 56 29.1	-0.5
	baz=1.8						
GSC	Goldstone	1.91	351	⇑P	Pn	03 56 07.4	-0.3
	baz=1.9,SNR=42						
GSC	Goldstone	1.91	351	ePn	Pn	03 56 07.5	-0.2
GSC				eSg	Sg	03 56 35.0	-1.6
EDW2	Edwards Air Fo	1.95	319	⇑P	Pn	03 56 08.0	-0.3
	baz=1.9						
EDW2				⇑Sb	Sb	03 56 35.3	+0.2
	baz=1.9						
LDFC	Landfair	1.99	33	ePn	Pn	03 56 11.1	+2.2
LDFC				eSg	Sg	03 56 39.2	-0.1
NEE2	Needles Airpor	2.03	48	⇑P	Pn	03 56 08.9	-0.4
	baz=2.0						
NEE2				⇑Sb	Sb	03 56 38.4	+1.1
	baz=2.0						
TUQ	Turquoise Moun	2.06	12	⇑P	Pn	03 56 09.2	-0.7
	baz=2.0						
TUQ				⇓Sb	Sb	03 56 39.6	+1.2
	baz=2.0						
PDMCI	Parker Dam,Lak	2.11	64	⇑P	Pn	03 56 09.5	-0.9
	baz=2.1						
PDMCI				⇓S	Sn	03 56 34.3	-2.4
	baz=2.1						
Y13A	Salome	2.21	79	⇑P	Pn	03 56 10.8	-1.1
	baz=2.2,SNR=21						
Y13A				⇓S	Sn	03 56 37.0	-2.2
	baz=2.2						
OSI	Osito Adit	2.25	303	⇓P	Pn	03 56 11.7	-0.7
	baz=2.2						
OSI				⇑Sb	Sb	03 56 44.4	+0.7
	baz=2.2						
OSI	Osito Adit	2.25	303	ePn	Pn	03 56 12.6	+0.2
OSI				ePg	Pg	03 56 17.8	-0.4
W12A	Cal Nev Ari	2.29	34	⇓P	Pn	03 56 12.5	-0.5
	baz=2.3						
W12A				⇑Sb	Sb	03 56 46.6	+1.8
	baz=2.3						
BLG	Laguna Peak	2.30	288	⇑P	Pn	03 56 12.7	-0.4
	baz=2.3						
BLG				⇑Sb	Sb	03 56 46.4	+1.4
	baz=2.3						

LRMC	Laurel Mountai	2.31	334	⇑P	Pn	03 56 12.5	-0.6
	baz=2.3						
LRMC				⇓Sb	Sb	03 56 46.5	+1.1
	baz=2.3						
113A	Mohawk Valley,	2.33	105	⇓P	Pn	03 56 12.0	-1.5
	baz=2.3,SNR=19						
113A				⇓S	Sn	03 56 41.2	-1.0
	baz=2.3						
Z13A	Yuma Proving G	2.34	94	⇑P	Pn	03 56 12.3	-1.3
	baz=2.3,SNR=92						
Z13A				⇓S	Sn	03 56 40.6	-1.8
	baz=2.3						
X13A	Yucca	2.47	61	⇑P	Pn	03 56 14.8	-0.5
	baz=2.5,SNR=89						
SHOC	Shoshone	2.49	3	⇑P	Pn	03 56 15.1	-0.5
	baz=2.5						
V11A	Goodsprings	2.56	19	⇑P	Pn	03 56 16.4	-0.2
	baz=2.5,SNR=17						
SNCC	San Nicolas Is	2.59	267	⇓P	Pn	03 56 16.7	-0.3
	baz=2.6						
SNCC	San Nicolas Is	2.59	267	*e*Pn	Pn	03 56 17.1	+0.1
ARVC	Arvin	2.62	311	⇑P	Pn	03 56 17.2	-0.3
	baz=2.6						
ARVC				⇑Sb	Sb	03 56 55.5	+1.1
	baz=2.6						
V12A	Nelson	2.66	29	⇑P	Pn	03 56 17.4	-0.5
	baz=2.6,SNR=12						
V12A				⇑Sb	Sb	03 56 57.7	+2.3
	baz=2.6						
W13A	Hualapai Mount	2.70	51	⇑P	Pn	03 56 18.4	-0.3
	baz=2.7,SNR=69						
W13A				⇑Sb	Sb	03 56 58.7	+2.0
	baz=2.7						
BSC	Santa Cruz Isl	2.73	283	⇓Pb	Pb	03 56 23.9	-0.1
	baz=2.7						
BSC				⇓Sb	Sb	03 56 59.2	+1.7
	baz=2.7						
MPMC	Manual Prospec	2.78	342	⇑P	Pn	03 56 19.4	-0.4
	baz=2.7,SNR=296						
ISA	Isabella	2.81	324	⇓P	Pn	03 56 19.1	-1.0
	baz=2.8						
ISA				⇑Sb	Sb	03 57 01.7	+2.0
	baz=2.8						
ISA	Isabella	2.81	324	*e*Pn	Pn	03 56 19.7	-0.3
ISA				*e*Pg	Pg	03 56 27.3	-1.6
Y14A	Wickenburg	2.91	79	⇑P	Pn	03 56 20.4	-1.1
	baz=2.9,SNR=13						
Y14A				⇓S	Sn	03 56 55.8	-0.7
	baz=2.9						
Z14A	Wintersburg	2.92	90	⇓P	Pn	03 56 20.5	-1.1
	baz=2.9,SNR=36						
U10A	Ash Meadows, A	3.00	2	⇑P	Pn	03 56 22.0	-0.7
	baz=3.0						
114A	Black Gap (USA	3.06	101	⇓P	Pn	03 56 22.5	-1.0
	baz=3.1,SNR=50						
114A				⇑S	Sn	03 56 58.7	-1.3
	baz=3.1						
U11A	Corn Creek	3.13	16	⇓P	Pn	03 56 24.2	-0.3
	baz=3.1						
X14A	Yava	3.13	69	⇑P	Pn	03 56 24.4	-0.2
	baz=3.1,SNR=211						
PKM	Peak Mountain	3.17	299	⇓P	Pn	03 56 24.9	-0.2
	baz=3.1						
SHPR	Sheep Range	3.26	18	*e*Pn	Pn	03 56 26.6	+0.3
W14A	Seligman	3.31	56	⇓P	Pn	03 56 27.0	0.0
	baz=3.3,SNR=37						
CWC	Cottonwood Cre	3.31	336	⇑P	Pn	03 56 26.8	-0.2
	baz=3.3						
214A	Organ Pipe Nat	3.38	114	⇑P	Pn	03 56 27.6	-0.4
	baz=3.4						
U12A	Valley of Fire	3.39	27	⇓P	Pn	03 56 27.9	-0.2
	baz=3.4,SNR=12						
Y15A	Casa Rosa Ranc	3.46	80	P	Pn	03 56 28.6	-0.4
	baz=3.5,SNR=82						
SMMC	Simmler	3.50	304	⇑P	Pn	03 56 29.6	-0.1
	baz=3.5						
V14A	Boquillas Ranc	3.53	50	⇑P	Pn	03 56 30.3	+0.2
	baz=3.5,SNR=66						
Z15A	Gila River Ind	3.58	91	⇓P	Pn	03 56 26.0	-4.7
	baz=3.6						
115A	Sonoran Desert	3.60	100	⇑P	Pn	03 56 30.6	-0.5
	baz=3.6,SNR=30						
U13A	Pakoon Wash	3.62	33	⇓P	Pn	03 56 31.0	-0.2
	baz=3.6						
X15A	Humboldt	3.65	72	⇓P	Pn	03 56 31.7	0.0
	baz=3.6,SNR=174						
GRAC	Grapevine Rang	3.66	348	⇑P	Pn	03 56 30.8	-1.0
	baz=3.6						
RCTC	Rector, Farmer	3.70	322	⇑P	Pn	03 56 31.3	-1.0
	baz=3.7						
W15A	Williams	3.88	62	⇓P	Pn	03 56 35.3	+0.5
	baz=3.9						
U14A	Mt Trumbull	4.02	41	⇑P	Pn	03 56 37.1	+0.4
	baz=4.0,SNR=10						
116A	Eloy	4.07	101	⇑P	Pn	03 56 36.9	-0.5
	baz=4.1,SNR=8.0						
T13A	Saint George	4.15	29	⇓P	Pn	03 56 39.0	+0.5
	baz=4.1,SNR=13						
Y16A	Circle Bar Ran	4.16	82	⇓P	Pn	03 56 38.6	-0.1
	baz=4.2,SNR=10						
Z16A	Peralta Trail,	4.19	90	⇑P	Pn	03 56 38.1	-1.0
	baz=4.2,SNR=9.0						
V15A	Kaibab Nationa	4.26	54	⇑P	Pn	03 56 40.5	+0.5
	baz=4.2						
X16A	Lo Mia Camp, P	4.27	75	P	Pn	03 56 40.6	+0.4
	baz=4.3,SNR=162						
S12A	Delamar Landin	4.38	17	⇓P	Pn	03 56 42.6	+0.9
	baz=4.4						
W16A	Flagstaff	4.40	66	⇑P	Pn	03 56 42.6	+0.7
	baz=4.4						
216A	Three Points,	4.43	107	⇑P	Pn	03 56 43.5	+1.2
	baz=4.4						
S10A	Tonopah Range,	4.50	358	⇑P	Pn	03 56 44.8	+1.4
	baz=4.5						
U15A	North Rim	4.54	47	⇑P	Pn	03 56 44.7	+0.8
	baz=4.5						
T14A	Hurricane	4.56	36	⇑P	Pn	03 56 44.8	+0.6
	baz=4.5						
S13A	Holt Ranch, En	4.66	26	⇑P	Pn	03 56 46.2	+0.6
	baz=4.6						
Y17A	Roosevelt	4.68	85	⇑P	Pn	03 56 45.3	-0.5
	baz=4.7,SNR=28						
WUAZ	Wupatki	4.68	62	⇓P	Pn	03 56 47.7	+1.9
	baz=4.7						
WUAZ	Wupatki	4.68	62	*e*Pn	Pn	03 56 47.4	+1.6
CCUT	Cedar City	4.83	30	*e*Pn	Pn	03 56 49.2	+1.3
117A	Oracle	4.86	98	⇑P	Pn	03 56 47.7	-0.5
	baz=4.9						
R10A	Warm Springs	4.87	1	⇓P	Pn	03 56 49.8	+1.5
	baz=4.8						
TUC	Tucson	4.88	101	*e*Pn	Pn	03 56 47.6	-0.9
T15A	Red Dirt Ranch	4.89	42	⇑P	Pn	03 56 50.0	+1.2
	baz=4.9						
R11A	Troy Canyon, C	4.98	8	⇑P	Pn	03 56 50.8	+0.9
	baz=5.0						
ARUT	Antelope Range	5.00	28	*e*Pn	Pn	03 56 51.0	+0.8
ARUT				*e*Pg	Pg	03 57 08.3	-2.7
217A	Green Valley	5.02	107	⇑P	Pn	03 56 51.9	+1.4
	baz=5.0						
S14A	Cedar City	5.09	31	⇓P	Pn	03 56 52.3	+0.8
	baz=5.1						
R12A	Pony Springs,	5.13	16	⇑P	Pn	03 56 52.8	+0.9
	baz=5.1						
U16A	Tuba City	5.15	57	⇓P	Pn	03 56 53.9	+1.7
	baz=5.1						
V17A	Tonalea, Kykot	5.15	63	⇑P	Pn	03 56 54.0	+1.7
	baz=5.1						
R13A	O'Grain Ranch,	5.16	22	⇑P	Pn	03 56 53.9	+1.5
	baz=5.1						
NVAR	Mina Array Bea	5.23	344	Pn	Pn	03 56 54.8	+1.4
	1.0nm,0.3s,baz=167,slow=15,SNR=10						
NVAR				Pg	Pg	03 57 11.7	-3.7
	4.1nm,0.3s,baz=156,slow=15,SNR=14						
NVAR				Lg		03 58 20.4	
	1.3nm,0.3s,baz=139,slow=19,SNR=2.2						
SAO	San Andreas Ge	5.30	311	*e*Pn	Pn	03 56 54.5	+0.2
Y18A	Canyon Day Jun	5.36	84	⇑P	Pn	03 56 55.4	+0.3
	baz=5.3,SNR=11						
Z18A	Geronimo	5.37	92	⇓P	Pn	03 56 55.1	-0.3
	baz=5.4						
118A	Homack Ranch,	5.49	96	⇑P	Pn	03 56 56.6	-0.3
	baz=5.5,SNR=13						
X18A	Snowflake	5.50	77	⇑P	Pn	03 56 57.1	0.0
	baz=5.5						
CMB	Columbia Colle	5.62	326	*e*Pn	Pn	03 56 57.4	-1.3
WAKR	Walker	5.63	335	*e*Pn	Pn	03 56 58.2	-0.7
318A	Bisbee	5.79	108	⇓P	Pn	03 57 01.2	+0.1
	baz=5.8,SNR=12						
Z19A	T-Link Ranch,	6.00	89	⇓P	Pn	03 57 04.4	+0.4
	baz=6.0,SNR=7.3						
Y19A	Nutrioso	6.01	83	⇑P	Pn	03 57 05.3	+1.2
	baz=6.0						
119A	Ashpeak Ranch,	6.02	94	⇓P	Pn	03 57 04.7	+0.4
	baz=6.0,SNR=6.8						
X19A	St. Johns	6.03	78	⇑P	Pn	03 57 05.1	+0.8
	baz=6.0						
Q14A	Sevier Lake (B	6.12	24	⇑P	Pn	03 57 06.7	+1.1
	baz=6.1						
MSU	Marysvale	6.15	33	*e*Pn	Pn	03 57 07.1	+1.1
X20A	Quemado	6.69	78	⇑P	Pn	03 57 13.3	-0.2
	baz=6.7						
PAHR	Pah Rah Range	6.71	340	*e*Pg	Pg	03 57 40.8	-2.9
DUG	Dugway	7.37	22	*e*Pn	Pn	03 57 23.2	+0.5
DUG				*e*Pg	Pg	03 57 51.9	-4.3
SRU	San Rafael	7.42	38	*e*Pn	Pn	03 57 23.2	-0.3
MVCO	Mesa Verde	7.51	57	*e*Pn	Pn	03 57 21.3	-3.4
	23nm,0.6s						
MNTX	Cornudas Mount	9.49	97	*e*Pn	Pn	03 57 52.4	+0.6
SMCO	Snowmass	9.56	50	*e*Pn	Pn	03 57 54.1	+1.3
PDAR	Pinedale Array	10.79	28	Pn	Pn	03 58 15.3	+5.7
	0.1nm,0.3s,baz=226,slow=9.9,SNR=2.4						
PDAR				Lg		04 01 14.9	
	baz=230,slow=35,SNR=2.7						
TXAR	Lajitas Array	11.64	107	Pn	Pn	03 58 23.6	+2.3
	0.1nm,0.3s,baz=293,slow=13,SNR=7.8						
TXAR				Lg		04 01 44.2	
	0.1nm,0.3s,baz=294,slow=33,SNR=3.7						
ULM	Lac du Bonnet	22.63	36	P	P	04 00 39.6	+3.6
	1.3nm,0.7s,baz=225,slow=12,SNR=3.1						

*ISCJB **01** 04:19:08.0±0.7, 38°.57N±0°.03×26°.78E±0°.05, h7km±9km, Error ellipse: s-maj=7.1km s-min=5.7km az=168.8*
*CSEM **01** 04:19:07.7±0.2, 38°.56N×26°.73E, h10km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.8km az=90.0*
*DDA **01** 04:19:07.9, 38°.56N×26°.78E, h7km±3km, Md2.8*
*ISK **01** 04:19:07.2, 38°.67N×27°.00E, h13km, MD2.6*
ISC 01 04:19:08.1±0.7, **38°.55N**±0°.04×**26°.78E**±0°.07, **h13**km±6km, **n16, σ0s.96**/28, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.24	217	*i* P	Pg	04 19 12.8	-0.5
URLA				*i* S	Sg	04 19 17.5	+0.8
URLA	Izmir	0.24	217	*i* P	Pg	04 19 12.8	-0.4
URLA				*i* S	Sg	04 19 17.5	+0.8
BLCB	Balcova	0.27	129	*e*PG	Pg	04 19 13.6	-0.1
BLCB				*e*SG	Sg	04 19 17.7	+0.3
BLCB	Balcova	0.27	129	*e*Pg	Pg	04 19 13.6	0.0
BLCB				*e*Sg	Sg	04 19 17.7	+0.3
IZM	Izmir	0.41	112	*e*PG	Pg	04 19 14.7	-1.5
AYVA	Ayvalik	0.76	355	*i* P	Pg	04 19 22.2	-0.6
AYVA				*i* S	Sg	04 19 33.4	+0.7
AYVA	Ayvalik	0.76	355	*i* P	Pg	04 19 22.2	-0.6
AYVA				*i* S	Sg	04 19 33.4	+0.7
AKHS	Akhisar	0.87	68	*i* P	Pb	04 19 25.2	+0.1
AKHS				*i* S	Sb	04 19 37.5	+0.8
AKHS	Akhisar	0.87	68	*i* P	Pb	04 19 25.2	+0.1
AKHS				*i* S	Sb	04 19 37.5	+0.9
AKS	Akhisar	0.87	68	*e*PG	Pg	04 19 20.5	-4.4
AKS	Akhisar	0.87	68	*e*Pg	Pg	04 19 20.5	-4.4
BALY	Balya	1.35	29	*i* P	Pn	04 19 32.5	-0.2
BALY				*i* S	Sn	04 19 50.1	-0.4
BALY	Balya	1.35	29	*i* P	Pn	04 19 32.5	-0.2
BALY				*i* S	Sn	04 19 50.1	-0.4
MANT	Manisa	1.40	92	*i* P	Pn	04 19 35.0	+1.8
MANT				*i* S	Sn	04 19 52.1	+0.5
MANT	Manisa	1.40	92	*i* P	Pn	04 19 35.0	+1.7
MANT				*i* S	Sn	04 19 52.1	+0.5
KULA	Kula-Manisa	1.48	91	*e*PN	Pn	04 19 31.8	-2.6

*ISCJB **01** 04:24:14.8±0.8, 57°.82N±0°.07×156°.2W±0°.1, h124km±10km, mb4.1/2, Error ellipse: s-maj=13.1km s-min=10.4km az=27.5*
*IDC **01** 04:24:14.8±3.0, 57°.60N×156°.17W, h118km±30km, mb3.2/2, mb1 3.3/3, mb1mx2.9/27, mbtmp3.1/3, Error ellipse: s-maj=53.6km s-min=33.0km az=167.0*
*NEIC **01** 04:24:18.1, 57°.78N×156°.10W, h107km, mb4.0/2, After AEIC.*
ISC 01 04:24:16.2±0.7, **57°.82N**±0°.06×**156°.1W**±0°.1, **h118**km±11km, **n26, σ1s.02**/33, **mb4.1**/2, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	1.65	110	*e*Pn	Pn	04 24 44.9	-0.3
OHAK				*e*Sn	Sn	04 25 07.4	0.0
KDAK	Kodiak Island	1.90	90	P	Pn	04 24 48.6	+0.3
	19nm,0.3s,baz=279,slow=6.5,SNR=518						
KDAK				S	Sn	04 25 12.2	-0.6
	22nm,0.3s,baz=345,slow=23,SNR=31						
KDAK	Kodiak Island	1.90	90	*e*Pn	Pn	04 24 48.5	+0.3
KDAK				*e*Sn	Sn	04 25 13.4	+0.6
RSO	Redoubt South	3.17	32	*e*Pn	Pn	04 25 05.4	+0.8
SVW2	Sparrevohn	3.30	5	*e*Pn	Pn	04 25 05.8	-0.4
SLKM	Skilak Lake	4.07	46	P	Pn	04 25 17.2	+0.8
SEW	Seward	4.15	54	*e*Pn	Pn	04 25 18.3	+0.8
SEW				*e*Sn	Sn	04 26 02.6	-2.6
RC01	Rabbit Creek A	4.63	42	*e*Pn	Pn	04 25 24.3	+0.4
RC01				*e*Sn	Sn	04 26 12.5	-4.1
TT01	Tatalina	5.10	1	P	Pn	04 25 30.6	+0.3
PMR	Palmer	5.18	40	*e*Pn	Pn	04 25 31.8	+0.4
PMR				*e*Sn	Sn	04 26 23.7	-6.3
PPLA	Purkeypile	5.46	19	P	Pn	04 25 36.9	+1.8
EYAK	Cordova Ski Ar	6.00	59	P	Pn	04 25 42.1	-0.3
DIV	Divide	6.24	54	*e*Pn	Pn	04 25 45.8	+0.2
KTH	Kantishna Hill	6.29	22	*e*Pn	Pn	04 25 46.6	+0.2
TRF	Thorofare Moun	6.34	25	P	Pn	04 25 46.8	-0.2
CHUM	Lake Minchumin	6.36	15	*e*Pn	Pn	04 25 48.2	+0.9
	4.0nm,0.6s						
MCK	McKinley	6.90	28	*e*Pn	Pn	04 25 54.2	-0.3
	2.9nm,0.4s						
UNV	Unalaska Valle	7.06	240	*e*Pn	Pn	04 25 55.9	-1.0
COLA	College	8.11	26	*e*Pn	Pn	04 26 09.0	-2.0
IL1	Eielson Array	8.27	29	P	Pn	04 26 11.2	-1.8
INK	Inuvik	14.56	35	P	Pn	04 27 35.9	-0.3
	0.1nm,0.3s,baz=218,slow=12,SNR=3.9						
INK				S	Sn	04 30 22.0	+5.3
	0.0nm,0.3s,baz=223,slow=19,SNR=5.9						
YKA	Yellowknife Ar	20.90	60	P	P	04 28 49.4	+0.8
	0.2nm,0.3s,baz=273,slow=9.9,SNR=11						
YKA	Yellowknife Ar	20.90	60	P	P	04 28 49.4	+0.8
MDJ	Mudanjiang	45.98	287	P	P	04 32 29.8	+2.8
MDJ				sP	sP	04 33 04.7	-2.8
MDJ				S	S	04 38 59.7	-3.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,26nm,4.7s						
SONM	Songino Array	54.73	305	P	P	04 33 32.1	-0.7
	comp=Z,0.8nm,0.4s,mb4.1,baz=50,slow=5.6,SNR=5.8						
BOSA	Boshof	150.79	357	PKPbc	PKPbc	04 43 53.1	-0.9
	comp=Z,2.5nm,0.8s,baz=72,slow=3.2,SNR=4.0						

IDC 01 04:28:14.7±2.0, **1°.78N**×**125°.49E, h0**km, **mb3.7**/3, **mb1 4.0**/3, **mb1mx3.6**/20, **mbtmp3.8**/3, **Error ellipse: s-maj=181.6km s-min=25.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.26	159	P	P	04 33 24.8	+0.6
	4.2nm,0.6s,baz=337,slow=10,SNR=48						
ASAR	Alice Springs	26.58	163	P	P	04 33 54.0	-0.7
	0.3nm,0.4s,baz=339,slow=10,SNR=4.1						
MKAR	Makanchi Array	58.47	327	P	P	04 38 12.8	+0.2
	0.3nm,0.3s,baz=125,slow=8.3,SNR=5.6						

IDC 01 04:32:08.3±49.0, **49°.07S**×**138°.17E, h0**km, **mb3.7**/2, **mb1 3.9**/3, **mb1mx3.8**/11, **mbtmp3.8**/3, **ML3.8**/1, **Error ellipse: s-maj=986.6km s-min=148.2km az=136.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	17.37	10	P	Pn	04 36 12.1	+0.1
	0.2nm,0.3s,baz=158,slow=16,SNR=2.1						
ASAR	Alice Springs	25.58	351	P	P	04 37 38.8	-0.1
	0.9nm,0.9s,baz=166,slow=10,SNR=3.9						
WRA	Warramunga Arr	29.22	353	P	P	04 38 11.9	+0.3
	1.3nm,0.8s,baz=181,slow=8.2,SNR=8.9						

*NEIC **01** 04:40:57.5, 18°.40N×71°.76W, h16km, MD4.3(RSPR), After RSPR.*
RSPR 01 04:40:57.5, 18°.39N×71°.76W, h16km±59km, **MD4.2**/5, **MD4.2**/5, **6C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.73	37	*e*S	Sg	04 41 16.3	-5.3
SDDR	Presa de Saban	0.73	37	⇓*i*P	Pg	04 41 09.1	-2.7
SDDR	Presa de Saban	0.73	37	*e*Pg	Pg	04 41 09.2	-2.7
SDDR				*e*S	Sg	04 41 16.3	-5.3
PCDR	Punta Cana, DR	3.20	87	⇑*e*P	Pn	04 41 45.8	-1.4
CRPR	Cabo Rojo, PR	4.43	94	⇑*e*P	Pn	04 42 05.8	+1.7
CRPR	Cabo Rojo, PR	4.43	94	*e*Pn	Pn	04 42 02.4	-1.7
AOPR	Arecibo Observ	4.75	90	⇓*e*P	Pn	04 42 10.6	+2.2
AOPR	Arecibo Observ	4.75	90	*e*Pn	Pn	04 42 09.8	+1.4
CPD	Cerro la Pandu	5.56	93	⇑*e*P	Pn	04 42 19.7	+0.1
CPD	Cerro la Pandu	5.56	93	*e*Pn	Pn	04 42 20.1	+0.5
CBYP	Canovanas	5.60	90	⇑*e*P	Pn	04 42 22.0	+1.8
CBYP	Canovanas	5.60	90	*e*Pn	Pn	04 42 20.2	0.0
HUMP	Col San Antoni	5.62	92	⇑*e*P	Pn	04 42 20.9	+0.5
HUMP	Col San Antoni	5.62	92	*e*Pn	Pn	04 42 20.1	-0.3
	9.3nm,0.5s						
MTP	Monte Pirata	5.90	92	⇑*e*P	Pn	04 42 23.9	-0.4

*IDC **01** 04:49:34.7±0.8, 1°.17N×122°.09E, h0km, mb4.1/6, mb1 4.3/8, mb1mx4.0/22, mbtmp4.2/8, ML4.4/2, MS3.6/2, Ms1 3.6/2, ms1mx3.0/38, Error ellipse: s-maj=44.6km s-min=15.7km az=76.0*
*DJA **01** 04:49:39, 1°.33N×121°.84E, h10km, Mw5.1/5*
*NEIC **01** 04:49:39.9±0.6, 1°.17N×122°.05E, h35km, mb4.2/2, Error ellipse: s-maj=23.4km s-min=10.1km az=80.0*
*ISCJB **01** 04:49:40.1±0.7, 1°.27N±0°.05×121°.92E±0°.06, h62km±9km, mb4.1/7, Error ellipse: s-maj=10.3km s-min=7.6km az=158.4*
ISC 01 04:49:41.8±0.7, **1°.24N**±0°.05×**121°.92E**±0°.06, **h62**km±10km, **n31, σ1s.23**/32, **mb4.1**/7, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.76	178	P	Pn	04 49 53.7	-3.2
APSI	Ampana	2.16	187	P	Pn	04 50 17.1	+1.7
APSI				S	Sn	04 50 47.5	+6.4
MPSI	Mapaga	2.21	246	P	Pn	04 50 15.4	-0.8
MPSI				S	Sn	04 50 42.7	+0.2
LUWI	Luwuk	2.42	159	P	Pn	04 50 20.5	+1.4
LUWI				S	Sn	04 50 54.9	+7.3
PCI	Palu	2.98	224	P	Pn	04 50 27.4	+0.7
SGSI	Sangihe	4.35	56	P	Pn	04 50 45.0	-0.4
TTSI	Tana Toraja	4.75	206	P	Pn	04 50 51.2	+0.3
TSM	Tawau	5.05	307	P	Pn	04 50 52.9	-2.2
MYLDM	Lahad Datu	5.19	319	P	Pn	04 50 57.4	+0.4
MYLDM	Lahad Datu	5.19	319	P	Pn	04 50 57.2	+0.2
	205nm,0.9s,2μm0.6nm						
KDI	Kendari	5.21	172	P	Pn	04 50 58.4	+1.1
	109nm,0.9s,1μm0.4nm						
MJSI	Majene	5.59	212	P	Pn	04 51 04.3	+1.8
	749nm,1.3s,6.4nm						
SDKM	Sandakan	6.43	313	P	Pn	04 51 13.7	-0.2
KAPI	Kappang	6.58	199	Pn	Pn	04 51 13.9	-2.1
	2.2nm,0.3s,baz=28,slow=9.8,SNR=8.8						
KAPI				Sn	Sn	04 52 24.8	-4.9
	1.1nm,0.3s,baz=202,slow=19,SNR=2.4						
KAPI				LR	LR	04 53 57.2	
	comp=Z,208nm,21.8s,baz=19,slow=40						
KAPI	Kappang	6.58	199	P	Pn	04 51 14.9	-1.1
DAV	Davao City (W)	6.84	32	LR	LR	04 53 07.3	
	comp=Z,50nm,21.8s,baz=180,slow=31						
KBKI	Kotabaru	7.31	232	P	Pn	04 51 25.1	-0.9
	62nm,0.7s,612nm0.2nm						
KKM	Kota Kinabalu	7.43	310	P	Pn	04 51 27.5	-0.1
FITZ	Fitzroy Crossi	19.57	169	P	Pn	04 54 04.2	-2.4
	2.3nm,0.3s,baz=1.9,slow=6.7,SNR=76						
FITZ	Fitzroy Crossi	19.57	169	*e*P	Pn	04 54 04.6	-2.0
	5.4nm,0.4s						
WRAB	Tennant Creek	24.32	151	*e*P	P	04 54 53.4	-0.5
	7.6nm,0.8s,mb4.2						
WRA	Warramunga Arr	24.32	151	P	P	04 54 52.9	-1.0
	4.7nm,0.5s,mb4.2,baz=326,slow=11,SNR=49						
WRA				PcP	PcP	04 58 33.2	+0.7
	0.8nm,0.8s,baz=324,slow=2.3,SNR=5.3						
WB2	Warramunga Arr	24.33	151	*e*P	P	04 54 53.4	-0.5
ASAR	Alice Springs	27.36	156	P	P	04 55 20.9	-0.5
	2.3nm,0.5s,mb4.0,baz=344,slow=14,SNR=48						
ASAR				PcP	PcP	04 58 40.2	+0.9
	0.9nm,0.4s,baz=341,slow=2.1,SNR=10						
STKA	Stephens Creek	37.85	152	P	P	04 56 52.7	-0.1
	7.6nm,0.8s,mb4.5,baz=342,slow=8.1,SNR=8.6						
STKA	Stephens Creek	37.85	152	P	P	04 56 52.7	-0.1
MJAR	Matsushiro Arr	38.22	21	P	P	04 56 56.5	+0.7
	0.7nm,0.3s,mb3.9,baz=181,slow=8.5,SNR=2.9						
SONM	Songino Array	48.32	346	P	P	04 58 20.0	+3.0
	2.0nm,0.9s,mb4.2,baz=162,slow=9.2,SNR=11						
MKAR	Makanchi Array	56.99	328	P	P	04 59 23.6	+2.5
	0.6nm,0.6s,mb3.8,baz=130,slow=9.1,SNR=6.0						
AAK	Ala-Archa	59.09	321	LR	LR	05 26 07.1	
	comp=Z,153nm,20.4s,baz=10,slow=37						
TORD	Torodi Ar. Bea	119.04	286	PKP	PKPdf	05 08 24.6	-0.1
	0.4nm,0.8s,baz=58,slow=1.1,SNR=3.7						

KRSC 01 04:54:10.0±0.5, **55°.00N**×**165°.73E, h29**km±30km, **ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.25	34	*i* P	Pb	04 54 16.4	-0.2
BKI				*i* S	Sb	04 54 20.7	-0.4
KBTR	Krutoberegovo	2.05	307	*e*P	Pn	04 54 42.3	-0.1
KBTR				*i* S	Sn	04 55 05.3	-1.7
MKZ	Mys Kozlova	2.36	261	*e*P	Pn	04 54 47.8	+1.1
MKZ				*i* S	Sn	04 55 14.7	+0.1
SMKR	Semkarok	2.88	305	*e*P	Pn	04 54 55.6	+1.7
SMKR				*i* S	Sn	04 55 28.0	+0.5
ZLN	Zelenaya	2.98	292	*e*P	Pn	04 54 58.1	+2.9
ZLN				*i* S	Sn	04 55 32.5	+2.5
BDR	Baidarnaya	3.00	303	*e*P	Pn	04 54 57.8	+2.3
BDR				*i* S	Sn	04 55 32.3	+1.9
CIRR	Tsirk	3.04	294	*e*P	Pn	04 54 58.6	+2.5
CIRR				*i* S	Sn	04 55 33.8	+2.3
SRKR	Sorokina	3.06	305	*e*P	Pn	04 54 58.9	+2.6
KMNR	Kamenistaya	3.22	286	*e*P	Pn	04 55 01.7	+3.1
KPT	Kopyto	3.28	289	*e*P	Pn	04 55 01.4	+2.0
KPT				*i* S	Sn	04 55 38.2	+0.9
SRDR	Sredinnyy	3.65	294	*e*P	Pn	04 55 07.9	+3.4
NLC	Nalytchevo	4.18	247	*e*P	Pn	04 55 12.9	+1.2
NLC				*i* S	Sn	04 55 58.9	-0.7
AVH	Avacha	4.46	250	*e*P	Pn	04 55 17.8	+2.2
AVH				*i* S	Sn	04 56 07.0	+0.5
PET	Petropavlovsk	4.62	248	*e*P	Pn	04 55 20.3	+2.6
PET				*i* S	Sn	04 56 10.8	+0.5
GNL	Ganaly	4.74	257	*e*P	Pn	04 55 22.3	+2.9
RUS	Russkaya	5.00	242	*e*P	Pn	04 55 24.2	+1.3
RUS				*i* S	Sn	04 56 18.4	-1.3
MIPR	Malaya Ipel'ka	5.99	247	P	Pn	04 55 39.5	+2.9

*LDG **01** 04:57:46.5±0.1, 19°.15S×168°.81E, h10km, Mb6.1/4, Ms5.0/9, Error ellipse: s-maj=19.0km s-min=9.7km az=42.0*
*NOU **01** 04:57:47.6±0.9, 19°.20S×168°.93E, h30km, MD3.2, ML3.1*
*SZGRF **01** 04:57:47.3, 20°.55S×170°.15E, h42km, mb5.1, Vanuatu Islands*
*DJA **01** 04:57:48, 20°.10S×169°.58E, h45km, mb5.6/13*
*BGS **01** 04:57:48.8±6.6, 19°.47S×168°.88E, h33km, mb5.7(NEIC)*
*MOS **01** 04:57:49.3±0.9, 19°.35S×168°.88E, h33km, mb5.9/81, MS5.1/70, Error ellipse: s-maj=7.6km s-min=6.9km az=67.9*
*ISCJB **01** 04:57:49.1±0.1, 19°.41S±0°.03×168°.84E±0°.02, h33km, mb5.7/169, MS5.1/241, Error ellipse: s-maj=4.4km s-min=2.6km az=147.8*
*GCMT **01** 04:57:50.2±0.1, 19°.52S×168°.58E, h49km, MW5.7/110, Moment Tensor Solution. s110,c216; s108,c259; Duration: 1s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}3.89±.05; $M_{\theta\theta}$-0.21±.04; $M_{\phi\phi}$-3.68±.04; $M_{r\theta}$-0.27±.04;*

$M_{\phi\phi}$1.75±.03; $M_{\phi r}$-0.19±.04; Best double couple: $M_0$4.16600×10^{17} NP1:ϕ_s332.00000°,δ45.00000°, λ82.00000°. NP2:ϕ_s163.00000°,δ46.00000°,λ98.00000°. Principal axes: T 3.9210, Plg85.0000°, Azm152.0000°; N 0.4870, Plg5.0000°, Azm337.0000°; P -4.4100, Plg1.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

*NEIC **01** 04:57:50.2±0.1, 19°.47S×168°.88E, h35km, mb5.7/130, MS5.2/198, MW5.6, MW5.7 Error ellipse: s-maj=5.1km s-min=3.4km az=157.0, Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}2.66; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-2.00; $M_{r\theta}$0.54; $M_{\theta\phi}$1.86; $M_{\phi r}$-0.05; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s336.00000°,δ43.00000°, λ107.00000°. NP2:ϕ_s134.00000°,δ49.00000°,λ75.00000°. Principal axes: T 2.7600, Plg78.0000°, Azm341.0000°; N 0.5700, Plg11.0000°, Azm143.0000°; P -3.3300, Plg3.0000°, Azm234.0000°;*

*IDC **01** 04:57:53.4±1.5, 19°.49S×168°.90E, h60km±12km, mb5.3/28, mb1 5.3/29, mb1mx5.3/30, mbtmp5.3/29, MS5.0/23, Ms1 5.0/23, ms1mx4.8/29 Error ellipse: s-maj=11.1km s-min=9.1km az=163.0*

*BJI **01** 04:57:56.2, 18°.90S×169°.01E, h83km, mB5.5/44, mb5.7/58, Ms5.2/53, Ms7 4.9/45*

ISC 01 04:57:51.1±0.8**, 19°.43S**±0°.03×**168°.91E**±0°.02**, h37**km±7km**, h88**km±1.9km**:pP-P, n1420, σ0°.64**/761**, mb5.7**/169**, MS5.1**/241**, 282C-220D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.30	215	eP	Pn	04 58 38.5	-1.8
BAYA				eS	Sn	04 59 17.3	-1.1
BAYA				AMP		04 59 18.9	
	comp=Z,112nm,2.8s						
DZM	Mont Dzumac	3.49	221	ePn	Pn	04 58 42.0	-0.9
	comp=Z,3μm,1.2s						
DZM				eSn	Sn	04 59 16.6	-6.4
	comp=Z,6μm,1.2s						
DZM				eLR	LR	04 59 25.1	
	comp=Z,59μm,23.8s						
DZM	Mont Dzumac	3.49	221	eP	Pn	04 58 41.6	-1.3
DZM				eS	Sn	04 59 20.7	-2.3
DZM	Mont Dzumac	3.49	221	ePn	Pn	04 58 41.9	-1.0
DZM				eSn	Sn	04 59 20.5	-2.5
NOUC	Port Laguerre	3.60	222	eP	Pn	04 58 43.7	-0.7
NOUC				eS	Sn	04 59 25.0	-0.8
NOUC				AMP		04 59 35.0	
	comp=Z,718nm,6.3s						
FUNA	Funafuti	14.73	44	ePn	Pn	05 01 18.9	+1.9
	comp=Z,490nm,1.2s						
RAO	Raoul Island	15.47	132	LR	LR	05 06 17.5	
	comp=Z,5μm,18.6s,baz=134,slow=33						
OUZ	Omahuta	16.27	166	eP	Pn	05 01 39.0	+2.3
	comp=Z,162nm,0.9s						
EIDS	Eidsvold	17.50	247	ePn	Pn	05 01 54.9	+2.6
	comp=Z,504nm,1.9s						
ARMA	Armidale	19.08	232	eP	Pn	05 02 13.2	+1.6
ARMA				eS	S	05 05 46.7	+1.5
ARMA	Armidale	19.08	232	ePn	Pn	05 02 13.5	+1.9
	comp=Z,274nm,1.4s						
AFI	Afiamalu	19.30	76	P	Pn	05 02 14.1	-0.1
AFI				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AFI				MLR	MLR		
	comp=Z,9μm,21.0s						
AFI	Afiamalu	19.30	76	P	Pn	05 02 14.1	-0.2
	comp=Z,3.9nm,0.3s,baz=264,slow=5.0,SNR=34						
AFI				LR	LR	05 08 18.7	
	comp=Z,9μm,21.0s,baz=224,slow=32						
AFI	Afiamalu	19.30	76	eP	Pn	05 02 14.0	-0.3
	comp=Z,685nm,1.4s						
URZ	Urewera	20.07	161	P	P	05 02 22.4	+1.1
	comp=Z,147nm,0.7s,baz=330,slow=5.0,SNR=31						
URZ				LR	LR	05 08 56.2	
	comp=Z,4μm,20.6s,MS4.7,baz=322,slow=33						
URZ	Urewera	20.07	161	eP	P	05 02 22.6	+1.4
	comp=Z,430nm,1.2s						
TARA	Tarawa	21.03	11	eP	P	05 02 32.9	+1.0
	comp=Z,250nm,0.8s,mb5.6						
TARA				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
CTA	Charters Tower	21.33	264	P	P	05 02 36.4	+1.3
CTA				pmax	pmax		
	comp=Z,31nm,0.9s						
CTA				MLR	MLR		
	comp=Z,6μm,21.0s						
CTA	Charters Tower	21.33	264	eP	P	05 02 37.0	+1.9
	comp=Z,87nm,1.0s,mb5.0						
CTA				eS	S	05 06 29.7	-0.4
CTA	Charters Tower	21.33	264	P	P	05 02 36.4	+1.3
	comp=Z,31nm,0.9s,mb4.7,baz=91,slow=11,SNR=19						
CTA				LR	LR	05 10 02.6	
	comp=Z,6μm,21.0s,MS5.0,baz=84,slow=34						
CTAO	Charters Tower	21.33	264	eP	P	05 02 37.1	+2.0
CTAO				eS	S	05 06 29.8	-0.3
CTAO				pmax	pmax		
	comp=Z,182nm,1.0s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,7μm,22.0s,MS5.0						
CTAO	Charters Tower	21.33	264	eP	P	05 02 37.1	+2.1
	comp=Z,182nm,1.0s,mb5.4						
CTAO				eS	S	05 06 29.8	-0.3
CTAO				LR	LR		
	comp=Z,7μm,22.0s,MS5.0						
CTAO	Charters Tower	21.33	264	P	P	05 02 37.1	+2.0
RIV	Riverview	21.34	224	eP	P	05 02 38.2	+3.2
SNZO	South Karori	22.36	168	eP	P	05 02 46.4	+0.5
	comp=Z,52nm,0.7s,mb5.1						
SNZO				LR	LR		
	comp=Z,6μm,20.0s,MS5.0						
CNB	Canberra Magne	23.41	224	eP	P	05 02 58.1	+1.1
CNB				eS	S	05 07 02.9	-4.6
CAN	Canberra	23.66	224	eP	P	05 03 00.2	+1.0
CAN				pmax	pmax		
	comp=Z,226nm,1.4s,mb5.4						
CAN				MLR	MLR		
	comp=Z,4μm,22.0s,MS4.8						
CAN	Canberra	23.66	224	eP	P	05 03 00.2	+0.9
	comp=Z,226nm,1.4s,mb5.4						
CAN				LR	LR		
	comp=Z,4μm,22.0s,MS4.8						
RPZ	Rata Peaks	24.28	176	P	P	05 03 05.4	+0.5
	comp=Z,155nm,0.9s,mb5.5,baz=13,slow=3.1,SNR=33						
RPZ				LR	LR	05 11 32.7	
	comp=Z,6μm,20.4s,MS5.1,baz=344,slow=34						
RPZ	Rata Peaks	24.28	176	eP	P	05 03 05.3	+0.5
	comp=Z,459nm,1.4s,mb5.7						
COEN	Coen	25.23	279	eP	P	05 03 14.7	+0.9
	comp=Z,648nm,1.0s,mb6.1						
TOO	Toolangi	27.26	224	eP	P	05 03 32.6	+0.7
TOO				eS	S	05 08 09.1	+0.3
STKA	Stephens Creek	27.48	238	eP	P	05 03 34.1	+0.2
	comp=Z,28nm,0.7s,mb4.9						
STKA				ePCP	PcP	05 06 51.6	-0.2
STKA				eS	S	05 07 53.4	-19
STKA				ePCS	PcS	05 10 32.7	-0.9
STKA	Stephens Creek	27.48	238	P	P	05 03 34.4	+0.5
	comp=Z,32nm,0.7s,mb4.9,baz=69,slow=7.9,SNR=56						
STKA				PcP	PcP	05 06 52.0	+0.2
	comp=Z,22nm,0.9s,baz=81,slow=1.7,SNR=5.4						
RAR	Rarotonga	29.40	99	LR	LR	05 13 09.3	
	comp=Z,2μm,19.9s,MS4.8,baz=266,slow=31						
TAU	Tasmania Unive	29.65	213	eP	P	05 03 54.2	+1.1
TAU				pmax	pmax		
	comp=Z,85nm,1.5s,mb5.2						
TAU				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.1						
TAU	Tasmania Unive	29.65	213	eP	P	05 03 54.1	+1.1
	comp=Z,85nm,1.5s,mb5.2						
TAU				LR	LR		
	comp=Z,4μm,19.0s,MS5.1						
WRAB	Tennant Creek	32.51	263	eP	P	05 04 17.3	-1.3
WRAB				e		05 07 04.9	
WRAB				pmax	pmax		
	comp=Z,94nm,1.3s,mb5.6						
WRAB				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.2						
WRAB	Tennant Creek	32.51	263	eP	P	05 04 17.3	-1.3
	comp=Z,94nm,1.3s,mb5.6						
WRAB				ePcP	PcP	05 07 04.9	-0.1
WRAB				LR	LR		
	comp=Z,5μm,20.0s,MS5.2						
WRA	Warramunga Arr	32.52	263	P	P	05 04 17.4	-1.3
WRA						05 07 04.4	
WRA				S	S	05 09 31.2	-0.4
WRA				pmax	pmax		
	comp=Z,27nm,1.1s						
WRA				smax			
	comp=N,4.0nm,1.3s						
WRA				MLR	MLR		
	comp=Z,4μm,19.5s						
WRA	Warramunga Arr	32.52	263	P	P	05 04 17.4	-1.3
	comp=Z,27nm,1.1s,mb5.1,baz=93,slow=8.5,SNR=33						
WRA				PcP	PcP	05 07 04.4	-0.7
	comp=Z,28nm,1.0s,baz=94,slow=2.4,SNR=15						
WRA				S	S	05 09 31.2	-0.4
	comp=Z,3.8nm,1.3s,baz=96,slow=12,SNR=5.3						
WRA				PKiKP	PKiKP	05 14 30.1	-2.3
	comp=Z,2.9nm,0.9s,baz=12,slow=0.1,SNR=14						
WRA				LR	LR	05 17 10.9	
	comp=Z,4μm,19.5s,MS5.1,baz=90,slow=36						
WRA	Warramunga Arr	32.52	263	P	P	05 04 17.4	-1.3
WRA				PcP	PcP	05 07 04.4	-0.7
WRA				S	S	05 09 31.2	-0.4
ASAR	Alice Springs	32.78	256	P	P	05 04 20.4	-0.6
	comp=Z,56nm,0.7s,mb5.6,baz=84,slow=9.0,SNR=406						
ASAR				PcP	PcP	05 07 05.0	-0.8
	comp=Z,15nm,0.9s,baz=98,slow=3.3,SNR=8.7						
ASAR				S	S	05 09 32.5	-3.0
	comp=Z,8.2nm,1.2s,baz=82,slow=18,SNR=4.8						
ASAR				PKiKP	PKiKP	05 14 30.4	-2.2
	comp=Z,2.1nm,0.9s,baz=106,slow=1.7,SNR=8.9						
ASAR				P3KPbc		05 35 41.5	
	comp=Z,1.1nm,0.8s,baz=273,slow=3.8,SNR=7.7						
ASAR	Alice Springs	32.78	256	P	P	05 04 20.4	-0.6
ASAR				PcP	PcP	05 07 05.0	-0.8
ASAR				S	S	05 09 32.5	-3.0
KAKA	Kakadu	35.62	275	eP	P	05 04 44.1	-1.6
	comp=Z,30nm,0.8s,mb5.3						
KAKA				ePCP	PcP	05 07 12.2	-1.8
FORT	Forrest	38.48	245	eP	P	05 05 09.6	-0.2
	comp=Z,123nm,0.8s,mb5.7						
FORT	Forrest	38.48	245	eP	P	05 05 09.5	-0.3
	comp=Z,145nm,0.8s,mb5.8						
WAKE	Wake Island	38.54	357	PFAKE		05 05 20.0	+10
WAKE				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
PAE	Paea	39.33	94	eP	P	05 05 16.4	-0.6
	comp=Z,26nm,1.3s,mb4.8						
PAE	Paea	39.33	94	eP	P	05 05 16.4	-0.6
PAE				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.8						
XMAS	Kiritimati	39.34	61	PFAKE		05 05 30.0	+13
XMAS				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
PPT	Papeete	39.35	94	eP	P	05 05 16.8	-0.4
	comp=Z,72nm,1.0s,mb5.4						
PPT				eS	S	05 11 09.6	-6.7
	comp=Z,980nm,28.2s						
PPT				eLQ		05 14 18.0	
	comp=Z,7μm,30.0s						
PPT				eLR	LR	05 15 57.1	
	comp=Z,7μm,27.0s,baz=259						
PPT	Papeete	39.35	94	P	P	05 05 17.0	-0.2
	comp=Z,91nm,1.0s,mb5.5,baz=210,slow=6.7,SNR=6.5						
PPT				LR	LR	05 18 06.2	
	comp=Z,1μm,18.5s,MS4.8,baz=265,slow=31						
TIAR	Tiarei	39.57	94	eP	P	05 05 18.7	-0.3
	comp=Z,158nm,1.0s,mb5.7						
GUMO	Guam	40.46	322	LR	LR	05 19 57.8	
	comp=Z,2μm,21.9s,MS4.8,baz=324,slow=33						
GUMO	Guam	40.46	322	PFAKE		05 05 40.0	+14
GUMO				LR	LR		
	comp=Z,2μm,22.0s,MS4.8						
MEH	Mehetia	40.72	95	eP	P	05 05 28.0	-0.6
	comp=Z,124nm,1.2s,mb5.4						
FITZ	Fitzroy Crossi	40.91	265	eP	P	05 05 30.2	0.0
	comp=Z,139nm,1.1s,mb5.5						
FITZ				ePCP	PcP	05 07 30.1	-0.2
FITZ				eS	S	05 11 33.8	-5.8
FITZ	Fitzroy Crossi	40.91	265	P	P	05 05 30.0	-0.2
	comp=Z,84nm,1.0s,mb5.3,baz=112,slow=8.1,SNR=40						
FITZ				LR	LR	05 22 29.3	
	comp=Z,4μm,19.8s,MS5.2,baz=100,slow=36						
FITZ	Fitzroy Crossi	40.91	265	eP	P	05 05 30.1	0.0
	comp=Z,107nm,1.1s,mb5.4						
FITZ				ePcP	PcP	05 07 30.2	-0.1
PMOR	Pomariorio Ree	41.42	91	eP	P	05 05 34.2	-0.2
	comp=Z,235nm,1.1s,mb5.7						
PMOR				epP	pP	05 05 50.5	+5.6
	comp=Z,557nm,1.6s						
JOHN	Johnston Islan	41.72	32	PFAKE		05 05 50.0	+13
JOHN				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
MBWA	Marble Bar	46.01	259	eP	P	05 06 11.3	0.0
	comp=Z,94nm,1.0s,mb5.7						
MBWA				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
NWAO	Narrogin (SRO)	47.85	243	eP	P	05 06 24.7	-0.8
NWAO				pmax	pmax		
	comp=Z,90nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,4μm,19.0s						
NWAO	Narrogin (SRO)	47.85	243	P	P	05 06 24.6	-0.9
	comp=Z,97nm,0.8s,mb5.9,baz=89,slow=7.5,SNR=36						
NWAO				LR	LR	05 26 55.0	
	comp=Z,5μm,19.5s,MS5.5,baz=90,slow=36						
NWAO	Narrogin (SRO)	47.85	243	eP	P	05 06 24.7	-0.8
	comp=Z,90nm,0.9s,mb5.8						
NWAO				LR	LR		
	comp=Z,4μm,19.0s,MS5.4						
MIDW	Midway	49.19	16	PFAKE		05 06 50.0	+14
MIDW				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
KAPI	Kappang	49.94	280	P	P	05 06 41.2	-0.6
	comp=Z,96nm,1.0s,mb5.8,baz=133,slow=4.6,SNR=33						
KAPI	Kappang	49.94	280	eP	P	05 06 41.3	-0.5
	comp=Z,170nm,1.1s,mb6.0						
KAPI				ePcP	PcP	05 08 01.5	-0.2
KAPI				LR	LR		
	comp=Z,905nm,20.0s,MS4.8						
DAV	Davao City (W)	50.14	297	P	P	05 06 42.6	-0.6
	comp=Z,124nm,0.4s,mb6.3,baz=12,slow=2.0,SNR=5.1						
DAV				LR	LR	05 25 55.6	
	comp=Z,556nm,22.0s,MS4.5,baz=120,slow=34						
DAV	Davao City (W)	50.14	297	P	P	05 06 42.6	-0.6
DAV				LR	LR	05 25 55.6	
DAV	Davao City (W)	50.14	297⇑	eP	P	05 06 41.2	-2.0
TAOE	Nuku Hiva Isla	50.34	85	eS	S	05 13 50.3	-5.3
	comp=Z,693nm,26.0s						
TAOE				eLR	LR	05 21 01.4	
	comp=Z,2μm,24.1s,baz=256						
DRV	Dumont d'Urvil	50.77	194	P	P	05 06 52.0	+4.8
DRV				S	S	05 14 15.0	+15
DRV				SS	SS	05 17 48.0	+13
DRV				L		05 19 00.0	
KIP	Kipapa	51.92	40	eP	P	05 06 56.6	+0.1
KIP				pmax	pmax		
	comp=Z,116nm,0.9s,mb5.8						
KIP	Kipapa	51.92	40	eP	P	05 06 56.6	+0.2
	comp=Z,116nm,0.9s,mb5.8						
RKT	Rikitea	52.16	105	eP	P	05 06 57.2	-1.1
	comp=Z,57nm,1.0s,mb5.4						
RKT	Rikitea	52.16	105	eP	P	05 06 57.2	-1.1
RKT				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5						
STCH	Steam Cracks	52.27	45	eP	P	05 06 59.6	+0.5
CBIJ	Chichi jima	53.01	330	P	P	05 07 03.8	-0.6
	comp=Z,984nm,0.9s,baz=168,slow=3.9,SNR=30						
RCP	Roxas	54.92	300⇑	eP	P	05 07 18.8	+0.2
TSM	Tawau	55.44	290	P	P	05 07 23.1	+0.7
SDKM	Sandakan	56.66	291	P	P	05 07 30.8	-0.3
KDM	Kudat	57.57	292	P	P	05 07 38.4	+0.8
KKM	Kota Kinabalu	57.71	291	P	P	05 07 39.4	+0.8
KKM	Kota Kinabalu	57.71	291	eP	P	05 07 38.7	+0.1
	comp=Z,412nm,1.5s,mb6.2						
TGY	Tagaytay City	57.79	302	P	P	05 07 39.6	+0.5
TGY				pmax	pmax		
	comp=Z,220nm,0.6s						
TGY	Tagaytay City	57.79	302	P	P	05 07 39.6	+0.5
	comp=Z,220nm,0.6s,mb6.4,baz=105,slow=9.8,SNR=16						
SBA	Scott Base	58.47	181	eP	P	05 07 43.4	+0.5
SBA				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.8						
SBA				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.0						
SBA	Scott Base	58.47	181	eP	P	05 07 43.4	+0.5
	comp=Z,83nm,0.9s,mb5.8						
SBA				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
JHJ	Hachijo jima 2	59.20	332	LR	LR	05 29 16.1	
	comp=Z,458nm,21.1s,MS4.6,baz=231,slow=32						
BTM	Bintulu	59.27	286	P	P	05 07 50.6	+1.1
SBUM	Sibu	59.75	285	P	P	05 07 53.5	+0.7
CASY	Casey	59.82	203	eP	P	05 07 51.7	-0.7
CASY	Casey	59.82	203	eP	P	05 07 50.9	-1.5
	comp=Z,124nm,1.3s,mb5.8						
CASY				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
JOW	Kunigami	60.56	318	P	P	05 07 58.6	+0.5
	comp=Z,144nm,0.9s,mb6.1,baz=148,slow=6.1,SNR=17						
JOW				LR	LR	05 30 19.6	
	comp=Z,674nm,21.7s,MS4.8,baz=139,slow=32						
KSM	Kuching	61.11	283	P	P	05 08 02.6	+0.5
KSM	Kuching	61.11	283	eP	P	05 08 02.1	0.0
	comp=Z,144nm,0.8s,mb6.2						
KSM				ePcP	PcP	05 08 45.4	+0.5
KSM				LR	LR		
	comp=Z,774nm,20.0s,MS4.8						
MJAR	Matsushiro Arr	62.78	332	P	P	05 08 12.3	-0.5
	comp=Z,57nm,1.0s,mb5.7,baz=166,slow=7.0,SNR=111						
MJAR				PKPPKP		05 37 16.3	
	comp=Z,0.5nm,0.4s,baz=359,slow=2.1,SNR=4.8						
MAJO	Matsushiro	62.78	332	eP	P	05 08 12.6	-0.2
MAJO				pmax	pmax		
	comp=Z,102nm,1.0s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,387nm,21.0s,MS4.5						
MAJO	Matsushiro	62.78	332	eP	P	05 08 12.6	-0.2
	comp=Z,102nm,1.0s,mb5.9						
MAJO				LR	LR		
	comp=Z,387nm,21.0s,MS4.5						
MAT	Matsushiro	62.78	332	P	P	05 08 12.4	-0.4
MAT				S	S	05 16 34.0	-5.3
TWG	Pinlang	62.81	310	eP	P	05 08 12.4	-0.9
	comp=Z,86nm,0.9s,mb5.9						
YULB	Yu-li	63.00	310	eP	P	05 08 13.9	-0.6
	comp=Z,110nm,1.0s,mb5.9						
NACB	Ninganchiao	63.27	311	eP	P	05 08 16.1	-0.3
	comp=Z,482nm,1.2s,mb6.5						
TPUB	Ta-pu	63.42	310	eP	P	05 08 16.7	-0.6
	comp=Z,308nm,0.9s,mb6.4						
SSLB	Suanglung	63.49	311	eP	P	05 08 16.9	-0.9
	comp=Z,229nm,0.9s,mb6.3						
YHNB	Yeheng	63.74	312	eP	P	05 08 19.6	+0.2
	comp=Z,444nm,1.0s,mb6.5						
TATO	Taipei	63.85	312	eP	P	05 08 20.5	+0.4
	comp=Z,573nm,1.2s,mb6.5						
TATO				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
TATO	Taipei	63.85	312	P	P	05 08 20.9	+0.8
	SNR=9.7						
TATO				P		05 08 20.9	
	SNR=9.7						
ERM	Erimo	65.61	339	eP	P	05 08 32.1	+0.9
ERM				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.7						
ERM				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.1						
ERM	Erimo	65.61	339	eP	P	05 08 32.1	+0.9
	comp=Z,60nm,0.7s,mb5.7						
ERM				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
QZH	Quanzhou	65.90	310⇑	iP	P	05 08 35.2	+1.7
QZH				S	S	05 17 20.3	+2.0
QZH				pmax	pmax		
	comp=Z,140nm,1.0s,mb6.0						
QZH				pmax	pmax		
	comp=Z,1μm,4.3s						
QZH				LR	LR		
	comp=Z,1μm,18.8s,MS5.1						
MIR	Mirnyy	66.72	205c	iP	P	05 08 38.0	-0.1
MIR				pmax	pmax		
	comp=Z,510nm,3.0s						
MYKOM	Kota Tinggi	67.20	281	P	P	05 08 42.7	+0.6
ASAJ	Asahikawa	67.67	340	P	P	05 08 45.6	+1.3
	comp=Z,315nm,0.8s,mb6.4,baz=216,slow=8.6,SNR=78						
ASAJ				LR	LR	05 33 41.5	
	comp=Z,2μm,21.5s,MS5.2,baz=147,slow=32						
KGM	Kluang	67.78	281	P	P	05 08 46.5	+0.8
SSE	Sheshan	68.00	317	P	P	05 08 46.2	-0.5
SSE				PP	PP	05 11 17.3	+0.1
SSE				S	S	05 17 42.2	-1.3
SSE				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.4						
SSE				pmax	pmax		
	comp=Z,300nm,12.0s						
SSE				LR	LR		
	comp=N,500nm,25.0s,MS4.8						
SSE				LR	LR		
	comp=E,470nm,25.0s,MS4.8						
SSE				LR	LR		
	comp=Z,640nm,22.8s,MS4.8						
KSRS	Korea Array	68.49	326	P	P	05 08 49.9	+0.2
	comp=Z,13nm,1.0s,mb4.9,baz=142,slow=5.6,SNR=34						
KSRS				PKiKP	PKiKP	05 15 09.2	-0.8
	comp=Z,0.4nm,0.3s,baz=202,slow=1.3,SNR=4.4						
KSRS				PKP2bc		05 37 01.4	
	comp=Z,5.6nm,1.0s,baz=325,slow=3.1,SNR=17						
GZH	Guangzhou	68.75	305	P	P	05 08 52.8	+1.2
GZH				S	S	05 17 50.9	-1.8
GZH				pmax	pmax		
	comp=Z,640nm,3.7s						
INCN	Inchon	69.20	325	eP	P	05 08 54.4	+0.3
	comp=Z,107nm,0.9s,mb5.8						
INCN				LR	LR		
	comp=Z,393nm,21.0s,MS4.6						
INCN	Inchon	69.20	325	P	P	05 08 54.9	+0.8
	SNR=7.9						
INCN				P		05 08 54.9	
	SNR=7.9						
KTGM	Kuala Trenggan	69.20	284	P	P	05 08 55.1	+0.5
COCO	West Island	69.30	264	PFAKE		05 09 10.0	+15
COCO				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
QIZ	Qiongzhong	69.40	300	P	P	05 08 56.3	+0.6
QIZ				pP	pP	05 09 20.9	+14
QIZ				S	S	05 18 01.4	+0.8
QIZ				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
QIZ				pmax	pmax		
	comp=Z,400nm,11.5s						
QIZ				LR	LR		
	comp=E,190nm,19.6s						
QIZ				LR	LR		
	comp=Z,650nm,22.9s,MS4.8						
QIZ	Qiongzhong	69.40	300	eP	P	05 08 56.3	+0.6
	comp=Z,84nm,1.3s,mb5.5						
QIZ				LR	LR		
	comp=Z,415nm,19.0s,MS4.7						
FRIM	Kepong	69.80	281	P	P	05 08 58.1	-0.2
NJ2	Nanjing	70.13	316	eP	P	05 09 00.1	+0.2
NJ2				pP	pP	05 09 20.5	+9.4
NJ2				sP	sP	05 09 29.5	+14
NJ2				S	S	05 18 06.5	-2.2
NJ2				sS	sS	05 18 39.5	+12
NJ2				SKS		05 18 45.0	
NJ2				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
NJ2				pmax	pmax		
	comp=Z,440nm,10.0s						
NJ2				LR	LR		
	comp=N,9μm,29.9s						
NJ2				LR	LR		
	comp=E,9μm,24.6s						
YSS	Yuzh-Sakhalins	70.16	341⇑	iP	P	05 09 00.0	+0.3
YSS				e		05 09 21.0	
YSS				pmax	pmax		
	comp=Z,280nm,1.0s,mb6.2						
YSS	Yuzh-Sakhalins	70.16	341	eP	P	05 09 01.1	+1.3
	comp=Z,210nm,0.9s,mb6.1						
YSS				LR	LR		
	comp=Z,426nm,20.0s,MS4.7						
QSPA	South Pole Qui	70.62	180	P	P	05 09 02.0	-0.3
	comp=Z,98nm,1.0s,mb5.7,baz=21,slow=2.1,SNR=208						
QSPA	South Pole Qui	70.62	180	eP	P	05 09 02.1	-0.1
	comp=Z,160nm,1.1s,mb5.9						
QSPA				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
IPM	Ipoh	70.82	282	P	P	05 09 05.0	+0.4
VLA	Vladivostok	70.94	332	eP	P	05 09 04.0	-0.6
VLA				e*PP	pP	05 09 25.3	+9.5
VLA				pmax	pmax		
	comp=Z,157nm,1.6s,mb5.7						
KULM	Kulim	71.47	283	P	P	05 09 08.3	-0.1
KULM	Kulim	71.47	283	eP	P	05 09 08.0	-0.5

comp=Z,81nm,1.0s,mb5.6
KULM LR LR
comp=Z,1μm,21.0s,MS5.1
ADK Adak 72.12 9 *e*P **P 05 09 10.8 -0.7**
ADK pmax pmax
comp=Z,52nm,0.9s,mb5.5
ADK MLR MLR
comp=Z,1μm,22.0s,MS5.1
ADK Adak 72.12 9 *e*P **P 05 09 10.8 -0.7**
comp=Z,52nm,0.9s,mb5.5
ADK LR LR
comp=Z,1μm,22.0s,MS5.1
PSI Prapat 72.15 280 P **P 05 09 11.3 -1.3**
PSI pmax pmax
comp=Z,91nm,0.9s,mb5.7
PSI Prapat 72.15 280 P **P 05 09 11.3 -1.2**
comp=Z,91nm,0.9s,mb5.7,baz=144,slow=3.4,SNR=73
PSI Prapat 72.15 280 P **P 05 09 11.3 -1.2**
SNG Songkhla 72.22 285 P 05 09 13.0 0.0
WHN Wuhan 72.25 312 ⇑P **P 05 09 12.7 -0.1**
WHN S S 05 18 31.9 -1.4
WHN pmax pmax
comp=Z,230nm,1.0s,mb6.1
WHN pmax pmax
comp=Z,1μm,4.6s
WHN LR LR
comp=N,1μm,15.9s,MS5.3
WHN LR LR
comp=E,960nm,18.8s,MS5.3
WHN LR LR
comp=Z,2μm,20.6s,MS5.4
PET Petropavlovsk 72.70 354 *ce*P **P 05 09 13.5 -1.4**
PET *e*S S 05 18 38.5 +1.1
PET *e*PS 05 19 22.5
PET *e*SS SS 05 23 20.4 +2.4
PET pmax pmax
comp=Z,119nm,1.4s,mb5.6
PET pmax pmax
comp=Z,700nm,6.1s
PET pmax pmax
comp=Z,500nm,15.5s
PET MLR MLR
comp=Z,400nm,17.0s,MS4.8
PET Petropavlovsk 72.70 354 *e*P **P 05 09 14.8 -0.1**
comp=Z,221nm,1.4s,mb5.9
PET LR LR
comp=Z,1μm,21.0s,MS5.1
PETK Petropavlovsk- 72.89 353 P **P 05 09 16.5 +0.4**
comp=Z,87nm,0.7s,mb5.8,baz=139,slow=7.7,SNR=140
PETK LR LR 05 36 21.2
comp=Z,748nm,21.7s,MS4.9,baz=169,slow=32
DL2 Dalian 72.98 323 P **P 05 09 17.7 +0.8**
DL2 *e*S S 05 18 36.0 -5.3
DL2 pmax pmax
comp=Z,130nm,0.9s,mb5.9
DL2 pmax pmax
comp=Z,190nm,5.7s
DL2 LR LR
comp=N,300nm,29.1s,MS4.5
DL2 LR LR
comp=E,190nm,28.8s,MS4.5
DL2 LR LR
comp=Z,560nm,27.8s,MS4.7
MDJ Mudanjiang 73.14 332 P **P 05 09 18.3 +0.5**
MDJ pP pP 05 09 39.5 +10
MDJ PP PP 05 12 01.3 0.0
MDJ S S 05 18 43.2 +0.3
MDJ ScS ScS 05 19 18.7 -4.4
MDJ pmax pmax
comp=Z,180nm,1.1s,mb5.9
MDJ pmax pmax
comp=Z,370nm,9.2s
MDJ LR LR
comp=N,540nm,27.0s,MS4.8
MDJ LR LR
comp=E,380nm,29.0s,MS4.8
MDJ LR LR
comp=Z,710nm,26.1s,MS4.8
MDJ Mudanjiang 73.14 332 *e*P **P 05 09 18.4 +0.7**
comp=Z,157nm,0.9s,mb5.9
MDJ LR LR
comp=Z,597nm,22.0s,MS4.8
SNY Shenyang 73.97 326 ⇑P **P 05 09 22.8 +0.1**
SNY pmax pmax
comp=Z,38nm,0.7s,mb5.4
SNY pmax pmax
comp=Z,380nm,12.0s
SNY LR LR
comp=N,300nm,19.8s,MS4.6
SNY LR LR
comp=E,240nm,24.6s,MS4.6
SNY LR LR
comp=Z,410nm,20.4s,MS4.7
KKTK Khon Kaen 74.05 294 P **P 05 09 24.0 +0.3**
HABR Khabarovsk 74.06 337 *e*P **P 05 09 22.2 -0.8**
HABR *e**PP pP 05 09 45.2 +11
HABR S S 05 18 48.1 -4.9
HABR *e* 05 19 23.0
HABR SS SS 05 23 34.3 -4.7
HABR SSS 05 26 56.3
HABR MLR MLR
comp=Z,492nm,20.0s,MS4.8
CN2 Changchun 74.46 329 *e*P **P 05 09 25.8 +0.3**
CN2 *e*pP pP 05 09 49.0 +12
CN2 *e*S S 05 18 53.1 -4.7
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=Z,500nm,27.0s,MS4.7
NIKO Nikolski 74.64 14 *e*P **P 05 09 24.5 -1.8**
comp=Z,267nm,0.8s,mb6.2
ENH Enshi 75.55 310 *e*P **P 05 09 31.9 -0.2**
comp=Z,108nm,1.0s,mb5.7
ENH LR LR
comp=Z,716nm,21.0s,MS5.0
GYA Guiyang 75.67 305⇓*i*P **P 05 09 33.6 +0.7**
GYA PcP PcP 05 09 47.0 +1.4
GYA pP pP 05 09 58.2 +14
GYA sP sP 05 10 07.1 +19
GYA PP PP 05 12 26.5 +3.4
GYA S S 05 19 07.6 -4.4
GYA SKS 05 19 32.0
GYA sS sS 05 19 49.3 +19
GYA SS SS 05 24 03.4 -1.0
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,160nm,5.9s
GYA LR LR
comp=N,2μm,19.8s,MS5.5
GYA LR LR
comp=E,2μm,20.4s,MS5.5
GYA LR LR
comp=Z,2μm,19.6s,MS5.3
KLR Kul'dur 75.92 336⇓*e*P **P 05 09 30.0 -3.8**
KLR *e*S S 05 19 09.5 -4.2
KLR pmax pmax
comp=E,80nm,1.6s
KLR pmax pmax
comp=Z,240nm,1.6s,mb5.9
UNV Unalaska Valle 75.99 15 *e*P **P 05 09 32.7 -1.4**
comp=Z,90nm,0.8s,mb5.8
NST Nakhon Sawan 76.09 292 P **P 05 09 36.0 +0.5**
BJT Baijiatuau 76.88 321 PFAKE 05 09 50.0 +11
BJT LR LR
comp=Z,458nm,19.0s,MS4.8
BJI Beijing 76.89 321 P **P 05 09 39.8 +0.3**
BJI pP pP 05 10 02.7 +12
BJI sP sP 05 10 11.7 +17
BJI S S 05 19 24.9 +0.1
BJI pmax pmax
comp=Z,130nm,0.8s,mb5.9
BJI pmax pmax
comp=Z,700nm,5.1s
BJI LR LR
comp=N,420nm,27.8s,MS4.6
BJI LR LR
comp=E,200nm,29.7s,MS4.6
BJI LR LR
comp=Z,1μm,35.9s
BDT Bhumibol Dam 77.74 293 P **P 05 09 45.5 +0.8**
XAN Xi'an 78.01 313 P **P 05 09 46.3 +0.4**
XAN pP pP 05 10 07.4 +10
XAN sP sP 05 10 16.1 +15
XAN PP PP 05 12 44.9 +2.2
XAN S S 05 19 36.3 -0.9
XAN sS sS 05 20 13.1 +17
XAN pmax pmax
comp=Z,30nm,1.1s,mb5.1
XAN pmax pmax
comp=Z,130nm,6.6s
XAN LR LR
comp=N,430nm,23.8s,MS4.7
XAN LR LR
comp=E,160nm,22.9s,MS4.7
XAN LR LR
comp=Z,220nm,22.9s,MS4.4
KMI Kunming 78.11 302 ⇑P **P 05 09 48.1 +1.4**
KMI PcP PcP 05 09 57.9 +1.7
KMI pP pP 05 10 11.9 +14
KMI sP sP 05 10 21.9 +20
KMI PP PP 05 12 44.8 +1.1
KMI S S 05 19 34.0 -4.6
KMI SKS 05 19 49.2
KMI ScS ScS 05 19 57.4 -6.7
KMI sS sS 05 20 15.0 +18
KMI SS SS 05 24 40.6 -0.7
KMI pmax pmax
comp=Z,150nm,1.0s,mb5.9
KMI pmax pmax
comp=Z,590nm,3.2s
KMI LR LR
comp=N,390nm,19.0s,MS4.9
KMI LR LR
comp=E,360nm,19.8s,MS4.9
KMI LR LR
comp=Z,660nm,22.7s,MS4.9
MAW Mawson 78.14 202 *e*P **P 05 09 46.3 +0.2**
comp=Z,50nm,1.2s,mb5.3
MAW *e*S S 05 19 36.9 -0.7
MAW Mawson 78.14 202 P **P 05 09 46.5 +0.4**
comp=Z,51nm,1.0s,mb5.4,baz=114,slow=7.3,SNR=56
MAW LR LR 05 39 52.4
comp=Z,2μm,19.9s,MS5.3,baz=98,slow=32
CMAR Chiang Mai Arr 78.30 294 P **P 05 09 48.3 +0.5**
comp=Z,13nm,0.7s,mb5.0,baz=127,slow=4.1,SNR=70
CMAR PKiKP PKiKP 05 15 23.9 -1.0
comp=Z,0.6nm,0.3s,baz=230,slow=1.0,SNR=5.4
CMAR PKPPKP 05 36 49.1
comp=Z,1.8nm,0.9s,baz=284,slow=3.4,SNR=5.8
CHG Chiang Mai 78.45 295 ⇑P **P 05 09 49.3 +0.6**
comp=Z,18nm,1.3s,mb4.8
CHTO Chiang Mai 78.45 295 *e*P **P 05 09 49.2 +0.5**
CHTO pmax pmax
comp=Z,149nm,1.7s,mb5.6
CHTO MLR MLR
comp=Z,371nm,22.0s,MS4.7
CHTO Chiang Mai 78.45 295 *e*P **P 05 09 49.2 +0.6**
comp=Z,149nm,1.7s,mb5.6
CHTO LR LR
comp=Z,371nm,22.0s,MS4.7
CHTO Chiang Mai 78.45 295 P **P 05 09 49.7 +1.0**
SNR=15
CHTO P 05 09 49.7
SNR=15
CD2 Chengdu 80.11 308⇑*i*P **P 05 09 58.0 +0.5**
CD2 pP pP 05 10 20.8 +12
CD2 sP sP 05 10 30.4 +17
CD2 PP PP 05 13 03.3 +3.1
CD2 S S 05 19 56.8 -2.8
CD2 SKS 05 20 02.8
CD2 sS sS 05 20 33.6 +15
CD2 SS SS 05 25 09.0 -2.1
CD2 pmax pmax
comp=Z,120nm,1.2s,mb5.7
CD2 pmax pmax
comp=Z,660nm,6.0s
CD2 LR LR
comp=N,630nm,23.8s
CD2 LR LR
comp=Z,850nm,26.2s,MS5.0
HHC Hu-ho-hao-te 80.16 320 ⇑P **P 05 09 58.8 +1.3**
HHC pP pP 05 10 24.0 +15
HHC sP sP 05 10 35.2 +22
HHC PP PP 05 13 05.7 +5.2
HHC S S 05 20 00.0 +0.2
HHC SKS 05 20 03.8
HHC SS SS 05 25 07.3 -4.2
HHC pmax pmax
comp=Z,95nm,1.1s,mb5.6
HHC pmax pmax
comp=Z,530nm,5.4s
HHC LR LR
comp=N,430nm,19.6s,MS4.9
HHC LR LR
comp=E,280nm,20.6s,MS4.9
HHC LR LR
comp=Z,540nm,20.6s,MS4.9
BTO Baotou 80.97 319 *e*P **P 05 10 02.2 +0.3**
HIA Hailar 81.12 330 *e*P **P 05 10 02.2 -0.2**
HIA pmax pmax
comp=Z,96nm,1.2s
HIA MLR MLR
comp=Z,433nm,20.0s
HIA Hailar 81.12 330 *e*P **P 05 10 02.1 -0.3**
comp=Z,96nm,1.2s,mb5.6
HIA LR LR
comp=Z,433nm,20.0s,MS4.8
LZH Lanzhou 82.63 312 *e*P **P 05 10 12.2 +1.5**
LZH pP pP 05 10 37.4 +15
LZH sP sP 05 10 47.1 +21
LZH PP PP 05 13 21.1 +0.2
LZH *e*S S 05 20 23.2 -2.3
LZH SS SS 05 25 47.1 -1.3
LZH pmax pmax
comp=Z,160nm,1.1s,mb6.0
LZH pmax pmax
comp=Z,700nm,4.1s
LZH LR LR
comp=N,2μm,17.5s
LZH LR LR
comp=Z,3μm,18.7s,MS5.7
OHAK Old Harbor 82.64 20 *e*P **P 05 10 10.2 0.0**
comp=Z,164nm,0.9s,mb6.1
SEY Seymchan 83.12 352 *ce*P **P 05 10 12.2 -0.4**
KDAK Kodiak Island 83.32 20 P **P 05 10 14.0 +0.3**
comp=Z,736nm,1.1s,mb6.6,SNR=15
KDAK Kodiak Island 83.32 20 *ce*P **P 05 10 13.8 +0.1**
KDAK Kodiak Island 83.32 20 P **P 05 10 13.6 -0.1**
comp=Z,79nm,0.9s,mb5.8,baz=181,slow=4.0,SNR=22
KDAK Kodiak Island 83.32 20 *e*P **P 05 10 13.7 0.0**
comp=Z,110nm,0.9s,mb5.9
KDAK LR LR
comp=Z,1μm,21.0s,MS5.3
GAMB Gambell 84.31 9 *e*P **P 05 10 18.6 0.0**
comp=Z,49nm,0.9s,mb5.6
NRGR Nerungri 84.38 337 *i*P **P 05 10 20.4 +1.2**
NRGR S S 05 20 40.0 -2.3
NRGR smax
comp=N,50nm,0.7s
CLNS Chul'man 84.45 337 *c i*P **P 05 10 19.8 +0.3**
CLNS *e**PP pP 05 10 30.2 -0.8
CLNS *e* 05 13 33.7
CLNS *e*PPP 05 15 26.1
CLNS *e*S S 05 20 40.0 -3.0
CLNS *e* 05 21 45.0
CLNS pmax pmax
comp=Z,180nm,1.0s,mb6.2
CLNS pmax pmax
comp=N,90nm,1.0s
CLNS pmax pmax
comp=E,27nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=Z,11nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,5.0nm,0.7s
CLNS smax
comp=N,127nm,12.2s
CLNS smax
comp=E,98nm,10.7s
CLNS MLR MLR
comp=Z,144nm,18.0s,MS4.4
CLNS MLR MLR
comp=N,114nm,15.0s,MS4.6
CLNS MLR MLR
comp=E,127nm,12.0s,MS4.6
SYO Syowa Base 84.66 196⇓*i*P **P 05 10 18.4 -2.2**
SYO Syowa Base 84.66 196⇓*i*P **P 05 10 22.1 +1.5**
SVW2 Sparrevohn 85.17 16 *e*P **P 05 10 22.9 -0.2**
RSO Redoubt South 85.44 18 *e*P **P 05 10 23.3 -1.1**
MCCM Marconi Confer 85.83 47 PFAKE 05 10 40.0 +13
MCCM LR LR
comp=Z,591nm,19.0s,MS5.0
SNCC San Nicolas Is 86.01 53 ⇑P **P 05 10 28.3 +0.3**
baz=86
KCPM Cahto Peak 86.09 46 *e*P **P 05 10 28.6 +0.5**
comp=Z,112nm,0.8s,mb6.1
HOPS Hopland 86.10 46 *e*P **P 05 10 29.1 +0.9**
comp=Z,97nm,1.4s,mb5.8
HOPS LR LR
comp=Z,1μm,20.0s,MS5.3
SAO San Andreas Ge 86.19 49 *e*P **P 05 10 29.5 +0.8**
SAO pmax pmax
comp=Z,62nm,0.9s,mb5.8
SAO MLR MLR
comp=Z,2μm,21.0s,MS5.5
SAO San Andreas Ge 86.19 49 *e*P **P 05 10 29.5 +0.8**
comp=Z,62nm,0.9s,mb5.8
SAO LR LR
comp=Z,2μm,21.0s,MS5.5
BSC Santa Cruz Isl 86.26 52 ⇓P **P 05 10 29.4 +0.2**
baz=86
SBC Santa Barbara 86.39 52 ⇑P **P 05 10 30.3 +0.5**
baz=87
PKM Peak Mountain 86.52 51 ⇑P **P 05 10 30.9 +0.5**
baz=87,SNR=6.1
TNA Tin City 86.55 9 *e*P **P 05 10 29.9 +0.1**
comp=Z,97nm,1.1s,mb6.0
SMMC Simmler 86.57 51 ⇓P **P 05 10 31.2 +0.5**
baz=87,SNR=7.9
TTA Tatalina 86.60 15 *e*P **P 05 10 29.7 -0.4**
SCI San Clemente I 86.63 53 ⇑P **P 05 10 31.6 +0.6**
baz=87
BLG Laguna Peak 86.73 52 ⇓P **P 05 10 31.9 +0.5**
baz=87
ULN Ulaanbaatar 86.83 324 *e*P **P 05 10 32.0 +0.4**
ULN pmax pmax
comp=Z,198nm,1.1s,mb6.3
ULN MLR MLR
comp=Z,440nm,22.0s,MS4.8
ULN Ulaanbaatar 86.83 324 *e*P **P 05 10 32.0 +0.4**
comp=Z,198nm,1.1s,mb6.3
ULN LR LR
comp=Z,440nm,22.0s,MS4.8
RC01 Rabbit Creek A 86.84 19 *e*P **P 05 10 30.0 -1.3**
CIS Catalina Islan 86.92 53 ⇓P **P 05 10 32.4 0.0**
baz=87
YAK Yakutsk 86.96 343 *c i*P **P 05 10 31.5 -0.4**
YAK *e* 05 13 57.1
YAK *e*PPP 05 15 53.5
YAK *e*S S 05 20 49.5 -18
YAK *e* 05 21 09.2
YAK *e*SS SS 05 26 47.2 -4.1
YAK pmax pmax
comp=Z,245nm,0.9s,mb6.4
YAK pmax pmax
comp=N,43nm,1.0s
YAK pmax pmax
comp=E,43nm,1.4s
YAK pmax pmax
comp=Z,22nm,1.8s,mb5.1
YAK pmax pmax
comp=N,40nm,2.1s
YAK pmax pmax
comp=E,28nm,1.9s
YAK smax
comp=N,111nm,2.8s
YAK smax
comp=E,52nm,2.5s
YAK Yakutsk 86.96 343 *e*P **P 05 10 31.5 -0.4**
comp=E,316nm,1.0s,mb6.5
YAK LR LR
comp=Z,993nm,22.0s,MS5.2
GTA Gaotai 87.03 314 ⇑P **P 05 10 33.5 +0.7**
GTA pP pP 05 10 56.6 +12
GTA sP sP 05 11 09.8 +21
GTA SKS 05 20 50.9
GTA S S 05 21 06.6 -2.6
GTA pmax pmax
comp=Z,95nm,0.8s,mb6.1
GTA pmax pmax
comp=Z,450nm,4.7s
GTA LR LR
comp=N,300nm,27.6s,MS4.7
GTA LR LR
comp=E,300nm,24.7s,MS4.7
GTA LR LR
comp=Z,580nm,29.4s,MS4.8
FMP Fort Macarthur 87.14 53 ⇓P **P 05 10 33.5 +0.1**
baz=87
KEBM Edson Butte 87.16 43 *e*P **P 05 10 34.8 +1.4**
comp=Z,101nm,1.0s,mb6.0
SONM Songino Array 87.19 323 P **P 05 10 33.4 +0.1**
comp=Z,79nm,0.9s,mb5.9,baz=138,slow=5.0,SNR=284
SONM PKKPbc PKKPbc 05 28 23.8 -2.9
comp=Z,2.4nm,0.9s,baz=281,slow=2.5,SNR=9.0
SONM LR LR 05 52 07.7
comp=Z,394nm,18.4s,MS4.8,baz=119,slow=37
OSI Osito Adit 87.20 52 ⇓P **P 05 10 34.1 +0.3**
baz=87
OSI Osito Adit 87.20 52 *e*P **P 05 10 33.1 -0.7**
comp=Z,58nm,1.0s,mb5.8
WDC Whiskeytown Da 87.22 45 *e*P **P 05 10 33.9 +0.2**
WDC pmax pmax
comp=Z,63nm,1.0s,mb5.8
WDC MLR MLR
comp=Z,2μm,22.0s,MS5.5
WDC Whiskeytown Da 87.22 45 *e*P **P 05 10 33.9 +0.2**
comp=Z,63nm,1.0s,mb5.8
WDC LR LR
comp=Z,2μm,22.0s,MS5.5
BILL Bilibino 87.24 359 *c i*P **P 05 10 32.5 -0.6**
BILL *i* pP 05 10 46.1 +1.5
BILL *e*S S 05 21 04.3 -5.6
BILL pmax pmax
comp=Z,173nm,1.3s,mb6.1
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.7
BILL Bilibino 87.24 359 *e*P **P 05 10 32.6 -0.5**
comp=Z,104nm,0.9s,mb6.1
BILL LR LR
comp=Z,384nm,20.0s,MS4.8
DECC Green Verdugo 87.34 52 ⇑P **P 05 10 34.4 -0.1**
baz=88
ARVC Arvin 87.35 51 ⇑P **P 05 10 34.5 0.0**
baz=88,SNR=8.9
OHCM Honcut 87.35 47 *e*P **P 05 10 34.2 -0.1**
PMR Palmer 87.41 19 *e*P **P 05 10 32.4 -1.7**
PASC Pasadena Art C 87.42 52 *e*P **P 05 10 34.7 -0.1**
comp=Z,222nm,0.8s,mb6.4
VES Vestal, Richgr 87.47 51 ⇓P **P 05 10 34.7 -0.3**
baz=88,SNR=12
CMB Columbia Colle 87.52 48 *e*P **P 05 10 35.2 0.0**
CMB pmax pmax
comp=Z,74nm,0.8s,mb6.0
CMB MLR MLR
comp=Z,1μm,20.0s,MS5.3
CMB Columbia Colle 87.52 48 *e*P **P 05 10 35.2 0.0**
comp=Z,74nm,0.8s,mb6.0
CMB LR LR
comp=Z,1μm,20.0s,MS5.3
MWC Mount Wilson 87.53 52 *e*P **P 05 10 35.5 +0.1**
MWC pmax pmax
comp=Z,113nm,1.0s,mb6.0
MWC Mount Wilson 87.53 52 *e*P **P 05 10 35.5 +0.2**
comp=Z,113nm,1.0s,mb6.0
RCTC Rector, Farmer 87.57 50 ⇓P **P 05 10 35.1 -0.4**
baz=88,SNR=8.7
YBH Yreka Blue Hor 87.65 44 P **P 05 10 36.4 +0.7**
comp=Z,50nm,0.9s,mb5.8,baz=179,slow=1.9,SNR=51
YBH LR LR 05 42 29.6
comp=Z,1μm,19.9s,MS5.3,baz=169,slow=30
YBH Yreka Blue Hor 87.65 44 *e*P **P 05 10 36.4 +0.7**
comp=Z,59nm,1.0s,mb5.8
YBH LR LR
comp=Z,2μm,19.0s,MS5.5
109C Camp Elliot, M 87.69 54 ⇑P **P 05 10 36.2 +0.1**
baz=88,SNR=14
BFSC Mount Baldy St 87.84 53 ⇑P **P 05 10 36.7 -0.1**
baz=88,SNR=14
ISA Isabella 87.84 51 ⇓P **P 05 10 37.1 +0.3**
baz=88,SNR=28
ISA Isabella 87.84 51 *e*P **P 05 10 37.0 +0.2**
ISA pmax pmax
comp=Z,66nm,0.9s,mb5.9

ISA Isabella 87.84 51 *eP* **P 05 10 37.0 +0.2**
comp=Z,66nm,0.9s,mb5.9
EDW2 Edwards Air Fo 87.86 52 ⇓P **P 05 10 37.2 +0.3**
baz=88,SNR=19
HUMO Hull Mountain 87.91 43 *eP* **P 05 10 37.6 +0.6**
comp=Z,56nm,0.8s,mb5.8
HUMO LR LR
comp=Z,2µm,21.0s,MS5.4
MURC Murrieta 87.92 53 ⇑P **P 05 10 37.1 -0.1**
baz=88,SNR=15
BAR Barrett 87.93 54 *eP* **P 05 10 37.2 -0.1**
comp=Z,52nm,0.9s,mb5.8
DIV Divide 88.11 20 *eP* **P 05 10 36.2 -1.2**
comp=Z,62nm,1.2s,mb5.7
LBCM Butte Creek Ri 88.14 45 P **P 05 10 38.5 +0.4**
MONP Monument Peak 88.21 54 ⇓P **P 05 10 39.0 +0.4**
baz=88,SNR=42
CHUM Lake Minchumin 88.33 16 *eP* **P 05 10 36.8 -1.7**
LRMC Laurel Mountai 88.34 51 ⇑P **P 05 10 39.5 +0.3**
baz=89,SNR=14
DVTC Desert V Tower 88.36 55 ⇑P **P 05 10 39.6 +0.2**
baz=89
BEKR Beckwourth 88.37 47 ⇓P **P 05 10 39.5 +0.3**
baz=89,SNR=38
BMRM Bremner River 88.38 21 *eP* **P 05 10 37.9 -0.8**
WAKR Walker 88.39 48 *eP* **P 05 10 40.0 +0.7**
BBRC Big Bear Sol-O 88.40 53 ⇓P **P 05 10 39.5 0.0**
baz=89
MLAC Mammoth Lakes 88.44 49 ⇑P **P 05 10 40.1 +0.5**
baz=89
KTH Kantishna Hill 88.44 17 *eP* **P 05 10 36.6 -2.3**
comp=Z,46nm,0.9s,mb5.7
CWC Cottonwood Cre 88.47 50 ⇓P **P 05 10 39.9 +0.2**
baz=89,SNR=9.3
PFO Pinyon Flat Ob 88.48 54 P **P 05 10 40.9 +1.0**
comp=Z,242nm,0.9s,mb6.4,SNR=10.0
PFO Pinyon Flat Ob 88.48 54 ⇓P **P 05 10 39.9 0.0**
baz=89,SNR=13
PFO Pinyon Flat Ob 88.48 54 *eP* **P 05 10 40.2 +0.3**
PFO pmax pmax
comp=Z,38nm,0.8s,mb5.7
PFO MLR MLR
comp=Z,562nm,22.0s,MS4.9
PFO Pinyon Flat Ob 88.48 54 *eP* **P 05 10 40.1 +0.3**
comp=Z,38nm,0.8s,mb5.7
PFO LR LR
comp=Z,562nm,22.0s,MS4.9
MTUM Tungsten Hills 88.51 49 *eP* **P 05 10 40.6 +0.7**
WCN Washoe City 88.53 47 ⇑P **P 05 10 40.4 +0.4**
baz=89,SNR=13
TRF Thorofare Moun 88.53 17 *eP* **P 05 10 37.5 -1.9**
HOG Hogback Mounta 88.56 44 P **P 05 10 40.5 +0.5**
TIN Tinemaha 88.62 50 ⇑P **P 05 10 40.8 +0.3**
baz=89
NVL N'lazarevskaya 88.63 187 ⇑*iP* **P 05 10 38.9 -1.1**
NVL pmax pmax
comp=Z,251nm,1.4s,mb6.3
MAIT Maitri 88.63 187 *eP* **P 05 10 38.7 -1.3**
COR Corvallis 88.65 41 PFAKE 05 10 50.0 +10
COR LR LR
comp=Z,2µm,20.0s,MS5.4
HEBO Mount Hebo 88.68 41 *eP* **P 05 10 41.3 +0.8**
comp=Z,336nm,1.4s,mb6.5
SWSC Sam W. Stewart 88.71 54 ⇑P **P 05 10 41.2 +0.2**
baz=89,SNR=10.0
MPMC Manual Prospec 88.74 51 ⇓P **P 05 10 41.4 +0.3**
baz=89,SNR=52
DAC Darwin (Calif) 88.75 51 PFAKE 05 10 50.0 +8.9
DAC LR LR
comp=Z,1µm,21.0s,MS5.3
GSC Goldstone 88.92 52 ⇓P **P 05 10 42.1 +0.1**
baz=89,SNR=11
GSC Goldstone 88.92 52 *eP* **P 05 10 41.8 -0.1**
GSC pmax pmax
comp=Z,91nm,1.5s,mb5.9
GSC Goldstone 88.92 52 *eP* **P 05 10 41.8 -0.1**
comp=Z,91nm,1.5s,mb5.9
PAHR Pah Rah Range 88.97 47 *eP* **P 05 10 42.4 +0.4**
comp=Z,83nm,1.1s,mb6.0
BELC Belle Mtn. 88.99 53 ⇓P **P 05 10 42.6 +0.4**
baz=89,SNR=43
IRO Indian Ridge 89.03 42 P **P 05 10 42.5 +0.3**
HEC Hector,Ludlow 89.08 53 ⇓P **P 05 10 42.6 -0.1**
baz=89,SNR=13
MCK McKinley 89.13 17 *eP* **P 05 10 40.2 -2.0**
MCK pmax pmax
comp=Z,22nm,0.9s,mb5.5
MCK McKinley 89.13 17 *eP* **P 05 10 40.2 -2.0**
comp=Z,22nm,0.9s,mb5.5
F03A Seaside 89.15 40 ⇓P **P 05 10 43.3 +0.6**
baz=89
NVAR Mina Array Bea 89.16 49 P **P 05 10 43.4 +0.4**
comp=Z,23nm,0.8s,mb5.6,baz=227,slow=8.8,SNR=121
NVAR PKPPKP 05 36 28.4
comp=Z,1.6nm,1.0s,baz=105,slow=3.5,SNR=6.4
GRAC Grapevine Rang 89.22 50 ⇑P **P 05 10 43.7 +0.4**
baz=89,SNR=29
BC3 Big Chucka Mtn 89.27 54 ⇑P **P 05 10 44.1 +0.5**
baz=90,SNR=25
K05A Summer Lake 89.31 44 ⇓P **P 05 10 44.3 +0.7**
baz=90,SNR=44
MOD Modoc 89.33 45 *eP* **P 05 10 44.1 +0.5**
comp=Z,118nm,1.2s,mb6.1
MOD LR LR
comp=Z,1µm,20.0s,MS5.4
LSA Lhasa 89.36 302 *eP* **P 05 10 44.9 +0.8**
LSA pmax pmax
comp=Z,28nm,0.9s,mb5.6
LSA MLR MLR
comp=Z,346nm,21.0s,MS4.8
LSA Lhasa 89.36 302 *eP* **P 05 10 44.9 +0.7**
comp=Z,28nm,0.9s,mb5.6
LSA LR LR
comp=Z,346nm,21.0s,MS4.8
BOD Bodaibo 89.37 334 ⇓*iP* **P 05 10 42.3 -1.1**
BOD pmax pmax
comp=Z,82nm,1.4s,mb5.9
FURC Furnace Creek, 89.37 51 ⇓P **P 05 10 44.1 +0.1**
baz=90,SNR=12
H04A Detroit Lake 89.40 42 ⇓P **P 05 10 44.0 +0.1**
baz=90,SNR=36
E03A Lebam 89.45 40 ⇑P **P 05 10 44.6 +0.6**
baz=90,SNR=15
G04A Mulino 89.46 41 ⇓P **P 05 10 44.4 +0.2**
baz=90,SNR=21
112A Yuma 89.49 55 ⇑P **P 05 10 45.1 +0.4**
baz=90,SNR=8.0
GLA Glamis 89.50 55 ⇑P **P 05 10 45.4 +0.7**
baz=90,SNR=27
GLA Glamis 89.50 55 *eP* **P 05 10 45.5 +0.8**
GLA pmax pmax
comp=Z,88nm,0.8s,mb6.1
GLA Glamis 89.50 55 *eP* **P 05 10 45.5 +0.8**
comp=Z,88nm,0.8s,mb6.1
VNA3 Neumayer Olymp 89.56 180 *eP* **P 05 10 43.1 -1.2**
VNA3 *e* pP 05 10 56.1 +0.3
VNA3 *e* 05 15 41.4
SHOC Shoshone 89.56 52 ⇓P **P 05 10 44.8 -0.1**
baz=90
GMRC Granite Mounta 89.56 53 ⇓P **P 05 10 45.0 +0.1**
baz=90,SNR=8.0
TUQ Turquoise Moun 89.63 52 ⇓P **P 05 10 45.5 +0.2**
baz=90,SNR=22
NLWA Neilton Lookou 89.68 39 ⇑P **P 05 10 45.9 +0.7**
baz=90,SNR=13
NLWA Neilton Lookou 89.68 39 *eP* **P 05 10 45.8 +0.6**
comp=Z,93nm,1.1s,mb6.0
NLWA LR LR
comp=Z,863nm,22.0s,MS5.1
IRM Iron Mountain 89.70 54 ⇑P **P 05 10 45.9 +0.4**
baz=90,SNR=33
U10A Ash Meadows, A 89.74 51 ⇑P **P 05 10 46.3 +0.6**
baz=90,SNR=41
TPH Tonopah 89.78 49 PFAKE 05 11 00.0 +14
TPH LR LR
comp=Z,1µm,20.0s,MS5.4
F04A Amboy 89.84 41 ⇓P **P 05 10 46.1 +0.1**
baz=90,SNR=28
VNA2 Neumayer--Watz 89.84 181 *eP* **P 05 10 44.8 -0.9**
baz=183,slow=4.0
VNA2 *e* pP 05 10 57.7 +0.5
Y12C Blythe 90.01 54 ⇓P **P 05 10 47.4 +0.3**
baz=90,SNR=41
HOOD Mount Hood Mea 90.03 41 *eP* **P 05 10 47.4 +0.6**
comp=Z,104nm,0.9s,mb6.2
LDFC Landfair 90.10 53 *eP* **P 05 10 48.3 +0.8**
comp=Z,288nm,1.6s,mb6.4

MENT Mentasta 90.10 20 *eP* **P 05 10 45.8 -0.9**
VNA1 Neumayer--Stat 90.14 181 *eP* **P 05 10 46.4 -0.6**
VNA1 *e* pP 05 10 59.4 +0.9
VFP Flag Point 90.15 41 P **P 05 10 47.5 +0.2**
V11A Goodsprings 90.17 52 ⇑P **P 05 10 47.9 +0.2**
baz=90,SNR=63
S10A Tonopah Range, 90.17 50 ⇑P **P 05 10 48.0 +0.3**
baz=90,SNR=88
TDL Tradedollar La 90.17 40 P **P 05 10 48.1 +0.7**
113A Mohawk Valley, 90.21 55 ⇓P **P 05 10 48.2 +0.1**
baz=90,SNR=15
ZAK Zakamensk 90.27 324 ⇓*iP* **P 05 10 47.1 -0.7**
ZAK *e* 05 14 25.6
ZAK pmax pmax
comp=Z,48nm,1.4s,mb5.6
VIPM Ingram Point 90.31 42 P **P 05 10 48.6 +0.4**
COLA College 90.32 17 *eP* **P 05 10 45.6 -2.1**
COLA MLR MLR
comp=Z,741nm,20.0s,MS5.1
NEE2 Needles Airpor 90.34 53 ⇑P **P 05 10 49.0 +0.4**
baz=90,SNR=24
W12A Cal Nev Ari 90.37 53 ⇓P **P 05 10 49.0 +0.4**
baz=91,SNR=16
GNW Green Mountain 90.38 39 P **P 05 10 48.8 +0.3**
U11A Corn Creek 90.44 51 ⇓P **P 05 10 49.3 +0.4**
baz=91,SNR=12
Z13A Yuma Proving G 90.46 55 ⇓P **P 05 10 49.5 +0.3**
baz=91,SNR=44
PDMCI Parker Dam,Lak 90.52 54 ⇓P **P 05 10 49.8 +0.3**
baz=91,SNR=28
R10A Warm Springs 90.53 49 ⇑P **P 05 10 49.9 +0.6**
baz=91,SNR=68
PGC Sidney 90.54 38 *eP* **P 05 10 49.7 +0.6**
comp=Z,7.0nm,0.9s,mb5.0
V12A Nelson 90.55 52 ⇓P **P 05 10 49.9 +0.3**
baz=91,SNR=26
Y13A Salome 90.57 54 ⇓P **P 05 10 50.3 +0.6**
baz=91,SNR=56
H06A Lindquist Farm 90.59 42 ⇓P **P 05 10 49.7 +0.2**
baz=91,SNR=99
LON Longmire 90.60 40 *eP* **P 05 10 49.3 -0.2**
LON pmax pmax
comp=Z,43nm,1.0s,mb5.7
LON Longmire 90.60 40 *eP* **P 05 10 49.2 -0.2**
comp=Z,43nm,1.0s,mb5.7
G06A Carlson Farm, 90.63 42 ⇑P **P 05 10 49.7 0.0**
baz=91,SNR=23
SHPR Sheep Range 90.63 51 *eP* **P 05 10 50.4 +0.5**
214A Organ Pipe Nat 90.64 56 ⇓P **P 05 10 50.5 +0.4**
baz=91,SNR=19
S11A Rachel 90.67 50 ⇑P **P 05 10 50.2 +0.2**
baz=91,SNR=13
WVOR Wild Horse Val 90.67 45 *eP* **P 05 10 50.3 +0.4**
WVOR pmax pmax
comp=Z,157nm,1.4s,mb6.2
WVOR MLR MLR
comp=Z,1µm,20.0s,MS5.4
WVOR Wild Horse Val 90.67 45 *eP* **P 05 10 50.3 +0.4**
comp=Z,157nm,1.4s,mb6.2
WVOR LR LR
comp=Z,1µm,20.0s,MS5.4
Q10A Clear Creek Ra 90.68 49 ⇑P **P 05 10 50.3 +0.2**
baz=91,SNR=41
IRK Irkutsk 90.70 326 *eP* **P 05 10 48.3 -1.5**
IRK *e* 05 11 02.3
IRK pmax pmax
comp=Z,68nm,1.2s,mb5.8
D05A Enumclaw 90.70 40 ⇓P **P 05 10 50.5 +0.6**
baz=91,SNR=49
PALK Pallekele 90.70 277 *iP* **P 05 10 52.5 +1.7**
WPW White Pass 90.74 40 P **P 05 10 50.4 +0.3**
TLY Talaya 90.74 326 P **P 05 10 49.4 -0.6**
comp=Z,290nm,0.9s,mb6.6,SNR=29
TLY Talaya 90.74 326 *cP* **P 05 10 49.5 -0.5**
TLY *e*S S 05 21 43.7 +0.2
TLY *e*SS SS 05 27 51.7 +5.0
TLY pmax pmax
comp=Z,44nm,0.9s,mb5.8
TLY MLR MLR
comp=Z,333nm,20.0s,MS4.8
TLY Talaya 90.74 326 *eP* **P 05 10 49.6 -0.4**
comp=Z,20nm,0.7s,mb5.5
TLY LR LR
comp=Z,360nm,21.0s,MS4.8
TLY Talaya 90.74 326 P **P 05 10 49.8 -0.1**
SNR=36
TLY P 05 10 49.8
SNR=36
SKAG Skagway 90.76 25 *eP* **P 05 10 49.5 -0.4**
comp=Z,111nm,1.1s,mb6.1
BMN Battle Mountai 90.77 47 *eP* **P 05 10 50.9 +0.5**
BMN pmax pmax
comp=Z,56nm,0.9s,mb5.9
BMN MLR MLR
comp=Z,617nm,20.0s,MS5.0
BMN Battle Mountai 90.77 47 *eP* **P 05 10 50.9 +0.5**
comp=Z,56nm,0.9s,mb5.9
BMN LR LR
comp=Z,617nm,20.0s,MS5.0
HYT Haines Junctio 90.79 23 *eP* **P 05 10 49.0 -1.0**
I07A Izee 90.83 43 ⇑P **P 05 10 51.0 +0.4**
baz=91,SNR=90
X13A Yucca 90.87 54 ⇓P **P 05 10 51.4 +0.4**
baz=91,SNR=49
T11A Corn Creek, Al 90.89 51 ⇑P **P 05 10 51.5 +0.5**
baz=91,SNR=52
114A Black Gap (USA 90.89 56 ⇓P **P 05 10 51.5 +0.4**
baz=91,SNR=35
RMW Rattlesnake Mo 90.94 39 P **P 05 10 51.3 +0.3**
P10A Eureka 90.96 48 ⇑P **P 05 10 51.7 +0.3**
baz=91,SNR=15
E06A Yakima 91.02 40 ⇑P **P 05 10 51.7 +0.3**
baz=91,SNR=43
W13A Hualapai Mount 91.03 53 ⇓P **P 05 10 52.3 +0.5**
baz=91,SNR=69
T12A Moapa 91.05 51 ⇓P **P 05 10 52.1 +0.3**
baz=91,SNR=5.8
U12A Valley of Fire 91.06 52 ⇑P **P 05 10 52.3 +0.4**
baz=91,SNR=18
R11A Troy Canyon, C 91.07 50 ⇓P **P 05 10 51.8 0.0**
baz=91,SNR=59
Z14A Wintersburg 91.08 55 ⇑P **P 05 10 52.4 +0.4**
baz=91,SNR=31
J08A Circle Bar Ran 91.18 44 ⇑P **P 05 10 52.5 +0.2**
baz=91,SNR=98
JCW Jim Creek 91.21 39 *eP* **P 05 10 52.4 +0.1**
O10A Cortez Mining, 91.22 48 ⇓P **P 05 10 53.0 +0.5**
baz=91,SNR=10.0
Q11A Duckwater 91.22 49 ⇓P **P 05 10 52.9 +0.3**
baz=91,SNR=87
G07A Ruggs Ranch, H 91.25 42 ⇓P **P 05 10 52.6 +0.1**
baz=92
Y14A Wickenburg 91.25 54 ⇓P **P 05 10 52.9 +0.1**
baz=92,SNR=30
S12A Delamar Landin 91.30 50 ⇑P **P 05 10 53.9 +1.0**
baz=92,SNR=85
F07A Phinny Hill Vi 91.37 41 ⇑P **P 05 10 53.2 +0.1**
baz=92,SNR=17
115A Sonoran Desert 91.38 56 ⇑P **P 05 10 53.8 +0.3**
baz=92,SNR=14
N10A Dunphy 91.39 47 ⇓P **P 05 10 53.7 +0.4**
baz=92,SNR=6.4
D06A Cle Elum 91.40 40 ⇑P **P 05 10 53.3 +0.1**
baz=92,SNR=32
P11A Circle Ranch, 91.44 48 ⇓P **P 05 10 53.8 +0.3**
baz=92,SNR=7.7
U13A Pakoon Wash 91.48 52 ⇑P **P 05 10 54.3 +0.5**
baz=92,SNR=32
A05A Maple Falls 91.50 38 ⇓P **P 05 10 53.2 -0.4**
baz=92
COLD Coldfoot 91.54 15 *eP* **P 05 10 53.3 -0.1**
comp=Z,26nm,0.9s,mb5.6
X14A Yava 91.54 54 ⇑P **P 05 10 54.7 +0.6**
baz=92,SNR=106
H08A Prairie City 91.56 43 ⇑P **P 05 10 54.0 0.0**
baz=92,SNR=28
RPW Rockport 91.58 39 P **P 05 10 53.7 -0.2**
B06A Marblemount 91.63 39 ⇑P **P 05 10 53.8 -0.4**
baz=92,SNR=10
J09A Fry Pan Ranch, 91.65 44 ⇓P **P 05 10 54.7 +0.3**
baz=92,SNR=21
Z15A Gila River Ind 91.66 55 ⇓P **P 05 10 54.8 +0.1**
baz=92,SNR=13
W14A Seligman 91.68 53 ⇑P **P 05 10 55.5 +0.7**
baz=92,SNR=62
M10A I.L. Ranch, Tu 91.70 46 ⇓P **P 05 10 55.2 +0.5**
baz=92,SNR=62

C06A Tall Timber Ra 91.70 39 ⇑P **P 05 10 54.3 -0.2**
baz=92
G08A Pilot Rock 91.71 42 ⇑P **P 05 10 54.7 +0.1**
baz=92,SNR=72
E07A Sunnyside 91.71 41 ⇑P **P 05 10 54.8 +0.1**
baz=92,SNR=30
216A Three Points, 91.73 57 ⇑P **P 05 10 55.8 +0.8**
baz=92,SNR=30
O11A Cowboy Ranch, 91.74 48 ⇓P **P 05 10 55.4 +0.4**
baz=92,SNR=52
116A Eloy 91.74 56 ⇓P **P 05 10 55.6 +0.5**
baz=92,SNR=43
T13A Saint George 91.76 51 ⇑P **P 05 10 55.6 +0.5**
baz=92,SNR=66
R12A Pony Springs, 91.76 50 ⇓P **P 05 10 55.5 +0.4**
baz=92,SNR=59
Y15A Casa Rosa Ranc 91.77 55 ⇑P **P 05 10 55.9 +0.6**
baz=92,SNR=118
RSW Rattlesnake Hi 91.80 41 *eP* **P 05 10 56.0 +0.9**
V14A Boquillas Ranc 91.82 53 ⇓P **P 05 10 56.1 +0.7**
baz=92,SNR=54
HAWA Hanford 91.84 41 *eP* **P 05 10 55.6 +0.3**
comp=Z,99nm,1.0s,mb6.1
HAWA LR LR
comp=Z,877nm,21.0s,MS5.2
Q12A Willow Creek R 91.89 49 ⇓P **P 05 10 55.9 +0.2**
baz=92,SNR=28
ETW Entiat 91.89 40 *eP* **P 05 10 55.5 0.0**
comp=Z,42nm,1.0s,mb5.7
D07A Quincy 91.92 40 ⇓P **P 05 10 55.6 0.0**
baz=92,SNR=14
I09A Lost Marbles R 91.93 44 ⇓P **P 05 10 55.5 -0.2**
baz=92,SNR=9.8
N11A Elko Archery C 91.96 47 ⇑P **P 05 10 56.2 +0.3**
baz=92,SNR=15
L10A Juniper Basin 91.97 46 ⇓P **P 05 10 56.4 +0.4**
baz=92,SNR=88
K10A MacKenzie Ranc 92.00 45 ⇓P **P 05 10 56.3 +0.3**
baz=92,SNR=65
P12A McGill 92.00 49 ⇓P **P 05 10 56.5 +0.4**
baz=92,SNR=27
S13A Holt Ranch, En 92.01 51 ⇓P **P 05 10 56.8 +0.6**
baz=92
X15A Humboldt 92.05 54 ⇑P **P 05 10 57.2 +0.7**
baz=92,SNR=108
F08A Pendleton 92.05 42 ⇓P **P 05 10 56.2 0.0**
baz=92,SNR=13
U14A Mt Trumbull 92.07 52 ⇑P **P 05 10 57.3 +0.8**
baz=92,SNR=58
C07A Waterville 92.09 40 ⇓P **P 05 10 56.0 -0.4**
baz=92,SNR=22
217A Green Valley 92.15 57 ⇑P **P 05 10 57.7 +0.6**
baz=92,SNR=39
MOY Mondy 92.16 325 *eP* **P 05 10 56.7 +0.1**
MOY pmax pmax
comp=Z,79nm,3.1s
WTV Waterville 92.16 40 P **P 05 10 56.8 +0.1**
R13A O'Grain Ranch, 92.17 50 ⇓P **P 05 10 57.7 +0.7**
baz=92,SNR=24
E08A Dider Farm, El 92.17 41 ⇓P **P 05 10 56.9 +0.1**
baz=92
M11A Holland Ranch, 92.17 47 ⇓P **P 05 10 57.5 +0.5**
baz=92,SNR=26
EGAK Eagle 92.21 19 *eP* **P 05 10 55.1 -1.4**
comp=Z,48nm,0.9s,mb5.8
EGAK LR LR
comp=Z,815nm,20.0s,MS5.2
Z16A Peralta Trail, 92.25 56 ⇑P **P 05 10 57.8 +0.4**
baz=92,SNR=44
H09A Durkee 92.27 43 ⇑P **P 05 10 57.2 -0.1**
baz=92,SNR=15
ELK Elko 92.28 48 *eP* **P 05 10 58.1 +0.7**
ELK MLR MLR
comp=Z,737nm,20.0s
DAWY Dawson 92.28 20 *eP* **P 05 10 55.6 -1.2**
W15A Williams 92.28 54 ⇓P **P 05 10 58.4 +0.8**
baz=92,SNR=29
J10A Berg Farm, Mel 92.34 45 ⇓P **P 05 10 57.5 -0.1**
baz=93,SNR=12
CCUT Cedar City 92.37 51 *eP* **P 05 10 58.7 +0.8**
comp=Z,54nm,1.1s,mb5.8
TUC Tucson 92.37 57 *eP* **P 05 10 58.7 +0.6**
TUC pmax pmax
comp=Z,39nm,1.0s,mb5.7
TUC MLR MLR
comp=Z,672nm,21.0s,MS5.1
TUC Tucson 92.37 57 *eP* **P 05 10 58.7 +0.6**
comp=Z,39nm,1.0s,mb5.7
TUC LR LR
comp=Z,672nm,21.0s,MS5.1
T14A Hurricane 92.38 52 ⇑P **P 05 10 58.4 +0.4**
baz=93,SNR=13
LNOR Lincton Mounta 92.39 42 *eP* **P 05 10 58.6 +0.8**
ARUT Antelope Range 92.40 51 *eP* **P 05 10 58.4 +0.3**
ARUT pmax pmax
comp=Z,30nm,1.1s,mb5.5
ARUT Antelope Range 92.40 51 *eP* **P 05 10 58.4 +0.3**
comp=Z,30nm,1.1s,mb5.5
Y16A Circle Bar Ran 92.41 55 ⇓P **P 05 10 58.9 +0.7**
baz=93,SNR=121
B07A Winthrop 92.41 39 ⇓P **P 05 10 57.7 -0.1**
baz=93,SNR=53
Q13A Wheeler Ranch, 92.43 50 ⇓P **P 05 10 58.4 +0.2**
baz=93,SNR=62
O12A Currie 92.43 48 ⇓P **P 05 10 58.5 +0.3**
baz=93,SNR=26
G09A Cove 92.46 43 ⇑P **P 05 10 58.1 -0.1**
baz=93,SNR=19
N12A Clover Valley, 92.46 47 ⇑P **P 05 10 58.5 +0.2**
baz=93,SNR=21
N12A Clover Valley, 92.46 47 *eP* **P 05 10 58.6 +0.3**
comp=Z,35nm,1.0s,mb5.6
L11A Cat Creek Ranc 92.50 46 ⇑P **P 05 10 59.0 +0.6**
baz=93,SNR=38
117A Oracle 92.50 56 ⇑P **P 05 10 59.2 +0.6**
baz=93,SNR=16
D08A Wollman Farm, 92.51 41 ⇑P **P 05 10 58.3 0.0**
baz=93,SNR=9.6
A07A Ashnola River, 92.52 38 ⇓P **P 05 10 58.3 0.0**
baz=93,SNR=33
K11A Parker Ranch, 92.56 45 ⇓P **P 05 10 58.8 +0.2**
baz=93,SNR=38
F09A S2 Ranch, Elgi 92.56 42 ⇓P **P 05 10 58.5 0.0**
baz=93
BMO Blue Mountains 92.58 43 *eP* **P 05 10 58.3 -0.4**
BMO pmax pmax
comp=Z,11nm,0.9s,mb5.3
BMO MLR MLR
comp=Z,1µm,20.0s,MS5.4
BMO Blue Mountains 92.58 43 *eP* **P 05 10 58.2 -0.5**
comp=Z,11nm,0.9s,mb5.3
BMO LR LR
comp=Z,1µm,20.0s,MS5.4
I10A Payette 92.59 44 ⇑P **P 05 10 58.9 +0.1**
baz=93,SNR=8.7
S14A Cedar City 92.59 51 ⇓P **P 05 10 59.2 +0.2**
baz=93,SNR=14
V15A Kaibab Nationa 92.59 53 ⇓P **P 05 10 59.8 +0.8**
baz=93,SNR=32
P13A Bates Ranch, G 92.63 49 ⇓P **P 05 10 59.4 +0.3**
baz=93,SNR=45
X16A Lo Mia Camp, P 92.63 54 ⇓P **P 05 10 59.9 +0.7**
baz=93,SNR=85
318A Bisbee 92.69 58 ⇓P **P 05 11 00.2 +0.7**
baz=93,SNR=37
U15A North Rim 92.73 52 ⇑P **P 05 11 00.5 +0.8**
baz=93,SNR=90
C08A Higginbotham F 92.75 40 ⇓P **P 05 10 58.8 -0.6**
baz=93
E09A Wood Farm, Sta 92.75 41 ⇓P **P 05 10 59.0 -0.5**
baz=93
M12A Wells 92.77 47 ⇓P **P 05 10 59.9 +0.3**
baz=93,SNR=18
OD2 Odessa Site #2 92.78 40 *eP* **P 05 10 59.4 -0.2**
W16A Flagstaff 92.81 54 ⇑P **P 05 11 00.7 +0.7**
baz=93,SNR=24
Y17A Roosevelt 92.83 55 ⇑P **P 05 11 00.4 +0.3**
baz=93,SNR=24
B08A Colville Reser 92.83 39 ⇑P **P 05 10 59.2 -0.6**
baz=93,SNR=26
218A Dragoon 92.83 57 ⇑P **P 05 11 00.9 +0.7**
baz=93,SNR=49
G10A Bishop Farm, J 92.88 43 ⇑P **P 05 10 59.7 -0.4**
baz=93,SNR=55
D09A Jones Farm, Ri 92.89 41 ⇓P **P 05 10 59.8 -0.2**
baz=93,SNR=23
T15A Red Dirt Ranch 92.89 52 ⇓P **P 05 11 00.7 +0.4**
baz=93,SNR=36

R14A	James Farms, M	92.90	50	⇑P	P	05 11 00.6	+0.2
	baz=93,SNR=5.6						
O13A	Hicks Ranch, I	92.92	48	⇑P	P	05 11 00.7	+0.3
	baz=93,SNR=16						
MFID	Camas Ranch	92.96	45	⇑P	P	05 11 00.4	-0.1
	baz=93,SNR=40						
Z17A	San Carlos Hig	92.97	56	⇑P	P	05 11 01.4	+0.5
	baz=93						
Q14A	Sevier Lake (B	92.98	50	⇓P	P	05 11 01.0	+0.3
	baz=93,SNR=63						
L12A	House Creek Ra	92.99	46	⇓P	P	05 11 00.9	+0.2
	baz=93,SNR=26						
N13A	Wendover, West	93.04	48	⇓P	P	05 11 01.0	+0.1
	baz=93,SNR=11						
N13A	Wendover, West	93.04	48	*e*P	P	05 11 01.3	+0.3
	comp=Z,53nm,1.5s,mb5.8						
I11A	Placerville	93.07	44	⇑P	P	05 11 00.9	-0.1
	baz=93,SNR=34						
WUAZ	Wupatki	93.09	54	⇑P	P	05 11 01.7	+0.4
	baz=93,SNR=12						
WUAZ	Wupatki	93.09	54	*e*P	P	05 11 02.3	+1.0
	comp=Z,75nm,1.1s,mb6.0						
WUAZ				LR	LR		
	comp=Z,935nm,22.0s,MS5.2						
X17A	Forest Lakes	93.09	55	⇑P	P	05 11 02.3	+1.0
	baz=93,SNR=16						
F10A	Beach Ranch, E	93.10	42	⇑P	P	05 11 00.4	-0.7
	baz=93,SNR=21						
A08A	Turner Farm, O	93.13	39	⇑P	P	05 11 00.9	-0.2
	baz=93,SNR=36						
118A	Homack Ranch,	93.13	57	⇑P	P	05 11 02.3	+0.7
	baz=93,SNR=56						
S15A	Panguitch	93.15	51	⇑P	P	05 11 02.6	+1.1
	baz=93						
C09A	Chrisman Ranch	93.23	40	⇑P	P	05 11 01.1	-0.5
	baz=94,SNR=5.7						
319A	Douglas	93.23	58	⇑P	P	05 11 02.8	+0.7
	baz=93,SNR=56						
Z18A	Geronimo	93.24	56	⇓P	P	05 11 02.6	+0.5
	baz=93,SNR=16						
K12A	Draper Farm, C	93.26	46	⇓P	P	05 11 01.8	-0.1
	baz=94,SNR=26						
M13A	Montello	93.27	47	⇑P	P	05 11 02.2	+0.3
	baz=94,SNR=38						
M13A	Montello	93.27	47	*e*P	P	05 11 02.1	+0.1
	comp=Z,17nm,0.9s,mb5.5						
H11A	Donnelly	93.36	44	⇓P	P	05 11 01.9	-0.3
	baz=94,SNR=47						
P14A	Drum Mountains	93.36	49	⇓P	P	05 11 02.4	-0.1
	baz=94,SNR=9.4						
J12A	Stokes Ranch,	93.38	45	⇓P	P	05 11 02.6	+0.2
	baz=94,SNR=56						
E10A	Myers Farm, Un	93.39	42	⇑P	P	05 11 02.0	-0.4
	baz=94						
R15A	Junction	93.41	51	⇓P	P	05 11 03.5	+0.8
	baz=94,SNR=11						
219A	White Tail Can	93.47	57	⇓P	P	05 11 03.6	+0.5
	baz=94,SNR=26						
G11A	Walters Elk Ra	93.48	43	⇓P	P	05 11 02.0	-0.8
	baz=94,SNR=51						
Y18A	Canyon Day Jun	93.49	56	⇑P	P	05 11 03.9	+0.8
	baz=94,SNR=55						
U16A	Tuba City	93.50	53	⇑P	P	05 11 03.7	+0.5
	baz=94,SNR=14						
D10A	Wagner Farm, O	93.52	41	⇑P	P	05 11 02.2	-0.8
	baz=94,SNR=19						
T16A	Glen Canyon Da	93.53	52	⇓P	P	05 11 03.6	+0.4
	baz=94						
A09A	Danville	93.55	39	⇑P	P	05 11 02.8	-0.2
	baz=94,SNR=24						
V17A	Tonalea, Kykot	93.57	54	⇓P	P	05 11 04.0	+0.5
	baz=94,SNR=53						
MVU	Marysvale	93.57	50	PFAKE		05 11 10.0	+6.6
MVU				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
B09A	Rice	93.57	40	⇓P	P	05 11 02.7	-0.5
	baz=94,SNR=15						
I12A	Atlanta	93.57	45	⇑P	P	05 11 03.3	0.0
	baz=94,SNR=29						
MSU	Marysvale	93.60	50	*e*P	P	05 11 04.2	+0.6
DGAR	Diego Garcia	93.60	261	PFAKE		05 11 10.0	+5.8
DGAR				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
Q15A	Fillmore	93.63	50	⇑P	P	05 11 03.7	0.0
	baz=94,SNR=16						
119A	Ashpeak Ranch,	93.70	57	⇑P	P	05 11 04.6	+0.4
	baz=94,SNR=32						
L13A	Double Diamond	93.70	47	⇓P	P	05 11 03.9	0.0
	baz=94						
F11A	Grangeville	93.75	43	⇑P	P	05 11 03.6	-0.5
	baz=94						
N14A	Grayback Hills	93.75	48	⇓P	P	05 11 04.1	-0.2
	baz=94						
DUG	Dugway	93.77	49	⇓P	P	05 11 04.1	-0.2
	baz=94,SNR=11						
DUG	Dugway	93.77	49	*e*P	P	05 11 04.2	-0.1
DUG				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.3						
DUG				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.4						
DUG	Dugway	93.77	49	*e*P	P	05 11 04.2	-0.1
	comp=Z,15nm,1.2s,mb5.3						
DUG				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
X18A	Snowflake	93.82	55	⇑P	P	05 11 05.0	+0.3
	baz=94,SNR=24						
320A	Kipp Ranch, An	93.82	58	⇑P	P	05 11 05.5	+0.7
	baz=94,SNR=73						
C10A	Spilker Farm,	93.83	40	⇓P	P	05 11 03.9	-0.5
	baz=94						
K13A	Stover Farm, H	93.83	46	⇓P	P	05 11 04.5	0.0
	baz=94,SNR=8.9						
M14A	Sheep Mountain	93.89	47	⇑P	P	05 11 04.7	-0.1
	baz=94,SNR=27						
BGU	Big Grassy Mou	93.89	48	*e*P	P	05 11 04.8	-0.1
	comp=Z,11nm,0.9s,mb5.3						
E11A	Bogner Ranch,	93.90	42	⇑P	P	05 11 03.4	-1.4
	baz=94,SNR=10						
Z19A	T-Link Ranch,	93.92	56	⇓P	P	05 11 05.6	+0.5
	baz=94						
P15A	Leamington	93.92	49	⇑P	P	05 11 04.7	-0.3
	baz=94,SNR=7.0						
HLID	Hailey	93.96	45	⇓P	P	05 11 05.2	+0.1
	baz=94,SNR=49						
HLID	Hailey	93.96	45	*e*P	P	05 11 05.2	+0.1
	comp=Z,23nm,0.9s,mb5.6						
HLID				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
U17A	Shonto	94.02	53	⇑P	P	05 11 06.0	+0.5
	baz=94						
220A	Playas Peak, P	94.02	58	⇓P	P	05 11 06.1	+0.5
	baz=94,SNR=15						
R16A	Teasdale	94.02	51	⇓P	P	05 11 06.1	+0.6
	baz=94,SNR=30						
O15A	The Old Anders	94.05	49	⇓P	P	05 11 05.5	-0.1
	baz=94						
H12A	Diamond D Ranc	94.05	44	⇑P	P	05 11 05.0	-0.5
	baz=94,SNR=50						
T17A	Navajo Res., N	94.05	52	⇑P	P	05 11 06.2	+0.5
	baz=94,SNR=23						
J13A	Cove Ranch, Pi	94.06	45	⇓P	P	05 11 05.6	+0.1
	baz=94,SNR=32						
B10A	Chitwood Farm,	94.08	40	⇓P	P	05 11 05.1	-0.4
	baz=94						
D11A	Klaveano Farm,	94.11	41	⇑P	P	05 11 04.8	-0.8
	baz=94,SNR=14						
NEW	Newport	94.12	40	*e*P	P	05 11 04.9	-0.8
NEW				pmax	pmax		
	comp=Z,13nm,1.0s						
NEW				MLR	MLR		
	comp=Z,481nm,19.0s						
NEW	Newport	94.12	40	*e*P	P	05 11 04.9	-0.8
	comp=Z,13nm,1.0s,mb5.3						
NEW				LR	LR		
	comp=Z,481nm,19.0s,MS5.0						
120A	U Bar Ranch, L	94.16	57	⇓P	P	05 11 06.5	+0.2
	baz=94,SNR=19						
Y19A	Nutrioso	94.16	56	⇓P	P	05 11 06.9	+0.7
	baz=94,SNR=8.8						
A10A	Northport	94.16	39	⇓P	P	05 11 05.6	-0.3
	baz=94,SNR=8.8						
L14A	Malta	94.17	47	⇑P	P	05 11 06.1	0.0
	baz=94						
W18A	Petrified Fore	94.19	54	⇑P	P	05 11 06.5	+0.1
	baz=94						
NLU	North Lily Min	94.20	49	*e*P	P	05 11 06.9	+0.6
	comp=Z,12nm,1.0s,mb5.3						
V18A	Ganado	94.25	54	⇑P	P	05 11 06.9	+0.3
	baz=94,SNR=20						
F12A	Elk City	94.27	43	⇓P	P	05 11 05.8	-0.7
	baz=94,SNR=34						
S17A	Black Ridge (B	94.29	52	⇑P	P	05 11 06.4	-0.4
	baz=94,SNR=5.8						
I13A	Wildhorse Cree	94.29	45	⇓P	P	05 11 06.7	+0.1
	baz=94,SNR=51						
X19A	St. Johns	94.29	55	⇑P	P	05 11 07.3	+0.4
	baz=94,SNR=13						
E12A	Beaver Dam Sad	94.33	42	⇓P	P	05 11 06.2	-0.5
	baz=95						
P16A	Fountain Green	94.38	50	⇑P	P	05 11 07.4	+0.3
	baz=95						
Z20A	Nine Sixteen R	94.38	57	⇑P	P	05 11 07.9	+0.6
	baz=95,SNR=14						
HVU	Hansel Valley	94.39	47	*e*P	P	05 11 07.5	+0.4
HVU				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.5						
HVU	Hansel Valley	94.39	47	*e*P	P	05 11 07.5	+0.3
	comp=Z,21nm,1.0s,mb5.5						
K14A	Jones Ranch, D	94.41	46	⇑P	P	05 11 07.2	+0.1
	baz=95,SNR=11						
H13A	Challis	94.45	44	⇑P	P	05 11 07.2	-0.2
	baz=95,SNR=20						
W19A	Sanders	94.46	54	⇑P	P	05 11 07.5	-0.1
	baz=95,SNR=8.0						
J14A	Carey	94.47	46	⇑P	P	05 11 07.7	+0.2
	baz=95,SNR=14						
Q16A	Castle Valley	94.48	50	⇑P	P	05 11 08.1	+0.5
	baz=95,SNR=16						
M15A	Larsen Ranch,	94.50	48	⇑P	P	05 11 07.4	-0.3
	baz=95						
MPU	Maple Canyon	94.54	49	*e*P	P	05 11 08.0	+0.1
	comp=Z,17nm,1.0s,mb5.4						
U18A	Rough Rock, Ch	94.55	53	⇑P	P	05 11 08.1	+0.1
	baz=95						
TMUT	Trail Mountain	94.59	50	*e*P	P	05 11 09.1	+1.0
	comp=Z,21nm,0.9s,mb5.6						
R17A	Hanksville Air	94.63	51	⇑P	P	05 11 08.1	-0.2
	baz=95,SNR=23						
221A	Mesquite Ranch	94.65	58	⇓P	P	05 11 09.0	+0.5
	baz=95						
B11A	Sandpoint	94.65	40	⇓P	P	05 11 09.0	+0.8
	baz=95						
G13A	Cobalt	94.67	44	⇓P	P	05 11 07.8	-0.5
	baz=95,SNR=21						
O16A	Springville	94.71	49	⇓P	P	05 11 08.5	-0.1
	baz=95,SNR=16						
D12A	Red Ives Fores	94.72	42	⇑P	P	05 11 07.8	-0.7
	baz=95						
I14A	Mackay	94.74	45	⇑P	P	05 11 08.7	0.0
	baz=95,SNR=44						
L15A	Malad City	94.75	47	⇑P	P	05 11 08.2	-0.5
	baz=95,SNR=11						
T18A	Mexican Hat	94.80	52	⇓P	P	05 11 09.3	+0.2
	baz=95,SNR=60						
121A	Cookes Peak, D	94.82	57	⇑P	P	05 11 09.8	+0.5
	baz=95,SNR=11						
Y20A	Horse Springs,	94.83	56	⇓P	P	05 11 09.8	+0.4
	baz=95						
TIXI	Tiksi	94.87	348	*e*P	P	05 11 06.7	-1.9
TIXI				*e*S	S	05 22 22.9	+3.5
TIXI				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.5						
TIXI				MLR	MLR		
	comp=Z,616nm,21.0s,MS5.0						
TIXI	Tiksi	94.87	348	*e*P	P	05 11 07.0	-1.6
	comp=Z,22nm,1.1s,mb5.5						
TIXI				*e*PP	PP	05 14 54.3	-3.8
TIXI				LR	LR		
	comp=Z,579nm,20.0s,MS5.0						
A11A	Hall Mountain,	94.87	40	⇑P	P	05 11 09.4	+0.3
	baz=95,SNR=15						
F13A	Darby	94.88	43	⇓P	P	05 11 08.4	-0.8
	baz=95,SNR=37						
JLU	Jordanelle	94.89	49	*e*P	P	05 11 09.2	-0.2
	comp=Z,15nm,1.0s,mb5.4						
K15A	Arbon	94.90	46	⇑P	P	05 11 09.5	+0.1
	baz=95						
S18A	Hurst Farm, Bl	94.90	52	⇑P	P	05 11 09.5	-0.1
	baz=95,SNR=25						
C12B	Naegeli Ranch,	94.91	41	⇑P	P	05 11 08.7	-0.6
	baz=95,SNR=11						
V19A	Window Rock	94.93	54	⇑P	P	05 11 09.7	0.0
	baz=95						
X20A	Quemado	94.95	55	⇑P	P	05 11 10.2	+0.3
	baz=95,SNR=9.8						
P17A	Butcher Ranch,	94.99	50	⇑P	P	05 11 09.9	-0.1
	baz=95						
N16A	Rees Ranch, Co	95.00	48	⇓P	P	05 11 09.9	0.0
	baz=95,SNR=12						
U19A	Dine' College,	95.01	53	⇓P	P	05 11 10.2	+0.1
	baz=95						
SRU	San Rafael	95.02	50	⇑P	P	05 11 09.8	-0.3
	baz=95,SNR=10						
SRU	San Rafael	95.02	50	*e*P	P	05 11 10.5	+0.4
SRU				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.5						
SRU	San Rafael	95.02	50	*e*P	P	05 11 10.5	+0.4
	comp=Z,19nm,0.9s,mb5.5						
M16A	Huntsville	95.02	48	⇓P	P	05 11 09.5	-0.5
	baz=95						
H14A	Leadore	95.06	44	⇑P	P	05 11 10.1	-0.1
	baz=95,SNR=16						
W20A	Ramah	95.15	55	⇓P	P	05 11 11.0	+0.2
	baz=95,SNR=14						
HWUT	Hardware Ranch	95.17	48	*e*P	P	05 11 10.2	-0.5
	comp=Z,7.2nm,0.7s,mb5.2						
HWUT				LR	LR		
	comp=Z,558nm,19.0s,MS5.0						
Z21A	St. Cloud Mine	95.18	57	⇓P	P	05 11 11.4	+0.5
	baz=95						
R18A	Canyonlands Na	95.22	51	⇑P	P	05 11 10.9	-0.1
	baz=95,SNR=10						
E13A	Victor	95.22	43	⇑P	P	05 11 09.5	-1.3
	baz=95,SNR=5.6						
222A	Williams Famil	95.22	58	⇓P	P	05 11 11.4	+0.2
	baz=95						
J15A	Blackfoot	95.23	46	⇑P	P	05 11 11.2	+0.3
	baz=95,SNR=26						
G14A	Jackson	95.23	44	⇓P	P	05 11 10.6	-0.3
	baz=96,SNR=11						
O17A	Robinson Place	95.25	49	⇑P	P	05 11 11.2	+0.2
	baz=96,SNR=48						
Q18A	Rafter H Ranch	95.30	51	⇓P	P	05 11 11.0	-0.3
	baz=96,SNR=10						
D13A	Huson	95.30	42	⇓P	P	05 11 11.7	+0.5
	baz=96,SNR=8.0						
T19A	Beclabito	95.33	53	⇓P	P	05 11 11.3	-0.3
	baz=96						
BSMT	Bassoo Peak	95.39	41	*e*P	P	05 11 10.7	-0.8
V20A	Brimhall	95.40	54	⇑P	P	05 11 11.6	-0.3
	baz=96						
P18A	Preston Nutter	95.40	50	⇑P	P	05 11 11.7	-0.1
	baz=96						
Y21A	Point of Rocks	95.41	56	⇑P	P	05 11 12.2	+0.2
	baz=96,SNR=12						
L16A	Fish Haven	95.41	47	⇑P	P	05 11 11.3	-0.4
	baz=96						
I15A	Monteview	95.42	45	⇑P	P	05 11 11.9	+0.2
	baz=96,SNR=10						
N17A	Moffit Pass	95.45	49	⇑P	P	05 11 11.8	-0.1
	baz=96,SNR=8.6						
C13A	Hot Springs	95.46	41	⇑P	P	05 11 11.0	-0.9
	baz=96						
X21A	Alamocita Cree	95.47	56	⇑P	P	05 11 12.1	-0.2
	baz=96						
MSO	Missoula	95.53	42	*e*P	P	05 11 11.9	-0.3
	comp=Z,1.5nm,0.8s,mb4.5						
MSO				LR	LR		
	comp=Z,416nm,20.0s,MS4.9						
H15A	Lima	95.54	45	⇑P	P	05 11 12.1	-0.2
	baz=96						
U20A	Newcomb	95.56	54	⇑P	P	05 11 12.2	-0.4
	baz=96						
S19A	Harvey Farm, M	95.56	52	⇓P	P	05 11 12.2	-0.4
	baz=96,SNR=16						
K16A	Soda Springs	95.60	47	⇓P	P	05 11 12.5	-0.1
	baz=96,SNR=15						
R19A	Curley Farm, L	95.66	52	⇑P	P	05 11 12.6	-0.4
	baz=96,SNR=20						
J16A	Bone	95.74	46	⇓P	P	05 11 13.3	+0.1
	baz=96,SNR=32						
SWMT	Swartz Lake	95.75	42	*e*P	P	05 11 12.3	-0.9
M17A	Scullys Gap (B	95.75	48	⇓P	P	05 11 12.8	-0.6
	baz=96						
B13A	Whitefish	95.79	41	⇓P	P	05 11 12.8	-0.5
	baz=96						
O18A	Roosevelt	95.80	49	⇓P	P	05 11 13.5	-0.1
	baz=96,SNR=13						
W21A	San Fidel	95.80	55	⇑P	P	05 11 13.2	-0.5
	baz=96						
L17A	Cokeville	95.83	47	⇑P	P	05 11 12.9	-0.8
	baz=96						
G15A	Dillon	95.84	44	⇑P	P	05 11 13.3	-0.4
	baz=96,SNR=16						
DLMT	Dillon	95.84	44	*e*P	P	05 11 13.4	-0.3
	comp=Z,12nm,0.8s,mb5.4						
MVCO	Mesa Verde	95.86	53	⇓P	P	05 11 13.3	-0.6
	baz=96						
MVCO	Mesa Verde	95.86	53	PFAKE		05 11 30.0	+16
MVCO				LR	LR		
	comp=Z,993nm,21.0s,MS5.3						
D14A	Greenough	95.90	42	⇓P	P	05 11 13.2	-0.7
	baz=96						
AHID	Auburn Hatcher	95.91	47	PFAKE		05 11 30.0	+16
AHID				LR	LR		
	comp=Z,565nm,22.0s,MS5.0						
LAZ	Ladron	95.96	56	*e*P	P	05 11 14.6	+0.2
	comp=Z,1.8nm,1.0s,mb4.5						
HYB	Hyderabad	95.97	286	⇑*i*P	P	05 11 13.5	-1.4
CHMT	Chamberlain Mo	96.00	42	*e*P	P	05 11 13.8	-0.6
K17A	Gardner Place,	96.03	47	⇑P	P	05 11 13.9	-0.7
	baz=96						
V21A	Milan	96.04	54	⇑P	P	05 11 14.4	-0.4
	baz=96						
A13A	Flathead Natio	96.04	40	⇑P	P	05 11 13.9	-0.6
	baz=96						
I16A	Newdale	96.04	46	⇑P	P	05 11 14.7	+0.1
	baz=96,SNR=16						
F15A	Butte	96.09	44	⇑P	P	05 11 14.3	-0.5
	baz=96,SNR=8.7						
LRM	Limekiln Ridge	96.11	44	*e*P	P	05 11 14.8	-0.1
M18A	Lyman	96.16	48	⇑P	P	05 11 14.7	-0.5
	baz=96,SNR=8.4						
E15A	Deer Lodge	96.21	43	⇓P	P	05 11 14.2	-1.1
	baz=96						
TPAW	Teton Pass	96.27	46	*e*P	P	05 11 15.9	+0.3
	comp=Z,14nm,1.3s,mb5.2						
R20A	Redvale	96.27	52	⇓P	P	05 11 15.7	-0.1
	baz=96,SNR=11						
BNM	Barren Site	96.28	56	*e*P	P	05 11 15.8	-0.1
	comp=Z,7.0nm,1.0s,mb5.0						
N18A	Larsen Ranch,	96.28	49	⇓P	P	05 11 15.0	-0.7
	baz=96,SNR=13						
REDW	Red Top Meadow	96.29	46	*e*P	P	05 11 15.9	+0.1
	comp=Z,24nm,1.1s,mb5.5						
324A	Moseley Ranch,	96.31	59	⇓P	P	05 11 15.2	-1.0
	baz=96,SNR=16						
G16A	Moss Hill, Enn	96.32	44	⇓P	P	05 11 14.7	-1.1
	baz=96,SNR=8.2						
P19A	Cripple Cowboy	96.32	50	⇓P	P	05 11 14.9	-1.1
	baz=96,SNR=17						
LPM	Los Pinos Moun	96.32	56	*e*P	P	05 11 16.5	+0.4
L18A	Fontenelle, Gr	96.35	48	⇑P	P	05 11 15.7	-0.4
	baz=97						
J17A	Brown Place, J	96.39	46	⇑P	P	05 11 15.5	-0.7
	baz=97,SNR=12						
W22A	Albuquerque	96.39	55	⇑P	P	05 11 15.6	-0.8
	baz=97						
IMW	Indian Meadow	96.42	46	*e*P	P	05 11 16.5	+0.1
	comp=Z,13nm,1.0s,mb5.3						
QLMT	Earthquake Lak	96.42	45	*e*P	P	05 11 16.7	+0.4
O19A	Miners Draw (B	96.44	50	⇑P	P	05 11 15.8	-0.8
	baz=97						
MNTX	Cornudas Mount	96.47	59	*e*P	P	05 11 16.5	-0.4
	comp=Z,16nm,1.1s,mb5.4						
MNTX				LR	LR		
	comp=Z,544nm,20.0s,MS5.0						
224A	Corundas Mount	96.48	58	⇑P	P	05 11 16.2	-0.7
	baz=97,SNR=6.9						
H16A	Russell Place,	96.50	45	⇓P	P	05 11 16.6	0.0
	baz=97,SNR=31						
425A	Indio Mountain	96.50	60	⇓P	P	05 11 16.6	-0.4
	baz=97,SNR=24						
D15A	Lincoln	96.51	42	⇓P	P	05 11 16.0	-0.7
	baz=97						
S21A	Coal Bank Pass	96.54	52	⇑P	P	05 11 17.0	0.0
	baz=97,SNR=7.1						
LOHW	Long Hollow	96.55	46	*e*P	P	05 11 16.6	-0.3
	comp=Z,13nm,1.4s,mb5.2						
BOZ	Bozeman (W)	96.58	44	⇓P	P	05 11 16.3	-0.7
	baz=97,SNR=19						
BOZ	Bozeman (W)	96.58	44	*e*P	P	05 11 16.6	-0.4
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.4						
BOZ	Bozeman (W)	96.58	44	*e*P	P	05 11 16.6	-0.5
	comp=Z,10nm,1.1s,mb5.2						
BOZ				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
Q20A	Ridgley Place,	96.59	51	⇑P	P	05 11 16.6	-0.7
	baz=97,SNR=12						
K18A	Toltan Ranch,	96.59	47	⇓P	P	05 11 16.6	-0.6
	baz=97,SNR=19						
N19A	John Jarvie Ra	96.61	49	⇓P	P	05 11 16.8	-0.5
	baz=97						
F16A	Kennard Place,	96.63	44	⇓P	P	05 11 16.8	-0.4
	baz=97,SNR=14						
A14A	Double T Ranch	96.66	40	⇑P	P	05 11 16.7	-0.6
	baz=97,SNR=6.5						
ANMO	Albuquerque	96.67	55	*e*P	P	05 11 17.3	-0.4
ANMO				pmax	pmax		
	comp=Z,12nm,1.0s						
ANMO				MLR	MLR		
	comp=Z,516nm,19.0s						
ANMO	Albuquerque	96.67	55	P	P	05 11 17.1	-0.6
	comp=Z,13nm,1.1s,mb5.3,baz=226,slow=5.0,SNR=17						
ANMO				LR	LR	05 51 51.2	
	comp=Z,399nm,18.6s,MS4.9,baz=322,slow=34						
ANMO	Albuquerque	96.67	55	*e*P	P	05 11 17.2	-0.4
	comp=Z,12nm,1.0s,mb5.3						
ANMO				LR	LR		
	comp=Z,516nm,19.0s,MS5.0						
I17A	Pilgrim Ck.	96.67	46	⇓P	P	05 11 17.3	-0.2
	baz=97,SNR=8.1						
YMR	Madison River	96.67	45	*e*P	P	05 11 18.1	+0.7
	comp=Z,10nm,0.9s,mb5.2						
325A	Bean Ranch, Si	96.70	59	⇓P	P	05 11 17.1	-0.8
	baz=97,SNR=27						
P20A	De Beque	96.70	51	⇑P	P	05 11 17.1	-0.7
	baz=97						
C15A	Salmond Ranch,	96.72	42	⇑P	P	05 11 17.0	-0.7
	baz=97,SNR=21						
124A	Stringfield Ra	96.74	58	⇓P	P	05 11 17.5	-0.5
	baz=97						
J18A	Kendall Valley	96.81	47	⇓P	P	05 11 17.4	-0.7
	baz=97,SNR=29						
626A	Big Bend Ranch	96.81	61	⇓P	P	05 11 18.0	-0.5
	baz=97,SNR=11						
INK	Inuvik	96.83	18	*e*P	P	05 11 16.5	-1.1
INK				pmax	pmax		
	comp=Z,106nm,1.6s						
INK	Inuvik	96.83	18	P	P	05 11 16.4	-1.2
	baz=224,slow=4.9						
INK				PKiKP	PKiKP	05 15 51.9	-2.0
	comp=Z,1.6nm,0.9s,baz=160,slow=5.4,SNR=4.3						
INK	Inuvik	96.83	18	*e*P	P	05 11 16.5	-1.1
	comp=Z,106nm,1.6s,mb6.0						
M19A	Rock Springs	96.83	49	⇓P	P	05 11 17.4	-0.9
	baz=97						
HRY	Holter Researc	96.83	43	*e*P	P	05 11 17.7	-0.4
H17A	Grant Village	96.84	45	⇑P	P	05 11 18.7	+0.5
	baz=97,SNR=10						
E16A	East Helena	96.87	43	⇓P	P	05 11 18.6	+0.3
	baz=97,SNR=5.3						
L19A	Farson	96.89	48	⇓P	P	05 11 17.9	-0.6
	baz=97,SNR=15						
B15A	Bradely Ranch,	96.95	41	⇑P	P	05 11 17.1	-1.5
	baz=97,SNR=15						
R21A	Cimarron	96.95	52	⇓P	P	05 11 18.6	-0.3
	baz=97,SNR=14						
W23A	Werner Place,	96.97	55	⇓P	P	05 11 18.5	-0.6
	baz=97						
BW06	Boulder Array	96.97	47	⇑P	P	05 11 18.2	-0.7
	baz=97,SNR=16						
BW06	Boulder Array	96.97	47	*e*P	P	05 11 18.3	-0.6
BW06				LR	LR		
	comp=Z,669nm,20.0s,MS5.1						
PDAR	Pinedale Array	96.97	47	P	P	05 11 18.2	-0.6
	comp=Z,5.3nm,0.9s,mb5.0,baz=236,slow=1.6,SNR=26						
PDAR				PP	PP	05 15 08.2	-6.8
	comp=Z,1.3nm,1.0s,baz=255,slow=5.8,SNR=4.2						
PDAR				PKKPbc	PKKPbc	05 27 57.9	-3.2
	comp=Z,0.5nm,0.9s,baz=72,slow=4.8,SNR=4.6						

PDAR PKPPKP 05 36 15.8
comp=Z,0.4nm,0.9s,baz=132,slow=2.2,SNR=4.3
PDAR LR LR 05 49 02.4
comp=Z,514nm,18.6s,MS5.0,baz=245,slow=32
526A Mary Lane Ranc 97.01 61 ⇑P **P 05 11 19.0 -0.4**
baz=97,SNR=12
LKWY Lake 97.02 45 *e*P **P 05 11 20.5 +1.5**
LKWY pmax pmax
comp=Z,2.0nm,0.7s,mb4.7
LKWY MLR MLR
comp=Z,1μm,19.0s,MS5.4
LKWY Lake 97.02 45 *e*P **P 05 11 20.5 +1.5**
comp=Z,2.2nm,0.7s,mb4.7
LKWY LR LR
comp=Z,1μm,19.0s,MS5.4
O20A White River Ci 97.02 50 ⇑P **P 05 11 18.6 -0.5**
baz=97
G17A Pierce Place, 97.05 44 ⇑P **P 05 11 18.4 -0.8**
baz=97
A15A Johnson Ranch, 97.08 41 ⇑P **P 05 11 18.6 -0.6**
baz=97,SNR=6.4
Q21A Lamborn Mesa, 97.08 51 ⇑P **P 05 11 18.6 -0.9**
baz=97
WMQ Urumqi 97.11 314 P **P 05 11 19.6 +0.1**
WMQ PP PP 05 15 19.3 +3.2
WMQ SKS 05 21 47.8
WMQ S S 05 22 31.0 -9.0
WMQ sS sS 05 23 13.5 +14
WMQ SS SS 05 29 14.0 -4.0
WMQ pmax pmax
comp=Z,28nm,1.5s,mb5.5
WMQ pmax pmax
comp=Z,260nm,5.0s
WMQ LR LR
comp=N,260nm,25.0s,MS4.9
WMQ LR LR
comp=E,530nm,30.0s,MS4.9
WMQ LR LR
comp=Z,600nm,26.0s,MS5.0
I18A Diamond G Ranc 97.11 46 ⇓P **P 05 11 19.4 -0.1**
baz=97
D16A Dana Ranch, Ca 97.13 43 ⇑P **P 05 11 18.9 -0.6**
baz=97,SNR=12
TXAR Lajitas Array 97.13 62 P **P 05 11 20.0 0.0**
comp=Z,5.3nm,0.8s,mb5.0,baz=225,slow=4.7,SNR=43
TXAR PKKPbc PKKPbc 05 27 54.6 -5.5
comp=Z,0.6nm,0.9s,baz=108,slow=4.1,SNR=3.6
TXAR PKPPKP 05 36 13.7
comp=Z,0.5nm,1.0s,baz=54,slow=6.4,SNR=3.7
TXAR LR LR 05 47 48.2
comp=Z,844nm,19.2s,MS5.2,baz=45,slow=31
N20A Spence Gulch, 97.24 49 ⇑P **P 05 11 19.9 -0.2**
baz=97,SNR=14
426A McDonald Obser 97.25 60 ⇓P **P 05 11 20.1 -0.4**
baz=97,SNR=15
C16A Fuhringer Ranc 97.28 42 ⇓P **P 05 11 19.4 -0.7**
baz=98,SNR=13
F17A Fitzpatrick Pl 97.31 44 ⇑P **P 05 11 20.1 -0.2**
baz=98,SNR=22
125A Gardner Draw, 97.36 58 ⇑P **P 05 11 20.5 -0.4**
baz=98
E17A Martinsdale 97.37 43 ⇓P **P 05 11 20.7 +0.1**
baz=98,SNR=5.6
627A Terlingua Ranc 97.40 61 ⇑P **P 05 11 20.9 -0.3**
baz=98,SNR=9.7
527A Woodward Ranch 97.43 61 ⇓P **P 05 11 20.7 -0.5**
baz=98,SNR=10.0
K19A Absolon Red Bu 97.49 47 ⇓P **P 05 11 20.3 -0.9**
baz=98,SNR=13
326A Caldwell Ranch 97.49 60 ⇑P **P 05 11 20.7 -0.8**
baz=98
R22A Saguache, Gunn 97.50 52 ⇑P **P 05 11 22.0 +0.6**
baz=98,SNR=11
M20A Sweetwater, Wa 97.51 49 ⇓P **P 05 11 20.7 -0.7**
baz=98
B16A M & M Farms, S 97.52 41 ⇓P **P 05 11 20.8 -0.4**
baz=98,SNR=5.6
L20A Wamsutter 97.57 48 ⇑P **P 05 11 21.8 +0.2**
baz=98,SNR=8.3
Q22A Crested Butte, 97.58 52 ⇑P **P 05 11 22.0 +0.2**
baz=98,SNR=6.5
O21A Pagoda 97.61 50 ⇑P **P 05 11 21.7 -0.2**
baz=98
226A Malaga, Loving 97.62 59 ⇓P **P 05 11 21.8 -0.3**
baz=98,SNR=8.8
SMCO Snowmass 97.64 51 *e*P **P 05 11 22.2 +0.2**
comp=Z,10.0nm,1.2s,mb5.2
SMCO *e*PP PP 05 15 19.9 -0.4
D17A Six Diamond Ra 97.72 43 ⇓P **P 05 11 21.8 -0.3**
baz=98,SNR=16
N21A Black Mountain 97.75 50 ⇓P **P 05 11 22.3 -0.1**
baz=98,SNR=8.8
A16A West Butte Ran 97.77 41 ⇑P **P 05 11 21.6 -0.7**
baz=98,SNR=7.8
K20A Yellowstone Ra 97.78 48 ⇓P **P 05 11 21.8 -0.8**
baz=98
427A Hayter Ranch, 97.82 60 ⇓P **P 05 11 22.3 -0.7**
baz=98,SNR=12
628A Black Gap, Mar 97.83 62 ⇑P **P 05 11 22.6 -0.4**
baz=98
G18A Lazy EL Ranch, 97.83 45 ⇓P **P 05 11 22.1 -0.5**
baz=98,SNR=11
C17A Wharram Farm, 97.84 42 ⇓P **P 05 11 22.5 -0.2**
baz=98,SNR=15
126A Clayton Basin, 97.87 58 ⇑P **P 05 11 22.1 -1.0**
baz=98
GCMT Greycliff 97.92 44 *e*P **P 05 11 23.3 +0.2**
comp=Z,6.4nm,1.0s,mb5.1
F18A Big Timber 97.93 44 ⇑P **P 05 11 23.0 -0.1**
baz=98,SNR=14
RLMT Red Lodge 97.96 45 ⇓P **P 05 11 23.1 -0.1**
baz=98,SNR=9.8
RLMT Red Lodge 97.96 45 *e*P **P 05 11 23.1 -0.1**
comp=Z,7.6nm,1.1s,mb5.1
RLMT LR LR
comp=Z,2μm,20.0s,MS5.5
E18A Harlowton 98.02 44 ⇓P **P 05 11 23.4 -0.1**
baz=98,SNR=10.0
B17A L&G Farms, Che 98.04 42 ⇑P **P 05 11 23.4 -0.2**
baz=98,SNR=21
528A Cox Ranch, San 98.11 61 ⇓P **P 05 11 23.8 -0.6**
baz=98,SNR=7.9
M21A Separation Pea 98.13 49 ⇑P **P 05 11 23.6 -0.6**
baz=98,SNR=15
L21A Rawlins 98.24 49 ⇓P **P 05 11 23.9 -0.7**
baz=98,SNR=11
227A Bennet, Jal 98.26 59 ⇑P **P 05 11 24.0 -0.9**
baz=98
EDM Edmonton 98.27 36 *e*P **P 05 11 23.2 -1.2**
RWWY Rawlins 98.27 49 *e*P **P 05 11 24.5 -0.2**
comp=Z,12nm,1.1s,mb5.3
SDCO Great Sand Dun 98.28 53 *e*P **P 05 11 25.0 +0.1**
comp=Z,2.9nm,1.0s,mb4.8
SDCO LR LR
comp=Z,678nm,19.0s,MS5.2
D18A Linhart Farms, 98.30 43 ⇓P **P 05 11 24.7 -0.1**
baz=98,SNR=5.7
W25A X Bar L Ranch, 98.31 56 ⇓P **P 05 11 24.5 -0.5**
baz=98,SNR=14
A17A Triple J Farms 98.33 41 ⇓P **P 05 11 24.8 0.0**
baz=98,SNR=13
428A Kincaid Ranch, 98.37 60 ⇑P **P 05 11 24.8 -0.7**
baz=98
127A Arkansas Junct 98.41 58 ⇑P **P 05 11 25.0 -0.6**
baz=99,SNR=5.5
328A Wristen Ranch, 98.46 60 ⇓P **P 05 11 25.2 -0.7**
baz=99
N22A Wattenberg Ran 98.53 50 ⇓P **P 05 11 25.7 -0.2**
baz=99,SNR=8.9
PLCA Paso Flores 98.60 139 LR LR 05 45 50.2
comp=Z,305nm,20.1s,MS4.8,baz=276,slow=29
EGMT Eagleton 98.61 42 ⇑P **P 05 11 25.7 -0.4**
baz=99
EGMT Eagleton 98.61 42 PFAKE 05 11 40.0 +14
EGMT LR LR
comp=Z,506nm,20.0s,MS5.0
M22A Cedar Creek Ra 98.61 49 ⇓P **P 05 11 25.7 -0.6**
baz=99
B18A Beardsley Farm 98.72 42 ⇑P **P 05 11 26.5 -0.1**
baz=99,SNR=18
ISCO Idaho Springs 98.83 51 PFAKE 05 11 40.0 +13
ISCO LR LR
comp=Z,450nm,20.0s,MS5.0
A18A Metzger Ranch, 98.85 41 ⇑P **P 05 11 26.8 -0.3**
baz=99
L22A Ellis Ranch, M 98.92 49 ⇑P **P 05 11 27.5 -0.2**
baz=99
AMTX Amarillo 100.39 57 PFAKE 05 11 50.0 +16
AMTX LR LR
comp=Z,491nm,20.0s,MS5.0
LAO LASA Array 100.47 44 PFAKE 05 11 50.0 +16
LAO LR LR
comp=Z,1μm,20.0s,MS5.4
JCT Junction City 100.68 61 PFAKE 05 11 50.0 +15
JCT LR LR
comp=Z,941nm,20.0s,MS5.3
YKA Yellowknife Ar 100.98 27 P Pdif 05 11 35.1 -1.6
comp=Z,16nm,0.8s,baz=254,slow=4.6,SNR=133
YKA PP PP 05 15 38.6 -6.5
comp=Z,1.1nm,0.8s,baz=251,slow=7.8,SNR=4.0
YKA PKKPbc PKKPbc 05 27 47.1 -3.3
comp=Z,0.3nm,0.7s,baz=69,slow=2.5,SNR=4.5
YKA tx tx 05 28 10.4
comp=Z,1.8nm,0.9s,baz=70,slow=5.2,SNR=16
YKA Yellowknife Ar 100.98 27 P Pdif 05 11 35.1 -1.6
YKA PP PP 05 15 38.6 -6.5
YKA PKKPbc PKKPbc 05 27 47.1 -3.3
RSSD Black Hills 101.22 47 PFAKE 05 11 50.0 +12
RSSD LR LR
comp=Z,785nm,20.0s,MS5.2
MKAR Makanchi Array 101.66 316 P Pdif 05 11 39.4 -0.3
MKAR 05 15 46.5
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 101.66 316 P Pdif 05 11 39.4 -0.4
comp=Z,5.9nm,0.7s,baz=99,slow=5.9,SNR=38
MKAR PP PP 05 15 46.5 -4.2
comp=Z,3.4nm,1.0s,baz=123,slow=6.2,SNR=5.1
MKAR PKKPbc PKKPbc 05 27 43.9 -4.0
comp=Z,1.5nm,0.8s,baz=273,slow=2.3,SNR=8.5
MKAR tx tx 05 28 06.9
comp=Z,2.1nm,0.8s,baz=306,slow=4.1,SNR=8.8
MKAR PKPPKP 05 36 04.0
comp=Z,0.7nm,0.9s,baz=272,slow=3.4,SNR=5.3
MKAR Makanchi Array 101.66 316 P Pdif 05 11 39.4 -0.4
MKAR PP PP 05 15 46.5 -4.2
MKAR PKKPbc PKKPbc 05 27 43.9 -4.0
MKAR P'P' 05 36 04.0
OGNE Ogallala 101.78 51 PFAKE 05 11 50.0 +10
OGNE LR LR
comp=Z,946nm,22.0s,MS5.3
ZALV Zalesovo Beam 102.08 323 P Pdif 05 11 40.3 -1.3
comp=Z,5.7nm,0.7s,baz=108,slow=4.8,SNR=29
ZALV PP PP 05 15 48.6 -5.0
comp=Z,2.8nm,0.9s,baz=104,slow=6.3,SNR=5.7
ZALV PKKPbc PKKPbc 05 27 42.2 -4.7
comp=Z,0.6nm,0.3s,baz=292,slow=4.0,SNR=3.6
DGMT Dagmar 102.29 43 ⇑P Pdif 05 11 42.1 -0.4
baz=102
DGMT Dagmar 102.29 43 PFAKE 05 11 50.0 +7.5
DGMT LR LR
comp=Z,606nm,19.0s,MS5.1
WMOK Wichita Mounta 102.65 57 PFAKE 05 12 00.0 +16
WMOK LR LR
comp=Z,673nm,19.0s,MS5.2
CBKS Cedar Bluff 102.94 53 PFAKE 05 12 00.0 +15
CBKS LR LR
comp=Z,552nm,21.0s,MS5.1
NVS Novosibirsk 103.21 324 *e*P Pdif 05 11 45.2 -1.5
NVS *e* 05 16 02.8
NVS *e* 05 22 20.6
NVS pmax pmax
comp=Z,24nm,1.7s
NVS pmax pmax
comp=N,5.0nm,1.5s
NVS pmax pmax
comp=E,13nm,1.5s
HKT Hockley 103.85 63 PFAKE 05 12 00.0 +11
HKT LR LR
comp=Z,945nm,21.0s,MS5.3
KURK Kurchatov 104.97 319 Pdiff Pdif 05 11 53.3 -1.2
comp=Z,2.1nm,0.8s,baz=100,slow=4.1,SNR=11
KURK PKiKP PKiKP 05 16 04.0 -5.0
comp=Z,6.3nm,1.0s,baz=107,slow=1.9,SNR=4.7
KURK PKKPbc PKKPbc 05 27 33.9 -4.3
comp=Z,3.9nm,0.8s,baz=291,slow=3.5,SNR=15
NIL Nilore 105.07 301 PFAKE 05 16 20.0 +10
NIL LR LR
comp=Z,107nm,21.0s,MS4.4
FFC Flin Flon 105.12 37 PFAKE 05 16 20.0 +11
FFC LR LR
comp=Z,763nm,20.0s,MS5.2
NATX Nacogdoches 105.26 61 PFAKE 05 16 20.0 +10
NATX LR LR
comp=Z,765nm,20.0s,MS5.2
TKM2 Tokmak 2 105.33 310 *e*PKPdf PKiKP 05 16 09.2 -0.8
TKM2 LR LR
comp=Z,266nm,20.0s,MS4.8
KSU1 Kansas State U 105.37 54 PFAKE 05 16 20.0 +10
KSU1 LR LR
comp=Z,534nm,20.0s,MS5.1
TRQA Tornquist 105.48 141 PFAKE 05 16 20.0 +9.4
TRQA LR LR
comp=Z,179nm,19.0s,MS4.6
UCH Uchtor 105.97 310 *e*PKPdf PKiKP 05 16 11.5 +0.3
UCH LR LR
comp=Z,297nm,22.0s,MS4.8
AAK Ala-Archa 106.07 310 PKiKP PKiKP 05 16 06.8 -4.6
comp=Z,1.0nm,0.3s,baz=153,slow=4.5,SNR=3.7
AAK PKKPbc PKKPbc 05 27 32.5 -2.0
comp=Z,1.1nm,0.3s,baz=62,slow=16,SNR=5.6
AAK Ala-Archa 106.07 310 PKPdf PKiKP 05 16 06.8 -4.6
AAK PKKPbc PKKPbc 05 27 32.5 -2.0
AAK LR LR
comp=Z,355nm,22.0s,MS4.9
ECSD EROS Data Cent 106.33 49 PFAKE 05 16 20.0 +8.2
ECSD LR LR
comp=Z,1μm,21.0s,MS5.4
AML Almayashu 106.55 309 PFAKE 05 16 20.0 +7.7
AML LR LR
comp=Z,398nm,21.0s,MS4.9
EKS2 Erkin-Say 106.59 310 *e*PKPdf PKiKP 05 16 09.8 -2.6
EKS2 LR LR
comp=Z,294nm,20.0s,MS4.8
MIAR Mount Ida 106.78 59 PFAKE 05 16 20.0 +7.1
MIAR LR LR
comp=Z,664nm,21.0s,MS5.2
TGUH Tegucigalpa,Un 107.37 81 PFAKE 05 16 30.0 +15
TGUH LR LR
comp=Z,710nm,20.0s,MS5.2
AGMN Agassiz Refuge 107.67 44 PFAKE 05 16 30.0 +16
AGMN LR LR
comp=Z,713nm,20.0s,MS5.2
ULM Lac du Bonnet 107.98 42 PKiKP PKiKP 05 16 09.1 -5.5
comp=Z,3.3nm,0.9s,baz=135,slow=0.6,SNR=6.7
ULM PKKPbc PKKPbc 05 27 25.3 -3.5
comp=Z,2.3nm,0.8s,baz=163,slow=2.5,SNR=5.8
NNA Nana 108.12 110 PFAKE 05 16 30.0 +14
NNA LR LR
comp=Z,545nm,22.0s,MS5.1
SCIA State Center 108.46 51 PFAKE 05 16 30.0 +14
SCIA LR LR
comp=Z,563nm,21.0s,MS5.1
JTS JuntasAbangare 108.47 85 PFAKE 05 16 30.0 +13
JTS LR LR
comp=Z,678nm,20.0s,MS5.2
VBMS Vicksburg 108.80 62 PFAKE 05 16 30.0 +13
VBMS LR LR
comp=Z,596nm,20.0s,MS5.2
CCM Cathedral Cave 109.30 55 PFAKE 05 16 30.0 +12
CCM LR LR
comp=Z,695nm,19.0s,MS5.2
LVC Limon Verde 109.76 124 PFAKE 05 16 30.0 +11
LVC LR LR
comp=Z,776nm,22.0s,MS5.2
FCC Fort Churchill 110.01 33 *e*PKPdf PKiKP 05 16 15.2 -3.0
OXF Oxford 110.14 59 PFAKE 05 16 30.0 +11
OXF LR LR
comp=Z,1μm,20.0s,MS5.4
RES Resolute Bay 110.23 16 *e*P Pdif 05 12 17.8 -0.1
RES *e* 05 16 16.1
MSEY Mahe Island 110.32 257 PFAKE 05 16 30.0 +10
MSEY LR LR
comp=Z,687nm,20.0s,MS5.2
BVAR Borovoye Array 110.37 320 P Pdif 05 12 16.7 -1.7
BVAR *i* 05 16 17.5
BVAR 05 27 17.8
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 110.37 320 Pdiff Pdif 05 12 16.7 -1.8
comp=Z,1.8nm,0.9s,baz=100,slow=6.6,SNR=8.4
BVAR PKiKP PKiKP 05 16 17.5 -1.5
comp=Z,8.2nm,0.8s,baz=106,slow=3.2,SNR=25
BVAR PKKPbc PKKPbc 05 27 17.8 -3.4
comp=Z,2.1nm,0.7s,baz=291,slow=4.5,SNR=11
BRVK Borovoye 110.43 320 *c i* PKiKP PKiKP 05 16 17.7 -1.5
BRVK pmax pmax
comp=Z,17nm,1.0s
BRVK Borovoye 110.43 320 *e*PKPdf PKiKP 05 16 18.4 -0.8
BRVK LR LR
comp=Z,542nm,22.0s,MS5.1
BRVK Borovoye 110.43 320 PKiKP PKiKP 05 16 18.2 -0.9
SNR=6.4
BRVK PKiKP PKiKP 05 16 18.2 -0.9
SNR=6.4
EYMN Ely 110.52 45 PFAKE 05 16 30.0 +10
EYMN LR LR
comp=Z,1μm,22.0s,MS5.4
JFWS Jewell Farm 110.78 51 PFAKE 05 16 30.0 +10
JFWS LR LR
comp=Z,1μm,21.0s,MS5.4
HDIL Hopedale 111.17 53 PFAKE 05 16 30.0 +9.0
HDIL LR LR
comp=Z,649nm,20.0s,MS5.2
ABPO Ambohimpanom 111.21 240 PFAKE 05 16 30.0 +8.2
ABPO LR LR
comp=Z,1μm,22.0s,MS5.5
PLAL Pickwick Lake 111.30 59 PFAKE 05 16 30.0 +8.6
PLAL LR LR
comp=Z,975nm,20.0s,MS5.4
OTAV Otavalo 111.39 98 PFAKE 05 16 30.0 +7.8
OTAV LR LR
comp=Z,576nm,21.0s,MS5.1
BRAL Brewton 111.47 64 PFAKE 05 16 30.0 +8.1
BRAL LR LR
comp=Z,568nm,21.0s,MS5.1
WVT Waverly 111.68 58 PFAKE 05 16 30.0 +7.9
WVT LR LR
comp=Z,335nm,19.0s,MS5.0
LRAL Lakeview Retre 111.87 61 PFAKE 05 16 30.0 +7.4
LRAL LR LR
comp=Z,447nm,20.0s,MS5.0
COWI Conover 111.94 47 PFAKE 05 16 30.0 +7.7
COWI LR LR
comp=Z,976nm,19.0s,MS5.4
BCIP Isla Barro Col 112.96 88 PFAKE 05 16 40.0 +15
BCIP LR LR
comp=Z,356nm,21.0s,MS4.9
WCI Wyandotte Cave 113.18 56 PFAKE 05 16 40.0 +15
WCI LR LR
comp=Z,529nm,19.0s,MS5.2
LPAZ La Paz 113.64 118 *e*PKIKP PKiKP 05 16 24.2 -2.2
LPAZ MLR MLR
comp=Z,160nm,19.0s
GOGA Godfrey 114.85 61 PFAKE 05 16 40.0 +12
GOGA LR LR
comp=Z,681nm,19.0s,MS5.3
GLMI Grayling 115.01 49 PFAKE 05 16 40.0 +12
GLMI LR LR
comp=Z,734nm,21.0s,MS5.3
AAM Ann Arbor 115.56 52 PFAKE 05 16 40.0 +11
AAM LR LR
comp=Z,612nm,20.0s,MS5.2
DWPF Disney 115.81 68 PFAKE 05 16 40.0 +10
DWPF LR LR
comp=Z,448nm,20.0s,MS5.1
ACSO Alum Creek Sta 115.94 54 PFAKE 05 16 40.0 +10
ACSO LR LR
comp=Z,584nm,22.0s,MS5.2
SMDO Samad 116.00 287 PKPdf PKPdf 05 16 30.4 -0.3
SNR=5.4
SVE Sverdlovsk 116.03 324 ⇑ *i* PKIKP PKPdf 05 16 29.1 -0.7
SVE *e* 05 17 35.7
SVE pmax pmax
comp=Z,25nm,1.0s
SVE MLR MLR
comp=Z,574nm,22.0s,MS5.1
CPUP Villa Florida 116.10 134 PKP PKPdf 05 16 28.5 -2.5
comp=Z,2.6nm,0.7s,baz=298,slow=3.9,SNR=7.4
CPUP PKKPbc PKKPbc 05 27 00.8 -0.4
comp=Z,3.5nm,0.9s,baz=51,slow=4.8,SNR=4.7
BSY Bisya 116.70 286 PKPdf PKPdf 05 16 31.3 -0.9
SNR=7.2
ABKAR Akbulak array 116.80 316 *e*PKPdf PKPdf 05 16 30.3 -1.1
ROSC El Rosal 116.82 94 PKP PKPdf 05 16 30.7 -2.0
comp=Z,2.1nm,0.5s,baz=272,slow=23,SNR=4.1
ROSC PKKPbc PKKPbc 05 26 58.0 -0.2
comp=Z,3.0nm,0.8s,baz=97,slow=18,SNR=4.0
ARU Arti 117.21 324 *i* PKIKP PKPdf 05 16 30.6 -1.4
ARU 05 23 13.9
ARU SP SP 05 27 25.1 +3.1
ARU MLR MLR
comp=Z,293nm,19.0s,MS4.9
ARU Arti 117.21 324 *e*PKPdf PKPdf 05 16 30.9 -1.1
ARU LR LR
comp=Z,334nm,20.0s,MS5.0
MTDJ Mount Denham 117.47 79 PFAKE 05 16 40.0 +6.3
MTDJ LR LR
comp=Z,553nm,20.0s,MS5.2
NHSC New Hope 117.55 62 PFAKE 05 16 40.0 +6.5
NHSC LR LR
comp=Z,548nm,20.0s,MS5.2
BLA Blacksburg 117.72 58 *e*PKIKP PKPdf 05 16 31.8 -1.8
BLA MLR MLR
comp=Z,622nm,20.0s,MS5.2
SOKR Solikamsk 117.74 328 *c i* PKIKP PKPdf 05 16 31.7 -1.3
SOKR pmax pmax
comp=Z,60nm,1.0s
SOKR MLR MLR
comp=Z,340nm,17.0s,MS5.0
AKTK Aktyubinsk 118.00 317 PKP PKPdf 05 16 32.4 -1.4
AKTK PKKPbc PKKPbc 05 26 54.0 -1.0
AKTO Aktyubinsk 118.00 317 PKP PKPdf 05 16 32.4 -1.4
comp=Z,17nm,0.8s,baz=98,slow=2.4,SNR=58
AKTO PKKPbc PKKPbc 05 26 54.0 -1.0
comp=Z,2.9nm,0.8s,baz=281,slow=1.2,SNR=5.8
HATD Hatta, Dubai 118.04 288 PKPdf PKPdf 05 16 33.7 -0.9
SNR=5.8
ERPA Erie 118.28 52 PFAKE 05 16 50.0 +15
ERPA LR LR
comp=Z,748nm,21.0s,MS5.3
MCWV Mont Chateau 118.31 55 PFAKE 05 16 50.0 +15
MCWV LR LR
comp=Z,534nm,20.0s,MS5.2
ABTO Aybut 119.19 279 PKPdf PKPdf 05 16 37.2 +0.2
SNR=5.3
KBS Kingsbay 119.50 355 *e*PP PP 05 17 53.5 -4.6
KBS *i* 05 27 42.9
KBS Kingsbay 119.50 355 PFAKE 05 16 50.0 +14
KBS LR LR
comp=Z,243nm,21.0s,MS4.8
SIV San Ignacio 119.55 122 PKKPbc PKKPbc 05 26 48.5 -0.1
comp=Z,2.3nm,0.9s,baz=73,slow=6.2,SNR=6.9
CNNC Cliffs of the 119.62 60 PFAKE 05 16 50.0 +13
CNNC LR LR
comp=Z,946nm,20.0s,MS5.4
SSPA Standing Stone 119.84 54 *e*PKPdf PKPdf 05 16 34.9 -2.7
SSPA LR LR
comp=Z,569nm,21.0s,MS5.2
GTBY Guantanamo Bay 120.07 78 PFAKE 05 16 50.0 +11
GTBY LR LR
comp=Z,405nm,19.0s,MS5.1
SUR Sutherland 120.11 211 PFAKE 05 16 50.0 +11
SUR LR LR
comp=Z,473nm,19.0s,MS5.2
CBN Corbin 120.18 57 PFAKE 05 16 50.0 +12
CBN LR LR
comp=Z,413nm,20.0s,MS5.1
BOSA Boshof 120.71 217 PKP PKPdf 05 16 38.9 -0.9
comp=Z,5.2nm,0.9s,baz=157,slow=5.8,SNR=6.1
BOSA PKKPbc PKKPbc 05 26 47.6 +2.9
comp=Z,4.3nm,1.0s,baz=37,slow=2.1,SNR=3.3
BOSA Boshof 120.71 217 PKP PKPdf 05 16 38.9 -0.9
BOSA PKKPbc PKKPbc 05 26 47.6 +2.9
BOSA LR LR
comp=Z,757nm,20.0s,MS5.3
BINY Binghamton 121.26 52 *e*PKPdf PKPdf 05 16 38.5 -1.8
BINY LR LR
comp=Z,849nm,22.0s,MS5.3
SDV Santo Domingo 121.57 91 *e*PKPdf PKPdf 05 16 39.9 -1.8
SDV LR LR
comp=Z,145nm,19.0s,MS4.6
LONY Lake Ozonia 122.16 49 *e*PKPdf PKPdf 05 16 39.9 -2.1
LONY LR LR
comp=Z,1μm,21.0s,MS5.5
NCB Newcomb 122.46 50 *e*PKPdf PKPdf 05 16 40.5 -2.0
NCB LR LR
comp=Z,714nm,20.0s,MS5.3
DAG Danmarks Havn 122.50 2 ⇓ *e*PKIKP PKPdf 05 16 39.8 -1.9
DAG pmax pmax

comp=Z,3.0nm,0.6s
DAG Danmarks Havn 122.50 2⇓ *i*P PKPdf 05 16 39.8 -1.9
comp=Z,3.3nm,0.6s
LBTB Lobatse 123.20 220 PFAKE 05 17 00.0 +15
LBTB LR LR
comp=Z,241nm,20.0s,MS4.8
SDDR Presa de Saban 123.42 80 PFAKE 05 17 00.0 +15
SDDR LR LR
comp=Z,1µm,21.0s,MS5.5
LVZ Lovozero 123.74 341 *d i*PKIKP PKPdf 05 16 42.9 -1.4
LVZ pmax pmax
comp=Z,87nm,2.5s
LVZ Lovozero 123.74 341 PFAKE 05 17 00.0 +16
LVZ LR LR
comp=Z,653nm,22.0s,MS5.2
GRTK Grand Turk 124.02 77 PFAKE 05 17 00.0 +14
GRTK LR LR
comp=Z,372nm,19.0s,MS5.1
LBNH Lisbon 124.09 49 *e*PKIKP PKPdf 05 16 44.4 -1.3
LBNH MLR MLR
comp=Z,1µm,20.0s,MS5.6
APA Apatity 124.31 341⇑ *i*PKIKP PKPdf 05 16 43.0 -2.4
APA *i* PPS 05 29 59.0
APA pmax pmax
comp=Z,42nm,1.0s
SPB Sao Paulo 124.46 139 PFAKE 05 17 00.0 +13
SPB LR LR
comp=Z,562nm,19.0s,MS5.2
KEV Kevo 124.65 345 *e*PKIKP PKPdf 05 16 45.3 -0.7
KEV MLR MLR
comp=Z,580nm,20.0s,MS5.2
KEV Kevo 124.65 345 *e*PKPdf PKPdf 05 16 45.3 -0.7
KEV LR LR
comp=Z,580nm,20.0s,MS5.2
KEV Kevo 124.65 345 *e*pkp PKPdf 05 16 43.8 -2.2
ARCES ARCESS Array B 125.17 345 PKP PKPdf 05 16 45.8 -1.2
comp=Z,40nm,0.8s,baz=74,slow=2.4,SNR=133
ARCES PKKPbc 05 26 27.4
comp=Z,2.7nm,1.0s,baz=222,slow=1.6,SNR=3.8
ARE0 ARCESS Array S 125.17 345 *e*PKPdf PKPdf 05 16 46.0 -0.9
SCHQ Schefferville 125.25 36 PKP PKPdf 05 16 45.6 -2.0
comp=Z,9.3nm,0.9s,baz=346,slow=3.4,SNR=6.2
KLMR Klimovskoe 125.56 332⇑ *i*PKIKP PKPdf 05 16 46.6 -1.4
KLMR pmax pmax
comp=Z,165nm,1.6s
QRN Al-Qurain 125.80 292 *e*P PKPdf 05 16 48.8 -0.7
QRN AMb AMB 05 16 50.1
comp=Z,277nm,1.0s
PKME Peaks-Kenny Pk 125.83 48 *e*PKPdf PKPdf 05 16 47.4 -1.6
PKME LR LR
comp=Z,1µm,20.0s,MS5.6
UMR Umm Al-Rimmam126.03 293 *e*P PKPdf 05 16 49.1 -0.7
UMR AMb AMB 05 16 50.5
comp=Z,236nm,1.0s
RDF Al-Radifah 126.13 292 *e*P PKPdf 05 16 49.5 -0.6
RDF AMb AMB 05 16 51.1
comp=Z,243nm,1.1s
SFJD Kangerlussuaq 126.17 18 *i*PKIKP PKPdf 05 16 44.6 -4.4
SFJD pmax pmax
comp=Z,5.0nm,1.0s
SFJD Kangerlussuaq 126.17 18 PFAKE 05 17 00.0 +11
SFJD LR LR
comp=Z,657nm,22.0s,MS5.3
SFJD Kangerlussuaq 126.17 18 *i* P PKPdf 05 16 44.6 -4.4
comp=Z,4.6nm,1.0s
MIB Mutribah 126.37 293 *e*P PKPdf 05 16 49.5 -1.0
MIB AMb AMB 05 16 51.6
comp=Z,202nm,1.1s
TRO Tromso 126.58 347 *e*PP PP 05 18 47.7 +1.8
TRO Tromso 126.58 347 *e*PKIKP PKPdf 05 16 47.7 -2.0
JOF Joensuu 127.81 337 *e*pkp PKPdf 05 16 48.1 -4.1
SJG San Juan 128.04 82 *e*PKIKP PKPdf 05 16 51.6 -2.4
SJG MLR MLR
comp=Z,1µm,22.0s
VRHR Novokhopersk 128.11 320 *e*PKIKP PKPdf 05 16 52.6 -0.5
VRHR pmax pmax
comp=Z,50nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.7s
LSZ Lusaka 128.20 231 *e*PKIKP PKPdf 05 16 54.2 -0.2
LSZ MLR MLR
comp=Z,851nm,20.0s,MS5.4
GNI Garni 128.22 306 *c i*PKIKP PKPdf 05 16 53.6 -0.1
GNI pmax pmax
comp=Z,94nm,1.7s
GNI Garni 128.22 306 PKP PKPdf 05 16 53.8 +0.1
comp=Z,22nm,0.8s,baz=355,slow=3.9,SNR=19
GNI Garni 128.22 306 *e*PKPdf PKPdf 05 16 54.5 +0.8
GNI LR LR
comp=Z,283nm,22.0s,MS4.9
GNI Garni 128.22 306 PKPdf PKPdf 05 16 54.7 +1.0
SNR=13
GNI PKPdf PKPdf 05 16 54.7 +1.0
SNR=13
KMBO Kilima Mbogo 128.37 252 PKIKP PKPdf 05 16 55.0 +0.2
KMBO pmax pmax
comp=Z,18nm,1.0s
KMBO Kilima Mbogo 128.37 252 PKP PKPdf 05 16 55.0 +0.2
comp=Z,18nm,1.0s,baz=24,slow=2.6,SNR=27
KMBO Kilima Mbogo 128.37 252 *e*PKPdf PKPdf 05 16 55.4 +0.5
KMBO LR LR
comp=Z,675nm,21.0s,MS5.3
KMBO Kilima Mbogo 128.37 252 PKPdf PKPdf 05 16 55.4 +0.6
KMBO
SNR=8.8
KMBO PKPdf PKPdf 05 16 55.4 +0.6
SNR=8.8
ZEI Tsey 128.50 310 *i*PKIKP PKPdf 05 16 52.5 -1.6
ZEI pmax pmax
comp=Z,28nm,1.0s
SCO Scoresbysund 128.53 5 *i*PKIKP PKPdf 05 16 51.6 -1.8
SCO pmax pmax
comp=Z,5.0nm,1.0s
SCO Scoresbysund 128.53 5 *i* P PKPdf 05 16 51.6 -1.8
comp=Z,5.3nm,1.0s
MOS Moscow 128.67 327 *e*PKIKP PKPdf 05 16 51.7 -2.4
MOS pmax pmax
comp=Z,100nm,1.3s
MOS pmax pmax
comp=Z,126nm,1.4s
ONI Oni 128.85 309 P PKPdf 05 16 54.9 +0.1
DYDN Diyadin 129.09 306 *i* P PKPdf 05 16 55.5 +0.1
KIV Kislovodsk 129.16 311 *c i*PKIKP PKPdf 05 16 54.5 -0.9
KIV *e* 05 19 11.1
KIV pmax pmax
comp=Z,60nm,1.2s
KIV Kislovodsk 129.16 311 *e*PKPdf PKPdf 05 16 55.1 -0.3
KIV LR LR
comp=Z,323nm,21.0s,MS5.0
KIV Kislovodsk 129.16 311 PKPdf PKPdf 05 16 55.6 +0.3
SNR=11
KIV PKPdf PKPdf 05 16 55.6 +0.3
SNR=11
HAKT HAKKARI 129.28 303 *i* P PKPdf 05 16 55.2 -0.6
OBN Obninsk 129.49 327 *c i*PKIKP PKPdf 05 16 54.4 -1.2
OBN *i* 05 17 08.5
OBN *e* 05 19 05.2
OBN pmax pmax
comp=Z,124nm,1.4s
OBN Obninsk 129.49 327 *e*PKPdf PKPdf 05 16 54.8 -0.8
OBN LR LR
comp=Z,390nm,21.0s,MS5.1
VSR Storozhevoye 129.54 321 *i*PKIKP PKPdf 05 16 54.7 -1.1
VSR pmax pmax
comp=Z,30nm,0.7s
VSR pmax pmax
comp=N,9.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.4s
KAF Kangasniemi 130.12 338 *e*pkp PKPdf 05 16 54.5 -2.1
ARTV Artvin 130.20 308 *i* P PKPdf 05 16 57.5 +0.1
DAGI Agillar 130.22 308 *i* P PKPdf 05 16 57.1 -0.4
DDEM Demirkent 130.38 308 *i* P PKPdf 05 16 57.9 +0.1
HOMI Horasan 130.39 306 *i* P PKPdf 05 16 57.6 -0.2
DBAD Bademkaya 130.40 308 *i* P PKPdf 05 16 57.7 -0.1
BBSR BB Station 130.55 64 PFAKE 05 17 10.0 +12
BBSR LR LR
comp=Z,385nm,21.0s,MS5.1
FINES FINESS Array B 130.65 338 *i* PKHKP 05 16 47.0
FINES 05 16 56.6
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 130.65 338 PKhKP 05 16 47.0
comp=Z,5.4nm,0.8s,baz=17,slow=2.0,SNR=9.6
FINES PKP PKPdf 05 16 56.6 -1.0
comp=Z,23nm,1.0s,baz=113,slow=4.4,SNR=25
FINES SKPbc SKPbc 05 20 16.9 -1.7
comp=Z,7.5nm,0.8s,baz=46,slow=4.0,SNR=8.7
FINES FINESS Array B 130.65 338 PKP 05 16 47.0
FINES PKP PKPdf 05 16 56.6 -1.0
FINES SKPbc SKPbc 05 20 16.9 -1.7
GRGR Grenville 130.95 91 PFAKE 05 17 10.0 +10
GRGR LR LR
comp=Z,512nm,20.0s,MS5.2
BEST Besiri 131.16 304 *i* P PKPdf 05 16 59.4 0.0
SOC Sochi 131.34 311 *c i*PKIKP PKPdf 05 16 58.5 -1.0
SOC *e* 05 19 14.9
SOC *e*PPP 05 22 08.3
SOC *e* 05 24 03.8
SOC *e*PS PS 05 29 30.9 -1.7
SOC *e*SS SS 05 36 40.4 -8.3
SOC pmax pmax
comp=Z,23nm,1.0s
SOC MLR MLR
comp=Z,419nm,22.0s,MS5.1
ANWB Willy Bob 132.05 83 PFAKE 05 17 10.0 +8.4
ANWB LR LR
comp=Z,458nm,19.0s,MS5.2
FDF Fort de France 132.05 87 PFAKE 05 17 10.0 +8.3
FDF LR LR
comp=Z,453nm,20.0s,MS5.2
TSUM Tsumeb 132.41 218 PFAKE 05 17 10.0 +7.7
TSUM LR LR
comp=Z,706nm,20.0s,MS5.4
MALT Malatya 133.32 305 *e*PKIKP PKPdf 05 17 03.6 +0.2
MALT *e* 05 19 28.8
MALT MLR MLR
comp=Z,515nm,22.0s,MS5.2
MALT Malatya 133.32 305 *e*PKPdf PKPdf 05 17 03.5 +0.1
MALT *e*PP PP 05 19 28.8 -2.3
MALT LR LR
comp=Z,515nm,22.0s,MS5.2
MALT Malatya 133.32 305⇑ *i*P PKPdf 05 17 04.5 +1.1
GZT Gaziantep 134.15 304 *i* P PKPdf 05 17 04.8 -0.2
IZAR Zarasai 134.19 331 *e*P PKPdf 05 17 03.9 -0.6
IDID Didziasalis 134.22 331 *e*P PKPdf 05 17 03.7 -0.9
ISAL Salakas 134.35 331 *e*P PKPdf 05 17 04.2 -0.6
NACGM Naroch 134.45 330 *e* PKPdf 05 17 02.0 -3.0
PINB Pinarbasi 134.82 306 *i* P PKPdf 05 17 04.6 -1.7
SIM Simferopol' 134.83 315 *ce*PKIKP PKPdf 05 17 05.7 -0.3
SIM pmax pmax
comp=Z,20nm,1.1s
SIM MLR MLR
comp=Z,620nm,24.0s,MS5.2
ASF Jabal al Asfar 135.31 296 PKIKP PKPdf 05 17 06.7 -0.7
ASF pmax pmax
comp=Z,15nm,0.9s
ASF Jabal al Asfar 135.31 296 PKP PKPdf 05 17 06.7 -0.7
comp=Z,15nm,0.9s,baz=344,slow=1.0,SNR=18
AKASG Malin Array Be 135.47 324 *i* PKHKP 05 16 52.6
AKASG 05 17 05.6
AKASG 05 19 42.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 135.47 324 PKhKP 05 16 52.6
comp=Z,0.9nm,0.4s,baz=82,slow=1.8,SNR=4.6
AKASG PKP PKPdf 05 17 05.6 -1.4
comp=Z,20nm,0.8s,baz=66,slow=2.0,SNR=34
AKASG PP PP 05 19 42.2 -1.8
comp=Z,12nm,1.2s,baz=53,slow=5.9,SNR=8.9
AKASG SKP 05 20 33.4
comp=Z,4.5nm,1.0s,baz=51,slow=3.2,SNR=4.6
KIEV Kiev 135.48 324 *e*PKIKP PKPdf 05 17 05.8 -1.3
KIEV MLR MLR
comp=Z,291nm,21.0s,MS5.0
NB2 NORSAR Subarra135.55 345 PKPdf 05 16 57.0
comp=Z,7.7nm,0.8s,baz=39,slow=1.9
NB2 NORSAR Subarra135.55 345 PKPdf 05 16 57.0
baz=39,slow=1.9
NB2 NORSAR Subarra135.55 345 PKHKP 05 16 57.0
NB2 NORSAR Subarra135.55 345 PKPdf 05 16 57.0
NOA NORSAR Array B135.55 345 *i* PKHKP 05 16 57.3
NOA 05 17 05.6
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA NORSAR Array B135.55 345 PKhKP 05 16 57.3
comp=Z,3.7nm,0.8s,baz=259,slow=3.0,SNR=13
NOA PKP PKPdf 05 17 05.6 -1.3
comp=Z,13nm,0.8s,baz=35,slow=2.0,SNR=22
NOA PP PP 05 19 40.9 -3.1
comp=Z,3.4nm,1.0s,baz=28,slow=5.6,SNR=3.6
CTKT Corum 135.61 309 *i* P PKPdf 05 17 06.7 -0.9
HFS Hagfors 135.66 343 *i* PKHKP 05 16 54.6
HFS 05 17 05.6
HFS pmax pmax
comp=Z,4.0nm,0.8s
HFS Hagfors 135.66 343 PKhKP 05 16 54.6
comp=Z,4.2nm,0.8s,baz=147,slow=3.0,SNR=7.0
HFS PKP PKPdf 05 17 05.6 -1.5
comp=Z,14nm,0.8s,baz=129,slow=2.1,SNR=15
HFS SKP 05 20 35.5
comp=Z,6.6nm,1.0s,baz=94,slow=6.5,SNR=3.9
NAO01 NORSAR Array S 135.80 345 PFAKE 05 17 20.0 +13
NAO01 LR LR
comp=Z,575nm,19.0s,MS5.3
HWQ Hawqa 135.89 299 *e*P PKPdf 05 17 07.8 -0.6
AVNT Avonos 135.99 306 *i* P PKPdf 05 17 10.7 +2.3
CDAG Cicekdag 136.16 307 *i* P PKPdf 05 17 07.3 -1.4
BHL Bhannes 136.18 299 *e*P PKPdf 05 17 09.0 +0.1
GULE Gulek 136.35 304 *i* P PKPdf 05 17 08.1 -1.0
FOO Floro 136.38 349 *e*PP PP 05 19 49.2 +0.2
FOO *e* 05 31 49.6
BALT Daday 136.39 310 *i* P PKPdf 05 17 08.0 -1.1
MMAI Mount Meron Ar 136.49 298 PKP PKPdf 05 17 09.2 -0.3
comp=Z,39nm,1.0s,baz=78,slow=3.8,SNR=18
MMAI SKP 05 20 42.8
comp=Z,18nm,1.1s,baz=152,slow=3.7,SNR=6.3
ELDT Eldivan 136.64 309 *i* P PKPdf 05 17 08.7 -0.9
SUW Suwalki 136.66 331 *e*PKPdf PKPdf 05 17 03.3 -5.8
SUW *e*PKPab PKPdf 05 17 08.2 -1.0
SUW *e* 05 20 42.0
SUW Suwalki 136.66 331 *e*PKPdf PKPdf 05 17 08.7 -0.4
BR131 Keskin Array S 136.68 308 PFAKE 05 17 20.0 +10
BR131 LR LR
comp=Z,262nm,19.0s,MS5.0
BRTR Keskin Array B 136.68 308 *i* PKHKP 05 16 57.3
BRTR 05 17 09.1
BRTR 05 19 51.7
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 136.68 308 PKhKP 05 16 57.3
comp=Z,2.3nm,0.9s,baz=134,slow=3.6,SNR=9.7
BRTR PKP PKPdf 05 17 09.1 -0.6
comp=Z,14nm,0.9s,baz=131,slow=3.1,SNR=38
BRTR PP PP 05 19 51.6 -0.7
comp=Z,11nm,1.3s,baz=90,slow=4.9,SNR=7.8
BRTR SKP 05 20 43.5
comp=Z,8.3nm,1.2s,baz=152,slow=5.6,SNR=5.1
EIL Elat 137.14 293 PKP PKPdf 05 17 10.1 -0.7
comp=Z,39nm,1.0s,baz=47,slow=1.0,SNR=14
KONO Kongsberg 137.16 345 *e*PP PP 05 19 56.6 +2.6
KONO *e* 05 32 09.2
KONO Kongsberg 137.16 345 PFAKE 05 17 20.0 +10
KONO LR LR
comp=Z,440nm,20.0s,MS5.2
KIS Kishinev 137.44 320 *e*PKIKP PKPdf 05 17 08.0 -2.8
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.3
KIS MLR MLR
comp=Z,700nm,24.0s
BER Bergen 137.45 348 *e*PP PP 05 19 55.3 -0.5
CSS Prodhromos 137.92 301 *e*PKPdf PKPdf 05 17 11.0 -1.1
CSS LR LR
comp=Z,275nm,19.0s,MS5.0
CSS Prodhromos 137.92 301 P 05 17 10.5
HENT Hendek 138.39 310 *i* P PKPdf 05 17 11.2 -1.5
LVV L'vov 138.76 326 *e*PKIKP PKPdf 05 17 11.3 -1.9
LVV *e* 05 17 26.5
TIRR Tirgusor 138.79 316 *e*PKIKP PKPdf 05 17 13.1 -0.3
TIRR Tirgusor 138.79 316 ⇓*i*P PKPdf 05 17 12.6 -0.8
BORA Eskisehir 139.00 309 *i* P PKPdf 05 17 13.1 -0.9
HARR Harsova 139.00 317 ⇓PKIKP PKPdf 05 17 13.9 +0.1
HARR Harsova 139.00 317 ⇓*i*P PKPdf 05 17 13.9 +0.1
VRI Vrincioaia 139.24 319 ⇓PKIKP PKPdf 05 17 14.5 +0.3
VRI Vrincioaia 139.24 319 ⇓*i*P PKPdf 05 17 14.4 +0.2
BSD Bornholm Skovb 139.29 337 *e*PKIKP PKPdf 05 17 11.3 -2.7
BSD pmax pmax
comp=Z,31nm,0.9s
BSD Bornholm Skovb 139.29 337 *i* P PKPdf 05 17 11.3 -2.7
comp=Z,31nm,0.9s
BURAR Bucovina Array 139.29 322 ⇑PKIKP PKPdf 05 17 14.8 +0.6
BURAR Bucovina Array 139.29 322 ⇑*i*P PKPdf 05 17 14.8 +0.6
ISP Isparta 139.53 306 PFAKE 05 17 30.0 +15
ISP LR LR
comp=Z,338nm,22.0s,MS5.0
KWP Kalwaria Pacla 139.57 326 *e*PKPdf PKPdf 05 17 06.9 -7.7
KWP *e*PKPab PKPdf 05 17 13.9 -0.8
KWP *e* 05 20 51.3
KWP Kalwaria Pacla 139.57 326 *e*PKIKP PKPdf 05 17 13.9 -0.8
KWP Kalwaria Pacla 139.57 326 PFAKE 05 17 30.0 +15
KWP LR LR
comp=Z,427nm,21.0s,MS5.2
KWP Kalwaria Pacla 139.57 326 ⇑*i*P PKPdf 05 17 09.6 -5.1
COP Copenhagen 139.69 340 *e*PKIKP PKPdf 05 17 14.7 0.0
COP pmax pmax
comp=Z,19nm,0.8s
COP Copenhagen 139.69 340 *i* P PKPdf 05 17 14.7 0.0
comp=Z,19nm,0.8s
KORT Korkueli 139.87 305 *i* P 05 17 07.6
MLR Muntele Rosu 139.91 319 PKIKP PKPdf 05 17 13.9 -1.5
MLR pmax pmax
comp=Z,15nm,0.8s
MLR Muntele Rosu 139.91 319 PKP PKPdf 05 17 13.9 -1.5
comp=Z,15nm,0.8s,baz=168,slow=16,SNR=9.5
MUD Monsted U'grnd 140.05 343 *i* P 05 17 08.1
KHAL Karahalli 140.16 307 *i* P 05 17 09.4
KOLS Kolonicke sedl 140.21 325 *e*PKHKP 05 17 09.5
KOLS *e* 05 17 16.1
KOLS Kolonicke sedl 140.21 325 *e*PKP 05 17 09.5
KOLS *e* 05 17 16.1
UZH Uzhgorod 140.38 325 *e*PKHKP 05 17 09.0
UZH *i* 05 17 16.6
UZH *e* 05 17 24.6
GOLH Golhisar 140.42 305 *i* P PKPdf 05 17 09.2 -7.4
STHS Stebnicka Huta 140.46 327 *e*PKHKP 05 17 10.0
STHS *e* 05 17 16.9
STHS Stebnicka Huta 140.46 327 *e*PKP 05 17 10.0
STHS *e* 05 17 16.9
VOIR 140.48 319 ⇑PKIKP PKPdf 05 17 18.0 +1.5
VOIR 140.48 319 ⇑*i*P PKPdf 05 17 18.0 +1.5
TRPA Tarpa 140.53 324 ⇓*i*P PKPdf 05 17 09.3 -7.1
DURS Dursunbey 140.54 309 *i* P PKPdf 05 17 10.2 -6.5
AKAS Kas 140.63 304 *i* P PKPdf 05 17 15.9 -1.1
DNZL Cakiroluk 140.69 306 *i* P PKPdf 05 17 15.6 -1.4
OJC Ojcow 140.69 329 *e*PKPdf 05 17 10.4
OJC e 05 17 15.9
OJC Ojcow 140.69 329 *e*PKHKP 05 17 10.4
OJC *e* 05 17 15.9
MANT Manisa 140.82 308 *i* P 05 17 11.5
SZH Strazhica 140.92 316 P PKPdf 05 17 15.3 -2.0
NIE Niedzica 140.94 327 *e*PKHKP 05 17 11.4
NIE *e* 05 17 17.4
DRGR 141.18 322 PKIKP PKPdf 05 17 12.9 -4.8
DRGR 141.18 322 ⇑*i*P PKPdf 05 17 12.7 -5.0
KECS Kecovo 141.43 326 *e*PKHKP 05 17 11.9
KECS Kecovo 141.43 326 *e*PKP 05 17 11.9
MCD Coleburn Disti 141.47 353 *e*P 05 17 11.3
AYDN Tasoluk 141.58 307 *i* P 05 17 13.4
OKC Ostrava-Krasne 141.74 329 *e*PKHKP 05 17 13.5
OKC *e* 05 17 18.3
OKC MLR MLR
comp=Z,500nm,20.2s,MS5.3
OKC Ostrava-Krasne 141.74 329 *e*PKP 05 17 13.5
OKC *ex* x 05 17 18.3
OKC AMS AMS 06 18 00.0
comp=Z,500nm,20.2s
KAC Achnashellach 141.75 355 *e*P PKPdf 05 17 12.4 -5.9
RUE Ruedersdorf 141.75 335 *e*PKPdf PKPdf 05 17 13.3 -5.2
GZR Gura Zlata 141.89 320 ⇓PKHKP 05 17 15.2
GZR Gura Zlata 141.89 320 ⇓*i*P PKPdf 05 17 15.1 -3.9
KSP Ksiaz 141.91 332 *e*PKP 05 17 12.1
KSP Ksiaz 141.91 332 *e*PKHKP 05 17 11.9
KSP *e* 05 20 24.0
KPL Plockton 141.93 355 *e*P PKPdf 05 17 12.3 -6.4
KSB Sheil Bridge 142.04 355 *e*P PKPdf 05 17 13.2 -5.6
GCAM G?zelcaml? 142.06 307 *i* P PKPdf 05 17 14.7 -4.9
MORC Moravsky Berou 142.07 330 PKIKP PKPdf 05 17 14.4 -4.8
MORC Moravsky Berou 142.07 330 *e*PKPdf PKPdf 05 17 14.2 -4.9
MORC Moravsky Berou 142.07 330 ⇑*i*P PKPdf 05 17 14.2 -5.0
PSZ Piszkesteto 142.09 326 *e*PKPdf PKPdf 05 17 14.3 -5.0
PSZ LR LR
comp=Z,416nm,20.0s,MS5.2
PSZ Piszkesteto 142.09 326 ⇓*e*PKP PKPdf 05 17 14.7 -4.5
PSZ Piszkesteto 142.09 326 ⇓*i*P PKPdf 05 17 14.8 -4.5
DPC Dobruska-Polom 142.25 331 *e*PKHKP PKPdf 05 17 14.3 -5.2
DPC MLR MLR
comp=Z,600nm,24.1s,MS5.3
DPC Dobruska-Polom 142.25 331 *e*PKP PKPdf 05 17 14.3 -5.2
DPC AMS AMS 06 13 10.0
comp=Z,600nm,24.1s
VYHS Vyhne 142.28 327 *e*PKIKP PKPdf 05 17 16.3 -3.3
VYHS Vyhne 142.28 327 *e*PKP PKPdf 05 17 16.3 -3.3
KOLL Kolacno 142.44 328 *e*PKIKP PKPdf 05 17 16.0 -3.9
KOLL Kolacno 142.44 328 *e*PKP PKPdf 05 17 16.0 -3.9
BZS Buzias 142.46 322 PKIKP PKPdf 05 17 15.5 -4.5
BZS Buzias 142.46 322 ⇑*i*P PKPdf 05 17 15.3 -4.7
BUD Budapest 142.82 326 ⇓*e*PKP PKPdf 05 17 17.1 -3.5
VRAC Vranov 142.84 330 *i* PKIKP 05 17 16.7
VRAC 05 20 29.5
VRAC pmax pmax
comp=Z,14nm,1.0s
VRAC pmax pmax
comp=Z,3.0nm,0.5s
VRAC Vranov 142.84 330 PKhKP 05 17 16.7
comp=Z,14nm,1.0s,baz=65,slow=3.7,SNR=12
VRAC PP PP 05 20 29.5 +0.2
comp=Z,2.8nm,0.5s,baz=27,slow=8.4,SNR=3.8
VRAC Vranov 142.84 330 ⇑*i*P 05 17 16.2
PVCC Panska Ves 142.89 333 *e*PKIKP PKPdf 05 17 16.5 -4.1
PVCC MLR MLR
comp=Z,700nm,26.4s,MS5.3
PVCC Panska Ves 142.89 333 *e*PKP PKPdf 05 17 16.5 -4.1
PVCC AMS AMS 06 16 30.0
comp=Z,700nm,26.4s
BRG Berggiesshubel 142.91 334 *i* PKP PKPdf 05 17 16.3 -4.3
comp=Z,40nm,1.0s
BRG *i* 05 17 22.4
comp=Z,61nm,1.0s
BRG PP PP 05 20 27.0 -2.6
BRG *e*PKS 05 20 58.7
comp=Z,13nm,1.3s
BRG
comp=N,635nm,34.0s
BRG
comp=E,289nm,18.2s
BRG
comp=Z,417nm,26.1s
BRG Berggiesshubel 142.91 334 *i* PKIKP PKPdf 05 17 16.3 -4.3
BRG *i* 05 17 22.4
BRG 05 20 27.0
BRG pmax pmax
comp=Z,24nm,1.0s
BRG pmax pmax
comp=Z,36nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG MLR MLR
comp=N,380nm,34.0s
BRG MLR MLR
comp=E,173nm,18.2s
BRG MLR MLR
comp=Z,250nm,26.1s
EAB Aberfoyle 142.95 354 *e*P PKPdf 05 17 16.8 -3.7
CLL Collm 142.96 335 ⇓*i*PKIKP PKPdf 05 17 16.5 -4.2
CLL *i* 05 17 21.2
CLL *e* 05 20 32.0
CLL pmax pmax
comp=Z,36nm,0.9s
CLL Collm 142.96 335 ⇓PKP PKPdf 05 17 16.5 -4.2
CLL *i* 05 17 21.2
CLL *e*pPKP pPKPdf 05 17 43.0 +10
CLL *e*PP PP 05 20 32.0 +2.1
CLL Collm 142.96 335 ⇓*i*PKPdf PKPdf 05 17 16.5 -4.2
comp=Z,36nm,0.9s
CLL *e*PKPmax 05 17 20.0
comp=Z,300nm,22.7s
CLL *i* PKiKP PKiKP 05 17 23.4 -0.5
CLL *e*PP PP 05 20 32.0 +2.1
comp=Z,200nm,23.3s
CLL *e*PSKS 05 30 44.0
CLL *e*PPPrev 05 32 15.0

CLL			ePPS		05 33 05.0	
CLL			e		05 34 10.0	
CLL			eSS	SS	05 39 00.0	-5.3
CLL			ePSS		05 39 44.0	
CLL			eSSS		05 44 20.0	
CLL			e		05 45 33.0	
CLL			e		05 49 18.0	
VTS	**Vitosha**	**143.01 316**	P	PKPdf	05 17 16.6	-4.5
VTS	**Vitosha**	**143.01 316**	P	PKPdf	05 17 16.9	-4.2
ESY	**Stoneypath**	**143.02 352**⇑	eP	PKPdf	05 17 16.0	-4.6
MMB	**Musomiste**	**143.12 314**	P	PKPdf	05 17 15.8	-5.5
EAU	**Auchinoon**	**143.19 353**⇑	eP	PKPdf	05 17 16.7	-4.2
EBL	**Broad Law**	**143.21 352**⇑	eP	PKPdf	05 17 16.2	-4.8
PRU	**Pruhonice**	**143.30 332**	ePKIKP	PKPdf	05 17 17.7	-3.6
PRU			MLR	MLR		
	comp=Z,900nm,25.1s,MS5.4					
PRU	**Pruhonice**	**143.30 332**	ePKP	PKPdf	05 17 17.7	-3.6
PRU			AMS	AMS	06 17 00.0	
	comp=Z,900nm,25.1s					
TREC	**Trest**	**143.37 331**	ePKIKP	PKPdf	05 17 17.9	-3.6
TREC			MLR	MLR		
	comp=Z,800nm,26.6s,MS5.4					
TREC	**Trest**	**143.37 331**	ePKP	PKPdf	05 17 17.9	-3.6
TREC			AMS	AMS	06 15 50.0	
	comp=Z,800nm,26.6s					
SRS	**Serrai**	**143.42 314**	P	PKPdf	05 17 16.4	-5.4
KKB	**Krupnik**	**143.43 315**	P	PKPdf	05 17 17.5	-4.3
OUR	**Ouranopolis**	**143.48 312**	P	PKPdf	05 17 18.0	-4.0
CLZ	**Clausthal**	**143.54 338**	ePKPbc	PKPdf	05 17 18.3	-3.4
ZKR	**Zakros**	**143.59 303**	P	PKPdf	05 17 18.8	-3.5
EKA	**Eskdalemuir Ar**	**143.66 352**	i PKIKP		05 17 17.7	
EKA			pmax	pmax		
	comp=Z,10.0nm,0.6s					
EKA	**Eskdalemuir Ar**	**143.66 352**	PKhKP		05 17 17.6	
	comp=Z,9.9nm,0.6s,baz=352,slow=2.6,SNR=36					
ESK	**Eskdalemuir**	**143.68 352**⇑	eP	PKPdf	05 17 17.9	-3.9
ESK	**Eskdalemuir**	**143.68 352**	PFAKE		05 17 30.0	+8.2
ESK			LR	LR		
	comp=Z,590nm,21.0s,MS5.3					
SOH	**Sokhos**	**143.71 314**	P	PKPdf	05 17 18.2	-4.2
ECK	**Cauldkaine Hil**	**143.80 352**⇑	eP	PKPdf	05 17 18.5	-3.5
PKSM	**Moragy**	**143.81 324**	⇑PKIKP	PKPdf	05 17 19.8	-2.6
PKSM	**Moragy**	**143.81 324**⇑	iP	PKPdf	05 17 19.8	-2.6
THR1	**Thera Island**	**143.82 305**	P	PKPdf	05 17 18.9	-3.8
PLG	**Polygyros**	**143.83 313**	eP	PKPdf	05 17 18.7	-3.9
PLG	**Polygyros**	**143.83 313**	P	PKPdf	05 17 18.6	-4.0
PAIG	**Paliouri**	**143.86 312**	P	PKPdf	05 17 18.6	-4.0
TANN	**Tannenbergstha**	**143.87 334**	ePKPbc	PKPdf	05 17 19.4	-2.9
WERD	**Werda**	**143.91 334**	ePKPbc	PKPdf	05 17 19.7	-2.7
WIT	**Witteveen**	**143.94 342**	ePKP	PKPdf	05 17 20.9	-1.5
	comp=Z,368nm,0.7s					
GUNZ	**Gunzen**	**143.96 334**	ePKPbc	PKPdf	05 17 20.1	-2.4
HORT	**Hortiatis**	**143.98 313**	P	PKPdf	05 17 18.8	-4.0
XAL	**Allendale**	**143.99 351**	eP	PKPdf	05 17 18.6	-3.8
WERN	**Wernitzgruen**	**144.00 334**	ePKPbc	PKPdf	05 17 20.1	-2.5
NKC	**Novy Kostel**	**144.01 334**	ePKIKP	PKPdf	05 17 20.1	-2.5
NKC			MLR	MLR		
	comp=Z,400nm,19.1s,MS5.2					
NKC	**Novy Kostel**	**144.01 334**	ePKP	PKPdf	05 17 20.1	-2.5
NKC			AMS	AMS	06 21 00.0	
	comp=Z,400nm,19.1s					
NPS	**Neapolis**	**144.02 304**	eP	PKPdf	05 17 20.2	-2.9
MOX	**Moxa**	**144.03 335**⇑	iPKP	PKPdf	05 17 19.9	-2.7
	comp=Z,251nm,1.1s					
MOX						
	comp=Z,300nm,23.0s					
MOX	**Moxa**	**144.03 335**	ePKPbc	PKPdf	05 17 19.8	-2.8
MOX	**Moxa**	**144.03 335**⇑	iPKIKP	PKPdf	05 17 19.9	-2.7
MOX			pmax	pmax		
	comp=Z,251nm,1.1s					
MOX			MLR	MLR		
	comp=Z,300nm,23.0s,MS5.0					
IBBN	**Ibbenburen**	**144.04 340**	ePKPbc	PKPdf	05 17 19.6	-3.0
IBBN			epPKPbc		05 17 32.7	
THE	**Thessaloniki**	**144.06 313**	P	PKPdf	05 17 19.0	-4.0
CONA	**Conrad Observa**	**144.15 329**⇑	iPKPdf	PKPdf	05 17 20.9	-2.0
	comp=Z,227nm,1.5s,SNR=100					
LAST	**Lasithi**	**144.16 304**	P	PKPdf	05 17 21.2	-2.1
DIVS	**Divibare**	**144.26 320**	P	PKPdf	05 17 20.6	-2.6
GAL1	**Galloway**	**144.29 354**	eP	PKPdf	05 17 18.9	-4.1
KHC	**Kasperske Hory**	**144.36 332**	ePKIKP	PKPdf	05 17 21.3	-1.9
KHC			e		05 17 30.0	
KHC			MLR	MLR		
	comp=Z,800nm,27.0s,MS5.4					
KHC	**Kasperske Hory**	**144.36 332**	ePKPdf	PKPdf	05 17 21.2	-2.0
KHC	**Kasperske Hory**	**144.36 332**	ePKP	PKPdf	05 17 21.3	-1.9
KHC			ex	x	05 17 30.0	
KHC			AMS	AMS	06 17 00.0	
	comp=Z,800nm,27.0s					
NEO	**Neokhori**	**144.43 311**	eP	PKPdf	05 17 20.3	-3.4
SKO	**Skopje**	**144.46 316**	i PKP	PKPdf	05 17 22.7	-0.9
SKO	**Skopje**	**144.46 316**	P	PKPdf	05 17 22.7	-0.9
ROTZ	**Rotzenmuhle**	**144.47 334**	ePKPbc	PKPdf	05 17 21.6	-1.8
UBBA	**Unterbreizbach**	**144.51 337**	ePKPbc	PKPdf	05 17 20.8	-2.6
XDE	**Dent Fell**	**144.51 352**⇑	eP	PKPdf	05 17 20.2	-3.1
GEC2	**GERESS Array S**	**144.51 331**	ePKPbc	PKPdf	05 17 21.4	-2.1
GERES	**GERESS Array B**	**144.51 331**	PKIKP	PKPdf	05 17 21.7	-1.8
GERES			pmax	pmax		
	comp=Z,81nm,0.8s					
GERES	**GERESS Array B**	**144.51 331**	PKP	PKPdf	05 17 21.7	-1.8
	comp=Z,81nm,0.8s,baz=33,slow=3.2,SNR=454					
ATHU	**Athens Univers**	**144.54 309**	P	PKPdf	05 17 20.8	-3.1
IDI	**Anoyia**	**144.58 304**	PKP	PKPdf	05 17 22.3	-1.8
	comp=Z,191nm,1.1s,baz=44,slow=6.5,SNR=43					
ATH	**Athens Observa**	**144.59 309**	eP	PKPdf	05 17 21.1	-2.9
LIT	**Litokhoron**	**144.61 313**	P	PKPdf	05 17 21.4	-2.6
WTSB	**Winterswijk**	**144.63 341**	ePKP	PKPdf	05 17 21.0	-2.6
	comp=Z,30nm,0.9s					
WET	**Wettzell**	**144.66 333**	ePKPbc	PKPdf	05 17 22.2	-1.5
SIVA	**Sivas**	**144.72 304**	P	PKPdf	05 17 23.2	-1.1
ARSA	**Arzberg**	**144.78 328**	i PKPdf	PKPdf	05 17 22.7	-1.3
	comp=Z,265nm,1.3s,SNR=96					
ATAL	**Atalanti**	**144.82 310**	P	PKPdf	05 17 21.5	-2.9
LKR	**Lokris**	**144.85 310**	eP	PKPdf	05 17 21.6	-2.8
LKR	**Lokris**	**144.85 310**	P	PKPdf	05 17 21.7	-2.7
KRUS	**Krusevo**	**144.87 316**	i PKP	PKPdf	05 17 22.2	-2.2
GRA1	**Grafenberg Arr**	**144.93 335**	ePKPbc	PKPdf	05 17 23.3	-0.9
GRA1			epPKPbc		05 17 35.9	
GRA1			LR	LR		
	comp=Z,300nm,20.8s,MS5.0					
GRF	**Grafenberg Arr**	**144.93 335**	ePKPbc	PKPdf	05 17 23.3	-0.9
GRF			epPKPbc		05 17 35.9	
GRF			eL		06 21 27.7	
	comp=Z,338nm,20.8s					
GRFO	**Grafenberg**	**144.93 335**	ePKPbc	PKPdf	05 17 23.4	-0.8
BUG	**Bochum--Univer**	**144.94 340**	ePKPbc	PKPdf	05 17 22.5	-1.6
KOGS	**Kog**	**144.94 326**	i PKPbc	PKPdf	05 17 23.2	-1.2
MOA	**Molln**	**144.97 330**	i PKPdf	PKPdf	05 17 23.2	-1.2
	comp=Z,515nm,0.9s,SNR=287					
RCBR	**Riachuelo**	**144.98 133**	ePKPdf	PKPdf	05 17 22.3	-3.1
RCBR			LR	LR		
	comp=Z,611nm,21.0s,MS5.3					
BEY	**Berane**	**144.98 319**	ePN	PKPdf	05 17 23.6	-0.9
IVA	**Berane**	**144.98 319**⇑	iPKP	PKPdf	05 17 23.5	-1.0
IVA	**Berane**	**144.98 319**⇑	iPKP	PKPdf	05 17 23.6	-0.9
BIA	**Bitola**	**144.99 315**	i PKP	PKPdf	05 17 22.3	-2.2
BIA	**Bitola**	**144.99 315**	P	PKPdf	05 17 22.3	-2.3
KZN	**Kozani**	**145.02 314**	eP	PKPbc	05 17 22.3	-1.7
KZN	**Kozani**	**145.02 314**	P	PKPbc	05 17 22.6	-1.4
PLE	**Pljevlja**	**145.04 320**⇑	iPKP	PKPdf	05 17 24.4	-0.2
PLE	**Pljevlja**	**145.04 320**⇑	iPKP	PKPdf	05 17 24.4	-0.2
FNA	**Florina**	**145.06 315**	P	PKPbc	05 17 22.9	-1.3
PVY	**Plav**	**145.08 318**	ePN	PKPbc	05 17 23.6	-0.5
PVY	**Plav**	**145.08 318**⇑	iPKP	PKPdf	05 17 23.6	-1.1
PVY	**Plav**	**145.08 318**⇑	iPKP	PKPdf	05 17 23.6	-1.0
DID	**Didima**	**145.11 308**	P	PKPbc	05 17 22.3	-2.2
LTK	**Loutraki**	**145.12 309**	P	PKPbc	05 17 22.4	-2.1
THL	**Klokotos Trika**	**145.17 312**	eP	PKPbc	05 17 22.5	-2.1
THL	**Klokotos Trika**	**145.17 312**	P	PKPbc	05 17 22.5	-2.1
AGG	**Agios Georgios**	**145.18 311**	P	PKPbc	05 17 23.0	-1.6
LHO	**Holmfirth**	**145.21 350**⇑	eP	PKPbc	05 17 23.0	-1.3
AWI1	**Witton**	**145.27 347**⇑	eP	PKPbc	05 17 24.2	-0.3
ABA1	**Baconsthorpe**	**145.28 347**⇑	eP	PKPbc	05 17 24.1	-0.4
OHR	**Ohrid**	**145.29 315**	i PKP	PKPdf	05 17 23.8	-1.3
OHR	**Ohrid**	**145.29 315**	P	PKPbc	05 17 23.9	-1.0
KARN	**Karanos**	**145.31 305**	P	PKPbc	05 17 24.5	-0.7
GVD	**Gavdhos**	**145.34 304**	ePKPbc	PKPbc	05 17 24.8	-0.5
GVD	**Gavdhos**	**145.34 304**	P	PKPbc	05 17 23.6	-1.7
PERS	**Pernice**	**145.40 328**	i PKPbc	PKPbc	05 17 23.6	-1.4
UPM	**Unac-Piva**	**145.41 320**	ePKP	PKPdf	05 17 24.0	-1.2
UPM	**Unac-Piva**	**145.41 320**	ePKP	PKPdf	05 17 24.1	-1.2
SOKA	**Soboth**	**145.41 328**⇓	iPKPdf	PKPdf	05 17 23.7	-1.4
	comp=Z,305nm,1.1s					
PUK	**Puka**	**145.42 317**	ePN	PKPbc	05 17 24.9	-0.4
AEU	**East Anglia Un**	**145.51 347**⇑	eP	PKPdf	05 17 24.8	-0.3
KBN	**Korca**	**145.53 315**	ePN	PKPdf	05 17 26.0	+0.5
TNS	**Taunus Mts**	**145.56 338**	ePKPbc	PKPbc	05 17 25.1	-0.4
NKY	**Niksic**	**145.57 319**	ePN	PKPdf	05 17 24.8	-0.7
NKY	**Niksic**	**145.57 319**⇑	iPKP	PKPdf	05 17 24.8	-0.7
KALE	**Kalithea**	**145.57 310**	P	PKPdf	05 17 24.3	-1.4
EVR	**Evrytania**	**145.59 311**	eP	PKPdf	05 17 25.7	0.0
GUR	**Goura**	**145.61 310**	P	PKPdf	05 17 24.5	-1.2
PDG	**Podgorica**	**145.61 319**	ePN	PKPdf	05 17 24.4	-1.2
TTG	**Podgorica**	**145.61 319**⇑	iPKP	PKPdf	05 17 24.4	-1.2
VLI	**Veliai**	**145.62 307**	eP	PKPdf	05 17 24.6	-1.2
TRIZ	**Trizonia**	**145.63 310**	P	PKPdf	05 17 24.7	-1.1
EFP	**Efpalio**	**145.73 311**	P	PKPdf	05 17 25.2	-0.7
RJOB	**Jochberg**	**145.74 331**	ePKPbc	PKPbc	05 17 25.5	-0.6
LAKA	**Lakka**	**145.75 310**	P	PKPdf	05 17 25.2	-0.8
OBKA	**Obir**	**145.77 328**⇑	iPKPbc	PKPbc	05 17 24.5	-1.7
	comp=Z,211nm,1.1s,SNR=43					
TIR	**Tirane**	**145.79 316**	ePKP2	PKPab	05 17 26.7	-0.2
TIR			MLR	MLR		
	comp=Z,420nm,22.0s,MS5.2					
TIR	**Tirane**	**145.79 316**	ePKPbc	PKPbc	05 17 26.7	+0.3
TIR			LR	LR		
	comp=Z,420nm,22.0s,MS5.2					
TIR	**Tirane**	**145.79 316**	P	PKPdf	05 17 26.3	+0.4
VLX	**Vlachokerasia**	**145.80 309**	P	PKPdf	05 17 26.2	+0.1
BRY	**Bratogost**	**145.80 320**	ePN	PKPdf	05 17 24.8	-1.1
BRY	**Bratogost**	**145.80 320**⇑	iPKP	PKPdf	05 17 24.8	-1.1
WLF1	**Llynfaes**	**145.81 353**⇑	eP	PKPdf	05 17 24.3	-1.3
ULC	**Ulcinj**	**145.87 318**	ePN	PKPdf	05 17 25.2	-0.8
ULC	**Ulcinj**	**145.87 318**⇑	iPKP	PKPdf	05 17 25.2	-0.9
ULC	**Ulcinj**	**145.87 318**⇑	iPKP	PKPdf	05 17 25.2	-0.8
UPR	**University Cam**	**145.87 310**	P	PKPdf	05 17 25.7	-0.5
BUM	**Brajici-Budva**	**145.91 319**	ePN	PKPdf	05 17 24.1	-2.0
BUM	**Brajici-Budva**	**145.91 319**⇑	iPKP	PKPdf	05 17 24.1	-2.0
JAN	**Janina**	**145.94 313**	eP	PKPdf	05 17 26.0	-0.3
TOD	**Tromm**	**145.94 337**	PKP	PKPdf	05 17 25.4	-0.5
HGN	**Heimansgroeve**	**145.95 341**	ePKP	PKPdf	05 17 26.0	+0.1
	comp=Z,336nm,1.4s					
KBA	**Koelnbreinsper**	**145.96 330**⇑	iPKPdf	PKPdf	05 17 24.4	-1.7
	comp=Z,204nm,1.3s,SNR=63					
BEBN	**Eben Emael**	**146.00 341**	PKP	PKPdf	05 17 24.9	-1.0
DCN	**Croghan**	**146.03 356**⇑	iP	PKPdf	05 17 25.9	0.0
DSB	**Dublin**	**146.06 355**	ePKPbc	PKPbc	05 17 26.2	-0.7
MEM	**Membach**	**146.06 340**	PKP	PKPdf	05 17 26.5	+0.4
HCY	**Herceg Novi**	**146.08 319**	ePN	PKPdf	05 17 25.8	-0.6
HCY	**Herceg Novi**	**146.08 319**⇑	iPKP	PKPdf	05 17 25.7	-0.7
HCY	**Herceg Novi**	**146.08 319**⇑	iPKP	PKPdf	05 17 25.8	-0.6
FUR	**Furstenfeldbru**	**146.09 333**	ePKPbc	PKPbc	05 17 27.2	+0.1
FUR			epPKPbc	pPKPbc	05 17 39.6	+0.7
LJU	**Ljubljana**	**146.10 327**	ePKPbc	PKPbc	05 17 25.3	-1.9
MYKA	**Terra Mystica**	**146.13 329**⇑	iPKPdf	PKPdf	05 17 24.6	-1.7
	comp=Z,224nm,1.6s					
ABH	**Alteburg**	**146.17 338**	PKP	PKPdf	05 17 26.3	0.0
RLS	**Riolos of Patr**	**146.19 310**	eP	PKPdf	05 17 26.1	-0.6
ITM	**Ithomi**	**146.20 309**	eP	PKPdf	05 17 26.7	-0.1
ITM	**Ithomi**	**146.20 309**	P	PKPdf	05 17 25.3	-1.5
IGT	**Igoumenitsa**	**146.35 313**	P	PKPdf	05 17 27.5	+0.5
HLM1	**Long Mynd**	**146.36 351**	eP	PKPdf	05 17 24.8	-1.8
CADS	**Cadrg**	**146.37 328**	ePKPbc	PKPbc	05 17 25.2	-2.8
UCC	**Uccle**	**146.39 342**	PKP	PKPdf	05 17 27.4	+0.7
SRN	**Sarande**	**146.42 314**	ePN	PKPdf	05 17 26.8	-0.3
VOY	**Vojsko**	**146.43 328**	ePKPbc	PKPbc	05 17 24.8	-3.4
VOY			e		05 17 27.4	
KTD	**Kalmit**	**146.44 337**	PKP	PKPdf	05 17 23.9	-2.9
BCLA	**Clavier**	**146.45 341**	PKP	PKPdf	05 17 27.5	+0.7
PYL	**PYLOS**	**146.45 308**	P	PKPdf	05 17 25.3	-1.9
STU	**Stuttgart**	**146.47 335**	ePKPbc	PKPbc	05 17 28.1	-0.2
STU	**Stuttgart**	**146.47 335**	ePKPbc	PKPbc	05 17 28.1	-0.1
RUP	**Ruppelstein**	**146.49 339**	PKP	PKPdf	05 17 26.7	-0.2
WATA	**Walderalm**	**146.59 332**⇑	iPKPdf	PKPdf	05 17 25.8	-1.3
	comp=Z,112nm,0.9s,SNR=14					
ABTA	**Abfaltersbach**	**146.59 330**⇑	iPKPdf	PKPdf	05 17 25.3	-1.9
	comp=Z,136nm,1.0s,SNR=103					
WTTA	**Wattenberg**	**146.62 331**⇓	iPKPdf	PKPdf	05 17 25.2	-1.9
	comp=Z,252nm,1.1s,SNR=69					
KEK	**Kerkira**	**146.63 314**	eP	PKPdf	05 17 27.7	+0.3
KEK	**Kerkira**	**146.63 314**	P	PKPdf	05 17 28.4	+1.0
KFL	**Anninata**	**146.66 311**	P	PKPdf	05 17 28.6	+1.1
SNF	**Seneffe**	**146.67 342**	PKP	PKPdf	05 17 28.5	+1.3
TRI	**Trieste**	**146.72 328**	PFAKE		05 17 40.0	+13
TRI			LR	LR		
	comp=Z,453nm,21.0s,MS5.2					
VLS	**Valsamata**	**146.77 311**	eP	PKPdf	05 17 26.6	-1.1
VLS	**Valsamata**	**146.77 311**	P	PKPdf	05 17 28.7	+1.0
MOTA	**Moosalm**	**146.79 332**⇓	iPKPdf	PKPdf	05 17 26.1	-1.3
	comp=Z,230nm,0.9s,SNR=151					
LANF	**Langenberg**	**146.83 337**	PKP	PKPdf	05 17 26.5	-0.9
WLF	**Walferdange**	**146.83 339**	PKP	PKPdf	05 17 29.9	+2.5
WLF			APKP		05 17 39.0	
WLF	**Walferdange**	**146.83 339**	ePKPbc	PKPbc	05 17 29.4	+0.1
WLF	**Walferdange**	**146.83 339**	ePKP2	PKPab	05 17 29.6	-1.0
WLF			MLR	MLR		
	comp=Z,614nm,20.0s,MS5.4					
WLF	**Walferdange**	**146.83 339**	ePKPbc	PKPbc	05 17 29.6	+0.4
WLF			LR	LR		
	comp=Z,614nm,20.0s,MS5.4					
RETA	**Reutte**	**146.83 333**⇑	iPKPdf	PKPdf	05 17 26.3	-1.2
	comp=Z,164nm,1.0s,SNR=12					
HTR	**Trewern Hill**	**146.85 351**	eP	PKPdf	05 17 28.1	+0.8
MCH1	**Michaelchurch**	**146.89 351**⇑	eP	PKPdf	05 17 28.2	+0.8
DOU	**Dourbes**	**146.95 341**	PKP	PKPdf	05 17 29.3	+1.7
BFO	**Black Forest**	**147.17 336**	ePKPbc	PKPbc	05 17 29.7	-0.6
SPAK	**Spaichingen-Ko**	**147.17 335**	PKP	PKPdf	05 17 26.5	-1.6
FETA	**Feichten**	**147.21 332**⇑	iPKPdf	PKPdf	05 17 27.3	-0.8
	comp=Z,284nm,1.0s,SNR=87					
HGH	**Gray Hill**	**147.21 350**⇑	iP	PKPdf	05 17 29.1	+1.1
MENF	**Mencas**	**147.21 344**	PKP	PKPdf	05 17 24.7	-3.3
WOL	**Wolverton**	**147.25 349**⇑	eP	PKPdf	05 17 29.4	+1.3
DAVA	**Damuels**	**147.37 333**⇑	iPKPdf	PKPdf	05 17 27.5	-0.9
	comp=Z,241nm,1.1s,SNR=88					
CDF	**Champ du Feu**	**147.50 337**	ePKIKP	PKPdf	05 17 27.5	-1.1
	comp=Z,32nm,1.1s					
FELD	**Feldberg im Sc**	**147.66 336**	PKP	PKPdf	05 17 27.3	-1.6
ECH	**Echery**	**147.70 337**	PKIKP	PKPdf	05 17 27.1	-1.8
ECH			e		05 17 31.2	
ECH			MLR	MLR		
	comp=Z,402nm,21.0s,MS5.2					
ECH	**Echery**	**147.70 337**	PKP	PKPdf	05 17 27.1	-1.8
ECH			ePKPbc	PKPbc	05 17 31.2	-0.5
ECH			LR	LR		
	comp=Z,402nm,21.0s,MS5.2					
DAVOS	**Davos**	**147.75 333**	PKIKP	PKPdf	05 17 28.3	-0.8
DAVOS					05 17 32.1	
DAVOX	**Davos/Dischmat**	**147.76 333**	PKP	PKPdf	05 17 28.3	-0.7
	comp=Z,316nm,0.9s,baz=350,slow=1.5,SNR=266					
DAVOX			PKPbc	PKPbc	05 17 32.1	+0.1
	comp=Z,316nm,0.9s,baz=34,slow=8.4,SNR=265					
MOF	**Molkenrain**	**148.02 337**	PKP	PKPdf	05 17 28.4	-1.1
HTL	**Hartland**	**148.07 352**	eP	PKPdf	05 17 30.2	+0.7
HTL	**Hartland**	**148.07 352**	P	PKPdf	05 17 30.2	+0.7
THEF	**They Montfort**	**148.12 338**	PKP	PKPdf	05 17 28.2	-1.4
HINF	**Hinteralfeld**	**148.15 337**	ePKIKP	PKPdf	05 17 28.4	-1.3
	comp=Z,50nm,1.0s					
HAU	**Haudompre**	**148.18 338**	ePKIKP	PKPdf	05 17 28.8	-0.9
	comp=Z,49nm,1.1s					
HAU			eMLR	MLR		
	comp=Z,272nm,20.2s,MS4.7					
HAU	**Haudompre**	**148.18 338**	ePKPdf	PKPdf	05 17 28.8	-0.9
HAU			LR	LR		
	comp=Z,270nm,20.3s,MS5.0					
BBS	**Basel-Blauen**	**148.19 336**	PKP	PKPdf	05 17 29.3	-0.5
MEZF	**Maizieres J'vi**	**148.20 339**	ePKIKP	PKPdf	05 17 29.4	-0.3
	comp=Z,113nm,1.2s					
DYA	**Yadsworthy**	**148.55 351**⇑	eP	PKPdf	05 17 30.5	+0.2
LOMF	**Lomont**	**148.55 336**	PKP	PKPdf	05 17 29.3	-1.1
TIP	**Timpagrande**	**148.94 315**	ePKPbc	PKPbc	05 17 35.4	+0.1
TIP			LR	LR		
	comp=Z,389nm,22.0s,MS5.2					
AQU	**L'Aquila**	**149.16 323**	ePKPbc	PKPbc	05 17 35.6	-0.1
AQU			LR	LR		
	comp=Z,486nm,22.0s,MS5.2					
AQU	**L'Aquila**	**149.16 323**⇑	iP	PKPdf	05 17 30.9	-0.6
CABF	**La Chapelle**	**149.44 336**	ePKIKP	PKPdf	05 17 31.4	-0.4
	comp=Z,103nm,1.4s					
OG01	**Vacheresse**	**149.45 335**	PKP	PKPdf	05 17 30.9	-0.9
JSA	**Saint Aubin**	**149.46 348**	eP	PKPdf	05 17 33.8	+2.0
VLC	**Villacollemand**	**149.50 329**	ePKPbc	PKPbc	05 17 35.6	-0.9
VLC			LR	LR		
	comp=Z,554nm,22.0s,MS5.3					
FLN	**La Foliniere**	**149.51 346**	ePKIKP	PKPdf	05 17 30.7	-1.2
	comp=Z,85nm,1.1s					
FLN			eMLR	MLR		
	comp=Z,444nm,21.8s,MS4.9					
FLN	**La Foliniere**	**149.51 346**	ePKPdf	PKPdf	05 17 30.7	-1.2
FLN			LR	LR		
	comp=Z,440nm,21.8s,MS5.2					
LDF	**La Druitiere**	**149.59 346**	ePKIKP	PKPdf	05 17 30.9	-1.1
	comp=Z,79nm,1.5s					
LOR	**Lormes**	**149.67 340**	ePKIKP	PKPdf	05 17 31.4	-0.8
	comp=Z,88nm,1.6s					
LOR			eMLR	MLR		
	comp=Z,336nm,23.0s,MS4.8					
LOR	**Lormes**	**149.67 340**	ePKPdf	PKPdf	05 17 31.4	-0.8
LOR			LR	LR		
	comp=Z,340nm,23.0s,MS5.1					
GRR	**Gorron**	**149.95 346**	ePKIKP	PKPdf	05 17 31.7	-0.9
	comp=Z,27nm,1.0s					
SSF	**Saint Saulge**	**149.97 340**	ePKIKP	PKPdf	05 17 31.9	-0.7
	comp=Z,64nm,1.3s					
CEL	**Celeste**	**150.00 314**	ePKPbc	PKPbc	05 17 36.6	-1.4
CEL			LR	LR		
	comp=Z,366nm,21.0s,MS5.2					
RSL	**Roselend**	**150.00 335**	PKP	PKPdf	05 17 31.5	-1.2
HYF	**Humbligny**	**150.06 341**	ePKIKP	PKPdf	05 17 32.4	-0.4
LPL	**La Plagne**	**150.10 334**	ePKIKP	PKPdf	05 17 32.6	-0.3
LPG	**La Plagne**	**150.10 334**	ePKIKP	PKPdf	05 17 32.6	-0.3
SMF	**Signal de Mont**	**150.22 339**	ePKIKP	PKPdf	05 17 32.1	-0.9
	comp=Z,62nm,1.4s					
AVF	**Avril sur Loir**	**150.25 340**	ePKIKP	PKPdf	05 17 31.9	-1.2
	comp=Z,56nm,1.6s					
SGMF	**Saint Gilles**	**150.43 348**	ePKIKP	PKPdf	05 17 32.1	-1.2
	comp=Z,30nm,1.0s					
ROSF	**Rostrenen**	**150.48 349**	ePKIKP	PKPdf	05 17 32.2	-1.2
	comp=Z,102nm,1.4s					
BNI	**Bardonecchia**	**150.50 334**	ePKIKP	PKPbc	05 17 38.8	-0.1
BNI			MLR	MLR		
	comp=Z,564nm,22.0s,MS5.3					
GDM	**Grand'Maison**	**150.60 335**	PKP	PKPdf	05 17 32.8	-0.9
BGF	**Bois d'Agland**	**150.62 340**	ePKIKP	PKPdf	05 17 33.0	-0.7
	comp=Z,26nm,0.9s					
GRN	**Grenoble**	**150.72 335**	PKP	PKPdf	05 17 33.2	-0.7
MBDF	**Montbardon**	**150.72 333**	ePKIKP	PKPdf	05 17 32.8	-1.1
QUIF	**Quistinic**	**150.87 349**	ePKIKP	PKPdf	05 17 32.8	-1.2
SURF	**Saint Ours**	**150.90 333**	PKP	PKPdf	05 17 34.1	-0.1
ORIF	**Oris-en-Rattie**	**150.93 335**	ePKIKP	PKPdf	05 17 34.0	-0.2
ORIF			eMLR	MLR		
	comp=Z,454nm,21.8s,MS4.9					
SAOF	**Saorge**	**150.97 332**	PKP	PKPdf	05 17 32.9	-1.4
AGO	**Saint Agoulin**	**150.98 339**	PKP	PKPdf	05 17 34.2	0.0
AUTN	**L'Aution**	**151.02 332**	PKP	PKPdf	05 17 34.7	+0.3
TCF	**Toulx Ste Croi**	**151.06 341**	ePKIKP	PKPdf	05 17 33.6	-0.8
	comp=Z,100nm,1.4s					
TOUF	**Mont Tournerai**	**151.08 332**	PKP	PKPdf	05 17 33.4	-1.1
SBF	**Sospel**	**151.12 332**	ePKIKP	PKPdf	05 17 33.4	-1.1
	comp=Z,156nm,1.4s					
LUCF	**Luceram**	**151.13 332**	PKP	PKPdf	05 17 32.8	-1.8
SSB	**Saint Sauveur**	**151.15 337**	PKIKP	PKPdf	05 17 33.6	-0.9
SSB			e		05 17 40.1	
SSB			MLR	MLR		
	comp=Z,525nm,21.0s,MS5.3					
MVIF	**Mont Vial**	**151.22 332**	PKP	PKPdf	05 17 33.6	-1.1
REVF	**Revere**	**151.24 332**	PKP	PKPdf	05 17 33.4	-1.3
COLF	**Collangettes**	**151.25 338**	PKP	PKPdf	05 17 34.0	-0.7
PYM	**Petit Puy Mans**	**151.28 339**	PKP	PKPdf	05 17 34.5	-0.2
PGF	**Pioggiola**	**151.37 328**	ePKIKP	PKPdf	05 17 33.9	-1.1
	comp=Z,295nm,1.3s					
VAE	**Valguarnera**	**151.40 314**	PKP	PKPdf	05 17 34.8	-0.3
	comp=Z,3.6nm,0.3s,baz=219,slow=2.6,SNR=3.2					
VAE			PKPbc	PKPbc	05 17 41.6	+0.3
	comp=Z,35nm,0.8s,baz=14,slow=12,SNR=6.1					
VAE	**Valguarnera**	**151.40 314**	PKP	PKPdf	05 17 34.8	-0.4
VAE			PKPbc	PKPbc	05 17 41.6	+0.3
OCF	**Saint Nazaire**	**151.44 335**	PKP	PKPdf	05 17 34.3	-0.7
OG26	**St.-Nazaire-De**	**151.44 335**	PKP	PKPdf	05 17 34.3	-0.7
CALN	**Calern**	**151.45 332**	PKP	PKPdf	05 17 33.9	-1.1
MFF	**Saint Martin d**	**151.45 344**	ePKIKP	PKPdf	05 17 34.2	-0.7
	comp=Z,48nm,1.0s					
VERF	**Verneugheol**	**151.46 340**	PKP	PKPdf	05 17 34.3	-0.7
VIVF	**Saint-Julien-l**	**151.46 336**	ePKIKP	PKPdf	05 17 34.2	-0.8
	comp=Z,65nm,1.4s					
LBL	**Lubilhac**	**151.65 338**	PKP	PKPdf	05 17 36.0	+0.7
FRF	**La Foret Royal**	**151.71 332**	ePKIKP	PKPdf	05 17 34.4	-1.0
	comp=Z,141nm,1.5s					
FRNF	**Fournols**	**151.75 339**	PKP	PKPdf	05 17 36.1	+0.7
SMRF	**Simiane la Rot**	**151.83 334**	ePKIKP	PKPdf	05 17 35.2	-0.4
OSPF	**L'Ospedale**	**151.92 327**	PKP	PKPdf	05 17 34.3	-1.5
LMR	**La Mourre**	**151.95 332**	ePKIKP	PKPdf	05 17 34.7	-1.1
	comp=Z,128nm,1.6s					
WDD	**Wield Dalam**	**152.14 311**	PFAKE		05 17 50.0	+14
WDD			LR	LR		
	comp=Z,374nm,21.0s,MS5.2					
RJF	**Les Rejaudoux**	**152.16 341**	ePKIKP	PKPdf	05 17 35.4	-0.7
	comp=Z,166nm,1.7s					
RJF			eMLR	MLR		
	comp=Z,347nm,21.2s,MS4.8					
RJF	**Les Rejaudoux**	**152.16 341**	ePKPdf	PKPdf	05 17 35.4	-0.7
RJF			LR	LR		
	comp=Z,350nm,21.3s,MS5.1					
CAF	**Calviac**	**152.32 340**	ePKIKP	PKPdf	05 17 36.0	-0.3
	comp=Z,68nm,1.3s					
LASF	**Ste Croix**	**152.43 336**	ePKIKP	PKPdf	05 17 35.9	-0.6
	comp=Z,106nm,1.3s					
LFF	**La Frestale**	**152.73 341**	ePKIKP	PKPdf	05 17 36.1	-0.8
	comp=Z,152nm,1.5s					
VSL	**Villasalto**	**153.33 323**	ePKPdf	PKPdf	05 17 37.4	-0.6
VSL			ePKPbc	PKPbc	05 17 45.0	-0.5
VSL			LR	LR		
	comp=Z,293nm,20.0s,MS5.1					
MTLF	**Montolieu**	**153.66 338**	ePKIKP	PKPdf	05 17 37.6	-0.7
	comp=Z,55nm,1.1s					
LRDF	**Laroque-de-Fa**	**153.90 337**	PKP	PKPdf	05 17 37.5	-1.2
EJON	**La Jonquera**	**154.18 336**	PKP	PKPdf	05 17 38.3	-0.8
FILF	**Fillols**	**154.21 336**	PKP	PKPdf	05 17 38.0	-1.1
MLS	**Moulis**	**154.39 339**	PKP	PKPdf	05 17 39.3	-0.1
VALF	**Valcebollere**	**154.55 337**	PKP	PKPdf	05 17 38.8	-0.8
EPF	**Esparros**	**154.57 340**	ePKIKP	PKPdf	05 17 38.9	-0.7
	comp=Z,126nm,1.3s					
LABF	**Labassere**	**154.65 341**	PKP	PKPdf	05 17 38.8	-0.9
REYF	**Montagne du Re**	**154.77 341**	PKP	PKPdf	05 17 39.0	-0.9
RESF	**Ens**	**154.78 340**	PKP	PKPdf	05 17 39.8	-0.1
VIEF	**Viey**	**154.81 341**	PKP	PKPdf	05 17 39.6	-0.3
EBIE	**Bielsa**	**154.95 340**	PKP	PKPdf	05 17 40.5	+0.4
SJPF	**Ste Jean**	**154.97 343**	ePKIKP	PKPdf	05 17 39.4	-0.8
	comp=Z,42nm,1.1s					
ETSF	**Etsaut**	**154.97 341**	ePKIKP	PKPdf	05 17 39.7	-0.5
	comp=Z,97nm,1.4s					
KEST	**Kesra**	**155.75 316**	PKP	PKPdf	05 17 40.4	-1.1
	comp=Z,5.1nm,1.1s,baz=184,slow=2.9,SNR=7.0					
KEST			PKPab	PKPab	05 18 08.4	+0.4
	comp=Z,23nm,1.0s,baz=348,slow=2.7,SNR=12					
EPOB	**Poblet**	**155.81 337**	PKP	PKPdf	05 17 40.5	-0.8
ESAC	**San Caprasio**	**156.01 340**	PKP	PKPdf	05 17 41.5	-0.1
CMAH	**Djebel Manchou**	**156.40 320**	P	PKPdf	05 17 40.8	-1.5
ERTA	**Horta de San J**	**156.43 338**	PKP	PKPdf	05 17 41.8	-0.4
ABSA	**Djebel Ababsia**	**156.60 320**	P	PKPdf	05 17 41.5	-1.1
CKFL	**Kef-Lekhel**	**156.97 321**	P	PKPdf	05 17 42.0	-1.0
CASM	**Ain Smara**	**157.20 321**	P	PKPdf	05 17 42.1	-1.2
ETOR	**Torete**	**157.32 342**	PKIKP	PKPdf	05 17 43.8	+0.5
DFRA	**Djebel Bou Aff**	**157.36 322**	P	PKPdf	05 17 43.0	-0.5
PBRG	**Braganca**	**157.39 352**	ePKPab	PKPab	05 18 14.0	-0.7
PCAB	**Cabril**	**157.64 354**	ePKPdf	PKPdf	05 17 43.0	-0.7
PCAB	**Cabril**	**157.64 354**	ePKPab	PKPab	05 18 15.2	-0.6
PVRL	**Vila Real**	**158.04 353**	ePKPdf	PKPdf	05 17 43.5	-0.7
PVRL	**Vila Real**	**158.04 353**	ePKPab	PKPab	05 18 17.6	+0.1
MVO	**Moncorvo**	**158.06 352**	ePKPdf	PKPdf	05 17 43.9	-0.3
MVO	**Moncorvo**	**158.06 352**	ePKPab	PKPab	05 18 17.2	-0.4
MVO			eLR	LR	06 15 21.5	
	comp=Z,493nm,20.0s					
ECHE	**Chera**	**158.09 339**	PKIKP	PKPdf	05 17 44.6	+0.3
PVIS	**Viseu**	**158.61 353**	ePKPab	PKPab	05 18 20.0	0.0
MTE	**Manteigas**	**158.88 352**	ePKPdf	PKPdf	05 17 44.6	-0.6
MTE	**Manteigas**	**158.88 352**	ePKPab	PKPab	05 18 20.9	-0.3
MTE			eLR	LR	06 13 51.4	
	comp=Z,420nm,22.0s					
MTE	**Manteigas**	**158.88 352**	ePKPdf	PKPdf	05 17 44.6	-0.6
MTE			ePKPab	PKPab	05 18 21.1	-0.1
MTE			LR	LR		
	comp=Z,690nm,19.0s,MS5.5					
ESDC	**Sonseca Array**	**158.91 345**	PKP	PKPdf	05 17 44.7	-0.6
	comp=Z,2.0nm,0.9s,baz=11,slow=3.1,SNR=10					
ESDC			PKPab	PKPab	05 18 20.9	-0.5
	comp=Z,14nm,0.8s,baz=19,slow=3.7,SNR=32					
ESDC			PP	PP	05 21 53.1	-8.0
	comp=Z,2.7nm,1.0s,baz=8.8,slow=6.2,SNR=6.3					
ESDC	**Sonseca Array**	**158.91 345**	PKP	PKPdf	05 17 44.6	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAB	San Pablo	159.13	345	ePKIKP	PKPdf	05 17 44.5	-1.1
PAB				e		05 18 21.9	
PAB				MLR	MLR		
	comp=Z,561nm,19.0s,MS5.4						
ETOB	Tobarra	159.14	339	PKP	PKPdf	05 17 44.9	-0.7
EMHD	Djebel Mahouad	159.22	326	P	PKPdf	05 17 46.0	+0.2
PCBR	Castelo Branco	159.43	352	ePKPdf	PKPdf	05 17 45.2	-0.7
PCBR	Castelo Branco	159.43	352	ePKPab	PKPab	05 18 23.0	-0.6
EVIA	Vianos	159.46	341	PKIKP	PKPdf	05 17 45.8	-0.2
EMUR	La Murta	159.75	337	PKP	PKPdf	05 17 45.5	-0.8
PTOM	Tomar	159.75	354	ePKPdf	PKPdf	05 17 45.9	-0.4
PTOM	Tomar	159.75	354	ePKPab	PKPab	05 18 24.9	-0.1
PMRV	Marv??o	159.82	352	ePKPab	PKPab	05 18 25.1	-0.2
PMRV				eLR	LR	06 14 13.4	
	comp=Z,448nm,24.0s						
EBAN	Banos Encina	160.28	343	PKIKP	PKPdf	05 17 46.2	-0.7
EANR	'Ain N'Sour	160.35	329	P	PKPdf	05 17 49.5	+2.4
PESTR	Estremoz	160.40	352	ePKPdf	PKPdf	05 17 45.9	-1.1
PESTR	Estremoz	160.40	352	ePKPab	PKPab	05 18 27.4	-0.4
PESTR				eLR	LR	06 14 32.8	
	comp=Z,508nm,22.0s						
EQES	Quesada	160.41	341	PKP	PKPdf	05 17 47.0	-0.1
PMAFR	Mafra	160.48	356	ePKPab	PKPab	05 18 28.9	+0.7
PMAFR				eLR	LR	06 14 12.2	
	comp=Z,547nm,20.0s						
EADA	Adamuz	160.49	344	PKP	PKPdf	05 17 46.7	-0.5
ETRT	Tiaret	160.70	328	P	PKPdf	05 17 48.0	+0.5
EVO	Evora	160.78	353	ePKPdf	PKPdf	05 17 46.3	-1.2
EVO	Evora	160.78	353	ePKPab	PKPab	05 18 29.1	-0.4
ELUQ	Luque	160.98	343	PKIKP	PKPdf	05 17 46.2	-1.5
PBAR	Barrancos	161.00	350	ePKPdf	PKPdf	05 17 46.9	-0.8
PBAR	Barrancos	161.00	350	ePKPab	PKPab	05 18 30.1	-0.4
PBAR				eLR	LR	06 14 14.8	
	comp=Z,641nm,22.0s						
ECOG	Cogollos-Vega	161.04	341	PKIKP	PKPdf	05 17 46.2	-1.6
PBEJ	Beja	161.26	352	ePKPab	PKPab	05 18 30.9	-0.7
EMIN	Mina Concepcio	161.33	349	PKP	PKPdf	05 17 47.1	-1.0
PVAQ	Vaqueiros	161.85	351	ePKPab	PKPab	05 18 34.5	+0.3
PVAQ				eLR	LR	06 19 27.8	
	comp=Z,605nm,20.0s						
ESPR	Espera	162.03	346	PKP	PKPdf	05 17 48.9	0.0
PBDV	Barranco-do-Ve	162.04	352	ePKPdf	PKPdf	05 17 47.2	-1.6
PBDV	Barranco-do-Ve	162.04	352	ePKPab	PKPab	05 18 35.3	+0.3
PBDV				eLR	LR	06 19 22.5	
	comp=Z,658nm,20.0s						
MORF	Marmelete	162.06	354	ePKPdf	PKPdf	05 17 48.3	-0.5
MORF	Marmelete	162.06	354	ePKPab	PKPab	05 18 36.2	+1.1
MORF				eLR	LR	06 18 40.4	
	comp=Z,380nm,20.0s						
PFVI	Vila Bisbo	162.25	354	eLR	LR	06 15 21.0	
	comp=Z,360nm,20.0s						
SFS	San Fernando	162.50	347	PFAKE		05 18 00.0	+11
SFS				LR	LR		
	comp=Z,1μm,20.0s						
RTC	Rabat Centre	165.02	346	PFAKE		05 18 00.0	+8.3
RTC				LR	LR		
	comp=Z,693nm,20.0s						
MDT	Midelt	165.46	338	PKP	PKPdf	05 17 51.2	-0.9
	comp=Z,11nm,1.0s,baz=107,slow=2.4,SNR=13						
MDT				PKPab	PKPab	05 18 50.4	+0.1
	comp=Z,16nm,0.8s,baz=55,slow=3.9,SNR=15						
LIC	Lamto	165.61	205	ePKP2	PKPab	05 18 50.8	-0.5
	comp=Z,152nm,1.3s						
LIC				eMLR	MLR		
	comp=Z,1μm,22.8s						
LIC	Lamto	165.61	205	eP	PKPab	05 18 50.5	-0.8
	comp=Z,152nm,1.3s						
KIC	Kosan Boka	165.61	206	eP	PKPab	05 18 50.4	-0.9
	comp=Z,86nm,1.1s						
PMAR	Madeira	165.77	20	ePKPdf	PKPdf	05 17 52.7	+0.3
DBIC	Dimbokro	165.94	206	PKIKP	PKPdf	05 17 50.8	-2.3
DBIC						05 18 52.3	
DBIC						05 22 40.3	
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DBIC	Dimbokro	165.94	206	PKP	PKPdf	05 17 50.8	-2.3
	comp=Z,7.3nm,1.0s,baz=108,slow=3.5,SNR=5.1						
DBIC				PKPab	PKPab	05 18 52.3	-0.5
	comp=Z,22nm,0.9s,baz=143,slow=7.2,SNR=12						
DBIC				PP	PP	05 22 40.3	+1.5
	comp=Z,18nm,1.2s,baz=146,slow=4.6,SNR=3.9						
TIC	Toumodi	165.98	206	eP	PKPab	05 18 52.2	-0.8
	comp=Z,125nm,1.1s						
TORD	Torodi Ar. Bea	166.23	245	PKP	PKPdf	05 17 51.6	-1.6
	comp=Z,16nm,1.1s,baz=36,slow=0.9,SNR=61						
TORD				PKPab	PKPab	05 18 53.3	-1.0
	comp=Z,26nm,1.0s,baz=112,slow=3.7,SNR=21						
TORD				PP	PP	05 22 32.9	-8.9
	comp=Z,2.9nm,1.1s,baz=104,slow=6.3,SNR=3.6						
CFTV	Fuerteventura	170.65	16	PKP	PKPdf	05 17 55.8	0.0
BBTS	Babate	172.96	132	PKP	PKPdf	05 17 55.5	-1.7
	comp=Z,21nm,0.8s,baz=116,slow=3.0,SNR=3.9						
BBTS				PKPab	PKPab	05 19 22.2	-1.7
	comp=Z,29nm,0.8s,baz=156,slow=1.9,SNR=4.0						

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*IDC **01** 04:59:10.3±2.6, 5°.20S×131°.55E, h0km, mb3.6/1, mb1 4.1/4, mb1mx3.7/16, mbtmp3.9/4, ML4.1/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/28, Error ellipse: s-maj=121.4km s-min=28.0km az=78.0*

*ISCJB **01** 04:59:12.8±0.8, 5°.21S±0°.05×131°.21E±0°.08, h33km, Error ellipse: s-maj=11.5km s-min=7.6km az=169.4*

*DJA **01** 04:59:12, 4°.70S×133°.34E, h149km, MLv4.2/4*

ISC 01 04:59:15.2±0.8**, 5°.21S**±0°.05×**131°.29E**±0°.08**, h35**km**, n9,** σ**1.^{s}10**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	1.50	106	P	Pn	04 59 40.6	+1.0
TLE				S	Sn	04 59 57.7	-0.2
MSAI	Masohi	3.00	308	P	Sn	05 00 23.2	-12
SWI	Sorong	4.32	360	P	Pn	05 00 19.5	+1.1
SWI				S	Sn	05 01 06.0	-1.6
KAKA	Kakadu	7.54	171	P	Pn	05 01 03.0	+0.4
DAV	Davao City (W)	13.47	335	LR	LR	05 06 59.5	
	comp=Z,220nm,18.7s,baz=253,slow=35						
FITZ	Fitzroy Crossi	13.95	203	Pn	Pn	05 02 30.3	-0.1
	1.2nm,0.3s,baz=40,slow=12,SNR=35						
FITZ				Sn	Sn	05 04 56.3	-7.9
	0.4nm,0.3s,baz=106,slow=22,SNR=5.0						
WRA	Warramunga Arr	14.94	169	Pn	Pn	05 02 40.6	-3.2
	0.7nm,0.3s,baz=352,slow=14,SNR=17						
WRA				Sn	Sn	05 05 16.0	-12
	baz=358,slow=25,SNR=2.9						
ASAR	Alice Springs	18.52	172	P	Pn	05 03 29.0	0.0
	0.3nm,0.3s,baz=350,slow=10,SNR=17						
MKAR	Makanchi Array	67.46	326	P	P	05 10 08.9	+1.5
	0.3nm,0.4s,baz=108,slow=9.3,SNR=3.8						

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*IDC **01** 05:44:46.9±2.4, 13°.65N×92°.37W, h0km, mb3.9/2, mb1 4.0/5, mb1mx3.7/21, mbtmp3.6/5, ML3.3/3, MS3.7/1, Ms1 3.7/1, ms1mx3.0/30, Error ellipse: s-maj=46.3km s-min=26.7km az=3.0*

*NEIC **01** 05:44:47.8±1.7, 13°.26N×92°.84W, h10km, mb4.3/1, Error ellipse: s-maj=47.3km s-min=11.9km az=211.0*

*ISCJB **01** 05:44:48.9±2.2, 13°.57N±0°.09×92°.44W±0°.05, h29km±21km, mb4.0/3, Error ellipse: s-maj=15.7km s-min=6.8km az=19.3*

*CASC **01** 05:44:51.2±1.5, 13°.73N×92°.34W, h76km±43km, MD3.8, mb4.3(NEIC)*

ISC 01 05:44:49.2±2.1**, 13°.65N**±0°.09×**92°.39W**±0°.05**, h12**km±15km**, n27,** σ**0.^{s}85**/29**, mb4.0**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.99	47	eP	Pb	05 45 09.0	+0.7
FUG	Fuego 3	1.70	62	eP	Pn	05 45 17.9	-0.8
FG6		1.72	58	eP	Pn	05 45 18.4	-0.6
TP2	Tecpan 2	1.74	49	eP	Pn	05 45 19.1	-0.2
PCG	Pacaya	1.88	67	eP	Pn	05 45 21.2	0.0
IXG	Ixpaco	1.95	74	eP	Pn	05 45 21.4	-0.7
NBG	Las Nubes	2.19	64	eP	Pn	05 45 26.4	+1.0
APG	El Apazote	2.30	54	Pn	Pn	05 45 26.8	-0.1
	6.7nm,0.3s,baz=230,slow=6.6,SNR=120						
APG				Sn	Sn	05 45 56.8	+1.6
	17nm,0.3s,baz=320,slow=16,SNR=4.1						
RBDL	Robledal	2.66	80	eP	Pn	05 45 31.4	-0.5
RBDL				eS	Sn	05 46 03.0	-1.2
RTR	El Retiro	2.68	84	eP	Pn	05 45 32.0	-0.1
SBLS	San Blas	2.69	86	eP	Pn	05 45 33.2	+0.9
SNJE	San Jose	2.71	85	eP	Pn	05 45 33.2	+0.6
MRL	Marmol	2.97	61	eP	Pn	05 45 35.6	-0.5
BOQS	Boqueron	3.02	88	eP	Pn	05 45 37.3	+0.4
LFRS	El Faro	3.23	90	eP	Pn	05 45 39.1	-0.6
LBRS	Las Brisas	3.25	88	eP	Pn	05 45 39.0	-1.1
SNVI	San Vicente	3.45	90	eP	Pn	05 45 43.2	+0.4
SNVI				eS	Sn	05 46 23.4	-0.2
CMIG	Matias Romero	4.19	325	Pn	Pn	05 45 51.7	-1.2
	0.7nm,0.3s,baz=141,slow=10,SNR=17						
CMIG				Sn	Sn	05 46 42.0	+0.2
	4.0nm,0.3s,baz=96,slow=15,SNR=5.6						
TGUH	Tegucigalpa,Un	4.99	85	ePn	Pn	05 46 10.3	+6.4
JTS	JuntasAbangare	8.00	114	Pn	Pn	05 46 46.9	+1.5
TXAR	Lajitas Array	18.79	328	P	Pn	05 49 09.0	0.0
	0.0nm,0.3s,baz=146,slow=9.1,SNR=6.0						
SDV	Santo Domingo	21.85	100	LR	LR	05 58 17.7	
	comp=Z,215nm,21.0s,baz=220,slow=37						
SNOW	Snow King Moun	33.65	336	eP	P	05 51 30.7	+0.9
	3.2nm,0.9s,mb4.2						
NVAR	Mina Array Bea	33.71	322	P	P	05 51 31.6	+1.2
	0.7nm,0.7s,mb3.7,baz=137,slow=8.4,SNR=5.6						
YKA	Yellowknife Ar	51.28	347	P	P	05 53 50.8	-1.9
	1.7nm,0.7s,mb4.1,baz=149,slow=7.5,SNR=31						
YKA				PcP	PcP	05 55 06.2	-1.4
	0.2nm,0.6s,baz=146,slow=4.1,SNR=4.0						
YKA	Yellowknife Ar	51.28	347	P	P	05 53 50.9	-1.9
YKA				PcP	PcP	05 55 06.2	-1.4
CMAR	Chiang Mai Arr	146.20	340	PKPbc	PKPbc	06 04 29.9	-0.5
	1.5nm,0.7s,baz=333,slow=3.1,SNR=10.0						

DHMR 01 05:47:42.2±0.2**, 11°.76N**×**42°.92E, h10**km±3km**, ML3.5, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.87	38	i P	Pn	05 48 15.4	+1.2
TRBA				i S	Sn	05 48 41.4	+3.5
TRBA				AML	AML	05 48 44.7	
	comp=E,256nm,0.5s						
ZUQR	Zugar Island	2.21	356	i P	Pn	05 48 20.7	+1.7
ZUQR				i S	Sn	05 48 50.8	+4.3
ZUQR				AML	AML	05 48 59.7	
	comp=E,1μm,0.3s						
LBOS		3.09	47	i P	Pn	05 48 34.1	+3.0
LBOS				i S	Sn	05 49 14.6	+6.5
DHBB	Dhamar BB	3.14	27	i S	Sn	05 49 15.8	+6.5
BDHA	Al Bayda'	3.39	49	i P	Pn	05 48 38.1	+2.9
BDHA				i S	Sn	05 49 21.6	+6.1
BDHA				AML	AML	05 49 37.3	
	comp=E,116nm,0.5s						

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*IDC **01** 06:32:42.3±2.6, 35°.24N×80°.92E, h0km, mb3.4/2, mb1 3.4/7, mb1mx3.3/28, mbtmp3.3/7, ML3.3/4, Error ellipse: s-maj=80.2km s-min=21.3km az=59.0*

*ISCJB **01** 06:32:43.2±1.4, 35°.4N±0°.1×81°.1E±0°.2, h10km, mb3.1/2, Error ellipse: s-maj=28.5km s-min=11.2km az=135.7*

ISC 01 06:32:44.6±1.4**, 35°.4N**±0°.1×**81°.1E**±0°.2**, h10**km**, n8,** σ**1.^{s}05**/9**, mb3.1**/2**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	5.81	317	ePn	Pn	06 34 18.2	+7.4
KSH				Sn	Sn	06 35 17.4	-0.1
KSH				smax			
	comp=N,38nm,1.0s						
KSH				smax			
	comp=E,45nm,0.8s						
AAK	Ala-Archa	8.89	327	Pn	Pn	06 34 54.0	+1.0
	comp=E,0.0nm,0.3s,baz=142,slow=12,SNR=1.7						
AAK				Lg		06 37 28.6	
	comp=E,0.0nm,0.3s,baz=352,slow=19,SNR=2.5						
MKAR	Makanchi Array	11.45	4	Pn	Pn	06 35 29.0	+0.9
	comp=E,0.2nm,0.3s,baz=184,slow=13,SNR=5.8						
KURK	Kurchatov	15.44	354	Pn	Pn	06 36 20.1	-2.3
	comp=E,0.0nm,0.3s,baz=176,slow=12,SNR=4.0						
ZALV	Zalesovo Beam	18.76	7	P	Pn	06 37 04.8	+0.8
	comp=E,0.2nm,0.3s,baz=178,slow=10,SNR=4.2						
BVAR	Borovoye Array	19.21	340	P	Pn	06 37 09.7	+0.2
	comp=E,0.2nm,0.3s,baz=157,slow=12,SNR=4.0						
CMAR	Chiang Mai Arr	23.11	132	P	P	06 37 51.2	+0.4
	comp=E,0.6nm,0.7s,mb3.2,baz=319,slow=12,SNR=5.1						
YKA	Yellowknife Ar	81.66	7	P	P	06 45 01.2	-1.4
	comp=E,0.1nm,0.4s,mb3.1,baz=338,slow=5.6,SNR=3.5						

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*HLW **01** 07:01:41.5, 36°.63N×27°.55E, h33km±34km, Ml3.7*

*ISCJB **01** 07:01:42.8±0.4, 36°.56N±0°.03×27°.55E±0°.04, h113km±6km, Error ellipse: s-maj=5.7km s-min=4.8km az=38.2*

*ATH **01** 07:01:43.8, 36°.60N×27°.42E, h101km±2km*

*CSEM **01** 07:01:44.2±0.2, 36°.51N×27°.52E, h100km, MD3.3, Error ellipse: s-maj=6.1km s-min=5.0km az=114.0*

*NEIC **01** 07:01:45.0, 36°.64N×27°.36E, h10km, ML3.0(ATH), After ATH.*

*DDA **01** 07:01:48.0, 36°.64N×27°.87E, h51km±6km, Md3.3*

ISC 01 07:01:43.9±0.5**, 36°.57N**±0°.03×**27°.53E**±0°.04**, h106**km±6km**, n67,** σ**1.^{s}04**/91**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.50	352	i P	Pn	07 02 00.5	+0.1
BDRM				i S	Sn	07 02 12.1	-0.6
BDRM	Kayabasi	0.50	352	i P	Pn	07 02 00.5	+0.1
BDRM				i S	Sn	07 02 12.1	-0.6
ARG	Arkhangelos	0.60	126	eP	Pn	07 02 02.2	+1.1
ARG				eS	Sn	07 02 14.9	+1.0
ARG	Arkhangelos	0.60	126	eP	Pn	07 02 02.2	+1.1
ARG				eS	Sn	07 02 14.9	+1.0
TURN	Turunc	0.91	71	i P	Pn	07 02 01.7	-2.2
TURN				i S	Sn	07 02 13.7	-5.3
KARP	Karpathos	1.07	196	eP	Pn	07 02 06.0	+0.5
KARP				eS	Sn	07 02 22.1	+0.3
KARP	Karpathos	1.07	196	eP	Pn	07 02 06.0	+0.5
KARP				eS	Sn	07 02 22.1	+0.3
AYDN	Tasoluk	1.12	14	i P	Pn	07 02 06.4	+0.3
AYDN				i S	Sn	07 02 22.2	-0.7
AYDN	Tasoluk	1.12	14	i P	Pn	07 02 06.4	+0.3
AYDN				i S	Sn	07 02 22.2	-0.7
SMG	Samos	1.26	334	eP	Pn	07 02 07.3	-0.4
SMG				eS	Sn	07 02 24.4	-1.3
SMG	Samos	1.26	334	eP	Pn	07 02 07.3	-0.4
SMG				eS	Sn	07 02 24.4	-1.3
DNZL	Cakiroluk	1.65	47	i P	Pn	07 02 12.9	+0.6
DNZL				i S	Sn	07 02 30.6	-3.3
DNZL	Cakiroluk	1.65	47	i P	Pn	07 02 12.9	+0.6
APE	Apeiranthos	1.68	288	eP	Pn	07 02 12.5	-0.2
APE	Apeiranthos	1.68	288	eP	Pn	07 02 12.5	-0.2
AKAS	Kas	1.71	101	i P	Pn	07 02 14.1	+1.1
AKAS				i S	Sn	07 02 32.0	-3.2
AKAS	Kas	1.71	101	i P	Pn	07 02 14.1	+1.1
GOLH	Golhisar	1.76	67	i P	Pn	07 02 15.1	+1.5
GOLH				i S	Sn	07 02 38.0	+1.6
GOLH	Golhisar	1.76	67	i P	Pn	07 02 15.1	+1.5
GOLH				i S	Sn	07 02 38.0	+1.7
NPS	Neapolis	2.03	231	eP	Pn	07 02 16.8	-0.4
NPS	Neapolis	2.03	231	eP	Pn	07 02 16.8	-0.4
MANT	Manisa	2.08	23	i P	Pn	07 02 17.6	-0.2
MANT				i S	Sn	07 02 43.0	-0.6
MANT	Manisa	2.08	23	i P	Pn	07 02 17.5	-0.3
MANT				i S	Sn	07 02 43.0	-0.6
LAST	Lasithi	2.18	230	P	Pn	07 02 19.7	+0.6
LAST	Lasithi	2.18	230	P	Pn	07 02 19.7	+0.6
KORT	Korkueli	2.30	78	i P	Pn	07 02 22.5	+1.9
KORT	Korkueli	2.30	78	i P	Pn	07 02 22.5	+1.9
KHAL	Karahalli	2.38	40	i P	Pn	07 02 22.0	+0.4
KHAL				i S	Sn	07 02 47.9	-2.5
KHAL	Karahalli	2.38	40	i P	Pn	07 02 22.0	+0.4
IDI	Anoyia	2.50	240	P	Pn	07 02 23.4	+0.2
IDI	Anoyia	2.50	240	P	Pn	07 02 23.4	+0.2
ISP	Isparta	2.69	61	P	Pn	07 02 26.5	+0.8
ISP	Isparta	2.69	61	P	Pn	07 02 26.5	+0.8
SIVA	Sivas	2.70	236	P	Pn	07 02 27.7	+1.8
SIVA	Sivas	2.70	236	P	Pn	07 02 27.7	+1.8
PRK	Paraskevi	2.85	340	eP	Pn	07 02 28.0	+0.2
PRK	Paraskevi	2.85	340	eP	Pn	07 02 28.0	+0.2
VAM	Vamos	2.94	248	eP	Pn	07 02 29.0	0.0
VAM	Vamos	2.94	248	eP	Pn	07 02 29.0	0.0
KYTH	Kithira	3.64	267	eP	Pn	07 02 38.5	+0.2
KYTH	Kithira	3.64	267	eP	Pn	07 02 38.5	+0.2
VLI	Veliai	3.70	274	P	Pn	07 02 40.5	+1.4
VLI	Veliai	3.70	274	P	Pn	07 02 40.5	+1.4
SLUM		5.42	201	P	Pn	07 03 01.5	-0.9
	baz=202						
SLUM				S	Sn	07 03 57.4	-6.2
	baz=202						
SLUM		5.42	201	P	Pn	07 03 01.5	-0.9
SLUM				S	Sn	07 03 57.4	-6.1
HMAT	Matruh	5.48	184	P	Pn	07 03 02.8	-0.4
	baz=185						
HMAT				S	Sn	07 03 59.1	-5.8
	baz=185						
HMAT				AMP		07 04 00.0	
	comp=E,40μm,0.2s,logA/T=5.2,baz=185						
HMAT	Matruh	5.48	184	P	Pn	07 03 02.8	-0.4
HMAT				S	Sn	07 03 59.1	-5.8
BR131	Keskin Array S	5.75	55	ePn	Pn	07 03 08.4	+1.7
	comp=E,6.7nm,0.5s						
BR131	Keskin Array S	5.75	55	ePn	Pn	07 03 08.4	+1.6
	comp=E,6.7nm,0.5s						
HNAT	Natroun	7.39	159	P	Pn	07 03 28.5	-0.6
	baz=158						
HNAT	Natroun	7.39	159	P	Pn	07 03 28.5	-0.6
HRSH	Kfar Ka'horesh	7.46	119	P	Pn	07 03 31.4	+1.3
	baz=136						
SWA2		7.51	194	P	Pn	07 03 29.6	-1.2
	baz=194						
SWA2				AMP		07 04 00.0	
	comp=N,50μm,0.3s,logA/T=5.2,baz=194						
SWA2				S	Sn	07 04 47.5	-6.9
	baz=194						
SWA2		7.51	194	P	Pn	07 03 29.6	-1.2
SWA2				S	Sn	07 04 47.5	-6.9
KOT	Kottamia	7.54	150	P	Pn	07 03 30.4	-0.7
	baz=150						
KOT	Kottamia	7.54	150	P	Pn	07 03 30.4	-0.8
AMAG	Maghara	7.58	140	P	Pn	07 03 30.5	-1.2
	baz=140						
AMAG	Maghara	7.58	140	P	Pn	07 03 30.5	-1.1
RSH		7.61	136	P	Pn	07 03 31.4	-0.7
HSAF	As Saff	7.71	153	P	Pn	07 03 33.0	-0.5
	baz=153						
HSAF	As Saff	7.71	153	P	Pn	07 03 33.0	-0.5
GLL	Jalalah	7.81	152	P	Pn	07 03 34.3	-0.5
	baz=152						
GLL	Jalalah	7.81	152	P	Pn	07 03 34.3	-0.5
AWBH		8.31	172	P	Pn	07 03 40.6	-1.0
	baz=171						
AWBH		8.31	172	P	Pn	07 03 40.6	-1.0
HNKL	Nakhl	8.54	139	P	Pn	07 03 44.3	-0.6
	baz=139						
HNKL	Nakhl	8.54	139	P	Pn	07 03 44.3	-0.5

IDC 01 07:09:56.6±2.1**, 15°.73S**×**174°.88W, h0**km**, mb4.2**/3**, mb1 4.4**/4**, mb1mx3.9**/17**, mbtmp4.2**/4**, ML2.6**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/24**, Error ellipse: s-maj=180.7km s-min=29.3km az=153.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.50	59	Pn	Pn	07 10 52.5	+0.1
	33nm,0.3s,baz=241,slow=10,SNR=72						
AFI				Sn	Sn	07 11 25.1	-9.4
	75nm,0.3s,baz=234,slow=19,SNR=14						
STKA	Stephens Creek	42.64	240	P	P	07 17 54.1	-1.0
	2.5nm,0.8s,baz=104,slow=11,SNR=3.7						
WRA	Warramunga Arr	48.38	257	P	P	07 18 41.2	+0.4
	1.4nm,0.9s,baz=90,slow=7.1,SNR=13						
ASAR	Alice Springs	48.66	252	P	P	07 18 42.9	+0.1
	5.0nm,0.6s,baz=86,slow=7.7,SNR=60						
GUMO	Guam	49.32	304	LR	LR	07 36 16.3	
	comp=Z,30nm,21.4s,baz=66,slow=32						

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*IDC **01** 07:21:47.8±1.6, 4°.89S×152°.30E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/17, mbtmp3.9/8, Error ellipse: s-maj=52.9km s-min=22.4km az=109.0*

*NEIC **01** 07:21:53.5±1.4, 4°.91S×152°.16E, h35km, mb4.4/3, Error ellipse: s-maj=43.7km s-min=12.7km az=115.0*

ISC 01 07:21:54.1±2.5**, 4°.9S**±0°.2×**152°.1E**±0°.4**, h35**km**, n15,** σ**0.^{s}84**/13**, mb4.0**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	20.91	247	eP	P	07 26 32.9	-0.8
	23nm,0.5s						
WRAB	Tennant Creek	22.85	228	eP	P	07 26 54.9	+0.5
	3.6nm,0.4s,mb4.2						
WB2	Warramunga Arr	22.85	228	eP	P	07 26 54.6	+0.2
WRA	Warramunga Arr	22.86	228	P	P	07 26 55.0	+0.5
	3.7nm,0.4s,mb4.2,baz=51,slow=9.8,SNR=54						
WRA				PcP	PcP	07 30 45.1	+0.2
	0.4nm,0.4s,baz=48,slow=2.1,SNR=5.3						
ASAR	Alice Springs	25.61	221	P	P	07 27 20.8	+0.5
	0.7nm,0.3s,mb3.6,baz=54,slow=8.8,SNR=16						
ASAR				PcP	PcP	07 30 50.6	-0.2
	0.2nm,0.5s,baz=35,slow=3.4,SNR=3.7						
FITZ	Fitzroy Crossi	29.00	241	P	P	07 27 50.1	-0.7
	1.0nm,0.4s,mb3.9,baz=52,slow=8.2,SNR=14						
MBWA	Marble Bar	35.32	240	eP	P	07 28 45.5	-0.7
	3.9nm,0.9s,mb4.3						
CMAR	Chiang Mai Arr	57.28	295	P	P	07 31 39.9	+1.2
	0.6nm,0.6s,mb3.8,baz=106,slow=5.7,SNR=3.7						
SONM	Songino Array	66.03	328	P	P	07 32 38.4	+1.3
	1.0nm,0.5s,mb4.1,baz=142,slow=3.9,SNR=6.9						
MKAR	Makanchi Array	79.94	319	P	P	07 33 59.9	+0.4
	0.4nm,0.5s,mb3.6,baz=93,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	79.94	319	P	P	07 33 59.9	+0.4
ZALV	Zalesovo Beam	80.84	326	P	P	07 34 02.6	-1.6
	0.6nm,0.4s,mb3.9,baz=115,slow=6.4,SNR=3.3						
BVAR	Borovoye Array	88.90	323	P	P	07 34 44.0	-0.7
	0.4nm,0.6s,mb3.9,baz=85,slow=6.1,SNR=3.4						
GERES	GERESS Array B	123.77	328	PKP	PKPdf	07 40 48.4	+0.1
	0.3nm,0.4s,baz=66,slow=1.6,SNR=5.8						
TORD	Torodi Ar. Bea	149.67	288	PKPbc	PKPbc	07 41 40.0	-1.1
	0.9nm,0.5s,baz=74,slow=1.7,SNR=10						

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*ISCJB **01** 07:29:35.4±0.9, 6°.19S±0°.07×127°.6E±0°.1, h412km±11km, mb3.9/14, Error ellipse: s-maj=18.2km s-min=7.4km az=149.5*

*NEIC **01** 07:29:37.3±1.0, 6°.23S×127°.56E, h417km±15km, mb4.5/4, Error ellipse: s-maj=16.0km s-min=7.0km az=223.0*

*IDC **01** 07:29:39.2±2.0, 6°.34S×127°.46E, h445km±25km, mb3.3/9, mb1 3.5/13, mb1mx3.5/19, mbtmp3.4/13, Error ellipse: s-maj=26.3km s-min=9.1km az=65.0*

ISC 01 07:29:37.9±1.0**, 6°.28S**±0°.08×**127°.6E**±0°.1**, h425**km±13km**, n27,** σ**0.^{s}79**/30**, mb3.9**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	7.86	279	P	P	07 31 31.0	-0.6
	0.5nm,0.3s,baz=101,slow=10,SNR=3.2						
KAKA	Kakadu	8.01	143	eP	P	07 31 32.4	-0.7
	20nm,0.3s						
KAKA	Kakadu	8.01	143	ePn	P	07 31 32.1	-1.0
	60nm,0.4s						
KAKA				eSn	S	07 33 04.0	-3.6
KNA	Kununurra	9.49	173	eP	P	07 31 50.2	+0.8
	38nm,1.1s						
FITZ	Fitzroy Crossi	11.90	189	eP	P	07 32 16.2	+0.2
	7.9nm,0.3s						
FITZ	Fitzroy Crossi	11.90	189	P	P	07 32 16.4	+0.4
	1.4nm,0.3s,baz=26,slow=8.4,SNR=35						
WRAB	Tennant Creek	15.09	155	eP	P	07 32 50.9	+0.2
	15nm,0.8s						
WRA	Warramunga Arr	15.10	155	P	P	07 32 50.9	+0.2
	4.8nm,0.3s,baz=331,slow=11,SNR=418						
WRA				S	S	07 35 28.5	-1.7
	1.5nm,0.3s,baz=330,slow=20,SNR=36						
WB2	Warramunga Arr	15.10	155	eP	P	07 32 50.9	+0.1
MBWA	Marble Bar	16.62	206	eP	P	07 33 06.7	-0.2
	15nm,0.7s						
ASAR	Alice Springs	18.34	161	P	P	07 33 25.2	+0.2
	4.6nm,0.3s,baz=347,slow=12,SNR=266						
ASAR				S	S	07 36 30.3	-1.4
	0.7nm,0.3s,baz=339,slow=17,SNR=21						
FORT	Forrest	24.38	179	eP	P	07 34 20.9	+0.6
	7.5nm,0.5s,mb4.4						
KMBL	Kambalda	25.52	191	eP	P	07 34 30.7	+0.3
	31nm,0.4s,mb5.1						
BBOO	Buckleboo	27.56	164	eP	P	07 34 49.0	+0.5
	8.0nm,1.0s,mb4.0						
STKA	Stephens Creek	28.65	154	eP	P	07 34 58.8	+0.7
	3.1nm,0.4s,mb4.0						
STKA	Stephens Creek	28.65	154	P	P	07 34 58.9	+0.8
	4.9nm,0.5s,mb4.1,baz=324,slow=8.1,SNR=12						

PSI Prapat 29.97 287 P P 07 35 10.1 +0.2
2.9nm,0.6s,mb3.8,baz=102,slow=9.3,SNR=4.1
CMSA Cobar Meteorol 30.32 148 *e*P **P 07 35 13.9 +1.1**
YNG Young 33.90 148 *e*P **P 07 35 45.4 +2.0**
4.8nm,0.7s,mb3.9
CMAR Chiang Mai Arr 37.42 312 P P 07 36 12.8 -0.3
1.7nm,0.7s,mb3.5,baz=144,slow=7.0,SNR=8.4
KSRS Korea Array 43.51 0 P P 07 37 01.4 -0.5
1.1nm,0.8s,mb3.3,baz=173,slow=11,SNR=5.3
SONM Songino Array 57.02 343 P P 07 38 41.8 +0.3
0.6nm,0.4s,mb3.2,baz=171,slow=8.4,SNR=5.3
PETK Petropavlovsk- 64.43 20 P P 07 39 31.1 +0.5
2.3nm,0.9s,mb3.7,baz=223,slow=3.2,SNR=3.1
MKAR Makanchi Array 66.31 328 P P 07 39 42.5 -0.2
1.8nm,0.5s,mb4.0,baz=123,slow=8.0,SNR=21
ZALV Zalesovo Beam 69.88 335 P P 07 40 03.3 -1.0
1.6nm,0.6s,mb3.8,baz=137,slow=5.6,SNR=10
KURK Kurchatov 70.65 329 *e*P **P 07 40 08.6 -0.4**
4.8nm,1.0s,mb4.0
BVAR Borovoye Array 76.17 328 P P 07 40 40.6 -0.1
0.5nm,0.4s,mb3.5,baz=138,slow=8.9,SNR=5.2

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*BJI **01** 08:11:40.2,35.°50N×118.°40W,h6km,mB4.9/6,mb4.8/7, Ms4.7/4,Ms7 4.4/4*
*ISCJB **01** 08:11:42.5±0.2,35.°43N±0.°01×118.°36W±0.°01,h10km, mb4.3/5,MS3.6/5,Error ellipse: s-maj=1.8km s-min=1.6km az=178.9*
*IDC **01** 08:11:43.6±1.5,35.°47N×118.°28W,h0km,mb3.7/2, mb1 3.8/8,mb1mx3.7/27,mbtmp3.6/8,ML3.7/6,MS3.2/8, Ms1 3.2/8,ms1mx3.0/33,Error ellipse: s-maj=17.6km s-min=11.2km az=63.0*
*NEIC **01** 08:11:43.2,35.°47N×118.°43W,h6km,ML4.4(PAS), MW4.1(BRK),After PAS.*
NEIC Felt [IV] at Bodfish, Caliente, Lake Isabella and Weldon; [III] at Bakersfield, Kernville, Onyx, Porterville, Tehachapi, Three Rivers, Visalia and Wofford Heights; [II] at Ridgecrest and Springville. Also felt at Arvin, California City, Delano, Glennville, Hesperia, Inyokern, Keene, Kings Canyon National Park, Lebec, Los Angeles, Mojave, Northridge, Palmdale, Posey and Shafter.
ISC 01 08:11:43.5±0.2,35.°43N±0.°01×118.°40W±0.°02,h10km, n201,σ1§16/253,mb4.3/5,MS3.6/5,78C-72D,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISA	**Isabella**	**0.24**	**346**	⇓P	**Pg**	**08 11 46.7**	**-1.7**
ISA	baz=0.2,SNR=1000						
	baz=0.2			⇓S	**Sg**	**08 11 49.4**	**-2.3**
ISA	**Isabella**	**0.24**	**346**	*e*Pg	**Pg**	**08 11 46.7**	**-1.7**
ISA				*e*Sg	**Sg**	**08 11 49.5**	**-2.1**
ARVC	**Arvin**	**0.46**	**229**	⇑P	**Pg**	**08 11 52.1**	**-0.4**
ARVC	baz=0.5						
	baz=0.5			⇓S	**Sg**	**08 11 58.8**	**+0.2**
LRMC	**Laurel Mountai**	**0.58**	**85**	⇓P	**Pg**	**08 11 54.4**	**-0.4**
LRMC	baz=0.6,SNR=280						
	baz=0.6			⇑S	**Sg**	**08 12 02.5**	**0.0**
EDW2	**Edwards Air Fo**	**0.65**	**148**	P	**Pg**	**08 11 55.5**	**-0.5**
EDW2	baz=0.7,SNR=1000						
	baz=0.7			⇑S	**Sg**	**08 12 05.2**	**+0.8**
VES	**Vestal, Richgr**	**0.69**	**306**	⇓P	**Pg**	**08 11 54.9**	**-2.0**
VES	baz=0.7,SNR=1000						
	baz=0.7			⇓S	**Sg**	**08 12 03.5**	**-2.4**
OSI	**Osito Adit**	**0.86**	**198**	⇑P	**Pg**	**08 11 59.4**	**-0.6**
OSI	baz=0.9,SNR=63						
	baz=0.9			⇓S	**Sg**	**08 12 11.5**	**+0.4**
OSI	**Osito Adit**	**0.86**	**198**	*e*Pg	**Pg**	**08 11 59.2**	**-0.7**
OSI				*e*Sg	**Sg**	**08 12 11.7**	**+0.6**
MPMC	**Manual Prospec**	**0.97**	**50**	⇓P	**Pg**	**08 12 00.9**	**-1.3**
MPMC	baz=1.0,SNR=1000						
	baz=1.0			⇑S	**Sg**	**08 12 13.8**	**-1.0**
CWC	**Cottonwood Cre**	**1.04**	**14**	⇑P	**Pg**	**08 12 01.3**	**-2.2**
CWC	baz=1.0,SNR=166						
	baz=1.0			⇓S	**Sg**	**08 12 14.6**	**-2.5**
RCTC	**Rector, Farmer**	**1.11**	**322**	P	**Pb**	**08 12 02.2**	**-2.6**
RCTC	baz=1.1,SNR=836						
	baz=1.1			⇑S	**Sg**	**08 12 16.4**	**-2.9**
DECC	**Green Verdugo**	**1.18**	**177**	⇓P	**Pb**	**08 12 05.1**	**-0.8**
	baz=1.2,SNR=166						
MWC	**Mount Wilson**	**1.24**	**167**	*e*Pg	**Pg**	**08 12 06.4**	**-0.8**
PASC	**Pasadena Art C**	**1.27**	**172**	*e*Pg	**Pg**	**08 12 06.6**	**-1.2**
PASC				*e*Sg	**Sg**	**08 12 25.8**	**+1.5**
RRX	**Edison Barstow**	**1.27**	**115**	⇑P	**Pn**	**08 12 06.9**	**-0.4**
RRX	baz=1.3,SNR=23						
	baz=1.3			⇓S	**Sb**	**08 12 24.6**	**+0.7**
PKM	**Peak Mountain**	**1.28**	**246**	⇓P	**Pn**	**08 12 05.8**	**-1.6**
PKM	baz=1.3,SNR=96						
	baz=1.3			⇑S	**Sb**	**08 12 23.1**	**-1.0**
GSC	**Goldstone**	**1.31**	**95**	⇑P	**Pn**	**08 12 07.1**	**-0.7**
GSC	baz=1.3,SNR=177						
	baz=1.3			⇑S	**Sb**	**08 12 24.9**	**-0.1**
GSC	**Goldstone**	**1.31**	**95**	*e*Pg	**Pg**	**08 12 07.1**	**-1.6**
GSC				*e*Sg	**Sg**	**08 12 24.3**	**-1.4**
SMMC	**Simmler**	**1.31**	**265**	P	**Pn**	**08 12 05.9**	**-2.0**
SMMC	baz=1.3,SNR=350						
	baz=1.3			⇑S	**Sb**	**08 12 23.4**	**-1.7**
BFSC	**Mount Baldy St**	**1.34**	**153**	P	**Pn**	**08 12 08.0**	**-0.2**
BFSC	baz=1.4,SNR=1000						
	baz=1.4			⇑S	**Sb**	**08 12 26.6**	**+0.8**
BLG	**Laguna Peak**	**1.43**	**203**	⇑P	**Pn**	**08 12 09.3**	**-0.1**
BLG	baz=1.5,SNR=565						
	baz=1.5			⇑S	**Sn**	**08 12 28.5**	**+0.2**
SBC	**Santa Barbara**	**1.46**	**228**	⇑P	**Pn**	**08 12 10.0**	**+0.1**
SBC	baz=1.5						
	baz=1.5			⇓Sb	**Sb**	**08 12 30.3**	**+0.9**
FURC	**Furnace Creek,**	**1.62**	**50**	⇓P	**Pn**	**08 12 10.8**	**-1.4**
	baz=1.6,SNR=426						
TIN	**Tinemaha**	**1.63**	**5**	⇑P	**Pn**	**08 12 11.8**	**-0.4**
	baz=1.6						
BBRC	**Big Bear Sol-O**	**1.69**	**133**	⇓P	**Pn**	**08 12 12.3**	**-0.7**
	baz=1.7,SNR=380						
FMP	**Fort Macarthur**	**1.72**	**177**	⇑P	**Pn**	**08 12 13.3**	**-0.1**
FMP	baz=1.8,SNR=23						
	baz=1.8			⇓Sb	**Sb**	**08 12 38.3**	**+1.6**
BSC	**Santa Cruz Isl**	**1.76**	**216**	⇑P	**Pn**	**08 12 13.8**	**-0.2**
BSC	baz=1.8,SNR=12						
	baz=1.8			⇑Sb	**Sb**	**08 12 38.6**	**+0.7**
GRAC	**Grapevine Rang**	**1.77**	**28**	⇑P	**Pn**	**08 12 13.9**	**-0.3**
	baz=1.7,SNR=205						
SHOC	**Shoshone**	**1.79**	**74**	⇓P	**Pn**	**08 12 13.1**	**-1.3**
	baz=1.8						
HEC	**Hector,Ludlow**	**1.80**	**109**	P	**Pn**	**08 12 14.0**	**-0.6**
	baz=1.8,SNR=37						
MTUM	**Tungsten Hills**	**1.92**	**356**	*e*Pn	**Pn**	**08 12 16.8**	**+0.5**
U10A	**Ash Meadows, A**	**1.95**	**59**	⇑P	**Pn**	**08 12 15.6**	**-1.0**
	baz=1.9,SNR=38						
CIS	**Catalina Islan**	**2.02**	**180**	⇓P	**Pn**	**08 12 17.4**	**-0.2**
	baz=2.1,SNR=45						
CIS				⇓Sb	**Sb**	**08 12 47.0**	**+1.5**
	baz=2.1						
TUQ	**Turquoise Moun**	**2.02**	**89**	⇑P	**Pn**	**08 12 16.7**	**-1.0**
	baz=2.0,SNR=48						
MURC	**Murrieta**	**2.08**	**151**	P	**Pn**	**08 12 18.3**	**-0.1**
	baz=2.1,SNR=241						
MURC				⇓Sb	**Sb**	**08 12 49.3**	**+2.2**
	baz=2.1						
MLAC	**Mammoth Lakes**	**2.22**	**351**	⇓P	**Pn**	**08 12 21.9**	**+1.5**
	baz=2.2						
GMRC	**Granite Mounta**	**2.34**	**105**	P	**Pn**	**08 12 20.7**	**-1.3**
	baz=2.4,SNR=93						
SNCC	**San Nicolas Is**	**2.37**	**203**	⇓P	**Pn**	**08 12 22.3**	**0.0**
	baz=2.4,SNR=6.1						
SNCC				⇑S	**Sn**	**08 12 51.2**	**-0.3**
	baz=2.4						
SNCC	**San Nicolas Is**	**2.37**	**203**	*e*Pn	**Pn**	**08 12 22.7**	**+0.4**
SNCC				*e*Sn	**Sn**	**08 12 49.8**	**-1.7**
PFO	**Pinyon Flat Ob**	**2.43**	**138**	⇓P	**Pn**	**08 12 22.9**	**-0.3**
	baz=2.5,SNR=43						
PFO	**Pinyon Flat Ob**	**2.43**	**138**	*e*Pn	**Pn**	**08 12 22.9**	**-0.2**
PFO				*e*Sg	**Sg**	**08 12 59.9**	**-1.6**
BELC	**Belle Mtn.**	**2.44**	**125**	⇓P	**Pn**	**08 12 22.8**	**-0.6**
	baz=2.5						
SCI	**San Clemente I**	**2.45**	**183**	⇓P	**Pn**	**08 12 23.1**	**-0.3**
	baz=2.5,SNR=13						
V11A	**Goodsprings**	**2.45**	**80**	⇓P	**Pn**	**08 12 22.6**	**-0.9**
	baz=2.5						
U11A	**Corn Creek**	**2.64**	**67**	⇑P	**Pn**	**08 12 25.3**	**-0.9**
	baz=2.6,SNR=9.5						
109C	**Camp Elliot, M**	**2.75**	**157**	⇑P	**Pn**	**08 12 27.4**	**-0.2**
	baz=2.8,SNR=13						
109C				⇓Sb	**Sb**	**08 13 09.1**	**+2.5**
	baz=2.8						
SAO	**San Andreas Ge**	**2.80**	**299**	*e*Pn	**Pn**	**08 12 27.7**	**-0.6**
SAO				*e*Sn	**Sn**	**08 13 02.8**	**+0.6**
SHPR	**Sheep Range**	**2.84**	**67**	*e*Pn	**Pn**	**08 12 28.5**	**-0.3**
S10A	**Tonopah Range,**	**2.88**	**30**	⇓P	**Pn**	**08 12 29.3**	**-0.1**
	baz=2.9,SNR=27						
W12A	**Cal Nev Ari**	**2.89**	**92**	⇓P	**Pn**	**08 12 28.7**	**-0.9**
	baz=2.9,SNR=12						
V12A	**Nelson**	**2.91**	**83**	P	**Pn**	**08 12 29.0**	**-0.8**
	baz=2.9,SNR=75						
IRM	**Iron Mountain**	**2.96**	**114**	⇑P	**Pn**	**08 12 29.0**	**-1.5**
	baz=3.0,SNR=94						
NVAR	**Mina Array Bea**	**2.99**	**1**	Pn	**Pn**	**08 12 31.8**	**+0.9**
	6.1nm,0.3s,baz=183,slow=15,SNR=71						
NVAR				Pg	**Pg**	**08 12 37.7**	**-3.1**
	60nm,0.3s,baz=182,slow=20,SNR=220						
NVAR				Sn	**Sn**	**08 13 06.9**	**0.0**
	42nm,0.3s,baz=190,slow=25,SNR=6.3						
NVAR				Lg		08 13 16.7	
	130nm,0.3s,baz=169,slow=34,SNR=15						
NVAR	**Mina Array Bea**	**2.99**	**1**	Pn	**Pn**	**08 12 31.8**	**+0.9**
NVAR				Pg	**Pg**	**08 12 37.7**	**-3.1**
NVAR				Sn	**Sn**	**08 13 06.9**	**0.0**
NVAR				Lg		08 13 16.7	
BC3	**Big Chuckw Mtn**	**3.01**	**125**	⇑P	**Pn**	**08 12 29.8**	**-1.4**
	baz=3.0,SNR=14						
MONP	**Monument Peak**	**3.02**	**146**	⇑P	**Pn**	**08 12 31.6**	**+0.3**
	baz=3.1,SNR=20						
MONP				⇑S	**Sn**	**08 13 07.7**	**+0.2**
	baz=3.1						
CMB	**Columbia Colle**	**3.05**	**329**	*e*Pn	**Pn**	**08 12 32.0**	**+0.2**
CMB				Sn	**Sn**	**08 13 06.7**	**-1.5**
S11A	**Rachel**	**3.07**	**43**	⇓P	**Pn**	**08 12 32.1**	**0.0**
	baz=3.1,SNR=37						
BAR	**Barrett**	**3.10**	**152**	*e*Pn	**Pn**	**08 12 32.7**	**+0.3**
BAR				*e*Sn	**Sn**	**08 13 09.6**	**+0.1**
T11A	**Corn Creek, Al**	**3.14**	**54**	⇓P	**Pn**	**08 12 32.7**	**-0.2**
	baz=3.1,SNR=21						
NEE2	**Needles Airpor**	**3.17**	**101**	⇑P	**Pn**	**08 12 32.2**	**-1.2**
	baz=3.2,SNR=42						
WAKR	**Walker**	**3.18**	**345**	*e*Pn	**Pn**	**08 12 37.3**	**+3.8**
U12A	**Valley of Fire**	**3.29**	**71**	⇓P	**Pn**	**08 12 34.5**	**-0.5**
	baz=3.3						
SWSC	**Sam W. Stewart**	**3.29**	**138**	⇓P	**Pn**	**08 12 34.0**	**-1.1**
	baz=3.3						
R10A	**Warm Springs**	**3.31**	**30**	⇑P	**Pn**	**08 12 35.4**	**0.0**
	baz=3.3,SNR=9.1						
S12A	**Delamar Landin**	**3.59**	**52**	⇓P	**Pn**	**08 12 39.2**	**0.0**
	baz=3.6,SNR=26						
Y12C	**Blythe**	**3.61**	**117**	⇓P	**Pn**	**08 12 38.4**	**-1.0**
	baz=3.6,SNR=64						
PDMCI	**Parker Dam,Lak**	**3.68**	**107**	⇓P	**Pn**	**08 12 39.3**	**-1.2**
	baz=3.7						
R11A	**Troy Canyon, C**	**3.68**	**37**	⇓P	**Pn**	**08 12 40.0**	**-0.4**
	baz=3.7,SNR=22						
W13A	**Hualapai Mount**	**3.71**	**94**	P	**Pn**	**08 12 40.3**	**-0.5**
	baz=3.7,SNR=109						
W13A				⇓S	**Sn**	**08 13 23.9**	**-0.7**
	baz=3.7						
U13A	**Pakoon Wash**	**3.73**	**73**	⇑P	**Pn**	**08 12 40.6**	**-0.5**
	baz=3.7,SNR=43						
Q10A	**Clear Creek Ra**	**3.75**	**25**	⇑P	**Pn**	**08 12 41.8**	**+0.5**
	baz=3.7						
GLA	**Glamis**	**3.79**	**128**	⇑P	**Pn**	**08 12 40.7**	**-1.3**
	baz=3.8,SNR=9.4						
GLA	**Glamis**	**3.79**	**128**	*e*Pn	**Pn**	**08 12 40.8**	**-1.2**
GLA				*e*Sg	**Sg**	**08 13 44.6**	**-0.7**
X13A	**Yucca**	**3.84**	**101**	P	**Pn**	**08 12 41.8**	**-0.9**
	baz=3.9,SNR=191						
X13A				⇓S	**Sn**	**08 13 27.2**	**-0.7**
	baz=3.9						
SAC	**San Andreas**	**3.88**	**305**	*e*Pn	**Pn**	**08 12 42.2**	**-1.0**
T13A	**Saint George**	**3.96**	**65**	⇓P	**Pn**	**08 12 44.1**	**-0.2**
	baz=4.0,SNR=33						
WCN	**Washoe City**	**4.01**	**345**	⇑P	**Pn**	**08 12 47.8**	**+2.8**
	baz=4.0						
Q11A	**Duckwater**	**4.05**	**32**	⇑P	**Pn**	**08 12 45.4**	**-0.1**
	baz=4.0,SNR=16						
Y13A	**Salome**	**4.10**	**112**	⇓P	**Pn**	**08 12 45.2**	**-1.0**
	baz=4.1,SNR=115						
Y13A				⇓S	**Sn**	**08 13 33.3**	**-0.9**
	baz=4.1						
R12A	**Pony Springs,**	**4.20**	**45**	⇑P	**Pn**	**08 12 47.3**	**-0.2**
	baz=4.2						
S13A	**Holt Ranch, En**	**4.24**	**58**	⇑P	**Pn**	**08 12 48.0**	**-0.1**
	baz=4.2,SNR=28						
V14A	**Boquillas Ranc**	**4.32**	**86**	⇓P	**Pn**	**08 12 49.3**	**0.0**
	baz=4.3,SNR=62						
PAHR	**Pah Rah Range**	**4.34**	**350**	*e*Pn	**Pn**	**08 12 53.4**	**+3.9**
U14A	**Mt Trumbull**	**4.35**	**75**	⇑P	**Pn**	**08 12 49.9**	**+0.3**
	baz=4.3,SNR=19						
W14A	**Seligman**	**4.35**	**91**	⇑P	**Pn**	**08 12 49.5**	**-0.1**
	baz=4.4,SNR=40						
P10A	**Eureka**	**4.46**	**20**	⇑P	**Pn**	**08 12 51.7**	**+0.7**
	baz=4.4						
R13A	**O'Grain Ranch,**	**4.49**	**51**	⇓P	**Pn**	**08 12 51.8**	**+0.2**
	baz=4.5,SNR=32						
Z13A	**Yuma Proving G**	**4.51**	**118**	⇓P	**Pn**	**08 12 50.3**	**-1.6**
	baz=4.5,SNR=263						
Z13A				⇓S	**Sn**	**08 13 44.4**	**0.0**
	baz=4.5						
CCUT	**Cedar City**	**4.58**	**61**	*e*Pn	**Pn**	**08 12 53.3**	**+0.6**
CCUT				*e*Sg	**Sg**	**08 14 07.7**	**-2.8**
Q12A	**Willow Creek R**	**4.59**	**37**	⇓P	**Pn**	**08 12 54.7**	**+1.8**
	baz=4.6						
T14A	**Hurricane**	**4.59**	**68**	⇑P	**Pn**	**08 12 53.6**	**+0.6**
	baz=4.6						
OHCM	**Honcut**	**4.61**	**329**	*e*Pn	**Pn**	**08 12 55.0**	**+1.9**
P11A	**Circle Ranch,**	**4.62**	**26**	⇑P	**Pn**	**08 12 54.6**	**+1.2**
	baz=4.6						
X14A	**Yava**	**4.63**	**100**	⇓P	**Pn**	**08 12 52.9**	**-0.5**
	baz=4.6,SNR=88						
ARUT	**Antelope Range**	**4.63**	**58**	*e*Pn	**Pn**	**08 12 53.9**	**+0.4**
ARUT				*e*Sg	**Sg**	**08 14 09.8**	**-2.4**
113A	**Mohawk Valley,**	**4.67**	**123**	⇓P	**Pn**	**08 12 56.1**	**+2.0**
	baz=4.7						
Y14A	**Wickenburg**	**4.69**	**107**	⇑P	**Pn**	**08 12 53.2**	**-1.1**
	baz=4.7,SNR=55						
Y14A				⇓S	**Sn**	**08 13 48.2**	**-0.5**
	baz=4.7						
BEKR	**Beckwourth**	**4.69**	**341**	⇑P	**Pn**	**08 12 56.1**	**+1.8**
	baz=4.7						
S14A	**Cedar City**	**4.81**	**60**	⇓P	**Pn**	**08 12 56.3**	**+0.4**
	baz=4.8						
P12A	**McGill**	**4.90**	**34**	⇓P	**Pn**	**08 12 57.7**	**+0.5**
	baz=4.9,SNR=21						
Q13A	**Wheeler Ranch,**	**4.96**	**44**	⇓P	**Pn**	**08 12 58.4**	**+0.5**
	baz=4.9,SNR=6.6						
Z14A	**Wintersburg**	**4.96**	**113**	⇓P	**Pn**	**08 12 57.1**	**-0.9**
	baz=5.0,SNR=39						
Z14A				⇓S	**Sn**	**08 13 54.5**	**-0.9**
	baz=5.0						
U15A	**North Rim**	**5.06**	**77**	⇑P	**Pn**	**08 13 00.3**	**+0.9**
	baz=5.1						
BMN	**Battle Mountai**	**5.08**	**10**	*e*Pn	**Pn**	**08 13 00.8**	**+1.2**
BMN				*e*Sg	**Sg**	**08 14 22.4**	**-4.1**
O10A	**Cortez Mining,**	**5.08**	**17**	⇑P	**Pn**	**08 13 00.6**	**+1.0**
	baz=5.1						
V15A	**Kaibab Nationa**	**5.09**	**84**	⇑P	**Pn**	**08 13 00.5**	**+0.7**
	baz=5.1,SNR=133						
T15A	**Red Dirt Ranch**	**5.12**	**70**	⇑P	**Pn**	**08 13 00.9**	**+0.8**
	baz=5.1						
X15A	**Humboldt**	**5.15**	**99**	⇓P	**Pn**	**08 13 00.4**	**-0.2**
	baz=5.2,SNR=54						
O11A	**Cowboy Ranch,**	**5.17**	**24**	⇑P	**Pn**	**08 13 01.8**	**+1.0**
	baz=5.1						
Y15A	**Casa Rosa Ranc**	**5.21**	**105**	⇑P	**Pn**	**08 13 00.8**	**-0.7**
	baz=5.2,SNR=60						
114A	**Black Gap (USA**	**5.30**	**119**	⇑P	**Pn**	**08 13 01.3**	**-1.4**
	baz=5.3,SNR=25						
P13A	**Bates Ranch, G**	**5.32**	**40**	⇓P	**Pn**	**08 13 03.9**	**+0.9**
	baz=5.3						
S15A	**Panguitch**	**5.35**	**63**	⇑P	**Pn**	**08 13 05.0**	**+1.6**
	baz=5.3						
Q14A	**Sevier Lake (B**	**5.42**	**48**	⇑P	**Pn**	**08 13 04.4**	**+0.2**
	baz=5.4,SNR=11						
Z15A	**Gila River Ind**	**5.59**	**111**	⇓P	**Pn**	**08 13 05.8**	**-0.8**
	baz=5.6,SNR=14						
O12A	**Currie**	**5.63**	**30**	⇑P	**Pn**	**08 13 08.0**	**+0.8**
	baz=5.6,SNR=32						
WUAZ	**Wupatki**	**5.74**	**87**	⇑P	**Pn**	**08 13 09.8**	**+1.1**
	baz=5.7						
WUAZ	**Wupatki**	**5.74**	**87**	*e*Pn	**Pn**	**08 13 09.1**	**+0.5**
WUAZ				*e*Sg	**Sg**	**08 14 44.6**	**-3.0**
N11A	**Elko Archery C**	**5.77**	**21**	⇑P	**Pn**	**08 13 09.9**	**+0.8**
	baz=5.7						
115A	**Sonoran Desert**	**5.80**	**116**	⇑P	**Pn**	**08 13 08.7**	**-0.9**
	baz=5.8,SNR=26						
X16A	**Lo Mia Camp, P**	**5.81**	**98**	⇑P	**Pn**	**08 13 09.9**	**+0.3**
	baz=5.8,SNR=26						
MSU	**Marysvale**	**5.86**	**56**	*e*Pn	**Pn**	**08 13 11.7**	**+1.4**
MSU				*e*Sg	**Sg**	**08 14 51.3**	**-0.1**
ELK	**Elko**	**5.86**	**24**	Pn	**Pn**	**08 13 11.7**	**+1.4**
	5.3nm,0.3s,baz=210,slow=9.7,SNR=94						
ELK				Sn	**Sn**	**08 14 18.2**	**+0.6**
	1.1nm,0.3s,baz=214,slow=11,SNR=1.4						
ELK				Lg		08 14 45.9	
	14nm,0.3s,baz=122,slow=9.9,SNR=12						
ELK				LR	LR	08 15 44.5	
	comp=Z,179nm,18.4s,baz=27,slow=42						
ELK	**Elko**	**5.86**	**24**	*e*Pn	**Pn**	**08 13 11.8**	**+1.5**
ELK				*e*Sg	**Sg**	**08 14 45.4**	**-6.2**
Y16A	**Circle Bar Ran**	**5.91**	**103**	⇑P	**Pn**	**08 13 10.9**	**-0.2**
	baz=5.9						
P14A	**Drum Mountains**	**5.93**	**44**	⇓P	**Pn**	**08 13 13.3**	**+1.9**
	baz=5.9						
U16A	**Tuba City**	**5.95**	**81**	⇑P	**Pn**	**08 13 13.3**	**+1.6**
	baz=6.0						
N12A	**Clover Valley,**	**6.03**	**25**	⇑P	**Pn**	**08 13 13.7**	**+1.0**
	baz=6.0,SNR=34						
N12A	**Clover Valley,**	**6.03**	**25**	*e*Pn	**Pn**	**08 13 13.5**	**+0.8**
N12A				*e*Sg	**Sg**	**08 14 53.3**	**-3.5**
WDC	**Whiskeytown Da**	**6.09**	**329**	*e*Pn	**Pn**	**08 13 13.4**	**-0.1**
Z16A	**Peralta Trail,**	**6.13**	**108**	⇓P	**Pn**	**08 13 13.2**	**-0.9**
	baz=6.2,SNR=34						
V17A	**Tonalea, Kykot**	**6.21**	**86**	⇑P	**Pn**	**08 13 16.8**	**+1.7**
	baz=6.2						
M10A	**I.L. Ranch, Tu**	**6.25**	**13**	⇑P	**Pn**	**08 13 17.8**	**+2.0**
	baz=6.2						
116A	**Eloy**	**6.25**	**115**	⇓P	**Pn**	**08 13 15.3**	**-0.5**
	baz=6.3						
M11A	**Holland Ranch,**	**6.33**	**18**	⇓P	**Pn**	**08 13 18.4**	**+1.5**
	baz=6.3						
X17A	**Forest Lakes**	**6.34**	**98**	⇓P	**Pn**	**08 13 18.1**	**+1.1**
	baz=6.3						
T17A	**Navajo Res., N**	**6.34**	**74**	⇑P	**Pn**	**08 13 18.6**	**+1.6**
	baz=6.3						
N13A	**Wendover, West**	**6.34**	**30**	⇑P	**Pn**	**08 13 17.9**	**+0.9**
	baz=6.3						
N13A	**Wendover, West**	**6.34**	**30**	*e*Pn	**Pn**	**08 13 17.6**	**+0.6**
U17A	**Shonto**	**6.38**	**77**	⇑P	**Pn**	**08 13 19.2**	**+1.7**
	baz=6.4						
Y17A	**Roosevelt**	**6.47**	**103**	⇑P	**Pn**	**08 13 19.8**	**+1.1**
	baz=6.5						
DUG	**Dugway**	**6.49**	**41**	*e*Pn	**Pn**	**08 13 20.8**	**+1.7**
	29nm,0.8s						
DUG				*e*Sg	**Sg**	**08 15 08.2**	**-3.6**
M12A	**Wells**	**6.57**	**24**	⇓P	**Pn**	**08 13 21.1**	**+1.0**
	baz=6.5						
MOD	**Modoc**	**6.63**	**348**	*e*Pn	**Pn**	**08 13 23.1**	**+2.2**
MOD				*e*Sg	**Sg**	**08 15 11.1**	**-5.2**
NLU	**North Lily Min**	**6.75**	**46**	*e*Pg	**Pg**	**08 13 48.1**	**-4.6**
	75nm,1.3s						
M13A	**Montello**	**6.79**	**28**	⇑P	**Pn**	**08 13 23.5**	**+0.4**
	baz=6.8						
M13A	**Montello**	**6.79**	**28**	*e*Pn	**Pn**	**08 13 22.4**	**-0.7**
	2.3nm,0.4s						
M13A				*e*Sg	**Sg**	**08 15 17.4**	**-4.0**
Z17A	**San Carlos Hig**	**6.89**	**106**	⇓P	**Pn**	**08 13 24.6**	**+0.1**
	baz=6.9,SNR=13						
TMUT	**Trail Mountain**	**6.91**	**54**	*e*Pn	**Pn**	**08 13 26.6**	**+1.9**
	30nm,0.8s						
V18A	**Ganado**	**6.91**	**85**	⇓P	**Pn**	**08 13 26.8**	**+2.1**
	baz=6.9						
117A	**Oracle**	**6.97**	**112**	⇑P	**Pn**	**08 13 25.2**	**-0.4**
	baz=7.0,SNR=6.2						
U18A	**Rough Rock, Ch**	**6.99**	**79**	⇑P	**Pn**	**08 13 27.7**	**+1.8**
	baz=7.0						
WVOR	**Wild Horse Val**	**7.00**	**359**	*e*Pg	**Pg**	**08 13 53.2**	**-4.2**
	21nm,1.1s						
WVOR				*e*Sg	**Sg**	**08 15 22.3**	**-5.7**
X18A	**Snowflake**	**7.00**	**95**	⇑P	**Pn**	**08 13 27.8**	**+1.8**
	baz=7.0						
L11A	**Cat Creek Ranc**	**7.04**	**16**	⇓P	**Pn**	**08 13 26.2**	**-0.3**
	baz=7.0						
TUC	**Tucson**	**7.06**	**114**	*e*Pn	**Pn**	**08 13 25.8**	**-1.0**
TUC				*e*Sg	**Sg**	**08 15 24.6**	**-5.4**
T18A	**Mexican Hat**	**7.09**	**74**	⇑P	**Pn**	**08 13 29.1**	**+1.8**
	baz=7.1					

YKA	**Yellowknife Ar**	**27.19**	**4**	**P**	**P**	**08 17 29.9**	**+3.0**
YKA				LR	LR	08 28 43.5	
KDAK	**Kodiak Island**	**31.87**	**325**	LR	LR	08 30 20.1	
	comp=Z,78nm,18.2s,MS3.4,baz=105,slow=35						
ROSC	**El Rosal**	**50.71**	**116**	LR	LR	08 41 55.4	
	comp=Z,34nm,20.1s,MS3.4,baz=16,slow=36						
MDJ	**Mudanjiang**	**79.31**	**318**	P	**P**	**08 23 48.8**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,58nm,6.5s						
GERES	**GERESS Array B**	**85.90**	**29**	LR	LR	09 03 43.2	
	comp=Z,32nm,19.7s,MS3.7,baz=287,slow=36						
HHC	**Hu-ho-hao-te**	**91.29**	**324**	*e*P	**P**	**08 24 49.3**	**+0.1**
HHC				PP	PP	08 28 27.4	+1.8
HHC				SKS		08 35 20.3	
HHC				S	S	08 35 47.3	-0.7
HHC				SS	SS	08 41 52.1	+0.7
HHC				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
HHC				pmax	pmax		
	comp=Z,74nm,5.4s						
HHC				LR	LR		
	comp=N,130nm,21.8s,MS4.5						
HHC				LR	LR		
	comp=E,110nm,20.2s,MS4.5						
HHC				LR	LR		
	comp=Z,87nm,21.6s,MS4.2						
WMQ	**Urumqi**	**97.62**	**341**	*e*P	**P**	**08 25 20.0**	**+1.8**
XAN	**Xi'an**	**97.94**	**322**	P	**P**	**08 25 19.2**	**-0.6**
XAN				PP	PP	08 29 16.5	-1.1
XAN				S	S	08 36 45.5	-1.0
XAN				SS	SS	08 43 26.5	+0.1
XAN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.6						
XAN				pmax	pmax		
	comp=Z,11nm,7.9s						

NEIC ***01*** *08:24:48.9±0.6, 5.°95N×130.°69E, h35km, mb4.0/1, Error ellipse: s-maj=19.8km s-min=8.7km az=68.0*
IDC ***01*** *08:24:50.8±5.5, 6.°03S×130.°67E, h52km±49km, mb3.9/9, mb1 4.1/11, mb1mx3.9/18, mbtmp4.0/11, ML4.9/3, Error ellipse: s-maj=56.6km s-min=17.9km az=58.0*
ISCJB ***01*** *08:24:56.0±0.5, 6.°38S±0.°04×130.°61E±0.°06, h128km±7km, mb4.0/9, Error ellipse: s-maj=10.3km s-min=6.1km az=167.8*
DJA ***01*** *08:24:57, 6.°23S×130.°66E, h134km, MLv4.6/7*
ISC 01 08:24:57.0±0.5,**6.°38S**±0.°04×**130.°61E**±0.°06,**h122**km±7km,
n41,σ1°17/41,mb4.0/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.24**	**71**	P	**Pn**	**08 25 34.6**	**+1.0**
TLE				S	**Sn**	**08 26 01.6**	**-0.1**
MSAI	**Masohi**	**3.45**	**331**	P	**Pn**	**08 25 49.0**	**-0.4**
AAI	**Ambon**	**3.60**	**318**	P	**Pn**	**08 25 51.4**	**0.0**
SWI	**Sorong**	**5.52**	**7**	P	**Pn**	**08 26 12.8**	**-4.3**
	258nm,0.7s,9μm1.9nm						
SWI				S	**Sn**	**08 27 07.5**	**-12**
	258nm,0.7s,9μm1.9nm						
LBMI	**Labuha**	**6.50**	**331**	P	**Pn**	**08 26 28.4**	**-1.9**
	145nm,0.8s,0.7nm						
KAKA	**Kakadu**	**6.54**	**164**	*e*P	**Pn**	**08 26 31.6**	**+0.8**
	111nm,0.2s						
KAKA				*e*S	**Sn**	**08 27 42.8**	**-1.3**
KAKA	**Kakadu**	**6.54**	**164**	*e*Pn	**Pn**	**08 26 31.6**	**+0.8**
	315nm,0.4s						
KAKA				*e*Sn	**Sn**	**08 27 44.5**	**+0.5**
KAKA	**Kakadu**	**6.54**	**164**	P	**Pn**	**08 26 31.8**	**+1.0**
	175nm,0.5s,7μm2.3nm						
KDI	**Kendari**	**8.32**	**286**	P	**Pn**	**08 26 56.8**	**+1.9**
KNA	**Kununurra**	**9.48**	**191**	*e*P	**Pn**	**08 27 12.8**	**+2.2**
	155nm,0.2s						
KNA				*e*S	**Sn**	**08 28 53.8**	**-1.6**
KAPI	**Kappang**	**10.89**	**277**	Pn	**Pn**	**08 27 18.7**	**-11**
FITZ	**Fitzroy Crossi**	**12.62**	**202**	*e*P	**Pn**	**08 27 51.6**	**-0.7**
	52nm,0.3s						
FITZ				*e*S	Sx	08 30 01.7	
FITZ	**Fitzroy Crossi**	**12.62**	**202**	P	**Pn**	**08 27 51.6**	**-0.6**
	12nm,0.3s,baz=35,slow=9.9,SNR=125						
FITZ				S	Sx	08 30 04.6	
	1.6nm,0.3s,baz=75,slow=19,SNR=3.3						
FITZ	**Fitzroy Crossi**	**12.62**	**202**	P	**Pn**	**08 27 52.0**	**-0.3**
	70nm,0.6s						
WRAB	**Tennant Creek**	**13.95**	**165**	*e*Pn	**Pn**	**08 28 08.5**	**-1.0**
	13nm,0.5s						
WRAB				*e*Sn	Sx	08 30 36.2	
WRAB	**Tennant Creek**	**13.95**	**165**	P	**Pn**	**08 28 08.2**	**-1.3**
	19nm,0.6s						
WRA	**Warramunga Arr**	**13.96**	**165**	P	**Pn**	**08 28 08.5**	**-1.1**
	3.5nm,0.3s,baz=350,slow=13,SNR=80						
WRA				S	Sx	08 30 37.9	
	4.7nm,0.3s,baz=337,slow=23,SNR=8.4						
WB2	**Warramunga Arr**	**13.96**	**165**	*e*Pn	**Pn**	**08 28 08.6**	**-1.1**
WB2				*e*Sn	Sx	08 30 37.2	
COEN	**Coen**	**14.47**	**122**	*e*P	**Pn**	**08 28 19.2**	**+3.0**
COEN				*e*S	Sx	08 30 44.5	
COEN	**Coen**	**14.47**	**122**	Pn	**Pn**	**08 28 14.1**	**-2.1**
COEN				*e*Sn	Sx	08 30 45.8	
COEN	**Coen**	**14.47**	**122**	P	**Pn**	**08 28 17.0**	**+0.8**
ASAR	**Alice Springs**	**17.47**	**170**	P	**Pn**	**08 28 56.0**	**+2.8**
	2.7nm,0.3s,baz=344,slow=9.3,SNR=78						
ASAR				S	Sx	08 31 57.0	
	0.3nm,0.3s,baz=356,slow=22,SNR=4.1						
ASAR	**Alice Springs**	**17.47**	**170**	P	**Pn**	**08 28 56.0**	**+2.8**
ASAR				S	Sx	08 31 57.0	
MBWA	**Marble Bar**	**18.07**	**215**	*e*P	**P**	**08 29 03.5**	**+4.3**
MBWA				*e*S	Sx	08 32 13.4	
MBWA	**Marble Bar**	**18.07**	**215**	P	**P**	**08 29 01.4**	**+2.2**
	5.0nm,0.4s						
STKA	**Stephens Creek**	**27.36**	**159**	P	**P**	**08 30 34.1**	**+3.3**
	0.8nm,0.3s,mb3.8,baz=353,slow=5.6,SNR=4.4						
PSI	**Prapat**	**32.93**	**285**	P	**P**	**08 31 20.2**	**+0.1**
	3.3nm,0.8s,mb4.2,baz=122,slow=9.5,SNR=3.2						
CMAR	**Chiang Mai Arr**	**39.81**	**309**	P	**P**	**08 32 18.9**	**+0.3**
	1.0nm,0.6s,mb3.8,baz=143,slow=7.8,SNR=7.0						
SONM	**Songino Array**	**58.06**	**341**	P	**P**	**08 34 37.4**	**+0.2**
	0.6nm,0.6s,mb3.8,baz=159,slow=4.5,SNR=3.5						
MKAR	**Makanchi Array**	**68.05**	**326**	P	**P**	**08 35 43.7**	**+0.4**
	4.5nm,0.4s,mb4.7,baz=113,slow=8.3,SNR=49						
MKAR	**Makanchi Array**	**68.05**	**326**	P	**P**	**08 35 43.7**	**+0.4**
ZALV	**Zalesovo Beam**	**71.30**	**333**	P	**P**	**08 36 01.8**	**-1.4**
	1.0nm,0.6s,mb3.8,baz=117,slow=5.2,SNR=4.9						
KURK	**Kurchatov**	**72.31**	**328**	P	**P**	**08 36 09.1**	**-0.2**
	3.1nm,0.6s,mb4.3,baz=124,slow=5.0,SNR=21						
BVAR	**Borovoye Array**	**77.87**	**328**	P	**P**	**08 36 40.5**	**-0.6**
	1.1nm,0.5s,mb3.9,baz=125,slow=9.4,SNR=6.7						
AKTK	**Aktyubinsk**	**83.96**	**322**	P	**P**	**08 37 13.7**	**+0.2**
AKTO	**Aktyubinsk**	**83.96**	**322**	P	**P**	**08 37 13.7**	**+0.2**
	0.5nm,0.3s,mb3.8,baz=101,slow=5.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**129.28**	**282**	PKP	PKPdf	08 43 52.7	+0.6
	0.3nm,0.6s,baz=80,slow=2.3,SNR=4.3						
LVC	**Limon Verde**	**145.42**	**147**	PKPbc	PKPbc	08 44 25.5	+3.9
	2.1nm,0.4s,baz=294,slow=5.0,SNR=6.9						
LVC	**Limon Verde**	**145.42**	**147**	PKPbc	PKPbc	08 44 25.5	+3.9
CPUP	**Villa Florida**	**146.58**	**167**	PKPbc	PKPbc	08 44 27.4	+2.4
	1.9nm,0.8s,baz=176,slow=3.7,SNR=3.7						
LPAZ	**La Paz**	**150.82**	**141**	*e*PKPbc	PKPbc	08 44 39.1	+2.9

DDA ***01*** *08:25:38.8, 40.°48N×29.°09E, h7km±3km, Md2.6*
ISCJB ***01*** *08:25:39.8±0.6, 40.°47N±0.°04×29.°06E±0.°07, h14km±5km, Error ellipse: s-maj=8.3km s-min=6.3km az=174.1*
CSEM ***01*** *08:25:39.6±0.1, 40.°44N×29.°06E, h15km±1km, MD2.4, Error ellipse: s-maj=3.1km s-min=2.4km az=71.0*
ISK ***01*** *08:25:40.3, 40.°49N×29.°12E, h13km, MD2.4*
ISC 01 08:25:39.9±0.6,**40.°46N**±0.°04×**29.°07E**±0.°07,**h17**km±5km,
n18,σ0°64/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.10**	**103**	*e*PG	**Pg**	**08 25 42.9**	**-0.4**
GEMT				*e*SG	**Sg**	**08 25 45.4**	**-0.2**
GEMT	**Gemlik**	**0.10**	**103**	*e*Pg	**Pg**	**08 25 42.9**	**-0.4**
GEMT				*e*Sg	**Sg**	**08 25 45.4**	**-0.2**
YLV	**Yalova**	**0.26**	**65**	*e*PG	**Pg**	**08 25 45.8**	**+0.1**
YLV	**Yalova**	**0.26**	**65**	*e*Pg	**Pg**	**08 25 45.8**	**+0.2**
ISK	**Istanbul-Kandi**	**0.61**	**359**	*e*PG	**Pg**	**08 25 51.9**	**0.0**
ISK				*e*SG	**Sg**	**08 26 00.6**	**+0.5**
ISK	**Istanbul-Kandi**	**0.61**	**359**	*e*Pg	**Pg**	**08 25 51.9**	**0.0**
ISK				*e*Sg	**Sg**	**08 26 00.6**	**+0.5**
KLYT	**Kilyos**	**0.80**	**359**	*e*Pg	**Pg**	**08 25 55.3**	**-0.1**
KLYT	**Kilyos**	**0.80**	**359**	*e*Pg	**Pg**	**08 25 55.3**	**-0.2**
SILT	**Sile**	**0.82**	**32**	*e*PG	**Pg**	**08 25 55.6**	**-0.3**
SILT	**Sile**	**0.82**	**32**	*e*Pg	**Pg**	**08 25 55.7**	**-0.3**
DST	**Dursunbey**	**0.91**	**202**	*e*PG	**Pg**	**08 25 59.5**	**+1.8**
DST	**Dursunbey**	**0.91**	**202**	*e*Pg	**Pg**	**08 25 59.5**	**+1.8**
DURS	**Dursunbey**	**0.97**	**208**	*i* P	**Pb**	**08 25 57.8**	**-0.5**
DURS				*i* S	**Sb**	**08 26 10.0**	**-0.8**
DURS	**Dursunbey**	**0.97**	**208**	*i* P	**Pb**	**08 25 57.8**	**-0.5**
DURS				*i* S	**Sb**	**08 26 10.0**	**-0.8**
GULT	**Gulveren**	**1.10**	**91**	*e*PG	**Pg**	**08 26 00.7**	**-0.6**
GULT	**Gulveren**	**1.10**	**91**	*e*Pg	**Pg**	**08 26 00.7**	**-0.6**
BORA	**Eskisehir**	**1.21**	**118**	*i* P	**Pn**	**08 26 02.0**	**0.0**
BORA				*i* S	**Sb**	**08 26 18.4**	**+0.7**
BORA	**Eskisehir**	**1.21**	**118**	*i* P	**Pn**	**08 26 02.0**	**-0.1**
BORA				*i* S	**Sb**	**08 26 18.4**	**+0.7**

CSEM ***01*** *08:25:42.0, 11.°97N×44.°92E, h5km, ML4.2, After DHMR*
DHMR 01 08:25:42.0±1.5,**11.°97N**×**44.°92E**,**h6**km±6km,**ML4.2,2C,**
Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.81**	**5⇑**	*e*P	Pg	08 25 57.3	-0.3
ADEN				*i* S	Sg	08 26 08.6	+0.6
ADEN				AML	AML	08 26 12.1	
	comp=E,10μm,0.5s						
ADEN	**Aden**	**0.81**	**5⇑**	*e*P	Pg	08 25 57.3	-0.2
ADEN				*i* S	Sg	08 26 08.6	+0.5
	comp=E,5μm,0.5s						
TRBA	**At Turbah**	**1.48**	**328**	*i* P	Pn	08 26 09.6	+0.4
TRBA				*i* S	Sn	08 26 30.9	+2.0
TRBA				AML	AML	08 26 36.9	
	comp=N,4μm,0.7s						
LBOS		**1.92**	**10**	*i* P	Pn	08 26 16.8	+1.5
LBOS				*i* S	Sn	08 26 43.1	+3.3
BDHA	**Al Bayda'**	**2.10**	**18**	*i* P	Pn	08 26 18.6	+0.9
BDHA				AML	AML	08 26 27.1	
	comp=N,2μm,0.6s						
BDHA				*i* S	Sn	08 26 48.8	+4.7
BDHA	**Al Bayda'**	**2.10**	**18**	*i* P	Pn	08 26 18.5	+0.8
	comp=N,1μm,0.6s						
BDHA				*i* S	Sn	08 26 48.8	+4.7
UDYN	**Al 'Udayn**	**2.19**	**335**	*i* P	Pn	08 26 20.4	+1.4
UDYN				*i* S	Sn	08 26 50.7	+4.2
UDYN				AML	AML	08 26 57.2	
	comp=E,3μm,0.7s						
DHBB	**Dhamar BB**	**2.64**	**349**	*i* P	Pn	08 26 28.5	+3.4
DHBB				*i* S	Sn	08 27 02.9	+5.3
DHBB	**Dhamar BB**	**2.64**	**349**	*i* P	Pn	08 26 28.5	+3.3
DHBB				*i* S	Sn	08 27 02.9	+5.4
ZUQR	**Zugar Island**	**2.91**	**314**	*i* P	Pn	08 26 30.6	+1.7
ZUQR				*i* S	Sn	08 27 10.4	+6.2
ZUQR				AML	AML	08 27 24.9	
	comp=N,1μm,0.7s						
ZUQR	**Zugar Island**	**2.91**	**314**	*i* P	Pn	08 26 30.6	+1.7
ZUQR				*i* S	Sn	08 27 10.4	+6.1
	comp=N,554nm,0.7s						
HAJJ	**Hajjah**	**3.92**	**341**	*i* P	Pn	08 26 45.8	+2.9
HAJJ				*i* S	Sn	08 27 35.4	+6.1
HAJJ				AML	AML	08 27 59.3	
	comp=Z,1μm,0.7s						
HAJJ	**Hajjah**	**3.92**	**341**	*i* P	Pn	08 26 45.8	+2.9
HAJJ				*i* S	Sn	08 27 35.4	+6.1
	comp=Z,737nm,0.7s						

DDA ***01*** *08:40:17.8, 39.°43N×33.°05E, h9km±2km, Md3.4*
ISCJB ***01*** *08:40:18.1±0.7, 39.°41N±0.°03×33.°05E±0.°03, h3km±5km, Error ellipse: s-maj=4.2km s-min=3.9km az=175.5*
CSEM ***01*** *08:40:18.1±0.2, 39.°42N×33.°04E, h0km±1km, MD3.4, Error ellipse: s-maj=3.7km s-min=3.2km az=154.0*
ISK ***01*** *08:40:18.3, 39.°43N×33.°01E, h9km, MD3.3*
ISC 01 08:40:18.6±0.5,**39.°42N**±0.°03×**33.°04E**±0.°03,**h4**km±5km,
n49,σ0°74/67,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.14**	**29**	*i* P	**Pg**	**08 40 20.9**	**-0.5**
BBAL				*i* S	**Sg**	**08 40 23.2**	**-0.1**
BBAL	**Bala**	**0.14**	**29**	*i* P	**Pg**	**08 40 20.9**	**-0.5**
BBAL				*i* S	**Sg**	**08 40 23.2**	**-0.1**
LOD	**Lodumlu**	**0.52**	**336**	*e*PG	**Pg**	**08 40 28.2**	**-0.3**
LOD				*e*SG	**Sg**	**08 40 36.2**	**+1.0**
LOD	**Lodumlu**	**0.52**	**336**	*e*Pg	**Pg**	**08 40 28.2**	**-0.3**
LOD				*e*Sg	**Sg**	**08 40 36.2**	**+1.0**
KIZT	**Kizilcal**	**1.05**	**240**	*e*PG	**Pg**	**08 40 38.8**	**+0.2**
KIZT	**Kizilcal**	**1.05**	**240**	*e*Pg	**Pg**	**08 40 38.8**	**+0.2**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**08 40 37.2**	**-1.6**
CDAG				*i* S	**Sg**	**08 40 52.0**	**-0.4**
CDAG	**Cicekdag**	**1.05**	**78**	*i* P	**Pg**	**08 40 37.2**	**-1.6**
CDAG				*i* S	**Sg**	**08 40 52.0**	**-0.5**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**08 40 38.4**	**-1.5**
ELDT				*i* S	**Sg**	**08 40 54.3**	**-0.1**
ELDT	**Eldivan**	**1.11**	**16**	*i* P	**Pg**	**08 40 38.4**	**-1.5**
ELDT				*i* S	**Sg**	**08 40 54.3**	**-0.1**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**08 40 39.8**	**-0.8**
KDHN				*i* S	**Sg**	**08 40 55.8**	**+0.4**
KDHN	**Kadinhani**	**1.15**	**219**	*i* P	**Pg**	**08 40 39.8**	**-0.7**
KDHN				*i* S	**Sg**	**08 40 55.8**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.17**	**272**	*e*PN	**Pn**	**08 40 40.9**	**-0.9**
SVRH				*e*SN	**Sn**	**08 40 57.1**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.17**	**272**	*e*Pn	**Pn**	**08 40 40.9**	**-0.8**
SVRH				*e*Sn	**Sn**	**08 40 57.1**	**-1.0**
CANT	**Cankiri**	**1.27**	**21**	*e*PN	**Pn**	**08 40 42.7**	**-0.4**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*PN	**Pn**	**08 40 43.2**	**0.0**
SULT	**Sultanhani-AKS**	**1.27**	**163**	*e*Pn	**Pn**	**08 40 43.2**	**+0.1**
LADK	**Ladik-KONYA**	**1.32**	**204**	*e*PN	**Pn**	**08 40 43.5**	**-0.3**
LADK	**Ladik-KONYA**	**1.32**	**204**	*e*Pn	**Pn**	**08 40 43.5**	**-0.3**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**08 40 44.4**	**-0.2**
SGKT				*i* S	**Sg**	**08 41 04.6**	**+1.7**
SGKT	**Sivrigoynuk**	**1.38**	**327**	*i* P	**Pn**	**08 40 44.4**	**-0.2**
SGKT				*i* S	**Sg**	**08 41 04.6**	**+1.7**
CORM	**Corum**	**1.45**	**58**	*e*PN	**Pn**	**08 40 44.6**	**-0.9**
CORM	**Corum**	**1.45**	**58**	*e*Pn	**Pn**	**08 40 44.6**	**-0.9**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pg**	**08 40 48.4**	**+0.1**
AVNT				*i* S	**Sg**	**08 41 10.1**	**+1.7**
AVNT	**Avonos**	**1.55**	**114**	*i* P	**Pg**	**08 40 48.4**	**+0.1**
AVNT				*i* S	**Sg**	**08 41 10.1**	**+1.6**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*PN	**Pn**	**08 40 46.7**	**-0.4**
KONT	**Konya--Tatoy**	**1.56**	**200**	*e*Pn	**Pn**	**08 40 46.7**	**-0.4**
ESKT	**Eskisehir**	**1.69**	**274**	*i* P	**Pb**	**08 40 50.0**	**-0.2**
ESKT				*i* S	**Sb**	**08 41 12.6**	**+0.6**
SEYT	**Eskypehyr**	**1.69**	**274**	*i* P	**Pb**	**08 40 50.0**	**-0.3**
SEYT				*i* S	**Sb**	**08 41 12.6**	**+0.6**
MDU	**Mudurnu**	**1.75**	**307**	*e*PN	**Pn**	**08 40 49.3**	**-0.3**
MDU	**Mudurnu**	**1.75**	**307**	*e*Pn	**Pn**	**08 40 49.3**	**-0.4**
YOZ	**Yozgat**	**1.78**	**82**	*e*PN	**Pn**	**08 40 50.3**	**+0.2**
YOZ	**Yozgat**	**1.78**	**82**	*e*Pn	**Pn**	**08 40 50.3**	**+0.2**
TOS	**Tosya**	**1.79**	**25**	*e*PN	**Pn**	**08 40 50.6**	**+0.4**
TOS	**Tosya**	**1.79**	**25**	*e*Pn	**Pn**	**08 40 50.6**	**+0.4**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**08 40 55.7**	**+0.8**
BALT	**Daday**	**2.13**	**7**	*i* P	**Pn**	**08 40 55.7**	**+0.8**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**	**08 40 55.8**	**+0.1**
GULT	**Gulveren**	**2.19**	**298**	*e*Pn	**Pn**	**08 40 55.8**	**+0.1**
BNN	**Bunyan**	**2.26**	**104**	*e*PN	**Pn**	**08 40 57.4**	**+0.8**
BNN	**Bunyan**	**2.26**	**104**	*e*Pn	**Pn**	**08 40 57.4**	**+0.7**
BYBT	**Boyabat**	**2.44**	**32**	*e*PN	**Pn**	**08 40 59.4**	**+0.2**
BYBT	**Boyabat**	**2.44**	**32**	*e*Pn	**Pn**	**08 40 59.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**2.51**	**220**	*e*PN	**Pn**	**08 41 00.7**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.51**	**220**	*e*Pn	**Pn**	**08 41 00.7**	**+0.5**
PINB	**Pinarbasi**	**2.73**	**105**	*i* P	**Pn**	**08 41 03.6**	**+0.5**
PINB	**Pinarbasi**	**2.73**	**105**	*i* P	**Pn**	**08 41 03.6**	**+0.5**
SVSK	**Karacayir**	**3.10**	**79**	*e*PN	**Pn**	**08 41 09.1**	**+0.9**
SVSK	**Karacayir**	**3.10**	**79**	*e*Pn	**Pn**	**08 41 09.1**	**+0.9**

IDC 01 08:48:07.4±64.0,**22.°72S**×**176.°02W**,**h0**km,**mb3.8/3,**
mb1 3.9/3,mb1mx3.7/15,mbtmp3.8/3,MS3.2/1,Ms1 3.2/1,
ms1mx2.6/18,Error ellipse: s-maj=1192.0km
s-min=168.8km az=87.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.57**	**199**	LR	LR	08 57 46.6	
	comp=Z,93nm,21.0s,baz=112,slow=35						
STKA	**Stephens Creek**	**38.55**	**247**	P	P	08 55 32.1	+0.1
	3.3nm,1.0s,baz=105,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**45.85**	**259**	P	P	08 56 31.2	-0.4
	0.2nm,0.4s,baz=96,slow=7.6,SNR=6.9						
WRA	**Warramunga Arr**	**46.16**	**264**	P	P	08 56 34.0	0.0
	0.6nm,0.3s,baz=103,slow=8.3,SNR=33						

DDA ***01*** *09:00:48.9, 37.°31N×28.°06E, h7km±5km, Md2.8*
ISK ***01*** *09:00:48.9, 37.°33N×28.°01E, h10km, MD2.8*
ISCJB ***01*** *09:00:49.1±0.5, 37.°32N±0.°03×28.°04E±0.°04, h7km±7km, Error ellipse: s-maj=6.2km s-min=4.4km az=30.5*
CSEM ***01*** *09:00:49.3±0.1, 37.°32N×28.°04E, h10km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.9km az=9.0*
ISC 01 09:00:49.5±0.5,**37.°32N**±0.°03×**28.°04E**±0.°03,**h10**km±6km,
n28,σ0°47/42,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.21**	**263**	*e*PG	**Pg**	**09 00 53.2**	**-0.6**
MLSB				*e*SG	**Sg**	**09 00 56.7**	**-0.1**
MLSB	**Milas**	**0.21**	**263**	*e*Pg	**Pg**	**09 00 53.2**	**-0.7**
MLSB				*e*Sg	**Sg**	**09 00 56.7**	**-0.2**
YER	**Yerkesik**	**0.27**	**134**	*e*PG	**Pg**	**09 00 55.2**	**+0.3**
YER	**Yerkesik**	**0.27**	**134**	*e*Pg	**Pg**	**09 00 55.2**	**+0.3**
AYDN	**Tasoluk**	**0.36**	**339**	*i* P	**Pg**	**09 00 56.4**	**-0.2**
AYDN				*i* S	**Sg**	**09 01 01.3**	**-0.2**
AYDN	**Tasoluk**	**0.36**	**339**	*i* P	**Pg**	**09 00 56.4**	**-0.2**
AYDN				*i* S	**Sg**	**09 01 01.3**	**-0.2**
BDRM	**Kayabasi**	**0.54**	**242**	*i* P	**Pg**	**09 00 59.8**	**-0.2**
BDRM				*i* S	**Sg**	**09 01 08.4**	**+1.4**
BDRM	**Kayabasi**	**0.54**	**242**	*i* P	**Pg**	**09 00 59.8**	**-0.2**
BDRM				*i* S	**Sg**	**09 01 08.4**	**+1.3**
TURN	**Turunc**	**0.64**	**135**	*i* P	**Pg**	**09 01 00.7**	**-1.0**
TURN				*i* S	**Sg**	**09 01 10.2**	**+0.2**
TURN	**Turunc**	**0.64**	**135**	*i* P	**Pg**	**09 01 00.7**	**-1.0**
TURN				*i* S	**Sg**	**09 01 10.2**	**+0.1**
BODT	**Bodrum**	**0.64**	**246**	*e*PG	**Pg**	**09 01 01.4**	**-0.5**
BODT				*e*SG	**Sg**	**09 01 10.4**	**+0.2**
BODT	**Bodrum**	**0.64**	**246**	*e*Pg	**Pg**	**09 01 01.4**	**-0.4**
BODT				*e*Sg	**Sg**	**09 01 10.4**	**+0.2**
DAT	**Datca**	**0.70**	**212**	*e*PG	**Pg**	**09 01 02.8**	**-0.2**
DAT	**Datca**	**0.70**	**212**	*e*Pg	**Pg**	**09 01 02.8**	**-0.1**
GCAM	**G?zelcaml?**	**0.74**	**301**	*i* P	**Pg**	**09 01 03.5**	**-0.3**
GCAM				*i* S	**Sg**	**09 01 14.0**	**+0.4**
GCAM	**G?zelcaml?**	**0.74**	**301**	*i* P	**Pg**	**09 01 03.5**	**-0.3**
GCAM				*i* S	**Sg**	**09 01 14.0**	**+0.4**
DNZL	**Cakiroluk**	**0.88**	**65**	*i* P	**Pg**	**09 01 06.7**	**+0.3**
DNZL				*i* S	**Sg**	**09 01 18.5**	**+0.7**
DNZL	**Cakiroluk**	**0.88**	**65**	*i* P	**Pg**	**09 01 06.7**	**+0.3**
DNZL				*i* S	**Sg**	**09 01 18.5**	**+0.6**
FETY	**Fethiye**	**1.08**	**129**	*e*PN	**Pn**	**09 01 10.6**	**0.0**
FETY	**Fethiye**	**1.08**	**129**	*e*Pn	**Pn**	**09 01 10.6**	**0.0**
IZM	**Izmir**	**1.24**	**330**	*e*PN	**Pn**	**09 01 12.9**	**+0.1**
IZM	**Izmir**	**1.24**	**330**	*e*Pn	**Pn**	**09 01 13.0**	**+0.2**
KULA	**Kula-Manisa**	**1.29**	**22**	*e*PN	**Pn**	**09 01 13.4**	**0.0**
KULA	**Kula-Manisa**	**1.29**	**22**	*e*Pn	**Pn**	**09 01 13.5**	**0.0**
BLCB	**Balcova**	**1.32**	**324**	*e*PN	**Pn**	**09 01 13.7**	**-0.3**
BLCB	**Balcova**	**1.32**	**324**	*e*Pn	**Pn**	**09 01 13.7**	**-0.3**
BALY	**Balya**	**2.44**	**352**	*i* P	**Pn**	**09 01 29.5**	**+0.2**
BALY	**Balya**	**2.44**	**352**	*i* P	**Pn**	**09 01 29.5**	**+0.2**

CSEM ***01*** *09:14:04.6±0.4, 37.°09N×27.°99E, h15km, MD2.7, Error ellipse: s-maj=11.1km s-min=8.5km az=156.0*
ISK ***01*** *09:14:04.1, 37.°09N×27.°96E, h16km, MD2.7*
ISC 01 09:13:59.5±0.9,**37.°13N**±0.°07×**28.°32E**±0.°08,**h24**km±19km,
n14,σ0°92/18,Turkey

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC

MVM	**Montagne Vaucl**	**1.70 161**	*e*P	**Pn**	**09 35 13.6**	**-0.8**
MVM			*e*S	**Sn**	**09 35 34.8**	**-1.0**
MCLT	**Moule a Chique**	**2.50 168**	*e*P	**Pn**	**09 35 26.1**	**+0.7**
MCLT			*e*S	**Sn**	**09 35 55.5**	**-0.1**
MCLT	**Moule a Chique**	**2.50 168**	*e*P	**Pn**	**09 35 26.1**	**+0.7**
MCLT			*e*S	**Sn**	**09 35 55.5**	**-0.1**
SVB	**Belmont**	**2.89 176**	*e*P	**Pn**	**09 35 30.7**	**-0.1**
SVB			*e*S	**Sb**	**09 36 11.5**	**-0.2**
SVB	**Belmont**	**2.89 176**	*e*P	**Pn**	**09 35 30.7**	**-0.1**
SVB			*e*S	**Sb**	**09 36 11.5**	**-0.2**

DJA 01 09:49:44,9″.50S×112″.82E, h30km, MLv3.8/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.37**	**27**	P	Pn	09 50 05.5	-1.5
GMJI				S	Sn	09 50 25.1	+1.0
SJI	**Sawahan**	**2.04**	**329**	P	Pn	09 50 17.3	+1.0
PCJI	**Pacitan**	**2.08**	**308**	P	Pn	09 50 16.8	0.0
NBBI	**Negara**	**2.10**	**58**	P	Pn	09 50 17.7	+0.5
SRBI	**Singaraja**	**2.75**	**59**	P	Pn	09 50 26.7	+0.6
UGM	**Wanagama**	**2.77**	**305**	P	Pn	09 50 26.6	+0.3
KHKI	**Kahang-Kahang**	**2.98**	**68**	P	Pn	09 50 29.8	+0.6

*IDC **01** 10:21:43.5±3.6, 19″.94N×146″.57E, h59km±34km, mb3.3/4, mb1 3.8/7, mb1mx3.4/25, mbtmp3.8/7, ML4.5/3, Error ellipse: s-maj=53.2km s-min=14.8km az=90.0*

ISC 01 10:21:44.2±2.5, 19.97N±0.06×146.5E±0.4, h63km±22km, n8, σ1°08/10, mb3.4/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.53**	**194**	P	**Pn**	**10 23 18.2**	**+0.6**
	9.8nm,0.3s,baz=20,slow=22,SNR=6.7						
GUMO				S	**Sn**	**10 24 31.2**	**+0.4**
	11nm,0.3s,baz=35,slow=23,SNR=4.0						
CBIJ	**Chichi jima**	**8.11**	**332**	P	**Pn**	**10 23 37.9**	**-1.4**
	27nm,0.3s,baz=269,slow=22,SNR=32						
CBIJ				S	**Sn**	**10 25 04.5**	**-5.0**
	2.0nm,0.3s,baz=114,slow=23,SNR=2.8						
MJAR	**Matsushiro Arr**	**18.03**	**338**	P	**Pn**	**10 25 50.1**	**-0.2**
	0.6nm,0.3s,baz=152,slow=10,SNR=12						
MAT	**Matsushiro**	**18.03**	**338**	P	**Pn**	**10 25 52.9**	**+2.5**
KSRS	**Korea Array**	**23.76**	**321**	P	**P**	**10 26 52.0**	**+1.2**
	1.5nm,0.6s,mb3.6,baz=148,slow=9.5,SNR=9.7						
WRA	**Warramunga Arr**	**41.41**	**197**	P	**P**	**10 29 23.6**	**-1.0**
	0.8nm,0.9s,mb3.3,baz=22,slow=8.8,SNR=6.7						
ASAR	**Alice Springs**	**45.07**	**196**	P	**P**	**10 29 53.1**	**-0.9**
	0.2nm,0.5s,mb3.2,baz=12,slow=6.6,SNR=8.1						
YKA	**Yellowknife Ar**	**76.53**	**28**	P	**P**	**10 33 27.5**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=285,slow=5.8,SNR=9.0						

IDC 01 10:41:15.3±48.0, 4″.57S×103″.98E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/21, mbtmp3.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/40, Error ellipse: s-maj=860.3km s-min=229.0km az=143.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.90**	**325**	LR	LR	10 47 47.1	
	comp=Z,105nm,19.0s,baz=238,slow=44						
WRA	**Warramunga Arr**	**33.28**	**120**	P	P	10 47 54.7	-0.1
	0.5nm,0.4s,baz=292,slow=8.7,SNR=20						
ASAR	**Alice Springs**	**34.54**	**126**	P	P	10 48 05.8	0.0
	0.3nm,0.3s,baz=296,slow=7.7,SNR=13						
STKA	**Stephens Creek**	**44.49**	**132**	P	P	10 49 28.7	+0.1
	2.0nm,0.5s,baz=326,slow=9.2,SNR=5.0						

*IDC **01** 10:45:26.6±3.2, 20″.14S×168″.63E, h0km, mb4.4/6, mb1 4.5/6, mb1mx4.2/16, mbtmp4.4/6, MS3.3/1, Ms1 3.2/1, ms1mx2.3/22, Error ellipse: s-maj=97.3km s-min=35.5km az=134.0*

*NOU **01** 10:45:28.2±1.8, 20″.17S×168″.89E, h30km, MD3.2, ML3.2*

ISC 01 10:45:29.8±4.0, 20.3S±0.3×168.7E±0.4, h24km±34km, n12, σ0°90/14, mb4.3/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.50**	**223**	*e*S	**Sn**	**10 46 39.2**	**+0.4**
DZM	**Mont Dzumac**	**2.75**	**231**	*e*P	**Pn**	**10 46 11.9**	**-0.5**
DZM				*e*S	**Sn**	**10 46 43.9**	**-1.0**
DZM				AMP		10 46 54.4	
	comp=Z,776nm,1.6s						
LASL	**Noumea**	**2.78**	**227**	*e*P	**Pn**	**10 46 13.2**	**+0.3**
LASL				*e*S	**Sn**	**10 46 44.4**	**-1.4**
NOUC	**Port Laguerre**	**2.87**	**232**	*e*P	**Pn**	**10 46 14.1**	**0.0**
NOUC				*e*S	**Sn**	**10 46 50.0**	**+2.1**
NOUC				AMP		10 46 53.9	
	comp=Z,37nm,1.1s						
CTA	**Charters Tower**	**21.10**	**267**	P	**P**	**10 50 17.1**	**+4.3**
	comp=Z,3.7nm,0.5s,mb3.9,baz=92,slow=9.5,SNR=6.1						
STKA	**Stephens Creek**	**26.87**	**239**	P	**P**	**10 51 10.3**	**+1.5**
	comp=Z,6.4nm,1.2s,mb4.0,baz=60,slow=14,SNR=2.9						
STKA				LR	LR	11 01 06.1	
	comp=Z,65nm,20.7s,baz=26,slow=35						
WRA	**Warramunga Arr**	**32.26**	**265**	P	**P**	**10 51 56.1**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.2,baz=91,slow=8.5,SNR=38						
ASAR	**Alice Springs**	**32.41**	**258**	P	**P**	**10 51 58.0**	**0.0**
	comp=Z,4.6nm,0.6s,mb4.5,baz=76,slow=8.4,SNR=102						
FITZ	**Fitzroy Crossi**	**40.67**	**266**	P	**P**	**10 53 08.9**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.4,baz=122,slow=10,SNR=17						
NWAO	**Narrogin (SRO)**	**47.30**	**244**	P	**P**	**10 54 01.1**	**-0.5**
	comp=Z,6.9nm,0.9s,mb4.6,baz=95,slow=9.2,SNR=4.7						
SONM	**Songino Array**	**87.80**	**323**	P	**P**	**10 58 16.5**	**-0.3**
	comp=Z,1.6nm,0.9s,mb4.2,baz=123,slow=5.3,SNR=6.4						
GERES	**GERESS Array B**	**145.22**	**331**	PKPbc	PKPbc	11 05 04.7	-0.3
	comp=Z,0.7nm,0.7s,baz=59,slow=2.6,SNR=9.0						

*NNC **01** 10:50:56.7±2.1, 44″.29N×81″.84E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=30.3km s-min=10.6km az=127.0*

BJI 01 10:51:03.0, 44.26N×81.81E, h20km, ML2.6/6, 5C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.56**	**7**	⇑Pn	Pn	10 51 41.8	-1.4
	3.6nm,0.3s,baz=190,slow=12,SNR=161						
MK31				⇑Lg		10 52 16.6	
	6.2nm,0.3s,baz=181,slow=27,SNR=15						
TKM2	**Tokmak 2**	**4.71**	**256**	⇑Pn	Pn	10 52 09.9	-3.0
	4.1nm,0.8s						
TKM2				⇑Lg		10 53 26.2	
	6.9nm,0.7s						
KURBB	**Kurchatov Arra**	**6.74**	**342**	⇑Lg		10 54 28.4	
	1.7nm,0.6s						

*HLW **01** 11:20:53.1, 37″.25N×22″.07E, h33km±21km, MI3.5*

*ISCJB **01** 11:20:55.2±0.6, 36″.74N±0″.02×22″.04E±0″.03, h4km±4km, mb3.7/12, Error ellipse: s-maj=4.2km s-min=3.0km az=155.7*

*CSEM **01** 11:20:57.0±0.2, 36″.80N×22″.12E, h7km, ML4.2/5, Error ellipse: s-maj=5.2km s-min=4.0km az=64.0*

*NEIC **01** 11:20:57.2, 36″.86N×22″.17E, h13km, mb3.8/1, ML3.5(ATH), After ATH.*

*ATH **01** 11:20:57.2, 36″.86N×22″.17E, h13km±1km, MD3.6/14, ML3.5*

*THE **01** 11:20:58.2, 36″.89N×22″.15E, h0km±2km, ML4.2/5, Error ellipse: s-maj=2.3km s-min=1.2km az=181.0*

*IDC **01** 11:21:01.1±1.9, 36″.86N×22″.22E, h47km±22km, mb3.6/13, mb1 3.7/16, mb1mx3.6/30, mbtmp3.6/16, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/35, Error ellipse: s-maj=20.8km s-min=14.5km az=7.0*

ISC 01 11:20:56.9±0.5, 36.79N±0°02×22.10E±0°03, h6km±3km, n146, σ1°29/181, mb3.7/12, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.30**	**290**	*e*PG	**Pg**	**11 21 03.8**	**+1.0**
PYL				*e*SB	**Sg**	**11 21 09.4**	**+2.6**
PYL	**PYLOS**	**0.30**	**290**	P	**Pg**	**11 21 03.7**	**+0.9**
PYL				S	**Sg**	**11 21 09.5**	**+2.7**
PYL	**PYLOS**	**0.30**	**290**	*e*Pg	**Pg**	**11 21 03.8**	**+1.0**
PYL				S	**Sg**	**11 21 09.5**	**+2.7**
ITM	**Ithomi**	**0.41**	**341**	*e*PB	**Pg**	**11 21 04.8**	**-0.1**
ITM				*e*SB	**Sg**	**11 21 10.5**	**+0.3**
ITM	**Ithomi**	**0.41**	**341**	P	**Pg**	**11 21 04.7**	**-0.2**
ITM				S	**Sg**	**11 21 10.6**	**+0.4**
ITM	**Ithomi**	**0.41**	**341**	P	**Pg**	**11 21 04.7**	**-0.2**
ITM				*e*Sb	**Sg**	**11 21 10.5**	**+0.3**
VLX	**Vlachokerasia**	**0.62**	**21**	*e*PB	**Pg**	**11 21 07.9**	**-1.0**
VLX				*e*SB	**Sg**	**11 21 15.6**	**-1.4**
VLX	**Vlachokerasia**	**0.62**	**21**	P	**Pg**	**11 21 07.8**	**-1.1**
VLX				S	**Sg**	**11 21 15.7**	**-1.3**
VLX	**Vlachokerasia**	**0.62**	**21**	*e*Pb	**Pg**	**11 21 07.9**	**-1.0**
VLX				*e*Sb	**Sg**	**11 21 15.6**	**-1.4**
VLI	**Veliai**	**0.68**	**96**	*e*PB	**Pg**	**11 21 09.6**	**-0.4**
VLI				*e*SB	**Sg**	**11 21 18.4**	**-0.4**
VLI	**Veliai**	**0.68**	**96**	*e*Pb	**Pg**	**11 21 09.6**	**-0.4**
VLI				*e*Sb	**Sg**	**11 21 18.4**	**-0.4**
KYTH	**Kithira**	**0.91**	**124**	*e*PB	**Pg**	**11 21 14.6**	**+0.2**
KYTH	**Kithira**	**0.91**	**124**	*e*Pb	**Pg**	**11 21 14.6**	**+0.2**
DID	**Didima**	**1.16**	**52**	*e*PG	**Pg**	**11 21 17.3**	**-1.8**
DID	**Didima**	**1.16**	**52**	P	**Pg**	**11 21 17.4**	**-1.7**
DID	**Didima**	**1.16**	**52**	P	**Pg**	**11 21 17.4**	**-1.7**
GUR	**Goura**	**1.16**	**10**	*e*PG	**Pg**	**11 21 17.4**	**-1.8**
GUR	**Goura**	**1.16**	**10**	P	**Pg**	**11 21 17.3**	**-1.9**
GUR	**Goura**	**1.16**	**10**	*e*Pg	**Pg**	**11 21 17.4**	**-1.8**
RLS	**Riolos of Patr**	**1.36**	**339**	*e*PB	**Pb**	**11 21 22.4**	**-0.4**
RLS				*e*SN	**Sn**	**11 21 41.0**	**+0.2**
RLS	**Riolos of Patr**	**1.36**	**339**	*e*Pb	**Pb**	**11 21 22.4**	**-0.4**
RLS				*e*Sn	**Sn**	**11 21 41.0**	**+0.2**
LTK	**Loutraki**	**1.41**	**29**	*e*PG	**Pn**	**11 21 21.9**	**-1.2**
LTK	**Loutraki**	**1.41**	**29**	P	**Pn**	**11 21 21.8**	**-1.3**
LTK				S	**Sb**	**11 21 42.9**	**+1.0**
LTK	**Loutraki**	**1.41**	**29**	P	**Pn**	**11 21 21.8**	**-1.3**
LAKA	**Lakka**	**1.45**	**356**	P	**Pn**	**11 21 22.7**	**-1.0**
LAKA				S	**Sb**	**11 21 43.7**	**+0.7**
LAKA	**Lakka**	**1.45**	**356**	P	**Pn**	**11 21 22.7**	**-1.0**
LAKA				S	**Sb**	**11 21 43.7**	**+0.7**
NAIG	**Nisos Aigina**	**1.47**	**49**	*e*PB	**Pn**	**11 21 23.6**	**-0.4**
NAIG	**Nisos Aigina**	**1.47**	**49**	*e*Pb	**Pn**	**11 21 23.6**	**-0.4**
UPR	**University Cam**	**1.51**	**351**	P	**Pn**	**11 21 23.8**	**-0.7**
UPR	**University Cam**	**1.51**	**351**	P	**Pn**	**11 21 23.8**	**-0.7**
TRIZ	**Trizonia**	**1.57**	**359**	P	**Pn**	**11 21 24.9**	**-0.4**
TRIZ				S	**Sn**	**11 21 46.8**	**+0.8**
TRIZ	**Trizonia**	**1.57**	**359**	P	**Pn**	**11 21 24.9**	**-0.4**
TRIZ				S	**Sn**	**11 21 46.8**	**+0.8**
KALE	**Kalithea**	**1.60**	**1**	P	**Pn**	**11 21 25.2**	**-0.5**
KALE				S	**Sn**	**11 21 46.2**	**-0.4**
KALE	**Kalithea**	**1.60**	**1**	P	**Pn**	**11 21 25.2**	**-0.5**
KALE				S	**Sn**	**11 21 46.2**	**-0.4**
EFP	**Efpalio**	**1.64**	**355**	*e*PG	**Pn**	**11 21 26.5**	**+0.2**
EFP	**Efpalio**	**1.64**	**355**	P	**Pn**	**11 21 26.4**	**+0.1**
EFP	**Efpalio**	**1.64**	**355**	P	**Pn**	**11 21 26.4**	**+0.1**
KFL	**Anninata**	**1.68**	**322**	P	**Pn**	**11 21 27.5**	**+0.7**
VLY	**Voula,Athens**	**1.72**	**51**	P	**Pn**	**11 21 28.2**	**+0.8**
VLY	**Voula,Athens**	**1.72**	**51**	P	**Pn**	**11 21 28.2**	**+0.8**
ATH	**Athens Observa**	**1.75**	**47**	*e*PB	**Pn**	**11 21 27.9**	**+0.1**
ATH	**Athens Observa**	**1.75**	**47**	*e*Pb	**Pn**	**11 21 27.9**	**+0.1**
ATHU	**Athens Univers**	**1.79**	**48**	P	**Pn**	**11 21 28.0**	**-0.3**
ATHU	**Athens Univers**	**1.79**	**48**	P	**Pn**	**11 21 28.0**	**-0.3**
VLS	**Valsamata**	**1.83**	**320**	*e*PN	**Pn**	**11 21 30.3**	**+1.4**
VLS	**Valsamata**	**1.83**	**320**	P	**Pn**	**11 21 29.9**	**+1.0**
VLS				S	**Sg**	**11 21 54.9**	**-0.8**
VLS	**Valsamata**	**1.83**	**320**	P	**Pn**	**11 21 29.9**	**+1.0**
VLS	**Valsamata**	**1.83**	**320**	*e*Pn	**Pn**	**11 21 30.3**	**+1.4**
VLS				S	**Sg**	**11 21 54.9**	**-0.8**
PTL	**Penteli**	**1.89**	**48**	*e*PN	**Pn**	**11 21 29.4**	**-0.3**
PTL	**Penteli**	**1.89**	**48**	*e*Pn	**Pn**	**11 21 29.4**	**-0.3**
LKR	**Lokris**	**1.99**	**21**	P	**Pn**	**11 21 32.4**	**+1.3**
LKR	**Lokris**	**1.99**	**21**	P	**Pn**	**11 21 31.4**	**+0.3**
LKR	**Lokris**	**1.99**	**21**	P	**Pn**	**11 21 31.4**	**+0.3**
KARN	**Karanos**	**2.02**	**133**	P	**Pg**	**11 21 34.5**	**-1.2**
KARN	**Karanos**	**2.02**	**133**	P	**Pg**	**11 21 34.5**	**-1.2**
ATAL	**Atalanti**	**2.04**	**21**	P	**Pn**	**11 21 32.0**	**+0.3**
ATAL				S	**Sn**	**11 21 58.5**	**+1.1**
ATAL	**Atalanti**	**2.04**	**21**	P	**Pn**	**11 21 32.0**	**+0.3**
ATAL				S	**Sn**	**11 21 58.5**	**+1.1**
VAM	**Vamos**	**2.19**	**128**	*e*PN	**Pn**	**11 21 35.9**	**+2.0**
VAM	**Vamos**	**2.19**	**128**	*e*Pn	**Pn**	**11 21 35.9**	**+2.0**
AGG	**Agios Georgios**	**2.23**	**5**	P	**Pn**	**11 21 36.2**	**+1.7**
AGG				S	**Sn**	**11 22 01.9**	**-0.5**
AGG	**Agios Georgios**	**2.23**	**5**	P	**Pn**	**11 21 36.2**	**+1.7**
AGG				S	**Sn**	**11 22 01.9**	**-0.5**
GVD	**Gavdhos**	**2.53**	**140**	*e*Pn	**Pn**	**11 21 41.8**	**+3.3**
GVD	**Gavdhos**	**2.53**	**140**	*e*Pn	**Pn**	**11 21 41.8**	**+3.3**
THR6	**Thira Island,**	**2.69**	**98**	P	**Pn**	**11 21 43.1**	**+2.3**
THR6	**Thira Island,**	**2.69**	**98**	P	**Pn**	**11 21 43.1**	**+2.3**
IDI	**Anoyia**	**2.72**	**123**	P	**Pn**	**11 21 41.7**	**+0.7**
	3.4nm,0.3s,baz=298,slow=13,SNR=23						
IDI	**Anoyia**	**2.72**	**123**	P	**Pn**	**11 21 41.7**	**+0.6**
APE	**Apeiranthos**	**2.77**	**83**	P	**Pn**	**11 21 42.5**	**+0.7**
APE	**Apeiranthos**	**2.77**	**83**	P	**Pn**	**11 21 42.5**	**+0.7**
THL	**Klokotos Trika**	**2.77**	**359**	*e*PB	**Pn**	**11 21 43.2**	**+1.4**
THL	**Klokotos Trika**	**2.77**	**359**	P	**Pn**	**11 21 44.3**	**+2.5**
THL	**Klokotos Trika**	**2.77**	**359**	*e*Pb	**Pn**	**11 21 43.2**	**+1.4**
SIVA	**Sivas**	**2.83**	**128**	P	**Pn**	**11 21 48.2**	**+5.6**
LAST	**Lasithi**	**3.19**	**120**	P	**Pn**	**11 21 49.0**	**+1.4**
LAST				S	**Sn**	**11 22 29.4**	**+3.5**
LAST	**Lasithi**	**3.19**	**120**	P	**Pn**	**11 21 49.0**	**+1.4**
PAIG	**Paliouri**	**3.37**	**21**	P	**Pn**	**11 21 50.5**	**+0.5**
PAIG	**Paliouri**	**3.37**	**21**	P	**Pn**	**11 21 50.5**	**+0.5**
KEK	**Kerkira**	**3.43**	**329**	P	**Pn**	**11 21 52.6**	**+1.7**
KEK	**Kerkira**	**3.43**	**329**	P	**Pn**	**11 21 52.6**	**+1.7**
PLG	**Polygyros**	**3.73**	**16**	P	**Pn**	**11 21 57.1**	**+2.1**
PLG	**Polygyros**	**3.73**	**16**	P	**Pn**	**11 21 57.1**	**+2.1**
OUR	**Ouranopolis**	**3.83**	**22**	P	**Pn**	**11 21 56.6**	**+0.2**
OUR	**Ouranopolis**	**3.83**	**22**	P	**Pn**	**11 21 56.6**	**+0.2**
LIA	**Limnos Island**	**3.94**	**37**	P	**Pn**	**11 22 00.2**	**+2.3**
LIA	**Limnos Island**	**3.94**	**37**	P	**Pn**	**11 22 00.2**	**+2.3**
KARP	**Karpathos**	**4.28**	**105**	P	**Pn**	**11 22 06.0**	**+3.4**
KARP	**Karpathos**	**4.28**	**105**	P	**Pn**	**11 22 06.0**	**+3.4**
SRS	**Serrai**	**4.47**	**15**	P	**Pn**	**11 22 06.2**	**+1.0**
SRS	**Serrai**	**4.47**	**15**	P	**Pn**	**11 22 06.2**	**+1.0**
TIP	**Timpagrande**	**4.84**	**301**	P	**Pn**	**11 22 11.5**	**+1.2**
TIP	**Timpagrande**	**4.84**	**301**	P	**Pn**	**11 22 11.5**	**+1.2**
ARG	**Arkhangelos**	**4.89**	**95**	P	**Pn**	**11 22 14.8**	**+3.8**
ARG	**Arkhangelos**	**4.89**	**95**	P	**Pn**	**11 22 14.8**	**+3.8**
LTBQ	**Tobruq**	**4.96**	**162**	*i* P	**Pn**	**11 22 13.1**	**+1.2**
	SNR=23						
LTBQ				*e*S	**Sn**	**11 23 08.8**	**-0.8**
	SNR=23						
CEL	**Celeste**	**5.14**	**288**	*e*Pn	**Pn**	**11 22 14.3**	**-0.1**
	29nm,0.7s						
CEL				*e*Sn	**Sn**	**11 23 12.3**	**-1.8**
CEL	**Celeste**	**5.14**	**288**	*e*Pn	**Pn**	**11 22 14.3**	**-0.1**
	29nm,0.7s						
CEL				*e*Sn	**Sn**	**11 23 12.3**	**-1.8**
TAR1	**Taranto**	**5.30**	**316**	*e*Pn	**Pn**	**11 22 16.7**	**+0.1**
SG1	**Sgolgore (BA)**	**5.85**	**315**	*e*Pn	**Pn**	**11 22 24.0**	**-0.1**
SLUM		**5.88**	**153**	P	**Pn**	**11 22 24.6**	**0.0**
	baz=154						
SLUM				AMP		11 23 00.0	
	comp=N,20μm,0.6s,logA/T=4.5,baz=154						
SLUM		**5.88**	**153**	P	**Pn**	**11 22 24.6**	**0.0**
LJBD	**Adjabya**	**6.07**	**196**	*i* P	**Pn**	**11 22 27.8**	**+0.6**
	SNR=23						
LJBD				*e*S	**Sn**	**11 23 35.6**	**-1.4**
	SNR=23						
VAE	**Valguarnera**	**6.18**	**279**	P	**Pn**	**11 22 33.2**	**+4.6**
	comp=N,2.3nm,0.3s,baz=100,slow=9.3,SNR=4.0						
VAE				S	**Sn**	**11 23 43.1**	**+3.5**
	comp=N,4.2nm,0.3s,baz=149,slow=20,SNR=4.0						
VAE				LR	LR	11 25 13.8	
	comp=N,53nm,19.1s,baz=142,slow=40						
VAE	**Valguarnera**	**6.18**	**279**	P	**Pn**	**11 22 33.2**	**+4.6**
VAE				S	**Sn**	**11 23 43.1**	**+3.5**
VAE				LR	LR	11 25 13.8	
VAE	**Valguarnera**	**6.18**	**279**	S	**Sn**	**11 23 43.1**	**+3.5**
HMAT	**Matruh**	**7.04**	**142**	P	**Pn**	**11 22 39.7**	**-0.8**
	baz=144						
HMAT	**Matruh**	**7.04**	**142**	P	**Pn**	**11 22 39.7**	**-0.8**
SWA2		**8.04**	**159**	P	**Pn**	**11 22 54.2**	**0.0**
	baz=159						
SWA2				AMP		11 24 00.0	
	comp=E,30μm,0.5s,logA/T=4.8,baz=159						
SWA2				S	**Sn**	**11 24 20.6**	**-4.9**
	baz=159						
SWA2		**8.04**	**159**	P	**Pn**	**11 22 54.2**	**0.0**
SWA2				S	**Sn**	**11 24 20.6**	**-4.8**
BR131	**Keskin Array S**	**9.54**	**69**	Pn	**Pn**	**11 23 18.1**	**+3.4**
	comp=E,6.0nm,1.2s						
BRTR	**Keskin Array B**	**9.54**	**69**	P	**Pn**	**11 23 17.8**	**+3.0**
	comp=E,0.1nm,0.3s,baz=256,slow=15,SNR=5.6						
PGF	**Pioggiola**	**11.61**	**304**	*e*P	**Pn**	**11 23 34.3**	**-8.8**
	comp=E,34nm,1.1s						
PGF	**Pioggiola**	**11.61**	**304**	*e*P	**Pn**	**11 23 34.3**	**-8.8**
	comp=E,17nm,1.1s						
DAVOX	**Davos/Dischmat**	**13.50**	**321**	P	**Pn**	**11 24 14.0**	**+5.1**
	comp=E,0.2nm,0.3s,baz=176,slow=10,0,SNR=4.3						
GERES	**GERESS Array B**	**13.52**	**336**	P	**Pn**	**11 24 10.7**	**+1.5**
	comp=E,0.1nm,0.3s,baz=151,slow=14,SNR=3.2						
GERES	**GERESS Array B**	**13.52**	**336**	P	**Pn**	**11 24 10.7**	**+1.5**
GERES	**GERESS Array B**	**13.52**	**336**	P	**Pn**	**11 24 10.7**	**+1.6**
HINF	**Hinteralfeld**	**15.73**	**319**	*e*P	**Pn**	**11 24 35.5**	**-3.5**
CLL	**Collm**	**15.90**	**339**	*es*P	**Pn**	**11 24 44.0**	**+2.9**
CDF	**Champ du Feu**	**15.90**	**322**	*e*P	**Pn**	**11 24 35.0**	**-6.2**
HAU	**Haudompre**	**16.12**	**319**	*e*P	**Pn**	**11 24 41.0**	**-2.9**
	comp=E,12nm,0.9s						
HAU	**Haudompre**	**16.12**	**319**	*e*P	**Pn**	**11 24 41.0**	**-2.9**
	comp=E,6.3nm,0.9s						
ESDC	**Sonseca Array**	**20.65**	**286**	P	**P**	**11 25 36.9**	**-0.3**
	comp=E,2.2nm,0.8s,baz=79,slow=10,SNR=6.5						
ESDC	**Sonseca Array**	**20.65**	**286**	P	**P**	**11 25 36.8**	**-0.4**
MDT	**Midelt**	**22.26**	**268**	P	**P**	**11 25 54.2**	**-0.3**
	comp=E,1.9nm,0.8s,mb3.5,baz=185,slow=6.5,SNR=3.6						
MDT	**Midelt**	**22.26**	**268**	P	**P**	**11 25 54.2**	**-0.4**
HFS	**Hagfors**	**23.98**	**350**	P	**P**	**11 26 09.6**	**-2.2**
	comp=E,3.6nm,0.6s,mb4.0,baz=156,slow=11,SNR=12						
FINES	**FINESS Array B**	**24.80**	**5**	P	**P**	**11 26 17.5**	**-1.9**
	comp=E,1.5nm,0.9s,mb3.5,baz=168,slow=29,SNR=3.8						
FINES	**FINESS Array B**	**24.80**	**5**	P	**P**	**11 26 17.5**	**-1.9**
NB2	**NORSAR Subarra**	**25.23**	**348**	P	**P**	**11 26 21.3**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.2,baz=156,slow=9.3						
NB2	**NORSAR Subarra**	**25.23**	**348**	P	**P**	**11 26 21.3**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.2,SNR=7.6						
NOA	**NORSAR Array B**	**25.23**	**348**	P	**P**	**11 26 21.4**	**-1.9**
	comp=Z,1.9nm,0.8s,mb3.7,baz=147,slow=9.8,SNR=7.8						
NOA	**NORSAR Array B**	**25.23**	**348**	P	**P**	**11 26 21.4**	**-1.9**
EKA	**Eskdalemuir Ar**	**25.28**	**325**	P	**P**	**11 26 24.2**	**+0.4**
	comp=Z,2.0nm,0.8s,mb3.7,baz=138,slow=6.8,SNR=4.4						
EKA	**Eskdalemuir Ar**	**25.28**	**325**	P	**P**	**11 26 24.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**29.81**	**223**	P	**P**	**11 27 04.6**	**-0.1**
	comp=Z,0.6nm,0.8s,mb3.4,baz=29,slow=6.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**29.81**	**223**	P	**P**	**11 27 04.6**	**-0.1**
ARCES	**ARCESS Array B**	**32.85**	**2**	P	**P**	**11 27 29.1**	**-1.9**
	comp=Z,1.7nm,0.7s,mb4.1,baz=193,slow=9.8,SNR=10						
ARCES	**ARCESS Array B**	**32.85**	**2**	P	**P**	**11 27 29.1**	**-1.9**
MKAR	**Makanchi Array**	**44.98**	**58**	P	**P**	**11 29 10.2**	**-2.5**
	comp=Z,0.6nm,0.5s,mb3.7,baz=280,slow=7.2,SNR=6.4						
ZAA0	**Zalesovo Array**	**45.70**	**47**	*e*P	**P**	**11 29 15.4**	**-3.0**
ZALV	**Zalesovo Beam**	**45.70**	**47**	P	**P**	**11 29 15.7**	**-2.7**
	comp=Z,1.8nm,0.4s,mb4.3,baz=272,slow=8.9,SNR=8.9						
YKA	**Yellowknife Ar**	**75.11**	**341**	P	**P**	**11 32 38.3**	**-1.1**
	comp=Z,0.3nm,0.8s,mb3.3,baz=33,slow=5.3,SNR=6.9						
YKA	**Yellowknife Ar**	**75.11**	**341**	P	**P**	**11 32 38.3**	**-1.1**
KSRS	**Korea Array**	**79.23**	**51**	P	**P**	**11 33 00.8**	**-2.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=312,slow=4.0,SNR=5.0						
MJAR	**Matsushiro Arr**	**86.05**	**46**	P	**P**	**11 33 37.1**	**-1.4**
	comp=Z,0.6nm,0.6s,mb4.0,baz=303,slow=2.8,SNR=3.7						

LSZ	**Lusaka**	**97.96 205**	LR	LR	13 25 50.5	
	comp=Z,97nm,19.1s,baz=146,slow=33					
BRTR	**Keskin Array B**	**149.12 232**	PKPbc	PKPbc	12 52 21.9	+0.3
	0.2nm,0.3s,baz=164,slow=4.8,SNR=2.9					

*NEIC **01** 12:35:42.2, 21°.93S×66°.38W, h304km, MG4.4(GUC), After GUC.*

GUC 01 12:35:42.2±0.6, 21°.93S×66°.38W, h304km±11km, ML4.4, 5C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.44**	**253**	⇑*i*P	Pn	12 36 35.7	+2.7
LVC				*i*S	S	12 37 16.9	+3.5
LVC	**Limon Verde**	**2.44**	**253**	⇑*i*P	Pn	12 36 35.7	+2.7
LVC				*i*S	S	12 37 16.9	+3.5
LVC				AML	AML	12 37 22.2	
	comp=E,66nm,0.2s						
PB04	**Plate Boundary**	**2.90**	**263**	⇑*i*P	Pn	12 36 46.9	+10
PB04				*i*S	S	12 37 35.9	+15
PB04				AML	AML	12 37 37.5	
	comp=N,326nm,0.4s						
PECH	**Pedro de Valdi**	**3.12**	**257**	*e*P	Pn	12 36 42.8	+3.4
PECH				*i*S	S	12 37 28.6	+3.5
PECH				AML	AML	12 37 30.0	
	comp=N,640nm,0.5s						
MACH	**Maria Elena**	**3.14**	**264**	*e*P	Pn	12 36 43.3	+3.8
MACH				*i*S	S	12 37 29.5	+4.0
HMBC	**Humberston**	**3.66**	**296**	⇑*i*P	Pn	12 36 48.3	+3.4
HMBC				*i*S	S	12 37 38.8	+3.6
MNMC	**Miæe Miæ**	**4.10**	**312**	⇑*i*P	Pn	12 36 53.9	+4.1
MNMC				*i*S	S	12 37 48.6	+4.7
ANCH	**Antofagasta**	**4.11**	**244**	*i*P	Pn	12 36 52.5	+2.8
ANCH				*i*S	S	12 37 44.6	+0.8
LPAZ	**La Paz**	**5.85**	**343**	*e*Pn	Pn	12 37 10.1	+0.2
	comp=N,1.2nm,0.4s						
LPAZ				*e*Sn	S	12 38 23.4	+2.8
LCO	**Las Campanas**	**8.06**	**208**	Pn	Pn	12 37 36.5	+0.1

*CSEM **01** 13:20:37.5, 12°.05N×44°.82E, h6km, ML3.8, After DHMR*

DHMR 01 13:20:37.5±2.5, 12°.05N×44°.82E, h7km±10km, ML3.8, 4C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.74**	**13**	⇑*i*P	Pg	13 20 51.8	+0.1
ADEN				*i*S	Sg	13 21 02.1	+0.8
ADEN				AML	AML	13 21 07.2	
	comp=E,11μm,0.5s						
ADEN	**Aden**	**0.74**	**13**	⇑*i*P	Pg	13 20 51.8	+0.1
ADEN				*i*S	Sg	13 21 02.1	+0.8
	comp=E,6μm,0.5s						
TRBA	**At Turbah**	**1.35**	**330**	⇑*i*P	Pn	13 21 03.1	+0.2
TRBA				*i*S	Sb	13 21 20.9	+0.1
TRBA				AML	AML	13 21 30.5	
	comp=N,1μm,0.5s						
LBOS		**1.85**	**13**	⇑*i*P	Pn	13 21 10.3	+0.6
LBOS				*i*S	Sn	13 21 36.5	+3.0
BDHA	**Al Bayda'**	**2.04**	**21**	*i*P	Pn	13 21 12.6	+0.2
BDHA				AML	AML	13 21 20.5	
	comp=N,990nm,0.4s						
BDHA				*i*S	Sn	13 21 43.1	+4.9
BDHA	**Al Bayda'**	**2.04**	**21**	*i*P	Pn	13 21 12.6	+0.2
BDHA				*i*S	Sn	13 21 43.1	+4.9
UDYN	**Al 'Udayn**	**2.07**	**337**	*i*P	Pn	13 21 15.4	+2.6
UDYN				*i*S	Sn	13 21 43.0	+4.1
UDYN				AML	AML	13 21 55.0	
	comp=E,588nm,0.9s						
DHBB	**Dhamar BB**	**2.54**	**351**	*i*P	Pn	13 21 21.9	+2.8
DHBB				*i*S	Sn	13 21 56.3	+6.0
DHBB	**Dhamar BB**	**2.54**	**351**	*i*P	Pn	13 21 21.9	+2.8
DHBB				*i*S	Sn	13 21 56.3	+6.0
ZUQR	**Zugar Island**	**2.78**	**314**	*i*P	Pn	13 21 24.1	+1.6
ZUQR				*i*S	Sn	13 22 03.4	+7.1
ZUQR				AML	AML	13 22 26.0	
	comp=N,262nm,0.5s						
ZUQR	**Zugar Island**	**2.78**	**314**	*i*P	Pn	13 21 24.1	+1.6
ZUQR				*i*S	Sn	13 22 03.4	+7.0
	comp=N,131nm,0.5s						
HAJJ	**Hajjah**	**3.81**	**342**	*i*P	Pn	13 21 39.8	+3.1
HAJJ				*i*S	Sn	13 22 27.0	+5.2
HAJJ				AML	AML	13 22 47.0	
	comp=Z,370nm,0.5s						
HAJJ	**Hajjah**	**3.81**	**342**	*i*P	Pn	13 21 39.8	+3.1
HAJJ				*i*S	Sn	13 22 27.0	+5.2
	comp=Z,185nm,0.5s						

*ISCJB **01** 13:28:04.9±0.8, 38°.75N±0°.06×122°.8W±0°.1, h10km, Error ellipse: s-maj=12.6km s-min=6.7km az=153.3*
*NEIC **01** 13:28:04.8, 38°.83N×122°.79W, h2km, ML3.2(NCEDC), After NCEDC.*
NEIC Felt [III] at Middletown. Also felt at Dana Point, Healdsburg, Hopland, Kelseyville, Milpitas, Saint Helena, Sebastopol and Tehachapi.
*IDC **01** 13:28:07.8±3.0, 38°.68N×122°.63W, h0km, mb1 3.5/5, mb1mx3.3/26, mbtmp3.1/5, ML3.2/5, Error ellipse: s-maj=36.2km s-min=9.3km az=42.0*

ISC 01 13:28:05.7±0.9, 38°.75N±0°.06×122°.9W±0°.1, h10km, n12, σ1°.26/16, 1C, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPS	**Hopland**	**0.28**	**330**	⇑*i*P	Pg	13 28 10.2	-1.1
MCCM	**Marconi Confer**	**0.60**	**179**	*e*P	Pg	13 28 18.6	+1.2
WDC	**Whiskeytown Da**	**1.85**	**8**	*e*Pn	Pn	13 28 38.2	+0.8
CMB	**Columbia Colle**	**2.10**	**109**	*e*Pn	Pn	13 28 38.9	-2.0
SAO	**San Andreas Ge**	**2.29**	**150**	*e*Pn	Pn	13 28 41.1	-2.4
YBH	**Yreka Blue Hor**	**2.98**	**3**	Pn	Pn	13 28 57.5	+4.4
	0.5nm,0.3s,baz=178,slow=11,SNR=3.5						
YBH				Pg	Pg	13 29 03.1	+0.3
	0.7nm,0.3s,baz=181,slow=7.7,SNR=15						
NVAR	**Mina Array Bea**	**3.61**	**94**	Pn	Pn	13 29 01.8	+0.1
	0.7nm,0.3s,baz=270,slow=14,SNR=14						
NVAR				Pg	Pg	13 29 08.1	-6.8
	2.3nm,0.3s,baz=267,slow=17,SNR=57						
NVAR				Lg		13 29 54.5	
	0.9nm,0.3s,baz=265,slow=34,SNR=2.7						
NVAR	**Mina Array Bea**	**3.61**	**94**	Pn	Pn	13 29 01.8	+0.1
NVAR				Pg	Pg	13 29 08.1	-6.8
NVAR				Lg		13 29 54.5	
ISA	**Isabella**	**4.69**	**130**	*e*Pn	Pn	13 29 17.2	+0.8
ISA				*e*Sn	Sn	13 30 10.4	-0.4
ELK	**Elko**	**6.23**	**69**	Pn	Pn	13 29 37.8	+0.1
	0.1nm,0.3s,baz=242,slow=13,SNR=5.1						
PDAR	**Pinedale Array**	**10.88**	**64**	Pn	Pn	13 30 45.5	+4.1
	0.1nm,0.3s,baz=249,slow=11,SNR=9.5						
TXAR	**Lajitas Array**	**18.47**	**115**	P	Pn	13 32 24.0	+2.3
	0.1nm,0.3s,baz=300,slow=10.0,SNR=7.3						

*IDC **01** 13:31:37.9±0.9, 4°.87N×94°.26E, h0km, mb4.1/14, mb1 4.2/15, mb1mx4.0/27, mbtmp4. 1/15, ML4.4/1, Error ellipse: s-maj=36.3km s-min=15.2km az=53.0*
*NEIC **01** 13:31:42.6±0.6, 4°.71N×94°.09E, h35km, mb4.4/4, Error ellipse: s-maj=15.8km s-min=8.4km az=48.0*
*ISCJB **01** 13:31:44.9±2.5, 4°.97N±0°.10×94°.4E±0°.1, h65km±21km, mb4.1/19, Error ellipse: s-maj=23.0km s-min=11.4km az=143.4*

ISC 01 13:31:46.7±2.2, 4°.93N±0°.10×94°.4E±0°.1, h66km±19km, n29, σ0°.95/30, mb4.0/19, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.99**	**115**	Pn	Pn	13 32 59.1	+0.1
	2.3nm,0.3s,baz=343,slow=12,SNR=8.2						
KULM	**Kulim**	**6.24**	**86**	*e*Pn	Pn	13 33 15.8	-0.4
	12nm,0.6s						
KULM				*e*Sn	Sn	13 34 24.8	-1.3
CM31	**Chiang Mai Arr**	**14.16**	**18**	*e*Pn	Pn	13 35 07.7	+3.6
	8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.16**	**18**	Pn	Pn	13 35 02.9	-1.2
	0.6nm,0.3s,baz=213,slow=13,SNR=26						
CHTO	**Chiang Mai**	**14.50**	**17**	*e*Pn	Pn	13 35 10.9	+2.4
	8.5nm,0.9s						
KSM	**Kuching**	**16.25**	**102**	*e*Pn	Pn	13 35 32.2	+1.3
	2.0nm,0.5s						
TWG	**Pinlang**	**31.31**	**53**	*e*P	P	13 38 03.3	+2.4
FITZ	**Fitzroy Crossi**	**38.38**	**127**	P	P	13 39 00.2	-1.6
	1.3nm,0.7s,mb3.9,baz=258,slow=3.8,SNR=5.7						
MK31	**Makanchi Array**	**43.00**	**348**	*e*P	P	13 39 39.7	+0.2
MKAR	**Makanchi Array**	**43.00**	**348**	P	P	13 39 39.8	+0.3
	3.2nm,0.5s,mb4.3,baz=167,slow=7.9,SNR=36						
SONM	**Songino Array**	**43.97**	**12**	P	P	13 39 46.8	-0.5
	1.4nm,0.6s,mb3.9,baz=195,slow=8.2,SNR=9.7						
KSRS	**Korea Array**	**44.55**	**39**	P	P	13 39 51.8	-0.3
	0.4nm,0.6s,mb3.3,baz=232,slow=7.4,SNR=2.8						
WRA	**Warramunga Arr**	**46.39**	**123**	P	P	13 40 07.8	+0.9
	6.4nm,0.8s,mb4.4,baz=302,slow=9.1,SNR=35						
WRAB	**Tennant Creek**	**46.40**	**123**	*e*P	P	13 40 07.0	0.0
	14nm,1.0s,mb4.6						
KURK	**Kurchatov**	**47.52**	**346**	P	P	13 40 15.3	+0.1
	2.0nm,0.8s,mb4.0,baz=166,slow=7.5,SNR=14						
KURK	**Kurchatov**	**47.52**	**346**	P	P	13 40 15.3	+0.1
ASAR	**Alice Springs**	**47.87**	**128**	P	P	13 40 19.3	+0.9
	1.2nm,0.6s,mb3.9,baz=298,slow=7.8,SNR=18						
ZAA0	**Zalesovo Array**	**49.49**	**353**	*e*P	P	13 40 30.1	-0.3
ZALV	**Zalesovo Beam**	**49.49**	**353**	P	P	13 40 30.5	+0.2
	3.1nm,0.5s,mb4.5,baz=183,slow=6.2,SNR=23						
BVAR	**Borovoye Array**	**51.85**	**342**	P	P	13 40 46.7	-1.4
	0.9nm,0.6s,mb4.0,baz=141,slow=7.3,SNR=6.3						
ABKAR	**Akbulak array**	**52.93**	**332**	*e*P	P	13 40 56.1	-0.1
	1.4nm,0.5s,mb4.2						
BRTR	**Keskin Array B**	**64.55**	**312**	P	P	13 42 16.8	-0.3
	0.8nm,0.8s,mb3.6,baz=148,slow=9.6,SNR=4.8						
TIXI	**Tiksi**	**70.06**	**11**	*e*P	P	13 42 50.5	-0.8
	4.5nm,0.8s,mb4.3						
JOF	**Joensuu**	**73.60**	**335**	*e*p	P	13 43 12.4	-0.3
	0.5nm,0.4s,mb3.6						
FINES	**FINESS Array B**	**75.42**	**333**	P	P	13 43 23.2	0.0
	1.3nm,0.4s,mb4.0,baz=105,slow=5.3,SNR=20						
KAF	**Kangasniemi**	**75.52**	**333**	*e*p	P	13 43 22.5	-1.3
	1.2nm,0.4s,mb4.0						
ARCES	**ARCESS Array B**	**78.11**	**340**	P	P	13 43 38.6	+0.4
	2.0nm,0.8s,mb3.9,baz=89,slow=7.3,SNR=3.5						
GERES	**GERESS Array B**	**80.19**	**319**	P	P	13 43 50.0	0.0
	1.1nm,0.8s,mb3.8,baz=82,slow=7.0,SNR=5.2						
SPITS	**Spitsbergen Ar**	**82.76**	**348**	P	P	13 44 04.0	+1.0
	1.4nm,0.6s,mb4.0,baz=116,slow=9.5,SNR=8.0						

*BJI **01** 13:51:47.4, 5°.46N×126°.15E, h124km, mB4.7/11, mb4.7/17*
*ISCJB **01** 13:51:50.7±0.5, 5°.85N±0°.04×126°.12E±0°.06, h129km±3km, mb4.3/53, Error ellipse: s-maj=10.2km s-min=5.3km az=162.5*
*MOS **01** 13:51:50.9±1.1, 5°.93N×125°.92E, h129km, mb4.5/16, Error ellipse: s-maj=19.5km s-min=8.4km az=106.6*
*NEIC **01** 13:51:51.9±0.9, 5°.91N×126°.05E, h124km±8km, mb4.6/19, Error ellipse: s-maj=12.1km s-min=6.1km az=81.0*
*MAN **01** 13:51:51, 5°.76N×126°.09E, h113km, mb5.3, ML4.2, MS4.5*
*DJA **01** 13:51:52, 5°.89N×126°.37E, h101km, mb4.7/10*
*IDC **01** 13:51:52.8±0.7, 5°.85N×125°.91E, h132km±5km, mb4.0/17, mb1 4.1/18, mb1mx4.0/24, mbtmp4.0/18, Error ellipse: s-maj=21.7km s-min=9.1km az=78.0*

ISC 01 13:51:51.8±0.5, 5°.84N±0°.04×126°.11E±0°.06, h124km±3km, h123km±2.4km: pP-P, n114, σ1°.21/118, mb4.4/53, 12C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.18**	**282**	⇑*e*P	Pn	13 52 13.9	-2.0
GSPH				*i*S	Sn	13 52 31.8	-2.5
DAV	**Davao City (W)**	**1.33**	**337**	P	Pn	13 52 17.7	+0.1
	828nm,0.3s,baz=174,slow=1.3,SNR=83						
DAV				S	Sn	13 52 38.3	+1.1
	899nm,0.3s,baz=293,slow=22,SNR=9.7						
DAV	**Davao City (W)**	**1.33**	**337**	*e*Pn	Pn	13 52 17.6	0.0
DAV				*e*Sn	Sn	13 52 35.8	-1.5
DMPH	**Davao City--Mi**	**1.38**	**334**	⇑*e*P	Pn	13 52 17.9	-0.2
DMPH				*e*S	Sn	13 52 35.6	-2.5
KCP	**Kidapawan**	**1.54**	**319**	⇑*e*P	Px	13 52 32.0	
KCP				*i*S	Sn	13 52 44.2	+2.8
CTBH	**Cotabato--PC H**	**2.31**	**307**	⇓*e*P	Pn	13 52 28.8	-0.5
CTBH				*i*S	Sn	13 52 58.2	+0.2
CGP	**Cagayan de Oro**	**2.96**	**332**	*e*P	Pn	13 52 36.5	-1.2
CGP				*i*S	Sn	13 53 14.6	+1.7
DCPH	**Dipolog City**	**3.86**	**315**	⇑*e*P	Pn	13 52 51.3	+1.7
IPIL	**Ipil**	**4.01**	**299**	⇑*i*P	Pn	13 52 52.6	+1.0
ZMPH	**Zamboanga City**	**4.17**	**286**	⇓*e*P	Pn	13 52 53.8	+0.1
TBP	**Tagbilaran**	**4.43**	**330**	*e*P	Pn	13 52 57.3	+0.2
SNPH	**Sibulan**	**4.50**	**321**	*e*P	Pn	13 53 01.3	+3.2
LLP	**Lapu-Lapu**	**4.93**	**335**	⇓*e*P	Pn	13 53 04.4	+0.6
LLP				*e*S	Sn	13 54 03.1	+3.1
RCP	**Roxas**	**6.59**	**330**	⇑*e*P	Pn	13 53 28.1	+1.9
KALP	**Kalibo**	**6.90**	**328**	*e*P	Sn	13 54 39.4	-8.1
KAPI	**Kappang**	**12.51**	**211**	P	Pn	13 54 46.1	+0.6
	0.6nm,0.3s,baz=24,slow=9.5,SNR=12						
TPUB	**Ta-pu**	**18.15**	**344**	*e*P	P	13 55 53.2	-1.4
	9.6nm,0.6s						
YHNB	**Yeheng**	**19.27**	**347**	*e*P	P	13 56 05.9	-0.9
	5.3nm,0.5s						
KAKA	**Kakadu**	**19.47**	**161**	*e*P	P	13 56 08.7	-0.4
	18nm,0.5s						
KAKA	**Kakadu**	**19.47**	**161**	*e*P	P	13 56 08.3	-0.8
	57nm,0.5s						
GUMO	**Guam**	**20.02**	**66**	*e*P	P	13 56 12.9	-2.1
GUMO				pmax	pmax		
	comp=Z,167nm,1.3s						
GUMO	**Guam**	**20.02**	**66**	*e*P	P	13 56 12.8	-2.1
	comp=Z,13nm,0.5s,mb4.5						
KNA	**Kununurra**	**21.61**	**173**	*e*P	P	13 56 32.8	+0.8
	comp=Z,13nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**23.79**	**181**	*e*P	P	13 56 54.1	+0.9
	comp=Z,6.5nm,0.4s,mb4.3						
FITZ	**Fitzroy Crossi**	**23.79**	**181**	P	P	13 56 53.2	0.0
	comp=Z,3.5nm,0.5s,mb3.9,baz=9.7,slow=9.0,SNR=22						
FITZ	**Fitzroy Crossi**	**23.79**	**181**	*e*P	P	13 56 53.0	-0.3
	comp=Z,3.1nm,0.5s,mb3.9						
COEN	**Coen**	**25.95**	**139**	*e*P	P	13 57 12.1	-0.8
CBIJ	**Chichi jima**	**26.10**	**34**	P	P	13 57 11.3	-2.8
	comp=Z,31nm,0.5s,mb5.0,baz=284,slow=16,SNR=5.8						
WRAB	**Tennant Creek**	**26.86**	**163**	*e*P	P	13 57 23.8	+2.8
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
WRAB	**Tennant Creek**	**26.86**	**163**	*e*P	P	13 57 23.8	+2.9
	comp=Z,9.3nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**26.87**	**163**	P	P	13 57 21.4	+0.4
	comp=Z,4.0nm,0.5s,mb4.2,baz=345,slow=10,SNR=38						
WB2	**Warramunga Arr**	**26.87**	**163**	*e*P	P	13 57 23.7	+2.6
NJ2	**Nanjing**	**26.95**	**346**	*e*P	P	13 57 22.2	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
WHN	**Wuhan**	**26.95**	**337**	P	Px	13 57 35.4	
GYA	**Guiyang**	**27.66**	**320**	P	P	13 57 28.4	+0.3
GYA				pP	pP	13 57 55.3	+0.6
GYA				sP	sP	13 58 12.0	+2.9
GYA				PP	PP	13 58 23.7	-9.2
GYA				PcP	PcP	14 00 43.2	+0.8
GYA				S	S	14 01 58.9	-2.1
GYA				sS	sS	14 02 47.9	0.0
GYA				ScP	ScP	14 04 10.0	-1.8
GYA				PcS	PcS	14 04 25.4	+0.9
GYA				ScS	ScS	14 08 01.2	-2.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
CMAR	**Chiang Mai Arr**	**29.32**	**298**	P	P	13 57 42.2	-0.6
	comp=Z,0.7nm,0.6s,mb3.5,baz=90,slow=7.7,SNR=4.8						
CMAR				ScP	ScP	14 04 18.1	+0.9
	comp=Z,2.2nm,1.0s,baz=119,slow=2.1,SNR=8.7						
KMI	**Kunming**	**29.48**	**313**	P	P	13 57 46.0	+1.7
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**30.29**	**166**	P	P	13 57 52.1	+0.7
	comp=Z,3.4nm,0.6s,mb4.2,baz=347,slow=7.3,SNR=38						
ASAR				ScP	ScP	14 04 21.9	+1.7
	comp=Z,0.3nm,0.5s,baz=330,slow=2.8,SNR=4.2						
KS15	**Wonju Array Si**	**31.50**	**3**	*e*P	P	13 58 02.9	+1.0
KSRS	**Korea Array**	**31.51**	**3**	P	P	13 58 03.4	+1.3
	comp=Z,1.3nm,0.6s,mb3.8,baz=188,slow=11,SNR=4.5						
XAN	**Xi'an**	**32.27**	**333**	P	P	13 58 09.1	+0.4
XAN				pP	pP	13 58 35.4	-0.3
XAN				sP	sP	13 58 49.5	-0.5
XAN				PP	PP	13 59 24.3	+0.2
XAN				S	S	14 03 14.4	+1.3
XAN				sS	sS	14 04 01.1	+0.8
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
XAN				pmax	pmax		
	comp=Z,25nm,7.5s						
CTAO	**Charters Tower**	**32.50**	**143**	*e*P	P	13 58 08.3	-2.5
CTAO				pmax	pmax		
	comp=Z,96nm,2.1s,mb5.2						
CTAO	**Charters Tower**	**32.50**	**143**	*e*P	P	13 58 08.3	-2.6
	comp=Z,96nm,2.1s,mb5.2						
MJAR	**Matsushiro Arr**	**32.51**	**18**	P	P	13 58 08.7	-2.1
	comp=Z,0.7nm,0.6s,mb3.7,baz=197,slow=8.2,SNR=4.8						
CD2	**Chengdu**	**32.60**	**323**	P	P	13 58 13.6	+2.0
CD2				pP	pP	13 58 41.0	+2.4
CD2				sP	sP	13 58 55.6	+2.7
CD2				PP	PP	13 59 27.1	-0.6
CD2				PcP	PcP	14 00 57.0	+1.8
CD2				S	S	14 03 18.9	+0.6
CD2				sS	sS	14 04 07.1	+1.6
CD2				SS	SS	14 05 24.8	-19
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,140nm,4.7s						
CD2				LR	LR		
	comp=N,230nm,8.3s						
CD2				LR	LR		
	comp=Z,150nm,7.7s						
HHC	**Hu-ho-hao-te**	**37.22**	**342**	*e*P	P	13 58 52.8	+1.7
HHC				pP	pP	13 59 21.7	+3.1
HHC				sP	sP	13 59 35.9	+3.1
HHC				PP	PP	14 00 24.6	+6.1
HHC				PcP	PcP	14 01 10.3	+1.9
HHC				S	S	14 04 30.4	+1.5
HHC				ScP	ScP	14 04 44.0	-0.3
HHC				PcS	PcS	14 04 59.6	+2.8
HHC				sS	sS	14 05 18.7	+2.0
HHC				SS	SS	14 07 09.0	-8.2
HHC				ScS	ScS	14 08 50.8	-1.4
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,76nm,6.0s						
HHC				LR	LR		
	comp=N,150nm,13.8s						
HHC				LR	LR		
	comp=E,140nm,10.2s						
HHC				LR	LR		
	comp=Z,110nm,13.9s						
CN2	**Changchun**	**37.81**	**359**	*e*P	P	13 58 57.6	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
MDJ	**Mudanjiang**	**38.74**	**4**	P	P	13 59 04.7	+0.8
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,57nm,4.4s						
MDJ	**Mudanjiang**	**38.74**	**4**	*e*P	P	13 59 04.7	+0.8
	comp=Z,8.3nm,1.0s,mb4.5						
EIDS	**Eidsvold**	**39.39**	**143**	*e*P	P	13 59 10.0	+0.5
NWAO	**Narrogin (SRO)**	**39.46**	**192**	P	P	13 59 11.0	+1.0
	baz=24,slow=9.0						
BBOO	**Buckleboo**	**39.58**	**167**	*e*P	P	13 59 12.0	+1.0
	comp=Z,12nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**40.30**	**159**	*e*P	P	13 59 17.7	+0.7
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**40.30**	**159**	*e*P	P	13 59 17.9	+0.9
	comp=Z,4.9nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**40.30**	**159**	P	P	13 59 17.6	+0.7
	comp=Z,6.4nm,0.5s,mb4.7,baz=329,slow=8.1,SNR=23						
STKA	**Stephens Creek**	**40.30**	**159**	*e*P	P	13 59 17.7	+0.7
	comp=Z,1.9nm,0.7s,mb4.0						
GTA	**Gaotai**	**40.99**	**328**	*e*P	P	13 59 21.6	-0.9
GTA				pP	pP	13 59 47.7	-2.7
GTA				sP	sP	14 00 03.2	-1.2
GTA				PcP	PcP	14 01 21.7	+1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
HABR	**Khabarovsk**	**43.16**	**9**	P	P	13 59 39.8	-0.2
HABR				*e*PP	pP	14 00 06.6	-1.5
HABR				*e*SP	sP	14 00 19.7	-2.4
HABR				*e*		14 01 20.7	
HABR				*e*		14 01 25.6	
HABR				*e*S	S	14 05 57.5	+0.3
HABR						14 09 25.8	
HABR				*e*SSS		14 10 08.7	
HABR				pmax	pmax		
	comp=E,13nm,0.7s						
HABR				pmax	pmax		
	comp=N,31nm,1.9s						
HABR				pmax	pmax		
	comp=Z,19nm,1.8s,mb4.5						
HABR				MLR	MLR		
	comp=Z,39nm,19.0s						
WMQ	**Urumqi**	**50.66**	**324**	*e*P	P	14 00 39.7	+1.3
BOD	**Bodaibo**	**52.70**	**352**	*e*P	P	14 00 53.6	+0.3
BOD				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
PETK	**Petropavlovsk-**	**53.73**	**23**	P	P	14 01 01.1	+0.2
	comp=Z,2.0nm,0.6s,mb4.3,baz=165,slow=0.4,SNR=7.6						
MK31	**Makanchi Array**	**55.49**	**325**	*e*P	P	14 01 13.5	-0.2
MKAR	**Makanchi Array**	**55.49**	**325**	*ce*P	P	14 01 13.3	-0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**55.49**	**325**	P	P	14 01 13.3	-0.4
	comp=Z,1.4nm,0.4s,mb4.3,baz=115,slow=6.7,SNR=35						
MKAR				PcP	PcP	14 02 11.6	-0.8
	comp=Z,0.7nm,0.4s,baz=118,slow=6.0,SNR=4.5						
YAK	**Yakutsk**	**56.13**	**2**	*e*P	P	14 01 18.5	+0.4
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,10.0nm,1.4s						
YAK	**Yakutsk**	**56.13**	**2**	*e*P	P	14 01 18.9	+0.8
	comp=N,24nm,0.7s,mb5.3						
UCH	**Uchtor**	**58.22**	**317**	*e

comp=Z,12nm,0.8s,mb4.8
KLMR Klimovskoe 83.28 331 *e*P **P 14 04 04.2 -0.2**
KLMR pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
OBN Obninsk 84.99 325⇓ *e*P **P 14 04 12.9 -0.3**
OBN pmax pmax
comp=Z,16nm,1.1s,mb4.9
EGAK Eagle 85.93 25 *e*P **P 14 04 18.4 +0.7**
comp=Z,3.1nm,0.7s,mb4.3
DAWY Dawson 86.77 26 *e*P **P 14 04 23.3 +1.6**
JOF Joensuu 87.03 333 *e*P **P 14 04 21.6 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
JOF Joensuu 87.03 333 *e*p **P 14 04 21.6 -1.5**
comp=Z,2.6nm,0.5s,mb4.4
BRTR Keskin Array B 88.21 310 P **P 14 04 27.6 -1.6**
comp=Z,1.2nm,0.8s,mb4.0,baz=125,slow=3.1,SNR=6.0
ARCES ARCESS Array B 88.27 340 P **P 14 04 28.2 -0.6**
comp=Z,1.8nm,0.6s,mb4.3,baz=77,slow=6.4,SNR=16
INK Inuvik 88.44 21 *e*P **P 14 04 30.0 +0.3**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 88.44 21 *e*P **P 14 04 30.0 +0.4**
comp=Z,5.4nm,1.0s,mb4.5
KAF Kangasniemi 89.46 332 *e*P **P 14 04 33.5 -1.0**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 89.46 332 *e*p **P 14 04 33.5 -1.0**
comp=Z,0.8nm,0.4s,mb4.1
FINES FINESS Array B 89.70 332 P **P 14 04 34.5 -1.2**
comp=Z,0.8nm,0.4s,mb4.2,baz=72,slow=5.6,SNR=12
RES Resolute Bay 95.86 10 P **P 14 05 04.0 +0.1**
comp=Z,1.1nm,0.7s,mb4.4,baz=285,slow=2.0,SNR=5.4
RES Resolute Bay 95.86 10 P **P 14 05 04.0 +0.1**
NOA NORSAR Array B 96.64 334 P **P 14 05 05.4 -2.2**
comp=Z,0.8nm,0.7s,mb4.3,baz=67,slow=4.6,SNR=3.5
YKA Yellowknife Ar 97.84 24 P **P 14 05 13.6 +0.6**
comp=Z,1.4nm,0.7s,mb4.6,baz=300,slow=4.5,SNR=28
M13A Montello 107.75 43 *e*Pdif Pdif 14 06 00.5 +3.3
M13A *e*PKiKP PKiKP 14 10 05.1 +0.4
TXAR Lajitas Array 120.78 51 PKP PKPdf 14 10 30.4 +0.4
comp=Z,0.3nm,0.6s,baz=198,slow=2.5,SNR=4.7
JFWS Jewell Farm 121.34 31 *e*PKIKP PKPdf 14 10 32.3 +1.7
TORD Torodi Ar. Bea 121.66 289 PKP PKPdf 14 10 32.0 0.0
comp=Z,1.0nm,0.6s,baz=60,slow=1.8,SNR=6.9
LONY Lake Ozonia 126.44 18 *e*PKPdf PKPdf 14 10 40.5 +0.1
JTS JuntasAbangare 145.16 63 PKPbc PKPbc 14 11 16.7 +1.1
comp=Z,18nm,0.7s,baz=312,slow=1.9,SNR=16
CFAA Coronel Fontan 151.06 154 PKPbc PKPbc 14 11 31.2 +0.4
comp=Z,0.5nm,0.6s,baz=229,slow=3.0,SNR=10

IDC 01 13:56:22.9±2.3, 9°.33S×78°.91W, h77km±16km, mb3.6/5, mb1 3.8/8, mb1mx3.6/19, mbtmp3.7/8, Error ellipse: s-maj=34.8km s-min=7.6km az=75.0, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.36**	**12**	P	Pn	13 56 58.5	-1.1
ATAH	111nm,0.3s,baz=222,slow=4.5,SNR=531			S	Sn	13 57 25.9	-1.8
	122nm,0.3s,baz=351,slow=17,SNR=28						
NNA	**Nana**	**3.34**	**143**	P	Pn	13 57 13.4	+0.6
	50nm,0.3s,baz=324,slow=11,SNR=82						
NNA				S	Sn	13 57 51.6	+0.3
	129nm,0.3s,baz=200,slow=15,SNR=20						
SIV	**San Ignacio**	**18.61**	**113**	P	Pn	14 00 34.5	-0.9
	0.3nm,0.3s,baz=293,slow=13,SNR=9.9						
CFAA	**Coronel Fontan**	**24.29**	**157**	P	P	14 01 30.5	-2.6
	0.2nm,0.3s,baz=251,slow=19,SNR=6.7						
PDAR	**Pinedale Array**	**58.91**	**334**	P	P	14 06 13.9	0.0
	0.2nm,0.6s,baz=125,slow=8.9,SNR=3.5						
DBIC	**Dimbokro**	**75.48**	**81**	P	P	14 07 59.4	-0.1
	1.3nm,0.5s,baz=274,slow=10,SNR=4.0						
YKA	**Yellowknife Ar**	**76.73**	**344**	P	P	14 08 04.9	-0.5
	0.4nm,0.6s,baz=139,slow=5.8,SNR=14						
TORD	**Torodi Ar. Bea**	**83.07**	**75**	P	P	14 08 41.1	+0.3
	2.4nm,0.9s,baz=276,slow=4.8,SNR=9.9						
ESDC	**Sonseca Array**	**84.52**	**48**	P	P	14 08 47.7	+0.1
	0.6nm,0.6s,baz=256,slow=5.4,SNR=6.3						
ASAR	**Alice Springs**	**134.13**	**224**	PKP	PKPdf	14 15 32.9	+0.4
	0.3nm,0.7s,baz=111,slow=3.0,SNR=4.1						
WRA	**Warramunga Arr**	**136.22**	**228**	PKP	PKPdf	14 15 37.9	+1.5
	0.4nm,0.6s,baz=117,slow=2.2,SNR=5.5						

*CSEM **01** 14:10:11.0±0.6, 37°.68N×35°.00E, h5km, MD2.6, Error ellipse: s-maj=14.9km s-min=7.2km az=136.0*
*ISK **01** 14:10:12.7, 37°.49N×35°.07E, h5km, MD2.6*
*ISCJB **01** 14:10:15.0±0.7, 37°.42N±0°.04×35°.13E±0°.05, h10km, Error ellipse: s-maj=7.2km s-min=4.4km az=137.4*
*DDA **01** 14:10:14.4, 37°.46N×35°.13E, h7km±5km, Md2.8*
ISC 01 14:10:15.2±0.7, 37°.4N±0°.1×35°.13E±0°.06, h15km±12km, n10, σ0°.90/18, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.16**	**203**	*e*PG	**Pg**	**14 10 18.4**	**-0.8**
KARA				*e*SG	**Sg**	**14 10 22.6**	**+0.8**
KARA	**Karaisali**	**0.16**	**203**	*e*Pg	**Pg**	**14 10 18.4**	**-0.8**
KARA				*e*Sg	**Sg**	**14 10 22.7**	**+0.9**
GULE	**Gulek**	**0.31**	**247**⇑	*i*P	**Pg**	**14 10 20.5**	**-1.2**
GULE				*i* S	**Sg**	**14 10 26.6**	**+0.6**
GULE	**Gulek**	**0.31**	**247**	*i* P	**Pg**	**14 10 20.5**	**-1.1**
GULE				*i* S	**Sg**	**14 10 26.6**	**+0.6**
KOZT	**Kozan**	**0.56**	**82**	*e*PG	**Pg**	**14 10 24.9**	**-1.3**
KOZT				*e*SG	**Sg**	**14 10 34.8**	**+1.1**
MERS	**Mersin**	**0.72**	**222**	*e*PG	**Pg**	**14 10 28.3**	**-1.0**
MERS				*e*SG	**Sg**	**14 10 39.7**	**+0.8**
MERS	**Mersin**	**0.72**	**222**	*e*Pg	**Pg**	**14 10 28.3**	**-1.0**
MERS				*e*Sg	**Sg**	**14 10 39.7**	**+0.8**
AVNT	**Avonos**	**1.39**	**351**	*e*P	**Pn**	**14 10 40.7**	**+0.6**
AVNT				*e*S	**Sn**	**14 10 58.3**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.77**	**44**	*e*PN	**Pn**	**14 10 40.5**	**-4.8**
SARI	**SarD1z-Kayseri**	**1.77**	**44**	*e*Pn	**Pn**	**14 10 40.6**	**-4.7**

*ISCJB **01** 14:18:21.8±0.7, 24°.68N±0°.07×122°.60E±0°.02, h3km±6km, Error ellipse: s-maj=11.4km s-min=3.0km az=8.8*
*JMA **01** 14:18:21.5±0.2, 24°.59N×122°.54E, h5km, M1.9*
*TAP **01** 14:18:23.4, 24°.70N×122°.51E, h17km±1km, ML3.0, C*
ISC 01 14:18:22.1±0.6, 24°.66N±0°.06×122°.60E±0°.02, h3km±7km, n16, σ0°.43/29, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**118**	P	**Pg**	**14 18 30.4**	**+0.2**
YOJ				*e*S	**Sg**	**14 18 36.5**	**+0.9**
TWB1	**Santiao Chiao**	**0.66**	**302**	*e*P	**Pg**	**14 18 35.1**	**+0.3**
TWB1	baz=303			*e*S	**Sg**	**14 18 43.3**	**0.0**
	baz=303						
TWC	**Suao**	**0.69**	**266**	*e*P	**Pg**	**14 18 35.6**	**+0.3**
	baz=262						
TWC				S	**Sg**	**14 18 44.4**	**+0.1**
	baz=262						
ENA	**Nanau**	**0.82**	**254**	P	**Pg**	**14 18 38.1**	**+0.2**
	baz=259						
ENA				*e*S	**Sg**	**14 18 48.4**	**0.0**
	baz=259						
TWE	**Neicheng**	**0.85**	**274**	P	**Pg**	**14 18 38.4**	**-0.1**
	baz=271						
TWE				S	**Sg**	**14 18 50.3**	**+0.7**
	baz=271						
ENTT	**Nioudou**	**0.94**	**269**	P	**Pg**	**14 18 40.3**	**+0.1**
	baz=265						
ENTT				*e*S	**Sg**	**14 18 52.5**	**0.0**
	baz=265						
IRIF	**Iriomote-Funau**	**1.08**	**107**	P	**Pg**	**14 18 42.1**	**-0.7**
IRIF				*e*S	**Sg**	**14 18 56.8**	**+0.1**
NSK	**Sanguang**	**1.13**	**271**	*e*P	**Pg**	**14 18 43.5**	**-0.4**
	baz=268						
NSK				*e*S	**Sg**	**14 18 57.8**	**-0.8**
	baz=268						
NNS	**Nan Shan**	**1.14**	**259**	*e*P	**Pg**	**14 18 43.9**	**-0.1**
	baz=255						
NNS				*e*S	**Sg**	**14 18 58.8**	**-0.1**
	baz=255						
HATJ	**Hateruma jima**	**1.25**	**118**	P	**Pg**	**14 18 45.5**	**-0.6**
HATJ				*e*S	**Sg**	**14 19 02.6**	**+0.3**
WHF	**Hehuan Shan**	**1.32**	**248**	*e*P	**Pg**	**14 18 47.7**	**+0.2**
	baz=243						
WHF				*e*S	**Sg**	**14 19 03.9**	**-0.8**
	baz=243						
JKRS	**Kuro-shima**	**1.35**	**108**	P	**Pn**	**14 18 47.4**	**-0.5**
JKRS				*e*S	**Sg**	**14 19 05.4**	**-0.1**
TWT	**Tachien**	**1.36**	**253**	*e*P	**Pn**	**14 18 48.4**	**+0.4**
	baz=242						
TWT				*e*S	**Sg**	**14 19 06.3**	**+0.3**
	baz=242						
JIJ	**Ishigaki jima**	**1.43**	**102**	P	**Pn**	**14 18 48.6**	**-0.4**
NSTT	**Nanjuang**	**1.46**	**269**	*e*P	**Pn**	**14 18 50.3**	**+0.9**
	baz=283						
TWQ1	**Liyutan**	**1.70**	**260**	*e*P	**Pn**	**14 18 52.5**	**-0.1**
	baz=256						

*NIED **01** 14:20:00.32°.20N×142°.00E, h8km, Mw3.9 Best double couple: M0 7.34000×10^14 NP1:φ=335.00000°, δ62.00000°, λ70.00000°. NP2:φ=193.00000°, δ34.00000°, λ123.00000°.*
*IDC **01** 14:20:41.3±0.7, 32°.10N×141°.98E, h0km, mb4.0/12, mb1 4.1/17, mb1mx3.9/30, mbtmp3.9/17, ML3.7/5, Error ellipse: s-maj=23.9km s-min=14.3km az=78.0*
*JMA **01** 14:20:42.7±0.3, 32°.15N×142°.03E, h32km, M3.9*
*ISCJB **01** 14:20:43.8±0.5, 32°.14N±0°.04×141°.96E±0°.08, h33km, mb3.9/14, Error ellipse: s-maj=10.4km s-min=4.4km az=158.2*
*NEIC **01** 14:20:46.1±4.3, 32°.17N×142°.07E, h35km, MG3.9(JMA), Error ellipse: s-maj=165.0km s-min=11.3km az=71.0*
ISC 01 14:20:43.7±1.8, 32°.17N±0°.04×141°.96E±0°.08, h16km±12km, n37, σ0°.93/48, mb3.9/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.04**	**298**	P	**Pn**	**14 21 17.1**	**-0.3**
JHJ	**Hachijo jima 2**	**2.07**	**298**	P	**Pn**	**14 21 17.2**	**-0.6**
	44nm,0.3s,baz=251,slow=19,SNR=26						
JHJ				Sn	**Sn**	**14 21 41.9**	**-1.3**
	61nm,0.3s,baz=65,slow=19,SNR=5.8						
BSO1	**Boso 1**	**2.61**	**342**	P	**Pn**	**14 21 25.1**	**-0.2**
BSO1				*e*S	**Sn**	**14 21 56.5**	**-0.1**
BSO3	**Boso 3**	**2.89**	**336**	P	**Pn**	**14 21 29.3**	**+0.2**
BSO3				*e*S	**Sn**	**14 22 03.9**	**+0.3**
JKO	**Kozu shima**	**3.11**	**311**	P	**Pn**	**14 21 32.3**	**+0.2**
BSO4	**Boso 4**	**3.12**	**335**	*e*S	**Sn**	**14 22 09.6**	**+0.3**
JOD2	**Odawara 2**	**3.91**	**323**	P	**Pn**	**14 21 43.1**	**0.0**
JOD2				*e*S	**Sn**	**14 22 25.4**	**-3.2**
JHU	**Hanno**	**4.29**	**330**	P	**Pn**	**14 21 48.3**	**-0.1**
JYT	**Yasato**	**4.30**	**341**	P	**Pn**	**14 21 47.6**	**-1.0**
JHO	**Hitachi**	**4.58**	**346**	P	**Pn**	**14 21 51.6**	**-0.7**
JHO				*e*S	**Sn**	**14 22 42.1**	**-3.0**
JRY	**Ryogami san**	**4.60**	**327**	P	**Pn**	**14 21 53.2**	**+0.6**
JRY				*e*S	**Sn**	**14 22 46.0**	**+0.3**
JAG	**Ashikaga**	**4.72**	**335**	P	**Pn**	**14 21 54.6**	**+0.3**
JAG				*e*S	**Sn**	**14 22 47.4**	**-1.4**
CBIJ	**Chichi jima**	**5.06**	**178**	P	**Pn**	**14 21 57.7**	**-1.2**
CBIJ				*e*S	**Sn**	**14 22 52.7**	**-4.4**
CBIJ	**Chichi jima**	**5.06**	**178**	Pn	**Pn**	**14 21 58.0**	**-0.9**
	24nm,0.3s,baz=254,slow=20,SNR=31						
CBIJ				Sn	**Sn**	**14 22 52.0**	**-5.1**
	10nm,0.3s,baz=258,slow=20,SNR=3.2						
MJAR	**Matsushiro Arr**	**5.35**	**326**	Pn	**Pn**	**14 22 03.7**	**+0.8**
	1.7nm,0.3s,baz=156,slow=11,SNR=21						
MJAR	**Matsushiro Arr**	**5.35**	**326**	Pn	**Pn**	**14 22 03.7**	**+0.8**
MAJO	**Matsushiro**	**5.35**	**326**	*e*Pn	**Pn**	**14 22 02.9**	**-0.1**
	9.5nm,0.5s						
MAT	**Matsushiro**	**5.35**	**326**	P	**Pn**	**14 22 03.3**	**+0.3**
MAT				S	**Sn**	**14 23 06.6**	**+2.3**
MAT	**Matsushiro**	**5.35**	**326**	P	**Pn**	**14 22 04.2**	**+1.2**
JMK	**Ichinoseki**	**6.79**	**355**	P	**Pn**	**14 22 21.8**	**-1.0**
JMK				S	**Sn**	**14 23 33.8**	**-6.0**
ASAJ	**Asahikawa**	**11.94**	**2**	Pn	**Pn**	**14 23 32.3**	**-0.9**
	0.7nm,0.3s,baz=165,slow=13,SNR=6.2						
KSRS	**Korea Array**	**12.68**	**298**	Pn	**Pn**	**14 23 44.9**	**+1.5**
	0.1nm,0.3s,baz=303,slow=38,SNR=2.9						
SONM	**Songino Array**	**31.09**	**311**	P	**P**	**14 27 02.8**	**+1.7**
	0.5nm,0.4s,mb3.7,baz=102,slow=8.3,SNR=6.2						
ZALV	**Zalesovo Beam**	**45.62**	**316**	P	**P**	**14 29 03.4**	**+0.3**
	0.7nm,0.6s,mb3.8,baz=98,slow=6.1,SNR=4.5						
ZALV				PcP	PcP	14 30 41.0	-0.1
	0.5nm,0.5s,baz=101,slow=2.9,SNR=3.6						
MKAR	**Makanchi Array**	**47.22**	**306**	P	**P**	**14 29 16.1**	**+0.4**
	2.6nm,0.7s,mb4.3,baz=89,slow=9.9,SNR=28						
WRA	**Warramunga Arr**	**52.33**	**189**	P	**P**	**14 29 54.3**	**-0.4**
	3.0nm,0.5s,mb4.4,baz=5.4,slow=7.7,SNR=57						
FITZ	**Fitzroy Crossi**	**52.37**	**200**	P	**P**	**14 29 55.1**	**-0.1**
	1.1nm,0.5s,mb4.0,baz=296,slow=9.0,SNR=7.0						
BVAR	**Borovoye Array**	**54.25**	**315**	P	**P**	**14 30 10.4**	**+1.7**
	0.4nm,0.4s,mb3.8,baz=101,slow=8.0,SNR=5.0						
ASAR	**Alice Springs**	**56.05**	**189**	P	**P**	**14 30 21.3**	**-0.6**
	0.5nm,0.4s,mb3.9,baz=7.4,slow=6.5,SNR=22						
INK	**Inuvik**	**58.54**	**26**	P	**P**	**14 30 40.4**	**+1.4**
	0.3nm,0.3s,mb3.8,baz=207,slow=7.0,SNR=3.9						
YKA	**Yellowknife Ar**	**67.81**	**29**	P	**P**	**14 31 41.6**	**+1.1**
	0.3nm,0.6s,mb3.5,baz=297,slow=6.0,SNR=6.8						
JOF	**Joensuu**	**70.47**	**333**	*e*p	**P**	**14 31 56.2**	**-0.9**
	0.8nm,0.5s,mb3.9						
KAF	**Kangasniemi**	**72.84**	**334**	*e*p	**P**	**14 32 10.8**	**-0.6**
	0.8nm,0.4s,mb4.0						
FINES	**FINESS Array B**	**73.33**	**333**	P	**P**	**14 32 14.1**	**-0.2**
	0.9nm,0.5s,mb4.0,baz=52,slow=4.5,SNR=9.3						
NB2	**NORSAR Subarra**	**78.85**	**338**	P	**P**	**14 32 45.7**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**78.85**	**338**	P	**P**	**14 32 45.1**	**-0.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=41,slow=5.4,SNR=4.2						
TXAR	**Lajitas Array**	**92.72**	**53**	P	**P**	**14 33 55.8**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.9,baz=168,slow=2.3,SNR=4.2						

*IDC **01** 14:24:39.0±1.0, 6°.07N×126°.83E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.8/20, mbtmp4.0/8, Error ellipse: s-maj=64.7km s-min=15.5km az=60.0*
*ISCJB **01** 14:24:41.1±3.2, 6°.1N±0°.2×127°.0E±0°.2, h25km±21km, mb3.9/8, Error ellipse: s-maj=42.9km s-min=11.4km az=141.6*
*MAN **01** 14:24:41, 5°.83N×126°.71E, h20km, mb5.0, ML3.9, MS4.0*
*NEIC **01** 14:24:44.5±0.9, 5°.93N×126°.52E, h35km, Error ellipse: s-maj=91.3km s-min=12.0km az=64.0*
ISC 01 14:24:42.7±3.5, 6°.1N±0°.2×126°.9E±0°.2, h22km±23km, n15, σ0°.81/16, mb3.9/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.62**	**308**	Pn	**Pn**	**14 25 08.4**	**-1.5**
	87nm,0.3s,baz=74,slow=3.3,SNR=9.2						
DAV				Sn	**Sn**	**14 25 30.4**	**+0.2**
	141nm,0.3s,baz=132,slow=19,SNR=8.7						
DMPH	**Davao City--Mi**	**1.69**	**307**⇓	*e*P	**Sb**	**14 25 34.6**	**+0.8**
GSPH	**General Santos**	**1.91**	**271**⇑	*e*P	**Pn**	**14 25 07.1**	**-6.8**
KCP	**Kidapawan**	**2.00**	**298**⇓	*e*P	**Pn**	**14 25 15.3**	**+0.2**
KCP				*i* S	**Sb**	**14 25 42.4**	**-0.4**
WRA	**Warramunga Arr**	**26.88**	**164**	P	**P**	**14 30 22.5**	**+0.5**
	0.8nm,0.4s,mb3.6,baz=343,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**30.34**	**167**	P	**P**	**14 30 52.0**	**-0.8**
	0.8nm,0.6s,mb3.6,baz=341,slow=6.7,SNR=5.0						
STKA	**Stephens Creek**	**40.27**	**160**	P	**P**	**14 32 18.8**	**+0.8**
	1.5nm,0.6s,mb3.9,baz=331,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**55.73**	**324**	P	**P**	**14 34 17.8**	**+0.2**
	0.6nm,0.5s,mb3.9,baz=124,slow=8.1,SNR=9.3						
MKAR				PcP	PcP	14 35 15.7	-1.0
	0.3nm,0.5s,baz=130,slow=4.8,SNR=4.2						
MKAR	**Makanchi Array**	**55.73**	**324**	P	**P**	**14 34 17.8**	**+0.2**
MKAR				PcP	PcP	14 35 15.7	-1.0
ZALV	**Zalesovo Beam**	**58.58**	**332**	P	**P**	**14 34 37.3**	**-0.3**
	0.3nm,0.4s,mb3.7,baz=158,slow=1.6,SNR=2.4						
BVAR	**Borovoye Array**	**65.45**	**326**	P	**P**	**14 35 25.6**	**+1.8**
	0.4nm,0.5s,mb3.7,baz=137,slow=6.9,SNR=3.5						
BVAR	**Borovoye Array**	**65.45**	**326**	P	**P**	**14 35 25.6**	**+1.8**
ARCES	**ARCESS Array B**	**88.31**	**340**	P	**P**	**14 37 31.6**	**-0.5**
	2.0nm,0.8s,mb4.4,baz=70,slow=5.3,SNR=4.9						
FINES	**FINESS Array B**	**89.85**	**332**	P	**P**	**14 37 38.8**	**-0.7**
	0.6nm,0.7s,mb4.0,baz=44,slow=4.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**122.30**	**290**	PKP	PKPdf	14 43 35.0	-2.0
	0.2nm,0.5s,baz=48,slow=2.1,SNR=2.3						

*ISCJB **01** 14:36:02.0±1.3, 1°.0N±0°.1×121°.6E±0°.2, h496km±22km, mb3.3/8, Error ellipse: s-maj=31.4km s-min=12.0km az=154.5*
*NEIC **01** 14:36:02.6±1.0, 0°.99N×121°.67E, h487km±16km, mb4.3/3, Error ellipse: s-maj=23.8km s-min=8.4km az=63.0*
*IDC **01** 14:36:03.3±1.9, 0°.96N×121°.58E, h494km±30km, mb2.7/7, mb1 2.9/9, mb1mx2.8/22, mbtmp2.7/9, Error ellipse: s-maj=29.7km s-min=11.6km az=70.0*
ISC 01 14:36:03.0±1.3, 1°.0N±0°.1×121°.6E±0°.2, h489km±22km, n12, σ0°.58/12, mb3.3/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.22**	**198**	P	**P**	**14 37 40.7**	**-0.2**
	1.7nm,0.3s,baz=64,slow=14,SNR=6.2						
KKM	**Kota Kinabalu**	**7.40**	**313**	*e*P	**P**	**14 37 53.0**	**+0.1**
	36nm,1.0s						
KSM	**Kuching**	**11.33**	**273**	*e*P	**P**	**14 38 34.5**	**+0.1**
	13nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.34**	**168**	P	**P**	**14 39 56.9**	**+0.7**
	0.2nm,0.3s,baz=344,slow=7.4,SNR=7.7						
WRAB	**Tennant Creek**	**24.22**	**150**	*e*P	**P**	**14 40 39.1**	**-1.1**
	1.3nm,0.6s,mb3.5						
WRA	**Warramunga Arr**	**24.22**	**150**	P	**P**	**14 40 40.1**	**-0.1**
	0.8nm,0.3s,mb3.6,baz=337,slow=9.3,SNR=18						
ASAR	**Alice Springs**	**27.23**	**155**	P	**P**	**14 41 07.7**	**+0.8**
	0.4nm,0.5s,mb3.1,baz=346,slow=15,SNR=13						
ASAR				PcP	PcP	14 44 10.7	-0.7
	0.3nm,0.6s,baz=342,slow=2.2,SNR=6.8						
CMAR	**Chiang Mai Arr**	**28.25**	**309**	P	**P**	**14 41 15.8**	**-0.1**
	0.8nm,0.6s,mb3.3,baz=133,slow=7.4,SNR=6.8						
KSRS	**Korea Array**	**36.78**	**8**	P	**P**	**14 42 29.1**	**+0.9**
	0.7nm,0.7s,mb3.2,baz=188,slow=9.7,SNR=4.8						
MJAR	**Matsushiro Arr**	**38.60**	**22**	P	**P**	**14 42 42.6**	**-0.5**
	0.8nm,0.4s,mb3.5,baz=216,slow=7.8,SNR=7.2						
SONM	**Songino Array**	**48.53**	**346**	P	**P**	**14 44 00.7**	**+0.2**
	0.8nm,0.6s,mb3.2,baz=170,slow=8.3,SNR=6.4						
MKAR	**Makanchi Array**	**57.09**	**329**	P	**P**	**14 45 01.2**	**-0.6**
	0.2nm,0.4s,mb2.6,baz=125,slow=9.3,SNR=4.8						

MAN 01 14:44:26, 5°.37N×126°.58E, h4km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.77**	**294**⇑	*i*P	Pn	14 44 53.9	-3.6

*ISCJB **01** 14:56:09.5±1.7, 21°.8S±0°.2×177°.5W±0°.4, h340km±44km, mb3.4/5, Error ellipse: s-maj=58.8km s-min=12.5km az=21.5*
*NEIC **01** 14:56:10.5±1.6, 21°.80S×177°.73W, h318km±43km, mb4.2/4, Error ellipse: s-maj=52.6km s-min=12.5km az=108.0*
*IDC **01** 14:56:13.4±4.7, 21°.65S×177°.12W, h402km±123km, mb3.1/3, mb1 3.3/5, mb1mx3.1/17, mbtmp3.3/5, Error ellipse: s-maj=100.0km s-min=21.1km az=96.0*
ISC 01 14:56:08.8±1.6, 21°.65S±0°.10×177°.5W±0°.3, h317km±33km, n11, σ0°.52/15, mb3.5/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.58**	**183**	Pn	**Pn**	**14 57 57.2**	**-0.1**
AFI	**Afiamalu**	**9.44**	**36**	P	**Pn**	**14 58 24.6**	**+4.5**
	2.4nm,0.3s,baz=164,slow=22,SNR=10						
AFI				S	**S**	**15 00 06.4**	**-0.8**
	3.7nm,0.3s,baz=96,slow=22,SNR=7.8						
AFI	**Afiamalu**	**9.44**	**36**	*e*P	**Pn**	**14 58 24.8**	**+4.8**
	6.7nm,0.3s						
AFI				*e*S	**S**	**15 00 07.9**	**+0.7**
URZ	**Urewera**	**17.19**	**194**	P	**P**	**14 59 49.4**	**+0.8**
	2.0nm,0.3s,baz=75,slow=19,SNR=14						
URZ				S	**S**	**15 02 50.9**	**-0.2**
	0.3nm,0.3s,baz=127,slow=20,SNR=5.8						
URZ	**Urewera**	**17.19**	**194**	*e*P	**P**	**14 59 48.1**	**-0.5**
	6.1nm,0.6s						
URZ				*e*S	**S**	**15 02 40.1**	**-11**
CTAO	**Charters Tower**	**33.85**	**266**	*e*P	**P**	**15 02 22.3**	**-0.1**
	4.8nm,0.6s,mb4.2						
CTAO				pP	pP	15 03 26.1	+2.5
CTAO				sP	sP	15 04 05.5	+5.2
STKA	**Stephens Creek**	**37.72**	**246**	P	**P**	**15 02 55.8**	**+0.9**
	1.4nm,0.5s,mb3.7,baz=39,slow=6.5,SNR=3.4						
ASAR	**Alice Springs**	**44.71**	**258**	P	**P**	**15 03 51.9**	**+0.4**
	1.8nm,0.8s,mb3.4,baz=92,slow=8.1,SNR=23						
WB2	**Warramunga Arr**	**44.90**	**263**	*e*P	**P**	**15 03 52.5**	**-0.4**
WRAB	**Tennant Creek**	**44.90**	**263**	*e*P	**P**	**15 03 52.5**	**-0.5**
	0.6nm,0.3s,mb3.3						
WRA	**Warramunga Arr**	**44.91**	**263**	P	**P**	**15 03 52.8**	**-0.3**
	0.5nm,0.3s,mb3.2,baz=96,slow=7.7,SNR=34						

*NIED **01** 15:11:00.27°.60N×128°.70E, h47km, Mw4.0 Best double couple: M0 1.02000×10^15 NP1:φ=346.00000°, δ59.00000°, λ58.00000°. NP2:φ=217.00000°, δ43.00000°, λ132.00000°.*
*ISCJB **01** 15:11:18.3±0.3, 27°.62N±0°.06×128°.65E±0°.07, h56km±4km, mb3.8/19, Error ellipse: s-maj=13.3km s-min=4.0km az=43.5*
*NEIC **01** 15:11:18.3±0.6, 27°.61N×128°.56E, h35km, mb4.1/7, Error ellipse: s-maj=13.0km s-min=8.5km az=118.0*
NEIC Recorded [2 JMA] on Okino-erabu-shima and [1 JMA] on Amami-oshima and Tokuno-shima.
*IDC **01** 15:11:18.8±1.4, 27°.60N×128°.60E, h43km±14km, mb3.5/12, mb1 3.5/14, mb1mx3.5/26, mbtmp3.4/14, ML2.6/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/27, Error ellipse: s-maj=24.3km s-min=13.3km az=91.0*
*JMA **01** 15:11:19

BRVK Borovoye 49.57 318 *eP* **P 15 20 04.8 -0.6**
2.2nm,0.8s,mb4.2
ASAR Alice Springs 51.24 174 P **P 15 20 18.4 +0.2**
0.3nm,0.5s,mb3.5,baz=3.9,slow=14,SNR=12
ABKAR Akbulak array 55.98 313 *eP* **P 15 20 52.6 -0.1**
1.2nm,0.7s,mb4.0
JOF Joensuu 69.02 331 *ep* **P 15 22 17.4 -2.1**
0.8nm,0.5s,mb3.9
FINES FINESS Array B 71.85 330 P **P 15 22 36.6 -0.2**
1.3nm,0.5s,mb4.1,baz=62,slow=4.9,SNR=12
RES Resolute Bay 74.12 11 *eP* **P 15 22 49.9 -0.2**
1.4nm,0.7s,mb4.0
AKASG Malin Array Be 74.73 319 P **P 15 22 53.7 -0.3**
0.3nm,0.3s,mb3.6,baz=51,slow=7.0,SNR=2.5
BRTR Keskin Array B 76.49 308 P **P 15 23 04.1 -0.2**
0.9nm,0.8s,mb3.8,baz=116,slow=5.6,SNR=5.9
YKA Yellowknife Ar 77.11 25 P **P 15 23 08.8 +1.5**
0.2nm,0.6s,mb3.3,baz=295,slow=5.7,SNR=5.1
NB2 NORSAR Subarra 78.24 334 P **P 15 23 13.4 -0.3**
comp=Z,0.2nm,0.6s,mb3.2,baz=59,slow=5.9
NOA NORSAR Array B 78.24 334 P **P 15 23 13.7 0.0**
comp=Z,1.4nm,0.7s,mb4.0,baz=51,slow=5.5,SNR=7.4

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*ISCJB **01** 15:14:49.4±0.8,20.°4S±0.°1×177.°6W±0.°2,h84km±37km, mb4.0/9,Error ellipse: s-maj=32.8km s-min=16.8km az=177.3*
*NEIC **01** 15:14:49.3±1.2,20.°51S×177.°63W,h644km±42km,mb4.3/5, Error ellipse: s-maj=38.1km s-min=24.9km az=56.0*
*IDC **01** 15:14:50.3±1.6,20.°40S×177.°63W,h662km±69km,mb3.3/5, mb1 3.5/7,mb1mx3.1/19,mbtmp3.4/7,Error ellipse: s-maj=52.6km s-min=18.2km az=75.0*
ISC 01 15:14:49.9±1.0,20.°3S±0.°1×177.°5W±0.°2,h674km±38km, n18,σ0s88/23,mb4.0/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.41**	**41**			**P**		**15 16 55.9**	**+0.3**
	3.4nm,0.3s,baz=209,slow=13,SNR=7.4								
AFI				S		S		15 18 37.4	-0.8
	1.5nm,0.3s,baz=217,slow=20,SNR=4.3								
AFI	**Afiamalu**	**8.41**	**41**	*eP*		**P**		**15 16 56.1**	**+0.6**
AFI				*e*S		S		15 18 37.8	-0.4
URZ	**Urewera**	**18.46**	**194**	P		**P**		**15 18 27.9**	**+1.2**
	1.7nm,0.3s,baz=141,slow=2.8,SNR=11								
URZ				S		S		15 21 21.5	-0.2
	0.2nm,0.3s,baz=348,slow=20,SNR=2.5								
URZ	**Urewera**	**18.46**	**194**	*eP*		**P**		**15 18 25.9**	**-0.8**
	13nm,0.9s								
URZ				S		S		15 21 21.5	-0.2
EIDS	**Eidsvold**	**29.34**	**254**	P		**P**		**15 20 01.1**	**-1.5**
	3.5nm,0.5s,mb4.2								
ARMA	**Armidale**	**29.56**	**244**	*eP*		**P**		**15 20 04.8**	**+0.5**
CTA	**Charters Tower**	**33.97**	**264**	*eP*		**P**		**15 20 41.0**	**-0.6**
	4.7nm,0.3s,mb4.5								
CTA	**Charters Tower**	**33.97**	**264**	P		**P**		**15 20 41.2**	**-0.4**
	7.6nm,0.4s,mb4.6,baz=90,slow=10,SNR=19								
CTAO	**Charters Tower**	**33.97**	**264**	*eP*		**P**		**15 20 40.5**	**-1.0**
	7.3nm,0.4s,mb4.6								
CMSA	**Cobar Meteorol**	**34.78**	**244**	*eP*		**P**		**15 20 48.3**	**+0.3**
STKA	**Stephens Creek**	**38.28**	**244**	P		**P**		**15 21 16.4**	**0.0**
	1.5nm,0.4s,mb3.8,baz=90,slow=10.0,SNR=4.4								
STKA	**Stephens Creek**	**38.28**	**244**	*eP*		**P**		**15 21 16.0**	**-0.4**
	0.7nm,0.7s,mb3.2								
BBOO	**Buckleboo**	**43.04**	**243**	*eP*		**P**		**15 21 54.9**	**+1.1**
	5.4nm,0.4s,mb4.3								
ASAR	**Alice Springs**	**45.01**	**257**	P		**P**		**15 22 09.9**	**+0.9**
	4.5nm,0.6s,mb4.0,baz=89,slow=8.0,SNR=115								
ASAR				S		S		15 27 59.6	-2.0
	0.6nm,1.0s,baz=90,slow=16,SNR=3.6								
WRAB	**Tennant Creek**	**45.08**	**262**	*eP*		**P**		**15 22 08.9**	**-0.6**
	13nm,1.1s,mb4.2								
WRA	**Warramunga Arr**	**45.09**	**262**	P		**P**		**15 22 09.9**	**+0.3**
	2.6nm,0.3s,mb4.0,baz=96,slow=7.5,SNR=98								
FITZ	**Fitzroy Crossi**	**53.52**	**262**	P		**P**		**15 23 12.6**	**+1.7**
	0.7nm,0.5s,mb3.2,baz=98,slow=7.1,SNR=2.4								
CASY	**Casey**	**64.31**	**205**	P		**P**		**15 24 20.9**	**-0.7**
	13nm,1.4s,mb4.0								

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*ISCJB **01** 15:16:51.5±0.2,23.°11S±0.°05×68.°68W±0.°06,h99km, mb4.5/35,Error ellipse: s-maj=8.8km s-min=5.8km az=144.7*
*BJI **01** 15:16:51.3,23.°10S×68.°90W,h83km,mB5.1/7,Ms5.3/2, Ms7 5.0/2*
*NEIC **01** 15:16:52.3,23.°09S×68.°92W,h94km,mb4.6/23,After GUC.*
*IDC **01** 15:16:52.3±0.6,23.°00S×68.°75W,h94km±3km,mb4.1/12, mb1 4.3/13,mb1mx4.2/16,mbtmp4.2/13,MS3.7/3, Ms1 3.6/3,ms1mx2.9/22,Error ellipse: s-maj=22.3km s-min=11.9km az=47.0*
*GUC **01** 15:16:52.3±0.7,23.°09S×68.°92W,h94km±4km,ML4.5*
ISC 01 15:16:53.5±0.3,23.°02S±0.°06×68.°47W±0.°07,h101km, h101km±1.6km:pP-P,n289,σ0s70/270,mb4.5/35,107C-96D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.58**	**315**	P		**Pn**		**15 17 07.8**	**-2.2**
	1μm,0.3s,baz=174,slow=6.4,SNR=9882								
LVC				S		**Sn**		15 17 20.1	-2.3
	3μm,0.3s,baz=41,slow=19,SNR=92								
LVC	**Limon Verde**	**0.58**	**315**	*e*Pn		**Pn**		**15 17 07.3**	**-2.7**
LVC				*e*Sn		**Sn**		15 17 20.3	-2.1
LVC	**Limon Verde**	**0.58**	**315**	⇓*i*P		**Pn**		**15 17 08.1**	**-1.9**
LVC				*i* S		**Sn**		15 17 19.8	-2.6
LVC				AML		AML		15 17 21.4	
	comp=N,14μm,0.2s								
PECH	**Pedro de Valdi**	**1.19**	**291**	⇑*i*P		**Pn**		**15 17 11.4**	**-4.7**
PECH				*i* S		**Sn**		15 17 25.7	-7.5
PECH				AML		AML		15 17 26.7	
	comp=N,33μm,0.6s								
PB04	**Plate Boundary**	**1.21**	**308**	⇑*i*P		**Pn**		**15 17 17.2**	**+0.9**
PB04				*i* S		**Sn**		15 17 36.7	+3.1
PB04				AML		AML		15 17 40.2	
	comp=N,15μm,0.4s								
MACH	**Maria Elena**	**1.45**	**304**	⇑*i*P		**Pn**		**15 17 15.2**	**-3.9**
MACH				*i* S		**Sn**		15 17 32.7	-6.0
MECH	**Mejillones**	**1.83**	**267**	⇑*i*P		**Pn**		**15 17 17.8**	**-6.1**
MECH				*i* S		**Sn**		15 17 37.7	-9.3
MECH				AML		AML		15 17 43.1	
	comp=N,8μm,0.3s								
ANCH	**Antofagasta**	**1.90**	**249**	⇑*i*P		**Pn**		**15 17 18.5**	**-6.4**
ANCH				*i* S		**Sn**		15 17 38.4	-10
PB01	**Plate Boundary**	**2.19**	**334**	⇑*i*P		**Pn**		**15 17 26.8**	**-1.7**
PB01				*i* S		**Sn**		15 17 53.1	-2.2
PB01				AML		AML		15 17 56.7	
	comp=N,4μm,0.4s								
LCO	**Las Campanas**	**6.29**	**198**	*e*Pn		**Pn**		**15 18 16.5**	**-7.2**
LCO				*e*Sn		**Sn**		15 19 24.4	-10
LPAZ	**La Paz**	**6.71**	**3**	*e*Pn		**Pn**		**15 18 28.8**	**-0.7**
CFAA	**Coronel Fontan**	**8.55**	**179**	P		**Pn**		**15 18 49.6**	**-4.8**
	comp=N,0.3nm,0.3s,baz=348,slow=13,SNR=28								
SIV	**San Ignacio**	**9.87**	**46**	P		**Pn**		**15 19 12.5**	**0.0**
	baz=248,slow=11								
SIV				S		**Sn**		15 20 57.2	-4.3
	comp=N,0.9nm,0.3s,baz=286,slow=19,SNR=2.5								
TRQA	**Tornquist**	**15.98**	**161**	*e*Pn		**Pn**		**15 20 29.8**	**-2.6**
	comp=N,88nm,2.0s								
PLCA	**Paso Flores**	**17.75**	**185**	LR		LR		15 28 55.4	
	comp=N,75nm,18.9s,baz=44,slow=41								
SPB	**Sao Paulo**	**19.33**	**96**	*e*P		**P**		**15 21 08.4**	**-2.5**
	comp=N,34nm,0.9s								
OTAV	**Otavalo**	**25.08**	**336**	P		**P**		**15 22 00.4**	**-8.3**
RCBR	**Riachuelo**	**35.74**	**66**	*e*P		**P**		**15 23 44.2**	**+1.5**
	comp=N,16nm,1.0s,mb4.9								
JTS	**JuntasAbangare**	**36.83**	**332**	*e*P		**P**		**15 23 49.8**	**-2.1**
FDF	**Fort de France**	**38.20**	**11**	*e*P		**P**		**15 24 06.1**	**+2.7**
	comp=N,28nm,0.7s,mb5.2								
VNA3	**Neumayer Olymp**	**58.51**	**161**	*e*P		**P**		**15 26 38.8**	**+0.1**
VNA1	**Neumayer--Stat**	**58.72**	**160**	*e*P		**P**		**15 26 40.6**	**+0.5**
VNA2	**Neumayer--Watz**	**59.09**	**160**	*e*P		**P**		**15 26 43.0**	**+0.3**
CPCT	**Cooper Cave**	**60.11**	**345**	*e*P		**P**		**15 26 45.5**	**-4.6**
CPCT				*e*pP		pP		15 27 14.2	-0.9
SWET	**Sewanee**	**60.24**	**344**	*e*P		**P**		**15 26 49.1**	**-1.9**
SWET				*e*pP		pP		15 27 15.0	-1.0
JSRW	**J. Sargeant Re**	**61.04**	**351**	*e*pP		pP		15 27 20.5	-0.9
WVT	**Waverly**	**61.62**	**342**	*e*P		**P**		**15 26 56.9**	**-3.4**
	comp=N,13nm,1.0s,mb4.9								
WVT				*e*pP		pP		15 27 22.0	-3.4
628A	**Black Gap, Mar**	**61.82**	**326**	⇑P		**P**		**15 27 01.4**	**-0.4**
	baz=62								
627A	**Terlingua Ranc**	**62.06**	**326**	⇑P		**P**		**15 27 02.5**	**-0.9**
	baz=62								
TXAR	**Lajitas Array**	**62.11**	**325**	P		**P**		**15 27 02.9**	**-0.8**
	comp=N,0.6nm,0.8s,mb3.7,baz=151,slow=8.0,SNR=6.3								
626A	**Big Bend Ranch**	**62.53**	**325**	⇑P		**P**		**15 27 05.8**	**-0.7**
	baz=63,SNR=9.9								
527A	**Woodward Ranch**	**62.73**	**326**	⇑P		**P**		**15 27 07.4**	**-0.5**
	baz=63								
526A	**Mary Lane Ranc**	**62.91**	**325**	⇓P		**P**		**15 27 08.2**	**-0.9**
	baz=63,SNR=7.6								
426A	**McDonald Obser**	**63.36**	**326**	⇓P		**P**		**15 27 11.5**	**-0.5**
	baz=63								
326A	**Caldwell Ranch**	**63.85**	**326**	⇓P		**P**		**15 27 14.4**	**-0.8**
	baz=64								
425A	**Indio Mountain**	**63.95**	**325**	⇓P		**P**		**15 27 14.8**	**-1.1**
	baz=64,SNR=8.2								
FVM	**French Village**	**64.10**	**341**	*e*P		**P**		**15 27 15.0**	**-1.7**
	comp=N,16nm,0.8s,mb4.9								
FVM				*e*pP		pP		15 27 40.5	-1.4
325A	**Bean Ranch, Si**	**64.41**	**326**	⇓P		**P**		**15 27 17.7**	**-1.1**
	baz=64,SNR=12								
CCM	**Cathedral Cave**	**64.41**	**340**	*e*P		**P**		**15 27 15.9**	**-2.9**
	comp=N,8.2nm,0.9s,mb4.6								
CCM				*e*pP		pP		15 27 41.1	-3.0
324A	**Moseley Ranch,**	**64.73**	**325**	⇓P		**P**		**15 27 19.5**	**-1.5**
	baz=65,SNR=5.3								
126A	**Clayton Basin,**	**64.94**	**327**	⇓P		**P**		**15 27 21.4**	**-1.0**
	baz=65								
220A	**Playas Peak, P**	**66.72**	**323**	⇓P		**P**		**15 27 33.4**	**-0.4**
	baz=67								
319A	**Douglas**	**66.74**	**323**	⇑P		**P**		**15 27 34.0**	**+0.1**
	baz=67								
318A	**Bisbee**	**67.19**	**322**	⇑P		**P**		**15 27 36.6**	**-0.1**
	baz=67								
120A	**U Bar Ranch, L**	**67.27**	**324**	⇓P		**P**		**15 27 37.1**	**-0.1**
	baz=67								
218A	**Dragoon**	**67.62**	**322**	⇓P		**P**		**15 27 39.6**	**+0.2**
	baz=68								
Z20A	**Nine Sixteen R**	**67.68**	**324**	⇑P		**P**		**15 27 39.5**	**-0.3**
	baz=68								
FRNY	**Flat Rock**	**67.69**	**356**	*e*P		**P**		**15 27 39.7**	**+0.2**
	comp=N,9.6nm,0.8s,mb4.7								
217A	**Green Valley**	**67.91**	**322**	⇑P		**P**		**15 27 41.3**	**+0.1**
	baz=68								
PKME	**Peaks-Kenny Pk**	**67.96**	**359**	*e*P		**P**		**15 27 41.2**	**0.0**
	comp=N,9.6nm,0.7s,mb4.7								
ANMO	**Albuquerque**	**68.00**	**327**	P		**P**		**15 27 41.8**	**0.0**
	comp=N,2.9nm,0.6s,mb4.3,baz=146,slow=6.8,SNR=7.0								
118A	**Homack Ranch,**	**68.07**	**323**	⇑P		**P**		**15 27 42.5**	**+0.2**
	baz=68								
Y20A	**Horse Springs,**	**68.17**	**325**	⇑P		**P**		**15 27 43.2**	**+0.3**
	baz=68								
Z19A	**T-Link Ranch,**	**68.18**	**324**	⇓P		**P**		**15 27 43.0**	**+0.1**
	baz=68								
X21A	**Alamocita Cree**	**68.28**	**326**	⇓P		**P**		**15 27 43.6**	**+0.1**
	baz=68								
LIC	**Lamto**	**68.43**	**73**	*e*P		**P**		**15 27 43.9**	**-1.0**
	comp=N,32nm,1.3s,mb5.0								
216A	**Three Points,**	**68.44**	**321**	⇓P		**P**		**15 27 44.9**	**+0.3**
	baz=68								
117A	**Oracle**	**68.45**	**322**	⇑P		**P**		**15 27 45.1**	**+0.4**
	baz=68								
TIC	**Toumodi**	**68.63**	**73**	*e*P		**P**		**15 27 42.5**	**-3.7**
	comp=N,10nm,0.2s,mb5.3								
Y19A	**Nutriosso**	**68.68**	**324**	⇑P		**P**		**15 27 46.3**	**+0.3**
	baz=69,SNR=7.8								
X20A	**Quemado**	**68.72**	**325**	⇑P		**P**		**15 27 46.1**	**-0.2**
	baz=69								
W21A	**San Fidel**	**68.73**	**326**	⇑P		**P**		**15 27 46.2**	**-0.1**
	baz=69								
KIC	**Kosan Boka**	**68.74**	**73**	*e*P		**P**		**15 27 41.7**	**-5.2**
	comp=N,8.7nm,0.4s,mb4.9								
DBIC	**Dimbokro**	**68.78**	**73**	P		**P**		**15 27 48.5**	**+1.3**
	comp=N,2.7nm,0.5s,mb4.3,baz=234,slow=7.1,SNR=8.6								
DBIC				LR		LR		15 57 08.3	
	comp=N,53nm,19.2s,baz=318,slow=35								
W20A	**Ramah**	**69.18**	**326**	⇓P		**P**		**15 27 49.5**	**+0.4**
	baz=69								
Y17A	**Roosevelt**	**69.35**	**323**	⇓P		**P**		**15 27 50.8**	**+0.6**
	baz=69								
114A	**Black Gap (USA**	**69.81**	**321**	⇑P		**P**		**15 27 53.0**	**-0.1**
	baz=70								
X16A	**Lo Mia Camp, P**	**70.22**	**323**	⇑P		**P**		**15 27 55.7**	**+0.2**
	baz=70								
Y15A	**Casa Rosa Ranc**	**70.37**	**322**	⇓P		**P**		**15 27 57.1**	**+0.7**
	baz=70								
X15A	**Humboldt**	**70.71**	**323**	⇓P		**P**		**15 27 59.0**	**+0.5**
	baz=71								
Y14A	**Wickenburg**	**70.74**	**322**	⇓P		**P**		**15 27 58.6**	**-0.1**
	baz=71								
T19A	**Beclabito**	**70.76**	**326**	⇓P		**P**		**15 27 58.8**	**0.0**
	baz=73								
V17A	**Tonalea, Kykot**	**70.76**	**324**	⇑P		**P**		**15 27 58.8**	**+0.1**
	baz=71,SNR=6.2								
W16A	**Flagstaff**	**70.77**	**324**	⇓P		**P**		**15 27 59.5**	**+0.7**
	baz=71								
MVCO	**Mesa Verde**	**70.79**	**327**	⇑P		**P**		**15 27 59.0**	**+0.1**
	baz=71								
S21A	**Coal Bank Pass**	**70.79**	**328**	⇑P		**P**		**15 27 58.6**	**-0.3**
	baz=71								
U18A	**Rough Rock, Ch**	**70.88**	**326**	⇑P		**P**		**15 27 59.8**	**+0.3**
	baz=71								
WUAZ	**Wupatki**	**71.00**	**324**	⇓P		**P**		**15 28 00.5**	**+0.3**
	baz=71								
WUAZ	**Wupatki**	**71.00**	**324**	*e*P		**P**		**15 28 00.3**	**+0.1**
	comp=N,7.3nm,1.0s,mb4.5								
Y13A	**Salome**	**71.12**	**321**	⇑P		**P**		**15 28 01.8**	**+0.8**
	baz=71								
R21A	**Cimarron**	**71.23**	**328**	⇑P		**P**		**15 28 01.6**	**+0.1**
	baz=71								
U16A	**Tuba City**	**71.33**	**325**	⇓P		**P**		**15 28 02.3**	**+0.1**
	baz=71								
T18A	**Mexican Hat**	**71.43**	**326**	⇓P		**P**		**15 28 02.3**	**-0.5**
	baz=72,SNR=5.9								
U17A	**Shonto**	**71.43**	**325**	⇓P		**P**		**15 28 02.9**	**+0.1**
	baz=72								
R20A	**Redvale**	**71.49**	**328**	⇓P		**P**		**15 28 03.2**	**0.0**
	baz=72								
S19A	**Harvey Farm, M**	**71.52**	**327**	⇓P		**P**		**15 28 03.6**	**+0.3**
	baz=72								
SMCO	**Snowmass**	**71.60**	**329**	*e*P		**P**		**15 28 04.2**	**+0.5**
	comp=N,4.5nm,0.9s,mb4.3								
V15A	**Kaibab Nationa**	**71.66**	**324**	⇓P		**P**		**15 28 04.9**	**+0.7**
	baz=72								
X13A	**Yucca**	**71.68**	**322**	⇓P		**P**		**15 28 04.8**	**+0.5**
	baz=72								
W14A	**Seligman**	**71.71**	**323**	⇑P		**P**		**15 28 05.1**	**+0.6**
	baz=72								
T17A	**Navajo Res., N**	**71.81**	**325**	⇑P		**P**		**15 28 05.5**	**+0.5**
	baz=72								
S18A	**Hurst Farm, Bl**	**71.92**	**326**	⇓P		**P**		**15 28 06.1**	**+0.4**
	baz=72								
R19A	**Curley Farm, L**	**72.01**	**327**	⇓P		**P**		**15 28 06.5**	**+0.2**
	baz=72								
V14A	**Boquillas Ranc**	**72.03**	**323**	⇓P		**P**		**15 28 07.0**	**+0.6**
	baz=72								
U15A	**North Rim**	**72.17**	**324**	⇑P		**P**		**15 28 08.1**	**+0.8**
	baz=72								
BELC	**Belle Mtn.**	**72.52**	**320**	⇓P		**P**		**15 28 09.0**	**-0.3**
	baz=72								
U14A	**Mt Trumbull**	**72.65**	**324**	⇓P		**P**		**15 28 10.3**	**+0.2**
	baz=73								
N22A	**Wattenberg Ran**	**72.66**	**331**	⇓P		**P**		**15 28 10.2**	**+0.1**
	baz=73								
T15A	**Red Dirt Ranch**	**72.66**	**324**	⇓P		**P**		**15 28 10.9**	**+0.8**
	baz=73								
V13A	**Grand Canyon W**	**72.68**	**323**	⇑P		**P**		**15 28 10.8**	**+0.6**
	baz=73								
R17A	**Hanksville Air**	**72.84**	**326**	⇓P		**P**		**15 28 11.3**	**+0.2**
	baz=73								
GMRC	**Granite Mounta**	**72.87**	**321**	⇑P		**P**		**15 28 12.2**	**+0.7**
	baz=73								
P19A	**Cripple Cowboy**	**72.91**	**328**	⇑P		**P**		**15 28 11.3**	**-0.3**
	baz=73,SNR=11								
O20A	**White River Ci**	**72.95**	**329**	⇑P		**P**		**15 28 12.1**	**+0.4**
	baz=73								
Q18A	**Rafter H Ranch**	**73.07**	**327**	⇓P		**P**		**15 28 12.6**	**+0.1**
	baz=73								
V12A	**Nelson**	**73.08**	**322**	⇓P		**P**		**15 28 13.2**	**+0.6**
	baz=73								
SRU	**San Rafael**	**73.27**	**327**	⇑P		**P**		**15 28 14.0**	**+0.3**
	baz=73								
SRU	**San Rafael**	**73.27**	**327**	*e*P		**P**		**15 28 13.7**	**0.0**
	comp=N,6.1nm,0.8s,mb4.5								
SRU				*e*pP		pP		15 28 39.7	+0.2
HEC	**Hector,Ludlow**	**73.30**	**320**	⇑P		**P**		**15 28 14.7**	**+0.8**
	baz=73								
T13A	**Saint George**	**73.48**	**324**	⇓P		**P**		**15 28 15.7**	**+0.8**
	baz=74								
O19A	**Miners Draw (B**	**73.50**	**329**	⇓P		**P**		**15 28 15.0**	**0.0**
	baz=74								
P18A	**Preston Nutter**	**73.53**	**328**	⇑P		**P**		**15 28 15.4**	**+0.2**
	baz=74								
CCUT	**Cedar City**	**73.58**	**324**	*e*P		**P**		**15 28 16.6**	**+1.1**
	comp=N,6.8nm,1.0s,mb4.3								
CCUT				*e*pP		pP		15 28 42.6	+1.2
M21A	**Separation Pea**	**73.71**	**331**	⇓P		**P**		**15 28 15.6**	**-0.6**
	baz=74								
S13A	**Holt Ranch, En**	**73.87**	**324**	⇓P		**P**		**15 28 17.8**	**+0.6**
	baz=74								
GSC	**Goldstone**	**73.91**	**321**	⇑P		**P**		**15 28 17.2**	**-0.3**
	baz=74								
N19A	**John Jarvie Ra**	**73.99**	**329**	⇑P		**P**		**15 28 17.9**	**+0.1**
	baz=74								
M20A	**Sweetwater, Wa**	**73.99**	**330**	⇓P		**P**		**15 28 17.8**	**0.0**
	baz=74								
L21A	**Rawlins**	**74.00**	**331**	⇓P		**P**		**15 28 18.0**	**+0.1**
	baz=74								
RSSD	**Black Hills**	**74.34**	**334**	*e*P		**P**		**15 28 19.4**	**-0.4**
	comp=N,2.0nm,0.6s,mb4.0								
R13A	**O'Grain Ranch,**	**74.36**	**324**	⇓P		**P**		**15 28 20.5**	**+0.4**
	baz=74								
T11A	**Corn Creek, Al**	**74.37**	**323**	⇑P		**P**		**15 28 20.9**	**+0.8**
	baz=74								
L20A	**Wamsutter**	**74.47**	**330**	⇓P		**P**		**15 28 20.5**	**-0.1**
	baz=75								
Q14A	**Sevier Lake (B**	**74.59**	**325**	⇑P		**P**		**15 28 21.5**	**+0.1**
	baz=75								
N17A	**Moffit Pass**	**74.82**	**328**	⇑P		**P**		**15 28 22.8**	**+0.2**
	baz=75								
MPMC	**Manual Prospec**	**74.83**	**321**	⇓P		**P**		**15 28 23.6**	**+0.7**
	baz=75								
L19A	**Farson**	**75.02**	**330**	⇑P		**P**		**15 28 23.8**	**+0.1**
	baz=75								
ISA	**Isabella**	**75.14**	**320**	⇓P		**P**		**15 28 25.4**	**+0.7**
	baz=75								
L18A	**Fontenelle, Gr**	**75.19**	**329**	⇑P		**P**		**15 28 24.3**	**-0.4**
	baz=75,SNR=5.7								
DUG	**Dugway**	**75.25**	**326**	⇑P		**P**		**15 28 25.5**	**+0.4**
	baz=75								
P13A	**Bates Ranch, G**	**75.32**	**325**	⇓P		**P**		**15 28 26.1**	**+0.6**
	baz=75								
K19A	**Absolon Red Bu**	**75.35**	**330**	⇑P		**P**		**15 28 25.4**	**-0.2**
	baz=76								
R11A	**Troy Canyon, C**	**75.36**	**323**	⇑P		**P**		**15 28 26.9**	**+1.0**
	baz=75								
PKM	**Peak Mountain**	**75.43**	**318**	⇓P		**P**		**15 28 27.1**	**+0.8**
	baz=75								
M16A	**Huntsville**	**75.49**	**328**	⇑P		**P**		**15 28 26.8**	**+0.2**
	baz=76								
S10A	**Tonopah Range,**	**75.62**	**323**	⇑P		**P**		**15 28 28.2**	**+0.9**
	baz=76								
BW06	**Boulder Array**	**75.63**	**330**	⇓P		**P**		**15 28 26.9**	**-0.4**
	baz=76								
PDAR	**Pinedale Array**	**75.63**	**330**	P		**P**		**15 28 26.7**	**-0.5**
	comp=N,0.7nm,0.4s,mb3.7,baz=136,slow=7.5,SNR=8.1								
R10A	**Warm Springs**	**75.72**	**323**	⇑P		**P**		**15 28 28.8**	**+1.0**
	baz=76								
K18A	**Toltan Ranch,**	**75.75**	**330**	⇓P		**P**		**15 28 28.5**	**+0.6**
	baz=76								
Q11A	**Duckwater**	**75.76**	**324**	⇓P		**P**		**15 28 28.7**	**+0.6**
	baz=76								
P12A	**McGill**	**75.81**	**325**	⇑P		**P**		**15 28 29.0**	**+0.7**
	baz=76								
N14A	**Grayback Hills**	**75.92**	**327**	⇓P		**P**		**15 28 28.5**	**-0.4**
	baz=76								
L16A	**Fish Haven**	**75.93**	**328**	⇑P		**P**		**15 28 28.4**	**-0.5**
	baz=76								
Q10A	**Clear Creek Ra**	**76.15**	**323**	⇓P		**P**		**15 28 30.7**	**+0.4**
	baz=76								
J18A	**Kendall Valley**	**76.19**	**330**	⇓P		**P**		**15 28 30.1**	**-0.3**
	baz=76,SNR=11								
K17A	**Gardner Place,**	**76.25**	**329**	⇑P		**P**		**15 28 30.8**	**0.0**
	baz=76								
O12A	**Currie**	**76.30**	**325**	⇓P		**P**		**15 28 31.5**	**+0.4**
	baz=76								
L15A	**Malad City**	**76.39**	**328**	⇑P		**P**		**15 28 31.3**	**-0.3**
	baz=76								
I18A	**Diamond G Ranc**	**76.47**	**330**	⇓P		**P**		**15 28 32.0**	**0.0**
	baz=77,SNR=6.3								
M14A	**S

baz=79
H14A Leadore 78.82 329 ⇑P P 15 28 45.6 +0.6
baz=79
G15A Dillon 78.82 330 ⇑P P 15 28 45.7 +0.6
baz=79
I12A Atlanta 79.07 328 ⇑P P 15 28 46.7 +0.3
baz=79,SNR=5.6
E17A Martinsdale 79.08 332 ⇓P P 15 28 46.3 -0.2
baz=79
BEKR Beckwourth 79.09 322 ⇑P P 15 28 47.3 +0.7
baz=79
MFID Camas Ranch 79.14 327 ⇓P P 15 28 47.3 +0.5
baz=79
H13A Challis 79.20 329 ⇑P P 15 28 47.3 +0.2
baz=79,SNR=5.9
K10A MacKenzie Ranc 79.21 326 ⇑P P 15 28 47.6 +0.4
baz=79
F15A Butte 79.34 330 ⇑P P 15 28 47.8 0.0
baz=80
H12A Diamond D Ranc 79.48 328 ⇑P P 15 28 48.9 +0.2
baz=80
D17A Six Diamond Ra 79.55 332 ⇑P P 15 28 48.6 -0.3
baz=80,SNR=5.2
G13A Cobalt 79.59 329 ⇓P P 15 28 49.6 +0.4
baz=80,SNR=20
D16A Dana Ranch, Ca 79.83 332 ⇓P P 15 28 50.6 +0.1
baz=80,SNR=8.4
EGMT Eagleton 79.83 333 ⇑P P 15 28 50.5 +0.1
baz=80
E15A Deer Lodge 79.85 331 ⇑P P 15 28 50.9 +0.4
baz=80
C17A Wharram Farm, 79.95 332 ⇑P P 15 28 51.0 -0.1
baz=80
J09A Fry Pan Ranch, 80.07 326 ⇓P P 15 28 52.0 +0.2
baz=80
B18A Beardsley Farm 80.13 333 ⇑P P 15 28 51.7 -0.4
baz=80
F13A Darby 80.15 329 ⇑P P 15 28 52.4 +0.2
baz=80,SNR=12
E14A Clinton 80.23 330 ⇓P P 15 28 53.1 +0.4
baz=80
D15A Lincoln 80.26 331 ⇑P P 15 28 53.1 +0.3
baz=80
I09A Lost Marbles R 80.51 326 ⇑P P 15 28 54.3 +0.2
baz=81
F12A Elk City 80.56 329 ⇓P P 15 28 54.3 -0.1
baz=81
E13A Victor 80.57 330 ⇑P P 15 28 54.7 +0.3
baz=81
D14A Greenough 80.73 331 ⇓P P 15 28 55.4 +0.1
baz=81
G11A Walters Elk Ra 80.79 328 ⇓P P 15 28 55.6 0.0
baz=81,SNR=6.1
C15A Salmond Ranch, 80.86 332 ⇑P P 15 28 55.8 -0.2
baz=81,SNR=7.0
BMO Blue Mountains 80.91 327 *eP* **P 15 28 55.4 -0.9**
comp=N,4.7nm,1.1s,mb4.2
A17A Triple J Farms 80.95 333 ⇑P P 15 28 55.9 -0.5
baz=81
F11A Grangeville 81.09 328 ⇑P P 15 28 57.2 0.0
baz=81
G10A Bishop Farm, J 81.13 328 ⇑P P 15 28 57.7 +0.2
baz=81,SNR=7.3
D13A Huson 81.18 330 ⇑P P 15 28 57.8 +0.1
baz=81,SNR=6.7
E12A Beaver Dam Sad 81.19 329 ⇑P P 15 28 57.8 0.0
baz=81
B15A Bradely Ranch, 81.25 332 ⇓P P 15 28 57.4 -0.7
baz=81,SNR=6.1
K05A Summer Lake 81.31 324 ⇓P P 15 28 58.9 +0.4
baz=81
A16A West Butte Ran 81.32 333 ⇑P P 15 28 58.1 -0.3
baz=82,SNR=7.3
C14A Swan Lake 81.36 331 ⇑P P 15 28 58.7 +0.1
baz=82
H08A Prairie City 81.36 326 ⇓P P 15 28 59.1 +0.4
baz=81
G09A Cove 81.45 327 ⇑P P 15 28 58.9 -0.3
baz=82,SNR=8.6
E11A Bogner Ranch, 81.45 329 ⇓P P 15 28 59.0 -0.2
baz=82
I07A Izee 81.49 325 ⇑P P 15 28 59.9 +0.4
baz=82
YBH Yreka Blue Hor 81.66 322 P **P 15 28 58.8 -1.5**
comp=N,0.8nm,0.4s,mb3.9,baz=55,slow=16,SNR=2.9
C13A Hot Springs 81.66 331 ⇓P P 15 28 60.0 -0.2
baz=82,SNR=5.8
F10A Beach Ranch, E 81.67 328 ⇓P P 15 29 00.2 -0.1
baz=82
BSMT Bassoo Peak 81.89 331 *eP* **P 15 29 01.3 -0.1**
E10A Myers Farm, Un 81.98 328 ⇑P P 15 29 01.9 0.0
baz=82
G08A Pilot Rock 82.05 327 ⇑P P 15 29 02.4 +0.1
baz=82
A14A Double T Ranch 82.12 332 ⇓P P 15 29 02.4 -0.2
baz=82
B13A Whitefish 82.13 331 ⇑P P 15 29 02.4 -0.2
baz=82
H06A Lindquist Farm 82.37 326 ⇑P P 15 29 04.4 +0.4
baz=82
BOSA Boshof 82.38 118 P **P 15 29 05.0 +0.5**
comp=N,3.3nm,0.7s,mb4.3,baz=270,slow=6.9,SNR=6.2
A13A Flathead Natio 82.52 331 ⇑P P 15 29 04.9 +0.2
baz=83,SNR=20
B12A Libby 82.70 331 ⇓P P 15 29 06.0 +0.3
baz=83
MAW Mawson 82.76 163 P **P 15 29 05.3 -0.6**
comp=N,6.9nm,0.9s,mb4.5,baz=233,slow=8.5,SNR=10
D09A Jones Farm, Ri 82.97 328 ⇓P P 15 29 07.2 +0.1
baz=83
B11A Sandpoint 83.04 330 ⇓P P 15 29 07.1 -0.2
baz=83
A12A Yaak River Ran 83.08 331 ⇑P P 15 29 07.4 -0.2
baz=83
KEBM Edson Butte 83.31 322 *eP* **P 15 29 07.0 -1.9**
comp=N,104nm,1.5s,mb5.4
OD2 Odessa Site #2 83.39 328 *eP* **P 15 29 08.4 -0.8**
OD2 *ep*P pP 15 29 34.8 -0.8
A11A Hall Mountain, 83.41 331 ⇓P P 15 29 09.1 -0.2
baz=84,SNR=7.0
C09A Chrisman Ranch 83.47 329 ⇓P P 15 29 09.6 0.0
baz=84
B09A Rice 83.85 329 ⇑P P 15 29 11.2 -0.3
baz=84
FCC Fort Churchill 84.20 347 *eP* **P 15 29 12.1 -0.9**
comp=N,0.1nm,0.9s
FCC *ep*P pP 15 29 37.6 -1.8
B08A Colville Reser 84.37 329 ⇑P P 15 29 13.4 -0.8
baz=84
A09A Danville 84.45 329 ⇑P P 15 29 13.8 -0.8
baz=84
A08A Turner Farm, O 84.76 329 ⇓P P 15 29 15.5 -0.6
baz=85
B07A Winthrop 84.82 328 ⇑P P 15 29 15.8 -0.7
baz=85
A07A Ashnola River, 85.35 329 ⇓P P 15 29 18.9 -0.2
baz=85
ESDC Sonseca Array 86.63 44 pP pP 15 29 51.8 -0.3
comp=N,0.3nm,0.4s,baz=234,slow=4.1,SNR=2.2
YKA Yellowknife Ar 92.75 340 P **P 15 29 53.0 -0.7**
comp=N,3.2nm,0.8s,mb4.7,baz=136,slow=4.5,SNR=74
YKA pP pP 15 30 19.4 -1.0
comp=N,2.2nm,0.8s,baz=135,slow=4.6,SNR=8.4
YKA Yellowknife Ar 92.75 340 P **P 15 29 53.0 -0.7**
YKA pP pP 15 30 19.4 -1.0
AFI Afiamalu 96.49 252 LR LR 16 08 07.3
comp=N,84nm,18.4s,baz=290,slow=32
ASAR Alice Springs 128.75 207 PKP PKPdf 15 35 48.5 -1.2
comp=N,2.1nm,0.7s,baz=135,slow=1.6,SNR=37
ASAR pPKP pPKPdf 15 36 15.6 -1.9
comp=N,1.0nm,0.9s,baz=111,slow=1.7,SNR=3.2
WB2 Warramunga Arr 131.84 209 *e*PKPdf PKPdf 15 35 54.1 -1.5
WRA Warramunga Arr 131.84 209 PKP PKPdf 15 35 54.8 -0.8
comp=N,1.8nm,0.6s,baz=152,slow=1.6,SNR=5.5
PETK Petropavlovsk- 134.02 323 PKP PKPdf 15 35 58.7 +0.1
comp=N,2.6nm,0.9s,baz=30,slow=3.7,SNR=4.3
PETK Petropavlovsk- 134.02 323 PKP PKPdf 15 35 58.7 +0.1
BVAR Borovoye Array 136.80 35 PKP PKPdf 15 36 04.6 +0.8
comp=N,0.8nm,0.7s,baz=318,slow=2.0,SNR=7.1
BVAR pPKP pPKPdf 15 36 30.7 -0.9
comp=N,0.5nm,0.6s,baz=323,slow=3.7,SNR=3.0
FITZ Fitzroy Crossi 136.87 200 PKP PKPdf 15 36 02.6 -2.4
comp=N,1.7nm,0.9s,baz=142,slow=6.0,SNR=3.5
ZAA0 Zalesovo Array 143.14 26 *e*PKPdf PKPdf 15 36 13.0 -2.2
ZAA0 *ep*PKPdf pPKPdf 15 36 37.8 -5.2
ZALV Zalesovo Beam 143.14 26 PKP PKPdf 15 36 12.8 -2.5
comp=N,3.3nm,0.6s,baz=302,slow=4.2,SNR=14
ZALV pPKP pPKPdf 15 36 39.7 -3.4
comp=N,2.7nm,0.8s,baz=298,slow=3.2,SNR=2.8
AAK Ala-Archa 143.62 49 *e*PKPdf PKPdf 15 36 15.3 -1.1
TKM2 Tokmak 2 144.27 48 *e*PKPdf PKPdf 15 36 16.4 -1.2
MKAR Makanchi Array 146.60 38 PKPbc PKPbc 15 36 22.1 -1.0
comp=N,6.4nm,0.9s,baz=336,slow=1.1,SNR=31
MKAR pPKPbc pPKPbc 15 36 49.4 -1.2
comp=N,5.0nm,0.7s,baz=336,slow=2.7,SNR=9.5
MKAR Makanchi Array 146.60 38 PKPbc PKPbc 15 36 22.1 -1.0
MKAR pPKPbc pPKPbc 15 36 49.4 -1.2
ASAJ Asahikawa 146.95 317 PKPbc PKPbc 15 36 22.6 -1.6
comp=N,8.2nm,0.7s,baz=107,slow=12,SNR=5.7
KAPI Kappang 151.00 197 PKPbc PKPbc 15 36 34.2 -1.2
comp=N,5.7nm,0.8s,baz=176,slow=4.1,SNR=4.7
WMQ Urumqi 151.44 38 *e*PKPbc PKPdf 15 36 28.0 -1.3
MJAR Matsushiro Arr 153.32 306 PKPbc PKPbc 15 36 38.3 -1.6
comp=N,1.1nm,0.6s,baz=86,slow=0.7,SNR=8.0
MJAR PKPab PKPab 15 36 51.4 -0.9
comp=N,3.3nm,0.7s,baz=79,slow=3.3,SNR=12
MAJO Matsushiro 153.32 306 *e*PKPdf PKPdf 15 36 28.9 -3.4
MAJO *e*PKPbc PKPbc 15 36 37.6 -2.3
MAJO *e*PKPab PKPab 15 36 51.1 -1.2
SONM Songino Array 154.90 8 PKP PKPdf 15 36 34.7 +0.5
comp=N,1.1nm,0.8s,baz=310,slow=1.6,SNR=5.8
SONM PKPbc PKPbc 15 36 42.9 -0.1
comp=N,0.5nm,0.5s,baz=318,slow=2.6,SNR=4.2
SONM PKPab PKPab 15 36 59.5 +1.0
comp=N,0.7nm,0.5s,baz=359,slow=6.2,SNR=4.7
KSRS Korea Array 159.86 319 PKP PKPdf 15 36 40.5 -0.3
comp=N,1.6nm,1.0s,baz=75,slow=1.4,SNR=7.3
KSRS PKPab PKPab 15 37 20.0 -0.3
comp=N,1.5nm,0.7s,baz=51,slow=4.7,SNR=8.5
GTA Gaotai 160.87 29 *e*PKP PKPdf 15 36 43.0 +1.2
HHC Hu-ho-hao-te 162.23 360 *e*PKP PKPdf 15 36 40.8 -2.3
HHC pPKP pPKPdf 15 37 08.1 -3.0
HHC sPKP 15 37 18.6
HHC PKS 15 40 13.4
HHC PP PP 15 41 16.1 +2.3
HHC SKS SKSdf 15 43 35.2 -3.6
HHC SKKS SKKSac 15 47 53.5 +0.1
HHC SS SS 16 01 29.5 +4.3
HHC AMB AMB
comp=Z,73nm,8.8s
HHC LR LR
comp=N,86nm,23.8s
HHC LR LR
comp=E,130nm,21.5s
HHC LR LR
comp=Z,82nm,24.6s
LZH Lanzhou 165.37 25 *e*PKP PKPdf 15 36 40.6 -5.6
LZH pPKP pPKPdf 15 37 07.1 -7.1
LZH sPKP 15 37 16.5
CD2 Chengdu 169.53 40 PKP PKPdf 15 36 46.6 -2.7
KMI Kunming 171.70 74 PKP PKPdf 15 36 45.6 -5.1
GYA Guiyang 174.41 51 *e*PKP PKPdf 15 36 47.9 -3.8
GYA pPKP pPKPdf 15 37 15.2 -4.6
GYA sPKP 15 37 28.7
GYA PKPab PKPab 15 38 23.6 -1.3
GYA PKS 15 40 19.0
GYA PP PP 15 42 18.4 +1.4
GYA AMB AMB
comp=Z,70nm,8.3s

*ISCJB **01** 15:17:44.7±0.5, 8°.65S±0°.09×114°.85E±0°.06, h150km±7km, mb3.6/4, Error ellipse: s-maj=16.3km s-min=6.8km az=23.2.*
*NEIC **01** 15:17:44.6±1.9, 8°.64S×114°.34E, h186km±21km, mb4.0/3, Error ellipse: s-maj=30.6km s-min=12.8km az=60.0*
*IDC **01** 15:17:44.5±7.6, 8°.66S×114°.30E, h180km±70km, mb3.3/4, mb1 3.4/6, mb1mx3.1/21, mbtmp3.3/6, Error ellipse: s-maj=69.4km s-min=16.5km az=62.0*
*DJA **01** 15:17:46, 8°.54S×114°.84E, h132km, MLv3.7/9*
ISC 01 15:17:45.4±0.5, 8°.6S±0°.1×114°.87E±0°.06, h149km±7km, n25, σ0°88/33, mb3.6/4, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.34**	**98**	P	**Pn**	**15 18 06.0**	**0.0**
SRBI	**Singaraja**	**0.64**	**32**	P	**Pn**	**15 18 07.4**	**-0.1**
SRBI				S	**Sn**	**15 18 25.1**	**+0.9**
KHKI	**Kahang-Kahang**	**0.78**	**70**	P	**Pn**	**15 18 08.2**	**-0.1**
KHKI				S	**Sn**	**15 18 26.4**	**+0.6**
ABJI	**Asem Bagus**	**1.04**	**323**	P	**Pn**	**15 18 09.7**	**-0.8**
GMJI	**Gumukmas**	**1.45**	**284**	P	**Pn**	**15 18 14.5**	**+0.1**
GMJI				S	**Sn**	**15 18 35.5**	**-1.1**
KMMI	**Kalianget**	**1.81**	**330**	P	**Pn**	**15 18 17.7**	**-0.6**
KMMI				S	**Sn**	**15 18 43.0**	**-0.5**
GRJI	**Gresik**	**2.92**	**306**	P	**Pn**	**15 18 30.9**	**-0.8**
SJI	**Sawahan**	**3.20**	**286**	P	**Pn**	**15 18 35.6**	**+0.3**
NGJI	**Ngawi**	**3.60**	**290**	P	**Pn**	**15 18 41.6**	**+1.1**
PCJI	**Pacitan**	**3.68**	**276**	P	**Pn**	**15 18 41.5**	**0.0**
UGM	**Wanagama**	**4.36**	**279**	P	**Pn**	**15 18 51.5**	**+1.1**
KAPI	**Kappang**	**6.03**	**54**	P	**Pn**	**15 19 18.5**	**+5.9**
	0.6nm,0.3s,baz=219,slow=13,SNR=4.2						
KAPI				S	**Sn**	**15 20 33.3**	**+13**
	0.6nm,0.3s,baz=218,slow=18,SNR=2.9						
KSM	**Kuching**	**11.02**	**335**	P	**Pn**	**15 20 14.2**	**-4.8**
	8.1nm,1.2s						
MBWA	**Marble Bar**	**13.31**	**160**	*e*P	**Pn**	**15 20 49.0**	**+0.3**
MBWA				*e*S	**Sn**	**15 23 10.4**	**-5.6**
MBWA	**Marble Bar**	**13.31**	**160**	*e*Pn	**Pn**	**15 20 48.8**	**+0.1**
	5.7nm,0.4s						
MBWA				*e*Sn	**Sn**	**15 23 10.6**	**-5.4**
FITZ	**Fitzroy Crossi**	**14.08**	**133**	*e*P	**Pn**	**15 20 59.5**	**+1.1**
	11nm,1.2s						
FITZ	**Fitzroy Crossi**	**14.08**	**133**	P	**Pn**	**15 21 00.7**	**+2.2**
	0.3nm,0.3s,baz=335,slow=8.6,SNR=8.4						
FITZ				S	**Sn**	**15 23 32.0**	**-2.5**
	0.3nm,0.3s,baz=120,slow=17,SNR=4.1						
KNA	**Kununurra**	**15.31**	**119**	*e*P	**Pn**	**15 21 14.4**	**+0.6**
	6.4nm,0.3s						
WRA	**Warramunga Arr**	**21.94**	**123**	P	**P**	**15 22 26.6**	**-0.5**
	0.6nm,0.3s,mb3.5,baz=298,slow=11,SNR=7.8						
WRAB	**Tennant Creek**	**21.94**	**123**	*e*P	**P**	**15 22 25.5**	**-1.7**
ASAR	**Alice Springs**	**23.57**	**132**	P	**P**	**15 22 43.2**	**+0.7**
	0.5nm,0.3s,mb3.5,baz=306,slow=9.1,SNR=12						
STKA	**Stephens Creek**	**33.93**	**137**	P	**P**	**15 24 14.8**	**+0.4**
	0.8nm,0.3s,mb4.0,baz=311,slow=11,SNR=4.6						
STKA	**Stephens Creek**	**33.93**	**137**	*e*P	**P**	**15 24 14.8**	**+0.3**
	0.5nm,0.8s,mb3.3						
MKAR	**Makanchi Array**	**62.34**	**335**	P	**P**	**15 27 46.4**	**-5.5**
	1.1nm,0.5s,mb3.9,baz=151,slow=7.4,SNR=20						
MKAR	**Makanchi Array**	**62.34**	**335**	P	**P**	**15 27 46.4**	**-5.5**

*NEIC **01** 15:22:04.5, 31°.32S×69°.21W, h160km, MD3.6(GUC), After GUC.*
GUC 01 15:22:04.5±0.6, 31°.32S×69°.21W, h160km±11km, MD3.6, ML3.6, 5C-8D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.54**	**275**	⇓*i*P	Pn	15 22 35.9	+0.7
CMCH				*i* S	Sn	15 22 59.4	+0.8
JACH	**Jahuel**	**1.79**	**221**	*e*P	Pn	15 22 38.5	+0.7
JACH				*e*S	Sn	15 23 04.6	+1.1
OVCH	**Ovalle**	**1.85**	**292**	⇑*i*P	Pn	15 22 39.0	+0.5
OVCH				*i* S	Sn	15 23 04.9	+0.2
OVCH	**Ovalle**	**1.85**	**292**	⇑*i*P	Pn	15 22 39.0	+0.5
OVCH				*i* S	Sn	15 23 04.9	+0.2
OVCH				AML	AML	15 23 05.8	
	comp=N,784nm,0.2s						
CHNG	**Los Chungos**	**2.03**	**253**	⇑*i*P	Pn	15 22 41.1	+0.6
CHNG				*i* S	Sn	15 23 08.3	+0.1
FCH	**Farellones**	**2.20**	**204**	⇑*i*P	Pn	15 22 44.3	+1.9
FCH				*i* S	Sn	15 23 13.7	+1.9
FCH				AML	AML	15 23 19.2	
	comp=E,204nm,0.1s						
CLCH	**Cerro Calan**	**2.35**	**208**	⇓*i*P	Pn	15 22 44.9	+0.6
CLCH				*i* S	Sn	15 23 15.8	+0.7
CLCH				AML	AML	15 23 19.8	
	comp=E,242nm,0.3s						
ANTU	**Antumapu**	**2.54**	**208**	⇓*i*P	Pn	15 22 47.3	+0.8
ANTU				*i* S	Sn	15 23 19.9	+0.8
ANTU	**Antumapu**	**2.54**	**208**	⇓*i*P	Pn	15 22 47.3	+0.8
ANTU				*i* S	Sn	15 23 19.9	+0.8
ANTU				AML	AML	15 23 24.7	
	comp=E,199nm,0.4s						
PCH	**Pirque**	**2.54**	**205**	*e*P	Pn	15 22 47.4	+0.8
PCH				*e*S	Sn	15 23 19.8	+0.7
LMEL	**Las Melosas**	**2.65**	**198**	⇓*i*P	Pn	15 22 48.6	+0.8
LMEL				*e*S	Sn	15 23 22.8	+1.3
LMEL	**Las Melosas**	**2.65**	**198**	⇓*i*P	Pn	15 22 48.6	+0.8
LMEL				*e*S	Sn	15 23 22.8	+1.3
LMEL				AML	AML	15 23 29.1	
	comp=N,140nm,0.2s						
TACH	**Talagante**	**2.74**	**212**	⇓*i*P	Pn	15 22 49.4	+0.4
TACH				*i* S	Sn	15 23 24.0	+0.5
CHCH	**Chadas Angostu**	**2.87**	**205**	⇓*i*P	Pn	15 22 51.4	+0.8
CACH	**El Canelo**	**3.02**	**202**	⇑*i*P	Pn	15 22 53.7	+1.3
CACH				*e*S	Sn	15 23 31.6	+1.9

MEX 01 15:24:43.8±0.9, 16°.96N×100°.27W, h28km±5km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.09**	**0**	*i* P	Pb	15 24 47.2	-1.6
CAIG				*i* S	Sb	15 24 50.8	-1.5
ACX	**Acapulco**	**0.35**	**105**	*e*P	Pb	15 24 50.0	-1.7
ACX				*i* S	Sb	15 24 56.3	-0.9
MEIG	**Mezcala**	**1.15**	**33**	*i* P	Pn	15 25 02.0	-2.0
MEIG				*i* S	Sn	15 25 15.2	-3.5
ZIIG	**Zihuatanejo**	**1.31**	**300**	*i* P	Pn	15 25 04.9	-1.3
ZIIG				*i* S	Sn	15 25 19.1	-3.8
PLIG	**Platanillo**	**1.60**	**27**	*i* P	Pn	15 25 09.0	-1.2
PLIG				*i* S	Sn	15 25 26.5	-3.5
PNIG	**Pinotepa**	**2.13**	**105**	*i* P	Pn	15 25 14.9	-2.6
PNIG				*i* S	Sn	15 25 41.3	-1.7
MZVM		**2.43**	**24**	*e*P	Pn	15 25 20.4	-1.3
UTMO	**Huajuapan**	**2.51**	**69**	*e*P	Pn	15 25 20.5	-2.2
UTMO				*e*S	Sn	15 25 49.6	-2.7
PPM	**Popocatepetl**	**2.62**	**36**	*i* P	Pn	15 25 21.8	-2.4
PPM				*i* S	Sn	15 25 53.0	-2.1
PTVM	**Pico Tres Padr**	**2.84**	**23**	*e*P	Pn	15 25 29.3	+2.0
IIO	**Organos**	**3.00**	**29**	*i* P	Pn	15 25 28.7	-0.8
IIO				*i* S	Sn	15 26 02.3	-2.3
VHO	**Vista Hermosa**	**3.38**	**88**	*e*P	Pn	15 25 36.5	+1.7

*ISCJB **01** 15:33:08.3±4.4, 5°.8N±0°.1×126°.4E±0°.2, h6km±27km, mb3.4/5, Error ellipse: s-maj=40.6km s-min=8.6km az=151.8*
*MAN **01** 15:33:09, 5°.94N×126°.79E, h21km, mb4.6, ML3.5, MS3.5*
*IDC **01** 15:33:09.3±1.4, 5°.70N×126°.11E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/21, mbtmp3.5/5, Error ellipse: s-maj=121.0km s-min=16.5km az=72.0*
ISC 01 15:33:09.3±4.7, 5°.8N±0°.1×126°.3E±0°.2, h1km±29km, n9, σ1°10/12, mb3.4/5, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.36**	**284**	⇓*i*P	**Pn**	**15 33 35.4**	**0.0**
DAV	**Davao City (W)**	**1.47**	**332**	Pn	**Pn**	**15 33 37.0**	**+0.1**
	19nm,0.3s,baz=197,slow=10,SNR=4.5						
DAV				Sn	**Sn**	**15 33 57.1**	**+0.3**
	43nm,0.3s,baz=52,slow=20,SNR=13						
DMPH	**Davao City--Mi**	**1.52**	**330**	⇑*e*P	**Pn**	**15 33 35.5**	**-2.1**
DMPH				*e*S	**Sn**	**15 33 57.8**	**-0.1**
KCP	**Kidapawan**	**1.71**	**316**	⇓*i*P	**Pn**	**15 33 42.6**	**+2.4**
KCP				*i* S	**Sn**	**15 33 58.8**	**-3.9**
FITZ	**Fitzroy Crossi**	**23.73**	**182**	P	**P**	**15 38 23.5**	**+0.4**
	1.6nm,0.8s,mb3.5,baz=34,slow=3.6,SNR=3.4						
WRA	**Warramunga Arr**	**26.75**	**163**	P	**P**	**15 38 50.5**	**-0.1**
	0.2nm,0.3s,mb3.1,baz=342,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**30.19**	**166**	P	**P**	**15 39 20.6**	**-0.7**
	0.1nm,0.3s,mb3.0,baz=342,slow=7.0,SNR=3.2						
MKAR	**Makanchi Array**	**55.64**	**325**	P	**P**	**15 42 45.9**	**-1.0**
	0.2nm,0.5s,mb3.4,baz=118,slow=8.3,SNR=2.8						
ARCES	**ARCESS Array B**	**88.39**	**340**	P	**P**	**15 46 04.3**	**+1.6**
	1.1nm,0.8s,mb4.1,baz=69,slow=3.0,SNR=4.4						

IDC 01 15:33:45.3±3.4, 25°.28N×45°.70W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/24, mbtmp3.6/3, MS3.4/6, Ms1 3.3/6, ms1mx3.0/25, Error ellipse: s-maj=169.0km s-min=31.8km az=24.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SADO	**Sadowa**	**33.26**	**314**	LR	LR	15 51 36.1	
	comp=Z,67nm,20.1s,baz=1.6,slow=32						
SCHQ	**Schefferville**	**33.39**	**338**	LR	LR	15 51 56.4	
	comp=Z,70nm,21.7s,baz=123,slow=33						
ULM	**Lac du Bonnet**	**45.74**	**316**	LR	LR	16 00 08.4	
	comp=Z,68nm,20.5s,baz=294,slow=35						
TORD	**Torodi Ar. Bea**	**46.14**	**96**	P	P	15 42 11.7	-0.1
	1.3nm,1.1s,baz=283,slow=6.4,SNR=3.8						
DAVOX	**Davos/Dischmat**	**48.69**	**49**	LR	LR	15 59 18.9	
	comp=Z,60nm,18.7s,slow=32						
VAE	**Valguarnera**	**51.97**	**61**	LR	LR	15 59 53.5	
	comp=Z,54nm,20.3s,slow=30						
PDAR	**Pinedale Array**	**54.47**	**306**	P	P	15 43 14.8	+0.2
	1.6nm,1.1s,baz=93,slow=6.8,SNR=8.1						
YKA	**Yellowknife Ar**	**58.17**	**329**	P	P	15 43 40.7	0.0
	0.4nm,0.8s,baz=97,slow=7.6,SNR=6.4						
YKA				LR	LR	16 07 30.8	
	comp=Z,5.1nm,19.2s,baz=310,slow=35						

*NEIC **01** 15:40:36.8, 16°.55N×99°.32W, h11km, MD3.5(MEX), After MEX.*
MEX 01 15:40:36.8±1.0, 16°.55N×99°.32W, h11km±13km, MD3.4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.66**	**299**	*i* P	Pg	15 40 47.4	-2.2
ACX				*i* S	Sg	15 40 56.1	-2.1
ACX	**Acapulco**	**0.66**	**299**	*i* P	Pg	15 40 47.4	-2.2
ACX				*i* S	Sg	15 40 56.1	-2.1
CAIG	**El Cayaco**	**1.04**	**299**	*i* P	Pb	15 40 54.1	-2.7
CAIG				*i* S	Sg	15 41 07.2	-3.1
CAIG	**El Cayaco**	**1.04**	**299**	*i* P	Pb	15 40 54.1	-2.7
CAIG				*i* S	Sg	15 41 07.2	-3.1
PNIG	**Pinotepa**	**1.15**	**97**	*i* P	Pb	15 40 55.1	-3.7
PNIG				*i* S	Sb	15 41 09.5	-4.2
PNIG	**Pinotepa**	**1.15**	**97**	*i* P	Pb	15 40 55.1	-3.7
PNIG				*i* S	Sb	15 41 09.5	-4.2
UTMO	**Huajuapan**	**1.93**	**48**	*i* P	Pn	15 41 06.9	-2.7
UTMO				*i* S	Sn	15 41 29.5	-4.3
PPM	**Popocatepetl**	**2.59**	**15**	*i* P	Pn	15 41 16.3	-2.4
PPM				*i* S	Sn	15 41 46.2	-4.0
PPM	**Popocatepetl**	**2.59**	**15**	*i* P	Pn	15 41 16.3	-2.4
PPM				*i* S	Sn	15 41 46.2	-4.0

MAN 01 15:55:29, 13°.25N×120°.55E, h36km, mb4.1, ML2.9, MS2.6, Mindoro

*IDC **01** 16:02:19.2±0.6, 6°.06N×126°.73E, h0km, mb4.0/14, mb1 4.1/15, mb1mx4.1/21, mbtmp4.0/15, ML3.5/1, MS3.7/7, Ms1 3.7/7, ms1mx3.2/30, Error ellipse: s-maj=30.1km s-min=12.8km az=70.0*
*MAN **01** 16:02:21, 5°.75N×126°.61E, h6km, mb5.2, ML4.2, MS4.4*
*DJA **01** 16:02:24, 6°.35N×127°.10E, h51km, mb4.5/11*
*NEIC **01** 16:02:25.6±1.9, 6°.00N×126°.70E, h44km±16km, mb4.4/12, Error ellipse: s-maj=20.0km s-min=7.4km az=73.0*
*ISCJB **01** 16:02:25.4±1.2, 5°.93N±0°.06×126°.6E±0°.1, h56km±10km, mb4.2/29, MS3.8/6, Error ellipse: s-maj=21.8km s-min=7.2km az=162.7*
*BJI **01** 16:02:27.5, 6°.00N×126°.70E, h35km, mB4.8/2, mb4.3/8*
ISC 01 16:02:25.7±1.2, 5°.96N±0°.06×126°.7E±0°.1, h42km±11km, n55, σ1°14/55, mb4.2/29, MS3.8/6, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.53**	**316**	Pn	**Pn**	**16 02 49.3**	**-1.3**
	100nm,0.3s,baz=14,slow=2.2,SNR=17						
DAV				Sn	**Sn**	**16 03 14.7**	**+5.4**
	139nm,0.3s,baz=75,slow=22,SNR=15						
DAV	**Davao City (W)**	**1.53**	**316**	*e*Pn	**Pn**	**16 02 49.9**	**-0.7**
DAV				Sn	**Sn**	**16 03 14.7**	**+5.4**
DMPH	**Davao City--Mi**	**1.59**	**314**	⇑*e*P	**Pn**	**16 02 50.7**	**-0.7**
DMPH				*e*S	**Sn**	**16 03 15.4**	**+4.6**
GSPH	**General Santos**	**1.70**	**274**	⇓*i*P	**Pn**	**16 02 47.9**	**-5.0**
KCP	**Kidapawan**	**1.87**	**304**	⇑*e*P	**Pn**	**16 02 55.2**	**0.0**
KCP				*i* S	**Sn**	**16 03 24.1**	**+6.5**
CTBH	**Cotabato--PC H**	**2.70**	**298**	⇑*e*P	**Pn**	**16 03 05.3**	**-

SNPH	Sibulan	4.77	315	eP	Pn	16 03 39.0	+3.9
KAPI	Kappang	12.90	212	Pn	Pn	16 05 25.8	-0.8
0.2nm,0.3s,baz=60,slow=12,SNR=3.2							
KAPI	Kappang	12.90	212	Pn	Pn	16 05 25.8	-0.8
KSM	Kuching	16.90	255	ePn	Pn	16 06 22.1	+2.7
22nm,1.1s							
KAKA	Kakadu	19.42	163	eP	Pn	16 06 49.2	-0.9
8.0nm,0.6s							
GUMO	Guam	19.47	66	LR	LR	16 12 49.4	
comp=Z,158nm,20.6s,baz=260,slow=32							
KNA	Kununurra	21.67	174	eP	P	16 07 12.8	-0.2
45nm,0.8s,mb5.0							
FITZ	Fitzroy Crossi	23.93	182	eP	P	16 07 37.0	+1.0
14nm,1.2s,mb4.3							
FITZ	Fitzroy Crossi	23.93	182	P	P	16 07 37.2	+1.2
6.2nm,0.9s,mb4.0,baz=17,slow=9.8,SNR=8.4							
WRAB	Tennant Creek	26.82	164	eP	P	16 08 03.6	+1.3
10nm,0.9s,mb4.3							
WRA	Warramunga Arr	26.83	164	P	P	16 08 02.5	+0.2
1.8nm,0.7s,mb3.7,baz=343,slow=10.0,SNR=20							
WB2	Warramunga Arr	26.83	164	eP	P	16 08 01.9	-0.5
MBWA	Marble Bar	27.80	194	eP	P	16 08 10.7	-0.2
14nm,1.1s,mb4.5							
PSI	Prapat	27.82	265	LR	LR	16 19 28.7	
comp=Z,157nm,19.7s,MS3.6,baz=101,slow=37							
ENH	Enshi	29.08	328	P	P	16 08 23.3	+1.0
21nm,1.6s,mb4.6							
CMAR	Chiang Mai Arr	29.73	297	P	P	16 08 28.8	+0.5
0.6nm,0.6s,mb3.5,baz=95,slow=7.1,SNR=7.4							
CMAR				ScP	ScP	16 15 13.2	+2.6
1.2nm,1.0s,baz=83,slow=2.8,SNR=7.4							
ASAR	Alice Springs	30.29	167	P	P	16 08 31.7	-1.4
0.6nm,0.4s,mb3.6,baz=343,slow=7.0,SNR=27							
ASAR				ScP	ScP	16 15 15.2	+3.1
0.5nm,0.8s,baz=351,slow=1.6,SNR=4.8							
KSRS	Korea Array	31.37	2	P	P	16 08 48.9	+6.4
0.6nm,0.8s,mb3.5,baz=251,slow=33,SNR=5.0							
MJAR	Matsushiro Arr	32.22	18	LR	LR	16 19 59.7	
comp=Z,72nm,20.9s,MS3.3,baz=170,slow=33							
XAN	Xi'an	32.41	332	P	P	16 08 55.7	+4.0
XAN				pP	pP	16 09 11.8	+8.6
XAN				pmax	pmax		
comp=Z,3.0nm,1.3s,mb4.0							
LZH	Lanzhou	36.56	328	eP	P	16 09 35.0	+7.4
LZH				pP	pP	16 09 40.0	+0.8
LZH				sP	sP	16 09 43.5	-0.7
LZH				pmax	pmax		
comp=Z,13nm,1.1s,mb4.7							
NWAO	Narrogin (SRO)	39.70	192	eP	P	16 09 53.4	-0.6
comp=Z,36nm,1.4s,mb4.9							
STKA	Stephens Creek	40.24	160	eP	P	16 09 59.0	+0.5
comp=Z,5.2nm,0.9s,mb4.3							
STKA	Stephens Creek	40.24	160	P	P	16 10 00.1	+1.6
comp=Z,2.5nm,0.9s,mb4.0,baz=344,slow=11,SNR=7.2							
STKA	Stephens Creek	40.24	160	eP	P	16 09 60.0	+1.5
comp=Z,1.7nm,1.0s,mb3.7							
GTA	Gaotai	41.16	328	eP	P	16 10 09.6	+3.5
GTA				pP	pP	16 10 16.7	-1.1
GTA				sP	sP	16 10 19.9	-2.8
GTA				pmax	pmax		
comp=Z,2.0nm,0.9s,mb3.8							
ARMA	Armidale	43.37	148	eP	P	16 10 26.2	+2.0
ULN	Ulaanbaatar	44.99	341	eP	P	16 10 39.1	+2.3
comp=Z,4.3nm,1.0s,mb4.2							
SONM	Songino Array	45.17	341	P	P	16 10 37.5	-0.8
comp=Z,0.3nm,0.5s,mb3.3,baz=114,slow=3.6,SNR=2.7							
PETK	Petropavlovsk-	53.41	23	P	P	16 11 40.4	-0.8
comp=Z,3.6nm,0.9s,mb4.3,baz=260,slow=8.6,SNR=2.8							
MKAR	Makanchi Array	55.70	324	P	P	16 11 57.0	-0.9
comp=Z,1.0nm,0.6s,mb4.1,baz=118,slow=7.4,SNR=12							
MKAR				LR	LR	16 37 43.9	
comp=Z,81nm,20.1s,MS3.8,baz=136,slow=38							
UCH	Uchtor	58.50	317	P	P	16 12 17.5	-0.3
comp=Z,2.1nm,0.8s,mb4.2							
ZAA0	Zalesovo Array	58.58	332	eP	P	16 12 18.8	+0.7
ZALV	Zalesovo Beam	58.58	332	P	P	16 12 18.0	-0.1
comp=Z,0.8nm,0.5s,mb4.0,baz=116,slow=6.9,SNR=6.3							
ZALV				LR	LR	16 38 44.5	
comp=Z,26nm,19.1s,MS3.4,baz=38,slow=37							
AML	Almayashu	59.02	316	P	P	16 12 23.1	+1.6
comp=Z,1.6nm,0.7s,mb4.2							
KURK	Kurchatov	59.83	327	eP	P	16 12 25.7	-1.2
comp=Z,11nm,1.4s,mb4.7							
AFI	Afiamalu	64.20	108	LR	LR	16 34 58.7	
comp=Z,480nm,20.6s,MS4.7,baz=323,slow=30							
BVAR	Borovoye Array	65.42	326	P	P	16 13 03.0	-1.1
comp=Z,0.6nm,0.5s,mb3.9,baz=249,slow=1.2,SNR=4.8							
TIXI	Tiksi	65.62	1	P	P	16 13 06.1	+1.0
comp=Z,4.2nm,0.9s,mb4.5							
ABKAR	Akbulak array	70.39	320	eP	P	16 13 33.8	-1.6
comp=Z,1.0nm,0.6s,mb3.9							
ARU	Arti	73.02	327	P	P	16 13 51.0	-0.1
ARCES	ARCESS Array B	88.34	340	P	P	16 15 11.0	-1.7
comp=Z,3.4nm,1.0s,mb4.5,baz=78,slow=8.8,SNR=5.6							
ARCES	ARCESS Array B	88.34	340	P	P	16 15 11.0	-1.7
BRTR	Keskin Array B	88.55	310	P	P	16 15 12.7	-1.7
comp=Z,1.4nm,0.9s,mb4.3,baz=108,slow=4.0,SNR=7.4							
FINES	FINESS Array B	89.84	332	P	P	16 15 19.7	-0.1
comp=Z,2.5nm,0.9s,mb4.5,baz=29,slow=4.4,SNR=6.2							
NOA	NORSAR Array B	96.77	334	LR	LR	17 03 05.9	
comp=Z,32nm,19.1s,MS3.8,baz=215,slow=38							
YKA	Yellowknife Ar	97.51	24	P	P	16 15 55.2	+0.1
comp=Z,0.2nm,0.8s,mb3.7,baz=290,slow=3.5,SNR=3.4							
TORD	Torodi Ar. Bea	122.13	289	PKP	PKPdf	16 21 15.6	-1.3
comp=Z,1.2nm,0.8s,baz=68,slow=1.5,SNR=6.7							

*IDC **01** 16:04:06.3±1.0, 6°.53N×127°.28E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/21, mbtmp3.8/9, MS3.9/3, Ms1 3.9/3, ms1mx3.1/29, Error ellipse: s-maj=37.9km s-min=17.9km az=59.0*

*ISCJB **01** 16:04:14.8±2.0, 6°.22N±0°.09×126°.8E±0°.2, h81km±16km, mb3.9/15, Error ellipse: s-maj=27.9km s-min=12.0km az=159.9*

*NEIC **01** 16:04:14.7±2.2, 6°.26N×126°.84E, h62km±18km, mb4.3/7, Error ellipse: s-maj=26.6km s-min=10.3km az=70.0*

ISC 01 16:04:16.0±2.2, 6°.24N±0°.09×126°.8E±0°.2, h73km±17km, n23, σ1§17/20, mb3.9/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.49	304	Pn	Pn	16 04 39.6	-1.3
baz=131,slow=18,SNR=1.8							
DAV				Sn	Sn	16 05 02.1	+2.4
113nm,0.3s,baz=53,slow=20,SNR=2.4							
DAV				LR	LR	16 05 29.4	
comp=Z,1μm,19.1s,baz=256,slow=47							
KKM	Kota Kinabalu	10.55	270	eP	Pn	16 06 44.2	-0.2
56nm,1.3s							
KSM	Kuching	17.14	255	ePn	Pn	16 08 09.6	-1.3
5.8nm,0.8s							
FITZ	Fitzroy Crossi	24.21	183	P	P	16 09 28.3	+2.3
2.1nm,0.6s,mb3.6,baz=358,slow=8.0,SNR=2.7							
WRAB	Tennant Creek	27.04	164	P	P	16 09 51.7	+0.2
3.2nm,0.6s,mb4.0							
WRA	Warramunga Arr	27.05	164	P	P	16 09 52.5	+0.9
1.6nm,0.5s,mb3.8,baz=343,slow=10,SNR=2.9							
MBWA	Marble Bar	28.10	194	P	P	16 10 01.2	+0.2
12nm,1.1s,mb4.3							
CMAR	Chiang Mai Arr	29.76	297	P	P	16 10 16.4	+0.6
0.8nm,0.9s,mb3.4,baz=106,slow=8.0,SNR=3.3							
ASAR	Alice Springs	30.52	167	P	P	16 10 21.6	-0.8
0.4nm,0.5s,mb3.4,baz=355,slow=9.3,SNR=3.4							
CTA	Charters Tower	32.40	144	LR	LR	16 23 40.2	
comp=Z,84nm,21.5s,baz=305,slow=36							
CTAO	Charters Tower	32.40	144	eP	P	16 10 32.5	-6.5
10nm,1.0s,mb4.5							
NWAO	Narrogin (SRO)	40.00	193	P	P	16 11 42.5	-1.2
34nm,1.5s,mb5.0							
SONM	Songino Array	44.97	341	P	P	16 12 21.4	-2.4
0.2nm,0.4s,mb3.2,baz=160,slow=4.6,SNR=2.4							
MKAR	Makanchi Array	55.57	324	P	P	16 13 42.7	-1.2
0.6nm,0.7s,mb3.7,baz=141,slow=4.5,SNR=2.3							
MKAR				PcP	PcP	16 14 45.0	+2.1
0.7nm,0.6s,baz=134,slow=4.2,SNR=3.3							
ZALV	Zalesovo Beam	58.42	332	P	P	16 14 04.1	+0.2
0.2nm,0.3s,mb3.6,baz=158,slow=4.2,SNR=1.9							
ZALV	Zalesovo Beam	58.42	332	P	P	16 14 04.1	+0.2
UCH	Uchtor	58.42	316	eP	P	16 14 04.0	-0.1
2.2nm,0.9s,mb4.2							
KURK	Kurchatov	59.70	327	eP	P	16 14 14.1	+1.3
3.0nm,1.0s,mb4.3							
PPT	Papeete	85.80	108	LR	LR	16 48 34.1	
comp=Z,305nm,18.4s,baz=226,slow=31							
ARCES	ARCESS Array B	88.14	340	LR	LR	17 00 16.0	
comp=Z,31nm,18.5s,baz=118,slow=38							

BRTR	Keskin Array B	88.50	310	P	P	16 17 01.0	+0.3
1.0nm,0.8s,mb3.9,baz=102,slow=4.1,SNR=4.0							
FINES	FINESS Array B	89.68	332	P	P	16 17 06.8	+1.1
0.8nm,0.8s,mb3.9,baz=66,slow=4.7,SNR=4.5							
TORD	Torodi Ar. Bea	122.20	290	PKP	PKPdf	16 23 05.2	+1.7
0.4nm,0.6s,baz=25,slow=3.8,SNR=2.6							

DJA 01 16:46:43, 0°.22S×122°.90E, h30km, MLv3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.83	189	P	Pn	16 46 58.4	-0.2
LUWI				S	Sb	16 47 08.0	-1.7
MRSI	Marisa	1.18	306	P	Pn	16 47 03.4	-0.1
APSI	Ampana	1.43	241	P	Pn	16 47 07.7	+0.8
APSI				S	Sn	16 47 24.9	+0.3
PCI	Palu	3.14	257	P	Pn	16 47 22.7	-7.7
PCI				S	Sn	16 48 10.9	+4.0

*ISCJB **01** 16:51:09.4±0.8, 39°.40N±0°.03×33°.14E±0°.04, h1km±6km, Error ellipse: s-maj=5.1km s-min=3.8km az=35.7*

*CSEM **01** 16:51:09.6±0.1, 39°.39N×33°.14E, h2km, MD3.4, Error ellipse: s-maj=1.5km s-min=1.2km az=109.0*

*DDA **01** 16:51:09.5, 39°.41N×33°.17E, h5km±1km, Md3.4*

*ISK **01** 16:51:09.4, 39°.41N×33°.13E, h8km, MD3.4*

ISC 01 16:51:10.1±0.6, 39°.40N±0°.03×33°.13E±0°.04, h4km±5km, n60, σ0§81/78, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	Bala	0.14	358	⇓iP	Pg	16 51 12.9	0.0
BBAL				i S	Sg	16 51 15.2	+0.4
BBAL	Bala	0.14	358	i P	Pg	16 51 12.9	0.0
BBAL				i S	Sg	16 51 15.2	+0.4
LOD	Lodumlu	0.56	330	ePG	Pg	16 51 20.7	-0.2
LOD				eSG	Sg	16 51 28.8	+0.5
LOD	Lodumlu	0.56	330	ePg	Pg	16 51 20.7	-0.2
LOD				eSg	Sg	16 51 28.8	+0.5
CDAG	Cicekdag	0.99	77	i P	Pg	16 51 27.9	-1.1
CDAG				i S	Sg	16 51 41.7	-0.1
CDAG	Cicekdag	0.99	77	i P	Pg	16 51 27.9	-1.1
CDAG				i S	Sg	16 51 41.7	-0.1
KIZT	Kizilcal	1.10	242	ePN	Pn	16 51 30.9	-1.4
KIZT	Kizilcal	1.10	242	ePn	Pn	16 51 30.9	-1.4
ELDT	Eldivan	1.11	12	i P	Pg	16 51 30.9	-0.6
ELDT				i S	Sg	16 51 46.1	+0.3
ELDT	Eldivan	1.11	12	i P	Pg	16 51 30.9	-0.5
ELDT				i S	Sg	16 51 46.1	+0.3
KDHN	Kadinhani	1.18	222	i P	Pg	16 51 32.6	-0.1
KDHN				i S	Sg	16 51 49.8	+1.7
KDHN	Kadinhani	1.18	222	i P	Pg	16 51 32.6	-0.2
KDHN				i S	Sg	16 51 49.8	+1.7
SULT	Sultanhani-AKS	1.24	166	ePN	Pn	16 51 33.6	-0.5
SULT	Sultanhani-AKS	1.24	166	ePn	Pn	16 51 33.6	-0.6
SVRH	Sivrihisar-ESK	1.25	273	ePN	Pn	16 51 33.7	-0.6
SVRH	Sivrihisar-ESK	1.25	273	ePn	Pn	16 51 33.7	-0.6
CANT	Cankiri	1.26	17	ePN	Pn	16 51 33.8	-0.7
CANT				eSN	Sn	16 51 51.6	-0.3
LADK	Ladik-KONYA	1.34	207	ePN	Pn	16 51 35.1	-0.5
LADK				eSN	Sn	16 51 53.9	+0.1
LADK	Ladik-KONYA	1.34	207	ePn	Pn	16 51 35.1	-0.5
LADK				eSn	Sn	16 51 53.9	+0.1
CORM	Corum	1.39	56	ePN	Pn	16 51 35.4	-0.9
CORM	Corum	1.39	56	ePn	Pn	16 51 35.4	-0.9
SGKT	Sivrigoynuk	1.43	325	i P	Pn	16 51 36.8	-0.1
SGKT	Sivrigoynuk	1.43	325	i P	Pn	16 51 36.8	-0.1
AVNT	Avonos	1.48	114	i P	Pn	16 51 39.3	+1.8
AVNT				i S	Sb	16 52 01.0	+3.7
AVNT	Avonos	1.48	114	i P	Pn	16 51 39.3	+1.8
KONT	Konya--Tatoy	1.57	203	ePN	Pn	16 51 38.4	-0.4
KONT	Konya--Tatoy	1.57	203	ePn	Pn	16 51 38.4	-0.4
YOZ	Yozgat	1.71	81	ePN	Pn	16 51 40.6	0.0
YOZ	Yozgat	1.71	81	ePn	Pn	16 51 40.6	-0.1
CTKT	Corum	1.77	46	i P	Pn	16 51 41.7	+0.2
CTKT				i S	Sn	16 52 06.6	+2.3
CTKT	Corum	1.77	46	i P	Pn	16 51 41.7	+0.3
CTKT				i S	Sn	16 52 06.6	+2.3
ESKT	Eskisehir	1.77	275	ePN	Pn	16 51 41.2	-0.2
ESKT	Eskisehir	1.77	275	i P	Pn	16 51 43.4	+1.9
ESKT				i S	Sn	16 52 10.4	+5.9
ESKT	Eskisehir	1.77	275	ePn	Pn	16 51 41.3	-0.2
SEYT	Eskypehyr	1.77	275	i P	Pn	16 51 43.4	+1.9
TOS	Tosya	1.77	22	ePN	Pn	16 51 40.7	-0.8
TOS	Tosya	1.77	22	ePn	Pn	16 51 40.7	-0.8
MDU	Mudurnu	1.82	306	ePN	Pn	16 51 41.9	-0.2
MDU	Mudurnu	1.82	306	ePn	Pn	16 51 41.9	-0.2
SAFT	Safranbolu	1.87	350	ePN	Pn	16 51 42.5	-0.4
SAFT	Safranbolu	1.87	350	ePn	Pn	16 51 42.5	-0.3
BALT	Daday	2.14	5	i P	Pn	16 51 49.5	+2.9
BALT				i S	Sn	16 52 18.9	+5.3
BNN	Bunyan	2.18	104	ePN	Pn	16 51 47.0	-0.2
BNN	Bunyan	2.18	104	ePn	Pn	16 51 47.0	-0.2
GULT	Gulveren	2.26	298	ePN	Pn	16 51 48.1	-0.1
GULT	Gulveren	2.26	298	ePn	Pn	16 51 48.2	0.0
ALT	Altintas	2.37	263	ePN	Pn	16 51 49.3	-0.5
ALT	Altintas	2.37	263	ePn	Pn	16 51 49.3	-0.5
BYBT	Boyabat	2.41	31	ePN	Pn	16 51 50.5	+0.1
BYBT	Boyabat	2.41	31	ePn	Pn	16 51 50.5	+0.2
HDMB	Hadim	2.48	192	ePN	Pn	16 51 51.6	+0.3
HDMB	Hadim	2.48	192	ePn	Pn	16 51 51.6	+0.3
SUTC	Sutluce-Ispart	2.55	222	ePN	Pn	16 51 52.3	+0.1
SUTC	Sutluce-Ispart	2.55	222	ePn	Pn	16 51 52.3	+0.1
BZK	Bozkurt	2.64	14	ePN	Pn	16 51 53.3	-0.1
BZK	Bozkurt	2.64	14	ePn	Pn	16 51 53.3	-0.2
DIKM	Dikmen	2.77	35	ePN	Pn	16 51 55.0	-0.2
DIKM	Dikmen	2.77	35	ePn	Pn	16 51 55.1	-0.1
YLV	Yalova	3.11	293	ePN	Pn	16 52 00.3	+0.4
YLV	Yalova	3.11	293	ePn	Pn	16 52 00.3	+0.4

IDC 01 17:05:22.1±2.9, 5°.14S×134°.29E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/15, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=109.9km s-min=30.5km az=83.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.71	180	Pn	Pn	17 08 49.8	-1.9
0.0nm,0.3s,baz=0.9,slow=13,SNR=4.3							
WRA				Sn	Sn	17 11 32.4	-3.2
0.1nm,0.3s,baz=349,slow=26,SNR=3.6							
FITZ	Fitzroy Crossi	15.41	213	Pn	Pn	17 08 58.9	-2.1
0.1nm,0.3s,baz=35,slow=14,SNR=5.5							
FITZ				Sn	Sn	17 11 42.7	-10
0.1nm,0.3s,baz=90,slow=20,SNR=2.9							
ASAR	Alice Springs	18.42	181	P	Pn	17 09 40.8	+1.7
0.1nm,0.3s,baz=4.5,slow=10,SNR=12							
MKAR	Makanchi Array	69.10	325	P	P	17 16 30.2	+0.1
0.6nm,0.8s,baz=114,slow=7.7,SNR=4.9							

*IDC **01** 17:44:47.6±0.6, 2°.95S×101°.05E, h0km, mb4.7/21, mb1 4.8/22, mb1mx4.7/26, mbtmp4.7/22, ML4.9/1, MS3.8/19, Ms1 3.8/19, ms1mx3.6/31, Error ellipse: s-maj=21.0km s-min=11.6km az=48.0*

*BJI **01** 17:44:47.7, 3°.52S×101°.04E, h41km, mB4.9/31, mb4.9/45, Ms4.5/30, Ms7 4.1/29*

*MOS **01** 17:44:51.7±1.0, 2°.76S×101°.24E, h33km, mb5.2/33, MS4.1/6, Error ellipse: s-maj=13.7km s-min=5.9km az=110.6*

*ISCJB **01** 17:44:54.8±0.4, 2°.97S±0°.03×101°.04E±0°.03, h65km±3km, mb4.9/106, Error ellipse: s-maj=6.6km s-min=3.6km az=36.0*

*NEIC **01** 17:44:54.7±1.2, 2°.87S×101°.21E, h49km±9km, mb5.0/29, Error ellipse: s-maj=11.6km s-min=5.1km az=45.0*

NEIC Felt [II] at Padang and Painan.

*DJA **01** 17:44:56, 3°.02S×100°.92E, h60km, mb4.9/26*

ISC 01 17:44:56.0±0.4, 3°.00S±0°.03×101°.01E±0°.03, h60km±3km, h38km±2.5km: pP-P, n288, σ1§13/274, mb5.0/106, 17C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	1.03	283	P	Pn	17 45 14.4	-0.1
KSI	Kapahiang	1.71	112	P	Pn	17 45 23.0	-0.5
SDSI	Sungai Dareh	2.09	11	P	Pn	17 45 28.2	-0.6
PDSI	Padang	2.15	345	P	Pn	17 45 28.2	-1.3

MNAI	Manna	2.36	125	P	Pn	17 45 32.3	-0.2
SISI	Saibi	2.54	311	P	Pn	17 45 34.3	-0.6
SISI				S	Sn	17 46 03.3	-1.4
PPI	Padang Panjang	2.60	346	P	Pn	17 45 35.3	-0.4
PPI				S	Sn	17 46 08.7	+2.6
RGRI	Rengat	2.94	27	P	Pn	17 45 39.4	-1.0
JMBI	JAMBI	2.96	63	P	Sn	17 46 27.1	+12
LWLI	Liwa	3.64	124	P	Pn	17 45 50.6	+0.7
PMBI	Palembang	3.75	89	P	Pn	17 45 52.2	+0.7
MNSI	Mandailing Nat	4.03	339	P	Pn	17 45 54.7	-0.6
KLI	Kotabumi	4.26	116	P	Pn	17 45 58.5	+0.1
KASI	Kota Agung	4.29	126	P	Pn	17 45 59.0	+0.2
TPRI	Tanjung Pinang	5.24	42	P	Pn	17 46 11.0	-0.9
992nm,0.6s,8μm3.3nm							
TRSI	Tarutung	5.40	338	P	Pn	17 46 16.9	+2.9
GSI	Gunungsitoli	5.48	321	P	Pn	17 46 14.0	-1.2
171nm,0.8s,9μm2.1nm							
KGM	Kluang	5.49	25	P	Pn	17 46 15.4	+0.1
MYKOM	Kota Tinggi	5.54	31	P	Pn	17 46 16.1	+0.1
MYKOM	Kota Tinggi	5.54	31	P	Pn	17 46 15.5	-0.4
196nm,0.8s,2μm0.6nm							
PSI	Prapat	6.13	340	Pn	Pn	17 46 20.4	-3.7
5.8nm,0.3s,baz=342,slow=13,SNR=13							
PSI				LR	LR	17 49 08.5	
comp=Z,2μm,20.6s,baz=147,slow=44							
FRIM	Kepong	6.22	6	P	Pn	17 46 27.0	+1.6
TPI	Tanjungpandan	6.64	88	P	Pn	17 46 30.4	-0.6
28nm,1.2s,0.3nm							
DBJI	Dramaga	6.72	122	P	Pn	17 46 34.2	+2.1
79nm,0.7s,0.6nm							
IPM	Ipoh	7.43	0	P	Pn	17 46 44.3	+2.5
IPM	Ipoh	7.43	0	P	Pn	17 46 43.5	+1.7
121nm,0.5s,1μm0.5nm							
LEM	Lembang	7.60	120	P	Pn	17 46 49.4	+5.2
82nm,1.0s,0.4nm							
KULM	Kulim	8.24	357	P	Pn	17 46 55.0	+2.0
KULM	Kulim	8.24	357	eP	Pn	17 46 50.6	-2.4
66nm,0.8s							
KTGM	Kuala Trenggan	8.54	14	P	Pn	17 46 58.5	+1.4
LHMI	Lhok Sumawe	9.13	334	P	Pn	17 46 58.0	-7.1
BSI	Banda Aceh	10.19	326	P	Pn	17 47 19.2	-0.4
45nm,1.2s							
SMRI	Semarang	10.21	114	P	Pn	17 47 21.6	+1.6
66nm,0.7s							
KSM	Kuching	10.30	65	P	Pn	17 47 20.1	-1.1
KSM	Kuching	10.30	65	eP	Pn	17 47 18.1	-3.1
14nm,0.8s							
KSM	Kuching	10.30	65	P	Pn	17 47 20.3	-0.8
18nm,0.9s							
PBKI	Pangkalan Bun	10.65	89	P	Pn	17 47 28.4	+2.5
78nm,1.1s							
STKI	Sintang	10.89	74	P	Pn	17 47 33.0	+3.7
30nm,1.0s							
SJI	Sawahan	11.69	114	P	Pn	17 47 39.4	-0.8
54nm,0.6s							
SBUM	Sibu	12.44	64	P	Pn	17 47 50.1	-0.3
SBUM	Sibu	12.44	64	P	Pn	17 47 52.0	+1.6
33nm,1.4s							
BTM	Bintulu	13.54	63	P	Pn	17 48 04.2	-1.2
BBKI	Banjar Baru	13.81	92	P	Pn	17 48 07.6	-1.5
99nm,0.7s							
KBKI	Kotaboru	15.13	92	P	Pn	17 48 27.9	+1.5
34nm,0.8s							
KKM	Kota Kinabalu	17.64	59	P	Pn	17 48 58.8	+1.0
SDKM	Sandakan	18.30	62	P	Pn	17 49 06.8	+1.0
TSM	Tawau	18.34	67	P	Pn	17 49 07.1	+0.8
KDM	Kudat	18.61	58	P	Pn	17 49 10.5	+0.9
KAPI	Kappang	18.80	97	Pn	Pn	17 49 11.4	-0.5
520nm,1.0s,SNR=8.1							
KAPI	Kappang	18.80	97	P	Pn	17 49 09.3	-2.6
3.9nm,0.3s,baz=279,slow=12,SNR=19							
KAPI				LR	LR	17 57 42.7	
comp=Z,147nm,21.4s,baz=59,slow=41							
KAPI	Kappang	18.80	97	eP	Pn	17 49 06.3	-5.6
92nm,1.0s							
KAPI				Pn	Pn	17 49 11.4	-0.5
KAPI	Kappang	18.80	97	P	Pn	17 49 07.5	-4.4
49nm,0.9s,356nm							
MYLDM	Lahad Datu	19.27	65	P	Pn	17 49 18.1	+0.7
MYLDM	Lahad Datu	19.27	65	P	Pn	17 49 17.5	+0.1
64nm,1.2s							
WSI	Waingapu	20.27	110	P	P	17 49 27.0	+0.2
268nm,0.6s,3μm							
APSI	Ampana	20.73	85	P	P	17 49 33.0	+1.2
132nm,1.0s,962nm							
MRSI	Marisa	21.20	81	P	P	17 49 37.0	+0.1
50nm,0.8s,505nm,mb4.9							
CM31	Chiang Mai Arr	21.42	355	eP	P	17 49 35.8	-3.4
CMAR	Chiang Mai Arr	21.42	355	P	P	17 49 35.4	-3.7
CMAR						17 53 41.9	
CMAR

KAKA	Kakadu	32.55	109	eP	P	17 51 15.1	-6.7
	comp=E,6.8nm,0.6s,mb4.8						
KAKA	Kakadu	32.55	109	eP	P	17 51 14.8	-6.9
TAPN	Taplejung	32.79	338	eP	P	17 51 24.7	+1.1
	comp=E,183nm,0.9s,mb6.0						
RAMN	Ramite	32.87	336	eP	P	17 51 25.6	+1.3
	comp=E,67nm,0.7s,mb5.7						
NWAO	Narrogin (SRO)	33.43	155	LR	LR	18 03 22.0	
	comp=E,244nm,19.4s,baz=150,slow=33						
JIRN	Jiri	33.66	336	eP	P	17 51 32.4	+1.2
	comp=E,193nm,0.8s,mb6.1						
CD2	Chengdu	33.82	4	P	P	17 51 34.9	+2.3
CD2				pP	pP	17 51 44.6	-2.9
CD2				sP	sP	17 51 48.5	-6.1
CD2				PP	PP	17 52 50.1	-0.1
CD2				PcP	PcP	17 54 12.2	+1.6
CD2				S	S	17 56 56.2	+3.8
CD2				sS	sS	17 57 12.2	-5.7
CD2				SS	SS	17 59 03.9	-17
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
CD2				pmax	pmax		
	comp=Z,180nm,6.9s						
CD2				LR	LR		
	comp=N,300nm,5.0s						
CD2				LR	LR		
	comp=Z,280nm,8.6s						
LSA	Lhasa	33.86	344	eP	P	17 51 32.8	-0.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LSA	Lhasa	33.86	344	eP	P	17 51 32.8	-0.1
	comp=Z,4.1nm,0.6s,mb4.5						
PKI	Pulchoki	33.91	335	eP	P	17 51 34.0	+0.6
	comp=Z,12nm,0.4s,mb5.1						
PKIN	Phulchoki	33.92	335	eP	P	17 51 34.0	+0.5
	comp=Z,21nm,0.6s,mb5.2						
PKIN	Phulchoki	33.92	335	eP	P	17 51 34.1	+0.6
	comp=Z,31nm,0.7s,mb5.3						
GUN	Gumba	34.01	336	eP	P	17 51 35.4	+1.1
	comp=Z,272nm,0.8s,mb6.2						
ENH	Enshi	34.06	13	eP	P	17 51 32.3	-2.4
	comp=Z,15nm,0.8s,mb5.0						
KKN	Kakani	34.16	335	eP	P	17 51 36.3	+0.8
	comp=Z,79nm,0.6s,mb5.8						
GKN	Gorkha	34.62	334	eP	P	17 51 40.3	+0.8
	comp=Z,33nm,0.4s,mb5.6						
BHPL	Bhopal	34.77	320	ex	P	17 51 43.1	+2.2
BHPL				AMb	AMB	17 52 02.5	
	comp=Z,11nm,1.9s,mb4.5						
KOLN	Koldanda	34.89	332	eP	P	17 51 42.9	+1.0
	comp=Z,63nm,0.9s,mb5.5						
WHN	Wuhan	35.70	20	⇓P	P	17 51 48.3	-0.5
WRA	Warramunga Arr	36.62	120	P	P	17 51 55.4	-1.5
	comp=Z,12nm,0.5s,mb5.0,baz=303,slow=8.9,SNR=197						
WRA				PcP	PcP	17 54 18.8	-0.2
	comp=Z,1.1nm,0.7s,baz=302,slow=2.6,SNR=4.7						
WRAB	Tennant Creek	36.62	120	P	P	17 51 55.9	-1.0
	comp=Z,166nm,0.7s,mb6.0,SNR=27						
WRAB	Tennant Creek	36.62	120	eP	P	17 51 56.5	-0.4
WRAB				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.1						
WRAB	Tennant Creek	36.62	120	eP	P	17 51 56.5	-0.4
	comp=Z,18nm,0.6s,mb5.1						
WRAB	Tennant Creek	36.62	120	P	P	17 51 56.4	-0.5
WB2	Warramunga Arr	36.63	120	eP	P	17 51 55.4	-1.5
AGRA	Agra	37.40	325	eP	P	17 52 03.3	0.0
XAN	Xi'an	37.59	11	P	P	17 52 03.1	-1.7
XAN				pP	pP	17 52 12.5	-7.4
XAN				sP	sP	17 52 16.6	-10
XAN				PP	PP	17 53 31.9	+0.2
XAN				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
XAN				pmax	pmax		
	comp=Z,8.0nm,3.9s						
XAN				LR	LR		
	comp=N,150nm,22.1s						
XAN				LR	LR		
	comp=E,84nm,23.1s						
XAN				LR	LR		
	comp=Z,82nm,18.1s						
FORT	Forrest	37.63	140	eP	P	17 52 14.2	+8.9
	comp=Z,14nm,0.6s,mb4.9						
ASAR	Alice Springs	37.85	126	P	P	17 52 06.6	-0.6
	comp=Z,4.8nm,0.7s,mb4.4,baz=299,slow=7.6,SNR=121						
ASAR				PcP	PcP	17 54 23.1	+0.3
	comp=Z,3.0nm,0.7s,baz=300,slow=2.7,SNR=10						
SONA	Sohna	38.66	325	eP	P	17 52 13.0	-1.0
SONA				AMb	AMB	17 52 14.8	
	comp=Z,16nm,0.6s,mb5.0						
BISR	Bishrakh	38.71	326	ex	x	17 52 05.9	
NJ2	Nanjing	38.76	25	eP	P	17 52 14.7	0.0
NJ2				pP	pP	17 52 24.5	-5.4
NJ2				sP	sP	17 52 28.7	-8.2
NJ2				PP	PP	17 53 48.1	+3.6
NJ2				S	S	17 58 09.5	+1.7
NJ2				sS	sS	17 58 27.5	-6.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,80nm,5.0s						
AYAN	Aya Nagar	38.81	325	eP	P	17 52 14.1	-1.1
AYAN				AMb	AMB	17 52 16.3	
	comp=Z,16nm,0.6s,mb4.9						
AJM	Ajmer	38.84	321	ex	P	17 52 17.9	+2.5
NDI	New Delhi	38.92	326	eP	P	17 52 14.0	-2.1
LZH	Lanzhou	38.97	4	eP	P	17 52 19.8	+3.4
LZH				pP	pP	17 52 30.7	-0.9
LZH				sP	sP	17 52 34.7	-3.9
LZH				PP	PP	17 53 53.1	+6.3
LZH				PcP	PcP	17 54 27.1	+1.2
LZH				eS	S	17 58 16.0	+5.1
LZH				sS	sS	17 58 33.0	-3.7
LZH				SS	SS	18 01 00.2	-4.8
LZH				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,56nm,4.8s						
LZH				LR	LR		
	comp=N,330nm,14.8s						
LZH				LR	LR		
	comp=Z,770nm,15.6s						
JOSI	Joshimath	39.15	330	eP	P	17 52 18.2	+0.2
JOSI				AMb	AMB	17 52 25.4	
	comp=Z,144nm,0.9s,mb5.7						
KHET	Khetri	39.28	324	eP	P	17 52 19.3	+0.2
RTK	Rohtak	39.64	325	ex	P	17 52 14.7	-7.4
DDI	Dehra Dun	39.73	328	eP	P	17 52 21.8	-1.1
KKR	Kurukshetra	40.12	327	eP	P	17 52 26.0	-0.1
SMLA	Simla	40.84	328	i P	P	17 52 30.9	-1.2
SDNR	Sundarnagar	41.23	328	eP	P	17 52 35.5	+0.3
GTA	Gaotai	42.21	359	eP	P	17 52 42.2	-0.9
GTA				pP	pP	17 52 52.1	-6.4
GTA				sP	sP	17 52 56.8	-8.6
GTA				PP	PP	17 54 23.4	+1.4
GTA				PcP	PcP	17 54 36.8	+0.5
GTA				ScP	ScP	17 58 22.8	+0.9
GTA				S	S	17 58 59.4	+0.3
GTA				ScS	ScS	18 02 38.7	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
GTA				pmax	pmax		
	comp=Z,50nm,3.9s						
GTA				LR	LR		
	comp=N,150nm,17.2s						
GTA				LR	LR		
	comp=E,93nm,18.4s						
GTA				LR	LR		
	comp=Z,210nm,19.9s						
THN	Thein Dam	42.63	328	eP	P	17 52 45.5	-1.1
HHC	Hu-ho-hao-te	44.69	11	eP	P	17 53 06.0	+3.0
HHC				pP	pP	17 53 15.8	-2.7
HHC				sP	sP	17 53 19.7	-5.7
HHC				PP	PP	17 54 52.4	+4.0
HHC				S	S	17 59 40.9	+5.7
HHC				sS	sS	17 59 56.4	-5.0
HHC				SS	SS	18 02 52.6	-5.0
HHC				ScS	ScS	18 02 58.1	+2.9
HHC				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,60nm,6.1s						
HHC				LR	LR		
	comp=N,180nm,15.1s						
HHC				LR	LR		
	comp=E,250nm,16.5s						
HHC				LR	LR		
	comp=Z,150nm,14.7s						
BJI	Beijing	45.03	16	P	P	17 53 05.3	-0.5
BJI				S	S	17 59 44.6	+4.4
BJI				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
BJI				LR	LR		
	comp=N,230nm,17.4s						
BJI				LR	LR		
	comp=E,130nm,18.6s						
BJI				LR	LR		
	comp=Z,160nm,19.4s						
CTA	Charters Tower	47.26	115	eP	P	17 53 22.5	-1.2
	comp=Z,12nm,0.8s,mb4.9						
CTA	Charters Tower	47.26	115	LR	LR	18 13 38.0	
	comp=Z,75nm,20.6s,baz=49,slow=37						
CTAO	Charters Tower	47.26	115	eP	P	17 53 22.4	-1.3
KSRS	Korea Array	47.37	29	P	P	17 53 23.1	-1.1
	comp=Z,4.7nm,0.9s,mb4.4,baz=226,slow=8.1,SNR=21						
KSRS				LR	LR	18 15 25.4	
	comp=Z,70nm,18.9s,baz=143,slow=39						
STKA	Stephens Creek	47.73	132	eP	P	17 53 26.8	-0.3
	comp=Z,10nm,0.6s,mb5.0						
STKA	Stephens Creek	47.73	132	P	P	17 53 27.2	0.0
	comp=Z,8.3nm,0.6s,mb5.0,baz=313,slow=6.8,SNR=22						
STKA				LR	LR	18 11 37.5	
	comp=Z,173nm,21.3s,baz=271,slow=34						
WMQ	Urumqi	48.12	347	P	P	17 53 30.4	+0.5
WMQ				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.7						
WMQ				LR	LR		
	comp=N,54nm,33.0s						
WMQ				LR	LR		
	comp=E,36nm,35.0s						
WMQ				LR	LR		
	comp=Z,51nm,24.0s						
KSH	Kashi	48.17	334	eP	P	17 53 29.3	-1.0
KSH				epP	pP	17 53 38.6	-7.3
KSH				esP	sP	17 53 42.4	-10
KSH				ePcP	PcP	17 54 58.7	+1.8
KSH				ePP	PP	17 55 20.7	-2.5
KSH				ePcS	PcS	17 58 52.9	+0.2
KSH				eS	S	18 00 22.2	-2.9
KSH				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
KSH				pmax	pmax		
	comp=Z,350nm,4.9s						
KSH				LR	LR		
	comp=Z,350nm,5.9s						
KZA	Kyzart	50.59	335	P	P	17 53 49.8	+1.1
	SNR=13						
SONM	Songino Array	50.84	5	P	P	17 53 50.6	+0.1
SONM						17 55 06.2	
SONM	Songino Array	50.84	5	P	P	17 53 50.6	+0.1
	comp=Z,30nm,0.8s,mb5.3,baz=184,slow=9.1,SNR=199						
SONM				PcP	PcP	17 55 06.2	-0.3
	comp=Z,1.8nm,0.5s,baz=190,slow=4.1,SNR=6.8						
SONM				LR	LR	18 16 41.9	
	comp=Z,102nm,19.3s,baz=338,slow=38						
ULN	Ulaanbaatar	50.93	5	eP	P	17 53 51.2	0.0
ULN				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
ULN	Ulaanbaatar	50.93	5	eP	P	17 53 51.2	0.0
	comp=Z,14nm,0.7s,mb5.0						
UCH	Uchtor	51.02	335	P	P	17 53 53.1	+1.1
	SNR=11						
UCH	Uchtor	51.02	335	eP	P	17 53 52.7	+0.7
	comp=Z,7.5nm,0.8s,mb4.7						
TKM2	Tokmak 2	51.15	336	P	P	17 53 53.6	+0.7
	SNR=33						
TKM2	Tokmak 2	51.15	336	eP	P	17 53 52.5	-0.4
TKM2				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.3						
TKM2	Tokmak 2	51.15	336	eP	P	17 53 52.5	-0.4
	comp=Z,23nm,0.6s,mb5.3						
KBK	Karagaybulak	51.19	335	P	P	17 53 54.5	+1.2
	SNR=12						
AML	Almayashu	51.30	334	P	P	17 53 55.2	+1.1
	SNR=32						
AML	Almayashu	51.30	334	eP	P	17 53 54.8	+0.8
	comp=Z,22nm,0.7s,mb5.2						
AAK	Ala-Archa	51.36	335	P	P	17 53 55.5	+1.0
	SNR=9.2						
AAK	Ala-Archa	51.36	335	ceP	P	17 53 55.1	+0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
AAK	Ala-Archa	51.36	335	P	P	17 53 55.4	+0.9
	comp=Z,4.3nm,0.5s,mb4.6,baz=134,slow=4.5,SNR=15						
AAK	Ala-Archa	51.36	335	eP	P	17 53 55.4	+0.9
	comp=Z,7.7nm,0.9s,mb4.6						
FRU	Bishkek	51.48	335	eP	P	17 53 54.5	-0.9
CN2	Changchun	51.50	23	eP	P	17 53 53.1	-2.5
CN2				epP	pP	17 54 03.8	-7.5
CN2				ePP	PP	17 55 51.9	-1.6
CN2				eS	S	18 01 10.9	-0.5
CN2				eSS	SS	18 04 45.1	-3.2
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,20.0s						
CN2				LR	LR		
	comp=E,300nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CHMS	Chumysh	51.56	336	P	P	17 53 56.2	+0.2
	SNR=6.0						
EKS2	Erkin-Say	51.69	335	P	P	17 53 58.0	+1.1
	SNR=67						
EKS2	Erkin-Say	51.69	335	eP	P	17 53 57.7	+0.7
	comp=Z,40nm,0.8s,mb5.4						
EKS2				e	pP	17 54 11.5	-1.3
USP	Ospenovka	51.88	336	P	P	17 53 58.4	0.0
	SNR=14						
MK31	Makanchi Array	52.26	344	eP	P	17 54 00.3	-0.8
MKAR	Makanchi Array	52.26	344	P	P	17 54 00.7	-0.4
	comp=Z,23nm,0.6s,mb5.2,baz=147,slow=8.1,SNR=186						
MKAR				LR	LR	18 21 08.9	
	comp=Z,46nm,19.1s,baz=166,slow=42						
MAT	Matsushiro	52.42	38	P	P	17 54 00.4	-2.1
MJAR	Matsushiro Arr	52.42	38	P	P	17 54 00.9	-1.6
	comp=Z,4.4nm,0.7s,mb4.5,baz=206,slow=7.5,SNR=29						
EIDS	Eidsvold	52.98	120	eP	P	17 54 06.6	-0.3
	comp=Z,15nm,0.9s,mb4.9						
ZAK	Zakamensk	53.21	2	eP	P	17 54 07.4	-0.6
ZAK				e		17 55 13.0	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MDJ	Mudanjiang	53.85	25	P	P	17 54 13.3	+0.4
MDJ				sP	sP	17 54 25.6	-10
MDJ				PP	PP	17 56 14.5	-0.1
MDJ				S	S	18 01 44.0	+0.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,41nm,4.4s						
MDJ				LR	LR		
	comp=N,72nm,29.4s						
MDJ				LR	LR		
	comp=E,79nm,22.4s						
MDJ				LR	LR		
	comp=Z,110nm,22.4s						
MOY	Mondy	54.46	360	eP	P	17 54 17.1	-0.1
MOY				pmax	pmax		
	comp=Z,20nm,2.4s,mb4.6						
TLY	Talaya	54.52	2	P	P	17 54 18.5	+0.9
	comp=Z,104nm,0.9s,mb5.9,SNR=15						
TLY	Talaya	54.52	2	eP	P	17 54 17.9	+0.3
TLY				e		18 07 35.6	
TLY				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
TLY				MLR	MLR		
	comp=Z,135nm,17.0s						
TLY	Talaya	54.52	2	eP	P	17 54 17.2	-0.4
	comp=Z,16nm,0.9s,mb5.0						
ARMA	Armidale	55.00	125	eP	P	17 54 22.6	+1.0
IRK	Irkutsk	55.10	2	⇑iP	P	17 54 21.2	-0.6
IRK				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.9						
KURK	Kurchatov	56.85	343	P	P	17 54 33.8	-0.5
	comp=Z,168nm,0.7s,mb6.2,SNR=15						
KURK	Kurchatov	56.85	343	ceP	P	17 54 33.4	-0.9
KURK				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
KURK	Kurchatov	56.85	343	P	P	17 54 33.4	-0.9
	comp=Z,11nm,0.6s,mb5.1,baz=164,slow=7.1,SNR=52						
KURK	Kurchatov	56.85	343	eP	P	17 54 33.9	-0.5
	comp=Z,17nm,0.7s,mb5.2						
ZAA0	Zalesovo Array	58.33	349	eP	P	17 54 43.9	-0.8
ZALV	Zalesovo Beam	58.33	349	P	P	17 54 44.0	-0.7
	comp=Z,86nm,0.8s,mb5.8,baz=170,slow=5.3,SNR=362						
ZALV				LR	LR	18 21 11.2	
	comp=Z,51nm,21.3s,baz=143,slow=38						
KLR	Kul'dur	58.44	23	eP	P	17 54 39.8	-5.7
HABR	Khabarovsk	59.21	26	eP	P	17 54 46.5	-4.4
HABR				e*PP	pP	17 54 56.6	-10
HABR				e*SP	sP	17 55 00.5	-13
HABR						17 56 59.1	
HABR				S	S	18 02 50.3	-3.9
HABR				e		18 03 03.3	
HABR				e*SS	sS	18 03 07.5	-14
HABR				e		18 04 33.6	
HABR				eSS	SS	18 06 46.0	-3.6
HABR				pmax	pmax		
	comp=E,22nm,2.1s						
HABR				pmax	pmax		
	comp=Z,23nm,2.0s,mb4.9						
HABR				pmax	pmax		
	comp=N,20nm,2.2s						
HABR				MLR	MLR		
	comp=Z,105nm,20.0s						
NVS	Novosibirsk	59.49	348	eP	P	17 54 50.5	-2.2
NVS				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
NVS				pmax	pmax		
	comp=N,23nm,1.5s						
NVS				pmax	pmax		
	comp=E,12nm,1.1s						
KBD	Kabd	60.23	306	eP	P	17 54 58.9	+0.6
KBD				AMb	AMB	17 54 59.7	
	comp=Z,13nm,0.9s,mb5.0						
RDF	Al-Radifah	60.25	306	eP	P	17 54 59.2	+0.7
RDF				AMb	AMB	17 55 00.4	
	comp=Z,28nm,1.2s,mb5.2						
UMR	Umm Al-Rimmam	60.36	307	eP	P	17 54 59.9	+0.7
UMR				AMb	AMB	17 55 00.6	
	comp=Z,26nm,0.7s,mb5.4						
MIB	Mutribah	60.76	307	eP	P	17 55 02.6	+0.7
MIB				AMb	AMB	17 55 03.6	
	comp=Z,34nm,1.2s,mb5.4						
BVAR	Borovoye Array	61.47	339	P	P	17 55 05.2	-1.0
	comp=Z,13nm,0.6s,mb5.2,baz=144,slow=8.8,SNR=65						
BVAR				LR	LR	18 22 31.7	
	comp=Z,48nm,19.6s,slow=37						
BOD	Bodaibo	61.52	8	⇓iP	P	17 55 05.1	-1.4
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
BRVK	Borovoye	61.53	339	P	P	17 55 05.1	-1.5
	comp=Z,98nm,0.5s,mb6.2,SNR=7.3						
BRVK	Borovoye	61.53	339	ceP	P	17 55 05.3	-1.3
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
BRVK	Borovoye	61.53	339	eP	P	17 55 05.6	-1.1
	comp=Z,12nm,0.7s,mb5.1						
YSS	Yuzh-Sakhalins	61.80	31	eP	P	17 55 08.1	-0.5
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
YSS	Yuzh-Sakhalins	61.80	31	eP	P	17 55 08.1	-0.5
	comp=Z,30nm,0.9s,mb5.4						
ABKAR	Akbulak array	63.00	331	eP	P	17 55 15.8	-0.8
	comp=Z,17nm,0.6s,mb5.4						
AKTK	Aktyubinsk	64.71	331	P	P	17 55 27.0	-0.8
AKTO	Aktyubinsk	64.71	331	P	P	17 55 27.0	-0.8
	comp=Z,4.2nm,0.6s,mb4.7,baz=127,slow=6.8,SNR=21						
SVE	Sverdlovsk	67.99	337	⇓eP	P	17 55 48.4	-0.2
SVE				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
YAK	Yakutsk	68.45	14	c iP	P	17 55 49.5	-1.9
YAK				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,137nm,16.0s						
YAK				MLR	MLR		
	comp=N,65nm,18.0s						
YAK				MLR	MLR		
	comp=E,64nm,17.0s						
YAK	Yakutsk	68.45	14	eP	P	17 55 49.6	-1.8
	comp=E,48nm,0.7s,mb5.6						
ARU	Arti	68.52	336	P	P	17 55 51.8	-0.1
	comp=E,93nm,0.7s,mb5.8,SNR=7.2						
ARU	Arti	68.52	336	c iP	P	17 55 51.0	-0.9
ARU						17 56 14.5	
ARU				e		17 58 19.6	
ARU				S	S	18 04 51.3	+1.9
ARU				SS	SS	18 09 12.4	-2.1
ARU				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
ARU	Arti	68.52	336	eP	P	17 55 51.2	-0.7
	comp=Z,16nm,1.0s,mb4.9						
ZEI	Tsey	68.65	318	eP	P	17 55 49.6	-3.4
ZEI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
MAW	Mawson	69.58	195	LR	LR	18 20 33.9	
	comp=Z,73nm,20.1s,baz=282,slow=31						
KIV	Kislovodsk	69.95	319	ceP	P	17 56 01.5	+0.4
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,100nm,20.0s						
MALT	Malatya	70.75	312	eP	P	17 56 07.1	+1.0
MALT				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MALT	Malatya	70.75	312	eP	P	17 56 07.1	+1.0
	comp=Z,6.4nm,1.1s,mb4.5						
SOKR	Solikamsk	71.36	338	c iP	P	17 56 09.3	0.0
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
SOC	Sochi	71.77	318	eP	P	17 56 10.9	-1.2
SOC				ePPP		18 00 35.5	
SOC				eS	S	18 05 28.9	+1.0
SOC				eSS	SS	18 10 12.2	+7.2
SOC				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
PETK	Petropavlovsk-	73.19	32	P	P	17 56 18.6	-1.8
	comp=Z,7.3nm,0.6s,mb4.8,baz=252,slow=0.8,SNR=21						
PETK				LR	LR	18 30 04.2	
	comp=Z,25nm,21.0s,baz=223,slow=37						
PET	Petropavlovsk	73.65	32	eP	P	17 56 22.1	-1.0
PET				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.5						
VRHR	Novokhopersk	73.72	326	eP	P	17 56 22.9	-0.6
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.1						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.8s						
BRTR	Keskin Array B	74.74	312	P	P	17 56 29.5	-0.2
	comp=E,4.9nm,0.7s,mb4.5,baz=128,slow=7.0,SNR=31						
BR131	Keskin Array S	74.74	312	eP	P	17 56 29.6	-0.1
VORD	Divnogorie	74.99	325	eP	P	17 56 29.5	-1.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
VORD				pmax	pmax		
	comp=N,7.0nm,0.4s						
VORD				pmax	pmax		
	comp=E,20nm,0.7s						
VSR	Storozhevoye	75.17	325	eP	P	17 56 30.8	-1.1
VSR				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
VSR				pmax	pmax		
	comp=N,20nm,1.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
BOSA	Boshof	76.07	241	P	P	17 56 38.1	+0.5
	comp=E,3.5nm,1.1s,mb4.2,baz=329,slow=12,SNR=3.6						
BOSA				LR	LR	18 22 34.2	
	comp=E,112nm,20.6s,baz=58,slow=30						
SEY	Seymchan	76.17	22	ceP	P	17 56 36.2	-1.2
TIXI	Tiksi	76.68	9	eP	P	17 56 38.2	-1.9
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,172nm,19.0s						
TIXI	Tiksi	76.68	9	eP	P	17 56 38.0	-2.1
	comp=Z,33nm,1.4s,mb5.1						
OBN	Obninsk	78.17	328	c iP	P	17 56 48.0	-0.8

OBN pmax pmax
comp=Z,41nm,1.6s,mb5.1
KLMR Klimovskoe 79.16 334 *eP* **P 17 56 53.4 -0.7**
KLMR pmax pmax
comp=Z,16nm,1.1s,mb4.9
TIRR Tirgusor 79.77 316⇑ *iP* **P 17 56 57.8 0.0**
AKASG Malin Array Be 80.89 322 P **P 17 57 03.4 -0.2**
comp=Z,2.5nm,0.7s,mb4.2,baz=93,slow=4.5,SNR=12
VRI Vrincioaia 81.27 317⇑ *iP* **P 17 57 06.9 +1.1**
MLR Muntele Rosu 81.72 317⇑ *iP* **P 17 57 09.3 +1.1**
BURAR Bucovina Array 82.67 319⇑ *iP* **P 17 57 14.8 +1.7**
JOF Joensuu 83.55 334 *eP* **P 17 57 15.3 -2.0**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
JOF Joensuu 83.55 334 *ep* **P 17 57 15.3 -2.0**
comp=Z,5.0nm,0.6s,mb4.8
BILL Bilibino 83.74 20⇑ *eP* **P 17 57 17.2 -1.0**
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.6
BILL MLR MLR
comp=Z,100nm,20.0s
BILL Bilibino 83.74 20 *eP* **P 17 57 16.8 -1.4**
comp=Z,3.9nm,1.0s,mb4.5
LVV L'vov 83.91 321 *eP* **P 17 57 19.3 -0.1**
BZS Buzias 84.72 316⇑ *iP* **P 17 57 24.3 +0.6**
KOLS Kolonicke sedl 84.86 320 *i P* **P 17 57 25.9 +1.6**
KOLS *e* 18 16 52.9
KOLS pmax pmax
comp=Z,14nm,0.9s,mb5.1
KOLS Kolonicke sedl 84.86 320 *i P* **P 17 57 25.9 +1.6**
comp=Z,14nm,0.9s,mb5.1
KOLS Kolonicke sedl 84.86 320 *i P* **P 17 57 25.9 +1.6**
SUW Suwalki 85.28 325 *eP* **P 17 57 26.4 +0.2**
SUW pmax pmax
comp=Z,33nm,0.7s,mb5.6
SUW Suwalki 85.28 325 *eP* **P 17 57 26.4 +0.2**
comp=Z,32nm,0.7s,mb5.6
FINES FINESS Array B 85.46 332 P **P 17 57 27.1 +0.1**
comp=Z,3.3nm,0.7s,mb4.6,baz=111,slow=5.2,SNR=22
FINES PP PP 18 00 48.9 +2.9
comp=Z,3.2nm,1.0s,baz=139,slow=10,SNR=4.5
KAF Kangasniemi 85.53 333 *eP* **P 17 57 26.7 -0.6**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
KAF Kangasniemi 85.53 333 *ep* **P 17 57 26.7 -0.6**
comp=Z,5.7nm,0.6s,mb5.0
STHS Stebnicka Huta 85.61 320 *eP* **P 17 57 29.3 +1.3**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
STHS Stebnicka Huta 85.61 320 *eP* **P 17 57 29.3 +1.3**
comp=Z,3.8nm,0.7s,mb4.7
STHS Stebnicka Huta 85.61 320 *eP* **P 17 57 29.3 +1.3**
KECS Kecovo 85.95 319 *eP* **P 17 57 30.3 +0.6**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
KECS Kecovo 85.95 319 *eP* **P 17 57 30.3 +0.6**
comp=Z,1.6nm,0.7s,mb4.4
KECS Kecovo 85.95 319 *eP* **P 17 57 30.3 +0.6**
VYHS Vyhne 87.04 319 *eP* **P 17 57 35.5 +0.5**
VYHS pmax pmax
comp=Z,2.0nm,1.4s,mb4.2
VYHS Vyhne 87.04 319 *eP* **P 17 57 35.5 +0.5**
comp=Z,2.2nm,1.4s,mb4.2
VYHS Vyhne 87.04 319 *eP* **P 17 57 35.5 +0.5**
KEV Kevo 87.30 340 *eP* **P 17 57 32.0 -3.9**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
KEV Kevo 87.30 340 *ep* **P 17 57 32.0 -3.9**
comp=Z,4.7nm,0.8s,mb4.8
ARCES ARCESS Array B 87.75 340 P **P 17 57 38.0 0.0**
comp=Z,8.7nm,0.8s,mb5.0,baz=99,slow=6.3,SNR=17
ARCES LR LR 18 38 49.5
comp=Z,48nm,19.9s,baz=18,slow=37
MORC Moravsky Berou 88.05 320 *eP* **P 17 57 40.8 +1.0**
MORC pmax pmax
comp=Z,61nm,2.5s,mb5.4
MORC Moravsky Berou 88.05 320 *eP* **P 17 57 40.8 +0.9**
comp=Z,61nm,2.5s,mb5.4
MORC Moravsky Berou 88.05 320⇓ *iP* **P 17 57 41.2 +1.4**
DPC Dobruska-Polom 88.89 320 *eP* **P 17 57 45.1 +1.3**
DPC *ex* x 17 57 54.4
DPC *ep*P pP 17 57 59.7 -1.2
GOLS Golise 88.93 316 *i P* **P 17 57 45.3 +1.2**
KSP Ksiaz 88.96 321 *eP* **P 17 57 45.3 +1.2**
GROS Grobnik 89.06 316 *i P* **P 17 57 45.6 +1.0**
PERS Pernice 89.34 317 *i P* **P 17 57 47.0 +1.0**
BRG Berggiesshubel 90.45 321 *eP* **P 17 57 52.1 +1.0**
comp=Z,4.5nm,0.8s,mb4.9
BRG *e* pP 17 58 09.3 +1.2
comp=Z,4.7nm,1.1s
BRG Berggiesshubel 90.45 321 *eP* **P 17 57 52.1 +1.0**
BRG *e* pP 17 58 09.3 +1.2
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
GERES GERESS Array B 90.46 319 P **P 17 57 52.4 +1.2**
comp=Z,2.1nm,0.7s,mb4.6,baz=76,slow=5.6,SNR=26
KHC Kasperske Hory 90.56 319 *eP* **P 17 57 52.4 +0.7**
KHC *ep*P pP 17 58 02.2 -6.5
CLL Collm 91.07 321 *eP* **P 17 57 55.0 +1.0**
CLL Collm 91.07 321 *eP* **P 17 57 55.0 +1.0**
GRF Grafenberg Arr 92.13 319 *eP* **P 17 57 59.9 +1.0**
NOA NORSAR Array B 92.50 331 P **P 17 58 00.4 0.0**
comp=Z,2.7nm,0.8s,mb4.7,baz=93,slow=4.7,SNR=11
NOA LR LR 18 43 57.1
comp=Z,39nm,18.7s,baz=30,slow=38
TORD Torodi Ar. Bea 99.75 283 LR LR 18 37 09.5
comp=Z,62nm,21.6s,baz=165,slow=32
YKA Yellowknife Ar 115.02 17 PKP PKiKP 18 03 28.9 -1.0
comp=Z,0.4nm,0.7s,baz=338,slow=2.1,SNR=11
YKA Yellowknife Ar 115.02 17 PKP PKiKP 18 03 28.9 -1.0
EDM Edmonton 122.49 24 *e*PKIKP PKPdf 18 03 44.2 -0.4
ETW Entiat 123.07 32 *e*PKPdf PKPdf 18 03 43.5 -2.4
HUMO Hull Mountain 124.45 38 *e*PKPdf PKPdf 18 03 49.4 +0.7
FFC Flin Flon 125.14 16 *c i* PKIKP PKPdf 18 03 49.8 +0.1
BOZ Bozeman (W) 128.82 29 *e*PKIKP PKPdf 18 03 57.9 +0.9
NVAR Mina Array Bea 129.72 40 PKP PKPdf 18 03 58.9 0.0
comp=Z,9.0nm,0.6s,baz=277,slow=3.0,SNR=5.8
ULM Lac du Bonnet 130.79 14 PKP PKPdf 18 03 59.7 -0.8
comp=Z,3.2nm,0.7s,baz=12,slow=5.0,SNR=6.2
ULM Lac du Bonnet 130.79 14 PKP PKPdf 18 03 59.7 -0.8
PDAR Pinedale Array 131.94 30 PKP PKPdf 18 04 02.6 -0.4
comp=Z,0.6nm,0.6s,baz=222,slow=0.4,SNR=5.1
RSSD Black Hills 133.44 25 *e*PKIKP PKPdf 18 04 05.2 -0.6
BINY Binghamton 140.88 356 *e*PKPpre PKPdf 18 04 19.7 +0.1
SSPA Standing Stone 142.52 359 *e*PKPpre 18 04 16.3
WMOK Wichita Mounta 143.45 28 *e*PKIKP PKPdf 18 04 20.8 -3.6
TXAR Lajitas Array 144.85 39 PKP PKPdf 18 04 26.3 -0.7
comp=Z,12nm,0.6s,baz=282,slow=1.1,SNR=122
TXAR Lajitas Array 144.85 39 PKP PKPdf 18 04 26.3 -0.7
MIAR Mount Ida 145.80 22 *e*PKP2 PKPdf 18 04 27.1 -1.4
WVT Waverly 146.03 13 *e*PKP2 PKPdf 18 04 28.7 -0.1
JCT Junction City 146.31 34 *e*PKP2 PKPdf 18 04 30.1 +0.6
TZTN Tazewell 146.35 7 *e*PKPab PKPdf 18 04 29.8 +0.5
PLAL Pickwick Lake 147.08 14 *e*PKPdf PKPdf 18 04 30.5 -0.1
SWET Sewanee 147.30 11 *e*PKPab PKPdf 18 04 32.1 +1.2
CPCT Cooper Cave 147.31 8 *e*PKPdf PKPdf 18 04 32.0 +1.0

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*ISCJB **01** 18:08:07.5±1.1, 19°.8S±0°.2×177°.0W±0°.5, h621km±64km, mb4.1/8, Error ellipse: s-maj=66.8km s-min=26.1km az=7.4*
*NEIC **01** 18:08:07.9±1.0, 19°.82S×177°.10W, h585km±43km, mb4.0/3, Error ellipse: s-maj=41.8km s-min=21.1km az=81.0*
*IDC **01** 18:08:07.5±1.6, 19°.79S×177°.38W, h549km±36km, mb3.6/5, mb1 3.6/7, mb1mx3.3/20, mbtmp3.5/7, Error ellipse: s-maj=32.7km s-min=26.3km az=104.0*
ISC 01 18:08:08.0±1.2, 19°.7S±0°.2×176°.9W±0°.5, h609km±61km, n19, σ0°60/21, mb4.1/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.59**	**41**	P	**P**	**18 10 04.8**	**+0.9**
	3.9nm,0.3s,baz=40,slow=20,SNR=5.1						
AFI				S	**S**	**18 11 37.8**	**-0.9**
	2.3nm,0.3s,baz=30,slow=14,SNR=5.3						
URZ	**Urewera**	**19.20**	**194**	P	**P**	**18 11 53.4**	**-0.5**
	1.1nm,0.3s,baz=338,slow=18,SNR=5.8						
ARMA	**Armidale**	**30.32**	**243**	*eP*	**P**	**18 13 32.0**	**0.0**
ARMA	**Armidale**	**30.32**	**243**	*eP*	**P**	**18 13 32.1**	**+0.2**
CTA	**Charters Tower**	**34.58**	**263**	*eP*	**P**	**18 14 07.6**	**-0.4**
	5.7nm,0.5s,mb4.5						
CTA	**Charters Tower**	**34.58**	**263**	P	**P**	**18 14 07.8**	**-0.2**
	8.3nm,0.6s,mb4.6,baz=100,slow=9.7,SNR=22						
CTA	**Charters Tower**	**34.58**	**263**	P	**P**	**18 14 07.8**	**-0.2**
CTAO	**Charters Tower**	**34.58**	**263**	*eP*	**P**	**18 14 07.7**	**-0.4**
	9.4nm,0.7s,mb4.5						
CMSA	**Cobar Meteorol**	**35.53**	**243**	*eP*	**P**	**18 14 15.4**	**-0.4**
STKA	**Stephens Creek**	**39.04**	**243**	*eP*	**P**	**18 14 44.6**	**+0.3**
	5.5nm,1.1s,mb4.0						
STKA	**Stephens Creek**	**39.04**	**243**	P	**P**	**18 14 44.9**	**+0.6**
	5.7nm,0.6s,mb4.2,baz=100,slow=6.3,SNR=12						
STKA	**Stephens Creek**	**39.04**	**243**	*eP*	**P**	**18 14 44.3**	**+0.1**
BBOO	**Buckleboo**	**43.80**	**243**	*eP*	**P**	**18 15 21.8**	**+0.1**
	7.0nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**45.68**	**256**	P	**P**	**18 15 36.4**	**+0.2**
	5.4nm,0.5s,mb4.3,baz=87,slow=8.5,SNR=257						
ASAR				PcP	PcP	18 17 05.6	+4.5
	0.5nm,0.8s,baz=104,slow=4.0,SNR=3.7						
ASAR				S	**S**	**18 21 34.2**	**-1.9**
	0.7nm,0.8s,baz=89,slow=16,SNR=4.6						
WRAB	**Tennant Creek**	**45.70**	**261**	*eP*	**P**	**18 15 36.6**	**+0.2**
	2.8nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**45.71**	**261**	P	**P**	**18 15 36.3**	**-0.2**
	2.9nm,0.5s,mb4.0,baz=97,slow=8.0,SNR=104						
FITZ	**Fitzroy Crossi**	**54.13**	**262**	*eP*	**P**	**18 16 38.4**	**+0.6**
	3.5nm,0.4s,mb4.0						
FITZ	**Fitzroy Crossi**	**54.13**	**262**	P	**P**	**18 16 38.8**	**+1.0**
	1.7nm,0.5s,mb3.7,baz=134,slow=1.6,SNR=22						
MBWA	**Marble Bar**	**59.01**	**257**	*eP*	**P**	**18 17 11.5**	**+0.4**
	1.8nm,0.6s,mb3.4						

IDC 01 18:20:48.4±11.0, 6°.11S×127°.68E, h411km±154km, mb2.5/1, mb1 2.7/4, mb1mx2.5/18, mbtmp2.5/4, Error ellipse: s-maj=105.7km s-min=56.2km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.09**	**189**	P	P	18 23 29.8	+1.1
	0.1nm,0.3s,baz=307,slow=20,SNR=5.6						
WRA	**Warramunga Arr**	**15.20**	**155**	P	P	18 24 02.2	-0.5
	0.2nm,0.3s,baz=333,slow=11,SNR=25						
ASAR	**Alice Springs**	**18.46**	**162**	P	P	18 24 37.5	+0.2
	0.2nm,0.3s,baz=344,slow=12,SNR=26						
MKAR	**Makanchi Array**	**66.23**	**328**	P	P	18 30 54.0	+0.1
	0.1nm,0.4s,baz=120,slow=8.0,SNR=4.7						

IDC 01 18:45:23.9±2.2, 43°.30S×72°.63W, h0km, mb3.9/2, mb1 4.3/3, mb1mx4.0/13, mbtmp4.0/3, ML5.0/1, Error ellipse: s-maj=60.0km s-min=41.4km az=128.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.99**	**32**	Pn	Pn	18 46 13.4	+0.9
	50nm,0.3s,baz=215,slow=16,SNR=79						
PLCA				Sn	Sn	18 46 49.0	0.0
	141nm,0.3s,baz=117,slow=23,SNR=19						
TORD	**Torodi Ar. Bea**	**87.84**	**70**	P	P	18 58 14.8	-0.4
	0.4nm,0.7s,baz=233,slow=4.7,SNR=3.2						
PDAR	**Pinedale Array**	**91.86**	**334**	P	P	18 58 34.0	+0.7
	0.5nm,0.6s,baz=145,slow=5.4,SNR=4.1						

MAN 01 18:48:06, 11°.64N×124°.31E, h21km, mb4.6, ML3.4, MS3.3, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.81**	**126⇓**	*eP*	Pb	18 48 21.3	-0.1
PLP				*eS*	Sb	18 48 35.0	+3.0
LLP	**Lapu-Lapu**	**1.36**	**194⇓**	*eP*	Pn	18 48 30.1	+0.4
LLP				*eS*	Sn	18 48 49.1	+1.9
RCP	**Roxas**	**1.54**	**267⇑**	*eP*	Pn	18 48 33.1	+1.0
RCP				*eS*	Sn	18 48 51.9	+0.4

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*IDC **01** 18:50:26.4±1.8, 6°.04N×126°.63E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, Error ellipse: s-maj=82.8km s-min=16.1km az=61.0*
*ISCJB **01** 18:50:27.4±1.0, 5°.79N±0°.08×126°.46E±0°.09, h10km, mb3.7/4, Error ellipse: s-maj=15.9km s-min=7.6km az=141.4*
*MAN **01** 18:50:34, 6°.17N×126°.15E, h1km, mb5.0, ML3.9, MS4.0*
ISC 01 18:50:28.8±0.9, 5°.82N±0°.09×126°.4E±0°.1, h10km, n7, σ1°53/10, mb3.7/4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.48**	**280⇑**	*iP*	**Pn**	**18 50 52.1**	**-3.5**
GSPH				*i S*	**Sn**	**18 51 14.9**	**0.0**
DAV	**Davao City (W)**	**1.49**	**326**	Pn	**Pn**	**18 50 54.0**	**-1.7**
	70nm,0.3s,baz=334,slow=9.0,SNR=8.2						
DAV				Sn	**Sn**	**18 51 16.9**	**+1.6**
	57nm,0.3s,baz=271,slow=23,SNR=6.1						
DMPH	**Davao City--Mi**	**1.54**	**324⇑**	*eP*	**Pn**	**18 50 55.1**	**-1.3**
DMPH				*eS*	**Sn**	**18 51 19.2**	**+2.7**
FITZ	**Fitzroy Crossi**	**23.78**	**182**	P	**P**	**18 55 42.5**	**+0.6**
	1.6nm,0.8s,mb3.5,baz=28,slow=6.9,SNR=6.9						
WRA	**Warramunga Arr**	**26.76**	**163**	P	**P**	**18 56 11.1**	**+2.1**
	0.5nm,0.4s,mb3.4,baz=344,slow=10,SNR=12						
ASAR	**Alice Springs**	**30.20**	**166**	P	**P**	**18 56 39.2**	**-0.4**
	0.4nm,0.7s,mb3.3,baz=347,slow=7.5,SNR=7.1						
MKAR	**Makanchi Array**	**55.67**	**325**	P	**P**	**19 00 03.9**	**-1.4**
	2.3nm,0.3s,mb4.6,baz=123,slow=6.2,SNR=64						

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*ISCJB **01** 19:00:32.0±1.7, 43°.18S±0°.05×171°.0E±0°.1, h6km±12km, mb4.1/7, MS3.8/4, Error ellipse: s-maj=15.3km s-min=8.2km az=15.9*
*IDC **01** 19:00:32.0±0.7, 43°.15S×171°.10E, h0km, mb4.0/7, mb1 4.2/8, mb1mx4.1/13, mbtmp4.0/8, ML3.5/1, MS3.8/4, Ms1 3.8/4, ms1mx3.6/13, Error ellipse: s-maj=24.7km s-min=7.9km az=87.0*
*NEIC **01** 19:00:33.1, 43°.23S×171°.03E, h2km, ML4.6(WEL), After WEL.*
ISC 01 19:00:33.9±1.6, 43°.24S±0°.06×171°.1E±0°.1, h12km±11km, n27, σ0°99/17, mb4.1/7, MS3.8/4, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**0.48**	**185**	Pg	**Pg**	**19 00 43.0**	**-0.3**
	694nm,0.3s,baz=331,slow=5.2,SNR=2578						
RPZ				Lg		19 00 50.1	
	1μm,0.3s,baz=293,slow=10,SNR=104						
RPZ	**Rata Peaks**	**0.48**	**185**	*eP*	**Pg**	**19 00 43.0**	**-0.3**
ODZ	**Otahua Downs**	**1.84**	**190**	*eP*	**Pn**	**19 01 04.8**	**-0.4**
ODZ				*eS*	**Sn**	**19 01 27.7**	**-0.6**
KHZ	**Kahutara**	**1.97**	**66**	*eP*	**Pn**	**19 01 07.3**	**+0.3**
SNZO	**South Karori**	**3.29**	**55**	*eP*	**Pn**	**19 01 26.7**	**+1.5**
URZ	**Urewera**	**6.74**	**44**	Pn	**Pn**	**19 02 11.8**	**-0.8**
	1.0nm,0.3s,baz=200,slow=6.2,SNR=5.7						
URZ				Sn	**Sn**	**19 03 27.0**	**-2.3**
	5.4nm,0.3s,baz=105,slow=21,SNR=8.0						
OUZ	**Omahuta**	**8.24**	**14**	*eP*	**Pn**	**19 02 33.3**	**+0.2**
	22nm,0.6s						
STKA	**Stephens Creek**	**25.87**	**286**	LR	LR	19 15 39.7	
	comp=Z,176nm,18.3s,MS3.6,baz=206,slow=35						
CTA	**Charters Tower**	**31.09**	**310**	LR	LR	19 18 05.9	
	comp=Z,156nm,18.1s,MS3.7,baz=330,slow=34						
ASAR	**Alice Springs**	**36.28**	**290**	P	**P**	**19 07 36.6**	**-0.5**
	1.7nm,0.6s,mb4.2,baz=129,slow=7.6,SNR=31						
ASAR				PcP	PcP	19 10 01.1	-0.8
	0.6nm,0.7s,baz=130,slow=4.5,SNR=5.7						
WB2	**Warramunga Arr**	**38.53**	**295**	*eP*	**P**	**19 07 55.6**	**-0.6**
WRA	**Warramunga Arr**	**38.54**	**295**	P	**P**	**19 07 55.7**	**-0.6**
	2.0nm,0.6s,mb4.0,baz=134,slow=7.7,SNR=28						
WRA				PcP	PcP	19 10 08.2	-0.7
	0.4nm,0.5s,baz=144,slow=2.9,SNR=7.1						
FITZ	**Fitzroy Crossi**	**45.71**	**289**	P	**P**	**19 08 54.3**	**-0.6**
	1.3nm,0.6s,mb4.1,baz=198,slow=11,SNR=8.8						
QSPA	**South Pole Qui**	**46.89**	**180**	P	**P**	**19 09 06.4**	**+3.1**
	1.9nm,1.0s,mb4.0,baz=356,slow=9.2,SNR=3.8						
MAW	**Mawson**	**57.12**	**206**	LR	LR	19 34 08.7	
	comp=Z,74nm,18.1s,MS3.8,baz=217,slow=35						
MJAR	**Matsushiro Arr**	**84.87**	**334**	P	**P**	**19 13 08.9**	**+0.8**
	0.3nm,0.3s,mb3.9,baz=152,slow=18,SNR=3.4						
KSRS	**Korea Array**	**89.39**	**327**	P	**P**	**19 13 30.9**	**+0.9**
	1.3nm,0.9s,mb4.2,baz=146,slow=5.6,SNR=4.8						
CMAR	**Chiang Mai Arr**	**90.14**	**295**	P	**P**	**19 13 34.9**	**+1.0**
	1.2nm,1.0s,mb4.2,baz=152,slow=3.4,SNR=4.9						
CMAR				LR	LR	19 57 08.5	
	comp=Z,73nm,19.1s,MS4.1,baz=81,slow=38						
MKAR	**Makanchi Array**	**119.05**	**308**	PKP	PKPdf	19 19 21.0	-0.8
	0.2nm,0.5s,baz=200,slow=1.4,SNR=5.1						
YKA	**Yellowknife Ar**	**120.84**	**31**	PKP	PKPdf	19 19 23.5	-1.2
	0.3nm,0.7s,baz=266,slow=1.6,SNR=5.1						
KEV	**Kevo**	**147.78**	**337**	*ep*	PKPdf	19 20 15.0	+0.7
	0.8nm,0.4s						
BRTR	**Keskin Array B**	**148.20**	**278**	PKPbc	PKPbc	19 20 19.1	-0.1
	4.0nm,1.0s,baz=145,slow=3.0,SNR=12						
ARCES	**ARCESS Array B**	**148.33**	**338**	PKPbc	PKPbc	19 20 18.3	-0.4
	1.6nm,0.6s,baz=74,slow=3.2,SNR=14						
TORD	**Torodi Ar. Bea**	**148.66**	**200**	PKPbc	PKPbc	19 20 21.2	+0.1
	5.7nm,0.7s,baz=158,slow=1.3,SNR=14						
JOF	**Joensuu**	**149.58**	**324**	*ep*	PKPdf	19 20 20.1	+2.7
	1.4nm,0.5s						
KAF	**Kangasniemi**	**152.03**	**325**	*ep*	PKPdf	19 20 25.8	+4.6
	1.2nm,0.5s						
FINES	**FINESS Array B**	**152.42**	**323**	PKPbc	PKPbc	19 20 27.5	-1.2
	1.6nm,0.5s,baz=64,slow=2.5,SNR=11						

BJI 01 19:32:37.2, 27°.26N×103°.80E, h9km, ML2.7/3, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.33**	**204**	Pg	Pg	19 33 17.8	-4.1
CD2	**Chengdu**	**3.64**	**359**	Pg	Pg	19 33 44.5	-2.4
CD2				Sg	Sg	19 34 31.3	-2.8
CD2				smax			
	comp=N,60nm,0.5s						
CD2				smax			
	comp=E,70nm,1.0s						

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*BJI **01** 19:45:50.4, 54°.70N×159°.80W, h18km, mb4.4/6, Ms4.6/2, Ms7 4.3/2*
*ISCJB **01** 19:45:55.0±0.8, 54°.78N±0°.07×159°.66W±0°.08, h40km±6km, mb4.1/27, MS3.6/3, Error ellipse: s-maj=12.6km s-min=4.6km az=150.2*
*NEIC **01** 19:45:55.5, 54°.74N×159°.79W, h1km, mb4.4/5, ML3.9(AEIC), After AEIC.*
*IDC **01** 19:45:56.7±5.1, 54°.91N×159°.72W, h35km±40km, mb3.9/21, mb1 4.0/23, mb1mx3.9/30, mbtmp3.9/23, ML4.1/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/36, Error ellipse: s-maj=24.0km s-min=12.3km az=152.0*
ISC 01 19:45:57.2±0.8, 54°.79N±0°.07×159°.69W±0°.08, h43km±5km, n63, σ0°83/65, mb4.1/27, MS3.6/3, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.72**	**322**	P	**Pn**	**19 46 09.6**	**-1.3**
SDPT				S	**Sn**	**19 46 20.8**	**-0.1**
CHGN	**Chignik**	**1.68**	**25**	P	**Pn**	**19 46 24.2**	**+0.1**
AKUT	**Akutan**	**3.61**	**262**	P	**Pn**	**19 46 50.5**	**+0.1**
AKUT				S	**Sn**	**19 47 32.4**	**+0.6**
AKLV	**Akutan Long Va**	**3.71**	**263**	P	**Pn**	**19 46 51.7**	**-0.1**
AKGG	**Akutan Green G**	**3.72**	**263**	P	**Pn**	**19 46 52.2**	**+0.2**
UNV	**Unalaska Valle**	**4.10**	**260**	P	**Pn**	**19 46 56.6**	**-0.6**
UNV				S	**Sn**	**19 47 43.4**	**-0.4**
OHAK	**Old Harbor**	**4.34**	**53**	P	**Pn**	**19 46 59.7**	**-0.9**
KDAK	**Kodiak Island**	**4.97**	**50**	Pn	**Pn**	**19 47 07.7**	**-1.4**
	3.3nm,0.3s,baz=166,slow=19,SNR=29						
KDAK				Sn	**Sn**	**19 48 01.2**	**-4.0**
	5.4nm,0.3s,baz=335,slow=14,SNR=3.4						
KDAK				LR	LR	19 49 24.6	
	comp=Z,405nm,18.9s,baz=141,slow=42						
KDAK	**Kodiak Island**	**4.97**	**50**	*eP*	**Pn**	**19 47 07.3**	**-1.8**
	50nm,0.6s						
OKCD	**Okmok Cone D**	**5.14**	**258**	P	**Pn**	**19 47 11.3**	**-0.2**
SPIA	**Saint Paul Isl**	**6.39**	**296**	P	**Pn**	**19 47 28.9**	**+0.3**
SVW2	**Sparrevohn**	**6.70**	**17**	*eP*	**Pn**	**19 47 33.2**	**+0.5**
RSO	**Redoubt South**	**6.80**	**30**	*eP*	**Pn**	**19 47 36.9**	**+2.7**
TT01	**Tatalina**	**8.36**	**12**	P	**Pn**	**19 47 55.7**	**+0.1**
TTA	**Tatalina**	**8.39**	**12**	*eP*	**Pn**	**19 47 55.7**	**-0.2**
	12nm,0.3s						
PPLA	**Purkeypile**	**9.01**	**22**	P	**Pn**	**19 48 05.4**	**+0.9**
CHUM	**Lake Minchumin**	**9.86**	**19**	*eP*	**Pn**	**19 48 17.6**	**+1.5**
	12nm,0.8s						
KTH	**Kantishna Hill**	**9.87**	**23**	*eP*	**Pn**	**19 48 16.1**	**0.0**
	6.9nm,0.7s						
TRF	**Thorofare Moun**	**9.93**	**25**	*eP*	**Pn**	**19 48 16.6**	**-0.4**
	6.3nm,0.4s						
BPAW	**Bear Paw Mtn.**	**10.33**	**22**	*eP*	**Pn**	**19 48 22.8**	**+0.3**
	9.6nm,0.9s						
MCK	**McKinley**	**10.51**	**27**	*eP*	**Pn**	**19 48 24.2**	**-0.7**
	20nm,1.2s						
TNA	**Tin City**	**11.55**	**343**	*eP*	**Pn**	**19 48 41.2**	**+2.1**
	24nm,1.2s						
DAWY	**Dawson**	**13.83**	**40**	*eP*	**Pn**	**19 49 10.9**	**+0.7**
INK	**Inuvik**	**18.19**	**32**	P	**Pn**	**19 50 03.7**	**-2.4**
	1.0nm,0.3s,baz=224,slow=11,SNR=23						
INK				S	**S**	**19 53 25.1**	**-6.6**
	0.0nm,0.3s,baz=103,slow=3.9,SNR=2.3						
INK				LR	LR	19 57 33.6	
	comp=Z,81nm,20.3s,baz=323,slow=38						
INK	**Inuvik**	**18.19**	**32**	P	**Pn**	**19 50 03.7**	**-2.4**
INK				S	**S**	**19 53 25.1**	**-6.6**
INK				LR	LR	19 57 33.6	
BBB	**Bella Bella**	**18.89**	**85**	LR	LR	19 55 58.9	
	comp=Z,58nm,21.8s,baz=330,slow=32						
BILL	**Bilibino**	**20.64**	**323**	*eP*	**P**	**19 50 31.8**	**-0.7**
	5.8nm,1.0s						
YKA	**Yellowknife Ar**	**24.24**	**53**	P	**P**	**19 51 09.8**	**+0.3**
	0.7nm,0.6s,mb3.3,baz=265,slow=7.6,SNR=19						
YKA				LR	LR	20 01 50.9	
	comp=Z,5.3nm,19.9s,baz=160,slow=40						
PETK	**Petropavlovsk-**	**24.86**	**284**	P	**P**	**19 51 15.2**	**0.0**
	9.0nm,0.5s,mb4.5,baz=78,slow=13,SNR=46						
YBH	**Yreka Blue Hor**	**27.51**	**103**	LR	LR	20 00 24.9	
	comp=Z,72nm,19.0s,MS3.3,baz=355,slow=32						
RES	**Resolute Bay**	**31.63**	**27**	P	**P**	**19 52 15.2**	**-0.3**
	0.8nm,0.7s,mb3.6,baz=258,slow=12,SNR=5.2						
TIXI	**Tiksi**	**33.74**	**327**	*eP*	**P**	**19 52 31.9**	**-2.0**
	2.6nm,0.8s,mb4.2						
ASAJ	**Asahikawa**	**37.97**	**278**	P	**P**	**19 53 10.1**	**-0.4**
	5.2nm,0.8s,mb4.3,baz=34,slow=11,SNR=4.5						
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ESDC Sonseca Array 83.64 19 P **P** **19 58 21.7 +0.9**
comp=Z,1.7nm,0.7s,mb4.3,baz=342,slow=4.9,SNR=16
ESDC Sonseca Array 83.64 19 P **P** **19 58 21.7 +0.9**
BRTR Keskin Array B 85.17 350 P **P** **19 58 27.8 -0.7**
comp=Z,0.5nm,0.6s,mb3.8,baz=93,slow=5.1,SNR=4.2
ASAR Alice Springs 96.48 238 P **P** **19 59 22.0 +0.4**
comp=Z,0.2nm,0.8s,mb3.6,baz=32,slow=5.5,SNR=3.4
QSPA South Pole Qui 144.56 180 PKP PKPdf 20 05 25.5 -1.4
comp=Z,1.7nm,0.8s,baz=270,slow=1.6,SNR=9.7

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*NIED **01** 19:46:00, 28.°60N×142.°40E, h5km, Mw4.0 Best double couple: M0 1.23000×10^15 NP1:φs 184.00000°, δ73.00000°, λ101.00000°. NP2:φs 329.00000°, δ20.00000°, λ57.00000°.*
*BJI **01** 19:46:44.2, 28.°40N×142.°80E, h10km, mB4.5/7, mb4.2/11, Ms3.7/2, Ms7 3.6/2*
*IDC **01** 19:46:45.6±0.5, 28.°40N×142.°85E, h0km, mb4.2/20, mb1 4.3/23, mb1mx4.3/29, mbtmp4.2/23, ML4.0/3, Error ellipse: s-maj=17.6km s-min=12.5km az=104.0*
*ISCJB **01** 19:46:46.5±1.3, 28.°57N±0.°02×142.°63E±0.°09, h15km±9km, mb4.3/31, Error ellipse: s-maj=12.9km s-min=4.0km az=175.0*
*NEIC **01** 19:46:46.3±3.7, 28.°43N×142.°79E, h4km±22km, mb4.5/8, MW4.0(NIED), Error ellipse: s-maj=8.3km s-min=6.9km az=107.0*
*JMA **01** 19:46:48.1±0.1, 28.°56N×142.°40E, h31km, M4.4*
ISC 01 19:46:49.8±1.7, 28.°52N±0.°03×142.°68E±0.°09, h24km±12km, n56, σ1.9°07/69, mb4.3/31, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.48**	**197**	P	**Pn**	**19 47 13.3**	**-1.7**
CBIJ				*e*S	**Sn**	**19 47 31.8**	**-1.8**
CBIJ	**Chichi jima**	**1.48**	**197**	Pn	**Pn**	**19 47 13.5**	**-1.5**
CBIJ	24nm,0.3s,baz=283,slow=23,SNR=56			Sn	**Sn**	**19 47 31.3**	**-2.3**
JHHJ	**Haha-jima-NKT**	**1.93**	**194**	P	**Pn**	**19 47 19.8**	**-1.4**
JHHJ	134nm,0.3s,baz=88,slow=24,SNR=24			S	**Sn**	**19 47 43.9**	**-0.8**
JHJ	**Hachijo jima 2**	**5.22**	**332**	Pn	**Pn**	**19 48 08.4**	**+2.0**
JHJ	11nm,0.3s,baz=260,slow=18,SNR=3.7			Sn	**Sn**	**19 49 01.9**	**-3.9**
BSO1	**Boso 1**	**6.29**	**347**	P	**Pn**	**19 48 20.3**	**-0.7**
BSO1				*e*S	**Sn**	**19 49 30.7**	**-1.4**
BSO3	**Boso 3**	**6.53**	**344**	P	**Pn**	**19 48 22.9**	**-1.5**
BSO4	**Boso 4**	**6.76**	**343**	P	**Pn**	**19 48 28.9**	**+1.4**
BSO4				*e*S	**Sn**	**19 49 41.2**	**-2.4**
JOD2	**Odawara 2**	**7.39**	**336**	P	**Pn**	**19 48 36.3**	**+0.2**
HMMJ	**Hamamatsu 2**	**7.60**	**327**	P	**Pn**	**19 48 41.1**	**+2.0**
JHU	**Hanno**	**7.86**	**339**	P	**Pn**	**19 48 43.1**	**+0.5**
JHU				*e*S	**Sn**	**19 50 09.7**	**-1.1**
JYT	**Yasato**	**7.97**	**345**	P	**Pn**	**19 48 43.9**	**-0.2**
JYT				*e*S	**Sn**	**19 50 09.5**	**-4.0**
JRY	**Ryogami san**	**8.13**	**338**	P	**Pn**	**19 48 47.3**	**+0.9**
JRY				*e*S	**Sn**	**19 50 17.7**	**+0.2**
JHO	**Hitachi**	**8.27**	**348**	P	**Pn**	**19 48 47.0**	**-1.2**
JAG	**Ashikaga**	**8.34**	**342**	P	**Pn**	**19 48 48.3**	**-0.9**
JAG				*e*S	**Sn**	**19 50 20.6**	**-2.1**
MJAR	**Matsushiro Arr**	**8.85**	**336**	Pn	**Pn**	**19 48 56.7**	**+0.5**
MJAR	3.1nm,0.3s,baz=152,slow=11,SNR=38			Sn	**Sn**	**19 50 33.4**	**-1.7**
MJAR	**Matsushiro Arr**	**8.85**	**336**	Pn	**Pn**	**19 48 56.7**	**+0.5**
MJAR	0.4nm,0.3s,baz=164,slow=15,SNR=3.3			Sn	**Sn**	**19 50 33.4**	**-1.7**
MAJO	**Matsushiro**	**8.85**	**336**	*e*P	**Pn**	**19 48 56.8**	**+0.6**
	12nm,0.6s						
MAT	**Matsushiro**	**8.85**	**336**	P	**Pn**	**19 48 56.7**	**+0.5**
MAT				S	**Sn**	**19 50 33.2**	**-1.9**
KSRS	**Korea Array**	**15.24**	**310**	Pn	**Pn**	**19 50 26.8**	**+3.3**
	0.4nm,0.3s,baz=117,slow=12,SNR=15						
MDJ	**Mudanjiang**	**19.16**	**330**	P	**Pn**	**19 51 12.4**	**0.0**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,44nm,7.0s						
HIA	**Hailar**	**27.16**	**326**	*e*P	**P**	**19 52 31.9**	**+0.7**
	comp=Z,3.2nm,0.3s,mb4.3						
ENH	**Enshi**	**28.92**	**282**	*e*P	**P**	**19 52 46.5**	**-0.6**
	comp=Z,7.7nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**33.62**	**315**	*e*P	**P**	**19 53 28.9**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**34.02**	**315**	P	**P**	**19 53 33.1**	**+1.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=111,slow=7.7,SNR=4.6						
CMAR	**Chiang Mai Arr**	**41.15**	**266**	P	**P**	**19 54 33.3**	**+0.8**
	comp=Z,0.8nm,0.8s,mb3.4,baz=49,slow=8.2,SNR=4.6						
TIXI	**Tiksi**	**43.85**	**354**	*e*P	**P**	**19 54 53.7**	**0.0**
	comp=Z,1.3nm,0.4s,mb4.0						
ZALV	**Zalesovo Beam**	**48.72**	**318**	P	**P**	**19 55 33.0**	**+0.8**
	comp=Z,2.1nm,0.5s,mb4.4,baz=89,slow=8.4,SNR=11						
ZALV				PcP	PcP	19 56 57.3	+0.3
	comp=Z,2.0nm,0.6s,baz=96,slow=3.9,SNR=6.2						
WRAB	**Tennant Creek**	**48.83**	**190**	*e*P	**P**	**19 55 32.9**	**-0.4**
	comp=Z,12nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	**48.84**	**190**	P	**P**	**19 55 32.3**	**-1.2**
	comp=Z,12nm,0.8s,mb5.0,baz=12,slow=8.4,SNR=110						
WRA				PcP	PcP	19 56 57.6	-0.2
	comp=Z,0.5nm,0.5s,baz=12,slow=3.9,SNR=3.0						
MK31	**Makanchi Array**	**49.92**	**309**	*e*P	**P**	**19 55 41.6**	**+0.1**
MKAR	**Makanchi Array**	**49.92**	**309**	P	**P**	**19 55 42.1**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.2,baz=89,slow=8.9,SNR=12						
MKAR				PcP	PcP	19 57 01.8	+0.2
	comp=Z,1.3nm,0.8s,baz=86,slow=5.1,SNR=4.2						
KURK	**Kurchatov**	**52.32**	**314**	*e*P	**P**	**19 56 00.1**	**+0.7**
	comp=Z,9.0nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**52.56**	**190**	P	**P**	**19 56 00.1**	**-1.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=9.0,slow=6.6,SNR=20						
KDAK	**Kodiak Island**	**52.97**	**37**	P	**P**	**19 56 03.2**	**-0.9**
	comp=Z,8.7nm,0.7s,mb4.8,baz=130,slow=22,SNR=6.5						
AML	**Almayashu**	**56.49**	**304**	*e*P	**P**	**19 56 31.8**	**+1.9**
	comp=Z,2.7nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**57.30**	**317**	P	**P**	**19 56 36.9**	**+1.4**
	comp=Z,3.8nm,0.5s,mb4.7,baz=85,slow=7.4,SNR=24						
BVAR	**Borovoye Array**	**57.30**	**317**	P	**P**	**19 56 36.9**	**+1.4**
BRVK	**Borovoye**	**57.37**	**317**	*e*P	**P**	**19 56 37.1**	**+1.2**
	comp=Z,4.8nm,0.8s,mb4.6						
INK	**Inuvik**	**61.56**	**25**	P	**P**	**19 57 04.6**	**0.0**
	comp=Z,2.4nm,0.7s,mb4.5,baz=295,slow=5.9,SNR=9.0						
RES	**Resolute Bay**	**70.58**	**14**	P	**P**	**19 58 02.7**	**+0.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=346,slow=8.3,SNR=5.1						
RES	**Resolute Bay**	**70.58**	**14**	P	**P**	**19 58 02.7**	**+0.2**
YKA	**Yellowknife Ar**	**70.69**	**29**	P	**P**	**19 58 02.7**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.8,baz=293,slow=6.2,SNR=15						
YKA	**Yellowknife Ar**	**70.69**	**29**	P	**P**	**19 58 02.7**	**-0.6**
ARCES	**ARCESS Array B**	**72.35**	**341**	P	**P**	**19 58 13.8**	**+0.6**
	comp=Z,3.2nm,0.9s,mb4.3,baz=57,slow=8.8,SNR=5.5						
FINES	**FINESS Array B**	**76.87**	**334**	P	**P**	**19 58 40.0**	**+0.4**
	comp=Z,0.9nm,0.4s,mb4.0,baz=66,slow=4.6,SNR=10						
NVAR	**Mina Array Bea**	**79.30**	**52**	P	**P**	**19 58 53.6**	**+0.1**
	comp=Z,1.6nm,0.6s,mb4.2,baz=289,slow=5.9,SNR=9.9						
ELK	**Elko**	**80.28**	**49**	P	**P**	**19 58 59.0**	**+0.2**
	comp=Z,0.7nm,0.8s,mb3.6,baz=288,slow=3.7,SNR=4.8						
MIB	**Mutribah**	**80.58**	**299**	*e*P	**P**	**19 59 01.1**	**+0.4**
MIB				AMb	AMB	19 59 02.0	
	comp=Z,13nm,0.9s,mb4.9						
KBD	**Kabd**	**80.60**	**298**	*e*P	**P**	**19 59 01.6**	**+0.9**
KBD				AMb	AMB	19 59 04.0	
	comp=Z,10nm,0.8s,mb4.8						
RDF	**Al-Radifah**	**80.82**	**298**	*e*P	**P**	**19 59 03.1**	**+1.2**
RDF				AMb	AMB	19 59 03.7	
	comp=Z,21nm,0.7s,mb5.2						
AKASG	**Malin Array Be**	**81.73**	**324**	P	**P**	**19 59 06.1**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=46,slow=5.8,SNR=4.1						
NB2	**NORSAR Subarra**	**82.46**	**338**	P	**P**	**19 59 09.7**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.1,baz=43,slow=5.6						
NOA	**NORSAR Array B**	**82.46**	**338**	P	**P**	**19 59 09.7**	**-0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=41,slow=5.2,SNR=7.4						
PDAR	**Pinedale Array**	**82.90**	**45**	P	**P**	**19 59 12.6**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=316,slow=4.1,SNR=5.6						
BRTR	**Keskin Array B**	**85.36**	**313**	P	**P**	**19 59 26.1**	**+0.9**
	comp=Z,1.4nm,0.7s,mb4.2,baz=99,slow=4.0,SNR=8.0						
TXAR	**Lajitas Array**	**94.40**	**53**	P	**P**	**20 00 08.7**	**+0.6**
	comp=Z,0.9nm,0.8s,mb4.2,baz=337,slow=2.9,SNR=5.7						

IDC 01 20:01:24.8±9.7, 32.°67S×178.°71W, h58km±91km, mb3.4/2, mb1 3.7/3, mb1mx3.4/14, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=73.5km s-min=56.7km az=161.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.54**	**210**	P	Pn	20 02 59.1	+0.8
	0.4nm,0.3s,baz=331,slow=12,SNR=6.6						
URZ				S	Sn	20 04 11.2	-0.3
	0.3nm,0.3s,baz=12,slow=17,SNR=2.5						
ASAR	**Alice Springs**	**42.44**	**270**	P	P	20 09 14.2	+0.2
	0.5nm,0.7s,baz=105,slow=8.0,SNR=10						
WRA	**Warramunga Arr**	**43.63**	**275**	P	P	20 09 23.6	-0.1
	0.5nm,0.3s,baz=112,slow=8.0,SNR=17						
FINES	**FINESS Array B**	**147.04**	**338**	PKPbc	PKPbc	20 20 59.3	-0.9
	0.4nm,0.4s,baz=62,slow=4.5,SNR=7.4						

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*ISCJB **01** 20:16:03.4±0.4, 43.°25N±0.°04×84.°39E±0.°04, h10km, mb3.9/18, Error ellipse: s-maj=5.4km s-min=4.2km az=172.9*
*NNC **01** 20:16:05.4±2.8, 43.°14N×84.°51E, h17km±15km, mb3.8, mpv3.8, Error ellipse: s-maj=23.9km s-min=13.4km az=114.0*
*IDC **01** 20:16:07.0±2.7, 43.°05N×84.°31E, h27km±18km, mb3.7/13, mb1 3.8/20, mb1mx3.8/31, mbtmp3.7/20, ML3.6/7, MS3.0/3, Ms1 3.0/3, ms1mx2.5/39, Error ellipse: s-maj=16.9km s-min=11.5km az=43.0*
*BJI **01** 20:16:06.2, 42.°96N×84.°35E, h15km, mb4.1/3, ML3.9/10*
*NEIC **01** 20:16:09.2±0.9, 43.°14N×84.°34E, h48km±8km, mb4.0/2, Error ellipse: s-maj=10.2km s-min=7.9km az=147.0*
ISC 01 20:16:05.0±0.4, 43.°18N±0.°04×84.°46E±0.°05, h10km, n65, σ1.9°06/84, mb3.9/18, 13C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.44**	**74**	Pg	**Pg**	**20 16 52.3**	**+0.5**
WMQ				Sn	**Sn**	**20 17 25.6**	**+11**
WMQ				Sg	**Sg**	**20 17 27.5**	**+4.1**
WMQ				smax			
	comp=N,500nm,0.7s						
WMQ				smax			
	comp=E,920nm,0.6s						
MK31	**Makanchi Array**	**3.93**	**338**	⇑Pn	**Pn**	**20 17 09.1**	**+3.8**
	comp=E,2.4nm,0.3s,baz=157,slow=14,SNR=413						
MK31				⇑Pg	**Pg**	**20 17 19.6**	**-0.7**
	comp=E,22nm,0.4s,baz=156,slow=17,SNR=46						
MK31				⇑Sn	**Sn**	**20 17 57.4**	**+5.9**
	comp=E,29nm,0.4s,baz=146,slow=26						
MK31				⇓Lg		20 18 11.1	
	comp=E,268nm,0.6s,baz=156,slow=25						
MK31	**Makanchi Array**	**3.93**	**338**	*e*P	**Pn**	**20 17 08.8**	**+3.5**
MKAR	**Makanchi Array**	**3.93**	**338**	Pn	**Pn**	**20 17 09.0**	**+3.6**
	comp=E,5.4nm,0.3s,baz=153,slow=14,SNR=161						
MKAR				Pg	**Pg**	**20 17 19.9**	**-0.4**
	comp=E,24nm,0.3s,baz=156,slow=16,SNR=82						
MKAR				Sn	**Sn**	**20 17 47.2**	**-4.3**
	comp=E,17nm,0.3s,baz=157,slow=17,SNR=6.2						
MKAR				Lg		20 18 14.4	
	comp=E,57nm,0.3s,baz=159,slow=29,SNR=15						
MKAR	**Makanchi Array**	**3.93**	**338**	Pn	**Pn**	**20 17 09.0**	**+3.6**
MKAR				Pg	**Pg**	**20 17 19.9**	**-0.4**
MKAR				Sn	**Sn**	**20 17 47.2**	**-4.3**
MKAR				Lg		20 18 14.4	
KNDC	**Almaty**	**5.48**	**273**	⇑Pn	**Pn**	**20 17 28.4**	**+1.7**
	comp=E,14nm,0.4s						
KNDC				⇑Lg		20 18 57.7	
	comp=E,139nm,0.8s						
ULHL	**Ulahol**	**6.13**	**264**	P	**Pn**	**20 17 36.6**	**+1.1**
	SNR=16						
TKM2	**Tokmak 2**	**6.50**	**271**	⇓Pn	**Pn**	**20 17 42.4**	**+1.7**
	comp=E,8.5nm,0.5s						
TKM2				⇓Lg		20 19 30.7	
	comp=E,31nm,0.6s						
TKM2	**Tokmak 2**	**6.50**	**271**	P	**Pn**	**20 17 42.8**	**+2.1**
	SNR=9.8						
TKM2	**Tokmak 2**	**6.50**	**271**	*e*P	**Pn**	**20 17 41.3**	**+0.6**
	comp=E,13nm,0.6s						
KZA	**Kyzart**	**6.88**	**264**	P	**Pn**	**20 17 47.4**	**+1.4**
	SNR=7.8						
KBK	**Karagaybulak**	**7.00**	**269**	P	**Pn**	**20 17 49.3**	**+1.7**
	SNR=6.9						
AAK	**Ala-Archa**	**7.34**	**269**	P	**Pn**	**20 17 53.2**	**+1.0**
	SNR=5.7						
AAK	**Ala-Archa**	**7.34**	**269**	Pn	**Pn**	**20 17 53.1**	**+0.9**
	comp=E,0.0nm,0.3s,baz=97,slow=7.5,SNR=14						
AAK				Pg	**Pg**	**20 18 17.6**	**-7.9**
	comp=E,0.0nm,0.3s,baz=74,slow=8.3,SNR=5.5						
AAK				Sn	**Sn**	**20 19 14.8**	**-0.7**
	comp=E,0.0nm,0.3s,baz=92,slow=22,SNR=4.2						
AAK				Lg		20 19 50.5	
	comp=E,0.0nm,0.3s,baz=325,slow=23,SNR=3.0						
AAK				LR	LR	20 20 58.0	
	comp=E,73nm,18.9s,baz=54,slow=40						
KSH	**Kashi**	**7.36**	**243**	*e*Pn	**Pn**	**20 17 58.9**	**+6.4**
KSH				Sn	**Sn**	**20 19 22.9**	**+6.9**
KSH				smax			
	comp=N,68nm,1.0s						
KSH				smax			
	comp=E,69nm,0.7s						
UCH	**Uchtor**	**7.39**	**266**	P	**Pn**	**20 17 54.5**	**+1.6**
	SNR=7.9						
UCH	**Uchtor**	**7.39**	**266**	*e*P	**Pn**	**20 17 54.1**	**+1.3**
	comp=E,5.8nm,0.5s						
EKS2	**Erkin-Say**	**7.86**	**270**	*e*P	**Pn**	**20 17 59.9**	**+0.5**
	comp=E,5.2nm,0.6s						
AML	**Almayashu**	**8.01**	**266**	*e*P	**Pn**	**20 18 00.3**	**-1.0**
	comp=E,9.7nm,0.7s						
KURBB	**Kurchatov Arra**	**8.48**	**334**	⇑Pn	**Pn**	**20 18 08.7**	**+0.9**
	comp=E,0.5nm,0.5s						
KURBB				⇓Sn	**Sn**	**20 19 44.5**	**+1.0**
	comp=E,4.6nm,0.5s						
KURBB				⇑Lg		20 20 34.3	
	comp=E,23nm,0.8s						
KURK	**Kurchatov**	**8.53**	**334**	⇓Pn	**Pn**	**20 18 09.6**	**+1.1**
	comp=E,2.1nm,0.8s						
KURK				⇓Sn	**Sn**	**20 19 45.1**	**+0.3**
	comp=E,30nm,0.8s						
KURK				⇑Lg		20 20 36.6	
	comp=E,34nm,0.7s						
KURK	**Kurchatov**	**8.53**	**334**	Pn	**Pn**	**20 18 08.7**	**+0.1**
	comp=E,0.4nm,0.3s,baz=146,slow=13,SNR=38						
KURK				Sn	**Sn**	**20 19 44.5**	**-0.3**
	comp=E,0.9nm,0.3s,baz=154,slow=21,SNR=6.6						
KURK				Lg		20 20 35.8	
	comp=E,0.9nm,0.3s,baz=238,slow=37,SNR=5.1						
KURK	**Kurchatov**	**8.53**	**334**	*e*P	**Pn**	**20 18 09.1**	**+0.5**
KURK				Sn	**Sn**	**20 19 44.5**	**-0.3**
KURK				Lg		20 20 35.8	
KK31	**Karatay Array**	**10.20**	**274**	⇓Pn	**Pn**	**20 18 32.0**	**+0.6**
	comp=E,1.8nm,0.7s						
KK31				⇑Lg		20 21 28.4	
	comp=E,12nm,0.8s						
ZAA0	**Zalesovo Array**	**10.78**	**1**	*e*P	**Pn**	**20 18 40.5**	**+1.1**
ZALV	**Zalesovo Beam**	**10.78**	**1**	Pn	**Pn**	**20 18 40.7**	**+1.4**
	comp=E,2.7nm,0.3s,baz=180,slow=13,SNR=42						
ZALV				Sn	**Sn**	**20 20 39.0**	**-1.0**
	comp=E,2.6nm,0.3s,baz=184,slow=26,SNR=10.0						
ZALV	**Zalesovo Beam**	**10.78**	**1**	Pn	**Pn**	**20 18 40.7**	**+1.4**
ZALV				Sn	**Sn**	**20 20 39.0**	**-1.0**
VOSK	**Vostochnaya**	**13.13**	**321**	⇑Pn	**Pn**	**20 19 11.1**	**-0.3**
	comp=E,1.7nm,0.5s						
VOSK				⇓Sn	**Sn**	**20 21 32.6**	**-4.6**
	comp=E,2.2nm,0.5s						
VOSK				⇑Lg		20 22 59.5	
	comp=E,14nm,0.9s						
BVA0	**Borovoye Array**	**13.60**	**321**	⇓Pn	**Pn**	**20 19 20.5**	**+2.8**
	comp=E,0.3nm,0.6s,baz=136,slow=14,SNR=12						
BVA0				⇓Sn	**Sn**	**20 21 44.7**	**-4.0**
	comp=E,1.3nm,1.9s,baz=131,slow=20,SNR=3.5						
BVA0				⇑Lg		20 23 13.9	
	comp=E,2.9nm,0.8s						
BVAR	**Borovoye Array**	**13.60**	**321**	Pn	**Pn**	**20 19 18.1**	**+0.4**
	comp=E,0.3nm,0.3s,baz=126,slow=12,SNR=7.8						
BVAR				LR	LR	20 24 39.3	
	comp=E,64nm,21.1s,slow=38						
BRVK	**Borovoye**	**13.66**	**321**	*e*P	**Pn**	**20 19 18.7**	**0.0**
	comp=E,2.5nm,0.4s						
SONM	**Songino Array**	**16.05**	**66**	Pn	**Pn**	**20 19 53.0**	**+2.4**
	comp=E,0.1nm,0.3s,baz=253,slow=8.9,SNR=2.4						
AB31	**Akbulak array**	**17.98**	**298**	Pn	**Pn**	**20 20 15.0**	**+0.1**
	comp=E,0.6nm,0.5s,baz=100,slow=12,SNR=8.3						
AB31				⇑Sn	**Sn**	**20 23 40.4**	**+5.1**
	comp=E,11nm,1.6s						
ABKAR	**Akbulak array**	**17.98**	**298**	*e*P	**Pn**	**20 20 13.3**	**-1.6**
	comp=E,1.4nm,0.6s						
AKTK	**Aktyubinsk**	**19.43**	**301**	P	**Pn**	**20 20 31.4**	**-1.1**
AKTO	**Aktyubinsk**	**19.43**	**301**	⇓Pn	**Pn**	**20 20 32.7**	**+0.2**
	comp=E,0.6nm,1.0s						
AKTO	**Aktyubinsk**	**19.43**	**301**	P	**Pn**	**20 20 31.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=112,slow=16,SNR=2.9						
CMAR	**Chiang Mai Arr**	**27.52**	**149**	P	**P**	**20 21 51.8**	**0.0**
	comp=E,0.7nm,0.7s,mb3.4,baz=324,slow=8.3,SNR=5.7						
KSRS	**Korea Array**	**33.34**	**85**	P	**P**	**20 22 43.6**	**+0.5**
	comp=E,0.9nm,0.5s,mb4.0,baz=288,slow=8.1,SNR=5.9						
JOF	**Joensuu**	**36.20**	**322**	*e*p	**P**	**20 23 06.4**	**-1.1**
	comp=E,3.2nm,0.5s,mb4.5						
AKASG	**Malin Array Be**	**37.68**	**301**	P	**P**	**20 23 19.2**	**-1.0**
	comp=E,0.2nm,0.2s,mb3.4,baz=71,slow=7.1,SNR=3.9						
BRTR	**Keskin Array B**	**37.77**	**283**	P	**P**	**20 23 20.2**	**-1.0**
	comp=E,0.6nm,0.5s,mb3.6,baz=94,slow=7.0,SNR=4.4						
KAF	**Kangasniemi**	**38.44**	**320**	*e*p	**P**	**20 23 25.7**	**-0.8**
	comp=E,1.0nm,0.5s,mb3.8						
FINES	**FINESS Array B**	**38.54**	**319**	P	**P**	**20 23 27.1**	**-0.2**
	comp=E,0.7nm,0.3s,mb3.8,baz=100,slow=8.9,SNR=16						
FINES				PcP	PcP	20 25 38.5	-1.3
	comp=E,0.6nm,0.5s,baz=108,slow=4.5,SNR=5.7						
FINES	**FINESS Array B**	**38.54**	**319**	P	**P**	**20 23 27.1**	**-0.2**
FINES				PcP	PcP	20 25 38.5	-1.3
KEV	**Kevo**	**39.09**	**332**	*e*p	**P**	**20 23 31.3**	**-0.6**
	comp=E,0.5nm,0.3s,mb3.7						
ARCES	**ARCESS Array B**	**39.56**	**332**	P	**P**	**20 23 36.0**	**+0.2**
	comp=E,1.0nm,0.4s,mb3.9,baz=91,slow=7.1,SNR=18						
NB2	**NORSAR Subarra**	**45.72**	**319**	P	**P**	**20 24 25.0**	**-0.8**
	comp=Z,1.5nm,0.4s,mb4.3,baz=77,slow=7.9						
NOA	**NORSAR Array B**	**45.72**	**319**	P	**P**	**20 24 25.4**	**-0.5**
	comp=Z,1.4nm,0.4s,mb4.3,baz=78,slow=8.0,SNR=7.9						
CLL	**Collm**	**47.41**	**306**	*e*P	**P**	**20 24 39.0**	**-0.3**
PETK	**Petropavlovsk-**	**47.84**	**51**	LR	LR	20 46 24.2	
	comp=Z,27nm,18.5s,baz=97,slow=38						
GERES	**GERESS Array B**	**47.85**	**303**	P	**P**	**20 24 42.8**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=74,slow=7.1,SNR=4.8						
LPG	**La Plagne**	**53.55**	**301**	*e*P	**P**	**20 25 26.0**	**+0.3**
LPL	**La Plagne**	**53.55**	**301**	*e*P	**P**	**20 25 25.9**	**+0.1**
	comp=Z,6.0nm,0.5s,mb4.5						
ORIF	**Oris-en-Rattie**	**54.36**	**301**	*e*P	**P**	**20 25 30.9**	**-0.8**
SMF	**Signal de Mont**	**54.81**	**304**	*e*P	**P**	**20 25 33.9**	**-1.0**
TCF	**Toulx Ste Croi**	**55.97**	**304**	*e*P	**P**	**20 25 42.6**	**-0.7**
ESDC	**Sonseca Array**	**63.32**	**300**	P	**P**	**20 26 33.1**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.8,baz=58,slow=7.4,SNR=5.5						
YKA	**Yellowknife Ar**	**73.57**	**9**	P	**P**	**20 27 37.2**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=340,slow=5.8,SNR=11						
YKA	**Yellowknife Ar**	**73.57**	**9**	P	**P**	**20 27 37.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**75.89**	**275**	P	**P**	**20 27 50.1**	**-1.8**
	comp=Z,2.8nm,0.5s,mb4.5,baz=44,slow=5.2,SNR=37						
WRA	**Warramunga Arr**	**77.74**	**133**	P	**P**	**20 28 01.3**	**-0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=332,slow=5.1,SNR=11						
ASAR	**Alice Springs**	**80.56**	**135**	P	**P**	**20 28 16.9**	**-0.6**
	comp=Z,0.7nm,0.8s,mb3.7,baz=320,slow=5.2,SNR=9.3						
JTMT	**Jette**	**87.96**	**13**	*e*P	**P**	**20 28 53.4**	**-1.6**
MSO	**Missoula**	**88.91**	**13**	*e*P	**P**	**20 28 56.1**	**-3.3**
	comp=Z,4.4nm,0.8s,mb4.8						

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*ISK **01** 20:34:29.4, 36.°99N×29.°21E, h3km, MD3.5*
*NEIC **01** 20:34:29.0, 37.°00N×29.°21E, h5km, MD3.4(ATH), MD3.5(ISK), After ISK.*
*DDA **01** 20:34:30.2, 37.°00N×29.°22E, h24km±1km, Md3.3*
*ISCJB **01** 20:34:30.0±0.5, 36.°97N±0.°02×29.°19E±0.°03, h2km±4km, Error ellipse: s-maj=4.1km s-min=3.4km az=137.5*
*CSEM **01** 20:34:30.5±0.1, 36.°99N×29.°23E, h2km, MD3.5, Error ellipse: s-maj=2.9km s-min=2.6km az=150.0*
*HLW **01** 20:34:36.9, 36.°67N×29.°40E, h33km±27km, Ml3.0*
*ATH **01** 20:34:40.8, 36.°86N×28.°03E, h5km, MD3.4/4*
ISC 01 20:34:30.8±0.5, 36.°98N±0.°02×29.°20E±0.°03, h3km±4km, n96, σ0.9°90/119, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**54**	*e*PG	**Pg**	**20 34 36.0**	**-0.5**
GLHS				*e

YLV	**Yalova**	**3.58**	**2**	*e*Pn	**Pn**	**20 35 28.4**	**+1.2**
GULT	**Gulveren**	**3.60**	**16**	*e*PN	**Pn**	**20 35 27.6**	**+0.2**
GULT	**Gulveren**	**3.60**	**16**	*e*Pn	**Pn**	**20 35 27.6**	**+0.2**
GADA	**Gvkgeada**	**4.12**	**322**	*e*PN	**Pn**	**20 35 34.8**	**+0.2**
GADA	**Gvkgeada**	**4.12**	**322**	*e*Pn	**Pn**	**20 35 34.8**	**+0.2**
LIA	**Limnos Island**	**4.29**	**314**	P	**Pn**	**20 35 38.2**	**+1.2**
LIA	**Limnos Island**	**4.29**	**314**	P	**Pn**	**20 35 38.2**	**+1.2**
GVD	**Gavdhos**	**4.67**	**244**	P	**Pn**	**20 35 46.5**	**+4.4**
GVD	**Gavdhos**	**4.67**	**244**	P	**Pn**	**20 35 46.5**	**+4.4**
NVR	**Nevrokopi**	**6.02**	**318**	P	**Pn**	**20 36 02.6**	**+1.9**
NVR	**Nevrokopi**	**6.02**	**318**	P	**Pn**	**20 36 02.6**	**+1.9**
HMAT	**Matruh**	**6.13**	**197**	P	**Pn**	**20 36 02.8**	**+0.6**
	baz=200						
HMAT				AMP		20 37 00.0	
	comp=N,10μm,0.6s,logA/T=4.2,baz=200						
HMAT				S	**Sn**	**20 37 02.8**	**-10**
	baz=200						
HMAT	**Matruh**	**6.13**	**197**	P	**Pn**	**20 36 02.8**	**+0.6**
HMAT				S	**Sn**	**20 37 02.8**	**-10**
SLUM		**6.39**	**212**	P	**Pn**	**20 36 06.8**	**+0.9**
	baz=216						
SLUM				AMP		20 37 00.0	
	comp=N,10μm,0.3s,logA/T=4.5,baz=216						
SLUM		**6.39**	**212**	P	**Pn**	**20 36 06.8**	**+0.9**
AMAG	**Maghara**	**7.15**	**151**	P	**Pn**	**20 36 14.9**	**-1.4**
	baz=151						
AMAG	**Maghara**	**7.15**	**151**	P	**Pn**	**20 36 14.9**	**-1.3**
SWA2		**8.33**	**203**	P	**Pn**	**20 36 33.1**	**+0.6**
	baz=206						
SWA2				S	**Sn**	**20 37 55.8**	**-11**
	baz=206						
SWA2		**8.33**	**203**	P	**Pn**	**20 36 33.1**	**+0.6**
SWA2				S	**Sn**	**20 37 55.8**	**-11**
TBG	**Guadaloupe-3**	**81.30**	**283**	*e*P	**P**	**20 46 43.2**	**-5.7**

IDC 01 20:38:57.5±1.7, 4°.80S×101°.49E, h0km, mb3.3/5, mb1 3.4/5, mb1mx3.3/21, mbtmp3.3/5, Error ellipse: s-maj=94.0km s-min=21.7km az=45.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.33**	**118**	P	P	20 45 55.2	+0.4
	0.1nm,0.3s,baz=290,slow=7.3,SNR=6.6						
ASAR	**Alice Springs**	**36.43**	**124**	P	P	20 46 03.6	-0.6
	0.1nm,0.4s,baz=301,slow=7.5,SNR=2.7						
MKAR	**Makanchi Array**	**54.11**	**344**	P	P	20 48 23.8	-0.3
	0.3nm,0.6s,baz=142,slow=7.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**60.18**	**349**	P	P	20 49 06.8	-0.1
	0.5nm,0.4s,baz=180,slow=1.4,SNR=3.8						
BRTR	**Keskin Array B**	**76.30**	**313**	P	P	20 50 48.8	+0.4
	0.2nm,0.3s,baz=113,slow=6.2,SNR=2.5						
TXAR	**Lajitas Array**	**145.91**	**41**	PKPbc	PKPbc	20 58 39.6	0.0
	0.2nm,0.4s,baz=339,slow=1.9,SNR=3.5						

*IDC **01** 20:41:49.3±9.0, 27°.00N×58°.85E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.1/27, mbtmp3.5/3, Error ellipse: s-maj=186.6km s-min=52.5km az=113.0*
*CSEM **01** 20:42:07.9±0.4, 28°.27N×56°.41E, h15km, ML3.4, Error ellipse: s-maj=13.5km s-min=7.5km az=107.0*
*ISCJB **01** 20:42:07.5±0.5, 28°.16N±0°.03×56°.54E±0°.05, h10km, mb3.4/3, Error ellipse: s-maj=6.5km s-min=4.2km az=7.7*
*NEIC **01** 20:42:08.9, 28°.19N×56°.56E, h27km, ML3.4(THR), After THR.*
*TEH **01** 20:42:10.5, 28°.06N×56°.62E, h31km*
*OMAN **01** 20:42:38.1±99.0, 26°.14N×56°.07E, h20km, Error ellipse: s-maj=229.0km s-min=7.7km az=357.0*
ISC 01 20:42:08.5±0.5, 28°.12N±0°.03×56°.55E±0°.06, h10km, n38, σ1§15/47, mb3.4/3, 2C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.79**	**205**	*e*Pg	**Pg**	**20 42 25.0**	**+1.3**
BNDS	**Bandar-Abbas**	**0.79**	**205**	*e*Pg	**Pg**	**20 42 25.3**	**+1.6**
BNDS				*e*Sg	**Sg**	**20 42 37.2**	**+3.1**
KRBR	**Kerman**	**1.87**	**6**	*e*Pg	**Pn**	**20 42 40.0**	**-0.5**
KRBR	**Kerman**	**1.87**	**6**	*e*Pg	**Pn**	**20 42 40.9**	**+0.4**
KRBR				*e*Sg	**Sn**	**20 43 05.1**	**+0.9**
BANOM	**Banah**	**2.20**	**186**	P	**Pn**	**20 42 44.8**	**-0.3**
	SNR=27						
BANOM				P		20 42 44.8	
	SNR=27						
BANOM	**Banah**	**2.20**	**186**	P	**Pn**	**20 42 44.8**	**-0.2**
	SNR=27						
GHIR	**Ghir-Karzin**	**3.15**	**274**	*e*Pn	**Pn**	**20 42 59.0**	**+0.8**
GHIR	**Ghir-Karzin**	**3.15**	**274**	*e*Pn	**Pn**	**20 42 59.0**	**+0.8**
ISRV	**Sarvestan**	**3.27**	**293**	*e*Pn	**Pn**	**20 43 00.6**	**+0.8**
ISRV				*e*Sg	**Sg**	**20 43 56.8**	**+3.1**
ISRV				*e*		20 44 06.5	
	comp=Z,689nm,0.4s						
FAQ	**Al Faqa, Dubai**	**3.47**	**195**	⇑P	**Pn**	**20 43 03.3**	**+0.8**
	SNR=8.5						
FAQ				⇑P		20 43 03.3	
	SNR=8.5						
FAQ	**Al Faqa, Dubai**	**3.47**	**195**	P	**Pn**	**20 43 03.3**	**+0.8**
	SNR=8.5						
IMOK	**Mouk**	**3.50**	**286**	*e*Pn	**Pn**	**20 43 03.3**	**+0.3**
IMOK				*e*		20 43 52.5	
	comp=Z,434nm,0.1s						
IBAF	**Bafgh**	**3.57**	**346**	*e*	**Pb**	**20 43 11.3**	**-0.4**
	comp=Z,442nm,0.2s						
IBAF				*e*Pn	**Pn**	**20 43 04.0**	**+0.1**
ASUD	**Al Ashush, Dub**	**3.65**	**198**	P	**Pn**	**20 43 06.0**	**+1.0**
	SNR=27						
ASUD				P		20 43 06.0	
	SNR=27						
ASUD	**Al Ashush, Dub**	**3.65**	**198**	P	**Pn**	**20 43 06.0**	**+1.0**
	SNR=27						
IMEH	**Mehriz**	**3.67**	**333**	*e*	**Pn**	**20 43 08.1**	**+2.7**
	comp=Z,272nm,0.1s						
IMEH				*e*Pn	**Pn**	**20 43 06.0**	**+0.7**
IMEH				*e*Sg	**Sg**	**20 44 06.8**	**+0.3**
ZHSF	**Zahedan**	**3.99**	**67**	*e*Pn	**Pn**	**20 43 10.0**	**+0.3**
ZHSF	**Zahedan**	**3.99**	**67**	*e*Pn	**Pn**	**20 43 10.2**	**+0.5**
IKOO	**Kooshah**	**4.79**	**26**	*e*Pn	**Pn**	**20 43 20.5**	**-0.2**
IKOO				*e*		20 46 27.6	
	comp=Z,225nm,0.1s						
ITEG	**Tejag**	**5.13**	**21**	*e*Pn	**Pn**	**20 43 25.2**	**-0.1**
ITEG				*e*		20 43 49.4	
	comp=Z,152nm,0.2s						
IDAH	**Dahanechah**	**5.42**	**31**	*e*Pn	**Pn**	**20 43 28.9**	**-0.5**
IDAH				*e*		20 43 54.4	
	comp=Z,103nm,0.2s						
NASN	**Na'in**	**5.68**	**326**	*e*Pn	**Pn**	**20 43 33.0**	**+0.1**
SLWS		**6.24**	**239**	P	**Pn**	**20 43 40.3**	**-0.3**
SLWS		**6.24**	**239**	P	**Pn**	**20 43 40.3**	**-0.4**
BTHS		**6.54**	**233**	P	**Pn**	**20 43 43.2**	**-1.5**
BTHS		**6.54**	**233**	P	**Pn**	**20 43 43.2**	**-1.5**
BTHS				S	**Sn**	**20 44 54.6**	**-4.8**
KFJS		**7.60**	**273**	P	**Pn**	**20 43 58.2**	**-1.2**
KFJS				S	**Sn**	**20 45 17.6**	**-8.0**
LYLS		**10.38**	**236**	P	**Pn**	**20 44 33.7**	**-3.7**
LYLS		**10.38**	**236**	P	**Pn**	**20 44 33.7**	**-3.8**
LYLS				S	**Sn**	**20 46 25.3**	**-8.6**
ASYS		**10.83**	**270**	P	**Pn**	**20 44 39.9**	**-3.7**
ASYS		**10.83**	**270**	P	**Pn**	**20 44 39.9**	**-3.7**
BRTR	**Keskin Array B**	**22.20**	**307**	P	**P**	**20 47 10.4**	**+5.6**
	comp=Z,0.4nm,0.6s,mb3.0,baz=127,slow=9.3,SNR=3.7						
BRTR	**Keskin Array B**	**22.20**	**307**	P	**P**	**20 47 10.4**	**+5.6**
FINES	**FINESS Array B**	**39.02**	**337**	P	**P**	**20 49 32.3**	**-2.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=132,slow=8.0,SNR=4.9						
FINES	**FINESS Array B**	**39.02**	**337**	P	**P**	**20 49 32.3**	**-2.6**
FINES	**FINESS Array B**	**39.02**	**337**	P	**P**	**20 49 32.3**	**-2.6**
TORD	**Torodi Ar. Bea**	**53.04**	**265**	P	**P**	**20 51 22.9**	**-3.2**
	comp=Z,0.4nm,0.4s,mb3.7,baz=60,slow=7.3,SNR=12						
TORD	**Torodi Ar. Bea**	**53.04**	**265**	P	**P**	**20 51 22.9**	**-3.2**

*NIED **01** 20:46:00, 37°.20N×136°.60E, h5km, Mw3.8 Best double couple: M0:5.34000×10^14 NP1:φs145.00000°, δ54.00000°, λ49.00000°. NP2:φs21.00000°, δ52.00000°, λ132.00000°.*
*ISCJB **01** 20:46:19.6±0.8, 37°.26N±0°.03×136°.59E±0°.05, h9km±5km, mb3.6/9, MS3.7/2, Error ellipse: s-maj=6.4km s-min=5.0km az=164.0*
*IDC **01** 20:46:19.6±0.8, 37°.22N×136°.69E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.5/8, ML3.2/1, MS3.4/3, Ms1 3.4/3, ms1mx2.7/33, Error ellipse: s-maj=23.6km s-min=16.3km az=28.0*
*JMA **01** 20:46:20.0±0.1, 37°.23N×136°.62E, h4km±1km, M4.0*

Broadband fault plane solution: P waves. NP1: φs33.00000°, δ51.00000°, λ156.00000°. NP2: φs138.00000°, δ72.00000°, λ42.00000°. Principal axes: T Plg42.0000°, Azm3.0000°; N Plg45.0000°, Azm158.0000°; P Plg13.0000°, Azm261.0000°;
JMA Felt III J1.
*NEIC **01** 20:46:20.8±0.5, 37°.25N×136°.71E, h10km, mb4.1/2 Error ellipse: s-maj=15.8km s-min=10.1km az=210.0*
ISC 01 20:46:20.5±0.7, 37°.24N±0°.03×136°.63E±0°.05, h6km±5km, n21, σ0§84/26, mb3.6/9, MS3.7/2, 2C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**159**	⇑P	**Pg**	**20 46 26.9**	**-0.1**
JJH				S	**Sg**	**20 46 32.0**	**+0.6**
JSZ	**Suzu**	**0.62**	**70**	⇓P	**Pg**	**20 46 32.1**	**-0.3**
JSZ				S	**Sg**	**20 46 40.9**	**+0.4**
JHG	**Hegura jima**	**0.65**	**21**	⇑P	**Pg**	**20 46 32.7**	**-0.3**
JHG				*e*S	**Sg**	**20 46 42.1**	**+0.6**
JTT	**Ttatey**	**0.85**	**138**	P	**Pg**	**20 46 36.3**	**-0.5**
JTT				*e*S	**Sg**	**20 46 48.4**	**+0.7**
JKG	**Kaga**	**0.99**	**194**	P	**Pg**	**20 46 38.9**	**-0.6**
JKG				*e*S	**Sg**	**20 46 52.2**	**-0.1**
MAT	**Matsushiro**	**1.44**	**118**	P	**Pn**	**20 46 45.7**	**-1.4**
MAT				S	**Sb**	**20 47 06.8**	**+0.5**
MAJO	**Matsushiro**	**1.44**	**118**	*e*P	**Pn**	**20 46 45.3**	**-1.8**
MJAR	**Matsushiro Arr**	**1.44**	**118**	Pn	**Pn**	**20 46 47.1**	**0.0**
	54nm,0.3s,baz=4.3,slow=3.9,SNR=290						
MJAR				Sn	**Sn**	**20 47 07.4**	**+1.0**
	58nm,0.3s,baz=112,slow=7.9,SNR=17						
KSRS	**Korea Array**	**6.94**	**274**	Pn	**Pn**	**20 48 04.0**	**+1.3**
	0.4nm,0.3s,baz=94,slow=14,SNR=7.5						
KSRS				LR	LR	20 50 31.1	
	comp=Z,104nm,18.5s,baz=164,slow=36						
ENH	**Enshi**	**23.56**	**261**	*e*P	**P**	**20 51 31.9**	**-0.1**
	5.2nm,0.9s,mb4.0						
SONM	**Songino Array**	**24.52**	**305**	P	**P**	**20 51 42.3**	**+1.8**
	1.4nm,0.6s,mb3.6,baz=104,slow=9.6,SNR=4.0						
TIXI	**Tiksi**	**34.72**	**356**	*e*P	**P**	**20 53 09.1**	**-1.6**
	1.9nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**37.90**	**251**	P	**P**	**20 53 39.4**	**+0.8**
	0.5nm,0.8s,mb3.3,baz=43,slow=8.9,SNR=3.9						
MKAR	**Makanchi Array**	**40.76**	**301**	P	**P**	**20 54 01.2**	**-1.0**
	0.3nm,0.6s,mb3.1,baz=85,slow=9.8,SNR=4.5						
KDAK	**Kodiak Island**	**49.50**	**42**	LR	LR	21 17 37.6	
	comp=Z,63nm,18.0s,MS3.6,baz=94,slow=38						
WRA	**Warramunga Arr**	**56.91**	**183**	P	**P**	**20 56 06.5**	**+0.2**
	0.9nm,0.6s,mb4.0,baz=358,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**60.63**	**183**	P	**P**	**20 56 31.6**	**-0.6**
	0.7nm,0.8s,mb3.9,baz=13,slow=6.5,SNR=8.4						
YKA	**Yellowknife Ar**	**65.51**	**29**	P	**P**	**20 57 04.4**	**+0.2**
	0.2nm,0.5s,mb3.4,baz=310,slow=7.5,SNR=5.3						
YKA	**Yellowknife Ar**	**65.51**	**29**	P	**P**	**20 57 04.4**	**+0.2**
PDAR	**Pinedale Array**	**80.19**	**43**	P	**P**	**20 58 32.0**	**+0.3**
	0.4nm,0.7s,mb3.5,baz=21,slow=2.1,SNR=3.6						
GERES	**GERESS Array B**	**80.46**	**326**	LR	LR	21 35 15.5	
	comp=Z,38nm,18.9s,MS3.8,baz=296,slow=36						

*INMG **01** 20:57:26.5, 19°.91N×72°.83W, h10km, Mb4.3*
*SSNC **01** 20:57:26.9±2.8, 19°.34N×72°.81W, h25km±154km, MD4.0, ML4.3*
*ISCJB **01** 20:57:27.4±0.5, 19°.79N±0°.05×72°.81W±0°.03, h33km±6km, mb4.3/51, MS3.5/14, Error ellipse: s-maj=8.2km s-min=4.0km az=11.4*
*NEIC **01** 20:57:28.2±1.4, 19°.90N×72°.84W, h23km±11km, mb4.6/22, Error ellipse: s-maj=6.8km s-min=3.9km az=191.0*
*JSN **01** 20:57:30.3±0.7, 19°.97N×73°.17W, h0km±999km, MD4.9*
*IDC **01** 20:57:30.1±3.4, 19°.86N×72°.88W, h38km±31km, mb3.9/17, mb1 4.1/20, mb1mx4.1/25, mbtmp4.0/20, ML4.3/2, MS3.3/11, Ms1 3.3/11, ms1mx3.1/32, Error ellipse: s-maj=20.7km s-min=14.0km az=28.0*
ISC 01 20:57:29.2±1.5, 19°.81N±0°.04×72°.85W±0°.02, h31km±11km, n117, σ0§96/118, mb4.3/51, MS3.5/14, 3C-3D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**1.35**	**286**	*e*P	**Pn**	**20 57 51.4**	**-0.5**
MASC				*e*S	**Sn**	**20 58 11.0**	**+2.3**
	comp=N,430nm,0.2s						
MASC				*e*			
	comp=E,195nm,0.1s						
SDDR	**Presa de Saban**	**1.69**	**119**	*e*P	**Pn**	**20 57 56.5**	**0.0**
SDDR				*e*S	**Sn**	**20 58 20.1**	**+3.1**
GTBY	**Guantanamo Bay**	**2.13**	**274**	*e*P	**Pn**	**20 58 01.1**	**-1.5**
MOAC	**Moa**	**2.16**	**293**	*e*P	**Pn**	**20 58 02.1**	**-0.8**
MOAC				*e*S	**Sn**	**20 58 29.2**	**+0.6**
	comp=N,2μm,0.2s						
MOAC				*e*			
	comp=E,2μm,0.2s						
GRTK	**Grand Turk**	**2.33**	**43**	*e*P	**Pn**	**20 58 03.8**	**-1.6**
RCC	**Rio Carpintero**	**2.69**	**274**	*e*P	**Pn**	**20 58 08.8**	**-1.4**
RCC				*e*S	**Sn**	**20 58 40.0**	**-1.7**
	comp=N,1μm,0.4s						
RCC				*e*			
	comp=E,1μm,0.4s						
CMJ	**Castle Mountai**	**3.73**	**244**	⇓*e*P	**Pn**	**20 58 25.7**	**+1.1**
LMGC	**Las Mercedes**	**3.92**	**274**	*e*P	**Pn**	**20 58 26.5**	**-0.7**
LMGC				*e*S	**Sn**	**20 59 07.5**	**-4.7**
	comp=N,658nm,0.2s						
LMGC				*e*			
	comp=E,823nm,0.4s						
GWJ	**Greenwich**	**4.06**	**245**	⇓*e*P	**Pn**	**20 58 29.4**	**+0.2**
HOJ	**Hope**	**4.11**	**245**	*i* P	**Pn**	**20 58 31.4**	**+1.6**
STH	**Stony Hill**	**4.13**	**246**	⇑*e*P	**Pn**	**20 58 30.5**	**+0.5**
PCJ	**Portland Cotta**	**4.57**	**244**	⇑*e*P	**Pn**	**20 58 36.9**	**+0.7**
MTDJ	**Mount Denham**	**4.71**	**251**	*e*P	**Pn**	**20 58 37.7**	**-0.3**
MTDJ				*e*S	**Sn**	**20 59 30.5**	**-1.0**
MCJ	**Malvern**	**4.95**	**249**	⇓*e*P	**Pn**	**20 58 41.7**	**+0.3**
MCJ				*e*S	**Sn**	**20 59 35.5**	**-2.2**
NEJ	**Negril**	**5.41**	**254**	⇑*e*P	**Pn**	**20 58 47.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**5.72**	**107**	*e*P	**Pn**	**20 58 53.0**	**+1.0**
	comp=E,30nm,0.8s						
ICM	**Isla Caja Muer**	**6.29**	**107**	*e*P	**Pn**	**20 59 02.1**	**+2.3**
SJG	**San Juan**	**6.56**	**104**	Pn	**Pn**	**20 59 04.1**	**+0.6**
	comp=E,15nm,0.3s,baz=317,slow=16,SNR=4.4						
SJG				Sn	**Sn**	**21 00 12.6**	**-4.7**
	comp=E,15nm,0.3s,baz=206,slow=22,SNR=3.0						
SJG	**San Juan**	**6.56**	**104**	*e*P	**Pn**	**20 59 01.4**	**-2.0**
	comp=E,110nm,0.6s						
CBYP	**Canovanas**	**6.79**	**102**	*e*P	**Pn**	**20 59 04.9**	**-1.7**
	comp=E,35nm,0.6s						
CBYP				*e*S	**Sn**	**21 00 19.8**	**-3.1**
MTP	**Monte Pirata**	**7.11**	**103**	*e*P	**Pn**	**20 59 09.2**	**-1.9**
	comp=E,40nm,0.7s						
MTP				*e*S	**Sn**	**21 00 29.6**	**-1.3**
SDV	**Santo Domingo**	**11.07**	**169**	Pn	**Pn**	**21 00 07.6**	**+2.2**
	comp=E,2.4nm,0.3s,baz=27,slow=6.2,SNR=22						
SDV				Sn	**Sn**	**21 02 05.1**	**-3.0**
	comp=E,0.7nm,0.3s,baz=241,slow=19,SNR=2.1						
SDV	**Santo Domingo**	**11.07**	**169**	*e*P	**Pn**	**21 00 07.4**	**+2.0**
	comp=E,14nm,0.6s						
PCRV	**Puerto La Cruz**	**12.43**	**139**	Pn	**Pn**	**21 00 25.9**	**+1.9**
	comp=E,1.2nm,0.3s,baz=270,slow=9.7,SNR=5.9						
PCRV				Sn	**Sn**	**21 02 39.7**	**-1.9**
	comp=E,0.2nm,0.3s,baz=202,slow=21,SNR=2.1						
PCRV				LR	LR	21 05 06.4	
	comp=E,133nm,18.6s,baz=294,slow=36						
BCIP	**Isla Barro Col**	**12.55**	**214**	*e*P	**Pn**	**21 00 26.4**	**+0.7**
JTS	**JuntasAbangare**	**15.03**	**233**	LR	LR	21 07 16.1	
	comp=E,226nm,18.5s,baz=16,slow=39						
JTS	**JuntasAbangare**	**15.03**	**233**	*e*P	Px	21 01 09.7	
	comp=E,20nm,0.8s						
TKL	**Tuckaleechee C**	**18.49**	**331**	LR	LR	21 08 56.2	
	comp=E,43nm,21.0s,baz=308,slow=37						
CMIG	**Matias Romero**	**21.08**	**266**	P	**P**	**21 02 08.9**	**-2.1**
	comp=E,2.5nm,0.7s,mb3.7,baz=227,slow=24,SNR=3.2						
OLIL	**Olney**	**23.02**	**328**	*e*P	**P**	**21 02 31.3**	**-0.2**
	comp=E,15nm,0.5s,mb4.7						
CCM	**Cathedral Cave**	**24.20**	**323**	*e*P	**P**	**21 02 42.0**	**-1.0**
	comp=E,13nm,0.8s,mb4.4						
SADO	**Sadowa**	**25.43**	**350**	P	**P**	**21 02 53.2**	**-0.8**
	comp=E,5.8nm,0.8s,mb4.1,baz=178,slow=2.7,SNR=4.1						
SADO				LR	LR	21 13 03.6	
	comp=E,59nm,19.5s,MS3.1,baz=292,slow=37						
SADO	**Sadowa**	**25.43**	**350**	P	**P**	**21 02 53.2**	**-0.8**
SADO				LR	LR	21 13 03.6	
WMOK	**Wichita Mounta**	**27.32**	**308**	*e*P	**P**	**21 03 11.1**	**-0.2**
	comp=E,5.3nm,0.8s,mb4.1						
TXAR	**Lajitas Array**	**29.51**	**295**	P	**P**	**21 03 32.3**	**+1.5**
	comp=E,0.8nm,0.8s,mb3.5,baz=123,slow=11,SNR=3.5						
ANMO	**Albuquerque**	**33.26**	**304**	LR	LR	21 20 29.4	
	comp=E,66nm,20.2s,MS3.3,baz=107,slow=42						
SDCO	**Great Sand Dun**	**33.51**	**309**	*e*P	**P**	**21 04 06.5**	**+0.7**
	comp=E,3.8nm,0.7s,mb4.4						
SMCO	**Snowmass**	**35.14**	**311**	*e*P	**P**	**21 04 21.2**	**+1.3**
	comp=E,3.2nm,1.1s,mb4.2						
SCHQ	**Schefferville**	**35.26**	**6**	LR	LR	21 18 14.9	
	comp=E,50nm,21.6s,MS3.2,baz=93,slow=35						
ULM	**Lac du Bonnet**	**35.45**	**334**	P	**P**	**21 04 20.9**	**-1.6**
	comp=E,2.1nm,0.5s,mb4.3,baz=133,slow=7.3,SNR=5.6						
SIV	**San Ignacio**	**37.41**	**161**	P	**P**	**21 04 40.3**	**+0.8**
	comp=E,1.0nm,0.5s,mb3.9,baz=251,slow=13,SNR=6.3						
PDAR	**Pinedale Array**	**38.39**	**315**	P	**P**	**21 04 48.5**	**+0.9**
	comp=E,3.1nm,1.0s,mb4.0,baz=109,slow=11,SNR=6.6						
PDAR				LR	LR	21 21 17.1	
	comp=E,77nm,21.9s,MS3.5,baz=244,slow=37						
LOHW	**Long Hollow**	**39.44**	**316**	*e*P	**P**	**21 04 57.2**	**+0.8**
	comp=E,2.5nm,0.7s,mb4.0						
RRI2	**Red Ridge**	**39.81**	**315**	*e*P	**P**	**21 04 59.7**	**+0.2**
	comp=E,6.2nm,0.8s,mb4.4						
M13A	**Montello**	**41.05**	**311**	*e*P	**P**	**21 05 10.1**	**+0.3**
	comp=E,2.0nm,0.7s,mb3.9						
N12A	**Clover Valley,**	**41.52**	**310**	*e*P	**P**	**21 05 14.5**	**+0.8**
	comp=E,2.1nm,0.6s,mb3.9						
ELK	**Elko**	**41.64**	**310**	LR	LR	21 24 35.5	
	comp=E,99nm,20.0s,MS3.7,baz=50,slow=39						
NVAR	**Mina Array Bea**	**43.34**	**305**	P	**P**	**21 05 29.1**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.6,baz=89,slow=9.2,SNR=5.0						
YKA	**Yellowknife Ar**	**51.36**	**337**	P	**P**	**21 06 29.8**	**-0.6**
	comp=E,0.8nm,0.7s,mb3.8,baz=127,slow=7.9,SNR=22						
YKA				LR	LR	21 31 12.8	
	comp=E,6.3nm,18.6s,MS2.7,baz=230,slow=39						
RES	**Resolute Bay**	**56.17**	**353**	LR	LR	21 27 58.5	
	comp=E,39nm,21.3s,MS3.5,baz=329,slow=33						
PCAB	**Cabril**	**58.45**	**53**	*e*P	**P**	**21 07 22.3**	**+0.2**
	comp=E,18nm,1.5s,mb4.9						
PVIS	**Viseu**	**58.54**	**54**	*e*P	**P**	**21 07 21.9**	**-0.9**
	comp=E,17nm,2.3s,mb4.7						
PBEJ	**Beja**	**58.59**	**57**	*e*P	**P**	**21 07 23.9**	**+0.7**
	comp=E,13nm,2.1s,mb4.6						
PVRL	**Vila Real**	**58.68**	**53**	*e*P	**P**	**21 07 24.2**	**+0.5**
	comp=E,29nm,2.0s,mb5.0						
PVAQ	**Vaqueiros**	**58.73**	**58**	*e*P	**P**	**21 07 25.3**	**+1.2**
	comp=E,19nm,1.5s,mb4.9						
PESTR	**Estremoz**	**58.79**	**56**	*e*P	**P**	**21 07 25.1**	**+0.6**
	comp=E,16nm,1.3s,mb4.9						
MTE	**Manteigas**	**58.81**	**54**	*e*P	**P**	**21 07 25.3**	**+0.7**
	comp=E,15nm,1.8s,mb4.7						
PCBR	**Castelo Branco**	**58.86**	**55**	*e*P	**P**	**21 07 25.5**	**+0.5**
	comp=E,8.3nm,1.6s,mb4.5						
PMRV	**Marv??o**	**58.93**	**55**	*e*P	**P**	**21 07 25.6**	**+0.1**
	comp=E,13nm,1.3s,mb4.8						
MVO	**Moncorvo**	**59.20**	**53**	*e*P	**P**	**21 07 27.8**	**+0.5**
	comp=E,15nm,1.0s,mb5.0						
PBAR	**Barrancos**	**59.24**	**57**	*e*P	**P**	**21 07 28.9**	**+1.2**
	comp=E,12nm,2.0s,mb4.6						
ESDC	**Sonseca Array**	**61.58**	**55**	P	**P**	**21 07 44.1**	**+0.5**
	comp=E,3.9nm,0.7s,mb4.7,baz=280,slow=7.1,SNR=49						
ESDC				LR	LR	21 27 48.5	
	comp=E,38nm,19.4s,MS3.6,baz=165,slow=30						
SJPF	**Ste Jean**	**63.46**	**51**	*e*P	**P**	**21 07 56.7**	**+0.6**
	comp=E,8.6nm,0.8s,mb4.6						
SJPF	**Ste Jean**	**63.46**	**51**	*e*P	**P**	**21 07 56.7**	**+0.6**
	comp=E,4.3nm,0.8s,mb4.6						
GRR	**Gorron**	**63.56**	**45**	*e*P	**P**	**21 07 57.4**	**+0.7**
FLN	**La Foliniere**	**63.81**	**45**	*e*P	**P**	**21 07 58.8**	**+0.5**
	comp=E,6.7nm,0.6s,mb4.5						
FLN				*e*MLR	MLR		
	comp=Z,67nm,18.2s,MS3.6						
FLN	**La Foliniere**	**63.81**	**45**	*e*P	**P**	**21 07 58.8**	**+0.5**
	comp=Z,3.3nm,0.6s,mb4.5						
FLN				LR	LR		
	comp=Z,70nm,18.3s,MS3.9						
ETSF	**Etsaut**	**63.96**	**51**	*e*P	**P**	**21 07 59.5**	**+0.1**
LDF	**La Druitiere**	**64.05**	**45**	*e*P	**P**	**21 07 59.8**	**-0.1**
MFF	**Saint Martin d**	**64.08**	**47**	*e*P	**P**	**21 08 00.3**	**+0.1**
	comp=Z,19nm,1.0s,mb4.8						
MFF	**Saint Martin d**	**64.08

HHC			SS	SS	21 34 02.0	+5.2
HHC			AMB	AMB		
	comp=Z,44nm,6.4s					
HHC			LR	LR		
	comp=N,53nm,23.5s,MS4.6					
HHC			LR	LR		
	comp=E,160nm,23.1s,MS4.6					
HHC			LR	LR		
	comp=Z,110nm,21.4s,MS4.5					
STKA	**Stephens Creek**	**146.89 242**	PKPbc	PKPbc	21 17 07.5	-1.4
	comp=Z,1.4nm,0.7s,baz=130,slow=7.9,SNR=4.3					
STKA	**Stephens Creek**	**146.89 242**	PKPbc	PKPbc	21 17 07.5	-1.4
WRA	**Warramunga Arr**	**154.44 265**	PKPbc	PKPbc	21 17 26.9	-0.4
	comp=Z,0.4nm,0.5s,baz=84,slow=3.2,SNR=5.4					

*CSEM **01** 21:05:08.4±0.1, 46°.83N×6°.65E, h32km±1km, ML2.1/19, Error ellipse: s-maj=2.0km s-min=1.6km az=94.0*
*ZUR **01** 21:05:09.5, 46°.85N×6°.68E, h27km±1km, ML1.8/9*
*GEN **01** 21:05:11.1, 46°.69N×6°.58E, h41km, ML1.3*
*STR **01** 21:05:12.5±0.9, 46°.96N×6°.81E, h10km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

LDG 01 21:05:09.2±0.1, 46°.84N×6°.66E, h19km, Ml2.1/19, 6C-2D, Error ellipse: s-maj=1.9km s-min=1.5km az=108.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRANT	**Les Verrieres**	**0.16**	**309**	⇑*i*Pg	Pg	21 05 15.0	+1.3
	168nm,0.2s						
BRANT	**Les Verrieres**	**0.16**	**309**	⇑*i*Pg	Pg	21 05 15.0	+1.3
	168nm,0.2s						
TORNY	**Torny/Romont**	**0.22**	**106**	⇑*i*Pg	Pg	21 05 15.5	+1.0
	790nm,0.1s						
TORNY				*i* Sg	Sg	21 05 19.9	+1.8
	790nm,0.1s						
TORNY	**Torny/Romont**	**0.22**	**106**	⇑*i*Pg	Pg	21 05 15.5	+1.0
	790nm,0.1s						
TORNY				*i* Sg	Sg	21 05 19.9	+1.8
	790nm,0.1s						
GIMEL	**St. Georges /**	**0.40**	**222**	⇑*i*Pg	Pg	21 05 18.4	+0.8
	161nm,0.3s						
GIMEL	**St. Georges /**	**0.40**	**222**	⇑*i*Pg	Pg	21 05 18.4	+0.8
	161nm,0.3s						
CABF	**La Chapelle**	**0.45**	**240**	*e*Pg	Pg	21 05 19.1	+0.7
CABF				*e*Sg	Sg	21 05 24.8	+0.2
	18nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**0.45**	**240**	*e*Pg	Pg	21 05 21.4	+3.0
CABF				*e*Sg	Sg	21 05 27.1	+2.5
	16nm,0.2s						
CABF	**La Chapelle**	**0.45**	**240**	*e*Pg	Pg	21 05 19.1	+0.7
CABF				*e*Sg	Sg	21 05 24.8	+0.2
	9.2nm,0.2s,SNR=1.0						
LOMF	**Lomont**	**0.53**	**13**	Pg	Pg	21 05 20.1	+0.3
LOMF				Sg	Sg	21 05 27.3	+0.3
LOMF	**Lomont**	**0.53**	**13**	Pg	Pg	21 05 20.1	+0.3
LOMF				Sg	Sg	21 05 27.3	+0.3
AIGLE	**Aigle**	**0.54**	**157**	⇓*i*Pg	Pg	21 05 20.4	+0.5
	112nm,0.1s						
AIGLE				*e*Sg	Sg	21 05 28.4	+1.3
	112nm,0.1s						
AIGLE	**Aigle**	**0.54**	**157**	⇓*i*Pg	Pg	21 05 20.4	+0.5
	112nm,0.1s						
AIGLE				*e*Sg	Sg	21 05 28.4	+1.3
	112nm,0.1s						
SENIN	**Lac Senin/Sane**	**0.65**	**137**	*e*Pg	Pg	21 05 22.2	+0.2
	112nm,0.3s						
SENIN	**Lac Senin/Sane**	**0.65**	**137**	*e*Pg	Pg	21 05 22.2	+0.2
	112nm,0.3s						
GRYON	**Gryon**	**0.66**	**152**	*e*Pg	Pg	21 05 22.3	0.0
	13nm,0.1s						
GRYON	**Gryon**	**0.66**	**152**	*e*Pg	Pg	21 05 22.3	0.0
	13nm,0.1s						
BOURR	**Bourrignon**	**0.68**	**35**	*e*Pg	Pg	21 05 22.5	-0.2
	62nm,0.7s						
BOURR	**Bourrignon**	**0.68**	**35**	*e*Pg	Pg	21 05 22.5	-0.2
	62nm,0.7s						
WIMIS	**Wimmis**	**0.69**	**104**	*e*Pg	Pg	21 05 22.7	0.0
	54nm,0.2s						
WIMIS	**Wimmis**	**0.69**	**104**	*e*Pg	Pg	21 05 22.7	0.0
	54nm,0.2s						
EMV	**Vieux Emosson**	**0.79**	**168**	*e*Pg	Pg	21 05 24.5	-0.2
	31nm,0.6s						
EMV	**Vieux Emosson**	**0.79**	**168**	*e*Pg	Pg	21 05 24.5	-0.2
	31nm,0.6s						
BBS	**Basel-Blauen**	**0.86**	**42**	Pg	Pg	21 05 25.1	-0.8
BBS				Sg	Sg	21 05 35.9	-1.4
HINF	**Hinteralfeld**	**0.99**	**8**	*e*Pn	Pn	21 05 26.3	-1.8
HINF				*e*Sg	Sg	21 05 40.0	-1.5
	6.4nm,0.2s						
HINF	**Hinteralfeld**	**0.99**	**8**	*e*Pn	Pn	21 05 28.7	+0.6
HINF				*e*Sg	Sg	21 05 42.4	+0.9
	6.5nm,0.2s						
HINF	**Hinteralfeld**	**0.99**	**8**	*e*Pn	Pn	21 05 26.3	-1.8
HINF				*e*Sg	Sg	21 05 42.4	+0.9
	3.2nm,0.2s						
MOF	**Molkenrain**	**1.07**	**18**	Pg	Pg	21 05 29.7	-0.2
MOF	**Molkenrain**	**1.07**	**18**	Pg	Pg	21 05 29.7	-0.2
HAU	**Haudompre**	**1.19**	**350**	*e*Pn	Pn	21 05 29.1	-1.7
HAU	**Haudompre**	**1.19**	**350**	*e*Pg	Pg	21 05 31.2	-1.0
HAU				*e*Sg	Sg	21 05 46.1	-1.7
	4.4nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.19**	**350**	*e*Pg	Pg	21 05 33.6	+1.4
HAU				*e*Sg	Sg	21 05 48.4	+0.6
	5.2nm,0.2s						
HAU	**Haudompre**	**1.19**	**350**	*e*Pn	Pn	21 05 29.1	-1.7
HAU	**Haudompre**	**1.19**	**350**	*e*Pg	Pg	21 05 31.2	-1.0
HAU				*e*Sg	Sg	21 05 48.4	+0.6
	2.6nm,0.2s						
LPL	**La Plagne**	**1.32**	**178**	*e*Pg	Pg	21 05 34.1	-0.6
	SNR=1.0						
LPL				*e*Sg	Sg	21 05 50.5	-1.4
	2.1nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**1.32**	**178**	*e*Pg	Pg	21 05 36.5	+1.8
LPL				*e*Sg	Sg	21 05 52.9	+1.0
	1.0nm,0.2s						
LPL	**La Plagne**	**1.32**	**178**	*e*Pg	Pg	21 05 34.1	-0.6
	SNR=1.0						
LPL				*e*Sg	Sg	21 05 52.9	+1.0
	0.5nm,0.2s						
LPG	**La Plagne**	**1.34**	**177**	*e*Pg	Pg	21 05 34.5	-0.6
	SNR=1.0						
LPG				*e*Sg	Sg	21 05 50.9	-1.6
	5.2nm,0.6s,SNR=1.0						
LPG	**La Plagne**	**1.34**	**177**	*e*Pg	Pg	21 05 36.9	+1.8
LPG				*e*Sg	Sg	21 05 53.2	+0.7
	1.7nm,0.3s						
LPG	**La Plagne**	**1.34**	**177**	*e*Pg	Pg	21 05 34.5	-0.6
	SNR=1.0						
LPG				*e*Sg	Sg	21 05 53.2	+0.7
	0.9nm,0.3s						
FELD	**Feldberg im Sc**	**1.39**	**41**	Pg	Pg	21 05 36.1	+0.1
FELD	**Feldberg im Sc**	**1.39**	**41**	Pg	Pg	21 05 36.1	+0.1
ECH	**Echery**	**1.42**	**14**	Pg	Pg	21 05 37.1	+0.5
ECH				Sg	Sg	21 05 53.5	-1.7
ECH	**Echery**	**1.42**	**14**	Pg	Pg	21 05 37.1	+0.5
ECH				Sg	Sg	21 05 53.5	-1.7
THEF	**They Montfort**	**1.46**	**342**	Pg	Pg	21 05 38.5	+1.1
THEF	**They Montfort**	**1.46**	**342**	Pg	Pg	21 05 38.5	+1.1
TRAV	**Traversella**	**1.52**	**150**	P	Pn	21 05 33.7	-1.7
TRAV				S	Sn	21 05 49.8	-4.9
CDF	**Champ du Feu**	**1.63**	**15**	*e*Pn	Pn	21 05 34.6	-2.3
CDF				*e*Sg	Sg	21 06 00.1	-1.8
	2.2nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**1.63**	**15**	*e*Pn	Pn	21 05 36.9	0.0
CDF				*e*Sg	Sg	21 06 02.4	+0.5
	4.5nm,0.3s						
CDF	**Champ du Feu**	**1.63**	**15**	*e*Pn	Pn	21 05 34.6	-2.3
CDF				*e*Sg	Sg	21 06 02.4	+0.5
	2.2nm,0.3s						
SFTF	**Sexfontaines**	**1.75**	**322**	*e*Pn	Pn	21 05 37.3	-1.3
	baz=141						
SFTF				*e*Sg	Sg	21 06 03.9	-1.9
	4.3nm,0.3s,baz=140						
SFTF	**Sexfontaines**	**1.75**	**322**	*e*Pn	Pn	21 05 39.7	+1.1
	baz=144						
SFTF				*e*Sg	Sg	21 06 06.3	+0.5
	2.2nm,0.2s						
SFTF	**Sexfontaines**	**1.75**	**322**	*e*Pn	Pn	21 05 37.3	-1.3
	baz=141						
SFTF				*e*Sg	Sg	21 06 06.3	+0.5
	1.1nm,0.2s						
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pn	Pn	21 05 40.1	-1.1
	SNR=1.0						
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pg	Pg	21 05 45.5	-1.1
	SNR=1.0						
SMF				*e*Sg	Sg	21 06 11.1	-0.7
	1.7nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pn	Pn	21 05 42.3	+1.1
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pg	Pg	21 05 47.9	+1.3
SMF				*e*Sg	Sg	21 06 13.1	+1.3
	4.3nm,0.3s						
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pn	Pn	21 05 40.1	-1.1
	SNR=1.0						
SMF	**Signal de Mont**	**1.94**	**265**	*e*Pg	Pg	21 05 45.5	-1.1
	SNR=1.0						
SMF				*e*Sg	Sg	21 06 11.1	-0.7
	0.9nm,0.2s,SNR=1.0						
LOR	**Lormes**	**1.96**	**284**	*e*Pn	Pn	21 05 40.5	-0.9
	baz=103						
LOR	**Lormes**	**1.96**	**284**	*e*Pg	Pg	21 05 45.9	-1.0
	baz=108						
LOR				*e*Sg	Sg	21 06 09.9	-2.4
	2.2nm,0.3s,baz=117,SNR=1.0						
LOR	**Lormes**	**1.96**	**284**	*e*Pg	Pg	21 05 48.3	+1.4
	baz=104						
LOR				*e*Sg	Sg	21 06 12.3	0.0
	3.9nm,0.2s						
LOR	**Lormes**	**1.96**	**284**	*e*Pn	Pn	21 05 40.5	-0.9
	baz=103						
LOR	**Lormes**	**1.96**	**284**	*e*Pg	Pg	21 05 45.9	-1.0
	baz=108						
LOR				*e*Sg	Sg	21 06 12.3	0.0
	2.0nm,0.2s						
RFYF	**Reffroy**	**1.96**	**336**	*e*Pn	Pn	21 05 40.1	-1.3
RFYF	**Reffroy**	**1.96**	**336**	*e*Sg	Sg	21 06 14.6	+2.2
	9.2nm,0.3s						
RFYF	**Reffroy**	**1.96**	**336**	*e*Pn	Pn	21 05 40.1	-1.3
RFYF				*e*Sg	Sg	21 06 14.6	+2.2
	4.6nm,0.3s						
MEZF	**Maizieres J'vi**	**1.99**	**328**	*e*Pg	Pg	21 05 46.3	-1.1
	baz=156						
MEZF				*e*Sg	Sg	21 06 11.5	-1.7
	0.8nm,0.2s,baz=140,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.99**	**328**	*e*Pg	Pg	21 05 48.6	+1.2
	baz=147						
MEZF				*e*Sg	Sg	21 06 13.9	+0.7
	2.3nm,0.2s						
MEZF	**Maizieres J'vi**	**1.99**	**328**	*e*Pg	Pg	21 05 46.3	-1.1
	baz=156						
MEZF				*e*Sg	Sg	21 06 13.9	+0.7
	1.1nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.99**	**196**	*e*Pg	Pg	21 05 45.9	-1.6
ORIF				*e*Sg	Sg	21 06 11.1	-2.2
	1.9nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.99**	**196**	*e*Pg	Pg	21 05 48.1	+0.6
ORIF				*e*Sg	Sg	21 06 13.5	+0.2
	2.0nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.99**	**196**	*e*Pg	Pg	21 05 45.9	-1.6
ORIF				*e*Sg	Sg	21 06 13.5	+0.2
	1.0nm,0.2s						
MBDF	**Montbardon**	**2.11**	**178**	*e*Pg	Pg	21 05 48.5	-1.2
MBDF				*e*Sg	Sg	21 06 17.1	0.0
	3.1nm,0.7s,SNR=1.0						
MBDF	**Montbardon**	**2.11**	**178**	*e*Pg	Pg	21 05 48.5	-1.2
MBDF				*e*Sg	Sg	21 06 17.1	0.0
	1.5nm,0.7s,SNR=1.0						
SSF	**Saint Saulge**	**2.17**	**277**	*e*Pn	Pn	21 05 43.3	-1.0
SSF	**Saint Saulge**	**2.17**	**277**	*e*Pg	Pg	21 05 49.8	-1.0
SSF				*e*Sn	Sn	21 06 05.9	-4.7
	SNR=1.0						
SSF				*e*Sg	Sg	21 06 16.0	-3.0
	1.5nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**2.17**	**277**	*e*Pg	Pg	21 05 51.8	+1.0
SSF				*e*Sg	Sg	21 06 18.7	-0.3
	1.3nm,0.2s						
SSF	**Saint Saulge**	**2.17**	**277**	*e*Pn	Pn	21 05 43.3	-1.0
SSF	**Saint Saulge**	**2.17**	**277**	*e*Pg	Pg	21 05 49.8	-1.0
SSF				*e*Sn	Sn	21 06 05.9	-4.7
	SNR=1.0						
SSF				*e*Sg	Sg	21 06 18.7	-0.3
	0.6nm,0.2s						
AVF	**Avril sur Loir**	**2.27**	**270**	*e*Pn	Pn	21 05 44.1	-1.5
	SNR=1.0						
AVF	**Avril sur Loir**	**2.27**	**270**	*e*Pg	Pg	21 05 51.4	-1.3
AVF				*e*Sg	Sg	21 06 20.1	-2.1
	0.5nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.27**	**270**	*e*Pn	Pn	21 05 46.4	+0.8
AVF				*e*Sg	Sg	21 06 22.7	+0.5
	0.7nm,0.2s						
AVF	**Avril sur Loir**	**2.27**	**270**	*e*Pn	Pn	21 05 44.1	-1.5
	SNR=1.0						
AVF	**Avril sur Loir**	**2.27**	**270**	*e*Pg	Pg	21 05 51.4	-1.3
AVF				*e*Sg	Sg	21 06 22.7	+0.5
	0.3nm,0.2s						
VIVF	**Saint-Julien-l**	**2.42**	**216**	*e*Sg	Sg	21 06 24.0	-2.9
	1.8nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.42**	**216**	*e*Sg	Sg	21 06 26.6	-0.3
	6.3nm,0.4s						
VIVF	**Saint-Julien-l**	**2.42**	**216**	*e*Sg	Sg	21 06 26.6	-0.3
	3.2nm,0.4s						
BGF	**Bois d'Agland**	**2.64**	**265**	*e*Pn	Pn	21 05 48.8	-1.9
BGF				*e*Sn	Sn	21 06 17.1	-5.0
	SNR=1.0						
BGF				*e*Sg	Sg	21 06 31.4	-2.5
	2.8nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**2.64**	**265**	*e*Sg	Sg	21 06 33.8	-0.1
	2.2nm,0.3s						
BGF	**Bois d'Agland**	**2.64**	**265**	*e*Pn	Pn	21 05 48.8	-1.9
BGF				*e*Sn	Sn	21 06 17.1	-5.0
	SNR=1.0						
BGF				*e*Sg	Sg	21 06 33.8	-0.1
	1.1nm,0.3s						
TCF	**Toulx Ste Croi**	**3.12**	**261**	*e*Pn	Pn	21 05 55.0	-2.3
	SNR=1.0						
TCF				*e*Sn	Sn	21 06 30.7	-3.2
	0.8nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.12**	**261**	*e*Pn	Pn	21 05 55.0	-2.3
	SNR=1.0						
TCF				*e*Sn	Sn	21 06 30.7	-3.2
	0.4nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**3.39**	**217**	*e*Sg	Sg	21 06 55.3	-2.7
	2.7nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**3.39**	**217**	*e*Sg	Sg	21 06 57.8	-0.2
	1.6nm,0.3s						
LASF	**Ste Croix**	**3.39**	**217**	*e*Sg	Sg	21 06 57.8	-0.2
	0.8nm,0.3s						
BAIF	**Baives**	**3.61**	**334**	*e*P	Pn	21 06 05.9	+1.8
BAIF				*e*Sn	Sn	21 06 41.3	-4.9
	1.3nm,0.4s,SNR=1.0						
BAIF	**Baives**	**3.61**	**334**	*e*P	Pn	21 06 05.9	+1.8
BAIF				*e*Sn	Sn	21 06 41.3	-4.9
	0.6nm,0.4s,SNR=1.0						
CAF	**Calviac**	**3.73**	**241**	*e*Sn	Sn	21 06 45.3	-3.8
	0.8nm,0.3s,SNR=1.0						
CAF	**Calviac**	**3.73**	**241**	*e*Sn	Sn	21 06 45.3	-3.8
	0.4nm,0.3s,SNR=1.0						

*CSEM **01** 21:15:28.9±0.2, 44°.68N×22°.28E, h5km, ML2.3, Error ellipse: s-maj=3.5km s-min=2.8km az=113.0*
*BEO **01** 21:15:29.3±0.2, 44°.69N×22°.30E, h6km±2km*
*BUC **01** 21:15:31.6±0.8, 44°.88N×22°.28E, h1km±3km, MD2.5/3, Error ellipse: s-maj=6.3km s-min=2.6km az=18.0*

ISC 01 21:15:29.0±0.4, 44°.66N±0°.02×22°.27E±0°.03, h1km±5km, n38, σ1s06/63, 13C-7D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJES	**Djerdap**	**0.18**	**89**	⇑*i*Pg	**Pg**	**21 15 32.8**	**+0.4**
DJES				*i* Sg	**Sg**	**21 15 35.8**	**+1.1**
DJES	**Djerdap**	**0.18**	**89**	⇑*i*Pg	**Pg**	**21 15 32.8**	**+0.4**
DJES				*i* Sg	**Sg**	**21 15 35.8**	**+1.1**
GZR	**Gura Zlata**	**0.81**	**26**	⇓*i*P	**Pg**	**21 15 44.3**	**-0.3**
GZR	**Gura Zlata**	**0.81**	**26**	⇓*i*P	**Pg**	**21 15 44.3**	**-0.3**
GZR	**Gura Zlata**	**0.81**	**26**	⇓*i*P	**Pg**	**21 15 44.3**	**-0.3**
GZR				S	**Sg**	**21 15 55.6**	**+0.4**
SVIS	**Svilajnac**	**0.85**	**243**	⇑*i*Pg	**Pg**	**21 15 45.7**	**+0.3**
SVIS				*i* Sg	**Sg**	**21 15 56.2**	**-0.2**
BZS	**Buzias**	**1.06**	**334**	*i* Pg	**Pg**	**21 15 48.8**	**-0.6**
BZS				*i* Sg	**Sg**	**21 16 02.7**	**-0.4**
BZS	**Buzias**	**1.06**	**334**	⇑*i*P	**Pg**	**21 15 49.1**	**-0.3**
BZS				*i* S	**Sg**	**21 16 02.3**	**-0.8**
BZS	**Buzias**	**1.06**	**334**	⇑*i*P	**Pg**	**21 15 49.1**	**-0.3**
BZS	**Buzias**	**1.06**	**334**	*i* Pg	**Pg**	**21 15 48.8**	**-0.6**
BZS	**Buzias**	**1.06**	**334**	⇑*i*P	**Pg**	**21 15 49.1**	**-0.3**
BZS				S	**Sg**	**21 16 02.3**	**-0.8**
BZS				*i* Sg	**Sg**	**21 16 02.7**	**-0.4**
NISS		**1.28**	**191**	*i* Pg	**Pg**	**21 15 53.1**	**-0.4**
NISS				*i* Sg	**Sg**	**21 16 11.6**	**+1.5**
NISS		**1.28**	**191**	*i* Pg	**Pg**	**21 15 53.1**	**-0.4**
NISS				*i* Sg	**Sg**	**21 16 11.6**	**+1.5**
DEV	**Deva**	**1.30**	**20**	⇑*i*P	**Pg**	**21 15 53.7**	**-0.3**
DEV	**Deva**	**1.30**	**20**	⇑*i*P	**Pg**	**21 15 53.7**	**-0.3**
DEV	**Deva**	**1.30**	**20**	⇑*i*P	**Pg**	**21 15 53.7**	**-0.3**
DEV				S	**Sg**	**21 16 11.4**	**+0.6**
GRUS	**Gruza**	**1.36**	**236**	*i* Pg	**Pg**	**21 15 54.9**	**-0.2**
GRUS				*e*Sg	**Sg**	**21 16 13.4**	**+0.8**
GRUS	**Gruza**	**1.36**	**236**	*i* Pg	**Pg**	**21 15 54.9**	**-0.2**
GRUS				*e*Sg	**Sg**	**21 16 13.4**	**+0.8**
TRUS	**Trudelj**	**1.41**	**252**	*e*Pg	**Pg**	**21 15 55.3**	**-0.7**
TRUS				*i* Sg	**Sg**	**21 16 13.2**	**-1.0**
TRUS	**Trudelj**	**1.41**	**252**	*e*Pg	**Pg**	**21 15 55.3**	**-0.7**
TRUS				*i* Sg	**Sg**	**21 16 13.2**	**-1.0**
ZAPS	**Zavoj**	**1.41**	**169**	⇑*i*Pg	**Pg**	**21 15 56.0**	**-0.1**
ZAPS				*i* Sg	**Sg**	**21 16 14.5**	**+0.1**
DIVS	**Divibare**	**1.73**	**252**	*e*Pn	**Pn**	**21 16 01.0**	**+0.8**
DIVS				*i* Sn	**Sn**	**21 16 23.7**	**+0.8**
DIVS	**Divibare**	**1.73**	**252**	*e*Pn	**Pn**	**21 16 01.0**	**+0.8**
DIVS				*i* Sn	**Sn**	**21 16 23.7**	**+0.8**
BARS	**Barje**	**1.87**	**190**	⇓*i*Pn	**Pn**	**21 16 03.2**	**+1.0**
BARS				*i* Sg	**Sg**	**21 16 28.4**	**-0.8**
BARS	**Barje**	**1.87**	**190**	⇓*i*Pn	**Pn**	**21 16 03.2**	**+1.0**
BARS				*i* Sg	**Sg**	**21 16 28.4**	**-0.8**
VOIR		**2.12**	**68**	⇑*i*P	**Pn**	**21 16 08.3**	**+2.7**
VOIR		**2.12**	**68**	⇑*i*P	**Pn**	**21 16 08.3**	**+2.7**
VOIR		**2.12**	**68**	⇑*i*P	**Pn**	**21 16 08.3**	**+2.7**
DRGR		**2.15**	**8**	⇓*i*P	**Pn**	**21 16 05.0**	**-1.1**
DRGR		**2.15**	**8**	⇓*i*P	**Pn**	**21 16 05.0**	**-1.1**
DRGR				S	**Sn**	**21 16 32.6**	**-0.8**
MLR	**Muntele Rosu**	**2.73**	**71**	*e*Pn	**Pn**	**21 16 12.2**	**-1.8**
MLR				*e*Sg	**Sg**	**21 16 55.6**	**-1.2**
MLR	**Muntele Rosu**	**2.73**	**71**	*e*Pn	**Pn**	**21 16 12.2**	**-1.8**
MLR				*e*Sg	**Sg**	**21 16 55.6**	**-1.2**
PKSM	**Moragy**	**2.99**	**303**	*e*Sn	**Sn**	**21 16 50.8**	**-3.2**
PKSM	**Moragy**	**2.99**	**303**	*e*Sn	**Sn**	**21 16 50.8**	**-3.2**
PLD	**Plovdiv**	**3.11**	**144**	*e*Pn	**Pn**	**21 16 19.2**	**0.0**
PLD				*e*Sg	**Sg**	**21 17 06.9**	**-2.0**
PLD	**Plovdiv**	**3.11**	**144**	*e*Pn	**Pn**	**21 16 19.2**	**0.0**
PLD				*e*Sg	**Sg**	**21 17 06.9**	**-2.0**
KOLS	**Kolonicke sedl**	**4.27**	**0**	*e*	**Pg**	**21 16 52.9**	**+2.0**
STHS	**Stebnicka Huta**	**4.81**	**352**	*e*	**Pn**	**21 16 44.8**	**+2.3**

*TIF **01** 21:17:24.1, 42°.35N×44°.87E, h10km*
*MOS **01** 21:17:25.9±1.1, 42°.30N×44°.96E, h18km, mb4.0/1, Error ellipse: s-maj=22.6km s-min=6.8km az=111.5*
*CSEM **01** 21:17:26.7±0.2, 42°.34N×44°.86E, h2km, ML2.4, Error ellipse: s-maj=6.4km s-min=3.6km az=67.0*

ISC 01 21:17:27.2±0.5, 42°.33N±0°.02×44°.85E±0°.04, h2km±5km, n42, σ1s29/81, 6C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.61**	**188**	*e*PG	**Pg**	**21 17 38.5**	**-0.4**
TBLG				*e*S	**Sg**	**21 17 47.7**	**+0.9**
TBLG	**Delisi**	**0.61**	**188**	P	**Pg**	**21 17 38.5**	**-0.3**
TBLG				S	**Sg**	**21 17 47.7**	**+0.9**
TBLG	**Delisi**	**0.61**	**188**	P	**Pg**	**21 17 38.5**	**-0.4**
TBLG				S	**Sg**	**21 17 47.7**	**+0.9**
MTA	**Mtatsminda**	**0.64**	**184**	P	**Pg**	**21 17 38.6**	**-0.8**
MTA				S	**Sg**	**21 17 48.9**	**+1.1**
MTA	**Mtatsminda**	**0.64**	**184**	P	**Pg**	**21 17 38.7**	**-0.8**
MTA				S	**Sg**	**21 17 48.9**	**+1.1**
GOR	**Gori**	**0.65**	**238**	P	**Pg**	**21 17 39.0**	**-0.8**
GOR				S	**Sg**	**21 17 49.8**	**+1.6**
GOR	**Gori**	**0.65**	**238**	P	**Pg**	**21 17 39.0**	**-0.8**
GOR				S	**Sg**	**21 17 49.8**	**+1.6**
KEH	**Kehvi**	**0.68**	**268**	P	**Pg**	**21 17 38.6**	**-1.7**
KEH				S	**Sg**	**21 17 49.7**	**+0.5**
VLKR	**Vladikavkaz**	**0.72**	**350**	*e*PG	**Pg**	**21 17 40.2**	**-0.9**
VLKR				*i* S	**Sg**	**21 17 52.2**	**+1.7**
VLKR	**Vladikavkaz**	**0.72**	**350**	*e*Pg	**Pg**	**21 17 40.2**	**-0.9**
VLKR				*i* Sg	**Sg**	**21 17 52.2**	**+1.7**
SNJR	**Sundja**	**0.73**	**358**	⇑*i*PG	**Pg**	**21 17 40.4**	**-0.9**
SNJR				*e*S	**Sg**	**21 17 52.5**	**+1.6**
SNJR	**Sundja**	**0.73**	**358**	*i* Pg	**Pg**	**21 17 40.4**	**-0.9**
SNJR				*e*Sg	**Sg**	**21 17 52.5**	**+1.6**
ZEI	**Tsey**	**0.83**	**302**	⇑*i*PG	**Pg**	**21 17 41.3**	**-1.9**
ZEI				*e*S	**Sg**	**21 17 55.1**	**+1.2**
ZEI	**Tsey**	**0.83**	**302**	*i* Pg	**Pg**	**21 17 41.3**	**-1.9**
ZEI				*e*Sg	**Sg**	**21 17 55.1**	**+1.2**
KORR	**Kora**

	baz=0.5						
LRMC	**Laurel Mountai**	**0.62**	**90**	⇓P	**Pg**	**21 39 49.8**	**-0.3**
	baz=0.6,SNR=123						
LRMC				⇓S	**Sg**	**21 39 57.8**	**-0.4**
	baz=0.6						
VES	**Vestal, Richgr**	**0.63**	**304**	⇓P	**Pg**	**21 39 50.4**	**+0.1**
	baz=0.7						
VES				⇓S	**Sg**	**21 39 58.8**	**+0.2**
	baz=0.7						
EDW2	**Edwards Air Fo**	**0.71**	**148**	P	**Pg**	**21 39 51.0**	**-0.8**
	baz=0.7,SNR=648						
EDW2				⇑S	**Sg**	**21 40 00.8**	**-0.3**
	baz=0.7						
OSI	**Osito Adit**	**0.90**	**195**	⇓P	**Pg**	**21 39 54.9**	**-0.5**
	baz=0.9,SNR=11						
OSI				⇑S	**Sg**	**21 40 06.6**	**-0.4**
	baz=0.9						
OSI	**Osito Adit**	**0.90**	**195**	*e*Pg	**Pg**	**21 39 54.9**	**-0.5**
OSI				*e*Sg	**Sg**	**21 40 07.2**	**+0.1**
MPMC	**Manual Prospec**	**0.97**	**53**	⇓P	**Pg**	**21 39 56.2**	**-0.5**
	baz=1.0,SNR=914						
MPMC				⇑S	**Sg**	**21 40 09.0**	**-0.3**
	baz=1.0						
CWC	**Cottonwood Cre**	**1.00**	**17**	⇑P	**Pg**	**21 39 56.6**	**-0.7**
	baz=1.0,SNR=16						
CWC				⇓S	**Sg**	**21 40 09.9**	**-0.5**
	baz=1.0						
RCTC	**Rector, Farmer**	**1.05**	**322**	⇓P	**Pg**	**21 39 57.5**	**-0.7**
	baz=1.1,SNR=29						
RCTC				⇓S	**Sg**	**21 40 11.8**	**0.0**
	baz=1.1						
DECC	**Green Verdugo**	**1.24**	**176**	⇑P	**Pn**	**21 40 00.8**	**-0.6**
	baz=1.2,SNR=23						
DECC				⇑S	**Sb**	**21 40 17.3**	**-0.3**
	baz=1.2						
PKM	**Peak Mountain**	**1.27**	**243**	⇑P	**Pn**	**21 40 01.3**	**-0.6**
	baz=1.3,SNR=78						
PKM				⇓S	**Sb**	**21 40 18.3**	**-0.2**
	baz=1.3						
SMMC	**Simmler**	**1.28**	**263**	⇑P	**Pn**	**21 40 01.3**	**-0.8**
	baz=1.3,SNR=36						
SMMC				⇑S	**Sb**	**21 40 18.5**	**-0.3**
	baz=1.3						
MWC	**Mount Wilson**	**1.30**	**166**	*e*Pg	**Pg**	**21 40 01.8**	**-1.3**
MWC				*e*S	**Sb**	**21 40 17.9**	**-1.4**
PASC	**Pasadena Art C**	**1.33**	**171**	*e*Pn	**Pn**	**21 40 02.4**	**-0.3**
RRX	**Edison Barstow**	**1.33**	**117**	⇑P	**Pn**	**21 40 02.1**	**-0.6**
	baz=1.3,SNR=20						
RRX				⇑S	**Sb**	**21 40 20.1**	**-0.1**
	baz=1.3						
GSC	**Goldstone**	**1.35**	**97**	⇑P	**Pn**	**21 40 02.4**	**-0.6**
	baz=1.3,SNR=32						
GSC				⇓S	**Sb**	**21 40 20.5**	**-0.4**
	baz=1.3						
GSC	**Goldstone**	**1.35**	**97**	*e*Pn	**Pn**	**21 40 02.5**	**-0.5**
GSC				*e*S	**Sb**	**21 40 19.6**	**-1.3**
BFSC	**Mount Baldy St**	**1.40**	**152**	⇑P	**Pn**	**21 40 03.3**	**-0.5**
	baz=1.4,SNR=72						
BFSC				⇑S	**Sn**	**21 40 22.0**	**-0.2**
	baz=1.4						
BLG	**Laguna Peak**	**1.46**	**201**	⇑Pb	**Pb**	**21 40 05.1**	**-0.3**
	baz=1.5,SNR=87						
BLG				⇑S	**Sn**	**21 40 24.4**	**+0.6**
	baz=1.5						
GRAC	**Grapevine Rang**	**1.74**	**30**	⇑Pb	**Pb**	**21 40 09.4**	**-0.8**
	baz=1.7						
GRAC				⇑Sb	**Sb**	**21 40 34.3**	**+2.1**
	baz=1.7						
BBRC	**Big Bear Sol-O**	**1.75**	**134**	⇑Sb	**Sb**	**21 40 34.1**	**+1.8**
	baz=1.7						
FMP	**Fort Macarthur**	**1.77**	**176**	⇑S	**Sn**	**21 40 33.0**	**+1.6**
	baz=1.8						
BSC	**Santa Cruz Isl**	**1.78**	**214**	⇑P	**Pn**	**21 40 08.8**	**-0.1**
	baz=1.8,SNR=11						
SHOC	**Shoshone**	**1.81**	**76**	⇑Sb	**Sb**	**21 40 35.9**	**+1.8**
	baz=1.8						
HEC	**Hector,Ludlow**	**1.85**	**110**	⇓P	**Pn**	**21 40 09.3**	**-0.6**
	baz=1.8,SNR=16						
HEC				⇓Sb	**Sb**	**21 40 36.7**	**+1.5**
	baz=1.8						
MTUM	**Tungsten Hills**	**1.87**	**357**	*e*Pg	**Pg**	**21 40 12.2**	**-1.8**
U10A	**Ash Meadows, A**	**1.95**	**61**	⇑P	**Pn**	**21 40 10.8**	**-0.5**
	baz=1.9,SNR=9.0						
TUQ	**Turquoise Moun**	**2.06**	**91**	⇓Sb	**Sb**	**21 40 42.9**	**+1.7**
	baz=2.0						
CIS	**Catalina Islan**	**2.07**	**179**	⇓P	**Pn**	**21 40 12.8**	**-0.2**
	baz=2.1,SNR=18						
CIS				⇓Sb	**Sb**	**21 40 44.0**	**+2.4**
	baz=2.1						
MURC	**Murrieta**	**2.14**	**151**	⇑P	**Pn**	**21 40 13.7**	**-0.2**
	baz=2.1,SNR=63						
MURC				⇑Sb	**Sb**	**21 40 45.8**	**+2.2**
	baz=2.1						
GMRC	**Granite Mounta**	**2.39**	**106**	⇓P	**Pn**	**21 40 16.0**	**-1.3**
	baz=2.4,SNR=30						
GMRC				⇑Sb	**Sb**	**21 40 52.8**	**+2.0**
	baz=2.4						
V11A	**Goodsprings**	**2.48**	**81**	⇓P	**Pn**	**21 40 17.9**	**-0.7**
	baz=2.5						
PFO	**Pinyon Flat Ob**	**2.49**	**138**	⇑P	**Pn**	**21 40 18.2**	**-0.5**
	baz=2.5						
PFO				⇑Sb	**Sb**	**21 40 55.4**	**+1.8**
	baz=2.5						
PFO	**Pinyon Flat Ob**	**2.49**	**138**	*e*Pn	**Pn**	**21 40 18.1**	**-0.5**
PFO				*e*Sg	**Sg**	**21 40 55.5**	**-2.7**
BELC	**Belle Mtn.**	**2.50**	**126**	⇓Sb	**Sb**	**21 40 56.0**	**+2.0**
	baz=2.5						
U11A	**Corn Creek**	**2.66**	**68**	⇓Sb	**Sb**	**21 41 01.5**	**+3.1**
	baz=2.6						
SAO	**San Andreas Ge**	**2.75**	**299**	*e*Pn	**Pn**	**21 40 23.8**	**+1.6**
SAO				*e*Sn	**Sn**	**21 40 57.4**	**+2.0**
SHPR	**Sheep Range**	**2.85**	**68**	*e*Pn	**Pn**	**21 40 24.1**	**+0.5**
SHPR				*e*Pg	**Pg**	**21 40 30.6**	**-2.2**
V12A	**Nelson**	**2.94**	**84**	⇑P	**Pn**	**21 40 24.1**	**-0.7**
	baz=2.9,SNR=7.4						
CMB	**Columbia Colle**	**2.98**	**329**	*e*Pn	**Pn**	**21 40 27.1**	**+1.6**
CMB				*e*Sn	**Sn**	**21 40 50.3**	**-11**
CMB				*e*Sg	**Sg**	**21 41 06.5**	**-7.5**
MONP	**Monument Peak**	**3.08**	**146**	⇑P	**Pn**	**21 40 26.7**	**-0.1**
	baz=3.1,SNR=7.4						
WAKR	**Walker**	**3.12**	**346**	*e*Pn	**Pn**	**21 40 30.9**	**+3.6**
V13A	**Grand Canyon W**	**3.65**	**83**	⇑P	**Pn**	**21 40 34.4**	**-0.2**
	baz=3.6						
W13A	**Hualapai Mount**	**3.75**	**95**	⇓P	**Pn**	**21 40 35.7**	**-0.3**
	baz=3.7						
U13A	**Pakoon Wash**	**3.75**	**74**	⇓P	**Pn**	**21 40 35.9**	**-0.2**
	baz=3.7,SNR=12						
GLA	**Glamis**	**3.86**	**128**	*e*Pn	**Pn**	**21 40 36.2**	**-1.2**
GLA				*e*Pg	**Pg**	**21 40 49.4**	**-2.6**
PAHR	**Pah Rah Range**	**4.28**	**350**	*e*Pn	**Pn**	**21 40 45.7**	**+2.4**
V14A	**Boquillas Ranc**	**4.36**	**87**	⇑P	**Pn**	**21 40 44.4**	**+0.1**
	baz=4.3						
OHCM	**Honcut**	**4.54**	**329**	*e*Pn	**Pn**	**21 40 47.1**	**+0.2**
OHCM				*e*Sg	**Sg**	**21 41 57.1**	**-6.8**
CCUT	**Cedar City**	**4.58**	**62**	*e*Pn	**Pn**	**21 40 39.4**	**-8.1**
CCUT				*e*Pg	**Pg**	**21 41 03.5**	**-2.4**
N12A	**Clover Valley,**	**5.99**	**26**	*e*Pg	**Pn**	**21 41 09.5**	**+2.7**

SZGRF ***01*** *21:58:48.5,37.°06N×142.°67E,h33km,mb5.1,Off east coast of Honshu, Japan*
BJI ***01*** *21:58:49.5,37.°18N×141.°57E,h45km,mB4.8/33,mb4.8/47, Ms4.2/40,MS7 4.0/42*
ISCJB ***01*** *21:58:50.7±0.2,37.°08N±0.°02×141.°51E±0.°03,h42km, mb4.8/170,MS4.1/56,Error ellipse: s-maj=3.7km s-min=3.0km az=144.8*
MOS ***01*** *21:58:50.8±0.8,37.°30N×141.°44E,h33km,mb5.1/85, MS4.0/29,Error ellipse: s-maj=7.9km s-min=4.1km az=110.7*
JMA ***01*** *21:58:51.0±0.2,37.°05N×141.°49E,h49km±2km,M4.7*
JMA Felt II J1.
NEIC ***01*** *21:58:52.3±0.2,37.°08N×141.°47E,mb4.9/79,MS4.3/4, Error ellipse: s-maj=5.1km s-min=3.2km az=133.0*
NEIC Felt at Koriyama. Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi; [1 JMA] in Miyagi and Yamagata.
IDC ***01*** *21:58:53.8±2.2,37.°02N×141.°41E,h56km±19km,mb4.3/35, mb1 4.4/40,mb1mx4.4/42,mbtmp4.3/40,ML4.0/5,MS3.9/29, Ms1 3.9/29,ms1mx3.8/41,Error ellipse: s-maj=13.8km s-min=10.7km az=92.0*
NIED ***01*** *21:59:00,37.°10N×141.°60E,h38km,Mw4.7 Best double couple: M0:1.36000×10^16 NP1:φ=14.00000°,δ73.00000°, λ92.00000°. NP2:φ=188.00000°,δ17.00000°,λ84.00000°.*

DJA ***01*** *21:59:27,36.°79N×138.°61E,h247km,mb4.7/13*
ISC 01 21:58:52.6±0.2,37.°10N±0.°02×141.°45E±0.°03,h44km, h44km±.8km:pP-P,n481,o0:86/497,mb4.8/170,MS4.1/55, 46C-20D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**271**	⇓P	**Pn**	**21 59 02.8**	**-0.9**
ONAJ				*e*S	**Sn**	**21 59 11.3**	**-0.3**
JFK	**Kawauchi**	**0.53**	**301**	⇓P	**Pn**	**21 59 03.1**	**-0.8**
JFK				S	**Sn**	**21 59 11.2**	**-0.7**
JHO	**Hitachi**	**0.85**	**236**	⇓P	**Pn**	**21 59 06.5**	**-1.7**
JHO				*e*S	**Sn**	**21 59 17.7**	**-1.9**
JMM	**Marumori**	**0.93**	**326**	⇓P	**Pn**	**21 59 08.5**	**-0.7**
JMM				*e*S	**Sn**	**21 59 20.6**	**-0.7**
JFT	**Otama**	**0.98**	**296**	⇓P	**Pn**	**21 59 10.1**	**+0.2**
JFT				S	**Sn**	**21 59 23.4**	**+0.8**
JIO	**Ouri**	**1.36**	**357**	⇓P	**Pn**	**21 59 14.1**	**-1.0**
JIO				S	**Sn**	**21 59 30.5**	**-1.4**
JOU	**Okura**	**1.41**	**334**	⇓P	**Pn**	**21 59 15.5**	**-0.3**
JOU				*e*S	**Sn**	**21 59 33.1**	**-0.1**
JFY	**Yanaizu**	**1.42**	**283**	⇓P	**Pn**	**21 59 16.2**	**+0.2**
JYS	**Shirataka**	**1.57**	**316**	⇓P	**Pn**	**21 59 18.4**	**+0.4**
MJAR	**Matsushiro Arr**	**2.66**	**259**	P	**Pn**	**21 59 32.9**	**0.0**
MJAR				S	**Sn**	**22 00 08.2**	**+4.3**
MJAR				pmax	pmax		
	comp=Z,59nm,0.3s						
MJAR				smax			
	comp=N,46nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,2μm,20.0s						
MJAR	**Matsushiro Arr**	**2.66**	**259**	P	**Pn**	**21 59 32.9**	**0.0**
	comp=Z,59nm,0.3s,baz=83,slow=15,SNR=289						
MJAR				S	**Sn**	**22 00 08.2**	**+4.3**
	comp=Z,46nm,0.3s,baz=78,slow=24,SNR=4.8						
MJAR				LR	LR	22 00 43.7	
	comp=Z,2μm,20.0s,baz=80,slow=42						
MAJO	**Matsushiro**	**2.66**	**259**	⇓*i*Pn	**Pn**	**21 59 34.0**	**+1.0**
MAJO				Sn	**Sn**	**22 00 05.8**	**+1.9**
MAT	**Matsushiro**	**2.66**	**259**	P	**Pn**	**21 59 34.0**	**+1.1**
MAT				S	**Sn**	**22 00 09.5**	**+5.6**
JHJ	**Hachijo jima 2**	**4.20**	**199**	P	**Pn**	**21 59 53.5**	**-0.6**
	comp=Z,128nm,0.3s,baz=15,slow=11,SNR=76						
JHJ				S	**Sn**	**22 00 37.8**	**-4.0**
	comp=Z,387nm,0.3s,baz=66,slow=19,SNR=12						
JHJ				LR	LR	22 01 11.0	
	comp=Z,284nm,18.0s,baz=321,slow=33						
ERM	**Erimo**	**5.09**	**15**	*e*Pn	**Pn**	**22 00 06.1**	**-0.2**
ERM				*e*Sn	**Sn**	**22 01 05.0**	**+1.4**
ASAJ	**Asahikawa**	**7.07**	**7**	P	**Pn**	**22 00 30.6**	**-2.8**
ASAJ				S	**Sn**	**22 01 51.8**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.07**	**7**	P	**Pn**	**22 00 30.6**	**-2.8**
	comp=N,8.3nm,0.3s,baz=224,slow=10,SNR=35						
ASAJ				S	**Sn**	**22 01 51.8**	**-0.5**
	comp=N,1.9nm,0.3s,baz=139,slow=19,SNR=3.1						
YUK	**Yuzh-Kuril'sk**	**7.70**	**24**	*e*P	**Pn**	**22 00 39.5**	**-2.6**
YUK				S	**Sn**	**22 02 00.5**	**-7.4**
YUK				smax			
	comp=N,370nm,0.5s						
YUK				smax			
	comp=E,570nm,0.5s						
YUK				smax			
	comp=N,3μm,0.9s						
YUK				smax			
	comp=E,2μm,0.9s						
VLA	**Vladivostok**	**9.47**	**312**	*e*P	**Pn**	**22 01 08.6**	**+2.3**
VLA				S	**Sn**	**22 02 56.0**	**+4.6**
VLA				pmax	pmax		
	comp=Z,99nm,1.5s						
VLA				MLR	MLR		
	comp=Z,500nm,15.4s						
YSS	**Yuzh-Sakhalins**	**9.90**	**5**	*e*P	**Pn**	**22 01 10.0**	**-2.2**
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS	**Yuzh-Sakhalins**	**9.90**	**5**	*e*Pn	**Pn**	**22 01 12.2**	**+0.1**
CBIJ	**Chichi jima**	**9.99**	**176**	P	**Pn**	**22 01 09.3**	**-4.3**
	comp=N,33nm,0.3s,baz=93,slow=22,SNR=37						
CBIJ				S	**Sn**	**22 02 51.4**	**-13**
	comp=N,29nm,0.3s,baz=288,slow=23,SNR=8.3						
KSRS	**Korea Array**	**10.78**	**276**	P	**Pn**	**22 01 27.1**	**+2.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,960nm,19.4s						
KSRS	**Korea Array**	**10.78**	**276**	P	**Pn**	**22 01 27.1**	**+2.7**
	comp=Z,1.4nm,0.3s,baz=88,slow=13,SNR=52						
KSRS				LR	LR	22 05 20.0	
	comp=Z,960nm,19.4s,baz=94,slow=36						
MDJ	**Mudanjiang**	**11.70**	**314**	P	**Pn**	**22 01 37.8**	**+1.0**
MDJ				PP		22 01 49.2	
MDJ				sP		22 01 53.0	
MDJ				S	**Sn**	**22 03 47.8**	**+2.0**
MDJ				SS		22 04 04.7	
MDJ				pmax	pmax		
	comp=Z,28nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,76nm,7.5s						
MDJ				LR	LR		
	comp=N,440nm,21.0s						
MDJ				LR	LR		
	comp=E,350nm,22.6s						
MDJ				LR	LR		
	comp=Z,720nm,21.4s						
MDJ	**Mudanjiang**	**11.70**	**314**	*e*Pn	**Pn**	**22 01 37.9**	**+1.1**
	comp=Z,16nm,0.6s						
CN2	**Changchun**	**13.89**	**304**	*e*P	**Pn**	**22 02 07.4**	**+0.7**
CN2				*es*P		22 02 23.3	
CN2				*e*S	**Sn**	**22 04 39.0**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s						
CN2				LR	LR		
	comp=E,700nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
KLR	**Kul'dur**	**14.02**	**333**	*e*P	**Pn**	**22 02 08.2**	**-0.3**
KLR				MLR	MLR		
	comp=Z,600nm,15.0s						
SNY	**Shenyang**	**14.59**	**294**	⇓P	**Pn**	**22 02 16.8**	**+0.7**
SNY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SNY				pmax	pmax		
	comp=Z,130nm,11.8s						
SNY				LR	LR		
	comp=N,500nm,16.2s						
SNY				LR	LR		
	comp=E,640nm,19.2s						
SNY				LR	LR		
	comp=Z,810nm,18.2s						
JOW	**Kunigami**	**15.14**	**231**	P	**Pn**	**22 02 24.1**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=48,slow=12,SNR=2.3						
JOW				LR	LR	22 08 04.4	
	comp=Z,285nm,20.3s,baz=41,slow=36						
NJ2	**Nanjing**	**19.26**	**262**	*e*P	**Pn**	**22 03 17.0**	**+2.3**
NJ2				pP	pP	22 03 26.8	+2.9
NJ2				sP	sP	22 03 33.1	+3.6
NJ2				PP		22 03 35.0	
NJ2				S	**S**	**22 06 46.0**	**-3.1**
NJ2				sS	sS	22 07 00.5	-5.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,70nm,6.3s						
NJ2				LR	LR		
	comp=N,360nm,23.3s						
NJ2				LR	LR		
	comp=E,440nm,17.9s						
NJ2				LR	LR		
	comp=Z,510nm,19.3s						
PETK	**Petropavlovsk-**	**19.62**	**30**	P	**Pn**	**22 03 18.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=213,slow=6.0,SNR=3.8						
PETK				LR	LR	22 10 27.9	
	comp=Z,123nm,21.4s,baz=221,slow=35						
HIA	**Hailar**	**19.88**	**315**	*e*P	**Pn**	**22 03 17.8**	**-4.1**
HIA				pmax	pmax		
	comp=Z,11nm,1.0s						
HIA	**Hailar**	**19.88**	**315**	*e*P	**Pn**	**22 03 17.8**	**-4.1**
	comp=Z,11nm,1.0s						
BJI	**Beijing**	**19.96**	**286**	P	**Pn**	**22 03 19.6**	**-3.3**
BJI				pP	pP	22 03 29.8	-1.7
BJI				sP	sP	22 03 34.8	-2.3
BJI				S	**S**	**22 07 00.7**	**-2.3**
BJI				sS	sS	22 07 17.5	-2.5
BJI				pmax	pmax		
	comp=Z,20nm,0.5s						
BJI				pmax	pmax		
	comp=Z,69nm,3.3s						
BJI				LR	LR		
	comp=N,300nm,15.1s						
BJI				LR	LR		
	comp=E,230nm,15.6s						
BJI				LR	LR		
	comp=Z,210nm,23.7s						
BJT	**Baijiatuau**	**19.96**	**286**	*e*P	**Pn**	**22 03 19.7**	**-3.3**
NACB	**Ninganchiao**	**21.34**	**238**	P	**P**	**22 03 34.2**	**-1.8**
SSLB	**Suanglung**	**22.03**	**239**	P	**P**	**22 03 44.5**	**+1.1**
YULB	**Yu-li**	**22.07**	**237**	P	**P**	**22 03 44.4**	**+0.6**
NRGR	**Nerungri**	**22.55**	**336**	*e*P	**P**	**22 03 47.5**	**-1.1**
NRGR				S	**S**	**22 07 52.3**	**-0.7**
NRGR				smax			
	comp=N,7.0nm,0.5s						
TPUB	**Ta-pu**	**22.58**	**238**	*e*P	**P**	**22 03 48.1**	**-1.1**
	comp=N,39nm,0.9s,mb4.8						
TWG	**Pinlang**	**22.61**	**237**	*e*P	**P**	**22 03 49.4**	**-0.1**
	comp=N,34nm,0.9s,mb4.8						
CLNS	**Chul'man**	**22.64**	**336**	*e*P	**P**	**22 03 50.7**	**+1.2**
CLNS				*e**PP		22 04 04.1	
CLNS				*e*		22 04 12.5	
CLNS				*e*		22 07 41.1	
CLNS				*e*S	**S**	**22 07 57.1**	**+2.6**
CLNS				*e*SS		22 08 35.6	
CLNS				pmax	pmax		
	comp=N,13nm,1.3s						
CLNS				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.9s						
CLNS				smax			
	comp=E,4.0nm,1.0s						
CLNS				smax			
	comp=N,6.0nm,0.9s						
CLNS				MLR	MLR		
	comp=E,99nm,15.0s,MS3.6						
CLNS				MLR	MLR		
	comp=Z,177nm,15.0s,MS3.6						
CLNS				MLR	MLR		
	comp=N,132nm,14.0s,MS3.6						
WHN	**Wuhan**	**23.40**	**262**	⇓P	**P**	**22 03 56.5**	**-1.1**
WHN				pP		22 04 09.6	
WHN				S	**S**	**22 08 04.0**	**-3.4**
WHN				pmax	pmax		
	comp=Z,46nm,1.1s,mb4.8						
WHN				LR	LR		
	comp=N,430nm,11.1s						
WHN				LR	LR		
	comp=E,1μm,17.9s						
WHN				LR	LR		
	comp=Z,1μm,20.0s						
HHC	**Hu-ho-hao-te**	**23.48**	**288**	*e*P	**P**	**22 03 57.6**	**-0.7**
HHC				pP		22 04 09.0	
HHC				sP	sP	22 04 15.2	+0.4
HHC				PP		22 04 29.4	
HHC				PcP	PcP	22 07 46.6	+3.7
HHC				S	**S**	**22 08 06.8**	**-1.7**
HHC				sS	sS	22 08 20.8	-7.1
HHC				SS		22 08 49.8	
HHC				ScP	ScP	22 11 18.6	+1.2
HHC				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,100nm,8.0s						
HHC				LR	LR		
	comp=N,240nm,12.0s,MS4.0						
HHC				LR	LR		
	comp=E,210nm,13.3s,MS4.0						
HHC				LR	LR		
	comp=Z,170nm,17.1s,MS3.6						
GUMO	**Guam**	**23.61**	**172**	LR	LR	22 12 05.4	
	comp=Z,178nm,20.9s,MS3.5,baz=78,slow=34						
YAK	**Yakutsk**	**26.01**	**347**	*e*P	**P**	**22 04 20.2**	**-0.9**
YAK				*e*		22 05 05.9	
YAK				*e*		22 07 46.4	
YAK				*e*S	**S**	**22 08 46.8**	**-1.8**
YAK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=Z,82nm,3.5s						
YAK				pmax	pmax		
	comp=N,86nm,2.8s						
YAK				pmax	pmax		
	comp=E,19nm,1.5s						
YAK				smax			
	comp=N,22nm,1.5s						
YAK				smax			
	comp=E,43nm,2.7s						
YAK	**Yakutsk**	**26.01**	**347**	*e*P	**P**	**22 04 21.0**	**-0.2**
	comp=E,46nm,1.0s,mb5.0						
XAN	**Xi'an**	**26.56**	**273**	P	**P**	**22 04 25.8**	**-0.6**
XAN				pP	pP	22 04 36.8	-1.3
XAN				sP	sP	22 04 41.4	-1.9
XAN				PcP	PcP	22 07 51.1	+1.1
XAN				S	**S**	**22 08 57.9**	**0.0**
XAN				sS	sS	22 09 16.8	-0.7
XAN				ScS	ScS	22 15 17.8	+1.1
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
XAN				pmax	pmax		
	comp=Z,27nm,6.5s						
XAN				LR	LR		
	comp=N,150nm,16.0s,MS3.7						
XAN				LR	LR		
	comp=E,68nm,15.3s,MS3.7						
XAN				LR	LR		
	comp=Z,62nm,14.5s,MS3.3						
SEY	**Seymchan**	**26.72**	**11**	*ce*P	**P**	**22 04 25.8**	**-1.7**
ULN	**Ulaanbaatar**	**27.34**	**304**	*e*P	**P**	**22 04 33.7**	**+0.5**
ULN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**27.34**	**304**	*e*P	**P**	**22 04 33.7**	**+0.4**
	comp=Z,13nm,0.9s,mb4.5						
ENH	**Enshi**	**27.36**	**265**	*e*P	**P**	**22 04 32.8**	**-0.8**
	comp=Z,22nm,0.5s,mb4.9						
BOD	**Bodaibo**	**27.49**	**328**	⇓*i*P	**P**	**22 04 33.5**	**-1.0**
BOD				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
SONM	**Songino Array**	**27.77**	**304**	P	**P**	**22 04 37.5**	**+0.4**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,291nm,18.2s						
SONM	**Songino Array**	**27.77**	**304**	P	**P**	**22 04 37.5**	**+0.4**
	comp=Z,5.9nm,0.6s,mb4.4,baz=106,slow=7.6,SNR=7.4						
SONM				LR	LR	22 16 04.5	
	comp=Z,291nm,18.2s,MS3.9,baz=95,slow=37						
IRK	**Irkutsk**	**30.08**	**312**	*e*P	**P**	**22 04 57.5**	**0.0**
IRK				*e*	pP	22 05 08.8	-0.5
IRK				pmax	pmax		
	comp=Z,15nm,2.9s,mb4.2						
LZH	**Lanzhou**	**30.08**	**280**	*e*P	**P**	**22 04 57.5**	**-0.3**
LZH				pP	pP	22 05 10.2	+0.7
LZH				sP	sP	22 05

ZAK e 22 07 58.9
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
TLY Talaya 30.31 311 *e*P **P** **22 04 59.5 -0.1**
TLY *e* pP 22 05 11.5 +0.2
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,310nm,17.0s,MS4.0
TLY Talaya 30.31 311 *e*P **P** **22 05 00.0 +0.4**
comp=Z,14nm,1.3s,mb4.5
GYA Guiyang 31.26 260 P **P** **22 05 09.4 +1.2**
GYA pP pP 22 05 21.8 +1.8
GYA sP sP 22 05 28.6 +3.4
GYA PP PP 22 06 13.2 -6.1
GYA PcP PcP 22 08 03.7 +1.8
GYA S **S** **22 10 12.4 +0.6**
GYA sS sS 22 10 32.0 +0.5
GYA ScP ScP 22 11 41.9 +0.7
GYA SS SS 22 11 58.4 -28
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.7s
GYA LR LR
comp=N,720nm,16.8s,MS4.5
GYA LR LR
comp=E,560nm,15.4s,MS4.5
GYA LR LR
comp=Z,750nm,16.6s,MS4.4
CD2 Chengdu 31.70 270 P **P** **22 05 11.7 -0.4**
CD2 pP pP 22 05 23.7 -0.1
CD2 sP sP 22 05 29.2 +0.1
CD2 PP PP 22 06 16.8 -7.3
CD2 PcP PcP 22 08 04.0 +1.0
CD2 S **S** **22 10 15.8 -2.8**
CD2 sS sS 22 10 35.6 -2.8
CD2 SS SS 22 12 05.7 -30
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,160nm,6.1s
CD2 LR LR
comp=N,450nm,17.3s
CD2 LR LR
comp=Z,470nm,16.7s,MS4.2
MOY Mondy 31.92 310 *e*P **P** **22 05 14.6 +0.9**
GTA Gaotai 32.57 287 *e*P **P** **22 05 20.2 +0.6**
GTA pP pP 22 05 27.3 -4.1
GTA PP PP 22 06 29.7 -4.0
GTA PcP PcP 22 08 06.7 +1.5
GTA S **S** **22 10 33.4 +1.4**
GTA ScP ScP 22 11 47.3 +1.8
GTA PcS PcS 22 11 50.5 +0.2
GTA SS SS 22 12 32.1 -21
GTA ScS ScS 22 15 45.0 0.0
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,100nm,5.0s
GTA LR LR
comp=N,210nm,15.2s,MS4.1
GTA LR LR
comp=E,200nm,15.5s,MS4.1
GTA LR LR
comp=Z,240nm,20.2s,MS3.9
QIZ Qiongzhong 32.98 246 P **P** **22 05 26.9 +3.5**
QIZ S **S** **22 10 46.6 +7.9**
QIZ pmax pmax
comp=Z,89nm,6.0s
QIZ LR LR
comp=Z,200nm,16.0s,MS3.9
QIZ Qiongzhong 32.98 246 P **P** **22 05 25.3 +1.9**
DAV Davao City (W) 33.20 210 LR LR 22 16 43.1
comp=Z,140nm,19.4s,MS3.7,baz=220,slow=32
BILL Bilibino 33.96 16⇑*e*P **P** **22 05 31.2 -0.2**
BILL *e* pP 22 05 43.0 -0.2
BILL pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
BILL MLR MLR
comp=Z,100nm,21.0s,MS3.5
BILL Bilibino 33.96 16 P **P** **22 05 31.1 -0.3**
KMI Kunming 35.00 261 ⇑P **P** **22 05 40.2 -0.6**
KMI pP pP 22 05 53.0 +0.3
KMI sP sP 22 05 59.9 +2.0
KMI PP PP 22 06 58.4 -2.3
KMI PcP PcP 22 08 15.2 +2.9
KMI S **S** **22 11 06.5 -3.3**
KMI sS sS 22 11 28.2 -1.5
KMI SS SS 22 13 23.2 -20
KMI ScS ScS 22 15 56.3 -1.8
KMI pmax pmax
comp=Z,36nm,0.9s,mb5.3
KMI pmax pmax
comp=Z,160nm,3.6s
KMI LR LR
comp=N,240nm,16.6s,MS4.3
KMI LR LR
comp=E,310nm,14.8s,MS4.3
KMI LR LR
comp=Z,420nm,19.3s,MS4.2
TIXI Tiksi 35.23 353 *e*P **P** **22 05 40.5 -1.8**
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TIXI MLR MLR
comp=Z,165nm,15.0s,MS3.9
TIXI Tiksi 35.23 353 *e*P **P** **22 05 41.6 -0.7**
comp=Z,3.4nm,0.8s,mb4.3
TNA Tin City 40.79 29 *e*P **P** **22 06 21.4 -7.7**
comp=Z,22nm,1.4s,mb4.6
WMQ Urumqi 40.84 297 *e*P **P** **22 06 31.3 +1.4**
WMQ PP PP 22 08 08.1 +3.7
WMQ PcP PcP 22 08 33.7 +3.7
WMQ S **S** **22 12 37.2 -0.6**
WMQ sS sS 22 12 57.5 -0.4
WMQ ScS ScS 22 16 32.0 +1.1
WMQ pmax pmax
comp=Z,35nm,1.0s,mb4.9
WMQ LR LR
comp=Z,160nm,26.0s,MS3.8
CHTO Chiang Mai 41.33 256 *e*P **P** **22 06 33.7 -0.5**
CHTO pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
CHTO Chiang Mai 41.33 256 *e*P **P** **22 06 33.7 -0.5**
comp=Z,2.5nm,0.7s,mb4.0
CM31 Chiang Mai Arr 41.54 255 *e*P **P** **22 06 35.9 0.0**
comp=Z,1.1nm,0.4s,mb3.8
CMAR Chiang Mai Arr 41.54 255 P **P** **22 06 36.0 +0.1**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR MLR MLR
comp=Z,270nm,18.5s
CMAR Chiang Mai Arr 41.54 255 P **P** **22 06 36.0 0.0**
comp=Z,2.8nm,0.8s,mb3.9,baz=52,slow=4.8,SNR=18
CMAR LR LR 22 25 58.8
comp=Z,270nm,18.5s,MS4.2,baz=78,slow=39
ZALV Zalesovo Beam 41.89 312 P **P** **22 06 38.6 +0.2**
ZALV 22 08 32.9
ZALV pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
ZALV MLR MLR
comp=Z,183nm,18.2s,MS4.0
ZALV Zalesovo Beam 41.89 312 P **P** **22 06 38.5 +0.2**
comp=Z,5.5nm,0.4s,mb4.5,baz=90,slow=7.4,SNR=52
ZALV PcP PcP 22 08 32.9 -0.4
comp=Z,4.9nm,0.9s,baz=92,slow=3.1,SNR=3.4
ZALV LR LR 22 24 55.9
comp=Z,183nm,18.2s,MS4.0,baz=245,slow=37
LSA Lhasa 42.23 275 *e*P **P** **22 06 42.9 +1.4**
LSA pmax pmax
comp=Z,13nm,0.9s,mb4.6
LSA Lhasa 42.23 275 *e*P **P** **22 06 42.9 +1.4**
comp=Z,13nm,0.9s,mb4.5
NVS Novosibirsk 42.82 314⇑*i*P **P** **22 06 45.1 -0.8**
NVS *i* 22 07 04.1
NVS pmax pmax
comp=Z,42nm,1.3s,mb5.0
NVS pmax pmax
comp=N,8.0nm,1.1s
NVS pmax pmax
comp=E,39nm,1.4s
MKAR Makanchi Array 44.11 302 P **P** **22 06 56.4 0.0**
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MKAR MLR MLR
comp=Z,85nm,19.8s
MKAR Makanchi Array 44.11 302 P **P** **22 06 56.4 0.0**
comp=Z,9.3nm,0.8s,mb4.5,baz=86,slow=9.2,SNR=77
MKAR LR LR 22 25 54.1
comp=Z,85nm,19.8s,MS3.7,baz=82,slow=37
MKAR Makanchi Array 44.11 302 P **P** **22 06 56.4 0.0**
MKAR LR LR 22 25 54.1
KSM Kuching 45.62 226 *e*P **P** **22 07 09.5 +0.8**
comp=Z,11nm,0.8s,mb4.8
KSM *e*pP pP 22 07 22.3 +1.4
KURK Kurchatov 45.91 308 *ce*P **P** **22 07 10.2 -0.5**
KURK pmax pmax
comp=Z,49nm,1.0s,mb5.4
KURK Kurchatov 45.91 308 *e*P **P** **22 07 10.3 -0.4**
comp=Z,54nm,1.0s,mb5.4
KAPI Kappang 46.53 210 P **P** **22 07 15.0 -0.9**
comp=Z,14nm,0.8s,mb4.9,baz=348,slow=6.4,SNR=8.4
KAPI Kappang 46.53 210 P **P** **22 07 15.6 -0.3**
comp=Z,44nm,1.0s,mb5.3
KAPI *e* pP 22 07 27.4 -0.7
KDAK Kodiak Island 47.03 42 *i* P **P** **22 07 19.3 -0.1**
KDAK Kodiak Island 47.03 42 P **P** **22 07 19.4 +0.1**
comp=Z,12nm,0.8s,mb4.8,baz=295,slow=9.5,SNR=8.5
KDAK Kodiak Island 47.03 42 P **P** **22 07 19.4 +0.1**
GUN Gumba 47.18 276 *e*P **P** **22 07 21.5 +0.6**
comp=Z,19nm,0.4s,mb5.4
KTH Kantishna Hill 47.68 34 *e*P **P** **22 07 25.8 +1.5**
comp=Z,30nm,1.6s,mb5.1
PKI Pulchoki 47.70 275 *e*P **P** **22 07 25.2 +0.2**
comp=Z,24nm,0.8s,mb5.3
KKN Kakani 47.70 276 *e*P **P** **22 07 25.3 +0.3**
comp=Z,35nm,0.7s,mb5.5
PKIN Phulchoki 47.71 275 *e*P **P** **22 07 25.0 0.0**
comp=Z,10nm,0.5s,mb5.1
PKIN Phulchoki 47.71 275 *e*P **P** **22 07 25.2 +0.2**
comp=Z,22nm,0.6s,mb5.3
GKN Gorkha 48.12 276 *e*P **P** **22 07 28.6 +0.4**
comp=Z,111nm,1.1s,mb5.8
MCK McKinley 48.57 34 P **P** **22 07 30.4 -0.7**
KULM Kulim 48.87 240 *e*P **P** **22 07 34.1 0.0**
COLA College 49.01 32 *e*P **P** **22 07 35.4 +0.9**
KOLN Koldanda 49.05 277 *e*P **P** **22 07 35.9 +0.5**
comp=Z,46nm,1.2s,mb5.4
TKM2 Tokmak 2 49.62 298 P **P** **22 07 40.6 +1.1**
SNR=15
TKM2 Tokmak 2 49.62 298 *e*P **P** **22 07 40.5 +1.0**
TKM2 *e**PP pP 22 07 52.3 +0.5
TKM2 pmax pmax
comp=Z,32nm,1.2s,mb5.2
TKM2 Tokmak 2 49.62 298 *e*P **P** **22 07 40.5 +1.0**
comp=Z,32nm,1.2s,mb5.2
TKM2 *e*pP pP 22 07 52.2 +0.4
KBK Karagaybulak 50.16 298 P **P** **22 07 44.4 +0.8**
SNR=12
KAKA Kakadu 50.26 191 *e*P **P** **22 07 53.4 +8.9**
comp=Z,74nm,0.8s,mb5.8
USP Ospenovka 50.29 299 P **P** **22 07 44.8 +0.2**
SNR=9.7
FRU Bishkek 50.34 299 *e*P **P** **22 07 41.0 -4.0**
FRU *e* pP 22 07 54.5 -2.8
AAK Ala-Archa 50.48 298 P **P** **22 07 46.1 +0.1**
SNR=5.6
AAK Ala-Archa 50.48 298 *ce*P **P** **22 07 46.1 0.0**
AAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
AAK Ala-Archa 50.48 298 *e*P **P** **22 07 46.3 +0.3**
comp=Z,7.8nm,1.1s,mb4.7
AAK *e*pP pP 22 07 58.3 -0.1
BVAR Borovoye Array 50.55 312 P **P** **22 07 46.4 0.0**
BVAR 22 09 03.6
BVAR pmax pmax
comp=Z,10.0nm,0.8s
BVAR MLR MLR
comp=Z,285nm,18.7s
BVAR Borovoye Array 50.55 312 P **P** **22 07 46.4 +0.1**
comp=Z,10nm,0.8s,mb4.8,baz=76,slow=7.8,SNR=42
BVAR PcP PcP 22 09 03.6 -0.1
comp=Z,4.6nm,0.8s,baz=108,slow=4.8,SNR=4.9
BVAR LR LR 22 30 24.0
comp=Z,285nm,18.7s,MS4.3,slow=37
UCH Uchtor 50.59 298 *e*P **P** **22 07 47.7 +0.8**
comp=Z,3.5nm,0.9s,mb4.3
BRVK Borovoye 50.60 312 P **P** **22 07 47.7 +0.9**
comp=Z,124nm,1.0s,mb5.8,SNR=9.1
BRVK Borovoye 50.60 312 *ce*P **P** **22 07 46.6 -0.2**
BRVK pmax pmax
comp=Z,21nm,0.9s,mb5.1
BRVK Borovoye 50.60 312 *e*P **P** **22 07 47.0 +0.2**
comp=Z,19nm,0.9s,mb5.0
EKS2 Erkin-Say 50.98 299 *e*P **P** **22 07 49.9 +0.1**
comp=Z,5.2nm,0.9s,mb4.5
AML Almayashu 51.20 298 P **P** **22 07 52.8 +1.3**
SNR=22
AML Almayashu 51.20 298 *e*P **P** **22 07 52.7 +1.2**
comp=Z,26nm,1.1s,mb5.1
INK Inuvik 54.32 27 *e*P **P** **22 08 14.7 +0.6**
INK pmax pmax
comp=Z,40nm,2.3s
INK Inuvik 54.32 27 P **P** **22 08 14.6 +0.5**
comp=Z,1.6nm,0.4s,mb4.3,baz=293,slow=7.2,SNR=11
INK Inuvik 54.32 27 *e*P **P** **22 08 14.7 +0.6**
comp=Z,40nm,2.3s,mb4.9
SVE Sverdlovsk 55.12 319⇑*e*P **P** **22 08 20.8 +0.8**
SVE pmax pmax
comp=Z,37nm,1.1s,mb5.3
SOKR Solikamsk 56.30 322 *e*P **P** **22 08 28.8 +0.4**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU Arti 56.33 319 *c i*P **P** **22 08 28.5 -0.2**
ARU *e**PP pP 22 08 39.8 -1.4
ARU *e* 22 09 24.7
ARU *e* 22 10 31.7
ARU S **S** **22 16 13.2 -2.4**
ARU pmax pmax
comp=Z,49nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,206nm,20.0s,MS4.2
ARU Arti 56.33 319 *e*P **P** **22 08 28.4 -0.3**
comp=Z,55nm,1.2s,mb5.5
ARU *e*pP pP 22 08 40.6 -0.6
FITZ Fitzroy Crossi 56.89 198 P **P** **22 08 32.3 -0.8**
comp=Z,3.0nm,0.6s,mb4.5,baz=15,slow=6.7,SNR=9.7
FITZ Fitzroy Crossi 56.89 198 *e*P **P** **22 08 33.2 +0.1**
comp=Z,7.3nm,0.6s,mb4.9
FITZ *e* 22 08 40.2
FITZ pP pP 22 08 45.5 -0.1
WRAB Tennant Creek 57.12 188 *e*P pP 22 08 44.8 -2.3
WRA Warramunga Arr 57.13 188 P **P** **22 08 33.4 -1.3**
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 57.13 188 P **P** **22 08 33.4 -1.3**
comp=Z,2.4nm,0.5s,mb4.5,baz=6.3,slow=7.2,SNR=35
KBL Kabul 57.42 291 *e*P **P** **22 08 36.9 +0.1**
KBL pmax pmax
comp=Z,20nm,1.1s,mb5.1
KBL Kabul 57.42 291 *e*P **P** **22 08 36.9 +0.1**
comp=Z,20nm,1.1s,mb5.0
ABKAR Akbulak array 57.92 310⇑*i*P **P** **22 08 39.6 -0.4**
comp=Z,18nm,0.8s,mb5.1
AKTO Aktyubinsk 58.65 312 LR LR 22 35 23.2
comp=Z,159nm,19.0s,MS4.2,baz=59,slow=37
SPITS Spitsbergen Ar 60.47 349 P **P** **22 08 57.9 +0.6**
SPITS pmax pmax
comp=Z,1.0nm,0.4s
SPITS Spitsbergen Ar 60.47 349 P **P** **22 08 57.9 +0.7**
comp=Z,1.1nm,0.4s,mb4.2,baz=69,slow=4.7,SNR=11
ASAR Alice Springs 60.85 188 P **P** **22 08 59.6 -0.9**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 60.85 188 P **P** **22 08 59.6 -0.9**
comp=Z,2.5nm,0.8s,mb4.4,baz=11,slow=6.9,SNR=22
MBWA Marble Bar 61.46 203 *e*P **P** **22 09 04.2 -0.4**
comp=Z,14nm,0.8s,mb5.2
PALK Palekele 62.41 258 *e*P **P** **22 09 11.4 +0.1**
RES Resolute Bay 62.53 14 *e*P **P** **22 09 11.0 -0.2**
RES pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
RES Resolute Bay 62.53 14 *e*P **P** **22 09 11.0 -0.2**
comp=Z,8.9nm,1.2s,mb4.8
KEV Kevo 63.39 339 *e*P **P** **22 09 16.1 -0.9**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
KEV Kevo 63.39 339 *ep* **P** **22 09 16.1 -0.9**
comp=Z,5.1nm,0.6s,mb4.8
DZM Mont Dzumac 63.40 154 *e*LR LR 22 27 59.7
comp=Z,193nm,22.1s
KLMR Klimovskoe 63.72 328⇓*i*P **P** **22 09 18.4 -0.9**
KLMR *e**PP pP 22 09 30.2 -1.7
KLMR *e* 22 09 53.5
KLMR *e* 22 11 38.5
KLMR pmax pmax
comp=Z,20nm,1.4s,mb5.0
YKA Yellowknife Ar 63.74 30 P **P** **22 09 19.3 -0.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 63.74 30 P **P** **22 09 19.3 -0.1**
comp=Z,0.6nm,0.7s,mb3.7,baz=302,slow=6.9,SNR=14
ARCES ARCESS Array B 63.95 339 P **P** **22 09 21.1 +0.4**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
ARCES MLR MLR
comp=Z,131nm,21.3s
ARCES ARCESS Array B 63.95 339 P **P** **22 09 21.1 +0.4**
comp=Z,7.6nm,0.8s,mb4.8,baz=57,slow=7.9,SNR=31
ARCES LR LR 22 39 27.9
comp=Z,131nm,21.3s,MS4.1,baz=48,slow=38
DAG Danmarks Havn 65.71 355⇑*i*P **P** **22 09 32.1 0.0**
DAG pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
DAG Danmarks Havn 65.71 355⇑*i*P **P** **22 09 32.1 0.0**
comp=Z,8.4nm,0.9s,mb4.8
JOF Joensuu 65.92 332 *e*P **P** **22 09 31.9 -1.7**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
JOF Joensuu 65.92 332 *ep* **P** **22 09 31.9 -1.7**
comp=Z,5.5nm,0.6s,mb4.8
OBN Obninsk 68.06 323⇑*i*P **P** **22 09 46.8 -0.5**
OBN *i **PP pP 22 09 59.2 -0.9
OBN *e* 22 12 14.6
OBN pmax pmax
comp=Z,31nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
OBN Obninsk 68.06 323 *e*P **P** **22 09 47.1 -0.2**
comp=Z,18nm,1.1s,mb5.0
KAF Kangasniemi 68.26 333 *e*P **P** **22 09 46.4 -2.0**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KAF Kangasniemi 68.26 333 *ep* **P** **22 09 46.4 -2.0**
comp=Z,9.0nm,0.6s,mb5.0
STKA Stephens Creek 68.62 180 P **P** **22 09 50.8 -0.1**
comp=Z,2.6nm,0.8s,mb4.2,baz=309,slow=5.8,SNR=4.6
STKA Stephens Creek 68.62 180 *e*P **P** **22 09 50.8 -0.1**
comp=Z,0.8nm,0.8s,mb3.7
FORT Forrest 68.68 192 *e*P **P** **22 09 55.5 +4.2**
FINES FINESS Array B 68.77 332 P **P** **22 09 51.4 -0.2**
FINES pmax pmax
comp=Z,21nm,0.9s
FINES MLR MLR
comp=Z,102nm,18.6s
FINES FINESS Array B 68.77 332 P **P** **22 09 51.4 -0.2**
comp=Z,21nm,0.9s,mb5.1,baz=59,slow=7.4,SNR=54
FINES LR LR 22 42 16.4
comp=Z,102nm,18.6s,MS4.1,baz=125,slow=38
FINES FINESS Array B 68.77 332 P **P** **22 09 51.4 -0.2**
FINES LR LR 22 42 16.4
VSR Storozhevoye 68.90 319 *e*P **P** **22 09 52.6 0.0**
VSR *e**PP pP 22 10 04.2 -1.2
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,1.2s
VSU Vasula 70.41 330 *c i*P **P** **22 10 01.7 -0.1**
VSU pmax pmax
comp=Z,33nm,1.0s,mb5.2
SUMG Summit 70.62 360 *e*P **P** **22 10 03.7 +0.8**
comp=Z,20nm,1.2s,mb4.9
SUMG *e*pP pP 22 10 18.0 +2.4
ZEI Tsey 70.79 309 *e*P **P** **22 10 02.2 -2.2**
ZEI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIV Kislovodsk 70.89 311⇑*i*P **P** **22 10 05.1 +0.2**
KIV *i **PP pP 22 10 17.6 -0.2
KIV *e* 22 12 47.9
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
KIV Kislovodsk 70.89 311 *e*P **P** **22 10 05.4 +0.5**
GNI Garni 71.69 307 *ce*P **P** **22 10 10.3 +0.4**
GNI pmax pmax
comp=Z,9.0nm,1.3s
BMO Blue Mountains 71.87 47 *e*P **P** **22 10 17.4 +6.6**
BMO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BMO Blue Mountains 71.87 47 *e*P **P** **22 10 17.4 +6.5**
comp=Z,9.2nm,1.1s,mb4.6
SCO Scoresbysund 72.05 354⇑*i*P **P** **22 10 12.2 +0.7**
IZAR Zarasai 72.37 328 *e*P **P** **22 10 13.7 +0.1**
IDID Didziasalis 72.44 327 *e*P **P** **22 10 14.5 +0.4**
ISAL Salakas 72.54 327 *e*P **P** **22 10 14.9 +0.3**
NACGM Naroch 72.69 327 *e* **P** **22 10 13.0 -2.6**
SOC Sochi 72.88 312 *e*P **P** **22 10 15.5 -1.4**
SOC *e*PPP 22 14 38.5
SOC *e*S S 22 19 34.1 -5.7
SOC *e*SSS 22 27 33.4
SOC pmax pmax
comp=Z,11nm,0.9s,mb4.8
FFC Flin Flon 73.64 33 *i* P **P** **22 10 23.9 +2.7**
FFC Flin Flon 73.64 33 *e*P **P** **22 10 21.0 -0.1**
comp=Z,5.8nm,0.9s,mb4.5
FFC *e*pP pP 22 10 31.8 -2.3
FCC Fort Churchill 73.93 27 *e*P **P** **22 10 22.6 -0.2**
comp=Z,0.1nm,1.0s
HFS Hagfors 74.04 336 P **P** **22 10 23.5 +0.1**
HFS pmax pmax
comp=Z,10.0nm,0.7s
HFS MLR MLR
comp=Z,183nm,20.2s
HFS Hagfors 74.04 336 P **P** **22 10 23.5 +0.1**
comp=Z,10nm,0.7s,mb4.9,baz=56,slow=5.6,SNR=40
HFS LR LR 22 45 27.1
comp=Z,182nm,20.1s,MS4.4,baz=36,slow=38
LRM Limekiln Ridge 74.08 44 P **P** **22 10 24.9 +1.0**
NB2 NORSAR Subarra 74.14 337 P **P** **22 10 23.8 -0.2**
comp=Z,40nm,1.1s,mb5.3,baz=40,slow=6.2
NOA NORSAR Array B 74.14 337 P **P** **22 10 24.1 +0.1**
NOA pmax pmax
comp=Z,16nm,0.8s
NOA MLR MLR
comp=Z,96nm,18.3s
NOA NORSAR Array B 74.14 337 P **P** **22 10 24.1 +0.2**
comp=Z,16nm,0.8s,mb5.0,baz=39,slow=5.8,SNR=52
NOA LR LR 22 46 10.8
comp=Z,96nm,18.3s,MS4.1,baz=30,slow=38
AKASG Malin Array Be 74.26 322 P **P** **22 10 24.5 -0.4**
AKASG pmax pmax
comp=Z,12nm,0.5s
AKASG MLR MLR
comp=Z,141nm,19.1s
AKASG Malin Array Be 74.26 322 P **P** **22 10 24.5 -0.4**
comp=Z,12nm,0.5s,mb5.1,baz=46,slow=5.9,SNR=51
AKASG LR LR 22 45 58.6
comp=Z,141nm,19.1s,MS4.3,baz=70,slow=38
AKASG Malin Array Be 74.26 322 P **P** **22 10 24.5 -0.4**
AKASG LR LR 22 45 58.6
AKBB Malin Array Si 74.26 322 *e*P **P** **22 10 24.6 -0.3**
AKBB *e**PP pP 22 10 36.8 -1.0
KIEV Kiev 74.28 322⇑*i*P **P** **22 10 24.5 -0.5**
KIEV *e**PP pP 22 10 36.8 -1.1
KIEV pmax pmax
comp=Z,21nm,0.9s,mb5.1
KIEV Kiev 74.28 322⇑*i*P **P** **22 10 24.5 -0.4**
comp=Z,20nm,0.9s,mb5.1
KIEV *e*pP pP 22 10 36.8 -1.1
NAO01 NORSAR Array S 74.39 337 *e*P **P** **22 10 25.7 +0.3**
SUW Suwalki 74.85 327 *e*P **P** **22 10 27.6 -0.6**
SUW Suwalki 74.85 327 *e*P **P** **22 10 27.9 -0.3**
SUW *e*pP pP 22 10 40.8 -0.4
NVAR Mina Array Bea 74.93 53 P **P** **22 10 30.3 +1.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=288,slow=6.9,SNR=5.2
NVAR Mina Array Bea 74.93 53 P **P** **22 10 30.3 +1.3**
SIM Simferopol' 75.30 316 P **P** **22 10 31.2 +0.2**
SIM pmax pmax
comp=Z,13nm,1.0s,mb4.8
SIM MLR MLR
comp=Z,92nm,18.0s,MS4.1
MIB Mutribah 75.69 297 *e*P **P** **22 10 32.3 -1.2**
MIB AMb AMB 22 10 34.0

comp=Z,23nm,1.0s,mb5.1
SFJD Kangerlussuaq 75.82 5 *e*P **P 22 10 32.3 -1.3**
SFJD pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SFJD Kangerlussuaq 75.82 5 *i* P **P 22 10 32.3 -1.3**
comp=Z,4.1nm,0.8s,mb4.4
QRN Al-Qurain 75.87 295 *e*P **P 22 10 33.4 -1.1**
QRN AMb AMB 22 10 34.6
comp=Z,41nm,1.1s,mb5.3
RDF Al-Radifah 76.03 296 *e*P **P 22 10 34.3 -1.2**
RDF AMb AMB 22 10 36.5
comp=Z,50nm,1.0s,mb5.4
MALT Malatya 76.76 308 *e*P **P 22 10 40.8 +1.4**
MALT pmax pmax
comp=Z,11nm,1.1s,mb4.7
MALT Malatya 76.76 308 *e*P **P 22 10 40.8 +1.4**
comp=Z,11nm,1.1s,mb4.7
MALT Malatya 76.76 308⇓ *i*P **P 22 10 41.0 +1.6**
KIS Kishinev 76.86 320 *e*P **P 22 10 37.0 -2.9**
KIS MLR MLR
comp=Z,500nm,20.0s,MS4.8
KIS MLR MLR
comp=Z,400nm,20.0s
DUG Dugway 77.30 49 *e*P **P 22 10 42.2 -0.2**
DUG *e* pP 22 10 52.5 -2.9
LVV L'vov 77.34 324 *e*P **P 22 10 42.5 0.0**
LVV *e* pP 22 10 55.1 -0.4
LVV MLR MLR
comp=N,50nm,16.0s,MS4.2
LVV MLR MLR
comp=E,80nm,16.0s,MS4.2
LVV MLR MLR
comp=Z,90nm,16.0s,MS4.2
BSD Bornholm Skovb 77.40 332⇑ *i*P **P 22 10 42.4 -0.3**
BSD pmax pmax
comp=Z,12nm,1.0s,mb4.8
BSD Bornholm Skovb 77.40 332⇑ *i*P **P 22 10 42.4 -0.3**
comp=Z,12nm,1.0s,mb4.8
PDAR Pinedale Array 77.60 45 P **P 22 10 44.3 +0.2**
comp=Z,0.6nm,0.7s,mb3.7,baz=303,slow=5.0,SNR=4.1
COP Copenhagen 77.88 333⇑ *i*P **P 22 10 45.6 +0.2**
COP pmax pmax
comp=Z,21nm,0.9s,mb5.1
COP Copenhagen 77.88 333⇑ *i*P **P 22 10 45.6 +0.2**
comp=Z,21nm,0.9s,mb5.1
KWP Kalwaria Pacla 78.09 324 *e*P **P 22 10 47.5 +0.8**
KWP Kalwaria Pacla 78.09 324 *e*P **P 22 10 47.4 +0.7**
comp=Z,51nm,1.0s,mb5.4
KWP Kalwaria Pacla 78.09 324⇓ *i*P **P 22 10 47.1 +0.4**
BUR08 Bucovina Ar. S 78.27 322 *e*P **P 22 10 48.1 +0.5**
BURAR Bucovina Array 78.28 322⇑ *i*P **P 22 10 48.2 +0.5**
MUD Monsted U'grnd 78.41 335 *i* P **P 22 10 47.6 -0.7**
MUD pmax pmax
comp=Z,15nm,0.9s,mb4.9
MUD Monsted U'grnd 78.41 335 *i* P **P 22 10 47.6 -0.7**
comp=Z,15nm,0.9s,mb4.9
VRI Vrincioaia 78.70 320 P **P 22 10 51.9 +1.8**
VRI Vrincioaia 78.70 320⇑ *i*P **P 22 10 51.1 +1.0**
PLOR Plostina 78.75 320⇑ *i*P **P 22 10 52.3 +1.9**
KOLS Kolonicke sedl 78.79 324 *e*P **P 22 10 51.1 +0.6**
KOLS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KOLS Kolonicke sedl 78.79 324 *e*P **P 22 10 51.1 +0.6**
comp=Z,8.3nm,1.0s,mb4.6
KOLS Kolonicke sedl 78.79 324 *e*P **P 22 10 51.1 +0.6**
BRTR Keskin Array B 78.83 312 P **P 22 10 51.4 +0.5**
BRTR 22 13 49.2
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR MLR MLR
comp=Z,38nm,18.0s
BRTR Keskin Array B 78.83 312 P **P 22 10 51.4 +0.5**
comp=Z,4.3nm,0.9s,mb4.4,baz=84,slow=5.1,SNR=26
BRTR PP PP 22 13 49.2 0.0
comp=Z,1.4nm,1.0s,baz=88,slow=6.6,SNR=4.3
BRTR LR LR 22 50 24.1
comp=Z,38nm,18.0s,MS3.8,baz=187,slow=39
STHS Stebnicka Huta 78.92 325 *e*P **P 22 10 52.8 +1.6**
STHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
STHS Stebnicka Huta 78.92 325 *e*P **P 22 10 52.8 +1.6**
comp=Z,11nm,1.1s,mb4.7
STHS Stebnicka Huta 78.92 325 *e*P **P 22 10 52.8 +1.6**
UZH Uzhgorod 78.99 324⇑ *i*P **P 22 10 51.8 +0.2**
UZH *i* pP 22 11 04.6 0.0
OJC Ojcow 79.00 326 *i* P **P 22 10 52.2 +0.5**
TRPA Tarpa 79.22 323⇑ *i*P **P 22 10 53.8 +0.9**
NIE Niedzica 79.35 325 *e*P **P 22 10 54.5 +0.9**
MLR Muntele Rosu 79.36 320 P **P 22 10 53.8 +0.2**
comp=Z,2.0nm,0.5s,mb4.3,baz=356,slow=8.5,SNR=10
MLR LR LR 22 48 03.9
comp=Z,159nm,21.4s,MS4.3,baz=52,slow=37
MLR Muntele Rosu 79.36 320⇑ *i*P **P 22 10 54.1 +0.4**
ULM Lac du Bonnet 79.44 33 LR LR 22 50 16.5
comp=Z,40nm,18.4s,MS3.8,baz=59,slow=39
RSSD Black Hills 79.76 42 *e*P **P 22 10 57.1 +1.2**
RUE Ruedersdorf 79.84 331 *e*P **P 22 10 56.9 +0.7**
comp=Z,14nm,0.5s,mb5.2
VOIR 79.85 320 P **P 22 10 57.4 +1.0**
VOIR 79.85 320⇓ *i*P **P 22 10 57.4 +1.0**
KECS Kecovo 79.94 325 *e*P **P 22 10 57.9 +1.1**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 79.94 325 *e*P **P 22 10 57.9 +1.1**
comp=Z,2.3nm,0.8s,mb4.2
KECS Kecovo 79.94 325 *e*P **P 22 10 57.9 +1.1**
OKC Ostrava-Krasne 80.01 327 *e*P **P 22 10 58.0 +0.8**
OKC *e**PP pP 22 11 09.6 -0.6
OKC MLR MLR
comp=Z,100nm,16.1s,MS4.2
OKC Ostrava-Krasne 80.01 327 *e*P **P 22 10 58.0 +0.8**
OKC *e*pP pP 22 11 09.6 -0.6
OKC AMS AMS 22 49 10.0
comp=Z,100nm,16.1s
BSEG Bad Segeberg 80.02 333 *e*P **P 22 10 57.4 +0.3**
comp=Z,26nm,1.0s,mb5.1
BSEG Bad Segeberg 80.02 333 *e*P **P 22 10 57.4 +0.3**
BSEG pmax pmax
comp=Z,26nm,1.0s,mb5.1
KSP Ksiaz 80.06 328 *e*P **P 22 10 58.0 +0.6**
KSP Ksiaz 80.06 328⇑ *e*P **P 22 10 57.9 +0.5**
KSP *e**PP pP 22 11 10.1 -0.3
DRGR 80.08 322 P **P 22 10 58.4 +0.8**
DRGR 80.08 322⇓ *i*P **P 22 10 58.3 +0.7**
MORC Moravsky Berou 80.32 327 *e*P **P 22 10 59.5 +0.7**
MORC Moravsky Berou 80.32 327⇑ *i*P **P 22 10 59.6 +0.8**
DPC Dobruska-Polom 80.42 328 *e*P **P 22 11 00.2 +0.9**
DPC *e**PP pP 22 11 12.9 +0.5
DPC MLR MLR
comp=Z,100nm,18.9s,MS4.2
DPC Dobruska-Polom 80.42 328 *e*P **P 22 11 00.2 +0.9**
DPC *e*pP pP 22 11 12.9 +0.5
DPC AMS AMS 22 49 40.0
comp=Z,100nm,18.9s
PSZ Piszkesteto 80.62 324⇑ *e*P **P 22 11 01.2 +0.7**
PSZ Piszkesteto 80.62 324⇑ *i*P **P 22 11 01.5 +1.0**
VYHS Vyhne 80.69 325 *e*P **P 22 11 01.6 +0.8**
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VYHS Vyhne 80.69 325 *e*P **P 22 11 01.6 +0.8**
comp=Z,6.4nm,1.1s,mb4.5
VYHS Vyhne 80.69 325 *e*P **P 22 11 01.5 +0.7**
KOLL Kolacno 80.82 326 *e*P **P 22 11 02.3 +0.8**
KOLL Kolacno 80.82 326 *e*P **P 22 11 02.3 +0.8**
BRG Berggiesshubel 81.01 329 *e*P **P 22 11 02.7 +0.2**
comp=Z,18nm,1.1s,mb4.9
BRG Berggiesshubel 81.01 329 *e*P **P 22 11 02.6 +0.1**
comp=Z,18nm,1.1s,mb4.9
BRG *e* pP 22 11 14.9 -0.6
comp=Z,3.3nm,0.8s
BRG
comp=N,132nm,22.4s
BRG
comp=E,85nm,22.5s
BRG
comp=Z,155nm,17.2s
BRG Berggiesshubel 81.01 329 *e*P **P 22 11 02.6 +0.1**
BRG *e* pP 22 11 14.9 -0.6
BRG pmax pmax
comp=Z,11nm,1.1s,mb4.7
BRG MLR MLR
comp=N,79nm,22.4s,MS4.1
BRG MLR MLR
comp=E,51nm,22.5s,MS4.1
BRG MLR MLR
comp=Z,93nm,17.2s
PVCC Panska Ves 81.02 329 *e*P **P 22 11 03.2 +0.7**
PVCC *e**PP pP 22 11 15.9 +0.3
PVCC MLR MLR
comp=Z,200nm,18.2s,MS4.5
PVCC Panska Ves 81.02 329 *e*P **P 22 11 03.2 +0.7**
PVCC *e*pP pP 22 11 15.9 +0.3
PVCC AMS AMS 22 50 00.0
comp=Z,200nm,18.2s
GZR Gura Zlata 81.03 321 P **P 22 11 03.3 +0.6**
GZR Gura Zlata 81.03 321⇑ *i*P **P 22 11 03.5 +0.8**
CLL Collm 81.06 330 *e*P **P 22 11 02.4 -0.3**
comp=Z,26nm,1.0s,mb5.1
CLL Collm 81.06 330⇑ *i*P **P 22 11 02.7 0.0**
CLL *e**PP pP 22 11 15.0 -0.8
CLL pmax pmax
comp=Z,27nm,1.0s,mb5.1
CLL MLR MLR
comp=Z,100nm,19.7s,MS4.2
CLL Collm 81.06 330⇑ *i*P **P 22 11 02.7 0.0**
comp=Z,27nm,1.0s,mb5.1
CLL *e*pP pP 22 11 15.0 -0.8
CLL LR LR
comp=Z,100nm,19.7s,MS4.2
CLL Collm 81.06 330⇑ *i*P **P 22 11 02.7 0.0**
comp=Z,27nm,1.0s,mb5.1
CLL *e*pP pP 22 11 15.0 -0.8
CLL LmV 22 52 00.0
comp=Z,100nm,19.7s
VRAC Vranov 81.08 327 P **P 22 11 04.3 +1.4**
VRAC Vranov 81.08 327 P **P 22 11 03.4 +0.5**
comp=Z,4.7nm,0.4s,mb4.7,baz=30,slow=6.7,SNR=15
NRDL Niedersach Rie 81.24 332 *e*P **P 22 11 03.8 +0.1**
comp=Z,10.0nm,1.0s,mb4.7
BUD Budapest 81.34 325⇑ *e*P **P 22 11 03.6 -0.7**
PRU Pruhonice 81.44 329 *e*P **P 22 11 05.4 +0.6**
PRU AMS AMS 22 50 20.0
BZS Buzias 81.45 322 P **P 22 11 05.0 +0.1**
BZS Buzias 81.45 322⇑ *i*P **P 22 11 04.9 0.0**
ASF Jabal al Asfar 81.50 304 P **P 22 11 05.9 +0.5**
ASF pmax pmax
comp=Z,4.0nm,0.9s
ASF MLR MLR
comp=Z,57nm,18.3s
ASF Jabal al Asfar 81.50 304 P **P 22 11 05.9 +0.5**
comp=Z,3.9nm,0.9s,mb4.3,baz=31,slow=5.9,SNR=6.7
ASF LR LR 22 51 19.2
comp=Z,56nm,18.3s,MS4.0,baz=106,slow=39
TREC Trest 81.57 328 *e*P **P 22 11 06.4 +0.9**
TREC *e**PP pP 22 11 17.8 -0.8
TREC MLR MLR
comp=Z,200nm,17.9s,MS4.5
TREC Trest 81.57 328 *e*P **P 22 11 06.4 +0.9**
TREC *e*pP pP 22 11 17.8 -0.8
TREC AMS AMS 22 50 20.0
comp=Z,200nm,17.9s
CLZ Clausthal 81.66 332 *e*P **P 22 11 06.2 +0.3**
comp=Z,25nm,1.1s,mb5.1
CLZ Clausthal 81.66 332 *e*P **P 22 11 06.2 +0.3**
CLZ pmax pmax
comp=Z,25nm,1.1s,mb5.1
ZST Bratislava 81.69 326 *e*P **P 22 11 07.4 +1.3**
ZST pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ZST Bratislava 81.69 326 *e*P **P 22 11 07.4 +1.3**
comp=Z,6.6nm,1.0s,mb4.5
ZST Bratislava 81.69 326 *e*P **P 22 11 07.4 +1.3**
ISCO Idaho Springs 81.79 46 *e*P **P 22 11 06.9 +0.1**
MMAI Mount Meron Ar 81.95 305 P **P 22 11 08.6 +0.8**
comp=Z,11nm,0.9s,mb4.8,baz=46,slow=7.1,SNR=10
MMAI LR LR 22 50 56.2
comp=Z,87nm,20.1s,MS4.1,baz=205,slow=38
WERD Werda 82.00 330 *e*P **P 22 11 07.9 +0.2**
comp=Z,9.0nm,1.1s,mb4.6
GUNZ Gunzen 82.06 330 *e*P **P 22 11 08.2 +0.2**
comp=Z,12nm,1.1s,mb4.7
WERN Wernitzgruen 82.10 330 *e*P **P 22 11 08.6 +0.3**
comp=Z,11nm,1.0s,mb4.7
NKC Novy Kostel 82.11 330 *e*P **P 22 11 08.6 +0.3**
NKC *e**PP pP 22 11 22.0 +0.6
MOX Moxa 82.12 330 *e*P **P 22 11 08.4 0.0**
comp=Z,15nm,1.3s,mb4.8
MOX Moxa 82.12 330 *e*P **P 22 11 08.4 0.0**
MOX pmax pmax
comp=Z,15nm,1.3s,mb4.8
IBBN Ibbenburen 82.25 333 *e*P **P 22 11 08.9 -0.1**
comp=Z,34nm,1.2s,mb5.2
CONA Conrad Observa 82.44 327⇓ *i*P **P 22 11 10.9 +0.8**
comp=Z,13nm,1.0s,mb4.8,SNR=13
KHC Kasperske Hory 82.50 328 *e*P **P 22 11 10.8 +0.4**
KHC *e**PP pP 22 11 22.9 -0.6
KHC MLR MLR
comp=Z,200nm,16.5s,MS4.6
KHC Kasperske Hory 82.50 328 *e*P **P 22 11 10.6 +0.2**
comp=Z,18nm,1.0s,mb5.0
KHC *e*pP pP 22 11 23.4 -0.1
KHC Kasperske Hory 82.50 328 *e*P **P 22 11 10.8 +0.4**
KHC *e*pP pP 22 11 22.9 -0.6
KHC AMS AMS 22 50 50.0
comp=Z,200nm,16.5s
RDO Rodhopi 82.54 317 P **P 22 11 11.6 +0.8**
ROTZ Rotzenmuhle 82.57 330 *e*P **P 22 11 11.3 +0.6**
comp=Z,16nm,1.4s,mb4.9
RZN Rozhen 82.61 318 P **P 22 11 11.1 0.0**
GEC2 GERESS Array S 82.67 328 *e*P **P 22 11 11.3 0.0**
comp=Z,10.0nm,1.1s,mb4.8
GEC2 GERESS Array S 82.67 328 *e*P **P 22 11 11.3 0.0**
GEC2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
GERES GERESS Array B 82.67 328 P **P 22 11 11.3 0.0**
GERES pmax pmax
comp=Z,7.0nm,0.9s
GERES MLR MLR
comp=Z,123nm,18.2s
GERES GERESS Array B 82.67 328 P **P 22 11 11.3 +0.1**
comp=Z,6.9nm,0.9s,mb4.7,baz=39,slow=5.1,SNR=47
GERES LR LR 22 51 34.2
comp=Z,123nm,18.1s,MS4.3,baz=232,slow=38
VTS Vitosha 82.78 319 P **P 22 11 12.5 +0.5**
VTS Vitosha 82.78 319 P **P 22 11 12.0 0.0**
WET Wettzell 82.78 329 *e*P **P 22 11 12.2 +0.3**
comp=Z,10.0nm,1.0s,mb4.8
WET Wettzell 82.78 329 *e*P **P 22 11 12.2 +0.3**
WET pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GRA1 Grafenberg Arr 83.03 330 *e*P **P 22 11 13.7 +0.6**
comp=Z,37nm,1.0s,mb5.4
GRF Grafenberg Arr 83.03 330 *e*P **P 22 11 13.7 +0.6**
comp=Z,37nm,1.0s,mb5.4
GRF Grafenberg Arr 83.03 330 *e*P **P 22 11 13.7 +0.6**
GRF pmax pmax
comp=Z,37nm,1.0s,mb5.4
GRF Grafenberg Arr 83.03 330 *e*P **P 22 11 13.7 +0.6**
GRF pmax pmax
comp=Z,37nm,1.0s,mb5.4
EKA Eskdalemuir Ar 83.08 341 P **P 22 11 13.9 +0.6**
EKA pmax pmax
comp=Z,7.0nm,0.9s
EKA Eskdalemuir Ar 83.08 341 P **P 22 11 13.8 +0.6**
comp=Z,7.0nm,0.9s,mb4.7,baz=29,slow=5.1,SNR=12
ARSA Arzberg 83.10 326⇓ *i*P **P 22 11 14.0 +0.5**
comp=Z,7.2nm,1.0s,mb4.6,SNR=6.2
MOA Molln 83.20 327⇑ *i*P **P 22 11 14.2 +0.2**
comp=Z,12nm,1.3s,mb4.8
MMB Musomiste 83.21 318 P **P 22 11 13.7 -0.5**
DIVS Divibare 83.35 322 P **P 22 11 14.9 0.0**
KKB Krupnik 83.36 319 P **P 22 11 14.6 -0.4**
PRK Paraskevi 83.44 315 P **P 22 11 15.1 -0.3**
BLCB Balcova 83.58 314 P **P 22 11 15.2 -1.0**
SRS Serrai 83.62 318 P **P 22 11 16.1 -0.2**
TNS Taunus Mts 83.68 332 *e*P **P 22 11 16.3 -0.2**
comp=Z,8.0nm,0.8s,mb4.9
TNS Taunus Mts 83.68 332 *e*P **P 22 11 16.3 -0.2**
TNS pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SOKA Soboth 83.76 326⇑ *i*P **P 22 11 16.9 0.0**
comp=Z,21nm,1.0s,mb5.2
RJOB Jochberg 83.91 328 *e*P **P 22 11 18.2 +0.5**
comp=Z,18nm,1.0s,mb5.2
SOH Sokhos 83.95 318 P **P 22 11 17.9 -0.1**
PMOR Pomariorio Ree 84.18 114 *e*T 23 43 40.4
comp=Z,16nm,0.2s
KBA Koelnbreinsper 84.19 327⇑ *i*PcP PcP 22 11 20.5 -2.4
comp=Z,9.9nm,1.1s
FUR Furstenfeldbru 84.21 329 *e*P **P 22 11 19.5 +0.3**
comp=Z,29nm,1.0s,mb5.4
FUR Furstenfeldbru 84.21 329 *e*P **P 22 11 19.5 +0.3**
FUR pmax pmax
comp=Z,29nm,1.0s,mb5.4
PLG Polygyros 84.22 317 P **P 22 11 19.2 -0.2**
MEM Membach 84.27 333 P **P 22 11 19.9 +0.5**
EIL Elat 84.36 303 P **P 22 11 20.5 +0.2**
comp=Z,9.2nm,0.9s,mb4.9,baz=80,slow=6.1,SNR=5.4
EIL LR LR 22 51 47.0
comp=Z,54nm,19.0s,MS4.0,baz=34,slow=38
ARG Arkhangelos 84.42 312 P **P 22 11 20.7 +0.2**
STU Stuttgart 84.57 331 *e*P **P 22 11 21.1 +0.1**
comp=Z,27nm,1.0s,mb5.3
STU Stuttgart 84.57 331 *e*P **P 22 11 21.5 +0.6**
PPT Papeete 84.64 117 *e*LR LR 22 37 55.2
comp=Z,221nm,29.8s
PPT *e*T 23 44 17.1
comp=Z,5.6nm,0.3s
BCLA Clavier 84.68 334 P **P 22 11 21.5 0.0**
UCC Uccle 84.69 334 P **P 22 11 21.8 +0.2**
comp=Z,9.9nm,1.7s,mb4.7
TIAR Tiarei 84.80 116 *e*T 23 44 29.0
comp=Z,9.6nm,0.2s
LIT Litokhoron 84.93 318 P **P 22 11 22.4 -0.6**
MOTA Moosalm 84.93 329⇑ *i*P **P 22 11 22.8 -0.1**
comp=Z,7.1nm,1.0s,mb4.8,SNR=8.1
RETA Reutte 84.96 329⇑ *i*P **P 22 11 23.1 +0.1**
comp=Z,19nm,1.1s,mb5.1
WLF Walferdange 85.00 333 P **P 22 11 24.8 +1.6**
comp=Z,9.9nm,1.8s,mb4.6
FNA Florina 85.03 319 P **P 22 11 23.4 -0.1**
GIVF Givet 85.11 334 *e*P **P 22 11 23.2 -0.5**
DOU Dourbes 85.20 334 P **P 22 11 23.8 -0.4**
BFO Black Forest 85.26 331 P **P 22 11 24.6 +0.1**
comp=Z,115nm,1.0s,mb6.0,SNR=10
BFO Black Forest 85.26 331 *e*P **P 22 11 24.4 -0.1**
comp=Z,24nm,1.0s,mb5.3
BFO Black Forest 85.26 331 *e*P **P 22 11 24.4 -0.1**
BFO pmax pmax
comp=Z,24nm,1.0s,mb5.3
SCHQ Schefferville 85.27 16 P **P 22 11 24.4 +0.1**
comp=Z,4.3nm,0.8s,mb4.6,baz=6.6,slow=2.8,SNR=5.1
SCHQ LR LR 22 52 52.9
comp=Z,61nm,21.1s,MS4.0,baz=54,slow=38
FETA Feichten 85.34 329⇑ *i*PcP PcP 22 11 25.0 -3.0
comp=Z,8.7nm,1.0s
BAIF Baives 85.36 334 *e*P **P 22 11 24.6 -0.4**
comp=Z,9.5nm,0.9s,mb4.6
BAIF Baives 85.36 334 *e*P **P 22 11 24.6 -0.4**
BAIF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
BAIF Baives 85.36 334 *e*P **P 22 11 24.6 -0.4**
comp=Z,4.8nm,0.9s,mb4.6
DAVA Damuels 85.48 329⇑ *i*P **P 22 11 25.6 0.0**
comp=Z,19nm,1.0s,mb5.2,SNR=9.1
CDF Champ du Feu 85.60 331 *e*P **P 22 11 26.1 -0.1**
comp=Z,31nm,1.0s,mb5.2
CDF Champ du Feu 85.60 331 *e*P **P 22 11 26.1 -0.1**
CDF pmax pmax
comp=Z,16nm,1.0s,mb5.2
CDF Champ du Feu 85.60 331 *e*P **P 22 11 26.1 -0.1**
comp=Z,16nm,1.0s,mb5.2
LKR Lokris 85.68 316 P **P 22 11 26.0 -0.8**
AGG Agios Georgios 85.78 317 P **P 22 11 17.5 -10**
ECH Echery 85.81 331 *e*P **P 22 11 27.4 +0.2**
ECH pmax pmax
comp=Z,13nm,0.9s,mb5.2
ECH Echery 85.81 331 *e*P **P 22 11 27.4 +0.2**
comp=Z,12nm,0.9s,mb5.1
DAVOS Davos 85.88 329 P **P 22 11 27.7 +0.1**
DAVOX Davos/Dischmat 85.89 329 P **P 22 11 27.7 +0.1**
comp=Z,5.1nm,1.0s,mb4.7,baz=155,slow=1.7,SNR=7.3
MEH Mehetia 85.92 116 *e*T 23 45 53.1
comp=Z,94nm,0.3s
LTK Loutraki 86.14 316 P **P 22 11 27.9 -1.2**
TAOE Nuku Hiva Isla 86.16 104 *e*LR LR 22 38 35.3
comp=Z,228nm,24.3s
HINF Hinteralfeld 86.25 331 *e*P **P 22 11 28.7 -0.7**
comp=Z,12nm,1.0s,mb4.8
HINF Hinteralfeld 86.25 331 *e*P **P 22 11 28.7 -0.7**
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
HINF Hinteralfeld 86.25 331 *e*P **P 22 11 28.7 -0.7**
comp=Z,6.2nm,1.0s,mb4.8
HAU Haudompre 86.29 332 *e*P **P 22 11 29.0 -0.6**
comp=Z,13nm,0.9s,mb4.9
HAU *e*MLR MLR
comp=Z,123nm,21.0s,MS4.0
HAU Haudompre 86.29 332 *e*P **P 22 11 29.0 -0.6**
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,120nm,21.0s,MS4.3
HAU Haudompre 86.29 332 *e*P **P 22 11 29.0 -0.6**
comp=Z,6.4nm,0.9s,mb4.8
HAU LR LR
comp=Z,120nm,21.0s,MS4.3
MEZF Maizieres J'vi 86.36 333 *e*P **P 22 11 30.0 +0.1**
comp=Z,81nm,1.5s,mb5.4
MEZF Maizieres J'vi 86.36 333 *e*P **P 22 11 30.0 +0.1**
comp=Z,81nm,1.5s,mb5.7
KEK Kerkira 86.64 319 P **P 22 11 28.3 -3.2**
LAST Lasithi 86.71 312 P **P 22 11 32.5 +0.6**
IDI Anoyia 86.97 313 P **P 22 11 31.7 -1.5**
comp=Z,7.6nm,0.9s,mb4.9,baz=27,slow=10,SNR=12
CABF La Chapelle 87.54 331 *e*P **P 22 11 35.4 -0.3**
LOR Lormes 87.84 333 *e*P **P 22 11 36.8 -0.3**
comp=Z,29nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,98nm,18.2s,MS4.0
LOR Lormes 87.84 333 *e*P **P 22 11 36.8 -0.3**
LOR pmax pmax
comp=Z,14nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,100nm,18.3s,MS4.3
LOR Lormes 87.84 333 *e*P **P 22 11 36.8 -0.3**
comp=Z,14nm,1.1s,mb5.1
LOR LR LR
comp=Z,100nm,18.3s,MS4.3
FLN La Foliniere 88.06 336 *e*P **P 22 11 37.8 -0.3**
comp=Z,50nm,1.2s,mb5.3
FLN *e*MLR MLR
comp=Z,126nm,22.8s,MS4.0
FLN La Foliniere 88.06 336 *e*P **P 22 11 37.8 -0.3**
FLN pmax pmax
comp=Z,25nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,130nm,22.8s,MS4.3
FLN La Foliniere 88.06 336 *e*P **P 22 11 37.8 -0.3**
comp=Z,25nm,1.2s,mb5.3
FLN LR LR
comp=Z,130nm,22.8s,MS4.3
LDF La Druitiere 88.09 336 *e*P **P 22 11 37.9 -0.4**
comp=Z,13nm,0.8s,mb4.9
LDF La Druitiere 88.09 336 *e*P **P 22 11 37.9 -0.4**
LDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
LDF La Druitiere 88.09 336 *e*P **P 22 11 37.9 -0.4**
comp=Z,6.3nm,0.8s,mb4.9
SSF Saint Saulge 88.14 333 *e*P **P 22 11 38.3 -0.2**
comp=Z,12nm,0.9s,mb4.8
SSF Saint Saulge 88.14 333 *e*P **P 22 11 38.3 -0.2**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
SSF Saint Saulge 88.14 333 *e*P **P 22 11 38.3 -0.2**
comp=Z,5.8nm,0.9s,mb4.8
LPL La Plagne 88.19 330 *e*P **P 22 11 37.7 -1.1**
comp=Z,9.5nm,0.9s,mb4.7
LPL La Plagne 88.19 330 *e*P **P 22 11 37.7 -1.1**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
LPL La Plagne 88.19 330 *e*P **P 22 11 37.7 -1.1**
comp=Z,4.8nm,0.9s,mb4.7
LPG La Plagne 88.20 330 *e*P **P 22 11 37.7 -1.2**
comp=Z,12nm,1.0s,mb4.8
LPG La Plagne 88.20 330 *e*P **P 22 11 37.7 -1.2**
LPG pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
LPG La Plagne 88.20 330 *e*P **P 22 11 37.7 -1.2**
comp=Z,5.8nm,1.0s,mb4.8
HYF Humbligny 88.28 333 *e*P **P 22 11 39.4 +0.2**
SMF Signal de Mont 88.37 332 *e*P **P 22 11 39.4 -0.2**
comp=Z,20nm,1.2s,mb4.9
SMF Signal de Mont 88.37 332 *e*P **P 22 11 39.4 -0.2**
SMF pmax pmax
comp=Z,10.0nm,1.2s,mb4.9

SMF	**Signal de Mont**	**88.37**	**332**	*e*P	**P**	**22 11 39.4**	**-0.2**
	comp=Z,9.8nm,1.2s,mb4.9						
AVF	**Avril sur Loir**	**88.43**	**333**	*e*P	**P**	**22 11 39.7**	**-0.2**
	comp=Z,33nm,1.3s,mb5.1						
AVF	**Avril sur Loir**	**88.43**	**333**	*e*P	**P**	**22 11 39.7**	**-0.2**
AVF				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.1						
AVF	**Avril sur Loir**	**88.43**	**333**	*e*P	**P**	**22 11 39.7**	**-0.2**
	comp=Z,16nm,1.3s,mb5.1						
GRR	**Gorron**	**88.51**	**336**	*e*P	**P**	**22 11 40.3**	**0.0**
	comp=Z,29nm,1.0s,mb5.3						
GRR	**Gorron**	**88.51**	**336**	*e*P	**P**	**22 11 40.3**	**0.0**
GRR				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
GRR	**Gorron**	**88.51**	**336**	*e*P	**P**	**22 11 40.3**	**0.0**
	comp=Z,15nm,1.0s,mb5.3						
BGF	**Bois d'Agland**	**88.81**	**333**	*e*P	**P**	**22 11 41.4**	**-0.3**
MBDF	**Montbardon**	**88.83**	**330**	*e*P	**P**	**22 11 41.0**	**-0.8**
	comp=Z,17nm,1.1s,mb5.0						
MBDF	**Montbardon**	**88.83**	**330**	*e*P	**P**	**22 11 41.0**	**-0.8**
MBDF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.0						
MBDF	**Montbardon**	**88.83**	**330**	*e*P	**P**	**22 11 41.0**	**-0.8**
	comp=Z,8.5nm,1.1s,mb5.0						
ORIF	**Oris-en-Rattie**	**89.03**	**330**	*e*P	**P**	**22 11 43.0**	**+0.2**
	comp=Z,11nm,1.0s,mb4.8						
ORIF				*e*MLR	MLR		
	comp=Z,104nm,22.2s,MS3.9						
ORIF	**Oris-en-Rattie**	**89.03**	**330**	*e*P	**P**	**22 11 43.0**	**+0.2**
ORIF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
ORIF	**Oris-en-Rattie**	**89.03**	**330**	*e*P	**P**	**22 11 43.0**	**+0.2**
	comp=Z,5.6nm,1.0s,mb4.8						
SGMF	**Saint Gilles**	**89.17**	**337**	*e*P	**P**	**22 11 43.4**	**0.0**
	comp=Z,116nm,1.7s,mb5.6						
SGMF	**Saint Gilles**	**89.17**	**337**	*e*P	**P**	**22 11 43.4**	**0.0**
SGMF				pmax	pmax		
	comp=Z,58nm,1.7s,mb5.6						
SGMF	**Saint Gilles**	**89.17**	**337**	*e*P	**P**	**22 11 43.4**	**0.0**
	comp=Z,58nm,1.7s,mb5.6						
WMOK	**Wichita Mounta**	**89.22**	**46**	*e*P	**P**	**22 11 39.4**	**-4.5**
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
WMOK	**Wichita Mounta**	**89.22**	**46**	*e*P	**P**	**22 11 39.4**	**-4.5**
	comp=Z,2.3nm,0.7s,mb4.6						
WMOK				*e*pP	pP	22 11 59.8	+2.8
SBF	**Sospel**	**89.26**	**329**	*e*P	**P**	**22 11 43.4**	**-0.5**
TCF	**Toulx Ste Croi**	**89.27**	**333**	*e*P	**P**	**22 11 43.8**	**-0.1**
ROSF	**Rostrenen**	**89.32**	**337**	*e*P	**P**	**22 11 44.0**	**-0.1**
	comp=Z,53nm,1.3s,mb5.4						
ROSF	**Rostrenen**	**89.32**	**337**	*e*P	**P**	**22 11 44.0**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.4						
ROSF	**Rostrenen**	**89.32**	**337**	*e*P	**P**	**22 11 44.0**	**-0.1**
	comp=Z,27nm,1.3s,mb5.4						
VIVF	**Saint-Julien-I**	**89.55**	**331**	*e*P	**P**	**22 11 44.8**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.6						
VIVF	**Saint-Julien-I**	**89.55**	**331**	*e*P	**P**	**22 11 44.8**	**-0.4**
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
VIVF	**Saint-Julien-I**	**89.55**	**331**	*e*P	**P**	**22 11 44.8**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.6						
QUIF	**Quistinic**	**89.66**	**337**	*e*P	**P**	**22 11 45.3**	**-0.4**
MFF	**Saint Martin d**	**89.83**	**335**	*e*P	**P**	**22 11 46.5**	**0.0**
	comp=Z,17nm,1.1s,mb5.0						
MFF	**Saint Martin d**	**89.83**	**335**	*e*P	**P**	**22 11 46.5**	**0.0**
MFF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
MFF	**Saint Martin d**	**89.83**	**335**	*e*P	**P**	**22 11 46.5**	**0.0**
	comp=Z,8.4nm,1.1s,mb5.0						
FRF	**La Foret Royal**	**89.84**	**329**	*e*P	**P**	**22 11 45.6**	**-1.0**
	comp=Z,17nm,1.2s,mb5.0						
FRF	**La Foret Royal**	**89.84**	**329**	*e*P	**P**	**22 11 45.6**	**-1.0**
FRF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.0						
FRF	**La Foret Royal**	**89.84**	**329**	*e*P	**P**	**22 11 45.6**	**-1.0**
	comp=Z,8.5nm,1.2s,mb5.0						
ATD	**Arta Tunnel**	**89.88**	**284**	LR	LR	22 58 50.2	
	comp=Z,45nm,18.6s,MS3.9,baz=101,slow=40						
SMRF	**Simiane la Rot**	**89.93**	**330**	*e*P	**P**	**22 11 45.4**	**-1.6**
TXAR	**Lajitas Array**	**90.06**	**52**	P	**P**	**22 11 48.3**	**+0.4**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				MLR	MLR		
	comp=Z,65nm,21.8s						
TXAR	**Lajitas Array**	**90.06**	**52**	P	**P**	**22 11 48.3**	**+0.4**
	comp=Z,0.7nm,0.7s,mb4.1,baz=295,slow=2.9,SNR=6.1						
TXAR				LR	LR	22 44 56.7	
	comp=Z,65nm,21.8s,MS4.0,baz=0.0,slow=31						
LMR	**La Mourre**	**90.08**	**329**	*e*P	**P**	**22 11 45.9**	**-1.8**
RJF	**Les Rejaudoux**	**90.36**	**333**	*e*P	**P**	**22 11 49.0**	**0.0**
	comp=Z,10nm,0.9s,mb4.8						
RJF				*e*MLR	MLR		
	comp=Z,107nm,22.0s,MS3.9						
RJF	**Les Rejaudoux**	**90.36**	**333**	*e*P	**P**	**22 11 49.0**	**0.0**
RJF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
RJF				MLR	MLR		
	comp=Z,110nm,22.0s,MS4.2						
RJF	**Les Rejaudoux**	**90.36**	**333**	*e*P	**P**	**22 11 49.0**	**0.0**
	comp=Z,5.3nm,0.9s,mb4.9						
RJF				LR	LR		
	comp=Z,110nm,22.0s,MS4.2						
CAF	**Calviac**	**90.48**	**332**	*e*P	**P**	**22 11 50.0**	**+0.4**
	comp=Z,15nm,1.1s,mb4.9						
CAF	**Calviac**	**90.48**	**332**	*e*P	**P**	**22 11 50.0**	**+0.4**
CAF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
CAF	**Calviac**	**90.48**	**332**	*e*P	**P**	**22 11 50.0**	**+0.4**
	comp=Z,7.6nm,1.1s,mb4.9						
LASF	**Ste Croix**	**90.53**	**331**	*e*P	**P**	**22 11 49.8**	**0.0**
	comp=Z,18nm,1.1s,mb5.0						
LFF	**La Frestale**	**90.96**	**333**	*e*P	**P**	**22 11 51.0**	**-0.8**
MTLF	**Montolieu**	**91.78**	**332**	*e*P	**P**	**22 11 55.7**	**+0.1**
	comp=Z,16nm,1.2s,mb4.9						
MTLF	**Montolieu**	**91.78**	**332**	*e*P	**P**	**22 11 55.7**	**+0.1**
MTLF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.9						
MTLF	**Montolieu**	**91.78**	**332**	*e*P	**P**	**22 11 55.7**	**+0.1**
	comp=Z,7.8nm,1.2s,mb4.9						
EPF	**Esparros**	**92.75**	**333**	*e*P	**P**	**22 11 59.5**	**-0.6**
ETSF	**Etsaut**	**93.19**	**333**	*e*P	**P**	**22 12 02.3**	**+0.1**
SJPF	**Ste Jean**	**93.25**	**334**	*e*P	**P**	**22 12 02.7**	**+0.3**
KEST	**Kesra**	**94.99**	**323**	P	**P**	**22 12 10.2**	**-0.4**
	comp=Z,1.2nm,1.0s,mb4.3,baz=9.5,slow=6.1,SNR=3.7						
ESDC	**Sonseca Array**	**97.25**	**334**	P	**P**	**22 12 20.9**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.7,baz=34,slow=3.1,SNR=5.3						
ESDC				LR	LR	23 00 25.8	
	comp=Z,101nm,18.5s,MS4.3,baz=150,slow=38						
TORD	**Torodi Ar. Bea**	**117.31**	**315**	PKP	PKPdf	22 17 32.8	-0.9
	comp=Z,1.1nm,1.0s,baz=37,slow=0.6,SNR=4.1						
SDV	**Santo Domingo**	**125.26**	**40**	PKPdf	PKPdf	22 17 46.8	-2.2
LPAZ	**La Paz**	**146.64**	**60**	*e*PKP2	PKPab	22 18 30.4	-0.6
LVC	**Limon Verde**	**150.13**	**70**	PKP	PKPdf	22 18 32.9	-0.9
	comp=Z,2.6nm,0.9s,baz=258,slow=14,SNR=2.5						
LVC				PKPbc	PKPbc	22 18 40.0	+1.2
	comp=Z,3.7nm,0.8s,baz=331,slow=19,SNR=3.5						
LVC	**Limon Verde**	**150.13**	**70**	*e*PKPdf	PKPdf	22 18 32.9	-0.9
SIV	**San Ignacio**	**151.02**	**49**	PKP	PKPdf	22 18 35.8	+0.5
	comp=Z,0.5nm,0.5s,baz=315,slow=1.4,SNR=3.7						
SIV				PKPbc	PKPbc	22 18 41.0	-0.1
	comp=Z,4.5nm,1.0s,baz=290,slow=1.7,SNR=6.4						

IDC 01 22:07:16.4±5.0, 6°95S×128°59E, h228km±51km, mb3.5/1, mb1 3.4/4, mb1mx3.1/17, mbtmp3.2/4, Error ellipse: s-maj=62.2km s-min=20.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.46**	**194**	P	Pn	22 09 53.9	+0.2
	1.1nm,0.3s,baz=13,slow=11,SNR=19						
FITZ				S	S	22 12 00.8	-1.0
	0.4nm,0.3s,baz=48,slow=18,SNR=3.7						
WRA	**Warramunga Arr**	**14.07**	**157**	P	Pn	22 10 24.8	-1.4
	0.2nm,0.3s,baz=342,slow=12,SNR=5.3						
WRA				S	S	22 12 54.8	-7.7
	0.9nm,0.3s,baz=334,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**17.39**	**163**	P	P	22 11 04.8	+0.9
	0.3nm,0.3s,baz=342,slow=10,SNR=8.5						
ASAR				S	S	22 14 13.3	+0.4
	0.1nm,0.3s,baz=330,slow=19,SNR=5.7						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	22 17 47.5	+0.1
	0.7nm,0.4s,baz=114,slow=8.2,SNR=27						

*ISCJB **01** 22:10:58.0±0.4, 38°.41N±0°.04×15°.30E±0°.06, h176km±3km, mb3.5/5, Error ellipse: s-maj=9.1km s-min=5.2km az=33.8*
*CSEM **01** 22:10:58.5, 38°.43N×15°.21E, h171km, After ROM*
*NEIC **01** 22:10:58.0, 38°.47N×15°.17E, h171km, MG3.0(ROM), After ROM.*
*ROM **01** 22:10:58.5±0.3, 38°.43N×15°.21E, h171km±4km, Ml3.0/35, Error ellipse: s-maj=4.7km s-min=2.5km az=118.0*
*IDC **01** 22:10:59.3±1.0, 38°.47N×15°.13E, h180km±21km, mb3.2/5, mb1 3.0/9, mb1mx2.9/28, mbtmp2.9/9, MS2.6/1, Ms1 2.6/1, ms1mx2.0/21, Error ellipse: s-maj=31.8km s-min=23.6km az=57.0*

ISC 01 22:10:58.9±0.4, 38°.42N±0°.04×15°.26E±0°.06, h172km±3km, n96, σ0°76/121, mb3.6/4, 30C-20D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSRU	**Castanea**	**0.25**	**129⇑**	*e*Pg	**Pn**	**22 11 21.2**	**-0.7**
MSRU				Sg	**Sn**	**22 11 38.2**	**-1.3**
	976nm,0.2s						
MSRU	**Castanea**	**0.25**	**129⇑**	*e*Pg	**Pn**	**22 11 21.2**	**-0.7**
MSRU				Sg	**Sn**	**22 11 38.2**	**-1.3**
	976nm,0.2s						
SCLL	**Scilla**	**0.39**	**114⇑**	*e*Pg	**Pn**	**22 11 21.7**	**-0.6**
	67nm,0.3s						
SCLL	**Scilla**	**0.39**	**114⇑**	*e*Pg	**Pn**	**22 11 21.7**	**-0.6**
	67nm,0.3s						
MMME	**Mongiuffi-Meli**	**0.48**	**181**	⇓*i*Pg	**Pn**	**22 11 22.8**	**+0.1**
	397nm,0.5s						
MMME	**Mongiuffi-Meli**	**0.48**	**181**	⇓*i*Pg	**Pn**	**22 11 22.8**	**+0.1**
	397nm,0.5s						
CEL	**Celeste**	**0.52**	**108**	*e*Pn	**Pn**	**22 11 21.6**	**-1.2**
CEL				*e*Sn	**Sn**	**22 11 38.7**	**-2.4**
CEL	**Celeste**	**0.52**	**108**	Pg	**Pn**	**22 11 22.3**	**-0.5**
CEL				Sg	**Sn**	**22 11 41.2**	**+0.1**
	261nm,0.3s						
CEL	**Celeste**	**0.52**	**108**	Pg	**Pn**	**22 11 22.3**	**-0.5**
CEL				Sg	**Sn**	**22 11 41.2**	**+0.1**
	261nm,0.3s						
JOPP	**Joppolo**	**0.52**	**69**	Pg	**Pn**	**22 11 22.3**	**-0.5**
JOPP				Sg	**Sn**	**22 11 40.7**	**-0.5**
	251nm,0.4s						
JOPP	**Joppolo**	**0.52**	**69**	Pg	**Pn**	**22 11 22.3**	**-0.5**
JOPP				Sg	**Sn**	**22 11 40.7**	**-0.5**
	251nm,0.4s						
MTTG	**Motta San Giov**	**0.54**	**141**	Pg	**Pn**	**22 11 23.1**	**+0.2**
MTTG				Sg	**Sn**	**22 11 42.2**	**+0.9**
	393nm,0.4s						
MTTG	**Motta San Giov**	**0.54**	**141**	Pg	**Pn**	**22 11 23.1**	**+0.2**
MTTG				Sg	**Sn**	**22 11 42.2**	**+0.9**
	393nm,0.4s						
IFIL	**Filicudi I Eol**	**0.56**	**285⇑**	*e*Pg	**Pn**	**22 11 22.3**	**-0.7**
IFIL				Sg	**Sn**	**22 11 40.0**	**-1.5**
	281nm,0.9s						
IFIL	**Filicudi I Eol**	**0.56**	**285⇑**	*e*Pg	**Pn**	**22 11 22.3**	**-0.7**
IFIL				Sg	**Sn**	**22 11 40.0**	**-1.5**
	281nm,0.9s						
SOI	**Samo**	**0.71**	**119⇑**	*e*Pg	**Pn**	**22 11 24.0**	**+0.2**
SOI				Sg	**Sn**	**22 11 42.3**	**-0.6**
	272nm,0.8s						
SOI	**Samo**	**0.71**	**119⇑**	*e*Pg	**Pn**	**22 11 24.0**	**+0.2**
SOI				Sg	**Sn**	**22 11 42.3**	**-0.6**
	272nm,0.8s						
IACL	**Alicudi**	**0.72**	**279⇑**	*i*Pg	**Pn**	**22 11 23.1**	**-0.7**
	96nm,0.6s						
IACL	**Alicudi**	**0.72**	**279⇑**	*i*Pg	**Pn**	**22 11 23.1**	**-0.7**
	96nm,0.6s						
MPAZ	**Palizzi**	**0.75**	**128⇓**	*e*Pg	**Pn**	**22 11 24.2**	**+0.1**
MPAZ				Sg	**Sn**	**22 11 43.1**	**-0.2**
	378nm,0.3s						
MPAZ	**Palizzi**	**0.75**	**128⇓**	*e*Pg	**Pn**	**22 11 24.2**	**+0.1**
MPAZ				Sg	**Sn**	**22 11 43.1**	**-0.2**
	378nm,0.3s						
GALF	**Gagliano Caste**	**0.90**	**218**	Pg	**Pn**	**22 11 25.9**	**+0.9**
	176nm,0.6s						
GALF	**Gagliano Caste**	**0.90**	**218**	Pg	**Pn**	**22 11 25.9**	**+0.9**
	176nm,0.6s						
PLAC	**Placanica**	**0.93**	**88⇑**	*e*Pg	**Pn**	**22 11 25.5**	**+0.3**
PLAC				Sg	**Sn**	**22 11 45.5**	**+0.1**
	58nm,0.4s						
PLAC	**Placanica**	**0.93**	**88⇑**	*e*Pg	**Pn**	**22 11 25.5**	**+0.3**
PLAC				Sg	**Sn**	**22 11 45.5**	**+0.1**
	58nm,0.4s						
ECNV	**Catenanuova**	**0.93**	**208**	⇓*i*Pg	**Pn**	**22 11 26.2**	**+0.9**
	210nm,0.7s						
ECNV	**Catenanuova**	**0.93**	**208**	⇓*i*Pg	**Pn**	**22 11 26.2**	**+0.9**
	210nm,0.7s						
GRI	**Girifalco**	**0.99**	**66**	Pg	**Pn**	**22 11 26.5**	**+0.8**
	109nm,0.5s						
GRI	**Girifalco**	**0.99**	**66**	Pg	**Pn**	**22 11 26.5**	**+0.8**
	109nm,0.5s						
GIB	**Gibilmanna**	**1.06**	**247**	Pg	**Pn**	**22 11 25.5**	**-0.8**
	45nm,0.2s						
GIB	**Gibilmanna**	**1.06**	**247**	Pg	**Pn**	**22 11 25.5**	**-0.8**
	45nm,0.2s						
CARO	**Carolei**	**1.12**	**42⇑**	*i*Pg	**Pn**	**22 11 26.4**	**-0.3**
CARO				Sg	**Sn**	**22 11 47.0**	**-1.2**
	117nm,0.6s						
CARO	**Carolei**	**1.12**	**42⇑**	*i*Pg	**Pn**	**22 11 26.4**	**-0.3**
CARO				Sg	**Sn**	**22 11 47.0**	**-1.2**
	117nm,0.6s						
HAGA	**Augusta**	**1.14**	**184**	Pg	**Pn**	**22 11 26.2**	**-0.7**
HAGA				Sg	**Sn**	**22 11 49.5**	**+1.1**
	102nm,0.6s						
HAGA	**Augusta**	**1.14**	**184**	Pg	**Pn**	**22 11 26.2**	**-0.7**
HAGA				Sg	**Sn**	**22 11 49.5**	**+1.1**
	102nm,0.6s						
VAE	**Valguarnera**	**1.16**	**216**	P	**Pn**	**22 11 28.2**	**+1.2**
	15nm,0.3s,baz=78,slow=19,SNR=30						
RESU	**Resuttano**	**1.23**	**231**	Pg	**Pn**	**22 11 28.7**	**+1.1**
	61nm,0.5s						
RESU	**Resuttano**	**1.23**	**231**	Pg	**Pn**	**22 11 28.7**	**+1.1**
	61nm,0.5s						
SSY	**Sortino**	**1.27**	**187**	⇓*i*Pg	**Pn**	**22 11 27.6**	**-0.5**
	121nm,0.5s						
SSY	**Sortino**	**1.27**	**187**	⇓*i*Pg	**Pn**	**22 11 27.6**	**-0.5**
	121nm,0.5s						
SERS	**Sersale**	**1.27**	**61⇑**	*i*Pg	**Pn**	**22 11 28.6**	**+0.6**
SERS				Sg	**Sn**	**22 11 50.8**	**+0.3**
	62nm,0.3s						
SERS	**Sersale**	**1.27**	**61⇑**	*i*Pg	**Pn**	**22 11 28.6**	**+0.6**
SERS				Sg	**Sn**	**22 11 50.8**	**+0.3**
	62nm,0.3s						
HVZN	**Vizzini**	**1.31**	**199**	⇓*i*Pg	**Pn**	**22 11 28.2**	**-0.2**
	184nm,0.7s						
HVZN	**Vizzini**	**1.31**	**199**	⇓*i*Pg	**Pn**	**22 11 28.2**	**-0.2**
	184nm,0.7s						
RAFF	**Raffo Rosso**	**1.39**	**211**	⇓*i*Pg	**Pn**	**22 11 29.4**	**+0.2**
	66nm,0.6s						
RAFF	**Raffo Rosso**	**1.39**	**211**	⇓*i*Pg	**Pn**	**22 11 29.4**	**+0.2**
	66nm,0.6s						
TIP	**Timpagrande**	**1.39**	**57**	*e*Pn	**Pn**	**22 11 29.4**	**+0.3**
TIP				*e*Sn	**Sn**	**22 11 53.6**	**+1.2**
TIP	**Timpagrande**	**1.39**	**57⇑**	*i*Pg	**Pn**	**22 11 29.7**	**+0.6**
TIP				Sg	**Sn**	**22 11 53.2**	**+0.8**
	56nm,0.5s						
TIP	**Timpagrande**	**1.39**	**57⇑**	*i*Pg	**Pn**	**22 11 29.7**	**+0.6**
TIP				Sg	**Sn**	**22 11 53.2**	**+0.8**
	56nm,0.5s						
HAVL	**Avola**	**1.46**	**184**	⇓*i*Pg	**Pn**	**22 11 29.5**	**-0.3**
	129nm,0.3s						
HAVL	**Avola**	**1.46**	**184**	⇓*i*Pg	**Pn**	**22 11 29.5**	**-0.3**
	129nm,0.3s						
HMDC	**Modica**	**1.51**	**195**	⇓*i*Pg	**Pn**	**22 11 30.1**	**-0.2**
	70nm,0.9s						
HMDC	**Modica**	**1.51**	**195**	⇓*i*Pg	**Pn**	**22 11 30.1**	**-0.2**
	70nm,0.9s						
CORL	**Corleone**	**1.63**	**252**	⇓*i*Pg	**Pn**	**22 11 31.1**	**-0.4**
	109nm,0.5s						
CORL	**Corleone**	**1.63**	**252**	⇓*i*Pg	**Pn**	**22 11 31.1**	**-0.4**
	109nm,0.5s						
USI	**Ustica**	**1.66**	**281**	Pg	**Pn**	**22 11 31.5**	**-0.2**
	35nm,0.5s						
USI	**Ustica**	**1.66**	**281**	Pg	**Pn**	**22 11 31.5**	**-0.2**
	35nm,0.5s						
BULG	**Bulgheria - Ca**	**1.66**	**3⇑**	*i*Pg	**Pn**	**22 11 32.1**	**+0.4**
	35nm,0.4s						
BULG	**Bulgheria - Ca**	**1.66**	**3⇑**	*i*Pg	**Pn**	**22 11 32.1**	**+0.4**
	35nm,0.4s						
FAVR	**Favara**	**1.71**	**228**	⇓*i*Pg	**Pn**	**22 11 33.3**	**+1.0**
	66nm,0.3s						
FAVR	**Favara**	**1.71**	**228**	⇓*i*Pg	**Pn**	**22 11 33.3**	**+1.0**
	66nm,0.3s						
SIRI	**Monte Sirino -**	**1.82**	**15⇑**	*i*Pg	**Pn**	**22 11 33.7**	**+0.3**
	44nm,0.6s						
SIRI	**Monte Sirino -**	**1.82**	**15⇑**	*i*Pg	**Pn**	**22 11 33.7**	**+0.3**
	44nm,0.6s						
MTSN	**Montesano sull**	**1.88**	**11⇑**	*i*Pg	**Pn**	**22 11 34.3**	**+0.2**
	34nm,0.7s						
MTSN	**Montesano sull**	**1.88**	**11⇑**	*i*Pg	**Pn**	**22 11 34.3**	**+0.2**
	34nm,0.7s						
ORI	**Oriolo Calabro**	**1.88**	**29**	Pg	**Pn**	**22 11 35.1**	**+1.0**
	57µm,16.0s						
ORI	**Oriolo Calabro**	**1.88**	**29**	Pg	**Pn**	**22 11 35.1**	**+1.0**
	57um,16.0s						
SCHR	**S. Chirico Rap**	**1.89**	**19**	Pg	**Pn**	**22 11 34.6**	**+0.5**
	14nm,0.7s						
SCHR	**S. Chirico Rap**	**1.89**	**19**	Pg	**Pn**	**22 11 34.6**	**+0.5**
	14nm,0.7s						
MCEL	**Monticello**	**1.95**	**12⇑**	*i*Pg	**Pn**	**22 11 35.1**	**+0.3**
	25nm,0.5s						
MCEL	**Monticello**	**1.95**	**12⇑**	*i*Pg	**Pn**	**22 11 35.1**	**+0.3**
	25nm,0.5s						
CDRU	**Civita di Ruta**	**2.07**	**1⇑**	*i*Pg	**Pn**	**22 11 36.7**	**+0.6**
	15nm,0.7s						
CDRU	**Civita di Ruta**	**2.07**	**1⇑**	*i*Pg	**Pn**	**22 11 36.7**	**+0.6**
	15nm,0.7s						
SGO	**Sicignano**	**2.14**	**1**	Pg	**Pn**	**22 11 37.7**	**+0.8**
	11nm,0.3s						
SGO	**Sicignano**	**2.14**	**1**	Pg	**Pn**	**22 11 37.7**	**+0.8**
	11nm,0.3s						
MIGL	**Miglionico**	**2.37**	**22**	Pg	**Pn**	**22 11 39.4**	**-0.1**
	206nm,1.3s						
MIGL	**Miglionico**	**2.37**	**22**	Pg	**Pn**	**22 11 39.4**	**-0.1**
	206nm,1.3s						
CSSN	**Cassano Irpino**	**2.44**	**356**	Pg	**Pn**	**22 11 41.9**	**+1.5**
	12nm,0.4s						
CSSN	**Cassano Irpino**	**2.44**	**356**	Pg	**Pn**	**22 11 41.9**	**+1.5**
	12nm,0.4s						
AMUR	**Altamura**	**2.69**	**22⇑**	*i*Pg	**Pn**	**22 11 42.6**	**-0.8**
	64nm,0.8s						
AMUR	**Altamura**	**2.69**	**22⇑**	*i*Pg	**Pn**	**22 11 42.6**	**-0.8**
	64nm,0.8s						
NOCI	**Noci**	**2.75**	**30**	Pg	**Pn**	**22 11 42.5**	**-1.5**
	50nm,0.6s						
NOCI	**Noci**	**2.75**	**30**	Pg	**Pn**	**22 11 42.5**	**-1.5**
	50nm,0.6s						
PSB1	**Pescosannita**	**2.82**	**353**	Pg	**Pn**	**22 11 46.4**	**+1.5**
	19nm,0.7s						
PSB1	**Pescosannita**	**2.82**	**353**	Pg	**Pn**	**22 11 46.4**	**+1.5**
	19nm,0.7s						
KEST	**Kesra**	**5.44**	**242**	P	**Pn**	**22 12 18.3**	**-0.1**
	0.1nm,0.3s,baz=48,slow=16,SNR=5.5						
DAVOX	**Davos/Dischmat**	**9.25**	**336**	P	**Pn**	**22 13 08.2**	**-0.2**
	0.1nm,0.3s,baz=180,slow=20,SNR=1.5						
GERES	**GERESS Array B**	**10.48**	**354**	P	**Pn**	**22 13 25.6**	**+0.9**
	0.1nm,0.3s,baz=171,slow=14,SNR=3.9						
VRAC	**Vranov**	**10.93**	**5**	LR	LR	22 17 50.5	
	comp=Z,31nm,18.6s,baz=4.8,slow=38						
AKASG	**Malin Array Be**	**15.77**	**34**	P	**Pn**	**22 14 30.6**	**-1.0**
	0.5nm,0.3s,baz=225,slow=10,SNR=3.0						
EKA	**Eskdalemuir Ar**	**20.98**	**330**	P	**P**	**22 15 27.2**	**-1.1**
	0.5nm,0.7s,baz=146,slow=13,SNR=3.7						
FINES	**FINESS Array B**	**24.01**	**13**	P	**P**	**22 15 56.6**	**-0.9**
	1.4nm,0.5s,mb3.8,baz=198,slow=8.7,SNR=21						
ARCES	**ARCESS Array B**	**31.66**	**7**	P	**P**	**22 17 04.5**	**-1.0**
	2.5nm,1.0s,mb3.9,baz=194,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**48.60**	**48**	P	**P**	**22 19 25.0**	**+0.2**
	0.3nm,0.3s,mb3.5,baz=289,slow=9,SNR=2.9						
MKAR	**Makanchi Array**	**48.68**	**57**	P	**P**	**22 19 25.7**	**+0.2**
	0.2nm,0.3s,mb3.2,baz=286,slow=7.1,SNR=5.8						
MKAR	**Makanchi Array**	**48.68**	**57**	P	**P**	**22 19 25.7**	**+0.2**

*CSEM **01** 22:24:12.8±0.1, 37°.34N×38°.57E, h2km, MD2.6, Error ellipse: s-maj=2.6km s-min=1.8km az=148.0*
*ISCJB **01** 22:24:13.0±1.2, 37°.34N±0°.06×38°.67E±0°.09, h17km±14km, Error ellipse: s-maj=12.7km s-min=8.4km az=32.3*
*ISK **01** 22:24:14.0, 37°.48N×38°.70E, h15km, MD2.6*
*DDA **01** 22:24:15.7, 37°.40N×38°.34E, h5km, Md2.6*

ISC 01 22:24:13.1±0.9, 37°37N±0°.05×38°60E±0°.09, h9km±10km, n14, σ0°67/22, Turkey

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

baz=38
A08A Turner Farm, O 37.85 70 ⇓P P 22 31 33.8 -0.8
baz=38
B08A Colville Reser 38.10 71 ⇓P P 22 31 36.2 -0.5
baz=38
H04A Detroit Lake 38.29 77 ⇑P P 22 31 38.9 +0.6
baz=38
D08A Wollman Farm, 38.99 72 ⇑P P 22 31 43.3 -0.9
baz=39
EDM Edmonton 39.21 61 P P 22 31 45.3 -0.6
D09A Jones Farm, Ri 39.35 72 ⇑P P 22 31 47.2 +0.1
baz=40
RES Resolute Bay 39.45 25 eP P 22 31 48.2 +0.5
4.6nm,1.1s,mb4.0
A11A Hall Mountain, 39.52 68 ⇓P P 22 31 48.1 -0.4
baz=40
YBH Yreka Blue Hor 39.61 82 eP P 22 31 51.2 +1.8
100nm,2.9s,mb4.9
K05A Summer Lake 40.15 79 ⇑P P 22 31 54.8 +1.0
baz=40
I07A Izee 40.23 77 ⇑P P 22 31 54.6 +0.2
baz=40
H08A Prairie City 40.49 76 ⇓P P 22 31 56.8 +0.3
baz=41
G09A Cove 40.60 74 ⇓P P 22 31 57.2 -0.3
baz=41
C12B Naegeli Ranch, 40.66 70 ⇑P P 22 31 57.0 -0.9
baz=41
B13A Whitefish 40.90 68 ⇓P P 22 31 59.1 -0.8
baz=41
E11A Bogner Ranch, 40.95 72 ⇑P P 22 31 59.0 -1.3
baz=41
MOD Modoc 40.98 80 eP P 22 32 01.6 +1.0
G10A Bishop Farm, J 40.98 74 ⇑P P 22 32 00.2 -0.4
baz=41
BSMT Bassoo Peak 40.99 69 eP P 22 31 60.0 -0.6
BMO Blue Mountains 41.12 74 eP P 22 32 01.2 -0.5
2.2nm,0.8s,mb3.8
A14A Double T Ranch 41.19 67 ⇓P P 22 32 01.4 -0.8
baz=41,SNR=6.1
G11A Walters Elk Ra 41.43 73 ⇑P P 22 32 03.7 -0.6
baz=42
J09A Fry Pan Ranch, 41.69 76 ⇑P P 22 32 06.5 +0.1
baz=42
F12A Elk City 41.83 72 ⇑P P 22 32 06.5 -0.9
baz=42,SNR=5.4
H11A Donnelly 41.97 74 ⇓P P 22 32 08.2 -0.4
baz=42
B15A Bradely Ranch, 42.02 67 ⇓P P 22 32 08.0 -1.0
baz=42
D14A Greenough 42.13 69 ⇑P P 22 32 08.8 -1.1
baz=42,SNR=5.3
BEKR Beckwourth 42.16 82 ⇑P P 22 32 11.0 +0.8
baz=42
A16A West Butte Ran 42.24 66 ⇓P P 22 32 09.6 -1.1
baz=42
C15A Salmond Ranch, 42.28 68 ⇑P P 22 32 10.2 -0.8
baz=42,SNR=8.4
F13A Darby 42.35 71 ⇑P P 22 32 10.7 -1.0
baz=42
E14A Clinton 42.50 70 ⇑P P 22 32 11.8 -1.1
baz=43
K10A MacKenzie Ranc 42.55 77 ⇓P P 22 32 13.3 0.0
baz=43,SNR=8.6
D15A Lincoln 42.72 69 ⇑P P 22 32 13.7 -0.9
baz=43
H12A Diamond D Ranc 42.74 73 ⇓P P 22 32 14.5 -0.4
baz=43
A17A Triple J Farms 42.74 65 ⇓P P 22 32 13.6 -1.2
baz=43
C16A Fuhringer Ranc 42.76 67 ⇓P P 22 32 13.8 -1.1
baz=43
G13A Cobalt 42.80 72 ⇑P P 22 32 14.3 -1.0
baz=43,SNR=5.9
E15A Deer Lodge 42.99 70 ⇓P P 22 32 15.7 -1.2
baz=43
L10A Juniper Basin 43.20 77 ⇓P P 22 32 18.8 +0.3
baz=43
J12A Stokes Ranch, 43.33 75 ⇑P P 22 32 19.8 +0.2
baz=44
F15A Butte 43.40 70 ⇓P P 22 32 20.1 0.0
baz=44
C17A Wharram Farm, 43.41 67 ⇑P P 22 32 19.4 -0.8
baz=44
M10A I.L. Ranch, Tu 43.48 78 ⇓P P 22 32 21.5 +0.6
baz=44
I13A Wildhorse Cree 43.53 74 ⇓P P 22 32 20.6 -0.6
baz=44,SNR=7.7
B18A Beardsley Farm 43.55 66 ⇑P P 22 32 20.4 -0.9
baz=44
HLID Hailey 43.56 74 ⇑P P 22 32 21.2 -0.3
baz=44,SNR=6.1
H14A Leadore 43.58 72 ⇓P P 22 32 21.1 -0.5
baz=44
L11A Cat Creek Ranc 43.58 77 ⇓P P 22 32 22.0 +0.4
baz=44
D17A Six Diamond Ra 43.71 68 ⇓P P 22 32 22.0 -0.7
baz=44
MCMT McKenzie Canyo 43.76 72 P P 22 32 22.2 -0.8
1.8nm,0.5s,mb4.0
G15A Dillon 43.78 71 ⇓P P 22 32 22.6 -0.6
baz=44
J13A Cove Ranch, Pi 43.80 74 ⇑P P 22 32 23.2 -0.2
baz=44
K12A Draper Farm, C 43.81 75 ⇑P P 22 32 23.8 +0.4
baz=44
I14A Mackay 43.92 73 ⇓P P 22 32 24.3 0.0
baz=44
F16A Kennard Place, 43.93 70 ⇑P P 22 32 23.7 -0.7
baz=44
M11A Holland Ranch, 43.99 77 ⇑P P 22 32 25.4 +0.5
baz=44
E17A Martinsdale 44.00 69 ⇑P P 22 32 24.5 -0.4
baz=44
BOZ Bozeman (W) 44.01 70 ⇑P P 22 32 24.3 -0.7
baz=44,SNR=9.9
BOZ Bozeman (W) 44.01 70 eP P 22 32 24.0 -1.0
4.1nm,0.7s,mb4.2
L12A House Creek Ra 44.03 76 ⇓P P 22 32 25.5 +0.3
baz=44,SNR=5.3
G16A Moss Hill, Enn 44.14 71 ⇓P P 22 32 25.2 -0.9
baz=44
J14A Carey 44.23 74 ⇑P P 22 32 26.5 -0.3
baz=44
O10A Cortez Mining, 44.25 79 ⇑P P 22 32 27.8 +0.8
baz=44
NVAR Mina Array Bea 44.30 83 P P 22 32 28.1 +0.7
3.6nm,0.6s,mb4.2,baz=297,slow=7.4,SNR=20
F17A Fitzpatrick Pl 44.42 69 ⇓P P 22 32 27.8 -0.5
baz=45
E18A Harlowton 44.48 68 ⇓P P 22 32 28.3 -0.4
baz=45
L13A Double Diamond 44.70 76 ⇑P P 22 32 30.8 +0.2
baz=45
H16A Russell Place, 44.77 71 ⇑P P 22 32 30.6 -0.4
baz=45,SNR=6.7
N12A Clover Valley, 44.79 78 ⇑P P 22 32 31.7 +0.4
baz=45
MTUM Tungsten Hills 44.82 84 eP P 22 32 32.9 +1.4
K14A Jones Ranch, D 44.89 75 ⇓P P 22 32 32.0 0.0
baz=45
F18A Big Timber 44.97 69 ⇑P P 22 32 32.3 -0.3
baz=45
K15A Arbon 45.19 74 ⇓P P 22 32 34.4 0.0
baz=45
Q10A Clear Creek Ra 45.22 81 ⇑P P 22 32 35.6 +1.0
baz=45
O12A Currie 45.33 78 ⇓P P 22 32 36.0 +0.5
baz=45
M14A Sheep Mountain 45.41 76 ⇓P P 22 32 36.2 0.0
baz=46
RRI2 Red Ridge 45.52 72 eP P 22 32 37.9 +0.9
32nm,2.1s,mb4.6
R10A Warm Springs 45.61 81 ⇓P P 22 32 38.1 +0.3
baz=46
Q11A Duckwater 45.66 80 ⇑P P 22 32 38.6 +0.5
baz=46,SNR=8.1
S10A Tonopah Range, 45.66 82 ⇓P P 22 32 38.9 +0.7
baz=46
P12A McGill 45.72 79 ⇓P P 22 32 39.0 +0.4
baz=46
R11A Troy Canyon, C 46.01 81 ⇓P P 22 32 41.2 +0.3
baz=46,SNR=5.3
Q12A Willow Creek R 46.03 79 ⇓P P 22 32 41.5 +0.5
baz=46
FCC Fort Churchill 46.08 46 eP P 22 32 40.8 -0.4
P13A Bates Ranch, G 46.27 78 ⇓P P 22 32 43.1 +0.2
baz=46
MPMC Manual Prospec 46.31 85 ⇓P P 22 32 44.4 +1.2
baz=46
S11A Rachel 46.36 82 ⇑P P 22 32 44.4 +0.8
baz=46
J18A Kendall Valley 46.36 72 ⇑P P 22 32 43.2 -0.3
baz=46
DUG Dugway 46.53 77 ⇓P P 22 32 45.1 +0.2
baz=47
M16A Huntsville 46.55 75 ⇓P P 22 32 44.8 -0.2
baz=47
LRMC Laurel Mountai 46.57 85 ⇑P P 22 32 46.8 +1.5
baz=47
Q13A Wheeler Ranch, 46.58 79 ⇑P P 22 32 45.6 +0.3
baz=47,SNR=11
PDAR Pinedale Array 46.90 72 P P 22 32 47.0 -0.8
3.5nm,0.7s,mb4.1,baz=311,slow=4.3,SNR=31
S12A Delamar Landin 46.93 81 ⇓P P 22 32 48.8 +0.8
baz=47,SNR=6.8
T11A Corn Creek, Al 46.94 82 ⇓P P 22 32 48.3 +0.1
baz=47,SNR=11
Q14A Sevier Lake (B 47.01 78 ⇓P P 22 32 48.9 +0.3
baz=47,SNR=11
R13A O'Grain Ranch, 47.10 80 ⇑P P 22 32 50.1 +0.8
baz=47
SHOC Shoshone 47.16 84 ⇓P P 22 32 50.9 +1.0
baz=47
GSC Goldstone 47.23 85 ⇓P P 22 32 51.5 +1.1
baz=47
P15A Leamington 47.24 77 ⇓P P 22 32 50.7 +0.2
baz=47
L19A Farson 47.42 73 ⇑P P 22 32 51.5 -0.2
baz=48
S13A Holt Ranch, En 47.55 80 ⇓P P 22 32 53.2 +0.4
baz=48,SNR=5.2
T13A Saint George 47.88 81 ⇓P P 22 32 56.0 +0.6
baz=48
U13A Pakoon Wash 48.24 82 ⇑P P 22 32 58.9 +0.7
baz=48,SNR=6.6
N19A John Jarvie Ra 48.27 74 ⇓P P 22 32 58.3 0.0
baz=48
GMRC Granite Mounta 48.28 84 ⇓P P 22 32 59.3 +0.9
baz=48
R16A Teasdale 48.54 78 ⇑P P 22 33 01.1 +0.7
baz=49
SRU San Rafael 48.59 77 ⇑P P 22 33 01.4 +0.6
baz=49
L21A Rawlins 48.67 72 ⇓P P 22 33 00.9 -0.5
baz=49
O19A Miners Draw (B 48.67 74 ⇓P P 22 33 01.0 -0.4
baz=49,SNR=7.2
Q18A Rafter H Ranch 48.83 76 ⇓P P 22 33 02.4 -0.2
baz=49
R17A Hanksville Air 48.92 77 ⇓P P 22 33 03.5 +0.2
baz=49
P19A Cripple Cowboy 49.18 75 ⇓P P 22 33 04.8 -0.5
baz=49,SNR=5.4
U15A North Rim 49.25 80 ⇑P P 22 33 06.5 +0.6
baz=49,SNR=8.9
O20A White River Ci 49.30 74 ⇑P P 22 33 06.0 -0.2
baz=50
S17A Black Ridge (B 49.37 78 ⇓P P 22 33 06.7 0.0
baz=50
R18A Canyonlands Na 49.43 77 ⇓P P 22 33 06.7 -0.5
baz=50
SPITS Spitsbergen Ar 49.61 356 P P 22 33 08.4 +0.4
1.6nm,0.4s,mb4.0,baz=46,slow=7.1,SNR=20
T17A Navajo Res., N 49.78 79 ⇑P P 22 33 10.1 +0.2
baz=50
S18A Hurst Farm, Bl 49.82 78 ⇑P P 22 33 09.8 -0.3
baz=50
N22A Wattenberg Ran 49.94 72 ⇑P P 22 33 11.0 0.0
baz=50
U17A Shonto 50.13 79 ⇑P P 22 33 12.5 0.0
baz=50
T18A Mexican Hat 50.25 78 ⇓P P 22 33 13.0 -0.4
baz=50
S19A Harvey Farm, M 50.30 77 ⇓P P 22 33 13.7 -0.1
baz=50
WUAZ Wupatki 50.41 81 ⇑P P 22 33 15.0 +0.3
baz=50
U18A Rough Rock, Ch 50.73 79 ⇑P P 22 33 17.6 +0.6
baz=51
T19A Beclabito 50.97 78 ⇓P P 22 33 19.0 +0.2
baz=51
S21A Coal Bank Pass 51.16 76 ⇑P P 22 33 20.4 +0.2
baz=51
ARCES ARCESS Array B 57.25 350 P P 22 34 03.7 -0.1
2.1nm,0.9s,mb4.0,baz=24,slow=8.2,SNR=7.2
ARCES ARCESS Array B 57.25 350 P P 22 34 03.7 -0.1
MKAR Makanchi Array 58.94 307 P P 22 34 15.6 -0.2
0.3nm,0.3s,mb3.6,baz=54,slow=6.4,SNR=13
MKAR pP pP 22 34 50.8 -0.8
0.2nm,0.5s,baz=47,slow=5.9,SNR=2.3
MKAR Makanchi Array 58.94 307 P P 22 34 15.6 -0.3
MKAR pP pP 22 34 50.8 -0.8
TXAR Lajitas Array 59.38 81 P P 22 34 18.9 -0.2
2.5nm,0.5s,mb4.3,baz=303,slow=4.7,SNR=39
BVAR Borovoye Array 59.81 319 P P 22 34 21.7 +0.1
0.2nm,0.3s,mb3.4,baz=58,slow=8.8,SNR=2.6
SCHQ Schefferville 59.97 38 P P 22 34 22.3 -0.5
1.5nm,0.5s,mb4.1,baz=291,slow=8.6,SNR=8.9
MIAR Mount Ida 61.67 69 eP P 22 34 34.1 -0.5
3.0nm,0.5s,mb4.4
JOF Joensuu 62.70 344 ep P 22 34 40.2 -0.8
1.4nm,0.5s,mb4.0
KAF Kangasniemi 64.23 347 ep P 22 34 48.2 -2.8
1.2nm,0.6s,mb3.9
FINES FINESS Array B 64.91 346 P P 22 34 54.9 -0.5
0.9nm,0.7s,mb3.7,baz=19,slow=8.9,SNR=5.6
NOA NORSAR Array B 66.86 354 P P 22 35 08.5 +0.6
0.3nm,0.5s,mb3.4,baz=14,slow=6.3,SNR=2.8
HFS Hagfors 67.58 353 P P 22 35 12.2 -0.2
0.6nm,0.4s,mb3.6,baz=27,slow=3.6,SNR=9.1
EKA Eskdalemuir Ar 72.93 2 P P 22 35 45.8 +0.8
0.8nm,0.7s,mb3.5,baz=7.1,slow=7.4,SNR=3.6
AKASG Malin Array Be 74.62 341 P P 22 35 54.7 -0.2
0.8nm,0.4s,mb3.8,baz=20,slow=5.9,SNR=4.2
AKASG Malin Array Be 74.62 341 P P 22 35 54.7 -0.2
WRA Warramunga Arr 81.95 223 P P 22 36 35.5 0.0
0.3nm,0.6s,mb3.1,baz=33,slow=6.0,SNR=3.1
WRA pP pP 22 37 10.2 -3.3
0.3nm,0.6s,baz=30,slow=5.8,SNR=2.0
WRA Warramunga Arr 81.95 223 P P 22 36 35.5 0.0
WRA pP pP 22 37 10.2 -3.3
BRTR Keskin Array B 83.95 334 P P 22 36 45.8 +0.1
0.2nm,0.5s,mb3.1,baz=18,slow=5.2,SNR=2.6
ASAR Alice Springs 85.44 221 P P 22 36 53.9 +0.7
0.1nm,0.3s,mb3.0,baz=12,slow=4.1,SNR=2.9
ASAR pP pP 22 37 29.4 -2.0
0.4nm,0.9s,baz=23,slow=5.7,SNR=2.7
ESDC Sonseca Array 88.56 3 P P 22 37 08.0 -0.2
0.2nm,0.4s,mb3.4,baz=353,slow=4.0,SNR=4.7
TORD Torodi Ar. Bea 115.03 358 PKP PKiKP 22 42 54.8 -1.2
0.5nm,0.9s,baz=12,slow=1.8,SNR=3.7
DBIC Dimbokro 121.34 5 PKP PKPdf 22 43 07.2 -0.9
5.2nm,1.1s,baz=0.0,slow=1.0,SNR=2.3
BOSA Boshof 149.88 311 PKPbc PKPbc 22 44 04.7 0.0
3.5nm,1.0s,baz=357,slow=3.0,SNR=6.7
BOSA Boshof 149.88 311 PKPbc PKPbc 22 44 04.7 0.0

*ISCJB **01** 22:37:26.2±1.1, 0.°95S±0.°06×98.°49E±0.°08, h44km±8km, mb4.0/14, Error ellipse: s-maj=15.6km s-min=6.8km az=145.7*
*DJA **01** 22:37:27, 0.°99S×98.°51E, h51km, MLv4.4/10*
*NEIC **01** 22:37:31.3±1.7, 0.°70S×98.°89E, h60km±14km, mb4.0/6, Error ellipse: s-maj=19.8km s-min=6.6km az=53.0*
*IDC **01** 22:37:33.1±4.7, 0.°63S×98.°99E, h72km±37km, mb3.7/8, mb1 3.7/10, mb1mx3.5/23, mbtmp3.6/10, ML3.7/2, Error ellipse: s-maj=57.4km s-min=16.5km az=56.0*
ISC 01 22:37:27.3±1.2, 0.°96S±0.°06×98.°50E±0.°06, h33km±8km, n46, σ0.°91/44, mb4.0/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.69	122	P		Pb	22 37 41.6	+0.6
SISI	Saibi	0.69	122	P		Pb	22 37 41.5	+0.5
PDSI	Padang	1.96	89	P		Pn	22 37 58.7	+0.5
PDSI				S		Sn	22 38 29.4	+7.7
PPI	Padang Panjang	1.96	75	P		Pn	22 37 58.9	+0.7
PPI				S		Sn	22 38 21.5	-0.2
PPI	Padang Panjang	1.96	75	P		Pn	22 37 58.5	+0.3
543nm,0.8s,7μm2.6nm
MNSI Mandailing Nat 2.05 32 P Pn 22 37 59.9 +0.5
MNSI Mandailing Nat 2.05 32 P Px 22 38 13.9
982nm,0.7s
GSI Gunungsitoli 2.43 338 P Pn 22 38 04.2 -0.5
GSI Gunungsitoli 2.43 338 P Pb 22 38 10.2 -0.2
0.9nm183nm,0.6s
TRSI Tarutung 3.00 9 P Pn 22 38 13.9 +1.4
TRSI Tarutung 3.00 9 P Px 22 38 28.8
2.2nm6μm502nm,0.7s
PSI Prapat 3.76 6 P Pn 22 38 22.1 -0.8
1.3nm,0.3s,baz=148,slow=9.5,SNR=5.0
MNAI Manna 5.58 127 P Pn 22 38 47.5 -0.6
227nm,1.8s,1.1nm
LHSI Lahat 5.77 120 P Pn 22 38 50.1 -0.5
14nm,0.9s
IPM Ipoh 5.96 25 P Pn 22 38 55.4 +2.1
IPM Ipoh 5.96 25 P Px 22 39 08.0
16nm,1.1s
LHMI Lhok Sumawe 6.34 346 P Pn 22 38 59.3 +0.8
68nm,1.0s,0.3nm
KULM Kulim 6.57 19 ePn Pn 22 39 01.4 -0.2
BSI Banda Aceh 7.17 334 P Pn 22 39 08.3 -1.5
31nm,1.2s,0.2nm
KLI Kotabumi 7.44 122 P Pn 22 39 12.3 -1.2
64nm,0.4s,0.4nm
KASI Kota Agung 7.51 127 P Pn 22 39 14.2 -0.3
KSM Kuching 12.05 78 ePn Pn 22 40 12.8 -4.0
CMAR Chiang Mai Arr 19.30 1 P Pn 22 41 49.5 -1.3
0.4nm,0.3s,baz=192,slow=11,SNR=6.3
CHTO Chiang Mai 19.66 1 eP Pn 22 41 51.7 -3.3
LSA Lhasa 31.29 348 eP P 22 43 44.9 +0.6
1.4nm,0.4s,mb4.1
FITZ Fitzroy Crossi 31.63 124 eP P 22 43 48.0 +0.5
ENH Enshi 32.78 18 P P 22 43 55.6 -1.7
WRA Warramunga Arr 39.81 121 P P 22 44 57.1 -0.5
1.3nm,0.8s,mb3.7,baz=303,slow=8.8,SNR=8.3
WRAB Tennant Creek 39.81 121 eP P 22 44 57.9 +0.2
2.2nm,0.8s,mb3.9
WB2 Warramunga Arr 39.82 121 eP P 22 44 57.8 +0.1
ASAR Alice Springs 41.07 126 P P 22 45 08.8 +0.8
0.8nm,0.7s,mb3.5,baz=298,slow=7.8,SNR=10
KSRS Korea Array 46.92 32 P P 22 45 50.9 -3.9
1.3nm,0.5s,mb4.1,baz=218,slow=8.1,SNR=3.7
UCH Uchtor 48.14 336 eP P 22 46 05.2 +1.1
0.6nm,0.5s,mb3.9
AAK Ala-Archa 48.49 336 eP P 22 46 07.7 +0.9
1.0nm,0.7s,mb4.0
SONM Songino Array 49.08 7 P P 22 46 11.4 +0.1
2.0nm,0.5s,mb4.4,baz=195,slow=9.0,SNR=2.6
ULN Ulaanbaatar 49.20 8 eP P 22 46 11.2 -0.9
1.4nm,0.6s,mb4.2
MKAR Makanchi Array 49.64 345 P P 22 46 16.8 +1.2
1.9nm,0.7s,mb4.3,baz=152,slow=7.7,SNR=26
MKAR Makanchi Array 49.64 345 P P 22 46 16.8 +1.2
TLY Talaya 52.63 4 eP P 22 46 37.4 -0.5
KURK Kurchatov 54.20 345 eP P 22 46 48.6 -0.9
1.1nm,0.6s,mb4.0
ZALV Zalesovo Beam 55.89 350 P P 22 47 01.9 +0.4
2.0nm,0.5s,mb4.4,baz=181,slow=5.7,SNR=14
BVAR Borovoye Array 58.70 341 P P 22 47 21.3 -0.2
0.9nm,0.7s,mb3.9,baz=157,slow=8.0,SNR=6.6
KIV Kislovodsk 66.78 319 eP P 22 48 16.1 +0.6
TSUM Tsumeb 81.11 251 P P 22 49 43.6 +3.7
FINES FINESS Array B 82.50 332 P P 22 49 46.3 0.0
0.7nm,0.8s,mb3.8,baz=99,slow=8.6,SNR=4.5
TXAR Lajitas Array 144.75 35 PKP PKPdf 22 57 01.9 +0.5
1.1nm,0.5s,baz=263,slow=0.8,SNR=10

*IDC **01** 22:43:20.5±3.6, 2.°83S×139.°81E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=115.2km s-min=27.8km az=92.0*
*ISCJB **01** 22:43:22.9±0.9, 2.°87S±0.°07×139.°8E±0.°2, h33km, mb3.8/3, Error ellipse: s-maj=26.2km s-min=7.8km az=14.5*
*NEIC **01** 22:43:24.6±0.8, 2.°87S×139.°83E, h35km, mb3.7/3, Error ellipse: s-maj=28.7km s-min=8.1km az=99.0*
ISC 01 22:43:24.6±0.9, 2.°88S±0.°07×139.°9E±0.°2, h35km, n15, σ0.°82/16, mb3.8/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.24	217	ePn		Pn	22 46 13.9	-2.6
66nm,1.0s
KAKA eSn Sn 22 48 31.8 0.0
GUMO Guam 17.09 17 Pn Pn 22 47 19.6 -1.4
WRAB Tennant Creek 17.79 197 ePn Pn 22 47 29.6 0.0
2.6nm,0.5s
WB2 Warramunga Arr 17.80 197 ePn Pn 22 47 29.7 0.0
WRA Warramunga Arr 17.80 197 P Pn 22 47 29.6 -0.2
0.5nm,0.3s,baz=19,slow=12,SNR=23
FITZ Fitzroy Crossi 20.59 222 P P 22 48 00.6 -0.2
1.2nm,0.6s,baz=48,slow=12,SNR=5.8
FITZ Fitzroy Crossi 20.59 222 eP P 22 48 00.9 +0.1
1.6nm,0.6s
ASAR Alice Springs 21.46 195 P P 22 48 11.3 +1.2
1.1nm,0.4s,mb3.5,baz=24,slow=11,SNR=25
CHTO Chiang Mai 45.69 300 P P 22 51 41.9 -0.6
MDJ Mudanjiang 48.17 350 P P 22 52 01.6 +0.2
LSA Lhasa 56.74 309 eP P 22 53 05.7 +0.4
0.9nm,0.2s,mb4.5
MK31 Makanchi Array 70.64 322 eP P 22 54 36.5 -0.1
MKAR Makanchi Array 70.64 322 P P 22 54 37.6 +1.0
0.2nm,0.4s,mb3.4,baz=97,slow=6.0,SNR=6.0
UCH Uchtor 74.00 315 P P 22 54 57.4 +0.6
BRVK Borovoye 80.19 325 P P 22 55 31.7 +0.4

*IDC **01** 22:49:41.5±2.0, 2.°92S×138.°25E, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.9/14, mbtmp4.0/7, ML4.4/1, MS3.7/5, Ms1 3.6/5, ms1mx3.1/25, Error ellipse: s-maj=78.9km s-min=13.6km az=90.0*
*NEIC **01** 22:49:49.3±1.6, 2.°99S×138.°26E, h64km±17km, mb4.1/4, Error ellipse: s-maj=17.5km s-min=9.4km az=95.0*
ISC 01 22:49:50.3±1.5, 3.°07S±0.°05×138.°3E±0.°1, h76km±15km, n27, σ0.°99/33, mb3.8/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	11.20	211	eP		Pn	22 52 29.3	+1.8
28nm,0.4s
KAKA eS Sn 22 54 40.5 +9.5
KAKA Kakadu 11.20 211 ePn Pn 22 52 29.3 +1.7
75nm,0.5s
KAKA eSn Sn 22 54 29.4 -1.6
KNA Kununurra 15.71 216 eP Pn 22 53 33.7 +6.4
12nm,0.6s
WRAB Tennant Creek 17.20 193 ePn Pn 22 53 44.9 -0.9
12nm,0.8s
WRAB eSn Sn 22 56 55.9 -0.8
WB2 Warramunga Arr 17.21 193 ePn Pn 22 53 45.5 -0.3
WB2 eSn Sn 22 56 57.2 +0.3
WRA Warramunga Arr 17.21 193 P Pn 22 53 45.8 -0.1
1.4nm,0.3s,baz=18,slow=12,SNR=23
WRA S S 22 57 00.3 -1.3
0.2nm,0.3s,baz=34,slow=25,SNR=4.2
WRA LR LR 23 01 09.9
comp=Z,200nm,19.4s,baz=55,slow=40
GUMO Guam 17.79 21 ePn Pn 22 53 51.4 -1.5
CTA Charters Tower 18.61 156 LR LR 23 01 37.1
comp=Z,116nm,20.1s,baz=49,slow=38
CTAO Charters Tower 18.61 156 P Pn 22 54 03.0 +0.1
FITZ Fitzroy Crossi 19.42 219 eP Pn 22 54 15.2 +2.7
14nm,0.9s
FITZ eS S 22 57 59.5 +13
FITZ Fitzroy Crossi 19.42 219 P Pn 22 54 11.3 -1.2
0.0nm,0.3s,baz=50,slow=11,SNR=1.7
FITZ S S 22 57 59.8 +14
0.2nm,0.3s,baz=90,slow=20,SNR=3.0
FITZ Fitzroy Crossi 19.42 219 eP Pn 22 54 15.2 +2.7
6.2nm,0.6s
FITZ S S 22 57 46.7 +0.5
ASAR Alice Springs 20.91 191 P P 22 54 27.2 +0.5
3.6nm,0.4s,baz=22,slow=10,SNR=44
ASAR S S 22 58 23.0 +7.3
0.9nm,0.9s,baz=18,slow=21,SNR=3.7
EIDS Eidsvold 25.36 152 eP P 22 55 05.5 -4.9
6.4nm,0.7s,mb4.2
MBWA Marble Bar 25.49 224 eP P 22 55 12.3 +0.6
3.9nm,0.6s,mb4.0
KSM Kuching 28.34 279 P P 22 55 35.8 -1.6
STKA Stephens Creek 28.82 174 P P 22 55 43.5 +2.0
2.3nm,0.9s,mb3.8,baz=356,slow=7.2,SNR=2.8
STKA LR LR 23 08 06.5
comp=Z,140nm,21.7s,baz=23,slow=38
KSRS Korea Array 41.45 347 LR LR 23 14 37.5
comp=Z,21nm,18.1s,baz=230,slow=36
AFI Afiamalu 50.43 105 LR LR 23 16 07.1
comp=Z,486nm,18.5s,baz=118,slow=31

MK31	Makanchi Array	69.82	323	eP	P	23 00 52.3	-0.4
MKAR	Makanchi Array	69.82	323	P	P	23 00 53.8	+1.0
	0.5nm,0.4s,mb3.7,baz=123,slow=7.1,SNR=16						
ZALV	Zalesovo Beam	72.04	330	P	P	23 01 05.6	-0.4
	0.4nm,0.4s,mb3.6,baz=116,slow=6.6,SNR=2.4						
TKM2	Tokmak 2	72.52	317	P	P	23 01 09.7	+0.6
EKS2	Erkin-Say	73.68	316	P	P	23 01 15.7	-0.3
KBL	Kabul	74.81	307	P	P	23 01 23.0	+0.2
BVAR	Borovoye Array	79.37	325	P	P	23 01 48.1	+0.2
	0.5nm,0.5s,mb3.6,baz=115,slow=7.2,SNR=5.3						
ARU	Arti	86.87	327	P	P	23 02 26.8	+0.4

*NEIC **01** 22:50:39.4, 19°.19N×67°.97W, h42km, MD3.8(RSPR), After RSPR.*

RSPR 01 22:50:39.4, 19°.19N×67°.97W, h42km±32km, MD3.8/14, MD3.8/14, 5C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	Isla Mona	1.08	177	⇓eP	Pn	22 50 57.7	-0.4
AGPR	Aguadilla, PR	1.09	132	⇓eP	Pn	22 50 55.6	-2.6
AGP	Aguadilla	1.11	135	eSg	Sn	22 51 06.0	-6.5
MPR	Mayaguez	1.25	141	ePg	Pn	22 50 58.2	-2.2
LSP	Las Mesas	1.31	140	⇑eP	Pn	22 50 59.3	-2.0
LRS	Lares	1.39	130	⇓iP	Pn	22 51 00.7	-1.7
AOPR	Arecibo Observ	1.43	126	⇑eP	Pn	22 51 01.0	-1.9
CRPR	Cabo Rojo, PR	1.43	145	⇓eP	Pn	22 51 01.7	-1.3
CRPR				eS	Sn	22 51 20.1	-0.6
GBPR	Guanica, Bosqu	1.59	139	⇓eP	Pn	22 51 04.7	-0.4
CELP	Cerrillos	1.72	130	⇓iP	Pn	22 51 05.8	-1.1
CELP				eS	Sn	22 51 27.7	0.0
OBIP	Obispado Ponce	1.73	131	⇓eP	Pn	22 51 06.1	-0.9
OBIP				eS	Sn	22 51 26.3	-1.4
ICM	Isla Caja Muer	1.89	133	⇑eP	Pn	22 51 08.5	-0.6
ICM				eS	Sn	22 51 30.3	-1.4
SJG	San Juan	2.03	122	⇓eP	Pn	22 51 10.0	-1.2
SJG	San Juan	2.03	122	⇓eP	Pn	22 51 10.3	-0.8
SJG				eS	Sn	22 51 34.3	-1.0
CBYP	Canovanas	2.20	114	⇓eP	Pn	22 51 13.5	0.0
CPD	Cerro la Pandu	2.26	120	⇓eP	Pn	22 51 14.2	-0.1
HUMP	Col San Antoni	2.26	117	⇓eP	Pn	22 51 14.3	0.0
MTP	Monte Pirata	2.54	115	⇓eP	Pn	22 51 17.5	-0.6
STVI	Saint Thomas	2.98	106	⇓eP	Pn	22 51 24.3	+0.1
STVI				eS	Sn	22 51 57.7	-0.9

*IDC **01** 23:13:36.9±0.6, 3°.63S×144°.08E, h0km, mb4.5/15, mb1 4.6/16, mb1mx4.6/18, mbtmp4.5/16, ML4.0/1, MS3.7/14, Ms1 3.6/14, ms1mx3.5/22, Error ellipse: s-maj=19.2km s-min=13.8km az=85.0*

*ISCJB **01** 23:13:37.1±1.6, 3°.61S±0°.05×144°.13E±0°.07, h10km±9km, mb4.8/50, MS3.8/17, Error ellipse: s-maj=11.4km s-min=7.6km az=170.8*

*BJI **01** 23:13:38.0, 3°.58S×144°.70E, h33km, mB5.0/23, mb4.9/38, Ms4.7/17, Ms7 4.3/16*

*NEIC **01** 23:13:44.2±1.6, 3°.63S×144°.11E, h54km±15km, mb4.7/21, Error ellipse: s-maj=10.1km s-min=6.6km az=62.0*

*DJA **01** 23:13:51, 3°.66S×143°.55E, h74km, mb4.8/13*

ISC 01 23:13:41.4±1.7, 3°.65S±0°.05×144°.12E±0°.06, h26km±12km, h34km±2.4km: pP-P, n108, σ1°.01/101, mb4.8/50, MS3.8/17, 1C-1D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	10.29	185	ePn	Pn	23 16 09.7	+2.4
KAKA	Kakadu	14.64	231	eP	Pn	23 17 04.4	-2.5
	22nm,0.5s						
KAKA				eS	Sn	23 19 43.7	-4.8
KAKA	Kakadu	14.64	231	ePn	Pn	23 17 04.3	-2.6
KAKA				eSn	Sn	23 19 45.4	-3.1
CTA	Charters Tower	16.47	173	Pn	Pn	23 17 34.4	+3.6
	0.2nm,0.3s,baz=342,slow=13,SNR=1.8						
CTAO	Charters Tower	16.47	173	ePn	Pn	23 17 32.0	+1.2
	12nm,0.9s						
GUMO	Guam	17.14	2	LR	LR	23 23 42.3	
	comp=Z,61nm,19.1s,baz=135,slow=35						
WRAB	Tennant Creek	18.78	210	ePn	Pn	23 17 58.7	-0.6
	49nm,1.1s						
WRA	Warramunga Arr	18.80	210	P	Pn	23 17 59.0	-0.5
	0.5nm,0.3s,baz=31,slow=11,SNR=22						
DAV	Davao City (W)	21.35	300	P	P	23 18 26.5	-0.3
ASAR	Alice Springs	22.21	205	P	P	23 18 35.0	-0.9
	3.5nm,0.7s,mb3.9,baz=38,slow=7.6,SNR=30						
ASAR				PcP	PcP	23 22 32.4	+0.2
	2.6nm,0.8s,baz=28,slow=1.9,SNR=5.5						
EIDS	Eidsvold	22.61	163	eP	P	23 18 40.9	+0.7
	28nm,1.0s,mb4.7						
FITZ	Fitzroy Crossi	23.10	230	eP	P	23 18 43.7	-1.7
	29nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	23.10	230	P	P	23 18 43.9	-1.5
	4.5nm,0.4s,mb4.2,baz=70,slow=7.7,SNR=16						
FITZ				LR	LR	23 28 24.9	
	comp=Z,138nm,21.2s,MS3.4,baz=49,slow=38						
FITZ	Fitzroy Crossi	23.10	230	eP	P	23 18 44.1	-1.3
	27nm,1.1s,mb4.6						
KAPI	Kappang	24.33	266	P	P	23 18 54.7	-2.6
	2.4nm,0.3s,mb4.1,baz=59,slow=18,SNR=4.6						
KAPI	Kappang	24.33	266	eP	P	23 18 56.6	-0.7
	3.2nm,0.4s,mb4.1						
STKA	Stephens Creek	28.18	185	eP	P	23 19 31.1	-0.7
	4.8nm,0.8s,mb4.2						
STKA	Stephens Creek	28.18	185	P	P	23 19 31.2	-0.5
	3.6nm,0.7s,mb4.1,baz=11,slow=9.3,SNR=6.0						
STKA				LR	LR	23 32 26.2	
	comp=Z,598nm,18.3s,MS4.2,baz=140,slow=40						
STKA	Stephens Creek	28.18	185	eP	P	23 19 31.8	+0.1
	4.8nm,1.4s,mb3.9						
MBWA	Marble Bar	29.41	232	eP	P	23 19 44.1	+1.3
	1.4nm,0.5s,mb4.0						
FORT	Forrest	30.95	208	eP	P	23 19 53.0	-3.4
	15nm,0.7s,mb4.9						
FORT	Forrest	30.95	208	eP	P	23 19 56.6	+0.3
	22nm,0.9s,mb5.0						
CAN	Canberra	31.84	172	P	P	23 20 05.7	+1.6
KSM	Kuching	34.17	278	eP	P	23 20 24.3	-0.6
NACB	Ninganchiao	35.29	323	eP	P	23 20 33.6	-0.7
YHNB	Yeheng	35.79	323	P	P	23 20 39.2	+0.6
MJAR	Matsushiro Arr	40.36	353	P	P	23 21 15.3	-1.7
	0.7nm,0.3s,mb3.9,baz=191,slow=7.8,SNR=3.4						
MJAR				LR	LR	23 37 05.5	
	comp=Z,64nm,18.5s,MS3.5,baz=210,slow=35						
MAJO	Matsushiro	40.36	353	P	P	23 21 17.3	+0.3
NJ2	Nanjing	42.86	328	eP	P	23 21 38.4	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
KSRS	Korea Array	43.58	341	P	P	23 21 42.6	-0.6
	comp=Z,11nm,0.7s,mb4.7,baz=160,slow=9.1,SNR=50						
KSRS				PcP	PcP	23 23 31.0	+0.4
	comp=Z,2.3nm,0.8s,baz=170,slow=3.9,SNR=8.1						
KSRS				LR	LR	23 36 56.3	
	comp=Z,122nm,18.9s,MS3.8,baz=154,slow=32						
RAO	Raoul Island	44.09	129	P	P	23 21 48.1	+0.6
	comp=Z,263nm,0.4s,baz=301,slow=17,SNR=2.7						
KULM	Kulim	44.32	281	P	P	23 21 49.2	-0.4
WHN	Wuhan	44.32	322	⇓P	P	23 21 50.7	+1.4
AFI	Afiamalu	44.69	106	P	P	23 21 51.6	-0.9
	comp=Z,6.7nm,0.3s,mb4.9,baz=312,slow=12,SNR=2.4						
GYA	Guiyang	46.98	312	P	P	23 22 11.0	+0.5
GYA				pP	pP	23 22 21.8	+3.3
GYA				sP	sP	23 22 28.7	+7.1
GYA				PcP	PcP	23 23 43.2	+0.5
GYA				PP	PP	23 24 01.9	+0.6
GYA				ScP	ScP	23 27 32.8	-2.2
GYA				S	S	23 29 01.0	+0.4
GYA				sS	sS	23 29 17.8	+4.0
GYA				SS	SS	23 32 20.5	-7.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,90nm,4.7s						
GYA				LR	LR		
	comp=N,420nm,18.8s,MS4.5						
GYA				LR	LR		
	comp=E,360nm,19.4s,MS4.5						
GYA				LR	LR		
	comp=Z,450nm,18.6s,MS4.5						
ENH	Enshi	47.26	318	eP	P	23 22 11.7	-0.8
	comp=Z,5.1nm,0.6s,mb4.6						
KMI	Kunming	49.30	308	P	P	23 22 29.8	+1.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.6						
CM31	Chiang Mai Arr	49.62	298	eP	P	23 22 32.1	+1.1
CMAR	Chiang Mai Arr	49.62	298	P	P	23 22 31.5	+0.5
	comp=Z,3.3nm,0.8s,mb4.4,baz=120,slow=5.8,SNR=17						
CHTO	Chiang Mai	49.75	298	eP	P	23 22 31.7	-0.2
	comp=Z,18nm,1.5s,mb4.9						
MDJ	Mudanjiang	49.78	346	P	P	23 22 30.4	-1.3
MDJ				sP	sP	23 22 44.1	+1.2
MDJ				PcS	PcS	23 27 48.3	-0.7
MDJ				S	S	23 29 38.0	-1.5
MDJ				sS	sS	23 29 52.0	-0.7
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,72nm,6.3s						
MDJ				LR	LR		
	comp=N,78nm,30.2s						
MDJ				LR	LR		
	comp=Z,100nm,25.5s,MS3.7						
XAN	Xi'an	50.06	321	P	P	23 22 33.7	-0.3
XAN				pP	pP	23 22 42.5	+0.4
XAN				sP	sP	23 22 46.0	+0.8
XAN				PP	PP	23 24 30.0	+0.7
XAN				S	S	23 29 42.4	-1.3
XAN				sS	sS	23 30 00.1	+3.1
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.2						
XAN				pmax	pmax		
	comp=Z,14nm,6.8s						
BJT	Baijiatuau	50.47	332	eP	P	23 22 36.0	-1.0
BJI	Beijing	50.48	332	P	P	23 22 36.2	-0.9
BJI				PP	PP	23 24 32.7	-0.4
BJI				S	S	23 29 50.9	+1.5
BJI				SS	SS	23 33 24.9	+1.1
BJI				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
BJI				LR	LR		
	comp=N,91nm,23.4s,MS4.0						
BJI				LR	LR		
	comp=E,130nm,21.7s,MS4.0						
BJI				LR	LR		
	comp=Z,71nm,19.1s,MS3.7						
CD2	Chengdu	51.59	315	⇑iP	P	23 22 46.1	+0.5
CD2				pP	pP	23 22 58.0	+4.3
CD2				sP	sP	23 23 02.0	+5.2
CD2				PP	PP	23 24 46.2	+2.9
CD2				PcS	PcS	23 27 57.6	+0.3
CD2				S	S	23 30 05.8	+0.7
CD2				sS	sS	23 30 22.3	+3.9
CD2				SS	SS	23 33 40.2	-1.5
CD2				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
CD2				pmax	pmax		
	comp=Z,140nm,8.9s						
CD2				LR	LR		
	comp=N,270nm,5.3s						
CD2				LR	LR		
	comp=E,200nm,7.1s						
HHC	Hu-ho-hao-te	53.35	329	eP	P	23 22 59.1	+0.6
HHC				pP	pP	23 23 08.9	+2.3
HHC				sP	sP	23 23 13.2	+3.5
HHC				PcP	PcP	23 24 06.8	+1.1
HHC				PP	PP	23 25 01.2	+2.2
HHC				ScP	ScP	23 27 59.2	-2.7
HHC				S	S	23 30 28.7	-0.1
HHC				sS	sS	23 30 43.1	+1.0
HHC				ScS	ScS	23 32 42.6	-3.8
HHC				SS	SS	23 34 06.4	-2.8
HHC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,120nm,6.1s						
HHC				LR	LR		
	comp=N,150nm,15.9s,MS4.6						
HHC				LR	LR		
	comp=E,410nm,19.6s,MS4.6						
HHC				LR	LR		
	comp=Z,110nm,17.5s,MS4.0						
LZH	Lanzhou	54.57	320	eP	P	23 23 09.1	+1.6
LZH				pP	pP	23 23 19.6	+4.0
LZH				sP	sP	23 23 24.7	+5.9
LZH				PcP	PcP	23 24 13.4	+2.9
LZH				PP	PP	23 25 07.4	-2.7
LZH				eS	S	23 30 45.0	-0.5
LZH				sS	sS	23 31 03.5	+4.6
LZH				SS	SS	23 34 28.3	-0.3
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
LZH				pmax	pmax		
	comp=Z,200nm,4.6s						
PETK	Petropavlovsk-	57.70	10	P	P	23 23 29.1	-0.4
	comp=Z,8.0nm,0.7s,mb4.8,baz=176,slow=8.9,SNR=6.5						
PETK				LR	LR	23 43 45.2	
	comp=Z,24nm,20.5s,MS3.3,baz=284,slow=31						
GTA	Gaotai	59.11	321	eP	P	23 23 40.6	+0.9
GTA				pP	pP	23 23 45.7	-2.2
GTA				sP	sP	23 23 49.6	-1.4
GTA				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
LSA	Lhasa	60.54	307	eP	P	23 23 50.2	+0.5
	comp=Z,16nm,1.2s,mb5.0						
ULN	Ulaanbaatar	60.69	332	eP	P	23 23 51.0	+0.6
	comp=Z,16nm,1.3s,mb5.0						
SONM	Songino Array	60.98	332	P	P	23 23 52.6	+0.3
	comp=Z,3.7nm,0.8s,mb4.5,baz=149,slow=7.3,SNR=7.2						
SONM				LR	LR	23 50 19.0	
	comp=Z,92nm,19.3s,MS3.9,baz=116,slow=36						
GUN	Gumba	64.18	303	eP	P	23 24 15.2	+1.1
	comp=Z,44nm,0.9s,mb5.5						
PKI	Pulchoki	64.47	303	eP	P	23 24 16.4	+0.4
	comp=Z,21nm,1.0s,mb5.1						
PKIN	Phulchoki	64.48	303	eP	P	23 24 15.5	-0.6
	comp=Z,42nm,1.3s,mb5.3						
PKIN	Phulchoki	64.48	303	eP	P	23 24 16.5	+0.4
KKN	Kakani	64.64	303	eP	P	23 24 17.6	+0.4
	comp=Z,55nm,0.9s,mb5.6						
GKN	Gorkha	65.25	303	eP	P	23 24 21.7	+0.6
	comp=Z,48nm,0.8s,mb5.6						
KOLN	Koldanda	66.05	302	eP	P	23 24 27.0	+0.7
	comp=Z,52nm,0.8s,mb5.6						
WMQ	Urumqi	69.15	320	eP	P	23 24 46.0	+0.5
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
JOSI	Joshimath	70.25	304	eP	P	23 24 52.9	+0.3
AGRA	Agra	70.72	300	eP	P	23 24 54.7	-0.9
BISR	Bishrakh	71.49	302	eP	P	23 24 59.1	-1.1
SONA	Sohna	71.71	301	eP	P	23 25 00.8	-0.7
AYAN	Aya Nagar	71.73	301	eP	P	23 25 00.7	-0.9
AYAN				AMb	AMB	23 25 01.6	
	comp=Z,10nm,0.5s,mb5.0						
SMLA	Simla	72.39	304	eP	P	23 25 05.8	+0.3
RTK	Rohtak	72.48	302	ex	x	23 24 58.9	
KHET	Khetri	72.76	301	eP	P	23 25 06.2	-1.6
KHET				AMb	AMB	23 25 09.0	
	comp=Z,14nm,1.1s,mb4.8						
BILL	Bilibino	73.19	9	eP	P	23 25 07.7	-1.8
	comp=Z,3.7nm,0.8s,mb4.4						
MK31	Makanchi Array	73.87	321	eP	P	23 25 14.2	+0.3
MKAR	Makanchi Array	73.87	321	P	P	23 25 14.0	+0.1
	comp=Z,4.3nm,0.8s,mb4.4,baz=109,slow=7.1,SNR=29						
MKAR				LR	LR	23 59 14.1	
	comp=Z,23nm,18.2s,MS3.5,baz=256,slow=37						
SBA	Scott Base	75.11	175	eP	P	23 25 20.8	+0.2
ZALV	Zalesovo Beam	75.51	328	P	P	23 25 22.1	-1.1
	comp=Z,7.5nm,0.8s,mb4.7,baz=108,slow=5.5,SNR=35						
ZALV				LR	LR	23 55 51.5	
	comp=Z,34nm,21.6s,MS3.6,baz=242,slow=34						
KSH	Kashi	75.68	312	eP	P	23 25 25.9	+1.3
KSH				epP	pP	23 25 35.4	+2.4
KSH				ePcP	PcP	23 25 38.6	+1.3
KSH				esP	sP	23 25 40.2	+4.1
KSH				ePP	PP	23 28 18.6	+4.0
KSH				eS	S	23 35 02.1	-2.5
KSH				esS	sS	23 35 21.5	+3.1
KSH				eSKS		23 35 28.4	
KSH				eScS	ScS	23 35 34.2	-2.8
KSH				eSS	SS	23 39 59.5	+3.0
KSH				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
KSH				LR	LR		
	comp=N,280nm,4.3s						
KSH				LR	LR		
	comp=E,180nm,4.9s						
KSH				LR	LR		
	comp=Z,310nm,5.6s						
CHGN	Chignik	75.72	29	eP	P	23 25 20.5	-3.9
KZA	Kyzart	76.96	315	P	P	23 25 33.5	+1.7
	SNR=21						
TKM2	Tokmak 2	76.97	315	P	P	23 25 32.8	+1.0
	SNR=8.6						
KBK	Karagaybulak	77.34	315	P	P	23 25 34.9	+1.0
	SNR=6.8						
UCH	Uchtor	77.53	315	P	P	23 25 36.4	+1.4
	SNR=16						
KURK	Kurchatov	77.62	324	eP	P	23 25 35.2	-0.1
	comp=Z,41nm,2.0s,mb5.0						
AAK	Ala-Archa	77.66	315	P	P	23 25 36.7	+1.0
	SNR=6.6						
AAK	Ala-Archa	77.66	315	eP	P	23 25 36.5	+0.8
	comp=Z,8.8nm,0.9s,mb4.7						
USP	Ospenovka	77.83	316	P	P	23 25 37.4	+0.7
	SNR=12						
AML	Almayashu	78.08	314	P	P	23 25 39.5	+1.4
	SNR=19						
EKS2	Erkin-Say	78.17	315	P	P	23 25 39.2	+0.7
	SNR=11						
KBL	Kabul	79.83	306	eP	P	23 25 47.5	-0.3
	comp=Z,4.6nm,0.8s,mb4.5						
BVAR	Borovoye Array	83.19	324	P	P	23 26 05.0	-0.1
	comp=Z,14nm,0.8s,mb5.0,baz=104,slow=6.3,SNR=73						
BRVK	Borovoye	83.26	324	eP	P	23 26 05.4	-0.2
	comp=Z,62nm,1.5s,mb5.4						
MAW	Mawson	83.31	202	P	P	23 26 05.2	-0.3
	comp=Z,8.3nm,1.0s,mb4.7,baz=54,slow=5.2,SNR=11						
MAW				LR	LR	00 02 33.6	
	comp=Z,84nm,18.4s,MS4.2,baz=283,slow=35						
MAW	Mawson	83.31	202	eP	P	23 26 05.2	-0.3
	comp=Z,0.9nm,0.6s,mb4.0						
COLA	College	84.13	23	P	P	23 26 08.1	-1.6
	comp=Z,6.5nm,0.9s,mb4.8						
INK	Inuvik	90.54	22	LR	LR	00 02 30.2	
	comp=Z,74nm,19.7s,MS4.1,baz=241,slow=32						
INK	Inuvik	90.54	22	eP	P	23 26 39.5	-1.1
	comp=Z,6.3nm,1.1s,mb4.9						
ARU	Arti	90.55	326	eP	P	23 26 39.1	-1.9
	comp=Z,7.0nm,1.1s,mb4.9						
BBB	Bella Bella	91.48	38	LR	LR	00 00 16.0	
	comp=Z,34nm,21.9s,MS3.8,baz=254,slow=31						
YBH	Yreka Blue Hor	94.78	49	LR	LR	00 01 11.4	
	comp=Z,64nm,21.0s,MS4.1,baz=346,slow=30						
YKA	Yellowknife Ar	98.43	27	P	P	23 27 15.6	-1.3
	comp=Z,0.9nm,0.8s,mb4.4,baz=281,slow=4.6,SNR=16						
YKA				LR	LR	00 05 10.3	
	comp=Z,7.9nm,20.9s,MS3.2,baz=290,slow=31						
CLL	Collm	117.46	328	ePKPdf	PKPdf	23 32 24.0	-0.8
GERES	GERESS Array B	118.35	325	PKP	PKPdf	23 32 26.0	-0.5
	comp=Z,0.4nm,0.7s,baz=294,slow=1.3,SNR=4.7						
SCHQ	Schefferville	123.14	21	PKP	PKPdf	23 32 34.5	-1.1
	comp=Z,3.9nm,0.8s,baz=275,slow=0.6,SNR=5.0						
SCHQ	Schefferville	123.14	21	PKP	PKPdf	23 32 34.5	-1.1
TORD	Torodi Ar. Bea	141.70	287	PKPKP		23 33 05.7	
	comp=Z,0.6nm,0.8s,baz=91,slow=1.8,SNR=3.4						
TORD				PKP	PKPdf	23 33 10.6	-1.0
	comp=Z,1.0nm,0.7s,baz=66,slow=2.1,SNR=5.9						
LPAZ	La Paz	142.47	123	ePKPdf	PKPdf	23 33 10.1	-2.7
CPUP	Villa Florida	143.68	146	PKP	PKPdf	23 33 15.2	+0.4
	comp=Z,1.6nm,0.6s,baz=233,slow=13						
KIC	Kosan Boka	148.87	276	ePKP1	PKPbc	23 33 26.8	-1.1
	comp=Z,25nm,1.0s						
DBIC	Dimbokro	148.96	277	PKPbc	PKPbc	23 33 26.9	-1.2
	comp=Z,6.9nm,0.9s,baz=94,slow=3.1,SNR=6.7						
TIC	Toumodi	149.12	277	ePKP1	PKPbc	23 33 27.7	-0.8
	comp=Z,27nm,1.0s						
LIC	Lamto	149.16	276	ePKP1	PKPbc	23 33 27.4	-1.2
	comp=Z,33nm,1.1s						

*IDC **01** 23:36:39.5±1.3, 0°.57S×135°.93E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.7/6, ML3.6/1, MS3.5/2, Ms1 3.5/2, ms1mx2.5/27, Error ellipse: s-maj=60.1km s-min=22.4km az=86.0*

*ISCJB **01** 23:36:42.3±0.8, 0°.64S±0°.08×135°.8E±0°.3, h33km, mb3.6/4, MS3.4/2, Error ellipse: s-maj=37.4km s-min=12.0km az=176.6*

*NEIC **01** 23:36:44.5±0.5, 0°.60S×135°.89E, h35km, mb3.5/2, Error ellipse: s-maj=24.6km s-min=8.2km az=87.0*

ISC 01 23:36:44.4±0.8, 0°.64S±0°.08×135°.9E±0°.3, h35km, n15, σ0°.60/12, mb3.6/4, MS3.4/2, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	19.24	185	eP	Pn	23 41 06.0	-0.9
	3.2nm,0.7s						
WRA	Warramunga Arr	19.25	185	P	Pn	23 41 06.0	-1.0
	0.2nm,0.3s,baz=3.3,slow=12,SNR=7.3						
FITZ	Fitzroy Crossi	20.09	210	P	P	23 41 15.3	+0.3
	1.7nm,0.9s,baz=38,slow=18,SNR=3.1						
ASAR	Alice Springs	22.98	185	P	P	23 41 47.0	+1.0
	1.6nm,0.6s,mb3.6,baz=9.9,slow=11,SNR=13						
CBIJ	Chichi jima	28.22	12	LR	LR	23 51 16.5	
	comp=Z,93nm,18.8s,MS3.4,baz=132,slow=31						
STKA	Stephens Creek	31.53	171	P	P	23 43 03.8	+0.5
	2.3nm,0.8s,mb4.0,baz=351,slow=14,SNR=4.8						
STKA	Stephens Creek	31.53	171	eP	P	23 43 03.8	+0.5
	0.4nm,0.8s,mb3.3						
TAU	Tasmania Unive	43.31	168	P	P	23 44 43.2	+0.4
MDJ	Mudanjiang	45.41	354	P	P	23 44 59.1	-0.5
MKAR	Makanchi Array	66.46	323	P	P	23 47 30.5	+0.2
	0.2nm,0.4s,mb3.5,baz=113,slow=8.2,SNR=7.5						
MKAR				LR	LR	00 16 48.5	
	comp=Z,27nm,19.0s,MS3.5,baz=196,slow=36						
MKAR	Makanchi Array	66.46	323	P	P	23 47 30.5	+0.2
MKAR				LR	LR	00 16 48.5	
EKS2	Erkin-Say	70.30	316	P	P	23 47 54.4	0.0
YKA	Yellowknife Ar	99.47	26	P	P	23 50 23.3	0.0
	0.1nm,0.4s,mb3.7,baz=284,slow=5.7,SNR=2.8						
CPUP	Villa Florida	150.30	155	PKPbc	PKPbc	23 56 33.7	+1.0
	0.6nm,0.4s,baz=162,slow=15,SNR=3.4						
CPUP	Villa Florida	150.30	155	PKPbc	PKPbc	23 56 33.7	+1.0

*CSEM **01** 23:44:45.9, 36°.33N×21°.66E, h22km, MD3.1, After ATH*

ATH 01 23:44:45.9, 36°.33N×21°.66E, h22km±2km, MD3.1/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.57	7	ePG	Pb	23 44 57.2	0.0
PYL	PYLOS	0.57	7	ePN	Pn	23 44 57.2	-1.5
PYL	PYLOS

SLKM	**Skilak Lake**	**2.94**	**30**	P		**Pn**	**23 47 26.4**	**+0.1**
SVW2	**Sparrevohn**	**3.33**	**340**	P		**Pn**	**23 47 31.4**	**-0.3**
RC01	**Rabbit Creek A**	**3.56**	**28**	P		**Pn**	**23 47 35.1**	**+0.4**
SKT	**Skwentna**	**4.08**	**11**	P		**Pn**	**23 47 42.0**	**+0.2**
PMR	**Palmer**	**4.14**	**28**	P		**Pn**	**23 47 42.4**	**-0.3**
EYAK	**Cordova Ski Ar**	**4.59**	**53**	P		**Pn**	**23 47 49.2**	**+0.4**
DIV	**Divide**	**4.90**	**47**	P		**Pn**	**23 47 53.6**	**+0.5**
PPLA	**Purkeypile**	**4.94**	**5**	P		**Pn**	**23 47 53.7**	**+0.2**
TT01	**Tatalina**	**5.12**	**345**	P		**Pn**	**23 47 55.8**	**-0.2**
TTA	**Tatalina**	**5.14**	**345**	*e*Pn		**Pn**	**23 47 56.1**	**-0.1**
	49nm,0.6s							
BMRM	**Bremner River**	**5.29**	**52**	P		**Pn**	**23 47 58.7**	**+0.4**
TRF	**Thorofare Moun**	**5.65**	**13**	P		**Pn**	**23 48 03.4**	**+0.1**
KTH	**Kantishna Hill**	**5.68**	**10**	P		**Pn**	**23 48 04.0**	**+0.3**
CHUM	**Lake Minchumin**	**5.92**	**4**	P		**Pn**	**23 48 06.6**	**-0.3**
MCK	**McKinley**	**6.11**	**18**	P		**Pn**	**23 48 09.7**	**+0.1**
BPAW	**Bear Paw Mtn.**	**6.21**	**9**	P		**Pn**	**23 48 10.7**	**-0.2**
DOT	**Dot Lake**	**7.20**	**34**	P		**Pn**	**23 48 24.6**	**+0.1**
PNL	**Peninsula**	**7.35**	**71**	P		**Pn**	**23 48 26.6**	**+0.1**
COLA	**College**	**7.35**	**18**	*e*Pn		**Pn**	**23 48 26.7**	**+0.2**
	13nm,0.9s							
IL1	**Eielson Array**	**7.43**	**21**	P		**Pn**	**23 48 27.1**	**-0.5**
BCA3	**Beaver Creek A**	**7.57**	**43**	P		**Pn**	**23 48 29.5**	**+0.1**
IM3	**Indian Mountai**	**8.02**	**358**	P		**Pn**	**23 48 34.9**	**-0.7**
UNV	**Unalaska Valle**	**8.55**	**247**	P		**Pn**	**23 48 41.8**	**-1.2**
EGAK	**Eagle**	**8.90**	**35**	*e*Pn		**Pn**	**23 48 48.4**	**+0.8**
	3.3nm,0.6s							
DLBC	**Dease Lake**	**12.20**	**78**	P		**Pn**	**23 49 34.1**	**+1.5**
	0.3nm,0.3s,baz=291,slow=14,SNR=2.8							
DLBC				S		**Sn**	**23 51 44.1**	**-2.6**
	0.1nm,0.3s,baz=217,slow=20,SNR=2.3							
INK	**Inuvik**	**13.54**	**32**	P		**Pn**	**23 49 50.4**	**-0.3**
	0.1nm,0.3s,baz=221,slow=15,SNR=10							
INK	**Inuvik**	**13.54**	**32**	*e*Pn		**Pn**	**23 49 51.1**	**+0.4**
	4.9nm,0.9s							
YKA	**Yellowknife Ar**	**19.45**	**60**	P		**Pn**	**23 51 03.9**	**-0.4**
	0.1nm,0.3s,baz=274,slow=10,SNR=9.0							
YKA	**Yellowknife Ar**	**19.45**	**60**	P		**Pn**	**23 51 03.9**	**-0.4**
RES	**Resolute Bay**	**27.08**	**30**	P		**P**	**23 52 18.2**	**+0.8**
	0.3nm,0.4s,mb3.1,baz=250,slow=16,SNR=4.4							
ARCES	**ARCESS Array B**	**52.76**	**1**	P		**P**	**23 55 49.0**	**-0.1**
	3.0nm,1.1s,mb4.2,baz=2.3,slow=6.1,SNR=4.2							
ARCES	**ARCESS Array B**	**52.76**	**1**	P		**P**	**23 55 49.0**	**-0.1**
SONM	**Songino Array**	**55.90**	**307**	P		**P**	**23 56 12.3**	**+0.2**
	0.7nm,0.3s,mb4.1,baz=52,slow=6.1,SNR=2.8							
HHC	**Hu-ho-hao-te**	**59.03**	**298**	*e*P		**P**	**23 56 37.4**	**+3.1**
HHC				pP		pP	23 56 53.3	+0.9
HHC				sP		sP	23 57 00.4	+0.1
HHC				PP		PP	23 58 49.5	+4.6
HHC				pmax		pmax		
	comp=Z,16nm,1.1s							
HHC				pmax		pmax		
	comp=Z,130nm,5.8s							
FINES	**FINESS Array B**	**60.89**	**0**	P		**P**	**23 56 47.4**	**+0.7**
	comp=Z,1.1nm,0.9s,mb3.9,baz=359,slow=7.4,SNR=3.1							
BVAR	**Borovoye Array**	**63.80**	**332**	P		**P**	**23 57 04.3**	**-1.8**
	comp=Z,0.2nm,0.4s,mb3.3,baz=191,slow=23,SNR=3.2							
MKAR	**Makanchi Array**	**65.94**	**322**	P		**P**	**23 57 19.5**	**-0.7**
	comp=Z,0.1nm,0.4s,mb3.0,baz=30,slow=6.7,SNR=3.3							
CMAR	**Chiang Mai Arr**	**83.61**	**295**	P		**P**	**23 59 03.1**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.7,baz=2.3,slow=4.5,SNR=3.6							

IDC 02 00:08:36.6±1.4, 3°.18S×147°.88E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/24, Error ellipse: s-maj=68.5km s-min=29.0km az=128.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.27**	**217**	P	P	00 13 25.3	+0.6
	1.8nm,0.7s,baz=45,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**24.44**	**212**	P	P	00 13 57.4	+0.1
	1.6nm,0.6s,baz=40,slow=7.3,SNR=16						
FITZ	**Fitzroy Crossi**	**26.36**	**234**	P	P	00 14 14.4	-0.3
	2.4nm,0.9s,baz=81,slow=13,SNR=3.8						
STKA	**Stephens Creek**	**29.15**	**191**	LR	LR	00 27 09.0	
	comp=Z,85nm,21.2s,baz=27,slow=38						
YKA	**Yellowknife Ar**	**96.28**	**28**	P	P	00 22 06.6	-0.2
	0.3nm,0.9s,baz=272,slow=4.5,SNR=4.0						
TORD	**Torodi Ar. Bea**	**145.15**	**288**	PKPbc	PKPbc	00 28 15.9	-0.9
	0.6nm,1.1s,baz=64,slow=3.5,SNR=3.3						
SIV	**San Ignacio**	**145.61**	**124**	PKPbc	PKPbc	00 28 17.4	-0.8
	0.5nm,0.5s,baz=262,slow=7.9,SNR=4.0						
SIV	**San Ignacio**	**145.61**	**124**	PKPbc	PKPbc	00 28 17.4	-0.8

*ISCJB **02** 00:08:56.5±1.6, 18°.77N±0°.10×145°.1E±0°.2, h433km±17km, mb3.3/11, Error ellipse: s-maj=27.8km s-min=14.6km az=167.5*
*NEIC **02** 00:08:57.4±0.9, 18°.76N×145°.13E, h429km±10km, mb3.3/4, Error ellipse: s-maj=14.8km s-min=7.7km az=77.0*
*IDC **02** 00:08:57.5±21.0, 18°.77N×145°.25E, h433km±246km, mb2.8/8, mb1 2.9/8, mb1mx2.8/22, mbtmp2.8/8, Error ellipse: s-maj=70.1km s-min=30.7km az=59.0*

ISC 02 00:08:57.4±1.6, 18°.76N±0°.10×145°.1E±0°.2, h428km±18km, n21, σ0°.38/21, mb3.3/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.15**	**183**	*e*P	**P**	**00 10 22.5**	**+0.2**
DAV	**Davao City (W)**	**22.30**	**241**	*e*P	**P**	**00 13 20.3**	**-0.8**
YHNB	**Yeheng**	**22.83**	**289**	P	**P**	**00 13 25.7**	**-0.1**
INCN	**Inchon**	**24.70**	**323**	P	**P**	**00 13 41.9**	**-0.5**
BJT	**Baijiatuau**	**32.72**	**317**	P	**P**	**00 14 52.2**	**-0.3**
ENH	**Enshi**	**34.27**	**296**	*e*P	**P**	**00 15 05.6**	**-0.2**
	6.5nm,0.3s,mb4.4						
WRAB	**Tennant Creek**	**39.88**	**196**	*e*P	**P**	**00 15 52.3**	**-0.1**
	0.9nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**39.89**	**196**	P	**P**	**00 15 52.2**	**-0.3**
	0.8nm,0.5s,mb3.3,baz=20,slow=8.9,SNR=4.8						
FITZ	**Fitzroy Crossi**	**41.34**	**209**	P	**P**	**00 16 04.6**	**+0.5**
	1.0nm,0.7s,mb3.3,baz=350,slow=6.1,SNR=6.0						
FITZ	**Fitzroy Crossi**	**41.34**	**209**	*e*P	**P**	**00 16 04.5**	**+0.4**
	0.3nm,0.3s,mb3.1						
ASAR	**Alice Springs**	**43.57**	**195**	P	**P**	**00 16 21.8**	**+0.1**
	0.3nm,0.5s,mb2.9,baz=12,slow=7.4,SNR=4.3						
CHTO	**Chiang Mai**	**43.63**	**278**	P	**P**	**00 16 22.5**	**0.0**
LSA	**Lhasa**	**50.04**	**293**	P	**P**	**00 17 11.7**	**+0.6**
MKAR	**Makanchi Array**	**58.04**	**314**	P	**P**	**00 18 08.0**	**+0.3**
	0.2nm,0.6s,mb2.6,baz=123,slow=7.1,SNR=2.6						
KURK	**Kurchatov**	**60.87**	**318**	P	**P**	**00 18 26.8**	**+0.1**
	0.5nm,0.4s,mb3.3,baz=97,slow=7.2,SNR=5.2						
KURK	**Kurchatov**	**60.87**	**318**	*e*P	**P**	**00 18 26.9**	**+0.2**
	0.3nm,0.4s,mb3.1						
EKS2	**Erkin-Say**	**63.95**	**309**	*e*P	**P**	**00 18 47.3**	**+0.3**
	1.0nm,0.3s,mb3.8						
BVAR	**Borovoye Array**	**66.09**	**320**	P	**P**	**00 19 01.1**	**+0.8**
	0.6nm,0.7s,mb3.4,baz=65,slow=3.2,SNR=4.2						
BRVK	**Borovoye**	**66.15**	**320**	*e*P	**P**	**00 19 00.8**	**0.0**
YKA	**Yellowknife Ar**	**78.18**	**28**	P	**P**	**00 20 10.4**	**-0.4**
	0.1nm,0.7s,mb2.5,baz=297,slow=5.5,SNR=2.9						
FINES	**FINESS Array B**	**86.61**	**335**	P	**P**	**00 20 53.4**	**-0.3**
	1.1nm,0.9s,mb3.6,baz=73,slow=6.6,SNR=8.3						

DJA 02 00:44:56, 0°.49N×98°.73E, h13km, MLv2.8/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.90**	**70**	P	Pg	00 45 12.9	-0.6
MNSI				S	Sg	00 45 25.7	+0.4
GSI	**Gunungsitoli**	**1.41**	**305**	P	Pn	00 45 20.7	-0.7
GSI				S	Sn	00 45 39.8	0.0
SISI	**Saibi**	**1.84**	**169**	P	Pn	00 45 27.5	+0.2
PPI	**Padang Panjang**	**1.91**	**119**	P	Pn	00 45 28.7	+0.4

*MOS **02** 01:09:07.4±1.2, 49°.85N×156°.92E, h52km, mb4.0/1, Error ellipse: s-maj=99.9km s-min=29.3km az=76.8*

KRSC 02 01:09:08.6±0.7, 49°.90N×157°.03E, h47km±46km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.98**	**324**	*e*PN	Pn	01 09 16.1	-10
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
SKR				pmax	pmax		
	comp=Z,130nm,0.3s						
ALID	**Alaid**	**1.36**	**316**	*e*P	Pn	01 09 31.8	+0.8
ALID				*i* S	Sn	01 09 48.0	+0.1
MIPR	**Malaya Ipel'ka**	**2.39**	**356**	*e*P	Pn	01 09 47.7	+2.6
MIPR				*i* S	Sn	01 10 16.9	+3.8
RUS	**Russkaya**	**2.70**	**20**	*e*P	Pn	01 09 52.7	+3.2
RUS				*i* S	Sn	01 10 25.0	+4.1
GRL	**Gorelyy**	**2.73**	**13**	*e*P	Pn	01 09 52.7	+2.8
AVH	**Avacha**	**3.53**	**17**	*e*P	Pn	01 10 05.5	+4.6
NLC	**Nalytchevo**	**3.58**	**23**	*e*P	Pn	01 10 04.0	+2.5
NLC				*i* S	Sn	01 10 44.7	+2.2
GNL	**Ganaly**	**3.84**	**8**	*e*P	Pn	01 10 09.2	+4.1
MKZ	**Mys Kozlova**	**5.48**	**30**	*e*P	Pn	01 10 30.3	+2.7
MKZ				*i* S	Sn	01 11 30.8	+1.5
KMNR	**Kamenistaya**	**6.18**	**17**	*e*P	Pn	01 10 42.9	+5.8
KBTR	**Krutoberegovo**	**7.22**	**27**	*e*P	Pn	01 10 54.1	+2.8

*IDC **02** 01:23:54.3±0.7, 20°.36S×173°.69W, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.3/20, mbtmp4.2/14, MS3.8/2, Ms1 3.8/2, ms1mx3.5/33, Error ellipse: s-maj=27.8km s-min=16.9km az=142.0*
*ISCJB **02** 01:23:58.0±0.4, 20°.3S±0°.1×173°.82W±0°.09, h33km, mb4.3/24, Error ellipse: s-maj=18.7km s-min=9.7km az=149.0*
*NEIC **02** 01:24:00.3±0.3, 20°.30S×173°.77W, mb4.5/11, Error ellipse: s-maj=15.5km s-min=8.0km az=147.0*

ISC 02 01:23:60.0±0.4, 20°.3S±0°.1×173°.79W±0°.09, h35km, n52, σ0°.88/33, mb4.3/24, 8C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.65**	**17**	Pn	**Pn**	**01 25 28.6**	**-6.7**
	5.7nm,0.3s,baz=201,slow=9.0,SNR=6.3						
AFI				Sn	**Sn**	**01 26 39.1**	**-11**
	10nm,0.3s,baz=339,slow=21,SNR=4.3						
RAR	**Rarotonga**	**13.14**	**96**	Pn	**Pn**	**01 26 52.2**	**-12**
	4.7nm,0.3s,baz=268,slow=8.4,SNR=14						
RAR				LR	LR	01 30 09.2	
	comp=Z,354nm,19.8s,baz=90,slow=29						
DZM	**Mont Dzumac**	**18.52**	**261**	*e*P	**Pn**	**01 28 12.5**	**-1.3**
	71nm,1.6s						
DZM				*e*LR	LR	01 32 28.3	
	321nm,22.6s						
URZ	**Urewera**	**19.55**	**202**	P	**Pn**	**01 28 20.3**	**-5.7**
	2.4nm,0.3s,baz=194,slow=0.2,SNR=6.0						
URZ				S	**S**	**01 31 48.1**	**-15**
	0.5nm,0.3s,baz=13,slow=8.1,SNR=3.4						
PPT	**Papeete**	**23.06**	**87**	*e*LR	LR	01 34 14.0	
	229nm,27.5s						
PPT	**Papeete**	**23.06**	**87**	LR	LR	01 36 07.7	
	comp=Z,296nm,18.2s,baz=248,slow=32						
RPZ	**Rata Peaks**	**26.55**	**205**	P	**P**	**01 29 34.8**	**+0.4**
	12nm,1.0s,mb4.4,baz=28,slow=14,SNR=1.8						
CTA	**Charters Tower**	**37.44**	**263**	P	**P**	**01 31 10.0**	**-0.1**
	1.6nm,0.3s,mb4.4,baz=79,slow=13,SNR=2.8						
CTA	**Charters Tower**	**37.44**	**263**	P	**P**	**01 31 10.0**	**-0.1**
CTAO	**Charters Tower**	**37.44**	**263**	*e*P	**P**	**01 31 09.8**	**-0.3**
	1.9nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**41.43**	**245**	P	**P**	**01 31 42.1**	**-1.2**
	2.4nm,0.7s,mb3.9,baz=100,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**48.40**	**256**	P	**P**	**01 32 37.8**	**-1.2**
	2.1nm,0.7s,mb4.3,baz=89,slow=8.4,SNR=22						
ASAR				PcP	PcP	01 34 06.3	+1.2
	2.0nm,0.8s,baz=105,slow=3.6,SNR=8.6						
WRA	**Warramunga Arr**	**48.53**	**261**	P	**P**	**01 32 38.8**	**-1.2**
	1.2nm,0.6s,mb4.1,baz=97,slow=8.5,SNR=5.7						
FITZ	**Fitzroy Crossi**	**56.96**	**261**	P	**P**	**01 33 44.1**	**+1.8**
	0.9nm,0.5s,mb4.1,baz=112,slow=11,SNR=4.9						
MBWA	**Marble Bar**	**61.74**	**256**	*e*P	**P**	**01 34 16.3**	**+1.0**
	3.8nm,0.6s,mb4.7						
CASY	**Casey**	**65.82**	**205**	*e*P	**P**	**01 34 42.5**	**+1.1**
	5.6nm,0.8s,mb4.7						
QSPA	**South Pole Qui**	**69.76**	**180**	P	**P**	**01 35 06.5**	**+0.5**
	2.0nm,0.8s,mb4.1,baz=40,slow=2.6,SNR=7.4						
MJAR	**Matsushiro Arr**	**72.47**	**321**	P	**P**	**01 35 24.0**	**+1.0**
	1.5nm,0.7s,mb4.0,baz=159,slow=7.5,SNR=4.5						
PETK	**Petropavlovsk-**	**77.18**	**343**	P	**P**	**01 35 50.2**	**+0.3**
	2.5nm,0.8s,mb4.2,baz=110,slow=7.4,SNR=4.1						
PETK	**Petropavlovsk-**	**77.18**	**343**	P	**P**	**01 35 50.2**	**+0.3**
NVAR	**Mina Array Bea**	**78.22**	**41**	P	**P**	**01 35 56.0**	**0.0**
	2.7nm,0.7s,mb4.3,baz=225,slow=9.3,SNR=16						
KSRS	**Korea Array**	**79.42**	**316**	P	**P**	**01 36 04.8**	**+2.1**
	2.4nm,0.9s,mb4.1,baz=134,slow=5.8,SNR=6.0						
TUC	**Tucson**	**79.79**	**50**	*e*P	**P**	**01 36 04.8**	**0.0**
	2.8nm,0.9s,mb4.2						
MNTX	**Cornudas Mount**	**83.45**	**53**	*e*P	**P**	**01 36 23.5**	**-0.6**
	1.2nm,0.8s,mb4.0						
HLID	**Hailey**	**83.65**	**39**	*e*P	**P**	**01 36 24.9**	**+0.1**
	2.2nm,0.8s,mb4.3						
HLID				*e*pP	pP	01 36 36.8	+0.9
TXAR	**Lajitas Array**	**83.66**	**56**	P	**P**	**01 36 24.8**	**-0.4**
	0.8nm,0.8s,mb3.9,baz=219,slow=9.6,SNR=11						
ANMO	**Albuquerque**	**84.24**	**50**	*e*P	**P**	**01 36 27.1**	**-0.9**
	8.1nm,1.4s,mb4.7						
ANMO				*e*pP	pP	01 36 40.3	+1.1
HWUT	**Hardware Ranch**	**84.28**	**42**	*e*P	**P**	**01 36 27.7**	**-0.4**
	2.1nm,0.6s,mb4.4						
PDAR	**Pinedale Array**	**86.16**	**42**	P	**P**	**01 36 37.0**	**-0.5**
	0.6nm,0.8s,mb3.9,baz=202,slow=3.2,SNR=5.9						
SDCO	**Great Sand Dun**	**86.28**	**48**	*e*P	**P**	**01 36 39.3**	**+1.1**
	1.4nm,0.9s,mb4.2						
COLA	**College**	**87.23**	**11**	*e*P	**P**	**01 36 42.2**	**0.0**
	5.8nm,0.8s,mb4.9						
NNA	**Nana**	**92.28**	**104**	*e*P	**P**	**01 37 06.8**	**-0.4**
	14nm,0.9s,mb5.3						
YKA	**Yellowknife Ar**	**94.73**	**24**	P	**P**	**01 37 16.6**	**-0.5**
	0.4nm,0.8s,mb3.9,baz=231,slow=4.2,SNR=11						
MKAR	**Makanchi Array**	**113.95**	**313**	PKP	PKiKP	01 42 34.3	-0.8
	0.5nm,0.9s,baz=79,slow=1.9,SNR=4.1						
BVAR	**Borovoye Array**	**121.47**	**320**	PKP	PKPdf	01 42 48.9	-0.5
	0.5nm,0.6s,baz=354,slow=1.5,SNR=4.1						
AKASG	**Malin Array Be**	**144.66**	**335**	PKP	PKPdf	01 43 31.4	-1.4
	2.3nm,0.5s,baz=39,slow=4.2,SNR=20						
AKBB	**Malin Array Si**	**144.66**	**335**	*e*PKPdf	PKPdf	01 43 31.4	-1.4
KIEV	**Kiev**	**144.67**	**335**	*e*PKPdf	PKPdf	01 43 31.1	-1.7
MALT	**Malatya**	**146.90**	**310**	*e*PKPdf	PKPdf	01 43 36.3	-0.7
MALT	**Malatya**	**146.90**	**310**	⇑*i*P	PKPab	01 43 44.2	+3.9
CLL	**Collm**	**148.61**	**352**	*e*PKPbc	PKPbc	01 43 44.0	+0.9
CLL				*e*pPKPbc	pPKPbc	01 43 54.0	-0.5
BURAR	**Bucovina Array**	**148.71**	**335**	⇑*i*P	PKPab	01 43 46.2	-0.9
BRG	**Berggiesshubel**	**148.90**	**351**	*e*P	PKPbc	01 43 45.4	+1.5
	2.7nm,1.0s						
TRPA	**Tarpa**	**149.28**	**338**	⇑*i*P	PKPbc	01 43 45.8	+0.9
BMR	**Baia Mare**	**149.32**	**337**	⇑*i*P	PKPbc	01 43 46.4	+1.4
VRI	**Vrincioaia**	**149.44**	**331**	⇑*i*P	PKPbc	01 43 46.3	+0.9
MLR	**Muntele Rosu**	**150.08**	**332**	⇑*i*P	PKPbc	01 43 48.6	+1.7
PSZ	**Piszkesteto**	**150.32**	**341**	⇓*i*P	PKPbc	01 43 48.6	+1.2
VOIR	**VOIRS**	**150.52**	**332**	⇑*i*P	PKPbc	01 43 49.8	+1.8
GERES	**GERESS Array B**	**150.91**	**350**	PKPbc	PKPbc	01 43 49.4	+0.6
	0.8nm,0.8s,baz=48,slow=2.0,SNR=7.6						
BZS	**Buzias**	**151.75**	**337**	⇑*i*P	PKPbc	01 43 50.8	0.0
TORD	**Torodi Ar. Bea**	**171.66**	**148**	PKP	PKPdf	01 44 04.8	-1.0
	0.5nm,0.9s,baz=286,slow=2.7,SNR=3.1						

*ISCJB **02** 01:33:34.0±0.1, 51°.81N±0°.02×177°.45W±0°.02, h5km, mb6.1/498, MS6.8/306, Error ellipse: s-maj=3.0km s-min=1.4km az=8.5*
*IDC **02** 01:33:36.6±1.6, 51°.93N×177°.53W, h14km±9km, mb5.4/35, mb1 5.5/37, mb1mx5.5/37, mbtmp5.4/37, ML5.2/2, MS6.7/40, Ms1 6.7/40, ms1mx6.6/50, Error ellipse: s-maj=12.0km s-min=9.4km az=174.0*
*GCMT **02** 01:33:37.2±0.0, 51°.96N×177°.54W, h12km, MW6.6/111, Moment Tensor Solution. s106,c271; s111,c520; Duration: 4s8 Moment tensor: Scale 10^19 Nm; Mrr-0.03±.00; Mθθ0.34±.00; Mφφ-0.30±.00; Mrθ0.13±.01; Mθφ-0.87±.00; Mφr-0.25±.01; Best double couple: M0 0.96800×10^19 NP1:φs79.00000°, δ74.00000°, λ176.00000°. NP2:φs170.00000°, δ86.00000°, λ16.00000°. Principal axes: T 1.0040, Plg14.0000°, Azm36.0000°; N -0.0720, Plg74.0000°, Azm183.0000°; P -0.9320, Plg8.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BJI **02** 01:33:37.5, 52°.14N×178°.11W, h16km, mB6.5/58, mb5.9/61, Ms7.0/77, Ms7 6.8/63*
*MOS **02** 01:33:37.9±1.0, 52°.01N×177°.56W, h33km, mb6.4/165, MS6.7/115, Error ellipse: s-maj=6.3km s-min=5.4km az=84.2*
*NEIC **02** 01:33:37.2±0.1, 51°.86N×177°.53W, h14km, mb6.3/293, ME7.1, MS6.8/201, MW6.5, MW6.6, Error ellipse: s-maj=3.7km s-min=2.4km az=10.0, Moment Tensor Solution. s214 Moment tensor: Scale 10^18 Nm; Mrr-1.57; Mθθ3.58; Mφφ-2.00; Mrθ1.89; Mθφ-5.67; Mφr-3.83; Best double couple: M0 7.70000×10^18 NP1:φs343.00000°, δ85.00000°, λ-36.00000°. NP2:φs77.00000°, δ55.00000°, λ-174.00000°. Principal axes: T 8.4700, Plg20.0000°, Azm35.0000°; N -1.7300, Plg54.0000°, Azm156.0000°; P -6.7300, Plg27.0000°, Azm293.0000°; Broadband fault plane solution: P waves. NP1:φs170.00000°, δ80.00000°, λ1.00000°. NP2:φs80.00000°, δ89.00000°, λ170.00000°. Principal axes: T Plg8.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg6.0000°, Azm126.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt on Adak.
*SZGRF **02** 01:33:38.3, 51°.36N×178°.98E, h33km, mb6.4, MS6.7, Rat Islands, Aleutian Islands, United States*
*BGS **02** 01:33:39.3±1.6, 52°.16N×178°.06E, h14km±999km, mb5.9, MS6.7*
*DJA **02** 01:33:47, 52°.46N×177°.17W, h116km, Mw6.8/13*

ISC 02 01:33:35.8±0.1, 51°.86N±0°.02×177°.49W±0°.02, h5km, h5km±1.1km; pP-P, n1833, σ1°.03/1747, mb6.1/498, MS6.8/306, 284C-268D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.92**	**74**	*e*Pg	**Pg**	**01 33 52.7**	**-0.6**
ATKA	**Atka Island**	**2.07**	**79**	P	**Pn**	**01 34 10.7**	**-0.3**
ATKA				S	**Sn**	**01 34 38.4**	**+1.3**
SMY	**Shemya**	**5.24**	**283**	P	**Pn**	**01 34 51.7**	**-2.9**
SMY				S	**Sn**	**01 35 54.6**	**-0.6**
NIKO	**Nikolski**	**5.41**	**75**	P	**Pn**	**01 34 57.3**	**+0.4**
OKFG	**Magazine Ridge**	**6.04**	**71**	P	**Pn**	**01 35 06.3**	**+0.7**
SPIA	**Saint Paul Isl**	**6.80**	**35**	P	**Pn**	**01 35 15.4**	**-0.6**
UNV	**Unalaska Valle**	**6.95**	**69**	P	**Pn**	**01 35 19.1**	**+1.0**
AKGG	**Akutan Green G**	**7.32**	**67**	P	**Pn**	**01 35 23.0**	**-0.2**
AKLV	**Akutan Long Va**	**7.33**	**67**	P	**Pn**	**01 35 23.4**	**0.0**
AKUT	**Akutan**	**7.43**	**68**	P	**Pn**	**01 35 25.0**	**+0.3**
FALS	**False Pass**	**8.94**	**65**	P	**Pn**	**01 35 45.6**	**+0.2**
SDPT	**Sand Point**	**10.70**	**64**	*e*Pn	**Pn**	**01 36 10.5**	**+1.0**
CHGN	**Chignik**	**12.04**	**61**	*e*Pn	**Pn**	**01 36 29.3**	**+1.5**
PET	**Petropavlovsk**	**14.58**	**284**	κ *i*P	**Pn**	**01 37 01.7**	**-0.8**
PET				*i* S	**Sn**	**01 39 41.7**	**-2.7**
PET				pmax	pmax		
	comp=Z,1μm,1.9s						
PET				pmax	pmax		
	comp=E,1μm,1.8s						
PET				pmax	pmax		
	comp=Z,48μm,4.8s						
PET				pmax	pmax		
	comp=E,51μm,5.0s						
PET				pmax	pmax		
	comp=Z,34μm,10.4s						
PET				pmax	pmax		
	comp=N,10μm,3.0s						
PET				MLR	MLR		
	comp=Z,247μm,18.0s						
PET				MLR	MLR		
	comp=Z,222μm,17.0s						
PET	**Petropavlovsk**	**14.58**	**284**	*e*Pn	**Pn**	**01 37 01.6**	**-0.8**
OHAK	**Old Harbor**	**15.00**	**60**	*e*Pn	**Pn**	**01 37 07.5**	**-0.6**
OHAK				*e*P		01 37 13.6	
PETK	**Petropavlovsk-**	**15.15**	**285**	Pn	**Pn**	**01 37 09.6**	**-0.5**
	comp=Z,6.7nm,0.3s,baz=88,slow=18,SNR=106						
PETK				PcP	PcP	01 42 16.4	-0.4
	comp=Z,0.5nm,0.3s,baz=116,slow=3.4,SNR=4.4						
PETK				LR	LR	01 42 23.3	
	comp=Z,324μm,21.7s,baz=293,slow=35						
PETK				ScP	ScP	01 45 48.2	-3.0
	comp=Z,0.4nm,0.3s,baz=41,slow=3.8,SNR=7.7						
SVW2	**Sparrevohn**	**15.16**	**44**	*e*Pn	**Pn**	**01 37 10.1**	**-0.2**
KDAK	**Kodiak Island**	**15.48**	**58**	Pn	**Pn**	**01 37 16.9**	**+2.4**
	comp=Z,12μm,0.9s,SNR=72						
KDAK	**Kodiak Island**	**15.48**	**58**	*i* P	**Pn**	**01 37 13.4**	**-1.1**
KDAK	**Kodiak Island**	**15.48**	**58**	Pn	**Pn**	**01 37 13.7**	**-0.8**
	comp=Z,18nm,0.3s,baz=258,slow=5.9,SNR=46						
KDAK				Sn	**Sn

YUK pmax pmax
comp=E,7μm,1.6s
YUK pmax pmax
comp=Z,10μm,1.6s,mb7.1
YUK smax
comp=N,52μm,10.0s
YUK smax
comp=E,24μm,12.0s
YSS Yuzh-Sakhalins 26.09 275κ *i*P **P 01 39 10.0 -0.1**
YSS *i* 01 39 52.0
YSS *e* 01 42 39.0
YSS *i* S **S 01 43 38.0 -3.6**
YSS *i* SS 01 44 48.0
YSS *e*SSS 01 45 06.0
YSS pmax pmax
comp=Z,880nm,1.5s,mb6.1
YSS pmax pmax
comp=Z,14μm,10.0s
YSS MLR MLR
comp=Z,133μm,16.0s,MS6.6
YSS MLR MLR
comp=N,128μm,14.0s,MS6.7
YSS MLR MLR
comp=E,64μm,15.0s,MS6.7
YSS Yuzh-Sakhalins 26.09 275 *e*P **P 01 39 09.0 -1.1**
comp=E,2μm,2.0s,mb6.3
YSS *e*PcP PcP 01 42 38.5 +1.1
YSS LR LR
comp=Z,39μm,22.0s,MS5.9
CRAG Craig 26.20 64 *e*P **P 01 39 16.0 +5.1**
comp=Z,633nm,1.5s,mb5.9
INK Inuvik 26.60 35 P **P 01 39 14.4 -0.1**
INK 01 42 37.7
INK pmax pmax
comp=Z,235nm,0.9s
INK MLR MLR
comp=Z,332μm,19.6s
INK Inuvik 26.60 35 P **P 01 39 14.4 -0.1**
comp=Z,235nm,0.8s,mb5.7,baz=244,slow=8.6,SNR=105
INK PcP PcP 01 42 37.7 -0.5
comp=Z,32nm,1.0s,baz=269,slow=2.5,SNR=4.6
INK ScP ScP 01 46 17.0 -1.5
comp=Z,64nm,1.2s,baz=275,slow=6.1,SNR=2.8
INK LR LR 01 50 35.9
comp=Z,332μm,19.6s,MS6.9,baz=223,slow=38
INK P3KPbc 02 11 58.5
comp=Z,4.2nm,1.0s,baz=67,slow=8.4,SNR=6.6
INK Inuvik 26.60 35 *e*P **P 01 39 14.1 -0.3**
comp=Z,11μm,2.6s,mb6.9
DLBC Dease Lake 27.41 57 P **P 01 39 22.2 +0.3**
comp=Z,21nm,1.1s,mb4.6,baz=265,slow=9.0,SNR=7.7
DLBC PcP PcP 01 42 41.1 +0.8
comp=Z,36nm,1.1s,baz=111,slow=8.6,SNR=2.3
DLBC LR LR 01 51 10.2
comp=Z,329μm,19.5s,MS6.9,baz=281,slow=38
DLBC Dease Lake 27.41 57 *e*P **P 01 39 22.5 +0.6**
ASAJ Asahikawa 27.52 270 P **P 01 39 22.6 -0.5**
comp=Z,130nm,0.8s,mb5.6,baz=63,slow=9.4,SNR=33
ASAJ PcP PcP 01 42 40.2 -0.6
comp=Z,15nm,0.8s,baz=273,slow=3.4,SNR=1.9
ASAJ ScP ScP 01 46 19.4 -2.4
comp=Z,37nm,1.0s,baz=304,slow=10,SNR=6.6
ASAJ LR LR 01 49 42.0
comp=Z,134μm,18.8s,MS6.5,baz=76,slow=35
ERM Erimo 28.30 265 P **P 01 39 31.3 +1.3**
comp=Z,790nm,1.8s,mb6.0,SNR=7.7
ERM Erimo 28.30 265 *e*P **P 01 39 29.1 -0.9**
ERM *e* 01 42 44.6
ERM pmax pmax
comp=Z,520nm,1.6s,mb5.9
ERM MLR MLR
comp=Z,81μm,20.0s,MS6.3
ERM Erimo 28.30 265 *e*P **P 01 39 29.1 -0.9**
comp=Z,520nm,1.6s,mb5.9
ERM *e*PcP PcP 01 42 44.6 +1.8
ERM *e*ScP ScP 01 46 23.7 -0.4
ERM LR LR
comp=Z,81μm,20.0s,MS6.3
YAK Yakutsk 29.72 311*d* *i*P **P 01 39 40.7 -1.7**
YAK *e**PP pP 01 39 52.4 +8.5
YAK *e*PPP 01 40 38.7
YAK *e* 01 42 52.2
YAK *e*S **S 01 44 26.0 -12**
YAK *e*SSS 01 46 03.3
YAK *e* 01 46 34.3
YAK *e* 01 50 14.0
YAK pmax pmax
comp=Z,112nm,0.9s,mb5.6
YAK pmax pmax
comp=E,90nm,1.5s
YAK smax
comp=E,20μm,14.5s
YAK smax
comp=N,5μm,7.8s
YAK MLR MLR
comp=Z,97μm,19.0s,MS6.5
YAK MLR MLR
comp=E,86μm,20.0s,MS6.6
YAK MLR MLR
comp=N,110μm,17.0s,MS6.6
YAK Yakutsk 29.72 311 *e*P **P 01 39 41.3 -1.1**
comp=N,2μm,2.1s,mb6.6
YAK *e*ScP ScP 01 46 25.4 -3.0
YAK LR LR
comp=Z,82μm,21.0s,MS6.3
BBB Bella Bella 29.92 70 P **P 01 39 46.8 +2.5**
comp=Z,93nm,0.9s,mb5.5,baz=286,slow=11,SNR=9.9
BBB PcP PcP 01 42 48.5 +1.8
comp=Z,34nm,0.8s,baz=295,slow=5.1,SNR=3.5
BBB LR LR 01 51 25.4
comp=Z,106μm,18.7s,MS6.5,baz=288,slow=36
BBB Bella Bella 29.92 70 P **P 01 39 46.8 +2.5**
BBB PcP PcP 01 42 48.5 +1.8
BBB LR LR 01 51 25.4
HABR Khabarovsk 30.16 283*c* *i*P **P 01 39 46.6 +0.2**
HABR 01 40 44.0
HABR *e* 01 42 48.4
HABR *e*S **S 01 44 46.0 +0.3**
HABR *e*SS SS 01 46 22.1 -32
HABR *e*SSS 01 46 36.6
HABR pmax pmax
comp=N,142nm,2.0s
HABR pmax pmax
comp=Z,7μm,4.7s
HABR pmax pmax
comp=E,610nm,2.7s
HABR pmax pmax
comp=Z,830nm,2.0s,mb6.1
HABR MLR MLR
comp=E,132μm,14.0s,MS6.8
HABR MLR MLR
comp=N,118μm,18.0s,MS6.8
HABR MLR MLR
comp=Z,183μm,14.0s,MS6.9
TIXI Tiksi 30.63 330*d* *i*P **P 01 39 50.1 -0.2**
TIXI *e*S **S 01 44 48.6 -3.9**
TIXI *e*SS SS 01 46 23.6 -39
TIXI pmax pmax
comp=E,1μm,2.5s
TIXI pmax pmax
comp=Z,1μm,2.3s,mb6.4
TIXI pmax pmax
comp=N,403nm,2.2s
TIXI pmax pmax
comp=Z,5μm,7.2s
TIXI smax
comp=N,21μm,11.9s
TIXI smax
comp=E,13μm,10.7s
TIXI MLR MLR
comp=E,217μm,22.0s,MS6.9
TIXI MLR MLR
comp=N,193μm,18.0s,MS6.9
TIXI MLR MLR
comp=Z,225μm,17.0s,MS6.9
TIXI Tiksi 30.63 330 *e*P **P 01 39 49.3 -0.9**
comp=Z,5μm,2.4s,mb6.9
TIXI *e*ScP ScP 01 46 26.6 -4.5
TIXI LR LR
comp=Z,209μm,19.0s,MS6.8
KLR Kul'dur 31.84 286 *e*P **P 01 39 54.0 -7.2**
KLR *e*S **S 01 45 11.0 -0.8**
KLR *e* 01 47 24.5
KLR pmax pmax
comp=N,2μm,9.0s
KLR pmax pmax
comp=E,4μm,9.0s
KLR pmax pmax
comp=Z,7μm,9.0s
CLNS Chul'man 33.08 302 *e*P **P 01 40 10.5 -1.5**
CLNS *e**PP pP 01 40 22.9 +9.4
CLNS *e* 01 41 19.5
CLNS *e* 01 42 50.4
CLNS *e*S **S 01 45 23.1 -7.9**
CLNS pmax pmax
comp=E,250nm,1.9s
CLNS pmax pmax
comp=Z,346nm,2.1s,mb5.9
CLNS pmax pmax
comp=N,122nm,1.4s
CLNS smax
comp=N,5μm,12.3s
CLNS smax
comp=E,29μm,18.4s
CLNS MLR MLR
comp=N,163μm,17.0s,MS6.8
CLNS MLR MLR
comp=Z,77μm,16.0s,MS6.5
CLNS MLR MLR
comp=E,77μm,18.0s,MS6.8
NRGR Nerungri 33.22 301 *i*P **P 01 40 12.9 -0.3**
KIP Kipapa 33.94 146*c*e*P **P 01 40 21.1 +1.3**
KIP Kipapa 33.94 146 *e*P **P 01 40 20.8 +1.1**
comp=E,1μm,1.4s,mb6.7
KIP LR LR
comp=Z,127μm,20.0s,MS6.6
OBC Olympics--Boni 33.94 75 P **P 01 40 21.4 +1.8**
HON Honolulu 34.03 146 *e*P **P 01 40 22.7 +2.1**
PGC Sidney 34.04 74 *e*P **P 01 40 20.4 0.0**
comp=Z,59nm,1.7s,mb5.2
PGC *e*ScP ScP 01 46 41.7 -1.5
VGZ Gonzales 34.22 74 P **P 01 40 23.6 +1.6**
YKA Yellowknife Ar 34.31 47 P **P 01 40 21.6 -1.0**
YKA 01 42 57.8
YKA Yellowknife Ar 34.31 47 P **P 01 40 21.5 -1.1**
comp=Z,137nm,1.0s,mb5.8,baz=281,slow=7.4,SNR=92
YKA PcP PcP 01 42 57.8 -0.7
comp=Z,7.9nm,0.7s,baz=287,slow=2.7,SNR=3.8
YKA ScP ScP 01 46 41.0 -2.8
comp=Z,22nm,1.1s,baz=284,slow=3.2,SNR=8.5
YKA PKiKP PKiKP 01 50 20.8 -0.6
comp=Z,1.8nm,0.8s,baz=255,slow=0.8,SNR=5.7
YKA LR LR 01 56 24.4
comp=Z,62μm,18.0s,MS6.4,baz=100,slow=40
YKA P3KPbc 02 11 21.1
comp=Z,1.8nm,0.7s,baz=94,slow=5.1,SNR=12
YKA P3KP 02 12 50.9
comp=Z,0.2nm,0.7s,baz=127,slow=0.6,SNR=4.3
YKA Yellowknife Ar 34.31 47 P **P 01 40 21.6 -1.1**
YKA PcP PcP 01 42 57.8 -0.7
YKA ScP ScP 01 46 41.0 -2.9
NLWA Neilton Lookou 34.36 76 *e*P **P 01 40 24.3 +1.0**
comp=Z,1μm,1.5s,mb6.6
NLWA *e*ScP ScP 01 46 42.0 -2.4
NLWA LR LR
comp=Z,180μm,22.0s,MS6.8
MJAR Matsushiro Arr 34.66 261 P **P 01 40 24.9 -1.1**
comp=Z,128nm,1.2s,mb5.7,baz=48,slow=7.4,SNR=47
MJAR PcP PcP 01 42 60.0 0.0
comp=Z,42nm,0.9s,baz=56,slow=1.0,SNR=10
MJAR ScP ScP 01 46 44.4 -1.2
comp=Z,24nm,1.1s,baz=12,slow=1.1,SNR=11
MJAR LR LR 01 54 02.3
comp=Z,53μm,18.1s,MS6.3,baz=60,slow=35
MAJO Matsushiro 34.66 261 *e*P **P 01 40 25.1 -0.9**
MAJO *e* 01 43 00.3
MAJO pmax pmax
comp=Z,1μm,1.5s,mb6.5
MAJO MLR MLR
comp=Z,59μm,19.0s,MS6.3
MAJO Matsushiro 34.66 261 *e*P **P 01 40 25.1 -0.9**
comp=Z,1μm,1.5s,mb6.5
MAJO *e*PcP PcP 01 43 00.3 +0.3
MAJO *e*ScP ScP 01 46 44.6 -1.1
MAJO LR LR
comp=Z,59μm,19.0s,MS6.3
MAT Matsushiro 34.66 261 P **P 01 40 25.2 -0.8**
MAT S **S 01 45 56.0 +0.1**
VLA Vladivostok 34.67 276 *i*P **P 01 40 25.5 -0.5**
VLA *e* 01 40 31.6
VLA *e*S **S 01 45 52.6 -3.4**
VLA pmax pmax
comp=Z,187nm,1.0s,mb6.0
VLA MLR MLR
comp=Z,73μm,14.5s,MS6.6
A05A Maple Falls 34.70 72 ⇓P **P 01 40 25.8 -0.3**
baz=35,SNR=63
HDW Hoodsport 34.73 75 P **P 01 40 27.9 +1.5**
WAKE Wake Island 34.81 207 *e*P **P 01 40 27.9 +0.5**
comp=Z,1μm,1.4s,mb6.6
WAKE LR LR
comp=Z,101μm,20.0s,MS6.6
MBW Mount Baker 34.90 73 P **P 01 40 28.7 +0.8**
GNW Green Mountain 34.91 75 *e*P **P 01 40 28.5 +0.5**
comp=Z,166nm,0.9s,mb6.0
GNW *e*PcP PcP 01 43 02.7 +2.2
GNW *e*ScP ScP 01 46 44.3 -2.0
E03A Lebam 34.95 77 ⇓P **P 01 40 29.0 +0.7**
baz=35,SNR=100
JCW Jim Creek 35.15 73 *e*P **P 01 40 30.8 +0.7**
JCW *e*PcP PcP 01 43 03.4 +2.2
JCW *e*ScP ScP 01 46 45.2 -2.0
F03A Seaside 35.25 78 ⇓P **P 01 40 31.7 +0.7**
baz=35,SNR=54
B06A Marblemount 35.27 73 ⇑P **P 01 40 31.4 +0.4**
baz=35,SNR=34
RPW Rockport 35.28 73 P **P 01 40 31.8 +0.6**
MDJ Mudanjiang 35.30 280 P **P 01 40 28.5 -2.8**
MDJ S **S 01 46 00.5 -5.0**
MDJ ScP ScP 01 46 46.4 -1.4
MDJ PcS PcS 01 46 47.8 -0.7
MDJ pmax pmax
comp=Z,3μm,5.7s
MDJ LR LR
comp=N,169μm,27.5s,MS6.7
MDJ LR LR
comp=E,84μm,28.1s,MS6.7
MDJ LR LR
comp=Z,149μm,20.3s
MDJ Mudanjiang 35.30 280 *e*P **P 01 40 27.5 -3.9**
comp=Z,134nm,1.4s,mb5.7
MDJ LR LR
comp=Z,158μm,20.0s,MS6.8
HEBO Mount Hebo 35.49 79 *e*P **P 01 40 35.8 +2.7**
comp=Z,2μm,1.5s,mb6.9
D05A Enumclaw 35.59 75 ⇑P **P 01 40 34.5 +0.7**
baz=36,SNR=165
JOHN Johnston Islan 35.61 167 *e*P **P 01 40 36.6 +2.4**
comp=Z,2μm,1.5s,mb6.7
JOHN LR LR
comp=Z,39μm,20.0s,MS6.2
A07A Ashnola River, 35.68 71 ⇑P **P 01 40 35.2 +0.6**
baz=36,SNR=153
TDL Tradedollar La 35.86 76 P **P 01 40 37.6 +1.4**
C06A Tall Timber Ra 35.89 73 ⇓P **P 01 40 37.1 +0.7**
baz=36,SNR=16
LON Longmire 35.91 76 *e*P **P 01 40 37.2 +0.7**
LON pmax pmax
comp=Z,994nm,1.7s,mb6.5
LON Longmire 35.91 76 *e*P **P 01 40 37.2 +0.7**
comp=Z,994nm,1.7s,mb6.5
LON *e*ScP ScP 01 46 48.0 -1.9
JHJ Hachijo jima 2 36.01 256 LR LR 01 52 35.8
comp=Z,56μm,20.7s,MS6.3,baz=52,slow=32
WPW White Pass 36.09 75 P **P 01 40 39.2 +1.1**
COR Corvallis 36.09 80 *e*P **P 01 40 38.9 +0.7**
COR pmax pmax
comp=Z,4μm,1.9s,mb7.0
COR MLR MLR
comp=Z,97μm,19.0s,MS6.6
COR Corvallis 36.09 80 *e*P **P 01 40 38.9 +0.7**
comp=Z,4μm,1.9s,mb7.0
COR *e*ScP ScP 01 46 50.9 +0.2
COR LR LR
comp=Z,97μm,19.0s,MS6.6
B07A Winthrop 36.10 72 ⇑P **P 01 40 38.7 +0.5**
baz=36,SNR=128
D06A Cle Elum 36.27 74 ⇓P **P 01 40 40.2 +0.5**
baz=36,SNR=139
G04A Mulino 36.27 78 ⇑P **P 01 40 40.9 +1.2**
baz=36,SNR=71
POHA Pohakuloa 36.35 144 *e*P **P 01 40 42.0 +1.4**
comp=Z,882nm,1.3s,mb6.5
POHA LR LR
comp=Z,92μm,20.0s,MS6.5
A08A Turner Farm, O 36.37 71 ⇓P **P 01 40 40.0 -0.5**
baz=36,SNR=95
KEBM Edson Butte 36.37 83 *e*P **P 01 40 42.7 +2.1**
comp=Z,662nm,1.0s,mb6.5
ETW Entiat 36.38 73 *e*P **P 01 40 40.4 -0.1**
C07A Waterville 36.50 73 ⇑P **P 01 40 41.8 +0.2**
baz=36,SNR=83
E06A Yakima 36.51 75 ⇑P **P 01 40 41.5 -0.2**
baz=36,SNR=196
WTV Waterville 36.56 73 P **P 01 40 42.7 +0.6**
B08A Colville Reser 36.61 72 ⇓P **P 01 40 42.4 -0.1**
baz=36,SNR=188
B08A ⇓S **S 01 46 23.8 -1.8**
baz=36
HOOD Mount Hood Mea 36.72 78 *e*P **P 01 40 44.7 +1.2**
comp=Z,3μm,1.6s,mb6.8
HOOD *e*ScP ScP 01 46 50.9 -2.1
H04A Detroit Lake 36.72 79 ⇓P **P 01 40 44.2 +0.7**
baz=37,SNR=572
H04A ⇑S **S 01 46 26.9 -0.5**
baz=37
A09A Danville 36.76 71 ⇓P **P 01 40 43.4 -0.4**
baz=37,SNR=86
A09A ⇑S **S 01 46 25.0 -2.9**
baz=37
D07A Quincy 36.79 74 ⇑P **P 01 40 44.5 +0.5**
baz=37,SNR=115
KHU Kahuku 36.79 144 *e*P **P 01 40 46.4 +2.1**
PUH Pauahi 36.82 143 *e*P **P 01 40 46.3 +1.7**
STCH Steam Cracks 36.84 143 *e*P **P 01 40 45.8 +1.0**
C08A Higginbotham F 37.05 73 ⇑P **P 01 40 45.8 -0.5**
baz=37,SNR=82
E07A Sunnyside 37.17 75 ⇑P **P 01 40 47.2 -0.1**
baz=37,SNR=27
MDW Midway 37.20 75 P **P 01 40 48.3 +0.7**
B09A Rice 37.28 71 ⇓P **P 01 40 47.8 -0.4**
baz=37,SNR=91
A10A Northport 37.36 70 ⇑P **P 01 40 48.7 -0.2**
baz=37,SNR=29
HUMO Hull Mountain 37.37 82 *e*P **P 01 40 50.7 +1.7**
comp=Z,3μm,2.2s,mb6.7
HUMO *e*PcP PcP 01 43 08.1 +0.2
HUMO *e*ScP ScP 01 46 53.8 -1.6
HUMO LR LR
comp=Z,116μm,19.0s,MS6.7
G06A Carlson Farm, 37.38 77 ⇓P **P 01 40 49.3 +0.2**
baz=37,SNR=109
RSW Rattlesnake Hi 37.41 75 *e*P **P 01 40 49.6 +0.3**
RSW *e*ScP ScP 01 46 55.8 +0.3
OD2 Odessa Site #2 37.44 73 P **P 01 40 50.0 +0.4**
HAWA Hanford 37.45 75 *e*P **P 01 40 50.0 +0.3**
comp=Z,614nm,1.0s,mb6.4
HAWA *e*ScP ScP 01 46 53.6 -2.1
HAWA LR LR
comp=Z,136μm,20.0s,MS6.7
D08A Wollman Farm, 37.48 73 ⇑P **P 01 40 49.9 -0.1**
baz=37,SNR=90
C09A Chrisman Ranch 37.50 72 ⇓P **P 01 40 50.4 +0.2**
baz=37,SNR=21
E08A Dider Farm, El 37.68 74 ⇓P **P 01 40 52.0 +0.3**
baz=38,SNR=63
H06A Lindquist Farm 37.82 78 ⇓P **P 01 40 53.2 +0.4**
baz=38,SNR=279
D09A Jones Farm, Ri 37.84 73 ⇓P **P 01 40 52.4 -0.6**
baz=38,SNR=46
EDM Edmonton 37.87 62 *e*P **P 01 40 51.9 -1.3**
EDM *e*ScP ScP 01 46 56.4 -0.7
KHMM Horse Mountain 37.87 85 *e*P **P 01 40 55.9 +2.5**
comp=Z,530nm,1.2s,mb6.1
B10A Chitwood Farm, 37.88 71 ⇑P **P 01 40 53.2 -0.1**
baz=38,SNR=18
NEW Newport 37.95 71 *e*P **P 01 40 53.3 -0.7**
NEW pmax pmax
comp=Z,235nm,1.1s
NEW MLR MLR
comp=Z,128μm,20.0s
NEW Newport 37.95 71 *e*P **P 01 40 53.3 -0.6**
comp=Z,235nm,1.1s,mb5.8
NEW *e*ScP ScP 01 46 55.7 -1.8
NEW LR LR
comp=Z,128μm,20.0s,MS6.7
YBH Yreka Blue Hor 38.01 83 *e*P **P 01 40 56.0 +1.5**
YBH pmax pmax
comp=Z,3μm,2.1s
YBH MLR MLR
comp=Z,54μm,20.0s
YBH Yreka Blue Hor 38.01 83 ScP ScP 01 46 54.0 -3.9
comp=Z,2.2nm,0.5s,baz=223,slow=18,SNR=4.0
YBH LR LR 01 54 06.0
comp=Z,61μm,18.6s,MS6.4,baz=302,slow=32
YBH Yreka Blue Hor 38.01 83 *e*P **P 01 40 56.0 +1.5**
comp=Z,3μm,2.1s,mb6.6
YBH *e*ScP ScP 01 46 56.5 -1.4
YBH LR LR
comp=Z,54μm,20.0s,MS6.3
C10A Spilker Farm, 38.06 72 ⇓P **P 01 40 55.0 +0.2**
baz=38,SNR=13
A11A Hall Mountain, 38.07 69 ⇓P **P 01 40 55.3 +0.5**
baz=38,SNR=82
F08A Pendleton 38.20 75 ⇓P **P 01 40 56.1 0.0**
baz=38,SNR=76
CN2 Changchun 38.26 281 *e*P **P 01 40 53.7 -2.9**
CN2 *e*pP pP 01 41 03.5 +5.4
CN2 *e*sP sP 01 41 07.4 +8.6
CN2 PP PP 01 42 24.1 +0.3
CN2 *e*S **S 01 46 43.3 -7.4**
CN2 SS SS 01 49 21.1 -17
B11A Sandpoint 38.31 70 ⇑P **P 01 40 57.1 +0.1**
baz=38,SNR=53
BOD Bodaibo 38.35 307 *e*P **P 01 40 52.4 -4.7**
BOD *e* 01 42 30.4
BOD pmax pmax
comp=Z,92nm,1.5s,mb5.3
BOD pmax pmax
comp=Z,185nm,2.0s,mb5.5
G08A Pilot Rock 38.36 76 ⇑P **P 01 40 57.1 -0.2**
baz=38,SNR=216
D10A Wagner Farm, O 38.46 73 ⇓P **P 01 40 57.3 -0.9**
baz=38,SNR=101
LNOR Lincton Mounta 38.46 75 *e*P **P 01 40 58.6 +0.4**
LNOR *e* 01 46 58.9
A12A Yaak River Ran 38.49 69 ⇑P **P 01 40 58.0 -0.4**
baz=38,SNR=10
K05A Summer Lake 38.57 81 ⇑P **P 01 41 00.3 +1.1**
baz=38,SNR=390
KCPM Cahto Peak 38.66 87 *e*P **P 01 41 02.0 +2.0**
comp=Z,4μm,2.4s,mb6.7
I07A Izee 38.67 78 ⇓P **P 01 40 59.6 -0.4**
baz=39,SNR=466
B12A Libby 38.75 70 ⇑P **P 01 41 00.7 +0.1**
baz=39,SNR=12
F09A S2 Ranch, Elgi 38.77 75 ⇑P **P 01 41 00.9 +0.1**
baz=39,SNR=105
WDC Whiskeytown Da 38.78 85 *e*P **P 01 41 02.5 +1.5**
WDC *e* 01 43 13.4
WDC *e* 01 46 59.0
WDC pmax pmax
comp=Z,2μm,2.3s,mb6.5
WDC MLR MLR
comp=Z,41μm,20.0s,MS6.2
WDC Whiskeytown Da 38.78 85 *e*P **P 01 41 02.5 +1.5**
comp=Z,2μm,2.3s,mb6.5
WDC *e*PcP PcP 01 43 13.4 +1.1
WDC *e*ScP ScP 01 46 59.0 -1.9
WDC LR LR
comp=Z,41μm,20.0s,MS6.2
E10A Myers Farm, Un 38.84 73 ⇓P **P 01 41 00.8 -0.6**
baz=39,SNR=187
HIA Hailar 38.87 292 *e*P **P 01 40 59.8 -1.8**
HIA *e* 01 46 58.4
HIA pmax pmax
comp=Z,75nm,0.9s
HIA MLR MLR
comp=Z,212μm,21.0s
HIA Hailar 38.87 292 *e*P **P 01 40 59.8 -1.8**
comp=Z,75nm,0.9s,mb5.4
HIA *e*ScP ScP 01 46 58.4 -2.6
HIA LR LR
comp=Z,212μm,21.0s,MS6.9
H08A Prairie City 38.94 77 ⇓P **P 01 41 01.9 -0.3**
baz=39,SNR=203
RES Resolute Bay 38.97 25 *e*P **P 01 41 01.7 -0.5**
RES pmax pmax

comp=Z,635nm,1.4s,mb6.2
RES **Resolute Bay** 38.97 25 LR LR 01 58 47.0
comp=Z,116µm,21.2s,MS6.7,baz=132,slow=39
RES **Resolute Bay** 38.97 25 eP P 01 41 01.6 -0.5
comp=Z,635nm,1.4s,mb6.2
D11A **Klaveano Farm,** 39.02 72 ⇑P P 01 41 02.0 -0.9
baz=39,SNR=149
CBIJ **Chichi jima** 39.02 246 LR LR 01 54 53.4
comp=Z,59µm,20.4s,MS6.4,baz=205,slow=33
F10A **Beach Ranch, E** 39.04 74 ⇑P P 01 41 02.6 -0.5
baz=39,SNR=118
G09A **Cove** 39.07 75 ⇓P P 01 41 02.3 -1.0
baz=39,SNR=227
C12B **Naegeli Ranch,** 39.19 71 ⇓P P 01 41 04.1 -0.3
baz=39,SNR=25
MOD **Modoc** 39.39 81 eP P 01 41 07.3 +1.2
comp=Z,640nm,1.0s,mb6.3
MOD ePcP PcP 01 43 15.8 +1.6
MOD eScP ScP 01 47 01.1 -2.0
MOD LR LR
comp=Z,86µm,19.0s,MS6.6
HOPS **Hopland** 39.40 87 eP P 01 41 08.0 +1.9
comp=Z,2µm,1.8s,mb6.4
HOPS LR LR
comp=Z,73µm,22.0s,MS6.5
WALA **Waterton Lakes** 39.43 68 eP P 01 41 05.8 -0.6
comp=Z,26nm,2.1s,mb4.6
WALA ePcP PcP 01 43 15.1 +0.9
WALA eScP ScP 01 47 03.0 -0.2
E11A **Bogner Ranch,** 39.45 73 ⇑P P 01 41 05.2 -1.3
baz=39,SNR=97
B13A **Whitefish** 39.45 69 ⇑P P 01 41 05.3 -1.2
baz=39,SNR=50
H09A **Durkee** 39.47 76 ⇓P P 01 41 06.4 -0.3
baz=39,SNR=74
BSMT **Bassoo Peak** 39.52 70 eP P 01 41 07.0 -0.1
BSMT ePcP PcP 01 43 15.8 +1.3
BSMT eScP ScP 01 47 04.0 +0.4
BMO **Blue Mountains** 39.58 76 eP P 01 41 07.4 -0.2
comp=Z,255nm,1.0s,mb5.9
BMO eScP ScP 01 47 00.8 -3.1
BMO LR LR
comp=Z,129µm,21.0s,MS6.7
J08A **Circle Bar Ran** 39.69 78 ⇓P P 01 41 08.3 -0.3
baz=40,SNR=204
F11A **Grangeville** 39.72 74 ⇓P P 01 41 07.8 -1.0
baz=40,SNR=112
C13A **Hot Springs** 39.73 70 ⇑P P 01 41 08.1 -0.8
baz=40,SNR=96
A14A **Double T Ranch** 39.76 68 ⇑P P 01 41 08.5 -0.5
baz=40,SNR=104
E12A **Beaver Dam Sad** 39.79 73 ⇓P P 01 41 08.7 -0.7
baz=40,SNR=187
I09A **Lost Marbles R** 39.80 77 ⇑P P 01 41 08.8 -0.6
baz=40,SNR=50
JTMT **Jette** 39.87 70 eP P 01 41 09.7 -0.3
JTMT eScP ScP 01 47 04.7 -0.2
G11A **Walters Elk Ra** 39.91 74 ⇑P P 01 41 09.1 -1.2
baz=40,SNR=266
YBMT **Yellow Bay** 39.97 70 eP P 01 41 10.5 -0.4
YBMT eScP ScP 01 47 03.9 -1.4
MCCM **Marconi Confer** 40.03 88 eP P 01 41 11.9 +0.5
comp=Z,2µm,2.1s,mb6.4
MCCM LR LR
comp=Z,103µm,19.0s,MS6.7
D13A **Huson** 40.10 71 ⇓P P 01 41 10.9 -1.0
baz=40,SNR=65
WVOR **Wild Horse Val** 40.11 80 eP P 01 41 13.0 +0.9
WVOR pmax pmax
comp=Z,500nm,1.0s,mb6.2
WVOR MLR MLR
comp=Z,94µm,21.0s,MS6.6
WVOR **Wild Horse Val** 40.11 80 eP P 01 41 13.0 +0.9
comp=Z,500nm,1.0s,mb6.2
WVOR eScP ScP 01 47 05.1 -0.8
WVOR LR LR
comp=Z,94µm,21.0s,MS6.6
J09A **Fry Pan Ranch,** 40.13 78 ⇓P P 01 41 12.5 +0.3
baz=40,SNR=307
A15A **Johnson Ranch,** 40.15 68 ⇓P P 01 41 11.0 -1.3
baz=40,SNR=22
SWMT **Swartz Lake** 40.16 70 eP P 01 41 12.5 +0.1
SWMT eScP ScP 01 47 05.7 -0.3
C14A **Swan Lake** 40.17 70 ⇑P P 01 41 11.4 -1.1
baz=40,SNR=73
OHCM **Honcut** 40.17 85 eP P 01 41 13.0 +0.4
I10A **Payette** 40.30 76 ⇓P P 01 41 13.7 +0.1
baz=40,SNR=82
F12A **Elk City** 40.33 73 ⇓P P 01 41 13.2 -0.6
baz=40,SNR=467
H11A **Donnelly** 40.44 75 ⇓P P 01 41 13.9 -0.9
baz=40,SNR=358
KSRS **Korea Array** 40.45 271 P P 01 41 13.8 -1.1
KSRS 01 43 17.6
KSRS pmax pmax
comp=Z,46nm,0.8s,mb5.3
KSRS **Korea Array** 40.45 271 P P 01 41 13.8 -1.1
comp=Z,46nm,0.8s,mb5.3,baz=53,slow=7.6,SNR=52
KSRS PcP PcP 01 43 17.6 -0.1
comp=Z,23nm,0.9s,baz=59,slow=3.3,SNR=7.1
KSRS ScP ScP 01 47 06.2 -1.2
comp=Z,4.1nm,0.7s,baz=57,slow=4.6,SNR=5.3
KSRS LR LR 01 56 00.6
comp=Z,37µm,19.8s,MS6.2,baz=57,slow=33
SNY **Shenyang** 40.50 280 ⇓P P 01 41 13.8 -1.5
SNY PP PP 01 42 50.7 +2.4
SNY S S 01 47 21.5 -2.9
SNY pmax pmax
comp=Z,8µm,9.8s
SNY LR LR
comp=N,129µm,19.6s,MS6.8
SNY LR LR
comp=E,65µm,20.6s,MS6.8
SNY LR LR
comp=Z,105µm,21.6s,MS6.7
MSO **Missoula** 40.54 71 eP P 01 41 14.6 -1.0
comp=Z,176nm,1.1s,mb5.6
MSO LR LR
comp=Z,49µm,19.0s,MS6.4
BEKR **Beckwourth** 40.55 84 ⇑P P 01 41 15.5 -0.2
baz=40,SNR=168
B15A **Bradely Ranch,** 40.58 68 ⇓P P 01 41 14.0 -1.9
baz=40,SNR=93
SLMT **Seeley Lake** 40.59 70 eP P 01 41 15.2 -0.7
SLMT ePcP PcP 01 43 19.4 +1.4
SLMT eScP ScP 01 47 06.8 -0.9
E13A **Victor** 40.60 72 ⇓P P 01 41 14.6 -1.4
baz=40,SNR=94
G12A **Big Creek, Yel** 40.62 74 ⇑P P 01 41 15.2 -1.0
baz=40
D14A **Greenough** 40.66 70 ⇓P P 01 41 15.5 -1.1
baz=40,SNR=197
SAC **San Andreas** 40.67 88 eP P 01 41 20.7 +4.0
J10A **Berg Farm, Mel** 40.69 77 ⇓P P 01 41 15.6 -1.3
baz=41,SNR=39
A16A **West Butte Ran** 40.82 67 ⇑P P 01 41 16.3 -1.5
baz=41,SNR=40
C15A **Salmond Ranch,** 40.83 69 ⇓P P 01 41 16.4 -1.5
baz=41,SNR=192
F13A **Darby** 40.86 73 ⇑P P 01 41 17.5 -0.7
baz=41,SNR=116
CHMT **Chamberlain Mo** 40.90 71 eP P 01 41 17.6 -0.9
CHMT eScP ScP 01 47 08.0 -1.0
I11A **Placerville** 40.91 76 ⇑P P 01 41 18.9 +0.3
baz=41,SNR=257
K10A **MacKenzie Ranc** 40.99 78 ⇑P P 01 41 19.5 +0.1
baz=41,SNR=438
E14A **Clinton** 41.02 71 ⇓P P 01 41 19.1 -0.4
baz=41,SNR=91
B16A **M & M Farms, S** 41.02 68 ⇓P P 01 41 17.1 -2.5
baz=41,SNR=15
CIT **Chita** 41.03 299 eP P 01 41 19.4 -0.1
CIT e 01 41 33.6
CIT e 01 42 58.9
H12A **Diamond D Ranc** 41.22 75 ⇓P P 01 41 21.1 0.0
baz=41,SNR=165
INCN **Inchon** 41.23 272 eP P 01 41 21.5 +0.2
comp=Z,2µm,1.8s,mb6.3
INCN LR LR
comp=Z,57µm,19.0s,MS6.5
INCN **Inchon** 41.23 272 P P 01 41 21.4 +0.1
SNR=80
INCN P pP 01 41 21.4 -1.5
SNR=80
PAHR **Pah Rah Range** 41.24 83 eP P 01 41 22.3 +0.8
comp=Z,4µm,2.1s,mb6.7
WCN **Washoe City** 41.26 84 ⇓P P 01 41 22.2 +0.6
baz=41,SNR=102
D15A **Lincoln** 41.26 70 ⇑P P 01 41 20.5 -1.0
baz=41,SNR=87
MFID **Camas Ranch** 41.26 77 ⇓P P 01 41 21.4 -0.2
baz=41,SNR=201
G13A **Cobalt** 41.29 73 ⇑P P 01 41 21.1 -0.7
baz=41,SNR=477
C16A **Fuhringer Ranc** 41.31 69 ⇑P P 01 41 20.9 -1.1
baz=41,SNR=118
A17A **Triple J Farms** 41.33 67 ⇓P P 01 41 19.9 -2.1
baz=41,SNR=54
F14A **Wisdom** 41.41 72 ⇓P P 01 41 21.4 -1.4
baz=41
I12A **Atlanta** 41.47 76 ⇓P P 01 41 22.6 -0.6
baz=41,SNR=532
K11A **Parker Ranch,** 41.50 77 ⇑P P 01 41 23.1 -0.4
baz=41,SNR=187
E15A **Deer Lodge** 41.51 71 ⇓P P 01 41 22.4 -1.2
baz=41,SNR=58
H13A **Challis** 41.57 74 ⇓P P 01 41 23.7 -0.3
baz=41,SNR=88
B17A **L&G Farms, Che** 41.60 67 ⇓P P 01 41 22.9 -1.4
baz=42,SNR=68
L10A **Juniper Basin** 41.63 79 ⇑P P 01 41 24.5 -0.1
baz=42,SNR=312
CMB **Columbia Colle** 41.65 86 eP P 01 41 25.5 +0.7
CMB e 01 43 21.3
CMB pmax pmax
comp=Z,1µm,1.8s,mb6.2
CMB MLR MLR
comp=Z,77µm,19.0s,MS6.6
CMB **Columbia Colle** 41.65 86 eP P 01 41 25.5 +0.7
comp=Z,1µm,1.8s,mb6.2
CMB ePcP PcP 01 43 21.3 -0.2
CMB eScP ScP 01 47 09.9 -2.2
CMB LR LR
comp=Z,77µm,19.0s,MS6.6
G14A **Jackson** 41.67 73 ⇓P P 01 41 23.7 -1.1
baz=42,SNR=38
SAO **San Andreas Ge** 41.78 88 eP P 01 41 26.7 +0.8
SAO pmax pmax
comp=Z,177nm,0.9s,mb5.7
SAO MLR MLR
comp=Z,69µm,19.0s,MS6.5
SAO **San Andreas Ge** 41.78 88 eP P 01 41 26.7 +0.8
comp=Z,177nm,0.9s,mb5.7
SAO LR LR
comp=Z,69µm,19.0s,MS6.5
J12A **Stokes Ranch,** 41.79 76 ⇑P P 01 41 25.0 -1.0
baz=42,SNR=295
A18A **Metzger Ranch,** 41.83 66 ⇓P P 01 41 23.9 -2.2
baz=42,SNR=10
D16A **Dana Ranch, Ca** 41.83 69 ⇓P P 01 41 24.9 -1.3
baz=42,SNR=45
HRY **Holter Researc** 41.84 70 eP P 01 41 25.4 -0.8
HRY ePcP PcP 01 43 23.9 +1.8
HRY eScP ScP 01 47 12.9 +0.3
M10A **I.L. Ranch, Tu** 41.91 79 ⇑P P 01 41 27.0 +0.1
baz=42,SNR=192
F15A **Butte** 41.91 72 ⇓P P 01 41 25.1 -1.8
baz=42,SNR=59
LRM **Limekiln Ridge** 41.95 72 eP P 01 41 27.6 +0.4
comp=Z,958nm,1.4s,mb6.2
LRM ePP PP 01 43 03.8 -0.1
LRM ePcP PcP 01 43 24.0 +1.6
LRM eScP ScP 01 47 12.6 -0.5
C17A **Wharram Farm,** 41.97 68 ⇑P P 01 41 26.1 -1.2
baz=42,SNR=63
I13A **Wildhorse Cree** 42.01 75 ⇑P P 01 41 27.0 -0.7
baz=42,SNR=527
ALE **Alert** 42.01 10 P P 01 41 27.6 +0.3
comp=Z,2µm,1.4s,mb6.5,SNR=82
L11A **Cat Creek Ranc** 42.02 78 ⇑P P 01 41 27.9 +0.1
baz=42,SNR=555
E16A **East Helena** 42.02 70 ⇓P P 01 41 26.2 -1.5
baz=42,SNR=46
HLID **Hailey** 42.03 75 eP P 01 41 28.2 +0.3
comp=Z,386nm,1.0s,mb6.0
HLID ePcP PcP 01 43 23.9 +1.2
HLID eScP ScP 01 47 12.1 -1.5
HLID LR LR
comp=Z,100µm,22.0s,MS6.7
H14A **Leadore** 42.07 74 ⇓P P 01 41 27.4 -0.7
baz=42,SNR=246
DLMT **Dillon** 42.11 72 eP P 01 41 29.0 +0.5
comp=Z,1µm,2.5s,mb6.0
DLMT ePcP PcP 01 43 23.4 +0.5
DLMT eScP ScP 01 47 12.4 -1.5
B18A **Beardsley Farm** 42.14 67 ⇓P P 01 41 27.0 -1.7
baz=42,SNR=54
BMN **Battle Mountai** 42.14 81 eP P 01 41 29.7 +0.9
BMN e 01 43 23.3
BMN pmax pmax
comp=Z,2µm,2.0s,mb6.3
BMN MLR MLR
comp=Z,92µm,19.0s,MS6.7
BMN **Battle Mountai** 42.14 81 eP P 01 41 29.7 +0.9
comp=Z,2µm,2.0s,mb6.3
BMN ePcP PcP 01 43 23.3 +0.2
BMN eScP ScP 01 47 13.0 -1.0
BMN LR LR
comp=Z,92µm,19.0s,MS6.7
MCMT **McKenzie Canyo** 42.26 73 eP P 01 41 28.6 -1.1
comp=Z,280nm,0.8s,mb5.9
K12A **Draper Farm, C** 42.26 77 ⇓P P 01 41 29.9 +0.2
baz=42,SNR=421
D17A **Six Diamond Ra** 42.27 69 ⇓P P 01 41 28.3 -1.5
baz=42,SNR=77
J13A **Cove Ranch, Pi** 42.27 76 ⇑P P 01 41 29.8 0.0
baz=42,SNR=511
G15A **Dillon** 42.28 72 ⇑P P 01 41 28.7 -1.2
baz=42,SNR=161
EGMT **Eagleton** 42.34 67 eP P 01 41 29.6 -0.7
comp=Z,103nm,0.8s,mb5.5
EGMT eScP ScP 01 47 13.2 -1.5
EGMT LR LR
comp=Z,130µm,19.0s,MS6.8
I14A **Mackay** 42.40 74 ⇑P P 01 41 30.9 0.0
baz=42,SNR=286
N10A **Dunphy** 42.41 80 ⇑P P 01 41 31.5 +0.6
baz=42
M11A **Holland Ranch,** 42.42 79 ⇓P P 01 41 31.2 +0.1
baz=42,SNR=132
F16A **Kennard Place,** 42.45 71 ⇑P P 01 41 30.4 -0.9
baz=42,SNR=38
L12A **House Creek Ra** 42.48 78 ⇓P P 01 41 31.7 +0.2
baz=42,SNR=417
H15A **Lima** 42.49 73 ⇓P P 01 41 31.5 -0.1
baz=42,SNR=52
BOZ **Bozeman (W)** 42.53 71 eP P 01 41 30.9 -1.0
BOZ e 01 43 24.7
BOZ pmax pmax
comp=Z,102nm,0.8s,mb5.6
BOZ MLR MLR
comp=Z,58µm,20.0s,MS6.5
BOZ **Bozeman (W)** 42.53 71 eP P 01 41 30.9 -0.9
comp=Z,102nm,0.8s,mb5.6
BOZ ePcP PcP 01 43 24.7 +0.4
BOZ eScP ScP 01 47 14.4 -1.0
BOZ LR LR
comp=Z,58µm,20.0s,MS6.5
E17A **Martinsdale** 42.53 70 ⇑P P 01 41 30.9 -1.0
baz=42,SNR=67
G16A **Moss Hill, Enn** 42.65 72 ⇓P P 01 41 32.1 -0.8
baz=42,SNR=191
O10A **Cortez Mining,** 42.66 81 ⇓P P 01 41 32.7 -0.4
baz=43,SNR=115
NVAR **Mina Array Bea** 42.69 84 P P 01 41 34.2 +0.9
comp=Z,87nm,0.9s,mb5.5,baz=291,slow=7.9,SNR=139
NVAR PcP PcP 01 43 25.3 +0.3
comp=Z,33nm,1.0s,baz=287,slow=3.3,SNR=4.2
NVAR ScP ScP 01 47 14.1 -2.1
comp=Z,7.7nm,0.8s,baz=300,slow=4.0,SNR=6.2
NVAR PKiKP PKiKP 01 50 30.0 +0.9
comp=Z,2.3nm,0.7s,baz=302,slow=1.3,SNR=4.9
NVAR **Mina Array Bea** 42.69 84 P P 01 41 34.2 +0.9
NVAR PcP PcP 01 43 25.3 +0.3
NVAR ScP ScP 01 47 14.1 -2.1
J14A **Carey** 42.70 75 ⇑P P 01 41 32.7 -0.7
baz=43,SNR=283
K13A **Stover Farm, H** 42.75 76 ⇑P P 01 41 33.6 -0.1
baz=43,SNR=54
D18A **Linhart Farms,** 42.75 68 ⇑P P 01 41 31.8 -1.9
baz=43,SNR=26
N11A **Elko Archery C** 42.82 80 ⇓P P 01 41 34.2 -0.1
baz=43,SNR=55
MLAC **Mammoth Lakes** 42.86 86 ⇓P P 01 41 35.4 +0.7
baz=43,SNR=36
I15A **Monteview** 42.94 74 ⇑P P 01 41 34.5 -0.7
baz=43
F17A **Fitzpatrick Pl** 42.95 70 ⇓P P 01 41 34.4 -0.9
baz=43,SNR=79
M12A **Wells** 42.96 78 ⇓P P 01 41 35.7 +0.2
baz=43,SNR=246
E18A **Harlowton** 43.03 69 ⇓P P 01 41 33.7 -2.2
baz=43,SNR=70
P10A **Eureka** 43.09 82 ⇓P P 01 41 36.4 -0.1
baz=43,SNR=96
QLMT **Earthquake Lak** 43.09 72 eP P 01 41 36.3 -0.2
QLMT ePcP PcP 01 43 25.7 -0.5
QLMT eScP ScP 01 47 16.3 -1.5
L13A **Double Diamond** 43.16 77 ⇑P P 01 41 36.7 -0.3
baz=43,SNR=277
ELK **Elko** 43.16 79 eP P 01 41 38.3 +1.2
ELK e 01 43 24.4
ELK pmax pmax
comp=Z,258nm,0.8s
ELK MLR MLR
comp=Z,114µm,19.0s
ELK **Elko** 43.16 79 eP P 01 41 38.3 +1.2
comp=Z,258nm,0.8s,mb6.0
ELK ePcP PcP 01 43 24.4 -2.1
ELK eScP ScP 01 47 16.9 -1.2
ELK LR LR
comp=Z,114µm,19.0s,MS6.8
MTUM **Tungsten Hills** 43.20 86 eP P 01 41 38.5 +1.1
FFC **Flin Flon** 43.20 55 P P 01 41 37.1 -0.1
comp=Z,141nm,1.0s,mb5.7,SNR=15
FFC **Flin Flon** 43.20 55 i P P 01 41 35.8 -1.4
FFC **Flin Flon** 43.20 55 eP P 01 41 36.8 -0.4
comp=Z,28nm,1.0s,mb5.0
FFC eScP ScP 01 47 16.6 -1.4
FFC LR LR
comp=Z,253µm,20.0s,MS7.1
N12A **Clover Valley,** 43.22 79 ⇑P P 01 41 37.8 +0.3
baz=43,SNR=417
N12A **Clover Valley,** 43.22 79 eP P 01 41 37.7 +0.1
comp=Z,692nm,1.1s,mb6.3
G17A **Pierce Place,** 43.23 71 ⇑P P 01 41 36.6 -1.0
baz=43,SNR=65
H16A **Russell Place,** 43.27 72 ⇑P P 01 41 37.1 -0.8
baz=43,SNR=178
O11A **Cowboy Ranch,** 43.28 80 ⇑P P 01 41 37.5 -0.6
baz=43,SNR=246
J15A **Blackfoot** 43.31 74 ⇑P P 01 41 37.4 -0.8
baz=43,SNR=146
K14A **Jones Ranch, D** 43.35 76 ⇓P P 01 41 37.0 -1.6
baz=43,SNR=75
DL2 **Dalian** 43.44 278 P P 01 41 41.1 +1.8
DL2 S S 01 48 03.2 -4.7
DL2 pmax pmax
comp=Z,180nm,1.4s,mb5.6
DL2 pmax pmax
comp=Z,3µm,7.1s
DL2 LR LR
comp=N,43µm,17.7s,MS6.4
DL2 LR LR
comp=E,22µm,18.6s,MS6.4
DL2 LR LR
comp=Z,37µm,24.5s
RCTC **Rector, Farmer** 43.44 87 ⇑P P 01 41 39.7 +0.3
baz=43,SNR=25
M13A **Montello** 43.45 78 ⇑P P 01 41 39.1 -0.3
baz=43,SNR=258
YMR **Madison River** 43.46 72 eP P 01 41 39.5 0.0
comp=Z,263nm,1.0s,mb5.9
YMR eScP ScP 01 47 18.6 -0.7
F18A **Big Timber** 43.50 70 ⇓P P 01 41 38.5 -1.3
baz=43,SNR=70
P11A **Circle Ranch,** 43.57 81 ⇓P P 01 41 40.7 +0.3
baz=44,SNR=82
TPH **Tonopah** 43.58 84 PFAKE 01 41 50.0 +10
TPH LR LR
comp=Z,45µm,19.0s,MS6.4
GCMT **Greycliff** 43.59 70 eP P 01 41 40.3 -0.2
comp=Z,422nm,2.0s,mb5.8
TIN **Tinemaha** 43.59 86 ⇓P P 01 41 41.5 +0.8
baz=44,SNR=41
I16A **Newdale** 43.60 73 ⇓P P 01 41 41.0 +0.5
baz=44,SNR=32
YNR **Norris Junctio** 43.60 72 eP P 01 41 41.5 +0.9
comp=Z,717nm,1.6s,mb6.2
YNR ePcP PcP 01 43 29.7 +1.8
YNR eScP ScP 01 47 20.1 +0.2
L14A **Malta** 43.62 77 ⇑P P 01 41 41.1 +0.4
baz=44
Q10A **Clear Creek Ra** 43.62 82 ⇑P P 01 41 41.4 +0.7
baz=44,SNR=241
SMMC **Simmler** 43.62 89 ⇑P P 01 41 41.6 +0.8
baz=44,SNR=33
YFT **Old Faithful** 43.66 72 eP P 01 41 42.9 +1.8
comp=Z,229nm,0.9s,mb5.9
YFT ePcP PcP 01 43 31.8 +3.6
YFT eScP ScP 01 47 19.7 -0.4
K15A **Arbon** 43.66 75 ⇑P P 01 41 41.3 +0.2
baz=44,SNR=340
N13A **Wendover, West** 43.73 79 ⇑P P 01 41 41.6 0.0
baz=44,SNR=122
N13A **Wendover, West** 43.73 79 eP P 01 41 42.4 +0.7
comp=Z,342nm,0.8s,mb6.1
O12A **Currie** 43.75 80 ⇓P P 01 41 41.7 -0.1
baz=44,SNR=280
VES **Vestal, Richgr** 43.84 88 ⇑P P 01 41 42.8 +0.2
baz=44,SNR=138
H17A **Grant Village** 43.84 72 ⇓P P 01 41 42.2 -0.4
baz=44,SNR=173
LKWY **Lake** 43.85 72 eP P 01 41 44.1 +1.5
LKWY e 01 43 31.8
LKWY pmax pmax
comp=Z,235nm,1.0s,mb5.9
LKWY MLR MLR
comp=Z,77µm,20.0s,MS6.6
LKWY **Lake** 43.85 72 eP P 01 41 44.1 +1.5
comp=Z,235nm,1.0s,mb5.9
LKWY ePcP PcP 01 43 31.8 +3.0
LKWY eScP ScP 01 47 21.8 +1.0
LKWY LR LR
comp=Z,77µm,20.0s,MS6.6
M14A **Sheep Mountain** 43.86 77 ⇑P P 01 41 42.4 -0.3
baz=44,SNR=34
J16A **Bone** 43.87 74 ⇓P P 01 41 42.8 0.0
baz=44,SNR=186
IMW **Indian Meadow** 43.91 73 eP P 01 41 43.2 +0.2
comp=Z,216nm,1.2s,mb5.8
IMW ePcP PcP 01 43 31.5 +2.5
IMW eScP ScP 01 47 20.7 -0.5
G18A **Lazy EL Ranch,** 43.92 71 ⇑P P 01 41 42.2 -0.9
baz=44,SNR=38
DCID1 **Drake Creek** 43.94 73 eP P 01 41 44.3 +1.0
comp=Z,133nm,0.9s,mb5.7
PKM **Peak Mountain** 44.00 89 ⇓P P 01 41 44.5 +0.6
baz=44,SNR=35
RRI2 **Red Ridge** 44.00 74 eP P 01 41 44.4 +0.6
comp=Z,2µm,2.3s,mb6.4
RRI2 eScP ScP 01 47 20.5 -1.0
R10A **Warm Springs** 44.01 83 ⇓P P 01 41 44.6 +0.7
baz=44,SNR=134
HVU **Hansel Valley** 44.05 77 eP P 01 41 44.3 +0.1
HVU pmax pmax
comp=Z,368nm,1.0s,mb6.1
HVU **Hansel Valley** 44.05 77 eP P 01 41 44.3 +0.1
comp=Z,368nm,1.0s,mb6.1
S10A **Tonopah Range,** 44.06 84 ⇓P P 01 41 44.9 +0.6
baz=44,SNR=333
Q11A **Duckwater** 44.06 82 ⇑P P 01 41 44.4 0.0
baz=44,SNR=220
CWC **Cottonwood Cre** 44.08 86 ⇑P P 01 41 45.0 +0.5
baz=44,SNR=101
I17A **Pilgrim Ck.** 44.12 73 ⇑P P 01 41 43.4 -1.3
baz=44
P12A **McGill** 44.13 81 ⇓P P 01 41 44.9 -0.1
baz=44,SNR=265
TPAW **Teton Pass** 44.14 73 eP P 01 41 45.8 +0.9
comp=Z,339nm,1.5s,mb5.8
TPAW ePcP PcP 01 43 29.8 0.0
K16A **Soda Springs** 44.14 75 ⇓P P 01 41 45.3 +0.4
baz=44,SNR=350
L15A **Malad City** 44.15 76 ⇓P P 01 41 44.8 -0.2
baz=44,SNR=202
GRAC **Grapevine Rang** 44.16 85 ⇑P P 01 41 46.6 -0.5
baz=44,SNR=74
RLMT **Red Lodge** 44.20 71 eP P 01 41 45.4 0.0
comp=Z,200nm,0.9s,mb5.8
RLMT LR LR

comp=Z,76µm,20.0s,MS6.6
REDW Red Top Meadow 44.27 74 *e*P **P 01 41 46.4 +0.5**
comp=Z,258nm,1.3s,mb5.8
SNOW Snow King Moun 44.27 73 *e*P **P 01 41 47.4 +1.4**
comp=Z,106nm,1.0s,mb5.5
LOHW Long Hollow 44.27 73 *e*P **P 01 41 46.1 +0.1**
comp=Z,784nm,2.3s,mb6.0
O13A Hicks Ranch, I 44.30 79 ⇑P **P 01 41 46.0 -0.3**
baz=44,SNR=28
ISA Isabella 44.33 87 ⇑P **P 01 41 46.4 -0.2**
baz=44,SNR=125
ISA Isabella 44.33 87 *e*P **P 01 41 46.8 +0.2**
ISA *e* 01 43 31.9
ISA pmax pmax
comp=Z,781nm,1.7s,mb6.2
ISA Isabella 44.33 87 *e*P **P 01 41 46.8 +0.2**
comp=Z,781nm,1.7s,mb6.2
ISA *e*PcP PcP 01 43 31.9 +1.3
ISA *e*ScP ScP 01 47 20.5 -2.5
N14A Grayback Hills 44.35 78 ⇑P **P 01 41 46.2 -0.5**
baz=44,SNR=241
J17A Brown Place, J 44.35 73 ⇓P **P 01 41 46.0 -0.7**
baz=44,SNR=51
SBC Santa Barbara 44.36 90 ⇓P **P 01 41 46.4 -0.5**
baz=44
BGU Big Grassy Mou 44.40 78 *e*P **P 01 41 47.3 +0.3**
comp=Z,765nm,0.7s,mb6.5
R11A Troy Canyon, C 44.41 82 ⇑P **P 01 41 46.9 -0.2**
baz=44,SNR=372
M15A Larsen Ranch, 44.43 77 ⇑P **P 01 41 46.9 -0.4**
baz=44,SNR=108
Q12A Willow Creek R 44.45 81 ⇑P **P 01 41 47.4 0.0**
baz=44,SNR=220
ARVC Arvin 44.46 88 ⇓P **P 01 41 47.8 +0.2**
baz=44,SNR=18
AHID Auburn Hatcher 44.47 74 *e*P **P 01 41 48.1 +0.5**
comp=Z,272nm,1.1s,mb5.9
AHID LR LR
comp=Z,141µm,21.0s,MS6.9
DAC Darwin (Calif) 44.48 86 PFAKE 01 42 00.0 +12
DAC LR LR
comp=Z,80µm,19.0s,MS6.7
SPUT South Promonto 44.52 77 *e*P **P 01 41 49.6 +1.6**
comp=Z,4µm,2.5s,mb6.8
K17A Gardner Place, 44.59 74 ⇑P **P 01 41 47.9 -0.6**
baz=44,SNR=40
KWAJ Kwajalein Atol 44.63 201 *e*P **P 01 41 48.6 -0.5**
comp=Z,666nm,1.3s,mb6.3
MPMC Manual Prospec 44.69 86 ⇓P **P 01 41 49.9 +0.5**
baz=45,SNR=180
I18A Diamond G Ranc 44.69 73 ⇑P **P 01 41 49.0 -0.4**
baz=45,SNR=45
P13A Bates Ranch, G 44.69 80 ⇑P **P 01 41 49.4 0.0**
baz=45,SNR=312
BSC Santa Cruz Isl 44.71 90 ⇑P **P 01 41 49.3 -0.3**
baz=45
L16A Fish Haven 44.71 75 ⇓P **P 01 41 49.2 -0.3**
baz=45,SNR=74
N15A Stansbury Isla 44.73 77 ⇓P **P 01 41 49.4 -0.2**
baz=45,SNR=314
S11A Rachel 44.75 83 ⇓P **P 01 41 50.5 +0.6**
baz=45,SNR=48
FURC Furnace Creek, 44.81 85 ⇓P **P 01 41 50.6 +0.2**
baz=45,SNR=129
J18A Kendall Valley 44.85 73 ⇑P **P 01 41 50.1 -0.6**
baz=45,SNR=147
OSI Osito Adit 44.86 89 ⇓P **P 01 41 51.4 +0.6**
baz=45
OSI Osito Adit 44.86 89 *e*P **P 01 41 51.7 +0.9**
comp=Z,306nm,0.8s,mb6.2
HWUT Hardware Ranch 44.88 76 *e*P **P 01 41 51.4 +0.5**
comp=Z,295nm,1.1s,mb6.0
HWUT *e*PcP PcP 01 43 33.0 +0.6
HWUT *e*ScP ScP 01 47 22.6 -2.5
HWUT LR LR
comp=Z,82µm,20.0s,MS6.7
LRMC Laurel Mountai 44.94 87 ⇑P **P 01 41 51.7 +0.3**
baz=45,SNR=111
DUG Dugway 44.97 78 *e*P **P 01 41 51.9 +0.3**
DUG pmax pmax
comp=Z,793nm,1.1s,mb6.5
DUG MLR MLR
comp=Z,66µm,21.0s,MS6.5
DUG Dugway 44.97 78 *e*P **P 01 41 51.9 +0.3**
comp=Z,793nm,1.1s,mb6.5
DUG *e*ScP ScP 01 47 23.7 -1.8
DUG LR LR
comp=Z,66µm,21.0s,MS6.5
Q13A Wheeler Ranch, 45.00 81 ⇑P **P 01 41 51.7 -0.1**
baz=45,SNR=408
L17A Cokeville 45.00 75 ⇑P **P 01 41 51.8 0.0**
baz=45,SNR=25
M16A Huntsville 45.01 76 ⇑P **P 01 41 51.5 -0.4**
baz=45,SNR=315
R12A Pony Springs, 45.03 82 ⇑P **P 01 41 52.0 0.0**
baz=45,SNR=96
FCC Fort Churchill 45.04 47 *e*P **P 01 41 49.5 -2.4**
FCC *e* 01 43 32.9
FCC Fort Churchill 45.04 47 *e*P **P 01 41 49.5 -2.4**
comp=Z,3.6nm,0.9s
FCC *e*PcP PcP 01 43 32.9 +0.3
FCC *e*ScP ScP 01 47 23.1 -2.4
NOQ North Oquirrh 45.12 77 *e*P **P 01 41 53.7 +1.0**
comp=Z,4µm,2.2s,mb6.9
NOQ *e*PP PP 01 43 36.7 -1.2
O15A The Old Anders 45.13 78 ⇓P **P 01 41 53.1 +0.3**
baz=45,SNR=87
EDW2 Edwards Air Fo 45.14 88 ⇑P **P 01 41 53.2 +0.2**
baz=45,SNR=92
U10A Ash Meadows, A 45.17 85 ⇑P **P 01 41 53.8 +0.5**
baz=45,SNR=144
K18A Toltan Ranch, 45.18 74 ⇑P **P 01 41 52.9 -0.3**
baz=45,SNR=185
P14A Drum Mountains 45.19 79 ⇓P **P 01 41 53.4 +0.1**
baz=45,SNR=329
DGMT Dagmar 45.24 64 *e*P **P 01 41 53.6 0.0**
comp=Z,174nm,1.2s,mb5.8
DGMT LR LR
comp=Z,115µm,21.0s,MS6.8
SNCC San Nicolas Is 45.27 91 ⇓P **P 01 41 54.2 +0.1**
baz=45,SNR=5.7
SNCC San Nicolas Is 45.27 91 *e*P **P 01 41 54.9 +0.8**
comp=Z,182nm,0.9s,mb5.9
CTU Camp Tracy 45.31 77 *e*P **P 01 41 56.7 +2.4**
comp=Z,791nm,1.4s,mb6.3
S12A Delamar Landin 45.33 83 ⇓P **P 01 41 55.2 +0.8**
baz=45,SNR=97
T11A Corn Creek, Al 45.33 83 ⇓P **P 01 41 54.7 +0.2**
baz=45
DECC Green Verdugo 45.35 89 ⇑P **P 01 41 53.7 -0.9**
baz=45
N16A Rees Ranch, Co 45.39 77 ⇓P **P 01 41 54.0 -0.9**
baz=45,SNR=53
BW06 Boulder Array 45.39 73 *e*P **P 01 41 54.0 -0.9**
comp=Z,508nm,1.2s,mb6.2
BW06 LR LR
comp=Z,92µm,20.0s,MS6.7
PDAR Pinedale Array 45.39 73 P **P 01 41 53.8 -1.1**
comp=Z,67nm,0.6s,mb5.6,baz=321,slow=2.8,SNR=141
PDAR ScP ScP 01 47 24.0 -3.2
comp=Z,2.9nm,0.8s,baz=311,slow=4.7,SNR=3.1
PDAR LR LR 01 58 52.9
comp=Z,78µm,19.9s,MS6.6,baz=307,slow=33
Q14A Sevier Lake (B 45.43 80 ⇓P **P 01 41 55.1 -0.1**
baz=45,SNR=652
PASC Pasadena Art C 45.49 89 *e*P **P 01 41 56.7 +0.9**
M17A Scullys Gap (B 45.50 76 ⇑P **P 01 41 55.5 -0.2**
baz=45,SNR=52
R13A O'Grain Ranch, 45.51 81 ⇓P **P 01 41 55.4 -0.5**
baz=45,SNR=192
MWC Mount Wilson 45.53 89 *e*P **P 01 41 56.8 +0.7**
MWC pmax pmax
comp=Z,1µm,1.6s,mb6.6
MWC Mount Wilson 45.53 89 *e*P **P 01 41 56.8 +0.7**
comp=Z,1µm,1.6s,mb6.6
SHOC Shoshone 45.54 86 ⇑P **P 01 41 56.4 +0.2**
baz=46,SNR=54
JLU Jordanelle 45.55 77 *e*P **P 01 41 56.3 +0.1**
comp=Z,200nm,0.8s,mb6.1
NLU North Lily Min 45.57 78 *e*P **P 01 41 56.8 +0.5**
comp=Z,2µm,2.0s,mb6.6
NLU *e*ScP ScP 01 47 26.2 -1.8
GSC Goldstone 45.60 87 ⇓P **P 01 41 57.0 +0.3**
baz=46,SNR=214
GSC Goldstone 45.60 87 *e*P **P 01 41 57.5 +0.8**
GSC *e* 01 43 36.5
GSC pmax pmax
comp=Z,362nm,0.9s,mb6.3
GSC Goldstone 45.60 87 *e*P **P 01 41 57.5 +0.8**
comp=Z,362nm,0.9s,mb6.3
GSC *e*PcP PcP 01 43 36.5 +1.6
GSC *e*ScP ScP 01 47 25.8 -2.4
L18A Fontenelle, Gr 45.60 75 ⇑P **P 01 41 54.8 -1.8**
baz=46,SNR=106
P15A Leamington 45.68 79 ⇓P **P 01 41 56.8 -0.4**
baz=46,SNR=156
FMP Fort Macarthur 45.73 89 ⇓P **P 01 41 56.7 -1.0**
baz=46
U11A Corn Creek 45.76 84 ⇑P **P 01 41 58.0 +0.1**
baz=46,SNR=9.0
RRX Edison Barstow 45.76 87 ⇓P **P 01 41 57.2 -0.7**
baz=46,SNR=11
BFSC Mount Baldy St 45.77 88 ⇓P **P 01 41 58.0 -0.1**
baz=46,SNR=112
K19A Absolon Red Bu 45.78 73 ⇑P **P 01 41 56.0 -2.0**
baz=46,SNR=244
DAU Daniels Canyon 45.78 77 *e*P **P 01 41 59.2 +1.2**
DAU pmax pmax
comp=Z,590nm,1.1s,mb6.4
DAU Daniels Canyon 45.78 77 *e*P **P 01 41 59.2 +1.2**
comp=Z,590nm,1.1s,mb6.4
MPU Maple Canyon 45.80 78 *e*P **P 01 41 58.2 0.0**
comp=Z,245nm,0.9s,mb6.1
MPU *e*PcP PcP 01 43 37.5 +1.9
MPU *e*ScP ScP 01 47 28.7 -0.2
SHPR Sheep Range 45.84 84 *e*P **P 01 41 58.8 +0.2**
CIS Catalina Islan 45.86 90 ⇓P **P 01 41 58.8 0.0**
baz=46,SNR=7.6
IRK Irkutsk 45.86 303 *e*P **P 01 41 57.1 -1.4**
IRK *e* 01 43 33.4
IRK *e* 01 52 00.1
IRK pmax pmax
comp=Z,128nm,3.4s
M18A Lyman 45.88 75 ⇓P **P 01 41 58.1 -0.7**
baz=46,SNR=76
L19A Farson 45.90 74 ⇑P **P 01 41 57.8 -1.2**
baz=46,SNR=109
S13A Holt Ranch, En 45.95 82 ⇓P **P 01 41 59.4 0.0**
baz=46,SNR=403
Q15A Fillmore 45.97 79 ⇓P **P 01 41 59.5 0.0**
baz=46,SNR=114
T12A Moapa 45.97 84 ⇓P **P 01 41 59.0 -0.6**
baz=46,SNR=35
R14A James Farms, M 46.02 81 ⇑P **P 01 41 59.3 -0.6**
baz=46,SNR=18
P16A Fountain Green 46.03 78 ⇑P **P 01 42 00.2 +0.1**
baz=46
TUQ Turquoise Moun 46.06 86 ⇓P **P 01 41 59.6 -0.7**
baz=46,SNR=35
SCI San Clemente I 46.06 90 ⇑P **P 01 41 59.9 -0.5**
baz=46
BJI Beijing 46.07 282 P **P 01 41 59.1 -1.2**
BJI PP PP 01 43 48.4 +0.4
BJI S **S 01 48 42.3 -3.8**
BJI pmax pmax
comp=Z,340nm,1.9s,mb6.0
BJI pmax pmax
comp=Z,11µm,9.0s
BJI LR LR
comp=N,149µm,18.1s,MS7.0
BJI LR LR
comp=E,54µm,20.1s,MS7.0
BJI LR LR
comp=Z,161µm,22.1s,MS6.9
ARUT Antelope Range 46.08 81 *e*P **P 01 42 00.9 +0.5**
ARUT pmax pmax
comp=Z,2µm,1.9s,mb6.6
ARUT Antelope Range 46.08 81 *e*P **P 01 42 00.9 +0.5**
comp=Z,2µm,1.9s,mb6.6
BJT Baijiatuau 46.09 282 *e*P **P 01 41 59.4 -1.0**
BJT pmax pmax
comp=Z,261nm,0.9s
BJT MLR MLR
comp=Z,211µm,20.0s
BJT Baijiatuau 46.09 282 *e*P **P 01 41 59.4 -1.1**
comp=Z,261nm,0.9s,mb6.2
BJT LR LR
comp=Z,211µm,20.0s,MS7.1
V11A Goodsprings 46.10 85 ⇓P **P 01 42 01.1 +0.5**
baz=46,SNR=146
K20A Yellowstone Ra 46.18 73 ⇓P **P 01 41 59.9 -1.2**
baz=46,SNR=87
HEC Hector,Ludlow 46.20 87 ⇑P **P 01 42 00.9 -0.6**
baz=46,SNR=24
BBRC Big Bear Sol-O 46.21 88 ⇓P **P 01 42 01.0 -0.5**
baz=46
O17A Robinson Place 46.23 77 ⇑P **P 01 42 00.7 -0.9**
baz=46,SNR=118
S14A Cedar City 46.27 81 ⇑P **P 01 42 01.7 -0.2**
baz=46,SNR=63
U12A Valley of Fire 46.27 84 ⇓P **P 01 42 01.9 -0.1**
baz=46,SNR=84
CCUT Cedar City 46.28 82 *e*P **P 01 42 02.7 +0.7**
comp=Z,271nm,1.1s,mb6.1
T13A Saint George 46.28 83 ⇓P **P 01 42 02.6 +0.6**
baz=46,SNR=252
M19A Rock Springs 46.38 75 ⇑P **P 01 42 01.5 -1.2**
baz=46,SNR=19
MVU Marysvale 46.38 80 PFAKE 01 42 20.0 +17
MVU LR LR
comp=Z,85µm,19.0s,MS6.7
N18A Larsen Ranch, 46.39 76 ⇓P **P 01 42 01.2 -1.6**
baz=46,SNR=50
MSU Marysvale 46.40 80 *e*P **P 01 42 03.4 +0.5**
MSU *e* 01 43 40.3
MSU pmax pmax
comp=Z,1µm,1.6s,mb6.6
MSU Marysvale 46.40 80 *e*P **P 01 42 03.4 +0.5**
comp=Z,1µm,1.6s,mb6.6
MSU *e*PcP PcP 01 43 40.3 +2.6
MSU *e*ScP ScP 01 47 30.3 -1.2
MURC Murrieta 46.48 89 ⇓P **P 01 42 03.8 +0.2**
baz=46,SNR=43
TLY Talaya 46.49 303 P **P 01 42 03.2 -0.3**
comp=Z,160nm,1.4s,mb5.8,SNR=22
TLY Talaya 46.49 303 *e*P **P 01 42 02.1 -1.4**
TLY *e* 01 43 56.4
TLY *e*S **S 01 48 48.2 -3.7**
TLY pmax pmax
comp=Z,99nm,1.6s,mb5.5
TLY MLR MLR
comp=Z,137µm,20.0s,MS6.9
TLY Talaya 46.49 303 *e*P **P 01 42 02.5 -1.0**
comp=Z,200nm,1.8s,mb5.8
TLY LR LR
comp=Z,144µm,20.0s,MS6.9
TLY Talaya 46.49 303 P **P 01 42 02.8 -0.7**
SNR=42
TLY P pP 01 42 02.8 -2.3
SNR=42
TMUT Trail Mountain 46.50 78 *e*P **P 01 42 04.9 +1.2**
comp=Z,646nm,1.0s,mb6.5
R15A Junction 46.53 80 ⇓P **P 01 42 03.7 -0.3**
baz=46,SNR=113
V12A Nelson 46.53 85 ⇑P **P 01 42 04.7 +0.7**
baz=46,SNR=139
L20A Wamsutter 46.57 74 ⇓P **P 01 42 02.7 -1.5**
baz=46,SNR=56
O18A Roosevelt 46.63 77 ⇑P **P 01 42 04.7 0.0**
baz=46,SNR=182
U13A Pakoon Wash 46.63 83 ⇑P **P 01 42 05.1 +0.3**
baz=46,SNR=299
GMRC Granite Mounta 46.65 86 ⇓P **P 01 42 05.1 +0.2**
baz=47,SNR=166
P17A Butcher Ranch, 46.67 78 ⇑P **P 01 42 05.0 0.0**
baz=47,SNR=66
N19A John Jarvie Ra 46.74 75 ⇑P **P 01 42 04.6 -1.0**
baz=47,SNR=67
Q16A Castle Valley 46.76 79 ⇓P **P 01 42 05.8 0.0**
baz=47,SNR=88
T14A Hurricane 46.76 82 ⇓P **P 01 42 06.4 +0.6**
baz=47,SNR=226
ULN Ulaanbaatar 46.78 297 *e*P **P 01 42 05.1 -0.7**
ULN pmax pmax
comp=Z,73nm,1.0s,mb5.6
ULN MLR MLR
comp=Z,110µm,19.0s,MS6.8
ULN Ulaanbaatar 46.78 297 *e*P **P 01 42 05.1 -0.7**
comp=Z,73nm,1.0s,mb5.6
ULN LR LR
comp=Z,110µm,19.0s,MS6.8
ULN Ulaanbaatar 46.78 297 P **P 01 42 04.9 -0.8**
SNR=44
ULN P pP 01 42 04.9 -2.4
SNR=44
LDFC Landfair 46.80 86 *e*P **P 01 42 06.8 +0.7**
comp=Z,474nm,0.8s,mb6.5
W12A Cal Nev Ari 46.80 85 ⇓P **P 01 42 06.3 +0.2**
baz=47,SNR=41
S15A Panguitch 46.81 81 ⇑P **P 01 42 06.8 +0.6**
baz=47,SNR=92
PFO Pinyon Flat Ob 46.94 88 P **P 01 42 07.0 -0.2**
comp=Z,811nm,2.0s,mb6.3,SNR=35
PFO Pinyon Flat Ob 46.94 88 ⇓P **P 01 42 07.4 +0.2**
baz=47,SNR=54
PFO Pinyon Flat Ob 46.94 88 *e*P **P 01 42 06.8 -0.4**
PFO *e* 01 43 41.7
PFO pmax pmax
comp=Z,458nm,1.4s,mb6.2
PFO MLR MLR
comp=Z,24µm,20.0s,MS6.2
PFO Pinyon Flat Ob 46.94 88 *e*P **P 01 42 06.8 -0.4**
comp=Z,458nm,1.4s,mb6.2
PFO *e*PcP PcP 01 43 41.7 +2.0
PFO *e*ScP ScP 01 47 31.6 -2.2
PFO LR LR
comp=Z,24µm,20.0s,MS6.2
BELC Belle Mtn. 46.96 87 ⇓P **P 01 42 07.3 0.0**
baz=47,SNR=44
R16A Teasdale 46.97 80 ⇓P **P 01 42 07.8 +0.4**
baz=47,SNR=279
M20A Sweetwater, Wa 46.97 74 ⇓P **P 01 42 06.2 -1.2**
baz=47,SNR=140
V13A Grand Canyon W 46.99 84 ⇑P **P 01 42 08.0 +0.4**
baz=47,SNR=289
109C Camp Elliot, M 47.02 89 ⇓P **P 01 42 08.4 +0.6**
baz=47,SNR=29
SRU San Rafael 47.03 78 *e*P **P 01 42 07.7 -0.2**
SRU pmax pmax
comp=Z,588nm,1.1s,mb6.4
SRU San Rafael 47.03 78 *e*P **P 01 42 07.7 -0.1**
comp=Z,588nm,1.1s,mb6.4
U14A Mt Trumbull 47.12 83 ⇓P **P 01 42 08.9 +0.4**
baz=47,SNR=195
O19A Miners Draw (B 47.14 76 ⇑P **P 01 42 08.1 -0.6**
baz=47,SNR=167
SONM Songino Array 47.16 297 P **P 01 42 07.1 -1.7**
comp=Z,21nm,0.8s,mb5.1,baz=56,slow=8.9,SNR=44
SONM ScP ScP 01 47 31.3 -3.2
comp=Z,16nm,1.0s,baz=57,slow=1.5,SNR=8.0
SONM LR LR 02 03 58.4
comp=Z,151µm,18.3s,MS7.0,baz=57,slow=39
SONM PKPPKP 02 13 07.4
comp=Z,1.3nm,0.8s,baz=194,slow=3.0,SNR=3.5
L21A Rawlins 47.17 73 ⇓P **P 01 42 07.5 -1.4**
baz=47,SNR=233
Q18A Rafter H Ranch 47.27 78 ⇓P **P 01 42 09.6 -0.1**
baz=47,SNR=254
NEE2 Needles Airpor 47.30 86 ⇓P **P 01 42 10.1 0.0**
baz=47
N20A Spence Gulch, 47.33 75 ⇓P **P 01 42 10.0 -0.2**
baz=47,SNR=127
R17A Hanksville Air 47.35 79 ⇑P **P 01 42 10.3 -0.1**
baz=47,SNR=245
IRM Iron Mountain 47.38 87 ⇑P **P 01 42 10.4 -0.3**
baz=47,SNR=103
M21A Separation Pea 47.39 73 ⇑P **P 01 42 09.8 -0.9**
baz=47,SNR=148
ZAK Zakamensk 47.41 301 *e*P **P 01 42 09.8 -0.8**
ZAK pmax pmax
comp=Z,89nm,1.5s,mb5.5
BAR Barrett 47.43 89 *e*P **P 01 42 11.8 +0.8**
comp=Z,183nm,1.0s,mb6.0
BAR *e*ScP ScP 01 47 34.4 -1.5
RWWY Rawlins 47.43 73 *e*P **P 01 42 11.2 +0.2**
comp=Z,262nm,1.1s,mb6.1
RWWY *e*ScP ScP 01 47 36.3 +0.6
MONP Monument Peak 47.44 89 ⇑P **P 01 42 11.7 +0.5**
baz=47,SNR=43
JOW Kunigami 47.46 260 LR LR 02 00 45.8
comp=Z,46µm,19.1s,MS6.5,baz=275,slow=34
BC3 Big Chuckw Mtn 47.53 87 ⇑P **P 01 42 12.0 +0.2**
baz=48,SNR=53
W13A Hualapai Mount 47.54 85 ⇓P **P 01 42 12.1 +0.2**
baz=48,SNR=139
P19A Cripple Cowboy 47.64 77 ⇑P **P 01 42 11.7 -0.8**
baz=48,SNR=681
U15A North Rim 47.66 82 ⇓P **P 01 42 12.8 +0.1**
baz=48,SNR=415
V14A Boquillas Ranc 47.67 84 ⇓P **P 01 42 13.5 +0.6**
baz=48,SNR=235
L22A Ellis Ranch, M 47.68 72 ⇓P **P 01 42 12.4 -0.5**
baz=48
O20A White River Ci 47.77 76 ⇓P **P 01 42 12.7 -0.9**
baz=48,SNR=336
T16A Glen Canyon Da 47.78 81 ⇑P **P 01 42 13.1 -0.6**
baz=48,SNR=25
S17A Black Ridge (B 47.79 80 ⇓P **P 01 42 13.8 -0.1**
baz=48,SNR=253
SWSC Sam W. Stewart 47.79 88 ⇑P **P 01 42 13.6 -0.2**
baz=48
DVTC Desert V Tower 47.79 89 ⇑P **P 01 42 13.8 -0.1**
baz=48,SNR=42
N21A Black Mountain 47.82 74 ⇑P **P 01 42 12.7 -1.2**
baz=48,SNR=143
RSSD Black Hills 47.83 69 *e*P **P 01 42 12.7 -1.3**
RSSD pmax pmax
comp=Z,88nm,1.1s,mb5.7
RSSD Black Hills 47.83 69 *e*P **P 01 42 12.7 -1.3**
comp=Z,88nm,1.1s,mb5.7
R18A Canyonlands Na 47.87 78 ⇓P **P 01 42 13.3 -1.1**
baz=48,SNR=245
MOY Mondy 47.88 304 *e*P **P 01 42 14.1 -0.2**
MOY *e* 01 44 09.1
MOY pmax pmax
comp=Z,410nm,3.2s
X13A Yucca 47.91 85 ⇓P **P 01 42 14.6 -0.1**
baz=48,SNR=129
TIA Tai'an 47.91 278 ⇓P **P 01 42 12.7 -2.0**
TIA pP pP 01 42 26.5 +10
TIA S **S 01 49 09.5 -2.9**
TIA pmax pmax
comp=Z,180nm,1.0s,mb6.1
TIA pmax pmax
comp=Z,5µm,5.0s
TIA LR LR
comp=N,28µm,34.8s,MS6.1
TIA LR LR
comp=E,19µm,36.0s,MS6.1
PDMCI Parker Dam,Lak 47.91 86 ⇑P **P 01 42 14.5 -0.3**
baz=48,SNR=49
W14A Seligman 47.96 84 ⇑P **P 01 42 15.2 0.0**
baz=48,SNR=161
M22A Cedar Creek Ra 47.97 73 ⇓P **P 01 42 13.0 -2.1**
baz=48,SNR=60
Y12C Blythe 48.04 86 ⇓P **P 01 42 15.1 -0.7**
baz=48,SNR=97
P20A De Beque 48.08 76 ⇓P **P 01 42 14.7 -1.2**
baz=48,SNR=226
V15A Kaibab Nationa 48.12 83 ⇑P **P 01 42 16.1 -0.3**
baz=48,SNR=505
O21A Pagoda 48.18 75 ⇓P **P 01 42 15.7 -1.1**
baz=48,SNR=63
T17A Navajo Res., N 48.20 80 ⇑P **P 01 42 16.0 -1.0**
baz=48,SNR=213
S18A Hurst Farm, BI 48.25 79 ⇓P **P 01 42 16.9 -0.5**
baz=48,SNR=555
R19A Curley Farm, L 48.31 78 ⇑P **P 01 42 16.8 -1.0**
baz=48,SNR=205
GLA Glamis 48.32 87 ⇑P **P 01 42 17.8 -0.2**
baz=48,SNR=65
GLA Glamis 48.32 87 *e*P **P 01 42 18.6 +0.7**
GLA pmax pmax
comp=Z,449nm,1.3s,mb6.3
GLA Glamis 48.32 87 *e*P **P 01 42 18.6 +0.7**
comp=Z,449nm,1.3s,mb6.3
GLA *e*ScP ScP 01 47 38.3 -1.3
HHC Hu-ho-hao-te 48.34 286 ⇓P **P 01 42 17.3 -0.7**
HHC pP pP 01 42 21.9 +2.3
HHC sP sP 01 42 25.0 +4.8
HHC PP PP 01 44 08.8 -1.4
HHC ScP ScP 01 47 40.1 +0.5
HHC S **S 01 49 15.3 -3.1**
HHC sS sS 01 49 23.6 +2.6
HHC ScS ScS 01 52 06.7 -4.6
HHC SS SS 01 52 38.3 -9.1
HHC pmax pmax
comp=Z,280nm,1.6s,mb6.0
HHC pmax pmax
comp=Z,7µm,8.2s
HHC LR LR

comp=N,69μm,16.3s,MS6.7
HHC LR LR
comp=E,26μm,17.8s,MS6.7
HHC LR LR
comp=Z,48μm,17.6s,MS6.5
N22A Wattenberg Ran 48.42 74 ⇑P **P 01 42 18.2 -0.5**
baz=48,SNR=144
Y13A Salome 48.43 86 ⇓P **P 01 42 18.4 -0.4**
baz=48,SNR=45
Q20A Ridgley Place, 48.48 77 ⇑P **P 01 42 17.7 -1.3**
baz=48,SNR=178
W15A Williams 48.49 83 ⇓P **P 01 42 19.3 +0.1**
baz=48,SNR=95
U17A Shonto 48.54 81 ⇓P **P 01 42 18.7 -0.9**
baz=48,SNR=70
U16A Tuba City 48.55 82 ⇓P **P 01 42 19.4 -0.3**
baz=48,SNR=115
X14A Yava 48.57 85 ⇑P **P 01 42 20.1 +0.3**
baz=48,SNR=247
GUMO Guam 48.65 232 *e*P **P 01 42 21.6 +1.0**
GUMO pmax pmax
comp=Z,721nm,1.1s,mb6.6
GUMO MLR MLR
comp=Z,61μm,20.0s,MS6.6
GUMO Guam 48.65 232 LR LR 02 01 26.7
comp=Z,59μm,19.7s,MS6.6,baz=41,slow=34
GUMO Guam 48.65 232 *e*P **P 01 42 21.6 +1.0**
comp=Z,721nm,1.1s,mb6.6
GUMO LR LR
comp=Z,61μm,20.0s,MS6.6
T18A Mexican Hat 48.68 80 ⇓P **P 01 42 19.6 -1.1**
baz=49,SNR=635
PHWY Pilot Hill 48.71 73 *e*P **P 01 42 22.3 +1.5**
comp=Z,105nm,1.2s,mb5.7
S19A Harvey Farm, M 48.74 79 ⇑P **P 01 42 20.6 -0.5**
baz=49,SNR=475
ULM Lac du Bonnet 48.74 58 P **P 01 42 19.0 -2.0**
comp=Z,23nm,1.0s,mb5.2,baz=308,slow=8.8,SNR=24
ULM LR LR 02 05 30.2
comp=Z,153μm,18.0s,MS7.0,baz=311,slow=39
WUAZ Wupatki 48.81 82 *e*P **P 01 42 21.4 -0.3**
comp=Z,337nm,0.9s,mb6.4
WUAZ *e*ScP ScP 01 47 40.6 -1.1
WUAZ LR LR
comp=Z,59μm,19.0s,MS6.6
SSE Sheshan 48.82 270 P **P 01 42 20.2 -1.6**
SSE PP PP 01 44 13.0 -1.8
SSE S **S 01 49 22.2 -3.1**
SSE sS sS 01 49 27.9 -0.1
SSE pmax pmax
comp=Z,350nm,1.0s,mb6.3
SSE pmax pmax
comp=Z,5μm,7.9s
SSE LR LR
comp=N,43μm,19.6s,MS6.6
SSE LR LR
comp=E,40μm,19.6s,MS6.6
SSE LR LR
comp=Z,48μm,24.0s,MS6.4
Y14A Wickenburg 48.85 85 ⇑P **P 01 42 21.6 -0.4**
baz=49,SNR=139
R20A Redvale 48.91 78 ⇓P **P 01 42 21.5 -0.9**
baz=49,SNR=142
Z13A Yuma Proving G 48.94 86 ⇓P **P 01 42 22.5 -0.2**
baz=49,SNR=128
X15A Humboldt 48.96 84 ⇑P **P 01 42 22.8 -0.1**
baz=49,SNR=158
Q21A Lamborn Mesa, 48.99 76 ⇓P **P 01 42 22.0 -1.0**
baz=49,SNR=152
W16A Flagstaff 48.99 83 ⇓P **P 01 42 23.4 +0.3**
baz=49,SNR=92
V17A Tonalea, Kykot 49.10 82 ⇑P **P 01 42 24.3 +0.4**
baz=49,SNR=464
SMCO Snowmass 49.13 76 *e*P **P 01 42 23.5 -0.6**
comp=Z,124nm,0.9s,mb5.9
SMCO *e*PcP PcP 01 43 50.9 +3.5
SMCO *e*ScP ScP 01 47 42.2 -0.8
U18A Rough Rock, Ch 49.15 80 ⇑P **P 01 42 24.0 -0.3**
baz=49,SNR=98
113A Mohawk Valley, 49.17 87 ⇑P **P 01 42 24.0 -0.4**
baz=49,SNR=89
Y15A Casa Rosa Ranc 49.26 85 ⇓P **P 01 42 25.1 -0.1**
baz=49,SNR=129
Z14A Wintersburg 49.27 86 ⇓P **P 01 42 24.6 -0.7**
baz=49,SNR=29
R21A Cimarron 49.30 77 ⇑P **P 01 42 24.6 -0.9**
baz=49,SNR=238
KBS Kingsbay 49.36 358 *e*P **P 01 42 25.7 +0.3**
KBS AMB AMB 01 42 31.1
comp=Z,765nm,3.1s
KBS *e*PP PP 01 44 26.1 +7.2
KBS Kingsbay 49.36 358 *e*P **P 01 42 25.8 +0.5**
KBS pmax pmax
comp=Z,1μm,1.8s,mb6.6
KBS Kingsbay 49.36 358 *e*P **P 01 42 26.0 +0.7**
comp=Z,516nm,1.0s,mb6.5
KBS LR LR
comp=Z,58μm,19.0s,MS6.6
Q22A Crested Butte, 49.37 76 ⇑P **P 01 42 25.0 -0.9**
baz=49,SNR=186
T19A Beclabito 49.40 79 ⇑P **P 01 42 25.4 -0.7**
baz=49,SNR=639
BTO Baotou 49.41 287 *e*P **P 01 42 26.1 -0.1**
BTO S **S 01 49 30.6 -2.8**
MVCO Mesa Verde 49.47 79 *e*P **P 01 42 26.7 0.0**
comp=Z,1μm,1.6s,mb6.7
MVCO LR LR
comp=Z,45μm,19.0s,MS6.5
X16A Lo Mia Camp, P 49.50 84 ⇓P **P 01 42 27.3 +0.4**
baz=49,SNR=207
W17A Winslow 49.51 82 ⇓P **P 01 42 27.1 +0.1**
baz=49,SNR=14
ISCO Idaho Springs 49.55 74 *e*P **P 01 42 27.5 +0.2**
ISCO pmax pmax
comp=Z,180nm,1.1s,mb6.0
ISCO MLR MLR
comp=Z,119μm,21.0s,MS6.9
ISCO Idaho Springs 49.55 74 *e*P **P 01 42 27.5 +0.2**
comp=Z,180nm,1.1s,mb6.0
ISCO *e*ScP ScP 01 47 43.2 -1.6
ISCO LR LR
comp=Z,119μm,21.0s,MS6.9
V18A Ganado 49.57 81 ⇓P **P 01 42 27.4 -0.1**
baz=50,SNR=132
S21A Coal Bank Pass 49.61 78 ⇑P **P 01 42 27.8 +0.1**
baz=50,SNR=359
NJ2 Nanjing 49.61 272 *e*P **P 01 42 25.2 -2.6**
NJ2 pP pP 01 42 35.1 +5.7
NJ2 sP sP 01 42 39.0 +8.9
NJ2 PP PP 01 44 20.6 -1.4
NJ2 S **S 01 49 27.0 -9.4**
NJ2 pmax pmax
comp=Z,70nm,0.9s,mb5.7
NJ2 LR LR
comp=N,88μm,20.3s,MS6.9
NJ2 LR LR
comp=E,85μm,22.3s,MS6.9
NJ2 LR LR
comp=Z,81μm,18.2s,MS6.8
U19A Dine' College, 49.63 80 ⇑P **P 01 42 27.9 -0.1**
baz=50,SNR=124
114A Black Gap (USA 49.73 86 ⇑P **P 01 42 28.6 -0.2**
baz=50,SNR=94
TIY Taiyuan 49.80 283 *e*P **P 01 42 29.9 +0.7**
TIY PcP PcP 01 43 50.1 +0.2
TIY S **S 01 49 38.4 -0.6**
TIY sS sS 01 49 46.3 +4.7
TIY ScS ScS 01 52 15.9 -5.3
TIY pmax pmax
comp=Z,110nm,0.6s,mb6.1
TIY pmax pmax
comp=Z,7μm,5.4s
TIY LR LR
comp=N,100μm,15.1s,MS6.9
TIY LR LR
comp=E,26μm,19.8s,MS6.9
TIY LR LR
comp=Z,56μm,16.9s,MS6.6
Z15A Gila River Ind 49.81 85 ⇓P **P 01 42 29.2 -0.2**
baz=50,SNR=7.7
Y16A Circle Bar Ran 49.83 84 ⇑P **P 01 42 29.6 0.0**
baz=50,SNR=148
AGMN Agassiz Refuge 49.89 60 *e*P **P 01 42 29.3 -0.5**
comp=Z,106nm,1.2s,mb5.7
AGMN LR LR
comp=Z,107μm,20.0s,MS6.8
X17A Forest Lakes 49.94 83 ⇑P **P 01 42 30.8 +0.5**
baz=50
SPB4 Spitsbergen Ar 49.95 356 *e*P **P 01 42 28.4 -1.5**
SPITS Spitsbergen Ar 49.95 356 P **P 01 42 29.6 -0.3**
SPITS pmax pmax
comp=Z,456nm,0.9s
SPITS Spitsbergen Ar 49.95 356 P **P 01 42 29.6 -0.3**
comp=Z,456nm,0.9s,mb6.5,baz=13,slow=4.2,SNR=32
U20A Newcomb 50.00 80 ⇓P **P 01 42 30.7 -0.1**
baz=50,SNR=41
V19A Window Rock 50.11 81 ⇓P **P 01 42 31.7 +0.1**
baz=50,SNR=32
115A Sonoran Desert 50.16 86 ⇓P **P 01 42 32.0 0.0**
baz=50,SNR=76
Z16A Peralta Trail, 50.23 85 ⇑P **P 01 42 32.3 -0.2**
baz=50,SNR=69
W19A Sanders 50.30 81 ⇑P **P 01 42 33.2 +0.1**
baz=50,SNR=77
214A Organ Pipe Nat 50.31 87 ⇓P **P 01 42 32.8 -0.3**
baz=50
X18A Snowflake 50.34 82 ⇑P **P 01 42 33.3 -0.1**
baz=50,SNR=124
Y17A Roosevelt 50.35 84 ⇓P **P 01 42 33.3 -0.1**
baz=50,SNR=113
V20A Brimhall 50.41 80 ⇑P **P 01 42 33.6 -0.3**
baz=50,SNR=110
T22A Edith 50.57 78 ⇓P **P 01 42 35.0 -0.1**
baz=50,SNR=301
Y18A Canyon Day Jun 50.79 83 ⇑P **P 01 42 37.0 +0.2**
baz=51
X19A St. Johns 50.81 82 ⇑P **P 01 42 37.1 +0.1**
baz=51,SNR=135
W20A Ramah 50.83 81 ⇑P **P 01 42 36.7 -0.4**
baz=51
Z17A San Carlos Hig 50.85 84 ⇑P **P 01 42 37.2 0.0**
baz=51,SNR=34
V21A Milan 50.91 79 ⇑P **P 01 42 36.9 -0.7**
baz=51
SDCO Great Sand Dun 50.94 76 *e*P **P 01 42 38.2 +0.4**
comp=Z,334nm,1.1s,mb6.2
SDCO *e*PcP PcP 01 43 58.9 +4.8
SDCO *e*ScP ScP 01 47 49.7 -1.1
SDCO LR LR
comp=Z,64μm,22.0s,MS6.6
DAG Danmarks Havn 50.94 6 ⇓*i*P **P 01 42 36.5 -0.8**
DAG pmax pmax
comp=Z,1μm,1.8s,mb6.6
DAG MLR MLR
comp=Z,110μm,18.0s,MS6.9
DAG MLR MLR
comp=N,140μm,20.0s
DAG Danmarks Havn 50.94 6 ⇓*i*P **P 01 42 36.5 -0.8**
comp=N,1μm,1.8s,mb6.6
DAG
comp=Z,112μm,18.0s
OGNE Ogallala 50.95 71 *e*P **P 01 42 39.8 +1.9**
comp=Z,185nm,0.9s,mb6.0
OGNE LR LR
comp=Z,97μm,19.0s,MS6.8
TARA Tarawa 50.96 192 *e*P **P 01 42 40.1 +1.9**
comp=Z,860nm,1.3s,mb6.5
TARA LR LR
comp=Z,63μm,20.0s,MS6.6
216A Three Points, 51.12 86 ⇓P **P 01 42 39.2 0.0**
baz=51,SNR=43
HSP Hornsund 51.14 356 *e*P **P 01 42 39.8 +0.9**
Y19A Nutrioso 51.15 82 ⇓P **P 01 42 40.2 +0.7**
baz=51
117A Oracle 51.17 85 ⇓P **P 01 42 39.8 +0.2**
baz=51
X20A Quemado 51.22 81 ⇓P **P 01 42 40.1 +0.1**
baz=51
Z18A Geronimo 51.26 84 ⇑P **P 01 42 40.5 +0.2**
baz=51
TUC Tucson 51.32 85 *e*P **P 01 42 41.0 +0.2**
TUC pmax pmax
comp=Z,838nm,1.6s,mb6.4
TUC MLR MLR
comp=Z,55μm,19.0s,MS6.6
TUC Tucson 51.32 85 *e*P **P 01 42 41.0 +0.2**
comp=Z,838nm,1.6s,mb6.4
TUC LR LR
comp=Z,55μm,19.0s,MS6.6
W21A San Fidel 51.36 80 ⇑P **P 01 42 40.7 -0.3**
baz=51
Z19A T-Link Ranch, 51.59 83 ⇑P **P 01 42 42.4 -0.4**
baz=52
118A Homack Ranch, 51.60 84 ⇑P **P 01 42 43.0 +0.1**
baz=52
217A Green Valley 51.67 86 ⇓P **P 01 42 43.2 -0.2**
baz=52
Y20A Horse Springs, 51.72 82 ⇓P **P 01 42 44.1 +0.4**
baz=52
X21A Alamocita Cree 51.73 81 ⇓P **P 01 42 44.4 +0.6**
baz=52
W22A Albuquerque 51.87 80 ⇑P **P 01 42 44.6 -0.2**
baz=52
119A Ashpeak Ranch, 51.93 84 ⇑P **P 01 42 45.5 +0.2**
baz=52
218A Dragoon 52.01 85 ⇓P **P 01 42 46.2 +0.3**
baz=52
Y21A Point of Rocks 52.09 81 ⇓P **P 01 42 47.1 +0.6**
baz=52
Z20A Nine Sixteen R 52.13 83 ⇓P **P 01 42 46.9 0.0**
baz=52
LAZ Ladron 52.15 80 *e*P **P 01 42 47.5 +0.5**
comp=Z,721nm,1.8s,mb6.3
ANMO Albuquerque 52.20 79 *e*P **P 01 42 47.1 -0.2**
ANMO *e* 01 44 01.3
ANMO pmax pmax
comp=Z,544nm,1.6s
ANMO MLR MLR
comp=Z,62μm,22.0s
ANMO Albuquerque 52.20 79 *e*P **P 01 42 47.0 -0.3**
comp=Z,544nm,1.6s,mb6.2
ANMO *e*PcP PcP 01 44 01.3 +2.4
ANMO LR LR
comp=Z,62μm,22.0s,MS6.6
W23A Werner Place, 52.25 79 ⇑P **P 01 42 47.5 -0.2**
baz=52
ECSD EROS Data Cent 52.29 65 *e*P **P 01 42 45.2 -2.7**
comp=Z,31nm,0.8s,mb5.3
ECSD LR LR
comp=Z,139μm,19.0s,MS7.0
XMAS Kiritimati 52.41 154 *e*P **P 01 42 48.2 -0.8**
comp=Z,1μm,1.5s,mb6.5
XMAS LR LR
comp=Z,38μm,19.0s,MS6.5
318A Bisbee 52.41 85 ⇓P **P 01 42 49.1 +0.2**
baz=52
LENM Lemitar 52.41 81 *e*P **P 01 42 50.7 +1.8**
EYMN Ely 52.42 58 *e*P **P 01 42 48.4 -0.5**
comp=Z,129nm,1.2s,mb5.7
EYMN LR LR
comp=Z,137μm,20.0s,MS7.0
219A White Tail Can 52.48 84 ⇓P **P 01 42 49.3 -0.1**
baz=52
120A U Bar Ranch, L 52.49 83 ⇓P **P 01 42 49.8 +0.3**
baz=52
Y22D IRIS PASSCAL I 52.51 81 ⇓P **P 01 42 50.0 +0.4**
baz=52
LPM Los Pinos Moun 52.52 80 *e*P **P 01 42 44.6 -5.2**
Z21A St. Cloud Mine 52.56 82 ⇓P **P 01 42 50.0 0.0**
baz=52
Y22A Socorro 52.57 81 ⇑P **P 01 42 50.0 -0.1**
baz=52
X23A Hourglass Bar 52.61 80 ⇑P **P 01 42 50.5 +0.1**
baz=52
BNM Barren Site 52.63 80 *e*P **P 01 42 51.4 +0.8**
comp=Z,2μm,1.9s,mb6.6
SUMG Summit 52.64 14 *e*P **P 01 42 50.0 0.0**
comp=Z,620nm,1.1s,mb6.5
319A Douglas 52.89 85 ⇑P **P 01 42 52.4 -0.1**
baz=53
TATO Taipei 52.98 264 PFAKE 01 43 10.0 +17
TATO LR LR
comp=Z,44μm,19.0s,MS6.5
220A Playas Peak, P 52.99 84 ⇑P **P 01 42 53.0 -0.3**
baz=53
121A Cookes Peak, D 53.02 83 ⇓P **P 01 42 53.1 -0.3**
baz=53
Z22A Elephant Butte 53.03 81 ⇑P **P 01 42 53.8 +0.3**
baz=53
X24A Lazy VL Ranch, 53.08 79 ⇑P **P 01 42 53.9 +0.1**
baz=53
Y23A Lovelace Mesa, 53.13 80 ⇑P **P 01 42 54.5 +0.3**
baz=53
W25A X Bar L Ranch, 53.23 78 ⇓P **P 01 42 54.6 -0.4**
baz=53
221A Mesquite Ranch 53.38 83 ⇑P **P 01 42 56.2 +0.1**
baz=53
320A Kipp Ranch, An 53.38 84 ⇓P **P 01 42 56.2 +0.1**
baz=53
122A Conniff Cattle 53.39 82 ⇓P **P 01 42 56.1 0.0**
baz=53
WHN Wuhan 53.44 274 ⇓P **P 01 42 56.0 -0.5**
WHN pP pP 01 43 08.2 +10
WHN S **S 01 50 23.9 -5.3**
WHN pmax pmax
comp=Z,3μm,1.8s,mb6.9
WHN pmax pmax
comp=Z,16μm,5.0s
WHN LR LR
comp=N,113μm,15.7s,MS7.1
WHN LR LR
comp=E,14μm,12.8s,MS7.1
WHN LR LR
comp=Z,106μm,16.8s,MS7.0
Y24A Capitan 53.51 80 ⇑P **P 01 42 56.9 -0.1**
baz=53
X25A Clemmons Ranch 53.58 79 ⇓P **P 01 42 57.3 -0.2**
baz=54
CBKS Cedar Bluff 53.67 71 *e*P **P 01 42 58.0 -0.1**
CBKS pmax pmax
comp=Z,174nm,0.7s,mb6.1
CBKS MLR MLR
comp=Z,71μm,19.0s,MS6.7
CBKS Cedar Bluff 53.67 71 *e*P **P 01 42 58.0 -0.1**
comp=Z,174nm,0.7s,mb6.1
CBKS LR LR
comp=Z,71μm,19.0s,MS6.7
222A Williams Famil 53.73 83 ⇓P **P 01 42 58.6 -0.1**
baz=54
Y25A Mesa, Roswell 53.97 79 ⇑P **P 01 43 00.2 -0.2**
baz=54
X26A CR and CF Fran 54.08 78 ⇑P **P 01 43 00.7 -0.5**
baz=54
223A Chaparral, Ant 54.22 82 ⇓P **P 01 43 02.4 +0.2**
baz=54
ZAA0 Zalesovo Array 54.29 314 *e*P **P 01 43 02.1 -0.3**
ZALV Zalesovo Beam 54.29 314 P **P 01 43 01.2 -1.2**
ZALV 01 44 05.9
ZALV MLR MLR
comp=Z,50μm,18.6s,MS6.6
ZALV Zalesovo Beam 54.29 314 P **P 01 43 01.2 -1.2**
comp=Z,8.2nm,1.0s,mb4.6,baz=64,slow=6.8,SNR=15
ZALV PcP PcP 01 44 05.9 -0.6
comp=Z,12nm,0.8s,baz=39,slow=5.5,SNR=4.8
ZALV LR LR 02 07 35.6
comp=Z,50μm,18.6s,MS6.6,baz=46,slow=38
ZALV PKPPKP 02 13 07.1
comp=Z,0.9nm,0.7s,baz=204,slow=3.2,SNR=3.5
124A Stringfield Ra 54.34 81 ⇑P **P 01 43 02.6 -0.5**
baz=54
XAN Xi'an 54.37 281 P **P 01 43 02.9 -0.4**
XAN pP pP 01 43 05.3 +0.4
XAN PP PP 01 45 03.7 -1.3
XAN S **S 01 50 38.2 -3.6**
XAN sS sS 01 50 45.0 +0.6
XAN ScS ScS 01 52 51.6 -1.5
XAN pmax pmax
comp=Z,72nm,1.5s,mb5.4
XAN pmax pmax
comp=Z,810nm,5.0s
XAN LR LR
comp=N,69μm,20.5s,MS6.8
XAN LR LR
comp=E,29μm,19.1s,MS6.8
XAN LR LR
comp=Z,33μm,21.1s,MS6.4
NVS Novosibirsk 54.40 315 ⇑*i*P **P 01 43 02.0 -1.2**
NVS *i* 01 45 03.6
NVS *e*PPP 01 46 15.4
NVS *e*S **S 01 50 37.5 -4.2**
NVS pmax pmax
comp=N,2μm,4.0s
NVS pmax pmax
comp=E,2μm,4.0s
NVS pmax pmax
comp=Z,5μm,4.0s
NVS pmax pmax
comp=Z,565nm,2.5s,mb6.0
NVS pmax pmax
comp=N,380nm,2.0s
NVS pmax pmax
comp=E,469nm,2.2s
NVS smax
comp=E,3μm,4.5s
X27A F and S Farms, 54.45 77 ⇑P **P 01 43 03.1 -0.8**
baz=54
Y26A Elida 54.49 79 ⇓P **P 01 43 03.5 -0.7**
baz=54
224A Corundas Mount 54.72 81 ⇑P **P 01 43 06.1 +0.2**
baz=55
QZH Quanzhou 54.79 266 ⇑*i*P **P 01 43 07.3 +0.8**
QZH PcP PcP 01 44 09.8 +0.9
QZH S **S 01 50 45.2 -2.5**
QZH pmax pmax
comp=Z,230nm,1.1s,mb6.1
QZH pmax pmax
comp=Z,13μm,4.9s
QZH LR LR
comp=N,38μm,15.4s,MS6.8
QZH LR LR
comp=E,41μm,14.1s,MS6.8
QZH LR LR
comp=Z,71μm,19.0s,MS6.8
COWI Conover 54.85 58 *e*P **P 01 43 06.2 -0.4**
comp=Z,50nm,1.0s,mb5.5
COWI LR LR
comp=Z,133μm,19.0s,MS7.0
Z26A Caprock 54.85 79 ⇓P **P 01 43 06.2 -0.5**
baz=55
125A Gardner Draw, 54.85 80 ⇓P **P 01 43 06.6 -0.2**
baz=55
SFJD Kangerlussuaq 54.90 23 *e*P **P 01 43 06.3 -0.4**
comp=Z,178nm,1.0s,mb6.0
SFJD LR LR
comp=Z,84μm,20.0s,MS6.8
SFJD Kangerlussuaq 54.90 23 ⇑*i*P **P 01 43 05.9 -0.7**
SFJD
comp=Z,82μm,20.0s
Y27A Causey 54.92 78 ⇓P **P 01 43 06.5 -0.8**
baz=55
MNTX Cornudas Mount 55.07 82 *e*P **P 01 43 07.6 -0.8**
comp=Z,914nm,1.8s,mb6.5
MNTX LR LR
comp=Z,28μm,21.0s,MS6.3
CPRX Cap Rock 55.08 79 *e*P **P 01 43 08.7 +0.2**
comp=Z,721nm,1.9s,mb6.4
MSTX Muleshoe 55.10 78 ⇑P **P 01 43 07.7 -0.9**
baz=55
AMTX Amarillo 55.14 76 *e*P **P 01 43 08.7 -0.1**
comp=Z,344nm,1.0s,mb6.3
AMTX LR LR
comp=Z,49μm,22.0s,MS6.5
324A Moseley Ranch, 55.19 82 ⇑P **P 01 43 08.8 -0.4**
baz=55
126A Clayton Basin, 55.25 80 ⇑P **P 01 43 08.9 -0.8**
baz=55
Z27A Tatum 55.28 79 ⇑P **P 01 43 08.8 -1.1**
baz=55
KSU1 Kansas State U 55.31 69 *e*P **P 01 43 10.4 +0.4**
comp=Z,100nm,0.9s,mb5.8
KSU1 LR LR
comp=Z,105μm,21.0s,MS6.9
SCIA State Center 55.38 64 *e*P **P 01 43 11.4 +0.9**
comp=Z,71nm,0.8s,mb5.8
SCIA LR LR
comp=Z,162μm,19.0s,MS7.1
325A Bean Ranch, Si 55.55 82 ⇓P **P 01 43 11.6 -0.3**
baz=56
226A Malaga, Loving 55.60 80 ⇓P **P 01 43 11.6 -0.6**
baz=56
127A Arkansas Junct 55.63 79 ⇑P **P 01 43 11.3 -1.2**
baz=56
425A Indio Mountain 55.95 82 ⇓P **P 01 43 14.5 -0.3**
baz=56
LZH Lanzhou 56.03 287 *e*P **P 01 43 16.2 +0.9**
LZH pP pP 01 43 20.2 +3.3
LZH sP sP 01 43 23.5 +6.0
LZH PcP PcP 01 44 16.1 +2.6
LZH PP PP 01 45 25.3 +5.5
LZH *e*S **S 01 51 00.3 -3.7**
LZH sS sS 01 51 08.0 +1.3
LZH SS SS 01 54 46.4 -3.1

LZH pmax pmax
comp=Z,940nm,1.2s,mb6.7
LZH pmax pmax
comp=Z,7μm,5.2s
LZH LR LR
comp=N,112μm,15.8s
LZH LR LR
comp=Z,145μm,16.6s,MS7.1
BBP Basco 56.06 260 *e*P **P 01 43 17.3 +1.7**
227A Bennet, Jal 56.13 80 ⇑P **P 01 43 14.9 -1.1**
baz=56
GTA Gaotai 56.14 292 ⇑P **P 01 43 14.1 -1.9**
GTA pP pP 01 43 27.7 +10
GTA PP PP 01 45 20.8 +0.1
GTA S **S 01 50 58.5 -6.9**
GTA SS SS 01 54 44.6 -6.6
GTA pmax pmax
comp=Z,23nm,1.2s,mb5.1
GTA pmax pmax
comp=Z,5μm,7.1s
GTA LR LR
comp=N,109μm,20.2s,MS7.1
GTA LR LR
comp=E,103μm,19.0s,MS7.1
GTA LR LR
comp=Z,119μm,19.3s,MS7.0
326A Caldwell Ranch 56.20 81 ⇓P **P 01 43 15.8 -0.7**
baz=56
JFWS Jewell Farm 56.35 62 *e*P **P 01 43 15.7 -1.7**
JFWS pmax pmax
comp=Z,69nm,0.9s,mb5.7
JFWS MLR MLR
comp=Z,99μm,20.0s,MS6.9
JFWS Jewell Farm 56.35 62 *e*P **P 01 43 15.7 -1.8**
comp=Z,69nm,0.9s,mb5.7
JFWS LR LR
comp=Z,99μm,20.0s,MS6.9
327A Balmorhea Ranc 56.46 81 ⇓P **P 01 43 17.6 -0.7**
baz=56
426A McDonald Obser 56.62 82 ⇑P **P 01 43 18.6 -0.9**
baz=56
ENH Enshi 56.62 278 *e*P **P 01 43 17.7 -1.8**
comp=Z,603nm,1.5s,mb6.4
ENH LR LR
comp=Z,47μm,19.0s,MS6.6
SCO Scoresbysund 56.70 10⇑*i*P **P 01 43 18.5 -1.0**
SCO *i* S **S 01 51 12.9 +1.0**
SCO pmax pmax
comp=Z,66nm,1.0s,mb5.6
SCO MLR MLR
comp=Z,54μm,19.0s,MS6.7
SCO Scoresbysund 56.70 10⇑*i*P **P 01 43 18.5 -1.0**
comp=Z,66nm,1.0s,mb5.6
SCO *i* S **S 01 51 12.9 +1.0**
SCO
comp=Z,54μm,19.0s
328A Wristen Ranch, 56.87 80 ⇑P **P 01 43 20.1 -1.1**
baz=57
427A Hayter Ranch, 56.88 81 ⇑P **P 01 43 19.9 -1.5**
baz=57
WMOK Wichita Mounta 56.98 74 *e*P **P 01 43 20.2 -1.8**
WMOK pmax pmax
comp=Z,167nm,1.0s,mb6.0
WMOK MLR MLR
comp=Z,62μm,19.0s,MS6.7
WMOK Wichita Mounta 56.98 74 *e*P **P 01 43 20.2 -1.8**
comp=Z,167nm,1.0s,mb6.0
WMOK LR LR
comp=Z,62μm,19.0s,MS6.7
526A Mary Lane Ranc 57.01 82 ⇓P **P 01 43 21.8 -0.5**
baz=57
527A Woodward Ranch 57.24 82 ⇑P **P 01 43 23.4 -0.5**
baz=57
626A Big Bend Ranch 57.34 83 ⇑P **P 01 43 24.1 -0.5**
baz=57
KEV Kevo 57.39 350 *e*P **P 01 43 23.7 -0.7**
KEV pmax pmax
comp=Z,68nm,0.8s,mb5.7
KEV Kevo 57.39 350 *e*P **P 01 43 24.4 0.0**
comp=Z,466nm,1.3s,mb6.3
KEV LR LR
comp=Z,65μm,20.0s,MS6.7
KEV Kevo 57.39 350 *e*p **P 01 43 23.7 -0.7**
comp=Z,68nm,0.8s,mb5.7
428A Kincaid Ranch, 57.40 81 ⇓P **P 01 43 24.1 -1.0**
baz=57
528A Cox Ranch, San 57.73 81 ⇓P **P 01 43 26.7 -0.7**
baz=58
ARCES ARCESS Array B 57.76 351 P **P 01 43 25.1 -1.9**
comp=Z,110nm,0.8s,mb5.9,baz=26,slow=7.2,SNR=73
ARCES PKPPKP 02 13 13.3
comp=Z,5.4nm,1.0s,baz=132,slow=1.8,SNR=5.3
ARCES ARCESS Array B 57.76 351 P **P 01 43 25.1 -1.9**
ARCES P'P' 02 13 13.3
ARE0 ARCESS Array S 57.76 351 *e*P **P 01 43 25.3 -1.7**
TXAR Lajitas Array 57.78 82 P **P 01 43 26.7 -1.1**
comp=Z,751nm,1.4s,mb6.5,baz=299,slow=4.6,SNR=186
TXAR ScP ScP 01 48 19.1 -1.8
comp=Z,5.4nm,0.8s,baz=274,slow=4.4,SNR=5.9
TXAR PKPPKP 02 13 11.9
comp=Z,1.5nm,1.0s,baz=156,slow=3.4,SNR=6.6
TXAR PKP2bc 02 13 23.1
comp=Z,1.5nm,0.9s,baz=164,slow=5.1,SNR=7.2
TXAR P4KPbc 02 20 40.5
comp=Z,1.0nm,0.9s,baz=292,slow=3.0,SNR=8.3
TXAR Lajitas Array 57.78 82 P **P 01 43 26.7 -1.1**
TXAR ScP ScP 01 48 19.1 -1.7
TXAR P'P' 02 13 11.9
TXAR ⇑*e* 02 13 23.1
627A Terlingua Ranc 57.87 82 ⇓P **P 01 43 27.7 -0.6**
baz=58
GLMI Grayling 58.06 57 *e*P **P 01 43 29.7 +0.2**
comp=Z,140nm,0.9s,mb6.0
GLMI LR LR
comp=Z,185μm,19.0s,MS7.2
628A Black Gap, Mar 58.15 82 ⇓P **P 01 43 29.6 -0.8**
baz=58
LVZ Lovozero 58.17 346 P **P 01 43 30.6 +0.7**
comp=Z,4μm,1.1s,mb7.3,SNR=20
LVZ Lovozero 58.17 346*c e*P **P 01 43 29.1 -0.8**
LVZ pmax pmax
comp=Z,786nm,1.0s,mb6.7
LVZ Lovozero 58.17 346 PFAKE 01 43 40.0 +10
LVZ LR LR
comp=Z,49μm,20.0s,MS6.6
TRO Tromso 58.23 353 *e*P **P 01 43 27.9 -2.5**
TRO AMb AMB 01 43 35.0
comp=Z,528nm,2.9s,mb6.1
TRO Tromso 58.23 353 *e*P **P 01 43 27.9 -2.5**
comp=Z,528nm,2.9s,mb6.1
HDIL Hopedale 58.47 63 *e*P **P 01 43 32.6 +0.2**
comp=Z,163nm,1.0s,mb6.0
HDIL LR LR
comp=Z,93μm,20.0s,MS6.9
KTK1 Kautokeino 58.48 351 *e*P **P 01 43 30.3 -1.8**
KTK1 AMb AMB 01 43 35.3
comp=N,292nm,2.6s
KTK1 *e*PP PP 01 45 42.9 +2.1
KTK1 Kautokeino 58.48 351 *e*P **P 01 43 30.3 -1.8**
comp=N,292nm,2.6s,mb5.8
PIP Pasuquin 58.48 259⇑*e*P **P 01 43 33.2 +0.4**
APA Apatity 58.66 347⇑*i*P **P 01 43 33.0 -0.3**
APA *i* 01 45 45.0
APA *i* S **S 01 51 32.0 -5.7**
APA *i* SP 01 51 44.0
APA pmax pmax
comp=Z,6μm,4.6s
APA MLR MLR
comp=Z,67μm,18.0s,MS6.8
CCM Cathedral Cave 59.10 67 *e*P **P 01 43 35.1 -1.7**
CCM pmax pmax
comp=Z,31nm,0.6s,mb5.5
CCM MLR MLR
comp=Z,67μm,20.0s,MS6.8
CCM Cathedral Cave 59.10 67 *e*P **P 01 43 35.1 -1.7**
comp=Z,31nm,0.6s,mb5.5
CCM LR LR
comp=Z,67μm,20.0s,MS6.8
SCHQ Schefferville 59.12 39 P **P 01 43 34.2 -2.5**
comp=Z,90nm,0.9s,mb5.8,baz=334,slow=7.1,SNR=49
SCHQ LR LR 02 09 13.8
comp=Z,92μm,21.2s,MS6.9,baz=316,slow=36
SCHQ PKP2bc 02 13 18.7
comp=Z,4.6nm,0.8s,baz=174,slow=1.0,SNR=4.0
SCHQ Schefferville 59.12 39 *e*P **P 01 43 36.9 +0.2**
comp=Z,284nm,1.3s,mb6.1
SLM Saint Louis 59.27 66 *e*P **P 01 43 38.2 +0.2**

SLM pmax pmax
comp=Z,229nm,1.4s,mb6.0
SLM Saint Louis 59.27 66 *e*P **P 01 43 38.2 +0.2**
comp=Z,229nm,1.4s,mb6.0
KURK Kurchatov 59.28 314 P **P 01 43 36.6 -1.3**
comp=Z,395nm,1.1s,mb6.3,SNR=41
KURK Kurchatov 59.28 314*c e*P **P 01 43 36.0 -1.9**
KURK pmax pmax
comp=Z,256nm,2.5s,mb5.8
KURK MLR MLR
comp=Z,105μm,17.0s,MS7.0
KURK Kurchatov 59.28 314 P **P 01 43 37.0 -0.9**
comp=Z,57nm,1.0s,mb5.6,baz=40,slow=6.5,SNR=68
KURK PP PP 01 45 49.6 +1.4
comp=Z,51nm,1.1s,baz=48,slow=9.2,SNR=4.8
KURK LR LR 02 12 10.2
comp=Z,72μm,18.1s,MS6.8,baz=50,slow=39
KURK PKPPKP 02 13 07.0
comp=Z,3.5nm,1.1s,baz=240,slow=2.3,SNR=4.8
KURK PKP2bc 02 13 20.7
comp=Z,3.8nm,1.0s,baz=228,slow=2.7,SNR=5.8
KURK Kurchatov 59.28 314 *e*P **P 01 43 36.3 -1.5**
comp=Z,157nm,1.4s,mb5.8
KURK LR LR
comp=Z,64μm,21.0s,MS6.7
KURK Kurchatov 59.28 314 P **P 01 43 36.5 -1.3**
SNR=72
KURK P pP 01 43 36.5 -3.0
SNR=72
JCT Junction City 59.33 79 *e*P **P 01 43 37.3 -1.3**
JCT pmax pmax
comp=Z,562nm,1.4s,mb6.4
JCT MLR MLR
comp=Z,91μm,19.0s,MS6.9
JCT Junction City 59.33 79 *e*P **P 01 43 37.3 -1.3**
comp=Z,562nm,1.4s,mb6.4
JCT LR LR
comp=Z,91μm,19.0s,MS6.9
GZH Guangzhou 59.40 269 P **P 01 43 35.5 -3.6**
GZH S **S 01 51 39.0 -10**
GZH LR LR
comp=N,41μm,16.1s,MS6.8
GZH LR LR
comp=E,42μm,15.2s,MS6.8
GZH LR LR
comp=Z,59μm,16.3s,MS6.8
HKC Hong Kong Obse 59.47 268⇓*i*P **P 01 43 43.0 +3.4**
HKC S **S 01 51 50.0 +0.6**
FVM French Village 59.61 66 *e*P **P 01 43 38.4 -2.0**
FVM pmax pmax
comp=Z,491nm,1.8s,mb6.2
FVM French Village 59.61 66 *e*P **P 01 43 38.4 -2.0**
comp=Z,491nm,1.8s,mb6.2
CD2 Chengdu 59.67 282 P **P 01 43 40.5 -0.4**
CD2 pP pP 01 43 53.3 +11
CD2 PcP PcP 01 44 27.8 -0.1
CD2 PP PP 01 45 53.7 +1.4
CD2 S **S 01 51 47.6 -4.2**
CD2 SS SS 01 55 41.3 -5.6
CD2 pmax pmax
comp=Z,320nm,2.1s,mb6.0
CD2 pmax pmax
comp=Z,6μm,10.3s
CD2 LR LR
comp=N,86μm,19.0s
CD2 LR LR
comp=Z,78μm,19.0s,MS6.9
WMQ Urumqi 59.76 303 P **P 01 43 41.1 -0.2**
WMQ PcP PcP 01 44 27.1 -1.0
WMQ PP PP 01 45 55.5 +2.8
WMQ S **S 01 51 46.4 -6.3**
WMQ SS SS 01 55 44.9 -2.9
WMQ pmax pmax
comp=Z,77nm,1.6s,mb5.5
WMQ pmax pmax
comp=Z,7μm,9.0s
WMQ LR LR
comp=N,156μm,19.0s,MS7.2
WMQ LR LR
comp=E,57μm,20.0s,MS7.2
WMQ LR LR
comp=Z,115μm,20.0s,MS7.0
LOF Lofoten 60.05 355 *e*P **P 01 43 44.3 +1.3**
LOF AMB AMB 01 43 48.2
comp=Z,422nm,2.3s,mb6.1
STEI Steigen 60.16 354 *e*P **P 01 43 43.0 -0.7**
MIAR Mount Ida 60.20 71 *e*P **P 01 43 43.2 -1.3**
MIAR pmax pmax
comp=Z,1μm,1.8s,mb6.6
MIAR MLR MLR
comp=Z,69μm,20.0s,MS6.8
MIAR Mount Ida 60.20 71 *e*P **P 01 43 43.2 -1.2**
comp=Z,1μm,1.8s,mb6.6
MIAR LR LR
comp=Z,69μm,20.0s,MS6.8
FUNA Funafuti 60.20 184 *e*P **P 01 43 44.6 0.0**
comp=Z,665nm,1.6s,mb6.4
FUNA LR LR
comp=Z,48μm,21.0s,MS6.6
AAM Ann Arbor 60.32 58 *e*P **P 01 43 45.6 +0.4**
AAM pmax pmax
comp=Z,443nm,1.7s,mb6.2
AAM MLR MLR
comp=Z,137μm,19.0s,MS7.1
AAM Ann Arbor 60.32 58 *e*P **P 01 43 45.5 +0.4**
comp=Z,443nm,1.7s,mb6.2
AAM LR LR
comp=Z,137μm,19.0s,MS7.1
MK31 Makanchi Array 60.37 309 *e*P **P 01 43 43.0 -2.5**
MKAR Makanchi Array 60.37 309 P **P 01 43 43.8 -1.7**
MKAR 01 46 03.7
MKAR MLR MLR
comp=Z,85μm,18.7s
MKAR Makanchi Array 60.37 309 P **P 01 43 43.8 -1.7**
comp=Z,8.2nm,0.7s,mb4.9,baz=52,slow=7.9,SNR=30
MKAR PP PP 01 46 03.7 +5.7
comp=Z,20nm,1.0s,baz=52,slow=7.9,SNR=3.5
MKAR LR LR 02 11 40.4
comp=Z,85μm,18.7s,MS6.9,baz=41,slow=38
MKAR PKPPKP 02 13 07.1
comp=Z,2.5nm,0.9s,baz=250,slow=3.6,SNR=7.5
MKAR Makanchi Array 60.37 309 P **P 01 43 43.8 -1.7**
MKAR PP PP 01 46 03.7 +5.7
MKAR LR LR 02 11 40.4
MKAR P'P' 02 13 07.1
OLIL Olney 60.40 64 *e*P **P 01 43 43.7 -2.1**
comp=Z,177nm,1.0s,mb6.0
BOLP Bolinao 60.40 259 *e*P **P 01 43 48.8 +2.7**
SIUC Southern Illin 60.48 66 *e*P **P 01 43 46.6 +0.2**
comp=Z,174nm,1.3s,mb5.9
SOKR Solikamsk 60.60 332*d i*P **P 01 43 47.2 +0.4**
SOKR S **S 01 52 02.9 0.0**
SOKR SSS 01 58 36.7
SOKR pmax pmax
comp=Z,280nm,1.2s,mb6.3
SOKR MLR MLR
comp=Z,96μm,16.0s,MS7.0
SCZP Santa Cruz 60.87 258 *e*P **P 01 43 51.5 +2.2**
PARMO Parma 60.92 67 *e*P **P 01 43 50.6 +1.3**
BLO Bloomington 60.97 63 *e*P **P 01 43 50.0 +0.4**
BLO pmax pmax
comp=Z,144nm,1.0s,mb6.1
BLO Bloomington 60.97 63 *e*P **P 01 43 50.0 +0.3**
comp=Z,144nm,1.0s,mb6.1
BVAR Borovoye Array 61.05 320 P **P 01 43 48.9 -1.0**
comp=Z,36nm,0.6s,mb5.7,baz=50,slow=7.1,SNR=73
BVAR LR LR 02 13 01.2
comp=Z,203μm,19.4s,MS7.3,slow=39
BVAR PKPPKP 02 13 06.0
comp=Z,4.9nm,1.0s,baz=255,slow=4.1,SNR=4.9
BVAR PKP2ab 02 13 26.0
comp=Z,3.9nm,0.9s,baz=245,slow=2.8,SNR=5.3
BVAR Borovoye Array 61.05 320 P **P 01 43 48.9 -1.0**
BVAR LR LR 02 13 01.2
BVAR P'P' 02 13 06.0
BVAR P'P'ab 02 13 26.0
BRVK Borovoye 61.06 320 P **P 01 43 49.9 -0.2**
comp=Z,501nm,1.7s,mb6.4,SNR=73
BRVK Borovoye 61.06 320*c e*P **P 01 43 49.0 -1.1**
BRVK pmax pmax
comp=Z,352nm,2.5s,mb6.0
BRVK MLR MLR
comp=Z,202μm,20.0s,MS7.3
BRVK Borovoye 61.06 320 *e*P **P 01 43 48.6 -1.5**
comp=Z,301nm,1.5s,mb6.2
BRVK *e*PP PP 01 46 02.8 -1.2

BRVK LR LR
comp=Z,192μm,19.0s,MS7.3
BRVK Borovoye 61.06 320 P **P 01 43 49.6 -0.5**
SNR=126
BRVK P pP 01 43 49.6 -2.1
SNR=126
GYA Guiyang 61.08 277⇑*i*P **P 01 43 48.2 -2.4**
GYA pP pP 01 43 56.0 +3.8
GYA PcP PcP 01 44 33.6 0.0
GYA PP PP 01 46 05.0 +0.2
GYA ScP ScP 01 48 33.5 -2.0
GYA S **S 01 52 04.9 -5.1**
GYA SS SS 01 56 05.0 -4.2
GYA pmax pmax
comp=Z,90nm,1.0s,mb5.8
GYA pmax pmax
comp=Z,12μm,9.2s
GYA LR LR
comp=N,34μm,18.0s,MS6.7
GYA LR LR
comp=E,34μm,18.2s,MS6.7
GYA LR LR
comp=Z,33μm,19.8s,MS6.5
USIN University of 61.18 64 *e*P **P 01 43 49.1 -2.0**
comp=Z,354nm,1.2s,mb6.4
HBAR Harrisburg 61.18 68 *e*P **P 01 43 51.8 +0.6**
GNAR Gosnell 61.26 68 *e*P **P 01 43 52.2 +0.5**
comp=Z,6μm,1.8s,mb7.4
GLAT Glass 61.46 67 *e*P **P 01 43 54.2 +1.2**
PLP Palo 61.47 250⇑*e*P **P 01 43 52.4 -0.9**
NATX Nacogdoches 61.52 74 *e*P **P 01 43 51.9 -1.6**
comp=Z,276nm,1.1s,mb6.3
NATX LR LR
comp=Z,83μm,20.0s,MS6.9
SVE Sverdlovsk 61.63 328 *e*P **P 01 43 54.3 +0.5**
SVE *e* 01 46 04.6
SVE *e*S **S 01 52 19.2 +3.1**
SVE pmax pmax
comp=Z,408nm,1.9s,mb6.2
SVE pmax pmax
comp=Z,3μm,9.0s
SVE MLR MLR
comp=Z,86μm,17.0s,MS7.0
UTMT University of 61.65 67 *e*P **P 01 43 55.4 +1.0**
comp=Z,226nm,0.9s,mb6.3
HALT Halls 61.69 67 *e*P **P 01 43 55.5 +1.0**
WCI Wyandotte Cave 61.76 63 *e*P **P 01 43 53.4 -1.6**
WCI pmax pmax
comp=Z,401nm,1.6s,mb6.3
WCI MLR MLR
comp=Z,95μm,19.0s,MS7.0
WCI Wyandotte Cave 61.76 63 *e*P **P 01 43 53.4 -1.6**
comp=Z,401nm,1.6s,mb6.3
WCI LR LR
comp=Z,95μm,19.0s,MS7.0
STOK Stokkvaagen 61.87 355 *e*P **P 01 43 55.2 -0.1**
MOR8 Moi Rana 61.95 355 *e*P **P 01 43 53.6 -2.3**
MOR8 AMb AMB 01 43 59.2
comp=Z,292nm,2.9s,mb5.9
MOR8 Moi Rana 61.95 355 *e*P **P 01 43 53.6 -2.3**
comp=Z,292nm,2.9s,mb5.9
HKT Hockley 62.11 76 PFAKE 01 44 10.0 +12
HKT LR LR
comp=Z,92μm,20.0s,MS6.9
ACSO Alum Creek Sta 62.14 60 *e*P **P 01 43 57.3 -0.3**
comp=Z,277nm,1.5s,mb6.2
ACSO LR LR
comp=Z,106μm,20.0s,MS7.0
LUBP Lubang 62.25 256 *e*P **P 01 43 58.5 -0.1**
BORG Borgarnes 62.27 11 P **P 01 44 01.6 +3.5**
comp=Z,769nm,1.1s,mb6.7,SNR=6.8
BORG Borgarnes 62.27 11 *e*P **P 01 43 59.0 +0.9**
BORG pmax pmax
comp=Z,216nm,1.3s
BORG MLR MLR
comp=Z,58μm,20.0s
BORG Borgarnes 62.27 11 *e*P **P 01 43 59.0 +0.9**
comp=Z,216nm,1.3s,mb6.1
BORG LR LR
comp=Z,58μm,20.0s,MS6.7
MSLP Maasin 62.36 250 *e*P **P 01 44 02.7 +3.4**
ERPA Erie 62.36 56 *e*P **P 01 43 59.9 +0.8**
comp=Z,417nm,1.3s,mb6.4
ERPA LR LR
comp=Z,226μm,19.0s,MS7.4
WVT Waverly 62.39 66 *e*P **P 01 43 56.9 -2.4**
WVT pmax pmax
comp=Z,463nm,1.9s,mb6.3
WVT MLR MLR
comp=Z,81μm,19.0s,MS6.9
WVT Waverly 62.39 66 *e*P **P 01 43 56.9 -2.4**
comp=Z,463nm,1.9s,mb6.3
WVT LR LR
comp=Z,81μm,19.0s,MS6.9
RCP Roxas 62.47 253⇓*e*P **P 01 44 00.7 +0.7**
ARU Arti 62.62 329 P **P 01 44 00.2 -0.3**
comp=Z,830nm,1.1s,mb6.8,SNR=63
ARU Arti 62.62 329*c i*P **P 01 44 01.8 +1.3**
ARU *e* 01 44 34.3
ARU *e* 01 46 15.8
ARU PPP 01 47 43.5
ARU S **S 01 52 33.4 +4.7**
ARU SS SS 01 56 26.3 -5.6
ARU SSS 01 59 09.5
ARU pmax pmax
comp=Z,617nm,2.5s,mb6.3
ARU pmax pmax
comp=Z,3μm,9.1s
ARU Arti 62.62 329 *e*P **P 01 43 59.4 -1.1**
comp=Z,556nm,1.6s,mb6.4
ARU LR LR
comp=Z,70μm,22.0s,MS6.8
OXF Oxford 62.64 68 *e*P **P 01 43 59.6 -1.4**
OXF pmax pmax
comp=Z,429nm,1.0s,mb6.5
OXF MLR MLR
comp=Z,143μm,19.0s,MS7.2
OXF Oxford 62.64 68 *e*P **P 01 43 59.6 -1.4**
comp=Z,429nm,1.0s,mb6.5
OXF LR LR
comp=Z,143μm,19.0s,MS7.2
BIPH Bislig 63.07 247⇑*e*P **P 01 44 01.7 -2.4**
PLAL Pickwick Lake 63.07 67 *e*P **P 01 44 01.8 -2.0**
comp=Z,53nm,0.8s,mb5.7
PLAL LR LR
comp=Z,79μm,21.0s,MS6.9
LONY Lake Ozonia 63.25 51 *e*P **P 01 44 03.2 -1.6**
comp=Z,65nm,1.1s,mb5.7
LONY LR LR
comp=Z,119μm,20.0s,MS7.1
TBP Tagbilaran 63.30 250 *e*P **P 01 44 04.3 -1.2**
GUIM Jordan 63.30 252 *e*P **P 01 44 06.5 +0.9**
JOF Joensuu 63.34 346 *e*P **P 01 44 02.4 -2.8**
JOF pmax pmax
comp=Z,94nm,0.6s,mb6.1
JOF Joensuu 63.34 346 *e*p **P 01 44 02.4 -2.8**
comp=Z,94nm,0.6s,mb6.1
BUSP Coron 63.63 255 *e*P **P 01 44 10.2 +2.4**
VBMS Vicksburg 63.64 71 *e*P **P 01 44 07.7 0.0**
comp=Z,2μm,1.9s,mb6.7
VBMS LR LR
comp=Z,69μm,20.0s,MS6.8
KLMR Klimovskoe 63.80 341⇓*i*P **P 01 44 08.4 +0.2**
KLMR *e* 01 46 27.1
KLMR *e*S **S 01 52 41.1 -2.1**
KLMR pmax pmax
comp=Z,885nm,1.6s,mb6.5
NCB Newcomb 63.90 51 *e*P **P 01 44 08.4 -0.8**
comp=Z,242nm,1.8s,mb5.9
NCB LR LR
comp=Z,150μm,19.0s,MS7.2
BUKP Musuan 64.06 248 *e*P **P 01 44 11.6 +1.0**
SWET Sewanee 64.12 65 *e*P **P 01 44 09.9 -0.9**
MCWV Mont Chateau 64.22 58 *e*P **P 01 44 10.8 -0.6**
comp=Z,240nm,1.3s,mb6.1
MCWV LR LR
comp=Z,107μm,19.0s,MS7.0
BINY Binghamton 64.34 54 *e*P **P 01 44 12.8 +0.7**
comp=Z,311nm,1.2s,mb6.2
BINY LR LR
comp=Z,159μm,19.0s,MS7.2
DAV Davao City (W) 64.42 247 LR LR 02 09 52.4
comp=Z,34μm,21.6s,MS6.5,baz=288,slow=34
DAV Davao City (W) 64.42 247 PFAKE 01 44 30.0 +17
DAV LR LR
comp=Z,74μm,22.0s,MS6.8

DAV	**Davao City (W)**	**64.42 247**	P	**P**	**01 44 13.2**	**+0.2**
	SNR=31					
DAV			P	pP	01 44 13.2	-1.4
	SNR=31					
KMI	**Kunming**	**64.46 279**	P	**P**	**01 44 13.3**	**+0.1**
KMI			pP	pP	01 44 18.2	+3.4
KMI			sP	sP	01 44 20.1	+4.7
KMI			PcP	PcP	01 44 48.4	+1.0
KMI			PP	PP	01 46 37.2	+2.6
KMI			S	**S**	**01 52 47.0**	**-5.5**
KMI			sS	sS	01 52 55.1	-0.1
KMI			SS	SS	01 57 00.4	-1.7
KMI			pmax	pmax		
	comp=Z,320nm,1.6s,mb6.1					
KMI			pmax	pmax		
	comp=Z,7μm,3.8s					
KMI			LR	LR		
	comp=N,41μm,26.2s					
KMI			LR	LR		
	comp=E,72μm,15.6s					
KMI			LR	LR		
	comp=Z,51μm,15.0s					
TZTN	**Tazewell**	**64.49 63**	*e*P	**P**	**01 44 13.7**	**+0.5**
	comp=Z,583nm,1.8s,mb6.3					
SSPA	**Standing Stone**	**64.53 56**	*e*P	**P**	**01 44 11.8**	**-1.6**
	comp=Z,151nm,1.1s,mb5.9					
SSPA			LR	LR		
	comp=Z,266μm,19.0s,MS7.5					
QIZ	**Qiongzhong**	**64.59 269**	P	**P**	**01 44 14.9**	**+0.8**
QIZ			sP	sP	01 44 22.8	+6.5
QIZ			S	**S**	**01 52 55.4**	**+1.2**
QIZ			sS	sS	01 53 03.5	+6.6
QIZ			pmax	pmax		
	comp=Z,250nm,2.0s,mb5.9					
QIZ			pmax	pmax		
	comp=Z,5μm,8.6s					
QIZ			LR	LR		
	comp=N,28μm,16.0s					
QIZ			LR	LR		
	comp=Z,39μm,16.0s,MS6.7					
QIZ	**Qiongzhong**	**64.59 269**	*e*P	**P**	**01 44 14.2**	**+0.2**
	comp=Z,960nm,1.8s,mb6.5					
QIZ			LR	LR		
	comp=Z,29μm,19.0s,MS6.5					
ENPP	**El Nido**	**64.73 255**	*e*P	**P**	**01 44 17.4**	**+2.4**
CPCT	**Cooper Cave**	**64.74 64**	*e*P	**P**	**01 44 14.8**	**-0.1**
LBNH	**Lisbon**	**64.80 50**	*e*P	**P**	**01 44 15.0**	**-0.1**
LBNH			pmax	pmax		
	comp=Z,96nm,1.1s,mb5.7					
LBNH			MLR	MLR		
	comp=Z,170μm,20.0s,MS7.2					
LBNH	**Lisbon**	**64.80 50**	*e*P	**P**	**01 44 15.0**	**-0.1**
	comp=Z,96nm,1.1s,mb5.7					
LBNH			LR	LR		
	comp=Z,170μm,20.0s,MS7.2					
KAF	**Kangasniemi**	**64.82 348**	*e*P	**P**	**01 44 12.5**	**-2.4**
KAF			pmax	pmax		
	comp=Z,117nm,0.7s,mb6.0					
KAF	**Kangasniemi**	**64.82 348**	*e*p	**P**	**01 44 12.5**	**-2.4**
	comp=Z,116nm,0.7s,mb6.0					
TKL	**Tuckaleechee C**	**65.01 64**	*e*P	**P**	**01 44 15.4**	**-1.2**
LRAL	**Lakeview Retre**	**65.09 68**	*e*P	**P**	**01 44 15.3**	**-1.9**
	comp=Z,287nm,1.8s,mb6.0					
LRAL			LR	LR		
	comp=Z,54μm,19.0s,MS6.8					
PKME	**Peaks-Kenny Pk**	**65.26 48**	*e*P	**P**	**01 44 18.2**	**+0.2**
	comp=Z,127nm,1.2s,mb5.8					
PKME			LR	LR		
	comp=Z,192μm,19.0s,MS7.3					
FINES	**FINESS Array B**	**65.49 348**	P	**P**	**01 44 17.9**	**-1.3**
	comp=Z,182nm,1.0s,mb6.1,baz=18,slow=6.6,SNR=152					
FINES			PKPPKP		02 12 53.2	
	comp=Z,5.7nm,1.0s,baz=147,slow=4.5,SNR=9.2					
FINES			PKP2bc		02 13 03.0	
	comp=Z,14nm,1.0s,baz=146,slow=3.7,SNR=11					
FINES			LR	LR	02 19 23.2	
	comp=Z,63μm,18.6s,MS6.8,baz=233,slow=42					
FINES	**FINESS Array B**	**65.49 348**	P	**P**	**01 44 17.9**	**-1.3**
FINES			P'P'		02 12 53.2	
FINES			⇑*e*		02 13 03.0	
FINES			LR	LR	02 19 23.2	
AAA	**Alma-Ata**	**65.53 309**	*i* P	**P**	**01 44 21.3**	**+1.5**
AAA			*e*S	S	01 53 05.7	+0.6
AAA			pmax	pmax		
	comp=Z,5μm,10.6s					
AAA			smax			
	comp=E,5μm,13.5s					
AAA			MLR	MLR		
	comp=Z,73μm,18.0s,MS6.9					
AFI	**Afiamalu**	**65.68 174**	PFAKE		01 44 30.0	+9.1
AFI			LR	LR		
	comp=Z,13μm,19.0s,MS6.2					
BLA	**Blacksburg**	**65.71 60**	*e*P	**P**	**01 44 21.8**	**+0.7**
BLA			pmax	pmax		
	comp=Z,375nm,1.5s,mb6.2					
BLA			MLR	MLR		
	comp=Z,140μm,20.0s,MS7.2					
BLA	**Blacksburg**	**65.71 60**	*e*P	**P**	**01 44 21.8**	**+0.8**
	comp=Z,375nm,1.5s,mb6.2					
BLA			LR	LR		
	comp=Z,140μm,20.0s,MS7.2					
MOL	**Molde**	**65.85 357**	*e*P	**P**	**01 44 21.4**	**-0.2**
MOL			*e*PP	PP	01 46 45.2	-0.5
PPR	**Puerto Princes**	**66.27 255**⇓	*e*P	**P**	**01 44 27.8**	**+2.8**
DOMB	**Dombas**	**66.33 357**	*e*P	**P**	**01 44 24.1**	**-0.5**
DOMB			AMb	AMB	01 44 29.5	
	comp=Z,356nm,1.7s,mb6.1					
DOMB	**Dombas**	**66.33 357**	*e*P	**P**	**01 44 24.1**	**-0.5**
	comp=Z,356nm,1.7s,mb6.1					
TKM2	**Tokmak 2**	**66.44 310**	P	**P**	**01 44 24.9**	**-0.8**
	SNR=18					
PUL	**Pulkovo**	**66.49 345**	*ce*P	**P**	**01 44 26.2**	**+0.5**
PUL			pmax	pmax		
	comp=Z,637nm,1.7s,mb6.4					
PUL			MLR	MLR		
	comp=Z,73μm,21.0s,MS6.9					
BRAL	**Brewton**	**66.54 69**	*e*P	**P**	**01 44 27.3**	**+0.8**
	comp=Z,211nm,0.9s,mb6.2					
BRAL			LR	LR		
	comp=Z,94μm,19.0s,MS7.0					
CBN	**Corbin**	**66.59 58**	*e*P	**P**	**01 44 28.6**	**+1.8**
	comp=Z,20nm,0.5s,mb5.4					
CBN			LR	LR		
	comp=Z,216μm,19.0s,MS7.4					
USP	**Ospenovka**	**66.69 311**	P	**P**	**01 44 26.8**	**-0.5**
	SNR=28					
CHMS	**Chumysh**	**66.78 311**	P	**P**	**01 44 29.2**	**+1.4**
	SNR=8.2					
GOGA	**Godfrey**	**66.83 65**	*e*P	**P**	**01 44 26.6**	**-1.7**
GOGA			pmax	pmax		
	comp=Z,554nm,1.9s,mb6.3					
GOGA			MLR	MLR		
	comp=Z,106μm,20.0s,MS7.0					
GOGA	**Godfrey**	**66.83 65**	*e*P	**P**	**01 44 26.6**	**-1.7**
	comp=Z,554nm,1.9s,mb6.3					
GOGA			LR	LR		
	comp=Z,106μm,20.0s,MS7.0					
FOO	**Floro**	**66.88 359**	*e*P	**P**	**01 44 28.2**	**0.0**
FOO			AMB	AMB	01 44 30.5	
	comp=Z,272nm,2.8s,mb5.8					
FOO			*e*PP	PP	01 46 55.4	+0.7
KBK	**Karagaybulak**	**66.95 310**	P	**P**	**01 44 28.4**	**-0.6**
	SNR=18					
FRU	**Bishkek**	**66.97 310**	*e*P	**P**	**01 44 27.0**	**-2.1**
FRU			*e*		01 53 18.0	
FRU			pmax	pmax		
	comp=Z,513nm,2.2s,mb6.2					
FRU			MLR	MLR		
	comp=Z,69μm,17.0s,MS6.9					
AAK	**Ala-Archa**	**67.18 310**	P	**P**	**01 44 31.2**	**+0.8**
	comp=Z,203nm,1.1s,mb6.1,SNR=22					
AAK	**Ala-Archa**	**67.18 310**	P	**P**	**01 44 31.9**	**+1.5**
	SNR=21					
AAK	**Ala-Archa**	**67.18 310**	*ce*P	**P**	**01 44 29.1**	**-1.3**
AAK			pmax	pmax		
	comp=Z,74nm,2.5s,mb5.3					
AAK			MLR	MLR		
	comp=Z,34μm,16.0s,MS6.7					
AAK	**Ala-Archa**	**67.18 310**	P	**P**	**01 44 30.0**	**-0.4**
	comp=Z,9.6nm,0.7s,mb4.9,baz=119,slow=4.0,SNR=18					
AAK			PP	PP	01 46 58.9	+1.0
	comp=Z,21nm,0.9s,baz=60,slow=6.5,SNR=3.5					
AAK			PKPPKP		02 12 56.5	
	comp=Z,2.0nm,0.8s,baz=271,slow=6.6,SNR=3.9					
AAK			LR	LR	02 16 25.1	
	comp=Z,57μm,18.8s,MS6.8,baz=30,slow=38					
AAK	**Ala-Archa**	**67.18 310**	*e*P	**P**	**01 44 29.7**	**-0.7**
	comp=Z,161nm,1.5s,mb5.8					
AAK			LR	LR		
	comp=Z,60μm,19.0s,MS6.8					
AAK	**Ala-Archa**	**67.18 310**	P	**P**	**01 44 30.6**	**+0.1**
	SNR=33					
AAK			P	pP	01 44 30.6	-1.5
	SNR=33					
NB2	**NORSAR Subarra**	**67.24 355**	P	**P**	**01 44 29.8**	**-0.7**
	comp=Z,432nm,1.2s,mb6.4,baz=3.7,slow=6.5					
NB2	**NORSAR Subarra**	**67.24 355**	P	**P**	**01 44 32.0**	**+1.5**
NOA	**NORSAR Array B**	**67.24 355**	P	**P**	**01 44 29.4**	**-1.1**
	comp=Z,156nm,1.1s,mb6.0,baz=4.0,slow=6.4,SNR=120					
NOA			LR	LR	02 12 06.3	
	comp=Z,25μm,21.5s,MS6.4,baz=15,slow=34					
NOA			PKPPKP		02 12 53.4	
	comp=Z,7.0nm,0.9s,baz=155,slow=3.1,SNR=12					
KZA	**Kyzart**	**67.25 310**	P	**P**	**01 44 33.5**	**+2.6**
	SNR=7.9					
JSC	**Jenkinsville**	**67.42 63**	*e*P	**P**	**01 44 32.2**	**+0.2**
NAO01	**NORSAR Array S**	**67.45 356**	*e*P	**P**	**01 44 31.8**	**0.0**
	comp=Z,78nm,1.1s,mb5.7					
NAO01			LR	LR		
	comp=Z,33μm,19.0s,MS6.6					
UCH	**Uchtor**	**67.48 310**	P	**P**	**01 44 34.2**	**+1.9**
	SNR=17					
EKS2	**Erkin-Say**	**67.50 311**	P	**P**	**01 44 32.3**	**-0.1**
	SNR=18					
PTVM	**Pico Tres Padr**	**67.71 86**	*e*P	**P**	**01 44 34.4**	**+0.3**
ZIIG	**Zihuatanejo**	**67.75 90**	*i* P	**P**	**01 44 35.7**	**+1.4**
AKTK	**Aktyubinsk**	**67.76 325**	P	**P**	**01 44 33.2**	**-0.7**
AKTK			PP	PP	01 47 02.0	-0.6
AKTK			⇑*e*		02 12 57.9	
AKTO	**Aktyubinsk**	**67.76 325**	P	**P**	**01 44 33.3**	**-0.7**
AKTO					01 47 02.1	
AKTO			pmax	pmax		
	comp=Z,89nm,0.7s,mb5.9					
AKTO			pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0					
AKTO	**Aktyubinsk**	**67.76 325**	P	**P**	**01 44 33.2**	**-0.7**
	comp=Z,89nm,0.7s,mb5.9,baz=42,slow=6.2,SNR=64					
AKTO			PP	PP	01 47 02.0	-0.6
	comp=Z,17nm,1.1s,baz=20,slow=7.1,SNR=4.6					
AKTO			PKP2bc		02 12 57.9	
	comp=Z,2.2nm,0.8s,baz=253,slow=4.5,SNR=8.6					
PBVM	**Pinon**	**67.84 87**	*e*P	**P**	**01 44 37.7**	**+2.7**
AML	**Almayashu**	**67.95 311**	P	**P**	**01 44 37.3**	**+2.1**
	SNR=22					
IIO	**Organos**	**67.95 86**	*e*P	**P**	**01 44 35.8**	**+0.2**
HFA0	**Hagfors New Ar**	**67.99 354**	P	**P**	**01 44 33.0**	**-2.3**
LSA	**Lhasa**	**68.04 290**	*e*P	**P**	**01 44 37.2**	**+1.1**
LSA			pmax	pmax		
	comp=Z,229nm,1.4s,mb6.0					
LSA			MLR	MLR		
	comp=Z,64μm,21.0s,MS6.8					
LSA	**Lhasa**	**68.04 290**	*e*P	**P**	**01 44 37.2**	**+1.1**
	comp=Z,229nm,1.4s,mb6.0					
LSA			LR	LR		
	comp=Z,64μm,21.0s,MS6.8					
VSU	**Vasula**	**68.28 347**	*ce*P	**P**	**01 44 35.7**	**-1.4**
VSU			pmax	pmax		
	comp=Z,509nm,1.0s,mb6.5					
VSU	**Vasula**	**68.28 347**	P	**P**	**01 44 36.0**	**-1.1**
LRW	**Lerwick**	**68.32 2**	*e*P	**P**	**01 44 37.0**	**-0.3**
LRW			AMb	AMB	01 44 41.0	
	comp=Z,357nm,3.1s					
LRW			AMS	AMS	02 21 41.0	
	comp=Z,35μm,17.2s,MS6.7					
OSL	**Oslo**	**68.36 356**	*e*P	**P**	**01 44 37.9**	**+0.3**
OSL			AMB	AMB	01 44 40.9	
	comp=Z,458nm,2.7s,mb6.0					
PLIG	**Platanillo**	**68.37 88**	*i* P	**P**	**01 44 37.4**	**-0.9**
COW	**Cow Castle Cre**	**68.40 63**	*e*P	**P**	**01 44 39.8**	**+1.6**
PPM	**Popocatepetl**	**68.41 86**	*i* P	**P**	**01 44 40.2**	**+1.7**
TAOE	**Nuku Hiva Isla**	**68.45 140**	*e*P	**P**	**01 44 38.8**	**+0.1**
	comp=Z,715nm,1.1s,mb6.6					
TAOE			*e*S	S	01 53 36.8	-4.0
	comp=Z,78μm,25.5s					
TAOE			*e*SS	SS	01 58 02.5	-2.3
	comp=Z,11μm,24.8s					
TAOE			*e*LQ		02 02 02.5	
	comp=Z,66μm,33.2s					
TAOE			*e*LR	LR	02 05 14.5	
	comp=Z,90μm,24.5s,baz=344					
TAOE	**Nuku Hiva Isla**	**68.45 140**	*e*P	**P**	**01 44 38.8**	**+0.1**
	comp=Z,715nm,1.1s,mb6.6					
TAOE			*e*P	pP	01 44 39.4	-0.9
TAOE			*e*S	S	01 53 36.8	-4.0
TAOE			*e*SS	SS	01 58 02.5	-2.3
TAOE			*e*LQ		02 02 02.5	
CNNC	**Cliffs of the**	**68.54 60**	PFAKE		01 44 50.0	+11
CNNC			LR	LR		
	comp=Z,142μm,19.0s,MS7.2					
KONO	**Kongsberg**	**68.70 356**	*e*P	**P**	**01 44 38.2**	**-1.5**
KONO			*e*		01 47 20.7	
KONO	**Kongsberg**	**68.70 356**	*e*P	**P**	**01 44 40.4**	**+0.7**
KONO			pmax	pmax		
	comp=Z,602nm,1.6s,mb6.3					
KONO			MLR	MLR		
	comp=Z,47μm,20.0s,MS6.7					
KONO	**Kongsberg**	**68.70 356**	*e*P	**P**	**01 44 40.4**	**+0.6**
	comp=Z,602nm,1.6s,mb6.3					
KONO			LR	LR		
	comp=Z,47μm,20.0s,MS6.7					
KSH	**Kashi**	**68.86 307**⇓	*i* P	**P**	**01 44 43.1**	**+2.1**
KSH			*e*pP	pP	01 44 47.2	+4.5
KSH			*e*sP	sP	01 44 49.9	+6.6
KSH			*e*PcP	PcP	01 45 07.1	+1.6
KSH			*e*PP	PP	01 47 17.5	+5.0
KSH			*e*ScP		01 49 09.4	
KSH			*e*S	S	01 53 44.5	-0.9
KSH			*e*sS	sS	01 53 59.0	+11
KSH			*e*ScS	ScS	01 54 39.2	-2.6
KSH			*e*SS	SS	01 58 13.3	+3.7
KSH			pmax	pmax		
	comp=Z,600nm,1.7s,mb6.2					
KSH			pmax	pmax		
	comp=Z,2μm,3.0s					
KSH			LR	LR		
	comp=Z,207μm,19.2s,MS7.4					
NHSC	**New Hope**	**68.89 63**	*e*P	**P**	**01 44 42.3**	**+1.0**
	comp=Z,658nm,1.3s,mb6.4					
NHSC			LR	LR		
	comp=Z,95μm,20.0s,MS7.0					
MOS	**Moscow**	**68.90 340**	*e*P	**P**	**01 44 37.4**	**-3.6**
MOS			*e*		01 45 01.4	
MOS			*i*		01 47 12.9	
MOS			*i* PPP		01 48 52.7	
MOS			*i* S	S	01 53 41.6	-3.7
MOS			*i*		01 54 35.4	
MOS			*e*SS	SS	01 58 13.3	+4.0
MOS			pmax	pmax		
	comp=Z,5μm,3.0s					
MOS			pmax	pmax		
	comp=Z,904nm,1.8s,mb6.4					
CAIG	**El Cayaco**	**68.92 89**	*i* P	**P**	**01 44 41.8**	**+0.1**
ACX	**Acapulco**	**69.27 89**	*e*P	**P**	**01 44 47.1**	**+3.2**
LVIG	**Laguna Verde**	**69.28 84**	*i* P	**P**	**01 44 43.9**	**0.0**
STAV	**Stavanger**	**69.54 358**	*e*P	**P**	**01 44 47.1**	**+2.2**
KDM	**Kudat**	**69.67 255**	P	**P**	**01 44 47.2**	**+0.9**
OBN	**Obninsk**	**69.71 340**	P	**P**	**01 44 46.0**	**0.0**
	comp=Z,2μm,1.4s,mb6.8,SNR=58					
OBN	**Obninsk**	**69.71 340**	*ce*P	**P**	**01 44 44.2**	**-1.8**
OBN			*i*		01 47 19.8	
OBN			*i* S	S	01 54 11.9	+17
OBN			pmax	pmax		
	comp=Z,244nm,1.2s,mb6.0					
OBN	**Obninsk**	**69.71 340**	*e*P	**P**	**01 44 45.2**	**-0.8**
	comp=Z,4μm,2.2s,mb6.9					
OBN			LR	LR		
	comp=Z,44μm,19.0s,MS6.7					
ORE	**Reay**	**69.84 3**	*e*P	**P**	**01 44 47.1**	**+0.4**
MYLDM	**Lahad Datu**	**70.06 252**	P	**P**	**01 44 50.1**	**+1.4**
IMP	**Imphal**	**70.06 285**	*i* P	**P**	**01 44 50.0**	**+1.3**
MVH1	**Achvaich**	**70.44 4**⇑	*e*P	**P**	**01 44 50.6**	**+0.1**
SHL	**Shillong**	**70.70 287**	*e*P	**P**	**01 44 53.0**	**+0.5**
SHL			*ex*	x	01 53 58.5	
PNIG	**Pinotepa**	**70.74 88**	*i* P	**P**	**01 44 55.6**	**+2.8**
KSK	**Scoval**	**70.78 5**	*e*P	**P**	**01 44 53.2**	**+0.7**
KAC	**Achnashellach**	**70.82 4**	*e*P	**P**	**01 44 53.4**	**+0.7**
MCD	**Coleburn Disti**	**70.82 3**	*e*P	**P**	**01 44 53.1**	**+0.3**
MDO	**Dochfour**	**70.92 4**	*e*P	**P**	**01 44 53.6**	**+0.2**
KPL	**Plockton**	**70.96 5**⇑	*e*P	**P**	**01 44 54.7**	**+1.1**
KPL			AMb	AMB	01 44 57.6	
	comp=Z,313nm,3.0s,mb5.7					
KPL			AMS	AMS	02 24 20.8	
	comp=Z,32μm,15.5s,MS6.7					
IZAR	**Zarasai**	**70.97 346**	*e*P	**P**	**01 44 53.0**	**-0.8**
KKTK	**Khon Kaen**	**70.98 272**	⇓P	**P**	**01 44 54.5**	**+0.2**
	comp=Z,2μm,1.0s,mb7.1					
OXX	**Oaxaca**	**71.09 86**	*e*P	**P**	**01 44 58.6**	**+3.6**
VHO	**Vista Hermosa**	**71.09 86**	*i* P	**P**	**01 44 56.5**	**+1.5**
MME1	**Meikle Cairn**	**71.10 3**	*e*P	**P**	**01 44 55.7**	**+1.2**
KSB	**Sheil Bridge**	**71.10 5**	*e*P	**P**	**01 44 55.0**	**+0.5**
ISAL	**Salakas**	**71.16 346**	*e*P	**P**	**01 44 54.1**	**-0.8**
IDID	**Didziasalis**	**71.32 346**	*e*P	**P**	**01 44 55.0**	**-0.8**
KAR1	**Arisaig**	**71.37 5**	*e*P	**P**	**01 44 56.2**	**+0.1**
PMOR	**Pomariorio Ree**	**71.38 150**	*e*P	**P**	**01 44 57.4**	**+0.8**
	comp=Z,1μm,1.3s,mb6.6					
CHG	**Chiang Mai**	**71.50 277**	⇓P	**P**	**01 44 57.0**	**-0.5**
	comp=Z,25nm,1.6s,mb4.9					
CHTO	**Chiang Mai**	**71.50 277**	*e*P	**P**	**01 44 56.7**	**-0.8**
CHTO			pmax	pmax		
	comp=Z,762nm,1.7s,mb6.3					
CHTO			MLR	MLR		
	comp=Z,37μm,21.0s,MS6.6					
CHTO	**Chiang Mai**	**71.50 277**	*e*P	**P**	**01 44 56.7**	**-0.8**
	comp=Z,762nm,1.7s,mb6.3					
CHTO			LR	LR		
	comp=Z,37μm,21.0s,MS6.6					
CHTO	**Chiang Mai**	**71.50 277**	P	**P**	**01 44 57.5**	**0.0**
	SNR=82					
CHTO			P	pP	01 44 57.5	-1.7
	SNR=82					
NACGM	**Naroch**	**71.71 346**	*e*P	**P**	**01 44 55.0**	**-3.2**
CM31	**Chiang Mai Arr**	**71.77 277**	*e*P	**P**	**01 44 59.2**	**0.0**
	comp=Z,642nm,1.5s,mb6.3					
CM31			LR	LR		
	comp=Z,42μm,19.0s,MS6.7					
CMAR	**Chiang Mai Arr**	**71.77 277**	P	**P**	**01 44 58.9**	**-0.3**
	comp=Z,47nm,0.8s,mb5.5,baz=26,slow=6.6,SNR=37					
CMAR			PKPPKP		02 12 53.4	
	comp=Z,0.9nm,0.4s,baz=252,slow=3.7,SNR=7.9					
CMAR			LR	LR	02 19 06.2	
	comp=Z,48μm,18.5s,MS6.8,baz=174,slow=38					
TUIG	**Tuzandepetl**	**71.79 84**	*i* P	**P**	**01 44 59.1**	**-0.1**
MUD	**Monsted U'grnd**	**71.92 356**⇑	*i* P	**P**	**01 44 58.0**	**-1.4**
MUD			*i* S	S	01 54 22.7	+2.2
MUD			pmax	pmax		
	comp=Z,92nm,1.0s,mb5.7					
MUD			MLR	MLR		
	comp=Z,39μm,17.0s,MS6.7					
MUD	**Monsted U'grnd**	**71.92 356**⇑	*i* P	**P**	**01 44 58.0**	**-1.4**
	comp=Z,92nm,1.0s,mb5.7					
MUD			*i* S	S	01 54 22.7	+2.2
MUD						
	comp=Z,39μm,17.0s					
MICGM	**Minsk**	**71.92 345**	*e*P	**P**	**01 44 58.0**	**-1.5**
MNK	**Minsk**	**71.93 345**⇓	*e*P	**P**	**01 44 58.0**	**-1.5**
MNK			*e*		01 45 20.0	
MNK			*e*		01 47 36.0	
MNK			*e*PPP		01 49 24.0	
MNK			*e*S	S	01 54 16.0	-4.7
MNK			*e*SSS		02 02 04.0	
MNK			pmax	pmax		
	comp=Z,560nm,1.0s,mb6.5					
MNK			pmax	pmax		
	comp=Z,10μm,6.0s					
MNK			smax			
	comp=E,28μm,10.0s					
MNK			MLR	MLR		
	comp=Z,117μm,18.0s,MS7.2					
MNK			MLR	MLR		
	comp=N,38μm,18.0s,MS7.1					
MNK			MLR	MLR		
	comp=E,85μm,18.0s,MS7.1					
DWPF	**Disney**	**71.95 68**	*e*P	**P**	**01 45 01.4**	**+1.3**
	comp=E,1μm,2.0s,mb6.4					
DWPF			LR	LR		
	comp=Z,134μm,19.0s,MS7.2					
EBH	**Black Hill**	**72.15 4**⇑	*e*P	**P**	**01 45 01.0**	**+0.2**
EAB	**Aberfoyle**	**72.17 4**⇑	*e*P	**P**	**01 45 01.4**	**+0.4**
CMIG	**Matias Romero**	**72.22 85**	*i* P	**P**	**01 45 01.5**	**-0.3**
VRHR	**Novokhopersk**	**72.22 335**	*e*P	**P**	**01 45 02.0**	**+0.7**
VRHR			*e*		01 47 40.6	
VRHR			*e*PPP		01 49 22.5	
VRHR			*e*S	S	01 54 20.5	-3.6
VRHR			pmax	pmax		
	comp=N,50nm,0.8s					
VRHR			pmax	pmax		
	comp=E,30nm,0.8s					
VRHR			pmax	pmax		
	comp=Z,90nm,0.9s,mb5.7					
VRHR			pmax	pmax		
	comp=Z,2μm,2.8s,mb6.5					
VRHR			pmax	pmax		
	comp=N,720nm,1.9s					
VRHR			pmax	pmax		
	comp=E,720nm,3.9s					
VRHR			pmax	pmax		
	comp=Z,4μm,5.6s					
VRHR			pmax	pmax		
	comp=N,4μm,5.3s					
VRHR			pmax	pmax		
	comp=E,2μm,5.1s					
VRHR			smax			
	comp=E,4μm,6.2s					
VRHR			smax			
	comp=Z,560nm,5.2s					
VRHR			smax			
	comp=N,1μm,3.4s					
VRHR			MLR	MLR		
	comp=Z,75μm,17.0s,MS7.0					
VRHR			MLR	MLR		
	comp=N,31μm,18.0s,MS6.9					
VRHR			MLR	MLR		
	comp=E,47μm,16.0s,MS6.9					
GUN	**Gumba**	**72.43 293**	*e*P	**P**	**01 45 02.7**	**-0.3**
	comp=E,162nm,0.5s,mb6.2					
HUIG	**Huatulco**	**72.46 87**	*i* P	**P**	**01 45 03.6**	**+0.3**
EDI	**Edinburgh**	**72.48 3**⇑	*e*P	**P**	**01 45 03.3**	**+0.4**
EDI			AMb	AMB	01 45 06.7	
	comp=Z,227nm,2.7s,mb5.6					
EDI			AMS	AMS	02 23 55.9	
	comp=Z,31μm,18.0s,MS6.6					
ESY	**Stoneypath**	**72.51 3**⇑	*e*P	**P**	**01 45 03.0**	**+0.1**
COP	**Copenhagen**	**72.51 354**⇑	*i* P	**P**	**01 45 02.2**	**-0.8**
COP			*i* S	S	01 54 26.5	-0.8
COP			pmax	pmax		
	comp=Z,52nm,1.0s,mb5.4					
COP			MLR	MLR		
	comp=Z,21μm,19.0s,MS6.4					
COP	**Copenhagen**	**72.51 354**⇑	*i* P	**P**	**01 45 02.2**	**-0.8**
	comp=Z,52nm,1.0s,mb5.4					
COP			*i* S	S	01 54 26.5	-0.8
COP						
	comp=Z,21μm,19.0s					
PGBU	**Glenifferbraes**	**72.54 4**⇑	*e*P	**P**	**01 45 03.5**	**+0.3**
PGBU			AMb	AMB	01 45 08.6	
	comp=Z,478nm,1.6s,mb6.2					
PGBU			AMS	AMS	02 15 42.0	
	comp=Z,29μm,20.4s,MS6.5					
EAU	**Auchinoon**	**72.55 4**⇑	*e*P	**P**	**01 45 03.7**	**+0.5**
EBL	**Broad Law**	**72.64 3**	*e*P	**P**	**01 45 04.6**	**+0.8**
BDT	**Bhumibol Dam**	**72.65 276**	P	**P**	**01 45 05.0**	**+0.6**
	comp=Z,89nm,1.2s,mb5.6					
VSR	**Storozhevoye**	**72.73 337**	*d* P	**P**	**01 45 05.3**	**+1.0**
VSR			*e*		01 47 45.8	
VSR			*e*PPP		01 49 27.2	
VSR			*e*S	S	01 54 27.9	-2.0
VSR			*e*SSS		02 02 08.2	
VSR			pmax	pmax		
	comp=Z,140nm,1.1s,mb5.8					
VSR			pmax	pmax		
	comp=N,50nm,0.7s					
VSR			pmax	pmax		
	comp=E,20nm,0.7s					
V

VSR smax
comp=Z,870nm,4.8s
VSR smax
comp=N,4μm,5.6s
VSR MLR MLR
comp=Z,54μm,18.0s,MS6.9
VSR MLR MLR
comp=N,29μm,17.0s,MS6.7
VSR MLR MLR
comp=E,21μm,15.0s,MS6.7
KKN Kakani 72.86 293 *e*P **P 01 45 05.0 -0.5**
comp=E,906nm,2.1s,mb6.3
BSD Bornholm Skovb 72.90 353⇑ *i*P **P 01 45 03.2 -2.1**
BSD *i* S S 01 54 29.2 -2.6
BSD pmax pmax
comp=Z,61nm,0.9s,mb5.5
BSD MLR MLR
comp=Z,37μm,17.0s,MS6.7
BSD Bornholm Skovb 72.90 353⇑ *i*P **P 01 45 03.2 -2.1**
comp=Z,61nm,0.9s,mb5.5
BSD *i* S S 01 54 29.2 -2.6
BSD
comp=Z,37μm,17.0s
VORD Divnogorie 72.93 337 *e*P **P 01 45 06.5 +1.0**
VORD *e* 01 47 45.8
VORD *e*PPP 01 49 30.9
VORD *e*S S 01 54 29.6 -2.6
VORD *e*SS SS 01 59 13.0 +1.8
VORD pmax pmax
comp=Z,80nm,0.9s,mb5.7
VORD pmax pmax
comp=N,120nm,0.6s
VORD pmax pmax
comp=E,210nm,1.0s
VORD pmax pmax
comp=Z,3μm,3.0s
VORD pmax pmax
comp=N,2μm,2.5s
VORD pmax pmax
comp=E,890nm,2.2s
VORD pmax pmax
comp=Z,2μm,4.8s
VORD pmax pmax
comp=N,2μm,4.3s
VORD pmax pmax
comp=E,590nm,2.0s
VORD smax
comp=E,17μm,7.0s
VORD smax
comp=Z,1μm,6.6s
VORD smax
comp=N,5μm,5.8s
VORD MLR MLR
comp=N,31μm,18.0s,MS6.8
VORD MLR MLR
comp=E,32μm,18.0s,MS6.8
VORD MLR MLR
comp=Z,54μm,18.0s,MS6.9
PKI Pulchoki 72.96 293 *e*P **P 01 45 04.9 -1.2**
comp=Z,627nm,1.9s,mb6.2
GKN Gorkha 73.07 294 *e*P **P 01 45 05.6 -1.1**
comp=Z,1μm,2.1s,mb6.4
ESK Eskdalemuir 73.09 3 P **P 01 45 07.1 +0.7**
comp=Z,760nm,1.3s,mb6.5,SNR=8.4
ESK Eskdalemuir 73.09 3 *e*P **P 01 45 06.6 +0.2**
ESK AMb AMB 01 45 11.8
comp=Z,317nm,2.0s,mb5.9
ESK AMS AMS 02 24 43.1
comp=Z,30μm,17.8s,MS6.6
ESK Eskdalemuir 73.09 3 *i* P **P 01 45 08.0 +1.6**
ESK Eskdalemuir 73.09 3 *e*P **P 01 45 06.7 +0.3**
comp=Z,256nm,1.3s,mb6.0
ESK LR LR
comp=Z,34μm,20.0s,MS6.6
SUW Suwalki 73.10 347 *e*P **P 01 45 05.0 -1.4**
SUW *e*pP pP 01 45 07.1 -1.0
SUW *e*PP PP 01 47 51.2 +2.8
SUW *e*S S 01 54 28.6 -5.4
SUW *e*SS SS 01 59 10.9 -2.7
SUW LMZ 02 21 23.6
comp=Z,45μm,20.0s
SUW Suwalki 73.10 347 *e*P **P 01 45 05.0 -1.5**
SUW *e* 01 47 51.2
SUW *e*S S 01 54 28.6 -5.5
SUW *e*SS SS 01 59 10.9 -2.7
SUW MLR MLR
comp=Z,45μm,20.0s,MS6.8
SUW Suwalki 73.10 347 *e*P **P 01 45 05.0 -1.5**
comp=Z,333nm,1.0s,mb6.2
NST Nakhon Sawan 73.15 274 P **P 01 45 07.0 -0.4**
comp=Z,200nm,1.8s,mb5.8
ECK Cauldkaine Hill 73.23 3⇑ *e*P **P 01 45 07.5 +0.2**
PPT Papeete 73.29 152 *e*P **P 01 45 08.7 +0.7**
comp=Z,336nm,1.5s,mb6.1
PPT *e*S S 01 54 33.2 -3.7
comp=Z,54μm,26.2s
PPT *e*SS SS 01 59 16.5 -2.8
comp=Z,8μm,23.0s
PPT *e*LQ 02 03 58.6
comp=Z,68μm,26.8s
PPT *e*LR LR 02 07 19.9
comp=Z,62μm,28.5s,baz=347
PPT Papeete 73.29 152 P **P 01 45 08.4 +0.4**
comp=Z,78nm,0.8s,mb5.7,baz=50,slow=8.2,SNR=12
PPT LR LR 02 16 32.6
comp=Z,23μm,18.2s,MS6.5,baz=338,slow=35
TIAR Tiarei 73.35 152 *e*P **P 01 45 08.9 +0.6**
comp=Z,768nm,1.3s,mb6.5
PAE Paea 73.38 152 *e*P **P 01 45 09.1 +0.6**
comp=Z,138nm,1.4s,mb5.7
PAE Paea 73.38 152 *e*P **P 01 45 09.1 +0.6**
PAE pmax pmax
comp=Z,138nm,1.4s,mb5.7
GAL1 Galloway 73.48 4⇑ *e*P **P 01 45 09.4 +0.7**
GAL1 AMb AMB 01 45 14.0
comp=Z,312nm,1.7s,mb6.0
GAL1 AMS AMS 02 16 19.1
comp=Z,40μm,21.9s,MS6.7
GCD Castle Douglas 73.51 4⇑ *e*P **P 01 45 09.6 +0.7**
XAL Allendale 73.58 3⇑ *e*P **P 01 45 09.0 -0.3**
RGN Rugen 73.58 353 *e*P **P 01 45 10.0 +0.6**
comp=Z,1μm,1.7s,mb6.6
RGN *e*S S 01 54 41.6 +2.0
RGN Rugen 73.58 353 *e*P **P 01 45 09.7 +0.4**
comp=Z,919nm,1.4s,mb6.5
KOLN Koldanda 73.83 294 *e*P **P 01 45 10.4 -0.9**
COEN Coen 73.88 220 *e*P **P 01 45 10.4 -1.0**
comp=Z,6μm,1.8s,mb7.2
XDE Dent Fell 73.89 4⇑ *e*P **P 01 45 12.0 +0.8**
MEH Mehetia 74.03 151 *e*P **P 01 45 12.7 +0.4**
comp=Z,467nm,1.3s,mb6.3
GMM Mts of Mourne 74.04 5⇑ *e*P **P 01 45 12.9 +0.9**
GIM North Isle of 74.06 4 *e*P **P 01 45 12.5 +0.4**
HLG Helgoland 74.23 357 *e*P **P 01 45 12.4 -0.8**
comp=Z,1μm,1.8s,mb6.6
HLG *e*S S 01 54 48.0 +1.1
DMUB Kingscourt 74.32 6 *e*P **P 01 45 09.6 -4.1**
DMUB Kingscourt 74.32 6⇑ *i*P **P 01 45 15.0 +1.3**
PTH Pithoragarh 74.34 298 *e*P **P 01 45 13.8 -0.4**
BSEG Bad Segeberg 74.38 355 *e*P **P 01 45 14.7 +0.7**
comp=Z,646nm,1.5s,mb6.3
BSEG *e*S S 01 54 49.9 +1.4
BSEG Bad Segeberg 74.38 355 *e*P **P 01 45 14.7 +0.7**
BSEG *e*S S 01 54 49.9 +1.4
BSEG pmax pmax
comp=Z,646nm,1.5s,mb6.3
RAR Rarotonga 74.39 163 *e*P **P 01 45 14.2 -0.1**
RAR pmax pmax
comp=Z,357nm,1.5s
RAR MLR MLR
comp=Z,19μm,19.0s
RAR Rarotonga 74.39 163 P **P 01 45 14.4 0.0**
comp=Z,98nm,1.1s,mb5.6,baz=342,slow=15,SNR=3.3
RAR LR LR 02 15 27.8
comp=Z,22μm,19.3s,MS6.5,baz=344,slow=34
RAR Rarotonga 74.39 163 *e*P **P 01 45 14.2 -0.2**
comp=Z,357nm,1.5s,mb6.1
RAR LR LR
comp=Z,19μm,19.0s,MS6.4
THN Thein Dam 74.50 303 *ex* **P 01 45 13.6 -1.5**
GKP Gorka Klasztor 74.52 351 *e*P **P 01 45 14.7 -0.2**
GKP *e*pP pP 01 45 16.3 -0.2
GKP *e*PP PP 01 47 56.4 -4.1
GKP *e*S S 01 54 46.7 -3.4
GKP *e*SS SS 01 59 30.6 -4.6
GKP LMZ 02 22 50.8
comp=Z,56μm,21.3s
GKP Gorka Klasztor 74.52 351 P **P 01 45 14.6 -0.2**
GKP *e* 01 47 56.4
GKP *e*S S 01 54 46.7 -3.4
GKP *e*SS SS 01 59 30.6 -4.7
GKP MLR MLR
comp=Z,56μm,21.3s,MS6.8
GKP Gorka Klasztor 74.52 351 P **P 01 45 15.7 +0.8**
CCIG Comitan 74.53 83 *i* P **P 01 45 17.3 +1.9**
SDNR Sundarnagar 74.58 301 *ex* **P 01 45 13.1 -2.5**
SMLA Simla 74.76 301 *i x* **P 01 45 13.9 -2.8**
DCN Croghan 74.85 6 *e*P **P 01 45 12.6 -4.2**
DCN Croghan 74.85 6⇑ *i*P **P 01 45 18.0 +1.2**
LHO Holmfirth 74.91 3 *e*P **P 01 45 17.8 +0.7**
DDI Dehra Dun 74.92 300 *e*P **P 01 45 16.5 -1.1**
BHK Bhakra 74.94 302 *e*P **P 01 45 15.2 -2.4**
DZM Mont Dzumac 74.94 195 *e*P **P 01 45 18.7 +1.2**
comp=Z,1μm,1.4s,mb6.6
DZM *e*S S 01 54 52.7 -2.6
comp=Z,41μm,26.4s
DZM *e*LQ 02 04 48.7
comp=Z,78μm,30.1s
DZM *e*LR LR 02 08 22.4
comp=Z,143μm,25.3s
DZM Mont Dzumac 74.94 195 *e*P **P 01 45 17.9 +0.4**
DZM Mont Dzumac 74.94 195 *e*P **P 01 45 18.5 +1.0**
comp=Z,643nm,1.4s,mb6.4
NOUC Port Laguerre 75.00 196 *e*P **P 01 45 18.7 +0.9**
DSB Dublin 75.01 6 *e*P **P 01 45 17.6 -0.1**
comp=Z,241nm,1.3s,mb6.0
WLF1 Llynfaes 75.07 4⇑ *e*P **P 01 45 17.8 -0.2**
WLF1 AMb AMB 01 45 21.9
comp=Z,652nm,2.4s,mb6.1
SOR Soroa 75.08 72 *e*P **P 01 45 18.4 -0.2**
CAL Calcutta 75.10 287 *e*P **P 01 45 23.8 +5.1**
CAL *e*S S 01 55 01.5 +4.0
CAL *e*S S 01 55 07.1 +10
WAR Warsaw 75.11 348 *e*P **P 01 45 20.2 +1.9**
WAR *e*PP PP 01 48 08.4 +2.9
WAR *e*S S 01 54 55.6 -1.1
WAR LMZ 02 18 18.3
comp=Z,57μm,22.0s
WAR Warsaw 75.11 348 P **P 01 45 20.5 +2.2**
AKASG Malin Array Be 75.34 343 P **P 01 45 18.6 -1.0**
comp=Z,52nm,0.5s,mb5.7,baz=15,slow=5.7,SNR=104
AKASG PP PP 01 48 03.9 -3.6
comp=Z,10nm,0.9s,baz=19,slow=9.4,SNR=4.8
AKASG S S 01 54 57.2 -2.1
comp=Z,0.1nm,0.3s,baz=21,slow=13,SNR=4.5
AKASG PKPPKP 02 12 37.5
comp=Z,0.7nm,0.7s,baz=224,slow=2.2,SNR=6.8
AKASG LR LR 02 25 23.9
comp=Z,52μm,19.0s,MS6.9,baz=10.0,slow=41
AKBB Malin Array Si 75.34 343 *e*P **P 01 45 18.2 -1.4**
AKBB *e* 01 48 05.1
KIEV Kiev 75.35 343 *e*P **P 01 45 18.5 -1.2**
KIEV *e* 01 48 05.8
KIEV pmax pmax
comp=Z,457nm,1.4s,mb6.2
KIEV MLR MLR
comp=Z,61μm,19.0s,MS6.9
KIEV Kiev 75.35 343 *e*P **P 01 45 18.5 -1.2**
comp=Z,457nm,1.4s,mb6.2
KIEV *e*PP PP 01 48 05.8 -1.8
KIEV LR LR
comp=Z,61μm,19.0s,MS6.9
STNC Stoke 75.35 3⇑ *e*P **P 01 45 20.5 +0.9**
STNC AMb AMB 01 45 23.9
comp=Z,349nm,2.7s,mb5.8
STNC AMS AMS 02 25 60.0
comp=Z,37μm,18.0s,MS6.7
RUE Ruedersdorf 75.61 353 *e*P **P 01 45 21.5 +0.4**
comp=Z,460nm,1.4s,mb6.2
RUE *e*S S 01 55 01.7 -0.5
RUE Ruedersdorf 75.61 353 *e*P **P 01 45 22.4 +1.3**
comp=Z,534nm,1.5s,mb6.2
NRDL Niedersach Rie 75.83 355 *e*P **P 01 45 22.6 +0.2**
comp=Z,375nm,1.5s,mb6.1
NRDL *e*S S 01 55 04.9 +0.2
HLM1 Long Mynd 75.90 3⇑ *e*P **P 01 45 23.4 +0.6**
VAL Valentia 76.02 8 *e*P **P 01 45 18.7 -4.8**
VAL Valentia 76.02 8⇓ *i*S S 01 55 07.4 +0.6
IBBN Ibbenburen 76.12 357 *e*P **P 01 45 24.8 +0.8**
comp=Z,2μm,1.9s,mb6.7
IBBN *e*S S 01 55 08.2 +0.3
KBL Kabul 76.18 309 *e*P **P 01 45 22.6 -2.1**
KBL pmax pmax
comp=Z,150nm,1.3s,mb5.8
KBL Kabul 76.18 309 *e*P **P 01 45 22.6 -2.2**
comp=Z,150nm,1.3s,mb5.8
HTR Trewern Hill 76.33 4 *e*P **P 01 45 26.0 +0.7**
MCH1 Michaelchurch 76.42 3⇑ *e*P **P 01 45 25.7 -0.1**
MCH1 AMb AMB 01 45 31.1
comp=Z,298nm,2.2s,mb5.8
MCH1 AMS AMS 02 17 48.0
comp=Z,27μm,23.3s,MS6.5
CLZ Clausthal 76.47 355 *e*P **P 01 45 26.8 +0.8**
comp=Z,1μm,1.8s,mb6.5
CLZ *e*S S 01 55 12.3 +0.6
CLZ Clausthal 76.47 355 *e*P **P 01 45 26.8 +0.8**
CLZ *e*S S 01 55 12.3 +0.6
CLZ pmax pmax
comp=Z,1μm,1.8s,mb6.5
WTSB Winterswijk 76.49 357 *e*P **P 01 45 25.0 -1.1**
comp=Z,364nm,2.1s,mb6.0
NDI New Delhi 76.65 299 *i* P **P 01 45 26.0 -1.5**
NDI *ex* x 01 55 06.0
HGH Gray Hill 76.78 3 *e*P **P 01 45 28.3 +0.4**
CLL Collm 76.83 353 *e*P **P 01 45 27.8 -0.3**
comp=Z,352nm,1.5s,mb6.1
CLL *e*S S 01 55 14.2 -1.5
CLL Collm 76.83 353⇓ *i*P **P 01 45 29.7 +1.6**
CLL *e*S S 01 55 16.0 +0.3
CLL pmax pmax
comp=Z,344nm,1.5s,mb6.1
CLL Collm 76.83 353⇓ *i*P **P 01 45 29.7 +1.6**
comp=Z,89nm,1.1s,mb5.6
CLL *i* Pn sP 01 45 31.3 +0.9
CLL *e*S S 01 55 16.0 +0.3
CLL *e*P'P' 02 12 35.0
CLL LR LR
comp=Z,50μm,21.0s,MS6.8
SWN1 Swindon 76.94 3 *e*P **P 01 45 28.9 +0.1**
SWN1 AMS AMS 02 31 22.2
comp=Z,44μm,16.8s,MS6.8
BUG Bochum--Univer 77.00 357 *e*P **P 01 45 29.4 +0.3**
comp=Z,526nm,1.6s,mb6.2
BUG *e*S S 01 55 18.5 +0.9
KSP Ksiaz 77.01 351 *e*P **P 01 45 27.7 -1.5**
KSP *e*pP pP 01 45 30.7 -0.1
KSP *e*S S 01 55 16.1 -1.6
KSP *e*SS SS 02 00 17.1 +4.0
KSP LMZ 02 27 14.8
comp=Z,106μm,18.5s
KSP Ksiaz 77.01 351⇑ *e*P **P 01 45 27.7 -1.4**
KSP *e*S S 01 55 13.0 -4.7
KSP *e*SS SS 02 00 08.0 -5.0
KSP Ksiaz 77.01 351 P **P 01 45 30.2 +1.1**
LVV L'vov 77.06 346 *e*P **P 01 45 30.7 +1.3**
LVV *e* 01 48 25.5
LVV *e*PPP 01 50 15.1
LVV *i* S S 01 55 13.3 -5.0
LVV *e*PS 01 55 57.7
LVV *e*SS SS 02 00 08.3 -5.5
LVV pmax pmax
comp=Z,1μm,5.2s
LVV MLR MLR
comp=N,33μm,20.0s,MS6.8
LVV MLR MLR
comp=Z,51μm,20.0s,MS6.8
LVV MLR MLR
comp=E,35μm,19.0s,MS6.8
LVV L'vov 77.06 346 *e*P **P 01 45 30.0 +0.6**
WOL Wolverton 77.16 2⇑ *e*P **P 01 45 30.2 +0.3**
WOL AMb AMB 01 45 35.3
comp=Z,483nm,2.0s,mb6.1
BRG Berggiesshubel 77.19 353 *e*P **P 01 45 29.9 -0.2**
comp=Z,270nm,1.4s,mb6.0
BRG *e*S S 01 55 18.1 -1.6
BRG Berggiesshubel 77.19 353 *e*P **P 01 45 31.8 +1.6**
comp=Z,130nm,1.3s,mb5.7
BRG *i* pP 01 45 34.4 +2.6
comp=Z,271nm,1.4s
BRG *i* PP PP 01 48 22.1 -1.0
comp=Z,215nm,2.4s
BRG S S 01 55 21.0 +1.3
BRG SS SS 02 00 21.0 +5.3
BRG *e*PKPPKP 02 12 39.3
comp=Z,70nm,2.7s
BRG
comp=N,44μm,19.0s
BRG
comp=E,62μm,17.6s
BRG
comp=Z,52μm,19.1s
OJC Ojcow 77.25 349 *e*P **P 01 45 28.7 -1.8**
OJC *e*PcP PcP 01 45 39.9 -1.2
OJC *e*sP sP 01 45 44.9 +12
OJC *e*PP PP 01 48 20.4 -3.1
OJC *e*S S 01 55 13.4 -6.9
OJC *e*SS SS 02 00 10.2 -6.4
OJC L 02 25 27.4
comp=Z,49nm,21.0s
OJC Ojcow 77.25 349 *e*P **P 01 45 28.7 -1.8**
OJC *e* 01 45 39.9
OJC *e*'SP sP 01 45 44.9 +12
OJC *e* 01 48 20.4
OJC *e*S S 01 55 13.4 -6.9
OJC *e*SS SS 02 00 10.2 -6.4
OJC Ojcow 77.25 349 P **P 01 45 31.5 +1.0**
HEX Exmoor 77.31 4⇑ *e*P **P 01 45 31.5 +0.6**
GOF Gofitskoye 77.34 332⇑ *i*P **P 01 45 33.2 +2.1**
GOF *e*S S 01 55 30.0 +8.6
GOF pmax pmax
comp=Z,360nm,0.9s,mb6.3
GOF smax
comp=E,40nm,1.5s
HTL Hartland 77.36 5 AMS AMS 02 26 17.0
comp=Z,44μm,17.4s,MS6.8
UPC Upice 77.37 351 P **P 01 45 32.9 +1.7**
UPC Upice 77.37 351 *e*P **P 01 45 31.4 +0.2**
UPC *ex* x 01 45 32.9
UPC *e*PKPPKP 02 12 29.5
MGV Manicaragua 77.39 70 *e*P **P 01 45 31.6 -0.1**
TFO1 Folkestone 77.40 1 *e*P **P 01 45 30.7 -0.7**
TFO1 AMS AMS 02 27 48.2
comp=Z,39μm,18.2s,MS6.8
KWP Kalwaria Pacla 77.44 347 *e*P **P 01 45 31.9 +0.3**
KWP *e*pP pP 01 45 33.6 +0.4
KWP *e*PcP PcP 01 45 40.1 -1.8
KWP *e*PP PP 01 48 21.3 -3.8
KWP *e*S S 01 55 21.1 -1.3
KWP LMZ 02 19 54.9
comp=Z,51μm,21.4s
KWP Kalwaria Pacla 77.44 347 *e*P **P 01 45 31.3 -0.3**
comp=Z,700nm,1.3s,mb6.4
KWP LR LR
comp=Z,53μm,20.0s,MS6.9
KAKA Kakadu 77.47 230 *e*P **P 01 45 28.2 -3.9**
comp=Z,328nm,0.8s,mb6.3
KAKA Kakadu 77.47 230 *e*P **P 01 45 29.5 -2.6**
comp=Z,5μm,1.6s,mb7.2
PVCC Panska Ves 77.48 352 *e*P **P 01 45 30.9 -0.9**
PVCC *e*S S 01 55 21.5 -1.3
PVCC MLR MLR
comp=Z,53μm,18.8s,MS6.9
PVCC Panska Ves 77.48 352 P **P 01 45 33.1 +1.3**
PVCC Panska Ves 77.48 352 *e*P **P 01 45 30.9 -0.9**
PVCC *ex* x 01 45 33.5
PVCC *e*S S 01 55 21.5 -1.3
PVCC AMS AMS 02 23 50.0
comp=Z,53μm,18.8s
DPC Dobruska-Polom 77.50 351 *e*P **P 01 45 31.1 -0.8**
DPC *e* 01 48 28.0
DPC *e*S S 01 55 21.2 -1.8
DPC MLR MLR
comp=Z,53μm,17.6s,MS6.9
DPC Dobruska-Polom 77.50 351 P **P 01 45 32.1 +0.2**
DPC Dobruska-Polom 77.50 351 *e*P **P 01 45 31.1 -0.8**
DPC *ex* x 01 45 34.0
DPC *ex* x 01 45 52.0
DPC *e*PP PP 01 48 28.0 +2.4
DPC *e*S S 01 55 21.2 -1.8
DPC *e*PKPPKP 02 12 23.5
DPC *ex* x 02 16 07.5
DPC AMS AMS 02 27 20.0
comp=Z,53μm,17.6s
RAC Raciborz 77.57 350 *e*P **P 01 45 30.6 -1.7**
RAC *e*S S 01 55 23.1 -0.7
RAC MLR MLR
comp=Z,57μm,19.0s,MS6.9
MOX Moxa 77.58 354 *ce*P **P 01 45 32.9 +0.5**
comp=Z,647nm,2.0s,mb6.2
MOX *e*S S 01 55 24.0 +0.1
MOX
comp=Z,45μm,18.0s
MOX Moxa 77.58 354 *e*P **P 01 45 32.6 +0.2**
comp=Z,415nm,1.6s,mb6.1
MOX *e*S S 01 55 23.6 -0.3
MOX Moxa 77.58 354 *ce*P **P 01 45 32.9 +0.5**
MOX *e*S S 01 55 24.0 +0.1
MOX pmax pmax
comp=Z,647nm,2.0s,mb6.2
MOX MLR MLR
comp=Z,45μm,18.0s,MS6.8
KAPI Kappang 77.60 245 P **P 01 45 32.8 -0.1**
comp=Z,972nm,1.5s,mb6.5,SNR=69
KAPI Kappang 77.60 245 LR LR 02 15 05.1
comp=Z,11μm,21.5s,MS6.2,baz=29,slow=32
KAPI Kappang 77.60 245 *e*P **P 01 45 32.1 -0.8**
comp=Z,438nm,1.4s,mb6.2
KAPI LR LR
comp=Z,27μm,21.0s,MS6.5
KAPI Kappang 77.60 245 P **P 01 45 32.6 -0.3**
SNR=60
KAPI P pP 01 45 32.6 -2.0
SNR=60
BBSR BB Station 77.61 53 PFAKE 01 45 40.0 +7.2
BBSR LR LR
comp=Z,67μm,20.0s,MS7.0
BEBN Eben Emael 77.69 358 P **P 01 45 32.0 -0.9**
comp=Z,102nm,2.5s,mb5.3
UCC Uccle 77.71 359 P **P 01 45 32.6 -0.4**
HGN Heimansgroeve 77.72 358 *e*P **P 01 45 32.2 -0.9**
comp=Z,472nm,2.0s,mb6.1
HGN Heimansgroeve 77.72 358 *e*S S 01 55 23.1 -2.3
WERD Werda 77.73 354 *e*P **P 01 45 33.7 +0.5**
comp=Z,599nm,2.0s,mb6.2
WERD *e*S S 01 55 24.6 -1.0
TANN Tannenbergstha 77.76 354 *e*P **P 01 45 33.7 +0.4**
comp=Z,630nm,1.9s,mb6.2
TANN *e*S S 01 55 25.2 -0.6
OKC Ostrava-Krasne 77.81 350 *e*P **P 01 45 31.6 -2.1**
OKC *e* 01 48 23.9
OKC *e*S S 01 55 24.7 -1.8
OKC MLR MLR
comp=Z,52μm,18.8s,MS6.9
OKC Ostrava-Krasne 77.81 350 P **P 01 45 35.3 +1.6**
OKC Ostrava-Krasne 77.81 350 *e*P **P 01 45 31.6 -2.1**
OKC *ex* x 01 45 35.4
OKC *ex* x 01 45 57.9
OKC *e*PP PP 01 48 23.9 -4.4
OKC *e*S S 01 55 24.7 -1.8
OKC AMS AMS 02 23 20.0
comp=Z,52μm,18.8s
GUNZ Gunzen 77.82 354 *e*P **P 01 45 34.2 +0.5**
comp=Z,662nm,1.9s,mb6.2
GUNZ *e*S S 01 55 25.6 -0.9
MAK Makhachkala 77.84 328 *d i*P **P 01 45 36.1 +2.2**
MAK *e* 01 45 40.9
MAK *i* 01 48 33.4
MAK *i* PPP 01 50 18.2
MAK *i* S S 01 55 27.6 +0.7
MAK *e* 01 55 56.3
MAK *e*SSS 02 03 44.9
MAK pmax pmax
comp=Z,6μm,4.8s
MAK pmax pmax
comp=N,1μm,2.3s
MAK pmax pmax
comp=E,808nm,2.3s
MAK pmax pmax
comp=N,365nm,1.6s
MAK pmax pmax
comp=Z,656nm,1.7s,mb6.3
MAK pmax pmax
comp=E,247nm,1.4s
MAK smax

comp=N,5µm,10.4s
MAK smax
comp=E,13µm,8.9s
STHS Stebnicka Huta 77.85 348 *e*P **P 01 45 34.2 +0.3**
STHS pmax pmax
comp=Z,119nm,1.5s,mb5.6
STHS Stebnicka Huta 77.85 348 *e*P **P 01 45 34.2 +0.3**
comp=Z,119nm,1.5s,mb5.6
STHS *e*PP PP 01 48 33.3 +4.7
MEM Membach 77.87 358 P **P 01 45 33.1 -0.8**
comp=Z,114nm,1.4s,mb5.6
WERN Wernitzgruen 77.89 354 *e*P **P 01 45 34.7 +0.6**
comp=Z,3µm,3.1s
WERN *e*S S 01 55 26.6 -0.7
WERN Wernitzgruen 77.89 354 P **P 01 45 35.0 +0.9**
NKC Novy Kostel 77.94 353 *e*P **P 01 45 33.6 -0.7**
NKC *e*S S 01 55 26.6 -1.2
NKC MLR MLR
comp=Z,36µm,18.5s,MS6.7
NKC Novy Kostel 77.94 353 P **P 01 45 35.3 +1.0**
NKC Novy Kostel 77.94 353 *e*P **P 01 45 33.6 -0.7**
NKC *e*x x 01 45 35.5
NKC *e*S S 01 55 26.6 -1.2
NKC *e*x x 02 16 12.3
NKC AMS AMS 02 25 40.0
comp=Z,36µm,18.5s
DYA Yadsworthy 77.94 4⇑*e*P **P 01 45 34.5 +0.2**
DYA AMb AMB 01 45 39.6
comp=Z,253nm,2.1s,mb5.8
MORC Moravsky Berou 77.94 350 *e*P **P 01 45 34.1 -0.3**
MORC pmax pmax
comp=Z,200nm,1.5s,mb5.8
MORC Moravsky Berou 77.94 350 *e*P **P 01 45 34.1 -0.2**
comp=Z,200nm,1.5s,mb5.8
SBLS San Blas 77.94 83 *e*P **P 01 45 35.2 +0.3**
PRA Prague 77.95 352 ⇑P **P 01 45 33.0 -1.4**
PRA PP PP 01 48 35.0 +5.6
PRA S S 01 55 25.0 -2.9
PRA SS SS 02 00 30.0 +2.9
PRA AMS AMS 02 24 10.0
MENF Mencas 77.96 0 *e*P **P 01 45 35.5 +1.0**
NIE Niedzica 77.97 348⇓*e*P **P 01 45 36.6 +2.1**
NIE *e* 01 48 27.0
PRU Pruhonice 78.02 352 *e*P **P 01 45 34.3 -0.5**
PRU *e* 01 48 35.8
PRU *e*S S 01 55 26.1 -2.6
PRU MLR MLR
comp=Z,47µm,18.4s,MS6.8
PRU Pruhonice 78.02 352 P **P 01 45 36.4 +1.6**
PRU Pruhonice 78.02 352 *e*P **P 01 45 34.3 -0.5**
PRU *e*x x 01 45 55.7
PRU *e*PP PP 01 48 35.8 +5.8
PRU *e*S S 01 55 26.1 -2.6
PRU *e*PKPPKP 02 12 22.2
PRU *e*x x 02 16 05.3
PRU AMS AMS 02 26 10.0
comp=Z,47µm,18.4s
BCLA Clavier 78.07 358 P **P 01 45 35.9 +0.8**
comp=Z,200nm,2.1s,mb5.7
TNS Taunus Mts 78.17 356 *e*P **P 01 45 36.2 +0.6**
comp=Z,447nm,1.3s,mb6.2
TNS *e*S S 01 55 31.0 +0.7
TNS Taunus Mts 78.17 356 *e*P **P 01 45 36.2 +0.6**
TNS *e*S S 01 55 31.0 +0.7
TNS pmax pmax
comp=Z,447nm,1.3s,mb6.2
KOLS Kolonicke sedl 78.18 347 *e*P **P 01 45 35.5 -0.2**
comp=Z,124nm,1.3s,mb5.7
KOLS *e*PP PP 01 48 35.6 +4.2
KOLS *e*S S 01 55 26.6 -3.9
KOLS *e*SS SS 02 00 34.2 +3.5
KOLS LR LR
comp=Z,38µm,21.3s,MS6.7
KOLS Kolonicke sedl 78.18 347 *e*P **P 01 45 35.5 -0.2**
KOLS *e*PP PP 01 48 35.6 +4.2
KOLS *e*S S 01 55 26.6 -3.9
KOLS *e*SS SS 02 00 34.2 +3.5
ABKT Ailbek 78.28 318 P **P 01 45 36.4 0.0**
comp=Z,402nm,1.2s,mb6.2,SNR=24
CTA Charters Tower 78.33 215 *e*P **P 01 45 36.3 -0.4**
comp=Z,136nm,1.1s,mb5.8
CTA *e*S S 01 55 30.7 -1.8
CTAO Charters Tower 78.33 215 *e*P **P 01 45 36.1 -0.6**
CTAO pmax pmax
comp=Z,378nm,1.3s,mb6.2
CTAO MLR MLR
comp=Z,40µm,21.0s,MS6.7
CTAO Charters Tower 78.33 215 *e*P **P 01 45 36.1 -0.7**
comp=Z,378nm,1.3s,mb6.2
CTAO LR LR
comp=Z,40µm,21.0s,MS6.7
GIVF Givet 78.40 358 *e*P **P 01 45 35.8 -1.1**
comp=Z,2µm,1.8s,mb6.4
GIVF Givet 78.40 358 *e*P **P 01 45 35.8 -1.1**
GIVF pmax pmax
comp=Z,912nm,1.8s,mb6.4
GIVF Givet 78.40 358 *e*P **P 01 45 35.8 -1.1**
comp=Z,912nm,1.8s,mb6.4
DOU Dourbes 78.41 359 P **P 01 45 35.8 -1.2**
comp=Z,184nm,2.0s,mb5.7
ROTZ Rotzenmuhle 78.42 354 *e*P **P 01 45 37.7 +0.7**
comp=Z,569nm,2.0s,mb6.2
ROTZ *e*S S 01 55 33.1 +0.1
KIV Kislovodsk 78.44 332 P **P 01 45 38.5 +1.2**
comp=Z,723nm,1.1s,mb6.5,SNR=48
KIV Kislovodsk 78.44 332⇑*i*P **P 01 45 38.4 +1.1**
KIV *i*S S 01 55 45.9 +12
KIV pmax pmax
comp=Z,194nm,1.2s,mb5.9
KIV Kislovodsk 78.44 332 *e*P **P 01 45 38.7 +1.4**
comp=Z,177nm,1.1s,mb5.9
KIV LR LR
comp=Z,65µm,19.0s,MS7.0
KIV Kislovodsk 78.44 332 P **P 01 45 38.7 +1.4**
SNR=63
KIV P pP 01 45 38.7 -0.3
SNR=63
BAIF Baives 78.45 359 *e*P **P 01 45 36.2 -1.0**
comp=Z,1µm,1.8s,mb6.3
BAIF Baives 78.45 359 *e*P **P 01 45 36.2 -1.0**
BAIF pmax pmax
comp=Z,741nm,1.8s,mb6.3
BAIF Baives 78.45 359 *e*P **P 01 45 36.2 -1.0**
comp=Z,741nm,1.8s,mb6.3
UZH Uzhgorod 78.47 347⇑*i*P **P 01 45 38.8 +1.5**
UZH *i* pP 01 45 41.4 +2.4
UZH *i* 01 50 30.0
UZH *i*S S 01 55 31.6 -2.0
UZH *e* 01 55 54.0
UZH *e* 01 56 20.0
UZH *e* 02 00 30.0
UZH MLR MLR
comp=N,27µm,19.0s,MS6.8
UZH MLR MLR
comp=E,34µm,19.0s,MS6.8
UZH MLR MLR
comp=Z,23µm,19.0s,MS6.5
UZH Uzhgorod 78.47 347 *e*P **P 01 45 38.0 +0.7**
LIKS Likavka 78.48 349 *e*P **P 01 45 40.2 +2.8**
LIKS pmax pmax
comp=Z,46nm,0.9s,mb5.4
LIKS Likavka 78.48 349 *e*P **P 01 45 40.2 +2.8**
comp=Z,46nm,0.9s,mb5.4
ABH Alteburg 78.55 357 *e*P **P 01 45 39.0 +1.3**
GRA1 Grafenberg Arr 78.56 354 *e*P **P 01 45 38.7 +0.9**
comp=Z,2µm,2.0s,mb6.6
GRA1 *e*S S 01 55 35.5 +1.0
GRA1 *e*P'P' 02 12 35.5
GRA1 LR LR
comp=Z,38µm,20.9s,MS6.7
GRF Grafenberg Arr 78.56 354 *e*P **P 01 45 38.7 +0.9**
comp=Z,2µm,2.0s,mb6.6
GRF *e*S S 01 55 35.5 +1.0
GRF *e*PKPPKPdf 02 12 35.5
GRF *e*L 02 24 16.0
comp=Z,38µm,20.9s
GRF Grafenberg Arr 78.56 354 *e*P **P 01 45 38.7 +0.9**
GRF *e*S S 01 55 35.5 +1.0
GRF pmax pmax
comp=Z,2µm,2.0s,mb6.6
GRF MLR MLR
comp=Z,38µm,20.9s,MS6.7
GRF Grafenberg Arr 78.56 354 *e*P **P 01 45 38.7 +0.9**
GRF *e*S S 01 55 35.5 +1.0
GRF pmax pmax
comp=Z,2µm,2.0s,mb6.6
GRF Grafenberg Arr 78.56 354 *e*P **P 01 45 38.7 +0.9**
comp=Z,2µm,2.0s,mb6.6
GRF *e*S S 01 55 35.5 +1.0
GRFO Grafenberg 78.56 354 *e*S S 01 55 35.5 +1.0
TREC Trest 78.62 351 *e*P **P 01 45 36.7 -1.4**
TREC *e* 01 48 40.2
TREC *e*S S 01 55 32.3 -2.9
TREC MLR MLR
comp=Z,50µm,17.4s,MS6.9
TREC Trest 78.62 351 *e*P **P 01 45 36.7 -1.4**
TREC *e*PP PP 01 48 40.2 +5.2
TREC *e*S S 01 55 32.3 -2.9
TREC *e*PKPPKP 02 12 30.3
TREC AMS AMS 02 27 30.0
comp=Z,50µm,17.4s
RUP Ruppelstein 78.75 357 *e*P **P 01 45 40.1 +1.3**
TOD Tromm 78.77 356 *e*P **P 01 45 40.0 +1.0**
WLF Walferdange 78.81 358 P **P 01 45 38.9 -0.3**
comp=Z,241nm,2.3s,mb5.7
WLF Walferdange 78.81 358 *e*P **P 01 45 40.9 +1.7**
comp=Z,424nm,1.5s,mb6.2
WLF *e*S S 01 55 39.5 +2.3
WLF Walferdange 78.81 358 *e*P **P 01 45 40.7 +1.5**
WLF pmax pmax
comp=Z,563nm,1.7s,mb6.2
WLF MLR MLR
comp=Z,35µm,19.0s,MS6.7
WLF Walferdange 78.81 358 *e*P **P 01 45 40.7 +1.5**
comp=Z,563nm,1.7s,mb6.2
WLF LR LR
comp=Z,35µm,19.0s,MS6.7
CAHU Cacacuatique 78.87 82 *e*P **P 01 45 41.6 +1.6**
KECS Kecovo 78.87 348 *e*P **P 01 45 39.6 +0.1**
KECS pmax pmax
comp=Z,39nm,1.0s,mb5.3
KECS Kecovo 78.87 348 *e*P **P 01 45 39.6 +0.1**
comp=Z,39nm,1.0s,mb5.3
KECS *e*PP PP 01 48 41.9 +4.8
KECS Kecovo 78.87 348 *e*P **P 01 45 39.6 +0.1**
KECS *e*PP PP 01 48 41.9 +4.8
SWS Schriesheim-Wi 78.90 356 P **P 01 45 41.1 +1.4**
KHC Kasperske Hory 78.95 353 *e*P **P 01 45 39.4 -0.5**
KHC *e* pP 01 45 42.2 +0.6
KHC *e*S S 01 55 37.0 -1.7
KHC MLR MLR
comp=Z,57µm,16.9s,MS7.0
KHC Kasperske Hory 78.95 353 *e*P **P 01 45 40.4 +0.4**
comp=Z,1µm,2.1s,mb6.4
KHC Kasperske Hory 78.95 353 *e*P **P 01 45 39.4 -0.5**
KHC *e*x x 01 45 42.2
KHC *e*x x 01 46 04.9
KHC *e*S S 01 55 37.0 -1.7
KHC *e*PKPPKP 02 12 21.4
KHC *e*x x 02 16 08.5
KHC AMS AMS 02 30 30.0
comp=Z,57µm,16.9s
KIS Kishinev 78.97 342⇑*i*P **P 01 45 38.0 -2.1**
comp=Z,5µm,4.0s
KIS Kishinev 78.97 342 *e*PcP PcP 01 46 00.0 +11
KIS Kishinev 78.97 342 *i*PP PP 01 48 40.0 +2.0
KIS Kishinev 78.97 342*c i*P **P 01 45 38.0 -2.1**
KIS *i* 01 48 40.0
KIS *i*S S 01 55 34.0 -5.0
KIS *i* 01 55 57.0
KIS *i*SS SS 02 00 40.0 -2.7
KIS pmax pmax
comp=Z,2µm,1.8s,mb6.7
KIS pmax pmax
comp=Z,5µm,4.0s
KIS smax
comp=N,5µm,10.0s
KIS smax
comp=E,17µm,10.0s
KIS Kishinev 78.97 342 P **P 01 45 41.5 +1.4**
KIS Kishinev 78.97 342 *i*S S 01 55 34.0 -5.0
comp=E,5µm,10.0s
KIS *i*ScS SKKSac 01 55 57.0 -0.4
WET Wettzell 78.99 353 *e*P **P 01 45 40.8 +0.6**
comp=Z,402nm,1.8s,mb6.0
WET *e*S S 01 55 39.4 +0.3
WET Wettzell 78.99 353 *e*P **P 01 45 40.8 +0.6**
WET *e*S S 01 55 39.4 +0.3
WET pmax pmax
comp=Z,402nm,1.8s,mb6.0
SIND Sindeldorf 78.99 355 P **P 01 45 41.2 +1.0**
BURAR Bucovina Array 79.02 345 P **P 01 45 41.0 +0.7**
KOLL Kolacno 79.03 349 *e*P **P 01 45 41.5 +1.1**
KOLL Kolacno 79.03 349 *e*P **P 01 45 41.5 +1.1**
VYHS Vyhne 79.06 349 *e*P **P 01 45 40.9 +0.3**
comp=Z,119nm,1.5s,mb5.6
VYHS *e*PP PP 01 48 42.3 +3.6
VYHS *e*S S 01 55 32.3 -7.6
VYHS *e*SS SS 02 00 45.6 +1.7
VYHS LR LR
comp=Z,25µm,23.0s,MS6.5
KTD Kalmit 79.09 356 *e*P **P 01 45 42.2 +1.5**
ANN Anapa 79.12 335*c i*P **P 01 45 40.0 -0.9**
ANN *i* 01 48 39.9
ANN *i*S S 01 55 37.3 -3.3
ANN *e*SS SS 02 00 45.4 +0.4
ANN pmax pmax
comp=Z,230nm,2.1s,mb5.7
ZEI Tsey 79.16 330 *e*P **P 01 45 42.6 +1.4**
ZEI *e* 01 48 44.1
ZEI *e*S S 01 55 43.9 +2.8
ZEI *e*SS SS 02 00 49.4 +3.7
ZEI pmax pmax
comp=Z,310nm,4.4s
ZEI pmax pmax
comp=N,110nm,1.2s
ZEI pmax pmax
comp=E,109nm,0.9s
ZEI pmax pmax
comp=Z,301nm,1.7s,mb6.0
SMOL Smolenice 79.20 350 *e*P **P 01 45 45.3 +4.0**
TGUH Tegucigalpa,Un 79.22 81 *e*P **P 01 45 42.5 +0.6**
comp=Z,3µm,1.6s,mb6.9
TGUH LR LR
comp=Z,32µm,22.0s,MS6.6
TGUH Tegucigalpa,Un 79.22 81 *e*P **P 01 45 42.9 +0.9**
TGUH AMb AMB 01 45 49.9
comp=Z,7µm,1.6s,mb7.4
GEC2 GERESS Array S 79.22 352 *e*P **P 01 45 42.3 +0.9**
comp=Z,309nm,1.7s,mb6.0
GEC2 *e*S S 01 55 41.0 -0.6
GEC2 GERESS Array S 79.22 352 *e*P **P 01 45 42.3 +0.9**
GEC2 *e*S S 01 55 41.0 -0.6
GEC2 pmax pmax
comp=Z,309nm,1.7s,mb6.0
GERES GERESS Array B 79.22 352 P **P 01 45 41.3 -0.2**
comp=Z,26nm,1.0s,mb5.1,baz=32,slow=5.2,SNR=59
GERES PKKPbc PKKPbc 02 04 32.0 +1.9
comp=Z,0.8nm,0.7s,baz=199,slow=2.8,SNR=6.8
GERES PKPPKP 02 12 34.3
comp=Z,1.6nm,0.9s,baz=203,slow=1.0,SNR=6.6
BMR Baia Mare 79.23 346 P **P 01 45 43.7 +2.2**
JSA Saint Aubin 79.26 3 *e*P **P 01 45 42.1 +0.5**
JSA AMb AMB 01 45 46.9
comp=Z,300nm,2.1s,mb5.8
SNG Songkhla 79.39 268 P **P 01 45 42.0 -0.9**
comp=Z,400nm,1.0s,mb6.3
LANF Langenberg 79.44 356 *e*P **P 01 45 44.1 +1.5**
ONI Oni 79.46 331 P **P 01 45 44.4 +1.6**
ONI S S 01 55 42.4 -1.9
PSZ Piszkesteto 79.50 348 *e*P **P 01 45 43.1 +0.1**
PSZ *e* 01 48 40.8
PSZ pmax pmax
comp=Z,759nm,1.9s,mb6.3
PSZ MLR MLR
comp=Z,44µm,20.0s,MS6.8
PSZ Piszkesteto 79.50 348 *e*P **P 01 45 43.1 +0.1**
comp=Z,759nm,1.9s,mb6.3
PSZ *e*PP PP 01 48 40.8 -1.5
PSZ LR LR
comp=Z,44µm,20.0s,MS6.8
PSZ Piszkesteto 79.50 348⇑*e*P **P 01 45 42.3 -0.7**
ZST Bratislava 79.55 350 *e*P **P 01 45 45.8 +2.6**
comp=Z,89nm,1.4s,mb5.5
ZST *e*S S 01 55 44.0 -1.1
ZST *e*SS SS 02 01 05.4 +14
ZST LR LR
comp=Z,15µm,19.5s,MS6.3
KEH Kehvi 79.57 330 P **P 01 45 43.8 +0.4**
LEOM Leova 79.58 342 ⇑P **P 01 45 44.7 +1.3**
STU Stuttgart 79.59 356 *e*P **P 01 45 44.2 +0.8**
comp=Z,297nm,1.5s,mb6.0
STU *e*S S 01 55 45.5 0.0
STU Stuttgart 79.59 356 *e*P **P 01 45 44.7 +1.3**
STU pmax pmax
comp=Z,484nm,1.8s,mb6.1
STU Stuttgart 79.59 356 *e*P **P 01 45 44.7 +1.2**
comp=Z,484nm,1.8s,mb6.1
SOC Sochi 79.64 333*d i*P **P 01 45 45.2 +1.4**
SOC *e**PP pP 01 45 49.8 +4.3
SOC *e* 01 48 42.9
SOC *e*PPP 01 50 37.0
SOC *e*S S 01 55 46.4 +0.3
SOC *e**SS sS 01 55 57.5 +8.6
SOC *e*SS SS 02 00 51.9 -0.9
SOC pmax pmax
comp=Z,2µm,5.7s
SOC pmax pmax
comp=Z,183nm,1.8s,mb5.7
SOC MLR MLR
comp=Z,64µm,20.0s,MS7.0
LBG Lerchenberg 79.72 356 P **P 01 45 45.4 +1.3**
HDH Heidenheim-Cha 79.72 355 P **P 01 45 45.5 +1.3**
FLN La Foliniere 79.73 2 *e*P **P 01 45 42.9 -1.3**
comp=Z,1µm,1.8s,mb6.3
FLN *e*MLR MLR
comp=Z,58µm,18.8s,MS6.6
FLN La Foliniere 79.73 2 *e*P **P 01 45 42.9 -1.3**
FLN pmax pmax
comp=Z,668nm,1.8s,mb6.3
FLN MLR MLR
comp=Z,58µm,18.8s,MS6.9
FLN La Foliniere 79.73 2 *e*P **P 01 45 42.9 -1.3**
comp=Z,668nm,1.8s,mb6.3
FLN LR LR
comp=Z,58µm,18.8s,MS6.9
AJM Ajmer 79.78 300 *e*P **P 01 45 44.7 -0.1**
AJM AMb AMB 01 46 09.6
comp=Z,803nm,4.7s
AJM ⇓*e*S S 01 55 46.9 -1.4
SIM Simferopol' 79.79 338*ce*P **P 01 45 44.0 -0.6**
SIM *e* 01 48 49.0
SIM *i*S S 01 55 49.0 +1.3
SIM pmax pmax
comp=Z,34nm,0.9s,mb5.3
SIM pmax pmax
comp=Z,440nm,6.6s
SIM pmax pmax
comp=Z,1µm,11.2s
SIM MLR MLR
comp=Z,67µm,17.9s,MS7.0
GOR Gori 79.80 330 P **P 01 45 46.5 +1.7**
TBLG Delisi 79.84 329 *i*P **P 01 45 46.6 +1.7**
TBLG *i*S S 01 55 49.2 +0.9
TBLG Delisi 79.84 329 P **P 01 45 46.6 +1.7**
TBLG S S 01 55 49.2 +0.9
STR Strasbourg 79.84 356 *e*P **P 01 45 47.0 +2.2**
MTA Mtatsminda 79.85 329 P **P 01 45 46.8 +1.8**
MTA S S 01 55 42.1 -6.4
BUCH Bad Urach 79.90 355 P **P 01 45 46.9 +1.8**
LDF La Druitiere 79.91 2 *e*P **P 01 45 43.7 -1.5**
comp=Z,760nm,1.5s,mb6.1
LDF La Druitiere 79.91 2 *e*P **P 01 45 43.7 -1.5**
LDF pmax pmax
comp=Z,380nm,1.5s,mb6.1
LDF La Druitiere 79.91 2 *e*P **P 01 45 43.7 -1.5**
comp=Z,380nm,1.5s,mb6.1
CONA Conrad Observa 79.94 351⇑*i*P **P 01 45 44.8 -0.6**
comp=Z,173nm,1.5s,mb5.8,SNR=57
MEZF Maizieres J'vi 80.00 358 *e*P **P 01 45 44.8 -0.9**
comp=Z,2µm,1.9s,mb6.3
MEZF Maizieres J'vi 80.00 358 *e*P **P 01 45 44.8 -0.9**
comp=Z,2µm,1.9s,mb6.6
CDF Champ du Feu 80.03 357 *e*P **P 01 45 44.8 -1.0**
comp=Z,500nm,1.4s,mb5.9
CDF Champ du Feu 80.03 357 *e*P **P 01 45 44.8 -1.0**
CDF pmax pmax
comp=Z,250nm,1.4s,mb6.0
CDF Champ du Feu 80.03 357 *e*P **P 01 45 44.8 -1.0**
comp=Z,250nm,1.4s,mb6.0
BUD Budapest 80.03 349⇓*e*P **P 01 45 48.3 +2.4**
BST Brest 80.06 4 *e*P **P 01 45 46.4 +0.4**
ROSF Rostrenen 80.06 4 *e*P **P 01 45 45.0 -1.0**
comp=Z,1µm,1.9s,mb6.2
ROSF Rostrenen 80.06 4 *e*P **P 01 45 45.0 -1.0**
ROSF pmax pmax
comp=Z,562nm,1.9s,mb6.2
ROSF Rostrenen 80.06 4 *e*P **P 01 45 45.0 -1.0**
comp=Z,562nm,1.9s,mb6.2
BFO Black Forest 80.07 356 P **P 01 45 47.8 +1.8**
comp=Z,488nm,1.9s,mb6.1,SNR=18
BFO Black Forest 80.07 356 *e*P **P 01 45 46.9 +0.8**
comp=Z,498nm,1.9s,mb6.1
BFO *e*S S 01 55 51.7 +1.1
BFO Black Forest 80.07 356 *e*P **P 01 45 46.9 +0.8**
BFO *e*S S 01 55 51.7 +1.1
BFO pmax pmax
comp=Z,498nm,1.9s,mb6.1
FUR Furstenfeldbru 80.08 354 *e*P **P 01 45 47.0 +0.9**
comp=Z,440nm,1.6s,mb6.1
FUR *e*S S 01 55 50.0 -0.6
FUR Furstenfeldbru 80.08 354 *e*P **P 01 45 47.0 +0.9**
FUR *e*S S 01 55 50.0 -0.6
FUR pmax pmax
comp=Z,440nm,1.6s,mb6.1
GRR Gorron 80.09 2 *e*P **P 01 45 45.0 -1.2**
comp=Z,662nm,1.4s,mb6.1
GRR Gorron 80.09 2 *e*P **P 01 45 45.0 -1.2**
GRR pmax pmax
comp=Z,331nm,1.4s,mb6.1
GRR Gorron 80.09 2 *e*P **P 01 45 45.0 -1.2**
comp=Z,331nm,1.4s,mb6.1
MOA Molln 80.17 352 P **P 01 45 47.7 +1.1**
MOA Molln 80.17 352⇑*i*P **P 01 45 44.4 -2.2**
comp=Z,70nm,1.6s,mb5.3,SNR=19
SGMF Saint Gilles 80.17 3 *e*P **P 01 45 45.6 -1.0**
comp=Z,898nm,1.5s,mb6.2
SGMF Saint Gilles 80.17 3 *e*P **P 01 45 45.6 -1.0**
SGMF pmax pmax
comp=Z,449nm,1.5s,mb6.2
SGMF Saint Gilles 80.17 3 *e*P **P 01 45 45.6 -1.0**
comp=Z,449nm,1.5s,mb6.2
DRGR 80.21 346 P **P 01 45 47.6 +0.8**
ECH Echery 80.23 357 *e*P **P 01 45 48.1 +1.2**
THEF They Montfort 80.25 358 *e*P **P 01 45 48.5 +1.5**
SPAK Spaichingen-Ko 80.28 356 *e*P **P 01 45 48.4 +1.2**
LIBD Limburg 80.28 357 *e*P **P 01 45 48.5 +1.3**
GUT Gutenstein 80.29 356 P **P 01 45 48.6 +1.3**
RJOB Jochberg 80.40 353 *e*S S 01 55 55.2 +1.2
CRIN San Cristobal 80.41 82 *e*P **P 01 45 48.4 0.0**
VRI Vrincioaia 80.45 343⇓*i*P **P 01 45 50.0 +1.9**
KIZ Kirchzarten 80.46 356 P **P 01 45 49.2 +1.0**
HAU Haudompre 80.46 357 *e*P **P 01 45 47.0 -1.2**
comp=Z,754nm,1.6s,mb6.1
HAU *e*MLR MLR
comp=Z,67µm,22.2s,MS6.6
HAU Haudompre 80.46 357 *e*P **P 01 45 47.0 -1.2**
HAU pmax pmax
comp=Z,377nm,1.5s,mb6.1
HAU MLR MLR
comp=Z,67µm,22.3s,MS6.9
HAU Haudompre 80.46 357 *e*P **P 01 45 47.0 -1.2**
comp=Z,377nm,1.5s,mb6.1
HAU LR LR
comp=Z,67µm,22.3s,MS6.9
PLOR Plostina 80.48 343 P **P 01 45 49.9 +1.6**
PLOR Plostina 80.48 343⇓*i*P **P 01 45 50.7 +2.4**
QUIF Quistinic 80.49 4 *e*P **P 01 45 47.3 -1.0**
comp=Z,1µm,1.9s,mb6.2
QUIF Quistinic 80.49 4 *e*P **P 01 45 47.3 -1.0**
QUIF pmax pmax
comp=Z,537nm,1.9s,mb6.2
QUIF Quistinic 80.49 4 *e*P **P 01 45 47.3 -1.0**
comp=Z,538nm,1.9s,mb6.2
FELD Feldberg im Sc 80.54 356 *e*P **P 01 45 49.5 +0.9**
MOF Molkenrain 80.59 357 *e*P **P 01 45 50.0 +1.1**
UBR Ueberruh 80.63 355 P **P 01 45 50.4 +1.3**
HINF Hinteralfeld 80.64 357 *e*P **P 01 45 47.8 -1.3**
comp=Z,610nm,1.6s,mb6.0
HINF Hinteralfeld 80.64 357 *e*P **P 01 45 47.8 -1.3**
HINF pmax pmax
comp=Z,305nm,1.6s,mb6.0
HINF Hinteralfeld 80.64 357 *e*P **P 01 45 47.8 -1.3**
comp=Z,305nm,1.6s,mb6.0

ARSA Arzberg 80.64 351 P **P** **01 45 50.5 +1.3**
ARSA Arzberg 80.64 351⇑iP **P** **01 45 49.1 -0.1**
comp=Z,93nm,1.3s,mb5.5,SNR=67
SISB Singen-Schiene 80.68 356 P **P** **01 45 50.5 +1.1**
TLCR 80.71 341⇓iP **P** **01 45 51.7 +2.1**
LMGC Las Mercedes 80.71 69 *eP* **P** **01 45 50.8 +0.8**
RAO Raoul Island 80.76 180 LR LR 02 17 32.6
comp=Z,29µm,19.7s,MS6.6,baz=11,slow=33
RAO Raoul Island 80.76 180 PFAKE 01 46 00.0 +10
RAO LR LR
comp=Z,32µm,20.0s,MS6.7
CNGN Cerro Negro 80.78 82 *eP* **P** **01 45 50.5 +0.2**
RETA Reutte 80.78 354⇓iP **P** **01 45 48.8 -1.1**
comp=Z,143nm,2.1s,mb5.5,SNR=41
BHPL Bhopal 80.83 296 *eP* **P** **01 45 49.3 -1.2**
WATA Walderalm 80.88 354⇑iP **P** **01 45 49.2 -1.2**
comp=Z,223nm,1.6s,mb5.8,SNR=21
MOTA Moosalm 80.91 354⇑iP **P** **01 45 50.4 -0.2**
comp=Z,156nm,1.6s,mb5.7,SNR=19
WTTA Wattenberg 80.95 354⇑iP **P** **01 45 50.1 -0.7**
comp=Z,357nm,1.9s,mb6.0,SNR=111
MLR Muntele Rosu 80.95 344⇑iP **P** **01 45 53.1 +2.3**
BBS Basel-Blauen 80.97 357 *eP* **P** **01 45 52.2 +1.3**
KBA Koelnbreinsper 81.01 353⇑iP **P** **01 45 50.6 -0.5**
comp=Z,588nm,1.8s,mb6.2,SNR=189
DAVA Damuels 81.03 355 P **P** **01 45 52.9 +1.6**
DAVA Damuels 81.03 355⇑iP **P** **01 45 50.7 -0.6**
comp=Z,124nm,1.7s,mb5.6,SNR=37
LOMF Lomont 81.10 357 *eP* **P** **01 45 53.2 +1.6**
VOIR 81.16 344 P **P** **01 45 53.1 +1.2**
LOR Lormes 81.25 359 *eP* **P** **01 45 51.3 -1.1**
comp=Z,1µm,1.8s,mb6.3
LOR *e*MLR MLR
comp=Z,53µm,19.0s,MS6.6
LOR Lormes 81.25 359 *eP* **P** **01 45 51.3 -1.1**
LOR pmax pmax
comp=Z,649nm,1.8s,mb6.3
LOR MLR MLR
comp=Z,53µm,19.0s,MS6.9
LOR Lormes 81.25 359 *eP* **P** **01 45 51.3 -1.1**
comp=Z,649nm,1.8s,mb6.3
LOR LR LR
comp=Z,53µm,19.0s,MS6.9
FETA Feichten 81.25 354⇑iP **P** **01 45 52.5 +0.1**
comp=Z,120nm,1.2s,mb5.7,SNR=80
HYF Humbligny 81.26 360 *eP* **P** **01 45 51.7 -0.7**
SOKA Soboth 81.26 351⇑iP **P** **01 45 50.6 -1.8**
comp=Z,282nm,1.6s,mb6.0
GNI Garni 81.27 329 P **P** **01 45 53.1 +0.5**
GNI pmax pmax
comp=Z,22nm,0.9s
GNI Garni 81.27 329 P **P** **01 45 53.1 +0.5**
comp=Z,22nm,0.9s,mb5.1,baz=33,slow=0.9,SNR=31
GNI Garni 81.27 329 *eP* **P** **01 45 53.9 +1.3**
comp=Z,515nm,1.6s,mb6.2
GNI LR LR
comp=Z,106µm,20.0s,MS7.2
GNI Garni 81.27 329 P **P** **01 45 54.8 +2.2**
SNR=67
GNI P pP 01 45 54.8 +0.5
SNR=67
PERS Pernice 81.29 351 *eP* **P** **01 45 52.2 -0.4**
PERS *e*S S 01 56 00.7 -2.8
MGAN Managua 81.33 81 *eP* **P** **01 45 51.2 -2.1**
MGAN AMb AMB 01 46 01.7
comp=Z,159nm,1.6s,mb5.7
HARR Harsova 81.36 342⇑iP **P** **01 45 55.2 +2.2**
HARR Harsova 81.36 342⇑iP **P** **01 45 55.2 +2.2**
KOGS Kog 81.37 350 P **P** **01 45 54.9 +1.9**
ABTA Abfaltersbach 81.40 353⇑iP **P** **01 45 51.2 -2.0**
comp=Z,184nm,1.4s,mb5.8,SNR=44
MYKA Terra Mystica 81.43 352⇓iP **P** **01 45 52.4 -1.0**
comp=Z,165nm,1.7s,mb5.7
BOAB BOACO BROADBAND 81.45 81 *eP* **P** **01 45 51.8 -2.1**
SSF Saint Saulge 81.46 359 *eP* **P** **01 45 52.5 -1.0**
comp=Z,1µm,1.8s,mb6.2
SSF Saint Saulge 81.46 359 *eP* **P** **01 45 52.5 -1.0**
SSF pmax pmax
comp=Z,571nm,1.8s,mb6.2
SSF Saint Saulge 81.46 359 *eP* **P** **01 45 52.5 -1.0**
comp=Z,571nm,1.8s,mb6.2
TIM Timisoara 81.46 347 P **P** **01 45 56.7 +3.2**
OBKA Obir 81.47 352 P **P** **01 45 54.6 +1.0**
OBKA Obir 81.47 352⇑iP **P** **01 45 51.8 -1.8**
comp=Z,158nm,1.4s,mb5.8,SNR=52
TIRR Tirgusor 81.49 342 *eP* **P** **01 45 52.7 -1.0**
TIRR pmax pmax
comp=Z,786nm,1.9s,mb6.3
TIRR Tirgusor 81.49 342 *eP* **P** **01 45 52.6 -1.1**
comp=Z,786nm,1.9s,mb6.3
TIRR Tirgusor 81.49 342⇑iP **P** **01 45 55.5 +1.8**
BZS Buzias 81.52 347⇑iP **P** **01 45 54.9 +1.0**
RCC Rio Carpintero 81.53 69 *eP* **P** **01 45 53.6 -0.7**
GZR Gura Zlata 81.57 346 P **P** **01 45 54.4 +0.3**
GZR Gura Zlata 81.57 346⇑iP **P** **01 45 55.8 +1.7**
PTCC Patocco-Chiusa 81.68 352 P **P** **01 45 54.4 -0.3**
EIDS Eidsvold 81.69 208 *eP* **P** **01 45 54.6 -0.2**
comp=Z,474nm,1.6s,mb6.2
AVF Avril sur Loir 81.73 359 *eP* **P** **01 45 53.9 -1.1**
comp=Z,831nm,1.6s,mb6.1
AVF Avril sur Loir 81.73 359 *eP* **P** **01 45 53.9 -1.1**
AVF pmax pmax
comp=Z,416nm,1.6s,mb6.1
AVF Avril sur Loir 81.73 359 *eP* **P** **01 45 53.9 -1.1**
comp=Z,416nm,1.6s,mb6.1
BRMO Bormio 81.81 355 P **P** **01 45 58.2 +2.8**
MTDJ Mount Denham 81.84 71 *eP* **P** **01 45 56.1 +0.1**
comp=Z,1µm,1.9s,mb6.5
MTDJ LR LR
comp=Z,58µm,20.0s,MS6.9
CABF La Chapelle 81.86 358 *eP* **P** **01 45 55.0 -0.7**
comp=Z,847nm,1.6s,mb6.1
CABF La Chapelle 81.86 358 *eP* **P** **01 45 55.0 -0.7**
CABF pmax pmax
comp=Z,423nm,1.6s,mb6.1
CABF La Chapelle 81.86 358 *eP* **P** **01 45 55.0 -0.7**
comp=Z,423nm,1.6s,mb6.1
SMF Signal de Mont 81.87 359 *eP* **P** **01 45 54.6 -1.1**
comp=Z,2µm,1.8s,mb6.3
SMF Signal de Mont 81.87 359 *eP* **P** **01 45 54.6 -1.1**
SMF pmax pmax
comp=Z,754nm,1.8s,mb6.3
SMF Signal de Mont 81.87 359 *eP* **P** **01 45 54.6 -1.1**
comp=Z,754nm,1.8s,mb6.3
MFF Saint Martin d 81.90 2 *eP* **P** **01 45 54.9 -0.9**
comp=Z,515nm,1.3s,mb6.0
MFF Saint Martin d 81.90 2 *eP* **P** **01 45 54.9 -0.9**
MFF pmax pmax
comp=Z,258nm,1.3s,mb6.0
MFF Saint Martin d 81.90 2 *eP* **P** **01 45 54.9 -0.9**
comp=Z,258nm,1.3s,mb6.0
GTBY Guantanamo Bay 81.92 68 *eP* **P** **01 45 57.0 +0.6**
GTBY LR LR
comp=Z,85µm,20.0s,MS7.1
LJU Ljubljana 81.93 352 *i P* **P** **01 45 55.3 -0.7**
LJU *e* 01 46 04.7
LJU *e* 01 49 07.4
LJU *e*S S 01 56 04.6 -5.5
LJU Ljubljana 81.93 352 *i P* **P** **01 45 55.3 -0.8**
LJU *e*PcP PcP 01 46 04.7 +3.0
LJU *e* 01 46 35.1
LJU *e*PP PP 01 49 07.4 +4.9
LJU *e*S S 01 56 04.6 -5.5
LJU *e* 02 07 32.4
BGF Bois d'Agland 81.97 360 *eP* **P** **01 45 55.2 -1.0**
comp=Z,521nm,1.5s,mb6.0
BGF Bois d'Agland 81.97 360 *eP* **P** **01 45 55.2 -1.0**
BGF pmax pmax
comp=Z,260nm,1.5s,mb5.9
BGF Bois d'Agland 81.97 360 *eP* **P** **01 45 55.2 -1.0**
comp=Z,260nm,1.5s,mb5.9
VOY Vojsko 82.00 352 *eP* **P** **01 45 56.7 +0.3**
VOY *e* pP 01 45 57.8 -0.3
BUC1 Bucharest 82.04 343⇓iP **P** **01 45 59.7 +3.1**
CRES Cresnjev 82.06 351 P **P** **01 45 57.8 +1.1**
JAVS Javornik 82.12 352 *eP* **P** **01 45 54.7 -2.3**
JAVS *e*S S 01 56 07.0 -5.0
OG01 Vacheresse 82.13 357 *eP* **P** **01 45 58.8 +1.7**
MABI Malga Bissina 82.23 354 P **P** **01 45 56.6 -1.0**
TCF Toulx Ste Croi 82.24 0 *eP* **P** **01 45 56.5 -1.1**
comp=Z,259nm,1.4s,mb5.7
TCF Toulx Ste Croi 82.24 0 *eP* **P** **01 45 56.5 -1.1**
TCF pmax pmax
comp=Z,129nm,1.4s,mb5.7
TCF Toulx Ste Croi 82.24 0 *eP* **P** **01 45 56.5 -1.1**
comp=Z,129nm,1.4s,mb5.7
CEY Cerknica 82.25 352 P **P** **01 45 58.8 +1.1**
PSN Preselentsi 82.28 342 P **P** **01 45 58.0 +0.1**
TRI Trieste 82.33 352 *eP* **P** **01 45 57.8 -0.3**
TRI pmax pmax
comp=Z,230nm,1.8s,mb5.8
TRI MLR MLR
comp=Z,42µm,19.0s,MS6.8
TRI Trieste 82.33 352 *eP* **P** **01 45 57.8 -0.3**
comp=Z,230nm,1.8s,mb5.8
TRI LR LR
comp=Z,42µm,19.0s,MS6.8
BOJS Bojanci 82.40 351 *eP* **P** **01 45 58.3 -0.2**
BOJS *e*S S 01 56 10.2 -4.7
BOJS *e* 02 07 36.8
AGO Saint Agoulin 82.47 360 *eP* **P** **01 46 00.0 +1.1**
MAGA Magasa 82.50 354 P **P** **01 45 58.6 -0.4**
RSL Roselend 82.77 357 *eP* **P** **01 46 02.2 +1.8**
PYM Petit Puy Mans 82.77 360 *eP* **P** **01 46 01.5 +1.1**
PRD Provadia 82.90 342 P **P** **01 46 02.6 +1.5**
SVIS Svilajnac 82.90 347 P **P** **01 46 01.5 +0.4**
WRAB Tennant Creek 82.91 225 P **P** **01 46 00.6 -0.7**
comp=Z,1µm,2.2s,mb6.5,SNR=20
WRAB Tennant Creek 82.91 225 *eP* **P** **01 45 59.1 -2.2**
WRAB pmax pmax
comp=Z,848nm,1.8s,mb6.5
WRAB MLR MLR
comp=Z,49µm,22.0s,MS6.8
WRAB Tennant Creek 82.91 225 *eP* **P** **01 45 59.1 -2.2**
comp=Z,848nm,1.8s,mb6.5
WRAB LR LR
comp=Z,49µm,22.0s,MS6.8
GRTK Grand Turk 82.92 64 PFAKE 01 46 10.0 +8.4
GRTK LR LR
comp=Z,92µm,20.0s,MS7.2
WB2 Warramunga Arr 82.92 225 *eP* **P** **01 45 59.7 -1.6**
WRA Warramunga Arr 82.92 225 P **P** **01 46 00.0 -1.4**
WRA S S 01 56 18.3 -2.3
WRA pmax pmax
comp=Z,46nm,0.8s
WRA smax
comp=N,3.0nm,1.2s
WRA Warramunga Arr 82.92 225 P **P** **01 45 60.0 -1.4**
comp=N,46nm,0.8s,mb5.5,baz=32,slow=4.7,SNR=40
WRA S S 01 56 18.3 -2.3
comp=N,3.4nm,1.1s,baz=23,slow=8.9,SNR=4.4
WRA LR LR 02 21 03.4
comp=N,29µm,20.2s,MS6.7,baz=25,slow=34
LPL La Plagne 82.94 357 *eP* **P** **01 46 01.3 0.0**
BLY Banja Luka 82.94 350 P **P** **01 46 02.1 +0.8**
LPG La Plagne 82.96 357 *eP* **P** **01 46 01.7 +0.3**
comp=N,931nm,1.9s,mb6.2
LPG La Plagne 82.96 357 *eP* **P** **01 46 01.7 +0.3**
LPG pmax pmax
comp=Z,465nm,1.8s,mb6.2
LPG La Plagne 82.96 357 *eP* **P** **01 46 01.7 +0.3**
comp=Z,465nm,1.8s,mb6.2
COLF Collangettes 83.00 359 *eP* **P** **01 46 04.0 +2.4**
RJF Les Rejaudoux 83.22 1 *eP* **P** **01 46 01.7 -1.0**
comp=Z,941nm,1.7s,mb6.2
RJF *e*MLR MLR
comp=Z,67µm,18.8s,MS6.7
RJF Les Rejaudoux 83.22 1 *eP* **P** **01 46 01.7 -1.0**
RJF pmax pmax
comp=Z,470nm,1.7s,mb6.2
RJF MLR MLR
comp=Z,67µm,18.8s,MS7.0
RJF Les Rejaudoux 83.22 1 *eP* **P** **01 46 01.7 -1.0**
comp=Z,470nm,1.7s,mb6.2
RJF LR LR
comp=Z,67µm,18.8s,MS7.0
SSB Saint Sauveur 83.23 359 *eP* **P** **01 46 04.6 +1.8**
GRN Grenoble 83.24 358 *eP* **P** **01 46 05.1 +2.2**
PVL Pavlikeni 83.26 343 P **P** **01 46 02.8 -0.2**
GDM Grand'Maison 83.27 357 *eP* **P** **01 46 05.4 +2.4**
LBL Lubilhac 83.29 359 *eP* **P** **01 46 03.7 +0.6**
GRUS Gruza 83.34 347 P **P** **01 46 04.2 +0.8**
BNI Bardonecchia 83.41 357 *eP* **P** **01 46 04.7 +1.0**
BNI pmax pmax
comp=Z,834nm,1.9s,mb6.4
BNI MLR MLR
comp=Z,42µm,20.0s,MS6.8
BNI Bardonecchia 83.41 357 *eP* **P** **01 46 04.7 +1.0**
comp=Z,834nm,1.9s,mb6.4
BNI LR LR
comp=Z,42µm,20.0s,MS6.8
RKT Rikitea 83.42 141 *eP* **P** **01 46 03.9 0.0**
comp=Z,275nm,1.6s,mb6.0
RKT Rikitea 83.42 141 *eP* **P** **01 46 03.9 0.0**
RKT pmax pmax
comp=Z,275nm,1.6s,mb6.0
JTS JuntasAbangare 83.56 82 P **P** **01 46 07.3 +2.3**
comp=Z,218nm,1.0s,mb6.2,SNR=6.8
JTS JuntasAbangare 83.56 82 *eP* **P** **01 46 04.7 -0.3**
JTS JuntasAbangare 83.56 82 *eP* **P** **01 46 04.6 -0.3**
comp=Z,460nm,2.0s,mb6.3
JTS LR LR
comp=Z,29µm,21.0s,MS6.6
ORIF Oris-en-Rattie 83.56 358 *eP* **P** **01 46 04.2 -0.3**
comp=Z,960nm,1.9s,mb6.3
ORIF *e*MLR MLR
comp=Z,43µm,22.5s,MS6.5
ORIF Oris-en-Rattie 83.56 358 *eP* **P** **01 46 04.2 -0.3**
ORIF pmax pmax
comp=Z,480nm,1.9s,mb6.3
ORIF Oris-en-Rattie 83.56 358 *eP* **P** **01 46 04.2 -0.3**
comp=Z,480nm,1.9s,mb6.3
LFF La Frestale 83.57 1 *eP* **P** **01 46 03.7 -0.9**
comp=Z,2µm,1.7s,mb6.6
LFF La Frestale 83.57 1 *eP* **P** **01 46 03.7 -0.9**
LFF pmax pmax
comp=Z,861nm,1.7s,mb6.6
LFF La Frestale 83.57 1 *eP* **P** **01 46 03.7 -0.9**
comp=Z,861nm,1.7s,mb6.6
CAF Calviac 83.60 0 *eP* **P** **01 46 04.0 -0.7**
comp=Z,1µm,1.9s,mb6.5
CAF Calviac 83.60 0 *eP* **P** **01 46 04.0 -0.7**
CAF pmax pmax
comp=Z,750nm,1.9s,mb6.5
CAF Calviac 83.60 0 *eP* **P** **01 46 04.0 -0.7**
comp=Z,750nm,1.9s,mb6.5
VIVF Saint-Julien-l 83.65 358 *eP* **P** **01 46 04.2 -0.8**
comp=Z,713nm,1.9s,mb6.2
VIVF Saint-Julien-l 83.65 358 *eP* **P** **01 46 04.2 -0.8**
VIVF pmax pmax
comp=Z,356nm,1.9s,mb6.2
VIVF Saint-Julien-l 83.65 358 *eP* **P** **01 46 04.2 -0.8**
comp=Z,356nm,1.9s,mb6.2
MBDF Montbardon 83.73 357 *eP* **P** **01 46 05.1 -0.3**
comp=Z,218nm,1.4s,mb5.8
MBDF Montbardon 83.73 357 *eP* **P** **01 46 05.1 -0.3**
MBDF pmax pmax
comp=Z,109nm,1.4s,mb5.8
MBDF Montbardon 83.73 357 *eP* **P** **01 46 05.1 -0.3**
comp=Z,109nm,1.4s,mb5.8
JMB Yambol 83.76 342 P **P** **01 46 07.0 +1.4**
JMB Yambol 83.76 342 P **P** **01 46 05.3 -0.3**
JMB Yambol 83.76 342 P **P** **01 46 05.8 +0.2**
PSI Prapat 83.84 267 LR LR 02 26 29.5
comp=Z,27µm,20.4s,MS6.6,baz=191,slow=38
ERBM Eremo 83.86 354 P **P** **01 46 02.9 -3.2**
OG26 St.-Nazaire-De 83.92 358 *eP* **P** **01 46 08.7 +2.4**
GSCL Gusciola 83.92 354 P **P** **01 46 08.4 +2.0**
SURF Saint Ours 83.97 357 *eP* **P** **01 46 09.5 +2.9**
FNVD Fontana Vidola 84.07 354 P **P** **01 46 07.2 +0.1**
QLNO Quiliano 84.07 356 P **P** **01 46 05.7 -1.4**
PLE Pljevlja 84.07 348⇓iP **P** **01 46 06.0 -1.2**
PLE Pljevlja 84.07 348⇓iP **P** **01 46 06.1 -1.1**
VLC Villacollemand 84.12 354 *eP* **P** **01 46 07.1 -0.3**
comp=Z,224nm,1.5s,mb6.1
VLC LR LR
comp=Z,53µm,19.0s,MS6.9
SEI Scarperia 84.16 354 P **P** **01 46 09.5 +1.9**
BARS Barje 84.23 346 P **P** **01 46 07.3 -0.7**
VTS Vitosha 84.23 345 P **P** **01 46 07.2 -0.8**
VTS Vitosha 84.23 345 P **P** **01 46 07.5 -0.5**
VMG Vicchio 84.24 353 P **P** **01 46 10.6 +2.6**
UPM Unac-Piva 84.26 348⇓iP **P** **01 46 06.5 -1.6**
UPM Unac-Piva 84.26 348⇓iP **P** **01 46 06.6 -1.6**
DIM Dimitrovgrad 84.36 343 P **P** **01 46 11.3 +2.7**
FSSB Fossombrone 84.42 353 P **P** **01 46 10.2 +1.3**
TOUF Mont Tournerai 84.42 357 *eP* **P** **01 46 10.3 +1.4**
AUTN L'Aution 84.43 356 *eP* **P** **01 46 08.5 -0.5**
SAOF Saorge 84.44 356 *eP* **P** **01 46 08.9 -0.1**
LASF Ste Croix 84.44 359 *eP* **P** **01 46 08.5 -0.5**
comp=Z,616nm,1.8s,mb6.1
PLD Plovdiv 84.45 344 P **P** **01 46 09.8 +0.7**
PLD Plovdiv 84.45 344 P **P** **01 46 09.9 +0.8**
IVA Berane 84.45 347⇓iP **P** **01 46 08.6 -0.5**
IVA Berane 84.45 347⇓iP **P** **01 46 08.7 -0.4**
STOF St-Etienne Org 84.48 358 *eP* **P** **01 46 10.8 +1.6**
AOI Ancona 84.49 352 P **P** **01 46 11.8 +2.5**
IMI Imperia 84.50 356 P **P** **01 46 10.1 +0.8**
SMRF Simiane la Rot 84.51 358 *eP* **P** **01 46 07.5 -1.9**
comp=Z,1µm,1.9s,mb6.4
SMRF Simiane la Rot 84.51 358 *eP* **P** **01 46 07.5 -1.9**
comp=Z,1µm,1.9s,mb6.7
LUCF Luceram 84.54 356 *eP* **P** **01 46 09.5 0.0**
MVIF Mont Vial 84.54 357 *eP* **P** **01 46 10.4 +0.9**
SBF Sospel 84.57 356 *eP* **P** **01 46 08.4 -1.3**
comp=Z,420nm,1.4s,mb6.1
SBF Sospel 84.57 356 *eP* **P** **01 46 08.4 -1.3**
SBF pmax pmax
comp=Z,210nm,1.4s,mb6.1
SBF Sospel 84.57 356 *eP* **P** **01 46 08.4 -1.3**
comp=Z,210nm,1.4s,mb6.1
BRY Bratogost 84.60 348⇓iP **P** **01 46 07.6 -2.3**
BRY Bratogost 84.60 348⇓iP **P** **01 46 07.6 -2.2**
NKY Niksic 84.63 348⇓iP **P** **01 46 07.7 -2.3**
NKY Niksic 84.63 348⇓iP **P** **01 46 07.7 -2.3**
VILF Villemus 84.63 358 *eP* **P** **01 46 11.9 +1.9**
BADI Badiali 84.64 353 P **P** **01 46 09.2 -0.8**
CALN Calern 84.70 357 *eP* **P** **01 46 10.6 +0.3**
CING Cingoli 84.70 352 P **P** **01 46 11.5 +1.2**
PVY Plav 84.72 347⇓iP **P** **01 46 10.3 -0.1**
PVY Plav 84.72 347⇓iP **P** **01 46 10.3 -0.1**
CSNT Castellina Chi 84.75 354 P **P** **01 46 12.1 +1.5**
KDZ Kurdzhali 84.77 343 P **P** **01 46 11.8 +1.1**
HYB Hyderabad 84.80 292⇓iP **P** **01 46 11.0 -0.3**
comp=Z,80nm,1.0s,mb5.8
HYB *e*SKS 01 56 28.0
HYB *e*S S 01 56 36.0 -3.9
HYB *e* 02 02 20.0
HYB LR LR 02 10 00.0
comp=Z,49nm,20.0s
EPON Pontenova 84.83 7 P **P** **01 46 11.5 +0.5**
comp=Z,1µm,2.3s,mb6.7
SNTG Esanatoglia 84.84 352 P **P** **01 46 12.4 +1.4**
SDDR Presa de Saban 84.85 66 *eP* **P** **01 46 12.4 +0.9**
comp=Z,20nm,0.6s,mb5.4
SDDR LR LR
comp=Z,68µm,19.0s,MS7.1
RZN Rozhen 84.86 343 P **P** **01 46 11.1 -0.1**
TAVF Tavernes 84.86 357 *eP* **P** **01 46 12.0 +0.9**
MURB Monte Urbino 84.86 353 P **P** **01 46 12.5 +1.3**
TREF Trevaresse 84.87 358 *eP* **P** **01 46 13.2 +2.0**
MALT Malatya 84.88 332 *eP* **P** **01 46 11.4 0.0**
MALT *e* 01 49 25.6
MALT pmax pmax
comp=Z,421nm,1.8s,mb6.3
MALT MLR MLR
comp=Z,41µm,20.0s,MS6.8
MALT Malatya 84.88 332 *eP* **P** **01 46 11.4 0.0**
comp=Z,421nm,1.8s,mb6.3
MALT *e*PP PP 01 49 25.6 -1.3
MALT LR LR
comp=Z,41µm,20.0s,MS6.8
MALT Malatya 84.88 332⇑iP **P** **01 46 11.7 +0.3**
FRF La Foret Royal 84.90 357 *eP* **P** **01 46 10.2 -1.1**
comp=Z,648nm,1.8s,mb6.2
FRF La Foret Royal 84.90 357 *eP* **P** **01 46 10.2 -1.1**
FRF pmax pmax
comp=Z,324nm,1.8s,mb6.2
FRF La Foret Royal 84.90 357 *eP* **P** **01 46 10.2 -1.1**
comp=Z,324nm,1.8s,mb6.2
KKB Krupnik 84.96 345 P **P** **01 46 12.4 +0.7**
TTG Podgorica 84.97 348 *eP* **P** **01 46 09.4 -2.3**
TTG Podgorica 84.97 348 *eP* **P** **01 46 09.4 -2.3**
EARI Arriondas 84.99 6 P **P** **01 46 11.9 +0.1**
comp=Z,1µm,2.1s,mb6.6
EMAZ Mazaricos 85.05 8 P **P** **01 46 13.4 +1.3**
comp=Z,925nm,2.4s,mb6.5
HCY Herceg Novi 85.06 348⇓iP **P** **01 46 12.4 +0.2**
OFFI Offida 85.09 352 P **P** **01 46 15.0 +2.7**
SKO Skopje 85.11 346⇓iP **P** **01 46 14.7 +2.2**
SKO Skopje 85.11 346 P **P** **01 46 14.1 +1.6**
MMB Musomiste 85.12 344 P **P** **01 46 12.5 0.0**
LMR La Mourre 85.13 357 *eP* **P** **01 46 11.6 -0.9**
comp=Z,962nm,1.9s,mb6.3
LMR La Mourre 85.13 357 *eP* **P** **01 46 11.6 -0.9**
LMR pmax pmax
comp=Z,481nm,1.9s,mb6.3
LMR La Mourre 85.13 357 *eP* **P** **01 46 11.6 -0.9**
comp=Z,481nm,1.9s,mb6.3
BUM Brajici-Budva 85.15 348⇓iP **P** **01 46 10.3 -2.3**
BUM Brajici-Budva 85.15 348⇓iP **P** **01 46 10.3 -2.3**
STS Santiago 85.15 8 P **P** **01 46 14.6 +2.0**
STS pmax pmax
comp=Z,85nm,1.1s,mb5.8
STS Santiago 85.15 8 P **P** **01 46 14.6 +2.0**
comp=Z,85nm,1.1s,mb5.8
ELAN Lanestosa 85.15 4 P **P** **01 46 13.0 +0.4**
comp=Z,2µm,2.5s,mb6.8
BERF Bertagne 85.17 358 *eP* **P** **01 46 13.5 +0.8**
MTLF Montolieu 85.18 0 *eP* **P** **01 46 12.2 -0.6**
comp=Z,668nm,1.5s,mb6.2
MTLF Montolieu 85.18 0 *eP* **P** **01 46 12.2 -0.6**
MTLF pmax pmax
comp=Z,334nm,1.5s,mb6.2
MTLF Montolieu 85.18 0 *eP* **P** **01 46 12.2 -0.6**
comp=Z,334nm,1.5s,mb6.2
MSL Mosul 85.21 328 *eP* **P** **01 46 13.0 0.0**
MSL *e*PP PP 01 49 30.0 +0.4
MSL *e*S S 01 56 44.0 +0.5
OSSF Osses 85.21 3 *eP* **P** **01 46 13.6 +0.7**
EALK Alkurruntz 85.24 3 P **P** **01 46 13.8 +0.8**
comp=Z,1µm,2.3s,mb6.7
NRCA Norcia 85.24 352 P **P** **01 46 12.7 -0.4**
ORDF Ordiarp 85.26 3 *eP* **P** **01 46 14.1 +0.9**
ELIZ Elizondo 85.30 3 P **P** **01 46 13.6 +0.3**
ELIZ pmax pmax
comp=Z,258nm,1.8s,mb6.1
ELIZ Elizondo 85.30 3 P **P** **01 46 13.6 +0.3**
comp=Z,258nm,1.8s,mb6.1
SJPF Ste Jean 85.36 3 *eP* **P** **01 46 12.5 -1.1**
comp=Z,600nm,1.9s,mb6.1
SJPF Ste Jean 85.36 3 *eP* **P** **01 46 12.5 -1.1**
SJPF pmax pmax
comp=Z,300nm,1.9s,mb6.1
SJPF Ste Jean 85.36 3 *eP* **P** **01 46 12.5 -1.1**
comp=Z,300nm,1.9s,mb6.1
ALN Alexandroupoli 85.38 342 P **P** **01 46 14.8 +1.0**
ATE Arette 85.40 2 *eP* **P** **01 46 14.7 +0.8**
FITZ Fitzroy Crossi 85.40 233 *eP* **P** **01 46 11.7 -2.3**
comp=Z,263nm,0.9s,mb6.4
FITZ *e*S S 01 56 39.2 -6.3
FITZ Fitzroy Crossi 85.40 233 LR LR 02 21 24.7
comp=Z,38µm,20.9s,MS6.8,baz=21,slow=34
FITZ Fitzroy Crossi 85.40 233 *eP* **P** **01 46 12.5 -1.5**
comp=Z,334nm,1.2s,mb6.3
TERO Teramo 85.41 352 P **P** **01 46 14.6 +0.7**
ULC Ulcinj 85.43 348⇓iP **P** **01 46 11.8 -2.3**
ULC Ulcinj 85.43 348⇓iP **P** **01 46 11.8 -2.2**
LABF Labassere 85.45 2 *eP* **P** **01 46 14.7 +0.6**
EPF Esparros 85.47 2 *eP* **P** **01 46 12.8 -1.4**
comp=Z,632nm,1.8s,mb6.1
EPF Esparros 85.47 2 *eP* **P** **01 46 12.8 -1.4**
EPF pmax pmax
comp=Z,316nm,1.8s,mb6.1
EPF Esparros 85.47 2 *eP* **P** **01 46 12.8 -1.4**
comp=Z,316nm,1.8s,mb6.1
MLS Moulis 85.56 1 *eP* **P** **01 46 15.7 +1.0**
LATE Laterza 85.56 353 P **P** **01 46 16.4 +1.7**
LRDF Laroque-de-Fa 85.59 360 *eP* **P** **01 46 16.1 +1.3**
ETSF Etsaut 85.59 2 *eP* **P** **01 46 14.5 -0.3**
comp=Z,1µm,1.7s,mb6.5
ETSF Etsaut 85.59 2 *eP* **P** **01 46 14.5 -0.3**
ETSF pmax pmax
comp=Z,572nm,1.7s,mb6.5
ETSF Etsaut 85.59 2 *eP* **P** **01 46 14.5 -0.3**
comp=Z,572nm,1.7s,mb6.5
VIEF Viey 85.62 2 *eP* **P** **01 46 16.7 +1.8**
MELF Melles 85.64 1 *eP* **P** **01 46 15.9 +0.8**
AQU L'Aquila 85.69 352 *eP* **P** **01 46 15.8 +0.5**
AQU pmax pmax
comp=Z,143nm,1.1s,mb6.1
AQU MLR MLR
comp=Z,39µm,21.0s,MS6.8
AQU L'Aquila 85.69 352 *eP* **P** **01 46 15.8 +0.4**

comp=Z,143nm,1.1s,mb6.1
AQU LR LR
AQU L'Aquila 85.69 352 ⇑*i*P **P 01 46 20.4 +5.1**
RESF Ens 85.70 2 *e*P **P 01 46 17.2 +1.8**
KRUS Krusevo 85.73 346 ⇓*i*P **P 01 46 16.2 +0.6**
SALF Salau 85.76 1 *e*P **P 01 46 16.9 +1.2**
ERUA La Rua 85.76 7 P **P 01 46 17.1 +1.4**
ERUA pmax pmax
comp=Z,259nm,1.8s,mb6.2
ERUA La Rua 85.76 7 P **P 01 46 17.1 +1.4**
comp=Z,259nm,1.8s,mb6.2
MAON Monte Argentar 85.80 354 P **P 01 46 17.4 +1.5**
FIAM Fiamignano 85.80 352 P **P 01 46 15.9 0.0**
PGF Pioggiola 85.81 355 *e*P **P 01 46 14.8 -1.1**
comp=Z,1µm,1.6s,mb6.5
PGF Pioggiola 85.81 355 *e*P **P 01 46 14.8 -1.1**
PGF pmax pmax
comp=Z,507nm,1.6s,mb6.5
PGF Pioggiola 85.81 355 *e*P **P 01 46 14.8 -1.1**
comp=Z,507nm,1.6s,mb6.5
CARF Carcanieres 85.81 0 *e*P **P 01 46 17.2 +1.3**
ECRI Cripan 85.81 4 P **P 01 46 16.7 +0.8**
ECRI pmax pmax
comp=Z,96nm,1.4s,mb5.8
ECRI Cripan 85.81 4 P **P 01 46 16.7 +0.7**
comp=Z,96nm,1.4s,mb5.8
EBIE Bielsa 85.82 2 P **P 01 46 16.1 +0.2**
comp=Z,852nm,2.1s,mb6.6
EZAM Zamans 85.87 8 P **P 01 46 18.6 +2.4**
EZAM pmax pmax
comp=Z,224nm,1.5s,mb6.2
EZAM Zamans 85.87 8 P **P 01 46 18.6 +2.4**
comp=Z,224nm,1.5s,mb6.2
TIR Tirane 85.95 347 *e*P **P 01 46 16.6 -0.1**
TIR *e* 01 49 35.0
TIR pmax pmax
comp=Z,671nm,1.8s,mb6.6
TIR MLR MLR
comp=Z,46µm,20.0s,MS6.9
TIR Tirane 85.95 347 *e*P **P 01 46 16.6 -0.1**
comp=Z,671nm,1.8s,mb6.6
TIR *e*PP PP 01 49 35.0 -0.5
TIR LR LR
comp=Z,46µm,20.0s,MS6.9
FILF Fillols 85.96 360 *e*P **P 01 46 18.1 +1.4**
INTR Introdacqua 85.99 352 P **P 01 46 18.2 +1.4**
PTQR Pietraquaria 86.02 352 P **P 01 46 16.9 -0.1**
OHR Ohrid 86.05 346 ⇓*i*P **P 01 46 17.5 +0.4**
OHR Ohrid 86.05 346 P **P 01 46 17.2 +0.1**
SGRT San Giovanni R 86.06 350 P **P 01 46 19.2 +2.0**
BIA Bitola 86.06 346 ⇓*i*P **P 01 46 19.1 +1.9**
FG2 Serracapriola 86.07 351 P **P 01 46 20.1 +2.9**
EJON La Jonquera 86.08 360 P **P 01 46 18.0 +0.7**
comp=Z,766nm,2.4s,mb6.5
MTCE Montecelio 86.08 352 P **P 01 46 18.3 +1.0**
TOLF Tolfa 86.10 353 P **P 01 46 17.9 +0.6**
BRU2 Volcan 86.11 81 *e*P **P 01 46 18.9 +1.1**
VALF Valcebollere 86.12 0 *e*P **P 01 46 19.2 +1.7**
CERT Cerreto 86.13 352 P **P 01 46 16.7 -0.8**
VVLD Villa Vallelon 86.15 352 P **P 01 46 20.8 +3.2**
RGNG Rignano Grg 86.16 350 P **P 01 46 18.5 +0.8**
ELOB Lobios 86.20 8 P **P 01 46 18.6 +0.7**
comp=Z,892nm,2.6s,mb6.5
ECAL Calabor 86.24 7 P **P 01 46 17.3 -0.7**
comp=Z,876nm,2.4s,mb6.6
CIGN Sant'Elia a Pi 86.25 351 P **P 01 46 20.6 +2.5**
RNI2 Rionero Sannit 86.27 351 P **P 01 46 19.8 +1.6**
FNA Florina 86.29 346 P **P 01 46 18.9 +0.6**
ROM9 Roma 86.29 353 P **P 01 46 19.9 +1.6**
ARMA Armidale 86.29 206 *e*P **P 01 46 18.5 +0.3**
ARMA *e*S S 01 56 49.0 -4.7
ARMA Armidale 86.29 206 *e*P **P 01 46 18.4 +0.3**
comp=Z,522nm,1.3s,mb6.6
ARMA *e*PP PP 01 49 41.6 +2.0
MIDA Miranda 86.32 351 P **P 01 46 17.3 -1.2**
PLG Polygyros 86.35 344 P **P 01 46 17.6 -1.0**
PCAB Cabril 86.36 8 *e*P **P 01 46 19.7 +1.0**
comp=Z,142nm,1.9s,mb5.9
PCAB Cabril 86.36 8 *e*PP PP 01 49 42.3 +3.6
PBRG Braganca 86.37 7 *e*P **P 01 46 19.6 +0.9**
comp=Z,193nm,1.8s,mb6.0
ASAR Alice Springs 86.39 224 P **P 01 46 17.4 -1.5**
comp=Z,30nm,0.8s,mb5.6,baz=26,slow=5.4,SNR=89
ASAR PP PP 01 49 44.1 +3.7
comp=Z,11nm,1.1s,baz=44,slow=7.4,SNR=4.1
ASAR PKKP PKKPbc 02 03 56.3 -19
comp=Z,1.3nm,1.0s,baz=176,slow=2.4,SNR=4.0
ASAR PKPPKP 02 12 19.6
comp=Z,0.7nm,0.9s,baz=198,slow=3.7,SNR=4.3
SGG Gregorio Mates 86.56 351 P **P 01 46 18.8 -0.9**
FG5 Orsara di Pugl 86.58 350 P **P 01 46 21.4 +1.7**
POO Poona 86.59 296 *e*P **P 01 46 20.2 +0.1**
EMIR Miracle 86.61 1 P **P 01 46 21.3 +1.4**
PSB1 Pescosannita 86.68 351 P **P 01 46 19.8 -0.4**
RFI Roccamonfina 86.69 351 P **P 01 46 21.8 +1.5**
KZN Kozani 86.69 345 *e*P **P 01 46 19.8 -0.5**
MRB1 Monte Rocchett 86.76 351 P **P 01 46 17.0 -3.6**
ESAC San Caprasio 86.77 2 P **P 01 46 20.5 -0.2**
comp=Z,857nm,2.0s,mb6.6
LIT Litokhoron 86.78 345 P **P 01 46 20.9 +0.2**
LIT Litokhoron 86.78 345 P **P 01 46 20.1 -0.6**
PVRL Vila Real 86.82 8 *e*P **P 01 46 21.9 +1.0**
comp=Z,185nm,1.9s,mb6.0
PVRL Vila Real 86.82 8 *e*PP PP 01 49 43.6 +1.2
MVO Moncorvo 86.99 7 *e*P **P 01 46 22.0 +0.3**
comp=Z,163nm,1.9s,mb5.9
MVO Moncorvo 86.99 7 *e*PP PP 01 49 45.9 +2.1
MVO *e*S S 01 56 56.6 -4.1
MVO *i*P 02 02 44.7
MVO *e*LQ 02 09 44.1
MVO *e*LR LR 02 15 36.9
comp=Z,42µm,18.0s
CSSN Cassano Irpino 87.02 351 P **P 01 46 21.4 -0.5**
SIGR SIGRI 87.05 342 P **P 01 46 22.4 +0.3**
OUZ Omahuta 87.06 187 *e*P **P 01 46 22.8 +1.0**
comp=Z,317nm,1.3s,mb6.4
EPOB Poblet 87.16 1 P **P 01 46 22.4 -0.2**
comp=Z,971nm,2.7s,mb6.6
PVIS Viseu 87.36 8 *e*P **P 01 46 24.7 +1.1**
comp=Z,96nm,1.7s,mb5.8
PVIS Viseu 87.36 8 *e*PP PP 01 49 50.5 +3.7
KAD Karad 87.38 295 *e*P **P 01 46 23.2 -0.8**
KAD *e*P pP 01 46 23.9 -1.8
NEO Neokhori 87.43 344 *e*P **P 01 46 23.8 -0.1**
PDA Ponta Delgada 87.43 22 *e*PP sP 01 46 34.0 +7.7
PDA *e*S S 01 57 10.0 +4.9
PDA *e*LQ 02 10 04.0
PDA *e*LR LR 02 16 00.0
CMLA Cha da Macela 87.45 22 PFAKE 01 46 40.0 +16
CMLA LR LR
comp=Z,28µm,19.0s,MS6.7
JAN Janina 87.47 346 *e*P **P 01 46 24.5 +0.4**
ERTA Horta de San J 87.55 2 P **P 01 46 23.3 -1.2**
comp=Z,581nm,2.9s,mb6.3
BCIP Isla Barro Col 87.56 78 *e*P **P 01 46 25.3 +0.4**
comp=Z,940nm,1.9s,mb6.7
BCIP LR LR
comp=Z,21µm,19.0s,MS6.6
BCIP Isla Barro Col 87.56 78 *e*P **P 01 46 23.8 -1.1**
SCHR S. Chirico Rap 87.56 350 P **P 01 46 25.7 +1.2**
KEK Kerkira 87.57 347 *e*P **P 01 46 23.3 -1.3**
ETOR Torete 87.62 3 P **P 01 46 24.3 -0.5**
ETOR pmax pmax
comp=Z,29nm,1.1s,mb5.4
ETOR Torete 87.62 3 P **P 01 46 24.3 -0.5**
comp=Z,29nm,1.1s,mb5.4
GUD Guadarrama 87.70 5 P **P 01 46 24.5 -0.7**
GUD pmax pmax
comp=Z,32nm,1.1s,mb5.5
GUD Guadarrama 87.70 5 P **P 01 46 24.5 -0.6**
comp=Z,32nm,1.1s,mb5.5
MTE Manteigas 87.71 8 *e*P **P 01 46 26.0 +0.8**
comp=Z,63nm,2.3s,mb5.4
MTE Manteigas 87.71 8 *e*PP PP 01 49 51.8 +2.2
MTE *e*S S 01 57 03.8 -3.8
MTE *i*P 02 02 57.8
MTE *e*LQ 02 09 56.2
MTE *e*LR LR 02 12 55.3
comp=Z,31µm,20.0s
MTE Manteigas 87.71 8 *e*P **P 01 46 23.4 -1.8**
comp=Z,28nm,1.1s,mb5.4
MTE LR LR
comp=Z,34µm,20.0s,MS6.8
CRPR Cabo Rojo, PR 87.97 63 *e*P **P 01 46 27.8 +0.9**
comp=Z,57nm,1.5s,mb5.6
DGI Dorgali Grotta 88.00 355 P **P 01 46 27.6 +1.0**
EVR Evrytania 88.05 345 *e*P **P 01 46 28.3 +1.4**
EMOS Mosqueruela 88.12 2 P **P 01 46 27.6 +0.4**
comp=Z,506nm,2.8s,mb6.3
PCBR Castelo Branco 88.27 8 *e*P **P 01 46 29.9 +2.0**
comp=Z,48nm,2.3s,mb5.3
PCBR Castelo Branco 88.27 8 *e*PP PP 01 49 57.0 +2.9
PTOM Tomar 88.41 8 *e*P **P 01 46 28.2 -0.4**
comp=Z,49nm,1.7s,mb5.5
PTOM Tomar 88.41 8 *e*PP PP 01 49 56.9 +1.7
SJG San Juan 88.41 62 *e*P **P 01 46 28.3 -0.6**
SJG pmax pmax
comp=Z,58nm,0.8s
SJG MLR MLR
comp=Z,223µm,19.0s
SJG San Juan 88.41 62 *e*P **P 01 46 28.2 -0.7**
comp=Z,58nm,0.8s,mb5.9
SJG LR LR
comp=Z,223µm,19.0s,MS7.6
SJG San Juan 88.41 62 *e*P **P 01 46 27.6 -1.3**
CBYP Canovanas 88.44 62 *e*P **P 01 46 26.3 -2.8**
comp=Z,91nm,1.5s,mb5.8
TIP Timpagrande 88.49 349 *e*P **P 01 46 28.9 0.0**
comp=Z,301nm,1.7s,mb6.2
TIP *e*PP PP 01 49 56.8 +0.9
TIP LR LR
comp=Z,34µm,22.0s,MS6.7
TRIZ Trizonia 88.54 345 P **P 01 46 31.9 +2.7**
ATH Athens Observa 88.64 343 *e*P **P 01 46 29.4 -0.3**
ESDC Sonseca Array 88.67 5 P **P 01 46 27.4 -2.5**
comp=Z,3.2nm,0.6s,mb4.8,baz=350,slow=4.0,SNR=31
ESDC PP PP 01 49 57.2 -0.1
comp=Z,6.6nm,1.1s,baz=358,slow=7.7,SNR=4.6
ESDC PKKPbc PKKPbc 02 04 11.3 +3.1
comp=Z,1.1nm,0.7s,baz=186,slow=1.5,SNR=12
ESDC PKPPKP 02 12 15.0
comp=Z,1.0nm,0.9s,baz=276,slow=0.3,SNR=4.8
ESDC Sonseca Array 88.67 5 P **P 01 46 28.6 -1.2**
comp=Z,14nm,1.1s,mb5.2
ESLA Sonseca Array 88.67 5 *e*P **P 01 46 29.0 -0.8**
comp=Z,46nm,1.8s,mb5.5
ESLA *e*PP PP 01 49 59.0 +1.7
ESLA LR LR
comp=Z,189µm,19.0s,MS7.5
LAKA Lakka 88.68 345 P **P 01 46 31.9 +2.0**
PMRV Marv??o 88.68 8 *e*P **P 01 46 29.7 -0.2**
comp=Z,75nm,2.1s,mb5.7
PMRV Marv??o 88.68 8 *e*PP PP 01 49 55.5 -1.9
PMRV *e*S S 01 57 11.3 -5.7
PMRV *i*P 02 03 14.1
PMRV *e*LQ 02 10 09.2
PMRV *e*LR LR 02 16 19.2
comp=Z,36µm,20.0s
PMRV Marv??o 88.68 8 *e*P **P 01 46 29.4 -0.5**
LTK Loutraki 88.73 344 P **P 01 46 30.8 +0.7**
MTP Monte Pirata 88.75 62 *e*P **P 01 46 30.4 -0.1**
comp=Z,74nm,0.8s,mb6.1
ETOS Mallorca 88.75 360 P **P 01 46 30.4 +0.2**
comp=Z,432nm,2.1s,mb6.4
PAB San Pablo 88.78 5 *e*P **P 01 46 29.0 -1.3**
PAB *e* 01 50 00.6
PAB pmax pmax
comp=Z,33nm,1.5s,mb5.4
PAB MLR MLR
comp=Z,35µm,19.0s,MS6.8
PAB San Pablo 88.78 5 *e*P **P 01 46 29.0 -1.3**
comp=Z,33nm,1.5s,mb5.4
PAB *e*PP PP 01 50 00.6 +2.4
PAB LR LR
comp=Z,35µm,19.0s,MS6.8
PAYG Puerto Ayora 88.79 93 *e*P **P 01 46 31.4 +0.7**
comp=Z,561nm,1.5s,mb6.7
PAYG LR LR
comp=Z,25µm,19.0s,MS6.7
VSL Villasalto 88.83 355 *e*P **P 01 46 29.7 -0.8**
comp=Z,90nm,1.4s,mb5.9
VSL *e*PP PP 01 50 04.6 +6.1
VSL LR LR
comp=Z,22µm,20.0s,MS6.6
ECHE Chera 88.88 3 P **P 01 46 31.1 +0.3**
ECHE pmax pmax
comp=Z,26nm,1.0s,mb5.5
ECHE Chera 88.88 3 P **P 01 46 31.1 +0.3**
comp=Z,26nm,1.0s,mb5.5
GUR Goura 88.92 344 P **P 01 46 31.2 +0.2**
VLS Valsamata 88.96 346 *e*P **P 01 46 30.7 -0.5**
PMAFR Mafra 88.98 9 *e*P **P 01 46 30.9 -0.4**
comp=Z,127nm,2.0s,mb5.9
PMAFR Mafra 88.98 9 *e*PP PP 01 50 00.9 +1.1
PMAFR *e*S S 01 57 16.0 -3.8
PMAFR *i*P 02 03 16.0
PMAFR *e*LQ 02 10 06.0
PMAFR *e*LR LR 02 16 09.6
comp=Z,46µm,22.0s
KFL Anninata 89.00 346 P **P 01 46 32.9 +1.5**
GOA Goa 89.05 294 ⇑*e*P **P 01 46 30.3 -1.6**
PESTR Estremoz 89.22 8 *e*P **P 01 46 31.8 -0.6**
comp=Z,84nm,1.9s,mb5.7
PESTR Estremoz 89.22 8 *e*PP PP 01 50 03.4 +1.7
PESTR *e*S S 01 57 18.3 -3.8
PESTR *i*P 02 03 20.8
PESTR *e*LQ 02 10 07.6
PESTR *e*LR LR 02 16 42.1
comp=Z,46µm,18.0s
LIS Lisbon 89.23 9 *e*P **P 01 46 31.6 -0.9**
LIS *e*S SKSac 01 57 01.7 -1.2
LIS *e*SS SS 02 03 15.9 +1.7
LIS *e*SS SS 02 03 16.6 +2.4
LIS AMS AMS 02 26 58.8
comp=Z,52µm,23.2s,MS6.9
LIS Lisbon 89.23 9 *e*P **P 01 46 31.6 -0.9**
LIS *e*S SKSac 01 57 01.7 -1.2
LIS *e*SS SS 02 03 15.9 +1.7
USI Ustica 89.33 352 P **P 01 46 33.9 +1.0**
HWQ Hawqa 89.36 333 *e*P **P 01 46 33.8 +0.6**
BANOM Banah 89.36 313 P **P 01 46 33.4 +0.1**
SNR=12
EBAD Badajoz 89.38 7 P **P 01 46 32.1 -1.1**
comp=Z,361nm,2.3s,mb6.3
CSS Prodhromos 89.43 335 *e*P **P 01 46 33.2 -0.2**
comp=Z,307nm,1.8s,mb6.3
CSS Prodhromos 89.43 335 P **P 01 46 32.9 -0.5**
VLX Vlachokerasia 89.46 344 P **P 01 46 37.6 +4.0**
EIBI Ibiza 89.49 1 P **P 01 46 33.7 0.0**
comp=Z,483nm,2.5s,mb6.4
CEL Celeste 89.50 349 *e*P **P 01 46 30.5 -3.2**
comp=Z,46nm,0.9s,mb5.8
CEL LR LR
comp=Z,24µm,19.0s,MS6.6
EVO Evora 89.52 8 *e*P **P 01 46 34.1 +0.3**
comp=Z,60nm,1.9s,mb5.6
EVO Evora 89.52 8 *e*PP PP 01 50 05.2 +1.1
SCLL Scilla 89.52 350 P **P 01 46 34.2 +0.4**
RIV Riverview 89.64 206 *e*P **P 01 46 34.8 +0.7**
MIB Mutribah 89.68 322 *e*P **P 01 46 33.6 -1.1**
MIB AMb AMB 01 46 38.6
comp=Z,130nm,1.6s,mb6.0
ITM Ithomi 89.72 345 *e*P **P 01 46 34.0 -0.8**
EVIA Vianos 89.78 4 P **P 01 46 35.8 +0.8**
EVIA pmax pmax
comp=Z,44nm,1.3s,mb5.6
EVIA Vianos 89.78 4 P **P 01 46 35.8 +0.8**
comp=Z,44nm,1.3s,mb5.6
EBEN Beniarda 89.78 2 P **P 01 46 35.0 0.0**
comp=Z,267nm,2.3s,mb6.2
BHL Bhannes 89.79 333 *e*P **P 01 46 35.2 0.0**
ETOB Tobarra 89.81 3 P **P 01 46 35.1 -0.1**
comp=Z,484nm,2.5s,mb6.4
URZ Urewera 89.86 184 P **P 01 46 33.4 -1.6**
baz=297,slow=2.3
URZ LR LR 02 25 51.7
comp=Z,30µm,18.9s,MS6.8,baz=39,slow=35
URZ Urewera 89.86 184 *e*P **P 01 46 34.8 -0.2**
comp=Z,121nm,1.3s,mb6.1
PBAR Barrancos 89.96 8 *e*P **P 01 46 35.6 -0.3**
comp=Z,140nm,2.1s,mb5.9
PBAR Barrancos 89.96 8 *e*PP PP 01 50 09.0 +1.4
PBAR *e*S S 01 57 28.2 -0.7
PBAR *i*P 02 03 27.8
PBAR *e*LQ 02 10 15.0
PBAR *e*LR LR 02 16 34.4
comp=Z,46µm,18.0s
PBEJ Beja 90.03 8 *e*P **P 01 46 36.8 +0.6**
comp=Z,59nm,1.8s,mb5.6
PBEJ Beja 90.03 8 *e*PP PP 01 50 08.5 +0.3
KBD Kabd 90.11 322 *e*P **P 01 46 35.4 -1.3**
KBD AMb AMB 01 46 40.7
comp=Z,89nm,1.4s,mb5.9
EADA Adamuz 90.14 6 P **P 01 46 35.7 -1.0**
comp=Z,450nm,2.1s,mb6.4
XMIS Christmas Isla 90.17 253 *e*P **P 01 46 37.9 +0.8**
comp=Z,472nm,1.6s,mb6.6
EBAN Banos Encina 90.19 5 P **P 01 46 36.8 -0.1**
EBAN pmax pmax
comp=Z,75nm,1.5s,mb5.8
EBAN Banos Encina 90.19 5 P **P 01 46 36.8 -0.2**
comp=Z,75nm,1.5s,mb5.8
HATD Hatta, Dubai 90.38 313 P **P 01 46 39.0 +0.9**
SNR=17
RDF Al-Radifah 90.38 322 *e*P **P 01 46 37.2 -0.9**
RDF AMb AMB 01 46 42.2
comp=Z,154nm,1.6s,mb6.1
EMIN Mina Concepcio 90.39 7 P **P 01 46 37.1 -0.7**
comp=Z,340nm,2.4s,mb6.2
PTEO Sao Teotonio 90.43 9 *e*P **P 01 46 39.1 +1.0**
comp=Z,113nm,1.8s,mb5.9
PTEO Sao Teotonio 90.43 9 *e*PP PP 01 50 11.1 -0.3
NAZ Nazwa, Dubai 90.46 313 P **P 01 46 38.2 -0.2**
SNR=9.8
EQES Quesada 90.58 4 P **P 01 46 38.2 -0.6**
comp=Z,414nm,2.4s,mb6.3
EMUR La Murta 90.62 3 P **P 01 46 39.6 +0.6**
comp=Z,215nm,1.9s,mb6.2
PVAQ Vaqueiros 90.67 8 *e*P **P 01 46 38.2 -1.0**
comp=Z,133nm,2.1s,mb5.9
PVAQ Vaqueiros 90.67 8 *e*PP PP 01 50 14.3 +1.1
PVAQ *e*S S 01 57 33.0 -2.5
PVAQ *i*P 02 03 38.6
PVAQ *e*LQ 02 12 01.2
PVAQ *e*LR LR 02 18 26.7
comp=Z,40µm,18.0s
MORF Marmelete 90.68 9 *e*P **P 01 46 39.7 +0.5**
comp=Z,111nm,2.1s,mb5.8
MORF Marmelete 90.68 9 *e*PP PP 01 50 14.5 +1.2
MORF *e*S S 01 57 33.7 -1.9
MORF *i*P 02 03 33.3
MORF *e*LQ 02 10 15.7
MORF *e*LR LR 02 17 09.6
comp=Z,49µm,20.0s
MORF Marmelete 90.68 9 *e*P **P 01 46 38.7 -0.5**
MORF *e* 01 50 13.5
MORF *e*S SKSac 01 57 09.6 -1.8
MORF *e*SS SS 02 03 37.1 +1.9
MORF Marmelete 90.68 9 *e*P **P 01 46 40.0 +0.8**
FAQ Al Faqa, Dubai 90.70 313 P **P 01 46 39.3 -0.2**
SNR=6.3
ELUQ Luque 90.76 5 P **P 01 46 38.7 -0.9**
ELUQ pmax pmax
comp=Z,43nm,1.3s,mb5.6
ELUQ Luque 90.76 5 P **P 01 46 38.7 -1.0**
comp=Z,43nm,1.3s,mb5.6
STKA Stephens Creek 90.77 214 *e*P **P 01 46 38.8 -0.6**
comp=Z,116nm,1.2s,mb6.1
STKA *e*S SKSac 01 57 07.2 -4.2
STKA Stephens Creek 90.77 214 P **P 01 46 39.0 -0.4**
comp=Z,62nm,0.7s,mb6.1,baz=347,slow=5.8,SNR=32
STKA PP PP 01 50 15.9 +0.4
comp=Z,9.1nm,1.0s,baz=20,slow=14,SNR=3.6
STKA LR LR 02 24 10.0
comp=Z,80µm,20.9s,MS7.1,baz=15,slow=33
STKA Stephens Creek 90.77 214 *e*P **P 01 46 38.7 -0.7**
comp=Z,133nm,1.6s,mb6.0
PBDV Barranco-do-Ve 90.81 8 *e*P **P 01 46 41.2 +1.4**
comp=Z,123nm,1.8s,mb5.9
PBDV Barranco-do-Ve 90.81 8 *e*PP PP 01 50 15.1 +0.8
PBDV *e*S S 01 57 36.1 -0.7
PBDV *i*P 02 03 41.9
PBDV *e*LQ 02 10 07.7
PBDV *e*LR LR 02 16 49.8
comp=Z,62µm,18.0s
PFVI Vila Bisbo 90.83 9 *e*P **P 01 46 41.1 +1.1**
comp=Z,136nm,1.5s,mb6.1
PFVI Vila Bisbo 90.83 9 *e*PP PP 01 50 15.4 +0.9
PFVI *e*S S 01 57 34.8 -2.2
PFVI *i*P 02 03 32.6
PFVI *e*LQ 02 10 30.5
PFVI *e*LR LR 02 17 10.5
comp=Z,40µm,18.0s
MBWA Marble Bar 90.95 236 *e*P **P 01 46 38.1 -2.4**
comp=Z,410nm,1.6s,mb6.5
MBWA LR LR
comp=Z,22µm,22.0s,MS6.5
MBWA Marble Bar 90.95 236 P **P 01 46 41.1 +0.6**
SNR=17
MBWA P pP 01 46 41.1 -1.1
SNR=17
WBK Wadi Bani Khal 90.96 310 P **P 01 46 43.2 +2.4**
SNR=5.1
SMDO Samad 91.02 311 P **P 01 46 42.0 +0.9**
SNR=7.0
VAM Vamos 91.05 342 *e*P **P 01 46 41.6 +0.6**
ASF Jabal al Asfar 91.05 331 P **P 01 46 40.9 -0.2**
ASF 01 50 13.5
ASF pmax pmax
comp=Z,11nm,1.1s
ASF pmax pmax
comp=Z,7.0nm,1.0s
ASF Jabal al Asfar 91.05 331 P **P 01 46 40.9 -0.1**
comp=Z,11nm,1.1s,mb5.1,baz=235,slow=1.2,SNR=22
ASF PP PP 01 50 13.5 -3.1
comp=Z,6.5nm,1.0s,baz=278,slow=5.9,SNR=3.2
ECOG Cogollos-Vega 91.08 5 P **P 01 46 41.1 0.0**
ECOG pmax pmax
comp=Z,92nm,1.5s,mb5.9
ECOG Cogollos-Vega 91.08 5 P **P 01 46 41.1 0.0**
comp=Z,92nm,1.5s,mb5.9
ANWB Willy Bob 91.14 59 PFAKE 01 46 50.0 +8.3
ANWB LR LR
comp=Z,81µm,21.0s,MS7.1
ELOJ Sierra Loja 91.18 5 P **P 01 46 41.5 -0.1**
ELOJ pmax pmax
comp=Z,179nm,1.7s,mb6.1
ELOJ Sierra Loja 91.18 5 P **P 01 46 41.5 -0.1**
comp=Z,179nm,1.7s,mb6.1
ESPR Espera 91.34 7 P **P 01 46 41.9 -0.5**
comp=Z,157nm,1.3s,mb6.2
ENIJ Nijar 91.45 4 P **P 01 46 43.5 +0.7**
ENIJ pmax pmax
comp=Z,27nm,1.2s,mb5.5
ENIJ Nijar 91.45 4 P **P 01 46 43.5 +0.7**
comp=Z,27nm,1.2s,mb5.5
ARQ Araqi 91.49 312 P **P 01 46 42.4 -0.9**
SNR=19
CNB Canberra Magne 91.53 207 *e*P **P 01 46 42.9 0.0**
PALK Pallekele 91.56 284 *e*P **P 01 46 45.1 +1.4**
PALK pmax pmax
comp=Z,89nm,1.5s,mb5.9
PALK Pallekele 91.56 284 *e*P **P 01 46 45.1 +1.5**
comp=Z,89nm,1.5s,mb5.9
JMDO Jabal Madar 91.58 310 P **P 01 46 43.9 +0.3**
SNR=9.6
GVD Gavdhos 91.62 342 *e*P **P 01 46 42.4 -1.3**
comp=Z,258nm,1.5s,mb6.3
BSY Bisya 91.68 311 P **P 01 46 44.1 -0.1**
SNR=14
SFS San Fernando 91.72 7 PFAKE 01 47 00.0 +16
SFS LR LR
comp=Z,84µm,19.0s,MS7.2
EMIJ Mijas 91.72 6 P **P 01 46 43.5 -0.6**
comp=Z,304nm,2.2s,mb6.2
CMAH Djebel Manchou 91.79 356 P **P 01 46 45.0 +0.6**
DFRA Djebel Bou Aff 91.92 357 P **P 01 46 48.0 +3.0**
WDD Wield Dalam 92.02 350 PFAKE 01 47 00.0 +15
WDD LR LR
comp=Z,28µm,21.0s,MS6.7
CKHR Kef el Ahmar 92.46 358 P **P 01 46 51.0 +3.5**
KEST Kesra 92.58 354 P **P 01 46 47.9 -0.2**
comp=Z,6.4nm,1.0s,mb5.0,baz=270,slow=2.2,SNR=13
KEST PP PP 01 50 25.8 -2.5
comp=Z,14nm,1.3s,baz=38,slow=13,SNR=7.6
PHG Guadaloupe-2 92.58 60 *e*P **P 01 46 51.8 +3.4**
TRD Trivandrum 92.82 287 ⇓*i*x x 01 46 57.0
TRD *i*x x 01 50 39.5
SNZO South Karori 93.03 186 PFAKE 01 47 00.0 +10
SNZO LR LR
comp=Z,30µm,22.0s,MS6.7
SDV Santo Domingo 93.29 71 PFAKE 01 47 00.0 +8.3
SDV LR LR
comp=Z,14µm,20.0s,MS6.4

RTC Rabat Centre 94.13 8 PFAKE 01 47 10.0 +15
RTC LR LR
comp=Z,29μm,20.0s,MS6.7
ROSC El Rosal 94.29 77 P **P** **01 46 56.4 +0.1**
comp=Z,13nm,0.7s,mb5.5,baz=90,slow=16,SNR=12
ROSC LR LR 02 33 14.2
comp=Z,19μm,20.4s,MS6.5,baz=353,slow=38
ROSC El Rosal 94.29 77 *e*P **P** **01 46 56.2 0.0**
TOO Toolangi 94.75 209 *e*P **P** **01 47 01.8 +4.2**
FORT Forrest 95.11 225 *e*P **P** **01 47 01.6 +2.1**
comp=Z,77nm,0.8s,mb6.2
FORT Forrest 95.11 225 *e*P **P** **01 47 01.1 +1.7**
comp=Z,112nm,0.9s,mb6.3
OTAV Otavalo 95.41 83 *e*P **P** **01 47 01.9 +0.6**
comp=Z,154nm,1.7s,mb6.2
OTAV *e*PP PP 01 50 51.8 +0.1
OTAV LR LR
comp=Z,17μm,22.0s,MS6.5
RPZ Rata Peaks 95.71 188 P **P** **01 47 02.7 +0.8**
comp=Z,13nm,0.7s,mb5.5,baz=6.3,slow=9.2,SNR=3.3
RPZ LR LR 02 26 44.8
comp=Z,51μm,19.9s,MS7.0,baz=294,slow=33
RPZ Rata Peaks 95.71 188 P **P** **01 47 02.7 +0.8**
RPZ LR LR 02 26 44.8
GRGR Grenville 95.77 62 PFAKE 01 47 10.0 +7.0
GRGR LR LR
comp=Z,61μm,21.0s,MS7.0
BBGH Gun Hill 96.07 60 PFAKE 01 47 20.0 +16
BBGH LR LR
comp=Z,147μm,22.0s,MS7.4
RPN Rapa Nui 98.63 123 PFAKE 01 47 30.0 +14
RPN LR LR
comp=Z,14μm,21.0s,MS6.4
MOO Moorlands 98.79 206 *e*P **P** **01 47 19.3 +3.5**
MOO *e*S SKSac 01 57 44.0 -10
TAU Tasmania Unive 99.19 205 PFAKE 01 47 30.0 +12
TAU LR LR
comp=Z,19μm,20.0s,MS6.6
ATAH Atahualpa 101.19 87 PP PP 01 51 41.8 +5.7
comp=Z,4.0nm,0.7s,baz=343,slow=10,SNR=5.3
NWAO Narrogin (SRO) 101.90 231 PFAKE 01 47 40.0 +10
NWAO LR LR
comp=Z,14μm,20.0s,MS6.5
NNA Nana 105.90 89 PFAKE 01 52 10.0 +9.4
NNA LR LR
comp=Z,18μm,20.0s,MS6.6
DGAR Diego Garcia 108.15 281 PFAKE 01 52 20.0 +15
DGAR LR LR
comp=Z,13μm,20.0s,MS6.5
LPAZ La Paz 114.59 85 *e*PKIKP PKiKP 01 52 15.5 -1.4
LPAZ MLR MLR
comp=Z,26μm,21.0s
TOA0 Torodi Ar. Sit 115.27 1 *e*PKP PKiKP 01 52 16.4 -2.1
TORD Torodi Ar. Bea 115.27 1 Pdiff Pdif 01 48 33.0 +3.1
comp=Z,0.3nm,0.8s,baz=9.4,slow=4.5,SNR=3.0
TORD PKP PKiKP 01 52 15.2 -3.2
comp=Z,4.5nm,0.6s,baz=355,slow=2.5,SNR=37
TORD PP PP 01 53 19.1 +1.4
comp=Z,12nm,1.0s,baz=3.3,slow=5.6,SNR=7.0
TORD PKKPbc PKKPbc 02 02 51.6 +0.7
comp=Z,5.6nm,0.7s,baz=175,slow=3.4,SNR=13
TORD SKKP 02 06 53.6
comp=Z,37nm,1.3s,baz=182,slow=1.8,SNR=13
MSEY Mahe Island 115.83 298 PFAKE 01 52 30.0 +10
MSEY LR LR
comp=Z,20μm,22.0s,MS6.7
SIV San Ignacio 118.70 79 PKP PKPdf 01 52 22.6 -2.3
comp=Z,9.6nm,0.8s,baz=313,slow=0.8,SNR=14
SIV PP PP 01 53 45.0 +2.2
comp=Z,17nm,1.1s,baz=337,slow=7.9,SNR=12
SIV PKKPab PKKPab 02 02 44.1 +0.9
comp=Z,7.3nm,0.9s,baz=117,slow=7.2,SNR=13
LVC Limon Verde 118.85 90 PKP PKPdf 01 52 24.6 -0.4
comp=Z,12nm,1.0s,baz=339,slow=1.8,SNR=7.0
LVC PP PP 01 53 47.9 +3.9
comp=Z,8.6nm,1.2s,baz=293,slow=7.4,SNR=3.5
LVC Limon Verde 118.85 90 *e*PKPdf PKPdf 01 52 26.8 +1.8
LVC LR LR
comp=Z,15μm,20.0s,MS6.6
DBIC Dimbokro 121.36 9 PKP PKPdf 01 52 27.4 -2.8
comp=Z,16nm,1.0s,baz=29,slow=0.3,SNR=13
DBIC PKKPbc PKKPbc 02 02 29.1 0.0
comp=Z,4.8nm,0.5s,baz=145,slow=3.0,SNR=8.1
DBIC Dimbokro 121.36 9 *e*PKPdf PKPdf 01 52 28.7 -1.5
DBIC LR LR
comp=Z,19μm,19.0s,MS6.8
TIC Toumodi 121.37 9 *e*PKIKP PKPdf 01 52 29.6 -0.6
comp=Z,97nm,1.2s
KMBO Kilima Mbogo 121.66 318 PKP PKPdf 01 52 30.4 -0.3
comp=Z,7.8nm,1.1s,baz=16,slow=3.8,SNR=8.7
KMBO PKKPab PKKPab 02 02 35.5 +3.3
comp=Z,1.5nm,0.5s,baz=94,slow=12,SNR=4.7
KMBO Kilima Mbogo 121.66 318 *e*PKPdf PKPdf 01 52 30.3 -0.4
KMBO LR LR
comp=Z,33μm,19.0s,MS7.0
KMBO Kilima Mbogo 121.66 318 *e*P PKPdf 01 52 30.5 -0.3
KMBO AMS AMS 02 51 07.3
comp=Z,418μm,19.5s,MS8.1
KIC Kosan Boka 121.68 8 *e*PKIKP PKPdf 01 52 30.0 -0.8
comp=Z,27nm,0.8s
LIC Lamto 121.79 9 *e*PKIKP PKPdf 01 52 28.0 -3.0
comp=Z,25nm,0.8s
LIC *e*MLR MLR
comp=Z,42μm,18.5s,MS6.8
LIC Lamto 121.79 9 *e*PKIKP PKPdf 01 52 30.2 -0.8
comp=Z,108nm,1.6s
LIC Lamto 121.79 9 *e*PKPdf PKPdf 01 52 28.0 -3.0
LIC LR LR
comp=Z,21μm,18.5s,MS6.8
LCO Las Campanas 122.37 97 *e*PKPdf PKPdf 01 52 32.8 +1.2
LCO LR LR
comp=Z,17μm,19.0s,MS6.7
DRV Dumont d'Urvil 122.50 199 PP PP 01 54 18.0 +10
DRV SP SP 02 04 15.0 +14
DRV SS SS 02 11 27.0 +37
RCBR Riachuelo 124.24 48 PFAKE 01 52 50.0 +14
RCBR LR LR
comp=Z,40μm,21.0s,MS7.1
FCH Farellones 125.63 100 *e*P PKPdf 01 52 39.4 +1.7
LMEL Las Melosas 126.04 101 ‖ *i*P PKPdf 01 52 41.0 +2.5
CPUP Villa Florida 128.74 84 PKP PKPdf 01 52 42.0 -1.8
comp=Z,21nm,0.7s,baz=322,slow=2.6,SNR=28
CPUP SKPbc 01 56 02.3
comp=Z,3.8nm,0.7s,baz=306,slow=5.1,SNR=3.3
CPUP Villa Florida 128.74 84 *e*PKPdf PKPdf 01 52 42.4 -1.4
CASY Casey 129.77 210 *e*P PKPdf 01 52 45.8 +1.3
CASY Casey 129.77 210 *e*PKPdf PKPdf 01 52 44.0 -0.6
CASY *e*SKP 01 56 08.1
CASY LR LR
comp=Z,27μm,22.0s,MS6.9
SBA Scott Base 129.81 184 *e*PKPdf PKPdf 01 52 43.5 -0.9
SBA *e*SKP 01 56 07.7
SBA LR LR
comp=Z,14μm,22.0s,MS6.6
PLCA Paso Flores 130.33 108 PKP PKPdf 01 52 46.3 -0.1
comp=Z,101nm,1.0s,baz=255,slow=1.6,SNR=8.5
PLCA SKPbc SKPbc 01 56 07.8 -2.2
comp=Z,29nm,1.0s,baz=313,slow=3.0,SNR=5.7
PLCA Paso Flores 130.33 108 *e*PKPdf PKPdf 01 52 46.3 -0.1
PLCA *e*PP PP 01 55 02.6 +1.8
PLCA *e*SKPbc SKPbc 01 56 07.4 -2.5
PLCA LR LR
comp=Z,29μm,19.0s,MS7.0
ABPO Ambohimpanom 132.15 296 *e*PKPdf PKPdf 01 52 51.3 +0.8
ABPO *e*SKP 01 56 13.9
ABPO LR LR
comp=Z,21μm,21.0s,MS6.8
TRQA Tornquist 133.82 99 *e*PKPdf PKPdf 01 52 52.5 -0.6
TRQA *e*SKPbc SKPbc 01 56 19.7 -2.7
TRQA LR LR
comp=Z,29μm,19.0s,MS7.0
MIR Mirnyy 135.78 215 *i* PKIKP PKPdf 01 52 59.0 +3.2
MIR *e*PS PS 02 05 50.0 -7.9
MIR pmax pmax
comp=Z,700nm,6.0s
LSZ Lusaka 138.15 321 *e*PKIKP PKPdf 01 52 59.6 -2.2
LSZ MLR MLR
comp=Z,28μm,22.0s,MS7.0
LSZ Lusaka 138.15 321 *e*PKPdf PKPdf 01 52 59.5 -2.2
LSZ LR LR
comp=Z,28μm,22.0s,MS7.0
LSZ Lusaka 138.15 321 *e*P PKPdf 01 53 02.0 +0.2
QSPA South Pole Qui 141.61 180 PKhKP 01 53 00.3
comp=Z,40nm,0.7s,baz=28,slow=1.4,SNR=26
QSPA PKP PKPdf 01 53 04.6 -1.6
comp=Z,43nm,0.6s,baz=352,slow=1.0,SNR=74
QSPA South Pole Qui 141.61 180 PKP 01 53 00.3
QSPA PKP PKPdf 01 53 04.6 -1.6
QSPA LR LR
comp=Z,18μm,20.0s,MS6.8
EFI East Falkland 143.47 114 *e*PKHKP 01 53 04.0
EFI *e* 01 53 10.1
EFI MLR MLR
comp=Z,37μm,21.0s,MS7.1
EFI East Falkland 143.47 114 *e*PKPpre 01 53 04.0
EFI *e*PKPdf PKPdf 01 53 10.1 -0.2
EFI *e*SKP 01 56 46.1
EFI LR LR
comp=Z,37μm,21.0s,MS7.1
SHEL Horse Pasture 143.59 13 PFAKE 01 53 20.0 +8.4
SHEL LR LR
comp=Z,16μm,21.0s,MS6.8
MSNA Messina 143.68 314 *e*P PKPdf 01 53 09.5 -2.1
MSNA AMS AMS 03 00 48.4
comp=Z,19μm,20.4s,MS6.9
PMSA Palmer Station 144.54 137 PKP PKPdf 01 53 10.3 -1.4
comp=Z,162nm,0.8s,baz=292,slow=2.7,SNR=21
PMSA Palmer Station 144.54 137 *e*PKPdf PKPdf 01 53 10.2 -1.5
PMSA LR LR
comp=Z,17μm,20.0s,MS6.8
TSUM Tsumeb 145.33 334 *e*PKPdf PKPdf 01 53 12.2 -2.4
POGA Pongola 147.21 307 *e*P PKPdf 01 53 18.6 +1.1
POGA AMS AMS 03 13 11.6
comp=Z,23μm,19.1s,MS7.0
MAW Mawson 147.36 218 PKP2 PKPbc 01 53 18.3 -0.6
MAW pmax pmax
comp=Z,83nm,0.7s
MAW Mawson 147.36 218 *e*P PKPdf 01 53 16.8 +0.3
comp=Z,224nm,1.1s
MAW Mawson 147.36 218 PKPbc PKPbc 01 53 18.3 -0.7
comp=Z,83nm,0.7s,baz=81,slow=3.1,SNR=40
LBTB Lobatse 147.94 318 *e*PKPdf PKPdf 01 53 19.4 +0.6
LBTB *e*PKPbc PKPbc 01 53 21.8 0.0
LBTB LR LR
comp=Z,29μm,20.0s,MS7.1
LBTB Lobatse 147.94 318 *e*P SS 02 15 55.4 +0.7
LBTB AMS AMS 03 07 32.4
comp=Z,21μm,19.2s,MS7.0
ERPM east rand prop 147.95 313 *e*P PKPdf 01 53 19.6 +0.9
ERPM AMS AMS 03 14 47.4
comp=Z,23μm,20.0s,MS7.0
KSR Koster 148.12 315 *e*P PKPdf 01 53 20.6 +1.5
KSR AMS AMS 02 59 18.9
comp=Z,16μm,21.3s,MS6.8
KLOF Kloof 148.24 314 *e*P PKPdf 01 53 20.5 +1.3
KLOF AMS AMS 03 03 16.1
comp=Z,12μm,21.1s,MS6.6
PRYS Parys 148.84 314 *e*P PKPdf 01 53 20.8 +0.6
PRYS AMS AMS 03 03 29.4
comp=Z,21μm,21.1s,MS6.9
SEK Senekal 149.92 312 *e*P PKPdf 01 53 23.3 +1.4
SEK AMS AMS 03 12 09.5
comp=Z,23μm,20.5s,MS7.0
BOSA Boshof 151.24 315 PKIKP PKPbc 01 53 27.8 -2.1
BOSA pmax pmax
comp=Z,39nm,0.7s
BOSA Boshof 151.24 315 PKPbc PKPbc 01 53 27.8 -2.0
comp=Z,39nm,0.7s,baz=38,slow=1.4,SNR=52
BOSA Boshof 151.24 315 PKPbc PKPbc 01 53 27.8 -2.0
BOSA LR LR
comp=Z,39μm,21.0s,MS7.2
BOSA Boshof 151.24 315 *e*P PKPdf 01 53 24.0 +0.1
BOSA AMS AMS 03 11 22.1
comp=Z,35μm,19.8s,MS7.2
UPI Upington 152.66 322 *e*P PKPdf 01 53 27.7 +1.6
UPI AMS AMS 03 09 55.6
comp=Z,30μm,20.2s,MS7.1
HVD Gariep Dam 152.83 312 *e*P PKPdf 01 53 28.0 +1.8
HVD AMS AMS 03 11 08.9
comp=Z,32μm,20.4s,MS7.1
SOE Somerset East 154.56 310 *e*P PKPdf 01 53 30.9 +2.3
SOE AMS AMS 03 10 58.4
comp=Z,33μm,20.4s,MS7.1
KOMG Komaggas 155.32 327 *e*P PKPdf 01 53 30.8 +1.0
KOMG AMS AMS 03 15 36.9
comp=Z,22μm,17.9s,MS7.0
SYO Syowa Base 155.51 212 ‖ *e*pPKPdf pPKPbc 01 53 37.2 -2.5
SUR Sutherland 156.39 318 PFAKE 01 53 40.0 +8.9
SUR LR LR
comp=Z,31μm,21.0s,MS7.1
CER Ceres 157.87 320 *e*P PKPdf 01 53 34.3 +1.4
CER AMS AMS 03 05 12.1
comp=Z,10μm,21.4s,MS6.6
ELIM Elim 158.75 318 *e*P PKPdf 01 53 35.0 +0.9
VNA3 Neumayer Olymp 159.78 169 *e*PKPdf PKPdf 01 53 34.2 +0.2
VNA2 Neumayer--Watz 160.34 170 *e*PKPdf PKPdf 01 53 35.4 +0.7
baz=316,slow=3.2
VNA1 Neumayer--Stat 160.50 169 *e*PKPdf PKPdf 01 53 36.5 +1.6
MAIT Maitri 160.55 189 *e*PKPdif PKPab 01 54 15.9 -0.6

*IDC **02** 01:34:21.5±1.5, 42°.81S×72°.53W, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.2/17, mbtmp4.3/9, ML4.6/1, MS4.2/5, Ms1 4.2/5, ms1mx4.1/25, Error ellipse: s-maj=53.1km s-min=13.5km az=111.0*
*ISCJB **02** 01:34:22.1±0.9, 42°.79S±0°.08×72°.2W±0°.2, h10km, mb4.3/9, MS4.3/2, Error ellipse: s-maj=22.9km s-min=11.1km az=12.4*
*NEIC **02** 01:34:23.2±0.9, 42°.83S×72°.47W, h10km, mb4.4/4, Error ellipse: s-maj=24.0km s-min=12.3km az=100.0*
ISC 02 01:34:23.9±0.9, 42°.83S±0°.08×72°.3W±0°.2, h10km, n17, σ1°21/17, mb4.3/9, MS4.3/2, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.47**	**32**	Pn	**Pn**	**01 35 05.6**	**+1.4**
	29nm,0.3s,baz=216,slow=15,SNR=41						
PLCA				Pg	**Pg**	**01 35 08.7**	**-2.6**
	53nm,0.3s,baz=221,slow=17,SNR=61						
PLCA				Lg		01 35 42.6	
	165nm,0.3s,baz=300,slow=22,SNR=17						
PLCA				LR	LR	01 36 16.6	
	comp=Z,4μm,18.6s,baz=207,slow=45						
TRQA	**Tornquist**	**9.20**	**62**	*e*Pn	**Pn**	**01 36 37.9**	**+1.3**
CFAA	**Coronel Fontan**	**11.66**	**17**	Pn	**Pn**	**01 37 11.3**	**+1.0**
	0.1nm,0.3s,baz=204,slow=11,SNR=6.1						
CFAA				LR	LR	01 41 26.3	
	comp=Z,227nm,19.4s,baz=186,slow=36						
USHA	**Ushuaia**	**12.27**	**169**	LR	LR	01 42 04.4	
	comp=Z,931nm,19.6s,baz=318,slow=38						
LVC	**Limon Verde**	**20.36**	**9**	P	**P**	**01 39 00.9**	**+0.3**
	16nm,1.0s,baz=198,slow=9.3,SNR=10.0						
LVC				LR	LR	01 46 52.9	
	comp=Z,2μm,18.2s,MS4.4,baz=182,slow=37						
LVC	**Limon Verde**	**20.36**	**9**	*e*P	**P**	**01 38 58.7**	**-1.8**
	28nm,1.2s						
LVC				LR	LR	01 46 52.9	
CPUP	**Villa Florida**	**20.51**	**41**	P	**P**	**01 39 02.5**	**+0.3**
	1.2nm,0.5s,baz=202,slow=9.0,SNR=5.5						
CPUP				LR	LR	01 47 47.0	
	comp=Z,1μm,18.4s,MS4.2,baz=203,slow=39						
CPUP	**Villa Florida**	**20.51**	**41**	P	**P**	**01 39 02.5**	**+0.3**
CPUP				LR	LR	01 47 47.0	
LPAZ	**La Paz**	**26.69**	**9**	*e*P	**P**	**01 40 03.9**	**+0.7**
	8.0nm,1.1s,mb4.2						
SIV	**San Ignacio**	**28.42**	**23**	P	**P**	**01 40 16.9**	**-1.9**
	5.1nm,0.8s,mb4.2,baz=207,slow=7.5,SNR=12						
OTAV	**Otavalo**	**43.23**	**351**	*e*P	**P**	**01 42 26.2**	**+0.9**
	8.4nm,1.3s,mb4.3						
QSPA	**South Pole Qui**	**47.42**	**180**	P	**P**	**01 42 58.5**	**+0.6**
	13nm,1.0s,mb4.8,baz=155,slow=4.9,SNR=22						
RCBR	**Riachuelo**	**48.89**	**52**	*e*P	**P**	**01 43 09.0**	**-1.1**
	10nm,1.0s,mb4.8						
MAW	**Mawson**	**64.80**	**163**	P	**P**	**01 45 01.3**	**-1.0**
	3.1nm,0.7s,mb4.4,baz=225,slow=11,SNR=4.7						
BOSA	**Boshof**	**76.25**	**116**	P	**P**	**01 46 13.5**	**+0.7**
	2.2nm,0.8s,mb4.1,baz=225,slow=8.6,SNR=3.1						
DBIC	**Dimbokro**	**78.33**	**69**	P	**P**	**01 46 25.1**	**+0.5**
	2.1nm,0.8s,mb4.2,baz=233,slow=5.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**87.45**	**70**	P	**P**	**01 47 10.0**	**-1.8**
	1.0nm,0.9s,mb4.0,baz=222,slow=4.7,SNR=3.6						

*ISCJB **02** 01:37:05.2±0.7, 38°.92N±0°.03×26°.16E±0°.05, h6km±5km, Error ellipse: s-maj=7.0km s-min=4.2km az=146.6*
*CSEM **02** 01:37:05.3±0.2, 38°.93N×26°.16E, h8km, ML2.8/3, Error ellipse: s-maj=4.1km s-min=2.5km az=51.0*
*THE **02** 01:37:05.3, 38°.91N×26°.16E, h3km±1km, ML2.8/3, Error ellipse: s-maj=2.3km s-min=0.7km az=57.0*

*DDA **02** 01:37:05.2, 38°.95N×26°.19E, h7km±3km, Md3.2*
ISC 02 01:37:05.6±0.6, 38°.93N±0°.03×26°.16E±0°.05, h8km±5km, n19, σ0°62/36, 3C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.33**	**16**	P	**Pg**	**01 37 11.7**	**-0.4**
PRK				S	**Sg**	**01 37 17.3**	**+0.8**
PRK	**Paraskevi**	**0.33**	**16**	P	**Pg**	**01 37 11.7**	**-0.4**
PRK				S	**Sg**	**01 37 17.3**	**+0.8**
SIGR	**SIGRI**	**0.37**	**320**	P	**Pg**	**01 37 12.9**	**+0.1**
SIGR				S	**Sg**	**01 37 18.2**	**+0.5**
SIGR	**SIGRI**	**0.37**	**320**	P	**Pg**	**01 37 12.9**	**+0.1**
SIGR				S	**Sg**	**01 37 18.2**	**+0.5**
AYVA	**Ayvalik**	**0.56**	**47**	↑ *i*P	**Pg**	**01 37 15.9**	**-0.6**
AYVA				*i* S	**Sg**	**01 37 23.1**	**-0.7**
AYVA	**Ayvalik**	**0.56**	**47**	*i* P	**Pg**	**01 37 15.9**	**-0.6**
AYVA				*i* S	**Sg**	**01 37 23.1**	**-0.8**
URLA	**Izmir**	**0.66**	**149**	↑ *i*P	**Pg**	**01 37 17.8**	**-0.5**
URLA				*i* S	**Sg**	**01 37 28.4**	**+1.4**
URLA	**Izmir**	**0.66**	**149**	*i* P	**Pg**	**01 37 17.8**	**-0.6**
URLA				*i* S	**Sg**	**01 37 28.4**	**+1.4**
BLCB	**Balcova**	**0.88**	**128**	P	**Pg**	**01 37 21.9**	**-0.6**
BLCB				S	**Sg**	**01 37 34.2**	**+0.3**
BLCB	**Balcova**	**0.88**	**128**	P	**Pg**	**01 37 21.9**	**-0.6**
BLCB				S	**Sg**	**01 37 34.2**	**+0.3**
BOZC	**Bozcaada**	**0.92**	**355**	↑ *i*P	**Pg**	**01 37 22.4**	**-0.8**
BOZC				*i* S	**Sg**	**01 37 35.7**	**+0.5**
LOS	**Limnos**	**1.31**	**321**	P	**Pn**	**01 37 30.0**	**-0.1**
LOS				S	**Sb**	**01 37 47.7**	**+0.4**
LOS	**Limnos**	**1.31**	**321**	P	**Pn**	**01 37 30.0**	**-0.1**
LOS				S	**Sb**	**01 37 47.7**	**+0.4**
BALY	**Balya**	**1.39**	**54**	*e*P	**Pn**	**01 37 30.9**	**-0.4**
BALY				*e*S	**Sb**	**01 37 50.8**	**+1.0**
BALY	**Balya**	**1.39**	**54**	*e*P	**Pn**	**01 37 30.9**	**-0.4**
BALY				*e*S	**Sb**	**01 37 50.8**	**+1.0**
ALN	**Alexandroupoli**	**1.97**	**358**	P	**Pn**	**01 37 38.8**	**-0.4**
ALN				S	**Sn**	**01 38 04.3**	**+0.2**
ALN	**Alexandroupoli**	**1.97**	**358**	P	**Pn**	**01 37 38.8**	**-0.4**
ALN				S	**Sn**	**01 38 04.3**	**+0.2**
OUR	**Ouranopolis**	**2.19**	**311**	P	**Pn**	**01 37 41.7**	**-0.6**
OUR	**Ouranopolis**	**2.19**	**311**	P	**Pn**	**01 37 41.7**	**-0.6**

JMA 02 01:40:14.8±0.3, 28°.79N×128°.26E, h0km, M3.7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.17**	**149**	P	Pg	01 40 37.5	+0.2
JTK				S	Sg	01 40 53.2	+0.8
JAM	**Amami Oshima**	**1.24**	**107**	P	Pg	01 40 38.0	-0.6
JAM				S	Sg	01 40 56.1	+1.4
JZK	**Kikaishima**	**1.58**	**107**	P	Pn	01 40 44.9	+0.9
JZK				*e*S	Sn	01 41 05.9	+0.7
JNN	**Nakanoshima**	**1.76**	**53**	P	Pn	01 40 47.1	+0.6
JIH	**Iheya**	**1.77**	**189**	P	Pn	01 40 47.2	+0.6
JIH				*e*S	Sn	01 41 09.8	0.0
JOW	**Kunigami**	**1.95**	**180**	P	Pn	01 40 49.6	+0.4

IDC 02 01:41:25.8±10.0, 51°.70N×177°.88W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.9/25, mbtmp4.2/5, Error ellipse: s-maj=262.9km s-min=105.5km az=178.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVAR	**Borovoye Array**	**61.02**	**320**	P	P	01 51 41.1	+0.5
	3.7nm,1.0s,baz=64,slow=6.6,SNR=2.6						
FINES	**FINESS Array B**	**65.60**	**348**	P	P	01 52 12.2	+1.4
	2.4nm,0.7s,baz=29,slow=6.3,SNR=2.4						
NOA	**NORSAR Array B**	**67.38**	**355**	P	P	01 52 21.9	-0.4
	2.1nm,0.9s,baz=3.3,slow=6.2,SNR=3.3						
AKASG	**Malin Array Be**	**75.42**	**343**	P	P	01 53 09.1	-1.9
	1.9nm,0.6s,baz=16,slow=5.8,SNR=2.9						
ESDC	**Sonseca Array**	**88.85**	**5**	P	P	01 54 22.4	+0.9
	1.3nm,0.9s,baz=356,slow=5.3,SNR=2.8						

NEIC 02 01:42:56.4, 51°.84N×177°.58W, h9km, ML2.9(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**2.12**	**79**	P	Pn	01 43 32.2	+0.1
SLKM	**Skilak Lake**	**17.41**	**49**	P	Pn	01 47 03.5	+4.2
FIB	**Fire Island**	**17.65**	**47**	P	Pn	01 47 08.3	+6.1
SEW	**Seward**	**17.67**	**51**	P	Pn	01 47 06.2	+3.7
SEW				S		01 47 29.8	
RC01	**Rabbit Creek A**	**17.82**	**48**	P	Pn	01 47 08.8	+4.4
RC01				S		01 47 34.5	
PMR	**Palmer**	**18.26**	**47**	P	Pn	01 47 15.3	+5.5
PMR				S		01 47 45.6	
KNK	**Knik Glacier**	**18.51**	**48**	P	Pn	01 47 16.9	+4.1
DIV	**Divide**	**19.68**	**49**	P	Pn	01 47 32.5	+5.6

*IDC **02** 01:49:06.5±1.0, 51°.92N×177°.76W, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.8/28, mbtmp3.9/12, ML4.1/1, Error ellipse: s-maj=27.5km s-min=20.7km az=177.0*
*NEIC **02** 01:49:07.9, 51°.92N×177°.62W, h9km, ML3.5(AEIC), After AEIC.*
*ISCJB **02** 01:49:09.9±0.8, 52°.0N±0°.1×177°.7W±0°.1, h33km, mb3.9/11, Error ellipse: s-maj=21.3km s-min=12.4km az=0.2*
ISC 02 01:49:11.9±0.8, 52°.0N±0°.1×177°.6W±0°.1, h35km, n14, σ0°61/14, mb3.9/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**2.14**	**82**	P	**Pn**	**01 49 43.9**	**-1.1**
KDAK	**Kodiak Island**	**15.51**	**58**	Pn	**Pn**	**01 52 48.4**	**+0.8**
	0.8nm,0.3s,baz=248,slow=5.4,SNR=5.0						
YKA	**Yellowknife Ar**	**34.31**	**47**	P	**P**	**01 55 53.8**	**-0.7**
	0.3nm,0.7s,mb3.3,baz=84,slow=23,SNR=3.3						
NVAR	**Mina Array Bea**	**42.77**	**84**	P	**P**	**01 57 07.2**	**+1.5**
	0.5nm,0.7s,mb3.4,baz=265,slow=9.7,SNR=3.5						
PDAR	**Pinedale Array**	**45.45**	**73**	P	**P**	**01 57 27.1**	**0.0**
	0.8nm,0.6s,mb3.8,baz=327,slow=2.1,SNR=6.6						
SPITS	**Spitsbergen Ar**	**49.86**	**356**	P	**P**	**01 58 00.8**	**0.0**
	3.7nm,0.8s,mb4.5,baz=35,slow=14,SNR=6.9						
ARCES	**ARCESS Array B**	**57.65**	**351**	P	**P**	**01 58 57.9**	**0.0**
	2.3nm,0.7s,mb4.3,baz=27,slow=8.1,SNR=4.8						
TXAR	**Lajitas Array**	**57.86**	**82**	P	**P**	**01 58 59.7**	**-0.2**
	0.3nm,0.6s,mb3.5,baz=331,slow=5.4,SNR=3.7						
BVAR	**Borovoye Array**	**60.92**	**320**	P	**P**	**01 59 20.2**	**-0.5**
	0.6nm,0.4s,mb4.1,baz=52,slow=8.6,SNR=4.8						
FINES	**FINESS Array B**	**65.39**	**348**	P	**P**	**01 59 50.4**	**+0.2**
	2.4nm,1.1s,mb4.2,baz=2.3,slow=14,SNR=3.7						
AKTK	**Aktyubinsk**	**67.64**	**325**	P	**P**	**02 00 04.8**	**+0.1**
AKTO	**Aktyubinsk**	**67.64**	**325**	P	**P**	**02 00 04.8**	**+0.1**
	1.2nm,0.6s,mb4.1,baz=90,slow=9.1,SNR=4.2						
WRA	**Warramunga Arr**	**82.93**	**225**	P	**P**	**02 01 32.4**	**-0.5**
	0.6nm,0.5s,mb3.9,baz=31,slow=5.8,SNR=2.9						
ASAR	**Alice Springs**	**86.40**	**223**	P	**P**	**02 01 50.6**	**+0.4**
	0.9nm,0.8s,mb4.1,baz=26,slow=4.7,SNR=6.0						

*IDC **02** 01:54:04.0±1.4, 51°.77N×177°.61W, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/27, mbtmp3.7/7, ML4.2/1, Error ellipse: s-maj=39.1km s-min=29.3km az=157.0*
*NEIC **02** 01:54:05.7, 51°.87N×177°.58W, h7km, ML3.5(AEIC), After AEIC.*
*ISCJB **02** 01:54:09.2±4.5, 51°.9N±0°.2×177°.5W±0°.4, h48km±37km, mb3.6/6, Error ellipse: s-maj=36.7km s-min=36.1km az=13.3*
ISC 02 01:54:10.8±4.0, 51°.9N±0°.2×177°.5W±0°.4, h46km±33km, n9, σ0°39/9, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**5.40**	**75**	P	**Pn**	**01 55 28.4**	**-0.3**
KDAK	**Kodiak Island**	**15.48**	**58**	Pn	**Pn**	**01 57 46.1**	**+0.5**
	0.9nm,0.3s,baz=253,slow=2.1,SNR=6.1						
YKA	**Yellowknife Ar**	**34.31**	**47**	P	**P**	**02 00 52.2**	**0.0**
	0.1nm,0.6s,mb2.9,baz=281,slow=7.4,SNR=3.5						
PDAR	**Pinedale Array**	**45.38**	**73**	P	**P**	**02 02 24.8**	**+0.4**
	0.6nm,0.6s,mb3.6,baz=325,slow=3.4,SNR=4.4						
SPITS	**Spitsbergen Ar**	**49.96**	**356**	P	**P**	**02 02 59.7**	**+0.2**
	0.7nm,0.4s,mb4.0,baz=12,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**57.77**	**351**	P	**P**	**02 03 55.9**	**-0.5**
	1.9nm,0.8s,mb4.2,baz=27,slow=8.3,SNR=3.7						
ARCES	**ARCESS Array B**	**57.77**	**351**	P	**P**	**02 03 55.9**	**-0.5**

TXAR	Lajitas Array	57.77	82	P		P	02 03 56.5 -0.6
	0.2nm,0.6s,mb3.3,baz=320,slow=4.9,SNR=3.1						
ASAR	Alice Springs	86.39	224	P		P	02 06 48.1 +0.2
	0.3nm,0.5s,mb3.8,baz=26,slow=5.6,SNR=4.8						

*IDC **02** 01:57:20.1±3.9, 51.°56N×177.°94W, h0km, mb3.7/5, mb1 4.1/6, mb1mx3.6/28, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=75.9km s-min=40.8km az=32.0*
*NEIC **02** 01:57:23.8, 51.°94N×177.°59W, h7km, ML2.9(AEIC), After AEIC.*

ISC 02 01:57:27.1±2.8, 51.°7N±0.°3×177.°6W±0.°3, h35km, n8, σ0°76/8, mb3.7/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	2.15	76	P	Pn	01 57 59.4	-1.0
KDAK	Kodiak Island	15.60	57	Pn	Pn	02 01 05.2	+1.2
	1.0nm,0.3s,baz=259,slow=5.2,SNR=10						
KDAK	Kodiak Island	15.60	57	Pn	Pn	02 01 05.2	+1.2
INK	Inuvik	26.74	35	P	P	02 03 03.0	+0.2
	0.6nm,0.5s,mb3.4,baz=261,slow=6.2,SNR=3.6						
YKA	Yellowknife Ar	34.44	47	P	P	02 04 09.8	-1.0
	0.2nm,0.7s,mb3.2,baz=282,slow=8.3,SNR=3.8						
PDAR	Pinedale Array	45.49	73	P	P	02 05 42.8	+0.2
	0.6nm,0.5s,mb3.7,baz=300,slow=4.1,SNR=5.4						
SPITS	Spitsbergen Ar	50.07	356	P	P	02 06 17.5	-0.2
	7.0nm,1.1s,mb4.6,baz=8.3,slow=15,SNR=4.2						
TXAR	Lajitas Array	57.86	82	P	P	02 07 15.8	+0.7
	0.4nm,0.8s,mb3.5,baz=312,slow=4.7,SNR=3.5						

JMA 02 02:02:58.3±0.3, 32.°19N×138.°22E, h401km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.63	55	P	Pn	02 03 53.0	+0.9
JHJ2				S	S	02 04 36.2	+0.5
JWZ	Kozaga	2.50	303	P	Pn	02 03 56.9	-0.7
JOD2	Odawara 2	3.15	13	P	Pn	02 04 03.4	+0.7
JOD2				S	S	02 04 56.3	+1.4
JNY	Yasuok	3.17	355	P	Pn	02 04 04.8	+1.9
BSO3	Boso 3	3.23	36	P	Pn	02 04 03.1	-0.3
BSO3				S	S	02 04 54.4	-1.8
BSO4	Boso 4	3.31	32	P	Pn	02 04 04.3	+0.3
BSO4				S	S	02 04 56.1	-1.2
BSO1	Boso 1	3.37	42	P	Pn	02 04 04.7	+0.1
BSO1				S	S	02 04 56.1	-2.2
JHU	Hanno	3.76	13	S	S	02 05 02.9	-1.8
JRY	Ryogami san	3.86	8	P	Pn	02 04 11.1	+2.1
JRY				S	S	02 05 06.3	-0.1
JWT	Wachi	3.88	323	P	Pn	02 04 10.0	+0.9
JAG	Ashikaga	4.35	13	S	S	02 05 11.9	-3.0
JYT	Yasato	4.35	22	P	Pn	02 04 14.6	+1.0
JYT				S	S	02 05 12.0	-2.9
JHO	Hitachi	4.82	23	P	Pn	02 04 18.6	+0.3
JHO				S	S	02 05 20.2	-3.3
CBIJ	Chichi jima	6.14	145	S	S	02 05 41.7	-7.6
JMK	Ichinoseki	7.17	19	S	S	02 06 08.9	-1.2

*ISCJB **02** 02:08:42.7±1.3, 51.°9N±0.°4×177.°8W±0.°2, h10km, mb3.4/4, Error ellipse: s-maj=57.6km s-min=13.1km az=163.6*
*IDC **02** 02:08:43.1±2.5, 51.°63N×177.°79W, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.4/26, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=148.1km s-min=28.2km az=151.0*
*NEIC **02** 02:08:44.5, 51.°80N×177.°59W, h8km, ML3.6(AEIC), After AEIC.*

ISC 02 02:08:44.4±1.4, 51.°8N±0.°4×177.°7W±0.°3, h10km, n7, σ1°02/8, mb3.4/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.04	75	ePg	Pg	02 09 03.2	-1.3
ATKA	Atka Island	2.19	79	P	Pn	02 09 20.4	-0.4
ATKA				S	Sn	02 09 48.6	+0.6
KDAK	Kodiak Island	15.60	58	Pn	Pn	02 12 24.1	+0.1
	0.6nm,0.3s,baz=286,slow=7.4,SNR=6.9						
NVAR	Mina Array Bea	42.81	84	P	P	02 16 43.7	+1.5
	0.2nm,0.5s,mb3.1,baz=315,slow=7.8,SNR=2.4						
PDAR	Pinedale Array	45.52	73	P	P	02 17 07.2	+3.4
	0.5nm,0.6s,mb3.6,baz=305,slow=3.2,SNR=4.1						
TXAR	Lajitas Array	57.91	82	P	P	02 18 35.8	-0.7
	0.2nm,0.7s,mb3.3,baz=327,slow=6.5,SNR=3.1						
ASAR	Alice Springs	86.29	223	P	P	02 21 25.7	-0.4
	0.4nm,0.8s,mb3.7,baz=22,slow=5.2,SNR=3.2						

*ISCJB **02** 02:12:31.9±0.2, 45.°38N±0.°01×112.°55W±0.°02, h10km, Error ellipse: s-maj=1.6km s-min=1.5km az=159.7*
*NEIC **02** 02:12:32.0, 45.°38N×112.°59W, h11km, ML3.0(BUT), After BUT.*

ISC 02 02:12:32.1±0.1, 45.°382N±0.°009×112.°57W±0.°01, h10km, n81, σ1°08/158, 39C-41D, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMT	Dillon	0.03	227	ePg	Pg	02 12 33.9	0.0
G15A	Dillon	0.22	166	⇑P	Pg	02 12 36.7	0.0
	baz=0.2						
G15A				⇓S	Sg	02 12 39.8	+0.1
	baz=0.2						
LRM	Limekiln Ridge	0.45	10	ePg	Pg	02 12 40.7	-0.1
F15A	Butte	0.46	6	⇑P	Pg	02 12 41.2	+0.1
	baz=0.4,SNR=847						
F15A				⇓S	Sg	02 12 47.6	+0.4
	baz=0.4						
G16A	Moss Hill, Enn	0.56	106	⇓P	Pg	02 12 43.0	+0.1
	baz=0.5						
G16A				⇓S	Sg	02 12 50.6	+0.3
	baz=0.5						
MCMT	McKenzie Canyo	0.59	200	ePg	Pg	02 12 43.0	-0.5
MCMT				eSg	Sg	02 12 51.1	-0.1
G14A	Jackson	0.65	258	⇑P	Pg	02 12 44.2	-0.4
	baz=0.7,SNR=58						
G14A				⇓S	Sg	02 12 52.4	-0.6
	baz=0.7						
F14A	Wisdom	0.71	308	⇓P	Pg	02 12 45.5	-0.3
	baz=0.7						
F14A				⇓S	Sg	02 12 54.6	-0.4
	baz=0.7						
BOZ	Bozeman (W)	0.71	68	ePg	Pg	02 12 45.2	-0.6
BOZ				ePn	Pn	02 12 48.0	-0.1
BOZ				eSg	Sg	02 12 55.5	+0.4
H15A	Lima	0.77	184	⇑P	Pg	02 12 46.2	-0.7
	baz=0.8						
H15A				⇑S	Sg	02 12 56.5	-0.4
	baz=0.8						
F16A	Kennard Place,	0.77	58	⇓P	Pg	02 12 46.9	-0.1
	baz=0.7,SNR=6.6						
H14A	Leadore	0.95	217	⇓P	Pg	02 12 49.7	-0.7
	baz=1.0						
H14A				⇓S	Sg	02 13 02.1	-0.7
	baz=1.0						
QLMT	Earthquake Lak	0.98	124	ePn	Pn	02 12 50.6	-1.2
QLMT				eSg	Sg	02 13 03.3	-0.3
QLMT				eSn	Sn	02 13 06.5	+0.8
E15A	Deer Lodge	1.04	357	⇓P	Pg	02 12 51.7	-0.4
	baz=1.0,SNR=190						
E15A				⇑S	Sg	02 13 05.6	-0.2
	baz=1.0						
H16A	Russell Place,	1.16	125	⇓P	Pb	02 12 53.9	-0.3
	baz=1.1						
H16A				⇑S	Sb	02 13 09.1	-0.1
	baz=1.1						
G13A	Cobalt	1.21	257	P	Pn	02 12 54.4	-0.6
	baz=1.2,SNR=1000						
G13A				⇑S	Sb	02 13 09.5	-1.2
	baz=1.2						
E14A	Clinton	1.22	328	P	Pn	02 12 54.8	-0.4
	baz=1.2,SNR=219						
E14A				⇑S	Sb	02 13 11.1	+0.1
	baz=1.2						
G17A	Pierce Place,	1.29	92	⇓P	Pn	02 12 56.2	+0.1
	baz=1.3,SNR=27						
G17A				⇑S	Sb	02 13 13.4	+0.4
	baz=1.3						
F13A	Darby	1.30	289	⇑P	Pn	02 12 56.0	-0.3
	baz=1.3,SNR=100						
F13A				⇑S	Sb	02 13 12.2	-1.3
	baz=1.3						
E16A	East Helena	1.31	28	⇑P	Pn	02 12 56.6	+0.2
	baz=1.3,SNR=184						
E16A				⇓S	Sb	02 13 14.6	+1.0
	baz=1.3						
YMR	Madison River	1.34	122	ePn	Pn	02 12 57.7	+0.9
YMR				eSg	Sg	02 13 14.8	-0.4
I15A	Monteview	1.38	178	⇑Pb	Pb	02 12 58.0	0.0
	baz=1.4,SNR=20						
HRY	Holter Researc	1.43	21	ePn	Pn	02 12 57.9	-0.1
HRY				ePg	Pg	02 12 59.6	+0.2
HRY				eSn	Sn	02 13 16.1	-0.7
F17A	Fitzpatrick Pl	1.44	68	⇑P	Pn	02 12 58.6	+0.4
	baz=1.4,SNR=186						
F17A				⇓S	Sn	02 13 18.1	+1.0
	baz=1.4						
H13A	Challis	1.45	236	⇑Pb	Pb	02 12 59.0	-0.2
	baz=1.5,SNR=64						
H13A				⇓S	Sn	02 13 17.0	-0.3
	baz=1.5						
YNR	Norris Junctio	1.50	116	ePn	Pn	02 13 00.1	+1.1
YNR				eSg	Sg	02 13 19.3	-0.9
YFT	Old Faithful	1.54	126	ePg	Pg	02 13 01.1	-0.5
YFT				eSg	Sg	02 13 21.0	-0.7
E13A	Victor	1.55	314	⇓Pb	Pb	02 13 00.8	0.0
	baz=1.6						
E13A				⇓S	Sn	02 13 20.6	+0.7
	baz=1.6						
I14A	Mackay	1.58	204	Pb	Pb	02 13 00.8	-0.6
	baz=1.6,SNR=132						
I14A				⇓S	Sn	02 13 21.4	+0.8
	baz=1.6						
CHMT	Chamberlain Mo	1.60	343	ePg	Pg	02 13 01.8	-1.0
CHMT				eSg	Sg	02 13 22.5	-1.2
E17A	Martinsdale	1.61	47	⇓P	Pn	02 13 01.0	+0.5
	baz=1.6,SNR=105						
D15A	Lincoln	1.66	1	⇓P	Pn	02 13 01.5	+0.3
	baz=1.6,SNR=387						
D15A				⇓Sb	Sb	02 13 25.6	+1.9
	baz=1.6						
I16A	Newdale	1.69	152	⇑P	Pn	02 13 02.3	+0.7
	baz=1.7,SNR=18						
MSO	Missoula	1.73	327	ePn	Pn	02 13 02.0	-0.3
MSO				ePg	Pg	02 13 04.2	-1.2
MSO				eSg	Sg	02 13 26.1	-1.7
LKWY	Lake	1.74	117	ePg	Pg	02 13 05.1	-0.4
LKWY				eSg	Sg	02 13 28.6	+0.6
D16A	Dana Ranch, Ca	1.79	23	⇑P	Pn	02 13 03.6	+0.5
	baz=1.8,SNR=97						
D14A	Greenough	1.82	339	P	Pn	02 13 03.6	+0.1
	baz=1.8,SNR=135						
D14A				⇑Sb	Sb	02 13 29.4	+1.1
	baz=1.8						
H12A	Diamond D Ranc	1.82	244	⇓P	Pn	02 13 03.9	+0.4
	baz=1.9						
H12A				⇓Sb	Sb	02 13 29.2	+0.8
	baz=1.9						
I13A	Wildhorse Cree	1.84	218	P	Pn	02 13 04.2	+0.5
	baz=1.9,SNR=117						
I13A				⇑Sb	Sb	02 13 29.3	+0.6
	baz=1.9						
IMW	Indian Meadow	1.89	141	ePg	Pg	02 13 05.8	-2.4
IMW				eSg	Sg	02 13 31.7	-1.0
F12A	Elk City	1.92	282	⇑P	Pn	02 13 05.4	+0.6
	baz=1.9						
F12A				⇓Sb	Sb	02 13 31.6	+0.3
	baz=1.9						
G12A	Big Creek, Yel	1.96	264	⇑P	Pn	02 13 05.7	+0.3
	baz=2.0,SNR=207						
G12A				⇓Sb	Sb	02 13 33.1	+0.6
	baz=2.0						
SLMT	Seeley Lake	1.97	341	ePn	Pn	02 13 05.4	0.0
SLMT				ePb	Pb	02 13 06.8	-1.2
SLMT				ePg	Pg	02 13 09.0	-0.8
SLMT				eSg	Sg	02 13 33.7	-1.7
J15A	Blackfoot	1.98	177	⇓P	Pn	02 13 06.6	+0.9
	baz=2.0,SNR=36						
J15A				⇑Sb	Sb	02 13 34.2	+1.3
	baz=2.0						
I17A	Pilgrim Ck.	2.04	135	⇑Pb	Pb	02 13 09.7	+0.5
	baz=2.0,SNR=9.6						
I17A				⇓Sb	Sb	02 13 36.7	+2.1
	baz=2.0						
DCID1	Drake Creek	2.04	151	ePn	Pn	02 13 06.1	-0.4
DCID1				eSg	Sg	02 13 37.5	-0.2
F18A	Big Timber	2.07	74	⇑Sb	Sb	02 13 37.3	+1.9
	baz=2.0						
G18A	Lazy EL Ranch,	2.12	91	⇑Sb	Sb	02 13 39.0	+2.1
	baz=2.1						
D13A	Huson	2.16	323	⇓Sb	Sb	02 13 39.6	+1.5
	baz=2.2						
J14A	Carey	2.17	199	⇓P	Pn	02 13 09.1	+0.9
	baz=2.2,SNR=112						
J14A				⇑Sb	Sb	02 13 39.3	+1.0
	baz=2.2						
E18A	Harlowton	2.20	56	⇓Sb	Sb	02 13 41.4	+2.2
	baz=2.2						
D17A	Six Diamond Ra	2.20	36	P	Pn	02 13 08.8	+0.1
	baz=2.2,SNR=53						
D17A				⇓Sb	Sb	02 13 41.3	+2.1
	baz=2.2						
J16A	Bone	2.22	162	⇑P	Pn	02 13 11.0	+2.1
	baz=2.2,SNR=11						
J16A				⇓Sb	Sb	02 13 41.3	+1.6
	baz=2.2						
TPAW	Teton Pass	2.22	148	ePn	Pn	02 13 08.7	-0.2
TPAW				ePg	Pg	02 13 11.8	-2.8
TPAW				eSn	Sn	02 13 34.6	-1.7
TPAW				eSg	Sg	02 13 41.4	-1.9
RRI2	Red Ridge	2.22	156	ePg	Pg	02 13 11.4	-3.2
RRI2				eSg	Sg	02 13 40.5	-2.9
HLID	Hailey	2.25	217	ePn	Pn	02 13 09.8	+0.5
HLID				ePg	Pg	02 13 14.0	-1.2
HLID				eSn	Sn	02 13 36.5	-0.6
HLID				eSg	Sg	02 13 41.1	-3.2
LOHW	Long Hollow	2.26	141	ePg	Pg	02 13 12.1	-3.3
LOHW				eSg	Sg	02 13 41.5	-3.1
J13A	Cove Ranch, Pi	2.29	211	⇑P	Pn	02 13 10.7	+0.7
	baz=2.3,SNR=40						
J13A				⇓Sb	Sb	02 13 43.1	+1.2
	baz=2.3						
E12A	Beaver Dam Sad	2.34	297	⇓Sb	Sb	02 13 44.7	+1.5
	baz=2.4						
RLMT	Red Lodge	2.34	95	ePn	Pn	02 13 10.8	+0.1
RLMT				ePg	Pg	02 13 14.7	-2.3
RLMT				eSg	Sg	02 13 45.3	-2.1
SWMT	Swartz Lake	2.35	336	ePn	Pn	02 13 11.0	+0.3
SWMT				ePg	Pg	02 13 15.5	-1.5
SWMT				eSg	Sg	02 13 45.4	-2.0
REDW	Red Top Meadow	2.36	148	ePn	Pn	02 13 09.6	-1.3
REDW				ePg	Pg	02 13 14.2	-3.2
REDW				eSg	Sg	02 13 46.7	-1.3
C15A	Salmond Ranch,	2.39	359	⇓P	Pn	02 13 11.4	+0.1
	baz=2.4						
I12A	Atlanta	2.42	230	⇓P	Pn	02 13 12.2	+0.4
	baz=2.5,SNR=35						
I12A				⇑Sb	Sb	02 13 46.9	+1.2
	baz=2.5						
C16A	Fuhringer Ranc	2.49	13	⇑P	Pn	02 13 12.6	0.0
	baz=2.5,SNR=44						
C16A				⇑Sb	Sb	02 13 49.4	+2.0
	baz=2.5						
C14A	Swan Lake	2.52	342	⇓P	Pn	02 13 13.4	+0.3
	baz=2.5,SNR=12						
C14A				⇑Sb	Sb	02 13 50.6	+2.1
	baz=2.5						
H11A	Donnelly	2.54	256	⇓Sb	Sb	02 13 50.1	+1.2
	baz=2.6						
F11A	Grangeville	2.57	283	⇑Sb	Sb	02 13 50.9	+1.1
	baz=2.6						
C17A	Wharram Farm,	2.57	28	⇑P	Pn	02 13 13.7	0.0
	baz=2.5,SNR=16						
JTMT	Jette	2.65	334	ePn	Pn	02 13 15.7	+0.9
JTMT				ePg	Pg	02 13 21.0	-1.8
JTMT				eSg	Sg	02 13 54.1	-2.9
YBMT	Yellow Bay	2.67	339	ePn	Pn	02 13 15.5	+0.3
YBMT				ePg	Pg	02 13 20.2	-3.2
YBMT				eSg	Sg	02 13 56.6	-1.4
K15A	Arbon	2.70	179	⇓Sb	Sb	02 13 55.1	+1.6
	baz=2.7						
J12A	Stokes Ranch,	2.80	221	⇑Sb	Sb	02 13 58.0	+1.5
	baz=2.8						
I11A	Placerville	2.83	240	⇑Sb	Sb	02 13 59.0	+1.6
	baz=2.9						
J18A	Kendall Valley	2.84	139	⇑Sb	Sb	02 13 59.9	+2.3
	baz=2.8						
B16A	M & M Farms, S	3.09	11	⇓P	Pn	02 13 21.8	+0.9
	baz=3.1,SNR=16						
B17A	L&G Farms, Che	3.15	22	⇑P	Pn	02 13 22.1	+0.3
	baz=3.1,SNR=13						
EGMT	Eagleton	3.28	35	ePn	Pn	02 13 23.7	+0.3
EGMT				eSn	Sn	02 14 02.3	-0.1
EGMT				eSg	Sg	02 14 16.1	-1.1
BMO	Blue Mountains	3.40	263	ePn	Pn	02 13 25.7	+0.6
BMO				ePg	Pg	02 13 33.4	-3.8
BMO				eSn	Sn	02 14 04.6	-0.8
BMO				eSg	Sg	02 14 16.2	-4.9
HVU	Hansel Valley	3.60	182	ePn	Pn	02 13 28.1	+0.2
HVU				ePg	Pg	02 13 37.4	-3.8
HVU				eSg	Sg	02 14 23.7	-4.1
CCUT	Cedar City	7.85	185	ePn	Pn	02 14 27.5	+1.2

IDC 02 02:16:28.5±7.0, 20.°38S×178.°21W, h541km±65km, mb3.1/4, mb1 3.5/5, mb1mx3.1/17, mbtmp3.3/5, Error ellipse: s-maj=238.7km s-min=20.6km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.90	45	P	P	02 18 35.1	0.0
	12nm,0.3s,baz=64,slow=6.2,SNR=4.5						
AFI				S	S	02 20 13.7	-5.4
	2.7nm,0.3s,baz=72,slow=20,SNR=5.1						
CTA	Charters Tower	33.30	264	P	P	02 22 22.2	+0.4
	14nm,1.1s,baz=100,slow=12,SNR=5.8						
ASAR	Alice Springs	44.35	257	P	P	02 23 51.1	+0.1
	2.2nm,0.7s,baz=93,slow=8.2,SNR=20						
WRA	Warramunga Arr	44.42	262	P	P	02 23 50.7	-0.9
	0.7nm,0.6s,baz=97,slow=8.4,SNR=5.7						
TXAR	Lajitas Array	87.16	57	P	P	02 28 17.6	+0.2
	0.5nm,0.8s,baz=221,slow=5.0,SNR=6.4						

*IDC **02** 02:30:03.7±3.6, 51.°11N×177.°75W, h0km, mb3.4/5, mb1 3.9/6, mb1mx3.5/27, mbtmp3.6/6, ML4.0/1, Error ellipse: s-maj=76.0km s-min=53.5km az=99.0*
*BJI **02** 02:30:04.2, 52.°72N×177.°15W, h22km, mB4.5/1, mb4.4/5, Ms4.7/1, Ms7 4.5/1*
*NEIC **02** 02:30:06.0, 51.°80N×177.°58W, h3km, ML3.7(AEIC), After AEIC.*
*ISCJB **02** 02:30:08.3±1.0, 51.°7N±0.°3×177.°7W±0.°1, h33km, mb3.8/8, Error ellipse: s-maj=42.2km s-min=8.2km az=168.2*

ISC 02 02:30:10.3±1.0, 51.°6N±0.°3×177.°6W±0.°1, h35km, n13, σ1°19/15, mb3.8/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.09	62	ePg	Pn	02 30 25.1	-3.9
GSTR				eSg	Sn	02 30 38.1	-4.7
ATKA	Atka Island	2.21	73	P	Pn	02 30 43.2	-1.2
ATKA				S	Sn	02 31 10.7	+0.3
KDAK	Kodiak Island	15.68	57	Pn	Pn	02 33 47.4	-0.9
	0.6nm,0.3s,baz=225,slow=4.3,SNR=8.1						
INK	Inuvik	26.86	35	P	P	02 35 49.7	+2.6
	0.7nm,0.6s,mb3.4,baz=201,slow=5.1,SNR=4.2						
INK	Inuvik	26.86	35	P	P	02 35 49.7	+2.6
YKA	Yellowknife Ar	34.54	47	P	P	02 36 57.6	+2.8
	0.2nm,0.7s,mb3.2,baz=278,slow=7.7,SNR=4.3						
MDJ	Mudanjiang	35.26	280	P	P	02 37 00.7	-0.6
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
NVAR	Mina Array Bea	42.79	84	P	P	02 38 05.1	+0.8
	comp=Z,0.4nm,0.5s,mb3.4,baz=286,slow=7.4,SNR=3.6						
NVAR	Mina Array Bea	42.79	84	P	P	02 38 05.1	+0.8
PDAR	Pinedale Array	45.54	73	P	P	02 38 26.0	-0.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=302,slow=5.3,SNR=4.6						
PDAR				PcP	PcP	02 40 03.3	-1.1
	comp=Z,0.4nm,0.6s,baz=318,slow=2.6,SNR=3.4						
XAN	Xi'an	54.34	282	P	P	02 39 32.3	-0.9
XAN				PP	PP	02 41 34.1	-1.0
XAN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
XAN				pmax	pmax		
	comp=Z,380nm,13.3s						
TXAR	Lajitas Array	57.89	82	P	P	02 39 59.1	+0.5
	comp=Z,0.3nm,0.6s,mb3.5,baz=302,slow=4.9,SNR=4.0						
GYA	Guiyang	61.03	277	eP	P	02 40 21.0	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						

*IDC **02** 02:45:17.7±1.0, 42.°85S×72.°40W, h0km, mb3.8/7, mb1 4.1/8, mb1mx4.0/16, mbtmp3.9/8, ML4.0/1, MS4.5/1, Ms1 4.5/1, ms1mx4.2/19, Error ellipse: s-maj=34.8km s-min=17.6km az=122.0*
*NEIC **02** 02:45:20.1±0.7, 42.°71S×72.°57W, h10km, mb4.5/4, Error ellipse: s-maj=20.2km s-min=14.4km az=102.0*
*ISCJB **02** 02:45:21.9±0.6, 42.°82S±0.°09×72.°4W±0.°2, h33km, mb4.1/10, Error ellipse: s-maj=17.5km s-min=11.7km az=17.8*

ISC 02 02:45:23.8±0.7, 42.°8S±0.°1×72.°4W±0.°2, h35km, n17, σ1°01/16, mb4.1/10, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.49	35	Pn	Pn	02 46 01.4	-0.3
	6.7nm,0.3s,baz=217,slow=16,SNR=59						
PLCA				Lg		02 46 37.4	
	111nm,0.3s,baz=303,slow=19,SNR=24						
PLCA				LR	LR	02 47 04.7	
	comp=Z,9μm,18.5s,baz=1.1,slow=42						
PLCA	Paso Flores	2.49	35	Pn	Pn	02 46 01.4	-0.3
PLCA				Lg		02 46 37.4	
PLCA				LR	LR	02 47 04.7	
TRQA	Tornquist	9.26	63	ePn	Pn	02 47 34.7	-0.1
	9.0nm,1.0s						
CFAA	Coronel Fontan	11.65	18	Pn	Pn	02 48 11.3	+3.8
	0.0nm,0.3s,baz=182,slow=9.0,SNR=3.1						
USHA	Ushuaia	12.33	169	Pn	Pn	02 48 19.7	+3.0
	0.1nm,0.3s,baz=295,slow=6.9,SNR=3.6						
CPUP	Villa Florida	20.54	42	P	P	02 49 59.8	+0.6
	0.6nm,0.5s,baz=184,slow=10,SNR=4.3						
LPAZ	La Paz	26.67	9	eP	P	02 51 00.6	+1.2
	32nm,2.2s,mb4.5						
OTAV	Otavalo	43.18	351	eP	P	02 53 22.1	+0.9
	5.7nm,1.3s,mb4.1						
QSPA	South Pole Qui	47.46	180	P	P	02 53 54.2	-0.2
	1.7nm,0.8s,mb4.0,baz=156,slow=1.6,SNR=4.6						
TXAR	Lajitas Array	77.31	332	P	P	02 57 14.2	-0.3
	1.0nm,0.8s,mb3.8,baz=151,slow=7.9,SNR=9.0						
CCM	Cathedral Cave	82.27	345	eP	P	02 57 39.8	-1.3
	3.4nm,0.8s,mb4.3						
ANMO	Albuquerque	83.39	332	P	P	02 57 47.1	+0.1
	1.2nm,0.8s,mb4.0,baz=166,slow=7.0,SNR=4.0						
TORD	Torodi Ar. Bea	87.52	70	P	P	02 58 06.0	-2.1
	0.5nm,0.9s,mb3.8,baz=220,slow=3.1,SNR=3.2						
ECSD	EROS Data Cent	88.83	343	eP	P	02 58 13.3	-0.3
	1.5nm,0.6s,mb4.5						
NVAR	Mina Array Bea	90.95	326	P	P	02 58 24.1	+0.5
	0.3nm,0.7s,mb3.8,baz=179,slow=5.

YER	Yerkesik	1.37	2	ePN	Pn	02 59 50.3	0.0
YER	Yerkesik	1.37	2	ePn	Pn	02 59 50.3	0.0
BDRM	Kayabasi	1.45	334	i P	Pn	02 59 50.1	-1.2
BDRM	Kayabasi	1.45	334	i P	Pn	02 59 50.2	-1.2
BODT	Bodrum	1.50	331	ePN	Pn	02 59 51.4	-0.6
BODT	Bodrum	1.50	331	ePn	Pn	02 59 51.4	-0.6
MLSB	Milas	1.58	347	ePN	Pn	02 59 53.2	+0.1
MLSB	Milas	1.58	347	ePn	Pn	02 59 53.3	+0.2
ELL	Elmali	1.68	53	ePN	Pn	02 59 54.3	-0.2
ELL	Elmali	1.68	53	ePn	Pn	02 59 54.3	-0.2
GLHS	Gihisar (BURDU	1.73	36	ePN	Pn	02 59 55.4	+0.2
GLHS	Gihisar (BURDU	1.73	36	ePn	Pn	02 59 55.4	+0.2
SMG	Samos	2.24	330	ePN	Pn	03 00 02.7	+0.4
SMG	Samos	2.24	330	ePn	Pn	03 00 02.7	+0.4
KULA	Kula-Manisa	2.77	7	ePN	Pn	03 00 10.1	+0.5
KULA	Kula-Manisa	2.77	7	ePn	Pn	03 00 10.1	+0.6
HDMB	Hadim	3.64	69	ePN	Pn	03 00 21.8	+0.3
HDMB	Hadim	3.64	69	ePn	Pn	03 00 21.8	+0.3

KRSC 02 03:17:00.1±1.8, 50°.08N×156°.67E, h95km±105km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.07	318	P	Pn	03 17 22.5	+1.7
MIPR	Malaya Ipel'ka	2.20	1	ePn	Pn	03 17 37.1	+2.1
RUS	Russkaya	2.62	25	ePn	Pn	03 17 43.9	+3.3
RUS				eS	Sn	03 18 15.9	+4.1
AVH	Avacha	3.44	21	ePn	Pn	03 17 55.3	+3.8
NLC	Nalytchevo	3.52	27	S	Sn	03 18 36.0	+2.9
GNL	Ganaly	3.71	12	ePn	Pn	03 17 57.9	+2.8
MKZ	Mys Kozlova	5.45	33	P	Pn	03 18 21.2	+2.5
KMNR	Kamenistaya	6.08	19	P	Pn	03 18 30.5	+3.2
KBTR	Krutoberegovo	7.16	29	ePn	Pn	03 18 44.7	+2.7

JMA 02 03:23:18.2, 35°.24N×132°.72E, h9km, M4.0, 4C-2D Broadband fault plane solution: P waves. NP1: ϕ_s74.00000°, δ77.00000°, λ174.00000°. **NP2:** ϕ_s165.00000°, δ84.00000°, λ13.00000°. **Principal axes:** T Plg13.0000°, Azm30.0000°; N Plg76.0000°, Azm188.0000°; P Plg5.0000°, Azm299.0000°; **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNM	Ikuma	0.36	45	⇑P	Pg	03 23 25.6	+0.3
JNM				S	Sg	03 23 30.9	+0.8
JGT	Gotsu	0.38	236	⇑P	Pg	03 23 25.7	+0.1
JGT				S	Sg	03 23 30.9	+0.2
JHS	Saijyo	0.40	126	⇓P	Pg	03 23 26.2	+0.1
JHS				S	Sg	03 23 31.8	+0.4
JHT	Toyohira	0.63	203	⇑P	Pg	03 23 30.2	-0.1
JHT				S	Sg	03 23 38.7	+0.2
JJG	Jouge	0.70	149	⇓P	Pg	03 23 31.6	0.0
JJG				S	Sg	03 23 41.1	+0.4
JHIK	Hikimi	0.96	223	⇑P	Pg	03 23 36.0	-0.7
JHIK				S	Sg	03 23 48.4	-0.7
MAT	Matsushiro	4.64	72	P	Pn	03 24 29.9	+1.5
MAT				eS	Sb	03 25 40.0	+4.3

*IDC **02** 03:31:57.2±5.4, 17°.88S×168°.51E, h0km, mb4.3/4, mb1 4.5/4, mb1mx4.0/14, mbtmp4.3/4 Error ellipse: s-maj=144.8km s-min=43.7km az=124.0*
*NOU **02** 03:32:04.4±1.1, 17°.18S×167°.03E, h30km, MD3.1, ML2.8*
*ISCJB **02** 03:32:05.7±2.2, 17°.60S±0°.07×167°.6E±0°.3, h33km, mb4.1/4, Error ellipse: s-maj=46.2km s-min=9.2km az=177.4*

ISC 02 03:32:07.0±2.2, 17°.57S±0°.07×167°.8E±0°.3, h35km, n9, σ0°.72/9, mb4.2/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.63	190	eS	Sn	03 34 08.6	+1.5
DZM	Mont Dzumac	4.64	195	eP	Pn	03 33 14.7	+0.1
DZM				eS	Sn	03 34 06.6	-0.8
DZM				AMP		03 34 09.0	
	comp=Z,818nm,9.8s						
NOUC	Port Laguerre	4.71	197	eP	Pn	03 33 15.6	0.0
NOUC				eS	Sn	03 34 08.0	-1.0
NOUC				AMP		03 34 11.6	
	comp=Z,29nm,0.0s						
STKA	Stephens Creek	27.61	234	P	P	03 37 51.3	+0.1
	comp=Z,2.7nm,0.7s,mb4.0,baz=60,slow=10,SNR=4.0						
WRA	Warramunga Arr	31.70	260	P	P	03 38 27.6	+0.1
	comp=Z,2.4nm,0.8s,mb4.1,baz=94,slow=8.9,SNR=11						
ASAR	Alice Springs	32.20	253	P	P	03 38 32.6	+0.7
	comp=Z,7.1nm,0.7s,mb4.6,baz=87,slow=8.7,SNR=74						
SONM	Songino Array	85.05	324	P	P	03 44 38.2	-0.7
	comp=Z,1.0nm,0.8s,mb4.0,baz=159,slow=4.3,SNR=3.7						
BAIF	Baives	144.99	341	ePKP1	PKPdf	03 51 43.0	+2.6
	comp=Z,11nm,1.1s						
BGF	Bois d'Agland	148.51	340	ePKP1	PKPbc	03 51 51.4	+1.4

*ISCJB **02** 03:32:38.6±0.5, 40°.57N±0°.03×34°.84E±0°.05, h9km±4km, Error ellipse: s-maj=5.8km s-min=4.5km az=0.3*
*CSEM **02** 03:32:38.6±0.2, 40°.58N×34°.82E, h6km±1km, MD3.1, Error ellipse: s-maj=4.0km s-min=3.5km az=78.0*
*ISK **02** 03:32:38.2, 40°.58N×34°.84E, h8km, MD3.1*
*DDA **02** 03:32:39.1, 40°.55N×34°.73E, h6km±1km, Md3.1*

ISC 02 03:32:38.9±0.5, 40°.58N±0°.03×34°.83E±0°.05, h7km±4km, n36, σ0°.83/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	Corum	0.06	329	i P	Pg	03 32 41.3	+0.7
CTKT				i S	Sg	03 32 43.1	+1.2
CTKT	Corum	0.06	329	i P	Pg	03 32 41.3	+0.7
CTKT				i S	Sg	03 32 43.1	+1.2
CORM	Corum	0.42	201	ePG	Pg	03 32 47.1	0.0
CORM				eSG	Sg	03 32 53.6	+0.9
CORM	Corum	0.42	201	ePg	Pg	03 32 47.1	0.0
CORM				eSg	Sg	03 32 53.6	+0.9
TOS	Tosya	0.77	307	ePG	Pg	03 32 53.5	-0.2
TOS	Tosya	0.77	307	ePg	Pg	03 32 53.5	-0.2
BYBT	Boyabat	0.89	357	ePG	Pg	03 32 55.8	-0.4
BYBT	Boyabat	0.89	357	ePg	Pg	03 32 55.8	-0.3
CANT	Cankiri	0.92	272	ePG	Pg	03 32 56.6	-0.1
YOZ	Yozgat	1.01	153	ePG	Pg	03 32 57.9	-0.3
YOZ	Yozgat	1.01	158	ePg	Pg	03 32 57.9	-0.4
CDAG	Cicekdag	1.01	200	i P	Pg	03 32 57.5	-0.9
CDAG				i S	Sg	03 33 10.7	-0.8
CDAG	Cicekdag	1.01	200	i P	Pg	03 32 57.5	-0.9
CDAG				i S	Sg	03 33 10.7	-0.8
KVT	Kavak	1.05	61	ePG	Pg	03 32 58.8	-0.4
KVT	Kavak	1.05	61	ePg	Pg	03 32 58.8	-0.4
ELDT	Eldivan	1.07	266	i P	Pg	03 32 58.0	-1.5
ELDT				i S	Sg	03 33 12.7	-0.7
ELDT	Eldivan	1.07	266	i P	Pg	03 32 58.0	-1.5
ELDT				i S	Sg	03 33 12.7	-0.7
DIKM	Dikmen	1.12	17	ePN	Pn	03 32 60.0	-1.0
DIKM				eSN	Sn	03 33 16.0	-0.7
DIKM	Dikmen	1.12	17	ePn	Pn	03 33 00.0	-1.0
DIKM				eSn	Sn	03 33 16.0	-0.6
TOKT	Tokat	1.33	100	ePN	Pn	03 33 03.4	-0.5
TOKT	Tokat	1.33	100	ePn	Pn	03 33 03.4	-0.5
BALT	Daday	1.45	312	i P	Pn	03 33 05.8	+0.3
BALT				i S	Sn	03 33 26.2	+1.4
BALT	Daday	1.45	312	i P	Pn	03 33 05.8	+0.3
BALT				i S	Sn	03 33 26.2	+1.4
BZK	Bozkurt	1.52	336	ePN	Pn	03 33 06.4	0.0
BZK	Bozkurt	1.52	336	ePn	Pn	03 33 06.4	0.0
LOD	Lodumlu	1.72	247	ePN	Pn	03 33 09.2	0.0
LOD	Lodumlu	1.72	247	ePn	Pn	03 33 09.2	0.0
SVSK	Karacayir	1.79	111	ePN	Pn	03 33 10.1	0.0
SVSK	Karacayir	1.79	111	ePn	Pn	03 33 10.1	0.0
AVNT	Avonos	1.79	179	i P	Pn	03 33 13.7	+3.4
AVNT				i S	Sn	03 33 37.8	+4.6
BNN	Bunyan	1.89	155	ePN	Pn	03 33 11.5	-0.1
BNN	Bunyan	1.89	155	ePn	Pn	03 33 11.5	-0.1
SARI	SarD1z-Kayseri	2.38	142	ePN	Pn	03 33 20.2	+1.9
SARI	SarD1z-Kayseri	2.38	142	ePn	Pn	03 33 20.2	+1.9
SULT	Sultanhani-AKS	2.58	204	ePN	Pn	03 33 21.6	+0.6
SULT	Sultanhani-AKS	2.58	204	ePn	Pn	03 33 21.6	+0.6

*NEIC **02** 03:39:33.3, 18°.34N×68°.06W, h137km, MD3.6(RSPR),*
After RSPR.

RSPR 02 03:39:33.3, 18°.34N×68°.06W, h137km±1km, MD3.6/10, MD3.6/10, 13C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	Isla Mona	0.27	149	⇑eP	Pn	03 39 51.6	-0.7
CRPR	Cabo Rojo, PR	0.96	110	⇑eP	Pn	03 39 56.6	+0.1
CRPR				eS	Sn	03 40 14.1	0.0
GBPR	Guanica, Bosqu	1.18	108	⇑eP	Pn	03 39 58.6	+0.1
GBPR				eS	Sn	03 40 18.2	+0.4
OBIP	Obispado Ponce	1.41	102	⇑eP	Pn	03 40 00.6	-0.3
OBIP				eS	Sn	03 40 22.1	0.0
CELP	Cerrillos	1.43	100	⇓eP	Pn	03 40 00.8	-0.3
CELP				eS	Sn	03 40 22.5	+0.1
ICM	Isla Caja Muer	1.53	107	⇑eP	Pn	03 40 01.7	-0.5
ICM				eS	Sn	03 40 24.3	0.0
SJG	San Juan	1.83	97	⇑eP	Pn	03 40 05.4	-0.3
SJG	San Juan	1.83	97	⇑eP	Pn	03 40 05.4	-0.2
SJG				eS	Sn	03 40 30.5	+0.2
CPD	Cerro la Pandu	2.06	98	⇑eP	Pn	03 40 08.6	+0.2
CPD				eS	Sn	03 40 35.7	+0.4
CBYP	Canovanas	2.09	92	⇑eP	Pn	03 40 08.4	-0.4
HUMP	Col San Antoni	2.11	95	⇑eP	Pn	03 40 09.2	+0.2
HUMP				eS	Sn	03 40 36.7	+0.3
MTP	Monte Pirata	2.39	95	⇑eP	Pn	03 40 12.8	+0.3
STVI	Saint Thomas	2.95	89	⇑eP	Pn	03 40 19.4	-0.1
TBVI	Tortola	3.27	88	⇑eP	Pn	03 40 24.1	+0.4

*IDC **02** 03:39:37.8±1.1, 2°.40N×95°.93E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.8/24, mbtmp3.9/12, ML3.5/1, MS3.8/1, Ms1 3.8/1, ms1mx3.2/28, Error ellipse: s-maj=43.2km s-min=15.8km az=50.0*
*ISCJB **02** 03:39:42.3±1.4, 2°.55N±0°.07×96°.05E±0°.09, h39km±11km, mb3.9/16, Error ellipse: s-maj=18.7km s-min=6.6km az=144.2*
*DJA **02** 03:39:42, 2°.55N×96°.04E, h67km, MLv3.9/3*
*NEIC **02** 03:39:45.2±3.2, 2°.51N×96°.13E, h51km±25km, mb3.9/5, Error ellipse: s-maj=35.2km s-min=7.0km az=57.0*
NEIC Felt [II] on Pulau Simeulue.

ISC 02 03:39:43.4±3.1, 2°.53N±0°.07×96°.05E±0°.08, h33km±21km, n24, σ0°.73/27, mb3.9/16, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.95	129	P	Pn	03 40 14.2	-0.1
GSI				S	Sn	03 40 37.7	0.0
LHMI	Lhok Sumawe	2.83	18	P	Pn	03 40 25.3	-1.0
PSI	Prapat	2.89	85	Pn	Pn	03 40 27.6	+0.5
	5.8nm,0.3s,baz=291,slow=6.6,SNR=20						
PSI				Sn	Sn	03 41 00.3	-0.4
	4.7nm,0.3s,baz=297,slow=18,SNR=4.7						
PSI				LR	LR	03 41 54.0	
	comp=Z,2μm,19.1s,baz=350,slow=45						
BSI	Banda Aceh	3.04	346	P	Pn	03 40 27.4	-1.9
BSI				S	Sn	03 41 04.2	-0.3
MNSI	Mandailing Nat	3.93	116	P	Pn	03 40 42.4	+1.0
KULM	Kulim	5.35	59	ePn	Pn	03 41 01.4	+0.4
	57nm,0.8s						
CMAR	Chiang Mai Arr	16.08	10	Pn	Pn	03 43 28.9	+1.8
	baz=201,slow=11,SNR=6.5						
FITZ	Fitzroy Crossi	35.64	126	P	P	03 46 37.3	-1.2
	0.8nm,0.7s,mb3.8,baz=288,slow=13,SNR=3.3						
GTA	Gaotai	36.87	5	eP	P	03 46 48.9	+0.1
GTA				pP	pP	03 46 54.4	-4.0
GTA				sP	sP	03 46 58.0	-4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
WRA	Warramunga Arr	43.71	122	P	P	03 47 45.2	-0.6
	comp=Z,0.6nm,0.3s,mb3.8,baz=301,slow=9.0,SNR=3.4						
WRAB	Tennant Creek	43.72	122	eP	P	03 47 45.5	-0.3
	comp=Z,2.4nm,0.9s,mb3.9						
TKM2	Tokmak 2	44.16	338	eP	P	03 47 50.5	+1.5
	comp=Z,0.9nm,0.5s,mb3.8						
AAK	Ala-Archa	44.33	337	eP	P	03 47 50.4	0.0
	comp=Z,1.5nm,0.7s,mb3.8						
ASAR	Alice Springs	45.11	127	P	P	03 47 56.5	-0.4
	comp=Z,0.5nm,0.6s,mb3.5,baz=300,slow=8.1,SNR=8.5						
MK31	Makanchi Array	45.69	347	eP	P	03 48 01.3	+0.2
MKAR	Makanchi Array	45.69	347	P	P	03 48 01.2	+0.1
	comp=Z,2.3nm,0.5s,mb4.4,baz=155,slow=9.0,SNR=42						
SONM	Songino Array	46.01	10	P	P	03 48 03.6	0.0
	comp=Z,1.8nm,0.6s,mb4.2,baz=188,slow=9.1,SNR=9.4						
ULN	Ulaanbaatar	46.15	10	eP	P	03 48 05.2	+0.5
	comp=Z,1.2nm,0.4s,mb4.2						
KURK	Kurchatov	50.22	346	eP	P	03 48 35.5	-0.6
	comp=Z,0.6nm,0.6s,mb3.8						
ZALV	Zalesovo Beam	52.08	352	P	P	03 48 50.0	+0.1
	comp=Z,2.7nm,0.5s,mb4.5,baz=177,slow=6.7,SNR=18						
BVAR	Borovoye Array	54.63	341	P	P	03 49 08.1	-0.6
	comp=Z,1.1nm,0.6s,mb4.0,baz=131,slow=6.8,SNR=6.4						
FINES	FINESS Array B	78.30	333	P	P	03 51 40.2	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=120,slow=8.2,SNR=3.2						
ARCES	ARCESS Array B	80.90	340	P	P	03 51 54.3	+0.3
	comp=Z,0.8nm,0.8s,mb3.7,baz=94,slow=7.2,SNR=3.3						
GERES	GERESS Array B	83.06	319	P	P	03 52 06.4	+0.7
	comp=Z,0.5nm,0.8s,mb3.6,baz=91,slow=5.3,SNR=3.9						

*IDC **02** 03:55:24.6±0.9, 42°.83S×72°.41W, h0km, mb4.4/8, mb1 4.6/9, mb1mx4.4/18, mbtmp4.4/9, ML4.8/1, MS4.0/1, Ms1 4.0/1, ms1mx3.7/21, Error ellipse: s-maj=32.1km s-min=15.2km az=113.0*
*NEIC **02** 03:55:26.9±0.4, 42°.71S×72°.46W, h10km, mb4.6/16, Error ellipse: s-maj=17.1km s-min=8.6km az=94.0*
*ISCJB **02** 03:55:29.7±2.2, 42°.75S±0°.07×72°.3W±0°.2, h44km±20km, mb4.5/22, Error ellipse: s-maj=28.2km s-min=12.1km az=1.9*

ISC 02 03:55:31.9±1.7, 42°.73S±0°.07×72°.3W±0°.2, h46km±16km, n30, σ0°.76/29, mb4.5/22, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.41	34	Pn	Pn	03 56 07.9	-0.8
	44nm,0.3s,baz=207,slow=15,SNR=88						
PLCA				Lg		03 56 45.7	
	343nm,0.3s,baz=303,slow=22,SNR=37						
PLCA				LR	LR	03 56 55.3	
	comp=Z,3μm,18.7s,baz=230,slow=36						
TRQA	Tornquist	9.18	63	ePn	Pn	03 57 42.9	+1.2
	7.7nm,0.7s						
CFAA	Coronel Fontan	11.58	18	Pn	Pn	03 58 11.0	-3.5
	0.1nm,0.3s,baz=188,slow=8.0,SNR=5.9						
CFAA				Lg		04 01 33.9	
	0.0nm,0.3s,baz=272,slow=4.9,SNR=8.0						
USHA	Ushuaia	12.38	169	Pn	Pn	03 58 25.4	+0.2
	0.2nm,0.3s,baz=90,slow=20,SNR=3.4						
LVC	Limon Verde	20.27	9	P	P	04 00 03.4	-0.1
	15nm,0.9s,baz=197,slow=6.5,SNR=12						
LVC	Limon Verde	20.27	9	eP	P	04 00 04.5	+1.1
	25nm,1.1s						
LPAZ	La Paz	26.60	9	eP	P	04 01 06.7	+0.9
	2.7nm,0.8s,mb3.8						
SIV	San Ignacio	28.35	23	P	P	04 01 20.6	-0.8
	2.6nm,0.9s,mb3.9,baz=212,slow=9.6,SNR=16						
OTAV	Otavalo	43.13	351	eP	P	04 03 28.9	+1.2
	8.0nm,1.2s,mb4.3						
QSPA	South Pole Qui	47.52	180	P	P	04 04 00.9	-0.9
	11nm,1.1s,mb4.8,baz=151,slow=4.8,SNR=16						
SDV	Santo Domingo	51.39	2	eP	P	04 04 31.2	-0.8
	6.1nm,0.9s,mb4.5						
PCRV	Puerto La Cruz	53.12	10	P	P	04 04 45.4	+0.5
	16nm,1.0s,mb4.9,baz=153,slow=11,SNR=4.1						
APG	El Apazote	59.82	340	P	P	04 05 32.3	-0.1
	10nm,1.2s,mb4.7,baz=187,slow=7.6,SNR=4.5						
CASY	Casey	71.30	181	eP	P	04 06 46.4	+0.4
	3.7nm,0.8s,mb4.4						
JCT	Junction City	77.10	336	eP	P	04 07 19.8	-0.3
	11nm,1.0s,mb4.8						
TXAR	Lajitas Array	77.29	332	P	P	04 07 21.6	+0.5
	4.1nm,1.1s,mb4.3,baz=160,slow=5.9,SNR=16						
WVT	Waverly	79.75	347	eP	P	04 07 34.2	-0.3
	8.4nm,1.3s,mb4.5						
MNTX	Cornudas Mount	80.04	332	eP	P	04 07 36.0	-0.3
	3.7nm,1.1s,mb4.2						
WMOK	Wichita Mounta	80.80	338	eP	P	04 07 39.5	-0.8
	7.9nm,1.0s,mb4.6						
AMTX	Amarillo	81.77	336	eP	P	04 07 45.0	-0.4
	4.2nm,0.6s,mb4.5						
LAZ	Ladron	83.10	332	eP	P	04 07 53.0	+0.6
	5.3nm,1.3s,mb4.4						
ANMO	Albuquerque	83.36	332	eP	P	04 07 54.8	+1.1
	6.8nm,1.1s,mb4.6						
SDCO	Great Sand Dun	85.59	334	eP	P	04 08 05.7	+0.8
	2.5nm,1.1s,mb4.4						
TOA0	Torodi Ar. Sit	87.45	70	eP	P	04 08 15.0	+0.5
TORD	Torodi Ar. Bea	87.45	70	P	P	04 08 13.5	-1.0
	0.7nm,0.8s,mb4.0,baz=238,slow=3.5,SNR=4.4						
HWUT	Hardware Ranch	91.10	332	eP	P	04 08 31.2	+0.2
	7.0nm,1.1s,mb4.9						
BW06	Boulder Array	91.45	334	eP	P	04 08 32.6	0.0
	5.8nm,1.1s,mb4.8						
PDAR	Pinedale Array	91.45	334	P	P	04 08 32.4	-0.3
	2.4nm,0.9s,mb4.5,baz=165,slow=5.4,SNR=11						
ULM	Lac du Bonnet	94.86	345	eP	P	04 08 47.0	-1.1
	6.3nm,1.3s,mb4.9						
MKAR	Makanchi Array	161.56	69	PKPab	PKPab	04 16 11.6	-0.5
	0.5nm,0.6s,baz=296,slow=2.7,SNR=4.7						

*ISCJB **02** 04:03:37.1±0.4, 35°.48N±0°.02×118°.40W±0°.02, h8km±3km, Error ellipse: s-maj=3.0km s-min=2.8km az=27.5*
*NEIC **02** 04:03:38.0, 35°.49N×118°.44W, h11km, ML3.7(NCEDC), After NCEDC.*
NEIC Felt in the Lake Isabella area.

ISC 02 04:03:37.3±0.3, 35°.49N±0°.02×118°.42W±0°.02, h7km±3km, n61, σ0°.85/90, 21C-26D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISA	Isabella	0.18	347	⇑P	Pg	04 03 41.9	+0.9
	baz=0.2,SNR=1000						
ISA				⇓S	Sg	04 03 44.5	+1.0
	baz=0.2						
ISA	Isabella	0.18	347	ePg	Pg	04 03 41.7	+0.6
ISA				eSg	Sg	04 03 44.1	+0.6
ARVC	Arvin	0.49	223	⇑P	Pg	04 03 47.5	+0.8
	baz=0.5,SNR=267						
LRMC	Laurel Mountai	0.60	91	P	Pg	04 03 49.7	+0.9
	baz=0.6,SNR=278						
LRMC				⇓S	Sg	04 03 57.7	+1.1
	baz=0.6						
VES	Vestal, Richgr	0.65	304	P	Pg	04 03 50.4	+0.6
	baz=0.7,SNR=607						
VES				⇑S	Sg	04 03 58.7	+0.5
	baz=0.7						
EDW2	Edwards Air Fo	0.70	149	P	Pg	04 03 50.9	+0.1
	baz=0.7,SNR=572						
OSI	Osito Adit	0.90	196	⇑P	Pg	04 03 54.8	+0.2
	baz=0.9,SNR=8.2						
OSI				⇓S	Sg	04 04 06.7	+0.3
	baz=0.9						
OSI	Osito Adit	0.90	196	ePg	Pg	04 03 56.6	+2.0
OSI				eSg	Sg	04 04 08.6	+2.2
MPMC	Manual Prospec	0.95	53	⇓P	Pg	04 03 56.0	+0.4
	baz=1.0,SNR=1000						
MPMC				⇑S	Sg	04 04 09.0	+1.0
	baz=1.0						
CWC	Cottonwood Cre	0.99	16	⇑P	Pg	04 03 56.5	+0.2
	baz=1.0,SNR=32						
CWC				⇑S	Sg	04 04 09.8	+0.5
	baz=1.0						
RCTC	Rector, Farmer	1.06	321	⇓P	Pg	04 03 57.3	-0.3
	baz=1.1,SNR=65						
RCTC				⇓S	Sg	04 04 11.8	+0.4
	baz=1.1						
DECC	Green Verdugo	1.23	176	⇑P	Pb	04 04 00.6	-0.3
	baz=1.2						
PKM	Peak Mountain	1.29	243	⇓P	Pn	04 04 01.1	-0.7
	baz=1.3,SNR=20						
MWC	Mount Wilson	1.29	166	ePn	Pn	04 04 01.6	-0.2
MWC				eS	Sb	04 04 24.3	+5.5
SMMC	Simmler	1.30	263	⇑P	Pn	04 04 01.2	-0.7
	baz=1.3,SNR=96						
SMMC				⇑S	Sb	04 04 18.7	-0.3
	baz=1.3						
RRX	Edison Barstow	1.31	117	⇑P	Pn	04 04 01.9	-0.2
	baz=1.3,SNR=9.6						
GSC	Goldstone	1.33	97	⇑P	Pn	04 04 02.4	0.0
	baz=1.3,SNR=39						
GSC				⇑S	Sb	04 04 20.7	+0.7
	baz=1.3						
GSC	Goldstone	1.33	97	ePn	Pn	04 04 02.3	-0.1
GSC				eSg	Sg	04 04 21.4	+1.2
BFSC	Mount Baldy St	1.39	153	⇓P	Pn	04 04 03.2	+0.1
	baz=1.4,SNR=147						
BLG	Laguna Peak	1.47	201	⇓Pb	Pb	04 04 05.0	0.0
	baz=1.5,SNR=33						
BLG				⇑S	Sn	04 04 24.2	+0.4
	baz=1.5						
SBC	Santa Barbara	1.49	226	⇓Pb	Pb	04 04 05.3	0.0
	baz=1.5						
FURC	Furnace Creek,	1.60	52	⇓Pb	Pb	04 04 07.7	+0.4
	baz=1.6						
GRAC	Grapevine Rang	1.73	29	⇓Pb	Pb	04 04 09.3	-0.2
	baz=1.7,SNR=64						
BBRC	Big Bear Sol-O	1.74	134	⇑Pb	Pb	04 04 09.7	+0.2
	baz=1.7						
SHOC	Shoshone	1.79	76	⇓P	Pn	04 04 08.5	-0.1
	baz=1.8						
HEC	Hector,Ludlow	1.83	110	⇓P	Pn	04 04 09.2	-0.1
	baz=1.8,SNR=20						
U10A	Ash Meadows, A	1.94	61	⇓P	Pn	04 04 10.7	0.0
	baz=1.9,SNR=52						
TUQ	Turquoise Moun	2.04	91	P	Pn	04 04 12.0	-0.1
	baz=2.0,SNR=26						
CIS	Catalina Islan	2.07	180	P	Pn	04 04 13.0	+0.4
	baz=2.1,SNR=9.4						
MURC	Murrieta	2.13	151	⇓P	Pn	04 04 13.5	+0.1
	baz=2.1,SNR=21						
MLAC	Mammoth Lakes	2.17	351	⇓Pb	Pb	04 04 17.4	+0.5
	baz=2.2						
GMRC	Granite Mounta	2.37	106	P	Pn	04 04 16.0	-0.6
	baz=2.4,SNR=33

baz=5.2,SNR=6.9
WUAZ Wupatki 5.75 88 *e*Pn **Pn 04 05 03.9 +0.8**
12nm,0.9s
WUAZ *e*Sg **Sg 04 06 41.0 -1.0**
MSU Marysvale 5.84 57 *e*Pn **Pn 04 05 04.9 +0.6**
16nm,1.1s
MSU *e*Pg **Pg 04 05 26.7 -2.5**
SRU San Rafael 7.26 58 *e*Pn **Pn 04 05 24.8 +1.0**
6.5nm,0.5s

ISCJB ***02*** *04:20:16.3±0.9, 17°.7S±0°.3×178°.8W±0°.2, h600km, mb3.9/11, Error ellipse: s-maj=48.2km s-min=12.5km az=150.3*
IDC ***02*** *04:20:17.6±7.4, 17°.34S×178°.88W, h594km±91km, mb3.3/7, mb1 3.6/7, mb1mx3.4/16, mbtmp3.3/7, Error ellipse: s-maj=93.9km s-min=27.9km az=151.0*
NEIC ***02*** *04:20:17.1±0.9, 17°.85S×178°.61W, h600km, mb4.1/3, Error ellipse: s-maj=62.9km s-min=12.2km az=153.0*
ISC 02 04:20:17.5±0.9, 17°.7S±0°.3×178°.7W±0°.2, h600km, n20, σ0°67/20, mb3.9/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNB	**Canberra Magne**	**33.32**	**232**	*e*P	**P**	**04 26 07.5**	**+0.2**
CMSA	**Cobar Meteorol**	**35.00**	**240**	*e*P	**P**	**04 26 21.1**	**-0.2**
COEN	**Coen**	**36.82**	**270**	*e*P	**P**	**04 26 38.4**	**+1.8**
COEN	**Coen**	**36.82**	**270**	*e*P	**P**	**04 26 38.4**	**+1.8**
71nm,0.8s							
STKA	**Stephens Creek**	**38.47**	**241**	*e*P	**P**	**04 26 50.3**	**+0.6**
5.0nm,0.9s,mb4.0							
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**04 26 50.2**	**+0.5**
4.8nm,0.6s,mb4.2,baz=63,slow=5.6,SNR=9.5							
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**04 26 50.2**	**+0.5**
WB2	**Warramunga Arr**	**44.38**	**259**	*e*P	**P**	**04 27 36.0**	**-0.3**
WRAB	**Tennant Creek**	**44.38**	**259**	*e*P	**P**	**04 27 36.4**	**0.0**
4.0nm,0.6s,mb4.1							
WRA	**Warramunga Arr**	**44.39**	**259**	P	**P**	**04 27 36.1**	**-0.3**
3.0nm,0.5s,mb4.1,baz=95,slow=7.1,SNR=22							
ASAR	**Alice Springs**	**44.57**	**254**	P	**P**	**04 27 38.1**	**+0.4**
21nm,0.6s,mb4.8,baz=87,slow=8.5,SNR=234							
ASAR				PcP	PcP	04 29 07.7	+0.3
0.6nm,0.6s,baz=101,slow=4.8,SNR=3.8							
KAKA	**Kakadu**	**47.31**	**269**	*e*P	**P**	**04 27 58.0**	**-0.6**
8.5nm,0.6s,mb4.5							
FORT	**Forrest**	**49.83**	**244**	*e*P	**P**	**04 28 16.2**	**-0.8**
6.2nm,0.5s,mb4.3							
FORT	**Forrest**	**49.83**	**244**	*e*P	**P**	**04 28 16.0**	**-1.0**
3.1nm,0.4s,mb4.1							
MBWA	**Marble Bar**	**57.85**	**256**	*e*P	**P**	**04 29 12.9**	**-0.5**
2.6nm,0.6s,mb3.5							
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**04 31 23.0**	**0.0**
0.9nm,0.7s,mb3.2,baz=224,slow=8.4,SNR=6.4							
TXAR	**Lajitas Array**	**86.14**	**58**	P	**P**	**04 31 57.2**	**+0.8**
1.0nm,0.8s,mb3.5,baz=217,slow=6.2,SNR=12							
PDAR	**Pinedale Array**	**87.41**	**44**	P	**P**	**04 32 02.1**	**+0.1**
0.5nm,0.6s,mb3.4,baz=231,slow=2.1,SNR=4.8							
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**	**04 32 32.2**	**-1.0**
0.1nm,0.6s,mb3.1,baz=238,slow=4.0,SNR=3.9							
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**	**04 32 32.2**	**-1.0**

NNC 02 04:33:43.2±3.6, 41°.28N×68°.85E, h0km, mb3.5, mpv3.2, 1C-2D, Error ellipse: s-maj=27.6km s-min=17.6km az=27.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**2.20**	**34**	Pn	Pn	04 34 20.1	-1.0
3.5nm,0.3s,baz=200,slow=17,SNR=268							
KK31				Sn	Sn	04 34 50.3	+1.3
18nm,0.4s,baz=215,slow=35,SNR=15							
TKM2 Tokmak 2		**5.28**	**70**	⇓Pn	Pn	04 35 04.3	+1.0
3.0nm,0.7s							
TKM2				⇓Sn	Sn	04 36 06.6	+1.7
9.6nm,0.7s							
AB31 Akbulak array		**10.14**	**325**	⇑P	Pn	04 36 12.1	+2.1
0.3nm,0.5s,baz=130,slow=13,SNR=5.8							

DDA ***02*** *04:54:13.0, 36°.86N×27°.91E, h7km±6km, Md2.5*
ISK ***02*** *04:54:15.2, 37°.00N×27°.81E, h5km, MD2.5*
CSEM 02 04:54:15.5±0.1, 36°.97N×27°.82E, h15km, MD2.5, Error ellipse: s-maj=3.5km s-min=2.3km az=140.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.31**	**218**	*e*Pg	Pg	04 54 22.3	+0.3
DAT				*e*Sg	Sg	04 54 27.4	+1.0
DAT	**Datca**	**0.31**	**218**	*e*PG	Pg	04 54 22.3	+0.3
DAT				*e*SG	Sg	04 54 27.4	+1.0
BDRM	**Kayabasi**	**0.31**	**287**	*i* P	Pg	04 54 22.3	+0.3
BDRM				*i* S	Sg	04 54 27.1	+0.6
BDRM	**Kayabasi**	**0.31**	**287**	*i* P	Pg	04 54 22.3	+0.3
BDRM				*i* S	Sg	04 54 27.1	+0.6
YER	**Yerkesik**	**0.40**	**67**	*e*PG	Pg	04 54 23.7	+0.1
YER	**Yerkesik**	**0.40**	**67**	*e*Pg	Pg	04 54 23.7	0.0
BODT	**Bodrum**	**0.42**	**282**	*e*PG	Pg	04 54 23.7	-0.2
BODT				*e*SG	Sg	04 54 29.9	+0.3
BODT	**Bodrum**	**0.42**	**282**	*e*Pg	Pg	04 54 23.7	-0.2
BODT				*e*Sg	Sg	04 54 29.9	+0.4
TURN	**Turunc**	**0.64**	**99**	*i* P	Pg	04 54 23.5	-4.5
TURN				*i* S	Sg	04 54 29.5	-6.9
AYDN	**Tasoluk**	**0.69**	**4**	*i* P	Pg	04 54 29.3	+0.4
AYDN				*i* S	Sg	04 54 38.7	+0.6
AYDN	**Tasoluk**	**0.69**	**4**	*i* P	Pg	04 54 29.3	+0.4
AYDN				*i* S	Sg	04 54 38.7	+0.7

IDC ***02*** *04:57:27.2±2.0, 41°.08N×48°.66E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, ML0.4/1, Error ellipse: s-maj=53.3km s-min=19.7km az=151.0*
ISCJB ***02*** *04:57:34.1±3.8, 41°.0N±0°.4×48°.6E±0°.2, h72km±58km, mb3.4/5, Error ellipse: s-maj=64.1km s-min=27.3km az=7.3*
ISC 02 04:57:35.1±4.0, 41°.0N±0°.4×48°.6E±0°.2, h66km±63km, n6, σ0°83/7, mb3.4/5, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNI	**Garni**	**3.04**	**254**	Pn	**Pn**	**04 58 21.3**	**+0.6**
1.0nm,0.3s,baz=336,slow=12,SNR=2.7							
GNI				Sn	**Sn**	**04 58 55.5**	**-0.5**
0.9nm,0.3s,baz=322,slow=18,SNR=5.7							
JOF	**Joensuu**	**24.20**	**341**	*ep*	**P**	**05 02 44.0**	**-1.1**
1.2nm,0.5s,mb3.5							
FINES	**FINESS Array B**	**24.58**	**334**	P	**P**	**05 02 48.7**	**+0.2**
1.2nm,0.4s,mb3.7,baz=140,slow=10.0,SNR=13							
MKAR	**Makanchi Array**	**24.84**	**65**	P	**P**	**05 02 50.7**	**-0.4**
0.4nm,0.4s,mb3.2,baz=264,slow=8.5,SNR=3.4							
KAF	**Kangasniemi**	**25.00**	**335**	*ep*	**P**	**05 02 52.9**	**+0.6**
0.9nm,0.4s,mb3.5							
YKA	**Yellowknife Ar**	**75.94**	**352**	P	**P**	**05 09 14.6**	**+0.4**
0.1nm,0.5s,mb2.8,baz=5.0,slow=5.8,SNR=4.2							

IDC 02 05:13:57.0±2.3, 39°.37N×53°.32E, h0km, mb3.0/3, mb1 3.1/3, mb1mx3.0/24, mbtmp3.1/3, 1C-2D, Error ellipse: s-maj=69.6km s-min=32.1km az=165.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AB31	**Akbulak array**	**10.96**	**23**	P	Pn	05 16 31.2	-3.7
0.4nm,0.4s,baz=205,slow=12,SNR=8.8							
AB31				⇓S	Sn	05 18 28.0	-10
2.0nm,0.7s,baz=196,slow=27,SNR=7.1							
AKTO Aktyubinsk		**11.55**	**15**	⇓P	Pn	05 16 50.5	+7.5
0.7nm,1.4s							
AKTO				⇑S	Sn	05 18 43.7	-9.0
0.7nm,0.8s							
AKTO Aktyubinsk		**11.55**	**15**	Sn	Sn	05 18 47.0	-5.7
0.2nm,0.3s,baz=73,slow=19,SNR=4.2							
AKASG Malin Array Be		**20.36**	**312**	P	P	05 18 34.9	+0.1
0.6nm,0.6s,baz=110,slow=12,SNR=3.6							
MKAR Makanchi Array		**22.33**	**61**	P	P	05 18 56.3	+0.1
0.3nm,0.6s,baz=266,slow=10,SNR=3.6							
TORD Torodi Ar. Bea		**52.30**	**255**	P	P	05 23 10.4	-0.1
0.4nm,1.0s,baz=51,slow=7.0,SNR=4.1							

NIED ***02*** *05:41:00, 37°.20N×141°.80E, h35km, Mw4.9 Best double couple: M0 2.82000×10^16 NP1:φ=57.00000°, δ70.00000°, λ-77.00000°. NP2:φ=203.00000°, δ24.00000°, λ-121.00000°.*
BJI ***02*** *05:41:23.7, 37°.39N×141°.80E, h41km, mB5.0/34, mb5.0/51, Ms4.5/49, Ms7 4.3/47*
ISCJB ***02*** *05:41:25.0±0.1, 37°.26N±0°.02×141°.59E±0°.02, h38km, mb5.0/268, MS4.4/47, Error ellipse: s-maj=3.0km s-min=1.8km az=176.3*
MOS ***02*** *05:41:25.4±0.8, 37°.56N×141°.58E, h33km, mb5.3/124, MS4.4/24, Error ellipse: s-maj=6.6km s-min=3.9km az=103.8*
IDC ***02*** *05:41:25.9±0.5, 37°.25N×141°.61E, h36km±3km, mb4.6/21, mb1 4.8/25, mb1mx4.8/26, mbtmp4.7/25, ML4.6/3, MS4.3/18, Ms1 4.3/18, ms1mx4.0/41, Error ellipse: s-maj=12.4km s-min=10.8km az=108.0*
JMA ***02*** *05:41:25.1±0.2, 37°.23N×141°.66E, h45km±2km, M5.1*
JMA Felt III J1.
NEIC ***02*** *05:41:26.3±0.1, 37°.28N×141°.54E, mb5.1/176, MS4.7/4, MW4.9(NIED), Error ellipse: s-maj=3.9km s-min=2.4km az=158.0*
NEIC Recorded [3 JMA] in Fukushima; [2 JMA] in Iwate, Miyagi and Tochigi; [1 JMA] in Akita, Aomori, Ibaraki, Nagano and Yamagata.
DJA ***02*** *05:41:28, 38°.40N×141°.73E, h22km, mb5.3/15*
SZGRF ***02*** *05:41:30.0, 37°.96N×142°.23E, h40km, mb5.4, Off east coast of Honshu, Japan*
ISC 02 05:41:26.8±0.1, 37°.27N±0°.02×141°.56E±0°.02, h40km, h40km±4km: pP-P, n1048, σ0°69/1063, mb5.0/268, MS4.4/46, 219C-235D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.55**	**280**	⇑P	**Pn**	**05 41 37.8**	**-0.4**
JFK				S	**Sn**	**05 41 46.6**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.63**	**254**	⇓P	**Pn**	**05 41 38.7**	**-0.6**
ONAJ				S	**Sn**	**05 41 48.0**	**-0.1**
JMM	**Marumori**	**0.85**	**315**	⇑P	**Pn**	**05 41 41.9**	**-0.3**
JMM				S	**Sn**	**05 41 54.1**	**+0.7**
JFT	**Otama**	**1.00**	**284**	⇑P	**Pn**	**05 41 45.1**	**+0.8**
JFT				S	**Sn**	**05 41 59.3**	**+2.1**
JHO	**Hitachi**	**1.03**	**230**	⇓P	**Pn**	**05 41 43.2**	**-1.6**
JHO				S	**Sn**	**05 41 56.4**	**-1.6**
JIO	**Ouri**	**1.19**	**352**	⇑P	**Pn**	**05 41 45.8**	**-1.2**
JIO				S	**Sn**	**05 42 00.6**	**-1.3**
JOU	**Okura**	**1.30**	**327**	⇑P	**Pn**	**05 41 48.4**	**0.0**
JOU				S	**Sn**	**05 42 06.6**	**+2.0**
JFY	**Yanaizu**	**1.48**	**276**	⇑P	**Pn**	**05 41 51.6**	**+0.7**
JFY				S	**Sn**	**05 42 11.5**	**+2.4**
JYS	**Shirataka**	**1.51**	**309**	⇑P	**Pn**	**05 41 52.1**	**+0.7**
JMK	**Ichinoseki**	**1.70**	**351**	⇑P	**Pn**	**05 41 53.4**	**-0.5**
JMK				S	**Sn**	**05 42 14.7**	**+0.3**
OFUJ	**Ofunato**	**1.81**	**3**	⇑P	**Pn**	**05 41 54.0**	**-1.4**
JYK	**Kaneyama**	**1.89**	**330**	⇑P	**Pn**	**05 41 56.9**	**+0.3**
JYA	**Atsumi**	**1.96**	**313**	⇑P	**Pn**	**05 41 58.5**	**+0.9**
JHK	**Hiroka**	**2.02**	**270**	⇑P	**Pn**	**05 41 59.4**	**+1.0**
JOM	**Ohasama**	**2.21**	**355**	P	**Pn**	**05 42 00.5**	**-0.4**
JRG	**Rokugo**	**2.24**	**341**	⇑P	**Pn**	**05 42 01.9**	**+0.5**
MIYJ	**Miyakonagasawa**	**2.31**	**5**	⇑P	**Pn**	**05 42 00.7**	**-1.6**
JTB	**Tobi-shima**	**2.48**	**321**	P	**Pn**	**05 42 05.2**	**+0.5**
JYW	**Yuwa**	**2.50**	**335**	P	**Pn**	**05 42 06.0**	**+1.1**
JTH	**Tanohata**	**2.67**	**5**	P	**Pn**	**05 42 06.1**	**-1.2**
JKZ	**Kuzumaki**	**2.71**	**356**	⇑P	**Pn**	**05 42 07.5**	**-0.4**
JSD	**Sado**	**2.72**	**287**	P	**Pn**	**05 42 08.2**	**+0.2**
MJAR	**Matsushiro Arr**	**2.78**	**256**	P	**Pn**	**05 42 09.8**	**+1.0**
MJAR						05 42 45.6	
MJAR				pmax	pmax		
comp=Z,20nm,0.3s							
MJAR				smax			
comp=N,40nm,0.3s							
MJAR				MLR	MLR		
comp=Z,4μm,20.3s							
MJAR Matsushiro Arr		**2.78**	**256**	Pn	**Pn**	**05 42 09.8**	**+1.0**
comp=Z,20nm,0.3s,baz=75,slow=16,SNR=82							
MJAR				Sn	**Sn**	**05 42 45.6**	**+4.5**
comp=Z,40nm,0.3s,baz=80,slow=27,SNR=5.2							
MJAR				LR	LR	05 43 31.5	
comp=Z,4μm,20.3s,baz=85,slow=45							
MAJO Matsushiro		**2.78**	**256**	*e*P	**Pn**	**05 42 10.6**	**+1.8**
MAT Matsushiro		**2.78**	**256**	P	**Pn**	**05 42 10.3**	**+1.5**
MAT				*e*S	**Sn**	**05 42 45.6**	**+4.5**
JNG Nsakai		**2.90**	**254**	P	**Pn**	**05 42 12.0**	**+1.5**
JOG2 Oga 2		**2.98**	**333**	P	**Pn**	**05 42 12.0**	**+0.5**
JIW Iwasaki		**3.53**	**340**	⇑P	**Pn**	**05 42 19.9**	**+0.8**
JSI2 Shiura 2		**3.88**	**347**	⇑P	**Pn**	**05 42 24.8**	**+0.9**
JHJ Hachijo jima 2		**4.39**	**200**	Pn	**Pn**	**05 42 28.4**	**-2.6**
comp=Z,210nm,0.3s,baz=225,slow=6.9,SNR=17							
JHJ				Sn	**Sn**	**05 43 18.4**	**-2.4**
comp=Z,259nm,0.3s,baz=73,slow=19,SNR=4.2							
ERM Erimo		**4.89**	**14**	Pn	**Pn**	**05 42 35.5**	**-2.3**
comp=Z,3μm,0.5s,SNR=90							
ERM Erimo		**4.89**	**14**	*e*Pn	**Pn**	**05 42 36.1**	**-1.7**
ERM				*e*Sn	**Sn**	**05 43 32.4**	**-0.8**
JAD Aida		**6.42**	**251**	P	**Pn**	**05 43 02.7**	**+3.9**
ASAJ Asahikawa		**6.88**	**6**	P	**Pn**	**05 43 03.7**	**-1.4**
ASAJ						05 44 19.4	
ASAJ				pmax	pmax		
comp=Z,12nm,0.3s							
ASAJ				smax			
comp=N,14nm,0.3s							
ASAJ Asahikawa		**6.88**	**6**	Pn	**Pn**	**05 43 03.7**	**-1.4**
comp=N,12nm,0.3s,baz=218,slow=10.0,SNR=30							
ASAJ				Sn	**Sn**	**05 44 19.4**	**-2.7**
comp=N,14nm,0.3s,baz=181,slow=32,SNR=3.9							
YUK Yuzh-Kuril'sk		**7.50**	**25**	*e*P	**Pn**	**05 43 09.7**	**-3.9**
YUK				*i* S	**Sn**	**05 44 29.4**	**-8.0**
YUK				pmax	pmax		
comp=N,370nm,0.5s							
YUK				pmax	pmax		
comp=E,180nm,0.5s							
YUK				pmax	pmax		
comp=Z,370nm,0.5s							
YUK				smax			
comp=N,3μm,0.5s							
YUK				smax			
comp=E,1μm,0.5s							
YUK				smax			
comp=N,5μm,0.9s							
YUK				smax			
comp=E,4μm,0.9s							
YUK				MLR	MLR		
comp=N,3μm,14.0s							
YUK				MLR	MLR		
comp=E,3μm,14.0s							
YUK				MLR	MLR		
comp=Z,3μm,14.0s							
KUR Kuril'sk		**9.26**	**29**	*e*P	**Pn**	**05 43 34.5**	**-3.2**
KUR				*e*S	**Sn**	**05 45 12.0**	**-8.5**
KUR				pmax	pmax		
comp=Z,190nm,0.6s							
KUR				smax			
comp=N,920nm,0.9s							
KUR				smax			
comp=E,280nm,0.9s							
VLA Vladivostok		**9.42**	**311**	*i* P	**Pn**	**05 43 45.4**	**+5.6**
VLA				*e*		05 45 32.0	
VLA				MLR	MLR		
comp=Z,400nm,13.0s							
YSS Yuzh-Sakhalins		**9.71**	**5**	⇑*i* P	**Pn**	**05 43 41.8**	**-2.1**
YSS				*e*S	**Sn**	**05 45 27.0**	**-4.6**
YSS				pmax	pmax		
comp=Z,60nm,1.0s							
YSS				smax			
comp=N,70nm,1.0s							
YSS				MLR	MLR		
comp=Z,700nm,14.0s							
YSS				MLR	MLR		
comp=E,2μm,16.0s							
YSS Yuzh-Sakhalins		**9.71**	**5**	*e*Pn	**Pn**	**05 43 41.8**	**-2.1**
comp=E,199nm,0.9s							
CBIJ Chichi jima		**10.16**	**177**	Pn	**Pn**	**05 43 45.3**	**-4.9**
comp=E,32nm,0.3s,baz=301,slow=4.8,SNR=16							
CBIJ				Sn	**Sn**	**05 45 32.5**	**-10**
comp=E,38nm,0.3s,baz=100,slow=24,SNR=7.6							
KSRS Korea Array		**10.85**	**275**	Pn	**Pn**	**05 44 03.5**	**+4.0**
comp=E,0.8nm,0.3s,baz=91,slow=13,SNR=54							
KSRS				LR	LR	05 47 55.6	
comp=E,2μm,19.2s,baz=89,slow=36							
KSRS				PcP	PcP	05 49 57.9	+0.1
comp=E,0.1nm,0.3s,baz=11,slow=2.6,SNR=4.1							
MDJ Mudanjiang		**11.64**	**313**	P	**Pn**	**05 44 10.2**	**0.0**
MDJ				pP		05 44 15.4	
MDJ				S	**Sn**	**05 46 20.1**	**+1.4**
MDJ				ScP	ScP	05 53 29.3	+1.3
MDJ				PcS	PcS	05 53 32.9	+0.7
MDJ				ScS	ScS	05 57 04.9	+1.5
MDJ				pmax	pmax		
comp=Z,65nm,4.0s							
MDJ				LR	LR		
comp=N,700nm,23.2s							
MDJ				LR	LR		
comp=E,800nm,19.1s							
MDJ				LR	LR		
comp=Z,2μm,20.4s							
MDJ Mudanjiang		**11.64**	**313**	*e*Pn	**Pn**	**05 44 14.9**	**+4.7**
comp=Z,74nm,0.9s							
HABR Khabarovsk		**12.16**	**339**	*de*P	**Pn**	**05 44 19.0**	**+1.7**
HABR				*e*		05 46 34.6	
HABR				pmax	pmax		
comp=Z,60nm,1.5s							
HABR				pmax	pmax		
comp=N,26nm,1.3s							
HABR				pmax	pmax		
comp=E,12nm,0.8s							
HABR				MLR	MLR		
comp=Z,1μm,14.0s							
CN2 Changchun		**13.87**	**303**	*e*P	**Pn**	**05 44 42.5**	**+1.8**
CN2				*ep*P		05 44 49.9	
CN2				*e*S	**Sn**	**05 47 15.5**	**+2.3**
CN2				pmax	pmax		
comp=Z,30nm,1.1s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,1μm,16.0s							
CN2				LR	LR		
comp=E,1μm,16.0s							
CN2				LR	LR		
comp=Z,1μm,17.0s							
KLR Kul'dur		**13.91**	**332**	*e*P	**Pn**	**05 44 36.2**	**-5.0**
KLR				MLR	MLR		
comp=E,600nm,12.5s							
KLR				MLR	MLR		
comp=Z,2μm,12.5s							
SNY Shenyang		**14.59**	**294**	⇓P	**Pn**	**05 44 51.1**	**+0.6**
SNY				pmax	pmax		
comp=Z,18nm,1.3s							
SNY				pmax	pmax		
comp=Z,430nm,12.0s							
SNY				LR	LR		
comp=N,650nm,14.2s							
SNY				LR	LR		
comp=E,1μm,16.2s							
SNY				LR	LR		
comp=Z,2μm,18.8s							
JOW Kunigami		**15.32**	**231**	LR	LR	05 51 03.9	
comp=Z,432nm,19.5s,baz=140,slow=38							
DL2 Dalian		**15.78**	**282**	P	**Pn**	**05 45 06.4**	**+0.4**
DL2				S	**S**	**05 48 02.6**	**-10**
DL2				pmax	pmax		
comp=Z,30nm,0.9s							
DL2				LR	LR		
comp=N,470nm,12.6s							
DL2				LR	LR		
comp=E,440nm,12.9s							
DL2				LR	LR		
comp=Z,750nm,17.1s							
NJ2 Nanjing		**19.37**	**261**	*e*P	**Pn**	**05 45 50.5**	**0.0**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s							
PETK Petropavlovsk-		**19.42**	**30**	P	**Pn**	**05 45 48.3**	**-2.6**
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
PETK				MLR	MLR		
comp=Z,321nm,20.6s							
PETK Petropavlovsk-		**19.42**	**30**	P	**Pn**	**05 45 48.3**	**-2.7**
comp=Z,0.7nm,0.3s,baz=206,slow=7.6,SNR=21							
PETK				LR	LR	05 52 59.9	
comp=Z,321nm,20.6s,baz=213,slow=36							
PET Petropavlovsk		**19.75**	**32**	*e*P	**Pn**	**05 45 52.8**	**-2.0**
PET				pmax	pmax		
comp=Z,75nm,1.2s							
PET Petropavlovsk		**19.75**	**32**	*e*P	**Pn**	**05 45 52.2**	**-2.6**
comp=Z,92nm,1.2s							
HIA Hailar		**19.82**	**314**	*e*P	**Pn**	**05 45 53.1**	**-2.5**
HIA				pmax	pmax		
comp=Z,22nm,0.9s							
HIA Hailar		**19.82**	**314**	*e*P	**Pn**	**05 45 53.0**	**-2.6**
comp=Z,22nm,0.9s							
BJI Beijing		**19.99**	**286**	P	**Pn**	**05 45 55.4**	**-2.4**
BJI				pP	pP	05 46 03.4	-2.4
BJI				sP	sP	05 46 07.5	-3.3
BJI				S	**S**	**05 49 39.1**	**+0.6**
BJI				sS	sS	05 49 52.9	-1.4
BJI				pmax	pmax		
comp=Z,39nm,0.8s							
BJI				pmax	pmax		
comp=Z,130nm,4.1s							
BJI				LR	LR		
comp=N,480nm,14.2s							
BJI				LR	LR		
comp=E,200nm,13.2s							
BJI				LR	LR		
comp=Z,400nm,20.3s							
BJT Baijiatuau		**20.00**	**286**	*e*P	**Pn**	**05 45 54.1**	**-3.8**
BJT				pmax	pmax		
comp=Z,41nm,0.6s							
BJT Baijiatuau		**20.00**	**286**	*e*P	**Pn**	**05 45 54.1**	**-3.8**
comp=Z,41nm,0.6s							
YULB Yu-li		**22.23**	**237**	*e*P	**P**	**05 46 18.9**	**-1.1**
comp=Z,9.4nm,0.5s,mb4.5							
YULB				*e*		05 46 29.5	
NRGR Nerungri		**22.42**	**335**	*e*P	**P**	**05 46 21.1**	**-0.7**
NRGR				S	**S**	**05 50 25.9**	**+0.1**
NRGR				smax			
comp=N,12nm,0.4s							
CLNS Chul'man		**22.51**	**336**	*e*P	**P**	**05 46 20.7**	**-2.0**
CLNS				*e**PP		05 46 29.2	
CLNS				*e*PPP		05 46 50.3	
CLNS				*e*		05 50 17.0	
CLNS				*e*S	**S**	**05 50 22.9**	**-4.4**
CLNS				pmax	pmax		
comp=Z,16nm,0.8s,mb4.5							
CLNS				pmax	pmax		
comp=N,13nm,1.1s							
CLNS				pmax	pmax		
comp=E,7.0nm,1.2s							
CLNS				smax			
comp=E,121nm,12.0s							
CLNS				smax			
comp=N,134nm,12.5s							
CLNS				MLR	MLR		
comp=Z,861nm,16.0s,MS4.3							
CLNS				MLR	MLR		
comp=E,406nm,15.0s,MS4.2							
CLNS				MLR	MLR		
comp=N,626nm,16.0s,MS4.2							
TPUB Ta-pu		**22.75**	**238**	*e*P	**P**	**05 46 22.5**	**-3.1**
comp=N,40nm,0.8s,mb4.9							
TWG Pinlang		**22.77**	**237**	*e*P	**P**	**05 46 25.5**	**-0.3**
comp=N,53nm,1.1s,mb4.9							
TWG				*e*		05 46 35.3	
HHC Hu-ho-hao-te		**23.50**	**288**	*e*P	**P**	**05 46 32.2**	**-1.0**
HHC				pP		05 46 41.7	
HHC				sP	sP	05 46 45.8	-2.6
HHC				PP		05 47 04.1	
HHC				PcP	PcP	05 50 20.1	+2.4
HHC				S	**S**	**05 50 42.1**	**-1.8**
HHC				sS	sS	05 50 54.9	-6.9
HHC				SS		05 51 26.3	
HHC				ScP	ScP	05 53 54.0	+1.3
HHC				pmax	pmax		
comp=Z,18nm,1.0s,mb4.5							
HHC				pmax	pmax		
comp=Z,230nm,5.3s							
HHC				LR	LR		
comp=N,470nm,12.9s,MS4.3							
HHC				LR	LR		
comp=E,380nm,11

comp=E,2μm,16.8s
WHN LR LR
comp=Z,2μm,20.0s,MS4.5
GUMO Guam 23.77 172 LR LR 05 53 54.3
comp=Z,329nm,21.9s,MS3.8,baz=24,slow=32
YAK Yakutsk 25.86 347 *d iP* **P** **05 46 53.2 -1.2**
YAK *e**PP pP 05 47 03.0 -2.2
YAK *e* 05 47 30.8
YAK *e*PPP 05 47 39.3
YAK *e* 05 50 18.5
YAK *e*S **S** **05 51 19.5 -1.7**
YAK *e*SSS 05 52 37.6
YAK *e* 05 57 49.4
YAK pmax pmax
comp=Z,85nm,0.9s,mb5.3
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK pmax pmax
comp=N,27nm,1.1s
YAK pmax pmax
comp=Z,53nm,0.9s,mb5.1
YAK pmax pmax
comp=N,24nm,1.0s
YAK pmax pmax
comp=E,13nm,0.5s
YAK smax
comp=N,246nm,2.5s
YAK smax
comp=E,100nm,1.9s
YAK MLR MLR
comp=Z,1μm,16.0s,MS4.5
YAK MLR MLR
comp=N,838nm,16.0s,MS4.4
YAK MLR MLR
comp=E,393nm,16.0s,MS4.4
YAK Yakutsk 25.86 347 *e*P **P** **05 46 53.7 -0.7**
comp=E,110nm,0.8s,mb5.4
SEY Seymchan 26.53 11 *ce*P **P** **05 47 00.6 +0.2**
XAN Xi'an 26.64 273 P **P** **05 47 01.4 -0.3**
XAN pP pP 05 47 11.2 -1.4
XAN S **S** **05 51 34.9 +0.9**
XAN sS sS 05 51 49.9 -2.3
XAN pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
XAN pmax pmax
comp=Z,56nm,5.9s
XAN LR LR
comp=N,430nm,17.4s,MS4.1
XAN LR LR
comp=E,110nm,16.2s,MS4.1
XAN LR LR
comp=Z,120nm,17.0s,MS3.5
ULN Ulaanbaatar 27.31 304 *e*P **P** **05 47 07.4 -0.2**
ULN pmax pmax
comp=Z,15nm,0.8s,mb4.6
ULN Ulaanbaatar 27.31 304 *e*P **P** **05 47 07.4 -0.2**
comp=Z,15nm,0.8s,mb4.6
ULN Ulaanbaatar 27.31 304 P **P** **05 47 09.0 +1.4**
SNR=11
ULN P 05 47 09.0
SNR=11
BOD Bodaibo 27.39 327 *e*P **P** **05 47 07.1 -1.1**
BOD *e* pP 05 47 16.7 -2.3
BOD pmax pmax
comp=Z,30nm,0.9s,mb4.8
ENH Enshi 27.47 265 *e*P **P** **05 47 08.8 -0.4**
comp=Z,82nm,1.1s,mb5.2
SONM Songino Array 27.75 304 P **P** **05 47 11.1 -0.4**
SONM 05 50 27.0
SONM pmax pmax
comp=Z,13nm,0.6s
SONM MLR MLR
comp=Z,466nm,19.0s
SONM Songino Array 27.75 304 P **P** **05 47 11.1 -0.4**
comp=Z,13nm,0.6s,mb4.7,baz=101,slow=8.9,SNR=55
SONM PcP PcP 05 50 27.0 -0.3
comp=Z,1.3nm,0.5s,baz=136,slow=3.5,SNR=4.1
SONM LR LR 05 58 27.9
comp=Z,466nm,19.0s,MS4.1,baz=61,slow=37
GZH Guangzhou 28.06 248 P **P** **05 47 09.9 -4.6**
GZH S **S** **05 51 49.7 -6.9**
GZH LR LR
comp=N,640nm,18.9s,MS4.3
GZH LR LR
comp=E,470nm,16.8s,MS4.3
GZH LR LR
comp=Z,840nm,14.1s,MS4.5
LZH Lanzhou 30.14 279 *e*P **P** **05 47 34.7 +1.8**
LZH pP pP 05 47 45.6 +1.8
LZH sP sP 05 47 50.3 +1.7
LZH PP PP 05 48 32.2 -9.0
LZH PcP PcP 05 50 34.6 +1.1
LZH *e*S **S** **05 52 29.3 +0.2**
LZH sS sS 05 52 44.2 -3.0
LZH SS SS 05 54 08.6 -30
LZH pmax pmax
comp=Z,41nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,180nm,5.5s
LZH LR LR
comp=E,850nm,14.9s
LZH LR LR
comp=Z,1μm,16.6s,MS4.7
ZAK Zakamensk 30.21 308 *e*P **P** **05 47 32.2 -1.1**
ZAK pmax pmax
comp=Z,15nm,1.2s,mb4.6
TLY Talaya 30.26 311 P **P** **05 47 34.8 +1.0**
comp=Z,109nm,0.8s,mb5.6,SNR=12
TLY Talaya 30.26 311 *e*P **P** **05 47 33.1 -0.7**
TLY pmax pmax
comp=Z,17nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,666nm,18.0s,MS4.3
TLY Talaya 30.26 311 *e*P **P** **05 47 34.2 +0.5**
comp=Z,16nm,0.9s,mb4.8
TLY Talaya 30.26 311 P **P** **05 47 34.6 +0.8**
SNR=11
TLY P 05 47 34.6
SNR=11
GYA Guiyang 31.37 260 ⇑ *iP* **P** **05 47 43.2 -0.6**
GYA pP pP 05 47 54.8 0.0
GYA sP sP 05 47 59.6 +0.1
GYA PP PP 05 48 48.0 -7.1
GYA PcP PcP 05 50 37.6 +0.7
GYA S **S** **05 52 47.3 -1.2**
GYA sS sS 05 53 05.4 -1.4
GYA ScP ScP 05 54 16.8 0.0
GYA SS SS 05 54 35.9 -28
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,530nm,17.0s,MS4.4
GYA LR LR
comp=E,460nm,16.2s,MS4.4
GYA LR LR
comp=Z,570nm,16.8s,MS4.3
CD2 Chengdu 31.79 270 P **P** **05 47 46.9 -0.5**
CD2 pP pP 05 47 58.9 +0.5
CD2 sP sP 05 48 03.7 +0.6
CD2 PP PP 05 48 53.6 -6.0
CD2 PcP PcP 05 50 39.0 +1.0
CD2 S **S** **05 52 53.9 -1.0**
CD2 sS sS 05 53 11.8 -1.4
CD2 SS SS 05 54 43.7 -28
CD2 pmax pmax
comp=Z,30nm,0.7s,mb5.2
CD2 pmax pmax
comp=Z,90nm,5.7s
CD2 LR LR
comp=N,580nm,15.5s
CD2 LR LR
comp=Z,790nm,15.5s,MS4.5
MOY Mondy 31.87 310 *e*P **P** **05 47 47.8 -0.1**
GTA Gaotai 32.60 287 *e*P **P** **05 47 54.3 -0.2**
GTA pP pP 05 48 04.6 -0.9
GTA sP sP 05 48 09.7 -0.5
GTA PcP PcP 05 50 40.9 +0.9
GTA S **S** **05 53 06.7 -0.8**
GTA sS sS 05 53 24.1 -1.6
GTA SS SS 05 55 07.9 -21
GTA pmax pmax
comp=Z,13nm,0.8s,mb4.9
GTA pmax pmax
comp=Z,170nm,3.8s
GTA LR LR
comp=N,370nm,16.9s,MS4.3
GTA LR LR
comp=E,430nm,15.8s,MS4.3
GTA LR LR
comp=Z,340nm,17.8s,MS4.1
QIZ Qiongzhong 33.13 245 P **P** **05 48 00.9 +1.6**
QIZ S **S** **05 53 23.9 +7.9**
QIZ pmax pmax
comp=Z,27nm,1.4s,mb5.0
QIZ LR LR
comp=N,270nm,13.4s
QIZ LR LR
comp=Z,350nm,16.1s,MS4.2
QIZ Qiongzhong 33.13 245 *e*P **P** **05 48 00.4 +1.1**
comp=Z,10.0nm,0.7s,mb4.8
BILL Bilibino 33.77 16 κ *iP* **P** **05 48 03.2 -1.1**
BILL *e**PP pP 05 48 14.6 -0.7
BILL *e**SP sP 05 48 18.7 -1.3
BILL 05 49 16.0
BILL pmax pmax
comp=Z,44nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,200nm,15.0s,MS4.0
BILL Bilibino 33.77 16 *e*P **P** **05 48 03.0 -1.3**
comp=Z,44nm,1.2s,mb5.3
TIXI Tiksi 35.06 353 *e*P **P** **05 48 13.3 -2.2**
TIXI pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
TIXI MLR MLR
comp=Z,618nm,16.0s,MS4.5
TIXI Tiksi 35.06 353 *e*P **P** **05 48 14.5 -1.1**
comp=Z,11nm,0.7s,mb4.9
TIXI *e*pP pP 05 48 24.8 -1.7
KMI Kunming 35.11 261 P **P** **05 48 16.4 0.0**
KMI pP pP 05 48 26.9 -0.6
KMI sP sP 05 48 31.1 -1.1
KMI PP PP 05 49 35.9 -0.6
KMI S **S** **05 53 45.4 -1.1**
KMI sS sS 05 54 03.3 -1.5
KMI pmax pmax
comp=Z,37nm,1.1s,mb5.2
KMI pmax pmax
comp=Z,140nm,4.3s
KMI LR LR
comp=N,370nm,17.1s,MS4.5
KMI LR LR
comp=E,570nm,15.3s,MS4.5
KMI LR LR
comp=Z,630nm,13.0s,MS4.5
KKM Kota Kinabalu 38.73 223 *e*P **P** **05 48 47.8 +0.5**
comp=Z,20nm,1.0s,mb4.8
KKM *e*pP pP 05 48 57.4 -1.0
TNA Tin City 40.59 30 *e*P **P** **05 49 02.3 +0.1**
comp=Z,38nm,1.2s,mb4.9
WMQ Urumqi 40.83 297 P **P** **05 49 05.3 +0.8**
WMQ pP pP 05 49 16.4 +0.8
WMQ PP PP 05 50 43.2 +4.3
WMQ ScP ScP 05 54 45.4 -5.8
WMQ PcS PcS 05 54 56.5 +1.0
WMQ S **S** **05 55 13.2 +0.4**
WMQ sS sS 05 55 31.9 +0.6
WMQ ScS ScS 05 59 05.5 -0.5
WMQ pmax pmax
comp=Z,33nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,340nm,3.5s
WMQ LR LR
comp=N,130nm,22.0s
WMQ LR LR
comp=E,250nm,29.0s
WMQ LR LR
comp=Z,280nm,22.0s,MS4.1
CMAR Chiang Mai Arr 41.67 255 P **P** **05 49 11.8 +0.2**
CMAR *PP pP 05 49 22.7 -0.1
CMAR 05 51 08.6
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR MLR MLR
comp=Z,348nm,18.6s
CMAR Chiang Mai Arr 41.67 255 P **P** **05 49 11.8 +0.2**
comp=Z,3.9nm,0.8s,mb4.1,baz=48,slow=5.0,SNR=17
CMAR pP pP 05 49 22.7 -0.1
comp=Z,6.0nm,0.9s,baz=51,slow=5.1,SNR=7.0
CMAR PcP PcP 05 51 08.6 +0.7
comp=Z,1.4nm,0.4s,baz=25,slow=3.1,SNR=6.0
CMAR LR LR 06 08 36.5
comp=Z,348nm,18.6s,MS4.3,baz=67,slow=39
ZALV Zalesovo Beam 41.84 312 P **P** **05 49 12.4 -0.2**
ZALV *PP pP 05 49 22.8 -1.0
ZALV 05 51 07.0
ZALV pmax pmax
comp=Z,12nm,0.4s,mb4.9
ZALV MLR MLR
comp=Z,448nm,18.7s,MS4.4
ZALV Zalesovo Beam 41.84 312 P **P** **05 49 12.4 -0.2**
comp=Z,12nm,0.4s,mb4.8,baz=91,slow=6.5,SNR=84
ZALV pP pP 05 49 22.8 -0.9
comp=Z,57nm,0.9s,baz=84,slow=6.9,SNR=24
ZALV PcP PcP 05 51 07.0 -0.9
comp=Z,4.9nm,0.6s,baz=79,slow=2.9,SNR=4.3
ZALV LR LR 06 07 28.6
comp=Z,448nm,18.7s,MS4.4,baz=248,slow=37
LSA Lhasa 42.30 275 *e*P **P** **05 49 18.5 +1.8**
LSA *e**PP pP 05 49 30.5 +2.6
LSA pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
LSA Lhasa 42.30 275 *e*P **P** **05 49 18.5 +1.8**
comp=Z,9.7nm,0.7s,mb4.5
LSA *e*pP pP 05 49 30.5 +2.6
NVS Novosibirsk 42.76 314 ⇓ *iP* **P** **05 49 20.0 0.0**
NVS *e* 05 51 08.8
NVS *e*S **S** **05 55 42.7 +1.8**
NVS pmax pmax
comp=E,81nm,1.1s
NVS pmax pmax
comp=Z,82nm,1.1s,mb5.4
NVS smax
comp=N,14nm,2.4s
NVS smax
comp=E,50nm,2.7s
SHL Shillong 43.52 269 *e*P **P** **05 49 26.5 -0.1**
MK31 Makanchi Array 44.09 302 *e*P **P** **05 49 31.1 +0.2**
MK31 *e**PP pP 05 49 42.2 +0.1
MKAR Makanchi Array 44.09 302 P **P** **05 49 31.1 +0.2**
MKAR *PP pP 05 49 41.2 -0.9
MKAR pmax pmax
comp=Z,24nm,0.7s
MKAR MLR MLR
comp=Z,206nm,18.3s
MKAR Makanchi Array 44.09 302 P **P** **05 49 31.1 +0.2**
comp=Z,24nm,0.7s,mb5.0,baz=88,slow=10.0,SNR=211
MKAR pP pP 05 49 41.2 -1.0
comp=Z,24nm,0.8s,baz=90,slow=8.3,SNR=16
MKAR LR LR 06 09 09.3
comp=Z,206nm,18.3s,MS4.1,baz=29,slow=38
MKAR Makanchi Array 44.09 302 P **P** **05 49 31.1 +0.3**
MKAR pP pP 05 49 41.2 -1.0
MKAR LR LR 06 09 09.3
SVW2 Sparrevohn 45.26 37 *e*P **P** **05 49 40.6 +0.6**
KSM Kuching 45.80 226 *e*P **P** **05 49 45.7 +0.8**
comp=Z,54nm,0.9s,mb5.5
KSM *e*pP pP 05 49 55.7 -0.4
KURK Kurchatov 45.87 308 P **P** **05 49 44.5 -0.5**
comp=Z,2μm,0.9s,SNR=64
KURK Kurchatov 45.87 308 *ce*P **P** **05 49 44.7 -0.3**
KURK pmax pmax
comp=Z,69nm,1.0s,mb5.5
KURK Kurchatov 45.87 308 LR LR 06 09 40.5
comp=Z,370nm,20.6s,MS4.3,baz=50,slow=37
KURK Kurchatov 45.87 308 *e*P **P** **05 49 44.2 -0.8**
comp=Z,238nm,0.9s,mb6.1
KURK *e*pP pP 05 49 55.6 -0.7
KURK Kurchatov 45.87 308 P **P** **05 49 45.1 +0.1**
SNR=124
KURK P 05 49 45.1
SNR=124
TAPN Tapejung 46.04 274 *e*P **P** **05 49 47.3 +0.7**
ODAN Odare 46.51 273 *e*P **P** **05 49 51.2 +0.8**
comp=Z,57nm,0.8s,mb5.6
RSO Redoubt South 46.65 38 *e*P **P** **05 49 50.7 -0.2**
KAPI Kappang 46.73 211 *e*P **P** **05 49 51.8 -0.3**
comp=Z,27nm,0.9s,mb5.2
KDAK Kodiak Island 46.85 42 P **P** **05 49 52.0 -0.5**
comp=Z,436nm,0.7s,mb6.5,SNR=9.4
KDAK Kodiak Island 46.85 42 *e*P **P** **05 49 51.5 -1.0**
KDAK pmax pmax
comp=Z,365nm,1.8s,mb6.0
KDAK Kodiak Island 46.85 42 *e*P **P** **05 49 51.5 -1.0**
comp=Z,365nm,1.8s,mb6.0
CHUM Lake Minchumin 46.87 34 *e*P **P** **05 49 53.6 +0.9**
comp=Z,30nm,1.0s,mb5.2
PPLA Purkeypile 46.91 35 *e*P **P** **05 49 53.9 +1.0**
comp=Z,21nm,1.0s,mb5.0
RAMN Ramite 47.10 274 *e*P **P** **05 49 55.6 +0.6**
comp=Z,165nm,1.1s,mb5.9
JIRN Jiri 47.11 275 *e*P **P** **05 49 56.1 +1.1**
GUN Gumba 47.24 276 *e*P **P** **05 49 57.1 +1.0**
comp=Z,55nm,0.5s,mb5.7
BPAW Bear Paw Mtn. 47.46 33 *e*P **P** **05 49 57.3 +0.1**
comp=Z,15nm,0.8s,mb5.0
KTH Kantishna Hill 47.49 34 *e*P **P** **05 49 57.7 +0.3**
comp=Z,63nm,1.2s,mb5.4
PKI Pulchoki 47.77 275 *e*P **P** **05 50 00.6 +0.5**
comp=Z,41nm,0.9s,mb5.5
TRF Thorofare Moun 47.77 34 *e*P **P** **05 49 59.5 -0.2**
comp=Z,19nm,0.8s,mb5.2
KKN Kakani 47.77 276 *e*P **P** **05 50 00.7 +0.5**
comp=Z,83nm,0.9s,mb5.8
PKIN Phulchoki 47.78 275 *e*P **P** **05 50 00.3 +0.1**
FIB Fire Island 47.88 37 *e*P **P** **05 50 00.3 -0.3**
FIB *e* pP 05 50 08.2 -3.7
FIB pmax pmax
comp=Z,131nm,0.6s,mb6.1
FIB Fire Island 47.88 37 *e*P **P** **05 50 00.3 -0.3**
comp=Z,131nm,0.6s,mb6.1
FIB *e* pP 05 50 08.2 -3.7
COLD Coldfoot 47.89 29 *e*P **P** **05 50 00.2 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
RC01 Rabbit Creek A 48.10 37 *e*P **P** **05 50 01.5 -0.8**
comp=Z,2μm,0.7s
GKN Gorkha 48.19 276 *e*P **P** **05 50 03.6 +0.2**
comp=Z,251nm,1.2s,mb6.1
PMR Palmer 48.37 37 *e*P **P** **05 50 03.6 -0.7**
PMR pmax pmax
comp=Z,24nm,0.7s,mb5.3
PMR Palmer 48.37 37 *e*P **P** **05 50 03.6 -0.7**
comp=Z,24nm,0.7s,mb5.3
MCK McKinley 48.37 34 *e*P **P** **05 50 03.4 -0.9**
MCK pmax pmax
comp=Z,21nm,0.8s,mb5.2
MCK McKinley 48.37 34 *e*P **P** **05 50 03.4 -0.9**
comp=Z,21nm,0.8s,mb5.2
COLA College 48.82 32 *e*P **P** **05 50 07.6 -0.1**
COLA pmax pmax
comp=Z,11nm,0.6s,mb5.1
COLA College 48.82 32 *e*P **P** **05 50 07.6 -0.1**
comp=Z,11nm,0.6s,mb5.1
KOLN Koldanda 49.12 277 *e*P **P** **05 50 11.1 +0.6**
comp=Z,37nm,0.8s,mb5.5
TKM2 Tokmak 2 49.62 298 P **P** **05 50 15.3 +1.2**
SNR=38
TKM2 Tokmak 2 49.62 298 *e*P **P** **05 50 15.1 +1.0**
TKM2 *e**PP pP 05 50 26.1 +0.6
TKM2 pmax pmax
comp=Z,79nm,1.2s,mb5.6
TKM2 Tokmak 2 49.62 298 *e*P **P** **05 50 15.1 +1.0**
comp=Z,79nm,1.2s,mb5.6
TKM2 *e*pP pP 05 50 26.1 +0.6
KZA Kyzart 50.11 297 P **P** **05 50 19.7 +1.8**
SNR=18
KBK Karagaybulak 50.15 298 P **P** **05 50 19.1 +0.9**
SNR=19
USP Ospenovka 50.28 299 P **P** **05 50 19.6 +0.5**
SNR=17
FRU Bishkek 50.33 298 *e*P **P** **05 50 19.0 -0.5**
FRU *i* pP 05 50 29.0 -2.0
FRU pmax pmax
comp=Z,37nm,1.4s,mb5.2
KSH Kashi 50.41 294 *e*P **P** **05 50 24.5 +4.3**
KSH *e*pP pP 05 50 34.1 +2.5
KSH *e*sP sP 05 50 38.7 +2.4
KSH *e*PcP PcP 05 51 41.8 +3.6
KSH *e*PP PP 05 52 21.6 +5.7
KSH *e*ScP ScP 05 55 33.0 +2.1
KSH *e*PcS PcS 05 55 37.3 +2.0
KSH *e*S **S** **05 57 35.5 +4.7**
KSH *e*sS sS 05 57 53.5 +3.8
KSH *e*ScS ScS 06 00 09.9 +2.0
KSH pmax pmax
comp=Z,19nm,1.0s,mb5.1
KSH LR LR
comp=N,710nm,9.7s
KSH LR LR
comp=E,770nm,12.1s
KSH LR LR
comp=Z,2μm,15.1s,MS5.1
KAKA Kakadu 50.45 192 *e*P **P** **05 50 18.4 -2.2**
comp=Z,32nm,1.0s,mb5.3
KAKA Kakadu 50.45 192 P **P** **05 50 18.9 -1.7**
comp=Z,160nm,1.2s,mb5.9
KAKA *e*pP pP 05 50 34.5 +2.4
AAK Ala-Archa 50.48 298 P **P** **05 50 21.2 +0.5**
comp=Z,82nm,0.7s,mb5.9,SNR=6.5
AAK Ala-Archa 50.48 298 P **P** **05 50 21.2 +0.6**
SNR=7.9
AAK Ala-Archa 50.48 298 *ce*P **P** **05 50 20.5 -0.2**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
AAK Ala-Archa 50.48 298 LR LR 06 13 10.6
comp=Z,774nm,19.5s,MS4.7,baz=41,slow=38
AAK Ala-Archa 50.48 298 *e*P **P** **05 50 20.6 -0.1**
comp=Z,15nm,0.9s,mb5.0
AAK Ala-Archa 50.48 298 P **P** **05 50 21.5 +0.8**
SNR=9.2
AAK P 05 50 21.5
SNR=9.2
BVAR Borovoye Array 50.49 312 P **P** **05 50 20.5 -0.1**
comp=Z,8.7nm,0.7s,mb4.9,baz=76,slow=7.8,SNR=40
BVAR pP pP 05 50 31.3 -0.8
comp=Z,12nm,0.6s,baz=68,slow=8.8,SNR=13
BVAR PcP PcP 05 51 38.2 0.0
comp=Z,4.6nm,0.6s,baz=130,slow=4.6,SNR=4.0
BVAR pPcP 05 51 51.9
comp=Z,11nm,0.8s,baz=87,slow=3.1,SNR=5.8
BVAR LR LR 06 12 56.8
comp=Z,665nm,18.7s,MS4.7,slow=37
BRVK Borovoye 50.55 312 P **P** **05 50 21.0 0.0**
comp=Z,136nm,0.9s,mb5.9,SNR=6.5
BRVK Borovoye 50.55 312 *e*P **P** **05 50 21.1 +0.1**
BRVK *e**PP pP 05 50 32.0 -0.5
BRVK pmax pmax
comp=Z,21nm,0.9s,mb5.1
BRVK Borovoye 50.55 312 *e*P **P** **05 50 21.1 0.0**
comp=Z,21nm,0.9s,mb5.1
BRVK *e*pP pP 05 50 32.0 -0.5
BRVK Borovoye 50.55 312 P **P** **05 50 21.6 +0.5**
SNR=12
BRVK P 05 50 21.6
SNR=12
UCH Uchtor 50.59 298 P **P** **05 50 22.8 +1.3**
SNR=10
UCH Uchtor 50.59 298 *e*P **P** **05 50 22.5 +1.0**
comp=Z,9.1nm,0.9s,mb4.7
BMRM Bremner River 50.60 37 *e*P **P** **05 50 21.4 +0.1**
comp=Z,24nm,0.8s,mb5.2
BMRM *e* 05 50 36.4
MENT Mentasta 50.77 35 *e*P **P** **05 50 22.4 -0.2**
EKS2 Erkin-Say 50.97 298 P **P** **05 50 24.6 +0.2**
SNR=9.2
EKS2 Erkin-Say 50.97 298 *e*P **P** **05 50 24.4 0.0**
comp=Z,11nm,0.8s,mb4.8
EKS2 *e*pP pP 05 50 35.5 -0.3
COEN Coen 50.98 178 *e*P **P** **05 50 23.6 -1.0**
comp=Z,69nm,0.8s,mb5.6
COEN *e*pP pP 05 50 32.3 -3.7
PTH Pithoragarh 51.00 280 *e*P **P** **05 50 25.0 +0.2**
LGTI Lohaghat 51.02 280 *ex* **P** **05 50 27.5 +2.5**
AML Almayashu 51.20 298 P **P** **05 50 27.1 +1.0**
SNR=42
AML Almayashu 51.20 298 *e*P **P** **05 50 26.9 +0.8**
comp=Z,27nm,0.8s,mb5.2
AML *e*pP pP 05 50 39.0 +1.5
EGAK Eagle 51.68 32 *e*P **P** **05 50 28.8 -0.5**
comp=Z,11nm,0.7s,mb4.9
EGAK *e* pP 05 50 41.6 +0.9
DDI Dehra Dun 52.36 282 *e*P **P** **05 50 33.5 -1.4**
DAWY Dawson 52.54 33 *e*P **P** **05 50 35.9 +0.2**
THN Thein Dam 53.27 286 *ex* x 05 45 38.1
HYT Haines Junctio 54.04 37 *e*P **P** **05 50 48.2 +1.4**
INK Inuvik 54.12 27 *e*P **P** **05 50 47.5 +0.2**

INK pmax pmax
comp=Z,28nm,0.9s
INK Inuvik 54.12 27 *e*P **P 05 50 47.5 +0.2**
comp=Z,28nm,0.9s,mb5.2
SVE Sverdlovsk 55.04 319⇑*e*P **P 05 50 54.6 +0.5**
SVE pmax pmax
comp=Z,73nm,1.1s,mb5.6
SKAG Skagway 55.44 38 *e*P **P 05 50 57.8 +0.8**
comp=Z,20nm,1.1s,mb5.1
BHPL Bhopal 56.17 275 *e*P **P 05 51 02.6 -0.2**
SOKR Solikamsk 56.21 322 *d i*P **P 05 51 02.5 0.0**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.2
ARU Arti 56.26 318 P **P 05 51 02.4 -0.5**
comp=Z,291nm,1.0s,mb6.3,SNR=9.9
ARU Arti 56.26 318 *d i*P **P 05 51 02.7 -0.2**
ARU *e* 05 53 07.0
ARU S **S 05 58 53.2 +3.6**
ARU SS SS 06 02 34.8 -1.3
ARU pmax pmax
comp=Z,98nm,1.7s,mb5.6
ARU Arti 56.26 318 *e*P **P 05 51 02.2 -0.6**
comp=Z,63nm,1.1s,mb5.6
ARU *e*pP pP 05 51 13.3 -1.1
AJM Ajmer 56.78 280 *e*P **P 05 51 06.8 -0.3**
AJM AMb AMB 05 51 08.5
comp=Z,26nm,1.1s,mb5.2
FITZ Fitzroy Crossi 57.08 198 *e*P **P 05 51 08.8 -0.3**
comp=Z,11nm,0.9s,mb4.9
FITZ Fitzroy Crossi 57.08 198 *e*P **P 05 51 09.1 0.0**
comp=Z,9.7nm,1.0s,mb4.8
FITZ *e* pP 05 51 19.0 -1.7
WRAB Tennant Creek 57.30 188 P **P 05 51 09.2 -1.4**
comp=Z,93nm,0.7s,mb5.9,SNR=5.4
WRAB Tennant Creek 57.30 188 *e*P **P 05 51 08.8 -1.8**
WRAB pmax pmax
comp=Z,15nm,0.9s,mb5.0
WRAB Tennant Creek 57.30 188 *e*P **P 05 51 08.8 -1.8**
comp=Z,15nm,0.9s,mb5.0
WRA Warramunga Arr 57.31 188 P **P 05 51 09.4 -1.3**
WRA *PP pP 05 51 20.7 -1.6
WRA pmax pmax
comp=Z,7.0nm,0.7s
WRA MLR MLR
comp=Z,228nm,20.6s
WRA Warramunga Arr 57.31 188 P **P 05 51 09.4 -1.2**
comp=Z,7.0nm,0.7s,mb4.8,baz=4.9,slow=7.4,SNR=41
WRA pP pP 05 51 20.7 -1.6
comp=Z,14nm,0.8s,baz=6.6,slow=7.3,SNR=15
WRA LR LR 06 15 51.4
comp=Z,228nm,20.6s,MS4.3,baz=205,slow=36
KBL Kabul 57.44 291 *e*P **P 05 51 11.5 -0.1**
KBL *e**PP pP 05 51 22.5 -0.7
KBL pmax pmax
comp=Z,20nm,0.9s,mb5.2
KBL Kabul 57.44 291 *e*P **P 05 51 11.5 -0.1**
comp=Z,20nm,0.9s,mb5.2
KBL *e*pP pP 05 51 22.5 -0.7
ABKAR Akbulak array 57.87 310 *e*P **P 05 51 13.9 -0.5**
comp=Z,26nm,0.7s,mb5.4
ABKAR *e*pP pP 05 51 25.0 -1.0
HYB Hyderabad 58.32 268 *i*P **P 05 51 18.0 0.0**
HYB *e* pP 05 51 29.0 -0.6
DLBC Dease Lake 58.37 38 *e*P **P 05 51 18.8 +1.1**
AKTO Aktyubinsk 58.60 312 LR LR 06 17 46.0
comp=Z,384nm,19.4s,MS4.5,baz=85,slow=37
ALE Alert 59.87 4 P **P 05 51 27.0 -0.8**
comp=Z,172nm,1.2s,mb6.0,SNR=5.1
ASAR Alice Springs 61.04 188 P **P 05 51 35.5 -0.9**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
ASAR Alice Springs 61.04 188 P **P 05 51 35.5 -0.9**
comp=Z,3.0nm,0.7s,mb4.5,baz=12,slow=6.4,SNR=35
POO Poona 61.47 272 *e*P **P 05 51 39.6 0.0**
POO AMb AMB 05 51 51.4
comp=Z,35nm,0.9s,mb5.5
MBWA Marble Bar 61.65 203 *e*P **P 05 51 40.4 -0.2**
MBWA Marble Bar 61.65 203 *e*P **P 05 51 40.1 -0.5**
comp=Z,12nm,1.0s,mb5.0
KAD Karad 61.87 271 *e*P **P 05 51 42.1 -0.2**
KAD AMb AMB 05 51 45.6
comp=Z,38nm,1.5s,mb5.3
BHJ Bhuj 62.31 279 *e*P **P 05 51 43.9 -1.3**
BHJ AMb AMB 05 51 50.4
comp=Z,102nm,1.2s,mb5.8
RES Resolute Bay 62.34 14 *e*P **P 05 51 43.6 -1.0**
RES pmax pmax
comp=Z,29nm,1.0s,mb5.4
RES Resolute Bay 62.34 14 *e*P **P 05 51 43.6 -1.0**
comp=Z,29nm,1.0s,mb5.4
APA Apatity 62.52 336⇓*e*P **P 05 51 45.8 -0.1**
APA *i* pP 05 51 57.0 -0.6
APA pmax pmax
comp=Z,59nm,1.4s,mb5.5
APA MLR MLR
comp=Z,600nm,18.0s,MS4.8
KEV Kevo 63.26 339 *e*P **P 05 51 49.7 -1.1**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KEV Kevo 63.26 339 *e*p **P 05 51 49.7 -1.1**
comp=Z,5.9nm,0.7s,mb4.8
DZM Mont Dzumac 63.52 154 *e*LR LR 06 11 08.9
comp=Z,479nm,21.4s
YKA Yellowknife Ar 63.55 30 P **P 05 51 51.9 -0.9**
YKA pmax pmax
comp=Z,8.0nm,0.7s
YKA Yellowknife Ar 63.55 30 P **P 05 51 51.9 -0.8**
comp=Z,7.9nm,0.7s,mb4.8,baz=303,slow=6.7,SNR=178
YKA Yellowknife Ar 63.55 30 P **P 05 51 51.9 -0.8**
KLMR Klimovskoe 63.62 328 *e*P **P 05 51 52.8 -0.5**
KLMR *e**PP pP 05 52 03.8 -1.2
KLMR *e* 05 54 13.5
KLMR pmax pmax
comp=Z,81nm,1.5s,mb5.5
ARCES ARCESS Array B 63.81 339 P **P 05 51 54.1 -0.3**
ARCES *PP pP 05 52 05.5 -0.7
ARCES pmax pmax
comp=Z,6.0nm,0.8s
ARCES MLR MLR
comp=Z,262nm,18.0s
ARCES ARCESS Array B 63.81 339 P **P 05 51 54.1 -0.3**
comp=Z,6.2nm,0.8s,mb4.7,baz=57,slow=7.1,SNR=17
ARCES pP pP 05 52 05.5 -0.7
comp=Z,18nm,0.9s,baz=60,slow=7.2,SNR=12
ARCES LR LR 06 23 46.0
comp=Z,262nm,18.0s,MS4.5,baz=41,slow=40
ARE0 ARCESS Array S 63.81 339 *e*P **P 05 51 54.1 -0.4**
ARE0 *e*pP pP 05 52 05.5 -0.7
ABKT Ailbek 63.82 299 P pP 05 52 06.2 -0.5
comp=Z,248nm,1.0s,SNR=5.7
DAG Danmarks Havn 65.55 355⇑*i*P **P 05 52 05.1 -0.6**
DAG pmax pmax
comp=Z,11nm,0.9s,mb4.9
DAG Danmarks Havn 65.55 355 *i*P **P 05 52 05.1 -0.6**
comp=Z,11nm,0.9s,mb4.9
JOF Joensuu 65.81 332 *e*P **P 05 52 05.6 -1.9**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
JOF Joensuu 65.81 332 *e*p **P 05 52 05.6 -1.9**
comp=Z,3.5nm,0.5s,mb4.7
NLWA Neilton Lookou 66.47 48⇑P **P 05 52 12.7 +0.7**
baz=66,SNR=8.3
NLWA Neilton Lookou 66.47 48 *e*P **P 05 52 13.2 +1.2**
comp=Z,35nm,1.1s,mb5.3
NLWA *e* pP 05 52 22.8 -1.0
A05A Maple Falls 66.70 45⇓P **P 05 52 13.5 +0.1**
baz=66
MBW Mount Baker 66.91 46 P **P 05 52 15.1 +0.2**
E03A Lebam 67.08 48⇑P **P 05 52 16.5 +0.5**
baz=67
MOS Moscow 67.12 323 *e*P **P 05 52 14.7 -1.4**
MOS *e* pP 05 52 24.6 -3.3
MOS pmax pmax
comp=Z,52nm,1.0s,mb5.5
JCW Jim Creek 67.19 46 *e*P **P 05 52 17.2 +0.6**
JCW *e* pP 05 52 27.6 -0.8
B06A Marblemount 67.28 46⇓P **P 05 52 17.0 -0.2**
baz=67
RPW Rockport 67.30 46 *e*P **P 05 52 16.9 -0.4**
F03A Seaside 67.39 49⇑P **P 05 52 18.4 +0.4**
baz=67
VRHR Novokhopersk 67.59 318 *e*P **P 05 52 18.3 -0.8**
VRHR *e**SP sP 05 52 29.7 -5.7
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=E,9.0nm,0.4s
A07A Ashnola River, 67.63 45⇓P **P 05 52 19.6 +0.2**
baz=67
D05A Enumclaw 67.68 47⇑P **P 05 52 19.8 +0.1**
baz=68
C06A Tall Timber Ra 67.93 46⇓P **P 05 52 21.4 +0.1**
baz=68
OBN Obninsk 67.97 323 *d i*P **P 05 52 20.6 -0.8**
OBN *i* pP 05 52 31.3 -1.9
OBN *i* 05 52 47.2
OBN *i* 05 55 00.3
OBN pmax pmax
comp=Z,41nm,1.2s,mb5.3
OBN Obninsk 67.97 323 *e*P **P 05 52 20.5 -1.0**
comp=Z,27nm,0.9s,mb5.3
OBN *e*pP pP 05 52 31.8 -1.5
LON Longmire 68.01 47 *e*P **P 05 52 21.4 -0.4**
LON pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
LON Longmire 68.01 47 *e*P **P 05 52 21.4 -0.4**
comp=Z,8.1nm,1.2s,mb4.6
F04A Amboy 68.07 48⇑P **P 05 52 22.4 +0.2**
baz=68
B07A Winthrop 68.09 45⇓P **P 05 52 22.2 -0.1**
baz=68,SNR=5.4
KAF Kangasniemi 68.15 333 *e*P **P 05 52 20.6 -1.8**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KAF Kangasniemi 68.15 333 *e*p **P 05 52 20.6 -1.8**
comp=Z,8.5nm,0.6s,mb5.0
A08A Turner Farm, O 68.31 44⇑P **P 05 52 23.5 -0.2**
baz=68,SNR=7.6
D06A Cle Elum 68.34 47⇓P **P 05 52 24.1 +0.2**
baz=68
G04A Mulino 68.42 49⇓P **P 05 52 24.8 +0.4**
baz=68
ETW Entiat 68.42 46 *e*P **P 05 52 24.4 +0.1**
ASR Mount Adams--S 68.45 48 P **P 05 52 25.1 +0.5**
C07A Waterville 68.53 46⇑P **P 05 52 24.6 -0.4**
baz=68,SNR=6.3
B08A Colville Reser 68.59 45⇑P **P 05 52 25.2 -0.2**
baz=68,SNR=7.5
E06A Yakima 68.61 47⇓P **P 05 52 25.9 +0.3**
baz=68
EBG Ellensburg 68.65 47 P **P 05 52 26.3 +0.5**
FINES FINESS Array B 68.66 332 P **P 05 52 25.1 -0.5**
FINES *PP pP 05 52 35.0 -2.4
FINES pmax pmax
comp=Z,19nm,0.9s
FINES MLR MLR
comp=Z,229nm,19.2s
FINES FINESS Array B 68.66 332 P **P 05 52 25.1 -0.5**
comp=Z,19nm,0.9s,mb5.0,baz=56,slow=7.4,SNR=44
FINES pP pP 05 52 35.0 -2.5
comp=Z,40nm,0.8s,baz=55,slow=7.2,SNR=23
FINES LR LR 06 24 47.9
comp=Z,229nm,19.2s,MS4.4,baz=253,slow=38
A09A Danville 68.68 44⇓P **P 05 52 25.9 -0.1**
baz=68,SNR=7.0
STKA Stephens Creek 68.79 180 *e*P **P 05 52 25.4 -1.3**
comp=Z,2.6nm,0.5s,mb4.4
STKA Stephens Creek 68.79 180 P **P 05 52 25.5 -1.2**
comp=Z,3.0nm,0.8s,mb4.2,baz=333,slow=9.1,SNR=3.8
VSR Storozhevoye 68.83 319 *e*P **P 05 52 26.3 -0.5**
VSR *e**SP sP 05 52 37.9 -5.3
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR MLR MLR
comp=Z,590nm,18.0s,MS4.9
VSR MLR MLR
comp=N,180nm,16.0s,MS4.7
VSR MLR MLR
comp=E,320nm,19.0s,MS4.7
D07A Quincy 68.84 46⇓P **P 05 52 26.8 -0.2**
baz=69
HOOD Mount Hood Mea 68.85 49 *e*P **P 05 52 27.9 +0.8**
comp=E,46nm,1.2s,mb5.3
HOOD *e* pP 05 52 38.6 -0.3
H04A Detroit Lake 68.86 49⇓P **P 05 52 27.4 +0.2**
baz=69,SNR=16
FORT Forrest 68.87 192 *e*P **P 05 52 26.7 -0.5**
comp=E,29nm,0.6s,mb5.4
FORT Forrest 68.87 192 *e*P **P 05 52 26.6 -0.6**
comp=E,31nm,0.6s,mb5.4
VORD Divnogorie 68.90 319 *e*P **P 05 52 26.2 -1.1**
VORD *e**SP sP 05 52 37.9 -5.8
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD MLR MLR
comp=Z,480nm,17.0s,MS4.8
VORD MLR MLR
comp=N,110nm,15.0s,MS4.6
VORD MLR MLR
comp=E,240nm,15.0s,MS4.6
VFP Flag Point 68.97 49 P **P 05 52 28.2 +0.4**
C08A Higginbotham F 69.06 45⇑P **P 05 52 27.8 -0.6**
baz=69
EDM Edmonton 69.09 38 *e*P **P 05 52 28.1 -0.3**
EDM *e* pP 05 52 38.8 -1.5
B09A Rice 69.22 45⇓P **P 05 52 29.3 -0.1**
baz=69,SNR=6.8
A10A Northport 69.24 44⇑P **P 05 52 29.2 -0.2**
baz=69
E07A Sunnyside 69.25 47⇓P **P 05 52 29.6 0.0**
baz=69
OD2 Odessa Site #2 69.46 46 P **P 05 52 30.4 -0.5**
OD2 *e*pP pP 05 52 40.1 -2.5
C09A Chrisman Ranch 69.49 45⇑P **P 05 52 30.7 -0.3**
baz=69
G06A Carlson Farm, 69.50 48⇑P **P 05 52 31.3 +0.2**
baz=69,SNR=7.6
D08A Wollman Farm, 69.52 46⇑P **P 05 52 30.9 -0.3**
baz=69,SNR=5.7
HAWA Hanford 69.53 47 *e*P **P 05 52 30.9 -0.4**
comp=E,3.6nm,0.9s,mb4.3
HAWA *e*pP pP 05 52 42.5 -0.6
F07A Phinny Hill Vi 69.57 47⇓P **P 05 52 31.7 +0.1**
baz=69
E08A Dider Farm, El 69.75 47⇓P **P 05 52 32.4 -0.3**
baz=70
B10A Chitwood Farm, 69.80 44⇑P **P 05 52 32.9 0.0**
baz=70
D09A Jones Farm, Ri 69.87 46⇓P **P 05 52 33.0 -0.4**
baz=70
NEW Newport 69.88 44 *e*P **P 05 52 33.3 -0.1**
NEW pmax pmax
comp=Z,15nm,1.2s
NEW Newport 69.88 44 *e*P **P 05 52 33.2 -0.1**
comp=Z,15nm,1.2s,mb4.8
VIPM Ingram Point 69.91 49 P **P 05 52 34.0 +0.4**
A11A Hall Mountain, 69.91 43⇓P **P 05 52 34.2 +0.7**
baz=70,SNR=14
H06A Lindquist Farm 69.95 49⇑P **P 05 52 33.7 -0.2**
baz=70,SNR=7.9
C10A Spilker Farm, 70.02 45⇓P **P 05 52 34.1 -0.2**
baz=70
GOF Gofitskoye 70.02 312⇑*i*P **P 05 52 41.0 +6.7**
GOF pmax pmax
comp=Z,110nm,0.9s,mb5.8
B11A Sandpoint 70.20 44⇑P **P 05 52 35.6 +0.2**
baz=70
F08A Pendleton 70.30 47⇑P **P 05 52 36.3 +0.3**
baz=70
VSU Vasula 70.31 330 *de*P **P 05 52 35.5 -0.3**
VSU pmax pmax
comp=Z,45nm,1.2s,mb5.3
A12A Yaak River Ran 70.31 43⇓P **P 05 52 36.4 +0.3**
baz=70
SUMG Summit 70.45 0 *e*P **P 05 52 36.5 0.0**
comp=Z,34nm,1.3s,mb5.1
D10A Wagner Farm, O 70.47 45⇑P **P 05 52 36.6 -0.4**
baz=70,SNR=5.2
G08A Pilot Rock 70.47 48⇓P **P 05 52 37.2 +0.1**
baz=70,SNR=7.5
LNOR Lincton Mounta 70.54 47 *e*P **P 05 52 37.0 -0.5**
LNOR *e**PP pP 05 52 50.1 +0.7
B12A Libby 70.61 43⇑P **P 05 52 37.9 0.0**
baz=70
K05A Summer Lake 70.71 51⇑P **P 05 52 39.3 +0.8**
baz=70,SNR=16
ZEI Tsey 70.75 309 *e*P **P 05 52 36.9 -1.9**
ZEI *e* pP 05 52 49.4 -1.3
ZEI pmax pmax
comp=Z,11nm,0.9s,mb4.8
MTA Mtatsminda 70.78 308 P pP 05 52 50.8 0.0
TBLG Delisi 70.79 308 *e*P pP 05 52 51.1 +0.1
TBLG Delisi 70.79 308 P pP 05 52 51.1 +0.1
I07A Izee 70.81 49⇓P **P 05 52 39.4 +0.2**
baz=71,SNR=9.5
KIV Kislovodsk 70.83 311 P **P 05 52 40.8 +1.5**
comp=Z,621nm,1.0s,mb6.5,SNR=5.5
KIV Kislovodsk 70.83 311 *e*P **P 05 52 39.5 +0.2**
KIV *i* pP 05 52 52.3 +1.1
KIV *i* 05 53 03.6
KIV pmax pmax
comp=Z,52nm,1.0s,mb5.4
KIV Kislovodsk 70.83 311 *e*P **P 05 52 40.2 +0.9**
comp=Z,145nm,1.1s,mb5.8
KIV *e*pP pP 05 52 52.1 +0.9
KIV Kislovodsk 70.83 311 P **P 05 52 40.0 +0.7**
SNR=33
KIV P 05 52 40.0
SNR=33
WDC Whiskeytown Da 70.84 53 *e*P **P 05 52 39.0 -0.4**
WDC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WDC Whiskeytown Da 70.84 53 *e*P **P 05 52 39.0 -0.4**
comp=Z,7.2nm,0.9s,mb4.6
F09A S2 Ranch, Elgi 70.85 47⇓P **P 05 52 39.7 +0.3**
baz=71
E10A Myers Farm, Un 70.88 46⇑P **P 05 52 39.1 -0.4**
baz=71,SNR=6.0
KEH Kehvi 70.98 309 P **P 05 52 39.6 -0.6**
A13A Flathead Natio 70.99 43⇓P **P 05 52 40.2 +0.1**
baz=71
D11A Klaveano Farm, 71.00 45⇑P **P 05 52 39.7 -0.6**
baz=71,SNR=11
H08A Prairie City 71.07 48⇑P **P 05 52 40.9 +0.1**
baz=71,SNR=16
F10A Beach Ranch, E 71.10 46⇓P **P 05 52 41.0 +0.1**
baz=71
C12B Naegeli Ranch, 71.11 44⇑P **P 05 52 40.8 -0.1**
baz=71
ONI Oni 71.12 309 P **P 05 52 41.5 +0.4**
G09A Cove 71.17 47⇓P **P 05 52 41.3 -0.1**
baz=71,SNR=8.3
WALA Waterton Lakes 71.18 42 *e*P **P 05 52 41.5 +0.1**
comp=Z,1.1nm,1.4s,mb3.6
WALA *e*pP pP 05 52 52.2 -1.0
B13A Whitefish 71.28 43⇑P **P 05 52 42.2 +0.3**
baz=71,SNR=24
BSMT Bassoo Peak 71.41 44 *e*P **P 05 52 42.6 -0.1**
comp=Z,2.5nm,0.8s,mb4.2
LBCM Butte Creek Ri 71.45 53 P **P 05 52 43.2 +0.1**
E11A Bogner Ranch, 71.47 46⇑P **P 05 52 42.7 -0.4**
baz=71,SNR=6.7
A14A Double T Ranch 71.50 42⇑P **P 05 52 43.1 -0.2**
baz=71,SNR=13
MOD Modoc 71.53 51 *e*P **P 05 52 43.8 +0.3**
comp=Z,17nm,1.1s,mb4.9
MOD *e*pP pP 05 52 54.8 -0.6
G10A Bishop Farm, J 71.54 47⇑P **P 05 52 43.6 0.0**
baz=71,SNR=20
D12A Red Ives Fores 71.55 45⇓P **P 05 52 43.3 -0.3**
baz=71
H09A Durkee 71.58 48⇑P **P 05 52 44.1 +0.3**
baz=71,SNR=5.2
C13A Hot Springs 71.62 44⇓P **P 05 52 44.1 +0.1**
baz=71,SNR=8.5
GNI Garni 71.65 307 *ce*P **P 05 52 44.8 +0.5**
GNI pmax pmax
comp=Z,19nm,1.7s
GNI Garni 71.65 307 *e*P **P 05 52 45.5 +1.1**
comp=Z,50nm,1.3s,mb5.3
GNI *e*pP pP 05 52 55.1 -1.1
BMO Blue Mountains 71.69 47 *e*P **P 05 52 44.5 +0.1**
comp=Z,11nm,0.8s,mb4.8
BMO *e*pP pP 05 52 56.1 -0.2
JTMT Jette 71.74 44 *e*P **P 05 52 45.0 +0.3**
F11A Grangeville 71.76 46⇑P **P 05 52 44.7 -0.2**
baz=72,SNR=23
E12A Beaver Dam Sad 71.79 45⇑P **P 05 52 45.2 +0.1**
baz=72
YBMT Yellow Bay 71.83 43 *e*P **P 05 52 45.5 +0.3**
J08A Circle Bar Ran 71.83 49⇓P **P 05 52 45.7 +0.4**
baz=72,SNR=22
A15A Johnson Ranch, 71.86 42⇑P **P 05 52 44.9 -0.5**
baz=72,SNR=15
SCO Scoresbysund 71.89 354 *e*P **P 05 52 46.1 +0.9**
SCO pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
SCO Scoresbysund 71.89 354 *i*P **P 05 52 46.1 +0.9**
comp=Z,8.4nm,1.2s,mb4.5
I09A Lost Marbles R 71.92 48⇓P **P 05 52 46.1 +0.2**
baz=72,SNR=14
G11A Walters Elk Ra 71.98 46⇓P **P 05 52 45.9 -0.3**
baz=72,SNR=64
C14A Swan Lake 72.03 43⇑P **P 05 52 46.6 +0.1**
baz=72
D13A Huson 72.03 44⇓P **P 05 52 46.2 -0.3**
baz=72,SNR=12
SWMT Swartz Lake 72.04 44 *e*P **P 05 52 46.5 0.0**
OHCM Honcut 72.20 54 *e*P **P 05 52 47.5 -0.1**
WVOR Wild Horse Val 72.25 50 *e*P **P 05 52 47.9 0.0**
WVOR *e**PP pP 05 52 59.5 -0.3
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.7
WVOR Wild Horse Val 72.25 50 *e*P **P 05 52 47.9 0.0**
comp=Z,11nm,1.0s,mb4.7
WVOR *e*pP pP 05 52 59.5 -0.3
IZAR Zarasai 72.27 328 *e*P **P 05 52 47.6 -0.1**
J09A Fry Pan Ranch, 72.27 49⇓P **P 05 52 48.3 +0.3**
baz=72,SNR=26
IDID Didziasalis 72.34 327 *e*P **P 05 52 48.5 +0.3**
B15A Bradely Ranch, 72.35 42⇑P **P 05 52 48.3 0.0**
baz=72,SNR=27
F12A Elk City 72.35 46⇑P **P 05 52 48.4 0.0**
baz=72,SNR=29
I10A Payette 72.42 48⇓P **P 05 52 49.1 +0.3**
baz=72
ISAL Salakas 72.44 327 *e*P **P 05 52 49.0 +0.2**
MSO Missoula 72.47 44 *e*P **P 05 52 49.1 0.0**
comp=Z,4.5nm,0.8s,mb4.5
SLMT Seeley Lake 72.47 44 *e*P **P 05 52 49.0 -0.2**
ARQ Araqi 72.48 286 P **P 05 52 50.3 +0.7**
SNR=8.0
A16A West Butte Ran 72.48 41⇑P **P 05 52 48.6 -0.5**
baz=72,SNR=6.1
H11A Donnelly 72.53 47⇑P **P 05 52 49.0 -0.5**
baz=72,SNR=20
E13A Victor 72.56 45⇓P **P 05 52 49.0 -0.6**
baz=72,SNR=5.3
D14A Greenough 72.56 44⇓P **P 05 52 49.2 -0.5**
baz=72,SNR=12
NACGM Naroch 72.59 327 *e* **P 05 52 47.0 -2.7**
BEKR Beckwourth 72.62 53⇑P **P 05 52 50.1 0.0**
baz=72
C15A Salmond Ranch, 72.64 43⇓P **P 05 52 50.4 +0.3**
baz=72,SNR=15
B16A M & M Farms, S 72.75 42⇑P **P 05 52 50.5 -0.2**
baz=72,SNR=22
CHMT Chamberlain Mo 72.80 44 *e*P **P 05 52 50.9 -0.1**
J10A Berg Farm, Mel 72.82 48⇓P **P 05 52 51.1 -0.2**
baz=73
SOC Sochi 72.82 312 *e*P **P 05 52 49.8 -1.5**
SOC *e**PP pP 05 52 59.6 -3.6
SOC *e* 05 53 07.2
SOC *e*S S 06 02 11.5 -2.8
SOC *e* 06 02 56.5
SOC pmax pmax
comp=Z,31nm,1.3s,mb5.1
SOC MLR MLR
comp=Z,287nm,17.0s,MS4.6
F13A Darby 72.86 45⇓P **P 05 52 50.6 -0.8**
baz=73,SNR=9.3
A17A Triple J Farms 72.96 41⇑P **P 05 52 51.6 -0.4**
baz=73,SNR=22
E14A Clinton 72.96 44⇑P **P 05 52 51.5 -0.6**
baz=73
I11A Placerville 73.02 48⇓P **P 05 52 52.1 -0.3**
baz=73,SNR=5.5
C16A Fuhringer Ranc 73.09 42⇓P **P 05 52 52.7 -0.1**
baz=73,SNR=24

D15A Lincoln 73.13 43 ⇓P P 05 52 52.8 -0.2
baz=73
K10A MacKenzie Ranc 73.13 49 ⇓P P 05 52 53.4 +0.3
baz=73,SNR=17
H12A Diamond D Ranc 73.29 47 ⇑P P 05 52 53.6 -0.4
baz=73,SNR=13
B17A L&G Farms, Che 73.30 42 ⇑P P 05 52 53.8 -0.2
baz=73,SNR=20
G13A Cobalt 73.33 46 ⇓P P 05 52 53.6 -0.6
baz=73,SNR=14
WCN Washoe City 73.33 53 ⇑P P 05 52 54.7 +0.4
baz=73
PAHR Pah Rah Range 73.33 53 *e*P **P 05 52 54.5 +0.2**
MFID Camas Ranch 73.38 48 ⇓P P 05 52 54.6 0.0
baz=73,SNR=7.0
A18A Metzger Ranch, 73.42 41 ⇓P P 05 52 54.3 -0.3
baz=73,SNR=20
E15A Deer Lodge 73.43 44 ⇓P P 05 52 54.5 -0.3
baz=73,SNR=9.7
FFC Flin Flon 73.44 33 P **P 05 52 54.4 -0.3**
comp=Z,217nm,0.7s,mb6.2,SNR=22
FFC Flin Flon 73.44 33 *e*P **P 05 52 54.2 -0.5**
FFC pmax pmax
comp=Z,30nm,0.8s,mb5.3
FFC Flin Flon 73.44 33 *e*P **P 05 52 54.2 -0.5**
comp=Z,30nm,0.8s,mb5.3
ANN Anapa 73.45 314 *e*P **P 05 52 53.1 -1.8**
ANN *e*S S 06 02 24.8 +3.5
ANN pmax pmax
comp=Z,35nm,1.4s,mb5.1
ANN MLR MLR
comp=N,293nm,16.0s,MS4.8
ANN MLR MLR
comp=E,292nm,16.0s,MS4.8
ANN MLR MLR
comp=Z,257nm,16.0s,MS4.6
I12A Atlanta 73.57 47 ⇑P P 05 52 56.0 +0.3
baz=73,SNR=28
H13A Challis 73.62 46 ⇑P P 05 52 56.0 0.0
baz=73,SNR=27
K11A Parker Ranch, 73.64 49 ⇑P P 05 52 56.3 +0.2
baz=73,SNR=14
CMB Columbia Colle 73.64 55 *e*P **P 05 52 56.2 0.0**
CMB *e**PP pP 05 53 07.6 -0.5
CMB pmax pmax
comp=Z,13nm,0.9s,mb4.9
CMB Columbia Colle 73.64 55 *e*P **P 05 52 56.1 0.0**
comp=Z,13nm,0.9s,mb4.9
CMB *e*pP pP 05 53 07.6 -0.5
D16A Dana Ranch, Ca 73.66 43 ⇑P P 05 52 56.3 +0.1
baz=73,SNR=10.0
G14A Jackson 73.68 45 ⇓P P 05 52 55.4 -0.8
baz=73
HRY Holter Researc 73.70 43 *e*P **P 05 52 56.5 +0.1**
C17A Wharram Farm, 73.72 42 ⇑P P 05 52 55.9 -0.6
baz=74,SNR=11
FCC Fort Churchill 73.74 27 *e*P **P 05 52 55.7 -0.7**
FCC pmax pmax
comp=Z,1.0nm,1.0s,mb3.7
FCC Fort Churchill 73.74 27 *e*P **P 05 52 55.7 -0.6**
comp=Z,1.1nm,1.0s,mb3.7
B18A Beardsley Farm 73.78 41 ⇑P P 05 52 56.8 0.0
baz=74,SNR=26
L10A Juniper Basin 73.78 49 ⇓P P 05 52 57.2 +0.3
baz=74,SNR=8.4
F15A Butte 73.86 44 ⇑P P 05 52 57.6 +0.2
baz=74,SNR=21
E16A East Helena 73.90 43 ⇑P P 05 52 57.7 +0.1
baz=74,SNR=13
LRM Limekiln Ridge 73.90 44 *e*P **P 05 52 57.8 +0.2**
LRM *e*pP pP 05 53 09.6 +0.1
J12A Stokes Ranch, 73.91 48 ⇓P P 05 52 57.8 +0.1
baz=74,SNR=7.8
WAKR Walker 73.98 54 *e*P **P 05 52 59.0 +0.8**
NB2 NORSAR Subarra 74.01 337 P **P 05 52 57.4 -0.5**
comp=Z,44nm,1.2s,mb5.3,baz=39,slow=6.2
NOA NORSAR Array B 74.01 337 P **P 05 52 57.8 -0.1**
NOA *PP pP 05 53 08.9 -0.9
NOA pmax pmax
comp=Z,16nm,0.9s
NOA NORSAR Array B 74.01 337 P **P 05 52 57.8 -0.1**
comp=Z,16nm,0.9s,mb5.0,baz=39,slow=5.8,SNR=32
NOA pP pP 05 53 08.9 -1.0
comp=Z,20nm,0.8s,baz=39,slow=5.8,SNR=19
EGMT Eagleton 74.02 41 ⇓P P 05 52 58.0 -0.2
baz=74,SNR=13
EGMT Eagleton 74.02 41 *e*P **P 05 52 58.1 -0.1**
comp=Z,20nm,0.9s,mb5.1
EGMT *e*pP pP 05 53 09.3 -0.8
D17A Six Diamond Ra 74.06 43 ⇑P P 05 52 58.3 -0.1
baz=74,SNR=13
M10A I.L. Ranch, Tu 74.06 50 ⇑P P 05 52 59.3 +0.7
baz=74,SNR=9.5
I13A Wildhorse Cree 74.09 47 ⇓P P 05 52 59.1 +0.4
baz=74,SNR=14
DLMT Dillon 74.09 45 *e*P **P 05 52 58.7 0.0**
comp=Z,15nm,0.6s,mb5.1
DLMT *e*pP pP 05 53 10.6 0.0
H14A Leadore 74.10 46 ⇓P P 05 52 58.4 -0.3
baz=74,SNR=5.0
HLID Hailey 74.13 47 ⇑P P 05 52 59.3 +0.4
baz=74,SNR=20
HLID Hailey 74.13 47 *e*P **P 05 52 59.3 +0.4**
comp=Z,14nm,1.0s,mb4.8
HLID *e*pP pP 05 53 10.6 -0.2
L11A Cat Creek Ranc 74.16 49 ⇑P P 05 52 59.8 +0.6
baz=74,SNR=19
AKASG Malin Array Be 74.18 322 P **P 05 52 58.3 -0.8**
AKASG *PP pP 05 53 09.9 -1.1
AKASG pmax pmax
comp=Z,19nm,0.6s
AKASG MLR MLR
comp=Z,421nm,18.1s
AKASG Malin Array Be 74.18 322 P **P 05 52 58.3 -0.8**
comp=Z,19nm,0.6s,mb5.2,baz=45,slow=5.8,SNR=9.0
AKASG pP pP 05 53 09.9 -1.1
comp=Z,18nm,0.7s,baz=46,slow=5.9,SNR=13
AKASG LR LR 06 28 39.5
comp=Z,421nm,18.1s,MS4.8,baz=75,slow=38
AKASG Malin Array Be 74.18 322 P **P 05 52 58.3 -0.8**
AKASG pP pP 05 53 09.9 -1.1
AKASG LR LR 06 28 39.5
AKBB Malin Array Si 74.18 322 *e*P **P 05 52 58.5 -0.6**
AKBB *e**PP pP 05 53 09.8 -1.2
KIEV Kiev 74.19 322 *e*P **P 05 52 58.4 -0.8**
KIEV *e**PP pP 05 53 09.6 -1.5
KIEV pmax pmax
comp=Z,33nm,0.8s,mb5.3
KIEV Kiev 74.19 322 *e*P **P 05 52 58.4 -0.7**
comp=Z,33nm,0.8s,mb5.3
KIEV *e*pP pP 05 53 09.6 -1.5
NAO01 NORSAR Array S 74.26 337 *e*P **P 05 52 58.8 -0.6**
comp=Z,11nm,0.8s,mb4.8
NAO01 *e*pP pP 05 53 09.8 -1.5
G15A Dillon 74.27 45 ⇓P P 05 52 59.7 0.0
baz=74,SNR=33
J13A Cove Ranch, Pi 74.36 47 ⇑P P 05 53 00.8 +0.5
baz=74,SNR=16
F16A Kennard Place, 74.38 44 ⇑P P 05 53 00.5 +0.1
baz=74,SNR=13
E17A Martinsdale 74.39 43 ⇓P P 05 53 00.9 +0.5
baz=74,SNR=16
K12A Draper Farm, C 74.39 48 ⇑P P 05 53 00.7 +0.3
baz=74,SNR=11
BOZ Bozeman (W) 74.46 44 ⇓P P 05 53 01.2 +0.3
baz=74,SNR=31
BOZ Bozeman (W) 74.46 44 *e*P **P 05 53 00.9 +0.1**
BOZ *e**PP pP 05 53 12.3 -0.5
BOZ pmax pmax
comp=Z,20nm,1.0s,mb5.0
BOZ Bozeman (W) 74.46 44 *e*P **P 05 53 00.9 +0.1**
comp=Z,20nm,1.0s,mb5.0
BOZ *e*pP pP 05 53 12.3 -0.5
I14A Mackay 74.47 46 ⇑P P 05 53 01.5 +0.6
baz=74,SNR=36
D18A Linhart Farms, 74.50 42 ⇓P P 05 53 01.2 +0.1
baz=74,SNR=15
H15A Lima 74.52 45 ⇑P P 05 53 01.1 -0.1
baz=74
M11A Holland Ranch, 74.57 50 ⇑P P 05 53 02.3 +0.8
baz=74,SNR=10
L12A House Creek Ra 74.61 49 ⇓P P 05 53 02.3 +0.6
baz=74,SNR=13
G16A Moss Hill, Enn 74.62 45 ⇓P P 05 53 01.9 +0.1
baz=74,SNR=14
SUW Suwalki 74.75 327 *e*P **P 05 53 02.3 -0.1**
SUW *e*e pP 05 53 14.8 +0.6
SUW Suwalki 74.75 327 *e*P **P 05 53 01.9 -0.5**
NVAR Mina Array Bea 74.75 53 P **P 05 53 03.1 +0.4**
comp=Z,9.5nm,0.8s,mb4.8,baz=285,slow=5.8,SNR=69
NVAR pP pP 05 53 14.2 -0.4
comp=Z,10nm,0.8s,baz=288,slow=6.0,SNR=14
J14A Carey 74.79 47 ⇑P P 05 53 03.9 +1.1
baz=75,SNR=18
O10A Cortez Mining, 74.80 51 ⇓P P 05 53 03.6 +0.7
baz=75
E18A Harlowton 74.84 43 ⇓P P 05 53 03.4 +0.4
baz=75,SNR=11
F17A Fitzpatrick Pl 74.84 44 ⇑P P 05 53 03.3 +0.3
baz=75,SNR=16
K13A Stover Farm, H 74.86 48 ⇑P P 05 53 03.8 +0.6
baz=75,SNR=8.4
N11A Elko Archery C 74.96 50 ⇑P P 05 53 04.3 +0.5
baz=75
I15A Monteview 74.98 46 ⇑P P 05 53 04.3 +0.5
baz=75
QLMT Earthquake Lak 75.07 45 *e*P **P 05 53 04.8 +0.4**
M12A Wells 75.11 49 ⇑P P 05 53 05.5 +0.9
baz=75,SNR=7.4
G17A Pierce Place, 75.16 44 ⇑P P 05 53 05.4 +0.6
baz=75,SNR=13
P10A Eureka 75.22 51 ⇑P P 05 53 06.0 +0.6
baz=75
SIM Simferopol' 75.24 316 *d i*P **P 05 53 05.0 -0.3**
SIM *e* pP 05 53 17.0 -0.3
SIM pmax pmax
comp=Z,23nm,0.8s,mb5.2
SIM MLR MLR
comp=Z,140nm,15.7s,MS4.4
H16A Russell Place, 75.25 45 ⇑P P 05 53 05.9 +0.5
baz=75,SNR=13
L13A Double Diamond 75.28 48 ⇑P P 05 53 06.4 +0.8
baz=75,SNR=9.8
F18A Big Timber 75.36 43 ⇓P P 05 53 06.4 +0.4
baz=75,SNR=20
N12A Clover Valley, 75.37 50 ⇓P P 05 53 06.7 +0.6
baz=75,SNR=6.5
J15A Blackfoot 75.38 46 ⇓P P 05 53 07.0 +0.9
baz=75,SNR=7.9
O11A Cowboy Ranch, 75.42 51 ⇑P P 05 53 07.0 +0.5
baz=75,SNR=9.1
YMR Madison River 75.43 45 *e*P **P 05 53 07.0 +0.5**
YMR *e*pP pP 05 53 18.6 +0.2
SMMC Simmler 75.45 57 ⇑P P 05 53 07.2 +0.4
baz=75
K14A Jones Ranch, D 75.46 47 ⇑P P 05 53 07.3 +0.7
baz=75,SNR=11
YNR Norris Junctio 75.56 45 *e*P **P 05 53 09.0 +1.8**
M13A Montello 75.59 49 ⇑P P 05 53 07.9 +0.5
baz=75,SNR=8.2
I16A Newdale 75.63 46 ⇓P P 05 53 08.7 +1.1
baz=75,SNR=37
SFJD Kangerlussuaq 75.64 5 *i* P **P 05 53 06.8 -0.4**
SFJD pmax pmax
comp=Z,13nm,0.9s,mb4.9
SFJD Kangerlussuaq 75.64 5 *e*P **P 05 53 06.6 -0.6**
comp=Z,14nm,0.8s,mb4.9
SFJD Kangerlussuaq 75.64 5 *i* P **P 05 53 06.8 -0.4**
comp=Z,13nm,0.9s,mb4.9
YFT Old Faithful 75.64 45 *e*P **P 05 53 09.4 +1.7**
comp=Z,22nm,0.8s,mb5.1
YFT *e*pP pP 05 53 21.1 +1.5
P11A Circle Ranch, 75.70 51 ⇓P P 05 53 08.7 +0.6
baz=76
Q10A Clear Creek Ra 75.73 52 ⇓P P 05 53 08.3 +0.1
baz=76,SNR=12
L14A Malta 75.73 48 ⇓P P 05 53 08.8 +0.6
baz=76,SNR=12
VES Vestal, Richgr 75.75 56 ⇑P P 05 53 07.6 -0.9
baz=76,SNR=5.2
K15A Arbon 75.75 47 ⇓P P 05 53 09.2 +0.9
baz=76,SNR=7.2
LKWY Lake 75.81 45 *e*P **P 05 53 10.7 +2.1**
LKWY pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LKWY Lake 75.81 45 *e*P **P 05 53 10.7 +2.1**
comp=Z,7.8nm,0.8s,mb4.7
H17A Grant Village 75.82 45 ⇓P P 05 53 10.8 +2.1
baz=76,SNR=22
N13A Wendover, West 75.87 49 ⇓P P 05 53 09.5 +0.4
baz=76
N13A Wendover, West 75.87 49 *e*P **P 05 53 09.3 +0.2**
comp=Z,13nm,0.8s,mb4.9
N13A *e*pP pP 05 53 21.3 +0.3
O12A Currie 75.90 50 ⇓P P 05 53 09.6 +0.4
baz=76,SNR=16
IMW Indian Meadow 75.92 45 *e*P **P 05 53 10.4 +1.1**
comp=Z,13nm,0.7s,mb5.0
IMW *e*pP pP 05 53 21.9 +0.6
J16A Bone 75.93 46 ⇓P P 05 53 10.2 +0.8
baz=76,SNR=10
DCID1 Drake Creek 75.97 46 *e*P **P 05 53 11.0 +1.5**
comp=Z,30nm,0.9s,mb5.2
DCID1 *e*pP pP 05 53 22.1 +0.6
DCID1 *e*sP sP 05 53 26.8 +0.7
M14A Sheep Mountain 75.99 48 ⇑P P 05 53 10.3 +0.6
baz=76,SNR=9.2
RRI2 Red Ridge 76.05 46 *e*P **P 05 53 10.8 +0.8**
comp=Z,14nm,0.9s,mb4.9
RRI2 *e*pP pP 05 53 22.7 +0.8
RLMT Red Lodge 76.09 44 ⇓P P 05 53 10.6 +0.4
baz=76
R10A Warm Springs 76.11 52 ⇓P P 05 53 10.7 +0.3
baz=76,SNR=5.5
I17A Pilgrim Ck. 76.12 45 ⇓P P 05 53 11.8 +1.4
baz=76,SNR=14
S10A Tonopah Range, 76.14 53 ⇑P P 05 53 10.8 +0.2
baz=76,SNR=19
HVU Hansel Valley 76.17 48 *e*P **P 05 53 11.3 +0.6**
HVU *e**PP pP 05 53 22.4 -0.3
HVU pmax pmax
comp=Z,15nm,1.0s,mb4.9
HVU Hansel Valley 76.17 48 *e*P **P 05 53 11.3 +0.6**
comp=Z,15nm,1.0s,mb4.9
HVU *e*pP pP 05 53 22.4 -0.2
TPAW Teton Pass 76.17 46 *e*P **P 05 53 11.3 +0.6**
comp=Z,11nm,0.8s,mb4.8
Q11A Duckwater 76.19 52 ⇑P P 05 53 11.0 +0.1
baz=76,SNR=6.7
GRAC Grapevine Rang 76.19 54 ⇑P P 05 53 11.3 +0.3
baz=76,SNR=5.6
K16A Soda Springs 76.21 46 ⇑P P 05 53 11.8 +0.9
baz=76,SNR=19
L15A Malad City 76.26 48 ⇑P P 05 53 11.6 +0.4
baz=76,SNR=8.2
ISA Isabella 76.26 56 *e*P **P 05 53 09.2 -2.1**
ISA *e**PP pP 05 53 22.0 -1.3
ISA pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ISA Isabella 76.26 56 *e*P **P 05 53 09.2 -2.2**
comp=Z,8.8nm,1.1s,mb4.6
ISA *e*pP pP 05 53 22.0 -1.3
P12A McGill 76.27 51 ⇑P P 05 53 11.8 +0.4
baz=76,SNR=14
LOHW Long Hollow 76.29 45 *e*P **P 05 53 12.2 +0.8**
comp=Z,7.4nm,1.0s,mb4.6
LOHW *e*pP pP 05 53 23.4 +0.1
SNOW Snow King Moun 76.30 46 *e*P **P 05 53 12.8 +1.3**
comp=Z,17nm,1.0s,mb4.9
SNOW *e*pP pP 05 53 23.4 0.0
REDW Red Top Meadow 76.31 46 *e*P **P 05 53 12.1 +0.7**
comp=Z,16nm,1.0s,mb4.9
REDW *e*pP pP 05 53 23.2 -0.2
J17A Brown Place, J 76.39 46 ⇓P P 05 53 12.6 +0.7
baz=76,SNR=11
O13A Hicks Ranch, I 76.44 50 ⇑P P 05 53 12.7 +0.4
baz=76,SNR=6.4
N14A Grayback Hills 76.49 49 ⇑P P 05 53 13.0 +0.4
baz=76,SNR=11
R11A Troy Canyon, C 76.53 52 ⇓P P 05 53 13.1 +0.3
baz=76,SNR=20
AHID Auburn Hatcher 76.54 46 *e*P **P 05 53 12.5 -0.3**
comp=Z,11nm,0.9s,mb4.8
AHID *e*pP pP 05 53 23.7 -1.0
BGU Big Grassy Mou 76.54 49 *e*P **P 05 53 13.1 +0.3**
comp=Z,5.8nm,0.9s,mb4.5
BGU *e*pP pP 05 53 24.2 -0.5
M15A Larsen Ranch, 76.55 48 ⇑P P 05 53 13.2 +0.3
baz=76,SNR=12
DGMT Dagmar 76.58 39 ⇑P P 05 53 12.5 -0.5
baz=76,SNR=7.5
DGMT Dagmar 76.58 39 *e*P **P 05 53 12.1 -0.9**
comp=Z,25nm,0.9s,mb5.1
DGMT *e*pP pP 05 53 23.9 -1.0
Q12A Willow Creek R 76.58 51 ⇑P P 05 53 13.5 +0.4
baz=76,SNR=7.4
K17A Gardner Place, 76.65 46 ⇑P P 05 53 13.2 -0.3
baz=76
MPMC Manual Prospec 76.67 55 ⇓P P 05 53 13.7 0.0
baz=76,SNR=10
I18A Diamond G Ranc 76.68 45 ⇑P P 05 53 14.1 +0.5
baz=76
MALT Malatya 76.72 308 P **P 05 53 15.2 +1.3**
MALT Malatya 76.72 308 *e*P **P 05 53 14.8 +1.0**
comp=Z,14nm,0.9s,mb4.9
MALT *e*pP pP 05 53 25.6 -0.3
MALT Malatya 76.72 308 ⇑*i*P **P 05 53 15.0 +1.1**
P13A Bates Ranch, G 76.83 50 ⇓P P 05 53 14.9 +0.4
baz=77,SNR=7.9
FURC Furnace Creek, 76.83 54 ⇓P P 05 53 14.6 0.0
baz=77,SNR=11
S11A Rachel 76.85 53 ⇑P P 05 53 14.9 +0.2
baz=77,SNR=7.0
N15A Stansbury Isla 76.86 48 ⇓P P 05 53 15.0 +0.4
baz=77,SNR=5.2
J18A Kendall Valley 76.88 45 ⇓P P 05 53 15.0 +0.3
baz=77,SNR=13
LRMC Laurel Mountai 76.88 55 ⇑P P 05 53 14.7 -0.2
baz=77,SNR=7.4
HWUT Hardware Ranch 76.98 47 *e*P **P 05 53 15.8 +0.5**
comp=Z,29nm,1.3s,mb5.0
HWUT *e*pP pP 05 53 27.0 -0.3
EDW2 Edwards Air Fo 77.04 56 ⇑P P 05 53 15.8 0.0
baz=77,SNR=7.8
L17A Cokeville 77.08 47 ⇑P P 05 53 16.2 +0.3
baz=77,SNR=5.6
DUG Dugway 77.11 49 ⇓P P 05 53 16.5 +0.4
baz=77,SNR=15
DUG Dugway 77.11 49 *e*P **P 05 53 16.3 +0.2**
DUG *e**PP pP 05 53 27.6 -0.5
DUG pmax pmax
comp=Z,11nm,0.8s,mb4.8
DUG Dugway 77.11 49 *e*P **P 05 53 16.3 +0.2**
comp=Z,11nm,0.8s,mb4.8
DUG *e*pP pP 05 53 27.6 -0.5
M16A Huntsville 77.13 48 ⇑P P 05 53 16.2 0.0
baz=77,SNR=7.5
Q13A Wheeler Ranch, 77.14 51 ⇑P P 05 53 16.6 +0.3
baz=77,SNR=21
R12A Pony Springs, 77.15 52 ⇓P P 05 53 16.6 +0.3
baz=77,SNR=10
U10A Ash Meadows, A 77.21 54 ⇓P P 05 53 16.9 +0.2
baz=77
K18A Toltan Ranch, 77.22 46 ⇑P P 05 53 17.1 +0.4
baz=77,SNR=7.9
LVV L'vov 77.25 324 *e*P **P 05 53 16.5 -0.2**
LVV MLR MLR
comp=Z,300nm,19.0s,MS4.6
BSD Bornholm Skovb 77.29 332 ⇓*i*P **P 05 53 16.0 -0.8**
BSD pmax pmax
comp=Z,22nm,0.9s,mb5.1
BSD Bornholm Skovb 77.29 332 ⇓*i*P **P 05 53 16.0 -0.8**
comp=Z,22nm,0.9s,mb5.1
P14A Drum Mountains 77.33 50 ⇓P P 05 53 17.7 +0.4
baz=77,SNR=19
BW06 Boulder Array 77.42 46 ⇓P P 05 53 17.5 -0.3
baz=77,SNR=11
BW06 Boulder Array 77.42 46 *e*P **P 05 53 17.2 -0.5**
comp=Z,8.2nm,0.9s,mb4.7
BW06 *e*pP pP 05 53 28.2 -1.6
PDAR Pinedale Array 77.42 46 P **P 05 53 17.6 -0.2**
comp=Z,5.3nm,0.6s,mb4.6,baz=282,slow=2.0,SNR=54
T11A Corn Creek, Al 77.42 53 ⇑P P 05 53 18.1 +0.2
baz=77,SNR=17
S12A Delamar Landin 77.44 52 ⇓P P 05 53 18.4 +0.5
baz=77,SNR=5.6
N16A Rees Ranch, Co 77.51 48 ⇓P P 05 53 18.7 +0.4
baz=77
SHOC Shoshone 77.55 54 ⇓P P 05 53 18.4 -0.2
baz=77
GSC Goldstone 77.57 55 ⇑P P 05 53 18.5 -0.2
baz=77,SNR=6.2
GSC Goldstone 77.57 55 *e*P **P 05 53 18.3 -0.4**
GSC *e**PP pP 05 53 29.9 -0.8
GSC pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
GSC Goldstone 77.57 55 *e*P **P 05 53 18.3 -0.5**
comp=Z,9.1nm,1.0s,mb4.7
GSC *e*pP pP 05 53 29.9 -0.8
Q14A Sevier Lake (B 77.57 50 ⇑P P 05 53 19.2 +0.5
baz=77,SNR=29
M17A Scullys Gap (B 77.59 47 ⇑P P 05 53 18.8 0.0
baz=77
BFSC Mount Baldy St 77.64 56 ⇑P P 05 53 19.2 0.0
baz=77
R13A O'Grain Ranch, 77.64 51 ⇑P P 05 53 19.6 +0.5
baz=77,SNR=9.1
L18A Fontenelle, Gr 77.68 46 ⇓P P 05 53 19.4 +0.2
baz=77,SNR=10
JLU Jordanelle 77.68 48 *e*P **P 05 53 20.0 +0.8**
comp=Z,6.7nm,0.8s,mb4.6
JLU *e*pP pP 05 53 31.2 0.0
NLU North Lily Min 77.71 49 *e*P **P 05 53 20.2 +0.8**
comp=Z,10nm,0.8s,mb4.8
NLU *e*pP pP 05 53 31.1 -0.3
COP Copenhagen 77.76 333 *i* P **P 05 53 20.1 +0.7**
COP pmax pmax
comp=Z,21nm,0.9s,mb5.1
COP Copenhagen 77.76 333 *i* P **P 05 53 20.1 +0.7**
comp=Z,21nm,0.9s,mb5.1
K19A Absolon Red Bu 77.79 45 ⇑P P 05 53 19.1 -0.7
baz=78,SNR=5.9
U11A Corn Creek 77.81 53 ⇓P P 05 53 20.4 +0.4
baz=78
P15A Leamington 77.82 49 ⇓P P 05 53 20.3 +0.2
baz=78
N17A Moffit Pass 77.83 48 ⇓P P 05 53 20.3 +0.2
baz=78
O16A Springville 77.89 49 ⇓P P 05 53 20.9 +0.4
baz=78,SNR=8.9
SHPR Sheep Range 77.91 53 *e*P **P 05 53 20.9 +0.4**
SHPR *e*pP pP 05 53 33.0 +0.4
MPU Maple Canyon 77.94 49 *e*P **P 05 53 21.1 +0.5**
comp=Z,14nm,0.8s,mb5.0
MPU *e*pP pP 05 53 32.7 0.0
L19A Farson 77.96 46 ⇓P P 05 53 20.8 0.0
baz=78,SNR=7.3
M18A Lyman 77.97 47 ⇓P P 05 53 21.0 +0.1
baz=78
KWP Kalwaria Pacla 78.00 324 *e*P **P 05 53 21.5 +0.7**
KWP *e*e pP 05 53 33.8 +0.9
KWP Kalwaria Pacla 78.00 324 *e*P **P 05 53 21.1 +0.2**
comp=Z,105nm,1.1s,mb5.7
KWP *e*pP pP 05 53 33.7 +0.8
KWP Kalwaria Pacla 78.00 324 ⇓*i*P **P 05 53 21.5 +0.6**
T12A Moapa 78.06 53 ⇑P P 05 53 21.6 +0.2
baz=78
TUQ Turquoise Moun 78.06 55 ⇑P P 05 53 21.5 0.0
baz=78,SNR=7.8
S13A Holt Ranch, En 78.08 52 ⇓P P 05 53 22.1 +0.6
baz=78,SNR=18
Q15A Fillmore 78.12 50 ⇑P P 05 53 22.1 +0.3
baz=78,SNR=10
R14A James Farms, M 78.16 51 ⇑P P 05 53 22.1 +0.1
baz=78
HEC Hector,Ludlow 78.16 55 ⇓P P 05 53 21.9 -0.2
baz=78
P16A Fountain Green 78.17 49 ⇑P P 05 53 22.4 +0.4
baz=78
K20A Yellowstone Ra 78.18 45 ⇑P P 05 53 21.3 -0.7
baz=78
BUR08 Bucovina Ar. S 78.18 322 *e*P **P 05 53 22.2 +0.4**
BUR08 *e*pP pP 05 53 34.0 +0.1
BURAR Bucovina Array 78.19 322 ⇓P **P 05 53 22.3 +0.3**
BURAR Bucovina Array 78.19 322 ⇓*i*P **P 05 53 22.3 +0.3**
ARUT Antelope Range 78.21 51 *e*P **P 05 53 22.4 +0.1**
ARUT *e**PP pP 05 53 34.4 +0.2
ARUT pmax pmax
comp=Z,5.0nm,0.2s,mb5.1
ARUT Antelope Range 78.21 51 *e*P **P 05 53 22.4 +0.1**
comp=Z,4.6nm,0.2s,mb5.1
ARUT *e*pP pP 05 53 34.4 +0.1
MUD Monsted U'grnd 78.28 335 *i* P **P 05 53 22.4 +0.1**
MUD pmax pmax
comp=Z,14nm,0.9s,mb4.9
MUD Monsted U'grnd 78.28 335 *i* P **P 05 53 22.4 +0.1**
comp=Z,14nm,0.9s,mb4.9
MURC Murrieta 78.33 57 ⇓P P 05 53 22.5 -0.5
baz=78
U12A Valley of Fire 78.35 53 ⇓P P 05 53 22.7 -0.4
baz=78

O17A **Robinson Place** 78.36 48 ⇑P P 05 53 23.5 +0.4
baz=78,SNR=9.2
T13A **Saint George** 78.39 52 ⇓P P 05 53 23.9 +0.6
baz=78,SNR=13
S14A **Cedar City** 78.40 51 ⇑P P 05 53 23.6 +0.3
baz=78,SNR=5.2
CCUT **Cedar City** 78.41 52 eP P 05 53 23.4 0.0
comp=Z,14nm,1.1s,mb4.8
CCUT epP pP 05 53 34.9 -0.4
N18A **Larsen Ranch,** 78.49 47 ⇑P P 05 53 23.4 -0.3
baz=78
MSU **Marysvale** 78.54 50 eP P 05 53 24.9 +0.8
MSU e*PP pP 05 53 36.4 +0.3
V12A **Nelson** 78.58 54 ⇑P P 05 53 24.4 +0.1
baz=78,SNR=6.2
L20A **Wamsutter** 78.60 46 ⇓P P 05 53 24.3 0.0
baz=78,SNR=5.6
VRI **Vrincioaia** 78.62 320 P P 05 53 25.6 +1.3
VRI **Vrincioaia** 78.62 320 ⇓iP P 05 53 24.6 +0.3
GMRC **Granite Mounta** 78.63 55 ⇑P P 05 53 24.5 -0.1
baz=78,SNR=7.0
TMUT **Trail Mountain** 78.64 49 eP P 05 53 24.1 -0.5
comp=Z,15nm,1.2s,mb4.8
R15A **Junction** 78.67 51 ⇑P P 05 53 25.5 +0.7
baz=78,SNR=6.6
TIRR **Tirgusor** 78.67 318 ⇓P P 05 53 24.6 -0.1
TIRR **Tirgusor** 78.67 318 ⇓iP P 05 53 24.6 -0.1
KOLS **Kolonicke sedl** 78.69 324 eP P 05 53 25.0 +0.3
KOLS pmax pmax
comp=Z,16nm,1.1s,mb4.9
KOLS **Kolonicke sedl** 78.69 324 eP P 05 53 25.0 +0.3
comp=Z,16nm,1.1s,mb4.8
KOLS **Kolonicke sedl** 78.69 324 eP P 05 53 25.0 +0.3
U13A **Pakoon Wash** 78.72 53 ⇑P P 05 53 25.6 +0.5
baz=78,SNR=15
O18A **Roosevelt** 78.75 48 ⇓P P 05 53 25.6 +0.5
baz=78,SNR=9.8
HARR **Harsova** 78.78 318 ⇑P P 05 53 25.6 +0.4
HARR **Harsova** 78.78 318 ⇑iP P 05 53 25.6 +0.4
P17A **Butcher Ranch,** 78.81 49 ⇓P P 05 53 25.9 +0.3
baz=79,SNR=7.8
109C **Camp Elliot, M** 78.82 57 ⇑P P 05 53 25.1 -0.5
baz=79
PFO **Pinyon Flat Ob** 78.82 56 ⇓P P 05 53 25.3 -0.4
baz=79
PFO **Pinyon Flat Ob** 78.82 56 eP P 05 53 24.9 -0.8
PFO e*PP pP 05 53 37.2 -0.5
PFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
PFO **Pinyon Flat Ob** 78.82 56 eP P 05 53 24.9 -0.7
comp=Z,7.4nm,1.0s,mb4.6
PFO epP pP 05 53 37.2 -0.5
STHS **Stebnicka Huta** 78.83 325 eP P 05 53 26.4 +1.0
STHS pmax pmax
comp=Z,17nm,1.2s,mb4.8
STHS **Stebnicka Huta** 78.83 325 eP P 05 53 26.4 +1.0
comp=Z,17nm,1.2s,mb4.8
STHS **Stebnicka Huta** 78.83 325 eP P 05 53 26.4 +1.0
N19A **John Jarvie Ra** 78.83 47 ⇑P P 05 53 25.2 -0.4
baz=79,SNR=5.3
T14A **Hurricane** 78.88 52 ⇑P P 05 53 26.3 +0.3
baz=79,SNR=5.7
UZH **Uzhgorod** 78.90 324 eP P 05 53 23.0 -2.8
UZH eS S 06 03 15.0 -6.1
UZH MLR MLR
comp=Z,70nm,20.0s,MS4.0
OJC **Ojcow** 78.90 326 iP P 05 53 26.2 +0.4
S15A **Panguitch** 78.95 51 ⇓P P 05 53 27.2 +0.9
baz=79,SNR=7.4
M20A **Sweetwater, Wa** 79.02 46 ⇑P P 05 53 27.2 +0.6
baz=79,SNR=5.1
V13A **Grand Canyon W** 79.06 53 ⇓P P 05 53 27.3 +0.4
baz=79,SNR=12
R16A **Teasdale** 79.11 50 ⇓P P 05 53 28.2 +1.0
baz=79,SNR=17
TRPA **Tarpa** 79.14 323 ⇓iP P 05 53 27.8 +0.7
SRU **San Rafael** 79.17 49 ⇑P P 05 53 27.6 +0.1
baz=79,SNR=12
SRU **San Rafael** 79.17 49 eP P 05 53 27.8 +0.3
SRU e*PP pP 05 53 38.8 -0.7
SRU pmax pmax
comp=Z,12nm,0.8s,mb4.9
SRU **San Rafael** 79.17 49 eP P 05 53 27.8 +0.3
comp=Z,12nm,0.8s,mb4.9
SRU epP pP 05 53 38.8 -0.7
L21A **Rawlins** 79.18 45 ⇑P P 05 53 27.3 -0.2
baz=79,SNR=9.3
U14A **Mt Trumbull** 79.22 52 ⇓P P 05 53 28.2 +0.3
baz=79,SNR=10.0
BAR **Barrett** 79.23 57 eP P 05 53 27.3 -0.7
comp=Z,13nm,1.0s,mb4.8
BAR epP pP 05 53 38.8 -1.2
ULM **Lac du Bonnet** 79.24 33 P P 05 53 26.7 -1.0
comp=Z,10nm,0.9s,mb4.8,baz=316,slow=7.2,SNR=20
O19A **Miners Draw (B** 79.24 47 ⇓P P 05 53 27.4 -0.4
baz=79,SNR=6.8
NIE **Niedzica** 79.25 325 eP P 05 53 28.7 +1.0
MLR **Muntele Rosu** 79.28 320 P P 05 53 28.9 +0.9
MLR **Muntele Rosu** 79.28 320 LR LR 06 31 55.3
comp=Z,486nm,18.9s,MS4.9,baz=47,slow=38
MLR **Muntele Rosu** 79.28 320 ⇑iP P 05 53 28.0 0.0
MONP **Monument Peak** 79.28 57 ⇓P P 05 53 28.1 -0.1
baz=79
IRM **Iron Mountain** 79.34 55 ⇑P P 05 53 28.3 -0.2
baz=79,SNR=6.8
T15A **Red Dirt Ranch** 79.35 52 ⇑P P 05 53 28.9 +0.4
baz=79
N20A **Spence Gulch,** 79.40 46 ⇑P P 05 53 29.1 +0.4
baz=79,SNR=11
Q18A **Rafter H Ranch** 79.41 49 ⇓P P 05 53 28.5 -0.3
baz=79
M21A **Separation Pea** 79.41 45 ⇓P P 05 53 28.6 -0.2
baz=79
BC3 **Big Chuckw Mtn** 79.45 56 ⇓P P 05 53 29.0 -0.2
baz=79
R17A **Hanksville Air** 79.50 50 ⇑P P 05 53 29.3 0.0
baz=79,SNR=12
RSSD **Black Hills** 79.58 42 eP P 05 53 29.0 -0.6
RSSD pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
RSSD **Black Hills** 79.58 42 eP P 05 53 29.0 -0.6
comp=Z,4.4nm,0.6s,mb4.6
DVTC **Desert V Tower** 79.63 57 ⇑P P 05 53 29.5 -0.6
baz=79
SWSC **Sam W. Stewart** 79.66 57 ⇓P P 05 53 29.9 -0.4
baz=80
P19A **Cripple Cowboy** 79.75 48 ⇓P P 05 53 30.8 +0.2
baz=80,SNR=14
V14A **Boquillas Ranc** 79.75 53 ⇑P P 05 53 31.2 +0.5
baz=80,SNR=21
VOIR 79.77 320 ⇑P P 05 53 32.2 +1.5
VOIR 79.77 320 ⇑iP P 05 53 32.2 +1.5
U15A **North Rim** 79.77 52 ⇑P P 05 53 31.4 +0.6
baz=80,SNR=15
KECS **Kecovo** 79.85 325 eP P 05 53 31.5 +0.5
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS **Kecovo** 79.85 325 eP P 05 53 31.5 +0.5
comp=Z,4.4nm,0.9s,mb4.4
KECS **Kecovo** 79.85 325 eP P 05 53 31.5 +0.5
O20A **White River Ci** 79.86 47 ⇓P P 05 53 31.0 -0.3
baz=80,SNR=7.6
N21A **Black Mountain** 79.88 46 ⇓P P 05 53 31.4 +0.1
baz=80,SNR=5.5
BSEG **Bad Segeberg** 79.90 333 eP P 05 53 31.1 -0.1
comp=Z,43nm,1.1s,mb5.3
BSEG epP pP 05 53 42.9 -0.3
BSEG **Bad Segeberg** 79.90 333 eP P 05 53 31.1 -0.1
BSEG e*PP pP 05 53 42.9 -0.3
BSEG pmax pmax
comp=Z,43nm,1.1s,mb5.3
OKC **Ostrava-Krasne** 79.91 327 ⇓eP P 05 53 31.1 -0.2
OKC epP pP 05 53 40.5 -2.8
OKC AMS AMS 06 32 00.0
comp=Z,300nm,19.1s
T16A **Glen Canyon Da** 79.92 51 ⇑P P 05 53 31.1 -0.5
baz=80
PDMCI **Parker Dam,Lak** 79.92 55 ⇓P P 05 53 31.5 -0.2
baz=80
X13A **Yucca** 79.94 54 ⇓P P 05 53 31.8 0.0
baz=80,SNR=14
S17A **Black Ridge (B** 79.94 50 ⇑P P 05 53 31.7 0.0
baz=80,SNR=9.5
KSP **Ksiaz** 79.96 328 eP P 05 53 31.9 +0.4
KSP ee pP 05 53 43.9 +0.3
KSP **Ksiaz** 79.96 328 ⇓iP P 05 53 32.0 +0.5
KSP e*PP pP 05 53 43.4 -0.2
M22A **Cedar Creek Ra** 79.98 45 ⇓P P 05 53 31.8 -0.1
baz=80,SNR=5.6
DRGR 80.00 322 P P 05 53 32.5 +0.7
DRGR 80.00 322 ⇓iP P 05 53 32.4 +0.6
Y12C **Blythe** 80.00 55 ⇓P P 05 53 31.9 -0.3
baz=80
R18A **Canyonlands Na** 80.01 49 ⇓P P 05 53 31.8 -0.3
baz=80,SNR=8.6
W14A **Seligman** 80.03 53 ⇓P P 05 53 32.6 +0.4
baz=80,SNR=14
P20A **De Beque** 80.19 48 ⇑P P 05 53 32.7 -0.3
baz=80
MORC **Moravsky Berou** 80.22 327 ⇓P P 05 53 33.4 +0.4
MORC **Moravsky Berou** 80.22 327 eP P 05 53 32.9 -0.1
comp=Z,32nm,1.1s,mb5.2
MORC epP pP 05 53 44.5 -0.5
MORC **Moravsky Berou** 80.22 327 ⇓iP P 05 53 33.3 +0.3
V15A **Kaibab Nationa** 80.23 52 ⇓P P 05 53 33.8 +0.4
baz=80,SNR=11
GLA **Glamis** 80.24 56 ⇑P P 05 53 33.3 -0.1
baz=80
DPC **Dobruska-Polom** 80.32 328 ⇓iP P 05 53 34.0 +0.5
DPC epP pP 05 53 45.0 -0.5
DPC AMS AMS 06 32 20.0
comp=Z,300nm,20.4s
T17A **Navajo Res., N** 80.34 51 ⇑P P 05 53 33.6 -0.3
baz=80
S18A **Hurst Farm, Bl** 80.39 50 ⇓P P 05 53 34.0 -0.1
baz=80,SNR=16
Y13A **Salome** 80.42 55 ⇓P P 05 53 34.4 0.0
baz=80
R19A **Curley Farm, L** 80.45 49 ⇓P P 05 53 34.6 +0.1
baz=80,SNR=9.1
N22A **Wattenberg Ran** 80.46 46 ⇓P P 05 53 34.8 +0.4
baz=80,SNR=5.4
PSZ **Piszkesteto** 80.53 325 P P 05 53 35.3 +0.6
PSZ **Piszkesteto** 80.53 325 eP P 05 53 34.8 +0.2
comp=Z,56nm,1.4s,mb5.3
PSZ **Piszkesteto** 80.53 325 ⇓eP P 05 53 35.2 +0.5
PSZ **Piszkesteto** 80.53 325 ⇑iP P 05 53 35.2 +0.5
W15A **Williams** 80.57 53 ⇑P P 05 53 35.9 +0.8
baz=80,SNR=5.4
VYHS **Vyhne** 80.59 325 eP P 05 53 35.5 +0.5
VYHS pmax pmax
comp=Z,17nm,1.4s,mb4.8
VYHS **Vyhne** 80.59 325 eP P 05 53 35.5 +0.5
comp=Z,17nm,1.4s,mb4.8
VYHS ePP PP 05 56 39.4 +1.2
VYHS **Vyhne** 80.59 325 eP P 05 53 35.5 +0.5
VYHS ePP PP 05 56 39.4 +1.2
Q20A **Ridgley Place,** 80.60 48 ⇑P P 05 53 35.2 -0.1
baz=80,SNR=14
X14A **Yava** 80.62 54 ⇑P P 05 53 36.0 +0.6
baz=80,SNR=12
AGMN **Agassiz Refuge** 80.67 35 eP P 05 53 33.9 -1.6
comp=Z,12nm,0.8s,mb4.9
U16A **Tuba City** 80.68 52 ⇓P P 05 53 36.4 +0.7
baz=80,SNR=20
U17A **Shonto** 80.68 51 ⇑P P 05 53 36.1 +0.3
baz=80,SNR=12
KOLL **Kolano** 80.73 326 eP P 05 53 36.7 +1.0
KOLL **Kolacno** 80.73 326 eP P 05 53 36.7 +1.0
P21A **Newcastle** 80.73 47 ⇑P P 05 53 36.2 +0.3
baz=80
SZH **Strazhica** 80.80 318 eP P 05 53 36.0 -0.2
T18A **Mexican Hat** 80.82 50 ⇓P P 05 53 36.0 -0.5
baz=81,SNR=12
Y14A **Wickenburg** 80.88 54 ⇑P P 05 53 36.7 -0.1
baz=81,SNR=8.5
S19A **Harvey Farm, M** 80.88 49 ⇓P P 05 53 36.7 -0.1
baz=81,SNR=15
BRG **Berggiesshubel** 80.90 329 eP P 05 53 36.4 -0.2
comp=Z,26nm,1.2s,mb5.0
BRG **Berggiesshubel** 80.90 329 iP P 05 53 36.7 +0.1
comp=Z,26nm,1.2s,mb5.0
BRG i pP 05 53 48.1 -0.5
comp=Z,10nm,0.9s
BRG **Berggiesshubel** 80.90 329 iP P 05 53 36.7 +0.1
BRG i pP 05 53 48.2 -0.5
BRG pmax pmax
comp=Z,16nm,1.2s,mb4.8
PVCC **Panska Ves** 80.91 329 ⇓iP P 05 53 37.1 +0.4
PVCC epP pP 05 53 48.6 -0.1
PVCC AMS AMS 06 32 30.0
comp=Z,300nm,15.3s
Z13A **Yuma Proving G** 80.91 55 ⇑P P 05 53 36.9 -0.1
baz=81,SNR=10
WUAZ **Wupatki** 80.92 52 ⇓P P 05 53 37.1 +0.1
baz=81
WUAZ **Wupatki** 80.92 52 eP P 05 53 37.9 +0.9
comp=Z,17nm,0.9s,mb5.0
WUAZ epP pP 05 53 49.3 +0.2
CLL **Collm** 80.95 330 eP P 05 53 36.3 -0.5
comp=Z,43nm,1.1s,mb5.3
CLL epP pP 05 53 47.8 -1.1
CLL **Collm** 80.95 330 ⇓iP P 05 53 36.6 -0.2
CLL i *PP pP 05 53 48.1 -0.8
CLL pmax pmax
comp=Z,43nm,1.1s,mb5.3
CLL MLR MLR
comp=Z,300nm,17.7s,MS4.7
CLL **Collm** 80.95 330 ⇓iP P 05 53 36.6 -0.2
comp=Z,43nm,1.1s,mb5.3
CLL i pP pP 05 53 48.1 -0.8
CLL LR LR
comp=Z,300nm,17.7s,MS4.7
CLL **Collm** 80.95 330 ⇓iP P 05 53 36.6 -0.2
comp=Z,43nm,1.1s,mb5.3
CLL i pP pP 05 53 48.1 -0.8
comp=Z,24nm,0.9s
GZR **Gura Zlata** 80.95 321 P P 05 53 37.3 +0.3
GZR **Gura Zlata** 80.95 321 ⇑iP P 05 53 37.0 0.0
VRAC **Vranov** 80.98 327 P P 05 53 37.9 +0.8
VRAC **Vranov** 80.98 327 ⇑iP P 05 53 37.5 +0.4
X15A **Humboldt** 81.03 53 ⇓P P 05 53 38.0 +0.4
baz=81,SNR=15
R20A **Redvale** 81.05 49 ⇓P P 05 53 37.9 +0.3
baz=81,SNR=20
W16A **Flagstaff** 81.09 53 ⇑P P 05 53 38.3 +0.3
baz=81
Q21A **Lamborn Mesa,** 81.10 48 ⇓P P 05 53 38.2 +0.3
baz=81,SNR=5.9
NRDL **Niedersach Rie** 81.12 332 eP P 05 53 37.3 -0.5
comp=Z,14nm,0.9s,mb4.9
SMOL **Smolenice** 81.21 326 eP P 05 53 39.5 +1.2
SMOL **Smolenice** 81.21 326 eP P 05 53 39.5 +1.2
V17A **Tonalea, Kykot** 81.22 52 ⇑P P 05 53 39.3 +0.7
baz=81,SNR=22
SMCO **Snowmass** 81.23 47 eP P 05 53 38.9 +0.3
comp=Z,6.9nm,1.0s,mb4.5
SMCO epP pP 05 53 50.4 -0.3
BUD **Budapest** 81.25 325 ⇓eP P 05 53 39.1 +0.6
U18A **Rough Rock, Ch** 81.29 51 ⇓P P 05 53 39.6 +0.6
baz=81,SNR=18
Y15A **Casa Rosa Ranc** 81.30 54 ⇓P P 05 53 39.3 +0.2
baz=81
PRU **Pruhonice** 81.34 329 ⇓iP P 05 53 39.4 +0.4
PRU epP pP 05 53 50.7 -0.3
PRU AMS AMS 06 32 40.0
comp=Z,300nm,17.6s
BZS **Buzias** 81.36 322 ⇓P P 05 53 38.9 -0.3
BZS **Buzias** 81.36 322 ⇓iP P 05 53 38.9 -0.3
R21A **Cimarron** 81.42 48 ⇑P P 05 53 40.2 +0.5
baz=81,SNR=9.2
TREC **Trest** 81.47 328 ⇓eP P 05 53 40.0 +0.3
TREC epP pP 05 53 51.8 +0.1
TREC AMS AMS 06 33 00.0
comp=Z,300nm,20.4s
Q22A **Crested Butte,** 81.48 47 ⇑P P 05 53 40.5 +0.6
baz=81,SNR=14
T19A **Beclabito** 81.54 50 ⇑P P 05 53 40.5 +0.2
baz=81,SNR=10
CLZ **Clausthal** 81.54 332 eP P 05 53 40.0 0.0
comp=Z,56nm,1.3s,mb5.3
CLZ **Clausthal** 81.54 332 eP P 05 53 40.0 0.0
CLZ pmax pmax
comp=Z,56nm,1.3s,mb5.3
X16A **Lo Mia Camp, P** 81.58 53 ⇑P P 05 53 41.0 +0.5
baz=81,SNR=7.9
ZST **Bratislava** 81.59 326 eP P 05 53 41.0 +0.7
ZST pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ZST **Bratislava** 81.59 326 eP P 05 53 41.0 +0.7
comp=Z,7.7nm,0.9s,mb4.6
ZST **Bratislava** 81.59 326 eP P 05 53 41.0 +0.7
ISCO **Idaho Springs** 81.61 46 eP P 05 53 40.6 0.0
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ISCO **Idaho Springs** 81.61 46 eP P 05 53 40.6 0.0
comp=Z,4.0nm,0.8s,mb4.4
MVCO **Mesa Verde** 81.61 49 ⇓P P 05 53 40.9 +0.2
baz=81,SNR=8.0
MVCO **Mesa Verde** 81.61 49 eP P 05 53 40.6 0.0
comp=Z,12nm,1.0s,mb4.8
MVCO epP pP 05 53 52.8 0.0
V18A **Ganado** 81.70 51 ⇑P P 05 53 41.6 +0.4
baz=82,SNR=6.8
S21A **Coal Bank Pass** 81.74 49 ⇓P P 05 53 42.0 +0.7
baz=82,SNR=9.3
U19A **Dine' College,** 81.78 50 ⇓P P 05 53 41.8 +0.3
baz=82,SNR=18
TANN **Tannenbergstha** 81.86 330 eP P 05 53 41.6 -0.1
comp=Z,9.0nm,1.0s,mb4.7
Y16A **Circle Bar Ran** 81.90 53 ⇓P P 05 53 42.5 +0.2
baz=82
R22A **Saguache, Gunn** 81.98 48 ⇓P P 05 53 43.6 +1.0
baz=82
CSS **Prodhromos** 82.00 308 eP P 05 53 42.0 -0.8
comp=Z,9.0nm,0.6s,mb4.9
CSS epP pP 05 53 54.8 -0.1
NKC **Novy Kostel** 82.00 330 ⇓eP P 05 53 42.3 -0.2
NKC epP pP 05 53 53.5 -1.0
MOX **Moxa** 82.01 330 eP P 05 53 42.3 -0.2
comp=Z,27nm,1.4s,mb5.0
MOX e pP 05 53 54.4 -0.2
MOX
comp=Z,200nm,19.0s
MOX **Moxa** 82.01 330 eP P 05 53 42.2 -0.3
comp=Z,30nm,1.6s,mb5.0
MOX epP pP 05 53 54.3 -0.3
MOX **Moxa** 82.01 330 eP P 05 53 42.3 -0.2
MOX e pP 05 53 54.4 -0.2
MOX pmax pmax
comp=Z,27nm,1.4s,mb5.0
MOX MLR MLR
comp=Z,200nm,19.0s,MS4.5
X17A **Forest Lakes** 82.04 53 ⇓P P 05 53 43.7 +0.7
baz=82,SNR=5.6
IBBN **Ibbenburen** 82.13 333 eP P 05 53 42.7 -0.4
comp=Z,47nm,1.1s,mb5.3
U20A **Newcomb** 82.14 50 ⇑P P 05 53 43.7 +0.2
baz=82
115A **Sonoran Desert** 82.16 55 ⇑P P 05 53 43.7 +0.1
baz=82
KDZ **Kurdzhali** 82.19 317 eP P 05 53 44.0 +0.4
W18A **Petrified Fore** 82.21 52 ⇑P P 05 53 44.1 +0.3
baz=82
214A **Organ Pipe Nat** 82.25 56 ⇑P P 05 53 44.1 0.0
baz=82
V19A **Window Rock** 82.25 51 ⇓P P 05 53 44.5 +0.5
baz=82
Z16A **Peralta Trail,** 82.27 54 ⇓P P 05 53 44.3 +0.1
baz=82
CONA **Conrad Observa** 82.34 327 iP P 05 53 45.1 +0.8
comp=Z,21nm,1.0s,mb5.0,SNR=17
PKSM **Moragy** 82.36 324 P P 05 53 44.4 0.0
PKSM **Moragy** 82.36 324 ⇑iP P 05 53 43.8 -0.6
KHC **Kasperske Hory** 82.40 329 eP P 05 53 44.5 0.0
comp=Z,24nm,0.8s,mb5.2
KHC epP pP 05 53 55.6 -1.0
KHC **Kasperske Hory** 82.40 329 ⇓iP P 05 53 44.8 +0.2
KHC epP pP 05 53 56.1 -0.5
KHC AMS AMS 06 33 40.0
comp=Z,300nm,19.3s
Y17A **Roosevelt** 82.42 53 ⇑P P 05 53 45.1 +0.1
baz=82
W19A **Sanders** 82.43 51 ⇓P P 05 53 45.6 +0.6
baz=82
X18A **Snowflake** 82.45 52 ⇑P P 05 53 45.4 +0.2
baz=82
ROTZ **Rotzenmuhle** 82.47 330 eP P 05 53 45.3 +0.4
comp=Z,39nm,1.4s,mb5.1
ROTZ epP pP 05 53 56.6 -0.4
V20A **Brimhall** 82.55 50 ⇓P P 05 53 45.8 +0.1
baz=82
GEC2 **GERESS Array S** 82.57 328 eP P 05 53 45.1 -0.3
comp=Z,13nm,0.8s,mb5.0
GEC2 **GERESS Array S** 82.57 328 eP P 05 53 45.1 -0.3
GEC2 pmax pmax
comp=Z,13nm,0.8s,mb5.0
GERES **GERESS Array B** 82.57 328 P P 05 53 45.2 -0.2
GERES *PP pP 05 53 57.2 -0.3
GERES 05 56 56.3
GERES pmax pmax
comp=Z,9.0nm,0.6s
GERES **GERESS Array B** 82.57 328 P P 05 53 45.2 -0.2
comp=Z,9.2nm,0.6s,mb5.0,baz=35,slow=4.9,SNR=74
GERES pP pP 05 53 57.2 -0.3
comp=Z,4.5nm,0.7s,baz=34,slow=5.0,SNR=9.9
GERES PP PP 05 56 56.3 +1.9
comp=Z,1.8nm,1.0s,baz=58,slow=8.2,SNR=3.4
WET **Wettzell** 82.68 329 eP P 05 53 46.1 +0.1
comp=Z,28nm,1.4s,mb5.1
WET epP pP 05 53 57.4 -0.7
WET **Wettzell** 82.68 329 eP P 05 53 46.1 +0.1
WET e*PP pP 05 53 57.4 -0.7
WET pmax pmax
comp=Z,28nm,1.4s,mb5.1
T22A **Edith** 82.70 49 ⇓P P 05 53 47.0 +0.7
baz=82,SNR=12
VTS **Vitosha** 82.71 319 eP P 05 53 46.7 +0.4
WTSB **Winterswijk** 82.75 334 eP P 05 53 45.8 -0.5
comp=Z,22nm,0.8s,mb5.2
EYMN **Ely** 82.88 33 eP P 05 53 45.8 -1.2
comp=Z,21nm,0.9s,mb5.2
EYMN epP pP 05 53 57.6 -1.5
Y18A **Canyon Day Jun** 82.89 53 ⇑P P 05 53 47.9 +0.6
baz=83,SNR=7.4
Z17A **San Carlos Hig** 82.92 53 ⇑P P 05 53 47.8 +0.3
baz=83
GRA1 **Grafenberg Arr** 82.92 330 eP P 05 53 47.5 +0.3
comp=Z,116nm,1.6s,mb5.7
GRA1 epP pP 05 53 59.1 -0.2
GRF **Grafenberg Arr** 82.92 330 eP P 05 53 47.5 +0.3
comp=Z,116nm,1.6s,mb5.7
GRF epP pP 05 53 59.1 -0.2
GRF **Grafenberg Arr** 82.92 330 eP P 05 53 47.5 +0.3
GRF e*PP pP 05 53 59.1 -0.2
GRF pmax pmax
comp=Z,116nm,1.6s,mb5.7
GRF **Grafenberg Arr** 82.92 330 eP P 05 53 47.5 +0.3
GRF e*PP pP 05 53 59.1 -0.2
GRF pmax pmax
comp=Z,116nm,1.6s,mb5.7
X19A **St. Johns** 82.94 52 ⇓P P 05 53 48.0 +0.4
baz=83,SNR=13
W20A **Ramah** 82.97 51 ⇑P P 05 53 47.7 -0.1
baz=83,SNR=5.3
ARSA **Arzberg** 83.00 326 ⇓iP P 05 53 48.1 +0.4
comp=Z,8.5nm,0.8s,mb4.8
BUG **Bochum--Univer** 83.01 333 eP P 05 53 47.7 0.0
comp=Z,11nm,0.5s,mb5.1
SDCO **Great Sand Dun** 83.05 47 eP P 05 53 47.9 -0.3
comp=Z,18nm,1.5s,mb4.9
SDCO epP pP 05 54 00.3 0.0
V21A **Milan** 83.06 50 ⇓P P 05 53 48.5 +0.2
baz=83
MOA **Molln** 83.10 327 ⇓iP P 05 53 48.4 +0.2
comp=Z,18nm,1.1s,mb5.0
216A **Three Points,** 83.11 55 ⇑P P 05 53 48.5 -0.1
baz=83
MMB **Musomiste** 83.14 318 eP P 05 53 48.6 0.0
117A **Oracle** 83.21 54 ⇓P P 05 53 49.0 -0.1
baz=83
Y19A **Nutrioso** 83.26 52 ⇓P P 05 53 50.1 +0.7
baz=83,SNR=5.0
KKB **Krupnik** 83.29 319 eP P 05 53 49.8 +0.5
Z18A **Geronimo** 83.33 53 ⇓P P 05 53 49.9 +0.2
baz=83
TUC **Tucson** 83.35 54 eP P 05 53 49.3 -0.5
TUC e*PP pP 05 54 01.2 -0.7
TUC pmax pmax
comp=Z,11nm,1.4s,mb4.7
TUC **Tucson** 83.35 54 eP P 05 53 49.3 -0.5
comp=Z,11nm,1.4s,mb4.7
TUC epP pP 05 54 01.2 -0.7
X20A **Quemado** 83.36 51 ⇓P P 05 53 50.6 +0.8
baz=83,SNR=10
W21A **San Fidel** 83.50 50 ⇓P P 05 53 51.0 +0.5
baz=83
TNS **Taunus Mts** 83.57 332 eP P 05 53 50.2 -0.4

comp=Z,19nm,0.8s,mb5.3
TNS Taunus Mts 83.57 332 *e*P **P 05 53 50.2 -0.4**
TNS pmax pmax
comp=Z,19nm,0.8s,mb5.3
PERS Pernice 83.65 326 *i* P **P 05 53 51.2 +0.2**
SOKA Soboth 83.66 326 ⇑*i*P **P 05 53 51.1 0.0**
comp=Z,41nm,1.3s,mb5.4
ECSD EROS Data Cent 83.66 38 *e*P **P 05 53 50.1 -1.1**
comp=Z,12nm,0.8s,mb5.1
118A Homack Ranch, 83.66 54 ⇑P **P 05 53 51.6 +0.2**
baz=83,SNR=8.2
217A Green Valley 83.67 55 ⇑P **P 05 53 51.5 0.0**
baz=84,SNR=7.3
RJOB Jochberg 83.81 328 *e*P **P 05 53 52.0 +0.1**
comp=Z,24nm,1.0s,mb5.3
Y20A Horse Springs, 83.85 52 ⇓P **P 05 53 53.0 +0.7**
baz=84,SNR=11
X21A Alamocita Cree 83.86 51 ⇑P **P 05 53 53.0 +0.6**
baz=84,SNR=13
119A Ashpeak Ranch, 84.01 53 ⇑P **P 05 53 53.5 +0.3**
baz=84
W22A Albuquerque 84.01 50 ⇓P **P 05 53 53.9 +0.7**
baz=84
218A Dragoon 84.04 54 ⇓P **P 05 53 53.7 +0.3**
baz=84
HGN Heimansgroeve 84.05 333 *e*P **P 05 53 52.5 -0.6**
comp=Z,17nm,1.4s,mb5.0
KBA Koelnbreinsper 84.09 327 ⇓*i*P **P 05 53 53.2 -0.1**
comp=Z,19nm,0.9s,mb5.2,SNR=11
FUR Furstenfeldbru 84.11 329 *e*P **P 05 53 53.3 -0.1**
comp=Z,44nm,0.8s,mb5.6
FUR Furstenfeldbru 84.11 329 *e*P **P 05 53 53.3 -0.1**
FUR pmax pmax
comp=Z,44nm,0.8s,mb5.6
BEBN Eben Emael 84.11 334 P **P 05 53 52.8 -0.5**
comp=Z,8.0nm,1.3s,mb4.7
MEM Membach 84.15 333 P **P 05 53 53.2 -0.3**
comp=Z,11nm,1.2s,mb4.8
MEM AP pP 05 54 05.0 -0.7
PMOR Pomariorio Ree 84.17 114 *e*T 07 26 16.0
comp=Z,20nm,0.2s
Y21A Point of Rocks 84.22 51 ⇑P **P 05 53 54.9 +0.7**
baz=84,SNR=9.4
Z20A Nine Sixteen R 84.23 53 ⇓P **P 05 53 54.7 +0.4**
baz=84,SNR=18
LAZ Ladron 84.29 51 *e*P **P 05 53 55.0 +0.4**
comp=Z,8.1nm,1.3s,mb4.7
LAZ *ep*P pP 05 54 06.4 -0.3
MYKA Terra Mystica 84.31 327 ⇓*i*P **P 05 53 53.8 -0.6**
comp=Z,12nm,0.7s,mb5.1
ANMO Albuquerque 84.34 50 *e*P **P 05 53 55.2 +0.4**
ANMO *e**PP pP 05 54 07.1 +0.2
ANMO pmax pmax
comp=Z,16nm,1.1s
ANMO Albuquerque 84.34 50 *e*P **P 05 53 55.2 +0.3**
comp=Z,16nm,1.1s,mb5.1
ANMO *ep*P pP 05 54 07.1 +0.1
LJU Ljubljana 84.37 326 *i* P **P 05 53 54.4 -0.4**
318A Bisbee 84.42 55 ⇑P **P 05 53 55.4 +0.1**
baz=84,SNR=12
STU Stuttgart 84.45 331 *e*P **P 05 53 55.2 +0.1**
BOJS Bojanci 84.46 325 *i* P **P 05 53 54.9 -0.3**
219A White Tail Can 84.53 54 ⇓P **P 05 53 56.1 +0.2**
baz=84
BCLA Clavier 84.56 334 P **P 05 53 54.9 -0.7**
comp=Z,13nm,1.4s,mb4.9
BCLA AP pP 05 54 07.2 -0.5
UCC Uccle 84.57 334 P **P 05 53 55.7 0.0**
120A U Bar Ranch, L 84.58 53 ⇓P **P 05 53 56.5 +0.4**
baz=84,SNR=6.2
PPT Papeete 84.64 117 *e*LR LR 06 20 31.9
PPT *e*T 07 26 49.3
comp=Z,5.6nm,0.3s
Y22D IRIS PASSCAL I 84.64 51 ⇑P **P 05 53 56.6 +0.2**
baz=84
Z21A St. Cloud Mine 84.68 52 ⇓P **P 05 53 57.2 +0.6**
baz=84,SNR=11
JAVS Javornik 84.69 326 *i* P **P 05 53 55.5 -0.9**
Y22A Socorro 84.71 51 ⇓P **P 05 53 57.0 +0.3**
baz=84,SNR=6.5
BNM Barren Site 84.77 51 *e*P **P 05 53 56.9 -0.1**
comp=Z,3.4nm,0.7s,mb4.6
BNM *ep*P pP 05 54 09.0 -0.2
TIAR Tiarei 84.80 117 *e*T 07 27 01.1
comp=Z,14nm,0.3s
WLF Walferdange 84.88 333 P **P 05 53 57.9 +0.7**
comp=Z,18nm,1.6s,mb5.0
WLF Walferdange 84.88 333 *e*P **P 05 53 57.4 +0.2**
comp=Z,40nm,1.5s,mb5.3
WLF Walferdange 84.88 333 E 05 53 06.1
319A Douglas 84.93 54 ⇑P **P 05 53 57.9 +0.1**
baz=85,SNR=5.9
GIVF Givet 84.99 334 *e*P **P 05 53 56.8 -1.0**
220A Playas Peak, P 85.07 53 ⇑P **P 05 53 58.6 0.0**
baz=85,SNR=6.3
DOU Dourbes 85.08 334 P **P 05 53 57.7 -0.5**
comp=Z,7.7nm,1.5s,mb4.6
DOU E 05 54 03.7
DOU AP pP 05 54 11.0 +0.7
SCHQ Schefferville 85.08 16 P **P 05 53 57.6 -0.5**
comp=Z,12nm,0.8s,mb5.1,baz=360,slow=6.0,SNR=21
SCHQ Schefferville 85.08 16 *e*P **P 05 53 57.7 -0.4**
comp=Z,17nm,1.1s,mb5.1
121A Cookes Peak, D 85.12 52 ⇑P **P 05 53 59.1 +0.3**
baz=85,SNR=6.4
BFO Black Forest 85.15 331 P **P 05 53 58.1 -0.5**
comp=Z,225nm,0.9s,mb6.3,SNR=13
BFO Black Forest 85.15 331 *e*P **P 05 53 58.2 -0.4**
comp=Z,44nm,1.1s,mb5.5
BFO Black Forest 85.15 331 *e*P **P 05 53 58.2 -0.4**
BFO pmax pmax
comp=Z,44nm,1.1s,mb5.5
Z22A Elephant Butte 85.16 51 ⇓P **P 05 53 58.9 -0.1**
baz=85
FETA Feichten 85.24 329 *i* P **P 05 53 58.9 -0.2**
comp=Z,10nm,0.7s,mb5.1,SNR=7.1
BAIF Baives 85.24 334 *e*P **P 05 53 58.0 -1.1**
comp=Z,23nm,0.9s,mb5.0
BAIF Baives 85.24 334 *e*P **P 05 53 58.0 -1.1**
BAIF pmax pmax
comp=Z,12nm,0.9s,mb5.0
BAIF Baives 85.24 334 *e*P **P 05 53 58.0 -1.1**
comp=Z,12nm,0.9s,mb5.0
Y23A Lovelace Mesa, 85.27 50 ⇓P **P 05 53 59.7 +0.2**
baz=85,SNR=12
W25A X Bar L Ranch, 85.37 49 ⇓P **P 05 54 00.3 +0.3**
baz=85,SNR=21
DAVA Damuels 85.38 329 ⇓*i*P **P 05 53 59.7 -0.1**
comp=Z,35nm,1.0s,mb5.5,SNR=14
320A Kipp Ranch, An 85.44 54 ⇑P **P 05 54 00.5 +0.1**
baz=85
221A Mesquite Ranch 85.47 53 ⇓P **P 05 54 00.5 -0.1**
baz=85
CDF Champ du Feu 85.49 331 *e*P **P 05 53 59.5 -0.8**
comp=Z,61nm,1.0s,mb5.4
CDF Champ du Feu 85.49 331 *e*P **P 05 53 59.5 -0.8**
CDF pmax pmax
comp=Z,30nm,1.0s,mb5.4
CDF Champ du Feu 85.49 331 *e*P **P 05 53 59.5 -0.8**
comp=Z,30nm,1.0s,mb5.4
122A Conniff Cattle 85.51 52 ⇑P **P 05 54 01.2 +0.4**
baz=85
Y24A Capitan 85.66 50 ⇓P **P 05 54 01.2 -0.3**
baz=85
ECH Echery 85.70 331 *e*P **P 05 54 00.8 -0.6**
ECH *e**PP pP 05 54 12.5 -1.0
ECH pmax pmax
comp=Z,20nm,1.0s,mb5.3
ECH Echery 85.70 331 *e*P **P 05 54 00.8 -0.5**
comp=Z,20nm,1.0s,mb5.3
ECH *ep*P pP 05 54 12.5 -1.0
X25A Clemmons Ranch 85.72 49 ⇓P **P 05 54 01.9 +0.2**
baz=86
222A Williams Famil 85.84 52 ⇓P **P 05 54 02.4 0.0**
baz=86
MEH Mehetia 85.92 116 *e*T 07 28 25.7
comp=Z,86nm,0.2s
Y25A Mesa, Roswell 86.11 50 ⇑P **P 05 54 03.3 -0.4**
baz=86
TAOE Nuku Hiva Isla 86.12 104 *e*LR LR 06 21 00.3
comp=Z,408nm,22.5s
HINF Hinteralfeld 86.14 331 *e*P **P 05 54 02.3 -1.3**
comp=Z,14nm,0.8s,mb4.9
HINF Hinteralfeld 86.14 331 *e*P **P 05 54 02.3 -1.3**
HINF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
HINF Hinteralfeld 86.14 331 *e*P **P 05 54 02.3 -1.3**
comp=Z,7.1nm,0.8s,mb5.0
HAU Haudompre 86.18 332 *e*P **P 05 54 02.5 -1.2**
comp=Z,24nm,0.7s,mb5.2
HAU *e*MLR MLR
comp=Z,361nm,22.2s,MS4.4
HAU Haudompre 86.18 332 *e*P **P 05 54 02.5 -1.2**
HAU pmax pmax
comp=Z,12nm,0.7s,mb5.2
HAU MLR MLR
comp=Z,360nm,22.3s,MS4.7
HAU Haudompre 86.18 332 *e*P **P 05 54 02.5 -1.2**
comp=Z,12nm,0.7s,mb5.2
HAU LR LR
comp=Z,360nm,22.3s,MS4.7
X26A CR and CF Fran 86.22 49 ⇓P **P 05 54 04.2 0.0**
baz=86
MEZF Maizieres J'vi 86.25 333 *e*P **P 05 54 03.6 -0.5**
comp=Z,102nm,1.3s,mb5.6
MEZF Maizieres J'vi 86.25 333 *e*P **P 05 54 03.6 -0.5**
comp=Z,102nm,1.3s,mb5.9
223A Chaparral, Ant 86.33 52 ⇓P **P 05 54 04.5 -0.3**
baz=86
124A Stringfield Ra 86.47 51 ⇑P **P 05 54 05.4 -0.1**
baz=86
X27A F and S Farms, 86.58 48 ⇓P **P 05 54 06.1 +0.1**
baz=86
Y26A Elida 86.64 49 ⇓P **P 05 54 05.8 -0.5**
baz=86
SCIA State Center 86.69 38 *e*P **P 05 54 06.2 -0.2**
comp=Z,7.4nm,0.8s,mb5.0
Z26A Caprock 86.99 50 ⇓P **P 05 54 07.3 -0.7**
baz=87
125A Gardner Draw, 86.99 51 ⇑P **P 05 54 08.0 -0.1**
baz=87,SNR=8.6
Y27A Causey 87.06 49 ⇓P **P 05 54 07.8 -0.5**
baz=87
324A Moseley Ranch, 87.30 52 ⇓P **P 05 54 09.2 -0.4**
baz=87
126A Clayton Basin, 87.39 50 ⇑P **P 05 54 09.4 -0.6**
baz=87
Z27A Tatum 87.42 49 ⇓P **P 05 54 09.5 -0.7**
baz=87,SNR=7.1
CABF La Chapelle 87.43 331 *e*P **P 05 54 09.0 -0.9**
325A Bean Ranch, Si 87.67 52 ⇓P **P 05 54 11.1 -0.2**
baz=87
LOR Lormes 87.72 333 *e*P **P 05 54 10.4 -0.9**
comp=Z,75nm,1.2s,mb5.5
LOR *e*MLR MLR
comp=Z,264nm,20.2s,MS4.3
LOR Lormes 87.72 333 *e*P **P 05 54 10.4 -0.9**
LOR pmax pmax
comp=Z,37nm,1.2s,mb5.5
LOR MLR MLR
comp=Z,260nm,20.3s,MS4.6
LOR Lormes 87.72 333 *e*P **P 05 54 10.4 -0.9**
comp=Z,37nm,1.2s,mb5.5
LOR LR LR
comp=Z,260nm,20.3s,MS4.6
FLN La Foliniere 87.94 336 *e*P **P 05 54 11.2 -1.1**
comp=Z,29nm,0.7s,mb5.3
FLN *e*MLR MLR
comp=Z,346nm,19.5s,MS4.5
FLN La Foliniere 87.94 336 *e*P **P 05 54 11.2 -1.1**
FLN pmax pmax
comp=Z,14nm,0.7s,mb5.3
FLN MLR MLR
comp=Z,350nm,19.5s,MS4.8
FLN La Foliniere 87.94 336 *e*P **P 05 54 11.2 -1.1**
comp=Z,14nm,0.7s,mb5.3
FLN LR LR
comp=Z,350nm,19.5s,MS4.8
LDF La Druitiere 87.97 336 *e*P **P 05 54 11.4 -1.0**
comp=Z,13nm,0.6s,mb5.1
LDF La Druitiere 87.97 336 *e*P **P 05 54 11.4 -1.0**
LDF pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
LDF La Druitiere 87.97 336 *e*P **P 05 54 11.4 -1.0**
comp=Z,6.6nm,0.6s,mb5.0
SSF Saint Saulge 88.02 333 *e*P **P 05 54 11.9 -0.8**
comp=Z,22nm,0.9s,mb5.1
SSF Saint Saulge 88.02 333 *e*P **P 05 54 11.9 -0.8**
SSF pmax pmax
comp=Z,11nm,0.9s,mb5.1
SSF Saint Saulge 88.02 333 *e*P **P 05 54 11.9 -0.8**
comp=Z,11nm,0.9s,mb5.1
425A Indio Mountain 88.06 52 ⇑P **P 05 54 12.8 -0.5**
baz=88
LPL La Plagne 88.08 330 *e*P **P 05 54 12.4 -0.6**
comp=Z,12nm,0.8s,mb4.9
LPL La Plagne 88.08 330 *e*P **P 05 54 12.4 -0.6**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
LPL La Plagne 88.08 330 *e*P **P 05 54 12.4 -0.6**
comp=Z,6.3nm,0.8s,mb4.9
LPG La Plagne 88.09 330 *e*P **P 05 54 12.5 -0.6**
comp=Z,17nm,0.8s,mb5.0
LPG La Plagne 88.09 330 *e*P **P 05 54 12.5 -0.6**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
LPG La Plagne 88.09 330 *e*P **P 05 54 12.5 -0.6**
comp=Z,8.3nm,0.8s,mb5.0
HYF Humbligny 88.16 333 *e*P **P 05 54 13.0 -0.4**
GLMI Grayling 88.25 31 *e*P **P 05 54 13.6 -0.2**
comp=Z,70nm,1.0s,mb5.8
SMF Signal de Mont 88.25 332 *e*P **P 05 54 13.1 -0.7**
comp=Z,33nm,1.0s,mb5.2
SMF Signal de Mont 88.25 332 *e*P **P 05 54 13.1 -0.7**
SMF pmax pmax
comp=Z,16nm,1.0s,mb5.2
SMF Signal de Mont 88.25 332 *e*P **P 05 54 13.1 -0.7**
comp=Z,16nm,1.0s,mb5.2
227A Bennet, Jal 88.28 50 ⇓P **P 05 54 13.6 -0.6**
baz=88
AVF Avril sur Loir 88.31 333 *e*P **P 05 54 13.2 -0.9**
comp=Z,35nm,0.9s,mb5.3
AVF Avril sur Loir 88.31 333 *e*P **P 05 54 13.2 -0.9**
AVF pmax pmax
comp=Z,17nm,0.9s,mb5.3
AVF Avril sur Loir 88.31 333 *e*P **P 05 54 13.2 -0.9**
comp=Z,18nm,0.9s,mb5.3
326A Caldwell Ranch 88.33 51 ⇓P **P 05 54 14.0 -0.4**
baz=88
GRR Gorron 88.39 336 *e*P **P 05 54 13.6 -0.8**
comp=Z,140nm,1.3s,mb5.7
GRR Gorron 88.39 336 *e*P **P 05 54 13.6 -0.8**
GRR pmax pmax
comp=Z,70nm,1.3s,mb5.7
GRR Gorron 88.39 336 *e*P **P 05 54 13.6 -0.8**
comp=Z,70nm,1.3s,mb5.7
TIP Timpagrande 88.53 320 *e*P **P 05 54 14.9 -0.4**
comp=Z,25nm,1.3s,mb5.4
BGF Bois d'Agland 88.69 333 *e*P **P 05 54 15.1 -0.8**
MBDF Montbardon 88.72 330 *e*P **P 05 54 14.6 -1.4**
comp=Z,14nm,0.8s,mb5.0
MBDF Montbardon 88.72 330 *e*P **P 05 54 14.6 -1.4**
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
MBDF Montbardon 88.72 330 *e*P **P 05 54 14.6 -1.4**
comp=Z,6.9nm,0.8s,mb5.0
ORIF Oris-en-Rattie 88.92 330 *e*P **P 05 54 16.1 -0.9**
comp=Z,5.8nm,0.7s,mb4.7
ORIF *e*MLR MLR
comp=Z,199nm,19.5s,MS4.2
ORIF Oris-en-Rattie 88.92 330 *e*P **P 05 54 16.1 -0.9**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 88.92 330 *e*P **P 05 54 16.1 -0.9**
comp=Z,2.9nm,0.7s,mb4.7
328A Wristen Ranch, 89.01 50 ⇓P **P 05 54 17.0 -0.7**
baz=89
427A Hayter Ranch, 89.01 51 ⇓P **P 05 54 17.3 -0.4**
baz=89
WMOK Wichita Mounta 89.03 46 *e*P **P 05 54 16.9 -0.8**
WMOK pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
WMOK Wichita Mounta 89.03 46 *e*P **P 05 54 16.9 -0.8**
comp=Z,4.5nm,1.0s,mb4.8
SGMF Saint Gilles 89.05 337 *e*P **P 05 54 17.0 -0.5**
comp=Z,28nm,0.6s,mb5.5
SGMF Saint Gilles 89.05 337 *e*P **P 05 54 17.0 -0.5**
SGMF pmax pmax
comp=Z,14nm,0.6s,mb5.5
SGMF Saint Gilles 89.05 337 *e*P **P 05 54 17.0 -0.5**
comp=Z,14nm,0.6s,mb5.5
526A Mary Lane Ranc 89.12 52 ⇑P **P 05 54 17.9 -0.3**
baz=89
TCF Toulx Ste Croi 89.15 333 *e*P **P 05 54 17.3 -0.7**
comp=Z,9.5nm,0.8s,mb4.9
TCF Toulx Ste Croi 89.15 333 *e*P **P 05 54 17.3 -0.7**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
TCF Toulx Ste Croi 89.15 333 *e*P **P 05 54 17.3 -0.7**
comp=Z,4.8nm,0.8s,mb4.9
SBF Sospel 89.16 329 *e*P **P 05 54 17.1 -1.0**
ROSF Rostrenen 89.19 337 *e*P **P 05 54 17.4 -0.8**
comp=Z,33nm,0.8s,mb5.4
ROSF Rostrenen 89.19 337 *e*P **P 05 54 17.4 -0.8**
ROSF pmax pmax
comp=Z,17nm,0.8s,mb5.4
ROSF Rostrenen 89.19 337 *e*P **P 05 54 17.4 -0.8**
comp=Z,16nm,0.8s,mb5.4
527A Woodward Ranch 89.36 52 ⇑P **P 05 54 18.6 -0.7**
baz=89
626A Big Bend Ranch 89.44 53 ⇑P **P 05 54 18.8 -0.9**
baz=89
VIVF Saint-Julien-I 89.44 331 *e*P **P 05 54 18.6 -0.8**
comp=Z,8.2nm,0.7s,mb4.8
VIVF Saint-Julien-I 89.44 331 *e*P **P 05 54 18.6 -0.8**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
VIVF Saint-Julien-I 89.44 331 *e*P **P 05 54 18.6 -0.8**
comp=Z,4.1nm,0.7s,mb4.9
QUIF Quistinic 89.53 337 *e*P **P 05 54 19.1 -0.7**
comp=Z,28nm,0.9s,mb5.3
QUIF Quistinic 89.53 337 *e*P **P 05 54 19.1 -0.7**
QUIF pmax pmax
comp=Z,14nm,0.9s,mb5.3
QUIF Quistinic 89.53 337 *e*P **P 05 54 19.1 -0.7**
comp=Z,14nm,0.9s,mb5.3
428A Kincaid Ranch, 89.54 51 ⇓P **P 05 54 20.0 -0.2**
baz=89
PGF Pioggiola 89.56 327 *e*P **P 05 54 18.6 -1.4**
comp=Z,22nm,1.1s,mb5.1
PGF Pioggiola 89.56 327 *e*P **P 05 54 18.6 -1.4**
PGF pmax pmax
comp=Z,11nm,1.1s,mb5.1
PGF Pioggiola 89.56 327 *e*P **P 05 54 18.6 -1.4**
comp=Z,11nm,1.1s,mb5.1
CEL Celeste 89.67 320 *e*P **P 05 54 19.7 -1.0**
comp=Z,29nm,1.0s,mb5.6
CEL *ep*P pP 05 54 34.5 +1.7
MFF Saint Martin d 89.71 335 *e*P **P 05 54 20.2 -0.4**
comp=Z,34nm,0.9s,mb5.3
MFF Saint Martin d 89.71 335 *e*P **P 05 54 20.2 -0.4**
MFF pmax pmax
comp=Z,17nm,0.9s,mb5.4
MFF Saint Martin d 89.71 335 *e*P **P 05 54 20.2 -0.4**
comp=Z,17nm,0.9s,mb5.4
FRF La Foret Royal 89.73 329 *e*P **P 05 54 20.3 -0.5**
comp=Z,6.0nm,0.7s,mb4.7
FRF La Foret Royal 89.73 329 *e*P **P 05 54 20.3 -0.5**
FRF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
FRF La Foret Royal 89.73 329 *e*P **P 05 54 20.3 -0.5**
comp=Z,3.0nm,0.7s,mb4.7
SMRF Simiane la Rot 89.82 330 *e*P **P 05 54 20.4 -0.8**
528A Cox Ranch, San 89.87 51 ⇓P **P 05 54 21.5 -0.3**
baz=90
TXAR Lajitas Array 89.89 52 P **P 05 54 21.5 -0.3**
TXAR *PP pP 05 54 33.4 -0.6
TXAR pmax pmax
comp=Z,7.0nm,0.8s
TXAR Lajitas Array 89.89 52 P **P 05 54 21.5 -0.3**
comp=Z,6.6nm,0.8s,mb5.0,baz=298,slow=3.1,SNR=50
TXAR pP pP 05 54 33.4 -0.7
comp=Z,5.1nm,0.8s,baz=299,slow=3.3,SNR=13
TXAR Lajitas Array 89.89 52 P **P 05 54 21.5 -0.3**
TXAR pP pP 05 54 33.4 -0.7
LMR La Mourre 89.97 329 *e*P **P 05 54 20.6 -1.4**
comp=Z,13nm,0.7s,mb5.0
LMR La Mourre 89.97 329 *e*P **P 05 54 20.6 -1.4**
LMR pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
LMR La Mourre 89.97 329 *e*P **P 05 54 20.6 -1.4**
comp=Z,6.3nm,0.7s,mb5.0
627A Terlingua Ranc 89.98 52 ⇑P **P 05 54 21.9 -0.4**
baz=90
RJF Les Rejaudoux 90.24 333 *e*P **P 05 54 22.9 -0.3**
comp=Z,21nm,0.9s,mb5.2
RJF *e*MLR MLR
comp=Z,301nm,19.8s,MS4.4
RJF Les Rejaudoux 90.24 333 *e*P **P 05 54 22.9 -0.3**
RJF pmax pmax
comp=Z,11nm,0.9s,mb5.2
RJF MLR MLR
comp=Z,300nm,19.8s,MS4.7
RJF Les Rejaudoux 90.24 333 *e*P **P 05 54 22.9 -0.3**
comp=Z,11nm,0.9s,mb5.2
RJF LR LR
comp=Z,300nm,19.8s,MS4.7
628A Black Gap, Mar 90.27 52 ⇓P **P 05 54 23.1 -0.5**
baz=90
CAF Calviac 90.37 333 *e*P **P 05 54 23.6 -0.2**
comp=Z,35nm,1.1s,mb5.3
CAF Calviac 90.37 333 *e*P **P 05 54 23.6 -0.2**
CAF pmax pmax
comp=Z,18nm,1.1s,mb5.3
CAF Calviac 90.37 333 *e*P **P 05 54 23.6 -0.2**
comp=Z,18nm,1.1s,mb5.3
LASF Ste Croix 90.41 331 *e*P **P 05 54 23.5 -0.5**
comp=Z,11nm,0.9s,mb4.9
CCM Cathedral Cave 90.61 39 *e*P **P 05 54 24.2 -0.8**
CCM pmax pmax
comp=Z,19nm,1.3s,mb5.3
CCM Cathedral Cave 90.61 39 *e*P **P 05 54 24.2 -0.8**
comp=Z,19nm,1.3s,mb5.3
LFF La Frestale 90.84 333 *e*P **P 05 54 25.7 -0.2**
comp=Z,43nm,1.0s,mb5.4
LFF La Frestale 90.84 333 *e*P **P 05 54 25.7 -0.2**
LFF pmax pmax
comp=Z,22nm,1.0s,mb5.4
LFF La Frestale 90.84 333 *e*P **P 05 54 25.7 -0.2**
comp=Z,22nm,1.0s,mb5.4
JCT Junction City 91.48 49 *e*P **P 05 54 28.2 -1.0**
JCT pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
JCT Junction City 91.48 49 *e*P **P 05 54 28.1 -1.0**
comp=Z,7.1nm,0.6s,mb5.2
MTLF Montolieu 91.67 332 *e*P **P 05 54 29.3 -0.5**
comp=Z,13nm,1.0s,mb4.9
MTLF Montolieu 91.67 332 *e*P **P 05 54 29.3 -0.5**
MTLF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
MTLF Montolieu 91.67 332 *e*P **P 05 54 29.3 -0.5**
comp=Z,6.5nm,1.0s,mb4.9
MIAR Mount Ida 92.07 43 *e*P **P 05 54 31.3 -0.6**
MIAR *e**PP pP 05 54 42.5 -1.6
MIAR pmax pmax
comp=Z,19nm,0.9s,mb5.4
MIAR Mount Ida 92.07 43 *e*P **P 05 54 31.3 -0.6**
comp=Z,18nm,0.9s,mb5.4
MIAR *ep*P pP 05 54 42.5 -1.5
EPF Esparros 92.63 333 *e*P **P 05 54 33.2 -1.1**
ACSO Alum Creek Sta 92.71 33 *e*P **P 05 54 34.1 -0.6**
comp=Z,5.7nm,0.4s,mb5.3
ETSF Etsaut 93.08 333 *e*P **P 05 54 36.3 0.0**
comp=Z,11nm,0.9s,mb5.0
ETSF Etsaut 93.08 333 *e*P **P 05 54 36.3 0.0**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
ETSF Etsaut 93.08 333 *e*P **P 05 54 36.3 0.0**
comp=Z,5.6nm,0.9s,mb5.0
SJPF Ste Jean 93.12 334 *e*P **P 05 54 35.3 -1.3**
comp=Z,15nm,1.0s,mb5.1
SJPF Ste Jean 93.12 334 *e*P **P 05 54 35.3 -1.3**
SJPF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
SJPF Ste Jean 93.12 334 *e*P **P 05 54 35.3 -1.3**
comp=Z,7.6nm,1.0s,mb5.1
KEST Kesra 94.90 323 P **P 05 54 44.5 -0.3**
comp=Z,2.6nm,1.1s,mb4.6,baz=248,slow=5.1,SNR=3.8
ESDC Sonseca Array 97.12 334 P **P 05 54 53.8 -1.1**
comp=Z,0.9nm,0.6s,mb4.4,baz=17,slow=4.4,SNR=7.4
ESDC PP PP 05 58 51.4 +1.2
comp=Z,0.2nm,0.4s,baz=30,slow=8.2,SNR=4.7
ESDC Sonseca Array 97.12 334 P **P 05 54 53.8 -1.1**
ESDC PP PP 05 58 51.4 +1.2
TORD Torodi Ar. Bea 117.24 315 PKP PKPdf 06 00 07.0 -1.3
comp=Z,0.9nm,0.5s,baz=34,slow=1.8,SNR=26
TORD PP PP 06 01 17.9 -0.4
comp=Z,4.9nm,1.1s,baz=32,slow=7.4,SNR=8.7
TORD Torodi Ar. Bea 117.24 315 PKP PKPdf 06 00 07.0 -1.4
TORD PP PP 06 01 17.9 -0.4

DBIC Dimbokro 126.19 317 PKIKP PKPdf 06 00 24.8 -0.8
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 126.19 317 PKP PKPdf 06 00 24.8 -0.7
comp=Z,3.8nm,0.7s,baz=9.7,slow=3.4,SNR=9.0
LVC Limon Verde 149.98 69 PKPbc PKPbc 06 01 13.8 +0.6
comp=Z,19nm,0.9s,baz=276,slow=3.9,SNR=11
SIV San Ignacio 150.84 49 PKPbc PKPbc 06 01 14.8 -0.6
comp=Z,12nm,0.8s,baz=302,slow=1.8,SNR=30

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*IDC **02** 05:51:22.9±0.4, 42°.86S×72°.11W, h0km, mb4.6/11, mb1 4.7/13, mb1mx4.6/17, mbtmp4.6/13, ML3.6/2, MS4.8/13, Ms1 4.7/13, ms1mx4.6/21, Error ellipse: s-maj=21.2km s-min=9.9km az=101.0*
*ISCJB **02** 05:51:23.6±0.2, 42°.72S±0°.04×72°.08W±0°.07, h10km, mb5.1/81, MS4.8/24, Error ellipse: s-maj=7.3km s-min=5.6km az=174.9*
*GCMT **02** 05:51:24.5±0.2, 42°.93S×72°.65W, h17km±1km, MW5.2/70, Moment Tensor Solution. s29,c36; s70,c117; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.35±.04; $M_{\theta\theta}$0.88±.03; $M_{\phi\phi}$-0.52±.04; $M_{r\theta}$-0.18±.07; $M_{\theta\phi}$0.56±.03; $M_{\phi r}$0.01±.09; Best double couple: $M_0$0.91700×10^{17} NP1:ϕ_s206.00000°, δ77.00000°, λ-177.00000°. NP2: ϕ_s115.00000°, δ87.00000°, λ-13.00000°. Principal axes: T 1.0970, Plg7.0000°, Azm161.0000°; N -0.3600, Plg77.0000°, Azm281.0000°; P -0.7380, Plg12.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 05:51:24.6±0.2, 42°.77S×72°.27W, h10km, mb5.3/71, MS4.9/12 Error ellipse: s-maj=9.3km s-min=5.9km az=78.0*
NEIC Felt at Esguel, Argentina.
ISC 02 05:51:25.0±0.2, 42.76S±0°.04×72.17W±0°.07, h10km, n423, σ0.76/373, mb5.1/81, MS4.8/24, 133C-118D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.36**	**31**	Pn	**Pn**	**05 52 03.9**	**+0.2**
	7.0nm,0.3s,baz=216,slow=14,SNR=12						
PLCA				Lg		05 52 41.9	
	885nm,0.3s,baz=315,slow=19,SNR=25						
PLCA	**Paso Flores**	**2.36**	**31**	*e*Pn	**Pn**	**05 52 06.2**	**+2.5**
PLCA				*e*S	**Sg**	**05 52 42.4**	**+1.7**
TRQA	**Tornquist**	**9.08**	**62**	*e*Pn	**Pn**	**05 53 39.5**	**+3.5**
CFAA	**Coronel Fontan**	**11.56**	**17**	Pn	**Pn**	**05 54 10.1**	**+0.1**
	baz=189,slow=13,SNR=1.6						
CFAA				Lg		05 57 35.7	
	0.0nm,0.3s,baz=274,slow=19,SNR=3.1						
CFAA				LR	LR	05 59 04.3	
	comp=Z,1μm,18.0s,baz=183,slow=40						
CFAA	**Coronel Fontan**	**11.56**	**17**	Pn	**Pn**	**05 54 10.1**	**+0.1**
CFAA				Lg		05 57 35.7	
CFAA				LR	LR	05 59 04.3	
USHA	**Ushuaia**	**12.33**	**170**	Pn	**Pn**	**05 54 18.2**	**-2.3**
	0.1nm,0.3s,baz=320,slow=15,SNR=2.1						
EFI	**East Falkland**	**13.08**	**138**	*e*Pn	**Pn**	**05 54 32.8**	**+2.1**
LPA	**La Plata**	**13.57**	**59**	*ce*P	**Pn**	**05 54 40.0**	**+2.5**
LPA	**La Plata**	**13.57**	**59**	*ce*P	**Pn**	**05 54 46.0**	**+8.4**
LPA				*es*P		05 55 16.0	
LCO	**Las Campanas**	**13.77**	**5**	*e*Pn	**Pn**	**05 54 42.1**	**+1.9**
	29nm,0.9s						
LVC	**Limon Verde**	**20.27**	**9**	P	**P**	**05 56 01.5**	**+0.9**
	41nm,0.9s,baz=190,slow=11,SNR=19						
LVC				S	**S**	**05 59 51.3**	**+3.4**
	2.5nm,0.8s,baz=162,slow=20,SNR=3.5						
LVC				LR	LR	06 03 52.8	
	comp=Z,7μm,18.6s,MS5.0,baz=174,slow=37						
LVC	**Limon Verde**	**20.27**	**9**	P	**P**	**05 56 01.5**	**+0.9**
LVC				S	**S**	**05 59 51.3**	**+3.4**
LVC				LR	LR	06 03 52.8	
PMSA	**Palmer Station**	**22.54**	**171**	LR	LR	06 04 33.6	
	comp=Z,5μm,19.3s,MS5.0,baz=300,slow=35						
PMSA	**Palmer Station**	**22.54**	**171**	P	**P**	**05 56 25.1**	**+0.3**
	113nm,1.3s,mb5.1						
PMSA				LR	LR		
	comp=Z,5μm,21.0s,MS4.9						
LPAZ	**La Paz**	**26.60**	**9**	*e*P	**P**	**05 57 03.9**	**+0.4**
	comp=Z,35nm,1.4s,mb4.7						
SIV	**San Ignacio**	**28.32**	**23**	P	**P**	**05 57 17.5**	**-1.4**
	comp=Z,11nm,0.8s,mb4.5,baz=205,slow=8.0,SNR=47						
NNA	**Nana**	**30.92**	**351**	LR	LR	06 07 18.3	
	comp=Z,1μm,21.2s,MS4.6,baz=156,slow=31						
VNA3	**Neumayer Olymp**	**41.41**	**154**	*e*Pdiff	**P**	**05 59 11.8**	**+0.8**
VNA1	**Neumayer--Stat**	**41.78**	**153**	*e*Pdiff	**P**	**05 59 14.1**	**0.0**
VNA2	**Neumayer--Watz**	**42.10**	**154**	*e*Pdiff	**P**	**05 59 17.3**	**+0.6**
OTAV	**Otavalo**	**43.17**	**351**	*e*P	**P**	**05 59 27.4**	**+1.5**
	comp=Z,56nm,1.5s,mb5.1						
OTAV				*e*PcP	PcP	06 01 16.0	+0.5
ROSC	**El Rosal**	**47.43**	**357**	P	**P**	**06 00 02.2**	**+2.5**
	comp=Z,5.8nm,0.8s,mb4.6,baz=161,slow=3.8,SNR=14						
ROSC	**El Rosal**	**47.43**	**357**	*e*P	**P**	**06 00 02.0**	**+2.3**
QSPA	**South Pole Qui**	**47.49**	**180**	P	**P**	**05 59 58.3**	**-1.3**
	comp=Z,26nm,1.0s,mb5.1,baz=148,slow=4.3,SNR=23						
QSPA				PcP	PcP	06 01 30.3	+0.8
	comp=Z,4.5nm,0.7s,baz=308,slow=7.1,SNR=4.1						
QSPA	**South Pole Qui**	**47.49**	**180**	*e*P	**P**	**05 59 58.9**	**-0.7**
	comp=Z,33nm,1.0s,mb5.2						
QSPA				LR	LR		
	comp=Z,927nm,20.0s,MS4.8						
MAIT	**Maitri**	**48.39**	**154**	*e*P	**P**	**06 00 07.4**	**+0.8**
JTS	**JuntasAbangare**	**54.07**	**344**	LR	LR	06 18 35.5	
	comp=Z,482nm,21.4s,MS4.5,baz=153,slow=30						
JTS	**JuntasAbangare**	**54.07**	**344**	*e*P	**P**	**06 00 50.0**	**+0.3**
	comp=Z,84nm,1.7s,mb5.4						
JTS				*e*		06 01 24.6	
SBA	**Scott Base**	**54.51**	**193**	*e*P	**P**	**06 00 53.4**	**+1.1**
	comp=Z,8.9nm,1.0s,mb4.8						
GRGR	**Grenville**	**55.46**	**13**	*e*P	**P**	**06 00 59.3**	**-0.6**
	comp=Z,84nm,1.0s,mb5.7						
FDF	**Fort de France**	**58.09**	**13**	*e*P	**P**	**06 01 14.0**	**-4.5**
	comp=Z,52nm,1.1s,mb5.5						
TGUH	**Tegucigalpa,Un**	**58.21**	**343**	*e*P	**P**	**06 01 17.0**	**-2.3**
	comp=Z,167nm,1.8s,mb5.8						
ICM	**Isla Caja Muer**	**60.57**	**6**	*e*P	**P**	**06 01 33.5**	**-2.1**
CRPR	**Cabo Rojo, PR**	**60.63**	**6**	*e*P	**P**	**06 01 34.2**	**-1.8**
	comp=Z,24nm,1.1s,mb5.2						
OBIP	**Obispado Ponce**	**60.71**	**6**	*e*P	**P**	**06 01 35.5**	**-1.1**
	comp=Z,71nm,1.1s,mb5.7						
CELP	**Cerrillos**	**60.74**	**6**	*e*P	**P**	**06 01 35.1**	**-1.7**
SJG	**San Juan**	**60.81**	**7**	*e*P	**P**	**06 01 35.3**	**-2.0**
	comp=Z,209nm,1.6s,mb6.0						
MPR	**Mayaguez**	**60.84**	**5**	*e*P	**P**	**06 01 38.3**	**+0.9**
MTP	**Monte Pirata**	**60.85**	**7**	*e*P	**P**	**06 01 34.2**	**-3.3**
	comp=Z,35nm,1.2s,mb5.4						
HUMP	**Col San Antoni**	**60.87**	**7**	*e*P	**P**	**06 01 35.8**	**-1.8**
	comp=Z,35nm,1.2s,mb5.4						
LRS	**Lares**	**60.94**	**6**	*e*P	**P**	**06 01 36.0**	**-2.1**
CBYP	**Canovanas**	**61.00**	**7**	*e*P	**P**	**06 01 35.0**	**-3.5**
	comp=Z,25nm,0.8s,mb5.4						
SDDR	**Presa de Saban**	**61.43**	**1**	*e*P	**P**	**06 01 40.0**	**-1.4**
	comp=Z,27nm,1.3s,mb5.2						
SDDR				*e*		06 02 15.3	
MAW	**Mawson**	**64.85**	**163**	P	**P**	**06 02 02.8**	**-0.8**
	comp=Z,9.3nm,1.1s,mb4.8,baz=194,slow=7.2,SNR=8.6						
MAW				LR	LR	06 28 46.9	
	comp=Z,1μm,20.9s,MS5.1,baz=214,slow=35						
MAW	**Mawson**	**64.85**	**163**	*e*P	**P**	**06 02 04.5**	**+0.9**
	comp=Z,4.9nm,1.3s,mb4.4						
BOSA	**Boshof**	**76.20**	**116**	P	**P**	**06 03 11.8**	**-1.7**
	comp=Z,2.5nm,0.9s,mb4.1,baz=235,slow=11,SNR=3.0						
BOSA				LR	LR	06 31 09.3	
	comp=Z,584nm,20.8s,MS4.9,baz=225,slow=31						
BOSA	**Boshof**	**76.20**	**116**	P	**P**	**06 03 12.1**	**-1.5**
	comp=Z,4.8nm,0.8s,mb4.5						
VBMS	**Vicksburg**	**76.48**	**344**	*e*P	**P**	**06 03 13.3**	**-1.4**
	comp=Z,71nm,1.3s,mb5.4						
GOGA	**Godfrey**	**76.50**	**350**	*e*P	**P**	**06 03 14.0**	**-0.9**
	comp=Z,78nm,1.8s,mb5.3						
LRAL	**Lakeview Retre**	**76.64**	**347**	*e*P	**P**	**06 03 14.1**	**-1.5**
	comp=Z,14nm,0.8s,mb5.0						
LRAL				LR	LR		
	comp=Z,312nm,21.0s,MS4.6						
NATX	**Nacogdoches**	**76.97**	**340**	*e*P	**P**	**06 03 18.2**	**+0.6**
	comp=Z,80nm,1.5s,mb5.4						
NATX				*e*		06 03 52.4	
JSC	**Jenkinsville**	**77.11**	**352**	*e*P	**P**	**06 03 17.2**	**-1.1**
JCT	**Junction City**	**77.18**	**336**	*e*P	**P**	**06 03 18.4**	**-0.4**
	comp=Z,105nm,1.8s,mb5.5						
628A	**Black Gap, Mar**	**77.24**	**333**	⇑P	**P**	**06 03 17.5**	**-1.6**
	baz=78,SNR=20						
TXAR	**Lajitas Array**	**77.37**	**332**	P	**P**	**06 03 19.4**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=152,slow=8.2,SNR=22						
TXAR				LR	LR	06 31 51.5	
	comp=Z,718nm,19.6s,MS5.0,baz=15,slow=31						
627A	**Terlingua Ranc**	**77.38**	**332**	⇓P	**P**	**06 03 18.8**	**-1.1**
	baz=78,SNR=10.0						
626A	**Big Bend Ranch**	**77.73**	**332**	⇑P	**P**	**06 03 20.9**	**-0.9**
	baz=78,SNR=11						
LIC	**Lamto**	**77.78**	**70**	*e*PKP1	**P**	**06 03 24.0**	**+1.4**
	comp=Z,34nm,0.9s,mb5.3						
528A	**Cox Ranch, San**	**77.83**	**333**	⇑P	**P**	**06 03 21.1**	**-1.3**
	baz=78,SNR=11						
KIC	**Kosan Boka**	**78.08**	**70**	*e*PKP1	**P**	**06 03 24.4**	**+0.2**
	comp=Z,21nm,1.1s,mb5.0						
TIC	**Toumodi**	**78.09**	**69**	*e*PKP1	**P**	**06 03 25.1**	**+0.8**
	comp=Z,12nm,0.7s,mb4.9						
527A	**Woodward Ranch**	**78.09**	**332**	⇑P	**P**	**06 03 22.4**	**-1.5**
	baz=78,SNR=17						
526A	**Mary Lane Ranc**	**78.18**	**332**	⇑P	**P**	**06 03 23.9**	**-0.5**
	baz=78,SNR=19						
DBIC	**Dimbokro**	**78.22**	**69**	P	**P**	**06 03 24.5**	**-0.5**
	comp=Z,7.0nm,0.8s,mb4.6,baz=194,slow=8.7,SNR=6.3						
DBIC				LR	LR	06 32 44.1	
	comp=Z,371nm,18.7s,MS4.7,baz=246,slow=32						
DBIC	**Dimbokro**	**78.22**	**69**	P	**P**	**06 03 24.5**	**-0.5**
DBIC				LR	LR	06 32 44.1	
428A	**Kincaid Ranch,**	**78.31**	**333**	⇓P	**P**	**06 03 24.4**	**-0.7**
	baz=79,SNR=6.9						
SWET	**Sewanee**	**78.61**	**349**	*e*P	**P**	**06 03 25.3**	**-1.3**
CPCT	**Cooper Cave**	**78.64**	**350**	*e*P	**P**	**06 03 25.8**	**-1.0**
427A	**Hayter Ranch,**	**78.67**	**333**	⇑P	**P**	**06 03 26.4**	**-0.7**
	baz=79,SNR=5.3						
426A	**McDonald Obser**	**78.71**	**332**	⇓P	**P**	**06 03 26.6**	**-0.6**
	baz=79,SNR=6.6						
PLAL	**Pickwick Lake**	**78.72**	**347**	*e*P	**P**	**06 03 25.6**	**-1.6**
	comp=Z,68nm,1.9s,mb5.2						
PLAL				*e*		06 04 04.9	
LBTB	**Lobatse**	**78.81**	**114**	P	**P**	**06 03 27.2**	**-0.9**
	comp=Z,3.7nm,1.0s,mb4.3						
328A	**Wristen Ranch,**	**78.96**	**334**	⇓P	**P**	**06 03 27.9**	**-0.7**
	baz=79,SNR=7.1						
425A	**Indio Mountain**	**79.15**	**332**	⇑P	**P**	**06 03 29.3**	**-0.4**
	baz=79,SNR=7.9						
326A	**Caldwell Ranch**	**79.29**	**333**	⇑P	**P**	**06 03 30.1**	**-0.3**
	baz=80,SNR=6.8						
TZTN	**Tazewell**	**79.60**	**351**	*e*P	**P**	**06 03 30.6**	**-1.4**
	comp=Z,31nm,1.5s,mb5.0						
325A	**Bean Ranch, Si**	**79.68**	**332**	⇓P	**P**	**06 03 31.8**	**-0.8**
	baz=80,SNR=8.2						
227A	**Bennet, Jal**	**79.70**	**333**	⇑P	**P**	**06 03 32.2**	**-0.5**
	baz=80						
WVT	**Waverly**	**79.80**	**347**	*e*P	**P**	**06 03 31.4**	**-1.7**
	comp=Z,84nm,1.9s,mb5.3						
WVT				LR	LR		
	comp=Z,373nm,22.0s,MS4.7						
324A	**Moseley Ranch,**	**79.92**	**332**	⇓P	**P**	**06 03 33.1**	**-0.8**
	baz=80,SNR=7.8						
MNTX	**Cornudas Mount**	**80.12**	**332**	*e*P	**P**	**06 03 33.3**	**-1.6**
	comp=Z,7.0nm,1.1s,mb4.5						
MNTX				LR	LR		
	comp=Z,580nm,22.0s,MS4.9						
JSRW	**J. Sargeant Re**	**80.24**	**355**	*e*P	**P**	**06 03 35.4**	**0.0**
127A	**Arkansas Junct**	**80.33**	**334**	⇓P	**P**	**06 03 35.8**	**-0.3**
	baz=81						
224A	**Corundas Mount**	**80.51**	**332**	⇑P	**P**	**06 03 36.6**	**-0.4**
	baz=81,SNR=7.2						
126A	**Clayton Basin,**	**80.52**	**333**	⇑P	**P**	**06 03 37.1**	**0.0**
	baz=81						
125A	**Gardner Draw,**	**80.75**	**333**	⇓P	**P**	**06 03 37.9**	**-0.4**
	baz=81,SNR=6.8						
WMOK	**Wichita Mounta**	**80.87**	**338**	*e*P	**P**	**06 03 37.8**	**-1.1**
	comp=Z,82nm,1.9s,mb5.3						
Z27A	**Tatum**	**80.87**	**334**	⇓P	**P**	**06 03 37.9**	**-1.0**
	baz=81						
320A	**Kipp Ranch, An**	**80.94**	**329**	⇓P	**P**	**06 03 39.4**	**0.0**
	baz=81						
124A	**Stringfield Ra**	**81.06**	**332**	⇑P	**P**	**06 03 39.3**	**-0.6**
	baz=81,SNR=11						
Z26A	**Caprock**	**81.08**	**333**	⇑P	**P**	**06 03 39.6**	**-0.4**
	baz=81,SNR=6.7						
222A	**Williams Famil**	**81.10**	**331**	⇑P	**P**	**06 03 39.9**	**-0.3**
	baz=81						
319A	**Douglas**	**81.26**	**329**	⇓P	**P**	**06 03 41.0**	**-0.1**
	baz=82						
MSTX	**Muleshoe**	**81.33**	**335**	⇓P	**P**	**06 03 40.8**	**-0.6**
	baz=82,SNR=11						
Y27A	**Causey**	**81.38**	**334**	⇓P	**P**	**06 03 41.0**	**-0.6**
	baz=82						
220A	**Playas Peak, P**	**81.44**	**329**	⇑P	**P**	**06 03 42.0**	**0.0**
	baz=82						
USIN	**University of**	**81.57**	**348**	*e*P	**P**	**06 03 40.1**	**-2.4**
	comp=Z,25nm,0.4s,mb5.5						
SIUC	**Southern Illin**	**81.58**	**346**	*e*P	**P**	**06 03 41.7**	**-0.9**
	comp=Z,10.0nm,0.4s,mb5.1						
318A	**Bisbee**	**81.59**	**328**	⇑P	**P**	**06 03 42.7**	**-0.1**
	baz=82						
Y26A	**Elida**	**81.63**	**334**	⇑P	**P**	**06 03 42.6**	**-0.3**
	baz=82						
121A	**Cookes Peak, D**	**81.73**	**330**	⇓P	**P**	**06 03 43.3**	**-0.2**
	baz=82						
219A	**White Tail Can**	**81.81**	**329**	⇑P	**P**	**06 03 43.8**	**-0.1**
	baz=82						
Y25A	**Mesa, Roswell**	**81.91**	**333**	⇓P	**P**	**06 03 44.0**	**-0.4**
	baz=82						
FVM	**French Village**	**82.06**	**346**	*e*P	**P**	**06 03 43.9**	**-1.2**
	comp=Z,74nm,1.7s,mb5.3						
120A	**U Bar Ranch, L**	**82.06**	**330**	⇑P	**P**	**06 03 45.2**	**0.0**
	baz=82,SNR=5.6						
218A	**Dragoon**	**82.09**	**328**	⇓P	**P**	**06 03 46.0**	**+0.6**
	baz=82						
Z22A	**Elephant Butte**	**82.09**	**331**	⇓P	**P**	**06 03 45.5**	**+0.1**
	baz=82						
Y24A	**Capitan**	**82.17**	**333**	⇓P	**P**	**06 03 46.0**	**+0.2**
	baz=82,SNR=7.1						
X26A	**CR and CF Fran**	**82.20**	**334**	⇓P	**P**	**06 03 46.4**	**+0.5**
	baz=82						
217A	**Green Valley**	**82.21**	**328**	⇑P	**P**	**06 03 46.0**	**-0.1**
	baz=82						
CCM	**Cathedral Cave**	**82.28**	**345**	*e*P	**P**	**06 03 44.5**	**-1.8**
	comp=Z,15nm,0.8s,mb5.0						
Y23A	**Lovelace Mesa,**	**82.38**	**332**	⇑P	**P**	**06 03 47.1**	**+0.2**
	baz=83,SNR=10						
Z21A	**St. Cloud Mine**	**82.39**	**331**	⇑P	**P**	**06 03 47.4**	**+0.4**
	baz=83						
MVL	**Millersville**	**82.46**	**357**	*e*P	**P**	**06 03 47.7**	**+0.6**
	comp=Z,45nm,1.8s,mb5.1						
Z20A	**Nine Sixteen R**	**82.55**	**330**	⇓P	**P**	**06 03 48.5**	**+0.7**
	baz=83,SNR=12						
BLO	**Bloomington**	**82.58**	**349**	*e*P	**P**	**06 03 46.7**	**-1.1**
	comp=Z,35nm,1.3s,mb5.2						
118A	**Homack Ranch,**	**82.65**	**329**	⇑P	**P**	**06 03 48.8**	**+0.5**
	baz=83,SNR=9.0						
216A	**Three Points,**	**82.67**	**327**	⇑P	**P**	**06 03 48.7**	**+0.3**
	baz=83						
TUC	**Tucson**	**82.67**	**328**	*e*P	**P**	**06 03 49.2**	**+0.8**
	comp=Z,16nm,1.4s,mb4.9						
Y22A	**Socorro**	**82.70**	**331**	⇑P	**P**	**06 03 48.4**	**-0.1**
	baz=83,SNR=6.5						
BNM	**Barren Site**	**82.78**	**332**	*e*P	**P**	**06 03 49.0**	**0.0**
	comp=Z,6.5nm,1.0s,mb4.6						
117A	**Oracle**	**82.89**	**328**	⇓P	**P**	**06 03 50.2**	**+0.6**
	baz=83						
LENM	**Lemitar**	**82.91**	**332**	*e*P	**P**	**06 03 50.4**	**+0.8**
LPM	**Los Pinos Moun**	**82.93**	**332**	*e*P	**P**	**06 03 51.0**	**+1.3**
Y21A	**Point of Rocks**	**83.02**	**331**	⇓P	**P**	**06 03 50.7**	**+0.5**
	baz=83,SNR=15						
W25A	**X Bar L Ranch,**	**83.02**	**334**	⇑P	**P**	**06 03 50.1**	**-0.1**
	baz=83,SNR=18						
SSPA	**Standing Stone**	**83.17**	**356**	*e*P	**P**	**06 03 50.4**	**-0.4**
	comp=Z,15nm,1.2s,mb4.9						
214A	**Organ Pipe Nat**	**83.18**	**326**	⇓P	**P**	**06 03 51.8**	**+0.8**
	baz=83						
ACSO	**Alum Creek Sta**	**83.18**	**352**	*e*P	**P**	**06 03 49.8**	**-1.1**
	comp=Z,90nm,1.9s,mb5.5						
Y20A	**Horse Springs,**	**83.18**	**330**	⇑P	**P**	**06 03 51.6**	**+0.5**
	baz=83,SNR=7.0						
LAZ	**Ladron**	**83.19**	**331**	*e*P	**P**	**06 03 51.6**	**+0.5**
	comp=Z,32nm,1.7s,mb5.1						
Z17A	**San Carlos Hig**	**83.42**	**328**	⇓P	**P**	**06 03 52.7**	**+0.4**
	baz=84						
ANMO	**Albuquerque**	**83.44**	**332**	*e*P	**P**	**06 03 52.1**	**-0.3**
	comp=Z,38nm,1.5s,mb5.2						
ANMO				LR	LR		
	comp=Z,654nm,21.0s,MS5.0						
X21A	**Alamocita Cree**	**83.45**	**331**	⇓P	**P**	**06 03 53.3**	**+0.8**
	baz=84,SNR=18						
Y19A	**Nutrioso**	**83.55**	**330**	⇑P	**P**	**06 03 54.1**	**+1.1**
	baz=84,SNR=20						
115A	**Sonoran Desert**	**83.59**	**327**	⇑P	**P**	**06 03 54.3**	**+1.1**
	baz=84						
Y18A	**Canyon Day Jun**	**83.68**	**329**	⇑P	**P**	**06 03 54.0**	**+0.4**
	baz=84,SNR=6.1						
W22A	**Albuquerque**	**83.70**	**332**	⇑P	**P**	**06 03 54.6**	**+0.9**
	baz=84						
X20A	**Quemado**	**83.80**	**331**	⇓P	**P**	**06 03 55.0**	**+0.8**
	baz=84,SNR=9.9						
Y17A	**Roosevelt**	**83.92**	**328**	⇑P	**P**	**06 03 55.4**	**+0.5**
	baz=84,SNR=8.4						
X19A	**St. Johns**	**83.98**	**330**	⇑P	**P**	**06 03 55.4**	**+0.2**
	baz=84						
113A	**Mohawk Valley,**	**84.28**	**326**	⇑P	**P**	**06 03 57.4**	**+0.7**
	baz=84						
W20A	**Ramah**	**84.32**	**331**	⇑P	**P**	**06 03 57.3**	**+0.4**
	baz=85,SNR=8.2						
X18A	**Snowflake**	**84.32**	**329**	⇓P	**P**	**06 03 57.8**	**+1.0**
	baz=85,SNR=5.8						
Y16A	**Circle Bar Ran**	**84.33**	**328**	⇑P	**P**	**06 03 57.8**	**+0.9**
	baz=85,SNR=5.6						
HDIL	**Hopedale**	**84.36**	**347**	*e*P	**P**	**06 03 55.5**	**-1.4**
	comp=Z,22nm,0.9s,mb5.3						
HDIL				LR	LR		
	comp=Z,272nm,20.0s,MS4.6						
KSU1	**Kansas State U**	**84.44**	**341**	*e*P	**P**	**06 03 56.5**	**-0.9**
	comp=Z,11nm,0.6s,mb5.2						
Z14A	**Wintersburg**	**84.46**	**327**	⇓P	**P**	**06 03 58.4**	**+0.8**
	baz=85						
X17A	**Forest Lakes**	**84.47**	**329**	⇑P	**P**	**06 03 58.8**	**+1.1**
	baz=85,SNR=8.1						
Z13A	**Yuma Proving G**	**84.61**	**326**	⇑P	**P**	**06 03 59.1**	**+0.7**
	baz=85						
V21A	**Milan**	**84.63**	**332**	⇓P	**P**	**06 03 59.3**	**+0.9**
	baz=85						
W19A	**Sanders**	**84.63**	**330**	⇓P	**P**	**06 03 59.1**	**+0.7**
	baz=85						
X16A	**Lo Mia Camp, P**	**84.79**	**328**	⇑P	**P**	**06 04 00.2**	**+1.0**
	baz=85,SNR=6.3						
V20A	**Brimhall**	**84.91**	**331**	⇑P	**P**	**06 03 60.0**	**+0.1**
	baz=85,SNR=6.5						
CBKS	**Cedar Bluff**	**84.96**	**339**	*e*P	**P**	**06 04 00.1**	**+0.1**
	comp=Z,88nm,1.5s,mb5.7						
GLA	**Glamis**	**84.97**	**325**	⇑P	**P**	**06 04 01.0**	**+0.8**
	baz=85						
GLA	**Glamis**	**84.97**	**325**	*e*P	**P**	**06 04 01.4**	**+1.2**
	comp=Z,37nm,1.4s,mb5.3						
Y14A	**Wickenburg**	**84.98**	**327**	⇑P	**P**	**06 04 00.8**	**+0.5**
	baz=85,SNR=6.0						
V19A	**Window Rock**	**85.04**	**331**	⇓P	**P**	**06 04 00.4**	**-0.1**
	baz=85						
X15A	**Humboldt**	**85.16**	**328**	⇓P	**P**	**06 04 01.6**	**+0.5**
	baz=85,SNR=13						
Y13A	**Salome**	**85.21**	**326**	⇓P	**P**	**06 04 02.2**	**+0.8**
	baz=86,SNR=6.0						
SWSC	**Sam W. Stewart**	**85.28**	**324**	⇓P	**P**	**06 04 01.9**	**+0.1**
	baz=86						
V18A	**Ganado**	**85.36**	**330**	⇓P	**P**	**06 04 02.8**	**+0.7**
	baz=86,SNR=5.9						
X14A	**Yava**	**85.40**	**327**	⇓P	**P**	**06 04 03.1**	**+0.7**
	baz=86,SNR=6.5						
W16A	**Flagstaff**	**85.42**	**329**	⇓P	**P**	**06 04 03.0**	**+0.6**
	baz=86						
Y12C	**Blythe**	**85.44**	**326**	⇑P	**P**	**06 04 03.1**	**+0.5**
	baz=86						
U20A	**Newcomb**	**85.45**	**331**	⇑P	**P**	**06 04 02.7**	**+0.2**
	baz=86						
T22A	**Edith**	**85.47**	**333**	⇑P	**P**	**06 04 03.2**	**+0.7**
	baz=86,SNR=19						
MONP	**Monument Peak**	**85.51**	**324**	⇑P	**P**	**06 04 03.5**	**+0.6**
	baz=86						
V17A	**Tonalea, Kykot**	**85.61**	**329**	⇓P	**P**	**06 04 03.7**	**+0.4**
	baz=86,SNR=12						
U19A	**Dine' College,**	**85.62**	**331**	⇓P	**P**	**06 04 03.5**	**+0.1**
	baz=86,SNR=9.1						
SDCO	**Great Sand Dun**	**85.67**	**334**	*e*P	**P**	**06 04 03.0**	**-0.6**
	comp=Z,11nm,1.4s,mb4.9						
WUAZ	**Wupatki**	**85.73**	**329**	⇓P	**P**	**06 04 04.5**	**+0.6**
	baz=86,SNR=9.2						
WUAZ	**Wupatki**	**85.73**	**329**	*e*P	**P**	**06 04 05.0**	**+1.0**
	comp=Z,40nm,1.4s,mb5.5						
WUAZ				LR	LR		
	comp=Z,542nm,21.0s,MS4.9						
BC3	**Big Chuckw Mtn**	**85.75**	**325**	⇓P	**P**	**06 04 04.0**	**-0.1**
	baz=86					

T15A **Red Dirt Ranch** 87.44 329 ⇑P P 06 04 12.8 +0.6
baz=88
SMCO **Snowmass** 87.45 334 eP P 06 04 13.2 +0.9
comp=Z,20nm,1.3s,mb5.2
TUQ **Turquoise Moun** 87.48 326 ⇓P P 06 04 12.9 +0.4
baz=88,SNR=7.5
U13A **Pakoon Wash** 87.53 327 ⇑P P 06 04 13.4 +0.7
baz=88
ISCO **Idaho Springs** 87.58 335 eP P 06 04 13.1 +0.2
comp=Z,14nm,1.4s,mb5.0
Q20A **Ridgley Place,** 87.69 333 ⇑P P 06 04 13.8 +0.4
baz=88,SNR=7.5
GSC **Goldstone** 87.73 325 ⇑P P 06 04 14.3 +0.5
baz=88,SNR=5.5
GSC **Goldstone** 87.73 325 eP P 06 04 14.4 +0.7
comp=Z,99nm,2.1s,mb5.7
R18A **Canyonlands Na** 87.73 331 ⇑P P 06 04 14.0 +0.3
baz=88,SNR=7.8
T14A **Hurricane** 87.75 328 ⇓P P 06 04 13.9 +0.2
baz=88,SNR=7.6
EDW2 **Edwards Air Fo** 87.88 324 ⇓P P 06 04 15.0 +0.6
baz=88
P21A **Newcastle** 87.92 333 ⇓P P 06 04 15.0 +0.5
baz=88
S15A **Panguitch** 88.01 329 ⇑P P 06 04 15.0 0.0
baz=88,SNR=5.9
T13A **Saint George** 88.03 328 ⇑P P 06 04 15.4 +0.3
baz=88
R17A **Hanksville Air** 88.05 331 ⇓P P 06 04 14.8 -0.4
baz=88,SNR=13
SHPR **Sheep Range** 88.08 327 eP P 06 04 16.7 +1.4
P20A **De Beque** 88.21 333 ⇑P P 06 04 16.0 +0.1
baz=88,SNR=15
R16A **Teasdale** 88.22 330 ⇓P P 06 04 16.2 +0.2
baz=88
LRMC **Laurel Mountai** 88.26 324 ⇓P P 06 04 16.7 +0.5
baz=88,SNR=8.4
S14A **Cedar City** 88.39 329 ⇓P P 06 04 17.0 +0.3
baz=89
Q18A **Rafter H Ranch** 88.45 331 ⇑P P 06 04 17.1 +0.1
baz=89,SNR=11
U10A **Ash Meadows, A** 88.49 326 ⇓P P 06 04 18.0 +0.7
baz=89
S13A **Holt Ranch, En** 88.50 328 ⇓P P 06 04 17.8 +0.5
baz=89,SNR=11
ARUT **Antelope Range** 88.52 328 eP P 06 04 18.0 +0.6
comp=Z,48nm,1.8s,mb5.5
ARUT e 06 05 11.3
P19A **Cripple Cowboy** 88.53 332 ⇓P P 06 04 17.5 +0.1
baz=89,SNR=19
SRU **San Rafael** 88.60 331 ⇓P P 06 04 18.0 +0.3
baz=89,SNR=6.4
SRU **San Rafael** 88.60 331 eP P 06 04 17.3 -0.4
comp=Z,6.5nm,0.7s,mb5.1
Q16A **Castle Valley** 88.66 331 ⇑P P 06 04 18.7 +0.7
baz=89,SNR=8.0
MPMC **Manual Prospec** 88.67 325 ⇓P P 06 04 18.9 +0.8
baz=89,SNR=7.2
MSU **Marysvale** 88.67 330 eP P 06 04 18.8 +0.7
O20A **White River Ci** 88.73 333 ⇑P P 06 04 18.3 0.0
baz=89
T11A **Corn Creek, Al** 88.74 327 ⇓P P 06 04 19.4 +0.9
baz=89,SNR=9.5
FURC **Furnace Creek,** 88.75 325 ⇑P P 06 04 19.3 +0.7
baz=89,SNR=6.5
ISA **Isabella** 88.75 324 ⇓P P 06 04 19.7 +1.2
baz=89,SNR=8.7
ISA **Isabella** 88.75 324 eP P 06 04 19.5 +1.0
comp=Z,32nm,1.3s,mb5.5
N22A **Wattenberg Ran** 88.76 335 ⇑P P 06 04 18.6 +0.2
baz=89
R14A **James Farms, M** 88.80 329 ⇓P P 06 04 19.0 +0.3
baz=89
ECSD **EROS Data Cent** 88.85 343 eP P 06 04 17.6 -1.2
comp=Z,19nm,1.0s,mb5.4
S12A **Delamar Landin** 88.91 327 ⇑P P 06 04 20.2 +0.9
baz=89,SNR=6.0
P17A **Butcher Ranch,** 89.00 331 ⇑P P 06 04 19.5 -0.1
baz=89
N21A **Black Mountain** 89.06 334 ⇓P P 06 04 20.3 +0.5
baz=89
R13A **O'Grain Ranch,** 89.06 328 ⇑P P 06 04 20.7 +0.8
baz=89,SNR=6.2
SMMC **Simmler** 89.13 323 ⇑P P 06 04 20.8 +0.5
baz=89
VES **Vestal, Richgr** 89.17 324 ⇓P P 06 04 20.9 +0.4
baz=89,SNR=9.8
O19A **Miners Draw (B** 89.17 333 ⇓P P 06 04 20.5 +0.1
baz=90
Q15A **Fillmore** 89.18 330 ⇑P P 06 04 21.0 +0.6
baz=89,SNR=7.5
S11A **Rachel** 89.30 327 ⇑P P 06 04 22.0 +0.9
baz=90
N20A **Spence Gulch,** 89.37 333 ⇓P P 06 04 21.5 +0.2
baz=90
GRAC **Grapevine Rang** 89.42 325 ⇑P P 06 04 22.2 +0.6
baz=90
R12A **Pony Springs,** 89.44 328 ⇑P P 06 04 22.6 +0.9
baz=90,SNR=8.0
O18A **Roosevelt** 89.45 332 ⇓P P 06 04 22.3 +0.6
baz=90,SNR=8.4
Q14A **Sevier Lake (B** 89.50 329 ⇓P P 06 04 22.8 +0.9
baz=90,SNR=7.8
RCTC **Rector, Farmer** 89.63 324 ⇑P P 06 04 23.3 +0.6
baz=90
O17A **Robinson Place** 89.64 331 ⇓P P 06 04 22.8 +0.2
baz=90
P15A **Leamington** 89.64 330 ⇓P P 06 04 22.8 +0.2
baz=90
N19A **John Jarvie Ra** 89.72 333 ⇑P P 06 04 23.0 0.0
baz=90
Q13A **Wheeler Ranch,** 89.76 329 ⇑P P 06 04 23.9 +0.8
baz=90,SNR=6.3
M21A **Separation Pea** 89.77 334 ⇑P P 06 04 22.7 -0.4
baz=90
MPU **Maple Canyon** 89.80 331 eP P 06 04 22.8 -0.5
comp=Z,22nm,1.4s,mb5.3
R11A **Troy Canyon, C** 89.84 327 ⇑P P 06 04 24.0 +0.4
baz=90,SNR=5.6
S10A **Tonopah Range,** 89.88 326 ⇓P P 06 04 24.0 +0.2
baz=90
NLU **North Lily Min** 89.91 330 eP P 06 04 24.4 +0.5
comp=Z,6.9nm,0.9s,mb5.0
O16A **Springville** 89.92 331 ⇓P P 06 04 23.6 -0.3
baz=90
M20A **Sweetwater, Wa** 89.93 334 ⇓P P 06 04 23.6 -0.3
baz=90
P14A **Drum Mountains** 89.95 330 ⇑P P 06 04 24.2 +0.1
baz=90,SNR=14
L21A **Rawlins** 90.10 335 ⇓P P 06 04 24.2 -0.4
baz=90
P13A **Bates Ranch, G** 90.19 329 ⇓P P 06 04 25.5 +0.4
baz=90,SNR=7.6
M19A **Rock Springs** 90.27 333 ⇓P P 06 04 25.3 -0.1
baz=90
N17A **Moffit Pass** 90.34 332 ⇓P P 06 04 25.7 -0.1
baz=91
DUG **Dugway** 90.39 330 ⇑P P 06 04 25.9 -0.2
baz=91,SNR=6.3
L20A **Wamsutter** 90.45 334 ⇑P P 06 04 25.6 -0.7
baz=91
N16A **Rees Ranch, Co** 90.50 331 ⇓P P 06 04 26.2 -0.3
baz=91
M17A **Scullys Gap (B** 90.75 332 ⇓P P 06 04 27.1 -0.6
baz=91
L19A **Farson** 90.87 333 ⇑P P 06 04 28.1 -0.2
baz=91
L18A **Fontenelle, Gr** 90.94 333 ⇑P P 06 04 28.1 -0.5
baz=91
M16A **Huntsville** 90.94 331 ⇓P P 06 04 27.9 -0.7
baz=91
NVAR **Mina Array Bea** 91.02 326 P P 06 04 29.4 +0.3
comp=Z,0.9nm,0.7s,mb4.2,baz=153,slow=3.7,SNR=8.5
K20A **Yellowstone Ra** 91.03 334 ⇑P P 06 04 28.5 -0.6
baz=91
N14A **Grayback Hills** 91.10 330 ⇑P P 06 04 28.8 -0.5
baz=91
HWUT **Hardware Ranch** 91.18 332 eP P 06 04 28.9 -0.8
comp=Z,39nm,1.4s,mb5.5
HWUT LR LR
comp=Z,568nm,19.0s,MS5.0
P10A **Eureka** 91.28 327 ⇑P P 06 04 29.7 -0.6
baz=92
K19A **Absolon Red Bu** 91.35 334 ⇑P P 06 04 29.8 -0.7
baz=92
M15A **Larsen Ranch,** 91.37 331 ⇓P P 06 04 30.1 -0.4
baz=92
L17A **Cokeville** 91.38 332 ⇑P P 06 04 29.9 -0.7
baz=92
O11A **Cowboy Ranch,** 91.41 328 ⇓P P 06 04 30.5 -0.4
baz=92
BW06 **Boulder Array** 91.53 333 ⇓P P 06 04 30.5 -0.8
baz=92
BW06 **Boulder Array** 91.53 333 eP P 06 04 30.2 -1.1
comp=Z,21nm,1.4s,mb5.3
BW06 LR LR
comp=Z,664nm,19.0s,MS5.1
PDAR **Pinedale Array** 91.53 333 P P 06 04 30.1 -1.2
comp=Z,3.5nm,0.7s,mb4.8,baz=143,slow=4.2,SNR=23
PDAR LR LR 06 40 56.5
comp=Z,478nm,19.5s,MS5.0,baz=142,slow=32
PDAR **Pinedale Array** 91.53 333 P P 06 04 30.1 -1.2
PDAR LR LR 06 40 56.5
WAKR **Walker** 91.56 325 eP P 06 04 34.2 +2.6
K18A **Toltan Ranch,** 91.57 333 ⇑P P 06 04 31.2 -0.3
baz=92
M14A **Sheep Mountain** 91.72 330 ⇑P P 06 04 31.8 -0.4
baz=92
L15A **Malad City** 91.82 331 ⇑P P 06 04 32.2 -0.5
baz=92
M13A **Montello** 91.90 330 ⇑P P 06 04 32.5 -0.5
baz=92
AHID **Auburn Hatcher** 92.04 332 eP P 06 04 33.9 +0.2
J18A **Kendall Valley** 92.08 333 ⇑P P 06 04 32.9 -0.9
baz=92
L14A **Malta** 92.15 331 ⇓P P 06 04 33.3 -0.9
baz=92
M12A **Wells** 92.23 329 ⇑P P 06 04 34.3 -0.3
baz=92
K16A **Soda Springs** 92.27 332 ⇑P P 06 04 34.5 -0.2
baz=92
WCN **Washoe City** 92.36 325 ⇓P P 06 04 35.1 -0.1
baz=93
J17A **Brown Place, J** 92.44 333 ⇑P P 06 04 35.1 -0.4
baz=93
I18A **Diamond G Ranc** 92.45 334 ⇓P P 06 04 35.2 -0.3
baz=93
L13A **Double Diamond** 92.45 330 ⇓P P 06 04 35.7 +0.1
baz=93
REDW **Red Top Meadow** 92.49 333 eP P 06 04 35.6 -0.1
comp=Z,3.4nm,0.7s,mb4.8
SNOW **Snow King Moun** 92.55 333 eP P 06 04 35.1 -0.9
comp=Z,11nm,1.3s,mb5.1
K14A **Jones Ranch, D** 92.58 331 ⇑P P 06 04 36.0 -0.2
baz=93
M11A **Holland Ranch,** 92.58 329 ⇑P P 06 04 36.4 +0.2
baz=93
LOHW **Long Hollow** 92.63 333 eP P 06 04 35.4 -1.0
comp=Z,9.1nm,1.3s,mb5.0
RRI2 **Red Ridge** 92.63 333 eP P 06 04 37.3 +0.9
comp=Z,8.3nm,1.1s,mb5.1
TPAW **Teton Pass** 92.64 333 eP P 06 04 35.8 -0.6
comp=Z,4.7nm,0.9s,mb4.9
J16A **Bone** 92.67 332 ⇑P P 06 04 35.9 -0.6
baz=93
DCID1 **Drake Creek** 92.81 333 eP P 06 04 37.6 +0.4
comp=Z,13nm,1.0s,mb5.3
I17A **Pilgrim Ck.** 92.89 333 ⇓P P 06 04 37.5 0.0
baz=93
IMW **Indian Meadow** 92.99 333 eP P 06 04 38.4 +0.3
comp=Z,15nm,1.4s,mb5.2
K13A **Stover Farm, H** 92.99 330 ⇑P P 06 04 38.1 +0.1
baz=93
J15A **Blackfoot** 93.06 332 ⇓P P 06 04 38.5 +0.1
baz=93
I16A **Newdale** 93.16 333 ⇓P P 06 04 38.5 -0.3
baz=93
L11A **Cat Creek Ranc** 93.19 329 ⇓P P 06 04 39.0 0.0
baz=94
K12A **Draper Farm, C** 93.28 330 ⇑P P 06 04 39.6 +0.2
baz=94
J14A **Carey** 93.38 331 ⇓P P 06 04 39.7 -0.1
baz=94
L10A **Juniper Basin** 93.39 329 ⇑P P 06 04 39.8 -0.1
baz=94
J13A **Cove Ranch, Pi** 93.68 331 ⇓P P 06 04 41.1 -0.1
baz=94
YMR **Madison River** 93.69 333 eP P 06 04 41.5 +0.3
comp=Z,12nm,1.1s,mb5.3
G18A **Lazy EL Ranch,** 93.81 335 ⇑P P 06 04 41.6 -0.2
baz=94
H16A **Russell Place,** 93.81 333 ⇑P P 06 04 41.5 -0.3
baz=94
I14A **Mackay** 93.88 331 ⇑P P 06 04 42.3 +0.1
baz=94
J12A **Stokes Ranch,** 93.88 330 ⇑P P 06 04 42.2 0.0
baz=94
HLID **Hailey** 93.91 331 ⇓P P 06 04 42.1 -0.2
baz=94
HLID **Hailey** 93.91 331 eP P 06 04 41.3 -0.9
comp=Z,2.4nm,0.9s,mb4.6
QLMT **Earthquake Lak** 93.98 333 eP P 06 04 43.2 +0.6
I13A **Wildhorse Cree** 94.11 331 ⇓P P 06 04 42.7 -0.5
baz=94
H15A **Lima** 94.20 332 ⇓P P 06 04 44.0 +0.3
baz=94
I12A **Atlanta** 94.37 330 ⇑P P 06 04 43.9 -0.5
baz=95
F18A **Big Timber** 94.38 335 ⇑P P 06 04 43.7 -0.7
baz=95
G15A **Dillon** 94.63 333 ⇓P P 06 04 45.6 +0.1
baz=95
F17A **Fitzpatrick Pl** 94.68 334 ⇑P P 06 04 45.7 -0.1
baz=95
H13A **Challis** 94.72 331 ⇑P P 06 04 45.8 -0.1
baz=95
BOZ **Bozeman (W)** 94.77 333 ⇑P P 06 04 45.8 -0.3
baz=95
F16A **Kennard Place,** 94.89 333 ⇑P P 06 04 46.5 -0.2
baz=95
J09A **Fry Pan Ranch,** 94.97 328 ⇓P P 06 04 47.2 +0.1
baz=95
G13A **Cobalt** 95.17 332 ⇓P P 06 04 48.1 +0.1
baz=95
LRM **Limekiln Ridge** 95.20 333 eP P 06 04 49.0 +0.8
F15A **Butte** 95.23 333 ⇓P P 06 04 48.4 +0.2
baz=96
E17A **Martinsdale** 95.24 334 ⇓P P 06 04 48.1 -0.3
baz=96
H11A **Donnelly** 95.47 330 ⇑P P 06 04 49.4 0.0
baz=96
D17A **Six Diamond Ra** 95.80 335 ⇑P P 06 04 50.4 -0.4
baz=96
D16A **Dana Ranch, Ca** 95.97 334 ⇓P P 06 04 51.6 0.0
baz=96
E14A **Clinton** 96.07 333 ⇓P P 06 04 52.5 +0.4
baz=96
C17A **Wharram Farm,** 96.25 335 ⇑P P 06 04 52.7 -0.2
baz=96
I07A **Izee** 96.27 328 ⇑P P 06 04 53.0 -0.1
baz=96
E13A **Victor** 96.33 332 ⇓P P 06 04 53.3 0.0
baz=97
C16A **Fuhringer Ranc** 96.71 334 ⇑P P 06 04 54.6 -0.3
baz=97
SLMT **Seeley Lake** 96.79 333 eP P 06 04 55.9 +0.6
B17A **L&G Farms, Che** 96.84 335 ⇑P P 06 04 55.1 -0.5
baz=97
D13A **Huson** 96.98 332 ⇓P P 06 04 56.5 +0.2
baz=97
SCHQ **Schefferville** 97.32 3 LR LR 06 51 38.8
comp=Z,290nm,18.3s,MS4.8,baz=145,slow=37
A17A **Triple J Farms** 97.39 336 ⇑P P 06 04 57.4 -0.7
baz=98
B15A **Bradely Ranch,** 97.42 334 ⇑P P 06 04 57.4 -0.7
baz=98
STKA **Stephens Creek** 99.52 209 LR LR 06 43 57.5
comp=Z,204nm,19.0s,MS4.7,baz=205,slow=32
YKA **Yellowknife Ar** 110.28 340 PKiKP PKiKP 06 09 55.0 -1.0
comp=Z,0.3nm,0.6s,baz=153,slow=2.2,SNR=11
YKA **Yellowknife Ar** 110.28 340 PKPdf PKiKP 06 09 55.0 -1.0
GERES **GERESS Array B** 118.21 48 PKP PKPdf 06 10 10.9 -0.7
comp=Z,1.0nm,0.6s,baz=215,slow=1.6,SNR=9.1
COLA **College** 122.27 331 ePKPdf PKPdf 06 10 18.3 -0.6
NB2 **NORSAR Subarra** 123.34 35 PKPdf PKPdf 06 10 20.6 -0.5
comp=Z,7.7nm,1.4s,baz=248,slow=1.9
NB2 **NORSAR Subarra** 123.34 35 PKPdf PKPdf 06 10 20.6 -0.5
baz=248,slow=1.9
NB2 **NORSAR Subarra** 123.34 35 PKPdf PKPdf 06 10 20.6 -0.5
NOA **NORSAR Array B** 123.34 35 PKP PKPdf 06 10 20.1 -1.0
comp=Z,1.2nm,0.7s,baz=247,slow=2.3,SNR=4.9
HFS **Hagfors** 123.99 37 PKP PKPdf 06 10 20.1 -2.3
comp=Z,3.1nm,0.7s,baz=191,slow=3.0,SNR=10
AKASG **Malin Array Be** 127.92 52 PKP PKPdf 06 10 29.1 -1.1
comp=Z,1.5nm,0.8s,baz=250,slow=3.5,SNR=5.6
FINES **FINESS Array B** 130.09 38 PKP PKPdf 06 10 33.7 -0.2
comp=Z,0.7nm,0.7s,baz=276,slow=4.9,SNR=3.6
ARCES **ARCESS Array B** 131.90 28 PKP PKPdf 06 10 36.0 -1.2
comp=Z,1.6nm,0.6s,baz=250,slow=3.5,SNR=8.3
AKTK **Aktyubinsk** 145.48 60 PKPbc PKPbc 06 11 02.0 -0.7
AKTO **Aktyubinsk** 145.48 60 PKPbc PKPbc 06 11 02.0 -0.7
comp=Z,14nm,0.9s,baz=241,slow=2.8,SNR=17
PETK **Petropavlovsk-** 145.68 305 PKPbc PKPbc 06 11 03.7 +0.6
comp=Z,6.5nm,1.0s,baz=37,slow=4.1,SNR=4.2
ARU **Arti** 146.04 49 ePKPdf PKPdf 06 11 03.1 -0.2
ABKAR **Akbulak array** 146.57 62 ePKPdf PKPdf 06 11 04.2 -0.3
TIXI **Tiksi** 149.24 347 ePKPdf PKPdf 06 11 07.5 -0.7
BVAR **Borovoye Array** 153.16 54 PKP PKPdf 06 11 14.7 0.0
comp=Z,1.3nm,0.8s,baz=252,slow=3.2,SNR=5.8
BVAR PKPbc PKPbc 06 11 22.8 +0.7
comp=Z,1.4nm,0.6s,baz=323,slow=4.1,SNR=6.6
DDI **Dehra Dun** 153.20 108 ex PKPbc 06 11 26.0 +3.0
CMAR **Chiang Mai Arr** 154.63 160 PKP PKPdf 06 11 15.9 -2.0
comp=Z,1.1nm,0.3s,baz=230,slow=3.9,SNR=4.5
CMAR PKPbc PKPbc 06 11 25.9 -0.5
comp=Z,3.2nm,0.8s,baz=226,slow=3.2,SNR=10
AML **Almayashu** 154.90 80 ePKPdf PKPdf 06 11 18.7 +1.2
AML LR LR
comp=Z,226nm,20.0s,MS5.0
UCH **Uchtor** 155.51 80 ePKPdf PKPdf 06 11 18.7 +0.4
KSH **Kashi** 155.87 87 ePKP PKPdf 06 11 22.9 +4.0
KSH ePKS 06 14 54.4
KSH eSKS SKSdf 06 18 22.8 -2.3
KSH AMB AMB
comp=Z,180nm,5.9s
KSH LR LR
comp=N,460nm,6.6s
KSH LR LR
comp=E,440nm,9.1s
KSH LR LR
comp=Z,290nm,7.8s
MJAR **Matsushiro Arr** 155.88 265 PKPab PKPab 06 11 45.4 -0.6
comp=Z,1.6nm,0.6s,baz=156,slow=4.7,SNR=5.9
MJAR **Matsushiro Arr** 155.88 265 PKPab PKPab 06 11 45.4 -0.6
MAT **Matsushiro** 155.88 265 ePKP PKPab 06 11 44.0 -2.0
QIZ **Qiongzhong** 156.29 185 PKP PKPdf 06 11 20.6 +0.5
QIZ PP PP 06 15 28.4 +3.9
QIZ LR LR
comp=N,230nm,20.0s
QIZ LR LR
comp=Z,280nm,19.5s,MS5.1
SSLB **Suanglung** 158.18 214 ePKPdf PKPdf 06 11 21.7 -0.7
SSLB ePKPab PKPab 06 11 58.1 +2.0
KURK **Kurchatov** 158.56 58 PKP PKPdf 06 11 21.2 -0.8
comp=Z,1.9nm,1.1s,baz=298,slow=2.0,SNR=12
KURK PKPab PKPab 06 11 55.6 -1.6
comp=Z,1.7nm,0.9s,baz=287,slow=4.0,SNR=5.7
ZAA0 **Zalesovo Array** 161.14 46 ePKPdf PKPdf 06 11 24.9 +0.1
ZAA0 ePKPab PKPab 06 12 09.9 +1.7
ZALV **Zalesovo Beam** 161.14 46 PKP PKPdf 06 11 24.1 -0.6
comp=Z,1.4nm,0.7s,baz=247,slow=2.2,SNR=6.3
ZALV PKPab PKPab 06 12 08.2 0.0
comp=Z,2.0nm,0.8s,baz=309,slow=4.7,SNR=5.4
MK31 **Makanchi Array** 161.45 69 ePKPdf PKPdf 06 11 24.7 -0.6
MK31 ePKPab PKPab 06 12 10.1 +0.2
MKAR **Makanchi Array** 161.45 69 PKP PKPdf 06 11 25.2 -0.1
comp=Z,1.3nm,1.0s,baz=0.0,slow=0.5,SNR=8.3
MKAR PKPab PKPab 06 12 09.8 -0.1
comp=Z,3.7nm,0.8s,baz=268,slow=3.8,SNR=17
KMI **Kunming** 161.92 165 PKP PKPdf 06 11 26.6 +0.1
KMI PP PP 06 15 57.8 +2.5
KMI SS SS 06 36 11.0 -2.6
KMI AMB AMB
comp=Z,130nm,8.1s
KMI LR LR
comp=N,330nm,17.1s
KMI LR LR
comp=E,200nm,18.8s
KMI LR LR
comp=Z,400nm,18.4s
GYA **Guiyang** 163.71 176 PKP PKPdf 06 11 27.8 -0.4
GYA PKPab PKPab 06 12 21.0 +0.9
GYA PKS 06 14 58.7
GYA PP PP 06 16 07.5 +2.8
GYA SKS SKSdf 06 18 28.9 -3.9
GYA SKKS SKKSac 06 22 52.0 -1.5
GYA SS SS 06 36 34.3 +2.3
GYA AMB AMB
comp=Z,140nm,7.9s
GYA LR LR
comp=N,290nm,21.0s
GYA LR LR
comp=E,260nm,20.2s
GYA LR LR
comp=Z,270nm,20.8s
KSRS **Korea Array** 163.75 258 PKP PKPdf 06 11 28.9 +1.0
comp=Z,0.4nm,0.3s,baz=253,slow=1.3,SNR=2.7
KSRS PKPab PKPab 06 12 19.2 -1.1
comp=Z,0.3nm,0.3s,baz=101,slow=6.1,SNR=3.3
WMQ **Urumqi** 165.29 79 ePKP PKPdf 06 11 26.5 -2.6
CD2 **Chengdu** 167.74 163 PKP PKPdf 06 11 29.6 -1.8
CD2 PKPab PKPab 06 12 40.0 +2.2
CD2 PKS 06 15 00.8
CD2 PP PP 06 16 29.5 +3.8
CD2 AMB AMB
comp=Z,100nm,9.0s
CD2 **Chengdu** 167.74 163 PKPbc PKPdf 06 11 26.4 -5.0
CD2 pPKP pPKPdf 06 11 53.4 +19
CD2 sPKP 06 12 03.9
CD2 PKPab PKPab 06 12 35.7 -2.1
CD2 PKS 06 14 57.7
CD2 PP PP 06 16 25.0 -0.7
CD2 SKS SKSdf 06 18 18.7 -16
CD2 SKKS SKKSac 06 23 00.9 -13
CD2 SS SS 06 37 03.0 -10
CD2 AMB AMB
comp=Z,130nm,10.1s
CD2 LR LR
comp=N,330nm,20.8s
CD2 LR LR
comp=Z,460nm,20.2s
TLY **Talaya** 170.63 16 ePKPdf PKPdf 06 11 31.9 -0.5
TLY ePKPab PKPab 06 12 48.6 -1.4
TLY ePP PP 06 16 42.1 +1.8
XAN **Xi'an** 171.26 186 PKP PKPdf 06 11 32.7 -0.7
XAN PKS 06 15 03.4
XAN AMB AMB
comp=Z,42nm,12.5s
LZH **Lanzhou** 172.66 154 ePKP PKPdf 06 11 29.8 -4.2
LZH pPKP pPKPdf 06 11 36.8 -0.6
LZH sPKP 06 11 40.4
LZH AMB AMB
comp=Z,180nm,6.2s
LZH LR LR
comp=E,280nm,16.1s
LZH LR LR
comp=Z,300nm,19.7s
GTA **Gaotai** 173.09 116 ePKP PKPdf 06 11 33.7 -0.4
BJI **Beijing** 173.16 249 PKP PKPdf 06 11 33.5 -0.6
BJI PP PP 06 16 54.6 +0.6
BJI SKS SKSdf 06 18 31.6 -5.5
BJI SS SS 06 38 06.4 -2.6
BJI AMB AMB
comp=Z,170nm,11.6s
BJI LR LR
comp=N,220nm,22.0s
BJI LR LR
comp=E,150nm,20.6s
BJI LR LR
comp=Z,260nm,21.3s
SONM **Songino Array** 174.82 11 PKP PKPdf 06 11 34.7 +0.4
comp=Z,0.4nm,0.5s,baz=333,slow=5.2,SNR=3.0
SONM PKPab PKPab 06 13 08.5 -0.3
comp=Z,1.1nm,0.7s,baz=335,slow=6.7,SNR=4.4
ULN **Ulaanbaatar** 174.86 6 ePKPdf PKPdf 06 11 34.1 -0.2
ULN ePKPab PKPab 06 13 08.2 -0.7
ULN LR LR
comp=Z,311nm,21.0s
HHC **Hu-ho-hao-te** 176.62 237 ePKP PKPdf 06 11 35.3 +0.2
HHC PKS 06 15 07.6
HHC PP PP 06 17 15.2 +4.8
HHC SS SS 06 38 38.5 -3.2
HHC AMB AMB
comp=Z,98nm,9.6s
HHC LR LR
comp=N,150nm,22.5s
HHC LR LR
comp=E,210nm,22.5s
HHC LR LR
comp=Z,200nm,20.0s

*ISCJB **02** 06:01:37.2±0.4, 29°.62S±0°.03×71°.01W±0°.08, h73km±4km, mb4.1/18, Error ellipse: s-maj=11.2km s-min=4.1km az=4.1*
*GUC **02** 06:01:37.4±0.8, 29°.62S×70°.94W, h44km±4km, ML5.2*
*NEIC **02** 06:01:37.4, 29°.62S×70°.94W, h44km, mb4.4/9, After GUC. NEIC Felt at La Serena.*
*IDC **02** 06:01:38.2±0.6, 29°.52S×70°.94W, h64km±4km, mb3.9/10, mb1 4.0/14, mb1mx3.9/19, mbtmp3.9/14, Error ellipse: s-maj=20.3km s-min=10.1km az=52.0*
ISC 02 06:01:38.2±0.4, 29°.61S±0°.03×71°.01W±0°.08, h66km±4km, h65km±.9km: pP-P, n55, σ0s95/60, mb4.1/18, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.65**	**25**	*e*Pn			**Pn**	**06 01 52.7**	**+0.5**
LCO				*e*Sn			**Sn**	**06 02 03.4**	**+0.8**
OVCH	**Ovalle**	**1.01**	**189**	⇑*i*P			**Pn**	**06 01 56.1**	**-0.5**
OVCH				*i* S			**Sn**	**06 02 09.5**	**-0.8**
OVCH	**Ovalle**	**1.01**	**189**	⇑*i*P			**Pn**	**06 01 56.1**	**-0.5**
OVCH				*i* S			**Sn**	**06 02 09.5**	**-0.8**
OVCH					AML		AML	06 02 12.8	
	comp=N,50μm,0.4s								
CMCH	**Combarbala**	**1.56**	**180**	⇓*i*P			**Pn**	**06 02 03.4**	**-0.4**
CMCH				*i* S			**Sn**	**06 02 23.2**	**0.0**
CMCH	**Combarbala**	**1.56**	**180**	⇓*i*P			**Pn**	**06 02 03.4**	**-0.4**
CMCH				*i* S			**Sn**	**06 02 23.2**	**0.0**
CMCH					AML		AML	06 02 36.6	
	comp=E,33μm,0.6s								
CHNG	**Los Chungos**	**2.31**	**190**	*e*P			**Pn**	**06 02 13.2**	**-0.7**
CHNG				*i* S			**Sn**	**06 02 41.2**	**0.0**
CPCH	**Copiapo**	**2.31**	**15**	⇑*i*P			**Pn**	**06 02 13.7**	**-0.3**
CPCH				*e*S			**Sn**	**06 02 41.7**	**+0.3**
CPCH	**Copiapo**	**2.31**	**15**	⇑*i*P			**Pn**	**06 02 13.7**	**-0.3**
CPCH				*e*S			**Sn**	**06 02 41.7**	**+0.3**
CPCH					AML		AML	06 02 50.2	
	comp=N,34μm,0.2s								
JACH	**Jahuel**	**3.09**	**173**	*e*P			**Pn**	**06 02 24.2**	**-0.2**
CFAA	**Coronel Fontan**	**3.11**	**130**	P			**Pn**	**06 02 26.7**	**+1.9**
	comp=N,11nm,0.3s,baz=315,slow=12,SNR=454								
CFAA				S			**Sn**	**06 03 02.6**	**+1.8**
	comp=N,18nm,0.3s,baz=57,slow=23,SNR=5.0								
PEL	**Peldehue**	**3.54**	**176**	*e*P			**Pn**	**06 02 30.6**	**0.0**
PEL				*e*S			**Sn**	**06 03 10.5**	**-0.7**
PEL					AML		AML	06 03 27.0	
	comp=E,4μm,0.6s								
CLCH	**Cerro Calan**	**3.80**	**174**	*e*P			**Pn**	**06 02 34.3**	**+0.1**
ANTU	**Antumapu**	**3.96**	**175**	*e*P			**Pn**	**06 02 36.8**	**+0.4**
ANTU				*e*S			**Sn**	**06 03 21.9**	**+0.3**
PCH	**Pirque**	**4.02**	**174**	*e*P			**Pn**	**06 02 37.4**	**+0.1**
TACH	**Talagante**	**4.03**	**179**	*e*P			**Pn**	**06 02 37.0**	**-0.4**
SJCH	**San Jose de Ma**	**4.06**	**172**	*e*P			**Pn**	**06 02 38.8**	**+1.0**
SJCH				*e*S			**Sn**	**06 03 25.0**	**+1.0**
LNV	**Longovilo**	**4.35**	**184**	*e*P			**Pn**	**06 02 40.0**	**-1.7**
LVC	**Limon Verde**	**7.22**	**16**	P			**Pn**	**06 03 18.7**	**-2.3**
LVC				S			**Sn**	**06 04 50.9**	**+9.3**
LVC	**Limon Verde**	**7.22**	**16**	P			**Pn**	**06 03 18.7**	**-2.3**
LVC				S			**Sn**	**06 04 50.9**	**+9.3**
PLCA	**Paso Flores**	**11.11**	**178**	P			**Pn**	**06 04 17.1**	**+3.0**
	comp=E,0.1nm,0.3s,baz=127,slow=10,SNR=1.6								
TRQA	**Tornquist**	**11.28**	**141**	*e*Pn			**Pn**	**06 04 15.8**	**-0.7**
CPUP	**Villa Florida**	**12.52**	**78**	P			**Pn**	**06 04 30.7**	**-2.8**
	baz=234,slow=15								
SIV	**San Ignacio**	**16.34**	**36**	P			**Pn**	**06 05 23.0**	**-0.5**
	comp=E,0.6nm,0.3s,baz=228,slow=11,SNR=11								
OTAV	**Otavalo**	**30.52**	**345**	*e*P			**P**	**06 07 46.6**	**+1.3**
	comp=E,1.3nm,0.6s,mb3.8								
QSPA	**South Pole Qui**	**60.62**	**180**	P			**P**	**06 11 42.1**	**+0.5**
	comp=E,4.5nm,0.7s,mb4.6,baz=164,slow=1.6,SNR=34								
QSPA	**South Pole Qui**	**60.62**	**180**	*e*P			**P**	**06 11 41.6**	**0.0**
	comp=E,3.5nm,0.6s,mb4.6								
TXAR	**Lajitas Array**	**66.38**	**329**	P			**P**	**06 12 20.8**	**+0.6**
	comp=E,1.1nm,0.6s,mb3.9,baz=148,slow=8.9,SNR=9.3								
TXAR				sP			sP	06 12 44.7	-0.3
	comp=E,0.7nm,0.7s,baz=148,slow=9.5,SNR=3.4								
TXAR	**Lajitas Array**	**66.38**	**329**	P			**P**	**06 12 20.8**	**+0.6**
TXAR				sP			sP	06 12 44.7	-0.3
WVT	**Waverly**	**67.28**	**345**	*e*P			**P**	**06 12 24.7**	**-1.0**
	comp=E,3.2nm,0.7s,mb4.3								
CCM	**Cathedral Cave**	**69.92**	**343**	*e*P			**P**	**06 12 41.6**	**-0.5**
	comp=E,7.9nm,0.9s,mb4.5								
DBIC	**Dimbokro**	**72.96**	**72**	P			**P**	**06 13 00.5**	**-0.6**
	comp=E,0.9nm,0.3s,mb4.1,baz=216,slow=7.3,SNR=5.1								
DBIC				pP			pP	06 13 18.2	-0.6
	comp=E,2.0nm,0.7s,baz=206,slow=10,SNR=2.0								
SDCO	**Great Sand Dun**	**74.37**	**332**	*e*P			**P**	**06 13 09.9**	**+1.1**
	comp=E,1.4nm,0.8s,mb3.7								
ECSD	**EROS Data Cent**	**76.66**	**341**	*e*P			**P**	**06 13 21.2**	**-0.4**
	comp=E,4.5nm,0.8s,mb4.2								
ECSD				*e*				06 13 46.5	
MAW	**Mawson**	**77.13**	**164**	P			**P**	**06 13 23.2**	**-1.0**
	comp=E,2.1nm,0.6s,mb4.0,baz=206,slow=9.8,SNR=5.1								
ISA	**Isabella**	**78.81**	**322**	*e*P			**P**	**06 13 35.5**	**+1.6**
	comp=E,3.6nm,0.8s,mb4.2								
HWUT	**Hardware Ranch**	**80.15**	**330**	*e*P			**P**	**06 13 41.7**	**+0.7**
	comp=E,4.1nm,0.7s,mb4.4								
PDAR	**Pinedale Array**	**80.27**	**332**	P			**P**	**06 13 42.1**	**+0.5**
	comp=E,0.4nm,0.6s,mb3.5,baz=134,slow=5.2,SNR=2.9								
NVAR	**Mina Array Bea**	**80.81**	**324**	P			**P**	**06 13 45.6**	**+1.0**
	comp=E,0.8nm,0.8s,mb3.6,baz=156,slow=5.9,SNR=4.6								
NVAR				sP			sP	06 14 10.9	+1.0
	comp=E,1.6nm,1.1s,baz=145,slow=5.4,SNR=3.7								
BOSA	**Boshof**	**81.34**	**118**	P			**P**	**06 13 47.4**	**-0.5**
	comp=E,4.4nm,0.9s,mb4.3,baz=293,slow=3.0,SNR=7.4								
TOA0	**Torodi Ar. Sit**	**81.89**	**70**	*e*P			**P**	**06 13 49.8**	**-1.0**
TOA0				*e*pP			pP	06 14 07.6	-1.3
TORD	**Torodi Ar. Bea**	**81.89**	**70**	P			**P**	**06 13 50.4**	**-0.5**
	comp=E,1.4nm,0.7s,mb3.9,baz=273,slow=6.2,SNR=12								
TORD				pP			pP	06 14 07.7	-1.2
	comp=E,2.4nm,0.6s,baz=262,slow=4.8,SNR=11								
TORD	**Torodi Ar. Bea**	**81.89**	**70**	P			**P**	**06 13 50.4**	**-0.5**
TORD				pP			pP	06 14 07.7	-1.2
ULM	**Lac du Bonnet**	**82.51**	**344**	P			**P**	**06 13 52.4**	**-0.9**
	comp=E,2.7nm,0.7s,mb4.2,baz=154,slow=5.1,SNR=5.1								
ULM				sP			sP	06 14 18.1	-0.4
	comp=E,2.3nm,0.8s,baz=198,slow=5.2,SNR=3.3								
HLID	**Hailey**	**82.97**	**330**	*e*P			**P**	**06 13 56.8**	**+1.0**
	comp=E,3.4nm,1.0s,mb4.1								
YKA	**Yellowknife Ar**	**98.19**	**341**	P			**P**	**06 15 06.9**	**-0.4**
	comp=E,0.2nm,0.7s,mb3.7,baz=141,slow=4.4,SNR=7.8								
YKA	**Yellowknife Ar**	**98.19**	**341**	P			**P**	**06 15 06.9**	**-0.4**
KURK	**Kurchatov**	**148.99**	**39**	PKPbc		PKPbc		06 21 18.4	+0.1
	comp=E,1.6nm,0.7s,baz=304,slow=3.2,SNR=12								
AAK	**Ala-Archa**	**149.47**	**55**	PKPbc		PKPbc		06 21 21.4	+1.7
	comp=E,1.2nm,0.4s,baz=136,slow=1.4,SNR=5.9								
AAK				pPKPbc		pPKPbc		06 21 38.3	-0.4
	comp=E,1.7nm,0.5s,baz=297,slow=2.3,SNR=3.4								
AAK	**Ala-Archa**	**149.47**	**55**	*e*PKPbc		PKPbc		06 21 21.0	+1.2
AAK				pPKPbc		pPKPbc		06 21 38.3	-0.4
UCH	**Uchtor**	**149.58**	**56**	*e*PKPbc		PKPbc		06 21 21.7	+1.7
ZAA0	**Zalesovo Array**	**150.01**	**29**	*e*PKPbc		PKPbc		06 21 20.3	-0.4
ZALV	**Zalesovo Beam**	**150.01**	**29**	PKPbc		PKPbc		06 21 20.7	0.0
	comp=E,6.8nm,0.7s,baz=303,slow=3.5,SNR=28								
TKM2	**Tokmak 2**	**150.18**	**54**	*e*PKPbc		PKPbc		06 21 20.9	-0.6
MKAR	**Makanchi Array**	**153.09**	**43**	PKPbc		PKPbc		06 21 27.9	-0.1
	comp=E,0.6nm,0.7s,baz=318,slow=2.5,SNR=8.2								
MKAR				pPKPbc		pPKPbc		06 21 46.3	-0.7
	comp=E,0.9nm,0.7s,baz=297,slow=4.0,SNR=6.7								
MJAR	**Matsushiro Arr**	**154.62**	**293**	PKPab		PKPab		06 21 46.7	0.0
	comp=E,0.7nm,0.3s,baz=88,slow=2.8,SNR=3.3								

*ISCJB **02** 06:12:50.3±4.3, 23°.6S±0°.3×179°.9E±0°.2, h589km±58km, mb3.8/8, Error ellipse: s-maj=40.1km s-min=23.8km az=13.8*
*NEIC **02** 06:12:52.4±3.5, 23°.67S×179°.96E, h608km±40km, mb4.3/2, Error ellipse: s-maj=28.5km s-min=19.8km az=197.0*
*IDC **02** 06:12:53.1±5.3, 23°.67S×179°.94E, h616km±68km, mb3.1/6, mb1 3.4/7, mb1mx3.3/15, mbtmp3.2/7, Error ellipse: s-maj=70.8km s-min=26.1km az=173.0*
ISC 02 06:12:48.8±4.0, 23°.5S±0°.3×180°.0W±0°.2, h555km±51km, n20, σ0s56/11, mb3.8/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.88**	**189**	P			**P**	**06 15 56.7**	**-0.1**
	4.6nm,0.3s,baz=59,slow=2.0,SNR=19								
URZ	**Urewera**	**14.88**	**189**	*e*Pn			**P**	**06 15 56.6**	**-0.1**
CTAO	**Charters Tower**	**31.50**	**270**	*e*P			**P**	**06 18 26.2**	**+0.2**
	5.4nm,0.5s,mb4.3								
STKA	**Stephens Creek**	**34.88**	**248**	P			**P**	**06 18 55.1**	**+0.9**
	1.1nm,0.5s,mb3.7,baz=97,slow=15,SNR=6.0								
ASAR	**Alice Springs**	**42.12**	**260**	P			**P**	**06 19 52.9**	**-0.1**
	1.8nm,0.6s,mb3.8,baz=98,slow=7.9,SNR=24								
WRA	**Warramunga Arr**	**42.45**	**266**	P			**P**	**06 19 54.8**	**-0.9**
	1.8nm,0.4s,mb3.9,baz=102,slow=8.5,SNR=12								
QSPA	**South Pole Qui**	**66.54**	**180**	*e*P			**P**	**06 22 43.2**	**-0.2**
	8.3nm,1.3s,mb4.1								
NVAR	**Mina Array Bea**	**84.48**	**44**	P			**P**	**06 24 23.0**	**-0.4**
	0.7nm,0.8s,mb3.2,baz=216,slow=7.3,SNR=4.2								
NVAR	**Mina Array Bea**	**84.48**	**44**	P			**P**	**06 24 23.0**	**-0.4**
TXAR	**Lajitas Array**	**90.22**	**58**	P			**P**	**06 24 51.6**	**+0.9**
	0.5nm,0.6s,mb3.5,baz=211,slow=7.0,SNR=4.1								
PDAR	**Pinedale Array**	**92.42**	**44**	P			**P**	**06 25 00.1**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=223,slow=3.7,SNR=3.2								
MKAR	**Makanchi Array**	**111.93**	**313**	PKiKP		PKiKP		06 30 19.9	-1.1
	0.2nm,0.4s,baz=135,slow=0.6,SNR=3.1								
BVAR	**Borovoye Array**	**120.18**	**319**	PKP		PKPdf		06 30 33.1	-3.5
	0.3nm,0.4s,baz=74,slow=12,SNR=3.9								
ARCES	**ARCESS Array B**	**131.54**	**348**	PKP		PKPdf		06 30 56.2	-1.6
	1.9nm,0.8s,baz=349,slow=2.5,SNR=6.9								
FINES	**FINESS Array B**	**138.11**	**342**	PKP		PKPdf		06 31 09.3	-1.0
	0.4nm,0.4s,baz=256,slow=0.8,SNR=3.5								
NOA	**NORSAR Array B**	**141.73**	**351**	PKhKP				06 31 11.6	
	1.0nm,0.7s,baz=16,slow=4.9,SNR=4.4								
NOA	**NORSAR Array B**	**141.73**	**351**	PKP				06 31 11.6	
AKASG	**Malin Array Be**	**144.68**	**328**	PKP		PKPdf		06 31 21.1	-1.2
	1.4nm,0.4s,baz=44,slow=3.6,SNR=12								
MLR	**Muntele Rosu**	**149.64**	**323**	PKPbc		PKPbc		06 31 34.7	-1.3
	1.8nm,0.5s,baz=155,slow=16,SNR=3.5								
CLL	**Collm**	**150.52**	**343**	*i* PKPbc		PKPbc		06 31 37.2	-0.6
	comp=Z,5.0nm,0.8s								

MAN 02 06:16:11, 17°.49N×122°.29E, h6km, mb4.5, ML3.4, MS3.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.44**	**162**	*e*P			Pg	06 16 21.8	+2.3
PALP				*e*S			Sg	06 16 32.8	+7.4
CVP	**Callao Caves**	**0.49**	**296**	⇓*i*P			Pg	06 16 22.6	+2.1
CAUP	**Cauayan**	**0.70**	**219**	*e*P			Pg	06 16 29.7	+5.2
ABRA	**Dolores**	**1.51**	**276**	*e*P			Pn	06 16 49.2	+11
BALP	**Baler**	**1.86**	**201**	*e*P			Pn	06 16 45.1	+1.6
BBP	**Basco**	**2.95**	**354**	*e*P			Pn	06 16 59.9	+1.4
AUQP	**San Andres**	**4.16**	**175**	*e*P			Pn	06 17 39.7	+25

IDC 02 06:41:43.1±1.2, 6°.92S×154°.71E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.0/16, mbtmp3.9/7, Error ellipse: s-maj=52.2km s-min=23.0km az=121.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.63**	**235**	P			P	06 46 55.5	-0.8
	2.2nm,0.8s,baz=61,slow=9.8,SNR=6.1								
ASAR	**Alice Springs**	**26.01**	**228**	P			P	06 47 17.5	-0.5
	0.9nm,0.8s,baz=62,slow=8.6,SNR=9.8								
STKA	**Stephens Creek**	**27.68**	**205**	P			P	06 47 34.7	+1.7
	2.9nm,0.8s,baz=36,slow=8.7,SNR=4.7								
SONM	**Songino Array**	**69.12**	**327**	P			P	06 52 52.5	+1.3
	0.8nm,0.5s,baz=126,slow=7.3,SNR=3.2								
MKAR	**Makanchi Array**	**83.17**	**319**	P			P	06 54 11.7	+0.5
	0.6nm,0.7s,baz=105,slow=5.5,SNR=6.0								
NVAR	**Mina Array Bea**	**91.89**	**52**	P			P	06 54 53.9	+0.2
	0.4nm,0.7s,baz=254,slow=5.5,SNR=3.2								
YKA	**Yellowknife Ar**	**96.40**	**28**	P			P	06 55 13.3	-0.5
	0.7nm,0.8s,baz=269,slow=4.7,SNR=16								
TORD	**Torodi Ar. Bea**	**152.74**	**285**	PKPbc		PKPbc		07 01 41.9	-1.2
	1.0nm,0.8s,baz=73,slow=1.5,SNR=5.5								

*CSEM **02** 06:45:15.6±0.7, 12°.93N×50°.32E, h2km, mb3.9/1, Error ellipse: s-maj=30.1km s-min=13.4km az=8.0*
*ISCJB **02** 06:45:19.2±1.1, 13°.5N±0°.2×50°.63E±0°.07, h10km, mb3.7/9, Error ellipse: s-maj=23.7km s-min=9.8km az=7.2*
*IDC **02** 06:45:19.3±1.5, 13°.39N×50°.71E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, Error ellipse: s-maj=46.2km s-min=24.7km az=167.0*
*NEIC **02** 06:45:20.8±0.9, 13°.38N×50°.71E, h10km, mb3.9/1, Error ellipse: s-maj=25.1km s-min=14.4km az=167.0*
ISC 02 06:45:21.4±1.1, 13°.5N±0°.2×50°.60E±0°.07, h10km, n23, σ0s79/19, mb3.7/9, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.79**	**302**	*i* P			**Pn**	**06 45 47.1**	**-5.3**
MUKL				*e*				06 45 47.4	
	baz=137,slow=5.9								
MUKL				*i* S			**Sn**	**06 46 14.5**	**-0.8**
MUKL					AML		AML	06 46 15.8	
	comp=N,217nm,0.5s								
LBOS		**5.21**	**275**	*i* P			**Pn**	**06 46 39.3**	**-0.2**
ABKAR	**Akbulak array**	**36.46**	**10**	*e*P			**P**	**06 52 27.4**	**+0.9**
	comp=N,2.1nm,1.0s,mb4.0								
ABKAR	**Akbulak array**	**36.46**	**10**	*e*P			**P**	**06 52 27.4**	**+0.9**
	comp=N,2.1nm,1.0s,mb4.0								
AKASG	**Malin Array Be**	**40.96**	**339**	P			**P**	**06 53 04.2**	**+0.1**
	comp=N,0.4nm,0.4s,mb3.4,baz=146,slow=6.9,SNR=4.8								
AKASG	**Malin Array Be**	**40.96**	**339**	P			**P**	**06 53 04.2**	**0.0**
AKASG	**Malin Array Be**	**40.96**	**339**	P			**P**	**06 53 04.2**	**0.0**
BVAR	**Borovoye Array**	**42.45**	**18**	P			**P**	**06 53 16.3**	**0.0**
	comp=N,0.5nm,0.5s,mb3.4,baz=188,slow=5.7,SNR=4.0								
BVAR				PcP			PcP	06 55 09.4	+0.2
	comp=N,0.7nm,0.7s,baz=196,slow=3.8,SNR=4.6								
BVAR	**Borovoye Array**	**42.45**	**18**	P			**P**	**06 53 16.3**	**-0.1**
BVAR	**Borovoye Array**	**42.45**	**18**	PcP			PcP	06 55 09.4	+0.2
MKAR	**Makanchi Array**	**42.49**	**32**	P			**P**	**06 53 17.2**	**+0.3**
	comp=N,0.4nm,0.8s,mb3.1,baz=191,slow=2.5,SNR=4.0								
MKAR	**Makanchi Array**	**42.49**	**32**	P			**P**	**06 53 17.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**46.63**	**77**	P			**P**	**06 53 48.6**	**-1.8**
	comp=N,1.4nm,0.4s,mb4.3,baz=279,slow=8.8,SNR=3.2								
CMAR	**Chiang Mai Arr**	**46.63**	**77**	P			**P**	**06 53 48.6**	**-1.7**
TORD	**Torodi Ar. Bea**	**47.52**	**276**	P			**P**	**06 53 57.7**	**+0.4**
	comp=N,1.7nm,1.1s,mb4.0,baz=86,slow=7.3,SNR=6.9								
ZALV	**Zalesovo Beam**	**48.49**	**26**	P			**P**	**06 54 03.4**	**-0.8**
	comp=N,0.3nm,0.3s,mb3.8,baz=243,slow=4.7,SNR=2.7								
ESDC	**Sonseca Array**	**54.34**	**309**	P			**P**	**06 54 49.4**	**+1.1**
	comp=N,0.1nm,0.3s,mb3.3,baz=76,slow=5.4,SNR=4.2								
SONM	**Songino Array**	**57.32**	**41**	P			**P**	**06 55 10.2**	**+0.6**
	comp=N,0.5nm,0.4s,mb3.9,baz=258,slow=5.7,SNR=2.7								
SONM	**Songino Array**	**57.32**	**41**	P			**P**	**06 55 10.2**	**+0.6**
YKA	**Yellowknife Ar**	**103.36**	**353**	PKiKP		PKiKP		07 03 38.5	-2.0
	comp=N,0.0nm,0.4s,baz=40,slow=2.1,SNR=3.9								
PDAR	**Pinedale Array**	**121.11**	**343**	PKP		PKPdf		07 04 14.8	+0.1
	comp=N,0.4nm,0.8s,baz=11,slow=1.5,SNR=3.5								
NVAR	**Mina Array Bea**	**127.30**	**349**	PKP		PKPdf		07 04 27.4	+0.7
	comp=N,0.5nm,0.8s,baz=117,slow=1.0,SNR=3.3								
NVAR	**Mina Array Bea**	**127.30**	**349**	PKP		PKPdf		07 04 27.4	+0.7

*ISCJB **02** 06:54:37.2±0.4, 51°.55N±0°.02×6°.47E±0°.03, h0km, Error ellipse: s-maj=3.7km s-min=2.4km az=44.6*
*BUG **02** 06:54:38.7, 51°.51N×6°.58E, h1km, ML2.3*
*CSEM **02** 06:54:38.2±0.2, 51°.54N×6°.49E, h1km, ML3.2/15, Error ellipse: s-maj=3.9km s-min=2.5km az=136.0*
*BNS **02** 06:54:39.4±0.9, 51°.52N×6°.57E, h1km±13km, ML2.3*
*LDG **02** 06:54:39.2±0.2, 51°.54N×6°.58E, h1km, Md3.3/2, Ml3.1/14, Error ellipse: s-maj=2.6km s-min=1.9km az=14.0, Suspected Mining induced.*
*NEIC **02** 06:54:39.2, 51°.54N×6°.58E, h1km, ML3.1(LDG), After LDG.*
*BGR **02** 06:54:39.9±0.6, 51°.51N×6°.58E, h1km, ML2.4/4, Error ellipse: s-maj=10.0km s-min=3.3km az=125.0*
*UCC **02** 06:54:41.2±1.7, 51°.57N×6°.20E, h0km, ML2.2*
ISC 02 06:54:38.4±0.4, 51°.53N±0°.02×6°.49E±0°.03, h0km, n84, σ1s06/143, 3C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.34**	**122**	⇑*e*Pg			**Pg**	**06 54 44.6**	**-0.3**
LAUG				*e*Sg			**Sg**	**06 54 49.5**	**+0.4**
	122nm,0.5s								
LAUG	**Laupendahl**	**0.34**	**122**	Pg			**Pg**	**06 54 44.6**	**-0.2**
LAUG				Sg			**Sg**	**06 54 49.5**	**+0.3**
	122nm,0.5s								
RODG	**Roetgen-Dahlhe**	**0.43**	**207**	*e*Sg			**Sg**	**06 54 54.6**	**+2.4**
	293nm,0.4s								
RODG	**Roetgen-Dahlhe**	**0.43**	**207**	Sg			**Sg**	**06 54 54.6**	**+2.4**
	293nm,0.4s								
WTSB	**Winterswijk**	**0.48**	**24**	*e*Pg			**Pg**	**06 54 47.6**	**0.0**
	29nm,0.3s								
WTSB				*e*Sg			**Sg**	**06 54 54.8**	**+1.0**
WTSB	**Winterswijk**	**0.48**	**24**	*e*Pg			**Pg**	**06 54 47.6**	**0.0**
	29nm,0.3s								
WTSB				*e*Sg			**Sg**	**06 54 54.8**	**+1.0**
BUG	**Bochum--Univer**	**0.50**	**100**	⇓*e*Pg			**Pg**	**06 54 47.8**	**-0.1**
BUG				Sg			**Sg**	**06 54 54.5**	**+0.2**
BUG	**Bochum--Univer**	**0.50**	**100**	*e*Pg			**Pg**	**06 54 47.6**	**-0.3**
BUG				*e*Sg			**Sg**	**06 54 54.4**	**+0.1**
BUG	**Bochum--Univer**	**0.50**	**100**	*e*Pg			**Pg**	**06 54 47.6**	**-0.3**
BUG				*e*Sg			**Sg**	**06 54 54.4**	**+0.1**
HOBG	**Hohbusch**	**0.76**	**135**	⇓*e*Pg			**Pg**	**06 54 53.3**	**+0.3**
HOBG				*e*Sg			**Sg**	**06 55 03.8**	**+0.9**
	65nm,0.4s								
HOBG	**Hohbusch**	**0.76**	**135**	Pg			**Pg**	**06 54 53.3**	**+0.3**
HOBG				Sg			**Sg**	**06 55 03.8**	**+0.9**
	65nm,0.4s								
HGN	**Heimansgroeve**	**0.84**	**205**	*e*Pg			**Pg**	**06 54 56.2**	**+1.7**
	17nm,0.2s,baz=20								
HGN				*e*Sg			**Sg**	**06 55 09.2**	**+3.8**
HGN				*e*Sg			**Sb**	**06 55 23.7**	**+16**
HGN	**Heimansgroeve**	**0.84**	**205**	*e*Pg			**Pg**	**06 54 56.2**	**+1.7**
	17nm,0.2s								
DREG	**Dreilaegerbach**	**0.88**	**191**	*e*Pg			**Pg**	**06 54 55.7**	**+0.4**
DREG				*e*Pg			**Pg**	**06 54 55.9**	**+0.6**
	SNR=24								
DREG				*e*Sg			**Sg**	**06 55 08.0**	**+1.3**
DREG	**Dreilaegerbach**	**0.88**	**191**	Pg			**Pg**	**06 54 55.7**	**+0.4**
DREG				Sg			**Sg**	**06 55 08.0**	**+1.3**
KLL	**Kalltalsperre**	**0.89**	**187**	*e*Pg			**Pg**	**06 54 56.1**	**+0.7**
KLL				*e*Sg			**Sg**	**06 55 09.4**	**+2.4**
	155nm,0.2s								
KLL	**Kalltalsperre**	**0.89**	**187**	Pg			**Pg**	**06 54 56.1**	**+0.6**
KLL				Sg			**Sg**	**06 55 09.4**	**+2.4**
	155nm,0.2s								
BEBN	**Eben Emael**	**0.89**	**215**	P			**Pg**	**06 54 56.9**	**+1.3**
BEBN				S			**Sg**	**06 55 09.1**	**+2.0**
	comp=E,43nm,0.2s								
BEBN	**Eben Emael**	**0.89**	**215**	P			**Pg**	**06 54 56.8**	**+1.3**
BEBN				S			**Sg**	**06 55 09.0**	**+1.9**
	comp=E,43nm,0.2s								
STB	**Steinbach**	**0.96**	**167**	*e*Pg			**Pg**	**06 54 57.7**	**+0.9**
STB				*e*Sg			**Sg**	**06 55 10.1**	**+0.8**
	comp=E,88nm,0.4s								
STB	**Steinbach**	**0.96**	**167**	Pg			**Pg**	**06 54 57.7**	**+0.9**
STB				Sg			**Sg**	**06 55 10.1**	**+0.8**
	comp=E,88nm,0.4s								
MEM	**Membach**	**0.97**	**198**	⇑P			**Pg**	**06 54 57.4**	**+0.5**
MEM				S			**Sg**	**06 55 11.5**	**+2.0**
	com

HINF	Hinteralfeld	3.72 176	eSg	Sg	06 56 35.6	-2.4
	comp=N,4.7nm,0.3s					
HINF	Hinteralfeld	3.72 176	eSg	Sg	06 56 35.6	-2.4
	comp=N,2.3nm,0.3s					
CLL	Collm	4.08 91	eSg	Sg	06 56 50.0	+0.5
LOR	Lormes	4.60 203	ePn	Pn	06 55 48.5	-0.6
	baz=31					
LOR			eSn	Sn	06 56 39.5	-3.6
LOR			eSg	Sg	06 57 03.6	-2.4
	comp=N,8.8nm,0.3s,baz=21					
LOR	Lormes	4.60 203	ePn	Pn	06 55 48.5	-0.6
	baz=31					
SSF	Saint Saulge	4.88 205	ePn	Pn	06 55 51.8	-1.2
SSF			eSn	Sn	06 56 46.0	-4.1
SSF			eSg	Sg	06 57 13.4	-1.6
	comp=N,5.9nm,0.4s					
SSF	Saint Saulge	4.88 205	ePn	Pn	06 55 51.8	-1.2
SSF			eSg	Sg	06 57 13.4	-1.6
	comp=N,3.0nm,0.4s					
AVF	Avril sur Loir	5.17 205	ePn	Pn	06 55 55.9	-1.0
AVF	Avril sur Loir	5.17 205	ePn	Pn	06 55 55.9	-1.0
LDF	La Druitiere	5.17 238	ePn	Pn	06 55 56.4	-0.6
LDF	La Druitiere	5.17 238	ePn	Pn	06 55 56.4	-0.6
SMF	Signal de Mont	5.19 201	ePn	Pn	06 55 56.4	-0.8
SMF	Signal de Mont	5.19 201	ePn	Pn	06 55 56.4	-0.8
FLN	La Foliniere	5.27 241	ePn	Pn	06 55 57.7	-0.6
	baz=61					
FLN	La Foliniere	5.27 241	ePn	Pn	06 55 57.7	-0.6
	baz=61					
BGF	Bois d'Agland	5.52 207	ePn	Pn	06 56 00.5	-1.3
BGF			eSn	Sn	06 57 01.3	-4.6
	comp=N,7.4nm,0.3s					
BGF	Bois d'Agland	5.52 207	ePn	Pn	06 56 00.5	-1.3
GRR	Gorron	5.69 239	ePn	Pn	06 56 03.2	-0.9
GRR			eSn	Sn	06 57 05.9	-4.1
	comp=N,9.8nm,0.4s					
GRR	Gorron	5.69 239	ePn	Pn	06 56 03.2	-0.9

DJA 02 07:04:28, 1°.15S×123°.41E, h249km, MLv3.6/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.65	280	P	Pn	07 05 09.0	+7.7
LUWI				S	S	07 05 28.8	+1.5
MRSI	Marisa	2.18	318	P	Pn	07 05 12.3	+0.2
KDI	Kendari	2.90	196	P	Pn	07 05 19.6	+0.2
PCI	Palu	3.58	274	P	Pn	07 05 28.7	+1.8
TTSI	Tana Toraja	4.05	242	P	Pn	07 05 28.8	-3.6
AAI	Ambon	5.40	118	P	Pn	07 05 48.5	-0.3

*ISCJB **02** 07:07:59.7±0.6, 40°.55N±0°.03×34°.85E±0°.06, h6km±5km, Error ellipse: s-maj=8.1km s-min=5.2km az=171.6*
*CSEM **02** 07:07:59.6±0.2, 40°.56N×34°.82E, h5km, MD3.1, Error ellipse: s-maj=5.7km s-min=4.3km az=85.0*
*DDA **02** 07:07:59.5, 40°.55N×34°.74E, h7km±1km, Md3.1*
*ISK **02** 07:07:59.3, 40°.54N×34°.85E, h8km, MD3.0*

ISC 02 07:08:00.1±0.6, 40°.56N±0°.03×34°.83E±0°.07, h5km±5km, n21, σ0°.85/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	Corum	0.07	333	i P	Pg	07 08 02.0	+0.2
CTKT				i S	Sg	07 08 03.5	+0.6
CTKT	Corum	0.07	333	i P	Pg	07 08 02.0	+0.3
CTKT				i S	Sg	07 08 03.5	+0.6
CORM	Corum	0.41	202	ePG	Pg	07 08 07.5	-0.4
CORM				eSG	Sg	07 08 13.8	+0.5
CORM	Corum	0.41	202	ePg	Pg	07 08 07.5	-0.4
CORM				eSg	Sg	07 08 13.8	+0.5
TOS	Tosya	0.78	308	ePG	Pg	07 08 15.4	+0.4
TOS	Tosya	0.78	308	ePg	Pg	07 08 15.4	+0.4
YOZ	Yozgat	0.99	158	ePG	Pg	07 08 18.4	-0.7
YOZ	Yozgat	0.99	158	ePg	Pg	07 08 18.4	-0.6
CDAG	Cicekdag	1.00	201	i P	Pg	07 08 18.2	-1.0
CDAG				i S	Sg	07 08 31.7	-0.4
CDAG	Cicekdag	1.00	201	i P	Pg	07 08 18.2	-1.0
CDAG				i S	Sg	07 08 31.7	-0.4
KVT	Kavak	1.06	60	ePG	Pg	07 08 20.2	-0.2
KVT	Kavak	1.06	60	ePg	Pg	07 08 20.2	-0.2
DIKM	Dikmen	1.14	16	ePN	Pn	07 08 21.5	-1.1
DIKM	Dikmen	1.14	16	ePn	Pn	07 08 21.5	-1.1
BALT	Daday	1.47	312	i P	Pn	07 08 26.1	-1.0
BALT				i S	Sn	07 08 46.8	+0.2
BALT	Daday	1.47	312	i P	Pn	07 08 26.1	-1.0
BALT				i S	Sn	07 08 46.8	+0.2
AVNT	Avonos	1.78	179	i P	Pn	07 08 34.3	+3.0
AVNT				i S	Sn	07 08 58.9	+4.6
SVSK	Karacayir	1.78	110	ePN	Pn	07 08 31.5	+0.1
SVSK	Karacayir	1.78	110	ePn	Pn	07 08 31.5	+0.1
SARI	SarD1z-Kayseri	2.37	142	ePN	Pn	07 08 40.7	+1.3
SARI	SarD1z-Kayseri	2.37	142	ePn	Pn	07 08 40.7	+1.2

IDC 02 07:16:07.3±1.5, 1°.35N×126°.18E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, Error ellipse: s-maj=165.8km s-min=19.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.62	160	P	P	07 21 10.5	+0.6
	1.1nm,0.3s,baz=337,slow=11,SNR=6.3						
ASAR	Alice Springs	25.98	164	P	P	07 21 42.1	+0.3
	0.7nm,0.5s,baz=350,slow=7.4,SNR=13						
STKA	Stephens Creek	36.13	157	P	P	07 23 10.3	-0.9
	0.9nm,0.6s,baz=324,slow=9.2,SNR=3.3						
MKAR	Makanchi Array	59.20	326	P	P	07 26 10.8	+0.6
	0.3nm,0.4s,baz=115,slow=8.8,SNR=4.4						
KURK	Kurchatov	63.45	328	P	P	07 26 38.6	-0.3
	0.3nm,0.5s,baz=126,slow=6.1,SNR=3.3						

IDC 02 07:17:10.9±1.7, 3°.20S×147°.79E, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.9/17, mbtmp4.0/5, MS3.5/4, Ms1 3.5/4, ms1mx3.2/26, Error ellipse: s-maj=69.8km s-min=24.5km az=115.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	16.93	350	LR	LR	07 26 08.5	
	comp=Z,72nm,21.5s,baz=185,slow=32						
WRA	Warramunga Arr	21.20	217	P	P	07 21 58.1	-0.1
	5.0nm,0.9s,baz=42,slow=11,SNR=16						
ASAR	Alice Springs	24.38	212	P	P	07 22 31.6	+0.7
	3.4nm,0.6s,baz=41,slow=7.0,SNR=37						
FITZ	Fitzroy Crossi	26.27	234	P	P	07 22 48.0	-0.2
	7.2nm,0.9s,baz=71,slow=6.6,SNR=14						
FITZ				LR	LR	07 33 54.2	
	comp=Z,245nm,21.9s,baz=37,slow=38						
STKA	Stephens Creek	29.12	191	LR	LR	07 34 51.0	
	comp=Z,109nm,20.7s,baz=28,slow=36						
KSRS	Korea Array	44.46	337	LR	LR	07 41 20.1	
	comp=Z,60nm,19.8s,baz=15,slow=33						
KURK	Kurchatov	79.46	323	P	P	07 29 19.9	+0.8
	0.2nm,0.8s,baz=114,slow=4.2,SNR=2.4						
YKA	Yellowknife Ar	96.34	28	P	P	07 30 41.0	-0.3
	0.4nm,0.7s,baz=275,slow=4.8,SNR=9.6						
TORD	Torodi Ar. Bea	145.06	288	PKPbc	PKPbc	07 36 49.1	-1.7
	0.4nm,0.8s,baz=65,slow=2.6,SNR=2.8						

IDC 02 07:18:33.7±1.9, 2°.66S×147°.17E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.7/18, Error ellipse: s-maj=313.8km s-min=32.1km az=121.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.26	215	P	P	07 23 22.0	+0.2
	0.6nm,0.6s,baz=41,slow=10,SNR=1.9						
ASAR	Alice Springs	24.51	210	P	P	07 23 54.9	0.0
	1.0nm,0.7s,baz=38,slow=7.1,SNR=3.5						
KAPI	Kappang	27.45	264	LR	LR	07 37 38.3	
	comp=Z,128nm,18.3s,baz=216,slow=42						
YKA	Yellowknife Ar	96.15	28	P	P	07 32 03.2	-0.1
	0.1nm,0.7s,baz=275,slow=4.3,SNR=3.5						

IDC 02 07:29:31.2±2.0, 7°.65S×130°.82E, h0km, mb3.4/1, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, MLL3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/25, Error ellipse: s-maj=71.2km s-min=24.0km az=77.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.55	205	Pn	Pn	07 32 15.8	-1.6
	0.8nm,0.3s,baz=37,slow=12,SNR=32						
FITZ				Sn	Sn	07 34 22.3	-5.0
	1.1nm,0.3s,baz=138,slow=19,SNR=8.7						
WRA	Warramunga Arr	12.69	165	Pn	Pn	07 32 33.4	+0.4
	0.3nm,0.3s,baz=348,slow=13,SNR=4.0						
WRA				Sn	Sn	07 34 55.1	0.0
	0.8nm,0.3s,baz=334,slow=22,SNR=8.4						
DAV	Davao City (W)	15.53	340	LR	LR	07 38 24.2	
	comp=Z,44nm,21.7s,baz=42,slow=34						
ASAR	Alice Springs	16.20	170	Pn	Pn	07 33 22.0	+1.7
	0.2nm,0.3s,baz=356,slow=14,SNR=14						
ASAR				Sn	Sn	07 36 23.3	+2.6
	0.3nm,0.3s,baz=354,slow=25,SNR=6.9						
MKAR	Makanchi Array	69.21	327	P	P	07 40 39.9	+0.2
	0.2nm,0.5s,baz=111,slow=7.9,SNR=3.6						

*ISCJB **02** 07:34:57.8±0.3, 24°.13N±0°.02×122°.14E±0°.02, h33km, Error ellipse: s-maj=3.4km s-min=2.3km az=159.1*
*TAP **02** 07:34:57.8, 24°.15N×122°.07E, h46km, ML3.1, C*
*JMA **02** 07:34:57.8±0.3, 24°.26N×122°.14E, h62km, M2.3*

ISC 02 07:34:58.1±0.5, 24°.14N±0°.02×122°.13E±0°.02, h34km±3km, n32, σ0°.59/63, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.46	309	i P	Pb	07 35 08.1	+0.1
	baz=319						
ENA				S	Sb	07 35 15.7	+0.8
	baz=319						
TWD	Chiawan	0.49	263	P	Pb	07 35 08.1	-0.4
	baz=254						
TWD				eS	Sb	07 35 15.5	-0.3
	baz=254						
HWA	Hwalien	0.50	252	eP	Pb	07 35 08.5	-0.3
	baz=242						
HWA				eS	Sb	07 35 16.1	0.0
	baz=242						
TWC	Suao	0.53	332	i P	Pb	07 35 09.0	-0.3
	baz=342						
TWC				S	Sb	07 35 16.7	-0.2
	baz=342						
ESL	Shilin	0.71	243	eP	Pn	07 35 10.9	-0.9
	baz=232						
ESL				eS	Sn	07 35 20.8	-0.8
	baz=232						
ENTT	Nioudou	0.72	314	i P	Pn	07 35 11.6	-0.2
	baz=310						
ENTT				eS	Sn	07 35 21.6	0.0
	baz=310						
TWE	Neicheng	0.72	324	eP	Pn	07 35 11.7	-0.2
	baz=333						
TWE				eS	Sn	07 35 21.8	+0.1
	baz=333						
NNS	Nan Shan	0.75	294	P	Pn	07 35 12.0	-0.3
	baz=294						
NNS				eS	Sn	07 35 22.1	-0.5
	baz=294						
WHF	Hehuan Shan	0.79	271	i P	Pn	07 35 12.1	-0.7
	baz=270						
WHF				S	Sn	07 35 23.4	0.0
	baz=270						
YOJ	Yonaguni jima	0.87	68	P	Pn	07 35 13.7	-0.2
YOJ				eS	Sn	07 35 25.7	+0.3
TWB1	Santiao Chiao	0.88	352	eP	Pn	07 35 13.7	-0.4
	baz=355						
TWB1				eS	Sn	07 35 25.0	-0.7
	baz=355						
TWT	Tachien	0.88	278	eP	Pn	07 35 13.9	-0.1
	baz=267						
TWT				eS	Sn	07 35 25.6	0.0
	baz=267						
NSK	Sanguang	0.88	308	i P	Pn	07 35 13.8	-0.3
	baz=300						
NSK				eS	Sn	07 35 24.8	-1.0
	baz=300						
EHY	Hungye	0.97	230	eP	Pn	07 35 14.8	-0.6
	baz=227						
EHY				eS	Sn	07 35 27.1	-0.8
	baz=227						
TWA	Mucha	0.97	330	P	Pn	07 35 15.7	+0.3
	baz=332						
TWA				eS	Sn	07 35 28.0	0.0
	baz=332						
NWF	Wu-fen Shan	0.98	341	eP	Pn	07 35 15.8	+0.3
	baz=357						
NWF				eS	Sn	07 35 29.0	+0.8
	baz=357						
TWF1	Yuli	1.09	224	eP	Pn	07 35 16.1	-0.9
	baz=234						
TWF1				eS	Sn	07 35 29.9	-1.0
	baz=234						
SMLT	Sun Moon Lake	1.15	258	eP	Pn	07 35 17.9	+0.1
	baz=256						
SMLT				eS	Sn	07 35 32.3	-0.1
	baz=256						
TYC	Yuchr	1.19	259	i P	Pn	07 35 18.2	-0.1
	baz=251						
TYC				eS	Sn	07 35 32.7	-0.6
	baz=251						
TWQ1	Liyutan	1.25	280	eP	Pn	07 35 19.9	+0.7
	baz=280						
TWQ1				eS	Sn	07 35 35.7	+0.7
	baz=280						
YUS	Yu-Shan	1.26	239	i P	Pn	07 35 19.6	+0.4
	baz=237						
YUS				eS	Sn	07 35 34.2	-0.8
	baz=237						
WNT	Mingjian	1.35	259	eP	Pn	07 35 21.4	+0.9
	baz=258						
WNT				eS	Sn	07 35 37.0	-0.1
	baz=258						
ALS	Alishan	1.36	243	eP	Pn	07 35 21.3	+0.6
	baz=233						
ALS				eS	Sn	07 35 38.4	+0.8
	baz=233						
ELDTW	Lidau	1.39	227	eP	Pn	07 35 20.2	-0.9
	baz=225						
CHN5	Tsauling	1.43	248	P	Pn	07 35 22.6	+0.9
	baz=235						
CHN5				eS	Sn	07 35 40.5	+1.1
	baz=235						
IRIF	Iriomote-Funau	1.48	82	P	Pn	07 35 22.2	-0.1
IRIF				eS	Sn	07 35 39.8	-0.6
WTP	Ta-pu	1.65	238	eP	Pn	07 35 25.4	+0.8
	baz=236						
WTP				eS	Sn	07 35 44.8	+0.2
	baz=236						
JKRS	Kuro-shima	1.72	86	P	Pn	07 35 26.3	+0.7
JKRS				eS	Sn	07 35 47.0	+0.6
TWK	Hsinying	1.73	240	eP	Pn	07 35 26.8	+1.0
	baz=238						
TWK				eS	Sn	07 35 48.5	+1.7
	baz=238						
CHN1	Nanshi	1.75	237	eP	Pn	07 35 27.0	+1.0
	baz=235						
CHN1				eS	Sn	07 35 46.9	-0.2
	baz=235						
JIJ	Ishigaki jima	1.85	83	P	Pn	07 35 27.2	-0.2
JIJ				eS	Sn	07 35 49.1	-0.6
JTJ	Tarama	2.40	77	P	Pn	07 35 35.3	+0.3
JTJ				eS	Sn	07 36 03.4	+0.2

*BJI **02** 07:36:04.6, 51°.70N×177°.60W, h6km, mB4.8/7, mb4.7/14, Ms4.6/6, Ms7 4.4/6*
*ISCJB **02** 07:36:05.0±1.1, 51°.75N±0°.07×177°.59W±0°.05, h8km±6km, mb4.2/28, Error ellipse: s-maj=12.7km s-min=5.5km az=171.7*
*NEIC **02** 07:36:06.7±0.6, 51°.68N×177°.58W, h10km, mb4.2/19, ML4.0(AEIC), Error ellipse: s-maj=11.4km s-min=6.8km az=171.0*
*IDC **02** 07:36:06.0±0.9, 52°.02N×177°.71W, h0km, mb4.0/12, mb1 4.2/13, mb1mx3.9/30, mbtmp4.0/13, ML4.7/1, Error ellipse: s-maj=25.1km s-min=18.6km az=167.0*

ISC 02 07:36:06.4±1.2, 51°.75N±0°.07×177°.58W±0°.06, h5km±7km, h13km±1.1km: pP-P, n62, σ1s12/68, mb4.2/28, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	0.57	76	P	Pg	07 36 17.0	-0.5
ADK				S	Sg	07 36 25.4	+0.5
GSTR	Great Sitkin T	1.00	69	ePg	Pg	07 36 24.4	-1.3
ATKA	Atka Island	2.14	76	P	Pn	07 36 41.5	-1.3
ATKA				S	Sn	07 37 10.1	+0.3
SMY	Shemya	5.21	284	P	Pn	07 37 25.3	+0.4
NIKO	Nikolski	5.49	74	P	Pn	07 37 29.6	+0.9
NIKO				S	Sn	07 38 32.4	+0.2
OKFG	Magazine Ridge	6.13	70	P	Pn	07 37 37.6	+0.1
SPIA	Saint Paul Isl	6.92	35	P	Pn	07 37 46.7	-1.6
UNV	Unalaska Valle	7.04	68	P	Pn	07 37 50.3	+0.2
AKGG	Akutan Green G	7.42	66	P	Pn	07 37 54.8	-0.4
OHAK	Old Harbor	15.10	59	eP	Pn	07 39 41.7	+1.5
	106nm,1.4s						
SVW2	Sparrevohn	15.28	44	eP	Pn	07 39 46.6	+4.0
KDAK	Kodiak Island	15.59	57	Pn	Pn	07 39 46.5	-0.1
	3.3nm,0.3s,baz=350,slow=3.4,SNR=13						
KDAK	Kodiak Island	15.59	57	Pn	Pn	07 39 46.5	-0.1
TTA	Tatalina	16.06	37	eP	Pn	07 39 55.7	+3.0
RSO	Redoubt South	16.28	48	eP	Pn	07 39 56.6	+1.1
PPLA	Purkeypile	17.54	41	eP	Pn	07 40 14.2	+2.8
	27nm,0.9s						
CHUM	Lake Minchumin	17.97	38	eP	Pn	07 40 18.1	+1.4
	13nm,0.9s						
BILL	Bilibino	18.13	340	eP	Pn	07 40 19.5	+0.9
	1.8nm,0.6s						
KTH	Kantishna Hill	18.35	40	eP	Pn	07 40 21.5	+0.1
	25nm,0.9s						
TRF	Thorofare Moun	18.56	40	eP	Pn	07 40 24.2	+0.3
	9.4nm,0.8s						
BPAW	Bear Paw Mtn.	18.59	38	eP	Pn	07 40 23.9	-0.4
	2μm,0.6s						
MCK	McKinley	19.23	40	eP	Pn	07 40 32.1	+0.1
	9.7nm,0.9s						
DIV	Divide	19.74	49	eP	Pn	07 40 37.5	-0.7
	8.4nm,0.7s						
COLA	College	20.15	38	eP	P	07 40 40.4	-0.8
	6.4nm,0.8s						
COLD	Coldfoot	20.55	31	eP	P	07 40 47.4	+2.0
	11nm,0.9s						
MENT	Mentasta	21.15	45	eP	P	07 40 52.0	0.0
EGAK	Eagle	22.77	41	eP	P	07 41 08.4	-0.8
	8.1nm,0.8s,mb4.2						
DAWY	Dawson	23.32	43	eP	P	07 41 15.1	0.0
INK	Inuvik	26.72	35	P	P	07 41 45.7	-0.6
	3.2nm,0.7s,mb3.9,baz=244,slow=8.9,SNR=21						
INK	Inuvik	26.72	35	eP	P	07 41 45.8	-0.5
	4.7nm,1.0s,mb4.0						
YKA	Yellowknife Ar	34.43	47	P	P	07 42 53.0	-1.3
	0.4nm,0.6s,mb3.5,baz=285,slow=8.5,SNR=8.6						
YKA	Yellowknife Ar	34.43	47	P	P	07 42 53.0	-1.3
MDJ	Mudanjiang	35.26	280	P	P	07 43 00.6	-1.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,14nm,2.8s,mb4.4						
HAWA	Hanford	37.53	75	eP	P	07 43 21.1	0.0
RES	Resolute Bay	39.09	25	eP	P	07 43 33.4	-0.6
	comp=Z,1.3nm,0.9s,mb3.7						
WVOR	Wild Horse Val	40.18	79	eP	P	07 43 43.0	-0.3
	comp=Z,2.8nm,0.7s,mb4.1						
HLID	Hailey	42.11	75	eP	P	07 43 59.8	+0.5
	comp=Z,2.1nm,1.0s,mb3.7						
MCMT	McKenzie Canyo	42.34	73	eP	P	07 44 00.7	-0.4
NVAR	Mina Array Bea	42.75	84	P	P	07 44 05.2	+0.7
	comp=Z,0.8nm,0.7s,mb3.5,baz=288,slow=7.8,SNR=7.1						
KWAJ	Kwajalein Atol	44.51	201	eP	P	07 44 17.6	-1.2
	comp=Z,80nm,0.6s						
BW06	Boulder Array	45.47	73	eP	P	07 44 25.4	-0.9
	comp=Z,3.0nm,0.7s,mb4.2						
PDAR	Pinedale Array	45.47	73	P	P	07 44 25.9	-0.4
	comp=Z,2.6nm,0.6s,mb4.2,baz=314,slow=4.6,SNR=11						
HHC	Hu-ho-hao-te	48.32	286	eP	P	07 44 49.8	+1.3
HHC				pP	pP	07 44 54.4	+4.4
HHC				sP	sP	07 44 56.8	+6.2
HHC				PcP	PcP	07 46 16.0	+0.8
HHC				PP	PP	07 46 42.4	+1.6
HHC				ScP	ScP	07 50 09.3	-1.0
HHC				S	S	07 51 48.7	-0.1
HHC				sS	sS	07 51 56.3	+5.0
HHC				ScS	ScS	07 54 39.4	-2.5
HHC				SS	SS	07 55 13.3	-4.5
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC				LR	LR		
	comp=N,110nm,15.2s						
HHC				LR	LR		
	comp=E,170nm,15.2s						
HHC				LR	LR		
	comp=Z,97nm,14.5s						
WUAZ	Wupatki	48.88	82	eP	P	07 44 53.6	+0.7
	comp=Z,3.0nm,0.6s,mb4.5						
SPITS	Spitsbergen Ar	50.06	356	P	P	07 45 00.3	-1.1
	comp=Z,4.4nm,0.7s,mb4.6,baz=35,slow=7.1,SNR=4.5						
SDCO	Great Sand Dun	51.02	76	eP	P	07 45 08.4	-0.8
	comp=Z,1.6nm,0.8s,mb4.0						
XAN	Xi'an	54.33	281	P	P	07 45 33.1	-0.7
XAN				pP	pP	07 45 36.3	+1.0
XAN				sP	sP	07 45 37.6	+1.8
XAN				PP	PP	07 47 35.0	-0.4
XAN				S	S	07 53 11.5	-0.6
XAN				SS	SS	07 56 54.9	+1.2
XAN				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
XAN				pmax	pmax		
	comp=Z,19nm,5.1s						
LZH	Lanzhou	56.01	287	eP	P	07 45 48.0	+2.2
LZH				pP	pP	07 45 51.0	+3.7
LZH				sP	sP	07 45 52.5	+4.6
LZH				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
GTA	Gaotai	56.13	292	eP	P	07 45 52.9	+6.2
GTA				pP	pP	07 45 56.6	+8.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TXAR	Lajitas Array	57.85	82	P	P	07 45 59.9	+0.9
	comp=Z,0.8nm,0.7s,mb3.8,baz=304,slow=5.0,SNR=7.3						
ARCES	ARCESS Array B	57.86	351	P	P	07 45 56.9	-1.5
	comp=Z,1.9nm,0.7s,mb4.2,baz=42,slow=15,SNR=4.5						
CD2	Chengdu	59.64	282	P	P	07 46 13.4	+2.0
CD2				pP	pP	07 46 18.0	+5.1
CD2				sP	sP	07 46 20.4	+6.9
CD2				PcP	PcP	07 47 00.4	+1.9
CD2				PP	PP	07 48 26.9	+4.2
CD2				S	S	07 54 21.4	-0.8
CD2				sS	sS	07 54 29.0	+4.3
CD2				SS	SS	07 58 18.1	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,170nm,6.4s						
CD2				LR	LR		
	comp=N,260nm,5.7s						
CD2				LR	LR		
	comp=Z,210nm,6.1s						
WMQ	Urumqi	59.78	303	eP	P	07 46 15.7	+3.5
GYA	Guiyang	61.04	277	eP	P	07 46 21.8	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
BVAR	Borovoye Array	61.10	320	P	P	07 46 20.0	-1.1
	comp=Z,1.1nm,0.7s,mb4.1,baz=17,slow=6.0,SNR=4.5						
ARU	Arti	62.69	329	eP	P	07 46 33.9	+2.2
	comp=Z,5.2nm,0.6s,mb4.8						
KMI	Kunming	64.43	279	P	P	07 46 44.5	+0.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
FINES	FINESS Array B	65.59	348	P	P	07 46 48.0	-2.6
	comp=Z,1.1nm,0.6s,mb4.1,baz=358,slow=9.5,SNR=4.9						
AKTK	Aktyubinsk	67.82	325	P	P	07 47 03.2	-1.9
AKTO	Aktyubinsk	67.82	325	P	P	07 47 03.2	-1.9
	comp=Z,0.9nm,0.5s,mb4.0,baz=27,slow=6.8,SNR=3.1				

*NNC **02** 07:37:14.9±5.9, 37.°02N×69.°92E, h230km±82km, mb2.3, mpv3.4, Error ellipse: s-maj=80.0km s-min=33.9km az=44.0*

ISC 02 07:37:09.4±0.8, 36.°51N±0.°06×69.°8E±0.°2, h218km±17km, n19, σ1°02/22, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.18**	**147**	P	**Pn**	**07 38 03.1**	**+1.0**
CEP				S	**S**	**07 38 43.0**	**-0.4**
SARP	**Sargodha**	**5.15**	**152**	P	**Pn**	**07 38 25.6**	**-0.6**
AML	**Almayashu** SNR=13	**6.37**	**27**	P	**Pn**	**07 38 41.6**	**+0.1**
KK31	**Karatay Array** 0.8nm,0.3s,baz=193,slow=14,SNR=19	**6.61**	**4**	⇑P	**Pn**	**07 38 43.9**	**-0.7**
KK31	1.7nm,0.4s			⇑S	**S**	**07 39 55.0**	**-5.4**
UCH	**Uchtor** SNR=21	**6.77**	**31**	P	**Pn**	**07 38 47.2**	**+0.5**
KZA	**Kyzart** SNR=7.0	**6.97**	**35**	P	**Pn**	**07 38 49.8**	**+0.6**
AAK	**Ala-Archa** SNR=16	**7.10**	**29**	P	**Pn**	**07 38 51.4**	**+0.4**
AAK	**Ala-Archa** 0.1nm,0.3s,baz=170,slow=5.7,SNR=34	**7.10**	**29**	P	**Pn**	**07 38 51.3**	**+0.4**
AAK	0.0nm,0.3s,baz=326,slow=22,SNR=8.6			S	**S**	**07 40 10.1**	**-1.8**
KBK	**Karagaybulak** SNR=8.0	**7.30**	**31**	P	**Pn**	**07 38 54.4**	**+0.9**
TKM2	**Tokmak 2** 1.7nm,0.4s	**7.79**	**33**	⇑P	**Pn**	**07 38 59.4**	**-0.4**
TKM2	**Tokmak 2** SNR=7.0	**7.79**	**33**	P	**Pn**	**07 38 60.0**	**+0.1**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=218,slow=7.7,SNR=4.3	**13.85**	**38**	P	**Pn**	**07 40 17.3**	**+0.6**
AB31	**Akbulak array** 1.1nm,0.5s,baz=152,slow=13,SNR=26	**14.64**	**334**	⇓P	**Pn**	**07 40 26.2**	**0.0**
KURK	**Kurchatov** 0.1nm,0.3s,baz=217,slow=9.1,SNR=8.3	**15.55**	**21**	P	**Pn**	**07 40 35.4**	**-1.8**
AKTO	**Aktyubinsk** 0.3nm,0.8s	**16.32**	**332**	⇓P	**P**	**07 40 45.7**	**+0.2**
AKTO	**Aktyubinsk** 0.4nm,0.3s,baz=148,slow=14,SNR=8.0	**16.32**	**332**	P	**P**	**07 40 46.9**	**+1.5**
BVAR	**Borovoye Array** 0.6nm,0.3s,baz=172,slow=11,SNR=6.4	**16.52**	**1**	P	**P**	**07 40 50.6**	**+3.0**
ZALV	**Zalesovo Beam** 0.8nm,0.3s,baz=224,slow=10,SNR=3.7	**20.31**	**26**	P	**P**	**07 41 28.9**	**+0.3**
TORD	**Torodi Ar. Bea** 0.2nm,0.4s,baz=79,slow=5.2,SNR=2.5	**64.77**	**268**	P	**P**	**07 47 23.2**	**-1.8**

*HLW **02** 07:40:27.8, 35.°20N×23.°58E, h33km±46km, Ml3.3*
*ISCJB **02** 07:40:29.5±0.9, 34.°85N±0.°06×23.°5E±0.°1, h90km±10km, Error ellipse: s-maj=19.5km s-min=8.1km az=160.7*
*ATH **02** 07:40:29.9, 34.°94N×23.°21E, h30km±1km, MD3.5/4*
*NEIC **02** 07:40:29.9, 34.°94N×23.°21E, h30km, MD3.5(ATH), After ATH.*
*CSEM **02** 07:40:30.4±0.7, 34.°83N×23.°29E, h30km, MD3.5, Error ellipse: s-maj=19.4km s-min=10.1km az=81.0*

ISC 02 07:40:30.6±0.9, 34.°85N±0.°06×23.°4E±0.°1, h79km±14km, n23, σ1°15/33, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.56**	**91**	*e*PN	**Pn**	**07 40 44.6**	**-0.2**
GVD				*e*SN	**Sn**	**07 40 55.5**	**+0.1**
GVD	**Gavdhos**	**0.56**	**91**	*e*Pn	**Pn**	**07 40 44.6**	**-0.2**
GVD				*e*Sn	**Sn**	**07 40 55.5**	**+0.1**
KARN	**Karanos**	**0.69**	**38**	*e*PN	**Pn**	**07 40 44.6**	**-1.5**
KARN	**Karanos**	**0.69**	**38**	*e*Pn	**Pn**	**07 40 44.6**	**-1.5**
VAM	**Vamos**	**0.86**	**50**	*e*PN	**Pn**	**07 40 47.8**	**-0.1**
VAM				*e*SN	**Sn**	**07 41 01.6**	**+0.8**
VAM	**Vamos**	**0.86**	**50**	*e*Pn	**Pn**	**07 40 47.8**	**-0.1**
VAM				*e*Sn	**Sn**	**07 41 01.6**	**+0.8**
KYTH	**Kithira**	**1.46**	**348**	*e*PN	**Pn**	**07 40 54.6**	**-0.7**
KYTH	**Kithira**	**1.46**	**348**	*e*Pn	**Pn**	**07 40 54.6**	**-0.7**
NPS	**Neapolis**	**1.86**	**77**	*e*PN	**Pn**	**07 41 02.9**	**+2.3**
NPS	**Neapolis**	**1.86**	**77**	*e*Pn	**Pn**	**07 41 02.9**	**+2.3**
VLI	**Veliai**	**1.90**	**349**	*e*PN	**Pn**	**07 41 00.6**	**-0.5**
VLI	**Veliai**	**1.90**	**349**	*e*Pn	**Pn**	**07 41 00.6**	**-0.5**
SLUM	baz=159	**3.68**	**155**	P	**Pn**	**07 41 26.9**	**+1.7**
SLUM	baz=159			S	**Sn**	**07 42 07.3**	**-0.1**
SLUM		**3.68**	**155**	P	**Pn**	**07 41 26.9**	**+1.7**
SLUM				S	**Sn**	**07 42 07.3**	**-0.1**
HMAT	**Matruh** baz=143	**4.87**	**139**	P	**Pn**	**07 41 42.0**	**+0.6**
HMAT	baz=143			S	**Sn**	**07 42 34.3**	**-2.1**
HMAT	**Matruh**	**4.87**	**139**	P	**Pn**	**07 41 42.0**	**+0.6**
HMAT				S	**Sn**	**07 42 34.3**	**-2.1**
SWA2	baz=164	**5.86**	**162**	P	**Pn**	**07 41 56.8**	**+1.9**
SWA2	baz=164			S	**Sn**	**07 42 59.4**	**-1.3**
SWA2	comp=N,20μm,0.2s,logA/T=4.9,baz=164			AMP		07 43 00.0	
SWA2		**5.86**	**162**	P	**Pn**	**07 41 56.8**	**+1.9**
SWA2				S	**Sn**	**07 42 59.4**	**-1.3**
HFRF	**Wahat Farafira** baz=152	**8.76**	**150**	P	**Pn**	**07 42 35.6**	**+1.1**
HFRF	**Wahat Farafira**	**8.76**	**150**	P	**Pn**	**07 42 35.6**	**+1.1**
RSH		**9.51**	**111**	P	**Pn**	**07 42 43.8**	**-0.9**
HNKL	**Nakhl** baz=118	**10.20**	**116**	P	**Pn**	**07 42 53.5**	**-0.7**
HNKL	**Nakhl**	**10.20**	**116**	P	**Pn**	**07 42 53.5**	**-0.6**

*ISCJB **02** 07:44:01.5±0.5, 11.°07N±0.°04×87.°15W±0.°03, h10km, mb3.9/13, Error ellipse: s-maj=6.6km s-min=3.5km az=29.7*
*IDC **02** 07:44:03.9±0.8, 12.°03N×86.°36W, h0km, mb3.7/5, mb1 4.1/7, mb1mx3.8/21, mbtmp3.8/7, ML3.2/3, Error ellipse: s-maj=58.0km s-min=11.6km az=52.0*
*CASC **02** 07:44:05.5±3.9, 11.°32N×87.°09W, h5km±14km, MD4.2, ML4.0, mb4.0(NEIC)*
*NEIC **02** 07:44:06.7±1.1, 11.°32N×86.°91W, h35km, mb4.0/7, Error ellipse: s-maj=29.3km s-min=11.5km az=216.0*

ISC 02 07:44:03.1±0.5, 11.°15N±0.°04×87.°05W±0.°03, h10km, n70, σ1°03/75, mb3.9/13, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**1.10**	**42**	*e*P	**Pg**	**07 44 25.2**	**+0.8**
COPN	**Copaltepe**	**1.11**	**24**	*e*P	**Pg**	**07 44 24.7**	**+0.1**
SSN	**San Juan del S**	**1.18**	**83**	*e*P	**Pn**	**07 44 25.5**	**-0.2**
SSN				*e*S	**Sb**	**07 44 42.8**	**+1.7**
TICN	**Ticuantepe**	**1.19**	**42**	*e*P	**Pb**	**07 44 25.5**	**-0.3**
CSAN		**1.19**	**31**	*e*P	**Pb**	**07 44 25.5**	**-0.4**
MASN	**Masaya**	**1.21**	**47**	*e*P	**Pb**	**07 44 25.7**	**-0.5**
XAVN	**Gruta Xavier**	**1.22**	**36**	*e*P	**Pb**	**07 44 26.0**	**-0.3**
APON	**Apoyo**	**1.23**	**52**	*e*P	**Pb**	**07 44 26.3**	**-0.1**
MGAN	**Managua**	**1.26**	**38**	*e*P	**Pn**	**07 44 26.6**	**-0.2**
MGAN				*e*S	**Sb**	**07 44 46.1**	**+2.8**
APYN	**Apoyeque**	**1.27**	**32**	*e*P	**Pn**	**07 44 27.0**	**0.0**
WILN	**Americas 2**	**1.31**	**40**	*e*P	**Pn**	**07 44 27.1**	**-0.4**
MIRN	**Miramar**	**1.32**	**14**	*e*P	**Pn**	**07 44 27.4**	**-0.3**
MOMN	**Momotombo**	**1.34**	**22**	*e*P	**Pn**	**07 44 28.2**	**+0.2**
CNGN	**Cerro Negro**	**1.38**	**14**	*e*P	**Pn**	**07 44 28.1**	**-0.4**
CONN	**Concepcion**	**1.46**	**74**	*e*P	**Pn**	**07 44 29.1**	**-0.4**
HUEN		**1.46**	**36**	*e*P	**Pn**	**07 44 29.2**	**-0.3**
TELN	**Telica**	**1.46**	**8**	*e*P	**Pn**	**07 44 29.8**	**+0.3**
CRIN	**San Cristobal**	**1.54**	**0**	*e*P	**Pn**	**07 44 30.6**	**-0.1**
CRIN	comp=N,3μm,0.3s			AML	AML	07 45 00.9	
NY14	**Universidad de**	**1.57**	**108**	*i* P	**Pn**	**07 44 31.0**	**-0.1**
LAPC	**Finca la Perla**	**1.63**	**103**	*i* P	**Pn**	**07 44 31.8**	**-0.1**
LAPC				*i* S	**Sn**	**07 45 00.2**	**+7.1**
GB1A	**Borinquen Arri**	**1.66**	**101**	*i* P	**Pn**	**07 44 32.1**	**-0.1**
GPS3	**Bodega del ICE**	**1.70**	**103**	*i* P	**Pn**	**07 44 33.1**	**+0.2**
VCR	**Vista de Mar**	**1.73**	**126**	*e*P	**Pn**	**07 44 42.5**	**+9.3**
LIM1	**Limonal**	**1.82**	**104**	*i* P	**Pn**	**07 44 34.0**	**-0.5**
BOAB	**BOACO BROADBAN**	**1.87**	**46**	*e*P	**Pn**	**07 44 34.5**	**-0.7**
CHPA	**Chiripa**	**2.22**	**108**	*i* P	**Pn**	**07 44 41.3**	**+1.3**
JTS	**JuntasAbangare** comp=N,3.8nm,0.3s,baz=317,slow=20,SNR=44	**2.23**	**112**	Pn	**Pn**	**07 44 40.3**	**+0.1**
JTS	comp=N,39nm,0.3s,baz=324,slow=14,SNR=134			Pg	**Pg**	**07 44 44.2**	**-1.8**
JTS	comp=N,29nm,0.3s,baz=265,slow=20,SNR=6.8			Lg		07 45 17.2	
JTS	**JuntasAbangare**	**2.23**	**112**	*e*Pn	**Pn**	**07 44 40.4**	**+0.2**
JTS				Lg		07 45 17.2	
CNCH	**Conchagua**	**2.25**	**340**	*e*P	**Pn**	**07 44 40.6**	**+0.2**
JCR	**Jicaral**	**2.31**	**124**	*e*P	**Pn**	**07 44 47.3**	**+6.1**
FORC	**Fortuna**	**2.44**	**106**	*e*P	**Pn**	**07 44 47.9**	**+4.9**
BLLM	**Bellamira**	**2.55**	**333**	*e*P	**Pn**	**07 44 44.8**	**+0.1**
BLLM				*e*S	**Sn**	**07 45 15.3**	**-0.4**
VSM	**San Miguel**	**2.56**	**332**	*e*P	**Pn**	**07 44 45.9**	**+1.2**
CAHU	**Cacacuatique**	**2.84**	**337**	*e*P	**Pn**	**07 44 49.7**	**+1.2**
CAHU				*e*S	**Sn**	**07 45 24.8**	**+2.0**
TGUH	**Tegucigalpa,Un**	**2.89**	**356**	*e*Pn	**Pn**	**07 44 49.9**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.89**	**356**	*e*P	**Pn**	**07 44 49.9**	**+0.6**
PRS1	**Puriscal**	**2.93**	**113**	*e*P	**Pn**	**07 44 54.9**	**+5.1**
LFRS	**El Faro**	**3.15**	**322**	*e*P	**Pn**	**07 44 53.2**	**+0.5**
LFRS				*e*S	**Sn**	**07 45 27.8**	**-2.6**
LAJ	**Bijagual**	**3.15**	**114**	*e*P	**Pn**	**07 44 51.3**	**-1.5**
LBRS	**Las Brisas**	**3.22**	**323**	*e*P	**Pn**	**07 44 54.5**	**+0.6**
LCR2	**La Lucha 2**	**3.31**	**115**	*e*P	**Pn**	**07 45 00.0**	**+5.0**
QCR	**Quepos**	**3.32**	**121**	*e*P	**Pn**	**07 45 03.4**	**+8.2**
URSC	**Urasca**	**3.47**	**112**	*e*P	**Pn**	**07 44 59.4**	**+2.1**
BUS	**Buena Vista**	**3.61**	**116**	*e*P	**Pn**	**07 45 05.7**	**+6.5**
RBDL	**Robledal**	**3.91**	**319**	*e*P	**Pn**	**07 45 04.8**	**+1.5**
BAR1		**4.14**	**117**	*e*P	**Pn**	**07 45 11.9**	**+5.5**
APG	**El Apazote** comp=N,0.3nm,0.3s,baz=167,slow=14,SNR=3.5	**5.07**	**319**	Pn	**Pn**	**07 45 19.7**	**+0.4**
CMIG	**Matias Romero** comp=N,1.0nm,0.3s,baz=125,slow=7.9,SNR=12	**9.62**	**309**	Pn	**Pn**	**07 46 23.4**	**+1.7**
SDV	**Santo Domingo** comp=N,0.1nm,0.3s,baz=292,slow=9.6,SNR=3.0	**16.32**	**96**	Pn	**Pn**	**07 47 53.0**	**+0.4**
SDV	**Santo Domingo**	**16.32**	**96**	Pn	**Pn**	**07 47 53.0**	**+0.4**
LRAL	**Lakeview Retre** comp=N,3.0nm,0.6s,mb3.9	**21.78**	**0**	*e*P	**P**	**07 48 54.8**	**-0.4**
TXAR	**Lajitas Array** comp=N,1.3nm,0.6s,mb3.5,baz=133,slow=9.8,SNR=13	**23.82**	**322**	P	**P**	**07 49 16.8**	**+0.3**
TXAR	comp=N,0.7nm,0.8s,baz=151,slow=5.7,SNR=4.5			PcP	PcP	07 53 02.2	+2.4
TXAR	**Lajitas Array**	**23.82**	**322**	P	**P**	**07 49 16.8**	**+0.3**
TXAR				PcP	PcP	07 53 02.2	+2.4
MIAR	**Mount Ida** comp=N,7.4nm,0.8s,mb4.2	**24.03**	**347**	*e*P	**P**	**07 49 16.0**	**-2.3**
CPCT	**Cooper Cave**	**24.30**	**5**	*e*P	**P**	**07 49 19.9**	**-0.9**
TKL	**Tuckaleechee C** comp=N,4.0nm,0.6s,mb4.1,baz=174,slow=12,SNR=6.8	**24.57**	**6**	P	**P**	**07 49 21.9**	**-1.4**
WMOK	**Wichita Mounta** comp=N,2.1nm,0.7s,mb3.8	**25.80**	**337**	*e*P	**P**	**07 49 33.8**	**-0.6**
CPRX	**Cap Rock** comp=N,1.9nm,0.7s,mb3.7	**26.70**	**327**	*e*P	**P**	**07 49 41.2**	**-1.4**
SDCO	**Great Sand Dun** comp=N,0.9nm,0.7s,mb3.7	**31.23**	**331**	*e*P	**P**	**07 50 23.2**	**+0.3**
ECSD	**EROS Data Cent** comp=N,4.3nm,0.9s,mb4.4	**33.50**	**347**	*e*P	**P**	**07 50 38.8**	**-3.9**
PDAR	**Pinedale Array** comp=N,0.9nm,0.6s,mb3.8,baz=124,slow=10,SNR=10	**37.09**	**332**	P	**P**	**07 51 13.1**	**-0.6**
PDAR	comp=N,0.3nm,0.6s,baz=91,slow=4.5,SNR=3.7			PcP	PcP	07 53 34.4	+0.3
HWUT	**Hardware Ranch** comp=N,2.5nm,0.6s,mb4.2	**37.18**	**329**	*e*P	**P**	**07 51 14.2**	**-0.3**
NVAR	**Mina Array Bea** comp=N,0.5nm,0.7s,mb3.3,baz=141,slow=6.5,SNR=4.8	**38.93**	**320**	P	**P**	**07 51 31.9**	**+2.7**
NVAR	comp=N,0.4nm,0.7s,baz=118,slow=3.7,SNR=3.9			PcP	PcP	07 53 41.0	+1.1
NVAR	**Mina Array Bea**	**38.93**	**320**	P	**P**	**07 51 31.9**	**+2.6**
NVAR				PcP	PcP	07 53 41.0	+1.0
ULM	**Lac du Bonnet** comp=N,3.5nm,0.8s,mb4.1,baz=174,slow=8.4,SNR=8.0	**39.65**	**351**	P	**P**	**07 51 31.3**	**-3.8**
ULM	**Lac du Bonnet**	**39.65**	**351**	P	**P**	**07 51 31.3**	**-3.8**
YKA	**Yellowknife Ar** comp=N,0.8nm,0.8s,mb3.8,baz=139,slow=7.5,SNR=21	**54.96**	**345**	P	**P**	**07 53 31.8**	**-2.3**
YKA	comp=N,0.2nm,0.5s,baz=146,slow=3.8,SNR=8.1			PcP	PcP	07 54 34.9	-1.0
YKA	**Yellowknife Ar**	**54.96**	**345**	P	**P**	**07 53 31.8**	**-2.3**
YKA				PcP	PcP	07 54 34.9	-1.0
KURK	**Kurchatov** comp=N,0.2nm,0.6s,baz=352,slow=1.8,SNR=2.4	**117.14**	**10**	PKP	PKPdf	08 02 47.6	-1.0
WRA	**Warramunga Arr** comp=N,0.5nm,0.7s,baz=92,slow=2.6,SNR=4.2	**139.27**	**252**	PKP	PKPdf	08 03 34.8	+3.4

DHMR 02 07:51:40.5±0.8, 12.°05N×43.°18E, h3km±41km, ML3.7, 1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZUQR	**Zugar Island**	**1.97**	**348**	⇓*i* P	Pn	07 52 15.3	+0.5
ZUQR				*i* S	Sn	07 52 43.5	+3.4
ZUQR	comp=N,746nm,0.3s			AML	AML	07 52 53.4	
LBOS		**2.71**	**48**	*i* P	Pn	07 52 28.0	+3.0
LBOS				*i* S	Sn	07 53 04.6	+6.4
DHBB	**Dhamar BB**	**2.77**	**25**	*i* P	Pn	07 52 29.1	+3.3
DHBB				*i* S	Sn	07 53 06.3	+6.5

*DDA **02** 08:03:17.7, 37.°10N×29.°73E, h7km±2km, Md3.1*
*ISK **02** 08:03:19.7, 36.°97N×29.°35E, h6km, MD3.0*
*ISCJB **02** 08:03:20.2±0.5, 36.°97N±0.°03×29.°37E±0.°03, h6km±5km, Error ellipse: s-maj=4.9km s-min=4.4km az=160.0*
*CSEM **02** 08:03:20.1±0.1, 36.°97N×29.°35E, h5km, MD3.0, Error ellipse: s-maj=2.8km s-min=2.4km az=176.0*

ISC 02 08:03:20.4±0.5, 36.°98N±0.°03×29.°35E±0.°03, h5km±5km, n44, σ0°65/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.21**	**34**	*e*PG	**Pg**	**08 03 24.6**	**-0.1**
GLHS				*e*SG	**Sg**	**08 03 28.5**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.21**	**34**	*e*Pg	**Pg**	**08 03 24.6**	**0.0**
GLHS				*e*Sg	**Sg**	**08 03 28.5**	**+1.0**
FETY	**Fethiye**	**0.40**	**212**	*e*PG	**Pg**	**08 03 27.5**	**-0.7**
FETY				*e*SG	**Sg**	**08 03 34.2**	**+0.7**
FETY	**Fethiye**	**0.40**	**212**	*e*Pg	**Pg**	**08 03 27.5**	**-0.7**
FETY				*e*Sg	**Sg**	**08 03 34.2**	**+0.8**
ELL	**Elmali**	**0.50**	**117**	*e*PG	**Pg**	**08 03 29.7**	**-0.4**
ELL				*e*SG	**Sg**	**08 03 37.2**	**+0.5**
ELL	**Elmali**	**0.50**	**117**	*e*Pg	**Pg**	**08 03 29.7**	**-0.4**
ELL				*e*Sg	**Sg**	**08 03 37.2**	**+0.5**
TURN	**Turunc**	**0.61**	**260**	*i* P	**Pg**	**08 03 35.8**	**+3.7**
TURN				*i* S	**Sg**	**08 03 49.1**	**+9.1**
TURN	**Turunc**	**0.61**	**260**	*i* P	**Pg**	**08 03 35.8**	**+3.7**
AKAS	**Kas**	**0.77**	**164**	*i* P	**Pg**	**08 03 34.3**	**-0.9**
AKAS				*i* S	**Sg**	**08 03 45.4**	**+0.2**
AKAS	**Kas**	**0.77**	**164**	*i* P	**Pg**	**08 03 34.3**	**-0.9**
AKAS				*i* S	**Sg**	**08 03 45.4**	**+0.2**
DENT	**Denizli**	**0.81**	**342**	*e*PG	**Pg**	**08 03 35.6**	**-0.4**
DENT	**Denizli**	**0.81**	**342**	*e*Pg	**Pg**	**08 03 35.6**	**-0.5**
YER	**Yerkesik**	**0.87**	**281**	*e*PG	**Pg**	**08 03 36.9**	**-0.2**
YER	**Yerkesik**	**0.87**	**281**	*e*Pg	**Pg**	**08 03 36.9**	**-0.2**
BCK	**Bucak**	**1.10**	**64**	*e*PN	**Pn**	**08 03 41.1**	**-1.4**
BCK	**Bucak**	**1.10**	**64**	*e*Pn	**Pn**	**08 03 41.1**	**-1.4**
ISP	**Isparta**	**1.27**	**47**	*e*PN	**Pn**	**08 03 45.1**	**+0.3**
ISP	**Isparta**	**1.27**	**47**	*e*Pn	**Pn**	**08 03 45.1**	**+0.4**
MLSB	**Milas**	**1.30**	**285**	*e*PN	**Pn**	**08 03 44.8**	**-0.3**
MLSB	**Milas**	**1.30**	**285**	*e*Pn	**Pn**	**08 03 44.8**	**-0.4**
KHL	**Karahalli**	**1.35**	**6**	*e*PN	**Pn**	**08 03 45.5**	**-0.4**
KHL	**Karahalli**	**1.35**	**6**	*e*Pn	**Pn**	**08 03 45.5**	**-0.4**
AYDN	**Tasoluk**	**1.35**	**301**	*i* P	**Pn**	**08 03 45.8**	**-0.2**
AYDN				*i* S	**Sb**	**08 04 03.4**	**-0.5**
AYDN	**Tasoluk**	**1.35**	**301**	*i* P	**Pn**	**08 03 45.8**	**-0.2**
AYDN				*i* S	**Sb**	**08 04 03.4**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.41**	**69**	*e*PN	**Pn**	**08 03 46.9**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.41**	**69**	*e*Pn	**Pn**	**08 03 46.9**	**+0.2**
DAT	**Datca**	**1.44**	**261**	*e*PN	**Pn**	**08 03 47.3**	**+0.1**
DAT	**Datca**	**1.44**	**261**	*e*Pn	**Pn**	**08 03 47.3**	**+0.1**
BDRM	**Kayabasi**	**1.53**	**274**	*i* P	**Pn**	**08 03 48.0**	**-0.4**
BDRM				*i* S	**Sn**	**08 04 10.4**	**+1.9**
BDRM	**Kayabasi**	**1.53**	**274**	*i* P	**Pn**	**08 03 48.0**	**-0.3**
BDRM				*i* S	**Sn**	**08 04 10.4**	**+1.8**
KULA	**Kula-Manisa**	**1.63**	**341**	*e*PN	**Pn**	**08 03 49.6**	**-0.1**
KULA	**Kula-Manisa**	**1.63**	**341**	*e*Pn	**Pn**	**08 03 49.6**	**-0.1**
BODT	**Bodrum**	**1.63**	**274**	*e*PN	**Pn**	**08 03 49.5**	**-0.3**
BODT	**Bodrum**	**1.63**	**274**	*e*Pn	**Pn**	**08 03 49.5**	**-0.3**
ALT	**Altintas**	**2.16**	**16**	*e*PN	**Pn**	**08 03 56.8**	**-0.2**
ALT	**Altintas**	**2.16**	**16**	*e*Pn	**Pn**	**08 03 56.8**	**-0.2**
BLCB	**Balcova**	**2.31**	**308**	*e*PN	**Pn**	**08 03 59.3**	**+0.2**
BLCB	**Balcova**	**2.31**	**308**	*e*Pn	**Pn**	**08 03 59.3**	**+0.2**
HDMB	**Hadim**	**2.51**	**89**	*e*PN	**Pn**	**08 04 02.0**	**+0.1**
HDMB	**Hadim**	**2.51**	**89**	*e*Pn	**Pn**	**08 04 02.0**	**+0.1**
KONT	**Konya--Tatoy**	**2.58**	**67**	*e*PN	**Pn**	**08 04 03.4**	**+0.5**
KONT	**Konya--Tatoy**	**2.58**	**67**	*e*Pn	**Pn**	**08 04 03.4**	**+0.5**
KIZT	**Kizilcal**	**2.76**	**46**	*e*PN	**Pn**	**08 04 05.8**	**+0.5**
KIZT	**Kizilcal**	**2.76**	**46**	*e*Pn	**Pn**	**08 04 05.8**	**+0.5**

ISC 02 08:18:57.1±0.8, 51.°27N±0.°10×7.°99E±0.°05, h0km, n8, σ0°94/10, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTSB	**Winterswijk** 10nm,0.7s	**1.02**	**314**	*e*Pg	**Pg**	**08 19 16.3**	**-0.4**
HGN	**Heimansgroeve** 13nm,0.2s	**1.40**	**250**	*e*Pg	**Pg**	**08 19 23.5**	**-0.4**
HGN				*e*Sg	**Sg**	**08 19 42.6**	**+0.7**
MEM	**Membach**	**1.42**	**243**	P	**Pn**	**08 19 24.1**	**-0.1**
BCLA	**Clavier**	**1.91**	**245**	P	**Pg**	**08 19 32.8**	**-0.8**
MOX	**Moxa**	**2.37**	**104**	*e*PG	**Pn**	**08 19 38.0**	**+0.7**
MOX				*e*SG	**Sg**	**08 20 13.0**	**-0.3**
DOU	**Dourbes**	**2.46**	**243**	P	**Pn**	**08 19 39.0**	**+0.5**
CLL	**Collm** comp=Z,8.0nm,0.9s	**3.15**	**87**	*e*Sg	**Sg**	**08 20 40.0**	**+1.9**
BRG	**Berggiesshubel** comp=Z,3.7nm,0.8s	**3.77**	**94**	SG	**Sg**	**08 20 56.4**	**-1.9**

IDC 02 09:24:37.8±1.4, 3.°31S×148.°04E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/16, mbtmp4.0/4, MS3.5/9, Ms1 3.5/9, ms1mx3.1/23, Error ellipse: s-maj=78.0km s-min=27.5km az=133.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** comp=Z,136nm,21.0s,baz=329,slow=30	**17.08**	**349**	LR	LR	09 33 14.5	
WRA	**Warramunga Arr** 2.3nm,0.8s,baz=44,slow=11,SNR=18	**21.26**	**218**	P	P	09 29 25.8	0.0
WRA	comp=Z,143nm,19.2s,baz=320,slow=39			LR	LR	09 38 24.7	
ASAR	**Alice Springs** 1.8nm,0.6s,baz=37,slow=7.1,SNR=46	**24.42**	**213**	P	P	09 29 59.1	+0.9
FITZ	**Fitzroy Crossi** 3.1nm,0.7s,baz=66,slow=5.4,SNR=8.8	**26.41**	**235**	P	P	09 30 15.6	-0.7
FITZ	comp=Z,116nm,21.9s,baz=47,slow=38			LR	LR	09 41 30.0	
STKA	**Stephens Creek** comp=Z,128nm,18.9s,baz=24,slow=37	**29.06**	**191**	LR	LR	09 42 37.5	
JOW	**Kunigami** comp=Z,63nm,18.4s,baz=101,slow=32	**35.53**	**329**	LR	LR	09 43 44.8	
KSRS	**Korea Array** comp=Z,26nm,18.7s,baz=148,slow=33	**44.66**	**337**	LR	LR	09 48 53.8	
MKAR	**Makanchi Array** comp=Z,28nm,20.2s,baz=355,slow=34	**76.11**	**320**	LR	LR	10 07 11.7	
ZALV	**Zalesovo Beam** comp=Z,27nm,18.1s,baz=275,slow=35	**77.31**	**327**	LR	LR	10 09 50.8	
AKTO	**Aktyubinsk** 0.4nm,0.8s,baz=272,slow=4.6,SNR=9.1	**92.54**	**320**	LR	LR	10 18 22.4	
YKA	**Yellowknife Ar** 0.4nm,0.8s,baz=272,slow=4.6,SNR=9.1	**96.32**	**28**	P	P	09 38 08.3	+0.2
SIV	**San Ignacio** 1.1nm,0.9s,baz=257,slow=8.6,SNR=4.8	**145.41**	**124**	PKPbc	PKPbc	09 44 17.4	-1.3

IDC 02 09:32:45.3±1.5, 18.°78N×145.°46E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=178.2km s-min=27.6km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=16,slow=8.0,SNR=11	**39.99**	**196**	P	P	09 40 22.0	0.0
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=53,slow=10,SNR=9.0	**41.50**	**209**	P	P	09 40 35.2	+0.7
ASAR	**Alice Springs** 0.3nm,0.8s,baz=19,slow=8.8,SNR=3.8	**43.66**	**195**	P	P	09 40 50.9	-1.1
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=291,slow=5.4,SNR=4.9	**78.03**	**28**	P	P	09 44 45.6	+0.1

CASC 02 09:34:46.8±1.8, 13.°42N×90.°72W, h6km±13km, MD3.6, ML2.4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.98**	**7**	*e*P	Pg	09 35 05.2	-0.4
FUG	**Fuego 3**	**1.03**	**354**	*e*P	Pg	09 35 05.2	-1.4
SBLS	**San Blas**	**1.15**	**68**	*e*P	Pg	09 35 08.0	-0.8
SBLS	

PPM				*i* S	Sn	09 48 50.3	-3.9
PPM	**Popocatepetl**	**2.21**	**21**	*i* P	Pn	09 48 24.6	-2.6
PPM				*i* S	Sn	09 48 50.3	-3.9

*ISCJB **02** 09:55:54.0±0.9, 42°.8S±0°.1×72°.4W±0°.2, h10km, mb4.0/6, Error ellipse: s-maj=26.0km s-min=13.2km az=27.0*
*IDC **02** 09:55:53.7±1.2, 42°.78S×72°.53W, h0km, mb3.8/5, mb1 4.1/6, mb1mx4.0/16, mbtmp3.9/6, MS2.9/1, Ms1 2.9/1, ms1mx2.6/19, Error ellipse: s-maj=34.7km s-min=16.2km az=122.0*
*NEIC **02** 09:55:55.4±0.8, 42°.80S×72°.49W, h10km, mb4.1/2, Error ellipse: s-maj=26.1km s-min=14.7km az=107.0*
ISC 02 09:55:55.6±0.9, 42°.8S±0°.1×72°.3W±0°.2, h10km, n12, σ1§06/14, mb4.0/6, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.43**	**33**	Pn	**Pn**	**09 56 35.8**	**+0.5**
PLCA	baz=227,slow=19,SNR=0.6						
				Pg	**Pg**	**09 56 40.6**	**-1.5**
PLCA	27nm,0.3s,baz=222,slow=16,SNR=3.2						
				LR	LR	09 57 10.1	
PLCA	comp=Z,234nm,20.7s,baz=245,slow=30						
				Lg		09 57 13.6	
PLCA	161nm,0.3s,baz=127,slow=7.9,SNR=13						
PLCA	**Paso Flores**	**2.43**	**33**	Pn	**Pn**	**09 56 35.8**	**+0.5**
PLCA				Pg	**Pg**	**09 56 40.6**	**-1.5**
PLCA				LR	LR	09 57 10.1	
PLCA				Lg		09 57 13.6	
LVC	**Limon Verde**	**20.31**	**9**	*e*P	**P**	**10 00 33.1**	**+1.4**
CPUP	3.0nm,0.7s **Villa Florida**	**20.48**	**42**	P	**P**	**10 00 36.0**	**+2.5**
	1.3nm,0.6s,baz=220,slow=5.5,SNR=4.4						
CPUP	**Villa Florida**	**20.48**	**42**	P	**P**	**10 00 36.0**	**+2.5**
PMSA	**Palmer Station**	**22.53**	**171**	P	**P**	**10 00 54.9**	**-0.2**
	47nm,0.6s,mb5.1,baz=334,slow=9.0,SNR=27						
SIV	**San Ignacio**	**28.38**	**23**	P	**P**	**10 01 48.6**	**-1.4**
	1.0nm,0.7s,mb3.5,baz=206,slow=13,SNR=5.7						
LRAL	**Lakeview Retre**	**76.64**	**347**	*e*P	**P**	**10 07 46.2**	**0.0**
	2.5nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**77.35**	**332**	P	**P**	**10 07 50.0**	**-0.3**
	0.6nm,0.7s,mb3.6,baz=151,slow=7.3,SNR=7.8						
TXAR	**Lajitas Array**	**77.35**	**332**	P	**P**	**10 07 50.0**	**-0.3**
ANMO	**Albuquerque**	**83.43**	**332**	P	**P**	**10 08 23.1**	**+0.2**
	0.2nm,0.3s,mb3.7,baz=172,slow=5.2,SNR=5.0						
PDAR	**Pinedale Array**	**91.51**	**334**	P	**P**	**10 09 01.3**	**-0.5**
	0.7nm,0.8s,mb4.0,baz=141,slow=5.4,SNR=6.4						

IDC 02 10:40:14.4±2.9, 19°.61S×177°.64W, h535km±152km, mb3.3/3, mb1 3.5/4, mb1mx3.1/17, mbtmp3.4/4, Error ellipse: s-maj=200.3km s-min=57.0km az=116.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.97**	**46**	P	P	10 42 12.3	+0.7
	5.1nm,0.3s,baz=226,slow=21,SNR=14						
AFI				S	S	10 43 47.0	-0.5
	6.4nm,0.3s,baz=28,slow=23,SNR=9.5						
STKA	**Stephens Creek**	**38.49**	**243**	P	P	10 46 50.2	-0.6
	1.4nm,0.5s,baz=83,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**45.06**	**256**	P	P	10 47 43.4	+0.5
	5.7nm,0.5s,baz=96,slow=7.6,SNR=176						
ASAR				S	S	10 53 43.4	+0.4
	0.5nm,0.8s,baz=97,slow=15,SNR=6.9						
WRA	**Warramunga Arr**	**45.07**	**261**	P	P	10 47 42.6	-0.4
	1.6nm,0.5s,baz=97,slow=7.5,SNR=42						

*IDC **02** 10:47:55.0±1.2, 52°.04N×177°.60W, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/27, mbtmp3.7/8, Error ellipse: s-maj=34.1km s-min=23.9km az=176.0*
*NEIC **02** 10:47:55.5, 51°.95N×177°.60W, h9km, ML3.3(AEIC), After AEIC.*
*ISCJB **02** 10:47:57.8±0.9, 52°.0N±0°.2×177°.64W±0°.09, h33km, mb3.8/9, Error ellipse: s-maj=25.5km s-min=8.1km az=0.6*
ISC 02 10:47:59.9±0.9, 52°.0N±0°.2×177°.57W±0°.10, h35km, n15, σ1§25/17, mb3.8/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.94**	**83**	*e*Pg	**Pn**	**10 48 13.6**	**-3.0**
GSTR				*e*Sg	**Sn**	**10 48 27.2**	**-1.5**
ATKA	**Atka Island**	**2.09**	**83**	P	**Pn**	**10 48 30.1**	**-2.2**
ATKA				S	**Sn**	**10 48 59.7**	**+2.6**
KDAK	**Kodiak Island**	**15.45**	**58**	Pn	**Pn**	**10 51 36.3**	**+1.4**
	0.8nm,0.3s,baz=299,slow=13,SNR=5.8						
INK	**Inuvik**	**26.52**	**35**	P	**P**	**10 53 34.2**	**+0.5**
	0.8nm,0.8s,mb3.3,baz=265,slow=11,SNR=5.7						
INK	**Inuvik**	**26.52**	**35**	P	**P**	**10 53 34.2**	**+0.5**
YKA	**Yellowknife Ar**	**34.26**	**47**	P	**P**	**10 54 41.7**	**-0.3**
	0.5nm,0.8s,mb3.5,baz=283,slow=8.4,SNR=7.7						
YKA	**Yellowknife Ar**	**34.26**	**47**	P	**P**	**10 54 41.7**	**-0.3**
MDJ	**Mudanjiang**	**35.23**	**279**	P	**P**	**10 54 49.8**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.8s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,33nm,2.9s,mb4.8						
NVAR	**Mina Array Bea**	**42.72**	**84**	P	**P**	**10 55 54.4**	**+1.1**
	comp=Z,0.5nm,0.8s,mb3.3,baz=294,slow=6.8,SNR=2.3						
PDAR	**Pinedale Array**	**45.40**	**74**	P	**P**	**10 56 14.8**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.9,baz=315,slow=2.8,SNR=12						
ARCES	**ARCESS Array B**	**57.62**	**351**	P	**P**	**10 57 44.9**	**-0.8**
	comp=Z,1.5nm,0.7s,mb4.1,baz=12,slow=6.7,SNR=4.3						
ARCES	**ARCESS Array B**	**57.62**	**351**	P	**P**	**10 57 44.9**	**-0.8**
TXAR	**Lajitas Array**	**57.81**	**82**	P	**P**	**10 57 47.9**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.5,baz=291,slow=4.4,SNR=6.2						
BVAR	**Borovoye Array**	**60.92**	**320**	P	**P**	**10 58 09.0**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.9,baz=64,slow=6.6,SNR=3.5						
ASAR	**Alice Springs**	**86.45**	**224**	P	**P**	**11 00 39.5**	**+0.9**
	comp=Z,0.7nm,1.1s,mb3.8,baz=23,slow=7.3,SNR=2.9						

*IDC **02** 10:48:43.9±1.0, 27°.48N×143°.07E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML3.6/2, Error ellipse: s-maj=22.9km s-min=16.0km az=121.0*
*NEIC **02** 10:48:46.0, 27°.74N×143°.04E, h28km, MG3.5(JMA), After JMA.*
*JMA **02** 10:48:45.9, 27°.74N×143°.04E, h28km±4km, M3.5*
*ISCJB **02** 10:48:46.8±1.8, 27°.75N±0°.05×143°.0E±0°.1, h26km±11km, mb3.7/9, Error ellipse: s-maj=18.8km s-min=6.7km az=14.2*
ISC 02 10:48:47.9±1.9, 27°.63N±0°.05×143°.0E±0°.1, h23km±12km, n18, σ1§13/22, mb3.7/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.90**	**234**	P	**Pb**	**10 49 04.0**	**-0.8**
CBIJ				*e*S	**Sb**	**10 49 16.8**	**+0.4**
CBIJ	**Chichi jima**	**0.90**	**234**	Pn	**Pn**	**10 49 04.1**	**-1.0**
	60nm,0.3s,baz=22,slow=6.5,SNR=50						
CBIJ				Sn	**Sn**	**10 49 17.2**	**-0.2**
	136nm,0.3s,baz=270,slow=22,SNR=16						
JHHJ	**Haha-jima-NKT**	**1.24**	**216**	*e*S	**Sn**	**10 49 26.3**	**+0.5**
JHU	**Hanno**	**8.78**	**340**	P	**Pn**	**10 50 53.9**	**+0.5**
JHU				*e*S	**Sn**	**10 52 29.9**	**-1.8**
JHO	**Hitachi**	**9.18**	**348**	*e*S	**Sn**	**10 52 37.8**	**-3.8**
JAG	**Ashikaga**	**9.27**	**342**	P	**Pn**	**10 51 00.0**	**-0.1**
JAG				*e*S	**Sn**	**10 52 40.9**	**-2.7**
MJAR	**Matsushiro Arr**	**9.76**	**337**	Pn	**Pn**	**10 51 07.5**	**+0.6**
	0.7nm,0.3s,baz=162,slow=12,SNR=8.6						
KSRS	**Korea Array**	**16.03**	**311**	Pn	**Pn**	**10 52 34.1**	**+2.3**
	0.2nm,0.3s,baz=119,slow=10,SNR=4.1						
SONM	**Songino Array**	**34.83**	**315**	P	**P**	**10 55 37.5**	**+0.5**
	0.5nm,0.4s,mb3.8,baz=114,slow=9.6,SNR=2.6						
WRA	**Warramunga Arr**	**48.03**	**191**	P	**P**	**10 57 23.9**	**-1.5**
	0.7nm,0.6s,mb3.9,baz=11,slow=8.7,SNR=13						
ZALV	**Zalesovo Beam**	**49.56**	**319**	P	**P**	**10 57 37.4**	**+0.5**
	1.1nm,0.7s,mb4.0,baz=94,slow=5.6,SNR=4.9						
MKAR	**Makanchi Array**	**50.69**	**309**	P	**P**	**10 57 46.1**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=94,slow=7.5,SNR=3.3						
ASAR	**Alice Springs**	**51.75**	**191**	P	**P**	**10 57 52.0**	**-1.7**
	0.7nm,1.1s,mb3.5,baz=12,slow=7.0,SNR=5.3						
BVAR	**Borovoye Array**	**58.14**	**317**	P	**P**	**10 58 40.4**	**+0.8**
	1.1nm,0.5s,mb4.1,baz=93,slow=6.5,SNR=7.5						
INK	**Inuvik**	**62.24**	**25**	P	**P**	**10 59 08.9**	**+1.4**
	0.3nm,0.5s,mb3.6,baz=246,slow=11,SNR=3.8						
ABKAR	**Akbulak array**	**65.24**	**314**	*e*P	**P**	**10 59 28.5**	**+1.0**
	0.6nm,0.5s,mb3.9						
YKA	**Yellowknife Ar**	**71.33**	**29**	P	**P**	**11 00 05.1**	**-0.3**
	0.1nm,0.5s,mb3.0,baz=294,slow=6.2,SNR=4.1						
YKA	**Yellowknife Ar**	**71.33**	**29**	P	**P**	**11 00 05.1**	**-0.3**

GUC 02 10:56:18.3±0.6, 22°.95S×69°.12W, h95km±7km, ML3.6, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**0.62**	**304**	*e*P	Pn	10 56 34.8	+0.2
PECH				*i* S	Sn	10 56 47.8	+1.0
PECH				AML	AML	10 56 48.3	
	comp=E,5μm,0.1s						
PB04	**Plate Boundary**	**0.77**	**333**	⇑*i*P	Pn	10 56 40.5	+4.6
PB04				*i* S	Sn	10 56 58.0	+8.9
PB04				AML	AML	10 57 04.6	
	comp=N,1μm,0.3s						
MACH	**Maria Elena**	**0.96**	**322**	*e*P	Pn	10 56 38.8	+0.9
MACH				*i* S	Sn	10 56 54.5	+1.9
MECH	**Mejillones**	**1.24**	**263**	*e*P	Pn	10 56 41.4	+0.3
MECH				AML	AML	10 57 06.8	
	comp=E,1μm,0.3s						
ANCH	**Antofagasta**	**1.39**	**238**	⇑*i*P	Pn	10 56 43.3	+0.3
ANCH				*i* S	Sn	10 57 02.5	+0.8
ANCH				AML	AML	10 57 07.8	
	comp=E,2μm,0.1s						
PB01	**Plate Boundary**	**1.93**	**350**	*e*P	Pn	10 56 50.7	+0.9
PB01				*i* S	Sn	10 57 14.9	+1.1
PB01				AML	AML	10 57 23.2	
	comp=N,467nm,0.2s						
HMBC	**Humberston**	**2.76**	**345**	*e*P	Pn	10 57 00.7	0.0
HMBC				*e*S	Sn	10 57 34.0	+0.7
HMBC				AML	AML	10 57 45.2	
	comp=N,210nm,0.6s						

*ISCJB **02** 10:58:59.0±0.5, 43°.13N±0°.05×144°.00E±0°.06, h138km±3km, mb3.3/5, Error ellipse: s-maj=8.2km s-min=6.6km az=161.3*
*NEIC **02** 10:59:00.8, 43°.14N×143°.94E, h132km, MG3.1(JMA), After JMA.*
*JMA **02** 10:59:00.7±0.1, 43°.14N×143°.94E, h132km±1km, M3.1*
*IDC **02** 10:59:01.5±4.8, 43°.23N×143°.89E, h143km±18km, mb3.1/5, mb1 3.2/5, mb1mx3.0/24, mbtmp3.1/5, Error ellipse: s-maj=77.0km s-min=25.1km az=172.0*
ISC 02 10:59:00.2±0.5, 43°.13N±0°.05×143°.98E±0°.06, h135km±3km, n22, σ0§54/35, mb3.3/5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAR	**Ashorobuto**	**0.23**	**317**	P	**Pn**	**10 59 19.0**	**+0.4**
JAR				*e*S	**Sn**	**10 59 32.6**	**0.0**
JOB	**Onbets**	**0.25**	**206**	P	**Pn**	**10 59 19.3**	**+0.6**
JOB				*e*S	**Sn**	**10 59 33.3**	**+0.6**
JAK	**Akkeshi**	**0.54**	**104**	P	**Pn**	**10 59 20.2**	**+0.2**
JAK				*e*S	**Sn**	**10 59 34.8**	**-0.1**
JCH	**Churui**	**0.69**	**222**	P	**Pn**	**10 59 21.0**	**+0.1**
JCH				*e*S	**Sn**	**10 59 35.7**	**-0.9**
JNK	**Nakash**	**0.70**	**49**	P	**Pn**	**10 59 21.3**	**+0.3**
JNK				*e*S	**Sn**	**10 59 36.8**	**-0.1**
JTKR	**Abashiri--Toko**	**0.84**	**356**	P	**Pn**	**10 59 22.4**	**+0.3**
JTKR				*e*S	**Sn**	**10 59 38.3**	**-0.5**
JMP	**Maruseppu**	**0.99**	**333**	P	**Pn**	**10 59 23.5**	**+0.2**
JMP				*e*S	**Sn**	**10 59 40.3**	**-0.7**
JFR	**Furan**	**1.02**	**272**	P	**Pn**	**10 59 23.7**	**+0.1**
JFR				*e*S	**Sn**	**10 59 41.7**	**+0.3**
JRA	**Rausu**	**1.16**	**45**	P	**Pn**	**10 59 25.6**	**+0.7**
JKK2	**Kamakawa 2**	**1.17**	**310**	P	**Pn**	**10 59 25.3**	**+0.3**
JKK2				*e*S	**Sn**	**10 59 43.9**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.24**	**227**	P	**Pn**	**10 59 25.8**	**0.0**
JNBK				*e*S	**Sn**	**10 59 44.4**	**-0.9**
ERM	**Erimo**	**1.27**	**209**	*e*Pn	**Pn**	**10 59 27.4**	**+1.3**
ERM				*e*Sn	**Sn**	**10 59 49.8**	**+3.9**
NEM2	**Nemuro 2**	**1.31**	**79**	P	**Pn**	**10 59 26.5**	**0.0**
NEM2				*e*S	**Sn**	**10 59 45.3**	**-1.2**
ASAJ	**Asahikawa**	**1.41**	**315**	P	**Pn**	**10 59 28.1**	**+0.5**
	16nm,0.3s,baz=135,slow=16,SNR=148						
ASAJ				S	**Sn**	**10 59 49.0**	**+0.5**
	2.1nm,0.3s,baz=19,slow=29,SNR=9.7						
JEW	**Eniwo**	**1.88**	**262**	*e*S	**Sn**	**10 59 57.6**	**-0.4**
JSE	**Soyaes**	**2.09**	**332**	P	**Pn**	**10 59 35.3**	**-0.1**
MAJO	**Matsushiro**	**7.94**	**216**	*e*Pn	**Pn**	**11 00 52.3**	**-0.5**
	37nm,0.8s						
MKAR	**Makanchi Array**	**42.82**	**297**	P	**P**	**11 06 43.9**	**-0.5**
	0.2nm,0.5s,mb3.0,baz=87,slow=9.2,SNR=3.6						
INK	**Inuvik**	**48.09**	**30**	P	**P**	**11 07 25.9**	**+0.3**
	0.3nm,0.3s,mb3.4,baz=298,slow=6.4,SNR=7.8						
BVAR	**Borovoye Array**	**48.10**	**309**	P	**P**	**11 07 25.9**	**0.0**
	0.6nm,0.3s,mb3.7,baz=71,slow=9.2,SNR=5.4						
YKA	**Yellowknife Ar**	**57.59**	**33**	P	**P**	**11 08 35.1**	**-0.1**
	0.1nm,0.6s,mb2.8,baz=308,slow=7.2,SNR=6.6						
FINES	**FINESS Array B**	**64.36**	**332**	P	**P**	**11 09 20.5**	**-0.5**
	0.4nm,0.4s,mb3.6,baz=23,slow=4.5,SNR=2.8						

*ISCJB **02** 10:59:54.0±0.3, 35°.72N±0°.06×135°.26E±0°.05, h377km±3km, mb3.4/14, Error ellipse: s-maj=10.6km s-min=5.6km az=160.6*
*IDC **02** 10:59:54.5±0.9, 35°.68N×135°.22E, h364km±9km, mb3.1/12, mb1 3.3/15, mb1mx3.2/30, mbtmp3.2/15, Error ellipse: s-maj=15.2km s-min=12.9km az=94.0*
*NEIC **02** 10:59:55.3, 35°.73N×135°.19E, h370km, MG3.4(JMA), After JMA.*
*JMA **02** 10:59:55.2±0.1, 35°.73N×135°.19E, h370km±1km, M3.4*
ISC 02 10:59:55.0±0.3, 35°.72N±0°.06×135°.22E±0°.05, h369km±3km, n43, σ0§77/60, mb3.4/14, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.13**	**226**	P	**Pn**	**11 00 41.4**	**+0.4**
JKY				*e*S	**S**	**11 01 17.9**	**0.0**
JWT	**Wachi**	**0.46**	**161**	P	**Pn**	**11 00 41.8**	**+0.3**
JWT				S	**S**	**11 01 17.9**	**-0.8**
JKG	**Kaga**	**1.06**	**58**	P	**Pn**	**11 00 43.5**	**+0.5**
JKG				*e*S	**S**	**11 01 20.7**	**-0.9**
JGM	**Miyama**	**1.22**	**90**	P	**Pn**	**11 00 44.6**	**+0.9**
JGM				*e*S	**S**	**11 01 22.5**	**-0.4**
JWY	**Kouya**	**1.53**	**168**	P	**Pn**	**11 00 45.9**	**+0.5**
JWY				*e*S	**S**	**11 01 25.0**	**-0.8**
JIE	**Ise**	**1.80**	**137**	P	**Pn**	**11 00 47.5**	**+0.6**
JIE				*e*S	**S**	**11 01 28.2**	**-0.4**
JHS	**Saijyo**	**1.86**	**248**	P	**Pn**	**11 00 47.5**	**+0.3**
JHS				*e*S	**S**	**11 01 29.0**	**-0.2**
JAI	**Aioi**	**2.02**	**198**	P	**Pn**	**11 00 48.8**	**+0.4**
JWZ	**Kozaga**	**2.22**	**169**	P	**Pn**	**11 00 49.9**	**+0.2**
JMN	**Monobe**	**2.27**	**209**	P	**Pn**	**11 00 50.9**	**+0.8**
JSZ	**Suzu**	**2.44**	**44**	P	**Pn**	**11 00 51.8**	**+0.6**
JGT	**Gotsu**	**2.46**	**255**	P	**Pn**	**11 00 51.3**	**-0.1**
JGT				*e*S	**S**	**11 01 36.4**	**-0.4**
JHT	**Toyohira**	**2.52**	**246**	P	**Pn**	**11 00 52.2**	**+0.3**
JHT				*e*S	**S**	**11 01 37.2**	**-0.5**
JHG	**Hegura jima**	**2.53**	**32**	P	**Pn**	**11 00 52.6**	**+0.8**
MAT	**Matsushiro**	**2.55**	**70**	P	**Pn**	**11 00 52.2**	**+0.1**
MAT	**Matsushiro**	**2.55**	**70**	P	**Pn**	**11 00 52.5**	**+0.4**
MJAR	**Matsushiro Arr**	**2.56**	**70**	P	**Pn**	**11 00 52.9**	**+0.8**
	4.1nm,0.3s,baz=260,slow=3.9,SNR=78						
MJAR				S	**S**	**11 01 37.0**	**-1.1**
	baz=259,slow=20,SNR=1.7						
JYN	**Shimob**	**2.72**	**94**	P	**Pn**	**11 00 53.7**	**+0.3**
JRY	**Ryogami san**	**3.01**	**83**	P	**Pn**	**11 00 57.1**	**+1.3**
JRY				*e*S	**S**	**11 01 45.7**	**+0.8**
JOD2	**Odawara 2**	**3.19**	**97**	P	**Pn**	**11 00 58.5**	**+1.0**
JOD2				*e*S	**S**	**11 01 49.4**	**+1.5**
JTO	**Tosashimizu**	**3.48**	**216**	P	**Pn**	**11 01 01.1**	**+0.8**
JTO				*e*S	**S**	**11 01 52.0**	**-0.9**
JYT	**Yasato**	**4.07**	**81**	P	**Pn**	**11 01 04.3**	**-1.5**
JYT				*e*S	**S**	**11 01 57.7**	**-5.3**
JHO	**Hitachi**	**4.42**	**77**	P	**Pn**	**11 01 07.9**	**-1.5**
JHO				*e*S	**S**	**11 02 02.0**	**-7.5**
BSO3	**Boso 3**	**4.42**	**100**	P	**Pn**	**11 01 07.4**	**-2.1**
BSO3				*e*S	**S**	**11 02 05.3**	**-4.4**
JFK	**Kawauchi**	**4.84**	**68**	P	**Pn**	**11 01 12.5**	**-1.2**
JFK				*e*S	**S**	**11 02 13.0**	**-4.5**
KSRS	**Korea Array**	**6.12**	**289**	P	**Pn**	**11 01 28.9**	**+1.2**
	0.7nm,0.3s,baz=107,slow=12,SNR=16						
ASAJ	**Asahikawa**	**10.12**	**32**	P	**Pn**	**11 02 13.5**	**-0.6**
	4.5nm,0.3s,baz=230,slow=12,SNR=12						
SONM	**Songino Array**	**24.52**	**308**	P	**P**	**11 04 42.2**	**-0.1**
	0.3nm,0.3s,mb3.0,baz=115,slow=9.9,SNR=2.5						
MKAR	**Makanchi Array**	**40.59**	**303**	P	**P**	**11 06 60.0**	**-0.1**
	0.5nm,0.5s,mb3.0,baz=93,slow=10,SNR=5.6						
KDAK	**Kodiak Island**	**51.39**	**41**	P	**P**	**11 08 23.4**	**+0.3**
	8.2nm,0.9s,mb4.0,baz=260,slow=6.1,SNR=5.7						
WRA	**Warramunga Arr**	**55.36**	**181**	P	**P**	**11 08 51.6**	**-0.5**
	0.6nm,0.3s,mb3.4,baz=360,slow=7.6,SNR=21						
INK	**Inuvik**	**57.80**	**26**	P	**P**	**11 09 09.0**	**+0.6**
	1.2nm,0.5s,mb3.5,baz=295,slow=6.7,SNR=16						
ASAR	**Alice Springs**	**59.07**	**181**	P	**P**	**11 09 17.4**	**-0.2**
	0.2nm,0.7s,mb2.7,baz=18,slow=11,SNR=6.0						
KEV	**Kevo**	**62.85**	**338**	*e*p	**P**	**11 09 41.2**	**-1.0**
	0.5nm,0.4s,mb3.4						
ARCES	**ARCESS Array B**	**63.41**	**338**	P	**P**	**11 09 46.0**	**+0.1**
	1.2nm,0.5s,mb3.7,baz=64,slow=8.2,SNR=13						
JOF	**Joensuu**	**64.71**	**331**	*e*p	**P**	**11 09 53.1**	**-1.2**
	0.5nm,0.5s,mb3.4						
YKA	**Yellowknife Ar**	**67.39**	**28**	P	**P**	**11 10 11.4**	**+0.2**
	0.3nm,0.6s,mb3.2,baz=296,slow=6.3,SNR=9.7						
YKA	**Yellowknife Ar**	**67.39**	**28**	P	**P**	**11 10 11.4**	**+0.2**
FINES	**FINESS Array B**	**67.57**	**331**	P	**P**	**11 10 12.0**	**-0.4**
	1.1nm,0.5s,mb3.9,baz=75,slow=4.4,SNR=8.3						
FINES	**FINESS Array B**	**67.57**	**331**	P	**P**	**11 10 12.0**	**-0.4**
NOA	**NORSAR Array B**	**73.37**	**335**	P	**P**	**11 10 46.7**	**-0.4**
	0.5nm,0.5s,mb3.5,baz=45,slow=5.6,SNR=2.7						
BRTR	**Keskin Array B**	**75.88**	**309**	P	**P**	**11 11 02.3**	**+0.6**
	0.5nm,0.6s,mb3.5,baz=86,slow=4.5,SNR=2.8						
PDAR	**Pinedale Array**	**82.08**	**42**	P	**P**	**11 11 35.7**	**+0.7**
	0.4nm,0.7s,mb3.4,baz=153,slow=0.3,SNR=3.4						

*BJI **02** 11:05:50.1, 51°.90N×177°.80W, h12km, mB4.7/4, mb4.7/8, Ms4.5/3, Ms7 4.3/3*
*NEIC **02** 11:05:53.1, 51°.86N×177°.84W, h3km, ML3.3(AEIC), After AEIC.*
*ISCJB **02** 11:05:56.2±2.6, 52°.2N±0°.4×177°.6W±0°.2, h10km, mb3.5/5, Error ellipse: s-maj=56.7km s-min=11.6km az=15.6*
*IDC **02** 11:05:56.7±35.0, 52°.23N×177°.67W, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.4/27, mbtmp3.4/4, Error ellipse: s-maj=648.5km s-min=62.2km az=67.0*
ISC 02 11:05:58.1±2.6, 52°.1N±0°.4×177°.6W±0°.2, h10km, n8, σ0§89/9, mb3.5/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.94**	**91**	*e*Pg	**Pg**	**11 06 14.3**	**-1.9**
GSTR				*e*Sg	**Sg**	**11 06 29.2**	**+0.8**
SVW2	**Sparrevohn**	**15.01**	**45**	*e*P	**Pn**	**11 09 38.2**	**+8.2**
INK	**Inuvik**	**26.41**	**36**	P	**P**	**11 11 34.4**	**0.0**
	0.8nm,0.7s,mb3.4,baz=257,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**34.17**	**47**	P	**P**	**11 12 42.6**	**-0.3**
	0.3nm,0.7s,mb3.3,baz=284,slow=8.4,SNR=6.2						
MDJ	**Mudanjiang**	**35.19**	**279**	P	**P**	**11 12 45.9**	**-6.1**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,18nm,2.9s,mb4.5						
NVAR	**Mina Array Bea**	**42.72**	**84**	P	**P**	**11 13 56.0**	**+0.9**
	comp=Z,0.3nm,0.6s,mb3.2,baz=295,slow=6.5,SNR=3.5						
PDAR	**Pinedale Array**	**45.37**	**74**	P	**P**	**11 14 16.5**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.2,baz=317,slow=7.4,SNR=3.4						
PDAR	**Pinedale Array**	**45.37**	**74**	P	**P**	**11 14 16.5**	**+0.3**

*IDC **02** 11:13:14.6±0.6, 42°.79S×72°.21W, h0km, mb4.5/12, mb1 4.6/12, mb1mx4.5/17, mbtmp4.5/12, ML2.8/1, MS4.0/12, Ms1 4.0/12, ms1mx3.9/18, Error ellipse: s-maj=25.1km s-min=13.3km az=110.0*
*ISCJB **02** 11:13:15.9±2.7, 42°.73S±0°.05×72°.2W±0°.1, h14km±16km, mb4.8/48, MS4.1/10, Error ellipse: s-maj=15.3km s-min=7.2km az=165.3*
*NEIC **02** 11:13:16.8±0.3, 42°.70S×72°.41W, h10km, mb4.9/41, Error ellipse: s-maj=10.3km s-min=7.1km az=87.0*
ISC 02 11:13:16.8±2.8, 42°.71S±0°.05×72°.5W±0°.1, h8km±16km, n284, σ0§64/263, mb4.8/48, MS4.1/10, 95C-92D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.43**	**36**	Pg	**Pn**	**11 13 58.2**	**+1.4**
	78nm,0.3s,baz=217,slow=16,SNR=126						
PLCA				Lg		11 14 32.0	
	91nm,0.3s,baz=283,slow=19,SNR=3.9						
PLCA				LR	LR	11 14 35.4	
	comp=Z,403nm,21.6s,baz=234,slow=34						
PLCA	**Paso Flores**	**2.43**	**36**	*e*Pn	**Pn**	**11 13 58.3**	**+1.5**
PLCA				*e*Sg	**Sg**	**11 14 35.2**	**+0.3**
TRQA	**Tornquist**	**9.24**	**63**	*e*Pn	**Pn**	**11 15 31.8**	**+1.5**
	35nm,0.8s					

TXAR LR LR 11 52 55.2
627A Terlingua Ranc 77.25 333 ⇑P P 11 25 11.3 0.0
baz=78
626A Big Bend Ranch 77.59 332 ⇓P P 11 25 13.4 +0.1
baz=78
528A Cox Ranch, San 77.70 333 ⇑P P 11 25 13.4 -0.4
baz=78
527A Woodward Ranch 77.96 333 ⇓P P 11 25 15.2 -0.1
baz=78,SNR=14
526A Mary Lane Ranc 78.04 332 ⇓P P 11 25 15.7 -0.1
baz=78,SNR=12
428A Kincaid Ranch, 78.18 334 ⇑P P 11 25 16.2 -0.3
baz=78
DBIC Dimbokro 78.40 70 LR LR 11 51 58.1
comp=Z,76nm,21.4s,MS4.0,baz=196,slow=30
DBIC Dimbokro 78.40 70 P P 11 25 14.8 -3.4
6.4nm,1.0s,mb4.5
SWET Sewanee 78.53 349 eP P 11 25 19.2 +0.9
427A Hayter Ranch, 78.53 333 ⇓P P 11 25 18.0 -0.4
baz=79
CPCT Cooper Cave 78.56 350 eP P 11 25 19.5 +1.0
426A McDonald Obser 78.58 333 ⇑P P 11 25 18.6 -0.1
baz=79
328A Wristen Ranch, 78.83 334 ⇑P P 11 25 19.8 -0.3
baz=79
425A Indio Mountain 79.01 332 ⇓P P 11 25 20.9 -0.2
baz=79
325A Bean Ranch, Si 79.54 332 ⇑P P 11 25 23.1 -0.8
baz=80
227A Bennet, Jal 79.57 334 ⇑P P 11 25 23.7 -0.4
baz=80
WVT Waverly 79.71 347 eP P 11 25 25.4 +0.6
20nm,1.4s,mb4.8
324A Moseley Ranch, 79.78 332 ⇓P P 11 25 24.2 -1.1
baz=80,SNR=5.3
226A Malaga, Loving 79.88 333 ⇓P P 11 25 25.7 -0.1
baz=80
MNTX Cornudas Mount 79.98 332 eP P 11 25 25.1 -1.3
6.0nm,1.1s,mb4.4
GDL2 Guadalupe Moun 80.09 333 eP P 11 25 27.0 +0.1
127A Arkansas Junct 80.20 334 ⇑P P 11 25 27.4 -0.2
baz=81
224A Corundas Mount 80.38 332 ⇑P P 11 25 28.3 -0.2
baz=81,SNR=16
CPRX Cap Rock 80.69 334 eP P 11 25 30.4 +0.3
13nm,1.1s,mb4.8
Z27A Tatum 80.74 334 ⇓P P 11 25 30.4 0.0
baz=81
WMOK Wichita Mounta 80.75 338 eP P 11 25 29.7 -0.7
11nm,1.1s,mb4.7
320A Kipp Ranch, An 80.79 329 ⇓P P 11 25 30.6 -0.2
baz=81
124A Stringfield Ra 80.92 332 ⇑P P 11 25 31.3 -0.1
baz=81,SNR=9.5
Z26A Caprock 80.95 334 ⇑P P 11 25 30.6 -0.9
baz=81
319A Douglas 81.11 329 ⇑P P 11 25 32.2 -0.2
baz=82
MSTX Muleshoe 81.20 335 ⇓P P 11 25 32.6 -0.2
baz=82
Y27A Causey 81.25 335 ⇑P P 11 25 32.6 -0.5
baz=82
220A Playas Peak, P 81.30 330 ⇓P P 11 25 32.8 -0.7
baz=82
318A Bisbee 81.44 328 ⇑P P 11 25 34.2 0.0
baz=82
Y26A Elida 81.50 334 ⇑P P 11 25 34.4 0.0
baz=82
121A Cookes Peak, D 81.59 330 ⇑P P 11 25 35.3 +0.3
baz=82
219A White Tail Can 81.66 329 ⇓P P 11 25 35.1 -0.2
baz=82
AMTX Amarillo 81.72 336 eP P 11 25 35.4 -0.2
14nm,0.9s,mb4.9
Y25A Mesa, Roswell 81.78 333 ⇓P P 11 25 35.7 -0.2
baz=82
120A U Bar Ranch, L 81.92 330 ⇓P P 11 25 36.9 +0.2
baz=82
Z22A Elephant Butte 81.95 331 ⇑P P 11 25 37.1 +0.3
baz=82,SNR=5.1
FVM French Village 81.96 346 eP P 11 25 36.2 -0.6
12nm,1.1s,mb4.7
Y24A Capitan 82.03 333 ⇓P P 11 25 37.5 +0.3
baz=82
217A Green Valley 82.06 328 ⇓P P 11 25 37.5 0.0
baz=82
X26A CR and CF Fran 82.07 334 ⇓P P 11 25 37.7 +0.2
baz=82
CCM Cathedral Cave 82.18 345 eP P 11 25 36.6 -1.3
16nm,0.7s,mb5.1
Y23A Lovelace Mesa, 82.25 332 ⇑P P 11 25 38.9 +0.5
baz=83,SNR=5.2
Z21A St. Cloud Mine 82.25 331 ⇑P P 11 25 38.3 -0.1
baz=83
119A Ashpeak Ranch, 82.36 329 ⇓P P 11 25 38.8 -0.2
baz=83
Z20A Nine Sixteen R 82.41 330 ⇓P P 11 25 39.8 +0.6
baz=83,SNR=9.3
118A Homack Ranch, 82.50 329 ⇓P P 11 25 40.0 +0.3
baz=83
216A Three Points, 82.52 327 ⇓P P 11 25 40.1 +0.2
baz=83
Y22A Socorro 82.57 332 ⇓P P 11 25 40.3 +0.3
baz=83
BNM Barren Site 82.64 332 eP P 11 25 41.1 +0.6
9.0nm,1.2s,mb4.7
LPM Los Pinos Moun 82.79 332 eP P 11 25 41.7 +0.5
Y21A Point of Rocks 82.88 331 ⇑P P 11 25 42.4 +0.8
baz=83,SNR=12
W25A X Bar L Ranch, 82.89 334 ⇓P P 11 25 41.8 +0.1
baz=83
214A Organ Pipe Nat 83.02 326 ⇓P P 11 25 42.8 +0.3
baz=83
Y20A Horse Springs, 83.04 331 ⇑P P 11 25 42.8 +0.2
baz=83
LAZ Ladron 83.05 332 eP P 11 25 43.3 +0.7
12nm,1.6s,mb4.7
ACSO Alum Creek Sta 83.11 352 P P 11 25 42.8 +0.1
11nm,1.0s,mb4.8
ANMO Albuquerque 83.31 332 P P 11 25 44.0 +0.1
8.4nm,1.0s,mb4.7,baz=156,slow=6.2,SNR=16
ANMO Albuquerque 83.31 332 eP P 11 25 44.2 +0.3
12nm,1.1s,mb4.8
X21A Alamocita Cree 83.31 331 ⇓P P 11 25 44.7 +0.8
baz=84,SNR=8.9
Y19A Nutrioso 83.41 330 ⇓P P 11 25 45.2 +0.8
baz=84,SNR=15
Y18A Canyon Day Jun 83.54 329 ⇓P P 11 25 45.5 +0.4
baz=84
X20A Quemado 83.66 331 ⇑P P 11 25 45.8 +0.1
baz=84
Y17A Roosevelt 83.78 329 ⇑P P 11 25 46.5 +0.2
baz=84
113A Mohawk Valley, 84.12 326 ⇑P P 11 25 48.4 +0.3
baz=84
X18A Snowflake 84.18 330 ⇓P P 11 25 48.8 +0.4
baz=84
W20A Ramah 84.18 331 ⇓P P 11 25 48.6 +0.2
baz=84
Y16A Circle Bar Ran 84.18 328 ⇓P P 11 25 48.9 +0.5
baz=84
X17A Forest Lakes 84.33 329 ⇑P P 11 25 49.4 +0.3
baz=85
Z13A Yuma Proving G 84.45 326 ⇓P P 11 25 50.0 +0.2
baz=85
V21A Milan 84.49 332 ⇓P P 11 25 50.4 +0.5
baz=85
W19A Sanders 84.49 330 ⇓P P 11 25 50.1 +0.2
baz=85
Y15A Casa Rosa Ranc 84.58 328 ⇑P P 11 25 51.1 +0.7
baz=85
X16A Lo Mia Camp, P 84.64 329 ⇓P P 11 25 51.1 +0.4
baz=85
V20A Brimhall 84.77 331 ⇓P P 11 25 51.6 +0.3
baz=85
X15A Humboldt 85.01 328 ⇓P P 11 25 53.1 +0.5
baz=85,SNR=9.0
X14A Yava 85.25 327 ⇑P P 11 25 53.9 +0.1
baz=86
W16A Flagstaff 85.28 329 ⇓P P 11 25 54.0 +0.2
baz=86
Y12C Blythe 85.29 326 ⇓P P 11 25 54.4 +0.4
baz=86
T22A Edith 85.33 333 ⇓P P 11 25 54.4 +0.3
baz=86
V17A Tonalea, Kykot 85.46 330 ⇓P P 11 25 55.0 +0.2
baz=86
U19A Dine' College, 85.48 331 ⇑P P 11 25 55.1 +0.2
baz=86
SDCO Great Sand Dun 85.54 334 eP P 11 25 55.3 +0.2
5.7nm,1.1s,mb4.7
WUAZ Wupatki 85.59 329 ⇓P P 11 25 55.1 -0.3
baz=86
WUAZ Wupatki 85.59 329 eP P 11 25 56.4 +1.0
13nm,1.2s,mb5.0
BC3 Big Chuckw Mtn 85.59 325 ⇑P P 11 25 55.3 -0.2
baz=86
W15A Williams 85.63 328 ⇓P P 11 25 56.1 +0.5
baz=86
X13A Yucca 85.74 327 ⇓P P 11 25 56.6 +0.5
baz=86,SNR=14
U18A Rough Rock, Ch 85.83 331 ⇑P P 11 25 57.2 +0.6
baz=86,SNR=13
T19A Beclabito 85.90 331 ⇓P P 11 25 56.8 -0.1
baz=86
IRM Iron Mountain 85.90 326 ⇓P P 11 25 56.9 -0.1
baz=86
PFO Pinyon Flat Ob 85.98 324 ⇑P P 11 25 57.3 -0.1
baz=86
PFO Pinyon Flat Ob 85.98 324 eP P 11 25 58.5 +1.1
19nm,1.0s,mb5.3
W14A Seligman 85.98 328 ⇑P P 11 25 57.7 +0.4
baz=86
U16A Tuba City 86.05 330 ⇓P P 11 25 58.1 +0.4
baz=86
MVCO Mesa Verde 86.05 332 ⇑P P 11 25 57.8 +0.1
baz=86
MVCO Mesa Verde 86.05 332 eP P 11 25 58.7 +1.0
19nm,1.4s,mb5.1
BELC Belle Mtn. 86.12 325 ⇑P P 11 25 58.6 +0.5
baz=86
V15A Kaibab Nationa 86.16 329 ⇑P P 11 25 58.8 +0.5
baz=86,SNR=12
W13A Hualapai Mount 86.20 327 ⇑P P 11 25 58.6 +0.1
baz=86
S21A Coal Bank Pass 86.22 333 ⇑P P 11 25 58.8 +0.3
baz=87
U17A Shonto 86.28 330 ⇑P P 11 25 58.6 -0.2
baz=87
V14A Boquillas Ranc 86.36 328 ⇓P P 11 25 59.8 +0.6
baz=87,SNR=7.8
T18A Mexican Hat 86.47 331 ⇓P P 11 25 60.0 +0.2
baz=87
GMRC Granite Mounta 86.65 326 ⇓P P 11 26 00.9 +0.2
baz=87
T17A Navajo Res., N 86.69 330 ⇓P P 11 26 01.5 +0.7
baz=87,SNR=6.5
U15A North Rim 86.74 329 ⇓P P 11 26 01.4 +0.3
baz=87,SNR=6.1
S19A Harvey Farm, M 86.76 332 ⇓P P 11 26 01.2 +0.1
baz=87
R21A Cimarron 86.77 333 ⇓P P 11 26 01.7 +0.6
baz=87
R20A Redvale 86.89 332 ⇓P P 11 26 02.2 +0.4
baz=87
V13A Grand Canyon W 86.89 327 ⇑P P 11 26 02.2 +0.4
baz=87
T16A Glen Canyon Da 86.93 330 ⇑P P 11 26 02.4 +0.4
baz=87
S18A Hurst Farm, Bl 87.01 331 ⇑P P 11 26 02.6 +0.2
baz=87
Q22A Crested Butte, 87.01 334 ⇑P P 11 26 02.5 +0.2
baz=87
BFSC Mount Baldy St 87.04 324 ⇓P P 11 26 02.3 -0.3
baz=87
U14A Mt Trumbull 87.07 328 ⇓P P 11 26 02.8 +0.1
baz=87
V12A Nelson 87.13 327 ⇑P P 11 26 02.8 -0.2
baz=88
FRNY Flat Rock 87.17 359 eP P 11 26 04.2 +1.2
19nm,1.3s,mb5.2
S17A Black Ridge (B 87.25 330 ⇓P P 11 26 03.9 +0.3
baz=88
R19A Curley Farm, L 87.29 332 ⇓P P 11 26 03.9 +0.3
baz=88
T15A Red Dirt Ranch 87.29 329 ⇑P P 11 26 03.7 -0.1
baz=88
SMCO Snowmass 87.32 334 eP P 11 26 04.6 +0.8
6.6nm,1.0s,mb4.8
TORD Torodi Ar. Bea 87.51 70 P P 11 26 03.8 -1.6
1.2nm,0.8s,mb4.2,baz=237,slow=4.6,SNR=6.3
TORD LR LR 12 05 16.2
comp=Z,97nm,18.3s,MS4.2,baz=225,slow=36
GSC Goldstone 87.58 325 ⇓P P 11 26 05.4 +0.3
baz=88
GSC Goldstone 87.58 325 eP P 11 26 05.4 +0.3
6.2nm,1.0s,mb4.8
R18A Canyonlands Na 87.59 331 ⇑P P 11 26 05.0 -0.1
baz=88
T14A Hurricane 87.60 329 ⇑P P 11 26 05.4 +0.1
baz=88
EDW2 Edwards Air Fo 87.72 324 ⇑P P 11 26 05.9 0.0
baz=88
P21A Newcastle 87.79 334 ⇓P P 11 26 06.6 +0.5
baz=88
S15A Panguitch 87.86 329 ⇑P P 11 26 06.3 -0.2
baz=88
R17A Hanksville Air 87.91 331 ⇑P P 11 26 06.5 -0.2
baz=88
SHPR Sheep Range 87.93 327 eP P 11 26 07.8 +0.9
P20A De Beque 88.08 333 ⇓P P 11 26 07.6 +0.2
baz=88
LRMC Laurel Mountai 88.10 325 ⇑P P 11 26 07.4 -0.3
baz=88,SNR=8.6
CCUT Cedar City 88.13 329 eP P 11 26 08.6 +0.9
10.0nm,1.3s,mb4.9
S14A Cedar City 88.24 329 ⇑P P 11 26 08.7 +0.4
baz=89
R15A Junction 88.30 330 ⇑P P 11 26 08.7 +0.2
baz=89
Q18A Rafter H Ranch 88.32 332 ⇑P P 11 26 08.7 +0.1
baz=89
S13A Holt Ranch, En 88.35 328 ⇓P P 11 26 07.9 -0.9
baz=89
P19A Cripple Cowboy 88.39 333 ⇓P P 11 26 09.1 +0.1
baz=89
SRU San Rafael 88.46 331 ⇓P P 11 26 08.9 -0.4
baz=89
SRU San Rafael 88.46 331 eP P 11 26 09.3 0.0
7.6nm,1.0s,mb4.9
MPMC Manual Prospec 88.51 325 ⇑P P 11 26 09.1 -0.5
baz=89
Q16A Castle Valley 88.52 331 ⇓P P 11 26 09.9 +0.3
baz=89
MSU Marysvale 88.53 330 eP P 11 26 10.4 +0.8
T11A Corn Creek, Al 88.59 327 ⇑P P 11 26 10.1 +0.2
baz=89
ISA Isabella 88.60 324 ⇑P P 11 26 09.8 -0.2
baz=89,SNR=5.7
ISA Isabella 88.60 324 eP P 11 26 11.1 +1.1
12nm,1.0s,mb5.2
FURC Furnace Creek, 88.60 326 ⇑P P 11 26 09.6 -0.3
baz=89
R14A James Farms, M 88.66 329 ⇓P P 11 26 10.2 0.0
baz=89
ECSD EROS Data Cent 88.74 343 eP P 11 26 09.5 -0.9
16nm,0.9s,mb5.3
P17A Butcher Ranch, 88.86 331 ⇑P P 11 26 11.7 +0.6
baz=89
R13A O'Grain Ranch, 88.92 328 ⇓P P 11 26 12.2 +0.8
baz=89
N21A Black Mountain 88.93 334 ⇓P P 11 26 12.8 +1.4
baz=89
SMMC Simmler 88.97 323 ⇑P P 11 26 12.6 +0.8
baz=89
VES Vestal, Richgr 89.01 324 ⇑P P 11 26 12.4 +0.5
baz=89
Q15A Fillmore 89.03 330 ⇑P P 11 26 12.3 +0.3
baz=89
O19A Miners Draw (B 89.04 333 ⇑P P 11 26 12.0 0.0
baz=89
N20A Spence Gulch, 89.23 334 ⇓P P 11 26 13.5 +0.7
baz=90
R12A Pony Springs, 89.29 328 ⇑P P 11 26 13.6 +0.4
baz=90
Q14A Sevier Lake (B 89.36 329 ⇑P P 11 26 13.9 +0.4
baz=90
RCTC Rector, Farmer 89.47 324 ⇓P P 11 26 14.2 +0.1
baz=90
P15A Leamington 89.50 330 ⇑P P 11 26 14.1 0.0
baz=90
O17A Robinson Place 89.50 332 ⇑P P 11 26 14.2 +0.1
baz=90
Q13A Wheeler Ranch, 89.61 329 ⇑P P 11 26 14.7 0.0
baz=90
M21A Separation Pea 89.64 335 ⇑P P 11 26 14.8 +0.1
baz=90
R11A Troy Canyon, C 89.69 327 ⇓P P 11 26 15.3 +0.2
baz=90
S10A Tonopah Range, 89.73 327 ⇓P P 11 26 15.5 +0.2
baz=90
P14A Drum Mountains 89.81 330 ⇑P P 11 26 15.8 +0.2
baz=90
L21A Rawlins 89.97 335 ⇑P P 11 26 16.1 -0.2
baz=90
M19A Rock Springs 90.13 333 ⇑P P 11 26 17.1 +0.1
baz=90
N17A Moffit Pass 90.20 332 ⇑P P 11 26 17.3 -0.1
baz=91
DUG Dugway 90.24 330 ⇓P P 11 26 17.8 +0.2
baz=91
L20A Wamsutter 90.32 334 ⇓P P 11 26 18.2 +0.3
baz=91
M17A Scullys Gap (B 90.61 332 ⇓P P 11 26 19.2 -0.1
baz=91
L19A Farson 90.73 333 ⇑P P 11 26 19.6 -0.2
baz=91
L18A Fontenelle, Gr 90.80 333 ⇓P P 11 26 20.2 0.0
baz=91
NVAR Mina Array Bea 90.87 326 P P 11 26 18.9 -1.6
1.3nm,0.8s,mb4.3,baz=144,slow=5.3,SNR=7.4
NVAR Mina Array Bea 90.87 326 P P 11 26 18.9 -1.6
K20A Yellowstone Ra 90.91 334 ⇑P P 11 26 20.4 -0.2
baz=91
HWUT Hardware Ranch 91.04 332 eP P 11 26 21.1 -0.2
12nm,1.1s,mb5.2
P10A Eureka 91.14 328 ⇓P P 11 26 22.0 +0.2
baz=92
K19A Absolon Red Bu 91.22 334 ⇓P P 11 26 21.8 -0.3
baz=92
L16A Fish Haven 91.36 332 ⇑P P 11 26 21.6 -1.1
baz=92
BW06 Boulder Array 91.40 334 ⇓P P 11 26 22.2 -0.7
baz=92
BW06 Boulder Array 91.40 334 eP P 11 26 22.1 -0.7
4.1nm,0.9s,mb4.8
PDAR Pinedale Array 91.40 334 P P 11 26 21.3 -1.6
3.5nm,0.9s,mb4.7,baz=135,slow=5.5,SNR=21
PDAR LR LR 12 01 41.8
comp=Z,75nm,20.7s,MS4.1,baz=356,slow=32
K18A Toltan Ranch, 91.44 333 ⇑P P 11 26 23.0 -0.1
baz=92
L15A Malad City 91.68 331 ⇑P P 11 26 23.4 -0.9
baz=92
J18A Kendall Valley 91.94 334 ⇓P P 11 26 24.6 -0.8
baz=92
L14A Malta 92.01 331 ⇑P P 11 26 25.1 -0.6
baz=92
K16A Soda Springs 92.13 332 ⇑P P 11 26 25.7 -0.6
baz=92
J17A Brown Place, J 92.31 333 ⇑P P 11 26 26.5 -0.6
baz=93
L13A Double Diamond 92.31 330 ⇑P P 11 26 26.6 -0.5
baz=93
I18A Diamond G Ranc 92.32 334 ⇑P P 11 26 27.0 -0.2
baz=93
K15A Arbon 92.33 332 ⇓P P 11 26 27.2 0.0
baz=93
M11A Holland Ranch, 92.43 329 ⇓P P 11 26 27.6 -0.1
baz=93
K14A Jones Ranch, D 92.44 331 ⇑P P 11 26 27.5 -0.3
baz=93
LOHW Long Hollow 92.50 333 eP P 11 26 27.5 -0.5
4.3nm,1.1s,mb4.7
TPAW Teton Pass 92.50 333 eP P 11 26 27.8 -0.2
7.9nm,1.1s,mb5.1
J16A Bone 92.53 333 ⇓P P 11 26 27.9 -0.2
baz=93
IMW Indian Meadow 92.86 333 eP P 11 26 29.9 +0.3
6.6nm,1.0s,mb5.0
L11A Cat Creek Ranc 93.05 329 ⇓P P 11 26 30.2 -0.3
baz=93
J14A Carey 93.24 331 ⇓P P 11 26 31.1 -0.2
baz=94
L10A Juniper Basin 93.25 329 ⇑P P 11 26 31.4 -0.1
baz=94
RLMT Red Lodge 93.41 335 ⇑P P 11 26 31.8 -0.4
baz=94
RLMT Red Lodge 93.41 335 eP P 11 26 31.3 -0.9
12nm,1.5s,mb5.1
J13A Cove Ranch, Pi 93.54 331 ⇓P P 11 26 32.4 -0.4
baz=94
K11A Parker Ranch, 93.68 329 ⇑P P 11 26 33.2 -0.2
baz=94
J12A Stokes Ranch, 93.74 330 ⇓P P 11 26 33.4 -0.3
baz=94
I14A Mackay 93.74 332 ⇑P P 11 26 33.6 -0.1
baz=94
HLID Hailey 93.77 331 ⇑P P 11 26 33.5 -0.3
baz=94
I13A Wildhorse Cree 93.97 331 ⇑P P 11 26 34.3 -0.4
baz=94
H15A Lima 94.07 332 ⇓P P 11 26 35.0 -0.2
baz=94
I12A Atlanta 94.23 331 ⇓P P 11 26 35.6 -0.3
baz=95
F18A Big Timber 94.25 335 ⇑P P 11 26 35.8 -0.1
baz=95
MCMT McKenzie Canyo 94.32 332 eP P 11 26 36.6 +0.3
1.2nm,1.1s,mb4.2
G15A Dillon 94.50 333 ⇑P P 11 26 37.2 0.0
baz=95
H13A Challis 94.58 331 ⇑P P 11 26 37.8 +0.2
baz=95
ULM Lac du Bonnet 94.82 345 P P 11 26 36.3 -2.2
1.4nm,0.8s,mb4.5,baz=114,slow=2.8,SNR=3.2
G13A Cobalt 95.03 332 ⇓P P 11 26 39.8 +0.2
baz=95
E15A Deer Lodge 95.66 333 ⇓P P 11 26 42.2 -0.2
baz=96
D16A Dana Ranch, Ca 95.83 334 ⇑P P 11 26 43.3 +0.1
baz=96
I07A Izee 96.12 328 ⇑P P 11 26 44.4 -0.2
baz=96
E13A Victor 96.19 332 ⇑P P 11 26 45.0 +0.1
baz=97
YKA Yellowknife Ar 110.17 341 PKiKP PKiKP 11 31 47.5 -0.5
0.3nm,0.8s,baz=134,slow=2.1,SNR=6.0
GERES GERESS Array B 118.34 48 PKP PKPdf 11 32 03.7 -0.4
0.6nm,0.6s,baz=194,slow=0.6,SNR=5.9
INK Inuvik 119.66 338 PKP PKPdf 11 32 06.1 +0.1
1.0nm,0.9s,baz=49,slow=2.1,SNR=4.2
BRTR Keskin Array B 126.00 66 PKP PKPdf 11 32 18.1 -1.0
0.7nm,0.7s,baz=323,slow=2.2,SNR=3.9
PETK Petropavlovsk- 145.48 305 PKPbc PKPbc 11 32 54.8 0.0
9.6nm,1.1s,baz=103,slow=6.4,SNR=4.5
ABKAR Akbulak array 146.73 62 ePKPdf PKPdf 11 32 56.2 -0.7
ABKAR ePKPbc PKPbc 11 32 57.7 -0.9
ABKAR ePKPab PKPab 11 32 59.3 -0.6
TIXI Tiksi 149.15 347 ePKPbc PKPdf 11 33 02.0 +1.8
NDI New Delhi 151.84 110 eP PKPbc 11 33 12.0 -0.2
BVAR Borovoye Array 153.30 54 PKPbc PKPbc 11 33 11.0 -3.6
0.7nm,0.7s,baz=245,slow=3.0,SNR=3.2
MJAR Matsushiro Arr 155.68 266 PKPab PKPab 11 33 39.0 +1.6
1.1nm,0.9s,baz=165,slow=7.1,SNR=4.1
ZALV Zalesovo Beam 161.25 45 PKP PKPdf 11 33 17.3 +0.2
1.8nm,0.9s,baz=277,slow=1.2,SNR=5.4
MKAR Makanchi Array 161.63 68 PKP PKPdf 11 33 18.5 +0.8
1.0nm,1.1s,baz=29,slow=3.3,SNR=3.4
MKAR PKPab PKPab 11 33 59.9 -2.9
1.6nm,0.8s,baz=273,slow=3.3,SNR=8.8
KMI Kunming 162.02 166 PKP PKPdf 11 33 18.4 -0.4
GYA Guiyang 163.77 177 ePKP PKPdf 11 33 19.0 -1.5
GYA PKPab PKPab 11 34 13.8 +1.2
GYA PKS 11 36 50.0
GYA PP PP 11 38 01.2 +4.0
GYA SKS SKSdf 11 40 20.4 -4.9
GYA SKKS SKKSac 11 44 44.8 -1.4
GYA SS SS 11 58 24.5 -0.5
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,190nm,23.0s
GYA LR LR
comp=E,160nm,22.2s
GYA LR LR
comp=Z,170nm,23.4s
WMQ Urumqi 165.49 79 ePKP PKPdf 11 33 20.8 -0.6
CD2 Chengdu 167.84 164 PKP PKPdf 11 33 23.9 +0.2
CD2 PKPab PKPab 11 34 32.6 +2.2
CD2 PKS 11 36 55.1
CD2 PP PP 11 38 22.0 +3.6
CD2 SKS SKSdf 11 40 26.3 -1.4

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CD2                                   SKKS  SKKSac  11 45 08.0 +1.5
CD2                                   SS    SS       11 59 09.0 +2.4
CD2                                   AMB   AMB
      comp=Z,120nm,5.7s
CD2                                   LR    LR
      comp=N,340nm,6.2s
CD2                                   LR    LR
      comp=Z,220nm,5.9s
LZH   Lanzhou          172.79 155 ePKP  PKPdf   11 33 22.0 -4.2
LZH                               pPKP  pPKPdf  11 33 30.0 +1.1
LZH                               sPKP          11 33 34.0
SONM  Songino Array    174.81   9 PKPab  PKPab   11 35 00.9 +0.1
      comp=Z,1.4nm,0.9s,baz=339,slow=3.7,SNR=5.1
HHC   Hu-ho-hao-te     176.47 240 ePKP  PKPdf   11 33 27.9 +0.7
HHC                               PKS           11 36 59.3
HHC                               PP    PP      11 39 04.4 +2.5
HHC                               SKS   SKSdf   11 40 30.3  0.0
HHC                               SKKS  SKKSac  11 45 49.6 +1.5
HHC                               SS    SS      12 00 32.4 -0.4
HHC                               AMB   AMB
      comp=Z,87nm,6.0s
HHC                               LR    LR
      comp=N,150nm,21.2s
HHC                               LR    LR
      comp=E,110nm,19.1s
HHC                               LR    LR
      comp=Z,78nm,21.5s
```

*ISCJB **02** 11:14:10.9±0.5, 38°.14N±0°.03×38°.57E±0°.04, h6km±10km, Error ellipse: s-maj=5.0km s-min=4.9km az=142.8*
*DDA **02** 11:14:10.6, 38°.15N×38°.56E, h7km±3km, Md2.9*
*ISK **02** 11:14:10.0, 38°.15N×38°.55E, h16km, MD2.8*
*CSEM **02** 11:14:11.0±0.1, 38°.16N×38°.58E, h10km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.4km az=116.0*

ISC 02 11:14:11.4±0.6, 38°.15N±0°.03×38°.57E±0°.04, h9km±10km, n18, σ0°46/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.19	325	ePG	Pg	11 14 14.9	-0.5
MALT				eSG	Sg	11 14 18.2	+0.1
MALT	Malatya	0.19	325	ePg	Pg	11 14 14.9	-0.5
MALT				eSg	Sg	11 14 18.2	0.0
MYA	Malataya	0.20	327	ePG	Pg	11 14 15.6	0.0
MYA				eSG	Sg	11 14 18.8	+0.3
MYA	Malataya	0.20	327	ePg	Pg	11 14 15.6	0.0
MYA				eSg	Sg	11 14 18.8	+0.3
ELZG	Elazig	0.47	44	iP	Pg	11 14 20.4	-0.2
ELZG				iS	Sg	11 14 27.3	+0.4
ELZG	Elazig	0.47	44	iP	Pg	11 14 20.5	-0.1
ELZG				iS	Sg	11 14 27.4	+0.4
AKCD	Akcadag	0.53	286	iP	Pg	11 14 21.6	0.0
AKCD				iS	Sg	11 14 28.6	+0.1
AKCD	Akcadag	0.53	286	iP	Pg	11 14 21.6	0.0
AKCD				iS	Sg	11 14 28.6	+0.1
SVRC	Sivrice-ELAZID	0.62	69	ePG	Pg	11 14 22.8	-0.7
SVRC				eSG	Sg	11 14 32.6	+1.0
SVRC	Sivrice-ELAZID	0.62	69	ePg	Pg	11 14 22.8	-0.6
SVRC				eSg	Sg	11 14 32.6	+1.0
ATAB	Bozova	0.72	198	iP	Pg	11 14 25.6	+0.4
ATAB				iS	Sg	11 14 34.7	+0.2
ATAB	Bozova	0.72	198	iP	Pg	11 14 25.6	+0.4
ATAB				iS	Sg	11 14 34.7	+0.2
URFA	Urfa	0.74	164	ePG	Pg	11 14 25.0	-0.6
URFA				eSG	Sg	11 14 35.4	+0.1
URFA	Urfa	0.74	164	ePg	Pg	11 14 25.0	-0.6
URFA				eSg	Sg	11 14 35.4	+0.1
PTK	Pertek	0.98	41	ePG	Pg	11 14 29.4	-0.8
PTK	Pertek	0.98	41	ePg	Pg	11 14 29.4	-0.8
SARI	SarD1z-Kayseri	1.56	290	ePN	Pn	11 14 39.5	+0.3
SARI	SarD1z-Kayseri	1.56	290	ePn	Pn	11 14 39.6	+0.4

IDC 02 11:23:07.4±14.0, 11°.65S×166°.56E, h137km±126km, mb3.6/7, mb1 3.8/7, mb1mx3.6/16, mbtmp3.6/7, Error ellipse: s-maj=55.1km s-min=39.8km az=157.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.57	225	P	P	11 29 08.5	+0.3
	2.7nm,0.9s,baz=31,slow=13,SNR=4.3						
WRA	Warramunga Arr	32.04	251	P	P	11 29 21.2	-0.1
	1.6nm,0.8s,baz=84,slow=9.3,SNR=12						
ASAR	Alice Springs	33.25	244	P	P	11 29 31.5	-0.3
	1.5nm,0.7s,baz=71,slow=9.8,SNR=13						
ASAR				PcP	PcP	11 32 11.2	+0.1
	0.3nm,0.7s,baz=66,slow=3.0,SNR=4.9						
CMAR	Chiang Mai Arr	73.08	293	P	P	11 34 24.0	+0.8
	1.1nm,0.8s,baz=132,slow=6.2,SNR=3.4						
NVAR	Mina Array Bea	85.80	50	P	P	11 35 33.2	+1.6
	0.2nm,0.6s,baz=248,slow=6.5,SNR=2.7						
MKAR	Makanchi Array	94.50	317	P	P	11 36 11.8	-0.4
	0.8nm,0.5s,baz=86,slow=6.4,SNR=8.0						
YKA	Yellowknife Ar	95.14	27	P	P	11 36 13.7	-1.0
	0.1nm,0.4s,baz=258,slow=5.0,SNR=8.2						
ARCES	ARCESS Array B	117.11	346	PKP	PKPdf	11 41 34.6	-1.0
	2.5nm,1.1s,baz=88,slow=3.0,SNR=5.7						

*ISCJB **02** 11:40:57.6±0.5, 15°.34N±0°.03×120°.01E±0°.07, h85km±5km, mb3.9/18, Error ellipse: s-maj=11.1km s-min=5.3km az=179.4*
*MAN **02** 11:40:58, 15°.41N×120°.13E, h13km, mb4.7, ML3.6, MS3.6*
*NEIC **02** 11:41:00.0±0.8, 15°.23N×120°.18E, h100km±8km, mb4.2/4, Error ellipse: s-maj=15.0km s-min=7.4km az=84.0*
*IDC **02** 11:41:01.5±0.9, 15°.20N×120°.17E, h116km±10km, mb3.6/15, mb1 3.8/16, mb1mx3.6/26, mbtmp3.7/16, MS3.3/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=20.1km s-min=12.4km az=82.0*

ISC 02 11:40:59.3±0.5, 15°.33N±0°.03×120°.11E±0°.07, h87km±6km, n49, σ1°34/54, mb3.9/18, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.49	336	eP	Pn	11 41 08.4	-5.3
PCPH	Palayan	0.98	76	eP	Pn	11 41 16.4	-2.2
BOLP	Bolinao	1.06	350	eP	Pn	11 41 15.6	-3.9
BCPH	Baguio City Da	1.14	23	iP	Pn	11 41 19.0	-1.5
BCPH				iS	Sn	11 41 34.5	-1.8
TGY	Tagaytay City	1.46	147	P	Pn	11 41 24.8	+0.5
	701nm,0.3s,baz=283,slow=1.8,SNR=37						
TGY				S	Sn	11 41 46.1	+2.8
	471nm,0.3s,baz=72,slow=23,SNR=11						
TGY	Tagaytay City	1.46	147	P	Pn	11 41 24.9	+0.5
BALP	Baler	1.47	74	eP	Pn	11 41 24.0	-0.6
BALP				eS	Sn	11 41 43.0	-0.6
LUBP	Lubang	1.59	175	eP	Pn	11 41 27.0	+0.9
POLP	Polilio Island	1.86	108	eP	Pn	11 41 32.6	+3.0
CAUP	Cauayan	2.30	45	eP	Pn	11 41 35.7	+0.3
ABRA	Dolores	2.38	14	eP	Pn	11 41 36.8	+0.3
ABRA				eS	Sn	11 42 01.4	-3.5
BOAC	Boac	2.50	138	eP	Pn	11 41 41.1	+3.0
GQP	Guinayangan	2.66	122	eP	Pn	11 41 41.0	+0.7
APYP	Conner	2.74	23	eP	Pn	11 41 43.0	+1.7
PALP	Palanan	2.81	52	eP	Pn	11 41 45.1	+2.8
CVP	Callao Caves	2.88	35	eP	Pn	11 41 42.2	-0.9
SJMP	San Jose	3.01	161	eP	Pn	11 41 45.2	+0.3
PIP	Pasuquin	3.02	9	iP	Pn	11 41 45.1	0.0
AUQP	San Andres	3.18	128	eP	Pn	11 41 56.5	+9.2
BUSP	Coron	3.31	179	eP	Pn	11 41 47.6	-1.4
ENPP	El Nido	4.15	189	eP	Pn	11 41 58.0	-2.4
BBP	Basco	5.38	19	eP	Pn	11 42 15.8	-1.3
TPUB	Ta-pu	7.95	3	ePn	Pn	11 42 52.7	+0.7
	19nm,0.6s						
TPUB				eSn	Sn	11 44 25.9	+5.5
YULB	Yu-li	8.10	8	ePn	Pn	11 42 54.7	+0.6
	22nm,0.6s						
YHNB	Yeheng	9.37	7	ePn	Pn	11 43 14.0	+2.5
	14nm,0.3s						
JOW	Kunigami	13.74	32	P	Pn	11 44 13.6	+3.2
	1.1nm,0.3s,baz=208,slow=5.3,SNR=3.0						
KAPI	Kappang	20.21	181	P	P	11 45 27.0	-0.4
	6.2nm,0.6s,baz=80,slow=8.8,SNR=6.8						
KAPI				LR	LR	11 55 52.5	
	comp=Z,82nm,19.4s,baz=151,slow=44						
KAPI	Kappang	20.21	181	P	P	11 45 27.0	-0.4
KAPI				LR	LR	11 55 52.5	
CMAR	Chiang Mai Arr	20.49	282	P	P	11 45 31.5	+1.1
	1.9nm,0.8s,baz=96,slow=8.5,SNR=9.8						
KSRS	Korea Array	23.10	16	P	P	11 45 56.9	-0.8
	3.8nm,0.8s,mb3.8,baz=198,slow=11,SNR=18						
MJAR	Matsushiro Arr	26.58	34	P	P	11 46 28.2	-1.0
	0.9nm,0.9s,mb3.3,baz=216,slow=8.6,SNR=3.0						
SONM	Songino Array	34.34	344	P	P	11 47 37.6	+0.1
	0.7nm,0.6s,mb3.7,baz=167,slow=10.0,SNR=5.9						
ASAJ	Asahikawa	34.48	29	P	P	11 47 40.1	+1.4
	2.7nm,0.4s,mb4.5,baz=235,slow=16,SNR=8.4						
MBWA	Marble Bar	36.26	181	eP	P	11 47 52.6	-1.7
	2.4nm,0.3s,mb4.6						
WRA	Warramunga Arr	37.74	158	P	P	11 48 04.3	-2.5
	2.7nm,0.9s,mb4.1,baz=340,slow=8.4,SNR=24						
ASAR	Alice Springs	41.03	161	P	P	11 48 32.1	-2.1
	1.0nm,0.5s,mb3.9,baz=339,slow=7.0,SNR=28						
MKAR	Makanchi Array	44.40	323	P	P	11 49 01.7	+0.5
	0.2nm,0.4s,mb3.2,baz=142,slow=7.3,SNR=3.6						
UCH	Uchtor	47.37	314	eP	P	11 49 26.7	+2.1
	1.5nm,0.9s,mb3.7						
PETK	Petropavlovsk-	47.89	30	P	P	11 49 28.8	+0.3
	3.2nm,0.8s,mb4.2,baz=212,slow=5.1,SNR=6.4						
KURK	Kurchatov	48.53	326	P	P	11 49 34.0	+0.6
	0.8nm,0.5s,mb3.9,baz=118,slow=8.9,SNR=4.8						
TIXI	Tiksi	56.55	3	eP	P	11 50 31.6	-0.7
	2.2nm,0.6s,mb4.4						
ABKAR	Akbulak array	59.14	319	eP	P	11 50 51.1	+0.3
	0.9nm,0.5s,mb4.1						
JOF	Joensuu	75.95	332	ep	P	11 52 35.5	-0.9
	0.7nm,0.5s,mb3.6						
ARCES	ARCESS Array B	77.37	339	P	P	11 52 44.5	+0.2
	1.5nm,0.7s,mb3.8,baz=64,slow=8.2,SNR=6.8						
FINES	FINESS Array B	78.60	331	P	P	11 52 51.3	+0.1
	1.1nm,0.5s,mb3.9,baz=57,slow=5.1,SNR=12						
FINES	FINESS Array B	78.60	331	P	P	11 52 51.3	+0.1
NB2	NORSAR Subarra	85.56	332	P	P	11 53 26.7	-1.0
	comp=Z,1.0nm,0.7s,mb3.9,baz=70,slow=5.1						
NOA	NORSAR Array B	85.56	332	P	P	11 53 26.3	-1.4
	comp=Z,0.6nm,0.5s,mb3.8,baz=67,slow=4.9,SNR=3.7						
YKA	Yellowknife Ar	91.50	22	P	P	11 53 56.8	+1.0
	comp=Z,0.6nm,0.5s,mb4.0,baz=308,slow=4.4,SNR=28						

*ISK **02** 11:47:13.9, 36°.95N×37°.33E, h23km, MD2.9*
*DDA **02** 11:47:14.5, 37°.06N×37°.64E, h7km±6km, Md2.8*
*CSEM **02** 11:47:15.9±0.2, 37°.12N×37°.50E, h2km, MD2.9, Error ellipse: s-maj=5.0km s-min=2.5km az=143.0*
*ISCJB **02** 11:47:16.4±0.7, 37°.12N±0°.05×37°.46E±0°.06, h10km, Error ellipse: s-maj=9.0km s-min=4.3km az=42.3*

ISC 02 11:47:16.3±0.9, 37°.12N±0°.05×37°.5E±0°.1, h5km±9km, n18, σ0°91/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	Gaziantep	0.24	9	iP	Pg	11 47 19.7	-1.3
GZT				iS	Sg	11 47 26.0	+1.7
GAZ	Gaziantep	0.25	283	ePG	Pg	11 47 20.3	-0.8
GAZ	Gaziantep	0.25	283	ePg	Pg	11 47 20.3	-0.8
KUZU	Kuzuini	0.49	226	iP	Pg	11 47 25.6	-0.1
KUZU				iS	Sg	11 47 34.0	+1.9
KUZU	Kuzuini	0.49	226	iP	Pg	11 47 25.6	-0.1
KUZU				iS	Sg	11 47 34.0	+2.0
KMRS	Kahramanmaras	0.63	309	ePG	Pg	11 47 27.6	-0.7
KMRS	Kahramanmaras	0.63	309	ePg	Pg	11 47 27.6	-0.7
URFA	Urfa	1.09	72	ePN	Pn	11 47 37.2	-1.1
URFA				eSN	Sn	11 47 54.1	+0.4
URFA	Urfa	1.09	72	ePn	Pn	11 47 37.2	-1.1
URFA				eSn	Sn	11 47 54.1	+0.3
AKCD	Akcadag	1.22	15	iP	Pg	11 47 39.5	-0.2
AKCD				iS	Sg	11 47 55.9	+0.3
AKCD	Akcadag	1.22	15	iP	Pg	11 47 39.5	-0.2
AKCD				iS	Sg	11 47 55.8	+0.2
MALT	Malatya	1.40	31	ePN	Pn	11 47 42.2	-0.3
MALT				eSN	Sn	11 48 02.3	+0.9
MALT	Malatya	1.40	31	ePn	Pn	11 47 42.2	-0.3
MALT				eSn	Sn	11 48 02.3	+0.9
MYA	Malataya	1.41	31	ePN	Pn	11 47 42.2	-0.4
MYA				eSN	Sn	11 48 02.3	+0.7
MYA	Malataya	1.41	31	ePn	Pn	11 47 42.2	-0.4
MYA				eSn	Sn	11 48 02.3	+0.7
SARI	SarD1z-Kayseri	1.69	338	ePN	Pn	11 47 42.0	-4.5
SVRC	Sivrice-ELAZID	1.90	48	ePN	Pn	11 47 48.8	-0.6
SVRC	Sivrice-ELAZID	1.90	48	ePn	Pn	11 47 48.8	-0.6

*IDC **02** 11:54:22.8±1.9, 3°.52N×125°.83E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=178.7km s-min=23.7km az=64.0*
*ISCJB **02** 11:54:24.0±1.2, 2°.7N±0°.1×124°.1E±0°.4, h10km, mb3.9/4, Error ellipse: s-maj=53.2km s-min=15.4km az=172.3*

ISC 02 11:54:26.0±1.2, 2°.8N±0°.1×124°.3E±0°.4, h10km, n5, σ0°63/5, mb3.9/4, 1C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	3.38	11	eP	Pn	11 55 18.9	+0.1
WRA	Warramunga Arr	24.61	157	P	P	11 59 46.4	-0.2
	8.4nm,0.6s,mb4.4,baz=339,slow=10,SNR=59						
ASAR	Alice Springs	27.88	161	P	P	12 00 16.9	+0.8
	0.8nm,0.5s,mb3.6,baz=347,slow=7.9,SNR=24						
STKA	Stephens Creek	38.16	156	P	P	12 01 45.1	-0.5
	2.1nm,0.4s,mb4.2,baz=335,slow=9.9,SNR=5.4						
MKAR	Makanchi Array	57.00	327	P	P	12 04 11.8	-0.1
	0.2nm,0.4s,mb3.5,baz=137,slow=8.8,SNR=3.0						

NEIC 02 11:56:20.8±4.1, 42°.87N×126°.44W, h10km, mb3.5/1, 1D, Error ellipse: s-maj=46.9km s-min=11.6km az=66.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.55	89	P	Pn	11 56 47.5	-0.8
RNO	Roman Nose	2.23	61	P	Pn	11 56 56.6	-1.1
DBO	Dodson Butte	2.36	83	P	Pn	11 56 59.2	-0.3
HSO	Harness Mounta	2.54	74	P	Pn	11 57 01.5	-0.5
HUMO	Hull Mountain	2.58	95	ePn	Pn	11 57 02.9	+0.3
HUMO				eSn	Sn	11 57 35.9	+2.0
MPOR	Mary's Peak	2.66	51	P	Pn	11 57 02.2	-1.5
BBOR	Butler Butte	2.77	88	P	Pn	11 57 05.7	+0.7
YBH	Yreka Blue Hor	2.99	111	ePn	Pn	11 57 08.4	+0.3
YBH				eSn	Sn	11 57 47.5	+3.4
IRO	Indian Ridge	3.26	68	P	Pn	11 57 12.1	+0.3
FRIS	Frissel Point	3.43	65	P	Pn	11 57 14.7	+0.4
RVW	Rose Valley	4.22	38	P	Pn	11 57 24.6	-0.4
HOOD	Mount Hood Mea	4.24	53	ePn	Pn	11 57 25.9	+0.7
VIPM	Ingram Point	4.53	67	P	Pn	11 57 29.5	+0.1
LON	Longmire	5.09	39	ePn	Pn	11 57 37.3	+0.2
	23nm,0.7s						
LON				eSn	Sn	11 58 40.5	+4.6
ETW	Entiat	6.41	40	ePn	Pn	11 57 57.5	+2.4
	3.4nm,0.7s						
ETW				eSn	Sn	11 59 16.2	+7.9
RPW	Rockport	6.56	30	ePn	Pn	11 57 56.7	-0.5
	1.6nm,0.4s						
BMO	Blue Mountains	6.90	70	ePn	Pn	11 58 02.3	+0.5
	1.5nm,0.6s						
BOZ	Bozeman (W)	10.98	70	ePn	Pn	11 58 59.7	+1.9
	1.2nm,0.7s						
FFC	Flin Flon	19.89	45	eP	Pn	12 00 52.0	-1.7
	2.5nm,1.0s						

*CSEM **02** 12:00:00.1±0.2, 41°.46N×23°.01E, h2km, ML2.6/3, Error ellipse: s-maj=4.9km s-min=3.0km az=75.0*
*THE **02** 12:00:00.5, 41°.46N×23°.05E, h8km±1km, ML2.6/3, Error ellipse: s-maj=1.7km s-min=0.8km az=124.0*
*BEO **02** 12:00:04.0±1.9, 41°.62N×23°.07E, h14km, ML2.0/3*

ISC 02 12:00:00.2±0.5, 41°.48N±0°.02×23°.01E±0°.04, h1km±10km, n23, σ0°82/43, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	Serrai	0.56	129	P	Pg	12 00 10.2	-0.8
SRS				S	Sg	12 00 18.0	-0.3
SRS	Serrai	0.56	129	P	Pg	12 00 10.2	-0.8
SRS				S	Sg	12 00 18.0	-0.3
SOH	Sokhos	0.70	158	P	Pg	12 00 13.4	-0.2
SOH				S	Sg	12 00 23.2	+0.5
SOH	Sokhos	0.70	158	P	Pg	12 00 13.4	-0.2
SOH				S	Sg	12 00 23.2	+0.5
THE	Thessaloniki	0.84	182	P	Pg	12 00 16.3	0.0
THE				S	Sg	12 00 28.5	+1.3
THE	Thessaloniki	0.84	182	P	Pg	12 00 16.3	0.0
THE				S	Sg	12 00 28.5	+1.3
HORT	Hortiatis	0.88	176	P	Pg	12 00 16.9	-0.1
HORT				S	Sg	12 00 28.8	+0.4
HORT	Hortiatis	0.88	176	P	Pg	12 00 16.9	-0.1
HORT				S	Sg	12 00 28.8	+0.4
VTS	Vitosha	1.13	7	P	Pg	12 00 22.3	+0.5
VTS	Vitosha	1.13	7	P	Pg	12 00 22.3	+0.5
PLG	Polygyros	1.15	163	P	Pg	12 00 21.3	-0.8
PLG				S	Sg	12 00 38.1	+1.1
PLG	Polygyros	1.15	163	P	Pg	12 00 21.3	-0.8
PLG				S	Sg	12 00 38.1	+1.1
OUR	Ouranopolis	1.35	147	P	Pg	12 00 24.8	-1.3
OUR				S	Sg	12 00 43.2	-0.5
OUR	Ouranopolis	1.35	147	P	Pg	12 00 24.8	-1.3
OUR				S	Sg	12 00 43.2	-0.5
PLD	Plovdiv	1.41	63	iPg	Pg	12 00 27.4	+0.2
PLD				eSg	Sg	12 00 46.0	+0.5
PLD	Plovdiv	1.41	63	iPg	Pg	12 00 27.4	+0.2
PLD				eSg	Sg	12 00 46.0	+0.5
FNA	Florina	1.42	241	P	Pn	12 00 25.1	-1.9
FNA				S	Sg	12 00 45.6	0.0
FNA	Florina	1.42	241	P	Pn	12 00 25.1	-1.9
FNA				S	Sg	12 00 45.6	0.0
BARS	Barje	1.61	327	iPn	Pn	12 00 30.0	+0.3
BARS				iSg	Sg	12 00 52.6	+0.7
BARS	Barje	1.61	327	iPn	Pn	12 00 30.0	+0.3
BARS				iSg	Sg	12 00 52.6	+0.7
ZAPS	Zavoj	1.82	351	ePn	Pn	12 00 32.6	0.0
NISS		2.08	338	ePn	Pn	12 00 37.6	+1.4
NISS				iSg	Sg	12 01 05.8	-1.3
NISS		2.08	338	ePn	Pn	12 00 37.6	+1.4
NISS				iSg	Sg	12 01 05.8	-1.3

*NEIC **02** 12:02:36.4, 16°.67N×98°.28W, h19km, MD3.5(MEX), After MEX.*

MEX 02 12:02:36.1±0.8, 16°.68N×98°.24W, h31km±44km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.30	158	iP	Pb	12 02 41.9	-1.8
PNIG				iS	Sb	12 02 47.0	-1.8
PNIG	Pinotepa	0.30	158	iP	Pb	12 02 41.8	-1.9
PNIG				iS	Sb	12 02 47.5	-1.3
UTMO	Huajuapan	1.22	20	iP	Pn	12 02 55.9	-1.2
UTMO				iS	Sn	12 03 09.7	-2.9
ACX	Acapulco	1.61	277	eP	Pn	12 03 00.4	-2.1
ACX				iS	Sn	12 03 19.4	-2.8
ACX	Acapulco	1.61	277	eP	Pn	12 03 00.4	-2.1
ACX				iS	Sn	12 03 19.4	-2.8
CAIG	El Cayaco	1.97	281	iP	Pn	12 03 06.1	-1.3
CAIG				iS	Sn	12 03 27.1	-4.0
CAIG	El Cayaco	1.97	281	iP	Pn	12 03 06.1	-1.3
CAIG				iS	Sn	12 03 27.8	-3.3
PPM	Popocatepetl	2.40	351	iP	Pn	12 03 12.2	-1.1
PPM				iS	Sn	12 03 39.4	-2.4
PPM	Popocatepetl	2.40	351	iP	Pn	12 03 12.2	-1.1
PPM				iS	Sn	12 03 39.4	-2.4

*IDC **02** 12:07:16.6±3.0, 1°.64N×127°.32E, h115km±28km, mb3.7/7, mb1 3.9/9, mb1mx3.7/19, mbtmp3.7/9, Error ellipse: s-maj=32.3km s-min=12.6km az=73.0*
*ISCJB **02** 12:07:17.9±1.1, 1°.64N±0°.07×127°.18E±0°.06, h145km±10km, mb4.0/9, Error ellipse: s-maj=12.0km s-min=8.5km az=29.1*
*NEIC **02** 12:07:17.2±5.1, 1°.63N×127°.40E, h122km±48km, mb4.6/1, Error ellipse: s-maj=46.7km s-min=9.5km az=58.0*
*DJA **02** 12:07:18, 1°.75N×127°.11E, h108km, MLv4.5/4*

ISC 02 12:07:19.7±1.1, 1°.56N±0°.07×127°.17E±0°.06, h145km±10km, n29, σ0°95/38, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.21	171	P	Pn	12 07 56.3	-0.7
LBMI				S	Sn	12 08 26.5	+0.8
SGSI	Sangihe	2.67	322	P	Pn	12 07 56.3	-6.5
SGSI				S	Sn	12 08 27.1	-8.9
LUWI	Luwuk	5.10	240	P	Pn	12 08 36.2	+1.8
LUWI				S	Sn	12 09 33.7	+1.1
LUWI	Luwuk	5.10	240	P	Pn	12 08 34.2	-0.2
	84nm,0.6s,3μm0.9nm						
LUWI				S	Sn	12 09 33.9	+1.3
	84nm,0.6s,3μm0.9nm						
MRSI	Marisa	5.34	258	P	Pn	12 08 36.8	-0.8
	74nm,0.6s,1μm0.4nm						
MRSI	Marisa	5.34	258	P	Pn	12 08 36.7	-0.9
APSI	Ampana	6.04	246	P	Pn	12 08 46.9	-0.1
	83nm,0.6s,0.4nm						
APSI				S	Sn	12 09 55.2	+0.1
	83nm,0.6s,0.4nm						
APSI	Ampana	6.04	246	P	Pn	12 08 46.4	-0.6
	83nm,0.6s,2μm0.4nm						
APSI				S	Sn	12 09 55.4	+0.3
	83nm,0.6s,2μm0.4nm						
KDI	Kendari	7.12	220	P	Pn	12 09 00.9	-0.5
	13nm,0.9s,417nm0.1nm						
KDI				S	Sn	12 10 18.6	-2.5
	13nm,0.9s,417nm0.1nm						
KDI	Kendari	7.12	220	P	Pn	12 09 00.9	-0.5
KDI				S	Sn	12 10 18.6	-2.5
KAPI	Kappang	9.88	229	P	Pn	12 09 39.2	+1.0
	4.9nm,0.3s,baz=355,slow=2.4,SNR=13						
KAPI				S	Sn	12 11 27.2	-0.4
	2.4nm,0.3s,baz=170,slow=22,SNR=4.8						
KAPI	Kappang	9.88	229	P	Pn	12 09 40.7	+2.5
KAKA	Kakadu	15.11	160	eP	Pn	12 10 46.2	+0.4
	5.8nm,0.4s						
FITZ	Fitzroy Crossi	19.59	184	eP	P	12 11 37.5	+0.7
	5.9nm,0.4s						
FITZ	Fitzroy Crossi	19.59	184	P	P	12 11 36.2	-0.6
	0.8nm,0.3s,baz=25,slow=8.1,SNR=26						
WRAB	Tennant Creek	22.49	162	eP	P	12 12 06.5	-0.8
	24nm,0.8s,mb4.7						
WRAB	Tennant Creek	22.49	162	P	P	12 12 06.8	-0.6
WRA	Warramunga Arr	22.50	162	P	P	12 12 06.7	-0.7
	16nm,0.4s,mb4.8,baz=342,slow=11,SNR=222						
WB2	Warramunga Arr	22.50	162	eP	P	12 12 06.9	-0.5
ASAR	Alice Springs	25.91	166	P	P	12 12 38.5	0.0
	2.5nm,0.5s,mb4.1,baz=344,slow=8.0,SNR=91						
ASAR				ScP	ScP	12 19 32.9	+2.9
	0.3nm,0.7s,baz=348,slow

DEMI	**Demirci**	**0.83**	**97**	*i* P	**Pb**	**12 09 49.8**	**0.0**
DEMI				*i* S	**Sb**	**12 09 59.8**	**-0.7**
DEMI	**Demirci**	**0.83**	**97**	*i* P	**Pb**	**12 09 49.8**	**0.0**
DEMI				*i* S	**Sb**	**12 09 59.8**	**-0.7**
DST	**Dursunbey**	**0.88**	**58**	*e*PG	**Pg**	**12 09 46.3**	**-5.0**
DST	**Dursunbey**	**0.88**	**58**	*e*Pg	**Pg**	**12 09 46.3**	**-5.0**
MANT	**Manisa**	**0.96**	**133**	*i* P	**Pb**	**12 09 50.5**	**-1.5**
MANT				*i* S	**Sb**	**12 10 06.9**	**+2.7**
MANT	**Manisa**	**0.96**	**133**	*i* P	**Pb**	**12 09 50.5**	**-1.5**
MANT				*i* S	**Sb**	**12 10 06.9**	**+2.7**
KULA	**Kula-Manisa**	**1.00**	**128**	*e*PG	**Pg**	**12 09 51.8**	**-1.8**
KULA				*e*SG	**Sg**	**12 10 07.0**	**+0.3**
KULA	**Kula-Manisa**	**1.00**	**128**	*e*Pg	**Pg**	**12 09 51.8**	**-1.7**
KULA				*e*Sg	**Sg**	**12 10 07.0**	**+0.3**
URLA	**Izmir**	**1.14**	**227**	*i* P	**Pn**	**12 09 53.9**	**-1.0**
URLA				*i* S	**Sb**	**12 10 10.4**	**+0.9**
URLA	**Izmir**	**1.14**	**227**	*i* P	**Pn**	**12 09 53.9**	**-1.0**
URLA				*i* S	**Sb**	**12 10 10.4**	**+0.9**
ULDT	**Uludag**	**1.52**	**48**	*i* P	**Pn**	**12 10 02.3**	**+2.2**
ULDT	**Uludag**	**1.52**	**48**	*i* P	**Pn**	**12 10 02.3**	**+2.2**

IDC 02 12:12:23.8±2.1, 0°.71N×125°.87E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=172.8km s-min=27.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.14**	**158**	P	P	12 17 21.2	-0.1
	1.7nm,0.6s,baz=337,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**25.46**	**163**	P	P	12 17 53.9	+0.2
	0.5nm,0.5s,baz=343,slow=9.2,SNR=7.9						
MKAR	**Makanchi Array**	**59.56**	**327**	P	P	12 22 29.2	0.0
	0.2nm,0.4s,baz=112,slow=9.8,SNR=3.2						

CSEM 02 12:24:57.8, 42°.96N×6°.44W, h0km, ML1.8, Mining explosion. After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.64**	**306**	Pg	Pg	12 25 09.3	-0.7
	6.8nm,0.3s,SNR=24						
EPON				Lg		12 25 18.7	
	13nm,0.4s,SNR=11						
ERUA	**La Rua**	**0.77**	**223**	Pg	Pg	12 25 12.0	-0.4
	SNR=7.9						
ERUA				Lg		12 25 22.6	
	10nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**0.96**	**69**	Pg	Pg	12 25 14.7	-1.6
	11nm,0.3s,SNR=60						
EARI				Lg		12 25 31.4	
	8.4nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**1.04**	**192**	Pg	Pg	12 25 17.2	-0.5
	27nm,0.3s,SNR=98						
ECAL				Lg		12 25 31.7	
	25nm,0.3s,SNR=8.1						
ELOB	**Lobios**	**1.62**	**228**	Pg	Pg	12 25 26.0	-2.8
	2.9nm,0.3s,SNR=13						
ELOB				Lg		12 25 49.7	
	SNR=7.9						
EMAZ	**Mazaricos**	**1.86**	**271**	Lg		12 25 57.9	
	SNR=7.9						
ELAN	**Lanestosa**	**2.22**	**82**	Pg	Pg	12 25 35.2	-5.1
	1.8nm,0.3s,SNR=9.1						
ELAN				Lg		12 26 08.0	
	SNR=7.9						
GUD	**Guadarrama**	**2.88**	**143**	Pg	Pg	12 25 51.5	-1.4
GUD				Lg		12 26 27.6	
GUD	**Guadarrama**	**2.88**	**143**	Pg	Pg	12 25 51.5	-1.4
	SNR=7.9						
GUD				Lg		12 26 27.6	
	SNR=7.9						

*IDC **02** 12:41:34.5±1.6, 37°.42N×102°.64E, h0km, mb3.2/4, mb1 3.4/5, mb1mx3.3/27, mbtmp3.4/5, ML3.6/1, Error ellipse: s-maj=44.6km s-min=25.2km az=50.0*
*BJI **02** 12:41:38.4, 37°.48N×102°.69E, h18km, ML3.7/9*
ISC 02 12:41:36.0±0.7, 37°.48N±0°.07×102°.9E±0°.1, h10km, n9, σ0§90/13, mb3.4/2, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.60**	**150**	Pg	**Pg**	**12 42 07.9**	**+1.2**
LZH				Sg	**Sg**	**12 42 27.4**	**0.0**
LZH				smax			
	comp=N,1μm,0.7s						
LZH				smax			
	comp=E,500nm,0.8s						
GTA	**Gaotai**	**3.07**	**310**	Pn	**Pn**	**12 42 24.7**	**+0.1**
GTA				Pg	**Pg**	**12 42 29.5**	**-5.4**
GTA				Sg	**Sg**	**12 43 07.7**	**-7.0**
GTA				smax			
	comp=N,370nm,0.8s						
GTA				smax			
	comp=E,350nm,0.5s						
GTA				LR	LR		
	comp=N,320nm,6.8s						
GTA				LR	LR		
	comp=E,290nm,5.6s						
GTA				LR	LR		
	comp=Z,300nm,6.8s						
XAN	**Xi'an**	**6.00**	**123**	Pg	**Pg**	**12 43 28.6**	**-2.4**
XAN				Sg	**Sg**	**12 44 48.8**	**+0.1**
XAN				smax			
	comp=N,16nm,0.7s						
XAN				smax			
	comp=E,9.0nm,0.7s						
BTO	**Baotou**	**6.38**	**59**	*e*Pg	Px	12 44 00.7	
BTO				Sg	**Sg**	**12 44 55.3**	**-5.6**
BTO				smax			
	comp=N,4.0nm,0.5s						
BTO				smax			
	comp=E,4.0nm,0.3s						
BTO				SMZ			
	comp=E,7.0nm,0.7s						
SONM	**Songino Array**	**10.67**	**13**	Pn	**Pn**	**12 44 09.8**	**+1.0**
	comp=E,0.4nm,0.3s,baz=194,slow=14,SNR=12						
SONM				Lg		12 47 11.7	
	comp=E,0.2nm,0.3s,baz=203,slow=30,SNR=5.2						
KSRS	**Korea Array**	**19.88**	**82**	P	**Pn**	**12 46 09.3**	**+0.4**
	comp=E,0.8nm,0.6s,baz=277,slow=10.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**20.64**	**329**	P	**P**	**12 46 14.9**	**-0.6**
	comp=E,0.3nm,0.4s,baz=128,slow=9.3,SNR=2.4						
KURK	**Kurchatov**	**21.74**	**315**	P	**P**	**12 46 26.7**	**-0.7**
	comp=E,0.6nm,0.3s,mb3.5,baz=114,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**67.47**	**149**	P	**P**	**12 52 32.5**	**+0.4**
	comp=E,0.2nm,0.8s,mb3.2,baz=338,slow=6.8,SNR=4.7						

*IDC **02** 12:48:15.4±3.0, 3°.41S×134°.98E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.6/15, mbtmp3.6/4, Error ellipse: s-maj=133.9km s-min=27.1km az=87.0*
*NEIC **02** 12:48:20.8±1.5, 3°.48S×134°.85E, h35km, Error ellipse: s-maj=57.1km s-min=12.7km az=91.0*
ISC 02 12:48:28.8±4.0, 4°.1S±0°.2×135°.2E±0°.2, h92km±44km, n8, σ1§35/11, mb3.5/2, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.93**	**197**	*e*P	**Pn**	**12 50 34.5**	**-0.6**
	9.7nm,0.3s						
KAKA	**Kakadu**	**8.93**	**197**	*e*Pn	**Pn**	**12 50 34.5**	**-0.5**
	27nm,0.4s						
KAKA				*e*Sn	**Sn**	**12 52 16.0**	**+2.0**
WRA	**Warramunga Arr**	**15.72**	**183**	Pn	**Pn**	**12 52 03.8**	**-1.3**
	0.2nm,0.3s,baz=0.4,slow=13,SNR=29						
WRA				Sn	**Sn**	**12 54 57.1**	**-1.9**
	0.1nm,0.3s,baz=11,slow=23,SNR=4.7						
FITZ	**Fitzroy Crossi**	**16.72**	**213**	*e*P	**Pn**	**12 52 18.5**	**+1.0**
	7.2nm,1.5s						
FITZ	**Fitzroy Crossi**	**16.72**	**213**	Pn	**Pn**	**12 52 17.4**	**-0.1**
	0.2nm,0.3s,baz=40,slow=11,SNR=12						
FITZ				Sn	**Sn**	**12 55 21.9**	**-1.1**
	0.2nm,0.3s,baz=206,slow=16,SNR=4.3						
ASAR	**Alice Springs**	**19.45**	**183**	P	**Pn**	**12 52 51.7**	**+1.4**
	1.6nm,0.6s,baz=5.3,slow=11,SNR=27						
SONM	**Songino Array**	**57.59**	**337**	P	**P**	**12 58 01.8**	**-7.1**
	0.3nm,0.4s,mb3.7,baz=155,slow=4.8,SNR=2.6						
MKAR	**Makanchi Array**	**68.81**	**324**	P	**P**	**12 59 17.3**	**-5.9**
	0.3nm,0.5s,mb3.4,baz=110,slow=7.4,SNR=4.8						

*NEIC **02** 12:58:10.7, 16°.75N×100°.94W, h17km, MD3.6(MEX), After MEX.*
MEX 02 12:58:10.5±0.9, 16°.73N×100°.94W, h16km±49km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.72**	**64**	*i* P	Pg	12 58 22.0	-2.6
CAIG				*i* S	Sg	12 58 30.7	-3.5
CAIG	**El Cayaco**	**0.72**	**64**	*i* P	Pg	12 58 22.0	-2.6
CAIG				*i* S	Sg	12 58 30.7	-3.5
ACX	**Acapulco**	**0.99**	**82**	*i* P	Pb	12 58 31.0	+1.7
ACX				*i* S	Sb	12 58 40.2	-2.0
ACX	**Acapulco**	**0.99**	**82**	*i* P	Pb	12 58 23.8	-5.5
ACX				*i* S	Sb	12 58 37.8	-4.4
ZIIG	**Zihuatanejo**	**1.00**	**330**	*i* P	Pb	12 58 25.6	-4.0
ZIIG				*i* S	Sb	12 58 38.8	-3.7
ZIIG	**Zihuatanejo**	**1.00**	**330**	*i* P	Pb	12 58 25.6	-4.0
ZIIG				*i* S	Sb	12 58 38.8	-3.7
MEIG	**Mezcala**	**1.73**	**47**	*i* P	Pn	12 58 37.6	-2.4
MEIG				*i* S	Sn	12 58 57.1	-4.7
MZVM		**2.94**	**33**	*e*P	Pn	12 58 49.7	-6.8
UTMO	**Huajuapan**	**3.19**	**70**	*e*P	Pn	12 58 57.8	-2.3
UTMO				*i* S	Sn	12 59 34.8	-3.0
PPM	**Popocatepetl**	**3.20**	**43**	*e*P	Pn	12 58 58.4	-1.8
PPM				*i* S	Sn	12 59 33.7	-4.4
PPM	**Popocatepetl**	**3.20**	**43**	*e*P	Pn	12 58 58.4	-1.8
PPM				*i* S	Sn	12 59 33.7	-4.4
IIO	**Organos**	**3.54**	**36**	*e*P	Pn	12 59 11.1	+6.2
IIO				*i* S	Sn	12 59 49.7	+3.3
IIO	**Organos**	**3.54**	**36**	*e*P	Pn	12 59 11.1	+6.2

*DDA **02** 13:08:18.6, 38°.20N×28°.67E, h9km±2km, Md2.9*
*ISK **02** 13:08:18.5, 38°.15N×28°.63E, h2km, MD3.2*
*ISCJB **02** 13:08:19.4±0.2, 38°.17N±0°.01×28°.64E±0°.02, h10km, Error ellipse: s-maj=2.3km s-min=1.9km az=152.9*
*CSEM **02** 13:08:19.5±0.1, 38°.15N×28°.62E, h2km, MD2.9, Error ellipse: s-maj=2.5km s-min=2.1km az=60.0*
*THE **02** 13:08:22.2, 38°.27N×28°.63E, h8km±3km, ML3.7/2, Error ellipse: s-maj=3.0km s-min=1.0km az=38.0*
ISC 02 13:08:20.1±0.2, 38°.17N±0°.01×28°.63E±0°.02, h10km, n140, σ1§15/178, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	**Manisa**	**0.32**	**349**	*i* P	**Pg**	**13 08 25.8**	**-0.7**
MANT	**Manisa**	**0.32**	**349**	*i* P	**Pg**	**13 08 25.8**	**-0.7**
KULA	**Kula-Manisa**	**0.34**	**4**	*i* Pg	**Pg**	**13 08 25.8**	**-1.0**
KULA	**Kula-Manisa**	**0.34**	**4**	PG	**Pg**	**13 08 25.8**	**-1.1**
DENT	**Denizli**	**0.52**	**143**	*e*PG	**Pg**	**13 08 29.0**	**-1.2**
DENT	**Denizli**	**0.52**	**143**	*e*Pg	**Pg**	**13 08 29.0**	**-1.3**
DNZL	**Cakiroluk**	**0.58**	**146**	*i* P	**Pg**	**13 08 30.1**	**-1.3**
DNZL				*i* S	**Sg**	**13 08 38.4**	**-0.6**
DNZL	**Cakiroluk**	**0.58**	**146**	*i* P	**Pg**	**13 08 30.1**	**-1.3**
DNZL				*i* S	**Sg**	**13 08 38.4**	**-0.6**
KHAL	**Karahalli**	**0.70**	**73**	*i* P	**Pg**	**13 08 31.7**	**-2.0**
KHAL				*i* S	**Sg**	**13 08 39.7**	**-3.1**
KHAL	**Karahalli**	**0.70**	**73**	*i* P	**Pg**	**13 08 31.7**	**-2.0**
AYDN	**Tasoluk**	**0.79**	**230**	*i* P	**Pg**	**13 08 34.5**	**-0.8**
AYDN				*i* S	**Sg**	**13 08 46.4**	**+1.0**
AYDN	**Tasoluk**	**0.79**	**230**	*i* P	**Pg**	**13 08 34.5**	**-0.7**
AYDN				*i* S	**Sg**	**13 08 46.4**	**+0.9**
DEMI	**Demirci**	**0.87**	**4**	*i* P	**Pg**	**13 08 35.4**	**-1.4**
DEMI				*i* S	**Sg**	**13 08 45.7**	**-2.5**
DEMI	**Demirci**	**0.87**	**4**	*i* P	**Pg**	**13 08 35.4**	**-1.5**
AKHS	**Akhisar**	**0.95**	**318**	*i* P	**Pg**	**13 08 37.5**	**-0.9**
AKHS				*i* S	**Sg**	**13 08 49.6**	**-1.3**
AKHS	**Akhisar**	**0.95**	**318**	*i* P	**Pg**	**13 08 37.5**	**-0.9**
AKHS				*i* S	**Sg**	**13 08 49.6**	**-1.3**
AKS	**Akhisar**	**0.95**	**318**	*e*PG	**Pg**	**13 08 37.9**	**-0.5**
AKS				*e*SG	**Sg**	**13 08 52.1**	**+1.2**
AKS	**Akhisar**	**0.95**	**318**	*e*Pg	**Pg**	**13 08 37.9**	**-0.5**
AKS				*e*Sg	**Sg**	**13 08 52.1**	**+1.2**
YER	**Yerkesik**	**1.07**	**195**	*e*PG	**Pg**	**13 08 40.0**	**-0.7**
YER				*e*SG	**Sg**	**13 08 54.7**	**0.0**
YER	**Yerkesik**	**1.07**	**195**	*e*Pg	**Pg**	**13 08 40.0**	**-0.7**
YER				*e*Sg	**Sg**	**13 08 54.7**	**+0.1**
IZM	**Izmir**	**1.10**	**282**	*e*PN	**Pg**	**13 08 40.5**	**-0.8**
IZM	**Izmir**	**1.10**	**282**	*e*Pn	**Pg**	**13 08 40.5**	**-0.8**
MLSB	**Milas**	**1.11**	**218**	*e*PN	**Pg**	**13 08 40.2**	**-1.1**
MLSB				*e*SN	**Sg**	**13 08 56.1**	**+0.3**
MLSB	**Milas**	**1.11**	**218**	*e*Pn	**Pg**	**13 08 40.2**	**-1.2**
MLSB				*e*Sn	**Sg**	**13 08 56.1**	**+0.3**
GDZ	**Gediz**	**1.13**	**36**	*i* P	**Pg**	**13 08 39.6**	**-2.2**
GDZ				*i* S	**Sg**	**13 08 54.6**	**-1.9**
GOLH	**Golhisar**	**1.19**	**142**	*i* P	**Pn**	**13 08 41.2**	**-1.5**
GOLH				*i* S	**Sg**	**13 08 58.8**	**+0.4**
GOLH	**Golhisar**	**1.19**	**142**	*i* P	**Pn**	**13 08 41.2**	**-1.5**
GOLH				*i* S	**Sg**	**13 08 58.8**	**+0.4**
GCAM	**G?zelcaml?**	**1.20**	**247**	*i* P	**Pn**	**13 08 41.5**	**-1.4**
GCAM				*i* S	**Sb**	**13 08 58.1**	**-0.4**
GCAM	**G?zelcaml?**	**1.20**	**247**	*i* P	**Pn**	**13 08 41.5**	**-1.4**
GCAM				*i* S	**Sb**	**13 08 58.1**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.23**	**146**	*e*PN	**Pn**	**13 08 42.3**	**-1.0**
GLHS				*e*SN	**Sg**	**13 08 59.9**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.23**	**146**	*e*Pn	**Pn**	**13 08 42.3**	**-0.9**
GLHS				*e*Sn	**Sg**	**13 08 59.9**	**+0.4**
BLCB	**Balcova**	**1.27**	**280**	*e*PN	**Pn**	**13 08 43.8**	**-0.1**
BLCB	**Balcova**	**1.27**	**280**	P	**Pg**	**13 08 44.7**	**+0.2**
BLCB				S	**Sg**	**13 09 00.9**	**-0.1**
BLCB	**Balcova**	**1.27**	**280**	*e*Pn	**Pn**	**13 08 43.8**	**-0.1**
BLCB	**Balcova**	**1.27**	**280**	P	**Pg**	**13 08 44.7**	**+0.2**
BLCB				S	**Sg**	**13 09 00.9**	**-0.1**
TURN	**Turunc**	**1.30**	**181**	*i* P	**Pg**	**13 08 45.0**	**0.0**
TURN				*i* S	**Sg**	**13 09 07.2**	**+5.3**
TURN	**Turunc**	**1.30**	**181**	*i* P	**Pg**	**13 08 45.0**	**0.0**
DST	**Dursunbey**	**1.43**	**360**	*e*PN	**Pg**	**13 08 46.8**	**-0.7**
DST	**Dursunbey**	**1.43**	**360**	*e*Pn	**Pg**	**13 08 46.8**	**-0.7**
DURS	**Dursunbey**	**1.43**	**355**	*i* P	**Pn**	**13 08 45.4**	**-0.7**
DURS				*i* S	**Sn**	**13 09 05.1**	**+0.1**
DURS	**Dursunbey**	**1.43**	**355**	*i* P	**Pn**	**13 08 45.4**	**-0.7**
DURS				*i* S	**Sn**	**13 09 05.1**	**+0.2**
ALT	**Altintas**	**1.45**	**52**	*e*PN	**Pn**	**13 08 45.9**	**-0.5**
ALT	**Altintas**	**1.45**	**52**	*e*Pn	**Pn**	**13 08 45.9**	**-0.5**
BDRM	**Kayabasi**	**1.45**	**221**	*i* P	**Pn**	**13 08 45.9**	**-0.5**
BDRM	**Kayabasi**	**1.45**	**221**	*i* P	**Pn**	**13 08 45.9**	**-0.5**
ISP	**Isparta**	**1.52**	**102**	*e*PN	**Pg**	**13 08 47.8**	**-1.4**
ISP	**Isparta**	**1.52**	**102**	P	**Pg**	**13 08 47.6**	**-1.6**
ISP				S	**Sg**	**13 09 09.4**	**+0.5**
BODT	**Bodrum**	**1.53**	**224**	*e*PN	**Pn**	**13 08 47.3**	**-0.1**
BODT				*e*SN	**Sn**	**13 09 08.9**	**+1.6**
BODT	**Bodrum**	**1.53**	**224**	*e*Pn	**Pn**	**13 08 47.3**	**-0.1**
BODT				*e*Sn	**Sn**	**13 09 08.9**	**+1.6**
SHUT	**Suhut-Afyon**	**1.55**	**75**	*e*PN	**Pg**	**13 08 48.3**	**-1.6**
SHUT	**Suhut-Afyon**	**1.55**	**75**	*e*Pn	**Pg**	**13 08 48.3**	**-1.6**
FETY	**Fethiye**	**1.58**	**167**	*e*PN	**Pn**	**13 08 48.0**	**-0.1**
FETY	**Fethiye**	**1.58**	**167**	*e*Pn	**Pn**	**13 08 48.0**	**-0.1**
BALB	**Balikesir**	**1.58**	**338**	*e*PN	**Pg**	**13 08 48.9**	**-1.4**
BALB	**Balikesir**	**1.58**	**338**	*e*Pn	**Pg**	**13 08 48.9**	**-1.5**
URLA	**Izmir**	**1.61**	**277**	*i* P	**Pg**	**13 08 50.0**	**-1.0**
URLA	**Izmir**	**1.61**	**277**	*i* P	**Pg**	**13 08 50.0**	**-1.1**
DAT	**Datca**	**1.67**	**211**	*e*PN	**Pn**	**13 08 49.5**	**+0.1**
DAT	**Datca**	**1.67**	**211**	*e*Pn	**Pn**	**13 08 49.5**	**+0.2**
BCK	**Bucak**	**1.70**	**114**	*e*PN	**Pn**	**13 08 49.9**	**+0.1**
BCK	**Bucak**	**1.70**	**114**	*e*Pn	**Pn**	**13 08 49.9**	**+0.1**
ELL	**Elmali**	**1.75**	**144**	*e*PN	**Pn**	**13 08 50.4**	**0.0**
ELL	**Elmali**	**1.75**	**144**	*e*Pn	**Pn**	**13 08 50.4**	**0.0**
BALY	**Balya**	**1.75**	**334**	*i* P	**Pn**	**13 08 49.8**	**-0.7**
BALY				*i* S	**Sg**	**13 09 14.5**	**-1.9**
BALY	**Balya**	**1.75**	**334**	*i* P	**Pn**	**13 08 49.8**	**-0.7**
BALY				*i* S	**Sg**	**13 09 14.5**	**-1.9**
AYVA	**Ayvalik**	**1.90**	**307**	*i* P	**Pn**	**13 08 51.1**	**-1.3**
AYVA	**Ayvalik**	**1.90**	**307**	*i* P	**Pn**	**13 08 51.1**	**-1.4**
ARG	**Arkhangelos**	**2.00**	**192**	P	**Pg**	**13 08 55.7**	**-2.6**
ARG				S	**Sg**	**13 09 22.5**	**-1.7**
ARG	**Arkhangelos**	**2.00**	**192**	P	**Pg**	**13 08 55.7**	**-2.6**
ARG				S	**Sg**	**13 09 22.5**	**-1.7**
SUTC	**Sutluce-Ispart**	**2.00**	**110**	*e*PN	**Pn**	**13 08 54.2**	**+0.3**
SUTC	**Sutluce-Ispart**	**2.00**	**110**	*e*Pn	**Pn**	**13 08 54.2**	**+0.3**
ULDT	**Uludag**	**2.00**	**11**	*i* P	**Pg**	**13 08 56.0**	**-2.5**
ULDT	**Uludag**	**2.00**	**11**	*i* P	**Pg**	**13 08 56.0**	**-2.5**
AKAS	**Kas**	**2.08**	**158**	*i* P	**Pn**	**13 08 55.6**	**+0.5**
AKAS				*i* S	**Sg**	**13 09 28.0**	**+0.9**
AKAS	**Kas**	**2.08**	**158**	*i* P	**Pn**	**13 08 55.6**	**+0.5**
KCT	**Karacabey**	**2.10**	**354**	*e*PN	**Pn**	**13 08 56.2**	**+1.0**
KCT	**Karacabey**	**2.10**	**354**	*e*Pn	**Pn**	**13 08 56.2**	**+0.9**
PRK	**Paraskevi**	**2.14**	**301**	P	**Pn**	**13 08 56.0**	**+0.2**
PRK				S	**Sn**	**13 09 22.7**	**+0.4**
PRK	**Paraskevi**	**2.14**	**301**	P	**Pn**	**13 08 56.0**	**+0.2**
PRK				S	**Sn**	**13 09 22.7**	**+0.4**
ESKT	**Eskisehir**	**2.19**	**51**	*e*PN	**Pn**	**13 08 57.5**	**+1.0**
ESKT	**Eskisehir**	**2.19**	**51**	*i* P	**Pn**	**13 08 56.9**	**+0.4**
ESKT	**Eskisehir**	**2.19**	**51**	*e*Pn	**Pn**	**13 08 57.5**	**+1.0**
SEYT	**Eskypehyr**	**2.19**	**51**	*i* P	**Pn**	**13 08 56.9**	**+0.4**
BNT	**Bandirma**	**2.25**	**346**	*e*PN	**Pn**	**13 08 58.4**	**+1.0**
BNT	**Bandirma**	**2.25**	**346**	*e*Pn	**Pn**	**13 08 58.4**	**+1.1**
EDC	**Edincik**	**2.25**	**345**	*e*PN	**Pn**	**13 08 58.8**	**+1.4**
EDC	**Edincik**	**2.25**	**345**	*e*Pn	**Pn**	**13 08 58.8**	**+1.4**
GEMT	**Gemlik**	**2.30**	**11**	*e*PN	**Pn**	**13 08 59.3**	**+1.3**
GEMT	**Gemlik**	**2.30**	**11**	*e*Pn	**Pn**	**13 08 59.3**	**+1.3**
SIGR	**SIGRI**	**2.41**	**296**	P	**Pn**	**13 08 59.5**	**0.0**
SIGR				S	**Sn**	**13 09 29.5**	**+0.5**
SIGR	**SIGRI**	**2.41**	**296**	P	**Pn**	**13 08 59.5**	**0.0**
SIGR				S	**Sn**	**13 09 29.5**	**+0.5**
ADVT	**Abdulvahap**	**2.41**	**20**	*e*PN	**Pn**	**13 09 01.2**	**+1.6**
ADVT	**Abdulvahap**	**2.41**	**20**	*e*Pn	**Pn**	**13 09 01.2**	**+1.6**
EZN	**Ezine**	**2.44**	**313**	*e*PN	**Pn**	**13 09 01.2**	**+1.2**
EZN	**Ezine**	**2.44**	**313**	*e*Pn	**Pn**	**13 09 01.2**	**+1.2**
YLV	**Yalova**	**2.46**	**13**	*e*PN	**Pn**	**13 09 01.7**	**+1.5**
YLV	**Yalova**	**2.46**	**13**	*e*Pn	**Pn**	**13 09 01.7**	**+1.5**
GPA	**Golpazari**	**2.48**	**31**	*e*PN	**Pn**	**13 09 01.5**	**+1.0**
GPA	**Golpazari**	**2.48**	**31**	*e*Pn	**Pn**	**13 09 01.5**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.59**	**60**	*e*PN	**Pn**	**13 09 03.0**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.59**	**60**	*e*Pn	**Pn**	**13 09 03.0**	**+1.0**
BOZC	**Bozcaada**	**2.61**	**310**	*i* P	**Pn**	**13 09 01.8**	**-0.5**
LPK	**Lapseki**	**2.63**	**327**	*e*PN	**Pn**	**13 09 04.0**	**+1.4**
LPK	**Lapseki**	**2.63**	**327**	*e*Pn	**Pn**	**13 09 04.0**	**+1.4**
KIZT	**Kizilcal**	**2.64**	**74**	*e*PN	**Pn**	**13 09 03.8**	**+1.1**
KIZT	**Kizilcal**	**2.64**	**74**	*e*Pn	**Pn**	**13 09 03.8**	**+1.1**
GULT	**Gulveren**	**2.69**	**32**	*e*PN	**Pn**	**13 09 04.7**	**+1.4**
GULT	**Gulveren**	**2.69**	**32**	*e*Pn	**Pn**	**13 09 04.7**	**+1.4**
RKY	**Sarkoy-Tekirda**	**2.75**	**336**	*e*PN	**Pn**	**13 09 05.7**	**+1.5**
RKY	**Sarkoy-Tekirda**	**2.75**	**336**	*e*Pn	**Pn**	**13 09 05.7**	**+1.5**
MFT	**Murefte**	**2.81**	**339**	*e*PN	**Pn**	**13 09 06.4**	**+1.3**
MFT	**Murefte**	**2.81**	**339**	*e*Pn	**Pn**	**13 09 06.4**	**+1.3**
ISK	**Istanbul-Kandi**	**2.91**	**6**	*e*PN	**Pn**	**13 09 07.9**	**+1.6**
ISK	**Istanbul-Kandi**	**2.91**	**6**	*e*Pn	**Pn**	**13 09 07.9**	**+1.5**
GADA	**Gvkgeada**	**2.93**	**314**	*e*PN	**Pn**	**13 09 07.1**	**+0.4**
GADA	**Gvkgeada**	**2.93**	**314**	*e*Pn	**Pn**	**13 09 07.1**	**+0.4**
LADK	**Ladik-KONYA**	**2.94**	**88**	*e*PN	**Pn**	**13 09 08.4**	**+1.6**
LADK	**Ladik-KONYA**	**2.94**	**88**	*e*Pn	**Pn**	**13 09 08.4**	**+1.6**
KONT	**Konya--Tatoy**	**2.95**	**93**	*e*PN	**Pn**	**13 09 08.0**	**+1.0**
KONT	**Konya--Tatoy**	**2.95**	**93**	*e*Pn	**Pn**	**13 09 08.0**	**+1.0**
MDU	**Mudurnu**	**3.04**	**40**	*e*PN	**Pn**	**13 09 09.8**	**+1.6**
MDU	**Mudurnu**	**3.04**	**40**	*e*Pn	**Pn**	**13 09 09.8**	**+1.6**
CTKS	**Kestanelik-??a**	**3.06**	**358**	*e*PN	**Pn**	**13 09 09.8**	**+1.3**
CTKS	**Kestanelik-??a**	**3.06**	**358**	*e*Pn	**Pn**	**13 09 09.8**	**+1.3**
SILT	**Sile**	**3.08**	**14**	*e*PN	**Pn**	**13 09 10.2**	**+1.6**
SILT	**Sile**	**3.08**	**14**	*e*Pn	**Pn**	**13 09 10.2**	**+1.5**
KLYT	**Kilyos**	**3.09**	**6**	*e*PN	**Pn**	**13 09 10.2**	**+1.3**
KLYT	**Kilyos**	**3.09**	**6**	*e*Pn	**Pn**	**13 09 10.2**	**+1.3**
LIA	**Limnos Island**	**3.19**	**304**	P	**Pn**	**13 09 10.7**	**+0.4**
LIA	**Limnos Island**	**3.19**	**304**	P	**Pn**	**13 09 10.7**	**+0.4**
LOS	**Limnos**	**3.28**	**304**	P	**Pn**	**13 09 12.2**	**+0.8**
LOS	**Limnos**	**3.28**	**304**	P	**Pn**	**13 09 12.2**	**+0.8**
HDMB	**Hadim**	**3.29**	**110**	*e*PN

az=150.6
*IDC **02** 13:20:37.7±0.7, 7°27S×129°14E, h168km±6km, mb3.7/11, mb1 4.0/15, mb1mx3.9/19, mbtmp3.8/15, MS3.4/3, Ms1 3.4/3, ms1mx2.8/21, Error ellipse: s-maj=21.1km s-min=10.5km az=71.0*
*DJA **02** 13:20:40, 7°37S×129°11E, h107km, mb4.9/10*
ISC 02 13:20:38.8±0.6, 7°33S±0°04×129°19E±0°06, h178km±7km, h169km±3.5km; pP-P, n60, σ1§24/63, mb4.1/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.75**	**345**	P	**Pn**	**13 21 36.1**	**-0.7**
TLE	**Tual**	**3.90**	**65**	P	**Pn**	**13 21 38.8**	**+0.1**
KAKA	**Kakadu**	**6.23**	**149**	*eP*	**Pn**	**13 22 08.0**	**-0.9**
	34nm,0.2s						
KAKA				*eS*	**Sn**	**13 23 15.6**	**-4.3**
KAKA	**Kakadu**	**6.23**	**149**	*ePn*	**Pn**	**13 22 07.6**	**-1.3**
	220nm,0.5s						
KAKA				*eSn*	**Sn**	**13 23 15.3**	**-4.5**
KAKA	**Kakadu**	**6.23**	**149**	P	**Pn**	**13 22 08.3**	**-0.6**
	180nm,0.5s,4.0nm						
LBMI	**Labuha**	**6.86**	**346**	P	**Pn**	**13 22 17.1**	**0.0**
	194nm,0.8s,2μm0.6nm						
KDI	**Kendari**	**7.35**	**297**	P	**Pn**	**13 22 24.1**	**+0.5**
	32nm,1.0s,0.1nm						
KAPI	**Kappang**	**9.66**	**283**	P	**Pn**	**13 22 52.2**	**-1.8**
	0.6nm,0.3s,baz=109,slow=5.6,SNR=12						
KAPI	**Kappang**	**9.66**	**283**	P	**Pn**	**13 22 54.3**	**+0.3**
	20nm,1.2s						
MRSI	**Marisa**	**10.60**	**317**	P	**Pn**	**13 23 08.0**	**+1.7**
	86nm,1.2s,891nm						
FITZ	**Fitzroy Crossi**	**11.26**	**198**	*eP*	**Pn**	**13 23 13.5**	**-1.2**
	11nm,0.3s						
FITZ				*eS*	**Sn**	**13 25 10.8**	**-9.0**
FITZ	**Fitzroy Crossi**	**11.26**	**198**	P	**Pn**	**13 23 13.7**	**-1.1**
	3.0nm,0.3s,baz=34,slow=10,SNR=45						
FITZ				S	**Sn**	**13 25 11.8**	**-8.0**
	4.6nm,0.3s,baz=72,slow=11,SNR=7.7						
FITZ				LR	LR	13 28 32.2	
	comp=Z,103nm,18.2s,baz=126,slow=42						
FITZ	**Fitzroy Crossi**	**11.26**	**198**	P	**Pn**	**13 23 14.4**	**-0.3**
	25nm,1.4s						
WRAB	**Tennant Creek**	**13.49**	**159**	*ePn*	**Pn**	**13 23 41.2**	**-2.1**
	220nm,1.0s						
WRAB				*eP*		13 23 48.8	
WRAB				*eSn*	**Sn**	**13 26 02.9**	**-11**
WRAB	**Tennant Creek**	**13.49**	**159**	P	**Pn**	**13 23 48.8**	**+5.5**
	217nm,1.0s,2μm						
WRA	**Warramunga Arr**	**13.50**	**159**	P	**Pn**	**13 23 41.9**	**-1.4**
	1.3nm,0.3s,baz=334,slow=13,SNR=61						
WRA				S	**Sn**	**13 26 06.1**	**-7.5**
	2.6nm,0.3s,baz=335,slow=22,SNR=11						
WRA				ScP	ScP	13 32 13.0	-0.1
	baz=338,slow=1.4,SNR=4.8						
BBKI	**Banjar Baru**	**14.79**	**284**	P	**Pn**	**13 24 04.3**	**+4.7**
	309nm,1.1s						
COEN	**Coen**	**15.23**	**117**	*ePn*	**Pn**	**13 24 07.0**	**+2.0**
	256nm,0.8s						
COEN	**Coen**	**15.23**	**117**	P	**Pn**	**13 24 08.4**	**+3.4**
	196nm,1.2s						
MYLDM	**Lahad Datu**	**16.38**	**319**	P	**Pn**	**13 24 21.3**	**+2.4**
MBWA	**Marble Bar**	**16.52**	**213**	*eP*	**Pn**	**13 24 19.1**	**-1.4**
	4.2nm,0.4s						
MBWA				*eS*	**S**	**13 27 12.2**	**-11**
ASAR	**Alice Springs**	**16.86**	**165**	P	**Pn**	**13 24 26.1**	**+1.4**
	8.7nm,0.3s,baz=340,slow=9.7,SNR=586						
ASAR				S	**S**	**13 27 30.1**	**-0.6**
	1.7nm,0.3s,baz=343,slow=21,SNR=8.9						
SJI	**Sawahan**	**17.28**	**268**	P	**Pn**	**13 24 29.0**	**-0.7**
PBKI	**Pangkalan Bun**	**18.04**	**284**	P	**P**	**13 24 38.5**	**+1.7**
KKM	**Kota Kinabalu**	**18.55**	**315**	*eP*	**P**	**13 24 36.6**	**-5.6**
	65nm,1.1s						
STKI	**Sintang**	**19.13**	**292**	P	**P**	**13 24 49.7**	**+1.1**
SBUM	**Sibu**	**19.52**	**299**	P	**P**	**13 24 54.4**	**+1.6**
KSM	**Kuching**	**20.77**	**294**	*eP*	**P**	**13 25 01.3**	**-4.9**
	34nm,1.1s						
CTA	**Charters Tower**	**20.84**	**129**	*eP*	**P**	**13 25 09.2**	**+2.3**
	14nm,1.1s						
CTA	**Charters Tower**	**20.84**	**129**	P	**P**	**13 25 07.2**	**+0.3**
	19nm,1.1s,baz=318,slow=11,SNR=5.0						
FORT	**Forrest**	**23.36**	**182**	*eP*	**P**	**13 25 33.0**	**+1.7**
	39nm,0.6s,mb5.0						
FORT	**Forrest**	**23.36**	**182**	*eP*	**P**	**13 25 32.3**	**+1.0**
	77nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**27.03**	**156**	*eP*	**P**	**13 26 05.9**	**+1.5**
	11nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**27.03**	**156**	P	**P**	**13 26 05.2**	**+0.7**
	13nm,0.8s,mb4.6,baz=334,slow=9.1,SNR=20						
STKA				LR	LR	13 38 51.7	
	comp=Z,91nm,18.1s,baz=27,slow=40						
STKA	**Stephens Creek**	**27.03**	**156**	*eP*	**P**	**13 26 05.3**	**+0.9**
	3.1nm,0.9s,mb3.9						
NWAO	**Narrogin (SRO)**	**27.79**	**202**	LR	LR	13 38 19.2	
	comp=Z,102nm,21.7s,baz=239,slow=38						
KULM	**Kulim**	**31.11**	**293**	*eP*	**P**	**13 26 40.9**	**0.0**
	7.1nm,1.0s,mb4.3						
ARMA	**Armidale**	**31.15**	**140**	*eP*	**P**	**13 26 43.8**	**+2.9**
ARMA	**Armidale**	**31.15**	**140**	*eP*	**P**	**13 26 43.3**	**+2.4**
	3.9nm,0.7s,mb4.2						
TOO	**Toolangi**	**33.55**	**156**	*eP*	**P**	**13 27 05.1**	**+3.4**
CM31	**Chiang Mai Arr**	**39.33**	**311**	*eP*	**P**	**13 27 49.6**	**-1.3**
	1.1nm,0.3s,mb4.0						
CMAR	**Chiang Mai Arr**	**39.33**	**311**	P	**P**	**13 27 50.1**	**-0.9**
	3.2nm,0.8s,mb4.0,baz=146,slow=7.4,SNR=16						
CHTO	**Chiang Mai**	**39.55**	**311**	*eP*	**P**	**13 27 51.8**	**-1.0**
	5.0nm,0.8s,mb4.2						
NJ2	**Nanjing**	**40.38**	**346**	*eP*	**P**	**13 27 58.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
MJAR	**Matsushiro Arr**	**44.45**	**10**	P	**P**	**13 28 30.0**	**-2.1**
	comp=Z,1.8nm,0.9s,mb3.7,baz=189,slow=11,SNR=4.6						
KSRS	**Korea Array**	**44.56**	**359**	P	**P**	**13 28 32.5**	**-0.5**
	comp=Z,0.9nm,0.5s,mb3.6,baz=173,slow=9.3,SNR=7.9						
KSRS				pP	pP	13 29 08.7	-3.3
	comp=Z,0.3nm,0.5s,baz=195,slow=9.0,SNR=3.1						
SONM	**Songino Array**	**58.50**	**342**	P	**P**	**13 30 17.6**	**+1.4**
	comp=Z,0.6nm,0.6s,mb3.6,baz=165,slow=6.7,SNR=5.0						
SONM				pP	pP	13 30 54.2	-3.1
	comp=Z,0.7nm,0.8s,baz=164,slow=7.1,SNR=2.6						
SONM				ScP	ScP	13 34 48.8	+0.6
	comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=3.3						
PETK	**Petropavlovsk-**	**64.88**	**19**	P	**P**	**13 30 59.2**	**+0.5**
	comp=Z,4.1nm,0.7s,mb4.4,baz=180,slow=3.5,SNR=11						
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**13 31 18.6**	**-0.5**
	comp=Z,1.9nm,0.7s,mb4.0,baz=130,slow=7.9,SNR=25						
MKAR				pP	pP	13 31 58.2	-3.2
	comp=Z,1.0nm,0.8s,baz=129,slow=8.5,SNR=1.2						
AML	**Almayashu**	**70.53**	**319**	*eP*	**P**	**13 31 34.5**	**+0.1**
	comp=Z,5.2nm,1.2s,mb4.1						
EKS2	**Erkin-Say**	**70.74**	**320**	*eP*	**P**	**13 31 34.7**	**-0.9**
	comp=Z,5.2nm,0.3s,mb4.7						
ZALV	**Zalesovo Beam**	**71.52**	**334**	P	**P**	**13 31 38.6**	**-1.5**
	comp=Z,0.9nm,0.6s,mb3.7,baz=119,slow=5.1,SNR=7.1						
ZALV				pP	pP	13 32 21.1	-1.7
	comp=Z,3.1nm,1.0s,baz=64,slow=3.4,SNR=2.1						
MAW	**Mawson**	**74.36**	**201**	P	**P**	**13 31 57.6**	**+1.1**
	comp=Z,1.6nm,0.5s,mb4.0,baz=29,slow=6.2,SNR=3.9						
BVAR	**Borovoye Array**	**77.91**	**328**	P	**P**	**13 32 16.0**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.4,baz=167,slow=10,SNR=4.1						
BVAR				pP	pP	13 32 58.4	-1.8
	comp=Z,0.3nm,0.5s,baz=144,slow=12,SNR=1.4						
ABKAR	**Akbulak array**	**82.27**	**322**	*eP*	**P**	**13 32 39.1**	**-1.1**
	comp=Z,1.6nm,0.9s,mb3.6						
QSPA	**South Pole Qui**	**82.65**	**180**	*eP*	**P**	**13 32 42.3**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.1						
HEBO	**Mount Hebo**	**107.17**	**45**	*eP*	Pdif	13 34 37.9	+2.5
TORD	**Torodi Ar. Bea**	**128.08**	**281**	PKP	PKPdf	13 39 24.9	+0.2
	comp=Z,0.5nm,0.8s,baz=247,slow=1.7,SNR=3.7						
MIAR	**Mount Ida**	**132.27**	**49**	*ePKPdf*	PKPdf	13 39 28.2	-3.9
LPAZ	**La Paz**	**150.94**	**144**	*ePKPdf*	PKPbc	13 40 12.2	+0.8

*IDC **02** 13:38:15.0±1.0, 6°20S×130°05E, h0km, mb4.0/5, mb1 4.3/8, mb1mx4.0/18, mbtmp4.2/8, ML4.5/3, MS3.4/2, Ms1 3.3/2, ms1mx2.6/24, Error ellipse: s-maj=61.2km s-min=18.2km az=66.0*
*NEIC **02** 13:38:20.0±0.8, 6°29S×129°96E, h35km, mb4.6/2, Error ellipse: s-maj=18.7km s-min=11.4km az=66.0*
*ISCJB **02** 13:38:20.1±2.8, 6°4S±0°1×130°0E±0°1, h56km±28km, mb3.8/4, MS3.3/2, Error ellipse: s-maj=20.2km s-min=13.7km az=40.9*
ISC 02 13:38:23.8±2.7, 6°6S±0°1×129°92E±0°08, h74km±28km, n17, σ1§17/21, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.61**	**158**	*eP*	**Sn**	**13 41 11.2**	**-1.0**
	308nm,0.4s						
KAKA	**Kakadu**	**6.61**	**158**	*ePn*	**Pn**	**13 39 59.8**	**+1.5**
	103nm,0.3s						
KAKA				*eSn*	**Sn**	**13 41 10.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**12.21**	**200**	*eP*	**Pn**	**13 41 17.4**	**+2.5**
	19nm,0.3s						
FITZ				*eS*	**Sn**	**13 43 28.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**12.21**	**200**	Pn	**Pn**	**13 41 16.1**	**+1.2**
	1.5nm,0.3s,baz=28,slow=9.8,SNR=67						
FITZ				Sn	**Sn**	**13 43 28.6**	**-0.7**
	4.9nm,0.3s,baz=263,slow=13,SNR=9.6						
WRAB	**Tennant Creek**	**13.98**	**162**	*ePn*	**Pn**	**13 41 37.3**	**-1.2**
	5.7nm,0.3s						
WRAB				*eSn*	Sx	13 44 00.9	
WRA	**Warramunga Arr**	**13.99**	**163**	Pn	**Pn**	**13 41 38.3**	**-0.2**
	2.4nm,0.3s,baz=341,slow=14,SNR=25						
WRA				Sn	Sx	13 44 04.6	
	5.0nm,0.3s,baz=338,slow=21,SNR=10						
COEN	**Coen**	**14.97**	**120**	*ePn*	**Pn**	**13 41 49.6**	**-1.8**
	161nm,0.6s						
ASAR	**Alice Springs**	**17.44**	**168**	P	**Pn**	**13 42 24.7**	**+2.4**
	1.9nm,0.3s,baz=346,slow=8.9,SNR=52						
ASAR				S	Sx	13 45 28.7	
	0.6nm,0.3s,baz=348,slow=26,SNR=6.3						
MBWA	**Marble Bar**	**17.55**	**213**	*ePn*	**Pn**	**13 42 23.5**	**-0.2**
	3.3nm,0.4s						
MBWA				*eSn*	**Sn**	**13 45 38.2**	**-0.5**
CTA	**Charters Tower**	**20.80**	**132**	*eP*	**P**	**13 43 00.3**	**+1.1**
	6.4nm,0.7s						
CTA	**Charters Tower**	**20.80**	**132**	P	**P**	**13 43 00.3**	**+1.2**
	10nm,0.9s,baz=306,slow=10,SNR=5.6						
STKA	**Stephens Creek**	**27.46**	**158**	*eP*	**P**	**13 44 04.4**	**+1.5**
	2.6nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**27.46**	**158**	P	**P**	**13 44 04.5**	**+1.6**
	3.4nm,0.6s,mb4.0,baz=336,slow=10,SNR=8.1						
STKA				LR	LR	13 56 32.9	
	comp=Z,77nm,20.1s,baz=198,slow=40						
STKA	**Stephens Creek**	**27.46**	**158**	*eP*	**P**	**13 44 03.7**	**+0.8**
MKAR	**Makanchi Array**	**67.81**	**327**	P	**P**	**13 49 13.8**	**-0.1**
	0.5nm,0.4s,mb3.7,baz=116,slow=7.0,SNR=16						
MKAR				LR	LR	14 19 53.5	
	comp=Z,22nm,18.9s,baz=51,slow=37						
ZALV	**Zalesovo Beam**	**71.15**	**334**	P	**P**	**13 49 33.8**	**-0.5**
	0.7nm,0.8s,mb3.6,baz=96,slow=9.1,SNR=3.5						
BVAR	**Borovoye Array**	**77.64**	**328**	P	**P**	**13 50 11.3**	**-0.7**
	0.4nm,0.4s,mb3.5,baz=103,slow=8.2,SNR=4.7						

IDC 02 14:08:22.8±1.8, 3°53N×127°20E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=143.0km s-min=23.5km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.36**	**164**	P	P	14 13 43.1	+0.5
	1.4nm,0.4s,baz=344,slow=10,SNR=41						
ASAR	**Alice Springs**	**27.81**	**167**	P	P	14 14 14.0	+0.2
	0.1nm,0.3s,baz=350,slow=7.5,SNR=10						
STKA	**Stephens Creek**	**37.78**	**160**	P	P	14 15 40.4	-0.4
	0.9nm,0.4s,baz=341,slow=11,SNR=8.2						
MKAR	**Makanchi Array**	**57.98**	**325**	P	P	14 18 17.2	0.0
	0.2nm,0.5s,baz=116,slow=8.2,SNR=2.9						

*ISCJB **02** 14:33:13.6±0.3, 6°80N±0°03×73°00W±0°03, h163km±2km, mb4.0/14, Error ellipse: s-maj=6.1km s-min=4.1km az=137.6*
*FUNV **02** 14:33:13.5, 6°73N×73°17W, h173km, MW4.0*
*IDC **02** 14:33:13.7±0.7, 6°72N×72°94W, h160km±8km, mb3.8/6, mb1 4.1/9, mb1mx3.7/21, mbtmp3.9/9, Error ellipse: s-maj=19.2km s-min=8.1km az=134.0*
*NEIC **02** 14:33:16.0, 6°85N×73°31W, h147km, mb4.3/9, After RSNC.*
ISC 02 14:33:14.7±0.2, 6°80N±0°03×72°98W±0°03, h157km±2km, n168, σ0§74/177, mb4.0/14, 71C-58D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**231**	⇓*iP*	**Pn**	**14 33 36.2**	**+0.3**
BARC				*eS*	**Sn**	**14 33 51.5**	**-0.6**
CAPV	**Capacho**	**1.25**	**32**	⇑*iP*	**Pn**	**14 33 43.7**	**+1.3**
CAPV				*eS*	**Sn**	**14 34 05.1**	**+1.5**
OCAC	**Ocana**	**1.47**	**347**	*eP*	**Pn**	**14 33 44.1**	**-0.4**
OCAC				*eS*	**Sn**	**14 34 07.1**	**-0.4**
CHIC	**Chingaza**	**2.28**	**199**	*eP*	**Pn**	**14 33 53.5**	**-0.1**
CHIC				*eS*	**Sn**	**14 34 23.4**	**-0.1**
ROSC	**El Rosal**	**2.35**	**215**	P	**Pn**	**14 33 55.5**	**+1.1**
	171nm,0.3s,baz=329,slow=2.3,SNR=319						
ROSC				S	**Sn**	**14 34 23.9**	**-1.1**
	160nm,0.3s,baz=84,slow=14,SNR=6.6						
SOCV	**Socops**	**2.58**	**55**	⇑*iP*	**Pn**	**14 33 58.3**	**+1.2**
SOCV				*eS*	**Sn**	**14 34 30.5**	**+0.7**
VIGV	**El Vigia**	**2.59**	**38**	⇑*iP*	**Pn**	**14 33 58.2**	**+1.0**
VIGV				*eS*	**Sn**	**14 34 30.9**	**+0.7**
HELC	**Santa Helena**	**2.61**	**258**	*eP*	**Pn**	**14 33 55.7**	**-1.8**
HELC				*eS*	**Sn**	**14 34 24.6**	**-5.9**
SDV	**Santo Domingo**	**3.12**	**48**	P	**Pn**	**14 34 05.0**	**+1.1**
	181nm,0.3s,baz=245,slow=7.5,SNR=657						
SDV				S	**Sn**	**14 34 42.2**	**+0.2**
	60nm,0.3s,baz=336,slow=15,SNR=7.7						
TOLC	**Tolima**	**3.21**	**227**	*eP*	**Pn**	**14 34 04.7**	**-0.4**
ELOV	**Elorza**	**3.48**	**86**	⇑*iP*	**Pn**	**14 34 09.8**	**+1.3**
ELOV				*eS*	**Sn**	**14 34 50.9**	**+0.7**
VIRV	**Villa del Rosa**	**3.72**	**9**	⇑*iP*	**Pn**	**14 34 10.4**	**-1.2**
VIRV				*eS*	**Sn**	**14 34 53.6**	**-2.3**
QARV	**Quebrada Arrib**	**4.17**	**36**	⇑*iP*	**Pn**	**14 34 18.0**	**+0.6**
SANV	**Sanarito**	**4.34**	**52**	⇑*iP*	**Pn**	**14 34 19.8**	**+0.2**
CURV	**Curarigua**	**4.38**	**43**	⇑*iP*	**Pn**	**14 34 20.3**	**+0.2**
DABV	**Dabajuro**	**4.71**	**29**	*eP*	**Pn**	**14 34 24.5**	**0.0**
TEPV	**Terepaima**	**4.90**	**50**	⇑*iP*	**Pn**	**14 34 27.1**	**+0.3**
SIQV	**Siquisique**	**4.95**	**39**	⇑*iP*	**Pn**	**14 34 27.4**	**-0.2**
BAUV	**El Baul**	**5.34**	**66**	⇑*iP*	**Pn**	**14 34 31.7**	**-1.1**
MAPV	**Macapo**	**5.40**	**56**	*eP*	**Pn**	**14 34 33.5**	**0.0**
IMOV	**Isla Los Monje**	**5.89**	**20**	*eP*	**Pn**	**14 34 39.2**	**-0.9**
JACV	**Jacura**	**5.92**	**44**	*eP*	**Pn**	**14 34 39.8**	**-0.6**
MONV	**Montecano**	**5.92**	**30**	*eP*	**Pn**	**14 34 39.3**	**-1.2**
CAOV	**Caicara del Or**	**6.63**	**85**	⇑*iP*	**Pn**	**14 34 48.6**	**-1.3**
MERV	**Las Mercedes**	**7.06**	**69**	*eP*	**Pn**	**14 34 54.2**	**-1.3**
BIRV	**Birongo**	**7.58**	**61**	⇑*iP*	**Pn**	**14 35 01.3**	**-1.2**
CUPV	**Cepira**	**7.82**	**65**	⇑*iP*	**Pn**	**14 35 04.6**	**-1.1**
OTAV	**Otavalo**	**8.50**	**220**	*ePn*	**Pn**	**14 35 12.3**	**-2.4**
	5.4nm,0.6s						
OTAV				*eSn*	**Sn**	**14 36 52.2**	**+2.8**
PCRV	**Puerto La Cruz**	**8.91**	**67**	P	**Pn**	**14 35 19.2**	**-1.1**
	2.6nm,0.3s,baz=227,slow=6.5,SNR=9.5						
PCRV	**Puerto La Cruz**	**8.91**	**67**	*eP*	**Pn**	**14 35 19.4**	**-0.8**
MTDJ	**Mount Denham**	**12.19**	**339**	*ePn*	**Pn**	**14 36 03.8**	**+0.5**
	46nm,0.6s						
MTDJ				*eSn*	**Sn**	**14 38 09.3**	**-9.0**
SDDR	**Presa de Saban**	**12.22**	**8**	*ePn*	**Pn**	**14 36 06.7**	**+3.0**
JTS	**JuntasAbangare**	**12.33**	**287**	P	**Pn**	**14 36 10.4**	**+5.2**
	0.6nm,0.3s,baz=221,slow=15,SNR=3.0						
GTBY	**Guantanamo Bay**	**13.21**	**351**	*ePn*	**Pn**	**14 36 17.9**	**+1.5**
APG	**El Apazote**	**18.99**	**297**	P	**P**	**14 37 20.4**	**-3.9**
	0.4nm,0.3s,baz=141,slow=21,SNR=4.0						
LPAZ	**La Paz**	**23.43**	**168**	*eP*	**P**	**14 38 10.2**	**+0.3**
	4.8nm,0.9s,mb3.9						
LPAZ				*e*		14 38 42.7	
SIV	**San Ignacio**	**25.53**	**153**	pP	pP	14 39 01.3	-0.2
	1.1nm,0.5s,baz=295,slow=10.0,SNR=5.9						
628A	**Black Gap, Mar**	**36.08**	**312**	⇑P	**P**	**14 40 01.2**	**-0.3**
	baz=36						
528A	**Cox Ranch, San**	**36.38**	**313**	⇓P	**P**	**14 40 03.4**	**-0.6**
	baz=36						
627A	**Terlingua Ranc**	**36.43**	**312**	⇑P	**P**	**14 40 04.3**	**-0.2**
	baz=36,SNR=5.3						
TXAR	**Lajitas Array**	**36.58**	**312**	P	**P**	**14 40 05.3**	**-0.4**
	0.9nm,0.4s,mb3.7,baz=122,slow=8,8,SNR=13						
428A	**Kincaid Ranch,**	**36.62**	**314**	⇑P	**P**	**14 40 06.0**	**-0.1**
	baz=36						
527A	**Woodward Ranch**	**36.97**	**313**	⇓P	**P**	**14 40 09.1**	**+0.1**
	baz=37						
626A	**Big Bend Ranch**	**37.04**	**312**	⇓P	**P**	**14 40 09.5**	**-0.1**
	baz=37						
328A	**Wristen Ranch,**	**37.08**	**315**	⇓P	**P**	**14 40 09.2**	**-0.7**
	baz=37						
427A	**Hayter Ranch,**	**37.20**	**314**	⇑P	**P**	**14 40 10.2**	**-0.7**
	baz=37						
526A	**Mary Lane Ranc**	**37.27**	**312**	⇑P	**P**	**14 40 11.3**	**-0.3**
	baz=37						
426A	**McDonald Obser**	**37.55**	**313**	⇓P	**P**	**14 40 13.6**	**-0.3**
	baz=37,SNR=5.1						
425A	**Indio Mountain**	**38.31**	**313**	⇓P	**P**	**14 40 20.0**	**-0.2**
	baz=38						
Z27A	**Tatum**	**38.49**	**317**	⇓P	**P**	**14 40 20.5**	**-1.1**
	baz=38,SNR=7.2						
325A	**Bean Ranch, Si**	**38.61**	**313**	⇑P	**P**	**14 40 22.3**	**-0.4**
	baz=38						
Z26A	**Caprock**	**38.98**	**317**	⇑P	**P**	**14 40 24.8**	**-1.0**
	baz=39						
324A	**Moseley Ranch,**	**39.02**	**313**	⇑P	**P**	**14 40 25.8**	**-0.3**
	baz=39						
RCBR	**Riachuelo**	**39.08**	**108**	*eP*	**P**	**14 40 28.0**	**+1.1**
	3.1nm,0.7s,mb4.0						
125A	**Gardner Draw,**	**39.10**	**315**	⇑P	**P**	**14 40 26.4**	**-0.3**
	baz=39						
Y26A	**Elida**	**39.26**	**318**	⇑P	**P**	**14 40 27.5**	**-0.5**
	baz=39						
224A	**Corundas Mount**	**39.39**	**314**	⇑P	**P**	**14 40 29.2**	**0.0**
	baz=39,SNR=9.9						
Y25A	**Mesa, Roswell**	**39.84**	**317**	⇓P	**P**	**14 40 33.1**	**+0.3**
	baz=40						
Y24A	**Capitan**	**40.35**	**316**	⇓P	**P**	**14 40 36.7**	**-0.4**
	baz=40,SNR=5.5						
W25A	**X Bar L Ranch,**	**40.45**	**319**	⇑P	**P**	**14 40 37.6**	**-0.3**
	baz=40						
Y23A	**Lovelace Mesa,**	**40.78**	**316**	⇑P	**P**	**14 40 40.8**	**+0.2**
	baz=41						
Z22A	**Elephant Butte**	**41.04**	**315**	⇓P	**P**	**14 40 43.4**	**+0.6**
	baz=41						
120A	**U Bar Ranch, L**	**41.88**	**312**	⇓P	**P**	**14 40 50.2**	**+0.6**
	baz=42						
219A	**White Tail Can**	**42.08**	**311**	⇓P	**P**	**14 40 51.9**	**+0.6**
	baz=42						
Z20A	**Nine Sixteen R**	**42.14**	**313**	⇓P	**P**	**14 40 52.3**	**+0.7**
	baz=42						
X21A	**Alamocita Cree**	**42.26**	**315**	⇑P	**P**	**14 40 53.0**	**+0.3**
	baz=42						
Y20A	**Horse Springs,**	**42.39**	**314**	⇑P	**P**	**14 40 54.6**	**+0.9**
	baz=42						
218A	**Dragoon**	**42.65**	**311**	⇑P	**P**	**14 40 56.6**	**+0.7**
	baz=42						
217A	**Green Valley**	**43.14**	**310**	⇑P	**P**	**14 41 00.5**	**+0.7**
	baz=43						
W19A	**Sanders**	**43.73**	**315**	⇑P	**P**	**14 41 04.7**	**+0.2**
	baz=44						
S21A	**Coal Bank Pass**	**44.06**	**319**	⇑P	**P**	**14 41 07.0**	**-0.1**
	baz=44						
Q22A	**Crested Butte,**	**44.21**	**321**	⇑P	**P**	**14 41 08.2**	**0.0**
	baz=44						
V17A	**Tonalea, Kykot**	**44.98**	**315**	⇓P	**P**	**14 41 14.6**	**+0.2**
	baz=45						
T18A	**Mexican Hat**	**45.14**	**317**	⇑P	**P**	**14 41 15.7**	**+0.1**
	baz=45						
WUAZ	**Wupatki**	**45.33**	**315**	⇑P	**P**	**14 41 17.8**	**+0.6**
	baz=45						
TRQA	**Tornquist**	**45.79**	**168**	*eP*	**P**	**14 41 21.2**	**+0.5**
	52nm,2.3s,mb4.8						
R18A	**Canyonlands Na**	**45.83**	**319**	⇓P	**P**	**14 41 21.9**	**+0.8**
	baz=46						
S17A	**Black Ridge (B**	**46.03**	**317**	⇑P	**P**	**14 41 23.1**	**+0.5**
	baz=46						
V15A	**Kaibab Nationa**	**46.05**	**314**	⇑P	**P**	**14 41 23.8**	**+1.1**
	baz=46,SNR=7.4						
U15A	**North Rim**	**46.43**	**315**	⇑P	**P**	**14 41 26.3**	**+0.6**
	baz=46						
O19A	**Miners Draw (B**	**46.44**	**322**	⇑P	**P**	**14 41 25.5**	**-0.3**
	baz=46						
X13A	**Yucca**	**46.67**	**312**	⇓P	**P**	**14 41 29.0**	**+1.4**
	baz=46						
N19A	**John Jarvie Ra**	**46.82**	**322**	⇓P	**P**	**14 41 28.4**	**-0.3**
	baz=47						
R16A	**Teasdale**	**46.83**	**318**	⇓P	**P**	**14 41 29.4**	**+0.6**
	baz=47						
U14A	**Mt Trumbull**	**47.05**	**315**	⇓P	**P**	**14 41 31.3**	**+0.7**
	baz=47						
ULM	**Lac du Bonnet

B18A Beardsley Farm 51.85 329 ⇓P P 14 42 06.8 0.0
baz=52
D16A Dana Ranch, Ca 51.91 327 ⇓P P 14 42 06.9 -0.3
baz=52
L10A Juniper Basin 52.05 319 ⇑P P 14 42 08.5 +0.1
baz=52
I12A Atlanta 52.10 322 ⇓P P 14 42 08.7 0.0
baz=52
K11A Parker Ranch, 52.12 320 ⇓P P 14 42 08.8 -0.1
baz=52
E15A Deer Lodge 52.14 326 ⇑P P 14 42 08.8 -0.1
baz=52
G13A Cobalt 52.27 324 ⇑P P 14 42 09.4 -0.6
baz=52
MFID Camas Ranch 52.33 321 ⇓P P 14 42 10.5 +0.1
baz=52
H12A Diamond D Ranc 52.34 323 ⇑P P 14 42 10.5 +0.1
baz=52
C16A Fuhringer Ranc 52.49 328 ⇓P P 14 42 11.6 +0.2
baz=52
K10A MacKenzie Ranc 52.66 320 ⇑P P 14 42 12.7 -0.1
baz=52
I11A Placerville 52.67 322 ⇓P P 14 42 12.8 0.0
baz=52
F13A Darby 52.72 324 ⇓P P 14 42 13.0 -0.3
baz=53
H11A Donnelly 53.12 323 ⇑P P 14 42 15.7 -0.5
baz=53
A16A West Butte Ran 53.13 329 ⇓P P 14 42 16.7 +0.6
baz=53
F12A Elk City 53.24 324 ⇓P P 14 42 17.1 +0.1
baz=53
J09A Fry Pan Ranch, 53.51 320 ⇑P P 14 42 19.1 +0.1
baz=53
D13A Huson 53.54 326 ⇓P P 14 42 19.4 +0.2
baz=53
C14A Swan Lake 53.54 327 ⇑P P 14 42 19.4 +0.2
baz=53
G11A Walters Elk Ra 53.65 323 ⇑P P 14 42 19.6 -0.3
baz=54
A15A Johnson Ranch, 53.73 328 ⇓P P 14 42 20.1 -0.5
baz=54
E12A Beaver Dam Sad 53.79 325 ⇓P P 14 42 21.0 0.0
baz=54
C13A Hot Springs 53.94 326 ⇑P P 14 42 22.1 0.0
baz=54
G10A Bishop Farm, J 54.10 323 ⇑P P 14 42 22.7 -0.6
baz=54,SNR=5.1
E11A Bogner Ranch, 54.13 324 ⇓P P 14 42 22.5 -0.9
baz=54
FCC Fort Churchill 54.32 347 *eP* **P 14 42 22.6 -2.0**
0.1nm,1.1s
F10A Beach Ranch, E 54.52 323 ⇑P P 14 42 26.2 -0.1
baz=54
I07A Izee 54.97 320 ⇓P P 14 42 30.0 +0.5
baz=55
G08A Pilot Rock 55.22 322 ⇓P P 14 42 30.8 -0.5
baz=55,SNR=5.9
G06A Carlson Farm, 56.23 321 ⇑P P 14 42 38.7 +0.2
baz=56
YKA Yellowknife Ar 63.33 340 P **P 14 43 25.7 -0.9**
3.5nm,0.6s,mb4.4,baz=132,slow=6.7,SNR=104
TORD Torodi Ar. Bea 73.61 78 P **P 14 44 29.7 -1.8**
0.3nm,0.8s,mb3.1,baz=268,slow=8.7,SNR=2.5
KTH Kantishna Hill 78.58 333 *eP* **P 14 44 57.6 -0.9**
49nm,1.9s,mb4.8
KTH *e*PcP PcP 14 45 06.6 -0.4
MKAR Makanchi Array 122.30 20 PKP PKPdf 14 51 49.8 -1.4
0.2nm,0.4s,baz=249,slow=3.1,SNR=5.1
ASAR Alice Springs 149.21 234 PKPbc PKPbc 14 52 44.1 -1.4
0.5nm,0.5s,baz=119,slow=3.5,SNR=4.6
WRA Warramunga Arr 150.44 241 PKPbc PKPbc 14 52 47.3 -1.3
0.5nm,0.4s,baz=110,slow=2.4,SNR=8.7

IDC ***02*** *14:41:25.7±1.9, 6°.18S×130°.11E, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=130.7km s-min=26.8km az=67.0*
NEIC ***02*** *14:41:31.7±1.1, 6°.26S×129°.97E, h35km, mb3.8/2, Error ellipse: s-maj=27.6km s-min=14.1km az=67.0*
ISCJB ***02*** *14:41:35.9±3.7, 6°.6S±0°.2×130°.0E±0°.2, h101km±39km, mb3.2/2, Error ellipse: s-maj=29.6km s-min=24.4km az=39.8*
ISC 02 14:41:36.5±3.2, 6°.5S±0°.2×130°.0E±0°.2, h87km±33km, n12, σ0.94/14, mb3.2/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.60**	**159**	*e*Pn	**Pn**	**14 43 12.4**	**+1.5**
	32nm,0.3s						
KAKA				*e*Sn	**Sn**	**14 44 23.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.26**	**200**	*e*Pn	**Pn**	**14 44 27.8**	**-0.2**
	3.3nm,0.3s						
FITZ				*e*Sn	**Sn**	**14 46 34.6**	**-8.2**
WRAB	**Tennant Creek**	**13.98**	**163**	*e*Pn	**Pn**	**14 44 50.3**	**-0.3**
	2.0nm,0.4s						
WRA	**Warramunga Arr**	**13.98**	**163**	Pn	**Pn**	**14 44 49.9**	**-0.9**
	0.5nm,0.3s,baz=345,slow=13,SNR=35						
WRA				Sn	Sx	14 47 18.2	
	1.5nm,0.3s,baz=336,slow=23,SNR=9.4						
WB2	**Warramunga Arr**	**13.99**	**163**	*e*Pn	**Pn**	**14 44 49.9**	**-0.9**
WB2				*e*Sn	Sx	14 47 14.6	
COEN	**Coen**	**14.92**	**121**	*e*P	**Pn**	**14 45 02.7**	**-0.2**
	24nm,0.8s						
COEN				*e*Sn	Sx	14 47 40.0	
ASAR	**Alice Springs**	**17.45**	**168**	P	**Pn**	**14 45 36.5**	**+2.3**
	0.5nm,0.3s,baz=350,slow=10,SNR=81						
ASAR				S	Sx	14 48 43.0	
	0.4nm,0.3s,baz=359,slow=25,SNR=9.4						
STKA	**Stephens Creek**	**27.45**	**158**	P	**P**	**14 47 14.9**	**+0.6**
	1.2nm,0.6s,mb3.6,baz=332,slow=9.0,SNR=3.7						
STKA	**Stephens Creek**	**27.45**	**158**	*e*P	**P**	**14 47 15.0**	**+0.7**
	0.2nm,0.5s,mb2.9						
MK31	**Makanchi Array**	**67.83**	**327**	P	**P**	**14 52 25.5**	**+0.2**
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**14 52 24.5**	**-0.8**
	0.2nm,0.5s,mb3.2,baz=110,slow=8.1,SNR=5.0						
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**14 52 24.5**	**-0.8**

KRSC ***02*** *14:44:59.2±0.1, 51°.64N×154°.07E, h566km±24km, ML4.7*
ISCJB ***02*** *14:45:05.5±0.2, 52°.42N±0°.04×152°.99E±0°.08, h468km±3km, mb4.0/54, Error ellipse: s-maj=8.6km s-min=4.3km az=39.2*
MOS ***02*** *14:45:05.2±0.9, 52°.50N×152°.94E, h463km, mb4.3/15, Error ellipse: s-maj=12.4km s-min=6.5km az=88.5*
NEIC ***02*** *14:45:06.2±0.4, 52°.51N×152°.90E, h461km±5km, mb4.3/17, Error ellipse: s-maj=8.8km s-min=5.5km az=139.0*
IDC ***02*** *14:45:07.0±1.0, 52°.52N×152°.84E, h468km±11km, mb3.5/19, mb1 3.6/22, mb1mx3.4/31, mbtmp3.4/22, Error ellipse: s-maj=11.6km s-min=9.1km az=127.0*
ISC 02 14:45:06.3±0.2, 52°.45N±0°.04×152°.94E±0°.07, h463km±3km, h463km±5.2km; pP-P, n146, σ0.95/167, mb4.0/54, 13C-4D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.27**	**133**	*e*P	**P**	**14 46 09.6**	**0.0**
ALID				*i* S	**S**	**14 47 00.8**	**-0.1**
MIPR	**Malaya Ipel'ka**	**2.35**	**93**	*e*P	**P**	**14 46 09.7**	**-0.2**
PEA0B	**Petropavlovsk-**	**2.97**	**75**	*e*P	**P**	**14 46 13.4**	**-0.5**
PETK	**Petropavlovsk-**	**2.97**	**75**	PN	**P**	**14 46 13.8**	**-0.2**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
PETK	**Petropavlovsk-**	**2.97**	**75**	P	**P**	**14 46 13.8**	**-0.2**
	comp=Z,5.1nm,0.3s,baz=258,slow=2.4,SNR=410						
GNL	**Ganaly**	**3.27**	**66**	*e*P	**P**	**14 46 16.0**	**-0.2**
RUS	**Russkaya**	**3.41**	**88**	*e*P	**P**	**14 46 16.7**	**-0.7**
RUS				*i* S	**S**	**14 47 11.0**	**-4.3**
PET	**Petropavlovsk**	**3.52**	**78**	*e*P	**P**	**14 46 18.2**	**0.0**
PET				*i* S	**S**	**14 47 14.6**	**-2.2**
PET	**Petropavlovsk**	**3.52**	**78**	*e*P	**P**	**14 46 18.2**	**+0.1**
AVH	**Avacha**	**3.61**	**75**	*e*P	**P**	**14 46 19.4**	**+0.5**
NLC	**Nalytchevo**	**3.96**	**77**	*e*P	**P**	**14 46 21.5**	**-0.2**
NLC				*i* S	**S**	**14 47 20.3**	**-3.0**
SPN	**Mys Shipunski**	**4.35**	**79**	*e*P	**P**	**14 46 23.5**	**-1.7**
SPN				*i* S	**S**	**14 47 22.7**	**-6.9**
KMNR	**Kamenistaya**	**5.42**	**50**	*e*P	**P**	**14 46 36.4**	**+1.3**
KMNR				*i* S	**S**	**14 47 47.1**	**-0.7**
KOZ	**Kozyrevsk**	**5.44**	**46**	*e*P	**P**	**14 46 36.6**	**+1.3**
KOZR	**Kozyr**	**5.45**	**46**	PN	**P**	**14 46 36.6**	**+1.2**
KPT	**Kopyto**	**5.54**	**48**	*e*P	**P**	**14 46 37.4**	**+1.1**
SRDR	**Sredinnyy**	**5.54**	**43**	*e*P	**P**	**14 46 37.9**	**+1.6**
SRDR				*i* S	**S**	**14 47 49.8**	**-0.1**
KIRR	**Kirishev**	**5.58**	**48**	*e*P	**P**	**14 46 38.1**	**+1.4**
KIRR				*i* S	**S**	**14 47 51.8**	**+1.1**
BZMR	**Bezymyannaya**	**5.64**	**49**	*e*P	**P**	**14 46 38.5**	**+1.2**
ZLN	**Zelenaya**	**5.83**	**49**	*e*P	**P**	**14 46 40.6**	**+1.4**
CIRR	**Tsirk**	**5.86**	**48**	*e*P	**P**	**14 46 40.7**	**+1.2**
KLY	**Klyuchi**	**5.94**	**46**	*e*P	**P**	**14 46 41.3**	**+1.1**
KLY				*i* S	**S**	**14 47 58.2**	**+1.0**
BDR	**Baidarnaya**	**6.34**	**46**	*e*P	**P**	**14 46 45.1**	**+0.8**
BDR				*i* S	**S**	**14 48 02.8**	**-1.8**
SRKR	**Sorokina**	**6.37**	**45**	*e*P	**P**	**14 46 44.9**	**+0.3**
SRKR				*i* S	**S**	**14 48 05.1**	**-0.1**
SMKR	**Semkarok**	**6.46**	**47**	*e*P	**P**	**14 46 45.4**	**-0.2**
SMKR				*i* S	**S**	**14 48 04.5**	**-2.4**
KBTR	**Krutoberegovo**	**6.89**	**53**	*e*P	**P**	**14 46 47.9**	**-2.1**
KBTR				*i* S	**S**	**14 48 07.9**	**-7.2**
YSS	**Yuzh-Sakhalins**	**8.59**	**234**	⇑*i*PN	**P**	**14 47 09.5**	**+1.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.59**	**234**	*e*P	**P**	**14 47 10.0**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**9.65**	**212**	*e*PN	**P**	**14 47 19.9**	**+0.2**
YUK				*e*S	**S**	**14 49 06.2**	**-3.2**
YUK				pmax	pmax		
	comp=Z,270nm,0.5s						
YUK				smax			
	comp=N,370nm,0.8s						
YUK				smax			
	comp=E,370nm,0.8s						
SEY	**Seymchan**	**10.51**	**359**	*de*PN	**P**	**14 47 29.5**	**+0.9**
ASAJ	**Asahikawa**	**10.81**	**224**	PN	**P**	**14 47 31.8**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**10.81**	**224**	P	**P**	**14 47 31.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=63,slow=4.8,SNR=13						
HABR	**Khabarovsk**	**12.07**	**258**	*e*PN	**P**	**14 47 39.4**	**-6.3**
ERM	**Erimo**	**12.37**	**216**	*e*PN	**P**	**14 47 47.5**	**-1.5**
YAK	**Yakutsk**	**15.73**	**317**	*e*P	**P**	**14 48 23.9**	**-0.6**
YAK				*e*S	**S**	**14 51 07.8**	**-0.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
YAK				smax			
	comp=N,159nm,3.8s						
YAK				smax			
	comp=E,199nm,3.8s						
YAK	**Yakutsk**	**15.73**	**317**	*e*P	**P**	**14 48 19.1**	**-5.4**
	comp=E,11nm,0.5s						
BILL	**Bilibino**	**16.91**	**17**	*α i*P	**P**	**14 48 35.7**	**-1.1**
BILL				S	**S**	**14 51 31.0**	**+0.5**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BILL	**Bilibino**	**16.91**	**17**	*e*P	**P**	**14 48 35.6**	**-1.1**
	comp=Z,14nm,0.6s						
MDJ	**Mudanjiang**	**17.28**	**252**	P	**P**	**14 48 40.1**	**-0.9**
MDJ				S	**S**	**14 51 37.7**	**-0.5**
MDJ				ScP	ScP	14 55 46.7	+0.2
MDJ				PcS	PcS	14 56 32.6	+0.2
MDJ				ScS	ScS	14 59 27.0	+0.4
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,37nm,5.0s						
MDJ	**Mudanjiang**	**17.28**	**252**	P	**P**	**14 48 40.0**	**-1.0**
	comp=Z,2.2nm,0.4s						
MAJO	**Matsushiro**	**19.00**	**219**	*e*P	**P**	**14 48 58.0**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s						
MAJO	**Matsushiro**	**19.00**	**219**	*e*P	**P**	**14 48 58.0**	**+0.2**
	comp=Z,12nm,0.6s						
MAT	**Matsushiro**	**19.00**	**219**	P	**P**	**14 48 58.2**	**+0.4**
MJAR	**Matsushiro Arr**	**19.00**	**219**	P	**P**	**14 48 58.6**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**19.00**	**219**	P	**P**	**14 48 58.5**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=20,slow=9.1,SNR=31						
HIA	**Hailar**	**21.09**	**275**	*e*P	**P**	**14 49 18.5**	**+1.9**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HIA	**Hailar**	**21.09**	**275**	*e*P	**P**	**14 49 18.5**	**+2.0**
	comp=Z,4.2nm,0.5s,mb4.2						
TIXI	**Tiksi**	**22.01**	**340**	*i* P	**P**	**14 49 24.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
KS15	**Wonju Array Si**	**23.07**	**239**	*e*P	**P**	**14 49 34.9**	**+0.3**
SVW2	**Sparrevohn**	**28.79**	**52**	*e*P	**P**	**14 50 24.6**	**-0.2**
SONM	**Songino Array**	**29.77**	**280**	pP	pP	14 51 53.8	-0.4
	comp=Z,0.3nm,0.6s,baz=29,slow=3.3,SNR=1.9						
HHC	**Hu-ho-hao-te**	**30.27**	**264**	*e*P	**P**	**14 50 38.9**	**+0.9**
HHC				pP	pP	14 52 02.3	+3.5
HHC				PP		14 52 06.2	
HHC				sP	sP	14 52 57.8	+5.3
HHC				PcP	PcP	14 53 24.4	0.0
HHC				S	**S**	**14 55 08.0**	**+4.0**
HHC				ScP	ScP	14 56 21.5	-0.6
HHC				PcS	PcS	14 57 07.6	-1.0
HHC				SS	SS	14 57 40.6	-0.2
HHC				ScS	ScS	15 00 18.0	-1.0
HHC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
HHC				pmax	pmax		
	comp=Z,96nm,5.1s						
COLD	**Coldfoot**	**30.83**	**40**	*e*P	**P**	**14 50 41.2**	**-1.3**
	comp=Z,8.2nm,0.8s,mb4.2						
EGAK	**Eagle**	**34.75**	**43**	*e*P	**P**	**14 51 15.6**	**-0.3**
	comp=Z,19nm,1.3s,mb4.4						
XAN	**Xi'an**	**36.28**	**257**	P	**P**	**14 51 28.3**	**-0.8**
XAN				pP	pP	14 52 51.3	-1.1
XAN				PP	PP	14 53 04.0	-1.0
XAN				sP	sP	14 53 44.4	-1.0
XAN				S	**S**	**14 56 35.1**	**-0.6**
XAN				sS	sS	14 59 08.4	-0.2
INK	**Inuvik**	**37.00**	**36**	P	**P**	**14 51 35.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
INK	**Inuvik**	**37.00**	**36**	P	**P**	**14 51 35.0**	**+0.4**
	comp=Z,5.4nm,0.3s,mb4.5,baz=298,slow=8.7,SNR=79						
LZH	**Lanzhou**	**37.96**	**264**	*e*P	**P**	**14 51 45.5**	**+2.5**
LZH				pP	pP	14 53 10.0	+2.9
LZH				sP	sP	14 53 56.5	-3.4
LZH				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.2						
GTA	**Gaotai**	**38.32**	**272**	*e*P	**P**	**14 51 48.2**	**+2.4**
GTA				pP	pP	14 53 11.4	+1.3
GTA				sP	sP	14 54 08.9	+6.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
ENH	**Enshi**	**38.64**	**252**	*e*P	**P**	**14 51 44.0**	**-4.6**
	comp=Z,2.3nm,0.4s,mb4.0						
ZALV	**Zalesovo Beam**	**39.40**	**300**	P	**P**	**14 51 54.1**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.5,baz=63,slow=4.7,SNR=3.8						
NVS	**Novosibirsk**	**39.83**	**302**	*e*P	**P**	**14 51 57.8**	**-0.1**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
NVS				pmax	pmax		
	comp=N,3.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
CD2	**Chengdu**	**41.57**	**259**	P	**P**	**14 52 11.5**	**-0.7**
CD2				pP	pP	14 53 40.8	+2.6
CD2				PcP	PcP	14 53 58.7	-0.1
CD2				sP	sP	14 54 33.5	+3.1
CD2				S	**S**	**14 57 52.5**	**-1.2**
CD2				sS	sS	15 00 31.5	+1.4
CD2				SS	SS	15 01 10.0	-7.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,130nm,7.0s						
WMQ	**Urumqi**	**43.01**	**286**	*e*P	**P**	**14 52 15.3**	**-8.1**
GYA	**Guiyang**	**43.14**	**251**	P	**P**	**14 52 24.3**	**-0.3**
GYA				pP	pP	14 53 51.0	-0.4
GYA				PcP	PcP	14 54 03.8	-0.3
GYA				PP	PP	14 54 14.9	-0.3
GYA				sP	sP	14 54 44.0	+0.6
GYA				ScP	ScP	14 57 11.2	+0.8
GYA				PcS	PcS	14 57 57.8	+0.2
GYA				S	**S**	**14 58 16.4**	**+0.1**
GYA				sS	sS	15 00 52.3	-1.5
GYA				ScS	ScS	15 01 31.0	-1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
KURK	**Kurchatov**	**44.30**	**299**	*d i*P	**P**	**14 52 33.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
KURK	**Kurchatov**	**44.30**	**299**	P	**P**	**14 52 34.4**	**+1.0**
	comp=Z,2.7nm,0.4s,mb4.0,baz=58,slow=7.1,SNR=23						
KURK				pP	pP	14 54 03.3	+2.7
	comp=Z,1.5nm,0.8s,baz=62,slow=8.6,SNR=6.2						
KURK				ScP	ScP	14 57 12.6	-2.2
	comp=Z,0.5nm,0.6s,baz=57,slow=3.6,SNR=4.3						
KURK	**Kurchatov**	**44.30**	**299**	*e*P	**P**	**14 52 33.6**	**+0.2**
	comp=Z,8.2nm,0.3s,mb4.6						
MK31	**Makanchi Array**	**44.44**	**292**	*e*P	**P**	**14 52 34.3**	**-0.2**
MK31	**Makanchi Array**	**44.44**	**292**	*e*P	**P**	**14 52 34.3**	**-0.2**
MKAR	**Makanchi Array**	**44.44**	**292**	P	**P**	**14 52 34.6**	**+0.1**
MKAR				*P*P	pP	14 54 04.8	+3.0
MKAR	**Makanchi Array**	**44.44**	**292**	P	**P**	**14 52 34.6**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.2,baz=62,slow=7.1,SNR=8.8						
MKAR				pP	pP	14 54 04.8	+3.0
	comp=Z,0.9nm,0.9s,baz=48,slow=8.7,SNR=3.7						
MKAR				ScP	ScP	14 57 13.5	-1.9
	comp=Z,0.2nm,0.4s,baz=58,slow=3.9,SNR=5.2						
RES	**Resolute Bay**	**45.49**	**20**	*e*P	**P**	**14 52 41.6**	**-0.5**
RES				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.5						
RES	**Resolute Bay**	**45.49**	**20**	P	**P**	**14 52 42.1**	**0.0**
	comp=Z,6.4nm,0.4s,mb4.4,baz=323,slow=5.1,SNR=77						
RES	**Resolute Bay**	**45.49**	**20**	*e*P	**P**	**14 52 41.6**	**-0.5**
	comp=Z,9.3nm,0.4s,mb4.6						
KMI	**Kunming**	**46.44**	**254**	P	**P**	**14 52 52.2**	**+2.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.5						
YKA	**Yellowknife Ar**	**46.51**	**40**	P	**P**	**14 52 50.2**	**+0.2**
	comp=Z,2.4nm,0.5s,mb3.9,baz=302,slow=7.2,SNR=55						
YKA				ScP	ScP	14 57 23.2	-0.5
	comp=Z,0.4nm,0.6s,baz=300,slow=3.9,SNR=8.2						
YKA	**Yellowknife Ar**	**46.51**	**40**	P	**P**	**14 52 50.2**	**+0.1**
YKA				ScP	ScP	14 57 23.2	-0.5
BVAR	**Borovoye Array**	**47.30**	**305**	P	**P**	**14 52 56.4**	**+0.2**
	comp=Z,3.5nm,0.6s,mb4.0,baz=55,slow=7.5,SNR=27						
BVAR				ScP	ScP	14 57 24.5	-2.8
	comp=Z,0.4nm,0.5s,baz=93,slow=2.5,SNR=3.6						
BRVK	**Borovoye**	**47.33**	**305**	*d i*P	**P**	**14 52 56.1**	**-0.4**
BRVK	**Borovoye**	**47.33**	**305**	*e*P	**P**	**14 52 55.7**	**-0.8**
	comp=Z,3.1nm,0.7s,mb3.9						
ARU	**Arti**	**50.83**	**314**	*c i*P	**P**	**14 53 22.1**	**-0.3**
ARU				*e*		14 55 23.0	
ARU				S	**S**	**15 00 02.7**	**+0.2**
ARU				SS	SS	15 03 41.3	-2.6
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.0						
AAK	**Ala-Archa**	**51.38**	**292**	*de*P	**P**	**14 53 27.7**	**+1.0**
KEV	**Kevo**	**51.95**	**339**	*e*P	**P**	**14 53 28.8**	**-1.6**
KEV	**Kevo**	**51.95**	**339**	*ep*	**P**	**14 53 28.8**	**-1.6**
	comp=Z,0.8nm,0.3s,mb3.5						
ARCES	**ARCESS Array B**	**52.45**	**339**	P	**P**	**14 53 33.4**	**-0.5**
	comp=Z,2.8nm,0.5s,mb3.9,baz=38,slow=8.3,SNR=52						
ARCES	**ARCESS Array B**	**52.45**	**339**	P	**P**	**14 53 33.4**	**-0.5**
ABKAR	**Akbulak array**	**54.79**	**307**	*e*P	**P**	**14 53 50.7**	**-0.3**
	comp=Z,2.8nm,0.5s,mb3.9						
JOF	**Joensuu**	**56.20**	**332**	*e*P	**P**	**14 53 59.6**	**-1.0**
JOF	**Joensuu**	**56.20**	**332**	*ep*	**P**	**14 53 59.6**	**-1.0**
	comp=Z,1.0nm,0.3s,mb3.6						
FCC	**Fort Churchill**	**56.60**	**35**	*e*P	**P**	**14 54 02.8**	**-0.6**
	comp=Z,0.6nm,1.8s						
KAF	**Kangasniemi**	**58.24**	**334**	*e*P	**P**	**14 54 13.3**	**-1.3**
KAF	**Kangasniemi**	**58.24**	**334**	*ep*	**P**	**14 54 13.3**	**-1.3**
	comp=Z,1.1nm,0.5s,mb3.4						
FINES	**FINESS Array B**	**58.86**	**333**	P	**P**	**14 54 18.3**	**-0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**58.86**	**333**	P	**P**	**14 54 18.2**	**-0.5**
	comp=Z,2.5nm,0.5s,mb3.8,baz=32,slow=7.0,SNR=24						
NVAR	**Mina Array Bea**	**60.01**	**65**	P	**P**	**14 54 28.4**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.3,baz=301,slow=5.5,SNR=7.0						
RLMT	**Red Lodge**	**60.02**	**54**	*e*P	**P**	**14 54 27.2**	**+0.4**
	comp=Z,3.4nm,1.2s,mb3.6						
PDAR	**Pinedale Array**	**61.56**	**56**	P	**P**	**14 54 37.9**	**+0.8**
	comp=Z,0.4nm,0.7s,mb3.0,baz=355,slow=1.6,SNR=3.8						
NB2	**NORSAR Subarra**	**62.80**	**340**	P	**P**	**14 54 44.2**	**-0.7**
	comp=Z,4.2nm,0.8s,mb4.0,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**62.80**	**340**	P	**P**	**14 54 44.6**	**-0.3**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	**NORSAR Array B**	**62.80**	**340**	P	**P**	**14 54 44.6**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.0,baz=25,slow=6.6,SNR=12						
AKASG	**Malin Array Be**	**66.77**	**325**	P	**P**	**14 55 08.0**	**-2.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**66.77**	**325**	P	**P**	**14 55 08.0**	**-2.2**
	comp=Z,1.2nm,0.4s,mb3.9,baz=33,slow=6.2,SNR=6.0						
AKASG	**Malin Array Be**	**66.77**	**325**	P	**P**	**14 55 08.0**	**-2.2**
SCHQ	**Schefferville**	**68.11**	**24**	P	**P**	**14 55 17.3**	**-1.1**
	comp=Z,1.9nm,0.4s,mb4.1,baz=308,slow=6.6,SNR=17						
BUR08	**Bucovina Ar. S**	**70.77**	**326**	*e*P	**P**	**14 55 33.5**	**-1.0**
CLL	**Collm**	**71.24**	**335**	*i* P	**P**	**14 55 36.6**	**-0.6**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
CLL	**Collm**	**71.24**	**335**	*i* P	**P**	**14 55 36.6**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.1						
CLL	**Collm**	**71.24**	**335**	*i* P	**P**	**14 55 36.6**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.1						
CTA	**Charters Tower**	**72.47**	**187**	P	**P**	**14 55 45.4**	**+0.7**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTA	**Charters Tower**	**72.47**	**187**	P	**P**	**14 55 45.4**	**+0.7**
	comp=Z,4.3nm,0.8s,mb4.0,baz=22,slow=5.4,SNR=3.4						
CTAO	**Charters Tower**	**72.47**	**187**	*e*P	**P**	**14 55 45.2**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
CTAO	**Charters Tower**	**72.47**	**187**	*e*P	**P**	**14 55 45.2**	**+0.5**
	comp=Z,9.5nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**73.29**	**333**	P	**P**	**14 55 49.2**	**0.0**
	comp=Z,1.1nm,0.6s,mb3.6,baz=35,slow=4.9,SNR=9.3						
WRAB	**Tennant Creek**	**73.88**	**198**	*e*P	**P**	**14 55 52.5**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
WRAB	**Tennant Creek**	**73.88

NIED ***02*** *14:51:00, 35.°30N×140.°30E, h38km, Mw3.8 Best double couple: M0=4.79000×10^14 NP1:φ0=340.00000°, δ80.00000°, λ-162.00000°. NP2:φ0=247.00000°, δ73.00000°, λ-10.00000°.*

ISCJB ***02*** *14:51:50.0±0.4, 35.°27N±0.°03×140.°26E±0.°05, h52km±3km, mb3.9/11, Error ellipse: s-maj=7.0km s-min=4.4km az=143.3*

IDC ***02*** *14:51:49.9±4.4, 35.°22N×140.°28E, h32km±34km, mb3.6/9, mb1 3.8/13, mb1mx3.6/30, mbtmp3.8/13, ML3.9/3, Error ellipse: s-maj=26.8km s-min=12.8km az=76.0*

NEIC ***02*** *14:51:50.4, 35.°34N×140.°30E, h41km, mb4.3/2, After JMA.*

JMA ***02*** *14:51:50.3±0.1, 35.°34N×140.°30E, h41km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φ0=353.00000°, δ50.00000°, λ-159.00000°. NP2: φ0=249.00000°, δ74.00000°, λ-41.00000°. Principal axes: T Plg15.0000°, Azm306.0000°; N Plg46.0000°, Azm52.0000°; P Plg40.0000°, Azm203.0000°;*

JMA Felt I J1.

ISC 02 14:51:50.8±0.4, 35.°28N±0.°03×140.°27E±0.°04, h44km±3km, n30, σ0=94/44, mb3.9/11, 2C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	**Katsuura**	**0.14**	**163**	P	**Pn**	**14 51 57.6**	**-0.5**
KTR				S	**Sn**	**14 52 02.7**	**-0.4**
JCN	**Nagara**	**0.15**	**339**	⇓P	**Pn**	**14 51 57.6**	**-0.5**
JCN				S	**Sn**	**14 52 03.3**	**+0.1**
BSO4	**Boso 4**	**0.30**	**169**	P	**Pn**	**14 51 59.7**	**+0.3**
BSO4				S	**Sn**	**14 52 07.2**	**+1.9**
TATJ	**Tateyama 2**	**0.40**	**231**	P	**Pn**	**14 52 01.1**	**+0.7**
TATJ				S	**Sn**	**14 52 09.3**	**+2.1**
BSO3	**Boso 3**	**0.52**	**157**	P	**Pn**	**14 52 02.0**	**0.0**
BSO3				S	**Sn**	**14 52 11.3**	**+1.5**
BSO1	**Boso 1**	**0.86**	**137**	P	**Pn**	**14 52 05.7**	**-0.8**
BSO1				S	**Sn**	**14 52 18.3**	**+0.5**
JIM2	**Oshima 3**	**0.89**	**231**	P	**Pn**	**14 52 06.6**	**-0.3**
JIM2				S	**Sn**	**14 52 18.2**	**-0.4**
JOD2	**Odawara 2**	**0.96**	**269**	⇑P	**Pn**	**14 52 07.4**	**-0.5**
JOD2				*e*S	**Sn**	**14 52 19.3**	**-1.2**
JIZS	**Izushimoda**	**1.27**	**244**	⇓P	**Pn**	**14 52 11.9**	**-0.2**
JIZS				S	**Sn**	**14 52 27.7**	**-0.3**
JAG	**Ashikaga**	**1.32**	**330**	⇑P	**Pn**	**14 52 12.2**	**-0.6**
JAG				*e*S	**Sn**	**14 52 29.0**	**-0.1**
JRY	**Ryogami san**	**1.33**	**304**	P	**Pn**	**14 52 12.4**	**-0.5**
JRY				*e*S	**Sn**	**14 52 29.0**	**-0.5**
MJAR	**Matsushiro Arr**	**2.09**	**308**	Pn	**Pn**	**14 52 22.8**	**-0.5**
	9.5nm,0.3s,baz=217,slow=1.8,SNR=105						
MJAR				Sn	**Sn**	**14 52 49.9**	**+1.8**
	18nm,0.3s,baz=135,slow=14,SNR=12						
MAJO	**Matsushiro**	**2.09**	**308**	*e*Pn	**Pn**	**14 52 23.2**	**-0.1**
MAT	**Matsushiro**	**2.09**	**308**	P	**Pn**	**14 52 23.4**	**0.0**
MAT				S	**Sn**	**14 52 48.9**	**+0.7**
JHJ	**Hachijo jima 2**	**2.19**	**191**	Pn	**Pn**	**14 52 24.2**	**-0.6**
	111nm,0.3s,baz=100,slow=19,SNR=51						
JHJ				Sn	**Sn**	**14 52 49.8**	**-0.9**
	212nm,0.3s,baz=91,slow=21,SNR=15						
CBIJ	**Chichi jima**	**8.32**	**168**	Pn	**Pn**	**14 53 47.1**	**-1.8**
	19nm,0.3s,baz=250,slow=16,SNR=14						
ASAJ	**Asahikawa**	**9.00**	**11**	Pn	**Pn**	**14 53 56.6**	**-1.6**
	0.6nm,0.3s,baz=247,slow=9.4,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**11.81**	**8**	*e*Pn	**Pn**	**14 54 33.5**	**-3.1**
	2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**42.43**	**314**	P	**P**	**14 59 41.5**	**+0.5**
	1.4nm,0.6s,mb3.7,baz=93,slow=8.9,SNR=7.2						
MKAR	**Makanchi Array**	**44.28**	**303**	P	**P**	**14 59 56.8**	**+0.7**
	0.6nm,0.5s,mb3.6,baz=88,slow=9.6,SNR=9.8						
KURK	**Kurchatov**	**46.30**	**309**	P	**P**	**15 00 12.9**	**+1.0**
	3.0nm,0.7s,mb4.4,baz=84,slow=7.7,SNR=20						
BVAR	**Borovoye Array**	**51.08**	**313**	P	**P**	**15 00 49.2**	**+0.6**
	0.4nm,0.5s,mb3.6,baz=59,slow=6.9,SNR=3.1						
AML	**Almayashu**	**51.23**	**299**	*e*P	**P**	**15 00 50.8**	**+0.9**
	2.6nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**55.20**	**187**	*e*P	**P**	**15 01 18.5**	**-0.7**
	2.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**55.21**	**187**	P	**P**	**15 01 19.1**	**-0.2**
	1.9nm,0.7s,mb4.3,baz=1.1,slow=7.5,SNR=18						
ASAR	**Alice Springs**	**58.93**	**187**	P	**P**	**15 01 46.0**	**+0.5**
	0.4nm,0.6s,mb3.7,baz=2.8,slow=6.6,SNR=13						
RES	**Resolute Bay**	**64.52**	**14**	P	**P**	**15 02 23.9**	**+1.2**
	0.5nm,0.7s,mb3.6,baz=329,slow=12,SNR=3.5						
YKA	**Yellowknife Ar**	**65.79**	**29**	P	**P**	**15 02 32.5**	**+1.5**
	0.2nm,0.7s,mb3.3,baz=300,slow=6.4,SNR=5.1						
YKA	**Yellowknife Ar**	**65.79**	**29**	P	**P**	**15 02 32.5**	**+1.5**
STKA	**Stephens Creek**	**66.81**	**179**	P	**P**	**15 02 36.1**	**-1.7**
	1.5nm,0.7s,mb4.1,baz=0.0,slow=13,SNR=2.7						

NEIC ***02*** *15:22:20.0, 16.°94N×100.°55W, h10km, MD3.7(MEX), After MEX.*

MEX 02 15:22:19.8±0.8, 16.°99N×100.°57W, h3km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.30**	**78**	*i* P	Pg	15 22 25.3	-0.2
CAIG				*i* S	Sg	15 22 29.2	-0.2
CAIG	**El Cayaco**	**0.30**	**78**	*i* P	Pg	15 22 25.3	-0.2
CAIG				*i* S	Sg	15 22 29.2	-0.2
ACX	**Acapulco**	**0.64**	**101**	*i* P	Pg	15 22 31.3	-0.7
ACX				*i* S	Sg	15 22 40.7	+0.4
ZIIG	**Zihuatanejo**	**1.05**	**306**	*e*P	Pg	15 22 37.5	-2.6
ZIIG				*i* S	Sg	15 22 50.8	-2.9
ZIIG	**Zihuatanejo**	**1.05**	**306**	*e*P	Pg	15 22 37.5	-2.6
ZIIG				*i* S	Sg	15 22 50.8	-2.9
MEIG	**Mezcala**	**1.30**	**44**	*i* P	Pg	15 22 42.4	-2.4
MEIG				*i* S	Sg	15 22 57.8	-3.9
PLIG	**Platanillo**	**1.73**	**36**	*e*P	Pn	15 22 49.1	-1.7
PLIG				*i* S	Sn	15 23 09.0	-4.4
PLIG	**Platanillo**	**1.73**	**36**	*e*P	Pn	15 22 49.1	-1.7
PLIG				*i* S	Sn	15 23 09.0	-4.4
PNIG	**Pinotepa**	**2.42**	**104**	*i* P	Pn	15 23 00.3	+0.1
PNIG				*i* S	Sn	15 23 29.9	-0.4
PNIG	**Pinotepa**	**2.42**	**104**	*i* P	Pn	15 23 00.3	+0.1
PNIG				*i* S	Sn	15 23 29.9	-0.4
MZVM		**2.54**	**30**	*e*P	Pn	15 23 07.0	+5.1
MZVM				*i* S	Sn	15 23 33.3	0.0
UTMO	**Huajuapan**	**2.77**	**72**	*i* P	Pn	15 23 03.0	-2.1
UTMO				*i* S	Sn	15 23 35.8	-3.4
PPM	**Popocatepetl**	**2.78**	**41**	*e*P	Pn	15 23 00.8	-4.3
PPM				*i* S	Sn	15 23 34.5	-4.7
PPM	**Popocatepetl**	**2.78**	**41**	*e*P	Pn	15 23 00.8	-4.3
PPM				*i* S	Sn	15 23 34.5	-4.7

IDC ***02*** *15:23:21.9±1.2, 9.°89S×160.°48E, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.3/19, mbtmp4.2/14, ML4.9/1, MS3.7/6, Ms1 3.7/6, ms1mx3.5/18, Error ellipse: s-maj=37.5km s-min=17.5km az=118.0*

ISCJB ***02*** *15:23:26.4±2.6, 9.°90S±0.°07×160.°43E±0.°09, h43km±22km, mb4.3/24, MS3.7/5, Error ellipse: s-maj=15.8km s-min=12.0km az=160.8*

NEIC ***02*** *15:23:27.1±0.4, 9.°87S×160.°45E, h35km, mb4.6/11, Error ellipse: s-maj=13.5km s-min=7.4km az=117.0*

NEIC Felt at Honiara.

ISC 02 15:23:29.1±2.0, 9.°94S±0.°08×160.°46E±0.°09, h52km±18km, n42, σ0=82/40, mb4.3/24, MS3.7/5, 2D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.36**	**155**	*e*Pn	**Pn**	**15 26 35.6**	**-0.4**
	2.9nm,0.2s						
DZM				*e*Sn	**Sn**	**15 28 54.5**	**-8.6**
	4.0nm,0.3s						
DZM				*e*LR	LR	15 29 39.7	
	600nm,21.2s						
CTA	**Charters Tower**	**17.02**	**232**	*e*P	**Pn**	**15 27 24.4**	**+0.8**
	37nm,0.6s						
CTA	**Charters Tower**	**17.02**	**232**	P	**Pn**	**15 27 23.6**	**-0.1**
	2.6nm,0.3s,baz=63,slow=12,SNR=23						
CTA				LR	LR	15 31 38.5	
	comp=Z,98nm,19.9s,baz=49,slow=29						
CTAO	**Charters Tower**	**17.02**	**232**	*e*Pn	**Pn**	**15 27 23.8**	**+0.1**
	70nm,0.9s						
EIDS	**Eidsvold**	**17.75**	**209**	*e*P	**Pn**	**15 27 33.8**	**+1.3**
EIDS	**Eidsvold**	**17.75**	**209**	*e*P	**Pn**	**15 27 33.5**	**+1.0**
	12nm,0.5s						
ARMA	**Armidale**	**21.98**	**201**	*e*P	**P**	**15 28 18.8**	**0.0**
	19nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**27.08**	**245**	*e*P	**P**	**15 29 06.6**	**-0.5**
	21nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**27.09**	**245**	P	**P**	**15 29 07.3**	**+0.1**
	13nm,0.7s,mb4.6,baz=75,slow=9.5,SNR=54						
CNB	**Canberra Magne**	**27.21**	**200**	*e*P	**P**	**15 29 08.8**	**+0.7**
AFI	**Afiamalu**	**27.44**	**101**	LR	LR	15 37 35.1	
	comp=Z,198nm,19.4s,MS3.7,baz=285,slow=31						
KAKA	**Kakadu**	**27.61**	**262**	*e*P	**P**	**15 29 06.4**	**-5.5**
	13nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**27.96**	**216**	⇓*i*P	**P**	**15 29 14.5**	**-0.3**
	6.7nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**27.96**	**216**	P	**P**	**15 29 14.8**	**0.0**
	8.2nm,0.5s,mb4.6,baz=28,slow=8.7,SNR=33						
STKA				LR	LR	15 40 25.5	
	comp=Z,174nm,20.4s,MS3.6,baz=24,slow=36						
STKA	**Stephens Creek**	**27.96**	**216**	*e*P	**P**	**15 29 14.2**	**-0.7**
GUMO	**Guam**	**28.03**	**326**	LR	LR	15 39 32.9	
	comp=Z,184nm,20.2s,MS3.7,baz=264,slow=35						
ASAR	**Alice Springs**	**28.79**	**238**	P	**P**	**15 29 21.4**	**-0.9**
	1.5nm,0.5s,mb3.9,baz=61,slow=10,SNR=50						
URZ	**Urewera**	**31.92**	**155**	LR	LR	15 39 50.5	
	comp=Z,164nm,18.2s,MS3.8,baz=205,slow=31						
FITZ	**Fitzroy Crossi**	**34.70**	**253**	⇓*i*P	**P**	**15 30 13.6**	**-0.6**
	16nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**34.70**	**253**	P	**P**	**15 30 14.0**	**-0.2**
	10nm,0.6s,mb4.9,baz=86,slow=6.7,SNR=45						
TAU	**Tasmania Unive**	**34.80**	**197**	*e*P	**P**	**15 30 13.7**	**-1.0**
	19nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**40.68**	**249**	*e*P	**P**	**15 31 04.5**	**-0.3**
	15nm,0.9s,mb4.6						
NWAO	**Narrogin (SRO)**	**45.86**	**233**	P	**P**	**15 31 46.2**	**-0.2**
	40nm,1.6s,mb5.1						
PPT	**Papeete**	**49.00**	**105**	*e*S	**S**	**15 39 11.6**	**-0.5**
	32nm,25.0s						
PPT				*e*LR	LR	15 46 14.1	
	154nm,24.8s						
MJAR	**Matsushiro Arr**	**50.75**	**337**	P	**P**	**15 32 22.3**	**-1.6**
	0.8nm,0.6s,mb3.9,baz=163,slow=8.4,SNR=4.6						
KSRS	**Korea Array**	**56.14**	**329**	P	**P**	**15 33 04.0**	**+0.6**
	0.2nm,0.4s,mb3.5,baz=148,slow=7.9,SNR=5.4						
CN2	**Changchun**	**62.23**	**332**	*e*P	**P**	**15 33 47.0**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
PETK	**Petropavlovsk-**	**62.84**	**358**	P	**P**	**15 33 48.3**	**-1.0**
	comp=Z,3.0nm,0.9s,mb4.4,baz=150,slow=6.3,SNR=4.0						
PETK				LR	LR	15 55 25.6	
	comp=Z,62nm,21.2s,MS3.8,baz=2.7,slow=31						
CMAR	**Chiang Mai Arr**	**66.92**	**295**	P	**P**	**15 34 16.8**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=137,slow=5.1,SNR=3.6						
SBA	**Scott Base**	**67.98**	**179**	*e*P	**P**	**15 34 23.5**	**+1.3**
	comp=Z,4.0nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**74.41**	**326**	*e*P	**P**	**15 35 01.4**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.3						
GTA	**Gaotai**	**74.59**	**316**	*e*P	**P**	**15 35 06.5**	**+3.7**
GTA				pP	pP	15 35 11.7	-5.8
GTA				sP	sP	15 35 14.9	-8.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**74.76**	**326**	P	**P**	**15 35 04.1**	**+0.5**
	comp=Z,1.1nm,0.6s,mb4.0,baz=142,slow=6.2,SNR=7.5						
BILL	**Biiibino**	**77.89**	**2**	*e*P	**P**	**15 35 20.2**	**-0.6**
	comp=Z,7.8nm,0.9s,mb4.6						
MAW	**Mawson**	**83.77**	**202**	P	**P**	**15 35 52.3**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.3,baz=80,slow=10,SNR=4.5						
MAW	**Mawson**	**83.77**	**202**	*e*P	**P**	**15 35 52.0**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.6						
RPN	**Rapa Nui**	**85.72**	**117**	*e*P	**P**	**15 36 02.8**	**-0.3**
	comp=Z,61nm,0.7s						
MKAR	**Makanchi Array**	**89.19**	**318**	P	**P**	**15 36 19.7**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.9,baz=102,slow=5.6,SNR=4.6						
YKA	**Yellowknife Ar**	**96.40**	**28**	P	**P**	**15 36 51.5**	**-0.7**
	comp=Z,0.6nm,0.9s,mb4.0,baz=254,slow=5.4,SNR=3.5						
PDAR	**Pinedale Array**	**96.64**	**48**	P	**P**	**15 36 55.9**	**+2.2**
	comp=Z,0.4nm,1.0s,mb3.8,baz=260,slow=4.2,SNR=2.3						
VNA3	**Neumayer Olymp**	**98.73**	**183**	*e*	**P**	**15 37 02.8**	**+0.2**
VNA2	**Neumayer--Watz**	**98.90**	**184**	*e*	**P**	**15 37 03.1**	**-0.3**
	baz=169,slow=5.1						

ISCJB ***02*** *15:56:21.1±0.2, 27.°24N±0.°03×101.°85E±0.°02, h10km, mb4.7/123, MS4.0/35, Error ellipse: s-maj=3.8km s-min=2.9km az=2.1*

IDC ***02*** *15:56:21.1±0.5, 27.°32N×101.°78E, h0km, mb4.4/23, mb1 4.5/23, mb1mx4.5/29, mbtmp4.4/23, MS3.8/16, Ms1 3.8/16, ms1mx3.7/31, Error ellipse: s-maj=19.7km s-min=11.0km az=49.0*

BJI ***02*** *15:56:23.2, 27.°40N×101.°89E, h16km, mB4.8/21, mb4.5/38, ML4.2/14, Ms4.6/53, Ms7 4.5/43*

SZGRF ***02*** *15:56:24.0, 27.°02N×102.°06E, h33km, mb4.9, Sichuan, China*

MOS ***02*** *15:56:25.1±1.4, 27.°39N×101.°86E, h33km, mb4.9/58, MS4.0/19, Error ellipse: s-maj=8.1km s-min=4.4km az=118.3*

NEIC ***02*** *15:56:27.2±0.3, 27.°45N×101.°94E, h35km, mb4.8/52, Error ellipse: s-maj=7.5km s-min=6.7km az=67.0*

DJA ***02*** *15:56:33, 27.°49N×101.°98E, h70km, mb4.4/9*

ISC 02 15:56:23.1±0.2, 27.°26N±0.°03×101.°83E±0.°02, h10km, (h9km±5.1km:pP-P), n309, σ1=39/325, mb4.7/123, MS4.0/35, 12C-16D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.28**	**159**	Pg	**Pg**	**15 57 04.8**	**-1.9**
KMI				Sg	**Sg**	**15 57 35.1**	**-1.2**
KMI				smax			
	comp=N,860nm,0.9s						
KMI				smax			
	comp=E,1μm,0.8s						
CD2	**Chengdu**	**4.01**	**24**	Pn	**Pn**	**15 57 26.1**	**+1.5**
CD2				Pg	**Pg**	**15 57 33.2**	**-6.7**
CD2				Sn	**Sn**	**15 58 14.0**	**+2.4**
CD2				Sg	**Sg**	**15 58 24.4**	**-7.5**
CD2				smax			
	comp=N,2μm,1.0s						
CD2				smax			
	comp=E,2μm,0.8s						
CD2				LR	LR		
	comp=N,9μm,5.6s						
CD2				LR	LR		
	comp=Z,11μm,7.7s						
GYA	**Guiyang**	**4.39**	**99**	⇑*i*Pn	**Pn**	**15 57 32.4**	**+2.6**
GYA				Sn	**Sn**	**15 58 25.3**	**+4.3**
GYA				Sg	**Sg**	**15 58 39.5**	**-4.6**
GYA				smax			
	comp=N,410nm,0.9s						
GYA				smax			
	comp=E,50nm,1.0s						
GYA				LR	LR		
	comp=N,7μm,9.1s						
GYA				LR	LR		
	comp=E,3μm,7.8s						
GYA				LR	LR		
	comp=Z,5μm,6.5s						
ENH	**Enshi**	**7.36**	**64**	*e*Pn	**Pn**	**15 58 10.4**	**-0.2**
	comp=Z,117nm,0.5s						
ENH				*e*Sn	**Sn**	**15 59 34.6**	**+0.4**
CHTO	**Chiang Mai**	**8.81**	**198**	*e*Pn	**Pn**	**15 58 38.1**	**+7.5**
CHTO				*e*Sn	Sx	16 01 05.8	
LZH	**Lanzhou**	**8.97**	**11**	*e*P	**Pn**	**15 58 37.9**	**+5.3**
LZH				pP		15 58 41.9	
LZH				sP		15 58 44.7	
LZH				*e*S	**Sn**	**16 00 16.2**	**+2.5**
LZH				sS		16 00 22.5	
LZH				pmax	pmax		
	comp=Z,58nm,1.1s						
LZH				pmax	pmax		
	comp=Z,200nm,4.4s						
LZH				LR	LR		
	comp=N,2μm,9.3s						
LZH				LR	LR		
	comp=Z,3μm,10.4s						
SHL	**Shillong**	**9.08**	**262**	*e*P	**Pn**	**15 58 37.5**	**+3.3**
XAN	**Xi'an**	**9.11**	**40**	P	**Pn**	**15 58 32.3**	**-2.2**
XAN				pP		15 58 41.3	
XAN				sP		15 58 44.9	
XAN				S	**Sn**	**16 00 13.9**	**-3.2**
XAN				sS		16 00 25.4	
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				LR	LR		
	comp=N,2μm,8.6s						
XAN				LR	LR		
	comp=E,620nm,10.3s						
XAN				LR	LR		
	comp=Z,660nm,9.5s						
CM31	**Chiang Mai Arr**	**9.15**	**197**	*e*Pn	**Pn**	**15 58 41.5**	**+6.3**
CM31				*e*Sn	Sx	16 01 19.9	
CMAR	**Chiang Mai Arr**	**9.15**	**197**	Pn	**Pn**	**15 58 41.2**	**+6.0**
	comp=Z,0.1nm,0.3s,baz=11,slow=12,SNR=11						
CMAR				Lg		16 01 20.6	
	comp=Z,0.2nm,0.3s,baz=20,slow=30,SNR=6.1						
CMAR				LR	LR	16 02 40.5	
	comp=Z,666nm,20.8s,baz=6.6,slow=41						
LSA	**Lhasa**	**9.71**	**287**	P	**Pn**	**15 58 46.0**	**+3.2**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**9.71**	**287**	*e*P	**Pn**	**15 58 45.6**	**+2.8**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**9.71**	**287**	*e*Pn	**Pn**	**15 58 45.5**	**+2.7**
	comp=Z,9.1nm,0.7s						
QIZ	**Qiongzhong**	**11.01**	**136**	*e*P	**Pn**	**15 59 09.1**	**+8.4**
QIZ				*e*S	**Sn**	**16 01 17.1**	**+13**
QIZ				LR	LR		
	comp=N,1μm,7.4s						
QIZ				LR	LR		
	comp=E,790nm,8.4s						
QIZ				LR	LR		
	comp=Z,2μm,8.7s						
GZH	**Guangzhou**	**11.22**	**109**	P	**Pn**	**15 59 05.0**	**+1.4**
GZH				S	**Sn**	**16 01 10.7**	**+1.6**
GZH				LR	LR		
	comp=N,1μm,6.7s						
GZH				LR	LR		
	comp=E,1μm,6.9s						
WHN	**Wuhan**	**11.45**	**70**	⇑P	**Pn**	**15 59 07.7**	**+1.1**
WHN				S	**Sn**	**16 01 07.0**	**-7.6**
WHN				LR	LR		
	comp=N,3μm,6.0s						
WHN				LR	LR		
	comp=E,2μm,7.3s						
WHN				LR	LR		
	comp=Z,3μm,10.8s						
GTA	**Gaotai**	**12.24**	**353**	*e*P	**Pn**	**15 59 18.9**	**+1.5**
GTA				PP		15 59 30.0	
GTA				S	**Sn**	**16 01 33.9**	**+0.1**
GTA				sS		16 01 46.1	
GTA				SS		16 01 49.7	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,3.9s						
GTA				LR	LR		
	comp=N,2μm,10.4s						
GTA				LR	LR		
	comp=E,1μm,9.2s						
GTA				LR	LR		
	comp=Z,3μm,10.7s						
GUN	**Gumba**	**14.16**	**276**	*e*P	**Pn**	**15 59 42.8**	**-1.0**
	comp=Z,10nm,0.3s						
PKI	**Pulchoki**	**14.59**	**275**	*e*P	**Pn**	**15 59 46.3**	**-3.3**
	comp=Z,24nm,0.7s						
KKN	**Kakani**	**14.70**	**276**	*e*P	**Pn**	**15 59 49.0**	**-2.0**
	comp=Z,52nm,0.8s						
BTO	**Baotou**	**14.94**	**25**	*e*P	**Pn**	**15 59 54.2**	**0.0**
QZH	**Quanzhou**	**15.23**	**95**	P	**Pn**	**15 59 58.7**	**+0.4**
QZH				S	**Sn**	**16 02 48.0**	**+0.8**
QZH				LR	LR		
	comp=N,5μm,6.9s						
QZH				LR	LR		
	comp=E,1μm,3.7s						
QZH				LR	LR		
	comp=Z,2μm,7.6s						
GKN	**Gorkha**	**15.26**	**277**	*e*P	**Pn**	**15 59 57.7**	**-0.9**
	comp=Z,17nm,0.6s						
NJ2	**Nanjing**	**15.55**	**68**	*e*P	**Pn**	**16 00 03.8**	**+1.4**
NJ2				pP	pP	16 00 11.3	+1.7
NJ2				PP		16 00 16.5	
NJ2				S	**Sn**	**16 02 52.0**	**-2.7**
NJ2				sS	sS	16 03 03.0	-12
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,130nm,6.7s						
NJ2				LR	LR		
	comp=N,1μm,18.1s						
NJ2				LR	LR		
	comp=E,1μm,18.1s						
NJ2				LR	LR		
	comp=Z,1μm,17.7s						
HHC	**Hu-ho-hao-te**	**15.76**	**28**	*e*P	**Pn**	**16 00 06.4**	**+1.4**
HHC				pP	pP	16 00 15.3	+3.5
HHC				PP		16 00 19.9	
HHC				S	**Sn**	**16 02 58.2**	**-1.5**
HHC				sS	sS	16 03 07.5	-12
HHC				SS		16 03 12.1	
HHC				PcP	PcP	16 05 08.9	+4.1
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,80nm,5.1s						
HHC				LR	LR		
	comp=N,990nm,9.4s						
HHC				LR	LR		
	comp=E,1μm,9.6s						
HHC				LR	LR		
	comp=Z,980nm,11.4s						
TIA	**Tai'an**	**15.76**	**52**	*e*P	**Pn**	**16 00 00.2**	**-4.9**
TIA				LR	LR		
	comp=N,550nm,9.0s						
TIA				LR	LR		
	comp=E,1μm,11.0s						
KOLN	**Koldanda**	**16.19**	**276**	*e*P	**Pn**	**16 00 10.0**	**-0.7**
	comp=E,26nm,0.8s						
SSE	**Sheshan**	**17.33**	**73**	P	**Pn**	**16 00 26.2**	**+1.1**
SSE				pmax	pmax		
	comp=Z,26nm,1.2s						
SSE				pmax	pmax		
	comp=Z,100nm,3.8s						
SSE				LR	LR		
	comp=N,370nm,9.1s						
SSE				LR	LR		
	comp=E,490nm,9.1s						
SSE				LR	LR		
	comp=Z,730nm,7.0s						
BJT	**Baijiatuau**	**17.42**	**39**	*e*P	**Pn**	**16 00 26.8**	**+0.6**
BJT				pmax	pmax		
	comp=Z,138nm,1.1s						
BJT	**Baijiatuau**	**17.42**	**39**	*e*P	**Pn**	**16 00 26.8**	**+0.6**
	comp=Z,138nm,1.1s						
BJI	**Beijing**	**17.44**	**39**	P	**Pn**	**16 00 25.2**	**-1.2**
BJI				pmax	pmax		
	comp=Z,32nm,0.7s						
BJI				pmax	pmax		
	comp=Z,150nm,3.3s						
BJI				LR	LR		
	comp=N,830nm,13.9s						
BJI				LR	LR		
	comp=E,1μm,11.6s						
BJI				LR	LR		
	comp=Z,560nm,19.1s						
JOSI	**Joshimath**	**19.77**	**285**	*e*P	**Pn**	**16 00 54.5**	**-0.4**

BISR Bishrakh 21.59 279 *e*P **P 16 01 14.5 +1.4**
BISR AMb AMB 16 01 16.4
comp=Z,103nm,0.2s,mb5.9
AYAN Aya Nagar 21.87 279 *e*P **P 16 01 17.0 +1.0**
SONA Sohna 21.92 278 *e*P **P 16 01 17.7 +1.1**
KKR Kurukshetra 22.11 283 *e*P **P 16 01 19.1 +0.4**
BHPL Bhopal 22.42 265 *e*P **P 16 01 23.8 +1.8**
RTK Rohtak 22.47 280 *e*x x 16 01 15.1
SNY Shenyang 22.98 45 ⇑P **P 16 01 28.1 +0.3**
SNY S **S 16 05 35.2 -3.0**
SNY pmax pmax
comp=Z,43nm,1.0s,mb4.8
SNY pmax pmax
comp=Z,150nm,3.9s
SNY LR LR
comp=N,340nm,10.8s,MS4.3
SNY LR LR
comp=E,610nm,13.2s,MS4.3
SNY LR LR
comp=Z,540nm,15.5s,MS4.1
KHET Khetri 23.05 278 *e*P **P 16 01 29.5 +0.8**
ZAK Zakamensk 23.12 2 *e*P **P 16 01 29.8 +0.7**
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.0
INCN Inchon 23.24 58 *e*P **P 16 01 30.4 -0.2**
comp=Z,48nm,1.0s,mb4.9
JOW Kunigami 23.55 85 P **P 16 01 34.8 +0.9**
comp=Z,23nm,0.6s,mb4.8,baz=281,slow=7.7,SNR=6.8
HYB Hyderabad 23.62 250 *i*P **P 16 01 37.0 +2.4**
KSRS Korea Array 24.20 59 P **P 16 01 39.1 -0.7**
KSRS pmax pmax
comp=Z,9.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,298nm,20.8s,MS3.8
KSRS Korea Array 24.20 59 P **P 16 01 39.1 -0.7**
comp=Z,8.6nm,0.6s,mb4.4,baz=250,slow=9.9,SNR=30
KSRS LR LR 16 12 20.6
comp=Z,298nm,20.8s,MS3.8,baz=54,slow=40
AJM Ajmer 24.25 274 *e*x **P 16 01 41.0 +0.7**
MOY Mondy 24.39 359 *e*P **P 16 01 43.4 +2.1**
PSI Prapat 24.48 187 P **P 16 01 45.5 +3.1**
PSI pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
PSI MLR MLR
comp=Z,323nm,19.1s,MS3.8
PSI Prapat 24.48 187 P **P 16 01 45.5 +3.0**
comp=Z,4.5nm,0.6s,mb4.0,baz=334,slow=13,SNR=5.7
PSI LR LR 16 12 05.3
comp=Z,323nm,19.1s,MS3.8,baz=159,slow=38
KSH Kashi 24.72 306 *e*P **P 16 01 47.2 +2.7**
KSH *e*pP 16 01 56.2
KSH *e*sP sP 16 02 00.0 +11
KSH *e*PP 16 02 23.0
KSH *e*PcP PcP 16 05 25.5 +4.1
KSH *e*S **S 16 06 02.9 -3.5**
KSH *e*sS sS 16 06 18.4 +7.0
KSH *e*SS 16 06 59.2
KSH *e*ScP ScP 16 09 00.6 +0.3
KSH *e*PcS PcS 16 09 04.0 +2.7
KSH *e*ScS ScS 16 12 46.2 -2.0
KSH pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
KSH pmax pmax
comp=Z,130nm,2.7s,mb5.0
KSH LR LR
comp=N,590nm,8.6s
KSH LR LR
comp=E,730nm,11.1s
KSH LR LR
comp=Z,640nm,10.5s,MS4.4
MKAR Makanchi Array 24.85 327 P **P 16 01 44.3 -1.3**
comp=Z,8.8nm,0.7s,mb4.4,baz=133,slow=8.9,SNR=35
MKAR PcP PcP 16 05 20.4 -1.1
comp=Z,0.8nm,0.9s,baz=108,slow=4.7,SNR=2.8
MKAR ScP ScP 16 09 01.3 +0.7
comp=Z,0.5nm,0.8s,baz=109,slow=3.5,SNR=4.0
MKAR Makanchi Array 24.85 327 P **P 16 01 44.3 -1.3**
MKAR PcP PcP 16 05 20.4 -1.1
MKAR ScP ScP 16 09 01.3 +0.7
IRK Irkutsk 25.02 4 *e*P **P 16 01 47.9 +0.8**
IRK pmax pmax
comp=Z,23nm,1.9s,mb4.4
CN2 Changchun 25.20 43 *e*P **P 16 01 51.4 +2.6**
CN2 *e*S **S 16 06 09.4 -4.7**
CN2 pmax pmax
comp=Z,50nm,1.2s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,700nm,15.0s,MS4.3
CN2 LR LR
comp=E,300nm,15.0s,MS4.3
CN2 LR LR
comp=Z,400nm,12.0s,MS4.2
ULHL Ulahol 25.67 312 P **P 16 01 57.6 +4.5**
SNR=8.1
HIA Hailar 25.96 27 *e*P **P 16 01 55.8 +0.2**
HIA pmax pmax
comp=Z,50nm,1.1s
HIA Hailar 25.96 27 *e*P **P 16 01 55.8 +0.1**
comp=Z,50nm,1.1s,mb5.0
KZA Kyzart 26.25 311 P **P 16 02 02.8 +4.4**
SNR=10
TKM2 Tokmak 2 26.41 313 *e*P **P 16 01 59.3 -0.4**
TKM2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
TKM2 Tokmak 2 26.41 313 *e*P **P 16 01 59.3 -0.4**
comp=Z,6.4nm,1.1s,mb4.1
KBK Karagaybulak 26.71 312 P **P 16 02 06.5 +4.0**
SNR=7.1
UCH Uchtor 26.81 311 *e*P **P 16 02 06.0 +2.5**
comp=Z,6.0nm,1.2s,mb4.0
AAK Ala-Archa 27.00 312 P **P 16 02 06.4 +1.3**
SNR=8.2
AAK Ala-Archa 27.00 312 *ce*P **P 16 02 06.7 +1.6**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb3.8
AAK Ala-Archa 27.00 312 P **P 16 02 06.2 +1.1**
comp=Z,3.2nm,0.7s,mb4.0,baz=88,slow=6.3,SNR=13
AAK Ala-Archa 27.00 312 *e*P **P 16 02 09.1 +4.0**
comp=Z,9.9nm,1.0s,mb4.3
FRU Bishkek 27.01 312 *e*P **P 16 02 10.0 +4.8**
USP Ospenovka 27.28 313 P **P 16 02 10.5 +3.0**
SNR=6.1
AML Almayashu 27.33 310 P **P 16 02 08.3 +0.2**
SNR=6.0
AML Almayashu 27.33 310 *e*P **P 16 02 09.0 +1.0**
comp=Z,11nm,1.1s,mb4.3
EKS2 Erkin-Say 27.49 311 P **P 16 02 13.5 +4.0**
SNR=6.3
EKS2 Erkin-Say 27.49 311 *e*P **P 16 02 09.2 -0.3**
comp=Z,11nm,1.1s,mb4.3
MDJ Mudanjiang 28.18 45 P **P 16 02 16.8 +1.2**
MDJ pP pP 16 02 25.5 +6.8
MDJ sP sP 16 02 29.5 +10
MDJ S **S 16 06 59.6 -1.5**
MDJ sS sS 16 07 14.4 +8.3
MDJ ScP ScP 16 09 09.4 -1.0
MDJ PcS PcS 16 09 13.2 +1.8
MDJ pmax pmax
comp=Z,10.0nm,1.4s,mb4.2
MDJ LR LR
comp=N,540nm,17.6s,MS4.2
MDJ LR LR
comp=E,250nm,19.6s,MS4.2
MDJ LR LR
comp=Z,370nm,14.5s
VLA Vladivostok 29.02 49 *e*P **P 16 02 23.0 -0.2**
VLA pmax pmax
comp=Z,59nm,1.5s,mb5.1
VLA MLR MLR
comp=Z,400nm,12.0s,MS4.2
KURK Kurchatov 29.34 329 *de*P **P 16 02 26.8 +1.0**
KURK pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KURK Kurchatov 29.34 329 P **P 16 02 24.8 -1.1**
comp=Z,2.1nm,0.7s,mb4.0,baz=140,slow=9.4,SNR=8.9
KURK LR LR 16 15 11.9
comp=Z,425nm,19.1s,MS4.1,baz=125,slow=39
KURK Kurchatov 29.34 329 *e*P **P 16 02 24.6 -1.2**
comp=Z,5.4nm,0.9s,mb4.3
ZALV Zalesovo Beam 29.47 339 P **P 16 02 26.8 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ZALV MLR MLR
comp=Z,298nm,18.4s,MS4.0

ZALV Zalesovo Beam 29.47 339 P **P 16 02 26.8 -0.1**
comp=Z,1.4nm,0.5s,mb4.0,baz=145,slow=8.4,SNR=7.6
ZALV LR LR 16 14 50.9
comp=Z,298nm,18.4s,MS4.0,baz=222,slow=38
BOD Bodaibo 31.73 12 *e*P **P 16 02 45.8 -1.1**
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
KLR Kul'dur 31.81 38 *e*P **P 16 02 42.9 -4.8**
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS4.9
MAT Matsushiro 32.08 64 P **P 16 02 51.3 +1.0**
MAT *e*S **S 16 07 58.2 -4.3**
MJAR Matsushiro Arr 32.08 64 P **P 16 02 52.0 +1.7**
MJAR pmax pmax
comp=Z,9.0nm,1.0s
MJAR MLR MLR
comp=Z,170nm,18.1s
MJAR Matsushiro Arr 32.08 64 P **P 16 02 52.0 +1.7**
comp=Z,9.2nm,1.0s,mb4.6,baz=268,slow=9.7,SNR=20
MJAR LR LR 16 17 36.3
comp=Z,170nm,18.1s,MS3.8,baz=260,slow=40
BVAR Borovoye Array 34.73 326 P **P 16 03 12.9 -0.2**
BVAR 16 05 43.9
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR MLR MLR
comp=Z,372nm,18.9s
BVAR Borovoye Array 34.73 326 P **P 16 03 12.9 -0.2**
comp=Z,1.3nm,0.5s,mb4.1,baz=122,slow=11,SNR=10.0
BVAR PcP PcP 16 05 43.9 -2.8
comp=Z,1.0nm,0.7s,baz=130,slow=6.0,SNR=4.9
BVAR LR LR 16 18 34.4
comp=Z,372nm,18.9s,MS4.2,slow=38
BRVK Borovoye 34.80 326 *ce*P **P 16 03 15.6 +1.8**
BRVK pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
BRVK Borovoye 34.80 326 *e*P **P 16 03 14.6 +0.9**
comp=Z,5.9nm,1.0s,mb4.5
ERM Erimo 36.68 55 *e*P **P 16 03 32.1 +2.1**
ERM pmax pmax
comp=Z,28nm,1.1s,mb5.0
ERM Erimo 36.68 55 *e*P **P 16 03 32.1 +2.1**
comp=Z,28nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 37.57 47 *e*P **P 16 03 38.0 +0.5**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.0
YSS MLR MLR
comp=Z,500nm,15.0s,MS4.4
YSS MLR MLR
comp=E,500nm,14.0s
YSS Yuzh-Sakhalins 37.57 47 *e*P **P 16 03 38.8 +1.3**
comp=E,15nm,0.8s,mb4.8
ABKAR Akbulak array 38.89 316 *e*P **P 16 03 50.3 +1.7**
comp=E,2.4nm,0.6s,mb4.1
YAK Yakutsk 39.39 20 *e*P **P 16 03 52.6 0.0**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.6
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK MLR MLR
comp=Z,249nm,15.0s,MS4.2
YAK MLR MLR
comp=E,152nm,14.0s,MS4.1
YAK MLR MLR
comp=N,110nm,14.0s,MS4.1
YAK Yakutsk 39.39 20 *e*P **P 16 03 53.3 +0.7**
comp=N,15nm,0.7s,mb4.8
SVE Sverdlovsk 41.51 327 ⇓*e*P **P 16 04 12.5 +2.3**
SVE pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
ARU Arti 42.36 326 *d i*P **P 16 04 15.2 -2.0**
ARU S **S 16 10 31.5 -6.7**
ARU pmax pmax
comp=Z,15nm,1.7s,mb4.3
ARU MLR MLR
comp=Z,280nm,19.0s,MS4.2
ARU Arti 42.36 326 *e*P **P 16 04 15.7 -1.5**
TIXI Tiksi 46.90 11 *e*P **P 16 04 52.0 -1.2**
TIXI pmax pmax
comp=Z,13nm,1.3s,mb4.7
TIXI MLR MLR
comp=Z,343nm,12.0s,MS4.5
TIXI Tiksi 46.90 11 *e*P **P 16 04 50.0 -3.3**
comp=Z,7.8nm,0.8s,mb4.7
PETK Petropavlovsk- 48.35 42 LR LR 16 29 02.3
comp=Z,88nm,18.6s,MS3.8,baz=79,slow=41
GNI Garni 48.45 301 *de*P **P 16 05 08.8 +3.1**
GNI pmax pmax
comp=Z,9.0nm,1.2s
ZEI Tsey 48.99 304 *e*P **P 16 05 13.6 +3.8**
ZEI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KIV Kislovodsk 49.85 306 ⇑*e*P **P 16 05 19.8 +3.4**
KIV *e*S **S 16 12 36.4 +10**
KIV pmax pmax
comp=Z,11nm,1.6s,mb4.6
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.9
FITZ Fitzroy Crossi 50.66 150 *e*P **P 16 05 23.7 +1.0**
comp=Z,4.5nm,0.7s,mb4.5
VRHR Novokhopersk 50.77 315 *e*P **P 16 05 23.7 +0.5**
VRHR pmax pmax
comp=N,5.0nm,0.4s
VRHR pmax pmax
comp=E,6.0nm,0.4s
VRHR pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
MBWA Marble Bar 51.15 158 *e*P **P 16 05 26.0 -0.4**
comp=Z,9.3nm,1.0s,mb4.7
SOC Sochi 52.01 305 *e*P **P 16 05 33.3 +0.6**
SOC *e* 16 06 49.6
SOC *e* 16 07 37.5
SOC *e*PPP 16 08 41.0
SOC *e*S **S 16 12 55.4 -0.7**
SOC pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SOC MLR MLR
comp=Z,128nm,15.0s,MS4.1
VORD Divnogorie 52.23 315 *e*P **P 16 05 35.1 +0.9**
VORD pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VORD pmax pmax
comp=N,4.0nm,0.4s
VORD pmax pmax
comp=E,7.0nm,0.7s
VSR Storozhevoye 52.32 315 *e*P **P 16 05 35.7 +0.9**
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KLMR Klimovskoe 53.15 327 *e*P **P 16 05 41.9 +1.1**
KLMR pmax pmax
comp=Z,34nm,1.6s,mb5.0
OBN Obninsk 54.06 320 *e*P **P 16 05 49.2 +1.6**
OBN pmax pmax
comp=Z,29nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.0
BILL Bilibino 55.49 24 κ *i*P **P 16 05 56.9 -0.8**
BILL *e**PP pP 16 06 06.4 +5.5
BILL *e**SP sP 16 06 10.0 +7.9
BILL S **S 16 13 43.0 +0.5**
BILL pmax pmax
comp=Z,24nm,1.4s,mb5.0
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.3
BILL Bilibino 55.49 24 *e*P **P 16 05 55.1 -2.7**
comp=Z,27nm,1.4s,mb5.1
WRA Warramunga Arr 56.51 143 P **P 16 06 05.3 -0.3**
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRA Warramunga Arr 56.51 143 P **P 16 06 05.3 -0.3**
comp=Z,5.2nm,0.7s,mb4.7,baz=333,slow=8.2,SNR=38
WB2 Warramunga Arr 56.52 143 *e*P **P 16 06 03.9 -1.8**
BR131 Keskin Array S 56.97 301 *e*P **P 16 06 10.0 +1.2**
comp=Z,2.1nm,0.8s,mb4.2
BRTR Keskin Array B 56.97 301 *i*P **P 16 06 10.0 +1.2**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 56.97 301 P **P 16 06 07.6 -1.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=97,slow=6.3,SNR=12
BRTR LR LR 16 32 45.9
comp=Z,34nm,18.0s,MS3.5,baz=255,slow=38
JOF Joensuu 57.25 329 *e*P **P 16 06 07.8 -2.6**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
JOF Joensuu 57.25 329 *ep* **P 16 06 07.8 -2.6**
comp=Z,7.0nm,0.7s,mb4.8
AKASG Malin Array Be 58.62 315 *i*P **P 16 06 21.7 +1.6**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKASG Malin Array Be 58.62 315 P **P 16 06 18.6 -1.5**
comp=Z,6.7nm,0.7s,mb4.8,baz=75,slow=6.4,SNR=25
KIEV Kiev 58.62 315 *e*P **P 16 06 20.3 +0.1**
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KIEV Kiev 58.62 315 *e*P **P 16 06 20.3 +0.1**
comp=Z,6.1nm,0.8s,mb4.7
ASAR Alice Springs 59.35 146 P **P 16 06 25.7 +0.2**
ASAR pmax pmax
comp=Z,7.0nm,0.6s
ASAR Alice Springs 59.35 146 P **P 16 06 25.6 +0.2**
comp=Z,6.9nm,0.6s,mb4.9,baz=328,slow=6.9,SNR=62
KEV Kevo 59.46 337 *e*P **P 16 06 24.0 -1.7**
KEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
KEV Kevo 59.46 337 *ep* **P 16 06 24.0 -1.7**
comp=Z,5.5nm,0.5s,mb4.8
KAF Kangasniemi 59.56 328 *e*P **P 16 06 26.2 -0.3**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 59.56 328 *ep* **P 16 06 26.2 -0.3**
comp=Z,3.1nm,0.7s,mb4.5
FINES FINESS Array B 59.68 327 P **P 16 06 25.7 -1.7**
FINES pmax pmax
comp=Z,7.0nm,0.7s
FINES FINESS Array B 59.68 327 P **P 16 06 25.7 -1.6**
comp=Z,6.9nm,0.7s,mb4.8,baz=91,slow=7.8,SNR=23
NACGM Naroch 59.70 320 *e* **P 16 06 27.0 -0.6**
ARCES ARCESS Array B 59.97 337 P **P 16 06 27.7 -1.5**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 59.97 337 P **P 16 06 27.7 -1.5**
comp=Z,4.2nm,0.8s,mb4.5,baz=87,slow=7.3,SNR=20
PLOR Plostina 60.99 309 ⇓P **P 16 06 39.1 +2.5**
PLOR Plostina 60.99 309 ⇓*i*P **P 16 06 39.1 +2.5**
MLR Muntele Rosu 61.54 309 ⇓P **P 16 06 42.6 +2.3**
MLR Muntele Rosu 61.54 309 ⇓*i*P **P 16 06 42.6 +2.3**
NWAO Narrogin (SRO) 61.62 165 LR LR 16 37 19.4
comp=Z,108nm,19.6s,MS4.0,baz=324,slow=40
BURAR Bucovina Array 61.65 312 ⇓P **P 16 06 43.3 +2.3**
BURAR Bucovina Array 61.65 312 ⇓*i*P **P 16 06 43.3 +2.3**
BUR08 Bucovina Ar. S 61.65 312 *e*P **P 16 06 43.1 +2.1**
SUW Suwalki 61.89 319 *e*P **P 16 06 42.6 +0.1**
SUW *e* pP 16 06 44.3 -1.5
SUW Suwalki 61.89 319 *e*P **P 16 06 43.0 +0.5**
SUW pmax pmax
comp=Z,24nm,0.8s,mb5.4
SUW Suwalki 61.89 319 *e*P **P 16 06 43.0 +0.5**
comp=Z,24nm,0.8s,mb5.4
LVV L'vov 62.04 314 *e*P **P 16 06 45.1 +1.5**
VOIR 62.17 309 ⇑P **P 16 06 47.1 +2.5**
VOIR 62.17 309 ⇑*i*P **P 16 06 47.1 +2.5**
FORT Forrest 62.91 155 *e*P **P 16 06 49.1 -0.4**
comp=Z,29nm,0.8s,mb5.5
KWP Kalwaria Pacla 62.91 314 *e*P **P 16 06 49.6 +0.1**
KWP *e* pP 16 06 51.4 -1.3
KOLS Kolonicke sedl 63.33 313 *e*P **P 16 06 54.6 +2.4**
KOLS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KOLS Kolonicke sedl 63.33 313 *e*P **P 16 06 54.6 +2.4**
comp=Z,2.5nm,1.0s,mb4.3
KOLS Kolonicke sedl 63.33 313 *e*P **P 16 06 54.6 +2.4**
CTA Charters Tower 63.77 133 P **P 16 06 55.7 +0.3**
CTA pmax pmax
comp=Z,7.0nm,0.8s
CTA Charters Tower 63.77 133 P **P 16 06 55.7 +0.3**
comp=Z,6.9nm,0.8s,mb4.7,baz=315,slow=11,SNR=2.7
STHS Stebnicka Huta 63.89 314 *e*P **P 16 06 58.4 +2.5**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 63.89 314 *e*P **P 16 06 58.4 +2.5**
comp=Z,3.6nm,0.9s,mb4.4
STHS Stebnicka Huta 63.89 314 *e*P **P 16 06 58.4 +2.5**
NIE Niedzica 64.48 314 *e*P **P 16 07 03.0 +3.2**
KECS Kecovo 64.58 313 *e*P **P 16 07 03.4 +2.9**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
KECS Kecovo 64.58 313 *e*P **P 16 07 03.4 +2.9**
comp=Z,3.3nm,1.1s,mb4.3
KECS Kecovo 64.58 313 *e*P **P 16 07 03.4 +2.9**
OJC Ojcow 64.64 315 *e*P **P 16 07 02.7 +1.9**
PSZ Pískesteto 65.10 313 ⇓*e*P **P 16 07 05.9 +2.1**
GVD Gavdhos 65.51 298 *e*P **P 16 07 05.5 -1.3**
comp=Z,22nm,0.6s,mb5.4
VYHS Vyhne 65.65 314 *e*P **P 16 07 09.7 +2.3**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 65.65 314 *e*P **P 16 07 09.7 +2.3**
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 65.65 314 *e*P **P 16 07 09.7 +2.3**
BUD Budapest 65.77 312 ⇑*e*P **P 16 07 10.7 +2.5**
MORC Moravsky Berou 66.15 315 *e*P **P 16 07 10.6 0.0**
comp=Z,9.2nm,1.0s,mb4.8
MORC Moravsky Berou 66.15 315 ⇓*i*P **P 16 07 10.9 +0.3**
PKSM Moragy 66.35 311 ⇓P **P 16 07 13.4 +1.4**
PKSM Moragy 66.35 311 ⇓*i*P **P 16 07 13.4 +1.4**
KSP Ksiaz 66.66 316 *e*P **P 16 07 14.1 +0.2**
KSP *e* pP 16 07 15.9 -1.2
KSP Ksiaz 66.66 316 *e*P **P 16 07 13.9 +0.1**
DPC Dobruska-Polom 66.77 316 *e*P **P 16 07 14.8 +0.2**
DPC *ex* x 16 07 16.5
NB2 NORSAR Subarra 66.84 328 P **P 16 07 15.3 +0.5**
comp=Z,6.4nm,0.9s,mb4.7,baz=78,slow=6.2
NOA NORSAR Array B 66.84 328 P **P 16 07 15.0 +0.2**
NOA pmax pmax
comp=Z,4.0nm,0.9s
NOA MLR MLR
comp=Z,84nm,18.4s
NOA NORSAR Array B 66.84 328 P **P 16 07 15.0 +0.2**
comp=Z,3.6nm,0.9s,mb4.4,baz=76,slow=6.4,SNR=7.4
NOA LR LR 16 37 53.5
comp=Z,84nm,18.4s,MS4.0,baz=15,slow=37
UPC Upice 66.92 316 *e*P **P 16 07 15.7 +0.2**
UPC *ex* x 16 07 17.6
CSNA Conrad Observa 67.72 314 ⇑*i*P **P 16 07 19.3 -1.3**
comp=Z,10nm,1.2s,mb4.8
PRU Pruhonice 67.97 316 *e*P **P 16 07 24.1 +1.9**
PRU MLR MLR
comp=N,100nm,18.1s
BRG Berggiesshubel 68.09 317 *e*P **P 16 07 22.3 -0.6**
comp=Z,6.0nm,1.0s,mb4.6
BRG Berggiesshubel 68.09 317 *e*P **P 16 07 24.9 +2.0**
comp=Z,6.3nm,1.0s,mb4.6
BRG Berggiesshubel 68.09 317 *e*P **P 16 07 24.9 +2.0**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KMBO Kilima Mbogo 68.09 257 *e*P **P 16 07 23.3 -0.2**
KMBO pmax pmax
comp=Z,24nm,1.8s
KMBO Kilima Mbogo 68.09 257 *e*P **P 16 07 23.3 -0.2**
comp=Z,24nm,1.8s,mb4.9
CLL Collm 68.53 318 *e*P **P 16 07 25.3 -0.3**
comp=Z,13nm,1.5s,mb4.6
CLL Collm 68.53 318 *e*P **P 16 07 25.0 -0.6**
CLL *e* 16 07 32.0
CLL *e*S ScS 16 17 26.0 +0.5
CLL pmax pmax
comp=Z,13nm,1.5s,mb4.6
CLL MLR MLR
comp=Z,100nm,18.6s,MS4.1
CLL Collm 68.53 318 *e*P **P 16 07 25.0 -0.6**
comp=Z,13nm,1.5s,mb4.6
CLL *e* 16 07 32.0
CLL S ScS 16 17 26.0 +0.5
CLL LR LR
comp=Z,100nm,18.6s,MS4.1
CLL Collm 68.53 318 *e*P **P 16 07 25.0 -0.6**
comp=Z,13nm,1.5s,mb4.6
CLL *e*SS SS 16 20 58.0 +6.9
CLL Lm 16 39 00.0
comp=N,100nm,21.0s
CLL Lm 16 39 00.0
comp=E,100nm,18.4s
CLL Lm 16 39 00.0

comp=Z,100nm,18.6s
KHC Kasperske Hory 68.82 315 *e*P **P 16 07 26.6 -0.9**
KHC MLR MLR
comp=Z,100nm,19.1s,MS4.1
KHC Kasperske Hory 68.82 315 *e*P **P 16 07 26.6 -0.9**
KHC *ex* x 16 07 29.5
KHC AMS AMS 16 41 00.0
comp=Z,100nm,19.1s
GEC2 GERESS Array S 68.83 315 *e*P **P 16 07 27.0 -0.6**
comp=Z,6.0nm,0.9s,mb4.5
GEC2 GERESS Array S 68.83 315 *e*P **P 16 07 27.0 -0.6**
GEC2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
GERES GERESS Array B 68.83 315 P **P 16 07 26.6 -1.0**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES MLR MLR
comp=Z,87nm,18.5s
GERES GERESS Array B 68.83 315 P **P 16 07 26.6 -0.9**
comp=Z,1.8nm,0.7s,mb4.1,baz=76,slow=6.2,SNR=14
GERES LR LR 16 41 25.4
comp=Z,87nm,18.5s,MS4.0,baz=272,slow=39
TANN Tannenbergstha 69.12 317 *e*P **P 16 07 28.8 -0.6**
comp=Z,7.0nm,1.1s,mb4.5
NKC Novy Kostel 69.19 317 AMS AMS 16 39 30.0
comp=Z,100nm,18.8s
WET Wettzell 69.25 315 *e*P **P 16 07 29.9 -0.3**
comp=Z,7.0nm,1.2s,mb4.5
WET Wettzell 69.25 315 *e*P **P 16 07 29.9 -0.3**
WET pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BSEG Bad Segeberg 69.30 321 *e*P **P 16 07 30.3 -0.1**
comp=Z,9.0nm,0.8s,mb4.8
BSEG Bad Segeberg 69.30 321 *e*P **P 16 07 30.3 -0.1**
BSEG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ROTZ Rotzenmuhle 69.48 316 *e*P **P 16 07 31.5 -0.1**
comp=Z,14nm,1.1s,mb4.8
MOX Moxa 69.56 317 *e*P **P 16 07 31.5 -0.6**
comp=Z,11nm,1.7s,mb4.5
MOX Moxa 69.56 317 *e*P **P 16 07 31.4 -0.7**
comp=Z,7.0nm,1.4s,mb4.4
MOX Moxa 69.56 317 *e*P **P 16 07 31.5 -0.6**
MOX pmax pmax
comp=Z,11nm,1.7s,mb4.5
KBA Koelnbreinsper 69.60 313⇑ *i*P **P 16 07 27.5 -4.9**
comp=Z,5.2nm,0.8s,mb4.5
RJOB Jochberg 69.74 314 *e*P **P 16 07 32.8 -0.5**
comp=Z,11nm,1.2s,mb4.7
TIP Timpagrande 69.75 304 *e*P **P 16 07 33.2 -0.3**
comp=Z,9.8nm,1.1s,mb4.7
NRDL Niedersach Rie 69.87 319 *e*P **P 16 07 33.8 -0.2**
comp=Z,10.0nm,1.1s,mb4.7
CLZ Clausthal 69.93 319 *e*P **P 16 07 33.9 -0.4**
comp=Z,15nm,1.0s,mb4.9
CLZ Clausthal 69.93 319 *e*P **P 16 07 33.9 -0.4**
CLZ pmax pmax
comp=Z,15nm,1.0s,mb4.9
STKA Stephens Creek 69.95 145 *e*P **P 16 07 32.8 -1.8**
comp=Z,7.3nm,0.8s,mb4.7
STKA Stephens Creek 69.95 145 P **P 16 07 34.1 -0.5**
comp=Z,8.6nm,0.8s,mb4.7,baz=320,slow=7.3,SNR=19
STKA Stephens Creek 69.95 145 *e*P **P 16 07 35.5 +0.9**
comp=Z,2.3nm,0.9s,mb4.1
GRA1 Grafenberg Arr 70.11 316 *e*P **P 16 07 35.2 -0.3**
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 70.11 316 *e*P **P 16 07 35.2 -0.3**
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 70.11 316 *e*P **P 16 07 35.2 -0.3**
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 70.11 316 *e*P **P 16 07 35.2 -0.3**
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
FUR Furstenfeldbru 70.57 315 *e*P **P 16 07 38.2 -0.1**
comp=Z,22nm,0.9s,mb5.1
FUR Furstenfeldbru 70.57 315 *e*P **P 16 07 38.2 -0.1**
FUR pmax pmax
comp=Z,22nm,0.9s,mb5.1
IBBN Ibbenburen 71.29 320 *e*P **P 16 07 42.1 -0.5**
comp=Z,12nm,1.2s,mb4.7
FETA Feichten 71.31 314⇑ *i*P **P 16 07 42.5 -0.3**
comp=Z,11nm,1.1s,mb4.7
TNS Taunus Mts 71.62 317 *e*P **P 16 07 44.1 -0.5**
comp=Z,9.0nm,0.9s,mb4.7
TNS Taunus Mts 71.62 317 *e*P **P 16 07 44.1 -0.5**
TNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
STU Stuttgart 71.67 316 *e*P **P 16 07 44.4 -0.6**
comp=Z,9.0nm,0.4s,mb5.0
COLD Coldfoot 71.78 23 *e*P **P 16 07 44.0 -1.3**
comp=Z,11nm,1.2s,mb4.7
BUG Bochum--Univer 71.88 319 *e*P **P 16 07 45.7 -0.5**
comp=Z,12nm,1.1s,mb4.7
BFO Black Forest 72.36 316 *e*P **P 16 07 48.3 -0.8**
comp=Z,6.0nm,1.1s,mb4.4
BFO Black Forest 72.36 316 *e*P **P 16 07 48.3 -0.8**
BFO pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CHUM Lake Minchumin 72.49 27 *e*P **P 16 07 48.4 -1.3**
comp=Z,20nm,1.1s,mb5.0
BPAW Bear Paw Mtn. 72.92 26 *e*P **P 16 07 50.2 -1.9**
comp=Z,16nm,0.9s,mb5.0
MEM Membach 72.93 318 P **P 16 07 54.8 +2.4**
PPLA Purkeypile 72.98 27 *e*P **P 16 07 51.2 -1.3**
comp=Z,46nm,1.2s,mb5.3
CDF Champ du Feu 72.99 316 *e*P **P 16 07 51.3 -1.5**
comp=Z,28nm,1.2s,mb4.8
WLF Walferdange 73.20 318 P **P 16 07 56.5 +2.4**
comp=Z,17nm,1.5s,mb4.8
WLF Walferdange 73.20 318 *e*P **P 16 07 53.9 -0.2**
comp=Z,26nm,1.1s,mb5.1
WLF Walferdange 73.20 318 *e*P **P 16 07 52.9 -1.2**
WLF pmax pmax
comp=Z,24nm,1.1s,mb5.0
WLF Walferdange 73.20 318 *e*P **P 16 07 52.9 -1.2**
comp=Z,24nm,1.1s,mb5.0
BCLA Clavier 73.42 318 P **P 16 07 57.8 +2.4**
HINF Hinteralfeld 73.47 316 *e*P **P 16 07 53.8 -1.9**
HAU Haudompre 73.72 316 *e*P **P 16 07 55.3 -1.9**
HAU *e*MLR MLR
comp=Z,121nm,20.0s,MS3.9
COLA College 73.74 25 *e*P **P 16 07 52.5 -4.5**
COLA pmax pmax
comp=Z,14nm,0.9s,mb4.9
COLA College 73.74 25 *e*P **P 16 07 52.5 -4.5**
comp=Z,14nm,0.9s,mb4.9
DOU Dourbes 73.96 318 P **P 16 07 59.8 +1.3**
PGF Pioggiola 74.07 310 *e*P **P 16 07 58.0 -1.4**
comp=Z,24nm,1.1s,mb4.7
BAIF Baives 74.21 318 *e*P **P 16 07 58.7 -1.3**
comp=Z,27nm,1.3s,mb4.7
MEZF Maizieres J'vi 74.32 317 *e*P **P 16 07 59.3 -1.4**
CABF La Chapelle 74.42 315 *e*P **P 16 07 59.7 -1.6**
comp=Z,14nm,1.0s,mb4.5
LPG La Plagne 74.43 315 *e*P **P 16 08 00.5 -0.9**
comp=Z,31nm,0.9s,mb5.0
LPL La Plagne 74.44 313 *e*P **P 16 08 00.5 -0.9**
comp=Z,21nm,0.6s,mb5.0
SBF Sospel 74.62 312 *e*P **P 16 08 00.9 -1.6**
comp=Z,22nm,0.9s,mb4.8
BNI Bardonecchia 74.65 313 *e*P **P 16 08 03.2 +0.5**
BNI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BNI Bardonecchia 74.65 313 *e*P **P 16 08 03.2 +0.5**
comp=Z,5.9nm,0.8s,mb4.6
MBDF Montbardon 74.72 313 *e*P **P 16 08 01.9 -1.2**
comp=Z,14nm,0.9s,mb4.6
KDAK Kodiak Island 75.14 32 *i*P **P 16 08 08.3 +3.1**
ORIF Oris-en-Rattie 75.23 313 *e*P **P 16 08 04.8 -1.2**
comp=Z,9.4nm,0.8s,mb4.5
ORIF *e*MLR MLR
comp=Z,72nm,21.5s,MS3.6
FRF La Foret Royal 75.27 312 *e*P **P 16 08 04.5 -1.8**
comp=Z,28nm,1.3s,mb4.7
LMR La Mourre 75.45 311 *e*P **P 16 08 05.7 -1.6**
comp=Z,25nm,1.1s,mb4.8
LOR Lormes 75.55 316 *e*P **P 16 08 05.8 -2.0**
LOR *e*MLR MLR
comp=Z,102nm,19.8s,MS3.8
SMRF Simiane la Rot 75.81 312 *e*P **P 16 08 08.0 -1.4**
SMF Signal de Mont 75.82 315 *e*P **P 16 08 07.6 -1.8**
comp=Z,29nm,1.2s,mb4.8
SSF Saint Saulge 75.86 316 *e*P **P 16 08 07.7 -1.9**
comp=Z,24nm,1.1s,mb4.7
VIVF Saint-Julien-l 76.04 313 *e*P **P 16 08 08.9 -1.7**
AVF Avril sur Loir 76.07 316 *e*P **P 16 08 09.1 -1.7**
comp=Z,7.8nm,0.7s,mb4.4
MENT Mentasta 76.31 25 *e*P **P 16 08 10.9 -1.0**
INK Inuvik 76.42 18 *e*P **P 16 08 10.5 -1.9**
INK pmax pmax
comp=Z,21nm,1.0s
INK Inuvik 76.42 18 *e*P **P 16 08 10.5 -2.0**
comp=Z,21nm,1.0s,mb5.0
KEST Kesra 76.50 303 LR LR 16 48 31.9
comp=Z,23nm,20.3s,MS3.5,baz=240,slow=41
LASF Ste Croix 76.89 313 *e*P **P 16 08 14.3 -1.2**
comp=Z,23nm,1.1s,mb4.7
TCF Toulx Ste Croi 77.00 315 *e*P **P 16 08 14.7 -1.3**
comp=Z,29nm,1.2s,mb4.8
DAWY Dawson 77.25 23 *e*P **P 16 08 15.5 -1.7**
LDF La Druitiere 77.39 318 *e*P **P 16 08 17.3 -0.9**
comp=Z,10.0nm,0.9s,mb4.5
CAF Calviac 77.68 314 *e*P **P 16 08 18.9 -1.0**
comp=Z,20nm,1.2s,mb4.6
RES Resolute Bay 77.72 4 *e*P **P 16 08 18.5 -1.1**
RES pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
RES Resolute Bay 77.72 4 *e*P **P 16 08 18.5 -1.1**
comp=Z,8.7nm,1.0s,mb4.6
RJF Les Rejaudoux 77.86 315 *e*P **P 16 08 20.1 -0.8**
comp=Z,41nm,1.3s,mb4.9
RJF *e*MLR MLR
comp=Z,63nm,21.0s,MS3.6
GRR Gorron 77.92 318 *e*P **P 16 08 19.6 -1.6**
MTLF Montolieu 78.28 313 *e*P **P 16 08 22.0 -1.3**
MFF Saint Martin d 78.31 316 *e*P **P 16 08 21.9 -1.5**
LFF La Frestale 78.52 315 *e*P **P 16 08 23.6 -1.0**
ROSF Rostrenen 79.37 319 *e*P **P 16 08 28.0 -1.2**
comp=Z,30nm,1.1s,mb4.8
DZM Mont Dzumac 79.41 122 *e*P **P 16 08 30.6 +0.9**
comp=Z,28nm,1.4s,mb5.0
EPF Esparros 79.65 313 *e*P **P 16 08 28.7 -2.1**
ETSF Etsaut 80.29 313 *e*P **P 16 08 33.5 -0.8**
comp=Z,8.1nm,0.8s,mb4.4
SJPF Ste Jean 80.62 314 *e*P **P 16 08 33.9 -2.2**
SKAG Skagway 81.66 26 *e*P **P 16 08 40.9 -0.3**
comp=Z,19nm,1.0s,mb5.0
ESDC Sonseca Array 84.11 312 P **P 16 08 54.5 +0.2**
comp=Z,0.2nm,0.3s,mb3.7,baz=69,slow=7.1,SNR=5.2
YKA Yellowknife Ar 85.93 16 P **P 16 09 01.5 -1.5**
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA MLR MLR
comp=Z,7.0nm,19.2s
YKA Yellowknife Ar 85.93 16 P **P 16 09 01.5 -1.5**
comp=Z,2.8nm,0.9s,mb4.5,baz=324,slow=4.6,SNR=20
YKA LR LR 16 52 14.4
comp=Z,7.4nm,19.2s,MS3.1,baz=200,slow=39
YKA Yellowknife Ar 85.93 16 P **P 16 09 01.5 -1.5**
YKA LR LR 16 52 14.4
BOSA Boshof 92.02 239 LR LR 16 51 52.3
comp=Z,59nm,19.2s,MS4.0,baz=147,slow=36
TORD Torodi Ar. Bea 92.85 286 P **P 16 09 37.1 +0.5**
comp=Z,0.7nm,0.7s,mb4.2,baz=59,slow=3.2,SNR=5.2
FFC Flin Flon 95.82 14 *i*P **P 16 09 51.5 +2.0**
BLA Blacksburg 115.84 2 *e*PKIKP PKPdf 16 15 07.4 +1.2
TXAR Lajitas Array 118.66 25 PKP PKPdf 16 15 10.5 -1.4
comp=Z,0.4nm,0.9s,baz=289,slow=2.8,SNR=2.6

IDC ***02*** *16:02:57.8±2.1, 22°.09S×169°.86E, h0km, mb4.1/8, mb1 4.4/8, mb1mx4.3/14, mbtmp4.1/8, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=63.3km s-min=27.4km az=141.0*
ISCJB ***02*** *16:03:01.3±3.1, 22°.4S±0°.1×169°.9E±0°.2, h43km±22km, mb4.3/15, Error ellipse: s-maj=29.7km s-min=24.4km az=14.4*
NEIC ***02*** *16:03:02.1±0.7, 22°.36S×169°.94E, h35km, mb4.4/7, Error ellipse: s-maj=18.7km s-min=14.5km az=169.0*
ISC 02 16:03:02.5±3.0, 22°.3S±0°.1×169°.9E±0°.2, h38km±22km, n22, σ0s90/18, mb4.3/15, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.25**	**274**	*e*Pn		**Pn**	**16 03 50.6**	**-0.3**
NOUC	**Port Laguerre**	**3.38**	**273**	*e*P		**Pn**	**16 03 53.2**	**+0.5**
RAO	**Raoul Island**	**12.91**	**125**	LR		LR	16 09 46.8	
comp=Z,241nm,19.1s,baz=19,slow=31								
CTA	**Charters Tower**	**22.19**	**271**	LR		LR	16 15 37.7	
comp=Z,89nm,20.0s,baz=226,slow=34								
STKA	**Stephens Creek**	**26.89**	**243**	P		**P**	**16 08 40.9**	**+1.0**
2.9nm,0.7s,mb3.9,baz=94,slow=10,SNR=3.4								
STKA	**Stephens Creek**	**26.89**	**243**	P		**P**	**16 08 40.9**	**+1.0**
ASAR	**Alice Springs**	**33.14**	**261**	P		**P**	**16 09 35.9**	**+0.5**
3.6nm,0.8s,mb4.4,baz=87,slow=9.3,SNR=33								
WRAB	**Tennant Creek**	**33.24**	**267**	*e*P		**P**	**16 09 34.5**	**-1.8**
5.2nm,1.1s,mb4.4								
WRA	**Warramunga Arr**	**33.25**	**267**	P		**P**	**16 09 35.7**	**-0.6**
0.5nm,0.5s,mb3.7,baz=101,slow=8.3,SNR=10								
FITZ	**Fitzroy Crossi**	**41.68**	**268**	*e*P		**P**	**16 10 48.2**	**+0.5**
5.9nm,1.0s,mb4.2								
MBWA	**Marble Bar**	**46.48**	**262**	*e*P		**P**	**16 11 25.8**	**-0.3**
5.0nm,0.7s,mb4.5								
NWAO	**Narrogin (SRO)**	**47.45**	**245**	*e*P		**P**	**16 11 37.1**	**+3.5**
66nm,1.6s,mb5.3								
SBA	**Scott Base**	**55.58**	**181**	*e*P		**P**	**16 12 33.1**	**-0.7**
1.6nm,0.8s,mb4.1								
CASY	**Casey**	**57.57**	**204**	*e*P		**P**	**16 12 43.1**	**-4.9**
26nm,1.7s,mb5.0								
MJAR	**Matsushiro Arr**	**65.79**	**332**	P		**P**	**16 13 42.9**	**-0.8**
1.8nm,0.7s,mb4.2,baz=164,slow=7.3,SNR=6.8								
KSRS	**Korea Array**	**71.43**	**326**	P		**P**	**16 14 18.1**	**-0.8**
2.4nm,1.0s,mb4.1,baz=139,slow=6.1,SNR=7.7								
MAW	**Mawson**	**75.82**	**202**	*e*P		**P**	**16 14 43.9**	**-0.4**
2.5nm,1.3s,mb4.0								
MAW				*e*		pP	16 14 55.3	-0.5
CMAR	**Chiang Mai Arr**	**80.38**	**294**	P		**P**	**16 15 11.9**	**+1.6**
1.1nm,0.6s,mb3.9,baz=132,slow=4.0,SNR=8.5								
SONM	**Songino Array**	**90.08**	**323**	P		**P**	**16 15 58.5**	**+0.2**
1.4nm,1.0s,mb4.2,baz=132,slow=4.3,SNR=5.9								
NVAR	**Mina Array Bea**	**90.36**	**48**	P		**P**	**16 16 00.6**	**+0.8**
0.5nm,0.7s,mb3.9,baz=223,slow=9.9,SNR=3.2								
BRG	**Berggieesshubel**	**145.93**	**333**	*e*(P)		PKPdf	16 22 38.1	+1.1
4.0nm,1.2s								
GERES	**GERESS Array B**	**147.51**	**330**	PKPbc		PKPbc	16 22 42.4	0.0
0.6nm,0.6s,baz=46,slow=5.8,SNR=5.6								

IDC ***02*** *16:07:39.2±1.1, 15°.23S×173°.26W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/18, mbtmp3.9/5, Error ellipse: s-maj=51.9km s-min=19.8km az=140.0*
ISCJB ***02*** *16:07:42.5±2.5, 15°.0S±0°.2×173°.3W±0°.2, h47km±29km, mb3.8/5, Error ellipse: s-maj=47.0km s-min=22.5km az=138.9*
NEIC ***02*** *16:07:43.1±0.8, 15°.02S×173°.32W, h35km, mb4.4/2, Error ellipse: s-maj=44.1km s-min=14.1km az=145.0*
ISC 02 16:07:43.1±7.5, 15°.0S±0°.2×173°.3W±0°.2, h35km±58km, n12, σ1s09/11, mb3.8/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.84**	**53**	Pn		**Pn**	**16 08 12.1**	**-0.1**
150nm,0.3s,baz=252,slow=9.6,SNR=404								
AFI				Sn		Sx	16 08 30.9	
810nm,0.3s,baz=54,slow=19,SNR=26								
AFI	**Afiamalu**	**1.84**	**53**	*e*Pn		**Pn**	**16 08 12.3**	**+0.1**
AFI				*e*Sn		Sx	16 08 30.3	
URZ	**Urewera**	**24.65**	**198**	P		**P**	**16 13 00.4**	**-0.1**
4.8nm,0.4s,mb4.4,baz=357,slow=4.5,SNR=8.9								
STKA	**Stephens Creek**	**44.31**	**240**	P		**P**	**16 15 50.2**	**+0.4**
1.2nm,0.6s,mb3.8,baz=188,slow=23,SNR=4.3								
STKA	**Stephens Creek**	**44.31**	**240**	*e*P		**P**	**16 15 49.7**	**-0.1**
0.1nm,0.4s								
WB2	**Warramunga Arr**	**50.01**	**256**	*e*P		**P**	**16 16 32.9**	**-1.5**
WRAB	**Tennant Creek**	**50.02**	**256**	*e*P		**P**	**16 16 34.5**	**+0.1**
WRA	**Warramunga Arr**	**50.02**	**256**	P		**P**	**16 16 35.2**	**+0.6**
0.2nm,0.4s,mb3.5,baz=94,slow=7.0,SNR=13								
ASAR	**Alice Springs**	**50.32**	**252**	P		**P**	**16 16 37.5**	**+0.7**
1.0nm,0.6s,mb4.0,baz=90,slow=7.6,SNR=22								
DCID1	**Drake Creek**	**81.29**	**41**	*e*P		**P**	**16 19 54.1**	**-1.7**
36nm,0.3s								
PDAR	**Pinedale Array**	**81.92**	**42**	P		**P**	**16 20 02.0**	**+2.9**
0.3nm,0.6s,mb3.4,baz=203,slow=3.9,SNR=2.9								
BRTR	**Keskin Array B**	**145.92**	**321**	PKPbc		PKPbc	16 27 23.3	+4.1
0.6nm,0.7s,baz=46,slow=3.6,SNR=4.0								

NIED ***02*** *16:29:00, 40°.50N×139°.90E, h180km, Mw4.5 Best double couple: M0 6.37000×10^15 NP1:*ϕ_s*180.00000°, δ80.00000°, λ46.00000°. NP2:*ϕ_s*80.00000°, δ45.00000°, λ166.00000°.*
BJI ***02*** *16:29:49.2, 40°.55N×139°.99E, h174km, mB4.7/22, mb4.8/38*
ISCJB ***02*** *16:29:51.7±0.2, 40°.60N±0°.02×139°.72E±0°.03, h170km±1km, mb4.4/73, Error ellipse: s-maj=3.9km s-min=3.1km az=163.6*
MOS ***02*** *16:29:51.2±0.9, 40°.60N×139°.81E, h173km, mb4.4/40, Error ellipse: s-maj=7.9km s-min=5.4km az=98.0*
IDC ***02*** *16:29:52.4±0.7, 40°.59N×139°.83E, h168km±6km, mb4.0/19, mb1 4.1/23, mb1mx4.0/28, mbtmp3.9/23, Error ellipse: s-maj=11.6km s-min=8.4km az=124.0*
NEIC ***02*** *16:29:52.8, 40°.53N×139°.92E, h174km, mb4.4/37, After JMA.*
NEIC Recorded [1 JMA] in the Ombetsu area and in eastern Hokkaido.
JMA ***02*** *16:29:52.8±0.1, 40°.53N×139°.92E, h174km±1km, M4.5 Broadband fault plane solution: P waves. NP1:*
ϕ_s76.00000°, δ34.00000°, λ162.00000°. NP2:
ϕ_s181.00000°, δ80.00000°, λ58.00000°. Principal axes: T Plg45.0000°, Azm58.0000°; N Plg32.0000°, Azm187.0000°; P Plg28.0000°, Azm296.0000°;
JMA Felt I J1.
ISC 02 16:29:52.7±0.2, 40°.59N±0°.02×139°.72E±0°.03, h166km±1km, h168km±2.7km; pP-P, n430, σ0s72/463, mb4.4/73, 120C-137D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JIW	**Iwasaki**	**0.22**	**88**	⇑P		**Pn**	**16 30 15.9**	**+1.0**
JIW				S		**Sn**	**16 30 33.5**	**+1.6**
JOG2	**Oga 2**	**0.67**	**176**	⇑P		**Pn**	**16 30 17.6**	**+0.8**
JOG2				S		**Sn**	**16 30 36.7**	**+1.5**
JSI2	**Shiura 2**	**0.70**	**48**	⇓P		**Pn**	**16 30 17.5**	**+0.6**
JSI2				S		**Sn**	**16 30 36.4**	**+0.9**
JAH	**Hinai**	**0.80**	**119**	⇓P		**Pn**	**16 30 17.6**	**0.0**
JAH				S		**Sn**	**16 30 36.4**	**-0.1**
JTM	**Tenmabayashi**	**1.04**	**78**	⇓P		**Pn**	**16 30 19.2**	**-0.1**
JTM				S		**Sn**	**16 30 39.5**	**-0.2**
JSR	**Shiriuchi**	**1.08**	**29**	⇓P		**Pn**	**16 30 20.5**	**+0.9**
JSR				S		**Sn**	**16 30 41.4**	**+1.0**
JYW	**Yuwa**	**1.11**	**160**	⇑P		**Pn**	**16 30 20.3**	**+0.4**
JYW				S		**Sn**	**16 30 42.0**	**+1.3**
JOT	**Ohata**	**1.28**	**51**	⇓P		**Pn**	**16 30 21.7**	**+0.3**
JOT				S		**Sn**	**16 30 43.7**	**+0.3**
JKZ	**Kuzumaki**	**1.37**	**116**	⇓P		**Pn**	**16 30 21.3**	**-0.9**
JKZ				S		**Sn**	**16 30 43.9**	**-0.9**
JRG	**Rokugo**	**1.38**	**149**	⇓P		**Pn**	**16 30 22.2**	**-0.2**
JRG				*e*S		**Sn**	**16 30 44.6**	**-0.4**
JANG	**Nango**	**1.38**	**98**	⇓P		**Pn**	**16 30 21.4**	**-0.9**
JANG				S		**Sn**	**16 30 43.5**	**-1.6**
JTB	**Tobi-shima**	**1.40**	**185**	⇑P		**Pn**	**16 30 23.0**	**+0.5**
JTB				S		**Sn**	**16 30 45.9**	**+0.6**
JOSM	**Okushiri--Mats**	**1.51**	**353**	⇓P		**Pn**	**16 30 25.0**	**+1.5**
JOSM				S		**Sn**	**16 30 49.7**	**+2.3**
JKB	**Kayabe**	**1.63**	**37**	⇓P		**Pn**	**16 30 25.2**	**+0.4**
JKB				*e*S		**Sn**	**16 30 49.8**	**+0.2**
JOM	**Ohasama**	**1.64**	**132**	⇓P		**Pn**	**16 30 23.4**	**-1.5**
JYK	**Kaneyama**	**1.74**	**163**	⇓P		**Pn**	**16 30 25.7**	**-0.3**
JYK				S		**Sn**	**16 30 50.8**	**-0.7**
JMK	**Ichinoseki**	**2.00**	**144**	⇓P		**Pn**	**16 30 27.3**	**-1.5**
JMK				*e*S		**Sn**	**16 30 54.6**	**-2.0**
JAW	**Awa shima**	**2.16**	**190**	⇑P		**Pn**	**16 30 30.8**	**+0.1**
JAW				S		**Sn**	**16 30 59.9**	**0.0**
ERM	**Erimo**	**2.95**	**60**	*e*Pn		**Pn**	**16 30 39.0**	**-1.1**
ERM				*e*Sn		**Sn**	**16 31 12.8**	**-4.1**
ASAJ	**Asahikawa**	**4.12**	**30**	P		**Pn**	**16 30 54.5**	**-0.4**
ASAJ				S		**Sn**	**16 31 39.5**	**-3.9**
ASAJ				pmax		pmax		
comp=Z,97nm,0.3s								
ASAJ				smax				
comp=N,67nm,0.3s								
ASAJ	**Asahikawa**	**4.12**	**30**	P		**Pn**	**16 30 54.5**	**-0.4**
comp=N,96nm,0.3s,baz=228,slow=12,SNR=486								
ASAJ				S		**Sn**	**16 31 39.5**	**-3.9**
comp=N,66nm,0.3s,baz=296,slow=33,SNR=13								
MAJO	**Matsushiro**	**4.21**	**197**	*e*P		**Pn**	**16 30 56.4**	**+0.3**
MAT	**Matsushiro**	**4.21**	**197**	P		**Pn**	**16 30 56.3**	**+0.2**
MAT				*e*S		**Sn**	**16 31 50.4**	**+4.9**
MJAR	**Matsushiro Arr**	**4.21**	**197**	P		**Pn**	**16 30 56.7**	**+0.6**
MJAR				pmax		pmax		
comp=Z,8.0nm,0.3s								
MJAR	**Matsushiro Arr**	**4.21**	**197**	P		**Pn**	**16 30 56.7**	**+0.6**
comp=Z,7.7nm,0.3s,baz=14,slow=14,SNR=135								
MJAR	**Matsushiro Arr**	**4.21**	**197**	P		**Pn**	**16 30 56.7**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**5.71**	**51**	⇑*i*P		**Pn**	**16 31 13.9**	**-1.7**
YUK				*i*S		**Sn**	**16 32 15.0**	**-5.6**
YUK				pmax		pmax		
comp=Z,760nm,0.3s								
YUK				smax				
comp=N,6μm,0.5s								
YUK				smax				
comp=E,5μm,0.5s								
YUK				smax				
comp=N,9μm,0.9s								
YUK				smax				
comp=E,10μm,0.9s								
VLA	**Vladivostok**	**6.37**	**296**	⇑*i*P		**Pn**	**16 31 25.5**	**+1.1**
VLA				*e*S		**Sn**	**16 32 44.2**	**+7.8**
VLA				pmax		pmax		
comp=Z,205nm,1.4s								
YSS	**Yuzh-Sakhalins**	**6.73**	**18**	⇑*i*P		**Pn**	**16 31 28.1**	**-1.0**
YSS				*e*S		**Sn**	**16 32 41.0**	**-3.9**
YSS				pmax		pmax		
comp=Z,200nm,0.5s								
YSS				smax				
comp=N,160nm,0.8s								
YSS				smax				
comp=E,120nm,0.8s								
YSS	**Yuzh-Sakhalins**	**6.73**	**18**	*e*Pn		**Pn**	**16 31 28.4**	**-0.7**
JHJ	**Hachijo jima 2**	**7.45**	**180**	P		**Pn**	**16 31 36.2**	**-2.6**
comp=E,30nm,0.3s,baz=114,slow=20,SNR=4.5								
JHJ				S		**Sn**	**16 32 52.0**	**-10**
comp=E,31nm,0.3s,baz=270,slow=20,SNR=4.2								
KUR	**Kuril'sk**	**7.57**	**49**	P		**Pn**	**16 31 37.6**	**-2.6**
KUR				S		**Sn**	**16 32 59.0**	**-5.9**
KUR				pmax		pmax		
comp=Z,110nm,0.5s								
KUR				smax				
comp=N,300nm,0.6s								
KUR				smax				
comp=E,450nm,0.6s								
MDJ	**Mudanjiang**	**8.49**	**302**	P		**Pn**	**16 31 50.1**	**-2.3**
MDJ				pP			16 31 54.0	
MDJ				S		**Sn**	**16 33 23.3**	**-3.7**
MDJ				PcS		PcS	16 41 39.6	+1.0
MDJ				pmax		pmax		
comp=Z,77nm,4.8s								
MDJ	**Mudanjiang**	**8.49**	**302**	*e*Pn		**Pn**	**16 31 53.8**	**+1.5**
comp=Z,121nm,1.0s								
HABR	**Khabarovsk**	**8.56**	**339**	*e*P		**Pn**	**16 31 52.5**	**-0.8**
HABR				S		**Sn**	**16 33 27.8**	**-0.8**
HABR				pmax		pmax		
comp=Z,14nm,1.0s								
HABR				pmax		pmax		
comp=N,23nm,1.6s								
HABR				pmax		pmax		
comp=E,22nm,1.1s								
HABR				MLR		MLR		
comp=Z,107nm,8.0s								
KSRS	**Korea Array**	**9.70**	**255**	P		**Pn**	**16 32 10.1**	**+1.6**
comp=Z,0.2nm,0.3s,baz=71,slow=14,SNR=15								
KS15	**Wonju Array Si**	**9.73**	**255**	*e*Pn		**Pn**	**16 32 09.6**	**+0.7**
CN2	**Changchun**	**11.07**	**292**	*e*P		**Pn**	**16 32 27.0**	**+0.7**
CN2				pmax		pmax		
comp=Z,20nm,0.9s								
HIA	**Hailar**	**16.56**	**308**	*e*P		**Pn**	**16 33 33.9**	**-1.4**
HIA				pmax		pmax		
comp=Z,5.0nm,

comp=N,170nm,18.4s
BJI LR LR
comp=E,100nm,17.1s
BJI LR LR
comp=Z,51nm,17.8s
BJT Baijiatuau 17.97 276 *e*P **Pn 16 33 49.6 -2.5**
BJT pmax pmax
comp=Z,44nm,0.8s
BJT Baijiatuau 17.97 276 *e*P **Pn 16 33 49.6 -2.5**
comp=Z,44nm,0.8s
NRGR Nerungri 18.82 334 *e*P **P 16 33 59.5 0.0**
NRGR S **S 16 37 23.5 -1.0**
NRGR smax
comp=N,78nm,0.8s
HHC Hu-ho-hao-te 21.31 280 ⇑P **P 16 34 25.5 -0.9**
HHC PP 16 34 57.6
HHC sP sP 16 35 16.2 +0.1
HHC S **S 16 38 07.9 -5.3**
HHC PcP PcP 16 38 26.1 +2.4
HHC ScP ScP 16 41 45.9 +1.0
HHC PcS PcS 16 42 03.9 +2.1
HHC pmax pmax
comp=Z,22nm,1.1s,mb4.4
HHC pmax pmax
comp=Z,100nm,5.5s
HHC LR LR
comp=N,280nm,13.7s
HHC LR LR
comp=E,1μm,15.7s
HHC LR LR
comp=Z,100nm,13.4s
TATO Taipei 21.78 230 P **P 16 34 30.9 -0.6**
comp=Z,7.1nm,0.4s,mb4.5
YHNB Yeheng 22.08 230 *e*P **P 16 34 34.2 -0.3**
comp=Z,8.6nm,0.6s,mb4.4
YAK Yakutsk 22.32 347 *e*P **P 16 34 35.3 -1.1**
YAK *e**PP 16 35 09.0
YAK *e*S **S 16 38 23.4 -5.8**
YAK *e**SS sS 16 39 19.5 -2.7
YAK *e* 16 45 27.3
YAK pmax pmax
comp=Z,17nm,0.9s,mb4.5
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK smax
comp=N,190nm,1.6s
YAK smax
comp=E,126nm,1.4s
YAK Yakutsk 22.32 347 *e*P **P 16 34 35.4 -1.0**
comp=E,28nm,0.9s,mb4.7
SEY Seymchan 23.62 14*c*e*P **P 16 34 47.8 -0.5**
BOD Bodaibo 23.84 325 *e*P **P 16 34 48.5 -1.9**
BOD pmax pmax
comp=Z,30nm,0.8s,mb4.9
ULN Ulaanbaatar 24.38 298 *e*P **P 16 34 54.4 -1.0**
ULN pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
ULN Ulaanbaatar 24.38 298 *e*P **P 16 34 54.4 -1.0**
comp=Z,9.6nm,0.6s,mb4.5
SONM Songino Array 24.82 298 P **P 16 34 58.6 -0.7**
comp=Z,5.2nm,0.6s,mb4.3,baz=93,slow=8.5,SNR=40
SONM ScP ScP 16 41 52.6 -1.5
comp=Z,1.1nm,0.9s,baz=107,slow=5.0,SNR=4.9
XAN Xi'an 25.27 265 P **P 16 35 02.6 -1.0**
XAN pP pP 16 35 34.2 -3.4
XAN S **S 16 39 18.3 +1.3**
XAN sS sS 16 40 14.1 -3.3
XAN pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
XAN pmax pmax
comp=Z,19nm,4.5s
ENH Enshi 26.59 257 *e*P **P 16 35 14.0 -1.4**
comp=Z,9.8nm,0.6s,mb4.6
TLY Talaya 27.08 306 *e*P **P 16 35 18.9 -0.7**
TLY pmax pmax
comp=Z,9.0nm,1.4s,mb4.2
TLY Talaya 27.08 306 *e*P **P 16 35 19.5 -0.1**
comp=Z,13nm,1.4s,mb4.4
ZAK Zakamensk 27.12 303 *e*P **P 16 35 19.8 -0.2**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
LZH Lanzhou 28.37 273 *e*P **P 16 35 33.0 +1.7**
LZH sP sP 16 36 32.5 +7.6
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.7
MOY Mondy 28.71 306 *e*P **P 16 35 34.1 0.0**
GTA Gaotai 30.42 281 *e*P **P 16 35 48.6 -0.7**
GTA pP pP 16 36 22.9 -1.1
GTA sP sP 16 36 41.9 -1.1
GTA PP PP 16 36 53.0 -8.2
GTA S **S 16 40 33.6 -4.1**
GTA pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
GTA pmax pmax
comp=Z,82nm,5.3s
GTA LR LR
comp=N,130nm,16.6s
GTA LR LR
comp=E,110nm,13.7s
GTA LR LR
comp=Z,65nm,15.2s
CD2 Chengdu 30.57 263 P **P 16 35 52.0 +1.3**
CD2 pP pP 16 36 25.7 +0.3
CD2 sP sP 16 36 44.3 -0.1
CD2 PP PP 16 36 58.8 -4.2
CD2 PcP PcP 16 38 47.0 +1.8
CD2 S **S 16 40 40.1 -0.1**
CD2 sS sS 16 41 39.7 -1.7
CD2 SS SS 16 42 34.2 -23
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,90nm,4.9s
GYA Guiyang 30.75 253 P **P 16 35 52.3 -0.1**
GYA pP pP 16 36 28.5 +1.4
GYA sP sP 16 36 46.0 -0.1
GYA PP PP 16 37 01.3 -3.8
GYA S **S 16 40 42.8 -0.4**
GYA sS sS 16 41 42.7 -1.7
GYA ScP ScP 16 42 14.0 +1.3
GYA ScS ScS 16 46 08.4 -1.3
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
GYA pmax pmax
comp=Z,70nm,4.8s
BILL Biiibino 31.05 19⇓*e*P **P 16 35 54.2 -0.3**
BILL 16 38 46.0
BILL S **S 16 40 54.0 +7.1**
BILL pmax pmax
comp=Z,5.0nm,1.3s,mb4.1
BILL Biiibino 31.05 19 *e*P **P 16 35 52.2 -2.3**
comp=Z,1.5nm,0.4s,mb4.1
TIXI Tiksi 31.61 353 *e*P **P 16 35 57.5 -1.9**
TIXI pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
TIXI Tiksi 31.61 353 *e*P **P 16 35 58.5 -0.9**
comp=Z,30nm,2.2s,mb4.6
GSTR Great Sitkin T 32.14 54 *e*P **P 16 36 02.5 -1.7**
KMI Kunming 34.40 255 P **P 16 36 26.4 +2.3**
KMI pmax pmax
comp=Z,11nm,1.2s,mb4.5
WMQ Urumqi 38.16 293 *e*P pP 16 37 33.3 +1.9
ZAA0 Zalesovo Array 38.60 309 *e*P **P 16 36 58.8 -0.6**
ZALV Zalesovo Beam 38.60 309 P **P 16 36 59.4 +0.1**
ZALV 16 42 38.4
ZALV pmax pmax
comp=Z,34nm,0.6s,mb5.2
ZALV Zalesovo Beam 38.60 309 P **P 16 36 59.4 +0.1**
comp=Z,34nm,0.6s,mb5.2,baz=86,slow=8.0,SNR=175
ZALV ScP ScP 16 42 38.4 -1.9
comp=Z,2.2nm,0.7s,baz=83,slow=3.6,SNR=7.9
ZALV Zalesovo Beam 38.60 309 P **P 16 36 59.4 +0.1**
ZALV ScP ScP 16 42 38.4 -1.9
NVS Novosibirsk 39.48 311 *e*P **P 16 37 05.4 -1.2**
NVS *e*S **S 16 42 49.4 -6.6**
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,16nm,0.7s
NVS pmax pmax
comp=Z,16nm,0.7s,mb4.8
NVS smax
comp=N,2.0nm,1.0s
NVS smax
comp=E,9.0nm,1.5s
LSA Lhasa 40.72 270 *e*P **P 16 37 17.4 +0.2**
LSA Lhasa 40.72 270 *e*P **P 16 37 17.7 +0.5**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
LSA Lhasa 40.72 270 *e*P **P 16 37 17.7 +0.5**
comp=Z,5.3nm,0.6s,mb4.3
CHTO Chiang Mai 41.06 250 *e*P **P 16 37 20.4 +0.4**
CHTO pmax pmax
comp=Z,44nm,1.8s,mb4.8
CHTO Chiang Mai 41.06 250 *e*P **P 16 37 20.4 +0.3**
comp=Z,44nm,1.8s,mb4.8
MK31 Makanchi Array 41.19 298⇓*i*P **P 16 37 20.6 -0.2**
MKAR Makanchi Array 41.19 298 P **P 16 37 20.7 -0.1**
MKAR pmax pmax
comp=Z,28nm,0.7s
MKAR Makanchi Array 41.19 298 P **P 16 37 20.7 0.0**
comp=Z,28nm,0.7s,mb5.0,baz=85,slow=9.8,SNR=292
CMAR Chiang Mai Arr 41.30 250 P **P 16 37 22.5 +0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 41.30 250 P **P 16 37 22.4 +0.5**
comp=Z,2.0nm,0.5s,mb4.0,baz=40,slow=7.4,SNR=24
KURK Kurchatov 42.76 305*d i*P **P 16 37 33.1 -0.3**
KURK pmax pmax
comp=Z,136nm,1.0s
KURK Kurchatov 42.76 305 *e*P **P 16 37 33.0 -0.4**
KDAK Kodiak Island 45.41 44 *i* P **P 16 37 53.6 -0.7**
KDAK Kodiak Island 45.41 44 P **P 16 37 53.8 -0.5**
comp=Z,18nm,0.7s,mb4.8,baz=317,slow=3.0,SNR=7.2
KTH Kantishna Hill 45.60 36 *e*P **P 16 37 56.4 +0.6**
COLD Coldfoot 45.73 31 *e*P **P 16 37 57.1 +0.3**
comp=Z,12nm,0.9s,mb4.5
PMR Palmer 46.62 39 *e*P **P 16 38 02.8 -1.0**
PMR pmax pmax
comp=Z,15nm,0.9s,mb4.6
PMR Palmer 46.62 39 *e*P **P 16 38 02.8 -1.0**
comp=Z,15nm,0.9s,mb4.6
ULHL Ulahol 46.64 294 P **P 16 38 04.7 +0.4**
SNR=16
COLA College 46.83 34 *e*P **P 16 38 05.1 -0.2**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
COLA College 46.83 34 *e*P **P 16 38 05.1 -0.2**
comp=Z,7.3nm,0.8s,mb4.4
TKM2 Tokmak 2 46.85 295 P **P 16 38 07.0 +1.1**
SNR=53
BVAR Borovoye Array 47.25 310 P **P 16 38 09.2 +0.4**
BVAR pmax pmax
comp=Z,14nm,0.5s
BVAR Borovoye Array 47.25 310 P **P 16 38 09.2 +0.4**
comp=Z,14nm,0.5s,mb4.8,baz=72,slow=8.2,SNR=77
BRVK Borovoye 47.30 310*d i*P **P 16 38 09.3 +0.1**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb4.6
BRVK Borovoye 47.30 310 *e*P **P 16 38 09.4 +0.2**
KZA Kyzart 47.39 294 P **P 16 38 11.3 +1.2**
SNR=27
KBK Karagaybulak 47.40 295 P **P 16 38 10.8 +0.8**
SNR=57
CHMS Chumysh 47.41 295 P **P 16 38 10.8 +0.6**
SNR=7.3
USP Ospenovka 47.49 296 P **P 16 38 11.1 +0.3**
SNR=21
AAK Ala-Archa 47.72 295 P **P 16 38 13.0 +0.5**
SNR=24
AAK Ala-Archa 47.72 295*d i*P **P 16 38 12.8 +0.3**
AAK pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
AAK Ala-Archa 47.72 295 *e*P **P 16 38 12.5 0.0**
comp=Z,19nm,0.8s,mb4.8
KSH Kashi 47.84 291 *e*P **P 16 38 17.7 +4.2**
KSH *e*pP pP 16 38 53.5 +3.0
KSH *e*sP sP 16 39 11.3 +2.3
KSH *e*PcP PcP 16 39 43.4 +3.8
KSH *e*PP PP 16 40 10.6 +3.9
KSH *e*ScP ScP 16 43 21.3 +3.2
KSH *e*PcS PcS 16 43 37.0 +1.6
KSH *e*S **S 16 45 02.0 +4.4**
KSH *e*ScS ScS 16 47 50.4 +1.0
KSH *e*SS SS 16 48 28.3 +0.3
KSH pmax pmax
comp=Z,29nm,0.9s,mb4.9
KSH pmax pmax
comp=Z,130nm,2.7s,mb5.1
KSH LR LR
comp=N,140nm,4.9s
KSH LR LR
comp=E,270nm,5.4s
KSH LR LR
comp=Z,250nm,5.2s
UCH Uchtor 47.85 295 P **P 16 38 15.9 +2.3**
SNR=10
EKS2 Erkin-Say 48.20 295 P **P 16 38 16.4 +0.2**
SNR=25
AML Almayashu 48.45 295 P **P 16 38 19.3 +1.1**
SNR=34
EGAK Eagle 49.67 34 *e*P **P 16 38 26.6 -0.5**
comp=Z,6.5nm,0.9s,mb4.3
SVE Sverdlovsk 51.64 316⇑*e*P **P 16 38 42.4 +0.5**
SVE pmax pmax
comp=Z,27nm,0.8s,mb4.9
INK Inuvik 51.86 28 *e*P **P 16 38 43.2 -0.2**
HYT Haines Junctio 52.27 38 *e*P **P 16 38 47.9 +1.4**
ARU Arti 52.85 316*d i*P **P 16 38 50.7 -0.2**
ARU *e* 16 40 50.6
ARU S **S 16 46 07.1 +0.7**
ARU SS SS 16 49 46.7 -0.2
ARU pmax pmax
comp=Z,26nm,1.0s,mb4.9
ARU Arti 52.85 316 *e*P **P 16 38 48.9 -2.0**
comp=Z,25nm,1.0s,mb4.9
ABKAR Akbulak array 54.68 308 *e*P **P 16 39 03.9 -0.4**
comp=Z,9.4nm,0.5s,mb4.8
KBL Kabul 54.99 288 *e*P **P 16 39 06.2 -0.5**
KBL pmax pmax
comp=Z,18nm,0.8s,mb4.8
KBL Kabul 54.99 288 *e*P **P 16 39 06.2 -0.5**
comp=Z,18nm,0.8s,mb4.9
KEV Kevo 59.66 338 *e*P **P 16 39 37.9 -1.0**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
KEV Kevo 59.66 338 *e*p **P 16 39 37.9 -1.0**
comp=Z,1.9nm,0.4s,mb4.3
KLMR Klimovskoe 60.06 326 *e*P **P 16 39 41.3 -0.4**
KLMR *e* 16 41 52.6
KLMR pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
ARCES ARCESS Array B 60.21 338 P **P 16 39 42.3 -0.3**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 60.21 338 P **P 16 39 42.3 -0.4**
comp=Z,1.3nm,0.6s,mb4.0,baz=48,slow=7.1,SNR=13
WRAB Tennant Creek 60.41 186 *e*P **P 16 39 42.9 -1.6**
WRAB pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
WRAB Tennant Creek 60.41 186 *e*P **P 16 39 42.9 -1.6**
comp=Z,4.0nm,0.8s,mb4.3
WRA Warramunga Arr 60.42 186 P **P 16 39 42.9 -1.7**
WRA *PP pP 16 40 23.1 -0.2
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 60.42 186 P **P 16 39 42.9 -1.7**
comp=Z,1.5nm,0.5s,mb4.1,baz=2.7,slow=7.2,SNR=22
WRA pP pP 16 40 23.1 -0.2
comp=Z,1.5nm,0.8s,baz=3.2,slow=7.2,SNR=3.3
YKA Yellowknife Ar 61.41 31 P **P 16 39 50.4 -0.4**
YKA *PP pP 16 40 30.3 +0.7
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 61.41 31 P **P 16 39 50.4 -0.5**
comp=Z,3.9nm,0.8s,mb4.3,baz=306,slow=6.5,SNR=49
YKA pP pP 16 40 30.3 +0.7
comp=Z,0.5nm,0.6s,baz=300,slow=6.7,SNR=2.2
JOF Joensuu 62.22 331 *e*P **P 16 39 54.8 -1.4**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
JOF Joensuu 62.22 331 *e*p **P 16 39 54.8 -1.4**
comp=Z,2.3nm,0.4s,mb4.4
ASAR Alice Springs 64.15 186 P **P 16 40 08.2 -1.2**
comp=Z,0.3nm,0.3s,mb3.6,baz=2.1,slow=6.4,SNR=14
ASAR pP pP 16 40 49.3 +0.9
comp=Z,0.8nm,0.7s,baz=6.9,slow=5.4,SNR=4.3
OBN Obninsk 64.48 322 *e*P **P 16 40 10.9 -0.3**
OBN *e* 16 40 40.6
OBN *e* 16 42 37.7
OBN pmax pmax
comp=Z,12nm,1.3s,mb4.6
KAF Kangasniemi 64.56 331 *e*P **P 16 40 09.6 -2.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
KAF Kangasniemi 64.56 331 *e*p **P 16 40 09.6 -2.0**
comp=Z,2.8nm,0.5s,mb4.3
FINES FINESS Array B 65.07 331 P **P 16 40 14.4 -0.5**
FINES 16 42 38.6
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 65.07 331 P **P 16 40 14.3 -0.5**
comp=Z,3.7nm,0.6s,mb4.4,baz=27,slow=11,SNR=27
FINES PP PP 16 42 38.6 -0.9
comp=Z,1.2nm,0.5s,baz=38,slow=11,SNR=4.0
NLWA Neilton Lookou 65.31 48⇓P **P 16 40 17.4 +0.7**
baz=65
VSR Storozhevoye 65.41 317 *e*P **P 16 40 17.0 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,0.5s
A06A Chilliwack 65.68 45⇓P **P 16 40 18.5 -0.5**
baz=65
E03A Lebam 65.95 49⇑P **P 16 40 21.5 +0.7**
baz=66
B06A Marblemount 66.00 46⇑P **P 16 40 20.8 -0.3**
baz=66
A07A Ashnola River, 66.30 45⇑P **P 16 40 22.5 -0.4**
baz=66
B07A Winthrop 66.78 45⇑P **P 16 40 25.4 -0.7**
baz=66
LON Longmire 66.83 48 *e*P **P 16 40 25.8 -0.6**
LON pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LON Longmire 66.83 48 *e*P **P 16 40 25.8 -0.6**
comp=Z,3.6nm,0.8s,mb4.2
A08A Turner Farm, O 66.95 45⇓P **P 16 40 26.8 -0.3**
baz=67
F04A Amboy 66.95 49⇓P **P 16 40 27.2 0.0**
baz=67
D06A Cle Elum 67.12 47⇓P **P 16 40 28.1 -0.1**
baz=67
B08A Colville Reser 67.27 45⇑P **P 16 40 28.6 -0.6**
baz=67
A09A Danville 67.31 44⇓P **P 16 40 29.3 0.0**
baz=67
G04A Mulino 67.34 49⇓P **P 16 40 29.9 +0.2**
baz=67
EDM Edmonton 67.39 39 *e*P **P 16 40 27.4 -2.4**
E06A Yakima 67.42 48⇑P **P 16 40 30.1 0.0**
baz=67
ZEI Tsey 67.57 308 *e*P **P 16 40 29.8 -1.3**
ZEI pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
D07A Quincy 67.60 47⇓P **P 16 40 31.0 -0.2**
baz=67
KIV Kislovodsk 67.61 309⇑*i*P **P 16 40 31.7 +0.3**
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.0
KIV Kislovodsk 67.61 309 *e*P **P 16 40 31.6 +0.2**
comp=Z,22nm,0.9s,mb4.9
C08A Higginbotham F 67.76 46⇓P **P 16 40 31.6 -0.6**
baz=68
H04A Detroit Lake 67.81 50⇓P **P 16 40 32.6 0.0**
baz=68
A10A Northport 67.85 44⇑P **P 16 40 32.6 -0.1**
baz=68
B09A Rice 67.87 45⇓P **P 16 40 33.0 +0.1**
baz=68
C09A Chrisman Ranch 68.17 45⇓P **P 16 40 34.8 0.0**
baz=68
D08A Wollman Farm, 68.26 46⇓P **P 16 40 35.5 +0.2**
baz=68
G06A Carlson Farm, 68.38 49⇓P **P 16 40 36.5 +0.4**
baz=68
F07A Phinny Hill Vi 68.39 48⇑P **P 16 40 36.7 +0.5**
baz=68
A11A Hall Mountain, 68.49 43⇑P **P 16 40 37.0 +0.2**
baz=68,SNR=7.0
E08A Dider Farm, El 68.52 47⇑P **P 16 40 36.6 -0.4**
baz=68
GNI Garni 68.56 305*d i*P **P 16 40 37.7 +0.4**
GNI pmax pmax
comp=Z,13nm,1.7s
D09A Jones Farm, Ri 68.59 46⇓P **P 16 40 37.2 -0.2**
baz=68
B11A Sandpoint 68.81 44⇓P **P 16 40 38.6 -0.1**
baz=68
H06A Lindquist Farm 68.85 49⇓P **P 16 40 39.2 +0.1**
baz=69
E09A Wood Farm, Sta 69.01 46⇓P **P 16 40 39.9 -0.1**
baz=69
F08A Pendleton 69.09 47⇓P **P 16 40 40.6 +0.1**
baz=69
D10A Wagner Farm, O 69.16 45⇑P **P 16 40 40.7 -0.2**
baz=69
G08A Pilot Rock 69.30 48⇑P **P 16 40 42.2 +0.4**
baz=69
E10A Myers Farm, Un 69.60 46⇓P **P 16 40 43.6 0.0**
baz=69
D11A Klaveano Farm, 69.67 45⇓P **P 16 40 43.6 -0.4**
baz=69
I07A Izee 69.72 49⇓P **P 16 40 44.8 +0.4**
baz=69
K05A Summer Lake 69.72 51⇓P **P 16 40 45.0 +0.6**
baz=70,SNR=5.1
B13A Whitefish 69.84 43⇓P **P 16 40 44.9 -0.1**
baz=70,SNR=5.5
F10A Beach Ranch, E 69.85 46⇑P **P 16 40 45.4 +0.2**
baz=70
H08A Prairie City 69.93 48⇑P **P 16 40 45.7 0.0**
baz=70
G09A Cove 69.97 47⇑P **P 16 40 46.1 +0.2**
baz=70
A14A Double T Ranch 70.00 42⇓P **P 16 40 45.9 -0.2**
baz=70
ANN Anapa 70.14 312 *e*P **P 16 40 46.8 -0.2**
ANN pmax pmax
comp=Z,17nm,1.0s,mb4.7
E11A Bogner Ranch, 70.17 46⇓P **P 16 40 46.7 -0.4**
baz=70
C13A Hot Springs 70.22 44⇑P **P 16 40 47.7 +0.3**
baz=70
G10A Bishop Farm, J 70.33 47⇑P **P 16 40 47.5 -0.6**
baz=70,SNR=5.2
A15A Johnson Ranch, 70.35 42⇑P **P 16 40 47.4 -0.8**
baz=70
NB2 NORSAR Subarra 70.41 336 P **P 16 40 47.8 -0.5**
comp=Z,1.5nm,0.4s,mb4.1,baz=37,slow=6.5
NOA NORSAR Array B 70.41 336 P **P 16 40 47.9 -0.4**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 70.41 336 P **P 16 40 47.9 -0.4**
comp=Z,1.8nm,0.6s,mb4.0,baz=39,slow=6.2,SNR=8.5
E12A Beaver Dam Sad 70.48 45⇑P **P 16 40 49.1 +0.1**
baz=70,SNR=8.3
F11A Grangeville 70.49 46⇑P **P 16 40 48.8 -0.3**
baz=70
BMO Blue Mountains 70.49 47 *e*P **P 16 40 48.5 -0.6**
comp=Z,4.0nm,1.0s,mb4.1
C14A Swan Lake 70.60 43⇓P **P 16 40 49.4 -0.3**
baz=70
D13A Huson 70.65 44⇑P **P 16 40 49.7 -0.3**
baz=70
AKASG Malin Array Be 70.70 321 P **P 16 40 49.7 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 70.70 321 P **P 16 40 49.7 -0.5**
comp=Z,1.5nm,0.5s,mb4.0,baz=42,slow=5.6,SNR=9.9
G11A Walters Elk Ra 70.73 46⇓P **P 16 40 50.3 -0.3**
baz=70,SNR=10.0
J08A Circle Bar Ran 70.75 49⇓P **P 16 40 50.9 +0.3**
baz=70
B15A Bradely Ranch, 70.86 42⇑P **P 16 40 51.0 -0.3**
baz=71,SNR=9.9
F12A Elk City 71.06 46⇑P **P 16 40 52.4 -0.1**
baz=71,SNR=9.8
D14A Greenough 71.16 44⇓P **P 16 40 53.0 -0.1**
baz=71
J09A Fry Pan Ranch, 71.17 49⇓P **P 16 40 53.2 +0.1**
baz=71,SNR=5.6
C15A Salmond Ranch, 71.19 43⇑P **P 16 40 53.5 +0.3**
baz=71
B16A M & M Farms, S 71.23 42⇓P **P 16 40 53.0 -0.5**

baz=71
I10A **Payette** 71.25 48 ⇓P P 16 40 53.2 -0.5
baz=71
H11A **Donnelly** 71.31 47 ⇑P P 16 40 53.4 -0.6
baz=71
A17A **Triple J Farms** 71.40 41 ⇓P P 16 40 53.9 -0.6
baz=71,SNR=5.2
FCC **Fort Churchill** 71.41 26 *e*P P 16 40 53.3 -1.1
comp=Z,0.3nm,1.0s
FFC **Flin Flon** 71.43 33 *i* P P 16 40 54.2 -0.4
E14A **Clinton** 71.59 44 ⇓P P 16 40 54.9 -0.8
baz=71
C16A **Fuhringer Ranc** 71.61 42 ⇓P P 16 40 55.5 -0.3
baz=71,SNR=5.9
BEKR **Beckwourth** 71.77 53 ⇑P P 16 40 56.6 -0.3
baz=72,SNR=6.8
B17A **L&G Farms, Che** 71.77 42 ⇑P P 16 40 56.6 -0.1
baz=72
A18A **Metzger Ranch,** 71.84 41 ⇑P P 16 40 56.9 -0.1
baz=72
K10A **MacKenzie Ranc** 72.03 49 ⇓P P 16 40 58.9 +0.5
baz=72
E15A **Deer Lodge** 72.04 44 ⇑P P 16 40 57.8 -0.6
baz=72
G13A **Cobalt** 72.04 46 ⇓P P 16 40 57.9 -0.5
baz=72
H12A **Diamond D Ranc** 72.05 46 ⇓P P 16 40 58.2 -0.3
baz=72
D16A **Dana Ranch, Ca** 72.22 43 ⇓P P 16 40 59.2 -0.2
baz=72
B18A **Beardsley Farm** 72.22 41 ⇓P P 16 40 59.2 -0.2
baz=72,SNR=6.1
MFID **Camas Ranch** 72.22 48 ⇑P P 16 40 59.8 +0.3
baz=72
H13A **Challis** 72.37 46 ⇑P P 16 41 00.2 -0.1
baz=72
E16A **East Helena** 72.47 43 ⇑P P 16 41 01.1 +0.2
baz=72
EGMT **Eagleton** 72.48 41 ⇑P P 16 41 00.9 0.0
baz=72,SNR=8.4
F15A **Butte** 72.50 44 ⇓P P 16 41 01.0 -0.1
baz=72,SNR=5.9
K11A **Parker Ranch,** 72.51 48 ⇓P P 16 41 01.2 0.0
baz=72
D17A **Six Diamond Ra** 72.58 42 ⇓P P 16 41 01.1 -0.4
baz=72
L10A **Juniper Basin** 72.70 49 ⇑P P 16 41 02.3 -0.1
baz=72,SNR=5.9
J12A **Stokes Ranch,** 72.74 48 ⇓P P 16 41 02.9 +0.4
baz=72
DLMT **Dillon** 72.75 45 *e*P P 16 41 02.0 -0.6
comp=Z,3.1nm,0.6s,mb4.2
I13A **Wildhorse Cree** 72.86 47 ⇓P P 16 41 03.5 +0.3
baz=73
CMB **Columbia Colle** 72.88 54 *e*P P 16 41 02.8 -0.7
CMB pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CMB **Columbia Colle** 72.88 54 *e*P P 16 41 02.8 -0.7
comp=Z,8.7nm,1.1s,mb4.4
G15A **Dillon** 72.94 45 ⇓P P 16 41 03.8 +0.1
baz=73
E17A **Martinsdale** 72.95 43 ⇑P P 16 41 03.9 +0.2
baz=73
F16A **Kennard Place,** 72.99 44 ⇑P P 16 41 04.1 +0.1
baz=73
D18A **Linhart Farms,** 73.00 42 ⇓P P 16 41 04.0 0.0
baz=73
M10A **I.L. Ranch, Tu** 73.01 50 ⇑P P 16 41 04.6 +0.4
baz=73
L11A **Cat Creek Ranc** 73.06 49 ⇓P P 16 41 04.5 0.0
baz=73,SNR=7.8
BOZ **Bozeman (W)** 73.08 44 ⇑P P 16 41 04.7 +0.2
baz=73,SNR=6.8
BOZ **Bozeman (W)** 73.08 44 *e*P P 16 41 04.2 -0.3
BOZ pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
BOZ **Bozeman (W)** 73.08 44 *e*P P 16 41 04.2 -0.3
comp=Z,5.6nm,1.2s,mb4.2
I14A **Mackay** 73.22 46 ⇑P P 16 41 05.8 +0.5
baz=73
K12A **Draper Farm, C** 73.24 48 ⇓P P 16 41 05.8 +0.3
baz=73
E18A **Harlowton** 73.37 42 ⇓P P 16 41 06.3 +0.2
baz=73
F17A **Fitzpatrick Pl** 73.42 43 ⇑P P 16 41 06.5 +0.1
baz=73
M11A **Holland Ranch,** 73.50 49 ⇓P P 16 41 08.1 +1.0
baz=73,SNR=6.9
O10A **Cortez Mining,** 73.82 51 ⇓P P 16 41 09.3 +0.4
baz=74
H16A **Russell Place,** 73.90 45 ⇓P P 16 41 09.8 +0.5
baz=74
F18A **Big Timber** 73.91 43 ⇑P P 16 41 09.5 +0.2
baz=74,SNR=9.1
NVAR **Mina Array Bea** 73.92 53 P P 16 41 10.0 +0.5
comp=Z,5.9nm,0.7s,mb4.4,baz=288,slow=5.5,SNR=41
M12A **Wells** 74.02 49 ⇑P P 16 41 10.6 +0.5
baz=74,SNR=5.3
K14A **Jones Ranch, D** 74.27 47 ⇑P P 16 41 12.3 +0.8
baz=74
I16A **Newdale** 74.32 45 ⇓P P 16 41 12.7 +0.9
baz=74
O11A **Cowboy Ranch,** 74.41 50 ⇑P P 16 41 13.0 +0.6
baz=74
H17A **Grant Village** 74.47 44 ⇓P P 16 41 14.5 +1.9
baz=74,SNR=6.0
M13A **Montello** 74.48 49 ⇓P P 16 41 13.1 +0.3
baz=74
L14A **Malta** 74.57 48 ⇑P P 16 41 14.0 +0.8
baz=74
J16A **Bone** 74.66 46 ⇓P P 16 41 13.8 +0.1
baz=74
RLMT **Red Lodge** 74.67 43 ⇑P P 16 41 14.1 +0.3
baz=74
RLMT **Red Lodge** 74.67 43 *e*P P 16 41 13.2 -0.5
comp=Z,1.9nm,0.8s,mb3.8
BUR08 **Bucovina Ar. S** 74.71 320 *e*P P 16 41 13.3 -0.6
RRI2 **Red Ridge** 74.77 46 *e*P P 16 41 14.1 -0.2
comp=Z,6.9nm,1.3s,mb4.1
I17A **Pilgrim Ck.** 74.79 45 ⇓P P 16 41 15.1 +0.6
baz=74
N13A **Wendover, West** 74.79 49 ⇑P P 16 41 14.7 +0.2
baz=74
Q10A **Clear Creek Ra** 74.81 52 ⇓P P 16 41 15.0 +0.3
baz=75,SNR=7.4
M14A **Sheep Mountain** 74.86 48 ⇓P P 16 41 15.5 +0.6
baz=75
O12A **Currie** 74.86 50 ⇓P P 16 41 15.2 +0.3
baz=75,SNR=7.3
K16A **Soda Springs** 74.96 46 ⇓P P 16 41 16.0 +0.5
baz=75
PKM **Peak Mountain** 75.20 57 ⇑P P 16 41 17.3 +0.3
baz=75
Q11A **Duckwater** 75.25 51 ⇑P P 16 41 17.7 +0.5
baz=75
S10A **Tonopah Range,** 75.28 53 ⇓P P 16 41 17.8 +0.5
baz=75,SNR=9.0
P12A **McGill** 75.28 51 ⇑P P 16 41 17.7 +0.4
baz=75
N14A **Grayback Hills** 75.38 49 ⇓P P 16 41 18.5 +0.6
baz=75
M15A **Larsen Ranch,** 75.39 48 ⇑P P 16 41 17.9 -0.1
baz=75
GRAC **Grapevine Rang** 75.39 54 ⇑P P 16 41 18.3 +0.3
baz=75,SNR=11
BRTR **Keskin Array B** 75.53 310 P P 16 41 19.0 +0.2
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR **Keskin Array B** 75.53 310 P P 16 41 19.0 +0.2
comp=Z,0.9nm,0.6s,mb3.6,baz=70,slow=4.3,SNR=5.3
J18A **Kendall Valley** 75.56 45 ⇑P P 16 41 19.4 +0.5
baz=75
ISA **Isabella** 75.56 55 ⇓P P 16 41 18.9 -0.2
baz=75
Q12A **Willow Creek R** 75.61 51 ⇑P P 16 41 19.5 +0.3
baz=75
R11A **Troy Canyon, C** 75.61 52 ⇑P P 16 41 19.6 +0.4
baz=75
HWUT **Hardware Ranch** 75.79 47 *e*P P 16 41 19.5 -0.8
comp=Z,4.2nm,0.6s,mb4.2
P13A **Bates Ranch, G** 75.81 50 ⇑P P 16 41 20.0 -0.4
baz=76
MPMC **Manual Prospec** 75.92 55 ⇑P P 16 41 21.1 0.0
baz=76
S11A **Rachel** 75.97 52 ⇓P P 16 41 21.7 +0.4
baz=76,SNR=5.4
FURC **Furnace Creek,** 76.05 54 ⇑P P 16 41 22.0 +0.2
baz=76
PDAR **Pinedale Array** 76.11 45 P P 16 41 21.9 -0.1
comp=Z,2.7nm,0.7s,mb4.0,baz=296,slow=2.7,SNR=26
Q13A **Wheeler Ranch,** 76.14 50 ⇑P P 16 41 22.8 +0.6
baz=76
R12A **Pony Springs,** 76.20 51 ⇓P P 16 41 22.9 +0.3
baz=76
P14A **Drum Mountains** 76.28 49 ⇑P P 16 41 23.0 0.0
baz=76
EDW2 **Edwards Air Fo** 76.37 56 ⇓P P 16 41 23.7 +0.1
baz=76
L18A **Fontenelle, Gr** 76.42 46 ⇑P P 16 41 24.2 +0.4
baz=76
K19A **Absolon Red Bu** 76.45 45 ⇑P P 16 41 23.7 -0.2
baz=76
S12A **Delamar Landin** 76.53 52 ⇓P P 16 41 25.1 +0.7
baz=76
T11A **Corn Creek, Al** 76.55 52 ⇑P P 16 41 25.0 +0.4
baz=76,SNR=6.4
Q14A **Sevier Lake (B** 76.55 50 ⇓P P 16 41 25.1 +0.6
baz=76,SNR=7.9
N17A **Moffit Pass** 76.64 47 ⇑P P 16 41 25.4 +0.3
baz=76
P15A **Leamington** 76.74 49 ⇑P P 16 41 25.8 +0.2
baz=76
BFSC **Mount Baldy St** 76.99 56 ⇓P P 16 41 27.1 0.0
baz=77
Q15A **Fillmore** 77.07 50 ⇑P P 16 41 27.7 +0.2
baz=77
S13A **Holt Ranch, En** 77.14 51 ⇑P P 16 41 28.3 +0.4
baz=77
T12A **Moapa** 77.19 53 ⇓P P 16 41 28.5 +0.3
baz=77
O17A **Robinson Place** 77.20 48 ⇑P P 16 41 28.5 +0.3
baz=77
ULM **Lac du Bonnet** 77.25 33 P P 16 41 26.9 -1.4
comp=Z,4.2nm,0.8s,mb4.1,baz=324,slow=8.1,SNR=6.8
TUQ **Turquoise Moun** 77.30 54 ⇓P P 16 41 28.9 +0.1
baz=77
CLL **Collm** 77.37 329 *e*P P 16 41 29.0 +0.1
CLL **Collm** 77.37 329 *e*P P 16 41 29.0 +0.1
HEC **Hector,Ludlow** 77.44 55 ⇑P P 16 41 29.9 +0.3
baz=77
T13A **Saint George** 77.48 52 ⇓P P 16 41 30.2 +0.4
baz=77
O18A **Roosevelt** 77.56 47 ⇓P P 16 41 31.0 +0.8
baz=77
N19A **John Jarvie Ra** 77.60 46 ⇓P P 16 41 30.8 +0.4
baz=77
P17A **Butcher Ranch,** 77.69 48 ⇓P P 16 41 31.5 +0.6
baz=77
L21A **Rawlins** 77.84 45 ⇑P P 16 41 31.2 -0.5
baz=78
U13A **Pakoon Wash** 77.85 52 ⇓P P 16 41 32.1 +0.2
baz=78,SNR=5.1
P18A **Preston Nutter** 77.86 48 ⇑P P 16 41 33.2 +1.3
baz=78
GMRC **Granite Mounta** 77.89 55 ⇑P P 16 41 32.1 0.0
baz=78
O19A **Miners Draw (B** 78.04 47 ⇑P P 16 41 32.7 -0.1
baz=78
SRU **San Rafael** 78.06 48 ⇓P P 16 41 33.1 +0.1
baz=78
SRU **San Rafael** 78.06 48 *e*P P 16 41 29.8 -3.2
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
SRU **San Rafael** 78.06 48 *e*P P 16 41 29.8 -3.2
comp=Z,5.0nm,0.8s,mb4.2
R16A **Teasdale** 78.07 50 ⇓P P 16 41 34.3 +1.2
baz=78,SNR=5.3
M21A **Separation Pea** 78.09 45 ⇓P P 16 41 33.2 +0.1
baz=78
N20A **Spence Gulch,** 78.14 46 ⇓P P 16 41 33.9 +0.5
baz=78
PFO **Pinyon Flat Ob** 78.16 56 ⇓P P 16 41 34.0 +0.4
baz=78
BELC **Belle Mtn.** 78.19 55 ⇑P P 16 41 33.1 -0.7
baz=78
V13A **Grand Canyon W** 78.21 53 ⇓P P 16 41 34.0 +0.2
baz=78
U14A **Mt Trumbull** 78.32 52 ⇓P P 16 41 34.9 +0.4
baz=78
R17A **Hanksville Air** 78.42 49 ⇓P P 16 41 35.1 +0.1
baz=78,SNR=6.5
P19A **Cripple Cowboy** 78.57 47 ⇓P P 16 41 35.9 +0.1
baz=78,SNR=5.1
M22A **Cedar Creek Ra** 78.65 45 ⇓P P 16 41 36.4 +0.2
baz=78
W13A **Hualapai Mount** 78.77 53 ⇓P P 16 41 36.5 -0.4
baz=78
U15A **North Rim** 78.84 51 ⇑P P 16 41 37.9 +0.6
baz=79,SNR=9.2
V14A **Boquillas Ranc** 78.89 52 ⇓P P 16 41 38.4 +0.8
baz=79,SNR=7.0
S17A **Black Ridge (B** 78.90 50 ⇑P P 16 41 37.7 +0.1
baz=79
R18A **Canyonlands Na** 78.91 49 ⇑P P 16 41 37.0 -0.6
baz=79,SNR=5.4
GERES **GERESS Array B** 79.01 327 P P 16 41 37.6 -0.4
comp=Z,0.3nm,0.5s,baz=45,slow=5.8,SNR=6.5
X13A **Yucca** 79.14 54 ⇑P P 16 41 38.8 -0.2
baz=79
W14A **Seligman** 79.18 53 ⇓P P 16 41 39.5 +0.3
baz=79,SNR=5.2
V15A **Kaibab Nationa** 79.32 52 ⇑P P 16 41 40.2 +0.3
baz=79
S18A **Hurst Farm, Bl** 79.33 49 ⇑P P 16 41 39.6 -0.4
baz=79,SNR=5.4
R19A **Curley Farm, L** 79.34 48 ⇑P P 16 41 39.8 -0.1
baz=79
P21A **Newcastle** 79.50 46 ⇑P P 16 41 41.0 +0.2
baz=79
U16A **Tuba City** 79.73 51 ⇓P P 16 41 42.7 +0.6
baz=80,SNR=6.0
T18A **Mexican Hat** 79.78 50 ⇑P P 16 41 41.9 -0.4
baz=80
S19A **Harvey Farm, M** 79.79 49 ⇓P P 16 41 42.5 +0.1
baz=80
SMCO **Snowmass** 80.00 46 *e*P P 16 41 43.1 -0.4
comp=Z,2.2nm,0.5s,mb4.0
WUAZ **Wupatki** 80.01 52 ⇑P P 16 41 44.2 +0.5
baz=80
Z13A **Yuma Proving G** 80.18 55 ⇑P P 16 41 44.3 -0.2
baz=80,SNR=5.1
X15A **Humboldt** 80.19 53 ⇑P P 16 41 44.9 +0.3
baz=80
R21A **Cimarron** 80.25 47 ⇓P P 16 41 44.8 0.0
baz=80
Q22A **Crested Butte,** 80.26 47 ⇑P P 16 41 45.4 +0.4
baz=80
U18A **Rough Rock, Ch** 80.28 50 ⇑P P 16 41 45.6 +0.5
baz=80
V17A **Tonalea, Kykot** 80.28 51 ⇓P P 16 41 45.9 +0.8
baz=80,SNR=9.2
T19A **Beclabito** 80.48 49 ⇑P P 16 41 46.3 +0.1
baz=80
Y15A **Casa Rosa Ranc** 80.49 53 ⇓P P 16 41 46.5 +0.3
baz=80
S21A **Coal Bank Pass** 80.61 48 ⇑P P 16 41 48.1 +1.3
baz=80,SNR=7.4
X16A **Lo Mia Camp, P** 80.72 52 ⇑P P 16 41 47.6 +0.2
baz=80
V18A **Ganado** 80.73 51 ⇓P P 16 41 48.1 +0.7
baz=80
U19A **Dine' College,** 80.75 50 ⇓P P 16 41 48.1 +0.5
baz=80
115A **Sonoran Desert** 81.40 54 ⇑P P 16 41 51.3 +0.2
baz=81
W19A **Sanders** 81.46 51 ⇑P P 16 41 52.3 +0.9
baz=81
214A **Organ Pipe Nat** 81.55 55 ⇑P P 16 41 52.2 +0.4
baz=81
T22A **Edith** 81.57 48 ⇓P P 16 41 52.3 +0.5
baz=81
Y17A **Roosevelt** 81.57 53 ⇓P P 16 41 51.9 0.0
baz=81
CDF **Champ du Feu** 81.91 330 *e*P P 16 41 54.0 +0.6
W20A **Ramah** 81.97 50 ⇓P P 16 41 54.3 +0.3
baz=82
X19A **St. Johns** 82.00 51 ⇓P P 16 41 54.6 +0.4
baz=82,SNR=5.4
X20A **Quemado** 82.38 51 ⇓P P 16 41 56.5 +0.3
baz=82
HINF **Hinteralfeld** 82.56 330 *e*P P 16 41 57.2 +0.4
118A **Homack Ranch,** 82.83 53 ⇑P P 16 41 58.8 +0.3
baz=83
X21A **Alamocita Cree** 82.87 50 ⇑P P 16 41 59.3 +0.6
baz=83
Y20A **Horse Springs,** 82.90 51 ⇓P P 16 41 59.8 +0.9
baz=83
217A **Green Valley** 82.91 54 ⇓P P 16 41 59.4 +0.5
baz=83
Y21A **Point of Rocks** 83.24 51 ⇑P P 16 42 01.0 +0.4
baz=83
Z20A **Nine Sixteen R** 83.33 52 ⇓P P 16 42 01.5 +0.5
baz=83,SNR=6.0
318A **Bisbee** 83.65 54 ⇓P P 16 42 03.1 +0.3
baz=83
120A **U Bar Ranch, L** 83.70 52 ⇓P P 16 42 03.4 +0.4
baz=83
219A **White Tail Can** 83.70 53 ⇑P P 16 42 03.1 +0.1
baz=83,SNR=5.4
Y22A **Socorro** 83.71 50 ⇑P P 16 42 03.5 +0.5
baz=83
Z21A **St. Cloud Mine** 83.74 51 ⇑P P 16 42 03.2 0.0
baz=84
CABF **La Chapelle** 83.85 330 *e*P P 16 42 04.2 +0.8
319A **Douglas** 84.12 53 ⇑P P 16 42 05.6 +0.5
baz=84
Z22A **Elephant Butte** 84.19 51 ⇓P P 16 42 05.7 +0.3
baz=84
220A **Playas Peak, P** 84.21 53 ⇑P P 16 42 05.9 +0.3
baz=84
121A **Cookes Peak, D** 84.22 52 ⇓P P 16 42 06.3 +0.7
baz=84
W25A **X Bar L Ranch,** 84.23 48 ⇑P P 16 42 05.8 +0.2
baz=84,SNR=5.6
Y23A **Lovelace Mesa,** 84.25 50 ⇓P P 16 42 06.3 +0.6
baz=84
LPL **La Plagne** 84.51 329 *e*P P 16 42 06.7 -0.1
comp=Z,7.7nm,0.9s,mb4.1
LPL **La Plagne** 84.51 329 *e*P P 16 42 06.7 -0.1
LPL pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
LPL **La Plagne** 84.51 329 *e*P P 16 42 06.7 -0.1
comp=Z,3.8nm,0.9s,mb4.1
LPG **La Plagne** 84.52 329 *e*P P 16 42 06.9 +0.1
comp=Z,5.9nm,0.8s,mb4.1
LPG **La Plagne** 84.52 329 *e*P P 16 42 06.9 +0.1
LPG pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
LPG **La Plagne** 84.52 329 *e*P P 16 42 06.9 +0.1
comp=Z,3.0nm,0.8s,mb4.1
AVF **Avril sur Loir** 84.72 332 *e*P P 16 42 07.4 -0.4
comp=Z,5.7nm,0.8s,mb4.1
AVF **Avril sur Loir** 84.72 332 *e*P P 16 42 07.4 -0.4
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
AVF **Avril sur Loir** 84.72 332 *e*P P 16 42 07.4 -0.4
comp=Z,2.8nm,0.8s,mb4.0
Y25A **Mesa, Roswell** 85.04 49 ⇓P P 16 42 09.8 +0.1
baz=85
X26A **CR and CF Fran** 85.08 48 ⇓P P 16 42 10.1 +0.2
baz=85
MBDF **Montbardon** 85.15 328 *e*P P 16 42 09.1 -0.9
comp=Z,6.1nm,0.9s,mb4.0
MBDF **Montbardon** 85.15 328 *e*P P 16 42 09.1 -0.9
MBDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
MBDF **Montbardon** 85.15 328 *e*P P 16 42 09.1 -0.9
comp=Z,3.0nm,0.9s,mb4.0
ORIF **Oris-en-Rattie** 85.34 329 *e*P P 16 42 11.3 +0.3
124A **Stringfield Ra** 85.48 50 ⇑P P 16 42 11.8 -0.1
baz=85
Z25A **Roswell** 85.49 49 ⇑P P 16 42 11.8 -0.1
baz=85
TCF **Toulx Ste Croi** 85.56 332 *e*P P 16 42 11.8 -0.2
125A **Gardner Draw,** 85.97 50 ⇓P P 16 42 14.2 -0.1
baz=86
Z27A **Tatum** 86.32 48 ⇑P P 16 42 15.6 -0.4
baz=86
425A **Indio Mountain** 87.13 51 ⇓P P 16 42 19.9 -0.1
baz=87
526A **Mary Lane Ranc** 88.19 51 ⇑P P 16 42 25.2 +0.2
baz=88
428A **Kincaid Ranch,** 88.53 50 ⇑P P 16 42 26.6 0.0
baz=88
528A **Cox Ranch, San** 88.88 50 ⇓P P 16 42 28.1 -0.1
baz=89
TXAR **Lajitas Array** 88.97 51 P P 16 42 28.4 -0.3
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR **Lajitas Array** 88.97 51 P P 16 42 28.4 -0.3
comp=Z,0.9nm,0.7s,mb3.8,baz=296,slow=4.1,SNR=12
TORD **Torodi Ar. Bea** 113.90 315 PP PP 16 49 06.2 -1.1
comp=Z,1.0nm,0.9s,baz=19,slow=9.4,SNR=5.6
QSPA **South Pole Qui** 130.32 180 PKP PKPdf 16 48 40.4 -1.3
comp=Z,1.2nm,1.0s,baz=213,slow=5.0,SNR=3.6
VNA2 **Neumayer--Watz** 145.32 198 *e*PKPdf PKPdf 16 49 09.1 -0.3
baz=113,slow=3.6
VNA2 *e* 16 49 54.5
VNA2 *e* 16 49 57.7
VNA3 **Neumayer Olymp** 145.62 197 *e*PKPdf PKPdf 16 49 09.6 -0.3
SIV **San Ignacio** 149.56 42 PKPbc PKPbc 16 49 22.4 -0.4
comp=Z,2.3nm,0.9s,baz=15,slow=7.8,SNR=4.1

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*ISCJB **02** 16:31:30.2±2.0, 14°.20N±0°.09×145°.9E±0°.2, h93km±14km, mb4.0/16, Error ellipse: s-maj=30.7km s-min=14.8km az=176.9*
*NEIC **02** 16:31:31.1±2.1, 14°.16N×145°.99E, h87km±16km, mb4.3/5, Error ellipse: s-maj=25.8km s-min=12.8km az=85.0*
*IDC **02** 16:31:31.8±2.4, 14°.21N×145°.83E, h86km±16km, mb3.6/11, mb1 3.7/11, mb1mx3.6/22, mbtmp3.6/11, MS3.0/2, Ms1 3.0/2, ms1mx2.4/20, Error ellipse: s-maj=33.4km s-min=16.0km az=87.0*

ISC 02 16:31:31.2±2.1, 14°.18N±0°.09×145°.9E±0°.2, h86km±15km, n23, σ1°.904/22, mb4.0/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	1.18	240	P	Pn	16 31 53.1	+0.4
	2μm,0.3s,baz=116,slow=2.9,SNR=1301						
GUMO				S	Sn	16 32 08.5	-0.3
	854nm,0.3s,baz=6.8,slow=22,SNR=30						
JOW	**Kunigami**	20.74	310	LR	LR	16 43 31.0	
	comp=Z,33nm,18.4s,baz=203,slow=35						
NACB	**Ninganchiao**	24.99	297	P	P	16 36 49.8	+2.7
	21nm,1.0s,mb4.5						
KSRS	**Korea Array**	28.17	329	P	P	16 37 14.6	-1.0
	1.1nm,0.6s,mb3.5,baz=138,slow=9.6,SNR=7.1						
KS15	**Wonju Array Si**	28.18	329	P	P	16 37 15.8	+0.2
QIZ	**Qiongzhong**	34.86	283	*e*P	P	16 38 14.0	-0.4
	120nm,1.9s						
WRAB	**Tennant Creek**	35.76	199	*e*P	P	16 38 20.2	-1.8
	1.9nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	35.77	199	P	P	16 38 22.4	+0.3
	0.8nm,0.8s,mb3.7,baz=22,slow=9.3,SNR=11						
ENH	**Enshi**	37.14	302	*e*P	P	16 38 32.9	-0.9
	1.9nm,0.3s,mb4.5						
FITZ	**Fitzroy Crossi**	37.80	213	P	P	16 38 39.9	+0.5
	1.8nm,0.9s,mb3.9,baz=73,slow=11,SNR=5.7						
ASAR	**Alice Springs**	39.41	197	P	P	16 38 53.6	+0.9
	0.2nm,0.6s,mb3.1,baz=14,slow=6.4,SNR=6.1						
PETK	**Petropavlovsk-**	39.95	11	LR	LR	16 56 09.4	
	comp=Z,24nm,19.0s,baz=294,slow=37						
CMAR	**Chiang Mai Arr**	45.19	282	P	P	16 39 40.3	+0.4
	0.6nm,0.4s,mb3.7,baz=71,slow=6.7,SNR=9.1						
SONM	**Songino Array**	46.85	324	P	P	16 39 53.5	+1.0
	1.1nm,0.9s,mb3.6,baz=115,slow=6.5,SNR=3.5						
LSA	**Lhasa**	52.64	297	*e*P	P	16 40 33.4	-3.4
	1.2nm,0.4s,mb4.3						
BILL	**Bilibino**	55.42	9	*e*P	P	16 40 55.4	-0.9
	2.0nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	61.74	324	P	P	16 41 40.9	+0.4
	0.7nm,0.4s,mb4.0,baz=111,slow=7.9,SNR=3.5						
MKAR	**Makanchi Array**	61.78	316	P	P	16 41 42.2	+1.3
	1.0nm,0.7s,mb4.0,baz=94,slow=7.8,SNR=6.4						
MKAR	**Makanchi Array**	61.78	316	P	P	16 41 42.2	+1.3
BVAR	**Borovoye Array**	70.10	322	P	P	16 42 33.3	-0.8
	1.2nm,0.5s,mb4.0,baz=102,slow=8.3,SNR=8.0						
YKA	**Yellowknife Ar**	81.87	28	P	P	16 43 42.0	+1.2
	0.7nm,0.4s,mb3.9,baz=286,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	81.87	28	P	P	16 43 42.0	+1.2
FINES	**FINESS Array B**	91.06	335	P	P	16 44 24.5	-1.3
	0.8nm,0.4s,mb4.2,baz=70,slow=4.7,SNR=9.8						

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*IDC **02** 16:42:29.0±0.9, 42°.79S×72°.40W, h0km, mb4.1/8, mb1 4.4/9, mb1mx4.3/17, mbtmp4.2/9, ML4.7/1, MS3.8/5, Ms1 3.8/5, ms1mx3.4/29, Error ellipse: s-maj=32.8km s-min=15.7km az=117.0*
*NEIC **02** 16:42:30.3±0.7, 42°.74S×72°.47W, h10km, mb4.7/9, Error ellipse: s-maj=19.6km s-min=14.3km az=124.0*

*ISCJB **02** 16:42:32.4±0.8, 42°.7S±0°.1×72°.4W±0°.1, h33km, mb4.4/14, MS3.9/4, Error ellipse: s-maj=17.1km s-min=9.8km az=157.1*

ISC 02 16:42:34.5±0.8, 42°.7S±0°.1×72°.5W±0°.1, h35km, n32, σ1§30/25, mb4.4/14, MS3.9/4, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.45**	**38**	Pn	**Pn**	**16 43 12.7**	**+0.7**
	37nn,0.3s,baz=215,slow=14,SNR=132						
PLCA				Lg		16 43 49.1	
	416nn,0.3s,baz=304,slow=14,SNR=29						
PLCA	**Paso Flores**	**2.45**	**38**	*e*Pn	**Pn**	**16 43 11.3**	**-0.7**
PLCA				*e*Sn	**Sn**	**16 43 46.2**	**+5.6**
TRQA	**Tornquist**	**9.29**	**64**	*e*Pn	**Pn**	**16 44 45.4**	**-0.4**
	6.1nm,0.6s						
TRQA				*e*Sn	**Sn**	**16 46 30.8**	**+1.8**
CFAA	**Coronel Fontan**	**11.57**	**19**	Pn	**Pn**	**16 45 14.8**	**-2.3**
	0.1nm,0.3s,baz=127,slow=5.1,SNR=3.4						
CFAA				Lg		16 48 45.2	
	0.0nm,0.3s,baz=287,slow=14,SNR=3.2						
CFAA	**Coronel Fontan**	**11.57**	**19**	Pn	**Pn**	**16 45 14.8**	**-2.4**
CFAA				Lg		16 48 45.2	
USHA	**Ushuaia**	**12.46**	**169**	LR	LR	16 50 26.7	
	comp=Z,370nm,19.4s,baz=253,slow=39						
LVC	**Limon Verde**	**20.24**	**10**	P	**P**	**16 47 07.9**	**+1.3**
	10nm,1.0s,baz=208,slow=8.8,SNR=9.2						
LVC				LR	LR	16 54 57.2	
	comp=Z,218nm,21.4s,MS3.5,baz=173,slow=37						
LVC	**Limon Verde**	**20.24**	**10**	*e*P	**P**	**16 47 06.6**	**0.0**
	38nm,1.5s						
CPUP	**Villa Florida**	**20.52**	**42**	P	**P**	**16 47 09.3**	**-0.3**
	0.9nm,0.4s,baz=197,slow=8.9,SNR=3.9						
LPAZ	**La Paz**	**26.57**	**9**	*e*P	**P**	**16 48 07.0**	**-2.3**
	4.5nm,1.3s,mb3.8						
SIV	**San Ignacio**	**28.36**	**24**	P	**P**	**16 48 24.4**	**-0.9**
	5.8nm,0.9s,mb4.2,baz=210,slow=8.5,SNR=21						
NNA	**Nana**	**30.81**	**352**	*e*P	**P**	**16 48 49.2**	**+2.2**
	33nm,1.3s,mb5.0						
OTAV	**Otavalo**	**43.05**	**351**	*e*P	**P**	**16 50 33.5**	**+2.6**
	6.9nm,1.3s,mb4.2						
QSPA	**South Pole Qui**	**47.57**	**180**	P	**P**	**16 51 06.4**	**+0.4**
	7.4nm,1.0s,mb4.7,baz=143,slow=5.7,SNR=14						
SDV	**Santo Domingo**	**51.34**	**2**	*e*P	**P**	**16 51 34.9**	**-0.6**
	7.8nm,1.1s,mb4.5						
MAW	**Mawson**	**65.00**	**163**	LR	LR	17 20 43.8	
	comp=Z,128nm,18.0s,MS4.2,baz=109,slow=35						
LRAL	**Lakeview Retre**	**76.51**	**348**	*e*P	**P**	**16 54 21.2**	**+0.6**
	7.2nm,1.0s,mb4.6						
TXAR	**Lajitas Array**	**77.17**	**332**	P	**P**	**16 54 26.1**	**+1.7**
	2.2nm,1.0s,mb4.0,baz=153,slow=6.6,SNR=13						
CCM	**Cathedral Cave**	**82.14**	**345**	*e*P	**P**	**16 54 49.8**	**-1.3**
	6.0nm,0.8s,mb4.6						
ANMO	**Albuquerque**	**83.25**	**333**	LR	LR	17 23 49.3	
	comp=Z,54nm,20.9s,MS3.9,baz=331,slow=30						
TORD	**Torodi Ar. Bea**	**87.56**	**70**	P	**P**	**16 55 17.0**	**-2.1**
	0.6nm,0.8s,mb3.9,baz=230,slow=4.5,SNR=3.5						
ECSD	**EROS Data Cent**	**88.70**	**343**	*e*P	**P**	**16 55 23.2**	**-0.5**
	8.5nm,1.1s,mb5.0						
NVAR	**Mina Array Bea**	**90.81**	**326**	P	**P**	**16 55 33.5**	**-0.2**
	0.3nm,0.5s,mb3.9,baz=148,slow=8.7,SNR=3.7						
NVAR	**Mina Array Bea**	**90.81**	**326**	P	**P**	**16 55 33.5**	**-0.2**
HWUT	**Hardware Ranch**	**90.98**	**332**	*e*P	**P**	**16 55 34.7**	**+0.2**
	4.9nm,1.1s,mb4.8						
PDAR	**Pinedale Array**	**91.34**	**334**	P	**P**	**16 55 37.0**	**+0.9**
	1.9nm,1.0s,mb4.4,baz=141,slow=5.4,SNR=7.6						
PDAR				LR	LR	17 32 54.6	
	comp=Z,48nm,19.7s,MS3.9,baz=252,slow=33						
ARU	**Arti**	**146.19**	**49**	*e*PKPdf	PKPdf	17 02 09.0	-0.1
ABKAR	**Abkulak array**	**146.78**	**62**	*e*PKPbc	PKPbc	17 02 11.0	-1.1
TIXI	**Tiksi**	**149.11**	**347**	*e*PKPbc	PKPbc	17 02 16.8	-0.9
ZALV	**Zalesovo Beam**	**161.28**	**45**	PKPab	PKPab	17 03 13.5	-1.0
	0.5nm,0.6s,baz=316,slow=6.2,SNR=4.1						
MKAR	**Makanchi Array**	**161.68**	**68**	PKPab	PKPab	17 03 15.6	-0.9
	0.9nm,0.8s,baz=284,slow=3.2,SNR=8.6						
SONM	**Songino Array**	**174.79**	**8**	PKPab	PKPab	17 04 15.4	+1.2
	1.0nm,0.9s,baz=2.9,slow=3.0,SNR=4.6						

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*NEIC **02** 16:47:54.7, 32°.65S×71°.86W, h15km, ML2.8(GUC), After GUC.*

GUC 02 16:47:54.7±0.6, 32°.65S×71°.86W, h15km±4km, MD3.6, ML2.8, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.82**	**22**	*e*P	Pg	16 48 09.5	-1.2
CHNG				*i* S	Sg	16 48 20.5	-0.9
JACH	**Jahuel**	**1.07**	**92**	⇓*i*P	Pb	16 48 13.6	-1.2
JACH				*i* S	Sb	16 48 27.8	-0.8
TACH	**Talagante**	**1.27**	**143**	⇑*i*P	Pn	16 48 16.6	-1.2
TACH				*i* S	Sb	16 48 32.9	-1.5
CLCH	**Cerro Calan**	**1.34**	**124**	*e*P	Pn	16 48 17.9	-0.9
CLCH				*i* S	Sn	16 48 35.9	-0.5
CLCH				AML	AML	16 48 40.1	
	comp=E,270nm,0.5s						
LNV	**Longovilo**	**1.36**	**164**	*e*P	Pn	16 48 17.8	-1.3
LNV				*i* S	Sn	16 48 35.4	-1.4
ANTU	**Antumapu**	**1.38**	**132**	*e*P	Pn	16 48 18.5	-0.9
ANTU				*i* S	Sn	16 48 36.6	-0.8
ANTU	**Antumapu**	**1.38**	**132**	*e*P	Pn	16 48 18.5	-0.9
ANTU				*i* S	Sn	16 48 36.6	-0.8
ANTU				AML	AML	16 48 41.6	
	comp=N,313nm,0.5s						
FCH	**Farellones**	**1.48**	**118**	⇓*i*P	Pn	16 48 20.4	-0.4
FCH				AML	AML	16 48 41.2	
	comp=E,244nm,0.3s						
PCH	**Pirque**	**1.49**	**131**	*e*P	Pn	16 48 20.6	-0.3
CACH	**El Canelo**	**1.81**	**145**	*e*P	Pn	16 48 26.6	+1.4
CACH				*e*S	Sn	16 48 50.1	+2.2
LMEL	**Las Melosas**	**1.83**	**131**	*e*P	Pn	16 48 26.6	+0.9
LMEL				*i* S	Sn	16 48 50.1	+1.5
LMEL	**Las Melosas**	**1.83**	**131**	*e*P	Pn	16 48 26.6	+0.9
LMEL				*i* S	Sn	16 48 50.1	+1.5
LMEL				AML	AML	16 48 53.9	
	comp=N,190nm,0.2s						

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*IDC **02** 17:05:27.2±1.3, 2°.73N×97°.29E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, Error ellipse: s-maj=41.3km s-min=17.3km az=44.0*

*NEIC **02** 17:05:32.6±0.9, 2°.69N×97°.39E, h35km, mb4.1/2, Error ellipse: s-maj=22.2km s-min=12.4km az=54.0*

*DJA **02** 17:05:33, 2°.82N×97°.24E, h20km, MLv4.1/7*

*ISCJB **02** 17:05:34.1±0.6, 2°.87N±0°.05×97°.37E±0°.06, h67km±7km, mb3.9/8, Error ellipse: s-maj=11.8km s-min=6.4km az=141.1*

ISC 02 17:05:35.4±0.6, 2°.85N±0°.05×97°.37E±0°.06, h60km±8km, n21, σ1§26/27, mb3.9/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.55**	**92**	Pn	**Pn**	**17 05 57.8**	**-3.0**
	13nm,0.3s,baz=293,slow=12,SNR=28						
PSI				Sn	**Sn**	**17 06 19.6**	**-0.3**
	22nm,0.3s,baz=266,slow=9.3,SNR=8.2						
GSI	**Gunungsitoli**	**1.55**	**172**	P	**Pn**	**17 05 58.3**	**-2.5**
GSI				S	**Sn**	**17 06 21.0**	**+1.0**
TRSI	**Tarutung**	**1.79**	**117**	P	**Pn**	**17 06 03.2**	**-0.8**
TRSI				S	**Sn**	**17 06 26.2**	**+0.5**
LHMI	**Lhok Sumawe**	**2.40**	**350**	P	**Pn**	**17 06 11.8**	**-0.5**
LHMI				S	**Sn**	**17 06 46.6**	**+6.1**
MNSI	**Mandailing Nat**	**3.01**	**133**	P	**Pn**	**17 06 21.3**	**+0.6**
MNSI				S	**Sn**	**17 07 04.6**	**+9.1**
BSI	**Banda Aceh**	**3.34**	**322**	P	**Pn**	**17 06 23.0**	**-2.2**
BSI				S	**Sn**	**17 07 04.2**	**+0.5**
IPM	**Ipoh**	**3.99**	**66**	P	**Pn**	**17 06 35.2**	**+1.1**
KULM	**Kulim**	**4.07**	**53**	*e*Pn	**Pn**	**17 06 32.0**	**-3.1**
PPI	**Padang Panjang**	**4.47**	**137**	P	**Pn**	**17 06 42.4**	**+1.8**
PDSI	**Padang**	**4.85**	**140**	P	**Pn**	**17 06 51.5**	**+5.6**
MYKOM	**Kota Tinggi**	**6.56**	**99**	P	**Pn**	**17 07 10.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**15.58**	**6**	Pn	**Pn**	**17 09 14.7**	**+3.3**
	0.2nm,0.3s,baz=200,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**42.78**	**124**	P	**P**	**17 13 26.6**	**-0.8**
	1.3nm,0.4s,mb4.0,baz=302,slow=9.2,SNR=30						
WRAB	**Tennant Creek**	**42.79**	**124**	*e*P	**P**	**17 13 25.8**	**-1.7**
	9.4nm,1.3s,mb4.4						
UCH	**Uchtor**	**44.22**	**336**	*e*P	**P**	**17 13 39.9**	**+1.3**
	0.8nm,0.6s,mb3.6						
ASAR	**Alice Springs**	**44.27**	**129**	P	**P**	**17 13 38.8**	**-0.6**
	0.6nm,0.8s,mb3.4,baz=300,slow=7.9,SNR=20						
MKAR	**Makanchi Array**	**45.69**	**346**	P	**P**	**17 13 50.2**	**0.0**
	0.9nm,0.8s,mb3.7,baz=157,slow=9.0,SNR=7.6						
ZALV	**Zalesovo Beam**	**51.96**	**351**	P	**P**	**17 14 38.6**	**+0.4**
	0.9nm,0.4s,mb4.1,baz=172,slow=6.8,SNR=6.8						
STKA	**Stephens Creek**	**54.34**	**133**	P	**P**	**17 14 55.9**	**-0.2**
	2.1nm,0.8s,mb4.1,baz=282,slow=9.3,SNR=3.4						
STKA	**Stephens Creek**	**54.34**	**133**	P	**P**	**17 14 55.9**	**-0.2**
BVAR	**Borovoye Array**	**54.76**	**340**	P	**P**	**17 14 59.4**	**+0.7**
	0.7nm,0.7s,mb3.8,baz=141,slow=9.6,SNR=3.7						

CASC 02 17:07:52.4±1.7, 13°.66N×90°.83W, h35km±15km, MD3.7, 2C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.63**	**35**	⇓*e*P	Pn	17 08 05.2	+0.3
PCG	**Pacaya**	**0.76**	**16**	*e*P	Pn	17 08 07.1	+0.4
FUG	**Fuego 3**	**0.79**	**359**	⇓*e*P	Pn	17 08 07.0	-0.1
FG6		**0.90**	**357**	*e*P	Pn	17 08 08.6	0.0
JAT	**Jato**	**1.02**	**310**	⇓*e*P	Pn	17 08 09.8	-0.4
NBG	**Las Nubes**	**1.04**	**27**	*e*P	Pn	17 08 11.8	+1.3
NBG				*e*S	Sn	17 08 26.8	+3.1
TP2	**Tecpan 2**	**1.14**	**351**	*e*P	Pn	17 08 12.6	+0.7
TP2				*e*S	Sn	17 08 27.4	+1.2
RTR	**El Retiro**	**1.17**	**78**	*e*P	Pn	17 08 12.9	+0.5
RTR				*e*S	Sn	17 08 28.6	+1.5
SBLS	**San Blas**	**1.19**	**81**	*e*P	Pn	17 08 12.5	0.0
SBLS				*e*S	Sn	17 08 28.7	+1.3
RBDL	**Robledal**	**1.20**	**68**	⇑*e*P	Pn	17 08 13.2	+0.5
SNJE	**San Jose**	**1.21**	**80**	*e*P	Pn	17 08 13.1	+0.3
SNJE				*e*S	Sn	17 08 28.4	+0.5
BOQS	**Boqueron**	**1.51**	**87**	*e*P	Pn	17 08 17.4	+0.5
BOQS				*e*S	Sn	17 08 36.7	+1.3
MTO2	**Montecristo 2**	**1.60**	**62**	*e*P	Pn	17 08 18.1	-0.1
MTO2				*e*S	Sn	17 08 38.5	+0.8
LFRS	**El Faro**	**1.72**	**91**	*e*P	Pn	17 08 20.5	+0.7
LFRS				*e*S	Sn	17 08 42.1	+1.5
LBRS	**Las Brisas**	**1.74**	**87**	*e*P	Pn	17 08 20.6	+0.6
LBRS				*e*S	Sn	17 08 41.0	0.0
MRL	**Marmol**	**1.78**	**38**	*e*P	Pn	17 08 22.1	+1.4
SNVI	**San Vicente**	**1.94**	**91**	*e*P	Pn	17 08 23.4	+0.6
SNVI				*e*S	Sn	17 08 46.9	+1.0
VSM	**San Miguel**	**2.50**	**95**	*e*P	Pn	17 08 31.4	+0.9
VSM				*e*S	Sn	17 09 00.2	+0.5
BLLM	**Bellamira**	**2.53**	**95**	*e*P	Pn	17 08 32.0	+1.1
CAHU	**Cacacuatique**	**2.55**	**87**	*e*P	Pn	17 08 31.9	+0.7
CNCH	**Conchagua**	**2.94**	**97**	*e*P	Pn	17 08 38.4	+1.8
CNCH				*e*S	Sn	17 09 11.4	+0.7

IDC 02 17:13:29.7±6.8, 35°.28S×178°.97E, h226km±73km, mb2.8/2, mb1 3.0/3, mb1mx2.9/14, mbtmp2.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/4, Error ellipse: s-maj=105.9km s-min=42.7km az=2.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.33**	**206**	P	Pn	17 14 24.9	+0.5
	0.6nm,0.3s,baz=22,slow=19,SNR=10						
URZ				S	S	17 15 07.9	+0.2
	3.5nm,0.3s,baz=102,slow=22,SNR=14						
RAO	**Raoul Island**	**6.56**	**25**	LR	LR	17 16 45.7	
	comp=Z,89nm,19.9s,baz=109,slow=30						
ASAR	**Alice Springs**	**40.60**	**274**	P	P	17 20 47.9	+0.3
	0.3nm,0.4s,baz=116,slow=7.7,SNR=18						
WRA	**Warramunga Arr**	**42.04**	**279**	P	P	17 20 59.0	-0.4
	0.2nm,0.3s,baz=120,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**148.67**	**335**	PKPbc	PKPbc	17 32 48.5	-0.7
	0.6nm,0.5s,baz=27,slow=6.5,SNR=5.5						

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*ISK **02** 17:21:02.4, 36°.97N×29°.33E, h5km, MD3.0*

*ISCJB **02** 17:21:03.6±0.4, 36°.99N±0°.02×29°.32E±0°.03, h4km±4km, Error ellipse: s-maj=3.9km s-min=3.6km az=42.1*

*CSEM **02** 17:21:03.8±0.1, 36°.99N×29°.32E, h5km, MD3.0, Error ellipse: s-maj=3.4km s-min=2.8km az=15.0*

*DDA **02** 17:21:03.6, 36°.99N×29°.34E, h22km±1km, Md3.2*

ISC 02 17:21:04.2±0.4, 36°.99N±0°.02×29°.32E±0°.03, h6km±4km, n74, σ0§87/101, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.22**	**41**	PG	**Pg**	**17 21 07.8**	**-0.7**
GLHS				*e*SG	**Sg**	**17 21 12.3**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.22**	**41**	*i* Pg	**Pg**	**17 21 07.8**	**-0.7**
GLHS				*e*Sg	**Sg**	**17 21 12.3**	**+0.8**
GOLH	**Golhisar**	**0.31**	**38**	*i* P	**Pg**	**17 21 09.6**	**-0.7**
GOLH				*i* S	**Sg**	**17 21 14.9**	**+0.4**
GOLH	**Golhisar**	**0.31**	**38**	*i* P	**Pg**	**17 21 09.6**	**-0.7**
GOLH				*i* S	**Sg**	**17 21 14.9**	**+0.5**
FETY	**Fethiye**	**0.40**	**208**	PG	**Pg**	**17 21 10.4**	**-1.5**
FETY				*e*SG	**Sg**	**17 21 17.8**	**+0.6**
FETY	**Fethiye**	**0.40**	**208**	*i* Pg	**Pg**	**17 21 10.4**	**-1.5**
FETY				*e*Sg	**Sg**	**17 21 17.8**	**+0.7**
ELL	**Elmali**	**0.53**	**117**	*e*PG	**Pg**	**17 21 13.3**	**-1.1**
ELL				*e*SG	**Sg**	**17 21 21.7**	**+0.4**
ELL	**Elmali**	**0.53**	**117**	*e*Pg	**Pg**	**17 21 13.3**	**-1.1**
ELL				*e*Sg	**Sg**	**17 21 21.7**	**+0.4**
TURN	**Turunc**	**0.58**	**259**	*i* P	**Pg**	**17 21 19.9**	**+4.5**
TURN				*i* S	**Sg**	**17 21 32.2**	**+9.2**
TURN	**Turunc**	**0.58**	**259**	*i* P	**Pg**	**17 21 19.9**	**+4.5**
DNZL	**Cakiroluk**	**0.73**	**343**	*i* P	**Pg**	**17 21 17.2**	**-1.1**
DNZL				*i* S	**Sg**	**17 21 28.6**	**+0.8**
DNZL	**Cakiroluk**	**0.73**	**343**	*i* P	**Pg**	**17 21 17.2**	**-1.0**
DNZL				*i* S	**Sg**	**17 21 28.6**	**+0.8**
AKAS	**Kas**	**0.79**	**163**	*i* P	**Pg**	**17 21 18.1**	**-1.2**
AKAS				*i* S	**Sg**	**17 21 30.4**	**+0.9**
AKAS	**Kas**	**0.79**	**163**	*i* P	**Pg**	**17 21 18.1**	**-1.2**
AKAS				*i* S	**Sg**	**17 21 30.4**	**+0.9**
DENT	**Denizli**	**0.80**	**343**	*e*PG	**Pg**	**17 21 19.2**	**-0.3**
DENT	**Denizli**	**0.80**	**343**	*e*Pg	**Pg**	**17 21 19.2**	**-0.3**
KORT	**Korkueli**	**0.83**	**89**	*i* P	**Pg**	**17 21 19.6**	**-0.4**
KORT				*i* S	**Sg**	**17 21 32.6**	**+1.8**
KORT	**Korkueli**	**0.83**	**89**	*i* P	**Pg**	**17 21 19.6**	**-0.4**
KORT				*i* S	**Sg**	**17 21 32.6**	**+1.8**
YER	**Yerkesik**	**0.84**	**280**	*e*PG	**Pg**	**17 21 20.3**	**0.0**
YER	**Yerkesik**	**0.84**	**280**	*e*Pg	**Pg**	**17 21 20.3**	**0.0**
ANTB	**Antalya**	**1.07**	**94**	*e*PG	**Pg**	**17 21 24.0**	**-0.8**
ANTB	**Antalya**	**1.07**	**94**	*e*Pg	**Pg**	**17 21 24.0**	**-0.8**
BCK	**Bucak**	**1.12**	**65**	*e*PN	**Pn**	**17 21 25.0**	**-1.3**
BCK	**Bucak**	**1.12**	**65**	*e*Pn	**Pn**	**17 21 25.0**	**-1.3**
MLSB	**Milas**	**1.27**	**284**	*e*PN	**Pn**	**17 21 28.5**	**+0.1**
MLSB	**Milas**	**1.27**	**284**	*e*Pn	**Pn**	**17 21 28.5**	**+0.1**
ISP	**Isparta**	**1.27**	**48**	*e*PN	**Pn**	**17 21 27.9**	**-0.6**
ISP	**Isparta**	**1.27**	**48**	*e*Pn	**Pn**	**17 21 27.9**	**-0.6**
AYDN	**Tasoluk**	**1.33**	**301**	*i* P	**Pn**	**17 21 29.1**	**-0.2**
AYDN				*i* S	**Sg**	**17 21 49.0**	**+2.2**
AYDN	**Tasoluk**	**1.33**	**301**	*i* P	**Pn**	**17 21 29.1**	**-0.1**
AYDN				*i* S	**Sg**	**17 21 49.0**	**+2.1**
KHL	**Karahalli**	**1.34**	**7**	*e*PN	**Pn**	**17 21 29.4**	**0.0**
KHL	**Karahalli**	**1.34**	**7**	*e*Pn	**Pn**	**17 21 29.5**	**+0.1**
KHAL	**Karahalli**	**1.39**	**6**	*i* P	**Pn**	**17 21 30.0**	**0.0**
KHAL				*i* S	**Sb**	**17 21 49.3**	**+0.9**
KHAL	**Karahalli**	**1.39**	**6**	*i* P	**Pn**	**17 21 30.0**	**0.0**
KHAL				*i* S	**Sb**	**17 21 49.3**	**+0.9**
DAT	**Datca**	**1.42**	**260**	*e*PN	**Pn**	**17 21 30.8**	**+0.3**
DAT	**Datca**	**1.42**	**260**	*e*Pn	**Pn**	**17 21 30.8**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.43**	**70**	*e*PN	**Pn**	**17 21 31.4**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.43**	**70**	*e*Pn	**Pn**	**17 21 31.4**	**+0.8**
BDRM	**Kayabasi**	**1.50**	**273**	*i* P	**Pn**	**17 21 32.4**	**+0.8**
BDRM				*i* S	**Sn**	**17 21 52.4**	**+0.9**
BDRM	**Kayabasi**	**1.50**	**273**	*i* P	**Pn**	**17 21 32.4**	**+0.8**
BDRM				*i* S	**Sn**	**17 21 52.4**	**+0.9**
BODT	**Bodrum**	**1.61**	**273**	*e*PN	**Pn**	**17 21 33.5**	**+0.5**
BODT	**Bodrum**	**1.61**	**273**	*e*Pn	**Pn**	**17 21 33.5**	**+0.4**
KULA	**Kula-Manisa**	**1.61**	**341**	*e*PN	**Pn**	**17 21 32.6**	**-0.5**
KULA	**Kula-Manisa**	**1.61**	**341**	*e*Pn	**Pn**	**17 21 32.6**	**-0.5**
MANT	**Manisa**	**1.62**	**338**	*i* P	**Pn**	**17 21 33.1**	**0.0**
MANT				*i* S	**Sn**	**17 21 55.0**	**+0.7**
MANT	**Manisa**	**1.62**	**338**	*i* P	**Pn**	**17 21 33.1**	**-0.1**
MANT				*i* S	**Sn**	**17 21 55.0**	**+0.7**
GCAM	**G?zelcaml?**	**1.81**	**294**	*i* P	**Pn**	**17 21 35.1**	**-0.7**
GCAM				*i* S	**Sn**	**17 21 59.0**	**0.0**
GCAM	**G?zelcaml?**	**1.81**	**294**	*i* P	**Pn**	**17 21 35.1**	**-0.7**
GCAM				*i* S	**Sn**	**17 21 59.0**	**0.0**
SHUT	**Suhut-Afyon**	**1.84**	**32**	*e*PN	**Pn**	**17 21 36.7**	**+0.4**
SHUT	**Suhut-Afyon**	**1.84**	**32**	*e*Pn	**Pn**	**17 21 36.7**	**+0.4**
GDZ	**Gediz**	**2.10**	**3**	*i* P	**Pn**	**17 21 38.1**	**-1.7**
GDZ	**Gediz**	**2.10**	**3**	*i* P	**Pn**	**17 21 38.1**	**-1.7**
DEMI	**Demirci**	**2.10**	**347**	*i* P	**Pn**	**17 21 38.9**	**-1.0**
DEMI				*i* S	**Sn**	**17 22 04.3**	**-2.0**
DEMI	**Demirci**	**2.10**	**347**	*i* P	**Pn**	**17 21 38.9**	**-1.0**
DEMI				*i* S	**Sn**	**17 22 04.3**	**-2.1**
IZM	**Izmir**	**2.15**	**311**	*e*PN	**Pn**	**17 21 41.3**	**+0.8**
IZM	**Izmir**	**2.15**	**311**	*e*Pn	**Pn**	**17 21 41.3**	**+0.7**
ALT	**Altintas**	**2.15**	**17**	*e*PN	**Pn**	**17 21 41.0**	**+0.5**
ALT	**Altintas**	**2.15**	**17**	*e*Pn	**Pn**	**17 21 41.0**	**+0.4**
AKHS	**Akhisar**	**2.23**	**328**	*i* P	**Pn**	**17 21 40.7**	**-0.9**
AKHS	**Akhisar**	**2.23**	**328**	*i* P	**Pn**	**17 21 40.7**	**-0.9**
AKS	**Akhisar**	**2.23**	**328**	*e*PN	**Pn**	**17 21 41.5**	**-0.2**
AKS	**Akhisar**	**2.23**	**328**	*e*Pn	**Pn**	**17 21 41.5**	**-0.1**
BLCB	**Balcova**	**2.28**	**308**	*e*PN	**Pn**	**17 21 42.4**	**+0.1**
BLCB	**Balcova**	**2.28**	**308**	*e*Pn	**Pn**	**17 21 42.4**	**+0.1**
HDMB	**Hadim**	**2.54**	**90**	*e*PN	**Pn**	**17 21 46.7**	**+0.8**
HDMB	**Hadim**	**2.54**	**90**	*e*Pn	**Pn**	**17 21 46.7**	**+0.9**
KONT	**Konya--Tatoy**	**2.60**	**68**	*e*PN	**Pn**	**17 21 47.6**	**+0.9**
KONT	**Konya--Tatoy**	**2.60**	**68**	*e*Pn	**Pn**	**17 21 47.6**	**+0.9**
DURS	**Dursunbey**	**2.69**	**346**	*i* P	**Pn**	**17 21 47.6**	**-0.3**
DURS	**Dursunbey**	**2.69**	**346**	*i* P	**Pn**	**17 21 47.6**	**-0.3**
LADK	**Ladik-KONYA**	**2.71**	**63**	*e*PN	**Pn**	**17 21 49.4**	**+1.3**
LADK	**Ladik-KONYA**	**2.71**	**63**	*e*Pn	**Pn**	**17 21 49.4**	**+1.3**
BALY	**Balya**	**3.05**	**335**	*i* P	**Pn**	**17 21 52.3**	**-0.7**
BALY	**Balya**	**3.05**	**335**	*i* P	**Pn**	**17 21 52.3**	**-0.6**

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*DDA **02** 17:54:46.7, 40°.15N×26°.91E, h7km±4km, Md2.9*

*ISCJB **02** 17:54:47.5±0.3, 40°.16N±0°.02×26°.87E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.8km az=13.6*

*CSEM **02** 17:54:47.5±0.1, 40°.15N×26°.88E, h2km, MD2.8, Error ellipse: s-maj=2.9km s-min=2.3km az=89.0*

*ISK **02** 17:54:47.2, 40°.17N×26°.86E, h5km, MD2.8*

ISC 02 17:54:47.6±0.4, 40°.15N±0°.02×26°.90E±0°.03, h2km±4km, n56, σ0§66/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.25**	**335**	PG	**Pg**	**17 54 52.4**	**-0.1**
LPK				*e*SG	**Sg**	**17 54 55.8**	**+0.1**
LPK	**Lapseki**	**0.25**	**335**	*i* Pg	**Pg**	**17 54 52.4**	**0.0**
LPK				*e*Sg	**Sg**	**17 54 55.8**	**+0.1**
EZN	**Ezine**	**0.54**	**234**	*e*PG	**Pg**	**17 54 57.8**	**-0.2**
EZN				*e*SG	**Sg**	**17 55 05.5**	**+0.4**
EZN	**Ezine**	**0.54**	**234**	*e*Pg	**Pg**	**17 54 57.8**	**-0.2**
EZN				*e*Sg	**Sg**	**17 55 05.5**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.58**	**21**	*e*PG	**Pg**	**17 54 58.2**	**-0.5**
RKY				*e*SG	**Sg**	**17 55 06.6**	**+0.3**
RKY	**Sarkoy-Tekirda**	**0.58**	**21**	*e*Pg	**Pg**	**17 54 58.2**	**-0.5**
RKY				*e*Sg	**Sg**	**17 55 06.6**	**+0.3**
SART	**Tekirdag**	**0.58**	**21**	*i* P	**Pg**	**17 54 58.2**	**-0.5**
SART				*i* S	**Sg**	**17 55 06.0**	**-0.3**
SART	**Tekirdag**	**0.58**	**21**	*i* P	**Pg**	**17 54 58.2**	**-0.6**
SART				*i* S	**Sg**	**17 55 06.0**	**-0.4**
BALY	**Balya**	**0.69**	**126**	*i* P	**Pg**	**17 55 00.7**	**0.0**
BALY				*i* S	**Sg**	**17 55 09.9**	**+0.4**
BALY	**Balya**	**0.69

PVCP Virac 7.97 343 *e*P **Pn 17 58 25.5 +3.8**
SJMP San Jose 8.39 321 *e*P **Pn 17 58 33.0 +5.6**
BUSP Coron 8.67 315 *e*P **Pn 17 58 32.8 +1.6**
ENPP El Nido 8.74 307 *e*P **Pn 17 58 32.4 +0.2**
KKM Kota Kinabalu 10.22 271 Pn **Pn 17 58 52.8 +0.3**
41nm,1.3s
KAPI Kappang 12.78 212 Pn **Pn 17 59 26.6 -0.7**
0.6nm,0.3s,baz=12,slow=5.4,SNR=13
KAPI Kappang 12.78 212 Pn **Pn 17 59 26.6 -0.7**
KSM Kuching 16.74 255 *e*Pn **Pn 18 00 24.0 +5.1**
70nm,1.2s
TPUB Ta-pu 18.18 342 *e*Pn **Pn 18 00 32.3 -4.2**
24nm,1.0s
YHNB Yeheng 19.28 346 *e*P **Pn 18 00 47.2 -2.5**
24nm,1.2s
KAKA Kakadu 19.43 162 *e*P **Pn 18 00 50.2 -1.3**
14nm,0.6s
KAKA Kakadu 19.43 162 *e*P **Pn 18 00 49.7 -1.8**
158nm,1.3s
GUMO Guam 19.64 66 LR LR 18 07 13.0
comp=Z,381nm,19.9s,baz=275,slow=33
QIZ Qiongzhong 20.80 310 *e*P **P 18 01 03.5 -1.3**
36nm,1.2s
FITZ Fitzroy Crossi 23.88 182 *e*P **P 18 01 37.8 +1.5**
29nm,1.0s,mb4.7
FITZ Fitzroy Crossi 23.88 182 P **P 18 01 36.8 +0.5**
18nm,1.0s,mb4.5,baz=14,slow=8.7,SNR=30
KULM Kulim 25.73 270 *e*P **P 18 01 53.1 -0.1**
21nm,1.4s,mb4.5
CBIJ Chichi jima 25.82 34 LR LR 18 10 08.3
comp=Z,256nm,21.8s,baz=145,slow=32
WRA Warramunga Arr 26.83 163 P **P 18 02 02.4 -0.6**
3.7nm,0.5s,mb4.1,baz=343,slow=10.0,SNR=24
NJ2 Nanjing 26.96 346 *e*P **P 18 02 04.7 +0.6**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb4.9
PSI Prapat 27.66 265 P **P 18 02 10.2 -0.4**
comp=Z,2.1nm,0.4s,mb4.2,baz=265,slow=13,SNR=2.4
PSI LR LR 18 15 30.7
comp=Z,191nm,18.4s,baz=256,slow=41
MBWA Marble Bar 27.71 194 *e*P **P 18 02 10.6 -0.4**
comp=Z,26nm,1.0s,mb4.8
ENH Enshi 29.04 329 *e*P **P 18 02 21.1 -1.5**
comp=Z,26nm,1.2s,mb4.8
CMAR Chiang Mai Arr 29.61 297 P **P 18 02 29.2 +1.3**
CMAR 18 05 33.6
CMAR 18 09 13.2
CMAR Chiang Mai Arr 29.61 297 P **P 18 02 29.2 +1.3**
comp=Z,14nm,0.6s,mb3.8,baz=107,slow=7.0,SNR=12
CMAR PcP PcP 18 05 33.6 +2.1
comp=Z,1.1nm,0.8s,baz=177,slow=1.4,SNR=4.7
CMAR ScP ScP 18 09 13.2 +5.1
comp=Z,3.3nm,1.0s,baz=170,slow=1.8,SNR=9.6
CMAR LR LR 18 16 03.3
comp=Z,222nm,18.5s,baz=112,slow=40
KMI Kunming 29.70 313 P **P 18 02 26.1 -2.5**
KMI pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
KMI LR LR
comp=N,250nm,16.3s
KMI LR LR
comp=E,340nm,14.9s
KMI LR LR
comp=Z,400nm,15.9s
JHJ Hachijo jima 2 29.76 23 LR LR 18 12 41.6
comp=Z,260nm,21.4s,baz=313,slow=33
ASAR Alice Springs 30.28 166 P **P 18 02 34.2 +0.5**
comp=Z,1.5nm,0.6s,mb3.9,baz=345,slow=6.8,SNR=22
ASAR PcP PcP 18 05 34.4 +1.3
comp=Z,1.0nm,0.6s,baz=352,slow=2.3,SNR=5.4
ASAR ScP ScP 18 09 14.4 +4.3
comp=Z,0.6nm,0.7s,baz=343,slow=2.9,SNR=5.1
KSRS Korea Array 31.42 2 P **P 18 02 47.9 +4.3**
comp=Z,3.1nm,1.0s,mb4.1,baz=188,slow=10,SNR=10
MJAR Matsushiro Arr 32.31 18 P **P 18 02 54.5 +3.0**
comp=Z,1.7nm,0.9s,mb3.9,baz=195,slow=10.0,SNR=2.7
CTA Charters Tower 32.34 144 LR LR 18 16 36.7
comp=Z,152nm,21.7s,baz=160,slow=38
XAN Xi'an 32.38 332 P **P 18 02 52.2 +0.1**
XAN pP pP 18 03 00.6 -7.0
XAN pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
XAN pmax pmax
comp=Z,17nm,5.6s
XAN LR LR
comp=N,270nm,20.8s
XAN LR LR
comp=E,78nm,17.8s
XAN LR LR
comp=Z,130nm,20.0s
BJT Baijiatuau 35.20 346 *e*P **P 18 03 16.8 +0.3**
BJT pmax pmax
comp=Z,33nm,1.0s
BJT Baijiatuau 35.20 346 *e*P **P 18 03 16.8 +0.3**
comp=Z,33nm,1.0s,mb5.2
LZH Lanzhou 36.52 328 *e*P **P 18 03 33.7 +5.9**
LZH pP pP 18 03 42.1 -1.5
LZH sP sP 18 03 46.1 -4.9
LZH PcP PcP 18 05 47.0 -3.4
LZH pmax pmax
comp=Z,27nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,100nm,5.7s
LZH LR LR
comp=N,580nm,17.6s
LZH LR LR
comp=Z,940nm,18.8s
FORT Forrest 36.52 178 *e*P **P 18 03 29.0 +1.1**
comp=Z,16nm,1.0s,mb4.8
SHL Shillong 38.42 304 *e*P **P 18 03 46.0 +1.9**
MDJ Mudanjiang 38.64 4 P **P 18 03 41.2 -4.4**
comp=Z,14nm,1.1s,mb4.6
NWAO Narrogin (SRO) 39.62 192 *e*P **P 18 03 53.9 0.0**
NWAO pmax pmax
comp=Z,45nm,1.4s
NWAO Narrogin (SRO) 39.62 192 *e*P **P 18 03 53.9 0.0**
comp=Z,45nm,1.4s,mb5.0
STKA Stephens Creek 40.25 160 *e*P **P 18 04 02.1 +2.9**
comp=Z,6.2nm,0.8s,mb4.4
STKA Stephens Creek 40.25 160 P **P 18 04 00.5 +1.3**
comp=Z,7.9nm,0.9s,mb4.4,baz=342,slow=6.5,SNR=8.2
LSA Lhasa 40.84 310 *e*P **P 18 04 05.4 +1.2**
LSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
LSA Lhasa 40.84 310 *e*P **P 18 04 05.3 +1.1**
comp=Z,3.2nm,0.8s,mb4.0
GTA Gaotai 41.12 328 *e*P **P 18 04 12.0 +5.7**
GTA pP pP 18 04 18.5 -3.7
GTA sP sP 18 04 21.8 -7.8
GTA PcP PcP 18 06 06.3 +1.5
GTA ScP ScP 18 09 55.6 +6.3
GTA sS sS 18 10 42.1 +0.2
GTA ScS ScS 18 14 08.7 +3.8
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
GTA pmax pmax
comp=Z,84nm,3.9s
GTA LR LR
comp=N,230nm,22.3s
GTA LR LR
comp=E,310nm,21.1s
GTA LR LR
comp=Z,460nm,20.8s
YSS Yuzh-Sakhalins 43.22 16 *e*P **P 18 04 21.1 -2.1**
ARMA Armidale 43.42 148 *e*P **P 18 04 30.9 +5.8**
ULN Ulaanbaatar 44.98 342 *e*P **P 18 04 37.4 +0.1**
ULN pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ULN Ulaanbaatar 44.98 342 *e*P **P 18 04 37.4 0.0**
comp=Z,7.3nm,1.0s,mb4.5
SONM Songino Array 45.16 341 P **P 18 04 39.4 +0.6**
SONM 18 06 19.8
SONM Songino Array 45.16 341 P **P 18 04 39.4 +0.7**
comp=Z,1.6nm,1.0s,mb3.8,baz=164,slow=7.5,SNR=5.0
SONM PcP PcP 18 06 19.8 +1.6
comp=Z,1.2nm,0.9s,baz=159,slow=4.3,SNR=3.0
SONM ScP ScP 18 10 12.1 +6.6
comp=Z,0.4nm,0.7s,baz=151,slow=3.4,SNR=3.8
SONM Songino Array 45.16 341 P **P 18 04 39.4 +0.7**
SONM PcP PcP 18 06 19.8 +1.6
SONM ScP ScP 18 10 12.1 +6.6
DZM Mont Dzumac 48.01 127 *e*LR LR 18 18 43.2
comp=Z,287nm,34.6s
HYB Hyderabad 48.19 288 *i*P **P 18 05 04.0 +1.1**
ZAK Zakamensk 48.40 340 *e*P **P 18 05 08.0 +4.0**
ZAK *e* 18 06 33.8
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
TLY Talaya 49.39 341 *e*P **P 18 05 11.4 -0.2**
TLY *e*S **S 18 12 06.4 -7.3**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TLY MLR MLR
comp=Z,88nm,18.0s
MOY Mondy 50.26 340 *e*P **P 18 05 23.4 +5.2**
WMQ Urumqi 50.81 324 *e*P **P 18 05 21.6 -0.9**
WMQ pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
WMQ LR LR
comp=N,170nm,22.0s
WMQ LR LR
comp=E,210nm,22.0s
WMQ LR LR
comp=Z,240nm,23.0s
BOD Bodaibo 52.68 352 *e*P **P 18 05 37.4 +1.3**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
PETK Petropavlovsk- 53.51 23 LR LR 18 28 36.6
comp=Z,56nm,19.6s,baz=25,slow=36
MKAR Makanchi Array 55.64 325 P **P 18 05 58.2 +0.3**
MKAR 18 06 58.7
MKAR Makanchi Array 55.64 325 P **P 18 05 58.1 +0.2**
comp=Z,1.5nm,0.6s,mb4.2,baz=118,slow=8.1,SNR=19
MKAR PcP PcP 18 06 58.6 +1.8
comp=Z,2.5nm,0.7s,baz=116,slow=3.9,SNR=6.0
MKAR ScP ScP 18 10 55.8 +5.3
comp=Z,0.4nm,0.8s,baz=134,slow=6.2,SNR=3.2
MKAR LR LR 18 31 35.6
comp=Z,212nm,19.4s,baz=250,slow=38
YAK Yakutsk 56.04 2 *e*P **P 18 06 05.9 +5.4**
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK MLR MLR
comp=Z,80nm,16.0s
YAK MLR MLR
comp=N,95nm,22.0s
TKM2 Tokmak 2 57.97 318 *e*P **P 18 06 14.9 +0.4**
TKM2 pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
TKM2 Tokmak 2 57.97 318 *e*P **P 18 06 14.9 +0.4**
comp=Z,7.6nm,1.3s,mb4.6
UCH Uchtor 58.42 317 *e*P **P 18 06 18.8 +1.1**
UCH pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
UCH Uchtor 58.42 317 *e*P **P 18 06 18.8 +1.1**
comp=Z,8.2nm,1.2s,mb4.6
ZAA0 Zalesovo Array 58.55 333 *e*P **P 18 06 17.6 -0.7**
ZALV Zalesovo Beam 58.55 333 P **P 18 06 18.6 +0.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=115,slow=7.0,SNR=8.6
AAK Ala-Archa 58.59 317 *i*P **P 18 06 18.8 -0.1**
AAK pmax pmax
comp=Z,4.0nm,2.6s,mb4.0
AAK Ala-Archa 58.59 317 *e*P **P 18 06 23.3 +4.4**
comp=Z,11nm,1.5s,mb4.7
AML Almayashu 58.95 316 *e*P **P 18 06 21.5 +0.2**
AML pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
AML Almayashu 58.95 316 *e*P **P 18 06 21.5 +0.2**
comp=Z,5.7nm,1.2s,mb4.5
EKS2 Erkin-Say 59.09 317 *e*P **P 18 06 22.5 +0.2**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
EKS2 Erkin-Say 59.09 317 *e*P **P 18 06 22.5 +0.2**
comp=Z,3.2nm,0.8s,mb4.4
KURK Kurchatov 59.78 327 *ce*P **P 18 06 26.3 -0.6**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.8
KURK Kurchatov 59.78 327 *e*P **P 18 06 26.7 -0.2**
comp=Z,17nm,1.0s,mb5.0
NVS Novosibirsk 59.83 333 *e*P **P 18 06 26.2 -0.9**
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,6.0nm,1.1s
NVS pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KBL Kabul 60.02 307 P **P 18 06 25.8 -3.1**
BVAR Borovoye Array 65.37 327 P **P 18 07 04.6 +0.5**
comp=Z,1.6nm,0.6s,mb4.3,baz=103,slow=6.7,SNR=15
BRVK Borovoye 65.44 327 *ce*P **P 18 07 05.5 +0.9**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRVK Borovoye 65.44 327 *e*P **P 18 07 05.3 +0.7**
comp=Z,12nm,1.0s,mb4.9
TIXI Tiksi 65.67 1 *e*P **P 18 07 10.0 +4.3**
TIXI pmax pmax
comp=Z,13nm,1.4s,mb4.8
TIXI Tiksi 65.67 1 *e*P **P 18 07 07.6 +1.9**
comp=Z,7.8nm,0.9s,mb4.7
BILL Biiibino 67.51 15 P **P 18 07 17.1 -0.4**
ABKAR Abkulak array 70.32 320 *e*P **P 18 07 34.9 -0.4**
comp=Z,1.2nm,0.6s,mb4.0
AKTO Aktyubinsk 71.81 321 LR LR 18 41 42.7
comp=Z,202nm,20.4s,baz=259,slow=38
SVE Sverdlovsk 71.99 328 *e*P **P 18 07 45.4 +0.2**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.8
CASY Casey 72.95 187 *e*P **P 18 07 51.8 +1.1**
ARU Arti 72.97 327 *d i*P **P 18 07 50.6 -0.5**
ARU 18 10 28.7
ARU S S 18 17 15.2 +2.3
ARU pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
ARU Arti 72.97 327 *e*P **P 18 07 50.5 -0.6**
comp=Z,6.2nm,0.8s,mb4.6
GNI Garni 79.91 310 *d i*P **P 18 08 31.9 +1.2**
GNI pmax pmax
comp=Z,14nm,2.0s
GNI Garni 79.91 310 *e*P **P 18 08 31.9 +1.2**
comp=Z,14nm,1.2s,mb4.8
KDAK Kodiak Island 80.18 32 LR LR 18 42 57.9
comp=Z,126nm,19.6s,baz=279,slow=35
ZEI Tsey 80.58 312 *e*P **P 18 08 32.5 -1.7**
ZEI pmax pmax
comp=Z,14nm,1.4s,mb4.7
KIV Kislovodsk 81.47 313 *e*P **P 18 08 37.9 -1.1**
KIV *e* 18 08 47.5
KIV pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KIV Kislovodsk 81.47 313 P **P 18 08 37.7 -1.3**
comp=Z,4.6nm,0.6s,mb4.6
VRHR Novokhopersk 82.21 321 *e*P **P 18 08 42.3 -0.4**
VRHR pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.8s
MCK McKinley 82.32 27 *e*P **P 18 08 42.7 -0.3**
MCK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MCK McKinley 82.32 27 *e*P **P 18 08 42.7 -0.3**
comp=Z,10nm,1.1s,mb4.7
KLMR Klimovskoe 83.39 331 *e*P **P 18 08 48.7 +0.1**
KLMR pmax pmax
comp=Z,11nm,0.9s,mb4.9
VSR Storozhevoye 83.75 321 *e*P **P 18 08 50.1 -0.6**
VSR pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.4s
MALT Malatya 84.86 308 *e*P **P 18 08 56.8 +0.2**
MALT *e* pP 18 09 09.6 -4.6
MALT pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
MALT Malatya 84.86 308 *e*P **P 18 08 56.8 +0.2**
comp=Z,6.8nm,1.3s,mb4.6
MALT *e* pP 18 09 09.6 -4.6
OBN Obninsk 85.15 325 *e*P **P 18 08 58.0 +0.4**
OBN *i* 18 09 04.6
OBN pmax pmax
comp=Z,23nm,1.5s,mb5.1
OBN MLR MLR
comp=Z,100nm,17.0s
PPT Papeete 86.01 108 *e*S S 18 19 36.2 +4.0
comp=Z,64nm,25.2s
PPT *e*LR LR 18 36 20.2
comp=Z,64nm,23.5s
PPT Papeete 86.01 108 LR LR 18 42 18.1
comp=Z,151nm,20.6s,baz=270,slow=32
ASF Jabal al Asfar 86.55 302 LR LR 18 52 31.6
comp=Z,33nm,18.0s,baz=124,slow=39
JOF Joensuu 87.14 333 *e*P **P 18 09 06.3 -1.0**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
JOF Joensuu 87.14 333 *ep* **P 18 09 06.3 -1.0**
comp=Z,2.6nm,0.5s,mb4.7
MMAI Mount Meron Ar 87.73 303 LR LR 18 51 27.4
comp=Z,30nm,18.3s,baz=160,slow=38
INK Inuvik 88.23 21 LR LR 18 48 18.5
comp=Z,77nm,18.1s,baz=303,slow=35
ARCES ARCESS Array B 88.33 340 P **P 18 09 12.6 -0.3**
comp=Z,2.6nm,0.6s,mb4.6,baz=96,slow=5.0,SNR=17
BRTR Keskin Array B 88.45 310 *i*P **P 18 09 13.6 -0.5**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 88.45 310 P **P 18 09 13.2 -0.9**
comp=Z,4.6nm,0.9s,mb4.7,baz=117,slow=4.5,SNR=22
BRTR LR LR 18 55 46.4
comp=Z,49nm,20.6s,baz=277,slow=40
SIT Sitka 89.52 33 P **P 18 09 18.8 +0.1**
KAF Kangasniemi 89.56 332 *e*P **P 18 09 18.3 -0.4**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.7
KAF Kangasniemi 89.56 332 *ep* **P 18 09 18.3 -0.4**
comp=Z,1.7nm,0.5s,mb4.6
FINES FINESS Array B 89.80 332 P **P 18 09 20.1 +0.2**
comp=Z,1.6nm,0.5s,mb4.6,baz=44,slow=5.8,SNR=13
AKASG Malin Array Be 90.06 321 P **P 18 09 20.5 -0.8**
comp=Z,0.7nm,0.4s,mb4.3,baz=67,slow=4.4,SNR=7.4
BUR08 Bucovina Ar. S 93.22 318 *e*P **P 18 09 36.1 0.0**
TAOE Nuku Hiva Isla 94.20 98 *e*LR LR 18 40 16.4
comp=Z,226nm,28.3s
NOA NORSAR Array B 96.73 334 P **P 18 09 51.2 -0.6**
comp=Z,0.9nm,0.7s,mb4.3,baz=66,slow=4.5,SNR=3.4
NOA LR LR 18 57 08.1
comp=Z,130nm,20.7s,baz=90,slow=38
YKA Yellowknife Ar 97.61 24 P **P 18 09 56.0 +0.3**
comp=Z,0.1nm,0.5s,mb3.6,baz=300,slow=4.3,SNR=3.6
TORD Torodi Ar. Bea 121.99 289 PKP PKPdf 18 15 17.5 +0.7
comp=Z,2.1nm,0.9s,baz=53,slow=2.3,SNR=9.9
TORD PP PP 18 16 41.9 -10
comp=Z,0.8nm,0.9s,baz=52,slow=7.5,SNR=3.5
DBIC Dimbokro 129.86 284 SKPbc 18 18 53.4
comp=Z,5.9nm,0.9s,baz=49,slow=8.3,SNR=4.3
TRQA Tornquist 147.09 168 *e*PKPbc PKPbc 18 16 05.1 +0.5

MOS ***02*** *18:33:25.8±1.4, 50°.54N×97°.07E, h8km, mb4.6/6, Error ellipse: s-maj=8.6km s-min=7.8km az=174.8*
ISCJB ***02*** *18:33:25.9±0.3, 50°.54N±0°.05×97°.08E±0°.04, h10km, mb3.8/22, MS3.5/8, Error ellipse: s-maj=7.7km s-min=4.0km az=179.5*
IDC ***02*** *18:33:26.2±0.7, 50°.53N×97°.21E, h0km, mb3.8/12, mb1 3.8/18, mb1mx3.7/32, mbtmp3.7/18, ML3.5/6, MS3.5/10, Ms1 3.5/10, ms1mx3.2/35, Error ellipse: s-maj=22.1km s-min=11.3km az=12.0*
ASRS ***02*** *18:33:26.9±1.5, 50°.58N×97°.18E, h15km, Ms3.9/4*
BJI ***02*** *18:33:29.4, 50°.48N×97°.34E, h23km, mB4.8/3, mb4.3/6, ML4.8/2, Ms4.3/5*
NNC ***02*** *18:33:30.2±6.6, 50°.74N×96°.57E, h6km±28km, mb4.0, Error ellipse: s-maj=36.2km s-min=19.1km az=80.0*
NEIC ***02*** *18:33:30.6±1.5, 50°.46N×97°.08E, h32km±13km, mb4.0/10, Error ellipse: s-maj=7.8km s-min=4.3km az=174.0*
ISC 02 18:33:27.6±0.3, 50°.48N±0°.05×97°.09E±0°.04, h10km, n94, σ1§**07**/104, **mb3.8**/22, **MS3.5**/8, **10C-8D,**
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ORL	**Orlik**	**2.67**	**38**	*e*PN	**Pn**	**18 34 12.9**	**+2.3**
ORL				*e*		18 34 50.0	
MOY	**Mondy**	**2.73**	**63**	*e*PN	**Pg**	**18 34 15.8**	**-4.1**
MOY				*e*		18 34 51.9	
ARS	**Arshan**	**3.65**	**65**	*e*PN	**Pb**	**18 34 31.7**	**-0.4**
ARS				*e*		18 35 20.8	
ZAK	**Zakamensk**	**3.96**	**89**	*e*PN	**Pn**	**18 34 29.3**	**+1.0**
ZAK				*e*		18 34 38.4	
ZAK				*e*		18 35 28.1	
ZAK				pmax	pmax		
	comp=Z,351nm,1.0s						
ZAK				smax			
	comp=N,2μm,1.1s						
TLY	**Talaya**	**4.30**	**71**	*e*PN	**Pb**	**18 34 43.4**	**+0.1**
TLY				*e*	**Sg**	**18 35 40.0**	**-5.7**
TLY				pmax	pmax		
	comp=Z,97nm,0.4s						
TLY				smax			
	comp=E,938nm,0.6s						
TLY	**Talaya**	**4.30**	**71**	*e*Pn	**Pn**	**18 34 34.3**	**+1.3**
TLY				*e*Sg	**Sg**	**18 35 39.9**	**-5.8**
IRK	**Irkutsk**	**4.83**	**66**	*e*PN	**Pb**	**18 34 53.1**	**+0.8**
IRK				*e*	**Sg**	**18 35 55.9**	**-6.7**
IRK				pmax	pmax		
	comp=Z,284nm,0.7s						
IRK				smax			
	comp=N,4μm,1.2s						
AKAR	**Aktash**	**6.06**	**272**	*e*PN	**Pb**	**18 35 17.5**	**+4.3**
AKAR	**Aktash**	**6.06**	**272**	*e*Pg	**Pb**	**18 35 17.5**	**+4.3**
AKAR				*e*Sg	**Sg**	**18 36 36.9**	**-5.1**
TASR	**Tashtagol**	**6.17**	**295**	*e*Sg	**Sg**	**18 36 40.8**	**-4.8**
TRG	**Tyrgan**	**6.20**	**65**	*e*PN	**Pg**	**18 35 20.7**	**-5.6**
TRG				pmax	pmax		
	comp=Z,94nm,1.0s						
SONM	**Songino Array**	**6.65**	**110**	PN	**Pn**	**18 35 05.5**	**+0.2**
SONM						18 35 26.2	
SONM						18 36 51.3	
SONM	**Songino Array**	**6.65**	**110**	Pn	**Pn**	**18 35 05.5**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=300,slow=15,SNR=38						
SONM				Pg	**Pg**	**18 35 26.2**	**-8.7**
	comp=Z,9.6nm,0.3s,baz=298,slow=18,SNR=58						
SONM				Lg		18 36 51.3	
	comp=Z,8.5nm,0.3s,baz=264,slow=22,SNR=4.1						
SONM				LR	LR	18 37 50.9	
	comp=Z,382nm,19.6s,baz=300,slow=40						
ULN	**Ulaanbaatar**	**7.04**	**108**	*e*PN	**Pn**	**18 35 10.1**	**-0.5**
ULN				*e*		18 35 34.0	
ULN				pmax	pmax		
	comp=Z,49nm,0.6s						
ULN	**Ulaanbaatar**	**7.04**	**108**	*e*Pn	**Pn**	**18 35 10.1**	**-0.4**
	comp=Z,49nm,0.6s						
ULN				*e*Pg	**Pg**	**18 35 34.0**	**-8.3**
ULN				*e*Sg	**Sg**	**18 37 08.3**	**-5.0**
OGRR	**Ongureny**	**7.21**	**60**	*e*PN	**Pn**	**18 35 15.0**	**+2.1**
OGRR				*e*		18 35 37.7	
OGRR	**Ongureny**	**7.21**	**60**	*e*Pn	**Pn**	**18 35 15.0**	**+2.1**
OGRR				*e*Pg	**Pg**	**18 35 37.7**	**-7.8**
OGRR				*e*Sg	**Sg**	**18 37 08.2**	**-11**
ELT	**Yel'tsovka**	**7.27**	**297**	*e*Pg	**Pg**	**18 35 38.5**	**-8.2**
ELT				*e*Sg	**Sg**	**18 37 11.3**	**-10**
UKR	**Ust'-Kan**	**7.84**	**278**	*e*Pg	**Pb**	**18 35 50.7**	**+7.3**
UKR				*e*Sg	**Sb**	**18 37 31.5**	**+15**
ZAA0	**Zalesovo Array**	**8.30**	**299**	*e*Pn	**Pn**	**18 35 28.2**	**+0.4**
ZAA0				*e*Sg	Sn	18 37 47.8	+46
ZALV	**Zalesovo Beam**	**8.30**	**299**	Pn	**Pn**	**18 35 28.8**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=107,slow=12,SNR=11						
ZALV				Pg	Pn	18 35 58.9	+31
	comp=Z,2.2nm,0.3s,baz=114,slow=15,SNR=8.9						
ZALV				Lg		18 37 41.0	
	comp=Z,3.7nm,0.3s,baz=129,slow=25,SNR=3.0						
NIZ	**Nizh Angarsk**	**9.17**	**50**	*e*P	**Pn**	**18 35 41.2**	**+1.5**
NIZ				pmax	pmax		
	comp=Z,39nm,1.0s						
WMQ	**Urumqi**	**9.23**	**227**	*e*Pn	Px	18 36 02.5	
WMQ				Sg	Sx	18 38 22.2	
WMQ				smax			
	comp=N,160nm,0.8s						
WMQ				smax			
	comp=E,120nm,1.0s						
NVS	**Novosibirsk**	**9.48**	**303**	*e*P	**Pn**	**18 35 44.0**	**0.0**
NVS				*e*		18 37 31.8	
NVS	**Novosibirsk**	**9.48**	**303**	*e*Pg	Px	18 36 18.7	
NVS				*e*Sg	Sx	18 38 22.1	
MK31	**Makanchi Array**	**10.47**	**255**	⇑Pn	**Pn**	**18 35 56.1**	**-1.5**
	comp=E,2.1nm,0.6s,baz=187,slow=19,SNR=4.7						
MK31				⇑Pg	Pn	18 36 36.7	+39
	comp=E,4.1nm,0.5s						
MK31				⇑Lg		18 38 56.4	
	comp=E,51nm,0.8s,baz=63,slow=31,SNR=5.4						
MK31	**Makanchi Array**	**10.47**	**255**	*e*Pn	**Pn**	**18 35 57.9**	**+0.4**
MKAR	**Makanchi Array**	**10.47**	**255**	Pn	**Pn**	**18 35 58.9**	**+1.3**

comp=E,0.1nm,0.3s,baz=72,slow=14,SNR=5.3
MKAR Lg 18 38 52.2
comp=E,1.4nm,0.3s,baz=59,slow=21,SNR=3.3
MKAR LR LR 18 40 09.9
comp=E,240nm,19.7s,baz=322,slow=38
GTA Gaotai 11.24 169 *e*P **Pn 18 36 06.1 -2.0**
GTA pP 18 36 10.7
GTA sP 18 36 13.5
GTA PP 18 36 19.0
GTA S **Sn 18 38 06.1 -7.6**
GTA SS 18 38 18.6
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA LR LR
comp=N,330nm,7.7s
GTA LR LR
comp=E,800nm,8.3s
GTA LR LR
comp=Z,100nm,7.4s
KURK Kurchatov 11.74 278 ⇓Pn **Pn 18 36 14.3 -0.7**
comp=Z,4.0nm,0.6s
KURK ⇑Lg 18 39 29.7
comp=Z,138nm,1.5s
KURK Kurchatov 11.74 278*d i*P **Pn 18 36 14.7 -0.3**
KURK Kurchatov 11.74 278 Pn **Pn 18 36 15.9 +0.9**
comp=Z,0.3nm,0.3s,baz=95,slow=15,SNR=32
KURK Lg 18 39 33.4
comp=Z,0.2nm,0.3s,baz=223,slow=30,SNR=7.4
KURK LR LR 18 40 50.1
comp=Z,264nm,18.2s,baz=100,slow=37
KURK Kurchatov 11.74 278 *e*Pn **Pn 18 36 14.5 -0.5**
KURK Lg 18 39 33.4
KURK LR LR 18 40 50.1
KURBB Kurchatov Arra 11.81 278 ⇑Pn **Pn 18 36 15.3 -0.6**
comp=Z,0.9nm,0.6s
KURBB ⇓Lg 18 39 33.5
comp=Z,22nm,1.3s
BOD Bodaibo 12.31 47 *e*P **Pn 18 36 22.3 -0.5**
BOD pmax pmax
comp=Z,9.0nm,0.9s
LZH Lanzhou 15.19 159 *e*P **Pn 18 37 11.0 +8.9**
LZH pP pP 18 37 16.3 +6.3
LZH sP sP 18 37 19.0 +7.7
LZH pmax pmax
comp=Z,19nm,1.5s
LZH pmax pmax
comp=Z,85nm,4.3s
LZH LR LR
comp=E,470nm,10.0s
LZH LR LR
comp=Z,650nm,11.0s
VOSK Vostochnaya 16.35 288 ⇑P **Pn 18 37 14.2 -2.8**
comp=Z,5.8nm,1.1s
VOSK ⇑Lg 18 41 54.0
comp=Z,19nm,1.2s
TKM2 Tokmak 2 16.53 251 ⇓Pn **Pn 18 37 20.6 +1.2**
comp=Z,10nm,0.8s
TKM2 ⇑Lg 18 42 09.3
comp=Z,32nm,1.8s
TKM2 Tokmak 2 16.53 251 *e*P **Pn 18 37 20.5 +1.1**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s
TKM2 Tokmak 2 16.53 251 *e*Pn **Pn 18 37 20.5 +1.1**
comp=Z,9.4nm,0.8s
BVA0 Borovoye Array 16.69 289 ⇑P **Pn 18 37 19.0 -2.3**
comp=Z,1.0nm,1.3s,baz=82,slow=14,SNR=18
BVA0 ⇓Lg 18 42 04.0
comp=Z,3.4nm,1.4s,baz=88,slow=13,SNR=7.2
BVAR Borovoye Array 16.69 289 Pn **Pn 18 37 20.8 -0.6**
comp=Z,0.2nm,0.3s,baz=83,slow=15,SNR=13
BVAR LR LR 18 43 54.6
comp=Z,156nm,18.7s,slow=38
BRVK Borovoye 16.76 289*de*P **Pn 18 37 21.3 -0.9**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 16.76 289 *e*Pn **Pn 18 37 18.6 -3.5**
comp=Z,4.9nm,0.8s
BRVK *e*S **Sn 18 40 47.0 +19**
AAK Ala-Archa 17.36 252*ce*P **Pn 18 37 32.4 +2.6**
AAK pmax pmax
comp=Z,1.0nm,0.6s
AAK Ala-Archa 17.36 252 P **Pn 18 37 32.5 +2.7**
comp=Z,0.0nm,0.3s,baz=318,slow=3.3,SNR=7.0
AAK Lg 18 42 29.7
comp=Z,0.0nm,0.3s,baz=133,slow=20,SNR=3.5
AAK LR LR 18 44 24.2
comp=Z,132nm,19.2s,baz=187,slow=38
AAK Ala-Archa 17.36 252 *e*Pn **Pn 18 37 31.4 +1.5**
AAK Lg 18 42 29.7
AAK LR LR 18 44 24.2
UCH Uchtor 17.59 251 *e*P **Pn 18 37 33.7 +1.1**
EKS2 Erkin-Say 17.78 253 *e*P **Pn 18 37 33.7 -1.3**
EKS2 pmax pmax
comp=Z,13nm,1.0s
EKS2 Erkin-Say 17.78 253 *e*Pn **Pn 18 37 33.7 -1.3**
comp=Z,13nm,1.0s
AML Almayashu 18.14 252 *e*P **Pn 18 37 41.2 +1.8**
AML pmax pmax
comp=Z,7.0nm,0.8s
AML Almayashu 18.14 252 *e*Pn **Pn 18 37 41.2 +1.8**
comp=Z,7.0nm,0.8s
KK31 Karatay Array 19.57 258 P **Pn 18 37 55.6 -1.1**
comp=Z,1.6nm,0.6s,baz=59,slow=13,SNR=22
KK31 ⇓Lg 18 43 44.5
comp=Z,15nm,1.5s,baz=222,slow=19,SNR=2.5
CN2 Changchun 20.33 98 *e*P **P 18 38 02.7 -1.0**
CN2 *e*S **S 18 41 41.9 -10**
CN2 LR LR
comp=N,500nm,10.0s,MS4.3
CN2 LR LR
comp=E,500nm,10.0s,MS4.3
YAK Yakutsk 21.22 45 *e*P **P 18 38 14.3 +1.2**
YAK *e* 18 49 35.7
YAK pmax pmax
comp=Z,7.0nm,0.9s,mb4.0
YAK MLR MLR
comp=Z,63nm,11.0s,MS3.3
YAK Yakutsk 21.22 45 *e*P **P 18 38 12.6 -0.6**
comp=Z,6.3nm,0.6s,mb4.1
LSA Lhasa 21.23 194 P **P 18 38 17.0 +3.4**
LSA pmax pmax
comp=Z,4.0nm,0.9s,mb3.8
LSA Lhasa 21.23 194 P **P 18 38 17.0 +3.4**
comp=Z,3.9nm,0.9s,mb3.7
ENH Enshi 22.23 151 P **P 18 38 23.6 -0.6**
comp=Z,5.0nm,0.7s,mb4.0
SVE Sverdlovsk 22.31 301 *e*P **P 18 38 25.3 +0.4**
ARU Arti 23.46 300*d i*P **P 18 38 36.5 -0.6**
ARU *e*PPP 18 39 10.9
ARU S **S 18 42 50.4 +0.4**
ARU SS 18 43 26.5
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
ARU Arti 23.46 300 *e*P **P 18 38 36.0 -1.0**
comp=Z,9.3nm,1.0s,mb4.2
AB31 Akbulak array 23.82 282 P **P 18 38 39.8 -0.7**
comp=Z,1.3nm,0.6s,mb3.5,baz=68,slow=8.0,SNR=7.6
ABKAR Akbulak array 23.82 282 *e*P **P 18 38 39.3 -1.2**
comp=Z,1.6nm,0.6s,mb3.6
NJ2 Nanjing 24.48 131 *e*P **P 18 38 46.3 -0.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
AKTK Aktyubinsk 24.69 285 P **P 18 38 48.8 +0.4**
AKTO Aktyubinsk 24.69 285 P **P 18 38 48.8 +0.4**
comp=Z,2.6nm,0.8s,mb3.8,baz=102,slow=16,SNR=7.6
KSRS Korea Array 25.52 109 P **P 18 38 56.2 +0.1**
comp=Z,0.8nm,0.9s,mb3.2,baz=2.2,slow=36,SNR=5.9
KSRS LR LR 18 49 46.2
comp=Z,90nm,19.0s,MS3.3,baz=154,slow=38
TIXI Tiksi 25.61 23 *e*P **P 18 38 54.8 -1.8**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
TIXI MLR MLR
comp=Z,115nm,12.0s,MS3.6
TIXI Tiksi 25.61 23 *e*P **P 18 38 55.7 -0.9**
comp=Z,4.8nm,0.8s,mb4.1
MJAR Matsushiro Arr 32.47 99 LR LR 18 53 41.9
comp=Z,62nm,20.0s,MS3.3,baz=295,slow=38
JOW Kunigami 33.51 123 LR LR 18 55 52.5
comp=Z,66nm,20.2s,MS3.4,baz=78,slow=40
JOF Joensuu 36.49 315 *e*P **P 18 40 32.1 -0.3**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
JOF Joensuu 36.49 315 *ep* **P 18 40 32.1 -0.3**
comp=Z,1.9nm,0.6s,mb4.2
PETK Petropavlovsk- 36.60 62 P **P 18 40 34.3 +0.7**
comp=Z,2.4nm,0.9s,mb4.0,baz=297,slow=8.6,SNR=3.1
PETK LR LR 18 55 08.2
comp=Z,52nm,18.8s,MS3.3,baz=142,slow=36
KIV Kislovodsk 36.81 281 P **P 18 40 34.9 -0.5**
KIV Kislovodsk 36.81 281 P **P 18 40 34.9 -0.5**
KEV Kevo 37.16 327 P **P 18 40 37.5 -0.6**
KEV Kevo 37.16 327 *ep* **P 18 40 37.5 -0.6**
comp=Z,0.6nm,0.4s,mb3.8
ARCES ARCESS Array B 37.71 327 P **P 18 40 42.8 0.0**
comp=Z,0.9nm,0.3s,mb3.9,baz=75,slow=9.1,SNR=14
FINES FINESS Array B 39.24 314 P **P 18 40 55.9 +0.2**
comp=Z,3.3nm,0.4s,mb4.4,baz=69,slow=7.3,SNR=61
FINES LR LR 18 58 53.2
comp=Z,85nm,19.6s,MS3.6,baz=53,slow=39
AKASG Malin Array Be 41.69 298 P **P 18 41 15.8 -0.3**
comp=Z,0.6nm,0.5s,mb3.5,baz=56,slow=8.9,SNR=2.9
MALT Malatya 42.58 277 P **P 18 41 25.2 +1.7**
BRTR Keskin Array B 44.77 282 *i* P **P 18 41 42.5 +1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 44.77 282 P **P 18 41 42.4 +1.2**
comp=Z,1.6nm,0.9s,mb3.8,baz=69,slow=6.8,SNR=8.1
BUR08 Bucovina Ar. S 45.49 296 *e*P **P 18 41 46.6 -0.2**
NB2 NORSAR Subarra 46.02 318 P **P 18 41 50.6 -0.1**
comp=Z,1.4nm,0.4s,mb4.2,baz=61,slow=7.9
NOA NORSAR Array B 46.02 318 P **P 18 41 50.8 0.0**
comp=Z,1.9nm,0.6s,mb4.2,baz=62,slow=7.9,SNR=7.0
CLL Collm 50.20 306 *e*P **P 18 42 30.0 +6.9**
CLL *e* pP 18 42 34.0 +7.7
CLL Collm 50.20 306 *ep*P pP 18 42 30.0 +3.7
CLL *es*P sP 18 42 34.0 +6.5
CLL Lm 18 59 00.0
comp=N,100nm,21.2s
CLL Lm 18 59 00.0
comp=E,100nm,21.7s
CLL Lm 18 59 00.0
comp=Z,100nm,19.5s
YKA Yellowknife Ar 64.60 16 P **P 18 44 03.5 -1.1**
comp=Z,0.2nm,0.8s,mb3.2,baz=339,slow=7.0,SNR=3.7
WRA Warramunga Arr 77.43 144 P **P 18 45 22.4 -0.4**
comp=Z,0.4nm,0.7s,mb3.5,baz=342,slow=6.2,SNR=4.7
ASAR Alice Springs 80.68 146 P **P 18 45 40.8 +0.2**
comp=Z,0.2nm,0.8s,mb3.1,baz=320,slow=4.2,SNR=3.3
TORD Torodi Ar. Bea 83.38 282 P **P 18 45 54.6 -0.5**
comp=Z,0.4nm,0.8s,mb3.5,baz=34,slow=4.6,SNR=4.0

IDC 02 18:46:32.2±1.4, 19°.03N×146°.29E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=69.8km s-min=27.4km az=99.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.47**	**197**	P	P	18 54 12.6	-0.1
0.6nm,0.8s,baz=19,slow=8.5,SNR=4.8							
ASAR	**Alice Springs**	**44.12**	**196**	P	P	18 54 42.5	-0.1
0.4nm,0.9s,baz=20,slow=6.2,SNR=4.5							
BVAR	**Borovoye Array**	**66.58**	**320**	P	P	18 57 24.2	0.0
0.3nm,0.5s,baz=80,slow=8.0,SNR=3.9							
YKA	**Yellowknife Ar**	**77.44**	**28**	P	P	18 58 29.3	+0.2
0.4nm,1.0s,baz=282,slow=6.2,SNR=4.5							

*IDC **02** 19:19:01.9±2.8, 12°.16S×167°.59E, h283km±24km, mb3.5/12, mb1 3.7/12, mb1mx3.6/17, mbtmp3.5/12, Error ellipse: s-maj=27.8km s-min=15.3km az=130.0*
*ISCJB **02** 19:19:02.3±0.5, 12°.1S±0°.1×167°.6E±0°.1, h300km, mb4.1/25, Error ellipse: s-maj=18.8km s-min=10.1km az=39.1*
*NEIC **02** 19:19:05.4±4.2, 12°.11S×167°.51E, h319km±40km, mb4.4/13, Error ellipse: s-maj=18.9km s-min=13.5km az=114.0*

ISC 02 19:19:03.6±0.5, 12°.1S±0°.1×167°.6E±0°.1, h300km, n74, σ0s89/30, mb4.1/25, 8C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.96**	**246**	P	P	19 23 34.2	+0.9
9.0nm,0.7s,mb4.2,baz=72,slow=13,SNR=11							
CTAO	**Charters Tower**	**21.96**	**246**	*e*P	P	19 23 34.2	+0.9
10nm,0.7s,mb4.3							
RMQ	**Roma**	**22.76**	**228**	*e*P	P	19 23 41.4	+0.8
7.2nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**30.96**	**226**	*e*P	P	19 24 54.0	+0.5
2.0nm,0.6s,mb3.8							
STKA	**Stephens Creek**	**30.96**	**226**	P	P	19 24 54.0	+0.4
2.1nm,0.4s,mb4.0,baz=37,slow=9.2,SNR=12							
STKA				PcP	PcP	19 27 41.4	-0.4
1.4nm,0.8s,baz=63,slow=2.3,SNR=2.9							
WRA	**Warramunga Arr**	**32.84**	**252**	P	P	19 25 08.8	-1.2
0.7nm,0.6s,mb3.4,baz=82,slow=8.6,SNR=6.4							
ASAR	**Alice Springs**	**33.96**	**246**	P	P	19 25 17.9	-1.6
0.5nm,0.5s,mb3.3,baz=75,slow=10,SNR=5.2							
MJAR	**Matsushiro Arr**	**55.77**	**331**	P	P	19 28 09.2	-0.8
1.6nm,0.7s,mb3.5,baz=164,slow=8.9,SNR=6.1							
KSRS	**Korea Array**	**61.79**	**325**	P	P	19 28 52.1	+0.9
0.8nm,0.7s,mb3.4,baz=136,slow=6.9,SNR=5.7							
PETK	**Petropavlovsk-**	**65.52**	**353**	P	P	19 29 16.3	+1.2
3.2nm,0.3s,mb4.1,baz=139,slow=5.9,SNR=4.7							
PETK	**Petropavlovsk-**	**65.52**	**353**	P	P	19 29 16.3	+1.2
SBA	**Scott Base**	**65.72**	**180**	*e*P	P	19 29 16.8	+0.7
3.7nm,0.9s,mb4.1							
CASY	**Casey**	**66.04**	**202**	*e*P	P	19 29 17.1	-1.1
4.9nm,0.6s,mb4.4							
ENH	**Enshi**	**69.98**	**309**	P	P	19 29 43.0	-0.2
2.9nm,0.9s,mb4.0							
CHTO	**Chiang Mai**	**74.31**	**294**	P	P	19 30 05.5	-3.5
6.7nm,1.1s,mb4.2							
BILL	**Bilibino**	**79.96**	**359**	*e*P	P	19 30 39.5	+0.4
9.1nm,1.1s,mb4.4							
ULN	**Ulaanbaatar**	**80.24**	**323**	*e*P	P	19 30 41.7	+0.6
1.5nm,0.8s,mb3.8							
SONM	**Songino Array**	**80.60**	**323**	P	P	19 30 43.8	+0.7
0.9nm,0.8s,mb3.6,baz=149,slow=3.1,SNR=8.5							
PMR	**Palmer**	**80.95**	**19**	*e*P	P	19 30 43.0	-1.6
KTH	**Kantishna Hill**	**81.87**	**17**	*e*P	P	19 30 48.2	-1.1
6.3nm,0.8s,mb4.4							
TRF	**Thorofare Moun**	**81.98**	**18**	*e*P	P	19 30 49.5	-0.4
12nm,0.9s,mb4.6							
MCK	**McKinley**	**82.59**	**18**	*e*P	P	19 30 52.8	-0.3
COLA	**College**	**83.75**	**18**	*e*P	P	19 30 58.4	-0.5
10nm,0.8s,mb4.7							
LSA	**Lhasa**	**84.46**	**302**	P	P	19 31 04.2	+0.9
1.7nm,0.8s,mb3.9							
NVAR	**Mina Array Bea**	**85.34**	**49**	P	P	19 31 08.7	+1.2
1.0nm,0.7s,mb3.8,baz=235,slow=8.4,SNR=7.8							
EGAK	**Eagle**	**85.77**	**20**	*e*P	P	19 31 08.7	-0.2
6.5nm,0.8s,mb4.5							
N13A	**Wendover, West**	**89.10**	**48**	*e*P	P	19 31 25.9	+0.5
8.8nm,0.6s,mb4.8							
TXAR	**Lajitas Array**	**94.76**	**61**	P	P	19 31 52.0	+0.3
0.5nm,0.7s,mb3.8,baz=208,slow=5.1,SNR=6.4							
YKA	**Yellowknife Ar**	**95.10**	**27**	P	P	19 31 51.6	-0.9
0.8nm,0.5s,mb4.1,baz=255,slow=4.6,SNR=24							
MKAR	**Makanchi Array**	**95.54**	**317**	P	P	19 31 55.4	+0.5
3.0nm,0.6s,mb4.6,baz=85,slow=6.3,SNR=30							
ARCES	**ARCESS Array B**	**117.82**	**346**	PKP	PKPdf	19 37 13.3	-0.5
2.1nm,0.6s,baz=75,slow=1.4,SNR=14							
ARCES	**ARCESS Array B**	**117.82**	**346**	PKP	PKPdf	19 37 13.3	-0.5
FINES	**FINESS Array B**	**123.43**	**339**	PKP	PKPdf	19 37 24.8	-0.1
0.7nm,0.5s,baz=36,slow=3.6,SNR=12							
NOA	**NORSAR Array B**	**128.20**	**346**	PKP	PKPdf	19 37 34.5	+0.6
0.4nm,0.6s,baz=39,slow=16,SNR=3.0							
BRTR	**Keskin Array B**	**131.02**	**313**	PKP	PKPdf	19 37 40.0	+0.1
0.1nm,0.4s,baz=165,slow=6.3,SNR=4.0							
BRTR				SKPbc	SKPbc	19 40 38.2	+2.2
0.5nm,0.7s,baz=64,slow=2.9,SNR=3.8							
GERES	**GERESS Array B**	**137.46**	**335**	PKP	PKPdf	19 37 51.8	0.0
0.6nm,0.6s,baz=135,slow=0.4,SNR=8.0							
GIVF	**Givet**	**139.57**	**343**	*e*PKP1	PKPdf	19 37 54.9	-0.7
CDF	**Champ du Feu**	**140.28**	**339**	*e*PKP1	PKPdf	19 37 56.5	-0.4
HINF	**Hinteralfeld**	**140.94**	**339**	*e*PKP1	PKPdf	19 37 57.6	-0.5
HAU	**Haudompre**	**140.94**	**340**	*e*PKP1	PKPdf	19 37 57.8	-0.3
LDF	**La Druitiere**	**142.23**	**347**	*e*PKP1	PKPdf	19 37 57.8	-2.6
CABF	**La Chapelle**	**142.24**	**339**	*e*PKP1	PKPdf	19 37 57.6	-2.9
LOR	**Lormes**	**142.39**	**342**	*e*PKP1	PKPdf	19 37 59.3	-1.4
GRR	**Gorron**	**142.59**	**347**	*e*PKP1	PKPdf	19 37 58.7	-2.3
SSF	**Saint Saulge**	**142.68**	**342**	⇑*i*PKP1	PKPdf	19 37 59.9	-1.4
4.0nm,0.7s							
LPL	**La Plagne**	**142.94**	**338**	*e*PKP1	PKPdf	19 37 59.6	-2.2
3.3nm,0.7s							
LPG	**La Plagne**	**142.95**	**337**	*e*PKP1	PKPdf	19 37 59.8	-2.0
3.7nm,0.6s							
SMF	**Signal de Mont**	**142.95**	**341**	*e*PKP1	PKPdf	19 37 59.1	-2.6
AVF	**Avril sur Loir**	**142.97**	**342**	*e*PKP1	PKPdf	19 37 59.0	-2.8
SGMF	**Saint Gilles**	**143.06**	**349**	*e*PKP1	PKPdf	19 38 00.5	-1.4
BGF	**Bois d'Agland**	**143.34**	**342**	*e*PKP1	PKPdf	19 38 00.5	-1.9
10.0nm,0.6s							
QUIF	**Quistinic**	**143.49**	**350**	*e*PKP1	PKPdf	19 38 02.7	+0.1
MBDF	**Montbardon**	**143.59**	**337**	*e*PKP1	PKPdf	19 38 01.3	-1.6
5.2nm,0.7s							
TCF	**Toulx Ste Croi**	**143.77**	**343**	⇑*i*PKP1	PKPdf	19 38 01.9	-1.3
9.5nm,0.7s							
ORIF	**Oris-en-Rattie**	**143.77**	**338**	*e*PKP1	PKPdf	19 38 02.3	-0.9
18nm,0.7s							
SBF	**Sospel**	**144.05**	**335**	*e*PKP1	PKPdf	19 38 02.5	-1.3
30nm,0.8s							
MFF	**Saint Martin d**	**144.11**	**346**	*e*PKP1	PKPdf	19 38 02.9	-0.9
26nm,0.6s							
VIVF	**Saint-Julien-l**	**144.25**	**339**	*e*PKP1	PKPdf	19 38 03.8	-0.3
4.5nm,0.6s							
PGF	**Pioggiola**	**144.44**	**332**	⇑*i*PKP1	PKPdf	19 38 04.0	-0.5
20nm,0.8s							
FRF	**La Foret Royal**	**144.62**	**336**	⇑*i*PKP1	PKPdf	19 38 04.5	-0.3
19nm,0.7s							
SMRF	**Simiane la Rot**	**144.69**	**337**	*e*PKP1	PKPdf	19 38 05.3	+0.4
7.1nm,0.7s							
LMR	**La Mourre**	**144.86**	**336**	⇑*i*PKP1	PKPdf	19 38 05.3	+0.1
6.4nm,0.4s							
RJF	**Les Rejaudoux**	**144.86**	**343**	*e*PKP1	PKPdf	19 38 05.9	+0.8
17nm,0.8s							
CAF	**Calviac**	**145.04**	**342**	*e*PKP1	PKPbc	19 38 06.3	+0.8
4.2nm,0.6s							
LASF	**Ste Croix**	**145.22**	**339**	⇑*i*PKP1	PKPbc	19 38 06.9	+0.8
8.7nm,0.8s							
LFF	**La Frestale**	**145.42**	**343**	⇑*i*PKP1	PKPbc	19 38 07.2	+0.5
9.1nm,0.5s							
MTLF	**Montolieu**	**146.42**	**341**	⇑*i*PKP1	PKPbc	19 38 10.2	+0.5
4.3nm,0.6s							
EPF	**Esparros**	**147.28**	**343**	*e*PKP1	PKPbc	19 38 12.2	+0.1
SJPF	**Ste Jean**	**147.64**	**345**	*e*PKP1	PKPbc	19 38 13.4	+0.4
7.9nm,0.9s							
ETSF	**Etsaut**	**147.66**	**344**	*e*PKP1	PKPbc	19 38 14.0	+0.9
5.8nm,0.7s							
KEST	**Kesra**	**149.36**	**324**	PKPbc	PKPbc	19 38 18.1	+0.5
2.4nm,1.0s,baz=5.7,slow=4.3,SNR=5.1							
ESDC	**Sonseca Array**	**151.56**	**346**	PKPbc	PKPbc	19 38 22.6	-0.1
0.6nm,0.5s,baz=17,slow=2.7,SNR=9.9							
ESDC				PKPab	PKPab	19 38 33.0	+0.7
0.8nm,0.7s,baz=16,slow=3.5,SNR=6.2							
ESDC	**Sonseca Array**	**151.56**	**346**	PKPbc	PKPbc	19 38 22.6	-0.1
ESDC				PKPab	PKPab	19 38 33.0	+0.7
TORD	**Torodi Ar. Bea**	**166.20**	**276**	PKP	PKPdf	19 38 33.1	-0.8
0.5nm,0.8s,baz=24,slow=2.4,SNR=3.1							
TORD				PKPab	PKPab	19 39 34.1	-2.6
0.4nm,0.8s,baz=57,slow=5.3,SNR=3.0							

*IDC **02** 19:47:34.9±1.9, 8°.26S×157°.16E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/16, mbtmp3.8/7, MS3.3/2, Ms1 3.2/2, ms1mx2.8/23, Error ellipse: s-maj=57.2km s-min=25.8km az=115.0*
*ISCJB **02** 19:47:37.7±1.1, 8°.3S±0°.1×157°.2E±0°.2, h33km, mb3.9/11, Error ellipse: s-maj=34.0km s-min=14.5km az=28.4*
*NEIC **02** 19:47:39.5±0.9, 8°.28S×157°.20E, h35km, mb4.3/5, Error ellipse: s-maj=30.2km s-min=12.9km az=118.0*

ISC 02 19:47:39.7±1.1, 8°.3S±0°.1×157°.2E±0°.2, h35km, n14, σ0s83/13, mb3.9/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.81**	**221**	LR	LR	19 56 11.7	
comp=Z,67nm,20.6s,baz=200,slow=33							
GUMO	**Guam**	**24.92**	**331**	P	P	**19 52 58.7**	**-1.0**
WRAB	**Tennant Creek**	**24.96**	**240**	*e*P	P	**19 52 59.3**	**-0.7**
5.8nm,0.9s,mb4.1							
WRA	**Warramunga Arr**	**24.97**	**240**	P	P	**19 53 01.1**	**+1.0**
1.9nm,0.8s,mb3.7,baz=65,slow=10.0,SNR=8.8							
ASAR	**Alice Springs**	**27.05**	**233**	P	P	**19 53 18.6**	**-0.3**
0.6nm,0.8s,mb3.2,baz=65,slow=7.3,SNR=6.3							
STKA	**Stephens Creek**	**27.61**	**210**	P	P	**19 53 23.8**	**0.0**
2.4nm,0.8s,mb3.9,baz=22,slow=13,SNR=3.4							
STKA				LR	LR	20 03 23.6	
comp=Z,83nm,19.3s,baz=24,slow=34							
STKA	**Stephens Creek**	**27.61**	**210**	*e*P	P	**19 53 23.3**	**-0.5**
0.8nm,0.9s,mb3.4							
STKA				LR	LR	20 03 23.6	
CM31	**Chiang Mai Arr**	**63.29**	**295**	*e*P	P	**19 58 01.4**	**-4.0**
4.6nm,0.9s,mb4.6							
CMAR	**Chiang Mai Arr**	**63.29**	**295**	P	P	**19 58 05.9**	**+0.5**
0.9nm,1.0s,mb3.9,baz=113,slow=6.6,SNR=3.1							
SONM	**Songino Array**	**71.58**	**327**	P	P	**19 58 58.3**	**+1.1**
0.7nm,0.7s,mb3.7,baz=152,slow=4.9,SNR=4.6							
BILL	**Bilibino**	**76.39**	**4**	*e*P	P	**19 59 25.1**	**+0.1**
4.0nm,1.2s,mb4.2							
MCK	**McKinley**	**82.44**	**21**	P	P	**19 59 56.6**	**-1.3**
5.4nm,1.1s,mb4.4							
MKAR	**Makanchi Array**	**85.79**	**318**	P	P	**20 00 15.6**	**+0.2**
0.6nm,0.6s,mb4.0,baz=114,slow=4.8,SNR=4.9							
YKA	**Yellowknife Ar**	**96.44**	**28**	P	P	**20 01 06.0**	**+1.0**
0.2nm,0.7s,mb3.6,baz=253,slow=5.4,SNR=3.5							

DJA 02 19:50:56, 6°.25S×103°.43E, h20km, MLv3.2/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.28**	**56**	P	Pn	19 51 17.1	-1.7
KASI				S	Sn	19 51 34.4	-1.0
LWLI	**Liwa**	**1.38**	**27**	P	Pn	19 51 18.7	-1.4
LWLI				S	Sn	19 51 37.3	-0.4
MDSI	**Maura Dua**	**1.90**	**23**	P	Pn	19 51 26.3	-1.1
MDSI				S	Sn	19 51 52.9	+2.1
MNAI	**Manna**	**1.94**	**346**	P	Pn	19 51 26.2	-1.6
CGJI	**Cibinong**	**2.28**	**99**	P	Pn	19 51 33.8	+1.3
CGJI				S	Sn	19 52 01.2	+1.2
RBSI	**Rajabasa**	**2.33**	**80**	P	Pn	19 51 33.4	+0.1

MAN 02 19:55:29, 13°.68N×124°.13E, h17km, mb4.3, ML3.1, MS2.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.09**	**166**	*e*P	Pg	19 55 33.7	+1.3
AUQP	**San Andres**	**1.46**	**256**	*e*P	Pn	19 55 55.9	+1.3
GQP	**Guinayangan**	**1.65**	**278**	⇑*e*P	Pn	19 55 56.7	-0.6
GQP				*e*S	Sn	19 56 19.2	+1.1
BOAC	**Boac**	**2.24**	**265**	*e*P	Pn	19 56 05.7	+0.5
POLP	**Polillo Island**	**2.37**	**296**	*e*P	Pn	19 56 10.7	+3.6
SJMP	**San Jose**	**3.18**	**248**	*e*P	Pn	19 56 20.0	+1.8
BALP	**Baler**	**3.21**	**310**	*e*P	Pn	19 56 24.3	+5.6
GUIM	**Jordan**	**3.39**	**207**	*e*P	Pn	19 56 22.2	+1.1
CAUP	**Cauayan**	**3.94**	**326**	*e*P	Pn	19 56 30.1	+1.5
APYP	**Conner**	**5.00**	**327**	*e*P	Pn	19 56 44.7	+1.4
ABRA	**Dolores**	**5.14**	**321**	*e*P	Pn	19 56 47.9	+2.7

*ISCJB **02** 20:11:37.4±0.4, 37°.27N±0°.02×71°.67E±0°.03, h93km±4km, mb4.2/62, Error ellipse: s-maj=3.9km s-min=3.6km az=44.7*
*MOS **02** 20:11:40.1±0.9, 37°.40N×71°.71E, h116km, mb4.3/22, Error ellipse: s-maj=6.5km s-min=4.8km az=107.3*
*BJI **02** 20:11:40.4, 37°.43N×71°.70E, h114km, mB4.5/10, mb4.6/24*
*IDC **02** 20:11:41.2±0.5, 37°.28N×71°.73E, h118km±3km, mb3.6/21, mb1 3.8/25, mb1mx3.8/30, mbtmp3.7/25, MS3.0/4, Ms1 3.0/4, ms1mx2.5/41, Error

KSH e S Sn 20 13 18.5 -6.8
KSH LR LR
comp=N,4μm,1.3s
KSH LR LR
comp=E,3μm,1.4s
KSH LR LR
comp=Z,1μm,2.9s
AML Almayashu 5.07 17 P Pn 20 12 54.4 +1.3
SNR=306
AML Almayashu 5.07 17 e Pn Pn 20 12 54.3 +1.3
AML e Sn Sn 20 13 38.0 -12
JMU Jammu 5.29 149 ex Pn 20 13 00.0 +3.9
JMU e S Sn 20 13 52.0 -3.8
UCH Uchtor 5.38 23 P Pn 20 12 58.7 +1.4
SNR=75
UCH Uchtor 5.38 23 e PN Pn 20 12 58.5 +1.2
UCH pmax pmax
comp=Z,50nm,0.6s
UCH Uchtor 5.38 23 e Pn Pn 20 12 58.5 +1.2
comp=Z,50nm,0.6s
UCH e Sn Sn 20 13 45.6 -12
SARP Sargodha 5.43 171 P Pn 20 12 58.8 +0.7
KZA Kyzart 5.51 29 P Pn 20 13 00.4 +1.4
SNR=12
EKS2 Erkin-Say 5.59 16 P Pn 20 13 01.6 +1.5
SNR=137
EKS2 Erkin-Say 5.59 16 e PN Pn 20 13 01.1 +1.0
EKS2 pmax pmax
comp=Z,59nm,0.6s
EKS2 Erkin-Say 5.59 16 e Pn Pn 20 13 01.1 +1.0
comp=Z,59nm,0.6s
EKS2 e Sn Sn 20 13 47.9 -15
AAK Ala-Archa 5.75 21 P Pn 20 13 04.0 +1.7
SNR=157
AAK Ala-Archa 5.75 21 d i PN Pn 20 13 03.8 +1.5
AAK pmax pmax
comp=Z,52nm,0.8s
AAK Ala-Archa 5.75 21 P Pn 20 13 03.6 +1.3
comp=Z,0.3nm,0.3s,baz=183,slow=6.6,SNR=386
AAK S Sn 20 14 06.6 -0.2
comp=Z,0.2nm,0.3s,baz=119,slow=22,SNR=5.4
AAK Ala-Archa 5.75 21 e Pn Pn 20 13 03.6 +1.3
comp=Z,95nm,0.6s
AAK e Sn Sn 20 14 00.9 -5.9
KK31 Karatay Array 5.86 352 ⇑Pn Pn 20 13 03.6 -0.2
comp=Z,19nm,0.4s,baz=178,slow=13,SNR=726
KK31 ⇑Sn Sn 20 14 06.5 -3.0
comp=Z,21nm,0.4s,baz=167,slow=21,SNR=3.6
KK31 ⇓Lg 20 14 42.9
comp=Z,212nm,0.8s
THN Thein Dam 5.89 144 e P Pn 20 13 05.9 +1.6
THN e S Sn 20 14 07.5 -2.9
KBK Karagaybulak 5.91 24 P Pn 20 13 06.2 +1.8
SNR=38
FRU Bishkek 5.97 21 ⇓ i PN Pn 20 13 05.5 +0.3
FRU pmax pmax
comp=Z,105nm,1.2s
ULHL Ulahol 6.06 34 P Pn 20 13 07.6 +1.1
SNR=44
CHMS Chumysh 6.16 22 P Pn 20 13 09.0 +1.2
SNR=129
USP Ospenovka 6.33 19 P Pn 20 13 11.0 +0.8
SNR=100
TKM2 Tokmak 2 6.37 27 ⇓Pn Pn 20 13 11.5 +0.8
comp=Z,76nm,1.1s
TKM2 ⇑Sn Sn 20 14 20.0 -1.9
comp=Z,43nm,0.9s
TKM2 Tokmak 2 6.37 27 P Pn 20 13 12.1 +1.4
SNR=97
TKM2 Tokmak 2 6.37 27 e PN Pn 20 13 11.7 +1.0
TKM2 pmax pmax
comp=Z,41nm,0.5s
TKM2 Tokmak 2 6.37 27 e Pn Pn 20 13 11.7 +1.0
comp=Z,40nm,0.5s
BHK Bhakra 7.07 145 e P Pn 20 13 19.5 -0.8
BHK e S Sn 20 14 33.5 -5.5
SDNR Sundarnagar 7.26 141 e P Pn 20 13 22.1 -0.8
SDNR e S Sn 20 14 38.5 -5.3
SMLA Simla 7.66 142 i P Pn 20 13 25.0 -3.3
SMLA i S Sn 20 14 43.8 -10
KLP Kalpa 7.92 135 e P Pn 20 13 32.7 +0.8
KLP e S Sn 20 14 52.3 -7.5
DDI Dehra Dun 8.76 141 e P Pn 20 13 43.0 -0.3
JOSI Joshimath 9.39 133 e P Pn 20 13 52.7 +0.7
JOSI e S Sn 20 15 27.9 -7.9
NDI New Delhi 9.78 150 ex x 20 15 35.0
KHET Khetri 9.84 158 e P Pn 20 13 56.6 -1.5
KHET e S Sn 20 15 39.0 -7.7
KHET AML AML 20 15 43.2
comp=E,120nm,0.3s
KHET AML AML 20 15 43.4
comp=N,103nm,0.4s
SONA Sohna 10.11 152 e P Pn 20 14 00.5 -1.3
SONA e S Sn 20 15 46.3 -7.0
SONA AML AML 20 15 49.3
comp=N,74nm,0.4s
SONA AML AML 20 15 49.5
comp=E,153nm,0.3s
VAN Vannovskaya 10.78 278 ⇓ i P Pn 20 14 05.9 -4.8
AJM Ajmer 11.09 166 ex x 20 13 54.0
AJM e S Sn 20 16 10.0 -7.0
AGRA Agra 11.36 150 e S Sn 20 16 14.8 -8.9
AGRA AML AML 20 16 24.1
comp=E,157nm,0.4s
AGRA AML AML 20 16 24.1
comp=N,143nm,0.3s
MK31 Makanchi Array 12.33 36 P Pn 20 14 30.7 -0.8
comp=N,5.5nm,0.6s,baz=222,slow=15,SNR=50
MK31 Makanchi Array 12.33 36 e Pn Pn 20 14 31.1 -0.3
MKAR Makanchi Array 12.33 36 P Pn 20 14 30.6 -0.8
comp=N,0.8nm,0.3s,baz=227,slow=14,SNR=57
WMQ Urumqi 13.80 57 e P Pn 20 14 53.0 +2.1
WMQ sP 20 15 24.9
WMQ S Sn 20 17 23.9 +1.2
WMQ PcP PcP 20 20 09.1 +2.4
WMQ pmax pmax
comp=Z,10.0nm,1.0s
KOLN Koldanda 13.83 130 e P Pn 20 14 48.3 -3.1
comp=Z,63nm,0.5s
KURBB Kurchatov Arra 14.19 18 ⇑P Pn 20 14 52.5 -3.3
comp=Z,0.7nm,0.5s
KURK Kurchatov 14.30 18 ⇑P Pn 20 14 53.4 -3.9
comp=Z,4.8nm,0.8s
KURK Kurchatov 14.30 18 c i P Pn 20 14 53.5 -3.7
KURK pmax pmax
comp=Z,5.0nm,1.1s
KURK Kurchatov 14.30 18 P Pn 20 14 52.4 -4.8
comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=22
KURK S Sn 20 17 42.0 +7.5
baz=196,slow=30,SNR=1.7
KURK Kurchatov 14.30 18 e Pn Pn 20 14 52.7 -4.5
comp=Z,5.5nm,0.8s
GKN Gorkha 14.32 127 e P Pn 20 14 54.0 -3.7
comp=Z,75nm,0.5s
AB31 Akbulak array 14.66 328 P Pn 20 14 58.7 -3.2
comp=Z,2.5nm,0.3s,baz=134,slow=13,SNR=191
AB31 S Sn 20 17 32.7 -11
comp=Z,12nm,0.7s,baz=147,slow=23,SNR=6.5
ABKAR Akbulak array 14.66 328 e Pn Pn 20 14 58.5 -3.3
comp=Z,6.6nm,0.4s
ABKAR e Sn Sn 20 17 25.8 -17
KKN Kakani 14.88 126 e P Pn 20 15 00.2 -4.6
comp=Z,71nm,0.6s
PKI Pulchoki 15.11 126 e P Pn 20 15 04.3 -3.5
comp=Z,64nm,0.6s
GUN Gumba 15.19 124 e P Pn 20 15 04.7 -4.1
comp=Z,105nm,0.6s
GUN e S S 20 17 46.2 -21
VOSK Vostochnaya 15.43 358 ⇑P Pn 20 15 08.5 -3.0
comp=Z,4.7nm,0.8s
BVA0 Borovoye Array 15.74 357 P Pn 20 15 13.8 -1.7
comp=Z,0.8nm,0.6s,baz=167,slow=13,SNR=32
BVAR Borovoye Array 15.74 357 P Pn 20 15 13.5 -2.0
comp=Z,0.9nm,0.3s,baz=165,slow=13,SNR=19
BRVK Borovoye 15.78 357 c e P Pn 20 15 14.3 -1.7
BRVK pmax pmax
comp=Z,7.0nm,1.4s
BRVK Borovoye 15.78 357 e Pn Pn 20 15 13.5 -2.5
comp=Z,8.4nm,0.8s
AKTK Aktyubinsk 16.37 328 P Pn 20 15 23.8 +0.4
AKTK S S 20 18 10.7 -20
AKTO Aktyubinsk 16.37 328 ⇑P Pn 20 15 22.2 -1.1
comp=Z,5.2nm,0.7s
AKTO Aktyubinsk 16.37 328 P Pn 20 15 23.8 +0.4
comp=Z,2.8nm,0.3s,baz=133,slow=11,SNR=73
AKTO S S 20 18 10.7 -20
comp=Z,0.4nm,0.3s,baz=191,slow=16,SNR=3.4
LSA Lhasa 17.91 109 P Pn 20 15 44.0 +1.7
LSA pmax pmax
comp=Z,30nm,0.8s
LSA Lhasa 17.91 109 e P Pn 20 15 43.2 +0.9
LSA pmax pmax
comp=Z,12nm,0.6s
LSA Lhasa 17.91 109 e P Pn 20 15 43.2 +0.8
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 18.96 24 P Pn 20 15 52.5 -2.2
comp=Z,1.2nm,0.3s,baz=222,slow=11,SNR=27
ZALV S S 20 19 18.8 -4.1
baz=232,slow=9.3,SNR=1.9
NVS Novosibirsk 19.24 21 e P Pn 20 15 54.4 -3.5
NVS e S S 20 19 18.9 -10
NVS pmax pmax
comp=N,4.0nm,0.5s
NVS pmax pmax
comp=E,2.0nm,0.5s
NVS pmax pmax
comp=Z,6.0nm,0.5s
NVS smax
comp=N,12nm,1.9s
NVS smax
comp=E,12nm,1.9s
HYB Hyderabad 20.72 161 i P P 20 16 16.0 +3.8
HYB e S S 20 20 02.0 +3.7
ARU Arti 21.06 339 d i P P 20 16 15.0 -0.5
ARU e 20 16 46.1
ARU S S 20 20 01.1 -3.2
ARU SS 20 20 40.1
ARU pmax pmax
comp=Z,4.0nm,1.0s,mb3.7
ARU Arti 21.06 339 e Pn P 20 16 13.2 -2.3
comp=Z,9.1nm,0.8s,mb4.2
MTA Mtatsminda 21.16 290 P P 20 16 18.1 +1.3
GNI Garni 21.17 286 d i P P 20 16 19.4 +2.5
GNI pmax pmax
comp=Z,73nm,1.7s
GNI Garni 21.17 286 P P 20 16 18.9 +2.0
comp=Z,20nm,0.6s,mb4.6,baz=12,slow=1.2,SNR=41
GNI Garni 21.17 286 e P P 20 16 19.0 +2.1
comp=Z,32nm,0.8s,mb4.7
TBLG Delisi 21.20 290 P P 20 16 19.1 +1.9
UMR Umm Al-Rimmam 21.40 256 e P P 20 16 19.4 0.0
UMR AMb AMB 20 16 24.4
comp=Z,239nm,0.5s
MIB Mutribah 21.57 257 e P P 20 16 21.0 -0.3
MIB AMb AMB 20 16 26.9
comp=Z,124nm,0.8s,mb5.3
KBD Kabd 21.59 255 e P P 20 16 21.3 -0.2
KBD AMb AMB 20 16 27.0
comp=Z,33nm,0.6s,mb4.8
GOR Gori 21.69 291 P P 20 16 26.3 +3.9
RDF Al-Radifah 21.82 255 e P P 20 16 23.3 -0.6
RDF AMb AMB 20 16 29.6
comp=Z,84nm,0.9s,mb5.1
KEH Kehvi 21.84 292 P P 20 16 26.0 +2.1
ZEI Tsey 21.90 293 e P P 20 16 23.8 -0.8
ZEI pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
GTA Gaotai 22.14 76 e P P 20 16 28.4 +1.2
GTA pP 20 16 52.8
GTA sP sP 20 17 05.8 +7.7
GTA S S 20 20 18.7 -6.2
GTA sS sS 20 20 56.5 -0.6
GTA SS 20 21 07.0
GTA pmax pmax
comp=Z,46nm,0.7s,mb4.9
GTA pmax pmax
comp=Z,47nm,4.5s
GTA LR LR
comp=N,55nm,8.3s
GTA LR LR
comp=E,64nm,8.9s
GTA LR LR
comp=Z,77nm,7.7s
ONI Oni 22.21 293 P P 20 16 28.9 +0.9
GOF Gofitskoye 22.82 299 i P P 20 16 34.8 +0.5
GOF e S S 20 20 39.3 +3.5
KIV Kislovodsk 22.90 296 ⇓ i P P 20 16 35.5 +0.4
KIV 20 16 56.3
KIV pmax pmax
comp=Z,8.0nm,0.9s,mb4.0
KIV Kislovodsk 22.90 296 e P P 20 16 33.0 -2.0
comp=Z,19nm,0.8s,mb4.5
KIV e S S 20 20 36.8 -0.4
MOY Mondy 25.16 46 e P P 20 16 57.3 +1.8
LZH Lanzhou 25.77 83 e P P 20 17 03.0 +1.8
LZH pP pP 20 17 28.0 +5.4
LZH sP sP 20 17 42.1 +8.2
LZH pmax pmax
comp=Z,20nm,1.2s,mb4.4
LZH pmax pmax
comp=Z,120nm,5.3s
ZAK Zakamensk 26.06 50 e P P 20 17 04.8 +1.1
ZAK e 20 17 31.6
ZAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.2
MALT Malatya 26.21 282 e P P 20 17 06.6 +1.4
MALT e pP 20 17 31.5 +4.9
MALT e 20 17 46.2
MALT pmax pmax
comp=Z,2.0nm,0.9s,mb3.5
MALT Malatya 26.21 282 e P P 20 17 06.6 +1.5
comp=Z,2.1nm,0.9s,mb3.6
MALT e pP 20 17 31.5 +4.9
MALT e 20 17 46.2
CD2 Chengdu 27.24 94 P P 20 17 17.2 +2.7
CD2 pP pP 20 17 41.2 +5.2
CD2 sP sP 20 17 54.2 +7.0
CD2 PP PP 20 18 09.3 -8.4
CD2 S S 20 21 46.8 +0.2
CD2 sS sS 20 22 28.9 +4.8
CD2 SS 20 23 12.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
CD2 pmax pmax
comp=Z,130nm,7.1s
CD2 LR LR
comp=N,170nm,8.4s
CD2 LR LR
comp=Z,140nm,8.9s
SONM Songino Array 27.44 56 P P 20 17 16.5 +0.4
SONM *PP pP 20 17 43.0 +5.4
SONM Songino Array 27.44 56 P P 20 17 16.5 +0.4
comp=Z,3.6nm,1.2s,mb3.8,baz=264,slow=9.0,SNR=14
SONM pP pP 20 17 43.0 +5.3
comp=Z,1.3nm,0.8s,baz=259,slow=8.3,SNR=4.6
SONM LR LR 20 28 59.5
comp=Z,21nm,19.4s,baz=12,slow=38
ULN Ulaanbaatar 27.88 56 e P P 20 17 20.6 +0.5
ULN pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
ULN Ulaanbaatar 27.88 56 e P P 20 17 20.6 +0.6
comp=Z,1.1nm,0.6s,mb3.6
KMI Kunming 29.08 106 P P 20 17 33.9 +2.9
KMI pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
OBN Obninsk 29.69 318 e P P 20 17 43.1 +7.2
BR131 Keskin Array S 29.71 287 e P P 20 17 37.4 +1.0
comp=Z,1.1nm,0.5s,mb3.7
BRTR Keskin Array B 29.71 287 P P 20 17 37.1 +0.7
comp=Z,1.5nm,0.6s,mb3.8,baz=104,slow=9.3,SNR=15
BRTR pP pP 20 18 03.0 +5.0
comp=Z,0.9nm,0.6s,baz=89,slow=8.3,SNR=3.0
BRTR sP sP 20 18 15.3 +6.1
comp=Z,0.8nm,0.5s,baz=95,slow=9.1,SNR=2.8
CHTO Chiang Mai 30.14 120 P P 20 17 43.0 +2.6
XAN Xi'an 30.31 85 P P 20 17 42.0 +0.3
XAN pP pP 20 18 06.3 +2.9
XAN sP sP 20 18 19.3 +4.7
XAN S S 20 22 34.9 +0.1
XAN sS sS 20 23 17.9 +5.5
CMAR Chiang Mai Arr 30.39 121 P P 20 17 42.6 +0.1
comp=Z,1.9nm,0.7s,mb3.8,baz=306,slow=8.2,SNR=12
HHC Hu-ho-hao-te 30.99 71 e P P 20 17 49.8 +2.2
HHC pP pP 20 18 14.6 +5.3
HHC sP sP 20 18 27.6 +7.1
HHC PP PP 20 18 56.4 -2.8
HHC PcP PcP 20 20 42.6 +1.2
HHC S S 20 22 45.8 +0.6
HHC sS sS 20 23 27.9 +5.0
HHC ScP ScP 20 24 13.6 -1.8
HHC PcS PcS 20 24 27.2 +1.7
HHC SS SS 20 24 38.5 -23
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.6
HHC pmax pmax
comp=Z,68nm,5.5s
HHC LR LR
comp=N,310nm,15.2s
HHC LR LR
comp=E,350nm,14.7s
HHC LR LR
comp=Z,180nm,11.3s
GYA Guiyang 31.46 100 P P 20 17 53.2 +1.3
GYA pP pP 20 18 18.9 +5.2
GYA sP sP 20 18 32.6 +7.8
GYA PP PP 20 19 02.7 -1.9
GYA PcP PcP 20 20 43.2 +0.3
GYA S S 20 22 52.7 -0.2
GYA sS sS 20 23 35.8 +5.2
GYA ScP ScP 20 24 16.0 -1.2
GYA PcS PcS 20 24 29.6 +2.1
GYA ScS ScS 20 28 12.3 -2.9
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
ENH Enshi 32.05 91 e P P 20 17 57.8 +0.8
comp=Z,5.0nm,0.9s,mb4.2
AKASG Malin Array Be 32.87 308 P P 20 18 03.6 -0.4
comp=Z,3.1nm,0.7s,mb4.2,baz=80,slow=7.0,SNR=8.6
AKASG pP pP 20 18 29.1 +3.3
comp=Z,3.4nm,0.7s,baz=79,slow=7.6,SNR=5.1
AKASG sP sP 20 18 43.4 +6.5
comp=Z,1.0nm,0.4s,baz=79,slow=7.3,SNR=3.5
KIEV Kiev 32.88 308 e P P 20 18 03.3 -0.7
KIEV e pP 20 18 28.7 +2.9
KIEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KIEV Kiev 32.88 308 e P P 20 18 03.3 -0.7
comp=Z,2.3nm,0.6s,mb4.2
KIEV e pP 20 18 28.7 +2.9
MLR Muntele Rosu 34.86 298 ⇑P P 20 18 23.7 +2.4
MLR Muntele Rosu 34.86 298 ⇑ i P P 20 18 23.7 +2.4
BURAR Bucovina Array 35.30 302 ⇓P P 20 18 26.1 +1.0
BURAR Bucovina Array 35.30 302 ⇓ i P P 20 18 26.1 +1.0
BUR08 Bucovina Ar. S 35.32 302 e P P 20 18 25.3 +0.1
JOF Joensuu 35.45 329 e P P 20 18 25.4 -0.7
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
JOF Joensuu 35.45 329 e p P 20 18 25.4 -0.7
comp=Z,1.2nm,0.5s,mb4.0
APE Apeiranthos 36.47 284 ⇑P P 20 18 35.5 +0.3
APE Apeiranthos 36.47 284 ⇑ i P P 20 18 35.5 +0.3
DRGR 37.04 301 ⇑P P 20 18 41.2 +1.3
DRGR 37.04 301 ⇑ i P P 20 18 41.2 +1.3
FINES FINESS Array B 37.12 325 P P 20 18 40.1 -0.2
FINES *PP pP 20 19 06.7 +4.2
FINES FINESS Array B 37.12 325 P P 20 18 40.1 -0.2
comp=Z,1.0nm,0.7s,mb3.9,baz=114,slow=9.6,SNR=10.0
FINES pP pP 20 19 06.7 +4.2
comp=Z,3.2nm,0.8s,baz=107,slow=12,SNR=4.8
FINES LR LR 20 35 02.2
comp=Z,40nm,18.4s,baz=343,slow=38
FINES FINESS Array B 37.12 325 P P 20 18 40.1 -0.2
FINES pP pP 20 19 06.7 +4.2
FINES LR LR 20 35 02.2
KAF Kangasniemi 37.25 326 e P P 20 18 46.0 +4.6
KAF pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
KAF Kangasniemi 37.25 326 e p P 20 18 46.0 +4.6
comp=Z,1.1nm,0.8s,mb3.8
IDI Anoyia 37.46 281 P P 20 18 43.2 -0.3
comp=Z,1.7nm,0.6s,mb4.2,baz=23,slow=14,SNR=6.4
BZS Buzias 37.89 299 ⇓P P 20 18 48.0 +1.0
BZS Buzias 37.89 299 ⇓ i P P 20 18 48.0 +1.0
GVD Gavdhos 38.22 281 e P P 20 18 49.2 -0.7
comp=Z,22nm,1.0s,mb5.0
GVD e 20 19 30.6
NJ2 Nanjing 38.84 83 e P P 20 18 52.4 -2.8
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
KEV Kevo 40.26 338 P P 20 19 07.5 +1.1
comp=Z,8.1nm,0.9s,mb4.5
KEV Kevo 40.26 338 e p P 20 19 07.4 +1.0
MORC Moravsky Berou 40.32 306 e P P 20 19 06.7 -0.5
MORC pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
MORC Moravsky Berou 40.32 306 e P P 20 19 06.7 -0.6
comp=Z,1.8nm,0.6s,mb4.1
ARCES ARCESS Array B 40.61 337 P P 20 19 09.7 +0.4
comp=Z,0.6nm,0.3s,mb3.8,baz=110,slow=7.7,SNR=14
DPC Dobruska-Polom 41.08 307 e P P 20 19 14.2 +0.8
DPC e x x 20 19 18.9
DPC e p P p 20 19 40.7 +4.8
BRG Berggiesshubel 42.55 308 e P P 20 19 26.4 +1.0
comp=Z,4.2nm,1.1s,mb4.1
BRG e pP 20 19 52.2 +4.3
comp=Z,7.0nm,1.1s
BRG e 20 20 06.8
comp=Z,5.3nm,1.0s
BRG Berggiesshubel 42.55 308 e P P 20 19 26.4 +1.0
BRG e pP 20 19 52.2 +4.2
BRG e 20 20 06.8
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
TIP Timpagrande 42.61 290 e P P 20 19 25.8 -0.3
comp=Z,6.9nm,1.3s,mb4.2
HFS Hagfors 42.77 321 LR LR 20 38 11.8
comp=Z,27nm,18.5s,baz=254,slow=37
GERES GERESS Array B 42.91 305 P P 20 19 29.1 +0.8
comp=Z,0.2nm,0.5s,mb3.1,baz=70,slow=3.2,SNR=2.7
GERES pP pP 20 19 55.3 +4.4
comp=Z,1.2nm,0.7s,baz=72,slow=8.6,SNR=7.6
GERES sP sP 20 20 09.5 +7.6
comp=Z,0.6nm,0.7s,baz=80,slow=8.3,SNR=3.2
YAK Yakutsk 43.00 36 P P 20 19 27.8 -1.1
YAK pmax pmax
comp=Z,22nm,0.8s,mb4.9
YAK Yakutsk 43.00 36 P P 20 19 27.8 -1.1
comp=Z,22nm,0.8s,mb4.9
CLL Collm 43.11 308 e P P 20 19 30.0 +0.1
CLL e *PP pP 20 19 55.0 +2.5
CLL e *SP sP 20 20 11.0 +7.5
CLL Collm 43.11 308 e P P 20 19 30.0 +0.1
CLL e p P p P 20 19 55.0 +2.5
CLL e s P sP 20 20 11.0 +7.5
MDJ Mudanjiang 43.55 61 P P 20 19 32.3 -1.2
MDJ pmax pmax
comp=Z,5.0nm,2.1s,mb3.9
MDJ pmax pmax
comp=Z,42nm,3.1s
NB2 NORSAR Subarra 44.06 322 P P 20 19 36.8 -0.6
comp=Z,2.5nm,0.9s,mb3.9,baz=100,slow=7.9
NOA NORSAR Array B 44.06 322 P P 20 19 36.9 -0.5
NOA *SP sP 20 20 17.6 +6.5
NOA NORSAR Array B 44.06 322 P P 20 19 36.9 -0.5
comp=Z,1.6nm,0.8s,mb3.8,baz=94,slow=7.9,SNR=7.0
NOA sP sP 20 20 17.6 +6.5
comp=Z,2.7nm,0.6s,baz=96,slow=8.1,SNR=6.1
NOA LR LR 20 37 41.8
comp=Z,11nm,21.2s,baz=245,slow=35
KSRS Korea Array 44.12 72 P P 20 19 38.4 +0.2
KSRS *PP pP 20 20 03.1 +2.2
KSRS pmax pmax
comp=Z,1.0nm,0.8s,mb3.6
KSRS Korea Array 44.12 72 P P 20 19 38.4 +0.1
comp=Z,1.1nm,0.8s,mb3.6,baz=275,slow=6.5,SNR=5.8
KSRS pP pP 20 20 03.1 +2.2
comp=Z,0.5nm,0.5s,baz=295,slow=10,SNR=2.0
TIXI Tiksi 44.83 22 e P P 20 19 42.6 -0.8
TIXI pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TIXI Tiksi 44.83 22 e P P 20 19 42.7 -0.7
comp=Z,4.4nm,0.7s,mb4.3
PGF Pioggiola 47.38 297 e P P 20 20 03.3 -0.5
comp=Z,17nm,1.1s,mb4.4
PGF e p P p P 20 20 29.8 +3.0
PGF Pioggiola 47.38 297 e P P 20 20 03.3 -0.5
PGF e *PP pP 20 20 29.8 +3.0
PGF pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
PGF Pioggiola 47.38 297 e P P 20 20 03.3 -0.5
comp=Z,8.4nm,1.1s,mb4.4
PGF e p P p P 20 20 29.8 +3.0
HINF Hinteralfeld 47.58 304 e P P 20 20 04.9 -0.4
SBF Sospel 48.13 299 e P P 20 20 09.7 +0.1
comp=Z,15nm,0.8s,mb4.6

SBF				*e*pP	pP	20 20 36.4 +3.8
SBF	**Sospel**	**48.13**	**299**	*e*P	**P**	**20 20 09.7 +0.1**
SBF				*e**PP	pP	20 20 36.4 +3.8
SBF				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.5					
SBF	**Sospel**	**48.13**	**299**	*e*P	**P**	**20 20 09.7 +0.1**
	comp=Z,7.4nm,0.8s,mb4.6					
SBF				*e*pP	pP	20 20 36.4 +3.8
LPG	**La Plagne**	**48.18**	**301**	*e*P	**P**	**20 20 10.2 +0.2**
LPL	**La Plagne**	**48.19**	**301**	*e*P	**P**	**20 20 10.3 +0.3**
CABF	**La Chapelle**	**48.36**	**303**	*e*P	**P**	**20 20 12.4 +1.1**
	comp=Z,4.2nm,0.6s,mb4.1					
CABF	**La Chapelle**	**48.36**	**303**	*e*P	**P**	**20 20 12.4 +1.1**
CABF				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.1					
CABF	**La Chapelle**	**48.36**	**303**	*e*P	**P**	**20 20 12.4 +1.1**
	comp=Z,2.1nm,0.6s,mb4.1					
MBDF	**Montbardon**	**48.36**	**300**	*e*P	**P**	**20 20 11.0 -0.4**
MBDF				*e*pP	pP	20 20 38.7 +4.3
MEZF	**Maizieres J'vi**	**48.61**	**306**	*e*P	**P**	**20 20 12.7 -0.5**
FRF	**La Foret Royal**	**48.76**	**299**	*e*P	**P**	**20 20 14.1 -0.3**
	comp=Z,9.8nm,0.8s,mb4.5					
FRF				*e*pP	pP	20 20 40.8 +3.3
FRF	**La Foret Royal**	**48.76**	**299**	*e*P	**P**	**20 20 14.1 -0.3**
FRF				*e**PP	pP	20 20 40.8 +3.3
FRF				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.5					
FRF	**La Foret Royal**	**48.76**	**299**	*e*P	**P**	**20 20 14.1 -0.3**
	comp=Z,4.9nm,0.8s,mb4.5					
FRF				*e*pP	pP	20 20 40.8 +3.3
KEST	**Kesra**	**49.29**	**288**	P	**P**	**20 20 19.5 +0.9**
	comp=Z,1.1nm,0.8s,mb3.9,baz=63,slow=9.0,SNR=5.0					
SMRF	**Simiane la Rot**	**49.39**	**300**	*e*P	**P**	**20 20 19.2 0.0**
SMRF				*e*pP	pP	20 20 46.0 +3.7
LOR	**Lormes**	**49.68**	**304**	*e*P	**P**	**20 20 21.3 -0.1**
LOR				*e*MLR	MLR	
	comp=Z,41nm,18.0s					
LOR	**Lormes**	**49.68**	**304**	*e*P	**P**	**20 20 21.3 -0.1**
LOR				LR	LR	
	comp=Z,40nm,18.0s					
KMBO	**Kilima Mbogo**	**49.77**	**228**	*c*eP	**P**	**20 20 24.7 +2.3**
KMBO				pmax	pmax	
	comp=Z,1.0nm,0.6s					
KMBO	**Kilima Mbogo**	**49.77**	**228**	P	**P**	**20 20 22.9 +0.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=33,slow=19,SNR=3.5					
KMBO	**Kilima Mbogo**	**49.77**	**228**	*e*P	**P**	**20 20 23.1 +0.7**
	comp=Z,1.9nm,0.6s,mb4.2					
VIVF	**Saint-Julien-l**	**49.77**	**301**	*e*P	**P**	**20 20 21.9 -0.2**
VIVF				*e*pP	pP	20 20 49.1 +3.9
SMF	**Signal de Mont**	**49.85**	**303**	*e*P	**P**	**20 20 22.3 -0.4**
SSF	**Saint Saulge**	**49.97**	**304**	*e*P	**P**	**20 20 23.4 -0.2**
AVF	**Avril sur Loir**	**50.14**	**304**	*e*P	**P**	**20 20 24.3 -0.6**
	comp=Z,5.0nm,0.8s,mb4.2					
AVF				*e*pP	pP	20 20 51.4 +3.4
AVF	**Avril sur Loir**	**50.14**	**304**	*e*P	**P**	**20 20 24.3 -0.6**
AVF				*e**PP	pP	20 20 51.4 +3.4
AVF				pmax	pmax	
	comp=Z,3.0nm,0.8s,mb4.3					
AVF	**Avril sur Loir**	**50.14**	**304**	*e*P	**P**	**20 20 24.3 -0.6**
	comp=Z,2.5nm,0.8s,mb4.2					
AVF				*e*pP	pP	20 20 51.4 +3.4
BGF	**Bois d'Agland**	**50.54**	**304**	*e*P	**P**	**20 20 27.4 -0.5**
LASF	**Ste Croix**	**50.55**	**300**	*e*P	**P**	**20 20 28.3 +0.3**
LASF				*e*pP	pP	20 20 54.4 +3.2
TCF	**Toulx Ste Croi**	**51.04**	**303**	*e*P	**P**	**20 20 31.7 +0.1**
CAF	**Calviac**	**51.53**	**302**	*e*P	**P**	**20 20 35.4 +0.1**
RJF	**Les Rejaudoux**	**51.78**	**302**	*e*P	**P**	**20 20 36.7 -0.5**
RJF				*e*MLR	MLR	
	comp=Z,50nm,18.0s					
RJF	**Les Rejaudoux**	**51.78**	**302**	*e*P	**P**	**20 20 36.7 -0.5**
RJF				LR	LR	
	comp=Z,50nm,18.0s					
MTLF	**Montolieu**	**51.91**	**300**	*e*P	**P**	**20 20 38.1 -0.1**
MTLF				*e*pP	pP	20 21 05.0 +3.6
LDF	**La Druitiere**	**51.92**	**307**	*e*P	**P**	**20 20 38.4 +0.2**
	comp=Z,9.8nm,0.9s,mb4.5					
LDF	**La Druitiere**	**51.92**	**307**	*e*P	**P**	**20 20 38.4 +0.2**
LDF				pmax	pmax	
	comp=Z,5.0nm,0.9s,mb4.5					
LDF	**La Druitiere**	**51.92**	**307**	*e*P	**P**	**20 20 38.4 +0.2**
	comp=Z,4.9nm,0.9s,mb4.5					
FLN	**La Foliniere**	**52.10**	**307**	*e*P	**P**	**20 20 39.3 -0.2**
FLN				*e*MLR	MLR	
	comp=Z,57nm,19.0s					
FLN	**La Foliniere**	**52.10**	**307**	*e*P	**P**	**20 20 39.3 -0.2**
FLN				LR	LR	
	comp=Z,60nm,19.0s					
MAJO	**Matsushiro**	**52.16**	**69**	P	**P**	**20 20 38.9 -1.3**
MAJO				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.6					
MAJO	**Matsushiro**	**52.16**	**69**	P	**P**	**20 20 38.9 -1.3**
	comp=Z,6.3nm,0.9s,mb4.7					
MJAR	**Matsushiro Arr**	**52.16**	**69**	P	**P**	**20 20 39.7 -0.5**
	comp=Z,1.6nm,0.9s,mb4.0,baz=284,slow=9.6,SNR=4.5					
LFF	**La Frestale**	**52.42**	**302**	*e*P	**P**	**20 20 41.2 -0.7**
GRR	**Gorron**	**52.45**	**307**	*e*P	**P**	**20 20 42.0 -0.1**
EPF	**Esparros**	**53.31**	**300**	*e*P	**P**	**20 20 48.6 +0.1**
EPF				*e*pP	pP	20 21 13.8 +1.9
ETSF	**Etsaut**	**53.97**	**300**	*e*P	**P**	**20 20 53.4 +0.1**
ETSF				*e*pP	pP	20 21 20.6 +3.8
QUIF	**Quistinic**	**54.06**	**307**	*e*P	**P**	**20 20 53.2 -0.7**
ESDC	**Sonseca Array**	**57.56**	**298**	P	**P**	**20 21 18.8 -0.2**
	comp=Z,0.6nm,0.4s,mb4.0,baz=58,slow=7.2,SNR=9.0					
ESDC				pP	pP	20 21 47.1 +4.4
	comp=Z,1.2nm,0.7s,baz=60,slow=7.2,SNR=4.9					
ESLA	**Sonseca Array**	**57.56**	**298**	P	**P**	**20 21 18.3 -0.7**
	comp=Z,1.2nm,1.1s,mb3.8					
BILL	**Bilibino**	**57.65**	**26**	*e*P	**P**	**20 21 19.7 +0.5**
BILL				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.5					
TOA0	**Torodi Ar. Sit**	**66.27**	**269**	*e*P	**P**	**20 22 16.0 -1.7**
TORD	**Torodi Ar. Bea**	**66.27**	**269**	P	**P**	**20 22 16.1 -1.6**
	comp=Z,1.5nm,0.4s,mb4.1,baz=50,slow=5.9,SNR=40					
RES	**Resolute Bay**	**67.94**	**356**	P	**P**	**20 22 26.9 -0.4**
RES				pmax	pmax	
	comp=Z,1.0nm,0.7s,mb3.8					
RES	**Resolute Bay**	**67.94**	**356**	P	**P**	**20 22 26.9 -0.4**
	comp=Z,0.6nm,0.7s,mb3.5					
INK	**Inuvik**	**73.03**	**10**	*e*P	**P**	**20 22 58.3 0.0**
INK				pmax	pmax	
	comp=Z,2.0nm,0.6s					
INK	**Inuvik**	**73.03**	**10**	*e*P	**P**	**20 22 58.3 0.0**
	comp=Z,2.2nm,0.6s,mb4.2					
COLA	**College**	**73.56**	**16**	*e*P	**P**	**20 23 01.1 -0.4**
COLA				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.4					
COLA	**College**	**73.56**	**16**	*e*P	**P**	**20 23 01.1 -0.4**
	comp=Z,5.7nm,0.8s,mb4.3					
BOSA	**Boshof**	**78.70**	**220**	P	**P**	**20 23 31.9 +0.8**
	comp=Z,4.1nm,1.0s,mb4.2,baz=297,slow=2.3,SNR=3.2					
BOSA	**Boshof**	**78.70**	**220**	P	**P**	**20 23 31.9 +0.8**
YKA	**Yellowknife Ar**	**80.42**	**3**	P	**P**	**20 23 39.6 -0.4**
	comp=Z,2.5nm,0.6s,mb4.2,baz=350,slow=5.5,SNR=66					
YKA				pP	pP	20 24 09.0 +4.0
	comp=Z,0.7nm,0.6s,baz=349,slow=5.5,SNR=2.6					
WRA	**Warramunga Arr**	**81.97**	**122**	P	**P**	**20 23 45.9 -2.9**
	comp=Z,0.4nm,0.5s,mb3.5,baz=324,slow=5.1,SNR=9.6					
WRA				pP	pP	20 24 16.6 +2.7
	comp=Z,0.7nm,0.7s,baz=325,slow=4.7,SNR=3.1					
WRAB	**Tennant Creek**	**81.97**	**122**	*e*P	**P**	**20 23 55.3 +6.5**
WRAB				pmax	pmax	
	comp=Z,4.0nm,1.0s,mb4.2					
WRAB	**Tennant Creek**	**81.97**	**122**	*e*P	**P**	**20 23 55.3 +6.5**
	comp=Z,4.3nm,1.0s,mb4.2					
FCC	**Fort Churchill**	**83.55**	**353**	*e*P	**P**	**20 23 55.9 -0.6**
ASAR	**Alice Springs**	**84.28**	**125**	P	**P**	**20 23 58.5 -2.1**
	comp=Z,0.3nm,0.8s,mb3.1,baz=320,slow=4.1,SNR=2.3					
ASAR				pP	pP	20 24 31.4 +5.5
	comp=Z,0.2nm,0.3s,baz=311,slow=5.3,SNR=1.8					
FFC	**Flin Flon**	**88.17**	**356**	*i*P	**P**	**20 24 20.0 +0.7**
STKA	**Stephens Creek**	**94.84**	**127**	P	**P**	**20 24 50.2 -0.2**
	comp=Z,1.8nm,1.1s,mb4.4,baz=12,slow=12,SNR=2.8					
STKA	**Stephens Creek**	**94.84**	**127**	P	**P**	**20 24 50.2 -0.2**

IDC ***02*** *20:20:47.7±2.4, 32°.53N×76°.50E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.2/29, mbtmp3.3/5, ML3.2/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/24, Error ellipse: s-maj=40.3km s-min=27.4km az=133.0*

ISCJB ***02*** *20:20:52.9±1.3, 32°.90N±0°.04×76°.27E±0°.09, h28km±12km, mb3.4/2, Error ellipse: s-maj=13.2km s-min=5.2km az=158.9*

NDI ***02*** *20:20:52.9±2.6, 32°.93N×76°.15E, h33km, ML3.6*

ISC 02 20:20:54.7±1.2, 32°.84N±0°.04×76°.20E±0°.09, h33km±11km, n17, σ1°.25/23, mb3.4/2, 1D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.57**	**225**	*e*P	**Pb**	**20 21 05.1**	**-1.3**
THN				*e*S	**Sb**	**20 21 15.5**	**+1.1**
BHK	**Bhakra**	**1.43**	**172**	*e*x	**Pn**	**20 21 15.3**	**-3.0**
BHK				*e*S	**Sn**	**20 21 37.1**	**+1.2**
SDNR	**Sundarnagar**	**1.49**	**154**	*e*P	**Pn**	**20 21 17.1**	**-2.0**
SDNR				*e*S	**Sn**	**20 21 38.5**	**+1.2**
SMLA	**Simla**	**1.89**	**154**	*i* P	**Pn**	**20 21 24.2**	**-0.5**
SMLA				*i* S	**Sn**	**20 21 47.0**	**-0.4**
SMLA				*e*x	x	20 21 48.2	
	comp=N,2μm,0.3s						
SMLA				*e*x	x	20 21 49.0	
	comp=E,2μm,0.3s						
KLP	**Kalpa**	**2.17**	**126**	*e*P	**Pn**	**20 21 29.6**	**+1.0**
KLP				*e*S	**Sn**	**20 21 55.5**	**+1.2**
KLP				AML	AML	20 22 01.6	
	comp=N,273nm,0.5s						
KLP				AML	AML	20 22 02.1	
	comp=E,598nm,0.4s						
DDI	**Dehra Dun**	**2.97**	**147**	*e*x	x	20 21 50.5	
JOSI	**Joshimath**	**3.66**	**128**	*e*P	**Pn**	**20 21 49.2**	**+0.2**
JOSI				*e*S	**Sn**	**20 22 30.0**	**-0.9**
JOSI				AML	AML	20 22 33.8	
	comp=N,79nm,0.4s						
JOSI				AML	AML	20 22 44.7	
	comp=E,130nm,0.7s						
SONA	**Sohna**	**4.64**	**170**	*e*S	**Sn**	**20 22 52.1**	**-3.0**
KSH	**Kashi**	**6.67**	**358**	Pn	**Pn**	**20 22 30.5**	**+0.2**
KSH				Sn	**Sn**	**20 23 41.5**	**-3.6**
KSH				smax			
	comp=N,28nm,0.3s						
KSH				smax			
	comp=E,30nm,0.3s						
KK31	**Karatay Array**	**11.18**	**338**	P	**Pn**	**20 23 32.8**	**+0.6**
	comp=E,1.3nm,0.8s,baz=144,slow=12,SNR=7.6						
KK31				||S	**Sn**	**20 25 33.5**	**-2.5**
	comp=E,1.3nm,0.6s,baz=147,slow=22,SNR=7.6						
MKAR	**Makanchi Array**	**14.70**	**17**	Pn	**Pn**	**20 24 19.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=212,slow=15,SNR=5.2						
KURK	**Kurchatov**	**17.95**	**5**	P	**Pn**	**20 25 02.3**	**+0.7**
	comp=E,0.0nm,0.3s,baz=191,slow=11,SNR=2.2						
AB31	**Akbulak array**	**20.41**	**328**	P	**P**	**20 25 29.9**	**+1.2**
	comp=E,0.4nm,0.6s,baz=134,slow=11,SNR=5.8						
BVAR	**Borovoye Array**	**20.61**	**350**	P	**P**	**20 25 31.6**	**+0.7**
	comp=E,0.2nm,0.4s,baz=152,slow=10.0,SNR=2.2						
ZALV	**Zalesovo Beam**	**21.98**	**14**	LR	LR	20 34 36.5	
	comp=E,23nm,18.3s,baz=185,slow=37						
AKTO	**Aktyubinsk**	**22.12**	**328**	P	**P**	**20 25 48.7**	**+1.5**
	comp=E,1.0nm,0.6s,mb3.5,baz=105,slow=13,SNR=2.5						
YKA	**Yellowknife Ar**	**84.61**	**5**	P	**P**	**20 33 24.1**	**-0.3**
	comp=E,0.1nm,0.4s,mb3.3,baz=342,slow=5.0,SNR=4.8						

ISCJB ***02*** *20:35:47.5±1.2, 24°.11S±0°.09×179°.9W±0°.1, h494km±20km, mb3.6/8, Error ellipse: s-maj=21.5km s-min=10.8km az=25.8*

NEIC ***02*** *20:35:48.9±1.0, 24°.24S×179°.90W, h499km±19km, mb4.3/2, Error ellipse: s-maj=22.3km s-min=13.7km az=131.0*

IDC ***02*** *20:35:49.3±1.8, 24°.24S×179°.91W, h500km±25km, mb3.2/8, mb1 3.5/10, mb1mx3.4/18, mbtmp3.4/10, Error ellipse: s-maj=20.7km s-min=18.0km az=142.0*

ISC 02 20:35:49.0±1.1, 24°.25S±0°.10×179°.9W±0°.2, h500km±20km, n18, σ0°.94/19, mb3.6/8, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.29**	**161**	P	**P**	**20 37 19.8**	**+1.4**
	128nm,0.3s,baz=65,slow=17,SNR=7.6						
AFI	**Afiamalu**	**12.84**	**38**	P	**P**	**20 38 35.5**	**-1.1**
	6.2nm,0.3s,baz=230,slow=17,SNR=5.2						
AFI				S	**S**	**20 40 46.7**	**-8.0**
	0.9nm,0.3s,baz=197,slow=23,SNR=2.3						
URZ	**Urewera**	**14.19**	**190**	P	**P**	**20 38 49.8**	**-0.7**
	7.2nm,0.3s,baz=340,slow=2.3,SNR=15						
URZ				S	**S**	**20 41 19.5**	**-0.7**
	1.7nm,0.3s,baz=236,slow=22,SNR=6.1						
URZ	**Urewera**	**14.19**	**190**	*e*P	**P**	**20 38 48.5**	**-2.0**
URZ				S	**S**	**20 41 19.5**	**-0.7**
RPZ	**Rata Peaks**	**20.78**	**199**	P	**P**	**20 39 54.9**	**+0.5**
	11nm,0.5s,baz=116,slow=10,SNR=13						
CTA	**Charters Tower**	**31.56**	**271**	P	**P**	**20 41 30.9**	**+1.0**
	4.5nm,0.3s,mb4.3,baz=97,slow=11,SNR=12						
CTAO	**Charters Tower**	**31.56**	**271**	*e*P	**P**	**20 41 29.7**	**-0.2**
	24nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**34.67**	**249**	P	**P**	**20 41 57.0**	**+0.9**
	0.6nm,0.4s,mb3.4,baz=125,slow=16,SNR=5.7						
STKA	**Stephens Creek**	**34.67**	**249**	*e*P	**P**	**20 41 56.8**	**+0.7**
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**20 42 56.8**	**+0.4**
	0.6nm,0.5s,mb3.2,baz=94,slow=7.6,SNR=14						
WRAB	**Tennant Creek**	**42.45**	**267**	*e*P	**P**	**20 42 59.3**	**-0.2**
	1.9nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**42.46**	**266**	P	**P**	**20 42 59.4**	**-0.2**
	1.4nm,0.3s,mb3.8,baz=97,slow=8.4,SNR=67						
PVCP	**Virac**	**66.31**	**298**	||*i*P	**P**	**20 45 45.6**	**-2.1**
MJAR	**Matsushiro Arr**	**72.23**	**326**	P	**P**	**20 46 22.9**	**+0.1**
	0.3nm,0.3s,mb3.4,baz=177,slow=7.4,SNR=3.9						
KSRS	**Korea Array**	**78.56**	**320**	P	**P**	**20 46 59.0**	**+0.8**
	0.4nm,0.5s,mb3.2,baz=104,slow=5.1,SNR=1.9						
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	**20 47 58.2**	**+0.8**
	0.6nm,0.7s,mb3.6,baz=226,slow=3.3,SNR=6.8						
FINES	**FINESS Array B**	**138.80**	**341**	SKPbc	SKPbc	20 57 04.9	+0.2
	1.9nm,1.0s,baz=45,slow=3.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**168.85**	**188**	PKPab	PKPab	20 56 13.0	+0.2
	0.6nm,0.6s,baz=176,slow=4.1,SNR=3.5						

ISCJB ***02*** *20:37:13.0±4.7, 51°.7N±0°.1×175°.6E±0°.1, h15km±34km, mb3.7/6, Error ellipse: s-maj=21.5km s-min=13.7km az=11.2*

NEIC ***02*** *20:37:19.1±2.5, 51°.88N×175°.52E, h43km±21km, Error ellipse: s-maj=29.3km s-min=13.8km az=159.0*

IDC ***02*** *20:37:20.9±5.1, 51°.78N×175°.35E, h55km±47km, mb3.4/6, mb1 3.6/8, mb1mx3.3/28, mbtmp3.5/8, ML3.7/2, Error ellipse: s-maj=37.3km s-min=20.2km az=179.0*

ISC 02 20:37:14.4±5.0, 51°.7N±0°.1×175°.6E±0°.1, h8km±32km, n11, σ1°.13/13, mb3.7/6, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.36**	**318**	*e*Pn	**Pn**	**20 37 38.5**	**-1.1**
SMY				*e*Sn	**Sn**	**20 37 58.5**	**+0.7**
PETK	**Petropavlovsk-**	**11.02**	**284**	P	**Pn**	**20 39 54.1**	**+2.0**
	0.3nm,0.3s,baz=89,slow=18,SNR=3.1						
PETK				S	**Sn**	**20 41 43.2**	**-12**
	0.2nm,0.3s,baz=92,slow=40,SNR=1.3						
TNA	**Tin City**	**16.22**	**25**	P	**Pn**	**20 41 01.6**	**-0.7**
KDAK	**Kodiak Island**	**19.21**	**59**	P	**Pn**	**20 41 39.7**	**+0.4**
	0.6nm,0.3s,baz=277,slow=16,SNR=7.9						
KDAK	**Kodiak Island**	**19.21**	**59**	P	**Pn**	**20 41 39.7**	**+0.3**
SONM	**Songino Array**	**43.33**	**293**	P	**P**	**20 45 16.6**	**+0.1**
	0.5nm,0.5s,mb3.5,baz=60,slow=6.9,SNR=7.4						
MKAR	**Makanchi Array**	**57.02**	**305**	P	**P**	**20 46 58.8**	**-1.5**
	0.4nm,0.5s,mb3.7,baz=62,slow=6.5,SNR=7.5						
BVAR	**Borovoye Array**	**58.30**	**317**	P	**P**	**20 47 08.6**	**-0.6**
	0.6nm,0.3s,mb4.0,baz=52,slow=6.8,SNR=6.8						
TXAR	**Lajitas Array**	**62.02**	**77**	P	**P**	**20 47 37.2**	**+2.1**
	0.4nm,0.4s,mb3.9,baz=306,slow=5.9,SNR=10						
WRA	**Warramunga Arr**	**79.96**	**219**	P	**P**	**20 49 22.5**	**-1.3**
	1.0nm,1.1s,mb3.7,baz=30,slow=5.9,SNR=3.3						
ASAR	**Alice Springs**	**83.50**	**218**	P	**P**	**20 49 42.8**	**+0.3**
	0.4nm,0.9s,mb3.4,baz=20,slow=8.4,SNR=1.8						

IDC 02 20:37:56.7±46.0, 15°.40S×173°.02W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=884.6km s-min=185.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.35**	**240**	P	P	20 46 10.0	+1.0
	1.7nm,0.9s,baz=103,slow=12,SNR=6.6						
WRA	**Warramunga Arr**	**50.20**	**257**	P	P	20 46 53.9	-0.8
	0.3nm,0.7s,baz=96,slow=8.0,SNR=1.6						
ASAR	**Alice Springs**	**50.46**	**252**	P	P	20 46 56.2	-0.4
	1.5nm,0.6s,baz=88,slow=8.1,SNR=20						

MAN 02 20:46:17, 8°.59N×122°.57E, h39km, mb4.4, ML3.3, MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.80**	**180**	*e*P	Pn	20 46 32.6	+0.9
IPIL				*e*S	Sn	20 46 44.3	+1.9
PAGZ	**Pagadian**	**1.09**	**132**	*e*P	Pn	20 46 36.5	+0.7
PAGZ				*e*S	Sn	20 46 41.1	-8.6
GUIM	**Jordan**	**2.02**	**1**	*e*P	Pn	20 46 49.6	+1.0

GCMT ***02*** *20:48:09.6±0.1, 16°.72S×174°.63E, h21km, MW5.3/89, Moment Tensor Solution. s73,c126; s89,c172; Duration: 1s1 Moment tensor: Scale 10^17^Nm; Mrr-0.10±.02; Mθθ0.54±.02; Mφφ-0.44±.02; Mrθ-0.03±.03; Mθφ0.97±.02; Mφr0.01±.03; Best double couple: M0 1.09200×10^17^ NP1:φs193.00000°, δ88.00000°, λ-180.00000°. NP2:φs103.00000°, δ90.00000°, λ-2.00000°. Principal axes: T 1.1430, Plg1.0000°, Azm148.0000°; N -0.1020, Plg88.0000°, Azm271.0000°; P -1.0420, Plg2.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***02*** *20:48:09.6±3.2, 16°.65S×174°.58E, h4km±19km, mb4.9/48, MS4.6/3 Error ellipse: s-maj=11.3km s-min=6.1km az=149.0*

IDC ***02*** *20:48:10.0±0.6, 16°.61S×174°.51E, h0km, mb4.5/17, mb1 4.7/18, mb1mx4.7/20, mbtmp4.6/18, ML2.7/1, MS4.3/26, Ms1 4.3/26, ms1mx4.2/31, Error ellipse: s-maj=21.9km s-min=15.3km az=142.0*

SZGRF ***02*** *20:48:10.6, 18°.56S×174°.18E, h33km, Fiji Islands region*

BJI ***02*** *20:48:11.5, 16°.60S×174°.60E, h25km, mB5.1/25, mb4.9/38, Ms5.0/22, Ms7 4.6/27*

LDG ***02*** *20:48:12.8±0.2, 16°.25S×173°.97E, h10km, Mb5.1/2, Ms4.3/6, Error ellipse: s-maj=21.3km s-min=4.8km az=129.0*

ISCJB ***02*** *20:48:14.0±1.9, 16°.79S±0°.08×174°.51E±0°.04, h41km±17km, mb4.8/73, MS4.4/42, Error ellipse: s-maj=13.5km s-min=6.9km az=173.0*

DJA ***02*** *20:48:43, 16°.39S×174°.22E, h266km, mb4.7/13*

ISC 02 20:48:13.3±2.5, 16°.71S±0°.07×174°.57E±0°.04, h22km±18km, h24km±1.0km: pP-P, n412, σ0°.74/278, mb4.8/73, MS4.4/42, 120C-91D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**9.05**	**232**	*e*P	**Pn**	**20 50 24.8**	**+2.2**
FUNA	**Funafuti**	**9.30**	**30**	*e*Pn	**Pn**	**20 50 23.4**	**-2.7**
	65nm,0.8s						
DZM	**Mont Dzumac**	**9.34**	**234**	*e*LR	LR	20 52 20.3	
	4μm,28.1s						
DZM	**Mont Dzumac**	**9.34**	**234**	*e*Pn	**Pn**	**20 50 28.5**	**+1.9**
	981nm,1.6s						
LASL	**Noumea**	**9.36**	**233**	*e*P	**Pn**	**20 50 28.7**	**+1.9**
NOUC	**Port Laguerre**	**9.47**	**234**	*e*P	**Pn**	**20 50 30.8**	**+2.5**
AFI	**Afiamalu**	**13.46**	**80**	Pn	**Pn**	**20 51 22.1**	**-1.0**
	2.3nm,0.3s,baz=262,slow=18,SNR=8.8						
AFI				LR	LR	20 54 30.3	
	comp=Z,379nm,18.7s,baz=116,slow=28						
AFI	**Afiamalu**	**13.46**	**80**	*e*Pn	**Pn**	**20 51 22.1**	**-1.0**
	220nm,1.4s						
RAO	**Raoul Island**	**14.27**	**152**	LR	LR	20 54 56.5	
	comp=Z,780nm,19.9s,baz=263,slow=28						
RAO	**Raoul Island**	**14.27**	**152**	Pn	**Pn**	**20 51 32.7**	**-1.3**
URZ	**Urewera**	**21.59**	**175**	P	**P**	**20 53 01.8**	**+0.3**
	56nm,0.7s,mb5.1,baz=330,slow=4.2,SNR=16						
URZ				LR	LR	21 00 23.2	
	comp=Z,430nm,19.9s,MS3.9,baz=4.1,slow=34						
URZ	**Urewera**	**21.59**	**175**	*e*P	**P**	**20 53 01.3**	**-0.2**
	133nm,0.9s,mb5.4						
EIDS	**Eidsvold**	**23.53**	**245**	*e*P	**P**	**20 53 22.2**	**0.0**
	108nm,1.3s,mb5.1						
RAR	**Rarotonga**	**24.66**	**104**	LR	LR	21 00 27.2	
	comp=Z,558nm,18.7s,MS4.1,baz=268,slow=30						
ARMA	**Armidale**	**25.00**	**233**	*e*P	**P**	**20 53 36.3**	**+0.7**
ARMA	**Armidale**	**25.00**	**233**	*e*P	**P**	**20 53 35.4**	**-0.2**
	37nm,1.1s,mb4.8						
CTA	**Charters Tower**	**27.06**	**258**	*e*P	**P**	**20 53 58.2**	**+3.8**
	19nm,1.2s,mb4.5						
CTA	**Charters Tower**	**27.06**	**258**	P	**P**	**20 53 58.0**	**+3.6**
	33nm,1.1s,mb4.8,baz=96,slow=12,SNR=8.1						
CTA	**Charters Tower**	**27.06**	**258**	P	**P**	**20 53 58.0**	**+3.6**
CTAO	**Charters Tower**	**27.06**	**258**	P	**P**	**20 53 53.6**	**-0.8**
	52nm,1.3s,mb4.9						
RPZ	**Rata Peaks**	**27.09**	**186**	LR	LR	21 03 41.4	
	comp=Z,1μm,18.2s,MS4.5,baz=1.3,slow=34						
CNB	**Canberra Magne**	**29.13**	**226**	*e*P	**P**	**20 54 11.5**	**-1.2**
TOO	**Toolangi**	**32.97**	**225**	*e*P	**P**	**20 54 50.6**	**+4.1**
STKA	**Stephens Creek**	**33.48**	**237**	*e*P	**P**	**20 54 50.9**	**

comp=Z,76nm,6.6s
SSE LR LR
comp=N,180nm,20.0s,MS4.5
SSE LR LR
comp=E,250nm,20.0s,MS4.5
SSE LR LR
comp=Z,310nm,20.0s,MS4.5
PETK Petropavlovsk- 71.04 349 P **P** **20 59 29.3 +0.1**
comp=Z,18nm,0.9s,mb5.0,baz=131,slow=8.1,SNR=13
PETK LR LR 21 24 00.4
comp=Z,90nm,20.4s,MS4.0,baz=35,slow=30
NJ2 Nanjing 72.09 312 *eP* **P** **20 59 34.1 -2.0**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
QIZ Qiongzhong 72.88 296 *eP* **P** **20 59 40.9 -0.1**
QIZ S S 21 09 10.3 +3.8
QIZ LR LR
comp=Z,200nm,23.0s,MS4.3
MDJ Mudanjiang 73.49 328 P **P** **20 59 44.3 +0.2**
MDJ pP pP 20 59 50.9 -0.4
MDJ sP sP 20 59 53.3 -0.6
MDJ S S 21 09 14.6 +2.1
MDJ sS sS 21 09 25.6 +1.2
MDJ pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MDJ pmax pmax
comp=Z,53nm,5.2s
MDJ LR LR
comp=N,110nm,46.2s
MDJ LR LR
comp=E,210nm,34.3s
MDJ LR LR
comp=Z,230nm,31.0s
WHN Wuhan 74.56 309 P **P** **20 59 51.0 +0.3**
CN2 Changchun 75.10 325 *eP* **P** **20 59 53.9 +0.4**
CN2 *ep*P pP 20 59 59.9 -0.8
CN2 *eS* S 21 09 30.8 +0.2
CN2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s,MS4.7
CN2 LR LR
comp=E,200nm,16.0s,MS4.7
CN2 LR LR
comp=Z,200nm,20.0s,MS4.4
ENH Enshi 78.11 307 *eP* **P** **21 00 10.1 -0.8**
comp=Z,52nm,1.6s,mb5.2
BJI Beijing 78.32 318 P **P** **21 00 12.1 +0.3**
BJI PP PP 21 03 08.9 -0.3
BJI S S 21 10 07.2 +1.3
BJI pmax pmax
comp=Z,18nm,1.2s,mb4.9
BJI pmax pmax
comp=Z,170nm,4.0s
BJI LR LR
comp=N,140nm,16.0s,MS4.5
BJI LR LR
comp=E,130nm,18.4s,MS4.5
BJI LR LR
comp=Z,240nm,32.8s
GYA Guiyang 78.67 302 P **P** **21 00 13.2 -0.8**
GYA pP pP 21 00 22.4 +1.1
GYA PcP PcP 21 00 23.8 +0.9
GYA PP PP 21 03 13.2 +0.8
GYA S S 21 10 10.0 -0.2
GYA SS SS 21 15 17.0 +2.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,490nm,18.0s,MS5.0
GYA LR LR
comp=E,460nm,19.2s,MS5.0
GYA LR LR
comp=Z,470nm,18.4s,MS4.8
KDAK Kodiak Island 79.04 17 LR LR 21 28 27.9
comp=Z,172nm,19.8s,MS4.4,baz=145,slow=31
XAN Xi'an 80.27 310 P **P** **21 00 22.2 -0.4**
XAN pP pP 21 00 28.8 -1.1
XAN sP sP 21 00 31.3 -1.2
XAN PP PP 21 03 25.0 -0.6
XAN S S 21 10 27.8 +0.8
XAN sS sS 21 10 39.1 +0.1
XAN SS SS 21 15 40.5 +1.7
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
XAN LR LR
comp=N,140nm,20.9s,MS4.3
XAN LR LR
comp=E,78nm,24.9s,MS4.3
XAN LR LR
comp=Z,73nm,24.1s,MS3.9
HOPS Hopland 80.36 44 *eP* **P** **21 00 31.6 +8.7**
RSO Redoubt South 81.28 16 *eP* **P** **21 00 25.7 -1.7**
KMI Kunming 81.36 299 P **P** **21 00 29.9 +1.3**
KMI pP pP 21 00 36.9 +1.0
KMI sP sP 21 00 38.8 +0.3
KMI PP PP 21 03 38.6 +3.8
KMI S S 21 10 40.3 +1.7
KMI pmax pmax
comp=Z,16nm,1.7s,mb4.7
KMI pmax pmax
comp=Z,110nm,4.8s
KMI LR LR
comp=Z,200nm,15.4s,MS4.6
CMB Columbia Colle 81.72 46 P **P** **21 00 29.8 -0.5**
comp=Z,15nm,1.4s,mb4.7
HHC Hu-ho-hao-te 81.73 317 *eP* **P** **21 00 30.6 +0.4**
HHC pP pP 21 00 38.8 +1.3
HHC sP sP 21 00 41.8 +1.7
HHC PP PP 21 03 40.7 +3.2
HHC S S 21 10 44.1 +2.3
HHC SKS 21 10 45.5
HHC sS sS 21 10 56.4 +2.5
HHC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
HHC pmax pmax
comp=Z,98nm,5.8s
HHC LR LR
comp=N,290nm,20.6s,MS5.1
HHC LR LR
comp=E,960nm,22.5s,MS5.1
HHC LR LR
comp=Z,160nm,21.6s,MS4.3
ISA Isabella 81.97 49 ⇓P **P** **21 00 32.2 +0.6**
baz=82
ISA Isabella 81.97 49 *eP* **P** **21 00 29.7 -1.9**
comp=Z,6.3nm,1.0s,mb4.5
EDW2 Edwards Air Fo 81.97 50 ⇓P **P** **21 00 31.8 +0.2**
baz=82
YBH Yreka Blue Hor 81.99 42 P **P** **21 00 32.3 +0.8**
comp=Z,1.0nm,0.6s,mb3.9,baz=14,slow=8.0,SNR=5.6
YBH Yreka Blue Hor 81.99 42 *eP* **P** **21 00 31.7 +0.1**
comp=Z,6.6nm,1.0s,mb4.5
CMAR Chiang Mai Arr 82.19 292 P **P** **21 00 34.0 +1.0**
comp=Z,16nm,0.9s,mb4.9,baz=123,slow=3.8,SNR=49
CMAR LR LR 21 32 50.2
comp=Z,126nm,20.8s,MS4.3,baz=289,slow=33
HUMO Hull Mountain 82.28 41 *eP* **P** **21 00 30.1 -3.0**
comp=Z,5.5nm,1.0s,mb4.4
CHTO Chiang Mai 82.31 292 *eP* **P** **21 00 34.0 +0.3**
comp=Z,23nm,1.3s,mb4.9
LRMC Laurel Mountai 82.46 50 ⇑P **P** **21 00 35.1 +0.9**
baz=83
MAW Mawson 82.64 201 P **P** **21 00 36.8 +2.2**
comp=Z,8.4nm,1.1s,mb4.7,baz=130,slow=7.9,SNR=7.1
MAW LR LR 21 35 20.6
comp=Z,154nm,18.1s,MS4.4,baz=278,slow=34
MAW Mawson 82.64 201 *eP* **P** **21 00 36.0 +1.4**
comp=Z,2.3nm,1.2s,mb4.1
MAW *e* pP 21 00 43.8 +1.9
TTA Tatalina 82.65 13 *eP* **P** **21 00 32.1 -2.4**
comp=Z,21nm,1.2s,mb5.0
CD2 Chengdu 82.84 305 P **P** **21 00 36.2 0.0**
CD2 pP pP 21 00 42.6 -0.9
CD2 sP sP 21 00 45.2 -1.0
CD2 PP PP 21 03 48.9 +2.0
CD2 SKS 21 10 52.8
CD2 S S 21 10 53.0 -0.6
CD2 sS sS 21 11 03.6 -2.1
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,130nm,4.5s
CD2 LR LR
comp=N,340nm,17.8s
CD2 LR LR
comp=Z,320nm,21.4s,MS4.7
MPMC Manual Prospec 82.86 49 ⇓P **P** **21 00 36.2 -0.1**
baz=83
GSC Goldstone 83.03 50 ⇓P **P** **21 00 36.9 -0.2**
baz=83
BELC Belle Mtn. 83.07 52 ⇓P **P** **21 00 37.3 0.0**
baz=83
HEC Hector,Ludlow 83.18 51 ⇑P **P** **21 00 38.0 +0.1**
baz=83
BC3 Big Chuckw Mtn 83.33 52 ⇑P **P** **21 00 38.8 +0.1**
baz=84
NVAR Mina Array Bea 83.36 47 P **P** **21 00 39.1 +0.4**
comp=Z,1.3nm,0.7s,mb4.1,baz=227,slow=10.0,SNR=9.8
GRAC Grapevine Rang 83.37 48 ⇓P **P** **21 00 39.4 +0.6**
baz=84
FURC Furnace Creek, 83.50 49 ⇓P **P** **21 00 39.4 -0.1**
baz=84
MOD Modoc 83.64 43 P **P** **21 00 39.5 -0.6**
comp=Z,14nm,1.2s,mb5.0
F03A Seaside 83.64 38 ⇑P **P** **21 00 40.6 +0.6**
baz=84
GMRC Granite Mounta 83.65 51 ⇓P **P** **21 00 40.5 +0.1**
baz=84
K05A Summer Lake 83.66 42 ⇓P **P** **21 00 40.6 +0.4**
baz=84
SHOC Shoshone 83.68 50 ⇑P **P** **21 00 40.6 +0.2**
baz=84
TUQ Turquoise Moun 83.74 50 ⇑P **P** **21 00 40.9 +0.1**
baz=84
IRM Iron Mountain 83.77 52 ⇓P **P** **21 00 41.1 +0.1**
baz=84,SNR=6.4
S10A Tonopah Range, 84.33 48 ⇑P **P** **21 00 43.6 -0.2**
baz=84
Z13A Yuma Proving G 84.51 53 ⇑P **P** **21 00 44.8 0.0**
baz=85
Y13A Salome 84.63 53 ⇓P **P** **21 00 45.4 0.0**
baz=85
BBB Bella Bella 84.64 31 LR LR 21 30 36.4
comp=Z,135nm,21.3s,MS4.3,baz=98,slow=30
214A Organ Pipe Nat 84.67 55 ⇑P **P** **21 00 45.8 +0.2**
baz=85
R10A Warm Springs 84.70 48 ⇑P **P** **21 00 46.0 +0.4**
baz=85
BILL Bilibino 84.72 357 *eP* **P** **21 00 42.5 -2.5**
comp=Z,6.4nm,1.1s,mb4.7
LZH Lanzhou 84.91 310 *eP* **P** **21 00 48.6 +1.9**
LZH pP pP 21 00 55.1 +1.1
LZH sP sP 21 00 59.2 +2.5
LZH PP PP 21 04 06.4 +2.7
LZH SKS 21 11 07.0
LZH *eS* S 21 11 14.0 -0.3
LZH sS sS 21 11 25.3 -1.1
LZH pmax pmax
comp=Z,39nm,1.2s,mb5.4
LZH pmax pmax
comp=Z,130nm,6.0s
LZH LR LR
comp=N,360nm,17.4s
LZH LR LR
comp=Z,490nm,18.0s,MS4.9
X13A Yucca 84.95 52 ⇑P **P** **21 00 47.0 0.0**
baz=85
WVOR Wild Horse Val 84.98 43 *eP* **P** **21 00 47.1 +0.2**
comp=Z,7.6nm,1.0s,mb4.8
H06A Lindquist Farm 85.00 40 ⇑P **P** **21 00 47.2 +0.3**
baz=85
BMN Battle Mountai 85.01 45 *eP* **P** **21 00 46.5 -0.6**
comp=Z,10.0nm,1.0s,mb4.9
MCK McKinley 85.01 15 *eP* **P** **21 00 44.7 -1.8**
comp=Z,3.1nm,0.7s,mb4.5
T11A Corn Creek, Al 85.02 49 ⇑P **P** **21 00 47.6 +0.4**
baz=85
W13A Hualapai Mount 85.11 51 ⇑P **P** **21 00 47.7 -0.1**
baz=85
I07A Izee 85.20 41 ⇑P **P** **21 00 48.5 +0.5**
baz=85
R11A Troy Canyon, C 85.23 48 ⇑P **P** **21 00 48.2 -0.1**
baz=85
V13A Grand Canyon W 85.35 51 ⇓P **P** **21 00 48.6 -0.3**
baz=86
Q11A Duckwater 85.40 47 ⇓P **P** **21 00 49.2 +0.1**
baz=86
115A Sonoran Desert 85.42 54 ⇑P **P** **21 00 49.4 +0.1**
baz=86
S12A Delamar Landin 85.44 49 ⇓P **P** **21 00 49.2 -0.1**
baz=86
J08A Circle Bar Ran 85.52 42 ⇓P **P** **21 00 49.6 0.0**
baz=86
U13A Pakoon Wash 85.59 50 ⇓P **P** **21 00 50.3 +0.2**
baz=86
X14A Yava 85.61 52 ⇓P **P** **21 00 50.1 -0.1**
baz=86
W14A Seligman 85.76 51 ⇑P **P** **21 00 51.1 +0.2**
baz=86
Y15A Casa Rosa Ranc 85.83 53 ⇓P **P** **21 00 51.8 +0.5**
baz=86
T13A Saint George 85.88 50 ⇑P **P** **21 00 51.9 +0.3**
baz=86
V14A Boquillas Ranc 85.91 51 ⇑P **P** **21 00 52.4 +0.7**
baz=86
H08A Prairie City 85.94 41 ⇑P **P** **21 00 51.0 -0.6**
baz=86
O11A Cowboy Ranch, 85.95 46 ⇓P **P** **21 00 51.7 -0.1**
baz=86
M10A I.L. Ranch, Tu 85.96 45 ⇑P **P** **21 00 52.1 +0.3**
baz=86
J09A Fry Pan Ranch, 85.98 43 ⇑P **P** **21 00 52.1 +0.2**
baz=86
Q12A Willow Creek R 86.06 47 ⇓P **P** **21 00 52.2 -0.2**
baz=86
X15A Humboldt 86.11 52 ⇓P **P** **21 00 52.6 -0.1**
baz=86
G08A Pilot Rock 86.12 40 ⇑P **P** **21 00 52.8 +0.3**
baz=86
U14A Mt Trumbull 86.17 50 ⇑P **P** **21 00 53.0 +0.1**
baz=86,SNR=7.6
L10A Juniper Basin 86.25 44 ⇑P **P** **21 00 53.5 +0.3**
baz=86
K10A MacKenzie Ranc 86.30 43 ⇑P **P** **21 00 54.0 +0.6**
baz=86
R13A O'Grain Ranch, 86.32 48 ⇑P **P** **21 00 54.0 +0.4**
baz=86
Y16A Circle Bar Ran 86.45 53 ⇓P **P** **21 00 54.3 -0.2**
baz=87
ELK Elko 86.50 46 P **P** **21 00 55.0 +0.4**
comp=Z,0.8nm,0.8s,mb4.0,baz=210,slow=8.1,SNR=4.3
ARUT Antelope Range 86.54 49 *eP* **P** **21 00 52.7 -2.0**
comp=Z,13nm,1.2s,mb5.0
Q13A Wheeler Ranch, 86.60 48 ⇓P **P** **21 00 55.2 +0.2**
baz=87
O12A Currie 86.64 46 ⇓P **P** **21 00 55.4 +0.2**
baz=87
V15A Kaibab Nationa 86.68 51 ⇑P **P** **21 00 55.6 +0.1**
baz=87
N12A Clover Valley, 86.69 46 ⇑P **P** **21 00 55.4 0.0**
baz=87
N12A Clover Valley, 86.69 46 *eP* **P** **21 00 54.5 -0.9**
comp=Z,7.5nm,0.9s,mb4.9
X16A Lo Mia Camp, P 86.69 53 ⇓P **P** **21 00 55.5 0.0**
baz=87
318A Bisbee 86.70 56 ⇓P **P** **21 00 55.4 -0.3**
baz=87
P13A Bates Ranch, G 86.81 47 ⇑P **P** **21 00 56.2 +0.2**
baz=87
U15A North Rim 86.83 51 ⇑P **P** **21 00 56.4 +0.2**
baz=87
K11A Parker Ranch, 86.85 44 ⇓P **P** **21 00 56.3 +0.2**
baz=87
D08A Wollman Farm, 86.98 39 ⇓P **P** **21 00 57.4 +0.7**
baz=87
T15A Red Dirt Ranch 87.00 50 ⇓P **P** **21 00 57.3 +0.3**
baz=87
M12A Wells 87.01 45 ⇑P **P** **21 00 57.6 +0.6**
baz=87
Q14A Sevier Lake (B 87.14 48 ⇓P **P** **21 00 58.4 +0.8**
baz=87
118A Homack Ranch, 87.16 55 ⇓P **P** **21 00 57.8 -0.1**
baz=87
WUAZ Wupatki 87.16 52 *eP* **P** **21 00 56.8 -1.0**
comp=Z,8.6nm,1.0s,mb4.9
L12A House Creek Ra 87.25 45 ⇑P **P** **21 00 58.8 +0.6**
baz=87
N13A Wendover, West 87.26 46 P **P** **21 00 58.0 -0.2**
comp=Z,13nm,0.9s,mb5.2
MFID Camas Ranch 87.26 43 ⇓P **P** **21 00 58.5 +0.3**
baz=87
G10A Bishop Farm, J 87.27 41 ⇑P **P** **21 00 58.4 +0.3**
baz=87
I11A Placerville 87.40 43 ⇑P **P** **21 00 59.0 +0.2**
baz=88
PMSA Palmer Station 87.46 159 LR LR 21 37 20.3
comp=Z,446nm,18.3s,MS4.9,baz=292,slow=34
219A White Tail Can 87.48 56 ⇑P **P** **21 00 59.3 -0.2**
baz=88
M13A Montello 87.50 46 ⇓P **P** **21 00 59.2 -0.2**
baz=88
M13A Montello 87.50 46 *eP* **P** **21 00 58.7 -0.6**
comp=Z,19nm,1.2s,mb5.2
F10A Beach Ranch, E 87.51 40 ⇓P **P** **21 00 59.3 0.0**
baz=88
Y18A Canyon Day Jun 87.53 54 ⇑P **P** **21 00 59.9 +0.3**
baz=88
P14A Drum Mountains 87.53 47 ⇑P **P** **21 00 59.7 +0.1**
baz=88
J12A Stokes Ranch, 87.67 44 ⇑P **P** **21 01 00.3 +0.1**
baz=88,SNR=6.0
A08A Turner Farm, O 87.68 37 ⇑P **P** **21 00 60.0 0.0**
baz=88
H11A Donnelly 87.71 42 ⇑P **P** **21 01 00.6 +0.3**
baz=88
320A Kipp Ranch, An 87.82 57 ⇓P **P** **21 01 01.2 0.0**
baz=88
G11A Walters Elk Ra 87.86 41 ⇑P **P** **21 01 00.8 -0.2**
baz=88,SNR=5.9
I12A Atlanta 87.88 43 ⇑P **P** **21 01 01.4 +0.3**
baz=88
Z19A T-Link Ranch, 87.94 54 ⇓P **P** **21 01 01.7 0.0**
baz=88
L13A Double Diamond 87.95 45 ⇑P **P** **21 01 01.9 +0.5**
baz=88
DUG Dugway 87.96 47 P **P** **21 01 02.6 +1.0**
comp=Z,7.3nm,1.3s,mb4.8
ULN Ulaanbaatar 87.96 321 *eP* **P** **21 01 00.9 -0.5**
comp=Z,15nm,1.3s,mb5.1
M14A Sheep Mountain 88.12 46 ⇓P **P** **21 01 02.2 -0.1**
baz=88,SNR=5.4
R16A Teasdale 88.15 49 ⇑P **P** **21 01 03.1 +0.5**
baz=88
T17A Navajo Res., N 88.15 51 ⇑P **P** **21 01 02.4 -0.1**
baz=88
Y19A Nutrioso 88.20 54 ⇑P **P** **21 01 02.7 -0.1**
baz=88
HLID Hailey 88.26 43 ⇑P **P** **21 01 03.1 +0.3**
baz=88,SNR=6.9
HLID Hailey 88.26 43 *eP* **P** **21 01 03.4 +0.6**
comp=Z,5.8nm,1.0s,mb4.8
V18A Ganado 88.32 52 ⇑P **P** **21 01 03.5 +0.1**
baz=88
G12A Big Creek, Yel 88.33 42 ⇓P **P** **21 01 03.3 +0.1**
baz=88,SNR=6.6
X19A St. Johns 88.34 53 ⇑P **P** **21 01 03.8 +0.3**
baz=88
SONM Songino Array 88.34 321 P **P** **21 01 02.6 -0.6**
comp=Z,5.9nm,1.1s,mb4.8,baz=103,slow=3.9,SNR=27
SONM LR LR 21 35 34.9
comp=Z,139nm,22.0s,MS4.3,baz=123,slow=32
J13A Cove Ranch, Pi 88.35 44 ⇑P **P** **21 01 03.6 +0.2**
baz=88
H12A Diamond D Ranc 88.39 42 ⇓P **P** **21 01 03.3 -0.2**
baz=88,SNR=6.2
S17A Black Ridge (B 88.40 50 ⇑P **P** **21 01 04.0 +0.3**
baz=88
Z20A Nine Sixteen R 88.41 55 ⇑P **P** **21 01 03.6 -0.3**
baz=88
L14A Malta 88.41 45 ⇓P **P** **21 01 04.0 +0.3**
baz=89
N15A Stansbury Isla 88.44 46 ⇓P **P** **21 01 03.8 0.0**
baz=89
I13A Wildhorse Cree 88.60 43 ⇑P **P** **21 01 05.0 +0.5**
baz=89
Q16A Castle Valley 88.62 49 ⇓P **P** **21 01 04.8 +0.1**
baz=89
F12A Elk City 88.65 41 ⇓P **P** **21 01 04.8 +0.1**
baz=89,SNR=6.3
K14A Jones Ranch, D 88.66 45 ⇓P **P** **21 01 05.1 +0.3**
baz=89
M15A Larsen Ranch, 88.72 46 ⇑P **P** **21 01 05.5 +0.4**
baz=89
TMUT Trail Mountain 88.74 48 *eP* **P** **21 01 02.8 -2.5**
comp=Z,11nm,1.0s,mb5.2
J14A Carey 88.75 44 ⇓P **P** **21 01 05.6 +0.4**
baz=89
R17A Hanksville Air 88.76 49 ⇑P **P** **21 01 05.4 0.0**
baz=89
H13A Challis 88.78 43 ⇑P **P** **21 01 06.4 +1.0**
baz=89
Y20A Horse Springs, 88.86 54 ⇑P **P** **21 01 05.8 -0.1**
baz=89
O16A Springville 88.88 47 ⇑P **P** **21 01 05.8 -0.1**
baz=89
T18A Mexican Hat 88.89 51 ⇓P **P** **21 01 06.3 +0.2**
baz=89
L15A Malad City 88.98 45 ⇓P **P** **21 01 06.5 +0.2**
baz=89
S18A Hurst Farm, Bl 89.01 50 ⇑P **P** **21 01 06.6 0.0**
baz=89
G13A Cobalt 89.02 42 ⇓P **P** **21 01 07.0 +0.5**
baz=89
I14A Mackay 89.04 43 ⇓P **P** **21 01 07.2 +0.6**
baz=89,SNR=5.5
JLU Jordanelle 89.07 47 P **P** **21 01 05.8 -1.0**
comp=Z,6.1nm,1.0s,mb4.9
SRU San Rafael 89.16 49 ⇑P **P** **21 01 07.6 +0.3**
baz=89
SRU San Rafael 89.16 49 *eP* **P** **21 01 07.5 +0.3**
comp=Z,18nm,1.2s,mb5.3
GTA Gaotai 89.17 312 *eP* **P** **21 01 08.7 +1.4**
GTA pP pP 21 01 16.4 +1.8
GTA sP sP 21 01 19.6 +2.3
GTA SKS 21 11 35.4
GTA S S 21 11 58.0 +2.8
GTA pmax pmax
comp=Z,17nm,1.3s,mb5.2
GTA pmax pmax
comp=Z,83nm,5.6s
GTA LR LR
comp=N,77nm,17.3s,MS4.4
GTA LR LR
comp=E,120nm,20.2s,MS4.4
GTA LR LR
comp=Z,150nm,18.7s,MS4.4
M16A Huntsville 89.23 46 ⇓P **P** **21 01 07.4 -0.1**
baz=89
F13A Darby 89.25 41 ⇑P **P** **21 01 07.3 -0.2**
baz=89
R18A Canyonlands Na 89.34 50 ⇓P **P** **21 01 07.9 -0.2**
baz=90
A11A Hall Mountain, 89.38 38 ⇓P **P** **21 01 08.6 +0.5**
baz=90
T19A Beclabito 89.42 51 ⇓P **P** **21 01 08.7 +0.2**
baz=90
O17A Robinson Place 89.42 48 ⇓P **P** **21 01 08.5 +0.1**
baz=90
Q18A Rafter H Ranch 89.44 49 ⇑P **P** **21 01 09.1 +0.5**
baz=90
Y21A Point of Rocks 89.44 54 ⇓P **P** **21 01 08.5 -0.2**
baz=90
P18A Preston Nutter 89.56 48 ⇑P **P** **21 01 09.4 +0.3**
baz=90
G14A Jackson 89.58 42 ⇓P **P** **21 01 09.8 +0.8**
baz=90
U20A Newcomb 89.63 52 ⇑P **P** **21 01 09.3 -0.2**
baz=90
N17A Moffit Pass 89.64 47 ⇑P **P** **21 01 09.3 -0.1**
baz=90
Z22A Elephant Butte 89.73 55 ⇑P **P** **21 01 09.9 -0.2**
baz=90
MCMT McKenzie Canyo 89.81 43 *eP* **P** **21 01 07.1 -3.0**
comp=Z,3.5nm,1.0s,mb4.6
BSMT Bassoo Peak 89.84 39 *eP* **P** **21 01 09.7 -0.5**
comp=Z,4.8nm,1.1s,mb4.7
H15A Lima 89.85 43 ⇓P **P** **21 01 10.9 +0.5**
baz=90
C13A Hot Springs 89.90 40 ⇓P **P** **21 01 11.0 +0.5**
baz=90
M17A Scullys Gap (B 89.96 46 ⇓P **P** **21 01 10.9 0.0**
baz=90
Y22A Socorro 89.97 55 ⇑P **P** **21 01 11.0 -0.2**
baz=90
DLMT Dillon 90.18 42 *eP* **P** **21 01 11.7 -0.2**
comp=Z,9.8nm,1.2s,mb5.0
RRI2 Red Ridge 90.23 45 *eP* **P** **21 01 11.0 -1.2**

comp=Z,6.7nm,0.9s,mb5.0
B13A Whitefish 90.26 39 ⇓P P 21 01 12.4 +0.2
baz=90
324A Moseley Ranch, 90.31 57 ⇑P P 21 01 12.4 -0.4
baz=90
M18A Lyman 90.36 47 ⇓P P 21 01 12.9 +0.1
baz=90
F15A Butte 90.44 42 ⇓P P 21 01 13.9 +0.8
baz=91
LRM Limekiln Ridge 90.46 42 eP P 21 01 12.2 -1.0
comp=Z,38nm,1.3s,mb5.6
P19A Cripple Cowboy 90.47 49 ⇓P P 21 01 13.8 +0.4
baz=91
224A Corundas Mount 90.48 57 ⇑P P 21 01 13.2 -0.4
baz=91
425A Indio Mountain 90.49 58 ⇓P P 21 01 13.6 -0.1
baz=91
S21A Coal Bank Pass 90.63 51 ⇑P P 21 01 14.5 +0.3
baz=91
J17A Brown Place, J 90.64 45 ⇑P P 21 01 14.4 +0.3
baz=91
325A Bean Ranch, Si 90.69 58 ⇑P P 21 01 14.5 -0.2
baz=91
IMW Indian Meadow 90.70 44 eP P 21 01 13.4 -0.9
comp=Z,5.3nm,1.1s,mb4.8
ANMO Albuquerque 90.71 54 P P 21 01 14.8 +0.2
comp=Z,1.6nm,0.7s,mb4.5,baz=225,slow=5.5,SNR=4.9
ANMO Albuquerque 90.71 54 eP P 21 01 13.9 -0.7
comp=Z,10nm,1.1s,mb5.1
SHL Shillong 90.71 296 eP P 21 01 16.0 +1.2
626A Big Bend Ranch 90.79 59 ⇓P P 21 01 15.3 +0.1
baz=91
H16A Russell Place, 90.80 43 ⇓P P 21 01 15.6 +0.8
baz=91
K18A Toltan Ranch, 90.83 46 ⇑P P 21 01 15.6 +0.6
baz=91
P20A De Beque 90.84 49 ⇓P P 21 01 15.5 +0.4
baz=91
D15A Lincoln 90.91 41 ⇓P P 21 01 15.9 +0.7
baz=91
BOZ Bozeman (W) 90.92 42 ⇓P P 21 01 15.8 +0.5
baz=91
I17A Pilgrim Ck. 90.95 44 ⇓P P 21 01 15.9 +0.4
baz=91
F16A Kennard Place, 90.98 42 ⇓P P 21 01 15.6 0.0
baz=91
526A Mary Lane Ranc 90.99 59 ⇓P P 21 01 15.6 -0.5
baz=91
W23A Werner Place, 91.02 54 ⇓P P 21 01 15.7 -0.3
baz=91
M19A Rock Springs 91.02 47 ⇓P P 21 01 16.2 +0.3
baz=91
J18A Kendall Valley 91.06 45 ⇑P P 21 01 15.7 -0.3
baz=91
R21A Cimarron 91.06 50 ⇓P P 21 01 16.6 +0.5
baz=91
USHA Ushuaia 91.07 149 LR LR 21 31 30.8
comp=Z,468nm,20.9s,MS4.9,baz=59,slow=28
L19A Farson 91.10 46 ⇓P P 21 01 16.2 0.0
baz=91
TXAR Lajitas Array 91.11 60 P P 21 01 16.6 0.0
comp=Z,2.3nm,1.1s,mb4.4,baz=224,slow=4.7,SNR=7.0
TXAR LR LR 21 34 02.1
comp=Z,145nm,21.5s,MS4.4,baz=175,slow=30
TXAR Lajitas Array 91.11 60 P P 21 01 16.6 0.0
TXAR LR LR 21 34 02.1
A14A Double T Ranch 91.14 39 ⇑P P 21 01 16.6 +0.4
baz=91
C15A Salmond Ranch, 91.15 40 ⇓P P 21 01 16.6 +0.3
baz=91
Y24A Capitan 91.16 55 ⇑P P 21 01 16.5 -0.2
baz=91
O20A White River Ci 91.18 48 ⇓P P 21 01 17.2 +0.5
baz=91
BW06 Boulder Array 91.20 46 ⇑P P 21 01 16.7 0.0
baz=91
PDAR Pinedale Array 91.21 46 P P 21 01 16.0 -0.7
comp=Z,1.0nm,1.1s,mb4.1,baz=248,slow=1.6,SNR=5.1
PDAR LR LR 21 38 01.1
comp=Z,61nm,19.4s,MS4.0,baz=350,slow=33
HRY Holter Researc 91.21 41 eP P 21 01 15.6 -1.1
426A McDonald Obser 91.23 58 ⇓P P 21 01 16.7 -0.5
baz=91
E16A East Helena 91.24 42 ⇓P P 21 01 17.2 +0.4
baz=91
627A Terlingua Ranc 91.38 60 ⇓P P 21 01 18.0 +0.1
baz=92
TLY Talaya 91.64 324 eP P 21 01 13.1 -5.4
comp=Z,5.3nm,1.2s,mb4.8
M20A Sweetwater, Wa 91.70 47 ⇓P P 21 01 19.0 -0.1
baz=92
Q22A Crested Butte, 91.70 50 ⇓P P 21 01 18.8 -0.3
baz=92
K19A Absolon Red Bu 91.71 46 ⇓P P 21 01 19.2 +0.1
baz=92
L20A Wamsutter 91.77 47 ⇑P P 21 01 19.9 +0.6
baz=92
628A Black Gap, Mar 91.80 60 ⇓P P 21 01 19.4 -0.4
baz=92
528A Cox Ranch, San 92.09 59 ⇓P P 21 01 21.0 -0.1
baz=92
C17A Wharram Farm, 92.24 41 ⇓P P 21 01 21.6 +0.3
baz=92
RLMT Red Lodge 92.26 43 eP P 21 01 21.0 -0.6
comp=Z,3.7nm,1.1s,mb4.6
M21A Separation Pea 92.31 47 ⇓P P 21 01 21.9 0.0
baz=92
SDCO Great Sand Dun 92.37 51 eP P 21 01 22.2 0.0
comp=Z,4.8nm,1.1s,mb4.7
L21A Rawlins 92.43 47 ⇓P P 21 01 22.5 +0.1
baz=93
LSA Lhasa 92.59 300 eP P 21 01 24.5 +1.0
comp=Z,6.5nm,1.0s,mb5.0
INK Inuvik 92.60 17 P P 21 01 25.4 +2.8
comp=Z,0.4nm,0.7s,mb4.0,baz=126,slow=8.7,SNR=1.6
INK LR LR 21 35 32.9
comp=Z,114nm,20.7s,MS4.3,baz=248,slow=31
TIXI Tiksi 93.38 347 eP P 21 01 24.7 -1.4
comp=Z,1.4nm,0.6s,mb4.6
YKA Yellowknife Ar 96.14 26 P P 21 01 39.6 +0.7
comp=Z,0.7nm,0.9s,mb4.1,baz=252,slow=4.7,SNR=7.4
YKA LR LR 21 39 29.3
comp=Z,9.7nm,18.4s,MS3.3,baz=230,slow=32
PLCA Paso Flores 96.93 136 LR LR 21 36 21.8
comp=Z,229nm,21.1s,MS4.6,baz=248,slow=30
WMQ Urumqi 99.17 313 eP P 21 01 52.6 -0.4
MKAR Makanchi Array 103.52 315 Pdiff Pdif 21 02 12.4 +0.1
comp=Z,0.9nm,1.0s,baz=57,slow=4.5,SNR=4.4
FINES FINESS Array B 130.03 341 PKP PKPdf 21 07 21.5 +0.6
comp=Z,1.6nm,0.9s,baz=5.7,slow=5.6,SNR=3.2
FINES FINESS Array B 130.03 341 PKP PKPdf 21 07 21.5 +0.6
AKASG Malin Array Be 136.20 329 PKP PKPdf 21 07 31.3 -1.5
comp=Z,0.2nm,0.3s,baz=38,slow=1.6,SNR=1.6
BRTR Keskin Array B 139.09 312 PKP PKPdf 21 07 38.5 0.0
comp=Z,0.5nm,0.5s,baz=204,slow=3.2,SNR=3.6
DPC Dobruska-Polom 142.15 337 ePKP PKPdf 21 07 41.5 -2.2
NRDL Niedersach Rie 142.24 344 ePKPdf PKPdf 21 07 37.6 -6.2
CLL Collm 142.47 341 ePKP PKPdf 21 07 40.0 -4.2
CLL LR LR
comp=Z,100nm,21.8s,MS4.5
CLL Collm 142.47 341 ePKPdf PKPdf 21 07 40.0 -4.2
CLL LmV 21 11 00.0
comp=Z,100nm,21.8s
CLL eSS SS 21 29 36.0 +11
BRG Berggiesshubel 142.55 340 eP PKPdf 21 07 43.1 -1.3
comp=Z,2.0nm,0.9s
BRG e 21 09 01.2
comp=Z,3.0nm,1.0s
BRG e 21 34 56.0
BRG
comp=N,152nm,20.4s
BRG
comp=E,73nm,18.2s
BRG
comp=Z,174nm,21.4s
VYHS Vyhne 142.61 333 ePKP PKPdf 21 07 40.5 -4.1
VYHS e 21 08 06.8
VYHS Vyhne 142.61 333 ePKP PKPdf 21 07 40.5 -4.1
VYHS e 21 08 06.8
IBBN Ibbenburen 142.98 347 ePKPbc PKPdf 21 07 42.4 -2.7
PRU Pruhonice 143.09 338 ePKP PKPdf 21 07 42.9 -2.5
TANN Tannenbergstha 143.42 341 ePKPbc PKPdf 21 07 42.7 -3.2
MOX Moxa 143.48 342 ePKP PKPdf 21 07 46.0 0.0
MOX Moxa 143.48 342 ePKPbc PKPdf 21 07 42.0 -4.0
PGB Panagyurishte 143.93 322 eP PKPdf 21 07 44.9 -2.2
ROTZ Rotzenmuhle 144.07 340 ePKPbc PKPdf 21 07 45.2 -1.9
RZN Rozhen 144.09 320 eP PKPdf 21 07 44.5 -2.9

KHC Kasperske Hory 144.15 339 ePKPdf PKPdf 21 07 44.8 -2.4
KHC Kasperske Hory 144.15 339 ePKP PKPdf 21 07 45.2 -2.1
KHC ex x 21 07 57.9
CONA Conrad Observa 144.29 335 ⇑iPKPdf PKPdf 21 07 46.0 -1.5
comp=Z,11nm,1.0s,SNR=9.5
GEC2 GERESS Array S 144.35 338 ePKPbc PKPdf 21 07 45.7 -1.9
GERES GERESS Array B 144.35 338 PKP PKPdf 21 07 45.4 -2.2
comp=Z,5.6nm,0.9s,baz=45,slow=2.5,SNR=43
WET Wettzell 144.38 339 ePKPbc PKPdf 21 07 45.2 -2.5
GRA1 Grafenberg Arr 144.44 341 ePKPbc PKPdf 21 07 45.6 -2.2
GRF Grafenberg Arr 144.44 341 ePKPbc PKPdf 21 07 45.6 -2.2
VTS Vitosha 144.46 322 eP PKPdf 21 07 46.4 -1.6
TNS Taunus Mts 144.74 345 ePKPbc PKPdf 21 07 47.1 -1.2
MMB Musomiste 144.76 321 eP PKPdf 21 07 46.9 -1.7
MEM Membach 144.95 347 PKP PKPdf 21 07 47.8 -0.8
MEM E 21 07 51.1
ARSA Arzberg 144.97 335 ⇑iPKPbc PKPdf 21 07 47.7 -1.0
comp=Z,16nm,1.4s,SNR=9.4
MOA Molln 144.97 337 ⇑iPKPbc PKPdf 21 07 47.9 -0.9
comp=Z,34nm,1.2s,SNR=29
KKB Krupnik 144.98 322 eP PKPdf 21 07 47.9 -1.0
UCC Uccle 145.09 349 PKP PKPdf 21 07 48.2 -0.6
UCC APKP 21 07 55.6
TOD Tromm 145.21 344 PKP PKPdf 21 07 48.8 -0.3
BCLA Clavier 145.28 348 PKP PKPdf 21 07 48.6 -0.5
BCLA APKP 21 07 55.0
ABH Alteburg 145.28 345 PKP PKPdf 21 07 49.3 +0.1
RUP Ruppelstein 145.57 346 PKP PKPdf 21 07 50.6 +0.9
RJOB Jochberg 145.61 338 ePKPbc PKPbc 21 07 50.1 0.0
SOKA Soboth 145.63 335 ⇑iPKPbc PKPbc 21 07 49.6 -0.5
comp=Z,28nm,1.3s
KTD Kalmit 145.67 344 PKP PKPdf 21 07 50.6 +0.7
GIVF Givet 145.67 348 ⇑iPKP1 PKPbc 21 07 49.8 -0.4
comp=Z,67nm,1.1s
MENF Mencas 145.69 351 PKP PKPdf 21 07 49.9 0.0
DOU Dourbes 145.72 349 PKP PKPdf 21 07 50.1 +0.1
DOU APKP 21 07 54.1
FUR Furstenfeldbru 145.76 340 ePKPbc PKPbc 21 07 50.7 +0.2
WLF Walferdange 145.81 347 PKP PKPdf 21 07 50.4 +0.3
WLF APKP 21 07 54.3
WLF Walferdange 145.81 347 ePKPbc PKPbc 21 07 51.0 +0.4
WLF Walferdange 145.81 347 ePKPdf PKPdf 21 07 50.5 +0.4
BAIF Baives 145.83 349 ⇑iPKP1 PKPbc 21 07 50.5 -0.2
comp=Z,65nm,1.1s
STU Stuttgart 145.86 343 ePKPbc PKPbc 21 07 51.0 +0.2
STU Stuttgart 145.86 343 ePKPdf PKPdf 21 07 50.4 +0.2
OBKA Obir 145.96 335 ⇑iPKPdf PKPdf 21 07 50.5 0.0
comp=Z,14nm,1.3s
KBA Koelnbreinsper 145.96 337 i PKPdf PKPdf 21 07 50.6 +0.1
comp=Z,9.4nm,0.9s,SNR=7.3
LANF Langenberg 146.05 344 PKP PKPdf 21 07 51.9 +1.4
MYKA Terra Mystica 146.22 336 ⇑iPKPdf PKPdf 21 07 51.0 +0.1
comp=Z,8.2nm,0.7s
WATA Walderalm 146.38 339 ⇑iPKPdf PKPdf 21 07 52.0 +0.8
comp=Z,6.2nm,0.6s
WTTA Wattenberg 146.42 339 ⇓iPKPdf PKPdf 21 07 52.3 +1.0
comp=Z,20nm,1.1s
BFO Black Forest 146.51 343 ePKPbc PKPbc 21 07 52.5 -0.2
RETA Reutte 146.53 340 ⇑iPKPdf PKPdf 21 07 52.5 +1.1
comp=Z,22nm,1.4s,SNR=13
MOTA Moosalm 146.53 339 ⇓iPKPdf PKPdf 21 07 52.6 +1.2
comp=Z,19nm,1.0s,SNR=18
ABTA Abfaltersbach 146.55 337 ⇑iPKPdf PKPdf 21 07 51.8 +0.4
comp=Z,14nm,0.9s,SNR=9.5
SPAK Spaichingen-Ko 146.59 343 PKP PKPdf 21 07 53.1 +1.6
VOY Vojsko 146.62 335 ePKP PKPdf 21 07 52.5 +0.9
CDF Champ du Feu 146.71 345 ⇑iPKP1 PKPbc 21 07 53.1 -0.2
comp=Z,44nm,1.0s
ECH Echery 146.92 345 PKP PKPdf 21 07 53.8 +1.8
ECH Echery 146.92 345 ePKPbc PKPbc 21 07 53.2 -0.7
FETA Feichten 146.94 340 ⇑iPKPdf PKPbc 21 07 53.9 -0.1
comp=Z,21nm,1.1s,SNR=12
DAVA Damuels 146.99 341 ⇑iPKPdf PKPbc 21 07 54.0 -0.2
comp=Z,33nm,1.2s,SNR=9.2
FELD Feldberg im Sc 147.01 343 PKP PKPbc 21 07 54.2 0.0
MEZF Maizieres J'vi 147.15 347 ⇑iPKP1 PKPbc 21 07 54.5 -0.1
comp=Z,62nm,1.1s
THEF They Montfort 147.20 346 PKP PKPbc 21 07 55.3 +0.6
MOF Molkenrain 147.27 344 PKP PKPbc 21 07 54.9 0.0
HAU Haudompre 147.32 345 ⇑iPKP1 PKPbc 21 07 54.6 -0.5
comp=Z,15nm,0.8s
HAU eMLR MLR
comp=Z,113nm,19.5s,MS4.4
HAU Haudompre 147.32 345 ⇑iPKP PKPbc 21 07 54.6 -0.5
HAU LR LR
comp=Z,110nm,19.5s,MS4.7
HINF Hinteralfeld 147.37 345 ⇑iPKP1 PKPbc 21 07 54.6 -0.6
comp=Z,19nm,1.1s
FLN La Foliniere 147.78 354 ⇑iPKP1 PKPbc 21 07 55.5 -0.8
comp=Z,44nm,1.3s
FLN eMLR MLR
comp=Z,147nm,22.0s,MS4.4
FLN La Foliniere 147.78 354 ⇑iPKP PKPbc 21 07 55.5 -0.8
FLN LR LR
comp=Z,150nm,22.0s,MS4.7
LOMF Lomont 147.81 344 PKP PKPbc 21 07 56.8 +0.4
LDF La Druitiere 147.90 353 ePKP1 PKPbc 21 07 55.9 -0.7
comp=Z,20nm,1.1s
GVD Gavdhos 148.04 310 ePKPbc PKPbc 21 07 56.2 -1.2
GRR Gorron 148.18 354 ePKP1 PKPbc 21 07 56.8 -0.6
comp=Z,48nm,1.4s
SGMF Saint Gilles 148.45 356 ePKP1 PKPbc 21 07 57.4 -0.7
comp=Z,45nm,1.2s
LOR Lormes 148.57 348 ⇑iPKP1 PKPbc 21 07 58.0 -0.5
comp=Z,24nm,1.1s
LOR eMLR MLR
comp=Z,110nm,22.8s,MS4.3
LOR Lormes 148.57 348 ⇑iPKP PKPbc 21 07 58.0 -0.5
LOR LR LR
comp=Z,110nm,22.8s,MS4.6
CABF La Chapelle 148.68 345 ⇑iPKP1 PKPbc 21 07 58.8 0.0
comp=Z,22nm,0.9s
HYF Humbligny 148.80 349 ePKP1 PKPbc 21 07 59.0 0.0
SSF Saint Saulge 148.84 348 ⇑iPKP1 PKPbc 21 07 58.8 -0.3
comp=Z,37nm,1.2s
AVF Avril sur Loir 149.13 348 ⇑iPKP1 PKPbc 21 07 59.2 -0.7
comp=Z,7.1nm,0.8s
SMF Signal de Mont 149.17 347 ⇑iPKP1 PKPbc 21 07 59.4 -0.6
comp=Z,29nm,1.1s
BGF Bois d'Agland 149.45 349 ⇑iPKP1 PKPbc 21 08 00.1 -0.6
comp=Z,22nm,1.0s
LPL La Plagne 149.52 343 ⇑iPKP1 PKPbc 21 08 01.1 +0.2
comp=Z,19nm,1.1s
LPG La Plagne 149.53 343 ⇑iPKP1 PKPbc 21 08 01.2 +0.3
comp=Z,15nm,0.9s
AQU L'Aquila 149.78 332 ePKPbc PKPbc 21 08 01.0 -0.7
TCF Toulx Ste Croi 149.83 349 ⇑iPKP1 PKPbc 21 08 01.0 -0.6
comp=Z,27nm,1.2s
MFF Saint Martin d 149.87 353 ⇑iPKP1 PKPbc 21 08 01.0 -0.7
comp=Z,26nm,1.1s
BNI Bardonecchia 149.96 343 ePKPbc PKPbc 21 08 02.0 0.0
MBDF Montbardon 150.24 342 ⇑iPKP1 PKPbc 21 08 02.1 -0.6
comp=Z,11nm,0.8s
ORIF Oris-en-Rattie 150.31 344 ⇑iPKP1 PKPbc 21 08 02.4 -0.4
comp=Z,18nm,0.8s
ORIF eMLR MLR
comp=Z,86nm,22.5s,MS4.2
SSB Saint Sauveur 150.31 346 ePKPbc PKPbc 21 08 02.5 -0.4
TIP Timpagrande 150.40 324 ePKPbc PKPbc 21 08 02.5 -0.8
SAOF Saorge 150.67 341 PKP PKPbc 21 08 03.2 -0.5
VIVF Saint-Julien-l 150.68 345 ⇑iPKP1 PKPbc 21 08 03.3 -0.4
comp=Z,21nm,1.2s
AUTN L'Aution 150.70 341 PKP PKPbc 21 08 01.9 -1.9
TOUF Mont Tournerai 150.74 341 PKP PKPbc 21 08 03.5 -0.4
SBF Sospel 150.82 341 ⇑iPKP1 PKPbc 21 08 02.9 -1.2
comp=Z,37nm,1.0s
LUCF Luceram 150.82 341 PKP PKPbc 21 08 05.0 +0.9
RJF Les Rejaudoux 150.90 350 ePKP1 PKPbc 21 08 03.6 -0.6
comp=Z,21nm,1.1s
RJF eMLR MLR
comp=Z,108nm,22.8s,MS4.3
RJF Les Rejaudoux 150.90 350 ePKP PKPbc 21 08 03.6 -0.6
RJF LR LR
comp=Z,110nm,22.8s,MS4.6
CAF Calviac 151.17 349 ePKP1 PKPbc 21 08 05.1 +0.2
SMRF Simiane la Rot 151.26 343 ⇑iPKP1 PKPbc 21 08 04.9 -0.2
comp=Z,28nm,1.2s
FRF La Foret Royal 151.33 342 ⇑iPKP1 PKPbc 21 08 04.3 -1.0
comp=Z,19nm,1.1s
LFF La Frestale 151.38 351 ePKP1 PKPbc 21 08 04.8 -0.6
comp=Z,33nm,1.3s
PGF Pioggiola 151.44 337 ⇑iPKP1 PKPbc 21 08 04.5 -1.1
comp=Z,26nm,1.0s
LMR La Mourre 151.58 342 ⇑iPKP1 PKPbc 21 08 05.0 -0.9
comp=Z,20nm,1.1s

LASF Ste Croix 151.61 346 ⇑iPKP1 PKPbc 21 08 05.5 -0.4
comp=Z,12nm,1.1s
SJPF Ste Jean 153.44 353 ePKP1 PKPbc 21 08 10.4 +0.4
comp=Z,11nm,1.0s
ETSF Etsaut 153.57 352 ePKP1 PKPbc 21 08 11.4 +1.1
ESDC Sonseca Array 157.08 357 PKPab PKPab 21 08 37.8 +0.1
comp=Z,1.1nm,0.7s,baz=360,slow=4.1,SNR=9.2
TORD Torodi Ar. Bea 172.26 244 PKP PKPdf 21 08 23.7 +2.3
comp=Z,4.6nm,1.1s,baz=139,slow=1.8,SNR=7.5
TORD PKPab PKPab 21 09 47.6 +2.2
comp=Z,1.4nm,1.0s,baz=96,slow=5.1,SNR=2.8

ISCJB ***02*** *21:09:45.9±0.8, 5.°18S±0.°06×133.°3E±0.°1, h10km, mb3.7/4, Error ellipse: s-maj=17.3km s-min=8.4km az=9.0*
NEIC ***02*** *21:09:49.0±0.9, 5.°06S×133.°37E, mb4.1/2, Error ellipse: s-maj=27.5km s-min=12.7km az=79.0*
IDC ***02*** *21:09:49.1±1.1, 5.°11S×133.°28E, h16km±5km, mb3.7/4, mb1 4.0/7, mb1mx3.7/16, mbtmp3.9/7, ML4.2/3, Error ellipse: s-maj=56.2km s-min=20.2km az=72.0*
ISC 02 21:09:47.6±0.8, 5.°16S±0.°06×133.°4E±0.°1, h10km, (h18km±1.5km: pP-P), n17, σ1.9 39/20, mb3.7/4, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.57	187	eP	Pn	21 11 40.6	+2.4
24nm,0.6s							
KAKA				eS	Sn	21 13 01.0	-3.1
KAKA	Kakadu	7.57	187	ePn	Pn	21 11 40.5	+2.4
84nm,0.6s							
KAKA				eSn	Sn	21 13 03.8	-0.3
KNA	Kununurra	11.49	203	eP	Pn	21 12 35.0	+3.2
69nm,0.4s							
KNA				eS	Sn	21 14 40.9	+0.6
WRA	Warramunga Arr	14.72	177	Pn	Pn	21 13 14.6	-1.4
0.7nm,0.3s,baz=357,slow=13,SNR=37							
WRA				Sn	Sx	21 15 50.9	
0.9nm,0.3s,baz=356,slow=24,SNR=8.0							
WB2	Warramunga Arr	14.72	177	ePn	Pn	21 13 14.9	-1.2
FITZ	Fitzroy Crossi	14.96	210	eP	Pn	21 13 20.6	+1.3
9.9nm,0.6s							
FITZ				eS	Sn	21 16 01.5	-3.6
FITZ	Fitzroy Crossi	14.96	210	Pn	Pn	21 13 20.2	+0.9
1.0nm,0.3s,baz=49,slow=11,SNR=48							
FITZ				Sn	Sn	21 16 02.9	-2.3
1.4nm,0.3s,baz=222,slow=15,SNR=11							
ASAR	Alice Springs	18.41	179	P	Pn	21 14 02.9	-0.2
0.6nm,0.3s,baz=359,slow=12,SNR=49							
ASAR				S	Sx	21 17 22.4	
0.3nm,0.3s,baz=44,slow=33,SNR=5.3							
CTA	Charters Tower	19.38	141	P	Pn	21 14 15.0	+0.1
0.4nm,0.3s,baz=331,slow=13,SNR=1.5							
MBWA	Marble Bar	20.74	219	eP	pP	21 14 33.1	+1.7
MBWA	Marble Bar	20.74	219	eP	pP	21 14 32.8	+1.4
11nm,0.9s							
STKA	Stephens Creek	27.66	165	P	P	21 15 38.7	+3.0
2.7nm,1.0s,mb3.8,baz=357,slow=11,SNR=3.6							
MKAR	Makanchi Array	68.63	325	P	P	21 20 51.1	+0.1
0.5nm,0.6s,mb3.6,baz=105,slow=8.1,SNR=4.3							
MKAR				pP	pP	21 20 55.7	+1.5
1.7nm,0.9s,baz=108,slow=7.8,SNR=6.4							
MKAR	Makanchi Array	68.63	325	P	P	21 20 51.1	+0.1
MKAR				pP	pP	21 20 55.7	+1.5
ZALV	Zalesovo Beam	71.51	332	P	P	21 21 07.4	-1.1
0.3nm,0.5s,mb3.5,baz=126,slow=7.3,SNR=1.6							
ZALV				pP	pP	21 21 13.1	+1.3
1.1nm,0.7s,baz=126,slow=4.5,SNR=3.6							
KURK	Kurchatov	72.79	327	P	P	21 21 16.5	+0.3
0.7nm,0.9s,mb3.6,baz=115,slow=4.8,SNR=3.4							
KURK				pP	pP	21 21 21.6	+2.1
0.2nm,0.3s,baz=125,slow=4.9,SNR=8.9							
KURK	Kurchatov	72.79	327	eP	P	21 21 15.6	-0.7
1.4nm,0.9s,mb3.9							
KURK				pP	pP	21 21 21.6	+2.1

ISCJB ***02*** *21:29:14.2±0.7, 29.°30N±0.°06×50.°39E±0.°05, h10km, Error ellipse: s-maj=9.1km s-min=6.0km az=164.6*
KISR ***02*** *21:29:14.6±0.9, 29.°32N×50.°42E, h41km±330km, ML2.6*
CSEM ***02*** *21:29:15.5±0.3, 29.°30N×50.°27E, h2km, ML2.6, Error ellipse: s-maj=9.4km s-min=6.3km az=179.0*
ISC 02 21:29:16.1±0.6, 29.°30N±0.°06×50.°34E±0.°05, h10km, n17, σ0.9 91/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRN	Al-Qurain	2.19	256	eP	Pn	21 29 52.1	-0.5
QRN				eS	Sn	21 30 20.2	+0.5
QRN				AML	AML	21 30 22.7	
comp=Z,28nm,0.2s							
KBD	Kabd	2.31	268	eP	Pn	21 29 54.3	+0.1
KBD				eS	Sn	21 30 23.0	+0.2
KBD				AML	AML	21 30 32.3	
comp=Z,27nm,0.3s							
KBD	Kabd	2.31	268	eP	Pn	21 29 54.3	+0.1
KBD				eS	Sn	21 30 23.0	+0.3
RDF	Al-Radifah	2.46	262	eP	Pn	21 29 55.6	-0.8
RDF				eS	Sn	21 30 27.5	+1.0
RDF	Al-Radifah	2.46	262	eP	Pn	21 29 55.6	-0.8
RDF				eS	Sn	21 30 27.5	+1.0
GHIR	Ghir-Karzin	2.54	113	ePn	Pn	21 30 00.2	+2.9
MIB	Mutribah	2.66	282	eP	Pn	21 29 58.8	-0.3
MIB				eS	Sn	21 30 31.7	+0.4
MIB				AML	AML	21 30 42.5	
comp=Z,36nm,0.7s							
MIB	Mutribah	2.66	282	eP	Pn	21 29 58.8	-0.2
MIB				eS	Sn	21 30 31.7	+0.4
BOGSS		3.52	194	P	Pn	21 30 10.3	-0.6
NASN	Na'in	4.08	31	ePn	Pn	21 30 17.0	-1.6
ASAO	Ashtian	5.24	357	ePn	Pn	21 30 34.2	-0.3
BTHS		5.25	175	P	Pn	21 30 34.0	-0.7
BTHS		5.25	175	P	Pn	21 30 34.0	-0.7
ASYS		5.57	253	P	Pn	21 30 38.2	-0.9
ASYS		5.57	253	P	Pn	21 30 38.2	-0.9
KRBR	Kerman	5.63	81	ePn	Pn	21 30 41.3	+1.4
SNGE	Sanandaj	6.31	337	ePn	Pn	21 30 49.8	+0.6

JMA ***02*** *21:44:32.4±0.3, 32.°65N×138.°31E, h365km, M3.1*
ISCJB ***02*** *21:44:37.3±0.8, 33.°0N±0.°1×138.°1E±0.°1, h336km±8km, mb2.8/4, Error ellipse: s-maj=18.4km s-min=15.3km az=37.2*
IDC ***02*** *21:44:38.2±1.8, 32.°94N×138.°12E, h327km±69km, mb2.7/4, mb1 2.8/5, mb1mx2.6/26, mbtmp2.6/5, Error ellipse: s-maj=168.2km s-min=12.8km az=63.0*
ISC 02 21:44:38.5±0.8, 33.°0N±0.°1×138.°1E±0.°1, h329km±8km, n20, σ0.9 49/22, mb2.8/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	Tokai 2	1.01	343	P	Pn	21 45 22.2	+0.3
JIE	Ise	1.83	321	P	Pn	21 45 26.7	+0.1
HMMJ	Hamamatsu 2	1.90	350	P	Pn	21 45 27.2	+0.1
JKN2	Miekihoku	1.98	310	P	Pn	21 45 27.4	-0.2
JNY	Yasuok	2.38	355	P	Pn	21 45 31.2	+0.4
JAO	Obara	2.39	343	P	Pn	21 45 31.2	+0.4
JWY	Kouya	2.44	301	P	Pn	21 45 31.4	+0.2
JYN	Shimob	2.54	8	P	Pn	21 45 32.7	+0.6
BSO4	Boso 4	2.73	42	eS	S	21 46 18.4	+0.3
JHU	Hanno	3.03	18	P	Pn	21 45 35.6	-0.9
JRY	Ryogami san	3.10	12	P	Pn	21 45 37.5	+0.3
JAI	Aioi	3.16	286	P	Pn	21 45 37.3	-0.5
JWT	Wachi	3.21	316	P	Pn	21 45 38.2	0.0
MJAR	Matsushiro Arr	3.56	1	P	Pn	21 45 41.5	-0.1
1.7nm,0.3s,baz=177,slow=10.0,SNR=19							
MJAR				S	S	21 46 32.1	-0.2
0.2nm,0.3s,baz=246,slow=37,SNR=4.1							
MAT	Matsushiro	3.56	1	P	Pn	21 45 41.2	-0.4
MAT				eS	S	21 46 31.7	-0.6
MAT	Matsushiro	3.56	1	P	Pn	21 45 41.4	-0.2
SONM	Songino Array	28.11	311	P	P	21 50 01.5	+0.8
0.4nm,0.7s,mb2.7,baz=121,slow=9.0,SNR=3.7							
MKAR	Makanchi Array	44.10	305	P	P	21 52 14.9	-0.1
0.2nm,0.3s,mb2.7,baz=85,slow=9.6,SNR=8.7							
WRA	Warramunga Arr	52.74	184	P	P	21 53 19.3	-1.2
0.3nm,0.4s,mb3.0,baz=0.3,slow=7.6,SNR=5.0							
ASAR	Alice Springs	56.47	185	P	P	21 53 47.6	+0.6
0.2nm,0.5s,mb2.7,baz=18,slow=13,SNR=1.5							

IDC ***02*** *21:53:48.5±4.9, 21.°15N×72.°35E, h0km, mb3.5/3,*

mb1 3.7/3, mb1mx3.2/26, mbtmp3.5/3, Error ellipse: s-maj=107.8km s-min=51.7km az=89.0
ISCJB ***02*** *21:53:53.5±2.5, 21°.37N±0°.04×73°.05E±0°.06, h15km±16km, mb3.3/3, Error ellipse: s-maj=10.1km s-min=6.4km az=167.2*
NDI ***02*** *21:53:56.2±2.4, 21°.22N×72°.85E, h10km, ML3.1*
ISC 02 21:53:54.6±3.0, 21°.33N±0°.04×73°.00E±0°.06, h12km±19km, n16, σ1°.04/20, mb3.3/3, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POO	**Poona**	**2.90**	**164**	*eP*	**Pn**	**21 54 40.7**	**0.0**
POO				*eS*	**Sn**	**21 55 15.6**	**+0.2**
POO				AML	AML	21 55 23.6	
	comp=N,60nm,0.2s						
POO				AML	AML	21 55 25.2	
	comp=E,116nm,1.1s						
BHJ	**Bhuj**	**3.64**	**302**	*eP*	**Pn**	**21 54 51.3**	**+0.5**
BHJ				*eS*	**Sn**	**21 55 33.1**	**-0.6**
BHJ				AML	AML	21 55 36.8	
	comp=E,621nm,0.4s						
BHJ				AML	AML	21 55 37.7	
	comp=N,787nm,0.5s						
KAD	**Karad**	**4.15**	**164**	*eP*	**Pn**	**21 54 59.6**	**+1.7**
KAD				*eS*	**Sn**	**21 55 45.7**	**-0.8**
KAD				AML	AML	21 55 52.1	
	comp=N,20nm,0.7s						
KAD				AML	AML	21 55 59.8	
	comp=E,106nm,0.6s						
LATR	**Latur**	**4.43**	**130**	*eP*	**Pn**	**21 55 02.5**	**+0.8**
LATR				*ex*	x	21 56 15.0	
BHPL	**Bhopal**	**4.52**	**64**	*eP*	**Pn**	**21 55 06.7**	**+3.8**
BHPL				*eS*	**Sn**	**21 55 59.2**	**+3.8**
BHPL				AML	AML	21 56 39.5	
	comp=N,58nm,0.5s						
BHPL				AML	AML	21 56 39.9	
	comp=E,53nm,0.3s						
AJM	**Ajmer**	**5.34**	**16**	*eS*	**Sn**	**21 56 18.0**	**+2.3**
AJM				AML	AML	21 56 18.8	
	comp=N,26nm,0.2s						
AJM				AML	AML	21 56 18.9	
	comp=E,11nm,0.1s						
KOLN	**Koldanda**	**11.58**	**54**	*eP*	**Pn**	**21 56 40.2**	**+0.4**
	comp=E,14nm,0.3s						
GKN	**Gorkha**	**12.49**	**56**	*eP*	**Pn**	**21 56 51.7**	**-0.5**
	comp=E,10nm,0.3s						
KKN	**Kakani**	**12.89**	**58**	*eP*	**Pn**	**21 56 56.5**	**-1.2**
PKI	**Pulchoki**	**12.89**	**59**	*eP*	**Pn**	**21 56 57.4**	**-0.4**
	comp=E,11nm,0.7s						
GUN	**Gumba**	**13.42**	**58**	*eP*	**Pn**	**21 57 03.5**	**-1.4**
	comp=E,10.0nm,0.4s						
JIRN	**Jiri**	**13.56**	**60**	*eP*	**Pn**	**21 57 06.3**	**-0.5**
RAMN	**Ramite**	**13.61**	**63**	*eP*	**Pn**	**21 57 07.8**	**+0.2**
	comp=E,12nm,0.5s						
CMAR	**Chiang Mai Arr**	**24.55**	**92**	P	**P**	**21 59 15.7**	**+1.2**
	comp=E,0.8nm,0.6s,mb3.4,baz=280,slow=9.9,SNR=6.9						
SONM	**Songino Array**	**37.66**	**37**	P	**P**	**22 01 09.7**	**+0.2**
	comp=E,0.2nm,0.6s,mb3.0,baz=223,slow=7.9,SNR=2.5						
ASAR	**Alice Springs**	**74.25**	**124**	P	**P**	**22 05 30.2**	**-1.7**
	comp=E,0.3nm,0.5s,mb3.5,baz=301,slow=5.8,SNR=5.2						

MAN 02 22:02:40, 15°.10N×122°.78E, h19km, mb4.3, ML3.2, MS3.0, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.89**	**245**	*eP*	Pb	22 02 56.8	-0.1
POLP				*eS*	Sb	22 03 06.7	-1.6
GQP	**Guinayangan**	**1.23**	**195**	*i* P	Pn	22 03 02.5	+0.3
GQP				*i* S	Sb	22 03 19.7	+1.6
BALP	**Baler**	**1.32**	**299**	*eP*	Pn	22 03 03.5	+0.1
BALP				*eS*	Sn	22 03 14.9	-5.6
PCPH	**Palayan**	**1.68**	**286**	*eP*	Pn	22 03 09.2	+0.8
PVCP	**Virac**	**2.01**	**138**	*eP*	Pn	22 03 13.4	+0.5
CAUP	**Cauayan**	**2.05**	**334**	*eP*	Pn	22 03 14.2	+0.8
LUBP	**Lubang**	**2.80**	**241**	*eP*	Pn	22 03 32.2	+8.3

IDC ***02*** *22:04:09.8±2.6, 35°.15N×81°.75E, h0km, mb3.6/5, mb1 3.6/10, mb1mx3.4/30, mbtmp3.5/10, ML3.1/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=52.7km s-min=33.4km az=115.0*
ISCJB ***02*** *22:04:11.3±2.6, 35°.40N±0°.09×81°.8E±0°.1, h14km±17km, mb3.4/7, MS3.2/2, Error ellipse: s-maj=17.0km s-min=15.2km az=32.8*
NEIC ***02*** *22:04:12.0±1.5, 35°.25N×81°.64E, h10km, mb3.6/2, Error ellipse: s-maj=21.8km s-min=16.8km az=128.0*
BJI ***02*** *22:04:12.3, 35°.31N×81°.44E, h12km, ML3.6/6*
ISC 02 22:04:13.0±3.1, 35°.28N±0°.09×81°.8E±0°.1, h19km±20km, n22, σ1°.09/25, mb3.4/7, MS3.2/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.29**	**314**	Pn	**Pn**	**22 05 44.8**	**0.0**
KSH				Sn	**Sn**	**22 06 57.0**	**+0.9**
KSH				smax			
	comp=N,80nm,0.7s						
KSH				smax			
	comp=E,79nm,0.7s						
UCH	**Uchtor**	**8.99**	**323**	*e*Pn	**Pn**	**22 06 22.3**	**+0.6**
TKM2	**Tokmak 2**	**9.04**	**329**	*e*Pn	**Pn**	**22 06 22.9**	**+0.5**
AAK	**Ala-Archa**	**9.30**	**324**	Pn	**Pn**	**22 06 29.0**	**+3.0**
	comp=E,0.0nm,0.3s,baz=113,slow=13,SNR=2.5						
AAK				Pg	Pn	22 06 58.9	+33
	comp=E,0.0nm,0.3s,baz=146,slow=11,SNR=5.7						
AAK				Lg		22 08 55.9	
	comp=E,0.0nm,0.3s,baz=13,slow=9.2,SNR=1.7						
AAK				LR	LR	22 10 10.0	
	comp=E,37nm,21.9s,baz=6.5,slow=38						
AML	**Almayashu**	**9.34**	**320**	*e*Pn	**Pn**	**22 06 26.5**	**-0.1**
	comp=E,5.0nm,0.6s						
EKS2	**Erkin-Say**	**9.67**	**322**	*e*Pn	**Pn**	**22 06 28.9**	**-2.2**
MK31	**Makanchi Array**	**11.51**	**2**	P	**Pn**	**22 06 57.0**	**+0.7**
	comp=E,5.5nm,1.1s,baz=184,slow=13,SNR=11						
MK31				S	**Sn**	**22 09 12.1**	**+7.8**
	comp=E,3.4nm,0.9s,baz=186,slow=26,SNR=4.2						
MK31	**Makanchi Array**	**11.51**	**2**	*e*Pn	**Pn**	**22 06 57.7**	**+1.4**
MKAR	**Makanchi Array**	**11.51**	**2**	Pn	**Pn**	**22 06 57.0**	**+0.7**
	comp=E,0.2nm,0.3s,baz=182,slow=12,SNR=9.4						
MKAR				Sn	**Sn**	**22 09 03.5**	**-0.8**
	comp=E,0.1nm,0.3s,baz=191,slow=31,SNR=1.4						
KURK	**Kurchatov**	**15.61**	**352**	Pn	**Pn**	**22 07 48.7**	**-3.0**
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=2.8						
KURK				Sn	**Sn**	**22 10 31.6**	**-12**
	comp=E,0.1nm,0.3s,baz=76,slow=33,SNR=2.4						
KURK	**Kurchatov**	**15.61**	**352**	*e*P	**Pn**	**22 07 49.5**	**-2.2**
	comp=E,5.3nm,1.3s						
KURK				Sn	**Sn**	**22 10 31.6**	**-13**
ZALV	**Zalesovo Beam**	**18.79**	**5**	P	**Pn**	**22 08 32.1**	**+0.5**
	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=4.5						
BVAR	**Borovoye Array**	**19.51**	**339**	P	**Pn**	**22 08 38.8**	**-1.4**
	comp=E,0.3nm,0.3s,baz=147,slow=9.9,SNR=7.2						
ABKAR	**Akbulak array**	**21.28**	**318**	*e*P	**P**	**22 08 56.9**	**-1.3**
	comp=E,1.7nm,0.8s,mb3.4						
SONM	**Songino Array**	**22.15**	**48**	P	**P**	**22 09 15.9**	**+8.4**
	comp=E,0.3nm,0.8s,mb2.8,baz=235,slow=6.3,SNR=4.4						
KSRS	**Korea Array**	**36.90**	**73**	LR	LR	22 26 52.5	
	comp=E,17nm,21.6s,MS2.8,baz=230,slow=37						
MLR	**Muntele Rosu**	**42.99**	**301**	P	**P**	**22 12 11.2**	**+0.3**
	comp=E,0.6nm,0.4s,mb3.7,baz=129,slow=14,SNR=3.3						
FINES	**FINESS Array B**	**43.49**	**325**	P	**P**	**22 12 15.3**	**+0.5**
	comp=E,0.6nm,0.6s,mb3.5,baz=92,slow=9.7,SNR=1.8						
HFS	**Hagfors**	**49.44**	**322**	P	**P**	**22 13 01.8**	**+0.4**
	comp=E,0.6nm,0.5s,mb3.9,baz=113,slow=9.6,SNR=2.2						
GERES	**GERESS Array B**	**50.73**	**308**	LR	LR	22 39 36.7	
	comp=E,46nm,18.5s,MS3.5,baz=261,slow=42						
TORD	**Torodi Ar. Bea**	**74.54**	**275**	P	**P**	**22 15 49.9**	**-0.9**
	comp=E,0.7nm,1.0s,mb3.6,baz=42,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**81.67**	**8**	P	**P**	**22 16 30.5**	**+0.9**
	comp=E,0.1nm,0.5s,mb3.0,baz=338,slow=5.1,SNR=2.6						

ISCJB ***02*** *22:13:31.7±1.0, 42°.83S±0°.04×73°.1W±0°.2, h10km, Error ellipse: s-maj=19.6km s-min=5.7km az=3.7*
BJI ***02*** *22:13:31.0, 42°.90S×72°.80W, h10km, mB4.7/3, Ms5.2/3, Ms7 4.7/3*
NEIC ***02*** *22:13:31.0, 42°.86S×72°.85W, h3km, mb3.8/2, ML4.1(GUC), After GUC.*
NEIC Felt [IV] at Chaiten and [II] at Futaleufu.
GUC ***02*** *22:13:31.3±0.7, 42°.86S×72°.85W, h3km±6km, ML4.1*
ISC 02 22:13:31.9±0.9, 42°.81S±0°.04×73°.2W±0°.2, h10km, n12, σ1°.19/15, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMCH	**Puerto Montt**	**1.33**	**9**	*e*P	**Pn**	**22 13 56.3**	**-0.2**
PMCH				*i* S	**Sb**	**22 14 14.8**	**+0.8**
PLCA	**Paso Flores**	**2.85**	**44**	*e*Pn	**Pn**	**22 14 14.2**	**-3.2**
PLCA				*e*S	**Sn**	**22 14 52.6**	**+0.9**
PLCA	**Paso Flores**	**2.85**	**44**	*e*P	**Pn**	**22 14 17.0**	**-0.3**
PLCA				*i* S	**Sn**	**22 14 52.4**	**+0.6**
COYC	**Coyhaique**	**2.88**	**165**	*e*P	**Pn**	**22 14 18.1**	**+0.3**
COYC				*e*S	**Sn**	**22 14 52.7**	**+0.3**
COYC	**Coyhaique**	**2.88**	**165**	*e*P	**Pn**	**22 14 18.1**	**+0.3**
COYC				*e*S	**Sn**	**22 14 52.7**	**+0.3**
COYC				AML	AML	22 14 55.8	
	comp=E,522nm,0.3s						
TRQA	**Tornquist**	**9.76**	**65**	Pn	**Pn**	**22 15 49.5**	**-2.8**
LVC	**Limon Verde**	**20.45**	**11**	*e*P	**P**	**22 18 09.5**	**0.0**
	comp=E,2.2nm,0.7s						
PMSA	**Palmer Station**	**22.61**	**170**	P	**P**	**22 18 34.2**	**+1.8**
	comp=E,375nm,1.7s						
LPAZ	**La Paz**	**26.78**	**11**	*e*P	**P**	**22 19 16.7**	**+4.7**
SBA	**Scott Base**	**54.30**	**193**	P	**P**	**22 22 56.1**	**-1.6**
	comp=E,2.2nm,1.1s						
WMQ	**Urumqi**	**166.02**	**79**	*e*PKP	PKPdf	22 33 37.6	+1.0
HHC	**Hu-ho-hao-te**	**175.96**	**243**	*e*PKP	PKPdf	22 33 42.9	+1.1
HHC				PKS		22 37 13.5	
HHC				PP	PP	22 39 19.8	+5.5
HHC				SKS	SKSdf	22 40 45.0	+0.4
HHC				SS	SS	23 00 44.9	+2.4
HHC				AMB	AMB		
	comp=Z,39nm,6.8s						
HHC				LR	LR		
	comp=N,92nm,22.2s						
HHC				LR	LR		
	comp=E,160nm,22.2s						
HHC				LR	LR		
	comp=Z,41nm,22.9s						

IDC ***02*** *22:28:18.0±0.8, 30°.89N×50°.06E, h0km, mb3.6/7, mb1 3.6/7, mb1mx3.4/26, mbtmp3.6/7, Error ellipse: s-maj=19.3km s-min=12.1km az=138.0*
CSEM ***02*** *22:28:22.5±0.2, 30°.95N×50°.08E, h15km, mb3.4, Error ellipse: s-maj=7.0km s-min=5.4km az=109.0*
KISR ***02*** *22:28:22.8±1.0, 30°.73N×50°.08E, h34km±105km, ML3.2*
NEIC ***02*** *22:28:24.0, 30°.92N×50°.01E, h32km, ML3.3(THR), MN3.4(TEH), After TEH.*
TEH ***02*** *22:28:24.8, 30°.92N×50°.01E, h32km*
ISC 02 22:28:23.4±0.8, 30°.96N±0°.03×50°.05E±0°.03, h20km±6km, n72, σ1°.10/87, mb3.6/7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.57**	**317**	Pg	**Pn**	**22 28 51.0**	**+0.9**
SHGR				Sg	**Sg**	**22 29 13.0**	**-1.1**
SHGR	**Shooshtar-Gavs**	**1.57**	**317**	*e*Pg	**Pg**	**22 28 51.8**	**-1.8**
SHGR				Sg	**Sg**	**22 29 13.0**	**-1.1**
IPIR	**Pirpir**	**1.86**	**22**	Pg	**Pg**	**22 28 59.0**	**-0.3**
IPIR				Sg	**Sg**	**22 29 25.2**	**+1.6**
IPIR	**Pirpir**	**1.86**	**22**	*e*Pg	**Pg**	**22 28 59.1**	**-0.2**
IPIR				*e*Sg	**Sg**	**22 29 25.2**	**+1.6**
IPIR				*e*		22 29 27.9	
	comp=Z,4μm,0.2s						
IPIR	**Pirpir**	**1.86**	**22**	Pg	**Pg**	**22 28 59.0**	**-0.3**
IGAR	**Gharneh**	**2.23**	**49**	*e*Pn	**Pn**	**22 28 59.9**	**+0.7**
IGAR				*e*Sn	**Sn**	**22 29 26.5**	**+0.3**
IGAR				*e*		22 29 32.9	
	comp=Z,2μm,0.2s						
UMR	**Umm Al-Rimmam**	**2.46**	**236**	*e*P	**Pn**	**22 29 04.1**	**+1.7**
UMR				*e*S	**Sn**	**22 29 34.0**	**+2.1**
UMR				AML	AML	22 29 36.3	
	comp=Z,77nm,0.5s						
UMR	**Umm Al-Rimmam**	**2.46**	**236**	*e*P	**Pn**	**22 29 04.1**	**+1.7**
UMR				*e*S	**Sn**	**22 29 34.0**	**+2.1**
MIB	**Mutribah**	**2.61**	**245**	*e*P	**Pn**	**22 29 05.4**	**+0.9**
MIB	**Mutribah**	**2.61**	**245**	*e*P	**Pn**	**22 29 05.4**	**+0.9**
IKLH	**Kolahrood**	**2.69**	**28**	Pn	**Pn**	**22 29 07.3**	**+1.7**
IKLH	**Kolahrood**	**2.69**	**28**	*e*Pn	**Pn**	**22 29 07.3**	**+1.7**
IKLH	**Kolahrood**	**2.69**	**28**	*e*	**Sg**	**22 29 50.3**	**+0.4**
	comp=Z,1μm,0.2s						
KBD	**Kabd**	**2.71**	**230**	*e*P	**Pn**	**22 29 06.7**	**+0.9**
KBD	**Kabd**	**2.71**	**230**	*e*P	**Pn**	**22 29 06.7**	**+0.9**
IZEF	**Zefreh**	**2.74**	**44**	Pn	**Pn**	**22 29 06.9**	**+0.7**
IZEF				Sn	**Sn**	**22 29 38.3**	**-0.5**
IZEF	**Zefreh**	**2.74**	**44**	*e*	**Pn**	**22 29 08.4**	**+2.1**
	comp=Z,875nm,0.1s						
IZEF				*e*Pn	**Pn**	**22 29 07.0**	**+0.8**
IZEF				*e*Sn	**Sn**	**22 29 38.4**	**-0.4**
IZEF	**Zefreh**	**2.74**	**44**	Pn	**Pn**	**22 29 06.9**	**+0.7**
IZEF				Sn	**Sn**	**22 29 38.3**	**-0.5**
IPAR	**Pars**	**2.82**	**112**	*e*Pn	**Pn**	**22 29 07.5**	**+0.1**
IPAR				*e*		22 30 12.6	
	comp=Z,620nm,0.3s						
QRN	**Al-Qurain**	**2.88**	**221**	*e*P	**Pn**	**22 29 08.2**	**0.0**
QRN				*e*S	**Sn**	**22 29 42.5**	**+0.2**
QRN				AML	AML	22 29 45.6	
	comp=Z,77nm,0.3s						
RDF	**Al-Radifah**	**2.97**	**228**	*e*P	**Pn**	**22 29 10.0**	**+0.6**
RDF				*e*S	**Sn**	**22 29 45.6**	**+1.1**
RDF				AML	AML	22 29 46.6	
	comp=Z,60nm,0.4s						
RDF	**Al-Radifah**	**2.97**	**228**	*e*P	**Pn**	**22 29 10.0**	**+0.6**
NASN	**Na'in**	**2.98**	**51**	Pn	**Pn**	**22 29 10.0**	**+0.4**
NASN	**Na'in**	**2.98**	**51**	Pn	**Pn**	**22 29 10.0**	**+0.4**
IMOK	**Mouk**	**3.00**	**129**	Pn	**Pn**	**22 29 10.5**	**+0.7**
IMOK	**Mouk**	**3.00**	**129**	*e*Pn	**Pn**	**22 29 10.5**	**+0.7**
IMOK				*e*		22 30 08.4	
	comp=Z,1μm,0.3s						
IMOK	**Mouk**	**3.00**	**129**	Pn	**Pn**	**22 29 10.5**	**+0.7**
ISRV	**Sarvestan**	**3.08**	**120**	*e*Pn	**Pn**	**22 29 11.4**	**+0.4**
ISRV				*e*		22 29 59.5	
	comp=Z,725nm,0.1s						
ISAD	**Sadrabad**	**3.25**	**72**	*e*Pn	**Pn**	**22 29 14.2**	**+0.9**
ISAD				*e*		22 29 56.3	
	comp=Z,2μm,0.3s						
ASAO	**Ashtian**	**3.58**	**360**	Pn	**Pn**	**22 29 19.0**	**+1.2**
ASAO	**Ashtian**	**3.58**	**360**	Pn	**Pn**	**22 29 19.0**	**+1.2**
GHVR	**GHOM**	**3.67**	**16**	Pn	**Pn**	**22 29 19.0**	**0.0**
GHVR	**GHOM**	**3.67**	**16**	Pn	**Pn**	**22 29 19.0**	**0.0**
GHIR	**Ghir-Karzin**	**3.69**	**135**	Pn	**Pn**	**22 29 17.0**	**-2.4**
GHIR	**Ghir-Karzin**	**3.69**	**135**	*e*Pn	**Pn**	**22 29 17.5**	**-1.9**
ISFB	**Sefidab**	**3.86**	**28**	*e*Pn	**Pn**	**22 29 22.2**	**+0.6**
ISFB				*e*		22 29 22.6	
	comp=Z,884nm,0.2s						
IKOM	**Komasi**	**3.86**	**327**	Pn	**Pn**	**22 29 21.6**	**-0.1**
IKOM	**Komasi**	**3.86**	**327**	*e*Pn	**Pn**	**22 29 21.6**	**-0.1**
IKOM				*e*		22 30 10.2	
	comp=Z,438nm,0.1s						
IKOM	**Komasi**	**3.86**	**327**	Pn	**Pn**	**22 29 21.6**	**-0.1**
IMEH	**Mehriz**	**3.94**	**83**	*e*Pn	**Pn**	**22 29 22.7**	**0.0**
IMEH				*e*		22 30 13.2	
	comp=Z,361nm,0.2s						
IRAZ	**Razeghan**	**4.44**	**359**	*e*Pn	**Pn**	**22 29 30.6**	**+1.0**
IRAZ				*e*		22 30 40.6	
	comp=Z,256nm,0.3s						
SNGE	**Sanandaj**	**4.71**	**332**	*e*P	**Pn**	**22 29 33.0**	**-0.3**
SNGE				Sn	**Sn**	**22 30 26.0**	**-1.3**
SNGE	**Sanandaj**	**4.71**	**332**	*e*P	**Pn**	**22 29 33.0**	**-0.3**
SNGE	**Sanandaj**	**4.71**	**332**	*e*Pn	**Pn**	**22 29 33.3**	**0.0**
SNGE				Sn	**Sn**	**22 30 26.0**	**-1.3**
IDHR	**Dehrash**	**4.84**	**321**	Pn	**Pn**	**22 29 34.6**	**-0.6**
IDHR	**Dehrash**	**4.84**	**321**	*e*Pn	**Pn**	**22 29 34.7**	**-0.5**
IDHR				*e*		22 30 35.7	
	comp=N,1μm,0.1s						
IDHR	**Dehrash**	**4.84**	**321**	Pn	**Pn**	**22 29 34.6**	**-0.6**
IDMV	**Damavand**	**4.90**	**19**	Pn	**Pn**	**22 29 35.7**	**-0.2**
IDMV	**Damavand**	**4.90**	**19**	*e*Pn	**Pn**	**22 29 35.8**	**-0.1**
IDMV				*e*		22 29 36.6	
	comp=Z,180nm,0.2s						
IDMV	**Damavand**	**4.90**	**19**	Pn	**Pn**	**22 29 35.7**	**-0.2**
BOQSS		**5.10**	**187**	P	**Pn**	**22 29 38.0**	**-0.8**
IFIR	**Firoozkooh**	**5.19**	**25**	Pn	**Pn**	**22 29 39.9**	**-0.1**
IFIR	**Firoozkooh**	**5.19**	**25**	*e*Pn	**Pn**	**22 29 39.9**	**-0.1**
IFIR				*e*		22 29 44.6	
	comp=Z,327nm,0.1s						
IFIR	**Firoozkooh**	**5.19**	**25**	Pn	**Pn**	**22 29 39.9**	**-0.1**
ISHM	**Shahmirzad**	**5.54**	**28**	*e*Pn	**Pn**	**22 29 44.8**	**0.0**
ISHM				*e*		22 29 51.0	
	comp=Z,314nm,0.1s						
SLWS		**6.16**	**175**	P	**Pn**	**22 29 51.8**	**-1.5**
SLWS		**6.16**	**175**	P	**Pn**	**22 29 51.8**	**-1.5**
BTHS		**6.92**	**174**	P	**Pn**	**22 30 01.8**	**-2.0**
BTHS		**6.92**	**174**	P	**Pn**	**22 30 01.8**	**-2.0**
BRTR	**Keskin Array B**	**15.98**	**308**	Pn	**Pn**	**22 32 08.4**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=111,slow=8.2,SNR=2.8						
BRTR	**Keskin Array B**	**15.98**	**308**	Pn	**Pn**	**22 32 08.4**	**+1.4**
IDI	**Anoyia**	**21.49**	**288**	P	**P**	**22 33 10.5**	**-0.5**
	comp=Z,0.7nm,0.3s,mb3.4,baz=121,slow=12,SNR=2.2						
IDI	**Anoyia**	**21.49**	**288**	P	**P**	**22 33 10.4**	**-0.5**
BVAR	**Borovoye Array**	**26.56**	**28**	P	**P**	**22 33 58.0**	**-1.9**
	comp=Z,0.6nm,0.5s,mb3.4,baz=245,slow=6.2,SNR=4.7						
BVAR	**Borovoye Array**	**26.56**	**28**	P	**P**	**22 33 58.0**	**-1.8**
MKAR	**Makanchi Array**	**29.41**	**48**	P	**P**	**22 34 24.3**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.2,baz=240,slow=10,SNR=1.9						
MKAR	**Makanchi Array**	**29.41**	**48**	P	**P**	**22 34 24.2**	**-1.2**
ZALV	**Zalesovo Beam**	**33.90**	**37**	P	**P**	**22 35 03.4**	**-1.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=271,slow=8.7,SNR=3.6						
KMBO	**Kilima Mbogo**	**34.15**	**203**	P	**P**	**22 35 03.5**	**-3.8**
	comp=Z,0.4nm,0.3s,mb3.9,baz=350,slow=11,SNR=2.1						
KMBO	**Kilima Mbogo**	**34.15**	**203**	P	**P**	**22 35 03.5**	**-3.8**
FINES	**FINESS Array B**	**34.30**	**340**	P	**P**	**22 35 05.5**	**-2.7**
	comp=Z,0.9nm,0.7s,mb3.8,baz=136,slow=9.7,SNR=8.3						
TORD	**Torodi Ar. Bea**	**47.80**	**259**	P	**P**	**22 36 57.8**	**-2.0**
	comp=Z,0.2nm,0.3s,mb3.6,baz=58,slow=6.9,SNR=4.6						

ISCJB ***02*** *22:46:36.3±0.6, 33°.46N±0°.07×137°.06E±0°.09, h379km±7km, mb3.2/3, Error ellipse: s-maj=12.7km s-min=9.7km az=137.6*
IDC ***02*** *22:46:36.5±1.3, 33°.25N×136°.86E, h344km±26km, mb3.2/3, mb1 3.3/6, mb1mx2.9/29, mbtmp3.3/6, Error ellipse: s-maj=57.5km s-min=15.2km az=56.0*
JMA ***02*** *22:46:37.4±0.3, 33°.69N×136°.93E, h384km±3km, M3.1*
ISC 02 22:46:37.5±0.6, 33°.47N±0°.08×137°.07E±0°.09, h371km±7km, n22, σ0°.99/27, mb3.2/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.74**	**50**	P	**Pn**	**22 47 26.3**	**+1.8**
JIE	**Ise**	**0.97**	**342**	P	**Pn**	**22 47 26.2**	**+1.0**
JKN2	**Miekihoku**	**1.01**	**319**	P	**Pn**	**22 47 26.1**	**+0.7**
JAA	**Atsumi**	**1.16**	**3**	P	**Pn**	**22 47 27.1**	**+1.1**
JWY	**Kouya**	**1.44**	**302**	P	**Pn**	**22 47 28.0**	**+0.7**
JWY				S	**S**	**22 48 07.1**	**-0.3**
JAI	**Aioi**	**2.21**	**279**	P	**Pn**	**22 47 32.4**	**+0.3**
JGM	**Miyama**	**2.24**	**353**	P	**Pn**	**22 47 32.4**	**+0.1**
JWT	**Wachi**	**2.27**	**323**	P	**Pn**	**22 47 32.4**	**-0.1**
JWT				S	**S**	**22 48 14.5**	**-2.4**
JYN	**Shimob**	**2.36**	**31**	P	**Pn**	**22 47 33.9**	**+0.8**
JOD2	**Odawara 2**	**2.45**	**43**	P	**Pn**	**22 47 34.4**	**+0.6**
JMN	**Monobe**	**2.67**	**276**	P	**Pn**	**22 47 36.1**	**+0.5**
JKG	**Kaga**	**2.86**	**348**	P	**Pn**	**22 47 36.6**	**-0.5**
JRY	**Ryogami san**	**2.95**	**30**	P	**Pn**	**22 47 38.4**	**+0.5**
JRY				S	**S**	**22 48 27.0**	**+0.3**
MJAR	**Matsushiro Arr**	**3.20**	**17**	P	**Pn**	**22 47 39.5**	**-0.6**
	5.2nm,0.3s,baz=188,slow=9.6,SNR=76						
MAT	**Matsushiro**	**3.20**	**17**	P	**Pn**	**22 47 39.2**	**-0.9**
MAT				*e*S	**S**	**22 48 29.1**	**-1.6**
MAT	**Matsushiro**	**3.20**	**17**	P	**Pn**	**22 47 39.6**	**-0.5**
JHS	**Saijyo**	**3.61**	**296**	P	**Pn**	**22 47 43.6**	**-0.3**
CBIJ	**Chichi jima**	**7.74**	**144**	P	**Pn**	**22 48 27.4**	**-1.7**
	4.6nm,0.3s,baz=298,slow=18,SNR=8.4						
CBIJ				S	**S**	**22 49 56.6**	**-3.4**
	10nm,0.3s,baz=279,slow=23,SNR=7.0						
KSRS	**Korea Array**	**8.45**	**301**	P	**Pn**	**22 48 35.8**	**-1.3**
	0.6nm,0.3s,baz=112,slow=13,SNR=19						
SONM	**Songino Array**	**27.12**	**311**	P	**P**	**22 51 49.2**	**+1.4**
	0.4nm,0.4s,mb3.0,baz=116,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**53.18**	**183**	P	**P**	**22 55 18.6**	**-0.3**
	1.5nm,0.3s,mb3.8,baz=0.0,slow=7.5,SNR=17						
ASAR	**Alice Springs**	**56.90**	**183**	P	**P**	**22 55 44.8**	**-0.3**
	0.4nm,0.6s,mb3.0,baz=10,slow=13,SNR=10						

DDA ***02*** *23:06:25.5, 37°.05N×28°.01E, h7km±7km, Md2.7*
CSEM ***02*** *23:06:27.5±0.1, 37°.11N×27°.89E, h20km, MD2.4, Error ellipse: s-maj=3.3km s-min=2.7km az=133.0*
ISK ***02*** *23:06:27.6, 37°.11N×27°.88E, h12km, MD2.4*
ISCJB ***02*** *23:06:28.1±0.6, 37°.12N±0°.03×27°.88E±0°.04, h10km, Error ellipse: s-maj=5.0km s-min=4.4km az=37.8*
**ISC 02 23:06:27.8±0.7,

Error ellipse: s-maj=3.0km s-min=2.4km az=9.4
CSEM ***02*** *23:17:58.2±0.1,39°.97N×24°.25E,h5km,ML3.6/10,Error ellipse: s-maj=2.3km s-min=2.0km az=1.0*
THE ***02*** *23:17:59.3,39°.98N×24°.26E,h11km±1km,ML3.6/10,Error ellipse: s-maj=1.2km s-min=0.6km az=136.0*
NEIC ***02*** *23:17:59.0,40°.01N×24°.28E,h38km,MD3.4(ATH),After ATH.*
ATH ***02*** *23:17:59.0,40°.01N×24°.28E,h38km±2km,MD3.4/6,ML2.9*
ISC 02 23:17:59.0±0.5,**39°.97N**±0°.02×**24°.26E**±0°.02,**h11**km±3km,
n215,σ0°**86**/240,**1C-19D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.42**	**330**	P	**Pg**	**23 18 06.9**	**-0.3**
OUR	**Ouranopolis**	**0.42**	**330**	P	**Pg**	**23 18 06.9**	**-0.3**
PAIG	**Paliouri**	**0.45**	**264**	P	**Pg**	**23 18 08.0**	**+0.3**
PAIG				S	**Sg**	**23 18 14.9**	**+1.3**
PAIG	**Paliouri**	**0.45**	**264**	P	**Pg**	**23 18 08.0**	**+0.3**
LOS	**Limnos**	**0.64**	**93**	P	**Pg**	**23 18 11.2**	**-0.1**
LOS	**Limnos**	**0.64**	**93**	P	**Pg**	**23 18 11.2**	**-0.1**
LIA	**Limnos Island**	**0.72**	**96**	*e*PN	**Pg**	**23 18 13.5**	**+0.7**
LIA	**Limnos Island**	**0.72**	**96**	P	**Pg**	**23 18 12.5**	**-0.3**
LIA				S	**Sg**	**23 18 24.2**	**+2.0**
LIA	**Limnos Island**	**0.72**	**96**	P	**Pg**	**23 18 12.5**	**-0.3**
LIA	**Limnos Island**	**0.72**	**96**	*e*Pn	**Pg**	**23 18 13.5**	**+0.7**
PLG	**Polygyros**	**0.74**	**303**	*e*PN	**Pg**	**23 18 12.9**	**-0.4**
PLG	**Polygyros**	**0.74**	**303**	P	**Pg**	**23 18 12.9**	**-0.4**
PLG	**Polygyros**	**0.74**	**303**	P	**Pg**	**23 18 12.9**	**-0.4**
NEO	**Neokhori**	**1.04**	**231**	*e*PN	**Pg**	**23 18 18.8**	**-0.2**
NEO	**Neokhori**	**1.04**	**231**	*e*Pn	**Pg**	**23 18 18.8**	**-0.2**
HORT	**Hortiatis**	**1.08**	**306**	P	**Pg**	**23 18 18.8**	**-1.0**
HORT				S	**Sb**	**23 18 34.4**	**+0.4**
HORT	**Hortiatis**	**1.08**	**306**	P	**Pg**	**23 18 18.8**	**-1.0**
HORT				S	**Sb**	**23 18 34.4**	**+0.4**
SOH	**Sokhos**	**1.09**	**321**	*e*PN	**Pg**	**23 18 19.4**	**-0.6**
SOH	**Sokhos**	**1.09**	**321**	P	**Pg**	**23 18 19.4**	**-0.6**
SOH				S	**Sb**	**23 18 34.9**	**+0.7**
SOH	**Sokhos**	**1.09**	**321**	P	**Pg**	**23 18 19.4**	**-0.6**
SOH				S	**Sb**	**23 18 34.9**	**+0.7**
THE	**Thessaloniki**	**1.19**	**304**	P	**Pb**	**23 18 21.1**	**-0.5**
THE				S	**Sb**	**23 18 37.3**	**+0.4**
THE	**Thessaloniki**	**1.19**	**304**	P	**Pb**	**23 18 21.1**	**-0.5**
THE				S	**Sb**	**23 18 37.3**	**+0.4**
SRS	**Serrai**	**1.25**	**336**	P	**Pn**	**23 18 21.4**	**-1.1**
SRS	**Serrai**	**1.25**	**336**	P	**Pn**	**23 18 21.4**	**-1.1**
GADA	**Gvkgeada**	**1.28**	**80**	*e*PN	**Pn**	**23 18 21.9**	**-0.9**
GADA	**Gvkgeada**	**1.28**	**80**	*e*Pn	**Pn**	**23 18 21.9**	**-0.9**
LIT	**Litokhoron**	**1.36**	**276**	*e*PN	**Pn**	**23 18 24.1**	**+0.1**
LIT	**Litokhoron**	**1.36**	**276**	P	**Pn**	**23 18 24.1**	**+0.1**
LIT				S	**Sb**	**23 18 41.7**	**-0.3**
LIT	**Litokhoron**	**1.36**	**276**	P	**Pn**	**23 18 24.1**	**+0.1**
LIT				S	**Sb**	**23 18 41.7**	**-0.3**
NVR	**Nevrokopi**	**1.41**	**348**	P	**Pn**	**23 18 23.8**	**-0.8**
NVR	**Nevrokopi**	**1.41**	**348**	P	**Pn**	**23 18 23.8**	**-0.8**
SIGR	**SIGRI**	**1.45**	**121**	P	**Pn**	**23 18 24.7**	**-0.5**
SIGR	**SIGRI**	**1.45**	**121**	P	**Pn**	**23 18 24.7**	**-0.5**
RDO	**Rodhopi**	**1.53**	**39**	*e*PB	**Pn**	**23 18 24.7**	**-1.5**
RDO	**Rodhopi**	**1.53**	**39**	P	**Pn**	**23 18 24.7**	**-1.5**
RDO	**Rodhopi**	**1.53**	**39**	P	**Pn**	**23 18 24.7**	**-1.5**
EZN	**Ezine**	**1.60**	**95**	*e*PN	**Pn**	**23 18 26.4**	**-0.8**
EZN	**Ezine**	**1.60**	**95**	*e*Pn	**Pn**	**23 18 26.4**	**-0.8**
ENEZ	**Enez**	**1.64**	**62**	*e*PN	**Pn**	**23 18 26.2**	**-1.5**
ENEZ				*e*SN	**Sn**	**23 18 51.7**	**+2.9**
ENEZ	**Enez**	**1.64**	**62**	*e*Pn	**Pn**	**23 18 26.2**	**-1.6**
ENEZ				*e*Sn	**Sn**	**23 18 51.7**	**+2.8**
LKR	**Lokris**	**1.64**	**217**	*e*PN	**Pn**	**23 18 27.2**	**-0.6**
LKR	**Lokris**	**1.64**	**217**	P	**Pn**	**23 18 27.3**	**-0.5**
LKR	**Lokris**	**1.64**	**217**	P	**Pn**	**23 18 27.3**	**-0.5**
ALN	**Alexandroupoli**	**1.65**	**55**	P	**Pn**	**23 18 26.3**	**-1.6**
ALN				S	**Sn**	**23 18 49.1**	**0.0**
ALN	**Alexandroupoli**	**1.65**	**55**	P	**Pn**	**23 18 26.3**	**-1.6**
ALN				S	**Sn**	**23 18 49.1**	**0.0**
MMB	**Musomiste**	**1.67**	**346**	*i* Pg	**Pn**	**23 18 26.9**	**-1.2**
MMB	**Musomiste**	**1.67**	**346**	*i* Pg	**Pn**	**23 18 26.9**	**-1.2**
PRK	**Paraskevi**	**1.72**	**114**	*e*PB	**Pn**	**23 18 28.5**	**-0.4**
PRK	**Paraskevi**	**1.72**	**114**	P	**Pn**	**23 18 28.5**	**-0.4**
PRK				S	**Sn**	**23 18 50.4**	**-0.4**
PRK	**Paraskevi**	**1.72**	**114**	P	**Pn**	**23 18 28.5**	**-0.4**
PRK				S	**Sn**	**23 18 50.4**	**-0.4**
RZN	**Rozhen**	**1.75**	**11**	*i* P	**Pn**	**23 18 28.7**	**-0.6**
RZN	**Rozhen**	**1.75**	**11**	*i* P	**Pn**	**23 18 28.7**	**-0.6**
AGG	**Agios Georgios**	**1.77**	**238**	*e*PN	**Pn**	**23 18 29.6**	**+0.1**
AGG	**Agios Georgios**	**1.77**	**238**	P	**Pn**	**23 18 29.6**	**+0.1**
AGG				S	**Sn**	**23 18 52.6**	**+0.6**
AGG	**Agios Georgios**	**1.77**	**238**	P	**Pn**	**23 18 29.6**	**+0.1**
AGG				S	**Sn**	**23 18 52.6**	**+0.6**
THL	**Klokotos Trika**	**1.77**	**257**	*e*PN	**Pn**	**23 18 29.3**	**-0.4**
THL	**Klokotos Trika**	**1.77**	**257**	P	**Pn**	**23 18 29.7**	**0.0**
THL	**Klokotos Trika**	**1.77**	**257**	*e*Pn	**Pn**	**23 18 29.3**	**-0.4**
THL	**Klokotos Trika**	**1.77**	**257**	P	**Pn**	**23 18 29.7**	**0.0**
KDZ	**Kurdzhali**	**1.89**	**27**	*i* P	**Pn**	**23 18 29.4**	**-1.9**
KDZ				*i* Pg	**Pg**	**23 18 32.7**	**-2.6**
KDZ	**Kurdzhali**	**1.89**	**27**	*i* P	**Pn**	**23 18 29.4**	**-1.9**
KZN	**Kozani**	**1.94**	**281**	*e*PB	**Pn**	**23 18 33.1**	**+1.2**
KZN	**Kozani**	**1.94**	**281**	*e*Pb	**Pn**	**23 18 33.1**	**+1.2**
PTL	**Penteli**	**1.94**	**189**	*e*PN	**Pn**	**23 18 31.4**	**-0.6**
PTL	**Penteli**	**1.94**	**189**	*e*Pn	**Pn**	**23 18 31.4**	**-0.6**
LPK	**Lapseki**	**1.96**	**77**	*e*PN	**Pn**	**23 18 31.3**	**-0.9**
LPK	**Lapseki**	**1.96**	**77**	*e*Pn	**Pn**	**23 18 31.3**	**-0.9**
AYVA	**Ayvalik**	**1.99**	**109**	*i* P	**Pn**	**23 18 32.2**	**-0.4**
AYVA	**Ayvalik**	**1.99**	**109**	*i* P	**Pn**	**23 18 32.2**	**-0.4**
ATHU	**Athens Univers**	**2.04**	**191**	P	**Pn**	**23 18 32.7**	**-0.5**
ATHU	**Athens Univers**	**2.04**	**191**	P	**Pn**	**23 18 32.7**	**-0.5**
ATH	**Athens Observa**	**2.04**	**192**	*e*PN	**Pn**	**23 18 33.4**	**+0.1**
ATH	**Athens Observa**	**2.04**	**192**	*e*Pn	**Pn**	**23 18 33.4**	**+0.1**
KKB	**Krupnik**	**2.09**	**335**	*i* P	**Pn**	**23 18 33.6**	**-0.4**
KKB	**Krupnik**	**2.09**	**335**	*i* P	**Pn**	**23 18 33.6**	**-0.4**
VLY	**Voula,Athens**	**2.15**	**190**	*e*PN	**Pn**	**23 18 34.2**	**-0.6**
VLY	**Voula,Athens**	**2.15**	**190**	*e*Pn	**Pn**	**23 18 34.2**	**-0.6**
PLD	**Plovdiv**	**2.16**	**9**	P	**Pn**	**23 18 35.1**	**+0.2**
PLD				S	**Sn**	**23 19 02.2**	**+0.5**
PLD	**Plovdiv**	**2.16**	**9**	*i* P	**Pn**	**23 18 35.0**	**+0.1**
PLD	**Plovdiv**	**2.16**	**9**	P	**Pn**	**23 18 35.1**	**+0.2**
PLD				S	**Sn**	**23 19 02.2**	**+0.5**
EVR	**Evrytania**	**2.17**	**242**	*e*PN	**Pn**	**23 18 35.6**	**+0.5**
EVR	**Evrytania**	**2.17**	**242**	*e*Pn	**Pn**	**23 18 35.6**	**+0.5**
LTK	**Loutraki**	**2.19**	**208**	*e*PN	**Pn**	**23 18 34.8**	**-0.6**
LTK	**Loutraki**	**2.19**	**208**	P	**Pn**	**23 18 34.9**	**-0.5**
LTK	**Loutraki**	**2.19**	**208**	P	**Pn**	**23 18 34.9**	**-0.5**
KALE	**Kalithea**	**2.28**	**227**	P	**Pn**	**23 18 36.8**	**+0.2**
KALE	**Kalithea**	**2.28**	**227**	P	**Pn**	**23 18 36.8**	**+0.2**
DIM	**Dimitrovgrad**	**2.29**	**25**	*i* P	**Pn**	**23 18 36.1**	**-0.6**
DIM	**Dimitrovgrad**	**2.29**	**25**	*i* P	**Pn**	**23 18 36.1**	**-0.6**
NAIG	**Nisos Aigina**	**2.29**	**195**	*e*PN	**Pn**	**23 18 36.3**	**-0.4**
NAIG	**Nisos Aigina**	**2.29**	**195**	*e*Pn	**Pn**	**23 18 36.3**	**-0.4**
TRIZ	**Trizonia**	**2.34**	**227**	P	**Pn**	**23 18 37.6**	**+0.2**
TRIZ	**Trizonia**	**2.34**	**227**	P	**Pn**	**23 18 37.6**	**+0.2**
FNA	**Florina**	**2.34**	**291**	P	**Pn**	**23 18 37.8**	**+0.3**
FNA				S	**Sn**	**23 19 07.3**	**+1.0**
FNA	**Florina**	**2.34**	**291**	P	**Pn**	**23 18 37.8**	**+0.3**
FNA				S	**Sn**	**23 19 07.3**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.34**	**71**	*e*PN	**Pn**	**23 18 36.3**	**-1.2**
RKY	**Sarkoy-Tekirda**	**2.34**	**71**	*e*Pn	**Pn**	**23 18 36.3**	**-1.2**
SART	**Tekirdag**	**2.35**	**71**	*i* P	**Pn**	**23 18 36.1**	**-1.4**
SART	**Tekirdag**	**2.35**	**71**	*i* P	**Pn**	**23 18 36.2**	**-1.3**
EFP	**Efpalio**	**2.39**	**231**	P	**Pn**	**23 18 37.5**	**-0.6**
EFP	**Efpalio**	**2.39**	**231**	P	**Pn**	**23 18 37.5**	**-0.6**
URLA	**Izmir**	**2.43**	**131**	*i* P	**Pn**	**23 18 37.8**	**-0.8**
URLA	**Izmir**	**2.43**	**131**	*i* P	**Pn**	**23 18 37.8**	**-0.8**
BIA	**Bitola**	**2.47**	**296**	*e*PN	**Pn**	**23 18 38.6**	**-0.6**
BIA	**Bitola**	**2.47**	**296**	*e*Pn	**Pn**	**23 18 38.6**	**-0.6**
GUR	**Goura**	**2.52**	**217**	*e*PN	**Pn**	**23 18 39.9**	**0.0**
GUR	**Goura**	**2.52**	**217**	P	**Pn**	**23 18 39.9**	**0.0**
GUR	**Goura**	**2.52**	**217**	P	**Pn**	**23 18 39.9**	**0.0**
DID	**Didima**	**2.59**	**198**	*e*PN	**Pn**	**23 18 40.3**	**-0.5**
DID	**Didima**	**2.59**	**198**	P	**Pn**	**23 18 40.3**	**-0.5**
DID	**Didima**	**2.59**	**198**	P	**Pn**	**23 18 40.3**	**-0.5**
BALY	**Balya**	**2.60**	**94**	*i* P	**Pn**	**23 18 41.0**	**0.0**
BALY	**Balya**	**2.60**	**94**	*i* P	**Pn**	**23 18 41.0**	**0.0**
BALY				*i* S	**Sn**	**23 19 12.1**	**-0.5**
EDRB	**Edirne**	**2.66**	**44**	*e*PN	**Pn**	**23 18 41.0**	**-0.7**
EDRB	**Edirne**	**2.66**	**44**	*e*Pn	**Pn**	**23 18 41.1**	**-0.7**
KRUS	**Krusevo**	**2.68**	**302**	*e*Pn	**Pn**	**23 18 42.4**	**+0.3**
KRUS				*e*Sn	**Sg**	**23 19 26.8**	**+1.7**
KRUS	**Krusevo**	**2.68**	**302**	*e*Pn	**Pn**	**23 18 42.3**	**+0.2**
BLCB	**Balcova**	**2.68**	**125**	*e*PN	**Pn**	**23 18 42.1**	**-0.1**
BLCB	**Balcova**	**2.68**	**125**	P	**Pn**	**23 18 42.8**	**+0.7**
BLCB	**Balcova**	**2.68**	**125**	*e*Pn	**Pn**	**23 18 42.1**	**0.0**
BLCB	**Balcova**	**2.68**	**125**	P	**Pn**	**23 18 42.8**	**+0.7**
TKR	**Tekirdag**	**2.70**	**67**	*e*PN	**Pn**	**23 18 43.1**	**+0.7**
TKR	**Tekirdag**	**2.70**	**67**	*e*Pn	**Pn**	**23 18 43.1**	**+0.7**
VTS	**Vitosha**	**2.73**	**344**	P	**Pn**	**23 18 43.6**	**+0.8**
VTS	**Vitosha**	**2.73**	**344**	P	**Pn**	**23 18 43.3**	**+0.5**
VTS	**Vitosha**	**2.73**	**344**	*i* P	**Pn**	**23 18 43.2**	**+0.4**
VTS	**Vitosha**	**2.73**	**344**	P	**Pn**	**23 18 43.3**	**+0.5**
EDC	**Edincik**	**2.79**	**81**	*e*PN	**Pn**	**23 18 44.5**	**+0.9**
EDC	**Edincik**	**2.79**	**81**	*e*Pn	**Pn**	**23 18 44.5**	**+0.9**
BALB	**Balikesir**	**2.81**	**96**	*e*PN	**Pn**	**23 18 44.4**	**+0.5**
BALB	**Balikesir**	**2.81**	**96**	*e*Pn	**Pn**	**23 18 44.4**	**+0.5**
IZM	**Izmir**	**2.81**	**123**	*e*PN	**Pn**	**23 18 44.1**	**+0.1**
BNT	**Bandirma**	**2.83**	**81**	*e*PN	**Pn**	**23 18 44.4**	**+0.2**
CRLT	**Corlu**	**2.89**	**65**	*e*PN	**Pn**	**23 18 45.3**	**+0.3**
CRLT	**Corlu**	**2.89**	**65**	*e*Pn	**Pn**	**23 18 45.3**	**+0.3**
AKS	**Akhisar**	**2.96**	**110**	*e*PN	**Pn**	**23 18 46.7**	**+0.7**
AKS	**Akhisar**	**2.96**	**110**	*e*Pn	**Pn**	**23 18 46.7**	**+0.7**
VLX	**Vlachokerasia**	**2.98**	**210**	*e*PN	**Pn**	**23 18 46.1**	**-0.2**
VLX	**Vlachokerasia**	**2.98**	**210**	P	**Pn**	**23 18 46.8**	**+0.5**
VLX	**Vlachokerasia**	**2.98**	**210**	*e*Pn	**Pn**	**23 18 46.1**	**-0.2**
VLX	**Vlachokerasia**	**2.98**	**210**	P	**Pn**	**23 18 46.8**	**+0.5**
SMG	**Samos**	**3.03**	**137**	*e*PN	**Pn**	**23 18 46.7**	**-0.2**
SMG	**Samos**	**3.03**	**137**	*e*Pn	**Pn**	**23 18 46.7**	**-0.2**
JMB	**Yambol**	**3.05**	**34**	P	**Pn**	**23 18 46.2**	**-1.0**
JMB	**Yambol**	**3.05**	**34**	P	**Pn**	**23 18 46.2**	**-1.0**
APE	**Apeiranthos**	**3.07**	**161**	P	**Pn**	**23 18 47.0**	**-0.4**
APE	**Apeiranthos**	**3.07**	**161**	⇓*i*P	**Pn**	**23 18 46.6**	**-0.8**
APE	**Apeiranthos**	**3.07**	**161**	P	**Pn**	**23 18 46.7**	**-0.7**
APE	**Apeiranthos**	**3.07**	**161**	P	**Pn**	**23 18 47.0**	**-0.4**
KCT	**Karacabey**	**3.16**	**83**	*e*PN	**Pn**	**23 18 49.3**	**+0.6**
KCT	**Karacabey**	**3.16**	**83**	*e*Pn	**Pn**	**23 18 49.3**	**+0.6**
SLVT	**Silivri**	**3.26**	**66**	*e*PN	**Pn**	**23 18 50.5**	**+0.4**
SLVT	**Silivri**	**3.26**	**66**	*e*Pn	**Pn**	**23 18 50.5**	**+0.4**
DURS	**Dursunbey**	**3.27**	**95**	*i* P	**Pn**	**23 18 50.3**	**+0.1**
DURS	**Dursunbey**	**3.27**	**95**	*i* P	**Pn**	**23 18 50.3**	**+0.1**
BARS	**Barje**	**3.38**	**328**	⇑*i*Pn	**Pn**	**23 18 51.8**	**0.0**
DST	**Dursunbey**	**3.39**	**95**	*e*PN	**Pn**	**23 18 52.8**	**+0.9**
DST	**Dursunbey**	**3.39**	**95**	*e*Pn	**Pn**	**23 18 52.8**	**+1.0**
MPEP	**Malo Peshtene**	**3.40**	**354**	*i* P	**Pn**	**23 18 52.7**	**+0.7**
VLI	**Veliai**	**3.41**	**198**	*e*PN	**Pn**	**23 18 51.7**	**-0.4**
VLI	**Veliai**	**3.41**	**198**	*e*Pn	**Pn**	**23 18 51.7**	**-0.4**
CTYL	**Yal??k??y-??at**	**3.41**	**63**	*e*PN	**Pn**	**23 18 53.2**	**+1.0**
CTYL	**Yal??k??y-??at**	**3.41**	**63**	*e*Pn	**Pn**	**23 18 53.2**	**+1.0**
CTKS	**Kestanelik-??a**	**3.47**	**67**	*e*PN	**Pn**	**23 18 53.6**	**+0.6**
CTKS	**Kestanelik-??a**	**3.47**	**67**	*e*Pn	**Pn**	**23 18 53.6**	**+0.6**
DEMI	**Demirci**	**3.57**	**104**	*i* P	**Pn**	**23 18 54.9**	**+0.5**
DEMI	**Demirci**	**3.57**	**104**	*i* P	**Pn**	**23 18 54.9**	**+0.5**
BGKT	**Bogazkoy**	**3.65**	**69**	*e*PN	**Pn**	**23 18 56.8**	**+1.4**
BGKT	**Bogazkoy**	**3.65**	**69**	*e*Pn	**Pn**	**23 18 56.8**	**+1.4**
PYL	**PYLOS**	**3.65**	**214**	*e*PN	**Pn**	**23 18 55.7**	**+0.2**
PYL	**PYLOS**	**3.65**	**214**	*e*Pn	**Pn**	**23 18 55.7**	**+0.2**
THR5	**Thira Island,**	**3.65**	**166**	P	**Pn**	**23 18 55.7**	**+0.2**
THR5	**Thira Island,**	**3.65**	**166**	P	**Pn**	**23 18 55.7**	**+0.2**
KULA	**Kula-Manisa**	**3.72**	**112**	*e*PN	**Pn**	**23 18 56.9**	**+0.5**
KULA	**Kula-Manisa**	**3.72**	**112**	*e*Pn	**Pn**	**23 18 56.9**	**+0.6**
BODT	**Bodrum**	**3.77**	**140**	*e*PN	**Pn**	**23 18 56.2**	**-0.8**
BODT	**Bodrum**	**3.77**	**140**	*e*Pn	**Pn**	**23 18 56.2**	**-0.8**
ISK	**Istanbul-Kandi**	**3.82**	**72**	*e*PN	**Pn**	**23 18 58.5**	**+0.7**
ISK	**Istanbul-Kandi**	**3.82**	**72**	*e*Pn	**Pn**	**23 18 58.5**	**+0.7**
NISS		**3.84**	**334**	*e*Pn	**Pn**	**23 18 55.8**	**-2.2**
KLYT	**Kilyos**	**3.86**	**69**	*e*PN	**Pn**	**23 18 59.1**	**+0.7**
KLYT	**Kilyos**	**3.86**	**69**	*e*Pn	**Pn**	**23 18 59.1**	**+0.8**
YLV	**Yalova**	**3.96**	**80**	*e*PN	**Pn**	**23 19 01.3**	**+1.7**
YLV	**Yalova**	**3.96**	**80**	*e*Pn	**Pn**	**23 19 01.3**	**+1.6**
DAT	**Datca**	**4.16**	**140**	*e*PN	**Pn**	**23 19 01.3**	**-1.2**
DAT	**Datca**	**4.16**	**140**	*e*Pn	**Pn**	**23 19 01.3**	**-1.1**
SILT	**Sile**	**4.27**	**72**	*e*PN	**Pn**	**23 19 05.2**	**+1.3**
SILT	**Sile**	**4.27**	**72**	*e*Pn	**Pn**	**23 19 05.2**	**+1.3**
KARN	**Karanos**	**4.57**	**183**	P	**Pn**	**23 19 10.6**	**+2.5**
ALT	**Altintas**	**4.62**	**100**	*e*PN	**Pn**	**23 19 09.5**	**+0.7**
ALT	**Altintas**	**4.62**	**100**	*e*Pn	**Pn**	**23 19 09.5**	**+0.7**
GRUS	**Gruza**	**4.72**	**327**	*e*PN	**Pn**	**23 19 09.8**	**-0.3**
GULT	**Gulveren**	**4.81**	**83**	*e*PN	**Pn**	**23 19 13.0**	**+1.6**
GULT	**Gulveren**	**4.81**	**83**	*e*Pn	**Pn**	**23 19 13.0**	**+1.6**
DIVS	**Divibare**	**5.20**	**324**	*e*Pn	**Pn**	**23 19 16.5**	**-0.3**
TIRR	**Tirgusor**	**5.44**	**33**	⇓*i*P	**Pn**	**23 19 19.5**	**-0.5**
TIRR	**Tirgusor**	**5.44**	**33**	⇓*i*P	**Pn**	**23 19 19.5**	**-0.5**
HARR	**Harsova**	**5.44**	**29**	⇓*i*P	**Pn**	**23 19 19.9**	**-0.2**
HARR	**Harsova**	**5.44**	**29**	⇓*i*P	**Pn**	**23 19 19.9**	**-0.2**
VOIR		**5.49**	**6**	⇓*i*P	**Pn**	**23 19 21.2**	**+0.5**
VOIR		**5.49**	**6**	⇓*i*P	**Pn**	**23 19 21.2**	**+0.5**
MLR	**Muntele Rosu**	**5.65**	**12**	⇓*i*P	**Pn**	**23 19 23.6**	**+0.6**
MLR	**Muntele Rosu**	**5.65**	**12**	⇓*i*P	**Pn**	**23 19 23.6**	**+0.6**
BZS	**Buzias**	**5.97**	**342**	⇓*i*P	**Pn**	**23 19 26.6**	**-0.6**
BZS	**Buzias**	**5.97**	**342**	⇓*i*P	**Pn**	**23 19 26.6**	**-0.6**
PLOR	**Plostina**	**6.13**	**16**	⇓*i*P	**Pn**	**23 19 31.6**	**+2.1**
PLOR	**Plostina**	**6.13**	**16**	⇓*i*P	**Pn**	**23 19 31.6**	**+2.1**
MDB	**Medias**	**6.17**	**1**	⇓*i*P	**Pn**	**23 19 31.7**	**+1.7**
MDB	**Medias**	**6.17**	**1**	⇓*i*P	**Pn**	**23 19 31.7**	**+1.7**
TLCR		**6.20**	**31**	⇓*i*P	**Pn**	**23 19 30.4**	**-0.1**
TLCR		**6.20**	**31**	⇓*i*P	**Pn**	**23 19 30.4**	**-0.1**
BURAR	**Bucovina Array**	**7.67**	**5**	⇓*i*P	**Pn**	**23 19 51.1**	**+0.5**
BURAR	**Bucovina Array**	**7.67**	**5**	⇓*i*P	**Pn**	**23 19 51.1**	**+0.5**
BUR08	**Bucovina Ar. S**	**7.70**	**5**	*e*Pn	**Pn**	**23 19 50.8**	**-0.2**
BUR08	**Bucovina Ar. S**	**7.70**	**5**	*e*Pn	**Pn**	**23 19 50.8**	**-0.2**

ISCJB ***02*** *23:21:07.6±0.4,47°.87N±0°.02×16°.01E±0°.03,h1km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=20.6*
PRU ***02*** *23:21:08.0,47°.81N×16°.03E,h0km*
IPEC ***02*** *23:21:09.7±0.1,47°.81N×16°.07E,h18km,ML1.8/3,Error ellipse: s-maj=0.9km s-min=0.7km az=165.0*
CSEM ***02*** *23:21:09.4±0.1,47°.80N×16°.07E,h12km,ML2.9/6,Error ellipse: s-maj=2.8km s-min=2.3km az=138.0*
VIE ***02*** *23:21:09.4±0.2,47°.80N×16°.03E,h15km±1km,mb1.7/5, ML2.5/6,Error ellipse: s-maj=1.7km s-min=1.6km az=114.0 9 km N of Ternitz felt 3-4 ems98 near Hohe Wand / LOWER AUSTRIA*
ISC 02 23:21:08.9±0.4,**47°.85N**±0°.02×**16°.04E**±0°.03,**h8**km±3km,
n41,σ1°**20**/71,**5C-7D,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.14**	**303**	*e*Pg	**Pg**	**23 21 14.3**	**+2.2**
	7.7nm,0.1s,SNR=868						
CONA				⇓*i*Sg	**Sg**	**23 21 17.2**	**+3.0**
	213nm,0.2s						
CONA	**Conrad Observa**	**0.14**	**303**	Pg	**Pg**	**23 21 14.3**	**+2.2**
	7.7nm,0.1s,SNR=868						
CONA				Sg	**Sg**	**23 21 17.2**	**+3.0**
SOP	**Sopron**	**0.39**	**115**	*e*Pg	**Pg**	**23 21 17.3**	**+0.9**
	baz=291						
SOP				⇑*e*Sg	**Sg**	**23 21 22.6**	**+1.1**
ARSA	**Arzberg**	**0.69**	**211**	⇓*e*Pg	**Pg**	**23 21 22.4**	**+0.1**
	5.4nm,0.1s,SNR=9.7						
ARSA				⇓*i*Sg	**Sg**	**23 21 31.2**	**-0.1**
	21nm,0.1s						
ARSA	**Arzberg**	**0.69**	**211**	*e*Pg	**Pg**	**23 21 22.5**	**+0.2**
	baz=33						
ARSA				Sg	**Sg**	**23 21 31.2**	**-0.1**
	21nm,0.1s						
ZST	**Bratislava**	**0.79**	**64**	*e*PG	**Pg**	**23 21 25.2**	**+1.0**
ZST				*e*SG	**Sg**	**23 21 36.9**	**+2.4**
ZST	**Bratislava**	**0.79**	**64**	*e*Pg	**Pg**	**23 21 25.1**	**+0.9**
	baz=241						
ZST				*e*Sg	**Sg**	**23 21 37.0**	**+2.5**
SMOL	**Smolenice**	**1.14**	**54**	*e*SN	**Sn**	**23 21 47.7**	**+0.8**
SMOL	**Smolenice**	**1.14**	**54**	*e*Sn	**Sn**	**23 21 47.7**	**+0.8**
MOA	**Molln**	**1.20**	**271**	*e*Pn	**Pn**	**23 21 32.0**	**+0.1**
	SNR=47						
MOA				⇓*i*Pg	**Pg**	**23 21 32.5**	**+0.6**
	6.7nm,0.2s						
MOA				⇑*i*Sg	**Sg**	**23 21 48.8**	**+1.4**
	17nm,0.2s						
MOA	**Molln**	**1.20**	**271**	Pn	**Pn**	**23 21 32.0**	**+0.1**
	SNR=47						
MOA	**Molln**	**1.20**	**271**	Pg	**Pg**	**23 21 32.5**	**+0.6**
	6.7nm,0.2s						
MOA				Sn	**Sn**	**23 21 48.8**	**+0.5**
KRUC	**Moravsky**	**1.24**	**11**	*e*Pg	**Pg**	**23 21 32.6**	**-0.1**
	baz=190						
KRUC				*e*Sg	**Sg**	**23 21 49.3**	**+0.6**
	14nm,0.1s,baz=190						
SOKA	**Soboth**	**1.36**	**211**	⇑*i*Pg	**Pg**	**23 21 34.8**	**-0.2**
	2.4nm,0.3s						
SOKA				⇑*i*Sg	**Sg**	**23 21 50.3**	**-2.3**
	5.5nm,0.4s						
SOKA	**Soboth**	**1.36**	**211**	Pg	**Pg**	**23 21 34.8**	**-0.2**
	2.4nm,0.3s						
SOKA				Sg	**Sg**	**23 21 50.3**	**-2.3**
	5.5nm,0.4s						
TREC	**Trest**	**1.49**	**346**	*e*PG	**Pg**	**23 21 37.0**	**-0.6**
TREC				*e*SG	**Sg**	**23 21 56.5**	**-0.4**
	comp=Z,20nm,0.2s						
TREC	**Trest**	**1.49**	**346**	*e*Pn	**Pn**	**23 21 36.8**	**+0.8**
	baz=165						
TREC				*e*Sn	**Sn**	**23 21 56.4**	**+0.8**
	baz=165						
VRAC	**Vranov**	**1.51**	**14**	*e*Pn	**Pn**	**23 21 36.4**	**+0.3**
	baz=193						
VRAC				*e*Sn	**Sn**	**23 21 56.4**	**+0.5**
	comp=Z,8.2nm,0.1s,baz=193						
PKSG		**1.65**	**105**	⇓*e*Pn	**Pn**	**23 21 37.7**	**-0.5**
PKSG				*e*Sn	**Sn**	**23 21 57.8**	**-1.7**
OBKA	**Obir**	**1.68**	**218**	⇑*i*Pg	**Pg**	**23 21 40.8**	**-0.4**
	comp=Z,1.3nm,0.2s						
OBKA				⇓*i*Sn

CMIG			Sn	Sn	23 41 20.7	-0.1
comp=N,0.4nm,0.3s,baz=100,slow=19,SNR=1.6						
CMIG			LR	LR	23 43 21.3	
comp=N,224nm,20.3s,baz=191,slow=39						
CMIG	**Matias Romero**	**9.05 277**	Pn	Pn	23 39 45.3	+6.6
CMIG			Sn	Sn	23 41 20.7	-0.1
CMIG			LR	LR	23 43 21.3	
ROSC	**El Rosal**	**15.67 134**	LR	LR	23 47 24.6	
comp=N,68nm,20.4s,baz=204,slow=38						
SDV	**Santo Domingo**	**16.19 115**	Pn	Pn	23 41 18.3	+2.6
comp=N,0.3nm,0.3s,baz=1.6,slow=4.0,SNR=3.9						
SDV	**Santo Domingo**	**16.19 115**	Pn	Pn	23 41 18.3	+2.6
LRAL	**Lakeview Retre**	**16.88 356**	*e*Pn	Pn	23 41 24.1	-0.2
comp=N,36nm,1.4s						
LRAL			*e*P		23 41 26.7	
OTAV	**Otavalo**	**17.25 156**	*e*P	Pn	23 41 32.3	+3.1
comp=N,12nm,1.5s						
NATX	**Nacogdoches**	**17.65 333**	*e*P	Pn	23 41 34.5	+0.5
comp=N,20nm,0.6s						
JCT	**Junction City**	**19.38 320**	*e*P	Pn	23 41 54.2	-0.8
comp=N,16nm,0.9s						
WVT	**Waverly**	**20.02 354**	*e*P	P	23 42 00.4	-0.5
comp=N,6.1nm,0.8s						
TXAR	**Lajitas Array**	**21.26 311**	P	P	23 42 14.9	+0.5
comp=N,2.1nm,0.7s,mb3.6,baz=130,slow=11,SNR=26						
TXAR			S	S	23 46 05.9	-4.8
comp=N,0.4nm,0.8s,baz=120,slow=25,SNR=3.4						
TXAR			LR	LR	23 52 15.4	
comp=N,17nm,21.4s,MS2.4,baz=0.0,slow=42						
WMOK	**Wichita Mounta**	**22.03 330**	*e*P	P	23 42 21.9	-0.7
comp=N,15nm,1.0s,mb4.4						
AMTX	**Amarillo**	**23.65 325**	*e*P	P	23 42 39.0	-0.6
comp=N,12nm,0.9s,mb4.3						
CPRX	**Cap Rock**	**23.65 319**	*e*P	P	23 42 40.1	+0.5
comp=N,16nm,1.3s,mb4.3						
MNTX	**Cornudas Mount**	**23.82 314**	*e*P	P	23 42 40.5	-0.7
comp=N,10.0nm,1.0s,mb4.2						
ATAH	**Atahualpa**	**24.16 163**	LR	LR	23 51 39.3	
comp=N,84nm,20.1s,MS3.2,baz=164,slow=35						
ANMO	**Albuquerque**	**26.53 319**	P	P	23 43 06.7	+0.9
comp=N,2.8nm,1.1s,mb3.7,baz=145,slow=9.7,SNR=4.7						
ANMO	**Albuquerque**	**26.53 319**	P	P	23 43 06.7	+0.9
TUC	**Tucson**	**28.02 310**	*e*P	P	23 43 20.6	+1.3
comp=N,1.7nm,0.8s,mb3.7						
RSSD	**Black Hills**	**32.02 334**	*e*P	P	23 43 55.0	+0.5
comp=N,1.2nm,0.4s,mb4.1						
BW06	**Boulder Array**	**33.58 327**	*e*P	P	23 44 07.9	-0.3
PDAR	**Pinedale Array**	**33.58 327**	P	P	23 44 07.8	-0.4
comp=N,0.3nm,0.6s,mb3.4,baz=124,slow=11,SNR=2.2						
REDW	**Red Top Meadow**	**34.68 327**	*e*P	P	23 44 17.6	-0.1
comp=N,6.4nm,1.2s,mb4.4						
REDW			*e*		23 44 25.4	
TPAW	**Teton Pass**	**34.82 327**	*e*P	P	23 44 19.8	+0.9
comp=N,4.4nm,1.2s,mb4.3						
TPAW			*e*pP	pP	23 44 27.4	+5.5
NVAR	**Mina Array Bea**	**36.35 314**	P	P	23 44 33.7	+1.6
comp=N,1.1nm,0.8s,mb3.9,baz=123,slow=9.6,SNR=7.6						
NVAR			PcP	PcP	23 46 57.5	+0.7
comp=N,0.4nm,0.7s,baz=120,slow=5.3,SNR=2.6						
BOZ	**Bozeman (W)**	**36.67 329**	*e*P	P	23 44 34.5	-0.3
comp=N,2.0nm,1.1s,mb3.9						
MCMT	**McKenzie Canyo**	**36.73 327**	*e*P	P	23 44 35.3	0.0
comp=N,0.7nm,0.9s,mb3.5						
MCMT			*e*pP	pP	23 44 44.1	+5.7
WVOR	**Wild Horse Val**	**38.61 320**	*e*P	P	23 44 50.9	-0.3
comp=N,4.2nm,1.1s,mb4.1						
SCHQ	**Schefferville**	**41.23 16**	P	P	23 45 13.4	+0.5
comp=N,1.5nm,0.8s,mb3.7,baz=252,slow=6.4,SNR=2.9						
SCHQ			LR	LR	00 02 02.2	
comp=N,48nm,19.0s,MS3.4,baz=196,slow=36						
SCHQ	**Schefferville**	**41.23 16**	P	P	23 45 13.4	+0.5
SCHQ			LR	LR	00 02 02.2	
YKA	**Yellowknife Ar**	**50.62 343**	P	P	23 46 25.1	-1.7
comp=N,0.5nm,0.8s,mb3.5,baz=137,slow=7.5,SNR=11						
RES	**Resolute Bay**	**58.79 357**	*e*P	P	23 47 24.2	-1.6
comp=N,1.8nm,0.9s,mb4.1						
ESDC	**Sonseca Array**	**73.45 53**	P	P	23 49 02.0	+1.3
comp=N,0.1nm,0.5s,mb3.0,baz=286,slow=9.2,SNR=1.3						
WRA	**Warramunga Arr**	**142.00 258**	PKP	PKPdf	23 57 02.2	+1.2
comp=N,0.9nm,0.7s,baz=67,slow=2.5,SNR=5.0						
ASAR	**Alice Springs**	**142.30 252**	PKhKP		23 56 56.8	
comp=N,0.2nm,0.5s,baz=112,slow=3.6,SNR=2.0						
ASAR			PKP	PKPdf	23 57 04.2	+2.7
comp=N,0.5nm,0.6s,baz=102,slow=3.3,SNR=6.3						

*IDC **03** 00:16:26.5±2.2, 11.°55S×166.°50E, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/16, mbtmp4.1/7, MS3.6/4, Ms1 3.5/4, ms1mx3.1/28, Error ellipse: s-maj=70.9km s-min=29.5km az=121.0*

*ISCJB **03** 00:16:30.5±1.2, 11.°70S±0.°07×166.°4E±0.°2, h33km, mb4.1/11, MS3.4/4, Error ellipse: s-maj=33.1km s-min=10.1km az=175.9*

*NEIC **03** 00:16:32.1±1.5, 11.°55S×166.°43E, h35km, mb4.1/2, Error ellipse: s-maj=46.5km s-min=15.4km az=122.0*

ISC 03 00:16:32.7±1.2, 11.°61S±0.°07×166.°4E±0.°2, h35km, n17, σ0.°75/13, mb4.1/11, MS3.4/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.40**	**180**	*e*Pn	**Pn**	**00 19 06.2**	**+6.8**
2.8nm,0.2s							
DZM				*e*Sn	**Sn**	**00 20 54.8**	**0.0**
4.9nm,0.3s							
DZM				*e*LR	LR	00 21 31.7	
384nm,25.8s							
CTA	**Charters Tower**	**21.11**	**244**	LR	LR	00 28 04.1	
comp=Z,113nm,19.6s,MS3.3,baz=52,slow=33							
AFI	**Afiamalu**	**21.41**	**98**	LR	LR	00 27 37.7	
comp=Z,148nm,19.0s,MS3.4,baz=21,slow=32							
URZ	**Urewera**	**28.21**	**162**	LR	LR	00 32 34.0	
comp=Z,92nm,18.5s,MS3.4,baz=189,slow=34							
STKA	**Stephens Creek**	**30.48**	**225**	P	**P**	**00 22 42.8**	**+0.4**
1.5nm,0.6s,mb3.9,baz=45,slow=11,SNR=4.3							
STKA				LR	LR	00 34 05.0	
comp=Z,136nm,19.0s,MS3.6,baz=26,slow=35							
WRAB	**Tennant Creek**	**31.88**	**251**	*e*P	**P**	**00 22 54.9**	**0.0**
3.8nm,0.9s,mb4.2							
WRA	**Warramunga Arr**	**31.89**	**251**	P	**P**	**00 22 54.8**	**-0.2**
1.6nm,0.8s,mb3.9,baz=83,slow=9.2,SNR=8.6							
ASAR	**Alice Springs**	**33.12**	**244**	P	**P**	**00 23 05.4**	**-0.3**
1.9nm,0.8s,mb4.1,baz=75,slow=9.8,SNR=17							
ASAR				PcP	PcP	00 25 47.9	-0.6
0.7nm,0.8s,baz=47,slow=3.1,SNR=6.7							
PPT	**Papeete**	**42.95**	**103**	*e*LR	LR	00 36 51.6	
115nm,28.8s							
CMAR	**Chiang Mai Arr**	**72.92**	**293**	P	**P**	**00 27 58.2**	**-0.7**
0.7nm,0.5s,mb3.9,baz=118,slow=3.6,SNR=3.6							
LZH	**Lanzhou**	**75.61**	**312**	*e*P	**P**	**00 28 15.6**	**+1.4**
LZH				pP	pP	00 28 20.0	-5.2
LZH				sP	sP	00 28 23.5	-5.7
LZH				pmax	pmax		
comp=Z,17nm,1.4s,mb4.8							
ULN	**Ulaanbaatar**	**79.13**	**324**	*e*P	**P**	**00 28 32.6**	**-1.1**
comp=Z,1.1nm,0.6s,mb4.0							
SONM	**Songino Array**	**79.50**	**324**	P	**P**	**00 28 36.3**	**+0.6**
comp=Z,0.6nm,0.8s,mb3.6,baz=116,slow=6.6,SNR=4.3							
GTA	**Gaotai**	**79.91**	**314**	*e*P	**P**	**00 28 39.4**	**+1.3**
GTA				sP	sP	00 28 44.6	-8.6
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.4							
MKAR	**Makanchi Array**	**94.37**	**317**	P	**P**	**00 29 48.5**	**-0.4**
comp=Z,0.8nm,0.5s,mb4.4,baz=101,slow=6.1,SNR=7.4							
ZALV	**Zalesovo Beam**	**94.39**	**324**	P	**P**	**00 29 47.8**	**-0.9**
comp=Z,0.3nm,0.3s,mb4.2,baz=93,slow=5.9,SNR=3.3							
ARCES	**ARCESS Array B**	**117.04**	**346**	PKP	PKPdf	00 35 12.4	-1.0
comp=Z,1.4nm,0.8s,baz=49,slow=2.7,SNR=7.2							

*ATH **03** 00:32:48.5, 39.°55N×26.°04E, h31km±1km, MD3.3/4*

*NEIC **03** 00:32:48.0, 39.°65N×26.°05E, h3km, MD3.1(ISK), MD3.3(ATH), After ISK.*

*THE **03** 00:32:49.3, 39.°61N×26.°05E, h4km±1km, ML3.3/4, Error ellipse: s-maj=2.1km s-min=0.6km az=229.0*

*DDA **03** 00:32:49.6, 39.°57N×26.°15E, h36km±1km, Md3.2*

*ISK **03** 00:32:49.0, 39.°64N×26.°04E, h4km, MD3.2*

*CSEM **03** 00:32:49.6±0.2, 39.°59N×26.°00E, h10km, MD3.2, Error ellipse: s-maj=4.1km s-min=3.5km az=60.0*

*ISCJB **03** 00:32:49.0±0.4, 39.°59N±0.°02×26.°03E±0.°03, h6km±3km, Error ellipse: s-maj=3.6km s-min=2.7km az=163.1*

ISC 03 00:32:49.6±0.4, 39.°59N±0.°02×26.°04E±0.°03, h8km±3km, n92, σ1.°00/128, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.25**	**3**	*i*P	**Pg**	**00 32 54.2**	**-0.4**
BOZC				*i*S	**Sg**	**00 32 57.9**	**0.0**
EZN	**Ezine**	**0.32**	**44**	PG	**Pg**	**00 32 55.4**	**-0.6**
EZN				SG	**Sg**	**00 32 59.8**	**-0.5**
EZN	**Ezine**	**0.32**	**44**	*i*Pg	**Pg**	**00 32 55.4**	**-0.6**
EZN				*i*Sg	**Sg**	**00 32 59.8**	**-0.4**
PRK	**Paraskevi**	**0.39**	**152**	*e*PB	**Pg**	**00 32 57.0**	**-0.3**
PRK				*e*SB	**Sg**	**00 33 03.0**	**+0.5**
PRK	**Paraskevi**	**0.39**	**152**	P	**Pg**	**00 32 57.0**	**-0.3**
PRK				S	**Sg**	**00 33 02.7**	**+0.2**
PRK	**Paraskevi**	**0.39**	**152**	P	**Pg**	**00 32 57.0**	**-0.3**
PRK				S	**Sg**	**00 33 02.7**	**+0.2**
PRK				*e*Sb	**Sg**	**00 33 03.0**	**+0.5**
SIGR	**SIGRI**	**0.41**	**200**	P	**Pg**	**00 32 57.4**	**-0.1**
SIGR				S	**Sg**	**00 33 03.2**	**+0.3**
SIGR	**SIGRI**	**0.41**	**200**	P	**Pg**	**00 32 57.4**	**-0.1**
SIGR				S	**Sg**	**00 33 03.2**	**+0.3**
GADA	**Gvkgeada**	**0.60**	**350**	*e*PG	**Pg**	**00 33 00.5**	**-0.8**
GADA				*e*SG	**Sg**	**00 33 09.0**	**-0.2**
GADA	**Gvkgeada**	**0.60**	**350**	*e*Pg	**Pg**	**00 33 00.5**	**-0.8**
GADA				*e*Sg	**Sg**	**00 33 09.0**	**-0.2**
LIA	**Limnos Island**	**0.72**	**295**	*e*PN	**Pg**	**00 33 03.5**	**0.0**
LIA	**Limnos Island**	**0.72**	**295**	P	**Pg**	**00 33 03.5**	**0.0**
LIA				S	**Sg**	**00 33 13.8**	**+0.8**
LIA	**Limnos Island**	**0.72**	**295**	P	**Pg**	**00 33 03.5**	**0.0**
LIA				S	**Sg**	**00 33 13.8**	**+0.8**
LOS	**Limnos**	**0.81**	**295**	P	**Pg**	**00 33 05.4**	**+0.2**
LOS				S	**Sg**	**00 33 17.0**	**+1.3**
LOS	**Limnos**	**0.81**	**295**	P	**Pg**	**00 33 05.4**	**+0.2**
LOS				S	**Sg**	**00 33 17.0**	**+1.3**
LPK	**Lapseki**	**0.96**	**35**	*e*PG	**Pg**	**00 33 06.8**	**-1.1**
LPK				*e*SG	**Sg**	**00 33 20.6**	**+0.1**
LPK	**Lapseki**	**0.96**	**35**	*e*Pg	**Pg**	**00 33 06.8**	**-1.2**
LPK				*e*Sg	**Sg**	**00 33 20.6**	**+0.2**
ENEZ	**Enez**	**1.14**	**5**	*e*PN	**Pn**	**00 33 10.4**	**-1.4**
ENEZ	**Enez**	**1.14**	**5**	*e*Pn	**Pn**	**00 33 10.5**	**-1.4**
ALN	**Alexandroupoli**	**1.30**	**0**	*e*PN	**Pn**	**00 33 13.0**	**-1.1**
ALN				*e*SN	**Sb**	**00 33 30.5**	**-0.6**
ALN	**Alexandroupoli**	**1.30**	**0**	P	**Pn**	**00 33 12.9**	**-1.2**
ALN				S	**Sb**	**00 33 30.5**	**-0.6**
ALN	**Alexandroupoli**	**1.30**	**0**	*e*Pn	**Pn**	**00 33 13.0**	**-1.1**
ALN				S	**Sb**	**00 33 30.5**	**-0.6**
URLA	**Izmir**	**1.31**	**160**	*i*P	**Pn**	**00 33 12.3**	**-1.8**
URLA				*i*S	**Sb**	**00 33 29.7**	**-1.6**
URLA	**Izmir**	**1.31**	**160**	*i*P	**Pn**	**00 33 12.3**	**-1.8**
URLA				*i*S	**Sb**	**00 33 29.7**	**-1.6**
RKY	**Sarkoy-Tekirda**	**1.40**	**38**	*e*PN	**Pn**	**00 33 14.5**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.40**	**38**	*e*Pn	**Pn**	**00 33 14.5**	**-0.9**
SART	**Tekirdag**	**1.40**	**38**	*i*P	**Pn**	**00 33 14.8**	**-0.6**
SART				*i*S	**Sb**	**00 33 34.3**	**+0.3**
SART	**Tekirdag**	**1.40**	**38**	*i*P	**Pn**	**00 33 14.8**	**-0.6**
SART				*i*S	**Sb**	**00 33 34.3**	**+0.3**
BALB	**Balikesir**	**1.43**	**88**	*e*PN	**Pn**	**00 33 17.1**	**+1.3**
BALB	**Balikesir**	**1.43**	**88**	*e*Pn	**Pn**	**00 33 17.1**	**+1.3**
BLCB	**Balcova**	**1.44**	**147**	*e*PN	**Pn**	**00 33 17.1**	**+1.1**
BLCB	**Balcova**	**1.44**	**147**	P	**Pn**	**00 33 15.7**	**-0.2**
BLCB				S	**Sn**	**00 33 35.6**	**+0.6**
BLCB	**Balcova**	**1.44**	**147**	P	**Pn**	**00 33 15.7**	**-0.2**
BLCB	**Balcova**	**1.44**	**147**	*e*Pn	**Pn**	**00 33 17.1**	**+1.2**
BLCB				S	**Sn**	**00 33 35.6**	**+0.6**
IZM	**Izmir**	**1.53**	**141**	*e*PN	**Pn**	**00 33 18.3**	**+1.1**
IZM	**Izmir**	**1.53**	**141**	*e*Pn	**Pn**	**00 33 18.3**	**+1.1**
AKS	**Akhisar**	**1.56**	**117**	*e*PN	**Pn**	**00 33 17.5**	**0.0**
AKS	**Akhisar**	**1.56**	**117**	*e*Pn	**Pn**	**00 33 17.5**	**0.0**
EDC	**Edincik**	**1.59**	**61**	*e*PN	**Pn**	**00 33 18.2**	**+0.2**
EDC	**Edincik**	**1.59**	**61**	*e*Pn	**Pn**	**00 33 18.2**	**+0.1**
RDO	**Rodhopi**	**1.60**	**346**	*e*PN	**Pn**	**00 33 17.7**	**-0.4**
RDO	**Rodhopi**	**1.60**	**346**	P	**Pn**	**00 33 17.6**	**-0.5**
RDO				S	**Sn**	**00 33 38.2**	**-0.7**
RDO	**Rodhopi**	**1.60**	**346**	P	**Pn**	**00 33 17.6**	**-0.5**
RDO				S	**Sn**	**00 33 38.2**	**-0.7**
BNT	**Bandirma**	**1.64**	**62**	*e*PN	**Pn**	**00 33 18.8**	**+0.2**
OUR	**Ouranopolis**	**1.74**	**296**	P	**Pn**	**00 33 19.2**	**-0.9**
OUR				S	**Sn**	**00 33 43.7**	**+1.2**
OUR	**Ouranopolis**	**1.74**	**296**	P	**Pn**	**00 33 19.2**	**-0.9**
OUR				S	**Sn**	**00 33 43.7**	**+1.2**
TKR	**Tekirdag**	**1.81**	**39**	*e*PN	**Pn**	**00 33 21.3**	**+0.4**
TKR	**Tekirdag**	**1.81**	**39**	*e*Pn	**Pn**	**00 33 21.3**	**+0.3**
PAIG	**Paliouri**	**1.84**	**281**	P	**Pn**	**00 33 20.6**	**-0.9**
PAIG	**Paliouri**	**1.84**	**281**	P	**Pn**	**00 33 20.6**	**-0.9**
DURS	**Dursunbey**	**1.89**	**89**	*i*P	**Pn**	**00 33 20.7**	**-1.3**
DURS				*i*S	**Sn**	**00 33 44.4**	**-1.6**
DURS	**Dursunbey**	**1.89**	**89**	*i*P	**Pn**	**00 33 20.7**	**-1.4**
DURS				*i*S	**Sn**	**00 33 44.4**	**-1.6**
SMG	**Samos**	**1.98**	**161**	*e*PB	**Pb**	**00 33 22.0**	**-3.9**
SMG	**Samos**	**1.98**	**161**	*e*Pb	**Pb**	**00 33 22.0**	**-3.9**
DST	**Dursunbey**	**2.00**	**89**	*e*PN	**Pn**	**00 33 24.5**	**+0.8**
DST	**Dursunbey**	**2.00**	**89**	*e*Pn	**Pn**	**00 33 24.5**	**+0.8**
CRLT	**Corlu**	**2.01**	**40**	*e*PN	**Pn**	**00 33 24.0**	**+0.2**
CRLT	**Corlu**	**2.01**	**40**	*e*Pn	**Pn**	**00 33 24.0**	**+0.2**
GCAM	**G?zelcaml?**	**2.11**	**153**	*i*P	**Pn**	**00 33 27.6**	**+2.4**
GCAM				*i*S	**Sn**	**00 33 57.0**	**+5.4**
GCAM	**G?zelcaml?**	**2.11**	**153**	*i*P	**Pn**	**00 33 27.6**	**+2.4**
DEMI	**Demirci**	**2.15**	**104**	*i*P	**Pn**	**00 33 25.1**	**-0.6**
DEMI				*i*S	**Sn**	**00 33 49.7**	**-2.8**
DEMI	**Demirci**	**2.15**	**104**	*i*P	**Pn**	**00 33 25.1**	**-0.6**
DEMI				*i*S	**Sn**	**00 33 49.7**	**-2.9**
MANT	**Manisa**	**2.25**	**118**	*i*P	**Pn**	**00 33 26.3**	**-0.8**
MANT				*i*S	**Sn**	**00 33 49.5**	**-5.6**
MANT	**Manisa**	**2.25**	**118**	*i*P	**Pn**	**00 33 26.3**	**-0.8**
KULA	**Kula-Manisa**	**2.31**	**117**	*e*PN	**Pn**	**00 33 28.9**	**+1.0**
KULA	**Kula-Manisa**	**2.31**	**117**	*e*Pn	**Pn**	**00 33 28.9**	**+1.6**
EDRB	**Edirne**	**2.31**	**13**	*e*PN	**Pn**	**00 33 28.3**	**+0.3**
EDRB	**Edirne**	**2.31**	**13**	*e*Pn	**Pn**	**00 33 28.3**	**+0.3**
SLVT	**Silivri**	**2.33**	**45**	*e*PN	**Pn**	**00 33 29.2**	**+1.0**
SLVT	**Silivri**	**2.33**	**45**	*e*Pn	**Pn**	**00 33 29.2**	**+1.0**
SOH	**Sokhos**	**2.39**	**302**	P	**Pn**	**00 33 28.4**	**-0.6**
SOH	**Sokhos**	**2.39**	**302**	P	**Pn**	**00 33 28.4**	**-0.6**
SRS	**Serrai**	**2.41**	**310**	P	**Pn**	**00 33 28.5**	**-0.8**
SRS	**Serrai**	**2.41**	**310**	P	**Pn**	**00 33 28.5**	**-0.8**
CTKS	**Kestanelik-??a**	**2.50**	**48**	*e*PN	**Pn**	**00 33 31.6**	**+1.1**
CTKS	**Kestanelik-??a**	**2.50**	**48**	*e*Pn	**Pn**	**00 33 31.6**	**+1.1**
CTYL	**Yal??k??y-??at**	**2.55**	**42**	*e*PN	**Pn**	**00 33 32.1**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.55**	**42**	*e*Pn	**Pn**	**00 33 32.1**	**+0.9**
APE	**Apeiranthos**	**2.55**	**189**	*e*PN	**Pn**	**00 33 29.5**	**-1.7**
APE	**Apeiranthos**	**2.55**	**189**	*e*Pn	**Pn**	**00 33 29.5**	**-1.7**
BGKT	**Bogazkoy**	**2.62**	**52**	*e*PN	**Pn**	**00 33 33.5**	**+1.3**
BGKT	**Bogazkoy**	**2.62**	**52**	*e*Pn	**Pn**	**00 33 33.5**	**+1.3**
ISK	**Istanbul-Kandi**	**2.74**	**57**	*e*PN	**Pn**	**00 33 35.4**	**+1.6**
ISK	**Istanbul-Kandi**	**2.74**	**57**	*e*Pn	**Pn**	**00 33 35.4**	**+1.6**
YLV	**Yalova**	**2.74**	**68**	*e*PN	**Pn**	**00 33 35.6**	**+1.8**
YLV	**Yalova**	**2.74**	**68**	*e*Pn	**Pn**	**00 33 35.6**	**+1.8**
KLYT	**Kilyos**	**2.83**	**53**	*e*PN	**Pn**	**00 33 36.8**	**+1.7**
KLYT	**Kilyos**	**2.83**	**53**	*e*Pn	**Pn**	**00 33 36.8**	**+1.7**
ADVT	**Abdulvahap**	**2.96**	**72**	*e*PN	**Pn**	**00 33 37.8**	**+0.8**
ADVT	**Abdulvahap**	**2.96**	**72**	*e*Pn	**Pn**	**00 33 37.8**	**+0.9**
GULT	**Gulveren**	**3.54**	**75**	*e*PN	**Pn**	**00 33 45.8**	**+1.0**
GULT	**Gulveren**	**3.54**	**75**	*e*Pn	**Pn**	**00 33 45.8**	**+1.0**

*IDC **03** 00:36:38.4±1.7, 13.°74N×88.°35W, h0km, mb3.0/3, mb1 3.5/6, mb1mx3.4/22, mbtmp3.2/6, ML3.1/3, Error ellipse: s-maj=64.1km s-min=17.3km az=35.0*

*ISCJB **03** 00:36:39.8±4.9, 13.°6N±0.°3×88.°6W±0.°2, h26km±41km, mb3.0/3, Error ellipse: s-maj=57.7km s-min=8.5km az=38.1*

ISC 03 00:36:41.0±4.5, 13.°7N±0.°2×88.°5W±0.°2, h16km±30km, n6, σ1.°06/8, mb3.0/3, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**2.34**	**305**	Pn	**Pn**	**00 37 20.3**	**+1.5**
6.0nm,0.3s,baz=127,slow=19,SNR=29							
APG				Lg		00 37 55.0	
4.3nm,0.3s,baz=97,slow=14,SNR=5.9							
JTS	**JuntasAbangare**	**4.81**	**134**	Pn	**Pn**	**00 37 51.7**	**-1.1**
0.9nm,0.3s,baz=340,slow=16,SNR=6.2							
JTS				Sn	**Sn**	**00 38 48.9**	**+0.7**
0.9nm,0.3s,baz=292,slow=19,SNR=2.6							
CMIG	**Matias Romero**	**7.05**	**300**	Pn	**Pn**	**00 38 23.5**	**-0.1**
0.2nm,0.3s,baz=111,slow=14,SNR=2.4							
CMIG				Sn	**Sn**	**00 39 43.1**	**-0.4**
0.7nm,0.3s,baz=338,slow=16,SNR=3.2							
TXAR	**Lajitas Array**	**21.00**	**320**	P	**P**	**00 41 23.6**	**-0.2**
0.5nm,0.8s,mb2.9,baz=148,slow=11,SNR=5.9							
NVAR	**Mina Array Bea**	**36.13**	**318**	P	**P**	**00 43 41.8**	**-0.6**
0.2nm,0.5s,mb3.3,baz=147,slow=8.6,SNR=3.6							
YKA	**Yellowknife Ar**	**52.18**	**345**	P	**P**	**00 45 50.8**	**+0.3**
0.1nm,0.7s,mb2.9,baz=134,slow=7.6,SNR=4.3							

DJA 03 00:38:09.4±0.8, 0.°80S×122.°84E, h15km, MLv3.7/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.86**	**345**	P	Pb	00 38 25.1	-0.6
KDI				S	Sb	00 38 37.2	0.0
KAPI	**Kappang**	**3.08**	**266**	P	Pn	00 38 57.2	0.0
LUWI	**Luwuk**	**3.73**	**359**	P	Pn	00 39 07.1	+1.0
APSI	**Ampana**	**4.04**	**343**	P	Pn	00 39 11.5	+1.1

KRSC 03 00:39:09.4±0.9, 50.°52N×156.°98E, h22km±22km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.97**	**292**	*e*P	Pb	00 39 27.5	-0.1
ALID				*e*S	Sb	00 39 40.0	0.0
MIPR	**Malaya Ipel'ka**	**1.76**	**356**	*e*P	Pn	00 39 39.9	+1.3
MIPR				*e*S	Sn	00 40 02.4	+2.1
RUS	**Russkaya**	**2.14**	**26**	*e*P	Pn	00 39 44.9	+1.1
RUS				*e*S	Sn	00 40 10.6	+1.0
PET	**Petropavlovsk**	**2.71**	**22**	*e*S	Sn	00 40 27.0	+3.3
AVH	**Avacha**	**2.96**	**21**	*e*P	Pn	00 39 59.0	+4.0
NLC	**Nalytchevo**	**3.03**	**28**	*e*S	Sn	00 41 31.0	-0.6
SPN	**Mys Shipunski**	**3.20**	**35**	P	Pn	00 39 59.8	+1.5
SPN				S	Sn	00 40 36.3	+0.6
GNL	**Ganaly**	**3.23**	**10**	*e*P	Pn	00 40 01.7	+2.9

*CSEM **03** 00:41:27.6, 39.°34N×29.°84W, h5km, ML2.5, After PDA*

PDA 03 00:41:27.6±0.7, 39.°34N×29.°84W, h5km, MD3.5, ML2.5, Error ellipse: s-maj=12.9km s-min=5.7km az=41.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.14**	**128**	*e*P	Pg	00 41 45.3	-4.1
PCED				*e*S	Sg	00 41 58.6	-5.5
PCED				A		00 41 59.4	
28nm,0.3s							
PCED	**Cedros**	**1.14**	**128**	*e*P	Pg	00 41 45.3	-4.1
PCED				*e*S	Sg	00 41 58.6	-5.5
CALA	**Caldeira**	**1.17**	**130**	*e*P	Pg	00 41 45.4	-4.5
CALA				*e*S	Sg	00 41 59.3	-5.8
CALA	**Caldeira**	**1.17**	**130**	*e*P	Pg	00 41 45.4	-4.5
CALA				*e*S	Sg	00 41 59.3	-5.8
PICO	**Pico**	**1.39**	**127**	*e*P	Pn	00 41 49.0	-4.6
PICO				*e*S	Sb	00 42 05.0	-6.9
PICO	**Pico**	**1.39**	**127**	*e*P	Pn	00 41 49.0	-4.6
PICO				*e*S	Sb	00 42 05.0	-6.9
ROSA	**Rosais**	**1.39**	**116**	*e*P	Pn	00 41 49.1	-4.5
ROSA				*e*S	Sb	00 42 04.6	-7.5
ROSA	**Rosais**	**1.39**	**116**	*e*P	Pn	00 41 49.1	-4.5
ROSA				*e*S	Sb	00 42 04.6	-7.5
PMAN	**Manadas**	**1.54**	**117**	*e*S	Sn	00 42 08.1	-7.9
PMAN				A		00 42 09.4	
18nm,0.3s							
PMAN	**Manadas**	**1.54**	**117**	*e*S	Sn	00 42 08.1	-7.9

*NIED **03** 00:47:00, 24.°90N

comp=Z,226nm,19.4s,baz=117,slow=35
MAJO Matsushiro 16.21 41 P Pn 00 51 20.0 +3.7
MAJO pmax pmax
comp=Z,5.0nm,0.8s
MAJO Matsushiro 16.21 41 P Pn 00 51 20.0 +3.7
comp=Z,5.0nm,0.8s
MAT Matsushiro 16.21 41 P Pn 00 51 19.9 +3.6
MAT *e*S **Sn 00 54 22.0 +6.6**
MJAR Matsushiro Arr 16.22 41 Pn Pn 00 51 20.1 +3.8
comp=Z,0.3nm,0.3s,baz=230,slow=11,SNR=13
MJAR LR LR 00 58 26.6
comp=Z,147nm,18.5s,baz=195,slow=41
GYA Guiyang 16.70 280⇓*i*P Pn 00 51 22.7 +0.2
GYA pP pP 00 51 32.0 +0.1
GYA sP sP 00 51 40.9 +5.6
GYA S **Sn 00 54 24.3 -3.0**
GYA sS sS 00 54 41.2 -8.0
GYA SS 00 54 47.6
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA LR LR
comp=N,430nm,15.0s
GYA LR LR
comp=E,410nm,14.2s
GYA LR LR
comp=Z,400nm,12.4s
XAN Xi'an 16.80 307 P Pn 00 51 27.7 +4.0
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN pmax pmax
comp=Z,9.0nm,4.7s
BJI Beijing 16.92 336 P Pn 00 51 26.4 +1.2
BJI S **Sn 00 54 34.5 +2.1**
BJI pmax pmax
comp=Z,7.0nm,0.5s
BJI pmax pmax
comp=Z,170nm,5.3s
BJI LR LR
comp=N,460nm,13.3s
BJI LR LR
comp=E,290nm,11.2s
BJI LR LR
comp=Z,250nm,17.9s
SNY Shenyang 17.00 356 ⇑P Pn 00 51 33.7 +7.5
SNY S **Sn 00 54 39.1 +4.7**
SNY pmax pmax
comp=Z,12nm,0.9s
SNY pmax pmax
comp=Z,90nm,5.5s
SNY LR LR
comp=N,320nm,13.3s
SNY LR LR
comp=Z,350nm,13.7s
CN2 Changchun 18.93 1 *e*P Pn 00 51 53.9 +4.0
CN2 *ep*P pP 00 52 03.5 +7.2
CN2 *es*P sP 00 52 09.8 +10
CN2 *e*S **Sn 00 55 20.1 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,10.0s
CN2 LR LR
comp=E,300nm,10.0s
CN2 LR LR
comp=Z,200nm,11.0s
HHC Hu-ho-hao-te 19.57 328 *e*P Pn 00 52 00.1 +2.5
HHC pP pP 00 52 10.5 +7.1
HHC sP sP 00 52 16.8 +10
HHC PP 00 52 19.4
HHC S **Sn 00 55 34.1 -2.3**
HHC SS 00 56 01.6
HHC PcP PcP 00 56 18.5 +2.9
HHC ScP ScP 00 59 48.9 -1.0
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,100nm,5.5s
HHC LR LR
comp=N,280nm,13.3s
HHC LR LR
comp=E,600nm,15.2s
HHC LR LR
comp=Z,320nm,12.9s
CD2 Chengdu 19.80 293 P Pn 00 51 59.6 -0.8
CD2 pP pP 00 52 10.0 +4.0
CD2 sP sP 00 52 16.1 +6.7
CD2 PP 00 52 19.3
CD2 S **Sn 00 55 33.8 -8.4**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,170nm,7.1s
CD2 LR LR
comp=N,650nm,11.3s
CD2 LR LR
comp=Z,690nm,12.5s
KMI Kunming 20.27 276 P P 00 52 04.0 +0.1
KMI pP 00 52 15.8
KMI PP 00 52 26.1
KMI S **S 00 55 45.1 -4.9**
KMI sS sS 00 56 01.8 +0.3
KMI SS 00 56 14.3
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,100nm,4.6s
KMI LR LR
comp=N,260nm,15.7s,MS4.0
KMI LR LR
comp=E,440nm,12.7s,MS4.0
KMI LR LR
comp=Z,630nm,11.8s,MS4.2
LZH Lanzhou 21.43 307 *e*P P 00 52 17.1 +0.7
LZH pP 00 52 30.1
LZH sP sP 00 52 37.0 +10
LZH PP 00 52 40.7
LZH *e*S **S 00 56 03.8 -9.1**
LZH sS sS 00 56 27.0 +2.5
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.3
LZH pmax pmax
comp=Z,61nm,4.8s
LZH LR LR
comp=E,370nm,12.1s
LZH LR LR
comp=Z,580nm,13.3s,MS4.2
GUMO Guam 21.73 117 *e*P P 00 52 20.9 +1.1
GUMO pmax pmax
comp=Z,270nm,1.3s,mb5.5
GUMO Guam 21.73 117 *e*P P 00 52 20.9 +1.1
comp=Z,270nm,1.3s,mb5.5
ERM Erimo 22.75 37 *e*P P 00 52 30.4 0.0
ERM pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
ERM Erimo 22.75 37 *e*P P 00 52 30.4 0.0
comp=Z,3.6nm,0.6s,mb4.0
ASAJ Asahikawa 23.96 32 P P 00 52 42.0 -0.4
comp=Z,6.9nm,0.9s,mb4.1,baz=236,slow=15,SNR=2.8
CMAR Chiang Mai Arr 25.09 261 P P 00 52 52.1 -0.9
comp=Z,2.9nm,0.8s,mb3.9,baz=64,slow=8.4,SNR=6.3
GTA Gaotai 25.77 310 ⇑P P 00 52 58.7 -0.2
GTA pP pP 00 53 11.8 +5.1
GTA sP sP 00 53 18.7 +8.7
GTA S **S 00 57 24.5 -1.9**
GTA sS sS 00 57 45.2 +5.8
GTA SS 00 58 35.5
GTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
GTA pmax pmax
comp=Z,43nm,3.6s
GTA LR LR
comp=N,170nm,13.5s,MS4.1
GTA LR LR
comp=E,310nm,12.3s,MS4.1
GTA LR LR
comp=Z,350nm,13.2s,MS4.1
ULN Ulaanbaatar 27.07 333 *e*P P 00 53 09.8 -0.7
ULN pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
ULN Ulaanbaatar 27.07 333 *e*P P 00 53 09.8 -0.7
comp=Z,2.7nm,0.6s,mb4.0
SONM Songino Array 27.32 332 P P 00 53 11.9 -0.9
comp=Z,1.3nm,0.7s,mb3.6,baz=148,slow=9.4,SNR=8.1
SONM LR LR 01 05 11.7
comp=Z,172nm,20.4s,MS3.6,baz=108,slow=39
WMQ Urumqi 35.84 311 *e*P P 00 54 30.7 +3.0
PETK Petropavlovsk- 37.38 32 P P 00 54 39.9 -0.8
comp=Z,2.4nm,0.9s,mb4.0,baz=210,slow=8.3,SNR=2.8
PETK LR LR 01 09 42.9
comp=Z,76nm,18.2s,MS3.5,baz=49,slow=36
PET Petropavlovsk 37.80 33 *e*P P 00 54 43.4 -0.8
MK31 Makanchi Array 40.41 314 *e*P P 00 55 05.6 -0.5
MKAR Makanchi Array 40.41 314 P P 00 55 05.3 -0.8
comp=Z,3.8nm,0.5s,mb4.3,baz=99,slow=10,SNR=41
MKAR PcP PcP 00 57 08.6 -0.3
comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=3.6
ZAA0 Zalesovo Array 41.70 325 *e*P P 00 55 15.5 -1.2
ZALV Zalesovo Beam 41.70 325 P P 00 55 14.6 -2.1
comp=Z,4.2nm,0.5s,mb4.3,baz=115,slow=8.9,SNR=24
FITZ Fitzroy Crossi 42.67 179 *e*P P 00 55 24.9 0.0
comp=Z,1.8nm,0.6s,mb4.0
KSH Kashi 43.56 302 *e*P P 00 55 35.1 +3.1
KSH *ep*P pP 00 55 47.0 +6.9
KSH *es*P sP 00 55 52.0 +8.7
KSH *e*PP PP 00 57 19.2 +5.7
KSH *e*PcP PcP 00 57 21.0 +1.6
KSH *e*S **S 01 02 00.3 +0.7**
KSH *es*S sS 01 02 22.3 +9.4
KSH *e*SS SS 01 05 10.6 -4.1
KSH *e*ScS ScS 01 05 27.2 -2.7
KSH pmax pmax
comp=Z,13nm,1.0s,mb4.6
KSH pmax pmax
comp=Z,100nm,3.2s
KSH LR LR
comp=N,230nm,5.8s
KSH LR LR
comp=E,210nm,4.5s
KSH LR LR
comp=Z,220nm,6.9s
ULHL Ulahol 43.64 306 P P 00 55 33.3 +0.6
SNR=13
KURK Kurchatov 43.93 318*d* *i*P P 00 55 32.7 -2.1
KURK pmax pmax
comp=Z,13nm,1.2s,mb4.5
KURK Kurchatov 43.93 318 *e*P P 00 55 33.3 -1.5
comp=Z,7.7nm,0.8s,mb4.5
TKM2 Tokmak 2 44.20 307 P P 00 55 37.6 +0.5
SNR=20
TKM2 Tokmak 2 44.20 307 *e*P P 00 55 37.4 +0.3
TKM2 pmax pmax
comp=Z,13nm,0.7s,mb4.8
TKM2 Tokmak 2 44.20 307 *e*P P 00 55 37.4 +0.3
comp=Z,13nm,0.7s,mb4.8
KZA Kyzart 44.35 306 P P 00 55 39.6 +1.3
SNR=7.0
KBK Karagaybulak 44.64 306 P P 00 55 40.9 +0.2
SNR=5.8
CHMS Chumysh 44.83 307 P P 00 55 42.4 +0.3
SNR=5.4
UCH Uchtor 44.91 306 P P 00 55 44.3 +1.5
SNR=19
UCH Uchtor 44.91 306 *e*P P 00 55 43.8 +1.0
UCH pmax pmax
comp=Z,14nm,0.8s,mb4.8
UCH Uchtor 44.91 306 *e*P P 00 55 43.8 +0.9
comp=Z,14nm,0.8s,mb4.8
AAK Ala-Archa 44.97 306*c* *i*P P 00 55 43.0 -0.3
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.8
AAK Ala-Archa 44.97 306 *e*P P 00 55 43.4 +0.1
comp=Z,2.9nm,0.8s,mb4.2
WRAB Tennant Creek 45.39 168 *e*P P 00 55 46.0 -0.7
WRAB pmax pmax
comp=Z,16nm,1.1s,mb4.8
WRAB Tennant Creek 45.39 168 *e*P P 00 55 46.0 -0.8
comp=Z,16nm,1.1s,mb4.8
WRA Warramunga Arr 45.40 168 P P 00 55 47.1 +0.3
comp=Z,8.2nm,0.9s,mb4.6,baz=350,slow=8.3,SNR=21
WB2 Warramunga Arr 45.40 168 *e*P P 00 55 47.0 +0.1
EKS2 Erkin-Say 45.50 306 *e*P P 00 55 47.7 +0.2
EKS2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
EKS2 Erkin-Say 45.50 306 *e*P P 00 55 47.7 +0.2
comp=Z,2.8nm,0.8s,mb4.2
AML Almayashu 45.51 305 P P 00 55 48.4 +0.9
SNR=11
AML Almayashu 45.51 305 *e*P P 00 55 48.3 +0.7
AML pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AML Almayashu 45.51 305 *e*P P 00 55 48.3 +0.7
comp=Z,3.7nm,0.7s,mb4.4
MBWA Marble Bar 46.01 187 *e*P P 00 55 51.4 -0.2
comp=Z,1.7nm,0.6s,mb4.2
MBWA *ep*P pP 00 55 59.7 0.0
ASAR Alice Springs 48.96 169 P P 00 56 15.3 +0.9
comp=Z,1.8nm,0.6s,mb4.3,baz=356,slow=8.1,SNR=18
KBL Kabul 49.11 295 *e*P P 00 56 15.8 +0.1
KBL pmax pmax
comp=Z,14nm,0.5s,mb5.2
KBL Kabul 49.11 295 *e*P P 00 56 15.8 +0.1
comp=Z,14nm,0.5s,mb5.2
BVAR Borovoye Array 49.47 320 P P 00 56 17.5 -0.6
comp=Z,1.6nm,0.5s,mb4.3,baz=113,slow=7.9,SNR=9.9
BVAR PcP PcP 00 57 39.7 -0.2
comp=Z,1.4nm,0.5s,baz=96,slow=4.5,SNR=6.9
BRVK Borovoye 49.53 320*c* *e*P P 00 56 18.1 -0.5
BRVK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
BILL Bilibino 49.90 19⇑*i*P P 00 56 20.8 -0.4
BILL *e* 00 57 41.4
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ABKAR Akbulak array 55.55 314 *e*P P 00 57 03.1 -0.1
comp=Z,6.7nm,0.6s,mb4.8
SVE Sverdlovsk 55.65 323⇓*e*P P 00 57 03.3 -0.6
SVE pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
SVE MLR MLR
comp=Z,291nm,17.0s,MS4.4
ARU Arti 56.75 322*d* *i*P P 00 57 10.2 -1.5
ARU *e* 00 59 12.4
ARU S **S 01 05 01.4 -1.4**
ARU SS SS 01 08 44.0 -6.6
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ARU Arti 56.75 322 *e*P P 00 57 10.8 -0.9
comp=Z,5.6nm,0.8s,mb4.7
STKA Stephens Creek 58.55 164 P P 00 57 25.0 +0.4
comp=Z,3.2nm,0.7s,mb4.5,baz=346,slow=9.8,SNR=7.4
MAK Makhachkala 64.73 308 *e*P sP 00 58 18.2 +0.4
MAK MLR MLR
comp=Z,115nm,15.0s,MS4.2
ZEI Tsey 67.36 308 *e*P P 00 58 21.9 -1.3
ZEI pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
UMR Umm Al-Rimmam 67.80 293 *e*P P 00 58 25.7 -0.5
KIV Kislovodsk 67.94 309 *e*P P 00 58 27.1 +0.2
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,41nm,18.0s,MS3.7
KIV Kislovodsk 67.94 309 *e*P P 00 58 26.8 -0.1
comp=Z,6.9nm,0.8s,mb4.7
MIB Mutribah 68.04 294 *e*P P 00 58 27.0 -0.7
MIB AMb AMB 00 58 28.2
comp=Z,20nm,0.8s,mb5.2
RDF Al-Radifah 68.11 293 *e*P P 00 58 27.7 -0.5
RDF AMb AMB 00 58 28.5
comp=Z,31nm,0.8s,mb5.4
OBN Obninsk 69.19 322 *e*P P 00 58 34.1 -0.3
OBN *e* 00 58 58.1
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
JOF Joensuu 69.89 331 *e*P P 00 58 35.8 -2.8
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 69.89 331 *e*p P 00 58 35.8 -2.8
comp=Z,1.0nm,0.4s,mb4.1
ARCES ARCESS Array B 70.27 338 P P 00 58 40.5 -0.3
comp=Z,1.9nm,0.8s,mb4.0,baz=49,slow=8.2,SNR=3.8
INK Inuvik 71.28 23 *e*P P 00 58 47.9 +0.9
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 71.28 23 *e*P P 00 58 47.9 +0.9
comp=Z,6.9nm,0.9s,mb4.6
ANN Anapa 71.36 311 *e*P P 00 58 40.2 -7.7
ANN *e**PP pP 00 58 49.6 -6.8
ANN *es*S S 01 07 52.0 -12
ANN pmax pmax
comp=Z,14nm,1.0s,mb4.8
KAF Kangasniemi 72.35 331 *e*P P 00 58 52.0 -1.5
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KAF Kangasniemi 72.35 331 *ep* P 00 58 52.0 -1.5
comp=Z,0.6nm,0.5s,mb3.8
MALT Malatya 72.58 305⇑*i*P P 00 58 56.5 +1.1
FINES FINESS Array B 72.67 330 P P 00 58 54.6 -0.9
comp=Z,1.4nm,0.5s,mb4.2,baz=57,slow=5.8,SNR=28
FINES LR LR 01 33 37.4
comp=Z,63nm,21.2s,MS3.9,baz=354,slow=38
AKASG Malin Array Be 74.74 319 P P 00 59 06.2 -1.6
comp=Z,0.5nm,0.4s,mb3.8,baz=60,slow=5.0,SNR=6.9
BRTR Keskin Array B 75.64 307*c* *e*P P 00 59 13.5 +0.3
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 75.64 307 P P 00 59 13.0 -0.2
comp=Z,5.0nm,0.9s,mb4.5,baz=103,slow=5.3,SNR=27
SUW Suwalki 76.92 324 *e*P P 00 59 19.9 -0.2
SUW Suwalki 76.92 324 *e*P P 00 59 19.1 -1.0
RES Resolute Bay 77.44 10 *e*P P 00 59 22.6 -0.1
RES pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
RES Resolute Bay 77.44 10 *e*P P 00 59 22.6 -0.1
comp=Z,4.6nm,0.9s,mb4.4
BURAR Bucovina Array 78.34 317⇑*i*P P 00 59 28.4 +0.1
KWP Kalwaria Pacla 79.02 320 *e*P P 00 59 32.5 +0.6
KWP Kalwaria Pacla 79.02 320 *e*P P 00 59 32.3 +0.4
comp=Z,8.2nm,0.7s,mb4.8
NOA NORSAR Array B 79.29 333 P P 00 59 32.6 -0.6
comp=Z,1.3nm,0.8s,mb3.9,baz=55,slow=5.3,SNR=3.6
KOLS Kolonicke sedl 79.58 319 *e*P P 00 59 34.9 -0.1
KOLS pmax pmax
comp=Z,24nm,2.7s,mb4.7
KOLS Kolonicke sedl 79.58 319 *e*P P 00 59 34.9 -0.1
comp=Z,24nm,2.7s,mb4.6
KOLS Kolonicke sedl 79.58 319 *e*P P 00 59 34.9 -0.1
STHS Stebnicka Huta 79.97 320 *e*P P 00 59 37.4 +0.3
STHS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
STHS Stebnicka Huta 79.97 320 *e*P P 00 59 37.4 +0.3
comp=Z,2.3nm,1.2s,mb4.0
STHS Stebnicka Huta 79.97 320 *e*P P 00 59 37.4 +0.3
OJC Ojcow 80.44 321 *e*P P 00 59 39.6 0.0
KECS Kecovo 80.83 319 *e*P P 00 59 44.7 +2.9
KECS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
KECS Kecovo 80.83 319 *e*P P 00 59 44.7 +2.9
comp=Z,2.1nm,1.2s,mb3.9
KECS Kecovo 80.83 319 *e*P P 00 59 44.7 +2.9
YKA Yellowknife Ar 80.97 24 P P 00 59 42.5 +0.3
comp=Z,1.5nm,0.6s,mb4.1,baz=302,slow=5.4,SNR=43
YKA Yellowknife Ar 80.97 24 P P 00 59 42.5 +0.3
VYHS Vyhne 81.80 320 *e*P P 00 59 47.5 +0.6
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 81.80 320 *e*P P 00 59 47.5 +0.6
comp=Z,2.4nm,0.9s,mb4.1
VYHS Vyhne 81.80 320 *e*P P 00 59 47.5 +0.6
RUE Ruedersdorf 82.62 325 *e*P P 00 59 52.4 +1.3
comp=Z,19nm,1.0s,mb5.1
BRG Berggiesshubel 83.38 323 *e*P P 00 59 55.9 +0.8
comp=Z,4.0nm,0.9s,mb4.5
BRG Berggiesshubel 83.38 323 *i* P P 00 59 56.0 +1.0
comp=Z,4.0nm,0.9s,mb4.5
BRG *e* 01 08 47.0
comp=Z,2.3nm,0.6s
BRG Berggiesshubel 83.38 323 *i* P P 00 59 56.0 +0.9
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BSEG Bad Segeberg 83.59 327 *e*P P 00 59 57.1 +1.0
comp=Z,8.0nm,1.0s,mb4.8
BSEG Bad Segeberg 83.59 327 *e*P P 00 59 57.1 +1.0
BSEG Bad Segeberg 83.59 327 *e*P P 00 59 57.1 +1.0
CLL Collm 83.65 324 *e*P P 00 59 57.0 +0.5
comp=Z,5.0nm,0.7s,mb4.8
CLL Collm 83.65 324⇓*i*P P 00 59 57.2 +0.7
CLL *e* pP 01 00 07.0 +1.9
CLL pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
CLL MLR MLR
comp=Z,100nm,18.6s,MS4.2
CLL Collm 83.65 324⇓*i*P P 00 59 57.2 +0.7
comp=Z,5.0nm,0.8s,mb4.7
CLL *i* pP 01 00 03.5 -1.6
CLL *e* pP 01 00 07.0 +1.9
CLL LR LR
comp=Z,100nm,18.6s,MS4.2
CLL Collm 83.65 324⇓*i*P P 00 59 57.2 +0.7
comp=Z,5.0nm,0.8s,mb4.7
CLL LmV 00 41 00.0
comp=Z,100nm,18.6s
IDI Anoyia 83.77 306 P P 00 59 56.1 -1.4
baz=32,slow=11
TANN Tannenbergstha 84.42 324 *e*P P 01 00 01.4 +1.0
comp=Z,4.0nm,1.0s,mb4.5
WERD Werda 84.49 324 *e*P P 01 00 01.5 +0.8
comp=Z,4.0nm,0.9s,mb4.5
NRDL Niedersach Rie 84.50 326 *e*P P 01 00 01.1 +0.3
comp=Z,10.0nm,1.2s,mb4.8
GUNZ Gunzen 84.52 324 *e*P P 01 00 01.4 +0.5
comp=Z,7.0nm,1.0s,mb4.8
NKC Novy Kostel 84.53 323 *e*P P 01 00 01.9 +1.0
WERN Wernitzgruen 84.53 324 *e*P P 01 00 01.8 +0.8
comp=Z,6.0nm,0.9s,mb4.7
PLN Plauen 84.54 324 *e*P P 01 00 01.8 +0.8
GVD Gavdhos 84.56 306 *e*P P 01 00 00.5 -0.9
comp=Z,49nm,0.9s,mb5.6
GEC2 GERESS Array S 84.58 322 *e*P P 01 00 01.3 +0.1
comp=Z,4.0nm,1.0s,mb4.5
GEC2 GERESS Array S 84.58 322 *e*P P 01 00 01.3 +0.1
GEC2 pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
GEC2 GERESS Array S 84.58 322 *e*P P 01 00 01.3 +0.1
comp=Z,4.0nm,1.0s,mb4.5
GERES GERESS Array B 84.58 322 P P 01 00 01.0 -0.2
comp=Z,2.0nm,0.8s,mb4.3,baz=46,slow=3.9,SNR=19
CLZ Clausthal 84.74 326 *e*P P 01 00 02.5 +0.5
comp=Z,15nm,1.1s,mb5.0
CLZ Clausthal 84.74 326 *e*P P 01 00 02.5 +0.5
CLZ pmax pmax
comp=Z,15nm,1.1s,mb5.0
CLZ Clausthal 84.74 326 *e*P P 01 00 02.5 +0.5
comp=Z,15nm,1.1s,mb5.0
MOX Moxa 84.75 324 *e*P P 01 00 02.9 +0.8
MOX
comp=Z,100nm,16.0s
MOX Moxa 84.75 324 *e*P P 01 00 02.2 +0.1
comp=Z,4.0nm,1.0s,mb4.5
WET Wettzell 84.88 322 *e*P P 01 00 04.0 +1.3
comp=Z,5.0nm,1.6s,mb4.4
WET Wettzell 84.88 322 *e*P P 01 00 04.0 +1.3
WET pmax pmax
comp=Z,5.0nm,1.6s,mb4.4
WET Wettzell 84.88 322 *e*P P 01 00 04.0 +1.3
comp=Z,5.0nm,1.6s,mb4.4
ROTZ Rotzenmuhle 84.91 323 *e*P P 01 00 04.0 +1.1
comp=Z,5.0nm,1.1s,mb4.6
GOLS Golise 84.93 319 *i* P P 01 00 03.1 0.0
LEGS Legarje 85.14 319 *i* P P 01 00 04.0 -0.1
PDKS Podkum 85.28 319 *i* P P 01 00 04.9 +0.1
GRA1 Grafenberg Arr 85.48 323 *e*P P 01 00 06.1 +0.3
comp=Z,14nm,1.1s,mb5.0
GRF Grafenberg Arr 85.48 323 *e*P P 01 00 06.1 +0.3
comp=Z,14nm,1.1s,mb5.0
GRF Grafenberg Arr 85.48 323 *e*P P 01 00 06.1 +0.3
GRF pmax pmax
comp=Z,14nm,1.1s,mb5.0
GRF Grafenberg Arr 85.48 323 *e*P P 01 00 06.1 +0.3
GRF pmax pmax
comp=Z,14nm,1.1s,mb5.0
GRF Grafenberg Arr 85.48 323 *e*P P 01 00 06.1 +0.3
comp=Z,14nm,1.1s,mb5.0
CRNS Crni Vrh 85.70 319 *i* P P 01 00 06.4 -0.5
IBBN Ibbenburen 85.79 327 *e*P P 01 00 07.3 +0.1
comp=Z,16nm,1.1s,mb5.2
FUR Furstenfeldbru 86.30 322 *e*P P 01 00 10.4 +0.6
comp=Z,17nm,1.3s,mb5.1
FUR Furstenfeldbru 86.30 322 *e*P P 01 00 10.4 +0.6
FUR pmax pmax
comp=Z,17nm,1.3s,mb5.1
FUR Furstenfeldbru 86.30 322 *e*P P 01 00 10.4 +0.6
comp=Z,17nm,1.3s,mb5.1
BUG Bochum--Univer 86.55 326 *e*P P 01 00 11.0 0.0
STU Stuttgart 87.10 323 *e*P P 01 00 14.0 +0.3

175C-204D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.23**	**34**	P		**Pn**	**00 53 56.4**	**-9.3**
	145nm,0.3s,baz=180,slow=2.3,SNR=62							
AFI				S		S	00 55 08.1	-20
	294nm,0.3s,baz=52,slow=22,SNR=17							
RAO	**Raoul Island**	**9.39**	**191**	P		**Pn**	**00 54 31.7**	**-1.6**
	108nm,0.3s,baz=91,slow=12,SNR=8.1							
RAO				S		**S**	**00 56 13.8**	**-5.0**
	117nm,0.3s,baz=73,slow=19,SNR=6.7							
FUNA	**Funafuti**	**12.36**	**337**	*e*Pn		**Pn**	**00 55 10.7**	**-0.6**
	2μm,2.0s							
RAR	**Rarotonga**	**15.14**	**97**	P		**Pn**	**00 55 41.2**	**-4.2**
	4.4nm,0.3s,baz=251,slow=7.5,SNR=14							
RAR				S		**S**	**00 58 26.0**	**-7.2**
	3.0nm,0.3s,baz=75,slow=16,SNR=3.2							
BAYA	**Yate Dam**	**16.21**	**259**	*e*P		**P**	**00 56 01.2**	**+3.9**
NORM	**Noumea**	**16.59**	**259**	*e*P		**P**	**00 56 04.1**	**+2.7**
DZM	**Mont Dzumac**	**16.61**	**260**	*e*P		**P**	**00 56 04.8**	**+3.1**
	3μm,1.4s							
DZM	**Mont Dzumac**	**16.61**	**260**	*e*P		**P**	**00 56 04.5**	**+2.8**
NOUC	**Port Laguerre**	**16.75**	**260**	*e*P		**P**	**00 56 05.4**	**+2.2**
OUZ	**Omahuta**	**17.77**	**209**	*e*Pn		**Pn**	**00 56 16.0**	**-0.5**
	62nm,0.6s							
URZ	**Urewera**	**19.18**	**197**	P		**P**	**00 56 28.5**	**-0.9**
	92nm,0.3s,baz=19,slow=3.6,SNR=258							
URZ				S		**S**	**00 59 51.6**	**-3.1**
	4.4nm,0.3s,baz=81,slow=23,SNR=7.0							
URZ	**Urewera**	**19.18**	**197**	*e*P		**P**	**00 56 28.4**	**-1.0**
	830nm,0.6s							
URZ				*e*S		**S**	**00 59 52.1**	**-2.6**
SNZO	**South Karori**	**22.70**	**199**	*e*P		**P**	**00 57 03.6**	**-1.4**
	95nm,0.6s,mb5.5							
KHZ	**Kahutara**	**24.06**	**199**	*e*P		**P**	**00 57 17.8**	**+0.4**
	81nm,0.6s,mb5.5							
PAE	**Paea**	**25.01**	**89**	*e*P		**P**	**00 57 24.3**	**-1.9**
	34nm,1.1s,mb4.9							
PAE	**Paea**	**25.01**	**89**	*e*P		**P**	**00 57 24.3**	**-1.9**
PAE					pmax	pmax		
	comp=Z,34nm,1.1s,mb4.9							
PPT	**Papeete**	**25.03**	**89**	*e*P		**P**	**00 57 24.8**	**-1.6**
	comp=Z,146nm,1.2s,mb5.5							
PPT	**Papeete**	**25.03**	**89**	P		**P**	**00 57 24.7**	**-1.7**
	comp=Z,28nm,0.3s,mb5.4,baz=210,slow=4.8,SNR=10							
TIAR	**Tiarei**	**25.25**	**89**	*e*P		**P**	**00 57 26.7**	**-1.7**
	comp=Z,151nm,1.0s,mb5.6							
RPZ	**Rata Peaks**	**26.05**	**202**	P		**P**	**00 57 35.5**	**+0.2**
	comp=Z,303nm,0.6s,mb6.1,baz=316,slow=1.3,SNR=28							
RPZ	**Rata Peaks**	**26.05**	**202**	*e*P		**P**	**00 57 35.8**	**+0.6**
	comp=Z,293nm,0.6s,mb6.1							
PMOR	**Pomariorio Ree**	**27.15**	**84**	*e*P		**P**	**00 57 43.4**	**-2.0**
	comp=Z,295nm,1.3s,mb5.8							
EIDS	**Eidsvold**	**30.88**	**254**	*e*P		**P**	**00 58 18.5**	**+0.2**
	comp=Z,305nm,1.4s,mb5.7							
ARMA	**Armidale**	**31.06**	**244**	*e*P		**P**	**00 58 20.7**	**+0.9**
ARMA				*e*SCP		ScP	01 04 36.5	+4.7
ARMA	**Armidale**	**31.06**	**244**	*e*P		**P**	**00 58 20.8**	**+1.0**
	comp=Z,104nm,1.5s,mb5.2							
CNB	**Canberra Magne**	**34.14**	**236**	*e*P		**P**	**00 58 47.1**	**+0.6**
CAN	**Canberra**	**34.43**	**236**	*e*P		**P**	**00 58 48.5**	**-0.4**
CAN					pmax	pmax		
	comp=Z,114nm,1.2s,mb5.3							
CAN	**Canberra**	**34.43**	**236**	*e*P		**P**	**00 58 48.5**	**-0.4**
	comp=Z,114nm,1.2s,mb5.3							
CTA	**Charters Tower**	**35.51**	**263**	*e*P		**P**	**00 58 58.7**	**+0.3**
	comp=Z,234nm,0.5s,mb6.0							
CTA				*e*PCP		PcP	01 01 22.8	+0.2
CTA	**Charters Tower**	**35.51**	**263**	P		**P**	**00 58 58.7**	**+0.3**
	comp=Z,246nm,0.5s,mb6.0,baz=91,slow=10,SNR=386							
CTA				PcP		PcP	01 01 22.9	+0.3
	comp=Z,7.2nm,0.6s,baz=76,slow=4.2,SNR=2.7							
CTAO	**Charters Tower**	**35.51**	**263**	*e*P		**P**	**00 58 58.7**	**+0.3**
CTAO					pmax	pmax		
	comp=Z,203nm,0.4s,mb6.0							
CTAO	**Charters Tower**	**35.51**	**263**	*e*P		**P**	**00 58 58.7**	**+0.4**
	comp=Z,203nm,0.4s,mb6.0							
TOO	**Toolangi**	**37.78**	**234**	*e*P		**P**	**00 59 17.1**	**-0.2**
RKT	**Rikitea**	**38.10**	**102**	*e*P		**P**	**00 59 19.4**	**-0.8**
	comp=Z,148nm,1.1s,mb5.4							
RKT	**Rikitea**	**38.10**	**102**	*e*P		**P**	**00 59 19.4**	**-0.8**
RKT					pmax	pmax		
	comp=Z,148nm,1.1s,mb5.4							
TAU	**Tasmania Unive**	**38.37**	**225**	*e*P		**P**	**00 59 22.1**	**0.0**
TAU					pmax	pmax		
	comp=Z,192nm,1.8s,mb5.3							
TAU	**Tasmania Unive**	**38.37**	**225**	*e*P		**P**	**00 59 22.1**	**0.0**
	comp=Z,192nm,1.8s,mb5.3							
COEN	**Coen**	**39.53**	**272**	*e*P		**P**	**00 59 32.7**	**+0.6**
	comp=Z,2μm,1.0s							
STKA	**Stephens Creek**	**39.78**	**244**	*e*P		**P**	**00 59 33.8**	**-0.2**
STKA							01 01 36.5	
STKA					pmax	pmax		
	comp=Z,25nm,1.3s							
STKA	**Stephens Creek**	**39.78**	**244**	*e*P		**P**	**00 59 33.9**	**-0.1**
	comp=Z,13nm,0.4s,mb4.7							
STKA				*e*PCP		PcP	01 01 36.8	+1.1
STKA				*e*SCP		ScP	01 05 07.6	+4.1
STKA				*e*PCS		PcS	01 05 26.5	+0.3
STKA	**Stephens Creek**	**39.78**	**244**	P		**P**	**00 59 33.9**	**-0.1**
	comp=Z,16nm,0.4s,mb4.8,baz=89,slow=9.4,SNR=38							
STKA				PcP		PcP	01 01 36.5	+0.8
	comp=Z,23nm,0.8s,baz=92,slow=3.6,SNR=7.7							
STKA				ScP		ScP	01 05 07.6	+4.1
	comp=Z,6.2nm,0.8s,baz=81,slow=5.2,SNR=6.2							
STKA	**Stephens Creek**	**39.78**	**244**	*e*P		**P**	**00 59 33.8**	**-0.2**
	comp=Z,25nm,1.3s,mb4.5							
STKA				*e*PcP		PcP	01 01 36.3	+0.7
STKA				PcP		PcP	01 01 36.5	+0.8
STKA				ScP		ScP	01 05 07.6	+4.1
ASAR	**Alice Springs**	**46.55**	**256**	P		**P**	**01 00 27.9**	**-0.4**
ASAR							01 01 58.9	
ASAR				S		**S**	**01 06 58.9**	**-1.2**
ASAR	**Alice Springs**	**46.55**	**256**	P		**P**	**01 00 27.9**	**-0.4**
	comp=Z,68nm,0.5s,mb5.2,baz=95,slow=8.2,SNR=621							
ASAR				PcP		PcP	01 01 58.9	+0.1
	comp=Z,8.9nm,0.4s,baz=107,slow=3.9,SNR=5.7							
ASAR				ScP		ScP	01 05 34.9	+3.7
	comp=Z,3.3nm,0.8s,baz=98,slow=4.2,SNR=6.2							
ASAR				S		**S**	**01 06 58.9**	**-1.2**
	comp=Z,2.1nm,1.0s,baz=87,slow=19,SNR=6.7							
WB2	**Warramunga Arr**	**46.62**	**261**	*e*P		**P**	**01 00 27.8**	**-0.9**
WRAB	**Tennant Creek**	**46.62**	**261**	*e*P		**P**	**01 00 27.8**	**-1.0**
WRAB					pmax	pmax		
	comp=Z,208nm,1.2s,mb5.3							
WRAB	**Tennant Creek**	**46.62**	**261**	*e*P		**P**	**01 00 27.8**	**-1.0**
	comp=Z,208nm,1.2s,mb5.3							
WRA	**Warramunga Arr**	**46.63**	**261**	P		**P**	**01 00 27.9**	**-1.0**
WRA							01 01 59.4	
WRA				S		**S**	**01 07 00.1**	**-1.1**
WRA	**Warramunga Arr**	**46.63**	**261**	P		**P**	**01 00 27.9**	**-1.0**
	comp=Z,48nm,0.5s,mb5.0,baz=96,slow=5.2,SNR=95							
WRA				PcP		PcP	01 01 59.4	+0.3
	comp=Z,3.9nm,0.4s,baz=99,slow=4.1,SNR=4.7							
WRA				ScP		ScP	01 05 34.8	+3.3
	comp=Z,0.6nm,0.4s,baz=94,slow=3.0,SNR=5.2							
WRA				S		**S**	**01 07 00.1**	**-1.0**
	comp=Z,3.4nm,0.9s,baz=93,slow=14,SNR=5.8							
WRA				LR		LR	01 18 53.2	
	comp=Z,333nm,19.0s,baz=75,slow=34							
WRA	**Warramunga Arr**	**46.63**	**261**	P		**P**	**01 00 27.9**	**-1.0**
WRA				PcP		PcP	01 01 59.4	+0.3
WRA				ScP		ScP	01 05 34.8	+3.3
WRA				S		**S**	**01 07 00.1**	**-1.0**
WRA				LR		LR	01 18 53.2	
KAKA	**Kakadu**	**49.94**	**270**	*e*P		**P**	**01 00 52.3**	**-1.9**
	comp=Z,101nm,0.4s,mb5.5							
KAKA	**Kakadu**	**49.94**	**270**	*e*P		**P**	**01 00 52.4**	**-1.8**
	comp=Z,262nm,0.5s,mb5.8							
GUMO	**Guam**	**51.03**	**308**	P		**P**	**01 01 01.8**	**-0.4**
	comp=Z,357nm,1.0s,mb5.7,baz=180,slow=7.7,SNR=8.0							
FORT	**Forrest**	**51.30**	**246**	*e*P		**P**	**01 01 03.0**	**-1.2**
	comp=Z,47nm,0.5s,mb5.2							
FORT	**Forrest**	**51.30**	**246**	*e*P		**P**	**01 01 02.1**	**-2.1**
	comp=Z,130nm,1.2s,mb5.2							
FITZ	**Fitzroy Crossi**	**55.05**	**261**	*e*P		**P**	**01 01 31.2**	**-0.4**
	comp=Z,53nm,0.4s,mb5.4							
FITZ	**Fitzroy Crossi**	**55.05**	**261**	P		**P**	**01 01 31.3**	**-0.4**
	comp=Z,28nm,0.5s,mb5.1,baz=90,slow=5.4,SNR=100							
FITZ				LR		LR	01 22 23.5	
	comp=Z,300nm,20.2s,baz=98,slow=33							
FITZ	**Fitzroy Crossi**	**55.05**	**261**	*e*P		**P**	**01 01 31.5**	**-0.1**
	comp=Z,36nm,0.6s,mb5.1							
SBA	**Scott Base**	**58.50**	**184**	*e*P		**P**	**01 01 57.8**	**+2.9**
	comp=Z,48nm,1.3s,mb5.0							
MBWA	**Marble Bar**	**59.89**	**257**	*e*P		**P**	**01 02 04.2**	**-1.2**
	comp=Z,81nm,0.6s,mb5.5							
MEEK	**Meekatharra**	**59.95**	**250**	*e*P		**P**	**01 02 04.4**	**-1.3**
	comp=Z,76nm,1.4s,mb5.1							
NWAO	**Narrogin (SRO)**	**60.35**	**243**	P		**P**	**01 02 07.6**	**-0.7**
	comp=Z,19nm,0.6s,mb4.9,baz=128,slow=7.3,SNR=21							
NWAO	**Narrogin (SRO)**	**60.35**	**243**	P		**P**	**01 02 07.6**	**-0.8**
KAPI	**Kappang**	**64.21**	**274**	P		**P**	**01 02 32.4**	**-1.8**
	comp=Z,6.8nm,0.6s,mb4.5,baz=164,slow=3.0,SNR=9.3							
KAPI	**Kappang**	**64.21**	**274**	*e*P		**P**	**01 02 32.8**	**-1.4**
	comp=Z,61nm,1.4s,mb5.0							
KAPI				*e*PP		PP	01 04 52.7	-5.7
GIRL	**Giralia**	**64.59**	**254**	*e*P		**P**	**01 02 36.8**	**+0.3**
	comp=Z,1μm,1.4s							
CASY	**Casey**	**65.25**	**205**	*e*P		**P**	**01 02 41.1**	**+1.1**
CASY	**Casey**	**65.25**	**205**	*e*P		**P**	**01 02 41.1**	**+1.2**
	comp=Z,25nm,0.6s,mb5.0							
JHJ	**Hachijo jima 2**	**67.68**	**321**	P		**P**	**01 02 55.2**	**-0.6**
	comp=Z,130nm,0.6s,mb5.7,baz=186,slow=12,SNR=4.0							
TSM	**Tawau**	**69.35**	**283**	P		**P**	**01 03 07.4**	**+0.8**
SDKM	**Sandakan**	**70.50**	**284**	P		**P**	**01 03 14.5**	**+0.9**
TGY	**Tagaytay City**	**70.76**	**294**	P		**P**	**01 03 15.3**	**+0.3**
	comp=Z,138nm,0.3s,mb6.0,baz=190,slow=15,SNR=3.3							
MJAR	**Matsushiro Arr**	**71.00**	**322**	P		**P**	**01 03 15.3**	**-0.8**
	comp=Z,22nm,0.8s,mb4.8,baz=160,slow=5.9,SNR=56							
MAJO	**Matsushiro**	**71.01**	**322**	*e*P		**P**	**01 03 15.2**	**-0.9**
MAJO					pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0							
MAJO	**Matsushiro**	**71.01**	**322**	*e*P		**P**	**01 03 15.2**	**-0.9**
	comp=Z,32nm,0.9s,mb5.0							
JOW	**Kunigami**	**71.38**	**309**	P		**P**	**01 03 18.3**	**-0.2**
	comp=Z,34nm,0.8s,mb5.0,baz=207,slow=5.0,SNR=9.1							
KKM	**Kota Kinabalu**	**71.55**	**284**	P		**P**	**01 03 20.5**	**+0.6**
KKM	**Kota Kinabalu**	**71.55**	**284**	*e*P		**P**	**01 03 19.8**	**-0.1**
	comp=Z,32nm,0.4s,mb5.3							
MIR	**Mirnyy**	**72.27**	**205**	*e*P		**P**	**01 03 24.0**	**+0.8**
MIR					pmax	pmax		
	comp=Z,119nm,1.8s,mb5.2							
SBUM	**Sibu**	**73.88**	**279**	P		**P**	**01 03 34.4**	**+0.8**
ASAJ	**Asahikawa**	**74.25**	**330**	P		**P**	**01 03 35.5**	**+0.5**
	comp=Z,23nm,0.6s,mb5.0,baz=236,slow=9.2,SNR=14							
KSM	**Kuching**	**75.31**	**277**	P		**P**	**01 03 42.1**	**+0.3**
KSM	**Kuching**	**75.31**	**277**	*e*P		**P**	**01 03 41.9**	**+0.1**
	comp=Z,139nm,1.4s,mb5.4							
YHNB	**Yeheng**	**75.47**	**303**	*e*P		**P**	**01 03 41.5**	**-1.0**
	comp=Z,59nm,1.2s,mb5.1							
XMIS	**Christmas Isla**	**75.72**	**264**	*e*P		**P**	**01 03 43.5**	**-0.7**
	comp=Z,207nm,1.4s,mb5.6							
PET	**Petropavlovsk**	**76.00**	**344**	*e*P		**P**	**01 03 44.3**	**-0.5**
PETK	**Petropavlovsk-**	**76.32**	**344**	P		**P**	**01 03 45.9**	**-0.7**
	comp=Z,22nm,0.8s,mb4.9,baz=126,slow=8.6,SNR=27							
YSS	**Yuzh-Sakhalins**	**76.36**	**332**	⇓*i*P		**P**	**01 03 46.7**	**-0.2**
YSS					pmax	pmax		
	comp=Z,130nm,1.0s,mb5.5							
YSS	**Yuzh-Sakhalins**	**76.36**	**332**	*e*P		**P**	**01 03 47.6**	**+0.7**
	comp=Z,155nm,1.1s,mb5.5							
ARVC	**Arvin**	**77.04**	**45**	⇓P		**P**	**01 03 51.3**	**+0.3**
	baz=77							
VES	**Vestal, Richgr**	**77.29**	**44**	⇓P		**P**	**01 03 52.5**	**+0.1**
	baz=78							
MONP	**Monument Peak**	**77.40**	**48**	⇓P		**P**	**01 03 53.6**	**+0.4**
	baz=78							
EDW2	**Edwards Air Fo**	**77.45**	**46**	P		**P**	**01 03 53.4**	**0.0**
	baz=78,SNR=6.1							
EDW2				⇓pP		pP	01 04 45.9	0.0
	baz=78							
KHMM	**Horse Mountain**	**77.54**	**38**	*e*P		**P**	**01 03 59.4**	**+5.7**
	comp=Z,11nm,1.0s,mb4.5							
ISA	**Isabella**	**77.59**	**45**	⇓P		**P**	**01 03 54.2**	**+0.1**
	baz=78							
ISA	**Isabella**	**77.59**	**45**	*e*P		**P**	**01 03 54.1**	**0.0**
ISA					pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5							
ISA	**Isabella**	**77.59**	**45**	*e*P		**P**	**01 03 54.1**	**0.0**
	comp=Z,14nm,1.1s,mb4.5							
ISA				*e*pP		pP	01 04 45.5	-1.1
CMB	**Columbia Colle**	**77.77**	**42**	*e*P		**P**	**01 03 55.7**	**+0.7**
CMB					pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3							
CMB	**Columbia Colle**	**77.77**	**42**	*e*P		**P**	**01 03 55.7**	**+0.6**
	comp=Z,9.8nm,1.2s,mb4.3							
CMB				*e*pP		pP	01 04 47.8	+0.2
QZH	**Quanzhou**	**77.80**	**302**	⇓*i*P		**P**	**01 03 56.2**	**+0.7**
QZH					pmax	pmax		
	comp=Z,50nm,0.8s,mb5.2							
KSRS	**Korea Array**	**77.84**	**317**	P		**P**	**01 03 55.8**	**+0.3**
	comp=Z,14nm,1.0s,mb4.5,baz=140,slow=6.3,SNR=51							
OHCM	**Honcut**	**77.89**	**40**	*e*pP		pP	01 04 49.6	+1.4
LRMC	**Laurel Mountai**	**78.00**	**45**	⇑P		**P**	**01 03 56.1**	**-0.3**
	baz=78							
WDC	**Whiskeytown Da**	**78.04**	**39**	*e*P		**P**	**01 03 57.5**	**+1.0**
WDC					pmax	pmax		
	comp=Z,67nm,2.1s,mb4.9							
WDC	**Whiskeytown Da**	**78.04**	**39**	*e*P		**P**	**01 03 57.5**	**+1.0**
	comp=Z,67nm,2.1s,mb4.9							
WDC				*e*pP		pP	01 04 49.8	+0.7
BELC	**Belle Mtn.**	**78.31**	**47**	⇑P		**P**	**01 03 58.6**	**+0.5**
	baz=78							
MPMC	**Manual Prospec**	**78.47**	**45**	⇓P		**P**	**01 03 59.3**	**+0.4**
	baz=79,SNR=9.6							
GSC	**Goldstone**	**78.49**	**46**	*e*P		**P**	**01 03 58.0**	**-1.1**
GSC					pmax	pmax		
	comp=Z,12nm,1.2s,mb4.4							
GSC	**Goldstone**	**78.49**	**46**	*e*P		**P**	**01 03 58.0**	**-1.1**
	comp=Z,12nm,1.2s,mb4.4							
GSC				*e*pP		pP	01 04 51.3	-0.4
BC3	**Big Chuckw Mtn**	**78.50**	**48**	⇑P		**P**	**01 03 59.5**	**+0.4**
	baz=79							
HEC	**Hector,Ludlow**	**78.55**	**46**	⇑P		**P**	**01 03 58.3**	**-1.0**
	baz=79							
GLA	**Glamis**	**78.61**	**49**	⇓P		**P**	**01 03 59.6**	**-0.1**
	baz=79							
GLA	**Glamis**	**78.61**	**49**	*e*P		**P**	**01 04 00.8**	**+1.0**
GLA					pmax	pmax		
	comp=Z,122nm,2.6s,mb5.1							
GLA	**Glamis**	**78.61**	**49**	*e*P		**P**	**01 04 00.8**	**+1.1**
	comp=Z,122nm,2.6s,mb5.1							
WAKR	**Walker**	**78.65**	**42**	*e*P		**P**	**01 04 00.6**	**+0.8**
WAKR				*e*pP		pP	01 04 54.5	+2.1
YBH	**Yreka Blue Hor**	**78.68**	**38**	*e*P		**P**	**01 04 01.9**	**+2.0**
YBH					pmax	pmax		
	comp=Z,27nm,1.5s							
YBH	**Yreka Blue Hor**	**78.68**	**38**	P		**P**	**01 04 01.8**	**+1.9**
	comp=Z,4.9nm,0.8s,mb4.2,baz=242,slow=6.3,SNR=4.6							
YBH	**Yreka Blue Hor**	**78.68**	**38**	*e*P		**P**	**01 04 01.9**	**+2.0**
	comp=Z,27nm,1.5s,mb4.7							
YBH				*e*pP		pP	01 04 52.4	-0.2
BEKR	**Beckwourth**	**78.90**	**40**	⇑P		**P**	**01 04 02.0**	**+0.9**
	baz=79							
WCN	**Washoe City**	**78.93**	**41**	⇑P		**P**	**01 04 02.0**	**+0.7**
	baz=79							
GMRC	**Granite Mounta**	**78.98**	**47**	⇓P		**P**	**01 04 02.0**	**+0.3**
	baz=79							
GMRC				⇓pP		pP	01 04 53.5	-0.9
	baz=79							
IRM	**Iron Mountain**	**78.99**	**47**	⇓P		**P**	**01 04 02.3**	**+0.5**
	baz=79							
IRM				⇓pP		pP	01 04 55.4	+0.9
	baz=79							
HUMO	**Hull Mountain**	**79.10**	**37**	*e*P		**P**	**01 04 00.8**	**-1.4**
	comp=Z,6.1nm,1.0s,mb4.2							
HUMO				*e*pP		pP	01 04 54.0	-0.9
TUQ	**Turquoise Moun**	**79.16**	**46**	⇑P		**P**	**01 04 02.3**	**-0.4**
	baz=79							
TUQ				⇑pP		pP	01 04 56.5	+1.0
	baz=79							
NVAR	**Mina Array Bea**	**79.32**	**42**	P		**P**	**01 04 04.0**	**+0.5**
	comp=Z,4.0nm,0.8s,mb4.1,baz=221,slow=8.5,SNR=18							
NVAR				pP		pP	01 04 54.5	-1.7
	comp=Z,3.5nm,1.0s,baz=233,slow=8.9,SNR=1.8							
U10A	**Ash Meadows, A**	**79.44**	**45**	⇓P		**P**	**01 04 04.4**	**+0.2**
	baz=80							
214A	**Organ Pipe Nat**	**79.47**	**50**	⇑P		**P**	**01 04 04.7**	**+0.3**
	baz=80							
214A				⇓pP		pP	01 04 57.3	0.0
	baz=80							
Z13A	**Yuma Proving G**	**79.52**	**49**	⇓P		**P**	**01 04 04.7**	**+0.1**
	baz=80							
Z13A				⇓pP		pP	01 04 56.8	-0.7
	baz=80							
Y13A	**Salome**	**79.72**	**48**	⇑P		**P**	**01 04 05.8**	**+0.1**
	baz=80							
Y13A				⇓pP		pP	01 04 59.3	+0.8
	baz=80							
KDAK	**Kodiak Island**	**79.89**	**12**	P		**P**	**01 04 05.9**	**-0.2**
	comp=Z,13nm,0.8s,mb4.6,baz=217,slow=5.1,SNR=3.2							
V12A	**Nelson**	**80.05**	**46**	⇓P		**P**	**01 04 08.0**	**+0.5**
	baz=80							

DJA ***03*** *00:51:59, 19.°83S×175.°42W, h30km, Mw6.0/22*
BJI ***03*** *00:52:17.7, 20.°16S×175.°11W, h223km, mB5.1/24, mb5.1/36*
MOS ***03*** *00:52:17.3±0.8, 19.°82S×176.°02W, h181km, mb5.2/23, Error ellipse: s-maj=10.1km s-min=8.2km az=61.2*
IDC ***03*** *00:52:19.0±1.3, 19.°92S×175.°91W, h190km±11km, mb4.8/23, mb1 4.9/25, mb1mx4.9/27, mbtmp4.9/25, MS4.2/4, Ms1 4.2/4, ms1mx3.5/26, Error ellipse: s-maj=11.6km s-min=8.9km az=141.0*
ISCJB ***03*** *00:52:20.7±0.1, 20.°00S±0.°03×175.°90W±0.°03, h218km, mb4.9/116, Error ellipse: s-maj=5.2km s-min=3.0km az=149.2*
GCMT ***03*** *00:52:21.6±0.1, 19.°92S×175.°48W, h229km±1km, MW5.4/89, Moment Tensor Solution. s82,c132; s89,c155; Duration: 1s3 Moment tensor: Scale 10^17Nm; Mrr-0.35±.02; Mθθ0.24±.03; Mφφ0.11±.03; Mrθ0.08±.03; Mθφ1.07±.02; Mφr-1.32±.02; Best double couple: M0 1.72800×10^17 NP1:φs266.00000°, δ39.00000°, λ-12.00000°. NP2:φs6.00000°, δ82.00000°, λ-129.00000°. Principal axes: T 1.6870, Plg27.0000°, Azm125.0000°; N 0.0810, Plg38.0000°, Azm12.0000°; P -1.7680, Plg40.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***03*** *00:52:21.6±0.1, 20.°02S×175.°93W, mb4.9/79 Error ellipse: s-maj=5.8km s-min=3.6km az=146.0*
BGS ***03*** *00:52:21.6±5.8, 20.°02S×175.°93W, h217km, mb4.9(NEIC)*
SZGRF ***03*** *00:52:22.5, 20.°21S×175.°82W, h225km, Tonga Islands*
ISC 03 00:52:22.3±0.1, 20.°00S±0.°04×175.°90W±0.°03, h220km, h220km±.4km: pP-P, n745, σ0s78/437, mb4.9/116,

V12A ⇓pP pP 01 05 01.0 +0.7
baz=80
S10A Tonopah Range, 80.12 44 ⇑P **P 01 04 07.5 -0.3**
baz=80
X13A Yucca 80.14 48 ⇓P **P 01 04 08.0 0.0**
baz=80
MOD Modoc 80.19 39 *e*P **P 01 04 09.3 +1.3**
comp=Z,6.7nm,0.8s,mb4.3
SHPR Sheep Range 80.27 45 *e*P **P 01 04 09.4 +0.7**
SHPR *e*pP pP 01 05 02.8 +1.3
115A Sonoran Desert 80.28 50 ⇑P **P 01 04 08.7 -0.1**
baz=80
K05A Summer Lake 80.35 38 ⇑P **P 01 04 08.8 -0.1**
baz=81
Y14A Wickenburg 80.37 49 ⇑P **P 01 04 08.5 -0.7**
baz=81
W13A Hualapai Mount 80.37 47 ⇑P **P 01 04 08.2 -1.0**
baz=81
W13A ⇓pP pP 01 05 02.9 +0.8
baz=81
216A Three Points, 80.48 51 ⇓P **P 01 04 08.8 -1.0**
baz=81
T11A Corn Creek, Al 80.64 45 ⇓P **P 01 04 10.8 +0.2**
baz=81
T11A ⇓PcP PcP 01 04 18.6 +2.0
baz=81
U12A Valley of Fire 80.65 46 ⇑P **P 01 04 10.6 0.0**
baz=81
U12A ⇓PcP PcP 01 04 18.7 +2.0
baz=81
U12A ⇓pP pP 01 05 02.9 -0.6
baz=81
V13A Grand Canyon W 80.71 47 ⇑P **P 01 04 11.2 +0.2**
baz=81
V13A ⇑pP pP 01 05 04.5 +0.6
baz=81
X14A Yava 80.73 48 ⇓P **P 01 04 11.1 0.0**
baz=81
Q10A Clear Creek Ra 80.76 43 ⇓P **P 01 04 10.3 -0.8**
baz=81
Q10A ⇑pP pP 01 05 04.6 +0.4
baz=81
217A Green Valley 80.83 51 ⇓P **P 01 04 11.4 -0.4**
baz=81
217A ⇓pP pP 01 05 04.3 -0.3
baz=81
Y15A Casa Rosa Ranc 80.85 49 P **P 01 04 12.7 +0.9**
baz=81,SNR=5.6
Y15A ⇑pP pP 01 05 04.0 -0.7
baz=81
W14A Seligman 80.99 48 ⇑P **P 01 04 13.0 +0.6**
baz=81,SNR=5.6
W14A ⇓pP pP 01 05 05.8 +0.4
baz=81
HABR Khabarovsk 81.01 329*ce*P **P 01 04 12.0 -0.2**
HABR *e* 01 07 14.4
HABR *e*S S 01 14 00.2 -2.3
HABR *e* 01 14 15.7
HABR *e*SSS 01 22 45.1
HABR pmax pmax
comp=Z,285nm,1.8s,mb5.6
HABR pmax pmax
comp=E,64nm,1.0s
HABR pmax pmax
comp=N,25nm,1.1s
HABR MLR MLR
comp=Z,101nm,19.0s
U13A Pakoon Wash 81.03 46 ⇑P **P 01 04 13.6 +0.9**
baz=81
U13A ⇑pP pP 01 05 05.5 -0.2
baz=81
S12A Delamar Landin 81.09 45 ⇑P **P 01 04 13.7 +0.8**
baz=81
NJ2 Nanjing 81.10 309 *e*P **P 01 04 13.7 +0.6**
NJ2 pP pP 01 05 07.8 +1.7
NJ2 sP sP 01 05 31.5 +2.1
NJ2 pmax pmax
comp=Z,40nm,0.9s,mb5.0
TUC Tucson 81.13 51 *e*P **P 01 04 14.1 +0.8**
TUC pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
TUC Tucson 81.13 51 *e*P **P 01 04 14.1 +0.8**
comp=Z,4.7nm,0.8s,mb4.2
TUC *e*pP pP 01 05 04.8 -1.4
Z16A Peralta Trail, 81.18 50 ⇓P **P 01 04 14.4 +0.9**
baz=81
V14A Boquillas Ranc 81.20 47 ⇓P **P 01 04 13.7 +0.2**
baz=81
V14A ⇑pP pP 01 05 07.8 +1.3
baz=81
X15A Humboldt 81.20 49 ⇑P **P 01 04 12.3 -1.3**
baz=81,SNR=6.0
X15A ⇑pP pP 01 05 07.5 +0.9
baz=81
Q11A Duckwater 81.25 43 ⇑P **P 01 04 13.8 0.0**
baz=82
Q11A ⇓pP pP 01 05 06.6 -0.2
baz=82
MDJ Mudanjiang 81.26 324 P **P 01 04 13.8 +0.1**
MDJ pmax pmax
comp=Z,70nm,1.1s,mb5.2
MDJ pmax pmax
comp=Z,140nm,3.6s
MDJ Mudanjiang 81.26 324 *e*P **P 01 04 13.8 +0.1**
comp=Z,76nm,1.1s,mb5.2
318A Bisbee 81.28 52 ⇓P **P 01 04 14.3 +0.3**
baz=82
318A ⇓pP pP 01 05 06.5 -0.6
baz=82
T13A Saint George 81.39 46 ⇓P **P 01 04 14.4 -0.1**
baz=82
T13A ⇓pP pP 01 05 07.0 -0.6
baz=82
Y16A Circle Bar Ran 81.42 49 P **P 01 04 13.5 -1.3**
baz=82,SNR=6.1
MYKOM Kota Tinggi 81.46 275 P **P 01 04 16.0 +0.5**
WVOR Wild Horse Val 81.49 39 *e*P **P 01 04 15.6 +0.7**
WVOR pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
WVOR Wild Horse Val 81.49 39 *e*P **P 01 04 15.6 +0.7**
comp=Z,10nm,1.0s,mb4.4
WVOR *e*pP pP 01 05 07.3 -0.7
218A Dragoon 81.50 52 ⇓P **P 01 04 15.2 0.0**
baz=82,SNR=12
218A ⇑pP pP 01 05 07.6 -0.6
baz=82
U14A Mt Trumbull 81.56 46 ⇑P **P 01 04 16.4 +1.0**
baz=82,SNR=7.7
U14A ⇑pP pP 01 05 09.0 +0.5
baz=82
HOOD Mount Hood Mea 81.56 35 *e*P **P 01 04 22.5 +7.3**
comp=Z,10nm,0.8s,mb4.5
X16A Lo Mia Camp, P 81.72 49 ⇓P **P 01 04 16.1 -0.2**
baz=82,SNR=7.2
X16A ⇓pP pP 01 05 07.7 -1.7
baz=82
S13A Holt Ranch, En 81.73 45 ⇓P **P 01 04 16.2 -0.1**
baz=82
S13A ⇑pP pP 01 05 07.8 -1.5
baz=82
319A Douglas 81.77 52 ⇓P **P 01 04 16.6 -0.1**
baz=82
Y17A Roosevelt 81.78 50 ⇑P **P 01 04 16.1 -0.6**
baz=82
Y17A ⇑pP pP 01 05 08.9 -0.8
baz=82
118A Homack Ranch, 81.89 51 ⇓P **P 01 04 17.8 +0.5**
baz=82,SNR=10.0
118A ⇑pP pP 01 05 10.6 +0.2
baz=82
H06A Lindquist Farm 81.92 36 ⇓P **P 01 04 17.4 +0.3**
baz=82
V15A Kaibab Nationa 81.94 47 ⇓P **P 01 04 17.8 +0.4**
baz=82,SNR=6.2
V15A ⇑pP pP 01 05 10.9 +0.4
baz=82
O11A Cowboy Ranch, 81.98 42 ⇓P **P 01 04 17.7 +0.2**
baz=82
O11A ⇑pP pP 01 05 09.6 -1.0
baz=82
I07A Izee 81.99 37 ⇑P **P 01 04 17.6 +0.2**
baz=82
I07A ⇓pP pP 01 05 09.6 -1.0
baz=82
W16A Flagstaff 82.01 48 ⇓P **P 01 04 16.8 -1.0**
baz=82
W16A ⇑pP pP 01 05 10.4 -0.5
baz=82

KGM Kluang 82.03 275 P **P 01 04 19.4 +0.9**
CCUT Cedar City 82.05 45 *e*P **P 01 04 18.7 +0.8**
comp=Z,21nm,1.5s,mb4.5
CCUT *e*pP pP 01 05 11.5 +0.4
G06A Carlson Farm, 82.07 36 ⇑pP pP 01 05 10.9 -0.1
baz=82
P12A McGill 82.08 43 ⇑pP pP 01 05 10.7 -0.5
baz=82
219A White Tail Can 82.09 52 ⇓P **P 01 04 18.8 +0.5**
baz=82,SNR=9.0
219A ⇓pP pP 01 05 11.5 0.0
baz=82
X17A Forest Lakes 82.14 49 ⇑P **P 01 04 19.4 +0.9**
baz=82,SNR=5.8
U15A North Rim 82.18 47 ⇑P **P 01 04 19.2 +0.6**
baz=82,SNR=7.4
M10A I.L. Ranch, Tu 82.22 41 ⇓P **P 01 04 18.4 -0.3**
baz=82
320A Kipp Ranch, An 82.32 53 ⇑P **P 01 04 20.7 +1.2**
baz=82,SNR=8.5
WUAZ Wupatki 82.34 48 ⇑P **P 01 04 20.1 +0.5**
baz=83
WUAZ Wupatki 82.34 48 *e*P **P 01 04 21.0 +1.5**
comp=Z,12nm,1.0s,mb4.5
Q13A Wheeler Ranch, 82.37 44 ⇓P **P 01 04 20.1 +0.5**
baz=83
Y18A Canyon Day Jun 82.41 50 ⇑P **P 01 04 20.3 +0.4**
baz=83,SNR=6.7
T15A Red Dirt Ranch 82.42 46 ⇑P **P 01 04 20.1 +0.2**
baz=83,SNR=8.2
119A Ashpeak Ranch, 82.44 51 ⇓P **P 01 04 20.1 +0.1**
baz=83
119A ⇓pP pP 01 05 13.9 +0.7
baz=83
J09A Fry Pan Ranch, 82.56 39 ⇓P **P 01 04 20.2 -0.3**
baz=83
D05A Enumclaw 82.58 34 ⇑P **P 01 04 20.0 -0.4**
baz=83
L10A Juniper Basin 82.58 40 ⇓P **P 01 04 20.9 +0.3**
baz=83,SNR=5.5
220A Playas Peak, P 82.59 52 ⇑P **P 01 04 21.6 +0.7**
baz=83,SNR=13
220A ⇑pP pP 01 05 13.8 -0.2
baz=83
M11A Holland Ranch, 82.63 41 ⇓P **P 01 04 21.7 +0.8**
baz=83
P13A Bates Ranch, G 82.65 44 ⇓pP pP 01 05 13.8 -0.4
baz=83
MAW Mawson 82.69 199 ⇓*i*P **P 01 04 22.0 +1.2**
comp=Z,10nm,0.5s,mb4.8
MAW Mawson 82.69 199 P **P 01 04 21.9 +1.1**
comp=Z,16nm,0.6s,mb4.9,baz=136,slow=5.8,SNR=52
MAW LR LR 01 37 38.0
comp=Z,95nm,18.2s,baz=82,slow=33
MAW Mawson 82.69 199 P **P 01 04 21.9 +1.1**
MAW LR LR 01 37 38.0
E06A Yakima 82.70 35 ⇓P **P 01 04 21.6 +0.5**
baz=83
Z19A T-Link Ranch, 82.72 51 ⇑P **P 01 04 21.8 +0.2**
baz=83
H08A Prairie City 82.73 37 ⇑P **P 01 04 21.8 +0.5**
baz=83
K10A MacKenzie Ranc 82.75 40 ⇓P **P 01 04 21.6 +0.2**
baz=83
N12A Clover Valley, 82.77 42 ⇓PcP PcP 01 04 27.8 +1.9
baz=83
N12A Clover Valley, 82.77 42 *e*P **P 01 04 23.2 +1.6**
comp=Z,10nm,0.9s,mb4.5
S15A Panguitch 82.78 46 ⇓PcP PcP 01 04 29.0 +3.0
baz=83
V17A Tonalea, Kykot 82.80 48 ⇓P **P 01 04 22.7 +0.9**
baz=83,SNR=11
V17A ⇑PcP PcP 01 04 29.3 +3.2
baz=83
V17A ⇑pP pP 01 05 15.0 -0.1
baz=83
120A U Bar Ranch, L 82.82 52 ⇓P **P 01 04 22.7 +0.6**
baz=83,SNR=6.3
U16A Tuba City 82.83 48 ⇓P **P 01 04 22.9 +0.9**
baz=83,SNR=6.6
U16A ⇑PcP PcP 01 04 29.7 +3.4
baz=83
X18A Snowflake 82.84 49 ⇓P **P 01 04 22.9 +0.7**
baz=83
Q14A Sevier Lake (B 82.88 44 ⇓P **P 01 04 23.0 +0.8**
baz=83
Q14A ⇑PcP PcP 01 04 29.5 +3.1
baz=83,SNR=5.9
Q14A ⇑pP pP 01 05 14.9 -0.5
baz=83
G08A Pilot Rock 83.03 37 ⇑P **P 01 04 23.2 +0.4**
baz=83,SNR=10
G08A ⇑PcP PcP 01 04 30.0 +3.0
baz=83
G08A ⇓pP pP 01 05 15.1 -0.9
baz=83
Y19A Nutrioso 83.06 50 ⇑P **P 01 04 23.8 +0.6**
baz=83,SNR=7.9
Y19A ⇓pP pP 01 05 17.3 +0.8
baz=83
L11A Cat Creek Ranc 83.07 41 ⇑P **P 01 04 24.4 +1.3**
baz=83
KLR Kul'dur 83.12 328 *e*P **P 01 04 19.2 -4.0**
KLR *e* 01 05 18.5
KLR *e* 01 07 40.0
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.0
CN2 Changchun 83.13 321 ⇓*i*P **P 01 04 23.7 +0.3**
CN2 *e*sP sP 01 05 40.3 +0.5
CN2 *e*S S 01 14 22.2 -2.1
CN2 pmax pmax
comp=Z,60nm,1.1s,mb5.2
CN2 pmax pmax
comp=Z,200nm,8.0s
Z20A Nine Sixteen R 83.13 51 ⇑P **P 01 04 23.7 +0.1**
baz=83,SNR=9.6
M12A Wells 83.16 41 ⇓P **P 01 04 22.7 -0.9**
baz=83
M12A ⇑PcP PcP 01 04 30.9 +3.3
baz=83,SNR=5.3
M12A ⇑pP pP 01 05 15.3 -1.5
baz=83
K11A Parker Ranch, 83.25 40 ⇑P **P 01 04 24.0 0.0**
baz=84
X19A St. Johns 83.27 50 ⇑P **P 01 04 24.5 +0.2**
baz=84,SNR=7.3
N13A Wendover, West 83.30 42 ⇓P **P 01 04 23.4 -1.0**
baz=84
N13A ⇑pP pP 01 05 17.7 +0.1
baz=84
N13A Wendover, West 83.30 42 *e*P **P 01 04 25.2 +0.9**
P14A Drum Mountains 83.34 44 ⇓P **P 01 04 24.9 +0.4**
baz=84
P14A ⇑pP pP 01 05 16.8 -1.0
baz=84
MSU Marysvale 83.35 45 *e*P **P 01 04 26.3 +1.7**
MSU *e*pP pP 01 05 17.6 -0.3
RSW Rattlesnake Hi 83.36 35 *e*P **P 01 04 24.0 -0.5**
KTGM Kuala Trenggan 83.36 278 P **P 01 04 26.4 +1.1**
HAWA Hanford 83.39 35 *e*P **P 01 04 25.8 +1.2**
comp=Z,13nm,1.0s,mb4.6
H09A Durkee 83.39 38 ⇑P **P 01 04 25.1 +0.5**
baz=84
F08A Pendleton 83.44 36 ⇓P **P 01 04 25.0 +0.1**
baz=84
121A Cookes Peak, D 83.44 52 ⇑P **P 01 04 24.7 -0.6**
baz=84
V18A Ganado 83.45 48 ⇑P **P 01 04 25.3 +0.1**
baz=84
V18A ⇓pP pP 01 05 18.5 0.0
baz=84
T17A Navajo Res., N 83.49 47 ⇓P **P 01 04 25.3 -0.1**
baz=84,SNR=6.3
M13A Montello 83.60 42 ⇑P **P 01 04 26.0 +0.1**
baz=84
M13A ⇓PcP PcP 01 04 33.2 +3.7
baz=84,SNR=6.0
M13A ⇓pP pP 01 05 18.7 -0.4
baz=84
M13A Montello 83.60 42 *e*P **P 01 04 26.7 +0.9**
comp=Z,12nm,0.9s,mb4.6
M13A *e*pP pP 01 05 18.4 -0.7
D07A Quincy 83.65 35 ⇓P **P 01 04 26.3 +0.4**
baz=84
Y20A Horse Springs, 83.67 51 ⇓P **P 01 04 26.8 +0.4**
baz=84,SNR=10

Y20A ⇓pP pP 01 05 21.1 +1.4
baz=84
G09A Cove 83.69 37 ⇑P **P 01 04 25.6 -0.5**
baz=84
G09A ⇑pP pP 01 05 20.1 +0.6
baz=84
BMO Blue Mountains 83.71 38 *e*P **P 01 04 26.0 -0.3**
BMO *e*pP pP 01 05 18.8 -0.8
ETW Entiat 83.71 34 *e*P **P 01 04 26.9 +0.6**
ETW *e*pP pP 01 05 19.6 +0.1
MFID Camas Ranch 83.74 39 ⇓P **P 01 04 26.4 -0.1**
baz=84
WHN Wuhan 83.75 305 ⇑P **P 01 04 27.6 +0.7**
S17A Black Ridge (B 83.82 46 ⇑P **P 01 04 26.7 -0.3**
baz=84
S17A ⇑pP pP 01 05 20.5 +0.2
baz=84
DUG Dugway 83.83 43 ⇓P **P 01 04 26.6 -0.4**
baz=84
P15A Leamington 83.84 44 ⇑pP pP 01 05 20.8 +0.3
baz=84
K12A Draper Farm, C 83.86 40 ⇑P **P 01 04 26.2 -0.9**
baz=84
K12A ⇑pP pP 01 05 20.1 -0.4
baz=84
Z21A St. Cloud Mine 83.90 51 ⇓P **P 01 04 26.7 -0.8**
baz=84,SNR=13
Z21A ⇓pP pP 01 05 21.2 +0.3
baz=84
C07A Waterville 83.91 34 ⇓P **P 01 04 27.1 -0.1**
baz=84
I11A Placerville 83.95 39 ⇓P **P 01 04 28.1 +0.6**
baz=84
FRIM Kepong 84.04 276 P **P 01 04 29.1 +0.4**
G10A Bishop Farm, J 84.07 37 ⇑P **P 01 04 27.2 -0.9**
baz=84
G10A ⇑pP pP 01 05 22.2 +0.7
baz=84
J12A Stokes Ranch, 84.08 40 ⇑P **P 01 04 28.4 +0.2**
baz=84,SNR=17
J12A ⇓pP pP 01 05 20.8 -0.8
baz=84
D08A Wollman Farm, 84.13 35 ⇓P **P 01 04 27.1 -1.3**
baz=84
TTA Tatalina 84.13 9 *e*P **P 01 04 27.8 -0.2**
W20A Ramah 84.17 50 ⇑P **P 01 04 29.4 +0.6**
baz=84,SNR=13
M14A Sheep Mountain 84.19 42 ⇓P **P 01 04 28.4 -0.4**
baz=84
M14A ⇓pP pP 01 05 21.4 -0.8
baz=84
T18A Mexican Hat 84.20 47 ⇓P **P 01 04 29.6 +0.6**
baz=84
Y21A Point of Rocks 84.23 51 ⇑P **P 01 04 30.3 +1.1**
baz=84,SNR=11
U19A Dine' College, 84.25 48 ⇑P **P 01 04 29.6 +0.4**
baz=84,SNR=6.5
R17A Hanksville Air 84.28 46 ⇓P **P 01 04 29.4 +0.1**
baz=84
R17A PcP PcP 01 04 36.9 +4.2
baz=84,SNR=6.1
R17A ⇑pP pP 01 05 21.5 -1.2
baz=84
B07A Winthrop 84.36 34 ⇓P **P 01 04 28.3 -1.2**
baz=85
X21A Alamocita Cree 84.36 50 ⇑P **P 01 04 30.0 +0.2**
baz=85,SNR=5.5
X21A ⇑pP pP 01 05 23.8 +0.6
baz=85
K13A Stover Farm, H 84.36 41 ⇓P **P 01 04 30.1 +0.4**
baz=85
K13A ⇑pP pP 01 05 23.5 +0.5
baz=85
H11A Donnelly 84.37 38 ⇑P **P 01 04 29.3 -0.3**
baz=85
H11A ⇓pP pP 01 05 24.2 +1.2
baz=85
I12A Atlanta 84.37 39 ⇑P **P 01 04 29.8 +0.2**
baz=85,SNR=10
I12A ⇓pP pP 01 05 23.2 +0.1
baz=85
Z22A Elephant Butte 84.39 52 ⇓P **P 01 04 30.3 +0.3**
baz=85,SNR=7.8
Z22A ⇓pP pP 01 05 23.8 +0.4
baz=85
TMUT Trail Mountain 84.41 45 *e*P **P 01 04 30.3 +0.4**
comp=Z,16nm,0.8s,mb4.8
TMUT *e*pP pP 01 05 23.8 +0.4
F10A Beach Ranch, E 84.41 37 ⇓P **P 01 04 29.4 -0.4**
baz=85,SNR=8.7
OD2 Odessa Site #2 84.45 35 *e*P **P 01 04 30.3 +0.3**
OD2 *e*pP pP 01 05 25.5 +2.2
D09A Jones Farm, Ri 84.47 35 ⇓P **P 01 04 29.3 -0.8**
baz=85
D09A ⇑pP pP 01 05 24.3 +0.8
baz=85
C08A Higginbotham F 84.51 35 ⇑P **P 01 04 30.1 -0.1**
baz=85
V20A Brimhall 84.53 49 ⇓P **P 01 04 30.5 -0.2**
baz=85
BMRM Bremner River 84.54 15 *e*P **P 01 04 29.1 -1.0**
comp=Z,28nm,1.2s,mb4.9
L14A Malta 84.55 42 ⇑P **P 01 04 30.5 -0.1**
baz=85
A07A Ashnola River, 84.59 33 ⇑P **P 01 04 29.9 -0.8**
baz=85
G11A Walters Elk Ra 84.62 38 ⇑P **P 01 04 30.1 -0.8**
baz=85,SNR=8.9
G11A ⇓pP pP 01 05 24.0 -0.3
baz=85
T19A Beclabito 84.64 48 ⇓P **P 01 04 31.2 0.0**
baz=85
T19A ⇓pP pP 01 05 24.8 +0.2
baz=85
SPUT South Promonto 84.66 43 *e*P **P 01 04 38.6 +7.5**
comp=Z,14nm,1.3s,mb4.5
SPUT *e*pP pP 01 05 25.8 +1.2
324A Moseley Ranch, 84.67 54 ⇑P **P 01 04 31.8 +0.3**
baz=85,SNR=7.8
324A ⇑pP pP 01 05 24.1 -0.8
baz=85
HLID Hailey 84.67 40 ⇑P **P 01 04 31.4 +0.2**
baz=85,SNR=17
HLID ⇑pP pP 01 05 23.8 -0.8
baz=85
HLID Hailey 84.67 40 *e*P **P 01 04 32.3 +1.1**
comp=Z,7.6nm,0.9s,mb4.4
HLID *e*pP pP 01 05 24.1 -0.5
B08A Colville Reser 84.71 34 ⇓P **P 01 04 31.1 -0.2**
baz=85
Y22A Socorro 84.72 51 ⇓P **P 01 04 32.0 +0.4**
baz=85,SNR=7.4
J13A Cove Ranch, Pi 84.72 40 ⇓P **P 01 04 31.2 -0.2**
baz=85,SNR=8.4
J13A ⇑pP pP 01 05 25.1 +0.2
baz=85
M15A Larsen Ranch, 84.74 42 ⇓P **P 01 04 31.6 0.0**
baz=85
M15A ⇓pP pP 01 05 24.5 -0.5
baz=85
425A Indio Mountain 84.75 55 ⇑P **P 01 04 32.4 +0.6**
baz=85,SNR=21
425A ⇑pP pP 01 05 25.1 -0.2
baz=85
SRU San Rafael 84.76 45 *e*P **P 01 04 31.3 -0.4**
SRU pmax pmax
comp=Z,13nm,1.0s,mb4.6
SRU San Rafael 84.76 45 *e*P **P 01 04 31.3 -0.5**
comp=Z,13nm,1.0s,mb4.6
U20A Newcomb 84.77 48 ⇓pP pP 01 05 25.8 +0.5
baz=85
LAZ Ladron 84.81 51 *e*P **P 01 04 32.1 0.0**
comp=Z,4.7nm,1.3s,mb4.1
LAZ *e*pP pP 01 05 26.5 +1.0
LENM Lemitar 84.82 51 *e*P **P 01 04 32.4 +0.3**
comp=Z,7.2nm,0.9s,mb4.4
LENM *e*pP pP 01 05 26.7 +1.1
R18A Canyonlands Na 84.82 46 ⇓P **P 01 04 31.9 -0.2**
baz=85
MNTX Cornudas Mount 84.86 54 *e*P **P 01 04 33.0 +0.6**
comp=Z,40nm,1.6s,mb4.9
MNTX *e*pP pP 01 05 24.4 -1.5
626A Big Bend Ranch 84.86 56 ⇑P **P 01 04 32.7 +0.3**
baz=85,SNR=13
K14A Jones Ranch, D 84.87 41 ⇓pP pP 01 05 25.8 +0.2
baz=85
224A Corundas Mount 84.92 53 ⇑P **P 01 04 32.4 -0.3**
baz=85,SNR=12

224A ⇑pP pP 01 05 26.0 -0.2
baz=85,SNR=9.3
JLU Jordanelle 84.93 44 *e*P **P 01 04 32.5 -0.1**
comp=Z,5.9nm,1.1s,mb4.2
JLU *e*pP pP 01 05 22.5 -3.5
H12A Diamond D Ranc 84.96 39 ⇓P **P 01 04 32.1 -0.5**
baz=85
H12A ⇑pP pP 01 05 25.9 -0.2
baz=85
F11A Grangeville 84.97 37 ⇓P **P 01 04 32.3 -0.3**
baz=85
G12A Big Creek, Yel 85.01 38 ⇓P **P 01 04 33.1 +0.3**
baz=85
G12A ⇓pP pP 01 05 26.1 -0.2
baz=85
Q18A Rafter H Ranch 85.02 45 ⇓P **P 01 04 33.3 +0.3**
baz=85
325A Bean Ranch, Si 85.02 54 ⇓P **P 01 04 33.3 +0.1**
baz=85,SNR=13
325A ⇓pP pP 01 05 25.7 -1.0
baz=85
D10A Wagner Farm, O 85.03 36 ⇓P **P 01 04 32.8 0.0**
baz=85
IPM Ipoh 85.03 277 P **P 01 04 34.1 +0.4**
I13A Wildhorse Cree 85.05 40 ⇑P **P 01 04 33.2 +0.1**
baz=85
BNM Barren Site 85.06 51 *e*P **P 01 04 34.0 +0.7**
comp=Z,11nm,1.3s,mb4.4
BNM *e*pP pP 01 05 27.4 +0.6
L15A Malad City 85.07 42 ⇓pP pP 01 05 25.6 -1.1
baz=85
J14A Carey 85.08 40 ⇓P **P 01 04 31.5 -1.7**
baz=85
J14A ⇑pP pP 01 05 27.4 +0.7
baz=85
A08A Turner Farm, O 85.11 34 ⇓P **P 01 04 32.8 -0.4**
baz=85
A08A ⇓pP pP 01 05 26.5 -0.2
baz=85
526A Mary Lane Ranc 85.12 56 ⇓P **P 01 04 33.2 -0.5**
baz=85,SNR=16
526A ⇑pP pP 01 05 27.1 -0.1
baz=85
TXAR Lajitas Array 85.13 57 P **P 01 04 34.5 +0.7**
comp=Z,6.7nm,0.8s,mb4.4,baz=216,slow=8.3,SNR=64
TXAR pP pP 01 05 26.4 -0.9
comp=Z,9.7nm,1.2s,baz=221,slow=5.0,SNR=3.4
TXAR PKKPbc PKKPbc 01 22 40.0 +0.4
comp=Z,0.2nm,0.5s,baz=116,slow=2.9,SNR=4.3
LPM Los Pinos Moun 85.14 51 *e*P **P 01 04 34.7 +1.0**
LPM *e*pP pP 01 05 28.0 +0.8
O17A Robinson Place 85.18 44 ⇑P **P 01 04 33.0 -0.7**
baz=85
O17A ⇑pP pP 01 05 27.2 0.0
baz=85
M16A Huntsville 85.19 43 ⇓pP pP 01 05 27.3 0.0
baz=85
E11A Bogner Ranch, 85.21 37 ⇓P **P 01 04 32.8 -1.0**
baz=86
P18A Preston Nutter 85.21 45 ⇓P **P 01 04 35.3 +1.4**
baz=85
P18A ⇓pP pP 01 05 27.8 +0.3
baz=85
124A Stringfield Ra 85.26 53 ⇓P **P 01 04 34.9 +0.6**
baz=86,SNR=8.1
124A ⇓pP pP 01 05 27.8 -0.1
baz=86,SNR=6.1
H13A Challis 85.33 39 ⇑P **P 01 04 34.2 -0.2**
baz=86
B09A Rice 85.37 34 ⇓P **P 01 04 34.1 -0.4**
baz=86
Y23A Lovelace Mesa, 85.38 52 ⇑P **P 01 04 35.2 +0.3**
baz=86
627A Terlingua Ranc 85.40 57 ⇓P **P 01 04 34.3 -0.9**
baz=86,SNR=15
627A ⇑pP pP 01 05 27.0 -1.6
baz=86
F12A Elk City 85.41 38 ⇑P **P 01 04 34.5 -0.3**
baz=86,SNR=11
F12A ⇓pP pP 01 05 28.3 0.0
baz=86
426A McDonald Obser 85.44 55 ⇓P **P 01 04 34.8 -0.5**
baz=86,SNR=13
426A ⇓pP pP 01 05 26.8 -2.0
baz=86
I14A Mackay 85.45 40 ⇑pP pP 01 05 27.4 -1.1
baz=86
A09A Danville 85.48 34 ⇑P **P 01 04 34.7 -0.4**
baz=86
527A Woodward Ranch 85.53 56 ⇑P **P 01 04 35.4 -0.3**
baz=86,SNR=11
527A ⇑pP pP 01 05 28.2 -1.1
baz=86
KTH Kantishna Hill 85.55 11 *e*P **P 01 04 33.2 -1.8**
comp=Z,14nm,0.9s,mb4.7
ANMO Albuquerque 85.56 50 *e*P **P 01 04 36.5 +0.7**
ANMO pmax pmax
comp=Z,11nm,1.4s
ANMO Albuquerque 85.56 50 *e*P **P 01 04 36.5 +0.7**
comp=Z,11nm,1.4s,mb4.4
ANMO *e*pP pP 01 05 29.4 +0.1
TRF Thorofare Moun 85.57 11 *e*P **P 01 04 34.0 -1.1**
comp=Z,30nm,0.8s,mb5.1
CHUM Lake Minchumin 85.61 10 *e*P **P 01 04 34.0 -1.3**
comp=Z,20nm,1.0s,mb4.8
KULM Kulim 85.66 277 P **P 01 04 37.7 +0.9**
KULM Kulim 85.66 277 *e*P **P 01 04 36.8 0.0**
comp=Z,34nm,0.9s,mb5.1
L16A Fish Haven 85.68 42 ⇓P **P 01 04 34.0 -2.2**
baz=86
R20A Redvale 85.75 47 ⇑P **P 01 04 37.3 +0.6**
baz=86
326A Caldwell Ranch 85.76 55 ⇑P **P 01 04 36.6 -0.3**
baz=86
J15A Blackfoot 85.79 41 ⇓pP pP 01 05 30.2 -0.1
baz=86
628A Black Gap, Mar 85.81 57 ⇑P **P 01 04 36.8 -0.3**
baz=86,SNR=9.6
Y24A Capitan 85.83 52 ⇑P **P 01 04 37.5 +0.4**
baz=86,SNR=11
Y24A ⇑pP pP 01 05 31.5 +0.7
baz=86,SNR=13
125A Gardner Draw, 85.84 53 ⇓P **P 01 04 36.7 -0.6**
baz=86
125A ⇑P pP 01 05 29.9 -0.9
baz=86,SNR=8.8
GDL2 Guadalupe Moun 85.86 54 *e*P **P 01 04 38.6 +1.3**
GDL2 *e*pP pP 01 05 30.6 -0.3
W23A Werner Place, 85.88 50 ⇓pP pP 01 05 29.9 -1.1
baz=86
S21A Coal Bank Pass 85.90 48 ⇓P **P 01 04 36.6 -0.9**
baz=86
S21A ⇑pP pP 01 05 30.3 -0.7
baz=86
226A Malaga, Loving 86.00 54 ⇓P **P 01 04 37.9 -0.1**
baz=86,SNR=11
226A ⇑pP pP 01 05 30.3 -1.3
baz=86,SNR=7.4
427A Hayter Ranch, 86.00 55 ⇑P **P 01 04 38.4 +0.4**
baz=86,SNR=17
427A ⇓pP pP 01 05 30.0 -1.7
baz=86
A10A Northport 86.02 34 ⇑P **P 01 04 37.9 +0.2**
baz=86
P19A Cripple Cowboy 86.06 45 ⇓P **P 01 04 38.5 +0.3**
baz=86
MCK McKinley 86.08 12 *e*P **P 01 04 36.6 -1.0**
MCK pmax pmax
comp=Z,42nm,1.0s,mb5.1
MCK McKinley 86.08 12 *e*P **P 01 04 36.6 -1.0**
comp=Z,42nm,1.0s,mb5.1
Z25A Roswell 86.08 53 ⇑P **P 01 04 37.5 -0.9**
baz=86
Z25A ⇓pP pP 01 05 31.0 -0.9
baz=86
D12A Red Ives Fores 86.10 37 ⇓P **P 01 04 37.0 -1.1**
baz=86
528A Cox Ranch, San 86.18 56 ⇑P **P 01 04 38.2 -0.7**
baz=86,SNR=6.6
528A ⇓pP pP 01 05 32.3 -0.3
baz=86
J16A Bone 86.23 41 ⇑pP pP 01 05 32.1 -0.3
baz=86
126A Clayton Basin, 86.32 53 ⇑pP pP 01 05 32.9 -0.3
baz=86,SNR=7.6
SEY Seymchan 86.36 346*d i*P **P 01 04 37.6 -1.4**
Y25A Mesa, Roswell 86.38 52 ⇑P **P 01 04 39.5 -0.3**
baz=87
Y25A ⇑pP pP 01 05 33.4 -0.1
baz=87,SNR=12
P20A De Beque 86.39 46 ⇓P **P 01 04 38.7 -1.0**
baz=87
P20A ⇑pP pP 01 05 33.2 -0.2
baz=87
E13A Victor 86.41 38 ⇓pP pP 01 05 33.5 +0.2
baz=87
R21A Cimarron 86.41 47 ⇓pP pP 01 05 33.3 -0.2
baz=87
RRI2 Red Ridge 86.45 41 *e*P **P 01 04 41.1 +1.1**
comp=Z,4.1nm,1.0s,mb4.1
RRI2 *e*pP pP 01 05 33.6 0.0
MENT Mentasta 86.46 14 *e*P **P 01 04 39.0 -0.5**
428A Kincaid Ranch, 86.50 56 ⇓P **P 01 04 40.1 -0.4**
baz=87
N19A John Jarvie Ra 86.56 44 ⇑pP pP 01 05 33.8 -0.4
baz=87
Z26A Caprock 86.62 53 ⇓P **P 01 04 40.4 -0.7**
baz=87,SNR=5.1
Z26A ⇑P pP 01 05 34.6 -0.1
baz=87,SNR=11
X25A Clemmons Ranch 86.68 52 ⇓P pP 01 05 34.3 -0.7
baz=87,SNR=6.6
328A Wristen Ranch, 86.69 55 ⇑P **P 01 04 40.9 -0.5**
baz=87
328A ⇑pP pP 01 05 34.2 -0.9
baz=87
TPAW Teton Pass 86.75 41 *e*P **P 01 04 40.5 -0.9**
comp=Z,7.7nm,1.1s,mb4.3
TPAW *e*pP pP 01 05 34.7 -0.4
MSO Missoula 86.77 37 *e*pP pP 01 05 37.1 +2.0
127A Arkansas Junct 86.83 54 ⇓P **P 01 04 42.4 +0.3**
baz=87
127A ⇓pP pP 01 05 36.5 +0.7
baz=87,SNR=7.2
DLBC Dease Lake 86.83 22 *e*pP pP 01 05 36.9 +1.8
BSMT Bassoo Peak 86.87 36 *e*P **P 01 04 41.6 -0.2**
BSMT *e*pP pP 01 05 35.3 -0.2
M19A Rock Springs 86.88 44 ⇑pP pP 01 05 35.8 +0.1
baz=87
BJT Baijiatuau 86.93 315 *e*P **P 01 04 42.0 -0.4**
BJI Beijing 86.94 315 P **P 01 04 42.1 -0.3**
BJI S S 01 15 00.8 -1.1
BJI pmax pmax
comp=Z,35nm,1.3s,mb4.9
BJI pmax pmax
comp=Z,360nm,4.7s
BJI LR LR
comp=N,130nm,25.5s
BJI LR LR
comp=E,91nm,28.6s
BJI LR LR
comp=Z,81nm,30.9s
LOHW Long Hollow 87.03 41 *e*P **P 01 04 43.5 +0.7**
Q22A Crested Butte, 87.09 47 ⇑P **P 01 04 42.4 -0.8**
baz=87
N20A Spence Gulch, 87.13 45 ⇑P **P 01 04 42.1 -1.1**
baz=87
W25A X Bar L Ranch, 87.14 51 ⇑P **P 01 04 43.2 -0.2**
baz=87
W25A ⇓pP pP 01 05 36.6 -0.6
baz=87,SNR=13
D14A Greenough 87.16 37 ⇑P **P 01 04 42.5 -0.8**
baz=87
QLMT Earthquake Lak 87.16 40 *e*P **P 01 04 46.7 +3.4**
comp=Z,4.1nm,1.0s,mb4.1
J18A Kendall Valley 87.19 42 ⇓P **P 01 04 42.6 -0.9**
baz=87
SMCO Snowmass 87.19 47 *e*P **P 01 04 44.4 +0.8**
comp=Z,6.0nm,0.9s,mb4.3
SMCO *e*pP pP 01 05 37.8 +0.4
H16A Russell Place, 87.20 40 ⇑P **P 01 04 43.8 +0.3**
baz=87
H16A ⇓pP pP 01 05 36.8 -0.5
baz=87
CHMT Chamberlain Mo 87.21 38 *e*P **P 01 04 43.2 -0.3**
CHMT *e*pP pP 01 05 37.2 0.0
Z27A Tatum 87.22 53 ⇑pP pP 01 05 37.4 -0.2
baz=87,SNR=9.6
PDAR Pinedale Array 87.26 42 P **P 01 04 43.8 -0.1**
comp=Z,0.9nm,0.6s,baz=215,slow=2.1,SNR=8.0
PDAR pP pP 01 05 36.3 -1.3
comp=Z,1.4nm,0.9s,baz=148,slow=12,SNR=1.6
PDAR PKKPbc PKKPbc 01 22 34.5 -0.8
comp=Z,0.3nm,0.4s,baz=100,slow=5.9,SNR=5.8
E15A Deer Lodge 87.30 38 ⇓pP pP 01 05 38.3 +0.6
baz=88
COLA College 87.31 12 *e*P **P 01 04 42.5 -1.1**
COLA pmax pmax
comp=Z,18nm,0.9s,mb4.8
COLA College 87.31 12 *e*P **P 01 04 42.5 -1.1**
comp=Z,18nm,0.9s,mb4.8
COLA *e*pP pP 01 05 36.5 -0.8
COLA *e*pP pP 01 05 37.0 -0.3
B13A Whitefish 87.34 36 ⇑P **P 01 04 43.1 -1.0**
baz=88
ENH Enshi 87.41 303 *e*P **P 01 04 45.2 +0.4**
comp=Z,265nm,1.8s,mb5.7
BOZ Bozeman (W) 87.47 39 ⇓pP pP 01 05 36.8 -1.8
baz=88
BOZ Bozeman (W) 87.47 39 *e*pP pP 01 05 39.7 +1.2
Y27A Causey 87.51 53 ⇑pP pP 01 05 37.1 -1.9
baz=88,SNR=11
SDCO Great Sand Dun 87.54 48 *e*P **P 01 04 45.8 +0.5**
comp=Z,3.3nm,1.1s,mb4.1
SDCO *e*pP pP 01 05 38.8 -0.4
SYO Syowa Base 87.63 192⇓*e*P **P 01 04 46.0 +0.7**
L20A Wamsutter 87.66 44 ⇓P **P 01 04 45.3 -0.5**
baz=88
A13A Flathead Natio 87.68 35 ⇓P **P 01 04 44.7 -1.0**
baz=88
D15A Lincoln 87.70 38 ⇑P **P 01 04 45.8 0.0**
baz=88
MSTX Muleshoe 87.84 53 ⇑P **P 01 04 47.5 +0.7**
baz=88
MSTX ⇑pP pP 01 05 38.3 -2.3
baz=88,SNR=12
HRY Holter Researc 87.92 38 *e*P **P 01 04 48.3 +1.4**
WALA Waterton Lakes 88.03 36 *e*P **P 01 04 48.1 +0.8**
comp=Z,0.2nm,1.0s
C15A Salmond Ranch, 88.05 37 ⇓P **P 01 04 47.6 +0.1**
baz=88
M21A Separation Pea 88.10 44 ⇓P **P 01 04 47.9 0.0**
baz=88
GYA Guiyang 88.13 299 P **P 01 04 47.8 -0.6**
GYA pP pP 01 05 42.4 +0.2
GYA sP sP 01 06 06.3 +1.0
GYA PP PP 01 08 20.0 +1.1
GYA SKS 01 14 52.4
GYA S S 01 15 10.0 -3.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=N,330nm,19.0s
GYA LR LR
comp=E,210nm,18.2s
GYA LR LR
comp=Z,300nm,19.4s
PLCA Paso Flores 88.17 133 *e*P **P 01 04 49.7 +1.3**
PLCA pmax pmax
comp=Z,7.0nm,1.0s
PLCA Paso Flores 88.17 133 *e*P **P 01 04 49.7 +1.3**
comp=Z,7.1nm,1.0s,mb4.5
A14A Double T Ranch 88.25 36 ⇓P **P 01 04 48.3 -0.1**
baz=88
D16A Dana Ranch, Ca 88.25 38 ⇓P **P 01 04 49.0 +0.5**
baz=88
DAWY Dawson 88.45 15 *e*P **P 01 04 49.0 0.0**
DAWY *e*pP pP 01 05 40.6 -2.2
VNA3 Neumayer Olymp 88.49 176 *e*Pdiff **P 01 04 49.8 +0.5**
G18A Lazy EL Ranch, 88.55 40 ⇓P **P 01 04 49.7 -0.1**
baz=89
C16A Fuhringer Ranc 88.55 37 ⇑P **P 01 04 49.9 +0.1**
baz=89
RLMT Red Lodge 88.63 41 ⇓P **P 01 04 49.1 -1.1**
baz=89
RLMT Red Lodge 88.63 41 *e*P **P 01 04 52.5 +2.2**
comp=Z,9.1nm,1.4s,mb4.4
EGAK Eagle 88.63 14 *e*P **P 01 04 49.2 -0.6**
comp=Z,20nm,1.2s,mb4.8
EGAK *e*pP pP 01 05 43.5 -0.2
BILL Bilibino 88.76 353⇓*i*P **P 01 04 49.5 -0.8**
BILL pmax pmax
comp=Z,15nm,2.1s,mb4.5
BILL Bilibino 88.76 353 *e*P **P 01 04 50.0 -0.3**
comp=Z,3.0nm,0.6s,mb4.3
D17A Six Diamond Ra 88.82 38 ⇓P **P 01 04 51.1 +0.1**
baz=89
VNA2 Neumayer--Watz 88.96 176 *e*Pdiff **P 01 04 52.3 +0.8**
C17A Wharram Farm, 89.03 38 ⇓P **P 01 04 51.0 -1.1**
baz=89
C17A ⇓pP pP 01 05 45.4 -0.6
baz=89
COLD Coldfoot 89.05 10 *e*P **P 01 04 51.5 -0.1**
comp=Z,7.8nm,1.0s,mb4.5
VNA1 Neumayer--Stat 89.17 176 *e*Pdiff **P 01 04 53.5 +1.0**
A16A West Butte Ran 89.25 36 ⇑P **P 01 04 52.0 -1.1**
baz=90
XAN Xi'an 89.41 307 P **P 01 04 53.6 -0.6**
XAN pP pP 01 05 47.4 -0.8
XAN sP sP 01 06 10.7 -0.5
XAN PP PP 01 08 27.0 -1.9
XAN S S 01 15 23.7 -1.7
XAN sS sS 01 16 58.6 -1.4
XAN pmax pmax
comp=Z,12nm,1.2s,mb4.6
XAN pmax pmax
comp=Z,24nm,4.7s
HIA Hailar 89.45 324 *e*P **P 01 04 54.1 +0.1**
HIA pmax pmax
comp=Z,75nm,1.7s
HIA Hailar 89.45 324 *e*P **P 01 04 54.1 +0.2**
comp=Z,75nm,1.7s,mb5.2
EGMT Eagleton 89.81 38 ⇑P **P 01 04 54.5 -1.1**
baz=90
HHC Hu-ho-hao-te 90.43 314 ⇓P **P 01 04 59.2 +0.4**
HHC pP pP 01 05 53.8 +1.0
HHC sP sP 01 06 17.6 +1.8
HHC PP PP 01 08 39.1 +2.3
HHC SKS 01 15 06.7
HHC S S 01 15 30.1 -4.4
HHC sS sS 01 17 07.8 -1.4
HHC SS SS 01 21 47.2 +6.1
HHC pmax pmax
comp=Z,27nm,1.3s,mb4.9
HHC pmax pmax
comp=Z,220nm,9.5s
HHC LR LR
comp=N,140nm,18.8s
HHC LR LR
comp=E,300nm,20.0s
HHC LR LR
comp=Z,150nm,19.6s
EDM Edmonton 90.63 32 *e*P **P 01 04 59.7 +0.3**
EDM *e*pP pP 01 05 56.5 +3.1
KMI Kunming 90.89 296 P **P 01 05 03.0 +1.7**
KMI pmax pmax
comp=Z,34nm,1.0s,mb5.2
KMI LR LR
comp=Z,53nm,29.9s
RSSD Black Hills 91.44 43 *e*P **P 01 05 04.1 +0.8**
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
RSSD Black Hills 91.44 43 *e*P **P 01 05 04.0 +0.7**
comp=Z,10nm,1.1s,mb4.7
HKT Hockley 91.61 59 *e*P **P 01 05 05.3 +0.8**
HKT pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HKT Hockley 91.61 59 *e*P **P 01 05 05.3 +0.8**
comp=Z,5.1nm,0.9s,mb4.5
CMAR Chiang Mai Arr 91.82 289 P **P 01 05 06.8 +1.1**
comp=Z,19nm,0.9s,mb5.0,baz=118,slow=2.8,SNR=45
CMAR PP PP 01 08 51.9 +3.7
comp=Z,2.6nm,0.8s,baz=128,slow=5.8,SNR=4.3
CHTO Chiang Mai 91.94 289 *e*P **P 01 05 06.8 +0.5**
CHTO pmax pmax
comp=Z,22nm,1.0s,mb5.0
CHTO Chiang Mai 91.94 289 *e*P **P 01 05 06.8 +0.6**
comp=Z,22nm,1.0s,mb5.0
CD2 Chengdu 92.19 302 P **P 01 05 07.5 +0.3**
CD2 pP pP 01 06 02.3 +1.1
CD2 sP sP 01 06 25.5 +1.3
CD2 PP PP 01 08 52.8 +1.9
CD2 SKS 01 15 17.2
CD2 S S 01 15 46.8 -4.0
CD2 sS sS 01 17 23.4 -2.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,150nm,5.3s
LCO Las Campanas 92.97 122 *e*P **P 01 05 11.3 +0.4**
comp=Z,10nm,1.0s,mb4.8
INK Inuvik 93.29 15 *e*P **P 01 05 09.8 -1.5**
INK pmax pmax
comp=Z,16nm,1.0s
INK Inuvik 93.29 15 P **P 01 05 10.6 -0.7**
comp=Z,10nm,0.9s,mb4.8,baz=209,slow=4.8,SNR=6.4
INK Inuvik 93.29 15 *e*P **P 01 05 09.8 -1.5**
comp=Z,16nm,1.0s,mb5.0
INK *e*pP pP 01 06 04.7 -0.7
LZH Lanzhou 94.05 307 *e*P **P 01 05 17.0 +1.4**
LZH pP pP 01 06 12.1 +2.4
LZH sP sP 01 06 36.7 +4.0
LZH PP PP 01 09 08.0 +2.7
LZH SKS 01 15 28.3
LZH *e*S S 01 16 04.1 -2.7
LZH sS sS 01 17 40.4 -1.9
LZH pmax pmax
comp=Z,29nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,140nm,5.0s
JTS JuntasAbangare 94.33 81 *e*P **P 01 05 18.0 +0.6**
JTS pmax pmax
comp=Z,10.0nm,0.9s
JTS JuntasAbangare 94.33 81 *e*P **P 01 05 18.0 +0.6**
comp=Z,9.7nm,0.9s,mb4.8
YKA Yellowknife Ar 95.25 24 P **P 01 05 19.6 -0.7**
comp=Z,1.5nm,0.9s,mb4.1,baz=237,slow=4.2,SNR=27
YKA PKiKP PKiKP 01 09 59.2 -0.8
comp=Z,0.1nm,0.6s,baz=220,slow=1.5,SNR=4.1
YKA PKKPbc PKKPbc 01 22 11.2 -4.5
comp=Z,0.2nm,0.4s,baz=43,slow=2.2,SNR=9.8
YKW3 Yellowknife Ar 95.28 24 *e*P **P 01 05 19.4 -1.1**
comp=Z,0.1nm,1.1s
ECSD EROS Data Cent 96.17 46 *e*pP pP 01 06 19.5 +0.3
ULN Ulaanbaatar 96.29 319 *e*P **P 01 05 25.0 -0.5**
ULN pmax pmax
comp=Z,19nm,1.4s,mb5.1
ULN Ulaanbaatar 96.29 319 *e*P **P 01 05 25.0 -0.5**
comp=Z,19nm,1.4s,mb5.1
BOD Bodaibo 96.66 330 *e*P **P 01 05 24.5 -2.4**
SONM Songino Array 96.69 318 P **P 01 05 26.4 -0.8**
comp=Z,1.3nm,0.6s,mb4.3,baz=138,slow=3.7,SNR=18
GTA Gaotai 98.19 309⇓*e*P **P 01 05 34.8 +0.5**
GTA pP pP 01 06 29.7 +1.2
GTA sP sP 01 06 52.9 +1.4
GTA SKS 01 15 49.3
GTA S S 01 16 34.9 -7.4
GTA sS sS 01 18 13.8 -4.4
GTA pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
GTA pmax pmax
comp=Z,150nm,6.3s
GTA LR LR
comp=N,50nm,16.2s
GTA LR LR
comp=E,77nm,16.2s
GTA LR LR
comp=Z,76nm,17.1s
ULM Lac du Bonnet 98.98 40 LR LR 01 43 43.5
comp=Z,87nm,18.8s,baz=329,slow=31
ZAK Zakamensk 99.51 320 *e*P Pdif 01 05 35.7 -4.3
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.5
ZALV Zalesovo Beam 111.34 321 PKiKP PKiKP 01 10 28.4 -1.2
comp=Z,1.5nm,0.7s,baz=203,slow=1.1,SNR=7.3
ZALV PP PP 01 11 15.5 +1.8
comp=Z,0.8nm,0.5s,baz=89,slow=5.9,SNR=5.0
ZALV Zalesovo Beam 111.34 321 PKPdf PKiKP 01 10 28.4 -1.2
ZALV PP PP 01 11 15.5 +1.8
MK31 Makanchi Array 112.29 313 *e*PKiKP PKiKP 01 10 30.4 -1.3
MKAR Makanchi Array 112.29 313 PKiKP PKiKP 01 10 30.6 -1.0
comp=Z,0.8nm,0.4s,baz=70,slow=4.0,SNR=5.9
KURK Kurchatov 114.97 317*c i*PKiKP PKiKP 01 10 35.0 -1.7
KURK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 114.97 317 PKP PKiKP 01 10 35.4 -1.3
comp=Z,1.9nm,0.8s,baz=90,slow=1.7,SNR=14
KURK PP PP 01 11 42.5 +3.1

comp=Z,0.8nm,0.8s,baz=108,slow=9.9,SNR=5.2
KURK SKP 01 13 52.7
comp=Z,1.6nm,0.9s,baz=96,slow=2.1,SNR=5.5
KURK Kurchatov 114.97 317 *e*PKP PKiKP 01 10 35.5 -1.1
TKM2 Tokmak 2 116.75 309 *e*PKIKP PKPdf 01 10 39.8 -0.5
SCHQ Schefferville 117.07 38 PKKPbc PKKPbc 01 21 06.5 -1.4
comp=Z,1.0nm,0.5s,baz=101,slow=5.2,SNR=6.3
UCH Uchtor 117.51 308 *e*PKIKP PKPdf 01 10 42.3 +0.5
AAK Ala-Archa 117.54 308*c i*PKIKP PKPdf 01 10 42.1 +0.2
AAK pmax pmax
comp=Z,2.0nm,1.7s
EKS2 Erkin-Say 118.07 308 *e*PKIKP PKPdf 01 10 42.6 -0.3
BVAR Borovoye Array 119.97 320 PKP PKPdf 01 10 45.4 -0.8
comp=Z,2.7nm,0.4s,baz=115,slow=2.5,SNR=30
BVAR PP PP 01 12 23.8 +10
comp=Z,1.2nm,0.9s,baz=72,slow=6.4,SNR=3.7
BVAR SKP 01 14 02.8
comp=Z,2.8nm,0.9s,baz=116,slow=3.4,SNR=5.7
BRVK Borovoye 120.03 320*d i*PKIKP PKPdf 01 10 45.5 -0.8
BRVK pmax pmax
comp=Z,4.0nm,1.0s
BRVK Borovoye 120.03 320 *e*PKPdf PKPdf 01 10 45.8 -0.5
KBL Kabul 121.38 299 *e*PKIKP PKPdf 01 10 49.8 +0.3
SFJD Kangerlussuaq 121.75 22 *e*PKIKP PKPdf 01 10 48.0 -1.2
SFJD Kangerlussuaq 121.75 22 *i* P PKPdf 01 10 48.0 -1.2
SUR Sutherland 125.51 197 *e*PKPdf PKPdf 01 10 58.7 +1.0
ARU Arti 125.91 326 *i*PKIKP PKPdf 01 10 56.2 -1.3
ARU 01 12 48.4
ARU Arti 125.91 326 *e*PKPdf PKPdf 01 10 57.1 -0.4
ABKAR Akbulak array 127.08 317 *e*PKPdf PKPdf 01 10 59.3 -0.7
BOSA Boshof 127.53 204 PKP PKPdf 01 11 01.6 0.0
comp=Z,10nm,1.1s,baz=145,slow=2.2,SNR=7.5
KEV Kevo 128.34 350 *e*pkp PKPdf 01 11 00.3 -1.5
ARCES ARCESS Array B 128.78 351 PKP PKPdf 01 11 02.1 -0.5
comp=Z,2.3nm,0.4s,baz=328,slow=0.8,SNR=29
KLMR Klimovskoe 132.20 337 *e*PKIKP PKPdf 01 11 10.0 +0.7
KLMR pmax pmax
comp=Z,7.0nm,1.2s
JOF Joensuu 133.25 343 *e*pkp PKPdf 01 11 07.2 -4.1
KAF Kangasniemi 135.19 345 *e*pkp PKPdf 01 11 05.6 -9.3
FINES FINESS Array B 135.83 345 PKIKP PKPdf 01 11 12.9 -3.2
FINES 01 13 54.5
FINES FINESS Array B 135.83 345 PKhKP 01 11 12.8
comp=Z,5.7nm,1.0s,baz=48,slow=2.1,SNR=11
FINES PP PP 01 13 54.5 -2.4
comp=Z,2.7nm,1.1s,baz=19,slow=8.8,SNR=4.0
FINES SKPbc SKPbc 01 14 28.2 +1.4
comp=Z,2.7nm,0.9s,baz=29,slow=3.2,SNR=4.8
OBN Obninsk 137.24 333 *i*PKIKP PKPdf 01 11 19.4 +0.5
OBN pmax pmax
comp=Z,12nm,1.2s
LSZ Lusaka 137.69 216 *e*PKIKP PKPdf 01 11 21.5 +0.5
NOA NORSAR Array B 138.70 355 PKhKP 01 11 16.5
comp=Z,1.3nm,0.8s,baz=14,slow=2.4,SNR=4.5
NOA SKPbc SKPbc 01 14 37.3 +2.0
comp=Z,2.5nm,0.9s,baz=14,slow=4.3,SNR=5.2
MTA Mtatsminda 139.41 311 P SKPbc 01 14 40.9 +3.1
TBLG Delisi 139.44 311 P SKPbc 01 14 40.9 +3.0
ZEI Tsey 139.65 313 *e*PKHKP 01 11 15.6
ZEI pmax pmax
comp=Z,5.0nm,1.0s
RDF Al-Radifah 139.65 291 *e*P 01 11 15.7
RDF AMb AMB 01 11 27.5
comp=Z,51nm,0.7s
MIB Mutribah 139.79 293 *e*P 01 11 14.7
MIB AMb AMB 01 11 28.0
comp=Z,52nm,1.0s
KIV Kislovodsk 140.01 316 *i*PKIKP PKPdf 01 11 24.9 +0.5
KIV *e* 01 14 20.0
KIV *e*SS SS 01 32 23.1 -4.5
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV Kislovodsk 140.01 316 *e*PKPpre 01 11 20.7
KIV *e*PKPdf PKPdf 01 11 25.2 +0.8
IZAR Zarasai 140.62 340 *e*P 01 11 19.0
ISAL Salakas 140.81 340 *e*P 01 11 18.0
IDID Didziasalis 140.82 340 *e*P 01 11 20.0
IDID *e*PP PP 01 14 22.9 -4.9
IIGN Ignalina 140.96 340 *e*P PKPdf 01 11 16.8 -8.9
IIGN *e*PP PP 01 14 24.7 -4.0
NACGM Naroch 141.15 339 *e* 01 11 19.0
KMBO Kilima Mbogo 141.31 241 PKhKP 01 11 23.5
comp=Z,3.8nm,0.8s,baz=74,slow=2.6,SNR=8.8
KMBO SKPbc SKPbc 01 14 47.7 +3.9
comp=Z,3.0nm,0.9s,baz=62,slow=3.5,SNR=3.1
KMBO Kilima Mbogo 141.31 241 *e*PKPpre 01 11 23.3
KMBO PKP PKPdf 01 11 23.5 -4.2
KMBO SKPbc SKPbc 01 14 47.7 +3.9
ANN Anapa 142.96 320 *i*PKHKP 01 11 25.6
ANN *e* 01 14 50.2
ANN pmax pmax
comp=Z,34nm,1.2s
SUW Suwalki 143.04 341 *e*PKP 01 11 24.6
SUW Suwalki 143.04 341 *e*PKPdf PKPdf 01 11 25.7 -3.7
EAB Aberfoyle 143.32 8 *e*P PKPdf 01 11 25.6 -4.2
EBH Black Hill 143.36 7 *e*P PKPdf 01 11 26.5 -3.4
MUD Monsted U'grnd 143.41 355 *i*PKHKP 01 11 26.8
MUD pmax pmax
comp=Z,15nm,1.0s
MUD Monsted U'grnd 143.41 355 *i* P 01 11 26.8
comp=Z,15nm,1.0s
AKASG Malin Array Be 143.50 333 PKhKP 01 11 26.8
comp=Z,3.3nm,0.3s,baz=38,slow=3.6,SNR=43
AKASG SKP 01 14 49.3
comp=Z,2.8nm,0.7s,baz=36,slow=2.6,SNR=10
AKBB Malin Array Si 143.50 333 *e*PKHKP 01 11 27.0
KIEV Kiev 143.52 333 *e*PKHKP 01 11 26.7
EDI Edinburgh 143.72 7 *e*P PKPdf 01 11 28.1 -2.5
EAU Auchinoon 143.77 7 *e*P PKPdf 01 11 28.2 -2.4
ESY Stoneypath 143.79 6 *e*P PKPdf 01 11 27.3 -3.4
EBL Broad Law 143.88 7 *e*P PKPdf 01 11 28.2 -2.7
BSD Bornholm Skovb 144.00 349⇓*i*PKIKP PKPdf 01 11 28.1 -3.0
BSD pmax pmax
comp=Z,16nm,0.8s
BSD Bornholm Skovb 144.00 349⇓*i*P PKPdf 01 11 28.1 -3.0
comp=Z,16nm,0.8s
WNDE Wendo Genet 144.16 254 *i* P PKPdf 01 11 32.9 +0.3
ESK Eskdalemuir 144.31 7 *e*PKIKP PKPdf 01 11 29.1 -2.6
ESK Eskdalemuir 144.31 7 *i*PKIKP PKPdf 01 11 30.1 -1.5
ESK Eskdalemuir 144.31 7 *e*PKPdf PKPdf 01 11 29.1 -2.6
ECK Cauldkaine Hil 144.46 7 *e*P PKPdf 01 11 29.8 -2.1
GAL1 Galloway 144.56 9 *e*P PKPdf 01 11 30.2 -1.9
DESE Dese 144.71 261 *e*P PKPdf 01 11 34.4 +0.8
SIM Simferopol' 144.85 322 *e*PKIKP PKPdf 01 11 33.1 +0.2
SIM pmax pmax
comp=Z,182nm,0.9s
XAL Allendale 144.87 6 *e*P PKPdf 01 11 31.5 -1.1
XDE Dent Fell 145.07 8 *e*P PKPbc 01 11 31.1 -1.8
GIM North Isle of 145.15 9 *e*P PKPdf 01 11 30.3 -2.8
MALT Malatya 145.18 309 *e*PKIKP PKPdf 01 11 33.8 +0.1
MALT *e* 01 14 55.5
WAR Warsaw 145.22 342 *e*PKP PKPdf 01 11 33.3 -0.1
GKP Gorka Klasztor 145.28 346 *e*PKP PKPdf 01 11 32.9 -0.5
HLG Helgoland 145.76 356 *e*PKPbc PKPbc 01 11 34.7 -0.3
BSEG Bad Segeberg 145.79 353 *e*PKPbc PKPbc 01 11 34.9 -0.3
BSEG *e*pPKPbc pPKPbc 01 12 31.5 +0.5
WLF1 Llynfaes 146.13 9 *e*P PKPdf 01 11 35.3 +0.5
LHO Holmfirth 146.21 6 *e*P PKPdf 01 11 35.0 +0.1
LVV L'vov 146.28 337 *i*PKP2 PKPbc 01 11 36.2 -0.5
KIS Kishinev 146.37 329⇓*i*PKIKP PKPdf 01 11 34.0 -1.4
KIS *e* 01 12 35.0
KIS pmax pmax
comp=Z,200nm,1.0s
STNC Stoke 146.62 7 *e*P PKPbc 01 11 37.7 +0.1
RUE Ruedersdorf 146.72 349 *e*PKPbc PKPbc 01 11 37.7 -0.2
RUE Ruedersdorf 146.72 349 *e*PKPbc PKPbc 01 11 38.0 +0.1
KWP Kalwaria Pacla 146.92 338 *e*PKP PKPbc 01 11 38.5 -0.1
KWP Kalwaria Pacla 146.92 338 *e*PKPbc PKPbc 01 11 38.3 -0.2
KWP Kalwaria Pacla 146.92 338⇓*i*P PKPbc 01 11 38.3 -0.2
CWF Charnwood Fore 147.06 6 *e*P PKPdf 01 11 37.0 +0.6
HLM1 Long Mynd 147.10 8 *e*P PKPbc 01 11 37.8 -1.1
WIT Witteveen 147.19 357 *e*PKP PKPbc 01 11 39.7 +0.5
comp=Z,218nm,1.1s
NRDL Niedersach Rie 147.24 353 *e*PKPbc PKPbc 01 11 39.0 -0.3
OJC Ojcow 147.37 341 *e*PKP PKPbc 01 11 39.5 -0.3
HTR Trewern Hill 147.47 8 *e*P PKPbc 01 11 39.1 -0.9
BURAR Bucovina Array 147.56 333⇓PKP2 PKPbc 01 11 40.7 +0.3
BURAR Bucovina Array 147.56 333⇓*i*P PKPbc 01 11 40.7 +0.3
MCH1 Michaelchurch 147.59 8 *e*P PKPbc 01 11 38.9 -1.4
STHS Stebnicka Huta 147.61 339 *e*PKP PKPbc 01 11 41.0 +0.6
STHS *e* 01 11 44.2
STHS Stebnicka Huta 147.61 339 *e*PKP PKPbc 01 11 41.0 +0.6
STHS *e* 01 11 44.2
TLCR 147.63 326⇑PKP2 PKPbc 01 11 40.8 +0.2
TLCR 147.63 326⇑*i*P PKPbc 01 11 40.8 +0.2
IBBN Ibbenburen 147.63 356 *e*PKPbc PKPbc 01 11 40.3 -0.1
IBBN *e*PKPab PKPab 01 11 42.8 -0.4
KOLS Kolonicke sedl 147.66 337 *e*PKIKP PKPdf 01 11 38.1 +0.6
KOLS *e* 01 11 40.9
KOLS Kolonicke sedl 147.66 337 *e*PKP PKPdf 01 11 38.1 +0.6
KOLS *e* 01 11 40.9
KSP Ksiaz 147.75 345 *e*PKP PKPbc 01 11 40.9 +0.2
KSP Ksiaz 147.75 345 *e*PKIKP PKPdf 01 11 38.1 +0.5
CLZ Clausthal 147.85 353 *e*PKPdf PKPdf 01 11 37.6 -0.1
CLZ *e*PKPbc PKPbc 01 11 41.1 +0.1
UZH Uzhgorod 147.90 337⇑*i*PKP2 PKPbc 01 11 40.7 -0.5
NIE Niedzica 147.91 340 *e*PKP2 PKPbc 01 11 41.8 +0.6
BRTR Keskin Array B 147.94 314 PKPbc PKPbc 01 11 41.5 -0.1
comp=Z,38nm,0.9s,baz=140,slow=3.7,SNR=102
BRTR SKPbc SKPbc 01 15 01.4 +3.1
comp=Z,1.9nm,1.0s,baz=68,slow=1.9,SNR=5.3
HGH Gray Hill 147.97 8 *e*P PKPbc 01 11 40.3 -1.0
CLL Collm 147.99 349 *e*PKPdf PKPdf 01 11 37.8 -0.2
CLL *e*PKPbc PKPbc 01 11 41.1 -0.2
CLL *e*pPKPbc pPKPbc 01 12 38.1 +0.5
CLL Collm 147.99 349 *e*PKIKP PKPdf 01 11 38.0 0.0
CLL *i* 01 11 43.9
CLL Collm 147.99 349 *e*PKP PKPdf 01 11 38.0 0.0
CLL ⇓*i*PKP PKPdf 01 11 41.2 +3.2
CLL ⇑*i*PKP PKPdf 01 11 43.9 +5.9
CLL *e*pPKP pPKPdf 01 12 35.0 +0.2
CLL Collm 147.99 349 *e*PKPdf PKPdf 01 11 38.0 0.0
CLL ⇓*i*PKPbc PKPbc 01 11 41.2 -0.1
comp=Z,57nm,1.1s
CLL ⇑*i*PKPab PKPab 01 11 43.9 -0.7
comp=Z,42nm,1.1s
CLL *e*pPKPbc pPKPbc 01 12 35.0 -2.6
CLL *e*pPKPab pPKPab 01 12 39.0 -0.5
CLL *e* 01 13 19.0
CLL *e*(SKPbc) 01 15 01.0
CLL *e*(PP) 01 15 06.0
WTSB Winterswijk 148.03 357 *e*PKP PKPbc 01 11 40.7 -0.7
comp=Z,56nm,1.1s
VRI Vrincioaia 148.19 329 PKP2 PKPbc 01 11 41.9 -0.2
OKC Ostrava-Krasne 148.20 343 *e*PKP PKPbc 01 11 41.4 -0.5
OKC *ex* x 01 11 45.6
SWN1 Swindon 148.22 7 *e*P PKPbc 01 11 41.3 -0.6
BMR Baia Mare 148.23 335 PKP2 PKPbc 01 11 42.5 +0.4
BMR Baia Mare 148.23 335⇑*i*P PKPbc 01 11 42.2 +0.1
TRPA Tarpa 148.23 336⇓*i*P PKPbc 01 11 41.9 -0.2
BRG Berggiesshubel 148.23 348 *e*PKPdf PKPdf 01 11 38.3 -0.1
BRG *e*PKPbc PKPbc 01 11 41.9 -0.1
BRG *e*pPKPbc pPKPbc 01 12 39.1 +0.9
BRG Berggiesshubel 148.23 348 *i*PKP PKPdf 01 11 38.4 0.0
comp=Z,6.8nm,1.2s
BRG *i* 01 11 42.1
comp=Z,37nm,1.3s
BRG *i*pPKP pPKPdf 01 12 36.8 +1.5
comp=Z,18nm,1.2s
BRG *e* 01 15 01.6
comp=Z,10nm,1.7s
BRG SS 01 35 10.0
BRG Berggiesshubel 148.23 348 *i*PKIKP PKPdf 01 11 38.4 0.0
BRG *i* 01 11 42.1
BRG SS 01 35 10.0
BRG pmax pmax
comp=Z,4.0nm,1.2s
PLOR Plostina 148.24 329 PKP2 PKPbc 01 11 42.3 +0.1
PLOR Plostina 148.24 329⇓*i*P PKPbc 01 11 42.0 -0.2
TIRR Tirgusor 148.33 326⇓PKP2 PKPbc 01 11 42.4 -0.1
TIRR Tirgusor 148.33 326⇓*i*P PKPbc 01 11 42.4 -0.1
MORC Moravsky Berou 148.42 343 PKP2 PKPbc 01 11 42.8 +0.3
MORC Moravsky Berou 148.42 343 *e*PKPdf PKPdf 01 11 37.8 -0.9
MORC *e*PKPbc PKPbc 01 11 42.7 +0.1
MORC Moravsky Berou 148.42 343⇑*i*P PKPbc 01 11 42.7 +0.2
HARR Harsova 148.42 327⇑PKP2 PKPbc 01 11 42.9 +0.2
HARR Harsova 148.42 327⇑*i*P PKPbc 01 11 42.9 +0.2
HWQ Hawqa 148.45 303 *e*P PKPbc 01 11 43.1 0.0
WOL Wolverton 148.48 6 *e*P PKPbc 01 11 41.1 -1.5
BUG Bochum--Univer 148.53 356 *e*PKPbc PKPbc 01 11 42.4 -0.3
KECS Kecovo 148.67 339 *e*PKP PKPbc 01 11 43.8 +0.6
KECS *e* 01 11 48.3
KECS Kecovo 148.67 339 *e*PKP PKPbc 01 11 43.8 +0.6
KECS *e* 01 11 48.2
RCY Rachaya 148.79 302 *e*P PKPbc 01 11 44.8 +0.7
BHL Bhannes 148.80 303 *e*P PKPbc 01 11 44.1 +0.1
MLR Muntele Rosu 148.84 330⇑PKP2 PKPbc 01 11 43.4 -0.3
MLR Muntele Rosu 148.84 330⇑*i*P PKPbc 01 11 43.4 -0.3
MOX Moxa 148.85 351 *e*PKP PKPdf 01 11 39.3 -0.1
MOX *e* 01 11 43.4
comp=Z,43nm,1.6s
MOX *e* 01 12 24.0
MOX Moxa 148.85 351 *e*PKPbc PKPbc 01 11 43.4 -0.2
WERD Werda 148.93 350 *e*PKPbc PKPbc 01 11 43.7 -0.1
WERD *e*PKPab PKPab 01 11 47.8 -0.7
WERD *e*pPKPbc pPKPbc 01 12 41.3 +1.2
TANN Tannenbergstha 148.94 350 *e*PKPdf PKPdf 01 11 39.7 +0.1
TANN *e*PKPbc PKPbc 01 11 43.8 0.0
TANN *e*PKPab PKPab 01 11 47.7 -0.8
PRU Pruhonice 148.95 347 *e*PKP PKPdf 01 11 40.6 +1.0
PRU *ex* x 01 11 43.8
PSN Preselentsi 148.97 325 *e*P PKPbc 01 11 43.6 -0.5
GUNZ Gunzen 149.01 350 *e*PKPdf PKPdf 01 11 40.2 +0.5
GUNZ *e*PKPbc PKPbc 01 11 44.2 +0.2
WERN Wernitzgruen 149.08 350 *e*PKPbc PKPbc 01 11 44.5 +0.3
WERN *e*PKPab PKPab 01 11 49.0 -0.1
VRAC Vranov 149.10 344 PKP2 PKPbc 01 11 44.3 +0.1
NKC Novy Kostel 149.12 350 *e*PKP PKPbc 01 11 44.4 +0.1
NKC *ex* x 01 11 48.3
NKC *ex* x 01 11 53.3
VYHS Vyhne 149.19 341 *e*PKP2 PKPbc 01 11 44.8 +0.3
VYHS Vyhne 149.19 341 *e*PKP PKPbc 01 11 44.8 +0.3
KOLL Kolacno 149.25 341 *e*PKP PKPbc 01 11 45.2 +0.6
KOLL *e* 01 11 50.3
KOLL Kolacno 149.25 341 *e*PKP PKPbc 01 11 45.2 +0.6
KOLL *e* 01 11 50.3
DRGR 149.25 335 PKP2 PKPbc 01 11 45.2 +0.5
DRGR 149.25 335⇑*i*P PKPbc 01 11 44.6 -0.1
HGN Heimansgroeve 149.27 358 *e*PKP PKPbc 01 11 44.3 -0.3
comp=Z,28nm,2.0s
VOIR 149.30 330⇓PKP2 PKPbc 01 11 45.4 +0.5
VOIR 149.30 330⇓*i*P PKPbc 01 11 45.4 +0.5
PSZ Piszkesteto 149.35 339 *e*PKPdf PKPdf 01 11 41.0 +0.7
PSZ *e*PKPbc PKPbc 01 11 44.9 0.0
PSZ Piszkesteto 149.35 339⇓*e*PKP PKPbc 01 11 44.8 -0.1
PSZ Piszkesteto 149.35 339⇓*i*P PKPbc 01 11 44.8 -0.1
TREC Trest 149.38 345 *e*PKP PKPdf 01 11 40.6 +0.3
TREC *ex* x 01 11 44.6
TREC *ex* x 01 11 50.1
SMOL Smolenice 149.59 342 *e*PKP PKPbc 01 11 46.3 +0.8
SMOL *e* 01 11 52.7
SMOL Smolenice 149.59 342 *e*PKP PKPbc 01 11 46.3 +0.8
SMOL *e* 01 11 52.7
ROTZ Rotzenmuhle 149.61 350 *e*PKPbc PKPbc 01 11 45.6 +0.1
TNS Taunus Mts 149.65 354 *e*PKPbc PKPbc 01 11 45.6 0.0
TNS *e*PKPab PKPab 01 11 50.9 -0.5
TNS Taunus Mts 149.65 354 *e*PKP2 PKPab 01 11 50.9 -0.5
PRD Provadia 149.72 325 *e*P PKPbc 01 11 45.4 -0.6
GRA1 Grafenberg Arr 149.84 351 *e*PKPdf PKPdf 01 11 41.5 +0.5
GRA1 *e*PKPbc PKPbc 01 11 46.1 +0.1
GRA1 *e*PKPab PKPab 01 11 52.2 0.0
GRF Grafenberg Arr 149.84 351 *e*PKPdf PKPdf 01 11 41.5 +0.5
GRF *e*PKPbc PKPbc 01 11 46.1 +0.1
GRF *e*PKPab PKPab 01 11 52.2 0.0
KHC Kasperske Hory 149.96 348 *e*PKPbc PKPbc 01 11 46.7 +0.3
KHC Kasperske Hory 149.96 348 *e*PKP PKPdf 01 11 41.3 +0.1
KHC *ex* x 01 11 46.6
KHC *ex* x 01 11 52.9
ZST Bratislava 149.97 342 *e*PKP PKPbc 01 11 47.1 +0.7
ZST *e* 01 11 53.9
ZST Bratislava 149.97 342 *e*PKP PKPbc 01 11 47.1 +0.7
ZST *e* 01 11 53.9
BAIF Baives 150.01 360 *e*PKIKP PKPdf 01 11 40.8 -0.5
BUD Budapest 150.02 340⇓*e*PKP PKPbc 01 11 46.5 -0.1
ABH Alteburg 150.06 356 PKP PKPbc 01 11 46.7 +0.1
WET Wettzell 150.09 348 *e*PKPbc PKPbc 01 11 46.7 +0.1
WET *e*PKPab PKPab 01 11 53.4 +0.1
GEC2 GERESS Array S 150.21 347 *e*PKPbc PKPbc 01 11 46.9 -0.1
GEC2 GERESS Array S 150.21 347 *e*PKPdf PKPdf 01 11 41.4 -0.2
GEC2 *e*PKPbc PKPbc 01 11 46.9 -0.1
GEC2 *e*PKPab PKPab 01 11 54.5 +0.7
GERES GERESS Array B 150.21 347 PKPbc PKPbc 01 11 46.9 -0.1
comp=Z,14nm,0.9s,baz=116,slow=3.1,SNR=36
TOD Tromm 150.23 354 PKIKP PKPbc 01 11 46.4 -0.6
CSS Prodhromos 150.23 306 *e*PKPbc PKPbc 01 11 46.9 -0.6
RUP Ruppelstein 150.28 356 PKIKP PKPbc 01 11 47.3 +0.2
GZR Gura Zlata 150.35 333 PKIKP PKPbc 01 11 47.2 -0.2
GZR Gura Zlata 150.35 333⇓*i*P PKPbc 01 11 47.1 -0.3
WLF Walferdange 150.36 357 *e*PKPbc PKPbc 01 11 47.7 +0.4
WLF *e*PKPab PKPab 01 11 54.4 0.0
WLF *e*pPKPbc pPKPbc 01 12 45.1 +1.4
WLF Walferdange 150.36 357 *e*PKPdf PKPdf 01 11 42.9 +1.1
WLF *e*PKPbc PKPbc 01 11 47.0 -0.3
WLF *e*PKPab PKPab 01 11 54.3 -0.1
SZH Strazhica 150.45 327 *e*P PKPbc 01 11 46.8 -0.9
JSA Saint Aubin 150.45 8 *e*P PKPbc 01 11 47.0 -0.5
CONA Conrad Observa 150.56 344 *i*PKiKP PKiKP 01 11 48.1 -0.3
comp=Z,60nm,1.3s,SNR=16
BZS Buzias 150.65 334⇓PKIKP PKPbc 01 11 47.8 -0.3
BZS Buzias 150.65 334⇓*i*P PKPbc 01 11 47.8 -0.3
TIM Timisoara 150.71 335 PKIKP PKPbc 01 11 49.0 +0.8
LANF Langenberg 150.94 355 PKP PKPbc 01 11 48.6 -0.1
STU Stuttgart 151.01 353 *e*PKPbc PKPbc 01 11 48.7 -0.1
STU Stuttgart 151.01 353 *e*PKPbc PKPbc 01 11 48.9 +0.1
STU *e*PKPab PKPab 01 11 56.2 -0.9
MOA Molln 151.03 346 *i*PKPbc PKPbc 01 11 48.7 -0.2
comp=Z,17nm,1.1s,SNR=9.0
FLN La Foliniere 151.07 6 *e*PKIKP PKPdf 01 11 42.3 -0.7
comp=Z,24nm,1.0s
ROSF Rostrenen 151.11 10 *e*PKIKP PKPdf 01 11 42.3 -0.7
PKSM Moragy 151.26 339⇓PKIKP PKPbc 01 11 48.9 -0.6
PKSM Moragy 151.26 339⇓*i*P PKPbc 01 11 48.9 -0.6
ARSA Arzberg 151.27 344 *i*PKPbc PKPbc 01 11 49.1 -0.4
comp=Z,15nm,1.1s,SNR=7.9
LDF La Druitiere 151.28 6 *e*PKIKP PKPdf 01 11 42.5 -0.8
SGMF Saint Gilles 151.31 9 *e*PKIKP PKPdf 01 11 42.0 -1.3
FUR Furstenfeldbru 151.31 350 *e*PKPbc PKPbc 01 11 49.3 -0.3
FUR *e*PKPab PKPab 01 11 58.2 -0.2
GRR Gorron 151.40 7 *e*PKIKP PKPdf 01 11 42.8 -0.7
RJOB Jochberg 151.45 348 *e*PKPbc PKPbc 01 11 49.5 -0.4
RJOB *e*PKPab PKPab 01 11 59.1 +0.1
BFO Black Forest 151.54 354 *e*PKPbc PKPbc 01 11 49.7 -0.4
BFO *e*pPKPbc pPKPbc 01 12 47.4 +0.9
BFO Black Forest 151.54 354 *e*PKPbc PKPbc 01 11 49.9 -0.2
BFO *e*pPKPbc pPKPbc 01 12 47.4 +0.9
QUIF Quistinic 151.54 10 *e*PKIKP PKPdf 01 11 42.7 -1.0
SPAK Spaichingen-Ko 151.72 353 PKP PKPbc 01 11 50.3 -0.2
ECH Echery 151.75 356 PKP PKPbc 01 11 50.1 -0.4
ECH Echery 151.75 356 *e*PKPbc PKPbc 01 11 50.1 -0.5
ECH *e*PKPab PKPab 01 11 59.3 -0.9
THEF They Montfort 151.80 357 PKP PKPbc 01 11 50.6 -0.1
KDZ Kurdzhali 151.85 325 *e*P PKPbc 01 11 50.2 -0.8
PLD Plovdiv 151.91 326 *e*P PKPbc 01 11 49.5 -1.6
SOKA Soboth 151.93 344⇓*i*PKPbc PKPbc 01 11 50.3 -0.7
comp=Z,24nm,1.1s
PERS Pernice 151.95 344 *e*PKPdf PKPdf 01 11 43.9 -0.5
PERS *e*PKPbc PKPbc 01 11 50.1 -1.0
PERS *e* 01 12 00.8
KBA Koelnbreinsper 151.96 346 *i*PKPbc PKPbc 01 11 50.1 -1.0
comp=Z,25nm,1.1s,SNR=9.7
HAU Haudompre 152.01 357 *e*PKIKP PKPdf 01 11 43.7 -0.7
FELD Feldberg im Sc 152.02 354 PKP PKPbc 01 11 50.1 -1.1
WATA Walderalm 152.06 349⇓*i*PKPbc PKPbc 01 11 51.0 -0.3
comp=Z,9.8nm,0.5s,SNR=7.3
MOF Molkenrain 152.11 356 PKP PKPbc 01 11 51.0 -0.4
WTTA Wattenberg 152.12 349 *i*PKiKP PKiKP 01 11 51.4 -0.3
comp=Z,15nm,0.6s,SNR=17
ZAVS Zavodnje 152.16 344 *i*PKPbc PKPbc 01 11 50.3 -1.2
HINF Hinteralfeld 152.17 356 *e*PKIKP PKPdf 01 11 43.9 -0.7
RZN Rozhen 152.20 326 *e*P PKPbc 01 11 49.5 -2.3
VTS Vitosha 152.31 329 *e*P PKPbc 01 11 51.3 -0.7
DAVA Damuels 152.38 352 *i*PKiKP PKiKP 01 11 52.0 -0.2
comp=Z,26nm,0.9s,SNR=10
BBS Basel-Blauen 152.47 355 PKIKP PKPbc 01 11 51.9 -0.3
FETA Feichten 152.51 350 *i*PKiKP PKiKP 01 11 52.4 -0.1
comp=Z,24nm,1.0s,SNR=7.4
CRNS Crni Vrh 152.68 344 *e*PKPbc PKPbc 01 11 51.6 -1.1
MMB Musomiste 152.79 327 *e*P PKPbc 01 11 52.1 -1.0
LOR Lormes 152.80 0 *e*PKIKP PKPdf 01 11 45.1 -0.5
comp=Z,18nm,1.3s
VOY Vojsko 152.82 345 *e*PKPdf PKPdf 01 11 45.3 -0.4
VOY *e*PKPbc PKPbc 01 11 52.3 -0.7
VOY *e* 01 12 00.1
BOJS Bojanci 152.95 343 *e*PKPdf PKPdf 01 11 46.0 +0.2
BOJS *e*PKPbc PKPbc 01 11 53.1 -0.2
SSF Saint Saulge 153.01 1 *e*PKIKP PKPdf 01 11 45.4 -0.5
comp=Z,11nm,1.1s
TRI Trieste 153.15 345 *e*PKIKP PKPbc 01 11 52.7 -1.0
TRI *e* 01 12 04.4
MFF Saint Martin d 153.24 7 *e*PKIKP PKPdf 01 11 45.6 -0.7
AVF Avril sur Loir 153.28 1 *e*PKIKP PKPdf 01 11 45.5 -0.8
comp=Z,12nm,1.3s
CABF La Chapelle 153.41 357 *e*PKIKP PKPdf 01 11 46.5 0.0
comp=Z,26nm,1.4s
SMF Signal de Mont 153.43 0 *e*PKIKP PKPdf 01 11 45.7 -0.8
BGF Bois d'Agland 153.50 2 *e*PKIKP PKPdf 01 11 46.1 -0.5
TCF Toulx Ste Croi 153.74 3 *e*PKIKP PKPdf 01 11 47.2 +0.2
comp=Z,8.1nm,1.0s
AGO Saint Agoulin 154.01 2 PKP PKPbc 01 11 56.4 +0.8
PLDF La Plantade 154.10 1 PKP PKPbc 01 11 59.6 +3.8
LPL La Plagne 154.46 356 *e*PKIKP PKPdf 01 11 48.1 +0.1
LPG La Plagne 154.48 356 *e*PKIKP PKPdf 01 11 48.1 +0.1
APE Apeiranthos 154.73 317⇑PKP2 PKPab 01 12 11.0 -2.3
APE Apeiranthos 154.73 317⇑*i*P PKPab 01 12 11.0 -2.3
SSB Saint Sauveur 154.79 359 *e*PKIKP PKPbc 01 11 57.6 +0.3
LBL Lubilhac 154.83 1 PKP PKPbc 01 11 59.6 +2.3
BNI Bardonecchia 154.93 356 *e*PKIKP PKPbc 01 11 57.8 +0.2
BNI *e* 01 12 14.0
LFF La Frestale 154.98 6 *e*PKIKP PKPdf 01 11 48.8 +0.1
CAF Calviac 155.09 3 *e*PKIKP PKPdf 01 11 48.4 -0.5
ORIF Oris-en-Rattie 155.11 357 *e*PKIKP PKPdf 01 11 48.5 -0.4
comp=Z,15nm,1.4s
VIVF Saint-Julien-l 155.21 359 *e*PKIKP PKPdf 01 11 48.9 -0.2
MBDF Montbardon 155.25 355 *e*PKIKP PKPdf 01 11 48.9 -0.2
SAOF Saorge 155.91 354 PKP PKPdf 01 11 59.4 +9.4
TOUF Mont Tournerai 155.92 354 PKP PKPdf 01 11 59.2 +9.2
AUTN L'Aution 155.92 354 PKP PKPdf 01 11 58.8 +8.8
LASF Ste Croix 156.00 0 *e*PKIKP PKPdf 01 11 50.0 -0.1
SBF Sospel 156.05 354 *e*PKIKP PKPdf 01 11 50.5 +0.3
SMRF Simiane la Rot 156.07 357 *e*PKIKP PKPdf 01 11 50.2 0.0
comp=Z,12nm,1.2s
REVF Revere 156.18 354 PKP PKPdf 01 11 59.9 +10
AQU L'Aquila 156.37 343 *e*PKP2 PKPab 01 12 19.0 -1.1
FRF La Foret Royal 156.42 355 *e*PKIKP PKPdf 01 11 49.9 -0.8
LMR La Mourre 156.65 356 *e*PKIKP PKPdf 01 11 50.1 -0.9
comp=Z,9.3nm,1.0s
MTLF Montolieu 156.68 3 *e*PKIKP PKPdf 01 11 50.1 -0.9
EPF Esparros 156.82 7 *e*PKIKP PKPdf 01 11 51.1 -0.1
comp=Z,11nm,1.3s
GVD Gavdhos 156.98 314 *e*PKPab PKPab 01 12 22.4 -0.7
PGF Pioggiola 157.15 351 *e*PKIKP PKPdf 01 11 50.9 -0.8
comp=Z,10nm,1.0s
TIP Timpagrande 157.99 333 *e*PKPab PKPab 01 12 26.8 -0.4
ESDC Sonseca Array 159.20 18 PKP PKPdf 01 11 54.1 -0.1
comp=Z,0.8nm,0.8s,baz=2.3,slow=2.2,SNR=6.6
ESDC PKPab PKPab 01 12 32.0 -0.3
comp=Z,3.8nm,0.9s,baz=332,slow=3.8,SNR=16
KEST Kesra 163.67 345 PKPab PKPab 01 12 51.7 -0.3
comp=Z,2.9nm,1.0s,baz=343,slow=3.2,SNR=6.0
DBIC Dimbokro 164.15 146 PKP PKPdf 01 11 58.8 -1.3
comp=Z,5.6nm,0.9s,baz=140,slow=3.0,SNR=4.3
DBIC PKPab PKPab 01 12 55.4 +0.7
comp=Z,2.8nm,0.9s,baz=243,slow=4.5,SNR=3.1
DBIC Dimbokro 164.15 146 PKP PKPdf 01 11 58.8 -1.3
DBIC PKPab PKPab 01 12 55.4 +0.7
TOA0 Torodi Ar. Sit 172.80 161 *e*PKPdf PKPdf 01 12 04.3 -1.4
TOA0 *e*PKPab PKPab 01 13 35.6 +

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.46**	**293**	*e*Pg	**Pg**	**01 09 49.6**	**-1.4**
PTK				*e*SG	**Sg**	**01 09 57.5**	**+0.5**
PTK	**Pertek**	**0.46**	**293**	*e*Pg	**Pg**	**01 09 49.6**	**-1.4**
PTK				*e*Sg	**Sg**	**01 09 57.5**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.59**	**236**	*e*PG	**Pg**	**01 09 52.6**	**-0.9**
SVRC				*e*SG	**Sg**	**01 10 03.0**	**+1.7**
SVRC	**Sivrice-ELAZID**	**0.59**	**236**	*e*Pg	**Pg**	**01 09 52.6**	**-0.9**
SVRC				*e*Sg	**Sg**	**01 10 03.0**	**+1.8**
ELZG	**Elazig**	**0.78**	**255**	*i* P	**Pg**	**01 09 54.7**	**-2.3**
ELZG				*i* S	**Sg**	**01 10 09.7**	**+2.6**
ELZG	**Elazig**	**0.78**	**255**	*i* P	**Pg**	**01 09 54.7**	**-2.3**
ELZG				*i* S	**Sg**	**01 10 09.6**	**+2.6**
DIYA	**Diyarbakir**	**0.80**	**169**	*i* P	**Pg**	**01 09 56.3**	**-1.1**
DIYA				*i* S	**Sg**	**01 10 09.2**	**+1.5**
DIYA	**Diyarbakir**	**0.80**	**169**	*i* P	**Pg**	**01 09 56.3**	**-1.1**
DIYA				*i* S	**Sg**	**01 10 09.2**	**+1.5**
EZC	**Erzincan**	**1.14**	**337**	*e*PN	**Pn**	**01 10 03.1**	**-1.8**
EZC				*e*SN	**Sn**	**01 10 19.3**	**-1.7**
MYA	**Malataya**	**1.25**	**253**	*e*PN	**Pn**	**01 10 04.5**	**-1.9**
MALT	**Malatya**	**1.25**	**252**	*e*PN	**Pn**	**01 10 04.8**	**-1.7**
MALT	**Malatya**	**1.25**	**252**	*e*Pn	**Pn**	**01 10 04.8**	**-1.7**
BEST	**Besiri**	**1.33**	**127**	*i* P	**Pg**	**01 10 05.5**	**-2.1**
BEST				*i* S	**Sg**	**01 10 23.9**	**-0.9**
KOPT	**Kop Dagi**	**1.38**	**18**	*i* P	**Pn**	**01 10 06.4**	**-1.8**
KOPT				*i* S	**Sg**	**01 10 28.2**	**+1.8**
KOPT	**Kop Dagi**	**1.38**	**18**	*i* P	**Pn**	**01 10 06.4**	**-1.9**
KOPT				*i* S	**Sg**	**01 10 28.2**	**+1.8**
URFA	**Urfa**	**1.54**	**215**	*e*PN	**Pn**	**01 10 09.7**	**-0.8**
URFA	**Urfa**	**1.54**	**215**	*e*Pn	**Pn**	**01 10 09.7**	**-0.8**
EZM	**Erzurum**	**1.63**	**42**	*e*PN	**Pn**	**01 10 11.8**	**+0.1**
ERZM	**Erzurum**	**1.63**	**42**	*i* P	**Pn**	**01 10 11.5**	**-0.2**
ERZM	**Erzurum**	**1.63**	**42**	*i* P	**Pn**	**01 10 11.5**	**-0.2**
AKCD	**Akcadag**	**1.63**	**256**	*i* P	**Pn**	**01 10 10.5**	**-1.3**
AKCD				*i* S	**Sn**	**01 10 34.0**	**+0.7**
AKCD	**Akcadag**	**1.63**	**256**	*i* P	**Pn**	**01 10 10.5**	**-1.3**
AKCD				*i* S	**Sn**	**01 10 34.0**	**+0.7**
DARE	**Darende-Malaty**	**1.68**	**279**	*e*PN	**Pn**	**01 10 16.1**	**+3.7**
GUMT	**Gumushane**	**1.78**	**349**	*e*PN	**Pn**	**01 10 13.8**	**0.0**
GUMT	**Gumushane**	**1.78**	**349**	*e*Pn	**Pn**	**01 10 13.8**	**-0.1**
ATAB	**Bozova**	**1.79**	**227**	*i* P	**Pn**	**01 10 12.3**	**-1.7**
ATAB				*i* S	**Sn**	**01 10 35.4**	**-1.8**
ATAB	**Bozova**	**1.79**	**227**	*i* P	**Pn**	**01 10 12.3**	**-1.7**
ATAB				*i* S	**Sn**	**01 10 35.4**	**-1.8**
HOMI	**Horasan**	**2.03**	**48**	*i* P	**Pn**	**01 10 17.0**	**-0.2**
KTUT	**Trabzon**	**2.28**	**357**	*e*PN	**Pn**	**01 10 21.3**	**+0.7**
KTUT	**Trabzon**	**2.28**	**357**	*e*Pn	**Pn**	**01 10 21.3**	**+0.6**
ESPY	**Espiye-Giresun**	**2.39**	**337**	*e*PN	**Pn**	**01 10 22.4**	**+0.1**
ESPY	**Espiye-Giresun**	**2.39**	**337**	*e*Pn	**Pn**	**01 10 22.4**	**+0.2**
AGRB	**Hanur-Agry**	**2.53**	**69**	*e*PN	**Pn**	**01 10 25.2**	**+1.1**
AGRB	**Hanur-Agry**	**2.53**	**69**	*e*Pn	**Pn**	**01 10 25.2**	**+1.1**
SARI	**SarD1z-Kayseri**	**2.54**	**270**	*e*PN	**Pn**	**01 10 28.4**	**+4.2**
SVSK	**Karacayir**	**2.58**	**299**	*e*PN	**Pn**	**01 10 25.0**	**+0.2**
SVSK	**Karacayir**	**2.58**	**299**	*e*Pn	**Pn**	**01 10 25.0**	**+0.2**
GAZ	**Gaziantep**	**2.65**	**235**	*e*PN	**Pn**	**01 10 26.5**	**+0.8**
GAZ	**Gaziantep**	**2.65**	**235**	*e*Pn	**Pn**	**01 10 26.5**	**+0.8**
KMRS	**Kahramanmaras**	**2.68**	**244**	*e*PN	**Pn**	**01 10 27.0**	**+0.9**
KMRS	**Kahramanmaras**	**2.68**	**244**	*e*Pn	**Pn**	**01 10 27.0**	**+0.8**
DAGI	**Agillar**	**2.81**	**32**	*i* P	**Pn**	**01 10 27.3**	**-0.7**
BCA	**Borcka**	**3.02**	**25**	*e*PN	**Pn**	**01 10 30.7**	**-0.2**
BCA	**Borcka**	**3.02**	**25**	*e*Pn	**Pn**	**01 10 30.7**	**-0.2**
CLDR	**Caldiran**	**3.13**	**81**	*e*PN	**Pn**	**01 10 34.2**	**+1.8**
CLDR	**Caldiran**	**3.13**	**81**	*e*Pn	**Pn**	**01 10 34.2**	**+1.8**
BNN	**Bunyan**	**3.20**	**274**	*e*PN	**Pn**	**01 10 34.0**	**+0.6**
BNN	**Bunyan**	**3.20**	**274**	*e*Pn	**Pn**	**01 10 34.0**	**+0.7**
HKR	**Hakkari**	**3.21**	**109**	*e*PN	**Pn**	**01 10 35.7**	**+2.3**
HKR	**Hakkari**	**3.21**	**109**	*e*Pn	**Pn**	**01 10 35.7**	**+2.3**
CUKT	**Cukurca**	**3.25**	**116**	*e*PN	**Pn**	**01 10 35.2**	**+1.3**
CUKT	**Cukurca**	**3.25**	**116**	*e*Pn	**Pn**	**01 10 35.2**	**+1.2**
KOZT	**Kozan**	**3.47**	**251**	*e*PN	**Pn**	**01 10 37.6**	**+0.6**
YOZ	**Yozgat**	**3.71**	**286**	*e*PN	**Pn**	**01 10 41.5**	**+1.3**
YOZ	**Yozgat**	**3.71**	**286**	*e*Pn	**Pn**	**01 10 41.5**	**+1.2**
KARA	**Karaisali**	**4.12**	**251**	*e*PN	**Pn**	**01 10 46.4**	**+0.5**
KARA	**Karaisali**	**4.12**	**251**	*e*Pn	**Pn**	**01 10 46.4**	**+0.4**
KRTS	**Karatas**	**4.20**	**241**	*e*PN	**Pn**	**01 10 48.8**	**+1.7**
KRTS	**Karatas**	**4.20**	**241**	*e*Pn	**Pn**	**01 10 48.8**	**+1.7**
CORM	**Corum**	**4.36**	**291**	*e*PN	**Pn**	**01 10 50.8**	**+1.5**
CORM	**Corum**	**4.36**	**291**	*e*Pn	**Pn**	**01 10 50.8**	**+1.5**

*ISCJB **03** 01:16:22.4±0.7, 39.°03N±0.°03×26.°80E±0.°03, h9km±5km, Error ellipse: s-maj=6.2km s-min=3.8km az=31.3*
*CSEM **03** 01:16:22.5±0.2, 39.°04N×26.°79E, h10km, MD2.8, Error ellipse: s-maj=4.5km s-min=2.8km az=22.0*
*DDA **03** 01:16:22.1, 39.°04N×26.°79E, h7km±5km, Md2.8*
*THE **03** 01:16:22.9, 39.°01N×26.°77E, h9km±2km, ML2.2/2, Error ellipse: s-maj=3.2km s-min=0.7km az=226.0*
ISC 03 01:16:22.7±0.5, 39.°04N±0.°03×26.°80E±0.°03, h11km±4km, n20, σ0.°66/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.28**	**342**	*i* P	**Pg**	**01 16 28.0**	**-0.4**
AYVA				*i* S	**Sg**	**01 16 32.3**	**0.0**
AYVA	**Ayvalik**	**0.28**	**342**	*i* P	**Pg**	**01 16 28.0**	**-0.4**
AYVA				*i* S	**Sg**	**01 16 32.3**	**0.0**
PRK	**Paraskevi**	**0.46**	**297**	P	**Pg**	**01 16 31.4**	**-0.4**
PRK				S	**Sg**	**01 16 38.9**	**+1.0**
PRK	**Paraskevi**	**0.46**	**297**	P	**Pg**	**01 16 31.4**	**-0.4**
PRK				S	**Sg**	**01 16 38.9**	**+1.0**
BLCB	**Balcova**	**0.68**	**164**	P	**Pg**	**01 16 35.6**	**-0.3**
BLCB				S	**Sg**	**01 16 45.2**	**+0.4**
BLCB	**Balcova**	**0.68**	**164**	P	**Pg**	**01 16 35.6**	**-0.3**
BLCB				S	**Sg**	**01 16 45.2**	**+0.4**
SIGR	**SIGRI**	**0.76**	**283**	P	**Pg**	**01 16 36.4**	**-1.0**
SIGR				S	**Sg**	**01 16 48.5**	**+1.2**
SIGR	**SIGRI**	**0.76**	**283**	P	**Pg**	**01 16 36.4**	**-1.0**
SIGR				S	**Sg**	**01 16 48.5**	**+1.2**
AKHS	**Akhisar**	**0.80**	**101**	*i* P	**Pg**	**01 16 38.2**	**0.0**
AKHS				*i* S	**Sg**	**01 16 48.5**	**-0.2**
AKHS	**Akhisar**	**0.80**	**101**	*i* P	**Pg**	**01 16 38.2**	**0.0**
AKHS				*i* S	**Sg**	**01 16 48.5**	**-0.2**
BALY	**Balya**	**0.94**	**42**	*i* P	**Pg**	**01 16 40.3**	**-0.6**
BALY				*i* S	**Sg**	**01 16 53.8**	**+0.6**
BALY	**Balya**	**0.94**	**42**	*i* P	**Pg**	**01 16 40.3**	**-0.6**
BALY				*i* S	**Sg**	**01 16 53.8**	**+0.7**
BOZC	**Bozcaada**	**0.99**	**324**	*i* P	**Pg**	**01 16 40.6**	**-1.2**
BOZC				*i* S	**Sg**	**01 16 55.0**	**+0.3**
DURS	**Dursunbey**	**1.41**	**66**	*i* P	**Pn**	**01 16 41.9**	**-6.5**
DURS				*i* S	**Sn**	**01 17 07.4**	**+0.4**
DEMI	**Demirci**	**1.49**	**89**	*i* P	**Pn**	**01 16 50.6**	**+1.2**
DEMI				*i* S	**Sn**	**01 17 08.4**	**-0.4**
DEMI	**Demirci**	**1.49**	**89**	*i* P	**Pn**	**01 16 50.6**	**+1.2**
DEMI				*i* S	**Sn**	**01 17 08.4**	**-0.4**
LIA	**Limnos Island**	**1.52**	**305**	P	**Pn**	**01 16 48.8**	**-1.0**
LIA				S	**Sn**	**01 17 09.4**	**-0.2**
LIA	**Limnos Island**	**1.52**	**305**	P	**Pn**	**01 16 48.8**	**-1.0**
LIA				S	**Sn**	**01 17 09.4**	**-0.2**
ALN	**Alexandroupoli**	**1.94**	**343**	P	**Pn**	**01 16 55.9**	**+0.2**
ALN				S	**Sn**	**01 17 20.3**	**+0.2**
ALN	**Alexandroupoli**	**1.94**	**343**	P	**Pn**	**01 16 55.9**	**+0.2**
ALN				S	**Sn**	**01 17 20.3**	**+0.2**

*ISCJB **03** 01:35:10.6±0.5, 37.°39N±0.°04×37.°09E±0.°04, h8km±5km, Error ellipse: s-maj=7.4km s-min=4.5km az=22.1*
*ISK **03** 01:35:10.4, 37.°37N×37.°07E, h11km, MD3.3*
*DDA **03** 01:35:10.7, 37.°47N×37.°15E, h7km±5km, Md3.1*
*CSEM **03** 01:35:11.0±0.2, 37.°40N×37.°08E, h10km, MD3.3, Error ellipse: s-maj=4.8km s-min=4.4km az=23.0*
ISC 03 01:35:10.9±0.5, 37.°39N±0.°04×37.°10E±0.°03, h7km±5km, n35, σ0.°64/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.20**	**307**	PG	**Pg**	**01 35 15.0**	**+0.1**
KMRS				*e*SG	**Sg**	**01 35 18.2**	**+0.6**
KMRS	**Kahramanmaras**	**0.20**	**307**	*i* Pg	**Pg**	**01 35 15.0**	**+0.1**
KMRS				*e*Sg	**Sg**	**01 35 18.2**	**+0.6**
GAZ	**Gaziantep**	**0.23**	**157**	PG	**Pg**	**01 35 15.6**	**+0.1**
GAZ				*e*SG	**Sg**	**01 35 19.0**	**+0.4**
GAZ	**Gaziantep**	**0.23**	**157**	*i* Pg	**Pg**	**01 35 15.6**	**+0.1**
GAZ				*e*Sg	**Sg**	**01 35 19.0**	**+0.4**
GZT	**Gaziantep**	**0.37**	**95**	*i* P	**Pg**	**01 35 17.7**	**-0.5**
GZT				*i* S	**Sg**	**01 35 22.6**	**-0.5**
KUZU	**Kuzuini**	**0.61**	**182**	*i* P	**Pg**	**01 35 23.2**	**+0.6**
KUZU				*i* S	**Sg**	**01 35 35.1**	**+4.4**
KUZU	**Kuzuini**	**0.61**	**182**	*i* P	**Pg**	**01 35 23.2**	**+0.5**
KUZU				*i* S	**Sg**	**01 35 35.1**	**+4.5**
ATAB	**Bozova**	**0.96**	**85**	*i* P	**Pg**	**01 35 28.9**	**-0.4**
ATAB				*i* S	**Sg**	**01 35 41.6**	**-0.1**
ATAB	**Bozova**	**0.96**	**85**	*i* P	**Pg**	**01 35 28.9**	**-0.4**
ATAB				*i* S	**Sg**	**01 35 41.6**	**-0.1**
KOZT	**Kozan**	**1.02**	**276**	*e*PG	**Pg**	**01 35 30.0**	**-0.4**
KOZT	**Kozan**	**1.02**	**276**	*e*Pg	**Pg**	**01 35 30.0**	**-0.4**
COBT	**Iskenderun**	**1.10**	**218**	*i* P	Px	01 35 21.9	
COBT				*i* S	Sx	01 35 32.6	
SARI	**SarD1z-Kayseri**	**1.33**	**346**	*e*PN	**Pn**	**01 35 33.5**	**-2.4**
SARI	**SarD1z-Kayseri**	**1.33**	**346**	*e*Pn	**Pn**	**01 35 33.5**	**-2.3**
URFA	**Urfa**	**1.37**	**87**	*e*PN	**Pn**	**01 35 36.7**	**+0.3**
URFA	**Urfa**	**1.37**	**87**	*e*Pn	**Pn**	**01 35 36.7**	**+0.3**
MALT	**Malatya**	**1.40**	**48**	*e*PN	**Pn**	**01 35 37.0**	**+0.1**
MALT	**Malatya**	**1.40**	**48**	*e*Pn	**Pn**	**01 35 37.0**	**+0.2**
MYA	**Malataya**	**1.41**	**48**	*e*PN	**Pn**	**01 35 37.3**	**+0.3**
MYA				*e*SN	**Sn**	**01 35 56.5**	**+0.7**
MYA	**Malataya**	**1.41**	**48**	*e*Pn	**Pn**	**01 35 37.3**	**+0.4**
MYA				*e*Sn	**Sn**	**01 35 56.5**	**+0.8**
KRTS	**Karatas**	**1.60**	**240**	*e*PN	**Pn**	**01 35 39.1**	**-0.5**
KRTS	**Karatas**	**1.60**	**240**	*e*Pn	**Pn**	**01 35 39.1**	**-0.5**
KARA	**Karaisali**	**1.63**	**266**	*e*PN	**Pn**	**01 35 39.6**	**-0.4**
KARA	**Karaisali**	**1.63**	**266**	*e*Pn	**Pn**	**01 35 39.6**	**-0.4**
DARE	**Darende-Malaty**	**1.66**	**19**	*e*PN	**Pn**	**01 35 34.2**	**-6.1**
BNN	**Bunyan**	**1.77**	**326**	*e*PN	**Pn**	**01 35 41.5**	**-0.3**
BNN	**Bunyan**	**1.77**	**326**	*e*Pn	**Pn**	**01 35 41.5**	**-0.3**
SVRC	**Sivrice-ELAZID**	**2.01**	**60**	*e*PN	**Pn**	**01 35 44.7**	**-0.5**
SVRC	**Sivrice-ELAZID**	**2.01**	**60**	*e*Pn	**Pn**	**01 35 44.7**	**-0.5**
PTK	**Pertek**	**2.35**	**50**	*e*PN	**Pn**	**01 35 50.8**	**+0.9**
PTK	**Pertek**	**2.35**	**50**	*e*Pn	**Pn**	**01 35 50.8**	**+0.9**
SVSK	**Karacayir**	**2.53**	**358**	*e*PN	**Pn**	**01 35 52.7**	**+0.4**
SVSK	**Karacayir**	**2.53**	**358**	*e*Pn	**Pn**	**01 35 52.7**	**+0.4**
CORM	**Corum**	**3.39**	**326**	*e*PN	**Pn**	**01 36 04.9**	**+0.7**
CORM	**Corum**	**3.39**	**326**	*e*Pn	**Pn**	**01 36 04.9**	**+0.7**

*ATH **03** 02:13:52.5, 38.°13N×20.°65E, h17km, MD3.5/7, ML2.9*
*NEIC **03** 02:13:52.5, 38.°13N×20.°65E, h17km, ML2.9(ATH), After ATH.*
*ISCJB **03** 02:13:52.1±0.6, 38.°14N±0.°03×20.°63E±0.°03, h5km±3km, Error ellipse: s-maj=5.5km s-min=3.2km az=44.8*
*CSEM **03** 02:13:52.6±0.2, 38.°14N×20.°63E, h5km, ML2.9, Error ellipse: s-maj=5.0km s-min=2.9km az=42.0*
*THE **03** 02:13:53.9, 38.°16N×20.°71E, h5km, ML3.4/7, Error ellipse: s-maj=1.2km s-min=0.7km az=205.0*
*SKO **03** 02:13:53.1, 38.°17N×20.°74E, h0km*
ISC 03 02:13:53.0±0.6, 38.°14N±0.°03×20.°63E±0.°03, h7km±2km, n117, σ0.°88/163, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.05**	**319**	*e*PB	**Pg**	**02 13 55.9**	**+1.3**
VLS				*e*SB	**Sg**	**02 13 58.7**	**+3.0**
VLS	**Valsamata**	**0.05**	**319**	P	**Pg**	**02 13 55.9**	**+1.3**
VLS				S	**Sg**	**02 13 58.3**	**+2.6**
VLS	**Valsamata**	**0.05**	**319**	P	**Pg**	**02 13 55.9**	**+1.3**
VLS				S	**Sg**	**02 13 58.3**	**+2.6**
KFL	**Anninata**	**0.12**	**102**	P	**Pg**	**02 13 56.2**	**+0.5**
KFL				S	**Sg**	**02 13 57.9**	**+0.4**
RLS	**Riolos of Patr**	**0.66**	**97**	*e*PB	**Pg**	**02 14 04.9**	**-0.8**
RLS				*e*SN	**Sg**	**02 14 14.0**	**-0.3**
RLS	**Riolos of Patr**	**0.66**	**97**	*e*Pb	**Pg**	**02 14 04.9**	**-0.8**
UPR	**University Cam**	**0.92**	**80**	*e*PN	**Pg**	**02 14 10.0**	**-0.7**
UPR	**University Cam**	**0.92**	**80**	P	**Pg**	**02 14 10.1**	**-0.6**
UPR				S	**Sg**	**02 14 22.4**	**-0.2**
UPR	**University Cam**	**0.92**	**80**	P	**Pg**	**02 14 10.1**	**-0.6**
UPR				S	**Sg**	**02 14 22.4**	**-0.2**
EFP	**Efpalio**	**1.04**	**73**	*e*PB	**Pg**	**02 14 11.5**	**-1.5**
EFP				*e*SN	**Sg**	**02 14 26.7**	**+0.2**
EFP	**Efpalio**	**1.04**	**73**	P	**Pg**	**02 14 11.6**	**-1.4**
EFP				S	**Sg**	**02 14 26.7**	**+0.2**
EFP	**Efpalio**	**1.04**	**73**	P	**Pg**	**02 14 11.6**	**-1.4**
EFP				S	**Sg**	**02 14 26.7**	**+0.2**
LAKA	**Lakka**	**1.06**	**84**	P	**Pg**	**02 14 11.9**	**-1.5**
LAKA				S	**Sg**	**02 14 27.8**	**+0.5**
LAKA	**Lakka**	**1.06**	**84**	P	**Pg**	**02 14 11.9**	**-1.5**
LAKA				S	**Sg**	**02 14 27.8**	**+0.5**
TRIZ	**Trizonia**	**1.16**	**78**	P	**Pg**	**02 14 13.5**	**-1.7**
TRIZ				S	**Sg**	**02 14 30.8**	**+0.6**
TRIZ	**Trizonia**	**1.16**	**78**	P	**Pg**	**02 14 13.5**	**-1.7**
TRIZ				S	**Sg**	**02 14 30.8**	**+0.6**
EVR	**Evrytania**	**1.21**	**49**	*e*PN	**Pn**	**02 14 15.1**	**-1.2**
EVR	**Evrytania**	**1.21**	**49**	*e*Pn	**Pn**	**02 14 15.1**	**-1.2**
KALE	**Kalithea**	**1.21**	**77**	P	**Pg**	**02 14 14.5**	**-1.8**
KALE				S	**Sg**	**02 14 32.6**	**+0.6**
KALE	**Kalithea**	**1.21**	**77**	P	**Pg**	**02 14 14.5**	**-1.8**
KALE				S	**Sg**	**02 14 32.6**	**+0.6**
GUR	**Goura**	**1.36**	**98**	*e*PB	**Pn**	**02 14 16.8**	**-1.7**
GUR				*e*SN	**Sn**	**02 14 36.2**	**-0.6**
GUR	**Goura**	**1.36**	**98**	P	**Pn**	**02 14 16.9**	**-1.6**
GUR				S	**Sb**	**02 14 37.3**	**+0.8**
GUR	**Goura**	**1.36**	**98**	P	**Pn**	**02 14 16.9**	**-1.6**
GUR				*e*Sn	**Sn**	**02 14 36.2**	**-0.6**
GUR				S	**Sb**	**02 14 37.3**	**+0.8**
ITM	**Ithomi**	**1.40**	**133**	*e*PN	**Pn**	**02 14 18.4**	**-0.6**
ITM				*e*SN	**Sn**	**02 14 38.0**	**+0.3**
ITM	**Ithomi**	**1.40**	**133**	P	**Pn**	**02 14 18.6**	**-0.4**
ITM				S	**Sb**	**02 14 39.3**	**+1.7**
ITM	**Ithomi**	**1.40**	**133**	*e*Pn	**Pn**	**02 14 18.4**	**-0.6**
ITM				*e*Sn	**Sn**	**02 14 38.0**	**+0.3**
ITM				S	**Sb**	**02 14 39.3**	**+1.7**
IGT	**Igoumenitsa**	**1.41**	**350**	P	**Pn**	**02 14 18.5**	**-0.7**
IGT				S	**Sb**	**02 14 38.6**	**+0.6**
IGT	**Igoumenitsa**	**1.41**	**350**	P	**Pn**	**02 14 18.5**	**-0.7**
IGT				S	**Sb**	**02 14 38.6**	**+0.6**
JAN	**Janina**	**1.53**	**6**	*e*PN	**Pn**	**02 14 21.3**	**+0.6**
JAN	**Janina**	**1.53**	**6**	*e*Pn	**Pn**	**02 14 21.3**	**+0.6**
VLX	**Vlachokerasia**	**1.58**	**118**	*e*PN	**Pn**	**02 14 20.9**	**-0.6**
VLX	**Vlachokerasia**	**1.58**	**118**	P	**Pn**	**02 14 20.7**	**-0.8**
VLX				S	**Sn**	**02 14 42.3**	**+0.1**
VLX	**Vlachokerasia**	**1.58**	**118**	*e*Pn	**Pn**	**02 14 20.9**	**-0.6**
VLX				S	**Sn**	**02 14 42.3**	**+0.1**
AGG	**Agios Georgios**	**1.60**	**56**	*e*PN	**Pn**	**02 14 22.7**	**+1.0**
AGG	**Agios Georgios**	**1.60**	**56**	P	**Pn**	**02 14 22.3**	**+0.6**
AGG				S	**Sn**	**02 14 43.3**	**+0.7**
AGG	**Agios Georgios**	**1.60**	**56**	P	**Pn**	**02 14 22.3**	**+0.6**
AGG	**Agios Georgios**	**1.60**	**56**	*e*Pn	**Pn**	**02 14 22.7**	**+1.0**
AGG				S	**Sn**	**02 14 43.3**	**+0.7**
KEK	**Kerkira**	**1.70**	**338**	*e*PB	**Pn**	**02 14 22.5**	**-0.7**
KEK	**Kerkira**	**1.70**	**338**	P	**Pn**	**02 14 23.0**	**-0.2**
KEK				S	**Sn**	**02 14 46.9**	**+1.7**
KEK	**Kerkira**	**1.70**	**338**	P	**Pn**	**02 14 23.0**	**-0.2**
KEK				S	**Sn**	**02 14 46.9**	**+1.7**
THL	**Klokotos Trika**	**1.79**	**37**	*e*PN	**Pn**	**02 14 25.3**	**+1.0**
THL	**Klokotos Trika**	**1.79**	**37**	P	**Pn**	**02 14 25.1**	**+0.8**
THL				S	**Sn**	**02 14 48.6**	**+1.3**
THL	**Klokotos Trika**	**1.79**	**37**	P	**Pn**	**02 14 25.1**	**+0.8**
THL				S	**Sn**	**02 14 48.6**	**+1.3**
LTK	**Loutraki**	**1.84**	**93**	*e*PN	**Pn**	**02 14 24.9**	**-0.2**
LTK	**Loutraki**	**1.84**	**93**	P	**Pn**	**02 14 24.9**	**-0.2**
LTK				S	**Sn**	**02 14 48.0**	**-0.7**
LTK	**Loutraki**	**1.84**	**93**	P	**Pn**	**02 14 24.9**	**-0.2**
LTK				S	**Sn**	**02 14 48.0**	**-0.7**
LKR	**Lokris**	**1.93**	**74**	*e*PN	**Pn**	**02 14 26.4**	**+0.2**
LKR	**Lokris**	**1.93**	**74**	P	**Pn**	**02 14 26.2**	**0.0**
LKR	**Lokris**	**1.93**	**74**	P	**Pn**	**02 14 26.2**	**0.0**
DID	**Didima**	**2.15**	**106**	*e*PN	**Pn**	**02 14 29.7**	**+0.3**
DID	**Didima**	**2.15**	**106**	P	**Pn**	**02 14 30.0**	**+0.6**
DID				S	**Sn**	**02 14 56.8**	**+0.5**
DID	**Didima**	**2.15**	**106**	*e*Pn	**Pn**	**02 14 29.7**	**+0.3**
DID	**Didima**	**2.15**	**106**	P	**Pn**	**02 14 30.0**	**+0.6**
DID				S	**Sn**	**02 14 56.8**	**+0.5**
NAIG	**Nisos Aigina**	**2.29**	**99**	*e*PB	**Pn**	**02 14 31.0**	**-0.2**
VLI	**Veliai**	**2.32**	**127**	*e*PN	**Pn**	**02 14 33.8**	**+2.2**
NEO	**Neokhori**	**2.34**	**59**	*e*PB	**Pn**	**02 14 32.1**	**+0.2**
KZN	**Kozani**	**2.34**	**22**	*e*PN	**Pn**	**02 14 32.7**	**+0.8**
KZN	**Kozani**	**2.34**	**22**	P	**Pn**	**02 14 32.1**	**+0.2**
KZN	**Kozani**	**2.34**	**22**	P	**Pn**	**02 14 32.1**	**+0.2**
KZN	**Kozani**	**2.34**	**22**	*e*Pn	**Pn**	**02 14 32.7**	**+0.8**
LIT	**Litokhoron**	**2.44**	**36**	P	**Pn**	**02 14 33.4**	**+0.2**
LIT	**Litokhoron**	**2.44**	**36**	P	**Pn**	**02 14 33.4**	**+0.2**
ATH	**Athens Observa**	**2.44**	**93**	*e*PB	**Pn**	**02 14 34.2**	**+0.9**
ATHU	**Athens Univers**	**2.49**	**93**	P	**Pn**	**02 14 33.7**	**-0.3**
ATHU	**Athens Univers**	**2.49**	**93**	P	**Pn**	**02 14 33.7**	**-0.3**
VLY	**Voula,Athens**	**2.51**	**96**	*e*PN	**Pn**	**02 14 33.6**	**-0.7**
VLY	**Voula,Athens**	**2.51**	**96**	*e*Pn	**Pn**	**02 14 33.6**	**-0.7**
PTL	**Penteli**	**2.55**	**91**	*e*PN	**Pn**	**02 14 34.4**	**-0.4**
PTL	**Penteli**	**2.55**	**91**	*e*Pn	**Pn**	**02 14 34.4**	**-0.4**
KYTH	**Kithira**	**2.67**	**133**	*e*PN	**Pn**	**02 14 37.1**	**+0.7**
KYTH	**Kithira**	**2.67**	**133**	*e*Pn	**Pn**	**02 14 37.1**	**+0.7**
FNA	**Florina**	**2.71**	**12**	P	**Pn**	**02 14 37.3**	**+0.4**
FNA	**Florina**	**2.71**	**12**	P	**Pn**	**02 14 37.3**	**+0.4**
BIA	**Bitola**	**2.93**	**10**	*e*Pn	**Pn**	**02 14 40.6**	**+0.7**
BIA				*e*Sn	**Sn**	**02 15 15.8**	**+0.4**
BIA				*e*Lg		02 15 16.0	
	comp=E,11nm,0.5s						
BIA				*e*Lg		02 15 16.7	
	comp=N,10nm,0.4s						
BIA	**Bitola**	**2.93**	**10**	P	**Pn**	**02 14 40.2**	**+0.2**
BIA	**Bitola**	**2.93**	**10**	P	**Pn**	**02 14 40.2**	**+0.2**
BIA	**Bitola**	**2.93**	**10**	*e*Pn	**Pn**	**02 14 40.6**	**+0.6**
BIA				*e*Sn	**Sn**	**02 15 15.8**	**+0.4**
PAIG	**Paliouri**	**2.97**	**52**	P	**Pn**	**02 14 39.9**	**-0.7**
PAIG	**Paliouri**	**2.97**	**52**	P	**Pn**	**02 14 39.9**	**-0.7**
OHR	**Ohrid**	**2.97**	**2**	*e*Pn	**Pn**	**02 14 41.4**	**+0.7**
OHR				*e*Sn	**Sn**	**02 15 16.9**	**+0.3**
OHR	**Ohrid**	**2.97**	**2**	P	**Pn**	**02 14 41.1**	**+0.5**
OHR	**Ohrid**	**2.97**	**2**	P	**Pn**	**02 14 41.1**	**+0.5**
OHR				*e*Sn	**Sn**	**02 15 16.8**	**+0.3**
HORT	**Hortiatis**	**3.11**	**37**	P	**Pn**	**02 14 42.0**	**-0.5**
HORT	**Hortiatis**	**3.11**	**37**	P	**Pn**	**02 14 42.0**	**-0.5**
PLG	**Polygyros**	**3.12**	**43**	*e*PN	**Pn**	**02 14 42.2**	**-0.5**
PLG	**Polygyros**	**3.12**	**43**	P	**Pn**	**02 14 42.2**	**-0.5**
PLG	**Polygyros**	**3.12**	**43**	P	**Pn**	**02 14 42.2**	**-0.5**
TIP	**Timpagrande**	**3.21**	**290**	P	**Pn**	**02 14 43.1**	**-0.7**
TIP	**Timpagrande**	**3.21**	**290**	P	**Pn**	**02 14 43.1**	**-0.7**
KRUS	**Krusevo**	**3.26**	**8**	*e*Pn	**Pn**	**02 14 44.3**	**-0.3**
KRUS				*e*Sn	**Sn**	**02 15 23.4**

CFAA LR LR 02 43 17.3
USHA Ushuaia 12.38 170 P Pn 02 39 08.5 -0.7
0.1nm,0.3s,baz=330,slow=13,SNR=2.0
USHA LR LR 02 43 58.8
comp=Z,1µm,22.0s,baz=330,slow=37
LCO Las Campanas 13.69 5 *e*Pn **Pn 02 39 30.8 +3.5**
LVC Limon Verde 20.19 8 P **P 02 40 50.3 +2.4**
38nm,1.0s,baz=190,slow=9.9,SNR=12
LVC LR LR 02 48 41.5
comp=Z,2µm,18.6s,MS4.5,baz=171,slow=37
LVC Limon Verde 20.19 8 *e*P **P 02 40 50.4 +2.5**
32nm,0.9s
CPUP Villa Florida 20.29 41 P **P 02 40 50.7 +1.8**
4.7nm,0.6s,baz=202,slow=8.3,SNR=11
CPUP LR LR 02 48 26.6
comp=Z,298nm,20.7s,MS3.6,baz=199,slow=36
CPUP Villa Florida 20.29 41 P **P 02 40 50.7 +1.8**
CPUP LR LR 02 48 26.6
PMSA Palmer Station 22.59 171 LR LR 02 49 22.7
comp=Z,2µm,18.7s,MS4.6,baz=302,slow=35
LPAZ La Paz 26.53 8 *e*P **P 02 41 50.6 -0.2**
12nm,1.1s,mb4.3
SIV San Ignacio 28.22 23 P **P 02 42 06.2 +0.1**
8.2nm,0.8s,mb4.4,baz=197,slow=8.3
NNA Nana 30.87 351 *e*P **P 02 42 30.3 +0.7**
26nm,1.2s,mb4.9
ATAH Atahualpa 35.85 349 P **P 02 43 13.8 +0.8**
7.9nm,0.8s,mb4.7,baz=66,slow=8.7,SNR=4.6
VNA3 Neumayer Olymp 41.43 154 *e*P **P 02 44 00.8 +1.5**
VNA3 *e* pP 02 44 04.3 +2.3
VNA1 Neumayer--Stat 41.80 153 *e*P sP 02 44 11.8 +5.6
OTAV Otavalo 43.12 351 *e*P **P 02 44 15.5 +1.9**
22nm,1.2s,mb4.8
OTAV *e*PcP PcP 02 46 04.1 +0.7
ROSC El Rosal 47.37 357 P **P 02 44 49.3 +2.0**
4.9nm,0.6s,mb4.7,baz=99,slow=21,SNR=8.4
QSPA South Pole Qui 47.56 180 P **P 02 44 48.0 -0.2**
20nm,0.9s,mb5.1,baz=156,slow=5.6,SNR=14
QSPA PcP PcP 02 46 18.9 +1.1
4.9nm,1.0s,baz=118,slow=4.8,SNR=3.8
QSPA South Pole Qui 47.56 180 *e*P **P 02 44 47.9 -0.3**
26nm,1.0s,mb5.2
QSPA LR LR
comp=Z,521nm,19.0s,MS4.5
MAIT Maitri 48.41 154 *e*P **P 02 44 55.6 +0.8**
SDV Santo Domingo 51.34 2 *e*P **P 02 45 17.1 -0.6**
comp=Z,14nm,0.8s,mb5.0
JTS JuntasAbangare 54.03 344 *e*P **P 02 45 36.6 -1.0**
comp=Z,27nm,1.1s,mb5.1
SBA Scott Base 54.60 193 *e*P **P 02 45 41.9 +0.9**
comp=Z,16nm,1.5s,mb4.8
TGUH Tegucigalpa,Un 58.17 343 *e*P **P 02 46 07.1 0.0**
comp=Z,36nm,0.9s,mb5.4
TGUH LR LR
comp=Z,182nm,21.3s,MS4.2
OBIP Obispado Ponce 60.63 6 *e*P **P 02 46 23.5 -0.6**
comp=Z,70nm,1.4s,mb5.6
CELP Cerrillos 60.67 6 *e*P **P 02 46 23.8 -0.6**
HUMP Col San Antoni 60.80 7 *e*P **P 02 46 25.5 +0.2**
comp=Z,50nm,1.5s,mb5.4
LRS Lares 60.86 6 *e*P **P 02 46 24.6 -1.1**
CBYP Canovanas 60.92 7 *e*P **P 02 46 24.2 -1.9**
comp=Z,31nm,1.2s,mb5.3
SDDR Presa de Saban 61.37 1 *e*P **P 02 46 28.1 -1.0**
comp=Z,8.1nm,0.8s,mb4.9
SDDR LR LR
comp=Z,255nm,20.0s,MS4.4
MAW Mawson 64.88 163 P **P 02 46 51.3 -0.6**
comp=Z,4.2nm,0.9s,mb4.5,baz=243,slow=9.2,SNR=6.0
MAW LR LR 03 13 26.6
comp=Z,546nm,21.6s,MS4.7,baz=214,slow=34
TAOE Nuku Hiva Isla 67.97 278 *e*LR LR 03 07 40.1
comp=Z,202nm,23.7s
PPT Papeete 69.23 265 *e*LR LR 03 08 07.3
comp=Z,82nm,23.5s
CASY Casey 71.35 181 *e*P **P 02 47 31.4 -1.1**
comp=Z,22nm,1.3s,mb4.9
NHSC New Hope 75.80 353 *e*P **P 02 47 59.4 +0.4**
comp=Z,77nm,1.3s,mb5.5
BOSA Boshof 76.15 116 P **P 02 48 02.1 +0.7**
comp=Z,1.7nm,0.8s,mb4.0,baz=32,slow=9.6,SNR=3.8
BOSA LR LR 03 15 59.1
comp=Z,169nm,21.8s,MS4.3,baz=74,slow=31
GOGA Godfrey 76.45 350 *e*P **P 02 48 02.0 -0.7**
comp=Z,26nm,1.4s,mb5.0
LRAL Lakeview Retre 76.59 347 *e*P **P 02 48 03.4 0.0**
comp=Z,20nm,1.0s,mb5.0
JSC Jenkinsville 77.06 352 *e*P **P 02 48 05.8 -0.3**
JCT Junction City 77.15 336 *e*P **P 02 48 06.9 +0.2**
comp=Z,37nm,1.2s,mb5.2
JCT LR LR
comp=Z,255nm,21.0s,MS4.5
628A Black Gap, Mar 77.22 333 ⇓P **P 02 48 07.3 +0.2**
baz=78,SNR=14
TXAR Lajitas Array 77.35 332 P **P 02 48 07.8 0.0**
comp=Z,4.1nm,0.9s,mb4.3,baz=151,slow=7.2,SNR=36
TXAR LR LR 03 16 39.4
comp=Z,255nm,19.3s,MS4.6,baz=55,slow=31
627A Terlingua Ranc 77.36 332 ⇑P **P 02 48 08.2 +0.3**
baz=78,SNR=8.0
626A Big Bend Ranch 77.71 332 ⇑P **P 02 48 09.7 -0.2**
baz=78,SNR=8.4
528A Cox Ranch, San 77.81 333 ⇑P **P 02 48 10.1 -0.3**
baz=78
527A Woodward Ranch 78.07 332 P **P 02 48 12.0 +0.2**
baz=78,SNR=22
DBIC Dimbokro 78.12 69 P **P 02 48 13.1 +0.6**
comp=Z,7.3nm,1.0s,mb4.5,baz=209,slow=8.9,SNR=3.6
DBIC Dimbokro 78.12 69 *e*P **P 02 48 13.2 +0.6**
comp=Z,8.5nm,0.9s,mb4.7
526A Mary Lane Ranc 78.16 332 P **P 02 48 12.7 +0.3**
baz=78,SNR=16
428A Kincaid Ranch, 78.30 333 ⇑P **P 02 48 12.5 -0.6**
baz=79
SWET Sewanee 78.56 348 *e*P **P 02 48 13.7 -0.8**
CPCT Cooper Cave 78.60 350 *e*P **P 02 48 14.4 -0.3**
427A Hayter Ranch, 78.65 333 ⇓P **P 02 48 14.7 -0.3**
baz=79,SNR=5.8
PLAL Pickwick Lake 78.68 347 *e*P **P 02 48 14.1 -1.0**
comp=Z,11nm,0.9s,mb4.8
426A McDonald Obser 78.69 332 ⇑P **P 02 48 14.5 -0.8**
baz=79,SNR=16
328A Wristen Ranch, 78.94 334 ⇓P **P 02 48 16.5 -0.1**
baz=79
425A Indio Mountain 79.13 332 ⇑P **P 02 48 16.7 -0.9**
baz=80
MIAR Mount Ida 79.35 342 *e*P **P 02 48 18.4 -0.4**
comp=Z,6.3nm,1.0s,mb4.5
TZTN Tazewell 79.55 351 *e*P **P 02 48 19.4 -0.4**
227A Bennet, Jal 79.68 333 ⇓P **P 02 48 19.7 -0.9**
baz=80,SNR=6.9
WVT Waverly 79.75 347 *e*P **P 02 48 19.7 -1.3**
comp=Z,20nm,1.2s,mb4.9
324A Moseley Ranch, 79.91 331 ⇓P **P 02 48 20.4 -1.5**
baz=80
226A Malaga, Loving 79.99 333 ⇑P **P 02 48 22.1 -0.2**
baz=80
MNTX Cornudas Mount 80.10 332 *e*P **P 02 48 21.6 -1.4**
comp=Z,10nm,1.1s,mb4.7
CLNB Carlsbad 80.10 333 *e*P **P 02 48 22.9 0.0**
comp=Z,2.7nm,1.0s,mb4.1
GDL2 Guadalupe Moun 80.21 333 *e*P **P 02 48 23.5 0.0**
127A Arkansas Junct 80.31 334 ⇓P **P 02 48 23.5 -0.5**
baz=81
224A Corundas Mount 80.50 332 ⇓P **P 02 48 24.6 -0.5**
baz=81,SNR=20
125A Gardner Draw, 80.73 333 ⇓P **P 02 48 25.1 -1.1**
baz=81
CPRX Cap Rock 80.80 333 *e*P **P 02 48 26.5 -0.1**
comp=Z,16nm,1.1s,mb4.9
WMOK Wichita Mounta 80.84 338 *e*P **P 02 48 26.1 -0.8**
comp=Z,16nm,1.1s,mb4.9
320A Kipp Ranch, An 80.93 329 ⇑P **P 02 48 27.0 -0.4**
baz=81,SNR=6.8
124A Stringfield Ra 81.04 332 ⇑P **P 02 48 27.9 -0.1**
baz=81,SNR=15
Z26A Caprock 81.06 333 ⇓P **P 02 48 27.1 -1.0**
baz=81
221A Mesquite Ranch 81.25 330 ⇑P **P 02 48 28.5 -0.6**
baz=82
319A Douglas 81.25 328 ⇓P **P 02 48 27.9 -1.2**
baz=82,SNR=9.2
MSTX Muleshoe 81.31 335 ⇓P **P 02 48 28.6 -0.8**
baz=82
Z25A Roswell 81.31 333 ⇑P **P 02 48 28.8 -0.6**
baz=82
Y27A Causey 81.36 334 ⇑P **P 02 48 28.7 -0.9**
baz=82

220A Playas Peak, P 81.43 329 ⇓P **P 02 48 29.7 -0.4**
baz=82
SIUC Southern Illin 81.54 346 *e*P **P 02 48 29.9 -0.5**
318A Bisbee 81.58 328 ⇑P **P 02 48 31.0 +0.1**
baz=82,SNR=9.3
219A White Tail Can 81.80 329 ⇓P **P 02 48 30.5 -1.5**
baz=82,SNR=8.2
AMTX Amarillo 81.82 336 *e*P **P 02 48 30.8 -1.2**
comp=Z,44nm,1.3s,mb5.2
AMTX LR LR
comp=Z,408nm,21.0s,MS4.8
FVM French Village 82.02 345 *e*P **P 02 48 32.4 -0.6**
120A U Bar Ranch, L 82.05 329 ⇓P **P 02 48 33.3 0.0**
baz=82,SNR=11
Y24A Capitan 82.15 332 ⇑P **P 02 48 33.8 +0.1**
baz=82,SNR=8.5
X26A CR and CF Fran 82.18 334 ⇓P **P 02 48 33.4 -0.6**
baz=82
217A Green Valley 82.20 327 ⇑P **P 02 48 34.5 +0.3**
baz=82,SNR=5.7
CCM Cathedral Cave 82.24 345 *e*P **P 02 48 33.6 -0.6**
comp=Z,28nm,0.9s,mb5.2
Y23A Lovelace Mesa, 82.36 332 ⇑P **P 02 48 34.7 -0.2**
baz=83
Z21A St. Cloud Mine 82.37 331 ⇓P **P 02 48 35.3 +0.3**
baz=83,SNR=9.6
Z20A Nine Sixteen R 82.54 330 ⇑P **P 02 48 36.4 +0.6**
baz=83,SNR=17
118A Homack Ranch, 82.64 328 ⇑P **P 02 48 36.7 +0.4**
baz=83
Y22A Socorro 82.69 331 P **P 02 48 37.3 +0.7**
baz=83,SNR=8.5
X24A Lazy VL Ranch, 82.73 333 ⇓P **P 02 48 37.4 +0.6**
baz=83
BNM Barren Site 82.76 332 *e*P **P 02 48 37.8 +0.8**
comp=Z,14nm,1.2s,mb4.8
LPM Los Pinos Moun 82.91 332 *e*P **P 02 48 38.8 +1.1**
W25A X Bar L Ranch, 83.00 334 ⇑P **P 02 48 37.3 -0.9**
baz=83
Y21A Point of Rocks 83.00 331 ⇑P **P 02 48 38.7 +0.5**
baz=83,SNR=14
ACSO Alum Creek Sta 83.13 352 *e*P **P 02 48 37.9 -0.8**
comp=Z,32nm,1.3s,mb5.2
214A Organ Pipe Nat 83.17 326 ⇑P **P 02 48 39.9 +0.7**
baz=84
LAZ Ladron 83.17 331 *e*P **P 02 48 40.0 +0.9**
comp=Z,16nm,1.6s,mb4.8
Y20A Horse Springs, 83.17 330 ⇓P **P 02 48 39.8 +0.7**
baz=84,SNR=11
ANMO Albuquerque 83.43 332 *e*P **P 02 48 40.9 +0.5**
comp=Z,18nm,1.2s,mb5.0
X21A Alamocita Cree 83.44 331 P **P 02 48 41.8 +1.3**
baz=84,SNR=17
W23A Werner Place, 83.51 332 ⇓P **P 02 48 41.7 +0.9**
baz=84
Y19A Nutrioso 83.54 330 ⇓P **P 02 48 41.7 +0.7**
baz=84,SNR=13
115A Sonoran Desert 83.58 327 ⇓P **P 02 48 41.7 +0.4**
baz=84
Y18A Canyon Day Jun 83.67 329 ⇑P **P 02 48 41.4 -0.3**
baz=84
X20A Quemado 83.78 330 ⇑P **P 02 48 41.4 -0.8**
baz=84
Y17A Roosevelt 83.91 328 ⇑P **P 02 48 42.4 -0.5**
baz=84
113A Mohawk Valley, 84.27 326 ⇑P **P 02 48 44.6 -0.2**
baz=85
W20A Ramah 84.31 331 ⇑P **P 02 48 44.7 -0.2**
baz=85,SNR=12
HDIL Hopedale 84.32 347 *e*P **P 02 48 44.4 -0.4**
comp=Z,25nm,0.9s,mb5.3
Y16A Circle Bar Ran 84.32 328 ⇓P **P 02 48 44.6 -0.4**
baz=85
Z13A Yuma Proving G 84.60 326 ⇑P **P 02 48 46.9 +0.5**
baz=85
Y15A Casa Rosa Ranc 84.72 327 ⇑P **P 02 48 47.0 0.0**
baz=85,SNR=7.1
W18A Petrified Fore 84.75 330 ⇓P **P 02 48 47.2 +0.1**
baz=85
X16A Lo Mia Camp, P 84.78 328 ⇓P **P 02 48 47.4 +0.1**
baz=85,SNR=9.3
Y14A Wickenburg 84.98 327 ⇑P **P 02 48 47.0 -1.3**
baz=85
X15A Humboldt 85.15 328 ⇓P **P 02 48 49.0 -0.2**
baz=86,SNR=11
DVTC Desert V Tower 85.17 324 ⇑P **P 02 48 49.6 +0.3**
baz=85
Y13A Salome 85.20 326 ⇓P **P 02 48 50.1 +0.7**
baz=86
X14A Yava 85.39 327 ⇑P **P 02 48 51.1 +0.8**
baz=86
W16A Flagstaff 85.41 328 ⇑P **P 02 48 51.4 +1.0**
baz=86,SNR=9.1
BAR Barrett 85.44 324 *e*P **P 02 48 51.0 +0.3**
comp=Z,14nm,1.2s,mb5.0
T22A Edith 85.45 333 ⇓P **P 02 48 51.0 +0.4**
baz=86
MONP Monument Peak 85.50 324 ⇓P **P 02 48 50.5 -0.4**
baz=86
V17A Tonalea, Kykot 85.59 329 ⇑P **P 02 48 50.9 -0.4**
baz=86,SNR=9.9
U19A Dine' College, 85.60 331 ⇑P **P 02 48 50.6 -0.8**
baz=86,SNR=7.6
SDCO Great Sand Dun 85.65 334 *e*P **P 02 48 52.0 +0.4**
comp=Z,5.1nm,1.0s,mb4.7
WUAZ Wupatki 85.72 329 ⇓P **P 02 48 52.7 +0.7**
baz=86,SNR=8.8
WUAZ Wupatki 85.72 329 *e*P **P 02 48 53.0 +1.1**
comp=Z,18nm,1.2s,mb5.2
BC3 Big Chuckw Mtn 85.74 325 ⇓P **P 02 48 52.9 +0.8**
baz=86
X13A Yucca 85.88 327 ⇑P **P 02 48 53.5 +0.7**
baz=86
U18A Rough Rock, Ch 85.96 330 ⇓P **P 02 48 53.8 +0.6**
baz=86,SNR=12
T19A Beclabito 86.02 331 ⇓P **P 02 48 53.6 +0.2**
baz=86
IRM Iron Mountain 86.05 325 ⇑P **P 02 48 54.0 +0.3**
baz=86
W14A Seligman 86.12 327 ⇑P **P 02 48 54.4 +0.5**
baz=86,SNR=11
PFO Pinyon Flat Ob 86.13 324 P **P 02 48 55.5 +1.4**
comp=Z,83nm,1.0s,mb5.9,SNR=6.4
PFO Pinyon Flat Ob 86.13 324 ⇑P **P 02 48 54.7 +0.6**
baz=86
PFO Pinyon Flat Ob 86.13 324 *e*P **P 02 48 55.4 +1.3**
comp=Z,34nm,1.2s,mb5.5
MVCO Mesa Verde 86.17 332 ⇓P **P 02 48 54.1 -0.1**
baz=86
MVCO Mesa Verde 86.17 332 *e*P **P 02 48 55.0 +0.8**
comp=Z,14nm,1.3s,mb5.0
U16A Tuba City 86.18 329 ⇓P **P 02 48 54.4 +0.2**
baz=86,SNR=14
BELC Belle Mtn. 86.27 325 ⇑P **P 02 48 55.0 +0.2**
baz=87
V15A Kaibab Nationa 86.29 328 ⇓P **P 02 48 55.5 +0.7**
baz=87,SNR=11
S21A Coal Bank Pass 86.33 332 ⇑P **P 02 48 55.6 +0.7**
baz=87
W13A Hualapai Mount 86.34 327 ⇓P **P 02 48 55.7 +0.6**
baz=87
U17A Shonto 86.41 330 ⇑P **P 02 48 55.6 +0.3**
baz=87,SNR=8.7
V14A Boquillas Ranc 86.50 328 ⇑P **P 02 48 55.5 -0.3**
baz=87,SNR=8.4
R22A Saguache, Gunn 86.50 333 ⇑P **P 02 48 55.6 -0.1**
baz=87
T18A Mexican Hat 86.60 331 ⇓P **P 02 48 55.3 -1.0**
baz=87,SNR=5.3
GMRC Granite Mounta 86.80 325 ⇓P **P 02 48 57.5 +0.2**
baz=87,SNR=6.5
T17A Navajo Res., N 86.81 330 ⇑P **P 02 48 57.2 -0.1**
baz=87,SNR=16
LDFC Landfair 86.83 326 *e*P **P 02 48 58.4 +1.0**
comp=Z,12nm,0.9s,mb5.1
U15A North Rim 86.87 329 ⇑P **P 02 48 57.7 +0.1**
baz=87,SNR=14
S19A Harvey Farm, M 86.88 331 ⇓P **P 02 48 57.1 -0.5**
baz=87
R21A Cimarron 86.89 333 ⇓P **P 02 48 57.7 0.0**
baz=87
LONY Lake Ozonia 86.95 358 *e*P **P 02 48 58.2 +0.4**
comp=Z,21nm,1.2s,mb5.2
R20A Redvale 87.01 332 ⇓P **P 02 48 58.8 +0.6**
baz=87
V13A Grand Canyon W 87.04 327 ⇓P **P 02 48 58.9 +0.4**
baz=87,SNR=10.0
T16A Glen Canyon Da 87.06 329 ⇑P **P 02 48 59.3 +0.8**
baz=87,SNR=7.4

Q22A Crested Butte, 87.12 333 ⇑P **P 02 48 59.3 +0.5**
baz=88
S18A Hurst Farm, Bl 87.13 331 ⇓P **P 02 48 59.7 +0.8**
baz=88,SNR=25
FRNY Flat Rock 87.15 359 *e*P **P 02 48 59.5 +0.7**
BFSC Mount Baldy St 87.19 324 ⇓P **P 02 48 59.7 +0.4**
baz=88
U14A Mt Trumbull 87.21 328 ⇑P **P 02 49 00.2 +0.9**
baz=88,SNR=7.8
TOA0 Torodi Ar. Sit 87.23 69 *e*P **P 02 48 59.5 -0.5**
TORD Torodi Ar. Bea 87.23 69 P **P 02 48 59.3 -0.6**
comp=Z,1.4nm,0.7s,mb4.3,baz=220,slow=3.3,SNR=10
V12A Nelson 87.28 326 ⇑P **P 02 49 00.2 +0.5**
baz=88,SNR=6.3
S17A Black Ridge (B 87.38 330 ⇓P **P 02 49 00.1 0.0**
baz=88
R19A Curley Farm, L 87.41 332 ⇓P **P 02 49 00.7 +0.5**
baz=88
T15A Red Dirt Ranch 87.43 329 ⇑P **P 02 49 00.9 +0.6**
baz=88,SNR=15
SMCO Snowmass 87.43 334 *e*P **P 02 49 01.5 +1.3**
comp=Z,17nm,1.4s,mb5.1
TUQ Turquoise Moun 87.47 325 ⇓P **P 02 49 01.7 +1.1**
baz=88,SNR=8.5
U13A Pakoon Wash 87.52 327 ⇑P **P 02 49 01.0 +0.2**
baz=88
ISCO Idaho Springs 87.56 335 *e*P **P 02 49 02.1 +1.3**
V11A Goodsprings 87.61 326 ⇓P **P 02 49 01.9 +0.7**
baz=88
Q20A Ridgley Place, 87.67 333 ⇓P **P 02 49 01.4 -0.1**
baz=88
R18A Canyonlands Na 87.72 331 P **P 02 49 02.1 +0.4**
baz=88,SNR=5.7
GSC Goldstone 87.73 325 ⇑P **P 02 49 02.4 +0.6**
baz=88
GSC Goldstone 87.73 325 *e*P **P 02 49 03.0 +1.2**
T14A Hurricane 87.73 328 ⇑P **P 02 49 01.9 +0.1**
baz=88
S15A Panguitch 88.00 329 ⇓P **P 02 49 03.9 +0.9**
baz=88
T13A Saint George 88.02 328 ⇓P **P 02 49 03.6 +0.5**
baz=88
R17A Hanksville Air 88.04 331 P **P 02 49 03.5 +0.3**
baz=88,SNR=12
SHPR Sheep Range 88.08 327 *e*P **P 02 49 04.4 +1.0**
P20A De Beque 88.19 333 ⇑P **P 02 49 04.6 +0.7**
baz=88,SNR=8.5
R16A Teasdale 88.20 330 ⇓P **P 02 49 04.2 +0.2**
baz=88
CCUT Cedar City 88.27 328 *e*P **P 02 49 05.9 +1.6**
U10A Ash Meadows, A 88.48 326 ⇑P **P 02 49 05.7 +0.4**
baz=89
S13A Holt Ranch, En 88.49 328 ⇑P **P 02 49 05.2 -0.2**
baz=89
P19A Cripple Cowboy 88.51 332 ⇑P **P 02 49 05.5 +0.1**
baz=89,SNR=20
SRU San Rafael 88.58 331 ⇓P **P 02 49 05.2 -0.6**
baz=89,SNR=6.4
SRU San Rafael 88.58 331 *e*P **P 02 49 06.2 +0.4**
comp=Z,6.8nm,0.9s,mb5.0
Q16A Castle Valley 88.65 331 ⇑P **P 02 49 05.7 -0.3**
baz=89,SNR=10
MSU Marysvale 88.66 330 *e*P **P 02 49 07.3 +1.2**
MPMC Manual Prospec 88.66 325 ⇓P **P 02 49 06.0 -0.2**
baz=89,SNR=5.4
PKM Peak Mountain 88.70 322 ⇓P **P 02 49 06.3 -0.1**
baz=89
O20A White River Ci 88.71 333 ⇑P **P 02 49 06.0 -0.3**
baz=89
N22A Wattenberg Ran 88.73 335 ⇑P **P 02 49 06.0 -0.4**
baz=89
T11A Corn Creek, Al 88.73 327 ⇓P **P 02 49 07.7 +1.2**
baz=89
FURC Furnace Creek, 88.75 325 ⇑P **P 02 49 07.1 +0.5**
baz=89
ISA Isabella 88.75 324 ⇑P **P 02 49 07.7 +1.0**
baz=89,SNR=7.2
ISA Isabella 88.75 324 *e*P **P 02 49 07.5 +0.9**
comp=Z,12nm,1.1s,mb5.2
ECSD EROS Data Cent 88.81 342 *e*P **P 02 49 06.2 -0.5**
comp=Z,23nm,1.0s,mb5.5
PHWY Pilot Hill 88.88 335 *e*P **P 02 49 07.5 +0.5**
DAC Darwin (Calif) 88.89 325 *e*P **P 02 49 08.6 +1.3**
comp=Z,1.7nm,0.4s,mb4.7
P18A Preston Nutter 88.95 331 ⇑P **P 02 49 07.5 0.0**
baz=89
P17A Butcher Ranch, 88.98 331 ⇑P **P 02 49 07.9 +0.3**
baz=89
TMUT Trail Mountain 89.00 331 *e*P **P 02 49 08.7 +1.0**
N21A Black Mountain 89.04 334 ⇑P **P 02 49 07.8 -0.1**
baz=89
O19A Miners Draw (B 89.16 333 ⇓P **P 02 49 08.7 +0.3**
baz=90,SNR=9.4
VES Vestal, Richgr 89.17 324 ⇑P **P 02 49 09.5 +0.9**
baz=89
CWC Cottonwood Cre 89.24 325 ⇓P **P 02 49 09.3 +0.4**
baz=90
M22A Cedar Creek Ra 89.32 335 ⇑P **P 02 49 10.1 +0.9**
baz=90
N20A Spence Gulch, 89.35 333 ⇑P **P 02 49 09.6 +0.3**
baz=90,SNR=5.4
GRAC Grapevine Rang 89.41 325 ⇑P **P 02 49 10.7 +1.0**
baz=90
R12A Pony Springs, 89.43 328 ⇑P **P 02 49 10.3 +0.5**
baz=90
O18A Roosevelt 89.43 332 ⇓P **P 02 49 10.6 +0.9**
baz=90
P16A Fountain Green 89.44 330 ⇑P **P 02 49 10.6 +0.8**
baz=90
Q14A Sevier Lake (B 89.49 329 ⇑P **P 02 49 10.5 +0.5**
baz=90
O17A Robinson Place 89.62 331 ⇑P **P 02 49 10.9 +0.3**
baz=90
P15A Leamington 89.63 330 ⇓P **P 02 49 10.7 0.0**
baz=90
RCTC Rector, Farmer 89.63 324 ⇓P **P 02 49 11.4 +0.6**
baz=90
N19A John Jarvie Ra 89.71 333 ⇓P **P 02 49 11.0 0.0**
baz=90
Q13A Wheeler Ranch, 89.75 329 ⇓P **P 02 49 11.6 +0.4**
baz=90
M21A Separation Pea 89.75 334 ⇑P **P 02 49 10.8 -0.4**
baz=90,SNR=6.9
RWWY Rawlins 89.78 334 *e*P **P 02 49 11.0 -0.3**
comp=Z,23nm,1.2s,mb5.4
R11A Troy Canyon, C 89.83 327 ⇑P **P 02 49 11.5 -0.2**
baz=90
L22A Ellis Ranch, M 89.84 335 ⇓P **P 02 49 12.0 +0.4**
baz=90
S10A Tonopah Range, 89.88 326 ⇓P **P 02 49 11.4 -0.5**
baz=90
M20A Sweetwater, Wa 89.91 334 ⇓P **P 02 49 11.6 -0.3**
baz=90
P14A Drum Mountains 89.94 330 ⇓P **P 02 49 12.3 +0.2**
baz=90
DAU Daniels Canyon 90.00 331 *e*P **P 02 49 12.8 +0.4**
comp=Z,11nm,1.3s,mb5.0
L21A Rawlins 90.08 334 ⇓P **P 02 49 12.3 -0.4**
baz=90,SNR=11
JLU Jordanelle 90.23 331 *e*P **P 02 49 14.0 +0.5**
M19A Rock Springs 90.25 333 ⇓P **P 02 49 13.7 +0.2**
baz=91
Q11A Duckwater 90.29 327 ⇓P **P 02 49 14.2 +0.5**
baz=91
N17A Moffit Pass 90.32 332 ⇓P **P 02 49 14.5 +0.6**
baz=91
DUG Dugway 90.37 330 ⇓P **P 02 49 14.0 -0.2**
baz=91
DUG Dugway 90.37 330 *e*P **P 02 49 14.1 0.0**
L20A Wamsutter 90.43 334 ⇑P **P 02 49 13.4 -0.9**
baz=91
M17A Scullys Gap (B 90.73 332 ⇑P **P 02 49 15.1 -0.6**
baz=91
L19A Farson 90.85 333 ⇓P **P 02 49 16.2 -0.1**
baz=91,SNR=12
N15A Stansbury Isla 90.87 331 ⇑P **P 02 49 15.6 -0.9**
baz=91
L18A Fontenelle, Gr 90.92 333 ⇓P **P 02 49 15.8 -0.8**
baz=91
M16A Huntsville 90.93 331 ⇓P **P 02 49 16.3 -0.4**
baz=91
K20A Yellowstone Ra 91.01 334 ⇑P **P 02 49 15.5 -1.5**
baz=91
NVAR Mina Array Bea 91.01 325 P **P 02 49 15.8 -1.3**
comp=Z,1.3nm,0.8s,mb4.3,baz=168,slow=6.1,SNR=5.2
N14A Grayback Hills 91.08 330 ⇑P **P 02 49 16.2 -1.2**
baz=91

HWUT	Hardware Ranch	91.16	331	eP	P	02 49 17.9 +0.2
	comp=Z,11nm,0.9s,mb5.2					
SPUT	South Promonto	91.22	331	eP	P	02 49 19.9 +1.9
K19A	Absolon Red Bu	91.33	334	⇓P	P	02 49 17.8 -0.7
	baz=92,SNR=15					
L16A	Fish Haven	91.48	332	⇓P	P	02 49 18.6 -0.6
	baz=92,SNR=8.7					
PDAR	Pinedale Array	91.51	333	P	P	02 49 18.4 -0.9
	comp=Z,4.6nm,1.0s,mb4.8,baz=139,slow=4.3,SNR=20					
PDAR				LR	LR	03 25 54.3
	comp=Z,214nm,18.1s,MS4.6,baz=142,slow=32					
BW06	Boulder Array	91.51	333	P	P	02 49 18.8 -0.5
	baz=92,SNR=6.7					
BW06	Boulder Array	91.51	333	eP	P	02 49 19.1 -0.2
K18A	Toltan Ranch,	91.55	333	⇓P	P	02 49 19.2 -0.3
	baz=92,SNR=10					
M14A	Sheep Mountain	91.71	330	⇑P	P	02 49 18.7 -1.6
	baz=92					
L15A	Malad City	91.80	331	⇑P	P	02 49 19.0 -1.7
	baz=92					
M13A	Montello	91.89	330	⇓P	P	02 49 20.1 -1.0
	baz=92					
J18A	Kendall Valley	92.06	333	⇑P	P	02 49 21.6 -0.3
	baz=92,SNR=8.9					
K16A	Soda Springs	92.25	332	⇑P	P	02 49 22.4 -0.3
	baz=93					
J17A	Brown Place, J	92.42	333	⇑P	P	02 49 22.9 -0.7
	baz=93					
I18A	Diamond G Ranc	92.43	334	⇑P	P	02 49 23.0 -0.5
	baz=93,SNR=11					
REDW	Red Top Meadow	92.47	333	eP	P	02 49 23.8 0.0
	comp=Z,8.3nm,1.2s,mb4.9					
SNOW	Snow King Moun	92.53	333	eP	P	02 49 24.1 +0.1
	comp=Z,3.4nm,0.7s,mb4.9					
K14A	Jones Ranch, D	92.56	331	⇑P	P	02 49 23.0 -1.2
	baz=93					
LOHW	Long Hollow	92.61	333	eP	P	02 49 24.0 -0.4
	comp=Z,4.9nm,1.2s,mb4.8					
RRI2	Red Ridge	92.61	332	eP	P	02 49 24.6 +0.2
TPAW	Teton Pass	92.62	333	eP	P	02 49 24.7 +0.2
	comp=Z,8.9nm,1.2s,mb5.1					
J16A	Bone	92.65	332	⇑P	P	02 49 23.7 -0.9
	baz=93					
I17A	Pilgrim Ck.	92.87	333	⇑P	P	02 49 25.2 -0.4
	baz=93,SNR=7.0					
IMW	Indian Meadow	92.97	333	eP	P	02 49 26.4 +0.3
	comp=Z,11nm,1.2s,mb5.2					
L11A	Cat Creek Ranc	93.18	329	⇑P	P	02 49 26.6 -0.5
	baz=94					
RLMT	Red Lodge	93.52	335	⇓P	P	02 49 28.2 -0.3
	baz=94					
RLMT	Red Lodge	93.52	335	eP	P	02 49 28.6 0.0
	comp=Z,11nm,1.3s,mb5.1					
J13A	Cove Ranch, Pi	93.66	331	⇑P	P	02 49 28.2 -1.0
	baz=94					
G18A	Lazy EL Ranch,	93.79	334	⇓P	P	02 49 28.7 -1.1
	baz=94					
J12A	Stokes Ranch,	93.87	330	⇑P	P	02 49 29.7 -0.5
	baz=94					
HLID	Hailey	93.89	331	⇓P	P	02 49 29.8 -0.5
	baz=94					
HLID	Hailey	93.89	331	eP	P	02 49 30.4 +0.1
	comp=Z,5.2nm,1.4s,mb4.8					
QLMT	Earthquake Lak	93.96	333	eP	P	02 49 31.6 +1.0
	comp=Z,0.8nm,0.2s,mb4.8					
I13A	Wildhorse Cree	94.09	331	⇓P	P	02 49 30.0 -1.2
	baz=94					
I12A	Atlanta	94.35	330	⇓P	P	02 49 32.0 -0.4
	baz=95					
F18A	Big Timber	94.36	335	⇓P	P	02 49 31.5 -0.9
	baz=95					
MCMT	McKenzie Canyo	94.44	332	eP	P	02 49 33.1 +0.3
	comp=Z,4.0nm,1.4s,mb4.7					
G15A	Dillon	94.61	333	⇓P	P	02 49 33.3 -0.3
	baz=95					
H13A	Challis	94.70	331	⇑P	P	02 49 33.9 -0.1
	baz=95					
J09A	Fry Pan Ranch,	94.96	328	⇓P	P	02 49 35.2 0.0
	baz=95					
G13A	Cobalt	95.15	331	⇓P	P	02 49 35.0 -1.1
	baz=96					
H11A	Donnelly	95.46	330	⇓P	P	02 49 36.6 -0.8
	baz=96					
YBH	Yreka Blue Hor	95.63	324	LR	LR	03 27 37.1
	comp=Z,153nm,18.5s,MS4.5,baz=163,slow=32					
D17A	Six Diamond Ra	95.78	335	⇓P	P	02 49 37.8 -1.0
	baz=96					
D16A	Dana Ranch, Ca	95.94	334	⇓P	P	02 49 38.3 -1.3
	baz=96					
SCHQ	Schefferville	97.25	3	LR	LR	03 38 15.7
	comp=Z,92nm,18.1s,MS4.3,baz=48,slow=38					
YKA	Yellowknife Ar	110.25	340	Pdiff	Pdif	02 50 46.0 +1.9
	comp=Z,0.1nm,0.8s,baz=136,slow=6.1,SNR=2.9					
YKA				PKiKP	PKiKP	02 54 43.4 -0.6
	comp=Z,0.4nm,1.0s,baz=143,slow=2.2,SNR=3.3					
YKA	Yellowknife Ar	110.25	340	Pdif	Pdif	02 50 46.0 +1.9
YKA				PKPdf	PKiKP	02 54 43.4 -0.6
GERES	GERESS Array B	118.11	48	PKP	PKPdf	02 54 58.7 -0.8
	comp=Z,0.9nm,0.8s,baz=222,slow=1.8,SNR=7.1					
NOA	NORSAR Array B	123.23	35	PKP	PKPdf	02 55 08.1 -0.9
	comp=Z,0.5nm,0.6s,baz=152,slow=3.5,SNR=2.5					
NOA	NORSAR Array B	123.23	35	PKP	PKPdf	02 55 08.1 -0.9
BRTR	Keskin Array B	125.72	66	PKP	PKPdf	02 55 14.4 0.0
	comp=Z,1.3nm,0.8s,baz=188,slow=4.7,SNR=8.0					
MALT	Malatya	128.32	70	ePKPdf	PKPdf	02 55 19.8 +0.3
FINES	FINESS Array B	129.98	38	PKP	PKPdf	02 55 22.0 +0.1
	comp=Z,1.4nm,0.9s,baz=202,slow=3.0,SNR=3.1					
ARCES	ARCESS Array B	131.80	28	PKP	PKPdf	02 55 25.2 +0.1
	comp=Z,1.2nm,0.7s,baz=339,slow=4.8,SNR=4.0					
AKTK	Aktyubinsk	145.37	59	PKPbc	PKPbc	02 55 50.0 -0.4
AKTO	Aktyubinsk	145.37	59	PKPbc	PKPbc	02 55 50.0 -0.4
	comp=Z,9.7nm,1.0s,baz=242,slow=0.9,SNR=14					
PETK	Petropavlovsk-	145.71	305	PKPbc	PKPbc	02 55 50.4 -1.0
	comp=Z,11nm,1.0s,baz=114,slow=9.9,SNR=5.6					
ARU	Arti	145.93	49	ePKPbc	PKPbc	02 55 51.7 -0.3
ABKAR	Abkulak array	146.47	62	ePKPbc	PKPbc	02 55 53.2 -0.6
TIXI	Tiksi	149.19	347	ePKPbc	PKPbc	02 55 58.4 -2.0
BVAR	Borovoye Array	153.06	54	PKP	PKPdf	02 56 02.9 +0.2
	comp=Z,1.0nm,0.8s,baz=204,slow=3.3,SNR=5.1					
BVAR				PKPab	PKPab	02 56 22.8 +1.2
	comp=Z,1.3nm,0.7s,baz=202,slow=1.6,SNR=4.6					
CMAR	Chiang Mai Arr	154.66	160	PKP	PKPdf	02 56 05.0 -1.0
	comp=Z,0.7nm,0.3s,baz=256,slow=3.6,SNR=4.6					
CMAR				PKPbc	PKPbc	02 56 13.8 -0.7
	comp=Z,4.3nm,1.1s,baz=228,slow=3.8,SNR=5.9					
KSH	Kashi	155.78	87	ePKPbc	PKPdf	02 56 16.1 +9.2
KSH				ePKP	pPKPdf	02 56 26.0 +16
KSH				eSPKP		02 56 30.6
KSH				ePKS		02 59 47.4
KSH				ePP	PP	03 00 49.7 +38
KSH				eSKS	SKSdf	03 03 14.8 +1.5
KSH				eSKKS	SKKSac	03 07 59.1 +59
KSH				eSS		03 22 04.8
KSH				AMB	AMB	
	comp=Z,170nm,5.4s					
KSH				LR	LR	
	comp=N,170nm,7.9s					
KSH				LR	LR	
	comp=E,190nm,4.5s					
KSH				LR	LR	
	comp=Z,400nm,5.2s					
MJAR	Matsushiro Arr	155.97	265	PKPab	PKPab	02 56 32.6 -1.9
	comp=Z,2.5nm,1.1s,baz=177,slow=2.4,SNR=5.0					
KURK	Kurchatov	158.46	58	PKP	PKPdf	02 56 08.9 -1.0
	comp=Z,0.8nm,0.7s,baz=250,slow=1.5,SNR=5.6					
KURK	Kurchatov	158.46	58	ePKPdf	PKPdf	02 56 09.3 -0.6
KURK				ePKPab	PKPab	02 56 44.5 -0.3
ZALV	Zalesovo Beam	161.03	46	PKP	PKPdf	02 56 13.3 +0.6
	comp=Z,1.3nm,0.9s,baz=48,slow=2.2,SNR=4.7					
ZALV				PKPab	PKPab	02 56 56.0 +0.1
	comp=Z,0.6nm,0.6s,baz=310,slow=7.4,SNR=2.8					
MKAR	Makanchi Array	161.35	68	PKPab	PKPab	02 56 57.3 -0.3
	comp=Z,2.3nm,0.9s,baz=282,slow=5.7,SNR=7.1					
KMI	Kunming	161.96	165	PKP	PKPdf	02 56 13.2 -1.5
GYA	Guiyang	163.77	176	PKP	PKPdf	02 56 14.8 -1.6
GYA				PKPab	PKPab	02 57 10.4 +1.9
GYA				PKS		02 59 47.6
GYA				PP	PP	03 00 55.8 +2.7
GYA				SKKS	SKKSac	03 07 40.6 -1.4
GYA				LR	LR	
	comp=N,130nm,23.0s					
GYA				LR	LR	
	comp=E,110nm,22.2s					
GYA				LR	LR	
	comp=Z,100nm,25.4s					
WMQ	Urumqi	165.20	79	ePKP	PKPdf	02 56 16.7 -0.4
NJ2	Nanjing	166.30	223	ePKP	PKPdf	02 56 14.2 -4.2
NJ2				pPKP	pPKPdf	02 56 24.2 +2.8
NJ2				sPKP		02 56 28.4
NJ2				PKS		02 59 46.0
NJ2				PP	PP	03 01 05.0 -2.0
NJ2				SKS	SKSdf	03 03 12.0 -11
NJ2				AMB	AMB	
	comp=Z,60nm,6.9s					
CN2	Changchun	167.19	281	ePKP	PKPdf	02 56 18.8 +0.1
CN2				PP	PP	03 01 14.2 +2.0
CD2	Chengdu	167.78	163	PKP	PKPdf	02 56 19.8 +0.3
CD2				PKPab	PKPab	02 57 28.5 +2.5
CD2				PKS		02 59 51.0
CD2				PP	PP	03 01 17.9 +3.9
CD2				LR	LR	
	comp=Z,270nm,13.7s					
LZH	Lanzhou	172.68	153	ePKP	PKPdf	02 56 18.0 -4.1
LZH				pPKP	pPKPdf	02 56 28.6 +3.4
LZH				sPKP		02 56 34.2
BJI	Beijing	173.27	250	PKP	PKPdf	02 56 22.0 -0.2
BJI				SS	SS	03 22 56.5 -1.7
BJI				LR	LR	
	comp=N,350nm,23.8s					
BJI				LR	LR	
	comp=E,250nm,20.8s					
BJI				LR	LR	
	comp=Z,420nm,32.3s					
SONM	Songino Array	174.74	11	PKPab	PKPab	02 57 56.3 -0.1
	comp=Z,1.8nm,1.0s,baz=335,slow=3.7,SNR=7.4					
HHC	Hu-ho-hao-te	176.73	237	ePKP	PKPdf	02 56 22.2 -1.0
HHC				pPKP	pPKPdf	02 56 33.2 +7.0
HHC				sPKP		02 56 37.2
HHC				PKS		02 59 52.4
HHC				PP	PP	03 02 00.2 +1.2
HHC				SKS	SKSdf	03 03 19.2 -6.9
HHC				SKKS	SKKSac	03 08 42.6 -2.4
HHC				SS	SS	03 23 23.3 -7.6
HHC				AMB	AMB	
	comp=Z,77nm,5.9s					
HHC				LR	LR	
	comp=N,170nm,20.0s					
HHC				LR	LR	
	comp=E,150nm,20.5s					
HHC				LR	LR	
	comp=Z,170nm,21.0s					

*IDC **03** 02:45:01.3±5.1, 36°.57N×71°.24E, h84km±44km, mb3.2/5, mb1 3.4/11, mb1mx3.2/29, mbtmp3.3/11, ML3.6/6, Error ellipse: s-maj=36.9km s-min=25.9km az=23.0*

*ISCJB **03** 02:45:04.0±0.7, 36°.90N±0°.06×71°.2E±0°.1, h112km±8km, mb3.5/5, Error ellipse: s-maj=15.5km s-min=5.7km az=32.3*

*NEIC **03** 02:45:04.7±0.8, 36°.78N×71°.32E, h110km±8km, mb3.9/2, Error ellipse: s-maj=14.9km s-min=7.7km az=124.0*

*NNC **03** 02:45:07.7±6.0, 37°.15N×70°.85E, h96km±106km, mb3.2, mpv3.8, Error ellipse: s-maj=48.3km s-min=34.3km az=1.0*

ISC 03 02:45:05.2±0.7, 36°.89N±0°.06×71°.2E±0°.1, h110km±8km, n34, σ0=98/42, mb3.5/5, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.91	217	ePn	Pn	02 45 50.3	+0.3
KBL				eSn	Sn	02 46 24.3	-0.1
KSH	Kashi	4.61	54	Pn	Pn	02 46 07.9	-4.8
KSH				Sn	Sn	02 46 54.2	-11
KSH				smax			
	comp=N,230nm,0.2s						
KSH				smax			
	comp=E,290nm,0.2s						
AML	Almayashu	5.59	20	P	Pn	02 46 26.3	+0.4
	SNR=62						
AML	Almayashu	5.59	20	ePn	Pn	02 46 26.2	+0.3
	comp=E,27nm,0.5s						
AML				eSn	Sn	02 47 28.5	-0.4
UCH	Uchtor	5.93	25	P	Pn	02 46 31.1	+0.5
	SNR=9.5						
UCH	Uchtor	5.93	25	ePn	Pn	02 46 30.8	+0.2
	comp=E,4.8nm,0.4s						
UCH				eSn	Sn	02 47 35.8	-1.2
KZA	Kyzart	6.07	30	P	Pn	02 46 33.2	+0.8
	SNR=8.8						
EKS2	Erkin-Say	6.11	18	P	Pn	02 46 33.7	+0.7
	SNR=7.9						
EKS2	Erkin-Say	6.11	18	ePn	Pn	02 46 33.0	+0.1
	comp=E,7.1nm,0.4s						
EKS2				eSn	Sn	02 47 41.9	+0.4
KK31	Karatay Array	6.23	356	⇓P	Pn	02 46 34.3	-0.3
	comp=E,3.3nm,0.3s,baz=177,slow=12						
KK31				⇑S	Sn	02 47 41.0	-3.3
	comp=E,3.0nm,0.3s,baz=180,slow=25						
AAK	Ala-Archa	6.29	23	P	Pn	02 46 36.1	+0.8
	SNR=15						
AAK	Ala-Archa	6.29	23	P	Pn	02 46 36.0	+0.7
	comp=E,0.1nm,0.3s,baz=186,slow=5.0,SNR=23						
AAK				S	Sn	02 47 45.0	-0.7
	comp=E,0.0nm,0.3s,baz=341,slow=17,SNR=3.8						
CHMS	Chumysh	6.70	23	P	Pn	02 46 41.4	+0.4
	SNR=6.8						
USP	Ospenovka	6.87	21	P	Pn	02 46 43.1	-0.2
	SNR=8.1						
TKM2	Tokmak 2	6.92	28	⇑P	Pn	02 46 44.4	+0.4
	comp=E,2.3nm,0.4s						
TKM2				⇑S	Sn	02 48 01.4	+0.2
	comp=E,2.0nm,0.5s						
TKM2	Tokmak 2	6.92	28	P	Pn	02 46 44.4	+0.4
	SNR=11						
TKM2	Tokmak 2	6.92	28	ePn	Pn	02 46 44.0	0.0
	comp=E,5.1nm,0.6s						
MK31	Makanchi Array	12.90	36	ePn	Pn	02 48 03.8	-0.5
MKAR	Makanchi Array	12.90	36	P	Pn	02 48 03.6	-0.7
	comp=E,0.1nm,0.3s,baz=220,slow=11,SNR=4.9						
AB31	Akbulak array	14.81	330	P	Pn	02 48 26.8	-2.1
	comp=E,0.7nm,0.3s,baz=136,slow=13,SNR=69						
ABKAR	Akbulak array	14.81	330	ePn	Pn	02 48 26.4	-2.5
	comp=E,2.1nm,0.4s						
KURK	Kurchatov	14.82	19	P	Pn	02 48 30.3	+1.3
	comp=E,0.1nm,0.3s,baz=203,slow=10,SNR=4.1						
BVAR	Borovoye Array	16.14	358	P	Pn	02 48 46.8	+1.3
	comp=E,0.5nm,0.3s,baz=134,slow=8.8,SNR=4.6						
AKTK	Aktyubinsk	16.51	329	P	Pn	02 48 50.2	+0.1
AKTO	Aktyubinsk	16.51	329	⇓P	Pn	02 48 50.1	+0.1
	comp=E,0.6nm,0.8s						
AKTO	Aktyubinsk	16.51	329	P	Pn	02 48 50.2	+0.1
	comp=E,0.6nm,0.3s,baz=139,slow=12,SNR=8.8						
ZALV	Zalesovo Beam	19.51	25	P	P	02 49 23.2	-0.3
	comp=E,0.3nm,0.3s,baz=223,slow=9.8,SNR=6.4						
FINES	FINESS Array B	37.23	326	P	P	02 52 07.3	+1.6
	comp=E,1.5nm,0.9s,mb3.9,baz=131,slow=8.6,SNR=3.5						
ARCES	ARCESS Array B	40.84	337	P	P	02 52 37.2	+1.6
	comp=E,2.0nm,1.0s,mb3.9,baz=106,slow=9.5,SNR=3.6						
ARCES	ARCESS Array B	40.84	337	P	P	02 52 37.1	+1.6
TORD	Torodi Ar. Bea	65.85	269	P	P	02 55 38.4	-0.9
	comp=E,0.2nm,0.9s,mb2.9,baz=49,slow=6.6,SNR=3.3						
YKA	Yellowknife Ar	80.85	3	P	P	02 57 07.1	+0.6
	comp=E,0.1nm,0.4s,mb3.0,baz=348,slow=5.1,SNR=4.8						
YKA	Yellowknife Ar	80.85	3	P	P	02 57 07.1	+0.6
WRA	Warramunga Arr	82.09	122	P	P	02 57 11.8	-1.8
	comp=E,0.5nm,0.5s,mb3.6,baz=335,slow=5.1,SNR=2.5						

*ISCJB **03** 03:06:06.5±0.6, 24°.30N±0°.02×122°.03E±0°.02, h8km±4km, Error ellipse: s-maj=4.1km s-min=3.6km az=144.5*

*TAP **03** 03:06:06.5, 24°.33N×121°.99E, h10km±1km, ML3.3, D*

*JMA **03** 03:06:06.0±0.2, 24°.99N×122°.04E, h28km, M2.6*

ISC 03 03:06:06.9±0.5, 24°.30N±0°.03×122°.02E±0°.03, h10km±5km, n36, σ0=76/51, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.29	297	⇑iP	Pg	03 06 12.3	-0.4
	baz=293						
ENA				eS	Sg	03 06 17.3	+0.7
	baz=293						
TWC	Suao	0.35	333	⇑iP	Pg	03 06 13.5	-0.3
	baz=337						
TWC				S	Sg	03 06 18.4	-0.1
	baz=337						
TWD	Chiawan	0.45	241	iP	Pg	03 06 15.6	-0.1
	baz=234						
TWD				S	Sg	03 06 23.2	+1.7
	baz=234						
HWA	Hwalien	0.50	230	eP	Pg	03 06 17.3	+0.7
	baz=223						
TWE	Neicheng	0.53	322	⇑iP	Pg	03 06 16.7	-0.5
	baz=324						
TWE				eS	Sg	03 06 24.9	+0.7
	baz=324						
ENTT	Nioudou	0.54	309	iP	Pg	03 06 16.6	-0.7
	baz=309						
ENTT				S	Sg	03 06 24.4	0.0
	baz=309						
NNS	Nan Shan	0.61	283	P	Pg	03 06 18.1	-0.5
	baz=281						
NNS				eS	Sg	03 06 26.6	-0.1
	baz=281						
TWB1	Santiao Chiao	0.71	358	eP	Pg	03 06 20.4	-0.2
WHF	Hehuan Shan	0.71	258	eP	Pg	03 06 20.0	-0.6
	baz=254						
WHF				eS	Sg	03 06 31.0	+1.2
	baz=254						
NSK	Sanguang	0.71	302	⇑iP	Pg	03 06 19.9	-0.7
	baz=301						
NSK				S	Sg	03 06 29.1	-0.8
	baz=301						
ESL	Shilin	0.72	228	eP	Pg	03 06 20.8	-0.1
	baz=223						
TWT	Tachien	0.77	267	eP	Pg	03 06 21.6	-0.2
	baz=263						
TWT				eS	Sg	03 06 32.5	+0.6
	baz=263						
TWA	Mucha	0.79	330	eP	Pg	03 06 22.1	0.0
	baz=330						
TWA				eS	Sg	03 06 32.2	-0.1
	baz=330						
NWF	Wu-fen Shan	0.80	344	P	Pg	03 06 22.2	-0.1
	baz=345						
NWF				eS	Sg	03 06 32.5	-0.2
	baz=345						
YOJ	Yonaguni jima	0.92	80	P	Pg	03 06 24.5	-0.1
YOJ				eS	Sg	03 06 37.6	+1.1
TWS1	Kuangyinshan	0.97	326	eP	Pg	03 06 25.6	+0.1
	baz=326						
NSTT	Nanjuang	0.99	290	eP	Pg	03 06 25.6	-0.3
	baz=288						
NCU	National Centr	1.01	311	eS	Sg	03 06 42.0	+2.5
	baz=311						
EHY	Hungye	1.02	219	eP	Pg	03 06 25.1	-1.4
	baz=216						
TWY	Chenhua	1.04	339	eP	Pg	03 06 26.8	-0.2
	baz=339						
SMLT	Sun Moon Lake	1.11	248	eP	Pb	03 06 27.1	-1.0
	baz=245						
TYC	Yuchr	1.14	250	eP	Pb	03 06 28.0	-0.5
	baz=247						
TWQ1	Liyutan	1.14	273	eP	Pb	03 06 28.4	-0.3
	baz=270						
TWF1	Yuli	1.15	215	eP	Pb	03 06 26.5	-2.4
	baz=212						
NSY	Sanyi	1.16	276	eP	Pb	03 06 29.3	+0.4
	baz=274						
YUS	Yu-Shan	1.27	231	eP	Pn	03 06 29.9	-0.7
	baz=228						
ALS	Alishan	1.36	235	eP	Pn	03 06 31.8	-0.1
	baz=232						
CHN5	Tsauling	1.41	241	eP	Pn	03 06 32.7	0.0
	baz=238						
ELDTW	Lidau	1.44	220	eP	Pn	03 06 32.4	-0.5
	baz=217						
IRIF	Iriomote-Funau	1.56	88	P	Pn	03 06 34.0	-0.6
IRIF				eS	Sn	03 06 55.5	+0.6
CHN4	Tsaushan	1.61	234	eP	Pn	03 06 36.3	+0.9
	baz=232						
WTP	Ta-pu	1.66	231	eP	Pn	03 06 36.4	+0.3
	baz=229						
TWK	Hsinying	1.74	234	eP	Pn	03 06 38.4	+1.3
	baz=232						
CHN1	Nanshi	1.76	231	eP	Pn	03 06 38.4	+1.0
	baz=229						
JKRS	Kuro-shima	1.81	92	P	Pn	03 06 38.1	0.0
JKRS				eS	Sn	03 07 02.5	+1.3
JIJ	Ishigaki jima	1.94	88	P	Pn	03 06 39.2	-0.6
JIJ				eS	Sn	03 07 03.8	-0.4

IDC 03 03:16:29.5±1.8, 3°.40S×147°.91E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/16, mbtmp3.9/5, Error ellipse: s-maj=105.4km s-min=23.0km az=119.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.11	218	P	P	03 21 15.5	-0.3
	2.0nm,0.7s,baz=40,slow=12,SNR=8.1						
ASAR	Alice Springs	24.27	213	P	P	03 21 49.4	+0.8
	5.2nm,1.0s,baz=44,slow=7.2,SNR=16						
FITZ	Fitzroy Crossi	26.25	235	P	P	03 22 07.4	+0.8
	2.8nm,0.8s,baz=298,slow=23,SNR=3.5						
PETK	Petropavlovsk-	56.90	7	P	P	03 26 17.4	+1.3
	3.5nm,0.8s,baz=173,slow=13,SNR=3.9						
YKA	Yellowknife Ar	96.46	28	P	P	03 29 59.8	-0.6
	0.2nm,0.6s,baz=272,slow=4.6,SNR=6.6						
TORD	Torodi Ar. Bea	145.23	288	PKPbc	PKPbc	03 36 07.2	-2.7
	0.3nm,0.8s,baz=88,slow=1.9,SNR=3.6						

IDC 03 03:20:07.9±3.9, 3°.03S×148°.02E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/16, mbtmp4.1/3, Error ellipse: s-maj=114.2km s-min=50.4km az=106.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.47	217	P	P	03 24 57.9	-0.3
	9.9nm,1.1s,baz=43,slow=10,SNR=7.9						
ASAR	Alice Springs	24.64	212	P	P	03 25 30.4	0.0
	4.0nm,0.9s,baz=40,slow=7.1,SNR=16						
FITZ	Fitzroy Crossi	26.56	234	P	P	03 25 48.3	+0.4
	2.1nm,0.7s,baz=63,slow=9.0,SNR=3.4						
TORD	Torodi Ar. Bea	145.23	289	PKPbc	PKPbc	03 39 47.4	-1.0
	0.8nm,0.9s,baz=59,slow=4.1,SNR=4.3						

*ISCJB **03** 03:20:25.2±0.5, 60°.21N±0°.04×152°.85W±0°.09, h122km±5km, mb3.4/3, Error ellipse: s-maj=7.7km s-min=6.0km az=20.7*

*IDC **03** 03:20:25.9±1.8, 60°.13N×153°.36W, h113km±17km, mb3.2/3, mb1 3.4/7, mb1mx3.1/29, mbtmp3.2/7, Error ellipse: s-maj=27.7km s-min=16.5km az=99.0*

*NEIC **03** 03:20:27.2, 60°.23N×152°.80W, h118km, MG3.2(AEIC), After AEIC.*

ISC 03 03:20:26.4±0.5, 60°.21N±0°.04×152°.87W±0°.09, h113km±5km, n33, σ0=86/40, mb3.4/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	Redoubt South	0.26	12	ePg	Pn	03 20 42.9	+0.5
AUL	Augustine Lava	0.88	199	P	Pn	03 20 47.7	+1.1
AUL				S	Sn	03 21 04.0	+2.2
SLKM	Skilak Lake	1.35	76	P	Pn	03 20 51.8	+0.2
SLKM				S	Sn	03 21 10.5	-0.2
SVW2	Sparrevohn	1.61	305	P	Pn	03 20 54.4	-0.2
FIB	Fire Island	1.64	53	P	Pn	03 20 55.8	+0.9
FIB				S	Sn	03 21 19.3	+2.6
SEW	Seward	1.71

INK	Inuvik	11.63	38	P		Pn	03 23 09.8	+1.2
	0.2nm,0.3s,baz=253,slow=12,SNR=10							
DLBC	Dease Lake	11.79	89	P		Pn	03 23 15.4	+4.8
	0.5nm,0.3s,baz=263,slow=14,SNR=18							
YKA	Yellowknife Ar	18.31	66	P		P	03 24 31.8	+0.6
	0.1nm,0.3s,baz=276,slow=9.8,SNR=17							
YKA				PcP		PcP	03 28 57.3	-0.2
	0.0nm,0.3s,baz=289,slow=1.4,SNR=9.7							
YKA				ScP		ScP	03 32 21.0	-1.2
	0.0nm,0.3s,baz=283,slow=2.3,SNR=7.4							
YKA	Yellowknife Ar	18.31	66	P		P	03 24 31.8	+0.6
YKA				PcP		PcP	03 28 57.4	-0.2
YKA				ScP		ScP	03 32 21.0	-1.2
RES	Resolute Bay	25.09	32	P		P	03 25 41.3	+1.4
	0.3nm,0.5s,mb3.0,baz=252,slow=17,SNR=4.9							
TXAR	Lajitas Array	44.99	111	P		P	03 28 31.9	+1.8
	0.3nm,0.7s,mb3.1,baz=306,slow=6.3,SNR=4.5							
BVAR	Borovoye Array	61.92	332	P		P	03 30 32.5	-0.9
	1.5nm,0.6s,mb4.2,baz=37,slow=7.8,SNR=6.5							

GII ***03*** *03:20:31.8±0.0,38°.43N×36°.90E, h20km±2km, Mb4.2/5, Md3.9/7*
HLW ***03*** *03:20:50.0,37°.11N×36°.41E, h33km±46km, Ml3.5*
NIC ***03*** *03:20:52.2±0.3,36°.85N×36°.73E, h25km, ML3.5, MW3.8*
ISCJB ***03*** *03:20:52.2±0.4,36°.58N±0°.02×36°.62E±0°.02, h8km±3km, mb3.6/7, MS3.7/2, Error ellipse: s-maj=3.0km s-min=2.4km az=28.3*
NEIC ***03*** *03:20:53.0,36°.67N×36°.55E, h12km, mb4.0/1, ML3.8(ISK), After ISK.*
CSEM ***03*** *03:20:53.3±0.1,36°.59N×36°.56E, h5km, MD3.9, Mw3.8, Error ellipse: s-maj=3.3km s-min=2.6km az=126.0*
ISK ***03*** *03:20:53.0,36°.64N×36°.58E, h10km, ML3.8*
DDA ***03*** *03:20:54.1,36°.73N×36°.62E, h7km±6km, Md3.9*
IDC ***03*** *03:20:55.2±0.8,36°.63N×36°.39E, h0km, mb3.7/7, mb1 3.8/13, mb1mx3.6/29, mbtmp3.7/13, ML3.5/5, MS2.8/3, Ms1 2.8/3, ms1mx2.5/40, Error ellipse: s-maj=17.7km s-min=11.0km az=100.0*
NSSC ***03*** *03:20:56,36°.68N×36°.63E, h40km±19km*
ISC 03 03:20:53.3±0.4,36°.58N±0°.02×36°.60E±0°.02, h7km±3km, n171,σ1s25/217, mb3.6/7, MS3.7/2, 16D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	Iskenderun	0.28	259	*i* P	Pg	03 21 00.1	+1.3
COBT				*i* S	Sg	03 21 07.9	+5.4
COBT	Iskenderun	0.28	259	*i* P	Pg	03 21 00.1	+1.3
KUZU	Kuzuini	0.43	63	*i* P	Pg	03 21 01.4	-0.3
KUZU	Kuzuini	0.43	63	*i* P	Pg	03 21 01.4	-0.3
HTY	Hatay	0.58	219	*e*PG	Pg	03 21 06.4	+1.8
HTY				*e*SG	Sg	03 21 15.0	+2.7
HTY	Hatay	0.58	219	*e*Pg	Pg	03 21 06.4	+1.8
HTY				*e*Sg	Sg	03 21 15.0	+2.8
GAZ	Gaziantep	0.77	39	*e*PG	Pg	03 21 07.0	-1.2
GAZ				*e*SG	Sg	03 21 18.3	0.0
GAZ	Gaziantep	0.77	39	*e*Pg	Pg	03 21 07.0	-1.2
GAZ				*e*Sg	Sg	03 21 18.3	0.0
YURE	YUREGIR	0.81	288	*i* P	Pg	03 21 09.4	+0.5
YURE				*i* S	Sg	03 21 18.2	-1.3
YURE	YUREGIR	0.81	288	*i* P	Pg	03 21 09.4	+0.4
YURE				*i* S	Sg	03 21 18.2	-1.3
KMRS	Kahramanmaras	0.96	15	*e*PG	Pg	03 21 10.7	-1.0
KMRS				*e*SG	Sg	03 21 23.9	-0.3
KMRS	Kahramanmaras	0.96	15	*e*Pg	Pg	03 21 10.7	-1.1
KMRS				*e*Sg	Sg	03 21 23.9	-0.3
KRTS	Karatas	0.98	270	*e*PG	Pg	03 21 12.1	-0.1
KRTS	Karatas	0.98	270	*e*Pg	Pg	03 21 12.1	-0.1
WRDH	Warideh	1.08	188	⇓P	Pg	03 21 14.0	0.0
WRDH				⇓S	Sg	03 21 28.0	+0.1
WRDH	Warideh	1.08	188	⇓*i*P	Pg	03 21 14.9	+0.9
WRDH				⇓*i*S	Sg	03 21 28.7	+0.8
KOZT	Kozan	1.09	326	*e*PG	Pg	03 21 12.7	-1.6
GZT	Gaziantep	1.10	45	*i* P	Pg	03 21 13.0	-1.4
SLMH	Al Salmeh	1.13	108	⇑P	Pg	03 21 14.0	-1.1
SLMH				⇑S	Sg	03 21 28.0	-1.8
SLMH	Al Salmeh	1.13	108	⇑*i*P	Pg	03 21 14.9	-0.2
SLMH				⇑*i*S	Sg	03 21 28.3	-1.5
KFRA	Kufra	1.37	173	⇓P	Pn	03 21 19.0	+0.2
KFRA				⇓S	Sb	03 21 36.0	-0.9
KFRA	Kufra	1.37	173	⇓*i*P	Pn	03 21 19.1	+0.3
KFRA				⇓*i*S	Sb	03 21 36.2	-0.7
KARA	Karaisali	1.41	299	*e*PN	Pn	03 21 18.0	-1.4
KARA	Karaisali	1.41	299	*e*Pn	Pn	03 21 18.0	-1.4
BIDA	Albida	1.57	188	⇑P	Pn	03 21 21.0	-0.6
BIDA				⇑S	Sn	03 21 40.0	-2.2
BIDA	Albida	1.57	188	⇑*i*P	Pn	03 21 21.6	0.0
BIDA				⇑*i*S	Sn	03 21 40.2	-2.0
MERS	Mersin	1.69	281	*e*PN	Pn	03 21 23.0	-0.2
MERS	Mersin	1.69	281	*e*Pn	Pn	03 21 23.0	-0.2
JHLN	Al Jahlan	1.75	121	⇑P	Pn	03 21 23.0	-0.9
JHLN				⇑S	Sn	03 21 42.0	-4.4
JHLN	Al Jahlan	1.75	121	⇑*i*P	Pn	03 21 23.5	-0.4
JHLN				⇑*i*S	Sn	03 21 42.9	-3.5
URFA	Urfa	1.98	63	*e*PN	Pn	03 21 27.4	+0.2
URFA	Urfa	1.98	63	*e*Pn	Pn	03 21 27.4	+0.2
SARI	SarD1z-Kayseri	2.10	2	*e*PN	Pn	03 21 25.1	-3.8
SARI	SarD1z-Kayseri	2.10	2	*e*Pn	Pn	03 21 25.1	-3.7
NIG	Nigde	2.20	315	*e*PN	Pn	03 21 30.0	-0.2
NIG	Nigde	2.20	315	*e*Pn	Pn	03 21 30.0	-0.2
EREN	Erenkoy	2.23	243	*e*PN	Pn	03 21 31.1	+0.5
EREN	Erenkoy	2.23	243	*e*Pn	Pn	03 21 31.1	+0.5
MALT	Malatya	2.27	39	*e*PN	Pn	03 21 31.3	+0.2
MALT	Malatya	2.27	39	*e*Pn	Pn	03 21 29.6	-1.5
MALT				*e*Pg	Pg	03 21 34.9	-1.9
MALT				*e*Sn	Sn	03 21 57.4	-1.9
MALT				*e*Sg	Sg	03 22 05.5	-0.7
MALT	Malatya	2.27	39	*e*PN	Pn	03 21 31.3	+0.2
MALT	Malatya	2.27	39	*e*Pg	Pg	03 21 34.9	-1.8
MYA	Malataya	2.27	39	*e*PN	Pn	03 21 30.5	-0.7
MYA	Malataya	2.27	39	*e*Pn	Pn	03 21 30.5	-0.7
FKH	Fakeheh	2.34	184	*e*Pn	Pn	03 21 32.7	+0.6
FKH	Fakeheh	2.34	184	*e*Pn	Pn	03 21 32.7	+0.6
BNN	Bunyan	2.35	346	*e*PN	Pn	03 21 31.9	-0.3
BNN	Bunyan	2.35	346	*e*Pn	Pn	03 21 31.9	-0.4
HWQ	Hawqa	2.35	193	*e*Pn	Pn	03 21 33.3	+1.0
HWQ	Hawqa	2.35	193	*e*Pn	Pn	03 21 33.3	+1.0
ROOS	tl_alroos	2.47	167	⇓P	Pn	03 21 34.0	+0.1
ROOS				⇓S	Sn	03 22 02.0	-2.2
ROOS	tl_alroos	2.47	167	⇓*i*P	Pn	03 21 34.7	+0.8
ROOS				⇓*i*S	Sn	03 22 02.3	-1.9
MARH	Ras Al Marh	2.55	182	⇓P	Pn	03 21 35.0	0.0
MARH				⇓S	Sn	03 22 03.0	-3.2
MARH	Ras Al Marh	2.55	182	⇓*i*P	Pn	03 21 35.4	+0.4
MARH				⇓*i*S	Sn	03 22 03.7	-2.5
DARE	Darende-Malaty	2.56	22	*e*PN	Pn	03 21 28.8	-6.3
PHNC	Paralimni	2.61	234	P	Pn	03 21 36.6	+0.8
	14nm,0.8s						
PHNC	Paralimni	2.61	234	P	Pn	03 21 36.6	+0.8
	14nm,0.8s						
BHL	Bhannes	2.77	196	*e*Pn	Pn	03 21 38.6	+0.5
BHL	Bhannes	2.77	196	*e*Pn	Pn	03 21 38.6	+0.5
LFK	Lefkose	2.80	243	*e*PN	Pn	03 21 38.5	0.0
LFK	Lefkose	2.80	243	*e*Pn	Pn	03 21 38.5	0.0
SVRC	Sivrice-ELAZID	2.81	49	*e*PN	Pn	03 21 38.0	-0.6
SVRC	Sivrice-ELAZID	2.81	49	*e*Pn	Pn	03 21 38.0	-0.6
SULT	Sultanhani-AKS	2.94	304	*e*PN	Pn	03 21 40.9	+0.5
SULT	Sultanhani-AKS	2.94	304	*e*Pn	Pn	03 21 40.9	+0.5
QASN	Qassioun	3.05	185	⇑P	Pn	03 21 43.0	+1.1
QASN				⇑S	Sn	03 22 16.0	-2.6
QASN	Qassioun	3.05	185	⇑*i*P	Pn	03 21 43.4	+1.5
QASN				⇑*i*S	Sn	03 22 16.9	-1.7
MAMC	Mammari	3.08	244	P	Pn	03 21 41.4	-0.9
MAMC	Mammari	3.08	244	P	Pn	03 21 41.4	-0.9
CSS	Prodhromos	3.10	240	P	Pn	03 21 41.3	-1.4
	3.7nm,0.6s						
CSS				S	Sn	03 22 20.5	+0.5
CSS	Prodhromos	3.10	240	*e*Pn	Pn	03 21 42.0	-0.7
CSS	Prodhromos	3.10	240	P	Pn	03 21 41.3	-1.4
	3.7nm,0.6s						
CSS	Prodhromos	3.10	240	*e*Pn	Pn	03 21 42.0	-0.7
CSS				S	Sn	03 22 20.5	+0.5
RCY	Rachaya	3.15	192	*e*Pn	Pn	03 21 43.8	+0.5
RCY	Rachaya	3.15	192	*e*Pn	Pn	03 21 43.8	+0.5
PTK	Pertek	3.20	43	*e*PN	Pn	03 21 44.4	+0.4
PTK	Pertek	3.20	43	*e*Pn	Pn	03 21 44.4	+0.4
YOZ	Yozgat	3.22	342	*e*PN	Pn	03 21 45.0	+0.8
YOZ	Yozgat	3.22	342	*e*Pn	Pn	03 21 45.0	+0.8
MATL	Matirih	3.25	199	*e*Pn	Pn	03 21 44.2	-0.5
MATL	Matirih	3.25	199	*e*Pn	Pn	03 21 44.2	-0.5
HDMB	Hadim	3.32	278	*e*PN	Pn	03 21 46.1	+0.4
HDMB	Hadim	3.32	278	*e*PN	Pn	03 21 46.1	+0.5
LEF	Lefka	3.34	245	*e*PN	Pn	03 21 47.0	+1.1
LEF	Lefka	3.34	245	*e*Pn	Pn	03 21 47.0	+1.1
SVSK	Karacayir	3.35	5	*e*PN	Pn	03 21 46.1	0.0
SVSK	Karacayir	3.35	5	*e*Pn	Pn	03 21 46.1	+0.1
ALFC	Alevga	3.54	248	P	Pn	03 21 47.1	-1.6
	5.5nm,0.2s						
ALFC				S	Sn	03 22 30.6	-0.1
ALFC	Alevga	3.54	248	P	Pn	03 21 47.1	-1.6
	5.5nm,0.2s						
ALFC				S	Sn	03 22 30.6	-0.1
KONT	Konya--Tatoy	3.65	293	*e*PN	Pn	03 21 49.8	-0.2
KONT	Konya--Tatoy	3.65	293	*e*Pn	Pn	03 21 49.8	-0.3
MMAI	Mount Meron Ar	3.69	196	Pn	Pn	03 21 51.8	+1.2
	7.4nm,0.3s,baz=12,slow=12,SNR=51						
MMAI				Pg	Pg	03 22 01.2	-2.7
	18nm,0.3s,baz=2.4,slow=14,SNR=23						
MMAI				Sn	Sn	03 22 37.9	+3.6
	18nm,0.3s,baz=44,slow=18,SNR=5.3						
MMAI				Lg		03 22 54.4	
	37nm,0.3s,baz=10,slow=28,SNR=11						
LADK	Ladik-KONYA	3.74	297	*e*PN	Pn	03 21 52.2	+0.8
LADK	Ladik-KONYA	3.74	297	*e*Pn	Pn	03 21 52.2	+0.8
TOKT	Tokat	3.74	359	*e*PN	Pn	03 21 51.2	-0.2
TOKT	Tokat	3.74	359	*e*Pn	Pn	03 21 51.2	-0.2
EZC	Erzincan	3.84	34	*e*PN	Pn	03 21 53.6	+0.8
PPCY	Paphos	3.85	245	P	Pn	03 21 52.0	-0.9
PPCY	Paphos	3.85	245	P	Pn	03 21 52.0	-0.9
BRTR	Keskin Array B	3.91	324	Pn	Pn	03 21 53.8	0.0
	1.2nm,0.3s,baz=156,slow=13,SNR=44						
BRTR				Sn	Sn	03 22 36.9	-3.1
	1.1nm,0.3s,baz=142,slow=23,SNR=5.5						
BRTR				Lg		03 22 57.4	
	0.6nm,0.3s,baz=180,slow=32,SNR=6.3						
BRTR	Keskin Array B	3.91	324	Pn	Pn	03 21 53.8	0.0
CORM	Corum	3.91	337	*e*PN	Pn	03 21 53.1	-0.6
CORM	Corum	3.91	337	*e*Pn	Pn	03 21 53.1	-0.7
ASF	Jabal al Asfar	4.40	177	Pn	Pn	03 22 01.2	+0.7
	0.5nm,0.3s,baz=234,slow=10,SNR=6.2						
ASF				Pg	Pg	03 22 13.5	-4.2
	1.5nm,0.3s,baz=237,slow=16,SNR=8.4						
ASF				Sn	Sn	03 22 58.0	+6.0
	4.5nm,0.3s,baz=209,slow=23,SNR=3.3						
ASF				Lg		03 23 17.7	
	16nm,0.3s,baz=61,slow=22,SNR=8.5						
GUMT	Gumushane	4.49	29	*e*PN	Pn	03 22 01.6	-0.1
GUMT	Gumushane	4.49	29	*e*Pn	Pn	03 22 01.6	-0.1
SUTC	Sutluce-Ispart	4.57	283	*e*PN	Pn	03 22 03.5	+0.8
SUTC	Sutluce-Ispart	4.57	283	*e*Pn	Pn	03 22 03.5	+0.7
ESPY	Espiye-Giresun	4.64	20	*e*PN	Pn	03 22 04.5	+0.7
ESPY	Espiye-Giresun	4.64	20	*e*Pn	Pn	03 22 04.5	+0.7
CANT	Cankiri	4.65	331	*e*PN	Pn	03 22 04.4	+0.5
TOS	Tosya	4.89	337	*e*PN	Pn	03 22 07.3	+0.2
TOS	Tosya	4.89	337	*e*Pn	Pn	03 22 07.3	+0.2
EZM	Erzurum	5.01	47	*e*PN	Pn	03 22 10.1	+1.2
BYBT	Boyabat	5.09	344	*e*PN	Pn	03 22 10.6	+0.7
BYBT	Boyabat	5.09	344	*e*Pn	Pn	03 22 10.6	+0.7
DIKM	Dikmen	5.17	349	*e*PN	Pn	03 22 12.0	+0.9
DIKM	Dikmen	5.17	349	*e*Pn	Pn	03 22 12.0	+0.9
MSL	Mosul	5.25	90	*e*PN	Pn	03 22 11.0	-1.2
MSL				*e*Sn	Sn	03 23 10.0	-2.9
MSL				*e*Sg	Sg	03 23 45.0	+3.1
CUKT	Cukurca	5.66	81	*e*PN	Pn	03 22 20.5	+2.7
CUKT	Cukurca	5.66	81	*e*Pn	Pn	03 22 20.5	+2.8
VANB	Van	5.76	67	*e*PN	Pn	03 22 21.9	+2.8
VANB	Van	5.76	67	*e*Pn	Pn	03 22 21.9	+2.8
HKR	Hakkari	5.80	78	*e*PN	Pn	03 22 22.2	+2.6
HKR	Hakkari	5.80	78	*e*Pn	Pn	03 22 22.3	+2.6
AGRB	Hanur-Agry	5.87	57	*e*PN	Pn	03 22 22.4	+1.8
AGRB	Hanur-Agry	5.87	57	*e*Pn	Pn	03 22 22.4	+1.8
AMAG	Maghara	6.56	206	P	Pn	03 22 30.2	+0.1
	baz=204						
AMAG				S	Sn	03 23 42.1	-3.0
	baz=204						
AMAG	Maghara	6.56	206	P	Pn	03 22 30.2	+0.1
AMAG				S	Sn	03 23 42.1	-3.0
HNKL	Nakhl	6.98	199	P	Pn	03 22 37.2	+1.3
	baz=197						
HNKL				S	Sn	03 23 52.7	-2.9
	baz=197						
HNKL				AMP		03 24 00.0	
	comp=N,40μm,0.7s,logA/T=4.7,baz=197						
HNKL	Nakhl	6.98	199	P	Pn	03 22 37.2	+1.3
HNKL				S	Sn	03 23 52.7	-2.8
EIL	Elat	7.02	192	Pn	Pn	03 22 39.9	+3.3
	comp=N,0.1nm,0.3s,baz=62,slow=18,SNR=2.2						
EIL				Pg	Pg	03 23 01.1	-6.7
	comp=N,0.8nm,0.3s,baz=9.2,slow=13,SNR=6.3						
EIL				Lg		03 24 39.9	
	comp=N,0.9nm,0.3s,baz=70,slow=16,SNR=3.6						
EIL				LR	LR	03 25 38.1	
	comp=N,114nm,19.4s,baz=35,slow=40						
BHD	Baghdad	7.19	115	*e*Pn	Pn	03 22 40.0	+1.2
BHD				*e*Pg	Pg	03 23 13.0	+1.9
BHD				*e*Sb	Pg	03 23 13.0	+1.9
BHD				*e*Sg	Sg	03 24 03.0	-41
BHD	Baghdad	7.19	115	*e*Pn	Pn	03 22 40.0	+1.2
GNI	Garni	7.33	58	Pn	Pn	03 22 48.4	+7.8
	comp=N,0.5nm,0.3s,baz=167,slow=22,SNR=2.2						
GNI				Pg	Pg	03 23 08.3	-5.3
	comp=N,0.4nm,0.3s,baz=180,slow=16,SNR=3.0						
SUZ		7.42	206	P	Pn	03 22 42.8	+0.8
	baz=204						
SUZ		7.42	206	P	Pn	03 22 42.8	+0.8
HNAT	Natroun	8.55	218	P	Pn	03 22 57.9	+0.5
	baz=215						
HNAT	Natroun	8.55	218	P	Pn	03 22 57.9	+0.5
IDI	Anoyia	9.58	266	Pn	Pn	03 23 11.3	-0.3
	comp=N,1.4nm,0.3s,baz=79,slow=14,SNR=11						
IDI				Sn	Sn	03 24 58.3	-1.1
	comp=N,0.5nm,0.3s,baz=325,slow=16,SNR=4.8						
IDI	Anoyia	9.58	266	Pn	Pn	03 23 11.3	-0.3
IDI				Sn	Sn	03 24 58.3	-1.2
HMAT	Matruh	9.61	238	P	Pn	03 23 10.4	-1.5
	baz=235						
HMAT	Matruh	9.61	238	P	Pn	03 23 10.4	-1.5
GVD	Gavdhos	10.32	264	*e*PN	Pn	03 23 20.7	-1.0
GVD	Gavdhos	10.32	264	*e*Pn	Pn	03 23 20.7	-1.0
HFRF	Wahat Farafira	11.74	219	P	Pn	03 23 40.6	-0.5
	baz=217						
HFRF	Wahat Farafira	11.74	219	P	Pn	03 23 40.6	-0.6
SWA2		11.87	235	P	Pn	03 23 41.5	-1.5
	baz=233						
SWA2		11.87	235	P	Pn	03 23 41.5	-1.5
MLR	Muntele Rosu	11.99	321	LR	LR	03 28 25.4	
	comp=N,30nm,20.2s,baz=86,slow=38						
AKASG	Malin Array Be	15.08	342	Pn	Pn	03 24 26.9	+0.3
	comp=N,0.3nm,0.3s,baz=194,slow=13,SNR=4.1						
AKASG	Malin Array Be	15.08	342	Pn	Pn	03 24 26.9	+0.2
KWP	Kalwaria Pacla	16.49	327	*e*Pn	Pn	03 24 42.2	-2.7
	comp=N,14nm,1.1s						
GERES	GERESS Array B	20.72	313	P	P	03 25 34.2	+0.1
	comp=N,0.8nm,0.8s,baz=118,slow=11,SNR=9.5						
GERES	GERESS Array B	20.72	313	P	P	03 25 34.2	+0.1
KHC	Kasperske Hory	20.93	314	*e*P	P	03 25 44.0	+7.6
FINES	FINESS Array B	25.76	348	P	P	03 26 26.6	+2.4
	comp=N,2.2nm,0.9s,mb3.7,baz=153,slow=9.6,SNR=8.5						
FINES	FINESS Array B	25.76	348	P	P	03 26 26.6	+2.3
JOF	Joensuu	26.57	355	*e*p	P	03 26 33.8	+2.2
	comp=N,1.6nm,0.6s,mb3.7						
JOF	Joensuu	26.57	355	*e*P	P	03 26 33.8	+2.2
	comp=N,1.6nm,0.6s,mb3.7						
ARCES	ARCESS Array B	33.57	353	P	P	03 27 35.0	+1.6
	comp=N,3.0nm,1.0s,mb4.2,baz=150,slow=5.2,SNR=4.0						
ARCES	ARCESS Array B	33.57	353	P	P	03 27 35.0	+1.6
ZALV	Zalesovo Beam	37.29	47	P	P	03 28 09.9	+4.2
	comp=N,0.4nm,0.3s,mb3.7,baz=245,slow=9.5,SNR=3.6						
TORD	Torodi Ar. Bea	38.99	242	P	P	03 28 24.0	+3.6
	comp=N,1.0nm,1.0s,mb3.5,baz=28,slow=9.0,SNR=5.1						
TORD	Torodi Ar. Bea	38.99	242	P	P	03 28 24.0	+3.6
INK	Inuvik	75.17	356	P	P	03 32 39.0	+3.2
	comp=N,0.6nm,0.8s,mb3.6,baz=6.2,slow=6.1,SNR=2.9						
TGY	Tagaytay City	77.25	82	LR	LR	04 10 39.0	
	comp=N,7.3nm,19.0s,MS3.0,baz=44,slow=38						
YKA	Yellowknife Ar	78.58	347	P	P	03 32 57.7	+2.6
	comp=N,0.3nm,0.9s,mb3.2,baz=30,slow=5.3,SNR=4.5						
YKA	Yellowknife Ar	78.58	347	P	P	03 32 57.7	+2.6
YKA	Yellowknife Ar	78.58	347	P	P	03 32 57.7	+2.6
PDAR	Pinedale Array	95.22	336	LR	LR	04 18 48.1	
	comp=N,144nm,19.3s,MS4.5,baz=233,slow=36						

IDC ***03*** *03:25:42.2±1.6,3°.25S×147°.96E, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.1/16, mbtmp4.0/10, MS4.3/15, Ms1 4.3/15, ms1mx4.1/31, Error ellipse: s-maj=57.7km s-min=19.2km az=110.0*
BJI ***03*** *03:25:43.3,3°.30S×147°.90E, h25km, mB5.0/5, mb4.4/8, Ms4.6/4, Ms7 4.5/4*
ISCJB ***03*** *03:25:45.4±0.6,3°.33S±0°.07×147°.9E±0°.1, h33km, mb4.2/19, MS4.3/14, Error ellipse: s-maj=16.2km s-min=9.8km az=17.1*
NEIC ***03*** *03:25:47.4±2.3,3°.27S×147°.91E, h35km±23km, mb4.5/4, Error ellipse: s-maj=22.1km s-min=12.5km az=127.0*
GCMT ***03*** *03:25:47.4±0.2,2°.98S×147°.56E, h13km±1km, MW5.0/86, Moment Tensor Solution. s39,c50; s86,c132; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.36±.12; Mθθ1.16±.12; Mφφ-0.79±.13; Mrθ-0.81±.29; Mθφ4.15±.11; Mφr-0.71±.28; Best double couple: M0=4.37800×10^16 NP1:φs277.00000°, δ81.00000°, λ8.00000°. NP2: φs186.00000°, δ82.00000°, λ171.00000°. Principal axes: T 4.6720, Plg12.0000°, Azm142.0000°; N -0.5870, Plg78.0000°, Azm326.0000°; P -4.0840, Plg1.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 03 03:25:48.6±2.3,3°.35S±0°.09×148°.0E±0°.1, h48km±20km, n37,σ0s87/25, mb4.2/19, MS4.3/14, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	11.55	204	*e*P	Pn	03 28 30.0	-1.0
	47nm,0.7s						
CTA	Charters Tower	16.72	186	LR	LR	03 35 57.0	
	comp=Z,717nm,18.9s,baz=7.8,slow=37						
GUMO	Guam	17.11	350	LR	LR	03 34 32.0	
	comp=Z,933nm,21.4s,baz=129,slow=31						
WRAB	Tennant Creek	21.17	218	*e*P	P	03 30 31.0	+0.9
	200nm,2.0s,mb5.1						
WRA	Warramunga Arr	21.19	218	P	P	03 30 29.9	-0.3
	3.7nm,0.6s,mb3.9,baz=43,slow=11,SNR=10						
WRA				LR	LR	03 39 36.8	
	comp=Z,1μm,18.2s,MS4.4,baz=35,slow=39						
ASAR	Alice Springs	24.35	213	P	P	03 31 03.5	+1.4
	3.9nm,0.8s,mb3.9,baz=42,slow=7.3,SNR=21						
DAV	Davao City (W)	24.64	295	LR	LR	03 40 18.2	
	comp=Z,785nm,21.9s,MS4.2,baz=103,slow=36						
FITZ	Fitzroy Crossi	26.34	235	P	P	03 31 20.0	-0.3
	5.9nm,0.9s,mb4.1,baz=61,slow=12,SNR=5.4						
FITZ				LR	LR	03 42 35.1	
	comp=Z,2μm,18.8s,MS4.6,baz=285,slow=38						
CBIJ	Chichi jima	30.78	350	LR	LR	03 42 31.1	
	comp=Z,339nm,19.9s,MS4.0,baz=107,slow=33						
JOW	Kunigami	35.54	329	LR	LR	03 43 50.1	
	comp=Z,898nm,20.7s,MS4.5,baz=163,slow=31						
JHJ	Hachijo jima 2	37.09	349	LR	LR	03 45 14.4	
	comp=Z,357nm,21.6s,MS4.1,baz=179,slow=32						
MJAR	Matsushiro Arr	40.72	348	LR	LR	03 48 46.4	
	comp=Z,231nm,18.1s,MS4.1,baz=195,slow=34						
NWAO	Narrogin (SRO)	41.15	221	LR	LR	03 51 58.1	
	comp=Z,586nm,19.5s,MS4.5,baz=45,slow=38						
KSRS	Korea Array	44.67	337	P	P	03 33 55.9	-0.9
	4.9nm,1.2s,mb4.2,baz=146,slow=9.1,SNR=7.9						
KSRS				LR	LR	03 50 18.2	
	comp=Z,390nm,18.0s,MS4.4,baz=151,slow=33						
KULM	Kulim	48.05	280	*e*P	P	03 34 22.5	-1.3
	6.3nm,0.8s,mb4.7						
XAN	Xi'an	52.31	319	P	P	03 34 51.8	-3.9
XAN				S	S	03 42 16.7	-1.1
XAN				sS	sS	03 42 31.2	-8.7
XAN				pmax	pmax		
	comp=

λ109.00000°. NP2:φ₀121.00000°,δ63.00000°,λ80.00000°. Principal axes: T 1.2210, Plg70.0000°, Azm10.0000°; N 0.2170, Plg9.0000°, Azm126.0000°; P -1.4390, Plg17.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

NEIC **03** 03:53:34.9±0.1,3.02S×101.32E,mb5.6/129 Error ellipse: s-maj=4.4km s-min=3.1km az=222.0

NEIC Felt [III] at Mukomoko and Padang; [II] at Kapahiang.

MOS **03** 03:53:35.1±0.9,2.83S×101.40E,h58km,mb5.9/113, MS4.6/35,Error ellipse: s-maj=7.8km s-min=3.9km az=119.9

TEH **03** 03:53:35.0,2.89S×101.40E,h56km

DJA **03** 03:53:36,3.16S×101.04E,h64km,Mw5.7/31

IDC **03** 03:53:40.8±2.1,2.96S×101.43E,h100km±17km,mb5.3/26, mb1 5.3/27,mb1mx5.3/27,mbtmp5.3/27,MS4.5/27, Ms1 4.5/27,ms1mx4.4/30,Error ellipse: s-maj=11.4km s-min=7.7km az=33.0

ISC 03 03:53:35.8±0.1,3.02S±0.02×101.19E±0.02,h52km, h52km±.7km;pP-P,n1405,σ0.95/891,mb5.7/257,MS4.7/84, 404C-251D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.54**	**114**	P	**Pn**	**03 54 00.3**	**-0.5**
SDSI	**Sungai Dareh**	**2.08**	**7**	P	**Pn**	**03 54 09.8**	**+1.5**
MNAI	**Manna**	**2.21**	**127**	P	**Pn**	**03 54 09.3**	**-0.7**
PDSI	**Padang**	**2.21**	**341**	P	**Pn**	**03 54 10.9**	**+0.9**
LHSI	**Lahat**	**2.46**	**109**	P	**Pn**	**03 54 17.8**	**+4.3**
PPI	**Padang Panjang**	**2.66**	**343**	P	**Pn**	**03 54 17.8**	**+1.6**
RGRI	**Rengat**	**2.88**	**23**	P	**Pn**	**03 54 21.0**	**+1.7**
MDSI	**Maura Dua**	**3.32**	**116**	P	**Pn**	**03 54 28.3**	**+3.1**
LWLI	**Liwa**	**3.48**	**125**	P	**Pn**	**03 54 33.4**	**+5.9**
PMBI	**Palembang**	**3.58**	**89**	P	**Pn**	**03 54 28.7**	**-0.1**
KLI	**Kotabumi**	**4.09**	**117**	P	**Pn**	**03 54 37.5**	**+1.7**
MNSI	**Mandailing Nat**	**4.11**	**337**	P	**Pn**	**03 54 37.2**	**+1.1**
KASI	**Kota Agung**	**4.13**	**127**	P	**Pn**	**03 54 37.4**	**+1.0**
BLSI	**Bandar Lampung**	**4.67**	**120**	P	**Pn**	**03 54 44.8**	**+1.0**
PPBI	**Pangkal Pinang**	**5.01**	**80**	P	**Pn**	**03 54 49.1**	**+0.6**
	383nm,1.0s,7μm3.7nm						
TPRI	**Tanjung Pinang**	**5.14**	**41**	P	**Pn**	**03 54 51.9**	**+1.7**
	5μm,0.7s,15nm						
RBSI	**Rajabasa**	**5.34**	**122**	P	**Pn**	**03 54 54.9**	**+2.0**
	2μm,1.1s,6.8nm						
KGM	**Kluang**	**5.43**	**23**	P	**Pn**	**03 54 56.9**	**+2.6**
MYKOM	**Kota Tinggi**	**5.46**	**29**	P	**Pn**	**03 54 57.0**	**+2.3**
MYKOM	**Kota Tinggi**	**5.46**	**29**	P	**Pn**	**03 54 56.2**	**+1.5**
	1μm,1.2s,4.8nm						
TRSI	**Tarutung**	**5.48**	**336**	P	**Pn**	**03 54 58.4**	**+3.5**
	3μm,0.9s,17nm						
GSI	**Gunungsitoli**	**5.61**	**320**	P	**Pn**	**03 54 56.8**	**+0.1**
	1μm,0.8s,8.6nm						
CGJI	**Cibinong**	**5.74**	**129**	P	**Pn**	**03 54 57.0**	**-1.4**
PSI	**Prapat**	**6.21**	**339**	P	**Pn**	**03 55 04.2**	**-0.6**
PSI				S	**Sn**	**03 56 07.2**	**-7.3**
PSI				pmax	pmax		
	comp=Z,14nm,0.3s						
PSI				smax			
	comp=N,9.0nm,0.3s						
PSI				MLR	MLR		
	comp=Z,15μm,20.3s						
PSI	**Prapat**	**6.21**	**339**	P	**Pn**	**03 55 04.2**	**-0.6**
	comp=Z,14nm,0.3s,baz=166,slow=9.6,SNR=46						
PSI				S	**Sn**	**03 56 07.2**	**-7.3**
	comp=Z,9.3nm,0.3s,baz=166,slow=14,SNR=3.8						
PSI				LR	LR	03 57 53.7	
	comp=Z,15μm,20.2s,baz=145,slow=41						
FRIM	**Kepong**	**6.23**	**4**	P	**Pn**	**03 55 07.4**	**+2.3**
TNG	**Tangerang**	**6.28**	**120**	P		03 55 07.2	
	comp=Z,3μm,1.3s,comp=Z,12nm						
TNG	**Tangerang**	**6.28**	**120**	P	**Pn**	**03 55 07.7**	**+1.9**
DBJI	**Dramaga**	**6.56**	**123**	P	**Pn**	**03 55 10.2**	**+0.5**
	comp=Z,970nm,0.8s,comp=Z,5.3nm						
CBJI	**Citeko**	**6.58**	**121**	P	**Pn**	**03 55 13.2**	**+3.3**
	comp=Z,4μm,0.8s,comp=Z,12nm						
TSI	**Tuntungan**	**6.98**	**338**	P	**Pn**	**03 55 17.4**	**+1.9**
	comp=Z,1μm,1.0s,comp=Z,4.6nm						
LEM	**Lembang**	**7.44**	**121**	P	**Pn**	**03 55 22.7**	**+0.9**
	comp=Z,624nm,1.6s						
IPM	**Ipoh**	**7.45**	**359**	P	**Pn**	**03 55 24.5**	**+2.7**
IPM	**Ipoh**	**7.45**	**359**	P	**Pn**	**03 55 25.0**	**+3.1**
	comp=Z,607nm,0.9s,comp=Z,4μmcomp=Z,2.0nm						
JCJI	**Jatiwangi**	**7.85**	**116**	P	**Pn**	**03 55 31.3**	**+3.9**
	comp=Z,389nm,1.1s						
KULM	**Kulim**	**8.27**	**356**	P	**Pn**	**03 55 35.8**	**+2.6**
KULM	**Kulim**	**8.27**	**356**	*e*Pn	**Pn**	**03 55 34.5**	**+1.4**
	comp=Z,478nm,0.9s						
KTGM	**Kuala Trenggan**	**8.51**	**13**	P	**Pn**	**03 55 39.4**	**+3.0**
XMIS	**Christmas Isla**	**8.64**	**149**	*e*Pn	**Pn**	**03 55 30.4**	**-7.8**
XMIS				*e*Sn	**Sn**	**03 57 00.8**	**-14**
XMIS	**Christmas Isla**	**8.64**	**149**	P	**Pn**	**03 55 30.4**	**-7.8**
SMRI	**Semarang**	**10.05**	**114**	P	**Pn**	**03 55 59.2**	**+1.7**
	comp=Z,519nm,0.9s						
KSM	**Kuching**	**10.15**	**64**	P	**Pn**	**03 56 01.4**	**+2.5**
KSM	**Kuching**	**10.15**	**64**	*e*Pn	**Pn**	**03 55 59.6**	**+0.7**
	comp=Z,86nm,0.7s						
KSM	**Kuching**	**10.15**	**64**	P	**Pn**	**03 56 00.0**	**+1.1**
	comp=Z,132nm,0.7s,comp=Z,1μm						
BSI	**Banda Aceh**	**10.30**	**325**	P	**Pn**	**03 56 00.9**	**-0.1**
	comp=Z,300nm,1.0s						
UGM	**Wanagama**	**10.48**	**118**	P	**Pn**	**03 56 01.5**	**-2.0**
	comp=Z,429nm,1.4s						
STKI	**Sintang**	**10.73**	**74**	P	**Pn**	**03 56 09.0**	**+2.2**
	comp=Z,187nm,0.8s						
NGJI	**Ngawi**	**11.10**	**113**	P	**Pn**	**03 56 14.1**	**+2.2**
	comp=Z,254nm,1.4s						
SJI	**Sawahan**	**11.53**	**114**	P	**Pn**	**03 56 17.5**	**-0.2**
	comp=Z,361nm,0.6s						
PWJI	**Pagerwojo**	**11.67**	**116**	P	**Pn**	**03 56 18.4**	**-1.4**
	comp=Z,232nm,0.8s						
GRJI	**Gresik**	**11.89**	**109**	P	**Pn**	**03 56 25.5**	**+2.7**
	comp=Z,365nm,1.0s,comp=Z,4μm						
SBUM	**Sibu**	**12.29**	**64**	P	**Pn**	**03 56 30.9**	**+2.8**
SBUM	**Sibu**	**12.29**	**64**	P	**Pn**	**03 56 32.8**	**+4.6**
	comp=Z,300nm,1.2s,comp=Z,3μm						
GMJI	**Gumukmas**	**13.26**	**114**	P	**Pn**	**03 56 45.1**	**+3.7**
KMMI	**Kalianget**	**13.34**	**108**	P	**Pn**	**03 56 43.4**	**+0.9**
	comp=Z,380nm,1.2s						
BTM	**Bintulu**	**13.39**	**63**	P	**Pn**	**03 56 46.0**	**+2.7**
BBKI	**Banjar Baru**	**13.64**	**92**	P	**Pn**	**03 56 50.4**	**+3.8**
ABJI	**Asem Bagus**	**13.82**	**111**	P	**Pn**	**03 56 49.7**	**+0.6**
NBBI	**Negara**	**14.38**	**112**	P	**Pn**	**03 56 55.5**	**-1.0**
	comp=Z,316nm,0.8s						
SRBI	**Singaraja**	**14.83**	**110**	P	**Pn**	**03 57 02.1**	**-0.4**
	comp=Z,302nm,0.8s,comp=Z,2μm						
KBKI	**Kotaburu**	**14.96**	**91**	P	**Pn**	**03 57 07.3**	**+3.2**
KHKI	**Kahang-Kahang**	**15.29**	**111**	P	**Pn**	**03 57 05.0**	**-3.5**
	comp=Z,147nm,1.2s						
SMKI	**Samarinda**	**16.21**	**81**	P	**Pn**	**03 57 24.6**	**+4.4**
KKM	**Kota Kinabalu**	**17.50**	**59**	P	**Pn**	**03 57 38.1**	**+1.9**
KKM	**Kota Kinabalu**	**17.50**	**59**	*e*P	**Pn**	**03 57 37.4**	**+1.2**
	comp=Z,360nm,1.2s						
KKM	**Kota Kinabalu**	**17.50**	**59**	P	**Pn**	**03 57 38.3**	**+2.1**
	comp=Z,310nm,1.5s,comp=Z,4μm						
SDKM	**Sandakan**	**18.15**	**62**	P	**Pn**	**03 57 45.1**	**+0.8**
TSM	**Tawau**	**18.18**	**67**	P	**Pn**	**03 57 45.2**	**+0.6**
KDM	**Kudat**	**18.47**	**58**	P	**Pn**	**03 57 49.0**	**+0.9**
NST	**Nakhon Sawan**	**18.60**	**357**	P	**Pn**	**03 57 47.5**	**-2.1**
TTSI	**Tana Toraja**	**18.60**	**91**	P	**Pn**	**03 57 49.8**	**+0.1**
	comp=Z,324nm,1.0s						
KAPI	**Kappang**	**18.62**	**97**	Pn	**Pn**	**03 57 47.9**	**-2.1**
	comp=Z,4μm,0.9s,SNR=80						
KAPI	**Kappang**	**18.62**	**97**	P	**Pn**	**03 57 46.7**	**-3.2**
	comp=Z,14nm,0.3s,baz=276,slow=11,SNR=59						
KAPI				LR	LR	04 06 49.6	
	comp=Z,2μm,18.4s,baz=70,slow=43						
KAPI	**Kappang**	**18.62**	**97**	*e*P	**Pn**	**03 57 48.0**	**-2.0**
	comp=Z,744nm,1.0s						
KAPI	**Kappang**	**18.62**	**97**	P	**Pn**	**03 57 47.9**	**-2.1**
	SNR=80						
KAPI				P		03 57 47.9	
	SNR=80						
KAPI	**Kappang**	**18.62**	**97**	P	**Pn**	**03 57 47.5**	**-2.5**
	comp=Z,382nm,1.0s,comp=Z,3μm						
MYLDM	**Lahad Datu**	**19.11**	**65**	P	**Pn**	**03 57 55.5**	**-0.3**
MYLDM	**Lahad Datu**	**19.11**	**65**	P	**Pn**	**03 57 57.0**	**+1.1**
	comp=Z,465nm,1.2s,comp=Z,5μm						
KKTK	**Khon Kaen**	**19.30**	**5**	P	**Pn**	**03 57 55.6**	**-2.4**
	comp=Z,864nm,0.9s						
WSI	**Waingapu**	**20.10**	**110**	P	**P**	**03 58 03.5**	**-1.8**
	comp=Z,1μm,0.6s						
BDT	**Bhumibol Dam**	**20.25**	**354**	P	**P**	**03 58 04.0**	**-2.9**
	comp=Z,40nm,1.0s						
BATP	**Bataraza**	**20.30**	**55**	*e*P	**P**	**03 58 09.2**	**+1.7**
APSI	**Ampana**	**20.55**	**85**	P	**P**	**03 58 11.4**	**+1.1**
	comp=Z,1μm,1.0s,comp=Z,9μm						
MRSI	**Marisa**	**21.03**	**81**	P	**P**	**03 58 15.5**	**+0.1**
	comp=Z,369nm,0.8s,comp=Z,4μm,mb5.7						
KDI	**Kendari**	**21.41**	**93**	P	**P**	**03 58 20.1**	**+0.6**
	comp=Z,239nm,1.1s,comp=Z,2μm,mb5.4						
CM31	**Chiang Mai Arr**	**21.45**	**354**	*e*P	**P**	**03 58 17.4**	**-2.4**
CM31				*e*PcP	PcP	04 02 22.2	+0.5
CMAR	**Chiang Mai Arr**	**21.45**	**354**	P	**P**	**03 58 16.9**	**-3.0**
CMAR						04 02 22.2	
CMAR				pmax	pmax		
	comp=Z,77nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,2μm,18.5s						
CMAR	**Chiang Mai Arr**	**21.45**	**354**	P	**P**	**03 58 16.9**	**-2.9**
	comp=Z,76nm,0.8s,mb5.1,baz=185,slow=10,SNR=53						
CMAR				PcP	PcP	04 02 22.1	+0.5
	comp=Z,17nm,0.8s,baz=209,slow=3.1,SNR=17						
CMAR				ScP	ScP	04 05 54.3	-0.3
	comp=Z,6.7nm,0.9s,baz=204,slow=3.6,SNR=9.2						
CMAR				LR	LR	04 07 29.2	
	comp=Z,2μm,18.5s,MS4.5,baz=176,slow=39						
PPR	**Puerto Princes**	**21.61**	**54**	⇑*e*P	**P**	**03 58 22.1**	**+0.5**
LUWI	**Luwuk**	**21.66**	**85**	P	**P**	**03 58 22.5**	**+0.3**
	comp=Z,726nm,1.1s,comp=Z,7μm,mb6.0						
CHTO	**Chiang Mai**	**21.80**	**354**	*e*P	**P**	**03 58 22.2**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.0						
CHTO	**Chiang Mai**	**21.80**	**354**	*e*P	**P**	**03 58 22.2**	**-1.4**
	comp=Z,52nm,0.9s,mb5.0						
CHTO				*e*PcP	PcP	04 02 22.4	0.0
CHTO				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
CHTO	**Chiang Mai**	**21.80**	**354**	P	**P**	**03 58 21.6**	**-2.0**
	comp=Z,72nm,0.8s,mb5.1						
PALK	**Pallekele**	**22.86**	**297**	*e*P	**P**	**03 58 37.3**	**+2.4**
PALK				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.1						
PALK	**Pallekele**	**22.86**	**297**	*e*P	**P**	**03 58 37.2**	**+2.3**
	comp=Z,108nm,1.3s,mb5.1						
PALK	**Pallekele**	**22.86**	**297**	P	**P**	**03 58 37.9**	**+3.0**
QIZ	**Qiongzhong**	**23.50**	**21**	P	**P**	**03 58 40.3**	**-0.9**
QIZ				pP		03 58 53.5	
QIZ				sP	sP	03 58 58.2	-1.9
QIZ				PP		03 59 13.3	
QIZ				S	**S**	**04 02 48.5**	**-2.8**
QIZ				sS	sS	04 03 07.1	-6.2
QIZ				SS		04 03 39.3	
QIZ				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.2						
QIZ				pmax	pmax		
	comp=Z,540nm,9.6s						
QIZ				LR	LR		
	comp=N,2μm,20.7s						
QIZ				LR	LR		
	comp=Z,2μm,23.2s,MS4.5						
QIZ	**Qiongzhong**	**23.50**	**21**	*e*P	**P**	**03 58 41.1**	**-0.1**
	comp=Z,228nm,1.3s,mb5.4						
CUYO	**Cuyo Island**	**24.07**	**55**	*e*P	**P**	**03 58 47.0**	**+0.5**
BUSP	**Coron**	**24.08**	**51**	*e*P	**P**	**03 58 47.0**	**+0.5**
PAGZ	**Pagadian**	**24.63**	**64**	*e*P	**P**	**03 58 53.2**	**+1.6**
SJMP	**San Jose**	**25.07**	**52**	*e*P	**P**	**03 58 56.2**	**+0.6**
LUBP	**Lubang**	**25.18**	**48**	*e*P	**P**	**03 58 56.6**	**0.0**
SGSI	**Sangihe**	**25.22**	**75**	P	**P**	**03 58 57.8**	**+0.8**
GUIM	**Jordan**	**25.25**	**57**	*e*P	**P**	**03 58 57.9**	**+0.7**
MBWA	**Marble Bar**	**25.51**	**136**	*e*P	**P**	**03 58 58.0**	**-1.6**
	comp=Z,65nm,0.9s,mb5.2						
MBWA				LR	LR		
	comp=Z,2μm,20.0s,MS4.5						
MBWA	**Marble Bar**	**25.51**	**136**	P	**P**	**03 58 59.2**	**-0.4**
	SNR=7.0						
MBWA				P		03 58 59.2	
	SNR=7.0						
MBWA	**Marble Bar**	**25.51**	**136**	P	**P**	**03 58 58.5**	**-1.1**
	comp=Z,83nm,1.0s,mb5.2						
OTRP	**Odiongan**	**25.73**	**53**	*e*P	**P**	**03 59 01.9**	**+0.4**
RCP	**Roxas**	**25.87**	**56**	⇑*i*P	**P**	**03 59 03.4**	**+0.5**
NLAI	**Namlea**	**25.87**	**91**	P	**P**	**03 59 03.2**	**+0.3**
	comp=Z,111nm,0.9s,comp=Z,1μm,mb5.4						
TGY	**Tagaytay City**	**25.93**	**49**	P	**P**	**03 59 03.6**	**+0.1**
	comp=Z,2μm,0.7s,mb6.7,baz=262,slow=1.8,SNR=98						
BUKP	**Musuan**	**26.16**	**65**	*e*P	**P**	**03 59 06.8**	**+1.2**
SCZP	**Santa Cruz**	**26.30**	**44**	*e*P	**P**	**03 59 07.1**	**+0.4**
DAV	**Davao City (W)**	**26.32**	**68**	P	**P**	**03 59 05.9**	**-1.1**
	comp=Z,160nm,0.4s,mb5.9,baz=332,slow=12,SNR=6.0						
DAV				LR	LR	04 10 30.1	
	comp=Z,1μm,20.8s,MS4.4,baz=254,slow=39						
DAV	**Davao City (W)**	**26.32**	**68**	P	**P**	**03 59 08.4**	**+1.4**
	SNR=5.5						
DAV				P		03 59 08.4	
	SNR=5.5						
LBMI	**Labuha**	**26.40**	**85**	P	**P**	**03 59 07.1**	**-0.6**
	comp=Z,282nm,1.1s,comp=Z,3μm,mb5.7						
BOLP	**Bolinao**	**26.72**	**43**	*e*P	**P**	**03 59 10.0**	**-0.5**
BALP	**Baler**	**27.46**	**47**	*e*P	**P**	**03 59 16.8**	**-0.4**
KMI	**Kunming**	**28.01**	**3**	P	**P**	**03 59 22.2**	**+0.2**
KMI				pP	pP	03 59 35.5	+0.3
KMI				sP	sP	03 59 42.9	+1.6
KMI				PP	PP	04 00 16.2	-10
KMI				S	**S**	**04 04 03.4**	**+0.6**
KMI				sS	sS	04 04 29.4	+4.2
KMI				SS		04 05 28.9	
KMI				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.0						
KMI				pmax	pmax		
	comp=Z,230nm,6.1s						
KMI				LR	LR		
	comp=N,2μm,18.8s,MS4.8						
KMI				LR	LR		
	comp=E,880nm,19.3s,MS4.8						
KMI				LR	LR		
	comp=Z,2μm,19.9s,MS4.8						
PVCP	**Virac**	**28.13**	**54**	*e*P	**P**	**03 59 22.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**28.26**	**124**	*e*P	**P**	**03 59 22.8**	**-1.5**
	comp=Z,116nm,0.6s,mb5.7						
FITZ				*e*S	**S**	**04 04 01.0**	**-6.0**
FITZ	**Fitzroy Crossi**	**28.26**	**124**	P	**P**	**03 59 22.8**	**-1.5**
	comp=Z,62nm,0.7s,mb5.3,baz=297,slow=5.5,SNR=107						
FITZ				PcP	PcP	04 02 36.5	-0.3
	comp=Z,9.7nm,0.7s,baz=191,slow=6.4,SNR=2.9						
FITZ				S	**S**	**04 04 00.1**	**-6.9**
	comp=Z,8.2nm,0.8s,baz=131,slow=16,SNR=3.6						
FITZ				LR	LR	04 12 00.9	
	comp=Z,733nm,18.7s,MS4.3,baz=303,slow=39						
FITZ	**Fitzroy Crossi**	**28.26**	**124**	*e*P	**P**	**03 59 22.6**	**-1.7**
	comp=Z,64nm,0.7s,mb5.4						
FITZ	**Fitzroy Crossi**	**28.26**	**124**	P	**P**	**03 59 23.0**	**-1.3**
	comp=Z,201nm,0.8s,comp=Z,2μm,mb5.8						
AGT	**Agartala**	**28.43**	**341**	*ex*	**P**	**03 59 20.0**	**-5.8**
GZH	**Guangzhou**	**28.52**	**24**	P	**P**	**03 59 32.4**	**+5.8**
GZH				S	**S**	**04 04 25.1**	**+14**
GZH				LR	LR		
	comp=N,2μm,17.0s,MS4.9						
GZH				LR	LR		
	comp=E,690nm,12.6s,MS4.9						
GZH				LR	LR		
	comp=Z,2μm,16.8s,MS4.8						
GYA	**Guiyang**	**29.77**	**10**	⇑*i*P	**P**	**03 59 39.6**	**+2.0**
GYA				pP	pP	03 59 52.3	+1.4
GYA				sP	sP	03 59 59.8	+2.8
GYA				PP	PP	04 00 37.4	-8.3
GYA				PcP	PcP	04 02 41.0	+0.5
GYA				S	**S**	**04 04 33.4**	**+2.9**
GYA				sS	sS	04 04 53.9	+0.9
GYA				SS	SS	04 06 07.8	-31
GYA				ScP	ScP	04 06 19.0	+0.6
GYA				ScS	ScS	04 10 12.3	-1.2
GYA				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
GYA				pmax	pmax		
	comp=Z,420nm,4.9s						
GYA				LR	LR		
	comp=N,5μm,15.0s,MS5.3						
GYA				LR	LR		
	comp=E,2μm,16.2s,MS5.3						
GYA				LR	LR		
	comp=Z,4μm,15.4s,MS5.2						
SHL	**Shillong**	**29.81**	**343**	⇓*i*P	**P**	**03 59 37.0**	**-0.9**
SHL				*ex*	x	04 04 27.0	
SWI	**Sorong**	**30.13**	**87**	P	**P**	**03 59 39.1**	**-1.9**
	comp=Z,162nm,1.1s,comp=Z,2μm,mb5.7						
HYB	**Hyderabad**	**30.18**	**313**	⇑*i*P	**P**	**03 59 41.5**	**+0.1**
HYB				*e*		04 00 01.5	
TWG	**Pinlang**	**32.19**	**36**	*e*P	**P**	**03 59 59.2**	**+0.2**
	comp=Z,74nm,0.9s,mb5.5						
TPUB	**Ta-pu**	**32.30**	**35**	*e*P	**P**	**03 59 59.7**	**-0.3**
	comp=Z,164nm,1.0s,mb5.8						
KAKA	**Kakadu**	**32.38**	**109**	*e*P	**P**	**03 59 55.9**	**-4.9**
	comp=Z,27nm,0.6s,mb5.3						
KAKA	**Kakadu**	**32.38**	**109**	*e*P	**P**	**03 59 55.7**	**-5.1**
	comp=Z,79nm,0.6s,mb5.7						
QZH	**Quanzhou**	**32.52**	**30**	⇑*i*P	**P**	**04 00 02.8**	**+0.9**
QZH				S	**S**	**04 05 13.0**	**-0.6**
QZH				pmax	pmax		
	comp=Z,180nm,0.8s,mb6.0						
QZH				LR	LR		
	comp=N,1μm,16.1s,MS4.9						
QZH				LR	LR		
	comp=E,1μm,13.3s,MS4.9						
QZH				LR	LR		
	comp=Z,3μm,26.5s						
YULB	**Yu-li**	**32.76**	**36**	*e*P	**P**	**04 00 03.9**	**-0.1**
	comp=Z,100nm,0.8s,mb5.8						
NWAO	**Narrogin (SRO)**	**33.34**	**155**	*e*P	**P**	**04 00 08.1**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,35nm,0.8s						
NWAO	**Narrogin (SRO)**	**33.34**	**155**	P	**P**	**04 00 04.9**	**-4.0**
	comp=Z,24nm,1.1s,mb5.0,baz=312,slow=1.3,SNR=2.3						
NWAO				LR	LR	04 12 20.6	
	comp=Z,2μm,20.5s,MS4.7,baz=330,slow=34						
NWAO	**Narrogin (SRO)**	**33.34**	**155**	*e*P	**P**	**04 00 08.1**	**-0.8**
	comp=Z,36nm,0.8s,mb5.3						
NWAO				LR	LR	04 12 20.6	
KAD	**Karad**	**33.44**	**308**	*e*P	**P**	**04 00 11.0**	**+1.0**
KAD				AMb	AMB	04 00 12.3	
	comp=Z,90nm,1.1s,mb5.6						
NACB	**Ninganchiao**	**33.53**	**35**	*e*P	**P**	**04 00 10.6**	**-0.1**
	comp=Z,105nm,0.8s,mb5.8						
YHNB	**Yeheng**	**33.79**	**34**	*e*P	**P**	**04 00 12.9**	**0.0**
	comp=Z,73nm,1.0s,mb5.6						
CD2	**Chengdu**	**33.82**	**4**	P	**P**	**04 00 11.5**	**-1.6**
CD2				pP	pP	04 00 23.5	-3.0
CD2				sP	sP	04 00 29.0	-3.6
CD2				PP	PP	04 01 26.0	-4.6
CD2				PcP	PcP	04 02 49.1	-2.2
CD2				S	**S**	**04 05 28.2**	**-5.4**
CD2				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.8						
CD2				pmax	pmax		
	comp=Z,270nm,7.1s						
CD2				LR	LR		
	comp=N,2μm,19.6s						
CD2				LR	LR		
	comp=Z,3μm,20.2s,MS5.0						
ALBI	**Allahabad**	**33.85**	**327**	*ex*	x	04 00 15.0	
LSA	**Lhasa**	**33.92**	**344**	P	**P**	**04 00 14.7**	**+0.7**
LSA				S	**S**	**04 05 29.6**	**-5.6**
LSA				sS	sS	04 05 59.0	+1.3
LSA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
LSA				pmax	pmax		
	comp=Z,120nm,9.0s						
LSA				LR	LR		
	comp=N,23μm,30.0s,MS5.9						
LSA				LR	LR		
	comp=E,22μm,29.0s,MS5.9						
LSA				LR	LR		
	comp=Z,21μm,29.0s,MS5.7						
PKI	**Pulchoki**	**34.00**	**334**	*e*P	**P**	**04 00 15.6**	**+0.9**
	comp=Z,485nm,1.0s,mb6.4						
PKIN	**Phulchoki**	**34.01**	**334**	*e*P	**P**	**04 00 15.5**	**+0.7**
	comp=Z,303nm,0.9s,mb6.2						
ENH	**Enshi**	**34.04**	**13**	*e*P	**P**	**04 00 13.6**	**-1.4**
	comp=Z,144nm,0.7s,mb6.0						
ENH				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
TATO	**Taipei**	**34.09**	**34**	*e*P	**P**	**04 00 15.9**	**+0.3**
	comp=Z,48nm,0.7s,mb5.5						
GUN	**Gumba**	**34.10**	**335**	*e*P	**P**	**04 00 16.9**	**+1.3**
	comp=Z,2μm,0.8s,mb7.0						
KKN	**Kakani**	**34.25**	**334**	*e*P	**P**	**04 00 17.8**	**+0.9**
	comp=Z,1μm,0.9s,mb6.8						
POO	**Poona**	**34.40**	**310**	*e*P	**P**	**04 00 19.4**	**+1.1**
GKN	**Gorkha**	**34.71**	**334**	*e*P	**P**	**04 00 21.9**	**+1.0**
	comp=Z,1μm,1.1s,mb6.8						
BHPL	**Bhopal**	**34.90**	**320**	*e*P	**P**	**04 00 23.9**	**+1.3**
KOLN	**Koldanda**	**34.98**	**332**	*e*P	**P**	**04 00 24.4**	**+1.2**
	comp=Z,669nm,0.7s,mb6.7						
WHN	**Wuhan**	**35.66**	**20**	⇑P	**P**	**04 00 28.9**	**-0.1**
WHN				PcP	PcP	04 02 56.2	-0.5
WHN				pmax	pmax		
	comp=Z,160nm,0.8s,mb6.0						
WHN				LR	LR		
	comp=N,2μm,17.1s,MS5.1						
WHN				LR	LR		
	comp=E,870nm,12.9s,MS5.1						
WHN				LR	LR		
	comp=Z,2μm,21.1s						
WRA	**Warramunga Arr**	**36.46**	**120**	P	**P**	**04 00 34.1**	**-1.9**
WRA						04 02 58.5	
WRA				S	**S**	**04 06 06.8**	**-7.7**
WRA				pmax	pmax		
	comp=Z,211nm,0.9s						
WRA				smax			
	comp=N,15nm,0.

NJ2 LR LR
comp=E,370nm,11.9s
NJ2 LR LR
comp=Z,560nm,17.6s,MS4.4
SSE Sheshan 38.91 28 P **P 04 00 57.0 +0.5**
SSE S **S 04 06 52.4 +1.1**
SSE pmax pmax
comp=Z,52nm,0.8s,mb5.3
SSE pmax pmax
comp=Z,180nm,5.7s
SSE LR LR
comp=N,750nm,25.5s,MS4.5
SSE LR LR
comp=E,570nm,25.5s,MS4.5
SSE LR LR
comp=Z,1μm,25.5s,MS4.5
AJM Ajmer 38.97 320 *e*P **P 04 00 57.4 +0.3**
AJM AMb AMB 04 01 00.4
comp=Z,121nm,1.4s,mb5.4
LZH Lanzhou 38.98 3 *e*P **P 04 00 56.9 -0.1**
LZH pP pP 04 01 10.2 -0.4
LZH sP sP 04 01 17.1 +0.5
LZH PP PP 04 02 32.3 +5.1
LZH PcP PcP 04 03 07.1 +0.4
LZH *e*S **S 04 06 49.0 -3.2**
LZH ScP ScP 04 06 50.7 -0.2
LZH pmax pmax
comp=Z,120nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,340nm,4.1s
LZH LR LR
comp=N,3μm,15.7s
LZH LR LR
comp=Z,4μm,16.9s,MS5.3
NDI New Delhi 39.03 325 *e*P **P 04 00 57.0 -0.6**
NDI *ex* x 04 07 15.0
KHET Khetri 39.40 323 *e*P **P 04 01 00.7 +0.1**
KHET AMb AMB 04 01 02.8
comp=Z,98nm,0.9s,mb5.5
JOW Kunigami 39.55 40 P **P 04 01 02.2 +0.2**
comp=Z,55nm,0.7s,mb5.4,baz=262,slow=6.9,SNR=20
KKR Kurukshetra 40.23 326 *e*P **P 04 01 08.1 +0.5**
BHJ Bhuj 40.33 312 *e*P **P 04 01 09.7 +1.2**
KLP Kalpa 40.70 329 *e*P **P 04 01 12.1 +0.7**
KLP AMb AMB 04 01 16.7
comp=Z,235nm,1.1s,mb5.7
SMLA Simla 40.95 328 *e*P **P 04 01 10.4 -3.0**
SMLA *ex* x 04 01 11.3
comp=Z,127nm,0.3s
SMLA *i* x x 04 06 54.2
SDNR Sundarnagar 41.34 328 *e*P **P 04 01 17.5 +0.8**
JASL Jaisalmer 41.72 317 *e*P **P 04 01 20.8 +0.9**
TIY Taiyuan 41.84 13 *e*P **P 04 01 20.4 -0.3**
TIY S **S 04 07 33.8 -1.1**
TIY pmax pmax
comp=Z,300nm,4.5s
TIY LR LR
comp=N,2μm,17.8s,MS5.1
TIY LR LR
comp=E,390nm,13.8s,MS5.1
TIY LR LR
comp=Z,2μm,19.0s
GTA Gaotai 42.23 358⇑ *i*P **P 04 01 23.1 -0.7**
GTA pP pP 04 01 35.6 -1.9
GTA sP sP 04 01 40.6 -3.0
GTA PP PP 04 03 04.6 +2.0
GTA PcP PcP 04 03 16.7 -0.4
GTA ScP ScP 04 07 02.1 -1.5
GTA PcS PcS 04 07 07.5 -1.4
GTA S **S 04 07 39.4 -1.2**
GTA sS sS 04 08 01.0 -2.6
GTA SS SS 04 10 44.0 -6.6
GTA ScS ScS 04 11 18.5 -2.9
GTA pmax pmax
comp=Z,20nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,190nm,7.2s
GTA LR LR
comp=N,1μm,19.2s,MS5.0
GTA LR LR
comp=E,950nm,16.2s,MS5.0
GTA LR LR
comp=Z,2μm,20.4s,MS5.0
THN Thein Dam 42.73 328 *e*P **P 04 01 27.2 -0.8**
COEN Coen 42.84 107 *e*P **P 04 01 28.3 -0.9**
comp=Z,101nm,0.9s,mb5.5
BTO Baotou 44.16 10 *e*P **P 04 01 37.6 -1.7**
HHC Hu-ho-hao-te 44.67 11⇑P **P 04 01 44.2 +0.7**
HHC pP pP 04 01 57.0 -0.2
HHC sP sP 04 02 01.6 -1.6
HHC PcP PcP 04 03 25.8 +0.5
HHC PP PP 04 03 30.2 +1.6
HHC ScP ScP 04 07 13.9 +0.4
HHC PcS PcS 04 07 19.0 +0.2
HHC S **S 04 08 17.8 +1.6**
HHC sS sS 04 08 37.7 -1.6
HHC SS SS 04 11 30.5 -7.6
HHC ScS ScS 04 11 34.3 -2.3
HHC pmax pmax
comp=Z,78nm,1.2s,mb5.4
HHC pmax pmax
comp=Z,390nm,7.3s
HHC LR LR
comp=N,960nm,19.2s,MS4.9
HHC LR LR
comp=E,1μm,19.2s,MS4.9
HHC LR LR
comp=Z,1μm,19.6s,MS4.8
BJT Baijiatuau 44.98 16 *e*P **P 04 01 45.6 -0.3**
BJT pmax pmax
comp=Z,92nm,0.6s
BJT Baijiatuau 44.98 16 *e*P **P 04 01 45.6 -0.3**
comp=Z,92nm,0.6s,mb5.8
BJI Beijing 45.00 16 P **P 04 01 45.8 -0.3**
BJI S **S 04 08 20.1 -0.9**
BJI pmax pmax
comp=Z,130nm,0.6s,mb5.9
BJI pmax pmax
comp=Z,510nm,3.8s
BJI LR LR
comp=N,2μm,19.0s,MS5.0
BJI LR LR
comp=E,1μm,22.0s,MS5.0
BJI LR LR
comp=Z,1μm,20.7s,MS4.8
DL2 Dalian 45.78 22 P **P 04 01 52.5 +0.2**
DL2 S **S 04 08 32.5 +0.2**
DL2 sS sS 04 08 57.7 +2.3
DL2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
DL2 pmax pmax
comp=Z,120nm,4.7s
DL2 LR LR
comp=N,500nm,19.3s,MS4.6
DL2 LR LR
comp=E,390nm,18.6s,MS4.6
DL2 LR LR
comp=Z,600nm,20.0s,MS4.5
GUMO Guam 46.36 68 P **P 04 01 53.9 -3.4**
GUMO pmax pmax
comp=Z,162nm,0.6s,mb6.1
GUMO MLR MLR
comp=Z,315nm,21.6s,MS4.2
GUMO Guam 46.36 68 P **P 04 01 53.9 -3.4**
comp=Z,162nm,0.6s,mb6.1,baz=180,slow=8.6,SNR=13
GUMO LR LR 04 20 36.7
comp=Z,315nm,21.6s,MS4.2,baz=274,slow=35
INCN Inchon 46.71 28 *e*P **P 04 01 58.5 -1.1**
comp=Z,34nm,0.8s,mb5.3
CTA Charters Tower 47.09 115 P **P 04 02 01.7 -1.2**
CTA pmax pmax
comp=Z,141nm,0.8s
CTA MLR MLR
comp=Z,542nm,18.7s
CTA Charters Tower 47.09 115 *e*P **P 04 02 01.6 -1.3**
comp=Z,112nm,0.8s,mb5.8
CTA Charters Tower 47.09 115 P **P 04 02 01.6 -1.3**
comp=Z,140nm,0.8s,mb6.0,baz=290,slow=9.4,SNR=109
CTA LR LR 04 24 03.1
comp=Z,542nm,18.7s,MS4.5,baz=269,slow=39
CTAO Charters Tower 47.09 115 P **P 04 02 01.6 -1.3**
CTAO pmax pmax
comp=Z,160nm,0.9s,mb6.0
CTAO Charters Tower 47.09 115 *e*P **P 04 02 01.5 -1.4**
comp=Z,161nm,0.8s,mb6.0
CTAO LR LR
comp=Z,702nm,19.0s,MS4.6
CTAO Charters Tower 47.09 115 P **P 04 02 01.5 -1.4**
comp=Z,222nm,1.2s,comp=Z,2μm,mb6.0
KSRS Korea Array 47.30 29 P **P 04 02 03.6 -0.6**
comp=Z,50nm,0.9s,mb5.5,baz=228,slow=8.0,SNR=188
KSRS PcP PcP 04 03 33.9 -0.7
comp=Z,7.2nm,0.9s,baz=224,slow=2.7,SNR=4.8
KSRS ScP ScP 04 07 23.1 -1.4
comp=Z,1.7nm,0.7s,baz=220,slow=4.2,SNR=5.3
KSRS LR LR 04 24 08.2
comp=Z,388nm,18.8s,MS4.4,baz=232,slow=39
STKA Stephens Creek 47.59 132 *e*P **P 04 02 05.9 -0.7**
comp=Z,93nm,0.7s,mb5.9
STKA Stephens Creek 47.59 132 P **P 04 02 06.1 -0.5**
comp=Z,54nm,0.6s,mb5.8,baz=307,slow=7.8,SNR=99
STKA S **S 04 08 55.0 -3.5**
comp=Z,4.6nm,0.7s,baz=187,slow=18,SNR=5.2
STKA LR LR 04 22 45.8
comp=Z,717nm,19.4s,MS4.7,baz=290,slow=37
STKA Stephens Creek 47.59 132 *e*P **P 04 02 06.1 -0.5**
comp=Z,21nm,0.8s,mb5.2
KBL Kabul 48.05 324 *e*P **P 04 02 10.2 +0.1**
KBL pmax pmax
comp=Z,190nm,1.6s,mb5.9
KBL Kabul 48.05 324 *e*P **P 04 02 10.2 +0.1**
comp=Z,186nm,1.6s,mb5.9
WMQ Urumqi 48.18 347⇑ *i*P **P 04 02 11.4 +0.5**
WMQ pP pP 04 02 25.8 +1.0
WMQ PcP PcP 04 03 39.2 +1.6
WMQ PP PP 04 04 03.5 -0.2
WMQ S **S 04 09 05.0 -1.3**
WMQ sS sS 04 09 29.5 -0.1
WMQ ScS ScS 04 11 57.8 -1.6
WMQ SS SS 04 12 32.4 -3.9
WMQ pmax pmax
comp=Z,960nm,3.0s
WMQ LR LR
comp=N,460nm,22.0s,MS4.6
WMQ LR LR
comp=E,520nm,22.0s,MS4.6
WMQ LR LR
comp=Z,500nm,29.0s
KSH Kashi 48.26 334⇑ *i*P **P 04 02 10.4 -1.2**
KSH *e*pP pP 04 02 22.5 -3.0
KSH *e*sP sP 04 02 28.1 -3.4
KSH *e*PcP PcP 04 03 40.6 +2.6
KSH *e*PP PP 04 04 01.3 -3.2
KSH *e*ScP ScP 04 07 29.4 +0.9
KSH *e*PcS PcS 04 07 34.2 +0.4
KSH *e*S **S 04 09 02.4 -5.2**
KSH *e*ScS ScS 04 11 57.1 -3.0
KSH pmax pmax
comp=Z,320nm,0.8s,mb6.4
KSH LR LR
comp=N,220nm,5.8s
KSH LR LR
comp=E,320nm,5.3s
KSH LR LR
comp=Z,290nm,6.3s
WBK Wadi Bani Khal 48.44 304 P **P 04 02 15.1 +1.8**
SNR=6.9
SNY Shenyang 49.05 22⇑P **P 04 02 16.2 -1.4**
SNY pmax pmax
comp=Z,33nm,0.7s,mb5.5
SNY pmax pmax
comp=Z,250nm,2.7s,mb5.8
SNY LR LR
comp=N,790nm,18.5s,MS4.9
SNY LR LR
comp=E,710nm,19.4s,MS4.9
SNY LR LR
comp=Z,900nm,20.8s,MS4.7
JMDO Jabal Madar 49.06 303 P **P 04 02 19.5 +1.5**
SNR=6.1
SMDO Samad 49.40 304 P **P 04 02 22.0 +1.4**
SNR=8.8
BIDO Bidbid 49.54 305 P **P 04 02 23.4 +1.7**
SNR=12
CBIJ Chichi jima 49.59 50 P **P 04 02 19.4 -2.6**
comp=Z,59nm,0.4s,mb5.9,baz=293,slow=21,SNR=6.9
BSY Bisya 49.97 303 P **P 04 02 26.4 +1.4**
SNR=9.9
HOQ Hoqain 50.24 304 P **P 04 02 28.8 +1.8**
SNR=13
ULHL Ulahol 50.41 336 P **P 04 02 28.6 +0.7**
SNR=7.8
KZA Kyzart 50.68 335 P **P 04 02 31.0 +1.0**
SNR=127
ARQ Araqi 50.78 303 P **P 04 02 32.8 +1.6**
SNR=8.5
SONM Songino Array 50.84 5 P **P 04 02 31.6 +0.5**
SONM 04 03 46.7
SONM pmax pmax
comp=Z,147nm,0.9s
SONM MLR MLR
comp=Z,1μm,18.3s
SONM Songino Array 50.84 5 P **P 04 02 31.6 +0.4**
comp=Z,147nm,0.9s,mb5.9,baz=185,slow=8.6,SNR=384
SONM PcP PcP 04 03 46.7 -0.5
comp=Z,14nm,0.5s,baz=190,slow=4.2,SNR=8.0
SONM ScP ScP 04 07 38.0 -1.3
comp=Z,4.1nm,1.0s,baz=177,slow=2.0,SNR=5.1
SONM LR LR 04 26 59.8
comp=Z,1μm,18.3s,MS4.9,baz=182,slow=39
SONM PKPPKP 04 33 14.7
comp=Z,0.4nm,0.8s,baz=201,slow=2.9,SNR=4.0
ULN Ulaanbaatar 50.93 5 *e*P **P 04 02 31.8 0.0**
ULN pmax pmax
comp=Z,170nm,1.4s,mb5.8
ULN Ulaanbaatar 50.93 5 *e*P **P 04 02 31.8 0.0**
comp=Z,170nm,1.4s,mb5.8
ULN LR LR
comp=Z,1μm,21.0s,MS4.8
ULN Ulaanbaatar 50.93 5 P **P 04 02 32.4 +0.6**
SNR=28
ULN P 04 02 32.4
SNR=28
ULN Ulaanbaatar 50.93 5 P **P 04 02 32.1 +0.3**
comp=Z,108nm,1.3s,comp=Z,1μm,mb5.6
UCH Uchtor 51.11 335 P **P 04 02 34.3 +1.1**
SNR=117
UCH Uchtor 51.11 335 *e*P **P 04 02 34.1 +0.8**
comp=Z,109nm,1.0s,mb5.7
WHFO Wadi Hawf 51.14 296 P **P 04 02 35.2 +1.3**
SNR=5.1
JHJ Hachijo jima 2 51.20 42 LR LR 04 21 42.5
comp=Z,341nm,21.8s,MS4.3,baz=128,slow=33
TKM2 Tokmak 2 51.23 336 P **P 04 02 34.8 +0.6**
SNR=315
TKM2 Tokmak 2 51.23 336 *e*P **P 04 02 34.4 +0.2**
TKM2 *e**PP pP 04 02 48.4 +0.2
TKM2 pmax pmax
comp=Z,200nm,0.8s,mb6.1
TKM2 MLR MLR
comp=Z,315nm,20.0s,MS4.3
TKM2 Tokmak 2 51.23 336 *e*P **P 04 02 34.4 +0.3**
comp=Z,200nm,0.8s,mb6.1
TKM2 *e*pP pP 04 02 48.4 +0.3
TKM2 LR LR
comp=Z,315nm,20.0s,MS4.3
KBK Karagaybulak 51.28 335 P **P 04 02 35.7 +1.2**
SNR=54
ABTO Aybut 51.39 295 P **P 04 02 37.4 +1.6**
SNR=5.3
AML Almayashu 51.39 334 P **P 04 02 36.2 +0.9**
SNR=16
AML Almayashu 51.39 334 *e*P **P 04 02 36.2 +0.8**
comp=Z,141nm,0.8s,mb6.0
AML *e*pP pP 04 02 50.0 +0.7
CN2 Changchun 51.45 22⇑ *i*P **P 04 02 34.6 -1.2**
CN2 *e*pP pP 04 02 47.1 -2.7
CN2 *e*sP sP 04 02 52.5 -3.2
CN2 PcP PcP 04 03 48.1 -1.5
CN2 PP PP 04 04 32.6 -0.9
CN2 *e*S **S 04 09 49.8 -2.2**
CN2 SS SS 04 13 25.3 -3.4
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,800nm,16.0s,MS4.9
CN2 LR LR
comp=E,500nm,16.0s,MS4.9
CN2 LR LR
comp=Z,800nm,17.0s,MS4.8
AAK Ala-Archa 51.45 335 P **P 04 02 36.9 +1.1**
comp=Z,412nm,0.9s,mb6.4,SNR=64
AAK Ala-Archa 51.45 335 P **P 04 02 36.7 +0.8**
SNR=76
AAK Ala-Archa 51.45 335*c* *i*P **P 04 02 36.4 +0.6**
AAK pmax pmax
comp=Z,33nm,0.8s,mb5.3
AAK MLR MLR
comp=Z,321nm,21.0s,MS4.3
AAK Ala-Archa 51.45 335 LR LR 04 27 25.3
comp=Z,449nm,20.7s,MS4.5,baz=142,slow=39
AAK Ala-Archa 51.45 335 *e*P **P 04 02 36.3 +0.5**
comp=Z,64nm,0.9s,mb5.5
AAK *e*pP pP 04 02 49.7 -0.1
AAK LR LR
comp=Z,456nm,20.0s,MS4.5
AAK Ala-Archa 51.45 335 P **P 04 02 36.2 +0.4**
SNR=35
AAK P 04 02 36.2
SNR=35
AAK Ala-Archa 51.45 335 P **P 04 02 36.3 +0.5**
FRU Bishkek 51.57 335 *i*P **P 04 02 37.0 +0.4**
FRU *i* pP 04 02 48.0 -2.7
FRU *e* 04 09 56.0
FRU pmax pmax
comp=Z,240nm,1.4s,mb5.9
CHMS Chumysh 51.65 335 P **P 04 02 36.8 -0.5**
SNR=48
HATD Hatta, Dubai 51.74 305 P **P 04 02 39.5 +1.2**
SNR=10
EKS2 Erkin-Say 51.78 334 P **P 04 02 39.2 +0.9**
SNR=555
EKS2 Erkin-Say 51.78 334 *e*P **P 04 02 38.6 +0.3**
comp=Z,357nm,0.8s,mb6.3
EKS2 *e*pP pP 04 02 52.8 +0.5
EKS2 LR LR
comp=Z,415nm,21.0s,MS4.4
USP Ospenovka 51.97 335 P **P 04 02 39.8 +0.1**
SNR=206
FAQ Al Faqa, Dubai 52.15 305 P **P 04 02 42.8 +1.5**
SNR=11
NAZ Nazwa, Dubai 52.20 305 P **P 04 02 43.1 +1.4**
SNR=5.3
ASUD Al Ashush, Dub 52.32 304 P **P 04 02 44.3 +1.7**
SNR=5.4
MK31 Makanchi Array 52.33 344 P **P 04 02 42.0 -0.2**
MK31 Makanchi Array 52.33 344 *e*P **P 04 02 41.8 -0.4**
MKAR Makanchi Array 52.33 344 P **P 04 02 41.9 -0.3**
MKAR pmax pmax
comp=Z,260nm,0.8s
MKAR MLR MLR
comp=Z,485nm,21.1s
MKAR Makanchi Array 52.33 344 P **P 04 02 41.9 -0.3**
comp=Z,260nm,0.8s,mb6.2,baz=147,slow=7.9,SNR=1024
MKAR LR LR 04 29 53.8
comp=Z,485nm,21.1s,MS4.5,baz=155,slow=42
MKAR Makanchi Array 52.33 344 P **P 04 02 41.9 -0.3**
MKAR LR LR 04 29 53.8
MAJO Matsushiro 52.33 38 *e*P **P 04 02 41.5 -0.9**
MAJO pmax pmax
comp=Z,72nm,1.3s,mb5.4
MAJO Matsushiro 52.33 38 *e*P **P 04 02 41.5 -1.0**
comp=Z,72nm,1.3s,mb5.4
MAT Matsushiro 52.33 38 P **P 04 02 40.5 -1.9**
MAT S **S 04 10 17.0 +13**
MJAR Matsushiro Arr 52.33 38 P **P 04 02 40.4 -2.0**
comp=Z,22nm,0.7s,mb5.2,baz=213,slow=7.3,SNR=69
MJAR PcP PcP 04 03 52.0 -1.1
comp=Z,8.5nm,0.9s,baz=195,slow=3.4,SNR=4.0
MJAR ScP ScP 04 07 45.0 -1.1
comp=Z,6.5nm,1.0s,baz=220,slow=4.6,SNR=10.0
MJAR LR LR 04 25 13.9
comp=Z,281nm,21.7s,MS4.3,baz=210,slow=36
EIDS Eidsvold 52.82 120 *e*P **P 04 02 45.4 -0.9**
IDAH Dahanechah 52.85 316 *e*P **P 04 02 46.6 +0.2**
TOO Toolangi 53.16 136 *e*P **P 04 02 49.7 +1.1**
ZAK Zakamensk 53.22 2⇓ *i*P **P 04 02 48.4 -0.3**
ZAK *e* 04 03 55.8
ZAK pmax pmax
comp=Z,44nm,1.1s,mb5.3
VLA Vladivostok 53.62 28 *e*P **P 04 02 49.7 -2.1**
VLA pmax pmax
comp=Z,162nm,1.8s,mb5.7
VLA MLR MLR
comp=Z,500nm,18.2s,MS4.6
MDJ Mudanjiang 53.79 25 P **P 04 02 52.4 -0.6**
MDJ pP pP 04 03 05.5 -1.6
MDJ sP sP 04 03 11.5 -1.6
MDJ PcP PcP 04 03 57.1 -1.3
MDJ PP PP 04 04 53.3 -1.3
MDJ ScP ScP 04 07 50.6 -1.6
MDJ PcS PcS 04 07 56.5 -1.0
MDJ S **S 04 10 25.8 +1.9**
MDJ ScS ScS 04 12 37.4 -0.6
MDJ pmax pmax
comp=Z,31nm,0.8s,mb5.3
MDJ pmax pmax
comp=Z,200nm,6.9s
MDJ LR LR
comp=N,290nm,25.0s
MDJ LR LR
comp=E,920nm,18.7s
MDJ LR LR
comp=Z,1μm,20.8s,MS4.9
MDJ Mudanjiang 53.79 25 *e*P **P 04 02 52.1 -0.9**
comp=Z,26nm,0.8s,mb5.2
MOY Mondy 54.47 360⇑ *i*P **P 04 02 58.1 +0.2**
MOY pmax pmax
comp=Z,111nm,1.9s,mb5.5
HIA Hailar 54.50 15 *e*P **P 04 02 56.9 -1.2**
HIA pmax pmax
comp=Z,33nm,1.1s
HIA MLR MLR
comp=Z,727nm,19.0s
HIA Hailar 54.50 15 *e*P **P 04 02 56.9 -1.3**
comp=Z,33nm,1.1s,mb5.3
HIA LR LR
comp=Z,727nm,19.0s,MS4.8
TLY Talaya 54.53 2 P **P 04 02 59.2 +0.9**
comp=Z,657nm,0.9s,mb6.7,SNR=17
TLY Talaya 54.53 2*c* *i*P **P 04 02 58.8 +0.5**
TLY *e* 04 04 59.5
TLY *e*S **S 04 10 33.1 -0.5**
TLY *e*SSS 04 16 13.1
TLY pmax pmax
comp=Z,93nm,0.9s,mb5.8
TLY MLR MLR
comp=Z,1μm,18.0s,MS5.0
TLY Talaya 54.53 2 *e*P **P 04 02 58.4 +0.1**
comp=Z,98nm,0.9s,mb5.8
TLY Talaya 54.53 2 P **P 04 02 59.0 +0.8**
SNR=47
TLY P 04 02 59.0
SNR=47
CAN Canberra 54.65 132 *e*P **P 04 02 59.1 -0.5**
CAN pmax pmax
comp=Z,36nm,0.8s,mb5.5
CAN MLR MLR
comp=Z,815nm,20.0s,MS4.8
CAN Canberra 54.65 132 *e*P **P 04 02 59.1 -0.4**
comp=Z,36nm,0.8s,mb5.5
CAN LR LR
comp=Z,815nm,20.0s,MS4.8
IMYA Miami 54.77 319 *e*P **P 04 02 59.4 -1.0**
ARMA Armidale 54.85 125 *e*P **P 04 03 01.5 +0.4**
ARMA Armidale 54.85 125 *e*P **P 04 03 01.8 +0.7**
CNB Canberra Magne 54.92 132 *e*P **P 04 03 01.3 -0.2**
IRK Irkutsk 55.11 2⇑ *i*P **P 04 03 02.4 -0.1**
IRK pmax pmax
comp=Z,145nm,2.0s,mb5.7
IMOG Moghan 55.13 319 *e*P **P 04 03 02.3 -0.7**
ISRO Mashad 55.16 319 *e*P **P 04 03 01.3 -1.9**
IPAY Payeh 55.55 319 *e*P **P 04 03 05.8 -0.2**
RIV Riverview 55.69 129 *e*P **P 04 03 07.1 0.0**
IAKL Akhelmad 55.80 319 *e*P **P 04 03 06.8 -1.0**
IMEH Mehriz 55.95 311 *e*P **P 04 03 07.2 -1.7**
IEMG Emamgholi 56.34 320 *e*P **P 04 03 11.1 -0.5**
KURK Kurchatov 56.91 343*c* *i*P **P 04 03 13.9 -1.5**
KURK pmax pmax
comp=Z,239nm,1.0s,mb6.2
KURK Kurchatov 56.91 343 LR LR 04 32 28.9
comp=Z,418nm,20.1s,MS4.5,baz=175,slow=41
KURK PKP2bc 04 33 14.3
comp=Z,1.3nm,0.8s,baz=336,slow=2.5,SNR=4.3
KURK Kurchatov 56.91 343 *e*P **P 04 03 14.7 -0.7**
comp=Z,154nm,0.8s,mb6.1

KURK *e*pP pP 04 03 28.6 -1.0
KURK *e*PcP PcP 04 04 09.6 -0.7
KURK LR LR
comp=Z,434nm,19.0s,MS4.6
KURK Kurchatov 56.91 343 P P 04 03 15.2 -0.2
SNR=90
KURK P 04 03 15.2
SNR=90
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
ABKT Ailbek 56.98 320 P **P 04 03 16.6 +0.4**
comp=Z,406nm,0.9s,mb6.5,SNR=23
IZEF Zefreh 58.37 312 *e*P **P 04 03 24.6 -1.4**
KLR Kul'dur 58.38 23⇓*e*P **P 04 03 21.0 -4.8**
KLR *e* pP 04 03 32.8 -7.2
KLR *e*S **S 04 11 44.0 +19**
KLR pmax pmax
comp=E,60nm,1.0s
KLR pmax pmax
comp=Z,160nm,1.0s,mb6.0
KLR MLR MLR
comp=E,500nm,16.0s
KLR MLR MLR
comp=Z,1μm,16.0s,MS5.1
ZALV Zalesovo Beam 58.38 349 P **P 04 03 25.1 -0.6**
comp=Z,876nm,0.8s,mb6.8,baz=168,slow=5.3,SNR=2211
ZALV LR LR 04 32 26.7
comp=Z,370nm,19.6s,MS4.5,baz=175,slow=40
ZALV PKPPKP 04 33 04.2
comp=Z,0.6nm,0.5s,baz=316,slow=4.1,SNR=4.3
ZALV PKP2bc 04 33 14.3
comp=Z,2.3nm,0.9s,baz=264,slow=2.7,SNR=5.0
ZALV Zalesovo Beam 58.38 349 P **P 04 03 25.1 -0.6**
ZALV LR LR 04 32 26.8
ZALV P'P' 04 33 04.2
ZALV ⇑*e* 04 33 14.3
ERM Erimo 58.77 36 P **P 04 03 28.1 -0.5**
ERM pmax pmax
comp=Z,37nm,0.8s,mb5.5
ERM Erimo 58.77 36 *e*P **P 04 03 27.9 -0.7**
comp=Z,38nm,0.8s,mb5.5
IGLO Ghaloghah 59.06 316 *e*P **P 04 03 30.3 -0.5**
ISHM Shahmirzad 59.08 315 *e*P **P 04 03 30.4 -0.5**
ILAS Lasjerd 59.10 315 *e*P **P 04 03 30.9 -0.2**
IKLH Kolahrood 59.12 312 *e*P **P 04 03 30.4 -0.8**
HABR Khabarovsk 59.15 26*c e*P **P 04 03 28.9 -2.2**
HABR *e**SP sP 04 03 42.7 -8.5
HABR *e* 04 04 16.8
HABR *e* 04 05 38.7
HABR S **S 04 11 33.7 -1.0**
HABR *e**SS sS 04 11 50.3 -8.3
HABR *e* 04 13 15.5
HABR SS SS 04 15 28.7 -1.1
HABR pmax pmax
comp=Z,492nm,3.3s
HABR pmax pmax
comp=N,24nm,0.8s
HABR pmax pmax
comp=Z,81nm,0.8s,mb5.8
HABR pmax pmax
comp=E,45nm,0.9s
HABR MLR MLR
comp=Z,624nm,15.0s,MS4.9
IPIR Pirpir 59.34 311 *e*P pP 04 03 43.9 -3.2
IFIR Firoozkooh 59.38 315 *e*P **P 04 03 33.3 +0.3**
NVS Novosibirsk 59.54 348⇑*i*P **P 04 03 32.3 -1.4**
NVS *e*S **S 04 11 33.7 -5.9**
NVS pmax pmax
comp=N,169nm,1.0s
NVS pmax pmax
comp=E,119nm,1.0s
NVS pmax pmax
comp=Z,262nm,1.0s,mb6.2
NVS smax
comp=N,71nm,1.9s
NVS smax
comp=E,97nm,2.2s
ATD Arta Tunnel 59.78 285 LR LR 04 24 59.5
comp=E,277nm,20.4s,MS4.4,baz=249,slow=31
ASAJ Asahikawa 59.78 33 P **P 04 03 34.2 -1.4**
ASAJ pmax pmax
comp=Z,71nm,0.7s
ASAJ Asahikawa 59.78 33 P **P 04 03 34.2 -1.4**
comp=Z,71nm,0.7s,mb5.8,baz=256,slow=9.9,SNR=34
IDMV Damavand 59.86 315 *e*P **P 04 03 35.6 -0.7**
QRN Al-Qurain 60.04 306 *e*P **P 04 03 37.7 +0.1**
QRN AMb AMB 04 03 38.5
comp=Z,189nm,0.9s,mb6.1
KBD Kabd 60.38 306 *e*P **P 04 03 40.0 0.0**
KBD AMb AMB 04 03 41.5
comp=Z,128nm,1.1s,mb5.9
RDF Al-Radifah 60.41 306 *e*P **P 04 03 40.4 +0.3**
RDF AMb AMB 04 03 41.8
comp=Z,239nm,0.9s,mb6.2
UMR Umm Al-Rimmam 60.51 306 *e*P **P 04 03 41.0 +0.2**
IR3 Iran Long-Peri 60.53 314 *e*P **P 04 03 41.1 +0.2**
MIB Mutribah 60.91 307 *e*P **P 04 03 43.8 +0.3**
MIB AMb AMB 04 03 45.1
comp=Z,326nm,1.0s,mb6.4
IRAZ Razeghan 61.29 313 *e*P **P 04 03 46.4 +0.4**
BOD Bodaibo 61.51 8⇓*i*P **P 04 03 46.4 -0.6**
BOD pmax pmax
comp=Z,125nm,0.9s,mb6.0
BVAR Borovoye Array 61.54 339 P **P 04 03 46.3 -1.1**
comp=Z,90nm,0.7s,mb6.0,baz=144,slow=8.5,SNR=380
BVAR PKP2bc 04 33 07.8
comp=Z,0.8nm,0.7s,baz=204,slow=3.3,SNR=4.3
BVAR LR LR 04 36 23.2
comp=Z,277nm,19.7s,MS4.4,slow=42
BVAR Borovoye Array 61.54 339 P **P 04 03 46.3 -1.1**
BVAR ⇑*e* 04 33 07.8
BVAR LR LR 04 36 23.2
BRVK Borovoye 61.61 339 P **P 04 03 46.6 -1.2**
comp=Z,678nm,0.8s,mb6.8,SNR=38
BRVK Borovoye 61.61 339 P **P 04 03 46.6 -1.2**
BRVK pmax pmax
comp=Z,87nm,0.8s,mb5.9
BRVK Borovoye 61.61 339 *e*P **P 04 03 46.5 -1.3**
comp=Z,87nm,0.8s,mb5.9
BRVK *e*pP pP 04 04 00.1 -2.1
BRVK LR LR
comp=Z,312nm,20.0s,MS4.5
BRVK Borovoye 61.61 339 P **P 04 03 47.0 -0.7**
SNR=29
BRVK P 04 03 47.0
SNR=29
YSS Yuzh-Sakhalins 61.72 31⇑*i*P **P 04 03 47.8 -0.9**
YSS *e* pP 04 04 00.0 -3.0
YSS pmax pmax
comp=Z,370nm,1.0s,mb6.5
YSS Yuzh-Sakhalins 61.72 31 *e*P **P 04 03 47.9 -0.8**
comp=Z,299nm,0.8s,mb6.5
CLNS Chul'man 62.68 14 *e*P **P 04 03 54.4 -0.5**
CLNS *e* 04 04 31.5
CLNS *e* 04 06 12.1
CLNS *e*PPP 04 07 39.8
CLNS *e*S **S 04 12 19.5 +0.1**
CLNS *e* 04 13 42.0
CLNS pmax pmax
comp=Z,99nm,0.9s,mb5.9
CLNS pmax pmax
comp=E,47nm,1.0s
CLNS pmax pmax
comp=N,52nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS pmax pmax
comp=N,16nm,0.9s
CLNS smax
comp=E,455nm,20.8s
CLNS smax
comp=N,161nm,18.5s
CLNS MLR MLR
comp=E,428nm,18.0s,MS4.9
CLNS MLR MLR
comp=N,554nm,17.0s,MS4.9
CLNS MLR MLR
comp=Z,714nm,16.0s,MS4.9
ABKAR Akbulak array 63.10 331 *e*P **P 04 03 56.8 -1.0**
comp=Z,210nm,0.8s,mb6.3
CASY Casey 63.48 176 *e*P **P 04 04 01.1 +1.0**
CASY Casey 63.48 176 *e*P **P 04 04 01.0 +0.9**
comp=Z,23nm,1.0s,mb5.3
CASY LR LR
comp=Z,810nm,22.0s,MS4.9
KMBO Kilima Mbogo 63.92 270 P **P 04 04 05.8 +1.8**
comp=Z,7.1nm,0.8s,mb4.8,baz=67,slow=9.6,SNR=17
KMBO LR LR 04 26 06.9
comp=Z,543nm,21.6s,MS4.7,baz=277,slow=30
KMBO Kilima Mbogo 63.92 270 *e*P **P 04 04 05.4 +1.4**
comp=Z,17nm,1.1s,mb5.0
KMBO Kilima Mbogo 63.92 270⇑*i*P **P 04 04 05.8 +1.8**
ISRB Sarab 64.01 315 *e*P **P 04 04 04.1 0.0**
IBST Bostanabad 64.50 314 *e*P **P 04 04 06.0 -1.4**
ITBZ Tabriz 65.27 315 *e*P **P 04 04 12.3 0.0**
ISHB Shabestar 65.66 315 *e*P **P 04 04 14.8 -0.1**
NOUC Port Laguerre 65.84 113 *e*P **P 04 04 14.3 -2.1**
DZM Mont Dzumac 65.97 113 *e*LR LR 04 24 12.6
comp=Z,599nm,25.3s
DZM Mont Dzumac 65.97 113 *e*P **P 04 04 15.9 -1.2**
comp=Z,42nm,0.9s,mb5.5
MAK Makhachkala 66.50 320 *e*P **P 04 04 18.7 -1.5**
MAK *e* 04 04 43.7
MAK *e* 04 06 43.6
MAK *e*S S 04 13 09.9 +2.8
MAK *e* 04 14 12.8
MAK *e*SS SS 04 17 22.2 -2.8
MAK pmax pmax
comp=Z,164nm,1.2s,mb5.9
MSL Mosul 66.73 312 *e*P **P 04 04 22.0 +0.3**
MSL *e*S S 04 13 13.0 +3.0
HAKT HAKKARI 66.74 313⇑*i*P **P 04 04 22.0 +0.2**
GNI Garni 67.08 316*c i*P **P 04 04 24.5 +0.6**
GNI pmax pmax
comp=Z,75nm,1.7s
GNI Garni 67.08 316 *e*P **P 04 04 23.9 0.0**
comp=Z,73nm,1.0s,mb5.7
GNI LR LR
comp=Z,210nm,20.0s,MS4.3
GNI Garni 67.08 316 P **P 04 04 24.8 +1.0**
SNR=19
GNI P 04 04 24.8
SNR=19
MTA Mtatsminda 67.71 318 P **P 04 04 28.2 +0.4**
TBLG Delisi 67.76 318 P **P 04 04 28.7 +0.5**
SVE Sverdlovsk 68.07 337⇓*e*P **P 04 04 29.3 -0.5**
SVE pmax pmax
comp=Z,219nm,1.0s,mb6.1
GOR Gori 68.30 318 P **P 04 04 32.3 +0.7**
YAK Yakutsk 68.42 14*c i*P **P 04 04 30.2 -1.7**
YAK *e* 04 04 54.0
YAK *e*PPP 04 08 36.3
YAK *e*S S 04 13 26.0 -3.4
YAK *e**SS sS 04 13 47.9 -5.9
YAK *e* 04 14 19.2
YAK *e*SS SS 04 17 54.6 +0.6
YAK pmax pmax
comp=Z,512nm,1.1s,mb6.5
YAK pmax pmax
comp=N,100nm,1.1s
YAK pmax pmax
comp=E,70nm,1.0s
YAK smax
comp=E,45nm,3.8s
YAK smax
comp=N,139nm,5.3s
YAK MLR MLR
comp=N,529nm,18.0s,MS5.0
YAK MLR MLR
comp=Z,910nm,17.0s,MS5.1
YAK MLR MLR
comp=E,532nm,19.0s,MS5.0
YAK Yakutsk 68.42 14 *e*P **P 04 04 30.2 -1.7**
comp=E,587nm,0.8s,mb6.7
ARU Arti 68.61 336 P **P 04 04 32.8 -0.3**
comp=E,624nm,1.1s,mb6.5,SNR=34
ARU Arti 68.61 336*c i*P **P 04 04 32.1 -1.0**
ARU *e* 04 04 55.6
ARU *e* 04 07 02.4
ARU *e*PPP 04 08 45.0
ARU S S 04 13 34.2 +2.4
ARU SS SS 04 17 59.7 +2.6
ARU pmax pmax
comp=Z,167nm,1.2s,mb5.8
ARU MLR MLR
comp=Z,596nm,26.0s,MS4.7
ARU Arti 68.61 336 *e*P **P 04 04 32.1 -1.1**
comp=Z,113nm,1.0s,mb5.8
ARU LR LR
comp=Z,437nm,21.0s,MS4.7
BEST Besiri 68.65 313⇓*i*P **P 04 04 34.5 +0.7**
ZEI Tsey 68.78 318 *e*P **P 04 04 35.6 +1.1**
ZEI pmax pmax
comp=Z,66nm,0.7s,mb5.7
ONI Oni 69.00 318 P **P 04 04 36.7 +0.8**
HOMI Horasan 69.02 315⇑*i*P **P 04 04 36.8 +0.8**
DAGI Agillar 69.42 316⇑*i*P **P 04 04 39.2 +0.7**
ARTV Artvin 69.45 316⇑*i*P **P 04 04 39.0 +0.3**
MAW Mawson 69.60 195 P **P 04 04 40.7 +1.6**
MAW Mawson 69.60 195 *e*P **P 04 04 40.6 +1.4**
comp=Z,9.6nm,0.9s,mb4.7
MAW Mawson 69.60 195 P **P 04 04 39.9 +0.7**
comp=Z,8.8nm,0.9s,mb4.7,baz=21,slow=7.2,SNR=13
MAW LR LR 04 28 52.2
comp=Z,845nm,21.2s,MS5.0,baz=34,slow=30
MAW PKPPKP 04 32 43.0
comp=Z,5.5nm,1.0s,baz=320,slow=3.0,SNR=6.2
MAW Mawson 69.60 195 *e*P **P 04 04 39.5 +0.4**
comp=Z,2.8nm,0.9s,mb4.2
KIV Kislovodsk 70.08 319 P **P 04 04 42.5 0.0**
comp=Z,488nm,1.0s,mb6.4,SNR=13
KIV Kislovodsk 70.08 319*c i*P **P 04 04 42.8 +0.3**
KIV *e* pP 04 04 56.0 -1.1
KIV *e* 04 07 18.2
KIV *e*PPP 04 09 02.4
KIV *e*S S 04 13 49.3 -0.4
KIV *e*SS SS 04 18 25.5 +5.2
KIV pmax pmax
comp=Z,97nm,1.1s,mb5.7
KIV pmax pmax
comp=Z,111nm,6.3s
KIV MLR MLR
comp=Z,121nm,20.0s,MS4.2
KIV Kislovodsk 70.08 319 *e*P **P 04 04 42.4 -0.2**
comp=Z,74nm,0.9s,mb5.6
KIV LR LR
comp=Z,183nm,22.0s,MS4.3
KIV Kislovodsk 70.08 319 P **P 04 04 43.0 +0.5**
SNR=31
KIV P 04 04 43.0
SNR=31
POGA Pongola 70.50 242 *e*P **P 04 04 46.0 +0.5**
POGA AMb AMB 04 05 05.6
comp=Z,37nm,1.1s,mb5.2
ELZG Elazig 70.55 313⇑*i*P **P 04 04 46.7 +1.2**
MALT Malatya 70.90 312 *e*P **P 04 04 47.8 +0.2**
comp=Z,51nm,1.0s,mb5.4
MALT LR LR
comp=Z,226nm,20.0s,MS4.4
MALT Malatya 70.90 312⇑*i*P **P 04 04 48.2 +0.6**
GZT Gaziantep 71.22 311⇑*i*P **P 04 04 50.6 +1.0**
AKCD Akcadag 71.26 312⇑*i*P **P 04 04 50.6 +0.7**
SOKR Solikamsk 71.44 338*c i*P **P 04 04 50.2 -0.3**
SOKR pmax pmax
comp=Z,110nm,0.7s,mb5.9
SOKR MLR MLR
comp=Z,410nm,24.0s,MS4.6
HWQ Hawqa 71.52 308 *e*P **P 04 04 52.5 +1.0**
BHL Bhannes 71.64 307 *e*P **P 04 04 53.4 +1.1**
SOC Sochi 71.90 318*c i*P **P 04 04 52.9 -0.7**
SOC *e* pP 04 05 06.4 -1.8
SOC *e* 04 05 12.2
SOC *e* 04 07 31.0
SOC pmax pmax
comp=Z,79nm,0.8s,mb5.7
GRSN GIRESUNGRSN 71.92 315⇑*i*P **P 04 04 53.7 0.0**
PINB Pinarbasi 72.52 312⇑*i*P **P 04 04 57.2 -0.2**
LSZ Lusaka 72.82 255 P **P 04 05 00.5 +0.9**
LSZ pmax pmax
comp=Z,24nm,1.2s,mb5.0
LSZ Lusaka 72.82 255 *e*P **P 04 05 00.3 +0.7**
comp=Z,24nm,1.3s,mb5.0
LSZ Lusaka 72.82 255 *e*P **P 04 05 00.6 +1.0**
PEA0B Petropavlovsk- 73.11 32 *e*P **P 04 04 59.3 -1.2**
PETK Petropavlovsk- 73.11 32 P **P 04 04 59.5 -1.1**
comp=Z,79nm,0.7s,mb5.7,baz=354,slow=1.5,SNR=126
PETK LR LR 04 44 03.3
comp=Z,262nm,18.1s,MS4.6,baz=261,slow=41
GULE Gulek 73.31 310⇑*i*P **P 04 05 02.7 +0.6**
ERPM east rand prop 73.39 244 *e*P **P 04 05 03.4 +0.6**
ERPM AMb AMB 04 05 25.4
comp=Z,49nm,1.9s,mb5.1
PET Petropavlovsk 73.57 32α*i*P **P 04 05 02.3 -1.0**
PET *e*S S 04 14 27.0 -2.4
PET pmax pmax
comp=Z,400nm,0.9s,mb6.3
PET pmax pmax
comp=Z,432nm,0.8s,mb6.4
PET MLR MLR
comp=Z,200nm,20.0s,MS4.4
PET Petropavlovsk 73.57 32 *e*P **P 04 05 02.2 -1.1**
comp=Z,250nm,0.8s,mb6.2
MEST Erdemli 73.59 309⇑*i*P **P 04 05 03.6 -0.1**
AVNT Avonos 73.70 312⇑*i*P **P 04 05 07.5 +3.1**
CSS Prodhromos 73.78 308 *e*P **P 04 05 04.4 -0.5**
comp=Z,184nm,1.4s,mb5.8
CSS Prodhromos 73.78 308 P **P 04 05 04.8 -0.1**
VRHR Novokhopersk 73.83 326 *e*P **P 04 05 04.2 -0.6**
VRHR pmax pmax
comp=Z,190nm,0.5s,mb6.3
VRHR pmax pmax
comp=N,40nm,1.0s
VRHR pmax pmax
comp=E,50nm,0.6s
ANN Anapa 73.88 318 *e*P **P 04 05 02.2 -3.1**
ANN *e* pP 04 05 18.6 -1.3
ANN *e* 04 07 52.3
ANN *e*S S 04 14 31.1 -2.1
ANN pmax pmax
comp=Z,45nm,1.9s,mb5.1
ANN MLR MLR
comp=Z,222nm,23.0s,MS4.4
SEK Senekal 74.11 242 *e*P **P 04 05 07.0 0.0**
SEK AMb AMB 04 05 25.1
comp=Z,47nm,1.2s,mb5.3
PRYS Parys 74.23 243 *e*P **P 04 05 08.1 +0.4**
PRYS AMb AMB 04 05 29.3
comp=Z,50nm,1.2s,mb5.3
CDAG Cicekdag 74.31 312⇑*i*P **P 04 05 07.6 -0.3**
BRTR Keskin Array B 74.88 312 P **P 04 05 10.6 -0.6**
BRTR 04 07 58.4
BRTR pmax pmax
comp=Z,43nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR MLR MLR
comp=Z,65nm,20.7s
BRTR Keskin Array B 74.88 312 P **P 04 05 10.6 -0.7**
comp=Z,43nm,0.7s,mb5.5,baz=135,slow=7.1,SNR=302
BRTR PP PP 04 07 58.4 -1.0
comp=Z,1.1nm,0.3s,baz=82,slow=13,SNR=6.3
BRTR LR LR 04 42 35.0
comp=Z,65nm,20.7s,MS3.9,baz=204,slow=39
VORD Divnogorie 75.11 325 *e*P **P 04 05 10.7 -1.6**
VORD *e**SP sP 04 05 24.6 -8.2
VORD pmax pmax
comp=Z,100nm,0.8s,mb5.8
VORD pmax pmax
comp=N,50nm,0.7s
VORD pmax pmax
comp=E,70nm,1.0s
ELDT Eldivan 75.26 313⇑*i*P **P 04 05 13.2 -0.1**
VSR Storozhevoye 75.28 325*c i*P **P 04 05 12.2 -1.1**
VSR *e**SP sP 04 05 26.2 -7.6
VSR pmax pmax
comp=Z,100nm,0.5s,mb6.0
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.0s
VOR Voronezh 75.48 325⇑*i*P **P 04 05 14.0 -0.4**
VOR pmax pmax
comp=Z,300nm,1.4s,mb6.0
LBTB Lobatse 75.68 245 *e*P **P 04 05 17.0 +0.9**
LBTB pmax pmax
comp=Z,27nm,1.2s,mb5.0
LBTB MLR MLR
comp=Z,639nm,20.0s,MS4.9
LBTB Lobatse 75.68 245 *e*P **P 04 05 17.0 +0.9**
comp=Z,27nm,1.2s,mb5.0
LBTB LR LR
comp=Z,639nm,20.0s,MS4.9
LBTB Lobatse 75.68 245 *e*P **P 04 05 16.9 +0.7**
LBTB AMb AMB 04 05 39.3
comp=Z,41nm,1.6s,mb5.1
KDHN Kadinhani 75.68 311⇑*i*P **P 04 05 15.2 -0.6**
SIM Simferopol' 76.15 318*c i*P **P 04 05 18.4 +0.1**
SIM *e**PP pP 04 05 32.3 -0.8
SIM *e*S S 04 14 56.0 -2.4
SIM *e**SS sS 04 15 26.0 +2.8
SIM pmax pmax
comp=Z,77nm,0.9s,mb5.6
BOSA Boshof 76.21 241 *e*P **P 04 05 19.7 +0.6**
BOSA pmax pmax
comp=Z,18nm,0.9s,mb5.0
BOSA Boshof 76.21 241 P **P 04 05 20.0 +0.9**
comp=Z,10nm,1.0s,mb4.7,baz=100,slow=6.1,SNR=10
BOSA LR LR 04 32 28.0
comp=Z,444nm,21.7s,MS4.7,baz=138,slow=30
BOSA Boshof 76.21 241 *e*P **P 04 05 19.7 +0.6**
comp=Z,18nm,0.9s,mb5.0
BOSA Boshof 76.21 241 *e*P **P 04 05 19.9 +0.8**
BOSA AMb AMB 04 05 40.8
comp=Z,49nm,1.3s,mb5.3
SGKT Sivrigoynuk 76.28 313⇑*i*P **P 04 05 18.8 -0.5**
SOE Somerset East 76.29 237 *e*P **P 04 05 20.4 +1.0**
SOE AMb AMB 04 07 15.9
comp=Z,67nm,1.9s,mb5.2
KORT Korkueli 76.64 309⇓*i*P **P 04 05 21.4 +0.1**
TIXI Tiksi 76.67 9*c i*P **P 04 05 18.8 -1.9**
TIXI pmax pmax
comp=Z,134nm,0.9s,mb5.9
TIXI pmax pmax
comp=N,36nm,1.1s
TIXI pmax pmax
comp=E,17nm,0.9s
TIXI MLR MLR
comp=Z,1μm,17.0s,MS5.2
TIXI Tiksi 76.67 9 *e*P **P 04 05 18.7 -2.0**
comp=Z,164nm,1.0s,mb5.9
TIXI *e*PP PP 04 08 12.0 -1.7
ISP Isparta 76.71 310 P **P 04 05 20.4 -1.3**
ESKT Eskisehir 76.89 312⇓*i*P **P 04 05 22.5 -0.2**
AKAS Kas 77.04 308⇑*i*P **P 04 05 16.2 -7.4**
SYO Syowa Base 77.30 199⇓*e*X 04 05 28.8
GOLH Golhisar 77.31 309⇑*i*P **P 04 05 24.6 -0.5**
KHAL Karahalli 77.63 310⇑*i*P **P 04 05 26.2 -0.7**
MOS Moscow 77.97 329 *e*P **P 04 05 24.0 -4.4**
MOS *e* pP 04 05 41.1 -2.0
MOS *e* 04 08 20.6
MOS *e*S S 04 15 13.5 -4.4
MOS *e* 04 15 40.3
MOS pmax pmax
comp=Z,400nm,1.4s,mb6.2
MOS pmax pmax
comp=Z,198nm,0.9s,mb6.0

ARG Arkhangelos 78.20 308 P **P 04 05 30.1 0.0**
OBN Obninsk 78.28 328 P **P 04 05 29.1 -1.0**
comp=Z,1µm,0.8s,mb6.9,SNR=9.6
OBN Obninsk 78.28 328*c* iP **P 04 05 29.7 -0.4**
OBN *i* pP 04 05 44.1 -0.8
OBN *i* 04 08 27.2
OBN *i* S S 04 15 18.9 -2.3
OBN pmax pmax
comp=Z,259nm,1.2s,mb6.0
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.5
OBN Obninsk 78.28 328 *e*P **P 04 05 29.4 -0.6**
comp=Z,90nm,0.7s,mb5.8
OBN LR LR
comp=Z,293nm,20.0s,MS4.6
DEMI Demirci 78.38 311⇑ *i*P **P 04 05 30.9 -0.1**
AYDN Tasoluk 78.71 309⇑ *i*P **P 04 05 33.2 +0.3**
BDRM Kayabasi 78.92 309⇓ *i*P **P 04 05 33.6 -0.4**
GCAM G?zelcaml? 79.22 309⇑ *i*P **P 04 05 35.9 +0.2**
KLMR Klimovskoe 79.26 334⇑ *i*P **P 04 05 35.0 -0.3**
KLMR *i* 04 08 37.5
KLMR pmax pmax
comp=Z,143nm,1.1s,mb5.8
BALY Balya 79.37 311⇑ *i*P **P 04 05 36.2 -0.2**
ZKR Zakros 79.49 306 P **P 04 05 37.3 +0.1**
BLCB Balcova 79.51 310 P **P 04 05 37.6 +0.4**
TLCR 79.81 317⇑ P **P 04 05 38.7 0.0**
TLCR 79.81 317⇑ *i*P **P 04 05 38.7 0.0**
PSN Preselentsi 79.88 315 P **P 04 05 39.0 -0.1**
TIRR Tirgusor 79.91 316 *e*P **P 04 05 38.8 -0.4**
comp=Z,60nm,0.9s,mb5.5
TIRR Tirgusor 79.91 316⇓ *i*P **P 04 05 39.3 +0.1**
LAST Lasithi 80.10 306 P **P 04 05 40.8 +0.3**
SUR Sutherland 80.27 238 *e*P **P 04 05 42.6 +1.2**
comp=Z,35nm,0.8s,mb5.3
KIS Kishinev 80.28 319 *e*P **P 04 05 38.0 -3.1**
KIS LRM 04 33 36.0
comp=Z,300nm,19.0s
KIS Kishinev 80.28 319 *e*P **P 04 05 38.0 -3.1**
KIS *e* 04 08 44.0
KIS *e* 04 15 40.0
PRK Paraskevi 80.28 310 P **P 04 05 41.4 +0.1**
HARR Harsova 80.30 316⇑ P **P 04 05 41.4 +0.1**
HARR Harsova 80.30 316⇑ *i*P **P 04 05 41.4 +0.1**
PRD Provadia 80.31 315 P **P 04 05 41.2 -0.2**
THR1 Thera Island 80.34 307 P **P 04 05 41.6 -0.1**
THR3 Thira Island, 80.39 308 P **P 04 05 41.4 -0.6**
THR4 Thira Island, 80.41 308 P **P 04 05 41.9 -0.2**
APE Apeiranthos 80.42 308⇑ *i*P **P 04 05 41.3 -0.8**
APE Apeiranthos 80.42 308 P **P 04 05 41.4 -0.7**
THR5 Thira Island, 80.44 308 P **P 04 05 41.8 -0.5**
LEOM Leova 80.52 318⇑ P **P 04 05 42.5 0.0**
LEOM Leova 80.52 318⇑ *i*P **P 04 05 42.5 0.0**
SIGR SIGRI 80.59 310 P **P 04 05 42.7 -0.3**
SIVA Sivas 80.61 306 P **P 04 05 43.6 +0.4**
JMB Yambol 80.73 314 P **P 04 05 44.1 +0.4**
JMB Yambol 80.73 314 P **P 04 05 44.1 +0.4**
ALN Alexandroupoli 80.79 312 P **P 04 05 43.4 -0.7**
AKASG Malin Array Be 81.01 322 *i*P **P 04 05 44.0 -1.0**
AKASG pmax pmax
comp=Z,37nm,0.8s
AKASG Malin Array Be 81.01 322 P **P 04 05 44.1 -0.9**
comp=Z,37nm,0.8s,mb5.4,baz=92,slow=4.5,SNR=119
AKASG PP PP 04 08 49.5 -0.8
comp=Z,5.2nm,0.8s,baz=83,slow=7.0,SNR=6.8
AKBB Malin Array Si 81.01 322 *e*P **P 04 05 43.8 -1.2**
AKBB *e**PP pP 04 05 58.6 -1.2
KIEV Kiev 81.02 322 *e*P **P 04 05 44.1 -0.9**
KIEV pmax pmax
comp=Z,48nm,0.9s,mb5.4
KIEV Kiev 81.02 322 *e*P **P 04 05 43.9 -1.1**
comp=Z,48nm,0.9s,mb5.4
KIEV *e*pP pP 04 05 58.4 -1.5
KIEV LR LR
comp=Z,224nm,22.0s,MS4.5
GVD Gavdhos 81.16 306 *e*P **P 04 05 45.8 -0.4**
comp=Z,111nm,0.8s,mb5.8
GVD Gavdhos 81.16 306 P **P 04 05 46.1 -0.1**
RDO Rodhopi 81.22 312 P **P 04 05 45.6 -0.7**
LIA Limnos Island 81.23 311 P **P 04 05 46.0 -0.4**
LOS Limnos 81.32 311 P **P 04 05 46.7 -0.2**
SZH Strazhica 81.38 314 P **P 04 05 46.6 -0.5**
KARN Karanos 81.40 306 P **P 04 05 47.8 +0.4**
VRI Vrincioaia 81.40 317 P **P 04 05 47.8 +0.6**
DIM Dimitrovgrad 81.41 313 P **P 04 05 47.1 -0.2**
KDZ Kurdzhali 81.41 313 P **P 04 05 46.9 -0.4**
PLOR Plostina 81.45 317⇑ P **P 04 05 48.5 +1.1**
PLOR Plostina 81.45 317⇑ *i*P **P 04 05 48.5 +1.1**
MLR Muntele Rosu 81.85 317⇑ P **P 04 05 50.1 +0.6**
MLR Muntele Rosu 81.85 317⇑ *i*P **P 04 05 50.1 +0.6**
RZN Rozhen 81.93 313 P **P 04 05 50.0 -0.1**
ATHU Athens Univers 81.95 309 P **P 04 05 49.5 -0.7**
PLD Plovdiv 82.03 313 P **P 04 05 50.0 -0.5**
PLD Plovdiv 82.03 313 P **P 04 05 49.9 -0.6**
SBA Scott Base 82.03 169 *e*P **P 04 05 50.8 +0.9**
SBA pmax pmax
comp=Z,18nm,0.9s,mb5.0
SBA Scott Base 82.03 169 *e*P **P 04 05 50.8 +0.9**
comp=Z,18nm,0.9s,mb5.0
OUR Ouranopolis 82.22 311 P **P 04 05 51.0 -0.6**
DID Didima 82.30 308 P **P 04 05 50.2 -1.9**
PAIG Paliouri 82.38 311 P **P 04 05 51.9 -0.5**
VOIR 82.45 316⇓ P **P 04 05 52.5 -0.2**
VOIR 82.45 316⇓ *i*P **P 04 05 52.5 -0.2**
PGB Panagyurishte 82.50 313 P **P 04 05 52.4 -0.6**
LTK Loutraki 82.59 309 P **P 04 05 42.5 -1.6**
PLG Polygyros 82.63 311 P **P 04 05 53.1 -0.7**
MMB Musomiste 82.64 312 P **P 04 05 53.1 -0.7**
SRS Serrai 82.66 312 P **P 04 05 53.0 -0.9**
LKR Lokris 82.67 309 P **P 04 05 52.6 -1.4**
SOH Sokhos 82.78 312 P **P 04 05 53.8 -0.7**
BURAR Bucovina Array 82.80 319⇑ P **P 04 05 55.6 +1.1**
BURAR Bucovina Array 82.80 319⇑ *i*P **P 04 05 55.6 +1.1**
HORT Hortiatis 82.93 311 P **P 04 05 54.5 -0.8**
VLX Vlachokerasia 82.95 308 P **P 04 05 55.2 -0.3**
TSUM Tsumeb 82.98 251 *e*P **P 04 05 57.1 +1.0**
comp=Z,12nm,0.9s,mb4.9
TSUM LR LR
comp=Z,585nm,20.0s,MS5.0
TSUM Tsumeb 82.98 251 *e*P **P 04 05 56.8 +0.8**
THE Thessaloniki 83.04 311 P **P 04 05 53.7 -2.2**
GUR Goura 83.06 309 P **P 04 05 55.3 -0.8**
PUL Pulkovo 83.08 331*d* iP **P 04 05 56.3 +0.7**
PUL pmax pmax
comp=Z,120nm,0.7s,mb6.0
KKB Krupnik 83.17 313 P **P 04 05 55.5 -1.0**
VTS Vitosha 83.20 313 P **P 04 05 56.6 -0.1**
VTS Vitosha 83.20 313 P **P 04 05 56.3 -0.4**
AGG Agios Georgios 83.25 310 P **P 04 05 55.7 -1.3**
ITM Ithomi 83.27 308 P **P 04 05 56.4 -0.8**
KALE Kalithea 83.30 309 P **P 04 05 56.4 -0.8**
LIT Litokhoron 83.31 311 P **P 04 05 56.4 -0.9**
TRIZ Trizonia 83.34 309 P **P 04 05 56.7 -0.8**
PYL PYLOS 83.38 307 P **P 04 05 56.9 -0.8**
LAKA Lakka 83.40 309 P **P 04 05 57.3 -0.5**
EFP Efpalio 83.48 309 P **P 04 05 57.6 -0.6**
NACGM Naroch 83.55 326 *e* **P 04 05 55.0 -3.1**
THL Klokotos Trika 83.58 310 P **P 04 05 56.3 -2.4**
JOF Joensuu 83.64 334 *e*P **P 04 05 55.8 -2.6**
JOF pmax pmax
comp=Z,23nm,0.7s,mb5.4
JOF Joensuu 83.64 334 *e*p **P 04 05 55.8 -2.6**
comp=Z,23nm,0.7s,mb5.4
IDID Didziasalis 83.67 326 *e*P **P 04 05 59.2 +0.4**
BILL Bilibino 83.69 20*c* iP **P 04 05 57.6 -1.0**
BILL *i* 04 06 22.3
BILL pmax pmax
comp=Z,44nm,1.0s,mb5.5
BILL Bilibino 83.69 20 *e*P **P 04 05 57.2 -1.4**
comp=Z,34nm,0.9s,mb5.5
KZN Kozani 83.88 311 P **P 04 05 59.4 -0.8**
BMR Baia Mare 83.95 318⇑ P **P 04 06 01.2 +0.8**
BMR Baia Mare 83.95 318⇑ *i*P **P 04 06 01.2 +0.8**
GZR Gura Zlata 84.02 316⇓ P **P 04 06 01.1 +0.3**
GZR Gura Zlata 84.02 316⇓ *i*P **P 04 06 01.1 +0.3**
DEV Deva 84.02 317⇓ P **P 04 06 01.4 +0.6**
DEV Deva 84.02 317⇓ *i*P **P 04 06 01.4 +0.6**
LVV L'vov 84.03 321 *e*P **P 04 06 00.6 -0.1**
IZAR Zarasai 84.06 327 *e*P **P 04 06 00.8 +0.1**
ISAL Salakas 84.08 327 *e*P **P 04 06 01.1 +0.3**
LVZ Lovozero 84.14 340 P **P 04 05 59.1 -1.8**
comp=Z,367nm,0.8s,mb6.6,SNR=20
LVZ Lovozero 84.14 340*c* iP **P 04 06 00.1 -0.8**
LVZ pmax pmax
comp=Z,83nm,1.2s,mb5.7
FNA Florina 84.25 311 P **P 04 06 00.8 -1.3**
DRGR 84.31 317⇑ P **P 04 06 02.8 +0.6**
DRGR 84.31 317⇑ *i*P **P 04 06 02.8 +0.6**
SKO Skopje 84.39 312 P **P 04 06 01.7 -1.1**
APA Apatity 84.45 339⇑ *i*P **P 04 06 02.0 -0.5**
APA pmax pmax
comp=Z,47nm,1.0s,mb5.6
APA pmax pmax
comp=Z,300nm,5.0s
APA MLR MLR
comp=Z,700nm,22.0s,MS5.0
VLS Valsamata 84.47 309 P **P 04 06 03.2 0.0**
VSU Vasula 84.48 329*c* iP **P 04 06 02.8 0.0**
VSU pmax pmax
comp=Z,141nm,1.1s,mb6.0
TRPA Tarpa 84.67 319⇑ *i*P **P 04 06 04.3 +0.3**
OHR Ohrid 84.74 312 P **P 04 06 02.8 -1.7**
KWP Kalwaria Pacla 84.84 320 *i*P **P 04 06 05.1 +0.3**
comp=Z,200nm,1.5s,mb6.0
KWP LMZ 04 52 13.1
comp=Z,400nm,21.6s
KWP Kalwaria Pacla 84.84 320 *e*P **P 04 06 05.0 +0.2**
comp=Z,106nm,1.1s,mb5.9
KWP Kalwaria Pacla 84.84 320⇑ *i*P **P 04 06 05.1 +0.3**
BZS Buzias 84.86 316 P **P 04 06 05.2 +0.2**
BZS Buzias 84.86 316⇑ *i*P **P 04 06 05.1 +0.1**
IGT Igoumenitsa 84.86 310 P **P 04 06 04.8 -0.4**
UZH Uzhgorod 84.92 319⇓ *i*P **P 04 06 05.3 0.0**
UZH *i* pP 04 06 19.7 -0.5
KOLS Kolonicke sedl 84.99 319 *i*P **P 04 06 06.6 +1.0**
KOLS pmax pmax
comp=Z,172nm,0.9s,mb6.2
KOLS Kolonicke sedl 84.99 319 *i*P **P 04 06 06.6 +1.0**
comp=Z,172nm,0.9s,mb6.2
KOLS Kolonicke sedl 84.99 319 *i*P **P 04 06 06.6 +1.0**
KEK Kerkira 85.29 310 P **P 04 06 07.2 -0.1**
SUW Suwalki 85.40 325 *i*P **P 04 06 07.3 -0.2**
comp=Z,500nm,0.9s,mb6.6
SUW LMZ 04 43 40.0
comp=Z,300nm,28.1s
SUW Suwalki 85.40 325⇑ *i*P **P 04 06 07.3 -0.2**
SUW pmax pmax
comp=Z,500nm,0.9s,mb6.6
SUW MLR MLR
comp=Z,300nm,28.1s,MS4.5
SUW Suwalki 85.40 325 *e*P **P 04 06 07.1 -0.5**
comp=Z,463nm,1.0s,mb6.6
SUW *e*pP pP 04 06 21.9 -0.5
TIR Tirane 85.47 312 P **P 04 06 08.7 +0.5**
TIR pmax pmax
comp=Z,140nm,1.6s,mb5.8
TIR Tirane 85.47 312 *e*P **P 04 06 08.2 0.0**
comp=Z,136nm,1.6s,mb5.8
TIR Tirane 85.47 312 P **P 04 06 08.7 +0.5**
FINES FINESS Array B 85.56 332 P **P 04 06 07.9 -0.2**
FINES 04 09 27.8
FINES pmax pmax
comp=Z,58nm,1.1s
FINES pmax pmax
comp=Z,8.0nm,0.7s
FINES MLR MLR
comp=Z,299nm,22.0s
FINES FINESS Array B 85.56 332 P **P 04 06 07.9 -0.2**
comp=Z,58nm,1.1s,mb5.7,baz=103,slow=6.1,SNR=65
FINES PP PP 04 09 27.8 +0.5
comp=Z,7.8nm,0.7s,baz=90,slow=7.6,SNR=6.4
FINES PKKP PKKPbc 04 24 10.4 -3.8
comp=Z,0.7nm,0.6s,baz=306,slow=1.6,SNR=6.5
FINES LR LR 04 48 00.2
comp=Z,299nm,22.0s,MS4.6,baz=360,slow=38
FINES FINESS Array B 85.56 332 P **P 04 06 07.9 -0.2**
FINES PP PP 04 09 27.8 +0.5
FINES PKKP PKKPbc 04 24 10.4 -3.8
FINES LR LR 04 48 00.2
KAF Kangasniemi 85.62 333 *e*P **P 04 06 06.1 -2.4**
KAF pmax pmax
comp=Z,26nm,0.7s,mb5.6
KAF Kangasniemi 85.62 333 *e*p **P 04 06 06.1 -2.4**
comp=Z,26nm,0.7s,mb5.6
STHS Stebnicka Huta 85.74 320 *e*P **P 04 06 09.8 +0.5**
STHS pmax pmax
comp=Z,53nm,0.8s,mb5.8
STHS Stebnicka Huta 85.74 320 *e*P **P 04 06 09.8 +0.5**
comp=Z,53nm,0.8s,mb5.8
STHS *e* 04 09 41.7
STHS Stebnicka Huta 85.74 320 *e*P **P 04 06 09.8 +0.5**
STHS *e* 04 09 41.7
DIVS Divibare 85.76 314 P **P 04 06 09.6 0.0**
KECS Kecovo 86.08 319 *e*P **P 04 06 11.4 +0.4**
KECS pmax pmax
comp=Z,22nm,0.8s,mb5.4
KECS Kecovo 86.08 319 *e*P **P 04 06 11.4 +0.4**
comp=Z,22nm,0.8s,mb5.4
KECS *e* 04 09 51.1
KECS Kecovo 86.08 319 *e*P **P 04 06 11.4 +0.4**
KECS *e* 04 09 51.1
NIE Niedzica 86.34 320 *e*P **P 04 06 12.9 +0.6**
NIE *e* 04 09 37.4
WAR Warsaw 86.35 323 *e*P **P 04 06 12.7 +0.4**
PSZ Piszkesteto 86.39 318 P **P 04 06 12.9 +0.3**
PSZ Piszkesteto 86.39 318 *e*P **P 04 06 12.5 0.0**
comp=Z,40nm,0.8s,mb5.7
PSZ *e*PP PP 04 09 32.7 -1.7
PSZ LR LR
comp=Z,202nm,21.0s,MS4.5
PSZ Piszkesteto 86.39 318⇑ *e*P **P 04 06 12.8 +0.2**
PSZ Piszkesteto 86.39 318⇑ *i*P **P 04 06 12.8 +0.2**
AFI Afiamalu 86.41 104 *e*P **P 04 06 13.8 +0.4**
AFI pmax pmax
comp=Z,112nm,1.0s,mb6.0
AFI Afiamalu 86.41 104 *e*P **P 04 06 13.8 +0.5**
comp=Z,112nm,1.0s,mb6.0
OJC Ojcow 86.79 320 *i*P **P 04 06 14.6 +0.1**
OJC *e*pP pP 04 06 29.8 +0.3
OJC *e*S S 04 16 49.3 +1.0
OJC L 04 54 18.4
comp=Z,0.3nm,21.8s
OJC Ojcow 86.79 320⇑ *i*P **P 04 06 14.6 +0.1**
OJC *e**PP pP 04 06 29.8 +0.3
OJC *e*S S 04 16 49.3 +1.0
BUD Budapest 86.91 318⇑ *e*P **P 04 06 15.3 +0.2**
QSPA South Pole Qui 86.95 180 *e*P **P 04 06 15.2 +0.4**
comp=Z,18nm,1.0s,mb5.2
MAIT Maitri 86.99 199 *e*P **P 04 06 17.7 +2.6**
MAIT *e*E pP 04 06 34.3 +4.2
PKSM Moragy 87.00 316 P **P 04 06 15.8 +0.2**
PKSM Moragy 87.00 316⇑ *i*P **P 04 06 15.6 0.0**
VYHS Vyhne 87.17 319 *i*P **P 04 06 16.5 +0.1**
VYHS *e*S S 04 16 51.9 -0.1
VYHS pmax pmax
comp=Z,28nm,1.3s,mb5.3
VYHS Vyhne 87.17 319 *i*P **P 04 06 16.5 +0.1**
comp=Z,28nm,1.3s,mb5.3
VYHS *e*PP PP 04 09 40.2 -0.5
VYHS *e* 04 10 02.4
VYHS *e*S S 04 16 51.9 -0.1
VYHS Vyhne 87.17 319 *i*P **P 04 06 16.5 +0.1**
VYHS *e*PP PP 04 09 40.2 -0.5
VYHS *e* 04 10 02.3
VYHS *e*S S 04 16 51.8 -0.2
KEV Kevo 87.38 340 P **P 04 06 16.3 -0.6**
KEV pmax pmax
comp=Z,48nm,1.0s,mb5.7
KEV Kevo 87.38 340 *e*P **P 04 06 16.1 -0.8**
comp=Z,48nm,0.9s,mb5.7
KEV LR LR
comp=Z,438nm,22.0s,MS4.8
KEV Kevo 87.38 340 *e*p **P 04 06 14.6 -2.3**
comp=Z,25nm,0.8s,mb5.5
KOLL Kolacno 87.47 319 *e*P **P 04 06 18.2 +0.4**
KOLL Kolacno 87.47 319 *e*P **P 04 06 18.2 +0.4**
TIP Timpagrande 87.57 309 *e*P **P 04 06 19.1 +0.6**
comp=Z,26nm,0.9s,mb5.5
OKC Ostrava-Krasne 87.79 320⇑ *i*P **P 04 06 19.7 +0.4**
OKC *e*pP pP 04 06 34.5 +0.1
OKC *e*S S 04 16 57.2 -0.7
OKC AMS AMS 04 54 50.0
comp=Z,300nm,26.0s
RAC Raciborz 87.79 320 *e*P **P 04 06 20.2 +0.9**
ARCES ARCESS Array B 87.83 340 P **P 04 06 18.8 -0.3**
ARCES 04 09 46.4
ARCES pmax pmax
comp=Z,49nm,0.9s
ARCES pmax pmax
comp=Z,16nm,1.0s
ARCES ARCESS Array B 87.83 340 P **P 04 06 18.8 -0.3**
comp=Z,49nm,0.9s,mb5.7,baz=98,slow=5.0,SNR=83
ARCES PP PP 04 09 46.4 +1.0
comp=Z,16nm,1.0s,baz=106,slow=7.7,SNR=7.3
ARCES ARCESS Array B 87.83 340 P **P 04 06 18.8 -0.3**
ARCES PP PP 04 09 46.4 +1.0
SMOL Smolenice 88.10 319 *e*P **P 04 06 21.4 +0.6**
SMOL Smolenice 88.10 319 *e*P **P 04 06 21.4 +0.6**
CEL Celeste 88.15 308 *e*P **P 04 06 21.9 +0.6**
comp=Z,117nm,1.1s,mb6.0
MORC Moravsky Berou 88.17 320 P **P 04 06 21.9 +0.8**
MORC Moravsky Berou 88.17 320 *e*P **P 04 06 21.7 +0.6**
comp=Z,62nm,0.8s,mb5.9
MORC *e*PP PP 04 09 48.7 0.0
MORC Moravsky Berou 88.17 320⇑ *i*P **P 04 06 21.7 +0.6**
ZST Bratislava 88.28 318 *e*P **P 04 06 22.1 +0.4**
ZST pmax pmax
comp=Z,53nm,0.8s,mb5.8
ZST Bratislava 88.28 318 *e*P **P 04 06 22.1 +0.4**
comp=Z,53nm,0.8s,mb5.8
ZST *e*S S 04 17 06.8 +4.2
ZST *e*SS SS 04 22 59.2 +6.3
ZST Bratislava 88.28 318 *e*P **P 04 06 22.1 +0.4**
KTK1 Kautokeino 88.49 339 *e*P **P 04 06 23.6 +1.4**
KOGS Kog 88.67 316 *i*P **P 04 06 24.1 +0.5**
KOGS *e* pP 04 06 38.7 0.0
VRAC Vranov 88.74 319 P **P 04 06 24.3 +0.5**
VRAC Vranov 88.74 319⇑ *i*P **P 04 06 24.1 +0.3**
GKP Gorka Klasztor 88.77 323 *i*P **P 04 06 24.1 +0.2**
comp=Z,200nm,0.9s,mb6.5
GKP LMZ 04 34 39.7
comp=Z,400nm,20.7s
DPC Dobruska-Polom 89.02 320⇑ *i*P **P 04 06 26.1 +1.0**
DPC *e*pP pP 04 06 41.0 +0.8
DPC *e*S S 04 17 07.7 -1.8
DPC AMS AMS 04 55 20.0
comp=Z,300nm,22.4s
CONA Conrad Observa 89.08 318 *i*P **P 04 06 25.5 +0.1**
comp=Z,25nm,0.9s,mb5.6,SNR=23
KSP Ksiaz 89.09 321 *i*P **P 04 06 26.1 +0.7**
comp=Z,200nm,1.1s,mb6.4
KSP LMZ 04 36 19.7
comp=Z,500nm,20.7s
KSP Ksiaz 89.09 321⇑ *i*P **P 04 06 26.1 +0.7**
KSP *e**PP pP 04 06 40.9 +0.4
UPC Upice 89.23 320⇑ *i*P **P 04 06 26.9 +0.8**
UPC *e*pP pP 04 06 43.5 +2.3
ARSA Arzberg 89.25 317 *i*P **P 04 06 26.6 +0.4**
comp=Z,53nm,0.9s,mb5.9,SNR=36
BOJS Bojanci 89.28 315 *i*P **P 04 06 26.9 +0.4**
BOJS *e* pP 04 06 41.4 -0.1
BOJS *e* 04 17 10.3
TREC Trest 89.46 319⇑ *i*P **P 04 06 27.7 +0.5**
TREC *e*pP pP 04 06 42.6 +0.4
TREC AMS AMS 04 55 40.0
comp=Z,300nm,23.5s
PERS Pernice 89.47 317 *i*P **P 04 06 27.8 +0.5**
SOKA Soboth 89.53 317⇑ *i*P **P 04 06 28.1 +0.5**
comp=Z,97nm,1.0s,mb6.1
LJU Ljubljana 89.83 316 *i*P **P 04 06 29.5 +0.5**
LJU *e* pP 04 06 44.1 0.0
LJU *e* 04 17 15.2
OBKA Obir 89.85 316⇑ *i*P **P 04 06 29.7 +0.6**
comp=Z,74nm,1.4s,mb5.8,SNR=28
TRO Tromso 90.11 340 *e*P **P 04 06 29.2 -0.6**
PRU Pruhonice 90.13 320⇑ *i*P **P 04 06 31.0 +0.7**
PRU *e*pP pP 04 06 45.8 +0.4
PRU *e*S S 04 17 16.7 -3.1
PRU AMS AMS 04 53 30.0
comp=Z,300nm,29.0s
MOA Molln 90.14 318 *i*P **P 04 06 30.4 -0.1**
comp=Z,28nm,0.8s,mb5.6,SNR=34
PVCC Panska Ves 90.15 320⇑ *i*P **P 04 06 31.2 +0.8**
PVCC *e*pP pP 04 06 44.6 -0.9
PVCC AMS AMS 04 52 10.0
comp=Z,300nm,20.4s
PRA Prague 90.20 320 ⇑P **P 04 06 31.0 +0.3**
PRA PP PP 04 10 05.0 +0.1
VOY Vojsko 90.27 316 *e*P **P 04 06 31.2 +0.1**
VOY *e* pP 04 06 49.1 +3.0
VOY *e* 04 07 00.1
BSD Bornholm Skovb 90.31 325⇑ *i*P **P 04 06 30.6 -0.5**
BSD pmax pmax
comp=Z,43nm,0.9s,mb5.8
BSD Bornholm Skovb 90.31 325⇑ *i*P **P 04 06 30.6 -0.5**
comp=Z,43nm,0.9s,mb5.8
TRI Trieste 90.33 316 P **P 04 06 31.2 -0.2**
TRI pmax pmax
comp=Z,24nm,0.7s,mb5.6
TRI Trieste 90.33 316 *e*P **P 04 06 30.7 -0.7**
comp=Z,24nm,0.6s,mb5.7
AQU L'Aquila 90.37 312 P **P 04 06 32.5 +0.9**
AQU L'Aquila 90.37 312 *e*P **P 04 06 31.9 +0.3**
comp=Z,106nm,0.9s,mb6.2
AQU LR LR
comp=Z,170nm,21.0s,MS4.5
AQU L'Aquila 90.37 312⇑ *i*P **P 04 06 32.0 +0.4**
CADS Cadrg 90.39 316 *i*P **P 04 06 31.6 -0.1**
MYKA Terra Mystica 90.48 316⇑ *i*P **P 04 06 32.1 +0.1**
comp=Z,21nm,0.7s,mb5.6
BRG Berggiesshubel 90.58 321 *e*P **P 04 06 33.0 +0.6**
comp=Z,56nm,0.9s,mb5.9
BRG Berggiesshubel 90.58 321⇑ *i*P **P 04 06 33.1 +0.7**
comp=Z,56nm,0.9s,mb5.9
BRG *i* pP 04 06 47.7 +0.2
comp=Z,66nm,1.8s
BRG *e*PP PP 04 10 00.5 -7.3
comp=Z,7.3nm,1.0s
BRG *e*SKS 04 16 57.0
comp=Z,5.3nm,1.6s
BRG S S 04 17 24.0 +0.1
BRG SS SS 04 23 01.0 -25
BRG
comp=N,147nm,18.7s
BRG
comp=E,259nm,23.6s
BRG
comp=Z,244nm,19.2s
BRG Berggiesshubel 90.58 321⇑ *i*P **P 04 06 33.1 +0.7**
BRG *i* pP 04 06 47.7 +0.3
BRG *e* 04 16 57.0
BRG S S 04 17 24.0 +0.1
BRG pmax pmax
comp=Z,33nm,0.9s,mb5.7
BRG MLR MLR
comp=N,88nm,18.7s,MS4.5
BRG MLR MLR
comp=E,155nm,23.6s,MS4.5
BRG MLR MLR
comp=Z,146nm,19.2s,MS4.4
GEC2 GERESS Array S 90.59 319 *e*P **P 04 06 33.2 +0.7**
comp=Z,134nm,1.5s,mb6.0
GEC2 GERESS Array S 90.59 319 *e*P **P 04 06 33.2 +0.7**
GEC2 pmax pmax
comp=Z,134nm,1.5s,mb6.0
GEC2 GERESS Array S 90.59 319 *e*P **P 04 06 33.2 +0.7**
comp=Z,134nm,1.5s,mb6.0
GERES GERESS Array B 90.59 319 P **P 04 06 33.0 +0.5**
GERES 04 10 11.0
GERES pmax pmax
comp=Z,28nm,0.8s
GERES pmax pmax
comp=Z,3.0nm,0.9s
GERES GERESS Array B 90.59 319 P **P 04 06 33.0 +0.5**
comp=Z,28nm,0.8s,mb5.7,baz=90,slow=5.3,SNR=267
GERES PP PP 04 10 11.0 +3.0
comp=Z,3.1nm,0.9s,baz=86,slow=6.0,SNR=5.3
KHC Kasperske Hory 90.69 319 *e*P **P 04 06 33.3 +0.3**
comp=Z,18nm,0.8s,mb5.5
KHC Kasperske Hory 90.69 319⇑ *i*P **P 04 06 33.2 +0.2**
KHC *e*pP pP 04 06 46.9 -1.1
KHC *e*S S 04 17 23.3 -1.8
KHC AMS AMS 04 56 30.0
comp=Z,300nm,14.8s
KBA Koelnbreinsper 90.72 317⇑ *i*P **P 04 06 32.9 -0.2**
comp=Z,29nm,0.9s,mb5.6,SNR=19
RUE Ruedersdorf 90.79 322 *e*P **P 04 06 33.9 +0.6**
comp=Z,141nm,1.1s,mb6.2
RUE Ruedersdorf 90.79 322 *e*P **P 04 06 33.4 0.0**
comp=Z,31nm,0.7s,mb5.8
RJOB Jochberg 91.13 318 *e*P **P 04 06 34.9 -0.1**

comp=Z,35nm,0.8s,mb5.7
WET Wettzell 91.15 319 *e*P **P 04 06 35.6 +0.5**
comp=Z,68nm,1.0s,mb5.9
WET Wettzell 91.15 319 *e*P **P 04 06 35.6 +0.5**
WET pmax pmax
comp=Z,68nm,1.0s,mb5.9
WET Wettzell 91.15 319 *e*P **P 04 06 35.6 +0.5**
comp=Z,68nm,1.0s,mb5.9
RGN Rugen 91.19 324 *e*P **P 04 06 35.8 +0.6**
comp=Z,71nm,1.2s,mb5.9
CLL Collm 91.19 321 *e*P **P 04 06 35.3 +0.1**
comp=Z,37nm,1.1s,mb5.6
CLL Collm 91.19 321⇑*i*P **P 04 06 35.2 0.0**
CLL *e* pP 04 06 50.0 -0.3
CLL *e* 04 06 55.0
CLL *e*S S 04 17 28.0 -1.6
CLL pmax pmax
comp=Z,38nm,1.1s,mb5.6
CLL MLR MLR
comp=Z,200nm,21.2s,MS4.5
CLL MLR MLR
comp=Z,300nm,21.1s
CLL Collm 91.19 321⇑*i*P **P 04 06 35.2 0.0**
comp=Z,38nm,1.1s,mb5.6
CLL *e* pP 04 06 50.0 -0.3
CLL *e* 04 06 55.0
CLL *e* 04 06 58.0
CLL *e* 04 07 28.0
CLL *e*S S 04 17 28.0 -1.6
CLL *e* 04 17 57.0
CLL *e*PS PS 04 18 45.0 +0.4
CLL *e*SS SS 04 23 35.0 +0.1
CLL *e* 04 26 06.0
CLL *e*SSS 04 27 06.0
CLL *e*SSSS 04 30 36.0
CLL Lm 04 36 00.0
comp=N,200nm,20.9s
CLL Lm 04 36 00.0
comp=E,200nm,21.2s
CLL Lm 04 36 00.0
comp=Z,300nm,21.1s
CLL L 04 54 00.0
comp=N,100nm,20.5s
CLL L 04 54 00.0
comp=E,100nm,21.6s
CLL L 04 54 00.0
comp=Z,200nm,21.2s
ABTA Abfaltersbach 91.27 317⇑*i*P **P 04 06 35.3 -0.4**
comp=Z,36nm,1.1s,mb5.6,SNR=31
GAMB Gambell 91.40 26 *e*P **P 04 06 35.3 -0.6**
comp=Z,14nm,1.1s,mb5.2
MOR8 Moi Rana 91.42 336⇑*i*P **P 04 06 35.0 -1.0**
MOR8 AMb AMB 04 06 36.4
comp=Z,33nm,1.3s,mb5.5
MOR8 Moi Rana 91.42 336⇑*i*P **P 04 06 35.0 -1.0**
comp=Z,33nm,1.3s,mb5.5
NKC Novy Kostel 91.49 320⇑*i*P **P 04 06 37.1 +0.5**
NKC *e*S S 04 17 32.6 +0.3
NKC AMS AMS 04 52 30.0
comp=Z,300nm,24.5s
TANN Tannenbergstha 91.49 320 *e*P **P 04 06 37.1 +0.5**
comp=Z,34nm,1.3s,mb5.5
WERN Wernitzgruen 91.54 320 *e*P **P 04 06 37.5 +0.6**
comp=Z,30nm,1.1s,mb5.5
GUNZ Gunzen 91.57 320 *e*P **P 04 06 37.6 +0.6**
comp=Z,39nm,1.1s,mb5.7
WERD Werda 91.59 320 *e*P **P 04 06 37.5 +0.4**
comp=Z,37nm,1.1s,mb5.6
ROTZ Rotzenmuhle 91.62 320 *e*P **P 04 06 38.2 +0.9**
comp=Z,45nm,1.1s,mb5.7
COP Copenhagen 91.77 325 *i*P **P 04 06 37.1 -0.7**
COP pmax pmax
comp=Z,13nm,0.8s,mb5.3
COP Copenhagen 91.77 325 *i*P **P 04 06 37.1 -0.7**
comp=Z,13nm,0.8s,mb5.3
SPB4 Spitsbergen Ar 91.87 348 *e*P **P 04 06 36.3 -1.6**
WTTA Wattenberg 91.89 317 *i*P **P 04 06 38.4 -0.1**
comp=Z,62nm,0.8s,mb6.0,SNR=40
LOF Lofoten 91.90 338 *e*P **P 04 06 39.8 +1.7**
LOF *ep*P pP 04 06 55.7 +2.5
WATA Walderalm 91.93 317 *i*P **P 04 06 38.4 -0.3**
comp=Z,27nm,0.8s,mb5.6,SNR=18
STOK Stokkvaagen 92.00 336⇑*i*P **P 04 06 38.1 -0.6**
MOX Moxa 92.04 320⇑*i*P **P 04 06 39.4 +0.2**
comp=Z,49nm,1.3s,mb5.7
MOX *e* pP 04 06 54.4 +0.2
MOX
comp=Z,200nm,20.0s
MOX Moxa 92.04 320 *e*P **P 04 06 39.6 +0.4**
comp=Z,45nm,1.3s,mb5.6
MOX Moxa 92.04 320⇑*i*P **P 04 06 39.4 +0.2**
MOX *e* pP 04 06 54.4 +0.2
MOX pmax pmax
comp=Z,49nm,1.3s,mb5.7
MOX MLR MLR
comp=Z,200nm,20.0s,MS4.6
FUR Furstenfeldbru 92.17 318 *e*P **P 04 06 39.6 -0.2**
comp=Z,57nm,1.2s,mb5.8
FUR Furstenfeldbru 92.17 318 *e*P **P 04 06 39.6 -0.2**
FUR pmax pmax
comp=Z,57nm,1.2s,mb5.8
FUR Furstenfeldbru 92.17 318 *e*P **P 04 06 39.6 -0.2**
comp=Z,57nm,1.2s,mb5.8
MOTA Moosalm 92.25 317⇑*i*P **P 04 06 40.0 -0.3**
comp=Z,42nm,0.8s,mb5.8,SNR=47
GRA1 Grafenberg Arr 92.26 319 *e*P **P 04 06 40.9 +0.7**
comp=Z,57nm,1.0s,mb5.9
GRA1 *ep*P pP 04 06 55.2 -0.1
GRA1 *es*P sP 04 07 00.1 -0.9
GRA1 *e*S S 04 17 44.1 +4.9
GRA1 *e*L 04 36 45.9
comp=Z,200nm,21.5s,MS4.5
GRF Grafenberg Arr 92.26 319 *e*P **P 04 06 40.9 +0.7**
comp=Z,57nm,1.0s,mb5.9
GRF *ep*P pP 04 06 55.2 -0.1
GRF *es*P sP 04 07 00.1 -0.9
GRF *e*S S 04 17 44.1 +4.9
GRF *e*L 04 36 45.9
comp=Z,234nm,21.5s
GRF Grafenberg Arr 92.26 319 *e*P **P 04 06 40.9 +0.7**
GRF *e**PP pP 04 06 55.2 -0.1
GRF *e**SP sP 04 07 00.1 -0.9
GRF *e*S S 04 17 44.1 +4.9
GRF pmax pmax
comp=Z,57nm,1.0s,mb5.9
GRF Grafenberg Arr 92.26 319 *e*P **P 04 06 40.9 +0.7**
GRF *e**PP pP 04 06 55.2 -0.1
GRF *e**SP sP 04 07 00.1 -0.9
GRF *e*S S 04 17 44.1 +4.9
GRF pmax pmax
comp=Z,57nm,1.0s,mb5.9
GRF MLR MLR
comp=Z,200nm,21.5s,MS4.5
GRF Grafenberg Arr 92.26 319 *e*P **P 04 06 40.9 +0.7**
comp=Z,57nm,1.0s,mb5.9
GRF *ep*P pP 04 06 55.2 -0.1
GRF *es*P sP 04 07 00.1 -0.9
GRF *e*S S 04 17 44.1 +4.9
GRF LR LR
comp=Z,200nm,21.5s,MS4.5
NSS Namsos 92.36 334 *e*P **P 04 06 39.2 -1.2**
NSS AMb AMB 04 06 40.1
comp=Z,40nm,0.8s,mb5.8
NSS *ep*P pP 04 06 54.6 -0.9
NSS Namsos 92.36 334 *e*P **P 04 06 39.2 -1.2**
comp=Z,40nm,0.8s,mb5.8
RETA Reutte 92.49 317 *i*P **P 04 06 41.4 +0.1**
comp=Z,48nm,0.8s,mb5.9,SNR=21
FETA Feichten 92.50 317 *i*P **P 04 06 41.6 +0.2**
comp=Z,33nm,0.9s,mb5.7,SNR=35
NB2 NORSAR Subarra 92.60 331 P **P 04 06 40.9 -0.6**
comp=Z,26nm,0.9s,mb5.7,baz=94,slow=5.3
NOA NORSAR Array B 92.60 331 P **P 04 06 41.0 -0.5**
NOA 04 10 23.3
NOA pmax pmax
comp=Z,13nm,0.8s
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA NORSAR Array B 92.60 331 P **P 04 06 41.0 -0.6**
comp=Z,13nm,0.8s,mb5.4,baz=94,slow=4.6,SNR=42
NOA PP PP 04 10 23.3 -0.2
comp=Z,6.3nm,0.8s,baz=91,slow=7.6,SNR=8.1
NOA LR LR 04 52 32.9
comp=Z,250nm,21.9s,MS4.6,baz=80,slow=38
NAO01 NORSAR Array S 92.76 331 *e*P **P 04 06 41.4 -0.8**
comp=Z,19nm,0.9s,mb5.5
OSL Oslo 92.82 330 *e*P **P 04 06 42.4 -0.1**
OSL AMb AMB 04 06 43.2
comp=Z,2μm,1.8s,mb7.1
OSL Oslo 92.82 330 *e*P **P 04 06 42.4 -0.1**
comp=Z,2μm,1.8s,mb7.1
CLZ Clausthal 92.86 322 *e*P **P 04 06 43.3 +0.4**
comp=Z,32nm,1.0s,mb5.7
CLZ Clausthal 92.86 322 *e*P **P 04 06 43.3 +0.4**
CLZ pmax pmax
comp=Z,32nm,1.0s,mb5.7
CLZ Clausthal 92.86 322 *e*P **P 04 06 43.3 +0.4**
comp=Z,32nm,1.0s,mb5.7
BSEG Bad Segeberg 92.93 324 *e*P **P 04 06 43.5 +0.3**
comp=Z,41nm,1.1s,mb5.8
BSEG Bad Segeberg 92.93 324 *e*P **P 04 06 43.5 +0.3**
BSEG pmax pmax
comp=Z,41nm,1.1s,mb5.8
BSEG Bad Segeberg 92.93 324 *e*P **P 04 06 43.5 +0.3**
NRDL Niedersach Rie 93.03 322 *e*P **P 04 06 44.1 +0.4**
comp=Z,34nm,1.0s,mb5.7
DAVA Damuels 93.08 317 *i*P **P 04 06 44.4 +0.4**
comp=Z,68nm,0.8s,mb6.1,SNR=42
KEST Kesra 93.24 305 P **P 04 06 46.6 +1.5**
comp=Z,14nm,1.0s,mb5.4,baz=104,slow=0.9,SNR=32
KEST LR LR 04 46 48.6
comp=Z,103nm,21.3s,MS4.3,baz=299,slow=34
VSL Villasalto 93.30 309 *e*P **P 04 06 44.9 -0.3**
comp=Z,20nm,0.9s,mb5.5
KONO Kongsberg 93.39 329 P **P 04 06 45.3 +0.1**
KONO pmax pmax
comp=Z,18nm,0.9s,mb5.5
KONO Kongsberg 93.39 329 *e*P **P 04 06 44.6 -0.6**
comp=Z,18nm,0.8s,mb5.5
STU Stuttgart 93.56 319 *e*P **P 04 06 46.3 0.0**
comp=Z,25nm,0.8s,mb5.7
STU Stuttgart 93.56 319 *e*P **P 04 06 46.3 0.0**
STU pmax pmax
comp=Z,18nm,0.8s,mb5.5
STU Stuttgart 93.56 319 *e*P **P 04 06 46.3 0.0**
comp=Z,18nm,0.8s,mb5.5
MUD Monsted U'grnd 93.61 326 *i*P **P 04 06 45.7 -0.6**
MUD pmax pmax
comp=Z,11nm,0.9s,mb5.3
MUD Monsted U'grnd 93.61 326 *i*P **P 04 06 45.7 -0.6**
comp=Z,11nm,0.9s,mb5.3
PGF Pioggiola 93.64 312⇑*i*P **P 04 06 46.7 0.0**
comp=Z,28nm,0.9s,mb5.4
PGF Pioggiola 93.64 312⇑*i*P **P 04 06 46.7 0.0**
PGF pmax pmax
comp=Z,14nm,0.9s,mb5.4
PGF Pioggiola 93.64 312⇑*i*P **P 04 06 46.7 0.0**
comp=Z,14nm,0.9s,mb5.4
TOD Tromm 93.83 319 *e*P **P 04 06 47.3 -0.1**
SPAK Spaichingen-Ko 93.83 318 *e*P **P 04 06 47.5 0.0**
TNS Taunus Mts 94.06 320 *e*P **P 04 06 48.8 +0.3**
comp=Z,92nm,0.9s,mb6.2
TNS Taunus Mts 94.06 320 *e*P **P 04 06 48.8 +0.3**
TNS pmax pmax
comp=Z,92nm,0.9s,mb6.2
TNS Taunus Mts 94.06 320 *e*P **P 04 06 48.8 +0.3**
comp=Z,92nm,0.9s,mb6.2
BFO Black Forest 94.14 318 P **P 04 06 48.4 -0.5**
comp=Z,117nm,0.8s,mb6.4,SNR=8.0
BFO Black Forest 94.14 318 *e*P **P 04 06 48.6 -0.3**
comp=Z,21nm,1.0s,mb5.5
BFO Black Forest 94.14 318 *e*P **P 04 06 48.6 -0.3**
BFO pmax pmax
comp=Z,21nm,1.0s,mb5.5
BFO Black Forest 94.14 318 *e*P **P 04 06 48.6 -0.3**
comp=Z,21nm,1.0s,mb5.5
KTD Katmit 94.30 319 *e*P **P 04 06 49.5 -0.1**
FELD Feldberg im Sc 94.36 318 *e*P **P 04 06 49.5 -0.4**
HLG Helgoland 94.37 324 *e*P **P 04 06 50.4 +0.6**
comp=Z,79nm,1.2s,mb6.0
IBBN Ibbenburen 94.47 322 *e*P **P 04 06 50.4 +0.1**
comp=Z,35nm,1.0s,mb5.7
LANF Langenberg 94.48 319 *e*P **P 04 06 50.6 +0.1**
LIBD Limburg 94.62 318 *e*P **P 04 06 51.2 +0.1**
ABH Alteburg 94.64 320 *e*P **P 04 06 51.4 +0.2**
SAOF Saorge 94.69 314 *e*P **P 04 06 51.4 -0.2**
SBF Sospel 94.78 314⇑*i*P **P 04 06 51.8 -0.2**
comp=Z,50nm,0.9s,mb5.7
SBF Sospel 94.78 314⇑*i*P **P 04 06 51.8 -0.2**
SBF pmax pmax
comp=Z,25nm,0.9s,mb5.6
SBF Sospel 94.78 314⇑*i*P **P 04 06 51.8 -0.2**
comp=Z,25nm,0.9s,mb5.7
AUTN L'Aution 94.79 314 *e*P **P 04 06 53.3 +1.3**
BUG Bochum--Univer 94.79 321 *e*P **P 04 06 51.7 -0.1**
comp=Z,23nm,1.1s,mb5.5
REVF Revere 94.83 313 *e*P **P 04 06 52.0 -0.2**
CDF Champ du Feu 94.84 318⇑*i*P **P 04 06 51.7 -0.4**
comp=Z,28nm,1.0s,mb5.3
CDF Champ du Feu 94.84 318⇑*i*P **P 04 06 51.7 -0.4**
CDF pmax pmax
comp=Z,14nm,1.0s,mb5.3
CDF Champ du Feu 94.84 318⇑*i*P **P 04 06 51.7 -0.4**
comp=Z,14nm,1.0s,mb5.3
LUCF Luceram 94.85 314 *e*P **P 04 06 52.2 -0.1**
TOUF Mont Tournerai 94.92 314 *e*P **P 04 06 52.7 +0.1**
ECH Echery 94.92 318 *e*P **P 04 06 52.1 -0.4**
ECH Echery 94.92 318 *e*P **P 04 06 52.4 -0.1**
ECH pmax pmax
comp=Z,12nm,0.9s,mb5.3
ECH Echery 94.92 318 *e*P **P 04 06 52.4 -0.1**
comp=Z,12nm,0.9s,mb5.3
RUP Ruppelstein 94.96 319 *e*P **P 04 06 52.7 +0.1**
MVIF Mont Vial 94.99 314 *e*P **P 04 06 53.2 +0.3**
HYA Hoyanger 95.04 331 *e*P **P 04 06 54.1 +1.3**
HYA AMb AMB 04 07 12.8
comp=Z,22nm,2.7s,mb5.1
HYA Hoyanger 95.04 331 *e*P **P 04 06 54.1 +1.3**
comp=Z,22nm,2.7s,mb5.1
WTSB Winterswijk 95.07 322 *e*P **P 04 06 52.8 -0.3**
comp=Z,18nm,0.9s,mb5.5
LOMF Lomont 95.16 317 *e*P **P 04 06 53.1 -0.5**
CALN Calern 95.18 313 *e*P **P 04 06 53.7 -0.1**
MBDF Montbardon 95.25 314⇑*i*P **P 04 06 53.2 -0.9**
comp=Z,12nm,0.9s,mb5.0
MBDF Montbardon 95.25 314⇑*i*P **P 04 06 53.2 -0.9**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
MBDF Montbardon 95.25 314⇑*i*P **P 04 06 53.2 -0.9**
comp=Z,5.8nm,0.9s,mb5.0
LPG La Plagne 95.25 315⇑*i*P **P 04 06 54.1 0.0**
comp=Z,28nm,0.8s,mb5.4
LPG La Plagne 95.25 315⇑*i*P **P 04 06 54.1 0.0**
LPG pmax pmax
comp=Z,14nm,0.8s,mb5.4
LPG La Plagne 95.25 315⇑*i*P **P 04 06 54.1 0.0**
comp=Z,14nm,0.8s,mb5.4
LPL La Plagne 95.26 315⇑*i*P **P 04 06 54.1 0.0**
comp=Z,36nm,0.9s,mb5.5
LPL La Plagne 95.26 315⇑*i*P **P 04 06 54.1 0.0**
LPL pmax pmax
comp=Z,18nm,0.9s,mb5.5
LPL La Plagne 95.26 315⇑*i*P **P 04 06 54.1 0.0**
comp=Z,18nm,0.9s,mb5.5
BNI Bardonecchia 95.31 315 *e*P **P 04 06 53.6 -0.8**
BNI *e* 04 10 45.5
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
BNI Bardonecchia 95.31 315 *e*P **P 04 06 53.6 -0.7**
comp=Z,7.0nm,0.8s,mb5.1
BNI *e*PP PP 04 10 45.5 +0.4
FRF La Foret Royal 95.36 313⇑*i*P **P 04 06 54.4 -0.2**
comp=Z,40nm,1.1s,mb5.5
FRF La Foret Royal 95.36 313⇑*i*P **P 04 06 54.4 -0.2**
FRF pmax pmax
comp=Z,20nm,1.1s,mb5.5
FRF La Foret Royal 95.36 313⇑*i*P **P 04 06 54.4 -0.2**
comp=Z,20nm,1.1s,mb5.5
LMR La Mourre 95.46 313⇑*i*P **P 04 06 54.8 -0.3**
comp=Z,16nm,1.1s,mb5.1
LMR La Mourre 95.46 313⇑*i*P **P 04 06 54.8 -0.3**
LMR pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
LMR La Mourre 95.46 313⇑*i*P **P 04 06 54.8 -0.3**
comp=Z,8.2nm,1.1s,mb5.1
HAU Haudompre 95.47 318⇑*i*P **P 04 06 54.5 -0.5**
comp=Z,50nm,0.9s,mb5.6
HAU Haudompre 95.47 318⇑*i*P **P 04 06 54.5 -0.5**
HAU pmax pmax
comp=Z,25nm,0.9s,mb5.6
HAU Haudompre 95.47 318⇑*i*P **P 04 06 54.5 -0.5**
comp=Z,25nm,0.9s,mb5.6
WLF Walferdange 95.55 319 P **P 04 06 55.1 -0.2**
WLF Walferdange 95.55 319 *e*P **P 04 06 55.6 +0.3**
comp=Z,33nm,1.3s,mb5.6
WLF Walferdange 95.55 319 *e*P **P 04 06 56.0 +0.7**
WLF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
WLF Walferdange 95.55 319 *e*P **P 04 06 56.0 +0.6**
comp=Z,10nm,1.0s,mb5.2
MEM Membach 95.61 320 P **P 04 06 55.1 -0.5**
comp=Z,8.4nm,1.3s,mb5.0
HGN Heimansgroeve 95.65 321 *e*P **P 04 06 55.4 -0.4**
comp=Z,16nm,1.2s,mb5.3
CABF La Chapelle 95.69 316⇑*i*P **P 04 06 56.0 0.0**
comp=Z,50nm,1.1s,mb5.6
CABF La Chapelle 95.69 316⇑*i*P **P 04 06 56.0 0.0**
CABF pmax pmax
comp=Z,25nm,1.1s,mb5.6
CABF La Chapelle 95.69 316⇑*i*P **P 04 06 56.0 0.0**
comp=Z,25nm,1.1s,mb5.6
THEF They Montfort 95.70 318 *e*P **P 04 06 55.5 -0.6**
BEBN Eben Emael 95.81 321 P **P 04 06 55.8 -0.7**
ORIF Oris-en-Rattie 95.88 315 *e*P **P 04 06 56.8 -0.2**
comp=Z,25nm,1.1s,mb5.2
ORIF Oris-en-Rattie 95.88 315 *e*P **P 04 06 56.8 -0.2**
ORIF pmax pmax
comp=Z,12nm,1.1s,mb5.2
ORIF Oris-en-Rattie 95.88 315 *e*P **P 04 06 56.8 -0.2**
comp=Z,12nm,1.1s,mb5.2
VILF Villemus 96.03 314 *e*P **P 04 06 57.9 +0.2**
BERF Bertagne 96.06 313 *e*P **P 04 06 58.1 +0.3**
BCLA Clavier 96.07 320 P **P 04 06 57.6 -0.1**
comp=Z,9.6nm,1.4s,mb5.0
SMRF Simiane la Rot 96.12 314⇑*i*P **P 04 06 58.4 +0.3**
comp=Z,27nm,1.2s,mb5.3
SMRF Simiane la Rot 96.12 314⇑*i*P **P 04 06 58.4 +0.3**
comp=Z,27nm,1.2s,mb5.5
MEZF Maizieres J'vi 96.32 318⇑*i*P **P 04 06 58.6 -0.3**
comp=Z,27nm,0.9s,mb5.4
MEZF Maizieres J'vi 96.32 318⇑*i*P **P 04 06 58.6 -0.3**
comp=Z,27nm,0.9s,mb5.7
GIVF Givet 96.39 320 *e*P **P 04 06 58.8 -0.3**
DOU Dourbes 96.54 320 P **P 04 06 59.7 -0.1**
UCC Uccle 96.65 321 P **P 04 07 00.1 -0.2**
VIVF Saint-Julien-l 96.74 315⇑*i*P **P 04 07 00.5 -0.4**
comp=Z,17nm,1.1s,mb5.1
VIVF Saint-Julien-l 96.74 315⇑*i*P **P 04 07 00.5 -0.4**
VIVF pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
VIVF Saint-Julien-l 96.74 315⇑*i*P **P 04 07 00.5 -0.4**
comp=Z,8.7nm,1.1s,mb5.1
BAIF Baives 96.79 320⇑*i*P **P 04 07 00.8 -0.1**
comp=Z,36nm,1.0s,mb5.5
BAIF Baives 96.79 320⇑*i*P **P 04 07 00.8 -0.1**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.5
BAIF Baives 96.79 320⇑*i*P **P 04 07 00.8 -0.1**
comp=Z,18nm,1.0s,mb5.5
LOR Lormes 97.18 317⇑*i*P **P 04 07 02.4 -0.4**
comp=Z,31nm,0.9s,mb5.4
LOR Lormes 97.18 317⇑*i*P **P 04 07 02.4 -0.4**
LOR pmax pmax
comp=Z,15nm,0.9s,mb5.4
LOR Lormes 97.18 317⇑*i*P **P 04 07 02.4 -0.4**
comp=Z,15nm,0.9s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P 04 07 02.5 -0.5**
comp=Z,29nm,0.9s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P 04 07 02.5 -0.5**
SMF pmax pmax
comp=Z,14nm,0.9s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P 04 07 02.5 -0.5**
comp=Z,14nm,0.9s,mb5.4
LASF Ste Croix 97.36 314 *e*P **P 04 07 03.6 -0.1**
SSF Saint Saulge 97.44 317⇑*i*P **P 04 07 03.6 -0.4**
comp=Z,18nm,1.1s,mb5.1
SSF Saint Saulge 97.44 317⇑*i*P **P 04 07 03.6 -0.4**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
SSF Saint Saulge 97.44 317⇑*i*P **P 04 07 03.6 -0.4**
comp=Z,9.3nm,1.1s,mb5.1
AVF Avril sur Loir 97.56 317⇑*i*P **P 04 07 04.0 -0.5**
comp=Z,34nm,1.2s,mb5.4
AVF Avril sur Loir 97.56 317⇑*i*P **P 04 07 04.0 -0.5**
AVF pmax pmax
comp=Z,17nm,1.2s,mb5.5
AVF Avril sur Loir 97.56 317⇑*i*P **P 04 07 04.0 -0.5**
comp=Z,17nm,1.2s,mb5.5
LBL Lubilhac 97.73 315 *e*P **P 04 07 06.1 +0.8**
AGO Saint Agoulin 97.76 316 *e*P **P 04 07 06.1 +0.7**
BGF Bois d'Agland 97.92 316⇑*i*P **P 04 07 06.1 0.0**
comp=Z,39nm,1.3s,mb5.5
BGF Bois d'Agland 97.92 316⇑*i*P **P 04 07 06.1 0.0**
BGF pmax pmax
comp=Z,19nm,1.3s,mb5.5
BGF Bois d'Agland 97.92 316⇑*i*P **P 04 07 06.1 0.0**
comp=Z,19nm,1.3s,mb5.5
HYF Humbligny 98.01 317 *e*P **P 04 07 06.7 +0.2**
MENF Mencas 98.06 320 *e*P **P 04 07 06.5 -0.2**
TCF Toulx Ste Croi 98.38 316 *e*P **P 04 07 08.2 0.0**
CAF Calviac 98.59 315 *e*P **P 04 07 09.3 +0.1**
comp=Z,23nm,1.4s,mb5.2
CAF Calviac 98.59 315 *e*P **P 04 07 09.3 +0.1**
CAF pmax pmax
comp=Z,12nm,1.4s,mb5.2
CAF Calviac 98.59 315 *e*P **P 04 07 09.3 +0.1**
comp=Z,12nm,1.4s,mb5.2
MTLF Montolieu 98.59 313⇑*i*P **P 04 07 09.1 -0.1**
comp=Z,18nm,1.3s,mb5.1
MTLF Montolieu 98.59 313⇑*i*P **P 04 07 09.1 -0.1**
MTLF pmax pmax
comp=Z,9.0nm,1.3s,mb5.1
MTLF Montolieu 98.59 313⇑*i*P **P 04 07 09.1 -0.1**
comp=Z,8.9nm,1.3s,mb5.1
RJF Les Rejaudoux 98.94 315 *e*P **P 04 07 09.9 -0.9**
DAG Danmarks Havn 99.52 348 *i*P PP 04 11 05.0 -11
LDF La Druitiere 99.74 319⇑*i*P Pdif 04 07 13.8 -0.3
comp=Z,25nm,1.0s
LDF La Druitiere 99.74 319⇑*i*P Pdif 04 07 13.8 -0.3
LDF pmax pmax
comp=Z,13nm,1.0s,mb5.3
LDF La Druitiere 99.74 319⇑*i*P Pdif 04 07 13.8 -0.3
comp=Z,13nm,1.0s
TORD Torodi Ar. Bea 99.92 283 P Pdif 04 07 15.6 +0.7
comp=Z,2.4nm,1.1s,baz=86,slow=5.9,SNR=9.0
TORD PKiKP PKiKP 04 11 43.7 -0.2
comp=Z,1.5nm,0.8s,baz=13,slow=1.3,SNR=7.9
FLN La Foliniere 99.95 319 *e*P Pdif 04 07 14.7 -0.3
comp=Z,12nm,0.7s
FLN La Foliniere 99.95 319 *e*P Pdif 04 07 14.7 -0.3
FLN pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
FLN La Foliniere 99.95 319 *e*P Pdif 04 07 14.7 -0.3
comp=Z,5.9nm,0.7s
MFF Saint Martin d 99.97 317 *e*P Pdif 04 07 15.0 -0.1
comp=Z,25nm,1.3s
MFF Saint Martin d 99.97 317 *e*P Pdif 04 07 15.0 -0.1
MFF pmax pmax
comp=Z,12nm,1.3s,mb5.2
MFF Saint Martin d 99.97 317 *e*P Pdif 04 07 15.0 -0.1
comp=Z,12nm,1.3s
EPF Esparros 99.98 313 *e*P Pdif 04 07 15.1 -0.1
GRR Gorron 100.25 319 *e*P Pdif 04 07 16.2 -0.1
BPAW Bear Paw Mtn. 100.44 25 *e*Pdif Pdif 04 07 15.7 -1.5
comp=Z,42nm,1.5s
SGMF Saint Gilles 101.39 319 *e*P Pdif 04 07 21.9 +0.5
MCK McKinley 101.41 25 *e*P Pdif 04 07 19.3 -2.2
MCK pmax pmax
comp=Z,22nm,1.3s
MCK McKinley 101.41 25 *e*Pdif Pdif 04 07 19.3 -2.2
comp=Z,22nm,1.3s
ESDC Sonseca Array 103.57 310 Pdiff Pdif 04 07 30.5 -0.6
comp=Z,0.2nm,0.5s,baz=118,slow=15,SNR=3.3
ESDC PP PP 04 11 43.9 -4.2
comp=Z,0.7nm,0.8s,baz=50,slow=6.2,SNR=4.5
ESDC PKKPbc PKKPbc 04 23 23.5 -1.8
comp=Z,0.7nm,0.7s,baz=284,slow=3.0,SNR=6.2
ESDC Sonseca Array 103.57 310 Pdif Pdif 04 07 30.5 -0.6
ESDC PP PP 04 11 43.9 -4.2
ESDC PKKPbc PKKPbc 04 23 23.5 -1.8

INK **Inuvik** 105.25 18 eP Pdif 04 07 37.0 -1.6
INK 04 11 58.0
INK pmax pmax
comp=Z,4.0nm,1.1s
INK **Inuvik** 105.25 18 Pdiff Pdif 04 07 36.8 -1.7
comp=Z,4.0nm,1.1s,baz=316,slow=3.8,SNR=5.7
INK PKiKP PKiKP 04 11 48.8 -3.4
comp=Z,2.3nm,0.8s,baz=184,slow=3.3,SNR=8.2
INK PP PP 04 11 58.0 -1.6
comp=Z,2.9nm,0.8s,baz=25,slow=6.8,SNR=6.4
INK PKKPbc PKKPbc 04 23 17.7 -3.4
comp=Z,0.9nm,1.0s,baz=107,slow=5.1,SNR=3.4
INK **Inuvik** 105.25 18 ePdif Pdif 04 07 37.0 -1.5
comp=Z,3.6nm,1.1s
INK PKPdf PKiKP 04 11 48.8 -3.4
INK PP PP 04 11 58.0 -1.6
INK PKKPbc PKKPbc 04 23 17.7 -3.4
DBIC **Dimbokro** 106.27 276 ePKP PKiKP 04 11 55.0 -0.6
PPT **Papeete** 107.35 109 eLR LR 04 43 04.4
comp=Z,282nm,23.0s
RES **Resolute Bay** 107.78 4 Pdiff Pdif 04 07 49.5 -0.3
comp=Z,0.5nm,0.7s,baz=273,slow=14,SNR=3.5
RES PKiKP PKiKP 04 11 55.8 -0.9
comp=Z,3.1nm,0.8s,baz=320,slow=3.2,SNR=11
RES PP PP 04 12 14.7 -3.3
comp=Z,2.4nm,0.8s,baz=86,slow=11,SNR=4.3
RES **Resolute Bay** 107.78 4 Pdif Pdif 04 07 49.5 -0.3
RES ePKP PKiKP 04 11 55.6 -1.2
YKA **Yellowknife Ar** 114.98 17 PKIKP PKiKP 04 12 07.2 -3.4
YKA 04 13 05.4
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA **Yellowknife Ar** 114.98 17 PKP PKiKP 04 12 07.2 -3.5
comp=Z,3.9nm,0.8s,baz=346,slow=2.3,SNR=22
YKA PP PP 04 13 05.4 -4.3
comp=Z,2.2nm,0.8s,baz=330,slow=8.0,SNR=5.5
A05A **Maple Falls** 121.21 32 ⇓P PKPdf 04 12 21.7 -1.3
baz=121,SNR=5.1
B06A **Marblemount** 121.82 32 ⇓P PKPdf 04 12 22.6 -1.6
baz=122
RPW **Rockport** 121.84 32 P PKPdf 04 12 23.4 -0.9
A07A **Ashnola River,** 122.06 31 ⇓P PKPdf 04 12 23.6 -1.1
baz=122,SNR=12
F03A **Seaside** 122.17 35 ⇓P PKPdf 04 12 24.1 -0.9
baz=122
D05A **Enumclaw** 122.34 34 ⇑P PKPdf 04 12 24.3 -1.0
baz=122,SNR=6.9
EDM **Edmonton** 122.44 24 ePKIKP PKPdf 04 12 24.0 -1.3
B07A **Winthrop** 122.57 31 ⇑P PKPdf 04 12 24.5 -1.1
baz=122,SNR=7.7
A08A **Turner Farm, O** 122.69 31 ⇓P PKPdf 04 12 24.8 -1.1
baz=122,SNR=8.0
LON **Longmire** 122.69 34 ePKIKP PKPdf 04 12 24.4 -1.6
D06A **Cle Elum** 122.96 33 ⇓P PKPdf 04 12 25.6 -0.8
baz=123,SNR=5.9
ETW **Entiat** 122.99 32 ePKPdf PKPdf 04 12 25.7 -0.8
A09A **Danville** 123.03 30 ⇓P PKPdf 04 12 25.7 -0.8
baz=123,SNR=7.0
B08A **Colville Reser** 123.04 31 ⇑P PKPdf 04 12 25.3 -1.2
baz=123,SNR=13
C07A **Waterville** 123.08 32 ⇑P PKPdf 04 12 25.3 -1.4
baz=123,SNR=10
TBM **Table Mountain** 123.11 33 P PKPdf 04 12 26.3 -0.4
FCC **Fort Churchill** 123.14 9 ePKPdf PKPdf 04 12 24.4 -2.1
FCC ePP PP 04 14 00.6 -5.2
RNO **Roman Nose** 123.17 38 P PKPdf 04 12 27.0 +0.1
NAC **Naches** 123.25 33 P PKPdf 04 12 26.9 -0.2
E06A **Yakima** 123.28 34 ⇓P PKPdf 04 12 25.7 -1.4
baz=123,SNR=7.4
D07A **Quincy** 123.43 33 ⇑P PKPdf 04 12 25.9 -1.5
baz=123,SNR=7.3
A10A **Northport** 123.53 30 ⇓P PKPdf 04 12 25.9 -1.6
baz=123,SNR=5.1
C08A **Higginbotham F** 123.55 32 ⇑P PKPdf 04 12 26.2 -1.4
baz=123,SNR=14
B09A **Rice** 123.61 30 ⇓P PKPdf 04 12 26.8 -0.8
baz=123,SNR=26
H04A **Detroit Lake** 123.67 36 ⇑P PKPdf 04 12 26.9 -1.0
baz=124
C09A **Chrisman Ranch** 123.94 31 ⇓P PKPdf 04 12 27.3 -1.0
baz=124,SNR=5.5
OD2 **Odessa Site #2** 123.98 32 ePKPdf PKPdf 04 12 27.5 -0.9
D08A **Wollman Farm,** 124.08 32 ⇓P PKPdf 04 12 27.9 -0.7
baz=124,SNR=15
WRD **Warden** 124.12 32 P PKPdf 04 12 28.3 -0.4
RSW **Rattlesnake Hi** 124.13 33 ePKPdf PKPdf 04 12 28.3 -0.4
A11A **Hall Mountain,** 124.13 29 ⇑P PKPdf 04 12 27.7 -0.9
baz=124,SNR=14
HAWA **Hanford** 124.16 33 ePKPdf PKPdf 04 12 28.6 -0.2
HAWA ePPKPdf pPKPdf 04 12 43.1 -1.3
NEW **Newport** 124.22 30 ePKIKP PKPdf 04 12 27.7 -1.1
NEW e 04 12 43.5
G06A **Carlson Farm,** 124.25 35 ⇑P PKPdf 04 12 28.3 -0.7
baz=124,SNR=6.3
F07A **Phinny Hill Vi** 124.25 34 ⇑P PKPdf 04 12 28.1 -0.9
baz=124,SNR=6.4
HUMO **Hull Mountain** 124.35 39 ePKPdf PKPdf 04 12 29.1 -0.2
E08A **Dider Farm, El** 124.36 33 ⇓P PKPdf 04 12 28.5 -0.6
baz=124,SNR=18
D09A **Jones Farm, Ri** 124.40 32 ⇑P PKPdf 04 12 28.5 -0.7
baz=124,SNR=10
B11A **Sandpoint** 124.48 30 ⇓P PKPdf 04 12 28.1 -1.2
baz=124,SNR=8.5
A12A **Yaak River Ran** 124.49 29 ⇑P PKPdf 04 12 28.9 -0.4
baz=124,SNR=5.6
VIPM **Ingram Point** 124.69 35 PKIKP PKPdf 04 12 29.8 -0.1
H06A **Lindquist Farm** 124.72 35 ⇓P PKPdf 04 12 28.9 -1.0
baz=124
E09A **Wood Farm, Sta** 124.83 32 ⇑P PKPdf 04 12 29.0 -1.1
baz=125
B12A **Libby** 124.84 29 ⇓P PKPdf 04 12 28.7 -1.4
baz=125
D10A **Wagner Farm, O** 124.94 31 ⇓P PKPdf 04 12 29.1 -1.2
baz=125,SNR=13
F08A **Pendleton** 124.95 33 ⇑P PKPdf 04 12 28.9 -1.4
baz=125
YBH **Yreka Blue Hor** 124.98 39 ePKIKP PKPdf 04 12 29.9 -0.6
A13A **Flathead Natio** 125.08 28 ⇑P PKPdf 04 12 30.1 -0.4
baz=125
FFC **Flin Flon** 125.11 16 i PKIKP PKPdf 04 12 29.1 -1.2
FFC **Flin Flon** 125.11 16 ePKPdf PKPdf 04 12 28.5 -1.9
FFC ePP PP 04 14 10.6 -8.5
G08A **Pilot Rock** 125.16 34 ⇑P PKPdf 04 12 29.8 -0.9
baz=125,SNR=14
LNOR **Lincton Mounta** 125.17 33 ePKIKP PKPdf 04 12 30.0 -0.7
WALA **Waterton Lakes** 125.22 28 ePKPdf PKPdf 04 12 29.7 -1.0
E10A **Myers Farm, Un** 125.40 32 P PKPdf 04 12 30.2 -0.9
baz=125,SNR=13
C12B **Naegeli Ranch,** 125.42 30 ⇓P PKPdf 04 12 29.7 -1.5
baz=125
D11A **Klaveano Farm,** 125.43 31 ⇑P PKPdf 04 12 29.8 -1.4
baz=125,SNR=9.5
B13A **Whitefish** 125.45 28 ⇓P PKPdf 04 12 30.2 -0.9
baz=125,SNR=24
A14A **Double T Ranch** 125.51 27 ⇑P PKPdf 04 12 30.3 -1.0
baz=125
K05A **Summer Lake** 125.55 37 ⇓P PKPdf 04 12 31.0 -0.6
baz=125
I07A **Izee** 125.58 35 ⇓P PKPdf 04 12 31.1 -0.5
baz=125,SNR=18
BSMT **Bassoo Peak** 125.66 29 ePKPdf PKPdf 04 12 30.7 -0.9
F10A **Beach Ranch, E** 125.67 32 ⇑P PKPdf 04 12 30.7 -1.0
baz=126,SNR=28
WDC **Whiskeytown Da** 125.69 40 ePKIKP PKPdf 04 12 31.0 -0.9
H08A **Prairie City** 125.80 34 ⇓P PKPdf 04 12 31.1 -0.9
baz=126,SNR=14
G09A **Cove** 125.82 33 ⇑P PKPdf 04 12 31.0 -1.0
baz=126,SNR=8.8
A15A **Johnson Ranch,** 125.82 27 ⇑P PKPdf 04 12 30.2 -1.7
baz=126
C13A **Hot Springs** 125.88 29 ⇓P PKPdf 04 12 30.8 -1.2
baz=126,SNR=8.6
D12A **Red Ives Fores** 125.93 30 ⇑P PKPdf 04 12 30.5 -1.6
baz=126
E11A **Bogner Ranch,** 125.96 31 ⇓P PKPdf 04 12 30.4 -1.8
baz=126,SNR=17
JTMT **Jette** 125.97 29 ePKPdf PKPdf 04 12 30.8 -1.4
YBMT **Yellow Bay** 126.02 29 ePKPdf PKPdf 04 12 31.0 -1.3
G10A **Bishop Farm, J** 126.17 33 ⇓P PKPdf 04 12 30.8 -1.9
baz=126,SNR=11
C14A **Swan Lake** 126.22 29 ⇑P PKPdf 04 12 31.1 -1.6
baz=126
E12A **Beaver Dam Sad** 126.25 31 ⇓P PKPdf 04 12 30.7 -2.1
baz=126

H09A **Durkee** 126.27 34 ⇓P PKPdf 04 12 31.1 -1.7
baz=126
SWMT **Swartz Lake** 126.28 29 ePKPdf PKPdf 04 12 31.5 -1.3
F11A **Grangeville** 126.29 32 ⇑P PKPdf 04 12 31.0 -1.9
baz=126,SNR=14
LBCM **Butte Creek Ri** 126.32 40 P PKPdf 04 12 32.9 -0.2
D13A **Huson** 126.34 30 ⇑P PKPdf 04 12 31.4 -1.5
baz=126,SNR=16
BMO **Blue Mountains** 126.35 33 ePKIKP PKPdf 04 12 31.5 -1.5
A16A **West Butte Ran** 126.35 26 ⇓P PKPdf 04 12 31.4 -1.5
baz=126
MOD **Modoc** 126.38 38 ePKPdf PKPdf 04 12 33.0 -0.2
B15A **Bradely Ranch,** 126.38 27 ⇑P PKPdf 04 12 31.4 -1.6
baz=126
G11A **Walters Elk Ra** 126.56 32 ⇓P PKPdf 04 12 31.9 -1.5
baz=126,SNR=17
J08A **Circle Bar Ran** 126.62 35 ⇑P PKPdf 04 12 32.9 -0.7
baz=126,SNR=48
I09A **Lost Marbles R** 126.66 34 ⇓P PKPdf 04 12 32.5 -1.2
baz=126,SNR=5.6
B16A **M & M Farms, S** 126.70 27 ⇓P PKPdf 04 12 32.1 -1.5
baz=126
SLMT **Seeley Lake** 126.71 29 ePKPdf PKPdf 04 12 32.2 -1.4
A17A **Triple J Farms** 126.75 26 ⇑P PKPdf 04 12 32.3 -1.4
baz=127
C15A **Salmond Ranch,** 126.75 28 ⇓P PKPdf 04 12 32.4 -1.3
baz=127,SNR=53
MSO **Missoula** 126.78 30 ePKPdf PKPdf 04 12 32.3 -1.5
D14A **Greenough** 126.82 29 ⇓P PKPdf 04 12 32.6 -1.3
baz=127,SNR=14
F12A **Elk City** 126.85 31 ⇓P PKPdf 04 12 32.2 -1.8
baz=127,SNR=7.0
E13A **Victor** 126.93 30 ⇓P PKPdf 04 12 32.7 -1.4
baz=127,SNR=33
J09A **Fry Pan Ranch,** 127.04 35 ⇑P PKPdf 04 12 33.6 -0.7
baz=127,SNR=22
CHMT **Chamberlain Mo** 127.06 29 ePKPdf PKPdf 04 12 33.5 -0.8
WVOR **Wild Horse Val** 127.08 36 ePKIKP PKPdf 04 12 34.0 -0.5
I10A **Payette** 127.11 34 ⇑P PKPdf 04 12 33.8 -0.7
baz=127,SNR=7.0
C16A **Fuhringer Ranc** 127.13 27 ⇓P PKPdf 04 12 33.0 -1.5
baz=127
A18A **Metzger Ranch,** 127.14 25 ⇓P PKPdf 04 12 32.9 -1.5
baz=127
H11A **Donnelly** 127.15 33 ⇓P PKPdf 04 12 33.6 -1.0
baz=127,SNR=20
B17A **L&G Farms, Che** 127.20 26 ⇓P PKPdf 04 12 32.8 -1.7
baz=127
G12A **Big Creek, Yel** 127.23 32 ⇓P PKPdf 04 12 33.3 -1.4
baz=127
E14A **Clinton** 127.29 30 ⇓P PKPdf 04 12 33.2 -1.5
baz=127
F13A **Darby** 127.30 31 ⇑P PKPdf 04 12 32.7 -2.1
baz=127,SNR=13
D15A **Lincoln** 127.32 29 ⇓P PKPdf 04 12 33.2 -1.6
baz=127,SNR=14
SCHQ **Schefferville** 127.43 351 PKP PKPdf 04 12 34.1 -0.7
comp=Z,17nm,0.9s,baz=23,slow=3.2,SNR=25
SCHQ PP PP 04 14 32.1 -2.4
comp=Z,12nm,1.1s,baz=27,slow=6.9,SNR=5.9
BEKR **Beckwourth** 127.49 40 ⇑P PKPdf 04 12 34.4 -1.0
baz=127
J10A **Berg Farm, Mel** 127.55 34 ⇓P PKPdf 04 12 33.8 -1.6
baz=127,SNR=5.2
B18A **Beardsley Farm** 127.57 26 ⇓P PKPdf 04 12 33.6 -1.6
baz=127
I11A **Placerville** 127.69 33 ⇓P PKPdf 04 12 34.9 -0.7
baz=128,SNR=8.2
E15A **Deer Lodge** 127.70 29 ⇑P PKPdf 04 12 33.6 -1.9
baz=128
C17A **Wharram Farm,** 127.70 27 ⇑P PKPdf 04 12 33.9 -1.6
baz=128
F14A **Wisdom** 127.78 30 ⇑P PKPdf 04 12 34.7 -1.0
baz=128
D16A **Dana Ranch, Ca** 127.79 28 ⇑P PKPdf 04 12 34.7 -1.0
baz=128,SNR=44
G13A **Cobalt** 127.83 31 ⇓P PKPdf 04 12 34.6 -1.3
baz=128
EGMT **Eagleton** 127.86 26 ePKPdf PKPdf 04 12 35.6 -0.2
H12A **Diamond D Ranc** 127.87 32 ⇑P PKPdf 04 12 35.0 -1.0
baz=128,SNR=23
HRY **Holter Researc** 127.89 28 ePKPdf PKPdf 04 12 35.2 -0.7
HRY ePP PP 04 14 35.9 -2.0
K10A **MacKenzie Ranc** 127.90 35 ⇑P PKPdf 04 12 35.6 -0.4
baz=128,SNR=20
MFID **Camas Ranch** 128.08 34 ⇑P PKPdf 04 12 35.6 -0.8
baz=128,SNR=25
E16A **East Helena** 128.09 28 ⇑P PKPdf 04 12 35.5 -0.8
baz=128,SNR=13
E16A ⇓SKPdf SKPdf 04 15 49.4 -18
baz=128
D17A **Six Diamond Ra** 128.10 27 ⇓P PKPdf 04 12 35.1 -1.2
baz=128
D17A ⇑SKPdf SKPdf 04 15 50.0 -18
baz=128
G14A **Jackson** 128.12 31 ⇑P PKPdf 04 12 36.1 -0.4
baz=128,SNR=5.9
H13A **Challis** 128.18 32 ⇑P PKPdf 04 12 35.7 -0.8
baz=128,SNR=36
F15A **Butte** 128.19 30 ⇓P PKPdf 04 12 35.4 -1.1
baz=128
F15A ⇓SKPdf SKPdf 04 15 49.4 -18
baz=128
I12A **Atlanta** 128.22 33 ⇑P PKPdf 04 12 36.2 -0.5
baz=128,SNR=17
LRM **Limekiln Ridge** 128.22 30 ePKPdf PKPdf 04 12 35.8 -0.7
LRM ePP PP 04 14 41.6 +1.4
K11A **Parker Ranch,** 128.38 35 ⇓P PKPdf 04 12 36.2 -0.8
baz=128,SNR=16
CMB **Columbia Colle** 128.46 42 ePKIKP PKPdf 04 12 36.9 -0.4
D18A **Linhart Farms,** 128.46 27 ⇑P PKPdf 04 12 36.1 -0.9
baz=128
DLMT **Dillon** 128.48 30 ePKPdf PKPdf 04 12 36.7 -0.4
DLMT ePP PP 04 14 40.8 -1.0
E17A **Martinsdale** 128.53 28 ⇓P PKPdf 04 12 36.6 -0.5
baz=128,SNR=7.1
E17A ⇑SKPdf SKPdf 04 15 51.1 -17
baz=128
L10A **Juniper Basin** 128.57 36 ⇓P PKPdf 04 12 36.3 -1.1
baz=128,SNR=16
L10A ⇑SKPdf SKPdf 04 15 52.5 -16
baz=128
J12A **Stokes Ranch,** 128.60 34 ⇑P PKPdf 04 12 36.8 -0.5
baz=128,SNR=24
J12A ⇑SKPdf SKPdf 04 15 52.5 -16
baz=128
H14A **Leadore** 128.60 31 ⇓P PKPdf 04 12 37.0 -0.4
baz=128,SNR=15
F16A **Kennard Place,** 128.66 29 ⇑P PKPdf 04 12 37.1 -0.3
baz=128
G15A **Dillon** 128.67 30 ⇓P PKPdf 04 12 37.0 -0.4
baz=128,SNR=39
I13A **Wildhorse Cree** 128.69 32 ⇓P PKPdf 04 12 37.2 -0.3
baz=128,SNR=24
MCMT **McKenzie Canyo** 128.72 31 ePKPdf PKPdf 04 12 37.3 -0.3
MCMT ePP PP 04 14 44.5 +1.1
BOZ **Bozeman (W)** 128.75 29 ⇓P PKPdf 04 12 36.5 -1.0
baz=129,SNR=22
BOZ **Bozeman (W)** 128.75 29 ePKPdf PKPdf 04 12 37.2 -0.4
BOZ ePP PP 04 14 43.2 -0.4
HLID **Hailey** 128.76 33 ⇑P PKPdf 04 12 36.8 -0.9
baz=129,SNR=12
HLID **Hailey** 128.76 33 ePKPdf PKPdf 04 12 37.4 -0.3
E18A **Harlowton** 128.89 27 ⇑SKPdf SKPdf 04 15 52.6 -16
baz=129
L11A **Cat Creek Ranc** 128.93 35 ⇑P PKPdf 04 12 37.8 -0.2
baz=129,SNR=38
G16A **Moss Hill, Enn** 128.97 30 ⇓P PKPdf 04 12 37.8 -0.2
baz=129,SNR=31
H15A **Lima** 128.98 31 ⇑P PKPdf 04 12 37.8 -0.2
baz=129,SNR=11
J13A **Cove Ranch, Pi** 129.00 33 ⇑P PKPdf 04 12 38.0 -0.1
baz=129,SNR=29
F17A **Fitzpatrick Pl** 129.03 28 ⇑P PKPdf 04 12 37.5 -0.6
baz=129,SNR=13
I14A **Mackay** 129.03 32 ⇓P PKPdf 04 12 37.6 -0.6
baz=129,SNR=9.5
K12A **Draper Farm, C** 129.11 34 ⇑P PKPdf 04 12 37.7 -0.7
baz=129,SNR=12
L12A **House Creek Ra** 129.36 35 ⇓P PKPdf 04 12 38.0 -0.8
baz=129,SNR=19
M11A **Holland Ranch,** 129.37 36 ⇓P PKPdf 04 12 38.0 -0.9
baz=129,SNR=9.8
J14A **Carey** 129.41 33 ⇑P PKPdf 04 12 36.9 -2.0
baz=129,SNR=9.7
J14A ⇓SKPdf SKPdf 04 15 56.4 -14
baz=129

G17A **Pierce Place,** 129.42 29 ⇑P PKPdf 04 12 37.1 -1.7
baz=129,SNR=8.5
QLMT **Earthquake Lak** 129.44 30 ePKPdf PKPdf 04 12 39.3 +0.4
F18A **Big Timber** 129.47 28 ⇓P PKPdf 04 12 38.4 -0.6
baz=129,SNR=7.9
F18A ⇓SKPdf SKPdf 04 15 54.3 -16
baz=129
I15A **Monteview** 129.49 31 ⇑SKPdf SKPdf 04 15 56.5 -14
baz=129
K13A **Stover Farm, H** 129.55 34 ⇓P PKPdf 04 12 39.2 0.0
baz=129,SNR=11
K13A ⇓SKPdf SKPdf 04 15 55.9 -14
baz=129
NVAR **Mina Array Bea** 129.61 40 PKP PKPdf 04 12 39.3 -0.2
comp=Z,8.2nm,0.7s,baz=274,slow=2.1,SNR=33
H16A **Russell Place,** 129.62 30 ⇓SKPdf SKPdf 04 15 55.8 -15
baz=129
DGMT **Dagmar** 129.75 22 ⇓P PKPdf 04 12 38.8 -0.6
baz=130
DGMT **Dagmar** 129.75 22 ePKPdf PKPdf 04 12 38.6 -0.8
YMR **Madison River** 129.78 30 ePKPdf PKPdf 04 12 39.8 +0.2
N11A **Elko Archery C** 129.79 36 ⇓P PKPdf 04 12 39.1 -0.7
baz=130,SNR=5.7
M12A **Wells** 129.89 35 ⇑P PKPdf 04 12 39.5 -0.4
baz=130,SNR=21
M12A ⇓SKPab 04 15 56.7
baz=130
J15A **Blackfoot** 129.93 32 ⇑P PKPdf 04 12 39.4 -0.6
baz=130,SNR=7.3
J15A ⇑SKPab 04 15 57.2
baz=130
L13A **Double Diamond** 130.00 34 ⇑P PKPdf 04 12 39.7 -0.4
baz=130,SNR=14
L13A ⇑SKPab 04 15 57.8
baz=130
YFT **Old Faithful** 130.00 30 ePKPdf PKPdf 04 12 40.1 +0.1
YFT eSKP 04 15 59.4
P10A **Eureka** 130.08 38 ⇑P PKPdf 04 12 39.8 -0.5
baz=130
P10A ⇑SKPab 04 15 58.6
baz=130
I16A **Newdale** 130.09 31 ⇓SKPab SKPdf 04 15 56.6 -15
baz=130
K14A **Jones Ranch, D** 130.12 33 ⇑P PKPdf 04 12 40.3 0.0
baz=130,SNR=12
K14A ⇓SKPab 04 15 57.9
baz=130
ELK **Elko** 130.13 36 ePKIKP PKPdf 04 12 40.5 +0.1
LKWY **Lake** 130.14 29 ePKPdf PKPdf 04 12 41.2 +0.9
LKWY eSKP 04 15 59.6
SMMC **Simmler** 130.14 45 ⇓SKPab 04 15 58.7
baz=130
RCTC **Rector, Farmer** 130.15 43 ⇓SKPab 04 15 57.7
baz=130
H17A **Grant Village** 130.17 30 ⇓P PKPdf 04 12 39.3 -1.0
baz=130,SNR=6.3
H17A ⇓SKPab 04 15 59.1
baz=130
N12A **Clover Valley,** 130.18 36 ⇑P PKPdf 04 12 39.3 -1.1
baz=130,SNR=13
N12A ⇓SKPab 04 15 58.7
baz=130
N12A **Clover Valley,** 130.18 36 ePKPdf PKPdf 04 12 40.3 -0.2
O11A **Cowboy Ranch,** 130.26 37 ⇑P PKPdf 04 12 39.3 -1.4
baz=130,SNR=16
O11A ⇑SKPab 04 15 58.5
baz=130
RLMT **Red Lodge** 130.27 28 ⇓P PKPdf 04 12 39.9 -0.6
baz=130,SNR=5.7
RLMT ⇑SKPab 04 15 57.8
baz=130
RLMT **Red Lodge** 130.27 28 ePKPdf PKPdf 04 12 39.9 -0.6
RLMT ePP PP 04 14 51.7 -1.8
RLMT eSKPab 04 15 57.4
IMW **Indian Meadow** 130.35 30 ePKPdf PKPdf 04 12 39.9 -0.7
IMW eSKPbc SKPbc 04 15 59.1 -0.6
M13A **Montello** 130.35 35 ⇑P PKPdf 04 12 40.2 -0.6
baz=130,SNR=28
M13A ⇓SKPab 04 15 58.8
baz=130
M13A **Montello** 130.35 35 ePKPdf PKPdf 04 12 40.5 -0.3
M13A eSKPbc SKPbc 04 15 59.1 -0.7
K15A **Arbon** 130.37 32 ⇑P PKPdf 04 12 40.5 -0.3
baz=130,SNR=6.5
K15A ⇓SKPab 04 15 58.5
baz=130
LAO **LASA Array** 130.40 25 ePKPdf PKPdf 04 12 40.2 -0.5
LAO eSKPbc SKPbc 04 15 58.0 -1.8
L14A **Malta** 130.43 34 ⇓SKPab 04 15 58.9
baz=130
TIN **Tinemaha** 130.43 42 ⇑P PKPdf 04 12 40.3 -0.7
baz=130
TIN ⇑SKPab 04 15 59.4
baz=130
J16A **Bone** 130.45 31 ⇓P PKPdf 04 12 40.3 -0.6
baz=130
J16A ⇑SKPab 04 15 59.6
baz=130
PKM **Peak Mountain** 130.48 45 ⇑SKPab 04 15 59.8
baz=130
VES **Vestal, Richgr** 130.51 44 ⇓P PKPdf 04 12 40.3 -1.0
baz=130
VES ⇓SKPab 04 15 58.2
baz=130
I17A **Pilgrim Ck.** 130.52 30 ⇑P PKPdf 04 12 40.2 -0.8
baz=130
I17A ⇑SKPab 04 15 59.6
baz=130
RRI2 **Red Ridge** 130.55 31 ePKPdf PKPdf 04 12 41.0 -0.1
RRI2 ePP PP 04 14 56.0 +0.6
RRI2 eSKPbc SKPbc 04 15 59.5 -1.0
P11A **Circle Ranch,** 130.56 38 ⇑P PKPdf 04 12 40.0 -1.2
baz=130,SNR=6.7
P11A ⇓SKPab 04 15 58.8
baz=130
Q10A **Clear Creek Ra** 130.60 39 ⇓P PKPdf 04 12 40.4 -0.9
baz=130
Q10A ⇑SKPab 04 15 59.4
baz=130
TPAW **Teton Pass** 130.64 31 ePKPdf PKPdf 04 12 41.7 +0.5
TPAW ePP PP 04 14 58.0 +2.0
TPAW eSKP 04 15 60.0
N13A **Wendover, West** 130.66 35 ⇑SKPab 04 15 59.0
baz=130
O12A **Currie** 130.72 36 ⇑P PKPdf 04 12 40.0 -1.5
baz=130,SNR=20
O12A ⇓SKPab 04 15 59.9
baz=130
M14A **Sheep Mountain** 130.72 34 ⇓P PKPdf 04 12 41.0 -0.4
baz=130,SNR=36
M14A ⇑SKPab 04 16 00.4
baz=130
LOHW **Long Hollow** 130.72 30 ePKPdf PKPdf 04 12 40.6 -0.8
LOHW eSKP 04 15 59.9
SNOW **Snow King Moun** 130.76 31 ePKPdf PKPdf 04 12 41.4 -0.1
SNOW eSKP 04 15 59.7
ULM **Lac du Bonnet** 130.76 14 PKP PKPdf 04 12 39.5 -1.8
comp=Z,29nm,0.6s,baz=349,slow=2.6,SNR=66
ULM PP PP 04 14 51.2 -5.0
comp=Z,3.2nm,0.7s,baz=355,slow=13,SNR=2.9
K16A **Soda Springs** 130.77 32 ⇑SKPab 04 16 00.4
baz=131
REDW **Red Top Meadow** 130.78 31 ePKPdf PKPdf 04 12 41.0 -0.6
REDW ePP PP 04 15 00.3 +3.5
REDW eSKP 04 15 59.8
SBC **Santa Barbara** 130.78 46 ⇓SKPab 04 15 58.7
baz=131
J17A **Brown Place, J** 130.85 31 ⇓P PKPdf 04 12 41.2 -0.5
baz=131
J17A ⇓SKPab 04 15 59.1
baz=131
HVU **Hansel Valley** 130.86 34 ePKPdf PKPdf 04 12 41.3 -0.4
HVU eSKP 04 16 00.9
CWC **Cottonwood Cre** 130.87 42 ⇑SKPab 04 15 59.7
baz=131
L15A **Malad City** 130.92 33 ⇓P PKPdf 04 12 41.5 -0.3
baz=131,SNR=10
L15A ⇑SKPab 04 15 60.0
baz=131
S10A **Tonopah Range,** 131.01 40 ⇓SKPab 04 16 00.3
baz=131
ISA **Isabella** 131.02 44 ⇑P PKPdf 04 12 41.2 -1.0
baz=131
ISA ⇓SKPab 04 16 00.4
baz=131
GRAC **Grapevine Rang** 131.03 41 ⇑SKPab 04 16 00.7
baz=131

Q11A	**Duckwater**	**131.05**	**38**	⇑P	PKPdf	04 12 41.7	-0.4
	baz=131,SNR=15						
Q11A				⇓SKPab		04 16 01.2	
	baz=131						
I18A	**Diamond G Ranc**	**131.05**	**30**	⇓SKPab		04 16 00.3	
	baz=131						
ARVC	**Arvin**	**131.06**	**44**	⇑SKPab		04 16 00.9	
	baz=131						
BSC	**Santa Cruz Isl**	**131.07**	**46**	⇑SKPab		04 16 01.4	
	baz=131						
P12A	**McGill**	**131.12**	**37**	⇓P	PKPdf	04 12 42.0	-0.2
	baz=131,SNR=28						
P12A				⇑SKPab		04 16 01.5	
	baz=131						
K17A	**Gardner Place,**	**131.18**	**31**	⇑SKPab		04 16 01.4	
	baz=131						
N14A	**Grayback Hills**	**131.25**	**35**	⇓P	PKPdf	04 12 42.0	-0.5
	baz=131,SNR=26						
N14A				⇑SKPab		04 16 02.1	
	baz=131						
M15A	**Larsen Ranch,**	**131.25**	**34**	⇑P	PKPdf	04 12 41.9	-0.6
	baz=131,SNR=8.4						
M15A				⇑SKPab		04 16 02.0	
	baz=131						
O13A	**Hicks Ranch, I**	**131.26**	**36**	⇑SKPab		04 16 02.3	
	baz=131						
BGU	**Big Grassy Mou**	**131.28**	**35**	*e*PKPdf	PKPdf	04 12 42.7	+0.1
BGU				*e*SKP		04 16 02.5	
J18A	**Kendall Valley**	**131.31**	**30**	⇑P	PKPdf	04 12 42.1	-0.4
	baz=131,SNR=7.9						
J18A				⇑SKPab		04 16 02.0	
	baz=131						
SPUT	**South Promonto**	**131.35**	**34**	*e*PKPdf	PKPdf	04 12 42.1	-0.6
SPUT				*e*SKP		04 16 02.5	
R11A	**Troy Canyon, C**	**131.39**	**39**	⇓P	PKPdf	04 12 42.7	-0.1
	baz=131,SNR=34						
R11A				⇑SKPab		04 16 01.8	
	baz=131						
L16A	**Fish Haven**	**131.43**	**32**	⇓P	PKPdf	04 12 42.4	-0.4
	baz=131						
L16A				⇓SKPab		04 16 02.5	
	baz=131						
Q12A	**Willow Creek R**	**131.44**	**38**	⇓P	PKPdf	04 12 42.4	-0.5
	baz=131,SNR=5.8						
Q12A				⇑SKPab		04 16 02.2	
	baz=131						
MPMC	**Manual Prospec**	**131.48**	**43**	⇓P	PKPdf	04 12 42.8	-0.2
	baz=131						
MPMC				⇓SKPab		04 16 02.8	
	baz=131						
N15A	**Stansbury Isla**	**131.60**	**34**	P	PKPdf	04 12 43.0	-0.2
	baz=131,SNR=28						
N15A				⇑SKPab		04 16 03.2	
	baz=131						
HWUT	**Hardware Ranch**	**131.64**	**33**	*e*PKPdf	PKPdf	04 12 42.4	-0.8
HWUT				*e*PP	PP	04 15 06.7	+4.2
HWUT				*e*SKP		04 16 03.4	
LRMC	**Laurel Mountai**	**131.66**	**43**	⇓P	PKPdf	04 12 42.6	-0.8
	baz=132						
LRMC				⇑SKPab		04 16 03.8	
	baz=132						
L17A	**Cokeville**	**131.66**	**32**	⇑P	PKPdf	04 12 42.8	-0.4
	baz=132,SNR=7.9						
L17A				⇓SKPab		04 16 03.2	
	baz=132						
P13A	**Bates Ranch, G**	**131.67**	**37**	⇑P	PKPdf	04 12 42.9	-0.4
	baz=132,SNR=12						
P13A				⇓SKPab		04 16 03.5	
	baz=132						
FURC	**Furnace Creek,**	**131.67**	**42**	⇑P	PKPdf	04 12 42.8	-0.6
	baz=132						
FURC				⇓SKPab		04 16 03.5	
	baz=132						
K18A	**Toltan Ranch,**	**131.71**	**31**	⇓P	PKPdf	04 12 42.6	-0.7
	baz=132						
K18A				⇑SKPab		04 16 04.1	
	baz=132						
S11A	**Rachel**	**131.71**	**40**	⇓P	PKPdf	04 12 43.1	-0.4
	baz=132						
S11A				⇑SKPab		04 16 04.1	
	baz=132						
EDW2	**Edwards Air Fo**	**131.77**	**44**	⇓P	PKPdf	04 12 43.2	-0.5
	baz=132						
EDW2				⇑SKPab		04 16 04.3	
	baz=132						
M16A	**Huntsville**	**131.80**	**33**	⇓P	PKPdf	04 12 42.8	-0.7
	baz=132						
M16A				⇑SKPab		04 16 04.0	
	baz=132						
BW06	**Boulder Array**	**131.86**	**30**	⇓P	PKPdf	04 12 42.8	-0.8
	baz=132,SNR=7.4						
BW06				⇓SKPab		04 16 03.1	
	baz=132						
BW06	**Boulder Array**	**131.86**	**30**	*e*PKPdf	PKPdf	04 12 42.6	-1.0
BW06				*e*PP	PP	04 14 57.7	-6.2
PDAR	**Pinedale Array**	**131.86**	**30**	PKhKP		04 12 33.8	
	comp=Z,1.0nm,0.8s,baz=90,slow=1.5,SNR=6.0						
PDAR				PKP	PKPdf	04 12 42.4	-1.2
	comp=Z,4.3nm,0.7s,baz=210,slow=0.9,SNR=24						
PDAR				PP	PP	04 15 00.2	-3.6
	comp=Z,1.8nm,0.8s,baz=27,slow=1.7,SNR=3.8						
DUG	**Dugway**	**131.89**	**35**	⇓P	PKPdf	04 12 43.4	-0.3
	baz=132,SNR=16						
DUG				⇑SKPab		04 16 04.2	
	baz=132						
DUG	**Dugway**	**131.89**	**35**	*e*PKPdf	PKPdf	04 12 43.3	-0.4
DUG				*e*SKP		04 16 04.7	
Q13A	**Wheeler Ranch,**	**131.98**	**37**	⇓P	PKPdf	04 12 42.9	-1.0
	baz=132,SNR=25						
Q13A				⇑SKPab		04 16 04.2	
	baz=132						
O15A	**The Old Anders**	**132.03**	**35**	⇓SKPab		04 16 04.4	
	baz=132						
U10A	**Ash Meadows, A**	**132.05**	**41**	⇑SKPab		04 16 05.1	
	baz=132						
P14A	**Drum Mountains**	**132.14**	**36**	⇓P	PKPdf	04 12 43.1	-1.1
	baz=132,SNR=30						
P14A				⇓SKPab		04 16 05.7	
	baz=132						
K19A	**Absolon Red Bu**	**132.18**	**30**	⇓P	PKPdf	04 12 43.0	-1.2
	baz=132,SNR=23						
K19A				⇑SKPab		04 16 05.2	
	baz=132						
N16A	**Rees Ranch, Co**	**132.20**	**33**	⇓P	PKPdf	04 12 43.9	-0.4
	baz=132,SNR=8.6						
M17A	**Scullys Gap (B**	**132.21**	**32**	⇑P	PKPdf	04 12 43.5	-0.8
	baz=132,SNR=8.2						
M17A				⇓SKPab		04 16 05.5	
	baz=132						
L18A	**Fontenelle, Gr**	**132.23**	**31**	⇑P	PKPdf	04 12 44.0	-0.3
	baz=132						
L18A				⇓SKPab		04 16 05.8	
	baz=132						
T11A	**Corn Creek, Al**	**132.29**	**40**	⇓P	PKPdf	04 12 44.0	-0.5
	baz=132,SNR=17						
T11A				⇓SKPab		04 16 06.3	
	baz=132						
S12A	**Delamar Landin**	**132.30**	**39**	⇑P	PKPdf	04 12 44.6	0.0
	baz=132,SNR=10						
S12A				⇓SKPab		04 16 06.8	
	baz=132						
BFSC	**Mount Baldy St**	**132.34**	**45**	⇓P	PKPdf	04 12 44.4	-0.3
	baz=132						
BFSC				⇓SKPab		04 16 06.9	
	baz=132						
GSC	**Goldstone**	**132.36**	**43**	⇓P	PKPdf	04 12 43.9	-0.8
	baz=132						
GSC				⇓SKPab		04 16 06.4	
	baz=132						
GSC	**Goldstone**	**132.36**	**43**	*e*PKPdf	PKPdf	04 12 44.8	0.0
GSC				*e*SKP		04 16 06.5	
SHOC	**Shoshone**	**132.38**	**42**	⇓P	PKPdf	04 12 44.2	-0.5
	baz=132						
SHOC				⇓SKPab		04 16 06.5	
	baz=132						
Q14A	**Sevier Lake (B**	**132.41**	**37**	⇑P	PKPdf	04 12 44.3	-0.4
	baz=132,SNR=9.0						
Q14A				⇓SKPab		04 16 06.2	
	baz=132						
L19A	**Farson**	**132.45**	**31**	⇓P	PKPdf	04 12 44.3	-0.4
	baz=132,SNR=5.9						
L19A				⇑SKPab		04 16 06.3	
	baz=132						
NLU	**North Lily Min**	**132.47**	**35**	*e*PKPdf	PKPdf	04 12 44.8	0.0
NLU				*e*PP	PP	04 15 07.6	-0.3
NLU				*e*SKP		04 16 06.9	
N17A	**Moffit Pass**	**132.49**	**33**	⇑P	PKPdf	04 12 44.3	-0.5
	baz=132,SNR=7.8						
N17A				⇑SKPab		04 16 06.8	
	baz=132						
R13A	**O'Grain Ranch,**	**132.50**	**38**	⇓P	PKPdf	04 12 44.4	-0.5
	baz=132,SNR=6.7						
R13A				⇑SKPab		04 16 06.7	
	baz=132						
K20A	**Yellowstone Ra**	**132.55**	**30**	⇓P	PKPdf	04 12 43.9	-1.0
	baz=132,SNR=5.8						
K20A				⇓SKPab		04 16 06.4	
	baz=132						
M18A	**Lyman**	**132.56**	**32**	⇑P	PKPdf	04 12 44.1	-0.8
	baz=132						
P15A	**Leamington**	**132.61**	**35**	⇑P	PKPdf	04 12 44.2	-0.9
	baz=132						
P15A				⇑SKPab		04 16 07.3	
	baz=132						
DAU	**Daniels Canyon**	**132.63**	**34**	*e*PKPdf	PKPdf	04 12 45.0	-0.1
DAU				*e*SKP		04 16 07.4	
U11A	**Corn Creek**	**132.67**	**41**	⇑SKPab		04 16 07.8	
	baz=132						
TUQ	**Turquoise Moun**	**132.88**	**42**	⇓P	PKPdf	04 12 45.0	-0.7
	baz=133						
TUQ				⇓SKPab		04 16 08.3	
	baz=133						
Q15A	**Fillmore**	**132.93**	**36**	⇓P	PKPdf	04 12 45.9	+0.2
	baz=133						
Q15A				⇑SKPab		04 16 08.4	
	baz=133						
S13A	**Holt Ranch, En**	**132.94**	**39**	⇑P	PKPdf	04 12 45.6	-0.2
	baz=133,SNR=9.6						
S13A				⇓SKPab		04 16 08.7	
	baz=133						
P16A	**Fountain Green**	**132.94**	**35**	⇑P	PKPdf	04 12 45.2	-0.5
	baz=133						
P16A				⇑SKPab		04 16 09.0	
	baz=133						
HEC	**Hector,Ludlow**	**132.94**	**43**	⇑P	PKPdf	04 12 46.1	+0.3
	baz=133						
HEC				⇑SKPab		04 16 09.0	
	baz=133						
V11A	**Goodsprings**	**132.98**	**41**	⇓P	PKPdf	04 12 44.8	-1.1
	baz=133						
V11A				⇓SKPab		04 16 08.8	
	baz=133						
M19A	**Rock Springs**	**132.99**	**31**	⇓P	PKPdf	04 12 45.4	-0.3
	baz=133						
M19A				⇓SKPab		04 16 07.9	
	baz=133						
R14A	**James Farms, M**	**133.00**	**37**	⇑P	PKPdf	04 12 45.3	-0.6
	baz=133						
R14A				⇓SKPab		04 16 09.2	
	baz=133						
L20A	**Wamsutter**	**133.03**	**30**	⇓P	PKPdf	04 12 45.3	-0.5
	baz=133,SNR=7.0						
L20A				⇓SKPab		04 16 08.2	
	baz=133						
O17A	**Robinson Place**	**133.06**	**34**	⇓P	PKPdf	04 12 46.2	+0.3
	baz=133,SNR=49						
O17A				⇑SKPab		04 16 08.7	
	baz=133						
ARUT	**Antelope Range**	**133.07**	**38**	*e*PKIKP	PKPdf	04 12 42.5	-3.5
N18A	**Larsen Ranch,**	**133.09**	**32**	⇑SKPab		04 16 08.5	
	baz=133						
U12A	**Valley of Fire**	**133.21**	**40**	⇓SKPab		04 16 09.7	
	baz=133						
S14A	**Cedar City**	**133.26**	**38**	⇑P	PKPdf	04 12 46.4	0.0
	baz=133						
S14A				⇑SKPab		04 16 09.8	
	baz=133						
T13A	**Saint George**	**133.26**	**39**	⇓P	PKPdf	04 12 45.5	-0.9
	baz=133,SNR=6.6						
T13A				⇑SKPab		04 16 10.0	
	baz=133						
CCUT	**Cedar City**	**133.27**	**38**	*e*PKPdf	PKPdf	04 12 47.2	+0.8
MSU	**Marysvale**	**133.37**	**36**	*e*PKPdf	PKPdf	04 12 46.8	+0.2
MSU				*e*SKP		04 16 09.7	
RSSD	**Black Hills**	**133.38**	**25**	*e*PKPdf	PKPdf	04 12 45.4	-1.0
RSSD				*e*SKP		04 16 09.5	
TMUT	**Trail Mountain**	**133.41**	**35**	*e*PKPdf	PKPdf	04 12 45.9	-0.7
TMUT				*e*SKP		04 16 09.7	
N19A	**John Jarvie Ra**	**133.41**	**32**	⇑P	PKPdf	04 12 45.3	-1.3
	baz=133						
N19A				⇑SKPab		04 16 09.8	
	baz=133						
O18A	**Roosevelt**	**133.42**	**33**	⇑P	PKPdf	04 12 45.7	-0.9
	baz=133,SNR=29						
O18A				⇑SKPab		04 16 10.4	
	baz=133						
V12A	**Nelson**	**133.43**	**41**	⇓P	PKPdf	04 12 46.4	-0.4
	baz=133,SNR=12						
V12A				⇑SKPab		04 16 11.0	
	baz=133						
GMRC	**Granite Mounta**	**133.43**	**43**	⇑P	PKPdf	04 12 46.6	-0.2
	baz=133						
GMRC				⇓SKPab		04 16 11.1	
	baz=133						
109C	**Camp Elliot, M**	**133.45**	**46**	⇑SKPab		04 16 11.3	
	baz=133						
M20A	**Sweetwater, Wa**	**133.49**	**31**	⇓P	PKPdf	04 12 46.0	-0.7
	baz=133,SNR=6.3						
M20A				⇓SKPab		04 16 10.6	
	baz=133						
R15A	**Junction**	**133.51**	**37**	⇑SKPab		04 16 10.8	
	baz=133						
PFO	**Pinyon Flat Ob**	**133.53**	**45**	⇓P	PKPdf	04 12 46.4	-0.6
	baz=133						
PFO				⇓SKPab		04 16 11.0	
	baz=133						
PFO	**Pinyon Flat Ob**	**133.53**	**45**	*e*PKPdf	PKPdf	04 12 46.3	-0.7
PFO				*e*SKP		04 16 11.1	
L21A	**Rawlins**	**133.55**	**29**	⇑P	PKPdf	04 12 45.8	-1.0
	baz=133,SNR=10						
L21A				⇑SKPab		04 16 10.9	
	baz=133						
P17A	**Butcher Ranch,**	**133.56**	**34**	⇑P	PKPdf	04 12 46.5	-0.4
	baz=133,SNR=9.4						
P17A				⇑SKPab		04 16 10.6	
	baz=133						
U13A	**Pakoon Wash**	**133.59**	**40**	⇓P	PKPdf	04 12 47.1	+0.1
	baz=133,SNR=7.1						
U13A				⇑SKPab		04 16 11.3	
	baz=133						
LDFC	**Landfair**	**133.63**	**42**	*e*PKPdf	PKPdf	04 12 47.2	+0.1
LDFC				*e*SKPbc	SKPbc	04 16 11.0	-0.7
BELC	**Belle Mtn.**	**133.63**	**44**	⇑P	PKPdf	04 12 46.9	-0.3
	baz=134						
BELC				⇓SKPab		04 16 11.5	
	baz=134						
W12A	**Cal Nev Ari**	**133.66**	**42**	⇑SKPab		04 16 11.1	
	baz=134						
Q16A	**Castle Valley**	**133.69**	**35**	⇑P	PKPdf	04 12 46.9	-0.2
	baz=134,SNR=12						
Q16A				⇑SKPab		04 16 11.1	
	baz=134						
P18A	**Preston Nutter**	**133.73**	**34**	⇓P	PKPdf	04 12 47.6	+0.4
	baz=134						
P18A				⇑SKPab		04 16 11.8	
	baz=134						
T14A	**Hurricane**	**133.75**	**39**	⇑P	PKPdf	04 12 47.1	-0.2
	baz=134						
T14A				⇑SKPab		04 16 12.0	
	baz=134						
S15A	**Panguitch**	**133.80**	**37**	⇑SKPab		04 16 12.4	
	baz=134						
M21A	**Separation Pea**	**133.82**	**30**	⇓P	PKPdf	04 12 46.7	-0.6
	baz=134,SNR=20						
M21A				⇑SKPab		04 16 11.0	
	baz=134						
RWWY	**Rawlins**	**133.83**	**30**	*e*PKPdf	PKPdf	04 12 46.4	-1.0
RWWY				*e*SKP		04 16 10.7	
O19A	**Miners Draw (B**	**133.87**	**32**	⇓P	PKPdf	04 12 46.9	-0.5
	baz=134						
V13A	**Grand Canyon W**	**133.92**	**41**	⇑P	PKPdf	04 12 47.2	-0.5
	baz=134,SNR=14						
SRU	**San Rafael**	**133.93**	**35**	⇑P	PKPdf	04 12 47.0	-0.6
	baz=134,SNR=9.4						
SRU	**San Rafael**	**133.93**	**35**	*e*PKPdf	PKPdf	04 12 46.8	-0.8
SRU				*e*SKPbc	SKPbc	04 16 11.4	-1.2
R16A	**Teasdale**	**133.93**	**36**	⇑SKPab		04 16 13.1	
	baz=134						
MONP	**Monument Peak**	**133.94**	**45**	⇓SKPab		04 16 12.6	
	baz=134						
N20A	**Spence Gulch,**	**133.94**	**31**	⇑P	PKPdf	04 12 47.0	-0.6
	baz=134,SNR=14						
N20A				⇑SKPab		04 16 12.2	
	baz=134						
L22A	**Ellis Ranch, M**	**133.95**	**29**	⇑P	PKPdf	04 12 47.2	-0.4
	baz=134						
U14A	**Mt Trumbull**	**134.09**	**39**	⇓SKPab		04 16 13.1	
	baz=134						
IRM	**Iron Mountain**	**134.13**	**43**	⇑SKPab		04 16 12.5	
	baz=134						
Q18A	**Rafter H Ranch**	**134.16**	**34**	⇓P	PKPdf	04 12 47.7	-0.3
	baz=134,SNR=9.5						
Q18A				⇓SKPab		04 16 12.4	
	baz=134						
BC3	**Big Chuckw Mtn**	**134.20**	**44**	⇑P	PKPdf	04 12 47.9	-0.4
	baz=134						
BC3				⇓SKPab		04 16 13.2	
	baz=134						
T15A	**Red Dirt Ranch**	**134.21**	**38**	⇓P	PKPdf	04 12 48.0	-0.2
	baz=134,SNR=6.6						
T15A				⇑SKPab		04 16 12.4	
	baz=134						
DVTC	**Desert V Tower**	**134.29**	**46**	⇓P	PKPdf	04 12 48.0	-0.4
	baz=134						
DVTC				⇑SKPab		04 16 13.5	
	baz=134						
R17A	**Hanksville Air**	**134.29**	**35**	P	PKPdf	04 12 48.3	0.0
	baz=134,SNR=18						
R17A				⇓SKPab		04 16 13.2	
	baz=134						
M22A	**Cedar Creek Ra**	**134.35**	**29**	⇑P	PKPdf	04 12 48.0	-0.3
	baz=134,SNR=5.3						
M22A				⇓SKPab		04 16 13.6	
	baz=134						
SWSC	**Sam W. Stewart**	**134.35**	**45**	⇑SKPab		04 16 13.4	
	baz=134						
N21A	**Black Mountain**	**134.37**	**31**	⇑P	PKPdf	04 12 47.9	-0.5
	baz=134,SNR=16						
N21A				⇑SKPab		04 16 12.8	
	baz=134						
P19A	**Cripple Cowboy**	**134.42**	**33**	⇓P	PKPdf	04 12 48.4	-0.1
	baz=134						
P19A				⇓SKPab		04 16 13.1	
	baz=134						
W13A	**Hualapai Mount**	**134.43**	**41**	⇑P	PKPdf	04 12 48.9	+0.3
	baz=134,SNR=9.4						
W13A				⇓SKPab		04 16 13.4	
	baz=134						
O20A	**White River Ci**	**134.46**	**32**	P	PKPdf	04 12 48.1	-0.5
	baz=134,SNR=17						
O20A				⇓SKPab		04 16 13.9	
	baz=134						
V14A	**Boquillas Ranc**	**134.62**	**40**	⇓P	PKPdf	04 12 49.3	+0.3
	baz=134,SNR=15						
V14A				⇓SKPab		04 16 14.4	
	baz=134						
U15A	**North Rim**	**134.64**	**39**	⇓P	PKPdf	04 12 49.6	+0.6
	baz=134,SNR=13						
U15A				⇓SKPab		04 16 14.3	
	baz=134						
PDMCI	**Parker Dam,Lak**	**134.73**	**42**	⇓SKPab		04 16 15.1	
	baz=135						
X13A	**Yucca**	**134.77**	**42**	⇑P	PKPdf	04 12 49.3	0.0
	baz=135						
R18A	**Canyonlands Na**	**134.78**	**35**	P	PKPdf	04 12 49.2	0.0
	baz=135,SNR=18						
Y12C	**Blythe**	**134.79**	**43**	⇓P	PKPdf	04 12 49.0	-0.4
	baz=135						
P20A	**De Beque**	**134.83**	**33**	⇓P	PKPdf	04 12 49.1	-0.2
	baz=135						
N22A	**Wattenberg Ran**	**134.88**	**30**	⇓P	PKPdf	04 12 49.1	-0.2
	baz=135,SNR=7.3						
W14A	**Seligman**	**134.89**	**41**	⇓P	PKPdf	04 12 49.3	-0.2
	baz=135,SNR=14						
GLA	**Glamis**	**134.97**	**44**	⇓P	PKPdf	04 12 49.5	-0.3
	baz=135						
GLA	**Glamis**	**134.97**	**44**	*e*PKPdf	PKPdf	04 12 50.1	+0.4
GLA				*e*SKPbc	SKPbc	04 16 15.3	-0.9
PHWY	**Pilot Hill**	**134.98**	**29**	*e*PKPdf	PKPdf	04 12 48.5	-1.0
V15A	**Kaibab Nationa**	**135.10**	**39**	⇑P	PKPdf	04 12 49.5	-0.4
	baz=135,SNR=9.4						
T17A	**Navajo Res., N**	**135.19**	**37**	⇑P	PKPdf	04 12 50.0	0.0
	baz=135,SNR=18						
S18A	**Hurst Farm, Bl**	**135.20**	**36**	⇑P	PKPdf	04 12 50.1	+0.1
	baz=135,SNR=9.5						
R19A	**Curley Farm, L**	**135.21**	**34**	⇓P	PKPdf	04 12 49.7	-0.4
	baz=135,SNR=13						
Q20A	**Ridgley Place,**	**135.28**	**33**	⇓P	PKPdf	04 12 50.0	-0.1
	baz=135						
P21A	**Newcastle**	**135.32**	**32**	⇓P	PKPdf	04 12 50.5	+0.3
	baz=135						
W15A	**Williams**	**135.44**	**40**	⇓P	PKPdf	04 12 50.5	0.0
	baz=135,SNR=7.5						
X14A	**Yava**	**135.46**	**41**	⇑P	PKPdf	04 12 50.2	-0.5
	baz=135,SNR=5.7						
U17A	**Shonto**	**135.53**	**37**	⇑P	PKPdf	04 12 50.6	-0.1
	baz=135						
U16A	**Tuba City**	**135.54**	**38**	⇑P	PKPdf	04 12 50.4	-0.3
	baz=135						
T18A	**Mexican Hat**	**135.65**	**36**	⇓P	PKPdf	04 12 50.9	0.0
	baz=136,SNR=11						
S19A	**Harvey Farm, M**	**135.66**	**35**	⇓P	PKPdf	04 12 50.5	-0.4
	baz=136						
Z13A	**Yuma Proving G**	**135.70**	**43**	⇓P	PKPdf	04 12 51.0	-0.1
	baz=136,SNR=17						
Y14A	**Wickenburg**	**135.71**	**42**	⇑P	PKPdf	04 12 50.8	-0.3
	baz=136						
Q21A	**Lamborn Mesa,**	**135.75**	**33**	⇓P	PKPdf	04 12 50.7	-0.4
	baz=136						
R20A	**Redvale**	**135.78**	**34**	⇑P	PKPdf	04 12 50.9	-0.2
	baz=136						
WUAZ	**Wupatki**	**135.79**	**39**	⇓P	PKPdf	04 12 50.8	-0.4
	baz=136						
WUAZ	**Wupatki**	**135.79**	**39**	*e*PKPdf	PKPdf	04 12 51.0	-0.2
WUAZ				*e*SKPbc	SKPbc	04 16 18.1	-0.6
WUAZ				*e*SKP		04 16 22.8	
PLCA	**Paso Flores**	**135.81**	**189**	PKIKP	PKPdf	04 12 51.5	+0.4
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PLCA	**Paso Flores**	**135.81**	**189**	PKP	PKPdf	04 12 51.5	+0.4
	comp=Z,4.5nm,0.8s,baz=174,slow=3.8,SNR=5.1						
PLCA	**Paso Flores**	**135.81**	**189**	*e*PKPdf	PKPdf	04 12 49.6	-1.5
SMCO	**Snowmass**	**135.82**	**32**	*e*PKPpre		04 12 46.5	
SMCO				*e*PKPdf	PKPdf	04 12 51.1	0.0
SMCO				*e*PP	PP	04 15 35.4	+6.3
SMCO				*e*SKP		04 16 18.4	
113A	**Mohawk Valley,**	**135.87**	**44**	⇑P	PKPdf	04 12 50.7	-0.8
	baz=136						
X15A	**Humboldt**	**135.88**	**41**	⇓P	PKPdf	04 12 51.4	0.0
	baz=136,SNR=14						
W16A	**Flagstaff**	**135.96**	**40**	⇑P	PKPdf	04 12 51.6	0.0
	baz=136						
ISCO	**Idaho Springs**	**136.06**	**30**	*e*PKIKP	PKPdf	04 12 50.0	-1.6
ISCO				*e*		04 15 28.3	
Z14A	**Wintersburg**	**136.09**	**43**	⇓P	PKPdf	04 12 51.0	-0.8
	baz=136,SNR=5.7						
Q22A	**Crested Butte,**	**136.09**	**32**	⇑P	PKPdf	04 12 51.7	+0.1
	baz=136,SNR=7.1						
V17A	**Tonalea, Kykot**	**136.09**	**38**	⇓P	PKPdf	04 12 51.4	-0.3
	baz=136,SNR=12						
R21A	**Cimarron**	**136.10**	**33**	⇑P	PKPdf	04 12 51.6	-0.1
	baz=136						
Y15A	**Casa Rosa Ranc**	**136.14**	**41**	⇓P	PKPdf	04 12 51.6	-0.3
	baz=136,SNR=17						
TRQA	**Tornquist**	**136.26**	**199**	*e*PKPdf	PKPdf	04 12 51.0	-1.0
MVCO	**Mesa Verde**	**136.39**	**35**	⇓P	PKPdf	04 12 52.2	-0.1
	baz=136,SNR=6.7						
MVCO	**Mesa Verde**	**136.39**	**35**	*e*PKPdf	PKPdf	04 12 52.0	-0.3
M

baz=137,SNR=12
V19A Window Rock 137.10 37 ⇓P PKPdf 04 12 54.1 +0.5
baz=137
PKME Peaks-Kenny Pk 137.10 350 *e*PKPdf PKPdf 04 12 52.2 -1.1
Y17A Roosevelt 137.28 41 ⇑P PKPdf 04 12 54.2 +0.2
baz=137
W19A Sanders 137.29 38 ⇑P PKPdf 04 12 54.3 +0.3
baz=137
X18A Snowflake 137.32 39 ⇑P PKPdf 04 12 54.3 +0.3
baz=137
V20A Brimhall 137.38 36 ⇓P PKPdf 04 12 54.1 -0.1
baz=137
T22A Edith 137.43 34 ⇓P PKPdf 04 12 54.5 +0.3
baz=137
SDCO Great Sand Dun 137.66 32 *e*PKPpre 04 12 45.0
SDCO *e*PKPdf PKPdf 04 12 54.3 -0.3
SDCO *e*PP PP 04 15 40.1 -0.5
SDCO *e*SKP 04 16 22.9
Y18A Canyon Day Jun 137.75 40 ⇑P PKPdf 04 12 55.5 +0.7
baz=138,SNR=9.6
X19A St. Johns 137.80 39 ⇑P PKPdf 04 12 55.7 +0.8
baz=138,SNR=16
W20A Ramah 137.82 37 ⇓P PKPdf 04 12 55.9 +0.9
baz=138,SNR=16
216A Three Points, 137.90 43 ⇑P PKPdf 04 12 55.3 +0.1
baz=138
117A Oracle 138.04 42 ⇑P PKPdf 04 12 55.9 +0.5
baz=138
TUC Tucson 138.17 42 *e*PKHKP 04 12 47.8
TUC *e* 04 12 55.7
TUC Tucson 138.17 42 *e*PKPpre 04 12 47.8
TUC *e*PKPdf PKPdf 04 12 55.7 0.0
TUC *e*SKP 04 16 25.5
TUC *e*SKPab 04 16 31.6
X20A Quemado 138.22 38 ⇑P PKPdf 04 12 56.1 +0.4
baz=138
W21A San Fidel 138.34 37 ⇓P PKPdf 04 12 56.7 +0.8
baz=138
217A Green Valley 138.47 43 ⇓P PKPdf 04 12 56.8 +0.5
baz=138
118A Homack Ranch, 138.51 41 ⇑P PKPdf 04 12 57.0 +0.7
baz=138,SNR=6.4
Y20A Horse Springs, 138.71 38 ⇓P PKPdf 04 12 57.3 +0.6
baz=138,SNR=7.8
X21A Alamocita Cree 138.71 37 ⇑P PKPdf 04 12 57.1 +0.5
baz=138,SNR=15
119A Ashpeak Ranch, 138.87 41 ⇑P PKPdf 04 12 57.4 +0.5
baz=139
218A Dragoon 138.87 42 ⇑P PKPdf 04 12 57.5 +0.5
baz=139
JFWS Jewell Farm 138.99 13 *e*PKIKP PKPdf 04 12 55.0 -1.9
JFWS *e* 04 15 44.6
Y21A Point of Rocks 139.08 38 ⇑P PKPdf 04 12 57.6 +0.3
baz=139
Z20A Nine Sixteen R 139.10 40 ⇑P PKPdf 04 12 58.1 +0.7
baz=139,SNR=7.2
LAZ Ladron 139.13 37 *e*PKPdf PKPdf 04 12 57.1 -0.3
LAZ *e*SKP 04 16 28.2
X22A Bernardo 139.14 37 ⇑P PKPdf 04 12 58.2 +0.8
baz=139
ANMO Albuquerque 139.15 36 *e*PKHKP 04 12 49.2
ANMO *e* 04 12 57.2
ANMO Albuquerque 139.15 36 *e*PKPpre 04 12 49.2
ANMO *e*PKPdf PKPdf 04 12 57.2 -0.2
ANMO *e*SKP 04 16 28.2
W23A Werner Place, 139.18 35 ⇓P PKPdf 04 12 57.6 +0.2
baz=139
219A White Tail Can 139.38 41 ⇓P PKPdf 04 12 58.4 +0.5
baz=139,SNR=16
120A U Bar Ranch, L 139.44 40 ⇓P PKPdf 04 12 58.4 +0.4
baz=139,SNR=8.9
Z21A St. Cloud Mine 139.55 39 ⇑P PKPdf 04 12 58.3 +0.1
baz=139,SNR=10
Y22A Socorro 139.56 37 ⇑P PKPdf 04 12 58.3 +0.1
baz=139
X23A Hourglass Bar 139.57 36 ⇑P PKPdf 04 12 58.5 +0.3
baz=139
CBKS Cedar Bluff 139.58 25 *e*PKIKP PKPdf 04 12 57.7 -0.4
BNM Barren Site 139.61 37 *e*PKPdf PKPdf 04 12 57.9 -0.4
BNM *e*SKPdf SKPdf 04 16 29.3 +0.3
319A Douglas 139.75 42 ⇓P PKPdf 04 12 59.3 +0.6
baz=140,SNR=6.4
220A Playas Peak, P 139.92 41 ⇑P PKPdf 04 12 59.5 +0.6
baz=140,SNR=10
121A Cookes Peak, D 139.99 40 ⇓P PKPdf 04 12 59.6 +0.6
baz=140
Z22A Elephant Butte 140.02 38 ⇑P PKPdf 04 12 59.7 +0.6
baz=140
W25A X Bar L Ranch, 140.09 34 ⇓P PKPdf 04 12 59.7 +0.5
baz=140,SNR=10
Y23A Lovelace Mesa, 140.10 36 ⇑P PKPdf 04 12 59.2 0.0
baz=140
320A Kipp Ranch, An 140.28 42 ⇓P PKPdf 04 12 59.3 -0.3
baz=140,SNR=14
221A Mesquite Ranch 140.34 40 ⇑P PKPdf 04 13 00.1 +0.4
baz=140
122A Conniff Cattle 140.38 39 ⇑P PKPdf 04 13 00.7 +1.0
baz=140
Y24A Capitan 140.47 36 ⇓P PKPdf 04 13 00.1 +0.2
baz=140,SNR=11
KSU1 Kansas State U 140.59 22 *e*PKPpre 04 12 53.0
222A Williams Famil 140.71 39 ⇓P PKPdf 04 13 00.8 +0.4
baz=140
BINY Binghamton 140.91 357 *e*PKPpre 04 12 55.6
BINY *e*PKPdf PKPdf 04 12 59.3 -1.1
BINY *e*PP PP 04 15 58.9 -1.1
HDIL Hopedale 141.45 13 *e*PKPpre 04 12 52.7
HDIL *e*PKPdf PKPdf 04 13 01.8 +0.4
Z26A Caprock 141.79 35 ⇑P PKPdf 04 12 58.3 -3.9
baz=142,SNR=8.9
AMTX Amarillo 141.83 31 *e*PKPdf PKPdf 04 13 02.0 -0.2
MNTX Cornudas Mount 142.06 38 *e*PKPdf PKPdf 04 12 57.1 -5.7
MNTX *e*PKPdf PKPdf 04 13 01.0 -1.7
MNTX *e*SKPbc SKPbc 04 16 35.8 -0.5
324A Moseley Ranch, 142.17 39 ⇓P PKPdf 04 12 57.9 -5.1
baz=142
126A Clayton Basin, 142.22 36 ⇓P PKPdf 04 12 58.2 -4.8
baz=142
GDL2 Guadalupe Moun 142.33 37 *e*PKPpre 04 12 58.8
325A Bean Ranch, Si 142.54 38 ⇑P PKPdf 04 12 59.0 -4.6
baz=142,SNR=28
SSPA Standing Stone 142.54 359 *e*PKPpre 04 12 57.2
SSPA *e*PKPdf PKPdf 04 13 02.0 -1.3
SSPA *e*PP PP 04 16 07.5 -2.3
CLNB Carlsbad 142.57 36 *e*PKPpre 04 12 58.2
226A Malaga, Loving 142.58 37 ⇓P PKPdf 04 12 59.8 -3.9
baz=142,SNR=10
ACSO Alum Creek Sta 142.76 5 *e*PKPpre 04 12 57.9
ACSO *e*PKPdf PKPdf 04 13 03.1 -0.7
ACSO *e*PP PP 04 16 06.1 -5.1
425A Indio Mountain 142.93 39 ⇓P PKPdf 04 13 00.5 -3.9
baz=143,SNR=31
326A Caldwell Ranch 143.19 37 ⇑P PKPdf 04 13 01.0 -3.8
baz=143,SNR=16
CCM Cathedral Cave 143.31 17 *e*PKHKP 04 12 59.6
CCM *e* 04 16 10.6
BLO Bloomington 143.33 10 *e*PKPpre 04 12 60.0
BLO *e*PKPdf PKPdf 04 13 03.9 -0.9
WMOK Wichita Mounta 143.38 28 *e*PKIKP PKPdf 04 13 00.1 -4.9
OLIL Olney 143.45 12 *e*PKPpre 04 12 59.9
MCWV Mont Chateau 143.51 1 *e*PKPpre 04 13 00.7
426A McDonald Obser 143.61 38 ⇑P PKPdf 04 13 02.2 -3.3
baz=143,SNR=23
FVM French Village 143.61 16 *e*PKIKP PKPdf 04 13 00.7 -4.6
328A Wristen Ranch, 143.84 36 ⇑P PKPdf 04 13 02.9 -3.0
baz=144
427A Hayter Ranch, 143.86 37 ⇑P PKPdf 04 13 03.6 -2.3
baz=144,SNR=29
526A Mary Lane Ranc 143.99 39 ⇓P PKPdf 04 13 04.0 -2.2
baz=144,SNR=24
CFAA Coronel Fontan 144.13 195 PKP PKPdf 04 13 05.0 -1.5
comp=Z,2.9nm,0.6s,baz=184,slow=2.9,SNR=36
CFAA Coronel Fontan 144.13 195 PKP PKPdf 04 13 05.0 -1.5
SIUC Southern Illin 144.17 14 *e*PKPdf PKPdf 04 13 03.1 -3.2
SIUC *e*PP PP 04 16 18.1 -1.8
CPUP Villa Florida 144.19 214 PKP PKPdf 04 13 04.2 -2.4
comp=Z,17nm,0.8s,baz=109,slow=3.4,SNR=24
CPUP Villa Florida 144.19 214 *e*PKPdf PKPdf 04 13 04.9 -1.8
527A Woodward Ranch 144.23 38 ⇓P PKPdf 04 13 05.0 -1.6
baz=144,SNR=155
USIN University of 144.28 12 *e*PKPdf PKPdf 04 13 03.3 -3.2
626A Big Bend Ranch 144.31 40 ⇑P PKPdf 04 13 05.0 -1.8
baz=144
428A Kincaid Ranch, 144.38 37 P PKPdf 04 13 05.5 -1.4
baz=144,SNR=144

528A Cox Ranch, San 144.72 38 P PKPdf 04 13 06.3 -1.1
baz=144,SNR=130
TXAR Lajitas Array 144.75 39 PKIKP PKPdf 04 13 06.3 -1.3
TXAR pmax pmax
comp=Z,85nm,0.7s
TXAR Lajitas Array 144.75 39 PKP PKPdf 04 13 06.3 -1.3
comp=Z,85nm,0.7s,baz=293,slow=1.2,SNR=1075
627A Terlingua Ranc 144.85 39 ⇓P PKPdf 04 13 06.6 -1.2
baz=145,SNR=277
CBN Corbin 144.95 358 *e*PKPdf PKPdf 04 13 05.5 -2.1
PARMO Parma 145.03 15 *e*PKPdf PKPdf 04 13 05.8 -2.1
628A Black Gap, Mar 145.14 38 ⇓P PKPbc 04 13 07.2 -0.6
baz=145,SNR=218
GLAT Glass 145.52 15 *e*PKPbc PKPbc 04 13 07.6 -1.2
UTMT University of 145.56 14 *e*PKPbc PKPbc 04 13 07.5 -1.4
UTMT *ep*PKPdf pPKPdf 04 13 21.8 -2.6
GNAR Gosnell 145.61 16 *e*PKPbc PKPbc 04 13 07.8 -1.3
MIAR Mount Ida 145.75 22 *e*PKIKP PKPdf 04 13 08.6 -0.5
HBAR Harrisburg 145.81 17 *e*PKPbc PKPbc 04 13 08.6 -1.1
HBAR *e*PP PP 04 16 28.7 -1.0
HALT Halls 145.85 15 *e*PKPbc PKPbc 04 13 08.5 -1.3
BLA Blacksburg 145.94 2 *e*PKPbc PKPbc 04 13 08.4 -1.7
BLA *e*PP PP 04 16 24.8 -5.3
WVT Waverly 146.01 13 *e*PKPdf PKPdf 04 13 08.3 -1.2
WVT *ep*PKPdf pPKPdf 04 13 23.2 -2.0
WVT *e*PP PP 04 16 27.8 -2.9
JCT Junction City 146.23 34 *e*PKP2 PKPab 04 13 09.6 -2.3
TZTN Tazewell 146.35 7 *e*PKPbc PKPbc 04 13 09.4 -1.9
PLAL Pickwick Lake 147.05 14 *e*PKPdf PKPdf 04 13 09.2 -2.1
PLAL *e*PKPbc PKPbc 04 13 11.6 -1.8
PLAL *e*PP PP 04 16 32.9 -4.0
OXF Oxford 147.15 16 *e*PKIKP PKPdf 04 13 10.2 -1.3
OXF *e* 04 13 12.2
TKL Tuckaleechee C 147.20 7 *e*PKIKP PKPdf 04 13 10.6 -0.9
TKL *e* 04 13 12.3
LCO Las Campanas 147.22 193 *e*PKPbc PKPbc 04 13 12.3 -1.7
SWET Sewanee 147.29 11 *e*PKPdf PKPdf 04 13 10.4 -1.3
SWET *e*PKPbc PKPbc 04 13 12.2 -1.9
SWET *e*PP PP 04 16 33.2 -5.0
CPCT Cooper Cave 147.30 9 *e*PKPdf PKPdf 04 13 10.7 -1.1
CPCT *e*PKPbc PKPbc 04 13 12.8 -1.2
NATX Nacogdoches 147.75 26 *e*PKPdf PKPdf 04 13 11.5 -1.1
NATX *e*PKPbc PKPbc 04 13 14.7 -0.7
CNNC Cliffs of the 147.93 359 *e*PKPdf PKPdf 04 13 11.9 -0.8
CNNC *e*PKPbc PKPbc 04 13 14.8 -0.9
JSC Jenkinsville 148.81 4 *e*PKIKP PKPdf 04 13 13.6 -0.6
JSC *e* 04 13 16.7
VBMS Vicksburg 148.94 19 *e*PKPbc PKPbc 04 13 17.7 -0.8
LRAL Lakeview Retre 149.17 13 *e*PKPdf PKPdf 04 13 13.9 -0.9
LRAL *e*PKPbc PKPbc 04 13 17.2 -1.8
GOGA Godfrey 149.45 8 *e*PKPdf PKPdf 04 13 14.2 -1.1
GOGA *e*PKPbc PKPbc 04 13 18.7 -1.1
COW Cow Castle Cre 149.74 3 *e*PKPbc PKPbc 04 13 19.4 -1.1
NHSC New Hope 150.04 2 *e*PKPbc PKPbc 04 13 19.8 -1.4
BRAL Brewton 151.09 15 *e*PKPdf PKPdf 04 13 17.7 -0.3
BRAL *e*PKPbc PKPbc 04 13 23.0 -0.8
SIV San Ignacio 154.23 222 PKP PKPdf 04 13 23.0 +0.1
comp=Z,4.8nm,0.8s,baz=54,slow=6.6,SNR=4.7
SIV PKPbc PKPbc 04 13 30.9 -0.2
comp=Z,10nm,0.8s,baz=113,slow=4.2,SNR=7.2
SIV PKPab PKPab 04 13 45.4 +0.4
comp=Z,4.5nm,0.8s,baz=164,slow=3.4,SNR=3.9
CMIG Matias Romero 158.91 47 PKP PKPdf 04 13 28.3 -0.7
comp=Z,7.9nm,0.7s,baz=317,slow=2.5,SNR=14
CMIG PKPab PKPab 04 14 04.1 -1.0
comp=Z,6.8nm,0.8s,baz=338,slow=8.2,SNR=5.4
CMIG Matias Romero 158.91 47 PKP PKPdf 04 13 28.3 -0.7
CMIG PKPab PKPab 04 14 04.1 -1.0
MTP Monte Pirata 160.16 320 *e*PKPdf PKPdf 04 13 29.5 -0.8
MTP *e*PKPab PKPab 04 14 10.3 -0.2
APG El Apazote 163.45 43 PKP PKPdf 04 13 32.5 -1.3
comp=Z,9.1nm,0.9s,baz=139,slow=1.2,SNR=8.1
ATAH Atahualpa 169.91 182 PKP PKPdf 04 13 39.4 +0.6
comp=Z,7.9nm,1.0s,baz=290,slow=7.9,SNR=6.0
SDV Santo Domingo 170.00 306 PKP PKPdf 04 13 37.4 -1.5
comp=Z,4.8nm,0.8s,baz=313,slow=2.3,SNR=7.5
SDV PKPab PKPab 04 14 53.5 -0.5
comp=Z,6.9nm,0.7s,baz=9.9,slow=3.9,SNR=7.7
SDV PP PP 04 18 44.0 +0.4
comp=Z,9.6nm,1.0s,baz=71,slow=3.8,SNR=7.2
SDV Santo Domingo 170.00 306 *e*PKPdf PKPdf 04 13 36.8 -2.0
SDV *e*PKPab PKPab 04 14 53.5 -0.5
SDV *e*PP PP 04 18 43.9 +0.2
ROSC El Rosal 175.17 292 PKP PKPdf 04 13 40.2 -0.9
comp=Z,4.1nm,0.5s,baz=250,slow=23,SNR=10
ROSC PP PP 04 19 09.9 +0.2
comp=Z,3.4nm,0.8s,baz=76,slow=23,SNR=4.1
OTAV Otavalo 177.22 187 *e*PKPdf PKPdf 04 13 41.2 -0.3
OTAV *e*PKPab PKPab 04 15 25.0 -0.7

*ISCJB **03** 04:09:54.8±0.8, 20°.85S±0°.03×70°.4W±0°.1, h70km±8km, mb3.5/3, Error ellipse: s-maj=18.6km s-min=5.6km az=2.2*
*GUC **03** 04:09:54.7±1.0, 20°.87S×70°.26W, h70km±12km, ML4.2*
*NEIC **03** 04:09:54.7, 20°.87S×70°.26W, h70km, MG4.2(GUC), After GUC.*
NEIC Felt at Iquique.
*IDC **03** 04:09:56.0±0.8, 20°.72S×70°.19W, h60km±6km, mb3.4/3, mb1 3.9/6, mb1mx3.6/17, mbtmp3.7/6, Error ellipse: s-maj=31.3km s-min=8.4km az=63.0*
ISC 03 04:09:55.6±0.8, 20°.85S±0°.03×70°.4W±0°.1, h66km±9km, n20, σ0°96/25, mb3.5/3, 6C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	Humberston	0.71	37	⇓*i*P	Pn	04 10 10.2	-0.1
HMBC				*i* S	Sn	04 10 21.1	-0.1
HMBC				AML	AML	04 10 21.6	
comp=E,12μm,0.3s							
PB01	Plate Boundary	0.83	104	⇑*i*P	Pn	04 10 12.0	+0.3
PB01				*i* S	Sn	04 10 23.7	0.0
PB01				AML	AML	04 10 24.8	
comp=E,39μm,0.5s							
MACH	Maria Elena	1.45	158	⇑*i*P	Pn	04 10 19.6	-0.2
MACH				*i* S	Sn	04 10 38.2	+0.3
PB04	Plate Boundary	1.62	151	⇑*i*P	Pn	04 10 19.8	-2.3
PB04				*i* S	Sn	04 10 37.6	-4.5
PB04				AML	AML	04 10 43.1	
comp=N,3μm,0.2s							
MNMC	Miæe Miæ	1.85	23	⇓*i*P	Pn	04 10 25.6	+0.5
MNMC				*i* S	Sn	04 10 48.2	+0.7
MNMC				AML	AML	04 10 52.6	
comp=E,5μm,0.9s							
PECH	Pedro de Valdi	1.85	160	⇑*i*P	Pn	04 10 24.8	-0.3
PECH				*i* S	Sn	04 10 47.4	-0.2
PECH				AML	AML	04 10 47.9	
comp=E,3μm,0.6s							
LVC	Limon Verde	2.21	143	P	Pn	04 10 31.3	+1.3
comp=E,80nm,0.3s,baz=308,slow=8.9,SNR=929							
LVC				S	Sn	04 10 58.1	+1.9
comp=E,233nm,0.3s,baz=90,slow=19,SNR=40							
LVC	Limon Verde	2.21	143	⇑*i*P	Pn	04 10 31.2	+1.3
LVC				*i* S	Sn	04 10 58.1	+1.8
LVC				AML	AML	04 10 59.3	
comp=E,2μm,0.9s							
MECH	Mejillones	2.25	182	⇑*i*P	Pn	04 10 29.9	-0.6
MECH				*i* S	Sn	04 10 57.5	+0.3
MECH				AML	AML	04 11 23.7	
comp=N,983nm,1.3s							
SIV	San Ignacio	10.04	63	P	Pn	04 12 15.2	-1.9
comp=N,1.0nm,0.3s,baz=260,slow=12,SNR=19							
CFAA	Coronel Fontan	10.88	170	P	Pn	04 12 24.6	-3.9
comp=N,0.0nm,0.3s,baz=343,slow=14,SNR=13							
PLCA	Paso Flores	19.82	180	P	Pn	04 14 22.9	-0.1
comp=N,0.3nm,0.3s,baz=350,slow=8.2,SNR=4.1							
PDAR	Pinedale Array	72.88	331	P	P	04 21 19.3	+1.8
comp=N,0.2nm,0.7s,mb3.1,baz=104,slow=5.7,SNR=2.3							
TORD	Torodi Ar. Bea	78.41	71	P	P	04 21 48.9	-0.8
comp=N,0.7nm,0.5s,mb3.6,baz=251,slow=4.9,SNR=18							
YKA	Yellowknife Ar	90.13	341	P	P	04 22 47.7	-0.2
comp=N,0.4nm,0.6s,mb3.7,baz=134,slow=3.7,SNR=10.0							
YKA				pP	pP	04 23 04.4	-1.9
comp=N,0.6nm,0.8s,baz=134,slow=3.6,SNR=6.7							
YKA	Yellowknife Ar	90.13	341	P	P	04 22 47.7	-0.2
YKA				pP	pP	04 23 04.4	-1.9
ZALV	Zalesovo Beam	141.92	24	PKP	PKPdf	04 29 20.5	+0.9
comp=N,0.3nm,0.4s,baz=348,slow=2.1,SNR=3.4							
ZALV				pPKP	pPKPdf	04 29 37.1	-1.6
comp=N,0.7nm,0.6s,baz=321,slow=2.1,SNR=2.7							
MKAR	Makanchi Array	145.87	34	PKPbc	PKPbc	04 29 27.8	+0.3
comp=N,1.1nm,0.8s,baz=336,slow=2.7,SNR=7.8							
MKAR				pPKPbc	pPKPbc	04 29 45.4	-0.9
comp=N,2.2nm,0.7s,baz=333,slow=3.8,SNR=10							
MJAR	Matsushiro Arr	150.61	308	PKPbc	PKPbc	04 29 40.9	+0.5
comp=N,1.2nm,0.9s,baz=70,slow=2.2,SNR=5.0							
SONM	Songino Array	152.95	5	PKP	PKPdf	04 29 38.2	+0.2
comp=N,0.2nm,0.3s,baz=43,slow=42,SNR=3.5							
SONM				PKPbc	PKPbc	04 29 46.3	+1.0
comp=N,0.3nm,0.6s,baz=48,slow=2.1,SNR=2.9							
SONM				PKPab	PKPab	04 29 58.5	+1.9
comp=N,0.1nm,0.3s,baz=339,slow=6.2,SNR=2.4							

MAN 03 04:27:11.17°.58N×122°.48E, h14km, mb4.2, ML3.0, MS2.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.51	186	*e*P	Pg	04 27 22.3	+1.2
PALP				*e*S	Sg	04 27 32.8	+4.9
CVP	Callao Caves	0.64	282	⇓*i*P	Pg	04 27 22.9	-0.6
CVP				*i* S	Sg	04 27 33.1	+1.1
CAUP	Cauayan	0.89	225	*e*P	Pb	04 27 29.5	+1.3
ABRA	Dolores	1.69	273	*e*P	Pn	04 27 40.8	+0.8
ABRA				*e*S	Sn	04 28 02.4	+1.0
BALP	Baler	2.02	206	*e*P	Pn	04 27 45.4	+0.8
BALP				*e*S	Sn	04 28 11.3	+1.7

*NIED **03** 04:38:00.24°.80N×125°.10E, h11km, Mw3.6 Best double couple: M0 2.46000×10^14 NP1:φs336.00000°, δ59.00000°, λ-84.00000°. NP2:φs144.00000°, δ31.00000°, λ-100.00000°.*
*ISCJB **03** 04:38:11.1±0.8, 24°.9N±0°.1×125°.05E±0°.07, h23km±11km, Error ellipse: s-maj=22.8km s-min=4.4km az=156.5*
*JMA **03** 04:38:11.8±0.1, 24°.84N×125°.08E, h26km±1km, M3.6*
JMA Felt I J1.
ISC 03 04:38:11.7±0.8, 24°.9N±0°.1×125°.06E±0°.07, h22km±11km, n13, σ0°55/20, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	0.22	104	P	Pb	04 38 17.1	-0.2
JMJ				S	Sb	04 38 21.0	-0.1
JOGS	Gusukube	0.34	109	P	Pb	04 38 18.8	-0.3
JOGS				S	Sb	04 38 23.9	-0.2
JTJ	Tarama	0.40	235	P	Pb	04 38 20.1	+0.1
JTJ				S	Sb	04 38 26.5	+0.8
JIJ	Ishigaki jima	0.97	239	P	Pb	04 38 29.1	-0.8
JIJ				S	Sb	04 38 42.2	-0.1
JKRS	Kuro-shima	1.14	237	P	Pn	04 38 32.4	0.0
JKRS				S	Sb	04 38 47.8	+0.6
IRIF	Iriomote-Funau	1.32	246	P	Pn	04 38 35.0	+0.1
IRIF				S	Sn	04 38 52.3	+0.5
HATJ	Hateruma jima	1.40	235	P	Pn	04 38 36.0	+0.1
YOJ	Yonaguni jima	1.91	258	P	Pn	04 38 42.2	-0.7
YOJ				*e*S	Sn	04 39 05.1	-1.1
JKE	Kume jima 2	2.13	47	P	Pn	04 38 45.6	-0.4
JAGN	Aguni-jima	2.61	49	P	Pn	04 38 52.3	-0.3
JIH	Iheya	3.39	50	P	Pn	04 39 04.4	+1.1
JOW	Kunigami	3.50	55	P	Pn	04 39 05.6	+0.8
JAM	Amami Oshima	5.39	48	P	Pn	04 39 30.9	+0.1

MAN 03 04:54:48.17°.30N×122°.36E, h14km, mb4.6, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.24	166	*e*P	Pg	04 54 54.3	+1.0
PALP				*e*S	Sg	04 55 04.6	+7.8
CAUP	Cauayan	0.62	236	*e*P	Pg	04 55 01.6	+1.3
CAUP				*e*S	Sg	04 55 13.2	+4.7
CVP	Callao Caves	0.66	308	⇑*e*P	Pg	04 54 55.2	-5.6
CVP				*i* S	Sg	04 55 05.9	-3.6
BALP	Baler	1.72	206	*e*P	Pn	04 55 17.9	+0.3
BOLP	Bolinao	2.52	249	*e*P	Pn	04 55 29.2	+0.7

MEX 03 05:46:17.4±0.7, 17°.09N×95°.38W, h97km±17km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.30	270	*i* P	Pn	05 46 40.4	-0.7
VHO				*i* S	Sn	05 46 57.8	-1.1
HUIG	Huatulco	1.49	208	*i* P	Pn	05 46 41.3	-2.1
HUIG				*e*S	Sn	05 47 01.8	-1.2
TGIG		2.18	98	*e*P	Pn	05 46 51.1	-1.0
TGIG				*i* S	Sn	05 47 16.8	-2.0
TPIG	Tehuac#an	2.31	305	*e*P	Pn	05 46 53.3	-0.6
TPIG				*i* S	Sn	05 47 20.0	-1.9
UTMO	Huajuapan	2.43	288	*i* P	Pn	05 46 54.3	-1.3
UTMO				*i* S	Sn	05 47 22.9	-1.9
PCIG		2.48	123	*e*P	Pn	05 46 55.8	-0.4
PCIG				*i* S	Sn	05 47 24.6	-1.4
CCIG	Comitan	3.20	104	*i* P	Pn	05 47 05.7	-0.1
CCIG				*i* S	Sn	05 47 42.6	-0.6

*CSEM **03** 06:05:06.0, 37°.38N×24°.59W, h10km, ML3.1, After PDA*
PDA 03 06:05:06.0±1.1, 37°.38N×24°.59W, h10km, MD3.9, ML3.1, Error ellipse: s-maj=9.5km s-min=3.2km az=81.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.54	225	*i* P	Pg	06 05 14.8	-1.7
PSMN				*e*S	Sg	06 05 22.0	-1.5
PSMA	Santa Maria	0.58	228	*i* P	Pg	06 05 15.1	-2.2
PSMA				*e*S	Sg	06 05 22.8	-2.1
PSMA				A		06 05 28.7	
240nm,0.1s							
CMLA	Cha da Macela	0.83	297	*e*P	Pg	06 05 18.9	-3.2
CMLA				*e*S	Sg	06 05 28.7	-4.3
CMLA				A		06 05 31.7	
373nm,0.4s							
CMLA	Cha da Macela	0.83	297	*e*P	Pg	06 05 18.9	-3.2
CMLA				*e*S	Sg	06 05 28.7	-4.3
PDA	Ponta Delgada	0.93	293	*e*P	Pg	06 05 20.4	-3.5
PDA	Ponta Delgada	0.93	293	*e*P	Pg	06 05 20.4	-3.5
PSET	Sete Cidades	1.00	296	*e*P	Pg	06 05 21.3	-4.0
PSET				*e*S	Sg	06 05 33.5	-4.8
PSET				A		06 05 37.4	
107nm,0.4s							
PSET	Sete Cidades	1.00	296	*e*P	Pg	06 05 21.3	-4.0
PSET				*e*S	Sg	06 05 33.5	-4.8
ADH	Angra Heroismo	2.44	302	*e*S	Sn	06 06 07.7	-8.2
ADH				A		06 06 12.7	
72nm,0.6s							
ADH	Angra Heroismo	2.44	302	*e*S	Sn	06 06 07.7	-8.2
PID	Ribeirinha	2.99	292	*e*P	Pn	06 05 49.9	-3.5
PID	Ribeirinha	2.99	292	*e*P	Pn	06 05 49.9	-3.5
PMAN	Manadas	3.03	295	*e*P	Pn	06 05 49.8	-4.2
PMAN	Manadas	3.03	295	*e*P	Pn	06 05 49.8	-4.2
ROSA	Rosais	3.18	296	*e*P	Pn	06 05 52.0	-4.0
ROSA				*e*S	Sn	06 06 25.7	-8.2
ROSA	Rosais	3.18	296	*e*P	Pn	06 05 52.0	-4.0
ROSA				*e*S	Sn	06 06 25.7	-8.2
PICO	Pico	3.23	291	*e*P	Pn	06 05 53.3	-3.5
PICO				*e*S	Sn	06 06 27.3	-8.0
PICO	Pico	3.23	291	*e*P	Pn	06 05 53.3	-3.5
PICO				*e*S	Sn	06 06 27.3	-8.0
CALA	Caldeira	3.46	291	*e*P	Pn	06 05 57.9	-2.0

IDC 03 06:06:08.6±1.5, 2°.53S×101°.78E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/21, mbtmp3.8/5, Error ellipse: s-maj=86.0km s-min=20.3km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.19	121	P	P	06 13 12.6	-0.7
0.6nm,0.3s,baz=305,slow=9.1,SNR=3.4							
ASAR	Alice Springs	37.51	127	P	P	06 13 23.3	-1.1
0.4nm,0.6s,baz=296,slow=8.4,SNR=5.0							
STKA	Stephens Creek	47.48	132	P	P	06 14 47.3	+1.9
1.1nm,0.7s,baz=304,slow=7.3,SNR=2.8							
MKAR	Makanchi Array	52.03	343	P	P	06 15 20.0	+0.2
0.6nm,0.5s,baz=152,slow=8.5,SNR=6.1							
ZALV	Zalesovo Beam	58.03	348	P	P	06 16 03.4	+0.3
2.3nm,0.7s,baz=152,slow=7.0,SNR=11							
TORD	Torodi Ar. Bea	100.39	283	P	Pdif	06 19 57.4	0.0
0.4nm,1.0s,baz=113,slow=3.3,SNR=2.5							
TXAR	Lajitas Array	144.00	40	PKP	PKPdf	06 25 44.5	-2.4

0.3nm,0.6s,baz=318,slow=1.2,SNR=4.1

*ISCJB **03** 06:34:31.5±1.4, 43°.20N±0°.03×126°.25W±0°.10, h15km±10km, mb3.4/5, Error ellipse: s-maj=12.1km s-min=5.0km az=168.6*
*IDC **03** 06:34:32.4±2.2, 43°.28N×125°.89W, h0km, mb3.2/4, mb1 3.6/9, mb1mx3.4/29, mbtmp3.4/9, ML3.2/5, MS3.2/2, Ms1 3.1/2, ms1mx2.4/20, Error ellipse: s-maj=39.5km s-min=14.0km az=56.0*
*NEIC **03** 06:34:33.0±1.2, 43°.21N×126°.22W, h10km, mb3.6/7, Error ellipse: s-maj=14.3km s-min=5.9km az=77.0*
ISC 03 06:34:33.7±1.7, 43°.20N±0°.03×126°.3W±0°.1, h17km±13km, n85, σ1°21/91, mb3.4/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.45**	**102**	P	**Pn**	**06 34 55.5**	**-3.5**
TAKO	**Tahkenitch**	**1.67**	**70**	P	**Pn**	**06 35 00.1**	**-2.1**
RNO	**Roman Nose**	**1.96**	**68**	P	**Pn**	**06 35 04.6**	**-1.6**
DBO	**Dodson Butte**	**2.20**	**91**	P	**Pn**	**06 35 07.2**	**-2.3**
HSO	**Harness Mounta**	**2.33**	**81**	P	**Pn**	**06 35 09.4**	**-1.8**
MPOR	**Mary's Peak**	**2.35**	**55**	P	**Pn**	**06 35 10.1**	**-1.4**
EUO	**Eugene**	**2.46**	**69**	P	**Pn**	**06 35 11.6**	**-1.4**
HUMO	**Hull Mountain**	**2.49**	**103**	*e*Pn	**Pn**	**06 35 10.3**	**-3.1**
COR	**Corvallis**	**2.54**	**56**	*e*Pn	**Pn**	**06 35 12.7**	**-1.5**
COR				*e*Sn	**Sn**	**06 35 46.0**	**+1.2**
BBOR	**Butler Butte**	**2.64**	**96**	P	**Pn**	**06 35 13.8**	**-1.7**
HEBO	**Mount Hebo**	**2.70**	**41**	*e*Pn	**Pn**	**06 35 15.5**	**-0.8**
HEBO				*e*Sn	**Sn**	**06 35 48.7**	**+0.1**
YBH	**Yreka Blue Hor**	**3.00**	**118**	Pn	**Pn**	**06 35 18.1**	**-2.4**
	2.8nm,0.3s,baz=302,slow=12,SNR=42						
YBH				Sn	**Sn**	**06 35 55.5**	**-0.6**
	1.6nm,0.3s,baz=43,slow=18,SNR=5.2						
YBH	**Yreka Blue Hor**	**3.00**	**118**	*e*Pn	**Pn**	**06 35 18.0**	**-2.5**
IRO	**Indian Ridge**	**3.02**	**73**	P	**Pn**	**06 35 20.0**	**-0.6**
BUOR	**Burton Butte**	**3.09**	**106**	P	**Pn**	**06 35 20.6**	**-1.1**
FRIS	**Frissel Point**	**3.18**	**70**	P	**Pn**	**06 35 22.4**	**-0.5**
HUOR	**Husband**	**3.33**	**72**	P	**Pn**	**06 35 24.7**	**-0.2**
WIFE	**Three Sisters-**	**3.33**	**74**	P	**Pn**	**06 35 24.6**	**-0.4**
GT2	**Goat Mountain**	**3.47**	**54**	P	**Pn**	**06 35 27.3**	**+0.4**
BKCOR	**Black Crater**	**3.48**	**70**	P	**Pn**	**06 35 26.7**	**-0.3**
NLO	**Nicolai Mounta**	**3.51**	**34**	P	**Pn**	**06 35 27.3**	**-0.2**
WDC	**Whiskeytown Da**	**3.81**	**132**	*e*Pn	**Pn**	**06 35 30.6**	**-1.0**
RVW	**Rose Valley**	**3.87**	**39**	P	**Pn**	**06 35 32.6**	**+0.2**
HOOD	**Mount Hood Mea**	**3.93**	**56**	*e*Pn	**Pn**	**06 35 33.2**	**0.0**
GMO	**Grizzlie Mount**	**4.03**	**70**	P	**Pn**	**06 35 33.9**	**-0.7**
VFP	**Flag Point**	**4.04**	**57**	P	**Pn**	**06 35 34.6**	**-0.1**
VIPM	**Ingram Point**	**4.28**	**70**	P	**Pn**	**06 35 37.4**	**-0.6**
NLWA	**Neilton Lookou**	**4.52**	**21**	Pn	**Pn**	**06 35 38.5**	**-2.8**
NLWA				*e*Sn	**Sn**	**06 36 34.3**	**+0.9**
MOD	**Modoc**	**4.58**	**104**	*e*Pn	**Pn**	**06 35 40.8**	**-1.4**
LON	**Longmire**	**4.75**	**40**	*e*Pn	**Pn**	**06 35 44.9**	**+0.5**
HOPS	**Hopland**	**4.84**	**149**	*e*Pn	**Pn**	**06 35 45.4**	**-0.4**
GNW	**Green Mountain**	**4.99**	**28**	*e*Pn	**Pn**	**06 35 49.2**	**+1.4**
WVOR	**Wild Horse Val**	**5.65**	**95**	*e*Pn	**Pn**	**06 35 54.1**	**-2.8**
	4.3nm,0.8s						
RSW	**Rattlesnake Hi**	**5.72**	**54**	*e*Pn	**Pn**	**06 35 57.8**	**+0.1**
HAWA	**Hanford**	**5.75**	**54**	*e*Pn	**Pn**	**06 35 58.4**	**+0.2**
	4.9nm,0.6s						
PGC	**Sidney**	**5.79**	**19**	*e*Pn	**Pn**	**06 35 57.4**	**-1.3**
	0.2nm,0.5s						
PGC				*e*Sn	**Sn**	**06 37 04.1**	**-0.7**
JCW	**Jim Creek**	**5.84**	**30**	*e*Pn	**Pn**	**06 35 59.3**	**-0.2**
JCW				*e*Sn	**Sn**	**06 37 05.9**	**-0.1**
ETW	**Entiat**	**6.06**	**41**	*e*Pn	**Pn**	**06 36 04.0**	**+1.5**
	2.6nm,0.4s						
RPW	**Rockport**	**6.21**	**31**	*e*Pn	**Pn**	**06 36 04.2**	**-0.2**
	2.7nm,0.2s						
RPW				*e*Sn	**Sn**	**06 37 14.0**	**-0.9**
LNOR	**Lincton Mounta**	**6.29**	**62**	Pn	**Pn**	**06 36 06.5**	**+0.9**
	2.1nm,0.6s						
BMO	**Blue Mountains**	**6.66**	**73**	*e*Pn	**Pn**	**06 36 09.5**	**-1.2**
	3.3nm,0.6s						
OD2	**Odessa Site #2**	**6.77**	**49**	*e*Pn	**Pn**	**06 36 12.1**	**-0.1**
CMB	**Columbia Colle**	**6.82**	**137**	*e*Pn	**Pn**	**06 36 13.9**	**+1.0**
NVAR	**Mina Array Bea**	**7.68**	**126**	Pn	**Pn**	**06 36 25.0**	**+0.2**
	0.2nm,0.3s,baz=300,slow=14,SNR=7.9						
NEW	**Newport**	**8.15**	**48**	Pn	**Pn**	**06 36 33.7**	**+2.6**
ELK	**Elko**	**8.56**	**103**	Pn	**Pn**	**06 36 37.1**	**+0.2**
	0.1nm,0.3s,baz=297,slow=12,SNR=5.7						
HLID	**Hailey**	**8.63**	**84**	*e*Pn	**Pn**	**06 36 38.1**	**+0.4**
	2.6nm,0.6s						
N12A	**Clover Valley,**	**8.67**	**102**	*e*Pn	**Pn**	**06 36 39.5**	**+1.2**
	2.8nm,0.6s						
BBB	**Bella Bella**	**9.08**	**353**	LR	LR	06 39 46.4	
	comp=Z,108nm,20.3s,baz=198,slow=35						
M13A	**Montello**	**9.15**	**97**	*e*Pn	**Pn**	**06 36 46.4**	**+1.5**
BSMT	**Bassoo Peak**	**9.29**	**56**	*e*Pn	**Pn**	**06 36 47.2**	**+0.3**
MSO	**Missoula**	**9.45**	**63**	*e*Pn	**Pn**	**06 36 48.2**	**-0.7**
	1.8nm,0.8s						
JTMT	**Jette**	**9.56**	**57**	Pn	**Pn**	**06 36 51.1**	**+0.6**
ISA	**Isabella**	**9.63**	**139**	*e*Pn	**Pn**	**06 36 54.3**	**+2.8**
MCMT	**McKenzie Canyo**	**9.80**	**76**	*e*Pn	**Pn**	**06 36 56.0**	**+2.3**
	1.0nm,0.7s						
CHMT	**Chamberlain Mo**	**9.92**	**64**	*e*Pn	**Pn**	**06 36 55.4**	**0.0**
DLMT	**Dillon**	**10.03**	**73**	*e*Pn	**Pn**	**06 36 57.6**	**+0.7**
	3.6nm,0.8s						
BGU	**Big Grassy Mou**	**10.09**	**99**	*e*Pn	**Pn**	**06 36 58.4**	**+0.6**
	8.2nm,1.6s						
LRM	**Limekiln Ridge**	**10.20**	**70**	*e*Pn	**Pn**	**06 37 00.4**	**+1.1**
DUG	**Dugway**	**10.49**	**102**	*e*Pn	**Pn**	**06 37 03.8**	**+0.5**
BOZ	**Bozeman (W)**	**10.74**	**72**	*e*Pn	**Pn**	**06 37 06.9**	**+0.2**
	2.8nm,0.7s						
QLMT	**Earthquake Lak**	**10.80**	**76**	*e*Pn	**Pn**	**06 37 09.7**	**+2.2**
	1.7nm,0.6s						
HRY	**Holter Researc**	**10.81**	**66**	*e*Pn	**Pn**	**06 37 07.5**	**-0.1**
	1.0nm,0.5s						
RRI2	**Red Ridge**	**10.89**	**84**	*e*Pn	**Pn**	**06 37 10.9**	**+2.1**
	10nm,1.5s						
IMW	**Indian Meadow**	**11.14**	**81**	*e*Pn	**Pn**	**06 37 14.2**	**+2.1**
	1.9nm,0.8s						
ARUT	**Antelope Range**	**11.15**	**115**	*e*Pn	**Pn**	**06 37 13.4**	**+1.1**
	2.2nm,0.6s						
TPAW	**Teton Pass**	**11.15**	**83**	*e*Pn	**Pn**	**06 37 14.3**	**+2.0**
	5.8nm,0.9s						
SNOW	**Snow King Moun**	**11.30**	**83**	*e*Pn	**Pn**	**06 37 16.6**	**+2.4**
	4.5nm,0.8s						
CCUT	**Cedar City**	**11.33**	**116**	*e*Pn	**Pn**	**06 37 16.4**	**+1.6**
LOHW	**Long Hollow**	**11.40**	**83**	*e*Pn	**Pn**	**06 37 17.5**	**+1.9**
PDAR	**Pinedale Array**	**12.24**	**86**	Pn	**Pn**	**06 37 27.4**	**+0.3**
	0.0nm,0.3s,baz=279,slow=13,SNR=5.9						
DLBC	**Dease Lake**	**15.44**	**353**	Pn	**Pn**	**06 38 15.3**	**+4.9**
	0.1nm,0.3s,baz=168,slow=11,SNR=4.5						
ISCO	**Idaho Springs**	**15.83**	**95**	*e*P	**Pn**	**06 38 19.7**	**+4.1**
	4.9nm,1.0s						
DGMT	**Dagmar**	**16.23**	**63**	*e*P	**Pn**	**06 38 24.3**	**+3.5**
	7.5nm,0.9s						
SDCO	**Great Sand Dun**	**16.69**	**102**	*e*P	**Pn**	**06 38 26.0**	**-0.7**
	8.8nm,1.5s						
ANMO	**Albuquerque**	**17.41**	**112**	Pn	**Pn**	**06 38 34.4**	**-1.4**
	0.0nm,0.3s,baz=311,slow=11,SNR=8.4						
ANMO	**Albuquerque**	**17.41**	**112**	*e*P	**Pn**	**06 38 34.6**	**-1.1**
	2.1nm,0.9s						
FFC	**Flin Flon**	**19.56**	**45**	*e*P	**Pn**	**06 39 03.1**	**+1.4**
	2.7nm,0.9s						
YKA	**Yellowknife Ar**	**20.50**	**16**	P	**P**	**06 39 10.1**	**-0.5**
	0.7nm,0.7s,baz=206,slow=11,SNR=12						
ECSD	**EROS Data Cent**	**21.47**	**78**	*e*P	**P**	**06 39 20.7**	**-0.5**
	1.5nm,0.7s,mb3.4						
AGMN	**Agassiz Refuge**	**21.73**	**66**	*e*P	**P**	**06 39 23.6**	**-0.3**
	2.5nm,0.6s,mb3.8						
ULM	**Lac du Bonnet**	**21.88**	**61**	P	**P**	**06 39 24.1**	**-1.4**
	1.4nm,0.7s,mb3.5,baz=270,slow=11,SNR=2.8						
ULM				LR	LR	06 48 35.6	
	comp=Z,75nm,18.8s,baz=256,slow=39						
TXAR	**Lajitas Array**	**22.78**	**120**	P	**P**	**06 39 35.6**	**+0.4**
	0.7nm,0.7s,mb3.2,baz=294,slow=8.8,SNR=3.2						
INK	**Inuvik**	**25.46**	**354**	P	**P**	**06 40 01.7**	**+1.3**
	0.7nm,0.9s,mb3.2,baz=164,slow=7.4,SNR=2.4						
INK	**Inuvik**	**25.46**	**354**	P	**P**	**06 40 01.7**	**+1.3**

*LDG **03** 06:36:36.4±0.2, 19°.39N×64°.35W, h10km, Mb4.6/22, Error ellipse: s-maj=10.7km s-min=6.1km az=83.0*
*IDC **03** 06:36:37.5±0.4, 19°.44N×64°.07W, h0km, mb4.1/26, mb1 4.3/30, mb1mx4.2/37, mbtmp4.2/30, ML4.4/2, MS3.4/11, Ms1 3.4/11, ms1mx3.1/37, Error ellipse: s-maj=12.2km s-min=9.9km az=74.0*
*TRN **03** 06:36:40.8, 19°.46N×64°.17W, h49km, MD4.7, M4.9(FDF)*
*ISCJB **03** 06:36:42.2±0.1, 19°.38N±0°.02×64°.17W±0°.02, h46km, mb4.3/70, MS3.6/10, Error ellipse: s-maj=2.8km s-min=2.3km az=136.2*
*RSPR **03** 06:36:44.1, 19°.36N×64°.17W, h50km±4km, MD4.4/23, MD4.4/23*
*NEIC **03** 06:36:44.1, 19°.36N×64°.17W, h50km, mb4.5/45, MD4.4(RSPR), MD4.6(TRN), After RSPR.*
NEIC Felt [II] at Carolina, Puerto Rico.
ISC 03 06:36:44.1±0.1, 19°.33N±0°.02×64°.20W±0°.02, h48km, h48km±1.3km:pP-P, n294, σ0°85/307, mb4.3/70, MS3.6/10, 79C-49D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.60**	**192**	↓*i*P	**Pn**	**06 36 56.3**	**-0.3**
ABV	**Anegada**	**0.60**	**192**	↓*i*P	**Pn**	**06 36 56.3**	**-0.3**
TBVI	**Tortola**	**0.98**	**203**	↓*i*P	**Pn**	**06 37 01.4**	**-0.2**
TBVI	**Tortola**	**0.98**	**203**	↓*i*P	**Pn**	**06 37 01.4**	**-0.2**
STVI	**Saint Thomas**	**1.20**	**216**	↑*i*P	**Pn**	**06 37 04.3**	**-0.2**
STVI				*e*S	**Sn**	**06 37 18.4**	**-1.3**
STVI	**Saint Thomas**	**1.20**	**216**	↑*i*P	**Pn**	**06 37 04.3**	**-0.2**
STVI				*e*S	**Sn**	**06 37 18.4**	**-1.3**
CDVI	**St. Croix**	**1.65**	**199**	↓*e*P	**Pn**	**06 37 12.2**	**+1.5**
CDVI	**St. Croix**	**1.65**	**199**	↓*e*P	**Pn**	**06 37 12.2**	**+1.5**
SMRT	**St. Maarten**	**1.66**	**140**	↑*e*P	**Pn**	**06 37 09.8**	**-1.0**
SMRT	**St. Maarten**	**1.66**	**140**	↑*e*P	**Pn**	**06 37 09.8**	**-1.0**
SMRT				*e*S	**Sn**	**06 37 31.5**	**+0.5**
MTP	**Monte Pirata**	**1.77**	**227**	↑*e*P	**Pn**	**06 37 12.5**	**+0.2**
MTP	**Monte Pirata**	**1.77**	**227**	↑*e*P	**Pn**	**06 37 12.5**	**+0.2**
CBYP	**Canovanas**	**1.88**	**236**	↑*e*P	**Pn**	**06 37 13.5**	**-0.4**
CBYP	**Canovanas**	**1.88**	**236**	↑*e*P	**Pn**	**06 37 13.5**	**-0.4**
SABA	**Saba**	**1.93**	**152**	↑*e*P	**Pn**	**06 37 14.5**	**0.0**
SABA	**Saba**	**1.93**	**152**	↑*e*P	**Pn**	**06 37 14.5**	**0.0**
CPD	**Cerro la Pandu**	**2.07**	**232**	↑*e*P	**Pn**	**06 37 16.6**	**+0.2**
CPD	**Cerro la Pandu**	**2.07**	**232**	↑*e*P	**Pn**	**06 37 16.6**	**+0.2**
SEUS	**St. Eustatius**	**2.16**	**147**	↑*e*P	**Pn**	**06 37 17.1**	**-0.6**
SEUS	**St. Eustatius**	**2.16**	**147**	↑*e*P	**Pn**	**06 37 17.1**	**-0.6**
SJG	**San Juan**	**2.21**	**237**	↑*e*P	**Pn**	**06 37 17.7**	**-0.6**
SJG	**San Juan**	**2.21**	**237**	↑*e*P	**Pn**	**06 37 17.8**	**-0.5**
SJG	**San Juan**	**2.21**	**237**	Pn	**Pn**	**06 37 18.0**	**-0.3**
	158nm,0.3s,baz=68,slow=9.5,SNR=51						
SJG				Sn	**Sn**	**06 37 45.5**	**+1.1**
	280nm,0.3s,baz=0.0,slow=7.1,SNR=11						
SJG	**San Juan**	**2.21**	**237**	↑*e*P	**Pn**	**06 37 17.7**	**-0.6**
SJG				*e*S	**Sn**	**06 37 44.8**	**+0.5**
SJG	**San Juan**	**2.21**	**237**	↑*e*P	**Pn**	**06 37 17.7**	**-0.6**
SJG	**San Juan**	**2.21**	**237**	↑*e*P	**Pn**	**06 37 17.8**	**-0.5**
SJG				*e*S	**Sn**	**06 37 44.8**	**+0.5**
SKI	**Saint Kitts**	**2.42**	**145**	*e*P	**Pn**	**06 37 21.1**	**-0.2**
SKI				*e*S	**Sn**	**06 37 49.8**	**+0.1**
SKI	**Saint Kitts**	**2.42**	**145**	*e*P	**Pn**	**06 37 21.1**	**-0.2**
SKI				*e*S	**Sn**	**06 37 49.8**	**+0.1**
CELP	**Cerrillos**	**2.57**	**241**	↑*i*P	**Pn**	**06 37 23.2**	**-0.1**
CELP	**Cerrillos**	**2.57**	**241**	↑*i*P	**Pn**	**06 37 23.2**	**-0.1**
AOPR	**Arecibo Observ**	**2.60**	**248**	↑*e*P	**Pn**	**06 37 23.2**	**-0.6**
AOPR	**Arecibo Observ**	**2.60**	**248**	↑*e*P	**Pn**	**06 37 23.2**	**-0.6**
OBIP	**Obispado Ponce**	**2.61**	**241**	↑*e*P	**Pn**	**06 37 23.6**	**-0.2**
OBIP				*e*S	**Sn**	**06 37 55.5**	**+1.2**
OBIP	**Obispado Ponce**	**2.61**	**241**	↑*e*P	**Pn**	**06 37 23.6**	**-0.2**
OBIP				*e*S	**Sn**	**06 37 55.5**	**+1.2**
ICM	**Isla Caja Muer**	**2.62**	**237**	↑*e*P	**Pn**	**06 37 24.0**	**0.0**
ICM	**Isla Caja Muer**	**2.62**	**237**	↑*e*P	**Pn**	**06 37 24.1**	**+0.1**
LRS	**Lares**	**2.71**	**248**	↑*e*P	**Pn**	**06 37 24.8**	**-0.3**
LRS	**Lares**	**2.71**	**248**	↑*e*P	**Pn**	**06 37 24.8**	**-0.3**
ANWB	**Willy Bob**	**2.83**	**125**	*e*Pn	**Pn**	**06 37 24.0**	**-2.8**
GBPR	**Guanica, Bosqu**	**2.87**	**243**	↑*e*P	**Pn**	**06 37 27.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.87**	**243**	↑*e*P	**Pn**	**06 37 27.7**	**+0.3**
AGPR	**Aguadilla, PR**	**2.88**	**253**	↑*e*P	**Pn**	**06 37 26.1**	**-1.5**
AGPR	**Aguadilla, PR**	**2.88**	**253**	↑*e*P	**Pn**	**06 37 26.1**	**-1.5**
AGP	**Aguadilla**	**2.93**	**252**	*e*Pg	**Pn**	**06 37 26.7**	**-1.5**
LSP	**Las Mesas**	**2.96**	**248**	↓*e*P	**Pn**	**06 37 28.6**	**0.0**
LSP	**Las Mesas**	**2.96**	**248**	↓*e*P	**Pn**	**06 37 28.6**	**0.0**
MPR	**Mayaguez**	**3.00**	**249**	↑*e*P	**Pn**	**06 37 29.3**	**+0.1**
MPR	**Mayaguez**	**3.00**	**249**	↑*e*P	**Pn**	**06 37 29.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**3.05**	**245**	↓*e*P	**Pn**	**06 37 29.8**	**-0.1**
CRPR				*e*S	**Sn**	**06 38 04.3**	**-0.9**
CRPR	**Cabo Rojo, PR**	**3.05**	**245**	↓*e*P	**Pn**	**06 37 29.8**	**-0.1**
CRPR				*e*S	**Sn**	**06 38 04.3**	**-0.9**
MBRV		**3.15**	**142**	*i* P	**Pn**	**06 37 31.5**	**+0.2**
BPA	**Boggy Peak**	**3.18**	**135**	*e*P	**Pn**	**06 37 31.2**	**-0.5**
BPA				*e*S	**Sn**	**06 38 07.6**	**-0.7**
BPA	**Boggy Peak**	**3.18**	**135**	*e*P	**Pn**	**06 37 31.2**	**-0.5**
BPA				*e*S	**Sn**	**06 38 07.6**	**-0.7**
MBWH		**3.20**	**143**	*e*P	**Pn**	**06 37 31.4**	**-0.6**
MLYT	**Lee's Yard**	**3.22**	**143**	*i* P	**Pn**	**06 37 32.4**	**+0.2**
MBLG		**3.23**	**143**	*e*P	**Pn**	**06 37 32.1**	**-0.3**
MBRY		**3.26**	**143**	*e*P	**Pn**	**06 37 32.6**	**-0.2**
IMO	**Isla Mona**	**3.71**	**252**	↑*e*P	**Pn**	**06 37 39.8**	**+0.8**
IMO	**Isla Mona**	**3.71**	**252**	↑*e*P	**Pn**	**06 37 39.8**	**+0.8**
LZG	**Guadaloupe-1**	**3.92**	**143**	*e*P	**Pn**	**06 37 41.3**	**-0.6**
PCDR	**Punta Cana, DR**	**4.04**	**259**	↓*i*P	**Pn**	**06 37 42.7**	**-0.7**
PCDR	**Punta Cana, DR**	**4.04**	**259**	↓*i*P	**Pn**	**06 37 42.7**	**-0.7**
PCDR				*e*S	**Sn**	**06 38 27.9**	**-1.6**
BCG	**Bois Riant Cap**	**4.06**	**142**	*e*P	**Pn**	**06 37 43.5**	**-0.2**
SCG	**Saint Claude**	**4.07**	**143**	*e*P	**Pn**	**06 37 43.6**	**-0.2**
HMG	**Houelmont**	**4.09**	**144**	*e*P	**Pn**	**06 37 44.1**	**-0.1**
DOG	**Dongo Capester**	**4.10**	**143**	*e*P	**Pn**	**06 37 43.9**	**-0.4**
PHG	**Guadaloupe-2**	**4.10**	**143**	*e*P	**Pn**	**06 37 44.6**	**+0.3**
TBG	**Guadaloupe-3**	**4.23**	**144**	*e*P	**Pn**	**06 37 45.3**	**-0.7**
DEG	**La Desirade**	**4.24**	**135**	*e*P	**Pn**	**06 37 44.4**	**-1.8**
SMN1	**Samana, DR**	**4.79**	**269**	↑*e*P	**Pn**	**06 37 51.6**	**-2.2**
DR12	**Loma Pena Alta**	**4.93**	**265**	↑*e*P	**Pn**	**06 37 55.8**	**+0.2**
FDF	**Fort de France**	**5.42**	**147**	*e*Pn	**Pn**	**06 38 02.1**	**-0.3**
	39nm,0.5s						
FDF	**Fort de France**	**5.42**	**147**	*e*P	**Pn**	**06 38 02.4**	**0.0**
BIM	**Bigot**	**5.64**	**147**	*e*P	**Pn**	**06 38 05.5**	**0.0**
MVM	**Montagne Vaucl**	**5.70**	**146**	*e*P	**Pn**	**06 38 09.2**	**+2.9**
SVB	**Belmont**	**6.65**	**154**	*e*P	**Pn**	**06 38 20.9**	**+1.5**
SVB				*e*S	**Sn**	**06 39 31.6**	**-2.3**
SVB	**Belmont**	**6.65**	**154**	*e*P	**Pn**	**06 38 20.9**	**+1.5**
SVB				*e*S	**Sn**	**06 39 31.6**	**-2.3**
SDDR	**Presa de Saban**	**6.71**	**268**	↓*i*P	**Pn**	**06 38 20.0**	**-0.1**
SDDR	**Presa de Saban**	**6.71**	**268**	↓*i*P	**Pn**	**06 38 20.0**	**-0.1**
GRTK	**Grand Turk**	**6.85**	**290**	*e*Pn	**Pn**	**06 38 19.6**	**-2.5**
GRTK				*e*Sn	**Sn**	**06 39 28.5**	**-10**
BBGH	**Gun Hill**	**7.59**	**143**	*e*Pn	**Pn**	**06 38 32.6**	**+0.3**
TOSP	**Speyside**	**8.73**	**156**	*e*P	**Pn**	**06 38 49.6**	**+1.7**
TOSP				*e*S	**Sn**	**06 40 20.8**	**-4.1**
PCRV	**Puerto La Cruz**	**9.11**	**183**	Pn	**Pn**	**06 38 53.2**	**+0.2**
	3.6nm,0.3s,baz=342,slow=6.7,SNR=16						
PCRV				LR	LR	06 42 39.9	
	comp=Z,298nm,18.5s,baz=351,slow=39						
MASC	**Masc**	**9.48**	**277**	*e*P	**Pn**	**06 38 54.5**	**-3.6**
MASC				*e*S	**Sn**	**06 40 34.7**	**-8.6**
	comp=N,460nm,0.2s						
MASC				*e*			
	comp=E,1μm,0.2s						
MOAC	**Moa**	**10.20**	**279**	*e*P	**Pn**	**06 39 03.8**	**-4.2**
MOAC				*e*S	**Sn**	**06 40 50.4**	**-11**
	comp=N,22nm,0.2s						
MOAC				*e*			
	comp=E,24nm,0.2s						
RCC	**Rio Carpintero**	**10.85**	**275**	*e*P	**Pn**	**06 39 12.0**	**-4.8**
LMGC	**Las Mercedes**	**12.08**	**276**	*e*P	**Pn**	**06 39 28.4**	**-5.3**
LMGC				*e*S	**Sn**	**06 41 36.1**	**-11**
	comp=N,20nm,0.9s						
LMGC				*e*			
	comp=E,34nm,1.5s						
SDV	**Santo Domingo**	**12.10**	**212**	Pn	**Pn**	**06 39 34.9**	**+0.9**
	comp=E,2.0nm,0.3s,baz=68,slow=9.7,SNR=30						
SDV				Sn	**Sn**	**06 41 43.1**	**-4.5**
	comp=E,0.4nm,0.3s,baz=5.6,slow=6.0,SNR=2.2						
SDV				LR	LR	06 44 39.7	
	comp=E,192nm,18.1s,baz=20,slow=39						
SDV	**Santo Domingo**	**12.10**	**212**	*e*Pn	**Pn**	**06 39 35.9**	**+1.9**
	comp=E,25nm,0.9s						
CCCC	**Cccc**	**12.87**	**281**	*e*P	**Pn**	**06 39 35.4**	**-9.0**
ROSC	**El Rosal**	**17.45**	**216**	Pn	**Pn**	**06 40 46.0**	**+1.8**
	comp=E,1.0nm,0.3s,baz=91,slow=17,SNR=6.2						
ROSC				Sn	**Sn**	**06 43 59.2**	**+1.6**
	comp=E,0.2nm,0.3s,baz=65,slow=8.8,SNR=1.5						
ROSC				LR	LR	06 46 55.6	
	comp=E,75nm,19.4s,baz=12,slow=35						
NHSC	**New Hope**	**19.81**	**317**	*e*P	**Pn**	**06 41 16.9**	**+4.4**
	comp=E,71nm,0.6s						
BLA	**Blacksburg**	**22.78**	**325**	*e*P	**P**	**06 41 42.0**	**-0.4**
	comp=E,23nm,0.6s,mb4.8						
BLA				*e*		06 41 54.9	
OTAV	**Otavalo**	**23.56**	**218**	*e*P	**P**	**06 41 51.8**	**+1.3**
	comp=E,6.9nm,1.1s,mb4.0						
TKL	**Tuckaleechee C**	**23.72**	**317**	P	**P**	**06 41 51.4**	**-0.4**
	comp=E,2.4nm,0.6s,mb3.8,baz=124,slow=15,SNR=3.7						
TKL				LR	LR	06 51 14.9	
	comp=E,40nm,19.0s,MS2.9,baz=2.0,slow=37						
TKL	**Tuckaleechee C**	**23.72**	**317**	*e*P	**P**	**06 41 53.2**	**+1.4**
TKL				*e*		06 42 09.4	
SSPA	**Standing Stone**	**24.26**	**334**	*e*P	**P**	**06 41 56.1**	**-0.6**
	comp=E,8.0nm,0.8s,mb4.2						
SSPA				*e*		06 42 16.6	
APG	**El Apazote**	**25.45**	**264**	P	**P**	**06 42 10.3**	**+2.6**
	comp=E,3.1nm,0.7s,mb4.0,baz=48,slow=2.9,SNR=6.0						
SADO	**Sadowa**	**28.26**	**337**	LR	LR	06 53 27.7	
	comp=E,83nm,18.4s,MS3.4,baz=138,slow=36						
NNA	**Nana**	**33.51**	**203**	P	**P**	**06 43 19.1**	**-0.1**
	comp=E,2.9nm,0.3s,mb4.6,baz=331,slow=10,SNR=2.7						
SIV	**San Ignacio**	**35.23**	**175**	P	**P**	**06 43 33.8**	**-0.3**
	comp=E,3.0nm,0.5s,mb4.5,baz=14,slow=9.5,SNR=19						
SCHQ	**Schefferville**	**35.50**	**357**	P	**P**	**06 43 34.2**	**-1.8**
	comp=E,2.4nm,0.9s,mb4.1,baz=168,slow=9.3,SNR=7.4						
SCHQ				LR	LR	06 55 38.0	
	comp=E,73nm,21.6s,MS3.4,baz=25,slow=32						
SCHQ	**Schefferville**	**35.50**	**357**	P	**P**	**06 43 34.2**	**-1.8**
SCHQ				LR	LR	06 55 38.0	
LPAZ	**La Paz**	**35.60**	**186**	*e*P	**P**	**06 43 38.6**	**+1.4**
	comp=E,15nm,1.8s,mb4.6						
LPAZ				*e*	pP	06 43 54.0	+4.0
ECSD	**EROS Data Cent**	**36.44**	**319**	*e*P	**P**	**06 43 42.9**	**-1.3**
	comp=E,14nm,1.4s,mb4.7						
ECSD				*e*	pP	06 43 56.1	-0.8
428A	**Kincaid Ranch,**	**36.50**	**296**	↓↓P	**P**	**06 43 44.7**	**-0.3**
	baz=36						
628A	**Black Gap, Mar**	**36.51**	**294**	↓↓P	**P**	**06 43 44.8**	**-0.2**
	baz=36						
627A	**Terlingua Ranc**	**36.93**	**293**	↑↑P	**P**	**06 43 49.1**	**+0.4**
	baz=37						
TXAR	**Lajitas Array**	**37.16**	**293**	P	**P**	**06 43 51.2**	**+0.6**
	comp=E,0.7nm,0.7s,mb3.6,baz=119,slow=10,SNR=5.5						
**TX

G15A	Dillon	47.39	314	⇑P		P	06 45 14.1 +0.6
	baz=47						
HRY	Holter Researc	47.42	316	*e*P		P	06 45 14.4 +0.7
A17A	Triple J Farms	47.47	320	⇑P		P	06 45 14.3 +0.2
	baz=47						
MCMT	McKenzie Canyo	47.54	314	*e*P		P	06 45 15.6 +0.9
	comp=E,0.9nm,0.7s,mb3.9						
J14A	Carey	47.61	311	P		P	06 45 17.0 +1.7
	baz=48,SNR=6.5						
L13A	Double Diamond	47.63	310	⇑P		P	06 45 16.0 +0.5
	baz=48						
I14A	Mackay	47.72	312	P		P	06 45 17.7 +1.6
	baz=48,SNR=7.4						
H14A	Leadore	47.84	313	⇓P		P	06 45 17.7 +0.7
	baz=48						
K13A	Stover Farm, H	47.85	310	⇑P		P	06 45 17.5 +0.3
	baz=48						
A16A	West Butte Ran	48.03	319	⇑P		P	06 45 16.8 -1.7
	baz=48,SNR=9.4						
J13A	Cove Ranch, Pi	48.09	311	⇓P		P	06 45 19.8 +0.8
	baz=48,SNR=5.1						
C15A	Salmond Ranch,	48.26	317	⇓P		P	06 45 20.1 -0.1
	baz=48,SNR=14						
HLID	Hailey	48.30	312	⇓P		P	06 45 20.8 +0.2
	baz=48						
ELK	Elko	48.31	308	P		P	06 45 21.7 +0.9
	comp=E,0.5nm,0.5s,mb3.8,baz=102,slow=8.3,SNR=3.6						
H13A	Challis	48.43	313	⇑P		P	06 45 21.6 -0.1
	baz=48						
O11A	Cowboy Ranch,	48.52	307	⇓P		P	06 45 22.0 -0.4
	baz=48,SNR=6.3						
J12A	Stokes Ranch,	48.72	311	⇓P		P	06 45 24.2 +0.4
	baz=49						
A15A	Johnson Ranch,	48.74	319	⇓P		P	06 45 23.9 0.0
	baz=49,SNR=9.2						
M11A	Holland Ranch,	48.85	309	⇑P		P	06 45 24.5 -0.4
	baz=49						
Q10A	Clear Creek Ra	48.89	305	⇑P		P	06 45 24.9 -0.3
	baz=49						
E13A	Victor	48.89	315	⇓P		P	06 45 25.7 +0.6
	baz=49						
S10A	Tonopah Range,	48.92	304	⇑P		P	06 45 27.3 +1.8
	baz=49,SNR=5.8						
L11A	Cat Creek Ranc	48.96	309	⇓P		P	06 45 26.2 +0.5
	baz=49						
C14A	Swan Lake	48.99	317	⇑P		P	06 45 26.1 +0.2
	baz=49						
A14A	Double T Ranch	49.16	319	⇓P		P	06 45 27.2 0.0
	baz=49						
YBMT	Yellow Bay	49.19	317	*e*P		P	06 45 27.6 +0.2
	comp=E,3.4nm,0.6s,mb4.5						
D13A	Huson	49.25	316	⇑P		P	06 45 27.7 -0.1
	baz=49						
F12A	Elk City	49.42	314	⇑P		P	06 45 28.5 -0.7
	baz=49						
L10A	Juniper Basin	49.47	309	⇓P		P	06 45 29.5 -0.1
	baz=49						
H11A	Donnelly	49.69	313	⇓P		P	06 45 29.8 -1.4
	baz=50						
E11A	Bogner Ranch,	50.22	315	⇓P		P	06 45 34.4 -0.8
	baz=50,SNR=12						
NVAR	Mina Array Bea	50.32	304	P		P	06 45 37.1 +1.0
	comp=E,0.7nm,0.6s,mb3.9,baz=86,slow=8.6,SNR=10.0						
D11A	Klaveano Farm,	50.47	316	⇑P		P	06 45 36.9 -0.3
	baz=50,SNR=5.1						
CFAA	Coronel Fontan	50.78	184	P		P	06 45 41.1 +1.5
	comp=E,0.2nm,0.3s,mb3.5,baz=321,slow=8.0,SNR=5.6						
NEW	Newport	51.30	317	*e*P		P	06 45 43.0 -0.4
	comp=E,2.9nm,0.6s,mb4.4						
H08A	Prairie City	51.50	312	⇓P		P	06 45 41.9 -3.1
	baz=52,SNR=5.9						
ESDC	Sonseca Array	55.18	55	P		P	06 46 09.1 -3.0
	comp=E,0.8nm,0.6s,mb3.9,baz=260,slow=7.7,SNR=6.4						
YKA	Yellowknife Ar	55.19	334	P		P	06 46 10.5 -1.2
	comp=E,3.3nm,0.6s,mb4.5,baz=108,slow=7.5,SNR=86						
YKA				LR	LR		07 08 32.1
	comp=E,9.0nm,19.1s,MS2.9,baz=285,slow=35						
YKA	Yellowknife Ar	55.19	334	P		P	06 46 10.5 -1.2
YKA				LR	LR		07 08 32.1
SUMG	Summit	55.26	9	*e*P		P	06 46 12.6 +0.6
	comp=E,13nm,1.0s,mb4.9						
SUMG				*e*	pP		06 46 25.8 +0.4
SJPF	Ste Jean	57.44	51	*e*P		P	06 46 28.9 +0.8
	comp=E,14nm,0.8s,mb4.7						
SJPF	Ste Jean	57.44	51	*e*P		P	06 46 28.9 +0.8
	comp=E,6.8nm,0.8s,mb4.7						
RES	Resolute Bay	57.80	351	P		P	06 46 29.3 -0.8
	comp=E,2.3nm,0.7s,mb4.3,baz=159,slow=9.1,SNR=26						
RES	Resolute Bay	57.80	351	*e*P		P	06 46 29.0 -1.1
	comp=E,1.7nm,0.7s,mb4.2						
RES				*e*	pP		06 46 41.7 -1.8
ETSF	Etsaut	57.91	51	*e*P		P	06 46 32.2 +0.8
GRR	Gorron	58.16	45	*e*P		P	06 46 33.1 +0.1
	comp=E,11nm,0.7s,mb4.7						
GRR	Gorron	58.16	45	*e*P		P	06 46 33.1 +0.1
	comp=E,5.6nm,0.7s,mb4.7						
FLN	La Foliniere	58.45	44	*e*P		P	06 46 35.3 +0.3
	comp=E,23nm,1.0s,mb4.9						
FLN	La Foliniere	58.45	44	*e*P		P	06 46 35.3 +0.3
	comp=E,11nm,1.0s,mb4.9						
MFF	Saint Martin d	58.46	47	*e*P		P	06 46 35.7 +0.6
	comp=E,7.3nm,0.8s,mb4.5						
MFF	Saint Martin d	58.46	47	*e*P		P	06 46 35.7 +0.6
	comp=E,3.7nm,0.8s,mb4.5						
EPF	Esparros	58.58	51	*e*P		P	06 46 37.0 +1.0
	comp=E,8.4nm,0.7s,mb4.6						
EPF	Esparros	58.58	51	*e*P		P	06 46 37.0 +1.0
	comp=E,4.2nm,0.7s,mb4.6						
LDF	La Druitiere	58.66	44	*e*P		P	06 46 36.6 +0.1
	comp=E,7.8nm,0.7s,mb4.6						
LDF	La Druitiere	58.66	44	*e*P		P	06 46 36.6 +0.1
	comp=E,3.9nm,0.6s,mb4.6						
DBIC	Dimbokro	58.92	94	P		P	06 46 39.2 +0.3
	comp=E,4.4nm,0.7s,mb4.6,baz=272,slow=13,SNR=7.8						
DBIC	Dimbokro	58.92	94	P		P	06 46 39.2 +0.3
RJF	Les Rejaudoux	59.53	48	*e*P		P	06 46 42.7 +0.1
	comp=E,9.2nm,0.8s,mb4.5						
RJF	Les Rejaudoux	59.53	48	*e*P		P	06 46 42.7 +0.1
	comp=E,4.6nm,0.8s,mb4.6						
MTLF	Montolieu	59.96	51	*e*P		P	06 46 45.8 +0.2
	comp=E,2.6nm,0.6s,mb4.1						
MTLF	Montolieu	59.96	51	*e*P		P	06 46 45.8 +0.2
	comp=E,1.3nm,0.6s,mb4.1						
TCF	Toulx Ste Croi	60.06	47	*e*P		P	06 46 46.4 +0.2
	comp=E,11nm,0.9s,mb4.6						
TCF	Toulx Ste Croi	60.06	47	*e*P		P	06 46 46.4 +0.2
	comp=E,5.5nm,0.9s,mb4.6						
BGF	Bois d'Agland	60.52	47	*e*P		P	06 46 49.1 -0.2
AVF	Avril sur Loir	60.87	47	*e*P		P	06 46 51.6 -0.2
	comp=E,6.5nm,0.7s,mb4.5						
AVF	Avril sur Loir	60.87	47	*e*P		P	06 46 51.6 -0.2
	comp=E,3.3nm,0.7s,mb4.5						
SSF	Saint Saulge	60.99	46	*e*P		P	06 46 52.2 -0.3
	comp=E,17nm,1.3s,mb4.7						
SSF	Saint Saulge	60.99	46	*e*P		P	06 46 52.2 -0.3
	comp=E,8.3nm,1.3s,mb4.7						
DLBC	Dease Lake	61.10	327	P		P	06 46 53.8 +0.7
	comp=E,3.1nm,0.7s,mb4.6,baz=99,slow=4.1,SNR=12						
LASF	Ste Croix	61.16	50	*e*P		P	06 46 54.5 +0.7
	comp=E,9.4nm,1.0s,mb4.6						
SMF	Signal de Mont	61.20	47	*e*P		P	06 46 53.9 -0.1
	comp=E,12nm,1.1s,mb4.7						
SMF	Signal de Mont	61.20	47	*e*P		P	06 46 53.9 -0.1
	comp=E,6.0nm,1.1s,mb4.6						
LOR	Lormes	61.24	46	*e*P		P	06 46 54.0 -0.2
	comp=E,9.1nm,0.8s,mb4.7						
LOR	Lormes	61.24	46	*e*P		P	06 46 54.0 -0.2
	comp=E,4.6nm,0.8s,mb4.7						
BAIF	Baives	61.61	43	*e*P		P	06 46 56.8 +0.1
VIVF	Saint-Julien-l	61.75	49	*e*P		P	06 46 58.8 +1.1
	comp=E,5.8nm,0.7s,mb4.5						
VIVF	Saint-Julien-l	61.75	49	*e*P		P	06 46 58.8 +1.1
	comp=E,2.9nm,0.7s,mb4.5						
GIVF	Givet	62.01	43	*e*P		P	06 46 59.3 0.0
MEZF	Maizieres J'vi	62.09	45	*e*P		P	06 47 00.0 +0.1
	comp=E,23nm,0.8s,mb5.1						
MEZF	Maizieres J'vi	62.09	45	*e*P		P	06 47 00.0 +0.1
	comp=E,23nm,0.8s,mb5.4						
ORIF	Oris-en-Rattie	62.61	49	*e*P		P	06 47 04.6 +1.1
CABF	La Chapelle	62.75	47	*e*P		P	06 47 04.4 0.0
	comp=E,10nm,1.0s,mb4.6						
CABF	La Chapelle	62.75	47	*e*P		P	06 47 04.4 0.0
	comp=E,5.2nm,1.0s,mb4.6						
HAU	Haudompre	62.94	45	*e*P		P	06 47 05.4 -0.2
LMR	La Mourre	63.09	51	*e*P		P	06 47 06.8 +0.1
FRF	La Foret Royal	63.19	50	*e*P		P	06 47 07.6 +0.3
	comp=E,5.4nm,0.8s,mb4.4						
FRF	La Foret Royal	63.19	50	*e*P		P	06 47 07.6 +0.3
	comp=E,2.7nm,0.8s,mb4.4						
LPL	La Plagne	63.21	48	*e*P		P	06 47 08.3 +0.9
LPG	La Plagne	63.22	48	*e*P		P	06 47 08.6 +1.1
TORD	Torodi Ar. Bea	63.26	85	P		P	06 47 08.4 +0.2
	comp=E,4.1nm,0.7s,mb4.7,baz=293,slow=6.8,SNR=24						
TORD				LR	LR		07 13 21.0
	comp=E,46nm,18.2s,MS3.7,baz=175,slow=35						
HINF	Hinteralfeld	63.28	46	*e*P		P	06 47 08.2 +0.3
CDF	Champ du Feu	63.57	45	*e*P		P	06 47 09.6 -0.1
SBF	Sospel	63.75	50	*e*P		P	06 47 11.2 +0.2
INK	Inuvik	64.57	337	P		P	06 47 14.6 -1.4
	comp=E,2.2nm,0.6s,mb4.4,baz=97,slow=5.3,SNR=20						
INK	Inuvik	64.57	337	*e*P		P	06 47 14.0 -2.0
	comp=E,1.2nm,0.5s,mb4.2						
INK				*e*	pP		06 47 26.8 -2.9
PGF	Pioggiola	64.96	51	*e*P		P	06 47 18.8 -0.2
	comp=E,4.2nm,0.7s,mb4.3						
PGF	Pioggiola	64.96	51	*e*P		P	06 47 18.8 -0.2
	comp=E,2.1nm,0.7s,mb4.3						
NB2	NORSAR Subarra	66.23	31	P		P	06 47 26.2 -0.6
	comp=Z,1.6nm,0.8s,mb4.1,baz=269,slow=6.5						
NOA	NORSAR Array B	66.23	31	P		P	06 47 26.4 -0.5
	comp=Z,0.8nm,0.7s,mb3.9,baz=268,slow=6.5,SNR=4.5						
NOA				LR	LR		07 11 12.2
	comp=Z,27nm,18.1s,MS3.5,baz=305,slow=31						
EGAK	Eagle	67.14	333	*e*P		P	06 47 31.9 -0.6
	comp=Z,3.8nm,0.8s,mb4.5						
GERES	GERESS Array B	67.81	44	P		P	06 47 36.8 -0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=272,slow=4.8,SNR=10						
MENT	Mentasta	68.22	331	*e*P		P	06 47 39.4 +0.1
MENT				*e*	pP		06 47 53.0 -0.1
COLA	College	70.00	333	*e*P		P	06 47 48.8 -1.6
	comp=Z,4.1nm,0.8s,mb4.4						
BPAW	Bear Paw Mtn.	71.41	332	*e*P		P	06 47 57.8 -1.2
	comp=Z,10nm,1.2s,mb4.6						
BPAW				*e*	pP		06 48 10.0 -2.8
KTH	Kantishna Hill	71.44	332	*e*P		P	06 47 58.1 -1.0
	comp=Z,9.2nm,1.0s,mb4.7						
KTH				*e*	pP		06 48 11.4 -1.6
ARCES	ARCESS Array B	71.96	22	P		P	06 48 02.3 +0.1
	comp=Z,2.3nm,0.6s,mb4.3,baz=284,slow=4.9,SNR=13						
KAF	Kangasniemi	73.36	29	*e*p		P	06 48 10.1 -0.5
	comp=Z,1.2nm,0.6s,mb4.0						
FINES	FINESS Array B	73.37	30	P		P	06 48 10.7 0.0
	comp=Z,1.7nm,0.7s,mb4.1,baz=262,slow=5.4,SNR=8.8						
JOF	Joensuu	75.47	28	*e*p		P	06 48 21.9 -1.0
	comp=Z,1.6nm,0.8s,mb4.0						
BR131	Keskin Array S	83.68	50	*e*P		P	06 49 08.6 +0.6
	comp=Z,1.6nm,0.7s,mb4.3						
BRTR	Keskin Array B	83.68	50	P		P	06 49 08.0 0.0
	comp=Z,1.6nm,0.7s,mb4.2,baz=269,slow=4.5,SNR=9.5						
WMQ	Urumqi	112.09	22	*e*PKP	PKiKP		06 55 14.1 -0.3
CN2	Changchun	116.56	352	*e*PKP	PKPdf		06 55 14.8 -8.2
CN2				PP	PP		06 56 26.9 -2.3
HHC	Hu-ho-hao-te	120.01	4	*e*PKP	PKPdf		06 55 26.8 -2.9
HHC				PP	PP		06 56 54.1 +1.1
HHC				PKS			06 59 04.3
HHC				SKS	SKSdf		07 02 34.5 -3.4
HHC				SKKS	SKKSac		07 03 44.6 -5.7
HHC				SS	SS		07 13 15.2 +0.4
HHC				LR	LR		
	comp=N,79nm,22.6s,MS4.5						
HHC				LR	LR		
	comp=E,86nm,22.9s,MS4.5						
BJI	Beijing	120.94	360	PKP	PKPdf		06 55 31.1 -0.4
BJI				SS	SS		07 13 24.8 -2.0
BJI				LR	LR		
	comp=N,120nm,24.8s,MS4.5						
BJI				LR	LR		
	comp=E,100nm,25.8s,MS4.5						
LZH	Lanzhou	123.74	12	*e*PKP	PKPdf		06 55 37.2 +0.2
WHN	Wuhan	130.40	2	PKP	PKPdf		06 55 51.6 +1.7
GYA	Guiyang	133.63	11	*e*Pdif	Pdif		06 52 51.2 -2.4
GYA				PKP	PKPdf		06 55 53.8 -2.3
GYA				sPKP			06 56 14.0
GYA				PP	PP		06 58 25.4 +2.1
GYA				AMB	AMB		
	comp=Z,70nm,7.8s						
STKA	Stephens Creek	153.67	237	PKPbc	PKPbc		06 56 39.0 +0.9
	comp=Z,1.1nm,0.6s,baz=120,slow=20,SNR=3.0						
WRA	Warramunga Arr	162.52	265	PKPab	PKPab		06 57 30.2 +0.6
	comp=Z,0.7nm,0.6s,baz=86,slow=4.5,SNR=2.8						
ASAR	Alice Springs	162.61	252	PKP	PKPdf		06 56 41.9 +0.5
	comp=Z,0.6nm,0.7s,baz=107,slow=1.1,SNR=9.6						
ASAR				PKPab	PKPab		06 57 30.9 +1.0
	comp=Z,0.6nm,0.7s,baz=106,slow=4.4,SNR=5.8						

*ISCJB **03** 06:39:28.6±2.7, 22°.71N±0°.10×144°.3E±0°.2, h35km±23km, mb3.8/12, MS3.7/2, Error ellipse: s-maj=29.6km s-min=15.8km az=175.0*
*IDC **03** 06:39:31.2±3.9, 22°.75N×144°.43E, h43km±35km, mb3.5/12, mb1 3.7/14, mb1mx3.6/25, mbtmp3.5/14, ML3.6/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/25, Error ellipse: s-maj=28.8km s-min=18.9km az=84.0*
*NEIC **03** 06:39:32.8±2.3, 22°.74N×144°.35E, h59km±20km, mb4.6/1, Error ellipse: s-maj=17.8km s-min=9.4km az=87.0*

ISC 03 06:39:30.6±2.4, 22°.73N±0°.10×144°.4E±0°.2, h38km±20km, n20, σ0°81/20, mb3.8/12, MS3.7/2, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.80	336	P	Pn	06 40 39.0	-1.3
	5.2nm,0.3s,baz=112,slow=19,SNR=6.7						
CBIJ				S	Sn	06 41 30.2	-4.5
	9.7nm,0.3s,baz=201,slow=17,SNR=4.3						
MJAR	Matsushiro Arr	14.78	340	P	Pn	06 42 57.9	+0.9
	0.3nm,0.3s,baz=159,slow=12,SNR=3.4						
MJAR	Matsushiro Arr	14.78	340	P	Pn	06 42 57.9	+0.9
KSRS	Korea Array	20.42	320	P	P	06 44 06.6	+2.1
	1.3nm,0.6s,baz=128,slow=12,SNR=7.4						
SONM	Songino Array	39.29	319	P	P	06 46 56.2	+0.5
	0.4nm,0.3s,mb3.6,baz=114,slow=6.6,SNR=4.3						
SONM				LR	LR	07 04 13.8	
	comp=Z,54nm,18.5s,MS3.4,baz=170,slow=38						
WB2	Warramunga Arr	43.53	194	*e*P	P	06 47 30.5	-0.2
WRA	Warramunga Arr	43.53	194	P	P	06 47 30.8	0.0
	1.4nm,0.9s,mb3.7,baz=17,slow=8.4,SNR=3.3						
ASAR	Alice Springs	47.23	193	P	P	06 48 00.4	+0.4
	0.4nm,0.7s,mb3.5,baz=18,slow=10,SNR=5.2						
ZALV	Zalesovo Beam	54.12	321	P	P	06 48 51.2	-0.5
	0.7nm,0.5s,mb3.9,baz=106,slow=9.0,SNR=4.3						
MKAR	Makanchi Array	54.85	312	P	P	06 48 57.1	0.0
	0.5nm,0.6s,mb3.7,baz=88,slow=9.1,SNR=4.2						
KURK	Kurchatov	57.51	317	*e*P	P	06 49 15.2	-0.7
	2.9nm,0.5s,mb4.6						
BVAR	Borovoye Array	62.64	319	P	P	06 49 51.2	+0.1
	3.9nm,0.6s,mb4.7,baz=101,slow=8.0,SNR=12						
YKA	Yellowknife Ar	75.02	28	P	P	06 51 08.0	0.0
	0.2nm,0.6s,mb3.2,baz=290,slow=5.7,SNR=7.0						
NVAR	Mina Array Bea	81.61	52	P	P	06 51 46.0	+1.1
	0.7nm,0.8s,mb3.7,baz=267,slow=5.3,SNR=6.8						
NVAR	Mina Array Bea	81.61	52	P	P	06 51 46.0	+1.1
FINES	FINESS Array B	82.75	335	P	P	06 51 49.6	-0.8
	1.0nm,0.8s,mb3.9,baz=68,slow=5.1,SNR=5.6						
PDAR	Pinedale Array	85.86	45	P	P	06 52 06.2	-0.3
	0.2nm,0.8s,mb3.4,baz=316,slow=2.5,SNR=2.4						
PDAR	Pinedale Array	85.86	45	P	P	06 52 06.2	-0.4
NOA	NORSAR Array B	88.40	339	P	P	06 52 17.5	-0.9
	0.3nm,0.6s,mb3.7,baz=40,slow=6.3,SNR=2.4						
MMAI	Mount Meron Ar	92.54	307	LR	LR	07 37 11.8	
	comp=Z,50nm,21.0s,MS4.0,baz=115,slow=37						

BJI 03 06:40:22.2, 36°.21N×81°.01E, h25km, ML3.5/5, 1C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.17	311	*e*Pn	Pn	06 41 40.3	+2.3
KSH				Sn	Sn	06 42 50.0	+13
KSH				smax			
	comp=N,150nm,0.5s						
KSH				smax			
	comp=E,130nm,0.5s						
TKM2	Tokmak 2	7.90	330	⇓Pg	Pn	06 42 44.5	+29
	comp=E,2.1nm,0.8s						
TKM2				⇑Lg		06 44 36.3	
	comp=E,4.4nm,0.7s						
MK31	Makanchi Array	10.62	5	Pn	Pn	06 42 50.6	-2.0
	comp=E,0.4nm,0.3s,baz=185,slow=13,SNR=12						
MK31				⇓Sn	Sn	06 44 54.3	+3.7
	comp=E,0.8nm,0.5s,baz=187,slow=20						

*IDC **03** 06:50:11.0±1.2, 5°.93S×104°.34E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/22, mbtmp3.9/10, Error ellipse: s-maj=72.9km s-min=15.5km az=50.0*
*ISCJB **03** 06:50:16.7±1.4, 6°.21S±0°.06×104°.2E±0°.1, h64km±12km, mb3.9/12, Error ellipse: s-maj=21.3km s-min=9.1km az=168.3*
*NEIC **03** 06:50:16.3±2.7, 5°.94S×104°.41E, h35km±29km, mb4.2/2, Error ellipse: s-maj=40.3km s-min=11.3km az=224.0*
*DJA **03** 06:50:24.5°.97S×104°.69E, h37km, MLv4.1/11*

ISC 03 06:50:18.4±1.3, 6°.18S±0°.06×104°.2E±0°.1, h60km±12km, n29, σ0°94/21, mb3.9/12, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.72	24	P	Px	06 50 36.7	
BLSI	Bandar Lampung	1.31	52	P	Pn	06 50 39.7	-0.9
KLI	Kotabumi	1.46	26	P	Px	06 50 44.3	
CGJI	Cibinong	1.54	106	P	Pn	06 50 44.4	+0.8
RBSI	Rajabasa	1.56	78	P	Pn	06 50 42.9	-1.1
MDSI	Maura Dua	1.69	359	P	Px	06 50 49.8	
MNAI	Manna	2.20	325	P	Px	06 51 00.2	
TNG	Tangerang	2.43	90	P	Pn	06 50 55.9	+0.2
DBJI	Dramaga	2.56	98	P	Pn	06 50 58.2	+0.7
CBJI	Citeko	2.64	95	P	Px	06 51 01.5	
KSI	Kapahiang	2.98	327	P	Px	06 51 11.7	
PPBI	Pangkal Pinang	4.43	26	P	Pn	06 51 24.3	+1.1
XMIS	Christmas Isla	4.50	162	*e*Pn	Pn	06 51 24.5	+0.3
XMIS				*e*Sn	Sn	06 52 14.5	-0.8
FITZ	Fitzroy Crossi	24.03	121	P	P	06 55 27.6	-0.4
	2.6nm,1.0s,mb3.6,baz=287,slow=8.9,SNR=5.1						
WRA	Warramunga Arr	32.30	118	P	P	06 56 41.4	-0.5
	0.5nm,0.3s,mb3.8,baz=304,slow=9.0,SNR=6.5						
WRA				PcP	PcP	06 59 29.8	+0.8
	0.3nm,0.3s,baz=308,slow=2.0,SNR=3.6						
WRAB	Tennant Creek	32.31	118	*e*P	P	06 56 41.3	-0.7
	2.4nm,0.7s,mb4.1						
ASAR	Alice Springs	33.43	124	P	P	06 56 52.2	+0.6
	1.5nm,0.5s,mb4.2,baz=294,slow=7.5,SNR=37						
ASAR				PcP	PcP	06 59 33.4	+1.3
	0.6nm,0.8s,baz=283,slow=2.1,SNR=5.1						
STKA	Stephens Creek	43.26	131	P	P	06 58 15.6	+1.5
	2.9nm,0.5s,mb4.2,baz=309,slow=8.2,SNR=12						
SONM	Songino Array	53.82	2	P	P	06 59 35.5	+0.5
	0.4nm,0.5s,mb3.6,baz=170,slow=8.8,SNR=3.6						
SONM				PcP	PcP	07 00 40.5	+0.4
	0.3nm,0.2s,baz=183,slow=4.8,SNR=6.9						
MKAR	Makanchi Array	56.22	342	P	P	06 59 51.8	-0.4
	0.2nm,0.5s,mb3.5,baz=145,slow=8.6,SNR=4.7						
ZALV	Zalesovo Beam	62.09	347	P	P	07 00 31.1	-1.7
	0.6nm,0.3s,mb4.2,baz=159,slow=5.4,SNR=4.6						
BVAR	Borovoye Array	65.56	338	P	P	07 00 53.7	-1.9
	0.4nm,0.3s,mb3.9,baz=127,slow=7.9,SNR=2.7						
BVAR	Borovoye Array	65.56	338	P	P	07 00 53.7	-1.9
ABKAR	Akbulak array	67.31	330	*e*P	P	07 01 07.0	+0.1
	0.9nm,0.5s,mb4.1						
BRTR	Keskin Array B	79.22	312	P	P	07 02 18.6	+1.3
	0.5nm,0.6s,mb3.7,baz=98,slow=3.7,SNR=3.8						
FINES	FINESS Array B	89.75	332	P	P	07 03 11.0	+1.1
	0.6nm,0.7s,mb4.1,baz=98,slow=8.6,SNR=3.5						
TXAR	Lajitas Array	145.04	45	PKP	PKPdf	07 09 49.7	0.0
	2.4nm,0.5s,baz=256,slow=1.5,SNR=30						
TXAR	Lajitas Array	145.04	45	PKP	PKPdf	07 09 49.7	0.0
JCT	Junction City	146.94	40	*e*PKPbc	PKPbc	07 09 54.8	0.0

*IDC **03** 07:16:59.9±0.9, 27°.64N×66°.57E, h0km, mb3.7/14, mb1 3.8/15, mb1mx3.7/29, mbtmp3.7/15, ML2.7/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/37, Error ellipse: s-maj=22.0km s-min=20.1km az=30.0*
*ISCJB **03** 07:17:02.6±0.6, 27°.63N±0°.07×66°.76E±0°.06, h33km, mb3.8/18, MS3.3/5, Error ellipse: s-maj=10.1km s-min=7.7km az=15.8*
*NEIC **03** 07:17:05.4±3.6, 27°.72N×66°.56E, h36km±29km, mb3.7/5, Error ellipse: s-maj=22.2km s-min=14.2km az=201.0*

ISC 03 07:17:04.1±0.6, 27°.57N±0°.07×66°.73E±0°.06, h35km, n42, σ1°31/41, mb3.8/18, MS3.3/5, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	Ajmer	7.14	97	*e*P	Pn	07 18 56.0	+10
CEP	Cherat	7.67	34	P	Pn	07 18 52.2	-1.1
CEP				S	Sn	07 20 20.0	+1.1
CHCP	Chirah Chowk	8.28	41	P	Pn	07 19 01.3	-0.4
THN	Thein Dam	9.18	56	*ex*	Pn	07 19 10.6	-3.4
KOLN	Koldanda	14.96	85	*e*P	Pn	07 20 31.1	-1.9
	12nm,0.6s						
AML

*ISCJB **03** 07:47:54.1±0.3, 49°.33N±0°.02×6°.77E±0°.03, h0km, Error ellipse: s-maj=3.1km s-min=2.6km az=1.7*
*CSEM **03** 07:47:55.0±0.1, 49°.34N×6°.79E, h1km, ML2.5/9, Error ellipse: s-maj=3.1km s-min=2.6km az=88.0*
*NEIC **03** 07:47:56.0, 49°.34N×6°.82E, h1km, ML2.5(LDG), After LDG.*
*LDG **03** 07:47:56.0±0.1, 49°.34N×6°.82E, h1km, Md2.4/1, Ml2.5/9, Error ellipse: s-maj=1.8km s-min=1.3km az=111.0, Suspected Mining induced.*
*BGR **03** 07:47:56.5±0.4, 49°.34N×6°.82E, h1km, ML1.7/3, Error ellipse: s-maj=8.9km s-min=5.6km az=36.0*
*BNS **03** 07:48:09.7±6.3, 50°.61N×7°.18E, h1km, ML1.1*

ISC 03 07:47:55.2±0.3, 49°.34N±0°.02×6.78E±0°.03, h0km, n41, σ0§89/72, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WLF	**Walferdange**	**0.52**	**309**	*e*Pg	**Pg**	**07 48 07.1**	**+1.9**
	SNR=6.1						
WLF				*e*Sg	**Sg**	**07 48 13.7**	**+1.8**
WLF	**Walferdange**	**0.52**	**309**	Pg	**Pg**	**07 48 07.1**	**+1.9**
	SNR=6.1						
WLF				Sg	**Sg**	**07 48 13.7**	**+1.8**
BGG	**Burgeitz**	**0.94**	**23**	*e*Pg	**Pg**	**07 48 13.3**	**0.0**
BGG				*e*Sg	**Sg**	**07 48 26.1**	**+0.7**
	22nm,0.2s						
BGG	**Burgeitz**	**0.94**	**23**	Pg	**Pg**	**07 48 13.3**	**+0.1**
BGG				Sg	**Sg**	**07 48 26.1**	**+0.6**
	22nm,0.2s						
CDF	**Champ du Feu**	**0.98**	**160**	*e*Pg	**Pg**	**07 48 14.2**	**+0.2**
CDF				*e*Sg	**Sg**	**07 48 25.4**	**-1.3**
CDF	**Champ du Feu**	**0.98**	**160**	*e*Pg	**Pg**	**07 48 14.2**	**+0.2**
CDF				*e*Sg	**Sg**	**07 48 25.4**	**-1.3**
RFYF	**Reffroy**	**1.11**	**231**	*e*Pg	**Pg**	**07 48 17.3**	**+0.8**
	baz=49						
RFYF				*e*Sg	**Sg**	**07 48 32.2**	**+1.3**
	18nm,0.3s,baz=49						
RFYF	**Reffroy**	**1.11**	**231**	*e*Pg	**Pg**	**07 48 17.3**	**+0.8**
	baz=49						
RFYF				*e*Sg	**Sg**	**07 48 32.2**	**+1.3**
	9.1nm,0.3s,baz=49						
ECH	**Echery**	**1.15**	**167**	*e*Pg	**Pg**	**07 48 17.5**	**+0.3**
ECH				*e*Sg	**Sg**	**07 48 32.8**	**+0.7**
ECH	**Echery**	**1.15**	**167**	*e*Pg	**Pg**	**07 48 17.5**	**+0.3**
ECH				*e*Sg	**Sg**	**07 48 32.8**	**+0.7**
KOE	**Koeppel**	**1.25**	**29**	*e*Pg	**Pg**	**07 48 18.8**	**-0.4**
KOE	**Koeppel**	**1.25**	**29**	Pg	**Pg**	**07 48 18.8**	**-0.4**
KLL	**Kalltalsperre**	**1.34**	**347**	*e*Pg	**Pg**	**07 48 21.3**	**+0.3**
KLL	**Kalltalsperre**	**1.34**	**347**	Pg	**Pg**	**07 48 21.3**	**+0.4**
HAU	**Haudompre**	**1.36**	**192**	*e*Pg	**Pg**	**07 48 21.6**	**+0.3**
HAU				*e*Sg	**Sg**	**07 48 39.4**	**+0.5**
	11nm,0.2s						
HAU	**Haudompre**	**1.36**	**192**	*e*Pg	**Pg**	**07 48 21.6**	**+0.3**
HAU				*e*Sg	**Sg**	**07 48 39.4**	**+0.5**
	5.4nm,0.2s						
MEM	**Membach**	**1.37**	**339**	P	**Pg**	**07 48 20.9**	**-0.4**
TNS	**Taunus Mts**	**1.40**	**50**	*e*Pg	**Pg**	**07 48 20.7**	**-1.3**
	SNR=3.3						
TNS				*e*Sg	**Sg**	**07 48 41.1**	**+1.0**
TNS	**Taunus Mts**	**1.40**	**50**	Pg	**Pg**	**07 48 20.7**	**-1.3**
	SNR=3.3						
TNS				Sg	**Sg**	**07 48 41.1**	**+1.0**
MEZF	**Maizieres J'vi**	**1.41**	**234**	*e*Sg	**Sg**	**07 48 41.2**	**+0.7**
	5.4nm,0.3s						
MEZF	**Maizieres J'vi**	**1.41**	**234**	*e*Sg	**Sg**	**07 48 41.2**	**+0.7**
	2.7nm,0.3s						
BFO	**Black Forest**	**1.44**	**134**	*e*Pg	**Pg**	**07 48 23.0**	**+0.3**
	SNR=3.3						
BFO				*e*Sg	**Sg**	**07 48 41.4**	**0.0**
BFO	**Black Forest**	**1.44**	**134**	*e*Pn	**Pn**	**07 48 22.0**	**-0.5**
BFO				*e*Sg	**Sg**	**07 48 42.2**	**+0.8**
BFO	**Black Forest**	**1.44**	**134**	*e*Pn	**Pn**	**07 48 22.0**	**-0.5**
BFO	**Black Forest**	**1.44**	**134**	Pg	**Pg**	**07 48 23.0**	**+0.3**
	SNR=3.3						
BFO				Sg	**Sg**	**07 48 41.4**	**0.0**
GIVF	**Givet**	**1.48**	**302**	*e*Pg	**Pg**	**07 48 22.4**	**-1.1**
GIVF				*e*Sn	**Sn**	**07 48 41.7**	**-1.4**
	5.5nm,0.2s,SNR=1.0						
GIVF	**Givet**	**1.48**	**302**	*e*Pg	**Pg**	**07 48 22.4**	**-1.1**
GIVF				*e*Sn	**Sn**	**07 48 41.7**	**-1.4**
	2.8nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**1.52**	**178**	*e*Pg	**Pg**	**07 48 24.5**	**+0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**07 48 44.2**	**+0.1**
	17nm,0.3s						
HINF	**Hinteralfeld**	**1.52**	**178**	*e*Pg	**Pg**	**07 48 24.5**	**+0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**07 48 44.2**	**+0.1**
	8.4nm,0.3s						
SFTF	**Sexfontaines**	**1.61**	**226**	*e*Pn	**Pn**	**07 48 24.5**	**-0.4**
SFTF				*e*Sg	**Sg**	**07 48 47.9**	**+0.9**
	3.5nm,0.2s						
SFTF	**Sexfontaines**	**1.61**	**226**	*e*Pn	**Pn**	**07 48 24.5**	**-0.4**
SFTF				*e*Sg	**Sg**	**07 48 47.9**	**+0.9**
	1.8nm,0.2s						
BAIF	**Baives**	**1.82**	**294**	*e*Pg	**Pg**	**07 48 30.2**	**+0.2**
BAIF				*e*Sg	**Sg**	**07 48 52.7**	**-0.8**
	4.8nm,0.4s,SNR=1.0						
BAIF	**Baives**	**1.82**	**294**	*e*Pn	**Pn**	**07 48 27.1**	**-0.6**
BAIF				*e*Pg	**Pg**	**07 48 30.2**	**+0.2**
BAIF				*e*Sg	**Sg**	**07 48 52.7**	**-0.8**
BAIF	**Baives**	**1.82**	**294**	*e*Pn	**Pn**	**07 48 27.1**	**-0.6**
BAIF	**Baives**	**1.82**	**294**	*e*Pg	**Pg**	**07 48 30.2**	**+0.2**
BAIF				*e*Sg	**Sg**	**07 48 52.7**	**-0.8**
	2.4nm,0.4s,SNR=1.0						
LOR	**Lormes**	**2.84**	**224**	*e*Pn	**Pn**	**07 48 40.7**	**-1.0**
	baz=48						
LOR				*e*Sn	**Sn**	**07 49 14.1**	**-2.5**
LOR	**Lormes**	**2.84**	**224**	*e*Pn	**Pn**	**07 48 40.7**	**-1.0**
	baz=48						
LOR				*e*Sn	**Sn**	**07 49 14.1**	**-2.5**
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**07 48 45.1**	**-1.0**
SSF				*e*Sg	**Sg**	**07 49 35.9**	**-0.7**
	2.0nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**07 48 45.1**	**-1.0**
SSF				*e*Sg	**Sg**	**07 49 35.9**	**-0.7**
	1.0nm,0.3s,SNR=1.0						
GEC2	**GERESS Array S**	**4.58**	**94**	*e*Pn	**Pn**	**07 49 05.8**	**+0.2**
	SNR=2.8						
GEC2	**GERESS Array S**	**4.58**	**94**	Pn	**Pn**	**07 49 05.8**	**+0.2**
	SNR=2.8						

*ISK **03** 08:32:29.8, 36°.95N×29°.26E, h5km, MD2.7*
*DDA **03** 08:32:30.8, 36°.97N×29°.19E, h7km±4km, Md2.4*
*CSEM **03** 08:32:31.1±0.3, 36°.97N×29°.23E, h2km, MD2.7, Error ellipse: s-maj=5.8km s-min=4.9km az=145.0*

ISC 03 08:32:28.9±2.0, 36°.85N±0°.09×29°.5E±0°.2, h32km±7km, n16, σ1§04/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Gihisar (BURDU**	**0.31**	**1**	*e*PG	**Pb**	**08 32 35.8**	**-1.0**
GLHS				*e*SG	**Sb**	**08 32 41.6**	**-0.4**
GLHS	**Gihisar (BURDU**	**0.31**	**1**	*e*Pg	**Pb**	**08 32 35.8**	**-0.9**
GLHS				*e*Sg	**Sb**	**08 32 41.6**	**-0.4**
ELL	**Elmali**	**0.35**	**106**	*e*PG	**Pb**	**08 32 42.6**	**+5.4**
ELL	**Elmali**	**0.35**	**106**	*e*Pg	**Pb**	**08 32 42.6**	**+5.4**
FETY	**Fethiye**	**0.39**	**238**	*e*PG	**Pb**	**08 32 37.8**	**0.0**
FETY				*e*SG	**Sb**	**08 32 43.3**	**-0.5**
FETY	**Fethiye**	**0.39**	**238**	*e*Pg	**Pb**	**08 32 37.8**	**0.0**
FETY				*e*Sg	**Sb**	**08 32 43.3**	**-0.6**
GOLH	**Golhisar**	**0.39**	**8**	*i* P	**Pb**	**08 32 38.5**	**+0.6**
GOLH				*i* S	**Sb**	**08 32 45.2**	**+1.3**
GOLH	**Golhisar**	**0.39**	**8**	*i* P	**Pb**	**08 32 38.5**	**+0.6**
GOLH				*i* S	**Sb**	**08 32 45.2**	**+1.2**
DNZL	**Cakiroluk**	**0.91**	**337**	*i* P	**Pn**	**08 32 45.5**	**-0.1**
DNZL				*i* S	**Sn**	**08 32 55.4**	**-2.2**
DNZL	**Cakiroluk**	**0.91**	**337**	*i* P	**Pn**	**08 32 45.5**	**-0.1**
DNZL				*i* S	**Sn**	**08 32 55.4**	**-2.2**
YER	**Yerkesik**	**1.01**	**287**	*e*PG	**Pn**	**08 32 46.4**	**-0.5**
YER	**Yerkesik**	**1.01**	**287**	*e*Pg	**Pn**	**08 32 46.4**	**-0.5**
AYDN	**Tasoluk**	**1.52**	**303**	*i* P	**Pn**	**08 32 54.0**	**+0.1**
AYDN				*i* S	**Sn**	**08 33 13.9**	**+1.3**
AYDN	**Tasoluk**	**1.52**	**303**	*i* P	**Pn**	**08 32 54.0**	**+0.1**
AYDN				*i* S	**Sn**	**08 33 13.9**	**+1.3**
DAT	**Datca**	**1.54**	**266**	*e*PN	**Pn**	**08 32 57.4**	**+3.3**
DAT	**Datca**	**1.54**	**266**	*e*Pn	**Pn**	**08 32 57.4**	**+3.2**

IDC 03 08:35:29.0±3.5, 6°.74N×74°.42W, h173km±56km, mb2.8/1, mb1 3.2/1, mb1mx2.8/18, mbtmp2.8/1, Error ellipse: s-maj=557.5km s-min=34.1km az=90.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.88**	**177**	P	Pn	08 36 06.2	+1.9
	9.8nm,0.3s,baz=82,slow=14,SNR=29						
ROSC				S	Sn	08 36 32.5	+0.9
	18nm,0.3s,baz=269,slow=20,SNR=11						
YKA	**Yellowknife Ar**	**62.90**	**340**	P	P	08 45 36.1	-0.4
	0.2nm,0.6s,baz=132,slow=6.5,SNR=8.3						
ASAR	**Alice Springs**	**148.01**	**235**	PKPbc	PKPbc	08 54 54.6	-0.3
	0.2nm,0.8s,baz=114,slow=3.2,SNR=4.5						
WRA	**Warramunga Arr**	**149.17**	**242**	PKPbc	PKPbc	08 54 57.7	-0.2
	0.3nm,0.4s,baz=108,slow=2.5,SNR=5.7						

*ISK **03** 08:38:33.9, 40°.44N×35°.70E, h8km, MD2.8*
*ISCJB **03** 08:38:34.4±0.5, 40°.45N±0°.03×35°.73E±0°.04, h2km±8km, Error ellipse: s-maj=5.7km s-min=4.4km az=155.1*
*CSEM **03** 08:38:34.5±0.2, 40°.44N×35°.73E, h2km, MD2.8, Error ellipse: s-maj=5.4km s-min=3.6km az=161.0*
*DDA **03** 08:38:34.1, 40°.51N×35°.75E, h8km±3km, MD2.8*

ISC 03 08:38:35.1±0.5, 40°.46N±0°.03×35°.74E±0°.04, h8km±7km, n24, σ1§13/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKT	**Tokat**	**0.63**	**103**	*e*PG	**Pg**	**08 38 47.4**	**+0.1**
TOKT				*e*SG	**Sg**	**08 38 56.4**	**+1.0**
TOKT	**Tokat**	**0.63**	**103**	*e*Pg	**Pg**	**08 38 47.4**	**+0.1**
TOKT				*e*Sg	**Sg**	**08 38 56.4**	**+0.9**
KVT	**Kavak**	**0.66**	**20**	*e*PG	**Pg**	**08 38 47.8**	**-0.1**
KVT				*e*SG	**Sg**	**08 38 57.8**	**+1.2**
KVT	**Kavak**	**0.66**	**20**	*e*Pg	**Pg**	**08 38 47.8**	**-0.1**
KVT				*e*Sg	**Sg**	**08 38 57.8**	**+1.3**
CTKT	**Corum**	**0.74**	**283**	*i* P	**Pg**	**08 38 48.7**	**-0.7**
CTKT				*i* S	**Sg**	**08 38 59.7**	**+0.6**
CTKT	**Corum**	**0.74**	**283**	*i* P	**Pg**	**08 38 48.7**	**-0.8**
CTKT				*i* S	**Sg**	**08 38 59.7**	**+0.6**
ERBA	**Erbaa**	**0.80**	**74**	*i* P	**Pg**	**08 38 49.4**	**-1.2**
ERBA				*i* S	**Sg**	**08 39 00.7**	**-0.3**
ERBA	**Erbaa**	**0.80**	**74**	*i* P	**Pg**	**08 38 49.4**	**-1.2**
ERBA				*i* S	**Sg**	**08 39 00.7**	**-0.3**
YOZ	**Yozgat**	**0.88**	**202**	*e*PG	**Pg**	**08 38 51.3**	**-0.7**
YOZ	**Yozgat**	**0.88**	**202**	*e*Pg	**Pg**	**08 38 51.3**	**-0.8**
CORM	**Corum**	**0.90**	**252**	*e*PG	**Pg**	**08 38 50.3**	**-2.0**
CORM	**Corum**	**0.90**	**252**	*e*Pg	**Pg**	**08 38 50.3**	**-2.0**
SVSK	**Karacayir**	**1.10**	**119**	*e*PN	**Pg**	**08 38 55.6**	**-0.8**
SVSK	**Karacayir**	**1.10**	**119**	*e*Pn	**Pg**	**08 38 55.6**	**-0.7**
DIKM	**Dikmen**	**1.24**	**343**	*e*PN	**Pn**	**08 38 58.3**	**-0.5**
DIKM	**Dikmen**	**1.24**	**343**	*e*Pn	**Pn**	**08 38 58.3**	**-0.5**
CDAG	**Cicekdag**	**1.34**	**232**	*i* P	**Pn**	**08 38 59.5**	**-0.7**
CDAG				*i* S	**Sb**	**08 39 15.5**	**-2.4**
CDAG	**Cicekdag**	**1.34**	**232**	*i* P	**Pn**	**08 38 59.5**	**-0.7**
CDAG				*i* S	**Sb**	**08 39 15.5**	**-2.4**
ELDT	**Eldivan**	**1.77**	**272**	*i* P	**Pn**	**08 39 06.7**	**+0.8**
ELDT				*i* S	**Sn**	**08 39 30.3**	**+1.7**
ELDT	**Eldivan**	**1.77**	**272**	*i* P	**Pn**	**08 39 06.7**	**+0.7**
ELDT				*i* S	**Sn**	**08 39 30.3**	**+1.7**
AVNT	**Avonos**	**1.81**	**202**	*i* P	**Pg**	**08 39 11.2**	**+1.3**
AVNT				*i* S	**Sg**	**08 39 35.7**	**+2.4**
AVNT	**Avonos**	**1.81**	**202**	*i* P	**Pg**	**08 39 11.2**	**+1.3**
SARI	**SarD1z-Kayseri**	**1.93**	**157**	*e*PN	**Pb**	**08 39 10.6**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.93**	**157**	*e*Pn	**Pb**	**08 39 10.6**	**+0.1**

*ISCJB **03** 09:00:22.7±0.6, 7°.42S±0°.04×126°.79E±0°.07, h351km±7km, mb4.0/19, Error ellipse: s-maj=11.5km s-min=4.9km az=157.8*
*NEIC **03** 09:00:23.2±1.1, 7°.38S×126°.75E, h338km±14km, mb4.4/6, Error ellipse: s-maj=12.6km s-min=9.0km az=61.0*
*IDC **03** 09:00:23.8±3.0, 7°.38S×126°.69E, h343km±33km, mb3.5/11, mb1 3.6/14, mb1mx3.6/18, mbtmp3.5/14, Error ellipse: s-maj=24.0km s-min=12.4km az=84.0*
*DJA **03** 09:00:24, 7°.40S×127°.23E, h397km, mb4.5/7*

ISC 03 09:00:24.4±0.6, 7°.46S±0°.04×126°.81E±0°.07, h354km±7km, n52, σ0§91/58, mb4.0/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**4.20**	**4**	P	**Pn**	**09 01 37.1**	**+1.3**
LBMI	**Labuha**	**6.81**	**6**	P	**Pn**	**09 02 04.1**	**-0.6**
	276nm,0.7s,3μm1.1nm						
KAKA	**Kakadu**	**7.61**	**134**	*e*P	**Pn**	**09 02 12.3**	**-1.8**
	15nm,0.3s						
KAKA	**Kakadu**	**7.61**	**134**	*e*Pn	**Pn**	**09 02 12.1**	**-2.0**
	51nm,0.5s						
KAKA				*e*S	**S**	**09 03 26.3**	**-17**
KAKA	**Kakadu**	**7.61**	**134**	P	**Pn**	**09 02 12.2**	**-1.9**
	47nm,0.6s						
SWI	**Sorong**	**7.91**	**34**	P	**Pn**	**09 02 14.8**	**-2.8**
	49nm,0.5s,1μm0.4nm						
KNA	**Kununurra**	**8.46**	**167**	*e*P	**Pn**	**09 02 23.7**	**-0.4**
	35nm,0.7s						
MRSI	**Marisa**	**9.26**	**328**	P	**Pn**	**09 02 34.0**	**+0.4**
	31nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.64**	**186**	*e*P	**Pn**	**09 02 49.1**	**-0.9**
	23nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.64**	**186**	P	**Pn**	**09 02 49.2**	**-0.8**
	2.3nm,0.3s,baz=24,slow=9.0,SNR=54						
FITZ				S	**S**	**09 04 50.2**	**+0.5**
	1.1nm,0.3s,baz=53,slow=20,SNR=7.4						
FITZ	**Fitzroy Crossi**	**10.64**	**186**	P	**Pn**	**09 02 49.4**	**-0.6**
	44nm,1.0s						
BBKI	**Banjar Baru**	**12.56**	**288**	P	**P**	**09 03 16.6**	**+4.5**
	112nm,0.8s						
WRAB	**Tennant Creek**	**14.40**	**150**	*e*P	**P**	**09 03 33.3**	**+1.0**
	10nm,0.4s						
WRAB				*e*S	**S**	**09 06 07.4**	**-0.6**
WRAB	**Tennant Creek**	**14.40**	**150**	P	**P**	**09 03 34.1**	**+1.8**
WRA	**Warramunga Arr**	**14.40**	**150**	P	**P**	**09 03 33.1**	**+0.8**
	3.4nm,0.3s,baz=328,slow=12,SNR=192						
WRA				S	**S**	**09 06 07.9**	**-0.1**
	0.5nm,0.3s,baz=326,slow=21,SNR=13						
WB2	**Warramunga Arr**	**14.40**	**150**	*e*P	**P**	**09 03 33.2**	**+0.8**
WB2				*e*S	**S**	**09 06 06.5**	**-1.6**
MBWA	**Marble Bar**	**15.24**	**206**	*e*P	**P**	**09 03 41.6**	**+0.1**
MBWA	**Marble Bar**	**15.24**	**206**	*e*P	**P**	**09 03 41.4**	**-0.1**
	9.9nm,0.6s						
MBWA				*e*S	**S**	**09 06 22.9**	**-2.0**
MBWA	**Marble Bar**	**15.24**	**206**	P	**P**	**09 03 41.9**	**+0.4**
COEN	**Coen**	**17.32**	**113**	*e*P	**P**	**09 04 05.1**	**+1.0**
	101nm,1.1s						
ASAR	**Alice Springs**	**17.50**	**158**	P	**P**	**09 04 07.5**	**+1.8**
	1.7nm,0.3s,baz=334,slow=11,SNR=116						
ASAR				S	**S**	**09 07 08.4**	**-0.9**
	0.4nm,0.3s,baz=335,slow=19,SNR=10						
KSM	**Kuching**	**18.70**	**298**	P	**P**	**09 04 18.8**	**+0.1**
	7.6nm,0.6s						
FORT	**Forrest**	**23.23**	**177**	*e*P	**P**	**09 05 01.4**	**0.0**
	16nm,0.7s,mb4.3						
NWAO	**Narrogin (SRO)**	**26.86**	**198**	P	**P**	**09 05 34.0**	**+0.2**
	7.7nm,0.7s,mb4.0,baz=36,slow=8.4,SNR=5.6						
STKA	**Stephens Creek**	**27.93**	**152**	*e*P	**P**	**09 05 44.8**	**+1.4**
	2.6nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**27.93**	**152**	P	**P**	**09 05 45.1**	**+1.7**
	4.1nm,0.5s,mb3.9,baz=327,slow=9.5,SNR=14						
CMSA	**Cobar Meteorol**	**29.74**	**146**	*e*P	**P**	**09 06 01.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**37.67**	**313**	P	**P**	**09 07 06.6**	**-0.6**
	0.8nm,0.4s,mb3.3,baz=133,slow=6.3,SNR=3.9						
CMAR	**Chiang Mai Arr**	**37.67**	**313**	P	**P**	**09 07 06.6**	**-0.6**
MAT	**Matsushiro**	**45.05**	**13**	P	**P**	**09 08 05.3**	**-1.0**
MJAR	**Matsushiro Arr**	**45.05**	**13**	P	**P**	**09 08 05.1**	**-1.2**
	4.9nm,0.7s,mb3.7,baz=189,slow=9.3,SNR=20						
ODAN	**Odare**	**51.21**	**313**	*e*P	**P**	**09 08 53.2**	**+0.1**
TAPN	**Taplejung**	**51.27**	**314**	*e*P	**P**	**09 08 53.4**	**-0.2**
RAMN	**Ramite**	**51.84**	**313**	*e*P	**P**	**09 08 58.0**	**+0.3**
	31nm,0.8s,mb4.7						
GUN	**Gumba**	**52.92**	**313**	*e*P	**P**	**09 09 05.5**	**-0.1**
	24nm,0.8s,mb4.6						
PKI	**Pulchoki**	**53.06**	**313**	*e*P	**P**	**09 09 06.4**	**-0.2**
	9.0nm,0.5s,mb4.3						
PKIN	**Phulchoki**	**53.07**	**313**	*e*P	**P**	**09 09 07.4**	**+0.7**
	9.1nm,0.4s,mb4.4						
KKN	**Kakani**	**53.28**	**313**	*e*P	**P**	**09 09 08.4**	**+0.2**
DMN	**Daman**	**53.30**	**313**	*e*P	**P**	**09 09 08.7**	**+0.3**
GKN	**Gorkha**	**53.87**	**313**	*e*P	**P**	**09 09 11.8**	**-0.6**
	15nm,0.4s,mb4.7						
KOLN	**Koldanda**	**54.50**	**312**	*e*P	**P**	**09 09 16.5**	**-0.4**
	27nm,0.7s,mb4.7						
SONM	**Songino Array**	**57.93**	**344**	P	**P**	**09 09 40.7**	**+0.2**
	0.2nm,0.3s,mb2.9,baz=165,slow=6.9,SNR=2.7						
SONM	**Songino Array**	**57.93**	**344**	P	**P**	**09 09 40.7**	**+0.2**
PETK	**Petropavlovsk-**	**65.78**	**20**	P	**P**	**09 10 33.5**	**+1.2**
	1.4nm,0.6s,mb3.9,baz=154,slow=0.7,SNR=7.0						
MKAR	**Makanchi Array**	**66.91**	**328**	P	**P**	**09 10 40.1**	**+0.6**
	0.5nm,0.5s,mb3.5,baz=121,slow=8.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**70.63**	**335**	P	**P**	**09 11 01.6**	**-0.4**
	0.8nm,0.4s,mb3.8,baz=138,slow=5.6,SNR=7.5						
MAW	**Mawson**	**73.38**	**201**	P	**P**	**09 11 18.9**	**+0.8**
	1.5nm,0.5s,mb4.0,baz=80,slow=6.1,SNR=5.2						
BVAR	**Borovoye Array**	**76.79**	**329**	P	**P**	**09 11 36.8**	**-0.7**
	0.7nm,0.5s,mb3.6,baz=132,slow=4.4,SNR=4.2						
ABKAR	**Akbulak array**	**80.92**	**322**	*e*P	**P**	**09 11 59.6**	**-0.3**
	1.0nm,0.5s,mb3.8						
AKTK	**Aktyubinsk**	**82.51**	**323**	P	**P**	**09 12 08.2**	**+0.1**
AKTO	**Aktyubinsk**	**82.51**	**323**	P	**P**	**09 12 08.2**	**+0.1**
	1.3nm,0.5s,mb4.0,baz=90,slow=9.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**125.79**	**281**	PKP	PKPdf	09 18 44.3	-1.1
	0.5nm,0.7s,baz=95,slow=1.2,SNR=3.5						

*DDA **03** 09:30:45.7, 39°.68N×29°.49E, h7km±2km, Md2.7*
*ISCJB **03** 09:30:46.5±0.4, 39°.65N±0°.03×29°.51E±0°.04, h0km, Error ellipse: s-maj=4.1km s-min=3.7km az=16.3*
*CSEM **03** 09:30:46.7±0.2, 39°.63N×29°.52E, h2km, MD2.7, Error ellipse: s-maj=4.8km s-min=4.0km az=121.0*
*ISK **03** 09:30:46.3, 39°.67N×29°.59E, h5km, MD2.8*

ISC 03 09:30:47.0±0.4, 39°.66N±0°.03×29°.51E±0°.04, h0km, n30, σ1§02/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.57**	**182**	*i* P	**Pg**	**09 30 56.8**	**-1.0**
GDZ				*i* S	**Sg**	**09 31 07.7**	**+2.5**
GDZ	**Gediz**	**0.57**	**182**	*i* P	**Pg**	**09 30 56.8**	**-1.0**
DST	**Dursunbey**	**0.68**	**266**	*e*PG	**Pg**	**09 31 01.9**	**+1.9**
DST	**Dursunbey**	**0.68**	**266**	*e*Pg	**Pg**	**09 31 01.9**	**+1.9**
ALT	**Altintas**	**0.76**	**142**	*e*PG	**Pg**	**09 31 01.5**	**-0.1**
ALT				*e*SG	**Sg**	**09 31 12.5**	**+1.1**
ALT	**Altintas**	**0.76**	**142**	*e*Pg	**Pg**	**09 31 01.5**	**-0.1**
ALT				*e*Sg	**Sg**	**09 31 12.5**	**+1.1**
ADVT	**Abdulvahap**	**0.80**	**13**	*e*PG	**Pg**	**09 31 02.4**	**+0.1**
ADVT	**Abdulvahap**	**0.80**	**13**	*e*Pg	**Pg**	**09 31 02.4**	**+0.1**
DURS	**Dursunbey**	**0.80**	**266**	*i* P	**Pg**	**09 31 01.0**	**-1.3**
DURS				*i* S	**Sg**	**09 31 12.8**	**+0.1**
DURS	**Dursunbey**	**0.80**	**266**	*i* P	**Pg**	**09 31 01.0**	**-1.3**
DURS				*i* S	**Sg**	**09 31 12.8**	**+0.1**
DEMI	**Demirci**	**0.87**	**225**	*i* P	**Pg**	**09 31 02.7**	**-0.9**
DEMI				*i* S	**Sg**	**09 31 15.2**	**+0.4**
DEMI	**Demirci**	**0.87**	**225**	*i* P	**Pg**	**09 31 02.7**	**-0.9**
DEMI				*i* S	**Sg**	**09 31 15.2**	**+0.4**
GPA	**Golpazari**	**0.88**	**44**	*e*PG	**Pg**	**09 31 02.9**	**-1.0**
GPA	**Golpazari**	**0.88**	**44**	*e*Pg	**Pg**	**09 31 02.9**	**-1.0**
YLV	**Yalova**	**0.92**	**354**	*e*PG	**Pg**	**09 31 04.8**	**+0.2**
YLV				*e*SG	**Sg**	**09 31 19.0**	**+2.6**
YLV	**Yalova**	**0.92**	**354**	*e*Pg	**Pg**	**09 31 04.8**	**+0.2**
YLV				*e*Sg	**Sg**	**09 31 19.0**	**+2.6**
GULT	**Gulveren**	**1.10**	**45**	*e*PG	**Pg**	**09 31 07.6**	**-0.4**
GULT	**Gulveren**	**1.10**	**45**	*e*Pg	**Pg**	**09 31 07.6**	**-0.4**
KHAL	**Karahalli**	**1.28**	**181**	*i* P	**Pg**	**09 31 11.1**	**-0.5**
KHAL	**Karahalli**	**1.28**	**181**	*i* P	**Pg**	**09 31 11.1**	**-0.5**
ISK	**Istanbul-Kandi**	**1.45**	**347**	*e*PN	**Pn**	**09 31 14.6**	**+0.2**
ISK	**Istanbul-Kandi**	**1.45**	**347**	*e*Pn	**Pn**	**09 31 14.6**	**+0.1**
BALY	**Balya**	**1.46**	**274**	*i* P	**Pn**	**09 31 13.1**	**-1.5**
BALY				*i* S	**Sg**	**09 31 33.6**	**-0.3**
BALY	**Balya**	**1.46**	**274**	*i* P	**Pn**	**

VISS			*i* Sg		Sg	10 24 24.9	+0.3
VISS							
	comp=Z,40nm,0.1s						
VISS	**Visnje**	**0.18**	**276**	⇑*i*Pg	**Pg**	**10 24 22.2**	**+0.1**
VISS				*i* Sg	**Sg**	**10 24 24.9**	**+0.2**
	comp=Z,40nm,0.1s						
LEGS	**Legarje**	**0.23**	**43**	⇓*i*Pg	**Pg**	**10 24 23.1**	**+0.1**
LEGS				*i* Sg	**Sg**	**10 24 26.4**	**+0.2**
LEGS	**Legarje**	**0.23**	**43**	⇓*i*Pg	**Pg**	**10 24 23.1**	**+0.1**
LEGS				*i* Sg	**Sg**	**10 24 26.4**	**+0.3**
CRES	**Cresnjev**	**0.26**	**80**	*i* Pg	**Pg**	**10 24 23.4**	**-0.2**
CRES				*i* Sg	**Sg**	**10 24 27.1**	**+0.1**
CRES							
	comp=Z,273nm,0.2s						
CRES	**Cresnjev**	**0.26**	**80**	*i* Pg	**Pg**	**10 24 23.4**	**-0.2**
CRES				*i* Sg	**Sg**	**10 24 27.1**	**+0.1**
	comp=Z,273nm,0.2s						
PDKS	**Podkum**	**0.28**	**346**	⇓*i*Pg	**Pg**	**10 24 24.3**	**+0.2**
PDKS				*i* Sg	**Sg**	**10 24 28.2**	**+0.3**
PDKS							
	comp=Z,76nm,0.1s						
BOJS	**Bojanci**	**0.30**	**158**	⇓*i*Pg	**Pg**	**10 24 24.0**	**-0.4**
BOJS				*i* Sg	**Sg**	**10 24 28.2**	**-0.1**
BOJS							
	comp=Z,116nm,0.2s						
BOJS	**Bojanci**	**0.30**	**158**	⇓*i*Pg	**Pg**	**10 24 24.0**	**-0.3**
BOJS				*i* Sg	**Sg**	**10 24 28.2**	**-0.2**
	comp=Z,116nm,0.2s						
GCIS	**Gornji Cirnik**	**0.38**	**77**	*i* Pg	**Pg**	**10 24 26.1**	**+0.2**
GCIS				*i* Sg	**Sg**	**10 24 31.2**	**+0.2**
GCIS							
	comp=Z,43nm,0.1s						
GCIS	**Gornji Cirnik**	**0.38**	**77**	*i* Pg	**Pg**	**10 24 26.1**	**+0.2**
GCIS				*i* Sg	**Sg**	**10 24 31.2**	**+0.3**
	comp=Z,43nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.42**	**319**	*i* Pg	**Pg**	**10 24 26.7**	**+0.1**
GOLS	**Golise**	**0.43**	**58**	⇓*i*Pg	**Pg**	**10 24 26.8**	**0.0**
GOLS				*i* Sg	**Sg**	**10 24 32.7**	**+0.1**
GOLS							
	comp=Z,36nm,0.1s						
GOLS	**Golise**	**0.43**	**58**	⇓*i*Pg	**Pg**	**10 24 26.8**	**-0.1**
GOLS				*i* Sg	**Sg**	**10 24 32.7**	**+0.1**
	comp=Z,36nm,0.1s						
DOBS	**Dobrina**	**0.45**	**35**	⇓*i*Pg	**Pg**	**10 24 27.0**	**-0.2**
DOBS							
	comp=Z,36nm,0.1s						
DOBS	**Dobrina**	**0.45**	**35**	⇓*i*Pg	**Pg**	**10 24 27.0**	**-0.2**
	comp=Z,36nm,0.1s						
CEY	**Cerknica**	**0.47**	**265**	*i* Pg	**Pg**	**10 24 27.3**	**-0.2**
CEY				*i* Sg	**Sg**	**10 24 34.2**	**+0.6**
CEY	**Cerknica**	**0.47**	**265**	*i* Pg	**Pg**	**10 24 27.3**	**-0.2**
CEY				*i* Sg	**Sg**	**10 24 34.2**	**+0.5**
LJU	**Ljubljana**	**0.47**	**304**	⇑*i*Pg	**Pg**	**10 24 27.6**	**0.0**
LJU				*i* Sg	**Sg**	**10 24 33.4**	**-0.4**
LJU	**Ljubljana**	**0.47**	**304**	⇑*i*Pg	**Pg**	**10 24 27.6**	**0.0**
LJU				*i* Sg	**Sg**	**10 24 33.4**	**-0.4**
KNDS	**Knezji Dol**	**0.56**	**243**	*i* Pg	**Pg**	**10 24 29.5**	**+0.2**
KNDS				*i* Sg	**Sg**	**10 24 36.2**	**-0.4**
KNDS	**Knezji Dol**	**0.56**	**243**	*i* Pg	**Pg**	**10 24 29.5**	**+0.2**
KNDS				*i* Sg	**Sg**	**10 24 36.2**	**-0.4**
CRNS	**Crni Vrh**	**0.65**	**297**	⇑*i*Pg	**Pg**	**10 24 30.9**	**-0.1**
ZAVS	**Zavodnje**	**0.65**	**356**	⇓*i*Pg	**Pg**	**10 24 30.9**	**-0.1**
ZAVS				*e*Sg	**Sg**	**10 24 39.8**	**+0.2**
ZAVS							
	comp=Z,38nm,0.2s						
MOZS	**Mozjanca**	**0.68**	**319**	*i* Pg	**Pg**	**10 24 31.8**	**+0.2**
JAVS	**Javornik**	**0.73**	**279**	*i* Pg	**Pg**	**10 24 32.0**	**-0.5**
JAVS	**Javornik**	**0.73**	**279**	*i* Pg	**Pg**	**10 24 32.0**	**-0.4**
GROS	**Grobnik**	**0.73**	**23**	⇓*i*Pg	**Pg**	**10 24 32.2**	**-0.3**
GROS	**Grobnik**	**0.73**	**23**	⇓*i*Pg	**Pg**	**10 24 32.2**	**-0.4**
SKDS	**Skadanscina**	**0.79**	**253**	*i* Pg	**Pg**	**10 24 33.0**	**-0.7**
SKDS				*i* Sg	**Sg**	**10 24 44.0**	**0.0**
OBKA	**Obir**	**0.82**	**333**	⇓*e*Pg	**Pg**	**10 24 34.1**	**-0.1**
	SNR=19						
OBKA				⇑*i*Sg	**Sg**	**10 24 44.4**	**-0.4**
	comp=Z,32nm,0.3s						
OBKA	**Obir**	**0.82**	**333**	Pg	**Pg**	**10 24 34.1**	**-0.1**
	SNR=19						
OBKA				Sg	**Sg**	**10 24 44.4**	**-0.4**
	comp=Z,32nm,0.3s						
VOY	**Vojsko**	**0.87**	**287**	*e*Pg	**Pg**	**10 24 34.7**	**-0.5**
VOY				*e*		10 24 35.7	
VOY				*e*Sg	**Sg**	**10 24 47.5**	**+0.9**
VOY	**Vojsko**	**0.87**	**287**	*e*Pg	**Pg**	**10 24 34.7**	**-0.5**
VOY				*e*Sg	**Sg**	**10 24 47.5**	**+0.9**
SOKA	**Soboth**	**0.90**	**357**	⇓*i*Pg	**Pg**	**10 24 35.2**	**-0.4**
SOKA				⇑*i*Sg	**Sg**	**10 24 47.1**	**-0.1**
	comp=Z,8.9nm,0.3s						
SOKA	**Soboth**	**0.90**	**357**	Pg	**Pg**	**10 24 35.2**	**-0.4**
SOKA				Sg	**Sg**	**10 24 47.1**	**-0.2**
	comp=Z,8.9nm,0.3s						
GORS	**Gorjuse**	**0.93**	**305**	*i* Pg	**Pg**	**10 24 35.9**	**-0.5**
GORS	**Gorjuse**	**0.93**	**305**	*i* Pg	**Pg**	**10 24 35.8**	**-0.5**
KOGS	**Kog**	**1.04**	**50**	*i* Pg	**Pg**	**10 24 39.0**	**+0.5**
KOGS	**Kog**	**1.04**	**50**	*i* Pg	**Pg**	**10 24 39.0**	**+0.6**
CADS	**Cadrg**	**1.04**	**296**	*i* Pg	**Pg**	**10 24 37.7**	**-0.7**
CADS				*e*Sg	**Sg**	**10 24 53.4**	**+1.4**
CADS	**Cadrg**	**1.04**	**296**	*i* Pg	**Pg**	**10 24 37.7**	**-0.8**
CADS				*e*Sg	**Sg**	**10 24 53.4**	**+1.4**
ROBS	**Robic**	**1.20**	**293**	*i* Sg	**Sg**	**10 24 57.2**	**+0.3**
ROBS	**Robic**	**1.20**	**293**	*i* Sg	**Sg**	**10 24 57.2**	**+0.3**
NVLJ	**Novalja**	**1.23**	**187**	*e*Pg	**Pg**	**10 24 42.6**	**+0.6**
NVLJ				Sg	**Sg**	**10 24 58.6**	**+0.6**
NVLJ	**Novalja**	**1.23**	**187**	*e*Pg	**Pg**	**10 24 42.5**	**+0.5**
NVLJ				Sg	**Sg**	**10 24 58.6**	**+0.6**
MYKA	**Terra Mystica**	**1.32**	**311**	⇑*i*Pg	**Pg**	**10 24 42.5**	**-1.1**
MYKA				⇓*i*Sg	**Sg**	**10 25 01.2**	**+0.5**
	comp=Z,7.9nm,0.2s						
MYKA	**Terra Mystica**	**1.32**	**311**	Pg	**Pg**	**10 24 42.5**	**-1.2**
MYKA				Sg	**Sg**	**10 25 01.2**	**+0.5**
	comp=Z,7.9nm,0.2s						
ARSA	**Arzberg**	**1.50**	**11**	⇓*e*Pn	**Pn**	**10 24 45.3**	**-0.2**
	SNR=5.3						
ARSA				⇓*i*Sn	**Sn**	**10 25 05.6**	**+0.5**
ARSA	**Arzberg**	**1.50**	**11**	Pn	**Pn**	**10 24 45.3**	**-0.2**
	SNR=5.3						
ARSA				Sn	**Sn**	**10 25 05.6**	**+0.5**
KBA	**Koelnbreinsper**	**1.77**	**318**	⇓*i*Pg	**Pg**	**10 24 51.1**	**-1.2**
KBA				⇓*i*Sn	**Sn**	**10 25 12.0**	**+0.1**
KBA				⇓*i*Sg	**Sg**	**10 25 15.8**	**+0.5**
	comp=Z,3.2nm,0.2s						
KBA	**Koelnbreinsper**	**1.77**	**318**	Pg	**Pg**	**10 24 51.1**	**-1.3**
KBA				Sn	**Sn**	**10 25 12.0**	**+0.1**
KBA				Sg	**Sg**	**10 25 15.8**	**+0.5**
	comp=Z,3.2nm,0.2s						

BJI ***03*** *10:51:29.4, 0.°49N×96.°78E, h35km, mB5.0/8, mb4.6/21, Ms4.2/8, Ms7 4.2/8*
IDC ***03*** *10:51:33.3±0.8, 1.°31N×96.°96E, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.1/24, mbtmp4.1/18, ML3.8/2, MS3.6/6, Ms1 3.7/6, ms1mx3.2/26, Error ellipse: s-maj=26.4km s-min=14.2km az=49.0*
ISCJB ***03*** *10:51:34.3±2.2, 1.°29N±0.°06×96.°87E±0.°05, h15km±13km, mb4.3/32, MS3.8/9, Error ellipse: s-maj=11.1km s-min=6.4km az=38.2*
DJA ***03*** *10:51:35, 1.°34N×96.°83E, h10km, MLv4.5/9*
NEIC ***03*** *10:51:38.7±0.3, 1.°37N×97.°07E, h35km, mb4.4/5, Error ellipse: s-maj=9.2km s-min=6.2km az=50.0*
ISC 03 10:51:38.3±1.5, 1.°34N±0.°06×96.°99E±0.°07, h28km±10km, h34km±2.1km: pP-P, n61, σ1.°06/64, mb4.3/32, MS3.8/9, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.59**	**94**	P	**Pb**	**10 51 49.6**	**-0.6**
GSI				S	**Sb**	**10 51 59.2**	**+0.9**
TRSI	**Tarutung**	**2.09**	**71**	P	**Pn**	**10 52 11.5**	**+0.1**
TRSI				S	**Sn**	**10 52 42.6**	**+6.1**
PSI	**Prapat**	**2.42**	**53**	Pn	**Pn**	**10 52 14.7**	**-1.4**
	4.7nm,0.3s,baz=235,slow=3.8,SNR=22						
MNSI	**Mandailing Nat**	**2.65**	**102**	P	**Pn**	**10 52 19.1**	**-0.1**
TSI	**Tuntungan**	**2.66**	**36**	P	**Pn**	**10 52 19.4**	**+0.1**
PPI	**Padang Panjang**	**3.85**	**118**	P	**Pn**	**10 52 36.3**	**+0.6**
PDSI	**Padang**	**4.14**	**123**	P	**Pn**	**10 52 41.5**	**+1.9**
BSI	**Banda Aceh**	**4.46**	**338**	P	**Pn**	**10 52 41.4**	**-2.7**
SDSI	**Sungai Dareh**	**4.99**	**117**	P	**Pn**	**10 52 51.8**	**+0.5**
IPM	**Ipoh**	**5.10**	**52**	P	**Pn**	**10 52 52.7**	**-0.2**
	47nm,0.8s,0.2nm						
KULM	**Kulim**	**5.36**	**43**	*e*Pn	**Pn**	**10 52 55.3**	**-1.2**
	73nm,1.0s						
KULM	**Kulim**	**5.36**	**43**	P	**Pn**	**10 52 55.6**	**-0.9**
	90nm,1.1s,0.3nm						
MYKOM	**Kota Tinggi**	**6.88**	**86**	P	**Pn**	**10 53 17.7**	**+0.4**
	23nm,1.1s,0.1nm						
MDSI	**Maura Dua**	**9.23**	**129**	P	**Pn**	**10 53 48.7**	**-0.9**
	18nm,0.8s						
SBUM	**Sibu**	**15.27**	**86**	P	**Pn**	**10 55 12.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**17.12**	**6**	P	**Pn**	**10 55 33.8**	**-1.8**
	0.3nm,0.3s,baz=198,slow=11,SNR=16						
CMAR				LR	LR	11 02 50.5	
	comp=Z,160nm,18.4s,baz=180,slow=40						
QIZ	**Qiongzhong**	**21.63**	**35**	P	**P**	**10 56 31.1**	**+4.7**
QIZ				S	**S**	**11 00 35.1**	**+10**
QIZ				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.3						
QIZ				LR	LR		
	comp=N,230nm,13.9s,MS3.8						
QIZ				LR	LR		
	comp=E,120nm,12.8s,MS3.8						
QIZ				LR	LR		
	comp=Z,170nm,13.8s,MS3.6						
MYLDM	**Lahad Datu**	**21.81**	**79**	P	**P**	**10 56 29.9**	**+1.4**
	comp=Z,36nm,1.8s,mb4.5						
KMI	**Kunming**	**24.29**	**13**	P	**P**	**10 56 53.9**	**+0.6**
KMI				pP		10 57 04.2	
KMI				sP	sP	10 57 08.1	+3.0
KMI				PP		10 57 34.8	
KMI				S	**S**	**11 01 17.6**	**+6.9**
KMI				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,110nm,3.2s						
KMI				LR	LR		
	comp=N,470nm,15.4s,MS4.2						
KMI				LR	LR		
	comp=E,370nm,13.8s,MS4.2						
KMI				LR	LR		
	comp=Z,540nm,14.1s,MS4.2						
SHL	**Shillong**	**24.58**	**349**	*e*P	**P**	**10 56 56.0**	**0.0**
MRSI	**Marisa**	**24.97**	**92**	P	**P**	**10 57 02.3**	**+2.6**
PKI	**Pulchoki**	**28.34**	**338**	*e*P	**P**	**10 57 30.9**	**+1.0**
PKIN	**Phulchoki**	**28.35**	**338**	*e*P	**P**	**10 57 31.3**	**+1.3**
GUN	**Gumba**	**28.48**	**339**	*e*P	**P**	**10 57 32.5**	**+1.4**
	comp=Z,24nm,0.8s,mb4.9						
DMN	**Daman**	**28.49**	**337**	*e*P	**P**	**10 57 32.9**	**+1.6**
KKN	**Kakani**	**28.59**	**338**	*e*P	**P**	**10 57 33.6**	**+1.5**
GKN	**Gorkha**	**29.02**	**337**	*e*P	**P**	**10 57 38.0**	**+2.0**
KOLN	**Koldanda**	**29.24**	**335**	*e*P	**P**	**10 57 39.4**	**+1.5**
	comp=Z,19nm,0.8s,mb4.9						
ENH	**Enshi**	**31.12**	**21**	*e*Pn	**P**	**10 57 53.0**	**-1.6**
	comp=Z,11nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**34.19**	**126**	P	**P**	**10 58 20.2**	**-1.4**
	comp=Z,2.6nm,0.9s,mb4.2,baz=306,slow=12,SNR=4.2						
XAN	**Xi'an**	**34.39**	**18**	P	**P**	**10 58 21.5**	**-1.6**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
XAN				LR	LR		
	comp=N,170nm,14.6s,MS3.9						
XAN				LR	LR		
	comp=E,67nm,15.6s,MS3.9						
XAN				LR	LR		
	comp=Z,98nm,14.1s,MS3.7						
LZH	**Lanzhou**	**35.15**	**10**	*e*P	**P**	**10 58 29.2**	**-0.4**
LZH				pP	pP	10 58 37.5	-0.5
LZH				sP	sP	10 58 40.2	-1.3
LZH				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,94nm,4.3s						
NJ2	**Nanjing**	**36.86**	**32**	*e*P	**P**	**10 58 44.6**	**+0.3**
NJ2				pP	pP	10 58 54.3	+1.6
NJ2				sP	sP	10 58 58.4	+2.2
NJ2				PP	PP	11 00 12.0	+3.4
NJ2				S	**S**	**11 04 29.0**	**+1.8**
NJ2				sS	sS	11 04 45.0	+3.9
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3						
NJ2				LR	LR		
	comp=N,210nm,15.3s,MS4.1						
NJ2				LR	LR		
	comp=E,120nm,18.2s,MS4.1						
NJ2				LR	LR		
	comp=Z,470nm,13.8s,MS4.4						
GTA	**Gaotai**	**37.98**	**4**	*e*P	**P**	**10 58 55.2**	**+1.5**
GTA				pP	pP	10 59 05.9	+3.8
GTA				sP	sP	10 59 10.0	+4.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
WRA	**Warramunga Arr**	**42.29**	**122**	P	**P**	**10 59 28.5**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.1,baz=43,slow=11,SNR=7.6						
WB2	**Warramunga Arr**	**42.30**	**122**	*e*P	**P**	**10 59 28.6**	**-1.3**
ASAR	**Alice Springs**	**43.65**	**127**	P	**P**	**10 59 40.2**	**-0.6**
	comp=Z,1.7nm,0.8s,mb3.8,baz=299,slow=7.8,SNR=16						
UCH	**Uchtor**	**45.43**	**337**	*e*P	**P**	**10 59 55.1**	**+0.4**
	comp=Z,3.2nm,0.9s,mb4.2						
AML	**Almayashu**	**45.68**	**336**	*e*P	**P**	**10 59 57.8**	**+1.1**
	comp=Z,2.1nm,0.6s,mb4.2						
KSRS	**Korea Array**	**45.85**	**35**	P	**P**	**10 59 56.8**	**-1.3**
	comp=Z,7.8nm,0.9s,mb4.6,baz=221,slow=9.0,SNR=41						
KSRS				LR	LR	11 19 38.9	
	comp=Z,64nm,19.1s,MS3.6,baz=19,slow=37						
SONM	**Songino Array**	**47.02**	**9**	P	**P**	**11 00 07.1**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.5,baz=191,slow=8.4,SNR=38						
SONM				PcP	PcP	11 01 38.9	-0.1
	comp=Z,0.7nm,0.8s,baz=219,slow=3.7,SNR=2.3						
MKAR	**Makanchi Array**	**47.05**	**346**	P	**P**	**11 00 07.2**	**-0.2**
	comp=Z,2.9nm,0.5s,mb4.5,baz=159,slow=8.7,SNR=32						
ULN	**Ulaanbaatar**	**47.15**	**9**	P	**P**	**11 00 08.7**	**+0.6**
MJAR	**Matsushiro Arr**	**51.73**	**43**	P	**P**	**11 00 42.5**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=202,slow=18,SNR=3.8						
CTA	**Charters Tower**	**52.76**	**117**	LR	LR	11 24 18.2	
	comp=Z,50nm,21.3s,MS3.5,baz=57,slow=37						
ZAA0	**Zalesovo Array**	**53.38**	**351**	*e*P	**P**	**11 00 54.9**	**-0.3**
ZALV	**Zalesovo Beam**	**53.38**	**351**	P	**P**	**11 00 55.0**	**-0.1**
	comp=Z,4.9nm,0.6s,mb4.6,baz=180,slow=6.1,SNR=30						
STKA	**Stephens Creek**	**53.61**	**132**	P	**P**	**11 00 57.2**	**0.0**
	comp=Z,2.7nm,0.7s,mb4.3,baz=307,slow=6.5,SNR=5.6						
STKA				LR	LR	11 25 44.0	
	comp=Z,96nm,19.6s,MS3.9,baz=24,slow=38						
RDF	**Al-Radifah**	**54.47**	**305**	*e*P	**P**	**11 01 12.4**	**+8.8**
RDF				AMb	AMB	11 01 13.5	
	comp=Z,28nm,1.3s,mb5.0						
MIB	**Mutribah**	**54.96**	**306**	*e*P	**P**	**11 01 15.5**	**+8.3**
MIB				AMb	AMB	11 01 17.1	
	comp=Z,17nm,0.9s,mb5.1						
BVAR	**Borovoye Array**	**56.05**	**341**	P	**P**	**11 01 13.8**	**-0.7**
	comp=Z,2.1nm,0.7s,mb4.3,baz=149,slow=6.9,SNR=4.9						
ABKAR	**Akbulak array**	**57.29**	**332**	*e*P	**P**	**11 01 23.1**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**68.86**	**312**	P	**P**	**11 02 40.2**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=134,slow=6.2,SNR=2.6						
MAW	**Mawson**	**72.80**	**193**	LR	LR	11 28 52.6	
	comp=Z,74nm,18.4s,MS4.0,baz=300,slow=31						
TIXI	**Tiksi**	**73.08**	**10**	*e*P	**P**	**11 03 04.0**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.2						
AKASG	**Malin Array Be**	**75.01**	**322**	P	**P**	**11 03 16.4**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.6,baz=86,slow=4.8,SNR=4.9						
FINES	**FINESS Array B**	**79.77**	**333**	P	**P**	**11 03 42.8**	**-0.8**
	comp=Z,1.9nm,0.8s,mb4.0,baz=140,slow=10.0,SNR=6.1						
ARCES	**ARCESS Array B**	**82.33**	**340**	P	**P**	**11 03 56.9**	**-0.2**
	comp=Z,1.8nm,0.9s,mb4.0,baz=101,slow=4.8,SNR=10						
GERES	**GERESS Array B**	**84.56**	**319**	P	**P**	**11 04 09.0**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.5,baz=106,slow=8.4,SNR=4.0						
NB2	**NORSAR Subarra**	**86.78**	**331**	P	**P**	**11 04 19.5**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.8,baz=97,slow=5.3						
NOA	**NORSAR Array B**	**86.78**	**331**	P	**P**	**11 04 19.2**	**-0.5**
	comp=Z,1.3nm,0.8s,mb4.2,baz=94,slow=5.0,SNR=4.4						
NOA				LR	LR	11 50 50.0	
	comp=Z,17nm,18.2s,MS3.5,baz=120,slow=41						

IDC 03 11:36:34.1±2.1, 6.°09S×130.°60E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/16, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=79.3km s-min=28.0km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.88**	**202**	Pn	**Pn**	**11 39 38.6**	**+0.1**
	0.1nm,0.3s,baz=60,slow=16,SNR=10						
FITZ				Sn	Sn	11 41 50.9	-12
	0.4nm,0.3s,baz=110,slow=19,SNR=8.2						
WRA	**Warramunga Arr**	**14.24**	**166**	Pn	**Pn**	**11 39 57.2**	**0.0**
	0.1nm,0.3s,baz=346,slow=11,SNR=6.9						
WRA				Sn	Sn	11 42 20.3	-16
	0.3nm,0.3s,baz=354,slow=23,SNR=8.8						
ASAR	**Alice Springs**	**17.76**	**170**	P	**Pn**	**11 40 43.0**	**+0.1**
	0.2nm,0.3s,baz=348,slow=9.5,SNR=24						
ASAR				S	Sn	11 43 45.2	-16
	0.1nm,0.3s,baz=355,slow=29,SNR=4.1						
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**11 47 34.0**	**+0.1**
	0.2nm,0.4s,baz=115,slow=7.3,SNR=3.0						

ISK ***03*** *11:38:04.8, 36.°89N×29.°38E, h13km, MD2.9*
ISCJB ***03*** *11:38:05.8±0.5, 36.°95N±0.°03×29.°29E±0.°04, h13km±4km, Error ellipse: s-maj=6.4km s-min=4.2km az=39.3*
CSEM ***03*** *11:38:05.7±0.2, 36.°95N×29.°31E, h12km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.7km az=136.0*
DDA ***03*** *11:38:05.9, 37.°00N×29.°23E, h7km±6km, Md2.8*
ISC 03 11:38:06.0±0.5, 36.°95N±0.°03×29.°30E±0.°04, h14km±4km, n39, σ0.°83/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.26**	**37**	*e*PG	**Pg**	**11 38 11.0**	**-0.6**
GLHS				*e*SG	**Sg**	**11 38 15.7**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.26**	**37**	*e*Pg	**Pg**	**11 38 11.0**	**-0.6**
GLHS				*e*Sg	**Sg**	**11 38 15.7**	**+0.4**
GOLH	**Golhisar**	**0.35**	**36**	*i* P	**Pg**	**11 38 12.8**	**-0.5**
GOLH				*i* S	**Sg**	**11 38 19.5**	**+1.4**
GOLH	**Golhisar**	**0.35**	**36**	*i* P	**Pg**	**11 38 12.8**	**-0.4**
GOLH				*i* S	**Sg**	**11 38 19.5**	**+1.4**
FETY	**Fethiye**	**0.36**	**209**	*e*PG	**Pg**	**11 38 12.0**	**-1.4**
FETY				*e*SG	**Sg**	**11 38 17.8**	**-0.5**
FETY	**Fethiye**	**0.36**	**209**	*e*Pg	**Pg**	**11 38 12.0**	**-1.4**
FETY				*e*Sg	**Sg**	**11 38 17.8**	**-0.5**
TURN	**Turunc**	**0.56**	**262**	*i* P	**Pg**	**11 38 20.3**	**+3.2**
TURN				*i* S	**Sg**	**11 38 31.9**	**+7.3**
TURN	**Turunc**	**0.56**	**262**	*i* P	**Pg**	**11 38 20.3**	**+3.2**
AKAS	**Kas**	**0.76**	**161**	*i* P	**Pg**	**11 38 20.6**	**-0.1**
AKAS				*i* S	**Sg**	**11 38 34.9**	**+4.2**
AKAS	**Kas**	**0.76**	**161**	*i* P	**Pg**	**11 38 20.6**	**-0.1**
AKAS				*i* S	**Sg**	**11 38 34.9**	**+4.2**
DNZL	**Cakiroluk**	**0.77**	**345**	*i* P	**Pg**	**11 38 18.9**	**-2.0**
DNZL				*i* S	**Sg**	**11 38 30.2**	**-0.8**
DNZL	**Cakiroluk**	**0.77**	**345**	*i* P	**Pg**	**11 38 18.9**	**-2.0**
DNZL				*i* S	**Sg**	**11 38 30.2**	**-0.8**
DENT	**Denizli**	**0.83**	**345**	*e*PG	**Pg**	**11 38 22.9**	**+0.7**
DENT	**Denizli**	**0.83**	**345**	*e*Pg	**Pg**	**11 38 22.9**	**+0.8**
YER	**Yerkesik**	**0.84**	**283**	*e*PG	**Pg**	**11 38 22.9**	**+0.6**
YER	**Yerkesik**	**0.84**	**283**	*e*Pg	**Pg**	**11 38 22.9**	**+0.7**
KORT	**Korkueli**	**0.84**	**86**	*i* P	**Pg**	**11 38 22.6**	**+0.3**
KORT				*i* S	**Sg**	**11 38 39.2**	**+5.8**
KORT	**Korkueli**	**0.84**	**86**	*i* P	**Pg**	**11 38 22.6**	**+0.3**
BCK	**Bucak**	**1.15**	**63**	*e*PN	**Pn**	**11 38 26.9**	**-0.7**
BCK	**Bucak**	**1.15**	**63**	*e*Pn	**Pn**	**11 38 26.9**	**-0.7**
MLSB	**Milas**	**1.27**	**286**	*e*PN	**Pn**	**11 38 30.0**	**+0.8**
MLSB	**Milas**	**1.27**	**286**	*e*Pn	**Pn**	**11 38 30.0**	**+0.8**
ISP	**Isparta**	**1.31**	**47**	*e*PN	**Pn**	**11 38 29.4**	**-0.4**
ISP	**Isparta**	**1.31**	**47**	*e*Pn	**Pn**	**11 38 29.4**	**-0.4**
AYDN	**Tasoluk**	**1.34**	**302**	*i* P	**Pn**	**11 38 30.1**	**-0.2**
AYDN				*i* S	**Sn**	**11 38 47.4**	**-0.3**
AYDN	**Tasoluk**	**1.34**	**302**	*i* P	**Pn**	**11 38 30.0**	**-0.2**
AYDN				*i* S	**Sn**	**11 38 47.4**	**-0.4**
KHL	**Karahalli**	**1.38**	**7**	*e*PN	**Pn**	**11 38 30.7**	**-0.2**
KHL	**Karahalli**	**1.38**	**7**	*e*Pn	**Pn**	**11 38 30.7**	**-0.1**
DAT	**Datca**	**1.40**	**261**	*e*PN	**Pn**	**11 38 31.7**	**+0.6**
DAT	**Datca**	**1.40**	**261**	*e*Pn	**Pn**	**11 38 31.7**	**+0.6**
KHAL	**Karahalli**	**1.43**	**6**	*i* P	**Pn**	**11 38 32.8**	**+1.4**
KHAL				*i* S	**Sn**	**11 38 49.4**	**-0.5**
KHAL	**Karahalli**	**1.43**	**6**	*i* P	**Pn**	**11 38 32.8**	**+1.4**
KHAL				*i* S	**Sn**	**11 38 49.4**	**-0.5**

NEIC 03 12:06:19.9, 39.64N×142.11E, h48km, MG3.7(JMA), After JMA.

ISC 03 12:06:19.9±0.7, 39.64N±0.04×142.12E±0.09, h47km±5km, n23, σ0.96/33, mb3.6/8, 1C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.24	255	⇓P	Pn	12 06 28.1	-0.2
MIYJ				S	Sn	12 06 33.8	-0.3
JTH	Tanohata	0.36	326	⇓P	Pn	12 06 29.3	-0.1
JTH				S	Sn	12 06 35.8	-0.3
OFUJ	Ofunato	0.66	212	⇑P	Pn	12 06 32.6	-0.4
OFUJ				eS	Sn	12 06 41.5	-0.9
JOM	Ohasama	0.66	256	⇓P	Pn	12 06 33.0	-0.1
JOM				S	Sn	12 06 42.4	-0.1
JKZ	Kuzumaki	0.70	300	⇓P	Pn	12 06 33.6	0.0
JKZ				S	Sn	12 06 43.0	-0.4
JANG	Nango	0.87	328	⇓P	Pn	12 06 35.4	-0.4
JANG				S	Sn	12 06 46.7	-0.7
JMK	Ichinoseki	0.98	226	⇓P	Pn	12 06 36.9	-0.4
JMK				S	Sn	12 06 49.3	-0.8
JAH	Hinai	1.27	296	⇓P	Pn	12 06 41.2	0.0
JAH				S	Sn	12 06 57.9	+0.8
JIO	Ouri	1.33	207	⇓P	Pn	12 06 41.5	-0.5
JTM	Tenmabayashi	1.40	325	⇓P	Pn	12 06 43.0	0.0
MAJO	Matsushiro	4.37	226	ePn	Pn	12 07 26.1	+2.3
MAT	Matsushiro	4.37	226	P	Pn	12 07 26.5	+2.8
MAT				eS	Sn	12 08 22.2	+8.8
MJAR	Matsushiro Arr	4.37	226	Pn	Pn	12 07 26.2	+2.5
	1.8nm,0.3s,baz=34,slow=14,SNR=52						
ASAJ	Asahikawa	4.49	4	Pn	Pn	12 07 25.3	0.0
	0.8nm,0.3s,baz=183,slow=17,SNR=6.5						
ASAJ				Sn	Sn	12 08 18.1	+1.8
	0.7nm,0.3s,baz=94,slow=29,SNR=2.5						
KSRS	Korea Array	11.33	263	Pn	Pn	12 09 02.0	+2.8
	0.4nm,0.3s,baz=70,slow=14,SNR=11						
SONM	Songino Array	26.89	300	P	P	12 11 56.3	+0.1
	0.2nm,0.4s,mb3.0,baz=82,slow=8.3,SNR=2.8						
ZALV	Zalesovo Beam	40.62	310	P	P	12 13 53.8	-1.0
	1.2nm,0.4s,mb3.9,baz=83,slow=8.8,SNR=5.0						
MKAR	Makanchi Array	43.26	300	P	P	12 14 15.9	-0.6
	0.7nm,0.6s,mb3.6,baz=79,slow=10,SNR=5.4						
INK	Inuvik	51.83	28	P	P	12 15 23.5	+0.8
	0.8nm,0.9s,mb3.7,baz=334,slow=9.5,SNR=4.4						
RES	Resolute Bay	59.94	15	P	P	12 16 20.4	-0.3
	0.3nm,0.5s,mb3.6,baz=308,slow=4.3,SNR=3.7						
FINES	FINESS Array B	66.78	332	P	P	12 17 05.2	-0.8
	0.9nm,0.6s,mb4.0,baz=90,slow=7.8,SNR=5.4						
HFS	Hagfors	71.95	336	P	P	12 17 37.7	-0.3
	0.5nm,0.3s,mb3.9,baz=28,slow=6.7,SNR=7.7						
NOA	NORSAR Array B	72.00	337	P	P	12 17 37.0	-1.2
	0.4nm,0.5s,mb3.6,baz=38,slow=6.4,SNR=3.1						

IDC 03 12:08:07.6±0.8, 1.74N×126.41E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.8/19, mbtmp3.9/8, ML3.5/1, Error ellipse: s-maj=53.3km s-min=16.0km az=77.0

NEIC 03 12:08:08.9±0.5, 1.77N×126.55E, h10km, mb4.2/3, Error ellipse: s-maj=28.9km s-min=8.5km az=78.0

ISCJB 03 12:08:11.1±2.2, 1.74N±0.08×126.5E±0.2, h38km±22km, mb4.0/10, Error ellipse: s-maj=39.6km s-min=10.8km az=167.5

ISC 03 12:08:12.8±1.7, 1.68N±0.08×126.5E±0.2, h36km±18km, n15, σ0.77/15, mb4.0/10, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	Pagadian	6.85	334	eP	Pn	12 09 51.1	+0.2
IPIL	Ipil	7.20	328	eP	Pn	12 09 55.8	+0.1
FITZ	Fitzroy Crossi	19.67	182	P	Pn	12 12 39.4	-1.0
	0.1nm,0.3s,baz=320,slow=7.9,SNR=5.2						
WRAB	Tennant Creek	22.83	161	eP	P	12 13 12.6	-0.3
	5.4nm,0.6s,mb4.2						
WRA	Warramunga Arr	22.83	161	P	P	12 13 12.4	-0.5
	5.0nm,0.5s,mb4.2,baz=339,slow=11,SNR=53						
WB2	Warramunga Arr	22.84	161	eP	P	12 13 12.7	-0.2
MBWA	Marble Bar	23.63	196	eP	P	12 13 21.4	+0.5
	2.0nm,0.7s,mb3.7						
ASAR	Alice Springs	26.21	164	P	P	12 13 46.0	+1.6
	1.5nm,0.4s,mb3.9,baz=348,slow=13,SNR=28						
ASAR				PcP	PcP	12 17 10.7	-0.1
	0.5nm,0.5s,baz=354,slow=2.2,SNR=6.9						
FORT	Forrest	32.31	177	eP	P	12 14 39.4	+0.9
	6.9nm,0.6s,mb4.7						
KSRS	Korea Array	35.63	2	P	P	12 15 08.3	+1.1
	0.7nm,0.6s,mb3.8,baz=179,slow=10,SNR=5.0						
SONM	Songino Array	49.15	342	P	P	12 16 56.6	-0.4
	0.6nm,0.6s,mb3.8,baz=149,slow=9.9,SNR=6.2						
PETK	Petropavlovsk-	57.42	22	P	P	12 17 56.9	-0.9
	1.7nm,0.8s,mb4.2,baz=163,slow=5.0,SNR=6.6						
MKAR	Makanchi Array	59.09	326	P	P	12 18 08.5	-1.0
	1.8nm,0.5s,mb4.4,baz=118,slow=8.1,SNR=15						
BVAR	Borovoye Array	68.89	328	P	P	12 19 14.4	+0.6
	0.5nm,0.4s,mb3.8,baz=139,slow=9.7,SNR=4.3						
SYO	Syowa Base	90.42	201	⇑eP	P	12 21 09.6	-0.6

MAN 03 12:12:26, 6.39N×125.83E, h90km, mb4.7, ML3.6, MS3.5, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.69	38	eP	Pn	12 12 45.4	+2.9
MATI				eS	Sn	12 12 57.7	+3.0
DMPH	Davao City--Mi	0.76	335	⇓eP	Pn	12 12 44.8	+1.7
GSPH	General Santos	0.93	251	⇓iP	Pn	12 12 34.9	-10
GSPH				iS	Sn	12 12 42.8	-16
KCP	Kidapawan	0.96	310	⇓iP	Pn	12 12 46.2	+1.0
KCP				iS	Sn	12 13 02.3	+2.7
BUKP	Musuan	1.66	333	eP	Pn	12 12 55.3	+1.5
BUKP				eS	Sn	12 13 16.5	+1.6

ISCJB 03 12:14:18.7±0.2, 43.133N±0.009×0.18E±0.01, h9km±1km, Error ellipse: s-maj=1.6km s-min=1.5km az=143.8

CSEM 03 12:14:20.4±0.1, 43.06N×0.25E, h5km, ML4.1/37, Error ellipse: s-maj=1.6km s-min=1.2km az=146.0

MRB 03 12:14:21.9, 43.00N×0.24E, h3km±1km, ML3.7/14, Error ellipse: s-maj=0.8km s-min=0.5km az=308.0

LDG 03 12:14:22.2±0.0, 42.99N×0.25E, h4km, Md3.7/6, Ml4.1/40, Error ellipse: s-maj=1.0km s-min=0.8km az=143.0

STR 03 12:14:22.1±0.2, 42.96N×0.24E, h5km, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0

NEIC 03 12:14:22.2, 42.99N×0.25E, h4km, ML4.0(STR), ML4.1(LDG), MN3.4(MDD), After LDG.

NEIC Felt [II] near La Mongie, France.

MDD 03 12:14:22.2±0.1, 42.99N×0.24E, h9km±1km, mbLg3.4/61, Error ellipse: s-maj=1.7km s-min=1.3km az=178.0, PRIMO

MDD EMS: II INTENSIDAD MIMA ESPA.

INMG 03 12:14:23.8±1.4, 42.94N×0.19E, h19km±3km, MD3.6, ML3.1, Error ellipse: s-maj=3.9km s-min=1.8km az=39.0

ISC 03 12:14:20.7±0.2, 43.070N±0.008×0.24E±0.01, h11km±1km, n620, σ1.21/1092, 26C, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPF	Esparros	0.09	117	ePg	Pg	12 14 25.3	+2.0
EPF				eSg	Sg	12 14 27.0	+1.9
	34μm,0.3s,SNR=1.0						
EPF	Esparros	0.09	117	Pg	Pg	12 14 25.3	+2.0
EPF				Lg		12 14 27.0	
	17μm,0.3s						
EPF	Esparros	0.09	117	Pg	Pg	12 14 25.3	+2.0
EPF				Lg		12 14 27.0	
	17μm,0.3s						
EPF	Esparros	0.09	117	ePg	Pg	12 14 25.3	+2.0
EPF				eSg	Sg	12 14 27.0	+1.9
	17μm,0.3s,SNR=1.0						
LABF	Labassere	0.12	260	Pg	Pg	12 14 25.6	+1.9
LABF				Sg	Sg	12 14 28.5	+2.6
LABF	Labassere	0.12	260	Pg	Pg	12 14 25.6	+1.9
LABF				Lg		12 14 28.0	
LABF	Labassere	0.12	260	Pg	Pg	12 14 25.6	+1.9
LABF				Lg		12 14 28.0	
LABF	Labassere	0.12	260	Pg	Pg	12 14 25.6	+1.9
LABF				Sg	Sg	12 14 28.5	+2.6
VIEF	Viey	0.24	220	Pg	Pg	12 14 25.9	+0.2
VIEF	Viey	0.24	220	Pg	Pg	12 14 25.9	+0.2
VIEF				Lg		12 14 28.6	
VIEF	Viey	0.24	220	Pg	Pg	12 14 25.9	+0.2
VIEF				Lg		12 14 28.6	
VIEF	Viey	0.24	220	Pg	Pg	12 14 25.9	+0.2
RESF	Ens	0.27	164	Pg	Pg	12 14 26.2	-0.1
RESF	Ens	0.27	164	Pg	Pg	12 14 26.3	0.0
RESF				Lg		12 14 29.2	
RESF	Ens	0.27	164	Pg	Pg	12 14 26.3	0.0
RESF				Lg		12 14 29.2	
RESF	Ens	0.27	164	Pg	Pg	12 14 26.2	-0.1
EBIE	Bielsa	0.39	190	Pg	Pg	12 14 27.8	-0.6
EBIE				Lg		12 14 31.8	
EBIE	Bielsa	0.39	190	Pg	Pg	12 14 27.8	-0.6
	651nm,0.2s,SNR=18						
EBIE				Lg		12 14 31.8	
	2μm,0.1s,SNR=7.9						
EBIE	Bielsa	0.39	190	Pg	Pg	12 14 27.8	-0.6
	651nm,0.2s,SNR=18						
EBIE				Lg		12 14 31.8	
	2μm,0.1s,SNR=7.9						
EBIE	Bielsa	0.39	190	P	Pg	12 14 28.0	-0.4
EBIE				Lg		12 14 31.8	
	2μm,0.1s,SNR=7.9						
EBIE				S	Sg	12 14 32.2	-1.4
MELF	Melles	0.43	117	Pg	Pg	12 14 29.5	+0.3
MELF				Sg	Sg	12 14 35.5	+0.6
MELF	Melles	0.43	117	Pg	Pg	12 14 29.6	+0.4
MELF				Lg		12 14 35.3	
MELF	Melles	0.43	117	Pg	Pg	12 14 29.6	+0.4
MELF				Lg		12 14 35.3	
MELF	Melles	0.43	117	Pg	Pg	12 14 29.5	+0.3
MELF				Sg	Sg	12 14 35.5	+0.6
REYF	Montagne du Re	0.46	270	Pg	Pg	12 14 30.8	+1.1
REYF				Sg	Sg	12 14 37.9	+2.0
REYF	Montagne du Re	0.46	270	Pg	Pg	12 14 30.7	+0.9
REYF				Lg		12 14 37.6	
REYF	Montagne du Re	0.46	270	Pg	Pg	12 14 30.7	+0.9
REYF				Lg		12 14 37.6	
REYF	Montagne du Re	0.46	270	Pg	Pg	12 14 30.8	+1.1
REYF				Sg	Sg	12 14 37.9	+2.0
ETSF	Etsaut	0.61	254	ePg	Pg	12 14 33.0	+0.5
	SNR=1.0						
ETSF				eSg	Sg	12 14 40.5	0.0
	6μm,0.3s						
ETSF	Etsaut	0.61	254	Pg	Pg	12 14 33.0	+0.5
ETSF				Lg		12 14 40.5	
	3μm,0.3s						
ETSF	Etsaut	0.61	254	Pg	Pg	12 14 33.0	+0.5
ETSF				Lg		12 14 40.5	
	3μm,0.3s						
ETSF	Etsaut	0.61	254	ePg	Pg	12 14 33.0	+0.5
	SNR=1.0						
ETSF				eSg	Sg	12 14 40.5	0.0
	3μm,0.3s						
MLS	Moulis	0.64	100	Pg	Pg	12 14 32.5	-0.6
MLS				Sg	Sg	12 14 40.6	-0.9
MLS	Moulis	0.64	100	Pg	Pg	12 14 32.2	-0.9
MLS				Lg		12 14 40.5	
MLS	Moulis	0.64	100	Pg	Pg	12 14 32.2	-0.9
MLS				Lg		12 14 40.5	
MLS	Moulis	0.64	100	Pg	Pg	12 14 32.5	-0.6
MLS				Sg	Sg	12 14 40.6	-0.9
FDAF	Les Forges d'A	0.64	247	Pg	Pg	12 14 33.3	+0.1
FDAF				Lg		12 14 41.5	
FDAF	Les Forges d'A	0.64	247	Pg	Pg	12 14 33.3	+0.1
FDAF				Lg		12 14 41.5	
SALF	Salau	0.77	114	Pg	Pg	12 14 35.2	-0.3
SALF				Sg	Sg	12 14 45.8	+0.3
SALF	Salau	0.77	114	Pg	Pg	12 14 35.2	-0.3
SALF				Lg		12 14 45.8	
SALF	Salau	0.77	114	Pg	Pg	12 14 35.2	-0.3
SALF				Lg		12 14 45.8	
SALF	Salau	0.77	114	Pg	Pg	12 14 35.2	-0.3
SALF				Sg	Sg	12 14 45.8	+0.3
CTRE	Tremp	0.84	152	Pg	Pg	12 14 36.5	-0.5
CTRE				Lg		12 14 47.6	
	284nm,0.2s						
CTRE	Tremp	0.84	152	Pg	Pg	12 14 36.5	-0.5
CTRE				Lg		12 14 47.6	
	284nm,0.2s						
CTRE	Tremp	0.84	152	P	Pg	12 14 36.6	-0.4
CTRE				S	Sg	12 14 47.6	-0.4
	284nm,0.2s						
ORDF	Ordiarp	0.87	280	Pg	Pg	12 14 38.8	+1.3
ORDF				Sg	Sg	12 14 50.8	+2.0
ORDF	Ordiarp	0.87	280	Pg	Pg	12 14 38.4	+0.9
ORDF				Lg		12 14 50.0	
ORDF	Ordiarp	0.87	280	Pg	Pg	12 14 38.4	+0.9
ORDF				Lg		12 14 50.0	
ORDF	Ordiarp	0.87	280	Pg	Pg	12 14 38.8	+1.3
ORDF				Sg	Sg	12 14 50.8	+2.0
CEST	Esterri de Car	0.88	122	Pg	Pg	12 14 37.5	-0.3
CEST				Lg		12 14 49.5	
	1μm,0.1s						
CEST	Esterri de Car	0.88	122	Pg	Pg	12 14 37.5	-0.3
CEST				Lg		12 14 49.5	
	1μm,0.1s						
CEST	Esterri de Car	0.88	122	P	Pg	12 14 37.6	-0.2
CEST				S	Sg	12 14 49.6	+0.3
	1μm,0.1s						
CSOR	Sort	0.96	136	P	Pg	12 14 38.6	-0.6
CSOR				S	Sg	12 14 51.5	-0.1
	380nm,0.3s						
GRBF	Gourbit	0.98	103	Pg	Pg	12 14 39.0	-0.6
GRBF				Lg		12 14 53.5	
GRBF	Gourbit	0.98	103	Pg	Pg	12 14 39.0	-0.6
GRBF				Lg		12 14 53.5	
SJPF	Ste Jean	1.07	273	ePg	Pg	12 14 41.8	+0.5
	SNR=1.0						
SJPF				eSg	Sg	12 14 56.3	+1.0
	444nm,0.3s,SNR=1.0						
SJPF	Ste Jean	1.07	273	Pg	Pg	12 14 41.8	+0.5
SJPF				Lg		12 14 56.3	
	222nm,0.3s						
SJPF	Ste Jean	1.07	273	Pg	Pg	12 14 41.8	+0.5
SJPF				Lg		12 14 56.3	
	222nm,0.3s						
SJPF	Ste Jean	1.07	273	ePg	Pg	12 14 41.8	+0.5
	SNR=1.0						
SJPF				eSg	Sg	12 14 56.3	+1.0
	222nm,0.3s,SNR=1.0						
OSSF	Osses	1.11	280	Pg	Pg	12 14 42.1	0.0
OSSF	Osses	1.11	280	Pg	Pg	12 14 41.9	-0.2
OSSF				Lg		12 14 56.7	
OSSF	Osses	1.11	280	Pg	Pg	12 14 41.9	-0.2
OSSF				Lg		12 14 56.7	
OSSF	Osses	1.11	280	Pg	Pg	12 14 42.1	0.0
EORO	Oroz-Betelu	1.15	262	⇑Pg	Pg	12 14 43.1	+0.4
	18nm,0.2s,SNR=18						
EORO				Lg		12 14 59.1	
	154nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	1.15	262	⇑Pg	Pg	12 14 43.1	+0.4
	18nm,0.2s,SNR=18						
EORO				Lg		12 14 59.1	
	154nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	1.15	262	Pg	Pg	12 14 43.1	+0.3
	18nm,0.2s,SNR=18						
EORO				Lg		12 14 59.1	
	154nm,0.1s,SNR=7.9						
CORG	Organya	1.16	136	Pg	Pg	12 14 42.4	-0.6
CORG				Lg		12 14 57.4	
	207nm,0.2s						
CORG	Organya	1.16	136	Pg	Pg	12 14 42.4	-0.6
CORG				Lg		12 14 57.4	
	207nm,0.2s						
CORG	Organya	1.16	136	P	Pb	12 14 42.5	-0.2
CORG				S	Sb	12 14 57.4	-0.2
	415nm,0.2s						
IPRE	Itoiz	1.20	258	Pg	Pg	12 14 44.2	+0.5
	3.0nm,0.1s,SNR=25						
IPRE				Lg		12 15 00.3	
	186nm,0.3s,SNR=7.9						
IPRE	Itoiz	1.20	258	Pg	Pg	12 14 44.2	+0.5
	3.0nm,0.1s,SNR=25						
IPRE				Lg		12 15 00.3	
	186nm,0.3s,SNR=7.9						
IPRE	Itoiz	1.20	258	Pg	Pg	12 14 44.2	+0.5
	3.0nm,0.1s,SNR=25						
IPRE				Lg		12 15 00.3	
	186nm,0.3s,SNR=7.9						
LPEF	Le Peyrat	1.23	95	Pg	Pg	12 14 45.7	+1.3
LPEF				Lg		12 15 01.3	
LPEF	Le Peyrat	1.23	95	Pg	Pg	12 14 45.7	+1.3
LPEF				Lg		12 15 01.3	
CAVN	Les Avellanes	1.25	162	Pg	Pg	12 14 43.7	-0.9
CAVN				Lg		12 14 59.8	
	918nm,0.1s						
CAVN	Les Avellanes	1.25	162	Pg	Pg	12 14 43.7	-0.9
CAVN				Lg		12 14 59.8	
	918nm,0.1s						
CAVN	Les Avellanes	1.25	162	P	Pn	12 14 43.8	-0.2
CAVN				S	Sb	12 14 59.8	-0.4
	2μm,0.1s						
IZUN	Zunzarren	1.26	261	⇑Pg	Pg	12 14 45.2	+0.2
	3.9nm,0.1s,SNR=18						
IZUN				Lg		12 15 02.4	
	142nm,0.2s,SNR=7.9						
IZUN	Zunzarren	1.26	261	⇑Pg	Pg	12 14 45.2	+0.2
	3.9nm,0.1s,SNR=18						
IZUN				Lg		12 15 02.4	
	142nm,0.2s,SNR=7.9						
IZUN	Zunzarren	1.26	261	Pg	Pg	12 14 45.2	+0.3
	3.9nm,0.1s,SNR=18						
IZUN				Lg		12 15 02.4	
	142nm,0.2s,SNR=7.9						
EALK	Alkurruntz	1.28	277	Pg	Pg	12 14 45.0	-0.4
EALK				Lg		12 15 04.2	
EALK	Alkurruntz	1.28	277	Pg	Pg	12 14 45.0	-0.3
	3.6nm,0.2s,SNR=104						
EALK				Lg		12 15 04.2	
	356nm,0.3s,SNR=7.9						
EALK	Alkurruntz	1.28	277	Pg	Pg	12 14 45.0	-0.3
	3.6nm,0.2s,SNR=104						
EALK				Lg		12 15 04.2	
	356nm,0.3s,SNR=7.9						
EALK	Alkurruntz	1.28	277	Pg	Pg	12 14 45.0	-0.4
	3.6nm,0.2s,SNR=104						
EALK				Lg		12 15 04.2	
	356nm,0.3s,SNR=7.9						
ELIZ	Elizondo	1.30	275	Pg	Pg	12 14 45.3	-0.3
ELIZ				Lg		12 15 05.1	
ELIZ	Elizondo	1.30	275	Pg	Pg	12 14 45.3	-0.3
	2.0nm,0.2s,SNR=140						
ELIZ				Lg		12 15 05.1	
	117nm,0.2s,SNR=9.7						
ELIZ	Elizondo	1.30	275	Pg	Pg	12 14 45.3	-0.3
	2.0nm,0.2s,SNR=140						
ELIZ				Lg		12 15 05.1	
	117nm,0.2s,SNR=9.7						
ELIZ	Elizondo	1.30	275	Pg	Pg	12 14 45.3	-0.3
	2.0nm,0.2s,SNR=140						
ELIZ				Lg		12 15 05.1	
	117nm,0.2s,SNR=9.7						
IUNC	Unciti	1.31	257	⇑Pg	Pg	12 14 46.7	+0.8
	12nm,0.2s,SNR=18						
IUNC				Lg		12 15 04.6	
	138nm,0.2s,SNR=7.9						
IUNC	Unciti	1.31	257	⇑Pg	Pg	12 14 46.7	+0.8
	12nm,0.2s,SNR=18						
IUNC				Lg		12 15 04.6	
	138nm,0.2s,SNR=7.9						
IUNC	Unciti	1.31	257	Pg	Pg	12 14 46.7	+0.8
	12nm,0.2s,SNR=18						
IUNC				Lg		12 15 04.6	
	138nm,0.2s,SNR=7.9						
IUSE	Utxeti	1.31	265	Pg	Pg	12 14 45.9	0.0
	6.0nm,0.1s,SNR=111						
IUSE				Lg		12 15 04.2	
	48nm,0.2s,SNR=7.9						
IUSE	Utxeti	1.31	265	Pg	Pg	12 14 45.9	0.0
	6.0nm,0.1s,SNR=111						
IUSE				Lg		12 15 04.2	
	48nm,0.2s,SNR=7.9						
IUSE	Utxeti	1.31	265	Pg	Pg	12 14 45.9	0.0
	6.0nm,0.1s,SNR=111						
IUSE				Lg		12 15 04.2	
	48nm,0.2s,SNR=7.9						
EARA	Aranguren	1.37	258	⇑Pg	Pg	12 14 47.2	+0.2
	12nm,0.2s,SNR=18						
EARA				Lg		12 15 06.7	
	111nm,0.2s,SNR=7.9						
EARA	Aranguren	1.37	258	⇑Pg	Pg	12 14 47.2	+0.2
	12nm,0.2s,SNR=18						
EARA				Lg		12 15 06.7	
	111nm,0.2s,SNR=7.9						
EARA	Aranguren	1.37	258	Pg	Pg	12 14 47.2	+0.3
	12nm,0.2s,SNR=18						
EARA				Lg		12 15 07.2	
	111nm,0.2s,SNR=7.9						
FNEB	N''bias	1.38	96	Pg	Pg	12 14 47.2	-0.1
FNEB				Lg		12 15 05.4	
FNEB	N''bias	1.38	96	Pg	Pg	12 14 47.2	-0.1
FNEB				Lg		12 15 05.4	
FNEB	N''bias	1.38	96	P	Pg	12 14 47.2	-0.1
FNEB				S	Sn	12 15 05.5	+1.4
CLLI	Llivia	1.41	114	P	Pn	12 14 47.0	+0.8
CLLI				S	Sn	12 15 05.9	+1.2
	330nm,0.2s						
CARF	Carcanieres	1.42	104	Pg	Pg	12 14 48.6	+0.7
CARF				Sg	Sg	12 15 06.6	+0.3
CARF	Carcanieres	1.42	104	Pg	Pg	12 14 48.5	+0.5
CARF				Lg		12 15 06.9	
CARF	Carcanieres	1.42	104	Pg	Pg	12 14 48.5	+0.5
CARF				Lg		12 15 06.9	
ESAC	San Caprasio	1.45	201	⇑Pg	Pg	12 14 47.2	-1.2
ESAC				Lg		12 15 06.4	
ESAC	San Caprasio	1.45	201	⇑Pg	Pg	12 14 47.2	-1.2
	2μm,0.3s,SNR=18						
ESAC				Lg		12 15 06.4	
	441nm,0.2s,SNR=10						
ESAC	San Caprasio	1.45	201	⇑Pg	Pg	12 14 47.2	-1.2
	2μm,0.3s,SNR=18						
ESAC				Lg		12 15 06.4	
	441nm,0.2s,SNR=10						
ESAC	San Caprasio	1.45	201	Pg	Pg	12 14 47.2	-1.2
	2μm,0.3s,SNR=18						
ESAC				Lg		12 15 06.4	
	441nm,0.2s,SNR=10						
VALF	Valcebollere	1.47	116	Pg	Pg	12 14 48.7	-0.3
VALF				Sg	Sg	12 15 08.1	0.0
VALF	Valcebollere	1.47	116	Pg	Pg	12 14 49.0	+0.1
VALF				Lg		12 15 08.4	
VALF	Valcebollere	1.47	116	Pg	Pg	12 14 49.0	+0.1
VALF				Lg		12 15 08.4	
VALF	Valcebollere	1.47	116	Pg	Pg	12 14 48.7	-0.3
VALF				Sg	Sg	12 15 08.1	0.0
MTLF	Montolieu	1.47	79	ePg	Pg	12 14 49.9	+0.9
MTLF				eSg	Sg	12 15 09.6	+1.5
	498nm,0.3s,SNR=1.0						
MTLF	Montolieu	1.47	79	ePn	Pn	12 14 46.7	-0.4
MTLF				ePg	Pg	12 14 49.9	+0.9
MTLF				eSg	Sg	12 15 09.6	+1.5
MTLF	Montolieu	1.47	79	Pn	Pn	12 14 46.7	-0.4
MTLF				Pg	Pg	12 14 49.9	+0.9
MTLF				Lg		12 15 09.6	
	249nm,0.3s						
MTLF	Montolieu	1.47	79	Pn	Pn	12 14 46.7	-0.4
MTLF				Pg	Pg	12 14 49.9	+0.9
MTLF				Lg		12 15 09.6	
	249nm,0.3s						
MTLF	Montolieu	1.47	79	ePn	Pn	12 14 46.7	-0.4
	SNR=1.0						
MTLF	Montolieu	1.47	79	ePg	Pg	12 14 49.9	+0.9
MTLF				eSg	Sg	12 15 09.6	+1.5
	249nm,0.3s,SNR=1.0						
EMIR	Miracle	1.50	140	Pg	Pg	12 14 49.5	0.0
EMIR				Lg		12 15 09.2	
EMIR	Miracle	1.50	140	Pg	Pg	12 14 49.5	0.0
	SNR=4.0						
EMIR				Lg		12 15 09.2	
	263nm,0.1s,SNR=7.9						
EMIR	Miracle	1.50	140	Pg	Pg	12 14 49.5	0.0
	SNR=4.0						
EMIR				Lg		12 15 09.2	
	263nm,0.1s,SNR=7.9						
EMIR	Miracle	1.50	140	Pg	Pg	12 14 49.5	+0.1
	SNR=4.0						
EMIR				Lg		12 15 09.2	
	263nm,0.1s,SNR=7.9						
CBRU	Bruguera	1.63	118	Pg	Pg	12 14 50.3	-1.7
CBRU				Lg		12 15 11.8	
	323nm,0.4s						
CBRU	Bruguera	1.63	118	Pg	Pg	12 14 50.3	-1.7
CBRU				Lg		12 15 11.8	
	323nm,0.4s						
CBRU	Bruguera	1.63	118	P	Pn	12 14 50.4	+1.1
CBRU				S	Sn	12 15 11.8	+1.5
	646nm,0.4s						
LRDF	Laroque-de-Fa	1.69	94	Pg	Pg	12 14 53.8	+0.6
LRDF				Sg	Sg	12 15 15.6	+0.4
LRDF	Laroque-de-Fa	1.69	94	Pg	Pg	12 14 53.6	+0.4

LRDF Lg 12 15 15.4
LRDF Laroque-de-Fa 1.69 94 Pg Pg 12 14 53.6 +0.4
LRDF Lg 12 15 15.4
LRDF Laroque-de-Fa 1.69 94 Pg Pg 12 14 53.8 +0.6
LRDF Sg Sg 12 15 15.6 +0.4
CORI Orista 1.73 129 Pg Pg 12 14 52.0 -1.9
CORI Lg 12 15 14.3
874nm,0.2s
CORI Orista 1.73 129 Pg Pg 12 14 52.0 -1.9
CORI Lg 12 15 14.3
874nm,0.2s
CORI Orista 1.73 129 P Pn 12 14 52.1 +1.4
CORI S Sn 12 15 14.3 +1.6
874nm,0.2s
FILF Fillols 1.78 106 Pg Pg 12 14 53.1 -1.8
FILF Sg Sg 12 15 15.6 -2.5
FILF Fillols 1.78 106 Pg Pg 12 14 53.2 -1.8
FILF Lg 12 15 14.2
FILF Fillols 1.78 106 Pg Pg 12 14 53.2 -1.8
FILF Lg 12 15 14.2
FILF Fillols 1.78 106 Pg Pg 12 14 53.1 -1.8
FILF Sg Sg 12 15 15.6 -2.5
EPOB Poblet 1.83 160 Pn Pn 12 14 52.3 +0.3
EPOB Pg Pg 12 14 54.1 -1.6
EPOB Lg 12 15 16.5
EPOB Poblet 1.83 160 Pn Pn 12 14 52.3 +0.3
1.7nm,0.1s,SNR=162
EPOB Pg Pg 12 14 54.1 -1.6
23nm,0.2s,SNR=7.9
EPOB Lg 12 15 16.5
381nm,0.3s,SNR=34
EPOB Poblet 1.83 160 Pn Pn 12 14 52.3 +0.3
1.7nm,0.1s,SNR=162
EPOB Pg Pg 12 14 54.1 -1.6
23nm,0.2s,SNR=7.9
EPOB Lg 12 15 16.5
381nm,0.3s,SNR=34
EPOB Poblet 1.83 160 Pn Pn 12 14 52.3 +0.3
1.7nm,0.1s,SNR=162
CGAR Garraf 1.90 159 Pn Pn 12 14 57.7 +4.8
CGAR Sn Sn 12 15 24.6 +7.9
83nm,0.3s
CGAR Garraf 1.90 159 Pn Pn 12 14 57.7 +4.8
CGAR Sn Sn 12 15 24.6 +7.9
83nm,0.3s
CGAR Garraf 1.90 159 P Pn 12 14 57.7 +4.8
LFF La Frestale 1.90 11 ePg Pg 12 14 59.2 +2.0
SNR=1.0
LFF eSg Sg 12 15 24.8 +2.9
885nm,0.3s
LFF La Frestale 1.90 11 ePn Pn 12 14 54.0 +1.0
LFF ePg Pg 12 14 59.2 +2.0
LFF eSg Sg 12 15 24.8 +2.9
LFF La Frestale 1.90 11 Pn Pn 12 14 54.0 +1.0
LFF Pg Pg 12 14 59.2 +2.0
LFF Lg 12 15 24.8
442nm,0.3s
LFF La Frestale 1.90 11 Pn Pn 12 14 54.0 +1.0
LFF Pg Pg 12 14 59.2 +2.0
LFF Lg 12 15 24.8
442nm,0.3s
LFF La Frestale 1.90 11 ePn Pn 12 14 54.0 +1.0
SNR=1.0
CBEU Beuda 1.98 113 Pn Pn 12 14 55.2 +1.2
CBEU Sn Sn 12 15 20.2 +1.5
484nm,0.3s
CBEU Beuda 1.98 113 Pn Pn 12 14 55.2 +1.2
CBEU Sn Sn 12 15 20.2 +1.5
484nm,0.3s
CBEU Beuda 1.98 113 P Pn 12 14 55.2 +1.2
CBEU S Sn 12 15 20.2 +1.5
484nm,0.3s
SJAF Saint Jean de 2.03 106 Pn Pn 12 14 57.2 +2.4
SJAF Pg Pg 12 15 00.0 +0.3
SJAF Sg Sg 12 15 25.9 -0.2
SJAF Saint Jean de 2.03 106 Pg Pg 12 14 57.8 -1.9
SJAF Lg 12 15 25.1
SJAF Saint Jean de 2.03 106 Pg Pg 12 14 57.8 -1.9
SJAF Lg 12 15 25.1
SJAF Saint Jean de 2.03 106 Pn Pn 12 14 57.2 +2.4
EJON La Jonquera 2.05 107 Pg Pg 12 14 58.1 -1.9
EJON Lg 12 15 26.0
EJON La Jonquera 2.05 107 Pg Pg 12 14 58.1 -1.9
16nm,0.2s,SNR=57
EJON Lg 12 15 26.0
49nm,0.1s,SNR=36
EJON La Jonquera 2.05 107 Pg Pg 12 14 58.1 -1.9
16nm,0.2s,SNR=57
EJON Lg 12 15 26.0
49nm,0.1s,SNR=36
EJON La Jonquera 2.05 107 Pg Pg 12 14 58.1 -1.9
16nm,0.2s,SNR=57
EJON Lg 12 15 26.0
49nm,0.1s,SNR=36
CFON Fontmartina 2.09 128 P Pn 12 14 56.9 +1.3
CFON S Sn 12 15 23.0 +1.5
1µm,0.2s
ERTA Horta de San J 2.11 178 Pn Pn 12 14 56.1 +0.3
ERTA Pg Pg 12 14 58.8 -2.4
ERTA Lg 12 15 24.5
ERTA Horta de San J 2.11 178 Pn Pn 12 14 56.2 +0.3
0.3nm,0.1s,SNR=7.9
ERTA Pg Pg 12 14 58.8 -2.4
17nm,0.2s,SNR=171
ERTA Lg 12 15 24.5
138nm,0.2s,SNR=14
ERTA Horta de San J 2.11 178 Pn Pn 12 14 56.2 +0.3
0.3nm,0.1s,SNR=7.9
ERTA Pg Pg 12 14 58.8 -2.4
17nm,0.2s,SNR=171
ERTA Lg 12 15 24.5
138nm,0.2s,SNR=14
ERTA Horta de San J 2.11 178 Pn Pn 12 14 56.2 +0.3
0.3nm,0.1s,SNR=7.9
CAF Calviac 2.28 35 ePg Pg 12 15 05.8 +1.5
CAF eSn Sn 12 15 26.5 +0.3
SNR=1.0
CAF eSg Sg 12 15 36.0 +2.1
372nm,0.2s
CAF Calviac 2.28 35 ePn Pn 12 14 58.9 +0.7
CAF ePg Pg 12 15 05.8 +1.5
CAF eSn Sn 12 15 26.5 +0.3
CAF eSg Sg 12 15 36.0 +2.1
CAF Calviac 2.28 35 Pn Pn 12 14 58.9 +0.7
CAF Pg Pg 12 15 05.8 +1.5
CAF Sn Sn 12 15 26.5 +0.3
CAF Lg 12 15 36.0
186nm,0.2s
CAF Calviac 2.28 35 Pn Pn 12 14 58.9 +0.7
CAF Pg Pg 12 15 05.8 +1.5
CAF Sn Sn 12 15 26.5 +0.3
CAF Lg 12 15 36.0
186nm,0.2s
CAF Calviac 2.28 35 ePn Pn 12 14 58.9 +0.7
SNR=1.0
CAF Calviac 2.28 35 ePg Pg 12 15 05.8 +1.5
CAF eSn Sn 12 15 26.5 +0.3
SNR=1.0
CAF eSg Sg 12 15 36.0 +2.1
186nm,0.2s
CPAL Palau Saverder 2.29 108 Pn Pn 12 15 00.0 +1.7
CPAL Sn Sn 12 15 28.1 +1.7
199nm,0.3s
CPAL Palau Saverder 2.29 108 Pn Pn 12 15 00.0 +1.7
CPAL Sn Sn 12 15 28.1 +1.7
199nm,0.3s
CPAL Palau Saverder 2.29 108 P Pn 12 15 00.1 +1.8
CPAL S Sn 12 15 28.2 +1.8
199nm,0.3s
CCAS Cassa de la Se 2.30 120 Pn Pn 12 14 59.9 +1.4
CCAS Sn Sn 12 15 28.0 +1.2
362nm,0.5s
CCAS Cassa de la Se 2.30 120 Pn Pn 12 14 59.9 +1.4
CCAS Sn Sn 12 15 28.0 +1.2
362nm,0.5s
CCAS Cassa de la Se 2.30 120 P Pn 12 14 59.9 +1.4
CCAS S Sn 12 15 28.1 +1.3
362nm,0.5s
CMAS Mas de Barbera 2.34 179 Pn Pn 12 14 59.8 +0.8
CMAS Sn Sn 12 15 28.8 +1.1
226nm,0.2s
CMAS Mas de Barbera 2.34 179 Pn Pn 12 14 59.8 +0.8
CMAS Sn Sn 12 15 28.8 +1.1
226nm,0.2s
CMAS Mas de Barbera 2.34 179 P Pn 12 14 59.8 +0.8
CMAS S Sn 12 15 28.8 +1.1
226nm,0.2s
RJF Les Rejaudoux 2.42 22 ePg Pg 12 15 08.4 +1.4
RJF eSn Sn 12 15 30.7 +1.1
SNR=1.0
RJF eSg Sg 12 15 40.4 +2.1
408nm,0.2s,SNR=1.0
RJF Les Rejaudoux 2.42 22 ePn Pn 12 15 00.4 +0.3
RJF ePg Pg 12 15 08.4 +1.4
RJF eSn Sn 12 15 30.7 +1.1
RJF eSg Sg 12 15 40.4 +2.1
RJF Les Rejaudoux 2.42 22 Pn Pn 12 15 00.4 +0.3
RJF Pg Pg 12 15 08.4 +1.4
RJF Sn Sn 12 15 30.7 +1.1
RJF Lg 12 15 40.4
0.2nm,0.2s
RJF Les Rejaudoux 2.42 22 Pn Pn 12 15 00.4 +0.3
RJF Pg Pg 12 15 08.4 +1.4
RJF Sn Sn 12 15 30.7 +1.1
RJF Lg 12 15 40.4
0.2nm,0.2s
RJF Les Rejaudoux 2.42 22 ePn Pn 12 15 00.4 +0.3
SNR=1.0
RJF Les Rejaudoux 2.42 22 ePg Pg 12 15 08.4 +1.4
RJF eSn Sn 12 15 30.7 +1.1
SNR=1.0
RJF eSg Sg 12 15 40.4 +2.1
204nm,0.2s,SNR=1.0
COBS Casablanca 2.50 160 Pn Pn 12 15 02.1 +0.9
COBS Sn Sn 12 15 32.2 +0.6
COBS Casablanca 2.50 160 Pn Pn 12 15 02.1 +0.9
COBS Sn Sn 12 15 32.2 +0.6
COBS Casablanca 2.50 160 P Pn 12 15 02.1 +0.9
COBS S Sn 12 15 32.3 +0.7
ELAN Lanestosa 2.69 275 Pn Pn 12 15 06.7 +2.8
ELAN Pg Pg 12 15 10.9 -1.3
ELAN Lg 12 15 48.4
ELAN Lanestosa 2.69 275 Pn Pn 12 15 06.7 +2.8
2.4nm,0.2s,SNR=65
ELAN Pg Pg 12 15 10.9 -1.3
4.5nm,0.1s,SNR=7.9
ELAN Lg 12 15 48.4
54nm,0.3s,SNR=7.9
ELAN Lanestosa 2.69 275 Pn Pn 12 15 06.7 +2.8
2.4nm,0.2s,SNR=65
ELAN Pg Pg 12 15 10.9 -1.3
4.5nm,0.1s,SNR=7.9
ELAN Lg 12 15 48.4
54nm,0.3s,SNR=7.9
ELAN Lanestosa 2.69 275 Pn Pn 12 15 06.7 +2.9
2.4nm,0.2s,SNR=65
EMOS Mosqueruela 2.75 191 Pn Pn 12 15 05.4 +0.7
EMOS Pg Pg 12 15 11.3 -2.2
EMOS Sn Sn 12 15 35.3 -2.6
EMOS Lg 12 15 46.6
EMOS Mosqueruela 2.75 191 Pn Pn 12 15 05.4 +0.7
0.1nm,0.1s,SNR=36
EMOS Pg Pg 12 15 11.3 -2.2
16nm,0.2s,SNR=7.9
EMOS Sn Sn 12 15 35.9 -2.0
13nm,0.2s,SNR=7.9
EMOS Lg 12 15 46.6
27nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.75 191 Pn Pn 12 15 05.4 +0.7
0.1nm,0.1s,SNR=36
EMOS Pg Pg 12 15 11.3 -2.2
16nm,0.2s,SNR=7.9
EMOS Sn Sn 12 15 35.9 -2.0
13nm,0.2s,SNR=7.9
EMOS Lg 12 15 46.6
27nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.75 191 P Pn 12 15 05.4 +0.7
EMOS Mosqueruela 2.75 191 Pg Pg 12 15 11.3 -2.2
16nm,0.2s,SNR=7.9
EMOS Sn Sn 12 15 35.3 -2.6
13nm,0.2s,SNR=7.9
EMOS S Sn 12 15 38.4 +0.5
EMOS Lg 12 15 46.6
27nm,0.2s,SNR=7.9
LASF Ste Croix 2.82 68 ePn Pn 12 15 05.7 +0.1
SNR=1.0
LASF Ste Croix 2.82 68 eP Pn 12 15 09.4 +3.8
LASF Ste Croix 2.82 68 ePg Pg 12 15 15.2 +0.5
LASF eSn Sn 12 15 38.8 -0.7
SNR=1.0
LASF eSg Sg 12 15 51.4 +0.2
142nm,0.2s,SNR=1.0
LASF Ste Croix 2.82 68 eP Pn 12 15 09.4 +3.8
LASF ePg Pg 12 15 15.2 +0.5
LASF eSn Sn 12 15 38.8 -0.7
LASF eSg Sg 12 15 51.4 +0.2
LASF Ste Croix 2.82 68 Pn Pn 12 15 05.7 +0.1
LASF Pg Pg 12 15 15.2 +0.5
LASF Sn Sn 12 15 38.8 -0.7
LASF Lg 12 15 51.4
71nm,0.2s
LASF Ste Croix 2.82 68 Pn Pn 12 15 05.7 +0.1
LASF Pg Pg 12 15 15.2 +0.5
LASF Sn Sn 12 15 38.8 -0.7
LASF Lg 12 15 51.4
71nm,0.2s
LASF Ste Croix 2.82 68 ePn Pn 12 15 05.7 +0.1
SNR=1.0
LASF Ste Croix 2.82 68 ePg Pg 12 15 15.2 +0.5
LASF eSn Sn 12 15 38.8 -0.7
SNR=1.0
LASF eSg Sg 12 15 51.4 +0.2
71nm,0.2s,SNR=1.0
ETOR Torete 2.82 218 ⇑Pn Pn 12 15 06.7 +1.0
ETOR Pg Pg 12 15 14.0 -0.8
ETOR Lg 12 15 50.2
ETOR Torete 2.82 218 ⇑Pn Pn 12 15 06.7 +1.0
45nm,0.3s,SNR=18
ETOR Pg Pg 12 15 14.0 -0.8
178nm,0.3s,SNR=48
ETOR Lg 12 15 50.2
146nm,0.2s,SNR=6.8
ETOR Torete 2.82 218 ⇑Pn Pn 12 15 06.7 +1.0
45nm,0.3s,SNR=18
ETOR Pg Pg 12 15 14.0 -0.8
178nm,0.3s,SNR=48
ETOR Lg 12 15 50.2
146nm,0.2s,SNR=6.8
ETOR Torete 2.82 218 Pn Pn 12 15 06.7 +1.0
45nm,0.3s,SNR=18
FRNF Fournols 2.86 35 Pn Pn 12 15 06.6 +0.5
FRNF Fournols 2.86 35 Pn Pn 12 15 06.6 +0.5
LBL Lubilhac 3.06 44 Pn Pn 12 15 09.5 +0.6
LBL Lubilhac 3.06 44 Pn Pn 12 15 09.5 +0.6
PYM Petit Puy Mans 3.34 36 Pn Pn 12 15 14.1 +1.4
PYM Petit Puy Mans 3.34 36 Pn Pn 12 15 14.1 +1.4
COLF Collangettes 3.49 44 Pn Pn 12 15 15.2 +0.4
COLF Collangettes 3.49 44 Pn Pn 12 15 15.2 +0.4
TCF Toulx Ste Croi 3.51 23 ePn Pn 12 15 16.6 +1.5
SNR=1.0
TCF Toulx Ste Croi 3.51 23 eP Pn 12 15 19.8 +4.7
TCF Toulx Ste Croi 3.51 23 ePg Pg 12 15 28.7 +0.7
TCF eSn Sn 12 15 55.6 -1.0
SNR=1.0
TCF eSg Sg 12 16 14.0 +0.5
244nm,0.4s,SNR=1.0
TCF Toulx Ste Croi 3.51 23 eP Pn 12 15 19.8 +4.7
TCF ePg Pg 12 15 28.7 +0.7
TCF eSn Sn 12 15 55.6 -1.0
TCF eSg Sg 12 16 14.0 +0.5
TCF Toulx Ste Croi 3.51 23 Pn Pn 12 15 16.6 +1.5
TCF Pg Pg 12 15 28.7 +0.7
TCF Sn Sn 12 15 55.6 -1.0
TCF Lg 12 16 14.0
0.1nm,0.4s
TCF Toulx Ste Croi 3.51 23 Pn Pn 12 15 16.6 +1.5
TCF Pg Pg 12 15 28.7 +0.7
TCF Sn Sn 12 15 55.6 -1.0
TCF Lg 12 16 14.0
0.1nm,0.4s
TCF Toulx Ste Croi 3.51 23 ePn Pn 12 15 16.6 +1.5
SNR=1.0
TCF Toulx Ste Croi 3.51 23 ePg Pg 12 15 28.7 +0.7
TCF eSn Sn 12 15 55.6 -1.0
SNR=1.0
TCF eSg Sg 12 16 14.0 +0.5
122nm,0.4s,SNR=1.0
MFF Saint Martin d 3.54 356 ePg Pg 12 15 29.5 +0.9
MFF eSg Sg 12 16 15.0 +0.6
232nm,0.5s,SNR=1.0
MFF Saint Martin d 3.54 356 ePn Pn 12 15 16.7 +1.2
MFF ePg Pg 12 15 29.5 +0.9
MFF eSg Sg 12 16 15.0 +0.6
MFF Saint Martin d 3.54 356 Pn Pn 12 15 16.7 +1.2
MFF Pg Pg 12 15 29.5 +0.9
MFF Lg 12 16 15.0
116nm,0.5s
MFF Saint Martin d 3.54 356 Pn Pn 12 15 16.7 +1.2
MFF Pg Pg 12 15 29.5 +0.9
MFF Lg 12 16 15.0
116nm,0.5s
MFF Saint Martin d 3.54 356 ePn Pn 12 15 16.7 +1.2
SNR=1.0
MFF Saint Martin d 3.54 356 ePg Pg 12 15 29.5 +0.9
MFF eSg Sg 12 16 15.0 +0.6
116nm,0.5s,SNR=1.0
ECHE Chera 3.59 195 Pn Pn 12 15 16.5 +0.3
ECHE Pg Pg 12 15 26.8 -2.7
ECHE Lg 12 16 11.3
ECHE Chera 3.59 195 Pn Pn 12 15 16.5 +0.3
1.2nm,0.3s,SNR=18
ECHE Pg Pg 12 15 26.8 -2.7
1.7nm,0.2s,SNR=10
ECHE Lg 12 16 11.3
38nm,0.4s,SNR=7.9
ECHE Chera 3.59 195 Pn Pn 12 15 16.5 +0.3
1.2nm,0.3s,SNR=18
ECHE Pg Pg 12 15 26.8 -2.7
1.7nm,0.2s,SNR=10
ECHE Lg 12 16 11.3
38nm,0.4s,SNR=7.9
ECHE Chera 3.59 195 Pn Pn 12 15 16.5 +0.3
1.2nm,0.3s,SNR=18
AGO Saint Agoulin 3.63 34 Pn Pn 12 15 17.3 +0.6
AGO Saint Agoulin 3.63 34 Pn Pn 12 15 17.3 +0.6
PRAF Pradon 3.67 77 Pn Pn 12 15 18.3 +1.0
PRAF Pradon 3.67 77 Pn Pn 12 15 18.3 +1.0
VIVF Saint-Julien-l 3.67 59 ePg Pg 12 15 30.4 -0.5
SNR=1.0
VIVF eSg Sg 12 16 17.5 -0.9
217nm,0.5s
VIVF Saint-Julien-l 3.67 59 ePn Pn 12 15 17.8 +0.5
VIVF ePg Pg 12 15 30.4 -0.5
VIVF eSg Sg 12 16 17.5 -0.9
VIVF Saint-Julien-l 3.67 59 Pn Pn 12 15 17.8 +0.5
VIVF Pg Pg 12 15 30.4 -0.5
VIVF Lg 12 16 17.5
108nm,0.5s
VIVF Saint-Julien-l 3.67 59 Pn Pn 12 15 17.8 +0.5
VIVF Pg Pg 12 15 30.4 -0.5
VIVF Lg 12 16 17.5
108nm,0.5s
VIVF Saint-Julien-l 3.67 59 ePn Pn 12 15 17.8 +0.5
SNR=1.0
VIVF Saint-Julien-l 3.67 59 ePg Pg 12 15 30.4 -0.5
SNR=1.0
VIVF eSg Sg 12 16 17.5 -0.9
108nm,0.5s
PLDF La Plantade 3.78 39 Pn Pn 12 15 19.7 +0.9
PLDF La Plantade 3.78 39 Pn Pn 12 15 19.7 +0.9
TREF Trevaresse 3.79 80 Pn Pn 12 15 19.8 +0.8
TREF Trevaresse 3.79 80 Pn Pn 12 15 19.8 +0.8
SSB Saint Sauveur 3.80 53 Pn Pn 12 15 20.8 +1.7
SSB Saint Sauveur 3.80 53 Pn Pn 12 15 20.8 +1.7
GELF Grande-Etoile 3.81 84 Pn Pn 12 15 21.8 +2.6
GELF Grande-Etoile 3.81 84 Pn Pn 12 15 21.8 +2.6
ETOS Mallorca 3.83 149 Pn Pn 12 15 19.9 +0.4
ETOS Sn Sn 12 16 01.5 -2.9
ETOS Mallorca 3.83 149 Pn Pn 12 15 19.9 +0.4
1.0nm,0.1s,SNR=15
ETOS Sn Sn 12 16 01.5 -2.9
2.1nm,0.1s,SNR=7.9
ETOS Mallorca 3.83 149 Pn Pn 12 15 19.9 +0.4
1.0nm,0.1s,SNR=15
ETOS Sn Sn 12 16 01.5 -2.9
2.1nm,0.1s,SNR=7.9
ETOS Mallorca 3.83 149 Pn Pn 12 15 19.9 +0.4
1.0nm,0.1s,SNR=15
ETOS Mallorca 3.83 149 P Pn 12 15 20.4 +0.9
ETOS Sn Sn 12 16 01.5 -2.9
2.1nm,0.1s,SNR=7.9
ETOS S Sn 12 16 05.1 +0.7
BGF Bois d'Agland 3.95 27 ePg Pg 12 15 36.8 +0.4
BGF eSg Sg 12 16 28.1 +0.6
468nm,0.4s,SNR=1.0
BGF Bois d'Agland 3.95 27 ePn Pn 12 15 21.4 +0.2
BGF ePg Pg 12 15 36.8 +0.4
BGF eSg Sg 12 16 28.1 +0.6
BGF Bois d'Agland 3.95 27 Pn Pn 12 15 21.4 +0.2
BGF Pg Pg 12 15 36.8 +0.4
BGF Lg 12 16 28.1
234nm,0.4s
BGF Bois d'Agland 3.95 27 Pn Pn 12 15 21.4 +0.2
BGF Pg Pg 12 15 36.8 +0.4
BGF Lg 12 16 28.1
234nm,0.4s
BGF Bois d'Agland 3.95 27 ePn Pn 12 15 21.4 +0.2
SNR=1.0
BGF Bois d'Agland 3.95 27 ePg Pg 12 15 36.8 +0.4
BGF eSg Sg 12 16 28.1 +0.6
234nm,0.4s,SNR=1.0
OCF Saint Nazaire 3.96 66 Pn Pn 12 15 25.6 +4.3
OCF Saint Nazaire 3.96 66 Pn Pn 12 15 25.6 +4.3
OG26 St.-Nazaire-De 3.96 66 Pn Pn 12 15 25.6 +4.3
OG26 St.-Nazaire-De 3.96 66 Pn Pn 12 15 25.6 +4.3
SMRF Simiane la Rot 3.99 75 ePg Pg 12 15 36.5 -0.6
SNR=1.0
SMRF eSn Sn 12 16 07.0 -1.3
SNR=1.0
SMRF eSg Sg 12 16 27.5 -1.2
95nm,0.6s
SMRF Simiane la Rot 3.99 75 ePn Pn 12 15 21.3 -0.4
SMRF ePg Pg 12 15 36.5 -0.6
SMRF eSn Sn 12 16 07.0 -1.3
SMRF eSg Sg 12 16 27.5 -1.2
SMRF Simiane la Rot 3.99 75 Pn Pn 12 15 21.3 -0.4
SMRF Pg Pg 12 15 36.5 -0.6
SMRF Sn Sn 12 16 07.0 -1.3
SMRF Lg 12 16 27.5
95nm,0.6s
SMRF Simiane la Rot 3.99 75 Pn Pn 12 15 21.3 -0.4
SMRF Pg Pg 12 15 36.5 -0.6
SMRF Sn Sn 12 16 07.0 -1.3
SMRF Lg 12 16 27.5
95nm,0.6s
SMRF Simiane la Rot 3.99 75 ePn Pn 12 15 21.3 -0.4
SNR=1.0
SMRF Simiane la Rot 3.99 75 ePg Pg 12 15 36.5 -0.6
SNR=1.0
SMRF eSn Sn 12 16 07.0 -1.3
SNR=1.0
SMRF eSg Sg 12 16 27.5 -1.2
48nm,0.6s
EARI Arriondas 3.99 275 ⇑Pn Pn 12 15 24.2 +2.5
EARI Sn Sn 12 16 10.2 +1.9
EARI Arriondas 3.99 275 ⇑Pn Pn 12 15 24.2 +2.5
2.2nm,0.2s,SNR=18
EARI Sn Sn 12 16 07.2 -1.2
2.1nm,0.2s,SNR=7.9
EARI Arriondas 3.99 275 ⇑Pn Pn 12 15 24.2 +2.5
2.2nm,0.2s,SNR=18
EARI Sn Sn 12 16 07.2 -1.2
2.1nm,0.2s,SNR=7.9
EARI Arriondas 3.99 275 Pn Pn 12 15 24.2 +2.5
2.2nm,0.2s,SNR=18
EARI Sn Sn 12 16 10.2 +1.8
BERF Bertagne 4.00 85 Pn Pn 12 15 24.8 +3.0
BERF Bertagne 4.00 85 Pn Pn 12 15 24.8 +3.0
VILF Villemus 4.07 77 Pn Pn 12 15 25.5 +2.8
VILF Villemus 4.07 77 Pn Pn 12 15 25.5 +2.8
GUD Guadarrama 4.08 235 ⇑Pn Pn 12 15 24.1 +1.2
GUD Sn Sn 12 16 09.3 -1.3
GUD Guadarrama 4.08 235 ⇑Pn Pn 12 15 24.1 +1.2
8.6nm,0.2s,SNR=18
GUD Sn Sn 12 16 09.3 -1.3
17nm,0.3s,SNR=7.9
GUD Guadarrama 4.08 235 ⇑Pn Pn 12 15 24.1 +1.2
8.6nm,0.2s,SNR=18
GUD Sn Sn 12 16 09.3 -1.3
17nm,0.3s,SNR=7.9
GUD Guadarrama 4.08 235 Pn Pn 12 15 24.1 +1.2
8.6nm,0.2s,SNR=18
GUD Sn Sn 12 16 09.3 -1.3
17nm,0.3s,SNR=7.9
EIBI Ibiza 4.12 168 Pn Pn 12 15 23.3 -0.3

EIBI Sn **Sn** 12 16 07.3 -4.4
EIBI Ibiza 4.12 168 Pn **Pn** 12 15 23.3 -0.3
1.1nm,0.2s,SNR=6.4
EIBI Sn **Sn** 12 16 07.3 -4.4
6.7nm,0.2s,SNR=103
EIBI Ibiza 4.12 168 Pn **Pn** 12 15 23.3 -0.3
1.1nm,0.2s,SNR=6.4
EIBI Sn **Sn** 12 16 07.3 -4.4
6.7nm,0.2s,SNR=103
EIBI Ibiza 4.12 168 Pn **Pn** 12 15 23.3 -0.3
1.1nm,0.2s,SNR=6.4
STOF St-Etienne Org 4.23 75 Pn **Pn** 12 15 25.3 +0.3
STOF St-Etienne Org 4.23 75 Pn **Pn** 12 15 25.3 +0.3
TAVF Tavernes 4.28 81 Pn **Pn** 12 15 26.5 +0.8
TAVF Tavernes 4.28 81 Pn **Pn** 12 15 26.5 +0.8
AVF Avril sur Loir 4.33 30 *e*Pg **Pg** 12 15 43.8 +0.2
SNR=1.0
AVF *e*Sn **Sn** 12 16 15.3 -1.4
SNR=1.0
AVF *e*Sg **Sg** 12 16 39.1 -0.5
81nm,0.3s
AVF Avril sur Loir 4.33 30 *e*Pn **Pn** 12 15 26.9 +0.6
AVF *e*Pg **Pg** 12 15 43.8 +0.2
AVF *e*Sn **Sn** 12 16 15.3 -1.4
AVF *e*Sg **Sg** 12 16 39.1 -0.5
AVF Avril sur Loir 4.33 30 Pn **Pn** 12 15 26.9 +0.6
AVF Pg **Pg** 12 15 43.8 +0.2
AVF Sn **Sn** 12 16 15.3 -1.4
AVF Lg 12 16 39.1
41nm,0.3s
AVF Avril sur Loir 4.33 30 Pn **Pn** 12 15 26.9 +0.6
AVF Pg **Pg** 12 15 43.8 +0.2
AVF Sn **Sn** 12 16 15.3 -1.4
AVF Lg 12 16 39.1
41nm,0.3s
AVF Avril sur Loir 4.33 30 *e*Pn **Pn** 12 15 26.9 +0.6
SNR=1.0
AVF Avril sur Loir 4.33 30 *e*Pg **Pg** 12 15 43.8 +0.2
SNR=1.0
AVF *e*Sn **Sn** 12 16 15.3 -1.4
SNR=1.0
AVF *e*Sg **Sg** 12 16 39.1 -0.5
41nm,0.3s
EBEN Beniarda 4.38 185 Pn **Pn** 12 15 26.9 -0.1
EBEN Sn **Sn** 12 16 15.4 -2.5
EBEN Beniarda 4.38 185 Pn **Pn** 12 15 26.9 -0.1
0.9nm,0.2s,SNR=4.0
EBEN Sn **Sn** 12 16 15.4 -2.5
3.4nm,0.2s,SNR=7.9
EBEN Beniarda 4.38 185 Pn **Pn** 12 15 26.9 -0.1
0.9nm,0.2s,SNR=4.0
EBEN Sn **Sn** 12 16 15.4 -2.5
3.4nm,0.2s,SNR=7.9
EBEN Beniarda 4.38 185 Pn **Pn** 12 15 26.9 -0.1
0.9nm,0.2s,SNR=4.0
EBEN Sn **Sn** 12 16 15.4 -2.5
3.4nm,0.2s,SNR=7.9
SMF Signal de Mont 4.40 34 *e*Pn **Pn** 12 15 27.9 +0.6
SNR=1.0
SMF Signal de Mont 4.40 34 *e*P **Pn** 12 15 32.5 +5.2
SMF Signal de Mont 4.40 34 *e*Pg **Pg** 12 15 44.6 -0.3
SMF *e*Sn **Sn** 12 16 17.7 -0.8
SNR=1.0
SMF *e*Sg **Sg** 12 16 42.0 +0.1
56nm,0.3s,SNR=1.0
SMF Signal de Mont 4.40 34 *e*P **Pn** 12 15 32.5 +5.2
SMF *e*Pg **Pg** 12 15 44.6 -0.3
SMF *e*Sn **Sn** 12 16 17.7 -0.8
SMF *e*Sg **Sg** 12 16 42.0 +0.1
SMF Signal de Mont 4.40 34 Pn **Pn** 12 15 27.9 +0.6
SMF Pg **Pg** 12 15 44.6 -0.3
SMF Sn **Sn** 12 16 17.7 -0.8
SMF Lg 12 16 42.0
28nm,0.3s
SMF Signal de Mont 4.40 34 Pn **Pn** 12 15 27.9 +0.6
SMF Pg **Pg** 12 15 44.6 -0.3
SMF Sn **Sn** 12 16 17.7 -0.8
SMF Lg 12 16 42.0
28nm,0.3s
SMF Signal de Mont 4.40 34 *e*Pn **Pn** 12 15 27.9 +0.6
SNR=1.0
SMF Signal de Mont 4.40 34 *e*Pg **Pg** 12 15 44.6 -0.3
SMF *e*Sn **Sn** 12 16 17.7 -0.8
SNR=1.0
SMF *e*Sg **Sg** 12 16 42.0 +0.1
28nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 4.47 64 *e*Pn **Pn** 12 15 29.0 +0.7
SNR=1.0
ORIF *e*Sn **Sn** 12 16 19.1 -1.2
SNR=1.0
ORIF *e*Sg **Sg** 12 16 43.6 -0.6
26nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 4.47 64 Pn **Pn** 12 15 29.0 +0.7
ORIF Sn **Sn** 12 16 19.1 -1.2
ORIF Lg 12 16 43.6
13nm,0.3s
ORIF Oris-en-Rattie 4.47 64 Pn **Pn** 12 15 29.0 +0.7
ORIF Sn **Sn** 12 16 19.1 -1.2
ORIF Lg 12 16 43.6
13nm,0.3s
ORIF Oris-en-Rattie 4.47 64 *e*Pn **Pn** 12 15 29.0 +0.7
SNR=1.0
ORIF *e*Sn **Sn** 12 16 19.1 -1.2
SNR=1.0
ORIF *e*Sg **Sg** 12 16 43.6 -0.6
13nm,0.3s,SNR=1.0
HYF Humbligny 4.53 21 *e*Pn **Pn** 12 15 30.0 +0.9
HYF *e*Pg **Pg** 12 15 47.5 +0.1
HYF *e*Sg **Sg** 12 16 46.7 +0.6
HYF Humbligny 4.53 21 Pn **Pn** 12 15 30.0 +0.9
HYF Pg **Pg** 12 15 47.5 +0.1
HYF Lg 12 16 46.7
HYF Humbligny 4.53 21 Pn **Pn** 12 15 30.0 +0.9
HYF Pg **Pg** 12 15 47.5 +0.1
HYF Lg 12 16 46.7
HYF Humbligny 4.53 21 *e*Pn **Pn** 12 15 30.0 +0.9
LMR La Mourre 4.59 85 *e*Pg **Pg** 12 15 46.0 -2.7
SNR=1.0
LMR *e*Sn **Sn** 12 16 20.6 -2.7
SNR=1.0
LMR *e*Sg **Sg** 12 16 46.2 -1.9
13nm,0.3s,SNR=1.0
LMR La Mourre 4.59 85 *e*Pn **Pn** 12 15 31.3 +1.3
LMR *e*Pg **Pg** 12 15 46.0 -2.7
LMR *e*Sn **Sn** 12 16 20.6 -2.7
LMR *e*Sg **Sg** 12 16 46.2 -1.9
LMR La Mourre 4.59 85 Pn **Pn** 12 15 31.3 +1.3
LMR Pg **Pg** 12 15 46.0 -2.7
LMR Sn **Sn** 12 16 20.6 -2.7
LMR Lg 12 16 46.2
6.6nm,0.3s
LMR La Mourre 4.59 85 Pn **Pn** 12 15 31.3 +1.3
LMR Pg **Pg** 12 15 46.0 -2.7
LMR Sn **Sn** 12 16 20.6 -2.7
LMR Lg 12 16 46.2
6.6nm,0.3s
LMR La Mourre 4.59 85 *e*Pn **Pn** 12 15 31.3 +1.3
SNR=1.0
LMR La Mourre 4.59 85 *e*Pg **Pg** 12 15 46.0 -2.7
SNR=1.0
LMR *e*Sg **Sg** 12 16 46.2 -1.9
6.6nm,0.3s,SNR=1.0
SSF Saint Saulge 4.62 29 *e*Pn **Pn** 12 15 30.9 +0.6
SNR=1.0
SSF Saint Saulge 4.62 29 *e*P **Pn** 12 15 35.9 +5.6
SSF Saint Saulge 4.62 29 *e*Pg **Pg** 12 15 49.1 0.0
SSF *e*Sn **Sn** 12 16 21.9 -1.9
SNR=1.0
SSF *e*Sg **Sg** 12 16 48.4 -0.4
54nm,0.3s
SSF Saint Saulge 4.62 29 *e*P **Pn** 12 15 35.9 +5.6
SSF *e*Pg **Pg** 12 15 49.1 0.0
SSF *e*Sn **Sn** 12 16 21.9 -1.9
SSF *e*Sg **Sg** 12 16 48.4 -0.4
SSF Saint Saulge 4.62 29 Pn **Pn** 12 15 30.9 +0.6
SSF Pg **Pg** 12 15 49.1 0.0
SSF Sn **Sn** 12 16 21.9 -1.9
SSF Lg 12 16 48.4
27nm,0.3s
SSF Saint Saulge 4.62 29 Pn **Pn** 12 15 30.9 +0.6
SSF Pg **Pg** 12 15 49.1 0.0
SSF Sn **Sn** 12 16 21.9 -1.9
SSF Lg 12 16 48.4
27nm,0.3s
SSF Saint Saulge 4.62 29 *e*Pn **Pn** 12 15 30.9 +0.6
SNR=1.0
SSF Saint Saulge 4.62 29 *e*Pg **Pg** 12 15 49.1 0.0
SSF *e*Sg **Sg** 12 16 48.4 -0.4
27nm,0.3s
ETOB Tobarra 4.62 198 Pn **Pn** 12 15 29.8 -0.6
ETOB Sn **Sn** 12 16 21.2 -2.8
ETOB Tobarra 4.62 198 Pn **Pn** 12 15 29.8 -0.6
0.5nm,0.1s,SNR=41
ETOB Sn **Sn** 12 16 21.2 -2.8
0.9nm,0.1s,SNR=7.9
ETOB Tobarra 4.62 198 Pn **Pn** 12 15 29.8 -0.6
0.5nm,0.1s,SNR=41
ETOB Sn **Sn** 12 16 21.2 -2.8
0.9nm,0.1s,SNR=7.9
ETOB Tobarra 4.62 198 Pn **Pn** 12 15 29.8 -0.6
0.5nm,0.1s,SNR=41
ETOB Sn **Sn** 12 16 21.2 -2.8
0.9nm,0.1s,SNR=7.9
ESDC Sonseca Array 4.63 224 Pn **Pn** 12 15 30.3 -0.2
ESDC Sn **Sn** 12 16 20.8 -3.6
ESDC Sonseca Array 4.63 224 Pn **Pn** 12 15 30.3 -0.2
3.7nm,0.2s,baz=44,slow=14,SNR=94
ESDC Sn **Sn** 12 16 20.7 -3.6
45nm,0.2s,baz=45,slow=24,SNR=7.9
ESDC Sonseca Array 4.63 224 Pn **Pn** 12 15 30.3 -0.2
3.7nm,0.2s,baz=44,slow=14,SNR=94
ESDC Sn **Sn** 12 16 20.7 -3.6
45nm,0.2s,baz=45,slow=24,SNR=7.9
ESDC Sonseca Array 4.63 224 Pn **Pn** 12 15 30.3 -0.3
3.7nm,0.2s,baz=44,slow=14,SNR=94
ESDC Sn **Sn** 12 16 20.7 -3.6
45nm,0.2s,slow=24,SNR=7.9
FRF La Foret Royal 4.70 82 *e*Pg **Pg** 12 15 49.5 -1.3
FRF *e*Sn **Sn** 12 16 24.6 -1.4
SNR=1.0
FRF *e*Sg **Sg** 12 16 51.2 -0.5
44nm,0.6s,SNR=1.0
FRF La Foret Royal 4.70 82 *e*Pn **Pn** 12 15 32.3 +0.8
FRF *e*Pg **Pg** 12 15 49.5 -1.3
FRF *e*Sn **Sn** 12 16 24.6 -1.4
FRF *e*Sg **Sg** 12 16 51.2 -0.5
FRF La Foret Royal 4.70 82 Pn **Pn** 12 15 32.3 +0.8
FRF Pg **Pg** 12 15 49.5 -1.3
FRF Sn **Sn** 12 16 24.6 -1.4
FRF Lg 12 16 51.2
22nm,0.6s
FRF La Foret Royal 4.70 82 Pn **Pn** 12 15 32.3 +0.8
FRF Pg **Pg** 12 15 49.5 -1.3
FRF Sn **Sn** 12 16 24.6 -1.4
FRF Lg 12 16 51.2
22nm,0.6s
FRF La Foret Royal 4.70 82 *e*Pn **Pn** 12 15 32.3 +0.8
SNR=1.0
FRF La Foret Royal 4.70 82 *e*Pg **Pg** 12 15 49.5 -1.3
FRF *e*Sn **Sn** 12 16 24.6 -1.4
SNR=1.0
FRF *e*Sg **Sg** 12 16 51.2 -0.5
22nm,0.6s,SNR=1.0
EVIA Vianos 4.89 206 Pn **Pn** 12 15 33.0 -1.0
EVIA Sn **Sn** 12 16 26.3 -4.2
EVIA Lg 12 16 59.3
EVIA Vianos 4.89 206 Pn **Pn** 12 15 33.0 -1.0
0.6nm,0.1s,SNR=4.0
EVIA Sn **Sn** 12 16 26.3 -4.2
9.0nm,0.4s,SNR=7.9
EVIA Lg 12 16 55.2
21nm,0.6s,SNR=7.9
EVIA Vianos 4.89 206 Pn **Pn** 12 15 33.0 -1.0
0.6nm,0.1s,SNR=4.0
EVIA Sn **Sn** 12 16 26.3 -4.2
9.0nm,0.4s,SNR=7.9
EVIA Lg 12 16 55.2
21nm,0.6s,SNR=7.9
EVIA Vianos 4.89 206 Pn **Pn** 12 15 33.0 -1.1
0.6nm,0.1s,SNR=4.0
EVIA Lg 12 16 59.3
21nm,0.6s,SNR=7.9
LOR Lormes 4.92 30 *e*Pn **Pn** 12 15 35.7 +1.3
baz=220,SNR=1.0
LOR Lormes 4.92 30 *e*Pg **Pg** 12 15 54.5 -0.4
baz=219
LOR *e*Sg **Sg** 12 16 57.2 -1.3
58nm,0.3s,baz=200,SNR=1.0
LOR Lormes 4.92 30 *e*Pn **Pn** 12 15 35.7 +1.3
LOR *e*Pg **Pg** 12 15 54.5 -0.4
LOR *e*Sg **Sg** 12 16 57.2 -1.3
LOR Lormes 4.92 30 Pn **Pn** 12 15 35.7 +1.3
LOR Pg **Pg** 12 15 54.5 -0.4
LOR Lg 12 16 57.2
29nm,0.3s
LOR Lormes 4.92 30 Pn **Pn** 12 15 35.7 +1.3
LOR Pg **Pg** 12 15 54.5 -0.4
LOR Lg 12 16 57.2
29nm,0.3s
LOR Lormes 4.92 30 *e*Pn **Pn** 12 15 35.7 +1.3
baz=220,SNR=1.0
LOR Lormes 4.92 30 *e*Pg **Pg** 12 15 54.5 -0.4
baz=219
LOR *e*Sg **Sg** 12 16 57.2 -1.3
29nm,0.3s,baz=200,SNR=1.0
PAB San Pablo 4.93 226 *e*Pn **Pn** 12 15 34.4 -0.2
PAB *e*Sn **Sn** 12 16 28.9 -2.7
PAB San Pablo 4.93 226 *e*Pn **Pn** 12 15 34.4 -0.2
PAB *e*Sn **Sn** 12 16 28.9 -2.7
MBDF Montbardon 5.00 68 *e*Pg **Pg** 12 15 55.0 -1.5
MBDF *e*Sg **Sg** 12 16 59.2 -2.1
26nm,0.6s
MBDF Montbardon 5.00 68 *e*Pn **Pn** 12 15 36.5 +0.9
MBDF *e*Pg **Pg** 12 15 55.0 -1.5
MBDF *e*Sg **Sg** 12 16 59.2 -2.1
MBDF Montbardon 5.00 68 Pn **Pn** 12 15 36.5 +0.9
MBDF Pg **Pg** 12 15 55.0 -1.5
MBDF Lg 12 16 59.2
13nm,0.6s
MBDF Montbardon 5.00 68 Pn **Pn** 12 15 36.5 +0.9
MBDF Pg **Pg** 12 15 55.0 -1.5
MBDF Lg 12 16 59.2
13nm,0.6s
MBDF Montbardon 5.00 68 *e*Pn **Pn** 12 15 36.5 +0.9
SNR=1.0
MBDF Montbardon 5.00 68 *e*Pg **Pg** 12 15 55.0 -1.5
MBDF *e*Sg **Sg** 12 16 59.2 -2.1
13nm,0.6s
TOUF Mont Tournerai 5.18 77 Pn **Pn** 12 15 39.7 +1.6
TOUF Mont Tournerai 5.18 77 Pn **Pn** 12 15 39.7 +1.6
LUCF Luceram 5.24 79 Pn **Pn** 12 15 40.6 +1.7
LUCF Luceram 5.24 79 Pn **Pn** 12 15 40.6 +1.7
LPL La Plagne 5.26 60 *e*Pg **Pg** 12 16 01.3 -0.2
LPL *e*Sg **Sg** 12 17 07.3 -2.4
21nm,0.4s,SNR=1.0
LPL La Plagne 5.26 60 *e*P **Pn** 12 15 44.4 +5.2
LPL *e*Pg **Pg** 12 16 01.3 -0.2
LPL *e*Sg **Sg** 12 17 07.3 -2.4
LPL La Plagne 5.26 60 Pn **Pn** 12 15 44.4 +5.2
LPL Pg **Pg** 12 16 01.3 -0.2
LPL Lg 12 17 07.3
10nm,0.4s
LPL La Plagne 5.26 60 Pn **Pn** 12 15 44.4 +5.2
LPL Pg **Pg** 12 16 01.3 -0.2
LPL Lg 12 17 07.3
10nm,0.4s
LPL La Plagne 5.26 60 *e*P **Pn** 12 15 44.4 +5.2
SNR=1.0
LPL La Plagne 5.26 60 *e*Pg **Pg** 12 16 01.3 -0.2
LPL *e*Sg **Sg** 12 17 07.3 -2.4
10nm,0.4s,SNR=1.0
LPG La Plagne 5.27 60 *e*Pg **Pg** 12 16 00.7 -0.9
SNR=1.0
LPG *e*Sg **Sg** 12 17 08.2 -1.6
43nm,0.5s
LPG La Plagne 5.27 60 *e*Pn **Pn** 12 15 40.8 +1.5
LPG *e*Pg **Pg** 12 16 00.7 -0.9
LPG *e*Sg **Sg** 12 17 08.2 -1.6
LPG La Plagne 5.27 60 Pn **Pn** 12 15 40.8 +1.5
LPG Pg **Pg** 12 16 00.7 -0.9
LPG Lg 12 17 08.2
22nm,0.5s
LPG La Plagne 5.27 60 Pn **Pn** 12 15 40.8 +1.5
LPG Pg **Pg** 12 16 00.7 -0.9
LPG Lg 12 17 08.2
22nm,0.5s
LPG La Plagne 5.27 60 *e*Pn **Pn** 12 15 40.8 +1.5
SNR=1.0
LPG La Plagne 5.27 60 *e*Pg **Pg** 12 16 00.7 -0.9
SNR=1.0
LPG *e*Sg **Sg** 12 17 08.2 -1.6
22nm,0.5s
ECAL Calabor 5.28 260 ⇑Pn **Pn** 12 15 40.6 +1.3
ECAL Sn **Sn** 12 16 38.4 -1.8
ECAL Calabor 5.28 260 ⇑Pn **Pn** 12 15 40.6 +1.3
25nm,0.4s,SNR=18
ECAL Sn **Sn** 12 16 38.3 -1.8
47nm,0.4s,SNR=7.9
ECAL Calabor 5.28 260 ⇑Pn **Pn** 12 15 40.6 +1.3
25nm,0.4s,SNR=18
ECAL Sn **Sn** 12 16 38.3 -1.8
47nm,0.4s,SNR=7.9
ECAL Calabor 5.28 260 Pn **Pn** 12 15 40.6 +1.2
25nm,0.4s,SNR=18
ECAL Sn **Sn** 12 16 38.3 -1.8
47nm,0.4s,SNR=7.9
SBF Sospel 5.30 79 *e*P **Pn** 12 15 44.6 +4.9
SBF Sospel 5.30 79 *e*Pg **Pg** 12 16 00.1 -2.1
SBF *e*Sg **Sg** 12 17 10.1 -0.7
32nm,0.5s
SBF Sospel 5.30 79 *e*Pn **Pn** 12 15 40.4 +0.7
SBF *e*Pg **Pg** 12 16 00.1 -2.1
SBF *e*Sg **Sg** 12 17 10.1 -0.7
SBF Sospel 5.30 79 Pn **Pn** 12 15 40.4 +0.7
SBF Pg **Pg** 12 16 00.1 -2.1
SBF Lg 12 17 10.1
16nm,0.5s
SBF Sospel 5.30 79 Pn **Pn** 12 15 40.4 +0.7
SBF Pg **Pg** 12 16 00.1 -2.1
SBF Lg 12 17 10.1
16nm,0.5s
SBF Sospel 5.30 79 *e*Pn **Pn** 12 15 40.4 +0.7
SBF Sospel 5.30 79 *e*Pg **Pg** 12 16 00.1 -2.1
SBF *e*Sg **Sg** 12 17 10.1 -0.7
16nm,0.5s
AUTN L'Aution 5.31 78 Pn **Pn** 12 15 41.8 +2.0
AUTN L'Aution 5.31 78 Pn **Pn** 12 15 41.8 +2.0
PBRG Braganca 5.32 259 *e*Pn **Pn** 12 15 40.9 +1.0
PBRG *e*Sn **Sn** 12 16 38.9 -2.2
PBRG *e*Sg **Sg** 12 17 04.2 -7.1
PBRG A 12 17 13.3
16nm,0.5s
PBRG Braganca 5.32 259 Pn **Pn** 12 15 40.9 +1.0
PBRG Sn **Sn** 12 16 38.9 -2.2
PBRG Lg 12 17 04.2
7.8nm,0.5s
PBRG Braganca 5.32 259 Pn **Pn** 12 15 40.9 +1.0
PBRG Sn **Sn** 12 16 38.9 -2.2
PBRG Lg 12 17 04.2
7.8nm,0.5s
PBRG Braganca 5.32 259 *e*Pn **Pn** 12 15 40.9 +1.0
PBRG *e*Sn **Sn** 12 16 38.9 -2.2
EMUR La Murta 5.34 193 Pn **Pn** 12 15 40.6 +0.3
EMUR Sn **Sn** 12 16 38.3 -3.5
EMUR La Murta 5.34 193 Pn **Pn** 12 15 40.6 +0.3
2.1nm,0.2s,SNR=9.8
EMUR Sn **Sn** 12 16 38.3 -3.5
11nm,0.4s,SNR=7.9
EMUR La Murta 5.34 193 Pn **Pn** 12 15 40.6 +0.3
2.1nm,0.2s,SNR=9.8
EMUR Sn **Sn** 12 16 38.3 -3.5
11nm,0.4s,SNR=7.9
EMUR La Murta 5.34 193 Pn **Pn** 12 15 40.6 +0.3
2.1nm,0.2s,SNR=9.8
EMUR Sn **Sn** 12 16 38.3 -3.4
11nm,0.4s,SNR=7.9
GRR Gorron 5.37 352 *e*Pg **Pg** 12 16 03.6 0.0
GRR *e*Sn **Sn** 12 16 40.7 -1.8
SNR=1.0
GRR *e*Sg **Sg** 12 17 12.0 -1.1
38nm,0.3s,SNR=1.0
GRR Gorron 5.37 352 *e*Pn **Pn** 12 15 40.1 -0.6
GRR *e*Pg **Pg** 12 16 03.6 0.0
GRR *e*Sn **Sn** 12 16 40.7 -1.8
GRR *e*Sg **Sg** 12 17 12.0 -1.1
GRR Gorron 5.37 352 Pn **Pn** 12 15 40.1 -0.6
GRR Pg **Pg** 12 16 03.6 0.0
GRR Sn **Sn** 12 16 40.7 -1.8
GRR Lg 12 17 12.0
19nm,0.3s
GRR Gorron 5.37 352 Pn **Pn** 12 15 40.1 -0.6
GRR Pg **Pg** 12 16 03.6 0.0
GRR Sn **Sn** 12 16 40.7 -1.8
GRR Lg 12 17 12.0
19nm,0.3s
GRR Gorron 5.37 352 *e*Pn **Pn** 12 15 40.1 -0.6
SNR=1.0
GRR Gorron 5.37 352 *e*Pg **Pg** 12 16 03.6 0.0
GRR *e*Sg **Sg** 12 17 12.0 -1.1
19nm,0.3s,SNR=1.0
SAOF Saorge 5.40 78 Pn **Pn** 12 15 43.5 +2.4
SAOF Saorge 5.40 78 Pn **Pn** 12 15 43.5 +2.4
QUIF Quistinic 5.40 335 *e*Pn **Pn** 12 15 41.1 0.0
QUIF *e*Sn **Sn** 12 16 41.8 -1.4
QUIF *e*Sg **Sg** 12 17 13.3 -0.8
32nm,0.4s,SNR=1.0
QUIF Quistinic 5.40 335 Pn **Pn** 12 15 41.1 0.0
QUIF Sn **Sn** 12 16 41.8 -1.4
QUIF Lg 12 17 13.3
16nm,0.4s
QUIF Quistinic 5.40 335 Pn **Pn** 12 15 41.1 0.0
QUIF Sn **Sn** 12 16 41.8 -1.4
QUIF Lg 12 17 13.3
16nm,0.4s
QUIF Quistinic 5.40 335 *e*Pn **Pn** 12 15 41.1 0.0
QUIF *e*Sg **Sg** 12 17 13.3 -0.8
16nm,0.4s,SNR=1.0
EPON Pontenova 5.41 275 Pn **Pn** 12 15 43.6 +2.4
EPON Sn **Sn** 12 16 44.7 +1.4
EPON Pontenova 5.41 275 Pn **Pn** 12 15 43.6 +2.4
2.8nm,0.2s,SNR=18
EPON Sn **Sn** 12 16 44.7 +1.4
4.5nm,0.2s,SNR=7.9
EPON Pontenova 5.41 275 Pn **Pn** 12 15 43.6 +2.4
2.8nm,0.2s,SNR=18
EPON Sn **Sn** 12 16 44.7 +1.4
4.5nm,0.2s,SNR=7.9
EPON Pontenova 5.41 275 Pn **Pn** 12 15 43.6 +2.5
2.8nm,0.2s,SNR=18
EPON Sn **Sn** 12 16 44.7 +1.4
4.5nm,0.2s,SNR=7.9
CABF La Chapelle 5.46 48 *e*Pg **Pg** 12 16 05.1 -0.2
CABF *e*Sg **Sg** 12 17 15.5 -0.5
118nm,0.7s
CABF La Chapelle 5.46 48 *e*Pn **Pn** 12 15 43.1 +1.2
CABF *e*Pg **Pg** 12 16 05.1 -0.2
CABF *e*Sg **Sg** 12 17 15.5 -0.5
CABF La Chapelle 5.46 48 Pn **Pn** 12 15 43.1 +1.2
CABF Pg **Pg** 12 16 05.1 -0.2
CABF Lg 12 17 15.5
59nm,0.7s
CABF La Chapelle 5.46 48 Pn **Pn** 12 15 43.1 +1.2
CABF Pg **Pg** 12 16 05.1 -0.2
CABF Lg 12 17 15.5
59nm,0.7s
CABF La Chapelle 5.46 48 *e*Pn **Pn** 12 15 43.1 +1.2
SNR=1.0
CABF La Chapelle 5.46 48 *e*Pg **Pg** 12 16 05.1 -0.2
CABF *e*Sg **Sg** 12 17 15.5 -0.5
59nm,0.7s
ERUA La Rua 5.48 265 Pn **Pn** 12 15 43.6 +1.5
ERUA Sn **Sn** 12 16 43.2 -1.8
ERUA La Rua 5.48 265 Pn **Pn** 12 15 43.6 +1.5
2.5nm,0.2s,SNR=7.9
ERUA Sn **Sn** 12 16 43.2 -1.8
15nm,0.4s,SNR=7.9
ERUA La Rua 5.48 265 Pn **Pn** 12 15 43.6 +1.5
2.5nm,0.2s,SNR=7.9
ERUA Sn **Sn** 12 16 43.2 -1.8
15nm,0.4s,SNR=7.9
ERUA La Rua 5.48 265 Pn **Pn** 12 15 43.6 +1.5
2.5nm,0.2s,SNR=7.9
LDF La Druitiere 5.53 358 *e*Pg **Pg** 12 16 06.0 -0.6
SNR=1.0
LDF *e*Sn **Sn** 12 16 45.1 -1.2
LDF *e*Sg **Sg** 12 17 18.0 -0.1
75nm,0.5s
LDF La Druitiere 5.53 358 *e*Pn **Pn** 12 15 42.7 -0.1
LDF *e*Pg **Pg** 12 16 06.0 -0.6
LDF *e*Sn **Sn** 12 16 45.1 -1.2
LDF *e*Sg **Sg** 12 17 18.0 -0.1
LDF La Druitiere 5.53 358 *e*Pn **Pn** 12 15 42.7 -0.1
SNR=1.0
LDF La Druitiere 5.53 358 *e*Pg **Pg** 12 16 06.0 -0.6
SNR=1.0

LDF eSn Sn 12 16 45.1 -1.2
LDF eSg Sg 12 17 18.0 -0.1
37nm,0.5s
SGMF Saint Gilles 5.54 340 ePg Pg 12 16 06.5 -0.3
SNR=1.0
SGMF eSn Sn 12 16 43.9 -2.7
SGMF eSg Sg 12 17 18.4 -0.1
61nm,0.5s
SGMF Saint Gilles 5.54 340 ePn Pn 12 15 42.4 -0.6
SGMF ePg Pg 12 16 06.5 -0.3
SGMF eSn Sn 12 16 43.9 -2.7
SGMF eSg Sg 12 17 18.4 -0.1
SGMF Saint Gilles 5.54 340 Pn Pn 12 15 42.4 -0.6
SGMF Pg Pg 12 16 06.5 -0.3
SGMF Sn Sn 12 16 43.9 -2.7
SGMF Lg 12 17 18.4
31nm,0.5s
SGMF Saint Gilles 5.54 340 Pn Pn 12 15 42.4 -0.6
SGMF Pg Pg 12 16 06.5 -0.3
SGMF Sn Sn 12 16 43.9 -2.7
SGMF Lg 12 17 18.4
31nm,0.5s
SGMF Saint Gilles 5.54 340 ePn Pn 12 15 42.4 -0.6
SNR=1.0
SGMF Saint Gilles 5.54 340 ePg Pg 12 16 06.5 -0.3
SNR=1.0
SGMF eSn Sn 12 16 43.9 -2.7
SGMF eSg Sg 12 17 18.4 -0.1
31nm,0.5s
FLN La Foliniere 5.72 355 eSn Sn 12 16 48.3 -2.6
FLN eSg Sg 12 17 23.1 -1.0
34nm,0.3s,baz=167
FLN La Foliniere 5.72 355 Sn Sn 12 16 48.3 -2.6
FLN Lg 12 17 23.1
17nm,0.3s
FLN La Foliniere 5.72 355 Sn Sn 12 16 48.3 -2.6
FLN Lg 12 17 23.1
17nm,0.3s
FLN La Foliniere 5.72 355 eSn Sn 12 16 48.3 -2.6
FLN eSg Sg 12 17 23.1 -1.0
17nm,0.3s
MVO Moncorvo 5.73 253 ePn Pn 12 15 46.5 +0.9
MVO eSn Sn 12 16 48.9 -2.4
MVO eSg Sg 12 17 17.3 -7.2
MVO A 12 17 30.4
26nm,0.6s
MVO Moncorvo 5.73 253 ePn Pn 12 15 46.5 +0.9
EBAN Banos Encina 5.78 213 Pn Pn 12 15 45.3 -1.0
EBAN Sn Sn 12 16 46.5 -5.9
EBAN Banos Encina 5.78 213 Pn Pn 12 15 45.3 -1.0
0.8nm,0.1s,SNR=14
EBAN Sn Sn 12 16 46.5 -5.9
2.7nm,0.1s,SNR=7.9
EBAN Banos Encina 5.78 213 Pn Pn 12 15 45.3 -1.0
0.8nm,0.1s,SNR=14
EBAN Sn Sn 12 16 46.5 -5.9
2.7nm,0.1s,SNR=7.9
EBAN Banos Encina 5.78 213 Pn Pn 12 15 45.3 -1.0
0.8nm,0.1s,SNR=14
ROSF Rostrenen 5.81 336 ePn Pn 12 15 47.1 +0.4
SNR=1.0
ROSF Rostrenen 5.81 336 eP Pn 12 15 52.2 +5.5
ROSF eSn Sn 12 16 49.3 -4.0
ROSF eSg Sg 12 17 27.3 +0.1
34nm,0.6s,SNR=1.0
ROSF Rostrenen 5.81 336 eP Pn 12 15 52.2 +5.5
ROSF eSn Sn 12 16 49.3 -4.0
ROSF eSg Sg 12 17 27.3 +0.1
ROSF Rostrenen 5.81 336 Pn Pn 12 15 47.1 +0.4
ROSF Sn Sn 12 16 49.3 -4.0
ROSF Lg 12 17 27.3
17nm,0.6s
ROSF Rostrenen 5.81 336 Pn Pn 12 15 47.1 +0.4
ROSF Sn Sn 12 16 49.3 -4.0
ROSF Lg 12 17 27.3
17nm,0.6s
ROSF Rostrenen 5.81 336 ePn Pn 12 15 47.1 +0.4
SNR=1.0
ROSF Rostrenen 5.81 336 eP Pn 12 15 52.2 +5.5
ROSF eSn Sn 12 16 49.3 -4.0
ROSF eSg Sg 12 17 27.3 +0.1
17nm,0.6s,SNR=1.0
EQES Quesada 5.83 207 Pn Pn 12 15 46.5 -0.6
EQES Sn Sn 12 16 49.2 -4.6
EQES Quesada 5.83 207 Pn Pn 12 15 46.5 -0.6
0.1nm,0.1s,SNR=31
EQES Sn Sn 12 16 49.2 -4.6
0.6nm,0.1s,SNR=7.9
EQES Lg 12 17 24.4
9.6nm,0.5s,SNR=7.9
EQES Quesada 5.83 207 Pn Pn 12 15 46.5 -0.6
0.1nm,0.1s,SNR=31
EQES Sn Sn 12 16 49.2 -4.6
0.6nm,0.1s,SNR=7.9
EQES Lg 12 17 24.4
9.6nm,0.5s,SNR=7.9
EQES Quesada 5.83 207 Pn Pn 12 15 46.5 -0.6
0.1nm,0.1s,SNR=31
BST Brest 6.04 332 Pn Pn 12 15 51.3 +1.5
BST Brest 6.04 332 Pn Pn 12 15 51.3 +1.5
EADA Adamuz 6.11 218 Pn Pn 12 15 50.1 -0.8
EADA Sn Sn 12 16 56.3 -4.5
EADA Adamuz 6.11 218 Pn Pn 12 15 50.1 -0.8
0.4nm,0.1s,SNR=29
EADA Sn Sn 12 16 56.3 -4.5
1.2nm,0.1s,SNR=7.9
EADA Adamuz 6.11 218 Pn Pn 12 15 50.1 -0.8
0.4nm,0.1s,SNR=29
EADA Sn Sn 12 16 56.3 -4.5
1.2nm,0.1s,SNR=7.9
EADA Adamuz 6.11 218 Pn Pn 12 15 50.1 -0.8
0.4nm,0.1s,SNR=29
SFTF Sexfontaines 6.14 32 ePg Pg 12 16 17.3 -0.9
SFTF eSg Sg 12 17 37.3 -0.4
56nm,0.5s
SFTF Sexfontaines 6.14 32 ePn Pn 12 15 52.3 +1.1
SFTF ePg Pg 12 16 17.3 -0.9
SFTF eSg Sg 12 17 37.3 -0.4
SFTF Sexfontaines 6.14 32 Pn Pn 12 15 52.3 +1.1
SFTF Pg Pg 12 16 17.3 -0.9
SFTF Lg 12 17 37.3
56nm,0.5s
SFTF Sexfontaines 6.14 32 Pn Pn 12 15 52.3 +1.1
SFTF Pg Pg 12 16 17.3 -0.9
SFTF Lg 12 17 37.3
56nm,0.5s
SFTF Sexfontaines 6.14 32 ePn Pn 12 15 52.3 +1.1
SFTF Sexfontaines 6.14 32 ePg Pg 12 16 17.3 -0.9
SFTF eSg Sg 12 17 37.3 -0.4
28nm,0.5s
PVRL Vila Real 6.17 256 ePn Pn 12 15 52.5 +0.8
PVRL eSn Sn 12 16 58.8 -3.4
PVRL eSg Sg 12 17 30.7 -8.1
PVRL A 12 17 41.4
15nm,0.6s
PVRL Vila Real 6.17 256 Pn Pn 12 15 52.5 +0.8
PVRL Sn Sn 12 16 58.8 -3.4
PVRL Lg 12 17 30.7
7.3nm,0.6s
PVRL Vila Real 6.17 256 Pn Pn 12 15 52.5 +0.8
PVRL Sn Sn 12 16 58.8 -3.4
PVRL Lg 12 17 30.7
7.3nm,0.6s
PVRL Vila Real 6.17 256 ePn Pn 12 15 52.5 +0.8
ELOB Lobios 6.25 262 Pn Pn 12 15 53.5 +0.7
ELOB Sn Sn 12 17 02.6 -1.6
ELOB Lobios 6.25 262 Pn Pn 12 15 53.5 +0.7
0.4nm,0.1s,SNR=12
ELOB Sn Sn 12 17 00.0 -4.2
2.1nm,0.2s,SNR=7.9
ELOB Lobios 6.25 262 Pn Pn 12 15 53.5 +0.7
0.4nm,0.1s,SNR=12
ELOB Sn Sn 12 17 00.0 -4.2
2.1nm,0.2s,SNR=7.9
ELOB Lobios 6.25 262 Pn Pn 12 15 53.5 +0.7
0.4nm,0.1s,SNR=12
PCAB Cabril 6.27 260 ePn Pn 12 15 53.9 +0.9
PCAB eSn Sn 12 17 01.6 -2.9
PCAB eSg Sg 12 17 33.5 -8.3
PCAB A 12 17 51.2
12nm,0.6s
PCAB Cabril 6.27 260 Pn Pn 12 15 53.9 +0.9
PCAB Sn Sn 12 17 01.6 -2.9
PCAB Lg 12 17 33.5
6.2nm,0.6s
PCAB Cabril 6.27 260 Pn Pn 12 15 53.9 +0.9
PCAB Sn Sn 12 17 01.6 -2.9
PCAB Lg 12 17 33.5
6.2nm,0.6s
PCAB Cabril 6.27 260 ePn Pn 12 15 53.9 +0.9
MEZF Maizieres J'vi 6.39 30 eP Pn 12 16 00.5 +5.9
MEZF Maizieres J'vi 6.39 30 ePg Pg 12 16 21.3 -1.7
baz=210
MEZF eSg Sg 12 17 44.2 -1.5
65nm,0.5s
MEZF Maizieres J'vi 6.39 30 ePn Pn 12 15 55.8 +1.2
MEZF ePg Pg 12 16 21.3 -1.7
MEZF eSg Sg 12 17 44.2 -1.5
MEZF Maizieres J'vi 6.39 30 Pn Pn 12 15 55.8 +1.2
MEZF Pg Pg 12 16 21.3 -1.7
MEZF Lg 12 17 44.2
65nm,0.5s
MEZF Maizieres J'vi 6.39 30 Pn Pn 12 15 55.8 +1.2
MEZF Pg Pg 12 16 21.3 -1.7
MEZF Lg 12 17 44.2
65nm,0.5s
MEZF Maizieres J'vi 6.39 30 ePn Pn 12 15 55.8 +1.2
MEZF Maizieres J'vi 6.39 30 eP Pn 12 16 00.5 +5.9
MEZF Maizieres J'vi 6.39 30 ePg Pg 12 16 21.3 -1.7
MEZF eSg Sg 12 17 44.2 -1.5
32nm,0.5s
MTE Manteigas 6.40 248 ePn Pn 12 15 55.0 +0.2
MTE eSn Sn 12 17 04.8 -3.0
MTE Manteigas 6.40 248 ePn Pn 12 15 55.0 +0.2
STS Santiago 6.45 271 Pn Pn 12 15 56.7 +1.2
2.2nm,0.2s,SNR=7.9
STS Santiago 6.45 271 Pn Pn 12 15 56.7 +1.2
2.2nm,0.2s,SNR=7.9
PGF Pioggiola 6.47 92 ePn Pn 12 15 56.0 +0.3
SNR=1.0
PGF eSn Sn 12 17 05.7 -3.7
12nm,0.4s,SNR=1.0
PGF Pioggiola 6.47 92 Pn Pn 12 15 56.0 +0.3
PGF Sn Sn 12 17 05.7 -3.7
5.8nm,0.4s
PGF Pioggiola 6.47 92 Pn Pn 12 15 56.0 +0.3
PGF Sn Sn 12 17 05.7 -3.7
5.8nm,0.4s
PGF Pioggiola 6.47 92 ePn Pn 12 15 56.0 +0.3
SNR=1.0
PGF eSn Sn 12 17 05.7 -3.7
5.8nm,0.4s,SNR=1.0
ELUQ Luque 6.49 214 Pn Pn 12 15 56.7 +0.6
3.7nm,0.2s,SNR=7.9
ELUQ Sn Sn 12 17 05.7 -4.3
2.3nm,0.3s,SNR=7.9
ELUQ Lg 12 17 46.8
1.8nm,0.2s,SNR=7.9
ELUQ Luque 6.49 214 Pn Pn 12 15 56.7 +0.6
3.7nm,0.2s,SNR=7.9
ELUQ Sn Sn 12 17 05.7 -4.3
2.3nm,0.3s,SNR=7.9
ELUQ Lg 12 17 46.8
1.8nm,0.2s,SNR=7.9
EQUE Quentar 6.50 207 Pn Pn 12 15 56.4 +0.2
0.4nm,0.2s,SNR=29
EQUE Sn Sn 12 17 05.5 -4.8
0.2nm,0.1s,SNR=7.9
EQUE Lg 12 17 46.7
8.2nm,0.4s,SNR=7.9
EQUE Quentar 6.50 207 Pn Pn 12 15 56.4 +0.2
0.4nm,0.2s,SNR=29
EQUE Sn Sn 12 17 05.5 -4.8
0.2nm,0.1s,SNR=7.9
EQUE Lg 12 17 46.7
8.2nm,0.4s,SNR=7.9
EQUE Quentar 6.50 207 Pn Pn 12 15 56.4 +0.2
0.4nm,0.2s,SNR=29
PVIS Viseu 6.51 252 ePn Pn 12 15 56.5 +0.2
PVIS eSn Sn 12 17 07.6 -2.8
PVIS A 12 17 58.7
12nm,0.6s
PVIS Viseu 6.51 252 Pn Pn 12 15 56.5 +0.2
PVIS Sn Sn 12 17 07.6 -2.8
6.0nm,0.6s
PVIS Viseu 6.51 252 Pn Pn 12 15 56.5 +0.2
PVIS Sn Sn 12 17 07.6 -2.8
6.0nm,0.6s
PVIS Viseu 6.51 252 ePn Pn 12 15 56.5 +0.2
HAU Haudompre 6.54 39 ePg Pg 12 16 24.9 -1.0
HAU eSg Sg 12 17 48.8 -1.7
30nm,0.4s
HAU Haudompre 6.54 39 ePn Pn 12 15 57.5 +0.8
HAU ePg Pg 12 16 24.9 -1.0
HAU eSg Sg 12 17 48.8 -1.7
HAU Haudompre 6.54 39 Pn Pn 12 15 57.5 +0.8
HAU Pg Pg 12 16 24.9 -1.0
HAU Lg 12 17 48.8
15nm,0.4s
HAU Haudompre 6.54 39 Pn Pn 12 15 57.5 +0.8
HAU Pg Pg 12 16 24.9 -1.0
HAU Lg 12 17 48.8
15nm,0.4s
HAU Haudompre 6.54 39 ePn Pn 12 15 57.5 +0.8
SNR=1.0
HAU Haudompre 6.54 39 ePg Pg 12 16 24.9 -1.0
HAU eSg Sg 12 17 48.8 -1.7
15nm,0.4s
EBER Berja 6.61 202 Pn Pn 12 15 59.6 +1.8
EBER Berja 6.61 202 Pn Pn 12 15 59.3 +1.6
1.2nm,0.2s,SNR=14
EBER Berja 6.61 202 Pn Pn 12 15 59.3 +1.6
1.2nm,0.2s,SNR=14
EBER Berja 6.61 202 Pn Pn 12 15 59.6 +1.8
1.2nm,0.2s,SNR=14
PCBR Castelo Branco 6.63 243 ePn Pn 12 15 58.1 +0.1
PCBR eSn Sn 12 17 10.0 -3.5
PCBR A 12 17 57.3
10nm,0.8s
PCBR Castelo Branco 6.63 243 Pn Pn 12 15 58.1 +0.1
PCBR Sn Sn 12 17 10.0 -3.5
5.1nm,0.8s
PCBR Castelo Branco 6.63 243 Pn Pn 12 15 58.1 +0.1
PCBR Sn Sn 12 17 10.0 -3.5
5.1nm,0.8s
PCBR Castelo Branco 6.63 243 ePn Pn 12 15 58.1 +0.1
HINF Hinteralfeld 6.65 42 ePg Pg 12 16 25.9 -2.0
HINF eSg Sg 12 17 52.4 -1.5
16nm,0.3s
HINF Hinteralfeld 6.65 42 ePn Pn 12 15 58.6 +0.4
HINF ePg Pg 12 16 25.9 -2.0
HINF eSg Sg 12 17 52.4 -1.5
HINF Hinteralfeld 6.65 42 Pn Pn 12 15 58.6 +0.4
HINF Pg Pg 12 16 25.9 -2.0
HINF Lg 12 17 52.4
8.2nm,0.3s
HINF Hinteralfeld 6.65 42 Pn Pn 12 15 58.6 +0.4
HINF Pg Pg 12 16 25.9 -2.0
HINF Lg 12 17 52.4
8.2nm,0.3s
HINF Hinteralfeld 6.65 42 ePn Pn 12 15 58.6 +0.4
HINF Hinteralfeld 6.65 42 ePg Pg 12 16 25.9 -2.0
HINF eSg Sg 12 17 52.4 -1.5
8.2nm,0.3s
EZAM Zamans 6.65 265 Pn Pn 12 15 58.4 +0.1
2.3nm,0.3s,SNR=7.9
EZAM Sn Sn 12 17 08.5 -5.5
6.5nm,0.3s,SNR=7.9
EZAM Zamans 6.65 265 Pn Pn 12 15 58.4 +0.1
2.3nm,0.3s,SNR=7.9
EZAM Sn Sn 12 17 08.5 -5.5
6.5nm,0.3s,SNR=7.9
RFYF Reffroy 6.65 32 ePg Pg 12 16 26.4 -1.6
baz=212
RFYF eSg Sg 12 17 52.1 -2.0
36nm,0.3s,baz=210
RFYF Reffroy 6.65 32 Pg Pg 12 16 26.4 -1.6
RFYF Lg 12 17 52.1
36nm,0.3s
RFYF Reffroy 6.65 32 Pg Pg 12 16 26.4 -1.6
RFYF Lg 12 17 52.1
36nm,0.3s
RFYF Reffroy 6.65 32 ePg Pg 12 16 26.4 -1.6
RFYF eSg Sg 12 17 52.1 -2.0
18nm,0.3s
EMAZ Mazaricos 6.76 272 Pn Pn 12 16 00.7 +1.0
EMAZ Mazaricos 6.76 272 Pn Pn 12 16 00.7 +1.0
2.4nm,0.1s,SNR=7.4
EMAZ Sn Sn 12 17 13.4 -3.1
5.2nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.76 272 Pn Pn 12 16 00.7 +1.0
2.4nm,0.1s,SNR=7.4
EMAZ Sn Sn 12 17 13.4 -3.1
5.2nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.76 272 Pn Pn 12 16 00.7 +1.0
2.4nm,0.1s,SNR=7.4
PMRV Marv??o 6.80 240 ePn Pn 12 16 00.4 +0.1
PMRV eSn Sn 12 17 13.7 -4.0
PMRV A 12 17 15.4
18nm,0.5s
PMRV Marv??o 6.80 240 Pn Pn 12 16 00.4 +0.1
PMRV Sn Sn 12 17 13.7 -4.0
9.1nm,0.5s
PMRV Marv??o 6.80 240 Pn Pn 12 16 00.4 +0.1
PMRV Sn Sn 12 17 13.7 -4.0
9.1nm,0.5s
PMRV Marv??o 6.80 240 ePn Pn 12 16 00.4 +0.1
ELOJ Sierra Loja 6.80 211 Pn Pn 12 16 01.2 +0.9
ELOJ Sierra Loja 6.80 211 Pn Pn 12 16 01.2 +0.9
1.6nm,0.2s,SNR=11
ELOJ Sierra Loja 6.80 211 Pn Pn 12 16 01.2 +0.9
1.6nm,0.2s,SNR=11
ELOJ Sierra Loja 6.80 211 Pn Pn 12 16 01.2 +0.8
1.6nm,0.2s,SNR=11
EBAD Badajoz 6.98 234 ⇑Pn Pn 12 16 02.2 -0.6
EBAD Sn Sn 12 17 17.1 -5.0
EBAD Badajoz 6.98 234 ⇑Pn Pn 12 16 02.2 -0.6
2.0nm,0.1s,SNR=18
EBAD Sn Sn 12 17 17.1 -5.0
3.0nm,0.3s,SNR=7.9
EBAD Badajoz 6.98 234 ⇑Pn Pn 12 16 02.2 -0.6
2.0nm,0.1s,SNR=18
EBAD Sn Sn 12 17 17.1 -5.0
3.0nm,0.3s,SNR=7.9
EBAD Badajoz 6.98 234 Pn Pn 12 16 02.2 -0.6
2.0nm,0.1s,SNR=18
PESTR Estremoz 7.26 237 ePn Pn 12 16 06.5 -0.1
PESTR eSn Sn 12 17 24.4 -4.5
PESTR A 12 18 22.3
5.7nm,0.6s
PESTR Estremoz 7.26 237 Pn Pn 12 16 06.5 -0.1
PESTR Sn Sn 12 17 24.4 -4.5
2.8nm,0.6s
PESTR Estremoz 7.26 237 Pn Pn 12 16 06.5 -0.1
PESTR Sn Sn 12 17 24.4 -4.5
2.8nm,0.6s
PESTR Estremoz 7.26 237 ePn Pn 12 16 06.5 -0.1
CDF Champ du Feu 7.26 40 ePg Pg 12 16 37.5 -2.2
CDF eSg Sg 12 18 11.7 -2.0
39nm,0.8s
CDF Champ du Feu 7.26 40 Pg Pg 12 16 37.5 -2.2
CDF Lg 12 18 11.7
20nm,0.8s
CDF Champ du Feu 7.26 40 Pg Pg 12 16 37.5 -2.2
CDF Lg 12 18 11.7
20nm,0.8s
CDF Champ du Feu 7.26 40 ePg Pg 12 16 37.5 -2.2
CDF eSg Sg 12 18 11.7 -2.0
20nm,0.8s
PTOM Tomar 7.36 245 ePn Pn 12 16 08.7 +0.7
PTOM Tomar 7.36 245 Pn Pn 12 16 08.7 +0.7
PTOM Tomar 7.36 245 Pn Pn 12 16 08.7 +0.7
PTOM Tomar 7.36 245 ePn Pn 12 16 08.7 +0.7
PBAR Barrancos 7.38 231 ePn Pn 12 16 08.2 -0.1
PBAR eSn Sn 12 17 26.8 -5.2
PBAR A 12 17 48.2
5.5nm,0.6s
PBAR Barrancos 7.38 231 Pn Pn 12 16 08.2 -0.1
PBAR Sn Sn 12 17 26.8 -5.2
5.5nm,0.6s
PBAR Barrancos 7.38 231 Pn Pn 12 16 08.2 -0.1
PBAR Sn Sn 12 17 26.8 -5.2
5.5nm,0.6s
PBAR Barrancos 7.38 231 ePn Pn 12 16 08.2 -0.1
EMIN Mina Concepcio 7.47 227 Pn Pn 12 16 08.9 -0.6
EMIN Sn Sn 12 17 27.6 -6.5
EMIN Mina Concepcio 7.47 227 Pn Pn 12 16 08.9 -0.6
0.6nm,0.2s,SNR=7.9
EMIN Sn Sn 12 17 27.6 -6.5
0.4nm,0.2s,SNR=7.9
EMIN Mina Concepcio 7.47 227 Pn Pn 12 16 08.9 -0.6
0.6nm,0.2s,SNR=7.9
EMIN Sn Sn 12 17 27.6 -6.5
0.4nm,0.2s,SNR=7.9
EMIN Mina Concepcio 7.47 227 Pn Pn 12 16 08.9 -0.6
SNR=7.9
BAIF Baives 7.51 20 ePn Pn 12 16 09.4 -0.6
BAIF Baives 7.51 20 eP Pn 12 16 15.9 +5.9
BAIF eSn Sn 12 17 31.9 -3.1
BAIF eSg Sn 12 18 19.8 +45
34nm,0.8s
BAIF Baives 7.51 20 eP Pn 12 16 15.9 +5.9
BAIF eSn Sn 12 17 31.9 -3.1
BAIF eSg Sn 12 18 19.8 +45
BAIF Baives 7.51 20 Pn Pn 12 16 09.4 -0.6
BAIF Sn Sn 12 17 31.9 -3.1
BAIF Lg 12 18 19.8
17nm,0.8s
BAIF Baives 7.51 20 Pn Pn 12 16 09.4 -0.6
BAIF Sn Sn 12 17 31.9 -3.1
BAIF Lg 12 18 19.8
17nm,0.8s
BAIF Baives 7.51 20 ePn Pn 12 16 09.4 -0.6
BAIF Baives 7.51 20 eP Pn 12 16 15.9 +5.9
BAIF eSn Sn 12 17 31.9 -3.1
BAIF eSg Sn 12 18 19.8 +45
17nm,0.8s
EMIJ Mijas 7.55 212 Pn Pn 12 16 13.5 +2.8
EMIJ Mijas 7.55 212 Pn Pn 12 16 10.3 -0.3
5.3nm,0.7s,SNR=4.6
EMIJ Sn Sn 12 17 28.9 -7.3
4.5nm,0.4s,SNR=7.9
EMIJ Mijas 7.55 212 Pn Pn 12 16 10.3 -0.3
5.3nm,0.7s,SNR=4.6
EMIJ Sn Sn 12 17 28.9 -7.3
4.5nm,0.4s,SNR=7.9
EMIJ Mijas 7.55 212 Pn Pn 12 16 13.5 +2.9
5.3nm,0.7s,SNR=4.6
EALB Alboran 7.55 201 Pn Pn 12 16 10.8 +0.2
5.6nm,0.2s,SNR=7.9
EALB Alboran 7.55 201 Pn Pn 12 16 10.8 +0.2
5.6nm,0.2s,SNR=7.9
GIVF Givet 7.71 23 eP Pn 12 16 19.0 +6.3
GIVF eSn Sn 12 17 35.8 -4.2
GIVF eSg Sn 12 18 25.8 +46
44nm,0.7s
GIVF Givet 7.71 23 Pn Pn 12 16 19.0 +6.3
GIVF Sn Sn 12 17 35.8 -4.2
GIVF Lg 12 18 25.8
22nm,0.7s
GIVF Givet 7.71 23 Pn Pn 12 16 19.0 +6.3
GIVF Sn Sn 12 17 35.8 -4.2
GIVF Lg 12 18 25.8
22nm,0.7s
GIVF Givet 7.71 23 eP Pn 12 16 19.0 +6.3
GIVF eSn Sn 12 17 35.8 -4.2
GIVF eSg Sn 12 18 25.8 +46
22nm,0.7s
EVO Evora 7.72 237 ePn Pn 12 16 13.1 +0.1
EVO eSn Sn 12 17 35.8 -4.6
EVO Evora 7.72 237 Pn Pn 12 16 13.1 +0.1
EVO Sn Sn 12 17 35.8 -4.6
EVO Evora 7.72 237 Pn Pn 12 16 13.1 +0.1
EVO Sn Sn 12 17 35.8 -4.6
EVO Evora 7.72 237 ePn Pn 12 16 13.1 +0.1
MOE Montemor 7.94 238 ePn Pn 12 16 16.0 +0.1
MOE eSn Sn 12 17 39.5 -6.2
MOE Montemor 7.94 238 ePn Pn 12 16 16.0 +0.1
PBEJ Beja 7.96 233 ePn Pn 12 16 15.7 -0.6
PBEJ eSn Sn 12 17 41.0 -5.3
PBEJ Beja 7.96 233 Pn Pn 12 16 15.7 -0.6
PBEJ Sn Sn 12 17 41.0 -5.3
PBEJ Beja 7.96 233 Pn Pn 12 16 15.7 -0.6
PBEJ Sn Sn 12 17 41.0 -5.3
PBEJ Beja 7.96 233 ePn Pn 12 16 15.7 -0.6
PMAFR Mafra 8.29 243 ePn Pn 12 16 21.2 +0.5
PMAFR eSn Sn 12 17 51.3 -2.9
PMAFR A 12 17 59.9
16nm,0.6s
PMAFR Mafra 8.29 243 ePn Pn 12 16 21.2 +0.5
PVAQ Vaqueiros 8.30 230 ePn Pn 12 16 20.4 -0.6
PVAQ eSn Sn 12 17 47.9 -6.8
PVAQ A 12 18 23.7
2.9nm,0.6s

PVAQ Vaqueiros 8.30 230 Pn **Pn** **12 16 20.4 -0.6**
PVAQ Sn **Sn** **12 17 47.9 -6.8**
2.9nm,0.6s
PVAQ Vaqueiros 8.30 230 Pn **Pn** **12 16 20.4 -0.6**
PVAQ Sn **Sn** **12 17 47.9 -6.8**
2.9nm,0.6s
PVAQ Vaqueiros 8.30 230 *e*Pn **Pn** **12 16 20.4 -0.6**
PBDV Barranco-do-Ve 8.54 230 *e*Pn **Pn** **12 16 24.6 +0.4**
PBDV *e*Sn **Sn** **12 17 56.2 -4.3**
PBDV Barranco-do-Ve 8.54 230 Pn **Pn** **12 16 24.6 +0.4**
PBDV Sn **Sn** **12 17 56.2 -4.3**
PBDV Barranco-do-Ve 8.54 230 Pn **Pn** **12 16 24.6 +0.4**
PBDV Sn **Sn** **12 17 56.2 -4.3**
PBDV Barranco-do-Ve 8.54 230 *e*Pn **Pn** **12 16 24.6 +0.4**
PTEO Sao Teotonio 8.79 234 *e*Pn **Pn** **12 16 28.0 +0.4**
PTEO *e*Sn **Sn** **12 18 01.5 -5.1**
PTEO Sao Teotonio 8.79 234 Pn **Pn** **12 16 28.0 +0.4**
PTEO Sn **Sn** **12 18 01.5 -5.1**
PTEO Sao Teotonio 8.79 234 Pn **Pn** **12 16 28.0 +0.4**
PTEO Sn **Sn** **12 18 01.5 -5.1**
PTEO Sao Teotonio 8.79 234 *e*Pn **Pn** **12 16 28.0 +0.4**
MORF Marmelete 8.91 233 *e*Pn **Pn** **12 16 29.6 +0.4**
MORF *e*Sn **Sn** **12 18 04.0 -5.5**
MORF Marmelete 8.91 233 Pn **Pn** **12 16 29.6 +0.4**
MORF Sn **Sn** **12 18 04.0 -5.5**
MORF Marmelete 8.91 233 Pn **Pn** **12 16 29.6 +0.4**
MORF Sn **Sn** **12 18 04.0 -5.5**
MORF Marmelete 8.91 233 *e*Pn **Pn** **12 16 29.6 +0.4**
PFVI Vila Bisbo 9.13 233 *e*Pn **Pn** **12 16 32.7 +0.5**
PFVI *e*Sn **Sn** **12 18 09.8 -5.1**
PFVI Vila Bisbo 9.13 233 *e*Pn **Pn** **12 16 32.7 +0.5**
CMLA Cha da Macela 20.28 264 *e*LR LR 12 23 30.8

IDC 03 12:54:16.8±6.1,**6°48N**×**73°52W,h141**km±34km,**mb3.0**/1, **mb1 3.4**/1,**mb1mx2.9**/19,**mbtmp3.0**/1,**Error ellipse: s-maj=166.8km s-min=33.8km az=95.0,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.80**	**207**	P	Pn	12 54 49.6	+0.5
	4.2nm,0.3s,baz=22,slow=5.8,SNR=4.9						
ROSC				S	Sn	12 55 14.9	+1.1
	12nm,0.3s,baz=74,slow=22,SNR=11						
YKA	**Yellowknife Ar**	**63.45**	**340**	P	P	13 04 31.3	0.0
	0.3nm,0.6s,baz=132,slow=6.6,SNR=9.2						
ASAR	**Alice Springs**	**148.59**	**234**	PKPbc	PKPbc	13 13 47.5	-0.6
	0.1nm,0.5s,baz=107,slow=3.2,SNR=4.0						
WRA	**Warramunga Arr**	**149.83**	**241**	PKPbc	PKPbc	13 13 50.9	-0.3
	0.3nm,0.5s,baz=114,slow=2.1,SNR=6.0						

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*ISCJB **03** 13:12:07.9*±*0.3,29°.83N*±*0°.03*×*139°.25E*±*0°.06, h443km*±*3km, mb3.9/32, Error ellipse: s-maj=8.5km s-min=5.1km az=171.8*
*NEIC **03** 13:12:08.9*±*0.8,29°.86N*×*139°.12E, h431km*±*8km, mb4.1/11, Error ellipse: s-maj=11.3km s-min=8.3km az=86.0*
*JMA **03** 13:12:08.1*±*0.2,29°.90N*×*139°.39E, h454km*±*4km, M4.1*
*IDC **03** 13:12:08.4*±*0.6,29°.83N*×*139°.06E, h422km*±*7km, mb3.4/17, mb1 3.5/21, mb1mx3.5/28, mbtmp3.4/21, Error ellipse: s-maj=14.1km s-min=8.6km az=76.0*
ISC 03 13:12:08.9±0.3,**29°.82N**±0°.03×**139°.24E**±0°.06,**h435**km±4km, **n71,**σ1°**06**/85,**mb3.9**/32,**1D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.32**	**8**	P	**P**	**13 13 18.3**	**+1.2**
JHJ2				S	**S**	**13 14 13.1**	**+0.4**
JHJ	**Hachijo jima 2**	**3.32**	**8**	P	**P**	**13 13 17.8**	**+0.6**
	51nm,0.3s,baz=91,slow=24,SNR=10						
JHJ				S	**S**	**13 14 11.0**	**-1.7**
	51nm,0.3s,baz=73,slow=22,SNR=7.2						
CBIJ	**Chichi jima**	**3.76**	**136**	P	**P**	**13 13 21.6**	**+0.6**
CBIJ				S	**S**	**13 14 18.9**	**-0.6**
CBIJ	**Chichi jima**	**3.76**	**136**	P	**P**	**13 13 21.1**	**+0.1**
	37nm,0.3s,baz=300,slow=6.5,SNR=19						
CBIJ				S	**S**	**13 14 18.0**	**-1.5**
	69nm,0.3s,baz=280,slow=22,SNR=15						
JHHJ	**Haha-jima-NKT**	**4.10**	**140**	P	**P**	**13 13 24.6**	**+0.5**
JHHJ				S	**S**	**13 14 23.7**	**-1.5**
JWZ	**Kozaga**	**4.76**	**322**	P	**P**	**13 13 31.0**	**+0.9**
JIE	**Ise**	**5.04**	**335**	P	**P**	**13 13 34.3**	**+1.5**
BSO1	**Boso 1**	**5.04**	**17**	P	**P**	**13 13 32.9**	**+0.1**
BSO1				S	**S**	**13 14 39.2**	**-2.0**
JOD2	**Odawara 2**	**5.43**	**359**	P	**P**	**13 13 36.3**	**-0.3**
JOD2				S	**S**	**13 14 46.6**	**-1.7**
JGF	**Kuroka**	**5.98**	**345**	P	**P**	**13 13 43.3**	**+1.0**
JMN	**Monobe**	**6.00**	**312**	P	**P**	**13 13 43.8**	**+1.3**
JRY	**Ryogami san**	**6.18**	**357**	P	**P**	**13 13 44.1**	**-0.3**
JRY				S	**S**	**13 15 01.5**	**-1.1**
JWT	**Wachi**	**6.33**	**330**	P	**P**	**13 13 47.0**	**+1.0**
JYT	**Yasato**	**6.44**	**7**	P	**P**	**13 13 45.7**	**-1.4**
JYT				S	**S**	**13 15 02.2**	**-5.3**
JAD	**Aida**	**6.67**	**321**	P	**P**	**13 13 50.4**	**+0.9**
MJAR	**Matsushiro Arr**	**6.76**	**353**	P	**P**	**13 13 49.5**	**-0.9**
	7.2nm,0.3s,baz=170,slow=10,SNR=86						
MAJO	**Matsushiro**	**6.76**	**353**	*e*P	**P**	**13 13 49.4**	**-1.1**
	53nm,0.3s						
MAJO				S	**S**	**13 15 14.9**	**+1.1**
MAT	**Matsushiro**	**6.76**	**353**	P	**P**	**13 13 49.6**	**-0.9**
MAT				*e*S	**S**	**13 15 08.5**	**-5.2**
MAT	**Matsushiro**	**6.76**	**353**	P	**P**	**13 13 50.0**	**-0.5**
JHS	**Saijyo**	**7.31**	**317**	P	**P**	**13 13 57.3**	**+0.8**
JHS				S	**S**	**13 15 24.8**	**+0.2**
JMM	**Marumori**	**8.13**	**9**	P	**P**	**13 14 05.3**	**0.0**
JMM				S	**S**	**13 15 37.2**	**-3.7**
JSD	**Sado**	**8.23**	**355**	P	**P**	**13 14 05.3**	**-1.2**
JYA	**Atsumi**	**8.76**	**2**	P	**P**	**13 14 13.2**	**+1.0**
JMK	**Ichinoseki**	**9.25**	**10**	P	**P**	**13 14 18.6**	**+1.0**
JMK				S	**S**	**13 16 00.3**	**-3.3**
JOM	**Ohasama**	**9.78**	**9**	P	**P**	**13 14 24.6**	**+1.2**
JOM				S	**S**	**13 16 14.3**	**+0.2**
JOW	**Kunigami**	**10.11**	**256**	P	**P**	**13 14 29.0**	**+1.7**
	3.0nm,0.3s,baz=94,slow=7.0,SNR=9.1						
JTM	**Tenmabayashi**	**11.04**	**7**	P	**P**	**13 14 38.6**	**+1.4**
JKE	**Kume jima 2**	**11.53**	**255**	P	**P**	**13 14 43.1**	**+0.3**
JOT	**Ohata**	**11.63**	**7**	P	**P**	**13 14 45.2**	**+1.6**
KSRS	**Korea Array**	**12.11**	**312**	P	**P**	**13 14 49.0**	**0.0**
	0.1nm,0.3s,baz=124,slow=11,SNR=5.2						
JKB	**Kayabe**	**12.13**	**6**	P	**P**	**13 14 50.1**	**+1.0**
JOSM	**Okushiri--Mats**	**12.24**	**1**	P	**P**	**13 14 51.5**	**+1.2**
ASAJ	**Asahikawa**	**14.52**	**10**	P	**P**	**13 15 16.7**	**+1.8**
	1.0nm,0.3s,baz=174,slow=9.7,SNR=11						
MDJ	**Mudanjiang**	**16.63**	**335**	*e*P	**P**	**13 15 36.9**	**-0.5**
	3.3nm,0.7s						
GUMO	**Guam**	**16.97**	**161**	P	**P**	**13 15 40.5**	**-1.0**
	38nm,0.8s						
ENH	**Enshi**	**25.73**	**279**	*e*P	**P**	**13 17 01.3**	**-1.4**
	19nm,0.7s,mb4.6						
XAN	**Xi'an**	**26.02**	**287**	P	**P**	**13 17 04.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
XAN				pmax	pmax		
	comp=Z,14nm,4.2s						
SONM	**Songino Array**	**30.96**	**315**	P	**P**	**13 17 48.1**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.1,baz=134,slow=10,SNR=4.4						
GTA	**Gaotai**	**33.60**	**297**	*e*P	**P**	**13 18 10.7**	**-0.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb3.9						
CHTO	**Chiang Mai**	**38.14**	**263**	⇓*e*P	**P**	**13 18 48.9**	**-0.4**
	comp=Z,14nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**38.29**	**262**	P	**P**	**13 18 50.1**	**-0.4**
	comp=Z,3.1nm,0.4s,mb4.0,baz=77,slow=4.4,SNR=27						
ZALV	**Zalesovo Beam**	**45.73**	**318**	P	**P**	**13 19 48.0**	**-1.1**
	comp=Z,1.3nm,0.4s,mb3.6,baz=89,slow=7.2,SNR=7.3						
ZALV				PcP	PcP	13 21 17.7	-0.6
	comp=Z,0.9nm,0.5s,baz=140,slow=4.6,SNR=5.1						
MKAR	**Makanchi Array**	**46.75**	**308**	P	**P**	**13 19 56.5**	**-0.6**
	comp=Z,0.8nm,0.3s,mb3.5,baz=84,slow=9.6,SNR=20						
WRAB	**Tennant Creek**	**49.69**	**186**	*e*P	**P**	**13 20 20.0**	**+0.6**
	comp=Z,1.3nm,0.3s,mb3.7						
WRA	**Warramunga Arr**	**49.70**	**186**	P	**P**	**13 20 20.3**	**+0.8**
	comp=Z,1.2nm,0.3s,mb3.7,baz=0.8,slow=7.7,SNR=58						
UCH	**Uchtor**	**52.63**	**302**	*e*P	**P**	**13 20 41.0**	**+0.3**
	comp=Z,5.3nm,1.1s,mb3.7						
AML	**Almayashu**	**53.25**	**302**	*e*P	**P**	**13 20 46.0**	**+0.8**
	comp=Z,2.8nm,0.5s,mb3.8						
ASAR	**Alice Springs**	**53.43**	**186**	P	**P**	**13 20 47.5**	**+1.0**
	comp=Z,1.0nm,0.5s,mb3.3,baz=23,slow=11,SNR=28						
BVAR	**Borovoye Array**	**54.29**	**316**	P	**P**	**13 20 52.2**	**-0.2**
	comp=Z,5.2nm,0.5s,mb4.0,baz=91,slow=7.6,SNR=44						
BVAR				PcP	PcP	13 21 50.4	+0.4
	comp=Z,1.0nm,0.5s,baz=42,slow=2.4,SNR=6.0						
ARU	**Arti**	**60.68**	**321**	*e*P	**P**	**13 21 35.6**	**-0.6**
	comp=Z,5.6nm,0.4s,mb4.3						
ABKAR	**Akbulak array**	**61.34**	**313**	*e*P	**P**	**13 21 39.7**	**-1.0**
	comp=Z,3.5nm,0.4s,mb4.1						
INK	**Inuvik**	**61.65**	**25**	P	**P**	**13 21 43.4**	**+1.0**
	comp=Z,1.3nm,0.9s,mb3.5,baz=226,slow=8.3,SNR=4.7						
KEV	**Kevo**	**69.55**	**340**	*e*p	**P**	**13 22 31.6**	**-0.6**
	comp=Z,0.6nm,0.3s,mb3.6						
ARCES	**ARCESS Array B**	**70.11**	**340**	P	**P**	**13 22 36.1**	**+0.6**
	comp=Z,2.5nm,0.4s,mb4.1,baz=71,slow=8.6,SNR=40						
YKA	**Yellowknife Ar**	**70.98**	**28**	P	**P**	**13 22 41.7**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.3,baz=299,slow=6.1,SNR=12						
YKA	**Yellowknife Ar**	**70.98**	**28**	P	**P**	**13 22 41.7**	**+0.9**
JOF	**Joensuu**	**71.49**	**333**	*e*p	**P**	**13 22 41.7**	**-2.1**
	comp=Z,4.4nm,0.6s,mb4.2						
KAF	**Kangasniemi**	**73.89**	**333**	*e*p	**P**	**13 22 55.9**	**-1.8**
	comp=Z,2.9nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**74.36**	**333**	P	**P**	**13 23 00.3**	**-0.1**
	comp=Z,2.6nm,0.4s,mb4.2,baz=68,slow=4.9,SNR=40						
UMR	**Umm Al-Rimmam**	**77.13**	**297**	*e*P	**P**	**13 23 15.6**	**-0.9**
UMR				AMb	AMB	13 23 16.4	
	comp=Z,16nm,0.5s,mb4.9						
MIB	**Mutribah**	**77.31**	**297**	*e*P	**P**	**13 23 16.5**	**-1.0**
MIB				AMb	AMB	13 23 17.6	
	comp=Z,16nm,0.6s,mb4.8						
RDF	**Al-Radifah**	**77.55**	**296**	*e*P	**P**	**13 23 17.9**	**-0.9**
RDF				AMb	AMB	13 23 18.9	
	comp=Z,16nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**78.89**	**322**	P	**P**	**13 23 25.1**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.9,baz=52,slow=4.6,SNR=8.5						
NB2	**NORSAR Subarra**	**80.11**	**337**	P	**P**	**13 23 31.6**	**-0.3**
	comp=Z,2.1nm,0.5s,mb4.0,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**80.11**	**337**	P	**P**	**13 23 31.9**	**0.0**
	comp=Z,2.2nm,0.5s,mb4.1,baz=46,slow=5.0,SNR=14						
NVAR	**Mina Array Bea**	**80.85**	**51**	P	**P**	**13 23 39.2**	**+2.9**
	comp=Z,0.4nm,0.3s,mb3.6,baz=305,slow=5.2,SNR=7.4						
BR131	**Keskin Array S**	**82.26**	**311**	*e*P	**P**	**13 23 43.3**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.7						
BRTR	**Keskin Array B**	**82.26**	**311**	P	**P**	**13 23 43.6**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.0,baz=100,slow=4.0,SNR=14						
PDAR	**Pinedale Array**	**84.07**	**44**	P	**P**	**13 23 54.9**	**+2.4**
	comp=Z,0.3nm,0.7s,mb3.1,baz=340,slow=7.7,SNR=3.1						
GERES	**GERESS Array B**	**87.83**	**327**	P	**P**	**13 24 09.8**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.6,baz=54,slow=6.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**120.85**	**310**	PKP	PKPdf	13 30 10.6	-0.7
	comp=Z,0.3nm,0.4s,baz=43,slow=1.8,SNR=6.7						

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*NIED **03** 13:17:00,24°.50N×121°.90E,h23km,Mw4.1 Best double couple: M0*1.39000×1015 *NP1:*φs*91.00000°,*δ*67.00000°,* λ*25.00000°. NP2:*φs*351.00000°,*δ*67.00000°,*λ*155.00000°.*
*IDC **03** 13:17:04.9*±*0.8,24°.45N×122°.12E,h0km,mb3.7/11, mb1 3.9/11,mb1mx3.8/24,mbtmp3.7/11,MS3.0/1, Ms1 3.0/1,ms1mx2.1/29,Error ellipse: s-maj=43.0km s-min=17.7km az=66.0*
*ISCJB **03** 13:17:07.7*±*0.3,24°.44N*±*0°.01×122°.00E*±*0°.01,h6km*±*2km, mb3.9/15,Error ellipse: s-maj=2.6km s-min=1.9km az=140.3*
*JMA **03** 13:17:08.5*±*0.3,24°.53N×121°.88E,h41km,M3.9*
*TAP **03** 13:17:08.6,24°.44N×121°.89E,h21km,ML4.5,B*
*NEIC **03** 13:17:10.3*±*0.5,24°.41N×121°.83E,h35km,mb4.5/3,Error ellipse: s-maj=12.3km s-min=8.4km az=101.0*
NEIC Felt at Taipei. Recorded [5 TAP] in I-lan, [3 TAP] in Hua-lien, [2 TAP] in T'ao-yuan and [1 TAP] in T'ai-pei.
*BJI **03** 13:17:10.7,24°.80N×121°.72E,h7km,mB4.3/4,mb4.1/7, ML3.8/4,Ms3.9/6,Ms7 3.6/3*
ISC 03 13:17:08.4±0.3,**24°.45N**±0°.01×**121°.98E**±0°.02,**h9**km±2km, **n113,**σ1°**17**/173,**mb3.9**/15,**20C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20**	**325**	⇓*i*P	**Pg**	**13 17 13.6**	**+1.0**
	baz=354						
ENA	**Nanau**	**0.21**	**265**	⇑*i*P	**Pg**	**13 17 13.2**	**+0.4**
	baz=264						
ENA				*e*S	**Sg**	**13 17 16.0**	**+0.3**
	baz=264						
EHP	**Heping Village**	**0.25**	**237**	⇓*i*P	**Pg**	**13 17 13.7**	**+0.2**
	baz=227						
EHP				*i* S	**Sg**	**13 17 17.5**	**+0.6**
	baz=227						
ILA	**Ilan**	**0.38**	**327**	⇓*i*P	**Pg**	**13 17 16.8**	**+0.9**
	baz=331						
ILA				*i* S	**Sg**	**13 17 21.9**	**+1.0**
	baz=331						
TWE	**Neicheng**	**0.39**	**314**	⇓*i*P	**Pg**	**13 17 16.5**	**+0.4**
	baz=324						
TWE				S	**Sg**	**13 17 21.4**	**+0.1**
	baz=324						
EGS		**0.40**	**354**	*i* S	**Sg**	**13 17 23.3**	**+1.8**
	baz=9.0						
ENTT	**Nioudou**	**0.42**	**297**	⇓*i*P	**Pg**	**13 17 16.7**	**+0.1**
	baz=303						
NACB	**Ninganchiao**	**0.44**	**232**	*e*P	**Pg**	**13 17 16.1**	**-1.0**
NACB				*e*S	**Sg**	**13 17 22.0**	**-0.9**
TWD	**Chiawan**	**0.50**	**224**	⇑*i*P	**Pg**	**13 17 17.7**	**-0.5**
	baz=221						
TWD				S	**Sg**	**13 17 24.8**	**0.0**
	baz=221						
NNS	**Nan Shan**	**0.55**	**269**	⇑*i*P	**Pg**	**13 17 18.6**	**-0.4**
	baz=271						
NNS				S	**Sg**	**13 17 24.8**	**-1.5**
	baz=271						
TWB1	**Santiao Chiao**	**0.56**	**1**	⇑*i*P	**Pg**	**13 17 20.2**	**+1.0**
	baz=1.0						
TWB1				*i* S	**Sg**	**13 17 27.2**	**+0.6**
	baz=1.0						
HWA	**Hwalien**	**0.58**	**216**	⇑P	**Pg**	**13 17 20.0**	**+0.4**
	baz=214						
YHNB	**Yeheng**	**0.59**	**292**	⇑*i*P	**Pg**	**13 17 19.2**	**-0.6**
YHNB				*e*S	**Sg**	**13 17 25.7**	**-1.8**
NSK	**Sanguang**	**0.61**	**292**	⇓*i*P	**Pg**	**13 17 19.9**	**-0.2**
	baz=297						
NSK				S	**Sg**	**13 17 26.4**	**-1.7**
	baz=297						
TWA	**Mucha**	**0.64**	**326**	⇓*i*P	**Pg**	**13 17 21.1**	**+0.3**
	baz=323						
TWA				S	**Sg**	**13 17 30.4**	**+1.3**
	baz=323						
NWF	**Wu-fen Shan**	**0.65**	**344**	⇓*i*P	**Pg**	**13 17 21.7**	**+0.8**
	baz=342						
NWF				S	**Sg**	**13 17 30.4**	**+1.1**
	baz=342						
TATO	**Taipei**	**0.69**	**320**	⇑*i*P	**Pg**	**13 17 21.6**	**-0.1**
TATO				*e*S	**Sg**	**13 17 29.9**	**-0.8**
WHF	**Hehuan Shan**	**0.71**	**245**	⇑*i*P	**Pg**	**13 17 21.5**	**-0.7**
	baz=251						
WHF				*e*S	**Sg**	**13 17 29.9**	**-1.6**
	baz=251						
ESF	**Shoufeng Towns**	**0.71**	**217**	*e*P	**Pg**	**13 17 22.5**	**+0.3**
	baz=222						
TAP1	**Taipei**	**0.72**	**325**	⇓*i*P	**Pg**	**13 17 22.8**	**+0.5**
	baz=324						
TAP1				*i* S	**Sg**	**13 17 31.7**	**0.0**
	baz=324						
TWT	**Tachien**	**0.75**	**255**	⇑*i*P	**Pg**	**13 17 22.8**	**-0.2**
	baz=251						
TWT				*e*S	**Sg**	**13 17 32.0**	**-0.8**
	baz=251						
ESL	**Shilin**	**0.80**	**218**	P	**Pg**	**13 17 22.8**	**-1.0**
	baz=221						
ESL				*e*S	**Sg**	**13 17 35.0**	**+0.7**
	baz=221						
TWS1	**Kuangyinshan**	**0.82**	**322**	⇓*i*P	**Pg**	**13 17 25.0**	**+0.7**
	baz=321						
TWS1				S	**Sg**	**13 17 36.5**	**+1.4**
	baz=321						
TEGC	**Jichi Village**	**0.84**	**209**	*e*P	**Pg**	**13 17 24.8**	**+0.3**
	baz=205						
TEGC				*e*S	**Sg**	**13 17 38.6**	**+3.2**
	baz=205						
NCU	**National Centr**	**0.89**	**306**	⇓*i*P	**Pg**	**13 17 25.8**	**+0.3**
	baz=310						
NCU				S	**Sg**	**13 17 37.7**	**+0.7**
	baz=310						
TWY	**Chenhua**	**0.89**	**338**	⇓*i*P	**Pg**	**13 17 26.1**	**+0.5**
	baz=342						
TWY				S	**Sg**	**13 17 37.8**	**+0.5**
	baz=342						
NSTT	**Nanjuang**	**0.91**	**282**	⇓*i*P	**Pg**	**13 17 25.2**	**-0.6**
	baz=284						
NSTT				S	**Sg**	**13 17 35.9**	**-1.7**
	baz=284						
YOJ	**Yonaguni jima**	**0.94**	**89**	P	**Pg**	**13 17 26.8**	**+0.2**
YOJ				*e*S	**Sg**	**13 17 40.3**	**+1.4**
YOJ	**Yonaguni jima**	**0.94**	**89**	*e*P	**Pg**	**13 17 26.8**	**+0.2**
	baz=79						
YOJ				*e*S	**Sg**	**13 17 39.6**	**+0.7**
	baz=79						
HSN	**Hsinchu**	**0.98**	**291**	⇓P	**Pg**	**13 17 27.0**	**-0.3**
	baz=296						
HSN				S	**Sg**	**13 17 39.8**	**-0.3**
	baz=296						
TWQ1	**Liyutan**	**1.10**	**265**	⇑*e*P	**Pb**	**13 17 29.1**	**-0.5**
	baz=259						
TWQ1				*e*S	**Sg**	**13 17 43.1**	**-0.7**
	baz=259						
NSY	**Sanyi**	**1.11**	**269**	*e*P	**Pb**	**13 17 29.5**	**-0.2**
	baz=275						
NSY				*e*S	**Sg**	**13 17 44.1**	**0.0**
	baz=275						
EHY	**Hungye**	**1.11**	**213**	*e*P	**Pb**	**13 17 27.6**	**-2.2**
	baz=209						
SMLT	**Sun Moon Lake**	**1.13**	**240**	⇓*i*P	**Pb**	**13 17 29.4**	**-0.8**
	baz=240						
SMLT				*e*S	**Sb**	**13 17 45.3**	**+0.3**
	baz=240						
SSLB	**Suanglung**	**1.14**	**235**	⇓*i*P	**Pb**	**13 17 28.5**	**-1.9**
SSLB				*e*S	**Sb**	**13 17 44.1**	**-1.2**
TYC	**Yuchr**	**1.16**	**242**	⇑P	**Pb**	**13 17 29.5**	**-1.1**
	baz=232						
PCYT	**Pengchaiyu**	**1.18**	**4**	⇑*i*P	**Pb**	**13 17 29.7**	**-1.3**
	baz=7.0						
PCYT				*e*S	**Sb**	**13 17 45.5**	**-0.9**
	baz=7.0						
YULB	**Yu-li**	**1.22**	**211**	*e*Pn	**Pn**	**13 17 28.2**	**-3.5**
YULB				*e*Sn	**Sn**	**13 17 46.8**	**-1.5**
TCU	**Taichung**	**1.22**	**256**	*e*P	**Pn**	**13 17 31.8**	**+0.1**
	baz=255						
TWF1	**Yuli**	**1.25**	**210**	*e*P	**Pn**	**13 17 29.6**	**-2.5**
	baz=220						
WNT	**Mingjian**	**1.31**	**245**	*e*P	**Pn**	**13 17 33.4**	**+0.6**
	baz=244						
WNT				*e*S	**Sb**	**13 17 51.1**	**+1.0**
	baz=244						
YUS	**Yu-Shan**	**1.34**	**225**	⇑*i*P	**Pn**	**13 17 32.9**	**-0.4**
	baz=224						
YUS				S	**Sb**	**13 17 50.4**	**-0.5**
	baz=224						
ALS	**Alishan**	**1.42**	**229**	⇑*e*P	**Pn**	**13 17 34.3**	**-0.1**
	baz=216						
ALS				*e*S	**Sn**	**13 17 53.7**	**+0.5**
	baz=216						
CHKT	**Chengkung**	**1.45**	**203**	*e*P	**Pn**	**13 17 33.2**	**-1.6**
	baz=185						
CHKT				*e*S	**Sn**	**13 17 54.1**	**0.0**
	baz=185						
CHN5	**Tsauling**	**1.46**	**235**	⇑*i*P	**Pn**	**13 17 35.2**	**+0.3**
	baz=235						
CHN5				*e*S	**Sn**	**13 17 55.9**	**+1.7**
	baz=235						
WGK	**Gukeng**	**1.50**	**240**	⇓*i*P	**Pn**	**13 17 36.6**	**+1.1**
	baz=241						
WGK				*e*S	**Sn**	**13 17 57.5**	**+2.3**
	baz=241						
ELDTW	**Lidau**	**1.53**	**215**	*e*P	**Pn**	**13 17 34.1**	**-1.8**
	baz=200						
IRIF	**Iriomote-Funau**	**1.60**	**94**	P	**Pn**	**13 17 36.2**	**-0.7**
IRIF				*e*S	**Sn**	**13 17 56.9**	**-0.9**
CHN2	**Minshiung**	**1.65**	**237**	*e*P	**Pn**	**13 17 38.6**	**+1.1**
	baz=238						
CHN2				*e*S	**Sn**	**13 18 02.0**	**+3.2**
	baz=238						
WTCT	**Ta-ch'eng**	**1.65**	**250**	*e*P	**Pn**	**13 17 37.4**	**-0.2**
	baz=266						
WTCT				*e*S	**Sn**	**13 17 59.4**	**+0.4**
	baz=266						
CHN4	**Tsaushan**	**1.67**	**230**	P	**Pn**	**13 17 38.7**	**+0.8**
	baz=230						
CHN4				*e*S	**Sn**	**13 18 01.0**	**+1.6**
	baz=230						
TPUB	**Ta-pu**	**1.68**	**227**	*e*Pn	**Pn**	**13 17 38.2**	**+0.3**
TPUB				*e*Sn	**Sn**	**13 18 01.4**	**+1.8**
STYT	**Tauyuan**	**1.70**	**221**	⇑P	**Pn**	**13 17 38.2**	**0.0**
	baz=222						
STYT				*e*S	**Sn**	**13 18 01.0**	**+0.9**
	baz=222						
CHY	**Chiayi**	**1.71**	**237**	⇑P	**Pn**	**13 17 39.4**	**+1.1**
	baz=237						
CHY				*e*S	**Sn**	**13 18 02.5**	**+2.2**
	baz=237						
HATJ	**Hateruma jima**	**1.71**	**103**	P	**Pn**	**13 17 38.6**	**+0.1**
WTP	**Ta-pu**	**1.73**	**226**	⇑*i*P	**Pn**	**13 17 39.2**	**+0.5**
	baz=227						
WTP				*e*S	**Sn**	**13 18 02.4**	**+1.6**
	baz=227						
TWK	**Hsinying**	**1.80**	**230**	P	**Pn**	**13 17 40.5**	**+0.8**
	baz=230						
TWK				*e*S	**Sn**	**13 18 03.6**	**+1.0**
	baz=230						
TWG	**Pinlang**	**1.82**	**207**	*e*Pn	**Pn**	**13 17 37.3**	**-2.6**
TWG	**Pinlang**	**1.82**	**207**	*e*P	**Pn**	**13 17 37.6**	**-2.3**
	baz=205						
CHN1	**Nanshi**	**1.83**	**227**	⇑P	**Pn**	**13 17 40.6**	**+0.6**
	baz=227						
CHN1				*e*S	**Sn**	**13 18 05.0**	**+1.7**
	baz=227						

JOGS	Gusukube	3.14	84	P	Pn	13 17 59.0	+0.9
KNM	Kinmen	3.23	270	*e*P	Pn	13 17 59.2	-0.1
	baz=269						
JKE	Kume jima 2	4.74	66	P	Pn	13 18 22.8	+2.8
JAGN	Aguni-jima	5.21	65	P	Pn	13 18 29.3	+2.7
JIH	Iheya	5.99	63	P	Pn	13 18 39.5	+2.3
JOW	Kunigami	6.16	66	P	Pn	13 18 40.8	+1.2
JOW	Kunigami	6.16	66	Pn	Pn	13 18 40.5	+0.9
	comp=Z,1.7nm,0.3s,baz=204,slow=14,SNR=8.4						
JOW	Kunigami	6.16	66	*e*P	Pn	13 18 41.0	+1.4
	baz=74						
JTK	Tokunoshima	7.10	61	P	Pn	13 18 53.7	+1.2
JAM	Amami Oshima	7.90	58	P	Pn	13 19 04.7	+1.3
INCN	Inchon	13.59	16	Pn	Pn	13 20 16.4	-5.0
	comp=Z,6.8nm,0.3s						
KS15	Wonju Array Si	13.90	20	*e*Pn	Pn	13 20 34.3	+8.6
KS15				*e*Sn	Sn	13 22 48.0	-12
KSRS	Korea Array	13.93	20	Pn	Pn	13 20 32.8	+6.8
	comp=Z,0.3nm,0.3s,baz=198,slow=12,SNR=43						
KSRS				LR	LR	13 26 41.8	
	comp=Z,60nm,19.5s,baz=346,slow=42						
CD2	Chengdu	17.36	296	P	Pn	13 21 07.0	-4.0
CD2				pP	pP	13 21 14.8	-0.1
CD2				sP	sP	13 21 19.4	+3.3
CD2				PP		13 21 21.8	
CD2				S	Sn	13 24 16.6	-7.8
CD2				sS	sS	13 24 29.0	-8.1
CD2				SS		13 24 38.0	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,6.5s						
CD2				LR	LR		
	comp=N,140nm,6.5s						
CD2				LR	LR		
	comp=Z,170nm,12.5s						
HIA	Hailar	24.84	357	P	P	13 22 25.9	-5.0
	comp=Z,5.0nm,0.3s,mb4.5						
SONM	Songino Array	26.41	336	P	P	13 22 44.9	-0.4
	comp=Z,0.9nm,0.6s,mb3.5,baz=150,slow=9.7,SNR=8.5						
YSS	Yuzh-Sakhalins	27.93	31	*e*P	P	13 22 51.5	-7.3
	comp=Z,6.9nm,0.6s,mb4.5						
MKAR	Makanchi Array	38.66	315	P	P	13 24 30.9	-1.3
	comp=Z,0.9nm,0.8s,mb3.6,baz=110,slow=10,SNR=5.6						
ZALV	Zalesovo Beam	40.42	327	P	P	13 24 44.3	-2.5
	comp=Z,0.9nm,0.5s,mb3.7,baz=119,slow=7.5,SNR=4.4						
WRAB	Tennant Creek	45.73	164	*e*P	P	13 25 29.7	-0.4
	comp=Z,5.6nm,1.2s,mb4.4						
WRA	Warramunga Arr	45.73	164	P	P	13 25 28.0	-2.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=346,slow=8.6,SNR=12						
BVAR	Borovoye Array	47.93	320	P	P	13 25 45.7	-1.4
	comp=Z,0.5nm,0.5s,mb3.8,baz=116,slow=6.7,SNR=4.9						
ASAR	Alice Springs	49.21	166	P	P	13 25 54.8	-2.4
	comp=Z,0.1nm,0.4s,baz=347,slow=7.0,SNR=4.9						
JOF	Joensuu	68.83	331	*e*p	P	13 28 09.1	-3.8
	comp=Z,1.5nm,0.7s,mb4.0						
KAF	Kangasniemi	71.28	330	*e*p	P	13 28 26.1	-1.9
	comp=Z,0.8nm,0.5s,mb3.9						
FINES	FINESS Array B	71.58	330	P	P	13 28 27.9	-1.8
	comp=Z,1.8nm,0.8s,mb4.1,baz=71,slow=5.4,SNR=8.8						
INK	Inuvik	72.71	22	P	P	13 28 34.1	-2.3
	comp=Z,0.6nm,0.9s,mb3.5,baz=259,slow=6.5,SNR=4.3						
BRTR	Keskin Array B	73.60	307	P	P	13 28 41.0	-1.2
	comp=Z,0.6nm,0.6s,mb3.7,baz=104,slow=5.2,SNR=3.9						
NOA	NORSAR Array B	78.33	332	P	P	13 29 07.1	-1.7
	comp=Z,1.0nm,0.9s,mb3.7,baz=61,slow=5.6,SNR=2.7						
YKA	Yellowknife Ar	82.45	23	P	P	13 29 28.5	-2.4
	comp=Z,0.3nm,0.6s,mb3.4,baz=311,slow=5.1,SNR=9.8						

IDC 03 13:25:55.3±8.1, 23°.53N×141°.75E, h131km±52km, mb3.2/4, mb1 3.2/5, mb1mx3.0/23, mbtmp3.2/5, MS3.4/1, Ms1 3.4/1, ms1mx2.3/10, Error ellipse: s-maj=71.0km s-min=39.8km az=171.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.57	6	P	Pn	13 26 49.0	-0.1
	4.4nm,0.3s,baz=276,slow=19,SNR=11						
CBIJ				S	Sn	13 27 31.9	+0.6
	22nm,0.3s,baz=297,slow=23,SNR=14						
KAPI	Kappang	35.58	220	LR	LR	13 46 06.1	
	comp=Z,55nm,18.2s,baz=108,slow=34						
ZALV	Zalesovo Beam	51.96	321	P	P	13 34 50.2	-0.5
	0.6nm,0.4s,baz=100,slow=8.3,SNR=3.7						
MKAR	Makanchi Array	52.49	312	P	P	13 34 55.8	+1.0
	0.4nm,0.5s,baz=84,slow=10.0,SNR=6.8						
YKA	Yellowknife Ar	75.46	28	P	P	13 37 25.1	+0.5
	0.1nm,0.4s,baz=300,slow=6.4,SNR=2.5						
FINES	FINESS Array B	80.96	334	P	P	13 37 53.6	-1.3
	0.8nm,0.8s,baz=46,slow=5.5,SNR=4.3						

*ISCJB **03** 13:37:28.6±1.0, 17°.57S±0°.08×178°.98W±0°.08, h491km±13km, mb4.0/25, Error ellipse: s-maj=13.6km s-min=9.9km az=141.7*
*NEIC **03** 13:37:30.1±1.1, 17°.57S×178°.97W, h501km±14km, mb4.1/10, Error ellipse: s-maj=12.9km s-min=9.6km az=140.0*
*IDC **03** 13:37:31.8±1.4, 17°.68S×178°.94W, h520km±17km, mb3.5/15, mb1 3.7/16, mb1mx3.6/21, mbtmp3.5/16, Error ellipse: s-maj=15.5km s-min=10.4km az=133.0*
ISC 03 13:37:30.1±1.1, 17°.59S±0°.08×178°.95W±0°.08, h496km±14km, n44, σ0°96/45, mb4.0/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.81	63	P	P	13 39 25.7	+1.2
	4.1nm,0.3s,baz=102,slow=23,SNR=9.3						
AFI	Afiamalu	7.81	63	*e*P	P	13 39 24.9	+0.4
	21nm,0.5s						
AFI				*e*S	S	13 40 54.9	-3.4
URZ	Urewera	20.88	189	P	P	13 41 35.8	-0.9
	12nm,0.3s,baz=254,slow=2.2,SNR=33						
RPZ	Rata Peaks	27.38	196	P	P	13 42 33.9	-0.8
	5.1nm,0.4s,mb4.3,baz=171,slow=3.4,SNR=6.8						
EIDS	Eidsvold	28.90	249	*e*P	P	13 42 49.0	+0.8
ARMA	Armidale	29.66	239	*e*P	P	13 42 55.8	+1.1
	1.5nm,0.3s,mb3.9						
CTA	Charters Tower	33.00	260	P	P	13 43 24.4	+0.9
	5.3nm,0.7s,mb4.1,baz=91,slow=13,SNR=4.0						
CTA	Charters Tower	33.00	260	*e*P	P	13 43 24.0	+0.9
CTAO	Charters Tower	33.00	260	*e*P	P	13 43 23.0	-0.5
	6.8nm,0.7s,mb4.2						
TAU	Tasmania Unive	38.14	221	*e*P	P	13 44 04.2	-1.8
STKA	Stephens Creek	38.34	241	*e*P	P	13 44 09.2	+1.4
	1.8nm,0.3s,mb4.0						
STKA	Stephens Creek	38.34	241	P	P	13 44 09.2	+1.4
	2.4nm,0.3s,mb4.1,baz=80,slow=9.0,SNR=24						
STKA	Stephens Creek	38.34	241	*e*P	P	13 44 07.8	0.0
	0.5nm,0.3s,mb3.4						
BBOO	Buckleboo	43.12	241	*e*P	P	13 44 46.7	+0.7
	5.0nm,1.5s,mb3.7						
WB2	Warramunga Arr	44.18	259	*e*P	P	13 44 54.0	-0.5
WRAB	Tennant Creek	44.18	259	*e*P	P	13 44 53.3	-1.2
	3.1nm,0.7s,mb3.9						
WRA	Warramunga Arr	44.19	259	P	P	13 44 54.2	-0.3
	0.8nm,0.3s,mb3.6,baz=85,slow=7.3,SNR=49						
WRA				S	S	13 50 50.2	-1.1
	0.3nm,0.8s,baz=96,slow=7.8,SNR=3.2						
ASAR	Alice Springs	44.39	254	P	P	13 44 56.4	+0.4
	14nm,0.5s,mb4.7,baz=89,slow=8.0,SNR=336						
ASAR				ScP	ScP	13 49 33.2	-0.7
	0.8nm,0.7s,baz=99,slow=4.2,SNR=7.0						
ASAR				S	S	13 50 50.0	-4.0
	1.8nm,0.9s,baz=90,slow=16,SNR=13						
KAKA	Kakadu	47.08	269	*e*P	P	13 45 15.8	-0.9
	14nm,0.2s,mb5.0						
KAKA	Kakadu	47.08	269	*e*P	P	13 45 15.0	-1.8
	59nm,0.6s,mb5.2						
GUMO	Guam	47.28	309	P	P	13 45 18.6	+0.4
	40nm,0.9s,mb4.8,baz=111,slow=2.4,SNR=4.2						
GUMO	Guam	47.28	309	*e*P	P	13 45 17.4	-0.8
	186nm,1.2s,mb5.4						
KNA	Kununurra	50.00	264	*e*P	P	13 45 38.7	+0.2
	5.2nm,0.3s,mb4.3						
FITZ	Fitzroy Crossi	52.58	260	*e*P	P	13 45 57.9	+0.7
	2.8nm,0.3s,mb4.1						
MBWA	Marble Bar	57.66	256	*e*P	P	13 46 32.4	-0.4
MBWA	Marble Bar	57.66	256	*e*P	P	13 46 31.9	-0.9
	1.6nm,0.3s,mb3.8						
SBA	Scott Base	60.70	183	*e*P	P	13 46 54.1	+1.9
	9.6nm,1.1s,mb4.1						
CASY	Casey	66.21	205	*e*P	P	13 47 27.9	+0.1
	11nm,0.9s,mb4.5						
MJAR	Matsushiro Arr	67.35	324	P	P	13 47 35.0	-0.2
	2.6nm,0.5s,mb4.2,baz=162,slow=5.9,SNR=11						
MAT	Matsushiro	67.35	324	P	P	13 47 35.1	-0.1
ASAJ	Asahikawa	70.75	332	P	P	13 47 57.0	+1.4
	4.3nm,0.7s,mb4.1,baz=332,slow=17,SNR=5.8						
QSPA	South Pole Qui	72.46	180	*e*P	P	13 48 06.1	+1.0
	14nm,1.1s,mb4.4						
PETK	Petropavlovsk-	73.24	346	P	P	13 48 08.8	-1.1
	2.0nm,0.6s,mb3.8,baz=131,slow=9.1,SNR=8.6						
KSRS	Korea Array	74.12	319	P	P	13 48 15.7	+0.4
	1.3nm,1.0s,mb3.4,baz=131,slow=6.8,SNR=5.3						
NVAR	Mina Array Bea	79.55	44	P	P	13 48 45.6	+0.6
	0.6nm,0.6s,mb3.3,baz=220,slow=7.1,SNR=4.9						
MAW	Mawson	83.98	200	P	P	13 49 07.8	+0.6
	0.9nm,0.3s,mb3.7,baz=118,slow=6.4,SNR=6.9						
MAW	Mawson	83.98	200	*e*P	P	13 49 07.1	-0.1
	1.5nm,1.0s,mb3.5						
PDAR	Pinedale Array	87.47	44	P	P	13 49 25.1	+0.7
	0.4nm,0.5s,mb3.4,baz=214,slow=1.9,SNR=4.9						
VNA3	Neumayer Olymp	91.09	177	*e*	P	13 49 40.9	+0.2
VNA2	Neumayer--Watz	91.52	177	*e*	P	13 49 42.9	+0.2
	baz=190,slow=4.3						
PLCA	Paso Flores	91.92	134	P	P	13 49 42.8	-2.4
	1.6nm,0.8s,mb4.0,baz=228,slow=3.7,SNR=3.8						
YKA	Yellowknife Ar	94.26	25	P	P	13 49 54.6	-0.6
	0.2nm,0.6s,mb3.3,baz=243,slow=4.4,SNR=6.2						
BRTR	Keskin Array B	144.20	315	PKP	PKPdf	13 56 07.9	-1.3
	0.8nm,0.4s,baz=63,slow=1.8,SNR=5.5						
GERES	GERESS Array B	147.17	345	PKPbc	PKPbc	13 56 17.0	0.0
	0.7nm,0.4s,baz=21,slow=2.8,SNR=8.1						

*ISCJB **03** 13:39:32.9±1.0, 50°.2N±0°.1×155°.7E±0°.2, h123km±10km, mb3.4/5, Error ellipse: s-maj=22.5km s-min=9.9km az=139.2*
*KRSC **03** 13:39:32.7±1.8, 50°.09N×156°.17E, h5km±5km, ML3.9*
*NEIC **03** 13:39:33.6±1.4, 50°.10N×155°.76E, h126km±16km, mb3.8/3, Error ellipse: s-maj=28.4km s-min=13.6km az=123.0*
*MOS **03** 13:39:33.0±1.2, 50°.11N×155°.77E, h141km, mb4.1/1, Error ellipse: s-maj=28.6km s-min=14.5km az=72.8*
*IDC **03** 13:39:35.6±2.5, 50°.34N×155°.39E, h126km±23km, mb3.1/4, mb1 3.3/7, mb1mx3.0/27, mbtmp3.1/7, Error ellipse: s-maj=41.7km s-min=17.3km az=151.0*
ISC 03 13:39:34.3±0.9, 50°.2N±0°.1×155°.7E±0°.2, h117km±9km, n27, σ1°32/32, mb3.4/5, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.56	32	*i*PN	Pn	13 39 39.1	-13
SKR				pmax	pmax		
	comp=Z,340nm,0.5s						
SKR				pmax	pmax		
	comp=N,160nm,0.4s						
SKR				pmax	pmax		
	comp=E,100nm,0.4s						
MIPR	Malaya Ipel'ka	2.18	18	*e*P	Pn	13 40 10.0	+0.2
RUS	Russkaya	2.86	38	*e*P	Pn	13 40 18.1	-0.4
RUS				*e*S	Sn	13 40 51.2	-1.4
PETK	Petropavlovsk-	3.17	23	PN	Pn	13 40 23.7	+1.1
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	Petropavlovsk-	3.17	23	P	Pn	13 40 23.7	+1.1
	comp=Z,1.6nm,0.3s,baz=179,slow=12,SNR=79						
PETK	Petropavlovsk-	3.17	23	P	Pn	13 40 23.7	+1.1
PET	Petropavlovsk	3.38	32	*e*PN	Pn	13 40 25.9	+0.5
PET				*e*S	Sn	13 41 06.0	+1.1
PET	Petropavlovsk	3.38	32	*e*P	Pn	13 40 26.6	+1.2
PET				*e*S	Sn	13 41 05.6	+0.7
PET	Petropavlovsk	3.38	32	*e*Pn	Pn	13 40 25.2	-0.2
PET				*e*Sn	Sn	13 41 06.0	+1.1
AVH	Avacha	3.61	31	*e*P	Pn	13 40 29.8	+1.4
NLC	Nalytchevo	3.75	36	*e*S	Sn	13 41 10.9	-2.8
GNL	Ganaly	3.76	21	*e*P	Pn	13 40 32.0	+1.5
SPN	Mys Shipunski	3.97	42	*e*P	Pn	13 40 33.1	-0.1
SPN				*e*S	Sn	13 41 16.7	-2.2
ASAJ	Asahikawa	10.77	241	PN	Pn	13 42 05.9	+0.9
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.77	241	P	Pn	13 42 05.9	+0.9
	comp=Z,0.6nm,0.3s,baz=78,slow=10,SNR=6.4						
YAK	Yakutsk	18.54	320	*e*P	P	13 43 43.2	+1.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK	Yakutsk	18.54	320	*e*P	P	13 43 43.1	+1.7
	comp=Z,11nm,0.8s						
MAJO	Matsushiro	18.58	229	*e*P	P	13 43 40.0	-2.0
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MAJO	Matsushiro	18.58	229	*e*P	P	13 43 40.0	-2.0
	comp=Z,1.9nm,0.4s						
MJAR	Matsushiro Arr	18.58	229	P	P	13 43 41.2	-0.8
	comp=Z,0.2nm,0.3s,baz=332,slow=13,SNR=4.8						
TIXI	Tiksi	24.70	340	*e*P	P	13 44 42.3	-1.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
TIXI	Tiksi	24.70	340	*e*P	P	13 44 42.3	-1.6
	comp=Z,0.7nm,0.5s,mb3.4						
MK31	Makanchi Array	46.91	296	*e*P	P	13 47 51.7	-0.8
MKAR	Makanchi Array	46.91	296	P	P	13 47 51.6	-0.9
	comp=Z,0.3nm,0.4s,mb3.4,baz=43,slow=5.2,SNR=11						
YKA	Yellowknife Ar	47.15	39	P	P	13 47 53.9	-0.3
	comp=Z,0.1nm,0.4s,mb2.9,baz=298,slow=7.2,SNR=3.5						
NVAR	Mina Array Bea	59.39	66	P	P	13 49 25.8	+1.7
	comp=Z,0.6nm,0.6s,mb3.8,baz=298,slow=7.8,SNR=4.5						
PDAR	Pinedale Array	61.38	57	P	P	13 49 39.4	+1.8
	comp=Z,0.6nm,0.8s,mb3.7,baz=355,slow=1.6,SNR=5.5						

IDC 03 13:49:53.7±2.1, 1°.86S×153°.08E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/16, mbtmp3.2/3, Error ellipse: s-maj=156.1km s-min=33.0km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.67	224	P	P	13 55 26.8	+1.3
	0.2nm,0.6s,baz=48,slow=8.9,SNR=6.1						
ASAR	Alice Springs	28.55	219	P	P	13 55 50.4	-1.0
	0.1nm,0.4s,baz=54,slow=8.8,SNR=12						
YKA	Yellowknife Ar	92.71	28	P	P	14 03 07.4	0.0
	0.4nm,1.0s,baz=289,slow=5.8,SNR=3.8						
TORD	Torodi Ar. Bea	149.54	293	PKPbc	PKPbc	14 09 45.8	-0.4
	0.1nm,0.4s,baz=52,slow=1.2,SNR=2.9						

*DDA **03** 13:53:49.2, 39°.17N×30°.48E, h7km±5km, Md2.7*
*ISCJB **03** 13:53:50.4±0.7, 39°.19N±0°.05×30°.53E±0°.06, h10km±7km, Error ellipse: s-maj=10.1km s-min=5.5km az=140.5*
*ISK **03** 13:53:50.6, 39°.30N×30°.45E, h9km, MD2.6*
*CSEM **03** 13:53:50.4±0.3, 39°.23N×30°.48E, h5km, MD2.6, Error ellipse: s-maj=10.0km s-min=5.2km az=144.0*
ISC 03 13:53:50.6±0.7, 39°.20N±0°.05×30°.50E±0°.06, h6km±9km, n16, σ1°13/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	Altintas	0.34	244	*e*PG	Pg	13 53 57.9	+0.7
ALT				*e*SG	Sg	13 54 03.4	+1.8
ALT	Altintas	0.34	244	*e*Pg	Pg	13 53 57.9	+0.7
ALT				*e*Sg	Sg	13 54 03.4	+1.8
ESKT	Eskisehir	0.41	40	*e*PG	Pg	13 53 58.0	-0.6
ESKT				*e*SG	Sg	13 54 04.7	+0.6
ESKT	Eskisehir	0.41	40	*i* P	Pg	13 53 58.0	-0.6
ESKT				*i* S	Sg	13 54 02.9	-1.2
ESKT	Eskisehir	0.41	40	*e*Pg	Pg	13 53 58.0	-0.6
ESKT				*e*Sg	Sg	13 54 04.7	+0.6
SEYT	Eskypehyr	0.41	40	*i* P	Pg	13 53 58.0	-0.6
SEYT				*i* S	Sg	13 54 02.9	-1.2
SVRH	Sivrihisar-ESK	0.83	73	*e*PG	Pg	13 54 07.3	+0.8
SVRH	Sivrihisar-ESK	0.83	73	*e*Pg	Pg	13 54 07.3	+0.8
KIZT	Kizilcal	1.12	106	*e*PN	Pn	13 54 14.1	+1.4
KIZT	Kizilcal	1.12	106	*e*Pn	Pn	13 54 14.1	+1.4
KHAL	Karahalli	1.15	224	*i* P	Pg	13 54 11.5	-1.1
KHAL				*i* S	Sg	13 54 25.6	-1.8
KHAL	Karahalli	1.15	224	*i* P	Pg	13 54 11.5	-1.1
KHAL				*i* S	Sg	13 54 25.6	-1.9
GULT	Gulveren	1.23	0	*e*PN	Pn	13 54 12.9	-1.3
GULT	Gulveren	1.23	0	*e*Pn	Pn	13 54 12.9	-1.3
ULDT	Uludag	1.41	312	*i* P	Pn	13 54 16.4	-0.4
ULDT				*i* S	Sb	13 54 36.1	+0.7
ULDT	Uludag	1.41	312	*i* P	Pn	13 54 16.4	-0.3
ULDT				*i* S	Sb	13 54 36.2	+0.7

*ISCJB **03** 14:19:18.2±0.5, 43°.78N±0°.04×105°.12W±0°.06, h0km, Error ellipse: s-maj=6.3km s-min=6.0km az=44.9*
*NEIC **03** 14:19:20.1±0.4, 43°.76N×105°.24W, h0km, ML3.0, Error ellipse: s-maj=6.1km s-min=5.1km az=157.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **03** 14:19:20.4±1.7, 44°.01N×105°.86W, h0km, mb4.0/1, mb1 3.8/4, mb1mx3.4/25, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=52.2km s-min=7.8km az=146.0*
ISC 03 14:19:19.9±0.5, 43°.78N±0°.04×105°.19W±0°.05, h0km, n18, σ0°92/23, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	67	*e*P	Pg	14 19 39.0	+1.8
PHWY	Pilot Hill	2.49	185	*e*Pn	Pn	14 20 01.0	-0.7
RWWY	Rawlins	2.57	216	*e*Pn	Pn	14 20 02.7	-0.1
RWWY				*e*Sn	Sn	14 20 35.9	+1.3
LAO	LASA Array	3.00	346	*e*Pn	Pn	14 20 09.4	+0.7
RLMT	Red Lodge	3.21	296	*e*Pn	Pn	14 20 11.9	+0.2
RLMT				*e*S	Sn	14 20 56.3	+5.7
PDAR	Pinedale Array	3.35	254	Pn	Pn	14 20 13.1	-0.4
	4.4nm,0.3s,baz=69,slow=15,SNR=88						
PDAR				Lg		14 20 51.6	
	3.3nm,0.3s,baz=71,slow=18,SNR=4.6						
OGNE	Ogallala	3.68	139	*e*Pn	Pn	14 20 18.5	+0.5
OGNE				*e*S	Sg	14 21 17.2	-0.8
GCMT	Greycliff	3.77	304	*e*Pn	Pn	14 20 20.0	+0.7
LKWY	Lake	3.83	284	*e*Pn	Pn	14 20 20.7	+0.6
ISCO	Idaho Springs	3.99	185	*e*Pn	Pn	14 20 22.1	-0.2
IMW	Indian Meadow	4.16	274	*e*Pn	Pn	14 20 24.6	0.0
HWUT	Hardware Ranch	5.18	247	*e*Pn	Pn	14 20 37.7	-1.0
	7.0nm,0.4s						
DAU	Daniels Canyon	5.63	235	*e*Pn	Pn	14 20 44.7	-0.1
	6.1nm,0.4s						
ECSD	EROS Data Cent	6.21	87	*e*Pn	Pn	14 20 54.1	+1.3
	3.8nm,0.4s						
ULM	Lac du Bonnet	9.07	41	Pn	Pn	14 21 32.1	+0.2
	2.6nm,0.3s,baz=234,slow=11,SNR=20						
ULM				Pg	Pg	14 22 07.8	-5.8
	0.8nm,0.3s,baz=230,slow=13,SNR=3.0						
ULM				Sn	Sn	14 23 13.7	-1.1
	0.2nm,0.3s,baz=240,slow=3.9,SNR=4.2						
ULM				Lg		14 24 06.5	
	0.1nm,0.3s,baz=123,slow=18,SNR=2.9						
YKA	Yellowknife Ar	19.54	347	P	Pn	14 23 47.3	-2.6
YKA	Yellowknife Ar	19.54	347	P	Pn	14 23 47.3	-2.6
	0.0nm,0.3s,baz=155,slow=8.6,SNR=5.4						
ARCES	ARCESS Array B	61.36	18	P	P	14 29 36.0	-1.0
	1.1nm,0.7s,baz=330,slow=6.5,SNR=5.7						

*HLW **03** 15:08:21.5, 37°.27N×27°.55E, h33km±27km, Ml3.1*
*ATH **03** 15:08:24.7, 36°.86N×27°.60E, h9km±8km*
*DDA **03** 15:08:26.6, 36°.88N×27°.44E, h24km±1km, Ml3.7*
*NEIC **03** 15:08:26.0, 36°.86N×27°.50E, h8km, ML3.6(ISK), After ISK.*
*ISK **03** 15:08:26.9, 36°.87N×27°.51E, h7km, ML3.7*
*ISCJB **03** 15:08:27.6±0.5, 36°.88N±0°.02×27°.51E±0°.03, h7km±3km, Error ellipse: s-maj=3.8km s-min=3.0km az=160.0*
*THE **03** 15:08:27.7, 36°.90N×27°.75E, h8km±3km, ML4.3/2, Error ellipse: s-maj=3.5km s-min=0.7km az=98.0*
*CSEM **03** 15:08:27.5±0.2, 36°.85N×27°.49E, h5km, ML3.7, Error ellipse: s-maj=4.1km s-min=3.5km az=62.0*
ISC 03 15:08:27.9±0.4, 36°.87N±0°.02×27°.51E±0°.03, h5km±3km, n125, σ0°99/159, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.15	158	PG	Pg	15 08 30.6	-0.4
DAT				*e*SG	Sg	15 08 33.0	+0.1
DAT	Datca	0.15	158	*i* Pg	Pg	15 08 30.6	-0.4
DAT				*e*Sg	Sg	15 08 33.1	+0.1
BDRM	Kayabasi	0.20	346	*i* P	Pg	15 08 31.6	-0.3
BDRM				*i* S	Sg	15 08 35.5	+1.0
BDRM	Kayabasi	0.20	346	*i* P	Pg	15 08 31.6	-0.3
BDRM				*i* S	Sg	15 08 35.5	+0.9
BODT	Bodrum	0.25	321	PG	Pg	15 08 32.5	-0.2
BODT				*e*SG	Sg	15 08 36.6	+0.6
BODT	Bodrum	0.25	321	*i* Pg	Pg	15 08 32.5	-0.3
BODT				*e*Sg	Sg	15 08 36.6	+0.6
MLSB	Milas	0.48	27	*e*PG	Pg	15 08 36.5	-0.6
MLSB				*e*SG	Sg	15 08 43.9	+0.5
MLSB	Milas	0.48	27	*e*Pg	Pg	15 08 36.5	-0.6
MLSB				*e*Sg	Sg	15 08 43.9	+0.6
YER	Yerkesik	0.68	67	*e*PG	Pg	15 08 40.6	-0.4
YER	Yerkesik	0.68	67	*e*Pg	Pg	15 08 40.6	-0.3
ARG	Arkhangelos	0.82	142	*e*P	Pg	15 08 42.5	-1.2
ARG				*e*S	Sg	15 08 56.4	+2.0
ARG	Arkhangelos	0.82	142	P	Pg	15 08 42.3	-1.4
ARG				S	Sg	15 08 53.6	-0.8
ARG	Arkhangelos	0.82	142	*e*P	Pg	15 08 42.5	-1.2
ARG				S	Sg	15 08 53.6	-0.8
AYDN	Tasoluk	0.84	21	*i* P	Pg

ZKR	**Zakros**	**2.04 211**	P	**Pn**	**15 09 02.7**	**-0.2**
ZKR			S	**Sn**	**15 09 29.4**	**+0.6**
ZKR	**Zakros**	**2.04 211**	P	**Pn**	**15 09 02.7**	**-0.2**
ZKR			S	**Sn**	**15 09 29.4**	**+0.6**
KHL	**Karahalli**	**2.16 47**	*e*PN	**Pn**	**15 09 04.5**	**-0.1**
KHL	**Karahalli**	**2.16 47**	*e*Pn	**Pn**	**15 09 04.5**	**-0.1**
KHAL	**Karahalli**	**2.17 46**	*i* P	**Pn**	**15 09 06.0**	**+1.2**
KHAL	**Karahalli**	**2.17 46**	*i* P	**Pn**	**15 09 06.0**	**+1.2**
NPS	**Neapolis**	**2.22 224**	*e*P	**Pn**	**15 09 00.8**	**-4.6**
KORT	**Korkueli**	**2.28 86**	*i* P	**Pn**	**15 09 08.0**	**+1.7**
KORT	**Korkueli**	**2.28 86**	*i* P	**Pn**	**15 09 07.9**	**+1.6**
LAST	**Lasithi**	**2.37 225**	P	**Pn**	**15 09 07.6**	**+0.2**
LAST			S	**Sn**	**15 09 39.2**	**+2.3**
LAST	**Lasithi**	**2.37 225**	P	**Pn**	**15 09 07.6**	**+0.2**
LAST			S	**Sn**	**15 09 39.2**	**+2.3**
AYVA	**Ayvalik**	**2.52 345**	*i* P	**Pn**	**15 09 15.5**	**+6.0**
ANTB	**Antalya**	**2.52 88**	*e*PN	**Pn**	**15 09 09.6**	**0.0**
ANTB	**Antalya**	**2.52 88**	*e*Pn	**Pn**	**15 09 09.6**	**0.0**
BCK	**Bucak**	**2.53 76**	*e*PN	**Pn**	**15 09 10.0**	**+0.3**
BCK	**Bucak**	**2.53 76**	*e*Pn	**Pn**	**15 09 10.0**	**+0.3**
PRK	**Paraskevi**	**2.56 338**	P	**Pn**	**15 09 10.6**	**+0.5**
PRK			S	**Sn**	**15 09 40.9**	**-0.8**
PRK	**Paraskevi**	**2.56 338**	P	**Pn**	**15 09 10.6**	**+0.5**
PRK			S	**Sn**	**15 09 40.9**	**-0.8**
SIGR	**SIGRI**	**2.68 331**	P	**Pn**	**15 09 10.3**	**-1.4**
SIGR			S	**Sn**	**15 09 43.5**	**-1.0**
SIGR	**SIGRI**	**2.68 331**	P	**Pn**	**15 09 10.3**	**-1.4**
SIGR			S	**Sn**	**15 09 43.5**	**-1.0**
BALB	**Balikesir**	**2.78 6**	*e*PN	**Pn**	**15 09 13.1**	**0.0**
BALB	**Balikesir**	**2.78 6**	*e*Pn	**Pn**	**15 09 13.1**	**0.0**
SUTC	**Sutluce-Ispart**	**2.86 77**	*e*PN	**Pn**	**15 09 14.5**	**+0.3**
SUTC	**Sutluce-Ispart**	**2.86 77**	*e*Pn	**Pn**	**15 09 14.5**	**+0.4**
BALY	**Balya**	**2.87 2**	*i* P	**Pn**	**15 09 12.7**	**-1.6**
BALY	**Balya**	**2.87 2**	*i* P	**Pn**	**15 09 12.7**	**-1.6**
SHUT	**Suhut-Afyon**	**2.94 54**	*e*PN	**Pn**	**15 09 15.4**	**+0.1**
SHUT	**Suhut-Afyon**	**2.94 54**	*e*Pn	**Pn**	**15 09 15.4**	**+0.1**
ALT	**Altintas**	**3.00 43**	*e*PN	**Pn**	**15 09 16.2**	**+0.1**
ALT	**Altintas**	**3.00 43**	*e*Pn	**Pn**	**15 09 16.2**	**+0.1**
EZN	**Ezine**	**3.09 343**	*e*PN	**Pn**	**15 09 17.6**	**+0.2**
EZN	**Ezine**	**3.09 343**	*e*Pn	**Pn**	**15 09 17.6**	**+0.2**
BNT	**Bandirma**	**3.50 5**	*e*PN	**Pn**	**15 09 23.1**	**+0.1**
BNT	**Bandirma**	**3.50 5**	*e*Pn	**Pn**	**15 09 23.1**	**+0.2**
LIA	**Limnos Island**	**3.53 330**	P	**Pn**	**15 09 22.5**	**-0.9**
LIA	**Limnos Island**	**3.53 330**	P	**Pn**	**15 09 22.5**	**-0.9**
LPK	**Lapseki**	**3.55 351**	*e*PN	**Pn**	**15 09 23.7**	**+0.1**
LPK	**Lapseki**	**3.55 351**	*e*Pn	**Pn**	**15 09 23.7**	**+0.1**
GADA	**Gvkgeada**	**3.55 340**	*e*PN	**Pn**	**15 09 23.6**	**-0.1**
GADA	**Gvkgeada**	**3.55 340**	*e*Pn	**Pn**	**15 09 23.6**	**0.0**
LOS	**Limnos**	**3.60 329**	P	**Pn**	**15 09 24.0**	**-0.4**
LOS	**Limnos**	**3.60 329**	P	**Pn**	**15 09 24.0**	**-0.4**
RKY	**Sarkoy-Tekirda**	**3.82 356**	*e*PN	**Pn**	**15 09 28.9**	**+1.5**
RKY	**Sarkoy-Tekirda**	**3.82 356**	*e*Pn	**Pn**	**15 09 28.9**	**+1.5**
HDMB	**Hadim**	**3.99 87**	*e*PN	**Pn**	**15 09 30.3**	**+0.5**
HDMB	**Hadim**	**3.99 87**	*e*Pn	**Pn**	**15 09 30.3**	**+0.5**
KONT	**Konya--Tatoy**	**4.01 73**	*e*PN	**Pn**	**15 09 30.6**	**+0.6**
KONT	**Konya--Tatoy**	**4.01 73**	*e*Pn	**Pn**	**15 09 30.6**	**+0.6**
ISK	**Istanbul-Kandi**	**4.36 16**	*e*PN	**Pn**	**15 09 35.8**	**+0.9**
ISK	**Istanbul-Kandi**	**4.36 16**	*e*Pn	**Pn**	**15 09 35.8**	**+1.0**
IKL	**Isikli**	**5.01 95**	*e*PN	**Pn**	**15 09 45.0**	**+1.2**
IKL	**Isikli**	**5.01 95**	*e*Pn	**Pn**	**15 09 45.0**	**+1.2**
HMAT	**Matruh**	**5.77 183**	P	**Pn**	**15 09 50.5**	**-3.8**
	baz=184					
HMAT			S	**Sn**	**15 10 54.5**	**-6.4**
	baz=184					
HMAT			AMP		15 11 00.0	
	comp=N,10μm,0.6s,logA/T=4.2,baz=184					
HMAT	**Matruh**	**5.77 183**	P	**Pn**	**15 09 50.5**	**-3.7**
HMAT			S	**Sn**	**15 10 54.5**	**-6.3**
SWA2		**7.80 193**	P	**Pn**	**15 10 19.0**	**-3.1**
	baz=193					
SWA2		**7.80 193**	P	**Pn**	**15 10 19.0**	**-3.1**
SUZ		**8.30 146**	P	**Pn**	**15 10 25.4**	**-3.6**
	baz=147					
SUZ		**8.30 146**	P	**Pn**	**15 10 25.4**	**-3.6**
HNKL	**Nakhl**	**8.78 140**	P	**Pn**	**15 10 31.1**	**-4.5**
	baz=142					
HNKL	**Nakhl**	**8.78 140**	P	**Pn**	**15 10 31.1**	**-4.5**
HKAT	**Jabal Katrina**	**9.95 145**	P	**Pn**	**15 10 47.7**	**-3.9**
	baz=146					
HKAT	**Jabal Katrina**	**9.95 145**	P	**Pn**	**15 10 47.7**	**-3.9**

MEX 03 15:55:49.5±0.9, 16°.80N×95°.11W, h88km±26km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.40**	**223**	*i* P	Pn	15 56 12.6	-1.3
HUIG				*i* S	Sn	15 56 31.2	-1.2
OXX	**Oaxaca**	**1.57**	**281**	*i* P	Pn	15 56 19.2	+3.2
TGIG		**1.91**	**90**	*i* P	Pn	15 56 20.1	-0.3
TGIG				*i* S	Sn	15 56 42.5	-1.4
PCIG		**2.12**	**121**	*e*P	Pn	15 56 22.5	-0.7
PCIG				*i* S	Sn	15 56 46.5	-2.5
CCIG	**Comitan**	**2.90**	**100**	*i* P	Pn	15 56 32.2	-1.5
CCIG				*i* S	Sn	15 57 06.9	-0.7
PNIG	**Pinotepa**	**2.92**	**262**	*i* P	Pn	15 56 33.9	0.0
PNIG				*i* S	Sn	15 57 06.2	-1.9

NIED ***03*** *16:11:00, 45°.80N×153°.30E, h29km, Mw4.1 Best double couple: M0=1.85000×10^15 NP1:φs=191.00000°, δ58.00000°, λ-101.00000°. NP2:φs=32.00000°, δ33.00000°, λ-73.00000°.*
ISCJB ***03*** *16:11:36.9±0.4, 44°.91N±0°.06×153°.35E±0°.05, h29km, mb4.3/54, MS3.5/15, Error ellipse: s-maj=9.4km s-min=3.5km az=157.2*
JMA ***03*** *16:11:36.5±0.6, 45°.79N×153°.32E, h30km, M4.6*
BJI ***03*** *16:11:38.9, 45°.71N×153°.33E, h7km, mB4.5/10, mb4.2/16, Ms4.0/4, Ms7 3.8/5*
IDC ***03*** *16:11:39.2±0.6, 45°.08N×153°.65E, h28km±3km, mb3.8/21, mb1 4.0/22, mb1mx3.9/27, mbtmp3.8/22, ML3.8/1, MS3.2/10, Ms1 3.2/10, ms1mx2.9/38, Error ellipse: s-maj=16.1km s-min=12.4km az=155.0*
MOS ***03*** *16:11:39.6±1.4, 44°.99N×153°.35E, h46km, mb4.5/32, Error ellipse: s-maj=10.3km s-min=8.3km az=113.6*
NEIC ***03*** *16:11:39.7±0.4, 45°.04N×153°.49E, h35km, mb4.6/22, Error ellipse: s-maj=10.4km s-min=5.9km az=159.0*
ISC 03 16:11:39.3±0.3, 44°.95N±0°.06×153°.38E±0°.04, h31km, h31km±1.0km:pP-P, n148, σ1°.26/163, mb4.3/54, MS3.5/15, 7C-2D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.91**	**276**	*e*PN	**Pn**	**16 12 37.0**	**-0.2**
KUR				*e*S	**Sn**	**16 13 22.0**	**-0.1**
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax			
	comp=N,380nm,0.6s						
KUR				smax			
	comp=E,420nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.45**	**263**	PN	**Pn**	**16 13 00.5**	**+2.1**
YUK				*e*S	**Sn**	**16 14 01.3**	**+1.3**
YUK				pmax	pmax		
	comp=Z,160nm,0.4s						
YUK				smax			
	comp=N,2μm,0.8s						
YUK				smax			
	comp=N,400nm,0.7s						
YUK				smax			
	comp=E,290nm,0.5s						
NEM2	**Nemuro 2**	**5.71**	**257**	P	**Pn**	**16 13 01.2**	**-0.8**
NEM2				*e*S	**Sn**	**16 14 04.1**	**-2.4**
JRA	**Rausu**	**6.00**	**263**	P	**Pn**	**16 13 06.8**	**+1.0**
JNK	**Nakash**	**6.36**	**261**	P	**Pn**	**16 13 11.4**	**+0.5**
JNK				*e*S	**Sn**	**16 14 20.7**	**-1.8**
JAK	**Akkeshi**	**6.56**	**256**	P	**Pn**	**16 13 13.0**	**-0.6**
JAK				*e*S	**Sn**	**16 14 24.6**	**-2.7**
JTKR	**Abashiri--Toko**	**6.84**	**265**	P	**Pn**	**16 13 18.2**	**+0.7**
JAR	**Ashorobuto**	**7.11**	**260**	P	**Pn**	**16 13 22.1**	**+1.0**
JAR				*e*S	**Sn**	**16 14 39.4**	**-1.4**
JOB	**Onbets**	**7.19**	**257**	P	**Pn**	**16 13 22.5**	**+0.3**
JOB				*e*S	**Sn**	**16 14 40.8**	**-1.9**
JMP	**Maruseppu**	**7.23**	**266**	P	**Pn**	**16 13 24.1**	**+1.4**
JCH	**Churui**	**7.61**	**256**	P	**Pn**	**16 13 27.7**	**-0.3**
JCH				*e*S	**Sn**	**16 14 50.5**	**-2.7**
YSS	**Yuzh-Sakhalins**	**7.67**	**289**	*e*PN	**Pn**	**16 13 26.3**	**-2.5**
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS	**Yuzh-Sakhalins**	**7.67**	**289**	*e*Pn	**Pn**	**16 13 28.7**	**-0.1**
	comp=Z,17nm,0.8s						
JKK2	**Kamakawa 2**	**7.69**	**266**	P	**Pn**	**16 13 30.3**	**+1.3**
ASAJ	**Asahikawa**	**7.75**	**268**	PN	**Pn**	**16 13 31.4**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,88nm,20.3s						
ASAJ	**Asahikawa**	**7.75**	**268**	Pn	**Pn**	**16 13 31.4**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=70,slow=16,SNR=14						
ASAJ				LR	LR	16 16 52.1	
	comp=Z,88nm,20.3s,baz=151,slow=39						
JFR	**Furan**	**7.97**	**261**	P	**Pn**	**16 13 34.4**	**+1.5**
JNBK	**Urakawa-nobuka**	**8.16**	**255**	P	**Pn**	**16 13 35.1**	**-0.4**
JNBK				*e*S	**Sn**	**16 15 02.8**	**-3.8**
JBT2	**Biratori 2**	**8.25**	**259**	P	**Pn**	**16 13 36.5**	**-0.2**
PETK	**Petropavlovsk-**	**8.64**	**18**	PN	**Pn**	**16 13 35.6**	**-6.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,53nm,20.6s						
PETK	**Petropavlovsk-**	**8.64**	**18**	Pn	**Pn**	**16 13 35.5**	**-6.6**
	comp=Z,0.7nm,0.3s,baz=187,slow=12,SNR=46						
PETK				LR	LR	16 17 04.3	
	comp=Z,53nm,20.6s,baz=196,slow=38						
PET	**Petropavlovsk**	**8.79**	**21**	*e*PN	**Pn**	**16 13 37.1**	**-7.1**
PET				MLR	MLR		
	comp=Z,100nm,21.0s						
JNB	**Noboribetsu**	**9.27**	**259**	P	**Pn**	**16 13 50.6**	**-0.2**
JNB				*e*S	**Sn**	**16 15 31.0**	**-3.0**
JKB	**Kayabe**	**9.49**	**256**	P	**Pn**	**16 13 52.9**	**-0.9**
JKB				*e*S	**Sn**	**16 15 33.0**	**-6.3**
JANG	**Nango**	**9.86**	**247**	P	**Pn**	**16 13 57.1**	**-1.7**
JANG				*e*S	**Sn**	**16 15 41.1**	**-7.3**
JTH	**Tanohata**	**9.87**	**244**	*e*S	**Sn**	**16 15 42.5**	**-6.2**
JTM	**Tenmabayashi**	**9.95**	**250**	P	**Pn**	**16 13 59.2**	**-0.8**
OFUJ	**Ofunato**	**10.49**	**240**	*e*S	**Sn**	**16 15 57.7**	**-6.3**
JRG	**Rokugo**	**10.96**	**244**	P	**Pn**	**16 14 13.0**	**-0.9**
JIO	**Ouri**	**11.08**	**238**	*e*S	**Sn**	**16 16 09.3**	**-9.1**
MAJO	**Matsushiro**	**14.22**	**239**	*e*P	**Pn**	**16 14 57.9**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,18nm,1.1s						
MAJO	**Matsushiro**	**14.22**	**239**	*e*Pn	**Pn**	**16 14 57.9**	**-0.6**
	comp=Z,18nm,1.1s						
MAT	**Matsushiro**	**14.22**	**239**	P	**Pn**	**16 15 06.6**	**+8.1**
MJAR	**Matsushiro Arr**	**14.22**	**239**	Pn	**Pn**	**16 14 58.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=31,slow=14,SNR=4.4						
KLR	**Kul'dur**	**15.32**	**294**	*e*P	**Pn**	**16 15 08.5**	**-4.7**
KLR				MLR	MLR		
	comp=Z,500nm,13.0s						
MDJ	**Mudanjiang**	**16.88**	**277**	P	**Pn**	**16 15 34.2**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,65nm,3.8s						
MDJ	**Mudanjiang**	**16.88**	**277**	*e*P	**Pn**	**16 15 32.9**	**-0.2**
	comp=Z,12nm,0.8s						
SEY	**Seymchan**	**18.03**	**359**	*i* P	**Pn**	**16 15 40.6**	**-6.6**
CN2	**Changchun**	**19.96**	**277**	*e*P	**Pn**	**16 16 11.3**	**+0.7**
CN2				*e*S	**Sn**	**16 19 55.5**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=N,200nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
KSRS	**Korea Array**	**20.51**	**257**	P	**P**	**16 16 17.0**	**+2.2**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**20.51**	**257**	P	**P**	**16 16 16.9**	**+2.2**
	comp=Z,3.1nm,0.8s,baz=54,slow=11,SNR=12						
KS15	**Wonju Array Si**	**20.54**	**257**	*e*P	**P**	**16 16 17.2**	**+2.1**
YAK	**Yakutsk**	**21.95**	**330**	*e*P	**P**	**16 16 24.7**	**-5.4**
YAK				*e*S	**S**	**16 20 22.5**	**-8.0**
YAK				*e*		16 20 25.8	
YAK				*e**SS	sS	16 20 37.2	-6.5
YAK				*e*SSS		16 21 03.8	
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK				smax			
	comp=N,148nm,4.2s						
YAK				smax			
	comp=E,98nm,5.0s						
YAK				MLR	MLR		
	comp=Z,55nm,10.0s,MS3.3						
YAK				MLR	MLR		
	comp=N,40nm,12.0s						
YAK	**Yakutsk**	**21.95**	**330**	*e*P	**P**	**16 16 24.7**	**-5.4**
	comp=N,24nm,0.7s,mb4.7						
BILL	**Bilibino**	**24.11**	**12**	*e*P	**P**	**16 16 49.9**	**-1.9**
BILL				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
BILL	**Bilibino**	**24.11**	**12**	*e*P	**P**	**16 16 50.0**	**-1.8**
	comp=Z,6.4nm,0.8s,mb4.1						
BOD	**Bodaibo**	**27.31**	**312**	*e*P	**P**	**16 17 17.6**	**-3.3**
NJ2	**Nanjing**	**29.70**	**256**	*e*P	**P**	**16 17 49.6**	**+7.2**
NJ2				pP	pP	16 17 59.4	+8.1
NJ2				PP	PP	16 18 47.0	-2.6
NJ2				S	**S**	**16 22 44.0**	**+7.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				LR	LR		
	comp=N,160nm,11.9s,MS3.9						
NJ2				LR	LR		
	comp=E,80nm,12.6s,MS3.9						
NJ2				LR	LR		
	comp=Z,760nm,11.1s,MS4.6						
ULN	**Ulaanbaatar**	**31.70**	**292**	*e*P	**P**	**16 18 00.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**31.70**	**292**	*e*P	**P**	**16 18 00.5**	**+0.6**
	comp=Z,4.8nm,1.0s,mb4.3						
SONM	**Songino Array**	**32.15**	**292**	P	**P**	**16 18 04.7**	**+0.9**
SONM				*PP	pP	16 18 14.9	+2.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,42nm,20.6s						
SONM	**Songino Array**	**32.15**	**292**	P	**P**	**16 18 04.7**	**+0.8**
	comp=Z,1.0nm,0.7s,mb3.7,baz=70,slow=8.3,SNR=7.8						
SONM				pP	pP	16 18 14.9	+2.2
	comp=Z,1.6nm,0.7s,baz=81,slow=8.9,SNR=7.6						
SONM				LR	LR	16 31 01.4	
	comp=Z,42nm,20.6s,MS3.1,baz=78,slow=36						
SONM	**Songino Array**	**32.15**	**292**	P	**P**	**16 18 04.7**	**+0.8**
SONM				pP	pP	16 18 14.9	+2.2
SONM				LR	LR	16 31 01.4	
TLY	**Talaya**	**33.20**	**300**	*e*P	**P**	**16 18 12.5**	**-0.5**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
TLY				MLR	MLR		
	comp=Z,52nm,16.0s,MS3.3						
ZAK	**Zakamensk**	**33.64**	**298**	*e*P	**P**	**16 18 13.0**	**-3.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
GTA	**Gaotai**	**39.47**	**281⇑**	*e*P	**P**	**16 19 09.7**	**+3.0**
GTA				pP	pP	16 19 15.2	-0.5
GTA				sP	sP	16 19 18.3	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.8						
GTA				pmax	pmax		
	comp=Z,29nm,4.5s						
GTA				LR	LR		
	comp=N,60nm,14.0s,MS3.8						
GTA				LR	LR		
	comp=E,67nm,13.4s,MS3.8						
GTA				LR	LR		
	comp=Z,68nm,13.7s,MS3.6						
INK	**Inuvik**	**43.09**	**31**	P	**P**	**16 19 34.6**	**-1.4**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**43.09**	**31**	P	**P**	**16 19 34.5**	**-1.4**
	comp=Z,0.6nm,0.6s,mb3.5,baz=293,slow=3.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**43.83**	**307**	P	**P**	**16 19 41.8**	**-0.4**
ZALV						16 21 27.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ZALV				MLR	MLR		
	comp=Z,29nm,21.2s,MS3.2						
ZALV	**Zalesovo Beam**	**43.83**	**307**	P	**P**	**16 19 41.8**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.6,baz=103,slow=5.3,SNR=4.5						
ZALV				PcP	PcP	16 21 27.7	-0.4
	comp=Z,1.0nm,0.7s,baz=93,slow=2.9,SNR=5.2						
ZALV				LR	LR	16 37 60.0	
	comp=Z,29nm,21.2s,MS3.2,baz=20,slow=36						
MK31	**Makanchi Array**	**47.95**	**299**	*e*P	**P**	**16 20 15.4**	**+0.6**
MK31				*e*	pP	16 20 24.3	+0.4
MKAR	**Makanchi Array**	**47.95**	**299**	P	**P**	**16 20 15.5**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,30nm,21.0s						
MKAR	**Makanchi Array**	**47.95**	**299**	P	**P**	**16 20 15.5**	**+0.7**
	comp=Z,4.7nm,0.8s,mb4.6,baz=72,slow=6.2,SNR=28						
MKAR				LR	LR	16 41 30.5	
	comp=Z,30nm,21.0s,MS3.2,baz=244,slow=37						
KURK	**Kurchatov**	**48.53**	**305***c*	*i* P	**P**	**16 20 20.2**	**+1.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KURK	**Kurchatov**	**48.53**	**305**	*e*P	**P**	**16 20 20.1**	**+0.9**
	comp=Z,11nm,0.9s,mb4.9						
KURK				*e*	pP	16 20 29.1	+0.7
LSA	**Lhasa**	**50.58**	**275**	*e*P	**P**	**16 20 36.5**	**+1.4**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**50.58**	**275**	*e*P	**P**	**16 20 36.5**	**+1.4**
	comp=Z,5.0nm,0.8s,mb4.5						
CMAR	**Chiang Mai Arr**	**52.15**	**258**	P	**P**	**16 20 49.3**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**52.15**	**258**	P	**P**	**16 20 49.3**	**+2.4**
	comp=Z,0.6nm,0.9s,mb3.5,baz=36,slow=6.5,SNR=3.6						
BVAR	**Borovoye Array**	**52.16**	**311**	P	**P**	**16 20 48.3**	**+1.8**
BVAR						16 21 59.1	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,32nm,21.0s						
BVAR	**Borovoye Array**	**52.16**	**311**	P	**P**	**16 20 48.3**	**+1.7**
	comp=Z,2.1nm,0.8s,mb4.1,baz=49,slow=10.0,SNR=15						
BVAR				PcP	PcP	16 21 59.1	+1.1
	comp=Z,1.2nm,0.7s,baz=85,slow=3.3,SNR=4.2						
BVAR				LR	LR	16 43 55.1	
	comp=Z,32nm,21.0s,MS3.3,slow=37						
BRVK	**Borovoye**	**52.20**	**311⇑**	*e*P	**P**	**16 20 48.9**	**+2.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK				MLR	MLR		
	comp=Z,49nm,25.0s,MS3.4						
BRVK	**Borovoye**	**52.20**	**311**	P	**P**	**16 20 45.1**	**-1.8**
	comp=Z,4.8nm,0.8s,mb4.5						
BRVK				*e*		16 20 56.6	
YKA	**Yellowknife Ar**	**52.27**	**36**	P	**P**	**16 20 45.5**	**-1.7**
YKA						16 21 57.0	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**52.27**	**36**	P	**P**	**16 20 45.5**	**-1.7**
	comp=Z,0.7nm,0.9s,mb3.6,baz=296,slow=7.0,SNR=7.5						
YKA				PcP	PcP	16 21 57.0	-1.1
	comp=Z,0.1nm,0.5s,baz=305,slow=3.5,SNR=4.1						
YKA	**Yellowknife Ar**	**52.27**	**36**	P	**P**	**16 20 45.5**	**-1.7**
YKA				PcP	PcP	16 21 57.0	-1.1
RES	**Resolute Bay**	**52.49**	**18**	P	**P**	**16 20 49.0**	**+0.3**
RES				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
RES	**Resolute Bay**	**52.49**	**18**	P	**P**	**16 20 49.0**	**+0.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=16,slow=7.4,SNR=3.4						
TKM2	**Tokmak 2**	**53.97**	**297**	*e*P	**P**	**16 20 59.1**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**53.97**	**297**	*e*P	**P**	**16 20 59.1**	**-0.9**
	comp=Z,2.1nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**54.82**	**298⇑**	*e*P	**P**	**16 21 08.0**	**+1.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**54.82**	**298**	*e*P	**P**	**16 21 06.7**	**+0.5**
	comp=Z,3.7nm,0.8s,mb4.5						
AAK				*e*	pP	16 21 15.1	-0.4
AML	**Almayashu**	**55.59**	**297**	*e*P	**P**	**16 21 13.0**	**+1.2**
	comp=Z,2.2nm,0.8s,mb4.2						
ARU	**Arti**	**56.47**	**318***c*	*i* P	**P**	**16 21 18.0**	**+0.1**
ARU				*e**PP	pP	16 21 27.1	-0.1
ARU				S	**S**	**16 29 05.3**	**-1.4**
ARU				SS	SS	16 32 46.9	-6.5
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ARU	**Arti**	**56.47**	**318**	*e*P	**P**	**16 21 16.4**	**-1.5**
	comp=Z,7.5nm,0.7s,mb4.8						
ARU				*e*	pP	16 21 26.8	-0.5
KEV	**Kevo**	**59.10**	**341**	*e*P	**P**	**16 21 34.2**	**-2.0**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KEV	**Kevo**	**59.10**	**341**	*e*p	**P**	**16 21 34.2**	**-2.0**
	comp=Z,3.6nm,0.7s,mb4.5						
ARCES	**ARCESS Array B**	**59.62**	**341**	P	**P**	**16 21 40.1**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**59.62**	**341**	P	**P**	**16 21 40.1**	**+0.4**
	comp=Z,2.5nm,0.7s,mb4.4,baz=40,slow=6.4,SNR=8.1						
ABKAR	**Akbulak array**	**59.73**	**311**	*e*P	**P**	**

WRA	**Warramunga Arr**	**66.87 199**	P	**P**		**16 22 29.4**	**+1.1**
	comp=Z,1.9nm,1.1s,mb4.0,baz=15,slow=6.7,SNR=4.7						
OBN	**Obninsk**	**66.90 326**	*e*P	**P**		**16 22 29.3**	**+1.1**
OBN			pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.6						
NB2	**NORSAR Subarra**	**69.99 341**	P	**P**		**16 22 47.3**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.3,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.99 341**	P	**P**		**16 22 47.0**	**-0.4**
NOA			pmax	pmax			
	comp=Z,2.0nm,0.8s						
NOA			MLR	MLR			
	comp=Z,23nm,21.2s						
NOA	**NORSAR Array B**	**69.99 341**	P	**P**		**16 22 47.0**	**-0.4**
	comp=Z,1.9nm,0.8s,mb4.1,baz=27,slow=6.3,SNR=7.3						
NOA			LR	LR		16 53 49.5	
	comp=Z,23nm,21.2s,MS3.4,baz=140,slow=36						
ASAR	**Alice Springs**	**70.56 199**	P	**P**		**16 22 53.3**	**+2.1**
ASAR			*PP	pP		16 23 01.8	+1.1
ASAR			pmax	pmax			
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**70.56 199**	P	**P**		**16 22 53.3**	**+2.1**
	comp=Z,1.7nm,0.9s,mb4.0,baz=14,slow=4.8,SNR=11						
ASAR			pP	pP		16 23 01.8	+1.0
	comp=Z,1.9nm,0.8s,baz=16,slow=6.0,SNR=10						
KIV	**Kislovodsk**	**72.19 315**	*e*P	**P**		**16 22 59.3**	**-1.7**
KIV			pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.6						
KIV			MLR	MLR			
	comp=Z,16nm,18.0s,MS3.3						
AKASG	**Malin Array Be**	**73.15 327**	*i* P	**P**		**16 23 07.0**	**+0.5**
AKASG			pmax	pmax			
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**73.15 327**	P	**P**		**16 23 05.7**	**-0.9**
	comp=Z,1.3nm,0.4s,mb4.2,baz=34,slow=6.4,SNR=9.5						
AKASG			pP	pP		16 23 15.7	-0.4
	comp=Z,2.4nm,0.5s,baz=33,slow=5.8,SNR=7.0						
KIEV	**Kiev**	**73.16 327**	*e*P	**P**		**16 23 05.9**	**-0.7**
KIEV			pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6						
KIEV	**Kiev**	**73.16 327**	*e*P	**P**		**16 23 05.9**	**-0.7**
	comp=Z,5.7nm,0.8s,mb4.5						
SCHQ	**Schefferville**	**74.90 23**	P	**P**		**16 23 15.3**	**-1.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=346,slow=4.4,SNR=3.9						
BUR08	**Bucovina Ar. S**	**77.18 327**	*e*P	**P**		**16 23 29.8**	**0.0**
BURAR	**Bucovina Array**	**77.20 327**	||*i*P	**P**		**16 23 29.1**	**-0.8**
MORC	**Moravsky Berou**	**78.12 333**	||*i*P	**P**		**16 23 36.3**	**+1.3**
CLL	**Collm**	**78.18 336**	*e*P	**P**		**16 23 34.0**	**-1.3**
CLL			*e*	pP		16 23 44.0	-1.0
CLL	**Collm**	**78.18 336**	*e*P	**P**		**16 23 34.0**	**-1.3**
CLL			*e*PcP	PcP		16 23 44.0	-0.8
TXAR	**Lajitas Array**	**78.22 60**	P	**P**		**16 23 35.2**	**-0.8**
TXAR			*PP	pP		16 23 43.1	-2.5
TXAR			pmax	pmax			
	comp=Z,2.0nm,0.9s						
TXAR	**Lajitas Array**	**78.22 60**	P	**P**		**16 23 35.2**	**-0.8**
	comp=Z,1.7nm,0.9s,mb4.0,baz=289,slow=3.8,SNR=5.2						
TXAR			pP	pP		16 23 43.1	-2.5
	comp=Z,2.8nm,0.9s,baz=310,slow=4.3,SNR=5.8						
MLR	**Muntele Rosu**	**78.65 325**	||*i*P	**P**		**16 23 40.2**	**+2.2**
VOIR		**79.05 326**	||*i*P	**P**		**16 23 41.5**	**+1.3**
BRTR	**Keskin Array B**	**79.83 317**	*i* P	**P**		**16 23 45.2**	**+0.6**
BRTR			pmax	pmax			
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**79.83 317**	P	**P**		**16 23 45.2**	**+0.7**
	comp=Z,1.1nm,0.9s,mb3.8,baz=45,slow=3.7,SNR=5.8						
BRTR			LR	LR		17 05 19.3	
	comp=Z,12nm,20.8s,MS3.2,baz=216,slow=40						
KHC	**Kasperske Hory**	**79.94 334**	*e*P	**P**		**16 23 45.0**	**0.0**
KHC			*e*	pP		16 23 54.8	+0.1
KHC			pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0						
KHC	**Kasperske Hory**	**79.94 334**	*e*P	**P**		**16 23 45.0**	**0.0**
	comp=Z,2.3nm,0.9s,mb4.1						
KHC			*e*	pP		16 23 54.8	+0.1
KHC	**Kasperske Hory**	**79.94 334**	*e*P	**P**		**16 23 44.9**	**-0.1**
KHC			*e*pP	pP		16 23 54.8	+0.1
GERES	**GERESS Array B**	**80.16 334**	P	**P**		**16 23 46.4**	**+0.2**
GERES			*PP	pP		16 23 55.4	-0.5
GERES			pmax	pmax			
	comp=Z,1.0nm,0.6s						
GERES			MLR	MLR			
	comp=Z,30nm,18.8s						
GERES	**GERESS Array B**	**80.16 334**	P	**P**		**16 23 46.4**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=27,slow=3.3,SNR=5.9						
GERES			pP	pP		16 23 55.4	-0.4
	comp=Z,1.1nm,0.8s,baz=28,slow=6.0,SNR=5.7						
GERES			LR	LR		17 04 43.6	
	comp=Z,30nm,18.8s,MS3.7,baz=283,slow=40						
PPT	**Papeete**	**80.95 126**	LR	LR		16 57 52.5	
	comp=Z,174nm,18.3s,MS4.5,baz=84,slow=34						
HALT	**Halls**	**81.56 47**	*e*P	**P**		**16 23 51.6**	**-2.2**
CDF	**Champ du Feu**	**82.39 338**	*e*P	**P**		**16 23 58.7**	**+0.6**
AVF	**Avril sur Loir**	**84.90 340**	*e*P	**P**		**16 24 11.7**	**+0.8**
SMF	**Signal de Mont**	**84.92 339**	*e*P	**P**		**16 24 11.7**	**+0.7**
LPL	**La Plagne**	**85.20 337**	*e*P	**P**		**16 24 14.1**	**+1.6**
	comp=Z,7.2nm,1.0s,mb4.5						
LPG	**La Plagne**	**85.21 337**	*e*P	**P**		**16 24 14.4**	**+1.9**
	comp=Z,5.6nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**85.99 337**	*e*P	**P**		**16 24 17.9**	**+1.5**
	comp=Z,13nm,0.9s,mb4.8						

MAN ***03*** *16:42:23, 17°.66N×122°.63E, h20km, mb4.7, ML3.6, MS3.6*
ISCJB ***03*** *16:42:23.8±0.6, 17°.65N±0°.03×122°.76E±0°.06, h37km±6km, mb4.1/27, MS3.3/10, Error ellipse: s-maj=9.7km s-min=4.6km az=175.3*
BJI ***03*** *16:42:25.4, 17°.85N×122°.58E, h20km, mB4.6/9, mb4.2/15, Ms3.8/4, Ms7 3.4/4*
NEIC ***03*** *16:42:25.4±0.3, 17°.58N×122°.75E, h35km, mb4.4/11, Error ellipse: s-maj=9.5km s-min=5.4km az=76.0*
IDC ***03*** *16:42:27.0±2.7, 17°.56N×122°.71E, h51km±26km, mb3.6/16, mb1 3.8/17, mb1mx3.7/24, mbtmp3.7/17, ML4.2/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/33, Error ellipse: s-maj=22.5km s-min=12.5km az=75.0*
DJA ***03*** *16:42:53, 17°.10N×122°.97E, h286km, mb3.9/6*
ISC 03 16:42:25.1±1.3, 17°.62N±0°.03×122°.73E±0°.06, h31km±9km, n68, σ1§24/70, mb4.1/27, MS3.3/10, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.62 207**		*e*P	**Pb**	**16 42 35.5**	**-2.1**
CVP	**Callao Caves**	**0.87 276**		||*i*P	**Pn**	**16 42 36.2**	**-4.9**
CVP				*i* S	**Sn**	**16 42 46.5**	**-6.2**
SGCP	**Mt. Cagua**	**0.90 314**		*e*P	**Pn**	**16 42 39.2**	**-2.3**
CAUP	**Cauayan**	**1.09 232**		*e*P	**Pn**	**16 42 43.2**	**-1.1**
APYP	**Conner**	**1.43 280**		*e*P	**Pn**	**16 42 46.6**	**-2.4**
ABRA	**Dolores**	**1.92 271**		*e*P	**Pn**	**16 42 53.8**	**-1.9**
BALP	**Baler**	**2.17 211**		*e*P	**Pn**	**16 42 58.9**	**-0.2**
PCPH	**Palayan**	**2.58 218**		||*e*P	**Pn**	**16 43 04.2**	**-0.5**
PCPH				*e*S	**Sn**	**16 43 35.8**	**+0.8**
BBP	**Basco**	**2.90 346**		*e*P	**Pn**	**16 43 08.5**	**-0.6**
BOLP	**Bolinao**	**2.96 246**		*e*P	**Pn**	**16 43 09.1**	**-0.8**
POLP	**Polilio Island**	**2.97 195**		*e*P	**Pn**	**16 43 11.9**	**+1.7**
SCZP	**Santa Cruz**	**3.26 236**		*e*P	**Pn**	**16 43 14.9**	**+0.8**
GQP	**Guinayangan**	**3.70 184**		||*e*P	**Pn**	**16 43 20.7**	**+0.4**
GQP				*e*S	**Sn**	**16 44 01.7**	**-1.1**
TGY	**Tagaytay City**	**3.90 206**		P	**Pn**	**16 43 25.0**	**+2.1**
	70nm,0.3s,baz=41,slow=14,SNR=4.7						
TGY				S	**Sn**	**16 44 16.6**	**+8.9**
	47nm,0.3s,baz=318,slow=20,SNR=3.8						
PVCP	**Virac**	**4.23 161**		*e*P	**Pn**	**16 43 29.7**	**+2.3**
LUBP	**Lubang**	**4.54 212**		*e*P	**Pn**	**16 43 33.5**	**+1.7**
SJMP	**San Jose**	**5.36 197**		*e*P	**Pn**	**16 43 46.2**	**+3.2**
TWG	**Pinlang**	**5.40 344**		*e*Pn	**Pn**	**16 43 45.3**	**+1.7**
	20nm,0.4s						
TWG				*e*Sn	**Sn**	**16 44 44.2**	**-0.5**
YULB	**Yu-li**	**5.90 347**		*e*Pn	**Pn**	**16 43 49.8**	**-0.5**
	37nm,1.0s						
YULB				*e*Sn	**Sn**	**16 44 45.5**	**-11**
TPUB	**Ta-pu**	**5.98 341**		*e*Pn	**Pn**	**16 43 51.2**	**-0.4**
	32nm,0.8s						
BUSP	**Coron**	**6.09 204**		*e*P	**Pn**	**16 43 54.8**	**+1.7**
NACB	**Ninganchiao**	**6.61 351**		*e*Pn	**Pn**	**16 44 04.1**	**+4.0**
	26nm,0.8s						
JOW	**Kunigami**	**10.51 28**		P	**Pn**	**16 44 54.8**	**+1.2**
	2.0nm,0.3s,baz=190,slow=14,SNR=8.3						
DAV	**Davao City (W)**	**10.85 165**		LR	LR	16 49 55.5	
	comp=Z,122nm,18.6s,baz=192,slow=42						
ENH	**Enshi**	**17.44 319**		*e*Pn	**Pn**	**16 46 27.1**	**+0.9**
	6.5nm,0.9s						
KMI	**Kunming**	**20.04 295**		P	**P**	**16 46 57.6**	**+1.9**
KMI				pP		16 47 04.7	
KMI				sP	sP	16 47 10.3	+2.4
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,88nm,4.6s						
KMI				LR	LR		
	comp=N,210nm,16.3s,MS3.7						
KMI				LR	LR		
	comp=E,130nm,15.3s,MS3.7						
KMI				LR	LR		
	comp=Z,160nm,16.0s,MS3.5						
KS15	**Wonju Array Si**	**20.26 12**		*e*P	**P**	**16 46 54.5**	**-3.5**
KSRS	**Korea Array**	**20.28 12**		P	**P**	**16 46 57.3**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=198,slow=11,SNR=10						
KSRS				LR	LR	16 56 30.9	
	comp=Z,46nm,18.4s,MS2.9,baz=205,slow=42						
XAN	**Xi'an**	**20.50 326**		P	**P**	**16 47 01.6**	**+1.0**
XAN				pP		16 47 08.0	
XAN				S	**S**	**16 50 43.3**	**-5.1**
XAN				sS	sS	16 50 55.2	-6.4
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,18nm,4.9s						
XAN				LR	LR		
	comp=N,73nm,14.0s,MS3.2						
XAN				LR	LR		
	comp=E,23nm,14.0s,MS3.2						
XAN				LR	LR		
	comp=Z,48nm,13.5s,MS3.0						
GUMO	**Guam**	**21.70 98**		LR	LR	16 53 39.3	
	comp=Z,64nm,21.2s,MS3.0,baz=271,slow=31						
CMAR	**Chiang Mai Arr**	**22.63 276**		P	**P**	**16 47 23.4**	**-0.1**
	comp=Z,2.0nm,1.0s,mb3.5,baz=90,slow=7.5,SNR=6.2						
CMAR				LR	LR	16 57 30.2	
	comp=Z,59nm,18.1s,MS3.1,baz=80,slow=40						
KAPI	**Kappang**	**22.68 188**		LR	LR	16 57 54.4	
	comp=Z,76nm,18.3s,MS3.2,baz=234,slow=41						
MJAR	**Matsushiro Arr**	**23.29 33**		P	**P**	**16 47 32.1**	**+1.7**
	comp=Z,0.8nm,0.8s,mb3.2,baz=175,slow=11,SNR=3.8						
LZH	**Lanzhou**	**24.86 321**		*e*P	**P**	**16 47 47.0**	**+2.1**
LZH				pP		16 47 56.5	
LZH				sP	sP	16 48 01.2	+3.6
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.4						
PSI	**Prapat**	**27.61 240**		LR	LR	16 57 10.7	
	comp=Z,94nm,19.4s,MS3.4,baz=46,slow=32						
GTA	**Gaotai**	**29.45 322**		*e*P	**P**	**16 48 28.1**	**+2.0**
GTA				pP	pP	16 48 37.5	+2.4
GTA				sP	sP	16 48 41.8	+2.9
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
LSA	**Lhasa**	**31.22 298**		*e*P	**P**	**16 48 42.6**	**+0.8**
	comp=Z,6.9nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**32.78 340**		*e*P	**P**	**16 48 56.1**	**+0.8**
	comp=Z,5.6nm,1.4s,mb4.3						
SONM	**Songino Array**	**32.97 340**		P	**P**	**16 48 57.8**	**+0.8**
	comp=Z,0.7nm,0.5s,mb3.9,baz=157,slow=9.2,SNR=4.8						
SONM				LR	LR	17 03 27.0	
	comp=Z,96nm,19.0s,MS3.5,baz=156,slow=38						
TLY	**Talaya**	**37.20 340**		*e*P	**P**	**16 49 33.2**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**39.02 162**		*e*P	**P**	**16 49 47.9**	**-1.2**
	comp=Z,17nm,1.1s,mb4.7						
WRA	**Warramunga Arr**	**39.03 162**		P	**P**	**16 49 48.2**	**-0.9**
	comp=Z,7.8nm,0.7s,mb4.5,baz=342,slow=9.2,SNR=48						
WB2	**Warramunga Arr**	**39.03 162**		*e*P	**P**	**16 49 47.7**	**-1.5**
ASAR	**Alice Springs**	**42.46 165**		P	**P**	**16 50 17.1**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.0,baz=347,slow=7.1,SNR=55						
CTAO	**Charters Tower**	**44.02 147**		*e*P	**P**	**16 50 28.5**	**-1.5**
	comp=Z,7.2nm,0.9s,mb4.4						
MK31	**Makanchi Array**	**44.17 320**		*e*P	**P**	**16 50 31.1**	**+0.2**
MKAR	**Makanchi Array**	**44.17 320**		P	**P**	**16 50 31.2**	**+0.2**
	comp=Z,2.4nm,0.6s,mb4.1,baz=110,slow=8.4,SNR=20						
MKAR	**Makanchi Array**	**44.17 320**		P	**P**	**16 50 31.2**	**+0.2**
ZALV	**Zalesovo Beam**	**46.57 330**		P	**P**	**16 50 49.0**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=138,slow=6.7,SNR=3.3						
ZALV				LR	LR	17 12 07.1	
	comp=Z,32nm,18.0s,MS3.3,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**46.57 330**		P	**P**	**16 50 49.0**	**-0.9**
ZALV				LR	LR	17 12 07.1	
UCH	**Uchtor**	**47.67 311**		*e*P	**P**	**16 50 58.6**	**0.0**
	comp=Z,7.5nm,1.0s,mb4.7						
KURK	**Kurchatov**	**48.12 324**		P	**P**	**16 51 02.2**	**+0.2**
	comp=Z,3.0nm,0.7s,mb4.5,baz=120,slow=7.9,SNR=19						
KURK	**Kurchatov**	**48.12 324**		P	**P**	**16 51 02.2**	**+0.2**
STKA	**Stephens Creek**	**52.44 160**		P	**P**	**16 51 33.2**	**-1.6**
	comp=Z,3.2nm,0.8s,mb4.3,baz=344,slow=5.7,SNR=6.5						
STKA	**Stephens Creek**	**52.44 160**		*e*P	**P**	**16 51 34.3**	**-0.6**
	comp=Z,0.7nm,0.8s,mb3.6						
BVAR	**Borovoye Array**	**53.72 324**		P	**P**	**16 51 43.9**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=114,slow=8.4,SNR=3.0						
TIXI	**Tiksi**	**54.15 2**		*e*P	**P**	**16 51 51.0**	**+4.1**
	comp=Z,1.4nm,0.6s,mb4.1						
BILL	**Bilibino**	**57.40 18**		*e*P	**P**	**16 52 10.0**	**-0.3**
	comp=Z,5.1nm,1.0s,mb4.5						
ABKAR	**Akbulak array**	**59.13 317**		*e*P	**P**	**16 52 22.1**	**-0.7**
	comp=Z,1.7nm,0.4s,mb4.4						
NIKO	**Nikolski**	**63.15 39**		*e*P	**P**	**16 52 48.6**	**-1.2**
JOF	**Joensuu**	**75.12 332**		*e*p	**P**	**16 54 01.3**	**-2.6**
	comp=Z,1.0nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**76.14 339**		P	**P**	**16 54 10.4**	**+0.8**
	comp=Z,2.7nm,0.9s,mb4.2,baz=344,slow=9.6,SNR=3.0						
FINES	**FINESS Array B**	**77.83 331**		P	**P**	**16 54 19.1**	**-0.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=39,slow=9.8,SNR=7.7						
NB2	**NORSAR Subarra**	**84.69 333**		P	**P**	**16 54 54.7**	**-1.0**
	comp=Z,3.1nm,1.0s,mb4.4,baz=64,slow=5.6						
NOA	**NORSAR Array B**	**84.69 333**		P	**P**	**16 54 54.9**	**-0.8**
	comp=Z,1.6nm,0.9s,mb4.2,baz=64,slow=5.0,SNR=3.5						
NOA				LR	LR	17 36 39.5	
	comp=Z,39nm,19.0s,MS3.8,baz=55,slow=38						
YKA	**Yellowknife Ar**	**88.43 23**		P	**P**	**16 55 14.4**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.7,baz=303,slow=4.0,SNR=6.5						
GERES	**GERESS Array B**	**88.83 321**		P	**P**	**16 55 15.5**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.7,baz=283,slow=10.0,SNR=2.4						
SDV	**Santo Domingo**	**150.54 28**		*e*PKPbc	PKPbc	17 02 15.3	+0.5

TIF ***03*** *16:55:25.3, 41°.41N×45°.59E, h10km*
CSEM ***03*** *16:55:30.1±0.9, 41°.71N×45°.51E, h2km, mb4.1, Error ellipse: s-maj=16.6km s-min=8.8km az=122.0*
MOS ***03*** *16:55:33.3±0.3, 41°.73N×45°.10E, h2km, mb4.1/1, Error ellipse: s-maj=30.6km s-min=11.6km az=112.6*
ISC 03 16:55:28.2±1.3, 41°.38N±0°.04×45°.28E±0°.07, h10km, n29, σ1§16/49, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTA	**Mtatsminda**	**0.48 311**		P	**Pg**	**16 55 38.8**	**+1.1**
MTA				S	**Sg**	**16 55 48.2**	**+4.1**
MTA	**Mtatsminda**	**0.48 311**		P	**Pg**	**16 55 38.8**	**+1.1**
MTA				S	**Sg**	**16 55 48.2**	**+4.1**
TBLG	**Delisi**	**0.54 311**		*i* PG	**Pg**	**16 55 40.0**	**+1.3**
TBLG				*i* S	**Sg**	**16 55 50.0**	**+4.2**
TBLG	**Delisi**	**0.54 311**		P	**Pg**	**16 55 39.7**	**+0.9**
TBLG				S	**Sg**	**16 55 49.8**	**+3.9**
TBLG	**Delisi**	**0.54 311**		P	**Pg**	**16 55 39.7**	**+1.0**
TBLG	**Delisi**	**0.54 311**		*i* Pg	**Pg**	**16 55 40.0**	**+1.3**
TBLG				S	**Sg**	**16 55 49.8**	**+4.0**
TBLG				*i* Sg	**Sg**	**16 55 50.0**	**+4.2**
GOR	**Gori**	**1.07 305**		P	**Pg**	**16 55 49.1**	**+0.4**
GOR				S	**Sg**	**16 56 07.0**	**+4.4**
GOR	**Gori**	**1.07 305**		P	**Pg**	**16 55 49.1**	**+0.3**
GOR				S	**Sg**	**16 56 07.0**	**+4.3**
SNJR	**Sundja**	**1.73 348**		*e*PG	**Pg**	**16 55 58.9**	**-2.4**
SNJR				*i* S	**Sg**	**16 56 23.2**	**-0.5**
SNJR	**Sundja**	**1.73 348**		*e*Pg	**Pg**	**16 55 58.9**	**-2.4**
VLKR	**Vladikavkaz**	**1.73 345**		*e*PG	**Pg**	**16 55 59.0**	**-2.4**
VLKR				*e*S	**Sg**	**16 56 23.2**	**-0.6**
VLKR	**Vladikavkaz**	**1.73 345**		*e*Pg	**Pg**	**16 55 59.0**	**-2.4**
ZEI	**Tsey**	**1.73 324**		*e*PG	**Pn**	**16 55 59.1**	**+0.7**
ZEI				*e*		16 56 24.0	
ZEI				pmax	pmax		
	comp=Z,60nm,0.2s						
ZEI				smax			
	comp=N,134nm,0.4s						
ZEI				smax			
	comp=E,77nm,0.3s						
ZEI	**Tsey**	**1.73 324**		*e*Sg	**Sg**	**16 56 24.0**	**+0.1**
	comp=E,134nm,0.4s						
ONI	**Oni**	**1.82 312**		P	**Pn**	**16 56 01.3**	**+1.6**
ONI				S	**Sg**	**16 56 27.9**	**+1.1**
ONI	**Oni**	**1.82 312**		P	**Pn**	**16 56 01.3**	**+1.7**
ONI				S	**Sg**	**16 56 27.9**	**+1.0**
KORR	**Kora**	**1.93 333**		*e*PG	**Pn**	**16 56 02.4**	**+1.3**
KORR				*e*S	**Sg**	**16 56 29.8**	**-0.5**
KORR	**Kora**	**1.93 333**		*e*Pg	**Pn**	**16 56 02.4**	**+1.3**
KORR				*e*Sg	**Sg**	**16 56 29.8**	**-0.5**
ARNR	**Ardon**	**1.96 338**		*e*PG	**Pn**	**16 56 03.0**	**+1.5**
ARNR				*e*S	**Sg**	**16 56 30.0**	**-1.2**
ARNR	**Ardon**	**1.96 338**		*e*Pg	**Pn**	**16 56 03.0**	**+1.5**
ARNR				*e*Sg	**Sg**	**16 56 30.0**	**-1.2**
DIGR	**Digorskoe uzhe**	**1.98 321**		||*i*PN	**Pn**	**16 56 03.6**	**+1.8**
DIGR				*e*S	**Sg**	**16 56 31.0**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.98 321**		*i* Pn	**Pn**	**16 56 03.6**	**+1.8**
ARTV	**Artvin**	**2.54 267**		*i* P	**Pg**	**16 56 15.6**	**-1.3**
ARTV	**Artvin**	**2.54 267**		*i* P	**Pg**	**16 56 15.6**	**-1.2**
ARTV				*i* S	**Sg**	**16 56 50.2**	**+0.5**
DAGI	**Agillar**	**2.56 264**		*e*P	**Pg**	**16 56 16.4**	**-0.8**
DDEM	**Demirkent**	**2.71 261**		*e*P	**Pg**	**16 56 19.3**	**-0.9**
DDEM	**Demirkent**	**2.71 261**		*e*P	**Pg**	**16 56 19.3**	**-0.9**
DDEM				*e*S	**Sg**	**16 56 54.9**	**-0.4**
DBAD	**Bademkaya**	**2.73 264**		*i* P	**Pg**	**16 56 19.6**	**-1.0**
DBAD	**Bademkaya**	**2.73 264**		*i* P	**Pg**	**16 56 19.6**	**-1.0**
DBAD				*i* S	**Sg**	**16 56 55.2**	**-0.7**

MAN 03 16:56:10, 17°.55N×122°.55E, h30km, mb4.8, ML3.7, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.50 194**		*e*P	Pb	16 56 21.8	+1.3
PALP				*e*S	Sb	16 56 30.3	+2.8
CVP	**Callao Caves**	**0.71 282**		||*i*P	Pb	16 56 22.2	-1.7
CVP				*i* S	Sb	16 56 32.2	-1.2
SGCP	**Mt. Cagua**	**0.84 325**		*e*P	Pn	16 56 25.2	-0.6
CAUP	**Cauayan**	**0.92 229**		*e*P	Pn	16 56 28.5	+1.6
CAUP				*e*S	Sn	16 56 40.1	+1.0
APYP	**Conner**	**1.29 284**		*e*P	Pn	16 56 32.4	+0.5
APYP				*e*S	Sn	16 56 44.5	-3.7
ABRA	**Dolores**	**1.76 273**		*e*P	Pn	16 56 39.6	+1.2
ABRA				*e*S	Sn	16 56 54.1	-5.7
BALP	**Baler**	**2.03 208**		*e*P	Pn	16 56 44.8	+2.6
BALP				*e*S	Sn	16 57 07.3	+0.8

IDC ***03*** *17:06:48.0±2.0, 19°.98S×168°.18E, h0km, mb3.9/7, mb1 4.2/7, mb1mx4.0/15, mbtmp3.9/7, MS3.2/2, Ms1 3.1/2, ms1mx2.9/16, Error ellipse: s-maj=73.5km s-min=28.5km az=149.0*
NOU ***03*** *17:06:47.8±0.8, 19°.92S×168°.36E, h30km, MD2.7, ML3.6*
ISCJB ***03*** *17:06:48.5±3.8, 20°.08S±0°.10×168°.1E±0°.2, h13km±23km, mb3.9/7, MS3.0/2, Error ellipse: s-maj=32.8km s-min=10.4km az=25.2*
NEIC ***03*** *17:06:52.4±1.4, 20°.28S×168°.28E, h35km, mb3.7/2, Error ellipse: s-maj=36.4km s-min=18.9km az=140.0*
ISC 03 17:06:49.0±4.6, 20°.2S±0°.1×168°.2E±0°.2, h9km±28km, n16, σ0§93/19, mb3.9/7, MS3.0/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.32 212**		*e*S	**Sn**	**17 07 55.9**	**-0.2**
DZM	**Mont Dzumac**	**2.50 221**		*e*P	**Pn**	**17 07 29.5**	**-0.4**
DZM				*e*S	**Sn**	**17 07 59.6**	**-1.0**
DZM				AMP		17 08 13.6	
	comp=Z,2μm,2.1s						
DZM	**Mont Dzumac**	**2.50 221**		*e*Pn	**Pn**	**17 07 29.6**	**-0.2**
DZM				*e*Sn	**Sn**	**17 07 45.2**	**-15**
NOUC	**Port Laguerre**	**2.62 223**		*e*P	**Pn**	**17 07 31.3**	**-0.1**
NOUC				*e*S	**Sn**	**17 08 04.1**	**+0.7**
NOUC				AMP		17 08 16.2	
	comp=Z,132nm,2.2s						
CTA	**Charters Tower**	**20.62 266**		P	**P**	**17 11 30.6**	**+1.9**
	comp=Z,5.4nm,0.8s,baz=84,slow=9.2,SNR=3.3						
CTA				LR	LR	17 17 49.6	
	comp=Z,48nm,21.1s,MS2.8,baz=293,slow=32						
CTAO	**Charters Tower**	**20.62 266**		*e*P	**P**	**17 11 31.1**	**+2.4**
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**26.53 239**		P	**P**	**17 12 28.7**	**+1.6**
	comp=Z,2.4nm,0.6s,mb3.9,baz=60,slow=3.6,

ANTB	Antalya	2.55	32	*e*Pn	Pn	17 07 49.0	-0.1
BODT	Bodrum	2.67	330	*e*PN	Pn	17 07 50.2	-0.7
BODT	Bodrum	2.67	330	*e*Pn	Pn	17 07 50.2	-0.6
MLSB	Milas	2.72	340	*e*PN	Pn	17 07 51.0	-0.4
MLSB	Milas	2.72	340	*e*Pn	Pn	17 07 51.1	-0.4
PPCY	Paphos	2.78	86	P	Pn	17 07 51.9	-0.4
PPCY	Paphos	2.78	86	P	Pn	17 07 51.9	-0.4
NPS	Neapolis	2.80	282	*e*P	Pn	17 07 53.6	+1.0
NPS	Neapolis	2.80	282	P	Pn	17 07 54.2	+1.6
NPS	Neapolis	2.80	282	P	Pn	17 07 54.2	+1.6
DNZL	Cakiroluk	2.94	1	*i* P	Pn	17 07 54.7	+0.2
DNZL				*i* S	Sn	17 08 28.4	-0.1
DNZL	Cakiroluk	2.94	1	*i* P	Pn	17 07 54.7	+0.2
DNZL				*i* S	Sn	17 08 28.4	-0.1
DENT	Denizli	3.00	1	*e*PN	Pn	17 07 55.4	+0.1
DENT	Denizli	3.00	1	*e*Pn	Pn	17 07 55.4	+0.1
ALFC	Alevga	3.01	81	⇑P	Pn	17 07 55.1	-0.3
	28nm,0.1s						
ALFC				S	Sn	17 08 29.6	-0.7
ALFC	Alevga	3.01	81	⇑P	Pn	17 07 55.1	-0.3
	28nm,0.1s						
ALFC				S	Sn	17 08 29.6	-0.7
BCK	Bucak	3.01	25	*e*PN	Pn	17 07 55.8	+0.3
BCK	Bucak	3.01	25	*e*Pn	Pn	17 07 55.8	+0.4
SUTC	Sutluce-Ispart	3.18	31	*e*PN	Pn	17 07 58.1	+0.3
SUTC	Sutluce-Ispart	3.18	31	*e*Pn	Pn	17 07 58.1	+0.3
SZAC	Souni-Zanaja	3.22	89	P	Pn	17 07 58.4	0.0
	15nm,0.1s						
SZAC				S	Sn	17 08 36.3	+0.8
SZAC	Souni-Zanaja	3.22	89	P	Pn	17 07 58.4	0.0
	15nm,0.1s						
SZAC				S	Sn	17 08 36.3	+0.8
LEF	Lefka	3.24	82	*e*PN	Pn	17 07 57.6	-1.1
ISP	Isparta	3.33	21	*e*PN	Pn	17 08 00.0	+0.2
IDI	Anoyia	3.39	280	Pn	Pn	17 08 01.3	+0.6
	6.8nm,0.3s,baz=105,slow=13,SNR=23						
IDI				Sn	Sn	17 08 40.0	+0.4
	9.7nm,0.3s,baz=331,slow=22,SNR=12						
IDI	Anoyia	3.39	280	*e*Pn	Pn	17 08 00.6	0.0
IDI				*e*Sn	Sn	17 08 39.6	0.0
IDI	Anoyia	3.39	280	*e*Pn	Pn	17 08 00.6	0.0
IDI				*e*Sn	Sn	17 08 39.6	0.0
SMG	Samos	3.42	330	P	Pn	17 08 01.8	+0.7
SMG	Samos	3.42	330	P	Pn	17 08 01.8	+0.7
MAMC	Mammari	3.52	82	P	Pn	17 08 02.5	+0.1
MAMC	Mammari	3.52	82	P	Pn	17 08 02.5	+0.1
CSS	Prodhromos	3.59	85	P	Pn	17 08 03.4	0.0
	4.7nm,0.2s						
CSS				S	Sn	17 08 44.6	0.0
CSS	Prodhromos	3.59	85	*e*Pn	Pn	17 08 02.3	-1.1
CSS				*e*Sn	Sn	17 08 45.5	+0.9
CSS	Prodhromos	3.59	85	P	Pn	17 08 03.4	0.0
	4.7nm,0.2s						
CSS				S	Sn	17 08 44.6	0.0
KHL	Karahalli	3.60	7	*e*PN	Pn	17 08 03.4	-0.1
KHL	Karahalli	3.60	7	*e*Pn	Pn	17 08 03.4	-0.1
HDMB	Hadim	3.61	51	*e*PN	Pn	17 08 03.9	+0.2
HDMB	Hadim	3.61	51	*e*Pn	Pn	17 08 03.9	+0.2
APE	Apeiranthos	3.63	311	*e*P	Pn	17 08 03.5	-0.4
APE	Apeiranthos	3.63	311	P	Pn	17 08 03.9	0.0
APE	Apeiranthos	3.63	311	P	Pn	17 08 03.9	0.0
MANT	Manisa	3.75	355	*i* P	Pn	17 08 05.6	0.0
MANT				*i* S	Sn	17 08 46.2	-2.3
MANT	Manisa	3.75	355	*i* P	Pn	17 08 05.6	0.0
MANT				*i* S	Sn	17 08 46.2	-2.3
KULA	Kula-Manisa	3.77	356	*e*PN	Pn	17 08 05.4	-0.4
KULA	Kula-Manisa	3.77	356	*e*Pn	Pn	17 08 05.4	-0.4
LFK	Lefkose	3.78	81	*e*PN	Pn	17 08 05.8	-0.2
IZM	Izmir	3.89	340	*e*PN	Pn	17 08 07.7	+0.1
IZM	Izmir	3.89	340	*e*Pn	Pn	17 08 07.7	+0.2
BLCB	Balcova	3.95	337	*e*PN	Pn	17 08 08.6	+0.3
BLCB	Balcova	3.95	337	*e*Pn	Pn	17 08 08.6	+0.3
VAM	Vamos	3.97	281	P	Pn	17 08 11.2	+2.7
VAM	Vamos	3.97	281	P	Pn	17 08 11.2	+2.7
HMAT	Matruh	3.97	204	P	Pn	17 08 09.2	+0.6
	baz=206						
HMAT	Matruh	3.97	204	P	Pn	17 08 09.2	+0.6
SHUT	Suhut-Afyon	4.01	18	*e*PN	Pn	17 08 09.6	+0.5
SHUT	Suhut-Afyon	4.01	18	*e*Pn	Pn	17 08 09.6	+0.5
GVD	Gavdhos	4.02	273	*e*Pn	Pn	17 08 08.7	-0.6
GVD				*e*Sn	Sn	17 08 54.7	-0.3
GVD	Gavdhos	4.02	273	*e*Pn	Pn	17 08 08.7	-0.5
GVD				*e*Sn	Sn	17 08 54.7	-0.3
IKL	Isikli	4.13	67	*e*PN	Pn	17 08 11.0	+0.3
IKL	Isikli	4.13	67	*e*Pn	Pn	17 08 11.0	+0.3
PHNC	Paralimni	4.17	85	P	Pn	17 08 11.0	-0.3
	2.2nm,0.4s						
PHNC				S	Sn	17 08 54.2	-4.6
PHNC	Paralimni	4.17	85	P	Pn	17 08 11.0	-0.3
	2.2nm,0.4s						
PHNC				S	Sn	17 08 54.2	-4.6
KONT	Konya--Tatoy	4.21	40	*e*PN	Pn	17 08 12.7	+0.9
KONT	Konya--Tatoy	4.21	40	*e*Pn	Pn	17 08 12.7	+0.9
AKS	Akhisar	4.23	348	*e*PN	Pn	17 08 11.9	-0.2
AKS	Akhisar	4.23	348	*e*Pn	Pn	17 08 11.9	-0.2
EREN	Erenkoy	4.33	78	*e*PN	Pn	17 08 14.1	+0.5
EREN	Erenkoy	4.33	78	*e*Pn	Pn	17 08 14.1	+0.5
ALT	Altintas	4.40	12	*e*PN	Pn	17 08 14.4	-0.1
ALT	Altintas	4.40	12	*e*Pn	Pn	17 08 14.4	0.0
LADK	Ladik-KONYA	4.40	37	*e*PN	Pn	17 08 15.5	+1.0
LADK	Ladik-KONYA	4.40	37	*e*Pn	Pn	17 08 15.5	+1.0
SLUM		4.52	225	AMP		17 09 00.0	
	comp=N,50μm,0.2s,logA/T=5.4,baz=227						
KIZT	Kizilcal	4.74	29	*e*PN	Pn	17 08 20.1	+1.0
KIZT	Kizilcal	4.74	29	*e*Pn	Pn	17 08 20.1	+1.0
MERS	Mersin	4.99	63	*e*PN	Pn	17 08 23.2	+0.7
MERS	Mersin	4.99	63	*e*Pn	Pn	17 08 23.2	+0.7
SQR		5.20	158	P	Pn	17 08 25.4	-0.1
	baz=158						
SQR		5.20	158	P	Pn	17 08 25.4	-0.1
HNAT	Natroun	5.29	164	P	Pn	17 08 26.9	+0.2
	baz=164						
HNAT	Natroun	5.29	164	P	Pn	17 08 26.9	+0.2
FYM	Al Fayyum	5.34	160	P	Pn	17 08 27.5	+0.1
	baz=160						
FYM	Al Fayyum	5.34	160	P	Pn	17 08 27.5	+0.1
AYT	Al 'Ayyat	5.36	159	P	Pn	17 08 27.7	+0.1
	baz=159						
AYT	Al 'Ayyat	5.36	159	P	Pn	17 08 27.7	+0.1
KOT	Kottamia	5.38	152	P	Pn	17 08 27.5	-0.4
	baz=152						
KOT				AMP		17 09 00.0	
	comp=E,80μm,0.2s,logA/T=5.6,baz=152						
KOT				S	Sn	17 09 22.8	-5.8
	baz=152						
KOT	Kottamia	5.38	152	P	Pn	17 08 27.5	-0.4
KOT				S	Sn	17 09 22.8	-5.8
HHAG	Hagoal	5.46	150	P	Pn	17 08 28.7	-0.4
	baz=150						
HHAG				AMP		17 09 00.0	
	comp=N,130μm,0.1s,logA/T=5.9,baz=150						
HHAG				S	Sn	17 09 24.4	-6.2
	baz=150						
HHAG	Hagoal	5.46	150	P	Pn	17 08 28.7	-0.4
HHAG				S	Sn	17 09 24.4	-6.2
RSH		5.50	132	P	Pn	17 08 29.0	-0.6
KARA	Karaisali	5.54	61	*e*PN	Pn	17 08 31.2	+1.1
KARA	Karaisali	5.54	61	*e*Pn	Pn	17 08 31.2	+1.2
HSAF	As Saff	5.56	156	P	Pn	17 08 30.0	-0.4
	baz=156						
HSAF	As Saff	5.56	156	P	Pn	17 08 30.0	-0.4
MMAI	Mount Meron Ar	5.62	106	Pn	Pn	17 08 30.5	-0.8
	comp=N,5.5nm,0.3s,baz=297,slow=11,SNR=27						
MMAI				Sn	Sn	17 09 30.0	-4.5
	comp=N,5.5nm,0.3s,baz=289,slow=11,SNR=3.9						
HRSH	Kfar Ka'horesh	5.64	109	P	Pn	17 08 29.0	-2.6
	baz=132						
GLL	Jalalah	5.65	155	P	Pn	17 08 31.1	-0.6
	baz=155						
GLL	Jalalah	5.65	155	P	Pn	17 08 31.1	-0.6
GULT	Gulveren	5.81	12	*e*PN	Pn	17 08 35.0	+1.2
GULT	Gulveren	5.81	12	*e*Pn	Pn	17 08 35.0	+1.2
SUZ		5.88	145	P	Pn	17 08 35.0	+0.1
	baz=145						
SUZ		5.88	145	P	Pn	17 08 35.0	+0.1
HBNS	Bani Suwayf	6.08	161	P	Pn	17 08 37.7	+0.1
	baz=161						
HBNS	Bani Suwayf	6.08	161	P	Pn	17 08 37.7	+0.1
KOZT	Kozan	6.19	62	*e*PN	Pn	17 08 40.4	+1.5
ITM	Ithomi	6.21	295	P	Pn	17 08 40.4	+1.2
ITM	Ithomi	6.21	295	P	Pn	17 08 40.4	+1.2
BRTR	Keskin Array B	6.21	35	Pn	Pn	17 08 39.8	+0.5
	comp=N,0.7nm,0.3s,baz=223,slow=16,SNR=25						
BRTR				Sn	Sn	17 09 46.6	-2.3
	comp=N,1.8nm,0.3s,baz=206,slow=26,SNR=24						
BRTR	Keskin Array B	6.21	35	Pn	Pn	17 08 39.8	+0.5
BRTR				Sn	Sn	17 09 46.6	-2.3
SWA2		6.25	209	P	Pn	17 08 40.6	+0.8
	baz=211						
SWA2		6.25	209	P	Pn	17 08 40.6	+0.8
AWBH		6.41	181	P	Pn	17 08 41.6	-0.4
	baz=182						
AWBH		6.41	181	P	Pn	17 08 41.6	-0.4
HNKL	Nakhl	6.41	137	P	Pn	17 08 41.5	-0.5
	baz=137						
HNKL				S	Sn	17 09 47.1	-6.7
	baz=137						
HNKL	Nakhl	6.41	137	P	Pn	17 08 41.5	-0.5
HNKL				S	Sn	17 09 47.1	-6.7
NEO	Neokhori	6.47	316	P	Pn	17 08 42.2	-0.6
NEO	Neokhori	6.47	316	P	Pn	17 08 42.2	-0.6
ASF	Jabal al Asfar	7.11	109	Pn	Pn	17 08 52.0	+0.4
	comp=N,0.8nm,0.3s,baz=168,slow=12,SNR=4.7						
ASF				Sn	Sn	17 10 11.4	+0.5
	comp=N,0.3nm,0.3s,baz=217,slow=13,SNR=2.5						
EIL	Elat	7.16	133	Pn	Pn	17 08 52.2	-0.2
	comp=N,3.0nm,0.3s,baz=341,slow=7.9,SNR=27						
EIL				Sn	Sn	17 10 07.1	-5.3
	comp=N,8.4nm,0.3s,baz=337,slow=17,SNR=22						
EIL	Elat	7.16	133	Pn	Pn	17 08 52.2	-0.2
EIL				Sn	Sn	17 10 07.1	-5.3
HBST	Basata	7.37	137	P	Pn	17 08 55.3	+0.1
	baz=136						
HBST	Basata	7.37	137	P	Pn	17 08 55.3	+0.1
HKAT	Jabal Katrina	7.54	144	P	Pn	17 08 57.1	-0.5
	baz=144						
HKAT	Jabal Katrina	7.54	144	P	Pn	17 08 57.1	-0.4
VLS	Valsamata	7.57	299	P	Pn	17 08 58.3	+0.4
VLS	Valsamata	7.57	299	P	Pn	17 08 58.3	+0.4
HFRF	Wahat Farafira	7.59	184	P	Pn	17 08 58.1	-0.2
	baz=185						
HFRF	Wahat Farafira	7.59	184	P	Pn	17 08 58.1	-0.2
HDHB	Dhahab	7.69	140	P	Pn	17 09 00.1	+0.5
	baz=139						
HDHB	Dhahab	7.69	140	P	Pn	17 09 00.1	+0.4
TR1		7.95	146	P	Pn	17 09 02.8	-0.5
	baz=146						
TR1		7.95	146	P	Pn	17 09 02.8	-0.4
SHRM		8.13	146	P	Pn	17 09 05.5	-0.2
	baz=145						
SHRM		8.13	146	P	Pn	17 09 05.5	-0.2
HHRG	Al Ghardaqah	8.48	151	P	Pn	17 09 10.1	-0.3
	baz=151						
HHRG	Al Ghardaqah	8.48	151	P	Pn	17 09 10.1	-0.3
HSFG		9.20	151	P	Pn	17 09 19.9	-0.4
	baz=151						
HSFG		9.20	151	P	Pn	17 09 19.9	-0.4
TIP	Timpagrande	10.72	298	*e*Pn	Pn	17 09 36.7	-4.3
	comp=N,3.8nm,0.3s						
TIP				*e*Sn	Sn	17 11 23.4	-16
VSL	Villasalto	16.32	293	Pn	Pn	17 10 59.1	+3.4
	comp=N,6.0nm,0.9s						
GERES	GERESS Array B	18.06	326	P	Pn	17 11 17.5	+0.4
	comp=N,0.1nm,0.3s,baz=139,slow=12,SNR=5.0						
GERES				LR	LR	17 18 28.7	
	comp=N,18nm,18.1s,baz=268,slow=38						
GERES	GERESS Array B	18.06	326	P	Pn	17 11 17.5	+0.4
FRF	La Foret Royal	19.38	304	*e*P	Pn	17 11 33.9	+0.9
MBDF	Montbardon	19.71	307	*e*P	Pn	17 11 37.4	+0.5
	comp=N,3.4nm,0.6s						
MBDF	Montbardon	19.71	307	*e*P	Pn	17 11 37.4	+0.5
	comp=N,3.0nm,0.6s						
LPG	La Plagne	20.03	309	*e*P	P	17 11 39.5	+0.9
	comp=N,4.7nm,0.7s						
LPG	La Plagne	20.03	309	*e*P	P	17 11 39.5	+0.9
	comp=N,4.0nm,0.7s						
LPL	La Plagne	20.05	309	*e*P	P	17 11 38.8	0.0
	comp=N,3.9nm,0.6s						
LPL	La Plagne	20.05	309	*e*P	P	17 11 38.8	0.0
	comp=N,3.0nm,0.6s						
CLL	Collm	20.18	330	*e*(P)	P	17 11 44.0	+3.9
CABF	La Chapelle	20.93	311	*e*P	P	17 11 48.0	-0.2
CABF	La Chapelle	20.93	311	*e*P	P	17 11 48.0	-0.2
SMF	Signal de Mont	22.35	310	*e*P	P	17 12 01.6	-1.8
SMF	Signal de Mont	22.35	310	*e*P	P	17 12 01.6	-1.8
AVF	Avril sur Loir	22.72	310	*e*P	P	17 12 03.8	-3.5
SSF	Saint Saulge	22.73	310	*e*P	P	17 12 06.6	-0.8
	comp=N,9.3nm,0.8s,mb3.9						
SSF	Saint Saulge	22.73	310	*e*P	P	17 12 06.6	-0.8
	comp=N,9.0nm,0.8s,mb4.2						
TCF	Toulx Ste Croi	23.27	308	*e*P	P	17 12 11.3	-1.7
TCF	Toulx Ste Croi	23.27	308	*e*P	P	17 12 11.3	-1.7
FLN	La Foliniere	25.86	312	*e*P	P	17 12 34.2	-2.4
FLN	La Foliniere	25.86	312	*e*P	P	17 12 34.2	-2.4
FINES	FINESS Array B	26.78	357	P	P	17 12 45.5	+0.8
	comp=N,0.7nm,0.6s,mb3.4,baz=172,slow=15,SNR=4.9						
FINES	FINESS Array B	26.78	357	P	P	17 12 45.5	+0.8
HFS	Hagfors	27.28	343	P	P	17 12 48.4	-0.9
	comp=N,0.5nm,0.6s,mb3.2,baz=291,slow=12,SNR=4.1						
TORD	Torodi Ar. Bea	32.73	236	P	P	17 13 45.3	+7.4
	comp=N,0.7nm,1.1s,mb3.5,baz=26,slow=9.9,SNR=2.3						
MKAR	Makanchi Array	41.39	56	P	P	17 14 52.8	+1.8
	comp=N,0.2nm,0.5s,mb3.0,baz=257,slow=8.6,SNR=5.3						
MKAR	Makanchi Array	41.39	56	P	P	17 14 52.8	+1.8
SCHQ	Schefferville	65.51	321	P	P	17 17 48.8	+1.2
	comp=N,1.7nm,0.5s,mb4.4,baz=50,slow=5.1,SNR=7.6						
SCHQ	Schefferville	65.51	321	P	P	17 17 48.8	+1.3

MEX 03 17:21:53.3±0.3, 15°.37N×96°.79W, h30km±14km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.77	58	*e*P	Pn	17 22 05.9	-2.2
HUIG				*i* S	Sb	17 22 15.3	-3.0
PNIG	Pinotepa	1.65	309	*i* P	Pn	17 22 18.2	-1.9
PNIG				*i* S	Sn	17 22 38.0	-2.3
VHO	Vista Hermosa	1.70	2	*i* P	Pn	17 22 19.1	-1.8
VHO				*i* S	Sn	17 22 39.5	-2.2
TPIG	Tehuac#an	3.09	350	*i* P	Pn	17 22 38.2	-1.8
TPIG				*i* S	Sn	17 23 13.6	-2.3
PCIG		3.46	84	*i* P	Pn	17 22 42.0	-3.1
PCIG				*i* S	Sn	17 23 22.4	-2.6
TGIG		3.79	68	*i* S	Sn	17 23 30.1	-3.2

*IDC **03** 17:22:12.2±3.1, 35°.83S×178°.48E, h149km±25km, mb4.2/10, mb1 4.4/11, mb1mx4.3/16, mbtmp4.3/11, Error ellipse: s-maj=29.7km s-min=14.9km az=45.0*
*ISCJB **03** 17:22:13.7±1.2, 36°.16S±0°.08×178°.3E±0°.1, h167km±8km, mb4.4/20, Error ellipse: s-maj=17.4km s-min=10.2km az=143.4*
*NEIC **03** 17:22:15.1, 36°.28S×178°.32E, h170km, mb4.9/8, After WEL.*
ISC 03 17:22:14.3±1.3, 36°.13S±0°.08×178°.4E±0°.1, h159km±9km, n55, σ1°.18/41, mb4.4/20, 2C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	2.35	205	P	Pn	17 22 53.7	-0.3
	baz=348,slow=1.8						
URZ				S	Sn	17 23 24.3	-0.4
	835nm,0.3s,baz=240,slow=20,SNR=21						
URZ	Urewera	2.35	205	⇑P	Pn	17 22 53.4	-0.5
URZ				*e*Sn	Sn	17 23 24.1	-0.6
OUZ	Omahuta	3.98	282	*e*Pn	Pn	17 23 14.2	-0.2
OUZ				Sn	Sn	17 24 02.4	+1.2
SNZO	South Karori	5.91	208	*e*Pn	Pn	17 23 34.0	-5.7
	224nm,0.5s						
SNZO				*e*Sn	Sx	17 24 38.6	
KHZ	Kahutara	7.31	209	*e*Pn	Pn	17 23 52.2	-6.1
	324nm,0.4s						
KHZ				*e*Sn	Sx	17 25 11.7	
RPZ	Rata Peaks	9.43	214	P	Pn	17 24 19.9	-6.5
	28nm,0.3s,baz=65,slow=0.9,SNR=182						
RPZ	Rata Peaks	9.43	214	*e*Pn	Pn	17 24 20.1	-6.2
	126nm,0.6s						
RPZ				*e*Sn	Sx	17 25 59.0	
ODZ	Otahua Downs	10.66	211	*e*Pn	Pn	17 24 36.4	-6.2
	52nm,0.6s						
ARMA	Armidale	23.02	277	*e*P	P	17 27 11.0	+5.7
AFI	Afiamalu	23.83	24	*e*Pn	P	17 27 12.6	-0.2
	6.8nm,0.5s,mb4.4						
TAU	Tasmania Unive	24.79	245	P	P	17 27 18.7	-2.6
	35nm,1.3s,mb4.7						
STKA	Stephens Creek	30.65	267	*e*P	P	17 28 16.9	+3.3
	2.0nm,0.6s,mb4.0						
STKA	Stephens Creek	30.65	267	P	P	17 28 15.5	+1.9
	2.3nm,0.6s,mb4.1,baz=102,slow=9.9,SNR=8.7						
STKA	Stephens Creek	30.65	267	*e*P	P	17 28 11.5	-2.1
	0.6nm,0.7s,mb3.4						
CTA	Charters Tower	32.33	291	P	P	17 28 29.1	+0.7
	2.6nm,0.6s,mb4.1,baz=125,slow=12,SNR=1.9						
CTAO	Charters Tower	32.33	291	*e*P	P	17 28 29.7	+1.3
	10nm,0.8s,mb4.6						
BBOO	Buckleboo	34.83	263	*e*P	P	17 28 50.9	+1.0
	6.0nm,1.5s,mb4.0						
COEN	Coen	38.45	296	*e*P	P	17 29 22.2	+1.5
ASAR	Alice Springs	40.16	275	P	P	17 29 34.0	-0.9
	16nm,0.6s,mb4.8,baz=117,slow=7.9,SNR=62						
WRAB	Tennant Creek	41.69	281	*e*P	P	17 29 45.0	-2.4
	4.0nm,0.4s,mb4.4						
WRA	Warramunga Arr	41.69	281	P	P	17 29 46.4	-1.0
	4.4nm,0.5s,mb4.3,baz=120,slow=7.7,SNR=41						
FORT	Forrest	41.93	262	*e*P	P	17 29 50.0	+0.8
	13nm,0.8s,mb4.6						
KNA	Kununurra	48.41	281	*e*P	P	17 30 41.7	+1.2
	9.1nm,0.8s,mb4.5						
FITZ	Fitzroy Crossi	49.63	277	*e*P	P	17 30 50.1	+0.4
	7.2nm,0.6s,mb4.5						
MEEK	Meekatharra	51.18	263	*e*P	P	17 31 00.8	-0.4
	5.8nm,0.6s,mb4.4						
MBWA	Marble Bar	52.84	270	*e*P	P	17 31 13.4	-0.2
MBWA	Marble Bar	52.84	270	*e*P	P	17 31 12.8	-0.8
	14nm,0.7s,mb4.8						
QSPA	South Pole Qui	54.00	180	P	P	17 31 23.6	+2.4
	29nm,0.6s,mb5.2,baz=24,slow=1.2,SNR=428						
MAW	Mawson	65.88	202	P	P	17 32 42.1	-0.2
	0.6nm,0.6s,mb3.6						
SYO	Syowa Base	70.84	195	⇑*e*P	P	17 33 10.8	-2.3
VNA3	Neumayer Olymp	72.78	177	*e*	P	17 33 24.8	+0.2
VNA3				*e*		17 34 08.2	
VNA2	Neumayer--Watz	73.17	178	*e*	P	17 33 27.5	+0.6
	baz=179,slow=4.3						
VNA2				*e*	pP	17 34 09.9	+4.4
VNA1	Neumayer--Stat	73.42	178	*e*	P	17 33 29.3	+0.9
PLCA	Paso Flores	80.79	134	P	P	17 34 12.0	+1.9
	7.2nm,0.6s,mb4.5,baz=227,slow=6.1,SNR=16						
MJAR	Matsushiro Arr	81.35	328	P	P	17 34 11.2	-1.5
	2.2nm,0.9s,mb3.8,baz=163,slow=5.4,SNR=8.6						
KSRS	Korea Array	86.85	322	P	P	17 34 40.2	-0.3
	2.5nm,0.7s,mb4.1,baz=147,slow=6.7,SNR=12						
PETK	Petropavlovsk-	90.66	348	P	P	17 34 57.2	-0.8
	1.7nm,0.7s,mb4.2,baz=113,slow=5.4,SNR=5.9						
CMAR	Chiang Mai Arr	92.49	291	P	P	17 35 07.5	+0.1
	1.6nm,0.5s,mb4.3,baz=151,slow=3.8,SNR=20						
SONM	Songino Array	105.36	318	PKKPbc	PKKPbc	17 51 45.3	+1.2
	0.8nm,0.9s,baz=349,slow=2.0,SNR=6.4						
YKA	Yellowknife Ar	111.92	27	PKiKP	PKiKP	17 40 27.8	-1.6
	0.4nm,0.8s,baz=235,slow=1.4,SNR=7.6						
YKA				PKKPbc	PKKPbc	17 51 21.5	-2.0
	0.2nm,0.7s,baz=48,slow=3.6,SNR=5.2						
MKAR	Makanchi Array	119.03	309	PKP	PKPdf	17 40 40.5	-3.0
	0.5nm,0.7s,baz=123,slow=0.8,SNR=4.7						
MKAR				PKKPbc	PKKPbc	17 50 59.0	+0.7
	0.3nm,0.5s,baz=307,slow=2.8,SNR=5.1						
BVAR	Borovoye Array	128.22	313	PKP	PKPdf	17 40 58.3	-2.6
	0.8nm,0.7s,baz=107,slow=1.5,SNR=6.7						
ARCES	ARCESS Array B	143.40	344	PKP	PKPdf	17 41 25.8	-2.7
	1.4nm,0.6s,baz=24,slow=2.9,SNR=14						
KAF	Kangasniemi	148.68	335	*e*pkp	PKPdf	17 41 38.3	+0.6
FINES	FINESS Array B	149.22	334	PKPbc	PKPbc	17 41 40.6	-2.5
	3.5nm,0.7s,baz=96,slow=3.8,SNR=21						
LIC	Lamto	150.08	173	*e*PKIKP	PKPbc	17 41 44.9	-1.7
	33nm,0.5s						
KIC	Kosan Boka	150.24	174	*e*PKIKP	PKPbc	17 41 45.3	-1.7
	62nm,1.1s						
TIC	Toumodi	150.50	173	*e*PKIKP	PKPbc	17 41 44.8	-2.8
	60nm,1.3s						
DBIC	Dimbokro	150.54	174	PKPbc	PKPbc	17 41 46.7	-1.0
	6.2nm,0.7s,baz=81,slow=3.1,SNR=7.6						
DBIC	Dimbokro	150.54	174	PKPbc	PKPbc	17 41 46.7	-1.0
BRTR	Keskin Array B	152.05	288	PKPbc	PKPbc	17 41 48.1	-2.2
	2.4nm,0.8s,baz=134,slow=3.0,SNR=12						
AKASG	Malin Array Bz	153.50	313	PKPbc	PKPbc	17 41 50.7	-

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA				pP	pP	17 50 12.4	-0.3
	comp=Z,0.4nm,0.6s,baz=91,slow=8.5,SNR=2.3						
ASAR	**Alice Springs**	**32.08**	**258**	P	**P**	**17 50 04.1**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.1,baz=87,slow=8.7,SNR=42						
ASAR				pP	pP	17 50 14.7	+0.5
	comp=Z,2.6nm,1.0s,baz=81,slow=8.5,SNR=9.1						

MAN 03 17:51:18, 17°.63N×122°.45E, h27km, mb5.0, ML3.9, MS4.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.56**	**183**	*e*P	Pb	17 51 28.5	-0.9
CVP	**Callao Caves**	**0.60**	**277**	⇓*i*P	Pb	17 51 29.5	-0.6
CVP				*i* S	Sb	17 51 40.5	+2.3
SGCP	**Mt. Cagua**	**0.72**	**328**	*e*P	Pb	17 51 32.4	+0.4
CAUP	**Cauayan**	**0.91**	**221**	*e*P	Pn	17 51 35.9	+0.8
CAUP				*e*S	Sb	17 51 45.7	-1.2
APYP	**Conner**	**1.18**	**282**	*e*P	Pn	17 51 39.6	+0.9
APYP				*e*S	Sn	17 51 52.9	-0.9
ABRA	**Dolores**	**1.66**	**271**	*e*P	Pn	17 51 46.7	+1.4
ABRA				*e*S	Sn	17 52 04.1	-1.6
BALP	**Baler**	**2.06**	**204**	*e*P	Pn	17 51 52.1	+1.3
BALP				*e*S	Sn	17 52 11.3	-4.2
BOLP	**Bolinao**	**2.73**	**243**	*e*P	Pn	17 52 03.6	+3.5

MAN 03 18:00:52, 17°.56N×122°.46E, h30km, mb4.9, ML3.8, MS3.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.49**	**184**	*e*P	Pb	18 01 03.2	+0.9
PALP				*e*S	Sb	18 01 11.9	+2.5
CVP	**Callao Caves**	**0.62**	**283**	⇑*i*P	Pb	18 01 03.8	-0.6
CVP				*i* S	Sb	18 01 14.3	+1.4
SGCP	**Mt. Cagua**	**0.78**	**330**	*e*P	Pn	18 01 06.6	-0.4
CAUP	**Cauayan**	**0.86**	**225**	*e*P	Pn	18 01 10.3	+2.2
CAUP				*e*S	Sb	18 01 20.7	+1.1
APYP	**Conner**	**1.20**	**285**	*e*P	Pn	18 01 14.1	+1.4
APYP				*e*S	Sn	18 01 28.6	+0.7
ABRA	**Dolores**	**1.67**	**273**	*e*P	Pn	18 01 21.1	+1.9
ABRA				*e*S	Sn	18 01 40.2	+0.7
BALP	**Baler**	**2.00**	**205**	*e*P	Pn	18 01 26.3	+2.6
BALP				*e*S	Sn	18 01 48.9	+1.2

*ISCJB **03** 18:01:44.1±1.0, 37°.86N±0°.05×39°.60E±0°.07, h10km, Error ellipse: s-maj=8.5km s-min=6.3km az=20.5*
*CSEM **03** 18:01:44.5±0.2, 37°.87N×39°.61E, h10km, MD2.6, Error ellipse: s-maj=5.0km s-min=4.6km az=122.0*
*DDA **03** 18:01:44.9, 37°.89N×39°.63E, h7km±2km, Md2.6*
*ISK **03** 18:01:46.3, 37°.97N×39°.27E, h22km, MD2.6*
ISC 03 18:01:44.8±1.2, 37°.89N±0°.05×39°.58E±0°.08, h4km±12km, n11, σ0°77/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**0.43**	**85**	*i* P	**Pg**	**18 01 52.7**	**-0.4**
DIYA	**Diyarbakir**	**0.43**	**85**	*i* P	**Pg**	**18 01 52.7**	**-0.4**
SVRC	**Sivrice-ELAZID**	**0.54**	**336**	*e*Pg	**Pg**	**18 01 55.5**	**+0.3**
SVRC				*e*Sg	**Sg**	**18 02 02.0**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.54**	**336**	*e*PG	**Pg**	**18 01 55.5**	**+0.3**
SVRC				*e*SG	**Sg**	**18 02 02.0**	**-0.2**
URFA	**Urfa**	**0.75**	**234**	*e*PG	**Pg**	**18 01 59.1**	**-0.1**
URFA				*e*SG	**Sg**	**18 02 09.2**	**+0.2**
URFA	**Urfa**	**0.75**	**234**	*e*Pg	**Pg**	**18 01 59.1**	**-0.1**
URFA				*e*Sg	**Sg**	**18 02 09.2**	**+0.3**
ELZG	**Elazig**	**0.77**	**323**	*i* P	**Pb**	**18 02 00.6**	**-0.2**
ELZG				*i* S	**Sb**	**18 02 11.8**	**+0.2**
ELZG	**Elazig**	**0.77**	**323**	*i* P	**Pb**	**18 02 00.6**	**-0.2**
ELZG				*i* S	**Sb**	**18 02 11.8**	**+0.2**
MALT	**Malatya**	**1.00**	**295**	*e*PG	**Pg**	**18 02 01.3**	**-2.8**
PTK	**Pertek**	**1.01**	**352**	*e*PG	**Pg**	**18 02 04.5**	**+0.2**
PTK	**Pertek**	**1.01**	**352**	*e*Pg	**Pg**	**18 02 04.5**	**+0.2**

*IDC **03** 18:21:31.6±1.0, 1°.85N×100°.97W, h0km, mb4.2/7, mb1 4.4/9, mb1mx4.3/16, mbtmp4.2/9, ML3.2/2, MS3.9/18, Ms1 3.9/18, ms1mx3.8/35, Error ellipse: s-maj=31.8km s-min=21.8km az=60.0*
*ISCJB **03** 18:21:32.0±0.7, 1°.90N±0°.09×100°.7W±0°.1, h10km, mb4.2/20, MS3.9/15, Error ellipse: s-maj=19.0km s-min=7.6km az=140.7*
*NEIC **03** 18:21:32.9±0.6, 1°.88N×100°.79W, h10km, mb4.2/12, Error ellipse: s-maj=21.3km s-min=9.4km az=56.0*
ISC 03 18:21:33.9±0.7, 1°.88N±0°.09×100°.7W±0°.1, h10km, n111, σ0°77/96, mb4.2/20, MS3.9/15, 38C-31D, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**16.16**	**20**	Pn	**Pn**	**18 25 21.1**	**-0.1**
	0.1nm,0.3s,baz=223,slow=19,SNR=2.5						
CMIG				Sn	**Sn**	**18 28 27.3**	**+6.6**
	0.8nm,0.3s,baz=85,slow=20,SNR=7.8						
CMIG				LR	LR	18 29 56.1	
	comp=Z,770nm,19.1s,baz=17,slow=31						
CMIG	**Matias Romero**	**16.16**	**20**	Pn	**Pn**	**18 25 21.1**	**-0.1**
CMIG				Sn	**Sn**	**18 28 27.3**	**+6.6**
CMIG				LR	LR	18 29 56.1	
APG	**El Apazote**	**16.50**	**37**	Pn	**Pn**	**18 25 26.4**	**+0.8**
	0.1nm,0.3s,baz=224,slow=18,SNR=3.4						
APG				LR	LR	18 30 04.4	
	comp=Z,669nm,19.0s,baz=309,slow=31						
JTS	**JuntasAbangare**	**17.74**	**61**	LR	LR	18 29 56.7	
	comp=Z,229nm,21.9s,baz=123,slow=28						
OTAV	**Otavalo**	**22.31**	**94**	*e*P	**P**	**18 26 29.8**	**-2.1**
	43nm,1.7s,mb4.6						
ATAH	**Atahualpa**	**23.95**	**112**	LR	LR	18 33 11.6	
	comp=Z,90nm,21.6s,MS3.2,baz=92,slow=29						
ROSC	**El Rosal**	**26.50**	**83**	P	**P**	**18 27 14.0**	**+2.3**
	3.9nm,0.3s,mb4.4,baz=97,slow=21,SNR=3.6						
NNA	**Nana**	**27.43**	**121**	LR	LR	18 35 33.8	
	comp=Z,148nm,21.5s,MS3.5,baz=334,slow=30						
NNA	**Nana**	**27.43**	**121**	P	**P**	**18 27 19.2**	**-0.9**
	133nm,2.0s,mb5.1						
TXAR	**Lajitas Array**	**27.44**	**354**	P	**P**	**18 27 20.3**	**+0.2**
	2.0nm,0.9s,mb3.6,baz=181,slow=11,SNR=8.5						
TXAR				LR	LR	18 37 05.7	
	comp=Z,416nm,19.8s,MS4.0,baz=120,slow=34						
TXAR	**Lajitas Array**	**27.44**	**354**	P	**P**	**18 27 20.3**	**+0.2**
TXAR				LR	LR	18 37 05.7	
627A	**Terlingua Ranc**	**27.54**	**355**	⇑P	**P**	**18 27 19.3**	**-1.6**
	baz=28,SNR=6.1						
528A	**Cox Ranch, San**	**28.19**	**356**	⇑P	**P**	**18 27 27.0**	**+0.2**
	baz=28						
527A	**Woodward Ranch**	**28.24**	**355**	⇓P	**P**	**18 27 26.3**	**-0.9**
	baz=28,SNR=8.6						
426A	**McDonald Obser**	**28.80**	**354**	⇓P	**P**	**18 27 30.7**	**-1.4**
	baz=29						
425A	**Indio Mountain**	**29.03**	**352**	⇓P	**P**	**18 27 33.7**	**-0.5**
	baz=29						
324A	**Moseley Ranch,**	**29.75**	**352**	⇓P	**P**	**18 27 40.2**	**-0.3**
	baz=30						
RPN	**Rapa Nui**	**30.02**	**195**	LR	LR	18 36 50.3	
	comp=Z,323nm,21.0s,MS3.9,baz=92,slow=31						
224A	**Corundas Mount**	**30.37**	**352**	⇑P	**P**	**18 27 45.8**	**-0.3**
	baz=30						
125A	**Gardner Draw,**	**30.84**	**353**	⇓P	**P**	**18 27 50.1**	**-0.1**
	baz=31						
124A	**Stringfield Ra**	**30.98**	**352**	⇑P	**P**	**18 27 51.0**	**-0.4**
	baz=31						
121A	**Cookes Peak, D**	**31.21**	**348**	⇑P	**P**	**18 27 53.3**	**-0.1**
	baz=31						
Z27A	**Tatum**	**31.36**	**356**	⇓P	**P**	**18 27 54.7**	**-0.1**
	baz=32						
Z26A	**Caprock**	**31.38**	**355**	⇓P	**P**	**18 27 54.5**	**-0.4**
	baz=32						
Z25A	**Roswell**	**31.46**	**354**	⇑P	**P**	**18 27 55.9**	**+0.2**
	baz=32						
118A	**Homack Ranch,**	**31.81**	**345**	⇑P	**P**	**18 27 58.3**	**-0.4**
	baz=32						
Y27A	**Causey**	**31.92**	**356**	⇑P	**P**	**18 27 59.5**	**-0.2**
	baz=32						
Y25A	**Mesa, Roswell**	**32.09**	**354**	⇑P	**P**	**18 28 01.0**	**-0.2**
	baz=32						
Y24A	**Capitan**	**32.18**	**353**	⇑P	**P**	**18 28 02.3**	**+0.3**
	baz=32						
Y19A	**Nutrioso**	**32.89**	**347**	⇓P	**P**	**18 28 09.0**	**+0.7**
	baz=33,SNR=5.2						
X23A	**Hourglass Bar**	**32.93**	**352**	⇑P	**P**	**18 28 09.0**	**+0.5**
	baz=33						
X21A	**Alamocita Cree**	**33.06**	**349**	⇓P	**P**	**18 28 10.6**	**+0.9**
	baz=33						
ANMO	**Albuquerque**	**33.33**	**351**	LR	LR	18 40 48.5	
	comp=Z,540nm,19.2s,MS4.3,baz=159,slow=35						
W25A	**X Bar L Ranch,**	**33.35**	**354**	⇑P	**P**	**18 28 11.5**	**-0.7**
	baz=34						
V22A	**San Miguel Ran**	**34.34**	**351**	⇑P	**P**	**18 28 21.1**	**+0.2**
	baz=34						
X13A	**Yucca**	**34.77**	**341**	⇓P	**P**	**18 28 24.7**	**+0.2**
	baz=35						
V17A	**Tonalea, Kykot**	**34.85**	**346**	⇑P	**P**	**18 28 25.3**	**0.0**
	baz=35,SNR=6.2						
V15A	**Kaibab Nationa**	**35.40**	**344**	⇑P	**P**	**18 28 30.3**	**+0.3**
	baz=36						
MVCO	**Mesa Verde**	**35.88**	**349**	⇑P	**P**	**18 28 34.3**	**+0.2**
	baz=36						
T18A	**Mexican Hat**	**36.09**	**348**	⇓P	**P**	**18 28 36.5**	**+0.6**
	baz=36						
T17A	**Navajo Res., N**	**36.16**	**346**	⇓P	**P**	**18 28 37.3**	**+0.8**
	baz=36						
S19A	**Harvey Farm, M**	**36.52**	**349**	⇑P	**P**	**18 28 39.8**	**+0.3**
	baz=37						
EDW2	**Edwards Air Fo**	**36.56**	**336**	⇑P	**P**	**18 28 39.8**	**-0.2**
	baz=37						
S18A	**Hurst Farm, Bl**	**36.64**	**348**	⇑P	**P**	**18 28 41.4**	**+0.8**
	baz=37						
R21A	**Cimarron**	**36.85**	**351**	⇓P	**P**	**18 28 43.2**	**+0.8**
	baz=37						
LPAZ	**La Paz**	**36.90**	**121**	*e*P	**P**	**18 28 44.0**	**+0.9**
	5.2nm,1.3s,mb4.2						
TKL	**Tuckaleechee C**	**37.10**	**23**	LR	LR	18 44 46.8	
	comp=Z,129nm,19.4s,MS3.7,baz=270,slow=38						
R18A	**Canyonlands Na**	**37.29**	**348**	⇑P	**P**	**18 28 46.3**	**+0.2**
	baz=37,SNR=11						
P18A	**Preston Nutter**	**38.56**	**348**	⇑P	**P**	**18 28 57.6**	**+0.8**
	baz=39						
Q14A	**Sevier Lake (B**	**38.67**	**344**	⇑P	**P**	**18 28 59.2**	**+1.4**
	baz=39						
S10A	**Tonopah Range,**	**38.72**	**340**	⇓P	**P**	**18 28 58.5**	**+0.3**
	baz=39						
Q13A	**Wheeler Ranch,**	**38.85**	**343**	⇓P	**P**	**18 29 00.1**	**+0.8**
	baz=39,SNR=6.3						
N22A	**Wattenberg Ran**	**39.09**	**353**	⇑P	**P**	**18 29 01.3**	**0.0**
	baz=39						
P14A	**Drum Mountains**	**39.18**	**345**	⇓P	**P**	**18 29 02.2**	**+0.2**
	baz=39						
N20A	**Spence Gulch,**	**39.37**	**351**	⇑P	**P**	**18 29 03.2**	**-0.4**
	baz=40						
N18A	**Larsen Ranch,**	**39.75**	**349**	⇑P	**P**	**18 29 06.8**	**+0.1**
	baz=40						
NVAR	**Mina Array Bea**	**39.78**	**338**	P	**P**	**18 29 04.8**	**-2.3**
	0.5nm,0.7s,mb3.3,baz=171,slow=8.8,SNR=2.2						
O12A	**Currie**	**40.28**	**343**	⇓P	**P**	**18 29 11.4**	**+0.3**
	baz=40						
HWUT	**Hardware Ranch**	**40.74**	**347**	*e*P	**P**	**18 29 15.1**	**+0.2**
	9.8nm,1.4s,mb4.2						
M14A	**Sheep Mountain**	**41.05**	**346**	⇑P	**P**	**18 29 18.5**	**+1.0**
	baz=41,SNR=9.5						
L15A	**Malad City**	**41.30**	**347**	⇑P	**P**	**18 29 19.4**	**-0.1**
	baz=42						
BW06	**Boulder Array**	**41.47**	**350**	⇓P	**P**	**18 29 20.8**	**-0.1**
	baz=42,SNR=5.3						
PDAR	**Pinedale Array**	**41.47**	**350**	P	**P**	**18 29 20.9**	**0.0**
	2.6nm,0.9s,mb3.8,baz=152,slow=6.7,SNR=18						
L14A	**Malta**	**41.53**	**346**	⇑P	**P**	**18 29 20.4**	**-1.0**
	baz=42,SNR=5.6						
ECSD	**EROS Data Cent**	**41.83**	**4**	*e*P	**P**	**18 29 20.8**	**-3.0**
	20nm,1.8s,mb4.4						
J18A	**Kendall Valley**	**41.98**	**350**	⇓P	**P**	**18 29 24.8**	**-0.3**
	baz=42						
LCO	**Las Campanas**	**42.07**	**139**	*e*P	**P**	**18 29 25.9**	**-0.2**
	18nm,1.5s,mb4.5						
L12A	**House Creek Ra**	**42.09**	**344**	⇓P	**P**	**18 29 27.1**	**+1.0**
	baz=42						
RSSD	**Black Hills**	**42.16**	**356**	*e*P	**P**	**18 29 26.4**	**-0.2**
	3.7nm,0.9s,mb4.0						
L11A	**Cat Creek Ranc**	**42.32**	**343**	⇑P	**P**	**18 29 28.2**	**+0.3**
	baz=42						
J16A	**Bone**	**42.34**	**348**	⇑P	**P**	**18 29 27.1**	**-0.9**
	baz=42						
RRI2	**Red Ridge**	**42.36**	**348**	*e*P	**P**	**18 29 28.0**	**-0.2**
	2.7nm,0.9s,mb3.9						
LOHW	**Long Hollow**	**42.47**	**349**	*e*P	**P**	**18 29 28.7**	**-0.4**
	6.1nm,1.3s,mb4.1						
K12A	**Draper Farm, C**	**42.52**	**344**	⇑P	**P**	**18 29 30.3**	**+0.8**
	baz=43						
I17A	**Pilgrim Ck.**	**42.77**	**349**	⇑P	**P**	**18 29 32.3**	**+0.8**
	baz=43						
IMW	**Indian Meadow**	**42.81**	**349**	*e*P	**P**	**18 29 31.5**	**-0.3**
	4.2nm,1.1s,mb4.1						
J14A	**Carey**	**42.81**	**346**	⇓P	**P**	**18 29 31.0**	**-0.9**
	baz=43						
K10A	**MacKenzie Ranc**	**43.21**	**343**	⇓P	**P**	**18 29 35.5**	**+0.4**
	baz=43						
HLID	**Hailey**	**43.26**	**345**	⇑P	**P**	**18 29 36.3**	**+0.9**
	baz=43						
HLID	**Hailey**	**43.26**	**345**	*e*P	**P**	**18 29 35.5**	**0.0**
	1.7nm,1.0s,mb3.7						
I14A	**Mackay**	**43.37**	**347**	⇓P	**P**	**18 29 37.2**	**+0.9**
	baz=44						
MFID	**Camas Ranch**	**43.49**	**344**	⇑P	**P**	**18 29 37.4**	**0.0**
	baz=44						
I13A	**Wildhorse Cree**	**43.52**	**346**	⇓P	**P**	**18 29 38.0**	**+0.4**
	baz=44,SNR=9.0						
H15A	**Lima**	**43.84**	**348**	⇑P	**P**	**18 29 40.9**	**+0.6**
	baz=44						
G18A	**Lazy EL Ranch,**	**43.95**	**351**	⇓P	**P**	**18 29 40.8**	**-0.3**
	baz=44						
I11A	**Placerville**	**43.99**	**344**	⇓P	**P**	**18 29 41.5**	**+0.1**
	baz=44						
H14A	**Leadore**	**44.00**	**347**	⇓P	**P**	**18 29 42.2**	**+0.7**
	baz=44						
MCMT	**McKenzie Canyo**	**44.09**	**348**	*e*P	**P**	**18 29 42.4**	**+0.2**
	3.8nm,1.3s,mb4.0						
H13A	**Challis**	**44.16**	**346**	⇓P	**P**	**18 29 43.1**	**+0.4**
	baz=44,SNR=8.4						
H12A	**Diamond D Ranc**	**44.29**	**346**	⇓P	**P**	**18 29 44.3**	**+0.5**
	baz=44						
K05A	**Summer Lake**	**44.49**	**339**	⇓P	**P**	**18 29 45.3**	**-0.1**
	baz=45						
G13A	**Cobalt**	**44.65**	**346**	⇑P	**P**	**18 29 46.7**	**+0.1**
	baz=45,SNR=7.6						
H10A	**Noah's Angus R**	**44.83**	**344**	⇑P	**P**	**18 29 47.5**	**-0.6**
	baz=45						
LRM	**Limekiln Ridge**	**44.96**	**348**	*e*P	**P**	**18 29 47.3**	**-1.8**
F13A	**Darby**	**45.33**	**347**	⇓P	**P**	**18 29 51.7**	**-0.3**
	baz=46						
G11A	**Walters Elk Ra**	**45.45**	**345**	⇑P	**P**	**18 29 51.9**	**-1.2**
	baz=46						
NEW	**Newport**	**48.33**	**345**	*e*P	**P**	**18 30 12.4**	**-3.1**
	3.5nm,1.0s,mb4.3						
ULM	**Lac du Bonnet**	**48.36**	**4**	LR	LR	18 51 07.0	
	comp=Z,62nm,18.9s,MS3.6,baz=147,slow=37						
CPUP	**Villa Florida**	**50.39**	**127**	P	**P**	**18 30 31.5**	**-0.2**
	2.5nm,0.7s,mb4.3,baz=264,slow=7.3,SNR=4.0						
CPUP				LR	LR	18 50 24.5	
	comp=Z,142nm,18.8s,MS4.0,baz=186,slow=34						
BBB	**Bella Bella**	**55.11**	**340**	LR	LR	18 52 00.1	
	comp=Z,106nm,21.2s,MS3.9,baz=271,slow=33						
SCHQ	**Schefferville**	**59.55**	**22**	LR	LR	18 58 51.1	
	comp=Z,134nm,18.8s,MS4.1,baz=270,slow=38						
DLBC	**Dease Lake**	**60.91**	**343**	LR	LR	18 58 29.8	
	comp=Z,144nm,20.8s,MS4.1,baz=10,slow=36						
YKA	**Yellowknife Ar**	**61.35**	**353**	P	**P**	**18 31 48.4**	**-1.2**
	3.7nm,0.7s,mb4.6,baz=156,slow=8.5,SNR=6.2						
YKA				LR	LR	18 58 16.0	
	comp=Z,19nm,18.6s,MS3.3,baz=195,slow=36						
INK	**Inuvik**	**69.96**	**348**	LR	LR	19 04 31.8	
	comp=Z,104nm,19.0s,MS4.1,baz=124,slow=37						
JMIC	**Jan Mayen**	**88.95**	**19**	LR	LR	19 13 16.7	
	comp=Z,102nm,19.9s,MS4.2,baz=74,slow=35						
SPITS	**Spitsbergen Ar**	**93.55**	**11**	LR	LR	19 19 07.6	
	comp=Z,88nm,18.2s,MS4.3,baz=270,slow=37						
DBIC	**Dimbokro**	**95.59**	**83**	P	**P**	**18 35 01.5**	**+1.2**
	2.0nm,0.6s,mb4.7,baz=359,slow=5.0,SNR=4.6						
CASY	**Casey**	**112.06**	**193**	*e*PKPdf	PKiKP	18 40 08.3	-0.8
ASAR	**Alice Springs**	**122.94**	**243**	PKP	PKPdf	18 40 30.4	-0.9
	0.3nm,0.8s,baz=64,slow=2.2,SNR=3.5						
LSA	**Lhasa**	**146.61**	**341**	*e*PKPbc	PKPbc	18 41 17.1	+0.7
CMAR	**Chiang Mai Arr**	**152.03**	**317**	PKP	PKPdf	18 41 21.8	-2.1
	1.9nm,1.0s,baz=336,slow=2.9,SNR=5.2						
CMAR				PKPbc	PKPbc	18 41 31.1	+0.7
	1.8nm,1.0s,baz=326,slow=2.0,SNR=4.9						
CMAR				PKPab	PKPab	18 41 37.3	-2.4
	1.4nm,1.1s,baz=74,slow=4.6,SNR=3.0						

*BJI **03** 18:23:03.1, 75°.40N×61°.50W, h10km, mB4.9/15, mb4.6/21, Ms4.7/13, Ms7 4.3/14*
*ISCJB **03** 18:23:04.5±0.1, 75°.38N±0°.03×61°.69W±0°.08, h10km, mb4.4/117, MS3.6/23, Error ellipse: s-maj=4.8km s-min=2.4km az=158.9*
*IDC **03** 18:23:05.0±0.4, 75°.36N×61°.73W, h0km, mb4.0/29, mb1 4.2/33, mb1mx4.2/39, mbtmp4.1/33, ML4.5/4, MS3.5/19, Ms1 3.5/19, ms1mx3.4/41, Error ellipse: s-maj=13.9km s-min=9.3km az=159.0*
*NEIC **03** 18:23:06.1±0.2, 75°.40N×61°.51W, h10km, mb4.6/83, MS3.7/3, Error ellipse: s-maj=5.5km s-min=3.2km az=166.0*
*OTT **03** 18:23:06.5±0.5, 75°.25N×62°.17W, h18km, ML5.1/8, Western Greenland. 530km east from Craig Harbour, Nu Eastern Arctic Background Seismic Zone.*
*SZGRF **03** 18:23:12.2, 74°.37N×61°.53W, h33km, mb4.4, Baffin Bay*
ISC 03 18:23:06.3±0.1, 75°.34N±0°.03×61°.67W±0°.08, h10km, (h14km±1.5km:pP-P), n361, σ0°97/373, mb4.4/117, MS3.6/23, 67C-57D, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUMG	**Summit**	**6.97**	**102**	*e*Pn	**Pn**	**18 24 47.2**	**-1.1**
	203nm,0.6s						
SUMG				*e*Sn	**Sn**	**18 26 00.4**	**-7.0**
EUNU	**Eureka**	**7.02**	**323**	Pn	**Pn**	**18 24 47.5**	**-1.4**
EUNU				Sn	**Sn**	**18 26 02.5**	**-6.1**
EUNU	**Eureka**	**7.02**	**323**	PN	**Pn**	**18 24 47.5**	**-1.4**
EUNU				SN	**Sn**	**18 26 02.5**	**-6.1**
EUNU				LG		18 26 42.2	
EUNU				Trac		18 26 50.4	
	comp=Z,739nm,0.6s						
GIFN	**Gifford Fjord,**	**7.97**	**238**	Pn	**Pn**	**18 24 59.2**	**-2.8**
GIFN				Sn	**Sn**	**18 26 22.4**	**-10**
GIFN	**Gifford Fjord,**	**7.97**	**238**	PN	**Pn**	**18 24 59.2**	**-2.8**
GIFN				SN	**Sn**	**18 26 22.4**	**-10**
GIFN				Trac		18 26 41.7	
	comp=Z,225nm,0.5s						
ILON	**Igloolik, Nuna**	**8.51**	**236**	Pn	**Pn**	**18 25 06.3**	**-3.0**
ILON				Sn	**Sn**	**18 26 34.5**	**-11**
ILON	**Igloolik, Nuna**	**8.51**	**236**	PN	**Pn**	**18 25 06.3**	**-3.0**
ILON				SN	**Sn**	**18 26 34.5**	**-11**
ILON				Trac		18 26 39.1	
	comp=Z,142nm,0.3s						
RES	**Resolute Bay**	**8.56**	**282**	Pn	**Pn**	**18 25 08.3**	**-1.7**
	20nm,0.3s,baz=56,slow=12,SNR=394						
RES				Sn	**Sn**	**18 26 33.5**	**-13**
	46nm,0.3s,baz=22,slow=23,SNR=8.5						
RES				LR	LR	18 28 26.3	
	comp=Z,196nm,21.1s,baz=64,slow=38						
RES	**Resolute Bay**	**8.56**	**282**	*e*Pn	**Pn**	**18 25 07.5**	**-2.5**
	1.6nm,0.3s						
RES				*e*Sn	**Sn**	**18 26 30.6**	**-16**
RES	**Resolute Bay**	**8.56**	**282**	PN	**Pn**	**18 25 07.4**	**-2.6**
RES				SN	**Sn**	**18 26 34.0**	**-12**
RES				Trac		18 27 08.3	
	comp=Z,196nm,0.5s						
AP3N	**Apex site 3 Nu**	**9.01**	**241**	Pn	**Pn**	**18 25 12.6**	**-3.6**
AP3N				Sn	**Sn**	**18 26 46.6**	**-11**
AP3N	**Apex site 3 Nu**	**9.01**	**241**	PN	**Pn**	**18 25 12.6**	**-3.6**
AP3N				SN	**Sn**	**18 26 46.6**	**-11**
AP3N				Trac		18 27 03.5	
	comp=Z,146nm,0.5s						
LAIN	**Lailor River,**	**9.08**	**238**	Pn	**Pn**	**18 25 13.8**	**-3.5**
LAIN				Sn	**Sn**	**18 26 47.9**	**-11**
LAIN	**Lailor River,**	**9.08**	**238**	PN	**Pn**	**18 25 13.8**	**-3.5**
LAIN				SN	**Sn**	**18 26 47.9**	**-11**
SFJD	**Kangerlussuaq**	**9.09**	**152**	Pn	**Pn**	**18 25 15.3**	**-2.0**
	8.5nm,0.3s,baz=320,slow=9.8,SNR=59						
SFJD				Sn	**Sn**	**18 26 47.9**	**-11**
	5.2nm,0.3s,baz=67,slow=18,SNR=2.5						
SFJD				LR	LR	18 28 54.7	
	comp=Z,167nm,20.4s,baz=321,slow=38						
SFJD	**Kangerlussuaq**	**9.09**	**152**	*e*Pn	**Pn**	**18 25 15.0**	**-2.3**
	25nm,0.4s						
SFJD				*e*Sn	**Sn**	**18 26 47.5**	**-12**
SFJD	**Kangerlussuaq**	**9.09**	**152**	*i* P	**Pn**	**18 25 14.9**	**-2.4**
SFJD	**Kangerlussuaq**	**9.09**	**152**	PN	**Pn**	**18 25 15.1**	**-2.2**
SFJD				SN	**Sn**	**18 26 49.5**	**-10**
SFJD				Trac		18 27 31.3	
	comp=Z,54nm,0.5s						
SFJD				LG		18 27 49.0	
SRLN	**Sarcpa Lake, N**	**9.49**	**235**	PN	**Pn**	**18 25 18.9**	**-3.9**
SRLN				SN	**Sn**	**18 26 55.4**	**-14**
SRLN				Trac		18 27 34.2	
	comp=Z,141nm,0.7s						
DAG	**Danmarks Havn**	**10.29**	**62**	⇑*i*P	**Pn**	**18 25 33.3**	**-0.4**
	27nm,0.5s						
QILN	**Qililugaq Expl**	**11.73**	**235**	PN	**Pn**	**18 25 48.8**	**-4.5**
QILN				SN	**Sn**	**18 27 45.9**	**-18**
QILN				Trac		18 27 56.5	
	comp=Z,26nm,0.2s						
FRB	**Frobisher Bay**	**11.88**	**195**	Pn	**Pn**	**18 25 51.9**	**-3.6**
	2.8nm,0.3s,baz=5.6,slow=14,SNR=64						
FRB				Sn	**

COWN **Contwyoto Lake** 18.76 264 PN **Pn** **18 27 22.6 -2.8**
COWN SN **Sn** **18 30 36.1 -19**
FCC Fort Churchill 20.39 233 *e*P **P** **18 27 41.5 -1.2**
0.4nm,0.7s
FCC *e*S **S** **18 31 27.9 -2.8**
FCC Fort Churchill 20.39 233 PN **P** **18 27 42.4 -0.4**
FCC SN **S** **18 31 11.9 -19**
CTLN Castor Lake 20.67 268 PN **P** **18 27 45.6 -0.2**
CTLN SN **S** **18 31 16.2 -20**
SCHQ Schefferville 20.69 188 P **P** **18 27 45.8 -0.3**
12nm,0.8s,baz=9.2,slow=9.9,SNR=20
SCHQ S **S** **18 31 23.2 -14**
3.3nm,0.5s,baz=108,slow=20,SNR=2.8
SCHQ LR LR 18 35 29.2
comp=Z,144nm,21.4s,MS3.3,baz=349,slow=36
SCHQ Schefferville 20.69 188 PN **P** **18 27 42.7 -3.4**
SCHQ SN **S** **18 31 23.0 -14**
ROMN Roman Lake 21.27 269 PN **P** **18 27 56.0 +3.8**
ROMN SN **S** **18 31 32.4 -16**
YKW3 Yellowknife Ar 21.86 263 PN **P** **18 27 58.0 -0.6**
YKW3 SN **S** **18 31 44.0 -16**
YKW3 Trac 18 34 00.8
comp=Z,24nm,0.9s
YKA Yellowknife Ar 21.91 263 P **P** **18 27 58.3 -0.9**
5.6nm,0.8s,mb4.0,baz=34,slow=11,SNR=46
YKA LR LR 18 36 12.1
comp=Z,12nm,21.5s,MS2.3,baz=50,slow=36
YKA Yellowknife Ar 21.91 263 P **P** **18 27 58.3 -0.9**
YKA LR LR 18 36 12.1
INK Inuvik 22.00 289 P **P** **18 27 59.8 -0.2**
20nm,1.0s,mb4.5,baz=38,slow=14,SNR=55
INK S **S** **18 31 58.1 -4.2**
5.6nm,0.7s,baz=142,slow=14,SNR=3.1
INK LR LR 18 37 01.2
comp=Z,171nm,18.6s,MS3.5,baz=55,slow=38
INK Inuvik 22.00 289 ⇓*i*P **P** **18 27 59.6 -0.5**
15nm,0.6s,mb4.6
INK *e*S **S** **18 31 53.2 -9.1**
INK Inuvik 22.00 289 PN **P** **18 28 00.1 +0.1**
INK SN **S** **18 31 54.0 -8.3**
LG4Q La Grande 4 22.34 200 PN **P** **18 28 00.8 -3.0**
LG4Q SN **S** **18 31 48.8 -20**
LG4Q Trac 18 32 24.5
comp=Z,12nm,0.5s
SILO Sutton Inlier 22.80 216 PN **P** **18 28 08.4 -0.3**
SILO SN **S** **18 32 09.6 -8.1**
ARCES ARCESS Array B 24.54 58 P **P** **18 28 25.6 +0.1**
2.5nm,0.4s,mb4.1,baz=328,slow=8.2,SNR=53
KEV Kevo 24.69 56 *e*P **P** **18 28 25.4 -1.4**
22nm,0.9s,mb4.7
KEV Kevo 24.69 56 *e*p **P** **18 28 25.2 -1.6**
11nm,0.6s,mb4.6
FFC Flin Flon 25.79 240 *e*P **P** **18 28 36.6 -0.3**
9.3nm,0.7s,mb4.4
EGAK Eagle 26.66 290 *e*P **P** **18 28 43.9 -0.8**
13nm,0.9s,mb4.5
COLD Coldfoot 26.71 300 *e*P **P** **18 28 45.4 +0.2**
8.3nm,0.9s,mb4.3
DAWY Dawson 26.83 288 *e*P **P** **18 28 46.7 +0.5**
COLA College 28.15 295 P **P** **18 28 58.2 +0.2**
NOA NORSAR Array B 28.21 80 P **P** **18 28 58.5 -0.1**
1.0nm,0.7s,mb3.5,baz=323,slow=8.3,SNR=4.8
NOA LR LR 18 39 17.9
comp=Z,55nm,18.5s,MS3.2,baz=225,slow=34
ULM Lac du Bonnet 28.76 229 P **P** **18 29 03.5 -0.1**
0.9nm,0.5s,mb3.8,baz=186,slow=2.2,SNR=3.0
ULM Lac du Bonnet 28.76 229 *e*P **P** **18 29 03.4 -0.1**
4.0nm,0.8s,mb4.2
DLBC Dease Lake 29.32 273 LR LR 18 41 07.6
comp=Z,116nm,19.3s,MS3.5,baz=276,slow=37
MCK McKinley 29.38 295 *e*P **P** **18 29 10.2 +1.3**
5.9nm,1.0s,mb4.3
BPAW Bear Paw Mtn. 29.53 297 *e*P **P** **18 29 10.6 +0.3**
7.8nm,1.0s,mb4.4
EKA Eskdalemuir Ar 29.59 99 P **P** **18 29 11.3 +0.4**
1.4nm,1.0s,mb3.6,baz=346,slow=9.4,SNR=3.5
ESK Eskdalemuir 29.59 99 *e*P **P** **18 29 06.2 -4.7**
HFS Hagfors 29.61 79 P **P** **18 29 11.1 0.0**
1.3nm,0.8s,mb3.7,baz=316,slow=8.3,SNR=4.1
HFS LR LR 18 39 29.3
comp=Z,77nm,19.8s,MS3.3,baz=328,slow=33
EDM Edmonton 29.82 252 *e*P **P** **18 29 14.1 +1.2**
EDM *e* 18 29 22.9
CHUM Lake Minchumin 30.02 298 *e*P **P** **18 29 14.4 -0.2**
6.8nm,1.0s,mb4.3
EYMN Ely 30.18 222 P **P** **18 29 14.7 -1.5**
21nm,1.2s,mb4.8
AGMN Agassiz Refuge 30.62 227 *e*P **P** **18 29 19.9 -0.2**
12nm,1.0s,mb4.7
PPLA Purkeypile 30.84 297 *e*P **P** **18 29 22.6 +0.8**
8.9nm,1.0s,mb4.5
KAF Kangasniemi 30.94 66 *e*p **P** **18 29 16.5 -6.3**
2.0nm,0.7s,mb4.1
JOF Joensuu 31.38 61 *e*p **P** **18 29 25.8 -0.8**
2.1nm,0.5s,mb4.2
FINES FINESS Array B 31.48 67 P **P** **18 29 27.9 +0.4**
0.6nm,0.5s,mb3.7,baz=341,slow=11,SNR=13
SADO Sadowa 31.59 204 LR LR 18 42 23.3
comp=Z,139nm,19.9s,MS3.6,baz=122,slow=37
TNA Tin City 31.82 311 *e*P **P** **18 29 31.5 +1.0**
9.4nm,0.7s,mb4.7
TIXI Tiksi 33.08 354 *e*P **P** **18 29 41.8 +0.4**
3.1nm,0.7s,mb4.3
A17A Triple J Farms 33.16 246 ⇓P **P** **18 29 41.8 -0.5**
baz=33
BILL Bilibino 33.71 330 *e*P **P** **18 29 45.6 -1.4**
8.0nm,1.0s,mb4.6
A14A Double T Ranch 33.77 249 ⇑P **P** **18 29 47.6 -0.1**
baz=34
EGMT Eagleton 33.80 244 *e*P **P** **18 29 49.5 +1.5**
14nm,0.9s,mb4.9
EGMT *e* 18 29 58.7
WALA Waterton Lakes 33.80 249 *e*P **P** **18 29 50.4 +2.4**
0.1nm,0.9s
B15A Bradely Ranch, 34.18 247 ⇑P **P** **18 29 51.6 +0.4**
baz=34
C16A Fuhringer Ranc 34.47 246 ⇑P **P** **18 29 54.1 +0.3**
baz=34,SNR=6.4
C15A Salmond Ranch, 34.70 247 ⇑P **P** **18 29 55.7 0.0**
baz=35,SNR=5.6
D17A Six Diamond Ra 34.84 244 ⇓P **P** **18 29 56.4 -0.6**
baz=35
YBMT Yellow Bay 34.95 249 *e*P **P** **18 29 57.9 0.0**
2.9nm,0.9s,mb4.2
YBMT *e* 18 30 08.2
C14A Swan Lake 34.97 248 ⇑P **P** **18 29 57.9 -0.2**
baz=35
BSMT Bassoo Peak 35.14 249 *e*P **P** **18 29 58.9 -0.6**
3.0nm,0.9s,mb4.2
ECSD EROS Data Cent 35.16 226 *e*P **P** **18 30 00.1 +0.3**
12nm,0.9s,mb4.8
ECSD *e* 18 30 09.9
ECSD *e*PP PP 18 31 06.5 -13
SWMT Swartz Lake 35.27 248 *e*P **P** **18 30 00.9 +0.2**
6.1nm,1.1s,mb4.4
SWMT *e* 18 30 11.6
A07A Ashnola River, 35.39 256 ⇑P **P** **18 30 01.5 -0.2**
baz=35
SLMT Seeley Lake 35.41 248 *e*P **P** **18 30 00.4 -1.4**
12nm,1.1s,mb4.8
C12B Naegeli Ranch, 35.44 250 ⇑P **P** **18 30 02.5 +0.4**
baz=35
KDAK Kodiak Island 35.47 293 P **P** **18 30 01.8 -0.5**
9.0nm,0.9s,mb4.7,baz=348,slow=9.3,SNR=4.4
D14A Greenough 35.56 248 ⇑P **P** **18 30 00.1 -3.0**
baz=36
E16A East Helena 35.65 245 ⇑P **P** **18 30 03.6 -0.3**
baz=36
CHMT Chamberlain Mo 35.66 247 *e*P **P** **18 30 04.8 +0.8**
10nm,1.0s,mb4.7
CHMT *e* 18 30 14.7
GCMT Greycliff 35.89 242 *e*P **P** **18 30 06.6 +0.6**
15nm,1.0s,mb4.9
GCMT *e* 18 30 17.7
F17A Fitzpatrick Pl 36.01 244 ⇑P **P** **18 30 06.7 -0.3**
baz=36,SNR=8.3
D12A Red Ives Fores 36.02 250 ⇑P **P** **18 30 07.2 +0.1**
baz=36
E14A Clinton 36.18 247 ⇑P **P** **18 30 09.2 +0.7**
baz=36
RSSD Black Hills 36.25 235 *e*P **P** **18 30 10.6 +1.5**
8.3nm,1.1s,mb4.6
RSSD *e* 18 30 19.1
FLN La Foliniere 36.27 101 *e*P **P** **18 30 09.2 0.0**
59nm,1.2s,mb5.1
FLN *e*MLR MLR
comp=Z,160nm,17.2s,MS3.6
FLN La Foliniere 36.27 101 *e*P **P** **18 30 09.2 0.0**
comp=Z,30nm,1.3s,mb5.1
FLN LR LR
comp=Z,160nm,17.3s,MS3.9
RLMT Red Lodge 36.43 242 *e*P **P** **18 30 10.5 -0.1**
comp=Z,10nm,1.3s,mb4.6
RLMT *e* 18 30 22.6
BOZ Bozeman (W) 36.47 245 *e*P **P** **18 30 13.3 +2.4**
comp=Z,1.1nm,0.7s,mb3.9
BOZ *e* 18 30 22.3
ACSO Alum Creek Sta 36.51 208 *e*P **P** **18 30 11.4 +0.1**
comp=Z,14nm,0.8s,mb4.8
ACSO *e* 18 30 22.0
LDF La Druitiere 36.51 101 *e*P **P** **18 30 11.4 +0.1**
comp=Z,28nm,1.1s,mb4.7
LDF La Druitiere 36.51 101 *e*P **P** **18 30 11.4 +0.1**
comp=Z,14nm,1.1s,mb4.7
GRR Gorron 36.52 102 *e*P **P** **18 30 11.1 -0.2**
DLMT Dillon 36.97 246 *e*P **P** **18 30 16.7 +1.6**
comp=Z,17nm,1.0s,mb4.8
DLMT *e* 18 30 26.5
G15A Dillon 37.13 245 ⇓P **P** **18 30 16.8 +0.3**
baz=37,SNR=6.6
LKWY Lake 37.22 243 *e*P **P** **18 30 20.1 +2.8**
comp=Z,4.4nm,0.8s,mb4.3
LKWY *e* 18 30 29.7
G12A Big Creek, Yel 37.83 248 ⇑P **P** **18 30 22.7 +0.2**
baz=38
I17A Pilgrim Ck. 37.87 243 ⇓P **P** **18 30 22.8 0.0**
baz=38,SNR=7.1
MEZF Maizieres J'vi 37.90 96 *e*P **P** **18 30 23.6 +0.5**
I18A Diamond G Ranc 37.91 242 ⇓P **P** **18 30 23.5 +0.3**
baz=38,SNR=5.9
IMW Indian Meadow 37.97 243 *e*P **P** **18 30 25.7 +2.0**
comp=Z,12nm,0.9s,mb4.6
IMW *e* 18 30 35.8
H13A Challis 38.11 247 ⇓P **P** **18 30 24.9 +0.1**
baz=38,SNR=6.6
LOHW Long Hollow 38.17 242 *e*P **P** **18 30 27.9 +2.5**
comp=Z,15nm,1.2s,mb4.6
LOHW *e* 18 30 35.3
H12A Diamond D Ranc 38.26 248 ⇑P **P** **18 30 25.9 -0.2**
baz=38
G09A Cove 38.27 251 ⇓P **P** **18 30 26.5 +0.3**
baz=38
DCID1 Drake Creek 38.32 243 *e*P **P** **18 30 27.9 +1.3**
comp=Z,31nm,1.1s,mb5.0
DCID1 *e* 18 30 38.9
TPAW Teton Pass 38.36 243 *e*P **P** **18 30 27.8 +0.8**
comp=Z,16nm,1.3s,mb4.6
TPAW *e* 18 30 39.5
GRA1 Grafenberg Arr 38.37 89 *e*P **P** **18 30 29.0 +2.0**
comp=Z,11nm,1.5s,mb4.4
GRF Grafenberg Arr 38.37 89 *e*P **P** **18 30 29.0 +2.0**
comp=Z,11nm,1.5s,mb4.4
H11A Donnelly 38.39 249 ⇑P **P** **18 30 27.0 -0.2**
baz=38
J18A Kendall Valley 38.42 242 ⇑P **P** **18 30 27.6 +0.2**
baz=38
REDW Red Top Meadow 38.46 243 *e*P **P** **18 30 27.9 +0.1**
comp=Z,15nm,1.4s,mb4.5
REDW *e* 18 30 39.3
CDF Champ du Feu 38.55 94 *e*P **P** **18 30 29.3 +0.8**
K20A Yellowstone Ra 38.57 239 ⇓P **P** **18 30 28.0 -0.8**
baz=38
RRI2 Red Ridge 38.58 243 *e*P **P** **18 30 31.1 +2.2**
comp=Z,8.9nm,1.0s,mb4.5
RRI2 *e* 18 30 41.3
I13A Wildhorse Cree 38.69 246 ⇓P **P** **18 30 30.1 +0.4**
baz=39,SNR=7.1
HAU Haudompre 38.69 95 *e*P **P** **18 30 30.0 +0.3**
HAU *e*MLR MLR
comp=Z,104nm,21.0s,MS3.3
HAU Haudompre 38.69 95 *e*P **P** **18 30 30.0 +0.3**
HAU LR LR
comp=Z,100nm,21.0s,MS3.6
ECH Echery 38.70 94 *e*P **P** **18 30 31.3 +1.5**
comp=Z,4.3nm,1.0s,mb4.1
ECH *e* 18 30 39.5
BW06 Boulder Array 38.74 241 ⇑P **P** **18 30 30.1 -0.1**
baz=39
PDAR Pinedale Array 38.74 241 P **P** **18 30 31.3 +1.1**
comp=Z,1.9nm,0.8s,mb3.9,baz=29,slow=6.8,SNR=11
LOR Lormes 38.74 98 *e*P **P** **18 30 30.1 -0.1**
comp=Z,12nm,1.1s,mb4.3
LOR *e*MLR MLR
comp=Z,218nm,18.0s,MS3.7
LOR Lormes 38.74 98 *e*P **P** **18 30 30.1 -0.1**
comp=Z,6.3nm,1.1s,mb4.3
LOR LR LR
comp=Z,220nm,18.0s,MS4.0
SSF Saint Saulge 38.85 98 *e*P **P** **18 30 30.8 -0.2**
comp=Z,9.0nm,1.0s,mb4.2
SSF Saint Saulge 38.85 98 *e*P **P** **18 30 30.8 -0.2**
comp=Z,4.5nm,1.0s,mb4.2
PRU Pruhonice 38.94 86 AMS AMS 18 50 20.0
comp=Z,100nm,14.4s
HINF Hinteralfeld 38.99 95 *e*P **P** **18 30 32.6 +0.4**
L21A Rawlins 39.02 238 ⇑P **P** **18 30 32.6 +0.1**
baz=39,SNR=5.3
I12A Atlanta 39.04 247 ⇓P **P** **18 30 32.5 -0.2**
baz=39,SNR=7.3
AVF Avril sur Loir 39.06 99 *e*P **P** **18 30 31.9 -0.9**
comp=Z,30nm,1.1s,mb4.6
AVF Avril sur Loir 39.06 99 *e*P **P** **18 30 31.9 -0.9**
comp=Z,15nm,1.1s,mb4.6
DPC Dobruska-Polom 39.06 84 *e*P **P** **18 30 35.9 +3.1**
DPC *ex* x 18 30 46.6
HLID Hailey 39.09 247 pP pP 18 30 35.0 -1.2
baz=39,SNR=5.9
HLID Hailey 39.09 247 *e*P **P** **18 30 33.8 +0.7**
comp=Z,7.2nm,0.9s,mb4.4
HLID *e* 18 30 44.6
BGF Bois d'Agland 39.15 99 *e*P **P** **18 30 33.4 -0.2**
BLA Blacksburg 39.21 204 *e*P **P** **18 30 35.3 +1.1**
comp=Z,45nm,1.3s,mb5.0
BLA *e* 18 30 44.6
TCF Toulx Ste Croi 39.24 100 *e*P **P** **18 30 34.2 -0.1**
SMF Signal de Mont 39.32 98 *e*P **P** **18 30 34.0 -1.0**
comp=Z,26nm,1.1s,mb4.6
SMF Signal de Mont 39.32 98 *e*P **P** **18 30 34.0 -1.0**
comp=Z,13nm,1.1s,mb4.6
L19A Farson 39.33 240 ⇓P **P** **18 30 35.3 +0.2**
baz=39,SNR=5.3
M21A Separation Pea 39.37 238 ⇓P **P** **18 30 34.9 -0.5**
baz=39,SNR=8.1
KHC Kasperske Hory 39.49 87 *e*P **P** **18 30 39.5 +3.1**
comp=Z,5.3nm,1.0s,mb4.2
KHC Kasperske Hory 39.49 87 *e*P **P** **18 30 41.4 +5.0**
KHC *ex* x 18 30 51.0
KHC AMS AMS 18 48 20.0
comp=Z,100nm,13.8s
M20A Sweetwater, Wa 39.65 239 ⇓P **P** **18 30 37.3 -0.5**
baz=40,SNR=5.2
GERES GERESS Array B 39.78 87 P **P** **18 30 40.8 +2.0**
comp=Z,1.0nm,0.8s,mb3.6,baz=335,slow=5.9,SNR=6.9
GERES LR LR 18 47 16.7
comp=Z,36nm,19.6s,MS3.2,baz=286,slow=36
I07A Izee 39.81 252 ⇓pP pP 18 30 41.4 -0.8
baz=40
L16A Fish Haven 39.87 243 ⇓P **P** **18 30 38.6 -1.0**
baz=40,SNR=5.4
K13A Stover Farm, H 39.88 246 ⇓pP pP 18 30 42.2 -0.5
baz=40,SNR=5.5
MORC Moravsky Berou 39.90 83 P **P** **18 30 36.8 -3.0**
CABF La Chapelle 39.92 96 *e*P **P** **18 30 40.3 +0.3**
comp=Z,30nm,1.3s,mb4.6
CABF La Chapelle 39.92 96 *e*P **P** **18 30 40.3 +0.3**
comp=Z,15nm,1.3s,mb4.6
N22A Wattenberg Ran 39.94 236 ⇓P **P** **18 30 40.6 +0.4**
baz=40,SNR=7.4
RJF Les Rejaudoux 39.99 101 *e*P **P** **18 30 40.2 -0.3**
comp=Z,9.4nm,0.8s,mb4.2
RJF *e*MLR MLR
comp=Z,114nm,19.5s,MS3.4
RJF Les Rejaudoux 39.99 101 *e*P **P** **18 30 40.2 -0.3**
comp=Z,4.7nm,0.8s,mb4.3
RJF LR LR
comp=Z,110nm,19.5s,MS3.7
K12A Draper Farm, C 40.08 247 ⇑P **P** **18 30 40.6 -0.8**
baz=40,SNR=5.3
LFF La Frestale 40.13 102 *e*P **P** **18 30 40.9 -0.9**
comp=Z,14nm,0.8s,mb4.4
LFF La Frestale 40.13 102 *e*P **P** **18 30 40.9 -0.9**
comp=Z,7.2nm,0.8s,mb4.5
L14A Malta 40.27 245 ⇓P **P** **18 30 42.3 -0.6**
baz=40,SNR=5.5
HWUT Hardware Ranch 40.29 242 *e*P **P** **18 30 42.6 -0.6**
comp=Z,15nm,1.1s,mb4.6
HWUT *e* 18 30 54.1
N20A Spence Gulch, 40.30 238 ⇓P **P** **18 30 42.8 -0.4**
baz=40,SNR=5.2
K10A MacKenzie Ranc 40.41 249 ⇓P **P** **18 30 44.6 +0.5**
baz=40,SNR=6.3
CAF Calviac 40.48 101 *e*P **P** **18 30 44.4 -0.2**
ISCO Idaho Springs 40.73 235 *e*P **P** **18 30 48.1 +1.4**
comp=Z,10nm,0.9s,mb4.5
ISCO *e* 18 30 56.6
N17A Moffit Pass 40.76 241 ⇓P **P** **18 30 47.2 +0.2**
baz=41,SNR=7.2
SSB Saint Sauveur 40.77 98 P **P** **18 30 47.1 +0.1**
comp=Z,11nm,1.2s,mb4.4
M14A Sheep Mountain 40.80 244 ⇑P **P** **18 30 47.7 +0.4**
baz=41,SNR=7.4
O20A White River Ci 40.96 238 ⇑P **P** **18 30 48.5 -0.2**
baz=41,SNR=5.3
O19A Miners Draw (B 41.00 239 ⇑P **P** **18 30 49.6 +0.6**
baz=41,SNR=5.4
LPL La Plagne 41.10 96 *e*P **P** **18 30 50.8 +1.0**
LPG La Plagne 41.12 96 *e*P **P** **18 30 50.3 +0.4**
comp=Z,12nm,1.2s,mb4.1
LPG La Plagne 41.12 96 *e*P **P** **18 30 50.3 +0.4**
comp=Z,6.3nm,1.2s,mb4.1
VIVF Saint-Julien-l 41.20 98 *e*P **P** **18 30 50.0 -0.6**
BGU Big Grassy Mou 41.27 244 *e*P **P** **18 30 52.1 +0.9**
comp=Z,15nm,1.3s,mb4.5
BGU *e* 18 31 02.5
P21A Newcastle 41.38 237 ⇑pP pP 18 30 54.4 -0.9
baz=41
N14A Grayback Hills 41.38 244 ⇓P **P** **18 30 52.0 -0.2**
baz=41,SNR=5.4
CPCT Cooper Cave 41.41 209 *e*P **P** **18 30 52.3 -0.1**
CPCT *e* 18 31 02.8
M11A Holland Ranch, 41.43 247 ⇑pP pP 18 30 54.8 -0.9
baz=41
ORIF Oris-en-Rattie 41.45 97 *e*P **P** **18 30 53.2 +0.6**
comp=Z,15nm,0.9s,mb4.3
ORIF *e*MLR MLR
comp=Z,150nm,18.8s,MS3.6
ORIF Oris-en-Rattie 41.45 97 *e*P **P** **18 30 53.2 +0.6**
comp=Z,7.4nm,0.9s,mb4.3
P19A Cripple Cowboy 41.60 239 ⇑pP pP 18 30 56.0 -1.0
baz=42
SMCO Snowmass 41.61 236 *e*P **P** **18 30 55.9 +1.9**
comp=Z,15nm,1.0s,mb4.6
SMCO *e* 18 31 05.7
LASF Ste Croix 41.72 100 *e*P **P** **18 30 54.7 -0.2**
comp=Z,13nm,1.0s,mb4.2
ETSF Etsaut 41.73 105 *e*P **P** **18 30 54.0 -0.9**
MPU Maple Canyon 41.83 242 *e*P **P** **18 30 57.1 +1.3**
comp=Z,5.9nm,1.0s,mb4.2
MPU *e* 18 31 07.1
EPF Esparros 41.83 104 *e*P **P** **18 30 55.0 -0.7**
MBDF Montbardon 41.85 96 *e*P **P** **18 30 56.0 +0.1**
comp=Z,10nm,0.9s,mb4.1
MBDF Montbardon 41.85 96 *e*P **P** **18 30 56.0 +0.1**
comp=Z,5.2nm,0.9s,mb4.2
P18A Preston Nutter 41.89 240 ⇑P **P** **18 30 55.9 -0.4**
baz=42
Q22A Crested Butte, 41.90 236 ⇑pP pP 18 30 58.4 -1.1
baz=42
DUG Dugway 41.92 243 *e*P **P** **18 30 57.1 +0.5**
comp=Z,9.5nm,0.6s,mb4.6
DUG *e* 18 31 08.7
AKASG Malin Array Be 41.95 72 P **P** **18 30 56.6 0.0**
comp=Z,0.3nm,0.3s,mb3.4,baz=330,slow=8.5,SNR=4.8
ELK Elko 41.96 246 P **P** **18 30 58.1 +1.3**
comp=Z,1.4nm,0.9s,mb3.6,baz=260,slow=18,SNR=3.6
MOD Modoc 42.06 252 *e*P **P** **18 30 58.4 +0.7**
comp=Z,5.5nm,0.9s,mb4.2
MOD *e* 18 31 09.3
P17A Butcher Ranch, 42.15 241 ⇑pP pP 18 31 00.1 -1.3
baz=42,SNR=7.3
JSC Jenkinsville 42.19 204 *e*P **P** **18 30 57.8 -1.0**
JSC *e* 18 31 10.1
PSZ Piszkesteto 42.21 82 *e*P **P** **18 31 01.1 +2.2**
comp=Z,2.6nm,0.9s,mb3.9
Q18A Rafter H Ranch 42.37 240 ⇓P **P** **18 30 59.8 -0.4**
baz=42,SNR=8.2
R22A Saguache, Gunn 42.48 236 ⇓pP pP 18 31 03.4 -0.8
baz=42
R21A Cimarron 42.51 237 pP pP 18 31 03.5 -1.0
baz=42,SNR=10
SDCO Great Sand Dun 42.68 234 *e*P **P** **18 31 03.9 +1.2**
comp=Z,16nm,0.9s,mb4.8
SDCO *e* 18 31 14.2
YBH Yreka Blue Hor 42.81 255 LR LR 18 49 20.2
comp=Z,238nm,18.4s,MS4.1,baz=111,slow=37
R20A Redvale 42.86 237 ⇓P **P** **18 31 04.0 -0.2**
baz=43
ARU Arti 42.88 45 *e*P **P** **18 31 02.2 -1.9**
comp=Z,7.9nm,0.8s,mb4.5
FRF La Foret Royal 42.91 97 *e*P **P** **18 31 04.6 +0.1**
R19A Curley Farm, L 42.95 238 ⇓pP pP 18 31 06.9 -1.2
baz=43,SNR=6.4
R18A Canyonlands Na 43.00 239 ⇑P **P** **18 31 05.1 -0.2**
baz=43,SNR=7.7
R17A Hanksville Air 43.15 240 ⇑P **P** **18 31 06.6 +0.1**
baz=43
Q14A Sevier Lake (B 43.18 243 P **P** **18 31 09.3 +2.5**
baz=43,SNR=5.9
GOGA Godfrey 43.30 207 *e*P **P** **18 31 08.2 +0.4**
comp=Z,8.5nm,1.1s,mb4.4
GOGA *e* 18 31 18.4
MSU Marysvale 43.38 242 *e*P **P** **18 31 10.1 +1.6**
comp=Z,16nm,1.0s,mb4.7
S19A Harvey Farm, M 43.45 238 ⇑pP pP 18 31 11.1 -1.0
baz=43,SNR=5.7
S18A Hurst Farm, Bl 43.69 239 ⇓pP pP 18 31 13.0 -1.0
baz=44,SNR=11
BUR08 Bucovina Ar. S 43.80 77 *e*P **P** **18 31 10.4 -1.3**
MVCO Mesa Verde 43.83 237 ⇑pP pP 18 31 14.4 -0.7
baz=44,SNR=6.7
MVCO Mesa Verde 43.83 237 *e*P **P** **18 31 13.8 +1.8**
comp=Z,31nm,1.1s,mb5.0
MVCO *e* 18 31 24.2
BURAR Bucovina Array 43.83 77 ⇑*i*P **P** **18 31 15.2 +3.3**
Q11A Duckwater 43.86 246 ⇓P **P** **18 31 11.7 -0.6**
baz=44
S17A Black Ridge (B 43.92 240 ⇓pP pP 18 31 15.0 -0.9
baz=44
ESDC Sonseca Array 43.95 110 P **P** **18 31 14.0 +1.0**
comp=Z,1.2nm,0.5s,mb3.9,baz=342,slow=7.8,SNR=17
ESLA Sonseca Array 43.95 110 *e*P **P** **18 31 12.6 -0.4**
PAB San Pablo 43.98 110 *e*P **P** **18 31 12.7 -0.6**
Q10A Clear Creek Ra 44.05 247 ⇓pP pP 18 31 15.8 -1.1
baz=44,SNR=6.5
T18A Mexican Hat 44.20 239 ⇑P **P** **18 31 14.3 -0.6**
baz=44,SNR=6.8
WMOK Wichita Mounta 44.29 225 *e*P **P** **18 31 16.1 +0.3**
comp=Z,1.9nm,0.7s,mb3.9
T19A Beclabito 44.31 238 ⇑P **P** **18 31 15.2 -0.6**
baz=44,SNR=7.0
T17A Navajo Res., N 44.53 240 ⇓P **P** **18 31 17.6 -0.1**
baz=44
R10A Warm Springs 44.54 246 ⇓pP pP 18 31 20.0 -0.8
baz=44
S13A Holt Ranch, En 44.66 243 ⇑P **P** **18 31 19.0 +0.3**
baz=45,SNR=5.3
V22A San Miguel Ran 44.74 235 ⇓pP pP 18 31 21.6 -0.8
baz=45
BZS Buzias 44.79 82 ⇑*i*P **P** **18 31 20.9 +1.3**
T15A Red Dirt Ranch 44.86 241 ⇑P **P** **18 31 20.1 -0.2**
baz=45,SNR=6.5
NVAR Mina Array Bea 44.88 248 P **P** **18 31 21.2 +0.8**
comp=Z,0.8nm,0.7s,mb3.7,baz=14,slow=5.5,SNR=7.8
NVAR Mina Array Bea 44.88 248 P **P** **18 31 21.2 +0.8**
U18A Rough Rock, Ch 44.88 238 ⇓pP pP 18 31 22.9 -0.7
baz=45,SNR=7.6
U17A Shonto 44.88 239 ⇑pP pP 18 31 22.7 -0.9
baz=45
S10A Tonopah Range, 44.96 246 ⇓P **P** **18 31 21.2 +0.1**
baz=45,SNR=5.9
GZR Gura Zlata 45.29 81 ⇓*i*P **P** **18 31 25.4 +1.8**
W23A Werner Place, 45.31 234 ⇓P **P** **18 31 24.5 +0.6**
baz=45,SNR=5.2
U15A North Rim 45.41 241 ⇑P **P** **18 31 24.4 -0.2**
baz=45,SNR=5.4
U16A Tuba City 45.42 240 ⇑pP pP 18 31 26.6 -1.3
baz=45,SNR=7.5
ANMO Albuquerque 45.58 234 P **P** **18 31 27.4 +1.4**
comp=Z,2.5nm,1.0s,mb4.1,baz=29,slow=8.1,SNR=6.3
ANMO Albuquerque 45.58 234 *e*P **P** **18 31 26.7 +0.7**

comp=Z,17nm,1.0s,mb4.9
ANMO e 18 31 37.2
VRI Vrincioaia 45.83 77 ⇑iP **P 18 31 28.5 +0.6**
W20A Ramah 45.83 236 ⇓P **P 18 31 28.2 +0.2**
baz=46,SNR=5.2
V17A Tonalea, Kykot 45.85 239 ⇑P **P 18 31 28.4 +0.3**
baz=46,SNR=5.7
V15A Kaibab Nationa 45.97 241 ⇓pP pP 18 31 31.0 -1.2
baz=46,SNR=5.7
MLR Muntele Rosu 45.99 78 ⇑iP **P 18 31 30.4 +1.3**
W19A Sanders 46.04 237 ⇓P **P 18 31 29.2 -0.4**
baz=46,SNR=5.9
Y26A Elida 46.04 231 ⇑P **P 18 31 29.7 +0.1**
baz=46,SNR=6.5
WUAZ Wupatki 46.08 240 ⇑pP pP 18 31 32.1 -1.0
baz=46,SNR=5.3
WUAZ Wupatki 46.08 240 eP **P 18 31 31.5 +1.6**
comp=Z,3.6nm,0.8s,mb4.3
WUAZ e 18 31 42.3
X21A Alamocita Cree 46.34 235 ⇓P **P 18 31 32.3 +0.3**
baz=46,SNR=6.5
V13A Grand Canyon W 46.34 243 ⇓pP pP 18 31 34.1 -1.1
baz=46,SNR=5.6
V14A Boquillas Ranc 46.35 242 ⇑pP pP 18 31 34.6 -0.6
baz=46,SNR=7.7
Y24A Capitan 46.36 233 ⇑P **P 18 31 32.2 +0.1**
baz=46,SNR=6.5
BNM Barren Site 46.38 234 eP **P 18 31 33.3 +1.0**
comp=Z,13nm,1.2s,mb4.8
BNM e 18 31 43.7
X20A Quemado 46.40 236 ⇑pP pP 18 31 34.5 -1.1
baz=46,SNR=5.7
LENM Lemitar 46.44 234 P **P 18 31 33.6 +0.9**
comp=Z,13nm,1.2s,mb4.7
LENM e 18 31 43.2
Z27A Tatum 46.51 230 ⇓P **P 18 31 33.6 +0.3**
baz=46,SNR=5.5
W16A Flagstaff 46.52 240 ⇓pP pP 18 31 35.8 -0.7
baz=46,SNR=5.5
X19A St. Johns 46.67 237 ⇓P **P 18 31 34.4 -0.3**
baz=47,SNR=7.0
Z26A Caprock 46.70 231 ⇑P **P 18 31 34.8 0.0**
baz=47,SNR=5.5
Y21A Point of Rocks 46.74 235 ⇑P **P 18 31 34.9 -0.2**
baz=47,SNR=7.8
Y21A ⇑pP pP 18 31 37.5 -0.8
baz=47
W14A Seligman 46.75 241 ⇓pP pP 18 31 37.6 -0.8
baz=47
CPRX Cap Rock 46.91 231 eP **P 18 31 35.2 -1.3**
comp=Z,4.7nm,1.0s,mb4.4
CPRX e 18 31 47.5
MPMC Manual Prospec 46.95 247 ⇑P **P 18 31 36.2 -0.6**
baz=47,SNR=5.1
Y19A Nutrioso 47.12 237 ⇑pP pP 18 31 40.0 -1.2
baz=47,SNR=6.4
X16A Lo Mia Camp, P 47.15 239 ⇑P **P 18 31 38.2 -0.2**
baz=47,SNR=5.4
Z21A St. Cloud Mine 47.41 235 ⇓P **P 18 31 41.0 +0.6**
baz=47,SNR=7.4
125A Gardner Draw, 47.43 231 ⇓P **P 18 31 40.2 -0.3**
baz=47,SNR=5.1
Y18A Canyon Day Jun 47.46 238 ⇑P **P 18 31 40.5 -0.3**
baz=47,SNR=6.9
124A Stringfield Ra 47.55 232 ⇑P **P 18 31 41.7 +0.2**
baz=48,SNR=5.2
ISA Isabella 47.56 247 ⇑P **P 18 31 40.8 -0.7**
baz=48,SNR=9.8
ISA Isabella 47.56 247 eP **P 18 31 42.7 +1.2**
comp=Z,5.8nm,1.4s,mb4.4
ISA e 18 31 53.6
Z20A Nine Sixteen R 47.80 236 ⇓P **P 18 31 43.4 +0.1**
baz=48,SNR=5.8
BRVK Borovoye 48.07 37 P **P 18 31 44.9 -0.4**
BVAR Borovoye Array 48.12 37 P **P 18 31 46.0 +0.4**
comp=Z,3.4nm,1.1s,mb4.3,baz=20,slow=4.7,SNR=9.0
BVAR LR LR 18 56 13.7
comp=Z,49nm,18.7s,MS3.5,slow=41
328A Wristen Ranch, 48.30 229 ⇓P **P 18 31 46.6 -0.7**
baz=48,SNR=5.6
120A U Bar Ranch, L 48.35 236 ⇓P **P 18 31 47.6 -0.1**
baz=48,SNR=6.2
AKTK Aktyubinsk 48.49 48 P **P 18 31 48.4 -0.2**
AKTO Aktyubinsk 48.49 48 P **P 18 31 48.4 -0.2**
comp=Z,4.0nm,0.7s,mb4.3,baz=324,slow=4.7,SNR=5.4
326A Caldwell Ranch 48.59 230 ⇓P **P 18 31 49.4 -0.1**
baz=49,SNR=6.4
117A Oracle 48.77 238 ⇓P **P 18 31 50.4 -0.5**
baz=49,SNR=7.1
428A Kincaid Ranch, 48.92 229 ⇑P **P 18 31 51.4 -0.7**
baz=49,SNR=6.9
427A Hayter Ranch, 48.94 229 ⇓P **P 18 31 52.1 -0.1**
baz=49
220A Playas Peak, P 48.95 235 ⇑P **P 18 31 52.1 -0.2**
baz=49,SNR=5.9
219A White Tail Can 49.01 236 ⇓P **P 18 31 52.1 -0.6**
baz=49,SNR=6.0
ZAA0 Zalesovo Array 49.12 26 eP **P 18 31 53.0 -0.4**
ZALV Zalesovo Beam 49.12 26 P **P 18 31 53.3 0.0**
comp=Z,1.4nm,0.4s,mb4.3,baz=350,slow=7.5,SNR=10
ZALV LR LR 18 55 31.3
comp=Z,58nm,18.5s,MS3.6,baz=22,slow=40
218A Dragoon 49.20 237 ⇑P **P 18 31 54.3 +0.1**
baz=49
426A McDonald Obser 49.23 230 ⇑P **P 18 31 54.6 +0.2**
baz=49,SNR=7.2
PETK Petropavlovsk- 49.25 330 LR LR 18 55 31.0
comp=Z,67nm,19.7s,MS3.6,baz=7.2,slow=40
425A Indio Mountain 49.31 231 ⇑P **P 18 31 54.2 -0.9**
baz=49
527A Woodward Ranch 49.66 229 ⇑P **P 18 31 57.6 -0.1**
baz=50,SNR=5.9
526A Mary Lane Ranc 49.84 230 ⇓P **P 18 31 59.1 0.0**
baz=50
ABKAR Akbulak array 49.98 47 eP **P 18 31 59.2 -0.7**
comp=Z,2.5nm,0.7s,mb4.3
628A Black Gap, Mar 50.16 228 ⇑P **P 18 32 01.6 +0.1**
baz=50
627A Terlingua Ranc 50.29 229 ⇑P **P 18 32 02.6 +0.1**
baz=50,SNR=8.9
MDT Midelt 50.34 113 P **P 18 32 02.6 -0.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=334,slow=6.3,SNR=3.3
TXAR Lajitas Array 50.46 229 P **P 18 32 04.7 +0.9**
comp=Z,3.3nm,0.8s,mb4.4,baz=47,slow=5.8,SNR=18
TXAR LR LR 18 54 30.1
comp=Z,122nm,18.0s,MS4.0,baz=0.0,slow=37
KEST Kesra 50.98 98 LR LR 18 52 17.2
comp=Z,33nm,18.4s,MS3.4,baz=216,slow=34
KIV Kislovodsk 51.45 63 P **P 18 32 07.8 -3.3**
BRTR Keskin Array B 53.32 73 P **P 18 32 26.2 +1.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=330,slow=4.0,SNR=6.7
MKAR Makanchi Array 55.87 29 P **P 18 32 43.5 +0.1**
comp=Z,0.8nm,0.6s,mb4.0,baz=2.3,slow=5.6,SNR=11
ULN Ulaanbaatar 56.86 9 eP **P 18 32 50.8 +0.3**
comp=Z,4.0nm,0.5s,mb4.7
SONM Songino Array 56.86 10 P **P 18 32 51.2 +0.8**
comp=Z,2.6nm,0.5s,mb4.5,baz=345,slow=7.5,SNR=26
EKS2 Erkin-Say 58.73 37 eP **P 18 33 02.6 -1.1**
comp=Z,2.8nm,0.6s,mb4.5
TKM2 Tokmak 2 58.76 36 eP **P 18 33 04.4 +0.6**
comp=Z,3.5nm,0.8s,mb4.4
AAK Ala-Archa 58.87 37 eP **P 18 33 04.3 -0.4**
comp=Z,5.9nm,0.8s,mb4.7
AML Almayashu 59.24 37 eP **P 18 33 02.9 -4.3**
comp=Z,5.7nm,1.0s,mb4.6
WMQ Urumqi 59.43 25 eP **P 18 33 09.8 +1.3**
CN2 Changchun 61.05 354 eP **P 18 33 20.8 +1.2**
CN2 es P sP 18 33 27.8 +3.8
CN2 PcP PcP 18 34 05.0 +2.4
CN2 eS **S 18 41 36.8 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s,MS4.6
CN2 LR LR
comp=E,200nm,14.0s,MS4.6
CN2 LR LR
comp=Z,200nm,16.0s,MS4.4
HHC Hu-ho-hao-te 64.01 6 eP **P 18 33 35.2 -4.2**
HHC PcP PcP 18 34 10.7 -4.0
HHC PP PP 18 35 57.7 -1.9
HHC ScP 18 38 12.5
HHC S **S 18 42 08.4 -6.7**
HHC ScS ScS 18 43 25.1 -7.6
HHC SS SS 18 46 18.7 -4.1
HHC pmax pmax
comp=Z,19nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,57nm,6.4s
HHC LR LR
comp=N,120nm,15.3s,MS4.3
HHC LR LR
comp=E,120nm,15.2s,MS4.3
HHC LR LR
comp=Z,95nm,15.1s,MS4.1
GTA Gaotai 64.89 16 eP **P 18 33 46.4 +1.2**
GTA pP pP 18 33 51.0 +2.6
GTA sP sP 18 33 53.5 +3.9
GTA S **S 18 42 28.7 +2.7**
GTA sS sS 18 42 34.7 +3.4
GTA SS SS 18 46 41.9 +5.4
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
GTA pmax pmax
comp=Z,86nm,4.8s
GTA LR LR
comp=N,110nm,14.7s,MS4.3
GTA LR LR
comp=E,89nm,15.3s,MS4.3
GTA LR LR
comp=Z,120nm,15.3s,MS4.2
BJI Beijing 64.90 2 P **P 18 33 43.3 -1.9**
BJI S **S 18 42 23.5 -2.6**
BJI SS SS 18 46 34.4 -2.2
BJI pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
BJI pmax pmax
comp=Z,320nm,4.0s
BJI LR LR
comp=N,69nm,26.7s,MS4.0
BJI LR LR
comp=E,120nm,24.3s,MS4.0
BJI LR LR
comp=Z,30nm,29.1s,MS3.3
MAJO Matsushiro 67.64 343 eP **P 18 34 01.1 -1.8**
MJAR Matsushiro Arr 67.64 343 P **P 18 34 03.2 +0.3**
comp=Z,0.5nm,0.7s,mb3.6,baz=338,slow=5.8,SNR=4.0
MJAR PP PP 18 36 28.3 -3.1
comp=Z,1.2nm,1.1s,baz=27,slow=8.4,SNR=4.0
MJAR Matsushiro Arr 67.64 343 P **P 18 34 03.1 +0.3**
MJAR PP PP 18 36 28.3 -3.1
LZH Lanzhou 68.45 13 eP **P 18 34 08.0 +0.1**
LZH pP pP 18 34 12.6 +1.4
LZH sP sP 18 34 15.4 +3.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
TOA0 Torodi Ar. Sit 70.74 113 eP **P 18 34 21.7 -0.6**
TORD Torodi Ar. Bea 70.74 113 P **P 18 34 22.3 0.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=338,slow=6.5,SNR=4.1
CD2 Chengdu 73.60 13 P **P 18 34 38.6 -0.6**
CD2 pP pP 18 34 43.3 +0.8
CD2 sP sP 18 34 45.6 +1.9
CD2 PP PP 18 37 24.0 +1.3
CD2 S S 18 44 04.9 -4.1
CD2 sS sS 18 44 13.3 -1.1
CD2 SKS 18 44 39.6
CD2 SS SS 18 48 49.6 -1.3
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,70nm,6.5s
CD2 LR LR
comp=N,150nm,7.1s
CD2 LR LR
comp=Z,150nm,4.9s
LSA Lhasa 73.77 24 eP **P 18 34 41.1 +0.9**
comp=Z,6.7nm,1.0s,mb4.5
OTAV Otavalo 75.65 197 eP **P 18 34 49.0 -2.2**
comp=Z,2.5nm,0.8s,mb4.2
LIC Lamto 75.91 121 eP **P 18 34 52.1 -0.7**
GYA Guiyang 78.18 11 P **P 18 35 04.0 -1.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KMI Kunming 79.29 14 P **P 18 35 11.1 -0.5**
KMI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CHTO Chiang Mai 85.28 18 eP **P 18 35 40.3 -2.7**
CM31 Chiang Mai Arr 85.63 18 eP **P 18 35 44.0 -0.7**
CMAR Chiang Mai Arr 85.63 18 P **P 18 35 44.4 -0.3**
comp=Z,3.6nm,0.8s,mb4.7,baz=336,slow=5.4,SNR=23
SIV San Ignacio 91.13 179 P **P 18 36 11.8 +1.0**
comp=Z,1.6nm,0.6s,mb4.5,baz=16,slow=3.8,SNR=9.5
WRA Warramunga Arr 123.93 342 PKP PKPdf 18 42 02.8 -1.2
comp=Z,0.7nm,1.0s,baz=350,slow=2.2,SNR=4.1
ASAR Alice Springs 127.66 342 PKP PKPdf 18 42 09.2 -1.8
comp=Z,0.3nm,0.9s,baz=21,slow=2.0,SNR=7.7
VNA3 Neumayer Olymp 149.80 150 ePKPdf PKPbc 18 42 53.7 -0.5
VNA3 e 18 42 58.4
VNA3 e 18 43 03.8
VNA2 Neumayer--Watz 149.81 148 ePKPdf PKPbc 18 42 54.3 0.0
VNA2 e 18 42 59.1
VNA2 e 18 43 03.8

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*IDC **03** 18:39:32.1±1.7, 52.°01N×178.°73W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.4/26, mbtmp3.6/4, Error ellipse: s-maj=83.7km s-min=30.7km az=146.0*
*ISCJB **03** 18:39:52.9±2.4, 52.°2N±0.°3×178.°5W±0.°5, h189km±16km, mb3.4/4, Error ellipse: s-maj=59.6km s-min=28.5km az=35.8*
*NEIC **03** 18:39:55.1, 52.°10N×178.°48W, h179km, MG3.0(AEIC), After AEIC.*
ISC 03 18:39:53.5±2.5, 52.°2N±0.°2×178.°6W±0.°5, h182km±16km, n7, σ0s55/7, mb3.4/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.54**	**92**	ePn	**Pn**	**18 40 25.9**	**-0.1**
PPLA	**Purkeypile**	**17.61**	**42**	eP	**Pn**	**18 43 47.5**	**0.0**
BPAW	**Bear Paw Mtn.** 7.5nm,1.3s	**18.62**	**40**	eP	**P**	**18 43 57.5**	**+0.6**
YKA	**Yellowknife Ar** 0.3nm,0.3s,mb3.3,baz=282,slow=7.9,SNR=11	**34.57**	**47**	P	**P**	**18 46 23.5**	**-0.8**
NVAR	**Mina Array Bea** 0.9nm,0.7s,mb3.5,baz=293,slow=6.4,SNR=7.7	**43.30**	**84**	P	**P**	**18 47 37.4**	**+0.3**
TXAR	**Lajitas Array** 0.5nm,0.6s,mb3.6,baz=298,slow=5.4,SNR=4.8	**58.38**	**82**	P	**P**	**18 49 29.6**	**-0.1**
ASAR	**Alice Springs** 0.3nm,1.0s,mb3.0,baz=17,slow=5.1,SNR=3.7	**86.19**	**223**	P	**P**	**18 52 14.0**	**+0.1**

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*BJI **03** 19:01:44.5, 6.°40S×155.°43E, h38km, mB5.4/44, mb5.2/57, Ms5.1/63, Ms7 5.0/53*
*ISCJB **03** 19:01:45.0±0.1, 6.°64S±0.°03×155.°10E±0.°02, h34km, mb5.3/160, MS5.3/256, Error ellipse: s-maj=4.2km s-min=2.9km az=179.5*
*MOS **03** 19:01:45.8±0.9, 6.°47S×155.°02E, h33km, mb5.5/66, MS5.1/61, Error ellipse: s-maj=8.5km s-min=6.0km az=92.6*
*IDC **03** 19:01:45.9±0.5, 6.°63S×155.°10E, h31km±2km, mb5.0/21, mb1 5.1/22, mb1mx5.1/23, mbtmp5.0/22, ML5.0/1, MS5.0/19, Ms1 5.0/19, ms1mx5.0/22, Error ellipse: s-maj=13.4km s-min=10.8km az=93.0*
*GCMT **03** 19:01:46.3±0.1, 6.°96S×155.°08E, h38km, MW5.7/111, Moment Tensor Solution. s111,c222; s111,c275; Duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}4.05±.04; $M_{\theta\theta}$-2.44±.04; $M_{\phi\phi}$-1.61±.04; $M_{r\theta}$0.95±.05; $M_{\theta\phi}$2.55±.03; $M_{\phi r}$-0.93±.05; Best double couple: M_o4.52900×10^{17} NP1:ϕ_s309.00000°, δ36.00000°, λ88.00000°. NP2:ϕ_s132.00000°, δ54.00000°, λ92.00000°. Principal axes: T 4.2510, Plg81.0000°, Azm49.0000°; N 0.5570, Plg1.0000°, Azm311.0000°; P -4.8070, Plg9.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **03** 19:01:46.3±0.1, 6.°64S×155.°09E, h35km, mb5.4/117, MS5.4/206, MW5.6, MW5.8 Error ellipse: s-maj=4.7km s-min=3.6km az=135.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}2.96; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$-1.19; $M_{r\theta}$0.58; $M_{\theta\phi}$1.39; $M_{\phi r}$-0.40; Best double couple: M_o3.00000×10^{17} NP1:ϕ_s128.00000°, δ52.00000°, λ89.00000°. NP2:ϕ_s310.00000°, δ38.00000°, λ92.00000°. Principal axes: T 3.0400, Plg83.0000°, Azm30.0000°; N -0.0600, Plg0.0000°, Azm128.0000°; P -2.9800, Plg6.0000°, Azm218.0000°;*

*DJA **03** 19:02:04, 6.°99S×154.°47E, h150km, Mw5.6/36*
ISC 03 19:01:46.8±0.1, 6.°65S±0.°03×155.°15E±0.°02, h36km, h36km±.7km: pP-P, n1007, σ0s85/567, mb5.3/160, MS5.3/256, 159C-135D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen** 758nm,1.0s	**13.83**	**237**	ePn	**Pn**	**19 05 00.7**	**+0.2**
CTA	**Charters Tower**	**15.91**	**212**	P	**Pn**	**19 05 29.1**	**+1.0**
CTA						19 08 29.8	
CTA	comp=Z,4.0nm,0.3s			pmax	pmax		
CTA				MLR	MLR		
	comp=Z,11μm,19.9s						
CTA	**Charters Tower** comp=Z,73nm,0.9s	**15.91**	**212**	eP	**Pn**	**19 05 29.0**	**+0.9**
CTA				eS	**S**	**19 08 35.3**	**-1.3**
CTA	**Charters Tower** comp=Z,3.6nm,0.3s,baz=36,slow=14,SNR=42	**15.91**	**212**	Pn	**Pn**	**19 05 29.1**	**+1.0**
CTA				Sn	**Sn**	**19 08 29.8**	**+6.4**
	baz=268,slow=18,SNR=1.5						
CTA				LR	LR	19 10 49.9	
	comp=Z,11μm,19.9s,baz=18,slow=34						
CTAO	**Charters Tower**	**15.91**	**212**	eP	**Pn**	**19 05 29.1**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,3μm,2.9s						
CTAO	**Charters Tower** comp=Z,3μm,2.9s	**15.91**	**212**	ePn	**Pn**	**19 05 29.1**	**+1.1**
NOUC	**Port Laguerre**	**18.76**	**146**	eP	**Pn**	**19 06 03.8**	**+0.2**
DZM	**Mont Dzumac** comp=Z,90nm,0.8s	**18.82**	**146**	eP	**Pn**	**19 06 05.0**	**+0.7**
DZM				eLR	LR	19 10 34.7	
	comp=Z,16μm,26.2s						
EIDS	**Eidsvold** comp=Z,64nm,1.0s	**19.02**	**191**	eP	**Pn**	**19 06 07.0**	**+0.4**
TARA	**Tarawa** comp=Z,199nm,0.7s	**19.44**	**66**	eP	**Pn**	**19 06 13.3**	**+1.5**
KWAJ	**Kwajalein Atol** comp=Z,331nm,0.8s	**19.75**	**39**	eP	**Pn**	**19 06 18.0**	**+2.6**
KWAJ				e		19 06 27.9	
GUMO	**Guam**	**22.55**	**333**	P	**P**	**19 06 43.9**	**0.0**
GUMO				pmax	pmax		
	comp=Z,74nm,0.9s,mb5.1						
GUMO				MLR	MLR		
	comp=Z,2μm,18.8s,MS4.6						
GUMO	**Guam**	**22.55**	**333**	P	**P**	**19 06 43.9**	**0.0**
	comp=Z,74nm,0.9s,mb5.1,baz=164,slow=10,SNR=3.6						
GUMO				LR	LR	19 15 06.2	
	comp=Z,2μm,18.8s,MS4.6,baz=149,slow=36						
GUMO	**Guam**	**22.55**	**333**	eP	**P**	**19 06 50.1**	**+6.2**
	comp=Z,795nm,1.4s,mb6.0						
GUMO				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						
KAKA	**Kakadu** comp=Z,152nm,1.0s,mb5.4	**23.17**	**253**	eP	**P**	**19 06 49.3**	**-1.2**
KAKA	**Kakadu** comp=Z,266nm,0.7s,mb5.8	**23.17**	**253**	ePn	**P**	**19 06 48.7**	**-1.8**
ARMA	**Armidale**	**23.88**	**188**	eP	**P**	**19 06 57.5**	**+0.4**
ARMA	**Armidale** comp=Z,112nm,1.2s,mb5.2	**23.88**	**188**	eP	**P**	**19 06 57.2**	**+0.1**
FUNA	**Funafuti**	**23.91**	**96**	PFAKE		19 07 10.0	+12
FUNA				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
WRAB	**Tennant Creek** comp=Z,833nm,1.4s,mb6.0,SNR=52	**24.12**	**235**	P	**P**	**19 07 00.0**	**+0.5**
WRAB	**Tennant Creek** comp=Z,422nm,1.4s,mb5.7	**24.12**	**235**	eP	**P**	**19 06 59.4**	**-0.1**
WRAB				LR	LR		
	comp=Z,6μm,21.0s,MS5.1						
WB2	**Warramunga Arr**	**24.13**	**235**	eP	**P**	**19 06 59.9**	**+0.4**
WRA	**Warramunga Arr**	**24.14**	**235**	P	**P**	**19 06 59.4**	**-0.2**
WRA						19 10 40.5	
WRA				S	**S**	**19 11 11.9**	**-3.5**
WRA				pmax	pmax		
	comp=Z,24nm,0.5s						
WRA				smax			
	comp=N,4.0nm,1.0s						
WRA				MLR	MLR		
	comp=Z,5μm,18.9s						
WRA	**Warramunga Arr** comp=Z,24nm,0.5s,mb4.9,baz=58,slow=9.3,SNR=113	**24.14**	**235**	P	**P**	**19 06 59.4**	**-0.2**
WRA				PcP	PcP	19 10 40.5	+0.2
	comp=Z,15nm,0.5s,baz=57,slow=2.3,SNR=20						
WRA				S	**S**	**19 11 11.9**	**-3.5**
	comp=Z,3.8nm,1.0s,baz=58,slow=17,SNR=3.9						
WRA				ScP	ScP	19 14 15.6	-0.6
	comp=Z,3.0nm,0.9s,baz=60,slow=2.5,SNR=5.0						
WRA				LR	LR	19 16 19.3	
	comp=Z,5μm,18.9s,MS5.1,baz=55,slow=36						
ASAR	**Alice Springs**	**26.52**	**228**	P	**P**	**19 07 20.7**	**-0.5**
ASAR						19 10 45.5	
ASAR				S	**S**	**19 11 55.3**	**+2.1**
ASAR				pmax	pmax		
	comp=Z,12nm,0.6s						
ASAR				smax			
	comp=N,2.0nm,1.0s						
ASAR	**Alice Springs** comp=N,12nm,0.6s,mb4.6,baz=56,slow=9.5,SNR=145	**26.52**	**228**	P	**P**	**19 07 20.6**	**-0.5**
ASAR				PcP	PcP	19 10 45.5	-0.1
	comp=N,11nm,0.8s,baz=58,slow=2.5,SNR=6.8						
ASAR				S	**S**	**19 11 55.3**	**+2.1**
	comp=N,2.2nm,1.0s,baz=52,slow=14,SNR=2.4						
ASAR				ScP	ScP	19 14 22.6	-0.3
	comp=N,5.4nm,1.0s,baz=67,slow=3.3,SNR=6.6						
STKA	**Stephens Creek** comp=N,26nm,0.8s,mb4.9	**28.11**	**205**	eP	**P**	**19 07 34.7**	**-0.7**
STKA				ePCP	PcP	19 10 48.9	-0.3
STKA				eS	**S**	**19 12 05.0**	**-13**
STKA	**Stephens Creek** comp=N,7.5nm,0.6s,mb4.5,baz=16,slow=11,SNR=11	**28.11**	**205**	P	**P**	**19 07 34.4**	**-1.0**
STKA				PcP	PcP	19 10 48.9	-0.3
	comp=N,14nm,0.8s,baz=300,slow=2.2,SNR=5.4						
STKA				ScP	ScP	19 14 27.5	-0.1
	comp=N,5.7nm,0.9s,baz=31,slow=6.2,SNR=4.3						
STKA				LR	LR	19 19 03.5	
	comp=N,8μm,18.1s,MS5.4,baz=35,slow=37						
STKA	**Stephens Creek** comp=N,9.0nm,0.9s,mb4.4	**28.11**	**205**	eP	**P**	**19 07 34.9**	**-0.5**
WAKE	**Wake Island**	**28.15**	**24**	PFAKE		19 07 50.0	+14
WAKE				LR	LR		
	comp=Z,7μm,20.0s,MS5.3						
CNB	**Canberra Magne**	**29.02**	**190**	eP	**P**	**19 07 44.1**	**+0.6**
CNB				eS	**S**	**19 12 30.1**	**-2.3**
CAN	**Canberra**	**29.09**	**190**	PFAKE		19 08 00.0	+16
CAN				LR	LR		
	comp=Z,7μm,21.0s,MS5.2						
FITZ	**Fitzroy Crossi** comp=Z,65nm,0.5s,mb5.7	**30.93**	**246**	eP	**P**	**19 08 00.0**	**-0.6**
FITZ				ePCP	PcP	19 10 55.8	-0.9
FITZ				eS	**S**	**19 12 54.2**	**-8.6**
FITZ	**Fitzroy Crossi** comp=Z,15nm,0.7s,mb5.0,baz=74,slow=7.1,SNR=33	**30.93**	**246**	P	**P**	**19 08 00.0**	**-0.6**
FITZ				PcP	PcP	19 10 55.9	-0.7
	comp=Z,21nm,0.8s,baz=298,slow=1.8,SNR=4.0						
FITZ				LR	LR	19 20 35.6	
	comp=Z,7μm,20.2s,MS5.3,baz=76,slow=37						
FITZ	**Fitzroy Crossi** comp=Z,46nm,0.8s,mb5.4	**30.93**	**246**	eP	**P**	**19 07 59.7**	**-0.9**
FITZ				ePcP	PcP	19 10 55.9	-0.7
MATI	**Mati**	**31.83**	**295**	eP	**P**	**19 08 08.6**	**+0.1**
TOO	**Toolangi**	**32.01**	**195**	eP	**P**	**19 08 10.2**	**+0.4**
TOO				ePCP	PcP	19 10 59.3	+0.1
DAV	**Davao City (W)**	**32.49**	**294**	PFAKE		19 08 30.0	+16
DAV				LR	LR		
	comp=Z,2μm,20.0s,MS4.8						
DAV	**Davao City (W)**	**32.49**	**294**	⇑eP	**P**	**19 08 12.5**	**-1.9**
BUKP	**Musuan**	**33.29**	**295**	eP	**P**	**19 08 22.5**	**+1.1**
AFI	**Afiamalu** comp=Z,38nm,0.6s,mb5.5,baz=344,slow=7.4,SNR=8.1	**33.30**	**105**	P	**P**	**19 08 21.8**	**+0.4**
AFI	**Afiamalu**	**33.30**	**105**	P	**P**	**19 08 21.9**	**+0.4**
AFI				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
RAO	**Raoul Island**	**33.92**	**135**	P	**P**	**19 08 26.4**	**-0.3**
RAO				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.1						
MSLP	**Maasin**	**34.47**	**299**	eP	**P**	**19 08 32.2**	**+0.6**
PAGZ	**Pagadian**	**34.80**	**294**	eP	**P**	**19 08 35.7**	**+1.2**
FORT	**Forrest** comp=Z,84nm,0.7s,mb5.8	**34.94**	**223**	eP	**P**	**19 08 34.3**	**-1.2**
FORT	**Forrest** comp=Z,116nm,0.8s,mb5.9	**34.94**	**223**	eP	**P**	**19 08 34.2**	**-1.3**
KAPI	**Kappang** comp=Z,314nm,1.1s,mb6.2,SNR=8.9	**35.24**	**271**	P	**P**	**19 08 37.2**	**-1.1**
KAPI	**Kappang** comp=Z,146nm,1.4s,mb5.7	**35.24**	**271**	eP	**P**	**19 08 37.1**	**-1.2**
KAPI				LR	LR		

comp=Z,2μm,19.0s,MS4.8
KAPI Kappang 35.24 271 P **P 19 08 38.6 +0.3**
SNR=9.3
KAPI P 19 08 38.6
SNR=9.3
CNP Cataram 35.78 302 *e*P **P 19 08 43.2 +0.3**
GUIM Jordan 36.68 298 *e*P **P 19 08 51.0 +0.5**
PVCP Virac 36.76 303 *e*P **P 19 08 51.8 +0.6**
TAU Tasmania Unive 36.77 190 *e*P **P 19 08 51.9 +1.0**
comp=Z,100nm,1.3s,mb5.5
TAU LR LR
comp=Z,3μm,19.0s,MS5.1
RCP Roxas 36.96 299⇑ *e*P **P 19 08 53.8 +0.9**
MBWA Marble Bar 37.16 244 *e*P **P 19 08 53.7 -1.0**
comp=Z,62nm,0.8s,mb5.5
MBWA *e*PP PP 19 10 19.8 0.0
MBWA *e*PcP PcP 19 11 14.4 0.0
MBWA LR LR
comp=Z,5μm,20.0s,MS5.3
URZ Urewera 37.24 151 P **P 19 08 55.5 +0.5**
comp=Z,20nm,0.5s,mb5.2,baz=313,slow=3.9,SNR=20
URZ PcP PcP 19 11 12.3 -1.9
comp=Z,17nm,0.6s,baz=336,slow=2.8,SNR=5.3
URZ LR LR 19 23 08.3
comp=Z,3μm,18.2s,MS5.1,baz=332,slow=34
URZ Urewera 37.24 151 *e*P **P 19 08 55.3 +0.3**
comp=Z,20nm,0.6s,mb5.1
URZ *e*PcP PcP 19 11 11.6 -2.7
KALP Kalibo 37.37 299 *e*P **P 19 08 59.7 +3.3**
AUQP San Andres 37.86 302 *e*P **P 19 09 02.8 +2.2**
CUYO Cuyo Island 38.16 297 *e*P **P 19 09 04.5 +1.4**
MYLDM Lahad Datu 38.42 287 P **P 19 09 07.7 +2.3**
BOAC Boac 38.63 301 *e*P **P 19 09 07.6 +0.5**
SNZO South Karori 38.67 156 PFAKE 19 09 20.0 +13
SNZO LR LR
comp=Z,4μm,20.0s,MS5.2
TSM Tawau 38.76 285 P **P 19 09 09.3 +1.0**
SJMP San Jose 38.79 299 *e*P **P 19 09 10.1 +1.7**
BUSP Coron 39.38 298 *e*P **P 19 09 14.0 +0.6**
RPZ Rata Peaks 39.48 162 P **P 19 09 13.8 +0.1**
comp=Z,31nm,0.5s,mb5.3,baz=312,slow=1.7,SNR=7.8
RPZ PcP PcP 19 11 20.8 -0.4
comp=Z,7.9nm,0.6s,baz=346,slow=4.2,SNR=3.3
RPZ LR LR 19 24 00.1
comp=Z,5μm,19.2s,MS5.3,baz=324,slow=34
RPZ Rata Peaks 39.48 162 *e*P **P 19 09 13.9 +0.2**
comp=Z,38nm,0.6s,mb5.3
ENPP El Nido 39.73 296 *e*P **P 19 09 17.5 +1.2**
PPR Puerto Princes 39.78 294⇓ *i*P **P 19 09 18.0 +1.3**
BALP Baler 40.00 304 *e*P **P 19 09 18.9 +0.4**
PALP Palanan 40.02 306 *e*P **P 19 09 19.7 +1.2**
LUBP Lubang 40.13 300 *e*P **P 19 09 19.5 -0.1**
BATP Bataraza 40.26 292 *e*P **P 19 09 21.9 +1.2**
CAUP Cauayan 40.43 306 *e*P **P 19 09 23.4 +1.3**
KKM Kota Kinabalu 40.85 287 P **P 19 09 26.6 +1.0**
KKM Kota Kinabalu 40.85 287 *e*P **P 19 09 25.8 +0.2**
comp=Z,156nm,1.0s,mb5.6
KKM LR LR
comp=Z,1μm,22.0s,MS4.8
APYP Conner 41.39 307 *e*P **P 19 09 30.1 +0.1**
BOLP Bolinao 41.70 304 *e*P **P 19 09 34.1 +1.7**
ABRA Dolores 41.70 306 *e*P **P 19 09 33.3 +0.8**
JOHN Johnston Islan 41.95 56 PFAKE 19 09 50.0 +15
JOHN LR LR
comp=Z,6μm,21.0s,MS5.4
BBP Basco 42.29 310 *e*P **P 19 09 40.1 +2.8**
BTM Bintulu 43.12 282 P **P 19 09 46.1 +2.0**
MIDW Midway 43.64 36 PFAKE 19 10 00.0 +12
MIDW LR LR
comp=Z,7μm,21.0s,MS5.6
SBUM Sibu 43.79 281 P **P 19 09 51.3 +1.7**
NWAO Narrogin (SRO) 43.84 228 P **P 19 09 49.1 -0.5**
NWAO *PP pP 19 09 58.9 -1.2
NWAO pmax pmax
comp=Z,6.0nm,0.7s
NWAO Narrogin (SRO) 43.84 228 P **P 19 09 49.1 -0.5**
comp=Z,5.6nm,0.7s,mb4.4,baz=82,slow=9.6,SNR=3.3
NWAO pP pP 19 09 58.9 -1.2
comp=Z,11nm,0.6s,baz=65,slow=8.3,SNR=3.7
NWAO Narrogin (SRO) 43.84 228 *e*P **P 19 09 48.2 -1.4**
comp=Z,9.5nm,0.7s,mb4.6
NWAO LR LR
comp=Z,4μm,22.0s,MS5.2
TWG Pinlang 44.37 312 *e*P **P 19 09 51.4 -2.6**
comp=Z,29nm,0.5s,mb5.3
YULB Yu-li 44.55 313 *e*P **P 19 09 55.2 -0.3**
comp=Z,32nm,0.6s,mb5.3
NACB Ninganchiao 44.82 314 *e*P **P 19 09 56.6 -1.0**
comp=Z,40nm,0.4s,mb5.6
TPUB Ta-pu 44.98 313 *e*P **P 19 09 58.1 -0.8**
comp=Z,72nm,0.6s,mb5.7
YHNB Yeheng 45.29 315 *e*P **P 19 10 01.6 +0.3**
comp=Z,34nm,0.6s,mb5.4
YHNB LR LR
comp=Z,2μm,22.0s,MS5.0
TATO Taipei 45.40 315 *e*P **P 19 10 02.1 -0.1**
comp=Z,110nm,1.4s,mb5.5
TATO LR LR
comp=Z,2μm,20.0s,MS5.1
KSM Kuching 45.47 279 P **P 19 10 03.7 +0.7**
KSM Kuching 45.47 279 *e*P **P 19 10 03.0 0.0**
comp=Z,223nm,2.0s,mb5.7
KSM LR LR
comp=Z,974nm,22.0s,MS4.7
MJAR Matsushiro Arr 45.80 341 P **P 19 10 03.5 -1.7**
MJAR pmax pmax
comp=Z,7.0nm,0.7s
MJAR MLR MLR
comp=Z,1μm,21.8s
MJAR Matsushiro Arr 45.80 341 P **P 19 10 03.5 -1.7**
comp=Z,6.5nm,0.7s,mb4.7,baz=167,slow=8.2,SNR=30
MJAR LR LR 19 26 41.6
comp=Z,1μm,21.8s,MS4.8,baz=170,slow=33
MAJO Matsushiro 45.80 341 *e*P **P 19 10 03.6 -1.6**
comp=Z,45nm,1.5s,mb5.2
MAJO LR LR
comp=Z,1μm,22.0s,MS4.8
MAT Matsushiro 45.80 341 P **P 19 10 03.6 -1.6**
MAT S **S 19 16 39.0 -7.6**
QZH Quanzhou 47.45 313⇑ *i*P **P 19 10 19.2 +0.9**
QZH pP pP 19 10 28.8 -0.1
QZH S **S 19 17 08.0 -2.6**
QZH pmax pmax
comp=Z,110nm,0.9s,mb5.8
QZH pmax pmax
comp=Z,870nm,4.2s
QZH LR LR
comp=N,2μm,20.6s,MS5.2
QZH LR LR
comp=E,1μm,18.1s,MS5.2
QZH LR LR
comp=Z,3μm,25.6s
XMAS Kiritimati 48.10 81 PFAKE 19 10 40.0 +16
XMAS LR LR
comp=Z,5μm,19.0s,MS5.5
SSE Sheshan 49.63 321 P **P 19 10 35.3 +0.3**
SSE sP sP 19 10 49.6 -0.2
SSE S **S 19 17 39.3 -1.9**
SSE pmax pmax
comp=Z,24nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,220nm,5.1s
SSE LR LR
comp=N,650nm,21.4s,MS4.8
SSE LR LR
comp=E,680nm,21.7s,MS4.8
SSE LR LR
comp=Z,1μm,21.4s,MS4.8
ERM Erimo 49.65 348 PFAKE 19 10 50.0 +15
ERM LR LR
comp=Z,2μm,21.0s,MS5.1
GZH Guangzhou 50.43 307 P **P 19 10 42.6 +1.4**
GZH S **S 19 17 52.0 -0.5**
GZH LR LR
comp=N,490nm,24.5s,MS5.0
GZH LR LR
comp=E,1μm,21.1s,MS5.0
GZH LR LR
comp=Z,3μm,24.4s,MS5.2
KSRS Korea Array 50.70 332 P **P 19 10 42.6 -0.4**
KSRS *PP pP 19 10 52.5 -1.1
KSRS pmax pmax
comp=Z,13nm,0.9s,mb4.9
KSRS MLR MLR
comp=Z,504nm,19.5s,MS4.5
KSRS Korea Array 50.70 332 P **P 19 10 42.6 -0.4**
comp=Z,13nm,0.9s,mb4.8,baz=151,slow=8.9,SNR=50
KSRS pP pP 19 10 52.5 -1.1
comp=Z,16nm,0.8s,baz=143,slow=7.2,SNR=18
KSRS LR LR 19 30 57.2
comp=Z,504nm,19.5s,MS4.5,baz=144,slow=35
INCN Inchon 51.34 331 *e*P **P 19 10 48.0 +0.3**
INCN LR LR
comp=Z,1μm,20.0s,MS4.9
INCN Inchon 51.34 331 P **P 19 10 48.2 +0.4**
SNR=8.2
INCN P 19 10 48.2
SNR=8.2
QIZ Qiongzhong 51.41 301 P **P 19 10 49.3 +0.7**
QIZ pP pP 19 10 59.5 +0.2
QIZ sP sP 19 11 04.6 +1.1
QIZ S **S 19 18 04.1 -2.2**
QIZ sS sS 19 18 22.7 -1.1
QIZ pmax pmax
comp=Z,63nm,1.4s,mb5.3
QIZ pmax pmax
comp=Z,470nm,12.5s
QIZ LR LR
comp=N,600nm,21.5s,MS4.7
QIZ LR LR
comp=E,490nm,22.3s,MS4.7
QIZ LR LR
comp=Z,2μm,24.8s,MS5.0
QIZ Qiongzhong 51.41 301 *e*P **P 19 10 49.1 +0.5**
comp=Z,45nm,0.9s,mb5.4
QIZ *e* pP 19 10 59.2 0.0
QIZ LR LR
comp=Z,2μm,21.0s,MS5.1
MYKOM Kota Tinggi 51.88 277 P **P 19 10 53.0 +0.7**
KGM Kluang 52.44 278 P **P 19 10 57.1 +0.6**
KTGM Kuala Trenggan 53.26 282 P **P 19 11 03.3 +0.8**
KIP Kipapa 53.74 57 PFAKE 19 11 20.0 +14
KIP LR LR
comp=Z,4μm,19.0s,MS5.5
WHN Wuhan 53.80 316⇑ P **P 19 11 07.2 +1.1**
WHN S **S 19 18 35.8 -2.7**
WHN pmax pmax
comp=Z,13nm,0.3s,mb5.3
WHN LR LR
comp=Z,2μm,19.1s,MS5.2
FRIM Kepong 54.32 279 P **P 19 11 10.7 +0.4**
YSS Yuzh-Sakhalins 54.49 350 *e*P **P 19 11 09.0 -1.8**
YSS *e* pP 19 11 22.0 +0.5
YSS *e**SP sP 19 11 24.0 -1.7
YSS *e*S **S 19 18 42.0 -5.2**
YSS Yuzh-Sakhalins 54.49 350 *e*P **P 19 11 11.2 +0.4**
YSS LR LR
comp=Z,487nm,22.0s,MS4.5
PPT Papeete 54.95 107 *e*S **S 19 18 56.8 +2.2**
comp=Z,1μm,25.0s
PPT *e*LQ 19 24 59.5
comp=Z,4μm,29.0s
PPT *e*LR LR 19 27 19.3
comp=Z,2μm,22.0s,baz=276
PPT Papeete 54.95 107 LR LR 19 30 28.4
comp=Z,1μm,18.9s,MS5.0,baz=274,slow=31
IPM Ipoh 55.15 280 P **P 19 11 16.3 +0.1**
POHA Pohakuloa 55.16 60 PFAKE 19 11 30.0 +14
POHA LR LR
comp=Z,3μm,21.0s,MS5.3
KULM Kulim 55.67 281 P **P 19 11 20.5 +0.5**
KULM Kulim 55.67 281 *e*P **P 19 11 19.1 -0.9**
comp=Z,89nm,1.2s,mb5.7
KULM *e* pP 19 11 28.9 -1.8
KULM *e*PcP PcP 19 12 18.6 -0.7
KULM LR LR
comp=Z,610nm,19.0s,MS4.7
MDJ Mudanjiang 55.97 338 P **P 19 11 21.6 0.0**
MDJ PcP PcP 19 12 21.6 +1.9
MDJ PP PP 19 13 25.2 -1.6
MDJ S **S 19 19 07.3 +0.1**
MDJ pmax pmax
comp=Z,22nm,1.3s,mb5.0
MDJ pmax pmax
comp=Z,220nm,8.0s
MDJ LR LR
comp=N,280nm,18.2s,MS4.8
MDJ LR LR
comp=E,620nm,20.0s,MS4.8
MDJ LR LR
comp=Z,700nm,21.8s,MS4.7
MDJ Mudanjiang 55.97 338 *e*P **P 19 11 20.7 -0.9**
comp=Z,30nm,1.1s,mb5.2
MDJ LR LR
comp=Z,618nm,20.0s,MS4.7
SNG Songkhla 56.10 283 P **P 19 11 23.0 -0.1**
comp=Z,100nm,0.7s,mb6.0
PMOR Pomariorio Ree 56.43 104 *e*P **P 19 11 25.8 +0.4**
comp=Z,173nm,1.3s,mb5.9
KKTK Khon Kaen 56.58 294⇑ P **P 19 11 27.0 +0.6**
comp=Z,679nm,0.9s
CN2 Changchun 56.94 335⇑ P **P 19 11 27.7 -0.8**
CN2 *e*pP pP 19 11 38.0 -1.2
CN2 *e*sP sP 19 11 41.7 -1.7
CN2 PcP PcP 19 12 22.6 -0.9
CN2 PP PP 19 13 35.7 +0.3
CN2 *e*S **S 19 19 17.8 -2.3**
CN2 SS SS 19 23 07.9 -1.3
CN2 pmax pmax
comp=Z,30nm,1.1s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,18.0s,MS4.9
CN2 LR LR
comp=E,600nm,18.0s,MS4.9
CN2 LR LR
comp=Z,700nm,19.0s,MS4.8
ENH Enshi 57.11 313 *e*P **P 19 11 29.2 -0.8**
comp=Z,63nm,1.0s,mb5.6
ENH *e* pP 19 11 38.5 -2.2
ENH LR LR
comp=Z,1μm,22.0s,MS5.0
GYA Guiyang 57.36 307 P **P 19 11 32.5 +0.7**
GYA pP pP 19 11 42.8 +0.2
GYA sP sP 19 11 49.0 +2.3
GYA PcP PcP 19 12 25.4 -0.2
GYA PP PP 19 13 44.8 +5.3
GYA ScP ScP 19 16 21.0 -1.9
GYA S **S 19 19 25.3 -1.0**
GYA SS SS 19 23 15.7 -0.7
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,330nm,5.9s
GYA LR LR
comp=N,3μm,19.2s,MS5.4
GYA LR LR
comp=E,2μm,20.0s,MS5.4
GYA LR LR
comp=Z,3μm,19.6s,MS5.3
HABR Khabarovsk 57.66 344 *i* P **P 19 11 32.5 -0.9**
HABR *i* *PP pP 19 11 42.1 -2.1
HABR *e* 19 12 23.9
HABR *e*S **S 19 19 29.7 +0.4**
HABR *e* 19 19 40.5
HABR *e* 19 21 16.3
HABR *e*SS SS 19 23 17.7 -2.5
HABR pmax pmax
comp=N,9.0nm,0.8s
HABR pmax pmax
comp=Z,45nm,1.8s,mb5.2
HABR pmax pmax
comp=E,12nm,0.7s
HABR MLR MLR
comp=Z,280nm,19.0s,MS4.4
BJT Baijiatuau 58.71 326 *e*P **P 19 11 40.7 -0.3**
BJT pmax pmax
comp=Z,22nm,0.6s
BJT MLR MLR
comp=Z,1μm,20.0s
BJT Baijiatuau 58.71 326 *e*P **P 19 11 40.7 -0.2**
comp=Z,22nm,0.6s,mb5.4
BJT LR LR
comp=Z,1μm,20.0s,MS5.0
BJI Beijing 58.72 326 P **P 19 11 40.1 -0.9**
BJI S **S 19 19 37.1 -6.4**
BJI pmax pmax
comp=Z,21nm,0.7s,mb5.3
BJI pmax pmax
comp=Z,320nm,4.2s
BJI LR LR
comp=N,820nm,20.4s,MS5.0
BJI LR LR
comp=E,650nm,20.4s,MS5.0
BJI LR LR
comp=Z,880nm,35.6s
NST Nakhon Sawan 58.81 293 P **P 19 11 44.0 +1.8**
KLR Kul'dur 59.28 342 *e*P **P 19 11 40.5 -4.2**
KLR *e*S **S 19 19 53.0 +2.6**
KLR pmax pmax
comp=Z,52nm,1.4s,mb5.4
TIY Taiyuan 59.41 321 *e*P **P 19 11 46.3 +0.4**
TIY pP pP 19 11 55.7 -1.0
TIY sP sP 19 12 02.0 +1.1
TIY S **S 19 19 45.9 -6.7**
TIY pmax pmax
comp=Z,260nm,5.8s
TIY LR LR
comp=N,780nm,16.8s,MS5.0
TIY LR LR
comp=E,170nm,11.8s,MS5.0
TIY LR LR
comp=Z,610nm,19.0s
PET Petropavlovsk 59.51 2α *i*P **P 19 11 47.3 +1.0**
PET *e*S **S 19 19 53.4 +0.1**
PET *e*SS SS 19 23 53.9 +4.6
PET pmax pmax
comp=Z,82nm,1.3s,mb5.6
PET pmax pmax
comp=Z,1μm,5.1s
PET pmax pmax
comp=Z,800nm,18.3s
PET MLR MLR
comp=Z,1μm,19.0s,MS5.0
PET MLR MLR
comp=Z,2μm,18.0s
PET Petropavlovsk 59.51 2 *e*P **P 19 11 46.7 +0.4**
PET LR LR
comp=Z,2μm,20.0s,MS5.2
XAN Xi'an 59.56 316 P **P 19 11 46.1 -0.9**
XAN pP pP 19 11 56.2 -1.6
XAN PP PP 19 13 57.2 -1.7
XAN S **S 19 19 45.7 -9.0**
XAN pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
XAN pmax pmax
comp=Z,98nm,8.2s
XAN LR LR
comp=N,530nm,20.5s,MS4.7
XAN LR LR
comp=E,240nm,19.4s,MS4.7
XAN LR LR
comp=Z,320nm,20.5s,MS4.4
PEA0B Petropavlovsk- 59.56 2 *e*P **P 19 11 48.0 +1.3**
PEA0B *e* pP 19 11 59.4 +2.0
PETK Petropavlovsk- 59.56 2 P **P 19 11 47.7 +1.1**
PETK pmax pmax
comp=Z,37nm,0.6s,mb5.6
PETK MLR MLR
comp=Z,1μm,21.8s,MS5.0
PETK Petropavlovsk- 59.56 2 P **P 19 11 47.6 +1.0**
comp=Z,37nm,0.6s,mb5.6,baz=168,slow=4.9,SNR=49
PETK LR LR 19 33 12.5
comp=Z,1μm,21.8s,MS5.0,baz=182,slow=32
KMI Kunming 59.95 304 P **P 19 11 51.3 +1.5**
KMI pP pP 19 12 00.5 -0.1
KMI sP sP 19 12 03.6 -1.2
KMI PP PP 19 14 03.9 +1.4
KMI S **S 19 19 59.6 -0.4**
KMI sS sS 19 20 14.4 -3.4
KMI SS SS 19 23 55.8 -1.3
KMI pmax pmax
comp=Z,90nm,1.5s,mb5.6
KMI pmax pmax
comp=Z,490nm,3.3s
KMI LR LR
comp=N,570nm,17.3s
KMI LR LR
comp=E,990nm,22.7s
KMI LR LR
comp=Z,2μm,24.0s
BDT Bhumibol Dam 60.33 294 P **P 19 11 53.0 +0.4**
comp=Z,24nm,1.0s,mb5.2
CM31 Chiang Mai Arr 60.77 295 *e*P **P 19 11 56.4 +0.9**
comp=Z,90nm,0.7s,mb6.0
CMAR Chiang Mai Arr 60.77 295 P **P 19 11 56.7 +1.1**
comp=Z,143nm,0.9s,mb6.1,baz=122,slow=5.4,SNR=541
CMAR LR LR 19 39 49.4
comp=Z,621nm,18.1s,MS4.8,baz=327,slow=38
CMAR PKPPKP 19 41 16.7
comp=Z,2.3nm,0.9s,baz=280,slow=4.3,SNR=6.3
DRV Dumont d'Urvil 60.83 187 P **P 19 12 00.0 +4.9**
DRV S **S 19 20 16.0 +6.1**
DRV L 19 27 00.0
CHTO Chiang Mai 60.89 296 *e*P **P 19 11 56.6 +0.2**
CHTO pmax pmax
comp=Z,202nm,1.2s,mb6.1
CHTO MLR MLR
comp=Z,598nm,19.0s,MS4.8
CHTO Chiang Mai 60.89 296 *e*P **P 19 11 56.5 +0.2**
comp=Z,202nm,1.2s,mb6.1
CHTO LR LR
comp=Z,598nm,19.0s,MS4.8
CHTO Chiang Mai 60.89 296 P **P 19 11 57.2 +0.8**
SNR=31
CHTO P 19 11 57.2
SNR=31
SMY Shemya 61.31 13 *e*P **P 19 11 59.0 +0.5**
CD2 Chengdu 61.70 310 P **P 19 12 02.6 +0.9**
CD2 pP pP 19 12 12.8 +0.3
CD2 sP sP 19 12 16.7 0.0
CD2 PcP PcP 19 12 43.7 +0.9
CD2 PP PP 19 14 20.6 +2.7
CD2 S **S 19 20 19.2 -3.0**
CD2 sS sS 19 20 38.2 -1.8
CD2 SS SS 19 24 24.7 +0.2
CD2 pmax pmax
comp=Z,90nm,0.7s,mb6.0
CD2 pmax pmax
comp=Z,660nm,6.7s
CD2 LR LR
comp=N,1μm,23.8s
CD2 LR LR
comp=Z,2μm,25.0s,MS5.1
HHC Hu-ho-hao-te 61.90 324⇑ P **P 19 12 03.3 +0.5**
HHC pP pP 19 12 13.4 -0.2
HHC sP sP 19 12 17.6 -0.2
HHC PcP PcP 19 12 43.6 +0.2
HHC PP PP 19 14 22.8 +3.3
HHC ScP ScP 19 16 42.3 -0.4
HHC PcS PcS 19 16 44.7 -1.7
HHC S **S 19 20 23.5 -0.8**
HHC sS sS 19 20 42.2 0.0
HHC ScS ScS 19 21 48.3 -3.7
HHC SS SS 19 24 27.8 +0.6
HHC pmax pmax
comp=Z,19nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,290nm,7.5s
HHC LR LR
comp=N,690nm,17.2s,MS5.0
HHC LR LR
comp=E,630nm,17.6s,MS5.0
HHC LR LR
comp=Z,1μm,18.6s,MS5.1
BTO Baotou 62.67 323 *e*P **P 19 12 07.6 -0.4**
HIA Hailar 63.67 335 *e*P **P 19 12 14.2 -0.2**
HIA pmax pmax
comp=Z,31nm,0.8s
HIA MLR MLR
comp=Z,820nm,19.0s
HIA Hailar 63.67 335 *e*P **P 19 12 14.2 -0.2**
comp=Z,31nm,0.8s,mb5.4
HIA LR LR
comp=Z,820nm,19.0s,MS4.9
TAOE Nuku Hiva Isla 64.08 97 *e*S **S 19 20 52.7 +0.1**
comp=Z,552nm,36.6s
TAOE *e*LR LR 19 31 28.6
comp=Z,2μm,22.1s,baz=272
LZH Lanzhou 64.17 315 *e*P **P 19 12 18.9 +0.9**
LZH pP pP 19 12 30.8 +1.9
LZH sP sP 19 12 34.6 +1.6
LZH PcP PcP 19 12 49.8 -3.0
LZH PP PP 19 14 44.5 +4.9
LZH *e*S **S 19 20 53.0 +0.1**

LZH sS sS 19 21 10.1 -0.8
LZH ScS ScS 19 22 06.5 -3.0
LZH SS SS 19 24 59.0 -3.9
LZH pmax pmax
comp=Z,73nm,1.1s,mb5.6
LZH pmax pmax
comp=Z,420nm,5.8s
LZH LR LR
comp=N,2μm,15.3s
LZH LR LR
comp=Z,2μm,17.3s,MS5.3
CASY Casey 66.97 198 *e*P **P 19 12 34.7 -0.8**
CASY Casey 66.97 198 *e*P **P 19 12 34.6 -0.9**
comp=Z,19nm,0.8s,mb5.2
CASY *e* pP 19 12 44.9 -1.6
CASY LR LR
comp=Z,2μm,19.0s,MS5.3
IMP Imphal 67.24 300 *i* P **P 19 12 37.0 -1.0**
NRGR Nerungri 67.84 342 *i* P **P 19 12 41.4 +0.3**
CLNS Chul'man 67.94 343 *e*P **P 19 12 42.3 +0.6**
CLNS *e**PP pP 19 12 51.2 -1.5
CLNS *e* 19 13 06.6
CLNS *e* 19 15 14.4
CLNS *e*S S 19 21 39.0 +1.0
CLNS pmax pmax
comp=E,5.0nm,1.1s
CLNS pmax pmax
comp=Z,20nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS smax
comp=N,107nm,12.5s
CLNS smax
comp=E,137nm,12.8s
CLNS MLR MLR
comp=Z,178nm,16.0s,MS4.4
CLNS MLR MLR
comp=E,139nm,14.0s,MS4.5
CLNS MLR MLR
comp=N,171nm,14.0s,MS4.5
UNV Unalaska Valle 68.35 23 *e*P **P 19 12 43.9 -0.5**
comp=N,41nm,0.9s,mb5.5
GTA Gaotai 68.59 317⇑ *e*P **P 19 12 46.9 +0.7**
GTA pP pP 19 12 57.2 0.0
GTA sP sP 19 13 01.4 +0.1
GTA PP PP 19 15 21.3 +3.2
GTA S S 19 21 48.5 +2.1
GTA sS sS 19 22 05.7 +1.2
GTA SS SS 19 26 15.5 +4.1
GTA pmax pmax
comp=Z,34nm,1.5s,mb5.1
GTA pmax pmax
comp=Z,360nm,6.5s
GTA LR LR
comp=N,480nm,21.4s,MS5.0
GTA LR LR
comp=E,780nm,20.2s,MS5.0
GTA LR LR
comp=Z,920nm,20.8s,MS5.0
ULN Ulaanbaatar 68.79 327 *e*P **P 19 12 47.4 +0.1**
ULN *e* pP 19 12 57.6 -0.6
ULN pmax pmax
comp=Z,34nm,1.0s,mb5.2
ULN MLR MLR
comp=Z,674nm,21.0s,MS4.9
ULN Ulaanbaatar 68.79 327 *e*P **P 19 12 47.4 +0.2**
comp=Z,34nm,1.0s,mb5.2
ULN *e* pP 19 12 57.6 -0.6
ULN LR LR
comp=Z,674nm,21.0s,MS4.9
ULN Ulaanbaatar 68.79 327 P **P 19 12 48.0 +0.8**
SNR=25
ULN P 19 12 48.0
SNR=25
SONM Songino Array 69.13 327 P **P 19 12 49.6 +0.3**
comp=Z,16nm,0.6s,mb5.1,baz=145,slow=6.2,SNR=151
SONM pP pP 19 12 59.6 -0.7
comp=Z,16nm,0.8s,baz=142,slow=3.8,SNR=11
SONM PKP2bc 19 41 01.9
comp=Z,4.0nm,0.8s,baz=275,slow=2.7,SNR=20
SONM Songino Array 69.13 327 P **P 19 12 49.6 +0.3**
SONM pP pP 19 12 59.6 -0.7
SONM ⇑*e* 19 41 01.9
SHL Shillong 69.25 300⇓ *i*P **P 19 12 50.0 -0.6**
SHL *i* S S 19 21 54.0 -0.7
SEY Seymchan 69.41 359⇑ *e*P **P 19 12 51.2 +0.4**
LSA Lhasa 71.20 304 *e*P **P 19 13 03.1 +0.6**
LSA pmax pmax
comp=Z,80nm,1.0s,mb5.6
LSA MLR MLR
comp=Z,747nm,22.0s,MS4.9
LSA Lhasa 71.20 304 *e*P **P 19 13 03.0 +0.6**
comp=Z,80nm,1.0s,mb5.6
LSA LR LR
comp=Z,747nm,22.0s,MS4.9
YAK Yakutsk 71.25 348*c* *i*P **P 19 13 01.8 -0.2**
YAK *e**PP pP 19 13 10.5 -2.5
YAK *e* 19 13 24.5
YAK *e*PPP 19 17 20.5
YAK *e*S S 19 22 16.1 -0.6
YAK *e* 19 23 01.1
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.1
YAK smax
comp=N,186nm,5.6s
YAK smax
comp=E,71nm,2.6s
YAK MLR MLR
comp=Z,545nm,16.0s,MS4.9
YAK MLR MLR
comp=E,140nm,14.0s,MS4.9
YAK MLR MLR
comp=N,489nm,19.0s,MS4.9
YAK Yakutsk 71.25 348 *e*P **P 19 13 01.9 -0.1**
comp=N,28nm,0.6s,mb5.4
YAK LR LR
comp=Z,986nm,22.0s,MS5.0
SBA Scott Base 71.43 177 *e*P **P 19 12 59.7 -3.3**
comp=Z,55nm,1.8s,mb5.2
SBA LR LR
comp=Z,1μm,19.0s,MS5.2
ZAK Zakamensk 72.28 328⇑ *i*P **P 19 13 08.4 -0.1**
ZAK pmax pmax
comp=Z,33nm,1.1s,mb5.2
BOD Bodaibo 72.35 338 *e*P **P 19 13 07.5 -1.2**
BOD pmax pmax
comp=Z,13nm,1.2s,mb4.7
TLY Talaya 72.84 329 *e*P **P 19 13 11.7 -0.1**
TLY *e* 19 15 53.5
TLY *e*PPP 19 17 42.8
TLY *e*S S 19 22 33.3 -2.1
TLY *e*SS SS 19 27 16.9 +0.7
TLY pmax pmax
comp=Z,21nm,1.2s,mb4.9
TLY MLR MLR
comp=Z,888nm,19.0s,MS5.1
TLY Talaya 72.84 329 *e*P **P 19 13 10.8 -1.0**
comp=Z,7.4nm,0.9s,mb4.6
TLY LR LR
comp=Z,937nm,20.0s,MS5.1
TLY Talaya 72.84 329 P **P 19 13 12.1 +0.3**
SNR=8.4
TLY P 19 13 12.1
SNR=8.4
IRK Irkutsk 72.86 330 *e*P **P 19 13 11.0 -0.9**
IRK *e* 19 13 36.2
IRK pmax pmax
comp=Z,37nm,1.2s,mb5.2
MIR Mirnyy 73.07 202 *e*P **P 19 13 14.0 +1.0**
MIR *e*S S 19 22 38.0 +0.4
MIR pmax pmax
comp=Z,500nm,7.0s
MIR smax
comp=E,500nm,6.0s
MIR smax
comp=N,800nm,5.0s

MIR MLR MLR
comp=N,930nm,18.0s,MS5.3
MIR MLR MLR
comp=E,1μm,18.0s,MS5.3
MIR MLR MLR
comp=Z,2μm,18.0s,MS5.5
CHGN Chignik 73.37 25 *e*P **P 19 13 14.5 -0.4**
MOY Mondy 74.19 328 *e*P **P 19 13 19.9 +0.1**
MOY pmax pmax
comp=Z,49nm,1.5s,mb5.2
GAMB Gambell 74.54 15 *e*P **P 19 13 22.0 +0.5**
comp=Z,13nm,0.6s,mb5.0
BILL Bilibino 74.92 4*c* *i*P **P 19 13 24.2 +0.5**
BILL *i* 19 13 39.2
BILL *i* S S 19 23 01.1 +2.9
BILL pmax pmax
comp=Z,109nm,1.2s,mb5.7
BILL Bilibino 74.92 4 *e*P **P 19 13 23.9 +0.2**
comp=Z,67nm,0.8s,mb5.6
BILL LR LR
comp=Z,712nm,20.0s,MS5.0
GUN Gumba 75.07 301 *e*P **P 19 13 26.0 +0.6**
comp=Z,235nm,0.8s,mb6.2
PKI Pulchoki 75.38 301 *e*P **P 19 13 27.2 0.0**
comp=Z,338nm,1.1s,mb6.2
PKIN Phulchoki 75.39 301 *e*P **P 19 13 28.4 +1.2**
comp=Z,115nm,0.7s,mb5.9
PALK Pallekele 75.53 279 P **P 19 13 29.6 +1.3**
comp=Z,278nm,0.8s,mb6.2,SNR=5.8
PALK Pallekele 75.53 279 *e*P **P 19 13 28.4 +0.1**
PALK pmax pmax
comp=Z,107nm,1.3s,mb5.6
PALK Pallekele 75.53 279 *e*P **P 19 13 28.4 +0.1**
comp=Z,107nm,1.3s,mb5.6
KKN Kakani 75.55 301 *e*P **P 19 13 28.3 +0.2**
comp=Z,216nm,0.9s,mb6.1
OHAK Old Harbor 76.15 26 *e*P **P 19 13 30.8 -0.1**
comp=Z,29nm,0.6s,mb5.4
GKN Gorkha 76.15 301 *e*P **P 19 13 31.4 -0.2**
comp=Z,535nm,1.2s,mb6.4
KDAK Kodiak Island 76.79 26 P **P 19 13 35.0 +0.5**
comp=Z,335nm,0.8s,mb6.3,SNR=9.1
KDAK Kodiak Island 76.79 26 *e*P **P 19 13 35.1 +0.6**
KDAK pmax pmax
comp=Z,25nm,0.6s,mb5.3
KDAK MLR MLR
comp=Z,1μm,19.0s,MS5.2
KDAK Kodiak Island 76.79 26 *e*P **P 19 13 35.1 +0.6**
comp=Z,26nm,0.6s,mb5.3
KDAK LR LR
comp=Z,1μm,19.0s,MS5.2
MDRS Chennai 76.92 285 *e*P **P 19 13 34.9 -1.3**
TNA Tin City 76.95 15 *e*P **P 19 13 35.4 +0.2**
comp=Z,21nm,1.0s,mb5.0
KOLN Koldanda 76.98 300 *e*P **P 19 13 36.1 -0.2**
comp=Z,160nm,0.9s,mb5.9
SVW2 Sparrevohn 77.62 22 *e*P **P 19 13 40.0 +0.9**
RSO Redoubt South 78.32 24 *e*P **P 19 13 42.5 -0.5**
TTA Tatalina 78.64 21 *e*P **P 19 13 45.3 +0.6**
TTA pmax pmax
comp=Z,50nm,0.6s,mb5.6
TTA Tatalina 78.64 21 *e*P **P 19 13 45.2 +0.5**
comp=Z,50nm,0.6s,mb5.6
WMQ Urumqi 78.67 317 P **P 19 13 45.2 -0.1**
WMQ PcP PcP 19 13 54.4 +0.2
WMQ pP pP 19 13 56.9 +0.4
WMQ PP PP 19 16 47.6 +3.8
WMQ S S 19 23 38.8 -1.3
WMQ SKS 19 23 52.5
WMQ sS sS 19 23 57.3 -1.2
WMQ ScS ScS 19 24 00.3 -3.8
WMQ SS SS 19 28 47.0 +2.1
WMQ pmax pmax
comp=Z,18nm,1.4s,mb4.8
WMQ pmax pmax
comp=Z,460nm,6.0s
WMQ LR LR
comp=N,390nm,25.0s,MS4.9
WMQ LR LR
comp=E,570nm,25.0s,MS4.9
WMQ LR LR
comp=Z,860nm,27.0s,MS5.0
HYB Hyderabad 79.30 289⇑ *i*P **P 19 13 48.0 -1.3**
comp=Z,130nm,1.0s,mb5.8
TRD Trivandrum 79.38 280⇓ *ex* x 19 13 57.0
SEW Seward 79.45 25 *e*P **P 19 13 49.7 +0.5**
comp=Z,86nm,1.1s,mb5.6
RC01 Rabbit Creek A 79.89 24 *e*P **P 19 13 51.6 0.0**
comp=Z,115nm,0.5s,mb6.1
PPLA Purkeypile 80.00 22 *e*P **P 19 13 51.8 -0.3**
comp=Z,54nm,1.0s,mb5.4
TIXI Tiksi 80.03 352*c* *i*P **P 19 13 50.9 -1.3**
TIXI *e*S S 19 23 50.4 -3.1
TIXI *e*SS SS 19 28 59.7 -4.5
TIXI pmax pmax
comp=Z,26nm,1.8s,mb4.9
TIXI Tiksi 80.03 352 *e*P **P 19 13 51.1 -1.1**
comp=Z,6.6nm,0.6s,mb4.7
TIXI LR LR
comp=Z,761nm,19.0s,MS5.1
PMR Palmer 80.41 24 *e*P **P 19 13 54.0 -0.4**
PMR pmax pmax
comp=Z,79nm,0.6s,mb5.8
PMR Palmer 80.41 24 *e*P **P 19 13 54.0 -0.4**
comp=Z,79nm,0.6s,mb5.8
CHUM Lake Minchumin 80.54 21 *e*P **P 19 13 55.6 +0.6**
CHUM *e* pP 19 14 06.2 0.0
KTH Kantishna Hill 80.85 22 *e*P **P 19 13 56.1 -0.6**
comp=Z,51nm,0.9s,mb5.5
TRF Thorofare Moun 81.02 22⇑ *i*P **P 19 13 56.8 -0.8**
comp=Z,42nm,0.6s,mb5.5
BPAW Bear Paw Mtn. 81.14 21⇑ *i*P **P 19 13 57.4 -0.8**
comp=Z,60nm,1.3s,mb5.4
BHPL Bhopal 81.42 295 *e*P **P 19 13 59.5 -1.1**
BHPL AMb AMB 19 14 01.3
comp=Z,90nm,1.4s,mb5.5
DIV Divide 81.53 25⇑ *i*P **P 19 14 00.9 +0.6**
comp=Z,44nm,0.6s,mb5.6
MCK McKinley 81.68 22⇑ *i*P **P 19 14 00.5 -0.6**
MCK pmax pmax
comp=Z,119nm,0.8s,mb5.9
MCK McKinley 81.68 22⇑ *i*P **P 19 14 00.5 -0.6**
comp=Z,119nm,0.8s,mb5.9
BMRM Bremner River 81.95 25⇑ *i*P **P 19 14 03.1 +0.5**
comp=Z,122nm,1.3s,mb5.7
DGAR Diego Garcia 81.95 263 PFAKE 19 14 10.0 +6.3
DGAR LR LR
comp=Z,1μm,21.0s,MS5.3
PAX Paxson 82.60 23 *e*P **P 19 14 07.0 +1.1**
PAX pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
PAX Paxson 82.60 23 *e*P **P 19 14 07.0 +1.0**
comp=Z,7.9nm,0.6s,mb4.9
NDI New Delhi 82.67 300 *e*P **P 19 14 05.0 -2.1**
COLA College 82.70 21⇑ *i*P **P 19 14 05.4 -1.0**
COLA pmax pmax
comp=Z,51nm,0.8s,mb5.6
COLA MLR MLR
comp=Z,3μm,22.0s,MS5.6
COLA College 82.70 21⇑ *i*P **P 19 14 05.4 -1.1**
comp=Z,51nm,0.8s,mb5.6
COLA LR LR
comp=Z,3μm,22.0s,MS5.6
SMLA Simla 83.21 302 *e*P **P 19 14 06.1 -3.7**
COLD Coldfoot 83.23 19⇑ *i*P **P 19 14 09.8 +0.6**
comp=Z,20nm,0.6s,mb5.3
MK31 Makanchi Array 83.24 319⇑ *i*P **P 19 14 08.5 -1.1**
MKAR Makanchi Array 83.24 319 P **P 19 14 09.2 -0.4**
MKAR *PP pP 19 14 18.5 -2.3
MKAR pmax pmax
comp=Z,23nm,1.0s
MKAR MLR MLR
comp=Z,498nm,18.6s
MKAR Makanchi Array 83.24 319 P **P 19 14 09.2 -0.5**
comp=Z,23nm,1.0s,mb5.2,baz=99,slow=5.4,SNR=63
MKAR pP pP 19 14 18.5 -2.3
comp=Z,12nm,0.8s,baz=211,slow=14,SNR=14
MKAR PKKPbc PKKPbc 19 32 30.0 -2.0
comp=Z,1.9nm,0.9s,baz=318,slow=1.6,SNR=6.0
MKAR PKPPKP 19 40 35.6
comp=Z,0.9nm,0.8s,baz=243,slow=2.4,SNR=4.4
MKAR LR LR 19 52 08.0
comp=Z,498nm,18.6s,MS4.9,baz=105,slow=36
MKAR Makanchi Array 83.24 319 P **P 19 14 09.2 -0.5**
MKAR pP pP 19 14 18.5 -2.3
MKAR PKKPbc PKKPbc 19 32 30.0 -2.0

MKAR P'P' 19 40 35.6
MKAR LR LR 19 52 08.0
MENT Mentasta 83.27 24 *e*P **P 19 14 10.0 +0.6**
KAD Karad 83.39 288 *e*P **P 19 14 09.9 -1.1**
SDNR Sundarnagar 83.45 303 *e*P **P 19 14 11.1 0.0**
PNL Peninsula 83.66 28 *e*P **P 19 14 11.6 +0.1**
comp=Z,93nm,1.1s,mb5.8
POO Poona 83.90 289 *e*P **P 19 14 12.3 -1.3**
ZALV Zalesovo Beam 83.98 326 P **P 19 14 11.7 -1.5**
comp=Z,11nm,0.5s,mb5.2,baz=112,slow=5.3,SNR=38
ZALV PKKPbc PKKPbc 19 32 28.2 -2.4
comp=Z,1.0nm,0.5s,baz=295,slow=2.2,SNR=5.3
ZALV PKPPKP 19 40 29.7
comp=Z,0.9nm,0.7s,baz=306,slow=3.3,SNR=6.3
ZALV LR LR 19 52 29.0
comp=Z,536nm,20.4s,MS4.9,baz=273,slow=36
ZALV Zalesovo Beam 83.98 326 P **P 19 14 11.7 -1.5**
ZALV PKKPbc PKKPbc 19 32 28.2 -2.4
ZALV P'P' 19 40 29.7
ZALV LR LR 19 52 29.0
AJM Ajmer 84.50 297 *e*P **P 19 14 15.0 -1.5**
AJM *e*P 19 14 15.1
MAW Mawson 84.78 203 *e*P **P 19 14 16.6 -0.5**
MAW pmax pmax
comp=Z,12nm,1.1s
MAW MLR MLR
comp=Z,2μm,21.0s
MAW Mawson 84.78 203 *e*P **P 19 14 16.8 -0.3**
comp=Z,15nm,0.6s,mb5.3
MAW Mawson 84.78 203 P **P 19 14 16.7 -0.3**
comp=Z,18nm,0.6s,mb5.3,baz=92,slow=7.3,SNR=38
MAW LR LR 19 48 51.1
comp=Z,1μm,20.0s,MS5.2,baz=92,slow=33
MAW Mawson 84.78 203 *e*P **P 19 14 16.6 -0.5**
comp=Z,12nm,1.1s,mb5.0
MAW LR LR
comp=Z,2μm,21.0s,MS5.4
EGAK Eagle 85.14 23⇑ *i*P **P 19 14 19.5 +0.6**
comp=Z,34nm,0.8s,mb5.5
EGAK LR LR
comp=Z,4μm,22.0s,MS5.7
NVS Novosibirsk 85.15 327⇑ *i*P **P 19 14 16.9 -2.2**
NVS *i* pP 19 14 27.4 -2.9
NVS *e* 19 17 36.3
NVS *e*S S 19 24 42.9 -3.4
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,28nm,1.5s
NVS pmax pmax
comp=Z,35nm,1.5s,mb5.3
NVS pmax pmax
comp=Z,20nm,2.0s,mb4.9
NVS smax
comp=N,14nm,1.8s
SKAG Skagway 85.49 29 *e*P **P 19 14 21.0 +0.3**
comp=N,100nm,1.4s,mb5.8
DAWY Dawson 85.52 24⇑ *i*P **P 19 14 21.7 +0.9**
KSH Kashi 85.90 310 *e*P **P 19 14 24.6 +1.3**
KSH *e*pP pP 19 14 37.5 +3.0
KSH *e*sP sP 19 14 43.1 +4.5
KSH *e*PP PP 19 17 48.1 +4.7
KSH *e*SKS 19 24 44.1
KSH *e*S S 19 24 53.0 -1.4
KSH *e*sS sS 19 25 17.5 +4.5
KSH *e*SS SS 19 30 39.0 +6.4
KSH pmax pmax
comp=Z,17nm,0.5s,mb5.5
KSH pmax pmax
comp=Z,770nm,3.3s
KSH LR LR
comp=N,230nm,6.0s
KSH LR LR
comp=E,160nm,4.1s
KSH LR LR
comp=Z,260nm,5.5s
ULHL Ulahol 86.28 313 P **P 19 14 25.1 +0.1**
SNR=14
KURK Kurchatov 86.65 322 P **P 19 14 25.6 -1.1**
comp=Z,61nm,1.1s,mb5.7,SNR=9.4
KURK Kurchatov 86.65 322*c* *i*P **P 19 14 24.7 -2.0**
KURK pmax pmax
comp=Z,15nm,1.2s,mb5.1
KURK MLR MLR
comp=Z,710nm,20.0s,MS5.1
KURK Kurchatov 86.65 322 *e*P **P 19 14 24.4 -2.3**
comp=Z,44nm,1.6s,mb5.4
KURK LR LR
comp=Z,663nm,20.0s,MS5.0
KURK Kurchatov 86.65 322 P **P 19 14 25.6 -1.1**
SNR=8.1
KURK P 19 14 25.6
SNR=8.1
TKM2 Tokmak 2 86.89 314 P **P 19 14 27.7 -0.3**
SNR=9.5
TKM2 Tokmak 2 86.89 314⇑ *e*P **P 19 14 26.7 -1.3**
TKM2 pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
TKM2 MLR MLR
comp=Z,448nm,22.0s,MS4.8
TKM2 Tokmak 2 86.89 314⇑ *e*P **P 19 14 26.7 -1.3**
comp=Z,4.0nm,0.5s,mb4.9
TKM2 LR LR
comp=Z,448nm,22.0s,MS4.8
NIL Nilore 86.94 304 PFAKE 19 14 40.0 +12
NIL LR LR
comp=Z,67nm,22.0s,MS4.0
KZA Kyzart 86.96 313 P **P 19 14 29.2 +0.8**
SNR=13
UCH Uchtor 87.53 313 *e*P **P 19 14 31.0 -0.1**
comp=Z,23nm,1.3s,mb5.2
UCH LR LR
comp=Z,878nm,22.0s,MS5.1
FRU Bishkek 87.57 313 *e*P **P 19 14 30.0 -1.3**
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.3
AAK Ala-Archa 87.62 313 P **P 19 14 31.2 -0.4**
comp=Z,40nm,0.6s,mb5.8,SNR=7.1
AAK Ala-Archa 87.62 313 P **P 19 14 31.5 -0.1**
SNR=8.1
AAK Ala-Archa 87.62 313⇑ *e*P **P 19 14 31.2 -0.4**
AAK pmax pmax
comp=Z,11nm,2.5s,mb4.6
AAK MLR MLR
comp=Z,399nm,19.0s,MS4.8
AAK Ala-Archa 87.62 313⇑ *i*P **P 19 14 31.0 -0.6**
comp=Z,18nm,1.4s,mb5.1
AAK LR LR
comp=Z,928nm,22.0s,MS5.2
USP Ospenovka 87.74 314 P **P 19 14 31.6 -0.6**
SNR=8.9
DLBC Dease Lake 87.77 31⇑ *i*P **P 19 14 33.1 +1.2**
MCCM Marconi Confer 87.78 51 PFAKE 19 14 40.0 +7.5
MCCM LR LR
comp=Z,2μm,20.0s,MS5.5
HOPS Hopland 87.79 51 PFAKE 19 14 40.0 +7.5
HOPS LR LR
comp=Z,2μm,20.0s,MS5.6
AML Almayashu 88.11 313 P **P 19 14 34.2 +0.3**
SNR=17
AML Almayashu 88.11 313⇑ *i*P **P 19 14 33.8 -0.2**
comp=Z,24nm,1.1s,mb5.3
AML LR LR
comp=Z,762nm,21.0s,MS5.1
EKS2 Erkin-Say 88.15 313 P **P 19 14 34.2 +0.1**
SNR=12
EKS2 Erkin-Say 88.15 313⇑ *e*P **P 19 14 33.4 -0.7**
comp=Z,15nm,1.1s,mb5.1
EKS2 LR LR
comp=Z,788nm,21.0s,MS5.1
WDC Whiskeytown Da 88.47 49⇑ *e*P **P 19 14 35.4 -0.3**
WDC pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
WDC MLR MLR
comp=Z,2μm,19.0s,MS5.5
WDC Whiskeytown Da 88.47 49⇑ *e*P **P 19 14 35.4 -0.3**
comp=Z,5.9nm,0.6s,mb5.0
WDC LR LR
comp=Z,2μm,19.0s,MS5.5
BHJ Bhuj 88.47 293 *e*P **P 19 14 34.3 -1.8**
HUMO Hull Mountain 88.52 47 *e*P **P 19 14 36.6 +0.8**
comp=Z,7.1nm,0.7s,mb5.1
HUMO LR LR
comp=Z,3μm,20.0s,MS5.7
YBH Yreka Blue Hor 88.54 48 *e*P **P 19 14 36.6 +0.6**
YBH pmax pmax

comp=Z,3.0nm,0.6s
YBH MLR MLR
YBH Yreka Blue Hor 88.54 48 *e*P **P 19 14 36.6 +0.7**
comp=Z,4µm,21.0s
YBH LR LR
comp=Z,2.9nm,0.6s,mb4.8
COR Corvallis 88.63 45 PFAKE 19 14 50.0 +14
COR LR LR
comp=Z,4µm,21.0s,MS5.8
SAO San Andreas Ge 88.68 53 PFAKE 19 14 50.0 +13
SAO LR LR
comp=Z,4µm,22.0s,MS5.8
NLWA Neilton Lookou 88.77 42 PFAKE 19 14 50.0 +13
NLWA LR LR
comp=Z,2µm,20.0s,MS5.5
INK Inuvik 89.34 21⇑*i*P **P 19 14 39.0 -0.1**
INK pmax pmax
comp=Z,3µm,21.0s,MS5.6
INK Inuvik 89.34 21⇑*i*P **P 19 14 39.0 -0.1**
comp=Z,25nm,0.8s,mb5.6
LBCM Butte Creek Ri 89.40 49 P **P 19 14 40.8 +0.8**
GNW Green Mountain 89.50 42 *e*P **P 19 14 40.0 -0.3**
comp=Z,4.3nm,0.6s,mb5.0
CMB Columbia Colle 89.71 52 *e*P **P 19 14 41.9 +0.4**
CMB pmax pmax
comp=Z,48nm,2.0s,mb5.5
CMB MLR MLR
comp=Z,1µm,20.0s,MS5.4
CMB Columbia Colle 89.71 52 *e*P **P 19 14 41.9 +0.4**
comp=Z,48nm,2.0s,mb5.5
CMB LR LR
comp=Z,1µm,20.0s,MS5.4
BEKR Beckwourth 90.00 50⇑P **P 19 14 43.2 +0.3**
baz=90
K05A Summer Lake 90.04 47⇓P **P 19 14 43.7 +0.7**
baz=90
JCW Jim Creek 90.20 42 *e*P **P 19 14 43.5 -0.1**
WPW White Pass 90.21 43 P **P 19 14 44.1 +0.5**
MOD Modoc 90.35 48 *e*P **P 19 14 44.6 +0.1**
comp=Z,9.7nm,0.8s,mb5.2
MOD LR LR
comp=Z,3µm,21.0s,MS5.7
WCN Washoe City 90.38 51⇑P **P 19 14 44.7 0.0**
baz=90
VES Vestal, Richgr 90.43 54⇑P **P 19 14 46.2 +1.3**
baz=90
RPW Rockport 90.52 41 P **P 19 14 44.9 -0.2**
KBL Kabul 90.53 305 *e*P **P 19 14 44.5 -0.9**
KBL pmax pmax
comp=Z,22nm,1.2s,mb5.4
KBL Kabul 90.53 305 *e*P **P 19 14 44.5 -1.0**
comp=Z,22nm,1.2s,mb5.4
OSI Osito Adit 90.56 55 P **P 19 14 46.6 +1.0**
comp=Z,12nm,0.6s,mb5.4
E06A Yakima 90.57 43⇑P **P 19 14 45.6 +0.2**
baz=91,SNR=5.1
G06A Carlson Farm, 90.61 45⇓P **P 19 14 44.7 -0.8**
baz=91
A06A Chilliwack 90.65 41⇓P **P 19 14 45.2 -0.5**
baz=91
CIS Catalina Islan 90.66 57⇓P **P 19 14 44.4 -1.7**
baz=91
CIS ⇓pP pP 19 14 57.0 -0.4
baz=91
H06A Lindquist Farm 90.75 45⇓P **P 19 14 45.9 -0.3**
baz=91
D06A Cle Elum 90.77 43⇑P **P 19 14 45.5 -0.8**
baz=91
ISA Isabella 90.90 54⇑P **P 19 14 47.7 +0.5**
baz=91
ISA Isabella 90.90 54 *e*P **P 19 14 47.9 +0.8**
ISA *e* pP 19 14 59.0 +0.6
ISA pmax pmax
comp=Z,19nm,1.3s,mb5.3
ISA Isabella 90.90 54 *e*P **P 19 14 47.9 +0.8**
comp=Z,19nm,1.3s,mb5.3
ISA *e* pP 19 14 59.0 +0.6
PASC Pasadena Art C 90.94 56 *e*P **P 19 14 47.8 +0.4**
comp=Z,45nm,0.6s,mb6.0
MWC Mount Wilson 91.05 56 *e*P **P 19 14 48.7 +0.8**
MWC pmax pmax
comp=Z,38nm,0.7s,mb5.8
MWC Mount Wilson 91.05 56 *e*P **P 19 14 48.7 +0.8**
comp=Z,38nm,0.7s,mb5.8
ETW Entiat 91.17 42 P **P 19 14 48.6 +0.5**
EDW2 Edwards Air Fo 91.19 55⇑P **P 19 14 48.6 +0.1**
baz=91
I07A Izee 91.24 46⇑P **P 19 14 49.0 +0.5**
baz=91
I07A ⇑pP pP 19 14 59.4 -0.4
baz=91
E07A Sunnyside 91.34 43⇓P **P 19 14 49.7 +0.8**
baz=91
A07A Ashnola River, 91.35 41⇑P **P 19 14 48.9 0.0**
baz=91,SNR=11
D07A Quincy 91.35 43⇓P **P 19 14 48.7 -0.3**
baz=91,SNR=7.7
C07A Waterville 91.37 42⇓P **P 19 14 49.0 0.0**
baz=92,SNR=5.7
BFSC Mount Baldy St 91.38 56⇓P **P 19 14 48.2 -1.3**
baz=92
NVAR Mina Array Bea 91.39 52 P **P 19 14 50.5 +1.1**
comp=Z,14nm,0.7s,mb5.4,baz=256,slow=6.1,SNR=73
NVAR pP pP 19 15 00.7 +0.1
comp=Z,20nm,1.0s,baz=257,slow=6.1,SNR=10
B07A Winthrop 91.44 42⇓P **P 19 14 48.9 -0.4**
baz=92
B07A ⇓pP pP 19 15 00.2 -0.5
baz=92
WTV Waterville 91.44 42 P **P 19 14 49.6 +0.2**
RSW Rattlesnake Hi 91.50 44 *e*P **P 19 14 50.0 +0.3**
comp=Z,8.6nm,0.9s,mb5.1
LRMC Laurel Mountai 91.51 55⇑P **P 19 14 49.4 -0.6**
baz=92
HAWA Hanford 91.54 44 *e*P **P 19 14 49.7 -0.1**
comp=Z,7.1nm,0.8s,mb5.0
HAWA LR LR
comp=Z,3µm,20.0s,MS5.7
WVOR Wild Horse Val 91.65 48 *e*P **P 19 14 50.7 +0.2**
WVOR pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.6
WVOR Wild Horse Val 91.65 48 *e*P **P 19 14 50.7 +0.3**
comp=Z,5.9nm,0.8s,mb5.0
WVOR LR LR
comp=Z,2µm,20.0s,MS5.6
DAC Darwin (Calif) 91.68 54 PFAKE 19 15 00.0 +9.2
DAC LR LR
comp=Z,3µm,20.0s,MS5.7
MPMC Manual Prospec 91.74 54⇑P **P 19 14 51.8 +0.8**
baz=92
G08A Pilot Rock 91.79 45⇓P **P 19 14 51.0 0.0**
baz=92,SNR=11
J08A Circle Bar Ran 91.88 47 P **P 19 14 52.3 +0.8**
baz=92,SNR=7.4
H08A Prairie City 91.89 46⇑P **P 19 14 51.3 -0.3**
baz=92
RPN Rapa Nui 91.89 117 LR LR 19 47 16.0
comp=Z,2µm,21.0s,MS5.4,baz=274,slow=30
RPN Rapa Nui 91.89 117 PFAKE 19 15 00.0 +8.0
RPN LR LR
comp=Z,3µm,21.0s,MS5.6
B08A Colville Reser 91.94 42⇑P **P 19 14 51.4 -0.3**
baz=92,SNR=8.8
C08A Higginbotham F 92.06 42⇓P **P 19 14 51.7 -0.6**
baz=92,SNR=8.0
C08A ⇓pP pP 19 15 03.1 -0.4
baz=92
A08A Turner Farm, O 92.06 41⇓P **P 19 14 52.3 +0.1**
baz=92,SNR=5.7
BVAR Borovoye Array 92.11 323 P **P 19 14 50.1 -2.2**
BVAR 19 32 08.9
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR MLR MLR
comp=Z,711nm,21.5s
BVAR Borovoye Array 92.11 323 P **P 19 14 50.1 -2.3**
comp=Z,3.0nm,0.6s,mb4.8,baz=108,slow=4.8,SNR=26
BVAR PKKPbc PKKPbc 19 32 08.9 -1.7
comp=Z,1.1nm,0.5s,baz=270,slow=3.4,SNR=14
BVAR LR LR 19 54 46.6
comp=Z,711nm,21.5s,MS5.1,slow=34
BRVK Borovoye 92.18 323*c i*P **P 19 14 50.3 -2.3**
BRVK pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
BRVK Borovoye 92.18 323 *e*P **P 19 14 48.6 -4.0**
comp=Z,14nm,1.3s,mb5.1
BRVK LR LR
comp=Z,685nm,21.0s,MS5.1
BRVK Borovoye 92.18 323 P **P 19 14 51.4 -1.3**
SNR=5.3
BRVK P 19 14 51.4
SNR=5.3
TPH Tonopah 92.19 52 PFAKE 19 15 00.0 +6.9
TPH LR LR
comp=Z,2µm,20.0s,MS5.5
GSC Goldstone 92.20 55⇑P **P 19 14 53.7 +0.4**
baz=92,SNR=5.5
GSC Goldstone 92.20 55 *e*P **P 19 14 53.5 +0.3**
GSC pmax pmax
comp=Z,20nm,1.4s,mb5.2
GSC Goldstone 92.20 55 *e*P **P 19 14 53.5 +0.3**
comp=Z,20nm,1.4s,mb5.2
OD2 Odessa Site #2 92.23 43 *e*P **P 19 14 52.5 -0.5**
comp=Z,5.1nm,0.6s,mb5.0
MONP Monument Peak 92.25 57⇓P **P 19 14 54.6 +1.1**
baz=92,SNR=5.7
FURC Furnace Creek, 92.29 54⇓P **P 19 14 54.0 +0.5**
baz=92,SNR=13
PFO Pinyon Flat Ob 92.30 57 P **P 19 14 55.5 +1.8**
comp=Z,65nm,0.7s,mb6.1,SNR=5.7
PFO Pinyon Flat Ob 92.30 57⇓P **P 19 14 54.4 +0.7**
baz=92,SNR=7.1
PFO Pinyon Flat Ob 92.30 57 *e*P **P 19 14 54.5 +0.8**
PFO pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
PFO MLR MLR
comp=Z,927nm,19.0s,MS5.2
PFO Pinyon Flat Ob 92.30 57 *e*P **P 19 14 54.5 +0.8**
comp=Z,9.0nm,0.8s,mb5.2
PFO LR LR
comp=Z,927nm,19.0s,MS5.2
J09A Fry Pan Ranch, 92.40 47⇑P **P 19 14 54.5 +0.6**
baz=92,SNR=6.1
BMN Battle Mountai 92.46 50 *e*P **P 19 14 54.6 +0.3**
BMN pmax pmax
comp=Z,22nm,0.9s,mb5.5
BMN MLR MLR
comp=Z,2µm,20.0s,MS5.5
BMN Battle Mountai 92.46 50 *e*P **P 19 14 54.6 +0.3**
comp=Z,22nm,0.9s,mb5.5
BMN LR LR
comp=Z,2µm,20.0s,MS5.5
D09A Jones Farm, Ri 92.46 43⇑P **P 19 14 54.0 -0.1**
baz=93,SNR=5.9
DVTC Desert V Tower 92.49 58⇓P **P 19 14 54.6 0.0**
baz=93
E09A Wood Farm, Sta 92.51 44⇑P **P 19 14 54.0 -0.3**
baz=93,SNR=5.5
A09A Danville 92.52 41⇑P **P 19 14 54.4 +0.1**
baz=93,SNR=7.1
C09A Chrisman Ranch 92.58 42⇑P **P 19 14 53.9 -0.7**
baz=93
G09A Cove 92.61 45⇑P **P 19 14 55.0 +0.2**
baz=93,SNR=10
S10A Tonopah Range, 92.66 52⇑P **P 19 14 56.2 +0.9**
baz=93,SNR=46
SHOC Shoshone 92.70 54⇑P **P 19 14 55.0 -0.5**
baz=93
SYO Syowa Base 92.70 199⇓*e*P **P 19 14 52.4 -2.4**
SYO Syowa Base 92.70 199⇓*e*pP pP 19 15 03.8 -2.3
U10A Ash Meadows, A 92.71 54⇑P **P 19 14 54.6 -1.0**
baz=93,SNR=5.7
BELC Belle Mtn. 92.72 56⇓P **P 19 14 56.5 +0.8**
baz=93,SNR=26
B09A Rice 92.73 42 P **P 19 14 55.6 +0.3**
baz=93,SNR=6.7
SWSC Sam W. Stewart 92.78 57⇓P **P 19 14 56.6 +0.7**
baz=93
BMO Blue Mountains 92.90 45 PFAKE 19 15 10.0 +14
BMO LR LR
comp=Z,2µm,21.0s,MS5.6
Q10A Clear Creek Ra 92.91 51⇑P **P 19 14 57.1 +0.7**
baz=93,SNR=15
R10A Warm Springs 92.93 52⇓P **P 19 14 57.2 +0.7**
baz=93,SNR=6.6
P10A Eureka 92.95 51⇓P **P 19 14 58.0 +1.4**
baz=93
K10A MacKenzie Ranc 92.98 47⇑P **P 19 14 56.4 -0.2**
baz=93
O10A Cortez Mining, 92.99 50⇑P **P 19 14 57.8 +1.1**
baz=93,SNR=5.8
N10A Dunphy 93.03 50⇓P **P 19 14 57.4 +0.5**
baz=93
F10A Beach Ranch, E 93.08 44⇑P **P 19 14 56.6 -0.4**
baz=93,SNR=9.2
G10A Bishop Farm, J 93.08 45⇓P **P 19 14 56.8 -0.2**
baz=93,SNR=18
G10A ⇓pP pP 19 15 08.0 -0.3
baz=93
GMRC Granite Mounta 93.08 56⇑P **P 19 14 56.9 -0.4**
baz=93,SNR=13
GMRC ⇓pP pP 19 15 07.1 -1.4
baz=93
M10A I.L. Ranch, Tu 93.09 49⇓P **P 19 14 56.5 -0.7**
baz=93
BC3 Big Chuckw Mtn 93.14 57⇑P **P 19 14 58.3 +0.7**
baz=93,SNR=8.3
D10A Wagner Farm, O 93.16 43⇑P **P 19 14 56.9 -0.4**
baz=93,SNR=5.5
A10A Northport 93.19 41⇑P **P 19 14 56.8 -0.6**
baz=93,SNR=6.2
L10A Juniper Basin 93.20 48⇓P **P 19 14 57.7 +0.1**
baz=93,SNR=13
H10A Noah's Angus R 93.27 46⇓P **P 19 14 57.8 -0.1**
baz=93
S11A Rachel 93.30 53⇑P **P 19 14 57.7 -0.5**
baz=93
V11A Goodsprings 93.38 54⇑P **P 19 14 59.0 +0.4**
baz=94,SNR=11
NEW Newport 93.40 42 *e*P **P 19 14 57.2 -1.2**
NEW pmax pmax
comp=Z,5.0nm,0.7s
NEW MLR MLR
comp=Z,5µm,22.0s
NEW Newport 93.40 42 *e*P **P 19 14 57.1 -1.2**
comp=Z,5.3nm,0.7s,mb5.1
NEW LR LR
comp=Z,5µm,22.0s,MS5.9
IRM Iron Mountain 93.44 56⇓P **P 19 14 59.6 +0.7**
baz=94,SNR=14
U11A Corn Creek 93.47 54⇑P **P 19 14 59.0 0.0**
baz=94
P11A Circle Ranch, 93.49 51⇓P **P 19 14 58.5 -0.5**
baz=94,SNR=5.5
Q11A Duckwater 93.50 51⇑P **P 19 14 58.3 -0.7**
baz=94,SNR=26
R11A Troy Canyon, C 93.50 52⇑P **P 19 14 58.3 -0.8**
baz=94,SNR=31
LDFC Landfair 93.56 55⇑*i*P **P 19 15 00.4 +0.9**
comp=Z,30nm,0.6s,mb5.9
K11A Parker Ranch, 93.60 48⇓P **P 19 14 58.1 -1.3**
baz=94,SNR=8.0
GLA Glamis 93.60 57 P **P 19 15 00.7 +1.0**
GLA pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
GLA Glamis 93.60 57 P **P 19 15 00.7 +1.0**
comp=Z,4.8nm,0.6s,mb5.1
O11A Cowboy Ranch, 93.62 50⇑P **P 19 15 00.1 +0.5**
baz=94,SNR=20
M11A Holland Ranch, 93.64 49⇓P **P 19 14 58.8 -0.9**
baz=94,SNR=8.9
T11A Corn Creek, Al 93.68 53⇑P **P 19 14 58.8 -1.1**
baz=94
G11A Walters Elk Ra 93.69 45⇓P **P 19 14 59.1 -0.7**
baz=94,SNR=9.1
L11A Cat Creek Ranc 93.74 48⇑P **P 19 14 58.9 -1.3**
baz=94
H11A Donnelly 93.80 46⇑P **P 19 14 59.1 -1.2**
baz=94
D11A Klaveano Farm, 93.80 43⇓P **P 19 14 58.5 -1.8**
baz=94
MFID Camas Ranch 93.81 47⇑P **P 19 15 00.5 +0.1**
baz=94
F11A Grangeville 93.81 44⇑P **P 19 14 59.3 -1.1**
baz=94
E11A Bogner Ranch, 93.82 44⇓P **P 19 14 59.7 -0.7**
baz=94,SNR=8.2
V12A Nelson 93.83 55⇓P **P 19 15 00.1 -0.7**
baz=94,SNR=18
A11A Hall Mountain, 93.97 41⇓P **P 19 15 01.3 +0.3**
baz=94,SNR=14
ELK Elko 94.00 50 PFAKE 19 15 10.0 +8.7
ELK LR LR
comp=Z,2µm,20.0s,MS5.6
S12A Delamar Landin 94.01 53⇓P **P 19 15 00.7 -0.8**
baz=94,SNR=12
P12A McGill 94.13 51⇑P **P 19 15 02.0 0.0**
baz=94,SNR=15
Q12A Willow Creek R 94.15 51⇑P **P 19 15 01.3 -0.8**
baz=94,SNR=9.4
N12A Clover Valley, 94.16 50⇓P **P 19 15 01.2 -0.9**
baz=94,SNR=18
N12A Clover Valley, 94.16 50⇑*i*P **P 19 15 03.0 +0.9**
comp=Z,24nm,0.9s,mb5.6
R12A Pony Springs, 94.26 52⇑P **P 19 15 02.1 -0.5**
baz=94,SNR=10
E12A Beaver Dam Sad 94.27 44⇓P **P 19 15 02.0 -0.4**
baz=94
L12A House Creek Ra 94.29 48⇓P **P 19 15 02.9 +0.3**
baz=94,SNR=8.4
M12A Wells 94.30 49⇑P **P 19 15 02.6 -0.1**
baz=94,SNR=13
J12A Stokes Ranch, 94.32 47⇓P **P 19 15 01.9 -0.8**
baz=94,SNR=11
G12A Big Creek, Yel 94.32 45⇑P **P 19 15 02.2 -0.5**
baz=94,SNR=18
O12A Currie 94.33 50⇑P **P 19 15 01.6 -1.3**
baz=94,SNR=16
I12A Atlanta 94.35 47⇑P **P 19 15 01.9 -1.0**
baz=94
F12A Elk City 94.43 45⇓P **P 19 15 02.4 -0.8**
baz=94
D12A Red Ives Fores 94.47 43⇑P **P 19 15 02.9 -0.5**
baz=95
V13A Grand Canyon W 94.55 55⇑P **P 19 15 04.2 +0.2**
baz=95,SNR=18
W13A Hualapai Mount 94.56 55⇓P **P 19 15 03.9 -0.2**
baz=95,SNR=15
X13A Yucca 94.57 56⇑P **P 19 15 03.0 -1.1**
baz=95,SNR=5.4
Z13A Yuma Proving G 94.59 57⇑P **P 19 15 04.0 -0.2**
baz=95,SNR=5.9
H12A Diamond D Ranc 94.61 46⇑P **P 19 15 03.2 -0.8**
baz=95
U13A Pakoon Wash 94.61 54⇓P **P 19 15 04.7 +0.4**
baz=95,SNR=6.3
T13A Saint George 94.71 53⇓P **P 19 15 05.1 +0.4**
baz=95,SNR=11
R13A O'Grain Ranch, 94.75 52⇑P **P 19 15 04.8 -0.1**
baz=95,SNR=12
Q13A Wheeler Ranch, 94.78 51⇓P **P 19 15 04.4 -0.5**
baz=95,SNR=12
N13A Wendover, West 94.79 50 *e*P **P 19 15 05.1 +0.2**
comp=Z,7.9nm,0.7s,mb5.2
S13A Holt Ranch, En 94.79 53⇑P **P 19 15 04.4 -0.6**
baz=95,SNR=10
P13A Bates Ranch, G 94.82 51⇓P **P 19 15 05.8 +0.6**
baz=95,SNR=15
HLID Hailey 94.85 47⇑P **P 19 15 04.4 -0.8**
baz=95,SNR=5.6
HLID Hailey 94.85 47⇑*i*P **P 19 15 04.8 -0.4**
comp=Z,2.1nm,0.7s,mb4.7
HLID LR LR
comp=Z,3µm,19.0s,MS5.8
M13A Montello 94.86 49⇓P **P 19 15 06.0 +0.7**
baz=95,SNR=6.0
M13A Montello 94.86 49 *e*P **P 19 15 05.7 +0.4**
comp=Z,10nm,0.8s,mb5.3
BSMT Bassoo Peak 94.92 43 *e*P **P 19 14 04.7 -0.7**
comp=Z,3.8nm,0.7s,mb4.9
J13A Cove Ranch, Pi 95.01 47⇓P **P 19 15 05.0 -0.9**
baz=95
H13A Challis 95.04 46⇑P **P 19 15 06.0 0.0**
baz=95,SNR=10
C13A Hot Springs 95.05 43⇑P **P 19 15 05.1 -0.9**
baz=95
F13A Darby 95.08 45⇓P **P 19 15 05.5 -0.6**
baz=95,SNR=18
I13A Wildhorse Cree 95.09 47⇓P **P 19 15 05.8 -0.5**
baz=95
I13A ⇑pP pP 19 15 16.4 -1.1
baz=95
G13A Cobalt 95.09 45⇑P **P 19 15 05.5 -0.7**
baz=95,SNR=5.4
ARUT Antelope Range 95.14 53⇑*e*P **P 19 15 07.3 +0.6**
ARUT pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
ARUT Antelope Range 95.14 53⇑*e*P **P 19 15 07.3 +0.6**
comp=Z,6.5nm,0.9s,mb5.1
B13A Whitefish 95.17 42⇓P **P 19 15 07.0 +0.5**
baz=95,SNR=7.0
CCUT Cedar City 95.18 53 *e*P **P 19 15 06.9 0.0**
comp=Z,18nm,1.4s,mb5.3
E13A Victor 95.22 44⇓P **P 19 15 06.8 0.0**
baz=95
U14A Mt Trumbull 95.24 54⇓P **P 19 15 07.6 +0.5**
baz=95,SNR=14
V14A Boquillas Ranc 95.24 55⇑P **P 19 15 08.1 +1.0**
baz=95,SNR=9.9
A13A Flathead Natio 95.25 41⇓P **P 19 15 07.5 +0.7**
baz=95
Q14A Sevier Lake (B 95.36 51⇑P **P 19 15 08.4 +0.8**
baz=95,SNR=17
T14A Hurricane 95.37 53⇓P **P 19 15 08.7 +1.0**
baz=95,SNR=6.9
MSO Missoula 95.42 44 PFAKE 19 15 20.0 +12
MSO LR LR
comp=Z,2µm,20.0s,MS5.6
M14A Sheep Mountain 95.48 49⇑P **P 19 15 08.2 0.0**
baz=96,SNR=18
N14A Grayback Hills 95.56 50⇑P **P 19 15 08.4 0.0**
baz=96,SNR=10.0
N14A ⇓pP pP 19 15 19.2 -0.6
baz=96
P14A Drum Mountains 95.56 51⇓P **P 19 15 09.0 +0.5**
baz=96,SNR=11
I14A Mackay 95.57 47⇓P **P 19 15 08.6 +0.2**
baz=96
WALA Waterton Lakes 95.58 41 *e*P **P 19 15 08.3 -0.1**
comp=Z,0.2nm,0.9s
G14A Jackson 95.65 45⇓P **P 19 15 08.5 -0.3**
baz=96,SNR=5.6
K14A Jones Ranch, D 95.68 48⇓P **P 19 15 09.1 +0.1**
baz=96
DUG Dugway 95.80 50 PFAKE 19 15 20.0 +10
DUG LR LR
comp=Z,1µm,21.0s,MS5.4
A14A Double T Ranch 95.90 41⇓P **P 19 15 09.7 -0.2**
baz=96
HVU Hansel Valley 95.93 49 *e*P **P 19 15 10.7 +0.5**
HVU pmax pmax
comp=Z,7.0nm,0.6s,mb5.3
HVU Hansel Valley 95.93 49 *e*P **P 19 15 10.7 +0.5**
comp=Z,6.9nm,0.6s,mb5.3
U15A North Rim 95.96 54⇓P **P 19 15 10.0 -0.5**
baz=96,SNR=8.2
YKA Yellowknife Ar 95.96 28 P **P 19 15 09.7 -0.1**
YKA *PP pP 19 15 20.0 -1.1
YKA pmax pmax
comp=Z,23nm,0.8s
YKA MLR MLR
comp=Z,107nm,19.4s
YKA Yellowknife Ar 95.96 28 P **P 19 15 09.7 -0.1**
comp=Z,23nm,0.8s,mb5.7,baz=266,slow=4.6,SNR=267
YKA pP pP 19 15 20.0 -1.1
comp=Z,20nm,0.9s,baz=268,slow=5.1,SNR=12
YKA PKiKP PKiKP 19 19 48.0 -0.6
comp=Z,1.5nm,0.6s,baz=267,slow=1.4,SNR=20
YKA PKKPbc PKKPbc 19 31 56.5 -4.2
comp=Z,1.1nm,0.5s,baz=87,slow=2.9,SNR=36
YKA LR LR 19 57 36.9
comp=Z,107nm,19.4s,MS4.3,baz=45,slow=35
YKA Yellowknife Ar 95.96 28 P **P 19 15 09.7 -0.1**
YKA pP pP 19 15 20.0 -1.1
V15A Kaibab Nationa 96.01 55⇓P **P 19 15 11.1 +0.4**
baz=96,SNR=8.4
N15A Stansbury Isla 96.06 50⇓P **P 19 15 10.1 -0.7**
baz=96
MVU Marysvale 96.15 52 PFAKE 19 15 20.0 +8.7
MVU LR LR
comp=Z,2µm,21.0s,MS5.5
K15A Arbon 96.16 48⇑P **P 19 15 10.5 -0.7**
baz=96,SNR=6.2
P15A Leamington 96.17 51⇑P **P 19 15 11.0 -0.3**
baz=96,SNR=5.6
EDM Edmonton 96.17 37 *e*P **P 19 15 10.7 -0.3**
MSU Marysvale 96.18 52 *e*P **P 19 15 12.6 +1.2**
MSU pmax pmax
comp=Z,47nm,2.0s,mb5.6
MSU Marysvale 96.18 52 *e*P **P 19 15 12.6 +1.2**

comp=Z,47nm,2.0s,mb5.6
H15A Lima 96.19 46 ⇑P **P 19 15 11.3 0.0**
baz=96
L15A Malad City 96.23 49 ⇓P **P 19 15 12.0 +0.5**
baz=96
E15A Deer Lodge 96.29 44 ⇑P **P 19 15 11.5 -0.2**
baz=96
G15A Dillon 96.33 45 ⇓P **P 19 15 12.0 +0.1**
baz=96
A15A Johnson Ranch, 96.36 41 ⇓P **P 19 15 11.6 -0.3**
baz=96
F15A Butte 96.36 45 ⇓P **P 19 15 11.2 -0.9**
baz=96
C15A Salmond Ranch, 96.38 43 ⇑P **P 19 15 11.6 -0.5**
baz=96,SNR=7.1
B15A Bradely Ranch, 96.44 42 ⇓P **P 19 15 11.2 -1.1**
baz=96
WUAZ Wupatki 96.64 55 *e*P **P 19 15 15.0 +1.4**
WUAZ comp=Z,4.2nm,0.8s,mb4.9 LR LR
comp=Z,2µm,20.0s,MS5.5
R16A Teasdale 96.71 52 ⇓P **P 19 15 14.1 +0.2**
baz=97,SNR=22
HWUT Hardware Ranch 96.82 49⇑*e*P **P 19 15 13.5 -0.8**
HWUT comp=Z,5.3nm,0.6s,mb5.2 LR LR
comp=Z,2µm,20.0s,MS5.6
K16A Soda Springs 96.86 48 ⇓P **P 19 15 14.4 0.0**
baz=97,SNR=6.1
J16A Bone 96.87 47 ⇓P **P 19 15 15.1 +0.7**
baz=97
N16A Rees Ranch, Co 96.88 50 ⇑P **P 19 15 15.2 +0.7**
baz=97
L16A Fish Haven 96.94 49 ⇓P **P 19 15 15.2 +0.4**
baz=97
TUC Tucson 96.94 58 PFAKE 19 15 30.0 +15
TUC LR LR
comp=Z,2µm,21.0s,MS5.5
BOZ Bozeman (W) 96.96 45 ⇓P **P 19 15 14.3 -0.5**
baz=97,SNR=8.2
BOZ Bozeman (W) 96.96 45 *e*P **P 19 15 14.0 -0.7**
BOZ comp=Z,2.0nm,0.6s,mb4.7 pmax pmax
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.7
BOZ Bozeman (W) 96.96 45 *e*P **P 19 15 14.0 -0.7**
BOZ comp=Z,2.0nm,0.6s,mb4.7 LR LR
comp=Z,2µm,20.0s,MS5.7
TMUT Trail Mountain 96.98 51⇑*i*P **P 19 15 16.2 +1.3**
comp=Z,5.3nm,0.6s,mb5.2
Q16A Castle Valley 96.99 52 ⇓P **P 19 15 15.9 +0.8**
baz=97,SNR=5.1
RRI2 Red Ridge 97.08 47 *e*P **P 19 15 15.6 +0.3**
comp=Z,3.3nm,0.8s,mb4.8
A16A West Butte Ran 97.10 42 ⇑P **P 19 15 15.3 -0.1**
baz=97,SNR=5.2
V17A Tonalea, Kykot 97.12 55 ⇓P **P 19 15 16.2 +0.5**
baz=97
T17A Navajo Res., N 97.18 54 ⇓P **P 19 15 17.4 +1.4**
baz=97,SNR=5.5
AHID Auburn Hatcher 97.22 48 PFAKE 19 15 30.0 +14
AHID LR LR
comp=Z,2µm,20.0s,MS5.6
R17A Hanksville Air 97.33 52 ⇑P **P 19 15 15.7 -0.8**
baz=97,SNR=9.5
IMW Indian Meadow 97.38 47 *e*P **P 19 15 15.6 -1.1**
comp=Z,2.3nm,0.7s,mb4.7
O17A Robinson Place 97.38 50 ⇓P **P 19 15 16.1 -0.7**
baz=98
M17A Scullys Gap (B 97.49 49 ⇑P **P 19 15 17.3 +0.1**
baz=98,SNR=6.4
SRU San Rafael 97.50 51 *e*P **P 19 15 17.7 +0.3**
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb5.0
SRU San Rafael 97.50 51 *e*P **P 19 15 17.7 +0.3**
comp=Z,3.8nm,0.8s,mb5.0
J17A Brown Place, J 97.53 47 ⇑P **P 19 15 16.4 -1.0**
baz=98
B17A L&G Farms, Che 97.61 42 ⇑P **P 19 15 15.7 -1.9**
baz=98
C17A Wharram Farm, 97.62 43 ⇓P **P 19 15 14.8 -2.9**
baz=98
F17A Fitzpatrick Pl 97.64 45 ⇑P **P 19 15 18.6 +0.8**
baz=98
D17A Six Diamond Ra 97.66 43 ⇓P **P 19 15 17.0 -0.9**
baz=98
A17A Triple J Farms 97.69 42 ⇑P **P 19 15 18.5 +0.5**
baz=98,SNR=5.1
P18A Preston Nutter 97.74 51 ⇓P **P 19 15 18.3 -0.1**
baz=98,SNR=5.5
LKWY Lake 97.79 46 PFAKE 19 15 30.0 +11
LKWY LR LR
comp=Z,3µm,22.0s,MS5.7
Q18A Rafter H Ranch 97.81 52 ⇑P **P 19 15 19.2 +0.4**
baz=98
S18A Hurst Farm, Bl 97.86 53 ⇓P **P 19 15 18.6 -0.4**
baz=98
U18A Rough Rock, Ch 97.91 54 ⇓P **P 19 15 19.0 -0.3**
baz=98
R18A Canyonlands Na 97.97 52 ⇓P **P 19 15 19.5 0.0**
baz=98,SNR=9.4
L18A Fontenelle, Gr 97.98 49 ⇓P **P 19 15 19.5 +0.1**
baz=98
K18A Toltan Ranch, 97.99 48 ⇓P **P 19 15 19.6 +0.1**
baz=98
J18A Kendall Valley 98.03 47 ⇓P **P 19 15 19.6 -0.1**
baz=98,SNR=6.9
E18A Harlowton 98.18 44 ⇓P **P 19 15 20.2 0.0**
baz=98
N18A Larsen Ranch, 98.22 50 ⇓P **P 19 15 20.3 -0.2**
baz=98,SNR=5.7
F18A Big Timber 98.30 45 ⇑P **P 19 15 20.8 0.0**
baz=98
EGMT Eagleton 98.31 43 ⇑P **P 19 15 20.8 0.0**
baz=98
EGMT Eagleton 98.31 43 *e*P **P 19 15 20.1 -0.6**
EGMT comp=Z,4.3nm,0.6s,mb5.2 LR LR
comp=Z,2µm,22.0s,MS5.6
BW06 Boulder Array 98.35 48 ⇑P **P 19 15 20.8 -0.3**
baz=98,SNR=8.1
BW06 Boulder Array 98.35 48 PFAKE 19 15 30.0 +8.9
BW06 LR LR
comp=Z,2µm,20.0s,MS5.5
PDAR Pinedale Array 98.35 48 P **P 19 15 20.8 -0.3**
comp=Z,3.4nm,0.7s,mb5.0,baz=250,slow=2.0,SNR=31
PDAR PP PP 19 19 22.1 +0.7
comp=Z,1.1nm,1.0s,baz=276,slow=5.8,SNR=5.0
PDAR PKiKP PKiKP 19 19 53.5 +0.1
comp=Z,0.7nm,0.5s,baz=146,slow=2.0,SNR=8.1
PDAR LR LR 19 56 03.7
comp=Z,1µm,19.6s,MS5.5,baz=319,slow=33
PDAR Pinedale Array 98.35 48 P **P 19 15 20.8 -0.3**
PDAR PP PP 19 19 22.1 +0.7
ABKAR Akbulak array 98.39 319 *e*P **P 19 15 18.4 -2.7**
comp=Z,1.5nm,0.8s,mb4.6
G18A Lazy EL Ranch, 98.40 45 ⇓P **P 19 15 22.2 +0.9**
baz=98
U19A Dine' College, 98.44 54 ⇓P **P 19 15 21.9 +0.3**
baz=98
L19A Farson 98.49 49 ⇑P **P 19 15 22.0 +0.3**
baz=99
S19A Harvey Farm, M 98.54 53 ⇑P **P 19 15 22.6 +0.6**
baz=99,SNR=9.1
RLMT Red Lodge 98.61 45 ⇓P **P 19 15 22.7 +0.5**
baz=99
RLMT Red Lodge 98.61 45 *e*P **P 19 15 21.5 -0.7**
RLMT comp=Z,1.9nm,0.8s,mb4.7 LR LR
comp=Z,2µm,20.0s,MS5.6
O19A Miners Draw (B 98.62 50 ⇓P **P 19 15 22.4 0.0**
baz=99,SNR=6.1
K19A Absolon Red Bu 98.88 48 ⇓P **P 19 15 23.3 -0.1**
baz=99,SNR=5.9
MSEY Mahe Island 99.03 264 PFAKE 19 15 40.0 +15
MSEY LR LR
comp=Z,806nm,19.0s,MS5.2
MVCO Mesa Verde 99.03 53 PFAKE 19 15 40.0 +16
MVCO LR LR
comp=Z,1µm,20.0s,MS5.4
ARU Arti 99.14 326*d i*P **P 19 15 22.2 -2.1**
ARU 19 19 24.8
ARU S SKSac 19 25 57.7 -2.1
ARU SP SP 19 28 14.5 -4.2
ARU PS PS 19 28 28.6 +4.9
ARU SS SS 19 33 43.6 +2.1
ARU pmax pmax
comp=Z,11nm,2.5s,mb4.9
ARU MLR MLR
comp=Z,652nm,20.0s,MS5.1
ARU Arti 99.14 326 *e*Pdif **P 19 15 22.4 -1.9**
ARU LR LR
comp=Z,616nm,20.0s,MS5.1
R20A Redvale 99.15 52 ⇓P **P 19 15 25.3 +0.6**
baz=99,SNR=5.1
P20A De Beque 99.17 51 ⇑P **P 19 15 25.1 +0.3**
baz=99
Q20A Ridgley Place, 99.23 52 ⇑P **P 19 15 26.1 +1.0**
baz=99,SNR=5.9
L20A Wamsutter 99.24 49 ⇑P **P 19 15 25.7 +0.6**
baz=99
K20A Yellowstone Ra 99.25 48 ⇓P **P 19 15 25.4 +0.3**
baz=99
N20A Spence Gulch, 99.29 50 ⇑P **P 19 15 24.7 -0.7**
baz=99,SNR=8.1
O20A White River Ci 99.29 51 ⇓P **P 19 15 26.2 +0.8**
baz=99
M20A Sweetwater, Wa 99.35 49 ⇑P **P 19 15 26.5 +0.9**
baz=99,SNR=5.8
Q21A Lamborn Mesa, 99.79 52 ⇑P Pdif 19 15 26.9 -0.3
baz=100,SNR=5.4
R21A Cimarron 99.81 52 ⇓P Pdif 19 15 28.1 +0.8
baz=100
N21A Black Mountain 99.85 50 ⇓P Pdif 19 15 28.2 +0.6
baz=100,SNR=6.9
L21A Rawlins 99.97 49 ⇓P Pdif 19 15 28.4 +0.4
baz=100,SNR=5.9
M21A Separation Pea 99.97 49 ⇑P Pdif 19 15 28.6 +0.6
baz=100,SNR=8.4
Q22A Crested Butte, 100.31 52 ⇑P Pdif 19 15 30.5 +1.0
baz=100,SNR=10
ANMO Albuquerque 100.64 56 PKiKP PKiKP 19 19 57.9 +0.1
comp=Z,0.3nm,0.3s,baz=0.7,slow=1.9,SNR=4.0
ANMO Albuquerque 100.64 56 PFAKE 19 15 40.0 +9.0
ANMO LR LR
comp=Z,1µm,20.0s,MS5.4
LAO LASA Array 100.72 44 *e*Pdif Pdif 19 15 31.1 -0.2
LAO comp=Z,6.5nm,0.7s LR LR
comp=Z,2µm,21.0s,MS5.6
ISCO Idaho Springs 101.31 51 PFAKE 19 15 50.0 +16
ISCO LR LR
comp=Z,1µm,20.0s,MS5.5
SDCO Great Sand Dun 101.42 53 PFAKE 19 15 50.0 +15
SDCO LR LR
comp=Z,2µm,20.0s,MS5.7
MNTX Cornudas Mount 101.50 59 PFAKE 19 15 50.0 +15
MNTX LR LR
comp=Z,2µm,22.0s,MS5.6
RES Resolute Bay 101.59 15 P Pdif 19 15 34.0 -1.3
comp=Z,1.3nm,0.6s,baz=341,slow=2.7,SNR=9.9
RES PKiKP PKiKP 19 19 57.5 -0.9
comp=Z,1.0nm,0.5s,baz=276,slow=4.0,SNR=8.4
RES Resolute Bay 101.59 15 P Pdif 19 15 34.0 -1.3
VNA3 Neumayer Olymp 101.62 185 *e*Pdiff Pdif 19 15 36.2 +0.8
VNA3 *e* 19 19 58.2
VNA2 Neumayer--Watz 101.71 186 *e*Pdiff Pdif 19 15 34.7 -1.1
VNA2 *e* 19 19 58.1
DGMT Dagmar 102.01 42 PFAKE 19 15 50.0 +13
DGMT LR LR
comp=Z,3µm,22.0s,MS5.7
RSSD Black Hills 102.36 46 *e*P Pdif 19 15 38.2 -0.5
RSSD pmax pmax
comp=Z,3.0nm,0.6s
RSSD MLR MLR
comp=Z,3µm,21.0s,MS5.8
RSSD Black Hills 102.36 46 *e*Pdif Pdif 19 15 38.2 -0.4
RSSD comp=Z,3.3nm,0.6s LR LR
comp=Z,3µm,21.0s,MS5.8
FFC Flin Flon 102.83 35 PFAKE 19 15 50.0 +9.2
FFC LR LR
comp=Z,2µm,20.0s,MS5.6
TXAR Lajitas Array 102.96 62 P Pdif 19 15 40.1 -1.2
TXAR *i* 19 20 01.9
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 102.96 62 P Pdif 19 15 40.1 -1.2
comp=Z,0.2nm,0.5s,baz=272,slow=6.9,SNR=2.6
TXAR PKiKP PKiKP 19 20 01.9 -0.2
comp=Z,0.4nm,0.7s,baz=234,slow=2.4,SNR=3.1
TXAR PKKPbc PKKPbc 19 31 37.3 -2.4
comp=Z,0.5nm,0.6s,baz=120,slow=7.3,SNR=4.5
OGNE Ogallala 104.01 50 PFAKE 19 16 00.0 +14
OGNE LR LR
comp=Z,2µm,20.0s,MS5.6
AMTX Amarillo 104.57 56 PFAKE 19 16 00.0 +12
AMTX LR LR
comp=Z,2µm,20.0s,MS5.6
ABPO Ambohimpanom 104.59 248 PFAKE 19 16 00.0 +11
ABPO LR LR
comp=Z,980nm,19.0s,MS5.4
KBS Kingsbay 105.46 353 PFAKE 19 20 20.0 +15
KBS LR LR
comp=Z,794nm,20.0s,MS5.3
CBKS Cedar Bluff 105.91 52 PFAKE 19 20 20.0 +13
CBKS LR LR
comp=Z,2µm,22.0s,MS5.5
JCT Junction City 106.30 60 PKPdf PKiKP 19 20 09.0 +0.8
JCT LR LR
comp=Z,2µm,21.0s,MS5.7
FCC Fort Churchill 106.36 31 *e*Pdif Pdif 19 15 56.6 +0.1
FCC comp=Z,0.1nm,1.1s
*e*PKPdf PKiKP 19 20 04.9 -2.5
WMOK Wichita Mounta 106.96 56 PFAKE 19 20 20.0 +11
WMOK LR LR
comp=Z,2µm,20.0s,MS5.7
ULM Lac du Bonnet 107.19 39 PKiKP PKiKP 19 20 07.9 -1.3
comp=Z,3.8nm,0.6s,baz=295,slow=2.8,SNR=7.7
LVZ Lovozero 107.29 340 PFAKE 19 20 20.0 +11
LVZ LR LR
comp=Z,322nm,20.0s,MS4.9
AGMN Agassiz Refuge 107.54 41 PFAKE 19 20 20.0 +10
AGMN LR LR
comp=Z,2µm,22.0s,MS5.7
ECSD EROS Data Cent 107.73 46 *e*PKPdf PKiKP 19 20 09.2 -1.2
ECSD LR LR
comp=Z,2µm,21.0s,MS5.7
KVTX Kingsville 108.07 63 PFAKE 19 20 20.0 +8.4
KVTX LR LR
comp=Z,2µm,19.0s,MS5.7
KSU1 Kansas State U 108.31 51 PFAKE 19 20 20.0 +8.3
KSU1 LR LR
comp=Z,1µm,21.0s,MS5.5
KEV Kevo 108.74 343 PFAKE 19 20 20.0 +8.4
KEV LR LR
comp=Z,575nm,22.0s,MS5.1
KEV Kevo 108.74 343 *e*pkp PKiKP 19 20 12.5 +0.9
ARCES ARCESS Array B 109.30 343 P Pdif 19 16 09.3 -0.2
ARCES 19 31 17.5
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 109.30 343 Pdiff Pdif 19 16 09.3 -0.2
comp=Z,1.0nm,0.8s,baz=38,slow=6.1,SNR=3.7
ARCES PKiKP PKiKP 19 20 12.0 -0.6
comp=Z,2.9nm,0.9s,baz=54,slow=2.1,SNR=12
ARCES PKKPbc PKKPbc 19 31 17.4 -4.0
comp=Z,1.2nm,0.5s,baz=215,slow=4.3,SNR=17
ARCES ARCESS Array B 109.30 343 Pdif Pdif 19 16 09.3 -0.2
ARCES PKPdf PKiKP 19 20 12.0 -0.6
ARCES PKKPbc PKKPbc 19 31 17.4 -4.0
HKT Hockley 109.76 61 PFAKE 19 20 30.0 +15
HKT LR LR
comp=Z,2µm,19.0s,MS5.6
GNI Garni 109.83 310 PFAKE 19 20 30.0 +15
GNI LR LR
comp=Z,397nm,22.0s,MS4.9
EYMN Ely 110.48 41 *e*PKPdf PKiKP 19 20 15.7 +0.2
EYMN LR LR
comp=Z,3µm,22.0s,MS5.9
SCIA State Center 110.48 48 PFAKE 19 20 30.0 +14
SCIA LR LR
comp=Z,2µm,21.0s,MS5.8
NATX Nacogdoches 110.63 59 PFAKE 19 20 30.0 +14
NATX LR LR
comp=Z,2µm,20.0s,MS5.6
KIV Kislovodsk 110.71 314 *i* PKIKP PKiKP 19 20 15.1 -1.0
KIV *e* 19 20 51.9
KIV *e* 19 26 51.3
KIV *e*PS PS 19 30 19.7 -4.4
KIV *e*SS SS 19 36 20.7 +0.3
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,419nm,21.0s,MS5.0
KIV Kislovodsk 110.71 314 *e*PKPdf PKiKP 19 20 16.2 +0.2
KIV LR LR
comp=Z,374nm,20.0s,MS5.0
JOF Joensuu 110.82 336 *e*pkp PKiKP 19 20 13.0 -2.7
TRO Tromso 111.03 345 *e*PP PP 19 20 54.7 +0.3
TRO AMS AMS 20 06 57.2
comp=Z,727nm,22.6s,MS5.2
MIAR Mount Ida 111.25 56 PFAKE 19 20 30.0 +13
MIAR LR LR
comp=Z,2µm,20.0s,MS5.7
OBN Obninsk 111.54 327 PFAKE 19 20 30.0 +13
OBN LR LR
comp=Z,741nm,21.0s,MS5.2
JFWS Jewell Farm 112.45 46 PFAKE 19 20 30.0 +11
JFWS LR LR
comp=Z,2µm,20.0s,MS5.6
COWI Conover 112.49 43 PFAKE 19 20 30.0 +11
COWI LR LR
comp=Z,2µm,19.0s,MS5.8
CCM Cathedral Cave 112.62 52 PFAKE 19 20 30.0 +10
CCM LR LR
comp=Z,2µm,20.0s,MS5.7
SOC Sochi 112.89 315 *i* PKIKP PKiKP 19 20 16.6 -3.6
SOC *e* 19 21 05.6
SOC *e*PPP 19 23 31.3
SOC MLR MLR
comp=Z,509nm,22.0s,MS5.1
KAF Kangasniemi 113.23 337 *e*pkp PKiKP 19 20 18.5 -1.8
HDIL Hopedale 113.64 49 PFAKE 19 20 30.0 +8.3
HDIL LR LR
comp=Z,2µm,20.0s,MS5.7
FINES FINESS Array B 113.68 336 P Pdif 19 16 28.3 -0.7
FINES *i* 19 20 20.0
FINES pmax pmax
comp=Z,3.0nm,1.3s
FINES FINESS Array B 113.68 336 Pdiff Pdif 19 16 28.3 -0.7
comp=Z,2.8nm,1.2s,baz=57,slow=7.0,SNR=3.5
FINES PKiKP PKiKP 19 20 20.0 -1.2
comp=Z,1.3nm,0.5s,baz=48,slow=1.2,SNR=18
FINES PKKPbc PKKPbc 19 31 02.6 -4.1
comp=Z,2.2nm,0.5s,baz=258,slow=2.1,SNR=27
VBMS Vicksburg 114.08 58 PFAKE 19 20 30.0 +7.2
VBMS LR LR
comp=Z,2µm,21.0s,MS5.7
PAYG Puerto Ayora 114.31 94 PFAKE 19 20 40.0 +16
PAYG LR LR
comp=Z,995nm,20.0s,MS5.4
OXF Oxford 114.66 55 PFAKE 19 20 40.0 +16
OXF LR LR
comp=Z,2µm,20.0s,MS5.7
OLIL Olney 114.92 50 *e*PKPdf PKiKP 19 20 22.8 -1.5
MALT Malatya 114.98 309 *e*PKIKP PKiKP 19 20 24.1 -0.3
MALT *e* 19 21 22.8
MALT MLR MLR
comp=Z,446nm,22.0s,MS5.0
MALT Malatya 114.98 309 ⇓PKIKP PKiKP 19 20 24.4 0.0
MALT Malatya 114.98 309 *e*PKPdf PKiKP 19 20 24.1 -0.3
MALT *e*PP PP 19 21 22.8 -0.9
MALT LR LR
comp=Z,446nm,22.0s,MS5.0
MALT Malatya 114.98 309 ⇓*i*P PKiKP 19 20 24.4 0.0
FRB Frobisher Bay 114.99 20 PKIKP PKiKP 19 20 22.5 -1.1
FRB pmax pmax
comp=Z,16nm,0.5s
FRB Frobisher Bay 114.99 20 PKP PKiKP 19 20 22.5 -1.1
comp=Z,16nm,0.5s,baz=294,slow=1.7,SNR=80
WVT Waverly 115.65 53 PFAKE 19 20 40.0 +14
WVT LR LR
comp=Z,1µm,20.0s,MS5.5
PLAL Pickwick Lake 115.67 54 PFAKE 19 20 40.0 +14
PLAL LR LR
comp=Z,2µm,20.0s,MS5.6
GLMI Grayling 115.90 43 PFAKE 19 20 40.0 +14
GLMI LR LR
comp=Z,2µm,19.0s,MS5.8
LRAL Lakeview Retre 116.89 56 *e*PKPdf PKPdf 19 20 27.0 -1.2
LRAL LR LR
comp=Z,2µm,22.0s,MS5.6
BRAL Brewton 117.17 59 PFAKE 19 20 40.0 +11
BRAL LR LR
comp=Z,2µm,21.0s,MS5.6
SFJD Kangerlussuaq 117.21 11 PKP PKPdf 19 20 26.4 -1.4
comp=Z,8.6nm,0.5s,baz=112,slow=1.1,SNR=14
SFJD Kangerlussuaq 117.21 11 PKP PKPdf 19 20 26.4 -1.4
SFJD LR LR
comp=Z,1µm,22.0s,MS5.5
AAM Ann Arbor 117.31 46 PFAKE 19 20 40.0 +11
AAM LR LR
comp=Z,2µm,20.0s,MS5.6
AKASG Malin Array Be 117.34 325 PKP PKPdf 19 20 27.4 -1.2
comp=Z,2.3nm,0.5s,baz=66,slow=1.7,SNR=14
AKASG pPKP pPKPdf 19 20 37.0 -3.1
comp=Z,3.9nm,0.7s,baz=66,slow=1.8,SNR=4.1
AKASG PKKPbc PKKPbc 19 30 51.5 -2.2
comp=Z,3.1nm,0.5s,baz=262,slow=4.2,SNR=17
KIEV Kiev 117.36 325 *e*PKIKP PKPdf 19 20 27.4 -1.2
KIEV *e* 19 20 38.1
KIEV MLR MLR
comp=Z,493nm,21.0s,MS5.1
KMBO Kilima Mbogo 117.54 265 PKP PKPdf 19 20 29.9 -0.1
comp=Z,1.4nm,0.8s,baz=29,slow=8.9,SNR=4.1
KMBO pPKP pPKPdf 19 20 39.4 -2.3
comp=Z,3.0nm,0.9s,baz=71,slow=6.6,SNR=4.8
KMBO Kilima Mbogo 117.54 265 *e*PKPdf PKPdf 19 20 30.4 +0.3
KMBO *e* 19 20 39.7
KMBO LR LR
comp=Z,543nm,21.0s,MS5.2
BR131 Keskin Array S 118.27 312 *e*PKPdf PKPdf 19 20 29.7 -1.0
BRTR Keskin Array B 118.27 312 PKP PKPdf 19 20 29.8 -0.9
comp=Z,3.4nm,0.6s,baz=128,slow=3.4,SNR=22
BRTR pPKP pPKPdf 19 20 39.4 -2.9
comp=Z,5.1nm,1.0s,baz=111,slow=2.8,SNR=9.0
BRTR PKKPbc PKKPbc 19 30 49.5 -0.5
comp=Z,1.7nm,0.6s,baz=228,slow=3.5,SNR=13
TGUH Tegucigalpa,Un 118.30 78 PFAKE 19 20 40.0 +8.6
TGUH LR LR
comp=Z,1µm,19.0s,MS5.6
ACSO Alum Creek Sta 118.39 48 *e*PKPdf PKPdf 19 20 29.4 -1.5
ACSO LR LR
comp=Z,2µm,19.0s,MS5.7
TZTN Tazewell 118.93 52 *e*PKPdf PKPdf 19 20 30.8 -1.2
TKL Tuckaleechee C 118.97 53 PKIKP PKPdf 19 20 31.1 -1.0
TKL pmax pmax
comp=Z,9.0nm,0.6s
TKL Tuckaleechee C 118.97 53 PKP PKPdf 19 20 31.1 -1.1
comp=Z,8.9nm,0.6s,baz=168,slow=4.6,SNR=25
SUW Suwalki 119.00 330 *e*PKP PKPdf 19 20 31.8 +0.2
KIS Kishinev 119.12 321 *e*PP PP 19 21 50.0 -2.1
KIS LRM 20 23 36.0
comp=Z,500nm,20.0s
HFS Hagfors 119.23 339 PKIKP PKPdf 19 20 30.7 -1.2
HFS pmax pmax
comp=Z,3.0nm,0.5s
HFS Hagfors 119.23 339 PKP PKPdf 19 20 30.7 -1.2
comp=Z,3.0nm,0.5s,baz=79,slow=3.2,SNR=27
NB2 NORSAR Subarra119.42 341 PKPdf PKPdf 19 20 31.0 -1.2
comp=Z,1.6nm,0.8s,baz=39,slow=1.9
NB2 NORSAR Subarra119.42 341 PKPdf PKPdf 19 20 31.0 -1.2
baz=39,slow=1.9
NOA NORSAR Array B 119.42 341 PKP PKPdf 19 20 30.8 -1.4
comp=Z,1.4nm,0.5s,baz=44,slow=1.9,SNR=13
NOA PKKPbc PKKPbc 19 30 44.8 -1.7
comp=Z,1.5nm,0.7s,baz=42,slow=3.6,SNR=8.7
SADO Sadowa 119.58 42 PKP PKPdf 19 20 31.6 -1.4
comp=Z,12nm,0.6s,baz=298,slow=2.1,SNR=11
NAO01 NORSAR Array S 119.67 341 PFAKE 19 20 40.0 +7.3
NAO01 LR LR
comp=Z,489nm,20.0s,MS5.1
CSS Prodhromos 119.72 307 PFAKE 19 20 40.0 +6.4
CSS LR LR
comp=Z,319nm,22.0s,MS4.9
GOGA Godfrey 119.72 55 PFAKE 19 20 40.0 +6.3
GOGA LR LR
comp=Z,2µm,20.0s,MS5.7
TLCR 119.83 319 ⇓PKIKP PKPdf 19 20 33.5 0.0
TLCR 119.83 319 ⇓*i*P PKPdf 19 20 33.5 0.0
ERPA Erie 119.95 45 PFAKE 19 20 50.0 +16
ERPA LR LR
comp=Z,2µm,20.0s,MS5.6
TIRR Tirgusor 120.38 318 ⇓PKIKP PKPdf 19 20 34.3 -0.3
TIRR Tirgusor 120.38 318 ⇓*i*P PKPdf 19 20 34.3 -0.3
JTS JuntasAbangare 120.51 82 PFAKE 19 20 50.0 +14
JTS LR LR

comp=Z,1µm,20.0s,MS5.5
HARR Harsova 120.61 319 ⇑PKIKP PKPdf 19 20 35.1 +0.1
HARR Harsova 120.61 319 ⇑*i*P PKPdf 19 20 35.1 +0.1
LVV L'vov 120.71 325 *e*PKIKP PKPdf 19 20 34.4 -0.6
LVV MLR MLR
comp=Z,500nm,20.0s,MS5.2
LVV MLR MLR
comp=E,100nm,17.0s,MS4.8
LVV MLR MLR
comp=N,200nm,20.0s,MS4.8
FOO Floro 120.85 344 *e*PP PP 19 22 03.7 +0.5
FOO AMS AMS 20 06 16.1
comp=Z,772nm,23.7s,MS5.3
MCWV Mont Chateau 120.86 47 *e*PKPdf PKPdf 19 20 34.6 -1.0
MCWV LR LR
comp=Z,2µm,20.0s,MS5.7
VRI Vrincioaia 120.90 320 ⇑PKIKP PKPdf 19 20 35.3 -0.2
VRI Vrincioaia 120.90 320 ⇑*i*P PKPdf 19 20 35.3 -0.2
VRI Vrincioaia 120.90 320 ⇑*i*P PKKPbc 19 30 38.4 -2.2
PLOR Plostina 120.96 320 ⇑PKIKP PKPdf 19 20 35.5 -0.1
PLOR Plostina 120.96 320 ⇑*i*P PKPdf 19 20 35.5 -0.1
KONO Kongsberg 121.00 340 *e*PP PP 19 21 59.7 -4.7
KONO AMS AMS 20 12 37.4
comp=Z,645nm,18.2s,MS5.3
KONO Kongsberg 121.00 340 PFAKE 19 20 50.0 +15
KONO LR LR
comp=Z,696nm,21.0s,MS5.3
BUR08 Bucovina Ar. S 121.06 323 *e*PKPdf PKPdf 19 20 36.3 +0.5
BURAR Bucovina Array 121.07 323 ⇓PKIKP PKPdf 19 20 36.3 +0.5
BURAR Bucovina Array 121.07 323 ⇓*i*P PKPdf 19 20 36.3 +0.5
BURAR Bucovina Array 121.07 323 ⇓*i*P PKKPab 19 30 39.3 -0.1
ISP Isparta 121.15 310 PFAKE 19 20 50.0 +14
ISP LR LR
comp=Z,326nm,21.0s,MS5.0
BLA Blacksburg 121.17 50 *e*PKIKP PKPdf 19 20 34.8 -1.5
BLA MLR MLR
comp=Z,2µm,20.0s,MS5.8
JSC Jenkinsville 121.30 54 *e*PKIKP PKPdf 19 20 35.8 -0.9
SCHQ Schefferville 121.40 27 PKP PKPdf 19 20 35.6 -0.6
comp=Z,8.0nm,0.5s,baz=300,slow=2.1,SNR=33
SCHQ pPKP pPKPdf 19 20 44.9 -2.9
comp=Z,3.2nm,0.6s,baz=35,slow=16,SNR=3.8
SCHQ PKKPbc PKKPbc 19 30 36.2 -2.7
comp=Z,1.5nm,0.5s,baz=139,slow=5.2,SNR=6.3
SCHQ Schefferville 121.40 27 PKP PKPdf 19 20 35.6 -0.6
SCHQ pPKP pPKPdf 19 20 44.9 -2.9
SCHQ PKKPbc PKKPbc 19 30 36.2 -2.7
KWP Kalwaria Pacla 121.55 326 *e*PKP PKPdf 19 20 36.9 +0.2
KWP Kalwaria Pacla 121.55 326 *e*PKPdf PKPdf 19 20 36.4 -0.3
KWP LR LR
comp=Z,642nm,20.0s,MS5.3
KWP Kalwaria Pacla 121.55 326 ⇓*i*P PKPdf 19 20 36.8 +0.1
MLR Muntele Rosu 121.56 320 PKIKP PKPdf 19 20 36.7 -0.1
MLR Muntele Rosu 121.56 320 ⇑*i*P PKPdf 19 20 36.4 -0.4
MLR Muntele Rosu 121.56 320 ⇓*i*P PKKPab 19 30 36.6 -0.8
LBTB Lobatse 121.70 235 *e*PKIKP PKPdf 19 20 36.8 -0.9
LBTB MLR MLR
comp=Z,1µm,19.0s,MS5.6
SUR Sutherland 121.75 225 *e*PKPdf PKPdf 19 20 38.1 +0.5
SUR LR LR
comp=Z,1µm,19.0s,MS5.6
BER Bergen 121.75 343 *e*PP PP 19 22 10.6 +1.2
BER AMS AMS 20 07 42.5
comp=Z,552nm,25.8s,MS5.1
BORG Borgarnes 121.95 358 PKIKP PKPdf 19 20 38.2 +1.2
BORG pmax pmax
comp=Z,13nm,0.6s
BORG Borgarnes 121.95 358 PKP PKPdf 19 20 38.2 +1.2
comp=Z,13nm,0.6s,baz=252,slow=3.2,SNR=3.9
SSPA Standing Stone 121.95 46 *e*PKPdf PKPdf 19 20 36.5 -1.2
SSPA LR LR
comp=Z,869nm,20.0s,MS5.4
VOIR 122.15 320 ⇑PKIKP PKPdf 19 20 39.5 +1.5
VOIR 122.15 320 ⇑*i*P PKPdf 19 20 39.5 +1.5
VOIR 122.15 320 ⇓*i*P PKKPab 19 30 35.3 +0.5
KOLS Kolonicke sedl 122.15 325 *e*PKIKP PKPdf 19 20 38.4 +0.6
KOLS *e* 19 20 48.7
KOLS Kolonicke sedl 122.15 325 *e*PKP PKPdf 19 20 38.4 +0.6
KOLS *e* 19 20 48.7
KOLS *e* 19 30 35.7
KOLS Kolonicke sedl 122.15 325 *e*PKP PKPdf 19 20 38.4 +0.6
KOLS *e* 19 20 48.7
KOLS *e* 19 30 35.7
UZH Uzhgorod 122.29 325 *e*PKIKP PKPdf 19 20 38.0 -0.1
TRPA Tarpa 122.40 324 ⇑*i*P PKPdf 19 20 38.3 -0.1
NHSC New Hope 122.47 55 PFAKE 19 20 50.0 +11
NHSC LR LR
comp=Z,1µm,20.0s,MS5.6
STHS Stebnicka Huta 122.47 326 *e*PKIKP PKPdf 19 20 39.0 +0.6
STHS Stebnicka Huta 122.47 326 *e*PKP PKPdf 19 20 39.0 +0.6
DWPF Disney 122.49 61 PFAKE 19 20 50.0 +11
DWPF LR LR
comp=Z,1µm,22.0s,MS5.6
SZH Strazhica 122.50 318 P PKPdf 19 20 37.4 -1.3
LONY Lake Ozonia 122.62 40 *e*PKPdf PKPdf 19 20 37.6 -1.2
LONY *e* 19 20 48.7
LONY LR LR
comp=Z,3µm,21.0s,MS5.9
BINY Binghamton 122.69 43 PFAKE 19 20 50.0 +11
BINY LR LR
comp=Z,2µm,21.0s,MS5.8
OJC Ojcow 122.83 328 *e*PKPdf PKPdf 19 20 30.3 -8.8
OJC *e*PP PP 19 22 17.1 0.0
OJC *e*SP SP 19 32 08.4 +0.2
OJC L 20 17 00.7
comp=Z,0.6nm,20.6s
OJC Ojcow 122.83 328 *e*PKIKP PKPdf 19 20 39.3 +0.2
OJC *e* 19 22 17.1
OJC *e*SP SP 19 32 08.4 +0.2
OJC MLR MLR
comp=Z,600nm,20.6s,MS5.2
LSZ Lusaka 123.11 247 *e*PKIKP PKPdf 19 20 40.8 +0.2
LSZ *e* 19 20 49.8
LSZ MLR MLR
comp=Z,1µm,21.0s,MS5.5
NCB Newcomb 123.13 41 *e*PKPdf PKPdf 19 20 38.5 -1.4
NCB LR LR
comp=Z,4µm,21.0s,MS6.1
CBN Corbin 123.16 48 PFAKE 19 20 50.0 +10
CBN LR LR
comp=Z,1µm,19.0s,MS5.6
DIM Dimitrovgrad 123.26 317 P PKPdf 19 20 38.7 -1.5
KECS Kecovo 123.39 325 *e*PKP PKPdf 19 20 39.7 -0.5
KECS *e* 19 30 31.7
KECS Kecovo 123.39 325 *e*PKP PKPdf 19 20 39.7 -0.5
KECS *e* 19 30 31.7
LCO Las Campanas 123.41 131 *e*PKPdf PKPdf 19 20 40.3 -0.6
LCO *e* 19 20 50.1
LCO LR LR
comp=Z,774nm,19.0s,MS5.4
GZR Gura Zlata 123.59 321 ⇓PKIKP PKPdf 19 20 40.7 0.0
GZR Gura Zlata 123.59 321 ⇓*i*P PKPdf 19 20 40.7 0.0
RDO Rodhopi 123.62 316 P PKPdf 19 20 40.0 -0.9
TRQA Tornquist 123.69 145 PFAKE 19 20 50.0 +8.8
TRQA LR LR
comp=Z,429nm,19.0s,MS5.1
CNNC Cliffs of the 123.71 52 PFAKE 19 20 50.0 +8.7
CNNC LR LR
comp=Z,2µm,21.0s,MS5.8
OKC Ostrava-Krasne 123.92 328 *e*PKIKP PKPdf 19 20 41.6 +0.4
OKC *e* 19 20 51.9
OKC MLR MLR
comp=Z,500nm,20.2s,MS5.2
OKC Ostrava-Krasne 123.92 328 *e*PKPdf PKPdf 19 20 41.6 +0.4
OKC *ep*PKP pPKPdf 19 20 51.9 -0.9
OKC AMS AMS 20 19 20.0
comp=Z,500nm,20.2s
PSZ Piszkesteto 124.03 325 PKIKP PKPdf 19 20 41.7 +0.2
PSZ Piszkesteto 124.03 325 *e*PKPdf PKPdf 19 20 40.8 -0.7
PSZ LR LR
comp=Z,518nm,20.0s,MS5.2
PSZ Piszkesteto 124.03 325 ⇑*e*PKP PKPdf 19 20 40.8 -0.7
PSZ Piszkesteto 124.03 325 ⇓*i*P PKPdf 19 20 40.8 -0.7
BZS Buzias 124.20 322 PKIKP PKPdf 19 20 41.8 -0.1
BZS Buzias 124.20 322 ⇓*i*P PKPdf 19 20 41.7 -0.2
BZS Buzias 124.20 322 ⇑*i*P PKKPab 19 30 26.8 +0.7
MORC Moravsky Berou 124.27 328 *e*PKPdf PKPdf 19 20 41.6 -0.2
MORC Moravsky Berou 124.27 328 ⇓*i*P PKPdf 19 20 41.8 -0.1
MORC Moravsky Berou 124.27 328 ⇓*i*P PKKPab 19 30 26.9 +1.2
KSP Ksiaz 124.28 330 *e*PKP PKPdf 19 20 42.5 +0.6
KSP Ksiaz 124.28 330 *e*PKIKP PKPdf 19 20 42.0 +0.1
KSP *e* 19 20 51.8
KSP *e* 19 22 28.0
KSP *e*PPS 19 33 49.0
KSP MLR MLR
comp=Z,3µm,23.4s,MS5.8
VYHS Vyhne 124.31 326 *e*PKIKP PKPdf 19 20 41.5 -0.5
VYHS *e* 19 20 51.4
VYHS Vyhne 124.31 326 *e*PKP PKPdf 19 20 41.5 -0.5
VYHS *e* 19 20 51.4
VYHS *e* 19 30 25.6
VYHS Vyhne 124.31 326 *e*PKP PKPdf 19 20 41.5 -0.5
VYHS *e* 19 20 51.4
VYHS *e* 19 30 25.6
LIA Limnos Island 124.35 314 P PKPdf 19 20 41.5 -0.9
LBNH Lisbon 124.49 40 *e*PKIKP PKPdf 19 20 41.8 -0.7
LBNH *e* 19 20 52.9
LBNH MLR MLR
comp=Z,4µm,20.0s,MS6.0
KOLL Kolacno 124.50 326 *e*PKIKP PKPdf 19 20 43.0 +0.6
KOLL Kolacno 124.50 326 *e*PKP PKPdf 19 20 43.0 +0.6
DPC Dobruska-Polom 124.56 329 *e*PKIKP PKPdf 19 20 42.9 +0.5
DPC *e* 19 20 53.3
DPC MLR MLR
comp=Z,1µm,24.3s,MS5.4
DPC Dobruska-Polom 124.56 329 *e*PKPdf PKPdf 19 20 42.9 +0.5
DPC *ep*PKP pPKPdf 19 20 53.3 -0.7
DPC AMS AMS 20 14 30.0
comp=Z,1µm,24.3s
VTS Vitosha 124.60 318 P PKPdf 19 20 43.0 +0.3
MMB Musomiste 124.68 317 P PKPdf 19 20 41.6 -1.3
BUD Budapest 124.76 325 ⇑*e*PKP PKPdf 19 20 42.4 -0.5
ATAH Atahualpa 124.89 103 PKP PKPdf 19 20 44.9 +0.8
comp=Z,5.8nm,0.6s,baz=148,slow=6.9,SNR=6.2
BSEG Bad Segeberg 124.95 335 *e*PKPdf PKPdf 19 20 43.2 +0.1
BSEG *ep*PKPdf pPKPdf 19 20 53.8 -0.9
KKB Krupnik 125.00 317 P PKPdf 19 20 43.0 -0.5
VRAC Vranov 125.05 328 PKP PKPdf 19 20 43.0 -0.4
comp=Z,5.9nm,1.0s,baz=82,slow=1.2,SNR=11
VRAC Vranov 125.05 328 ⇓*i*P PKPdf 19 20 43.8 +0.4
NNA Nana 125.09 110 PFAKE 19 21 00.0 +16
NNA LR LR
comp=Z,623nm,22.0s,MS5.2
ZKR Zakros 125.28 309 P PKPdf 19 20 43.7 -0.6
PVCC Panska Ves 125.33 330 *e*PKIKP PKPdf 19 20 44.1 +0.2
PVCC *e* 19 20 54.9
PVCC MLR MLR
comp=Z,500nm,19.9s,MS5.2
PVCC Panska Ves 125.33 330 *e*PKPdf PKPdf 19 20 44.1 +0.2
PVCC *ep*PKP pPKPdf 19 20 54.9 -0.6
PVCC AMS AMS 20 15 30.0
comp=Z,500nm,19.9s
BRG Berggiesshubel 125.41 331 *e*PKPdf PKPdf 19 20 44.0 0.0
BRG *ep*PKPdf pPKPdf 19 20 54.6 -1.0
BRG Berggiesshubel 125.41 331 *e*PKP PKPdf 19 20 44.3 +0.2
comp=Z,38nm,1.4s
BRG *i* 19 20 54.8
comp=Z,24nm,1.3s
BRG *e* 19 21 16.8
comp=Z,10.0nm,1.3s
BRG *i* 19 22 39.0
BRG *e* 19 32 37.0
BRG *i* 19 32 46.0
BRG *i* 19 34 06.0
BRG SS SS 19 40 09.0 +39
comp=N,675nm,21.7s
BRG
comp=E,354nm,15.8s
BRG
comp=Z,898nm,21.3s
BRG Berggiesshubel 125.41 331 *e*PKIKP PKPdf 19 20 44.3 +0.3
BRG *i* 19 20 54.8
BRG *i* 19 22 39.0
BRG *e* 19 32 37.0
BRG *i* 19 34 06.0
BRG pmax pmax
comp=Z,23nm,1.4s
BRG MLR MLR
comp=N,404nm,21.7s
BRG MLR MLR
comp=E,212nm,15.8s
BRG MLR MLR
comp=Z,538nm,21.3s,MS5.2
ZST Bratislava 125.43 327 *e*PKIKP PKPdf 19 20 44.6 +0.4
ZST Bratislava 125.43 327 *e*PKP PKPdf 19 20 44.6 +0.4
BCIP Isla Barro Col 125.52 84 PFAKE 19 21 00.0 +15
BCIP LR LR
comp=Z,731nm,21.0s,MS5.3
CLL Collm 125.58 332 *e*PKPdf PKPdf 19 20 44.0 -0.3
CLL *ep*PKPdf pPKPdf 19 20 54.8 -1.1
CLL Collm 125.58 332 *i*PKIKP PKPdf 19 20 44.2 -0.1
CLL *e* 19 20 53.0
CLL *e* 19 22 36.0
CLL pmax pmax
comp=Z,26nm,1.4s
CLL MLR MLR
comp=Z,500nm,19.9s,MS5.2
CLL Collm 125.58 332 *i*PKP PKPdf 19 20 44.2 -0.1
CLL *ep*PKP pPKPdf 19 20 53.0 -2.9
CLL *e*PP PP 19 22 36.0 +0.5
CLL LR LR
comp=Z,500nm,19.9s,MS5.2
CLL Collm 125.58 332 *i*PKPdf PKPdf 19 20 44.2 -0.1
comp=Z,26nm,1.4s
CLL *ep*PKPdf pPKPdf 19 20 53.0 -2.9
comp=Z,15nm,1.2s
CLL *es*PKPdf 19 20 57.0
CLL *e*PP PP 19 22 36.0 +0.5
CLL *e* 19 23 19.0
CLL *e* 19 23 52.0
CLL *e* 19 31 28.0
CLL *e*PSKS 19 32 29.0
CLL *e*PPS 19 34 08.0
CLL *e*PPPrev 19 37 54.0
CLL *e*SS SS 19 39 36.0 +4.1
CLL *e*SSS 19 44 09.0
CLL *e*(SSSS) 19 48 24.0
CLL LmH 20 17 00.0
comp=Z,600nm,21.0s
CLL LmV 20 26 00.0
comp=Z,500nm,19.9s
PKME Peaks-Kenny Pk 125.61 37 *e*PKPdf PKPdf 19 20 43.7 -0.9
PKME *e* 19 20 53.9
PKME LR LR
comp=Z,2µm,20.0s,MS5.8
TREC Trest 125.63 329 *e*PKIKP PKPdf 19 20 44.6 +0.1
TREC *e* 19 20 55.5
TREC MLR MLR
comp=Z,800nm,23.5s,MS5.3
TREC Trest 125.63 329 *e*PKPdf PKPdf 19 20 44.6 +0.1
TREC *ep*PKP pPKPdf 19 20 55.5 -0.6
TREC AMS AMS 20 18 10.0
comp=Z,800nm,23.5s
PKSM Moragy 125.67 324 PKIKP PKPdf 19 20 44.7 0.0
PKSM Moragy 125.67 324 ⇓*i*P PKPdf 19 20 44.6 -0.1
PRU Pruhonice 125.69 330 *e*PKIKP PKPdf 19 20 44.9 +0.3
PRU *e* 19 20 55.6
PRU MLR MLR
comp=Z,800nm,26.1s,MS5.3
PRU Pruhonice 125.69 330 *e*PKPdf PKPdf 19 20 44.9 +0.3
PRU *ep*PKP pPKPdf 19 20 55.6 -0.6
PRU AMS AMS 20 15 40.0
comp=Z,800nm,26.1s
PRA Prague 125.69 330 PKPdf PKPdf 19 20 45.0 +0.4
PRA SKS SKSac 19 27 35.0 -12
LAST Lasithi 125.84 309 P PKPdf 19 20 45.4 0.0
DIVS Divibare 125.96 321 P PKPdf 19 20 44.8 -0.5
NRDL Niedersach Rie 126.07 334 *e*PKPdf PKPdf 19 20 45.3 +0.1
OTAV Otavalo 126.16 95 *e*PKPdf PKPdf 19 20 45.8 -0.8
OTAV LR LR
comp=Z,653nm,19.0s,MS5.3
LIT Litokhoron 126.16 316 P PKPdf 19 20 43.9 -1.9
CONA Conrad Observa 126.26 327 ⇑*i*PKPdf PKPdf 19 20 45.4 -0.3
comp=Z,14nm,1.2s
SIVA Sivas 126.40 309 P PKPdf 19 20 46.2 -0.2
LKR Lokris 126.40 314 P PKPdf 19 20 45.2 -1.1
CLZ Clausthal 126.41 334 *e*PKPdf PKPdf 19 20 46.2 +0.3
CLZ *ep*PKPdf pPKPdf 19 20 56.5 -1.0
TANN Tannenbergstha 126.43 331 *e*PKPdf PKPdf 19 20 46.0 0.0
TANN *ep*PKPdf pPKPdf 19 20 56.9 -0.7
FNA Florina 126.63 317 P PKPdf 19 20 46.0 -0.7
MOX Moxa 126.67 332 *e*PKP PKPdf 19 20 46.7 +0.2
comp=Z,42nm,2.0s
MOX *e* 19 20 57.1
MOX *e* 19 22 46.0
MOX
comp=Z,700nm,22.0s
MOX Moxa 126.67 332 *e*PKPdf PKPdf 19 20 46.3 -0.2
MOX Moxa 126.67 332 *e*PKIKP PKPdf 19 20 46.7 +0.2
MOX *e* 19 20 57.1
MOX *e* 19 22 46.0
MOX pmax pmax
comp=Z,42nm,2.0s
MOX MLR MLR
comp=Z,700nm,22.0s,MS5.3
DID Didima 126.68 312 P PKPdf 19 20 45.2 -1.7
KHC Kasperske Hory 126.71 329 *e*PKIKP PKPdf 19 20 47.0 +0.4
KHC *e* 19 20 57.6
KHC MLR MLR
comp=Z,1µm,22.3s,MS5.5
KHC Kasperske Hory 126.71 329 *e*PKPdf PKPdf 19 20 46.2 -0.4
KHC *e* 19 20 57.5
KHC Kasperske Hory 126.71 329 *e*PKPdf PKPdf 19 20 47.0 +0.4
KHC *ep*PKP pPKPdf 19 20 57.6 -0.6
KHC AMS AMS 20 16 20.0
comp=Z,1µm,22.3s
AGG Agios Georgios 126.73 315 P PKPdf 19 20 45.8 -1.1
GEC2 GERESS Array S 126.83 329 *e*PKPdf PKPdf 19 20 46.6 -0.2
GERES GERESS Array B 126.83 329 PKP PKPdf 19 20 47.1 +0.3
comp=Z,5.2nm,0.7s,baz=71,slow=1.7,SNR=59
GERES PKKPbc 19 30 16.2
comp=Z,0.4nm,0.5s,baz=226,slow=3.5,SNR=5.4
KOGS Kog 126.92 325 *e*PKPdf PKPdf 19 20 46.4 -0.6
KOGS *ep*PKPdf pPKPdf 19 20 56.8 -1.8
KARN Karanos 126.95 310 P PKPdf 19 20 47.5 0.0
ROTZ Rotzenmuhle 126.98 331 *e*PKPdf PKPdf 19 20 47.1 0.0
ROTZ *ep*PKPdf pPKPdf 19 20 57.5 -1.2
GVD Gavdhos 127.02 309 *e*PKPdf PKPdf 19 20 47.1 -0.5
GVD *e* 19 20 56.7
WET Wettzell 127.06 330 *e*PKPdf PKPdf 19 20 47.3 +0.1
WET *ep*PKPdf pPKPdf 19 20 57.9 -0.9
KALE Kalithea 127.12 314 P PKPdf 19 20 47.0 -0.7
GUR Goura 127.16 313 P PKPdf 19 20 43.3 -4.5
IBBN Ibbenburen 127.19 335 *e*PKPdf PKPdf 19 20 47.5 +0.1
WIT Witteveen 127.25 337 *e*PKP PKPdf 19 20 47.9 +0.4
comp=Z,149nm,0.5s
EFP Efpalio 127.28 314 P PKPdf 19 20 48.5 +0.5
UBBA Unterbreizbach 127.30 333 *e*PKPdf PKPdf 19 20 47.6 0.0
UBBA *ep*PKPdf pPKPdf 19 20 58.5 -0.8
LAKA Lakka 127.30 314 P PKPdf 19 20 45.0 -3.1
VLX Vlachokerasia 127.36 313 P PKPdf 19 20 47.4 -0.8
TIR Tirane 127.38 318 PFAKE 19 21 00.0 +12
TIR LR LR
comp=Z,607nm,21.0s,MS5.3
PERS Pernice 127.44 326 *e*PKPdf PKPdf 19 20 47.4 -0.7
MTDJ Mount Denham 127.45 72 PFAKE 19 21 00.0 +11
MTDJ LR LR
comp=Z,670nm,19.0s,MS5.3
SOKA Soboth 127.46 326 ⇓*i*PKPdf PKPdf 19 20 47.6 -0.5
comp=Z,17nm,1.3s
GRA1 Grafenberg Arr 127.51 331 *e*PKPdf PKPdf 19 20 48.0 -0.1
GRA1 *ep*PKPdf pPKPdf 19 20 58.1 -1.6
GRA1 LR LR
comp=Z,800nm,21.0s,MS5.4
GRF Grafenberg Arr 127.51 331 *e*PKPdf PKPdf 19 20 48.0 -0.1
GRF *ep*PKPdf pPKPdf 19 20 58.1 -1.6
GRF *eL* 20 20 11.6
comp=Z,772nm,21.0s
ITM Ithomi 127.77 313 P PKPdf 19 20 48.5 -0.5
WTSB Winterswijk 127.84 336 *e*PKP PKPdf 19 20 48.1 -0.5
comp=Z,34nm,1.6s
IGT Igoumenitsa 127.91 316 P PKPdf 19 20 48.9 -0.3
LVC Limon Verde 128.00 125 *e*PKPdf PKPdf 19 20 50.2 +0.3
LVC *e* 19 21 00.4
LVC LR LR
comp=Z,1µm,22.0s,MS5.6
RJOB Jochberg 128.00 328 *e*PKPdf PKPdf 19 20 48.4 -0.7
RJOB *ep*PKPdf pPKPdf 19 20 59.2 -1.5
PYL PYLOS 128.02 312 P PKPdf 19 20 48.1 -1.4
BOJS Bojanci 128.03 325 *e*PKPdf PKPdf 19 20 49.0 -0.2
BOJS *ep*PKPdf pPKPdf 19 20 59.9 -0.9
BUG Bochum--Univer 128.04 335 *e*PKPdf PKPdf 19 20 48.9 -0.1
BUG *ep*PKPdf pPKPdf 19 20 59.6 -1.0
LJU Ljubljana 128.12 326 *i*PKPdf PKPdf 19 20 49.1 -0.2
LJU *i*pPKPdf pPKPdf 19 20 59.8 -1.2
TNS Taunus Mts 128.42 333 *e*PKPdf PKPdf 19 20 49.9 +0.1
EKA Eskdalemuir Ar 128.44 344 PKP PKPdf 19 20 49.2 -0.5
comp=Z,2.8nm,0.4s,baz=13,slow=2.5,SNR=30
EKA PKKPbc 19 30 09.7
comp=Z,1.6nm,1.0s,baz=193,slow=3.3,SNR=4.5
ESK Eskdalemuir 128.47 344 PFAKE 19 21 00.0 +10
ESK LR LR
comp=Z,835nm,20.0s,MS5.4
FUR Furstenfeldbru 128.50 330 *e*PKPdf PKPdf 19 20 49.9 -0.1
FUR *ep*PKPdf pPKPdf 19 21 00.5 -1.1
TRI Trieste 128.75 326 PFAKE 19 21 00.0 +9.4
TRI LR LR
comp=Z,545nm,20.0s,MS5.2
ABTA Abfaltersbach 128.78 328 ⇓*i*PKPdf PKPdf 19 20 50.0 -0.6
comp=Z,19nm,1.3s,SNR=6.3
WTTA Wattenberg 128.91 329 ⇓*i*PKPdf PKPdf 19 20 50.8 -0.1
comp=Z,43nm,1.2s,SNR=12
STU Stuttgart 129.10 331 *e*PKPdf PKPdf 19 20 51.1 -0.1
STU Stuttgart 129.10 331 *e*PKPdf PKPdf 19 20 51.5 +0.3
HGN Heimansgroeve 129.11 335 *e*PKP PKPdf 19 20 50.0 -1.1
comp=Z,24nm,1.6s
MOTA Moosalm 129.13 329 ⇓*i*PKPdf PKPdf 19 20 50.8 -0.5
comp=Z,6.5nm,0.5s,SNR=10
MEM Membach 129.19 335 PKP PKPdf 19 20 51.1 -0.1
MEM APKP 19 21 01.9
GTBY Guantanamo Bay 129.53 70 PFAKE 19 21 00.0 +7.2
GTBY LR LR
comp=Z,955nm,22.0s,MS5.4
FETA Feichten 129.54 329 ⇑*e*PKPdf PKPdf 19 20 51.6 -0.4
comp=Z,22nm,1.2s,SNR=13
LANF Langenberg 129.60 333 PKP PKPdf 19 20 52.7 +0.6
LANF Langenberg 129.60 333 *e*P PKPdf 19 20 52.7 +0.6
BCLA Clavier 129.63 335 PKP PKPdf 19 20 51.9 -0.2
BCLA APKP 19 21 03.5
UCC Uccle 129.72 336 PKP PKPdf 19 20 53.1 +0.8
BFO Black Forest 129.82 332 *e*PKPdf PKPdf 19 20 52.2 -0.3
BFO LR LR
comp=Z,459nm,20.0s,MS5.2
WLF Walferdange 129.84 334 PKP PKPdf 19 20 53.4 +0.9
WLF APKP 19 21 04.4
WLF Walferdange 129.84 334 *e*PKPdf PKPdf 19 20 53.2 +0.7
WLF *ep*PKPdf pPKPdf 19 21 03.9 -0.2
WLF Walferdange 129.84 334 PFAKE 19 21 00.0 +7.5
WLF LR LR
comp=Z,718nm,20.0s,MS5.4
GIVF Givet 130.07 335 *e*PKIKP PKPdf 19 20 53.0 0.0
comp=Z,106nm,1.4s
DOU Dourbes 130.17 336 PKP PKPdf 19 20 52.3 -0.8
DOU APKP 19 21 04.2
CDF Champ du Feu 130.26 332 *e*PKIKP PKPdf 19 20 53.0 -0.4
comp=Z,11nm,0.9s
FELD Feldberg im Sc 130.30 331 PKP PKPdf 19 20 53.6 +0.1
FELD Feldberg im Sc 130.30 331 *e*P PKPdf 19 20 53.6 +0.1
BAIF Baives 130.36 336 *e*PKIKP PKPdf 19 20 53.6 +0.1
comp=Z,69nm,1.6s
ECH Echery 130.45 332 PFAKE 19 21 10.0 +16
ECH LR LR
comp=Z,565nm,20.0s,MS5.3
TIP Timpagrande 130.51 317 PFAKE 19 21 10.0 +16
TIP LR LR
comp=Z,626nm,22.0s,MS5.3
MOF Molkenrain 130.73 332 PKP PKPdf 19 20 54.5 +0.2
MOF Molkenrain 130.73 332 *e*P PKPdf 19 20 54.5 +0.2
ROSC El Rosal 130.75 89 PKP PKPdf 19 20 55.3 0.0
comp=Z,10.0nm,0.5s,baz=76,slow=23,SNR=6.1
HINF Hinteralfeld 130.88 332 *e*PKIKP PKPdf 19 20 54.2 -0.4
comp=Z,76nm,1.4s
TSUM Tsumeb 130.94 238 *e*PKPdf PKPdf 19 20 55.1 -0.4
TSUM LR LR
comp=Z,2µm,20.0s,MS5.7
AQU L'Aquila 130.95 323 PFAKE 19 21 10.0 +15
AQU LR LR
comp=Z,722nm,22.0s,MS5.3
HAU Haudompre 130.98 333 *e*PKIKP PKPdf 19 20 54.5 -0.2
comp=Z,64nm,1.4s
HAU *e*MLR MLR
comp=Z,1µm,22.8s,MS5.2
HAU Haudompre 130.98 333 *e*PKPdf PKPdf 19 20 54.5 -0.2
HAU LR LR
comp=Z,1µm,22.8s,MS5.5
THEF They Montfort 130.98 333 PKP PKPdf 19 20 55.3 +0.6
THEF They Montfort 130.98 333 *e*P PKPdf 19 20 55.3 +0.6
MEZF Maizieres J'vi 131.19 334 *e*PKIKP PKPdf 19 20 55.5 +0.4
comp=Z,122nm,1.5s

LOMF	**Lomont**	**131.23 332**	PKP	PKPdf	19 20 55.5	+0.3
LOMF	**Lomont**	**131.23 332**	*e*P	PKPdf	19 20 55.5	+0.3
LPAZ	**La Paz**	**131.49 118**	*e*PKHKP		19 20 45.9	
LPAZ			*e*		19 20 56.9	
LPAZ			MLR	MLR		
	comp=Z,718nm,21.0s					
LPAZ	**La Paz**	**131.49 118**	*e*PKPpre		19 20 45.9	
LPAZ			*e*PKPdf	PKPdf	19 20 56.9	+0.3
LPAZ			*e*SKP		19 24 18.9	
LPAZ			LR	LR		
	comp=Z,718nm,21.0s,MS5.3					
CEL	**Celeste**	**131.56 317**	*e*PKPdf	PKPdf	19 20 56.0	-0.2
CEL			LR	LR		
	comp=Z,629nm,22.0s,MS5.3					
VLC	**Villacollemand**	**131.59 326**	PFAKE		19 21 10.0	+14
VLC			LR	LR		
	comp=Z,729nm,22.0s,MS5.3					
CABF	**La Chapelle**	**132.12 331**	*e*PKIKP	PKPdf	19 20 55.8	-1.1
	comp=Z,100nm,1.7s					
LPL	**La Plagne**	**132.59 330**	*e*PKIKP	PKPdf	19 20 58.1	+0.2
LPG	**La Plagne**	**132.59 330**	*e*PKIKP	PKPdf	19 20 57.9	0.0
LOR	**Lormes**	**132.65 334**	*e*PKIKP	PKPdf	19 20 57.9	0.0
LOR			*e*MLR	MLR		
	comp=Z,643nm,23.0s,MS5.0					
LOR	**Lormes**	**132.65 334**	*e*PKPdf	PKPdf	19 20 57.9	0.0
LOR			LR	LR		
	comp=Z,640nm,23.0s,MS5.3					
GRTK	**Grand Turk**	**132.94 67**	PFAKE		19 21 10.0	+11
GRTK			LR	LR		
	comp=Z,1μm,22.0s,MS5.6					
BNI	**Bardonecchia**	**132.94 330**	*e*PKPdf	PKPdf	19 20 56.4	-2.2
BNI			*e*SKP		19 24 23.3	
BNI			LR	LR		
	comp=Z,1μm,22.0s,MS5.5					
SSF	**Saint Saulge**	**132.96 334**	*e*PKIKP	PKPdf	19 20 58.8	+0.3
MBDF	**Montbardon**	**133.12 329**	*e*PKIKP	PKPdf	19 20 58.8	-0.1
SMF	**Signal de Mont**	**133.13 333**	*e*PKIKP	PKPdf	19 20 56.8	-2.1
FLN	**La Foliniere**	**133.23 338**	*e*PKIKP	PKPdf	19 20 58.6	-0.4
FLN			*e*MLR	MLR		
	comp=Z,578nm,21.0s,MS5.0					
FLN	**La Foliniere**	**133.23 338**	*e*PKPdf	PKPdf	19 20 58.6	-0.4
FLN			LR	LR		
	comp=Z,580nm,21.0s,MS5.3					
SAOF	**Saorge**	**133.23 328**	PKP	PKPdf	19 20 59.2	+0.1
SAOF	**Saorge**	**133.23 328**	*e*P	PKPdf	19 20 59.2	+0.1
LDF	**La Druitiere**	**133.24 338**	*e*PKIKP	PKPdf	19 20 58.6	-0.4
SDDR	**Presa de Saban**	**133.24 70**	PFAKE		19 21 10.0	+10
SDDR			LR	LR		
	comp=Z,1μm,22.0s,MS5.6					
AVF	**Avril sur Loir**	**133.24 334**	*e*PKIKP	PKPdf	19 20 56.6	-2.5
AUTN	**L'Aution**	**133.29 328**	PKP	PKPdf	19 21 00.1	+0.9
AUTN	**L'Aution**	**133.29 328**	*e*P	PKPdf	19 21 00.1	+0.9
TOUF	**Mont Tournerai**	**133.37 328**	PKP	PKPdf	19 20 59.7	+0.3
TOUF	**Mont Tournerai**	**133.37 328**	*e*P	PKPdf	19 20 59.7	+0.3
PGF	**Pioggiola**	**133.40 325**	*e*PKIKP	PKPdf	19 20 59.0	-0.5
	comp=Z,29nm,0.9s					
LUCF	**Luceram**	**133.41 328**	PKP	PKPdf	19 20 59.7	+0.2
ORIF	**Oris-en-Rattie**	**133.44 330**	*e*PKIKP	PKPdf	19 20 59.0	-0.5
	comp=Z,19nm,0.9s					
ORIF			*e*MLR	MLR		
	comp=Z,798nm,22.8s,MS5.1					
REVF	**Revere**	**133.50 328**	PKP	PKPdf	19 20 59.5	-0.1
REVF	**Revere**	**133.50 328**	*e*P	PKPdf	19 20 59.5	-0.1
MVIF	**Mont Vial**	**133.50 328**	PKP	PKPdf	19 21 00.0	+0.4
MVIF	**Mont Vial**	**133.50 328**	*e*P	PKPdf	19 21 00.0	+0.4
BGF	**Bois d'Agland**	**133.64 334**	*e*PKIKP	PKPdf	19 20 59.7	-0.1
WDD	**Wield Dalam**	**133.69 315**	PFAKE		19 21 10.0	+10
WDD			LR	LR		
	comp=Z,335nm,20.0s,MS5.0					
SSB	**Saint Sauveur**	**133.83 331**	*e*PKIKP	PKPdf	19 20 56.7	-3.5
SSB			MLR	MLR		
	comp=Z,513nm,20.0s,MS5.2					
FRF	**La Foret Royal**	**134.00 328**	*e*PKIKP	PKPdf	19 21 00.1	-0.5
	comp=Z,9.0nm,0.6s					
VIVF	**Saint-Julien-l**	**134.07 331**	*e*PKIKP	PKPdf	19 21 00.5	-0.2
	comp=Z,46nm,1.3s					
TCF	**Toulx Ste Croi**	**134.13 334**	*e*PKIKP	PKPdf	19 21 01.2	+0.5
LMR	**La Mourre**	**134.23 328**	*e*PKIKP	PKPdf	19 21 00.5	-0.5
	comp=Z,12nm,0.8s					
SGMF	**Saint Gilles**	**134.41 339**	*e*PKIKP	PKPdf	19 21 00.7	-0.5
CPUP	**Villa Florida**	**134.54 137**	PKIKP	PKPdf	19 21 02.3	+0.2
CPUP					19 21 11.6	
CPUP			pmax	pmax		
	comp=Z,8.0nm,0.7s					
CPUP	**Villa Florida**	**134.54 137**	PKP	PKPdf	19 21 02.3	+0.2
	comp=Z,7.7nm,0.7s,baz=288,slow=1.9,SNR=17					
CPUP			pPKP	pPKPdf	19 21 11.6	-2.2
	comp=Z,12nm,0.8s,baz=179,slow=1.4,SNR=7.3					
ROSF	**Rostrenen**	**134.59 340**	*e*PKIKP	PKPdf	19 21 00.9	-0.6
SDV	**Santo Domingo**	**134.61 84**	PKP	PKPdf	19 21 02.2	-0.4
	comp=Z,28nm,0.6s,baz=299,slow=8.7,SNR=44					
SDV	**Santo Domingo**	**134.61 84**	*e*PKPdf	PKPdf	19 21 02.1	-0.5
SDV			LR	LR		
	comp=Z,328nm,22.0s,MS5.0					
MFF	**Saint Martin d**	**134.87 336**	*e*PKIKP	PKPdf	19 21 01.8	-0.3
QUIF	**Quistinic**	**134.91 339**	*e*PKIKP	PKPdf	19 21 01.7	-0.5
BBSR	**BB Station**	**134.97 50**	PFAKE		19 21 10.0	+7.3
BBSR			LR	LR		
	comp=Z,1μm,21.0s,MS5.7					
LASF	**Ste Croix**	**135.04 331**	*e*PKIKP	PKPdf	19 21 02.5	0.0
	comp=Z,30nm,1.0s					
VSL	**Villasalto**	**135.10 322**	*e*PKPpre		19 20 59.1	
VSL			LR	LR		
	comp=Z,318nm,21.0s,MS5.0					
RJF	**Les Rejaudoux**	**135.20 334**	*e*PKIKP	PKPdf	19 21 01.6	-1.2
RJF			*e*MLR	MLR		
	comp=Z,1μm,23.0s,MS5.2					
RJF	**Les Rejaudoux**	**135.20 334**	*e*PKPdf	PKPdf	19 21 01.6	-1.2
RJF			LR	LR		
	comp=Z,1μm,23.0s,MS5.5					
MTLF	**Montolieu**	**136.38 331**	*e*PKIKP	PKPdf	19 21 04.1	-0.9
KEST	**Kesra**	**137.33 318**	PKP	PKPdf	19 21 05.4	-1.7
	comp=Z,3.8nm,0.8s,baz=285,slow=1.0,SNR=13					
EPF	**Esparros**	**137.50 332**	*e*PKIKP	PKPdf	19 21 05.8	-1.3
EBIE	**Bielsa**	**137.86 332**	PKP	PKPdf	19 21 07.1	-0.7
EALK	**Alkurruntz**	**138.17 334**	PKP	PKPdf	19 21 08.2	-0.2
SJG	**San Juan**	**138.19 70**	PKIKP	PKPdf	19 21 08.8	-0.3
SJG			pmax	pmax		
	comp=Z,67nm,0.6s					
SJG	**San Juan**	**138.19 70**	PKP	PKPdf	19 21 08.8	-0.3
	comp=Z,66nm,0.6s,baz=3.7,slow=9.0,SNR=6.1					
SJG	**San Juan**	**138.19 70**	*e*PKPdf	PKPdf	19 21 08.0	-1.1
SJG			LR	LR		
	comp=Z,2μm,21.0s,MS5.8					
EPOB	**Poblet**	**138.44 330**	PKP	PKPdf	19 21 07.8	-1.1
MTP	**Monte Pirata**	**138.75 70**	*e*PKPdf	PKPdf	19 21 09.5	-0.6
ELAN	**Lanestosa**	**138.97 336**	PKP	PKPdf	19 21 09.5	-0.3
ECRI	**Cripan**	**139.10 335**	PKIKP	PKPdf	19 21 10.3	+0.2
EMOS	**Mosqueruela**	**139.95 331**	PKP	PKPdf	19 21 12.3	+0.6
ETOR	**Torete**	**140.34 333**	PKIKP	PKPdf	19 21 12.1	-0.3
GUD	**Guadarrama**	**141.42 334**	PKIKP	PKPdf	19 21 13.6	-0.7
PBRG	**Braganca**	**141.47 338**	*e*PKPdf	PKPdf	19 21 11.6	-2.8
ESDC	**Sonseca Array**	**142.13 333**	PKhKP		19 21 11.6	
	comp=Z,0.4nm,0.4s,baz=20,slow=3.5,SNR=5.8					
ESDC			PKP	PKPdf	19 21 16.4	+0.8
	comp=Z,0.5nm,0.4s,baz=16,slow=3.6,SNR=8.0					
ESDC			PP	PP	19 24 21.4	+0.7
	comp=Z,0.2nm,0.5s,baz=28,slow=7.5,SNR=4.2					
ESDC	**Sonseca Array**	**142.13 333**	PKP	PKPdf	19 21 13.4	-2.3
ESDC			PKP	PKPdf	19 21 16.4	+0.8
ESDC			PP	PP	19 24 21.4	+0.7
ESLA	**Sonseca Array**	**142.13 333**	PFAKE		19 21 30.0	+14
ESLA			LR	LR		
	comp=Z,2μm,20.0s,MS5.9					
MVO	**Moncorvo**	**142.13 338**	*e*PKPdf	PKPdf	19 21 16.1	+0.5
MVO			*e*LR	LR	20 15 40.2	
	comp=Z,414nm,23.2s					
EMUR	**La Murta**	**142.26 329**	PKP	PKPdf	19 21 15.3	-0.7
EVIA	**Vianos**	**142.28 331**	PKIKP	PKPdf	19 21 15.3	-0.6
ANWB	**Willy Bob**	**142.35 70**	PFAKE		19 21 30.0	+13
ANWB			LR	LR		
	comp=Z,1μm,20.0s,MS5.6					
PAB	**San Pablo**	**142.40 334**	*e*PKIKP	PKPdf	19 21 14.9	-1.2
PAB			MLR	MLR		
	comp=Z,441nm,21.0s,MS5.2					
SPB	**Sao Paulo**	**142.72 144**	*e*PKPdf	PKPdf	19 21 14.7	-2.5
PVIS	**Viseu**	**142.84 338**	*e*PKPdf	PKPdf	19 21 14.4	-2.5
MTE	**Manteigas**	**142.99 338**	*e*PKPdf	PKPdf	19 21 14.5	-2.6
MTE			*e*SKS	SKKSac	19 31 54.6	+38
MTE			*e*LR	LR	20 14 32.1	
	comp=Z,433nm,26.5s					
MTE	**Manteigas**	**142.99 338**	PFAKE		19 21 30.0	+13
MTE			LR	LR		
	comp=Z,586nm,22.0s,MS5.3					
EQES	**Quesada**	**143.21 331**	PKP	PKPdf	19 21 14.4	-3.3
EBAN	**Banos Encina**	**143.27 332**	PKIKP	PKPdf	19 21 14.9	-2.8
GRGR	**Grenville**	**143.31 79**	PFAKE		19 21 30.0	+12
GRGR			LR	LR		
	comp=Z,712nm,21.0s,MS5.4					
ENIJ	**Nijar**	**143.43 329**	PKIKP	PKPdf	19 21 16.5	-1.5
PCBR	**Castelo Branco**	**143.45 337**	*e*PKPdf	PKPdf	19 21 16.6	-1.4
FDF	**Fort de France**	**143.48 74**	PFAKE		19 21 30.0	+11
FDF			LR	LR		
	comp=Z,888nm,21.0s,MS5.5					
EADA	**Adamuz**	**143.63 333**	PKP	PKPdf	19 21 16.4	-2.0
PMRV	**Marv??o**	**143.77 337**	*e*PKPdf	PKPdf	19 21 17.1	-1.5
PMRV			*e*LR	LR	20 16 27.9	
	comp=Z,535nm,22.1s					
ELUQ	**Luque**	**143.98 332**	PKIKP	PKPdf	19 21 16.9	-2.1
PTOM	**Tomar**	**143.99 338**	*e*PKPdf	PKPdf	19 21 17.9	-1.0
ERON	**Agron**	**144.19 331**	PKP	PKPdf	19 21 16.7	-2.7
EBAD	**Badajoz**	**144.20 336**	PKP	PKPdf	19 21 17.4	-1.9
EGUA	**Guajares**	**144.22 330**	PKIKP	PKPdf	19 21 17.5	-1.9
ELOJ	**Sierra Loja**	**144.25 331**	PKIKP	PKPdf	19 21 18.4	-1.1
PESTR	**Estremoz**	**144.33 337**	*e*PKPdf	PKPdf	19 21 20.1	+0.5
PESTR			*e*LR	LR	20 13 41.5	
	comp=Z,629nm,18.8s					
PBAR	**Barrancos**	**144.70 335**	*e*PKPdf	PKPdf	19 21 21.1	+0.9
PBAR			*e*LR	LR	20 14 56.3	
	comp=Z,669nm,12.3s					
EVO	**Evora**	**144.79 337**	*e*PKPdf	PKPdf	19 21 20.1	-0.3
EMIN	**Mina Concepcio**	**144.89 335**	PKP	PKPdf	19 21 18.0	-2.6
PMAFR	**Mafra**	**144.90 339**	*e*PKPdf	PKPdf	19 21 20.4	-0.1
LIS	**Lisbon**	**145.06 338**	*e*P	PKPbc	19 21 19.4	-0.8
PLML	**Palmela**	**145.11 338**	*e*PKPdf	PKPdf	19 21 21.4	+0.5
PBEJ	**Beja**	**145.16 336**	*e*PKPdf	PKPdf	19 21 20.8	-0.2
BBGH	**Gun Hill**	**145.24 77**	PFAKE		19 21 30.0	+8.5
BBGH			LR	LR		
	comp=Z,2μm,22.0s,MS5.7					
ESPR	**Espera**	**145.28 333**	PKP	PKPdf	19 21 19.5	-1.8
PVAQ	**Vaqueiros**	**145.64 335**	*e*PKPdf	PKPdf	19 21 22.4	+0.5
PVAQ			*e*LR	LR	20 17 15.1	
	comp=Z,588nm,21.8s					
SFS	**San Fernando**	**145.77 333**	PFAKE		19 21 30.0	+7.9
SFS			LR	LR		
	comp=Z,1μm,21.0s,MS5.7					
PBDV	**Barranco-do-Ve**	**145.86 336**	*e*PKPdf	PKPdf	19 21 23.9	+1.7
PBDV			*i* P		19 22 25.7	
PBDV			*e*LR	LR	20 17 17.9	
	comp=Z,773nm,17.7s					
PTEO	**Sao Teotonio**	**145.92 337**	*e*PKPdf	PKPdf	19 21 23.6	+1.3
MORF	**Marmelete**	**146.10 336**	*e*PKPdf	PKPdf	19 21 24.1	+1.5
MORF			*e*LR	LR	20 24 03.5	
	comp=Z,623nm,23.0s					
PFVI	**Vila Bisbo**	**146.32 337**	*e*PKPdf	PKPdf	19 21 23.7	+0.7
PFVI			*e*LR	LR	20 13 46.8	
	comp=Z,675nm,21.5s					
TAM	**Tamanrasset**	**146.63 302**	PFAKE		19 21 40.0	+16
TAM			LR	LR		
	comp=Z,274nm,21.0s,MS5.0					
RTC	**Rabat Centre**	**148.10 331**	PFAKE		19 21 40.0	+14
RTC			LR	LR		
	comp=Z,576nm,20.0s,MS5.4					
PMAR	**Madeira**	**153.02 345**	*e*PKPdf	PKPdf	19 21 41.5	+7.7
TORD	**Torodi Ar. Bea**	**153.08 286**	PKP	PKPdf	19 21 33.1	-1.2
	comp=Z,3.7nm,0.6s,baz=4.0,slow=0.9,SNR=33					
TORD			PKPbc	PKPbc	19 21 41.1	-0.5
	comp=Z,21nm,0.5s,baz=50,slow=2.2,SNR=101					
TORD			PKPab	PKPab	19 21 50.3	-2.9
	comp=Z,45nm,0.9s,baz=34,slow=2.9,SNR=21					
TORD			PP	PP	19 25 27.4	+0.7
	comp=Z,4.2nm,1.1s,baz=73,slow=4.7,SNR=4.0					
KIC	**Kosan Boka**	**160.01 270**	*e*P	PKPab	19 22 13.2	-10
	comp=Z,159nm,1.1s					
DBIC	**Dimbokro**	**160.14 271**	PKIKP	PKPdf	19 21 43.2	-0.3
DBIC			*e*		19 22 23.0	
DBIC			MLR	MLR		
	comp=Z,418nm,20.0s					
LIC	**Lamto**	**160.29 270**	*e*PKP2	PKPab	19 22 24.0	-0.4
	comp=Z,36nm,0.8s					
LIC			*e*MLR	MLR		
	comp=Z,1μm,22.2s					
LIC	**Lamto**	**160.29 270**	*e*P	PKPab	19 22 17.0	-7.4
	comp=Z,110nm,1.2s					
TIC	**Toumodi**	**160.30 271**	*e*P	PKPab	19 22 13.9	-10
	comp=Z,167nm,1.4s					
ASCN	**Ascension**	**162.13 216**	PFAKE		19 22 00.0	+14
ASCN			LR	LR		
	comp=Z,558nm,22.0s					
RCBR	**Riachuelo**	**163.41 138**	PFAKE		19 22 00.0	+13
RCBR			LR	LR		
	comp=Z,980nm,20.0s					

ISCJB ***03*** *19:09:25.1±0.3, 47°.38N±0°.02×10°.03E±0°.02, h10km, Error ellipse: s-maj=3.2km s-min=1.8km az=177.9*
ZUR ***03*** *19:09:25.6, 47°.36N×10°.06E, h-1km±3km, ML2.1/6*
VIE ***03*** *19:09:26.2±0.4, 47°.30N×10°.03E, h9km±3km, mb1.4/10, ML2.3/12, Error ellipse: s-maj=2.1km s-min=1.5km az=161.0 12 km WNW of Warth*
NEIC ***03*** *19:09:26.7, 47°.35N×10°.09E, h5km, ML2.6(LDG), After LDG.*
BGR ***03*** *19:09:26.8±0.3, 47°.31N×10°.02E, h10km, ML2.0, Error ellipse: s-maj=5.6km s-min=3.3km az=2.0*
LDG ***03*** *19:09:26.7±0.5, 47°.35N×10°.09E, h5km, Ml2.6/8, Error ellipse: s-maj=9.0km s-min=5.8km az=75.0*
PRU ***03*** *19:09:26.5, 47°.34N×10°.12E, h0km*
CSEM ***03*** *19:09:26.0±0.1, 47°.33N×10°.04E, h10km, ML2.5/13, Error ellipse: s-maj=3.7km s-min=1.9km az=178.0*

ISC 03 19:09:26.3±0.3, 47°.37N±0°.02×10°.04E±0°.02, h10km±4km, n75, σ0°99/130, 11C-7D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels**	**0.14**	**235**	*e*Pg	**Pg**	**19 09 29.1**	**-0.3**
DAVA				*e*Sg	**Sg**	**19 09 31.5**	**-0.1**
DAVA	**Damuels**	**0.14**	**235**	*e*Pg	**Pg**	**19 09 29.1**	**-0.3**
	168nm,0.2s,SNR=130						
DAVA				⇓*i*Sg	**Sg**	**19 09 30.9**	**-0.6**
	275nm,0.2s						
DAVA	**Damuels**	**0.14**	**235**	Pg	**Pg**	**19 09 29.1**	**-0.3**
	168nm,0.2s,SNR=130						
DAVA				Sg	**Sg**	**19 09 30.9**	**-0.6**
	275nm,0.2s						
LIENZ	**Kamor/St.Gall**	**0.38**	**260**	*e*Pg	**Pg**	**19 09 33.8**	**0.0**
	112nm,0.6s						
LIENZ	**Kamor/St.Gall**	**0.38**	**260**	*e*Pg	**Pg**	**19 09 33.8**	**0.0**
	112nm,0.6s						
RETA	**Reutte**	**0.51**	**76**	⇓*e*Pg	**Pg**	**19 09 36.2**	**+0.1**
	8.3nm,0.2s,SNR=22						
RETA				⇑*i*Sg	**Sg**	**19 09 44.6**	**+1.8**
	12nm,0.2s						
RETA	**Reutte**	**0.51**	**76**	Pg	**Pg**	**19 09 36.2**	**+0.1**
	8.3nm,0.2s,SNR=22						
RETA				Sg	**Sg**	**19 09 44.6**	**+1.8**
	12nm,0.2s						
PLONS	**Plons/SG**	**0.55**	**235**	⇑*i*Pg	**Pg**	**19 09 36.7**	**-0.3**
	112nm,0.4s						
PLONS				*e*Sg	**Sg**	**19 09 44.8**	**+0.6**
	112nm,0.4s						
PLONS	**Plons/SG**	**0.55**	**235**	⇑*i*Pg	**Pg**	**19 09 36.7**	**-0.3**
PLONS				*e*Sg	**Sg**	**19 09 44.8**	**+0.6**
FETA	**Feichten**	**0.58**	**126**	*e*Pg	**Pg**	**19 09 37.3**	**-0.3**
	1.5nm,0.1s,SNR=15						
FETA				⇑*i*Sg	**Sg**	**19 09 45.0**	**-0.2**
	2.1nm,0.1s						
FETA	**Feichten**	**0.58**	**126**	Pg	**Pg**	**19 09 37.3**	**-0.3**
	1.5nm,0.1s,SNR=15						
FETA				Sg	**Sg**	**19 09 45.0**	**-0.2**
	2.1nm,0.1s						
DAVOX	**Davos/Dischmat**	**0.59**	**191**	*e*Pg	**Pg**	**19 09 37.5**	**-0.3**
	51nm,0.7s						
DAVOX	**Davos/Dischmat**	**0.59**	**191**	*e*Pg	**Pg**	**19 09 37.5**	**-0.3**
	51nm,0.7s						
MOTA	**Moosalm**	**0.72**	**91**	⇑*e*Pg	**Pg**	**19 09 40.0**	**-0.3**
	7.5nm,0.2s,SNR=7.6						
MOTA				⇑*i*Sg	**Sg**	**19 09 50.7**	**+1.0**
	15nm,0.3s						
MOTA	**Moosalm**	**0.72**	**91**	Pg	**Pg**	**19 09 40.0**	**-0.2**
	7.5nm,0.2s,SNR=7.6						
MOTA				Sg	**Sg**	**19 09 50.7**	**+1.0**
	15nm,0.3s						
WEIN	**Weingarten**	**0.73**	**283**	*e*Pg	**Pg**	**19 09 41.3**	**+0.8**
	177nm,0.2s						
WEIN				*e*Sg	**Sg**	**19 09 52.1**	**+2.0**
	177nm,0.2s						
WEIN	**Weingarten**	**0.73**	**283**	*e*Pg	**Pg**	**19 09 41.3**	**+0.8**
	177nm,0.2s						
WEIN				*e*Sg	**Sg**	**19 09 52.1**	**+2.0**
	177nm,0.2s						
WILA	**Wila**	**0.77**	**274**	⇑*i*Pg	**Pg**	**19 09 41.8**	**+0.6**
	509nm,0.2s						
WILA				*e*Sg	**Sg**	**19 09 53.2**	**+2.0**
	509nm,0.2s						
WILA	**Wila**	**0.77**	**274**	⇑*i*Pg	**Pg**	**19 09 41.8**	**+0.6**
	509nm,0.2s						
WILA				*e*Sg	**Sg**	**19 09 53.2**	**+2.0**
	509nm,0.2s						
MUO	**Muotathal**	**1.04**	**248**	⇓*i*Pg	**Pg**	**19 09 46.3**	**+0.1**
	143nm,0.5s						
MUO	**Muotathal**	**1.04**	**248**	⇓*i*Pg	**Pg**	**19 09 46.3**	**+0.1**
	143nm,0.5s						
WATA	**Walderalm**	**1.04**	**91**	⇑*i*Pg	**Pg**	**19 09 46.6**	**+0.2**
	4.7nm,0.2s						
WATA				⇓*i*Sg	**Sg**	**19 10 01.6**	**+1.6**
	7.9nm,0.2s						
WATA	**Walderalm**	**1.04**	**91**	Pg	**Pg**	**19 09 46.6**	**+0.2**
	4.7nm,0.2s						
WATA				Sg	**Sg**	**19 10 01.6**	**+1.7**
	7.9nm,0.2s						
WTTA	**Wattenberg**	**1.09**	**95**	*e*Pn	**Pn**	**19 09 47.0**	**-0.6**
WTTA				*e*Sg	**Sg**	**19 10 03.5**	**+2.1**
WTTA	**Wattenberg**	**1.09**	**95**	⇓*i*Pg	**Pg**	**19 09 47.1**	**-0.2**
	2.1nm,0.1s						
WTTA				⇑*i*Sg	**Sg**	**19 10 02.7**	**+1.3**
	10nm,0.2s						
WTTA	**Wattenberg**	**1.09**	**95**	Pg	**Pg**	**19 09 47.1**	**-0.1**
	2.1nm,0.1s						
WTTA				Sg	**Sg**	**19 10 02.7**	**+1.3**
	10nm,0.2s						
FUR	**Furstenfeldbru**	**1.16**	**46**	*e*Pg	**Pg**	**19 09 49.1**	**+0.6**
FUR				*e*Sg	**Sg**	**19 10 05.8**	**+2.3**
FUR	**Furstenfeldbru**	**1.16**	**46**	*e*Pg	**Pg**	**19 09 49.1**	**+0.6**
FUR				*e*Sg	**Sg**	**19 10 05.8**	**+2.3**
FUR	**Furstenfeldbru**	**1.16**	**46**	Pg	**Pg**	**19 09 49.1**	**+0.6**
FUR				Sg	**Sg**	**19 10 05.8**	**+2.3**
BFO	**Black Forest**	**1.50**	**311**	*e*Pn	**Pn**	**19 09 53.7**	**+0.4**
BFO				*e*Sg	**Sg**	**19 10 15.7**	**+1.1**
BFO	**Black Forest**	**1.50**	**311**	*e*Pn	**Pn**	**19 09 53.7**	**+0.4**
BFO				*e*Sg	**Sg**	**19 10 15.7**	**+1.0**
BFO	**Black Forest**	**1.50**	**311**	Pn	**Pn**	**19 09 53.7**	**+0.4**
BFO				Sg	**Sg**	**19 10 15.7**	**+1.0**
ABTA	**Abfaltersbach**	**1.80**	**109**	⇑*i*Pg	**Pg**	**19 10 00.5**	**-0.3**
	4.3nm,0.3s						
ABTA				⇓*i*Sg	**Sg**	**19 10 24.9**	**+0.9**
	3.1nm,0.3s						
ABTA	**Abfaltersbach**	**1.80**	**109**	Pg	**Pg**	**19 10 00.5**	**-0.3**
	4.3nm,0.3s						
ABTA				Sg	**Sg**	**19 10 24.9**	**+0.8**
	3.1nm,0.3s						
ECH	**Echery**	**2.12**	**295**	*e*Pn	**Pn**	**19 10 03.7**	**+1.9**
ECH				*e*Sn	**Sn**	**19 10 29.0**	**+0.8**
ECH	**Echery**	**2.12**	**295**	*e*Pn	**Pn**	**19 10 03.7**	**+1.9**
ECH				*e*Sn	**Sn**	**19 10 29.0**	**+0.8**
CDF	**Champ du Feu**	**2.14**	**300**	*e*Pg	**Pg**	**19 10 07.4**	**+0.2**
CDF				*e*Sg	**Sg**	**19 10 34.6**	**-0.3**
	5.7nm,0.2s						
CDF	**Champ du Feu**	**2.14**	**300**	*e*Pn	**Pn**	**19 10 02.3**	**+0.3**
CDF				*e*Pg	**Pg**	**19 10 07.4**	**+0.2**
CDF				*e*Sg	**Sg**	**19 10 34.6**	**-0.3**
CDF	**Champ du Feu**	**2.14**	**300**	*e*Pn	**Pn**	**19 10 02.3**	**+0.3**
CDF	**Champ du Feu**	**2.14**	**300**	*e*Pg	**Pg**	**19 10 07.4**	**+0.2**
CDF				*e*Sg	**Sg**	**19 10 34.6**	**-0.3**
	2.8nm,0.2s						
HINF	**Hinteralfeld**	**2.21**	**283**	*e*Pg	**Pg**	**19 10 08.3**	**-0.2**
HINF				*e*Sg	**Sg**	**19 10 37.0**	**-0.1**
	5.1nm,0.2s						
HINF	**Hinteralfeld**	**2.21**	**283**	*e*Pn	**Pn**	**19 10 02.7**	**-0.2**
HINF				*e*Pg	**Pg**	**19 10 08.3**	**-0.2**
HINF				*e*Sg	**Sg**	**19 10 37.0**	**-0.1**
HINF	**Hinteralfeld**	**2.21**	**283**	*e*Pn	**Pn**	**19 10 02.7**	**-0.2**
HINF	**Hinteralfeld**	**2.21**	**283**	*e*Pg	**Pg**	**19 10 08.3**	**-0.2**
HINF				*e*Sg	**Sg**	**19 10 37.0**	**-0.1**
	2.5nm,0.2s						
KBA	**Koelnbreinsper**	**2.27**	**96**	*e*Pg	**Pg**	**19 10 08.8**	**-1.0**
KBA				*e*Sg	**Sg**	**19 10 38.3**	**-0.9**
KBA	**Koelnbreinsper**	**2.27**	**96**	Pg	**Pg**	**19 10 08.8**	**-1.0**
KBA				Sg	**Sg**	**19 10 38.3**	**-0.9**
GRA1	**Grafenberg Arr**	**2.46**	**18**	Sg	**Sg**	**19 10 46.3**	**

XAVN	**Gruta Xavier**	**1.35**	**32**	*i* P		**Pn**	**19 18 50.9**	**-0.5**
TISN	**Laguna Tiscapa**	**1.38**	**34**	*i* P		**Pn**	**19 18 51.0**	**-0.7**
MGAN	**Managua**	**1.39**	**35**	*i* P		**Pn**	**19 18 51.5**	**-0.4**
MGAN					AML	AML	19 19 05.4	
	comp=E,68nm,0.6s							
MGAN				*e*S		**Sb**	**19 19 10.6**	**+0.2**
APYN	**Apoyeque**	**1.41**	**30**	*e*P		**Pn**	**19 18 51.3**	**-0.9**
WILN	**Americas 2**	**1.44**	**37**	*e*P		**Pn**	**19 18 52.2**	**-0.4**
MIRN	**Miramar**	**1.47**	**13**	*e*P		**Pn**	**19 18 52.6**	**-0.4**
MOMN	**Momotombo**	**1.49**	**20**	*i* P		**Pn**	**19 18 53.1**	**-0.2**
CONN	**Concepcion**	**1.52**	**68**	*e*P		**Pn**	**19 18 54.3**	**+0.6**
CNGN	**Cerro Negro**	**1.53**	**13**	*i* P		**Pn**	**19 18 53.2**	**-0.7**
HUEN		**1.59**	**33**	*i* P		**Pn**	**19 18 54.2**	**-0.5**
TELN	**Telica**	**1.61**	**8**	*i* P		**Pn**	**19 18 54.9**	**-0.1**
CRIN	**San Cristobal**	**1.69**	**0**	*e*P		**Pn**	**19 18 55.9**	**-0.2**
BOAB	**BOACO BROADBAN**	**.99**	**43**	*i* P		**Pn**	**19 18 59.4**	**-0.8**
JTS	**JuntasAbangare**	**2.19**	**109**	Pn		**Pg**	**19 19 08.7**	**+0.7**
	comp=E,8.9nm,0.3s,baz=320,slow=15,SNR=23							
JTS				Lg			19 19 41.9	
	comp=E,3.4nm,0.3s,baz=216,slow=19,SNR=4.8							
JTS	**JuntasAbangare**	**2.19**	**109**	*e*Pn		**Pg**	**19 19 08.5**	**+0.5**
JTS				*e*Sn		**Sg**	**19 19 35.8**	**-0.6**
CNCH	**Conchagua**	**2.38**	**342**	*e*P		**Pn**	**19 19 08.0**	**+2.4**
BLLM	**Bellamira**	**2.69**	**335**	*e*S		**Sg**	**19 19 51.1**	**-1.3**
CAHU	**Cacacuatique**	**2.97**	**338**	*e*P		**Pn**	**19 19 14.4**	**+0.7**
TGUH	**Tegucigalpa,Un**	**3.05**	**356**	*e*Pn		**Pn**	**19 19 06.6**	**-8.1**
TGUH	**Tegucigalpa,Un**	**3.05**	**356**	*e*S		**Sn**	**19 19 52.8**	**+1.3**
RBDL	**Robledal**	**4.02**	**321**	*e*S		**Sn**	**19 20 15.3**	**-0.2**
TXAR	**Lajitas Array**	**23.94**	**322**	P		**P**	**19 23 42.1**	**+1.2**
	comp=E,1.3nm,0.8s,mb3.4,baz=133,slow=10,SNR=5.3							
PDAR	**Pinedale Array**	**37.22**	**332**	P		**P**	**19 25 38.4**	**+0.2**
	comp=E,0.4nm,0.5s,mb3.5,baz=128,slow=12,SNR=4.9							
YKA	**Yellowknife Ar**	**55.10**	**345**	P		**P**	**19 27 57.4**	**-1.2**
	comp=E,0.3nm,0.7s,mb3.4,baz=142,slow=7.1,SNR=8.2							
YKA	**Yellowknife Ar**	**55.10**	**345**	P		**P**	**19 27 57.4**	**-1.2**
KEV	**Kevo**	**87.80**	**19**	*e*p		**P**	**19 31 16.7**	**+0.9**
	comp=E,3.9nm,0.8s,mb4.7							
ASAR	**Alice Springs**	**139.06**	**247**	PKP		PKPdf	19 37 58.2	+3.8
	comp=E,0.2nm,0.8s,baz=126,slow=2.4,SNR=2.7							

MAN 03 19:18:27, 11°.46N×122°.18E, h28km, mb4.4, ML3.3, MS3.2, 1C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALP	**Kalibo**	**0.27**	**36**	⇓*i*P	Pb	19 18 35.9	+2.0
KALP				*i* S	Sb	19 18 43.0	+4.5
RCP	**Roxas**	**0.57**	**80**	⇑*e*P	Pb	19 18 40.1	+1.7
RCP				*e*S	Sb	19 18 50.0	+3.7
GUIM	**Jordan**	**0.92**	**154**	*e*P	Pn	19 18 44.8	+0.7
GUIM				*e*S	Sb	19 18 57.4	+1.1
CUYO	**Cuyo Island**	**1.29**	**242**	*e*P	Pn	19 18 50.2	+1.0
CUYO				*e*S	Sn	19 19 01.1	-4.4
SJMP	**San Jose**	**1.44**	**314**	*e*P	Pn	19 18 55.1	+3.9
SJMP				*e*S	Sn	19 19 08.5	-0.6
BUSP	**Coron**	**2.01**	**286**	*e*P	Pn	19 18 59.7	+0.6
BOAC	**Boac**	**2.01**	**351**	*e*P	Pn	19 19 01.9	+2.8
BOAC				*e*S	Sn	19 19 22.0	-1.4

*NEIC **03** 19:54:48.6, 19°.21N×69°.35W, h131km, MD4.0(RSPR), After RSPR.*

RSPR 03 19:54:48.6, 19°.21N×69°.35W, h131km±5km, MD4.0/4, MD4.0/4, 3C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.15**	**127**	⇓*i*P	Pn	19 55 10.8	-2.2
PCDR	**Punta Cana, DR**	**1.15**	**127**	*e*S	Sn	19 55 29.0	-2.5
SDDR	**Presa de Saban**	**1.84**	**263**	⇑*e*P	Pn	19 55 20.9	+0.1
SDDR	**Presa de Saban**	**1.84**	**263**	*e*S	Sn	19 55 45.3	0.0
SDDR	**Presa de Saban**	**1.84**	**263**	*e*Pn	Pn	19 55 13.8	-6.9
SDDR				*e*Sn	Sn	19 55 44.4	-0.9
LSP	**Las Mesas**	**2.38**	**115**	*e*S	Sn	19 55 56.5	-0.6
CRPR	**Cabo Rojo, PR**	**2.44**	**119**	⇑*e*P	Pn	19 55 28.8	+0.7
CRPR				*e*S	Sn	19 55 59.4	+1.0
GRTK	**Grand Turk**	**2.84**	**324**	*e*Pn	Pn	19 55 28.2	-5.0
CBYP	**Canovanas**	**3.44**	**105**	*e*Pn	Pn	19 55 38.2	-2.9
CPD	**Cerro la Pandu**	**3.46**	**109**	*e*Pn	Pn	19 55 42.1	+0.8
CPD				*e*Sn	Sn	19 56 16.4	-5.6
HUMP	**Col San Antoni**	**3.48**	**107**	*e*Pn	Pn	19 55 37.5	-4.1
MTP	**Monte Pirata**	**3.77**	**106**	⇑*e*P	Pn	19 55 43.7	-1.7
MTP				*e*S	Sn	19 56 28.6	-0.6
MTP	**Monte Pirata**	**3.77**	**106**	*e*Pn	Pn	19 55 45.9	+0.5
MTP				*e*Sn	Sn	19 56 25.6	-3.7

MAN 03 19:57:33, 13°.62N×122°.57E, h24km, mb4.0, ML2.8, MS2.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.31**	**161**	*e*P	Pb	19 57 41.2	+1.1
GQP	**Guinayangan**	**0.31**	**337**	⇑*i*P	Pb	19 57 41.3	+1.2
GQP				*i* S	Sb	19 57 47.3	+2.3
BOAC	**Boac**	**0.73**	**258**	*e*P	Pb	19 57 50.0	+3.0
BOAC				*e*S	Sb	19 57 58.9	+2.3
PVCP	**Virac**	**1.54**	**91**	*e*P	Pn	19 57 59.4	+0.4

MAN 03 20:04:10, 15°.46N×121°.27E, h0km, mb4.2, ML3.1, MS2.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**0.19**	**302**	⇑*i*P	Pg	20 04 15.5	+1.8
PCPH				*i* S	Sg	20 04 19.3	+3.1
BALP	**Baler**	**0.41**	**47**	*e*P	Pg	20 04 18.3	+0.4
POLP	**Polilio Island**	**0.98**	**138**	*e*P	Pg	20 04 29.2	+0.5
SCZP	**Santa Cruz**	**1.34**	**284**	*e*P	Pg	20 04 35.1	-0.6
CAUP	**Cauayan**	**1.57**	**20**	*e*P	Pn	20 04 38.3	-0.8
BOLP	**Bolinao**	**1.59**	**305**	*e*P	Pn	20 04 38.9	-0.5
GQP	**Guinayangan**	**1.92**	**143**	⇓*i*P	Pn	20 04 43.9	-0.1
GQP				*i* S	Sn	20 05 10.8	+1.9
PALP	**Palanan**	**1.94**	**35**	*e*P	Pn	20 04 45.9	+1.6
LUBP	**Lubang**	**1.98**	**210**	*e*P	Pn	20 04 45.8	+1.0
BOAC	**Boac**	**2.07**	**164**	*e*P	Pn	20 04 47.0	+1.0
ABRA	**Dolores**	**2.24**	**346**	*e*P	Pn	20 04 48.6	+0.2
APYP	**Conner**	**2.39**	**359**	*e*P	Pn	20 04 52.0	+1.6
PVCP	**Virac**	**3.35**	**123**	*e*P	Pn	20 05 05.4	+1.6

*BJI **03** 20:11:30.6, 79°.00N×116°.00W, h18km, mB4.9/18, mb4.7/30, Ms4.6/17, Ms7 4.3/17*
*ISCJB **03** 20:11:32.5±0.1, 79°.15N±0°.02×115°.2W±0°.1, h10km, mb4.6/138, MS4.1/14, Error ellipse: s-maj=3.7km s-min=2.4km az=18.8*
*IDC **03** 20:11:32.8±0.4, 79°.26N×115°.54W, h0km, mb4.3/31, mb1 4.5/34, mb1mx4.4/37, mbtmp4.3/34, ML4.2/3, MS3.9/10, Ms1 3.8/10, ms1mx3.5/47, Error ellipse: s-maj=12.9km s-min=9.2km az=91.0*
*OTT **03** 20:11:33.7±1.1, 79°.00N×115°.98W, h18km, ML4.9/2, Queen Elizabeth Slope. 270km west from Isachsen, Nu*
*NEIC **03** 20:11:33.7, 79°.00N×115°.98W, h18km, mb4.7/98, ML4.9(PGC), After PGC.*
*SZGRF **03** 20:11:43.3, 80°.00N×114°.25W, h33km, mb4.8, Arctic Ocean*

ISC 03 20:11:34.6±0.1, 79°.20N±0°.02×115°.4W±0°.1, h10km, (h15km±.4km:pP-P), n357, σ0:92/401, mb4.6/138, MS4.1/14, 57C-33D, Arctic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**5.26**	**67**	Pn	**Pn**	**20 12 52.2**	**-0.9**
EUNU				Sn	**Sn**	**20 13 49.1**	**-4.7**
EUNU	**Eureka**	**5.26**	**67**	PN	**Pn**	**20 12 52.2**	**-0.9**
EUNU				SN	**Sn**	**20 13 49.1**	**-4.7**
EUNU				Trac		20 15 21.9	
	comp=Z,1μm,2.2s						
RES	**Resolute Bay**	**6.44**	**124**	Pn	**Pn**	**20 13 08.2**	**-1.0**
	5.2nm,0.3s,baz=321,slow=13,SNR=210						
RES				Sn	**Sn**	**20 14 19.4**	**-3.1**
	28nm,0.3s,baz=50,slow=21,SNR=8.0						
RES				LR	LR	20 16 11.7	
	comp=Z,542nm,19.2s,baz=232,slow=43						
RES	**Resolute Bay**	**6.44**	**124**	*e*Pn	**Pn**	**20 13 06.8**	**-2.4**
	2.4nm,1.0s						
RES				*e*Sn	**Sn**	**20 14 16.4**	**-6.1**
RES	**Resolute Bay**	**6.44**	**124**	PN	**Pn**	**20 13 07.0**	**-2.2**
RES				SN	**Sn**	**20 14 17.2**	**-5.4**
RES				LG		20 15 02.4	
RES				Trac		20 15 25.6	
	comp=Z,930nm,1.6s						
INK	**Inuvik**	**11.96**	**214**	Pn	**Pn**	**20 14 21.1**	**-3.6**
	1.4nm,0.3s,baz=18,slow=17,SNR=30						
INK				Sn	**Sn**	**20 16 28.4**	**-10**
	1.1nm,0.3s,baz=105,slow=22,SNR=3.1						
INK	**Inuvik**	**11.96**	**214**	*e*Pn	**Pn**	**20 14 20.1**	**-4.6**
	10nm,0.6s						
INK				*e*Sn	**Sn**	**20 16 27.4**	**-11**
INK	**Inuvik**	**11.96**	**214**	PN	**Pn**	**20 14 20.8**	**-4.0**
INK				SN	**Sn**	**20 16 26.5**	**-11**
INK				Trac		20 16 50.1	
	comp=Z,26nm,0.9s						
GIFN	**Gifford Fjord,**	**12.57**	**119**	Pn	**Pn**	**20 14 28.9**	**-4.1**
GIFN				Sn	**Sn**	**20 16 42.6**	**-10**
GIFN				Lg		20 17 53.2	
GIFN	**Gifford Fjord,**	**12.57**	**119**	PN	**Pn**	**20 14 28.9**	**-4.1**
GIFN				SN	**Sn**	**20 16 42.6**	**-10**
GIFN				LG		20 17 53.2	
GIFN				Trac		20 18 44.4	
	comp=Z,375nm,2.2s						
AP3N	**Apex site 3 Nu**	**12.59**	**124**	Pn	**Pn**	**20 14 30.5**	**-2.9**
AP3N				Sn	**Sn**	**20 16 45.4**	**-7.9**
AP3N				Lg		20 18 14.3	
AP3N	**Apex site 3 Nu**	**12.59**	**124**	PN	**Pn**	**20 14 30.5**	**-2.9**
AP3N				SN	**Sn**	**20 16 45.4**	**-7.9**
AP3N				LG		20 18 14.3	
AP3N				Trac		20 18 55.5	
	comp=Z,283nm,2.2s						
LAIN	**Lailor River,**	**13.05**	**123**	Pn	**Pn**	**20 14 36.8**	**-2.9**
LAIN				Lg		20 18 21.2	
LAIN	**Lailor River,**	**13.05**	**123**	PN	**Pn**	**20 14 36.8**	**-2.9**
LAIN				SN	**Sn**	**20 16 54.0**	**-11**
LAIN				LG		20 18 21.2	
LAIN				Trac		20 18 55.3	
	comp=Z,274nm,1.9s						
ILON	**Igloolik, Nuna**	**13.09**	**120**	Pn	**Pn**	**20 14 37.5**	**-2.7**
ILON				Sn	**Sn**	**20 16 55.5**	**-10**
ILON				Lg		20 18 33.7	
ILON	**Igloolik, Nuna**	**13.09**	**120**	PN	**Pn**	**20 14 37.5**	**-2.7**
ILON				SN	**Sn**	**20 16 55.5**	**-10**
ILON				LG		20 18 33.7	
ILON				Trac		20 18 54.6	
	comp=Z,365nm,2.3s						
JERN	**Jeri Cho Mine,**	**13.29**	**173**	Pn	**Pn**	**20 14 38.5**	**-4.4**
JERN				SN	**Sn**	**20 16 57.1**	**-13**
JERN				LG		20 18 22.9	
JERN				Trac		20 19 06.0	
	comp=Z,319nm,3.0s						
STLN	**Stellar Camp,**	**13.39**	**140**	PN	**Pn**	**20 14 39.3**	**-5.1**
STLN				SN	**Sn**	**20 16 55.2**	**-18**
STLN				LG		20 18 15.6	
STLN				Trac		20 19 15.3	
	comp=N,121nm,1.2s						
SRLN	**Sarcpa Lake, N**	**13.59**	**124**	PN	**Pn**	**20 14 43.0**	**-3.9**
SRLN				SN	**Sn**	**20 17 08.1**	**-10**
SRLN				LG		20 18 42.0	
SRLN				Trac		20 19 11.6	
	comp=Z,241nm,2.1s						
COWN	**Contwyoto Lake**	**14.05**	**173**	PN	**Pn**	**20 14 48.2**	**-5.1**
COWN				SN	**Sn**	**20 17 14.2**	**-15**
COWN				LG		20 18 58.9	
COWN				Trac		20 19 44.0	
	comp=Z,252nm,3.0s						
BULN	**Bullion Camp,**	**14.25**	**142**	PN	**Pn**	**20 14 51.2**	**-4.8**
BULN				SN	**Sn**	**20 17 20.0**	**-14**
BULN				LG		20 19 09.9	
BULN				Trac		20 19 52.4	
	comp=Z,344nm,2.6s						
CTLN	**Castor Lake**	**14.85**	**181**	PN	**Pn**	**20 15 00.0**	**-4.1**
CTLN				SN	**Sn**	**20 17 33.7**	**-15**
CTLN				LG		20 19 24.0	
CTLN				Trac		20 19 57.7	
	comp=Z,421nm,2.8s						
QILN	**Qililugaq Expl**	**14.89**	**131**	Pn	**Pn**	**20 14 59.0**	**-5.7**
QILN				Sn	**Sn**	**20 17 37.2**	**-12**
QILN				Lg		20 19 21.9	
QILN	**Qililugaq Expl**	**14.89**	**131**	PN	**Pn**	**20 14 59.0**	**-5.7**
QILN				SN	**Sn**	**20 17 37.2**	**-12**
QILN				LG		20 19 21.9	
QILN				Trac		20 20 00.6	
	comp=Z,267nm,1.9s						
ROMN	**Roman Lake**	**14.98**	**184**	PN	**Pn**	**20 15 00.6**	**-5.4**
ROMN				SN	**Sn**	**20 17 40.0**	**-12**
WAGN	**Wager Bay**	**15.20**	**137**	PN	**Pn**	**20 15 03.5**	**-5.4**
WAGN				SN	**Sn**	**20 17 40.4**	**-17**
WAGN				LG		20 19 44.1	
WAGN				Trac		20 19 53.0	
	comp=Z,184nm,1.6s						
COLD	**Coldfoot**	**15.23**	**238**	*e*Pn	**Pn**	**20 15 05.4**	**-3.9**
	13nm,0.7s						
COLD				*e*Sn	Sn	20 17 35.0	-23
NUNN	**Nunuq Camp, NU**	**15.63**	**140**	PN	**Pn**	**20 15 09.6**	**-5.0**
NUNN				SN	**Sn**	**20 17 49.8**	**-18**
NUNN				LG		20 19 42.8	
NUNN				Trac		20 20 01.1	
	comp=Z,250nm,2.4s						
YBKN	**Baker Lake, Hu**	**15.96**	**148**	PN	**Pn**	**20 15 12.2**	**-6.6**
YBKN				SN	**Sn**	**20 17 59.8**	**-16**
YBKN				LG		20 19 58.9	
YBKN				Trac		20 20 33.0	
	comp=Z,493nm,3.2s						
EGAK	**Eagle**	**16.23**	**222**	*e*Pn	**Pn**	**20 15 16.0**	**-6.3**
	18nm,0.9s						
EGAK				*e*Sn	**Sn**	**20 18 08.3**	**-14**
DAWY	**Dawson**	**16.71**	**218**	*e*Pn	**Pn**	**20 15 23.2**	**-5.2**
DAWY				*e*Sn	**Sn**	**20 18 19.6**	**-14**
DAWY	**Dawson**	**16.71**	**218**	PN	**Pn**	**20 15 23.0**	**-5.3**
DAWY				SN	**Sn**	**20 18 19.8**	**-14**
YKW3	**Yellowknife Ar**	**16.72**	**179**	PN	**Pn**	**20 15 23.6**	**-4.9**
YKW3				SN	**Sn**	**20 18 19.4**	**-14**
YKW3				Trac		20 18 25.9	
	comp=Z,28nm,0.7s						
YKA	**Yellowknife Ar**	**16.79**	**179**	Pn	**Pn**	**20 15 23.3**	**-6.0**
	1.0nm,0.3s,baz=359,slow=12,SNR=91						
YKA				Sn	**Sn**	**20 18 19.5**	**-16**
	1.6nm,0.3s,baz=355,slow=22,SNR=7.0						
YKA				LR	LR	20 22 43.4	
	comp=Z,40nm,19.8s,baz=240,slow=40						
YKA	**Yellowknife Ar**	**16.79**	**179**	Pn	**Pn**	**20 15 23.3**	**-6.0**
YKA				Sn	**Sn**	**20 18 19.5**	**-16**
YKA				LR	LR	20 22 43.4	
COLA	**College**	**17.06**	**231**	*e*Pn	**Pn**	**20 15 29.5**	**-3.3**
	12nm,1.0s						
SEDN	**First Sedna Si**	**17.52**	**142**	PN	**Pn**	**20 15 32.1**	**-6.3**
SEDN				SN	**Sn**	**20 18 34.0**	**-19**
SEDN				LG		20 20 43.2	
SEDN				Trac		20 21 16.1	
	comp=Z,242nm,2.5s						
JOSN	**Second Sedna S**	**17.56**	**143**	PN	**Pn**	**20 15 33.8**	**-5.2**
JOSN				SN	**Sn**	**20 18 41.6**	**-13**
JOSN				LG		20 20 52.4	
JOSN				Trac		20 21 17.4	
	comp=Z,181nm,1.6s						
DAG	**Danmarks Havn**	**18.09**	**47**	⇑*i*P	**Pn**	**20 15 46.1**	**+0.6**
	3.0nm,0.8s						
BPAW	**Bear Paw Mtn.**	**18.26**	**235**	*e*Pn	**Pn**	**20 15 47.0**	**-0.6**
	7.2nm,0.7s						
MCK	**McKinley**	**18.30**	**232**	*e*Pn	**Pn**	**20 15 46.0**	**-2.1**
	20nm,1.1s						
SUMG	**Summit**	**18.33**	**69**	*e*Pn	**Pn**	**20 15 43.5**	**-4.9**
	27nm,0.6s						
MENT	**Mentasta**	**18.33**	**224**	*e*Pn	**Pn**	**20 15 48.3**	**-0.2**
PAX	**Paxson**	**18.53**	**226**	Pn	**Pn**	**20 15 50.7**	**-0.2**
	13nm,1.0s						
CHUM	**Lake Minchumin**	**18.67**	**236**	*e*Pn	**Pn**	**20 15 50.2**	**-2.4**
	11nm,0.7s						
CHUM				*e*Sn	**Sn**	**20 19 05.4**	**-16**
KTH	**Kantishna Hill**	**18.77**	**234**	*e*Pn	**Pn**	**20 15 54.0**	**+0.2**
	24nm,1.2s						
TRF	**Thorofare Moun**	**18.77**	**233**	*e*Pn	**Pn**	**20 15 54.8**	**+1.0**
	28nm,1.3s						
ARVN	**Arviat, NU**	**19.32**	**148**	PN	**Pn**	**20 15 57.2**	**-3.1**
ARVN				SN	**Sn**	**20 19 18.2**	**-18**
ARVN				LG		20 21 32.8	
ARVN				Trac		20 22 06.5	
	comp=Z,141nm,1.4s						
WHY	**Whitehorse**	**19.56**	**209**	PN	**Pn**	**20 16 01.6**	**-1.8**
PPLA	**Purkeypile**	**19.58**	**235**	*e*P	**Pn**	**20 16 04.3**	**+0.7**
	32nm,1.3s						
IVKQ	**Ivujivik**	**20.14**	**125**	PN	**P**	**20 16 09.7**	**+1.4**
IVKQ				SN	**S**	**20 19 40.5**	**-14**
IVKQ				LG		20 21 44.4	
IVKQ				Trac		20 22 34.6	
	comp=Z,204nm,2.5s						
TTA	**Tatalina**	**20.16**	**240**	*e*P	**P**	**20 16 09.2**	**+0.7**
	8.4nm,1.0s						
PMR	**Palmer**	**20.37**	**230**	*e*P	**P**	**20 16 12.6**	**+1.8**
	8.9nm,0.8s						
FRB	**Frobisher Bay**	**20.45**	**112**	P	**P**	**20 16 09.8**	**-1.9**
	8.8nm,0.9s,baz=342,slow=9.4,SNR=11						
FRB				S	**S**	**20 19 49.9**	**-10**
	11nm,0.7s,baz=67,slow=5.5,SNR=5.9						
FRB	**Frobisher Bay**	**20.45**	**112**	P	**P**	**20 16 09.8**	**-1.9**
FRB				S	**S**	**20 19 49.9**	**-10**
FRB	**Frobisher Bay**	**20.45**	**112**	SN	**S**	**20 19 46.2**	**-14**
FRB				LG		20 22 17.4	
FRB				Trac		20 22 48.1	
	comp=Z,267nm,2.2s						
SPITS	**Spitsbergen Ar**	**20.77**	**26**	P	**P**	**20 16 14.3**	**-0.7**
	2.7nm,0.6s,baz=273,slow=5.6,SNR=3.9						
SPITS				PcP	PcP	20 20 22.6	-0.8
	1.9nm,0.7s,baz=73,slow=3.9,SNR=5.4						
SPITS	**Spitsbergen Ar**	**20.77**	**26**	P	**P**	**20 16 14.3**	**-0.7**
SPITS				PcP	PcP	20 20 22.6	-0.8
SFJD	**Kangerlussuaq**	**20.83**	**89**	P	**P**	**20 16 15.2**	**-0.6**
	6.1nm,0.8s,baz=314,slow=14,SNR=3.0						
SFJD	**Kangerlussuaq**	**20.83**	**89**	*e*P	**P**	**20 16 14.3**	**-1.5**
	67nm,1.6s						
SFJD	**Kangerlussuaq**	**20.83**	**89**	*i* P	**P**	**20 16 17.0**	**+1.2**
	9.6nm,0.8s						
RC01	**Rabbit Creek A**	**20.93**	**230**	*e*P	**P**	**20 16 17.4**	**+0.4**
	32nm,0.5s						
DLBC	**Dease Lake**	**21.37**	**201**	P	**P**	**20 16 22.6**	**+0.9**
	9.5nm,0.7s,mb4.2,baz=5.1,slow=9.7,SNR=18						
DLBC	**Dease Lake**	**21.37**	**201**	*e*P	**P**	**20 16 21.6**	**0.0**
FCC	**Fort Churchill**	**21.60**	**149**	*e*P	**P**	**20 16 22.2**	**-1.9**
	0.2nm,0.2s,mb3.2						
FCC				*e*S	**S**	**20 20 04.6**	**-18**
SVW2	**Sparrevohn**	**21.82**	**238**	*e*P	**P**	**20 16 29.9**	**+0.5**
RSO	**Redoubt South**	**21.98**	**233**	*e*P	**P**	**20 16 29.1**	**+0.9**
GAMB	**Gambell**	**22.14**	**259**	*e*P	**P**	**20 16 29.9**	**+0.1**
	26nm,1.1s,mb4.6						
BILL	**Bilibino**	**22.44**	**285**	*e*P	**P**	**20 16 32.1**	**-0.9**
	24nm,1.3s,mb4.5						
SCO	**Scoresbysund**	**22.91**	**60**	*i* P	**P**	**20 16 41.6**	**+3.6**
	13nm,0.9s,mb4.4						
KDAK	**Kodiak Island**	**24.53**	**231**	P	**P**	**20 16 54.2**	**+0.6**
	22nm,0.6s,mb4.9,baz=26,slow=7.4,SNR=32						
FFC	**Flin Flon**	**24.99**	**161**	*e*P	**P**	**20 16 56.5**	**-1.4**
	13nm,0.8s,mb4.5						
FFC				*e*S	**S**	**20 21 14.3**	**-6.9**
TIXI	**Tiksi**	**25.11**	**318**	*e*P	**P**	**20 16 58.7**	**-0.2**
	2.9nm,0.8s,mb3.9						
EDM	**Edmonton**	**26.10**	**177**	*e*P	**P**	**20 17 08.0**	**0.0**
SCHQ	**Schefferville**	**29.16**	**117**	P	**P**	**20 17 35.0**	**-0.4**
	5.0nm,0.9s,mb4.2,baz=357,slow=7.5,SNR=7.0						
SCHQ				LR	LR	20 28 56.0	
	comp=Z,678nm,19.6s,MS4.3,baz=267,slow=36						
SCHQ	**Schefferville**	**29.16**	**117**	P	**P**	**20 17 35.0**	**-0.4**
SCHQ				LR	LR	20 28 56.0	
KEV	**Kevo**	**29.70**	**25**	*e*P	**P**	**20 17 36.3**	**-3.7**
	11nm,0.8s,mb4.6						
KEV	**Kevo**	**29.70**	**25**	*e*p	**P**	**20 17 36.2**	**-3.8**
	7.9nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**29.80**	**27**	P	**P**	**20 17 40.0**	**-0.8**
	5.2nm,0.9s,mb4.3,baz=353,slow=8.6,SNR=6.8						
ARCES				PcP	PcP	20 20 43.5	-0.2
	1.9nm,0.9s,baz=339,slow=3.1,SNR=6.7						
ULM	**Lac du Bonnet**	**29.87**	**155**	P	**P**	**20 17 41.5**	**-0.2**
	2.8nm,0.7s,mb4.1,baz=4.8,slow=10,SNR=4.8						
ULM				LR	LR	20 29 44.0	
	comp=Z,160nm,19.8s,MS3.7,baz=53,slow=36						
ULM	**Lac du Bonnet**	**29.87**	**155**	*e*P	**P**	**20 17 37.0**	**-4.7**
	6.0nm,1.0s,mb4.3						
WALA	**Waterton Lakes**	**30.26**	**178**	*e*P	**P**	**20 17 39.0**	**-6.1**
A14A	**Double T Ranch**	**30.35**	**177**	⇑P	**P**	**20 17 46.6**	**+0.7**
	baz=30						
B15A	**Bradely Ranch,**	**31.02**	**176**	⇓P	**P**	**20 17 52.6**	**+0.7**
	baz=31						
C15A	**Salmond Ranch,**	**31.56**	**176**	⇓P	**P**	**20 17 57.0**	**+0.4**
	baz=31						
SLMT	**Seeley Lake**	**32.08**	**178**	*e*P	**P**	**20 17 59.1**	**-2.1**
	14nm,1.4s,mb4.6						
SLMT				*e*		20 18 11.5	
D13A	**Huson**	**32.22**	**179**	⇑P	**P**	**20 18 03.8**	**+1.4**
	baz=32						
D14A	**Greenough**	**32.24**	**178**	⇓P	**P**	**20 18 03.2**	**+0.6**
	baz=32						
EYMN	**Ely**	**32.55**	**150**	*e*P	**P**	**20 18 02.1**	**-3.1**
	30nm,1.2s,mb5.1						
E18A	**Harlowton**	**32.81**	**173**	⇓P	**P**	**20 18 08.5**	**+0.9**
	baz=32						
E12A	**Beaver Dam Sad**	**32.90**	**180**	⇑P	**P**	**20 18 09.1**	**+0.7**
	baz=33						
F13A	**Darby**	**33.53**	**179**	⇓P	**P**	**20 18 14.4**	**+0.6**
	baz=33						
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R18A **Canyonlands Na** 40.98 173 ⇑P P 20 19 17.2 +0.1
baz=41,SNR=8.6
R21A **Cimarron** 41.06 171 ⇓P P 20 19 19.4 +1.6
baz=41,SNR=5.0
ACSO **Alum Creek Sta** 41.08 141 *eP* P 20 19 12.2 -5.7
comp=Z,20nm,1.1s,mb4.7
S10A **Tonopah Range,** 41.39 181 ⇑P P 20 19 20.7 +0.2
baz=41
S19A **Harvey Farm, M** 41.64 173 ⇓P P 20 19 23.3 +0.8
baz=41,SNR=5.4
T18A **Mexican Hat** 42.23 173 ⇓P P 20 19 28.8 +1.4
baz=42,SNR=7.0
MPMC **Manual Prospec** 43.26 182 ⇑P P 20 19 36.5 +0.8
baz=43
BSEG **Bad Segeberg** 43.38 44 *eP* P 20 19 36.7 +0.3
comp=Z,6.0nm,0.9s,mb4.3
V14A **Boquillas Ranc** 43.68 177 ⇑P P 20 19 37.9 -1.2
baz=43
V17A **Tonalea, Kykot** 43.73 175 ⇓P P 20 19 40.9 +1.5
baz=43,SNR=6.5
WUAZ **Wupatki** 43.82 175 *eP* P 20 19 38.3 -1.9
comp=Z,5.9nm,0.9s,mb4.3
ANMO **Albuquerque** 44.51 170 P P 20 19 46.4 +0.7
comp=Z,1.6nm,0.8s,mb3.9,baz=1.9,slow=9.9,SNR=4.7
ANMO **Albuquerque** 44.51 170 *eP* P 20 19 46.6 +0.8
comp=Z,4.3nm,1.1s,mb4.2
ARU **Arti** 44.58 5 *eP* P 20 19 45.5 -0.5
comp=Z,22nm,1.0s,mb5.0
IBBN **Ibbenburen** 44.62 47 *eP* P 20 19 47.0 +0.6
comp=Z,13nm,1.2s,mb4.6
NRDL **Niedersach Rie** 44.76 45 *eP* P 20 19 47.7 +0.2
comp=Z,12nm,1.2s,mb4.6
OBN **Obninsk** 44.92 22 *eP* P 20 19 48.0 -0.7
comp=Z,46nm,1.2s,mb5.2
WMOK **Wichita Mounta** 45.09 161 *eP* P 20 19 50.0 -0.4
comp=Z,18nm,1.2s,mb4.8
BNM **Barren Site** 45.30 170 *eP* P 20 19 52.8 +0.8
comp=Z,7.9nm,1.3s,mb4.4
BUG **Bochum--Univer** 45.40 48 *eP* P 20 19 57.8 +5.2
comp=Z,33nm,1.8s,mb4.9
CLZ **Clausthal** 45.43 45 *eP* P 20 19 53.2 +0.3
comp=Z,12nm,1.0s,mb4.7
Y24A **Capitan** 45.57 168 ⇓P P 20 19 54.9 +0.7
baz=45
Y18A **Canyon Day Jun** 45.58 174 ⇓P P 20 19 54.6 +0.3
baz=45
Y25A **Mesa, Roswell** 45.60 168 ⇑P P 20 19 53.9 -0.5
baz=45,SNR=5.3
UCC **Uccle** 45.61 50 P P 20 19 55.0 +0.7
Y27A **Causey** 45.70 166 ⇓P P 20 19 55.8 +0.6
baz=45,SNR=9.5
HGN **Heimansgroeve** 45.87 49 *eP* P 20 19 56.6 +0.2
comp=Z,17nm,1.4s,mb4.8
MEM **Membach** 46.03 49 P P 20 19 58.0 +0.3
Z25A **Roswell** 46.24 168 ⇓P P 20 19 59.6 +0.2
baz=46,SNR=8.2
Z27A **Tatum** 46.27 166 ⇓P P 20 19 59.8 +0.1
baz=46
Z26A **Caprock** 46.28 167 ⇑P P 20 20 00.3 +0.6
baz=46,SNR=6.1
CLL **Collm** 46.30 43 *eP* P 20 19 59.4 -0.3
comp=Z,12nm,1.3s,mb4.7
CLL **Collm** 46.30 43⇑ *iP* P 20 19 59.4 -0.3
comp=Z,12nm,1.3s,mb4.7
CLL *i* pP pP 20 20 03.6 +0.8
CLL **Collm** 46.30 43⇑ *iP* P 20 19 59.4 -0.3
comp=Z,12nm,1.3s,mb4.7
CLL *i* pP pP 20 20 03.6 +0.8
BAIF **Baives** 46.31 51 *eP* P 20 19 59.9 +0.1
comp=Z,22nm,1.0s,mb4.7
BAIF **Baives** 46.31 51 *eP* P 20 19 59.9 +0.1
comp=Z,11nm,1.0s,mb4.8
DOU **Dourbes** 46.33 50 P P 20 20 00.6 +0.7
comp=Z,11nm,2.4s,mb4.3
GIVF **Givet** 46.36 50 *eP* P 20 20 00.1 -0.1
UBBA **Unterbreizbach** 46.38 46 *eP* P 20 20 00.4 0.0
comp=Z,22nm,1.8s,mb4.8
ZALV **Zalesovo Beam** 46.57 344 P P 20 20 00.7 -1.2
comp=Z,3.9nm,0.5s,mb4.6,baz=358,slow=8.9,SNR=17
ZALV PcP PcP 20 21 34.9 -0.8
comp=Z,0.7nm,0.5s,baz=21,slow=2.3,SNR=3.7
ZALV LR LR 20 38 35.8
comp=Z,60nm,20.6s,MS3.5,baz=87,slow=35
TNS **Taunus Mts** 46.75 47 *eP* P 20 20 03.6 +0.3
comp=Z,18nm,1.1s,mb4.9
MOX **Moxa** 46.77 44 *eP* P 20 20 03.5 +0.1
comp=Z,12nm,1.3s,mb4.7
MOX **Moxa** 46.77 44 *eP* P 20 20 03.4 0.0
comp=Z,7.0nm,0.9s,mb4.6
ROSF **Rostrenen** 46.84 58 *eP* P 20 20 03.7 -0.3
BRG **Berggiesshubel** 46.84 42 *eP* P 20 20 04.0 0.0
comp=Z,10.0nm,1.3s,mb4.6
BRG **Berggiesshubel** 46.84 42 *eP* P 20 20 03.8 -0.2
comp=Z,15nm,1.5s,mb4.7
125A **Gardner Draw,** 46.86 168 ⇑P P 20 20 03.0 -1.3
baz=47
WLF **Walferdange** 46.97 49 P P 20 20 05.7 +0.7
comp=Z,7.5nm,1.3s,mb4.5
WLF **Walferdange** 46.97 49 *eP* P 20 20 05.7 +0.7
comp=Z,9.0nm,0.8s,mb4.8
SGMF **Saint Gilles** 47.03 57 *eP* P 20 20 05.7 +0.2
WERD **Werda** 47.05 44 *eP* P 20 20 05.5 -0.1
comp=Z,4.0nm,0.9s,mb4.3
LDF **La Druitiere** 47.08 55 *eP* P 20 20 05.4 -0.5
TANN **Tannenbergstha** 47.10 44 *eP* P 20 20 06.2 +0.2
comp=Z,6.0nm,1.1s,mb4.4
PVCC **Panska Ves** 47.26 42 *eP* P 20 20 07.5 +0.2
NKC **Novy Kostel** 47.28 44 *eP* P 20 20 08.2 +0.8
GDL2 **Guadalupe Moun** 47.33 167 *eP* P 20 20 08.4 +0.4
comp=Z,8.1nm,1.0s,mb4.6
TLY **Talaya** 47.37 328 *eP* P 20 20 06.4 -1.8
224A **Corundas Mount** 47.41 169 ⇓P P 20 20 09.1 +0.5
baz=47
UPC **Upice** 47.46 41 *eP* P 20 20 09.1 +0.3
UPC *ex* x 20 20 16.0
226A **Malaga, Loving** 47.48 167 ⇑P P 20 20 09.3 +0.1
baz=47
GRA1 **Grafenberg Arr** 47.65 45 *eP* P 20 20 10.8 +0.5
comp=Z,22nm,1.0s,mb5.1
GRF **Grafenberg Arr** 47.65 45 *eP* P 20 20 10.8 +0.5
comp=Z,22nm,1.0s,mb5.1
DPC **Dobruska-Polom** 47.65 40 *eP* P 20 20 10.5 +0.2
DPC *ex* x 20 20 15.0
ROTZ **Rotzenmuhle** 47.70 44 *eP* P 20 20 11.2 +0.5
comp=Z,10.0nm,1.2s,mb4.7
PRU **Pruhonice** 47.79 42 *eP* P 20 20 12.1 +0.7
PRU *ex* x 20 20 17.0
MEZF **Maizieres J'vi** 47.95 51 *eP* P 20 20 13.0 +0.4
BRVK **Borovoye** 47.96 355 *eP* P 20 20 12.4 -0.3
comp=Z,11nm,1.0s,mb4.9
BVAR **Borovoye Array** 47.99 355 P P 20 20 12.3 -0.6
comp=Z,4.6nm,0.9s,mb4.5,baz=3.4,slow=7.4,SNR=25
BVAR PcP PcP 20 21 39.8 -0.9
comp=Z,0.9nm,0.4s,baz=318,slow=3.0,SNR=7.3
324A **Moseley Ranch,** 48.04 169 ⇓P P 20 20 13.8 +0.3
baz=48
OJC **Ojcow** 48.19 37 *eP* P 20 20 14.2 -0.3
328A **Wristen Ranch,** 48.21 166 ⇑P P 20 20 14.4 -0.4
baz=48,SNR=7.1
STU **Stuttgart** 48.27 47 *eP* P 20 20 16.0 +0.9
comp=Z,16nm,1.2s,mb4.9
CDF **Champ du Feu** 48.36 49 *eP* P 20 20 16.1 +0.3
comp=Z,17nm,1.0s,mb4.7
CDF **Champ du Feu** 48.36 49 *eP* P 20 20 16.1 +0.3
comp=Z,8.4nm,1.0s,mb4.7
MORC **Moravsky Berou** 48.36 39 *eP* P 20 20 15.7 -0.1
comp=Z,18nm,1.4s,mb4.9
MORC *e* pP 20 20 20.0 +1.0
MORC **Moravsky Berou** 48.36 39⇓ *iP* P 20 20 15.6 -0.2
OKC **Ostrava-Krasne** 48.38 39 *eP* P 20 20 16.1 +0.2
WET **Wettzell** 48.40 44 *eP* P 20 20 16.7 +0.6
comp=Z,12nm,1.0s,mb4.9
KHC **Kasperske Hory** 48.51 43 *eP* P 20 20 16.5 -0.4
comp=Z,8.4nm,1.5s,mb4.5
KHC **Kasperske Hory** 48.51 43 *eP* P 20 20 17.6 +0.7
KHC *ex* x 20 20 24.3
BFO **Black Forest** 48.59 48 *eP* P 20 20 17.8 +0.3
comp=Z,8.0nm,1.0s,mb4.7
HAU **Haudompre** 48.62 50 *eP* P 20 20 18.2 +0.4
comp=Z,21nm,1.1s,mb4.8
HAU **Haudompre** 48.62 50 *eP* P 20 20 18.2 +0.4
comp=Z,10nm,1.1s,mb4.8
AKASG **Malin Array Be** 48.69 29 P P 20 20 17.8 -0.5
comp=Z,11nm,0.7s,mb5.0,baz=352,slow=8.4,SNR=34
KIEV **Kiev** 48.70 29 *eP* P 20 20 17.2 -1.2
comp=Z,10nm,0.8s,mb4.9
KIEV *e* pP 20 20 21.8 +0.3

425A **Indio Mountain** 48.71 168 ⇓P P 20 20 17.9 -0.8
baz=48,SNR=8.2
427A **Hayter Ranch,** 48.71 166 ⇑P P 20 20 18.1 -0.6
baz=48
HYF **Humbligny** 48.80 53 *eP* P 20 20 19.3 +0.1
GEC2 **GERESS Array S** 48.80 43 *eP* P 20 20 19.7 +0.5
comp=Z,12nm,1.6s,mb4.7
GERES **GERESS Array B** 48.80 43 P P 20 20 19.7 +0.5
comp=Z,1.7nm,0.8s,mb4.1,baz=352,slow=6.7,SNR=14
426A **McDonald Obser** 48.87 167 ⇑P P 20 20 19.8 -0.1
baz=49
428A **Kincaid Ranch,** 48.87 165 ⇓P P 20 20 20.3 +0.4
baz=49
HINF **Hinteralfeld** 48.88 49⇑ *iP* P 20 20 20.0 +0.2
comp=Z,25nm,1.2s,mb4.8
HINF **Hinteralfeld** 48.88 49⇑ *iP* P 20 20 20.0 +0.2
comp=Z,12nm,1.2s,mb4.8
MOF **Molkenrain** 48.89 49 *eP* P 20 20 20.5 +0.6
LOR **Lormes** 48.98 52⇑ *iP* P 20 20 20.6 0.0
comp=Z,27nm,1.0s,mb4.9
LOR **Lormes** 48.98 52⇑ *iP* P 20 20 20.6 0.0
comp=Z,13nm,1.0s,mb4.9
MFF **Saint Martin d** 49.02 56 *eP* P 20 20 20.8 -0.1
comp=Z,17nm,1.1s,mb4.7
MFF **Saint Martin d** 49.02 56 *eP* P 20 20 20.8 -0.1
comp=Z,8.5nm,1.1s,mb4.7
SSF **Saint Saulge** 49.13 52⇑ *iP* P 20 20 21.6 -0.1
comp=Z,18nm,1.0s,mb4.8
SSF **Saint Saulge** 49.13 52⇑ *iP* P 20 20 21.6 -0.1
comp=Z,8.8nm,1.0s,mb4.7
STHS **Stebnicka Huta** 49.15 36 *eP* P 20 20 22.9 +1.1
comp=Z,5.1nm,0.9s,mb4.5
STHS *e* pP 20 20 27.6 +2.6
STHS **Stebnicka Huta** 49.15 36 *eP* P 20 20 22.9 +1.1
STHS *e*pP pP 20 20 27.6 +2.6
FUR **Furstenfeldbru** 49.15 45 *eP* P 20 20 21.5 -0.4
comp=Z,19nm,1.5s,mb4.9
JCT **Junction City** 49.27 162 *eP* P 20 20 22.7 -0.3
comp=Z,36nm,1.3s,mb5.2
AVF **Avril sur Loir** 49.37 53⇑ *iP* P 20 20 23.6 0.0
comp=Z,31nm,1.1s,mb5.0
AVF **Avril sur Loir** 49.37 53⇑ *iP* P 20 20 23.6 0.0
comp=Z,16nm,1.1s,mb5.0
526A **Mary Lane Ranc** 49.47 167 ⇑P P 20 20 24.7 +0.2
baz=49,SNR=20
BGF **Bois d'Agland** 49.52 53⇑ *iP* P 20 20 24.6 -0.1
comp=Z,31nm,1.0s,mb5.0
BGF **Bois d'Agland** 49.52 53⇑ *iP* P 20 20 24.6 -0.1
comp=Z,15nm,1.0s,mb5.0
SMF **Signal de Mont** 49.59 52⇑ *iP* P 20 20 25.0 -0.2
comp=Z,34nm,1.2s,mb5.0
SMF **Signal de Mont** 49.59 52⇑ *iP* P 20 20 25.0 -0.2
comp=Z,17nm,1.2s,mb5.0
KOLL **Kolacno** 49.65 39 *eP* P 20 20 26.6 +0.9
KOLL *e* pP 20 20 31.1 +2.3
KOLL **Kolacno** 49.65 39 *eP* P 20 20 26.6 +0.9
KOLL *e*pP pP 20 20 31.1 +2.3
TCF **Toulx Ste Croi** 49.69 54⇑ *iP* P 20 20 25.7 -0.3
comp=Z,21nm,1.1s,mb4.8
TCF **Toulx Ste Croi** 49.69 54⇑ *iP* P 20 20 25.7 -0.3
comp=Z,11nm,1.1s,mb4.8
KOLS **Kolonicke sedl** 49.74 36 *eP* P 20 20 26.9 +0.5
comp=Z,7.2nm,1.1s,mb4.6
KOLS *e* pP 20 20 31.0 +1.5
KOLS **Kolonicke sedl** 49.74 36 *eP* P 20 20 26.9 +0.5
KOLS *e*pP pP 20 20 31.0 +1.5
RJOB **Jochberg** 49.77 44 *eP* P 20 20 27.4 +0.8
comp=Z,7.0nm,1.2s,mb4.6
VYHS **Vyhne** 49.78 39 *eP* P 20 20 26.9 +0.2
comp=Z,4.2nm,1.0s,mb4.4
VYHS *e* pP 20 20 31.5 +1.7
VYHS **Vyhne** 49.78 39 *eP* P 20 20 26.9 +0.2
VYHS *e*pP pP 20 20 31.5 +1.7
DAVA **Damuels** 49.82 47⇓ *iP* P 20 20 28.3 +1.3
comp=Z,7.2nm,1.1s,mb4.6
ZST **Bratislava** 49.87 40 *eP* P 20 20 28.3 +1.0
comp=Z,5.9nm,0.9s,mb4.6
ZST *e* pP 20 20 32.5 +2.0
ZST **Bratislava** 49.87 40 *eP* P 20 20 28.3 +1.0
ZST *e*pP pP 20 20 32.5 +2.0
CABF **La Chapelle** 49.95 50⇑ *iP* P 20 20 28.3 +0.3
comp=Z,30nm,1.1s,mb4.9
CABF **La Chapelle** 49.95 50⇑ *iP* P 20 20 28.3 +0.3
comp=Z,15nm,1.1s,mb4.9
626A **Big Bend Ranch** 49.97 167 ⇑P P 20 20 28.3 0.0
baz=50,SNR=5.8
CSNA **Conrad Observa** 49.98 41⇑ *iP* P 20 20 28.4 +0.2
comp=Z,3.7nm,0.9s,mb4.4
KECS **Kecovo** 49.98 37 *eP* P 20 20 28.8 +0.6
comp=Z,2.9nm,1.0s,mb4.3
KECS *e* pP 20 20 33.5 +2.1
KECS **Kecovo** 49.98 37 *eP* P 20 20 28.8 +0.6
KECS *e*pP pP 20 20 33.5 +2.1
AGO **Saint Agoulin** 50.06 53 *eP* P 20 20 29.6 +0.8
KURK **Kurchatov** 50.08 348 *eP* P 20 20 27.5 -1.5
comp=Z,8.6nm,0.9s,mb4.8
KURK *e* pP 20 20 31.3 -0.8
628A **Black Gap, Mar** 50.09 166 ⇑P P 20 20 29.1 -0.1
baz=50,SNR=8.9
627A **Terlingua Ranc** 50.10 166 ⇓P P 20 20 28.5 -0.9
baz=50,SNR=7.2
TXAR **Lajitas Array** 50.21 167 P P 20 20 30.9 +0.7
comp=Z,1.9nm,0.8s,mb4.2,baz=0.0,slow=7.5,SNR=12
TXAR LR LR 20 43 03.9
comp=Z,210nm,19.2s,MS4.2,baz=155,slow=38
PYM **Petit Puy Mans** 50.33 53 *eP* P 20 20 31.8 +0.9
PSZ **Piszkesteto** 50.47 38 *eP* P 20 20 30.9 -1.1
comp=Z,9.6nm,0.9s,mb4.8
PSZ *e* 20 20 36.8
PSZ **Piszkesteto** 50.47 38⇑ *e*PKP P 20 20 32.6 +0.7
PSZ **Piszkesteto** 50.47 38⇓ *iP* P 20 20 32.4 +0.5
RJF **Les Rejaudoux** 50.54 55 *eP* P 20 20 32.0 -0.5
comp=Z,3.8nm,0.7s,mb4.1
RJF **Les Rejaudoux** 50.54 55 *eP* P 20 20 32.0 -0.5
comp=Z,1.9nm,0.7s,mb4.1
TRPA **Tarpa** 50.56 36⇑ *iP* P 20 20 32.6 0.0
LFF **La Frestale** 50.78 55 *eP* P 20 20 34.1 -0.2
ULN **Ulaanbaatar** 50.78 324 *eP* P 20 20 33.4 -0.9
comp=Z,8.7nm,1.3s,mb4.5
ULN *e* pP 20 20 37.9 +0.5
SONM **Songino Array** 50.88 325 P P 20 20 34.3 -0.7
comp=Z,5.5nm,1.0s,mb4.4,baz=11,slow=4.8,SNR=31
SONM LR LR 20 42 56.4
comp=Z,116nm,18.4s,MS3.9,baz=14,slow=37
CAF **Calviac** 51.00 54 *eP* P 20 20 35.7 -0.2
SSB **Saint Sauveur** 51.02 52 *eP* P 20 20 36.1 0.0
comp=Z,8.0nm,1.0s,mb4.6
SSB *e* pP 20 20 40.6 +1.3
LPL **La Plagne** 51.11 50 *eP* P 20 20 37.8 +1.0
LPG **La Plagne** 51.13 50⇑ *iP* P 20 20 38.2 +1.3
comp=Z,26nm,1.4s,mb4.7
LPG **La Plagne** 51.13 50⇑ *iP* P 20 20 38.2 +1.3
comp=Z,13nm,1.4s,mb4.7
BUR08 **Bucovina Ar. S** 51.33 33 *eP* P 20 20 38.3 0.0
BUR08 *e* pP 20 20 42.8 +1.3
ROBS **Robic** 51.33 44 *i P* P 20 20 38.0 -0.5
BURAR **Bucovina Array** 51.36 33⇓ *iP* P 20 20 38.0 -0.6
CADS **Cadrg** 51.38 44 *i P* P 20 20 38.0 -0.8
VIVF **Saint-Julien-l** 51.46 52⇑ *iP* P 20 20 39.7 +0.3
comp=Z,23nm,1.2s,mb4.7
VIVF **Saint-Julien-l** 51.46 52⇑ *iP* P 20 20 39.7 +0.3
comp=Z,12nm,1.2s,mb4.7
BNI **Bardonecchia** 51.56 50 *eP* P 20 20 40.4 +0.3
comp=Z,3.8nm,0.9s,mb4.3
BNI *e* 20 20 45.8
ORIF **Oris-en-Rattie** 51.58 51⇑ *iP* P 20 20 40.6 +0.3
comp=Z,13nm,1.0s,mb4.5
ORIF **Oris-en-Rattie** 51.58 51⇑ *iP* P 20 20 40.6 +0.3
comp=Z,6.3nm,1.0s,mb4.5
CRNS **Crni Vrh** 51.59 43 *eP* P 20 20 40.1 -0.2
ABKAR **Akbulak array** 51.78 4 *eP* P 20 20 40.9 -0.8
comp=Z,7.2nm,0.9s,mb4.6
ABKAR *e* 20 20 45.9
ABKAR *e*PcP PcP 20 21 53.8 -0.9
ABKAR *e* 20 21 57.9
MBDF **Montbardon** 51.89 50 *eP* P 20 20 43.7 +1.1
comp=Z,12nm,1.2s,mb4.4
MBDF **Montbardon** 51.89 50 *eP* P 20 20 43.7 +1.1
comp=Z,6.1nm,1.2s,mb4.4
SKDS **Skadanscina** 52.08 44 *eP* P 20 20 43.4 -0.6
LASF **Ste Croix** 52.10 53 *eP* P 20 20 44.7 +0.5
comp=Z,11nm,1.1s,mb4.4
CN2 **Changchun** 52.36 307 *eP* P 20 20 43.9 -2.2
CN2 *e*pP pP 20 20 48.4 -0.9
CN2 *e*S S 20 28 06.5 -4.7
CN2 pmax pmax

comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,16.0s,MS4.4
CN2 LR LR
comp=E,200nm,16.0s,MS4.4
CN2 LR LR
comp=Z,200nm,17.0s,MS4.2
SMRF **Simiane la Rot** 52.45 51 *eP* P 20 20 47.2 +0.4
ETSF **Etsaut** 52.57 57 *eP* P 20 20 48.5 +0.8
comp=Z,5.7nm,0.8s,mb4.3
ETSF **Etsaut** 52.57 57 *eP* P 20 20 48.5 +0.8
comp=Z,2.8nm,0.8s,mb4.2
MTLF **Montolieu** 52.57 55 *eP* P 20 20 47.7 0.0
AUTN **L'Aution** 52.70 50 *eP* P 20 20 50.3 +1.7
MVIF **Mont Vial** 52.76 50 *eP* P 20 20 50.4 +1.3
LUCF **Luceram** 52.79 50 *eP* P 20 20 50.6 +1.3
SBF **Sospel** 52.83 50 *eP* P 20 20 50.6 +1.0
comp=Z,30nm,1.0s,mb4.8
SBF **Sospel** 52.83 50 *eP* P 20 20 50.6 +1.0
comp=Z,15nm,1.0s,mb4.9
BZS **Buzias** 52.94 37⇑ *iP* P 20 20 50.5 +0.1
REVF **Revere** 52.94 50 *eP* P 20 20 51.5 +1.1
FRF **La Foret Royal** 53.02 50 *eP* P 20 20 50.2 -0.8
comp=Z,10nm,0.9s,mb4.5
FRF **La Foret Royal** 53.02 50 *eP* P 20 20 50.2 -0.8
comp=Z,5.1nm,0.9s,mb4.5
LMR **La Mourre** 53.22 51⇑ *iP* P 20 20 52.9 +0.4
comp=Z,17nm,1.1s,mb4.6
LMR **La Mourre** 53.22 51⇑ *iP* P 20 20 52.9 +0.4
comp=Z,8.6nm,1.1s,mb4.6
VRI **Vrincioaia** 53.24 32⇓ *iP* P 20 20 52.0 -0.6
MLR **Muntele Rosu** 53.53 33⇑ *iP* P 20 20 54.9 +0.2
MK31 **Makanchi Array** 53.84 345 *eP* P 20 20 55.4 -1.5
MK31 *e* pP 20 20 59.8 -0.3
MKAR **Makanchi Array** 53.84 345 P P 20 20 55.7 -1.3
comp=Z,8.4nm,0.9s,mb4.7,baz=2.7,slow=6.1,SNR=26
MKAR **Makanchi Array** 53.84 345 P P 20 20 55.7 -1.3
PGF **Pioggiola** 54.35 49 *eP* P 20 21 00.9 +0.2
comp=Z,16nm,1.1s,mb4.6
PGF **Pioggiola** 54.35 49 *eP* P 20 21 00.9 +0.2
comp=Z,8.1nm,1.1s,mb4.6
ESDC **Sonseca Array** 55.16 61 P P 20 21 06.8 +0.1
comp=Z,3.8nm,0.8s,mb4.5,baz=350,slow=8.2,SNR=27
ESLA **Sonseca Array** 55.16 61 *eP* P 20 21 06.6 -0.1
ESLA *e* 20 21 11.7
PAB **San Pablo** 55.22 61 *eP* P 20 21 06.9 -0.2
comp=Z,7.7nm,1.1s,mb4.7
PAB *e* 20 21 11.9
KIV **Kislovodsk** 56.44 19 *eP* P 20 21 15.5 -0.2
comp=Z,13nm,1.1s,mb4.9
WMQ **Urumqi** 56.50 340 P P 20 21 15.8 -0.4
WMQ LR LR
comp=N,88nm,24.0s,MS3.8
WMQ LR LR
comp=E,22nm,22.0s,MS3.8
WMQ LR LR
comp=Z,140nm,22.0s,MS4.0
HHC **Hu-ho-hao-te** 57.17 319 *eP* P 20 21 20.6 -0.4
HHC pP pP 20 21 25.7 +1.5
HHC sP sP 20 21 27.8 +2.4
HHC PcP PcP 20 22 15.2 -0.3
HHC PP PP 20 23 28.8 +1.3
HHC ScP ScP 20 26 13.6 -1.1
HHC S S 20 29 14.3 -1.6
HHC sS sS 20 29 21.6 +0.4
HHC ScS ScS 20 31 05.6 -4.2
HHC SS SS 20 33 02.5 -1.5
HHC pmax pmax
comp=Z,17nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,99nm,6.0s
HHC LR LR
comp=N,140nm,17.2s,MS4.3
HHC LR LR
comp=E,160nm,18.1s,MS4.3
HHC LR LR
comp=Z,140nm,17.8s,MS4.1
MJAR **Matsushiro Arr** 57.37 293 P P 20 21 21.9 -0.5
comp=Z,0.9nm,0.7s,mb3.9,baz=1.0,slow=7.3,SNR=5.8
BJI **Beijing** 57.37 314 P P 20 21 20.9 -1.5
BJI S S 20 29 16.9 -1.6
BJI SS SS 20 33 07.5 +0.3
BJI pmax pmax
comp=Z,15nm,0.8s,mb5.1
BJI pmax pmax
comp=Z,150nm,6.0s
BJI LR LR
comp=N,170nm,14.4s,MS4.4
BJI LR LR
comp=E,150nm,17.6s,MS4.4
BJI LR LR
comp=Z,120nm,25.8s
USP **Ospenovka** 57.66 351 P P 20 21 24.2 -0.2
SNR=17
TKM2 **Tokmak 2** 57.98 351 P P 20 21 26.9 +0.2
SNR=9.9
TKM2 **Tokmak 2** 57.98 351 *eP* P 20 21 26.2 -0.4
comp=Z,8.2nm,0.8s,mb4.8
TKM2 *e* pP 20 21 31.1 +1.2
TKM2 *e*PcP PcP 20 22 15.9 -2.7
KSRS **Korea Array** 58.18 303 P P 20 21 27.8 -0.4
comp=Z,1.1nm,0.7s,mb4.0,baz=11,slow=6.6,SNR=3.2
KSRS LR LR 20 47 26.8
comp=Z,143nm,18.2s,MS4.1,baz=178,slow=37
EKS2 **Erkin-Say** 58.29 352 P P 20 21 28.5 -0.3
SNR=6.2
EKS2 **Erkin-Say** 58.29 352 *eP* P 20 21 27.9 -0.9
comp=Z,3.9nm,0.9s,mb4.4
EKS2 *e* 20 21 33.8
AAK **Ala-Archa** 58.30 351 P P 20 21 29.4 +0.5
SNR=11
AAK **Ala-Archa** 58.30 351 *eP* P 20 21 28.6 -0.3
AAK *e* pP 20 21 32.8 +0.7
UCH **Uchtor** 58.70 351 *eP* P 20 21 31.9 +0.2
comp=Z,2.1nm,0.8s,mb4.2
UCH *e* 20 21 37.3
AML **Almayashu** 58.82 352 P P 20 21 33.5 +1.0
SNR=13
AML **Almayashu** 58.82 352 *eP* P 20 21 32.8 +0.3
comp=Z,9.6nm,0.9s,mb4.8
KZA **Kyzart** 58.83 351 P P 20 21 33.1 +0.5
SNR=6.0
GTA **Gaotai** 59.90 329 P P 20 21 40.2 +0.2
GTA pP pP 20 21 43.9 +0.7
GTA sP sP 20 21 45.2 +0.7
GTA PP PP 20 23 55.8 +4.1
GTA S S 20 29 53.3 +1.9
GTA sS sS 20 30 00.4 +3.7
GTA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,64nm,4.8s
GTA LR LR
comp=N,160nm,17.2s,MS4.3
GTA LR LR
comp=E,120nm,17.5s,MS4.3
GTA LR LR
comp=Z,160nm,18.1s,MS4.2
BRTR **Keskin Array B** 59.98 27 P P 20 21 41.2 +0.6
comp=Z,2.1nm,0.8s,mb4.2,baz=341,slow=3.0,SNR=16
GNI **Garni** 60.35 17 *eP* P 20 21 44.5 +1.4
comp=Z,9.9nm,1.2s,mb4.7
GNI *e* pP 20 21 48.5 +2.2
KEST **Kesra** 61.09 50 P P 20 21 48.6 +0.4
comp=Z,2.5nm,0.9s,mb4.3,baz=252,slow=5.4,SNR=6.5
MALT **Malatya** 61.76 23 *eP* P 20 21 53.4 +0.7
comp=Z,5.8nm,1.0s,mb4.7
MALT *e* pP 20 21 58.3 +2.4
MALT **Malatya** 61.76 23⇑ *iP* P 20 21 53.9 +1.2
LZH **Lanzhou** 62.77 325 *eP* P 20 22 03.2 +3.7
LZH pP pP 20 22 06.2 +3.4
LZH sP sP 20 22 07.6 +3.6
LZH pmax pmax
comp=Z,14nm,1.0s,mb5.0
CMIG **Matias Romero** 62.88 158 P P 20 21 59.7 -0.7
comp=Z,4.0nm,0.8s,mb4.6,baz=313,slow=7.4,SNR=5.1
XAN **Xi'an** 64.21 320 P P 20 22 07.8 -1.3
XAN pP pP 20 22 11.0 -1.3
XAN PP PP 20 24 28.5 -1.3
XAN S S 20 30 44.9 -1.1
XAN SS SS 20 34 54.8 +0.3
XAN pmax pmax
comp=Z,2.0nm,0.8s,mb4.2

XAN pmax pmax
comp=Z,13nm,3.9s
ENH Enshi 67.86 319 *e*P **P 20 22 31.0 -1.6**
comp=Z,7.7nm,0.8s,mb4.8
CD2 Chengdu 67.90 324 P **P 20 22 32.6 -0.2**
CD2 pP pP 20 22 37.3 +1.2
CD2 sP sP 20 22 39.6 +2.3
CD2 PP PP 20 25 03.7 +1.7
CD2 S S 20 31 28.6 -2.4
CD2 SS SS 20 35 50.5 -1.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,180nm,10.3s
CD2 LR LR
comp=N,230nm,10.2s
CD2 LR LR
comp=Z,250nm,8.3s
LSA Lhasa 70.29 336 *e*P **P 20 22 48.7 +1.0**
comp=Z,7.1nm,1.3s,mb4.4
GYA Guiyang 71.97 321 P **P 20 22 57.6 -0.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SDV Santo Domingo 73.55 134 *e*P **P 20 23 07.0 -0.4**
comp=Z,3.4nm,0.7s,mb4.4
SDV *e* 20 23 12.4
KMI Kunming 73.73 324 P **P 20 23 08.1 -0.2**
KMI pP pP 20 23 13.2 +1.6
KMI sP sP 20 23 15.3 +2.5
KMI PP PP 20 25 56.7 +4.5
KMI S S 20 32 37.8 -1.1
KMI SS SS 20 37 24.0 +2.5
KMI pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
KMI pmax pmax
comp=Z,62nm,4.2s
KMI LR LR
comp=N,220nm,21.1s,MS4.5
KMI LR LR
comp=E,200nm,22.0s,MS4.5
KMI LR LR
comp=Z,180nm,17.4s,MS4.4
ROSC El Rosal 77.03 138 P **P 20 23 29.2 +1.8**
comp=Z,2.8nm,0.3s,mb4.6,baz=97,slow=22,SNR=3.6
ROSC LR LR 20 59 04.4
comp=Z,417nm,21.9s,MS4.7,baz=280,slow=37
CHTO Chiang Mai 80.38 327 P **P 20 23 46.8 +1.0**
comp=Z,8.2nm,1.3s,mb4.5
CMAR Chiang Mai Arr 80.73 327 P **P 20 23 46.6 -1.0**
comp=Z,3.3nm,1.0s,mb4.2,baz=352,slow=5.5,SNR=12
TORD Torodi Ar. Bea 82.05 61 P **P 20 23 54.4 -0.3**
comp=Z,4.5nm,1.0s,mb4.3,baz=335,slow=5.3,SNR=19
ASAR Alice Springs 116.95 286 PKP PKPdf 20 30 17.1 -1.5
comp=Z,1.8nm,0.8s,baz=16,slow=2.1,SNR=26
STKA Stephens Creek 123.52 276 PKP PKPdf 20 30 29.2 -1.8
comp=Z,1.4nm,0.5s,baz=103,slow=14,SNR=8.8

MAN 03 20:32:28,13.°60N×120.°68E,h120km,mb4.5,ML3.4, MS3.3,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.28**	**110**	*e*P	Pn	20 32 46.0	+1.2
LUBP	**Lubang**	**0.45**	**287**	*e*P	Pn	20 32 47.6	+2.0
BOAC	**Boac**	**1.14**	**97**	*e*P	Pn	20 32 52.0	+0.5
SJMP	**San Jose**	**1.21**	**159**	*e*P	Pn	20 32 52.9	+0.7
BUSP	**Coron**	**1.66**	**197**	*e*P	Pn	20 32 58.1	+0.8
POLP	**Polilio Island**	**1.66**	**47**	*e*P	Pn	20 32 58.7	+1.4
SCZP	**Santa Cruz**	**2.29**	**341**	*e*P	Pn	20 33 05.7	+0.6
BALP	**Baler**	**2.30**	**22**	*e*P	Pn	20 33 06.5	+1.2
ENPP	**El Nido**	**2.68**	**207**	*e*P	Pn	20 33 11.4	+1.3
BOLP	**Bolinao**	**2.86**	**345**	*e*P	Pn	20 33 13.3	+0.8

ISCJB ***03*** *20:33:40.0±0.9, 52.°5N±0.°2×176.°7W±0.°1, h226km±9km, mb3.7/8, Error ellipse: s-maj=29.3km s-min=11.0km az=160.0*
NEIC ***03*** *20:33:41.0±0.8, 52.°58N×176.°65W, h218km±8km, mb4.4/1, Error ellipse: s-maj=22.0km s-min=9.8km az=159.0*
IDC ***03*** *20:33:41.3±5.3, 52.°76N×176.°67W, h218km±55km, mb3.4/7, mb1 3.7/9, mb1mx3.2/30, mbtmp3.4/9, Error ellipse: s-maj=35.2km s-min=14.9km az=164.0*
ISC 03 20:33:41.0±0.9, 52.°6N±0.°2×176.°7W±0.°2, h219km±10km, n18, σ0°89/18, mb3.7/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.61**	**142**	*e*Pn	**Pn**	**20 34 10.1**	**-0.5**
UNV	**Unalaska Valle**	**6.24**	**74**	*e*Pn	**Pn**	**20 35 11.7**	**+0.3**
SVW2	**Sparrevohn**	**14.29**	**45**	*e*Pn	**Pn**	**20 36 55.0**	**+1.5**
KDAK	**Kodiak Island**	**14.67**	**60**	P	**Pn**	**20 36 56.6**	**-1.5**
KDAK	2.8nm,0.3s,baz=146,slow=12,SNR=42			S	**S**	**20 39 35.1**	**-5.4**
RSO	**Redoubt South**	**15.30**	**50**	*e*P	**Pn**	**20 37 07.4**	**+1.6**
PETK	**Petropavlovsk-**	**15.48**	**282**	P	**Pn**	**20 37 08.3**	**+0.4**
	0.3nm,0.3s,baz=83,slow=14,SNR=5.6						
PETK	**Petropavlovsk-**	**15.48**	**282**	P	**Pn**	**20 37 08.3**	**+0.4**
RC01	**Rabbit Creek A**	**16.91**	**49**	*e*Pn	**Pn**	**20 37 24.5**	**-0.4**
DAWY	**Dawson**	**22.33**	**45**	*e*P	**P**	**20 38 19.5**	**-0.6**
INK	**Inuvik**	**25.72**	**36**	P	**P**	**20 38 50.5**	**-0.3**
	0.9nm,0.7s,mb3.5,baz=279,slow=7.8,SNR=6.2						
YKA	**Yellowknife Ar**	**33.45**	**48**	P	**P**	**20 39 58.4**	**-0.4**
	1.0nm,0.6s,mb3.5,baz=280,slow=7.4,SNR=21						
MJAR	**Matsushiro Arr**	**35.28**	**261**	P	**P**	**20 40 15.0**	**+0.2**
	0.8nm,0.6s,mb3.4,baz=42,slow=6.5,SNR=6.2						
EGMT	**Eagleton**	**41.60**	**68**	*e*P	**P**	**20 41 01.0**	**-6.2**
	4.9nm,0.4s,mb4.3						
NVAR	**Mina Array Bea**	**42.12**	**86**	P	**P**	**20 41 12.9**	**+1.4**
	1.5nm,0.7s,mb3.5,baz=299,slow=7.2,SNR=13						
PDAR	**Pinedale Array**	**44.70**	**75**	P	**P**	**20 41 31.8**	**-0.3**
	1.6nm,0.6s,mb3.5,baz=312,slow=3.8,SNR=8.5						
FRB	**Frobisher Bay**	**51.31**	**33**	P	**P**	**20 42 20.9**	**-1.3**
	1.8nm,0.4s,mb3.9,baz=303,slow=8.6,SNR=5.0						
TXAR	**Lajitas Array**	**57.19**	**83**	P	**P**	**20 43 05.1**	**0.0**
	0.9nm,0.6s,mb3.6,baz=286,slow=4.9,SNR=8.2						
PLCA	**Paso Flores**	**130.06**	**107**	PKP	PKPdf	20 52 24.6	+0.7
	2.2nm,0.8s,baz=224,slow=20,SNR=4.6						

IDC ***03*** *20:44:15.3±0.5, 14.°50N×93.°63E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.5/26, mbtmp4.5/23, ML5.0/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/31, Error ellipse: s-maj=18.1km s-min=11.7km az=51.0*
MOS ***03*** *20:44:18.4±0.9, 14.°50N×93.°70E, h33km, mb4.7/47, Error ellipse: s-maj=11.6km s-min=5.5km az=117.4*
ISCJB ***03*** *20:44:19.3±0.2, 14.°54N±0.°03×93.°65E±0.°03, h38km, mb4.6/116, MS3.8/9, Error ellipse: s-maj=4.9km s-min=3.5km az=170.1*
SZGRF ***03*** *20:44:19.5, 15.°10N×94.°73E, h33km, mb4.7, Near south coast of Myanmar*
NEIC ***03*** *20:44:20.6±0.2, 14.°51N×93.°72E, mb4.6/65, Error ellipse: s-maj=5.5km s-min=4.6km az=203.0*
BJI ***03*** *20:44:21.0, 14.°75N×93.°74E, h36km, mB4.8/21, mb4.7/38, Ms3.9/22, Ms7 3.8/21*
DJA ***03*** *20:44:31, 14.°74N×94.°56E, h155km, mb4.4/6*
ISC 03 20:44:21.5±0.2, 14.°55N±0.°03×93.°65E±0.°03, h40km, h40km±1.7km; pP-P, n289, σ1°01/293, mb4.6/116, MS3.8/9, 7C-24D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDT	**Bhumibol Dam**	**5.81**	**62**	P	**Pn**	**20 45 45.0**	**-0.1**
	116nm,1.0s						
NNT	**Nongplab**	**6.23**	**108**	P	**Pn**	**20 45 53.5**	**+2.6**
NST	**Nakhon Sawan**	**6.36**	**79**	P	**Pn**	**20 45 53.8**	**+1.1**
CM31	**Chiang Mai Arr**	**6.39**	**52**	*e*Pn	**Pn**	**20 45 52.8**	**-0.4**
	39nm,0.4s						
CMAR	**Chiang Mai Arr**	**6.39**	**52**	P	**Pn**	**20 45 52.8**	**-0.4**
CMAR						20 47 02.7	
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
CMAR				smax			
	comp=N,5.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,385nm,19.9s						
CMAR	**Chiang Mai Arr**	**6.39**	**52**	Pn	**Pn**	**20 45 52.8**	**-0.4**
	comp=Z,8.7nm,0.3s,baz=240,slow=15,SNR=146						
CMAR				Sn	**Sn**	**20 47 02.7**	**-2.2**
	comp=Z,4.7nm,0.3s,baz=239,slow=28,SNR=5.8						
CMAR				LR	LR	20 48 45.6	
	comp=Z,385nm,19.9s,baz=17,slow=42						
CHTO	**Chiang Mai 6.61 49**			*e*Pn	**Pn**	**20 45 55.5**	**-0.7**
	comp=Z,36nm,0.5s						
CHTO				*e*Sn	**Sn**	**20 47 03.5**	**-6.8**
KKTK	**Khon Kaen 9.02 77**			P	**Pn**	**20 46 30.0**	**+0.7**
AGT	**Agartala 9.55 347**			*ex*	x	20 48 08.0	
IMP	**Imphal 10.18 1**			*i* P	**Pn**	**20 46 45.0**	**-0.1**
SHL	**Shillong 11.08 352**			*e*P	**Pn**	**20 46 55.0**	**-2.4**
SHL				*e*S	**Sn**	**20 48 50.0**	**-10**
KULM	**Kulim 11.50 142**			*e*Pn	**Pn**	**20 47 05.8**	**+2.6**
	comp=Z,55nm,1.4s						
KULM				*e*Sn	**Sn**	**20 49 04.5**	**-5.9**
PSI	**Prapat 12.78 155**			P	**Pn**	**20 47 25.8**	**+5.0**
PSI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PSI				MLR	MLR		
	comp=Z,428nm,21.9s						
PSI	**Prapat 12.78 155**			Pn	**Pn**	**20 47 25.8**	**+5.0**
	comp=Z,1.1nm,0.3s,baz=332,slow=10,SNR=8.9						
PSI				LR	LR	20 52 02.8	
	comp=Z,428nm,21.9s,baz=315,slow=36						
KMI	**Kunming 13.55 38**			P	**Pn**	**20 47 31.2**	**0.0**
KMI				pP		20 47 40.2	
KMI				sP		20 47 44.4	
KMI				S	**Sn**	**20 50 02.5**	**+2.1**
KMI				SS		20 50 19.7	
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,37nm,4.2s						
KMI				LR	LR		
	comp=N,220nm,20.9s						
KMI				LR	LR		
	comp=E,170nm,20.9s						
KMI				LR	LR		
	comp=Z,180nm,19.0s						
PALK	**Pallekele 14.62 242**			*e*Pn	**Pn**	**20 47 45.6**	**-0.2**
PALK				*e*Sn	**Sn**	**20 50 16.2**	**-10**
HYB	**Hyderabad 14.79 283**			⇑*i*P	**Pn**	**20 47 56.0**	**+8.0**
HYB				*e*S	**Sn**	**20 50 24.0**	**-6.7**
PKI	**Pulchoki 15.05 331**			*e*P	**Pn**	**20 47 48.2**	**-3.3**
	comp=Z,44nm,0.4s						
PKI				*e*S	**Sn**	**20 50 26.7**	**-10**
PKIN	**Phulchoki 15.07 331**			*e*P	**Pn**	**20 47 49.8**	**-1.8**
	comp=Z,73nm,0.5s						
GUN	**Gumba 15.13 333**			*e*P	**Pn**	**20 47 51.0**	**-1.4**
	comp=Z,66nm,0.3s						
LSA	**Lhasa 15.25 352**			*e*P	**Pn**	**20 47 51.8**	**-2.2**
KKN	**Kakani 15.30 331**			*e*P	**Pn**	**20 47 53.6**	**-1.1**
	comp=Z,16nm,0.3s						
GKN	**Gorkha 15.79 329**			*e*P	**Pn**	**20 47 58.8**	**-2.2**
	comp=Z,53nm,0.3s						
QIZ	**Qiongzhong 16.13 72**			P	**Pn**	**20 48 05.1**	**-0.3**
QIZ				S	**Sn**	**20 51 04.8**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
QIZ				LR	LR		
	comp=Z,170nm,19.6s						
KOLN	**Koldanda 16.14 326**			*e*P	**Pn**	**20 48 04.3**	**-1.1**
	comp=Z,46nm,0.3s						
KOLN				*e*S	**Sn**	**20 50 52.6**	**-11**
LATR	**Latur 16.83 286**			*e*P	**Pn**	**20 48 15.5**	**+1.2**
GYA	**Guiyang 16.98 44**			P	**Pn**	**20 48 16.2**	**+0.1**
GYA				pP	pP	20 48 24.6	-2.8
GYA				sP	sP	20 48 32.1	-0.4
GYA				S	**S**	**20 51 22.3**	**-10**
GYA				SS		20 51 43.0	
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.3s						
GYA				LR	LR		
	comp=N,530nm,12.0s						
GYA				LR	LR		
	comp=E,410nm,11.2s						
GYA				LR	LR		
	comp=Z,500nm,12.4s						
BHPL	**Bhopal 17.60 302**			*e*P	**Pn**	**20 48 25.3**	**+1.5**
BHPL				*ex*	x	20 51 28.7	
CD2	**Chengdu 18.74 28**			P	**Pn**	**20 48 39.3**	**+1.6**
CD2				pP	pP	20 48 47.0	+0.1
CD2				sP	sP	20 48 51.5	-0.4
CD2				PP		20 48 55.0	
CD2				S	**S**	**20 52 04.0**	**-3.7**
CD2				sS	sS	20 52 16.5	-7.6
CD2				SS		20 52 27.8	
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,100nm,6.4s						
CD2				LR	LR		
	comp=N,200nm,14.3s						
CD2				LR	LR		
	comp=Z,210nm,16.7s						
KAD	**Karad 18.92 281**			*e*P	**Pn**	**20 48 38.5**	**-1.4**
KAD				AMb	AMB	20 48 42.4	
	comp=Z,38nm,0.3s						
KAD				*ex*	x	20 51 59.7	
POO	**Poona 19.39 284**			*e*P	**Pn**	**20 48 43.7**	**-1.8**
POO				AMb	AMB	20 48 48.1	
	comp=Z,15nm,0.7s						
KSM	**Kuching 20.97 127**			*e*P	**P**	**20 49 01.9**	**+0.5**
	comp=Z,8.8nm,1.0s						
AJM	**Ajmer 21.36 307**			*e*P	**P**	**20 49 06.7**	**+1.2**
AJM				AMb	AMB	20 49 08.7	
SMLA	**Simla 22.38 320**			*ex*	**P**	**20 49 14.8**	**-1.5**
SMLA				*i* x	x	20 53 11.0	
LZH	**Lanzhou 23.31 21**			*e*P	**P**	**20 49 26.2**	**+0.1**
LZH				pP		20 49 38.5	
LZH				sP	sP	20 49 42.7	+1.5
LZH				PP		20 49 56.2	
LZH				PcP	PcP	20 53 17.1	+4.8
LZH				*e*S	**S**	**20 53 35.3**	**-0.3**
LZH				sS	sS	20 53 51.0	-2.6
LZH				pmax	pmax		
	comp=Z,44nm,1.1s,mb4.8						
LZH				pmax	pmax		
	comp=Z,150nm,5.8s						
LZH				LR	LR		
	comp=N,1μm,13.5s						
LZH				LR	LR		
	comp=Z,2μm,14.7s,MS4.7						
XAN	**Xi'an 23.82 33**			P	**P**	**20 49 29.1**	**-1.8**
XAN				pP		20 49 37.9	
XAN				sP	sP	20 49 43.1	-3.4
XAN				S	**S**	**20 53 46.2**	**+2.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
GTA	**Gaotai 25.35 11**			P	**P**	**20 49 45.6**	**+0.9**
GTA				pP	pP	20 49 55.2	-0.4
GTA				sP	sP	20 49 59.1	-1.3
GTA				S	**S**	**20 54 10.9**	**+2.5**
GTA				sS	sS	20 54 26.6	+0.1
GTA				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
GTA				pmax	pmax		
	comp=Z,79nm,5.9s						
GTA				LR	LR		
	comp=N,96nm,16.6s,MS3.6						
GTA				LR	LR		
	comp=E,110nm,16.1s,MS3.6						
GTA				LR	LR		
	comp=Z,96nm,18.1s,MS3.4						
GQP	**Guinayangan 27.92 88**			⇓*e*P	**P**	**20 50 15.0**	**+6.9**
YHNB	**Yeheng 27.94 65**			P	**P**	**20 50 06.0**	**-2.2**
	comp=Z,30nm,1.3s,mb4.8						
WMQ	**Urumqi 29.61 351**			*e*P	**P**	**20 50 24.4**	**+1.6**
WMQ				LR	LR		
	comp=N,110nm,32.0s						
WMQ				LR	LR		
	comp=Z,120nm,24.0s						
KBL	**Kabul 29.81 316**			*e*P	**P**	**20 50 25.8**	**+1.0**
	comp=Z,8.3nm,0.8s,mb4.5						
KBL				*e*pP	pP	20 50 35.2	-0.5
KBL				*e*sP	sP	20 50 40.2	-0.2
KBL				*e*PcP	PcP	20 53 27.6	0.0
HHC	**Hu-ho-hao-te 30.50 27**			*e*P	**P**	**20 50 33.5**	**+2.8**
HHC				pP	pP	20 50 43.6	+1.9
HHC				sP	sP	20 50 46.8	+0.3
HHC				PP	PP	20 51 34.2	-5.9
HHC				PcP	PcP	20 53 32.0	+2.8
HHC				S	**S**	**20 55 33.1**	**+3.6**
HHC				sS	sS	20 55 49.1	+1.4
HHC				ScS	ScS	21 01 05.7	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,180nm,15.3s,MS3.9						
HHC				LR	LR		
	comp=E,130nm,15.1s,MS3.9						
HHC				LR	LR		
	comp=Z,120nm,17.8s,MS3.6						
KZA Kyzart 31.71 333				P	**P**	**20 50 43.3**	**+1.9**
	SNR=7.4						
BJI Beijing 32.15 34				P	**P**	**20 50 45.9**	**+0.6**
BJI				S	**S**	**20 55 54.9**	**-0.4**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
BJI				pmax	pmax		
	comp=Z,95nm,4.1s						
BJI				LR	LR		
	comp=N,150nm,14.7s,MS4.0						
BJI				LR	LR		
	comp=E,170nm,14.4s,MS4.0						
BJI				LR	LR		
	comp=Z,110nm,22.7s						
UCH Uchtor 32.15 333				*e*P	**P**	**20 50 46.2**	**+0.9**
	comp=Z,2.6nm,0.8s,mb4.1						
UCH				*e*PcP	PcP	20 53 34.2	+0.6
TKM2 Tokmak 2 32.25 335				P	**P**	**20 50 47.7**	**+1.6**
	SNR=11						
TKM2 Tokmak 2 32.25 335				*e*P	**P**	**20 50 47.0**	**+0.8**
	comp=Z,6.8nm,0.7s,mb4.6						
TKM2				*e*PcP	PcP	20 53 34.2	+0.3
AML Almayashu 32.44 332				P	**P**	**20 50 49.4**	**+1.6**
	SNR=8.8						
AML Almayashu 32.44 332				*e*P	**P**	**20 50 49.4**	**+1.6**
	comp=Z,4.6nm,0.7s,mb4.4						
AAK Ala-Archa 32.48 333				P	**P**	**20 50 49.9**	**+1.7**
	SNR=6.2						
AAK Ala-Archa 32.48 333				*d i*P	**P**	**20 50 49.8**	**+1.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
AAK				MLR	MLR		
	comp=Z,125nm,21.0s,MS3.6						
AAK Ala-Archa 32.48 333				PcP	PcP	20 53 35.6	+1.0
	comp=Z,1.1nm,0.6s,baz=64,slow=1.0,SNR=4.4						
AAK				LR	LR	21 05 29.5	
	comp=Z,265nm,21.9s,MS3.9,baz=304,slow=39						
AAK Ala-Archa 32.48 333				*e*P	**P**	**20 50 48.9**	**+0.7**
	comp=Z,5.6nm,1.0s,mb4.3						
AAK				*e*PcP	PcP	20 53 35.7	+1.2
EKS2 Erkin-Say 32.83 332				P	**P**	**20 50 53.0**	**+1.8**
	SNR=14						
EKS2 Erkin-Say 32.83 332				*e*P	**P**	**20 50 52.7**	**+1.5**
	comp=Z,6.2nm,0.8s,mb4.6						
EKS2				*e*PcP	PcP	20 53 36.6	+1.1
USP Ospenovka 32.99 334				P	**P**	**20 50 53.7**	**+1.1**
	SNR=17						
MKAR Makanchi Array 33.52 346				P	**P**	**20 50 57.8**	**+0.6**
MKAR						20 53 37.3	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR Makanchi Array 33.52 346				P	**P**	**20 50 57.8**	**+0.6**
	comp=Z,3.8nm,0.6s,mb4.5,baz=156,slow=9.6,SNR=24						
MKAR				PcP	PcP	20 53 37.3	0.0
	comp=Z,0.7nm,0.6s,baz=194,slow=2.7,SNR=3.3						
SONM Songino Array 34.83 15				P	**P**	**20 51 09.3**	**+0.8**
SONM						20 53 42.0	
SONM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM Songino Array 34.83 15				P	**P**	**20 51 09.3**	**+0.7**
	comp=Z,9.8nm,0.7s,mb4.8,baz=204,slow=7.6,SNR=87						
SONM				PcP	PcP	20 53 42.0	+0.9
	comp=Z,1.4nm,0.8s,baz=191,slow=3.4,SNR=4.2						
ULN Ulaanbaatar 35.03 16				*e*P	**P**	**20 51 10.3**	**+0.1**
	comp=Z,9.0nm,0.8s,mb4.8						
ULN				*e*pP	pP	20 51 21.3	0.0
ZAK Zakamensk 36.58 10				*e*P	**P**	**20 51 24.1**	**+0.6**
ZAK				*e*		20 53 46.2	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
MOY Mondy 37.49 8				*e*P	**P**	**20 51 32.3**	**+1.1**
TLY Talaya 37.90 10				*e*P	**P**	**20 51 36.6**	**+2.0**
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,98nm,22.0s,MS3.6						
TLY Talaya 37.90 10				P	**P**	**20 51 36.3**	**+1.7**
	comp=Z,5.9nm,0.8s,mb4.4						
KSRS Korea Array 38.00 47				P	**P**	**20 51 34.7**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
KSRS				MLR	MLR		
	comp=Z,88nm,18.6s,MS3.6						
KSRS Korea Array 38.00 47				P	**P**	**20 51 34.7**	**-1.1**
	comp=Z,3.0nm,0.7s,mb4.1,baz=241,slow=8.8,SNR=16						
KSRS				LR	LR	21 09 13.2	
	comp=Z,88nm,18.6s,MS3.6,baz=73,slow=39						
KURK Kurchatov 38.07 344				*d i*P	**P**	**20 51 36.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
KURK				MLR	MLR		
	comp=Z,191nm,18.0s,MS4.0						
KURK Kurchatov 38.07 344				LR	LR	21 07 51.5	
	comp=Z,56nm,20.7s,MS3.4,baz=290,slow=37						
KURK Kurchatov 38.07 344				*e*P	**P**	**20 51 36.4**	**+0.3**
	comp=Z,26nm,1.2s,mb4.8						
CN2 Changchun 39.82 37				*e*P	**P**	**20 51 53.8**	**+2.9**
CN2				*e*S	**S**	**20 57 55.3**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
ZAA0 Zalesovo Array 39.92 352				⇓*i*P	**P**	**20 51 51.6**	**+0.1**
ZALV Zalesovo Beam 39.92 352				P	**P**	**20 51 51.8**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.3						
ZALV Zalesovo Beam 39.92 352				P	**P**	**20 51 51.8**	**+0.3**
	comp=Z,40nm,0.7s,mb5.3,baz=176,slow=8.7,SNR=172						
NVS Novosibirsk 41.01 351				*e*P	**P**	**20 51 59.7**	**-0.8**
NVS				pmax	pmax		
	comp=N,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
BVAR Borovoye Array 42.58 339				P	**P**	**20 52 13.0**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR Borovoye Array 42.58 339				P	**P**	**20 52 13.0**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.0,baz=157,slow=8.0,SNR=9.3						
BRVK Borovoye 42.64 339				⇑*e*P	**P**	**20 52 14.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
BRVK				MLR	MLR		
	comp=Z,118nm,19.0s,MS3.8						
BRVK Borovoye 42.64 339				P	**P**	**20 52 12.2**	**-1.7**
	comp=Z,6.9nm,1.1s,mb4.3						
MBWA Marble Bar 43.76 144				*e*P	**P**	**20 52 20.7**	**-2.7**
	comp=Z,10nm,1.0s,mb4.5						
MBWA				*e*	pP	20 52 32.7	-2.0
ABKAR Akbulak array 44.24 329				⇓*i*P	**P**	**20 52 27.6**	**+0.7**
	comp=Z,9.9nm,0.7s,mb4.7						
UMR Umm Al-Rimmam 44.82 297				*e*P	**P**	**20 52 32.4**	**+0.6**
UMR				AMb	AMB	20 52 33.3	
	comp=Z,20nm,0.8s,mb5.0						
RDF Al-Radifah 44.87 296				*e*P	**P**	**20 52 33.1**	**+1.0**
RDF				AMb	AMB	20 52 33.9	
	comp=Z,33nm,0.7s,mb5.3						
MIB Mutribah 45.18 298				*e*P	**P**	**20 52 35.9**	**+1.2**
MIB				AMb	AMB	20 52 36.8	
	comp=Z,35nm,1.0s,mb5.2						
FITZ Fitzroy Crossi 45.25 135				P	**P**	**20 52 33.9**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=315,slow=9.8,SNR=17						
MAJO Matsushiro 45.28 53				*e*P	**P**	**20 52 35.0**	**-0.4**
MAJO				*e*	pP	20 52 46.7	0.0
MAT Matsushiro 45.28 53				P	**P**	**20 52 34.9**	**-0.5**
MJAR Matsushiro Arr 45.28 53				P	**P**	**20 52 34.9**	**-0.5**
MJAR						20 54 14.7	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
**MJAR

SVE	Sverdlovsk	49.08 337	⇑eP	P	20 53 05.3	+0.7
SVE			pmax	pmax		
comp=Z,23nm,0.9s,mb5.2						
GNI	Garni	49.59 311	iP	P	20 53 08.4	-0.4
GNI	Garni	49.59 311	⇓iP	P	20 53 11.1	+2.3
comp=Z,39nm,1.1s,mb5.3						
ARU	Arti	49.62 335	dP	P	20 53 08.8	0.0
ARU			e		20 54 59.3	
ARU			S	S	21 00 15.2	+0.9
ARU			SS	SS	21 03 42.2	-4.5
ARU			pmax	pmax		
comp=Z,12nm,1.0s,mb4.9						
ARU	Arti	49.62 335	⇓iP	P	20 53 08.6	-0.1
comp=Z,4.4nm,0.6s,mb4.7						
ZEI	Tsey	50.98 314	eP	P	20 53 19.2	-0.1
ZEI			pmax	pmax		
comp=Z,9.0nm,0.7s,mb4.8						
KIV	Kislovodsk	52.18 315	eP	P	20 53 29.5	+1.3
KIV			pmax	pmax		
comp=Z,43nm,1.0s,mb5.3						
KIV	Kislovodsk	52.18 315	⇓iP	P	20 53 29.3	+1.1
comp=Z,40nm,0.9s,mb5.3						
NWAO	Narrogin (SRO)	52.32 155	eP	P	20 53 28.3	-1.0
comp=Z,15nm,1.0s,mb4.9						
SOKR	Solikamsk	52.46 337	⇑iP	P	20 53 30.8	+0.8
SOKR			pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8						
WRA	Warramunga Arr	52.69 130	P	P	20 53 30.9	-1.4
WRA					20 54 42.5	
WRA			pmax	pmax		
comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	52.69 130	P	P	20 53 30.9	-1.4
comp=Z,1.6nm,0.6s,mb4.1,baz=313,slow=8.0,SNR=56						
WRA			PcP	PcP	20 54 42.5	+0.7
comp=Z,0.7nm,0.6s,baz=315,slow=3.6,SNR=2.6						
WRAB	Tennant Creek	52.70 130	eP	P	20 53 30.6	-1.7
comp=Z,4.0nm,0.7s,mb4.5						
YAK	Yakutsk	53.89 20	P	P	20 53 38.4	-2.1
comp=Z,18nm,0.7s,mb5.1						
MALT	Malatya	53.94 307	eP	P	20 53 42.3	+1.0
comp=Z,2.6nm,0.9s,mb4.2						
ASAR	Alice Springs	54.70 133	P	P	20 53 45.9	-1.0
ASAR					20 54 51.4	
ASAR			pmax	pmax		
comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	54.70 133	P	P	20 53 45.9	-1.0
comp=Z,1.7nm,0.5s,mb4.4,baz=310,slow=6.9,SNR=59						
ASAR			PcP	PcP	20 54 51.4	+2.0
comp=Z,1.1nm,1.0s,baz=319,slow=6.3,SNR=2.9						
VRHR	Novokhopersk	55.28 323	eP	P	20 53 50.0	-0.8
VRHR			pmax	pmax		
comp=E,10.0nm,0.5s						
VRHR			pmax	pmax		
comp=Z,20nm,0.5s,mb5.4						
VRHR			pmax	pmax		
comp=N,20nm,0.7s						
ANN	Anapa	56.03 314	eP	P	20 53 47.0	-9.3
ANN			pmax	pmax		
comp=Z,17nm,0.9s,mb5.1						
VORD	Divnogorie	56.62 322	eP	P	20 53 59.8	-0.5
VORD			pmax	pmax		
comp=N,9.0nm,0.6s						
VORD			pmax	pmax		
comp=E,10.0nm,0.6s						
VORD			pmax	pmax		
comp=Z,9.0nm,0.6s,mb5.0						
VSR	Storozhevoye	56.77 322	eP	P	20 54 01.2	-0.3
VSR			pmax	pmax		
comp=Z,6.0nm,0.4s,mb5.0						
VSR			pmax	pmax		
comp=N,1.0nm,0.3s						
VSR			pmax	pmax		
comp=E,4.0nm,0.4s						
BR131	Keskin Array S	57.84 308	eP	P	20 54 09.0	-0.3
comp=E,6.4nm,0.8s,mb4.7						
BRTR	Keskin Array B	57.84 308	P	P	20 54 09.3	+0.1
BRTR			pmax	pmax		
comp=Z,6.0nm,0.9s						
BRTR	Keskin Array B	57.84 308	P	P	20 54 09.3	+0.1
comp=Z,6.4nm,0.8s,mb4.7,baz=121,slow=7.0,SNR=47						
KMBO	Kilima Mbogo	57.93 259	P	P	20 54 12.4	+2.2
comp=Z,8.2nm,1.5s,mb4.5						
SIM	Simferopol'	58.37 314	iP	P	20 54 13.5	+0.7
SIM			pmax	pmax		
comp=Z,19nm,0.8s,mb5.2						
OBN	Obninsk	59.55 326	eP	P	20 54 20.8	0.0
OBN			pmax	pmax		
comp=Z,18nm,1.6s,mb4.8						
OBN	Obninsk	59.55 326	eP	P	20 54 20.6	-0.2
KLMR	Klimovskoe	60.30 333	eP	P	20 54 25.2	-0.6
KLMR			pmax	pmax		
comp=Z,14nm,1.6s,mb4.7						
TIXI	Tiksi	60.83 12	iP	P	20 54 28.2	-1.1
TIXI			pmax	pmax		
comp=Z,16nm,1.2s,mb5.0						
TIXI	Tiksi	60.83 12	eP	P	20 54 28.0	-1.3
comp=Z,6.2nm,0.6s,mb4.9						
TIXI			epP	pP	20 54 38.6	-2.4
TIRR	Tirgusor	62.31 313	⇓P	P	20 54 39.8	+0.1
TIRR	Tirgusor	62.31 313	⇓iP	P	20 54 39.8	+0.1
AKASG	Malin Array Be	62.71 320	iP	P	20 54 40.7	-1.6
AKASG			pmax	pmax		
comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	62.71 320	P	P	20 54 40.8	-1.5
comp=Z,0.5nm,0.4s,mb4.0,baz=89,slow=4.2,SNR=10						
VRI	Vrincioaia	63.65 314	⇓P	P	20 54 49.5	+0.9
VRI	Vrincioaia	63.65 314	⇓iP	P	20 54 49.5	+0.9
PLOR	Plostina	63.70 314	⇓P	P	20 54 50.3	+1.3
PLOR	Plostina	63.70 314	⇓iP	P	20 54 50.3	+1.3
MLR	Muntele Rosu	64.16 314	⇓P	P	20 54 53.1	+1.1
MLR	Muntele Rosu	64.16 314	⇓iP	P	20 54 53.1	+1.1
JOF	Joensuu	64.67 333	eP	P	20 54 53.6	-1.4
JOF			pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6						
JOF	Joensuu	64.67 333	ep	P	20 54 53.6	-1.4
comp=Z,4.1nm,0.6s,mb4.6						
BURAR	Bucovina Array	64.87 316	⇓P	P	20 54 56.8	+0.2
BURAR	Bucovina Array	64.87 316	⇓iP	P	20 54 56.8	+0.2
BUR08	Bucovina Ar. S	64.88 316	eP	P	20 54 56.4	-0.3
STKA	Stephens Creek	65.13 136	P	P	20 54 57.3	-1.2
comp=Z,2.9nm,0.6s,mb4.5,baz=336,slow=6.3,SNR=11						
STKA	Stephens Creek	65.13 136	eP	P	20 54 56.6	-1.9
comp=Z,1.2nm,1.0s,mb3.9						
STKA			eP		20 54 56.9	
VSU	Vasula	65.67 328	⇓eP	P	20 55 01.0	-0.6
FINES	FINESS Array B	66.64 331	P	P	20 55 07.4	-0.3
FINES			pmax	pmax		
comp=Z,4.0nm,0.6s						
FINES	FINESS Array B	66.64 331	P	P	20 55 07.4	-0.3
comp=Z,3.8nm,0.6s,mb4.6,baz=94,slow=5.6,SNR=44						
KAF	Kangasniemi	66.69 332	eP	P	20 55 06.9	-1.1
KAF			pmax	pmax		
comp=Z,1.0nm,0.4s,mb4.2						
KAF	Kangasniemi	66.69 332	ep	P	20 55 06.9	-1.1
comp=Z,1.1nm,0.4s,mb4.2						
KWP	Kalwaria Pacla	66.72 318	eP	P	20 55 08.5	+0.1
comp=Z,18nm,1.0s,mb5.1						
KWP	Kalwaria Pacla	66.72 318	⇓iP	P	20 55 08.7	+0.3
KOLS	Kolonicke sedl	66.94 317	eP	P	20 55 10.5	+0.6
KOLS			pmax	pmax		
comp=Z,4.0nm,1.5s,mb4.2						
KOLS	Kolonicke sedl	66.94 317	eP	P	20 55 10.5	+0.6
comp=Z,3.9nm,1.5s,mb4.2						
KOLS			epP	pP	20 55 23.8	+2.1
KOLS	Kolonicke sedl	66.94 317	eP	P	20 55 10.5	+0.6
KOLS			epP	pP	20 55 23.8	+2.1
STHS	Stebnicka Huta	67.65 318	eP	P	20 55 15.0	+0.6
STHS			pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.3						
STHS	Stebnicka Huta	67.65 318	eP	P	20 55 15.0	+0.6
comp=Z,2.3nm,0.7s,mb4.3						
STHS			epP	pP	20 55 27.2	+1.0
STHS	Stebnicka Huta	67.65 318	eP	P	20 55 15.0	+0.6
STHS			epP	pP	20 55 27.2	+1.0
KECS	Kecovo	68.10 317	eP	P	20 55 17.7	+0.5
KECS			pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.3						
KECS	Kecovo	68.10 317	eP	P	20 55 17.7	+0.5
comp=Z,2.9nm,1.0s,mb4.3						
KECS			ePP	pP	20 55 28.4	-0.7
KECS	Kecovo	68.10 317	eP	P	20 55 17.7	+0.5
KECS			epP	pP	20 55 28.4	-0.7
KEV	Kevo	68.43 340	eP	P	20 55 18.1	-0.8
KEV			pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4						
KEV	Kevo	68.43 340	ep	P	20 55 18.1	-0.8
comp=Z,2.9nm,0.8s,mb4.4						
OJC	Ojcow	68.63 319	eP	P	20 55 20.5	0.0
ARCES	ARCESS Array B	68.87 340	P	P	20 55 22.0	+0.4
ARCES			pmax	pmax		
comp=Z,2.0nm,0.5s						
ARCES	ARCESS Array B	68.87 340	P	P	20 55 21.9	+0.3
comp=Z,2.1nm,0.5s,mb4.4,baz=93,slow=6.3,SNR=30						
VYHS	Vyhne	69.19 317	eP	P	20 55 24.3	+0.2
VYHS			pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1						
VYHS	Vyhne	69.19 317	eP	P	20 55 24.3	+0.2
comp=Z,1.6nm,0.8s,mb4.0						
VYHS			ePP	pP	20 55 34.1	-1.8
VYHS			eSP		20 55 38.2	
VYHS	Vyhne	69.19 317	eP	P	20 55 24.3	+0.2
VYHS			epP	pP	20 55 34.1	-1.8
VYHS			esP	sP	20 55 38.2	-2.3
PKSM	Moragy	69.29 314	⇑P	P	20 55 24.8	+0.1
PKSM	Moragy	69.29 314	⇑iP	P	20 55 24.8	+0.1
MORC	Moravsky Berou	70.07 318	eP	P	20 55 29.6	+0.1
comp=Z,7.1nm,1.0s,mb4.5						
MORC	Moravsky Berou	70.07 318	⇑iP	P	20 55 30.1	+0.7
BILL	Bilibino	70.12 22	eP	P	20 55 28.2	-1.2
BILL			pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.3						
BILL	Bilibino	70.12 22	eP	P	20 55 27.9	-1.4
comp=Z,2.6nm,0.7s,mb4.3						
ZST	Bratislava	70.35 316	eP	P	20 55 32.5	+1.3
ZST			pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4						
ZST	Bratislava	70.35 316	eP	P	20 55 32.5	+1.3
comp=Z,5.2nm,1.0s,mb4.4						
ZST	Bratislava	70.35 316	eP	P	20 55 32.5	+1.3
KSP	Ksiaz	70.88 319	eP	P	20 55 34.7	+0.3
KSP			e*PP	pP	20 55 45.8	-0.5
KOGS	Kog	70.95 314	eP	P	20 55 35.0	+0.1
LSZ	Lusaka	71.17 248	eP	P	20 55 38.4	+1.7
comp=Z,8.0nm,0.7s,mb4.8						
LSZ			epP	pP	20 55 47.9	-0.7
CEL	Celeste	71.60 306	eP	P	20 55 38.6	-0.3
comp=Z,19nm,1.0s,mb5.0						
VNDS	Vrh nad Dolski	72.03 314	iP	P	20 55 41.8	+0.4
LJU	Ljubljana	72.15 314	eP	P	20 55 42.6	+0.4
CEY	Cerknica	72.24 314	iP	P	20 55 42.6	0.0
BRG	Berggiesshubel	72.37 319	eP	P	20 55 43.3	0.0
comp=Z,5.0nm,0.8s,mb4.5						
BRG	Berggiesshubel	72.37 319	iP	P	20 55 44.0	+0.6
comp=Z,5.0nm,0.8s,mb4.5						
BRG			e	pP	20 55 56.9	+1.7
comp=Z,3.2nm,0.8s						
BRG	Berggiesshubel	72.37 319	iP	P	20 55 44.0	+0.7
BRG			e	pP	20 55 56.9	+1.6
BRG			pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3						
GEC2	GERESS Array S	72.60 317	eP	P	20 55 44.9	+0.2
comp=Z,8.0nm,0.8s,mb4.7						
GEC2	GERESS Array S	72.60 317	eP	P	20 55 44.9	+0.2
GEC2			pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7						
GEC2	GERESS Array S	72.60 317	eP	P	20 55 44.5	-0.1
comp=Z,2μm,1.1s						
GERES	GERESS Array B	72.60 317	P	P	20 55 45.1	+0.4
GERES			pmax	pmax		
comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	72.60 317	P	P	20 55 45.1	+0.4
comp=Z,4.3nm,0.6s,mb4.5,baz=87,slow=6.1,SNR=59						
VOJS	Vojsko	72.60 314	iP	P	20 55 44.8	0.0
KHC	Kasperske Hory	72.67 317	eP	P	20 55 43.4	-1.7
comp=Z,5.3nm,1.2s,mb4.3						
KHC	Kasperske Hory	72.67 317	eP	P	20 55 45.2	+0.1
KHC			epP	pP	20 55 53.7	-3.3
CLL	Collm	72.95 320	eP	P	20 55 46.4	-0.4
comp=Z,4.0nm,0.9s,mb4.3						
CLL	Collm	72.95 320	⇓iP	P	20 55 46.6	-0.2
CLL			e	pP	20 56 00.0	+1.3
CLL			pmax	pmax		
comp=Z,4.0nm,0.9s,mb4.3						
CLL	Collm	72.95 320	⇓iP	P	20 55 46.6	-0.2
comp=Z,4.0nm,0.9s,mb4.3						
CLL			e	pP	20 56 00.0	+1.3
CLL	Collm	72.95 320	⇓iP	P	20 55 46.6	-0.2
comp=Z,4.0nm,0.9s,mb4.3						
CLL			es P	sP	20 56 00.0	-3.3
CLL			e(PcP)	PcP	20 56 04.0	+0.4
WET	Wettzell	73.12 317	eP	P	20 55 48.0	+0.2
comp=Z,13nm,1.4s,mb4.7						
WET	Wettzell	73.12 317	eP	P	20 55 48.0	+0.2
WET			pmax	pmax		
comp=Z,13nm,1.4s,mb4.7						
TANN	Tannenbergstha	73.33 319	eP	P	20 55 48.9	-0.1
comp=Z,3.0nm,1.0s,mb4.2						
NKC	Novy Kostel	73.35 319	eP	P	20 55 49.3	+0.2
comp=Z,4.0nm,0.8s,mb4.4						
GUNZ	Gunzen	73.42 319	eP	P	20 55 49.9	+0.4
comp=Z,6.0nm,1.0s,mb4.5						
WERD	Werda	73.43 319	eP	P	20 55 49.6	0.0
comp=Z,5.0nm,1.0s,mb4.4						
PLN	Plauen	73.52 319	eP	P	20 55 50.2	+0.1
comp=Z,30nm,1.1s,mb5.1						
ROTZ	Rotzenmuhle	73.53 318	eP	P	20 55 50.7	+0.5
comp=Z,8.0nm,1.3s,mb4.5						
NB2	NORSAR Subarra	73.73 330	P	P	20 55 50.2	-0.9
comp=Z,2.2nm,0.6s,mb4.3,baz=90,slow=6.2						
NOA	NORSAR Array B	73.73 330	P	P	20 55 50.7	-0.4
NOA			pmax	pmax		
comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	73.73 330	P	P	20 55 50.6	-0.5
comp=Z,1.9nm,0.7s,mb4.2,baz=89,slow=5.9,SNR=8.6						
MOX	Moxa	73.86 319	eP	P	20 55 52.5	+0.4
MOX	Moxa	73.86 319	eP	P	20 55 52.4	+0.3
comp=Z,4.0nm,0.9s,mb4.3						
GRA1	Grafenberg Arr	74.17 318	eP	P	20 55 54.5	+0.5
comp=Z,10.0nm,1.2s,mb4.6						
GRF	Grafenberg Arr	74.17 318	eP	P	20 55 54.5	+0.5
comp=Z,10.0nm,1.2s,mb4.6						
GRF	Grafenberg Arr	74.17 318	eP	P	20 55 54.5	+0.5
GRF			pmax	pmax		
comp=Z,10.0nm,1.2s,mb4.6						
BSEG	Bad Segeberg	74.46 322	eP	P	20 55 56.1	+0.5
comp=Z,8.0nm,0.9s,mb4.7						
BSEG	Bad Segeberg	74.46 322	eP	P	20 55 56.1	+0.5
BSEG			pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.7						
CLZ	Clausthal	74.56 320	eP	P	20 55 56.3	+0.1
comp=Z,6.0nm,0.9s,mb4.5						
CLZ	Clausthal	74.56 320	eP	P	20 55 56.3	+0.1
CLZ			pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.5						
TNS	Taunus Mts	75.91 319	eP	P	20 56 04.4	+0.4
comp=Z,13nm,1.2s,mb4.7						
TNS	Taunus Mts	75.91 319	eP	P	20 56 04.4	+0.4
TNS			pmax	pmax		
comp=Z,13nm,1.2s,mb4.7						
IBBN	Ibbenburen	76.13 321	eP	P	20 56 05.4	+0.2
comp=Z,12nm,0.3s,mb5.3						
PGF	Pioggiola	76.41 311	eP	P	20 56 06.4	-0.6
comp=Z,15nm,1.1s,mb4.5						
PGF	Pioggiola	76.41 311	eP	P	20 56 06.4	-0.6
comp=Z,7.6nm,1.1s,mb4.5						
CDF	Champ du Feu	76.88 317	eP	P	20 56 09.6	+0.1
comp=Z,8.6nm,1.1s,mb4.3						
CDF	Champ du Feu	76.88 317	eP	P	20 56 09.6	+0.1
comp=Z,4.3nm,1.1s,mb4.3						
LBTB	Lobatse	77.09 240	eP	P	20 56 12.2	+1.1
KEST	Kesra	77.09 304	P	P	20 56 10.2	-0.7
comp=Z,2.8nm,0.9s,mb4.2,baz=256,slow=3.9,SNR=8.4						
SBF	Sospel	77.37 312	eP	P	20 56 11.9	-0.5
HAU	Hadompre	77.55 317	eP	P	20 56 12.5	-0.8
LPG	La Plagne	77.62 314	eP	P	20 56 13.8	+0.1
comp=Z,18nm,0.9s,mb4.7						
LPG	La Plagne	77.62 314	eP	P	20 56 13.8	+0.1
comp=Z,8.9nm,0.9s,mb4.7						
LPL	La Plagne	77.63 314	eP	P	20 56 13.8	0.0
comp=Z,17nm,0.8s,mb4.7						
LPL	La Plagne	77.63 314	eP	P	20 56 13.8	0.0
comp=Z,8.3nm,0.8s,mb4.7						
MBDF	Montbardon	77.72 313	eP	P	20 56 13.3	-1.0
comp=Z,5.4nm,0.8s,mb4.2						
MBDF	Montbardon	77.72 313	eP	P	20 56 13.3	-1.0
comp=Z,2.7nm,0.8s,mb4.2						
CABF	La Chapelle	77.92 315	eP	P	20 56 15.1	-0.3
comp=Z,6.4nm,0.8s,mb4.3						
CABF	La Chapelle	77.92 315	eP	P	20 56 15.1	-0.3
comp=Z,3.2nm,0.8s,mb4.3						
FRF	La Foret Royal	77.98 312	eP	P	20 56 15.3	-0.5
comp=Z,15nm,0.8s,mb4.7						
FRF	La Foret Royal	77.98 312	eP	P	20 56 15.3	-0.5
comp=Z,7.6nm,0.8s,mb4.7						
LMR	La Mourre	78.11 312	eP	P	20 56 16.0	-0.5
comp=Z,17nm,1.1s,mb4.6						
LMR	La Mourre	78.11 312	eP	P	20 56 16.0	-0.5
comp=Z,8.7nm,1.1s,mb4.6						
GIVF	Givet	78.24 319	eP	P	20 56 16.6	-0.5
ORIF	Oris-en-Rattie	78.32 314	eP	P	20 56 16.7	-0.9
BAIF	Baives	78.64 319	eP	P	20 56 19.0	-0.3
comp=Z,5.9nm,0.8s,mb4.2						
BAIF	Baives	78.64 319	eP	P	20 56 19.0	-0.3
comp=Z,3.0nm,0.8s,mb4.3						
SMRF	Simiane la Rot	78.68 313	eP	P	20 56 19.6	0.0
comp=Z,6.9nm,0.8s,mb4.3						
SMRF	Simiane la Rot	78.68 313	eP	P	20 56 19.6	0.0
comp=Z,6.9nm,0.8s,mb4.6						
VIVF	Saint-Julien-l	79.17 314	eP	P	20 56 21.8	-0.5
LOR	Lormes	79.32 316	eP	P	20 56 22.3	-0.8
comp=Z,2.0nm,0.7s,mb3.9						
LOR	Lormes	79.32 316	eP	P	20 56 22.3	-0.8
comp=Z,1.0nm,0.7s,mb3.9						
SMF	Signal de Mont	79.44 316	eP	P	20 56 22.9	-0.9
comp=Z,4.1nm,0.7s,mb4.2						
SMF	Signal de Mont	79.44 316	eP	P	20 56 22.9	-0.9
comp=Z,2.0nm,0.7s,mb4.2						
SSF	Saint Saulge	79.60 316	eP	P	20 56 23.8	-0.8
comp=Z,5.3nm,0.9s,mb4.2						
SSF	Saint Saulge	79.60 316	eP	P	20 56 23.8	-0.8
comp=Z,2.7nm,0.9s,mb4.2						
AVF	Avril sur Loir	79.75 316	eP	P	20 56 24.5	-0.9
comp=Z,3.7nm,0.7s,mb4.1						
AVF	Avril sur Loir	79.75 316	eP	P	20 56 24.5	-0.9
comp=Z,1.9nm,0.7s,mb4.1						
LASF	Ste Croix	79.89 313	eP	P	20 56 26.1	-0.1
CAF	Calviac	80.98 314	eP	P	20 56 31.8	-0.3
comp=Z,3.2nm,0.7s,mb4.1						
CAF	Calviac	80.98 314	eP	P	20 56 31.8	-0.3
comp=Z,1.6nm,0.6s,mb4.1						
MTLF	Montolieu	81.19 312	eP	P	20 56 32.8	-0.4
RJF	Les Rejaudoux	81.29 314	eP	P	20 56 33.6	-0.1
comp=Z,5.2nm,0.7s,mb4.3						
RJF	Les Rejaudoux	81.29 314	eP	P	20 56 33.6	-0.1
comp=Z,2.6nm,0.7s,mb4.3						
LDF	La Druitiere	81.69 318	eP	P	20 56 35.0	-0.8
MFF	Saint Martin d	82.14 316	eP	P	20 56 37.4	-0.8
comp=Z,26nm,1.3s,mb4.7						
MFF	Saint Martin d	82.14 316	eP	P	20 56 37.4	-0.8
comp=Z,13nm,1.3s,mb4.7						
ETSF	Etsaut	83.27 312	eP	P	20 56 44.0	-0.1
MAW	Mawson	84.94 191	eP	P	20 56 53.2	+1.3
comp=Z,3.0nm,1.4s,mb4.2						
ESDC	Sonseca Array	86.57 310	P	P	20 57 00.2	-0.6
comp=Z,0.4nm,0.5s,mb3.9,baz=58,slow=4.5,SNR=7.7						
ESDC	Sonseca Array	86.57 310	P	P	20 57 00.2	-0.6
CHUM	Lake Minchumin	87.17 24	eP	P	20 57 03.1	-0.1
comp=Z,2.9nm,0.6s,mb4.7						
SUMG	Summit	87.57 347	eP	P	20 57 05.1	+0.1
comp=Z,7.4nm,1.2s,mb4.8						
BPAW	Bear Paw Mtn.	87.59 23	eP	P	20 57 04.8	-0.4
comp=Z,4.4nm,0.7s,mb4.8						
BPAW			epP	pP	20 57 17.0	-0.4
TORD	Torodi Ar. Bea	88.61 283	P	P	20 57 10.9	-0.1
comp=Z,5.5nm,0.8s,mb5.0,baz=82,slow=4.4,SNR=35						
TORD			PP	PP	21 00 38.0	-1.8
comp=Z,1.1nm,0.8s,baz=67,slow=6.5,SNR=6.1						
INK	Inuvik	90.74 16	P	P	20 57 19.7	-0.2
INK			pmax	pmax		
comp=Z,3.0nm,0.5s						
INK	Inuvik	90.74 16	P	P	20 57 19.7	-0.2
comp=Z,2.5nm,0.5s,mb4.8,baz=342,slow=5.3,SNR=18						
INK	Inuvik	90.74 16	eP	P	20 57 19.4	-0.6
comp=Z,6.3nm,1.0s,mb4.9						
RES	Resolute Bay	90.79 2	P	P	20 57 20.6	+0.5
RES					21 00 54.0	
RES			pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.6						
RES			pmax	pmax		
comp=Z,2.0nm,0.9s,mb4.5						
RES	Resolute Bay	90.79 2	P	P	20 57 20.6	+0.5
comp=Z,2.7nm,0.9s,mb4.6,baz=352,slow=5.5,SNR=12						
RES			PP	PP	21 00 54.0	-1.4
comp=Z,2.2nm,0.9s,baz=338,slow=18,SNR=9.1						
RES	Resolute Bay	90.79 2	eP	P	20 57 20.1	+0.1
comp=Z,2.6nm,0.9s,mb4.6						
RES			epP	pP	20 57 32.5	+0.2
RES			ePP	PP	21 00 51.0	-4.4
DBIC	Dimbokro	96.51 279	P	P	20 57 47.7	+0.1
DBIC			pmax	pmax		
comp=Z,3.0nm,0.8s						
DBIC	Dimbokro	96.51 279	P	P	20 57 47.7	+0.1
comp=Z,2.7nm,0.8s,mb4.7,baz=355,slow=7.9,SNR=3.0						
DBIC	Dimbokro	96.51 279	P	P	20 57 47.7	+0.1
YKA	Yellowknife Ar	100.07 13	P	Pdif	20 58 01.4	-1.3
comp=Z,0.3nm,0.6s,baz=338,slow=4.8,SNR=5.0						
YKA			PP	PP	21 02 01.8	-5.6
comp=Z,0.5nm,0.8s,baz=330,slow=7.3,SNR=7.3						
YKA	Yellowknife Ar	100.07 13	P	Pdif	20 58 01.4	-1.3
YKA			PP	PP	21 02 01.8	-5.6
MSU	Marysvale	121.94 24	ePKPdf	PKPdf	21 03 13.2	+1.3
TXAR	Lajitas Array	133.28 21	PKIKP	PKPdf	21 03 34.5	+0.7
TXAR			pmax	pmax		
comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	133.28 21	PKP	PKPdf	21 03 34.5	+0.7
comp=Z,0.7nm,0.5s,baz=188,slow=0.5,SNR=10.0						
TXAR	Lajitas Array	133.28 21	PKP	PKPdf	21 03 34.5	+0.7
CMIG	Matias Romero	147.45 15	PKPbc	PKPbc	21 04 01.6	-0.5
comp=Z,2.4nm,0.5s,baz=159,slow=0.8,SNR=6.5						
CPUP	Villa Florida	150.46 242	PKIKP	PKPbc	21 04 09.9	+0.4
CPUP					21 04 16.3	
CPUP			pmax	pmax		
comp=Z,1.0nm,0.8s						
CPUP	Villa Florida	150.46 242	PKPbc	PKPbc	21 04 09.9	+0.4
comp=Z,0.3nm,0.4s,baz=80,slow=6.1,SNR=3.7						
CPUP			PKPab	PKPab	21 04 16.3	+0.2
comp=Z,1.3nm,0.8s,baz=305,slow=14,SNR=2.0						

DCID1	Drake Creek	4.32	269	*e*Pn	Pn	20 47 16.1	+0.4
AHID	Auburn Hatcher	4.41	258	Pn	Pn	20 47 11.2	-5.7
RRI2	Red Ridge	4.44	266	*e*Pn	Pn	20 47 17.6	+0.2
QLMT	Earthquake Lak	4.56	285	*e*Pn	Pn	20 47 15.4	-3.6
DGMT	Dagmar	4.71	8	*e*Pn	Pn	20 47 23.0	+1.9
SMCO	Snowmass	4.82	196	*e*Pn	Pn	20 47 23.3	+0.7
BOZ	Bozeman (W)	4.91	294	*e*Pn	Pn	20 47 23.0	-0.8
HWUT	Hardware Ranch 13nm,0.5s	5.16	247	*e*Pn	Pn	20 47 26.8	-0.4
EGMT	Eagleton 38nm,0.6s	5.25	325	*e*Pn	Pn	20 47 29.1	+0.6
DLMT	Dillon 14nm,1.0s	5.48	289	*e*Pn	Pn	20 47 31.1	-0.5
HRY	Holter Researc 22nm,0.5s	5.48	304	*e*Pn	Pn	20 47 31.9	+0.3
LRM	Limekiln Ridge 35nm,0.6s	5.51	294	*e*Pn	Pn	20 47 32.3	+0.2
MCMT	McKenzie Canyo 3.5nm,0.5s	5.55	283	Pn	Pn	20 47 34.9	+2.2
DAU	Daniels Canyon 15nm,0.6s	5.62	235	*e*Pn	Pn	20 47 33.7	+0.1
JLU	Jordanelle 9.6nm,0.5s	5.62	237	*e*Pn	Pn	20 47 31.6	-2.0
SPUT	South Promonto 4.2nm,0.5s	5.89	247	*e*Pn	Pn	20 47 37.8	+0.6
HVU	Hansel Valley 10.0nm,0.6s	5.91	252	*e*Pn	Pn	20 47 37.0	-0.5
SDCO	Great Sand Dun 2.4nm,0.9s	6.07	182	*e*Pn	Pn	20 47 40.2	+0.5
MPU	Maple Canyon 16nm,0.7s	6.10	234	*e*Pn	Pn	20 47 40.1	-0.1
SRU	San Rafael 16nm,0.6s	6.15	222	*e*Pn	Pn	20 47 39.6	-1.3
ECSD	EROS Data Cent 7.4nm,0.5s	6.24	88	*e*Pn	Pn	20 47 42.4	+0.2
TMUT	Trail Mountain 14nm,0.6s	6.36	227	*e*Pn	Pn	20 47 44.0	+0.2
CHMT	Chamberlain Mo 3.3nm,0.6s	6.44	302	*e*Pn	Pn	20 47 44.8	0.0
BGU	Big Grassy Mou 3.1nm,0.7s	6.45	246	*e*Pn	Pn	20 47 44.8	-0.2
CBKS	Cedar Bluff 28nm,0.6s	6.49	139	*e*Pg	Pg	20 48 10.2	-3.0
HLID	Hailey 2.7nm,0.6s	6.66	271	*e*Pn	Pn	20 47 49.5	+1.7
DUG	Dugway 5.8nm,0.7s	6.70	240	*e*Pn	Pn	20 47 46.9	-1.6
SLMT	Seeley Lake 5.8nm,0.6s	6.73	303	*e*Pn	Pn	20 47 46.8	-2.1
MSO	Missoula 1.9nm,0.4s	6.83	299	*e*Pn	Pn	20 47 49.5	-0.8
MVCO	Mesa Verde 3.2nm,0.5s	7.05	202	*e*Pn	Pn	20 47 55.3	+2.1
SWMT	Swartz Lake 4.1nm,0.5s	7.16	304	*e*Pn	Pn	20 47 55.2	+0.5
YBMT	Yellow Bay 4.1nm,0.4s	7.34	306	*e*Pn	Pn	20 47 58.4	+1.3
JTMT	Jette 2.7nm,0.5s	7.44	305	*e*Pn	Pn	20 47 59.5	+0.9
MSU	Marysvale 9.6nm,0.7s	7.45	227	*e*Pn	Pn	20 47 58.7	0.0
BSMT	Bassoo Peak 2.8nm,0.7s	7.79	304	*e*Pn	Pn	20 48 03.7	+0.3
N12A	Clover Valley, 3.6nm,0.6s	7.84	251	*e*Pn	Pn	20 48 04.3	+0.3
AGMN	Agassiz Refuge 13nm,0.5s	7.91	52	Pn	Pn	20 48 04.1	-0.8
ELK	Elko 0.3nm,0.3s,baz=70,slow=8.1,SNR=3.8	8.03	251	Pn	Pn	20 48 07.2	+0.6
ELK				Lg		20 50 14.2	
	0.1nm,0.3s,baz=154,slow=19,SNR=2.2						
ARUT	Antelope Range 12nm,1.0s	8.66	229	*e*Pn	Pn	20 48 15.7	+0.4
CCUT	Cedar City 3.3nm,0.6s	8.79	227	*e*Pn	Pn	20 48 17.2	+0.2
ULM	Lac du Bonnet 0.9nm,0.3s,baz=231,slow=11,SNR=8.9	9.06	42	Pn	Pn	20 48 20.0	-0.8
ULM				Pg	Pg	20 48 55.4	-7.0
	1.8nm,0.3s,baz=222,slow=14,SNR=8.8						
ULM				Lg		20 50 54.0	
	0.5nm,0.3s,baz=134,slow=21,SNR=4.1						
WUAZ	Wupatki 2.8nm,0.5s	9.54	212	*e*Pn	Pn	20 48 26.1	-1.3
FFC	Flin Flon 5.5nm,0.6s	11.12	10	*e*Pn	Pn	20 48 47.0	-1.9
NVAR	Mina Array Bea 0.2nm,0.3s,baz=50,slow=10,SNR=4.4	11.23	246	Pn	Pn	20 48 50.2	-0.2
YBH	Yreka Blue Hor 0.1nm,0.3s,baz=246,slow=13,SNR=4.0	13.01	267	Pn	Pn	20 49 18.1	+3.4
TXAR	Lajitas Array 0.1nm,0.3s,baz=13,slow=17,SNR=2.6	14.51	175	Pg	Px	20 50 33.5	
YKA	Yellowknife Ar 0.1nm,0.3s,baz=162,slow=12,SNR=8.8	19.49	347	P	Pn	20 50 37.2	-1.1

*IDC **03** 20:48:35.8±1.1, 17.°75N×123.°06E, h0km, mb3.6/5, mb1 4.0/7, mb1mx3.5/26, mbtmp3.9/7, ML4.3/2, MS3.7/1, Ms1 3.7/1, ms1mx2.4/29, Error ellipse: s-maj=39.5km s-min=18.2km az=80.0*
*ISCJB **03** 20:48:38.2±0.8, 17.°69N±0.°07×122.°71E±0.°07, h33km, mb3.6/6, Error ellipse: s-maj=10.5km s-min=8.9km az=29.9*
*NEIC **03** 20:48:40.7±0.6, 17.°73N×123.°09E, h35km, mb3.9/1, Error ellipse: s-maj=18.5km s-min=9.2km az=92.0*
ISC 03 20:48:40.4±0.7, 17.°66N±0.°07×122.°74E±0.°10, h35km, n11, σ1°17/14, mb3.6/6, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PALP	Palanan	0.67	207	⇓	*e*P		Pn	20 48 49.5	-3.8
CVP	Callao Caves	0.87	273	⇑	*i*P		Pn	20 48 51.6	-4.6
CVP				*i*S			Sn	20 49 04.1	-3.6
PCPH	Palayan	2.61	217	⇓	*e*P		Pn	20 49 19.9	-0.3
PCPH				*e*S			Sn	20 49 51.1	+0.4
TGY	Tagaytay City 25nm,0.3s,baz=274,slow=4.5,SNR=3.5	3.94	206	Pn			Pn	20 49 42.6	+4.2
TGY				Sn			Sn	20 50 32.6	+9.2
	35nm,0.3s,baz=200,slow=16,SNR=2.4								
JOW	Kunigami 5.2nm,0.3s,baz=69,slow=20,SNR=14	10.47	28	Pn			Pn	20 51 05.9	-2.1
SONM	Songino Array 0.2nm,0.4s,mb3.4,baz=158,slow=11,SNR=3.4	32.94	340	P			P	20 55 12.7	+1.2
SONM				LR			LR	21 07 33.8	
	comp=Z,134nm,19.5s,baz=37,slow=34								
WRAB	Tennant Creek 1.3nm,0.6s,mb3.8	39.06	163	*e*P			P	20 56 03.5	-0.6
WRA	Warramunga Arr 1.5nm,0.6s,mb3.9,baz=342,slow=9.2,SNR=8.0	39.07	163	P			P	20 56 03.9	-0.3
ASAR	Alice Springs 0.8nm,0.7s,mb3.5,baz=343,slow=6.8,SNR=4.7	42.50	165	P			P	20 56 33.0	+0.6
MKAR	Makanchi Array 0.3nm,0.4s,mb3.4,baz=118,slow=8.6,SNR=5.8	44.14	320	P			P	20 56 47.0	+1.4
KURK	Kurchatov 0.8nm,0.7s,mb3.9,baz=121,slow=7.7,SNR=5.1	48.09	324	P			P	20 57 17.5	+0.9

*NEIC **03** 20:52:27.8±0.7, 23.°01S×177.°17W, h35km, mb4.1/3, Error ellipse: s-maj=26.9km s-min=12.3km az=157.0*
*ISCJB **03** 20:53:29.7±1.2, 23.°9S±0.°3×180.°0E±0.°2, h500km, mb3.6/8, Error ellipse: s-maj=39.0km s-min=20.8km az=179.2*
*IDC **03** 20:53:30.4±3.5, 23.°86S×179.°95W, h498km±35km, mb3.2/6, mb1 3.4/6, mb1mx3.1/16, mbtmp3.2/6, Error ellipse: s-maj=38.2km s-min=23.2km az=21.0*
ISC 03 20:53:30.8±1.1, 23.°8S±0.°3×180.°0E±0.°2, h500km, n14, σ0°62/14, mb3.6/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTAO	Charters Tower 8.6nm,0.6s,mb4.4	31.44	270	*e*P			P	20 59 11.6	+0.9
STKA	Stephens Creek 3.1nm,1.2s,mb3.6,baz=83,slow=8.1,SNR=2.4	34.72	248	P			P	20 59 39.3	+1.0
STKA	Stephens Creek 0.1nm,0.4s,mb2.6	34.72	248	*e*P			P	20 59 38.7	+0.4
ASAR	Alice Springs 1.5nm,0.8s,mb3.5,baz=98,slow=7.4,SNR=24	42.02	261	P			P	21 00 38.0	+0.2
ASAR				ScP			ScP	21 05 24.2	0.0
	0.5nm,0.7s,baz=115,slow=3.6,SNR=5.9								
ASAR	Alice Springs	42.02	261	P			P	21 00 38.0	+0.2
ASAR				ScP			ScP	21 05 24.2	0.0
WB2	Warramunga Arr	42.37	266	*e*P			P	21 00 40.0	-0.7
WRAB	Tennant Creek 1.0nm,0.4s,mb3.6	42.37	266	*e*P			P	21 00 39.5	-1.2
WRA	Warramunga Arr 3.7nm,0.6s,mb4.0,baz=102,slow=8.4,SNR=33	42.38	266	P			P	21 00 40.5	-0.3
WRA	Warramunga Arr	42.38	266	P			P	21 00 40.5	-0.3
FITZ	Fitzroy Crossi 1.6nm,0.7s,mb3.5,baz=121,slow=5.9,SNR=5.2	50.80	266	P			P	21 01 45.0	+0.3
FITZ	Fitzroy Crossi 1.1nm,0.7s,mb3.3	50.80	266	*e*P			P	21 01 45.1	+0.4
CASY	Casey 173nm,2.1s	60.16	206	*e*P			P	21 02 42.7	-6.4
QSPA	South Pole Qui 1.5nm,0.7s,mb3.7,baz=71,slow=4.9,SNR=12	66.26	180	P			P	21 03 28.0	-0.2
TXAR	Lajitas Array 0.3nm,0.7s,mb3.2,baz=234,slow=7.6,SNR=3.6	90.42	58	P			P	21 05 38.8	+0.1

*IDC **03** 21:20:28.6±10.0, 22.°15S×171.°45E, h75km±98km, mb3.9/9, mb1 4.1/10, mb1mx4.0/15, mbtmp3.9/10, ML4.0/1, Error ellipse: s-maj=47.9km s-min=27.7km az=172.0*
*NOU **03** 21:20:31.1±0.8, 20.°48S×171.°35E, h30km, MD3.1, ML3.8*
*ISCJB **03** 21:20:33.0±1.8, 22.°3S±0.°1×171.°4E±0.°1, h131km±15km, mb3.9/9, Error ellipse: s-maj=23.5km s-min=14.8km az=27.2*
*NEIC **03** 21:20:33.3±1.7, 22.°25S×171.°46E, h121km±15km, mb4.2/1, Error ellipse: s-maj=17.2km s-min=13.1km az=218.0*
ISC 03 21:20:33.6±1.7, 22.°3S±0.°1×171.°4E±0.°1, h122km±14km, n18, σ0°57/21, mb4.0/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.21	271	*e*P			Pn	21 21 36.3	+0.3
BAYA				*e*S			Sn	21 22 23.3	-1.2
ONTRN	Noumea	4.61	269	*e*P			Pn	21 21 41.8	+0.5
ONTRN				*e*S			Sn	21 22 34.0	+0.1
ONTRN				AMP				21 22 40.6	
	comp=Z,562nm,0.9s								
DZM	Mont Dzumac	4.62	272	*e*P			Pn	21 21 40.9	-0.7
DZM	Mont Dzumac	4.62	272	*e*Pn			Pn	21 21 41.7	+0.2
DZM				*e*Sn			Sn	21 22 34.4	+0.1
NOUC	Port Laguerre	4.75	271	*e*P			Pn	21 21 43.4	+0.1
NOUC				*e*S			Sn	21 22 38.0	+0.6
NOUC				AMP				21 22 42.8	
	comp=Z,203nm,0.0s								
URZ	Urewera	16.66	164	P			Pn	21 24 19.6	-0.2
	comp=Z,0.6nm,0.3s,baz=359,slow=2.4,SNR=7.4								
EIDS	Eidsvold	18.87	257	*e*P			P	21 24 44.9	+0.5
	comp=Z,13nm,0.9s								
STKA	Stephens Creek	28.16	244	P			P	21 26 14.3	-0.1
	comp=Z,1.3nm,0.6s,mb3.6,baz=119,slow=8.0,SNR=5.1								
STKA	Stephens Creek	28.16	244	P			P	21 26 14.3	-0.1
ASAR	Alice Springs	34.51	260	P			P	21 27 10.3	0.0
	comp=Z,6.1nm,0.9s,mb4.4,baz=87,slow=8.9,SNR=43								
WRA	Warramunga Arr	34.62	267	P			P	21 27 10.4	-1.0
	comp=Z,1.0nm,0.3s,mb4.1,baz=98,slow=8.5,SNR=28								
MJAR	Matsushiro Arr	66.38	331	P			P	21 31 08.9	-0.5
	comp=Z,1.6nm,0.8s,mb3.9,baz=168,slow=7.5,SNR=7.7								
KSRS	Korea Array	72.16	325	P			P	21 31 45.5	+0.5
	comp=Z,2.8nm,0.8s,mb4.1,baz=145,slow=6.1,SNR=12								
PETK	Petropavlovsk-	76.01	352	P			P	21 32 06.1	-0.9
	comp=Z,3.9nm,0.9s,mb4.1,baz=184,slow=4.3,SNR=3.8								
CMAR	Chiang Mai Arr	81.61	294	P			P	21 32 39.6	+1.2
	comp=Z,1.0nm,0.7s,mb3.8,baz=136,slow=3.9,SNR=6.6								
NVAR	Mina Array Bea	89.29	48	P			P	21 33 16.3	+0.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=226,slow=8.6,SNR=6.2								
SONM	Songino Array	90.86	322	P			P	21 33 23.3	+0.2
	comp=Z,1.3nm,0.8s,mb4.1,baz=161,slow=3.6,SNR=10								
GERES	GERESS Array B	148.12	332	PKPbc			PKPbc	21 40 04.4	-0.5
	comp=Z,0.3nm,0.6s,baz=67,slow=4.5,SNR=4.9								

IDC 03 21:26:25.8±1.8, 8.°57S×125.°56E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.5/15, mbtmp3.7/3, ML3.7/2, Error ellipse: s-maj=183.0km s-min=27.5km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.3s,baz=321,slow=13,SNR=15	14.14	144	Pn			Pn	21 29 46.9	-0.6
WRA				Sn			Sn	21 32 20.4	-4.8
	0.3nm,0.3s,baz=327,slow=22,SNR=4.9								
ASAR	Alice Springs 0.4nm,0.3s,baz=321,slow=10,SNR=31	17.01	153	Pn			Pn	21 30 26.6	+1.5
ASAR				Sn			Sn	21 33 34.0	-0.9
	0.1nm,0.3s,baz=347,slow=27,SNR=4.1								
MKAR	Makanchi Array 0.2nm,0.5s,baz=142,slow=6.5,SNR=3.9	67.22	329	P			P	21 37 21.9	+0.1

*ISCJB **03** 21:27:31.1±0.5, 36.°45N±0.°03×71.°66E±0.°07, h170km±15km, Error ellipse: s-maj=9.1km s-min=4.4km az=165.7*
*NNC **03** 21:27:34.6±7.9, 37.°10N×70.°93E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=61.8km s-min=43.4km az=178.0*
*NEIC **03** 21:27:35.9±0.9, 36.°87N×71.°02E, h84km±27km, Error ellipse: s-maj=25.6km s-min=8.9km az=127.0*
ISC 03 21:27:32.2±0.5, 36.°46N±0.°03×71.°68E±0.°06, h151km±16km, n34, σ1°31/45, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	Kabul	2.88	229	*e*Pn			Pn	21 28 19.2	+1.0
KBL				*e*Sn			Sn	21 28 52.9	-0.6
KSH	Kashi	4.56	47	Pn			Pn	21 28 37.1	-2.7
KSH				Sn			Sn	21 29 22.7	-10
KSH				smax					
	comp=N,210nm,0.5s								
KSH				smax					
	comp=E,190nm,0.2s								
THN	Thein Dam	5.22	139	*e*x			Pn	21 28 51.2	+2.6
THN				*e*S			Sn	21 29 48.9	+0.8
AML	Almayashu SNR=52	5.87	15	P			Pn	21 28 57.2	0.0
AML	Almayashu	5.87	15	*e*Pn			Pn	21 28 57.8	+0.6
AML				*e*Sg			Sn	21 30 01.9	-1.7
UCH	Uchtor SNR=18	6.16	20	P			Pn	21 29 02.2	+1.2
UCH	Uchtor comp=E,7.3nm,0.5s	6.16	20	*e*Pn			Pn	21 29 02.0	+1.1
UCH				*e*Sg			Sn	21 30 09.0	-1.5
KZA	Kyzart SNR=16	6.25	25	P			Pn	21 29 03.2	+1.0
EKS2	Erkin-Say SNR=15	6.40	14	P			Pn	21 29 05.2	+1.0
EKS2	Erkin-Say comp=E,9.0nm,0.4s	6.40	14	*e*Pn			Pn	21 29 05.1	+0.9
EKS2				*e*Sg			Sn	21 30 13.7	-2.5
AAK	Ala-Archa SNR=32	6.54	19	P			Pn	21 29 07.1	+1.1
AAK	Ala-Archa comp=E,17nm,0.3s	6.54	19	*e*Pn			Pn	21 29 07.2	+1.2
KBK	Karagaybulak SNR=5.0	6.68	21	P			Pn	21 29 10.0	+2.1
KK31	Karatay Array comp=E,2.7nm,0.3s,baz=181,slow=13,SNR=147	6.70	353	⇑Pn			Pn	21 29 07.5	-0.6
KK31				Sn			Sn	21 30 16.9	-6.4
	comp=E,4.2nm,0.4s,baz=179,slow=24,SNR=9.6								
ULHL	Ulahol SNR=9.6	6.77	30	P			Pn	21 29 10.9	+1.9
CHMS	Chumysh SNR=6.9	6.94	19	P			Pn	21 29 12.3	+0.9
SMLA	Simla	7.01	138	*i*P			Pn	21 29 12.2	-0.2
SMLA				*i*x			x	21 30 26.6	
SMLA				*e*x			x	21 30 30.9	
	comp=E,342nm,0.2s								
SMLA				*e*x			x	21 30 31.3	
	comp=N,376nm,0.3s								
TKM2	Tokmak 2 comp=N,1.1nm,0.4s	7.12	24	⇑Pn			Pn	21 29 15.2	+1.4
TKM2				⇑Sn			Sn	21 30 33.7	+0.2
	comp=N,1.6nm,0.6s								
TKM2	Tokmak 2 SNR=9.8	7.12	24	P			Pn	21 29 15.4	+1.7
TKM2	Tokmak 2 comp=N,7.4nm,0.8s	7.12	24	*e*Pn			Pn	21 29 15.4	+1.6
USP	Ospenovka SNR=11	7.13	17	P			Pn	21 29 14.1	+0.1
KLP	Kalpa	7.34	130	*e*P			Pn	21 29 16.2	-0.6
KLP				*e*S			Sn	21 30 39.4	+0.5
KLP				AML			AML	21 30 41.4	
	comp=N,59nm,0.7s								
KLP				AML			AML	21 30 41.4	
	comp=E,97nm,0.5s								
JOSI	Joshimath	8.82	130	*e*P			Pn	21 29 37.6	+1.0
JOSI				*e*S			Sn	21 31 13.5	-1.1
KHET	Khetri	9.06	156	*e*S			Sn	21 31 15.5	-4.8
KHET				AML			AML	21 31 19.9	
	comp=E,6.2nm,0.2s								
KHET				AML			AML	21 31 20.2	
	comp=N,6.8nm,0.1s								
SONA	Sohna	9.37	149	*e*S			Sn	21 31 24.9	-3.0
SONA				AML			AML	21 31 30.1	
	comp=N,6.2nm,0.1s								
SONA				AML			AML	21 31 31.3	
	comp=E,13nm,0.1s								
MK31	Makanchi Array	13.01	34	*e*Pn			Pn	21 30 36.9	+5.6
GKN	Gorkha comp=E,8.7nm,0.3s	13.82	124	*e*P			Sn	21 33 10.1	-4.9
KKN	Kakani	14.39	123	*e*P			Sn	21 33 16.5	-12
DMN	Daman	14.39	124	*e*P			Sn	21 33 14.9	-14
PKI	Pulchoki	14.62	123	*e*P			Sn	21 33 18.2	-16
GUN	Gumba	14.72	121	*e*P			Sn	21 33 21.8	-15
KURK	Kurchatov comp=E,2.0nm,1.0s	15.10	17	*e*Pn			Pn	21 31 01.9	+4.3
AB31	Akbulak array comp=E,0.3nm,0.4s,baz=138,slow=13,SNR=17	15.39	330	⇓P			Pn	21 30 60.0	-1.2
AB31				⇑S			Sn	21 33 39.7	-13
	comp=E,0.5nm,0.5s,baz=150,slow=23,SNR=5.0								
ABKAR	Akbulak array comp=E,0.5nm,0.3s	15.39	330	*e*Pn			Pn	21 31 00.1	-1.1

*DDA **03** 22:02:01.4, 39.°38N×33.°11E, h3km±2km, Md3.1*
*ISK **03** 22:02:01.4, 39.°51N×33.°17E, h16km, MD3.2*
*ISCJB **03** 22:02:02.1±0.5, 39.°47N±0.°03×33.°17E±0.°04, h15km±5km, Error ellipse: s-maj=5.7km s-min=4.9km az=42.0*
*CSEM **03** 22:02:02.0±0.2, 39.°47N×33.°15E, h12km, MD3.1, Error ellipse: s-maj=5.2km s-min=4.7km az=153.0*
ISC 03 22:02:02.5±0.5, 39.°46N±0.°03×33.°13E±0.°04, h16km±4km, n49, σ1°03/63, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BBAL	Bala	0.08	354	*i*P			Pg	22 02 04.8	-0.9
BBAL				*i*S			Sg	22 02 07.6	-0.2
BBAL	Bala	0.08	354	*i*P			Pg	22 02 04.8	-0.9
BBAL				*i*S			Sg	22 02 07.6	-0.2
LOD	Lodumlu	0.51	326	*e*PG			Pg	22 02 11.9	-0.8
LOD				*e*SG			Sg	22 02 19.0	-0.6
LOD	Lodumlu	0.51	326	*e*Pg			Pg	22 02 11.9	-0.8
LOD				*e*Sg			Sg	22 02 19.0	-0.6
CDAG	Cicekdag	0.97	80	*i*P			Pg	22 02 20.3	-1.0
CDAG				*i*S			Sg	22 02 35.6	+1.6
CDAG	Cicekdag	0.97	80	*i*P			Pg	22 02 20.3	-1.0
CDAG				*i*S			Sg	22 02 35.7	+1.7
ELDT	Eldivan	1.05	12	*i*P			Pg	22 02 23.7	+0.8
ELDT				*i*S			Sg	22 02 38.9	+2.3
ELDT	Eldivan	1.05	12	*i*P			Pg	22 02 23.7	+0.9
KIZT	Kizilcal	1.14	240	*e*PN			Pn	22 02 23.9	+0.2
KIZT	Kizilcal	1.14	240	*e*Pn			Pn	22 02 23.9	+0.1
CANT	Cankiri	1.20	18	*e*PN			Pn	22 02 23.6	-1.1
CANT				*e*SN			Sn	22 02 39.3	-1.4
KDHN	Kadinhani	1.23	220	*i*P			Pn	22 02 23.7	-1.4
KDHN				*i*S			Sb	22 02 40.2	-0.8
KDHN	Kadinhani	1.23	220	*i*P			Pn	22 02 23.7	-1.4
KDHN				*i*S			Sb	22 02 40.2	-0.8
SVRH	Sivrihisar-ESK	1.25	270	*e*PN			Pn	22 02 25.1	-0.2
SVRH				*e*SN			Sn	22 02 42.8	+1.0
SVRH	Sivrihisar-ESK	1.25	270	*e*Pn			Pn	22 02 25.1	-0.2
SVRH				*e*Sn			Sn	22 02 42.8	+1.0
SULT	Sultanhani-AKS	1.30	167	*e*PN			Pn	22 02 26.1	+0.1
SULT	Sultanhani-AKS	1.30	167	*e*Pn			Pn	22 02 26.1	+0.1
CORM	Corum	1.36	58	*e*PN			Pn	22 02 25.9	-0.9
CORM	Corum	1.36	58	*e*Pn			Pn	22 02 26.0	-0.8
SGKT	Sivrigoynuk	1.39	324	*i*P			Pn	22 02 29.2	+2.0
SGKT	Sivrigoynuk	1.39	324	*i*P			Pn	22 02 29.2	+2.0
LADK	Ladik-KONYA	1.40	206	*e*PN			Pn	22 02 27.7	+0.3
LADK	Ladik-KONYA	1.40	206	*e*Pn			Pn	22 02 27.7	+0.3
AVNT	Avonos	1.50	116	*i*P			Pn	22 02 34.0	+5.2
AVNT				*i*S			Sn	22 02 55.6	+7.5
KONT	Konya--Tatoy	1.63	202	*e*PN			Pn	22 02 30.9	+0.3
KONT	Konya--Tatoy	1.63	202	*e*Pn			Pn	22 02 30.9	+0.3
YOZ	Yozgat	1.70	83	*e*PN			Pn	22 02 31.0	-0.5
YOZ	Yozgat	1.70	83	*e*Pn			Pn	22 02 31.0	-0.5
CTKT	Corum	1.72	47	*i*P			Pn	22 02 35.3	+3.5
ESKT	Eskisehir	1.77	273	*e*P			Pn	22 02 34.9	+2.4
SEYT	Eskypehyr	1.77	273	*e*P			Pn	22 02 34.9	+2.4
MDU	Mudurnu	1.78	305	*e*PN			Pn	22 02 33.4	+0.7
MDU	Mudurnu	1.78	305	*e*Pn			Pn	22 02 33.4	+0.7
SAFT	Safranbolu	1.81	349	*e*PN			Pn	22 02 31.9	-1.1
SAFT	Safranbolu	1.81	349	*e*Pn			Pn	22 02 31.9	-1.1
BALT	Daday	2.08	5	*i*P			Pn	22 02 41.7	+5.0
BALT				*i*S			Sn	22 03 09.7	+7.4
GULT	Gulveren	2.23	297	*e*PN			Pn	22 02 38.8	-0.1
GULT	Gulveren	2.23	297	*e*Pn			Pn	22 02 38.8	-0.1
BYBT	Boyabat	2.36	31	*e*PN			Pn	22 02 39.3	-1.3
BYBT	Boyabat	2.36	31	*e*Pn			Pn	22 02 39.3	-1.3
ALT	Altintas	2.38	261	*e*PN			Pn	22 02 40.8	-0.1
ALT	Altintas	2.38	261	*e*Pn			Pn	22 02 40.8	-0.1
KARA	Karaisali	2.67	145	*e*PN			Pn	22 02 45.2	+0.4
KARA	Karaisali	2.67	145	*e*Pn			Pn	22 02 45.3	+0.5
DIKM	Dikmen	2.72	36	*e*PN			Pn	22 02 45.7	+0.2
DIKM	Dikmen	2.72	36	*e*Pn			Pn	22 02 45.7	+0.2
KOZT	Kozan	2.90	132	*e*PN			Pn	22 02 48.7	+0.7
SVSK	Karacayir	3.02	80	*e*PN			Pn	22 02 49.2	-0.4
SVSK	Karacayir	3.02	80	*e*Pn			Pn	22 02 49.2	-0.4

*ISCJB **03

0.3nm,0.3s,baz=245,slow=25,SNR=4.8
WRA Warramunga Arr 18.61 58 P **Pn 22 18 48.8 -1.4**
0.2nm,0.3s,baz=232,slow=13,SNR=8.5
WRA S **Sn 22 22 07.5 -11**
0.3nm,0.3s,baz=227,slow=23,SNR=9.9
WRA Lg 22 24 26.0
0.0nm,0.3s,baz=192,slow=26,SNR=3.0
WRAB Tennant Creek 18.63 58 *e*P **Pn 22 18 49.2 -1.1**
1.7nm,0.6s
STKA Stephens Creek 20.45 99 *e*P **P 22 19 11.2 +1.3**
STKA Stephens Creek 20.45 99 P **P 22 19 10.4 +0.5**
2.1nm,0.7s,baz=281,slow=11,SNR=5.0
STKA S **S 22 22 51.5 -7.3**
1.6nm,0.7s,baz=323,slow=12,SNR=2.9
SONM Songino Array 79.08 352 P **P 22 26 37.9 +1.5**
0.6nm,0.7s,baz=161,slow=7.9,SNR=5.5

IDC 03 23:09:39.2±4.0, 2°32S×139°35E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/15, mbtmp3.5/5, ML3.6/1, MS4.4/1, Ms1 4.4/1, ms1mx2.8/18, Error ellipse: s-maj=179.4km s-min=25.7km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.18**	**195**	P	Pn	23 13 54.0	+0.7
0.2nm,0.3s,baz=17,slow=13,SNR=4.6							
ASAR	**Alice Springs**	**21.86**	**194**	P	P	23 14 33.5	-0.2
0.4nm,0.5s,baz=25,slow=11,SNR=8.2							
JOW	**Kunigami**	**30.89**	**340**	LR	LR	23 26 33.9	
comp=Z,682nm,21.7s,baz=315,slow=33							
MKAR	**Makanchi Array**	**69.88**	**322**	P	P	23 20 52.1	+0.1
0.4nm,0.7s,baz=106,slow=11,SNR=3.7							
KURK	**Kurchatov**	**73.77**	**325**	P	P	23 21 15.0	-0.3
0.4nm,0.8s,baz=120,slow=6.8,SNR=4.7							
BVAR	**Borovoye Array**	**79.36**	**325**	P	P	23 21 47.3	+0.3
0.6nm,0.6s,baz=88,slow=9.2,SNR=7.1							
TORD	**Torodi Ar. Bea**	**136.76**	**287**	PKP	PKPdf	23 29 05.0	+0.2
0.3nm,0.5s,baz=50,slow=2.7,SNR=4.1							

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*IDC **03** 23:23:36.7±1.9, 6°35S×103°73E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/21, mbtmp3.9/8, Error ellipse: s-maj=80.7km s-min=17.3km az=55.0*
*DJA **03** 23:23:36, 6°61S×103°56E, h3km, MLv4.1/5*
*ISCJB **03** 23:23:37.4±0.7, 6°67S±0°04×103°42E±0°06, h33km, mb4.0/9, Error ellipse: s-maj=8.9km s-min=6.3km az=2.1*
*NEIC **03** 23:23:39.5±1.3, 6°83S×103°20E, h35km, mb4.3/1, Error ellipse: s-maj=61.0km s-min=10.8km az=57.0*
ISC 03 23:23:40.2±0.7, 6°60S±0°05×103°50E±0°06, h35km, n19, σ1**°24/22, mb4.0/9, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.46**	**43**	P	**Pn**	**23 24 01.2**	**-2.9**
KASI				S	**Sn**	**23 24 21.5**	**-0.5**
LWLI	**Liwa**	**1.67**	**20**	P	**Pn**	**23 24 05.8**	**-1.2**
LWLI				S	**Sn**	**23 24 26.8**	**-0.3**
CGJI	**Cibinong**	**2.18**	**91**	P	**Pn**	**23 24 12.1**	**-2.0**
CGJI				S	**Sn**	**23 24 41.7**	**+1.8**
KLI	**Kotabumi**	**2.19**	**38**	P	Px	23 24 25.3	
KLI				S	**Sn**	**23 24 42.0**	**+1.9**
MDSI	**Maura Dua**	**2.21**	**18**	P	**Pn**	**23 24 13.5**	**-0.9**
RBSI	**Rajabasa**	**2.35**	**72**	P	**Pn**	**23 24 16.1**	**-0.3**
KSI	**Kapahiang**	**3.06**	**343**	P	**Pn**	**23 24 27.9**	**+1.7**
XMIS	**Christmas Isla**	**4.41**	**151**	*e*Pn	**Pn**	**23 24 42.2**	**-2.5**
XMIS				*e*Sn	**Sn**	**23 25 27.2**	**-7.6**
XMIS	**Christmas Isla**	**4.41**	**151**	P	**Pn**	**23 24 41.9**	**-2.8**
WRA	**Warramunga Arr**	**32.74**	**117**	P	**P**	**23 30 10.5**	**+0.5**
1.5nm,0.5s,mb4.2,baz=287,slow=12,SNR=9.2							
WRAB	**Tennant Creek**	**32.75**	**117**	*e*P	**P**	**23 30 10.5**	**+0.5**
2.0nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**33.78**	**123**	P	**P**	**23 30 19.9**	**+0.9**
0.6nm,0.5s,mb3.8,baz=307,slow=7.8,SNR=12							
STKA	**Stephens Creek**	**43.52**	**130**	P	**P**	**23 31 42.0**	**+1.4**
2.9nm,0.6s,mb4.2,baz=308,slow=6.8,SNR=10							
KSRS	**Korea Array**	**49.40**	**26**	P	**P**	**23 32 25.6**	**-1.1**
0.5nm,0.5s,mb3.8,baz=218,slow=7.5,SNR=4.3							
SONM	**Songino Array**	**54.26**	**2**	P	**P**	**23 33 02.7**	**+0.1**
0.9nm,0.6s,mb3.9,baz=181,slow=9.6,SNR=9.1							
MKAR	**Makanchi Array**	**56.40**	**343**	P	**P**	**23 33 18.2**	**+0.2**
0.4nm,0.5s,mb3.7,baz=146,slow=9.4,SNR=13							
KURK	**Kurchatov**	**60.99**	**342**	P	**P**	**23 33 51.0**	**+1.0**
0.4nm,0.8s,mb3.6,baz=161,slow=5.8,SNR=4.0							
ZALV	**Zalesovo Beam**	**62.34**	**348**	P	**P**	**23 33 58.8**	**-0.2**
0.9nm,0.4s,mb4.2,baz=154,slow=6.4,SNR=5.6							
TXAR	**Lajitas Array**	**145.84**	**45**	PKPbc	PKPbc	23 43 17.5	+1.0
0.8nm,0.5s,baz=335,slow=1.9,SNR=8.0							

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*IDC **03** 23:38:57.9±0.6, 6°28S×103°80E, h0km, mb4.6/17, mb1 4.6/18, mb1mx4.5/23, mbtmp4.6/18, ML4.1/1, MS3.8/6, Ms1 3.8/6, ms1mx3.4/23, Error ellipse: s-maj=24.5km s-min=13.0km az=55.0*
*ISCJB **03** 23:39:02.0±0.3, 6°46S±0°03×103°70E±0°03, h40km, mb4.7/53, MS4.0/10, Error ellipse: s-maj=5.6km s-min=3.9km az=42.7*
*DJA **03** 23:39:02, 6°41S×103°63E, h10km, mb5.2/17*
*NEIC **03** 23:39:03.2±0.3, 6°35S×103°79E, h35km, mb4.6/23, Error ellipse: s-maj=11.0km s-min=6.0km az=46.0*
ISC 03 23:39:04.0±0.3, 6°43S±0°04×103°68E±0°03, h40km, h40km±2.3km: pP-P, n149, σ1**°26/130, mb4.7/53, MS4.0/10, 17C-12D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.21**	**42**	P	**Pn**	**23 39 22.5**	**-2.0**
KASI				S	**Sn**	**23 39 37.7**	**-2.0**
LWLI	**Liwa**	**1.45**	**15**	P	**Pn**	**23 39 27.9**	**+0.2**
LWLI				S	**Sn**	**23 39 46.7**	**+1.1**
KLI	**Kotabumi**	**1.95**	**37**	P	**Pn**	**23 39 37.2**	**+2.6**
MDSI	**Maura Dua**	**1.99**	**15**	P	**Pn**	**23 39 35.0**	**-0.2**
MDSI				S	**Sn**	**23 40 02.9**	**+4.0**
CGJI	**Cibinong**	**2.01**	**95**	P	**Pn**	**23 39 33.9**	**-1.5**
CGJI				S	**Sn**	**23 40 03.8**	**+4.4**
RBSI	**Rajabasa**	**2.13**	**74**	P	**Pn**	**23 39 36.1**	**-1.0**
RBSI				S	**Sn**	**23 40 06.2**	**+3.8**
MNAI	**Manna**	**2.18**	**341**	P	**Pn**	**23 39 39.0**	**+1.3**
KSI	**Kapahiang**	**2.96**	**339**	P	**Pn**	**23 39 48.7**	**+0.2**
TNG	**Tangerang**	**2.96**	**85**	P	**Pn**	**23 39 51.9**	**+3.4**
PMBI	**Palembang**	**3.65**	**17**	P	**Pn**	**23 39 58.5**	**+0.6**
XMIS	**Christmas Isla**	**4.47**	**154**	*e*Pn	**Pn**	**23 40 03.8**	**-5.6**
XMIS				*e*Sn	**Sn**	**23 40 48.3**	**-12**
XMIS	**Christmas Isla**	**4.47**	**154**	P	**Pn**	**23 40 03.8**	**-5.5**
JCJI	**Jatiwangi**	**4.56**	**91**	P	**Pn**	**23 40 02.8**	**-7.8**
TPI	**Tanjungpandan**	**5.39**	**48**	P	**Pn**	**23 40 21.4**	**-0.5**
42nm,0.8s,2μm0.5nm							
PDSI	**Padang**	**6.35**	**330**	P	**Pn**	**23 40 34.3**	**-0.8**
126nm,1.1s,5μm1.1nm							
SMRI	**Semarang**	**6.75**	**96**	P	**Pn**	**23 40 44.0**	**+3.5**
115nm,0.8s,0.5nm							
PPI	**Padang Panjang**	**6.77**	**331**	P	**Pn**	**23 40 50.2**	**+9.3**
UGM	**Wanagama**	**6.95**	**103**	P	**Pn**	**23 40 44.3**	**+0.9**
512nm,0.6s,6μm2.0nm							
NGJI	**Ngawi**	**7.79**	**97**	P	**Pn**	**23 40 58.0**	**+3.2**
114nm,0.9s,0.4nm							
SJI	**Sawahan**	**8.13**	**100**	P	**Pn**	**23 41 00.2**	**+0.6**
216nm,0.8s,0.7nm							
MYKOM	**Kota Tinggi**	**8.16**	**1**	P	Px	23 41 15.3	
PWJI	**Pagerwojo**	**8.22**	**102**	P	**Pn**	**23 41 00.4**	**-0.3**
256nm,0.9s							
GRJI	**Gresik**	**8.76**	**94**	P	**Pn**	**23 41 10.6**	**+2.5**
636nm,0.8s,6μm							
GSI	**Gunungsitoli**	**9.80**	**321**	P	**Pn**	**23 41 20.0**	**-2.5**
36nm,0.7s							
GMJI	**Gumukmas**	**9.86**	**101**	P	**Pn**	**23 41 24.1**	**+0.8**
59nm,1.1s							
STKI	**Sintang**	**10.11**	**51**	P	**Pn**	**23 41 31.4**	**+4.7**
39nm,0.8s,6μm							
KSM	**Kuching**	**10.27**	**40**	Pn	**Pn**	**23 41 28.7**	**-0.2**
SRBI	**Singaraja**	**11.56**	**99**	P	**Pn**	**23 41 46.0**	**-0.6**
156nm,0.6s,2μm							
IGBI	**Denpasar**	**11.61**	**103**	P	**Pn**	**23 41 47.4**	**+0.1**
387nm,0.9s							
KHKI	**Kahang-Kahang**	**11.99**	**100**	P	**Pn**	**23 41 50.9**	**-1.5**
93nm,0.7s							
SBUM	**Sibu**	**12.27**	**44**	P	Px	23 42 09.6	
KAPI	**Kappang**	**16.06**	**86**	Pn	**Pn**	**23 42 43.0**	**-4.0**
0.8nm,0.3s,baz=277,slow=8.1,SNR=3.1							
KAPI				LR	LR	23 49 33.2	
comp=Z,411nm,19.5s,baz=270,slow=40							
KAPI Kappang 16.06 86 *e*Pn **Pn 23 42 43.4 -3.6**							
3.0nm,0.4s							
KKM Kota Kinabalu 17.61 46 *e*Pn **Pn 23 43 06.9 +0.4**							
3.8nm,0.3s							
APSI Ampana 18.75 74 P **Pn 23 43 21.6 +1.2**							
165nm,1.0s,1μm							
MYLDM Lahad Datu 18.76 52 P **Pn 23 43 27.8 +7.2**							
LUWI Luwuk 19.79 75 P **Pn 23 43 33.3 +0.5**							
105nm,1.3s,1μm							
MBWA Marble Bar 21.36 135 *e*P **P 23 43 47.5 -0.5**							
MBWA Marble Bar 21.36 135 *e*Pn **P 23 43 47.8 -0.2**							
10nm,0.8s,mb4.2							
MBWA				*e*S	**S**	**23 47 34.5**	**-8.6**
FITZ Fitzroy Crossi 24.36 120 *e*P **P 23 44 17.5 -1.0**							
13nm,0.9s,mb4.4							
FITZ Fitzroy Crossi 24.36 120 P **P 23 44 17.3 -1.2**							
5.2nm,0.6s,mb4.1,baz=296,slow=7.6,SNR=18							
FITZ Fitzroy Crossi 24.36 120 *e*P **P 23 44 17.6 -0.9**							
8.5nm,0.8s,mb4.2							
FITZ Fitzroy Crossi 24.36 120 P **P 23 44 19.4 +0.9**							
CM31 Chiang Mai Arr 25.16 349 *e*P **P 23 44 25.0 -0.7**							
6.7nm,0.6s,mb4.3							
CMAR Chiang Mai Arr 25.16 349 P **P 23 44 23.6 -2.1**							
10nm,0.8s,mb4.4,baz=181,slow=9.0,SNR=41							
CMAR				LR	LR	23 55 41.3	
comp=Z,160nm,18.7s,MS3.6,baz=165,slow=40							
QIZ Qiongzhong 26.02 13 P **P 23 44 31.5 -1.9**							
QIZ				pmax	pmax		
comp=Z,14nm,2.0s,mb4.2							
QIZ				pmax	pmax		
comp=Z,93nm,5.5s							
QIZ				LR	LR		
comp=N,250nm,16.6s							
QIZ				LR	LR		
comp=Z,310nm,17.7s,MS3.9							
KNA Kununurra 26.28 113 *e*P **P 23 44 33.9 -2.0**							
comp=Z,16nm,0.6s,mb4.7							
KAKA Kakadu 29.02 105 *e*P **P 23 44 55.8 -4.7**							
comp=Z,7.8nm,0.4s,mb4.8							
KAKA Kakadu 29.02 105 *e*P **P 23 44 57.1 -3.4**							
comp=Z,33nm,0.6s,mb5.2							
KMBL Kambalda 30.10 148 *e*P **P 23 45 09.3 -0.6**							
comp=Z,73nm,0.6s,mb5.6							
KMI Kunming 31.37 358 P **P 23 45 25.3 +4.2**							
KMI				pP	pP	23 45 34.9	+2.8
KMI				sP	sP	23 45 39.1	+2.3
KMI				PP	PP	23 46 31.0	-1.6
KMI				S	**S**	**23 50 31.4**	**+5.5**
KMI				sS	sS	23 50 47.8	+3.6
KMI				pmax	pmax		
comp=Z,6.0nm,0.5s,mb4.7							
KMI				pmax	pmax		
comp=Z,71nm,4.2s							
KMI				LR	LR		
comp=N,160nm,20.5s,MS3.9							
KMI				LR	LR		
comp=E,210nm,18.4s,MS3.9							
KMI				LR	LR		
comp=Z,260nm,19.0s,MS3.9							
WRA Warramunga Arr 32.66 117 P **P 23 45 31.5 -1.1**							
comp=Z,19nm,0.7s,mb5.1,baz=290,slow=10,SNR=53							
WRAB Tennant Creek 32.66 117 *e*P **P 23 45 31.9 -0.6**							
comp=Z,24nm,0.6s,mb5.3							
WRAB Tennant Creek 32.66 117 P **P 23 45 31.8 -0.8**							
WB2 Warramunga Arr 32.67 117 *e*P **P 23 45 32.0 -0.6**							
GYA Guiyang 32.82 5 P **P 23 45 36.5 +2.7**							
GYA				pP	pP	23 45 46.3	+1.5
GYA				sP	sP	23 45 52.0	+2.5
GYA				PP	PP	23 46 47.6	-1.0
GYA				PcP	PcP	23 48 20.0	+1.7
GYA				S	**S**	**23 50 51.8**	**+3.4**
GYA				sS	sS	23 51 08.9	+2.2
GYA				ScP	ScP	23 52 01.2	+1.8
GYA				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8							
GYA				pmax	pmax		
comp=Z,70nm,4.9s							
GYA				LR	LR		
comp=N,430nm,15.0s,MS4.4							
GYA				LR	LR		
comp=E,410nm,16.2s,MS4.4							
GYA				LR	LR		
comp=Z,400nm,15.4s,MS4.2							
ASAR Alice Springs 33.73 124 P **P 23 45 41.2 -0.6**							
comp=Z,9.9nm,0.8s,mb4.8,baz=306,slow=7.5,SNR=100							
ASAR				PcP	PcP	23 48 19.4	-1.5
comp=Z,1.0nm,0.7s,baz=317,slow=1.5,SNR=4.5							
ENH Enshi 36.91 8 *e*P **P 23 46 07.7 -1.4**							
comp=Z,8.2nm,0.7s,mb4.7							
CD2 Chengdu 37.12 0 P **P 23 46 13.6 +2.7**							
CD2				pP	pP	23 46 23.3	+1.3
CD2				sP	sP	23 46 27.3	+0.6
CD2				PP	PP	23 47 41.8	+5.7
CD2				PcP	PcP	23 48 32.6	+1.9
CD2				S	**S**	**23 51 59.1**	**+4.5**
CD2				sS	sS	23 52 15.2	+2.2
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.9							
CD2				pmax	pmax		
comp=Z,160nm,8.2s							
CD2				LR	LR		
comp=N,190nm,10.7s							
CD2				LR	LR		
comp=Z,290nm,9.5s							
LSA Lhasa 37.88 342 *e*P **P 23 46 17.4 +0.1**							
comp=Z,5.9nm,0.7s,mb4.4							
XAN Xi'an 40.55 7 P **P 23 46 36.9 -2.6**							
XAN				pP	pP	23 46 46.6	-4.1
XAN				PP	PP	23 48 16.1	+2.5
XAN				sS	sS	23 53 06.6	+1.9
XAN				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.0							
JOW Kunigami 40.76 35 P **P 23 46 39.3 -2.1**							
comp=Z,8.8nm,0.7s,mb4.5,baz=104,slow=25,SNR=6.8							
LZH Lanzhou 42.29 0 *e*P **P 23 47 02.2 +8.5**							
LZH				pP	pP	23 47 10.7	+5.7
LZH				sP	sP	23 47 15.6	+5.9
LZH				pmax	pmax		
comp=Z,13nm,1.2s,mb4.4							
STKA Stephens Creek 43.49 131 *e*P **P 23 47 03.6 -0.1**							
comp=Z,19nm,0.6s,mb5.0							
STKA				*e*pP	pP	23 47 16.8	+1.9
STKA Stephens Creek 43.49 131 P **P 23 47 03.7 +0.1**							
comp=Z,22nm,0.6s,mb5.1,baz=304,slow=7.7,SNR=74							
STKA				LR	LR	00 06 25.6	
comp=Z,72nm,19.8s,MS3.6,baz=118,slow=38							
STKA Stephens Creek 43.49 131 P **P 23 47 03.7 0.0**							
STKA				LR	LR	00 06 25.6	
GTA Gaotai 45.75 356 *e*P **P 23 47 21.3 -0.1**							
GTA				pP	pP	23 47 31.3	-1.4
GTA				sP	sP	23 47 35.3	-2.1
GTA				S	**S**	**23 54 04.8**	**+2.6**
GTA				sS	sS	23 54 20.8	-0.1
GTA				SS	SS	23 57 21.5	-5.7
GTA				pmax	pmax		
comp=Z,4.0nm,1.1s,mb4.3							
GTA				pmax	pmax		
comp=Z,92nm,6.8s							
GTA				LR	LR		
comp=N,110nm,18.1s,MS4.0							
GTA				LR	LR		
comp=E,120nm,17.8s,MS4.0							
GTA				LR	LR		
comp=Z,190nm,18.1s,MS4.1							
CMSA Cobar Meteorol 46.50 128 *e*P **P 23 47 28.0 +0.4**							
CMSA				*e*pP	pP	23 47 40.6	+1.7
HHC Hu-ho-hao-te 47.60 8 *e*P **P 23 47 39.0 +3.1**							
HHC				pP	pP	23 47 49.4	+2.1
HHC				sP	sP	23 47 52.9	+1.0
HHC				PcP	PcP	23 49 07.3	+2.1
HHC				PP	PP	23 49 30.6	+2.8
HHC				ScP	ScP	23 52 57.7	+1.2
HHC				PcS	PcS	23 53 01.6	+1.0
HHC				S	**S**	**23 54 33.9**	**+5.3**
HHC				ScS	ScS	23 57 26.7	+0.3
HHC				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.8							
HHC				pmax	pmax		
comp=Z,91nm,6.4s							
HHC				LR	LR		
comp=N,230nm,16.7s,MS4.7							
HHC				LR	LR		
comp=E,570nm,16.9s,MS4.7							
HHC				LR	LR		
comp=Z,190nm,17.6s,MS4.1							
BJI Beijing 47.65 13 P **P 23 47 34.7 -1.6**							
BJI				pmax	pmax		
comp=Z,25nm,0.8s,mb5.3							
BJI Beijing 47.65 13 P **P 23 47 34.6 -1.7**							
BJI				pmax	pmax		
comp=Z,25nm,0.8s,mb5.3							
EIDS Eidsvold 49.01 118 *e*P **P 23 47 48.0 +0.8**							
comp=Z,1.3nm,0.5s,mb4.2							
KSRS Korea Array 49.17 26 P **P 23 47 46.4 -1.7**							
comp=Z,9.2nm,0.7s,mb4.9,baz=222,slow=7.7,SNR=40							
YNG Young 49.69 130 *e*P **P 23 47 52.6 +0.4**							
comp=Z,4.6nm,0.6s,mb4.7							
CAN Canberra 50.55 131 *e*P **P 23 47 59.3 +0.6**							
comp=Z,2.9nm,0.5s,mb4.5							
WMQ Urumqi 52.06 345 P **P 23 48 10.0 +0.2**							
WMQ				PP	PP	23 50 11.7	+3.3
WMQ				pmax	pmax		
comp=Z,24nm,1.0s,mb5.1							
KSH Kashi 52.40 333 *e*P **P 23 48 10.9 -1.5**							
KSH				*e*pP	pP	23 48 20.7	-3.2
KSH				*e*sP	sP	23 48 23.8	-4.7
KSH				*e*PcP	PcP	23 49 23.8	+0.9
KSH				*e*PP	PP	23 50 08.6	-2.9
KSH				*e*ScP	ScP	23 53 16.1	-1.0
KSH				*e*S	**S**	**23 55 29.6**	**-6.0**
KSH				*e*ScS	ScS	23 57 54.2	-5.0
KSH				pmax	pmax		
comp=Z,85nm,3.8s							
KSH				LR	LR		
comp=N,150nm,5.1s							
KSH				LR	LR		
comp=E,130nm,4.2s							
KSH				LR	LR		
comp=Z,170nm,8.5s							
MJAR Matsushiro Arr 53.60 35 P **P 23 48 17.9 -3.4**							
comp=Z,1.3nm,0.5s,mb4.1,baz=218,slow=7.3,SNR=7.5							
CN2 Changchun 53.73 19 *e*P **P 23 48 19.8 -2.3**							
CN2				pmax	pmax		
comp=Z,20nm,0.9s,mb5.0							
SONM Songino Array 54.08 2 P **P 23 48 24.0 -0.5**							
comp=Z,16nm,0.7s,mb5.0,baz=179,slow=8.9,SNR=93							
ULN Ulaanbaatar 54.14 3 *e*P **P 23 48 24.3 -0.7**							
comp=Z,7.7nm,0.8s,mb4.7							
ULN				*e*pP	pP	23 48 37.6	+1.1
UCH Uchtor 55.24 334 *e*P **P 23 48 33.5 +0.4**							
comp=Z,6.0nm,1.1s,mb4.5							
TKM2 Tokmak 2 55.34 335 *e*P **P 23 48 33.8 -0.1**							
comp=Z,5.3nm,0.6s,mb4.8							
AML Almayashu 55.53 335 *e*P **P 23 48 35.5 +0.3**							
comp=Z,5.5nm,0.6s,mb4.8							
AAK Ala-Archa 55.58 334 *e*P **P 23 48 35.5 0.0**							
comp=Z,3.4nm,0.9s,mb4.4							
EKS2 Erkin-Say 55.92 334 *e*P **P 23 48 38.1 +0.1**							
comp=Z,9.1nm,0.7s,mb4.9							
MK31 Makanchi Array 56.29 342 *e*P **P 23 48 39.8 -0.7**							
MK31				sP	sP	23 48 55.5	-1.2
MKAR Makanchi Array 56.29 342 P **P 23 48 39.5 -1.1**							
comp=Z,6.0nm,0.7s,mb4.7,baz=145,slow=7.6,SNR=49							
KURK Kurchatov 60.89 342 *e*P **P 23 49 11.8 -0.6**							
comp=Z,9.2nm,0.8s,mb5.0							
KURK				*e*pP	pP	23 49 25.2	+1.0
ZALV Zalesovo Beam 62.21 348 P **P 23 49 20.1 -1.2**							
comp=Z,15nm,0.9s,mb5.1,baz=141,slow=5.0,SNR=62							
ZALV				LR	LR	00 19 06.7	
comp=Z,58nm,21.1s,MS3.7,baz=48,slow=39							
ZALV Zalesovo Beam 62.21 348 P **P 23 49 20.1 -1.2**							
ZALV				LR	LR	00 19 06.7	
BVAR Borovoye Array 65.59 339 P **P 23 49 42.7 -0.9**							
comp=Z,5.0nm,0.6s,mb4.7,baz=141,slow=8.7,SNR=29							
KMBO Kilima Mbogo 66.45 272 LR LR 00 12 23.7							
comp=Z,146nm,19.9s,MS4.2,baz=71,slow=30							
MAW Mawson 66.98 196 P **P 23 49 52.9 +0.6**							
comp=Z,1.4nm,0.4s,mb4.3,baz=4.8,slow=7.2,SNR=4.4							
ABKAR Akbulak array 67.27 331 *e*P **P 23 49 53.7 -0.7**							
comp=Z,10nm,0.8s,mb4.9							
ABKAR				*e*		23 50 08.1	
GNI Garni 71.24 316 *e*P **P 23 50 19.8 +0.6**							
comp=Z,4.7nm,0.9s,mb4.4							
ARU Arti 72.71 336 *e*P **P 23 50 27.0 -0.7**							
comp=Z,9.9nm,1.0s,mb4.7							
ARU				*e*		23 50 41.5	
MALT Malatya 75.01 312 *e*P **P 23 50 42.8 +1.3**							
comp=Z,12nm,1.8s,mb4.5							
BRTR Keskin Array B 79.00 312 P **P 23 51 03.8 -0.1**							
comp=Z,1.3nm,0.9s,mb3.9,baz=138,slow=8.7,SNR=9.7							
BRTR				LR	LR	00 27 37.1	
comp=Z,51nm,18.7s,MS3.9,baz=142,slow=37							
AKASG Malin Array Be 85.21 322 P **P 23 51 35.2 -1.0**							
comp=Z,2.4nm,0.7s,mb4.4,baz=89,slow=4.4,SNR=10							
AKASG Malin Array Be 85.21 322 P **P 23 51 35.2 -1.0**							
VRI Vrincioaia 85.57 317 ⇑*i*P **P 23 51 39.7 +1.5**							
MLR Muntele Rosu 86.02 316 ⇓*i*P **P 23 51 41.6 +1.2**							
BURAR Bucovina Array 86.98 318 ⇓*i*P **P 23 51 46.9 +1.8**							
BUR08 Bucovina Ar. S 87.00 318 *e*P **P 23 51 47.0 +1.8**							
JOF Joensuu 87.77 334 *e*p **P 23 51 46.4 -2.1**							
comp=Z,1.9nm,0.7s,mb4.4							
IDID Didziasalis 87.87 326 *e*P **P 23 51 49.8 +0.6**							
GZR Gura Zlata 88.18 316 ⇓*i*P **P 23 51 52.7 +1.8**							
DEV Deva 88.18 316 ⇓*i*P **P 23 51 52.5 +1.6**							
IZAR Zarasai 88.25 326 *e*P **P 23 51 51.6 +0.6**							
ISAL Salakas 88.27 326 *e*P **P 23 51 51.5 +0.4**							
DRGR 88.49 317 ⇑*i*P **P 23 51 53.7 +1.4**							
BZS Buzias 89.02 316 ⇓*i*P **P 23 51 55.8 +1.0**							
KWP Kalwaria Pacla 89.03 320 *e*P **P 23 51 56.1 +1.3**							
KWP Kalwaria Pacla 89.03 320 *e*P **P 23 51 56.0 +1.2**							
comp=Z,22nm,1.6s,mb5.2							
KWP Kalwaria Pacla 89.03 320 ⇓*i*P **P 23 51 56.0 +1.2**							
SUW Suwalki 89.59 324 *e*P **P 23 51 58.0 +0.7**							
FINES FINESS Array B 89.71 332 P **P 23 51 58.1 +0.4**							
comp=Z,3.1nm,0.9s,mb4.6,baz=120,slow=7.3,SNR=12							
KAF Kangasniemi 89.77 333 *e*p **P 23

baz=146,SNR=19
MIAR Mount Ida 147.80 27 *e*PKPbc PKPbc 23 58 44.6 -0.5
WVT Waverly 148.61 18 *e*PKPbc PKPbc 23 58 46.5 -0.8
CPCT Cooper Cave 150.15 14 *e*PKPbc PKPbc 23 58 50.6 -0.5

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*ISCJB **03** 23:41:57.2±2.2, 6°.8S±0°.3×103°.2E±0°.5, h33km, mb4.1/6, Error ellipse: s-maj=82.8km s-min=15.5km az=151.2*
*IDC **03** 23:41:57.1±4.0, 6°.39S×103°.71E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/20, mbtmp4.0/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/25, Error ellipse: s-maj=171.8km s-min=21.9km az=57.0*
*NEIC **03** 23:41:59.7±1.9, 6°.86S×103°.17E, h35km, mb4.2/1, Error ellipse: s-maj=75.9km s-min=14.1km az=61.0*
ISC 03 23:41:59.6±2.2, 6°.9S±0°.3×103°.1E±0°.5, h35km, n9, σ0s89/8, mb4.1/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**4.36**	**145**	*e*Pn	**Pn**	**23 43 02.3**	**-1.0**
XMIS				*e*Sn	**Sn**	**23 43 47.5**	**-5.4**
WRA	**Warramunga Arr**	**32.93**	**116**	P	**P**	**23 48 31.1**	**+0.1**
	2.0nm,0.5s,mb4.3,baz=286,slow=12,SNR=5.4						
WRAB	**Tennant Creek**	**32.94**	**116**	*e*P	**P**	**23 48 30.4**	**-0.7**
	2.0nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**33.93**	**123**	P	**P**	**23 48 40.1**	**+0.5**
	1.4nm,0.7s,mb4.0,baz=309,slow=8.2,SNR=5.2						
STKA	**Stephens Creek**	**43.62**	**130**	P	**P**	**23 50 02.5**	**+1.7**
	3.9nm,0.6s,mb4.3,baz=295,slow=6.5,SNR=6.1						
SONM	**Songino Array**	**54.55**	**3**	P	**P**	**23 51 23.2**	**-0.8**
	0.5nm,0.6s,mb3.7,baz=182,slow=9.1,SNR=3.4						
MKAR	**Makanchi Array**	**56.56**	**343**	LR	LR	00 21 29.8	
	comp=Z,48nm,18.0s,baz=164,slow=42						
ZALV	**Zalesovo Beam**	**62.53**	**348**	P	**P**	**23 52 19.9**	**+0.3**
	0.5nm,0.3s,mb4.1,baz=146,slow=6.0,SNR=3.7						
TXAR	**Lajitas Array**	**146.28**	**45**	PKPbc	PKPbc	00 01 37.9	+0.7
	0.6nm,0.5s,baz=290,slow=1.3,SNR=6.9						

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*IDC **03** 23:52:55.3±12.0, 29°.30S×71°.28W, h0km, mb4.0/2, mb1 3.9/2, mb1mx3.6/13, mbtmp4.0/2, Error ellipse: s-maj=833.4km s-min=84.4km az=3.0*
*NEIC **03** 23:53:02.7±1.6, 28°.05S×71°.46W, h35km, Error ellipse: s-maj=46.3km s-min=14.7km az=82.0*
*ISCJB **03** 23:53:03.8±3.8, 28°.00S±0°.06×71°.2W±0°.6, h53km±17km, mb3.8/2, Error ellipse: s-maj=86.7km s-min=10.5km az=1.4*
ISC 03 23:53:04.2±3.8, 28°.05S±0°.06×71°.3W±0°.5, h48km±18km, n9, σ0s08/7, mb3.8/2, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.10**	**150**	*e*Pg	**Pn**	**23 53 23.4**	**0.0**
LCO				*e*Sg	**Sn**	**23 53 37.4**	**0.0**
LVC	**Limon Verde**	**5.84**	**23**	*e*Pn	**Pn**	**23 54 28.3**	**0.0**
	15nm,0.3s						
LVC				*e*S	**Sn**	**23 55 34.0**	**0.0**
DBIC	**Dimbokro**	**72.76**	**72**	P	**P**	**00 04 27.8**	**-0.1**
	1.6nm,0.7s,mb4.0,baz=228,slow=6.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**81.63**	**70**	P	**P**	**00 05 17.7**	**+0.1**
	0.7nm,0.8s,mb3.6,baz=256,slow=4.2,SNR=5.2						
TORD	**Torodi Ar. Bea**	**81.63**	**70**	P	**P**	**00 05 17.7**	**+0.1**
ZALV	**Zalesovo Beam**	**148.78**	**27**	PKPbc	PKPbc	00 12 46.5	+0.6
	1.1nm,0.5s,baz=300,slow=3.2,SNR=8.5						
ZALV	**Zalesovo Beam**	**148.78**	**27**	PKPbc	PKPbc	00 12 46.5	+0.6
MKAR	**Makanchi Array**	**152.12**	**41**	PKPbc	PKPbc	00 12 54.4	+0.3
	0.4nm,0.4s,baz=321,slow=1.7,SNR=4.9						
MKAR	**Makanchi Array**	**152.12**	**41**	PKPbc	PKPbc	00 12 54.4	+0.3

IDC 03 23:53:57.6±10.0, 31°.59S×69°.58W, h0km, mb4.4/2, mb1 4.3/2, mb1mx3.8/12, mbtmp4.4/2, Error ellipse: s-maj=827.8km s-min=85.1km az=178.0, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**11.94**	**67**	Pn	Pn	23 56 50.1	+1.1
	0.4nm,0.3s,baz=254,slow=18,SNR=3.5						
DBIC	**Dimbokro**	**72.43**	**70**	P	P	00 05 26.1	0.0
	7.3nm,1.2s,baz=200,slow=9.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**81.43**	**69**	P	P	00 06 16.9	+0.1
	1.0nm,0.5s,baz=278,slow=5.5,SNR=13						
ZALV	**Zalesovo Beam**	**151.09**	**32**	PKPbc	PKPbc	00 13 51.7	-0.3
	0.9nm,0.4s,baz=314,slow=3.8,SNR=4.5						
MKAR	**Makanchi Array**	**153.62**	**47**	PKPbc	PKPbc	00 13 58.1	+0.2
	0.2nm,0.4s,baz=349,slow=3.8,SNR=2.4						

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*JMA **04** 00:00:06.7±0.4, 24°.43N×122°.32E, h49km, M2.6*
TAP 04 00:00:06.5, 24°.07N×122°.37E, h35km, ML3.2, 1C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.68**	**302**	P	Pn	00 00 19.7	+0.1
	baz=310						
ENA				*e*S	Sn	00 00 29.9	+1.0
	baz=310						
YOJ	**Yonaguni jima**	**0.70**	**56**	P	Pn	00 00 19.5	-0.4
YOJ				S	Sn	00 00 28.7	-0.9
HWA	**Hwalien**	**0.71**	**263**	*e*P	Pn	00 00 19.3	-0.6
	baz=252						
TWD	**Chiawan**	**0.71**	**271**	*e*P	Pn	00 00 19.9	0.0
	baz=271						
TWD				*e*S	Sn	00 00 29.8	+0.1
	baz=271						
TWC	**Suao**	**0.72**	**319**	*i* P	Pn	00 00 20.3	+0.2
	baz=318						
TWC				*i* S	Sn	00 00 30.1	+0.1
	baz=318						
EGS		**0.87**	**333**	P	Pn	00 00 23.4	+1.1
	baz=323						
EGS				S	Sn	00 00 35.6	+1.8
	baz=323						
ESL	**Shilin**	**0.89**	**254**	P	Pn	00 00 21.9	-0.6
	baz=244						
ESL				*e*S	Sn	00 00 34.0	-0.2
	baz=244						
ILA	**Ilan**	**0.90**	**321**	*e*P	Pn	00 00 24.0	+1.4
	baz=310						
ILA				*e*S	Sn	00 00 37.0	+2.6
	baz=310						
TWE	**Neicheng**	**0.92**	**316**	P	Pn	00 00 24.1	+1.3
	baz=314						
TWE				*e*S	Sn	00 00 36.4	+1.6
	baz=314						
NNS	**Nan Shan**	**0.98**	**292**	*e*P	Pn	00 00 24.7	+0.9
	baz=283						
NNS				S	Sn	00 00 38.4	+1.9
	baz=283						
TWB1	**Santiao Chiao**	**1.00**	**340**	P	Pn	00 00 24.6	+0.6
	baz=351						
TWB1				S	Sn	00 00 38.5	+1.5
	baz=351						
WHF	**Hehuan Shan**	**1.01**	**275**	P	Pn	00 00 24.8	+0.6
	baz=274						
WHF				*e*S	Sn	00 00 38.3	+1.1
	baz=274						
NSK	**Sanguang**	**1.11**	**304**	*e*P	Pn	00 00 26.2	+0.7
	baz=291						
TWT	**Tachien**	**1.11**	**280**	*e*P	Pn	00 00 26.6	+1.1
	baz=268						
TWT				*e*S	Sn	00 00 41.4	+1.8
	baz=268						
EHY	**Hungye**	**1.11**	**240**	P	Pn	00 00 25.5	0.0
	baz=240						
EHY				*e*S	Sn	00 00 39.9	+0.3
	baz=240						
NWF	**Wu-fen Shan**	**1.14**	**332**	P	Pn	00 00 26.8	+0.9
	baz=330						
NWF				*e*S	Sn	00 00 42.8	+2.6
	baz=330						
TWA	**Mucha**	**1.16**	**322**	*e*P	Pn	00 00 27.9	+1.7
	baz=336						
TWA				*e*S	Sn	00 00 43.9	+3.1
	baz=336						
TWF1	**Yuli**	**1.21**	**234**	⇑P	Pn	00 00 27.0	+0.1
	baz=226						
TWF1				S	Sn	00 00 42.3	+0.2
	baz=226						
IRIF	**Iriomote-Funau**	**1.27**	**78**	P	Pn	00 00 29.1	+1.4
IRIF				*e*S	Sn	00 00 45.9	+2.4
HATJ	**Hateruma jima**	**1.31**	**90**	P	Pn	00 00 30.2	+1.9
HATJ				*e*S	Sn	00 00 46.7	+2.2
CHKT	**Chengkung**	**1.33**	**224**	*e*P	Pn	00 00 27.7	-0.8
	baz=216						
CHKT				*e*S	Sn	00 00 43.4	-1.7
	baz=216						
SMLT	**Sun Moon Lake**	**1.36**	**263**	P	Pn	00 00 30.0	+1.1
	baz=262						
SMLT				*e*S	Sn	00 00 47.0	+1.3
	baz=262						
TYC	**Yuchr**	**1.39**	**264**	P	Pn	00 00 30.4	+1.0
	baz=263						
TYC				*e*S	Sn	00 00 48.1	+1.5
	baz=263						
TWY	**Chenhua**	**1.40**	**330**	*e*P	Pn	00 00 31.7	+2.2
	baz=328						
YUS	**Yu-Shan**	**1.42**	**246**	*e*P	Pn	00 00 30.9	+1.1
	baz=246						
YUS				*e*S	Sn	00 00 47.9	+0.6
	baz=246						
TWQ1	**Liyutan**	**1.49**	**281**	*e*P	Pn	00 00 33.2	+2.5
	baz=280						
TWQ1				*e*S	Sn	00 00 52.1	+3.2
	baz=280						
JKRS	**Kuro-shima**	**1.51**	**83**	P	Pn	00 00 32.7	+1.8
JKRS				S	Sn	00 00 52.0	+2.6
ELDTW	**Lidau**	**1.52**	**235**	P	Pn	00 00 30.8	-0.3
	baz=236						
ELDTW				*e*S	Sn	00 00 48.9	-0.7
	baz=236						
ALS	**Alishan**	**1.54**	**249**	*e*P	Pn	00 00 33.0	+1.6
	baz=249						
ALS				*e*S	Sn	00 00 50.8	+0.7
	baz=249						
TCU	**Taichung**	**1.55**	**273**	*e*P	Pn	00 00 34.2	+2.6
	baz=272						
TCU				*e*S	Sn	00 00 54.9	+4.4
	baz=272						
CHN5	**Tsauling**	**1.62**	**254**	*e*P	Pn	00 00 34.5	+2.0
	baz=254						
CHN5				*e*S	Sn	00 00 55.2	+3.0
	baz=254						
JIJ	**Ishigaki jima**	**1.65**	**79**	P	Pn	00 00 32.9	0.0
JIJ				S	Sn	00 00 53.0	+0.2
TWG	**Pinlang**	**1.72**	**224**	*e*P	Pn	00 00 33.3	-0.6
	baz=234						
STYT	**Tauyuan**	**1.73**	**239**	*e*P	Pn	00 00 34.9	+0.9
	baz=231						
STYT				*e*S	Sn	00 00 57.0	+2.1
	baz=231						
CHN4	**Tsaushan**	**1.78**	**247**	*e*P	Pn	00 00 37.1	+2.4
	baz=247						
CHN4				*e*S	Sn	00 00 59.9	+3.8
	baz=247						
WTP	**Ta-pu**	**1.81**	**244**	P	Pn	00 00 37.0	+1.9
	baz=244						
WTP				*e*S	Sn	00 00 59.6	+2.8
	baz=244						
TWK	**Hsinying**	**1.90**	**246**	*e*P	Pn	00 00 38.6	+2.3
	baz=246						
TWK				*e*S	Sn	00 01 02.2	+3.1
	baz=246						
CHN1	**Nanshi**	**1.90**	**243**	*e*P	Pn	00 00 38.9	+2.4
	baz=243						
CHN1				*e*S	Sn	00 01 02.2	+3.0
	baz=243						
SGST	**Jiashian**	**1.91**	**240**	*e*P	Pn	00 00 39.0	+2.5
	baz=230						
SGST				*e*S	Sn	00 01 02.2	+2.9
	baz=230						
SSD	**Sandimen**	**2.07**	**231**	*e*P	Pn	00 00 40.0	+1.3
	baz=226						
LAY	**Lan-yu**	**2.15**	**201**	*e*P	Pn	00 00 39.3	-0.6
	baz=202						
TWM1	**Shoushan**	**2.17**	**236**	*e*P	Pn	00 00 42.8	+2.6
	baz=235						
EAST	**Anshuo**	**2.18**	**220**	*e*P	Pn	00 00 40.1	-0.1
	baz=221						
SCZT	**Fangliau**	**2.33**	**224**	*e*P	Pn	00 00 44.4	+2.1
	baz=224						
TWK1	**Hengchun**	**2.56**	**215**	*e*P	Pn	00 00 45.1	-0.3
	baz=221						

IDC 04 00:14:12.7±5.5, 5°.08S×132°.63E, h0km, mb3.5/1, mb1 3.5/3, mb1mx3.3/14, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=352.0km s-min=31.1km az=75.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.87**	**174**	Pn	Pn	00 17 43.0	-1.3
	0.1nm,0.3s,baz=350,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**18.52**	**176**	P	Pn	00 18 31.2	+0.4
	0.1nm,0.3s,baz=2.4,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**68.10**	**325**	P	P	00 25 14.5	+0.1
	0.3nm,0.6s,baz=111,slow=6.3,SNR=3.1						

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*IDC **04** 01:16:13.3±2.0, 6°.43S×103°.65E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/21, mbtmp3.8/9, Error ellipse: s-maj=79.7km s-min=17.2km az=54.0*
*ISCJB **04** 01:16:19.1±1.8, 6°.5S±0°.1×103°.7E±0°.1, h62km±13km, mb3.9/9, Error ellipse: s-maj=24.6km s-min=8.5km az=140.2*
*DJA **04** 01:16:21, 6°.28S×103°.94E, h4km, MLv4.0/7*
ISC 04 01:16:20.2±1.9, 6°.4S±0°.1×103°.7E±0°.1, h52km±14km, n20, σ1s01/21, mb3.9/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.23**	**42**	P	**Pn**	**01 16 38.3**	**-2.8**
LWLI	**Liwa**	**1.47**	**15**	P	**Pn**	**01 16 43.1**	**-1.2**
KLI	**Kotabumi**	**1.97**	**37**	P	**Pn**	**01 16 51.8**	**+0.7**
MDSI	**Maura Dua**	**2.01**	**15**	P	**Pn**	**01 16 51.0**	**-0.7**
MDSI				S	**Sn**	**01 17 16.3**	**+0.7**
CGJI	**Cibinong**	**2.02**	**95**	P	**Pn**	**01 16 49.9**	**-1.9**
CGJI				S	**Sn**	**01 17 16.5**	**+0.6**
RBSI	**Rajabasa**	**2.15**	**74**	P	**Pn**	**01 16 52.6**	**-1.0**
MNAI	**Manna**	**2.19**	**341**	P	**Pn**	**01 16 55.4**	**+1.3**
KSI	**Kapahiang**	**2.97**	**339**	P	**Pn**	**01 17 10.8**	**+5.9**
DBJI	**Dramaga**	**3.07**	**92**	P	**Pn**	**01 17 07.8**	**+1.7**
CBJI	**Citeko**	**3.17**	**90**	P	**Pn**	**01 17 09.1**	**+1.6**
FITZ	**Fitzroy Crossi**	**24.36**	**120**	P	**P**	**01 21 32.6**	**-0.9**
	1.9nm,0.9s,mb3.5,baz=288,slow=9.6,SNR=2.6						
WRA	**Warramunga Arr**	**32.66**	**117**	P	**P**	**01 22 47.2**	**-0.4**
	1.4nm,0.6s,mb4.0,baz=290,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**33.73**	**124**	P	**P**	**01 22 57.0**	**+0.1**
	0.6nm,0.7s,mb3.7,baz=306,slow=7.5,SNR=7.3						
STKA	**Stephens Creek**	**43.49**	**131**	P	**P**	**01 24 19.4**	**+0.7**
	1.9nm,0.6s,mb4.0,baz=303,slow=8.8,SNR=4.4						
KSRS	**Korea Array**	**49.19**	**26**	P	**P**	**01 25 03.0**	**-0.2**
	1.1nm,0.6s,mb4.1,baz=226,slow=6.4,SNR=4.6						
SONM	**Songino Array**	**54.09**	**2**	P	**P**	**01 25 39.9**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=177,slow=8.6,SNR=8.3						
MKAR	**Makanchi Array**	**56.30**	**342**	P	**P**	**01 25 55.5**	**0.0**
	0.4nm,0.5s,mb3.7,baz=153,slow=8.8,SNR=5.6						
ZALV	**Zalesovo Beam**	**62.22**	**348**	P	**P**	**01 26 36.1**	**-0.2**
	0.5nm,0.4s,mb4.0,baz=169,slow=5.2,SNR=4.0						
BVAR	**Borovoye Array**	**65.60**	**339**	P	**P**	**01 26 58.5**	**0.0**
	0.4nm,0.6s,mb3.6,baz=142,slow=7.5,SNR=4.1						
TXAR	**Lajitas Array**	**145.61**	**45**	PKPbc	PKPbc	01 35 54.8	+1.1
	0.7nm,0.5s,baz=234,slow=1.1,SNR=6.0						

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*IDC **04** 02:05:25.0±1.1, 6°.27S×103°.80E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.0/21, mbtmp4.1/13, MS3.3/2, Ms1 3.3/2, ms1mx2.3/28, Error ellipse: s-maj=40.6km s-min=14.5km az=52.0*
*DJA **04** 02:05:27, 6°.66S×103°.57E, h32km, MLv4.5/10*
*ISCJB **04** 02:05:30.6±1.5, 6°.4S±0°.1×103°.8E±0°.1, h63km±11km, mb4.2/18, Error ellipse: s-maj=25.1km s-min=7.7km az=135.0*
*NEIC **04** 02:05:32.0±0.6, 6°.20S×103°.93E, mb4.3/5, Error ellipse: s-maj=24.5km s-min=6.6km az=49.0*
ISC 04 02:05:31.4±1.6, 6°.4S±0°.1×103°.8E±0°.1, h51km±11km, n37, σ0s91/34, mb4.2/18, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.11**	**41**	P	**Pn**	**02 05 49.0**	**-1.7**
LWLI	**Liwa**	**1.37**	**13**	P	**Pn**	**02 05 56.3**	**+2.0**
BLSI	**Bandar Lampung**	**1.78**	**56**	P	**Pn**	**02 05 59.9**	**+0.1**
KLI	**Kotabumi**	**1.85**	**36**	P	**Pn**	**02 06 01.2**	**+0.4**
MDSI	**Maura Dua**	**1.92**	**13**	P	**Pn**	**02 06 01.2**	**-0.5**
CGJI	**Cibinong**	**1.94**	**97**	P	**Pn**	**02 06 00.9**	**-1.0**
RBSI	**Rajabasa**	**2.04**	**75**	P	**Pn**	**02 06 04.1**	**+0.8**
MNAI	**Manna**	**2.15**	**338**	P	**Pn**	**02 06 03.1**	**-1.8**
KSI	**Kapahiang**	**2.94**	**337**	P	**Pn**	**02 06 16.4**	**+0.7**
DBJI	**Dramaga**	**2.98**	**94**	P	**Pn**	**02 06 15.0**	**-1.2**
CBJI	**Citeko**	**3.07**	**91**	P	**Pn**	**02 06 19.9**	**+2.4**
LEM	**Lembang**	**3.86**	**97**	P	**Pn**	**02 06 27.9**	**-0.4**
XMIS	**Christmas Isla**	**4.50**	**156**	P	**Pn**	**02 06 30.7**	**-6.3**
TPI	**Tanjungpandan**	**5.29**	**47**	P	**Pn**	**02 06 49.5**	**+1.6**
	19nm,0.8s,0.1nm						
SJI	**Sawahan**	**8.06**	**100**	P	**Pn**	**02 07 25.6**	**-0.4**
KAPI	**Kappang**	**15.97**	**86**	LR	LR	02 15 28.6	
	comp=Z,99nm,18.7s,baz=64,slow=38						
FITZ	**Fitzroy Crossi**	**24.32**	**121**	P	**P**	**02 10 44.5**	**-0.1**
	1.3nm,0.8s,mb3.4,baz=316,slow=6.9,SNR=5.1						
CMAR	**Chiang Mai Arr**	**25.12**	**349**	P	**P**	**02 10 51.4**	**-0.4**
	1.6nm,0.4s,mb3.9,baz=180,slow=9.0,SNR=6.4						
WRA	**Warramunga Arr**	**32.61**	**117**	P	**P**	**02 11 58.7**	**+0.1**
	2.9nm,0.6s,mb4.4,baz=287,slow=12,SNR=15						
WRAB	**Tennant Creek**	**32.62**	**117**	*e*P	**P**	**02 11 58.4**	**-0.2**
	4.9nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**33.69**	**124**	P	**P**	**02 12 08.3**	**+0.4**
	1.4nm,0.6s,mb4.0,baz=304,slow=7.5,SNR=24						
JOW	**Kunigami**	**40.66**	**35**	LR	LR	02 30 23.4	
	comp=Z,33nm,18.0s,baz=320,slow=37						
STKA	**Stephens Creek**	**43.47**	**131**	P	**P**	**02 13 30.5**	**+0.6**
	4.5nm,0.6s,mb4.4,baz=309,slow=7.2,SNR=14						
KSRS	**Korea Array**	**49.08**	**26**	P	**P**	**02 14 13.6**	**-0.2**
	3.0nm,0.6s,mb4.5,baz=222,slow=7.6,SNR=15						
MJAR	**Matsushiro Arr**	**53.51**	**35**	P	**P**	**02 14 45.3**	**-1.6**
	0.9nm,0.7s,mb3.8,baz=203,slow=8.6,SNR=3.5						
SONM	**Songino Array**	**54.02**	**2**	P	**P**	**02 14 51.0**	**+0.5**
	3.8nm,0.7s,mb4.5,baz=180,slow=9.1,SNR=35						
ULN	**Ulaanbaatar**	**54.08**	**3**	*e*P	**P**	**02 14 50.0**	**-0.8**
	1.7nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**55.33**	**335**	*e*P	**P**	**02 15 00.6**	**+0.6**
	2.0nm,0.6s,mb4.3						
TKM2				*e*pP	pP	02 15 13.9	0.0
EKS2	**Erkin-Say**	**55.90**	**334**	*e*P	**P**	**02 15 05.0**	**+0.8**
	1.1nm,0.4s,mb4.2						
MK31	**Makanchi Array**	**56.26**	**342**	*e*P	**P**	**02 15 05.5**	**-1.1**
MKAR	**Makanchi Array**	**56.26**	**342**	P	**P**	**02 15 06.7**	**0.0**
	1.2nm,0.5s,mb4.2,baz=148,slow=8.1,SNR=9.5						
ZALV	**Zalesovo Beam**	**62.17**	**347**	P	**P**	**02 15 47.3**	**-0.1**
	1.5nm,0.3s,mb4.5,baz=147,slow=5.1,SNR=10						
BVAR	**Borovoye Array**	**65.57**	**339**	P	**P**	**02 16 09.6**	**-0.1**
	1.4nm,0.6s,mb4.2,baz=147,slow=7.2,SNR=5.9						
ABKAR	**Akbulak array**	**67.25**	**331**	*e*P	**P**	**02 16 20.4**	**-0.2**
	2.8nm,0.7s,mb4.4						
ABKAR				*e*pP	pP	02 16 35.0	+0.2
BRTR	**Keskin Array B**	**79.02**	**312**	P	**P**	**02 17 30.9**	**+0.6**
	0.4nm,0.7s,mb3.4,baz=79,slow=7.5,SNR=3.0						
FINES	**FINESS Array B**	**89.70**	**332**	P	**P**	**02 18 24.4**	**+0.6**
	0.3nm,0.5s,mb3.9,baz=116,slow=4.4,SNR=5.3						
TXAR	**Lajitas Array**	**145.49**	**45**	PKPbc	PKPbc	02 25 05.9	+1.1
	1.6nm,0.5s,baz=312,slow=1.1,SNR=18						

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*DDA **04** 02:15:34.7, 36°.95N×28°.19E, h7km±3km, Md2.6*
*ISCJB **04** 02:15:35.4±0.6, 37°.03N±0°.04×28°.21E±0°.04, h13km±5km, Error ellipse: s-maj=6.8km s-min=5.7km az=16.6*
*CSEM **04** 02:15:35.9±0.2, 37°.04N×28°.20E, h10km, MD2.5, Error ellipse: s-maj=5.4km s-min=3.7km az=17.0*
*ISK **04** 02:15:36.1, 37°.07N×28°.15E, h8km, MD2.5*
ISC 04 02:15:35.7±0.8, 37°.04N±0°.04×28°.21E±0°.04, h14km±9km, n18, σ0s68/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**31**	*e*PG	**Pg**	**02 15 39.3**	**+0.3**
YER				*e*SG	**Sg**	**02 15 41.9**	**+0.7**
YER	**Yerkesik**	**0.11**	**31**	*e*Pg	**Pg**	**02 15 39.3**	**+0.4**
YER				*e*Sg	**Sg**	**02 15 41.9**	**+0.7**
TURN	**Turunc**	**0.35**	**118**	*i* P	**Pg**	**02 15 41.9**	**-1.0**
TURN				*i* S	**Sg**	**02 15 46.5**	**-1.3**
TURN	**Turunc**	**0.35**	**118**	*i* P	**Pg**	**02 15 41.9**	**-1.0**
TURN				*i* S	**Sg**	**02 15 46.5**	**-1.3**
MLSB	**Milas**	**0.43**	**306**	*e*PG	**Pg**	**02 15 44.4**	**+0.1**
MLSB				*e*SG	**Sg**	**02 15 49.4**	**-0.7**
MLSB	**Milas**	**0.43**	**306**	*e*Pg	**Pg**	**02 15 44.4**	**+0.1**
MLSB				*e*Sg	**Sg**	**02 15 49.4**	**-0.7**
DAT	**Datca**	**0.60**	**239**	*e*PG	**Pg**	**02 15 47.5**	**+0.1**
DAT				*e*SG	**Sg**	**02 15 50.0**	**+0.7**
DAT	**Datca**	**0.60**	**239**	*e*Pg	**Pg**	**02 15 47.5**	**+0.1**
DAT				*e*Sg	**Sg**	**02 15 56.0**	**+0.7**
BDRM	**Kayabasi**	**0.61**	**272**	*e*P	**Pg**	**02 15 47.7**	**0.0**
BDRM				*i* S	**Sg**	**02 15 55.3**	**-0.6**
BDRM	**Kayabasi**	**0.61**	**272**	*e*P	**Pg**	**02 15 47.7**	**0.0**
BDRM				*i* S	**Sg**	**02 15 55.3**	**-0.6**
AYDN	**Tasoluk**	**0.67**	**337**	*i* P	**Pg**	**02 15 48.8**	**0.0**
AYDN				*i* S	**Sg**	**02 15 57.5**	**-0.2**
AYDN	**Tasoluk**	**0.67**	**337**	*i* P	**Pg**	**02 15 48.8**	**0.0**
AYDN				*i* S	**Sg**	**02 15 57.5**	**-0.2**
BODT	**Bodrum**	**0.72**	**272**	*e*PG	**Pg**	**02 15 49.7**	**0.0**
BODT	**Bodrum**	**0.72**	**272**	*e*Pg	**Pg**	**02 15 49.7**	**-0.1**
FETY	**Fethiye**	**0.81**	**120**	*e*PG	**Pg**	**02 15 53.0**	**+1.6**
FETY	**Fethiye**	**0.81**	**120**	*e*Pg	**Pg**	**02 15 53.0**	**+1.6**
GCAM	**G?zelcaml?**	**1.02**	**310**	*e*P	**Pb**	**02 15 55.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.02**	**310**	*e*P	**Pb**	**02 15 55.4**	**+0.3**

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*IDC **04** 02:16:46.9±4.4, 5°.01S×145°.48E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/16, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=72.9km s-min=67.9km az=122.0*
*ISCJB **04** 02:17:01.6±5.0, 5°.3S±0°.2×145°.2E±0°.3, h118km±44km, mb3.5/4, Error ellipse: s-maj=43.4km s-min=39.4km az=141.8*
*NEIC **04** 02:17:01.8±3.7, 5°.24S×145°.09E, h105km±31km, mb3.7/2, Error ellipse: s-maj=30.7km s-min=28.7km az=85.0*
**ISC 04 02:17:02.2±4.2, 5°.3S±0°.2×145°.1E±0°.2, h109km±35km, n15, σ0s69/13, mb3.5/4, Eastern New

*ISCJB **04** 02:41:03.2±1.0, 43°.08N±0°.05×126°.4W±0°.1, h10km, mb3.7/6, Error ellipse: s-maj=11.3km s-min=6.5km az=160.4*

*NEIC **04** 02:41:05.8±1.2, 43°.05N×126°.20W, h10km, mb3.6/8, Error ellipse: s-maj=14.6km s-min=7.3km az=68.0*

*IDC **04** 02:41:07.3±1.9, 43°.18N×125°.75W, h0km, mb3.4/4, mb1 3.7/8, mb1mx3.5/28, mbtmp3.5/8, ML3.5/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/24, Error ellipse: s-maj=35.7km s-min=16.1km az=52.0*

ISC 04 02:41:06.1±2.5, 43°.06N±0°.06×126°.4W±0°.1, h18km±18km, n58, σ1§46/61, mb3.7/6, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	1.52	97	P	Pn	02 41 29.6	-2.8
RNO	**Roman Nose**	2.11	65	P	Pn	02 41 38.8	-1.7
DBO	**Dodson Butte**	2.31	88	P	Pn	02 41 41.4	-1.8
HSO	**Harness Mounta**	2.45	78	P	Pn	02 41 43.5	-1.7
HUMO	**Hull Mountain**	2.57	99	ePn	Pn	02 41 44.3	-2.4
COR	**Corvallis**	2.70	55	ePn	Pn	02 41 46.9	-1.8
COR				eSn	Sn	02 42 21.5	+0.6
BBOR	**Butler Butte**	2.73	92	P	Pn	02 41 47.9	-1.1
YBH	**Yreka Blue Hor**	3.03	115	Pn	Pn	02 41 51.0	-2.2
	4.7nm,0.3s,baz=301,slow=11,SNR=54						
YBH				Sn	Sn	02 42 28.4	-0.6
	2.7nm,0.3s,baz=89,slow=19,SNR=6.0						
YBH	**Yreka Blue Hor**	3.03	115	ePn	Pn	02 41 50.9	-2.3
YBH				eSn	Sn	02 42 28.0	-1.1
IRO	**Indian Ridge**	3.15	71	P	Pn	02 41 54.1	-0.7
FRIS	**Frissel Point**	3.32	68	P	Pn	02 41 56.6	-0.5
WIFE	**Three Sisters-**	3.47	72	P	Pn	02 41 58.7	-0.5
HOOD	**Mount Hood Mea**	4.09	55	ePn	Pn	02 42 07.4	-0.3
LON	**Longmire**	4.92	40	ePn	Pn	02 42 18.9	-0.1
WVOR	**Wild Horse Val**	5.74	94	ePn	Pn	02 42 28.4	-2.0
	3.1nm,0.4s						
HAWA	**Hanford**	5.91	53	ePn	Pn	02 42 32.3	-0.4
	5.6nm,0.5s						
JCW	**Jim Creek**	6.01	30	ePn	Pn	02 42 33.4	-0.6
ETW	**Entiat**	6.23	41	ePn	Pn	02 42 37.9	+0.8
	2.5nm,0.5s						
ETW				eSn	Sn	02 43 51.9	+4.1
RPW	**Rockport**	6.37	31	ePn	Pn	02 42 38.4	-0.7
	2.0nm,0.4s						
BMO	**Blue Mountains**	6.80	72	ePn	Pn	02 42 43.8	-1.0
	2.9nm,0.5s						
NVAR	**Mina Array Bea**	7.69	124	Pn	Pn	02 42 58.4	+1.2
	0.1nm,0.3s,baz=302,slow=13,SNR=7.2						
ELK	**Elko**	8.63	102	Pn	Pn	02 43 12.8	+2.7
	0.1nm,0.3s,baz=294,slow=14,SNR=4.2						
ELK	**Elko**	8.63	102	Pn	Pn	02 43 12.8	+2.7
N12A	**Clover Valley,**	8.74	101	ePn	Pn	02 43 14.9	+3.3
	3.6nm,0.8s						
HLID	**Hailey**	8.75	83	ePn	Pn	02 43 12.9	+1.3
	2.2nm,0.6s						
BBB	**Bella Bella**	9.20	353	LR	LR	02 45 34.8	
	comp=Z,58nm,21.5s,baz=284,slow=29						
N13A	**Wendover, West**	9.34	100	ePn	Pn	02 43 22.7	+2.9
	6.4nm,0.9s						
BSMT	**Bassoo Peak**	9.45	56	ePn	Pn	02 43 22.4	+1.1
	1.6nm,0.8s						
MSO	**Missoula**	9.60	63	ePn	Pn	02 43 22.1	-1.1
	1.8nm,0.8s						
MCMT	**McKenzie Canyo**	9.93	75	ePn	Pn	02 43 30.0	+2.3
	1.0nm,0.7s						
SLMT	**Seeley Lake**	10.02	61	ePn	Pn	02 43 28.7	-0.4
	1.8nm,0.6s						
CHMT	**Chamberlain Mo**	10.07	63	ePn	Pn	02 43 29.5	-0.3
	1.0nm,0.7s						
BOZ	**Bozeman (W)**	10.88	71	ePn	Pn	02 43 41.3	+0.4
	3.1nm,0.7s						
QLMT	**Earthquake Lak**	10.93	76	ePn	Pn	02 43 43.7	+2.1
	3.4nm,0.9s						
RRI2	**Red Ridge**	11.01	83	ePn	Pn	02 43 44.8	+2.2
	5.0nm,1.2s						
IMW	**Indian Meadow**	11.26	80	ePn	Pn	02 43 48.5	+2.4
	22nm,1.1s						
TPAW	**Teton Pass**	11.27	83	ePn	Pn	02 43 48.9	+2.7
	4.5nm,0.8s						
SNOW	**Snow King Moun**	11.41	83	ePn	Pn	02 43 51.0	+2.9
	5.8nm,0.9s						
LOHW	**Long Hollow**	11.52	82	ePn	Pn	02 43 51.7	+2.2
	2.6nm,0.8s						
GCMT	**Greycliff**	12.27	71	ePn	Pn	02 44 00.6	+0.9
	1.3nm,0.6s						
PDAR	**Pinedale Array**	12.35	86	Pn	Pn	02 44 02.5	+1.6
	0.1nm,0.3s,baz=290,slow=11,SNR=7.0						
DLBC	**Dease Lake**	15.56	353	Pn	Pn	02 44 51.0	+6.8
	0.1nm,0.3s,baz=156,slow=15,SNR=4.6						
SDCO	**Great Sand Dun**	16.76	101	ePn	Pn	02 45 00.5	+0.7
	4.5nm,1.2s						
ANMO	**Albuquerque**	17.45	111	P	Pn	02 45 07.3	-1.2
	0.1nm,0.3s,baz=316,slow=12,SNR=7.9						
ANMO	**Albuquerque**	17.45	111	eP	Pn	02 45 09.7	+1.1
	2.5nm,0.9s						
FFC	**Flin Flon**	19.73	45	eP	Pn	02 45 34.2	-1.8
	4.7nm,1.1s						
MNTX	**Cornudas Mount**	20.13	117	eP	P	02 45 36.7	-2.3
	0.9nm,0.7s						
YKA	**Yellowknife Ar**	20.66	16	P	P	02 45 44.5	-0.1
	0.8nm,0.8s,baz=205,slow=11,SNR=11						
YKA	**Yellowknife Ar**	20.66	16	P	P	02 45 44.5	-0.1
AMTX	**Amarillo**	20.82	105	eP	P	02 45 44.9	-1.7
	9.6nm,1.0s						
ECSD	**EROS Data Cent**	21.60	78	eP	P	02 45 54.1	-0.7
	1.7nm,0.6s,mb3.6						
AGMN	**Agassiz Refuge**	21.88	66	eP	P	02 45 58.0	+0.2
	2.8nm,0.6s,mb3.9						
ULM	**Lac du Bonnet**	22.03	60	P	P	02 45 58.6	-0.8
	1.5nm,0.6s,mb3.6,baz=239,slow=5.9,SNR=4.2						
KDAK	**Kodiak Island**	22.06	321	P	P	02 46 05.9	+6.3
	11nm,1.0s,mb4.2,baz=112,slow=5.4,SNR=3.4						
DAWY	**Dawson**	22.32	345	eP	P	02 46 03.5	+1.1
TXAR	**Lajitas Array**	22.80	119	P	P	02 46 09.7	+1.9
	0.5nm,0.7s,mb3.0,baz=320,slow=8.3,SNR=2.3						
WMOK	**Wichita Mounta**	22.96	102	eP	P	02 46 10.6	+1.1
	2.0nm,0.8s,mb3.6						
FCC	**Fort Churchill**	25.38	41	eP	P	02 46 32.5	+0.5
	0.2nm,1.4s						

*IDC **04** 02:51:10.1±1.0, 43°.15N×126°.29W, h0km, mb3.9/16, mb1 4.1/20, mb1mx4.1/29, mbtmp4.0/20, ML3.8/4, MS4.2/26, Ms1 4.2/26, ms1mx4.0/41, Error ellipse: s-maj=27.0km s-min=8.8km az=40.0*

*ISCJB **04** 02:51:11.4±0.3, 43°.23N±0°.02×126°.29W±0°.03, h10km, mb4.4/54, MS4.2/23, Error ellipse: s-maj=4.0km s-min=2.9km az=139.8*

*NEIC **04** 02:51:12.3±0.3, 43°.16N×126°.37W, h10km, mb4.6/50, Error ellipse: s-maj=5.2km s-min=3.2km az=222.0*

*GCMT **04** 02:51:12.3±0.2, 42°.99N×126°.65W, h12km, MWS.1/88, Moment Tensor Solution. s42,c52; s88,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10±.10; $M_{\theta\theta}$-2.62±.10; $M_{\phi\phi}$3.72±.09; $M_{r\theta}$-2.44±.28; $M_{\theta\phi}$-3.09±.09; $M_{\phi r}$1.04±.27; Best double couple: $M_0$5.21800×10^{16} NP1:ϕ_s21.00000°, δ57.00000°, λ-9.00000°. NP2: ϕ_s116.00000°, δ82.00000°, λ-147.00000°. Principal axes: T 5.5420, Plg17.0000°, Azm244.0000°; N -0.6490, Plg56.0000°, Azm128.0000°; P -4.8930, Plg28.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **04** 02:51:14.1, 43°.90N×126°.83W, h10km, mB5.1/7, mb4.9/12, Ms5.0/6, Ms7 4.7/6*

ISC 04 02:51:12.9±0.3, 43°.24N±0°.02×126°.40W±0°.04, h10km, (h13km±1.2km:pP-P), n198, σ1§18/192, mb4.4/54, MS4.2/23, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	1.56	103	P	Pn	02 51 36.0	-4.7
RNO	**Roman Nose**	2.05	70	P	Pn	02 51 45.1	-2.4
DBO	**Dodson Butte**	2.31	92	P	Pn	02 51 47.8	-3.3
MPOR	**Mary's Peak**	2.42	57	P	Pn	02 51 50.9	-1.7
EUO	**Eugene**	2.55	71	P	Pn	02 51 52.6	-1.7
HUMO	**Hull Mountain**	2.61	103	ePn	Pn	02 51 51.2	-3.8
HUMO				eSn	Sn	02 52 22.7	-4.1
COR	**Corvallis**	2.62	58	ePn	Pn	02 51 53.9	-1.3
COR				eSn	Sn	02 52 25.2	-1.8
HEBO	**Mount Hebo**	2.75	43	ePn	Pn	02 51 56.0	-0.9
HEBO				eSn	Sn	02 52 31.3	+1.1
BBOR	**Butler Butte**	2.75	96	P	Pn	02 51 54.3	-2.8
KHMM	**Horse Mountain**	3.09	139	ePn	Pn	02 51 58.6	-3.1
IRO	**Indian Ridge**	3.11	74	P	Pn	02 52 00.4	-1.6
YBH	**Yreka Blue Hor**	3.12	118	Pn	Pn	02 51 59.1	-3.0
	7.6nm,0.3s,baz=292,slow=12,SNR=96						
YBH				Sn	Sn	02 52 35.4	-3.9
	5.2nm,0.3s,baz=175,slow=12,SNR=9.2						
YBH	**Yreka Blue Hor**	3.12	118	ePn	Pn	02 51 58.8	-3.3
BUOR	**Burton Butte**	3.21	106	P	Pn	02 52 01.4	-1.9
FRIS	**Frissel Point**	3.27	71	P	Pn	02 52 03.0	-1.2
HUOR	**Husband**	3.42	73	P	Pn	02 52 05.1	-1.2
WDC	**Whiskeytown Da**	3.92	131	ePn	Pn	02 52 11.3	-1.8
HOOD	**Mount Hood Mea**	4.00	57	ePn	Pn	02 52 14.3	+0.1
NLWA	**Neilton Lookou**	4.52	22	ePn	Pn	02 52 28.8	+1.4
NLWA				eSn	Sn	02 53 14.0	0.0
MOD	**Modoc**	4.70	104	ePn	Pn	02 52 22.1	-1.7
LON	**Longmire**	4.79	41	ePn	Pn	02 52 25.6	+0.5
LON				eSn	Sn	02 53 26.7	+6.1
GNW	**Green Mountain**	5.01	29	ePn	Pn	02 52 27.4	-0.6
	13nm,0.5s						
WVOR	**Wild Horse Val**	5.77	95	ePn	Pn	02 52 35.9	-2.6
	33nm,0.9s						
RSW	**Rattlesnake Hi**	5.78	55	ePn	Pn	02 52 38.4	-0.3
PGC	**Sidney**	5.79	20	ePn	Pn	02 52 39.0	+0.2
PGC				eSn	Sn	02 53 43.3	-2.0
HAWA	**Hanford**	5.82	55	ePn	Pn	02 52 39.1	-0.1
JCW	**Jim Creek**	5.86	31	ePn	Pn	02 52 40.1	+0.3
JCW				eSn	Sn	02 53 48.0	+1.0
ETW	**Entiat**	6.11	42	ePn	Pn	02 52 44.1	+0.9
ETW				eSn	Sn	02 53 57.9	+4.8
RPW	**Rockport**	6.23	32	ePn	Pn	02 52 45.2	+0.4
RPW				eSn	Sn	02 53 55.0	-1.1
PAHR	**Pah Rah Range**	6.34	121	ePn	Pn	02 52 48.3	+1.9
LNOR	**Lincton Mounta**	6.37	63	ePn	Pn	02 52 45.7	-1.0
BMO	**Blue Mountains**	6.75	73	ePn	Pn	02 52 51.1	-0.9
OD2	**Odessa Site #2**	6.83	50	ePn	Pn	02 52 53.0	-0.1
CMB	**Columbia Colle**	6.92	137	ePn	Pn	02 52 55.7	+1.4
WAKR	**Walker**	7.08	130	ePn	Pn	02 52 55.9	-0.7
NVAR	**Mina Array Bea**	7.79	125	Pn	Pn	02 53 06.1	-0.2
	0.3nm,0.3s,baz=294,slow=14,SNR=16						
NEW	**Newport**	8.21	49	ePn	Pn	02 53 12.2	+0.2
HLID	**Hailey**	8.74	84	ePn	Pn	02 53 19.6	+0.3
N12A	**Clover Valley,**	8.79	102	ePn	Pn	02 53 21.1	+1.1
BBB	**Bella Bella**	9.03	353	Pn	Pn	02 53 25.7	+2.5
	1.1nm,0.3s,baz=180,slow=12,SNR=7.6						
BBB				LR	LR	02 56 17.2	
	comp=Z,2μm,20.1s,baz=183,slow=34						
M13A	**Montello**	9.26	98	ePn	Pn	02 53 27.0	+0.6
BSMT	**Bassoo Peak**	9.36	56	ePn	Pn	02 53 28.6	+0.8
N13A	**Wendover, West**	9.38	101	ePn	Pn	02 53 29.1	+1.0
MSO	**Missoula**	9.53	64	ePn	Pn	02 53 29.9	-0.1
JTMT	**Jette**	9.63	58	ePn	Pn	02 53 31.8	+0.3
SWMT	**Swartz Lake**	9.72	60	ePn	Pn	02 53 32.0	-0.6
ISA	**Isabella**	9.73	138	ePn	Pn	02 53 33.7	+0.8
YBMT	**Yellow Bay**	9.85	58	ePn	Pn	02 53 34.7	+0.3
MCMT	**McKenzie Canyo**	9.89	76	ePn	Pn	02 53 35.5	+0.4
	8.9nm,0.8s						
SLMT	**Seeley Lake**	9.95	62	ePn	Pn	02 53 35.4	-0.4
CHMT	**Chamberlain Mo**	10.00	64	ePn	Pn	02 53 36.2	-0.3
DLMT	**Dillon**	10.13	73	ePn	Pn	02 53 38.8	+0.5
BGU	**Big Grassy Mou**	10.21	99	ePn	Pn	02 53 39.3	-0.1
	35nm,1.4s						
LRM	**Limekiln Ridge**	10.29	71	ePn	Pn	02 53 40.8	+0.2
WALA	**Waterton Lakes**	10.44	52	ePn	Pn	02 53 43.1	+0.6
SPUT	**South Promonto**	10.52	96	ePn	Pn	02 53 44.2	+0.5
DUG	**Dugway**	10.60	102	ePn	Pn	02 53 44.9	0.0
BOZ	**Bozeman (W)**	10.84	72	ePn	Pn	02 53 47.9	-0.1
GSC	**Goldstone**	10.86	134	ePn	Pn	02 53 51.5	+3.1
HRY	**Holter Researc**	10.89	66	ePn	Pn	02 53 48.5	-0.3
QLMT	**Earthquake Lak**	10.90	76	ePn	Pn	02 53 50.0	+1.1
SHPR	**Sheep Range**	10.94	124	ePn	Pn	02 53 51.0	+1.5
RRI2	**Red Ridge**	11.00	84	ePn	Pn	02 53 52.2	+1.9
DCID1	**Drake Creek**	11.08	83	ePn	Pn	02 53 53.2	+1.9
HWUT	**Hardware Ranch**	11.09	93	ePn	Pn	02 53 52.1	+0.6
NLU	**North Lily Min**	11.22	102	ePn	Pn	02 53 53.1	-0.2
AHID	**Auburn Hatcher**	11.22	87	ePn	Pn	02 53 55.3	+2.1
IMW	**Indian Meadow**	11.24	81	ePn	Pn	02 53 55.2	+1.6
TPAW	**Teton Pass**	11.26	83	ePn	Pn	02 53 55.4	+1.6
ARUT	**Antelope Range**	11.26	115	ePn	Pn	02 53 54.1	+0.3
	14nm,0.7s						
YFT	**Old Faithful**	11.31	78	ePn	Pn	02 53 57.7	+3.2
REDW	**Red Top Meadow**	11.34	84	ePn	Pn	02 53 56.9	+2.0
SNOW	**Snow King Moun**	11.40	83	ePn	Pn	02 53 58.0	+2.2
YNR	**Norris Junctio**	11.43	77	ePn	Pn	02 53 58.7	+2.6
CCUT	**Cedar City**	11.45	115	ePn	Pn	02 53 57.9	+1.5
JLU	**Jordanelle**	11.45	98	ePn	Pn	02 53 57.2	+0.8
LOHW	**Long Hollow**	11.50	83	ePn	Pn	02 53 59.0	+2.0
LKWY	**Lake**	11.63	78	ePn	Pn	02 54 01.7	+2.9
DAU	**Daniels Canyon**	11.65	99	ePn	Pn	02 53 59.8	+0.6
MSU	**Marysvale**	11.76	109	ePn	Pn	02 54 01.5	+0.9
LDFC	**Landfair**	11.96	129	ePn	Pn	02 54 05.1	+1.7
TMUT	**Trail Mountain**	12.09	104	ePn	Pn	02 54 06.7	+1.5
GCMT	**Greycliff**	12.22	72	ePn	Pn	02 54 06.8	-0.1
	14nm,0.8s						
BW06	**Boulder Array**	12.35	86	ePn	Pn	02 54 09.7	+1.0
PDAR	**Pinedale Array**	12.35	86	Pn	Pn	02 54 09.2	+0.6
	0.1nm,0.3s,baz=286,slow=12,SNR=48						
PDAR				LR	LR	02 59 20.0	
	comp=Z,3μm,18.7s,baz=278,slow=40						
RLMT	**Red Lodge**	12.45	75	ePn	Pn	02 54 10.8	+0.7
EGMT	**Eagleton**	12.59	62	ePn	Pn	02 54 11.4	-0.6
SRU	**San Rafael**	12.65	104	ePn	Pn	02 54 13.6	+0.8
EDM	**Edmonton**	13.23	36	ePn	Pn	02 54 20.8	+0.2
WUAZ	**Wupatki**	13.94	119	ePn	Pn	02 54 31.7	+1.3
LAO	**LASA Array**	14.69	69	ePn	Pn	02 54 38.9	-1.7
	18nm,0.8s						
MVCO	**Mesa Verde**	14.93	108	ePn	Pn	02 54 42.9	-1.1
SMCO	**Snowmass**	15.17	99	ePn	Pn	02 54 48.5	+1.3
	7.0nm,0.9s						
DLBC	**Dease Lake**	15.39	353	Pn	Pn	02 54 57.6	+7.7
	0.3nm,0.3s,baz=180,slow=11,SNR=34						
DLBC				LR	LR	03 00 07.9	
	comp=Z,838nm,19.8s,baz=169,slow=35						
DLBC	**Dease Lake**	15.39	353	ePn	Pn	02 54 58.2	+8.3
PHWY	**Pilot Hill**	15.62	90	ePn	Pn	02 54 50.1	-2.9
	6.2nm,1.0s						
ISCO	**Idaho Springs**	15.94	95	ePn	Pn	02 54 55.3	-1.9
	14nm,0.9s						
RSSD	**Black Hills**	16.20	79	ePn	Pn	02 54 57.2	-3.4
	7.4nm,1.0s						
DGMT	**Dagmar**	16.31	64	eP	Pn	02 55 04.8	+2.8
	102nm,1.1s						
TUC	**Tucson**	16.45	126	ePn	Pn	02 55 03.8	+0.1
	18nm,1.4s						
SDCO	**Great Sand Dun**	16.80	102	ePn	Pn	02 55 07.6	-0.6
	28nm,1.1s						
SKAG	**Skagway**	17.15	344	ePn	Pn	02 55 16.2	+3.8
	143nm,2.2s						
LAZ	**Ladron**	17.38	114	eP	Pn	02 55 15.1	-0.4
	4.2nm,1.1s						
ANMO	**Albuquerque**	17.52	111	P	Pn	02 55 16.5	-0.7
	0.2nm,0.3s,baz=312,slow=12,SNR=38						
ANMO				LR	LR	03 01 31.0	
	comp=Z,433nm,21.4s,baz=128,slow=36						
ANMO	**Albuquerque**	17.52	111	eP	Pn	02 55 16.5	-0.7
	16nm,1.0s						
LPM	**Los Pinos Moun**	17.77	113	ePn	Pn	02 55 20.8	+0.4
BNM	**Barren Site**	17.87	114	eP	Pn	02 55 21.9	+0.3
	22nm,1.1s						
OGNE	**Ogallala**	18.22	89	eP	Pn	02 55 26.9	+1.1
	26nm,0.8s						
FFC	**Flin Flon**	19.61	46	eP	Pn	02 55 40.5	-2.1
	48nm,1.0s						
MNTX	**Cornudas Mount**	20.21	118	eP	P	02 55 48.0	+0.1
	4.9nm,1.0s						
YKA	**Yellowknife Ar**	20.50	16	P	P	02 55 51.3	+0.6
	2.6nm,0.6s,baz=206,slow=11,SNR=42						
YKA				LR	LR	03 03 35.6	
	comp=Z,35nm,21.4s,baz=330,slow=36						
CBKS	**Cedar Bluff**	20.56	93	eP	P	02 55 52.0	+0.3
	42nm,0.8s						
GDL2	**Guadalupe Moun**	20.56	115	eP	P	02 55 52.5	+0.9
AMTX	**Amarillo**	20.88	105	eP	P	02 55 55.8	+0.7
	39nm,0.9s						
ECSD	**EROS Data Cent**	21.57	78	eP	P	02 56 02.0	-0.5
	25nm,0.9s,mb4.6						
AGMN	**Agassiz Refuge**	21.82	66	eP	P	02 56 05.1	0.0
	40nm,0.9s,mb4.8						
KDAK	**Kodiak Island**	21.92	321	P	P	02 56 06.4	+0.3
	17nm,0.9s,mb4.5,baz=100,slow=2.4,SNR=4.0						
KDAK				LR	LR	03 02 25.9	
	comp=Z,1μm,20.8s,MS4.3,baz=110,slow=31						
ULM	**Lac du Bonnet**	21.96	61	P	P	02 56 05.8	-0.8
	19nm,1.0s,mb4.5,baz=272,slow=10,SNR=24						
ULM				LR	LR	03 04 37.1	
	comp=Z,860nm,20.3s,MS4.2,baz=254,slow=37						
DAWY	**Dawson**	22.16	345	eP	P	02 56 09.3	+0.7
MENT	**Mentasta**	22.17	339	eP	P	02 56 10.9	+2.2
KSU1	**Kansas State U**	22.75	90	eP	P	02 56 15.1	0.0
	60nm,1.1s,mb4.9						
TXAR	**Lajitas Array**	22.89	120	P	P	02 56 14.3	-2.4
	3.8nm,0.8s,mb3.9,baz=299,slow=7.2,SNR=14						
TXAR				LR	LR	03 04 33.8	
	comp=Z,276nm,19.6s,MS3.7,baz=185,slow=35						
WMOK	**Wichita Mounta**	23.01	102	eP	P	02 56 17.0	-0.8
	24nm,0.9s,mb4.6						
EGAK	**Eagle**	23.14	344	eP	P	02 56 21.1	+2.1
	35nm,1.7s,mb4.5						
MCK	**McKinley**	24.27	335	eP	P	02 56 30.7	+0.9
	12nm,1.0s,mb4.3						
SCIA	**State Center**	24.39	82	eP	P	02 56 31.7	+0.5
	26nm,0.9s,mb4.7						
JCT	**Junction City**	24.68	112	eP	P	02 56 32.5	-1.4
	10nm,1.1s,mb4.3						
EYMN	**Ely**	24.74	67	eP	P	02 56 35.3	+0.9
	120nm,1.8s,mb5.1						
COLA	**College**	24.82	338	eP	P	02 56 35.1	+0.2
	2.4nm,0.7s,mb3.8						
BPAW	**Bear Paw Mtn.**	25.17	335	eP	P	02 56 38.3	+0.3
	16nm,1.2s,mb4.4						
FCC	**Fort Churchill**	25.26	41	eP	P	02 56 39.8	+0.9
	1.1nm,1.0s,mb3.3						
INK	**Inuvik**	25.41	354	P	P	02 56 39.9	-0.4
	4.8nm,1.0s,mb4.0,baz=165,slow=11,SNR=11						
INK				LR	LR	03 06 24.0	
	comp=Z,933nm,20.4s,MS4.3,baz=160,slow=36						
INK	**Inuvik**	25.41	354	eP	P	02 56 40.2	0.0
	32nm,1.7s,mb4.6						
CHUM	**Lake Minchumin**	25.45	333	eP	P	02 56 40.6	0.0
	13nm,1.2s,mb4.3						
TTA	**Tatalina**	26.15	329	eP	P	02 56 47.5	+0.5
	14nm,1.2s,mb4.4						
MIAR	**Mount Ida**	26.85	98	eP	P	02 56 53.3	-0.2
	9.3nm,0.9s,mb4.3						
CCM	**Cathedral Cave**	27.04	89	eP	P	02 56 54.5	-0.7
	99nm,2.1s,mb5.0						
NATX	**Nacogdoches**	27.51	104	eP	P	02 56 59.1	-0.3
	23nm,0.9s,mb4.8						
HDIL	**Hopedale**	27.61	83	eP	P	02 57 00.4	+0.1
	17nm,0.8s,mb4.7						
FVM	**French Village**	27.67	89	eP	P	02 57 03.2	+2.4
	11nm,0.8s,mb4.5						
SIUC	**Southern Illin**	28.65	88	eP	P	02 57 08.4	-1.3
	10nm,0.7s,mb4.7						
OXF	**Oxford**	29.89	94	eP	P	02 57 20.5	-0.2
	57nm,1.4s,mb5.1						
BLO	**Bloomington**	30.08	84	eP	P	02 57 20.2	-2.0
	19nm,0.8s,mb4.9						
WVT	**Waverly**	30.32	90	eP	P	02 57 23.6	-0.8
	6.5nm,0.8s,mb4.4						
PLAL	**Pickwick Lake**	30.65	93	eP	P	02 57 26.6	-0.8
	6.5nm,0.8s,mb4.5						
ACSO	**Alum Creek Sta**	32.27	80	eP	P	02 57 41.2	-0.4
	67nm,1.9s,mb5.2						
LRAL	**Lakeview Retre**	32.36	95	eP	P	02 57 40.3	-2.1
	9.0nm,1.1s,mb4.5						
CPCT	**Cooper Cave**	33.03	89	eP	P	02 57 47.2	-1.1
RES	**Resolute Bay**	34.55	14	eP	P	02 58 02.5	+1.4
	3.4nm,0.9s,mb4.3						
GOGA	**Godfrey**	34.75	92	eP	P	02 58 02.0	-1.2
	9.9nm,0.8s,mb4.8						
JSC	**Jenkinsville**	35.95	89	eP	P	02 58 12.6	-1.0
SCHQ	**Schefferville**	39.57	52	P	P	02 58 43.2	-0.7
	1.6nm,0.8s,mb3.8,baz=261,slow=5.7,SNR=3.8						
SCHQ				LR	LR	03 15 27.3	
	comp=Z,950nm,18.7s,MS4.7,baz=275,slow=37						
SCHQ	**Schefferville**	39.57	52	P	P	02 58 43.2	-0.7
SCHQ				LR	LR	03 15 27.3	
BILL	**Bilibino**	42.41	329	eP	P	02 59 06.9	-0.2
	4.3nm,1.0s,mb4.0						
SUMG	**Summit**	48.80	24	eP	P	02 59 58.9	+1.3
	5.0nm,0.8s,mb4.6						
PETK	**Petropavlovsk-**	49.31	310	P	P	03 00 00.6	-1.2
	3.7nm,0.7s

BVAR Borovoye Array 83.03 350 P P 03 03 37.8 -0.4
comp=Z,13nm,0.7s,mb4.1,baz=29,slow=3.4,SNR=7.3
BVAR LR LR 03 41 47.2
comp=Z,196nm,21.8s,MS4.4,slow=36
KURK Kurchatov 83.92 344 *e*P **P 03 03 42.1 -0.6**
comp=Z,2.6nm,0.9s,mb4.4
AKASG Malin Array Be 84.06 15 P P 03 03 42.6 -0.9
comp=Z,0.9nm,0.6s,mb4.0,baz=339,slow=4.3,SNR=3.7
AKASG LR LR 03 41 48.7
comp=Z,143nm,21.3s,MS4.3,baz=350,slow=36
NJ2 Nanjing 84.22 309 *e*P **P 03 03 46.4 +1.7**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.4
MKAR Makanchi Array 86.82 341 P P 03 03 55.8 -1.5
comp=Z,0.2nm,0.5s,mb3.6,baz=354,slow=2.9,SNR=2.7
MKAR LR LR 03 42 20.7
comp=Z,180nm,21.2s,MS4.5,baz=9.5,slow=35
ABKAR Akbulak array 87.72 356 *e*P **P 03 04 01.6 0.0**
comp=Z,0.7nm,0.4s,mb4.2
WMQ Urumqi 88.12 336 *e*P **P 03 04 05.7 +2.1**
MLR Muntele Rosu 88.30 19 LR LR 03 44 11.8
comp=Z,171nm,19.5s,MS4.5,baz=307,slow=36
LZH Lanzhou 88.76 321 *e*P **P 03 04 05.7 -1.1**
LZH pP pP 03 04 09.5 -0.6
LZH sP sP 03 04 11.0 -0.3
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.2
DZM Mont Dzumac 89.53 239 *e*LR LR 03 32 36.4
comp=Z,404nm,21.7s
KEST Kesra 91.67 35 LR LR 03 42 28.8
comp=Z,75nm,21.9s,MS4.1,baz=250,slow=34
VAE Valguarnera 92.13 30 LR LR 03 47 09.2
comp=Z,158nm,18.9s,MS4.5,baz=123,slow=36
GYA Guiyang 95.23 314 P **P 03 04 36.5 -0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
BRTR Keskin Array B 95.47 15 LR LR 03 50 56.7
comp=Z,95nm,19.9s,MS4.3,baz=134,slow=38
KMI Kunming 98.35 316 P **P 03 04 51.8 +0.7**
KMI pP pP 03 04 55.0 +0.6
KMI sP sP 03 04 56.4 +0.8
KMI pmax pmax
comp=Z,7.0nm,0.6s,mb5.4
KMI LR LR
comp=N,260nm,15.4s,MS4.8
KMI LR LR
comp=E,140nm,18.1s,MS4.8
KMI LR LR
comp=Z,190nm,16.7s,MS4.7
LSZ Lusaka 144.67 46 *e*PKPdf PKPdf 03 10 48.8 -1.3
LBTB Lobatse 150.75 61 *e*PKPbc PKPbc 03 11 04.2 -1.3

NEIC ***04*** *02:57:55.9±4.0, 22°.80N×121°.79E, h10km, Error ellipse: s-maj=40.5km s-min=14.1km az=146.0*
ISCJB ***04*** *02:57:56.8±0.7, 22°.83N±0°.02×121°.74E±0°.03, h8km±3km, Error ellipse: s-maj=4.9km s-min=3.2km az=8.8*
TAP ***04*** *02:57:58.7, 22°.83N×121°.68E, h18km, ML3.5, C*
ISC 04 02:57:57.0±0.6, 22°.83N±0°.02×121°.73E±0°.03, h7km±4km, n41, σ0°85/75, 8C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.43**	**309**	⇑*i*P	**Pg**	**02 58 06.5**	**+1.1**
CHKT	baz=323			*i* S	**Sg**	**02 58 11.9**	**+0.9**
TTN	**Taitung**	**0.54**	**262**	P	**Pg**	**02 58 08.6**	**+1.1**
TTN	baz=261			*e*S	**Sg**	**02 58 16.2**	**+1.7**
TWG	**Pinlang**	**0.61**	**269**	*e*Pg	**Pg**	**02 58 08.8**	**+0.2**
TWG				*e*Sg	**Sg**	**02 58 15.6**	**-1.0**
TWG	**Pinlang**	**0.61**	**269**	*i* P	**Pg**	**02 58 09.3**	**+0.7**
TWG	baz=279			*e*S	**Sg**	**02 58 17.3**	**+0.7**
TWF1	**Yuli**	**0.66**	**323**	⇑*i*P	**Pg**	**02 58 10.2**	**+0.6**
TWF1	baz=326			*e*S	**Sg**	**02 58 18.8**	**+0.6**
YULB	**Yu-li**	**0.69**	**325**	*e*Pg	**Pg**	**02 58 10.5**	**+0.2**
YULB				*e*Sg	**Sg**	**02 58 18.2**	**-1.0**
ELDTW	**Lidau**	**0.75**	**299**	P	**Pg**	**02 58 11.3**	**-0.1**
ELDTW	baz=309			*e*S	**Sg**	**02 58 20.7**	**-0.4**
ECL	**Taimali**	**0.75**	**252**	*e*P	**Pg**	**02 58 11.6**	**+0.2**
ECL	baz=251			*e*S	**Sg**	**02 58 20.9**	**-0.3**
EHY	**Hungye**	**0.77**	**331**	*i* P	**Pg**	**02 58 12.2**	**+0.3**
EHY	baz=334			S	**Sg**	**02 58 22.1**	**+0.2**
LAY	**Lan-yu**	**0.80**	**192**	⇓*i*P	**Pg**	**02 58 12.2**	**-0.2**
LAY	baz=188			*e*S	**Sg**	**02 58 23.0**	**+0.1**
TAW	**Tawu**	**0.90**	**239**	*e*P	**Pg**	**02 58 13.9**	**-0.4**
TAW	baz=250			*e*S	**Sg**	**02 58 24.6**	**-1.4**
EAST	**Anshuo**	**0.93**	**242**	P	**Pg**	**02 58 14.5**	**-0.3**
EAST	baz=253			*e*S	**Sg**	**02 58 24.6**	**-2.2**
STYT	**Tauyuan**	**0.95**	**291**	P	**Pg**	**02 58 15.1**	**-0.2**
STYT	baz=291			*e*S	**Sg**	**02 58 26.9**	**-0.9**
YUS	**Yu-Shan**	**0.97**	**313**	⇑*i*P	**Pg**	**02 58 15.8**	**+0.2**
YUS	baz=314			S	**Sg**	**02 58 28.1**	**-0.2**
SSD	**Sandimen**	**1.01**	**266**	⇑P	**Pg**	**02 58 16.0**	**-0.5**
SSD	baz=265			*e*S	**Sg**	**02 58 27.3**	**-2.4**
ESL	**Shilin**	**1.02**	**345**	*e*P	**Pg**	**02 58 16.3**	**-0.2**
ESL	baz=356			*e*S	**Sg**	**02 58 28.3**	**-1.5**
SGST	**Jiashian**	**1.09**	**284**	P	**Pg**	**02 58 18.1**	**+0.3**
SGST	baz=284			*e*S	**Sg**	**02 58 32.4**	**+0.5**
ALS	**Alishan**	**1.09**	**309**	⇑*i*P	**Pg**	**02 58 18.0**	**+0.1**
ALS	baz=310			*e*S	**Sg**	**02 58 32.1**	**0.0**
WTP	**Ta-pu**	**1.11**	**292**	⇑*i*P	**Pg**	**02 58 18.4**	**+0.1**
WTP	baz=293			*e*S	**Sg**	**02 58 33.0**	**+0.3**
TPUB	**Ta-pu**	**1.12**	**295**	*e*Pg	**Pg**	**02 58 18.2**	**-0.3**
TPUB				*e*Sg	**Sg**	**02 58 31.2**	**-1.8**
SCZT	**Fangliau**	**1.12**	**246**	*e*P	**Pg**	**02 58 18.9**	**+0.4**
SCZT	baz=251			*e*S	**Sg**	**02 58 31.9**	**-1.2**
CHN1	**Nanshi**	**1.16**	**288**	⇑P	**Pg**	**02 58 19.7**	**+0.4**
CHN1	baz=288			*e*S	**Sg**	**02 58 35.2**	**+0.8**
CHN4	**Tsaushan**	**1.17**	**297**	⇑*i*P	**Pg**	**02 58 19.6**	**+0.2**
CHN4	baz=306			*e*S	**Sg**	**02 58 36.0**	**+1.4**
TSEB	**Hengchuen, Pin**	**1.20**	**220**	*e*P	**Pb**	**02 58 21.4**	**+1.4**
TSEB	baz=220			*e*S	**Sg**	**02 58 35.2**	**-0.4**
TWM1	**Shoushan**	**1.21**	**270**	*e*P	**Pb**	**02 58 20.9**	**+0.8**
TWK	**Hsinying**	**1.22**	**291**	*e*P	**Pb**	**02 58 20.3**	**-0.1**
TWK	baz=292			*e*S	**Sg**	**02 58 37.0**	**+0.7**
TWK1	**Hengchun**	**1.23**	**224**	*e*P	**Pb**	**02 58 20.4**	**-0.1**
CHN5	**Tsauling**	**1.23**	**309**	*e*P	**Pb**	**02 58 20.8**	**+0.2**
CHN5	baz=310			*e*S	**Sb**	**02 58 36.8**	**0.0**
CHN3	**Shinhua**	**1.28**	**281**	*e*P	**Pn**	**02 58 22.7**	**+1.4**
CHN3	baz=281			*e*S	**Sb**	**02 58 40.8**	**+2.7**
SMLT	**Sun Moon Lake**	**1.30**	**324**	P	**Pn**	**02 58 21.1**	**-0.5**
SMLT	baz=333			*e*S	**Sb**	**02 58 37.5**	**-1.1**
TYC	**Yuchr**	**1.34**	**323**	*e*P	**Pn**	**02 58 21.7**	**-0.3**
TYC	baz=335			*e*S	**Sb**	**02 58 38.8**	**-1.0**
NACB	**Ninganchiao**	**1.34**	**355**	*e*Pn	**Pn**	**02 58 20.5**	**-1.7**
CHY	**Chiayi**	**1.37**	**299**	*e*P	**Pn**	**02 58 23.1**	**+0.6**
CHY	baz=300			*e*S	**Sb**	**02 58 40.9**	**+0.1**
WHF	**Hehuan Shan**	**1.38**	**342**	P	**Pn**	**02 58 21.9**	**-0.7**
WNT	**Mingjian**	**1.42**	**318**	*e*P	**Pn**	**02 58 23.8**	**+0.6**
WNT	baz=319			*e*S	**Sb**	**02 58 42.4**	**+0.3**
TWT	**Tachien**	**1.51**	**340**	*e*P	**Pn**	**02 58 24.4**	**0.0**
TCU	**Taichung**	**1.63**	**324**	*e*P	**Pn**	**02 58 26.5**	**+0.4**
NNS	**Nan Shan**	**1.64**	**349**	*e*P	**Pn**	**02 58 26.8**	**+0.6**
TWQ1	**Liyutan**	**1.75**	**330**	*e*P	**Pn**	**02 58 28.8**	**+1.0**
TWQ1	baz=331			*e*S	**Sn**	**02 58 50.5**	**+0.3**
YHNB	**Yeheng**	**1.86**	**350**	*e*Pn	**Pn**	**02 58 29.4**	**+0.1**
YHNB				*e*Pg	**Pg**	**02 58 33.2**	**+0.5**
NSK	**Sanguang**	**1.87**	**350**	*e*P	**Pn**	**02 58 29.0**	**-0.4**
NSK	baz=351			*e*S	**Sn**	**02 58 50.7**	**-2.6**
	baz=351						

IDC ***04*** *03:01:00.6±0.6, 17°.52N×122°.61E, h0km, mb4.2/21, mb1 4.3/23, mb1mx4.3/27, mbtmp4.2/23, ML3.9/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/34, Error ellipse: s-maj=22.8km s-min=12.4km az=75.0*
MOS ***04*** *03:01:04.1±1.4, 17°.49N×122°.54E, h33km, mb4.6/20, MS4.0/4, Error ellipse: s-maj=13.0km s-min=6.9km az=115.2*
NEIC ***04*** *03:01:06.2±1.5, 17°.48N×122°.55E, h38km±14km, mb4.6/20, Error ellipse: s-maj=9.2km s-min=5.9km az=71.0*
BJI ***04*** *03:01:06.2, 17°.75N×122°.68E, h37km, mB4.9/17, mb4.5/22, Ms4.2/18, Ms7 3.9/18*
DJA ***04*** *03:01:26, 17°.66N×121°.81E, h175km, mb4.5/7*
ISC 04 03:01:01.3±1.3, 17°.53N±0°.04×122°.65E±0°.04, h4km±8km, n100, σ1°05/107, mb4.3/53, MS3.8/14, 3C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.51**	**205**	⇓*e*P	**Pg**	**03 01 15.6**	**+4.6**
PALP				*e*S	**Sg**	**03 01 26.8**	**+9.2**
CVP	**Callao Caves**	**0.81**	**283**	⇓*e*P	**Pg**	**03 01 16.1**	**-0.7**
PIP	**Pasuquin**	**2.09**	**293**	⇓*e*P	**Pn**	**03 01 36.8**	**-0.3**
PIP				*e*S	**Sn**	**03 02 03.0**	**-0.6**
BCPH	**Baguio City Da**	**2.28**	**240**	⇓*e*P	**Pn**	**03 01 40.9**	**+1.1**
BCPH				*e*S	**Sn**	**03 02 08.6**	**+0.2**
TGY	**Tagaytay City**	**3.78**	**206**	Pn	**Pn**	**03 02 01.6**	**+1.2**
	30nm,0.3s,baz=125,slow=12,SNR=5.1						
TGY				Sn	**Sn**	**03 02 52.0**	**+6.7**
	39nm,0.3s,baz=319,slow=21,SNR=3.6						
JOW	**Kunigami**	**10.63**	**28**	Pn	**Pn**	**03 03 33.0**	**-1.4**
	1.2nm,0.3s,baz=208,slow=12,SNR=4.5						
JOW				Sn	**Sn**	**03 05 27.9**	**-6.0**
	1.4nm,0.3s,baz=114,slow=20,SNR=3.9						
JOW				LR	LR	03 07 03.3	
	comp=Z,166nm,19.7s,baz=250,slow=34						
JOW	**Kunigami**	**10.63**	**28**	Pn	**Pn**	**03 03 33.0**	**-1.4**
JOW				Sn	**Sn**	**03 05 27.9**	**-6.0**
JOW				LR	LR	03 07 03.3	
QIZ	**Qiongzhong**	**12.26**	**279**	P	**Pn**	**03 04 00.6**	**+3.9**
QIZ				*e*S	**Sn**	**03 06 23.4**	**+9.5**
QIZ				LR	LR		
	comp=N,280nm,13.9s						
QIZ				LR	LR		
	comp=Z,420nm,13.9s						
WHN	**Wuhan**	**15.01**	**331**	P	**Pn**	**03 04 33.9**	**-0.3**
WHN				S	**Sn**	**03 07 25.7**	**+4.7**
WHN				LR	LR		
	comp=N,1μm,20.4s						
WHN				LR	LR		
	comp=E,1μm,17.6s						
WHN				LR	LR		
	comp=Z,550nm,9.8s						
KSM	**Kuching**	**20.04**	**219**	*e*P	**P**	**03 05 35.0**	**-0.5**
	comp=Z,67nm,1.2s						
INCN	**Inchon**	**20.19**	**9**	*e*P	**P**	**03 05 36.5**	**-0.5**
KSRS	**Korea Array**	**20.39**	**12**	P	**P**	**03 05 40.0**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=200,slow=12,SNR=13						
KSRS				LR	LR	03 14 52.6	
	comp=Z,232nm,18.0s,MS3.6,baz=195,slow=41						
CBIJ	**Chichi jima**	**20.41**	**59**	LR	LR	03 12 06.3	
	comp=Z,112nm,18.2s,MS3.3,baz=162,slow=33						
XAN	**Xi'an**	**20.54**	**326**	P	**P**	**03 05 40.9**	**+0.1**
XAN				pP		03 05 49.8	
XAN				S	**S**	**03 09 30.8**	**-0.3**
XAN				LR	LR		
	comp=N,240nm,16.9s,MS3.7						
XAN				LR	LR		
	comp=E,64nm,14.1s,MS3.7						
XAN				LR	LR		
	comp=Z,80nm,17.0s,MS3.1						
CD2	**Chengdu**	**21.73**	**311**	P	**P**	**03 05 54.5**	**+0.7**
CD2				pP		03 06 03.7	
CD2				sP	sP	03 06 07.8	+13
CD2				PP		03 06 23.9	
CD2				S	**S**	**03 09 56.5**	**+1.7**
CD2				pmax	pmax		
	comp=Z,60nm,1.2s,mb4.9						
CD2				pmax	pmax		
	comp=Z,160nm,8.8s						
CD2				LR	LR		
	comp=N,600nm,16.6s						
CD2				LR	LR		
	comp=Z,500nm,13.1s,MS4.1						
GUMO	**Guam**	**21.76**	**97**	LR	LR	03 12 38.7	
	comp=Z,116nm,19.1s,MS3.3,baz=307,slow=32						
CHTO	**Chiang Mai**	**22.56**	**277**	*e*P	**P**	**03 06 02.6**	**0.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
CHTO	**Chiang Mai**	**22.56**	**277**	*e*P	**P**	**03 06 02.6**	**-0.1**
	comp=Z,3.8nm,0.7s,mb3.9						
CMAR	**Chiang Mai Arr**	**22.56**	**276**	P	**P**	**03 06 03.0**	**+0.2**
	comp=Z,1.8nm,0.3s,mb3.9,baz=96,slow=7.7,SNR=5.5						
CMAR				LR	LR	03 16 10.6	
	comp=Z,113nm,18.1s,MS3.3,baz=122,slow=40						
KAPI	**Kappang**	**22.58**	**188**	P	**P**	**03 06 02.4**	**-0.4**
	comp=Z,3.9nm,0.4s,mb4.2,baz=226,slow=8.2,SNR=3.6						
MJAR	**Matsushiro Arr**	**23.41**	**33**	P	**P**	**03 06 14.2**	**+2.7**
	comp=Z,0.6nm,0.6s,mb3.2,baz=231,slow=7.7,SNR=4.0						
KULM	**Kulim**	**24.72**	**243**	*e*P	**P**	**03 06 24.0**	**+0.1**
	comp=Z,5.8nm,0.7s,mb4.2						
LZH	**Lanzhou**	**24.89**	**322**	*e*P	**P**	**03 06 26.5**	**+1.3**
LZH				pP		03 06 36.5	
LZH				sP	sP	03 06 39.6	+13
LZH				pmax	pmax		
	comp=Z,58nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,170nm,4.0s						
LZH				LR	LR		
	comp=N,800nm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,14.6s,MS4.6						
HHC	**Hu-ho-hao-te**	**25.13**	**340**	*e*P	**P**	**03 06 27.0**	**-0.4**
HHC				pP	pP	03 06 36.3	+7.8
HHC				sP	sP	03 06 40.7	+12
HHC				PP		03 07 08.5	
HHC				S	**S**	**03 10 53.1**	**+0.3**
HHC				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=N,500nm,15.2s,MS4.2						
HHC				LR	LR		
	comp=E,370nm,16.1s,MS4.2						
HHC				LR	LR		
	comp=Z,290nm,14.6s,MS3.9						
HHC	**Hu-ho-hao-te**	**25.13**	**340**	PP	pP	03 06 36.5	+8.0
PSI	**Prapat**	**27.50**	**241**	LR	LR	03 18 13.9	
	comp=Z,266nm,18.8s,MS3.8,baz=240,slow=38						
MDJ	**Mudanjiang**	**27.63**	**11**	P	**P**	**03 06 57.0**	**+7.1**
MDJ				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,83nm,3.8s						
GTA	**Gaotai**	**29.48**	**322**	*e*P	**P**	**03 07 08.0**	**+1.5**
GTA				pP	pP	03 07 17.8	+10
GTA				sP	sP	03 07 21.9	+14
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
GTA				pmax	pmax		
	comp=Z,100nm,8.6s						
GTA				LR	LR		
	comp=N,260nm,21.7s,MS3.9						
GTA				LR	LR		
	comp=E,160nm,19.9s,MS3.9						
GTA				LR	LR		
	comp=Z,200nm,19.6s,MS3.8						
KLR	**Kul'dur**	**32.48**	**11**	*e*P	**P**	**03 07 30.2**	**-2.5**
KLR				MLR	MLR		
	comp=Z,500nm,12.5s,MS4.4						
ULN	**Ulaanbaatar**	**32.85**	**341**	*e*P	**P**	**03 07 36.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
ULN	**Ulaanbaatar**	**32.85**	**341**	*e*P	**P**	**03 07 36.5**	**+0.4**
	comp=Z,8.1nm,1.2s,mb4.5						
SONM	**Songino Array**	**33.04**	**340**	P	**P**	**03 07 37.8**	**+0.2**
	comp=Z,0.9nm,0.4s,mb4.0,baz=158,slow=8.5,SNR=7.4						
ZAK	**Zakamensk**	**36.27**	**339**	*e*P	**P**	**03 08 01.5**	**-4.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
TLY	**Talaya**	**37.26**	**340**	*e*P	**P**	**03 08 23.1**	**+9.1**
TLY				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.5						
TLY				MLR	MLR		
	comp=Z,148nm,17.0s,MS3.9						
MBWA	**Marble Bar**	**38.55**	**184**	*e*P	**P**	**03 08 23.9**	**-1.4**
	comp=Z,3.6nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**38.96**	**162**	*e*P	**P**	**03 08 28.1**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**38.96**	**162**	*e*P	**P**	**03 08 28.1**	**-0.5**
	comp=Z,36nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**38.96**	**162**	P	**P**	**03 08 28.1**	**-0.6**
	comp=Z,15nm,1.0s,mb4.7,baz=342,slow=9.2,SNR=36						
WB2	**Warramunga Arr**	**38.97**	**162**	*e*P	**P**	**03 08 28.3**	**-0.4**
BOD	**Bodaibo**	**40.74**	**353**	*e*P	**P**	**03 08 44.6**	**+1.5**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.8						
ASAR	**Alice Springs**	**42.39**	**165**	P	**P**	**03 08 57.0**	**+0.1**
	comp=Z,4.6nm,0.7s,mb4.2,baz=347,slow=7.1,SNR=45						
CTAO	**Charters Tower**	**43.98**	**147**	*e*P	**P**	**03 09 10.4**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
CTAO	**Charters Tower**	**43.98**	**147**	*e*P	**P**	**03 09 10.3**	**+0.4**
	comp=Z,6.1nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**44.19**	**320**	*e*P	**P**	**03 09 11.1**	**-0.3**
MKAR	**Makanchi Array**	**44.19**	**320**	P	**P**	**03 09 11.0**	**-0.4**
	comp=Z,3.3nm,0.4s,mb4.4,baz=116,slow=8.9,SNR=30						
ZALV	**Zalesovo Beam**	**46.62**	**330**	P	**P**	**03 09 28.3**	**-2.2**
	comp=Z,0.7nm,0.4s,mb3.9,baz=120,slow=8.9,SNR=4.2						
TKM2	**Tokmak 2**	**47.11**	**313**	*e*P	**P**	**03 09 35.4**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**47.11**	**313**	*e*P	**P**	**03 09 35.4**	**+0.9**
	comp=Z,2.6nm,0.5s,mb4.4						
UCH	**Uchtor**	**47.67**	**312**	*e*P	**P**	**03 09 39.8**	**+0.9**
UCH				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
UCH	**Uchtor**	**47.67**	**312**	*e*P	**P**	**03 09 39.8**	**+0.8**
	comp=Z,12nm,0.9s,mb4.9						
NVS	**Novosibirsk**	**47.89**	**330**	*e*P	**P**	**03 09 37.8**	**-2.6**
KURK	**Kurchatov**	**48.15**	**324**	⇓*i*P	**P**	**03 09 42.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.6						
KURK				MLR	MLR		
	comp=Z,95nm,16.0s,MS3.9						
KURK	**Kurchatov**	**48.15**	**324**	P	**P**	**03 09 41.8**	**-0.7**
	comp=Z,3.6nm,0.5s,mb4.7,baz=121,slow=7.9,SNR=15						
KURK	**Kurchatov**	**48.15**	**324**	*e*P	**P**	**03 09 41.6**	**-0.8**
	comp=Z,17nm,1.2s,mb5.0						
EKS2	**Erkin-Say**	**48.32**	**312**	*e*P	**P**	**03 09 43.6**	**-0.3**
EKS2				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
EKS2	**Erkin-Say**	**48.32**	**312**	*e*P	**P**	**03 09 43.5**	**-0.4**
	comp=Z,7.0nm,1.0s,mb4.7						
SEY	**Seymchan**	**49.82**	**17**	*i* P	**P**	**03 09 55.7**	**+0.6**
STKA	**Stephens Creek**	**52.37**	**160**	P	**P**	**03 10 13.7**	**-0.9**
	comp=Z,6.0nm,0.9s,mb4.5,baz=343,slow=4.1,SNR=8.5						
BVAR	**Borovoye Array**	**53.75**	**324**	P	**P**	**03 10 24.2**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=80,slow=9.2,SNR=3.7						
BVAR				PcP	PcP	03 11 29.8	-0.8
	comp=Z,1.4nm,0.7s,baz=108,slow=4.7,SNR=2.3						
BRVK	**Borovoye**	**53.82**	**324**	⇓*e*P	**P**	**03 10 24.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BRVK	**Borovoye**	**53.82**	**324**	*e*P	**P**	**03 10 24.6**	**-0.6**
	comp=Z,12nm,1.1s,mb4.8						
BILL	**Bilibino**	**57.51**	**18**	*e*P	**P**	**03 10 51.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BILL	**Bilibino**	**57.51**	**18**	*e*P	**P**	**03 10 51.6**	**+0.2**
	comp=Z,4.9nm,0.8s,mb4.6						
ABKAR	**Akbulak array**	**59.15**	**317**	*e*P	**P**	**03 11 02.5**	**-0.7**
	comp=Z,2.8nm,0.4s,mb4.7						
AKTK	**Aktyubinsk**	**60.56**	**318**	P	**P**	**03 11 12.1**	**-0.8**
AKTO	**Aktyubinsk**	**60.56**	**318**	P	**P**	**03 11 12.1**	**-0.8**
	comp=Z,3.1nm,0.4s,mb4.8,baz=101,slow=11,SNR=8.6						
ARU	**Arti**	**61.28**	**325**	*c i*P	**P**	**03 11 19.6**	**+1.9**
ARU				*e*		03 13 31.9	
ARU				S	**S**	**03 19 40.5**	**+2.1**
ARU				SS	SS	03 23 38.6	+0.2
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
ARU	**Arti**	**61.28**	**325**	*e*P	**P**	**03 11 17.0**	**-0.7**
	comp=Z,3.5nm,0.6s,mb4.7						
GNI	**Garni**	**69.79**	**307**	*e*P	**P**	**03 12 11.5**	**-1.5**
ZEI	**Tsey**	**70.15**	**310**	*e*P	**P**	**03 12 13.1**	**-2.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KIV	**Kislovodsk**	**70.91**	**311**	*e*P	**P**	**03 12 18.6**	**-1.2**
KIV				*e*S	S	03 21 32.8	-3.2
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KIV	**Kislovodsk**	**70.91**	**311**	*e*P	**P**	**03 12 18.5**	**-1.3**
	comp=Z,8.4nm,0.8s,mb4.7						
KLMR	**Klimovskoe**	**71.53**	**329**	*e*P	**P**	**03 12 21.0**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.9						
VORD	**Divnogorie**	**72.44**	**319**	*e*P	**P**	**03 12 29.0**	**+0.1**
VORD				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
VORD				pmax	pmax		
	comp=N,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.6s						
VSR	**Storozhevoye**	**72.50**	**319**	*e*P	**P**	**03 12 29.7**	**+0.5**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,6.0nm,1.0s						
KDAK	**Kodiak Island**	**72.58**	**34**	P	**P**	**03 12 31.4**	**+1.8**
	comp=E,5.5nm,0.7s,mb4.6,baz=297,slow=9.0,SNR=2.6						
BPAW	**Bear Paw Mtn.**	**72.82**	**27**	*e*P	**P**	**03 12 31.8**	**+0.9**
	comp=E,4.6nm,0.8s,mb4.5						
OBN	**Obninsk**	**73.59**	**323**	⇓*e*P	**P**	**03 12 38.0**	**+2.4**
OBN				*e*S	S	03 22 02.9	-3.6
OBN				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
MCK	**McKinley**	**73.75**	**28**	*e*P	**P**	**03 12 37.2**	**+0.8**
MCK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
MCK	**McKinley**	**73.75**	**28**	*e*P	**P**	**03 12 37.2**	**+0.8**
	comp=Z,6.8nm,1.2s,mb4.5						
JOF	**Joensuu**	**75.17**	**332**	*e*P	**P**	**03 12 44.9**	**+0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
JOF	**Joensuu**	**75.17**	**332**	*ep*	**P**	**03 12 44.9**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.1						

ARCES	ARCESS Array B	76.21	339	P	P	03 12 50.0	-0.5
	comp=Z,4.1nm,0.9s,mb4.3,baz=80,slow=6.5,SNR=5.7						
KAF	Kangasniemi	77.61	331	eP	P	03 12 58.8	+0.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KAF	Kangasniemi	77.61	331	ep	P	03 12 58.8	+0.3
	comp=Z,2.1nm,0.7s,mb4.2						
FINES	FINESS Array B	77.88	331	P	P	03 12 59.5	-0.6
	comp=Z,1.2nm,0.4s,mb4.2,baz=67,slow=6.4,SNR=24						
BR131	Keskin Array S	78.27	308	eP	P	03 13 00.9	-1.8
	comp=Z,1.0nm,0.8s,mb3.8						
BRTR	Keskin Array B	78.27	308	P	P	03 13 04.2	+1.6
	comp=Z,0.3nm,0.7s,mb3.3,baz=81,slow=4.5,SNR=2.4						
VSU	Vasula	78.29	328⇑	eP	P	03 13 04.4	+2.0
AKASG	Malin Array Be	78.77	320	P	P	03 13 06.0	+0.9
	comp=Z,0.2nm,0.2s,mb3.6,baz=62,slow=7.8,SNR=4.5						
INK	Inuvik	78.87	22	eP	P	03 13 06.1	+0.7
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	Inuvik	78.87	22	eP	P	03 13 06.1	+0.7
	comp=Z,3.6nm,1.3s,mb4.1						
BUR08	Bucovina Ar. S	82.14	317	eP	P	03 13 22.9	-0.5
NB2	NORSAR Subarra	84.74	333	P	P	03 13 35.1	-1.3
	comp=Z,3.6nm,0.9s,mb4.5,baz=63,slow=5.3						
NOA	NORSAR Array B	84.74	333	P	P	03 13 35.1	-1.3
	comp=Z,2.1nm,0.8s,mb4.3,baz=64,slow=4.9,SNR=7.9						
KMBO	Kilima Mbogo	85.94	268	P	P	03 13 43.5	+0.1
	comp=Z,1.7nm,0.9s,mb4.3,baz=70,slow=5.5,SNR=3.4						
YKA	Yellowknife Ar	88.54	23	P	P	03 13 55.2	+0.2
	comp=Z,0.4nm,0.5s,mb4.0,baz=304,slow=4.2,SNR=12						
YKA	Yellowknife Ar	88.54	23	P	P	03 13 55.2	+0.2
GERES	GERESS Array B	88.85	321	P	P	03 13 57.9	+1.1
	comp=Z,0.3nm,0.6s,mb3.8,baz=72,slow=4.8,SNR=5.0						
SDV	Santo Domingo	150.66	28	ePKPbc	PKPbc	03 20 55.9	+0.2

*ISCJB **04** 03:06:31.7±0.7, 37°.05N±0°.03×72°.00E±0°.07, h135km±9km, mb3.2/5, Error ellipse: s-maj=10.2km s-min=4.7km az=160.5*
*IDC **04** 03:06:31.9±5.7, 37°.06N×71°.79E, h116km±42km, mb3.1/5, mb1 3.3/9, mb1mx3.1/26, mbtmp3.2/9, Error ellipse: s-maj=44.1km s-min=25.1km az=172.0*
*NEIC **04** 03:06:33.9±0.8, 37°.17N×71°.74E, h131km±8km, mb3.8/1, Error ellipse: s-maj=15.4km s-min=8.2km az=127.0*

ISC 04 03:06:32.5±0.7, 37°.03N±0°.03×71°.99E±0°.08, h128km±8km, n41, σ1°14/49, mb3.3/5, 4C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.45	225	ePn	Pn	03 07 26.7	+1.8
KSH	Kashi	4.00	50	Pn	Pn	03 07 30.2	-2.0
KSH				Sn	Sn	03 08 10.9	-7.6
KSH				smax			
	comp=N,440nm,0.3s						
KSH				smax			
	comp=E,230nm,0.2s						
AML	Almayashu	5.27	14	P	Pn	03 07 49.5	+0.5
	SNR=59						
AML	Almayashu	5.27	14	ePn	Pn	03 07 49.3	+0.3
	comp=E,39nm,0.5s						
AML				eSn	Sn	03 08 46.7	-1.9
UCH	Uchtor	5.55	20	P	Pn	03 07 53.8	+1.0
	SNR=12						
UCH	Uchtor	5.55	20	ePn	Pn	03 07 53.5	+0.7
	comp=E,6.0nm,0.4s						
UCH				eSn	Sn	03 08 50.6	-4.9
KZA	Kyzart	5.64	26	P	Pn	03 07 55.2	+1.2
	SNR=5.3						
EKS2	Erkin-Say	5.79	13	P	Pn	03 07 56.9	+0.7
	SNR=9.7						
EKS2	Erkin-Say	5.79	13	ePn	Pn	03 07 56.8	+0.7
	comp=E,5.6nm,0.4s						
AAK	Ala-Archa	5.92	18	P	Pn	03 07 58.8	+0.9
	SNR=7.7						
AAK	Ala-Archa	5.92	18	P	Pn	03 07 58.5	+0.6
	comp=E,0.1nm,0.3s,baz=190,slow=6.4,SNR=34						
AAK				S	Sn	03 09 03.7	-0.8
	comp=E,0.0nm,0.3s,baz=311,slow=22,SNR=14						
ULHL	Ulahol	6.16	31	P	Pn	03 08 03.1	+2.0
KK31	Karatay Array	6.17	350	⇑P	Pn	03 08 00.1	-1.2
	comp=E,3.9nm,0.2s,baz=180,slow=13,SNR=334						
KK31				⇑S	Sn	03 09 03.1	-7.4
	comp=E,5.2nm,0.3s,baz=181,slow=24						
TKM2	Tokmak 2	6.51	24	⇑Pn	Pn	03 08 06.9	+1.1
	comp=E,3.0nm,0.5s						
TKM2				⇑Sn	Sn	03 09 18.1	-0.5
	comp=E,4.0nm,0.8s						
TKM2	Tokmak 2	6.51	24	P	Pn	03 08 07.0	+1.3
	SNR=8.6						
TKM2	Tokmak 2	6.51	24	ePn	Pn	03 08 06.9	+1.2
	comp=E,4.2nm,0.5s						
SDNR	Sundarnagar	6.88	142	eP	Pn	03 08 12.5	+1.6
SDNR				eS	Sn	03 09 26.6	-1.2
KLP	Kalpa	7.54	135	eP	Pn	03 08 21.7	+1.9
KLP				eS	Sn	03 09 42.4	-1.4
KLP				AML	AML	03 09 44.9	
	comp=E,107nm,0.7s						
KLP				AML	AML	03 09 51.4	
	comp=N,82nm,0.8s						
KHET	Khetri	9.49	159	eS	Sn	03 10 23.8	-7.1
AYAN	Aya Nagar	9.55	152	eS	Sn	03 10 29.3	-3.2
SONA	Sohna	9.75	152	eS	Sn	03 10 31.3	-5.8
KOLN	Koldanda	13.46	130	eP	Pn	03 09 38.3	-0.1
	comp=N,12nm,0.3s						
GKN	Gorkha	13.95	127	eP	Pn	03 09 44.6	0.0
	comp=N,23nm,0.3s						
KKN	Kakani	14.51	126	eP	Pn	03 09 50.7	-1.0
PKIN	Phulchoki	14.73	126	eP	Pn	03 09 55.0	+0.5
PKI	Pulchoki	14.74	126	eP	Pn	03 09 54.4	-0.3
	comp=N,17nm,0.6s						
GUN	Gumba	14.82	124	eP	Pn	03 09 55.2	-0.5
	comp=N,14nm,0.5s						
ABKAR	Akbulak array	15.03	328	eP	Pn	03 09 55.2	-2.8
	comp=N,1.9nm,0.4s						
JIRN	Jiri	15.20	124	eP	Pn	03 10 00.5	+0.2
	comp=N,21nm,0.3s						
RAMN	Ramite	15.94	125	eP	Pn	03 10 10.5	+0.9
BVAR	Borovoye Array	16.04	357	P	Pn	03 10 10.3	-0.3
	comp=N,0.1nm,0.3s,baz=167,slow=6.8,SNR=3.1						
TAPN	Taplejung	16.42	121	eP	Pn	03 10 16.0	+0.5
	comp=N,8.1nm,0.4s						
AKTK	Aktyubinsk	16.74	328	P	Pn	03 10 18.5	-0.7
AKTO	Aktyubinsk	16.74	328	P	Pn	03 10 18.5	-0.7
	comp=N,0.4nm,0.3s,baz=131,slow=13,SNR=5.1						
ZALV	Zalesovo Beam	19.11	24	P	P	03 10 45.7	+0.5
	comp=N,0.7nm,0.3s,baz=216,slow=11,SNR=8.0						
ZALV	Zalesovo Beam	19.11	24	P	P	03 10 45.7	+0.5
SONM	Songino Array	27.39	56	P	P	03 12 07.9	+2.2
	comp=N,0.2nm,0.3s,mb3.1,baz=298,slow=6.4,SNR=3.3						
FINES	FINESS Array B	37.49	325	P	P	03 13 33.5	+0.1
	comp=N,1.0nm,0.7s,mb3.9,baz=108,slow=8.9,SNR=3.0						
ARCES	ARCESS Array B	40.96	337	P	P	03 14 02.3	+0.1
	comp=N,0.8nm,0.7s,mb3.6,baz=122,slow=8.6,SNR=3.0						
TORD	Torodi Ar. Bea	66.52	269	P	P	03 17 07.8	-1.1
	comp=N,0.3nm,1.0s,mb3.1,baz=54,slow=5.1,SNR=4.6						
YKA	Yellowknife Ar	80.68	3	P	P	03 18 30.8	0.0
	comp=N,0.1nm,0.5s,mb3.0,baz=351,slow=5.5,SNR=6.3						

TAP 04 03:26:23.9, 22°.90N×121°.65E, h26km, ML2.5, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.33	307	P	Pb	03 26 31.0	-0.4
	baz=311						
CHKT				S	Sb	03 26 36.1	-0.5
	baz=311						
TWG	Pinlang	0.54	262	eP	Pb	03 26 34.5	-0.3
	baz=262						
TWG				eS	Sb	03 26 42.5	+0.2
	baz=262						
TWF1	Yuli	0.56	324	eP	Pb	03 26 34.8	-0.4
	baz=324						
TWF1				eS	Sb	03 26 42.7	-0.1
	baz=324						
ELDTW	Lidau	0.65	296	eP	Pb	03 26 35.9	-0.9
	baz=296						
ELDTW				eS	Sb	03 26 44.2	-1.2
	baz=296						
EHY	Hungye	0.68	333	eP	Pb	03 26 37.5	+0.4
	baz=340						
EHY				eS	Sb	03 26 46.2	0.0
	baz=340						
YUS	Yu-Shan	0.87	312	eP	Pb	03 26 40.8	+0.3
	baz=313						
EAST	Anshuo	0.90	235	eP	Pb	03 26 39.5	-1.5
	baz=236						
WTP	Ta-pu	1.02	290	eP	Pn	03 26 44.0	+1.4
	baz=290						
WTP				eS	Sb	03 26 58.2	+2.4
	baz=290						
CHN1	Nanshi	1.07	286	eP	Pn	03 26 43.7	+0.3
	baz=285						
CHN1				eS	Sn	03 26 59.2	+1.8
	baz=285						
CHN5	Tsauling	1.13	308	eP	Pn	03 26 45.7	+1.5
	baz=307						
CHN5				eS	Sn	03 27 01.6	+2.7
	baz=307						
WHF	Hehuan Shan	1.29	344	eP	Pn	03 26 48.6	+2.3
	baz=344						
WHF				eS	Sn	03 27 03.0	+0.2
	baz=344						

*IDC **04** 03:27:47.1±0.8, 17°.51N×122°.75E, h0km, mb3.7/11, mb1 3.9/12, mb1mx3.8/22, mbtmp3.8/12, ML3.5/1, MS3.6/3, Ms1 3.7/3, ms1mx3.0/31, Error ellipse: s-maj=31.4km s-min=15.4km az=70.0*
*ISCJB **04** 03:27:50.6±0.9, 17°.61N±0°.04×122°.72E±0°.07, h38km±8km, mb3.8/15, MS3.7/4, Error ellipse: s-maj=11.4km s-min=6.0km az=15.2*
*MAN **04** 03:27:50, 17°.65N×122°.41E, h1km, mb4.9, ML3.8, MS3.9*
*NEIC **04** 03:27:53.6±1.0, 17°.63N×122°.86E, h51km±10km, mb4.2/3, Error ellipse: s-maj=15.9km s-min=8.4km az=81.0*

ISC 04 03:27:51.8±1.3, 17°.54N±0°.04×122°.69E±0°.06, h32km±10km, n36, σ0°93/41, mb3.8/15, MS3.7/4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.54	208	eP	Pb	03 28 02.1	-0.7
CVP	Callao Caves	0.84	281	eP	Pn	03 28 02.1	-5.4
CAUP	Cauayan	1.02	235	eP	Pn	03 28 09.3	-0.5
CAUP				eS	Sn	03 28 22.1	-0.9
APYP	Conner	1.42	283	eP	Pn	03 28 15.7	+0.3
ABRA	Dolores	1.89	274	eP	Pn	03 28 20.8	-1.1
BALP	Baler	2.08	211	eP	Pn	03 28 25.2	+0.7
BALP				eS	Sn	03 28 53.3	+4.0
BCPH	Baguio City Da	2.32	241	‖iP	Pn	03 28 37.6	+10
BCPH				iS	Sn	03 28 54.5	-0.8
BOLP	Bolinao	2.90	247	eP	Pn	03 28 36.6	+0.9
BOLP				eS	Sn	03 29 09.6	+0.2
BBP	Basco	2.97	347	eP	Pn	03 28 37.5	+0.8
SCZP	Santa Cruz	3.19	237	eP	Pn	03 28 41.4	+1.7
TGY	Tagaytay City	3.81	207	Pn	Pn	03 28 53.6	+5.4
	49nm,0.3s,baz=343,slow=7.9,SNR=5.3						
TGY				Sn	Sn	03 29 38.4	+6.5
	39nm,0.3s,baz=278,slow=19,SNR=2.1						
YULB	Yu-li	5.97	348	ePn	Pn	03 29 18.2	+0.3
	10.0nm,0.6s						
YULB				eSn	Sn	03 30 22.6	-2.7
TPUB	Ta-pu	6.05	342	ePn	Pn	03 29 19.3	+0.3
	24nm,0.9s						
JOW	Kunigami	10.60	28	Pn	Pn	03 30 20.6	-0.8
	0.8nm,0.3s,baz=215,slow=16,SNR=2.5						
JOW				Sn	Sn	03 32 14.0	-5.0
	0.6nm,0.3s,baz=168,slow=20,SNR=2.3						
JOW	Kunigami	10.60	28	Pn	Pn	03 30 20.6	-0.8
JOW				Sn	Sn	03 32 14.0	-5.0
KSRS	Korea Array	20.37	12	P	P	03 32 26.2	+0.5
	1.0nm,0.7s,baz=198,slow=12,SNR=4.4						
XAN	Xi'an	20.55	326	P	P	03 32 27.8	+0.1
XAN				pP		03 32 41.7	
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GUMO	Guam	21.72	97	LR	LR	03 40 04.7	
	comp=Z,61nm,20.6s,MS3.0,baz=306,slow=34						
CMAR	Chiang Mai Arr	22.60	276	P	P	03 32 50.4	+0.5
	comp=Z,0.7nm,0.4s,mb3.4,baz=96,slow=8.6,SNR=5.3						
MJAR	Matsushiro Arr	23.38	33	P	P	03 33 02.0	+4.1
	comp=Z,0.2nm,0.5s,mb2.8,baz=222,slow=13,SNR=2.7						
LZH	Lanzhou	24.90	322	eP	P	03 33 15.0	+3.1
LZH				pP		03 33 22.5	
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
LZH				pmax	pmax		
	comp=Z,89nm,4.6s						
LZH				LR	LR		
	comp=E,220nm,11.4s						
LZH				LR	LR		
	comp=Z,370nm,13.0s,MS4.1						
SONM	Songino Array	33.04	340	P	P	03 34 24.1	-0.1
	comp=Z,0.5nm,0.6s,mb3.7,baz=142,slow=7.5,SNR=3.6						
WRAB	Tennant Creek	38.96	162	eP	P	03 35 14.2	-0.8
	comp=Z,4.6nm,0.8s,mb4.3						
WRA	Warramunga Arr	38.96	162	P	P	03 35 14.4	-0.7
	comp=Z,5.3nm,0.9s,mb4.3,baz=344,slow=9.3,SNR=15						
ASAR	Alice Springs	42.39	165	P	P	03 35 43.4	0.0
	comp=Z,1.7nm,0.8s,mb3.7,baz=346,slow=6.8,SNR=15						
MK31	Makanchi Array	44.21	320	eP	P	03 35 57.6	-0.2
MKAR	Makanchi Array	44.21	320	P	P	03 35 57.5	-0.4
	comp=Z,0.7nm,0.6s,mb3.5,baz=106,slow=8.9,SNR=5.7						
ZALV	Zalesovo Beam	46.63	330	P	P	03 36 18.9	+2.1
	comp=Z,0.4nm,0.4s,mb3.7,baz=101,slow=7.6,SNR=2.7						
KURK	Kurchatov	48.17	324	eP	P	03 36 28.5	-0.4
	comp=Z,1.1nm,0.7s,mb4.0						
NWAO	Narrogin (SRO)	50.45	186	LR	LR	04 00 46.5	
	comp=Z,173nm,21.0s,MS4.0,baz=232,slow=39						
STKA	Stephens Creek	52.37	160	P	P	03 37 01.1	+0.2
	comp=Z,1.1nm,0.3s,mb4.2,baz=324,slow=14,SNR=2.9						
BVAR	Borovoye Array	53.77	324	P	P	03 37 12.5	+1.5
	comp=Z,0.3nm,0.4s,mb3.5,baz=108,slow=14,SNR=2.1						
ABKAR	Akbulak array	59.17	317	eP	P	03 37 48.6	-0.9
	comp=Z,0.9nm,0.5s,mb4.1						
FINES	FINESS Array B	77.89	331	P	P	03 39 45.5	-0.6
	comp=Z,0.9nm,0.8s,mb3.7,baz=45,slow=7.1,SNR=5.9						
NOA	NORSAR Array B	84.74	333	LR	LR	04 21 55.3	
	comp=Z,36nm,19.8s,MS3.8,baz=200,slow=38						
YKA	Yellowknife Ar	88.52	23	P	P	03 40 40.8	-0.1
	comp=Z,0.1nm,0.6s,mb3.3,baz=304,slow=4.5,SNR=3.1						

IDC 04 03:38:19.8±11.0, 56°.17S×27°.31W, h82km±107km, mb3.7/3, mb1 3.8/3, mb1mx3.6/12, mbtmp3.7/3, Error ellipse: s-maj=59.3km s-min=26.4km az=55.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	Villa Florida	36.84	312	P	P	03 45 19.6	-0.1
	4.2nm,1.1s,baz=135,slow=7.8,SNR=3.4						
MAW	Mawson	40.09	143	P	P	03 45 46.5	-0.1
	1.7nm,0.7s,baz=270,slow=4.0,SNR=3.4						
TORD	Torodi Ar. Bea	73.19	30	P	P	03 49 41.6	+0.1
	0.8nm,0.6s,baz=201,slow=7.2,SNR=11						
YKA	Yellowknife Ar	136.21	318	PKP	PKPdf	03 57 29.9	0.0
	0.3nm,0.6s,baz=124,slow=2.2,SNR=8.7						
ZALV	Zalesovo Beam	142.48	64	PKP	PKPdf	03 57 42.5	+0.8
	0.4nm,0.3s,baz=261,slow=3.8,SNR=2.6						
SONM	Songino Array	150.80	87	PKPbc	PKPbc	03 58 01.1	-0.4
	0.3nm,0.6s,baz=214,slow=1.9,SNR=2.2						

*ISCJB **04** 03:38:26.6±0.3, 67°.12N±0°.02×20°.69E±0°.05, h0km, Error ellipse: s-maj=3.1km s-min=2.6km az=169.2*
*UPP **04** 03:38:28.2, 67°.18N×20°.66E, h0km, ML2.8, Suspected Mining explosion.*
*CSEM **04** 03:38:28.4±0.1, 67°.19N×20°.66E, h2km, ML2.8, Error ellipse: s-maj=3.2km s-min=2.5km az=91.0, Suspected Mining explosion.*
*NAO **04** 03:38:28.5±0.8, 67°.13N×20°.97E, ML2.4*
*IDC **04** 03:38:28.9±0.7, 67°.18N×21°.09E, h0km, mb1 3.5/5, mb1mx3.2/26, mbtmp3.5/5, ML3.2/5, Error ellipse: s-maj=13.2km s-min=5.6km az=113.0*
*HEL **04** 03:38:29.0±0.1, 67°.18N×20°.71E, h1km, ML2.4*
*BER **04** 03:38:30.6±3.7, 67°.13N×20°.69E, h0km, ML2.2, ML2.4(NAO), Suspected explosion*

ISC 04 03:38:28.3±0.3, 67°.17N±0°.02×20°.75E±0°.05, h0km, n67, σ1°02/106, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.56	58	P	Pg	03 38 39.6	+0.5
MASU				S	Sg	03 38 47.3	+0.8
ERTU	Ertsjaerv	0.84	137	P	Pg	03 38 44.4	+0.1
SALU	Saltoluokta	0.90	285	P	Pg	03 38 44.6	-0.9
PAJU	Pajala	0.93	98	P	Pg	03 38 46.3	+0.1
NIKU	Nikkaluokta	0.97	318	P	Pg	03 38 45.7	-1.1
LANU	Lannavaara	1.01	27	eP	Pg	03 38 46.9	-0.7
LANU				eS	Sg	03 38 59.4	-1.2
LANU	Lannavaara	1.01	27	P	Pg	03 38 46.9	-0.7
LANU				S	Sg	03 38 59.4	-1.2
HEF	Hetta	1.67	40	eP	Pn	03 38 58.3	-0.4
HEF				eS	Sn	03 39 19.9	-0.9
HEF	Hetta	1.67	40	P	Pn	03 38 58.3	-0.4
HEF				S	Sn	03 39 19.8	-1.0
KALU	Kalix	1.68	140	P	Pn	03 38 59.3	+0.5
SJUU	Sjulsmark	1.70	168	P	Pn	03 38 59.5	+0.3
KIF	Kilpisjarvi	1.85	1	eP	Pn	03 39 01.7	+0.5
KIF				eS	Sn	03 39 26.5	+1.2
KIF				MSG		03 39 30.2	
	comp=Z,45nm,0.2s						
KIF	Kilpisjarvi	1.85	1	P	Pn	03 39 01.7	+0.5
KIF				S	Sn	03 39 26.5	+1.2
	comp=Z,45nm,0.2s						
KTK1	Kautokeino	2.08	26	eP	Pn	03 39 05.6	+1.3
KTK1				eSg	Sg	03 39 33.1	-1.9
KTK1	Kautokeino	2.08	26	eP	Pn	03 39 05.6	+1.2
	SNR=50						
KTK1				eSg	Sg	03 39 33.1	-1.9
	comp=Z,28nm,0.3s,SNR=90						
RNF	Rovaniemi	2.15	103	eP	Pn	03 39 06.6	+1.3
RNF				eS	Sn	03 39 32.9	+0.2
RNF				MSG		03 39 39.8	
	comp=Z,23nm,0.2s						
RNF	Rovaniemi	2.15	103	P	Pn	03 39 06.6	+1.2
RNF				S	Sn	03 39 32.8	+0.1
	comp=Z,23nm,0.2s						
STEI	Steigen	2.25	292	eP	Pn	03 39 08.7	+1.9
STEI				eSg	Sg	03 39 38.9	-1.7
STEI				AML	AML	03 39 40.1	
	comp=Z,28nm,0.3s						
SGF	Sodankyl	2.26	80	eP	Pn	03 39 07.7	+0.9
SGF				eS	Sn	03 39 36.2	+0.9
SGF				MSG		03 39 40.3	
	comp=Z,33nm,0.2s						
SGF	Sodankyl	2.26	80	P	Pn	03 39 07.7	+0.9
SGF				S	Sn	03 39 36.1	+0.8
	comp=Z,33nm,0.2s						
TRO	Tromso	2.57	346	eP	Pn	03 39 11.6	+0.5
TRO				eS	Sn	03 39 44.8	+1.8
TRO	Tromso	2.57	346	eP	Pn	03 39 11.6	+0.5
	SNR=50						
TRO				eS	Sn	03 39 44.8	+1.8
	SNR=50						
MOR8	Moi Rena	2.70	251	eSg	Sg	03 39 46.5	-8.6
LOF	Lofoten	2.92	293	eSg	Sg	03 40 03.8	+1.7
LOF				AML	AML	03 40 10.8	
	comp=Z,23nm,0.4s						
LOF	Lofoten	2.92	293	eSg	Sg	03 40 03.8	+1.7
	comp=Z,23nm,0.4s,SNR=90						
OUL	Oulu	2.96	133	eP	Pn	03 39 17.6	+1.2
OUL				eS	Sn	03 39 52.5	0.0
OUL				MSG		03 40 02.1	
	comp=Z,6.7nm,0.3s						
OUL	Oulu	2.96	133	P	Pn	03 39 17.6	+1.2
OUL				S	Sn	03 39 52.5	0.0
	comp=Z,6.7nm,0.3s						
ARA0	ARCESS Array S	2.96	34	Pn	Pn	03 39 16.8	+0.3
	baz=217,slow=14						
ARA0				Sn	Sn	03 39 51.5	-1.2
	baz=221,slow=22						
ARA0	ARCESS Array S	2.96	34	Pn	Pn	03 39 16.8	+0.3
	baz=217,slow=13,SNR=50						
ARA0				Sn	Sn	03 39 51.5	-1.2
	baz=221,slow=19,SNR=50						
ARCES	ARCESS Array B	2.96	34	Pn	Pn	03 39 16.7	+0.2
	comp=Z,2.8nm,0.3s,baz=213,slow=13,SNR=171						
ARCES				Sn	Sn	03 39 51.0	-1.7
	comp=Z,2.1nm,0.3s,baz=214,slow=22,SNR=5.0						
ARCES				Lg		03 39 58.8	
	comp=Z,5.2nm,0.3s,baz=222,slow=34,SNR=14						
VRF	Varrio	3.46	76	eP	Pn	03 39 23.8	+0.4
VRF				eS	Sn	03 40 04.9	-0.1
VRF				MSG		03 40 16.7	
	comp=Z,9.1nm,0.3s						
VRF	Varrio	3.46	76	P	Pn	03 39 23.7	+0.3
VRF				S	Sn	03 40 04.8	-0.2
	comp=Z,9.1nm,0.3s						
KEV	Kevo	3.48	39	eP	Pn	03 39 23.9	+0.3
KEV				eS	Sn	03 40 04.7	-0.6
KEV				MSG		03 40 19.5	
	comp=Z,12nm,0.3s						
KEV	Kevo	3.48	39	P	Pn	03 39 23.9	+0.3
KEV				S	Sn	03 40 04.7	-0.7
	comp=Z,12nm,0.3s						
KU6	Riekki	3.82	103	eP	Pn	03 39 29.2	+0.9
KU6				eS	Sn	03 40 14.0	+0.2
KU6				MSG		03 40 33.5	
	comp=Z,4.4nm,0.2s						
KU6	Riekki	3.82	103	P	Pn	03 39 29.2	+0.9
KU6				S	Sn	03 40 14.0	+0.2
	comp=Z,4.4nm,0.2s						
VAF	Ylistaro	4.22	168	eP	Pn	03 39 35.1	+1.3
VAF				eS	Sn	03 40 22.4	-1.3
VAF				MSG		03 40 44.2	
	comp=Z,7.6nm,0.3s						
VAF	Ylistaro	4.22	168	P	Pn	03 39 35.0	+1.2
VAF				S	Sn	03 40 22.3	-1.3
	comp=Z,7.6nm,0.3s						
KJN	Kajaani	4.23	134	eP	Pn	03 39 34.8	+1.0
KJN				eS	Sn	03 40 22.4	-1.4
KJN				MSG		03 40 45.1	
	comp=Z,6.9nm,0.2s						
KJN	Kajaani	4.23	134	P	Pn	03 39 34.8	+0.9
KJN				S	Sn	03 40 22.4	-1.4
	comp=Z,6.9nm,0.2s						
NSS	Namsos	4.47	238	eSg	Sg	03 40 47.7	-4.2
NSS	Namsos	4.47	238	eSg	Sg	03 40 47.7	-4.2
	SNR=90						
APA0	Apatity Array	4.75	79	Sn	Sn	03 40 36.0	-0.7
APA0				Lg		03 40 51.9	
APA0	Apatity Array	4.75	79	Sn	Sn	03 40 36.0	-0.6
	SNR=50						
SUF	Sumiainen	5.02	150	eP	Pn	03 39 46.0	+1.2
SUF				eS	Sn	03 40 41.6	-1.7
SUF				MSG		03 41 07.3	
	comp=Z,4.2nm,0.2s						
SUF	Sumiainen	5.02	150	P	Pn	03 39 45.9	+1.2
KEF	Keuruu	5.32	159	eP	Pn	03 39 50.1	+1.3
KEF				eS	Sn

HFS Sn **Sn** **03 41 45.0 -4.8**
baz=32,slow=22
HFS Lg 03 42 26.5
baz=30,slow=28
HFS Hagfors 7.72 207 Pn **Pn** **03 40 20.9 -0.9**
comp=Z,0.7nm,0.3s,baz=18,slow=12,SNR=40
HFS Sn **Sn** **03 41 46.4 -3.4**
comp=Z,0.6nm,0.3s,baz=26,slow=21,SNR=6.5
HFS Lg 03 42 30.7
comp=Z,0.4nm,0.3s,baz=25,slow=28,SNR=6.1
HFS Hagfors 7.72 207 Pn **Pn** **03 40 20.9 -0.9**
baz=19,slow=12,SNR=50
SPA0 Spitsbergen Ar 11.14 355 Pn **Pn** **03 41 07.5 -1.1**
baz=175,slow=14
SPA0 Spitsbergen Ar 11.14 355 P **Pn** **03 41 07.5 -1.1**
baz=175,slow=13,SNR=47
SPITS Spitsbergen Ar 11.14 355 Pn **Pn** **03 41 07.5 -1.1**
baz=167,slow=18,SNR=8.9

*IDC **04** 03:41:14.9±0.8, 6°.16S×103°.88E, h0km, mb4.3/19, mb1 4.3/20, mb1mx4.2/27, mbtmp4.3/20, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/25, Error ellipse: s-maj=31.8km s-min=13.0km az=47.0*
*BJI **04** 03:41:19.5, 6°.10S×104°.00E, h47km, mB4.8/2, mb4.9/3*
*NEIC **04** 03:41:21.5±0.3, 6°.13S×103°.99E, mb4.6/14, Error ellipse: s-maj=13.6km s-min=5.8km az=221.0*
*ISCJB **04** 03:41:23.6±0.9, 6°.15S±0°.08×103°.98E±0°.07, h86km±6km, mb4.5/37, Error ellipse: s-maj=16.9km s-min=5.5km az=40.8*
*DJA **04** 03:41:23, 6°.23S×104°.00E, h15km, mb4.9/13*
ISC 04 03:41:24.4±0.9, 6°.16S±0°.08×103°.94E±0°.08, h75km±7km, h49km±1.8km: pP-P, n103, σ0°98/95, mb4.5/37, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.85**	**41**	P	**Pn**	**03 41 38.0**	**-3.3**
KASI	**Kota Agung**	**0.85**	**41**	P	**Pn**	**03 41 39.9**	**-1.4**
LWLI	**Liwa**	**1.15**	**6**	P	**Pn**	**03 41 45.1**	**+0.1**
BLSI	**Bandar Lampung**	**1.52**	**59**	P	**Pn**	**03 41 48.9**	**-1.0**
BLSI	**Bandar Lampung**	**1.52**	**59**	P	**Pn**	**03 41 49.3**	**-0.6**
KLI	**Kotabumi**	**1.58**	**35**	P	Px	03 41 58.0	
KLI	**Kotabumi**	**1.58**	**35**	P	**Pn**	**03 41 50.8**	**+0.1**
MDSI	**Maura Dua**	**1.68**	**8**	P	**Pn**	**03 41 50.3**	**-1.7**
CGJI	**Cibinong**	**1.80**	**104**	P	**Pn**	**03 41 53.0**	**-0.5**
RBSI	**Rajabasa**	**1.82**	**80**	P	**Pn**	**03 41 54.2**	**+0.4**
RBSI	**Rajabasa**	**1.82**	**80**	P	**Pn**	**03 41 53.1**	**-0.7**
MNAI	**Manna**	**2.04**	**331**	P	**Pn**	**03 42 00.1**	**+3.4**
MNAI	**Manna**	**2.04**	**331**	P	**Pn**	**03 41 56.8**	**+0.1**
DBJI	**Dramaga**	**2.82**	**98**	P	**Pn**	**03 42 06.1**	**-1.2**
DBJI	**Dramaga**	**2.82**	**98**	P	**Pn**	**03 42 08.6**	**+1.3**
KSI	**Kapahiang**	**2.83**	**332**	P	**Pn**	**03 42 06.0**	**-1.4**
KSI	**Kapahiang**	**2.83**	**332**	P	**Pn**	**03 42 07.4**	**0.0**
CBJI	**Citeko**	**2.91**	**95**	P	**Pn**	**03 42 09.1**	**+0.7**
CBJI	**Citeko**	**2.91**	**95**	P	**Pn**	**03 42 09.7**	**+1.3**
PPBI	**Pangkal Pinang**	**4.54**	**29**	P	**Pn**	**03 42 31.4**	**+0.7**
PPBI	**Pangkal Pinang**	**4.54**	**29**	P	**Pn**	**03 42 31.6**	**+0.9**
XMIS	**Christmas Isla**	**4.61**	**159**	P	**Pn**	**03 42 20.5**	**-11**
TPI	**Tanjungpandan**	**5.02**	**48**	P	**Pn**	**03 42 40.5**	**+3.3**
TPI	**Tanjungpandan**	**5.02**	**48**	P	**Pn**	**03 42 38.5**	**+1.3**
31nm,0.7s,0.2nm							
SDSI	**Sungai Dareh**	**5.77**	**334**	P	**Pn**	**03 42 53.3**	**+5.8**
PDSI	**Padang**	**6.26**	**326**	P	**Pn**	**03 42 57.7**	**+3.4**
87nm,0.7s,4μm0.9nm							
PDSI	**Padang**	**6.26**	**326**	P	**Pn**	**03 42 58.3**	**+4.0**
70nm,0.8s,4μm0.9nm							
PPI	**Padang Panjang**	**6.68**	**328**	P	Px	03 43 13.1	
0.3nm6μm49nm,0.5s							
UGM	**Wanagama**	**6.76**	**105**	P	**Pn**	**03 43 01.7**	**+0.6**
194nm,1.0s,0.8nm							
UGM	**Wanagama**	**6.76**	**105**	P	**Pn**	**03 43 01.7**	**+0.6**
194nm,1.0s,0.8nm							
PCJI	**Pacitan**	**7.46**	**106**	P	**Pn**	**03 43 09.3**	**-1.3**
SJI	**Sawahan**	**7.93**	**102**	P	**Pn**	**03 43 17.9**	**+0.9**
67nm,0.8s,0.3nm							
SJI	**Sawahan**	**7.93**	**102**	P	**Pn**	**03 43 17.0**	**0.0**
53nm,0.7s,0.3nm							
PWJI	**Pagerwojo**	**8.02**	**104**	P	**Pn**	**03 43 17.6**	**-0.7**
MNSI	**Mandailing Nat**	**8.17**	**328**	P	Px	03 43 38.0	
0.1nm22nm,0.9s							
GRJI	**Gresik**	**8.52**	**95**	P	**Pn**	**03 43 27.2**	**+2.1**
183nm,0.8s							
GMJI	**Gumukmas**	**9.66**	**103**	P	**Pn**	**03 43 41.9**	**+1.2**
27nm,0.7s							
STKI	**Sintang**	**9.74**	**51**	P	Px	03 43 49.0	
ABJI	**Asem Bagus**	**10.35**	**100**	P	**Pn**	**03 43 51.2**	**+1.1**
164nm,0.7s							
SRBI	**Singaraja**	**11.35**	**100**	P	**Pn**	**03 44 03.7**	**0.0**
57nm,0.6s							
KHKI	**Kahang-Kahang**	**11.78**	**101**	P	**Pn**	**03 44 10.1**	**+0.5**
50nm,0.7s							
KHKI	**Kahang-Kahang**	**11.78**	**101**	P	**Pn**	**03 44 08.8**	**-0.8**
39nm,1.2s							
SBUM	**Sibu**	**11.90**	**44**	P	**Pn**	**03 44 15.3**	**+4.1**
6.6nm,0.8s							
KAPI	**Kappang**	**15.78**	**87**	Pn	**Pn**	**03 44 59.8**	**-2.5**
0.4nm,0.3s,baz=256,slow=19,SNR=2.8							
KAPI				LR	LR	03 52 01.6	
comp=Z,134nm,18.7s,baz=98,slow=41							
KAPI	**Kappang**	**15.78**	**87**	Pn	**Pn**	**03 44 59.8**	**-2.5**
KAPI				LR	LR	03 52 01.6	
MYLDM	**Lahad Datu**	**18.39**	**53**	P	**Pn**	**03 45 39.9**	**+5.4**
36nm,0.8s							
MYLDM	**Lahad Datu**	**18.39**	**53**	P	**Pn**	**03 45 38.6**	**+4.1**
32nm,0.7s							
APSI	**Ampana**	**18.43**	**74**	P	**Pn**	**03 45 38.3**	**+3.4**
73nm,1.0s							
APSI	**Ampana**	**18.43**	**74**	P	**Pn**	**03 45 38.0**	**+3.1**
60nm,1.0s							
MRSI	**Marisa**	**19.14**	**70**	P	**Pn**	**03 45 42.3**	**-1.2**
MRSI	**Marisa**	**19.14**	**70**	P	**Pn**	**03 45 41.8**	**-1.7**
FITZ	**Fitzroy Crossi**	**24.27**	**121**	P	**P**	**03 46 35.5**	**+0.7**
2.9nm,1.1s,mb3.5,baz=285,slow=16,SNR=4.0							
CMAR	**Chiang Mai Arr**	**24.96**	**349**	P	**P**	**03 46 39.9**	**-1.1**
6.5nm,0.8s,mb4.1,baz=182,slow=9.3,SNR=28							
CMAR				LR	LR	03 58 00.1	
comp=Z,124nm,18.4s,baz=195,slow=40							
WRA	**Warramunga Arr**	**32.55**	**118**	P	**P**	**03 47 47.7**	**-0.9**
3.0nm,0.7s,mb4.2,baz=288,slow=11,SNR=19							
WRAB	**Tennant Creek**	**32.55**	**118**	*eP*	**P**	**03 47 47.6**	**-1.0**
5.9nm,0.9s,mb4.4							
ASAR	**Alice Springs**	**33.66**	**124**	P	**P**	**03 47 57.7**	**-0.6**
1.3nm,0.7s,mb3.9,baz=307,slow=7.7,SNR=19							
PKI	**Pulchoki**	**38.02**	**333**	*eP*	**P**	**03 48 35.6**	**+0.1**
9.8nm,0.5s,mb4.9							
GUN	**Gumba**	**38.10**	**334**	*eP*	**P**	**03 48 36.7**	**+0.6**
42nm,0.6s,mb5.5							
KKN	**Kakani**	**38.27**	**333**	*eP*	**P**	**03 48 37.6**	**+0.1**
19nm,0.5s,mb5.2							
GKN	**Gorkha**	**38.74**	**332**	*eP*	**P**	**03 48 41.7**	**+0.2**
10nm,0.4s,mb5.0							
KOLN	**Koldanda**	**39.04**	**331**	*eP*	**P**	**03 48 44.3**	**+0.3**
24nm,0.6s,mb5.2							
COEN	**Coen**	**39.36**	**104**	*eP*	**P**	**03 48 45.9**	**-0.9**
64nm,0.9s,mb5.5							
NDI	**New Delhi**	**43.16**	**325**	*eP*	**P**	**03 49 16.0**	**-1.8**
STKA	**Stephens Creek**	**43.47**	**131**	P	**P**	**03 49 20.4**	**0.0**
2.8nm,0.7s,mb4.1,baz=300,slow=9.2,SNR=12							
BJT	**Baijiatuan**	**47.32**	**13**	*eP*	**P**	**03 49 49.7**	**-0.8**
19nm,0.5s,mb5.1							
KSRS	**Korea Array**	**48.83**	**25**	P	**P**	**03 50 02.9**	**+0.7**
5.9nm,0.6s,mb4.7,baz=221,slow=7.6,SNR=22							
MJAR	**Matsushiro Arr**	**53.24**	**34**	P	**P**	**03 50 34.2**	**-1.1**
1.4nm,0.5s,mb4.3,baz=210,slow=8.4,SNR=9.4							
MJAR	**Matsushiro Arr**	**53.24**	**34**	P	**P**	**03 50 34.2**	**-1.1**
SONM	**Songino Array**	**53.81**	**2**	P	**P**	**03 50 40.4**	**+1.1**
9.2nm,0.7s,mb4.9,baz=180,slow=9.0,SNR=83							
SONM				LR	LR	04 17 35.7	
comp=Z,126nm,19.1s,baz=206,slow=40							
ULN	**Ulaanbaatar**	**53.87**	**3**	*eP*	**P**	**03 50 40.4**	**+0.7**
4.8nm,0.8s,mb4.6							
UCH	**Uchtor**	**55.12**	**334**	*eP*	**P**	**03 50 49.5**	**+0.5**
7.5nm,1.4s,mb4.5							
UCH				*ep*P	pP	03 51 03.3	-4.7
TKM2	**Tokmak 2**	**55.22**	**335**	*eP*	**P**	**03 50 49.9**	**+0.3**
5.8nm,0.7s,mb4.7							
TKM2				*ep*P	pP	03 51 03.9	-4.7
AML	**Almayashu**	**55.41**	**333**	*eP*	**P**	**03 50 51.4**	**+0.4**
4.0nm,0.7s,mb4.6							
AML				*ep*P	pP	03 51 05.6	-4.5
AAK	**Ala-Archa**	**55.46**	**334**	P	**P**	**03 50 51.3**	**-0.1**
1.2nm,0.5s,mb4.2,baz=108,slow=3.2,SNR=3.6							
AAK	**Ala-Archa**	**55.46**	**334**	*eP*	**P**	**03 50 51.5**	**+0.2**
1.8nm,0.6s,mb4.3							
EKS2	**Erkin-Say**	**55.80**	**333**	*eP*	**P**	**03 50 54.1**	**+0.3**
5.4nm,0.8s,mb4.6							
MK31	**Makanchi Array**	**56.12**	**342**	*eP*	**P**	**03 50 56.0**	**+0.1**
MKAR	**Makanchi Array**	**56.12**	**342**	P	**P**	**03 50 55.5**	**-0.4**
3.5nm,0.6s,mb4.6,baz=148,slow=8.1,SNR=25							
KURK	**Kurchatov**	**60.72**	**342**	P	**P**	**03 51 27.3**	**-0.6**
3.0nm,0.7s,mb4.4,baz=157,slow=6.2,SNR=19							
KURK	**Kurchatov**	**60.72**	**342**	*eP*	**P**	**03 51 28.2**	**+0.3**
5.6nm,0.8s,mb4.7							
ASAJ	**Asahikawa**	**60.97**	**31**	P	**P**	**03 51 29.6**	**-0.1**
8.1nm,0.8s,mb4.8,baz=196,slow=7.6,SNR=5.2							
ZALV	**Zalesovo Beam**	**62.01**	**347**	P	**P**	**03 51 36.3**	**-0.3**
5.3nm,0.4s,mb4.9,baz=152,slow=5.3,SNR=19							
ZALV				LR	LR	04 21 36.7	
comp=Z,53nm,20.0s,baz=49,slow=39							
BVAR	**Borovoye Array**	**65.45**	**338**	P	**P**	**03 51 58.8**	**-0.4**
2.9nm,0.6s,mb4.3,baz=144,slow=9.4,SNR=18							
BVAR	**Borovoye Array**	**65.45**	**338**	P	**P**	**03 51 58.8**	**-0.4**
BRVK	**Borovoye**	**65.51**	**338**	*eP*	**P**	**03 51 58.9**	**-0.8**
3.1nm,0.6s,mb4.3							
ABKAR	**Akbulak array**	**67.16**	**330**	*eP*	**P**	**03 52 09.9**	**-0.3**
5.8nm,0.8s,mb4.5							
ABKAR				*ep*P	pP	03 52 21.9	-8.0
AKTK	**Aktyubinsk**	**68.88**	**330**	P	**P**	**03 52 20.8**	**-0.2**
AKTO	**Aktyubinsk**	**68.88**	**330**	P	**P**	**03 52 20.8**	**-0.2**
0.9nm,0.5s,mb3.8,baz=90,slow=17,SNR=4.1							
LSZ	**Lusaka**	**74.68**	**256**	*eP*	**P**	**03 52 56.2**	**-0.4**
1.6nm,0.7s,mb3.9							
BR131	**Keskin Array S**	**79.01**	**312**	*eP*	**P**	**03 53 21.7**	**+1.3**
0.9nm,0.6s,mb3.8							
BR131				*ep*P	pP	03 53 34.6	-6.0
BRTR	**Keskin Array B**	**79.01**	**312**	P	**P**	**03 53 20.6**	**+0.2**
0.4nm,0.6s,mb3.4,baz=116,slow=5.3,SNR=3.5							
MLR	**Muntele Rosu**	**86.00**	**316**	P	**P**	**03 53 57.6**	**+1.0**
0.8nm,0.6s,mb3.8,baz=135,slow=13,SNR=2.7							
MLR	**Muntele Rosu**	**86.00**	**316**	P	**P**	**03 53 57.6**	**+1.0**
BUR08	**Bucovina Ar. S**	**86.98**	**318**	*eP*	**P**	**03 54 03.3**	**+1.9**
BUR08				*ep*P	pP	03 54 17.4	-4.3
JOF	**Joensuu**	**87.65**	**334**	*ep*	**P**	**03 54 02.8**	**-1.4**
0.7nm,0.5s,mb4.0							
FINES	**FINESS Array B**	**89.60**	**332**	P	**P**	**03 54 14.0**	**+0.5**
0.6nm,0.6s,mb3.9,baz=100,slow=5.8,SNR=9.6							
FINES	**FINESS Array B**	**89.60**	**332**	P	**P**	**03 54 14.0**	**+0.5**
KAF	**Kangasniemi**	**89.66**	**333**	*ep*	**P**	**03 54 13.4**	**-0.3**
1.0nm,0.6s,mb4.1							
ARCES	**ARCESS Array B**	**91.70**	**340**	P	**P**	**03 54 25.1**	**+2.0**
1.3nm,0.9s,mb4.2,baz=104,slow=7.5,SNR=2.5							
WMOK	**Wichita Mounta**	**144.67**	**33**	*e*PKPdf	PKPdf	04 00 52.2	-0.8
TXAR	**Lajitas Array**	**145.22**	**45**	PKPbc	PKPbc	04 00 55.3	+1.4
2.6nm,0.5s,baz=284,slow=1.0,SNR=45							
JCT	**Junction City**	**147.10**	**40**	*e*PKPbc	PKPbc	04 01 00.3	+0.8
WVT	**Waverly**	**148.28**	**18**	*e*PKPbc	PKPbc	04 01 02.5	0.0

*NEIC **04** 04:06:09.3±3.9, 33°.41N×138°.28E, h274km±21km, mb3.5/1, Error ellipse: s-maj=72.0km s-min=43.3km az=192.0*
*JMA **04** 04:06:10.5±0.3, 33°.65N×138°.30E, h288km±3km, M3.0*
*ISCJB **04** 04:06:11.0±0.7, 33°.78N±0°.08×138°.33E±0°.09, h287km±4km, mb3.5/5, Error ellipse: s-maj=14.6km s-min=9.4km az=144.6*
*IDC **04** 04:06:11.8±1.6, 33°.68N×138°.30E, h285km±15km, mb3.2/5, mb1 3.3/6, mb1mx2.9/27, mbtmp3.1/6, Error ellipse: s-maj=57.2km s-min=32.9km az=53.0*
ISC 04 04:06:11.8±0.7, 33°.76N±0°.08×138°.32E±0°.09, h282km±4km, n28, σ0°89/36, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**0.61**	**271**	*e*S	**S**	**04 07 17.6**	**-0.2**
TK04	**Tokai 4**	**0.72**	**329**	*e*S	**S**	**04 07 19.5**	**+1.1**
JHJ	**Hachijo jima 2**	**1.38**	**117**	P	**Pn**	**04 06 52.9**	**+0.5**
12nm,0.3s,baz=252,slow=20,SNR=2.8							
JHJ				S	**S**	**04 07 29.4**	**+4.9**
5.5nm,0.3s,baz=237,slow=22,SNR=2.3							
JOD2	**Odawara 2**	**1.63**	**23**	P	**Pn**	**04 06 54.7**	**+0.7**
JOD2				*e*S	**S**	**04 07 28.7**	**+1.2**
JYN	**Shimob**	**1.74**	**6**	P	**Pn**	**04 06 56.2**	**+1.4**
JWZ	**Kozaga**	**2.19**	**265**	P	**Pn**	**04 06 57.3**	**-1.2**
JHU	**Hanno**	**2.23**	**20**	P	**Pn**	**04 06 59.4**	**+0.6**
JHU				S	**S**	**04 07 34.5**	**-1.8**
JRY	**Ryogami san**	**2.30**	**12**	P	**Pn**	**04 07 00.9**	**+1.4**
JRY				S	**S**	**04 07 37.7**	**+0.3**
JWY	**Kouya**	**2.31**	**282**	P	**Pn**	**04 06 59.3**	**-0.3**
JGM	**Miyama**	**2.34**	**326**	P	**Pn**	**04 07 00.1**	**+0.2**
BSO1	**Boso 1**	**2.37**	**67**	P	**Pn**	**04 06 59.3**	**-0.9**
BSO1				S	**S**	**04 07 37.4**	**-1.2**
MJAR	**Matsushiro Arr**	**2.78**	**358**	P	**Pn**	**04 07 04.6**	**+0.6**
1.1nm,0.3s,baz=180,slow=9.9,SNR=20							
MAJO	**Matsushiro**	**2.78**	**358**	*e*Pn	**Pn**	**04 07 04.6**	**+0.6**
MAT	**Matsushiro**	**2.78**	**358**	P	**Pn**	**04 07 04.4**	**+0.4**
MAT				*e*S	**S**	**04 07 44.4**	**-1.1**
MAT	**Matsushiro**	**2.78**	**358**	P	**Pn**	**04 07 04.8**	**+0.8**
MAT				S	**S**	**04 07 44.7**	**-0.8**
JAG	**Ashikaga**	**2.81**	**19**	P	**Pn**	**04 07 04.6**	**+0.3**
JAG				*e*S	**S**	**04 07 42.6**	**-3.6**
JWT	**Wachi**	**2.85**	**303**	P	**Pn**	**04 07 04.2**	**-0.5**
JAI	**Aioi**	**3.23**	**272**	P	**Pn**	**04 07 07.4**	**-1.2**
JFK	**Kawauchi**	**4.16**	**29**	P	**Pn**	**04 07 18.4**	**-0.3**
JFK				S	**S**	**04 08 08.7**	**-3.6**
MKAR	**Makanchi Array**	**43.80**	**305**	P	**P**	**04 13 50.0**	**0.0**
0.9nm,0.6s,mb3.2,baz=96,slow=8.9,SNR=8.1							
KURK	**Kurchatov**	**46.04**	**310**	P	**P**	**04 14 07.7**	**+0.2**
0.6nm,0.3s,mb3.4,baz=96,slow=11,SNR=8.7							
KURK	**Kurchatov**	**46.04**	**310**	*eP*	**P**	**04 14 06.8**	**-0.7**
0.9nm,0.4s,mb3.5							
ARCES	**ARCESS Array B**	**66.16**	**339**	P	**P**	**04 16 29.3**	**+0.4**
1.5nm,0.8s,mb3.8,baz=66,slow=16,SNR=4.3							
ARCES	**ARCESS Array B**	**66.16**	**339**	P	**P**	**04 16 29.3**	**+0.4**
FINES	**FINESS Array B**	**70.52**	**332**	P	**P**	**04 16 55.9**	**+0.1**
0.5nm,0.3s,mb3.6,baz=50,slow=6.5,SNR=18							
FINES	**FINESS Array B**	**70.52**	**332**	P	**P**	**04 16 55.9**	**+0.1**
GERES	**GERESS Array B**	**84.11**	**327**	P	**P**	**04 18 10.9**	**-0.2**
0.3nm,0.6s,mb3.3,baz=18,slow=4.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**117.70**	**311**	PKP	PKPdf	04 24 24.2	-0.9
0.1nm,0.5s,baz=1.2,slow=2.7,SNR=3.4							

DJA 04 04:12:22, 8°.11S×106°.79E, h23km, MLv3.7/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.52**	**33**	P	Pn	04 12 48.4	+0.7
DBJI	**Dramaga**	**1.55**	**359**	P	Pn	04 12 47.9	-0.3
CGJI	**Cibinong**	**1.84**	**324**	P	Pn	04 12 51.0	-1.2
RBSI	**Rajabasa**	**2.48**	**335**	P	Pn	04 13 02.6	+1.6
XMIS	**Christmas Isla**	**2.61**	**205**	P	Pn	04 13 03.9	+1.1
PCJI	**Pacitan**	**4.34**	**91**	P	Pn	04 13 27.2	+0.5
MDSI	**Maura Dua**	**4.44**	**324**	P	Pn	04 13 29.4	+1.4
PWJI	**Pagerwojo**	**4.97**	**89**	P	Pn	04 13 35.6	+0.4

*FUNV **04** 04:41:53.9, 6°.70N×73°.16W, h171km, MW3.6*
*ISCJB **04** 04:41:54.5±0.6, 6°.86N±0°.06×72°.90W±0°.06, h179km±7km, mb3.5/9, Error ellipse: s-maj=12.3km s-min=7.3km az=44.4*
*IDC **04** 04:41:54.8±1.2, 6°.77N×72°.94W, h167km±14km, mb3.2/5, mb1 3.4/7, mb1mx3.2/21, mbtmp3.3/7, Error ellipse: s-maj=31.9km s-min=13.7km az=127.0*
*NEIC **04** 04:41:55.0±0.9, 6°.86N×73°.14W, h161km±9km, mb3.5/4, Error ellipse: s-maj=17.6km s-min=12.2km az=123.0*
ISC 04 04:41:55.4±0.6, 6°.86N±0°.06×72°.92W±0°.07, h169km±7km, n31, σ1°00/42, mb3.5/9, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**31**	⇑*i*P	**Pn**	**04 42 24.0**	**+0.6**
ROSC	**El Rosal**	**2.44**	**215**	P	**Pn**	**04 42 35.5**	**-1.3**
61nm,0.3s,baz=307,slow=4.6,SNR=179							
ROSC				S	**Sn**	**04 43 02.7**	**-6.1**
28nm,0.3s,baz=98,slow=11,SNR=9.3							
SOCV	**Socops**	**2.49**	**55**	*e*P	**Pn**	**04 42 38.7**	**+1.3**
SOCV				*e*S	**Sn**	**04 43 10.4**	**+0.6**
VIGV	**El Vigia**	**2.50**	**38**	*e*P	**Pn**	**04 42 38.4**	**+0.9**
VIGV				*e*S	**Sn**	**04 43 11.8**	**+1.6**
SDV	**Santo Domingo**	**3.03**	**48**	P	**Pn**	**04 42 45.3**	**+1.4**
6.5nm,0.3s,baz=246,slow=7.5,SNR=60							
SDV				S	**Sn**	**04 43 22.9**	**+1.2**
28nm,0.3s,baz=291,slow=19,SNR=33							
SDV	**Santo Domingo**	**3.03**	**48**	P	**Pn**	**04 42 45.3**	**+1.3**
SDV				S	**Sn**	**04 43 22.9**	**+1.2**
VIRV	**Villa del Rosa**	**3.65**	**8**	*e*P	**Pn**	**04 42 50.8**	**-1.1**
VIRV				*e*S	**Sn**	**04 43 33.7**	**-2.1**
QARV	**Quebrada Arrib**	**4.08**	**35**	⇑*i*P	**Pn**	**04 42 58.3**	**+1.0**
QARV				*e*S	**Sn**	**04 43 45.0**	**-0.6**
SANV	**Sanarito**	**4.26**	**52**	*e*P	**Pn**	**04 43 00.3**	**+0.8**
SANV				*e*S	**Sn**	**04 43 49.1**	**-0.5**
CURV	**Curarigua**	**4.29**	**43**	*e*P	**Pn**	**04 43 00.7**	**+0.7**
CURV				*e*S	**Sn**	**04 43 49.5**	**-0.8**
DABV	**Dabajuro**	**4.62**	**29**	*e*P	**Pn**	**04 43 04.7**	**+0.4**
DABV				*e*S	**Sn**	**04 43 56.7**	**-1.5**
TEPV	**Terepaima**	**4.81**	**50**	*e*P	**Pn**	**04 43 07.5**	**+0.8**
TEPV				*e*S	**Sn**	**04 44 01.9**	**-0.5**
SIQV	**Siquisique**	**4.86**	**39**	*e*P	**Pn**	**04 43 07.7**	**+0.3**
SIQV				*e*S	**Sn**	**04 44 03.0**	**-0.7**
BAUV	**El Baul**	**5.26**	**67**	*e*P	**Pn**	**04 43 12.2**	**-0.4**
BAUV				*e*S	**Sn**	**04 44 11.0**	**-2.0**
CAOV	**Caicara del Or**	**6.57**	**86**	*e*P	**Pn**	**04 43 29.3**	**-0.5**
CAOV				*e*S	**Sn**	**04 44 40.1**	**-3.9**
BCIP	**Isla Barro Col**	**7.22**	**289**	*e*Pn	**Pn**	**04 43 33.3**	**-5.2**
OTAV	**Otavalo**	**8.59**	**220**	*e*Pn	**Pn**	**04 43 55.7**	**-0.8**
JTS	**JuntasAbangare**	**12.37**	**287**	P	**Pn**	**04 44 51.3**	**+5.2**
0.6nm,0.3s,baz=8.8,slow=24,SNR=5.3							
JTS	**JuntasAbangare**	**12.37**	**287**	*e*Pn	**Pn**	**04 44 51.0**	**+4.9**
TXAR	**Lajitas Array**	**36.58**	**311**	P	**P**	**04 48 45.1**	**-0.2**
0.4nm,0.6s,mb3.2,baz=121,slow=8.9,SNR=4.7							
MNTX	**Cornudas Mount**	**39.09**	**313**	*e*P	**P**	**04 49 06.3**	**0.0**
0.6nm,0.7s,mb3.3							
SDCO	**Great Sand Dun**	**42.64**	**321**	*e*P	**P**	**04 49 36.5**	**+1.2**
0.5nm,0.7s,mb3.2							
ULM	**Lac du Bonnet**	**47.31**	**340**	P	**P**	**04 50 11.4**	**-0.5**
0.8nm,0.4s,mb3.7,baz=126,slow=8.7,SNR=3.1							
SCHQ	**Schefferville**	**48.08**	**5**	P	**P**	**04 50 18.8**	**+1.0**
1.5nm,0.9s,mb3.6,baz=160,slow=8.0,SNR=3.6							
PDAR	**Pinedale Array**	**48.16**	**324**	P	**P**	**04 50 19.2**	**+0.6**
0.4nm,0.7s,mb3.1,baz=92,slow=5.4,SNR=2.8							
DUG	**Dugway**	**48.71**	**319**	*e*P	**P**	**04 50 20.9**	**-2.0**
1.2nm,0.8s,mb3.6							
SNOW	**Snow King Moun**	**49.28**	**324**	*e*P	**P**	**04 50 27.7**	**+0.6**
1.6nm,0.7s,mb3.8							
YKA	**Yellowknife Ar**	**63.29**	**340**	P	**P**	**04 52 06.0**	**+0.1**
0.4nm,0.6s,mb3.5,baz=133,slow=6.8,SNR=19							
STKA	**Stephens Creek**	**139.32**	**228**	PKP	PKPdf	05 01 02.9	-0.3
0.8nm,0.7s,baz=170,slow=20,SNR=2.9							
ASAR	**Alice Springs**	**149.29**	**234**	PKPbc	PKPbc	05 01 23.7	-1.4
0.3nm,0.6s,baz=117,slow=3.4,SNR=6.0							
WRA	**Warramunga Arr**	**150.53**	**241**	PKPbc	PKPbc	05 01 27.4	-0.8
0.4nm,0.4s,baz=112,slow=2.2,SNR=2.5							

MEX 04 04:42:40.4±0.6, 15°.42N×96°.79W, h30km±9km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.74**	**62**	*e*P	Pn	04 42 52.4	-2.3
HUIG				*i*S	Sb	04 43 01.9	-2.8
PNIG	**Pinotepa**	**1.61**	**307**	*i*P	Pn	04 43 04.8	-1.9
PNIG				*i*S	Sn	04 43 23.0	-3.5
VHO	**Vista Hermosa**	**1.65**	**2**	*e*P	Pn	04 43 05.5	-1.7
VHO				*i*S	Sn	04 43 25.3	-2.0
TPIG	**Tehuac#an**	**3.04**	**350**	*i*P	Pn	04 43 26.1	-0.2
TPIG				*i*S	Sn	04 44 00.1	-1.6
PCIG		**3.45**	**85**	*i*P	Pn	04 43 31.4	-0.7
PCIG				*i*S	Sn

comp=Z,5.1nm,0.9s,mb4.5
SONM Songino Array 32.94 340 P **P 04 52 49.0 +0.1**
comp=Z,1.5nm,0.4s,mb4.3,baz=157,slow=9.8,SNR=8.8
GUN Gumba 35.27 294 *e*P **P 04 53 09.2 -0.2**
comp=Z,35nm,0.9s,mb5.3
PKI Pulchoki 35.63 293 *e*P **P 04 53 13.8 +1.3**
ZAK Zakamensk 36.18 339 *e*P **P 04 53 16.4 -0.5**
ZAK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
GKN Gorkha 36.37 293 *e*P **P 04 53 19.0 +0.1**
comp=Z,20nm,0.9s,mb5.0
TLY Talaya 37.16 340 *e*P **P 04 53 31.2 +6.0**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,84nm,19.0s,MS3.5
KOLN Koldanda 37.25 293 *e*P **P 04 53 25.3 -1.0**
MBWA Marble Bar 38.64 184 *e*P **P 04 53 35.7 -2.3**
comp=Z,5.6nm,0.7s,mb4.4
WRAB Tennant Creek 39.05 162 *e*P **P 04 53 40.0 -1.5**
WRAB pmax pmax
comp=Z,28nm,1.1s,mb4.9
WRAB Tennant Creek 39.05 162 *e*P **P 04 53 40.0 -1.5**
comp=Z,28nm,1.1s,mb4.9
WRA Warramunga Arr 39.06 162 P **P 04 53 40.2 -1.3**
comp=Z,14nm,0.6s,mb4.8,baz=342,slow=9.2,SNR=55
WB2 Warramunga Arr 39.06 162 *e*P **P 04 53 39.9 -1.6**
ASAR Alice Springs 42.48 165 P **P 04 54 08.8 -1.0**
comp=Z,6.0nm,0.8s,mb4.3,baz=348,slow=7.0,SNR=71
CTAO Charters Tower 44.07 147 *e*P **P 04 54 22.4 -0.2**
CTAO pmax pmax
comp=Z,11nm,1.0s,mb4.5
CTAO Charters Tower 44.07 147 *e*P **P 04 54 22.4 -0.2**
comp=Z,11nm,1.0s,mb4.5
MKAR Makanchi Array 44.10 320 P **P 04 54 23.1 +0.4**
comp=Z,2.3nm,0.4s,mb4.2,baz=121,slow=8.3,SNR=23
PETK Petropavlovsk- 44.73 29 P **P 04 54 29.9 +2.4**
comp=Z,8.6nm,0.9s,mb4.1,baz=162,slow=3.8,SNR=4.3
ZALV Zalesovo Beam 46.52 330 P **P 04 54 40.9 -0.8**
comp=Z,0.6nm,0.5s,mb3.8,baz=116,slow=10,SNR=4.8
TKM2 Tokmak 2 47.02 313 *e*P **P 04 54 47.0 +1.2**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TKM2 Tokmak 2 47.02 313 *e*P **P 04 54 47.0 +1.1**
comp=Z,3.3nm,0.8s,mb4.3
UCH Uchtor 47.59 312 *e*P **P 04 54 51.6 +1.3**
UCH pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
UCH Uchtor 47.59 312 *e*P **P 04 54 51.6 +1.4**
comp=Z,9.3nm,0.8s,mb4.9
AAK Ala-Archa 47.72 312 *i*P **P 04 54 50.6 -0.6**
AAK pmax pmax
comp=Z,20nm,2.0s,mb4.8
AAK MLR MLR
comp=Z,46nm,18.0s,MS3.5
AAK Ala-Archa 47.72 312 LR LR 05 17 41.8
comp=Z,70nm,19.6s,MS3.6,baz=218,slow=40
AAK Ala-Archa 47.72 312 *e*P **P 04 54 50.2 -1.0**
comp=Z,1.9nm,0.8s,mb4.2
KURK Kurchatov 48.06 324⇑ *e*P **P 04 54 53.6 -0.1**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KURK MLR MLR
comp=Z,56nm,17.0s,MS3.6
KURK Kurchatov 48.06 324 P **P 04 54 53.6 -0.1**
comp=Z,4.2nm,0.6s,mb4.7,baz=120,slow=7.9,SNR=34
AML Almayashu 48.15 311 *e*P **P 04 54 55.4 +0.8**
AML pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AML Almayashu 48.15 311 *e*P **P 04 54 55.4 +0.8**
comp=Z,8.2nm,0.9s,mb4.8
EKS2 Erkin-Say 48.23 312 *e*P **P 04 54 56.2 +1.0**
EKS2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
EKS2 Erkin-Say 48.23 312 *e*P **P 04 54 56.2 +1.0**
comp=Z,3.8nm,0.8s,mb4.5
STKA Stephens Creek 52.47 160 P **P 04 55 26.4 -0.9**
comp=Z,5.1nm,0.8s,mb4.5,baz=339,slow=7.2,SNR=9.2
BVAR Borovoye Array 53.66 324 P **P 04 55 36.2 +0.4**
comp=Z,0.7nm,0.5s,mb3.9,baz=101,slow=6.0,SNR=4.1
BRVK Borovoye 53.73 324⇓ *e*P **P 04 55 36.9 +0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BILL Biiibino 57.44 18⇓ *i*P **P 04 56 03.3 +0.5**
BILL *e* 04 58 10.9
BILL *e*S **S 05 03 55.6 -2.4**
BILL pmax pmax
comp=Z,4.0nm,1.7s,mb4.2
BILL Biiibino 57.44 18 *e*P **P 04 56 02.7 0.0**
comp=Z,2.2nm,0.6s,mb4.4
ABKAR Akbulak array 59.06 317 *e*P **P 04 56 14.2 -0.2**
comp=Z,3.1nm,0.4s,mb4.7
ARU Arti 61.19 325 *d i*P **P 04 56 28.4 -0.5**
ARU S **S 05 04 47.7 +0.8**
ARU SS SS 05 08 47.8 +0.9
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
ZEI Tsey 70.07 310 *e*P **P 04 57 25.0 -1.5**
ZEI pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KIV Kislovodsk 70.82 311 *e*P **P 04 57 31.4 +0.3**
KIV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIV Kislovodsk 70.82 311 *e*P **P 04 57 30.9 -0.3**
comp=Z,5.8nm,0.4s,mb4.9
VRHR Novokhopersk 70.88 319 *e*P **P 04 57 30.8 -0.5**
VRHR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VORD Divnogorie 72.36 319 *e*P **P 04 57 39.4 -0.8**
VORD pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
VORD pmax pmax
comp=N,7.0nm,0.8s
VORD pmax pmax
comp=E,7.0nm,0.5s
VSR Storozhevoye 72.41 319 *e*P **P 04 57 39.8 -0.7**
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
BPAW Bear Paw Mtn. 72.75 27 *e*P **P 04 57 43.3 +1.0**
comp=E,2.9nm,0.9s,mb4.2
MCK McKinley 73.69 28 *e*P **P 04 57 48.2 +0.4**
MCK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MCK McKinley 73.69 28 *e*P **P 04 57 48.2 +0.4**
comp=Z,5.7nm,1.0s,mb4.5
JOF Joensuu 75.08 332 *e*P **P 04 57 55.4 -0.5**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 75.08 332 *e*p **P 04 57 55.4 -0.5**
comp=Z,0.9nm,0.4s,mb4.0
KEV Kevo 75.55 339 *e*P **P 04 57 57.2 -1.3**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KEV Kevo 75.55 339 *e*p **P 04 57 57.2 -1.3**
comp=Z,3.9nm,0.7s,mb4.5
ARCES ARCESS Array B 76.11 339 P **P 04 58 01.0 -0.7**
comp=Z,3.8nm,1.0s,mb4.3,baz=78,slow=7.6,SNR=6.0
ARCES ARCESS Array B 76.11 339 P **P 04 58 01.0 -0.7**
KAF Kangasniemi 77.52 331 *e*P **P 04 58 08.3 -1.5**
KAF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KAF Kangasniemi 77.52 331 *e*p **P 04 58 08.3 -1.5**
comp=Z,1.1nm,0.6s,mb4.0
FINES FINESS Array B 77.78 331 P **P 04 58 10.9 -0.3**
comp=Z,1.3nm,0.5s,mb4.1,baz=46,slow=5.3,SNR=18
INK Inuvik 78.80 22 *e*P **P 04 58 17.8 +1.0**
INK pmax pmax
comp=Z,4.0nm,1.3s
INK Inuvik 78.80 22 *e*P **P 04 58 17.8 +1.0**
comp=Z,4.3nm,1.3s,mb4.2
BUR08 Bucovina Ar. S 82.05 317 *e*P **P 04 58 34.0 -0.6**
NB2 NORSAR Subarra 84.64 333 P **P 04 58 47.0 -0.7**
comp=Z,0.8nm,0.7s,mb4.0,baz=67,slow=5.1
NOA NORSAR Array B 84.64 333 P **P 04 58 46.4 -1.3**
comp=Z,1.6nm,0.8s,mb4.2,baz=62,slow=5.1,SNR=6.9
YKA Yellowknife Ar 88.47 23 P **P 04 59 07.1 +0.7**
comp=Z,0.5nm,0.7s,mb3.9,baz=304,slow=4.1,SNR=14
YKA Yellowknife Ar 88.47 23 P **P 04 59 07.1 +0.7**
GERES GERESS Array B 88.76 321 P **P 04 59 07.0 -1.1**
comp=Z,0.1nm,0.3s,mb3.6,baz=94,slow=8.0,SNR=2.6
SDV Santo Domingo 150.59 27 *e*PKPbc PKPbc 05 06 07.0 -0.2

IDC ***04*** *04:48:50.5±0.7, 17°.49N×122°.63E, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/25, mbtmp4.0/14, ML3.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/28, Error ellipse: s-maj=31.1km s-min=15.1km az=70.0*
BJI ***04*** *04:48:54.4, 17°.50N×122°.70E, h21km, mB4.5/4, mb4.1/7*
ISCJB ***04*** *04:48:55.1±0.9, 17°.57N±0°.04×122°.73E±0°.09, h45km±8km, mb4.1/19, Error ellipse: s-maj=14.3km s-min=6.9km az=1.2*
MAN ***04*** *04:48:55, 17°.59N×122°.36E, h8km, mb4.9, ML3.9, MS3.9*
NEIC ***04*** *04:48:56.5±1.3, 17°.52N×122°.71E, h41km±13km, mb4.3/9, Error ellipse: s-maj=10.7km s-min=6.0km az=76.0*
ISC 04 04:48:56.7±0.8, 17°.54N±0°.04×122°.68E±0°.09, h42km±8km, n36, σ0s92/35, mb4.1/19, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.54**	**208**	*e*P	**Pn**	**04 49 07.0**	**-0.9**
PALP				*e*S	**Sn**	**04 49 17.8**	**+1.8**
CVP	**Callao Caves**	**0.84**	**281**	*e*P	**Pn**	**04 49 06.8**	**-5.3**
SGCP	**Mt. Cagua**	**0.93**	**319**	*e*P	**Pn**	**04 49 09.9**	**-3.3**
BALP	**Baler**	**2.08**	**211**	*e*P	**Pn**	**04 49 30.8**	**+1.7**
BALP				*e*S	**Sn**	**04 49 53.1**	**-0.7**
PIP	**Pasuquin**	**2.12**	**292**⇑	*i*P	**Pn**	**04 49 27.5**	**-2.0**
BBP	**Basco**	**2.96**	**347**	*e*P	**Pn**	**04 49 42.0**	**+0.8**
GQP	**Guinayangan**	**3.62**	**184**	*e*P	Px	04 50 00.7	
JOW	**Kunigami**	**10.60**	**28**	Pn	**Pn**	**04 51 25.7**	**-0.2**
	1.4nm,0.3s,baz=117,slow=6.8,SNR=2.7						
KSM	**Kuching**	**20.07**	**219**	*e*P	**P**	**04 53 27.1**	**+0.5**
	34nm,1.3s						
KSRS	**Korea Array**	**20.37**	**12**	P	**P**	**04 53 30.4**	**+0.7**
	1.7nm,0.7s,baz=200,slow=11,SNR=4.8						
GUMO	**Guam**	**21.72**	**97**	LR	LR	05 00 41.6	
	comp=Z,54nm,18.8s,baz=67,slow=33						
CMAR	**Chiang Mai Arr**	**22.60**	**276**	P	**P**	**04 53 54.0**	**+0.2**
	0.7nm,0.3s,mb3.5,baz=101,slow=6.9,SNR=2.8						
ULN	**Ulaanbaatar**	**32.84**	**340**	*e*P	**P**	**04 55 26.9**	**+0.6**
	1.6nm,0.6s,mb4.1						
SONM	**Songino Array**	**33.03**	**340**	P	**P**	**04 55 28.0**	**+0.1**
	0.8nm,0.6s,mb3.9,baz=156,slow=11,SNR=3.4						
MBWA	**Marble Bar**	**38.57**	**184**	*e*P	**P**	**04 56 14.5**	**-1.0**
	10nm,1.2s,mb4.4						
WRAB	**Tennant Creek**	**38.96**	**162**	*e*P	**P**	**04 56 18.9**	**0.0**
	4.7nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**38.97**	**162**	P	**P**	**04 56 18.1**	**-0.8**
	9.8nm,0.9s,mb4.5,baz=343,slow=9.3,SNR=13						
WB2	**Warramunga Arr**	**38.97**	**162**	*e*P	**P**	**04 56 18.9**	**-0.1**
ASAR	**Alice Springs**	**42.40**	**165**	P	**P**	**04 56 47.1**	**-0.1**
	2.8nm,0.8s,mb4.0,baz=343,slow=7.0,SNR=12						
MK31	**Makanchi Array**	**44.20**	**320**	*e*P	**P**	**04 57 01.9**	**+0.3**
MKAR	**Makanchi Array**	**44.20**	**320**	P	**P**	**04 57 01.6**	**0.0**
	2.3nm,0.8s,mb4.0,baz=122,slow=8.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**46.62**	**330**	P	**P**	**04 57 20.1**	**-0.5**
	0.4nm,0.4s,mb3.7,baz=111,slow=7.9,SNR=2.7						
UCH	**Uchtor**	**47.69**	**312**	*e*P	**P**	**04 57 30.6**	**+1.5**
	3.4nm,0.9s,mb4.4						
KURK	**Kurchatov**	**48.16**	**324**	P	**P**	**04 57 33.0**	**+0.3**
	2.1nm,0.6s,mb4.3,baz=120,slow=7.9,SNR=5.2						
KURK	**Kurchatov**	**48.16**	**324**	*e*P	**P**	**04 57 32.8**	**+0.2**
	3.2nm,1.0s,mb4.3						
AML	**Almayashu**	**48.25**	**311**	*e*P	**P**	**04 57 34.5**	**+1.0**
	1.5nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**52.38**	**160**	P	**P**	**04 58 03.9**	**-0.8**
	2.1nm,0.8s,mb4.1,baz=330,slow=14,SNR=3.2						
ABKAR	**Akbulak array**	**59.16**	**317**	*e*P	**P**	**04 58 53.1**	**-0.1**
	1.3nm,0.5s,mb4.2						
MCK	**McKinley**	**73.72**	**28**	*e*P	**P**	**05 00 26.0**	**-0.1**
	3.2nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**76.20**	**339**	P	**P**	**05 00 39.4**	**-0.9**
	1.8nm,0.8s,mb4.1,baz=101,slow=8.3,SNR=3.3						
FINES	**FINESS Array B**	**77.88**	**331**	P	**P**	**05 00 49.7**	**-0.1**
	0.8nm,0.8s,mb3.7,baz=35,slow=7.0,SNR=4.5						
BUR08	**Bucovina Ar. S**	**82.15**	**317**	*e*P	**P**	**05 01 13.5**	**+0.3**
NOA	**NORSAR Array B**	**84.74**	**333**	P	**P**	**05 01 24.8**	**-1.4**
	1.0nm,0.8s,mb4.0,baz=64,slow=5.1,SNR=3.3						
NOA	**NORSAR Array B**	**84.74**	**333**	P	**P**	**05 01 24.8**	**-1.4**
YKA	**Yellowknife Ar**	**88.52**	**23**	P	**P**	**05 01 46.2**	**+1.6**
	0.2nm,0.7s,mb3.6,baz=303,slow=4.0,SNR=6.7						
SDV	**Santo Domingo**	**150.63**	**28**	*e*PKPbc	PKPbc	05 08 45.9	+0.8

ISCJB ***04*** *04:59:35.7±0.9, 14°.7N±0°.1×56°.0E±0°.1, h10km, mb3.8/21, MS3.5/4, Error ellipse: s-maj=22.1km s-min=11.5km az=44.3*
IDC ***04*** *04:59:35.8±1.3, 14°.63N×56°.10E, h0km, mb3.7/14, mb1 3.8/14, mb1mx3.6/29, mbtmp3.7/14, MS3.5/4, Ms1 3.5/4, ms1mx3.0/33, Error ellipse: s-maj=33.7km s-min=18.5km az=139.0*
NEIC ***04*** *04:59:37.3±0.7, 14°.66N×56°.02E, h10km, mb4.1/9, Error ellipse: s-maj=20.1km s-min=9.8km az=134.0*
CSEM ***04*** *04:59:40.9±0.5, 14°.71N×56°.02E, h33km, mb4.1/10, Error ellipse: s-maj=24.9km s-min=12.3km az=133.0*
ISC 04 04:59:37.5±0.9, 14°.7N±0°.1×56°.0E±0°.1, h10km, n48, σ0s94/45, mb3.8/21, MS3.5/4, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**24.32**	**231**	*e*P	**P**	**05 04 55.7**	**+0.1**
	1.0nm,0.6s,mb3.4						
KMBO	**Kilima Mbogo**	**24.32**	**231**	*e*P	**P**	**05 04 55.7**	**+0.2**
	1.0nm,0.6s,mb3.4						
MMAI	**Mount Meron Ar**	**26.16**	**318**	P	**P**	**05 05 13.0**	**+0.9**
	0.7nm,0.4s,mb3.5,baz=305,slow=48,SNR=2.7						
UCH	**Uchtor**	**31.77**	**27**	*e*P	**P**	**05 06 03.4**	**+1.5**
	1.1nm,0.8s,mb3.7						
UCH	**Uchtor**	**31.77**	**27**	*e*P	**P**	**05 06 03.4**	**+1.5**
	1.1nm,0.8s,mb3.7						
AAK	**Ala-Archa**	**32.09**	**26**	P	**P**	**05 06 06.1**	**+1.4**
	0.9nm,0.3s,mb4.0,baz=191,slow=9.6,SNR=3.0						
AAK	**Ala-Archa**	**32.09**	**26**	*e*P	**P**	**05 06 05.1**	**+0.3**
	1.7nm,0.5s,mb4.1						
AAK	**Ala-Archa**	**32.09**	**26**	*e*P	**P**	**05 06 05.1**	**+0.3**
	1.6nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**34.64**	**5**	*e*P	**P**	**05 06 27.6**	**+0.7**
ABKAR	**Akbulak array**	**34.64**	**5**	*e*P	**P**	**05 06 27.6**	**+0.7**
AKTK	**Aktyubinsk**	**35.71**	**2**	P	**P**	**05 06 37.2**	**+1.2**
AKTK	**Aktyubinsk**	**35.71**	**2**	P	**P**	**05 06 37.2**	**+1.1**
AKTO	**Aktyubinsk**	**35.71**	**2**	P	**P**	**05 06 37.2**	**+1.2**
	1.2nm,0.8s,mb3.9,baz=191,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**38.82**	**29**	P	**P**	**05 07 02.8**	**+0.2**
	0.6nm,0.6s,mb3.5,baz=191,slow=6.6,SNR=2.9						
MKAR				LR	LR	05 24 53.1	
	comp=Z,50nm,18.7s,MS3.4,baz=169,slow=39						
BVAR	**Borovoye Array**	**39.93**	**14**	P	**P**	**05 07 11.9**	**+0.2**
	0.3nm,0.4s,mb3.4,baz=189,slow=8.2,SNR=3.1						
BVAR	**Borovoye Array**	**39.93**	**14**	P	**P**	**05 07 11.9**	**+0.2**
KURK	**Kurchatov**	**40.34**	**22**	P	**P**	**05 07 13.7**	**-1.4**
	1.2nm,0.9s,mb3.6,baz=220,slow=8.4,SNR=5.9						
KURK	**Kurchatov**	**40.34**	**22**	*e*P	**P**	**05 07 14.4**	**-0.8**
	1.7nm,0.9s,mb3.8						
KURK	**Kurchatov**	**40.34**	**22**	*e*P	**P**	**05 07 14.4**	**-0.7**
	1.7nm,0.9s,mb3.8						
CMAR	**Chiang Mai Arr**	**41.25**	**79**	LR	LR	05 22 32.2	
	comp=Z,25nm,21.6s,MS3.0,baz=180,slow=33						
AKASG	**Malin Array Be**	**41.96**	**335**	P	**P**	**05 07 29.3**	**+0.8**
	0.5nm,0.4s,mb3.5,baz=146,slow=7.4,SNR=5.5						
AKASG	**Malin Array Be**	**41.96**	**335**	P	**P**	**05 07 29.3**	**+0.8**
ZALV	**Zalesovo Beam**	**45.23**	**24**	P	**P**	**05 07 54.0**	**-0.8**
	1.6nm,0.7s,mb4.0,baz=227,slow=7.9,SNR=7.4						
MORC	**Moravsky Berou**	**46.94**	**326**	*e*P	**P**	**05 08 08.7**	**+0.4**
	1.3nm,0.7s,mb4.0						
MORC	**Moravsky Berou**	**46.94**	**326**	*e*P	**P**	**05 08 08.7**	**+0.4**
	1.2nm,0.7s,mb3.9						
LBTB	**Lobatse**	**49.35**	**217**	P	**P**	**05 08 27.5**	**+0.2**
	1.6nm,0.6s,mb4.2,baz=67,slow=8.5,SNR=3.1						
LBTB	**Lobatse**	**49.35**	**217**	*e*P	**P**	**05 08 27.5**	**+0.2**
	4.3nm,0.8s,mb4.5						
LBTB	**Lobatse**	**49.35**	**217**	*e*P	**P**	**05 08 27.5**	**+0.2**
	4.3nm,0.8s,mb4.5						
JOF	**Joensuu**	**51.23**	**346**	*e*p	**P**	**05 08 39.4**	**-1.6**
	1.1nm,0.6s,mb4.0						
JOF	**Joensuu**	**51.23**	**346**	*e*P	**P**	**05 08 39.4**	**-1.6**
	1.1nm,0.6s,mb4.0						
FINES	**FINESS Array B**	**51.42**	**342**	P	**P**	**05 08 42.6**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=139,slow=10,SNR=6.1						
FINES	**FINESS Array B**	**51.42**	**342**	P	**P**	**05 08 42.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**52.65**	**275**	P	**P**	**05 08 53.5**	**+1.1**
	0.2nm,0.5s,mb3.3,baz=96,slow=6.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**52.65**	**275**	P	**P**	**05 08 53.5**	**+1.1**
SONM	**Songino Array**	**53.00**	**41**	P	**P**	**05 08 53.6**	**-0.8**
	0.3nm,0.5s,mb3.5,baz=224,slow=6.0,SNR=2.1						
SONM	**Songino Array**	**53.00**	**41**	P	**P**	**05 08 53.6**	**-0.9**
WLF	**Walferdange**	**53.37**	**322**	*e*P	**P**	**05 08 56.2**	**-0.9**
	4.4nm,0.9s,mb4.4						
WLF	**Walferdange**	**53.37**	**322**	*e*P	**P**	**05 08 56.2**	**-0.9**
	4.4nm,0.9s,mb4.4						
CART	**Cartagena**	**55.16**	**306**	*e*P	**P**	**05 09 09.6**	**-0.8**
	9.6nm,0.7s,mb4.9						
CART	**Cartagena**	**55.16**	**306**	*e*P	**P**	**05 09 09.6**	**-0.8**
	9.6nm,0.7s,mb4.9						
NAO01	**NORSAR Array S**	**56.38**	**335**	*e*P	**P**	**05 09 17.3**	**-1.4**
	0.6nm,0.5s,mb3.9						
NAO01	**NORSAR Array S**	**56.38**	**335**	*e*P	**P**	**05 09 17.3**	**-1.4**
	0.6nm,0.5s,mb3.9						
ESDC	**Sonseca Array**	**57.74**	**308**	P	**P**	**05 09 28.6**	**-0.3**
	0.2nm,0.4s,mb3.5,baz=84,slow=6.1,SNR=5.9						
ESDC	**Sonseca Array**	**57.74**	**308**	P	**P**	**05 09 28.5**	**-0.3**
ARCES	**ARCESS Array B**	**58.08**	**348**	P	**P**	**05 09 28.9**	**-1.7**
	1.0nm,0.8s,mb3.9,baz=146,slow=8.8,SNR=5.3						
ARCES	**ARCESS Array B**	**58.08**	**348**	P	**P**	**05 09 28.9**	**-1.7**
KSRS	**Korea Array**	**66.95**	**55**	LR	LR	05 42 58.1	
	comp=Z,45nm,19.9s,MS3.7,baz=162,slow=39						
FITZ	**Fitzroy Crossi**	**75.95**	**113**	LR	LR	05 36 47.1	
	comp=Z,74nm,20.8s,MS4.0,baz=121,slow=29						

NIED ***04*** *05:01:00, 24°.80N×122°.00E, h92km, Mw3.9 Best double couple: M0 7.36000×10^14 NP1:φs=202.00000°, δ62.00000°, λ37.00000°. NP2:φs=93.00000°, δ58.00000°, λ147.00000°.*
ISCJB ***04*** *05:01:56.7±0.2, 24°.88N±0°.02×122°.02E±0°.02, h111km±2km, mb3.5/8, Error ellipse: s-maj=3.8km s-min=2.2km az=147.2*
TAP ***04*** *05:01:57.7, 24°.87N×121°.99E, h104km, ML4.7, B*
NEIC ***04*** *05:01:57.1±0.5, 24°.85N×122°.05E, h105km±5km, mb4.0/1, Error ellipse: s-maj=10.7km s-min=8.3km az=93.0*
NEIC Recorded [2 TAP] in Hua-lien and I-lan; [1 TAP] in T'ai-chung, T'ai-pei and T'ao-yuan.
JMA ***04*** *05:01:58.0±0.2, 24°.85N×122°.05E, h104km±3km, M3.9*
IDC ***04*** *05:01:59.9±3.7, 24°.98N×122°.24E, h132km±37km, mb3.2/7, mb1 3.4/8, mb1mx3.2/25, mbtmp3.2/8, Error ellipse: s-maj=29.7km s-min=15.0km az=64.0*
ISC 04 05:01:57.7±0.2, 24°.87N±0°.02×122°.02E±0°.02, h106km±2km, n103, σ0s90/180, mb3.5/8, 2C-39D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.14**	**348**⇓	*i*P	**Pn**	**05 02 12.6**	**+0.1**
	baz=1.0						
TWB1				*e*S	**Sn**	**05 02 22.6**	**-0.8**
	baz=1.0						
ILA	**Ilan**	**0.27**	**247**⇓	*i*P	**Pn**	**05 02 13.0**	**+0.2**
	baz=242						
ILA				S	**Sn**	**05 02 24.4**	**+0.3**
	baz=242						
NWF	**Wu-fen Shan**	**0.29**	**312**⇓	*i*P	**Pn**	**05 02 13.0**	**0.0**
	baz=310						
NWF				*e*S	**Sn**	**05 02 23.7**	**-0.6**
	baz=310						
TWC	**Suao**	**0.30**	**211**⇓	*i*P	**Pn**	**05 02 13.0**	**0.0**
	baz=202						
TWC				S	**Sn**	**05 02 23.8**	**-0.6**
	baz=202						
TWE	**Neicheng**	**0.35**	**245**⇓	*i*P	**Pn**	**05 02 13.2**	**0.0**
	baz=243						
TWE				*e*S	**Sn**	**05 02 25.2**	**+0.4**
	baz=243						
TWA	**Mucha**	**0.41**	**285**	⇓P	**Pn**	**05 02 13.4**	**-0.1**
	baz=287						
TWA				*e*S	**Sn**	**05 02 25.5**	**+0.1**
	baz=287						
TAP1	**Taipei**	**0.48**	**290**	P	**Pn**	**05 02 13.5**	**-0.4**
	baz=292						
TAP1				S	**Sn**	**05 02 25.4**	**-0.8**
	baz=292						
TATO	**Taipei**	**0.49**	**282**	*e*Pg	**Pn**	**05 02 13.6**	**-0.5**
ENA	**Nanau**	**0.51**	**210**⇓	*i*P	**Pn**	**05 02 14.7**	**+0.5**
	baz=206						
ENA				*e*S	**Sn**	**05 02 26.8**	**+0.3**
	baz=206						
TWY	**Chenhua**	**0.56**	**317**⇓	*i*P	**Pn**	**05 02 14.4**	**-0.1**
	baz=320						
TWY				*e*S	**Sn**	**05 02 26.5**	**-0.6**
	baz=320						
TWS1	**Kuangyinshan**	**0.59**	**293**	P	**Pn**	**05 02 14.8**	**+0.1**
	baz=294						
TWS1				*e*S	**Sn**	**05 02 28.0**	**+0.5**
	baz=294						
YHNB	**Yeheng**	**0.62**	**251**	*e*Pn	**Pn**	**05 02 15.0**	**0.0**
YHNB				*e*Sn	**Sn**	**05 02 26.7**	**-1.2**
NSK	**Sanguang**	**0.63**	**252**⇓	*i*P	**Pn**	**05 02 15.2**	**+0.1**
	baz=242						
NSK				S	**Sn**	**05 02 27.2**	**-0.9**
	baz=242						
NNS	**Nan Shan**	**0.73**	**234**⇓	*i*P	**Pn**	**05 02 16.4**	**+0.5**
	baz=238						
NNS				*e*S	**Sn**	**05 02 30.2**	**+0.6**
	baz=238						
PCYT	**Pengchaiyu**	**0.76**	**3**⇑	*i*P	**Pn**	**05 02 16.5**	**+0.4**
	baz=14						
PCYT				S	**Sn**	**05 02 30.6**	**+0.6**
	baz=14						
NCU	**National Centr**	**0.76**	**278**⇓	*i*P	**Pn**	**05 02 16.7**	**+0.5**
	baz=278						
NCU				*e*S	**Sn**	**05 02 30.7**	**+0.6**
	baz=278						
NACB	**Ninganchiao**	**0.80**	**209**	*e*Pn	**Pn**	**05 02 15.6**	**-0.9**
NACB				*e*Sn	**Sn**	**05 02 29.7**	**-1.0**
TWD	**Chiawan**	**0.88**	**206**⇓	*i*P	**Pn**	**05 02 16.9**	**-0.4**
	baz=211						
TWD				*e*S	**Sn**	**05 02 31.3**	**-0.8**
	baz=211						
HSN	**Hsinchu**	**0.96**	**266**⇓	*i*P	**Pn**	**05 02 17.9**	**-0.2**
	baz=261						
HSN				S	**Sn**	**05 02 32.5**	**-1.0**
	baz=261						
NSTT	**Nanjuang**	**0.96**	**256**⇓	*i*P	**Pn**	**05 02 18.2**	**+0.1**
	baz=248						
NSTT				S	**Sn**	**05 02 32.7**	**-0.8**
	baz=248						
HWA	**Hwalien**	**0.97**	**203**	⇓P	**Pn**	**05 02 18.0**	**-0.2**
	baz=190						
HWA				*e*S	**Sn**	**05 02 33.8**	**+0.1**
	baz=190						
TWT	**Tachien**	**0.98**	**231**⇓	*i*P	**Pn**	**05 02 19.5**	**+1.1**
	baz=230						
TWT				S	**Sn**	**05 02 35.6**	**+1.6**
	baz=230						
YOJ	**Yon

baz=236
TYC eS Sn 05 02 44.5 +1.5
baz=236
SSLB Suanglung 1.45 222 ePn Pn 05 02 23.7 -0.1
SSLB eSn Sn 05 02 44.0 +0.6
EHY Hungye 1.50 205 eP Pn 05 02 22.8 -1.5
baz=197
WNT Mingjian 1.57 231 P Pn 05 02 25.5 +0.4
baz=239
WNT eS Sn 05 02 46.3 +0.3
baz=239
YULB Yu-li 1.61 204 ePn Pn 05 02 24.5 -1.2
YULB eSn Sn 05 02 44.3 -2.6
IRIF Iriomote-Funau 1.65 109 P Pn 05 02 25.8 -0.2
IRIF S Sn 05 02 47.7 +0.1
TWF1 Yuli 1.65 204 ⇓iP Pn 05 02 24.9 -1.3
baz=197
YUS Yu-Shan 1.69 216 ⇓iP Pn 05 02 27.9 +1.4
baz=213
YUS eS Sn 05 02 50.9 +2.3
baz=213
ALS Alishan 1.75 220 ⇓iP Pn 05 02 28.4 +1.0
baz=228
ALS eS Sn 05 02 51.2 +1.2
baz=228
CHN5 Tsauling 1.76 224 ⇓iP Pn 05 02 28.1 +0.5
baz=223
CHN5 S Sn 05 02 51.6 +1.4
baz=223
WGK Gukeng 1.78 229 iP Pn 05 02 28.3 +0.5
baz=238
WGK eS Sn 05 02 51.1 +0.5
baz=238
HATJ Hateruma jima 1.82 116 P Pn 05 02 28.5 +0.3
HATJ S Sn 05 02 51.7 +0.3
CHKT Chengkung 1.86 199 P Pn 05 02 28.2 -0.6
baz=195
CHKT eS Sn 05 02 50.5 -2.0
baz=195
WTCT Ta-ch'eng 1.88 238 eP Pn 05 02 28.5 -0.4
baz=238
WTCT eS Sn 05 02 51.9 -0.9
baz=238
ELDTW Lidau 1.91 209 ⇓P Pn 05 02 29.0 -0.4
baz=200
JKRS Kuro-shima 1.92 109 P Pn 05 02 29.8 +0.3
JKRS S Sn 05 02 53.7 0.0
CHN2 Minshiung 1.94 227 eP Pn 05 02 29.8 0.0
baz=236
CHN2 eS Sn 05 02 54.9 +0.7
baz=236
JIJ Ishigaki jima 2.00 104 P Pn 05 02 30.4 -0.1
JIJ S Sn 05 02 54.7 -0.8
CHN4 Tsaushan 2.00 221 ⇓iP Pn 05 02 31.1 +0.6
baz=220
CHN4 eS Sn 05 02 57.2 +1.6
baz=220
CHY Chiayi 2.00 227 ⇓iP Pn 05 02 31.0 +0.5
baz=236
CHY S Sn 05 02 55.6 0.0
baz=236
TPUB Ta-pu 2.02 219 ePn Pn 05 02 30.8 0.0
TPUB eSn Sn 05 02 54.4 -1.6
STYT Tauyuan 2.06 214 ⇓iP Pn 05 02 31.9 +0.7
baz=202
STYT eS Sn 05 02 58.6 +1.8
baz=202
WTP Ta-pu 2.07 219 ⇓iP Pn 05 02 31.8 +0.4
baz=218
WTP eS Sn 05 02 58.1 +1.0
baz=218
TWK Hsinying 2.12 222 ⇓iP Pn 05 02 32.4 +0.2
baz=221
TWK eS Sn 05 02 58.8 +0.3
baz=221
CHN1 Nanshi 2.16 219 ⇓iP Pn 05 02 32.9 +0.3
baz=219
CHN1 eS Sn 05 02 59.0 -0.3
baz=219
SGST Jiashian 2.21 217 ⇓iP Pn 05 02 33.9 +0.6
baz=226
SGST S Sn 05 03 00.5 0.0
baz=226
TWG Pinlang 2.22 203 ePn Pn 05 02 31.9 -1.5
TWG eSn Sn 05 02 58.7 -1.9
TWG Pinlang 2.22 203 eP Pn 05 02 32.3 -1.1
baz=191
TWG eS Sn 05 02 58.5 -2.1
baz=191
CHN8 Yiju 2.25 228 ⇓iP Pn 05 02 33.4 -0.3
baz=238
CHN8 eS Sn 05 03 00.9 -0.3
baz=238
CHN3 Shinhua 2.34 221 eP Pn 05 02 35.3 +0.3
baz=230
CHN3 eS Sn 05 03 05.0 +1.5
baz=230
SCLT Jiali 2.38 225 eP Pn 05 02 35.7 +0.3
baz=226
SCLT eS Sn 05 03 04.9 +0.7
baz=226
JTJ Tarama 2.45 95 P Pn 05 02 37.1 +0.8
JTJ S Sn 05 03 06.5 +0.6
TAI1 Yung-k'ang 2.45 222 eP Pn 05 02 36.6 +0.2
baz=224
TAI1 eS Sn 05 03 05.8 -0.2
baz=224
ECL Taimali 2.47 204 eP Pn 05 02 35.4 -1.2
baz=194
ECL eS Sn 05 03 03.8 -2.6
baz=194
SSD Sandimen 2.47 211 eP Pn 05 02 37.3 +0.7
baz=209
SSD eS Sn 05 03 07.6 +1.2
baz=209
TWM1 Shoushan 2.51 216 eP Pn 05 02 38.5 +1.4
baz=216
SGLT Jiouru 2.56 214 eP Pn 05 02 39.0 +1.3
baz=214
PNG Penghu 2.60 241 ⇓iP Pn 05 02 37.3 -1.0
baz=233
PNG eS Sn 05 03 06.7 -2.8
baz=233
WDGT Dungji 2.69 234 ⇓P Pn 05 02 38.7 -0.8
baz=235
WDGT S Sn 05 03 09.7 -2.0
baz=235
EAST Anshuo 2.70 204 eP Pn 05 02 39.2 -0.5
baz=196
TAW Tawu 2.71 203 eP Pn 05 02 41.5 +1.8
baz=196
SCZT Fangliau 2.80 208 eP Pn 05 02 41.2 +0.3
baz=207
LAY Lan-yu 2.85 189 P Pn 05 02 40.6 -1.1
baz=181
LAY eS Sn 05 03 12.7 -2.8
baz=181
TWP Hsiaoliuchiu 2.94 212 eP Pn 05 02 42.6 -0.2
baz=212
JMJ Miyako jima 2 2.97 90 P Pn 05 02 44.9 +1.7
JMJ S Sn 05 03 18.8 +0.5
JMJ Miyako jima 2 2.97 90 eP Pn 05 02 44.9 +1.6
baz=84
JOGS Gusukube 3.08 91 P Pn 05 02 45.8 +1.2
JOGS eS Sn 05 03 21.4 +0.6
HEN Hengchun 3.09 203 eP Pn 05 02 45.1 +0.3
baz=197
HEN eS Sn 05 03 20.6 -0.5
baz=197
QZH Quanzhou 3.11 272 ⇑iPn Pn 05 02 45.4 +0.3
QZH Sn Sn 05 03 19.8 -1.9
QZH smax
comp=N,490nm,0.9s
QZH smax
comp=E,330nm,1.0s
TWK1 Hengchun 3.12 201 eP Pn 05 02 44.4 -0.9
baz=197
TWK1 eS Sn 05 03 21.1 -0.8
baz=197
TSEB Hengchuen, Pin 3.13 199 eP Pn 05 02 45.9 +0.5
baz=196
TSEB eS Sn 05 03 22.4 +0.3
baz=196
KNM Kinmen 3.30 263 eP Pn 05 02 47.9 +0.4
baz=263
JKE Kume jima 2 4.54 70 P Pn 05 03 05.5 +1.2
JKE eS Sn 05 03 56.3 +0.3

JAGN Aguni-jima 5.01 69 P Pn 05 03 11.7 +1.1
JAGN S Sn 05 04 09.0 +1.7
JIH Iheya 5.77 67 P Pn 05 03 21.6 +0.7
JOW Kunigami 5.96 70 P Pn 05 03 23.2 -0.3
JOW S Sn 05 04 28.7 -1.8
JOW Kunigami 5.96 70 P Pn 05 03 23.0 -0.5
comp=E,4.4nm,0.3s,baz=108,slow=26,SNR=8.5
JOW S Sn 05 04 28.3 -2.2
comp=E,5.8nm,0.3s,baz=124,slow=26,SNR=8.2
JOW Kunigami 5.96 70 eP Pn 05 03 22.9 -0.6
baz=70
JTK Tokunoshima 6.86 63 P Pn 05 03 34.7 -1.0
JTK eS Sn 05 04 51.3 -1.0
JAM Amami Oshima 7.65 61 P Pn 05 03 44.9 -1.5
JAM eS Sn 05 05 09.4 -2.0
KSRS Korea Array 13.52 20 P Pn 05 05 07.4 +2.4
comp=E,0.1nm,0.3s,baz=207,slow=16,SNR=4.8
SONM Songino Array 26.05 336 P P 05 07 21.7 +0.7
comp=E,0.5nm,0.4s,mb3.3,baz=148,slow=8.5,SNR=3.2
MKAR Makanchi Array 38.38 315 P P 05 09 08.5 0.0
comp=E,0.4nm,0.4s,mb3.6,baz=123,slow=11,SNR=3.5
ZALV Zalesovo Beam 40.09 326 pP pP 05 09 46.6 -0.3
comp=E,0.4nm,0.4s,baz=99,slow=9.2,SNR=2.5
KURK Kurchatov 42.06 319 P P 05 09 38.2 -0.6
comp=E,0.2nm,0.4s,mb3.2,baz=111,slow=9.9,SNR=3.2
WRAB Tennant Creek 46.12 164 eP P 05 10 10.7 -0.8
comp=E,1.2nm,0.5s,mb3.9
WRA Warramunga Arr 46.13 164 P P 05 10 11.0 -0.5
comp=E,0.8nm,0.4s,mb3.8,baz=346,slow=8.7,SNR=12
ASAR Alice Springs 49.61 166 P P 05 10 38.8 +0.5
comp=E,0.2nm,0.4s,mb3.4,baz=346,slow=8.1,SNR=5.5
FINES FINESS Array B 71.24 330 P P 05 13 04.7 -0.4
comp=E,0.6nm,0.6s,mb3.6,baz=42,slow=7.5,SNR=5.6
FINES FINESS Array B 71.24 330 P P 05 13 04.7 -0.4
YKA Yellowknife Ar 82.04 23 P P 05 14 04.0 -1.9
comp=E,0.3nm,0.5s,mb3.4,baz=309,slow=5.1,SNR=16

MAN 04 05:09:36, 17°.50N×122°.69E, h34km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.51**	**210**	eP	Pb	05 09 48.3	+1.5
PALP				eS	Sb	05 09 55.8	+1.6
CVP	**Callao Caves**	**0.85**	**284**	eP	Pn	05 09 47.7	-3.8
CAUP	**Cauayan**	**1.00**	**236**	eP	Pn	05 09 55.2	+1.6
CAUP				eS	Sn	05 10 07.5	+1.0
APYP	**Conner**	**1.42**	**285**	eP	Pn	05 09 59.4	-0.1
APYP				eS	Sn	05 10 13.7	-3.4
ABRA	**Dolores**	**1.89**	**275**	eP	Pn	05 10 06.9	+1.0
ABRA				eS	Sn	05 10 23.7	-4.8
BALP	**Baler**	**2.05**	**211**	eP	Pn	05 10 11.3	+3.2
BALP				eS	Sn	05 10 27.3	-5.3
BOLP	**Bolinao**	**2.88**	**248**	eP	Pn	05 10 22.9	+3.4
BBP	**Basco**	**3.00**	**347**	eP	Pn	05 10 22.3	+1.1

*BJI **04** 05:45:57.4, 13°.62N×121°.02E, h213km, mB4.5/4, mb4.5/12*
*ISCJB **04** 05:46:01.1±0.5, 13°.98N±0°.05×120°.81E±0°.08,*
h220km±4km, mb4.2/44, Error ellipse: s-maj=13.4km
s-min=7.9km az=163.8
*IDC **04** 05:46:01.9±0.6, 13°.91N×120°.79E, h214km±5km, mb3.8/18,*
mb1 3.9/19, mb1mx3.8/26, mbtmp3.8/19, Error ellipse:
s-maj=20.7km s-min=7.4km az=65.0
*NEIC **04** 05:46:02.3±0.6, 13°.98N×120°.76E, h213km±5km, mb4.4/11,*
Error ellipse: s-maj=12.1km s-min=6.6km az=76.0
*DJA **04** 05:46:06, 14°.00N×120°.80E, h239km, mb4.3/10*
ISC 04 05:46:02.0±0.5, 13°.98N±0°.05×120°.82E±0°.08, h214km±4km, n66, σ0°.96/66, mb4.2/44, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.17**	**43**	eP	Pn	05 46 29.9	0.0
189nm,0.3s,baz=267,slow=2.4,SNR=72							
TGY	**Tagaytay City**	**0.17**	**43**	eP	Pn	05 46 32.0	+2.1
PGP	**Puerto Galera**	**0.49**	**165**	⇑iP	Pn	05 46 30.2	-0.5
BCPH	**Baguio City Da**	**2.40**	**355**	⇓eP	Pn	05 46 45.4	-0.3
BCPH				eS	S	05 47 17.8	-2.2
KKM	**Kota Kinabalu**	**9.09**	**210**	eP	Pn	05 48 10.2	+0.8
102nm,1.4s							
TPUB	**Ta-pu**	**9.27**	**359**	eP	Pn	05 48 12.3	+0.6
46nm,1.1s							
KAPI	**Kappang**	**18.90**	**183**	P	P	05 50 06.5	-0.3
0.7nm,0.3s,baz=4.9,slow=7.7,SNR=7.6							
KMI	**Kunming**	**20.30**	**306**	P	P	05 50 24.5	+2.8
KMI				pmax	pmax		
comp=Z,15nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.47**	**285**	P	P	05 50 34.1	+0.1
comp=Z,8.3nm,0.9s,mb4.3,baz=96,slow=7.7,SNR=21							
KSRS	**Korea Array**	**24.22**	**14**	P	P	05 50 59.5	+0.3
comp=Z,2.4nm,1.0s,mb3.8,baz=192,slow=11,SNR=6.4							
LZH	**Lanzhou**	**26.77**	**328**	eP	P	05 51 23.6	+1.5
LZH				pmax	pmax		
comp=Z,33nm,1.0s,mb4.9							
LZH				pmax	pmax		
comp=Z,160nm,5.0s							
GTA	**Gaotai**	**31.36**	**328**	eP	P	05 52 04.2	+1.5
GTA				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.2							
TAPN	**Taplejung**	**33.59**	**299**	eP	P	05 52 22.6	+0.3
comp=Z,12nm,0.5s,mb4.6							
ODAN	**Odare**	**33.73**	**298**	eP	P	05 52 23.7	+0.2
comp=Z,45nm,0.7s,mb5.1							
RAMN	**Ramite**	**34.44**	**297**	eP	P	05 52 29.8	+0.3
comp=Z,20nm,0.7s,mb4.8							
JIRN	**Jiri**	**34.98**	**298**	eP	P	05 52 34.7	+0.6
comp=Z,37nm,0.6s,mb5.1							
GUN	**Gumba**	**35.31**	**299**	eP	P	05 52 37.3	+0.3
comp=Z,36nm,0.7s,mb5.0							
PKI	**Pulchoki**	**35.62**	**298**	eP	P	05 52 39.3	-0.3
comp=Z,16nm,0.5s,mb4.8							
PKIN	**Phulchoki**	**35.63**	**298**	eP	P	05 52 39.4	-0.3
comp=Z,16nm,0.5s,mb4.8							
KKN	**Kakani**	**35.79**	**298**	eP	P	05 52 40.9	-0.1
SONM	**Songino Array**	**35.82**	**343**	P	P	05 52 41.6	+0.6
comp=Z,3.9nm,0.5s,mb4.2,baz=163,slow=9.5,SNR=18							
WRA	**Warramunga Arr**	**36.24**	**158**	P	P	05 52 44.6	-0.2
comp=Z,3.2nm,0.4s,mb4.2,baz=329,slow=10,SNR=24							
WRA				S	S	05 58 05.6	-3.6
comp=Z,0.7nm,0.8s,baz=332,slow=15,SNR=4.7							
GKN	**Gorkha**	**36.39**	**298**	eP	P	05 52 45.5	-0.7
comp=Z,12nm,0.6s,mb4.6							
KOLN	**Koldanda**	**37.23**	**298**	eP	P	05 52 52.8	-0.4
comp=Z,7.2nm,0.5s,mb4.5							
ASAR	**Alice Springs**	**39.54**	**161**	P	P	05 53 12.4	0.0
comp=Z,2.9nm,0.4s,mb4.1,baz=337,slow=6.8,SNR=66							
ASAR				PcP	PcP	05 55 15.6	+0.1
comp=Z,0.9nm,0.5s,baz=331,slow=3.1,SNR=6.7							
ASAR				S	S	05 58 55.9	-2.9
comp=Z,0.2nm,0.6s,baz=350,slow=14,SNR=4.5							
CTA	**Charters Tower**	**42.10**	**143**	P	P	05 53 34.6	+1.3
comp=Z,2.7nm,0.4s,mb4.0,baz=314,slow=2.0,SNR=3.6							
MK31	**Makanchi Array**	**45.88**	**323**	eP	P	05 54 02.8	-0.2
MKAR	**Makanchi Array**	**45.88**	**323**	P	P	05 54 03.7	+0.7
comp=Z,4.1nm,0.6s,mb4.0,baz=133,slow=8.7,SNR=30							
MKAR				PcP	PcP	05 55 36.7	+0.3
comp=Z,1.0nm,0.5s,baz=147,slow=2.9,SNR=4.8							
MKAR	**Makanchi Array**	**45.88**	**323**	P	P	05 54 03.7	+0.7
MKAR				PcP	PcP	05 55 36.7	+0.3
ZALV	**Zalesovo Beam**	**48.86**	**333**	P	P	05 54 25.6	-0.2
comp=Z,5.4nm,0.5s,mb4.2,baz=122,slow=6.9,SNR=20							
ZALV				PcP	PcP	05 55 45.5	-1.5
comp=Z,0.8nm,0.5s,baz=122,slow=3.4,SNR=3.9							
AAK	**Ala-Archa**	**48.95**	**315**	P	P	05 54 27.8	+1.0
comp=Z,1.4nm,0.5s,mb3.6,baz=90,slow=6.4,SNR=6.0							
KURK	**Kurchatov**	**50.02**	**326**	P	P	05 54 34.9	+0.2
comp=Z,8.5nm,0.6s,mb4.3,baz=133,slow=7.5,SNR=59							
BVAR	**Borovoye Array**	**55.61**	**326**	P	P	05 55 15.7	+0.2
comp=Z,2.0nm,0.6s,mb3.9,baz=114,slow=10,SNR=11							
BVAR				PcP	PcP	05 56 12.4	-0.1
comp=Z,1.6nm,0.6s,baz=142,slow=4.6,SNR=6.3							
BRVK	**Borovoye**	**55.68**	**326**	P	P	05 55 16.2	+0.2
comp=Z,9.9nm,1.2s,mb4.2							
TIXI	**Tiksi**	**57.85**	**3**	eP	P	05 55 30.5	-0.4
comp=Z,18nm,1.0s,mb4.7							
ABKAR	**Akbulak array**	**60.60**	**319**	eP	P	05 55 50.0	-0.2
comp=Z,8.7nm,0.9s,mb4.4							
RDF	**Al-Radifah**	**68.87**	**296**	eP	P	05 56 42.9	-1.1
RDF				AMb	AMB	05 56 43.7	
comp=Z,25nm,0.6s,mb5.0							
MIB	**Mutribah**	**68.98**	**297**	eP	P	05 56 43.0	-1.7
MIB				AMb	AMB	05 56 44.3	
comp=Z,23nm,0.5s,mb5.0							
BPAW	**Bear Paw Mtn.**	**76.76**	**27**	eP	P	05 57 31.0	+1.5
comp=Z,9.6nm,0.9s,mb4.4							
COLD	**Coldfoot**	**76.83**	**24**	eP	P	05 57 30.8	+0.9
comp=Z,1.1nm,0.6s,mb3.7							
JOF	**Joensuu**	**77.45**	**332**	ep	P	05 57 31.8	-1.6
comp=Z,2.6nm,0.3s,mb4.3							
KEV	**Kevo**	**78.31**	**339**	ep	P	05 57 36.6	-1.5
comp=Z,2.8nm,0.5s,mb4.2							
ARCES	**ARCESS Array B**	**78.87**	**339**	P	P	05 57 40.9	-0.2
comp=Z,3.2nm,0.6s,mb4.1,baz=81,slow=6.8,SNR=28							
BRTR	**Keskin Array B**	**79.07**	**308**	P	P	05 57 42.3	-0.5
comp=Z,0.8nm,0.8s,mb3.4,baz=97,slow=5.2,SNR=6.4							
KAF	**Kangasniemi**	**79.87**	**332**	ep	P	05 57 44.6	-2.0
comp=Z,2.2nm,0.6s,mb4.0							
FINES	**FINESS Array B**	**80.10**	**331**	P	P	05 57 46.9	-0.9
comp=Z,1.5nm,0.6s,mb3.8,baz=50,slow=5.1,SNR=10							
FINES	**FINESS Array B**	**80.10**	**331**	P	P	05 57 46.9	-0.9
AKASG	**Malin Array Be**	**80.32**	**320**	P	P	05 57 48.1	-1.2
comp=Z,0.3nm,0.4s,mb3.3,baz=68,slow=4.9,SNR=4.0							
BUR08	**Bucovina Ar. S**	**83.54**	**317**	eP	P	05 58 06.1	0.0
KWP	**Kalwaria Pacla**	**84.65**	**320**	eP	P	05 58 11.9	+0.2
comp=Z,2.9nm,0.4s,mb4.4							
KOLS	**Kolonicke sedl**	**85.11**	**319**	eP	P	05 58 16.3	+2.4
comp=Z,1.6nm,0.9s,mb3.8							
KOLS	**Kolonicke sedl**	**85.11**	**319**	eP	P	05 58 16.3	+2.4
STHS	**Stebnicka Huta**	**85.62**	**320**	eP	P	05 58 17.9	+1.4
comp=Z,2.1nm,0.6s,mb4.0							
STHS	**Stebnicka Huta**	**85.62**	**320**	eP	P	05 58 17.9	+1.4
OJC	**Ojcow**	**86.29**	**321**	eP	P	05 58 19.0	-0.7
KECS	**Kecovo**	**86.37**	**319**	eP	P	05 58 20.2	0.0
comp=Z,2.0nm,0.8s,mb3.9							
KECS	**Kecovo**	**86.37**	**319**	eP	P	05 58 20.2	0.0
NB2	**NORSAR Subarra**	**87.07**	**333**	P	P	05 58 21.9	-1.4
comp=Z,3.6nm,0.7s,mb4.2,baz=68,slow=4.6							
NOA	**NORSAR Array B**	**87.07**	**333**	P	P	05 58 21.9	-1.4
comp=Z,2.9nm,0.7s,mb4.2,baz=68,slow=4.6,SNR=16							
BRG	**Berggiesshubel**	**89.59**	**323**	eP	P	05 58 35.3	-0.1
comp=Z,4.2nm,1.0s,mb4.2							
GERES	**GERESS Array B**	**90.49**	**321**	P	P	05 58 39.3	-0.3
comp=Z,0.5nm,0.6s,mb3.5,baz=66,slow=6.6,SNR=5.8							
YKA	**Yellowknife Ar**	**92.47**	**22**	P	P	05 58 49.3	+0.8
comp=Z,1.1nm,0.5s,mb4.0,baz=307,slow=4.4,SNR=44							
YKA	**Yellowknife Ar**	**92.47**	**22**	P	P	05 58 49.3	+0.8
TXAR	**Lajitas Array**	**119.19**	**44**	PKP	PKPdf	06 04 27.0	+0.8
comp=Z,0.5nm,0.4s,baz=192,slow=0.7,SNR=12							
TXAR	**Lajitas Array**	**119.19**	**44**	PKP	PKPdf	06 04 27.0	+0.8
PLCA	**Paso Flores**	**151.55**	**162**	PKPbc	PKPbc	06 05 32.1	+1.1
comp=Z,3.1nm,0.6s,baz=187,slow=2.5,SNR=7.2							

*IDC **04** 05:54:38.9±1.2, 11°.35N×92°.47E, h0km, mb3.9/9,*
mb1 4.0/10, mb1mx3.7/25, mbtmp3.9/10, ML3.7/1, MS3.3/1,
Ms1 3.3/1, ms1mx2.5/27, Error ellipse: s-maj=50.9km
s-min=16.1km az=61.0
*ISCJB **04** 05:54:42.3±0.9, 11°.4N±0°.1×92°.6E±0°.2, h33km, mb3.9/10,*
Error ellipse: s-maj=23.8km s-min=13.9km az=155.6
*NEIC **04** 05:54:44.1±0.7, 11°.40N×92°.52E, h35km, mb4.4/1, Error*
ellipse: s-maj=18.8km s-min=11.0km az=66.0
ISC 04 05:54:44.4±0.9, 11°.4N±0°.1×92°.5E±0°.2, h35km, n15, σ0°.42/13, mb3.9/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.34**	**41**	Pn	Pn	05 56 56.6	0.0
0.2nm,0.3s,baz=234,slow=15,SNR=4.1							
ENH	**Enshi**	**24.49**	**37**	eP	P	06 00 00.8	+0.4
6.3nm,0.5s,mb4.3							
MKAR	**Makanchi Array**	**36.31**	**348**	P	P	06 01 45.0	+0.3
1.7nm,0.7s,mb4.1,baz=166,slow=7.7,SNR=13							
MKAR	**Makanchi Array**	**36.31**	**348**	P	P	06 01 45.0	+0.3
SONM	**Songino Array**	**38.12**	**15**	P	P	06 01 59.7	-0.4
0.7nm,0.7s,mb3.5,baz=202,slow=11,SNR=3.0							
KURK	**Kurchatov**	**40.82**	**346**	P	P	06 02 22.1	-0.3
1.3nm,0.7s,mb3.7,baz=168,slow=8.1,SNR=10.0							
KSRS	**Korea Array**	**40.95**	**45**	LR	LR	06 21 45.7	
comp=Z,33nm,18.1s,baz=220,slow=40							
ZALV	**Zalesovo Beam**	**42.87**	**353**	P	P	06 02 38.6	-0.5
1.2nm,0.4s,mb4.0,baz=176,slow=10,SNR=8.6							
FITZ	**Fitzroy Crossi**	**43.90**	**131**	P	P	06 02 48.1	+0.1
1.3nm,0.6s,mb3.8,baz=295,slow=14,SNR=4.5							
FITZ				PcP	PcP	06 04 32.6	-1.2
3.3nm,1.1s,baz=256,slow=4.0,SNR=3.4							
WRA	**Warramunga Arr**	**51.61**	**127**	P	P	06 03 48.1	+0.3
1.1nm,0.4s,mb4.2,baz=300,slow=10.0,SNR=14							
ASAR	**Alice Springs**	**53.40**	**131**	P	P	06 04 00.5	-0.5
0.5nm,0.5s,mb3.7,baz=304,slow=6.4,SNR=10							
ASAR				PcP	PcP	06 05 12.9	+4.9
0.3nm,0.6s,baz=312,slow=3.2,SNR=4.2							
FINES	**FINESS Array B**	**68.86**	**332**	P	P	06 05 45.1	-0.1
0.6nm,0.6s,mb3.7,baz=125,slow=7.7,SNR=5.2							
ARCES	**ARCESS Array B**	**71.42**	**340**	P	P	06 06 01.7	+0.9
1.3nm,0.8s,mb3.9,baz=81,slow=5.6,SNR=3.3							
ARCES	**ARCESS Array B**	**71.42**	**340**	P	P	06 06 01.7	+0.9
ARUT	**Antelope Range**	**125.33**	**25**	ePKPdf	PKPdf	06 13 40.5	-1.6

*DDA **04** 06:00:02.0, 36°.65N×27°.84E, h7km±5km, Md2.3*
*CSEM **04** 06:00:03.0±0.8, 36°.68N×27°.81E, h2km, MD2.5, Error*
ellipse: s-maj=15.5km s-min=7.5km az=1.0
*ISCJB **04** 06:00:05.3±2.2, 36°.8N±0°.1×27°.6E±0°.1, h12km±9km, Error*
ellipse: s-maj=23.7km s-min=9.0km az=136.1
*ISK **04** 06:00:05.4, 36°.82N×27°.58E, h4km, MD2.5*
ISC 04 06:00:04.9±2.2, 36°.8N±0°.1×27°.6E±0°.1, h15km±10km, n13, σ0°.20/2, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.03**	**160**	ePg	Pg	06 00 07.8	+0.1
DAT				eSg	Sg	06 00 09.4	-0.1
DAT	**Datca**	**0.03**	**160**	ePG	Pg	06 00 07.8	+0.1
DAT				eSG	Sg	06 00 09.4	-0.1
BDRM	**Kayabasi**	**0.32**	**343**	iP	Pg	06 00 11.6	-0.1
BDRM				iS	Sg	06 00 16.1	-0.1
BDRM	**Kayabasi**	**0.32**	**343**	iP	Pg	06 00 11.6	-0.1
BDRM				iS	Sg	06 00 16.1	-0.1
BODT	**Bodrum**	**0.37**	**326**	ePG	Pg	06 00 12.7	+0.3
BODT				eSG	Sg	06 00 17.5	0.0
BODT	**Bodrum**	**0.37**	**326**	ePg	Pg	06 00 12.7	+0.2
MLSB	**Milas**	**0.56**	**17**	ePg	Pg	06 00 16.0	0.0
MLSB	**Milas**	**0.56**	**17**	ePg	Pg	06 00 16.0	-0.1
YER	**Yerkesik**	**0.69**	**57**	ePG	Pg	06 00 18.5	+0.1
TURN	**Turunc**	**0.84**	**82**	iP	Pb	06 00 15.4	-5.8
TURN				iS	Sb	06 00 23.8	-8.5
TURN	**Turunc**	**0.84**	**82**	iP	Pb	06 00 15.4	-5.8
TURN				iS	Sb	06 00 23.8	-8.5
AYDN	**Tasoluk**	**0.94**	**15**	iP	Pb	06 00 22.4	-0.5
AYDN				iS	Sb	06 00 35.3	+0.2
AYDN	**Tasoluk**	**0.94**	**15**	iP	Pb	06 00 22.4	-0.4
AYDN				iS	Sb	06 00 35.3	+0.3

*IDC **04** 06:18:39.9±2.6, 63°.27N×150°.95W, h92km±26km, mb3.4/8,*
mb1 3.5/11, mb1mx3.3/27, mbtmp3.3/11, Error ellipse:
s-maj=20.6km s-min=16.3km az=63.0
*ISCJB **04** 06:18:41.7±0.3, 63°.18N±0°.03×150°.55W±0°.07,*
h129km±3km, mb3.6/8, Error ellipse: s-maj=5.2km
s-min=4.3km az=170.0
*NEIC **04** 06:18:43.1, 63°.17N×150°.55W, h124km, MG3.5(AEIC),*
After AEIC.
ISC 04 06:18:42.9±0.3, 63°.17N±0°.03×150°.55W±0°.07, h123km±3km, n52, σ0°.76/69, mb3.7/8, 1D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.30**	**23**	P	Pn	06 19 00.6	+0.5
TRF				S	Sn	06 19 13.6	+0.4
KTH	**Kantishna Hill**	**0.42**	**336**	P	Pn	06 19 00.9	+0.3
KTH				S	Sn	06 19 14.0	-0.1
PPLA	**Purkeypile**	**0.80**	**250**	⇓iPg	Pn	06 19 03.7	+0.4
PPLA				eSg	Sn	06 19 18.6	0.0
PPLA				S	Sn	06 19 19.1	+0.5
MCK	**McKinley**	**0.92**	**52**	P	Pn	06 19 04.7	+0.4
MCK				S	Sn	06 19 20.5	0.0
BPAW	**Bear Paw Mtn.**	**0.95**	**348**	P	Pn	06 19 04.6	+0.1
BPAW				S	Sn	06 19 20.5	-0.5
CHUM	**Lake Minchumin**	**1.06**	**313**	P	Pn	06 19 05.9	+0.2
CHUM				S	Sn	06 19 22.7	-0.3
SKT	**Skwentna**	**1.28**	**201**	P	Pn	06 19 07.9	0.0
SKT				S	Sn	06 19 27.2	+0.2
GHO	**Glory Hole Cre**	**1.60**	**151**	P	Pn	06 19 11.8	+0.2
SML	**Sawmill**	**1.71**	**142**

PMR			S	Sn	06 19 35.5	-0.4
FIB	**Fire Island**	**2.02 175**	Pn	Pn	06 19 18.2	+1.5
FIB			*e*Sn	Sn	06 19 42.6	0.0
COLA	**College**	**2.08 34**	P	Pn	06 19 17.4	+0.1
IL1	**Eielson Array**	**2.28 44**	P	Pn	06 19 19.7	-0.1
PAX	**Paxson**	**2.32 93**	P	Pn	06 19 21.0	+0.6
TTA	**Tatalina**	**2.50 267**	P	Pn	06 19 22.4	-0.2
TT01	**Tatalina**	**2.51 266**	P	Pn	06 19 22.5	-0.2
SLKM	**Skilak Lake**	**2.68 177**	P	Pn	06 19 24.9	-0.2
RSO	**Redoubt South**	**2.92 202**	*e*Pn	Pn	06 19 29.1	+1.0
DOT	**Dot Lake**	**2.96 78**	P	Pn	06 19 28.4	-0.2
DIV	**Divide**	**3.04 130**	P	Pn	06 19 28.7	-0.9
MENT	**Mentasta**	**3.12 91**	*e*Pn	Pn	06 19 30.8	+0.1
MENT			*e*Sn	Sn	06 26 03.0	-4.7
SEW	**Seward**	**3.13 170**	P	Pn	06 19 30.4	-0.4
IM3	**Indian Mountai**	**3.14 335**	P	Pn	06 19 30.8	-0.1
SVW2	**Sparrevohn**	**3.15 231**	P	Pn	06 19 31.1	0.0
GCSA	**Galena City Sc**	**3.21 302**	P	Pn	06 19 31.8	-0.1
EYAK	**Cordova Ski Ar**	**3.48 137**	P	Pn	06 19 35.0	-0.4
BMRM	**Bremner River**	**3.57 126**	P	Pn	06 19 35.6	-1.0
BCA3	**Beaver Creek A**	**3.98 88**	P	Pn	06 19 41.7	-0.4
COLD	**Coldfoot**	**4.07 2**	P	Pn	06 19 43.5	+0.2
MID	**Middleton Isla**	**4.27 150**	*e*Pn	Pn	06 19 46.1	+0.1
EGAK	**Eagle**	**4.44 65**	P	Pn	06 19 48.6	+0.4
BM3	**Burnt Mountain**	**4.94 28**	P	Pn	06 19 55.0	+0.2
DAWY	**Dawson**	**5.06 75**	P	Pn	06 19 56.4	-0.1
KDAK	**Kodiak Island**	**5.50 191**	P	Pn	06 20 00.7	-1.8
	2.0nm,0.3s,baz=52,slow=12,SNR=30					
KDAK			S	Sn	06 20 59.0	-5.5
	3.6nm,0.3s,baz=300,slow=21,SNR=12					
KDAK	**Kodiak Island**	**5.50 191**	P	Pn	06 20 00.7	-1.8
KDAK			S	Sn	06 20 59.0	-5.5
PNL	**Peninsula**	**6.40 118**	*e*Pn	Pn	06 20 14.6	0.0
PNL			*e*Sn	Sn	06 21 24.3	-1.9
HYT	**Haines Junctio**	**6.58 105**	*e*Pn	Pn	06 20 26.8	+10
INK	**Inuvik**	**8.68 46**	P	Pn	06 20 42.1	-3.2
	0.1nm,0.3s,baz=235,slow=10,SNR=4.6					
INK			S	Sn	06 22 20.7	-0.4
	0.1nm,0.3s,baz=166,slow=12,SNR=2.7					
INK	**Inuvik**	**8.68 46**	*e*Pn	Pn	06 20 46.5	+1.3
INK			S	Sn	06 22 20.7	-0.4
YKA	**Yellowknife Ar**	**16.30 76**	P	Pn	06 22 23.6	-0.6
	0.1nm,0.3s,baz=282,slow=9.6,SNR=15					
RES	**Resolute Bay**	**22.01 36**	P	**P**	06 23 28.0	+1.4
	0.6nm,0.5s,mb3.1,baz=283,slow=8.6,SNR=7.4					
PDAR	**Pinedale Array**	**31.23 111**	P	**P**	06 24 52.4	+2.0
	0.9nm,0.9s,mb3.5,baz=316,slow=4.1,SNR=7.1					
NVAR	**Mina Array Bea**	**31.46 127**	P	**P**	06 24 54.7	+2.3
	0.7nm,0.6s,mb3.5,baz=322,slow=6.9,SNR=4.9					
NVAR	**Mina Array Bea**	**31.46 127**	P	**P**	06 24 54.7	+2.3
TXAR	**Lajitas Array**	**45.16 116**	P	**P**	06 26 48.4	+1.5
	0.7nm,0.8s,mb3.5,baz=333,slow=6.2,SNR=6.2					
TXAR	**Lajitas Array**	**45.16 116**	P	**P**	06 26 48.4	+1.5
ARCES	**ARCESS Array B**	**47.55 2**	P	**P**	06 27 04.5	-0.6
	2.7nm,0.9s,mb4.1,baz=338,slow=7.0,SNR=2.9					
ZALV	**Zalesovo Beam**	**55.50 324**	P	**P**	06 28 03.2	-1.1
	1.2nm,0.5s,mb4.2,baz=27,slow=7.0,SNR=5.9					
ZALV	**Zalesovo Beam**	**55.50 324**	P	**P**	06 28 03.2	-1.1
BVAR	**Borovoye Array**	**59.79 333**	P	**P**	06 28 33.5	-0.9
	0.7nm,0.5s,mb3.9,baz=46,slow=8.5,SNR=4.1					
MKAR	**Makanchi Array**	**62.66 322**	P	**P**	06 28 53.0	-0.8
	0.6nm,0.5s,mb3.8,baz=54,slow=5.2,SNR=6.5					
MKAR	**Makanchi Array**	**62.66 322**	P	**P**	06 28 53.0	-0.8

*ISCJB **04** 06:26:20.0±0.5, 37.°00N±0.°03×29.°17E±0.°03, h1km±7km,*
Error ellipse: s-maj=4.7km s-min=4.4km az=28.2
*ISK **04** 06:26:19.5, 36.°96N×29.°19E, h7km, MD2.7*
*CSEM **04** 06:26:20.2±0.2, 37.°00N×29.°19E, h8km, MD2.7, Error*
ellipse: s-maj=3.8km s-min=3.6km az=7.0
*DDA **04** 06:26:20.3, 37.°02N×29.°18E, h7km±4km, Md2.9*

ISC 04 06:26:20.5±0.5, 37.°00N±0.°03×29.°18E±0.°03, h8km±6km, n32, σ0.°84/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**58**	*e*PG	**Pg**	**06 26 25.6**	**-0.9**
GLHS				*e*SG	**Sg**	**06 26 31.1**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**58**	*e*Pg	**Pg**	**06 26 25.6**	**-0.9**
GLHS				*e*Sg	**Sg**	**06 26 31.1**	**+0.6**
FETY	**Fethiye**	**0.37**	**192**	*e*PG	**Pg**	**06 26 26.2**	**-1.6**
FETY				*e*SG	**Sg**	**06 26 31.9**	**-0.7**
FETY	**Fethiye**	**0.37**	**192**	*e*Pg	**Pg**	**06 26 26.2**	**-1.6**
FETY				*e*Sg	**Sg**	**06 26 31.9**	**-0.8**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**06 26 27.3**	**-0.8**
GOLH				*i* S	**Sg**	**06 26 34.4**	**+1.2**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**06 26 27.3**	**-0.8**
GOLH				*i* S	**Sg**	**06 26 34.4**	**+1.2**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**06 26 34.0**	**+4.1**
TURN				*i* S	**Sg**	**06 26 44.7**	**+8.5**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pg**	**06 26 34.0**	**+4.2**
ELL	**Elmali**	**0.63**	**113**	*e*PG	**Pg**	**06 26 32.3**	**-0.5**
ELL	**Elmali**	**0.63**	**113**	*e*Pg	**Pg**	**06 26 32.3**	**-0.5**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**06 26 32.5**	**-1.5**
DNZL				*i* S	**Sg**	**06 26 42.6**	**-0.5**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**06 26 32.5**	**-1.5**
DNZL				*i* S	**Sg**	**06 26 42.7**	**-0.5**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**06 26 34.7**	**0.0**
YER				*e*SG	**Sg**	**06 26 45.0**	**+0.8**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**06 26 34.7**	**+0.1**
YER				*e*Sg	**Sg**	**06 26 45.0**	**+0.8**
DENT	**Denizli**	**0.76**	**351**	*e*PG	**Pg**	**06 26 35.5**	**+0.2**
DENT	**Denizli**	**0.76**	**351**	*e*Pg	**Pg**	**06 26 35.5**	**+0.2**
AKAS	**Kas**	**0.83**	**156**	*e*P	**Pg**	**06 26 36.9**	**+0.3**
AKAS				*e*S	**Sg**	**06 26 49.4**	**+1.9**
AKAS	**Kas**	**0.83**	**156**	*e*P	**Pg**	**06 26 36.9**	**+0.3**
AKAS				*e*S	**Sg**	**06 26 49.4**	**+1.9**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**06 26 42.7**	**-0.3**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**06 26 42.7**	**-0.3**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**06 26 44.2**	**+0.5**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**06 26 44.2**	**+0.4**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pb**	**06 26 43.8**	**-0.2**
AYDN				*i* S	**Sg**	**06 27 01.5**	**+1.4**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pb**	**06 26 43.8**	**-0.2**
AYDN				*i* S	**Sg**	**06 27 01.5**	**+1.4**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**06 26 45.0**	**-0.1**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**06 26 45.0**	**-0.1**
KHL	**Karahalli**	**1.35**	**11**	*e*PN	**Pn**	**06 26 45.4**	**-0.2**
KHL	**Karahalli**	**1.35**	**11**	*e*Pn	**Pn**	**06 26 45.4**	**-0.2**
BODT	**Bodrum**	**1.50**	**273**	*e*PN	**Pn**	**06 26 48.0**	**+0.3**
BODT	**Bodrum**	**1.50**	**273**	*e*Pn	**Pn**	**06 26 48.0**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**06 26 48.1**	**0.0**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**06 26 48.1**	**0.0**

*IDC **04** 06:36:36.8±0.8, 45.°96N×154.°63E, h0km, mb3.5/9,*
mb1 3.8/10, mb1mx3.6/25, mbtmp3.6/10, ML3.0/1, MS3.2/2,
Ms1 3.2/2, ms1mx2.5/25, Error ellipse: s-maj=26.8km
s-min=19.0km az=131.0
*ISCJB **04** 06:36:37.6±4.4, 46.°0N±0.°1×154.°5E±0.°1, h17km±31km,*
mb3.6/9, MS3.2/2, Error ellipse: s-maj=25.7km
s-min=10.7km az=153.8
*MOS **04** 06:36:40.9±1.5, 46.°06N×154.°48E, h42km, mb4.1/2, Error*
ellipse: s-maj=22.2km s-min=18.2km az=64.7

ISC 04 06:36:41.4±4.7, 46.°0N±0.°1×154.°6E±0.°1, h29km±33km, n15, σ1.°04/15, mb3.6/9, MS3.2/2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.75**	**263**	PN	**Pn**	**06 37 49.0**	**-2.0**
KUR				*e*S	**Sn**	**06 38 44.5**	**-0.5**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,150nm,0.8s						
KUR				smax			
	comp=E,170nm,0.8s						
PETK	**Petropavlovsk-**	**7.41**	**15**	Pn	**Pn**	**06 38 26.8**	**-0.7**
	comp=E,0.3nm,0.3s,baz=187,slow=10,SNR=3.8						
YSS	**Yuzh-Sakhalins**	**8.20**	**281**	*e*PN	**Pn**	**06 38 40.9**	**+2.6**
KSRS	**Korea Array**	**21.55**	**256**	P	**P**	**06 41 30.2**	**+1.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
KSRS	**Korea Array**	**21.55**	**256**	P	**P**	**06 41 30.2**	**+1.9**
	comp=Z,0.6nm,0.5s,mb3.3,baz=65,slow=10,SNR=3.4						
ZALV	**Zalesovo Beam**	**43.86**	**307**	LR	LR	07 03 20.4	
	comp=Z,23nm,18.5s,MS3.1,baz=67,slow=36						
MKAR	**Makanchi Array**	**48.17**	**299**	P	**P**	**06 45 18.8**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=68,slow=6.3,SNR=6.4						
MKAR				LR	LR	07 06 34.7	
	comp=Z,30nm,20.4s,MS3.3,baz=176,slow=37						
YKA	**Yellowknife Ar**	**50.94**	**37**	P	**P**	**06 45 40.7**	**+1.1**
	comp=Z,0.3nm,0.8s,mb3.3,baz=297,slow=7.3,SNR=4.2						
PDAR	**Pinedale Array**	**64.39**	**54**	P	**P**	**06 47 14.0**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=273,slow=6.0,SNR=3.3						
FINES	**FINESS Array B**	**65.14**	**336**	P	**P**	**06 47 18.9**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=40,slow=7.4,SNR=5.3						
WRA	**Warramunga Arr**	**68.14**	**200**	P	**P**	**06 47 38.0**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.7,baz=20,slow=7.0,SNR=5.3						
ASAR	**Alice Springs**	**71.82**	**200**	P	**P**	**06 48 01.3**	**+0.1**
	comp=Z,0.4nm,0.9s,mb3.4,baz=18,slow=6.7,SNR=3.5						
AKASG	**Malin Array Be**	**72.72**	**327**	P	**P**	**06 48 06.0**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=34,slow=6.5,SNR=2.8						
TXAR	**Lajitas Array**	**76.99**	**61**	P	**P**	**06 48 31.4**	**0.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**76.99**	**61**	P	**P**	**06 48 31.4**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=300,slow=4.0,SNR=6.9						

IDC 04 06:36:48.9±6.5, 25.°74S×177.°45W, h96km±53km, mb3.1/2, mb1 3.3/2, mb1mx3.2/13, mbtmp3.1/2, Error ellipse: s-maj=54.5km s-min=34.3km az=33.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.53**	**187**	P	Pn	06 37 42.2	+0.6
	59nm,0.3s,baz=66,slow=20,SNR=2.9						
RAO				S	Sn	06 38 22.7	+0.3
	81nm,0.3s,baz=105,slow=20,SNR=4.2						
ASAR	**Alice Springs**	**44.05**	**262**	P	P	06 44 47.4	-0.1
	0.2nm,0.4s,baz=98,slow=7.9,SNR=4.8						
WRA	**Warramunga Arr**	**44.61**	**267**	P	P	06 44 52.0	+0.1
	0.6nm,0.7s,baz=103,slow=7.7,SNR=5.9						
NOA	**NORSAR Array B**	**144.22**	**353**	PKP	PKPdf	06 56 13.1	+0.1
	1.1nm,0.7s,baz=11,slow=2.7,SNR=7.1						
AKASG	**Malin Array Be**	**147.76**	**328**	PKPbc	PKPbc	06 56 20.7	-1.5
	0.6nm,0.5s,baz=48,slow=0.5,SNR=3.6						
BRTR	**Keskin Array B**	**150.53**	**306**	PKPbc	PKPbc	06 56 29.9	+0.3
	0.4nm,0.7s,baz=119,slow=3.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	**167.45**	**176**	PKPab	PKPab	06 57 49.9	-0.2
	0.3nm,0.8s,baz=90,slow=2.9,SNR=2.6						

*ISCJB **04** 07:20:05.3±0.2, 61.°53N±0.°03×138.°99W±0.°05, h10km,*
mb4.0/25, MS3.5/3, Error ellipse: s-maj=5.3km
s-min=2.6km az=35.2
*IDC **04** 07:20:05.2±0.8, 61.°48N×139.°11W, h0km, mb3.8/14,*
mb1 4.0/18, mb1mx3.8/30, mbtmp3.8/18, ML3.6/4, MS3.3/2,
Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=14.2km
s-min=10.6km az=43.0
*NEIC **04** 07:20:06.0, 61.°46N×138.°95W, h5km, mb3.8/15,*
ML3.8(AEIC), MW4.1(PGC), After PGC.
NEIC Felt at Burwash Landing, Destruction Bay and Whitehorse.
*PGC **04** 07:20:06.4±2.5, 61.°46N×138.°95W, h5km, ML4.3/5, Mw4.1*
PGC 109km Wnw of Haines Jct., Yt Southern Yukon Territory,
Canada Felt (I-II) at Burwash Landing, Destruction Bay
and Whitehorse, Yt.

ISC 04 07:20:07.0±0.2, 61.°49N±0.°03×138.°97W±0.°05, h10km, n76, σ1.°21/94, mb4.0/25, MS3.5/3, 7D, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	**Haines Junctio**	**0.97**	**133**	*e*Pg	**Pg**	**07 20 23.9**	**-1.9**
HYT				*e*Sg	**Sg**	**07 20 36.5**	**-1.9**
HYT	**Haines Junctio**	**0.97**	**133**	⇑P	**Pg**	**07 20 23.6**	**-2.2**
HYT				⇑S	**Sg**	**07 20 36.8**	**-1.6**
PNL	**Peninsula**	**1.84**	**187**	P	**Pn**	**07 20 36.0**	**-2.6**
BCA3	**Beaver Creek A**	**2.06**	**321**	P	**Pn**	**07 20 39.8**	**-1.7**
WHY	**Whitehorse**	**2.15**	**111**	P	**Pn**	**07 20 42.4**	**-0.5**
WHY	**Whitehorse**	**2.15**	**111**	⇑Pn	**Pn**	**07 20 41.8**	**-1.1**
WHY				⇑Pg	**Pg**	**07 20 45.8**	**-2.5**
WHY				⇑Sn	**Sn**	**07 21 09.8**	**+0.2**
WHY				⇓Sg	**Sg**	**07 21 14.2**	**-2.0**
PLBC	**Pleasant Camp**	**2.41**	**147**	⇑Pn	**Pn**	**07 20 44.6**	**-1.8**
PLBC				⇓Pg	**Pg**	**07 20 48.4**	**-4.8**
PLBC				⇑Sg	**Sg**	**07 21 20.9**	**-3.6**
DAWY	**Dawson**	**2.59**	**356**	*e*Pn	**Pn**	**07 20 49.1**	**+0.2**
DAWY	**Dawson**	**2.59**	**356**	⇑Pn	**Pn**	**07 20 49.0**	**+0.1**
DAWY				⇓Sg	**Sg**	**07 21 29.0**	**-1.1**
MENT	**Mentasta**	**2.66**	**305**	Pn	**Pn**	**07 20 47.9**	**-2.0**
SKAG	**Skagway**	**2.72**	**137**	*e*Pn	**Pn**	**07 20 52.2**	**+1.6**
BMRM	**Bremner River**	**2.78**	**262**	*e*Pn	**Pn**	**07 20 49.4**	**-2.0**
BMRM				*e*Sn	**Sn**	**07 21 24.9**	**0.0**
DIV	**Divide**	**3.30**	**267**	*e*Pn	**Pn**	**07 20 58.5**	**-0.1**
PAX	**Paxson**	**3.39**	**299**	*e*Pn	**Pn**	**07 20 58.9**	**-1.0**
EGAK	**Eagle**	**3.45**	**344**	*e*Pn	**Pn**	**07 21 00.4**	**-0.2**
PMR	**Palmer**	**4.87**	**276**	*e*Pn	**Pn**	**07 21 19.9**	**-0.3**
MCK	**McKinley**	**5.12**	**300**	*e*Pn	**Pn**	**07 21 25.6**	**+1.9**
RC01	**Rabbit Creek A**	**5.21**	**270**	Pn	**Pn**	**07 21 24.4**	**-0.4**
COLA	**College**	**5.26**	**314**	*e*Pn	**Pn**	**07 21 22.5**	**-3.0**
	35nm,0.9s						
DLBC	**Dease Lake**	**5.43**	**120**	Pn	**Pn**	**07 21 27.8**	**-0.1**
	0.8nm,0.3s,baz=303,slow=10,SNR=27						
DLBC				Pg	**Pg**	**07 21 45.6**	**-5.4**
	9.3nm,0.3s,baz=310,slow=12,SNR=19						
DLBC				Lg		07 22 56.1	
	28nm,0.3s,baz=233,slow=26,SNR=13						
DLBC	**Dease Lake**	**5.43**	**120**	*e*Pn	**Pn**	**07 21 28.0**	**0.0**
DLBC	**Dease Lake**	**5.43**	**120**	⇓Pn	**Pn**	**07 21 27.8**	**-0.1**
DLBC				⇓Sg	**Sg**	**07 22 54.7**	**-6.6**
TRF	**Thorofare Moun**	**5.61**	**295**	*e*Pn	**Pn**	**07 21 31.1**	**+0.8**
	16nm,0.6s						
KTH	**Kantishna Hill**	**5.91**	**296**	*e*Pn	**Pn**	**07 21 35.5**	**+1.1**
	11nm,0.4s						
KTH				*e*Sg	**Sg**	**07 23 20.0**	**+3.6**
BPAW	**Bear Paw Mtn.**	**6.10**	**301**	*e*Pn	**Pn**	**07 21 38.3**	**+1.3**
	23nm,0.9s						
PPLA	**Purkeypile**	**6.35**	**289**	*e*Pn	**Pn**	**07 21 39.9**	**-0.5**
	23nm,0.8s						
PPLA				*e*Sg	**Sg**	**07 23 31.6**	**+1.2**
CHUM	**Lake Minchumin**	**6.59**	**297**	*e*Pn	**Pn**	**07 21 43.3**	**-0.5**
	22nm,1.0s						
INK	**Inuvik**	**7.22**	**16**	Pn	**Pn**	**07 21 52.2**	**-0.2**
	0.5nm,0.3s,baz=200,slow=15,SNR=16						
INK				Sn	**Sn**	**07 23 09.8**	**-4.5**
	1.4nm,0.3s,baz=185,slow=16,SNR=5.6						
INK				Lg		07 23 56.5	
	3.3nm,0.3s,baz=125,slow=26,SNR=8.3						
INK	**Inuvik**	**7.22**	**16**	*e*Pn	**Pn**	**07 21 51.9**	**-0.6**
INK	**Inuvik**	**7.22**	**16**	⇓Pn	**Pn**	**07 21 51.8**	**-0.7**
COLD	**Coldfoot**	**7.53**	**325**	*e*Pn	**Pn**	**07 21 56.0**	**-0.7**
	16nm,0.4s						
COLD				*e*Sg	**Sg**	**07 24 03.4**	**-5.0**
KDAK	**Kodiak Island**	**7.83**	**248**	Pn	**Pn**	**07 21 58.1**	**-2.7**
	1.9nm,0.3s,baz=360,slow=13,SNR=11						
KDAK	**Kodiak Island**	**7.83**	**248**	*e*Pn	**Pn**	**07 21 58.5**	**-2.4**
YKA	**Yellowknife Ar**	**11.48**	**74**	Pn	**Pn**	**07 22 49.9**	**-0.7**
	0.6nm,0.3s,baz=271,slow=13,SNR=59						
YKA				Sn	**Sn**	**07 24 52.4**	**-6.3**
	0.3nm,0.3s,baz=271,slow=23,SNR=3.1						
YKA				Lg		07 26 06.7	
	0.2nm,0.3s,baz=76,slow=8.6,SNR=4.1						
YKA	**Yellowknife Ar**	**11.48**	**74**	Pn	**Pn**	**07 22 49.9**	**-0.7**
YKA				Sn	**Sn**	**07 24 52.4**	**-6.3**
YKA				Lg		07 26 06.7	
EDM	**Edmonton**	**16.02**	**110**	*e*Pn	**Pn**	**07 23 51.2**	**-0.8**
JTMT	**Jette**	**19.67**	**123**	*e*P	**Pn**	**07 24 36.6**	**-0.6**
	3.0nm,1.0s						
SWMT	**Swartz Lake**	**19.97**	**123**	Pn	**Pn**	**07 24 42.1**	**+1.3**
	2.0nm,0.9s						
RES	**Resolute Bay**	**20.37**	**32**	P	**P**	**07 24 44.2**	**+1.0**
	1.2nm,0.7s,baz=255,slow=13,SNR=7.0						
RES				S	**S**	**07 28 40.9**	**+10**
	1.5nm,0.8s,baz=145,slow=8.1,SNR=3.5						
RES				Lg		07 30 40.3	
	3.4nm,1.1s,baz=139,slow=20,SNR=2.4						
RES				LR	LR	07 33 18.9	
	comp=Z,77nm,20.1s,MS3.1,baz=161,slow=39						
RES	**Resolute Bay**	**20.37**	**32**	*e*Pn	**P**	**07 24 44.5**	**+1.2**
	2.9nm,0.8s						
FFC	**Flin Flon**	**20.45**	**93**	*e*P	**P**	**07 24 44.4**	**+0.1**
	2.7nm,0.8s						
MSO	**Missoula**	**20.55**	**124**	*e*P	**P**	**07 24 45.0**	**-0.4**
	4.6nm,1.2s						
CHMT	**Chamberlain Mo**	**20.75**	**123**	*e*P	**P**	**07 24 49.1**	**+1.5**
	2.7nm,1.2s						
EGMT	**Eagleton**	**21.34**	**116**	*e*P	**P**	**07 24 54.4**	**+0.5**
	16nm,1.3s,mb4.2						
HRY	**Holter Researc**	**21.50**	**121**	*e*P	**P**	**07 24 56.1**	**+0.5**
LRM	**Limekiln Ridge**	**21.97**	**123**	*e*P	**P**	**07 25 03.1**	**+2.4**
FCC	**Fort Churchill**	**22.18**	**77**	*e*P	**P**	**07 25 03.6**	**+0.8**
	0.3nm,1.3s						
DLMT	**Dillon**	**22.29**	**124**	*e*P	**P**	**07 25 05.3**	**+1.2**
	5.3nm,1.1s,mb3.9						
MCMT	**McKenzie Canyo**	**22.63**	**126**	*e*P	**P**	**07 25 08.3**	**+0.6**
	1.5nm,1.1s,mb3.3						
HLID	**Hailey**	**23.11**	**130**	*e*P	**P**	**07 25 13.4**	**+0.6**
	4.5nm,1.0s,mb3.9						
IMW	**Indian Meadow**	**24.16**	**124**	*e*P	**P**	**07 25 23.7**	**+0.7**
	3.0nm,0.9s,mb3.7						
DCID1	**Drake Creek**	**24.32**	**125**	*e*P	**P**	**07 25 24.4**	**0.0**
	6.9nm,0.9s,mb4.1						
RRI2	**Red Ridge**	**24.47**	**125**	*e*P	**P**	**07 25 27.4**	**+1.6**
	22nm,2.0s,mb4.2						
TPAW	**Teton Pass**	**24.50**	**124**	*e*P	**P**	**07 25 26.4**	**+0.3**
	3.6nm,1.0s,mb3.8						
REDW	**Red Top Meadow**	**24.65**	**124**	*e*P	**P**	**07 25 29.1**	**+1.7**
	12nm,1.6s,mb4.2						
ELK	**Elko**	**25.29**	**134**	P	**P**	**07 25 34.4**	**+1.1**
	0.4nm,0.6s,mb3.1,baz=242,slow=15,SNR=3.6						
PDAR	**Pinedale Array**	**25.66**	**123**	P	**P**	**07 25 38.0**	**+1.4**
	2.0nm,1.0s,mb3.6,baz=326,slow=6.9,SNR=11						
NVAR	**Mina Array Bea**	**26.41**	**141**	P	**P**	**07 25 44.5**	**+1.1**
	1.4nm,0.8s,mb3.6,baz=330,slow=8.5,SNR=9.6						
NVAR	**Mina Array Bea**	**26.41**	**141**	P	**P**	**07 25 44.5**	**+1.1**
MSU	**Marysvale**	**28.35**	**132**	*e*P	**P**	**07 26 02.2**	**+1.4**
PETK	**Petropavlovsk-**	**33.92**	**285**	LR	LR	07 41 27.5	
	comp=Z,41nm,18.9s,MS3.2,baz=264,slow=38						
SCHQ	**Schefferville**	**36.80**	**67**	P	**P**	**07 27 15.3**	**+0.9**
	1.6nm,0.8s,mb3.9,baz=321,slow=10,SNR=4.3						
SCHQ	**Schefferville**	**36.80**	**67**	P	**P**	**07 27 15.3**	**+0.9**
TXAR	**Lajitas Array**	**39.69**	**128**	P	**P**	**07 27 40.0**	**+1.0**
	1.1nm,1.1s,mb3.5,baz=335,slow=5.7,SNR=3.5						
ARCES	**ARCESS Array B**	**48.80**	**7**	P	**P**	**07 28 50.8**	**-0.6**
	2.6nm,0.9s,mb4.3,baz=25,slow=7.2,SNR=6.5						
NOA	**NORSAR Array B**	**55.68**	**17**	P	**P**	**07 29 42.8**	**+0.2**
	1.1nm,0.9s,mb3.9,baz=344,slow=6.6,SNR=3.6						
FINES	**FINESS Array B**	**56.86**	**9**	P	**P**	**07 29 50.8**	**-0.3**
	1.7nm,0.8s,mb4.1,baz=12,slow=9.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**59.80**	**332**	P	**P**	**07 30 10.7**	**-1.0**
	0.4nm,0.4s,mb3.8,baz=57,slow=10,SNR=3.0						
HHC	**Hu-ho-hao-te**	**63.23**	**307**	*e*P	**P**	**07 30 37.0**	**+1.9**
HHC				PcP	PcP	07 31 14.8	+2.4
HHC				PP	PP	07 32 57.3	+3.6
HHC				ScP	ScP	07 35 17.8	+3.4
HHC				S	**S**	**07 39 07.2**	**+0.8**
HHC				ScS	ScS	07 40 27.7	-0.1
HHC				SS	SS	07 43 14.7	+2.9
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,58nm,6.8s						
HHC				LR	LR		
	comp=N,56nm,16.7s,MS4.3						
HHC				LR	LR		
	comp=E,140nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,94nm,16.5s,MS4.0						
AKASG	**Malin Array Be**	**67.76**	**8**	P	**

ELK	**Elko**	**87.85**	**43**	P		**P**	**07 32 06.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**89.67**	**290**	P		**P**	**07 32 17.6**	**+1.5**
	3.8nm,0.8s,mb4.3,baz=142,slow=3.6,SNR=12							
TXAR	**Lajitas Array**	**90.25**	**58**	P		**P**	**07 32 19.1**	**+0.5**
	2.1nm,0.7s,mb4.0,baz=216,slow=6.3,SNR=19							
PDAR	**Pinedale Array**	**92.52**	**44**	P		**P**	**07 32 29.2**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=238,slow=2.8,SNR=8.1							
KURK	**Kurchatov**	**115.27**	**316**	PKP		PKPdf	07 37 53.9	-1.5
	0.5nm,0.4s,baz=114,slow=1.8,SNR=3.2							
BVAR	**Borovoye Array**	**120.50**	**319**	PKP		PKPdf	07 38 04.1	-1.2
	0.6nm,0.4s,baz=124,slow=2.0,SNR=5.4							
AKTK	**Aktyubinsk**	**128.37**	**316**	PKP		PKPdf	07 38 19.2	-1.3
AKTO	**Aktyubinsk**	**128.37**	**316**	PKP		PKPdf	07 38 19.2	-1.3
	0.3nm,0.3s,baz=196,slow=4.4,SNR=3.9							
ARCES	**ARCESS Array B**	**131.86**	**348**	PKP		PKPdf	07 38 24.4	-2.1
	2.6nm,1.0s,baz=30,slow=2.9,SNR=4.7							
ARCES				SKPbc		SKPbc	07 41 02.2	-2.0
	2.8nm,1.0s,baz=27,slow=5.7,SNR=4.1							
ARCES	**ARCESS Array B**	**131.86**	**348**	PKP		PKPdf	07 38 24.4	-2.1
ARCES				SKPbc		SKPbc	07 41 02.2	-2.0
FINES	**FINESS Array B**	**138.44**	**342**	PKP		PKPdf	07 38 38.8	-0.2
	0.8nm,0.7s,baz=15,slow=7.9,SNR=3.7							
FINES				SKPbc		SKPbc	07 41 23.8	-1.0
	4.6nm,0.8s,baz=90,slow=3.8,SNR=20							
FINES	**FINESS Array B**	**138.44**	**342**	PKP		PKPdf	07 38 38.8	-0.2
FINES				SKPbc		SKPbc	07 41 23.8	-1.0
GNI	**Garni**	**139.31**	**304**	SKPbc		SKPbc	07 41 27.1	-0.8
	3.4nm,0.3s,baz=334,slow=22,SNR=3.0							
NOA	**NORSAR Array B**	**142.04**	**351**	PKhKP			07 38 41.1	
	1.0nm,0.8s,baz=16,slow=4.6,SNR=3.6							
NOA				SKPbc		SKPbc	07 41 33.3	-1.0
	0.8nm,0.7s,baz=16,slow=4.2,SNR=4.0							
AKASG	**Malin Array Be**	**145.01**	**327**	PKP		PKPdf	07 38 50.2	-0.8
	2.3nm,0.5s,baz=41,slow=4.3,SNR=13							
AKASG				SKPbc		SKPbc	07 41 40.9	-0.7
	2.8nm,0.6s,baz=40,slow=2.4,SNR=10							
ASF	**Jabal al Asfar**	**146.67**	**293**	PKPbc		PKPbc	07 38 56.5	-0.5
	3.2nm,0.8s,baz=289,slow=2.2,SNR=4.9							
BR131	**Keskin Array S**	**147.68**	**307**	ePKPbc		PKPbc	07 38 58.9	-0.5
BR131				ePKPab		PKPab	07 39 03.5	-0.1
BRTR	**Keskin Array B**	**147.68**	**307**	PKPbc		PKPbc	07 38 58.5	-1.0
	1.6nm,0.7s,baz=140,slow=5.2,SNR=10							
MMAI	**Mount Meron Ar**	**147.83**	**294**	PKPbc		PKPbc	07 39 00.1	+0.1
	7.5nm,0.6s,baz=87,slow=4.5,SNR=12							
EIL	**Elat**	**148.50**	**288**	PKPbc		PKPbc	07 39 01.2	-0.6
	5.5nm,0.7s,baz=164,slow=18,SNR=4.8							
EIL	**Elat**	**148.50**	**288**	PKPbc		PKPbc	07 39 01.2	-0.6
KOLS	**Kolonicke sedl**	**149.50**	**331**	eP		PKPbc	07 39 04.1	+0.5
KOLS	**Kolonicke sedl**	**149.50**	**331**	ePKP		PKPbc	07 39 04.1	+0.5
STHS	**Stebnicka Huta**	**149.59**	**332**	eP		PKPbc	07 39 03.9	+0.1
STHS	**Stebnicka Huta**	**149.59**	**332**	ePKP		PKPbc	07 39 03.9	+0.1
KECS	**Kecovo**	**150.62**	**332**	e		PKPab	07 39 20.4	+5.0
CLL	**Collm**	**150.84**	**343**	*i* P		PKPbc	07 39 05.8	-0.9
CLL				e			07 39 16.0	
CLL	**Collm**	**150.84**	**343**	*i* PKPbc		PKPbc	07 39 05.8	-0.9
	comp=Z,6.0nm,0.8s							
CLL				ePKPab		PKPab	07 39 16.0	-0.2
VYHS	**Vyhne**	**151.30**	**334**	ePKP		PKPab	07 39 18.5	+0.2
GERES	**GERESS Array B**	**152.85**	**340**	PKPbc		PKPbc	07 39 09.5	-1.7
	comp=Z,0.3nm,0.6s,baz=113,slow=3.0,SNR=3.7							
GERES	**GERESS Array B**	**152.85**	**340**	PKPbc		PKPbc	07 39 09.5	-1.7
KEST	**Kesra**	**165.73**	**328**	PKPab		PKPab	07 40 20.2	-1.1
	comp=Z,0.9nm,0.9s,baz=291,slow=11,SNR=3.6							
TORD	**Torodi Ar. Bea**	**169.28**	**188**	PKP		PKPdf	07 39 18.9	-2.7
	comp=Z,0.6nm,1.1s,baz=218,slow=8.7,SNR=3.7							
TORD				PKPab		PKPab	07 40 36.2	-1.0
	comp=Z,0.4nm,0.7s,baz=174,slow=3.6,SNR=2.7							

MOS ***04*** *07:27:32.3±0.9,51°.68N×103°.63E,h8km,mb4.5/1,Error ellipse: s-maj=6.9km s-min=0.0km az=179.3*
MOS Felt (III-IV) at Slyudyanka.
BYKL 04 07:27:32.7±0.3,51°.66N×103°.66E,h4km±4km,9C-8D, FELT I=IV MSK at Slyudyanka, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**0.02**	**334**	⇓*i*PG	Pg	07 27 33.3	-0.2
TLY				*e*S	Sg	07 27 34.3	+0.2
TLY				pmax	pmax		
	comp=Z,249nm,0.2s						
TLY				smax			
	comp=N,10μm,0.4s						
TLY	**Talaya**	**0.02**	**334**	⇑*i*Pg	Pg	07 27 33.7	+0.2
TLY				*e*Sg	Sg	07 27 34.4	+0.3
IRK	**Irkutsk**	**0.70**	**33**	*e*PG	Pg	07 27 45.9	-0.1
IRK				*e*		07 27 55.1	
IRK				pmax	pmax		
	comp=Z,1μm,0.2s						
IRK				smax			
	comp=E,5μm,0.3s						
IRK	**Irkutsk**	**0.70**	**33**	⇑*i*Pg	Pg	07 27 45.9	-0.1
IRK				*e*Sg	Sg	07 27 55.2	+0.1
IRK				Pmax			
	comp=E,1μm,0.2s						
IRK				Smax			
	comp=E,5μm,0.2s						
LSTR	**Listvyanka**	**0.76**	**74**	⇑*i*Pg	Pg	07 27 46.5	-0.7
LSTR				*e*Sg	Sg	07 27 56.3	-0.7
LSTR				Pmax			
	comp=E,35nm,0.1s						
LSTR				Smax			
	comp=E,577nm,0.2s						
ARS	**Arshan**	**0.81**	**289**	*e*PG	Pg	07 27 47.7	-0.5
ARS				*e*		07 27 58.4	
ARS				pmax	pmax		
	comp=Z,109nm,0.1s						
ARS				smax			
	comp=E,1μm,0.2s						
ARS	**Arshan**	**0.81**	**289**	⇑*i*Pg	Pg	07 27 47.8	-0.4
ARS				*e*Pb	Pb	07 27 50.8	+1.5
ARS				*e*Sg	Sg	07 27 58.5	-0.3
ARS				max			
	comp=E,109nm,0.2s						
ARS				Smax			
	comp=E,1μm,0.4s						
ZAK	**Zakamensk**	**1.30**	**191**	⇑*i*PG	Pg	07 27 56.4	-1.2
ZAK				*e*		07 28 13.7	
ZAK				pmax	pmax		
	comp=Z,418nm,0.1s						
ZAK				smax			
	comp=E,2μm,0.5s						
ZAK	**Zakamensk**	**1.30**	**191**	⇓*i*Pg	Pg	07 27 56.6	-1.0
	comp=E,200nm,0.5s						
ZAK				⇓*i*Pg	Pg	07 27 56.6	-1.0
	comp=E,71nm,0.5s						
ZAK				⇑*i*Pg	Pg	07 27 56.6	-1.0
	comp=E,187nm,0.5s						
ZAK				*e*Sg	Sg	07 28 13.8	-0.7
ZAK				*e*		07 28 18.7	
ZAK				Pmax			
	comp=E,423nm,0.1s						
ZAK				max			
	comp=E,2μm,0.5s						
MOY	**Mondy**	**1.66**	**271**	*e*PN	Pn	07 28 03.2	+0.7
MOY				*e*		07 28 24.3	
MOY				pmax	pmax		
	comp=Z,73nm,0.2s						
MOY				smax			
	comp=E,471nm,0.4s						
MOY	**Mondy**	**1.66**	**271**	⇓*i*Pg	Pg	07 28 03.2	-1.3
MOY				*e*Pb	Pb	07 28 03.8	0.0
MOY				*e*Sg	Sg	07 28 24.6	-1.4
MOY				max			
	comp=E,113nm,0.7s						
MOY				Smax			
	comp=E,441nm,0.8s						
FFNB	**Fofonovo**	**1.96**	**77**	⇑*i*Pn	Pn	07 28 06.9	+0.2
FFNB				*e*Pg	Pg	07 28 08.5	-1.8
FFNB				*e*Sg	Sg	07 28 33.9	-1.8
FFNB				Pmax			
	comp=E,185nm,0.3s						
FFNB				Smax			
	comp=E,1μm,0.5s						
TRG	**Tyrgan**	**1.99**	**55**	*e*PN	Pn	07 28 07.3	+0.3
TRG				*e*		07 28 09.0	
TRG				*e*S	Sn	07 28 32.5	+0.2
TRG				*e*		07 28 34.2	
TRG				pmax	pmax		
	comp=Z,81nm,0.3s						
TRG				smax			
	comp=N,1μm,0.3s						
TRG	**Tyrgan**	**1.99**	**55**	⇓*i*Pg	Pg	07 28 07.3	-3.5
TRG				*e*Sg	Sg	07 28 32.5	-4.0
TRG				Pmax			
	comp=N,78nm,0.2s						
TRG				Smax			
	comp=N,1μm,0.4s						
HRMR	**Khuramsha**	**2.05**	**90**	⇑*i*Pg	Pg	07 28 08.5	-3.5
	comp=N,28nm,0.4s						
HRMR				⇓*i*Pg	Pg	07 28 08.5	-3.5
	comp=N,54nm,0.4s						
HRMR				⇓*i*Pg	Pg	07 28 08.5	-3.5
	comp=N,100nm,0.4s						
HRMR				*e*Sg	Sg	07 28 35.2	-3.4
HRMR				Pmax			
	comp=N,155nm,0.6s						
HRMR				Smax			
	comp=N,2μm,0.4s						
ZRHB	**Zarechye**	**2.33**	**66**	*e*Pn	Pn	07 28 12.0	+0.2
ZRHB				*e*Pg	Pg	07 28 14.2	-3.2
ZRHB				*e*Sg	Sg	07 28 44.6	-3.0
ZRHB				Pmax			
	comp=N,65nm,0.8s						
ZRHB				Smax			
	comp=N,679nm,0.8s						
UUDB	**Ulan-Yde**	**2.50**	**84**	*e*Pg	Pg	07 28 17.2	-3.3
UUDB				*e*		07 28 45.3	
UUDB				*e*Sg	Sg	07 28 49.2	-3.6
UUDB				Pmax			
	comp=N,41nm,0.8s						
UUDB				Smax			
	comp=N,163nm,1.0s						
ORL	**Orlik**	**2.53**	**292**	*e*PN	Pn	07 28 17.9	+3.4
ORL				*e*		07 28 50.8	
ORL				pmax	pmax		
	comp=Z,45nm,0.2s						
ORL				smax			
	comp=N,435nm,0.8s						
ORL	**Orlik**	**2.53**	**292**	⇓*i*Pg	Pg	07 28 18.0	-3.2
ORL				*e*Sg	Sg	07 28 51.4	-2.6
ORL				Pmax			
	comp=N,43nm,0.5s						
ORL				Smax			
	comp=N,432nm,0.8s						
OGRR	**Ongureny**	**3.11**	**49**	*e*PN	Pn	07 28 22.7	+0.2
OGRR				*e*		07 28 28.6	
OGRR				*e*S	Sn	07 29 00.2	+0.1
OGRR				*e*		07 29 07.3	
OGRR				pmax	pmax		
	comp=Z,96nm,0.6s						
OGRR				smax			
	comp=E,532nm,0.5s						
OGRR	**Ongureny**	**3.11**	**49**	⇑*i*Pn	Pn	07 28 23.7	+1.2
OGRR				*e*		07 28 29.2	
OGRR				*e*		07 29 00.5	
OGRR				*e*Sg	Sg	07 29 07.1	-5.5
OGRR				max			
	comp=E,85nm,0.3s						
OGRR				Smax			
	comp=E,535nm,0.4s						
MXMB	**Maximikha**	**3.50**	**61**	*e*Pn	Pn	07 28 29.3	+1.5
MXMB				*e*Pg	Pg	07 28 36.4	-3.3
MXMB				*e*		07 29 06.6	
MXMB				*e*Sg	Sg	07 29 22.8	-2.2
MXMB				Pmax			
	comp=E,30nm,0.5s						
MXMB				Smax			
	comp=E,295nm,0.9s						
SYVR	**Suvo**	**4.35**	**60**	*e*Pn	Pn	07 28 40.5	+1.1
SYVR				*e*Pg	Pg	07 28 51.3	-4.6
SYVR				*e*Sg	Sg	07 29 48.0	-4.2
SYVR				Pmax			
	comp=E,6.0nm,0.4s						
SYVR				Smax			
	comp=E,69nm,0.8s						
ULN	**Ulaanbaatar**	**4.39**	**149**	*e*PN	Pn	07 28 42.0	+2.0
ULN				*e*		07 28 51.6	
ULN				*e*		07 29 47.4	
ULN	**Ulaanbaatar**	**4.39**	**149**	*e*Pn	Pn	07 28 41.5	+1.5
ULN				*e*Pg	Pg	07 28 51.0	-5.7
ULN				*e*Sg	Sg	07 29 47.0	-6.6
TDJR	**Todzha**	**4.73**	**282**	*e*Pg	Pg	07 28 56.6	-6.6
TDJR				*e*Sg	Sg	07 29 56.4	-8.0
NIZ	**Nizh Angarsk**	**5.40**	**38**	*e*PN	Pn	07 28 54.8	+0.9
NIZ				*e*		07 29 09.6	
NIZ				*e*S	Sn	07 29 54.7	-1.8
NIZ				*e*		07 30 17.9	
NIZ				pmax	pmax		
	comp=Z,29nm,0.5s						
NIZ				smax			
	comp=N,139nm,0.6s						
NIZ	**Nizh Angarsk**	**5.40**	**38**	*e*Pn	Pn	07 28 54.9	+1.0
NIZ				*e*Pg	Pg	07 29 08.9	-7.2
NIZ				*e*Sn	Sn	07 29 54.6	-1.9
NIZ				*e*Sg	Sg	07 30 18.4	-7.6
NIZ				Pmax			
	comp=N,29nm,0.8s						
NIZ				Smax			
	comp=N,141nm,0.5s						
YLYR	**Ulyunkhan**	**5.54**	**51**	*e*PN	Pn	07 28 57.3	+1.5
YLYR				*e*		07 29 12.9	
YLYR				*e*		07 30 21.6	
YLYR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YLYR				smax			
	comp=N,84nm,1.1s						
YLYR	**Ulyunkhan**	**5.54**	**51**	*e*Pn	Pn	07 28 56.6	+0.8
YLYR				*e*Pg	Pg	07 29 12.4	-6.2
YLYR				*e*Sg	Sg	07 30 22.6	-7.7
YLYR				Pmax			
	comp=N,5.0nm,0.5s						
YLYR				Smax			
	comp=N,83nm,0.8s						
KPC	**Khapcheranga**	**5.88**	**106**	*e*Pn	Pn	07 28 59.4	-1.1
KPC				*e*Pg	Pg	07 29 19.5	-5.7
KPC				*e*Sg	Sg	07 30 35.7	-5.6
KPC				Pmax			
	comp=N,6.0nm,1.0s						
KPC				Smax			
	comp=N,63nm,1.0s						
KMO	**Kumora**	**6.16**	**44**	*e*PN	Pn	07 29 06.8	+2.5
KMO				*e*		07 29 24.4	
KMO				*e*S	Sn	07 30 12.5	-2.5
KMO	**Kumora**	**6.16**	**44**	*e*Pn	Pn	07 29 05.5	+1.2
KMO				*e*Pg	Pg	07 29 22.9	-7.6
KMO				*e*Sg	Sg	07 30 41.9	-8.3
KMO				Pmax			
	comp=N,16nm,0.8s						
KMO				Smax			
	comp=N,153nm,1.1s						
UKT	**Uakit**	**7.06**	**53**	*e*PN	Pn	07 29 20.1	+3.4
UKT				*e*		07 29 40.4	
UKT				*e*S	Sn	07 30 36.4	-1.0
UKT	**Uakit**	**7.06**	**53**	*e*	Pn	07 29 22.8	+6.1
UKT				*e*Pg	Pg	07 29 39.2	-8.7
UKT				*e*Sg	Sg	07 31 10.2	-9.1
UKT				Pmax			
	comp=N,5.0nm,1.1s						
UKT				Smax			
	comp=N,45nm,1.5s						
NLYR	**Nelyaty**	**8.57**	**51**	*e*PG	Pg	07 30 07.6	-9.1
NLYR				*e*		07 31 59.4	
NLYR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NLYR				smax			
	comp=N,44nm,1.4s						
NLYR	**Nelyaty**	**8.57**	**51**	*e*Sg	Sg	07 31 58.5	-9.1
NLYR				Smax			
	comp=N,43nm,1.3s						
BOD	**Bodaibo**	**8.59**	**40**	*e*Pn	Pn	07 29 37.2	-0.4
BOD				*e*Pg	Pg	07 30 07.7	-9.3
BOD				*e*Sg	Sg	07 31 58.9	-9.2
BOD				Pmax			
	comp=N,7.0nm,1.0s						
BOD				Smax			
	comp=N,72nm,1.5s						
TUP	**Tupik**	**10.20**	**68**	*e*	Sn	07 31 53.9	-0.4
TUP				*e*Sg	Sn	07 32 49.0	+55
TUP				Smax			
	comp=N,29nm,1.5s						
NVS	**Novosibirsk**	**12.63**	**293**	*e*P	Pn	07 30 42.8	+10
ARU	**Arti**	**26.52**	**298**	*e*P	P	07 33 10.3	-0.7
ARU				S	S	07 37 45.2	-0.3
ARU				SS		07 38 46.5	

BJI ***04*** *07:34:45.5,5°.12N×125°.54E,h251km,mB4.7/18,mb4.6/29*

ISCJB ***04*** *07:34:46.1±0.3,5°.37N±0°.03×125°.47E±0°.05,h239km±2km, mb4.5/71,Error ellipse: s-maj=8.0km s-min=4.9km az=162.6*
IDC ***04*** *07:34:47.0±0.6,5°.35N×125°.30E,h231km±5km,mb4.1/26, mb1 4.2/26,mb1mx4.1/31,mbtmp4.1/26,Error ellipse: s-maj=14.1km s-min=6.6km az=77.0*
MAN ***04*** *07:34:47,5°.38N×125°.58E,h220km,mb5.2,ML4.2,MS4.4*
NEIC ***04*** *07:34:47.8±0.7,5°.39N×125°.43E,h241km±6km,mb4.5/39, Error ellipse: s-maj=8.1km s-min=4.5km az=72.0*
DJA ***04*** *07:34:49,5°.34N×125°.61E,h228km,mb4.7/19*
ISC 04 07:34:47.1±0.3,5°.37N±0°.03×125°.48E±0°.05,h232km±2km, h243km±6.1km:pP-P,n131,σ1906/142,mb4.5/71,2C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.89**	**324**	*e*P		**Pn**	**07 35 19.6**	**0.0**
GSPH				*i* S		**S**	**07 35 43.8**	**-1.2**
KCP	**Kidapawan**	**1.67**	**347**	⇑*i*P		**Pn**	**07 35 25.8**	**+0.6**
KCP				*i* S		**S**	**07 35 54.8**	**-0.3**
DAV	**Davao City (W)**	**1.69**	**3**	P		**Pn**	**07 35 26.4**	**+1.0**
	180nm,0.3s,baz=71,slow=2.7,SNR=26						
DAV				S		**S**	**07 35 55.6**	**+0.2**
	566nm,0.3s,baz=189,slow=21,SNR=19						
DAV	**Davao City (W)**	**1.69**	**3**	*e*Pn		**Pn**	**07 35 26.7**	**+1.3**
DAV				*e*Sn		**S**	**07 35 55.6**	**+0.2**
DMPH	**Davao City--Mi**	**1.70**	**1**	⇓*i*P		**Pn**	**07 35 26.3**	**+0.9**
DMPH				*i* S		**S**	**07 35 59.9**	**+4.4**
MATI	**Mati**	**1.75**	**26**	*e*P		**Pn**	**07 35 25.9**	**+0.1**
MATI				*e*S		**S**	**07 35 54.5**	**-1.8**
CTBH	**Cotabato--PC H**	**2.21**	**326**	*e*P		**Pn**	**07 35 30.6**	**+0.5**
BUKP	**Musuan**	**2.53**	**351**	*e*P		**Pn**	**07 35 34.3**	**+0.9**
BUKP				*e*S		**S**	**07 36 11.2**	**+1.4**
BIPH	**Bislig**	**2.93**	**17**	⇓*i*P		**Pn**	**07 35 38.1**	**+0.4**
BIPH				*i* S		**S**	**07 36 16.6**	**-1.1**
CGP	**Cagayan de Oro**	**3.16**	**346**	⇓*e*P		**Pn**	**07 35 38.0**	**-2.3**
CGP				*e*S		**S**	**07 36 19.3**	**-3.1**
PAGZ	**Pagadian**	**3.22**	**320**	*e*P		**Pn**	**07 35 41.5**	**+0.5**
DCPH	**Dipolog City**	**3.83**	**327**	⇑*e*P		**Pn**	**07 35 49.9**	**+1.8**
KKM	**Kota Kinabalu**	**9.24**	**275**	*e*Pn		**Pn**	**07 36 57.3**	**+0.9**
	11nm,0.5s						
KSM	**Kuching**	**15.63**	**256**	*e*Pn		**Pn**	**07 38 16.9**	**+1.2**
	25nm,0.5s						
TWG	**Pinlang**	**17.86**	**347**	*e*P		**P**	**07 38 37.7**	**-1.8**
	36nm,0.4s						
YULB	**Yu-li**	**18.36**	**348**	*e*P		**P**	**07 38 42.7**	**-2.2**
	22nm,0.5s						
TPUB	**Ta-pu**	**18.43**	**346**	*e*P		**P**	**07 38 44.3**	**-1.2**
	40nm,0.6s						
NACB	**Ninganchiao**	**19.07**	**349**	*e*P		**P**	**07 38 51.5**	**-0.9**
	12nm,0.6s						
KAKA	**Kakadu**	**19.25**	**159**	⇓*i*P		**P**	**07 38 53.1**	**-1.4**
	81nm,0.6s						
KAKA	**Kakadu**	**19.25**	**159**	*e*P		**P**	**07 38 53.2**	**-1.3**
	262nm,0.6s						
YHNB	**Yeheng**	**19.59**	**349**	*e*P		**P**	**07 38 57.3**	**-0.7**
	14nm,0.3s						
QIZ	**Qiongzhong**	**20.41**	**313**	*e*P		**P**	**07 39 05.7**	**-1.1**
JOW	**Kunigami**	**21.51**	**7**	P		**P**	**07 39 19.4**	**+1.3**
	34nm,0.5s,mb5.1,baz=193,slow=9.8,SNR=22						
JOW	**Kunigami**	**21.51**	**7**	P		**P**	**07 39 19.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**23.32**	**180**	*e*P		**P**	**07 39 34.8**	**0.0**
	38nm,0.3s,mb5.4						
FITZ	**Fitzroy Crossi**	**23.32**	**180**	P		**P**	**07 39 34.9**	**+0.1**
	18nm,0.3s,mb5.1,baz=1.5,slow=8.4,SNR=108						
FITZ	**Fitzroy Crossi**	**23.32**	**180**	*e*P		**P**	**07 39 34.8**	**0.0**
	21nm,0.4s,mb5.0						
KULM	**Kulim**	**24.72**	**271**	*e*P		**P**	**07 39 47.5**	**0.0**
	8.4nm,0.7s,mb4.5						
PSI	**Prapat**	**26.61**	**266**	P		**P**	**07 40 04.6**	**+0.1**
	16nm,0.7s,mb4.8,baz=64,slow=4.3,SNR=9.8						
WRAB	**Tennant Creek**	**26.62**	**161**	*e*P		**P**	**07 40 04.6**	**+0.2**
	16nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**26.62**	**161**	P		**P**	**07 40 03.9**	**-0.7**
	7.3nm,0.5s,mb4.6,baz=329,slow=11,SNR=101						
WB2	**Warramunga Arr**	**26.62**	**161**	*e*P		**P**	**07 40 03.7**	**-0.9**
MBWA	**Marble Bar**	**26.96**	**192**	*e*P		**P**	**07 40 06.7**	**-0.8**
NJ2	**Nanjing**	**27.26**	**348**	*e*P		**P**	**07 40 11.2**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.0						
GYA	**Guiyang**	**27.61**	**321**	⇓*i*P		**P**	**07 40 15.4**	**+2.1**
GYA				pP	pP	07 41 02.6	+3.3
GYA				PP	PP	07 41 18.3	-2.5
GYA				PcP	PcP	07 43 25.5	+0.8
GYA				S	**S**	**07 44 38.9**	**+1.2**
GYA				PcS	PcS	07 47 05.6	-1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
GYA				pmax	pmax		
	comp=Z,80nm,4.2s						
CMAR	**Chiang Mai Arr**	**28.98**	**299**	P		**P**	**07 40 25.6**	**+0.1**
	comp=Z,2.1nm,0.7s,mb3.9,baz=119,slow=7.8,SNR=7.9						
CMAR				ScP	ScP	07 46 47.5	-0.2
	comp=Z,1.2nm,0.5s,baz=163,slow=1.7,SNR=10						
ENH	**Enshi**	**28.99**	**331**	*e*P		**P**	**07 40 25.6**	**+0.1**
	comp=Z,10nm,0.7s,mb4.6						
CHTO	**Chiang Mai**	**29.12**	**300**	*e*P		**P**	**07 40 26.6**	**-0.1**
	comp=Z,28nm,2.0s,mb4.5						
KMI	**Kunming**	**29.35**	**314**	P		**P**	**07 40 30.8**	**+2.1**
KMI				pP	pP	07 41 19.6	+4.6
KMI				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**30.01**	**164**	P		**P**	**07 40 34.4**	**-0.1**
	comp=Z,7.3nm,0.4s,mb4.6,baz=340,slow=7.1,SNR=242						
ASAR				S		**S**	**07 45 14.8**	**-0.4**
	comp=Z,1.7nm,1.1s,baz=344,slow=18,SNR=5.5						
ASAR				ScP	ScP	07 46 50.2	-0.6
	comp=Z,0.7nm,0.4s,baz=343,slow=3.2,SNR=12						
KSRS	**Korea Array**	**32.01**	**4**	P		**P**	**07 40 53.3**	**+1.4**
	comp=Z,16nm,0.7s,mb4.6,baz=184,slow=10,SNR=61						
CTA	**Charters Tower**	**32.52**	**142**	*e*P		**P**	**07 40 57.3**	**+0.8**
	comp=Z,8.0nm,0.9s,mb4.2						
CTA	**Charters Tower**	**32.52**	**142**	P		**P**	**07 40 57.6**	**+1.1**
	comp=Z,7.5nm,0.7s,mb4.4,baz=327,slow=9.6,SNR=11						
CTAO	**Charters Tower**	**32.52**	**142**	*e*P		**P**	**07 40 57.4**	**+1.0**
	comp=Z,12nm,0.8s,mb4.5						
MAJO	**Matsushiro**	**33.15**	**19**	*e*P		**P**	**07 41 01.3**	**-0.5**
	comp=Z,5.6nm,0.8s,mb4.2						
MAT	**Matsushiro**	**33.15**	**19**	P		**P**	**07 41 01.5**	**-0.3**
MJAR	**Matsushiro Arr**	**33.15**	**19**	P		**P**	**07 41 01.9**	**+0.1**
	comp=Z,2.3nm,0.6s,mb3.9,baz=195,slow=9.3,SNR=9.8						
BJT	**Baijiatuau**

CN2 eS S 07 47 22.0 +0.5
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,15.0s
CN2 LR LR
comp=E,200nm,15.0s
CN2 LR LR
comp=Z,200nm,14.0s
NWAO Narrogin (SRO) 38.88 191 P **P 07 41 50.5 +0.2**
comp=Z,10.0nm,0.3s,mb4.8,baz=22,slow=6.2,SNR=20
NWAO Narrogin (SRO) 38.88 191 eP **P 07 41 50.4 +0.1**
comp=Z,7.3nm,0.4s,mb4.6
MDJ Mudanjiang 39.26 5 P **P 07 41 54.0 +0.8**
MDJ pmax pmax
comp=Z,33nm,0.6s,mb5.0
MDJ pmax pmax
comp=Z,90nm,3.5s
MDJ Mudanjiang 39.26 5 eP **P 07 41 54.8 +1.5**
comp=Z,27nm,0.9s,mb4.8
EIDS Eidsvold 39.40 142 eP **P 07 41 54.2 -0.5**
comp=Z,9.4nm,0.8s,mb4.4
STKA Stephens Creek 40.10 158 ||iP **P 07 42 01.1 +0.7**
comp=Z,12nm,0.8s,mb4.4
STKA Stephens Creek 40.10 158 P **P 07 42 01.1 +0.8**
comp=Z,14nm,0.6s,mb4.6,baz=336,slow=7.4,SNR=38
STKA ScP ScP 07 47 25.7 -1.5
comp=Z,1.5nm,0.6s,baz=5.5,slow=2.8,SNR=3.0
STKA Stephens Creek 40.10 158 eP **P 07 42 01.0 +0.6**
comp=Z,3.3nm,0.8s,mb3.8
ASAJ Asahikawa 41.42 19 P **P 07 42 12.9 +2.0**
comp=Z,5.7nm,0.3s,mb4.5,baz=238,slow=13,SNR=9.0
TAPN Taplejung 42.05 306 eP **P 07 42 16.6 +0.2**
comp=Z,28nm,0.4s,mb5.0
ODAN Odare 42.11 305 eP **P 07 42 17.0 +0.1**
RAMN Ramite 42.79 304 eP **P 07 42 22.6 +0.2**
comp=Z,24nm,0.5s,mb4.9
JIRN Jiri 43.41 305 eP **P 07 42 27.2 -0.1**
ARMA Armidale 43.51 146 eP **P 07 42 28.8 +0.8**
ARMA Armidale 43.51 146 eP **P 07 42 29.0 +1.0**
comp=Z,13nm,0.8s,mb4.3
GUN Gumba 43.76 305 eP **P 07 42 30.3 +0.2**
comp=Z,50nm,0.6s,mb5.0
HIA Hailar 44.01 355 eP **P 07 42 32.4 +0.8**
comp=Z,7.9nm,0.8s,mb4.1
PKI Pulchoki 44.01 305 eP **P 07 42 31.7 -0.4**
PKIN Phulchoki 44.02 305 eP **P 07 42 31.6 -0.6**
comp=Z,7.2nm,0.2s,mb4.6
KKN Kakani 44.20 305 eP **P 07 42 33.3 -0.3**
comp=Z,14nm,0.4s,mb4.7
GKN Gorkha 44.81 305 eP **P 07 42 37.7 -0.6**
comp=Z,15nm,0.4s,mb4.6
ULN Ulaanbaatar 45.19 343 eP **P 07 42 40.8 -0.2**
comp=Z,1.6nm,0.5s,mb3.6
ULN ePcP PcP 07 44 17.3 +0.3
SONM Songino Array 45.36 342 P **P 07 42 42.3 0.0**
comp=Z,2.3nm,0.7s,mb3.6,baz=152,slow=8.7,SNR=12
SONM PcP PcP 07 44 17.9 +0.3
comp=Z,2.0nm,0.7s,baz=169,slow=4.3,SNR=7.0
SONM ScP ScP 07 47 47.5 -0.6
comp=Z,0.7nm,0.6s,baz=149,slow=6.7,SNR=2.4
KOLN Koldanda 45.57 304 eP **P 07 42 44.5 +0.1**
comp=Z,66nm,0.4s,mb5.3
CAN Canberra 46.13 153 eP **P 07 42 50.1 +1.6**
comp=Z,13nm,0.7s,mb4.4
CNB Canberra Magne 46.29 153 eP **P 07 42 51.6 +1.9**
TOO Toolangi 46.61 158 eP **P 07 42 53.6 +1.4**
TLY Talaya 49.59 342 eP **P 07 43 14.9 +0.1**
comp=Z,6.5nm,0.7s,mb4.1
TLY epP pP 07 44 04.0 -1.1
WMQ Urumqi 50.67 325 eP **P 07 43 23.7 +0.7**
WMQ pmax pmax
comp=Z,11nm,1.0s,mb4.2
TAU Tasmania Unive 51.98 160 eP **P 07 43 31.4 -1.3**
comp=Z,66nm,1.5s,mb4.8
PETK Petropavlovsk- 54.41 23 P **P 07 43 52.2 +2.0**
comp=Z,4.1nm,0.7s,mb4.1,baz=202,slow=2.4,SNR=4.9
PETK Petropavlovsk- 54.41 23 P **P 07 43 52.2 +2.0**
MKAR Makanchi Array 55.50 325 P **P 07 43 58.0 -0.2**
comp=Z,4.7nm,0.5s,mb4.3,baz=124,slow=8.2,SNR=34
MKAR PcP PcP 07 44 54.1 -1.0
comp=Z,1.8nm,0.5s,baz=149,slow=3.4,SNR=7.2
MKAR ScP ScP 07 48 29.7 -2.1
comp=Z,0.8nm,0.8s,baz=115,slow=6.1,SNR=3.1
KSH Kashi 56.01 315 eP **P 07 44 03.0 +1.1**
KSH ePcP PcP 07 44 59.1 +1.8
KSH ePP PP 07 46 11.0 +1.5
KSH ePcS PcS 07 48 58.1 +0.1
KSH eS **S 07 51 27.4 -4.4**
KSH eScS ScS 07 53 25.0 -2.4
KSH eSS SS 07 55 20.2 -1.6
KSH pmax pmax
comp=Z,9.0nm,0.4s,mb4.7
KSH pmax pmax
comp=Z,150nm,6.2s
KSH LR LR
comp=N,150nm,4.2s
KSH LR LR
comp=E,150nm,5.0s
KSH LR LR
comp=Z,290nm,5.3s
YAK Yakutsk 56.62 2 eP **P 07 44 06.5 +0.7**
comp=Z,103nm,0.8s,mb5.5
KZA Kyzart 57.57 317 P **P 07 44 13.8 +1.0**
SNR=7.3
TKM2 Tokmak 2 57.70 318 P **P 07 44 14.0 +0.4**
SNR=5.6
TKM2 Tokmak 2 57.70 318 eP **P 07 44 14.0 +0.4**
comp=Z,2.9nm,0.6s,mb4.1
UCH Uchtor 58.13 317 P **P 07 44 17.6 +1.0**
SNR=9.3
UCH Uchtor 58.13 317 eP **P 07 44 17.4 +0.8**
comp=Z,6.8nm,0.7s,mb4.4
AAK Ala-Archa 58.31 318 P **P 07 44 17.7 -0.2**
comp=Z,1.1nm,0.4s,mb3.8,baz=160,slow=15,SNR=4.4
AAK Ala-Archa 58.31 318 eP **P 07 44 17.9 0.0**
comp=Z,3.3nm,1.0s,mb3.9
ZALV Zalesovo Beam 58.57 333 P **P 07 44 17.9 -1.5**
comp=Z,2.8nm,0.3s,mb4.3,baz=120,slow=6.3,SNR=11
ZALV Zalesovo Beam 58.57 333 P **P 07 44 17.9 -1.5**
USP Ospenovka 58.57 318 P **P 07 44 19.5 -0.2**
SNR=8.2
AML Almayashu 58.65 317 P **P 07 44 21.0 +0.7**
SNR=12
AML Almayashu 58.65 317 eP **P 07 44 20.8 +0.5**
comp=Z,16nm,1.1s,mb4.6
EKS2 Erkin-Say 58.80 317 P **P 07 44 21.7 +0.4**
SNR=7.4
EKS2 Erkin-Say 58.80 317 eP **P 07 44 21.6 +0.3**
comp=Z,6.2nm,0.7s,mb4.3
KURK Kurchatov 59.70 328 P **P 07 44 26.5 -0.7**
comp=Z,9.3nm,0.5s,mb4.7,baz=129,slow=6.4,SNR=93
KURK Kurchatov 59.70 328 eP **P 07 44 26.5 -0.7**
comp=Z,17nm,0.6s,mb4.8
BVAR Borovoye Array 65.27 327 P **P 07 45 03.2 -0.9**
comp=Z,2.2nm,0.5s,mb4.0,baz=128,slow=9.6,SNR=18
BRVK Borovoye 65.34 327 eP **P 07 45 03.7 -0.8**
comp=Z,4.2nm,0.7s,mb4.2
TIXI Tiksi 66.23 1 eP **P 07 45 09.6 -0.3**
comp=Z,42nm,0.4s,mb5.4
ABKAR Akbulak array 70.10 321 eP **P 07 45 33.0 -1.2**
comp=Z,5.8nm,0.6s,mb4.4
AKTK Aktyubinsk 71.61 322 P **P 07 45 42.2 -1.0**
AKTO Aktyubinsk 71.61 322 P **P 07 45 42.2 -1.0**
comp=Z,5.6nm,0.4s,mb4.5,baz=104,slow=8.5,SNR=24
ARU Arti 72.89 328 eP **P 07 45 48.5 -2.2**
comp=Z,7.4nm,0.5s,mb4.6
MCK McKinley 83.26 27 eP **P 07 46 48.2 +0.7**
comp=Z,7.3nm,0.6s,mb4.6
JOF Joensuu 87.16 333 ep **P 07 47 03.7 -3.0**
comp=Z,7.7nm,0.5s,mb4.7
KEV Kevo 87.93 340 ep **P 07 47 09.6 -0.7**
BRTR Keskin Array B 88.02 310 P **P 07 47 09.4 -1.9**
comp=Z,0.7nm,0.4s,mb3.8,baz=136,slow=3.9,SNR=7.1
KMBO Kilima Mbogo 88.34 269 P **P 07 47 12.5 -0.9**
comp=Z,1.0nm,0.5s,mb3.9,baz=238,slow=23,SNR=3.8
KMBO Kilima Mbogo 88.34 269 P **P 07 47 12.5 -0.9**
ARCES ARCESS Array B 88.49 340 P **P 07 47 11.4 -1.5**
comp=Z,2.3nm,0.6s,mb4.2,baz=81,slow=6.2,SNR=16
INK Inuvik 89.10 21 eP **P 07 47 14.6 -1.2**
comp=Z,0.7nm,0.7s,mb3.6
KAF Kangasniemi 89.57 332 ep **P 07 47 15.2 -2.9**
comp=Z,2.6nm,0.4s,mb4.4
FINES FINESS Array B 89.81 332 P **P 07 47 17.5 -1.7**
comp=Z,1.2nm,0.4s,mb4.1,baz=64,slow=4.4,SNR=25

RES Resolute Bay 96.43 10 eP **P 07 47 49.9 +0.5**
comp=Z,2.6nm,1.2s,mb4.3
NB2 NORSAR Subarra 96.77 333 P **P 07 47 49.1 -2.1**
comp=Z,1.5nm,0.7s,mb4.3,baz=66,slow=4.6
NOA NORSAR Array B 96.77 333 P **P 07 47 49.1 -2.1**
comp=Z,1.6nm,0.7s,mb4.4,baz=67,slow=4.6,SNR=10.0
YKA Yellowknife Ar 98.52 24 P **P 07 47 58.9 -0.1**
comp=Z,0.4nm,0.8s,mb3.8,baz=302,slow=4.8,SNR=7.6
YKA Yellowknife Ar 98.52 24 P **P 07 47 58.9 -0.1**
SCHQ Schefferville 119.14 8 PKP PKPdf 07 53 08.2 -0.2
comp=Z,0.9nm,0.5s,baz=52,slow=3.4,SNR=4.1
TORD Torodi Ar. Bea 121.22 289 PKP PKPdf 07 53 12.8 -0.7
comp=Z,2.0nm,0.6s,baz=50,slow=1.9,SNR=16
TXAR Lajitas Array 121.56 51 PKP PKPdf 07 53 15.0 +1.2
comp=Z,0.2nm,0.6s,baz=13,slow=1.7,SNR=4.5
TXAR Lajitas Array 121.56 51 PKP PKPdf 07 53 15.0 +1.2

*ISCJB **04** 07:34:48.7±0.6, 37°.00N±0°.03×29°.20E±0°.04, h1km±6km, Error ellipse: s-maj=5.6km s-min=4.3km az=13.9*
*CSEM **04** 07:34:48.7±0.2, 36°.98N×29°.25E, h8km, MD2.6, Error ellipse: s-maj=4.8km s-min=4.3km az=117.0*
*ISK **04** 07:34:48.1, 36°.94N×29°.28E, h9km, MD2.6*
*DDA **04** 07:34:49.2, 37°.03N×29°.21E, h7km±5km, Md2.9*
ISC 04 07:34:49.1±0.5, 37°.00N±0°.03×29°.20E±0°.04, h8km±6km, n26, σ1°06/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**56**	ePG	**Pg**	**07 34 53.8**	**-0.9**
GLHS				eSG	**Sg**	**07 34 58.6**	**0.0**
GLHS	**Glhisar (BURDU**	**0.28**	**56**	ePg	**Pg**	**07 34 53.8**	**-1.0**
GLHS				eSg	**Sg**	**07 34 58.6**	**0.0**
FETY	**Fethiye**	**0.37**	**195**	ePG	**Pg**	**07 34 55.0**	**-1.4**
FETY				eSG	**Sg**	**07 35 01.0**	**-0.3**
FETY	**Fethiye**	**0.37**	**195**	ePg	**Pg**	**07 34 55.0**	**-1.4**
FETY				eSg	**Sg**	**07 35 01.0**	**-0.3**
GOLH	**Golhisar**	**0.37**	**50**	iP	**Pg**	**07 34 55.5**	**-0.9**
GOLH				iS	**Sg**	**07 35 02.4**	**+1.0**
GOLH	**Golhisar**	**0.37**	**50**	iP	**Pg**	**07 34 55.5**	**-0.9**
GOLH				iS	**Sg**	**07 35 02.3**	**+0.9**
ELL	**Elmali**	**0.62**	**113**	ePG	**Pg**	**07 34 59.2**	**-1.8**
ELL	**Elmali**	**0.62**	**113**	ePg	**Pg**	**07 34 59.2**	**-1.8**
DNZL	**Cakiroluk**	**0.70**	**350**	iP	**Pg**	**07 35 01.6**	**-1.1**
DNZL				iS	**Sg**	**07 35 12.7**	**+0.7**
DNZL	**Cakiroluk**	**0.70**	**350**	iP	**Pg**	**07 35 01.6**	**-1.1**
DNZL				iS	**Sg**	**07 35 12.7**	**+0.8**
YER	**Yerkesik**	**0.75**	**281**	ePG	**Pg**	**07 35 04.8**	**+1.3**
YER	**Yerkesik**	**0.75**	**281**	ePg	**Pg**	**07 35 04.8**	**+1.2**
AKAS	**Kas**	**0.83**	**157**	iP	**Pg**	**07 35 05.4**	**+0.4**
AKAS				eS	**Sg**	**07 35 18.2**	**+2.4**
AKAS	**Kas**	**0.83**	**157**	iP	**Pg**	**07 35 05.4**	**+0.4**
AKAS				eS	**Sg**	**07 35 18.2**	**+2.5**
KORT	**Korkueli**	**0.92**	**89**	iP	**Pg**	**07 35 06.6**	**-0.2**
KORT				iS	**Sg**	**07 35 21.1**	**+2.4**
KORT	**Korkueli**	**0.92**	**89**	iP	**Pg**	**07 35 06.6**	**-0.2**
AYDN	**Tasoluk**	**1.25**	**303**	iP	**Pn**	**07 35 13.6**	**+0.7**
AYDN	**Tasoluk**	**1.25**	**303**	iP	**Pn**	**07 35 13.6**	**+0.8**
DAT	**Datca**	**1.33**	**259**	ePN	**Pn**	**07 35 14.3**	**+0.3**
DAT	**Datca**	**1.33**	**259**	ePn	**Pn**	**07 35 14.3**	**+0.3**
KHL	**Karahalli**	**1.35**	**11**	ePN	**Pn**	**07 35 13.5**	**-0.7**
KHL	**Karahalli**	**1.35**	**11**	ePn	**Pn**	**07 35 13.5**	**-0.8**
KHAL	**Karahalli**	**1.39**	**9**	iP	**Pn**	**07 35 14.8**	**0.0**
KHAL				iS	**Sb**	**07 35 33.7**	**+0.4**
KHAL	**Karahalli**	**1.39**	**9**	iP	**Pn**	**07 35 14.8**	**0.0**
KHAL				iS	**Sb**	**07 35 33.7**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	ePN	**Pn**	**07 35 15.7**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.51**	**71**	ePn	**Pn**	**07 35 15.7**	**-0.8**

*IDC **04** 07:53:17.6±0.9, 12°.28N×144°.16E, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.0/24, mbtmp4.0/12, MS3.7/1, Ms1 3.7/1, ms1mx2.6/23, Error ellipse: s-maj=29.1km s-min=16.2km az=104.0*
*NEIC **04** 07:53:18.5±6.6, 12°.29N×144°.10E, h6km±41km, mb4.5/1, Error ellipse: s-maj=24.3km s-min=12.2km az=99.0*
*ISCJB **04** 07:53:21.0±0.7, 12°.28N±0°.09×144°.1E±0°.1, h33km, mb4.0/13, Error ellipse: s-maj=20.9km s-min=9.3km az=30.8*
ISC 04 07:53:19.7±6.2, 12°.29N±0°.10×144°.1E±0°.1, h13km±38km, n22, σ0°77/21, mb4.0/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.48**	**29**	Pn	**Pn**	**07 53 46.0**	**0.0**
	164nm,0.3s,baz=138,slow=0.7,SNR=103						
GUMO				Sn	**Sn**	**07 54 05.1**	**-0.1**
	286nm,0.3s,baz=17,slow=21,SNR=28						
MJAR	**Matsushiro Arr**	**24.73**	**349**	P	**P**	**07 58 39.6**	**-1.2**
	0.5nm,0.4s,mb3.4,baz=161,slow=10,SNR=4.2						
MJAR	**Matsushiro Arr**	**24.73**	**349**	P	**P**	**07 58 39.6**	**-1.2**
KSRS	**Korea Array**	**28.96**	**333**	P	**P**	**07 59 19.7**	**+0.8**
	0.4nm,0.4s,mb3.5,baz=142,slow=9.6,SNR=3.3						
CTA	**Charters Tower**	**32.24**	**176**	LR	LR	08 10 06.1	
	comp=Z,141nm,21.7s,baz=58,slow=31						
WRA	**Warramunga Arr**	**33.45**	**197**	P	**P**	**07 59 59.0**	**+0.5**
	1.0nm,0.6s,mb3.9,baz=18,slow=9.4,SNR=6.5						
ASAR	**Alice Springs**	**37.11**	**196**	P	**P**	**08 00 29.2**	**-0.8**
	0.4nm,0.6s,mb3.4,baz=20,slow=10,SNR=9.7						
MKAR	**Makanchi Array**	**61.93**	**317**	P	**P**	**08 03 40.1**	**+0.9**
	1.1nm,0.5s,mb4.2,baz=101,slow=7.5,SNR=16						
CHGN	**Chignik**	**62.05**	**32**	eP	**P**	**08 03 35.4**	**-4.4**
KURK	**Kurchatov**	**65.12**	**320**	P	**P**	**08 04 00.8**	**+0.7**
	1.6nm,0.4s,mb4.4,baz=105,slow=6.8,SNR=20						
KURK	**Kurchatov**	**65.12**	**320**	P	**P**	**08 04 00.8**	**+0.7**
BVAR	**Borovoye Array**	**70.50**	**322**	P	**P**	**08 04 34.5**	**+0.4**
	1.8nm,0.3s,mb4.4,baz=102,slow=8.3,SNR=8.7						
ABKAR	**Akbulak array**	**77.02**	**318**	eP	**P**	**08 05 12.2**	**-0.1**
	2.4nm,0.5s,mb4.4						
AKTK	**Aktyubinsk**	**78.18**	**319**	P	**P**	**08 05 18.2**	**-0.6**
AKTO	**Aktyubinsk**	**78.18**	**319**	P	**P**	**08 05 18.2**	**-0.6**
	1.0nm,0.6s,mb3.9,baz=66,slow=10.0,SNR=2.8						
YKA	**Yellowknife Ar**	**84.34**	**27**	P	**P**	**08 05 51.0**	**-0.3**
	0.5nm,0.5s,mb3.9,baz=287,slow=5.0,SNR=11						
YKA	**Yellowknife Ar**	**84.34**	**27**	P	**P**	**08 05 51.0**	**-0.3**
ARCES	**ARCESS Array B**	**88.09**	**342**	P	**P**	**08 06 10.3**	**+0.6**
	3.1nm,1.0s,mb4.5,baz=66,slow=9.0,SNR=3.2						
NVAR	**Mina Array Bea**	**88.29**	**51**	P	**P**	**08 06 12.5**	**+1.2**
	0.5nm,0.5s,mb4.0,baz=270,slow=6.0,SNR=4.4						
FINES	**FINESS Array B**	**92.03**	**335**	P	**P**	**08 06 26.8**	**-1.4**
	0.5nm,0.4s,mb4.2,baz=76,slow=5.3,SNR=8.7						
FINES	**FINESS Array B**	**92.03**	**335**	P	**P**	**08 06 26.8**	**-1.4**
TORD	**Torodi Ar. Bea**	**134.99**	**303**	PKP	PKPdf	08 12 39.9	+0.2
	0.5nm,0.8s,baz=46,slow=4.2,SNR=3.0						

IDC 04 08:21:03.2±3.9, 4°.73S×147°.40E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=116.4km s-min=46.5km az=109.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.75**	**219**	P	Pn	08 25 35.0	-1.3
	0.2nm,0.3s,baz=43,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**22.88**	**213**	P	P	08 26 08.0	-0.6
	0.6nm,0.6s,baz=45,slow=7.6,SNR=11						
FITZ	**Fitzroy Crossi**	**25.08**	**236**	P	P	08 26 30.3	+0.6
	2.3nm,1.0s,baz=47,slow=13,SNR=3.1						
TORD	**Torodi Ar. Bea**	**145.14**	**286**	PKPbc	PKPbc	08 40 42.4	-0.9
	0.4nm,1.0s,baz=18,slow=1.8,SNR=2.3						

IDC 04 08:23:34.4±35.0, 9°.28S×158°.51E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, Error ellipse: s-maj=589.0km s-min=89.7km az=52.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.64**	**243**	P	P	08 29 06.8	+0.8
	1.4nm,0.5s,baz=70,slow=9.6,SNR=4.4						
STKA	**Stephens Creek**	**27.42**	**213**	P	P	08 29 22.1	+0.1
	0.8nm,0.5s,baz=46,slow=16,SNR=2.8						
ASAR	**Alice Springs**	**27.53**	**236**	P	P	08 29 22.2	-0.7
	0.3nm,0.5s,baz=60,slow=10,SNR=2.9						

IDC 04 08:32:14.8±11.0, 18°.03N×145°.72E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/22, mbtmp3.8/4, Error ellipse: s-maj=253.7km s-min=39.5km az=59.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.36**	**197**	P	P	08 39 46.0	-0.1
	0.3nm,0.4s,baz=19,slow=9.1,SNR=11						
FITZ	**Fitzroy Crossi**	**40.98**	**210**	P	P	08 39 59.6	+0.1
	1.1nm,0.7s,baz=49,slow=9.3,SNR=7.6						
ASAR	**Alice Springs**	**43.02**	**196**	P	P	08 40 15.9	-0.3
	0.4nm,0.7s,baz=10,slow=8.8,SNR=5.4						
CMAR	**Chiang Mai Arr**	**44.33**	**278**	P	P	08 40 26.9	0.0
	1.3nm,0.3s,baz=73,slow=12,SNR=5.6						

*IDC **04** 08:39:13.6±1.3, 48°.36N×156°.12E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.4/26, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=66.3km s-min=24.7km az=123.0*
*MOS **04** 08:39:14.2±1.0, 49°.56N×153°.15E, h31km, mb4.5/1, Error ellipse: s-maj=99.9km s-min=19.1km az=59.2*
*ISCJB **04** 08:39:19.4±2.4, 48°.8N±0°.2×155°.5E±0°.4, h58km±23km, mb3.5/3, Error ellipse: s-maj=59.9km s-min=11.4km az=43.1*
*KRSC **04** 08:39:20.4±2.2, 49°.00N×156°.15E, h10km±10km, ML4.3*
ISC 04 08:39:21.3±2.0, 48°.8N±0°.2×155°.5E±0°.4, h55km±20km, n21, σ1°08/22, mb3.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.95**	**11**	ePN	Px	08 39 39.5	
MIPR	**Malaya Ipel'ka**	**3.60**	**12**	eP	**Pn**	**08 40 13.5**	**-0.9**
RUS	**Russkaya**	**4.13**	**26**	PN	**Pn**	**08 40 22.2**	**+0.4**
RUS	**Russkaya**	**4.13**	**26**	eP	**Pn**	**08 40 22.2**	**+0.4**
RUS				iS	**Sn**	**08 41 07.0**	**-1.8**
PETK	**Petropavlovsk-**	**4.56**	**17**	PN	**Pn**	**08 40 29.7**	**+2.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**4.56**	**17**	Pn	**Pn**	**08 40 29.7**	**+2.1**
	comp=Z,1.3nm,0.3s,baz=178,slow=12,SNR=32						
SDLR	**Sedlovina**	**4.99**	**24**	eP	**Pn**	**08 40 34.5**	**+1.0**
GNL	**Ganaly**	**5.16**	**16**	P	**Pn**	**08 40 37.5**	**+1.7**
SPN	**Mys Shipunski**	**5.18**	**32**	PN	**Pn**	**08 40 36.9**	**+0.7**
SPN	**Mys Shipunski**	**5.18**	**32**	eP	**Pn**	**08 40 36.9**	**+0.7**
SPN				iS	**Sn**	**08 41 33.3**	**-1.3**
MKZ	**Mys Kozlova**	**6.96**	**31**	PN	**Pn**	**08 40 59.8**	**-0.7**
MKZ	**Mys Kozlova**	**6.96**	**31**	P	**Pn**	**08 40 59.8**	**-0.7**
KBTR	**Krutoberegovo**	**8.68**	**28**	PN	**Pn**	**08 41 23.6**	**-0.3**
KBTR	**Krutoberegovo**	**8.68**	**28**	P	**Pn**	**08 41 23.6**	**-0.3**
ASAJ	**Asahikawa**	**10.06**	**247**	PN	**Pn**	**08 41 41.9**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**10.06**	**247**	Pn	**Pn**	**08 41 41.9**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=77,slow=16,SNR=7.5						
YKA	**Yellowknife Ar**	**48.33**	**38**	P	**P**	**08 47 56.8**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	**Yellowknife Ar**	**48.33**	**38**	P	**P**	**08 47 56.8**	**+0.2**
	comp=Z,0.5nm,1.0s,mb3.5,baz=300,slow=7.0,SNR=5.4						
SCHQ	**Schefferville**	**70.81**	**24**	P	**P**	**08 50 32.1**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=12,slow=9.3,SNR=3.0						
ASAR	**Alice Springs**	**74.65**	**200**	P	**P**	**08 50 53.7**	**-0.8**
ASAR	**Alice Springs**	**74.65**	**200**	P	**P**	**08 50 53.7**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.3,baz=12,slow=5.7,SNR=4.9						

*ISCJB **04** 08:45:39.8±0.8, 38°.44N±0°.05×38°.06E±0°.04, h4km±7km, Error ellipse: s-maj=8.5km s-min=5.2km az=156.4*
*CSEM **04** 08:45:39.4±0.3, 38°.38N×38°.03E, h12km, MD2.7, Error ellipse: s-maj=9.4km s-min=6.3km az=167.0*
*ISK **04** 08:45:40.0, 38°.32N×38°.08E, h6km, MD2.8*
*DDA **04** 08:45:40.4, 38°.33N×38°.12E, h7km±7km, Md2.7*
ISC 04 08:45:40.1±0.7, 38°.43N±0°.05×38°.05E±0°.04, h9km±6km, n22, σ0°75/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.17**	**219**	iP	**Pg**	**08 45 44.0**	**+0.3**
AKCD				iS	**Sg**	**08 45 45.8**	**-0.2**
AKCD	**Akcadag**	**0.17**	**219**	iP	**Pg**	**08 45 44.0**	**+0.3**
AKCD				iS	**Sg**	**08 45 45.8**	**-0.3**
MYA	**Malataya**	**0.31**	**109**	ePG	**Pg**	**08 45 46.1**	**-0.2**
MYA				eSG	**Sg**	**08 45 50.5**	**+0.1**
MYA	**Malataya**	**0.31**	**109**	ePg	**Pg**	**08 45 46.1**	**-0.1**
MYA				eSg	**Sg**	**08 45 50.5**	**+0.1**
MALT	**Malatya**	**0.31**	**111**	ePG	**Pg**	**08 45 46.1**	**-0.2**
MALT				eSG	**Sg**	**08 45 50.4**	**-0.2**
MALT	**Malatya**	**0.31**	**111**	ePg	**Pg**	**08 45 46.1**	**-0.2**
MALT				eSg	**Sg**	**08 45 50.4**	**-0.2**
DARE	**Darende-Malaty**	**0.56**	**340**	ePG	**Pg**	**08 45 50.8**	**-0.2**
DARE	**Darende-Malaty**	**0.56**	**340**	ePg	**Pg**	**08 45 50.8**	**-0.2**
ELZG	**Elazig**	**0.73**	**84**	iP	**Pg**	**08 45 54.3**	**0.0**
ELZG				iS	**Sg**	**08 46 05.5**	**+1.6**
ELZG	**Elazig**	**0.73**	**84**	iP	**Pg**	**08 45 54.3**	**0.0**
ELZG				iS	**Sg**	**08 46 05.5**	**+1.6**
SVRC	**Sivrice-ELAZID**	**0.98**	**92**	ePG	**Pg**	**08 45 58.6**	**-0.5**
SVRC	**Sivrice-ELAZID**	**0.98**	**92**	ePg	**Pg**	**08 45 58.6**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.09**	**284**	ePN	**Pn**	**08 46 05.4**	**+3.8**
GZT	**Gaziantep**	**1.14**	**200**	iP	**Pb**	**08 46 02.8**	**+0.9**
GZT				iS	**Sg**	**08 46 17.6**	**+0.8**
PTK	**Pertek**	**1.15**	**66**	ePN	**Pn**	**08 46 02.1**	**-0.2**
PTK	**Pertek**	**1.15**	**66**	ePn	**Pn**	**08 46 02.1**	**-0.2**
URFA	**Urfa**	**1.16**	**148**	ePG	**Pg**	**08 46 00.5**	**-1.8**
URFA	**Urfa**	**1.16**	**148**	ePg	**Pg**	**08 46 00.5**	**-1.8**
KMRS	**Kahramanmaras**	**1.29**	**225**	ePN	**Pn**	**08 46 04.0**	**-0.4**
KMRS	**Kahramanmaras**	**1.29**	**225**	ePn	**Pn**	**08 46 04.0**	**-0.4**
GAZ	**Gaziantep**	**1.42**	**208**	ePN	**Pn**	**08 46 05.8**	**-0.2**
GAZ	**Gaziantep**	**1.42**	**208**	ePn	**Pn**	**08 46 05.8**	**-0.3**

*NIED **04** 09:08:00, 46°.90N×153°.20E, h35km, Mw4.0 Best double couple: M0 1.05000×10^15 NP1:φ0=128.00000°, δ82.00000°, λ-30.00000°. NP2:φ0=222.00000°, δ60.00000°, λ-171.00000°.*
*MOS **04** 09:08:14.3±2.7, 47°.43N×152°.84E, h50km, mb4.3/15, Error ellipse: s-maj=15.7km s-min=8.6km az=58.4*
*ISCJB **04** 09:08:16.2±0.9, 47°.13N±0°.09×152°.82E±0°.10, h75km±9km, mb3.9/25, Error ellipse: s-maj=16.3km s-min=8.1km az=147.5*
*NEIC **04** 09:08:16.8±0.4, 47°.18N×152°.68E, mb4.3/8, Error ellipse: s-maj=11.8km s-min=7.0km az=147.0*
*IDC **04** 09:08:17.2±0.7, 47°.19N×152°.72E, h68km±6km, mb3.7/20, mb1 3.9/21, mb1mx3.8/27, mbtmp3.7/21, MS2.8/4, Ms1 2.8/4, ms1mx2.6/46, Error ellipse: s-maj=15.9km s-min=12.5km az=160.0*
**ISC 04 09:08:18.5±0.8, 47°.17N±0°.09×152°.78E±0°.10, h77km±8km, h

comp=Z,2.0nm,0.3s
ASAJ MLR MLR
comp=Z,78nm,18.4s
ASAJ Asahikawa 7.76 251 P **Pn 09 10 09.3 +0.7**
comp=Z,1.6nm,0.3s,baz=84,slow=17,SNR=6.6
ASAJ LR LR 09 13 06.8
comp=Z,78nm,18.4s,baz=234,slow=38
JWK2 Keihoku 7.77 260 P **Pn 09 10 12.9 +4.1**
JKK2 Kamakawa 2 7.78 249 P **Pn 09 10 10.1 +1.2**
JCH Churui 8.09 239 P **Pn 09 10 10.9 -2.2**
ERM Erimo 8.58 237 *e*PN **Pn 09 10 17.9 -1.9**
JNBK Urakawa-nobuka 8.65 239 P **Pn 09 10 17.7 -3.1**
MAJO Matsushiro 15.16 231 *e*P **Pn 09 11 52.0 +3.9**
MAJO pmax pmax
comp=Z,9.0nm,0.6s
MAJO Matsushiro 15.16 231 *e*P **Pn 09 11 52.0 +3.8**
comp=Z,8.7nm,0.6s
MAT Matsushiro 15.16 231 P **Pn 09 11 52.0 +3.9**
MJAR Matsushiro Arr 15.16 231 P **Pn 09 11 51.5 +3.4**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 15.16 231 P **Pn 09 11 51.5 +3.3**
comp=Z,0.7nm,0.3s,baz=47,slow=9.6,SNR=12
KSRS Korea Array 20.71 251 P **P 09 12 53.2 +0.8**
KSRS pmax pmax
comp=Z,2.0nm,0.6s
KSRS MLR MLR
comp=Z,12nm,19.6s
KSRS Korea Array 20.71 251 P **P 09 12 53.2 +0.9**
comp=Z,2.1nm,0.6s,baz=53,slow=11,SNR=8.8
KSRS LR LR 09 20 45.9
comp=Z,12nm,19.6s,baz=10.0,slow=36
SONM Songino Array 30.98 289 P **P 09 14 27.8 -0.4**
comp=Z,0.2nm,0.3s,mb3.3,baz=85,slow=7.8,SNR=3.2
COLA College 35.95 39 *e*P **P 09 15 10.8 -0.3**
COLA *e**PP pP 09 15 27.6 -1.9
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
COLA College 35.95 39 *e*P **P 09 15 10.8 -0.3**
comp=Z,5.1nm,0.8s,mb4.5
COLA *e*pP pP 09 15 27.6 -1.8
INK Inuvik 41.42 33 P **P 09 15 57.6 +0.8**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 41.42 33 P **P 09 15 57.5 +0.8**
comp=Z,2.8nm,0.8s,mb4.1,baz=286,slow=6.3,SNR=12
INK Inuvik 41.42 33 *e*P **P 09 15 56.3 -0.5**
comp=Z,5.1nm,1.0s,mb4.3
ZALV Zalesovo Beam 42.19 305 LR LR 09 33 30.6
comp=Z,29nm,20.8s,baz=45,slow=36
DLBC Dease Lake 45.47 46 *e*P **P 09 16 30.7 +1.3**
MKAR Makanchi Array 46.55 297 P **P 09 16 36.3 -1.8**
MKAR 09 18 09.8
MKAR S **S 09 23 22.0 +1.3**
MKAR smax
comp=N,1.0nm,0.4s
MKAR Makanchi Array 46.55 297 P **P 09 16 36.3 -1.8**
comp=N,0.3nm,0.3s,mb3.5,baz=177,slow=26,SNR=3.4
MKAR PcP PcP 09 18 09.8 -1.3
comp=N,0.9nm,0.6s,baz=83,slow=2.2,SNR=4.2
MKAR S **S 09 23 22.0 +1.3**
comp=N,0.6nm,0.4s,baz=228,slow=44,SNR=3.5
BVAR Borovoye Array 50.42 309 PcP PcP 09 18 24.0 -0.9
comp=N,0.9nm,0.5s,baz=97,slow=4.5,SNR=3.8
YKA Yellowknife Ar 50.73 37 P **P 09 17 09.9 +0.1**
YKA *PP pP 09 17 26.9 -2.2
YKA 09 18 25.4
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 50.73 37 P **P 09 17 09.9 +0.1**
comp=Z,0.6nm,0.5s,mb3.9,baz=299,slow=7.1,SNR=17
YKA pP pP 09 17 26.9 -2.2
comp=Z,1.3nm,0.7s,baz=296,slow=7.1,SNR=14
YKA PcP PcP 09 18 25.4 -0.4
comp=Z,0.2nm,0.5s,baz=308,slow=3.9,SNR=6.0
YKA Yellowknife Ar 50.73 37 P **P 09 17 09.9 +0.1**
YKA pP pP 09 17 26.9 -2.2
YKA PcP PcP 09 18 25.4 -0.4
CMAR Chiang Mai Arr 52.25 256 P **P 09 17 23.1 +1.3**
CMAR pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 52.25 256 P **P 09 17 23.1 +1.3**
comp=Z,2.2nm,1.0s,mb4.1,baz=38,slow=8.3,SNR=5.3
ARCES ARCESS Array B 57.39 341 P **P 09 17 57.3 -0.9**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 57.39 341 P **P 09 17 57.3 -0.9**
comp=Z,3.1nm,0.9s,mb4.3,baz=44,slow=8.9,SNR=3.8
SUMG Summit 60.30 4 *e*P **P 09 18 18.4 +0.1**
comp=Z,8.4nm,0.8s,mb4.8
HRY Holter Researc 60.90 52 *e*P **P 09 18 23.5 +0.7**
comp=Z,1.9nm,0.7s,mb4.2
HRY *e*pP pP 09 18 38.5 -4.0
NVAR Mina Array Bea 62.44 62 P **P 09 18 34.0 +0.7**
comp=Z,0.6nm,0.5s,mb3.9,baz=298,slow=6.2,SNR=7.8
NVAR pP pP 09 18 51.7 -1.5
comp=Z,0.6nm,0.6s,baz=301,slow=7.4,SNR=5.0
NVAR Mina Array Bea 62.44 62 P **P 09 18 34.0 +0.7**
NVAR pP pP 09 18 51.7 -1.5
RRI2 Red Ridge 63.33 54 *e*P **P 09 18 40.2 +1.1**
comp=Z,2.1nm,0.7s,mb4.2
RRI2 *e*pP pP 09 18 57.5 -1.5
FINES FINESS Array B 63.57 335 P **P 09 18 39.0 -1.4**
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 63.57 335 P **P 09 18 39.0 -1.4**
comp=Z,1.8nm,0.6s,mb4.1,baz=33,slow=7.2,SNR=14
DUG Dugway 64.54 58 *e*P **P 09 18 47.0 -0.1**
DUG *e**PP pP 09 19 03.5 -3.6
DUG pmax pmax
comp=Z,1.0nm,0.7s,mb3.8
DUG Dugway 64.54 58 *e*P **P 09 18 47.0 -0.1**
comp=Z,1.3nm,0.7s,mb3.9
DUG *e*pP pP 09 19 03.5 -3.5
BW06 Boulder Array 64.68 54 *e*P **P 09 18 48.1 +0.1**
comp=Z,0.9nm,0.7s,mb3.7
BW06 *e*pP pP 09 19 05.9 -2.0
PDAR Pinedale Array 64.68 54 P **P 09 18 48.5 +0.5**
comp=Z,0.9nm,0.6s,mb3.8,baz=330,slow=2.1,SNR=10.0
PDAR pP pP 09 19 06.0 -2.0
comp=Z,1.0nm,0.8s,baz=349,slow=0.8,SNR=6.0
NB2 NORSAR Subarra 67.76 341 P **P 09 19 07.0 -0.3**
comp=Z,0.9nm,0.5s,mb3.9,baz=28,slow=6.2
NOA NORSAR Array B 67.76 341 P **P 09 19 07.0 -0.3**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 67.76 341 P **P 09 19 07.0 -0.3**
comp=Z,0.6nm,0.5s,mb3.7,baz=27,slow=6.0,SNR=4.8
HFS Hagfors 67.99 339 P **P 09 19 07.4 -1.4**
HFS pmax pmax
comp=Z,2.0nm,0.4s
HFS Hagfors 67.99 339 P **P 09 19 07.4 -1.3**
comp=Z,1.5nm,0.4s,mb4.2,baz=64,slow=6.8,SNR=12
WRA Warramunga Arr 68.83 199 P **P 09 19 13.4 -1.0**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 68.83 199 P **P 09 19 13.4 -1.1**
comp=Z,0.5nm,0.7s,mb3.4,baz=17,slow=6.8,SNR=6.8
AKASG Malin Array Be 71.08 326 P **P 09 19 26.8 -1.2**
comp=Z,0.4nm,0.3s,mb3.7,baz=34,slow=5.7,SNR=4.9
AKASG Malin Array Be 71.08 326 P **P 09 19 26.8 -1.2**
ASAR Alice Springs 72.53 198 P **P 09 19 37.2 +0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 72.53 198 P **P 09 19 37.1 +0.3**
comp=Z,1.1nm,0.8s,mb3.8,baz=13,slow=5.6,SNR=12
SCHQ Schefferville 73.01 23 P **P 09 19 39.0 -0.5**
comp=Z,1.7nm,0.8s,mb3.9,baz=281,slow=5.6,SNR=3.8
SCHQ Schefferville 73.01 23 P **P 09 19 39.0 -0.5**
BUR08 Bucovina Ar. S 75.10 326 *e*P **P 09 19 51.4 -0.4**
MLR Muntele Rosu 76.59 325 P **P 09 20 01.2 +0.9**
MLR pmax pmax
comp=Z,2.0nm,0.5s
MLR Muntele Rosu 76.59 325 P **P 09 20 01.2 +0.9**
comp=Z,2.0nm,0.5s,mb4.1,baz=13,slow=2.1,SNR=6.0
TXAR Lajitas Array 77.48 60 P **P 09 20 05.6 +0.1**
TXAR *PP pP 09 20 23.6 -2.5
TXAR pmax pmax
comp=Z,3.0nm,0.6s
TXAR Lajitas Array 77.48 60 P **P 09 20 05.6 +0.1**
comp=Z,3.0nm,0.6s,mb4.2,baz=299,slow=4.3,SNR=46
TXAR pP pP 09 20 23.6 -2.5
comp=Z,1.3nm,0.7s,baz=275,slow=4.2,SNR=6.1
BRTR Keskin Array B 77.93 316 P **P 09 20 08.1 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 77.93 316 P **P 09 20 08.1 +0.2**
comp=Z,0.8nm,0.7s,mb3.5,baz=74,slow=4.3,SNR=5.3
GERES GERESS Array B 77.98 334 P **P 09 20 07.6 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 77.98 334 P **P 09 20 07.6 -0.3**
comp=Z,0.5nm,0.5s,mb3.5,baz=33,slow=5.1,SNR=6.4
TORD Torodi Ar. Bea 114.62 329 PKP PKiKP 09 26 48.7 -1.3
comp=Z,0.3nm,0.8s,baz=0.2,slow=2.8,SNR=3.6
PLCA Paso Flores 148.47 94 PKP2 PKPab 09 27 55.1 -4.1
PLCA pmax pmax
comp=Z,1.0nm,0.6s
PLCA Paso Flores 148.47 94 PKPbc PKPbc 09 27 55.0 -0.6
comp=Z,1.1nm,0.6s,baz=108,slow=3.2,SNR=3.1

NEIC ***04*** *09:19:41.8±0.4, 13°.40N×125°.89E, h10km, mb4.4/12, Error ellipse: s-maj=17.0km s-min=7.5km az=77.0*
ISCJB ***04*** *09:19:45.6±1.3, 13°.29N±0°.05×125°.63E±0°.10, h50km±11km, mb4.1/30, Error ellipse: s-maj=16.2km s-min=6.2km az=161.9*
MAN ***04*** *09:19:47, 13°.25N×125°.42E, h64km, mb5.0, ML3.9, MS4.4*
IDC ***04*** *09:19:53.3±3.5, 13°.27N×125°.79E, h110km±31km, mb3.7/19, mb1 3.9/21, mb1mx3.8/27, mbtmp3.8/21, Error ellipse: s-maj=30.3km s-min=10.3km az=69.0*
ISC 04 09:19:46.1±1.0, 13°.33N±0°.04×125°.68E±0°.08, h38km±9km, n56, σ1§04/58, mb4.1/30, 3C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**1.28**	**231**	*e*P	**Pn**	**09 20 07.3**	**-0.2**
PVCP	**Virac**	**1.50**	**280**	*e*P	**Pn**	**09 20 09.7**	**-0.9**
PVCP				*e*S	**Sn**	**09 20 27.1**	**-1.9**
PLP	**Palo**	**2.25**	**198⇑**	*e*P	**Pn**	**09 20 21.2**	**+0.3**
OCLP	**Ormoc**	**2.49**	**205**	*e*P	**Pn**	**09 20 25.2**	**+1.1**
AUQP	**San Andres**	**2.92**	**270**	*e*P	**Pn**	**09 20 29.5**	**-0.6**
MSLP	**Maasin**	**3.27**	**194**	*e*P	**Pn**	**09 20 36.3**	**+1.4**
MSLP				*e*S	**Sn**	**09 21 11.1**	**-1.5**
RCP	**Roxas**	**3.36**	**239⇑**	*e*P	**Pn**	**09 20 36.5**	**+0.5**
LLP	**Lapu-Lapu**	**3.43**	**209⇑**	*e*P	**Pn**	**09 20 36.7**	**-0.3**
LLP				*e*S	**Sn**	**09 21 14.6**	**-1.9**
BOAC	**Boac**	**3.73**	**272**	*e*P	**Pn**	**09 20 42.8**	**+1.6**
TBP	**Tagbilaran**	**4.03**	**206⇓**	*e*P	**Pn**	**09 20 45.2**	**-0.1**
TBP				*e*S	**Sn**	**09 21 25.2**	**-6.1**
GUIM	**Jordan**	**4.04**	**229**	*e*P	**Pn**	**09 20 45.7**	**+0.2**
TGY	**Tagaytay City**	**4.67**	**280**	P	Px	09 21 04.6	
	35nm,0.3s,baz=140,slow=7.9,SNR=2.5						
CAUP	**Cauayan**	**5.17**	**315**	*e*P	**Pn**	**09 21 01.5**	**+0.5**
LUBP	**Lubang**	**5.30**	**275**	*e*P	**Pn**	**09 21 08.2**	**+5.5**
PAGZ	**Pagadian**	**5.89**	**203**	*e*P	**Pn**	**09 21 12.5**	**+1.6**
JOW	**Kunigami**	**13.65**	**10**	P	**Pn**	**09 22 55.6**	**-1.6**
	4.0nm,0.3s,baz=157,slow=16,SNR=14						
KAPI	**Kappang**	**19.15**	**198**	P	**Pn**	**09 24 07.9**	**+0.6**
	0.5nm,0.3s,baz=28,slow=5.7,SNR=12						
KSRS	**Korea Array**	**24.11**	**4**	P	**P**	**09 24 58.2**	**0.0**
	2.2nm,0.8s,mb3.6,baz=185,slow=9.5,SNR=8.9						
CMAR	**Chiang Mai Arr**	**26.20**	**285**	P	**P**	**09 25 18.6**	**+1.2**
	2.8nm,0.7s,mb3.9,baz=97,slow=8.0,SNR=10.0						
KAKA	**Kakadu**	**26.73**	**165**	*e*P	**P**	**09 25 23.1**	**+1.1**
	25nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**31.23**	**180**	*e*P	**P**	**09 26 01.3**	**-0.8**
	9.4nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**31.23**	**180**	P	**P**	**09 26 01.6**	**-0.5**
	3.7nm,0.7s,mb4.3,baz=18,slow=9.8,SNR=12						
FITZ	**Fitzroy Crossi**	**31.23**	**180**	*e*P	**P**	**09 26 03.0**	**+0.9**
	5.5nm,0.8s,mb4.4						
FITZ				*e*	pP	09 26 15.4	+2.6
WRA	**Warramunga Arr**	**34.14**	**165**	P	**P**	**09 26 25.4**	**-2.2**
	0.8nm,0.8s,mb3.7,baz=347,slow=9.2,SNR=3.8						
ASAR	**Alice Springs**	**37.64**	**168**	P	**P**	**09 26 57.5**	**+0.1**
	0.9nm,0.4s,mb3.8,baz=350,slow=7.0,SNR=21						
ASAR				PcP	PcP	09 29 14.2	-0.4
	0.7nm,0.7s,baz=352,slow=1.9,SNR=5.5						
ULN	**Ulaanbaatar**	**37.77**	**339**	*e*P	**P**	**09 26 58.9**	**+0.6**
	3.9nm,1.3s,mb4.0						
SONM	**Songino Array**	**37.97**	**339**	P	**P**	**09 27 01.0**	**+0.9**
	2.4nm,0.8s,mb4.0,baz=150,slow=8.1,SNR=12						
SONM				PcP	PcP	09 29 15.4	+0.1
	0.5nm,0.6s,baz=123,slow=10,SNR=2.9						
FORT	**Forrest**	**43.91**	**177**	*e*P	**P**	**09 27 50.5**	**+1.4**
	19nm,0.6s,mb5.0						
FORT	**Forrest**	**43.91**	**177**	*e*P	**P**	**09 27 50.2**	**+1.1**
	23nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**47.47**	**162**	*e*P	**P**	**09 28 16.9**	**-0.3**
	4.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**47.47**	**162**	P	**P**	**09 28 17.1**	**-0.1**
	4.3nm,0.8s,mb4.5,baz=346,slow=10.0,SNR=6.3						
STKA	**Stephens Creek**	**47.47**	**162**	*e*P	**P**	**09 28 16.7**	**-0.6**
	0.7nm,0.7s,mb3.7						
STKA				*e*		09 28 31.6	
MK31	**Makanchi Array**	**49.27**	**321**	*e*P	**P**	**09 28 32.1**	**+1.1**
MKAR	**Makanchi Array**	**49.27**	**321**	P	**P**	**09 28 32.5**	**+1.4**
	5.4nm,0.8s,mb4.6,baz=121,slow=8.7,SNR=29						
ZALV	**Zalesovo Beam**	**51.69**	**330**	P	**P**	**09 28 48.9**	**-0.3**
	0.6nm,0.4s,mb3.9,baz=120,slow=7.7,SNR=4.9						
UCH	**Uchtor**	**52.64**	**313**	*e*P	**P**	**09 28 58.9**	**+2.4**
	8.1nm,1.1s,mb4.6						
AML	**Almayashu**	**53.20**	**313**	*e*P	**P**	**09 29 02.2**	**+1.6**
	3.1nm,0.9s,mb4.2						
KURK	**Kurchatov**	**53.24**	**324**	P	**P**	**09 29 02.1**	**+1.3**
	9.6nm,0.8s,mb4.8,baz=118,slow=8.4,SNR=32						
KURK	**Kurchatov**	**53.24**	**324**	*e*P	**P**	**09 29 01.4**	**+0.7**
	9.9nm,0.7s,mb4.8						
BVAR	**Borovoye Array**	**58.84**	**325**	P	**P**	**09 29 41.1**	**+0.4**
	2.2nm,0.8s,mb4.2,baz=115,slow=7.0,SNR=8.4						
ABKAR	**Akbulak array**	**64.20**	**318**	*e*P	**P**	**09 30 16.9**	**-0.1**
	0.7nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**65.62**	**320**	P	**P**	**09 30 26.1**	**0.0**
AKTO	**Aktyubinsk**	**65.62**	**320**	P	**P**	**09 30 26.1**	**0.0**
	1.1nm,0.7s,mb4.0,baz=109,slow=8.2,SNR=3.3						
MCK	**McKinley**	**76.12**	**27**	*e*P	**P**	**09 31 29.2**	**-0.4**
	6.7nm,1.0s,mb4.5						
JOF	**Joensuu**	**80.23**	**332**	*e*p	**P**	**09 31 50.9**	**-1.5**
	1.2nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**81.14**	**339**	P	**P**	**09 31 56.5**	**-0.7**
	1.5nm,0.7s,mb4.0,baz=82,slow=7.4,SNR=4.6						
INK	**Inuvik**	**81.67**	**22**	*e*P	**P**	**09 31 59.5**	**-0.6**
	1.9nm,0.8s,mb4.1						
KAF	**Kangasniemi**	**82.67**	**332**	*e*p	**P**	**09 31 56.9**	**-8.5**
	0.7nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**82.94**	**331**	P	**P**	**09 32 06.0**	**-0.8**
	1.0nm,0.6s,mb4.0,baz=57,slow=7.3,SNR=6.3						
BRTR	**Keskin Array B**	**83.16**	**309**	P	**P**	**09 32 07.7**	**-0.7**
	0.5nm,0.8s,mb3.6,baz=128,slow=6.3,SNR=3.5						
AKASG	**Malin Array Be**	**83.84**	**321**	P	**P**	**09 32 10.7**	**-0.9**
	0.2nm,0.3s,mb3.7,baz=82,slow=2.1,SNR=6.6						
RES	**Resolute Bay**	**88.61**	**10**	*e*P	**P**	**09 32 34.1**	**-0.5**
	1.3nm,1.1s,mb4.2						
HFS	**Hagfors**	**89.09**	**332**	P	**P**	**09 32 36.5**	**-0.7**
	1.3nm,0.7s,mb4.4,baz=102,slow=13,SNR=3.5						
NOA	**NORSAR Array B**	**89.78**	**334**	P	**P**	**09 32 38.0**	**-2.4**
	0.5nm,0.7s,mb4.0,baz=64,slow=4.2,SNR=3.2						
YKA	**Yellowknife Ar**	**91.22**	**24**	P	**P**	**09 32 46.8**	**-0.2**
	0.2nm,0.7s,mb3.6,baz=300,slow=4.5,SNR=5.5						
TXAR	**Lajitas Array**	**116.24**	**48**	PKP	PKPdf	09 38 24.8	-1.3
	0.2nm,0.8s,baz=188,slow=3.6,SNR=3.6						

DJA 04 09:22:49, 0°.32S×122°.80E, h122km, MLv3.6/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.72**	**182**	P	Pn	09 23 09.5	+0.8
APSI	**Ampana**	**1.29**	**243**	P	Pn	09 23 15.3	+1.1
TTSI	**Tana Toraja**	**4.03**	**228**	P	Pn	09 23 47.4	-1.6
SPSI	**Sidrap Palu**	**4.72**	**220**	P	Pn	09 24 01.6	+3.3
SPSI				S	Sn	09 24 54.4	+2.3
KAPI	**Kappang**	**5.57**	**213**	P	Pn	09 24 08.6	-1.1

MAN ***04*** *09:29:02, 17°.69N×122°.70E, h17km, mb4.8, ML3.7, MS3.7*
ISCJB ***04*** *09:29:04.2±0.7, 17°.66N±0°.03×122°.69E±0°.05, h41km±6km, mb4.2/22, MS3.6/8, Error ellipse: s-maj=8.3km s-min=5.2km az=178.7*
NEIC ***04*** *09:29:07.2±0.8, 17°.58N×122°.73E, h59km±8km, mb4.5/6, Error ellipse: s-maj=13.1km s-min=7.0km az=90.0*
IDC ***04*** *09:29:07.2±2.5, 17°.56N×122°.69E, h58km±24km, mb3.7/17, mb1 3.9/18, mb1mx3.8/28, mbtmp3.8/18, ML4.2/2, MS3.5/6, Ms1 3.5/6, ms1mx3.2/34, Error ellipse: s-maj=21.5km s-min=11.8km az=78.0*
BJI ***04*** *09:29:08.1, 17°.37N×121°.98E, h31km, mB4.6/10, mb4.2/17, Ms4.0/11, Ms7 3.8/11*
ISC 04 09:29:04.1±0.9, 17°.65N±0°.03×122°.67E±0°.04, h23km±6km, n59, σ1§16/64, mb4.2/22, MS3.6/8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.63**	**202**	*e*P	**Pb**	**09 29 15.6**	**-0.9**
PALP				*e*S	**Sb**	**09 29 26.1**	**+1.2**
CVP	**Callao Caves**	**0.81**	**274**	*e*P	**Pb**	**09 29 15.6**	**-4.0**
SGCP	**Mt. Cagua**	**0.84**	**315**	*e*P	**Pb**	**09 29 18.9**	**-1.1**
SGCP				*e*S	**Sb**	**09 29 30.0**	**-0.9**
CAUP	**Cauayan**	**1.07**	**229**	*e*P	**Pn**	**09 29 22.9**	**-0.8**
APYP	**Conner**	**1.38**	**279**	*e*P	**Pn**	**09 29 27.4**	**-0.5**
ABRA	**Dolores**	**1.87**	**270**	*e*P	**Pn**	**09 29 33.6**	**-1.0**
ABRA				*e*S	**Sn**	**09 29 56.3**	**-1.3**
PIP	**Pasuquin**	**2.06**	**289⇑**	*i*P	**Pn**	**09 29 37.0**	**-0.3**
PIP				*e*S	**Sn**	**09 30 02.6**	**+0.2**
BALP	**Baler**	**2.17**	**209**	*e*P	**Pn**	**09 29 39.4**	**+0.6**
BALP				*e*S	**Sn**	**09 30 07.3**	**+2.3**
BCPH	**Baguio City Da**	**2.37**	**238⇓**	*e*P	**Pn**	**09 29 40.9**	**-0.6**
BCPH				*e*S	**Sn**	**09 30 10.5**	**+0.7**
BBP	**Basco**	**2.85**	**347**	*e*P	**Pn**	**09 29 47.8**	**-0.4**
BOLP	**Bolinao**	**2.93**	**245**	*e*P	**Pn**	**09 29 50.0**	**+0.8**
POLP	**Polilio Island**	**2.99**	**194**	*e*P	**Pn**	**09 29 50.6**	**+0.5**
TGY	**Tagaytay City**	**3.90**	**206**	P	**Pn**	**09 30 05.6**	**+2.9**
	66nm,0.3s,baz=158,slow=7.7,SNR=6.0						
LUBP	**Lubang**	**4.54**	**211**	*e*P	**Pn**	**09 30 13.9**	**+2.5**
TWG	**Pinlang**	**5.36**	**344**	*e*Pn	**Pn**	**09 30 25.9**	**+3.3**
YULB	**Yu-li**	**5.86**	**348**	*e*Pn	**Pn**	**09 30 35.6**	**+6.1**
	13nm,0.6s						
TPUB	**Ta-pu**	**5.94**	**342**	*e*Pn	**Pn**	**09 30 32.3**	**+1.7**
	64nm,1.0s						
YHNB	**Yeheng**	**7.09**	**350**	*e*Pn	**Pn**	**09 30 47.7**	**+1.3**
	17nm,0.6s						
JOW	**Kunigami**	**10.51**	**29**	P	**Pn**	**09 31 34.7**	**+1.4**
	2.2nm,0.3s,baz=200,slow=12,SNR=6.8						
JOW				S	**Sn**	**09 33 25.6**	**-4.6**
	0.4nm,0.3s,baz=113,slow=27,SNR=2.4						
JOW				LR	LR	09 36 00.8	
	comp=Z,137nm,19.7s,baz=262,slow=39						
QIZ	**Qiongzhong**	**12.26**	**278**	P	**Pn**	**09 31 56.2**	**-1.2**
QIZ				S	**Sn**	**09 34 06.1**	**-7.2**
QIZ				LR	LR		
	comp=N,190nm,13.1s						
QIZ				LR	LR		
	comp=Z,300nm,13.9s						
WHN	**Wuhan**	**14.90**	**331**	P	**Pn**	**09 32 40.5**	**+7.1**
KMI	**Kunming**	**19.98**	**295**	P	**Pn**	**09 33 38.9**	**+2.1**
KMI				pP	pP	09 33 47.5	+6.1
KMI				sP	sP	09 33 51.9	+7.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,77nm,4.9s						
KMI				LR	LR		
	comp=N,310nm,13.6s						
KMI				LR	LR		
	comp=E,370nm,13.6s						
KMI				LR	LR		
	comp=Z,320nm,14.9s						
KSM	**Kuching**	**20.15**	**218**	*e*P	**P**	**09 33 35.0**	**-1.9**
	comp=Z,38nm,1.3s						
KSRS	**Korea Array**	**20.26**	**12**	P	**P**	**09 33 39.4**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=196,slow=12,SNR=6.9						
KSRS				LR	LR	09 42 51.7	
	comp=Z,157nm,18.1s,MS3.4,baz=195,slow=41						
XAN	**Xi'an**	**20.44**	**326**	P	**P**	**09 33 40.5**	**+0.6**
XAN				pP		09 33 50.1	
XAN				S	**S**	**09 37 28.6**	**+0.8**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,18nm,13.8s						
XAN				LR	LR		
	comp=N,160nm,17.4s,MS3.5						
XAN				LR	LR		
	comp=E,40nm,15.9s,MS3.5						
XAN				LR	LR		
	comp=Z,52nm,14.5s,MS3.0						
CD2	**Chengdu**	**21.67**	**311**	P	**P**	**09 33 53.8**	**+0.6**
CD2				pP		09 34 03.0	
CD2				sP	sP	09 34 07.1	+4.4
CD2				PP		09 34 22.4	
CD2				S	**S**	**09 37 54.7**	**+2.7**
CD2				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.2						
CD2				pmax	pmax		
	comp=Z,100nm,4.5s						
CD2				LR	LR		
	comp=N,350nm,14.9s						
CD2				LR	LR		
	comp=Z,400nm,15.5s,MS3.9						
GUMO	**Guam**	**21.75**	**98**	LR	LR	09 40 16.9	
	comp=Z,151nm,20.6s,MS3.4,baz=121,slow=31						
CMAR	**Chiang Mai Arr**	**22.57**	**276**	P	**P**	**09 34 03.4**	**+0.5**
	comp=Z,2.2nm,0.3s,mb4.1,baz=221,slow=32,SNR=11						
CMAR				LR	LR	09 42 51.2	
	comp=Z,51nm,21.5s,MS2.9,baz=95,slow=36						
KAPI	**Kappang**	**22.70**	**188**	P	**P**	**09 34 03.1**	**-1.2**
	comp=Z,8.5nm,1.0s,mb4.1,baz=19,slow=15,SNR=3.5						
MJAR	**Matsushiro Arr**	**23.29**	**33**	P	**P**	**09 34 10.3**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.1,baz=284,slow=11,SNR=3.0						
MJAR	**Matsushiro Arr**	**23.29**	**33**	P	**P**	**09 34 10.3**	**-0.1**
LZH	**Lanzhou**	**24.80**	**321**	*e*P	**P**	**09 34 25.8**	**+1.4**
LZH				pP		09 34 39.4	
LZH				pmax	pmax		
	comp=Z,39nm,1.5s,mb4.7						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=N,400nm,13.8s						
LZH				LR	LR		
	comp=Z,600nm,14.3s,MS4.2						
MDJ	**Mudanjiang**	**27.51**	**11**	P	pP	09 34 59.2	+3.5
MDJ				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,57nm,3.4s						
SONM	**Songino Array**	**32.92**	**340**	P	**P**	**09 35 36.8**	**+0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=157,slow=8.6,SNR=7.2						
SONM				LR	LR	09 50 05.4	
	comp=Z,135nm,19.7s,MS3.6,baz=123,slow=38						
WRA	**Warramunga Arr**	**39.08**	**162**	P	**P**	**09 36 27.9**	**-1.6**
	comp=Z,6.0nm,0.6s,mb4.5,baz=343,slow=9.2,SNR=41						
ASAR	**Alice Springs**	**42.50**	**163**	P	**P**	**09 36 54.9**	**-2.9**
	comp=Z,3.2nm,0.8s,mb4.1,baz=350,slow=7.5,SNR=31						
MK31	**Makanchi Array**	**44.11**	**320**	*e*P	**P**	**09 37 10.1**	**-0.4**
MKAR	**Makanchi Array

SDV	**Santo Domingo**	**150.54**	**28**	PKPbc	PKPbc	09 48 54.2	-0.7
	comp=Z,3.9nm,0.8s,baz=333,slow=2.7,SNR=6.1						

*BJI **04** 09:38:03.7, 17°.09N×122°.88E, h46km, mB4.7/7, mb4.2/16*
*MAN **04** 09:38:07, 17°.67N×122°.54E, h11km, mb5.2, ML4.2, MS4.4*
*ISCJB **04** 09:38:07.8±0.6, 17°.61N±0°.03×122°.66E±0°.05, h44km±5km, mb4.2/36, MS3.2/4, Error ellipse: s-maj=7.2km s-min=4.5km az=173.2*
*NEIC **04** 09:38:09.8±0.8, 17°.56N×122°.62E, h47km±7km, mb4.5/13, Error ellipse: s-maj=11.7km s-min=6.3km az=87.0*
*IDC **04** 09:38:12.1±3.0, 17°.52N×122°.54E, h68km±29km, mb3.7/20, mb1 3.8/20, mb1mx3.8/26, mbtmp3.7/20, ML4.9/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/33, Error ellipse: s-maj=20.7km s-min=11.6km az=74.0*
*DJA **04** 09:38:44, 17°.18N×121°.47E, h431km, mb4.2/8*
ISC 04 09:38:07.5±0.9, 17°.61N±0°.03×122°.65E±0°.04, h25km±6km, n78, σ1°.15/85, mb4.2/36, MS3.2/4, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.59**	**202**	*eP*	**Pb**	**09 38 19.1**	**-0.1**
CVP	**Callao Caves**	**0.80**	**277**	*eP*	**Pb**	**09 38 19.2**	**-3.5**
SGCP	**Mt. Cagua**	**0.85**	**317**	*eP*	**Pb**	**09 38 22.1**	**-1.6**
SGCP				*eS*	**Sb**	**09 38 33.8**	**-0.8**
CAUP	**Cauayan**	**1.03**	**230**	*eP*	**Pn**	**09 38 26.1**	**-0.3**
APYP	**Conner**	**1.36**	**281**	*eP*	**Pn**	**09 38 29.3**	**-1.7**
APYP				*eS*	**Sn**	**09 38 47.6**	**-0.7**
ABRA	**Dolores**	**1.85**	**271**	*eP*	**Pn**	**09 38 36.7**	**-1.0**
ABRA				*eS*	**Sn**	**09 39 00.7**	**+0.4**
PIP	**Pasuquin**	**2.06**	**290**	⇑*iP*	**Pn**	**09 38 40.0**	**-0.6**
PIP				*eS*	**Sn**	**09 39 05.9**	**+0.4**
BALP	**Baler**	**2.13**	**209**	*eP*	**Pn**	**09 38 42.0**	**+0.6**
BALP				*eS*	**Sn**	**09 39 10.3**	**+3.2**
BCPH	**Baguio City Da**	**2.33**	**239**	⇑*eP*	**Pn**	**09 38 44.8**	**+0.6**
BCPH				*eS*	**Sn**	**09 39 11.9**	**-0.2**
BBP	**Basco**	**2.89**	**347**	*eP*	**Pn**	**09 38 52.6**	**+0.7**
BOLP	**Bolinao**	**2.89**	**245**	*eP*	**Pn**	**09 38 53.2**	**+1.2**
POLP	**Polilio Island**	**2.95**	**194**	*eP*	**Pn**	**09 39 00.3**	**+7.6**
SCZP	**Santa Cruz**	**3.20**	**236**	*eP*	**Pn**	**09 38 58.2**	**+2.0**
GQP	**Guinayangan**	**3.69**	**183**	*eP*	**Pn**	**09 39 03.7**	**+0.7**
GQP				*eS*	**Sn**	**09 39 45.1**	**-0.6**
TGY	**Tagaytay City**	**3.86**	**206**	P	**Pn**	**09 39 08.5**	**+3.2**
	93nm,0.3s,baz=40,slow=1.3,SNR=6.8						
TGY				S	**Sn**	**09 40 02.9**	**+13**
	80nm,0.3s,baz=6.3,slow=13,SNR=3.8						
BOAC	**Boac**	**4.20**	**191**	*eP*	**Pn**	**09 39 14.2**	**+4.1**
PVCP	**Virac**	**4.25**	**160**	*eP*	**Pn**	**09 39 14.5**	**+3.9**
LUBP	**Lubang**	**4.50**	**211**	*eP*	**Pn**	**09 39 17.0**	**+2.9**
TWG	**Pinlang**	**5.39**	**344**	*e*Pn	**Pn**	**09 39 27.8**	**+1.5**
	42nm,0.6s						
YULB	**Yu-li**	**5.89**	**348**	*e*Pn	**Pn**	**09 39 33.2**	**0.0**
	35nm,0.8s						
TPUB	**Ta-pu**	**5.97**	**342**	*e*Pn	**Pn**	**09 39 37.6**	**+3.4**
NACB	**Ninganchiao**	**6.60**	**352**	*e*Pn	**Pn**	**09 39 43.4**	**+0.4**
YHNB	**Yeheng**	**7.12**	**351**	*e*Pn	**Pn**	**09 39 54.2**	**+4.1**
	20nm,0.5s						
JOW	**Kunigami**	**10.55**	**29**	P	**Pn**	**09 40 37.7**	**+0.6**
	3.6nm,0.3s,baz=183,slow=9.4,SNR=10						
JOW				S	**Sn**	**09 42 32.0**	**-2.5**
	1.3nm,0.3s,baz=120,slow=20,SNR=2.8						
JOW				LR	LR	09 44 40.9	
	comp=Z,68nm,21.4s,baz=280,slow=36						
JOW	**Kunigami**	**10.55**	**29**	P	**Pn**	**09 40 37.7**	**+0.6**
JOW				S	**Sn**	**09 42 32.0**	**-2.5**
JOW				LR	LR	09 44 40.9	
WHN	**Wuhan**	**14.93**	**331**	P	**Pn**	**09 41 44.5**	**+7.5**
KMI	**Kunming**	**19.98**	**295**	P	**Pn**	**09 42 40.3**	**+0.4**
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
KSM	**Kuching**	**20.11**	**218**	*eP*	**P**	**09 42 38.4**	**-1.3**
	comp=Z,44nm,1.3s						
KSRS	**Korea Array**	**20.30**	**12**	P	**P**	**09 42 42.7**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=198,slow=11,SNR=13						
KSRS				LR	LR	09 51 56.8	
	comp=Z,97nm,18.9s,MS3.2,baz=195,slow=40						
XAN	**Xi'an**	**20.46**	**326**	P	**P**	**09 42 44.5**	**+1.2**
XAN				pP		09 42 53.4	
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,24nm,12.9s						
GUMO	**Guam**	**21.76**	**97**	LR	LR	09 49 32.3	
	comp=Z,86nm,19.0s,MS3.2,baz=279,slow=31						
CMAR	**Chiang Mai Arr**	**22.56**	**276**	P	**P**	**09 43 05.7**	**-0.3**
	comp=Z,1.5nm,0.7s,mb3.5,baz=91,slow=8.5,SNR=4.1						
CMAR				LR	LR	09 53 14.3	
	comp=Z,71nm,18.6s,MS3.1,baz=110,slow=40						
KAPI	**Kappang**	**22.66**	**188**	P	**P**	**09 43 06.3**	**-0.8**
	comp=Z,5.4nm,0.6s,mb4.1,baz=22,slow=13,SNR=3.4						
MJAR	**Matsushiro Arr**	**23.34**	**33**	P	**P**	**09 43 15.3**	**+1.3**
	comp=Z,0.9nm,0.7s,mb3.3,baz=229,slow=11,SNR=4.0						
LZH	**Lanzhou**	**24.82**	**322**	*eP*	**P**	**09 43 30.5**	**+2.7**
LZH				pP		09 43 39.0	
LZH				sP	sP	09 43 45.0	+6.9
LZH				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.5						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
PSI	**Prapat**	**27.54**	**240**	LR	LR	09 52 46.3	
	comp=Z,112nm,20.7s,MS3.4,baz=170,slow=32						
GTA	**Gaotai**	**29.41**	**322**	*eP*	**P**	**09 44 11.6**	**+2.6**
GTA				pP	pP	09 44 21.0	+4.7
GTA				sP	sP	09 44 24.9	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.8						
ULN	**Ulaanbaatar**	**32.77**	**340**	*eP*	**P**	**09 44 39.0**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.1						
SONM	**Songino Array**	**32.95**	**340**	P	**P**	**09 44 40.7**	**+0.7**
	comp=Z,1.4nm,0.4s,mb4.2,baz=153,slow=10,SNR=12						
FITZ	**Fitzroy Crossi**	**35.61**	**175**	*eP*	**P**	**09 45 01.6**	**-1.7**
	comp=Z,3.4nm,0.7s,mb4.4						
MBWA	**Marble Bar**	**38.64**	**184**	*eP*	**P**	**09 45 26.6**	**-2.4**
	comp=Z,6.7nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**39.04**	**162**	*eP*	**P**	**09 45 31.0**	**-1.4**
	comp=Z,21nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**39.04**	**162**	P	**P**	**09 45 31.3**	**-1.1**
	comp=Z,11nm,0.6s,mb4.8,baz=343,slow=9.2,SNR=79						
ASAR	**Alice Springs**	**42.47**	**165**	P	**P**	**09 46 00.3**	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.2,baz=348,slow=7.1,SNR=56						
MK31	**Makanchi Array**	**44.13**	**320**	*eP*	**P**	**09 46 13.6**	**-0.2**
MKAR	**Makanchi Array**	**44.13**	**320**	P	**P**	**09 46 14.3**	**+0.5**
	comp=Z,2.1nm,0.5s,mb4.2,baz=118,slow=8.7,SNR=18						
MKAR	**Makanchi Array**	**44.13**	**320**	P	**P**	**09 46 14.3**	**+0.5**
PETK	**Petropavlovsk-**	**44.71**	**29**	P	**P**	**09 46 19.4**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.8,baz=197,slow=4.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**46.54**	**330**	P	**P**	**09 46 32.1**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=114,slow=7.3,SNR=3.7						
TKM2	**Tokmak 2**	**47.05**	**313**	*eP*	**P**	**09 46 38.9**	**+1.8**
	comp=Z,3.3nm,0.9s,mb4.3						
UCH	**Uchtor**	**47.62**	**312**	*eP*	**P**	**09 46 42.2**	**+0.7**
	comp=Z,628nm,0.7s						
AAK	**Ala-Archa**	**47.74**	**312**	*eP*	**P**	**09 46 42.0**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2						
KURK	**Kurchatov**	**48.08**	**324**	P	**P**	**09 46 45.3**	**+0.3**
	comp=Z,3.9nm,0.5s,mb4.7,baz=120,slow=7.8,SNR=7.4						
KURK	**Kurchatov**	**48.08**	**324**	*eP*	**P**	**09 46 43.7**	**-1.2**
	comp=Z,11nm,1.2s,mb4.8						
AML	**Almayashu**	**48.18**	**311**	*eP*	**P**	**09 46 46.3**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**52.45**	**160**	*eP*	**P**	**09 47 17.7**	**-0.5**
	comp=Z,4.5nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**52.45**	**160**	P	**P**	**09 47 18.1**	**-0.2**
	comp=Z,5.3nm,0.9s,mb4.5,baz=322,slow=8.0,SNR=10.0						
STKA	**Stephens Creek**	**52.45**	**160**	*eP*	**P**	**09 47 17.6**	**-0.6**
	comp=Z,1.9nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**53.68**	**324**	P	**P**	**09 47 27.1**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=98,slow=9.1,SNR=3.7						
BILL	**Bilibino**	**57.43**	**18**	*eP*	**P**	**09 47 54.3**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.5						
ABKAR	**Akbulak array**	**59.09**	**317**	*eP*	**P**	**09 48 05.4**	**-0.3**
	comp=Z,2.7nm,0.4s,mb4.6						
AKTK	**Aktyubinsk**	**60.50**	**318**	P	**P**	**09 48 14.9**	**-0.4**
AKTO	**Aktyubinsk**	**60.50**	**318**	P	**P**	**09 48 14.9**	**-0.4**
	comp=Z,1.8nm,0.4s,mb4.4,baz=81,slow=7.9,SNR=12						
ARU	**Arti**	**61.21**	**325**	*eP*	**P**	**09 48 18.9**	**-1.2**
	comp=Z,3.1nm,0.4s,mb4.8						
JOF	**Joensuu**	**75.10**	**332**	*ep*	**P**	**09 49 45.4**	**-1.7**
	comp=Z,1.9nm,0.6s,mb4.2						
KEV	**Kevo**	**75.57**	**339**	*ep*	**P**	**09 49 49.1**	**-0.6**
	comp=Z,3.2nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**76.13**	**339**	P	**P**	**09 49 52.4**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.2,baz=47,slow=5.3,SNR=6.1						
SPITS	**Spitsbergen Ar**	**76.17**	**348**	P	**P**	**09 49 52.8**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.5,baz=93,slow=10,SNR=10						
KAF	**Kangasniemi**	**77.53**	**331**	*ep*	**P**	**09 49 59.3**	**-1.6**
	comp=Z,0.8nm,0.5s,mb3.9						
FINES	**FINESS Array B**	**77.80**	**331**	P	**P**	**09 50 02.3**	**-0.2**
	comp=Z,1.1nm,0.5s,mb4.0,baz=59,slow=5.6,SNR=12						
BRTR	**Keskin Array B**	**78.22**	**308**	P	**P**	**09 50 04.4**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=108,slow=4.7,SNR=2.9						
DAG	**Danmarks Havn**	**83.04**	**352**	*i* P	**P**	**09 50 30.0**	**-0.3**
NB2	**NORSAR Subarra**	**84.66**	**333**	P	**P**	**09 50 37.7**	**-1.2**
	comp=Z,0.7nm,0.6s,mb4.0,baz=61,slow=5.1						
NOA	**NORSAR Array B**	**84.66**	**333**	P	**P**	**09 50 38.1**	**-0.8**
	comp=Z,1.3nm,0.8s,mb4.1,baz=64,slow=5.0,SNR=6.6						
RES	**Resolute Bay**	**84.90**	**9**	*eP*	**P**	**09 50 42.1**	**+2.2**
	comp=Z,2.8nm,1.0s,mb4.3						
YKA	**Yellowknife Ar**	**88.46**	**23**	P	**P**	**09 50 58.6**	**+1.2**
	comp=Z,0.3nm,0.7s,mb3.7,baz=304,slow=4.1,SNR=10						
GERES	**GERESS Array B**	**88.79**	**321**	P	**P**	**09 50 57.9**	**-1.3**
	comp=Z,0.1nm,0.3s,mb3.6,baz=298,slow=2.1,SNR=2.1						
SDV	**Santo Domingo**	**150.58**	**28**	*e*PKPbc	PKPbc	09 57 58.7	+0.5

*TRN **04** 09:39:16.7, 19°.40N×64°.10W, h22km*
*NEIC **04** 09:39:18.5, 19°.50N×64°.00W, h48km, MD3.6(RSPR), After RSPR.*
*RSPR **04** 09:39:18.5, 19°.50N×64°.00W, h48km±7km, MD3.6/8, MD3.6/8*
ISC 04 09:39:17.6±1.6, 19°.53N±0°.07×64°.1W±0°.1, h25km±14km, n27, σ0°.58/44, 18C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.83**	**195**	⇑*eP*	**Pb**	**09 39 33.1**	**-0.2**
ABV				*eS*	**Sb**	**09 39 44.0**	**0.0**
ABV	**Anegada**	**0.83**	**195**	⇑*eP*	**Pb**	**09 39 33.1**	**-0.2**
ABV				*eS*	**Sb**	**09 39 44.0**	**0.0**
TBVI	**Tortola**	**1.21**	**204**	⇑*eP*	**Pn**	**09 39 38.1**	**-0.9**
TBVI	**Tortola**	**1.21**	**204**	⇑*eP*	**Pn**	**09 39 38.6**	**-0.4**
STVI	**Saint Thomas**	**1.42**	**215**	⇑*eP*	**Pn**	**09 39 41.5**	**-0.4**
STVI				*eS*	**Sn**	**09 39 59.6**	**-0.3**
STVI	**Saint Thomas**	**1.42**	**215**	⇑*eP*	**Pn**	**09 39 41.5**	**-0.4**
STVI				*eS*	**Sn**	**09 39 59.6**	**-0.3**
MTP	**Monte Pirata**	**1.98**	**224**	⇑*eP*	**Pn**	**09 39 49.5**	**-0.1**
MTP				*eS*	**Sn**	**09 40 13.3**	**-0.3**
MTP	**Monte Pirata**	**1.98**	**224**	⇑*eP*	**Pn**	**09 39 49.5**	**-0.1**
MTP				*eS*	**Sn**	**09 40 13.3**	**-0.3**
CBYP	**Canovanas**	**2.08**	**233**	⇓*eP*	**Pn**	**09 39 50.6**	**-0.4**
CBYP				*eS*	**Sn**	**09 40 16.7**	**+0.6**
CBYP	**Canovanas**	**2.08**	**233**	⇓*eP*	**Pn**	**09 39 50.6**	**-0.4**
CBYP				*eS*	**Sn**	**09 40 16.7**	**+0.6**
CPD	**Cerro la Pandu**	**2.27**	**229**	⇓*eP*	**Pn**	**09 39 53.2**	**-0.3**
CPD				*eS*	**Sn**	**09 40 20.7**	**-0.1**
CPD	**Cerro la Pandu**	**2.27**	**229**	⇓*eP*	**Pn**	**09 39 53.2**	**-0.3**
CPD				*eS*	**Sn**	**09 40 20.7**	**-0.1**
SJG	**San Juan**	**2.40**	**234**	⇓*eP*	**Pn**	**09 39 55.1**	**-0.3**
SJG				*eS*	**Sn**	**09 40 24.7**	**+0.7**
SJG	**San Juan**	**2.40**	**234**	⇓*eP*	**Pn**	**09 39 55.8**	**+0.5**
SJG				*eS*	**Sn**	**09 40 24.6**	**+0.6**
SJG	**San Juan**	**2.40**	**234**	⇓*eP*	**Pn**	**09 39 55.8**	**+0.4**
SJG	**San Juan**	**2.40**	**234**	⇓*eP*	**Pn**	**09 39 55.8**	**+0.5**
SJG				*eS*	**Sn**	**09 40 24.6**	**+0.6**
SJG				*eS*	**Sn**	**09 40 24.7**	**+0.7**
CELP	**Cerrillos**	**2.76**	**239**	⇑*eP*	**Pn**	**09 40 00.1**	**-0.2**
CELP	**Cerrillos**	**2.76**	**239**	⇑*eP*	**Pn**	**09 40 00.8**	**+0.5**
AOPR	**Arecibo Observ**	**2.77**	**245**	⇑*eP*	**Pn**	**09 40 01.2**	**+0.7**
AOPR				*eS*	**Sn**	**09 40 33.5**	**+0.3**
AOPR	**Arecibo Observ**	**2.77**	**245**	⇑*eP*	**Pn**	**09 40 01.2**	**+0.7**
AOPR				*eS*	**Sn**	**09 40 33.5**	**+0.3**
AGPR	**Aguadilla, PR**	**3.04**	**250**	⇑*eP*	**Pn**	**09 40 04.7**	**+0.5**
AGPR	**Aguadilla, PR**	**3.04**	**250**	⇑*eP*	**Pn**	**09 40 04.7**	**+0.5**
LSP	**Las Mesas**	**3.13**	**245**	⇑*eP*	**Pn**	**09 40 06.1**	**+0.6**
LSP	**Las Mesas**	**3.13**	**245**	⇑*eP*	**Pn**	**09 40 06.6**	**+1.2**
CRPR	**Cabo Rojo, PR**	**3.23**	**243**	⇑*eP*	**Pn**	**09 40 07.3**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.23**	**243**	⇑*eP*	**Pn**	**09 40 07.3**	**+0.6**
SDDR	**Presa de Saban**	**6.81**	**267**	*e*Pn	**Pn**	**09 40 55.8**	**-0.3**
	15nm,0.6s						
SDDR				*e*Sn	**Sn**	**09 42 11.1**	**-1.7**

*IDC **04** 09:48:53.5±0.9, 22°.86N×144°.39E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, ML3.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/27, Error ellipse: s-maj=38.3km s-min=20.6km az=89.0*
*ISCJB **04** 09:48:56.9±0.8, 22°.83N±0°.09×144°.3E±0°.2, h33km, mb3.5/6, Error ellipse: s-maj=31.0km s-min=10.4km az=162.8*
ISC 04 09:48:58.5±6.9, 22°.8N±0°.1×144°.4E±0°.3, h32km±49km, n9, σ0°.67/9, mb3.5/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima 2**	**4.69**	**335**	Pn	**Pn**	**09 50 06.8**	**-0.3**
	6.4nm,0.3s,baz=211,slow=17,SNR=2.9						
CBIJ				Sn	**Sn**	**09 51 00.6**	**+0.2**
	10.0nm,0.3s,baz=291,slow=22,SNR=5.0						
JHJ	**Hachijo jima 2**	**11.03**	**339**	LR	LR	09 54 52.6	
	comp=Z,116nm,21.2s,baz=252,slow=33						
KSRS	**Korea Array**	**20.32**	**320**	P	**P**	**09 53 35.9**	**+4.0**
	0.6nm,0.4s,baz=214,slow=28,SNR=3.8						
WRA	**Warramunga Arr**	**43.62**	**194**	P	**P**	**09 57 00.1**	**+0.1**
	0.3nm,0.3s,mb3.5,baz=17,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	**47.32**	**193**	P	**P**	**09 57 29.4**	**+0.1**
	0.2nm,0.6s,mb3.2,baz=12,slow=5.9,SNR=3.3						
BVAR	**Borovoye Array**	**62.54**	**319**	P	**P**	**09 59 19.5**	**+0.5**
	1.1nm,0.5s,mb4.3,baz=86,slow=9.5,SNR=5.3						
YKA	**Yellowknife Ar**	**74.95**	**28**	P	**P**	**10 00 36.8**	**+0.6**
	0.1nm,0.5s,mb3.0,baz=290,slow=5.5,SNR=2.7						
NVAR	**Mina Array Bea**	**81.58**	**52**	P	**P**	**10 01 13.2**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=243,slow=8.0,SNR=2.9						
FINES	**FINESS Array B**	**82.64**	**335**	P	**P**	**10 01 16.9**	**-1.5**
	0.7nm,0.7s,mb3.8,baz=20,slow=8.9,SNR=3.2						

*NEIC **04** 10:02:43.6, 31°.72S×71°.77W, h30km±2km, MD3.8, ML3.0(GUC), After GUC.*
GUC 04 10:02:43.6±0.7, 31°.72S×71°.77W, h30km±2km, MD3.8, ML3.0, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.28**	**125**	⇓*iP*	Pb	10 02 50.8	0.0
CHNG				*i* S	Sb	10 02 55.9	+0.1
CHNG				AML	AML	10 02 56.5	
	comp=N,1μm,0.3s						
CMCH	**Combarbala**	**0.85**	**51**	⇑*iP*	Pn	10 02 59.2	-0.4
CMCH				*i* S	Sb	10 03 11.4	+0.4
CMCH	**Combarbala**	**0.85**	**51**	⇑*iP*	Pn	10 02 59.2	-0.4
CMCH				*i* S	Sb	10 03 11.4	+0.4
CMCH				AML	AML	10 03 13.8	
	comp=N,2μm,0.6s						
JACH	**Jahuel**	**1.39**	**134**	*eP*	Pn	10 03 08.0	+1.1
CLCH	**Cerro Calan**	**1.97**	**148**	⇑*iP*	Pn	10 03 16.4	+1.4
CLCH				*i* S	Sn	10 03 41.5	+2.8
CLCH				AML	AML	10 03 46.9	
	comp=N,224nm,0.6s						
FCH	**Farellones**	**2.04**	**142**	⇑*iP*	Pn	10 03 18.1	+2.3
FCH				*i* S	Sn	10 03 44.4	+4.2
FCH				AML	AML	10 03 46.9	
	comp=E,117nm,0.2s						
TACH	**Talagante**	**2.05**	**160**	*eP*	Pn	10 03 17.7	+1.6
TACH				*i* S	Sn	10 03 43.6	+2.9
ANTU	**Antumapu**	**2.08**	**153**	*eP*	Pn	10 03 17.6	+1.1
ANTU				*i* S	Sn	10 03 43.7	+2.4
ANTU	**Antumapu**	**2.08**	**153**	*eP*	Pn	10 03 17.6	+1.1
ANTU				*i* S	Sn	10 03 43.7	+2.4
ANTU				AML	AML	10 03 53.7	
	comp=N,112nm,0.4s						
PCH	**Pirque**	**2.17**	**151**	*eP*	Pn	10 03 19.1	+1.3
PCH				*e*S	Sn	10 03 46.3	+2.6
LMEL	**Las Melosas**	**2.50**	**149**	⇓*iP*	Pn	10 03 24.4	+2.1
LMEL				*e*S	Sn	10 03 54.5	+2.8
LMEL	**Las Melosas**	**2.50**	**149**	⇓*iP*	Pn	10 03 24.4	+2.1
LMEL				*e*S	Sn	10 03 54.5	+2.8
LMEL				AML	AML	10 04 05.5	
	comp=N,110nm,0.2s						

*IDC **04** 10:21:33.8±0.9, 15°.64N×96°.58W, h0km, mb4.2/13, mb1 4.4/16, mb1mx4.2/26, mbtmp4.2/16, ML3.6/3, MS3.5/7, Ms1 3.4/7, ms1mx3.3/23, Error ellipse: s-maj=24.7km s-min=15.0km az=41.0*
*MEX **04** 10:21:35.2±0.4, 15°.35N×96°.79W, h16km±7km, MD4.4*
*NEIC **04** 10:21:35.6, 15°.40N×96°.81W, h16km, mb4.6/96, MD4.4(MEX), After MEX.*
NEIC Felt at Puerto Escondido.
*ISCJB **04** 10:21:39.8±0.7, 15°.91N±0°.05×96°.50W±0°.03, h39km±5km, mb4.5/97, MS3.7/8, Error ellipse: s-maj=9.6km s-min=3.5km az=29.1*
ISC 04 10:21:41.0±0.8, 15°.91N±0°.05×96°.50W±0°.03, h32km±5km, h34km±7km: pP-P, n449, σ0°.74/450, mb4.5/97, MS3.7/8, 132C-139D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.40**	**110**	*i* P	**Pb**	**10 21 47.6**	**-2.3**
HUIG				*i* S	**Sb**	**10 21 56.9**	**+0.8**
HUIG	**Huatulco**	**0.40**	**110**	*i* P	**Pb**	**10 21 47.6**	**-2.3**
HUIG				*i* S	**Sb**	**10 21 56.9**	**+0.8**
VHO	**Vista Hermosa**	**1.18**	**349**	*i* P	**Pn**	**10 22 01.0**	**-0.3**
VHO				*e*S	**Sn**	**10 22 21.4**	**+5.1**
VHO	**Vista Hermosa**	**1.18**	**349**	*i* P	**Pn**	**10 22 01.0**	**-0.3**
VHO				*e*S	**Sn**	**10 22 21.4**	**+5.1**
PNIG	**Pinotepa**	**1.64**	**287**	*i* P	**Pn**	**10 22 00.0**	**-7.6**
PNIG				*i* S	**Sn**	**10 22 17.6**	**-10**
PNIG	**Pinotepa**	**1.64**	**287**	*i* P	**Pn**	**10 22 00.0**	**-7.6**
PNIG				*i* S	**Sn**	**10 22 20.3**	**-7.3**
CMIG	**Matias Romero**	**1.95**	**52**	Pn	**Pn**	**10 22 11.9**	**+0.1**
	30nm,0.3s,baz=222,slow=12,SNR=92						
CMIG				Lg		10 22 49.4	
	191nm,0.3s,baz=151,slow=17,SNR=5.5						
CMIG	**Matias Romero**	**1.95**	**52**	Pn	**Pn**	**10 22 11.9**	**+0.1**
CMIG				Lg		10 22 49.4	
CAIG	**El Cayaco**	**3.79**	**288**	*i* P	**Pn**	**10 22 31.3**	**-5.9**
CAIG				*i* S	**Sn**	**10 23 12.3**	**-8.5**
CAIG	**El Cayaco**	**3.79**	**288**	*i* P	**Pn**	**10 22 29.7**	**-7.5**
CAIG				*i* S	**Sn**	**10 23 12.3**	**-8.5**
PLIG	**Platanillo**	**3.79**	**311**	*i* P	**Pn**	**10 22 33.6**	**-3.6**
PLIG				*i* S	**Sn**	**10 23 17.9**	**-2.8**
CCIG	**Comitan**	**4.21**	**84**	*i* P	**Pn**	**10 22 42.2**	**-0.8**
CCIG				*i* S	**Sn**	**10 23 33.2**	**+2.2**
ZIIG	**Zihuatanejo**	**5.05**	**290**	*i* P	**Pn**	**10 22 47.7**	**-6.8**
ZIIG				*i* S	**Sn**	**10 23 42.7**	**-9.1**
ZIIG	**Zihuatanejo**	**5.05**	**290**	*i* P	**Pn**	**10 22 47.7**	**-6.8**
ZIIG				*i* S	**Sn**	**10 23 43.6**	**-8.2**
APG	**El Apazote**	**5.89**	**98**	Pn	**Pn**	**10 23 05.1**	**-0.9**
	1.7nm,0.3s,baz=302,slow=14,SNR=24						
APG				Sn	**Sn**	**10 24 12.4**	**0.0**
	6.3nm,0.3s,baz=236,slow=22,SNR=5.0						
APG				Lg		10 24 50.8	
	3.1nm,0.3s,baz=300,slow=18,SNR=5.9						
TGUH	**Tegucigalpa,Un**	**9.10**	**100**	*e*Pn	**Pn**	**10 23 51.3**	**+1.1**
JTS	**JuntasAbangare**	**12.55**	**115**	Pn	**Pn**	**10 24 38.1**	**+0.7**
	0.6nm,0.3s,baz=328,slow=15,SNR=3.9						
JTS	**JuntasAbangare**	**12.55**	**115**	*e*Pn	**Pn**	**10 24 38.2**	**+0.7**
	22nm,0.9s						
628A	**Black Gap, Mar**	**14.74**	**338**	⇑P	**Pn**	**10 25 07.7**	**+0.4**
	baz=15						
JCT	**Junction City**	**14.82**	**349**	*e*Pn	**Pn**	**10 25 09.2**	**+0.9**
627A	**Terlingua Ranc**	**14.90**	**336**	⇑P	**Pn**	**10 25 09.7**	**+0.3**
	baz=15,SNR=34						
TXAR	**Lajitas Array**	**14.91**	**335**	Pn	**Pn**	**10 25 09.6**	**+0.1**
	0.

HBAR	Harrisburg	20.25 14	eP	P	10 26 14.8 +1.1
Y22A	Socorro baz=21,SNR=36	20.28 334	⇑P	P	10 26 14.4 +0.4
BNM	Barren Site 30nm,1.0s	20.33 335	eP	P	10 26 15.7 +1.1
Z20A	Nine Sixteen R baz=21	20.33 330	⇓P	P	10 26 15.4 +0.8
Y22D	IRIS PASSCAL I baz=21	20.38 334	⇑P	P	10 26 16.1 +1.0
PLAL	Pickwick Lake 15nm,0.8s	20.45 20	eP	P	10 26 15.4 -0.4
LPM	Los Pinos Moun	20.47 335	eP	P	10 26 17.4 +1.3
217A	Green Valley baz=21	20.48 323	⇑P	P	10 26 16.2 0.0
LENM	Lemitar	20.48 334	eP	P	10 26 17.2 +1.0
W25A	X Bar L Ranch, baz=21,SNR=19	20.51 341	⇓P	P	10 26 16.3 -0.2
X23A	Hourglass Bar baz=21,SNR=32	20.54 337	⇑P	P	10 26 16.9 +0.2
Y21A	Point of Rocks baz=21,SNR=38	20.65 333	⇓P	P	10 26 18.9 +0.9
118A	Homack Ranch, baz=21,SNR=19	20.66 326	⇑P	P	10 26 18.2 +0.1
LAZ	Ladron 16nm,1.0s	20.76 334	eP	P	10 26 20.3 +1.2
X22A	Bernardo baz=21,SNR=16	20.79 335	⇓P	P	10 26 20.6 +1.1
W24A	Lazy 6 Ranch, baz=21	20.82 339	⇑P	P	10 26 20.7 +0.9
TUC	Tucson 9.9nm,1.0s	20.86 324	eP	P	10 26 20.9 +0.6
Y20A	Horse Springs, baz=21,SNR=20	20.88 331	⇓P	P	10 26 21.9 +1.3
ANMO	Albuquerque 7.9nm,0.9s,baz=149,slow=12,SNR=45	20.97 337 P		P	10 26 22.0 +0.6
ANMO	Albuquerque 9.1nm,0.9s	20.97 337	eP	P	10 26 22.2 +0.8
216A	Three Points, baz=21	21.02 322	⇓P	P	10 26 21.8 -0.2
117A	Oracle baz=21,SNR=19	21.03 325	⇓P	P	10 26 22.7 +0.6
GOGA	Godfrey 15nm,0.8s,mb4.4	21.04 32	eP	P	10 26 21.1 -1.1
W23A	Werner Place, baz=22,SNR=17	21.04 337	⇓P	P	10 26 22.6 +0.4
X21A	Alamocita Cree baz=22,SNR=51	21.07 333	⇑P	P	10 26 24.0 +1.5
Y19A	Nutrioso baz=22,SNR=44	21.34 330	⇓P	P	10 26 26.2 +0.8
SWET	Sewanee	21.43 24	eP	P	10 26 26.0 -0.4
Z17A	San Carlos Hig baz=22,SNR=6.5	21.44 326	⇑P	P	10 26 27.3 +0.9
UTMT	University of 68nm,0.9s,mb5.0	21.46 17	eP	P	10 26 26.2 -0.4
X20A	Quemado baz=22,SNR=28	21.46 332	⇑P	P	10 26 28.1 +1.4
PARMO	Parma	21.53 15	eP	P	10 26 28.2 +0.8
116A	Eloy baz=22,SNR=6.9	21.57 323	⇓P	P	10 26 27.6 -0.4
WVT	Waverly 21nm,1.1s,mb4.5	21.57 19	eP	P	10 26 27.2 -0.7
Y18A	Canyon Day Jun baz=22,SNR=17	21.58 328	⇑P	P	10 26 28.5 +0.4
W21A	San Fidel baz=22,SNR=6.1	21.59 334	⇓P	P	10 26 29.0 +1.0
X19A	St. Johns baz=22,SNR=8.8	21.74 330	⇓P	P	10 26 30.9 +1.2
214A	Organ Pipe Nat baz=22,SNR=8.4	21.81 320	⇓P	P	10 26 30.5 0.0
Y17A	Roosevelt baz=22,SNR=10.0	21.94 326	⇑P	P	10 26 32.4 +0.5
W20A	Ramah baz=22,SNR=11	21.96 333	⇓P	P	10 26 33.4 +1.4
115A	Sonoran Desert baz=22,SNR=10.0	21.98 322	⇓P	P	10 26 32.6 +0.3
V22A	San Miguel Ran baz=22	21.99 337	⇑P	P	10 26 33.2 +0.8
Z16A	Peralta Trail, baz=22	21.99 325	⇑P	P	10 26 32.5 +0.1
X18A	Snowflake baz=22,SNR=20	22.14 329	⇓P	P	10 26 35.1 +1.2
CPCT	Cooper Cave	22.22 27	eP	P	10 26 35.7 +0.9
Z15A	Gila River Ind baz=23	22.36 324	⇓P	P	10 26 36.5 +0.1
114A	Black Gap (USA baz=23	22.40 321	⇓P	P	10 26 36.9 +0.1
X17A	Forest Lakes baz=23	22.42 328	⇓P	P	10 26 37.1 +0.1
Y16A	Circle Bar Ran baz=23	22.42 326	⇑P	P	10 26 36.6 -0.4
CCM	Cathedral Cave 33nm,1.0s,mb4.7	22.55 11	eP	P	10 26 38.7 +0.5
FVM	French Village 6.3nm,0.9s,mb4.0	22.64 13	eP	P	10 26 38.8 -0.4
FVM			e		10 26 48.3
SIUC	Southern Illin 38nm,0.9s,mb4.8	22.66 15	eP	P	10 26 40.6 +1.1
TKL	Tuckaleechee C 13nm,1.0s,mb4.3,baz=212,slow=7.9,SNR=7.1	22.72 28 P		P	10 26 38.6 -1.5
TKL	Tuckaleechee C	22.72 28	eP	P	10 26 40.3 +0.1
X16A	Lo Mia Camp, P baz=23	22.81 327	⇑P	P	10 26 41.3 +0.2
Z14A	Wintersburg baz=23	22.87 322	⇓P	P	10 26 41.6 -0.2
Y15A	Casa Rosa Ranc baz=23	22.95 324	⇑P	P	10 26 42.2 -0.4
T22A	Edith baz=23	22.96 338	⇓P	P	10 26 43.9 +1.2
CBKS	Cedar Bluff 81nm,1.2s,mb5.0	23.00 354	eP	P	10 26 43.8 +0.8
SDCO	Great Sand Dun 14nm,1.0s,mb4.4	23.16 342	eP	P	10 26 45.1 +0.3
Z13A	Yuma Proving G baz=23	23.18 321	⇑P	P	10 26 44.1 -1.0
X15A	Humboldt baz=24	23.29 325	⇓P	P	10 26 45.3 -0.9
USIN	University of 41nm,0.9s,mb4.9	23.32 18	eP	P	10 26 46.2 -0.2
Y14A	Wickenburg baz=24	23.32 323	⇓P	P	10 26 45.6 -0.9
V17A	Tonalea, Kykot baz=24,SNR=19	23.43 330	⇑P	P	10 26 47.7 +0.1
TZTN	Tazewell 64nm,1.9s,mb4.7	23.56 27	eP	P	10 26 48.9 +0.1
T19A	Beclabito baz=24	23.62 334	⇑P	P	10 26 48.9 -0.5
WUAZ	Wupatki baz=24,SNR=30	23.63 328	⇑P	P	10 26 50.1 +0.7
WUAZ	Wupatki 30nm,0.9s,mb4.7	23.63 328	eP	P	10 26 50.7 +1.3
X14A	Yava baz=24	23.64 324	⇑P	P	10 26 48.7 -0.9
U18A	Rough Rock, Ch baz=24	23.65 332	⇑P	P	10 26 49.4 -0.2
OTAV	Otavalo 4.0nm,0.8s,mb3.9	23.66 129	eP	P	10 26 51.4 +1.5
OTAV			e		10 27 04.0
Y13A	Salome baz=24	23.71 322	⇓P	P	10 26 49.8 -0.4
MVCO	Mesa Verde baz=24	23.74 336	⇓P	P	10 26 50.4 0.0
MVCO	Mesa Verde 154nm,2.2s,mb5.0	23.74 336	eP	P	10 26 50.9 +0.5
MVCO			e		10 27 00.6
GLA	Glamis baz=24	23.80 319	⇓P	P	10 26 50.8 -0.3
GLA	Glamis 11nm,0.9s,mb4.3	23.80 319	eP	P	10 26 50.4 -0.6
W15A	Williams baz=24	23.83 327	⇓P	P	10 26 51.2 -0.1
S21A	Coal Bank Pass baz=24	23.86 337	⇓P	P	10 26 51.5 -0.1
OLIL	Olney 28nm,0.9s,mb4.7	23.91 16	eP	P	10 26 51.9 0.0
R22A	Saguache, Gunn baz=24,SNR=8.1	24.01 340	⇑P	P	10 26 53.1 +0.2
U16A	Tuba City baz=24,SNR=14	24.01 330	⇑P	P	10 26 53.5 +0.6
U17A	Shonto baz=24,SNR=13	24.16 331	⇓P	P	10 26 54.1 -0.2
T18A	Mexican Hat baz=25,SNR=12	24.25 333	⇓P	P	10 26 55.2 +0.2
X13A	Yucca baz=24	24.26 323	⇓P	P	10 26 54.7 -0.5
V15A	Kaibab Nationa baz=25,SNR=14	24.27 328	⇓P	P	10 26 54.8 -0.5
W14A	Seligman baz=25,SNR=16	24.30 325	⇑P	P	10 26 55.4 -0.1
ROSC	El Rosal 4.3nm,0.4s,mb4.3,baz=73,slow=19,SNR=5.9	24.38 114 P		P	10 26 60.0 +3.5
R21A	Cimarron baz=25,SNR=13	24.40 339	⇓P	P	10 26 57.0 +0.5
S19A	Harvey Farm, M baz=25,SNR=25	24.45 335	⇓P	P	10 26 56.8 -0.1
R20A	Redvale baz=25,SNR=36	24.54 337	⇓P	P	10 26 58.2 +0.5
T17A	Navajo Res., N baz=25,SNR=15	24.55 332	⇓P	P	10 26 58.0 +0.3
BC3	Big Chuckw Mtn baz=25	24.59 319	⇓P	P	10 26 57.6 -0.7
V14A	Boquillas Ranc baz=25,SNR=14	24.62 326	⇑P	P	10 26 58.7 +0.2
Q22A	Crested Butte, baz=25,SNR=7.8	24.63 340	⇑P	P	10 26 58.3 -0.2
W13A	Hualapai Mount baz=25,SNR=18	24.66 324	⇓P	P	10 26 59.2 +0.4
IRM	Iron Mountain baz=25,SNR=16	24.74 321	⇑P	P	10 26 59.8 +0.2
S18A	Hurst Farm, Bl baz=25,SNR=18	24.76 334	⇓P	P	10 27 00.3 +0.6
BLO	Bloomington 58nm,1.2s,mb5.0	24.77 19	eP	P	10 26 59.6 -0.2
U15A	North Rim baz=25,SNR=22	24.80 328	⇓P	P	10 27 00.8 +0.6
Q21A	Lamborn Mesa, baz=25,SNR=18	24.83 339	⇑P	P	10 27 01.2 +0.8
SMCO	Snowmass 17nm,0.9s,mb4.6	24.94 340	eP	P	10 27 02.5 +1.2
R19A	Curley Farm, L baz=25,SNR=11	24.97 336	⇑P	P	10 27 01.8 +0.1
S17A	Black Ridge (B baz=26,SNR=17	25.07 332	⇓P	P	10 27 02.5 -0.1
ISCO	Idaho Springs 14nm,1.1s,mb4.4	25.10 343	eP	P	10 27 03.6 +0.8
BELC	Belle Mtn. baz=25,SNR=6.1	25.16 319	⇑P	P	10 27 03.4 -0.1
109C	Camp Elliot, M baz=25	25.18 316	⇓P	P	10 27 03.0 -0.6
Q20A	Ridgley Place, baz=26	25.19 338	⇑P	P	10 27 04.0 +0.4
U14A	Mt Trumbull baz=26,SNR=8.1	25.25 327	⇑P	P	10 27 04.2 0.0
V13A	Grand Canyon W baz=26,SNR=14	25.26 325	⇑P	P	10 27 04.7 +0.4
R18A	Canyonlands Na baz=26,SNR=8.9	25.31 335	⇑P	P	10 27 04.6 -0.1
T15A	Red Dirt Ranch baz=26,SNR=13	25.31 329	⇑P	P	10 27 05.0 +0.2
HDIL	Hopedale 18nm,0.9s,mb4.6	25.35 13	eP	P	10 27 03.0 -2.0
W12A	Cal Nev Ari baz=26	25.37 323	⇑P	P	10 27 04.9 -0.4
P21A	Newcastle baz=26	25.41 340	⇓P	P	10 27 06.3 +0.7
OGNE	Ogallala 69nm,0.9s,mb5.2	25.41 350	eP	P	10 27 06.8 +1.2
ELN	Prospectdale	25.41 30	eP	P	10 27 04.5 -1.2
V12A	Nelson baz=26,SNR=12	25.66 324	⇓P	P	10 27 07.6 -0.3
U13A	Pakoon Wash baz=26,SNR=8.8	25.67 326	⇑P	P	10 27 07.8 -0.2
R17A	Hanksville Air baz=26,SNR=8.3	25.68 334	⇓P	P	10 27 08.1 0.0
P20A	De Beque baz=26,SNR=7.6	25.71 338	⇑P	P	10 27 08.4 +0.1
R16A	Teasdale baz=26,SNR=12	25.91 332	⇑P	P	10 27 09.9 -0.2
U12A	Valley of Fire baz=26,SNR=8.0	25.99 325	⇑P	P	10 27 11.2 +0.2
P19A	Cripple Cowboy baz=26	26.04 338	⇓P	P	10 27 11.4 +0.2
SCIA	State Center 40nm,0.8s,mb5.0	26.07 6	eP	P	10 27 11.1 -0.4
V11A	Goodsprings baz=26	26.07 323	⇓P	P	10 27 11.7 +0.1
T13A	Saint George baz=26	26.09 327	⇑P	P	10 27 11.3 -0.6
SRU	San Rafael baz=27	26.18 335	⇑P	P	10 27 12.4 -0.2
SRU	San Rafael 5.9nm,1.1s,mb4.0	26.18 335	eP	P	10 27 14.0 +1.4
SDV	Santo Domingo 7.7nm,0.7s,mb4.3,baz=316,slow=4.5,SNR=18	26.19 102 P		P	10 27 12.4 -0.5
SDV			LR	LR	10 38 15.5
	comp=Z,123nm,19.1s,MS3.5,baz=10,slow=38				
SDV	Santo Domingo 18nm,1.1s,mb4.5	26.19 102	eP	P	10 27 13.4 +0.5
CCUT	Cedar City 4.0nm,0.9s,mb4.0	26.22 329	eP	P	10 27 14.5 +1.5
O20A	White River Ci baz=27,SNR=9.8	26.22 339	⇑P	P	10 27 13.6 +0.7
N22A	Wattenberg Ran baz=27	26.27 343	⇓P	P	10 27 14.1 +0.8
S14A	Cedar City baz=27	26.28 329	⇓P	P	10 27 13.9 +0.4
Q16A	Castle Valley baz=27	26.30 334	⇓P	P	10 27 14.3 +0.6
SHPR	Sheep Range	26.39 325	eP	P	10 27 15.2 +0.7
MSU	Marysvale 4.0nm,1.0s,mb3.9	26.41 332	eP	P	10 27 16.2 +1.6
ARUT	Antelope Range 6.2nm,0.8s,mb4.2	26.44 329	eP	P	10 27 16.1 +1.1
ARUT			e		10 27 34.8
PHWY	Pilot Hill 7.1nm,0.9s,mb4.2	26.47 345	eP	P	10 27 16.1 +0.9
S13A	Holt Ranch, En baz=27,SNR=8.4	26.49 328	⇑P	P	10 27 16.0 +0.6
P18A	Preston Nutter baz=27	26.51 336	⇓P	P	10 27 15.7 +0.1
N21A	Black Mountain baz=27,SNR=8.9	26.55 341	⇓P	P	10 27 15.6 -0.3
O19A	Miners Draw (B baz=27,SNR=9.9	26.67 338	⇑P	P	10 27 16.5 -0.5
N20A	Spence Gulch, baz=27,SNR=6.4	26.86 340	⇑P	P	10 27 19.2 +0.5
M22A	Cedar Creek Ra baz=27,SNR=11	26.87 343	⇑P	P	10 27 19.6 +0.8
Q15A	Fillmore baz=27	26.89 332	⇑P	P	10 27 19.1 0.0
ACSO	Alum Creek Sta 28nm,1.0s,mb4.7	26.95 23	eP	P	10 27 19.4 -0.1
T11A	Corn Creek, Al baz=27	26.95 326	⇑P	P	10 27 19.4 -0.2
O18A	Roosevelt baz=27	26.97 337	⇑P	P	10 27 20.2 +0.5
R13A	O'Grain Ranch, baz=27	27.01 329	⇓P	P	10 27 20.8 +0.7
O17A	Robinson Place baz=28	27.19 336	⇓P	P	10 27 21.4 -0.3
N19A	John Jarvie Ra baz=28	27.22 339	⇓P	P	10 27 22.4 +0.4
Q14A	Sevier Lake (B baz=28	27.30 331	⇓P	P	10 27 23.2 +0.5
RWWY	Rawlins 7.7nm,0.8s,mb4.3	27.31 342	eP	P	10 27 24.1 +1.4
JFWS	Jewell Farm 15nm,0.8s,mb4.6	27.45 10	eP	P	10 27 23.3 -0.7
N18A	Larsen Ranch, baz=28,SNR=12	27.47 338	⇓P	P	10 27 24.1 0.0
DAU	Daniels Canyon 4.1nm,0.9s,mb4.1	27.59 335	eP	P	10 27 26.1 +0.8
L21A	Rawlins baz=28	27.61 342	⇑P	P	10 27 25.0 -0.4
ECSD	EROS Data Cent 13nm,1.3s,mb4.4	27.74 360	eP	P	10 27 27.5 +0.9
R11A	Troy Canyon, C baz=28,SNR=6.7	27.97 327	⇑P	P	10 27 28.4 -0.3
M18A	Lyman baz=28	28.01 338	⇑P	P	10 27 29.0 0.0
DUG	Dugway 4.7nm,1.3s,mb4.0	28.06 333	eP	P	10 27 30.4 +0.9
R10A	Warm Springs baz=29	28.30 326	⇑P	P	10 27 32.3 +0.6
Q11A	Duckwater baz=29	28.37 327	⇑P	P	10 27 32.8 +0.5
L18A	Fontenelle, Gr baz=29	28.43 338	⇑P	P	10 27 32.7 -0.1
K20A	Yellowstone Ra baz=29	28.53 342	⇑P	P	10 27 33.8 +0.2
HWUT	Hardware Ranch 3.4nm,0.8s,mb4.1	28.73 336	eP	P	10 27 36.2 +0.9
Q10A	Clear Creek Ra baz=29,SNR=7.6	28.75 326	⇓P	P	10 27 35.6 0.0
N14A	Grayback Hills baz=29	28.76 333	⇓P	P	10 27 35.9 +0.2
K19A	Absolon Red Bu	28.84 341	⇓P	P	10 27 36.4 +0.1
	baz=29				
BW06	Boulder Array baz=30	29.02 340	⇓P	P	10 27 37.9 -0.1
BW06	Boulder Array 6.5nm,1.2s,mb4.2	29.02 340	eP	P	10 27 37.8 -0.1
PDAR	Pinedale Array 2.5nm,0.7s,mb4.0,baz=134,slow=9.1,SNR=26	29.02 340 P		P	10 27 38.4 +0.4
L16A	Fish Haven baz=29	29.02 337	⇑P	P	10 27 37.6 -0.4
K18A	Toltan Ranch, baz=30	29.06 339	⇑P	P	10 27 38.6 +0.2
M14A	Sheep Mountain baz=30	29.37 334	⇓P	P	10 27 41.1 0.0
L15A	Malad City baz=30	29.39 335	⇓P	P	10 27 41.1 -0.1
K17A	Gardner Place, baz=30	29.47 338	⇑P	P	10 27 42.0 0.0
NVAR	Mina Array Bea 1.9nm,0.8s,mb3.9,baz=144,slow=8.5,SNR=21	29.52 324 P		P	10 27 42.9 +0.5
J18A	Kendall Valley baz=30	29.57 340	⇓P	P	10 27 42.7 -0.1
N12A	Clover Valley, baz=30	29.60 331	⇓P	P	10 27 43.9 +0.7
N12A	Clover Valley, 6.6nm,1.0s,mb4.3	29.60 331	eP	P	10 27 44.3 +1.2
M13A	Montello baz=30	29.61 332	⇓P	P	10 27 43.4 +0.2
M13A	Montello 7.3nm,1.0s,mb4.4	29.61 332	eP	P	10 27 44.4 +1.2
M13A			e	pP	10 27 54.3 +1.9
ELK	Elko 0.9nm,0.7s,mb3.6,baz=154,slow=8.5,SNR=4.7	29.61 330 P		P	10 27 44.1 +0.8
ELK			LR	LR	10 41 09.1
	comp=Z,355nm,21.2s,MS4.0,baz=272,slow=39				
ELK	Elko	29.61 330 P		P	10 27 44.1 +0.9
ELK			LR	LR	10 41 09.1
L14A	Malta baz=30	29.76 334	⇓P	P	10 27 44.8 +0.3
J17A	Brown Place, J baz=30,SNR=17	29.93 339	⇓P	P	10 27 46.0 0.0
I18A	Diamond G Ranc baz=30	29.94 340	⇑P	P	10 27 46.1 0.0
REDW	Red Top Meadow 18nm,1.0s,mb4.8	29.98 339	eP	P	10 27 46.9 +0.4
M12A	Wells baz=30	29.99 332	⇓P	P	10 27 46.8 +0.2
K15A	Arbon baz=30	30.02 336	⇓P	P	10 27 47.0 +0.1
SNOW	Snow King Moun 25nm,0.8s,mb5.0	30.04 339	eP	P	10 27 47.9 +0.9
L13A	Double Diamond baz=30	30.10 334	⇑P	P	10 27 47.6 0.0
LOHW	Long Hollow 17nm,0.9s,mb4.8	30.12 339	eP	P	10 27 48.0 +0.3
TPAW	Teton Pass 9.7nm,1.0s,mb4.5	30.13 339	eP	P	10 27 48.2 +0.5
RRI2	Red Ridge 7.7nm,0.8s,mb4.5	30.14 338	eP	P	10 27 48.0 +0.2
K14A	Jones Ranch, D baz=31	30.16 335	⇓P	P	10 27 47.6 -0.5
J16A	Bone baz=31,SNR=10	30.18 338	⇑P	P	10 27 47.8 -0.5
I17A	Pilgrim Ck. baz=31,SNR=12	30.38 340	⇑P	P	10 27 50.4 +0.4
J15A	Blackfoot baz=31	30.59 337	⇑P	P	10 27 51.9 0.0
L12A	House Creek Ra baz=31	30.62 332	⇑P	P	10 27 51.1 -1.0
I16A	Newdale baz=31	30.66 338	⇑P	P	10 27 52.4 0.0
LKWY	Lake 7.0nm,1.0s,mb4.5	30.90 340	eP	P	10 27 56.5 +1.9
J14A	Carey baz=31	30.95 335	⇑P	P	10 27 54.8 -0.2
K12A	Draper Farm, C baz=31	30.96 333	⇓P	P	10 27 55.0 -0.1
L11A	Cat Creek Ranc baz=31,SNR=13	30.97 332	⇓P	P	10 27 55.1 -0.1
RLMT	Red Lodge baz=32,SNR=26	31.05 342	⇓P	P	10 27 56.3 +0.4
RLMT	Red Lodge 18nm,0.9s,mb4.9	31.05 342	eP	P	10 27 56.4 +0.5
I15A	Monteview baz=32	31.12 337	⇓P	P	10 27 56.2 -0.4
L10A	Juniper Basin baz=32,SNR=8.1	31.23 331	⇓P	P	10 27 57.3 -0.2
J13A	Cove Ranch, Pi baz=32,SNR=12	31.27 335	⇑P	P	10 27 57.9 0.0
H16A	Russell Place, baz=32	31.30 340	⇓P	P	10 27 58.0 -0.2
G18A	Lazy EL Ranch, baz=32	31.32 342	⇑P	P	10 27 57.8 -0.5
I14A	Mackay baz=32,SNR=19	31.43 336	⇓P	P	10 27 59.4 +0.1
QLMT	Earthquake Lak 1.1nm,0.4s,mb4.0	31.47 339	eP	P	10 28 00.6 +1.0
HLID	Hailey baz=32	31.51 335	⇑P	P	10 27 59.7 -0.3
HLID	Hailey 6.7nm,0.9s,mb4.5	31.51 335	eP	P	10 27 59.8 -0.2
J12A	Stokes Ranch, baz=32	31.54 334	⇑P	P	10 28 00.4 +0.2
K11A	Parker Ranch, baz=32,SNR=6.6	31.57 332	⇓P	P	10 28 00.3 -0.2
G17A	Pierce Place, baz=32	31.68 341	⇓P	P	10 28 00.8 -0.7
I13A	Wildhorse Cree baz=32,SNR=8.6	31.68 335	⇑P	P	10 28 01.3 -0.2
H15A	Lima baz=32,SNR=10	31.71 338	⇑P	P	10 28 02.4 +0.6
F18A	Big Timber baz=32,SNR=26	31.89 342	⇓P	P	10 28 02.9 -0.4
G16A	Moss Hill, Enn baz=32,SNR=20	31.95 339	⇑P	P	10 28 03.7 -0.1
K10A	MacKenzie Ranc baz=32	31.96 331	⇑P	P	10 28 03.3 -0.6
H14A	Leadore baz=32,SNR=15	31.98 337	⇑P	P	10 28 04.7 +0.6
MFID	Camas Ranch baz=32	31.99 333	⇑P	P	10 28 04.6 +0.3
I12A	Atlanta baz=32,SNR=8.4	32.00 334	⇑P	P	10 28 04.7 +0.4
G15A	Dillon baz=33,SNR=28	32.13 339	⇑P	P	10 28 06.2 +0.8
F17A	Fitzpatrick Pl baz=33,SNR=28	32.18 341	⇓P	P	10 28 06.6 +0.7
BOZ	Bozeman (W) baz=33,SNR=9.6	32.26 340	⇓P	P	10 28 07.0 +0.5
BOZ	Bozeman (W) 4.7nm,1.0s,mb4.3	32.26 340	eP	P	10 28 06.5 0.0
H13A	Challis baz=33,SNR=18	32.28 336 P		P	10 28 07.5 +0.7
AGMN	Agassiz Refuge 6.3nm,0.8s,mb4.5	32.31 1	eP	P	10 28 06.4 -0.5
DLMT	Dillon 30nm,0.9s,mb5.1	32.34 339	eP	P	10 28 07.7 +0.5
F16A	Kennard Place, baz=33,SNR=9.1	32.38 340	⇑P	P	10 28 08.2 +0.6
I11A	Placerville baz=33	32.45 333	⇑P	P	10 28 08.3 +0.1
H12A	Diamond D Ranc baz=33,SNR=27	32.50 335	⇓P	P	10 28 09.5 +0.8
LCCM	Lewis and Clar	32.51 340 P		P	10 28 10.1 +1.4
G14A	Jackson baz=33	32.55 337	⇑P	P	10 28 09.3 +0.3
E18A	Harlowton baz=33,SNR=17	32.55 343	⇓P	P	10 28 09.4 +0.3
LRM	Limekiln Ridge	32.69 339	eP	P	10 28 11.5 +1.2
G13A	Cobalt baz=33,SNR=14	32.71 336	⇓P	P	10 28 10.3 -0.2
F15A	Butte baz=33,SNR=9.6	32.72 339	⇓P	P	10 28 11.2 +0.7
E17A	Martinsdale baz=33,SNR=11	32.74 342 P		P	10 28 10.9 +0.2
J09A	Fry Pan Ranch, baz=33	32.81 331	⇑P	P	10 28 11.4 0.0
I10A	Payette baz=33	32.95 333	⇑P	P	10 28 12.6 0.0
E16A	East Helena baz=34,SNR=34	33.06 341	⇑P	P	10 28 13.5 0.0
D18A	Linhart Farms, baz=34	33.10 343	⇓P	P	10 28 14.1 +0.3
H11A	Donnelly baz=34,SNR=19	33.10 334	⇓P	P	10 28 13.8 -0.2
J08A	Circle Bar Ran baz=34	33.16 330	⇑P	P	10 28 14.6 +0.1
G12A	Big Creek, Yel baz=34	33.17 335	⇓P	P	10 28 14.9 +0.4

HRY	Holter Researc	33.26	341	eP	P	10 28 15.4	+0.1
	15nm,1.0s,mb4.9						
HRY				epP	pP	10 28 24.6	0.0
E15A	Deer Lodge	33.28	339	⇓P	P	10 28 15.6	+0.1
	baz=34						
I09A	Lost Marbles R	33.29	332	⇑P	P	10 28 15.5	0.0
	baz=34,SNR=22						
D17A	Six Diamond Ra	33.31	342	⇓P	P	10 28 16.0	+0.3
	baz=34,SNR=19						
F13A	Darby	33.34	337	⇓P	P	10 28 16.2	+0.2
	baz=34						
D16A	Dana Ranch, Ca	33.46	341	⇑P	P	10 28 17.1	0.0
	baz=34,SNR=13						
E14A	Clinton	33.56	339	⇑P	P	10 28 18.1	+0.1
	baz=34,SNR=6.0						
F12A	Elk City	33.66	336	⇑P	P	10 28 19.1	+0.3
	baz=34,SNR=28						
C17A	Wharram Farm,	33.77	343	⇓P	P	10 28 19.8	+0.2
	baz=34,SNR=23						
G11A	Walters Elk Ra	33.77	335	⇑P	P	10 28 19.4	-0.4
	baz=34,SNR=20						
D15A	Lincoln	33.78	340	⇓P	P	10 28 19.7	-0.1
	baz=34,SNR=6.2						
H09A	Durkee	33.79	332	⇓P	P	10 28 19.7	-0.2
	baz=34						
E13A	Victor	33.84	338	⇑P	P	10 28 20.1	-0.2
	baz=34,SNR=19						
EGMT	Eagleton	33.84	344	⇓P	P	10 28 20.3	0.0
	baz=34						
EGMT	Eagleton	33.84	344	eP	P	10 28 21.0	+0.6
	24nm,1.4s,mb4.9						
CHMT	Chamberlain Mo	33.91	339	eP	P	10 28 20.8	-0.1
	7.2nm,1.0s,mb4.6						
G10A	Bishop Farm, J	34.05	334	⇓P	P	10 28 21.2	-1.0
	baz=34,SNR=16						
MSO	Missoula	34.08	338	eP	P	10 28 22.8	+0.4
	5.3nm,0.9s,mb4.5						
F11A	Grangeville	34.13	335	⇓P	P	10 28 22.6	-0.3
	baz=34,SNR=7.4						
H08A	Prairie City	34.13	331	⇓P	P	10 28 22.5	-0.4
	baz=34,SNR=10						
D14A	Greenough	34.14	339	⇓P	P	10 28 22.8	-0.2
	baz=35						
C16A	Fuhringer Ranc	34.21	342	⇓P	P	10 28 23.0	-0.5
	baz=35						
ULM	Lac du Bonnet	34.26	1	P	P	10 28 22.5	-1.4
	3.1nm,0.8s,mb4.3,baz=193,slow=7.9,SNR=9.3						
ULM				LR	LR	10 42 59.1	
	comp=Z,40nm,18.7s,MS3.2,baz=237,slow=37						
ULM	Lac du Bonnet	34.26	1	P	P	10 28 22.5	-1.4
ULM				LR	LR	10 42 59.1	
SLMT	Seeley Lake	34.28	339	eP	P	10 28 23.7	-0.4
	8.7nm,1.2s,mb4.6						
G09A	Cove	34.32	333	⇑P	P	10 28 23.8	-0.7
	baz=35,SNR=11						
E12A	Beaver Dam Sad	34.33	336	⇑P	P	10 28 24.1	-0.5
	baz=35						
C15A	Salmond Ranch,	34.45	341	⇑P	P	10 28 25.5	-0.1
	baz=35,SNR=8.1						
D13A	Huson	34.49	338	⇑P	P	10 28 25.9	0.0
	baz=35,SNR=6.8						
E11A	Bogner Ranch,	34.53	336	⇑P	P	10 28 24.9	-1.4
	baz=35,SNR=9.9						
F10A	Beach Ranch, E	34.64	334	⇑P	P	10 28 26.7	-0.5
	baz=35						
SWMT	Swartz Lake	34.68	339	eP	P	10 28 27.3	-0.3
	11nm,0.9s,mb4.8						
SWMT				epP	pP	10 28 36.5	-0.4
F09A	S2 Ranch, Elgi	34.72	333	⇑P	P	10 28 27.6	-0.3
	baz=35						
B16A	M & M Farms, S	34.74	342	⇓P	P	10 28 27.7	-0.5
	baz=35						
D12A	Red Ives Fores	34.78	337	⇓P	P	10 28 27.6	-0.9
	baz=35						
C14A	Swan Lake	34.82	339	⇓P	P	10 28 28.0	-0.8
	baz=35						
G08A	Pilot Rock	34.86	332	⇓P	P	10 28 28.1	-1.0
	baz=35						
B15A	Bradely Ranch,	34.91	341	⇑P	P	10 28 29.0	-0.6
	baz=35						
A17A	Triple J Farms	34.94	344	⇑P	P	10 28 29.4	-0.4
	baz=35						
JTMT	Jette	34.98	339	eP	P	10 28 30.1	-0.1
	6.1nm,1.1s,mb4.4						
YBMT	Yellow Bay	34.99	339	eP	P	10 28 30.4	+0.1
	12nm,1.0s,mb4.8						
E10A	Myers Farm, Un	35.00	335	⇑P	P	10 28 30.1	-0.3
	baz=35						
C13A	Hot Springs	35.03	339	⇑P	P	10 28 30.4	-0.2
	baz=36						
H06A	Lindquist Farm	35.08	330	⇓P	P	10 28 30.5	-0.6
	baz=35						
D11A	Klaveano Farm,	35.15	336	⇓P	P	10 28 30.8	-0.9
	baz=36						
G07A	Ruggs Ranch, H	35.16	331	⇑P	P	10 28 30.7	-1.1
	baz=36						
A16A	West Butte Ran	35.19	343	⇑P	P	10 28 30.8	-1.2
	baz=36						
C12B	Naegeli Ranch,	35.38	338	⇓P	P	10 28 31.9	-1.7
	baz=36						
D10A	Wagner Farm, O	35.53	335	⇑P	P	10 28 33.4	-1.5
	baz=36						
A15A	Johnson Ranch,	35.56	342	⇓P	P	10 28 33.9	-1.2
	baz=36						
B13A	Whitefish	35.59	339	⇑P	P	10 28 34.7	-0.7
	baz=36						
BBGH	Gun Hill	35.84	89	eP	P	10 28 38.0	+0.1
	377nm,1.2s						
D09A	Jones Farm, Ri	35.95	334	⇓P	P	10 28 38.7	+0.1
	baz=36						
H04A	Detroit Lake	35.96	328	⇓P	P	10 28 37.1	-1.6
	baz=36						
WALA	Waterton Lakes	36.00	340	eP	P	10 28 39.1	+0.2
	0.3nm,1.2s						
A13A	Flathead Natio	36.05	340	⇓P	P	10 28 39.6	+0.2
	baz=36						
B12A	Libby	36.06	338	⇓P	P	10 28 39.4	-0.1
	baz=36						
NEW	Newport	36.45	337	eP	P	10 28 42.3	-0.5
	3.0nm,0.8s,mb4.3						
C09A	Chrisman Ranch	36.53	335	⇑P	P	10 28 42.9	-0.6
	baz=37						
A11A	Hall Mountain,	36.75	338	⇑P	P	10 28 45.4	+0.1
	baz=37						
EBG	Ellensburg	36.81	332	P	P	10 28 46.8	+0.8
B09A	Rice	36.98	336	⇑P	P	10 28 47.0	-0.3
	baz=37						
D06A	Cle Elum	37.15	332	⇓P	P	10 28 48.5	-0.3
	baz=38						
C07A	Waterville	37.19	333	⇓P	P	10 28 48.4	-0.7
	baz=38						
ETW	Entiat	37.24	333	eP	P	10 28 49.1	-0.4
	7.5nm,0.9s,mb4.5						
ETW				epP	pP	10 28 58.8	-0.1
ETW				esP	sP	10 29 09.2	+6.5
A07A	Ashnola River,	38.38	335	⇓P	P	10 28 58.3	-0.8
	baz=39						
EDM	Edmonton	39.53	344	eP	P	10 29 07.8	-0.9
LPAZ	La Paz	42.51	138	eP	P	10 29 34.4	+0.7
	3.7nm,1.1s,mb4.0						
FCC	Fort Churchill	42.82	2	eP	P	10 29 35.3	-0.4
	0.1nm,0.8s						
SCHQ	Schefferville	45.10	24	P	P	10 29 53.6	-0.4
	8.0nm,0.8s,mb4.6,baz=223,slow=6.2,SNR=16						
SCHQ				LR	LR	10 51 38.5	
	comp=Z,69nm,18.1s,MS3.6,baz=263,slow=40						
SCHQ	Schefferville	45.10	24	eP	P	10 29 53.4	-0.6
	8.3nm,0.9s,mb4.6						
SIV	San Ignacio	47.19	131	P	P	10 30 07.1	-3.9
	1.3nm,0.8s,mb3.9,baz=297,slow=9.8,SNR=7.5						
YKA	Yellowknife Ar	48.25	349	P	P	10 30 17.4	-1.1
	2.1nm,0.8s,mb4.2,baz=155,slow=7.2,SNR=35						
YKA				LR	LR	10 54 38.8	
	comp=Z,9.8nm,20.7s,MS2.8,baz=330,slow=41						
YKA	Yellowknife Ar	48.25	349	P	P	10 30 17.4	-1.1
YKA				LR	LR	10 54 38.8	
TAOE	Nuku Hiva Isla	49.73	243	eLR	LR	10 44 30.9	
	78nm,21.5s						
TAOE				eT		11 23 08.1	
	163nm,0.3s						
INK	Inuvik	57.42	345	eP	P	10 31 25.2	-1.0
	7.7nm,1.0s,mb4.7						
RES	Resolute Bay	58.79	0	eP	P	10 31 32.5	-3.2
	1.6nm,0.9s,mb4.0						
PMOR	Pomariorio Ree	59.33	241	eT		11 35 22.3	
	1.5nm,0.2s						
MCK	McKinley	59.67	336	eP	P	10 31 41.2	-0.8
	7.9nm,1.1s,mb4.7						
COLA	College	59.81	337	eP	P	10 31 41.9	-1.0
	4.2nm,0.8s,mb4.5						
TRF	Thorofare Moun	60.08	335	eP	P	10 31 43.2	-1.6
	11nm,0.9s,mb4.9						
STS	Santiago	77.88	49	P	P	10 33 35.4	-0.3
	6.9nm,0.9s,mb4.6						
BILL	Bilibino	78.07	338	eP	P	10 33 34.8	-1.5
	8.2nm,0.9s,mb4.7						
PTOM	Tomar	78.59	52	eP	P	10 33 40.3	+0.6
	12nm,1.3s,mb4.7						
MTE	Manteigas	79.09	51	eP	P	10 33 42.3	-0.2
	24nm,2.1s,mb4.8						
PCBR	Castelo Branco	79.25	52	eP	P	10 33 43.3	-0.1
MVO	Moncorvo	79.32	50	eP	P	10 33 43.9	+0.2
	12nm,2.6s,mb4.4						
PESTR	Estremoz	79.37	53	eP	P	10 33 43.4	-0.6
	13nm,1.6s,mb4.6						
PMRV	Marv??o	79.40	52	eP	P	10 33 43.9	-0.3
ESDC	Sonseca Array	81.93	51	P	P	10 33 57.0	-0.8
	2.0nm,0.8s,mb4.1,baz=297,slow=4.6,SNR=17						
ESDC	Sonseca Array	81.93	51	P	P	10 33 57.4	-0.3
	1.2nm,1.4s,mb3.6						
EMIJ	Mijas	82.06	54	P	P	10 34 01.0	+2.6
	5.4nm,1.1s,mb4.4						
FLN	La Foliniere	82.10	42	eP	P	10 33 58.2	-0.2
ELOJ	Sierra Loja	82.40	54	P	P	10 34 01.0	+0.7
	0.8nm,0.5s,mb3.9						
ECOG	Cogollos-Vega	82.82	53	P	P	10 34 03.0	+0.5
	3.2nm,0.6s,mb4.5						
ETOR	Torete	83.06	50	P	P	10 34 03.1	-0.5
	3.7nm,0.7s,mb4.5						
EQES	Quesada	83.07	53	P	P	10 34 03.2	-0.5
	3.6nm,0.9s,mb4.4						
EVIA	Vianos	83.29	52	P	P	10 34 05.0	+0.2
	4.1nm,0.7s,mb4.6						
EBER	Berja	83.44	54	P	P	10 34 05.7	+0.1
	8.3nm,0.9s,mb4.8						
ETSF	Etsaut	83.59	47	eP	P	10 34 06.1	-0.2
	2.8nm,0.6s,mb4.3						
ETSF	Etsaut	83.59	47	eP	P	10 34 06.1	-0.2
	1.4nm,0.6s,mb4.3						
EMOS	Mosqueruela	84.35	50	P	P	10 34 09.4	-0.8
	7.4nm,1.1s,mb4.7						
NOA	NORSAR Array B	84.52	28	P	P	10 34 09.5	-1.1
	0.4nm,0.7s,mb3.7,baz=232,slow=12,SNR=2.6						
NOA				LR	LR	11 09 31.5	
	comp=Z,30nm,19.5s,MS3.7,baz=180,slow=34						
TCF	Toulx Ste Croi	84.54	44	eP	P	10 34 10.3	-0.7
	31nm,1.4s,mb5.0						
TCF	Toulx Ste Croi	84.54	44	eP	P	10 34 10.3	-0.7
	15nm,1.4s,mb4.9						
SSF	Saint Saulge	85.15	43	eP	P	10 34 13.3	-0.8
	11nm,1.1s,mb4.6						
SSF	Saint Saulge	85.15	43	eP	P	10 34 13.3	-0.8
	5.7nm,1.1s,mb4.6						
LOR	Lormes	85.32	42	eP	P	10 34 14.3	-0.6
	15nm,1.0s,mb4.8						
LOR	Lormes	85.32	42	eP	P	10 34 14.3	-0.6
	7.7nm,1.0s,mb4.8						
MTLF	Montolieu	85.42	46	eP	P	10 34 14.9	-0.6
	13nm,1.0s,mb4.7						
MTLF	Montolieu	85.42	46	eP	P	10 34 14.9	-0.6
	6.3nm,1.0s,mb4.7						
LASF	Ste Croix	86.32	45	eP	P	10 34 19.9	-0.1
	21nm,1.2s,mb5.0						
TORD	Torodi Ar. Bea	94.13	75	P	P	10 34 54.4	-2.8
	0.6nm,0.9s,mb4.0,baz=280,slow=5.3,SNR=4.2						
BJI	Beijing	116.57	332	PKP	PKPdf	10 40 21.4	-0.7
BJI				LR	LR		
	comp=N,100nm,13.4s,MS4.7						
BJI				LR	LR		
	comp=E,94nm,13.9s,MS4.7						
BJI				LR	LR		
	comp=Z,30nm,19.6s						
HHC	Hu-ho-hao-te	117.82	336	ePKP	PKPdf	10 40 23.8	-0.7
HHC				PP	PP	10 41 41.3	+4.3
HHC				PKS		10 43 59.3	
HHC				SKS	SKSdf	10 47 31.5	-2.9
HHC				SKKS	SKKSac	10 48 28.9	-7.6
HHC				SS	SS	10 57 49.1	+1.8
HHC				AMB	AMB		
	comp=Z,81nm,8.4s						
HHC				LR	LR		
	comp=N,75nm,20.4s,MS4.5						
HHC				LR	LR		
	comp=E,83nm,20.7s,MS4.5						
HHC				LR	LR		
	comp=Z,97nm,23.1s,MS4.4						
WMQ	Urumqi	120.44	356	ePKP	PKPdf	10 40 29.6	+0.2
LZH	Lanzhou	124.83	340	ePKP	PKPdf	10 40 37.7	-0.4
STKA	Stephens Creek	125.16	242	PKP	PKPdf	10 40 35.3	-3.5
	comp=Z,1.6nm,0.7s,baz=162,slow=3.2,SNR=3.8						
CD2	Chengdu	129.54	337	PKP	PKPdf	10 40 46.3	-0.9
WRA	Warramunga Arr	131.61	257	PKP	PKPdf	10 40 48.6	-2.8
	comp=Z,1.0nm,0.9s,baz=85,slow=1.9,SNR=6.6						
ASAR	Alice Springs	132.15	252	PKP	PKPdf	10 40 49.5	-2.8
	comp=Z,0.4nm,0.7s,baz=117,slow=2.1,SNR=5.1						
GYA	Guiyang	132.25	332	ePdif	Pdif	10 37 44.2	-2.1
GYA				PKP	PKPdf	10 40 51.8	-0.7
GYA				sPKP		10 41 04.0	
GYA				PP	PP	10 43 17.4	+3.7
GYA				AMB	AMB		
	comp=Z,70nm,7.9s						
KMI	Kunming	135.12	335	PKP	PKPdf	10 40 57.7	-0.2

MAN 04 10:29:03, 17.56N×122.27E, h1km, mb4.2, ML3.0, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	Callao Caves	0.45	288	eP	Pg	10 29 14.0	+2.3
PALP	Palanan	0.52	164	eP	Pg	10 29 14.1	+1.1
PALP				eS	Sg	10 29 21.1	+1.4
SGCP	Mt. Cagua	0.71	342	eP	Pg	10 29 17.4	+0.8
APYP	Conner	1.02	287	eP	Pg	10 29 25.6	+3.0
APYP				eS	Sg	10 29 40.2	+4.2
ABRA	Dolores	1.49	273	eP	Pn	10 29 32.8	+1.9
BALP	Baler	1.93	200	eP	Pn	10 29 37.4	+0.4
BALP				eS	Sn	10 29 58.8	-3.1
BOLP	Bolinao	2.55	243	eP	Pn	10 29 48.5	+3.1

CASC 04 11:03:58.5±1.3, 13.12N×89.01W, h50km±14km, MD3.5, ML3.0, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.50	355	⇓P	Pn	11 04 10.1	+0.3
LFRS				eS	Sn	11 04 18.5	+0.6
SNVI	San Vicente	0.52	19	eP	Pn	11 04 10.4	+0.4
SNVI				eS	Sn	11 04 19.8	+1.6
SNET	Serv Nac Est T	0.60	339	eP	Pn	11 04 11.3	+0.3
SNET				eS	Sn	11 04 21.5	+1.5
LBRS	Las Brisas	0.61	357	eP	Pn	11 04 11.6	+0.4
LBRS				eS	Sn	11 04 20.8	+0.5
BOQS	Boqueron	0.66	337	eP	Pn	11 04 12.1	+0.3
BOQS				eS	Sn	11 04 22.9	+1.5
BOQS				AML	AML	11 04 26.5	
	comp=Z,492nm,0.1s						
VSM	San Miguel	0.78	67	eP	Pn	11 04 14.1	+0.8
VSM				eS	Sn	11 04 24.8	+0.6
BLLM	Bellamira	0.82	67	eP	Pn	11 04 14.2	+0.4
BLLM				eS	Sn	11 04 25.3	+0.3
SBLS	San Blas	0.93	320	eP	Pn	11 04 15.5	+0.2
SBLS				eS	Sn	11 04 30.1	+2.5
SNJE	San Jose	0.94	322	eP	Pn	11 04 15.1	-0.3
SNJE				eS	Sn	11 04 29.4	+1.5
RTR	El Retiro	0.99	322	eP	Pn	11 04 16.5	+0.4
RTR				eS	Sn	11 04 30.6	+1.6
CAHU	Cacacuatique	1.01	50	eP	Pn	11 04 17.1	+0.7
CAHU				eS	Sn	11 04 31.3	+1.6
CNCH	Conchagua	1.16	82	eP	Pn	11 04 18.3	-0.1
CNCH				eS	Sn	11 04 35.3	+2.2
RBDL	Robledal	1.18	327	eP	Pn	11 04 18.8	+0.1
RBDL				eS	Sn	11 04 34.9	+1.1
TGUH	Tegucigalpa,Un	1.93	61	eP	Pn	11 04 28.6	-0.3

*TRN **04** 11:15:46.9, 20.02N×65.03W, h35km, MD4.7*
*ISCJB **04** 11:15:48.1±0.6, 19.95N±0.03×64.99W±0.02, h44km±6km, mb4.3/56, MS3.3/8, Error ellipse: s-maj=5.7km s-min=3.2km az=15.9*
*NEIC **04** 11:15:49.0, 20.06N×65.04W, h35km, mb4.5/38, MD4.0(RSPR), MD4.6(TRN), After RSPR.*
*RSPR **04** 11:15:49.0, 20.06N×65.04W, h35km±27km, MD4.0/20, MD4.0/20*
*IDC **04** 11:15:50.3±0.6, 19.85N×65.00W, h40km±5km, mb3.9/21, mb1 4.2/24, mb1mx4.1/28, mbtmp4.0/24, ML4.4/2, MS3.4/10, Ms1 3.4/10, ms1mx3.2/31, Error ellipse: s-maj=8.8km s-min=6.2km az=111.0*

ISC 04 11:15:49.5±0.5, 19.95N±0.04×65.03W±0.02, h37km±6km, h48km±.6km: pP-P, n289, σ0.88/315, mb4.3/56, MS3.3/8, 81C-83D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	1.38	151	⇓eP	Pn	11 16 11.9	-0.4
ABV				eS	Sn	11 16 29.9	+0.6
ABV	Anegada	1.38	151	⇓eP	Pn	11 16 11.9	-0.4
ABV				eS	Sn	11 16 29.9	+0.6
TBVI	Tortola	1.57	165	⇑eP	Pn	11 16 14.6	-0.3
TBVI	Tortola	1.57	165	⇑eP	Pn	11 16 14.6	-0.3
STVI	Saint Thomas	1.59	177	⇑eP	Pn	11 16 15.2	+0.1
STVI				eS	Sn	11 16 35.0	+0.6
STVI	Saint Thomas	1.59	177	⇑eP	Pn	11 16 15.2	+0.1
STVI				eS	Sn	11 16 35.3	+0.8
CBYP	Canovanas	1.84	205	⇓eP	Pn	11 16 18.4	-0.2
CBYP				eS	Sn	11 16 40.9	+0.2
CBYP	Canovanas	1.84	205	⇓eP	Pn	11 16 18.4	-0.2
CBYP				eS	Sn	11 16 40.9	+0.2
MTP	Monte Pirata	1.91	195	⇑eP	Pn	11 16 19.8	+0.3
MTP	Monte Pirata	1.91	195	⇑eP	Pn	11 16 19.8	+0.3
HUMP	Col San Antoni	1.96	203	⇑eP	Pn	11 16 20.0	-0.2
HUMP				eS	Sn	11 16 43.6	+0.1
HUMP	Col San Antoni	1.96	203	⇑eP	Pn	11 16 20.3	+0.1
HUMP				eS	Sn	11 16 43.6	+0.1
CPD	Cerro la Pandu	2.08	204	⇑eP	Pn	11 16 21.9	0.0
CPD	Cerro la Pandu	2.08	204	⇑eP	Pn	11 16 21.9	0.0
SJG	San Juan	2.11	210	⇑eP	Pn	11 16 22.1	-0.2
SJG	San Juan	2.11	210	⇑eP	Pn	11 16 22.3	0.0
SJG	San Juan	2.11	210	P	Pn	11 16 22.2	-0.1
	720nm,0.3s,baz=38,slow=8.0,SNR=165						
SJG				S	Sn	11 16 46.8	-0.6
	788nm,0.3s,baz=233,slow=16,SNR=26						
SJG				LR	LR	11 17 13.9	
	comp=Z,1μm,21.0s,baz=55,slow=41						
SJG	San Juan	2.11	210	⇑eP	Pn	11 16 22.1	-0.2
SJG				eS	Sn	11 16 47.7	+0.4
SJG	San Juan	2.11	210	⇑eP	Pn	11 16 22.1	-0.2
SJG	San Juan	2.11	210	⇑eP	Pn	11 16 22.3	0.0
SJG				eS	Sn	11 16 47.7	+0.4
AOPR	Arecibo Observ	2.28	226	⇓eP	Pn	11 16 24.3	-0.4
AOPR	Arecibo Observ	2.28	226	⇓eP	Pn	11 16 24.3	-0.4
CELP	Cerrillos	2.37	218	⇓⇑P	Pn	11 16 25.9	0.0
CELP	Cerrillos	2.37	218	⇓⇑P	Pn	11 16 25.9	0.0
LRS	Lares	2.38	226	⇑⇑P	Pn	11 16 25.6	-0.3
LRS	Lares	2.38	226	⇑⇑P	Pn	11 16 25.6	-0.3
OBIP	Obispado Ponce	2.41	218	⇓eP	Pn	11 16 26.5	0.0
OBIP				eS	Sn	11 16 55.6	+0.9
OBIP	Obispado Ponce	2.41	218	⇓eP	Pn	11 16 26.5	0.0
OBIP				eS	Sn	11 16 55.6	+0.9
AGPR	Aguadilla, PR	2.46	234	⇓eP	Pn	11 16 26.5	-0.6
AGPR				eS	Sn	11 16 55.3	-0.6
AGPR	Aguadilla, PR	2.46	234	⇓eP	Pn	11 16 26.5	-0.6
AGPR				eS	Sn	11 16 55.3	-0.6
ICM	Isla Caja Muer	2.48	215	⇑eP	Pn	11 16 27.9	+0.5
ICM				eS	Sn	11 16 57.1	+0.6
ICM	Isla Caja Muer	2.48	215	⇑eP	Pn	11 16 27.9	+0.5
ICM				eS	Sn	11 16 57.9	+1.4
LSP	Las Mesas	2.62	228	⇓⇑P	Pn	11 16 29.3	-0.1
LSP	Las Mesas	2.62	228	⇓⇑P	Pn	11 16 29.3	-0.1
GBPR	Guanica, Bosqu	2.63	222	⇑⇑P	Pn	11 16 29.8	+0.3
GBPR	Guanica, Bosqu	2.63	222	⇑⇑P	Pn	11 16 29.8	+0.3
MPR	Mayaguez	2.64	229	⇑⇑P	Pn	11 16 29.4	-0.2
MPR	Mayaguez	2.64	229	⇑⇑P	Pn	11 16 29.4	-0.2
SMRT	St. Maarten	2.64	135	⇑eP	Pn	11 16 29.6	0.0
SMRT	St. Maarten	2.64	135	⇑eP	Pn	11 16 29.6	0.0
CRPR	Cabo Rojo, PR	2.76	226	⇓eP	Pn	11 16 31.8	+0.6
CRPR				eS	Sn	11 17 04.5	+1.2
CRPR	Cabo Rojo, PR	2.76	226	⇓eP	Pn	11 16 31.8	+0.6
CRPR				eS	Sn	11 17 04.5	+1.2
SABA	Saba	2.87	143	⇑eP	Pn	11 16 33.1	+0.4
SABA	Saba	2.87	143	⇑eP	Pn	11 16 33.1	+0.4
SEUS	St. Eustatius	3.12	141	⇓eP	Pn	11 16 36.2	0.0
SEUS	St. Eustatius	3.12	141	⇓eP	Pn	11 16 36.2	0.0
SEUS				eS	Sn	11 17 12.4	+0.1
IMO	Isla Mona	3.28	237	⇓⇑P	Pn	11 16 39.5	+1.1
IMO	Isla Mona	3.28	237	⇓⇑P	Pn	11 16 39.5	+1.1
SKI	Saint Kitts	3.39	140	eP	Pn	11 16 38.9	-1.0
SKI				eS	Sn	11 17 16.5	-2.4
SKI	Saint Kitts	3.39	140	eP	Pn	11 16 38.9	-1.0
SKI				eS	Sn	11 17 16.5	-2.4
ANWB	Willy Bob	3.82	126	ePn	Pn	11 16 43.7	-2.1
SMN1	Samana, DR	4.07	260	⇓⇑P	Pn	11 16 47.6	-1.7
BPA	Boggy Peak	4.17	133	eP	Pn	11 16 49.1	-1.5
BPA				eS	Sn	11 17 34.0	-4.2
BPA	Boggy Peak	4.17	133	eP	Pn	11 16 49.1	-1.5
BPA				eS	Sn	11 17 34.0	-4.2
LZG	Guadaloupe-1	4.89	140	⇑⇑P	Pn	11 17 00.3	-0.2
BCG	Bois Riant Cap	5.03	139	eP	Pn	11 17 02.5	0.0
SCG	Saint Claude	5.04	140	eP	Pn	11 17 03.1	+0.6
SCG				eS	Sn	11 17 58.9	-0.6
HMG	Houelmont	5.06	141	⇑⇑P	Pn	11 17 03.6	+0.7
HMG				⇑eS	Sn	11 17 59.6	-0.5
PHG	Guadaloupe-2	5.07	140	eP	Pn	11 17 03.8	+0.7
DOG	Dongo Capester	5.07	140	eP	Pn	11 17 03.0	0.0
TBG	Guadaloupe-3	5.19	141	eP	Pn	11 17 04.7	-0.1
DEG	La Desirade	5.23	133	eP	Pn	11 17 03.7	-1.5
DLPL	La Plaine	5.84	141	eP	Pn	11 17 13.9	+0.3
DLPL

52nm,0.3s
COW Cow Castle Cre 19.33 317 *e*P Pn 11 20 17.5 +4.5
COW *e*S **S 11 23 40.1 -8.4**
JTS JuntasAbangare 21.47 246 P P 11 20 35.1 +0.1
10nm,0.8s,mb4.2,baz=46,slow=11,SNR=9.2
JTS JuntasAbangare 21.47 246 *e*P P 11 20 34.7 -0.3
15nm,0.9s,mb4.3
BLA Blacksburg 21.82 325 *e*P P 11 20 39.7 +1.2
BLA *e* 11 20 51.5
TGUH Tegucigalpa,Un 22.05 258 *e*P P 11 20 45.6 +4.4
24nm,1.0s,mb4.6
TKL Tuckaleechee C 22.74 317 P P 11 20 50.0 +1.6
2.6nm,0.7s,mb3.8,baz=126,slow=11,SNR=6.3
TKL LR LR 11 28 49.8
comp=Z,57nm,19.9s,MS3.0,baz=81,slow=34
CPCT Cooper Cave 23.09 316 P P 11 20 53.1 +1.1
CPCT *e* 11 21 04.8
TZTN Tazewell 23.16 319 P P 11 20 53.0 +0.3
11nm,1.0s,mb4.2
TZTN *e* 11 21 09.0
OTAV Otavalo 23.59 215 *e*P P 11 20 58.0 +0.8
10nm,0.7s,mb4.4
SWET Sewanee 23.90 314 *e*P P 11 21 00.9 +1.1
APG El Apazote 24.74 263 P P 11 21 09.8 +2.2
9.3nm,0.7s,mb4.4,baz=83,slow=8.2,SNR=14
PLAL Pickwick Lake 25.26 311 *e*P P 11 21 13.1 +0.9
10nm,1.3s,mb4.2
PLAL *e* pP 11 21 25.4 +2.8
OXF Oxford 25.99 309 *e*P P 11 21 19.1 +0.2
16nm,0.6s,mb4.7
OXF *e* pP 11 21 30.1 +0.8
SADO Sadowa 27.39 338 LR LR 11 30 36.9
comp=Z,125nm,21.6s,MS3.5,baz=198,slow=32
SIUC Southern Illin 27.48 315 *e*P P 11 21 33.9 +1.7
8.9nm,0.6s,mb4.5
SIUC *e* pP 11 21 45.9 +3.2
FVM French Village 28.43 315 *e*P P 11 21 41.3 +0.6
6.1nm,0.6s,mb4.4
FVM *e* pP 11 21 53.4 +2.2
CCM Cathedral Cave 29.02 314 *e*P P 11 21 46.1 +0.2
11nm,0.5s,mb4.8
CCM *e* pP 11 21 58.8 +2.4
WMOK Wichita Mounta 33.22 303 *e*P P 11 22 24.0 +0.9
1.4nm,0.6s,mb4.1
SCHQ Schefferville 34.85 358 P P 11 22 37.6 +0.7
2.8nm,0.5s,mb4.4,baz=178,slow=6.8,SNR=13
SCHQ PcP PcP 11 25 09.5 +0.2
1.9nm,0.5s,baz=138,slow=1.8,SNR=5.5
SCHQ LR LR 11 33 44.3
comp=Z,75nm,20.9s,MS3.4,baz=179,slow=31
SCHQ Schefferville 34.85 358 P P 11 22 37.6 +0.7
SCHQ PcP PcP 11 25 09.5 +0.2
SCHQ LR LR 11 33 44.3
ECSD EROS Data Cent 35.46 319 *e*P P 11 22 42.3 +0.1
16nm,1.4s,mb4.8
ECSD *e*pP pP 11 22 55.1 +2.3
428A Kincaid Ranch, 35.53 295 ⇑P P 11 22 42.8 -0.3
baz=36,SNR=15
528A Cox Ranch, San 35.54 294 ⇓P P 11 22 41.8 -1.4
baz=36
628A Black Gap, Mar 35.54 293 ⇑P P 11 22 43.1 -0.1
baz=36
627A Terlingua Ranc 35.97 293 ⇓P P 11 22 45.6 -1.3
baz=36,SNR=5.2
LPAZ La Paz 36.14 185 *e*P P 11 22 47.6 -0.7
5.4nm,0.4s,mb4.8
LPAZ *e*pP pP 11 23 00.0 +1.2
427A Hayter Ranch, 36.16 295 ⇑P P 11 22 48.3 -0.2
baz=36,SNR=11
TXAR Lajitas Array 36.20 293 P P 11 22 49.8 +0.9
1.8nm,0.8s,mb4.1,baz=117,slow=9.8,SNR=23
TXAR pP pP 11 23 02.3 +2.9
0.9nm,0.6s,baz=87,slow=11,SNR=5.0
MSTX Muleshoe 36.21 301 ⇑P P 11 22 47.5 -1.4
baz=36,SNR=5.6
527A Woodward Ranch 36.25 294 ⇓P P 11 22 48.7 -0.6
baz=36,SNR=7.7
Y27A Causey 36.51 300 ⇓P P 11 22 50.2 -1.2
baz=36,SNR=7.9
626A Big Bend Ranch 36.63 293 ⇓P P 11 22 52.1 -0.4
baz=36,SNR=6.0
526A Mary Lane Ranc 36.65 294 ⇑P P 11 22 52.3 -0.4
baz=37,SNR=6.0
426A McDonald Obser 36.67 295 ⇓P P 11 22 52.6 -0.3
baz=37,SNR=7.3
126A Clayton Basin, 36.97 298 ⇓P P 11 22 53.9 -1.5
baz=37
Z26A Caprock 37.05 299 ⇓P P 11 22 55.1 -0.9
baz=37
GDL2 Guadalupe Moun 37.18 297 *e*P P 11 22 57.3 +0.1
1.6nm,0.5s,mb4.1
GDL2 *e*pP pP 11 23 09.8 +2.1
125A Gardner Draw, 37.50 298 ⇑P P 11 22 58.7 -1.1
baz=37
425A Indio Mountain 37.50 295 ⇑P P 11 22 59.5 -0.4
baz=37,SNR=7.5
225A Deer Hill, Car 37.55 297 ⇑P P 11 23 00.2 -0.1
baz=38
325A Bean Ranch, Si 37.57 296 ⇓P P 11 22 59.9 -0.6
baz=38,SNR=9.3
AGMN Agassiz Refuge 37.64 326 *e*P P 11 23 00.6 -0.3
4.2nm,0.4s,mb4.5
AGMN *e*pP pP 11 23 13.6 +2.2
Z25A Roswell 37.66 299 ⇓P P 11 23 00.7 -0.5
baz=38
Y25A Mesa, Roswell 37.76 300 ⇓P P 11 23 01.9 -0.1
baz=38,SNR=5.4
MNTX Cornudas Mount 37.96 296 *e*P P 11 23 03.8 0.0
1.2nm,0.6s,mb3.8
MNTX *e*pP pP 11 23 16.6 +2.2
324A Moseley Ranch, 38.01 296 ⇓P P 11 23 03.8 -0.4
baz=38,SNR=7.1
224A Corundas Mount 38.13 297 ⇑P P 11 23 04.5 -0.7
baz=38
124A Stringfield Ra 38.17 298 ⇑P P 11 23 04.7 -0.8
baz=38
Y24A Capitan 38.37 300 ⇓P P 11 23 04.8 -2.3
baz=38
W24A Lazy 6 Ranch, 38.60 302 ⇓P P 11 23 08.6 -0.5
baz=38
ULM Lac du Bonnet 38.87 328 P P 11 23 10.4 -0.7
2.1nm,0.6s,mb4.0,baz=142,slow=8.7,SNR=6.1
ULM LR LR 11 36 22.6
comp=Z,66nm,21.4s,MS3.4,baz=238,slow=32
Y23A Lovelace Mesa, 38.87 300 ⇓P P 11 23 11.5 +0.1
baz=39
W23A Werner Place, 39.19 301 ⇓P P 11 23 13.4 -0.6
baz=39,SNR=10
SDCO Great Sand Dun 39.28 306 *e*P P 11 23 15.5 +0.8
1.7nm,0.5s,mb4.0
SDCO *e*pP pP 11 23 28.4 +3.0
BNM Barren Site 39.38 300 *e*P P 11 23 17.0 +1.3
6.3nm,0.5s,mb4.6
BNM *e*pP pP 11 23 29.6 +3.3
ANMO Albuquerque 39.39 301 *e*P P 11 23 16.8 +1.0
2.7nm,0.6s,mb4.2
ANMO *e*pP pP 11 23 29.8 +3.4
V22A San Miguel Ran 39.95 302 ⇑P P 11 23 18.4 -2.0
baz=40
T22A Edith 40.18 304 ⇑P P 11 23 19.2 -3.1
baz=40
Y21A Point of Rocks 40.21 299 ⇓P P 11 23 21.9 -0.7
baz=40,SNR=13
X21A Alamocita Cree 40.38 300 ⇑P P 11 23 23.9 0.0
baz=40
V21A Milan 40.50 302 ⇑P P 11 23 24.2 -0.7
baz=40
Y20A Horse Springs, 40.77 299 ⇓P P 11 23 27.1 -0.1
baz=41
120A U Bar Ranch, L 40.80 297 ⇓P P 11 23 27.6 +0.1
baz=41
Z20A Nine Sixteen R 40.84 298 ⇓P P 11 23 28.0 +0.3
baz=41
X20A Quemado 40.97 300 ⇓P P 11 23 28.8 0.0
baz=41
W20A Ramah 41.07 301 ⇓P P 11 23 29.5 -0.1
baz=41
R20A Redvale 41.59 305 ⇓P P 11 23 33.2 -0.7
baz=42
X19A St. Johns 41.60 300 ⇑P P 11 23 34.7 +0.7
baz=42
Q20A Ridgley Place, 41.71 307 ⇑P P 11 23 34.3 -0.6
baz=42
T19A Beclabito 41.80 303 ⇑P P 11 23 35.9 +0.3
baz=42,SNR=7.4
318A Bisbee 41.84 295 ⇑P P 11 23 36.7 +0.7
baz=42
218A Dragoon 41.94 296 ⇑P P 11 23 36.6 -0.2
baz=42
118A Homack Ranch, 41.94 297 ⇑P P 11 23 37.2 +0.4
baz=42
S19A Harvey Farm, M 42.08 305 ⇓P P 11 23 37.4 -0.5
baz=42,SNR=6.9
X18A Snowflake 42.16 300 ⇑P P 11 23 39.0 +0.4
baz=42
R19A Curley Farm, L 42.29 305 ⇑P P 11 23 38.9 -0.7
baz=42
LVC Limon Verde 42.47 185 P P 11 23 39.3 -1.8
3.9nm,0.7s,mb4.2,baz=309,slow=3.5,SNR=7.4
LVC Limon Verde 42.47 185 *e*P P 11 23 38.9 -2.2
4.4nm,0.7s,mb4.2
T18A Mexican Hat 42.53 304 ⇑P P 11 23 40.6 -0.9
baz=42
217A Green Valley 42.57 296 ⇑P P 11 23 41.8 -0.1
baz=42
117A Oracle 42.58 297 ⇓P P 11 23 42.5 +0.5
baz=42,SNR=9.8
S18A Hurst Farm, Bl 42.73 304 ⇑P P 11 23 42.8 -0.4
baz=43
Y17A Roosevelt 42.78 298 ⇓P P 11 23 42.7 -1.0
baz=43,SNR=6.4
R18A Canyonlands Na 42.80 305 ⇓P P 11 23 43.2 -0.6
baz=43
X17A Forest Lakes 42.83 299 ⇓P P 11 23 43.5 -0.5
baz=43
V17A Tonalea, Kykot 43.00 301 ⇑P P 11 23 45.2 -0.2
baz=43,SNR=5.5
K19A Absolon Red Bu 43.19 312 ⇑P P 11 23 45.7 -1.1
baz=43
Y16A Circle Bar Ran 43.33 299 ⇑P P 11 23 48.7 +0.7
baz=43
X16A Lo Mia Camp, P 43.36 299 ⇓P P 11 23 49.1 +0.8
baz=43
116A Eloy 43.39 297 ⇓P P 11 23 47.8 -0.8
baz=43
WUAZ Wupatki 43.45 301 ⇓P P 11 23 49.5 +0.4
baz=43,SNR=5.3
WUAZ Wupatki 43.45 301 *e*P P 11 23 50.7 +1.7
5.2nm,0.9s,mb4.3
WUAZ *e*pP pP 11 24 03.6 +3.8
BW06 Boulder Array 43.67 312 ⇑P P 11 23 50.7 0.0
baz=44
PDAR Pinedale Array 43.67 312 P P 11 23 51.5 +0.8
0.7nm,0.5s,mb3.6,baz=108,slow=8.4,SNR=6.7
PDAR pP pP 11 24 04.6 +3.2
1.4nm,0.8s,baz=101,slow=7.9,SNR=5.7
PDAR PcP PcP 11 25 38.2 +0.8
0.8nm,0.6s,baz=106,slow=6.7,SNR=3.4
115A Sonoran Desert 43.84 297 ⇑P P 11 23 53.9 +1.8
baz=44
Q16A Castle Valley 43.89 306 ⇓P P 11 23 52.5 0.0
baz=44
K18A Toltan Ranch, 43.97 311 ⇓P P 11 23 52.1 -1.1
baz=44
X15A Humboldt 44.02 299 ⇓P P 11 23 55.0 +1.4
baz=44
Y15A Casa Rosa Ranc 44.04 299 ⇑P P 11 23 54.0 +0.2
baz=44
FCC Fort Churchill 44.11 339 *e*P P 11 23 54.0 +0.1
0.1nm,0.6s
FCC *e*pP pP 11 24 05.8 +1.1
J18A Kendall Valley 44.13 312 ⇓P P 11 23 53.6 -0.8
baz=44
I18A Diamond G Ranc 44.13 313 ⇑P P 11 23 53.9 -0.5
baz=44
RLMT Red Lodge 44.22 315 ⇑P P 11 23 54.7 -0.3
baz=44
RLMT Red Lodge 44.22 315 *e*P P 11 23 55.3 +0.2
11nm,1.5s,mb4.3
U15A North Rim 44.32 302 ⇑P P 11 23 57.2 +1.1
baz=44
114A Black Gap (USA 44.39 297 ⇓P P 11 23 57.0 +0.4
baz=44,SNR=5.8
X14A Yava 44.56 299 ⇓P P 11 23 58.3 +0.4
baz=44
S15A Panguitch 44.58 304 ⇑P P 11 23 58.6 +0.6
baz=44
Y14A Wickenburg 44.60 298 ⇑P P 11 23 59.0 +0.8
baz=44,SNR=6.0
J17A Brown Place, J 44.65 312 ⇑P P 11 23 57.3 -1.2
baz=44
F18A Big Timber 44.78 316 ⇓P P 11 24 00.1 +0.6
baz=45
HWUT Hardware Ranch 44.79 309 *e*P P 11 23 59.5 -0.2
1.6nm,0.7s,mb4.0
L16A Fish Haven 44.80 310 ⇓P P 11 23 59.4 -0.4
baz=45,SNR=7.5
TPAW Teton Pass 44.86 312 *e*P P 11 24 00.8 +0.6
3.0nm,0.7s,mb3.9
Z13A Yuma Proving G 45.08 297 ⇓P P 11 24 03.3 +1.2
baz=45
E18A Harlowton 45.14 317 ⇑P P 11 24 01.3 -1.1
baz=45
Y13A Salome 45.27 298 ⇓P P 11 24 02.9 -0.7
baz=45,SNR=6.2
F17A Fitzpatrick Pl 45.40 315 ⇓P P 11 24 04.2 -0.2
baz=45
L15A Malad City 45.48 310 ⇓P P 11 24 04.3 -0.9
baz=45
QLMT Earthquake Lak 45.58 314 *e*P P 11 24 08.2 +2.3
1.2nm,0.4s,mb4.2
N14A Grayback Hills 45.81 308 ⇓P P 11 24 06.7 -1.1
baz=46,SNR=5.5
D17A Six Diamond Ra 45.84 317 ⇑P P 11 24 07.7 -0.2
baz=46
A18A Metzger Ranch, 45.97 320 ⇑P P 11 24 09.2 +0.3
baz=46,SNR=6.0
I15A Monteview 46.07 312 ⇑P P 11 24 10.7 +0.9
baz=46
M14A Sheep Mountain 46.07 309 ⇑P P 11 24 09.1 -0.7
baz=46,SNR=6.5
K14A Jones Ranch, D 46.18 310 ⇓P P 11 24 10.9 +0.2
baz=46
D16A Dana Ranch, Ca 46.35 317 ⇓P P 11 24 11.4 -0.6
baz=46
IRM Iron Mountain 46.39 298 ⇑P P 11 24 11.3 -1.1
baz=46
G15A Dillon 46.40 314 ⇑P P 11 24 10.7 -1.6
baz=46
A17A Triple J Farms 46.50 319 ⇓P P 11 24 12.0 -1.0
baz=46
CPUP Villa Florida 46.60 170 P P 11 24 13.0 -1.1
2.1nm,0.4s,mb4.4,baz=338,slow=7.7,SNR=14
CPUP LR LR 11 43 22.3
comp=Z,117nm,18.4s,MS3.9,baz=65,slow=36
J14A Carey 46.62 311 ⇑P P 11 24 13.9 -0.2
baz=46,SNR=8.7
M13A Montello 46.64 308 ⇑P P 11 24 14.3 +0.1
baz=46
I14A Mackay 46.72 312 ⇓P P 11 24 15.0 +0.1
baz=47,SNR=5.7
K13A Stover Farm, H 46.86 310 ⇓P P 11 24 15.2 -0.7
baz=47
A16A West Butte Ran 47.05 319 ⇑P P 11 24 17.5 +0.2
baz=47
J13A Cove Ranch, Pi 47.10 311 ⇓P P 11 24 16.4 -1.5
baz=47,SNR=5.2
M12A Wells 47.20 308 ⇑P P 11 24 18.1 -0.6
baz=47
C15A Salmond Ranch, 47.28 317 ⇑P P 11 24 19.0 -0.2
baz=47,SNR=9.4
HLID Hailey 47.31 311 ⇑P P 11 24 19.0 -0.5
baz=47
HLID Hailey 47.31 311 *e*P P 11 24 20.6 +1.1
baz=47,SNR=6.0
B15A Bradely Ranch, 47.43 318 ⇓P P 11 24 20.0 -0.3
baz=47
O11A Cowboy Ranch, 47.52 307 ⇑P P 11 24 19.9 -1.3
baz=47,SNR=5.6
A15A Johnson Ranch, 47.76 319 ⇓P P 11 24 22.5 -0.3
baz=48,SNR=5.5
M11A Holland Ranch, 47.85 308 ⇑P P 11 24 23.4 -0.4
baz=48,SNR=6.4
E13A Victor 47.90 315 ⇓P P 11 24 22.8 -1.2
baz=48
S10A Tonopah Range, 47.93 303 ⇑P P 11 24 25.5 +1.1
baz=48
L11A Cat Creek Ranc 47.97 309 ⇓P P 11 24 24.2 -0.3
baz=48,SNR=5.5
C14A Swan Lake 48.01 317 ⇓P P 11 24 25.0 +0.2
baz=48
A14A Double T Ranch 48.19 319 ⇓P P 11 24 25.5 -0.6
baz=48
YBMT Yellow Bay 48.20 317 *e*P P 11 24 27.4 +1.1
9.8nm,1.2s,mb4.7
YBMT *e*pP pP 11 24 39.9 +2.7
L10A Juniper Basin 48.47 309 ⇓P P 11 24 28.8 +0.3
baz=48,SNR=6.9
I11A Placerville 48.48 311 ⇓P P 11 24 29.2 +0.7
baz=48
E11A Bogner Ranch, 49.23 315 ⇓P P 11 24 33.7 -0.5
baz=49
NVAR Mina Array Bea 49.33 304 P P 11 24 36.3 +1.2
0.8nm,0.6s,mb3.9,baz=90,slow=8.4,SNR=9.1
EDM Edmonton 49.67 324 *e*P P 11 24 37.0 -0.5
EDM *e*pP pP 11 24 50.4 +2.0
NEW Newport 50.32 317 *e*P P 11 24 42.5 0.0
3.8nm,0.7s,mb4.5
NEW *e*pP pP 11 24 55.6 +2.2
H08A Prairie City 50.51 312 ⇓P P 11 24 42.4 -1.6
baz=50
YKA Yellowknife Ar 54.30 334 P P 11 25 11.6 -0.2
4.9nm,0.5s,mb4.7,baz=107,slow=7.4,SNR=151
YKA pP pP 11 25 23.9 +1.2
4.7nm,0.8s,baz=110,slow=7.4,SNR=13
YKA PcP PcP 11 26 15.4 -0.1
0.7nm,0.6s,baz=118,slow=4.2,SNR=6.4
YKA LR LR 11 46 53.1
comp=Z,5.7nm,21.9s,MS2.6,baz=160,slow=34
YKA Yellowknife Ar 54.30 334 P P 11 25 11.6 -0.2
YKA pP pP 11 25 23.9 +1.2
YKA PcP PcP 11 26 15.4 -0.1
YKA LR LR 11 46 53.1
SUMG Summit 54.77 9 *e*P P 11 25 16.9 +1.8
16nm,1.1s,mb5.0
SUMG *e*pP pP 11 25 29.2 +3.2
ESDC Sonseca Array 55.47 55 P P 11 25 22.4 +1.7
0.3nm,0.4s,mb3.7,baz=279,slow=6.7,SNR=7.8
RES Resolute Bay 57.06 351 *e*P P 11 25 31.4 -0.1
0.4nm,0.5s,mb3.7
RES *e*pP pP 11 25 43.9 +1.4
TIC Toumodi 59.60 94 *e*P P 11 25 51.3 +1.2
5.7nm,0.2s,mb5.3
LIC Lamto 59.73 94 *e*P P 11 25 52.0 +1.0
44nm,1.7s,mb5.2
DBIC Dimbokro 59.74 94 P P 11 25 52.2 +1.1
4.4nm,0.5s,mb4.7,baz=280,slow=8.0,SNR=10
DBIC Dimbokro 59.74 94 *e*P P 11 25 52.2 +1.1
5.9nm,0.7s,mb4.7
KIC Kosan Boka 59.95 94 *e*P P 11 25 54.0 +1.4
9.0nm,0.5s,mb5.0
PLCA Paso Flores 60.58 185 P P 11 25 56.7 +0.4
3.3nm,0.7s,mb4.5,baz=7.1,slow=5.7,SNR=6.3
PLCA Paso Flores 60.58 185 P P 11 25 56.7 +0.4
INK Inuvik 63.70 337 *e*P P 11 26 16.5 -0.3
6.9nm,0.8s,mb4.7
INK *e*pP pP 11 26 29.5 +1.5
TORD Torodi Ar. Bea 63.98 85 P P 11 26 20.5 +0.9
4.6nm,0.6s,mb4.7,baz=288,slow=7.1,SNR=38
NOA NORSAR Array B 66.10 31 P P 11 26 33.7 +1.1
2.1nm,1.0s,mb4.1,baz=270,slow=6.5,SNR=3.7
NOA pP pP 11 26 45.1 +1.2
0.9nm,0.8s,baz=269,slow=6.6,SNR=3.4
NOA LR LR 11 50 54.0
comp=Z,16nm,18.2s,MS3.3,baz=180,slow=32
NOA NORSAR Array B 66.10 31 P P 11 26 33.7 +1.1
NOA pP pP 11 26 45.1 +1.2
NOA LR LR 11 50 54.0
KEST Kesra 66.22 59 P P 11 26 34.9 +1.1
0.9nm,0.6s,mb4.0,baz=259,slow=2.8,SNR=5.6
EGAK Eagle 66.23 333 *e*P P 11 26 33.8 +0.4
8.4nm,1.2s,mb4.7
EGAK *e*pP pP 11 26 46.9 +2.3
BRG Berggiesshubel 67.89 42 *e*P P 11 26 44.9 +0.7
3.2nm,1.0s,mb4.3
BRG *e* pP 11 26 58.0 +2.6
3.3nm,1.0s
GERES GERESS Array B 67.91 44 P P 11 26 44.7 +0.4
0.6nm,0.6s,mb3.8,baz=269,slow=5.6,SNR=7.9
COLA College 69.09 333 *e*P P 11 26 51.1 -0.3
3.5nm,0.9s,mb4.3
COLD Coldfoot 69.93 336 *e*P P 11 26 57.1 +0.6
3.6nm,0.9s,mb4.3
COLD *e*pP pP 11 27 10.1 +2.3
ARCES ARCESS Array B 71.68 22 P P 11 27 07.7 +0.5
1.5nm,0.7s,mb4.1,baz=289,slow=3.7,SNR=11
FINES FINESS Array B 73.22 30 P P 11 27 17.3 +0.8
1.5nm,0.7s,mb4.0,baz=274,slow=3.8,SNR=12
FINES LR LR 11 52 34.4
comp=Z,44nm,20.6s,MS3.7,baz=198,slow=30
FINES FINESS Array B 73.22 30 P P 11 27 17.3 +0.8
FINES LR LR 11 52 34.4
RKT Rikitea 80.52 241 *e*T 11 28 42.1
17nm,0.3s
BRTR Keskin Array B 83.89 50 P P 11 28 17.1 +1.4
1.1nm,0.7s,mb4.1,baz=297,slow=5.4,SNR=6.6
MAW Mawson 122.32 159 PKP PKPdf 11 34 40.8 +0.9
0.8nm,0.3s,baz=210,slow=2.2,SNR=4.9
CMAR Chiang Mai Arr 138.72 23 PKP PKPdf 11 35 13.4 +0.9
0.8nm,0.4s,baz=307,slow=2.0,SNR=5.7
RIV Riverview 145.08 239 *e*P PKPbc 11 35 24.2 +1.4
ARMA Armidale 145.36 245 *e*P PKPab 11 35 25.8 +1.8
CNB Canberra Magne 146.10 236 *e*P PKPab 11 35 27.7 +1.1
STKA Stephens Creek 153.34 238 PKPbc PKPbc 11 35 45.1 +1.0
2.5nm,0.8s,baz=42,slow=1.9,SNR=4.6
WRA Warramunga Arr 161.79 267 PKPab PKPab 11 36 33.3 +0.3
0.4nm,0.6s,baz=83,slow=4.2,SNR=6.4
ASAR Alice Springs 162.03 255 PKPab PKPab 11 36 34.4 +0.3
2.5nm,0.5s,baz=104,slow=4.5,SNR=54
ASAR pPKPab pPKPab 11 36 47.5 +1.7
1.0nm,0.6s,baz=102,slow=4.6,SNR=4.9

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*NEIC **04** 11:24:24.2, 19°.21N×68°.79W, h150km, MD4.0(RSPR), After RSPR.*
RSPR 04 11:24:24.2, 19°.21N×68°.79W, h150km±1km, MD4.0/16, MD4.0/16, 6C-10D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.80**	**151**	⇓*e*P	Pn	11 24 45.1	-2.3
PCDR	**Punta Cana, DR**	**0.80**	**151**	*e*S	Sn	11 25 01.5	-3.5
AGPR	**Aguadilla, PR**	**1.75**	**115**	⇑*e*P	Pn	11 24 57.4	+0.9
LSP	**Las Mesas**	**1.92**	**122**	⇓*i*P	Pn	11 24 58.2	-0.2
LSP				*e*S	Sn	11 25 25.2	+0.7
CRPR	**Cabo Rojo, PR**	**2.00**	**127**	⇓*e*P	Pn	11 24 57.7	-1.6
LRS	**Lares**	**2.06**	**116**	⇓*e*P	Pn	11 24 59.9	-0.1
LRS				*e*S	Sn	11 25 28.0	+0.5
AOPR	**Arecibo Observ**	**2.11**	**114**	⇓*e*P	Pn	11 25 01.9	+1.2
AOPR				*e*S	Sn	11 25 29.0	+0.4
SDDR	**Presa de Saban**	**2.37**	**265**	⇑*e*P	Pn	11 25 01.5	-2.2
OBIP	**Obispado Ponce**	**2.38**	**119**	⇓*e*P	Pn	11 25 03.9	+0.1
OBIP				*e*S	Sn	11 25 33.9	-0.4
ICM	**Isla Caja Muer**	**2.52**	**121**	⇓*e*P	Pn	11 25 04.9	-0.7
ICM				*e*S	Sn	11 25 36.5	-0.9
SJG	**San Juan**	**2.73**	**113**	⇓*e*P	Pn	11 25 08.7	+0.5
SJG	**San Juan**	**2.73**	**113**	⇑*e*P	Pn	11 25 09.4	+1.3
SJG				*e*S	Sn	11 25 41.9	-0.2
CBYP	**Canovanas**	**2.93**	**108**	⇑*e*P	Pn	11 25 10.3	-0.4
CBYP				*e*S	Sn	11 25 46.5	-0.2
CPD	**Cerro la Pandu**	**2.97**	**113**	⇑*e*P	Pn	11 25 11.3	+0.2
CPD				*e*S	Sn	11 25 47.9	+0.5
HUMP	**Col San Antoni**	**2.98**	**110**	⇓*e*P	Pn	11 25 11.2	-0.2
HUMP				*e*S	Sn	11 25 47.5	-0.3
MTP	**Monte Pirata**	**3.27**	**109**	⇓*e*P	Pn	11 25 15.0	0.0
STVI	**Saint Thomas**	**3.73**	**103**	⇑*e*P	Pn	11 25 22.4	+1.4
STVI				*e*S	Sn	11 26 06.3	+1.2

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*DJA **04** 11:38:49, 18°.61S×178°.29W, h398km, mb5.0/37*
*MOS **04** 11:38:49.5±1.6, 18°.36S×178°.15W, h406km, mb4.7/26, Error ellipse: s-maj=10.5km s-min=8.1km az=56.7*
*ISCJB **04** 11:38:49.3±0.8, 18°.45S±0°.04×178°.14W±0°.04, h415km±8km, mb4.5/105, Error ellipse: s-maj=7.7km s-min=4.4km az=149.0*
*BJI **04** 11:38:51.8, 18°.25S×178°.06W, h436km, mB4.9/17, mb4.8/29*
*IDC **04** 11:38:54.8±0.6, 18°.54S×178°.11W, h464km±5km, mb4.1/19, mb1 4.3/19, mb1mx4.3/20, mbtmp4.1/19, Error ellipse: s-maj=12.4km s-min=10.0km az=137.0*
*NEIC **04** 11:38:54.5±0.1, 18°.50S×178°.17W, mb4.6/79, Error ellipse: s-maj=6.8km s-min=4.0km az=144.0*
*SZGRF **04** 11:38:59.3, 17°.36S×176°.99W, h468km, Fiji Islands region*
ISC 04 11:38:52.1±1.0, 18°.45S±0°.05×178°.12W±0°.04, h431km±11km, h446km±3.5km; pP-P, n591, σ0s70/405, mb4.5/105, 131C-112D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.58**	**54**	*e*P	**P**	**11 40 40.9**	**-1.9**
AFI				*e*		11 42 08.0	
AFI				pmax	pmax		
	comp=Z,65nm,0.4s						
AFI	**Afiamalu**	**7.58**	**54**	P	**P**	**11 40 41.0**	**-1.8**
	comp=Z,19nm,0.3s,baz=72,slow=20,SNR=28						
AFI				S	**S**	**11 42 07.4**	**-6.1**
	comp=Z,8.0nm,0.3s,baz=41,slow=19,SNR=4.2						
AFI	**Afiamalu**	**7.58**	**54**	*e*Pn	**P**	**11 40 40.9**	**-1.9**
	comp=Z,64nm,0.4s						
AFI				*e*Sn	**S**	**11 42 08.0**	**-5.5**
RAO	**Raoul Island**	**10.76**	**179**	S	**S**	**11 43 14.8**	**-2.5**
	comp=Z,68nm,0.3s,baz=66,slow=20,SNR=3.1						
RAO	**Raoul Island**	**10.76**	**179**	*e*Pn	**P**	**11 41 16.6**	**-0.9**
RAO				*e*Sn	**S**	**11 43 20.2**	**+2.9**
DZM	**Mont Dzumac**	**14.93**	**253**	*e*Pn	**P**	**11 42 04.1**	**+1.2**
	comp=Z,3.6nm,0.3s						
DZM				*e*LR	LR	11 44 33.3	
	comp=Z,316nm,23.9s						
DZM	**Mont Dzumac**	**14.93**	**253**	*e*Pn	**P**	**11 42 04.3**	**+1.4**
	comp=Z,65nm,0.6s						
OUZ	**Omahuta**	**18.25**	**202**	*e*P	**P**	**11 42 40.2**	**+2.2**
	comp=Z,56nm,0.9s						
URZ	**Urewera**	**20.18**	**191**	P	**P**	**11 42 54.2**	**-1.8**
	comp=Z,38nm,0.7s,baz=12,slow=6.2,SNR=15						
URZ				S	**S**	**11 46 10.7**	**-4.3**
	comp=Z,13nm,0.8s,baz=212,slow=19,SNR=4.4						
URZ	**Urewera**	**20.18**	**191**	*e*P	**P**	**11 42 54.6**	**-1.4**
	comp=Z,60nm,0.9s						
RPZ	**Rata Peaks**	**26.79**	**198**	P	**P**	**11 43 55.4**	**0.0**
	comp=Z,8.5nm,0.7s,mb4.3,baz=5.7,slow=10,SNR=5.6						
PPT	**Papeete**	**27.15**	**93**	*e*LR	LR	11 50 16.0	
	comp=Z,473nm,26.0s						
PPT	**Papeete**	**27.15**	**93**	P	**P**	**11 43 58.9**	**0.0**
	comp=Z,72nm,1.1s,mb5.0,baz=26,slow=0.5,SNR=5.3						
EIDS	**Eidsvold**	**29.34**	**251**	*e*P	**P**	**11 44 18.5**	**+0.4**
	comp=Z,16nm,0.9s,mb4.4						
ARMA	**Armidale**	**29.91**	**241**	*e*P	**P**	**11 44 24.6**	**+1.6**
ARMA	**Armidale**	**29.91**	**241**	*e*P	**P**	**11 44 24.8**	**+1.8**
	comp=Z,14nm,0.5s,mb4.5						
CNB	**Canberra Magne**	**33.32**	**233**	*e*P	**P**	**11 44 53.6**	**+1.3**
CTA	**Charters Tower**	**33.63**	**261**	⇓*i*P	**P**	**11 44 55.5**	**+0.4**
	comp=Z,25nm,0.6s,mb4.7						
CTA	**Charters Tower**	**33.63**	**261**	P	**P**	**11 44 55.4**	**+0.2**
	comp=Z,30nm,0.6s,mb4.8,baz=91,slow=10,SNR=50						
CTAO	**Charters Tower**	**33.63**	**261**	*e*P	**P**	**11 44 55.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.0						
CTAO	**Charters Tower**	**33.63**	**261**	*e*P	**P**	**11 44 55.6**	**+0.5**
	comp=Z,104nm,1.3s,mb5.0						
TOO	**Toolangi**	**37.05**	**231**	*e*P	**P**	**11 45 24.8**	**+1.3**
COEN	**Coen**	**37.38**	**271**	*e*P	**P**	**11 45 26.8**	**+0.1**
	comp=Z,143nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**38.61**	**242**	*e*P	**P**	**11 45 37.7**	**+1.2**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
STKA	**Stephens Creek**	**38.61**	**242**	⇓*i*P	**P**	**11 45 37.6**	**+1.1**
	comp=Z,11nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**38.61**	**242**	P	**P**	**11 45 37.6**	**+1.0**
	comp=Z,12nm,0.5s,mb4.5,baz=92,slow=9.3,SNR=95						
STKA	**Stephens Creek**	**38.61**	**242**	*e*P	**P**	**11 45 37.7**	**+1.2**
	comp=Z,2.8nm,0.6s,mb3.8						
WAKE	**Wake Island**	**40.36**	**337**	*e*P	**P**	**11 45 50.5**	**-0.3**
	comp=Z,232nm,1.1s,mb5.4						
WB2	**Warramunga Arr**	**44.79**	**260**	*e*P	**P**	**11 46 25.2**	**-0.7**
WB2				*e*	pP	11 47 49.0	-0.2
WRAB	**Tennant Creek**	**44.80**	**260**	*e*P	**P**	**11 46 25.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	**44.80**	**260**	*e*P	**P**	**11 46 25.2**	**-0.8**
	comp=Z,23nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**44.80**	**260**	P	**P**	**11 46 25.2**	**-0.8**
	comp=Z,13nm,0.7s,mb4.4,baz=98,slow=6.2,SNR=114						
WRA				S	**S**	**11 52 25.0**	**-5.9**
	comp=Z,2.0nm,0.7s,baz=95,slow=13,SNR=6.4						
ASAR	**Alice Springs**	**44.91**	**255**	P	**P**	**11 46 26.9**	**+0.1**
	comp=Z,70nm,0.5s,mb5.2,baz=90,slow=8.3,SNR=2270						
ASAR				pP	pP	11 47 56.5	+6.3
	comp=Z,5.8nm,0.6s,baz=84,slow=8.6,SNR=1.6						
ASAR				S	**S**	**11 52 29.2**	**-3.0**
	comp=Z,5.8nm,0.8s,baz=89,slow=17,SNR=27						
KAKA	**Kakadu**	**47.85**	**269**	*e*P	**P**	**11 46 47.6**	**-1.8**
	comp=Z,22nm,0.6s,mb4.7						
KAKA	**Kakadu**	**47.85**	**269**	*e*P	**P**	**11 46 47.5**	**-2.0**
	comp=Z,50nm,0.6s,mb5.0						
GUMO	**Guam**	**48.42**	**309**	*e*P	**P**	**11 46 54.0**	**+0.3**
GUMO				pmax	pmax		
	comp=Z,354nm,1.5s,mb5.5						
GUMO	**Guam**	**48.42**	**309**	P	**P**	**11 46 53.9**	**+0.2**
	comp=Z,92nm,0.8s,mb5.2,baz=164,slow=9.6,SNR=6.7						
GUMO	**Guam**	**48.42**	**309**	*e*P	**P**	**11 46 54.0**	**+0.3**
	comp=Z,354nm,1.5s,mb5.5						
FORT	**Forrest**	**50.03**	**245**	*e*P	**P**	**11 47 05.2**	**-0.3**
	comp=Z,44nm,0.5s,mb5.0						
FORT	**Forrest**	**50.03**	**245**	*e*P	**P**	**11 47 04.8**	**-0.7**
	comp=Z,55nm,0.5s,mb5.1						
FORT				*e*S	**S**	**11 53 39.4**	**-3.9**
FITZ	**Fitzroy Crossi**	**53.21**	**261**	⇓*i*P	**P**	**11 47 29.1**	**+0.2**
	comp=Z,22nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.21**	**261**	*e*P	**P**	**11 47 29.0**	**+0.2**
	comp=Z,42nm,1.2s,mb4.5						
FITZ				*e*		11 49 02.1	
MBWA	**Marble Bar**	**58.21**	**256**	*e*P	**P**	**11 48 03.4**	**-0.4**
MBWA	**Marble Bar**	**58.21**	**256**	*e*P	**P**	**11 48 03.2**	**-0.6**
	comp=Z,9.3nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**59.20**	**242**	*e*P	**P**	**11 48 10.1**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**59.20**	**242**	*e*P	**P**	**11 48 10.1**	**-0.3**
	comp=Z,4.4nm,0.6s,mb4.0						
SBA	**Scott Base**	**59.90**	**184**	*e*P	**P**	**11 48 16.5**	**+2.2**
SBA				pmax	pmax		
	comp=Z,54nm,1.1s,mb4.9						
SBA	**Scott Base**	**59.90**	**184**	*e*P	**P**	**11 48 16.5**	**+2.2**
	comp=Z,54nm,1.1s,mb4.9						
MORW	**Morawa**	**60.52**	**247**	*e*P	**P**	**11 48 18.8**	**-0.5**
KAPI	**Kappang**	**62.00**	**274**	*e*P	**P**	**11 48 28.3**	**-1.0**
	comp=Z,39nm,1.6s,mb4.7						
CASY	**Casey**	**65.77**	**205**	*e*P	**P**	**11 48 52.5**	**0.0**
	comp=Z,26nm,1.0s,mb4.8						
MYLDM	**Lahad Datu**	**66.71**	**284**	P	**P**	**11 48 60.0**	**+0.6**
TSM	**Tawau**	**66.95**	**283**	P	**P**	**11 48 58.1**	**-2.8**
SDKM	**Sandakan**	**68.08**	**284**	P	**P**	**11 49 08.6**	**+0.7**
MJAR	**Matsushiro Arr**	**68.50**	**323**	P	**P**	**11 49 09.5**	**-0.4**
	comp=Z,10.0nm,0.8s,mb4.5,baz=161,slow=5.8,SNR=35						
MAJO	**Matsushiro**	**68.50**	**323**	*e*P	**P**	**11 49 09.7**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.8						
MAJO	**Matsushiro**	**68.50**	**323**	*e*P	**P**	**11 49 09.7**	**-0.2**
	comp=Z,28nm,1.1s,mb4.8						
MAT	**Matsushiro**	**68.50**	**323**	P	**P**	**11 49 09.4**	**-0.5**
MAT				*e*S	S	11 57 42.6	+5.9
KDM	**Kudat**	**68.90**	**285**	P	**P**	**11 49 19.5**	**+6.6**
KKM	**Kota Kinabalu**	**69.14**	**284**	P	**P**	**11 49 14.8**	**+0.6**
KKM	**Kota Kinabalu**	**69.14**	**284**	*e*P	**P**	**11 49 13.9**	**-0.4**
	comp=Z,20nm,0.8s,mb4.8						
KKM				*e*		11 50 53.8	
QSPA	**South Pole Qui**	**71.61**	**180**	*e*P	**P**	**11 49 28.6**	**+0.7**
	comp=Z,62nm,1.0s,mb5.1						
QSPA				*e*	pP	11 51 05.3	+3.9
NACB	**Ninganchiao**	**72.44**	**304**	*e*P	**P**	**11 49 32.8**	**-0.9**
MIR	**Mirnyy**	**72.80**	**205**	*e*P	**P**	**11 49 35.0**	**0.0**
MIR				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.9						
KSM	**Kuching**	**73.02**	**277**	*e*P	**P**	**11 49 37.0**	**-0.3**
	comp=Z,62nm,0.9s,mb5.1						
YSS	**Yuzh-Sakhalins**	**74.02**	**333**	⇑*i*P	**P**	**11 49 42.9**	**+0.7**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.1						
YSS	**Yuzh-Sakhalins**	**74.02**	**333**	*e*P	**P**	**11 49 43.4**	**+1.2**
	comp=Z,39nm,1.0s,mb5.0						
PEA0B	**Petropavlovsk-**	**74.27**	**345**	*e*P	**P**	**11 49 43.1**	**-0.4**
PETK	**Petropavlovsk-**	**74.27**	**345**	P	**P**	**11 49 43.6**	**+0.1**
	comp=Z,41nm,0.8s,mb5.1,baz=128,slow=8.2,SNR=40						
KSRS	**Korea Array**	**75.28**	**318**	P	**P**	**11 49 50.2**	**+0.6**
	comp=Z,2.6nm,0.9s,mb3.9,baz=143,slow=6.0,SNR=6.7						
KSRS				pP	pP	11 51 29.9	+5.6
	comp=Z,1.9nm,1.1s,baz=141,slow=8.1,SNR=3.0						
MWC	**Mount Wilson**	**77.50**	**47**	*e*P	**P**	**11 50 02.1**	**+0.1**
MWC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
MWC	**Mount Wilson**	**77.50**	**47**	*e*P	**P**	**11 50 02.1**	**+0.1**
	comp=Z,10nm,1.0s,mb4.4						
MWC				*e*		11 51 45.5	
VES	**Vestal, Richgr**	**77.67**	**45**	⇓P	**P**	**11 50 02.4**	**-0.5**
	baz=78						
MURC	**Murrieta**	**77.77**	**48**	⇓P	**P**	**11 50 03.4**	**-0.1**
	baz=78						
EDW2	**Edwards Air Fo**	**77.90**	**47**	⇓P	**P**	**11 50 04.7**	**+0.6**
	baz=78						
MONP	**Monument Peak**	**77.96**	**49**	⇓P	**P**	**11 50 04.4**	**-0.1**
	baz=78,SNR=5.9						
ISA	**Isabella**	**77.99**	**46**	⇑P	**P**	**11 50 04.6**	**0.0**
	baz=78						
ISA	**Isabella**	**77.99**	**46**	*e*P	**P**	**11 50 05.3**	**+0.7**
ISA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ISA	**Isabella**	**77.99**	**46**	*e*P	**P**	**11 50 05.3**	**+0.7**
	comp=Z,6.0nm,0.9s,mb4.2						
CMB	**Columbia Colle**	**78.04**	**43**	*e*P	**P**	**11 50 05.1**	**+0.2**
CMB				*e*		11 50 14.0	
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
CMB	**Columbia Colle**	**78.04**	**43**	*e*P	**P**	**11 50 05.1**	**+0.3**
	comp=Z,5.5nm,0.9s,mb4.2						
CMB				*e*PcP	PcP	11 50 14.0	+1.3
SWSC	**Sam W. Stewart**	**78.43**	**49**	⇓P	**P**	**11 50 06.9**	**-0.2**
	baz=79						
NJ2	**Nanjing**	**78.49**	**309**	*e*P	**P**	**11 50 05.6**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7						
HABR	**Khabarovsk**	**78.61**	**330**	*ce*P	**P**	**11 50 09.2**	**+1.5**
HABR				S	S	11 59 28.1	0.0
HABR				*e*		11 59 47.1	
HABR				*e*SS	SS	12 04 43.4	-0.5
HABR				*e*SSS		12 08 12.0	
HABR				pmax	pmax		
	comp=Z,135nm,1.6s,mb5.3						
HABR				pmax	pmax		
	comp=E,27nm,0.9s						
HABR				pmax	pmax		
	comp=N,25nm,1.0s						
MDJ	**Mudanjiang**	**78.78**	**325**	P	**P**	**11 50 09.9**	**+1.2**
MDJ				pP	pP	11 51 46.5	+2.1
MDJ				sP	sP	11 52 34.3	+4.9
MDJ				S	S	11 59 30.0	0.0
MDJ				SS	SS	12 04 47.3	+0.7
MDJ				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,130nm,3.9s						
MDJ	**Mudanjiang**	**78.78**	**325**	*e*P	**P**	**11 50 09.5**	**+0.8**
	comp=Z,46nm,1.1s,mb5.0						
MPMC	**Manual Prospec**	**78.88**	**46**	⇑P	**P**	**11 50 09.6**	**+0.2**
	baz=79						
WAKR	**Walker**	**78.92**	**43**	*e*P	**P**	**11 50 10.9**	**+1.3**
BC3	**Big Chuckw Mtn**	**79.04**	**49**	⇑P	**P**	**11 50 10.4**	**+0.1**
	baz=79						
WCN	**Washoe City**	**79.17**	**42**	⇑P	**P**	**11 50 10.6**	**-0.3**
	baz=79						
IRM	**Iron Mountain**	**79.52**	**49**	⇑P	**P**	**11 50 12.6**	**-0.3**
	baz=80						
NVAR	**Mina Array Bea**	**79.62**	**44**	P	**P**	**11 50 13.8**	**+0.4**
	comp=Z,4.2nm,0.8s,mb4.1,baz=226,slow=8.6,SNR=26						
113A	**Mohawk Valley,**	**79.82**	**51**	⇓P	**P**	**11 50 14.1**	**-0.4**
	baz=80						
U10A	**Ash Meadows, A**	**79.86**	**46**	⇓P	**P**	**11 50 14.8**	**+0.2**
	baz=80						
Z13A	**Yuma Proving G**	**80.11**	**50**	⇓P	**P**	**11 50 16.9**	**+0.9**
	baz=80,SNR=5.2						
214A	**Organ Pipe Nat**	**80.13**	**52**	⇑P	**P**	**11 50 16.2**	**0.0**
	baz=80						
Y13A	**Salome**	**80.29**	**50**	⇑P	**P**	**11 50 17.7**	**+0.8**
	baz=80,SNR=5.5						
MOD	**Moc**	**80.32**	**40**	*e*P	**P**	**11 50 17.6**	**+0.7**
	comp=Z,6.4nm,0.8s,mb4.3						
K05A	**Summer Lake**	**80.44**	**39**	⇓P	**P**	**11 50 18.0**	**+0.5**
	baz=81						
S10A	**Tonopah Range,**	**80.48**	**45**	⇓P	**P**	**11 50 17.9**	**+0.1**
	baz=81,SNR=8.4						
CN2	**Changchun**	**80.61**	**322**	*e*P	**P**	**11 50 19.0**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
KLR	**Kul'dur**	**80.71**	**329**	*e*P	**P**	**11 50 15.0**	**-3.8**
KLR				pmax	pmax		
	comp=Z,37nm,1.6s,mb4.9						
R10A	**Warm Springs**	**80.87**	**45**	⇓P	**P**	**11 50 19.2**	**-0.7**
	baz=81,SNR=10						
S11A	**Rachel**	**80.90**	**45**	⇑P	**P**	**11 50 19.9**	**-0.2**
	baz=81						
Y14A	**Wickenburg**	**80.95**	**50**	⇓P	**P**	**11 50 20.7**	**+0.3**
	baz=81						
T11A	**Corn Creek, Al**	**81.05**	**46**	⇑P	**P**	**11 50 20.8**	**-0.1**
	baz=81,SNR=8.0						
Q10A	**Clear Creek Ra**	**81.09**	**44**	⇑P	**P**	**11 50 21.6**	**+0.6**
	baz=81						
U12A	**Valley of Fire**	**81.10**	**47**	⇓P	**P**	**11 50 22.0**	**+0.9**
	baz=81,SNR=5.5						
WHN	**Wuhan**	**81.14**	**306**	P	**P**	**11 50 22.1**	**+0.6**
216A	**Three Points,**	**81.16**	**52**	⇑P	**P**	**11 50 22.3**	**+0.7**
	baz=81						
V13A	**Grand Canyon W**	**81.20**	**48**	⇑P	**P**	**11 50 21.3**	**-0.3**
	baz=81						
116A	**Eloy**	**81.24**	**52**	⇓P	**P**	**11 50 22.0**	**+0.1**
	baz=82						
X14A	**Yava**	**81.29**	**49**	⇑P	**P**	**11 50 22.4**	**+0.2**
	baz=82						
R11A	**Troy Canyon, C**	**81.38**	**45**	⇑P	**P**	**11 50 23.0**	**+0.4**
	baz=82						
BMN	**Battle Mountai**	**81.42**	**42**	*e*P	**P**	**11 50 22.4**	**-0.3**
BMN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
BMN	**Battle Mountai**	**81.42**	**42**	*e*P	**P**	**11 50 22.4**	**-0.3**
	comp=Z,8.5nm,1.0s,mb4.4						
Y15A	**Casa Rosa Ranc**	**81.44**	**50**	⇓P	**P**	**11 50 22.4**	**-0.5**
	baz=82,SNR=6.8						
P10A	**Eureka**	**81.47**	**43**	⇓P	**P**	**11 50 22.5**	**-0.4**
	baz=82						
F04A	**Amboy**	**81.48**	**36**	⇑P	**P**	**11 50 22.8**	**-0.1**
	baz=82						
S12A	**Delamar Landin**	**81.49**	**46**	⇓P	**P**	**11 50 23.1**	**0.0**
	baz=82,SNR=10						
U13A	**Pakoon Wash**	**81.50**	**47**	⇑P	**P**	**11 50 22.9**	**-0.2**
	baz=82,SNR=7.0						
W14A	**Seligman**	**81.52**	**49**	⇓P	**P**	**11 50 22.5**	**-0.8**
	baz=82						
217A	**Green Valley**	**81.54**	**53**	⇓P	**P**	**11 50 23.0**	**-0.5**
	baz=82,SNR=9.0						
Q11A	**Duckwater**	**81.59**	**44**	⇓P	**P**	**11 50 23.0**	**-0.7**
	baz=82,SNR=9.1						
WVOR	**Wild Horse Val**	**81.64**	**40**	*e*P	**P**	**11 50 23.6**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
WVOR	**Wild Horse Val**	**81.64**	**40**	*e*P	**P**	**11 50 23.6**	**-0.1**
	comp=Z,11nm,1.1s,mb4.5						
V14A	**Boquillas Ranc**	**81.71**	**48**	⇓P	**P**	**11 50 24.4**	**+0.1**
	baz=82,SNR=7.0						
X15A	**Humboldt**	**81.77**	**50**	⇑P	**P**	**11 50 24.5**	**-0.2**
	baz=82,SNR=6.6						
TUC	**Tucson**	**81.81**	**52**	*e*P	**P**	**11 50 25.6**	**+0.7**
TUC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
TUC	**Tucson**	**81.81**	**52**	*e*P	**P**	**11 50 25.6**	**+0.7**
	comp=Z,5.9nm,0.9s,mb4.3						
Z16A	**Peralta Trail,**	**81.82**	**51**	⇓P	**P**	**11 50 25.2**	**+0.3**
	baz=82						
T13A	**Saint George**	**81.84**	**47**	⇓P	**P**	**11 50 25.0**	**+0.1**
	baz=82						
TDL	**Tradedollar La**	**81.85**	**35**	P	**P**	**11 50 25.8**	**+1.1**
H06A	**Lindquist Farm**	**81.95**	**38**	⇑P	**P**	**11 50 25.5**	**+0.2**
	baz=82						
117A	**Oracle**	**81.97**	**52**	⇑P	**P**	**11 50 25.6**	**-0.1**
	baz=82,SNR=8.1						
318A	**Bisbee**	**82.01**	**53**	⇑P	**P**	**11 50 26.1**	**+0.2**
	baz=82,SNR=9.1						
R12A	**Pony Springs,**	**82.03**	**45**	⇓P	**P**	**11 50 26.4**	**+0.6**
	baz=82,SNR=5.1						
Y16A	**Circle Bar Ran**	**82.03**	**50**	⇑P	**P**	**11 50 26.1**	**+0.1**
	baz=82,SNR=6.2						
U14A	**Mt Trumbull**	**82.04**	**48**	⇑P	**P**	**11 50 26.2**	**+0.2**
	baz=82,SNR=16						
I07A	**Izee**	**82.06**	**38**	⇑P	**P**	**11 50 26.5**	**+0.7**
	baz=82,SNR=9.6						
G06A	**Carlson Farm,**	**82.07**	**37**	⇑P	**P**	**11 50 25.5**	**-0.4**
	baz=82						
GAMB	**Gambell**	**82.11**	**3**	*e*P	**P**	**11 50 26.0**	**+0.4**
	comp=Z,19nm,1.0s,mb4.8						
S13A	**Holt Ranch, En**	**82.15**	**46**	⇑P	**P**	**11 50 25.8**	**-0.7**
	baz=82,SNR=8.3						
218A	**Dragoon**	**82.21**	**53**	⇓P	**P**	**11 50 27.1**	**+0.1**
	baz=82						
J08A	**Circle Bar Ran**	**82.26**	**39**	⇓P	**P**	**11 50 27.1**	**+0.2**
	baz=82,SNR=11						
O11A	**Cowboy Ranch,**	**82.27**	**43**	⇓P	**P**	**11 50 27.1**	**+0.1**
	baz=82,SNR=11						
X16A	**Lo Mia Camp, P**	**82.32**	**50**	⇑P	**P**	**11 50 28.1**	**+0.6**
	baz=82,SNR=13						
R13A	**O'Grain Ranch,**	**82.38**	**46**	⇑P	**P**	**11 50 27.9**	**+0.2**
	baz=83						
Y17A	**Roosevelt**	**82.41**	**51**	⇑P	**P**	**11 50 27.7**	**-0.3**
	baz=83						
P12A	**McGill**	**82.42**	**44**	⇑P	**P**	**11 50 27.7**	**-0.1**
	baz=83						
T14A	**Hurricane**	**82.43**	**47**	⇓P	**P**	**11 50 28.0**	**+0.1**
	baz=83						
M10A	**I.L. Ranch, Tu**	**82.44**	**42**	⇓P	**P**	**11 50 27.9**	**0.0**
	baz=83,SNR=5.8						
V15A	**Kaibab Nationa**	**82.46**	**48**	⇑P	**P**	**11 50 28.2**	**+0.1**
	baz=83,SNR=7.0						
CCUT	**Cedar City**	**82.48**	**46**	*e*P	**P**	**11 50 28.6**	**+0.4**
	comp=Z,4.8nm,0.9s,mb4.2						
D05A	**Enumclaw**	**82.48**	**35**	⇓P	**P**	**11 50 28.2**	**+0.2**
	baz=83						
319A	**Douglas**	**82.52**	**54**	⇑P	**P**	**11 50 28.4**	**-0.2**
	baz=83,SNR=9.5						
W16A	**Flagstaff**	**82.57**	**49**	⇑P	**P**	**11 50 27.7**	**-1.0**
	baz=83						
118A	**Homack Ranch,**	**82.58**	**52**	⇓P	**P**	**11 50 28.6**	**-0.2**
	baz=83						
GSM	**Grass Mountain**	**82.60**	**35**	P	**P**	**11 50 29.2**	**+0.7**
G07A	**Ruggs Ranch, H**	**82.64**	**37**	⇑P	**P**	**11 50 28.5**	**-0.3**
	baz=83						
E06A	**Yakima**	**82.65**	**36**	⇑P	**P**	**11 50 28.9**	**+0.1**
	baz=83						
U15A	**North Rim**	**82.67**	**48**	⇑P	**P**	**11 50 29.4**	**+0.2**
	baz=83,SNR=16						
J09A	**Fry Pan Ranch,**	**82.69**	**40**	⇑P	**P**	**11 50 29.5**	**+0.4**
	baz=83,SNR=16						
Q13A	**Wheeler Ranch,**	**82.74**	**45**	⇓P	**P**	**11 50 28.9**	**-0.6**
	baz=83,SNR=11						
X17A	**Forest Lakes**	**82.74**	**50**	⇓P	**P**	**11 50 29.8**	**+0.2**
	baz=83,SNR=8.5						
RMW	**Rattlesnake Mo**	**82.75**	**35**	P	**P**	**11 50 29.9**	**+0.6**
L10A	**Juniper Basin**	**82.78**	**41**	⇓P	**P**	**11 50 30.1**	**+0.5**
	baz=83,SNR=9.6						
H08A	**Prairie City**	**82.80**	**38**	⇓P	**P**	**11 50 29.2**	**-0.4**
	baz=83						
219A	**White Tail Can**	**82.82**	**53**	⇑P	**P**	**11 50 30.1**	**+0.1**
	baz=83,SNR=5.7						
M11A	**Holland Ranch,**	**82.87**	**42**	⇑P	**P**	**11 50 29.7**	**-0.4**
	baz=83,SNR=6.7						
WUAZ	**Wupatki**	**82.89**	**49**	⇓P	**P**	**11 50 29.9**	**-0.5**
	baz=83						
WUAZ	**Wupatki**	**82.89**	**49**	*e*P	**P**	**11 50 31.1**	**+0.8**
	comp=Z,6.8nm,1.1s,mb4.3						
T15A	**Red Dirt Ranch**	**82.90**	**47**	⇓P	**P**	**11 50 30.9**	**+0.6**
	baz=83,SNR=9.2						
K10A	**MacKenzie Ranc**	**82.92**	**41**	⇓P	**P**	**11 50 30.6**	**+0.3**
	baz=83,SNR=9.9						
O12A	**Currie**	**82.93**	**44**	⇓P	**P**	**11 50 30.1**	**-0.3**
	baz=83,SNR=5.7						
TTA	**Tatalina**	**82.95**	**10**	*e*P	**P**	**11 50 30.1**	**+0.1**
TTA				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.0						
TTA	**Tatalina**	**82.95**	**10**	*e*P	**P**	**11 50 30.1**	**+0.2**
	comp=Z,32nm,1.1s,mb5.0						
TTA				*e*	pP	11 52 12.2	+5.4
P13A	**Bates Ranch, G**	**83.00**	**45**	⇑P	**P**	**11 50 30.3**	**-0.5**
	baz=83,SNR=9.6						
I09A	**Lost Marbles R**	**83.04**	**39**	⇓P	**P**	**11 50 30.8**	**-0.1**
	baz=83						
N12A	**Clover Valley,**	**83.05**	**43**	⇑P	**P**	**11 50 30.9**	**0.0**
	baz=83,SNR=7.7						
N12A	**Clover Valley,**	**83.05**	**43**	*e*P	**P**	**11 50 31.6**	**+0.7**
	comp=Z,7.4nm,0.9s,mb4.4						
Y18A	**Canyon Day Jun**	**83.05**	**51**	⇑P	**P**	**11 50 31.7**	**+0.5**
	baz=83,SNR=5.8						
PMR	**Palmer**	**83.06**	**14**	*e*P	**P**	**11 50 29.9**	**-0.6**
G08A	**Pilot Rock**	**83.07**	**38**	⇓P	**P**	**11 50 30.9**	**-0.1**
	baz=83,SNR=

baz=85
L13A **Double Diamond** 84.39 42 ⇑P P 11 50 38.4 +0.8
baz=85
OD2 **Odessa Site #2** 84.41 36 P P 11 50 37.9 +0.3
KTH **Kantishna Hill** 84.44 12 eP P 11 50 35.7 -1.7
comp=Z,21nm,0.9s,mb4.9
D09A **Jones Farm, Ri** 84.44 36 ⇑P P 11 50 38.3 +0.5
baz=85,SNR=7.2
C08A **Higginbotham F** 84.45 36 ⇓P P 11 50 37.6 -0.2
baz=85,SNR=5.7
F10A **Beach Ranch, E** 84.45 38 P P 11 50 38.4 +0.5
baz=85,SNR=8.7
TRF **Thorofare Moun** 84.48 12 eP P 11 50 37.0 -0.6
comp=Z,37nm,0.8s,mb5.2
CHUM **Lake Minchumin** 84.48 11 eP P 11 50 36.0 -1.6
comp=Z,27nm,1.0s,mb4.9
H11A **Donnelly** 84.48 39 ⇑P P 11 50 38.3 +0.3
baz=85,SNR=12
X20A **Quemado** 84.53 51 ⇓P P 11 50 38.6 0.0
baz=85
I12A **Atlanta** 84.53 40 ⇑P P 11 50 38.6 +0.3
baz=85,SNR=8.0
K13A **Stover Farm, H** 84.59 42 ⇑P P 11 50 38.6 0.0
baz=85
B08A **Colville Reser** 84.62 35 ⇓P P 11 50 38.3 -0.3
baz=85
G11A **Walters Elk Ra** 84.70 39 ⇑P P 11 50 38.6 -0.5
baz=85,SNR=18
T18A **Mexican Hat** 84.72 48 ⇓P P 11 50 39.1 -0.3
baz=85,SNR=10
ENH **Enshi** 84.80 304 eP P 11 50 40.4 +0.5
comp=Z,78nm,1.4s,mb5.2
HLID **Hailey** 84.85 41 ⇓P P 11 50 40.8 +0.9
baz=85,SNR=8.2
HLID **Hailey** 84.85 41 eP P 11 50 40.8 +0.8
comp=Z,15nm,1.6s,mb4.5
J13A **Cove Ranch, Pi** 84.92 41 ⇑P P 11 50 40.3 0.0
baz=85,SNR=9.0
BPAW **Bear Paw Mtn.** 84.92 12 eP P 11 50 38.7 -1.1
comp=Z,19nm,1.4s,mb4.6
A08A **Turner Farm, O** 85.00 34 P P 11 50 40.6 +0.1
baz=85,SNR=9.3
MCK **McKinley** 85.00 13 eP P 11 50 39.2 -0.9
MCK pmax pmax
comp=Z,30nm,1.0s,mb5.0
MCK **McKinley** 85.00 13 eP P 11 50 39.2 -0.9
comp=Z,30nm,1.0s,mb5.0
MCK e pP 11 52 20.0 +2.4
D10A **Wagner Farm, O** 85.03 37 ⇓P P 11 50 40.9 +0.3
baz=85,SNR=7.6
F11A **Grangeville** 85.03 38 ⇑P P 11 50 40.2 -0.6
baz=85,SNR=5.7
H12A **Diamond D Ranc** 85.10 40 ⇑P P 11 50 40.6 -0.4
baz=85,SNR=12
Z22A **Elephant Butte** 85.11 53 ⇓P P 11 50 41.4 0.0
baz=85
K14A **Jones Ranch, D** 85.11 42 ⇑P P 11 50 41.5 +0.3
baz=85
G12A **Big Creek, Yel** 85.12 39 ⇑P P 11 50 40.9 -0.2
baz=85
SRU **San Rafael** 85.19 46 ⇑P P 11 50 41.6 -0.1
baz=85
SRU **San Rafael** 85.19 46 eP P 11 50 42.1 +0.4
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
SRU **San Rafael** 85.19 46 eP P 11 50 42.1 +0.4
comp=Z,2.4nm,0.8s,mb4.0
E11A **Bogner Ranch,** 85.26 38 ⇓P P 11 50 41.4 -0.5
baz=86,SNR=6.7
R18A **Canyonlands Na** 85.28 47 ⇓P P 11 50 40.8 -1.4
baz=86
J14A **Carey** 85.29 41 ⇑P P 11 50 42.2 +0.1
baz=86,SNR=7.4
B09A **Rice** 85.31 35 ⇑P P 11 50 42.2 +0.2
baz=86,SNR=9.1
A09A **Danville** 85.38 35 ⇑P P 11 50 42.5 +0.2
baz=86,SNR=8.1
HYT **Haines Junctio** 85.47 19 eP P 11 50 43.6 +1.1
324A **Moseley Ranch,** 85.48 55 ⇓P P 11 50 42.7 -0.5
baz=86,SNR=5.8
F12A **Elk City** 85.50 39 ⇑P P 11 50 43.0 0.0
baz=86,SNR=31
GYA **Guiyang** 85.54 300 P P 11 50 43.0 -0.7
GYA pP pP 11 52 20.6 -0.6
GYA PP PP 11 54 11.8 +1.9
GYA SKS 12 00 25.4
GYA S S 12 00 41.2 +2.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,80nm,5.2s
O17A **Robinson Place** 85.56 45 ⇓P P 11 50 44.2 +0.7
baz=86,SNR=6.8
D11A **Klaveano Farm,** 85.56 37 ⇑P P 11 50 43.3 +0.1
baz=86,SNR=10.0
425A **Indio Mountain** 85.59 56 ⇑P P 11 50 44.0 +0.1
baz=86,SNR=6.3
I14A **Mackay** 85.64 41 ⇓P P 11 50 44.6 +0.9
baz=86,SNR=11
E12A **Beaver Dam Sad** 85.66 38 ⇑P P 11 50 43.5 -0.3
baz=86
224A **Corundas Mount** 85.71 54 ⇓P P 11 50 44.1 -0.3
baz=86
G13A **Cobalt** 85.76 40 ⇑P P 11 50 43.9 -0.4
baz=86
626A **Big Bend Ranch** 85.77 57 ⇑P P 11 50 45.0 +0.3
baz=86,SNR=18
NEW **Newport** 85.78 36 eP P 11 50 43.2 -1.1
NEW pmax pmax
comp=Z,6.0nm,1.1s
NEW **Newport** 85.78 36 eP P 11 50 43.2 -1.1
comp=Z,6.0nm,1.1s,mb4.2
325A **Bean Ranch, Si** 85.85 55 ⇑P P 11 50 44.9 -0.1
baz=86,SNR=7.7
L16A **Fish Haven** 85.97 43 ⇓P P 11 50 45.2 -0.2
baz=86
526A **Mary Lane Ranc** 86.01 57 ⇓P P 11 50 45.9 +0.1
baz=86,SNR=10
J15A **Blackfoot** 86.01 42 ⇓P P 11 50 45.9 +0.4
baz=86,SNR=8.9
124A **Stringfield Ra** 86.02 54 ⇑P P 11 50 45.4 -0.4
baz=86
H14A **Leadore** 86.04 40 ⇓P P 11 50 46.4 +0.7
baz=86,SNR=8.8
TXAR **Lajitas Array** 86.05 57 P P 11 50 47.0 +0.9
comp=Z,6.5nm,0.8s,mb4.4,baz=219,slow=5.8,SNR=55
TXAR **Lajitas Array** 86.05 57 P P 11 50 47.0 +0.9
F13A **Darby** 86.06 39 ⇑P P 11 50 45.3 -0.4
baz=86,SNR=12
ANMO **Albuquerque** 86.22 51 eP P 11 50 46.6 -0.1
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO **Albuquerque** 86.22 51 eP P 11 50 46.6 -0.1
comp=Z,3.4nm,1.0s,mb4.0
COLA **College** 86.24 12 eP P 11 50 44.3 -1.8
COLA pmax pmax
comp=Z,30nm,1.2s,mb4.9
COLA **College** 86.24 12 eP P 11 50 44.3 -1.8
comp=Z,30nm,1.2s,mb4.9
COLA e pP 11 52 26.4 +2.6
426A **McDonald Obser** 86.30 56 ⇓P P 11 50 47.4 +0.1
baz=86,SNR=12
G14A **Jackson** 86.31 40 ⇑P P 11 50 46.9 0.0
baz=87
627A **Terlingua Ranc** 86.32 57 ⇑P P 11 50 47.8 +0.4
baz=86,SNR=18
527A **Woodward Ranch** 86.42 57 ⇓P P 11 50 47.9 0.0
baz=87,SNR=9.5
S21A **Coal Bank Pass** 86.43 48 ⇓P P 11 50 47.4 -0.3
baz=87
MCMT **McKenzie Canyo** 86.47 40 eP P 11 50 48.1 +0.4
comp=Z,6.9nm,1.1s,mb4.3
J16A **Bone** 86.47 42 ⇑P P 11 50 48.4 +0.6
baz=87,SNR=13
H15A **Lima** 86.49 41 ⇓P P 11 50 47.3 -0.5
baz=87,SNR=10
Y24A **Capitan** 86.55 53 ⇑P P 11 50 47.3 -1.0
baz=87,SNR=9.5
A11A **Hall Mountain,** 86.59 36 ⇓P P 11 50 48.0 -0.1
baz=87,SNR=7.1
RRI2 **Red Ridge** 86.69 42 eP P 11 50 49.3 +0.5
comp=Z,11nm,1.0s,mb4.5
628A **Black Gap, Mar** 86.74 58 ⇑P P 11 50 48.7 -0.6
baz=87
MSO **Missoula** 86.83 38 eP P 11 50 49.7 +0.3
comp=Z,0.7nm,0.6s,mb3.6
MSO e pP 11 52 28.9 +1.6
I16A **Newdale** 86.84 42 ⇑P P 11 50 49.3 -0.2
baz=87,SNR=9.7
G15A **Dillon** 86.86 40 ⇓P P 11 50 49.8 +0.2
baz=87,SNR=14
427A **Hayter Ranch,** 86.87 56 ⇓P P 11 50 50.2 +0.3
baz=87,SNR=16
BSMT **Bassoo Peak** 86.88 37 P P 11 50 49.6 +0.1
E14A **Clinton** 86.89 39 ⇓P P 11 50 49.3 -0.3
baz=87
DLMT **Dillon** 86.89 40 eP P 11 50 49.1 -0.5
comp=Z,10.0nm,1.1s,mb4.5
R21A **Cimarron** 86.92 48 ⇓P P 11 50 50.4 +0.4
baz=87
HIA **Hailar** 86.96 325 eP P 11 50 51.0 +1.1
HIA pmax pmax
comp=Z,4.0nm,0.6s
HIA **Hailar** 86.96 325 eP P 11 50 51.0 +1.1
comp=Z,3.7nm,0.6s,mb4.3
BILL **Bilibino** 86.99 354 ⇑iP P 11 50 49.1 -0.5
BILL i 11 54 23.3
BILL eS SKSac 12 00 32.8 -1.5
BILL pmax pmax
comp=Z,21nm,1.1s,mb4.8
BILL **Bilibino** 86.99 354 eP P 11 50 49.0 -0.7
comp=Z,29nm,1.1s,mb4.9
BILL e pP 11 52 31.8 +4.2
BILL ePP PP 11 54 23.8 +3.2
TPAW **Teton Pass** 87.00 42 eP P 11 50 50.3 +0.1
comp=Z,8.5nm,1.4s,mb4.3
REDW **Red Top Meadow** 87.00 42 eP P 11 50 50.0 -0.2
comp=Z,8.2nm,1.1s,mb4.4
528A **Cox Ranch, San** 87.08 57 ⇓P P 11 50 51.0 0.0
baz=87,SNR=7.3
J17A **Brown Place, J** 87.09 42 ⇓P P 11 50 50.7 +0.1
baz=87,SNR=5.7
W24A **Lazy 6 Ranch,** 87.11 52 ⇑P P 11 50 50.5 -0.5
baz=87
SNOW **Snow King Moun** 87.11 42 eP P 11 50 51.9 +1.2
comp=Z,5.1nm,0.9s,mb4.2
K18A **Toltan Ranch,** 87.18 43 ⇓P P 11 50 51.3 +0.2
baz=87,SNR=7.8
IMW **Indian Meadow** 87.20 42 eP P 11 50 52.0 +0.8
comp=Z,7.2nm,1.1s,mb4.3
D14A **Greenough** 87.22 38 ⇓P P 11 50 50.1 -1.1
baz=88,SNR=5.6
CHMT **Chamberlain Mo** 87.28 38 eP P 11 50 51.6 +0.1
G16A **Moss Hill, Enn** 87.31 40 ⇓P P 11 50 51.1 -0.6
baz=88,SNR=6.5
QLMT **Earthquake Lak** 87.35 41 eP P 11 50 53.1 +1.3
comp=Z,4.9nm,0.9s,mb4.2
L19A **Farson** 87.38 44 ⇑P P 11 50 51.4 -0.7
baz=88
E15A **Deer Lodge** 87.40 39 ⇑P P 11 50 51.4 -0.6
baz=88
R22A **Saguache, Gunn** 87.42 48 ⇓P P 11 50 51.8 -0.5
baz=88
I17A **Pilgrim Ck.** 87.44 42 ⇑P P 11 50 52.3 0.0
baz=88
J18A **Kendall Valley** 87.46 43 ⇓P P 11 50 52.3 -0.1
baz=88,SNR=16
DAWY **Dawson** 87.53 16 eP P 11 50 52.4 +0.2
BW06 **Boulder Array** 87.55 43 ⇑P P 11 50 52.0 -0.8
baz=88,SNR=6.5
BW06 **Boulder Array** 87.55 43 eP P 11 50 51.7 -1.2
comp=Z,6.2nm,1.2s,mb4.2
PDAR **Pinedale Array** 87.55 43 P P 11 50 52.5 -0.3
comp=Z,2.2nm,0.8s,mb3.9,baz=228,slow=1.8,SNR=16
BOZ **Bozeman (W)** 87.62 40 ⇑P P 11 50 53.1 0.0
baz=88,SNR=10
BOZ **Bozeman (W)** 87.62 40 eP P 11 50 53.2 +0.1
BOZ pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
BOZ **Bozeman (W)** 87.62 40 eP P 11 50 53.2 0.0
comp=Z,7.8nm,1.3s,mb4.3
EGAK **Eagle** 87.66 15 eP P 11 50 52.8 0.0
comp=Z,18nm,1.1s,mb4.7
H17A **Grant Village** 87.67 42 ⇑P P 11 50 54.4 +1.0
baz=88,SNR=6.4
H17A ⇓PcP PcP 11 50 55.3 +0.5
baz=88
YNR **Norris Junctio** 87.76 41 eP P 11 50 55.6 +1.8
comp=Z,3.3nm,0.6s,mb4.2
D15A **Lincoln** 87.78 39 ⇑P P 11 50 53.6 -0.2
baz=88,SNR=5.7
W25A **X Bar L Ranch,** 87.82 52 ⇑P P 11 50 53.0 -1.3
baz=88,SNR=5.1
HHC **Hu-ho-hao-te** 87.84 314 eP P 11 50 54.5 +0.2
HHC PP PP 11 54 31.5 +3.5
HHC SKS 12 00 36.5
HHC S S 12 00 54.4 -5.5
HHC SS SS 12 07 01.7 +2.0
HHC pmax pmax
comp=Z,18nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,160nm,5.6s
LKWY **Lake** 87.86 41 eP P 11 50 56.7 +2.4
LKWY pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
LKWY **Lake** 87.86 41 eP P 11 50 56.7 +2.4
comp=Z,8.7nm,1.1s,mb4.4
COLD **Coldfoot** 87.89 11 eP P 11 50 53.7 -0.2
comp=Z,17nm,1.0s,mb4.7
COLD e pP 11 52 36.5 +4.5
L20A **Wamsutter** 88.00 44 ⇑P P 11 50 54.6 -0.4
baz=88,SNR=6.1
WALA **Waterton Lakes** 88.01 36 eP P 11 50 55.0 +0.1
comp=Z,0.1nm,1.0s
WALA e 11 52 43.9
HRY **Holter Researc** 88.03 39 eP P 11 50 54.4 -0.6
K19A **Absolon Red Bu** 88.04 44 ⇑P P 11 50 55.1 -0.1
baz=88
C15A **Salmond Ranch,** 88.10 38 ⇑P P 11 50 54.9 -0.4
baz=88
SDCO **Great Sand Dun** 88.11 49 eP P 11 50 56.0 +0.4
comp=Z,0.9nm,0.7s,mb3.6
A14A **Double T Ranch** 88.24 37 ⇑P P 11 50 55.9 0.0
baz=88,SNR=8.5
KMI **Kunming** 88.32 297 P P 11 50 58.0 +1.1
KMI pP pP 11 52 32.9 -2.2
KMI pmax pmax
comp=Z,13nm,0.9s,mb4.7
F17A **Fitzpatrick Pl** 88.34 40 ⇑P P 11 50 56.3 -0.2
baz=89,SNR=5.9
D16A **Dana Ranch, Ca** 88.35 39 ⇓P P 11 50 56.2 -0.3
baz=89
B15A **Bradely Ranch,** 88.39 37 ⇓P P 11 50 55.9 -0.7
baz=89
C16A **Fuhringer Ranc** 88.61 38 ⇑P P 11 50 57.2 -0.5
baz=89
SYO **Syowa Base** 88.69 193 ⇑eP P 11 50 55.6 -2.2
G18A **Lazy EL Ranch,** 88.74 41 ⇑P P 11 50 57.7 -0.7
baz=89
N22A **Wattenberg Ran** 88.74 46 ⇑P P 11 50 57.8 -0.7
baz=89
RLMT **Red Lodge** 88.83 41 ⇓P P 11 50 57.7 -1.1
baz=89,SNR=6.0
RLMT **Red Lodge** 88.83 41 eP P 11 50 59.7 +0.9
comp=Z,3.7nm,0.8s,mb4.2
GCMT **Greycliff** 88.90 41 eP P 11 50 59.7 +0.6
comp=Z,3.2nm,1.1s,mb4.0
D17A **Six Diamond Ra** 88.92 39 ⇓P P 11 50 58.6 -0.5
baz=89,SNR=7.1
C17A **Wharram Farm,** 89.11 39 ⇑P P 11 50 59.8 -0.2
baz=89,SNR=9.6
E18A **Harlowton** 89.11 40 ⇑P P 11 51 00.8 +0.7
baz=89,SNR=5.8
A16A **West Butte Ran** 89.27 37 ⇑P P 11 51 00.4 -0.3
baz=90
CMAR **Chiang Mai Arr** 89.32 290 P P 11 51 03.0 +1.3
comp=Z,5.8nm,0.9s,mb4.3,baz=113,slow=3.0,SNR=23
CMAR pP pP 11 52 44.4 +4.3
comp=Z,1.7nm,1.1s,baz=360,slow=8.2,SNR=2.7
CD2 **Chengdu** 89.59 303 P P 11 51 03.8 +1.1
CD2 pP pP 11 52 40.0 -1.2
CD2 sP sP 11 53 21.7 -3.8
CD2 PP PP 11 54 45.5 +3.5
CD2 SKS 12 00 53.8
CD2 S S 12 01 18.5 +2.0
CD2 sS sS 12 04 06.8 -5.2
CD2 SS SS 12 07 30.5 +5.3
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,80nm,5.2s
JCT **Junction City** 89.59 58 eP P 11 51 02.5 -0.2
JCT pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
JCT **Junction City** 89.59 58 eP P 11 51 02.5 -0.2
comp=Z,5.6nm,1.1s,mb4.3
VNA3 **Neumayer Olymp** 90.19 176 eP P 11 51 04.2 -0.5
VNA3 e 11 52 54.9
EDM **Edmonton** 90.46 33 eP P 11 51 05.3 -0.8
VNA2 **Neumayer--Watz** 90.63 177 eP P 11 51 06.7 -0.1
VNA2 e 11 52 57.5
NVL **N'lazarevskaya** 90.75 183 ⇓eP P 11 51 04.6 -2.7
NVL e 12 00 59.3
NVL eSSS 12 01 24.4
NVL pmax pmax
comp=Z,18nm,0.7s,mb5.0
PLCA **Paso Flores** 90.77 134 P P 11 51 06.7 -1.3
comp=Z,2.6nm,0.8s,mb4.1,baz=223,slow=8.6,SNR=4.6
PLCA **Paso Flores** 90.77 134 P P 11 51 06.7 -1.3
VNA1 **Neumayer--Stat** 90.86 177 eP P 11 51 07.9 +0.1
LZH **Lanzhou** 91.43 308 eP P 11 51 12.0 +0.9
LZH pmax pmax
comp=Z,36nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,130nm,5.6s
LAO **LASA Array** 91.44 41 eP P 11 51 11.2 +0.4
comp=Z,15nm,1.1s,mb4.8
RSSD **Black Hills** 91.76 44 eP P 11 51 12.5 +0.1
RSSD pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
RSSD **Black Hills** 91.76 44 eP P 11 51 12.5 +0.1
comp=Z,2.3nm,0.9s,mb4.1
INK **Inuvik** 92.33 15 eP P 11 51 14.1 -0.3
INK pmax pmax
comp=Z,20nm,1.1s
INK **Inuvik** 92.33 15 eP P 11 51 14.1 -0.4
comp=Z,20nm,1.1s,mb5.0
DGMT **Dagmar** 93.43 40 eP P 11 51 20.4 +0.4
comp=Z,11nm,0.8s,mb4.8
ULN **Ulaanbaatar** 93.74 319 eP P 11 51 21.5 +0.1
ULN pmax pmax
comp=Z,13nm,1.4s,mb4.8
ULN **Ulaanbaatar** 93.74 319 eP P 11 51 21.5 +0.2
comp=Z,12nm,1.4s,mb4.8
SONM **Songino Array** 94.13 319 P P 11 51 22.8 -0.4
comp=Z,1.3nm,0.9s,mb4.0,baz=105,slow=4.2,SNR=6.9
SONM pP pP 11 53 07.3 +5.3
comp=Z,0.5nm,0.6s,baz=72,slow=4.8,SNR=2.6
SONM PP PP 11 55 17.3 +0.3
comp=Z,0.6nm,0.7s,baz=109,slow=6.5,SNR=4.5
BOD **Bodaibo** 94.26 330 eP P 11 51 21.4 -2.1
BOD e 12 01 12.5
BOD pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
YKA **Yellowknife Ar** 94.70 25 P P 11 51 24.3 -1.1
comp=Z,3.7nm,0.9s,mb4.4,baz=244,slow=4.5,SNR=41
YKA pP pP 11 53 10.2 +6.0
comp=Z,0.6nm,0.9s,baz=241,slow=4.3,SNR=5.0
YKA **Yellowknife Ar** 94.70 25 P P 11 51 24.3 -1.1
YKA pP pP 11 53 10.2 +6.0
GTA **Gaotai** 95.58 310 eP P 11 51 30.7 +0.7
GTA pP pP 11 53 06.4 -2.5
GTA sP sP 11 53 49.3 -3.8
GTA S S 12 02 07.6 -1.2
GTA SS SS 12 08 50.4 +0.3
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
GTA pmax pmax
comp=Z,84nm,7.1s
TIXI **Tiksi** 96.74 345 eP P 11 51 32.7 -1.8
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
TIXI **Tiksi** 96.74 345 eP P 11 51 32.9 -1.6
comp=Z,2.0nm,0.5s,mb4.5
ZAK **Zakamensk** 96.98 321 eP P 11 51 32.8 -3.2
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.9
MKAR **Makanchi Array** 109.70 314 Pdiff Pdif 11 52 34.3 +1.6
comp=Z,0.5nm,0.9s,baz=134,slow=4.2,SNR=3.2
MKAR PKiKP PKiKP 11 56 31.2 -1.6
comp=Z,0.6nm,0.5s,baz=155,slow=0.4,SNR=10
MKAR PKKPbc PKKPbc 12 07 37.2 -1.8
comp=Z,0.8nm,0.8s,baz=266,slow=4.7,SNR=5.3
MKAR **Makanchi Array** 109.70 314 Pdif Pdif 11 52 34.3 +1.6
MKAR PKPdf PKiKP 11 56 31.2 -1.6
MKAR PKKPbc PKKPbc 12 07 37.2 -1.8
KURK **Kurchatov** 112.41 318 i PKIKP PKiKP 11 56 36.2 -1.6
KURK **Kurchatov** 112.41 318 PP PP 11 57 38.2 +6.6
comp=Z,1.3nm,0.9s,baz=90,slow=6.6,SNR=4.8
BVAR **Borovoye Array** 117.43 321 PKP PKPdf 11 56 46.1 -1.2
comp=Z,0.8nm,0.3s,baz=132,slow=2.2,SNR=7.6
BRVK **Borovoye** 117.49 321 ⇑i PKIKP PKPdf 11 56 46.4 -1.1
BRVK pmax pmax
comp=Z,2.0nm,1.0s
ARU **Arti** 123.45 326 i PKIKP PKPdf 11 56 57.0 -1.8
ARU 11 58 43.9
ARU 12 03 14.0
ABKAR **Akbulak array** 124.51 318 eP PKPdf 11 56 59.5 -1.5
AKTK **Aktyubinsk** 125.45 319 PKP PKPdf 11 57 02.0 -0.9
AKTO **Aktyubinsk** 125.45 319 PKP PKPdf 11 57 02.0 -0.9
comp=Z,1.7nm,0.8s,baz=78,slow=1.2,SNR=4.5
ARCES **ARCESS Array B** 126.89 350 PKP PKPdf 11 57 04.7 -0.4
comp=Z,2.0nm,0.7s,baz=186,slow=2.4,SNR=6.7
KLMR **Klimovskoe** 129.96 337 ePKIKP PKPdf 11 57 09.6 -1.5
KLMR pmax pmax
comp=Z,11nm,2.4s
JOF **Joensuu** 131.15 343 epkp PKPdf 11 57 11.8 -1.5
KAF **Kangasniemi** 133.15 345 epkp PKPdf 11 57 15.1 -2.0
FINES **FINESS Array B** 133.78 344 PKIKP PKPdf 11 57 17.8 -0.5
FINES 11 59 49.6
FINES **FINESS Array B** 133.78 344 PKP PKPdf 11 57 17.8 -0.5
comp=Z,2.3nm,0.8s,baz=70,slow=2.2,SNR=7.8
FINES PP PP 11 59 49.6 -3.6
comp=Z,2.2nm,1.1s,baz=28,slow=8.6,SNR=5.1
FINES SKP 12 00 05.8
comp=Z,5.1nm,1.1s,baz=49,slow=3.8,SNR=7.3
FINES **FINESS Array B** 133.78 344 PKP PKPdf 11 57 17.8 -0.5
FINES PP PP 11 59 49.6 -3.6
FINES SKP 12 00 05.8
OBN **Obninsk** 134.90 333 ⇑i PKIKP PKPdf 11 57 19.9 -0.7
OBN e 11 59 56.7
OBN e 12 03 50.1
OBN pmax pmax
comp=Z,6.0nm,0.6s
NOA **NORSAR Array B** 136.94 353 PKhKP 11 57 12.2
comp=Z,0.8nm,0.7s,baz=14,slow=4.2,SNR=3.5
NOA PKP PKPdf 11 57 23.6 -0.6
comp=Z,0.9nm,0.8s,baz=14,slow=4.1,SNR=4.4
NOA SKP 12 00 14.4
comp=Z,2.0nm,0.9s,baz=14,slow=4.5,SNR=5.1
ANN **Anapa** 140.41 319 i PKIKP PKiKP 11 57 34.2 +0.5
ANN pmax pmax
comp=Z,44nm,1.8s
AKASG **Malin Array Be** 141.16 332 PKhKP 11 57 25.3
comp=Z,0.8nm,0.5s,baz=41,slow=3.7,SNR=7.2
AKASG PP PP 12 00 40.9 +1.9
comp=Z,0.2nm,0.3s,baz=39,slow=5.7,SNR=5.6
MALT **Malatya** 142.57 310 ePKIKP PKPdf 11 57 34.0 -1.1
GKP **Gorka Klasztor** 143.25 345 ePKP PKPdf 11 57 34.0 -1.8
KIS **Kishinev** 143.95 328 ePKHKP PKPdf 11 57 33.0 -4.2
KIS e 11 57 39.0
KIS pmax pmax
comp=Z,110nm,1.6s
BSEG **Bad Segeberg** 143.98 352 ePKPbc PKPdf 11 57 35.4 -1.7
LVV **L'vov** 144.01 335 ePKHKP PKPdf 11 57 35.0 -2.3
HLG **Helgoland** 144.03 354 ePKPbc PKPdf 11 57 36.0 -1.2
KWP **Kalwaria Pacla** 144.67 336 ePKP PKPdf 11 57 38.5 +0.1
KWP e 11 57 39.5
KWP **Kalwaria Pacla** 144.67 336 ePKPdf PKPdf 11 57 38.1 -0.3
RUE **Ruedersdorf** 144.78 347 ePKPbc PKPdf 11 57 38.3 -0.2
RUE **Ruedersdorf** 144.78 347 ePKPdf PKPdf 11 57 38.4 -0.1
TLCR **145.17 326** ⇑PKIKP PKPdf 11 57 40.0 +0.6
TLCR **145.17 326** ⇑iP PKPdf 11 57 40.0 +0.6
BUR08 **Bucovina Ar. S** 145.20 332 ePKPdf PKPdf 11 57 40.3 +0.9
OJC **Ojcow** 145.21 340 ePKP PKPdf 11 57 39.5 +0.2
BURAR **Bucovina Array** 145.21 332 ⇓PKIKP PKPdf 11 57 40.0 +0.6
BURAR **Bucovina Array** 145.21 332 ⇓iP PKPab 11 57 41.1 +0.2
BRTR **Keskin Array B** 145.35 314 PKPbc PKPbc 11 57 39.9 -0.9
comp=Z,10nm,1.0s,baz=132,slow=3.5,SNR=35
BRTR pPKPbc 11 59 29.1
comp=Z,3.8nm,1.1s,baz=105,slow=1.4,SNR=4.6
STHS **Stebnicka Huta** 145.39 338 ePKP2 PKPab 11 57 40.9 -0.6
STHS **Stebnicka Huta** 145.39 338 ePKP PKPab 11 57 40.9 -0.6
STHS e 11 58 05.3
KOLS **Kolonicke sedl** 145.40 336 ePKP2 PKPab 11 57 40.9 -0.6
KOLS **Kolonicke sedl** 145.40 336 ePKP PKPab 11 57 40.9 -0.6
NRDL **Niedersach Rie** 145.41 351 ePKPbc PKPbc 11 57 40.0 -0.5
WIT **Witteveen** 145.50 355 ePKP PKPbc 11 57 41.6 +0.8
comp=Z,450nm,1.1s

UZH	Uzhgorod	145.64	336	⇑PKIKP	PKPbc	11 57 41.2	-0.1
UZH				e		11 59 23.6	
KSP	Ksiaz	145.70	344	ePKP	PKPbc	11 57 42.0	+0.5
KSP				e		11 57 42.8	
KSP	Ksiaz	145.70	344	ePKIKP	PKPab	11 57 41.5	-1.1
NIE	Niedzica	145.72	338	ePKP2	PKPab	11 57 41.8	-0.9
VRI	Vrincioaia	145.78	329	PKP2	PKPab	11 57 43.7	+0.6
VRI	Vrincioaia	145.78	329	⇑iP	PKPbc	11 57 41.8	0.0
PLOR	Plostina	145.83	329	⇑PKP2	PKPab	11 57 43.2	-0.1
PLOR	Plostina	145.83	329	⇑iP	PKPab	11 57 43.2	-0.1
RAC	Raciborz	145.84	341	ePKP2	PKPab	11 57 42.2	-1.0
TIRR	Tirgusor	145.86	325	⇓PKIKP	PKPdf	11 57 41.1	+0.5
TIRR	Tirgusor	145.86	325	⇓iP	PKPdf	11 57 41.1	+0.5
IBBN	Ibbenburen	145.90	354	ePKPbc	PKPbc	11 57 41.4	-0.5
BMR	Baia Mare	145.92	334	PKP2	PKPbc	11 57 42.4	+0.2
TRPA	Tarpa	145.95	335	⇓iP	PKPbc	11 57 41.7	-0.5
HARR	Harsova	145.97	326	⇓PKP2	PKPab	11 57 43.7	-0.2
HARR	Harsova	145.97	326	⇓iP	PKPab	11 57 43.7	-0.2
CLZ	Clausthal	146.01	351	ePKPbc	PKPbc	11 57 41.6	-0.7
CLL	Collm	146.04	347	ePKPbc	PKPbc	11 57 41.7	-0.7
CLL				epPKPbc		11 59 31.4	
CLL	Collm	146.04	347	⇓iPKIKP	PKPbc	11 57 42.1	-0.3
CLL				e		12 01 12.0	
CLL				pmax	pmax		
	comp=Z,43nm,0.9s						
OKC	Ostrava-Krasne	146.07	341	ePKP	PKPbc	11 57 42.6	+0.1
OKC				ex	x	11 57 45.1	
UPC	Upice	146.08	344	ePKP	PKPbc	11 57 42.7	+0.2
UPC				ex	x	11 57 45.3	
DPC	Dobruska-Polom	146.14	343	ePKP	PKPbc	11 57 43.0	+0.3
DPC				ex	x	11 57 45.9	
BRG	Berggiesshubel	146.25	346	ePKPbc	PKPbc	11 57 42.6	-0.4
BRG	Berggiesshubel	146.25	346	iPKP	PKPbc	11 57 42.9	-0.1
	comp=Z,42nm,1.2s						
BRG				i		11 57 50.3	
	comp=Z,12nm,1.0s						
BRG				epPKP	pPKPdf	11 59 30.6	+4.9
	comp=Z,7.8nm,1.4s						
BRG				ePKS		12 01 04.3	
	comp=Z,13nm,1.6s						
BRG	Berggiesshubel	146.25	346	iPKIKP	PKPbc	11 57 42.8	-0.2
BRG				pmax	pmax		
	comp=Z,25nm,1.2s						
MORC	Moravsky Berou	146.31	342	ePKP2	PKPbc	11 57 43.3	+0.1
MORC	Moravsky Berou	146.31	342	⇓iP	PKPdf	11 57 42.3	+1.1
WTSB	Winterswijk	146.33	355	ePKP	PKPbc	11 57 43.1	-0.1
	comp=Z,49nm,1.0s						
KECS	Kecovo	146.44	337	ePKP2	PKPbc	11 57 43.8	+0.2
KECS	Kecovo	146.44	337	ePKP	PKPbc	11 57 43.8	+0.2
BUG	Bochum--Univer	146.80	354	ePKPbc	PKPbc	11 57 44.3	-0.2
VOIR		146.91	330	PKP2	PKPbc	11 57 45.6	+0.6
VOIR		146.91	330	⇑iP	PKPbc	11 57 44.7	-0.3
PRU	Pruhonice	146.93	345	ePKP	PKPbc	11 57 45.1	+0.2
PRU				ex	x	11 57 48.7	
DRGR		146.94	333	PKP2	PKPbc	11 57 45.0	0.0
DRGR		146.94	333	⇓iP	PKPbc	11 57 44.6	-0.4
MOX	Moxa	146.95	349	ePKP	PKPbc	11 57 44.5	-0.4
	comp=Z,40nm,1.5s						
MOX	Moxa	146.95	349	ePKPbc	PKPbc	11 57 44.4	-0.5
MOX	Moxa	146.95	349	ePKIKP	PKPbc	11 57 44.5	-0.4
MOX				pmax	pmax		
	comp=Z,40nm,1.5s						
TANN	Tannenbergstha	147.00	348	ePKPbc	PKPbc	11 57 44.9	-0.2
TANN				ePKPab	PKPab	11 57 47.7	-0.1
TANN				epPKPbc	pPKPbc	11 59 34.6	+6.5
VRAC	Vranov	147.00	342	⇑PKIKP	PKPdf	11 57 43.6	+1.2
WERD	Werda	147.00	348	ePKPbc	PKPbc	11 57 44.7	-0.4
WERD				ePKPab	PKPab	11 57 47.6	-0.2
VYHS	Vyhne	147.01	339	ePKP2	PKPbc	11 57 45.6	+0.1
VYHS	Vyhne	147.01	339	ePKP	PKPbc	11 57 45.3	+0.1
UBBA	Unterbreizbach	147.06	351	ePKPbc	PKPbc	11 57 44.6	-0.6
GUNZ	Gunzen	147.08	348	ePKPbc	PKPbc	11 57 45.1	-0.2
GUNZ				ePKPab	PKPab	11 57 48.3	+0.2
GUNZ				epPKPbc	pPKPbc	11 59 34.6	+6.2
KOLL	Kolacno	147.09	340	ePKP2	PKPbc	11 57 45.6	+0.2
KOLL	Kolacno	147.09	340	ePKP	PKPbc	11 57 45.6	+0.2
PSZ	Piszkesteto	147.13	337	ePKPbc	PKPbc	11 57 45.4	-0.1
PSZ	Piszkesteto	147.13	337	⇓ePKP	PKPbc	11 57 45.0	-0.5
WERN	Wernitzgruen	147.14	348	ePKPbc	PKPbc	11 57 45.6	+0.2
WERN				ePKPab	PKPab	11 57 48.6	+0.3
NKC	Novy Kostel	147.18	347	ePKP	PKPbc	11 57 45.8	+0.3
NKC				ex	x	11 57 49.1	
TREC	Trest	147.33	343	ePKP	PKPbc	11 57 46.1	+0.1
TREC				ex	x	11 57 50.0	
BEBN	Eben Emael	147.58	356	PKPbc	PKPbc	11 57 46.8	+0.2
HGN	Heimansgroeve	147.59	355	ePKP	PKPbc	11 57 46.6	0.0
	comp=Z,17nm,1.4s						
UCC	Uccle	147.66	357	PKPbc	PKPbc	11 57 46.9	+0.1
ROTZ	Rotzenmuhle	147.67	347	ePKPbc	PKPbc	11 57 46.8	-0.1
MEM	Membach	147.74	355	PKPbc	PKPbc	11 57 47.1	0.0
BUD	Budapest	147.82	338	⇓ePKP	PKPbc	11 57 47.1	-0.2
ZST	Bratislava	147.84	341	ePKP2	PKPbc	11 57 48.1	+0.7
ZST	Bratislava	147.84	341	ePKP	PKPbc	11 57 48.1	+0.7
TNS	Taunus Mts	147.86	352	ePKPbc	PKPbc	11 57 47.1	-0.2
TNS				ePKPab	PKPab	11 57 51.2	-0.1
TNS				epPKPbc	pPKPbc	11 59 37.6	+6.9
TNS	Taunus Mts	147.86	352	ePKP2	PKPab	11 57 51.2	-0.1
GRF	Grafenberg Arr	147.94	349	ePKPbc	PKPbc	11 57 47.4	-0.1
GRF				ePKPab	PKPab	11 57 51.8	+0.2
GRF	Grafenberg Arr	147.94	349	ePKP2	PKPab	11 57 51.8	+0.2
KHC	Kasperske Hory	147.96	345	ePKPbc	PKPbc	11 57 47.3	-0.3
KHC				ePKPab	PKPab	11 57 52.4	+0.7
KHC	Kasperske Hory	147.96	345	ePKP	PKPbc	11 57 47.6	0.0
KHC				ex	x	11 57 52.8	
KHC				ex	x	11 59 39.5	
BCLA	Clavier	147.98	356	PKPbc	PKPbc	11 57 47.5	-0.1
GZR	Gura Zlata	148.00	332	⇓PKHKP	PKPbc	11 57 47.1	-0.8
GZR	Gura Zlata	148.00	332	⇓iP	PKPbc	11 57 47.1	-0.8
WET	Wettzell	148.11	346	ePKPbc	PKPbc	11 57 47.7	-0.3
WET				ePKPab	PKPab	11 57 52.6	+0.3
WET	Wettzell	148.11	346	ePKP2	PKPab	11 57 52.6	+0.3
GEC2	GERESS Array S	148.20	345	ePKPbc	PKPbc	11 57 48.2	0.0
GEC2				ePKPab	PKPab	11 57 53.2	+0.5
GEC2				epPKPbc	pPKPbc	11 59 39.4	+7.8
GEC2	GERESS Array S	148.20	345	ePKP2	PKPab	11 57 53.2	+0.5
GERES	GERESS Array B	148.20	345	ePKPbc	PKPbc	11 57 48.0	-0.2
	comp=Z,5.6nm,0.7s,baz=23,slow=2.6,SNR=47						
GERES				pPKPbc	pPKPbc	11 59 38.4	+6.7
	comp=Z,2.4nm,1.1s,baz=16,slow=1.9,SNR=4.0						
GIVF	Givet	148.33	356	ePKP1	PKPbc	11 57 48.0	-0.5
	comp=Z,54nm,1.0s						
BZS	Buzias	148.33	333	⇑PKHKP	PKPbc	11 57 48.5	-0.2
BZS	Buzias	148.33	333	⇑iP	PKPbc	11 57 48.5	-0.2
DOU	Dourbes	148.35	357	PKPbc	PKPbc	11 57 48.3	-0.3
BAIF	Baives	148.41	357	ePKP1	PKPbc	11 57 48.4	-0.3
	comp=Z,51nm,1.1s						
CONA	Conrad Observa	148.46	342	⇑iPKPdf	PKPbc	11 57 47.6	-1.3
	comp=Z,34nm,0.9s,SNR=17						
WLF	Walferdange	148.67	355	PKPbc	PKPbc	11 57 49.6	+0.2
WLF	Walferdange	148.67	355	ePKPbc	PKPbc	11 57 49.4	0.0
WLF	Walferdange	148.67	355	ePKPbc	PKPbc	11 57 49.4	0.0
PKSM	Moragy	149.03	337	PKHKP	PKPdf	11 57 47.5	+1.7
LANF	Langenberg	149.17	352	PKP	PKPbc	11 57 50.8	+0.2
STU	Stuttgart	149.17	351	ePKPbc	PKPbc	11 57 50.5	-0.2
STU				ePKPab	PKPab	11 57 56.3	-0.4
STU	Stuttgart	149.17	351	ePKPbc	PKPbc	11 57 50.4	-0.2
STU				ePKPab	PKPab	11 57 57.0	+0.3
FUR	Furstenfeldbru	149.38	348	ePKPbc	PKPbc	11 57 51.1	-0.1
FUR				ePKPab	PKPab	11 57 57.6	0.0
FUR	Furstenfeldbru	149.38	348	ePKP2	PKPab	11 57 57.6	0.0
RJOB	Jochberg	149.45	345	ePKPab	PKPab	11 57 58.2	+0.3
FLN	La Foliniere	149.70	3	ePKP1	PKPbc	11 57 51.1	-0.8
	comp=Z,61nm,1.1s						
BFO	Black Forest	149.73	351	ePKPbc	PKPbc	11 57 52.0	0.0
BFO				ePKPab	PKPab	11 57 58.5	-0.5
BFO	Black Forest	149.73	351	ePKP2	PKPab	11 57 58.5	-0.5
CDF	Champ du Feu	149.79	353	ePKP1	PKPbc	11 57 51.6	-0.6
SOKA	Soboth	149.83	342	⇑iPKPdf	PKPdf	11 57 47.4	+0.4
	comp=Z,14nm,1.1s						
PERS	Pernice	149.84	342	iPKPbc	PKPbc	11 57 51.3	-1.1
PERS				ePKPab	PKPab	11 57 59.5	0.0
LDF	La Druitiere	149.88	3	ePKP1	PKPbc	11 57 51.4	-1.0
	comp=Z,123nm,1.5s						
MEZF	Maizieres J'vi	149.91	356	ePKP1	PKPbc	11 57 52.2	-0.2
KBA	Koelnbreinsper	149.93	344	⇑iPKPdf	PKPdf	11 57 45.4	-1.8
	comp=Z,10nm,0.9s,SNR=6.7						
ECH	Echery	150.00	353	PKP	PKPbc	11 57 52.5	-0.1
ECH	Echery	150.00	353	ePKPbc	PKPbc	11 57 52.4	-0.3
ECH				ePKPab	PKPab	11 57 59.9	-0.2
GRR	Gorron	150.05	4	ePKP1	PKPbc	11 57 52.0	-0.8
THEF	They Montfort	150.11	354	PKP	PKPbc	11 57 53.1	+0.2
FELD	Feldberg im Sc	150.22	352	PKP	PKPbc	11 57 53.1	-0.1
HAU	Haudompre	150.29	354	ePKP1	PKPbc	11 57 52.7	-0.7
HINF	Hinteralfeld	150.43	353	ePKP1	PKPbc	11 57 52.3	-1.4
ABTA	Abfaltersbach	150.45	345	⇑iPKPdf	PKPdf	11 57 47.1	-0.8
	comp=Z,14nm,0.7s,SNR=12						
LJU	Ljubljana	150.55	342	iPKPbc	PKPbc	11 57 53.7	-0.3
LJU				iPKPab	PKPab	11 58 01.7	-0.8
FETA	Feichten	150.59	348	⇑iPKPdf	PKPdf	11 57 47.6	-0.6
	comp=Z,14nm,1.0s,SNR=5.4						
BOJS	Bojanci	150.82	341	ePKPbc	PKPbc	11 57 54.5	-0.2
BOJS				iPKPab	PKPab	11 58 02.3	-1.3
BOJS				epPKPbc	pPKPbc	11 59 43.0	+4.5
JAVS	Javornik	150.82	342	iPKPbc	PKPbc	11 57 53.8	-0.9
JAVS				iPKPab	PKPab	11 58 02.8	-0.9
LOMF	Lomont	150.89	353	PKP	PKPbc	11 57 54.7	-0.1
TRI	Trieste	151.08	343	ePKIKP	PKPbc	11 57 54.2	-1.0
TRI				e		11 58 04.2	
LOR	Lormes	151.21	357	ePKP1	PKPbc	11 57 54.9	-0.6
	comp=Z,23nm,0.9s						
HYF	Humbligny	151.25	359	ePKP1	PKPbc	11 57 55.4	-0.2
SSF	Saint Saulge	151.43	358	ePKP1	PKPbc	11 57 55.4	-0.6
	comp=Z,23nm,1.0s						
SSF	Saint Saulge	151.43	358	ePKP2	PKPab	11 58 05.8	-0.3
CABF	La Chapelle	151.70	354	ePKP1	PKPbc	11 57 56.5	-0.1
	comp=Z,35nm,1.0s						
AVF	Avril sur Loir	151.71	358	ePKP1	PKPbc	11 57 55.7	-0.9
KRUS	Krusevo	151.78	328	ePKP	PKPbc	11 57 54.5	-2.5
SMF	Signal de Mont	151.83	357	ePKP1	PKPbc	11 57 55.9	-1.0
MFF	Saint Martin d	151.87	3	ePKP1	PKPbc	11 57 56.2	-0.8
BGF	Bois d'Agland	151.95	359	ePKP1	PKPbc	11 57 56.5	-0.7
	comp=Z,11nm,0.7s						
TCF	Toulx Ste Croi	152.23	360	ePKP1	PKPbc	11 57 57.1	-0.7
	comp=Z,18nm,1.1s						
LPG	La Plagne	152.72	353	ePKP1	PKPbc	11 57 59.1	+0.2
	comp=Z,10nm,1.0s						
BNI	Bardonecchia	153.17	352	ePKIKP	PKPbc	11 57 59.7	-0.2
BNI				e		11 58 13.3	
MBDF	Montbardon	153.48	352	ePKP1	PKPbc	11 57 59.4	-1.2
	comp=Z,6.7nm,0.7s						
PBRG	Braganca	155.58	16	ePKPab	PKPab	11 58 24.5	+0.5
PVRL	Vila Real	155.81	18	ePKPab	PKPab	11 58 26.0	+1.0
MVO	Moncorvo	156.10	17	ePKPab	PKPab	11 58 26.6	+0.4
PVIS	Viseu	156.27	19	ePKPab	PKPab	11 58 27.9	+0.9
MTE	Manteigas	156.66	18	ePKPab	PKPab	11 58 30.0	+1.3
PTOM	Tomar	157.10	21	ePKPab	PKPab	11 58 31.1	+0.5
PCBR	Castelo Branco	157.20	19	ePKPab	PKPab	11 58 31.4	+0.4
PMRV	Marv??o	157.60	19	ePKPab	PKPab	11 58 32.5	-0.3
PESTR	Estremoz	158.05	20	ePKPab	PKPab	11 58 34.7	0.0
ESDC	Sonseca Array	158.25	12	PKPab	PKPab	11 58 35.4	-0.2
	comp=Z,3.0nm,0.8s,baz=343,slow=4.4,SNR=16						
PBAR	Barrancos	158.86	20	ePKPab	PKPab	11 58 38.5	+0.2
KEST	Kesra	161.56	340	PKPab	PKPab	11 58 50.2	+0.1
	comp=Z,5.8nm,1.1s,baz=290,slow=1.6,SNR=13						
LIC	Lamto	166.11	150	ePKIKP	PKPdf	11 58 05.9	-1.6
	comp=Z,20nm,0.9s						
LIC	Lamto	166.11	150	eP	PKPab	11 59 10.6	-0.1
	comp=Z,34nm,1.2s						
KIC	Kosan Boka	166.36	151	ePKIKP	PKPdf	11 58 05.9	-1.8
	comp=Z,32nm,1.1s						
KIC	Kosan Boka	166.36	151	eP	PKPab	11 59 12.4	+0.6
	comp=Z,33nm,1.0s						
TIC	Toumodi	166.48	149	ePKIKP	PKPdf	11 58 06.3	-1.5
	comp=Z,4.7nm,0.2s						
TIC	Toumodi	166.48	149	eP	PKPab	11 59 13.0	+0.7
	comp=Z,4.3nm,0.2s						
DBIC	Dimbokro	166.58	150	PKP	PKPdf	11 58 06.2	-1.6
	comp=Z,3.2nm,1.0s,baz=168,slow=5.0,SNR=3.9						
DBIC				PKPab	PKPab	11 59 12.6	-0.2
	comp=Z,3.4nm,0.8s,baz=146,slow=6.8,SNR=5.0						
TORD	Torodi Ar. Bea	174.73	178	PKP	PKPdf	11 58 10.4	-1.7
	comp=Z,3.2nm,1.0s,baz=341,slow=1.4,SNR=12						
TORD				PKPab	PKPab	11 59 48.3	-0.4
	comp=Z,2.2nm,0.9s,baz=197,slow=3.4,SNR=8.0						
TORD				pPKPab	pPKPab	12 01 33.1	+5.2
	comp=Z,2.2nm,1.1s,baz=169,slow=3.3,SNR=6.3						
TORD				PP	PP	12 03 39.5	-0.5
	comp=Z,1.0nm,0.8s,baz=162,slow=4.9,SNR=4.5						

TRN 04 11:50:11.6, 17°.42N×62°.47W, h3km, MD3.3, M3.5(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKI	Saint Kitts	0.28	252	eP	Pg	11 50 20.4	+3.5
SKI				eS	Sg	11 50 25.6	+5.1
NVBH	Bath Hotel, Ne	0.34	206	eP	Pg	11 50 23.0	+4.9
NVBH				eS	Sg	11 50 27.6	+5.2
BSK	Brimstone Hill	0.37	258	eP	Pg	11 50 21.1	+2.5
BSK				eS	Sg	11 50 28.1	+4.7
BPA	Boggy Peak	0.69	123	eP	Pg	11 50 27.8	+3.0
BPA				eS	Sg	11 50 38.7	+4.9
LZG	Guadaloupe-1	1.43	152	eP	Pn	11 50 41.0	+2.5
BCG	Bois Riant Cap	1.56	149	eP	Pn	11 50 42.3	+2.2
DOG	Dongo Capester	1.60	149	eP	Pn	11 50 43.3	+2.5
PHG	Guadaloupe-2	1.60	150	eP	Pn	11 50 43.3	+2.5
HMG	Houelmont	1.61	153	eP	Pn	11 50 43.6	+2.7

IDC 04 11:55:20.8±8.0, 2°.55N×126°.76E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/19, mbtmp3.5/3, Error ellipse: s-maj=167.4km s-min=124.7km az=74.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.56	162	P	P	12 00 33.6	+0.3
	1.0nm,1.0s,baz=340,slow=11,SNR=12						
ASAR	Alice Springs	26.97	165	P	P	12 01 05.2	+0.8
	0.2nm,0.3s,baz=350,slow=7.6,SNR=11						
STKA	Stephens Creek	37.03	159	P	P	12 02 31.1	-1.3
	0.6nm,0.4s,baz=327,slow=7.5,SNR=4.6						

CASC 04 12:08:57.2±0.9, 13°.14N×89°.29W, h48km±12km, MD3.5, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	El Faro	0.53	25	eP	Pn	12 09 08.9	+0.2
LFRS				eS	Sn	12 09 17.8	+0.9
SNET	Serv Nac Est T	0.55	6	eP	Pn	12 09 09.1	+0.2
SNET				eS	Sn	12 09 18.8	+1.5
BOQS	Boqueron	0.59	1	⇓eP	Pn	12 09 10.2	+0.7
BOQS				eS	Sn	12 09 20.0	+1.7
LBRS	Las Brisas	0.64	22	eP	Pn	12 09 10.2	0.0
LBRS				eS	Sn	12 09 20.1	+0.7
SNVI	San Vicente	0.64	43	eP	Pn	12 09 10.2	+0.1
SNVI				eS	Sn	12 09 19.9	+0.5
SBLS	San Blas	0.76	335	eP	Pn	12 09 12.1	+0.4
SBLS				eS	Sn	12 09 24.5	+2.2
SNJE	San Jose	0.78	337	eP	Pn	12 09 12.3	+0.3
SNJE				eS	Sn	12 09 24.1	+1.4
RTR	El Retiro	0.82	335	eP	Pn	12 09 13.2	+0.6
RTR				eS	Sn	12 09 24.4	+0.7
VSM	San Miguel	1.03	74	eP	Pn	12 09 15.8	+0.5
VSM				eP		12 09 16.1	
VSM				eS	Sn	12 09 30.7	+2.0
RBDL	Robledal	1.04	338	eP	Pn	12 09 15.9	+0.5
RBDL				eS	Sn	12 09 30.2	+1.4
BLLM	Bellamira	1.07	74	eP	Pn	12 09 16.1	+0.3
BLLM				eS	Sn	12 09 30.6	+1.0
CAHU	Cacacuatique	1.22	59	eP	Pn	12 09 18.2	+0.3
CAHU				eS	Sn	12 09 34.8	+1.4
CNCH	Conchagua	1.43	84	eP	Pn	12 09 20.8	+0.1
CNCH				eS	Sn	12 09 39.9	+1.6
CRIN	San Cristobal	2.23	101	eP	Pn	12 09 31.3	-0.4

IDC 04 12:15:09.6±2.0, 30°.09S×177°.96W, h96km±12km, mb3.5/2, mb1 3.8/3, mb1mx3.5/14, mbtmp3.7/3, Error ellipse: s-maj=54.9km s-min=20.0km az=103.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.84	2	P	Pn	12 15 29.3	+1.4
	449nm,0.3s,baz=99,slow=0.3,SNR=34						
RAO				S	Sn	12 15 42.4	+0.8
	1μm,0.3s,baz=96,slow=22,SNR=22						
URZ	Urewera	9.11	205	P	Pn	12 17 18.1	0.0
	0.4nm,0.3s,baz=63,slow=16,SNR=5.5						
URZ				S	Sn	12 18 58.4	-0.5
	2.1nm,0.3s,baz=218,slow=20,SNR=14						
ASAR	Alice Springs	43.16	267	P	P	12 23 01.2	+0.3
	0.5nm,0.4s,baz=106,slow=7.5,SNR=18						
WRA	Warramunga Arr	44.12	272	P	P	12 23 08.5	-0.2
	1.2nm,0.4s,baz=110,slow=8.1,SNR=34						
FINES	FINESS Array B	144.87	340	PKP	PKPdf	12 34 33.2	-1.4
	1.1nm,0.3s,baz=31,slow=3.2,SNR=19						

IDC 04 12:32:58.7±2.9, 4°.22S×135°.39E, h0km, mb3.9/1, mb1 3.9/4, mb1mx3.6/15, mbtmp3.8/4, ML3.5/3, Error ellipse: s-maj=100.2km s-min=30.0km az=84.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.66	184	Pn	Pn	12 36 39.2	-1.7
	0.2nm,0.3s,baz=4.3,slow=13,SNR=11						
WRA				Sn	Sn	12 39 30.0	-5.2
	0.3nm,0.3s,baz=2.0,slow=23,SNR=4.7						
FITZ	Fitzroy Crossi	16.77	214	Pn	Pn	12 36 53.6	-1.6
	0.1nm,0.3s,baz=34,slow=12,SNR=5.7						
FITZ				Sn	Sn	12 39 53.7	-8.5
	0.6nm,0.3s,baz=180,slow=20,SNR=9.1						
ASAR	Alice Springs	19.39	184	P	Pn	12 37 27.8	+0.5
	0.4nm,0.3s,baz=6.1,slow=11,SNR=51						
ASAR				S	Sn	12 41 04.1	-1.4
	0.1nm,0.3s,baz=4.1,slow=30,SNR=4.5						
MKAR	Makanchi Array	69.00	324	P	P	12 44 06.1	+0.1
	0.6nm,0.4s,baz=108,slow=7.6,SNR=4.7						

CASC 04 12:37:23.5±1.8, 13°.04N×88°.72W, h64km±13km, MD3.7, ML3.4, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.58	48	eP	Pn	12 37 36.8	+0.3
VSM				eS	Sn	12 37 47.9	+1.7
SNVI	San Vicente	0.58	348	eP	Pn	12 37 36.7	+0.1
SNVI				eS	Sn	12 37 46.9	+0.8
BLLM	Bellamira	0.61	50	iP	Pn	12 37 37.1	+0.1
BLLM				eS	Sn	12 37 47.8	+1.0
LFRS	El Faro	0.67	330	⇑eP	Pn	12 37 37.4	-0.2
LBRS	Las Brisas	0.76	335	eP	Pn	12 37 38.9	+0.2
LBRS				eS	Sn	12 37 51.0	+1.1
CAHU	Cacacuatique	0.88	34	eP	Pn	12 37 40.5	+0.4
CAHU				eS	Sn	12 37 53.8	+1.4
BOQS	Boqueron	0.88	322	eP	Pn	12 37 40.5	+0.4
BOQS				eS	Sn	12 37 53.8	+1.4
CNCH	Conchagua	0.89	75	eP	Pn	12 37 40.2	-0.1
CNCH				eS	Sn	12 37 54.0	+1.3
SBLS	San Blas	1.18	312	eP	Pn	12 37 44.5	+0.5
SBLS				eS	Sn	12 38 00.8	+1.4
SNJE	San Jose	1.19	314	eP	Pn	12 37 44.4	+0.2
SNJE				eS	Sn	12 38 00.5	+0.9
RTR	El Retiro	1.24	313	eP	Pn	12 37 45.4	+0.6
RTR				eS	Sn	12 38 02.0	+1.2
RBDL	Robledal	1.42	319	eP	Pn	12 37 47.9	+0.6
RBDL				eS	Sn	12 38 05.7	+0.6
MTO2	Montecristo 2	1.49	335	eP	Pn	12 37 48.6	+0.5
CRIN	San Cristobal	1.66	102	eP	Pn	12 37 50.6	+0.2
CRIN				eS	Sn	12 38 11.8	+1.0
CRIN				AML	AML	12 38 13.0	
	comp=N,508nm,0.3s						
TGUH	Tegucigalpa,Un	1.73	54	⇓eP	Pn	12 37 52.0	+0.6
TGUH				eS	Sn	12 38 13.0	+0.5
TELN	Telica	1.89	103	eP	Pn	12 37 53.3	-0.2
CNGN	Cerro Negro	2.04	105	eP	Pn	12 37 54.9	-0.7
CNGN				eS	Sn	12 38 18.9	-1.2
MOMN	Momotombo	2.22	106	eP	Pn	12 37 59.6	+1.7
COPN	Copaltepe	2.25	112	eP	Pn	12 37 58.5	+0.1
BOAB	BOACO BROADBAN	3.04	101	eP	Pn	12 38 07.7	-1.4
BOAB				eS	Sn	12 38 45.2	+0.9

*IDC **04** 12:58:17.8±1.0, 24°.00N×121°.83E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/24, mbtmp

TWB1	Santiao Chiao	0.98	6	eP		Pg	12 58 39.0 +0.5
	baz=1.0						
TWB1				eS		Sg	12 58 53.2 +2.0
	baz=1.0						
TWA	Mucha	0.98	344	i P		Pg	12 58 38.5 0.0
	baz=348						
TWA				S		Sg	12 58 52.6 +1.4
	baz=348						
NSTT	Nanjuang	0.99	307⇑	iP		Pg	12 58 38.1 -0.6
	baz=308						
NSTT				eS		Sg	12 58 49.9 -1.8
	baz=308						
YUS	Yu-Shan	1.00	238⇓	iP		Pg	12 58 39.0 +0.1
	baz=242						
YUS				eS		Sg	12 58 52.9 +1.0
	baz=242						
TATO	Taipei	1.00	340	ePn		Pn	12 58 38.4 -2.3
CHKT	Chengkung	1.04	207	P		Pg	12 58 39.6 +0.1
	baz=202						
CHKT				eS		Sg	12 58 55.5 +2.4
	baz=202						
NWF	Wu-fen Shan	1.04	355⇑	iP		Pg	12 58 39.8 +0.2
	baz=350						
NWF				eS		Sg	12 58 54.7 +1.6
	baz=350						
TAP1	Taipei	1.05	342	eP		Pg	12 58 39.0 -0.9
	baz=335						
TAP1				eS		Sg	12 58 54.6 +1.1
	baz=335						
TWQ1	Liyutan	1.05	288	P		Pg	12 58 39.8 -0.1
	baz=287						
NSY	Sanyi	1.08	291	P		Pg	12 58 40.6 +0.1
	baz=291						
NSY				eS		Sg	12 58 55.0 +0.5
	baz=291						
WNT	Mingjian	1.10	262⇓	iP		Pg	12 58 41.0 +0.3
	baz=261						
WNT				eS		Sg	12 58 56.2 +1.2
	baz=261						
TCU	Taichung	1.10	276	i P		Pg	12 58 41.1 +0.3
	baz=275						
TCU				S		Sg	12 58 55.7 +0.7
	baz=275						
ALS	Alishan	1.11	242⇓	iP		Pg	12 58 40.7 -0.2
	baz=240						
ALS				eS		Sg	12 58 55.9 +0.6
	baz=240						
NCU	National Centr	1.12	326	eP		Pg	12 58 41.5 +0.3
	baz=328						
NCU				eS		Sg	12 58 57.1 +1.3
	baz=328						
YOJ	Yonaguni jima	1.12	67	eP		Pg	12 58 43.0 +1.8
	baz=70						
HSN	Hsinchu	1.12	313	eP		Pg	12 58 41.6 +0.4
	baz=315						
TWS1	Kuangyinshan	1.14	339	eP		Pg	12 58 41.8 +0.2
	baz=341						
TWS1				eS		Sg	12 58 58.9 +2.5
	baz=341						
ELDTW	Lidau	1.15	223	eP		Pg	12 58 39.7 -2.0
	baz=220						
CHN5	Tsauling	1.18	249⇓	iP		Pg	12 58 42.2 0.0
	baz=247						
CHN5				eS		Sg	12 58 59.3 +1.8
	baz=247						
WGK	Gukeng	1.25	254	eP		Pg	12 58 43.5 -0.1
	baz=253						
WGK				eS		Sg	12 59 01.3 +1.5
	baz=253						
TWY	Chenhua	1.26	349	eP		Pg	12 58 44.2 +0.3
	baz=333						
STYT	Tauyuan	1.34	230⇓	iP		Pn	12 58 44.2 -1.0
	baz=228						
STYT				eS		Sg	12 59 03.2 +0.4
	baz=228						
TPUB	Ta-pu	1.35	238	ePn		Pn	12 58 44.4 -1.1
TPUB				eSn		Sn	12 59 05.7 +1.8
CHN4	Tsaushan	1.35	240	P		Pn	12 58 45.3 -0.2
	baz=220						
CHN2	Minshiung	1.37	249	eP		Pn	12 58 45.6 -0.1
	baz=248						
CHN2				eS		Sg	12 59 05.4 +1.5
	baz=248						
WTP	Ta-pu	1.39	236⇓	iP		Pn	12 58 45.5 -0.5
	baz=236						
TWG	Pinlang	1.41	212	ePn		Pn	12 58 43.1 -3.2
TWG	Pinlang	1.41	212	eP		Pn	12 58 43.7 -2.6
	baz=193						
CHY	Chiayi	1.43	248	eP		Pn	12 58 45.6 -0.9
	baz=262						
CHY				eS		Sb	12 59 06.5 +0.9
	baz=262						
TTN	Taitung	1.44	208	eP		Pn	12 58 44.0 -2.6
	baz=205						
WTCT	Ta-ch'eng	1.47	264	eP		Pn	12 58 46.2 -0.8
	baz=264						
WTCT				eS		Sb	12 59 06.9 +0.3
	baz=264						
TWK	Hsinying	1.48	239	eP		Pn	12 58 47.1 -0.1
	baz=239						
TWK				eS		Sb	12 59 08.6 +1.5
	baz=239						
CHN1	Nanshi	1.49	236	i P		Pn	12 58 47.4 0.0
	baz=236						
CHN1				eS		Sn	12 59 08.8 +1.4
	baz=236						
SGST	Jiashian	1.51	232⇓	iP		Pn	12 58 47.6 0.0
	baz=231						
SGST				eS		Sn	12 59 10.3 +2.4
	baz=231						
PCYT	Pengchaiyu	1.60	6	⇑P		Pn	12 58 49.3 +0.5
	baz=345						
ECL	Taimali	1.66	211	eP		Pn	12 58 47.3 -2.3
	baz=195						
CHN8	Yiju	1.67	246	eP		Pn	12 58 49.2 -0.6
	baz=247						
CHN8				eS		Sn	12 59 12.7 +1.0
	baz=247						
CHN3	Shinhua	1.68	236	eP		Pn	12 58 51.0 +1.0
	baz=235						
SSD	Sandimen	1.71	222	eP		Pn	12 58 49.7 -0.7
	baz=220						
SCLT	Jiali	1.76	241	eP		Pn	12 58 51.0 -0.1
	baz=243						
TWM1	Shoushan	1.79	228	eP		Pn	12 58 51.6 +0.1
	baz=226						
TAI1	Yung-k'ang	1.80	237	eP		Pn	12 58 52.1 +0.4
	baz=235						
SGLT	Jiouru	1.82	225	eP		Pn	12 58 52.0 +0.1
	baz=222						
EAST	Anshuo	1.89	210	eP		Pn	12 58 51.4 -1.5
	baz=201						
EAST				eS		Sn	12 59 18.5 +1.3
	baz=201						
TAW	Tawu	1.89	209	eP		Pn	12 58 53.0 +0.1
	baz=194						
LAY	Lan-yu	2.01	189	eP		Pn	12 58 51.6 -2.9
	baz=188						
SCZT	Fangliau	2.01	215	eP		Pn	12 58 54.2 -0.4
	baz=203						
SCZT				eS		Sn	12 59 23.3 +3.0
	baz=203						
PNG	Penghu	2.17	258	eP		Pn	12 58 56.1 -0.6
	baz=259						
PNG				eS		Sn	12 59 25.1 +0.9
	baz=259						
TWP	Hsiaoliuchiu	2.18	220	eP		Pn	12 58 58.7 +1.9
	baz=219						
HEN	Hengchun	2.27	208	eP		Pn	12 58 59.9 +1.8
	baz=195						
TWK1	Hengchun	2.30	206	eP		Pn	12 58 58.1 -0.4
	baz=198						
TWK1				eS		Sn	12 59 27.6 +0.3
	baz=198						
QZH	Quanzhou	3.12	288⇓	iPn		Pn	12 59 10.0 +0.2
QZH				Sn		Sn	12 59 40.1 -7.5
QZH				smax			
	comp=N,280nm,1.2s						
QZH				smax			
	comp=E,180nm,0.9s						
KNM	Kinmen	3.16	278	eP		Pn	12 59 11.8 +1.4
	baz=280						
JOW	Kunigami	6.42	63	Pn		Pn	12 59 55.2 0.0
	comp=E,2.8nm,0.3s,baz=124,slow=10,SNR=10						
WHN	Wuhan	9.32	316	P		Pn	13 00 31.0 -3.9
KSRS	Korea Array	14.35	20	Pn		Pn	13 01 46.0 +2.3
	comp=E,0.1nm,0.3s,baz=208,slow=14,SNR=2.7						
SONM	Songino Array	26.75	336	P		P	13 03 59.7 -0.8
	comp=E,0.3nm,0.3s,mb3.2,baz=157,slow=7.8,SNR=5.6						
MKAR	Makanchi Array	38.88	316	P		P	13 05 45.3 -1.0
	comp=E,0.5nm,0.6s,mb3.4,baz=102,slow=9.6,SNR=4.2						
ZALV	Zalesovo Beam	40.72	327	P		P	13 05 59.6 -1.8
	comp=E,1.0nm,0.6s,mb3.6,baz=99,slow=9.2,SNR=6.1						
WRA	Warramunga Arr	45.36	163	P		P	13 06 37.4 -2.0
	comp=E,0.6nm,0.8s,mb3.5,baz=345,slow=8.7,SNR=7.6						
ASAR	Alice Springs	48.83	165	P		P	13 07 05.6 -0.9
	comp=E,0.4nm,0.8s,mb3.5,baz=340,slow=6.9,SNR=5.5						
YKA	Yellowknife Ar	82.86	23	P		P	13 10 43.7 -1.6
	comp=E,0.3nm,0.8s,mb3.4,baz=312,slow=4.8,SNR=8.4						

MEX 04 13:07:19.6±0.4, 16°.07N×98°.39W, h1^{km}±5^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.41	38	eP		Pg	13 07 27.2 -0.3
PNIG				i S		Sg	13 07 33.2 +0.3
VHO	Vista Hermosa	1.88	58	i P		Pn	13 07 50.2 -2.7
VHO				i S		Sn	13 08 13.2 -4.1
CAIG	El Cayaco	2.05	299	i P		Pn	13 07 51.1 -4.1
CAIG				i S		Sn	13 08 16.5 -4.9
MEIG	Mezcala	2.19	328	eP		Pn	13 07 54.1 -3.1
MEIG				i S		Sn	13 08 21.1 -3.9
HUIG	Huatulco	2.22	97	i P		Pn	13 07 54.8 -2.7
HUIG				i S		Sn	13 08 20.4 -5.2

*ISCJB **04** 13:16:56.5±0.7, 39°.42N±0°.04×28°.14E±0°.05, h3^{km}±10^{km}, Error ellipse: s-maj=8.3km s-min=4.6km az=41.4*
*CSEM **04** 13:16:56.7±0.2, 39°.43N×28°.14E, h5^{km}, MD2.6, Error ellipse: s-maj=4.2km s-min=2.6km az=44.0*
*ISK **04** 13:16:56.3, 39°.43N×28°.12E, h8^{km}, MD2.6*
*DDA **04** 13:16:56.5, 39°.43N×28°.14E, h7^{km}±2^{km}, Md2.7*
ISC 04 13:16:57.0±0.8, 39°.42N±0°.04×28°.14E±0°.04, h8^{km}±12^{km}, n17, σ0^{s}.59/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.29	318	ePG		Pg	13 17 02.4 -0.4
BALB				eSG		Sg	13 17 07.0 +0.2
BALB	Balikesir	0.29	318	ePg		Pg	13 17 02.4 -0.4
BALB				eSg		Sg	13 17 07.0 +0.3
DURS	Dursunbey	0.32	55	i P		Pg	13 17 02.1 -1.1
DURS				i S		Sg	13 17 07.1 -0.3
DURS	Dursunbey	0.32	55	i P		Pg	13 17 02.1 -1.1
DURS				i S		Sg	13 17 07.1 -0.3
DST	Dursunbey	0.42	64	ePG		Pg	13 17 05.2 +0.1
BALY	Balya	0.51	309	i P		Pg	13 17 06.2 -0.7
BALY				i S		Sg	13 17 14.3 +0.7
BALY	Balya	0.51	309	i P		Pg	13 17 06.2 -0.7
BALY				i S		Sg	13 17 14.3 +0.7
DEMI	Demirci	0.59	130	eP		Pg	13 17 08.3 0.0
DEMI				i S		Sg	13 17 16.8 +0.8
DEMI	Demirci	0.59	130	eP		Pg	13 17 08.3 0.0
DEMI				i S		Sg	13 17 16.8 +0.8
BNT	Bandirma	0.95	350	ePG		Pg	13 17 14.6 -0.6
BNT				eSG		Sg	13 17 28.2 +0.8
BNT	Bandirma	0.95	350	ePg		Pg	13 17 14.6 -0.6
BNT				eSg		Sg	13 17 28.3 +0.8
KULA	Kula-Manisa	0.99	156	ePG		Pg	13 17 16.0 0.0
KULA	Kula-Manisa	0.99	156	ePg		Pg	13 17 16.0 0.0
ULDT	Uludag	1.05	47	i P		Pg	13 17 16.6 -0.6
ULDT				i S		Sg	13 17 31.7 +0.9
ULDT	Uludag	1.05	47	i P		Pg	13 17 16.5 -0.7
ULDT				i S		Sg	13 17 31.7 +0.9
YLV	Yalova	1.48	39	ePN		Pn	13 17 24.0 +0.1
YLV	Yalova	1.48	39	ePn		Pn	13 17 24.0 +0.1

*IDC **04** 13:31:12.6±0.6, 4°.39N×127°.82E, h0^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.5/22, mbtmp4.4/18, ML4.0/1, MS3.8/23, Ms1 3.8/23, ms1mx3.7/31, Error ellipse: s-maj=25.6km s-min=12.1km az=81.0*
*BJI **04** 13:31:15.8, 3°.86N×128°.07E, h65^{km}, mB4.8/24, mb4.8/33, Ms4.2/28, Ms7 4.1/26*
*NEIC **04** 13:31:20.9±1.0, 4°.33N×127°.83E, h65^{km}±9^{km}, mb4.7/28, Error ellipse: s-maj=9.7km s-min=4.6km az=75.0*
*GCMT **04** 13:31:20.9±0.3, 4°.37N×127°.78E, h60^{km}±2^{km}, MW5.0/74, Moment Tensor Solution. s33,c39; s74,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.57±.15; $M_{\theta\theta}$1.29±.12; $M_{\phi\phi}$-3.85±.11; $M_{r\theta}$1.47±.07; $M_{\theta\phi}$-0.13±.11; $M_{\phi r}$-0.33±.11; Best double couple: $M_0$3.70900×10^{16} NP1:ϕ_s30.00000°, δ51.00000°, λ134.00000°. NP2: ϕ_s153.00000°, δ56.00000°, λ49.00000°. Principal axes: T 3.5500, Plg57.0000°, Azm5.0000°; N 0.3280, Plg33.0000°, Azm179.0000°; P -3.8680, Plg3.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **04** 13:31:22.2±0.6, 4°.31N±0°.03×127°.81E±0°.04, h89^{km}±5^{km}, mb4.7/59 Error ellipse: s-maj=6.9km s-min=4.2km az=170.5*
*DJA **04** 13:31:24, 4°.40N×127°.75E, h62^{km}, mb4.8/23*
ISC 04 13:31:23.7±0.5, 4°.29N±0°.03×127°.82E±0°.04, h87^{km}±4^{km}, h65^{km}±1.2^{km}: pP-P, n167, σ1^{s}.26/175, mb4.7/59, 4C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	2.36	255	P		Pn	13 31 59.3 -1.3
MATI	Mati	3.06	330	eP		Pn	13 32 10.9 +0.9
MATI				eS		Sn	13 32 38.2 -7.6
GSPH	General Santos	3.37	302	eP		Pn	13 32 09.1 -5.1
DAV	Davao City (W)	3.55	321	Pn		Pn	13 32 15.0 -1.6
	96nm,0.3s,baz=107,slow=0.8,SNR=15						
DAV				Sn		Sn	13 33 01.4 +3.8
	146nm,0.3s,baz=116,slow=22,SNR=8.4						
DAV				LR		LR	13 33 18.0
	comp=Z,859nm,18.3s,baz=125,slow=36						
DAV	Davao City (W)	3.55	321	eP		Pn	13 32 14.7 -2.0
DAV	Davao City (W)	3.55	321	P		Pn	13 32 17.4 +0.8
DAV	Davao City (W)	3.55	321	P		Pn	13 32 15.9 -0.7
DMPH	Davao City--Mi	3.60	320⇑	eP		Pn	13 32 16.5 -0.8
DMPH				eS		Sn	13 33 09.7 +11
KCP	Kidapawan	3.83	315⇓	eP		Pn	13 32 16.6 -3.8
KCP				i S		Sn	13 33 07.9 +3.5
BIPH	Bislig	4.13	340⇑	eP		Pn	13 32 19.9 -4.6
BIPH				eS		Sn	13 32 58.5 -13
BUKP	Musuan	4.50	323	eP		Pn	13 32 31.2 +1.7
CTBH	Cotabato--PC H	4.59	309	eP		Pn	13 32 27.6 -3.2
CTBH				i S		Sn	13 33 26.5 +3.5
LBMI	Labuha	4.90	184	P		Pn	13 32 36.5 +1.4
	247nm,0.8s						
LBMI	Labuha	4.90	184	P		Pn	13 32 36.5 +1.4
	247nm,0.8s						
BUTP	Butuan	5.14	335	eP		Pn	13 32 40.6 +2.4
BUTP				eS		Sn	13 33 41.0 +4.8
CGP	Cagayan de Oro	5.17	323⇑	eP		Pn	13 32 40.5 +1.8
CGP				eS		Sn	13 33 45.3 +8.2
PAGZ	Pagadian	5.65	309	eP		Pn	13 32 42.7 -2.5
ZMPH	Zamboanga City	6.31	295	⇓iP		Pn	13 32 50.1 -4.1
TBP	Tagbilaran	6.65	324	eP		Pn	13 32 58.8 0.0
TBP				eS		Sn	13 34 14.3 +1.1
MRSI	Marisa	6.99	237	P		Pn	13 33 02.6 -0.8
LLP	Lapu-Lapu	7.10	328⇑	eP		Pn	13 33 06.5 +1.5
LUWI	Luwuk	7.31	224	P		Pn	13 33 09.3 +1.4
	254nm,1.1s,2μm1.5nm						
LUWI	Luwuk	7.31	224	P		Pn	13 33 09.0 +1.1
	208nm,1.1s,2μm1.5nm						
NLAI	Namlea	7.51	185	P		Pn	13 33 12.3 +1.7
	72nm,0.8s,1μm0.4nm						
AAI	Ambon	7.93	177	P		Pn	13 33 19.3 +3.0
	108nm,1.0s						
APSI	Ampana	8.04	230	P		Pn	13 33 17.8 0.0
	187nm,0.8s,2μm						
GUIM	Jordan	8.15	321	eP		Pn	13 33 19.4 0.0
MYLDM	Lahad Datu	9.33	276	P		Pn	13 33 36.1 +0.7
	160nm,1.6s,2μm						
MYLDM	Lahad Datu	9.33	276	P		Pn	13 33 36.3 +0.9
	130nm,1.4s,2μm						
CUYO	Cuyo Island	9.38	314	eP		Pn	13 33 34.0 -2.0
KDI	Kendari	9.70	212	P		Pn	13 33 38.6 -1.8
	95nm,0.7s,1μm						
KDI	Kendari	9.70	212	P		Pn	13 33 38.6 -1.8
TSM	Tawau	9.92	270	P		Pn	13 33 42.6 -0.9
PVCP	Virac	9.93	339	eP		Pn	13 33 41.2 -2.4
SDKM	Sandakan	10.67	278	P		Pn	13 33 52.7 -0.9
TTSI	Tana Toraja	10.82	228	P		Pn	13 34 02.0 +6.3
	78nm,0.9s,591nm						
TTSI	Tana Toraja	10.82	228	P		Pn	13 34 01.5 +5.8
TLE	Tual	11.02	153	P		Pn	13 34 01.3 +2.9
	110nm,1.1s						
KKM	Kota Kinabalu	11.69	279	P		Pn	13 34 06.9 -0.6
KKM	Kota Kinabalu	11.69	279	P		Pn	13 34 04.3 -3.2
	14nm,0.8s						
KKM	Kota Kinabalu	11.69	279	P		Pn	13 34 08.0 +0.5
	27nm,1.4s,508nm						
KKM	Kota Kinabalu	11.69	279	P		Pn	13 34 06.4 -1.1
	23nm,1.4s,508nm						
KAPI	Kappang	12.26	221	Pn		Pn	13 34 11.9 -3.4
	0.9nm,0.3s,baz=67,slow=5.6,SNR=9.3						
KAPI				Sn		Sn	13 36 28.4 -1.7
	0.8nm,0.3s,baz=30,slow=20,SNR=2.8						
KAPI				LR		LR	13 39 38.7
	comp=Z,437nm,19.2s,baz=50,slow=41						
KAPI	Kappang	12.26	221	eP		Pn	13 34 11.9 -3.4
	9.3nm,0.6s						
KAPI	Kappang	12.26	221	P		Pn	13 34 16.3 +1.0
	10.0nm,1.0s,155nm						
KAPI	Kappang	12.26	221	P		Pn	13 34 15.9 +0.6
	8.4nm,1.2s,154nm						
SMPI	Sarmi	12.54	120	P		Pn	13 34 18.8 -0.3
	50nm,2.3s,1μm						
KBKI	Kotabaru	13.87	237	P		Pn	13 34 34.7 -1.8
BBKI	Banjar Baru	15.08	239	P		Pn	13 34 53.0 +0.8
	87nm,1.1s						
SBUM	Sibu	15.68	264	P		Pn	13 34 58.8 -0.9
SBUM	Sibu	15.68	264	P		Pn	13 34 58.5 -1.2
	51nm,1.9s,740nm						
SBUM	Sibu	15.68	264	P		Pn	13 34 58.5 -1.2
	43nm,2.0s,740nm						
STKI	Sintang	16.86	256	P		Pn	13 35 14.1 -0.3
	24nm,1.7s						
KAKA	Kakadu	17.50	165	eP		Pn	13 35 19.9 -2.3
	18nm,0.8s						
KAKA	Kakadu	17.50	165	eP		Pn	13 35 19.8 -2.4
	72nm,0.9s						
KAKA	Kakadu	17.50	165	P		Pn	13 35 26.3 +4.1
	49nm,0.9s,363nm						
KAKA	Kakadu	17.50	165	P		Pn	13 35 25.9 +3.7
	41nm,0.8s,363nm						
SRBI	Singaraja	17.58	226	P		Pn	13 35 25.1 +1.8
	31nm,1.3s						
SRBI	Singaraja	17.58	226	P		Pn	13 35 25.1 +1.8
	31nm,1.3s						
KSM	Kuching	17.71	261	P		Pn	13 35 24.3 -0.5
KSM	Kuching	17.71	261	eP		Pn	13 35 23.4 -1.4
	46nm,0.9s						
KSM	Kuching	17.71	261	P		Pn	13 35 24.3 -0.5
	54nm,1.0s,606nm						
KSM	Kuching	17.71	261	P		Pn	13 35 24.7 -0.1
	45nm,0.9s,606nm						
GMJI	Gumukmas	19.01	229	P		Pn	13 35 42.4 +2.0
	67nm,1.2s						
GUMO	Guam	19.20	60	LR		LR	13 41 47.3
	comp=Z,437nm,20.2s,baz=104,slow=33						
YULB	Yu-li	20.01	342	eP		P	13 35 46.4 -3.1
	15nm,0.6s						
YHNB	Yeheng	21.19	344	eP		P	13 36 02.9 +0.7
	24nm,0.6s,mb4.7						
TPI	Tanjungpandan	21.33	251	P		P	13 36 05.7 +1.8
	25nm,1.3s,mb4.4						
FITZ	Fitzroy Crossi	22.35	185	eP		P	13 36 14.8 +0.2
	8.9nm,0.7s,mb4.2						
FITZ	Fitzroy Crossi	22.35	185	P		P	13 36 14.2 -0.5
	2.2nm,0.5s,mb3.8,baz=9.8,slow=6.2,SNR=22						
FITZ	Fitzroy Crossi	22.35	185	eP		P	13 36 14.1 -0.5
	8.7nm,0.8s,mb4.1						
JOW	Kunigami	22.42	1	LR		LR	13 45 09.8
	comp=Z,116nm,18.5s,baz=138,slow=38						
QIZ	Qiongzhong	22.86	311	P		P	13 36 23.1 +3.1
QIZ				S		S	13 40 18.7 -4.2
QIZ				LR		LR	
	comp=N,180nm,19.1s						
QIZ				LR		LR	
	comp=Z,260nm,17.0s						
MYKOM	Kota Tinggi	24.06	265	P		P	13 36 31.1 -0.1
WRAB	Tennant Creek	24.91	165	eP		P	13 36 38.5 -0.3
	comp=Z,15nm,0.7s,mb4.5						
WRAB	Tennant Creek	24.91	165	P		P	13 36 40.4 +1.7
	comp=Z,27nm,0.8s,mb4.7						
WRA	Warramunga Arr	24.92	165	P		P	13 36 39.1 +0.3
	comp=Z,3.8nm,0.4s,mb4.2,baz=346,slow=10,SNR=41						
WRA				S		S	13 41 02.1 +6.2
	comp=Z,1.9nm,1.0s,baz=344,slow=17,SNR=2.7						
WB2	Warramunga Arr	24.92	165	eP		P	13 36 38.9 +0.1
MDSI	Maura Dua	25.18	250	P		P	13 36 39.7 -1.6
MBWA	Marble Bar	26.50	197	eP		P	13 36 53.6 +0.5
	comp=Z,14nm,1.0s,mb4.5						
MBWA	Marble Bar	26.50	197	P		pP	13 37 09.2 -3.7
	comp=Z,21nm,1.6s						
MBWA	Marble Bar	26.50	197	P		P	13 36 56.8 +3.7
	comp=Z,18nm,1.6s,mb4.4						
CBIJ	Chichi jima	26.51	30	LR		LR	13 45 04.3
	comp=Z,346nm,21.5s,baz=98,slow=32						
ASAR	Alice Springs	28.41	168	P		P	13 37 10.3 +0.2
	comp=Z,3.1nm,0.5s,mb4.1,baz=353,slow=7.7,SNR=169						
ASAR				PcP		PcP	13 40 20.7 +0.1
	comp=Z,0.4nm,0.6s,baz=341,slow=1.9,SNR=2.4						
ASAR				S		S	13 42 07.1 +16
	comp=Z,0.7nm,0.9s,baz=345,slow=17,SNR=2.9						
NJ2	Nanjing	28.87	344	eP		P	13 37 16.2 +2.1
NJ2				pP		pP	13 37 31.7 -2.4
NJ2				sP		sP	13 37 38.9 -5.4
NJ2				PP		PP	13 38 11.9 -9.0
NJ2				S		S	13 42 00.0 +1.9
NJ2				pmax		pmax	
	comp=Z,20nm,0.7s,mb4.9						
NJ2				pmax		pmax	
	comp=Z,40nm,5.4s						
NJ2				LR		LR	
	comp=N,140nm,18.9s						
NJ2				LR		LR	
	comp=E,90nm,17.0s						
NJ2				LR		LR	
	comp=Z,190nm,16.6s						
PSI	Prapat	28.88	268	LR		LR	13 50 06.3
	comp=Z,273nm,19.0s,baz=244,slow=39						
GYA	Guiyang	29.93	320	P		P	13 37 25.3 +1.7
GYA				pP		pP	13 37 41.4 -2.2
GYA				sP		sP	13 37 49.0 -4.8
GYA				PP		PP	13 38 24.4 -8.3
GYA				PcP		PcP	13 40 25.3 +0.8
GYA				S		S	13 42 18.0 +3.1
GYA				sS		sS	13 42 45.3 -4.2
GYA				SS		SS	13 43 57.9 -28
GYA				ScP		ScP	13 44 01.2 +2.2
GYA				ScS		ScS	13 47 55.6 +1.1
GYA				pmax		pmax	
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				pmax		pmax	
	comp=Z,80nm,4.9s						
GYA				LR		LR	
	comp=N,480nm,15.7s						
GYA				LR		LR	
	comp=E,440nm,16.0s						
GYA				LR		LR	
	comp=Z,460nm,15.9s						
CTA	Charters Tower	30.25	144	LR		LR	13 49 47.9
	comp=Z,204nm,19.9s,baz=332,slow=37						
JHJ	Hachijo jima 2	30.78	20	LR		LR	13 47 21.4
	comp=Z,250nm,21.9s,baz=135,slow=32						
ENH	Enshi	31.11	328	P		P	13 37 33.0 -0.9
	comp=Z,11nm,0.6s,mb4.8						
CMAR	Chiang Mai Arr	31.54	299	P

comp=N,240nm,21.8s
KMI LR LR
comp=E,180nm,24.9s
KMI LR LR
comp=Z,280nm,23.9s
KSRS Korea Array 33.01 0 P **P 13 37 49.5 -1.0**
comp=Z,8.4nm,0.6s,mb4.7,baz=176,slow=9.4,SNR=41
KSRS LR LR 13 52 39.7
comp=Z,94nm,19.1s,baz=190,slow=39
MAJO Matsushiro 33.49 15 *eP* **P 13 37 53.4 -1.3**
comp=Z,8.3nm,0.6s,mb4.7
MAT Matsushiro 33.49 15 P **P 13 37 53.6 -1.1**
MAT *eS* S 13 43 31.8 +22
MJAR Matsushiro Arr 33.49 15 P **P 13 37 53.3 -1.4**
comp=Z,2.6nm,0.5s,mb4.3,baz=184,slow=9.8,SNR=34
MJAR LR LR 13 49 27.8
comp=Z,343nm,21.6s,baz=195,slow=33
XAN Xi'an 34.43 332 P **P 13 38 02.3 -0.6**
XAN pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
XAN LR LR
comp=N,130nm,33.3s
XAN LR LR
comp=E,44nm,38.2s
XAN LR LR
comp=Z,68nm,35.7s
CD2 Chengdu 34.85 322 P **P 13 38 07.7 +1.1**
CD2 pP pP 13 38 22.8 -4.0
CD2 sP sP 13 38 30.0 -6.9
CD2 PP PP 13 39 27.0 -0.3
CD2 S **S 13 43 33.8 +2.4**
CD2 sS sS 13 43 59.5 -6.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,80nm,4.7s
CD2 LR LR
comp=N,320nm,16.6s
CD2 LR LR
comp=Z,260nm,15.5s
FORT Forrest 34.87 180 *eP* **P 13 38 06.1 -0.6**
comp=Z,14nm,0.5s,mb5.1
FORT Forrest 34.87 180 *eP* **P 13 38 07.9 +1.2**
comp=Z,17nm,0.6s,mb5.0
BJT Baijiatuau 37.09 345 *eP* **P 13 38 24.6 -0.9**
comp=Z,36nm,0.6s,mb5.5
BJI Beijing 37.11 345 P **P 13 38 25.0 -0.8**
BJI S **S 13 44 09.8 +4.1**
BJI pmax pmax
comp=Z,54nm,0.6s,mb5.7
BJI pmax pmax
comp=Z,91nm,3.6s
BJI LR LR
comp=N,98nm,15.9s
BJI LR LR
comp=E,130nm,20.0s
BJI LR LR
comp=Z,73nm,21.9s
STKA Stephens Creek 38.28 161 *eP* **P 13 38 35.9 +0.2**
comp=Z,4.5nm,0.4s,mb4.7
STKA Stephens Creek 38.28 161 P **P 13 38 35.7 0.0**
comp=Z,5.3nm,0.5s,mb4.7,baz=339,slow=8.0,SNR=26
STKA LR LR 13 54 43.6
comp=Z,228nm,21.8s,baz=359,slow=37
STKA Stephens Creek 38.28 161 *eP* **P 13 38 35.6 -0.1**
comp=Z,1.9nm,0.8s,mb4.0
LZH Lanzhou 38.59 328 *eP* **P 13 38 39.6 +1.3**
LZH pP pP 13 38 56.9 -1.8
LZH sP sP 13 39 03.6 -5.2
LZH PP PP 13 40 13.3 +5.0
LZH *eS* **S 13 44 34.0 +5.9**
LZH SS SS 13 47 15.3 -6.2
LZH pmax pmax
comp=Z,38nm,1.4s,mb5.0
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=N,600nm,15.3s
LZH LR LR
comp=Z,810nm,16.0s
HHC Hu-ho-hao-te 39.22 340 *eP* **P 13 38 44.0 +0.5**
HHC pP pP 13 38 59.8 -4.2
HHC sP sP 13 39 06.0 -8.0
HHC PP PP 13 40 19.0 +3.9
HHC PcP PcP 13 40 49.1 -1.9
HHC ScP ScP 13 44 33.3 +1.4
HHC S **S 13 44 41.7 +4.2**
HHC sS sS 13 45 07.3 -5.5
HHC SS SS 13 47 30.7 -3.4
HHC ScS ScS 13 48 45.2 +1.6
HHC pmax pmax
comp=Z,13nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,85nm,5.2s
HHC LR LR
comp=N,130nm,14.3s
HHC LR LR
comp=E,120nm,12.6s
HHC LR LR
comp=Z,180nm,17.6s
CN2 Changchun 39.40 357 *eP* **P 13 38 47.3 +2.4**
MDJ Mudanjiang 40.19 2 P **P 13 38 52.2 +0.7**
MDJ pP pP 13 39 07.4 -4.7
MDJ sP sP 13 39 14.4 -7.7
MDJ PP PP 13 40 26.7 +1.1
MDJ PcP PcP 13 40 54.6 +0.6
MDJ PcS PcS 13 44 45.1 +0.7
MDJ S **S 13 44 53.5 +1.6**
MDJ ScS ScS 13 48 52.7 +3.5
MDJ pmax pmax
comp=Z,11nm,1.2s,mb4.6
MDJ pmax pmax
comp=Z,55nm,3.8s
MDJ LR LR
comp=N,69nm,20.9s
MDJ LR LR
comp=E,78nm,24.9s
MDJ LR LR
comp=Z,200nm,30.5s
SHL Shillong 40.43 305 *eP* **P 13 38 53.0 -0.8**
ARMA Armidale 41.35 148 *eP* **P 13 39 04.5 +3.3**
ASAJ Asahikawa 41.75 16 LR LR 13 54 17.4
comp=Z,240nm,21.7s,baz=160,slow=33
GTA Gaotai 43.19 328 P **P 13 39 16.5 +0.5**
GTA pP pP 13 39 32.0 -4.8
GTA sP sP 13 39 39.0 -7.8
GTA PP PP 13 40 59.7 +1.7
GTA S **S 13 45 38.7 +2.4**
GTA sS sS 13 46 04.9 -7.1
GTA SS SS 13 48 45.5 -7.0
GTA pmax pmax
comp=Z,14nm,0.9s,mb4.7
GTA pmax pmax
comp=Z,78nm,4.2s
GTA LR LR
comp=N,130nm,17.8s
GTA LR LR
comp=E,120nm,17.5s
GTA LR LR
comp=Z,220nm,19.9s
DZM Mont Dzumac 45.98 126 *eLR* LR 13 52 46.7
comp=Z,258nm,24.6s
GUN Gumba 46.28 305 *eP* **P 13 39 40.7 -0.1**
comp=Z,47nm,0.6s,mb5.4
PKI Pulchoki 46.54 304 *eP* **P 13 39 42.0 -0.8**
comp=Z,8.4nm,0.6s,mb4.7
KKN Kakani 46.73 305 *eP* **P 13 39 43.7 -0.6**
comp=Z,8.7nm,0.4s,mb4.9
ULN Ulaanbaatar 46.94 341 *eP* **P 13 39 44.8 -0.7**
comp=Z,10nm,0.7s,mb4.7
ULN Ulaanbaatar 46.94 341 P **P 13 39 45.6 0.0**
comp=Z,19nm,0.8s,mb4.9
SONM Songino Array 47.13 340 P **P 13 39 46.8 -0.2**
comp=Z,4.1nm,0.6s,mb4.3,baz=153,slow=7.7,SNR=32
SONM LR LR 13 58 55.6
comp=Z,84nm,21.6s,baz=79,slow=35
GKN Gorkha 47.34 305 *eP* **P 13 39 48.2 -0.8**
comp=Z,13nm,0.5s,mb5.0
KOLN Koldanda 48.11 304 *eP* **P 13 39 54.7 -0.3**
comp=Z,70nm,0.6s,mb5.6
PYUN Piuthan 48.73 304 *eP* **P 13 39 59.6 -0.2**
comp=Z,11nm,0.4s,mb5.1
WMQ Urumqi 52.90 324 *eP* **P 13 40 31.2 +0.4**
WMQ LR LR
comp=N,320nm,26.0s
WMQ LR LR
comp=E,150nm,28.0s
WMQ LR LR
comp=Z,250nm,30.0s
PETK Petropavlovsk- 54.51 22 P **P 13 40 42.6 +0.2**
comp=Z,6.1nm,0.6s,mb4.8,baz=176,slow=3.8,SNR=23
PETK LR LR 14 00 06.3
comp=Z,72nm,20.1s,baz=222,slow=32
YAK Yakutsk 57.63 1 *eP* **P 13 41 03.3 -1.1**
comp=Z,33nm,0.6s,mb5.5
MK31 Makanchi Array 57.73 325 *eP* **P 13 41 05.1 -0.3**
MKAR Makanchi Array 57.73 325 P **P 13 41 05.5 +0.1**
comp=Z,4.5nm,0.4s,mb4.9,baz=121,slow=7.6,SNR=100
MKAR LR LR 14 07 47.2
comp=Z,68nm,19.4s,baz=126,slow=38
KSH Kashi 58.42 314 *eP* **P 13 41 12.0 +1.6**
KSH *ep*P pP 13 41 28.0 -4.3
KSH *es*P sP 13 41 35.2 -6.8
KSH *e*PcP PcP 13 42 02.0 +1.7
KSH *e*PP PP 13 43 23.0 +2.3
KSH *e*ScP ScP 13 45 56.1 +3.1
KSH *e*PcS PcS 13 46 02.0 +0.1
KSH *e*S **S 13 49 07.0 0.0**
KSH *e*ScS ScS 13 50 52.1 -0.1
KSH pmax pmax
comp=Z,3.0nm,0.1s,mb5.3
KSH pmax pmax
comp=Z,150nm,4.2s
KSH LR LR
comp=N,160nm,4.6s
KSH LR LR
comp=E,210nm,5.8s
KSH LR LR
comp=Z,260nm,6.0s
KZA Kyzart 59.94 317 P **P 13 41 22.4 +1.5**
SNR=6.1
TKM2 Tokmak 2 60.05 318 P **P 13 41 22.2 +0.6**
SNR=9.3
TKM2 Tokmak 2 60.05 318 *eP* **P 13 41 21.7 0.0**
comp=Z,4.9nm,0.5s,mb4.8
UCH Uchtor 60.51 317 P **P 13 41 26.2 +1.5**
SNR=11
UCH Uchtor 60.51 317 *eP* **P 13 41 25.9 +1.1**
comp=Z,11nm,0.9s,mb4.9
ZALV Zalesovo Beam 60.59 332 P **P 13 41 24.1 -0.9**
comp=Z,2.4nm,0.4s,mb4.6,baz=120,slow=7.0,SNR=15
ZALV LR LR 14 08 45.1
comp=Z,64nm,21.8s,baz=70,slow=37
ZALV Zalesovo Beam 60.59 332 P **P 13 41 24.1 -0.9**
ZALV LR LR 14 08 45.1
AAK Ala-Archa 60.68 317 *eP* **P 13 41 26.0 +0.1**
comp=Z,3.5nm,0.6s,mb4.6
AAK Ala-Archa 60.68 317 P **P 13 41 27.0 +1.1**
USP Ospenovka 60.93 318 P **P 13 41 27.9 +0.3**
SNR=13
AML Almayashu 61.03 316 P **P 13 41 29.5 +1.2**
SNR=9.0
EKS2 Erkin-Say 61.18 317 P **P 13 41 30.0 +0.7**
SNR=10
EKS2 Erkin-Say 61.18 317 *eP* **P 13 41 29.5 +0.3**
comp=Z,5.3nm,0.6s,mb4.8
RPZ Rata Peaks 61.60 146 LR LR 14 08 44.3
comp=Z,222nm,18.1s,baz=297,slow=36
KURK Kurchatov 61.86 327 *eP* **P 13 41 32.9 -0.8**
comp=Z,11nm,0.5s,mb5.1
URZ Urewera 62.21 138 LR LR 14 08 25.2
comp=Z,162nm,19.8s,baz=176,slow=36
TIXI Tiksi 67.28 0 P **P 13 42 06.6 -2.0**
comp=Z,12nm,0.5s,mb5.0
BVAR Borovoye Array 67.45 327 P **P 13 42 09.7 -0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=125,slow=7.6,SNR=11
BVAR LR LR 14 13 58.1
comp=Z,82nm,19.7s,slow=38
BRVK Borovoye 67.52 327 *eP* **P 13 42 09.8 -0.7**
comp=Z,12nm,1.0s,mb4.7
BILL Bilibino 68.74 15 *eP* **P 13 42 16.7 -1.1**
comp=Z,1.3nm,0.6s,mb3.9
ABKAR Akbulak array 72.41 320 *eP* **P 13 42 39.8 -0.7**
comp=Z,2.3nm,0.6s,mb4.2
TTA Tatalina 79.91 27 *eP* **P 13 43 23.1 +0.3**
comp=Z,31nm,1.5s,mb4.9
COLD Coldfoot 82.96 23 *eP* **P 13 43 39.5 +0.8**
comp=Z,6.6nm,1.0s,mb4.4
MCK McKinley 83.18 26 *eP* **P 13 43 39.5 -0.5**
comp=Z,12nm,1.2s,mb4.6
COLA College 83.73 25 *eP* **P 13 43 41.7 -1.1**
comp=Z,2.4nm,0.7s,mb4.1
PPT Papeete 84.25 108 *eLR* LR 14 10 19.6
comp=Z,214nm,28.8s
JOF Joensuu 89.18 333 *ep* **P 13 44 07.1 -2.3**
comp=Z,2.0nm,0.6s,mb4.3
ARCES ARCESS Array B 90.30 340 P **P 13 44 13.2 -1.3**
comp=Z,2.0nm,0.6s,mb4.5,baz=84,slow=5.5,SNR=19
BRTR Keskin Array B 90.50 310 P **P 13 44 16.0 -0.2**
comp=Z,0.3nm,0.4s,mb3.8,baz=113,slow=6.9,SNR=4.1
BRTR LR LR 14 28 50.2
comp=Z,28nm,20.6s,baz=178,slow=38
FINES FINESS Array B 91.85 332 P **P 13 44 20.4 -1.5**
comp=Z,0.5nm,0.4s,mb4.1,baz=40,slow=6.2,SNR=7.4
AKASG Malin Array Be 92.14 321 P **P 13 44 22.1 -1.4**
comp=Z,0.6nm,0.4s,mb4.2,baz=69,slow=4.4,SNR=2.8
TAOE Nuku Hiva Isla 92.66 99 *eLR* LR 14 14 10.5
comp=Z,159nm,24.4s
YKA Yellowknife Ar 98.54 25 P **P 13 44 51.4 -1.0**
comp=Z,0.5nm,0.6s,mb4.2,baz=298,slow=4.3,SNR=12
YKA LR LR 14 27 27.4
comp=Z,5.4nm,19.1s,baz=85,slow=34
NOA NORSAR Array B 98.77 334 LR LR 14 33 06.4
comp=Z,75nm,20.9s,baz=75,slow=38
TORD Torodi Ar. Bea 123.77 289 PKP PKPdf 13 50 12.3 -0.2
comp=Z,0.3nm,0.7s,baz=75,slow=1.8,SNR=3.8

MEX 04 13:35:41.4±0.6, 15°.73N×93°.94W, h16^{km}±15^{km}, MD4.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.63**	**326**	*i* P	Pn	13 36 06.2	-3.3
CMIG				*e*S	Sn	13 36 25.2	-5.0
THIG		**1.81**	**117**	*i* P	Pn	13 36 09.2	-2.6
THIG				*i* S	Sn	13 36 29.6	-4.8
CCIG	**Comitan**	**1.81**	**72**	*i* P	Pn	13 36 08.4	-3.6
CCIG				*i* S	Sn	13 36 29.1	-5.5
HUIG	**Huatulco**	**2.09**	**271**	*i* P	Pn	13 36 12.2	-3.6
HUIG				*i* S	Sn	13 36 36.0	-5.6
VHO	**Vista Hermosa**	**3.00**	**297**	*i* P	Pn	13 36 26.5	-1.8
VHO				*e*S	Sn	13 37 00.6	-3.3

*DDA **04** 13:37:40.7, 36°.66N×36°.58E, h7^{km}±1^{km}, Md2.8*
*ISCJB **04** 13:37:41.9±0.6, 36°.70N±0°.03×36°.65E±0°.05, h12^{km}±7^{km}, Error ellipse: s-maj=7.2km s-min=4.4km az=42.0*
*ISK **04** 13:37:41.6, 36°.71N×36°.72E, h9^{km}, MD2.9*
*CSEM **04** 13:37:42.4±0.2, 36°.70N×36°.72E, h15^{km}, MD2.8, Error ellipse: s-maj=6.6km s-min=4.2km az=135.0*

ISC 04 13:37:42.2±0.6, 36°.68N±0°.04×36°.66E±0°.05, h11^{km}±9^{km}, n16, σ1^{s}.19/28, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.35**	**74**	*i* P	**Pg**	**13 37 49.0**	**-0.2**
KUZU				*i* S	**Sg**	**13 37 55.7**	**+1.8**
KUZU	**Kuzuini**	**0.35**	**74**	*i* P	**Pg**	**13 37 49.0**	**-0.1**
KUZU				*i* S	**Sg**	**13 37 55.7**	**+1.9**
GAZ	**Gaziantep**	**0.66**	**42**	*e*Pg	**Pg**	**13 37 54.0**	**-1.1**
GAZ				*e*Sg	**Sg**	**13 38 02.5**	**-1.3**
GAZ	**Gaziantep**	**0.66**	**42**	*e*Pg	**Pg**	**13 37 54.0**	**-1.1**
GAZ				*e*Sg	**Sg**	**13 38 02.5**	**-1.3**
HTY	**Hatay**	**0.70**	**217**	*e*PG	**Pg**	**13 37 56.4**	**+0.8**
HTY				*e*SG	**Sg**	**13 38 07.1**	**+2.3**
HTY	**Hatay**	**0.70**	**217**	*e*Pg	**Pg**	**13 37 56.4**	**+0.7**
HTY				*e*Sg	**Sg**	**13 38 07.1**	**+2.3**
YAYL	**Yayladag**	**0.78**	**215**	*i* P	**Pg**	**13 37 55.0**	**-2.3**
YAYL				*i* S	**Sg**	**13 38 05.9**	**-1.6**
YAYL	**Yayladag**	**0.78**	**215**	*i* P	**Pg**	**13 37 55.0**	**-2.3**
YAYL				*i* S	**Sg**	**13 38 05.9**	**-1.6**
KMRS	**Kahramanmaras**	**0.85**	**13**	*e*PG	**Pg**	**13 37 57.8**	**-0.8**
KMRS				*e*SG	**Sg**	**13 38 09.4**	**-0.3**
KMRS	**Kahramanmaras**	**0.85**	**13**	*e*Pg	**Pg**	**13 37 57.8**	**-0.8**
KMRS				*e*Sg	**Sg**	**13 38 09.4**	**-0.3**
GZT	**Gaziantep**	**0.99**	**47**	*i* P	**Pg**	**13 38 00.9**	**-0.4**
GZT				*i* S	**Sg**	**13 38 15.8**	**+1.6**
KRTS	**Karatas**	**1.04**	**265**	*e*PN	**Pn**	**13 38 03.4**	**+0.7**
KRTS	**Karatas**	**1.04**	**265**	*e*Pn	**Pn**	**13 38 03.4**	**+0.7**
KOZT	**Kozan**	**1.04**	**321**	*e*PG	**Pg**	**13 38 02.3**	**0.0**
KOZT				*e*SG	**Sg**	**13 38 16.8**	**+1.0**
MALT	**Malatya**	**2.15**	**40**	*e*PN	**Pn**	**13 38 17.9**	**-0.2**
MALT	**Malatya**	**2.15**	**40**	*e*Pn	**Pn**	**13 38 17.9**	**-0.2**

GUC 04 13:44:04.6±0.6, 29°.99S×72°.44W, h20^{km}, ML4.1, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**1.24**	**120**	‖ *i* P	Pn	13 44 26.3	-0.5
OVCH				*i* S	Sb	13 44 42.3	-0.5
CMCH	**Combarbala**	**1.71**	**134**	*e*P	Pn	13 44 33.8	+0.5
CMCH				*i* S	Sn	13 44 55.7	+1.1
CMCH				AML	AML	13 45 10.8	
	comp=E,4μm,0.8s						
CHNG	**Los Chungos**	**2.05**	**157**	*e*P	Pn	13 44 42.6	+4.6
CHNG				*i* S	Sn	13 45 08.4	+5.4
CLCH	**Cerro Calan**	**3.77**	**155**	*e*P	Pn	13 45 06.1	+4.6
CLCH				*e*S	Sn	13 45 50.7	+5.5
FCH	**Farellones**	**3.80**	**152**	*e*P	Pn	13 45 06.3	+4.3
FCH				*e*S	Sn	13 45 51.4	+5.2
LMEL	**Las Melosas**	**4.29**	**154**	*e*P	Pn	13 45 13.8	+5.1
LMEL				*i* S	Sn	13 46 04.1	+5.8

*NIED **04** 13:49:00, 28°.70N×142°.30E, h5^{km}, Mw4.4 Best double couple: M0=4.42000×10^{15} NP1:φ0=358.00000°, δ86.00000°, λ94.00000°. NP2:φ0=131.00000°, δ6.00000°, λ43.00000°.*
*IDC **04** 13:49:18.2±0.6, 28°.63N×142°.42E, h0^{km}, mb3.9/16, mb1 4.1/18, mb1mx4.0/24, mbtmp3.9/18, ML3.7/2, Error ellipse: s-maj=21.8km s-min=12.6km az=85.0*
*ISCJB **04** 13:49:21.4±0.5, 28°.66N±0°.04×142°.4E±0°.1, h33^{km}, mb4.0/22, Error ellipse: s-maj=14.2km s-min=6.0km az=174.1*
*BJI **04** 13:49:21.7, 28°.60N×142°.40E, h36^{km}, mB4.6/5, mb4.3/7*
*NEIC **04** 13:49:23.7±1.4, 28°.63N×142°.42E, h36^{km}±12^{km}, mb4.5/6, MW4.4(NIED), Error ellipse: s-maj=12.2km s-min=8.2km az=84.0*

ISC 04 13:49:23.6±0.5, 28°.64N±0°.04×142°.4E±0°.1, h35^{km}, n34, σ0^{s}.84/38, mb4.0/22, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.55**	**187**	Pn	**Pn**	**13 49 48.5**	**-0.2**
	16nm,0.3s,baz=14,slow=18,SNR=10						
CBIJ				Sn	**Sn**	**13 50 07.1**	**-0.4**
	108nm,0.3s,baz=270,slow=23,SNR=25						
MJAR	**Matsushiro Arr**	**8.64**	**337**	Pn	**Pn**	**13 51 26.0**	**-0.1**
	1.7nm,0.3s,baz=159,slow=12,SNR=38						
MJAR				Sn	**Sn**	**13 52 58.9**	**-3.4**
	0.2nm,0.3s,baz=180,slow=16,SNR=3.1						
MJAR	**Matsushiro Arr**	**8.64**	**337**	Pn	**Pn**	**13 51 26.0**	**-0.1**
MJAR				Sn	**Sn**	**13 52 58.9**	**-3.4**
MAJO	**Matsushiro**	**8.64**	**337**	*e*P	**Pn**	**13 51 26.3**	**+0.2**
	58nm,1.1s						
MAT	**Matsushiro**	**8.64**	**337**	P	**Pn**	**13 51 26.6**	**+0.5**
MAT				*e*S	**Sn**	**13 52 58.9**	**-3.4**
KSRS	**Korea Array**	**14.98**	**310**	Pn	**Pn**	**13 52 54.5**	**+1.8**
	0.2nm,0.3s,baz=116,slow=13,SNR=7.8						
ASAJ	**Asahikawa**	**15.45**	**1**	Pn	**Pn**	**13 52 55.9**	**-2.9**
	0.4nm,0.3s,baz=207,slow=11,SNR=3.9						
YULB	**Yu-li**	**19.67**	**259**	*e*P	**Pn**	**13 53 51.8**	**+0.6**
ULN	**Ulaanbaatar**	**33.36**	**315**	*e*P	**P**	**13 55 58.6**	**+0.3**
	1.3nm,0.7s,mb4.0						
SONM	**Songino Array**	**33.76**	**315**	P	**P**	**13 56 00.8**	**-1.0**
	0.7nm,0.5s,mb3.8,baz=112,slow=7.9,SNR=5.4						
CMAR	**Chiang Mai Arr**	**40.92**	**265**	P	**P**	**13 57 02.8**	**-0.1**
	0.8nm,0.7s,mb3.4,baz=83,slow=4.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**48.47**	**318**	P	**P**	**13 58 03.0**	**+0.5**
	3.8nm,0.8s,mb4.5,baz=103,slow=6.6,SNR=14						
ZALV				PcP	PcP	13 59 28.5	+0.3
	0.8nm,0.5s,baz=98,slow=3.6,SNR=3.7						
WRAB	**Tennant Creek**	**48.91**	**190**	*e*P	**P**	**13 58 05.9**	**-0.2**
	4.4nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**48.92**	**190**	*e*P	**P**	**13 58 05.8**	**-0.4**
WRA	**Warramunga Arr**	**48.92**	**190**	P	**P**	**13 58 05.9**	**-0.4**
	3.0nm,0.5s,mb4.5,baz=16,slow=9.1,SNR=45						
MK31	**Makanchi Array**	**49.66**	**309**	*e*P	**P**	**13 58 11.9**	**+0.1**
MKAR	**Makanchi Array**	**49.66**	**309**	P	**P**	**13 58 11.9**	**+0.2**
	2.0nm,0.7s,mb4.2,baz=97,slow=8.6,SNR=20						
KURK	**Kurchatov**	**52.06**	**314**	*e*P	**P**	**13 58 30.7**	**+0.9**
	10nm,1.2s,mb4.6						
ASAR	**Alice Springs**	**52.64**	**190**	P	**P**	**13 58 33.6**	**-0.7**
	0.2nm,0.4s,mb3.4,baz=2.0,slow=5.3,SNR=17						
AML	**Almayashu**	**56.22**	**304**	P	**P**	**13 58 60.0**	**-0.3**
	2.3nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**57.05**	**317**	P	**P**	**13 59 06.7**	**+0.8**
	1.8nm,0.5s,mb4.3,baz=94,slow=8.9,SNR=15						
BRVK	**Borovoye**	**57.12**	**317**	*e*P	**P**	**13 59 05.2**	**-1.1**
	2.0nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**60.18**	**181**	P	**P**	**13 59 27.8**	**0.0**
	1.3nm,0.7s,mb4.1,baz=337,slow=15,SNR=2.7						
ABKAR	**Akbulak array**	**64.17**	**314**	*e*P	**P**	**13 59 55.0**	**+0.5**
	4.9nm,0.6s,mb4.7						
YKA	**Yellowknife Ar**	**70.70**	**29**	P	**P**	**14 00 35.2**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=294,slow=6.4,SNR=6.4						
YKA	**Yellowknife Ar**	**70.70**	**29**	P	**P**	**14 00 35.2**	**-0.3**
FINES	**FINESS Array B**	**76.66**	**334**	P	**P**	**14 01 09.8**	**-0.8**
	0.6nm,0.4s,mb3.9,baz=62,slow=6.1,SNR=6.5						
NVAR	**Mina Array Bea**	**79.42**	**52**	P	**P**	**14 01 26.8**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=309,slow=5.7,SNR=3.0						
AKASG	**Malin Array Be**	**81.50**	**324**	P	**P**	**14 01 36.9**	**-0.3**
	0.3nm,0.3s,mb3.6,baz=46,slow=4.3,SNR=4.4						
NB2	**NORSAR Subarra**	**82.26**	**338**	P	**P**	**14 01 40.8**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=41,slow=5.3						
NOA	**NORSAR Array B**	**82.26**	**338**	P	**P**	**14 01 41.0**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=43,slow=5.4,SNR=4.9						
PDAR	**Pinedale Array**	**82.98**	**45**	P	**P**	**14 01 45.9**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=291,slow=3.6,SNR=2.6						
BRTR	**Keskin Array B**	**85.11**	**313**	P	**P**	**14 01 56.2**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.3,baz=115,slow=5.0,SNR=11						
TXAR	**Lajitas Array**	**94.53**	**53**	P	**P**	**14 02 42.6**	**+1.8**
	comp=Z,0.3nm,0.6s,mb3.9,baz=330,slow=1.7,SNR=3.7						

*IDC **04** 13:57:20.2±1.2, 17°.40N×122°.52E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.4/23, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=50.6km s-min=21.0km az=80.0*
*ISCJB **04** 13:57:23.8±0.9, 17°.63N±0°.03×122°.51E±0°.06, h26^{km}±6^{km}, mb3.6/3, Error ellipse: s-maj=9.7km s-min=5.5km az=175.3*
*MAN **04** 13:57:24, 17°.59N×122°.44E, h15^{km}, mb5.0, ML3.9, MS4.0*

ISC 04 13:57:24.6±0.9, 17°.63N±0°.03×122°.40E±0°.06, h12^{km}±5^{km}, n16, σ1^{s}.00/25, mb3.6/3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**0.56**	**278**	*e*P	**Pg**	**13 57 34.8**	**-0.8**
PALP	**Palanan**	**0.56**	**178**	*e*P	**Pg**	**13 57 35.0**	**-0.6**
PALP				*e*S	**Sg**	**13 57 43.6**	**+0.5**
SGCP	**Mt. Cagua**	**0.70**	**331**	*e*P	**Pg**	**13 57 38.5**	**+0.3**
SGCP				*e*S	**Sg**	**13 57 46.7**	**-0.7**
CAUP	**Cauayan**	**0.88**	**219**	*e*P	**Pg**	**13 57 42.0**	**+0.5**
CAUP				*e*S	**Sg**	**13 57 53.3**	**+0.3**
APYP	**Conner**	**1.13**	**282**	*e*P	**Pb**	**13 57 45.5**	**-0.6**
APYP				*e*S	**Sb**	**13 57 59.9**	**-0.9**
ABRA	**Dolores**	**1.61**	**271**	*e*P	**Pn**	**13 57 53.1**	**+0.2**
ABRA				*e*S	**Sn**	**13 58 14.6**	**+1.0**
PIP	**Pasuquin**	**1.83**	**292**	‖ *i* P	**Pn**	**13 57 57.7**	**+1.8**
PIP				*e*S	**Sn**	**13 58 22.6**	**+3.6**
BALP	**Baler**	**2.04**	**203**	*e*P	**Pn**	**13 57 58.1**	**-0.6**
BALP				*e*S	**Sn**	**13 58 23.7**	**-0.3**
BOLP	**Bolinao**	**2.69**	**243**	*e*P	**Pn**	**13 58 08.5**	**+0.9**
BOLP				*e*S	**Sn**	**13 58 38.4**	**-1.8**
BBP	**Basco**	**2.83**	**352**	*e*P	**Pn**	**13 58 10.9**	**+1.3**
SCZP	**Santa Cruz**	**3.02**	**233**	*e*P	**Pn**	**13 58 14.1**	**+1.9**
TGY	**Tagaytay City**	**3.78**	**202**	Pn	**Pn**	**13 58 16.6**	**-6.1**
	12nm,0.3s,baz=30,slow=8.1,SNR=2.3						
TGY				Sn	**Sn**	**13 59 06.7**	**-0.4**
	25nm,0.3s,baz=72,slow=20,SNR=2.2						
KSRS	**Korea Array**	**20.34**	**13**	P	**P**	**14 01 59.5**	**-1.3**
	0.5nm,0.7s,baz=198,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**39.13**	**162**	P	**P**	**14 04 47.3**	**-4.9**
	2.3nm,0.9s,mb3.9,baz=343,slow=9.3,SNR=11						
ASAR	**Alice Springs**	**42.55**	**164**	P	**P**	**14 05 16.4**	**-3.9**
	0.6nm,0.7s,mb3.4,baz=347,slow=6.8,SNR=13						
MKAR	**Makanchi Array**	**43.96**	**320**	P	**P**	**14 05 31.3**	**-0.3**
	0.6nm,0.6s,mb3.5,baz=102,slow=7.6,SNR=6.2						

*NEIC **04** 14:07:32.4, 32°.64S×71°.60W, h34^{km}, ML3.6(GUC), After*

GUC.

GUC 04 14:07:32.4±0.6, 32°64S×71°60W, h34km±2km, MD4.1, ML3.6, 8C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.76**	**6**	⇑*iP*	Pn	14 07 46.6	-0.2
CHNG				*i* S	Sn	14 07 57.4	+0.3
JACH	**Jahuel**	**0.85**	**93**	⇑*iP*	Pn	14 07 48.5	+0.5
SAN	**Santiago**	**1.13**	**136**	*eP*	Pn	14 07 52.4	+0.6
SAN				*i* S	Sn	14 08 07.7	+1.6
SAN	**Santiago**	**1.13**	**136**	*eP*	Pn	14 07 52.4	+0.6
SAN				*i* S	Sn	14 08 07.7	+1.6
SAN				AML	AML	14 08 08.6	
	comp=E,3μm,0.4s						
TACH	**Talagante**	**1.15**	**151**	⇑*iP*	Pn	14 07 52.5	+0.4
TACH				*e*S	Sn	14 08 07.3	+0.7
CLCH	**Cerro Calan**	**1.17**	**130**	⇓*iP*	Pn	14 07 53.2	+0.9
CLCH				*i* S	Sn	14 08 08.7	+1.6
CLCH				AML	AML	14 08 12.1	
	comp=E,2μm,0.5s						
FSR	**Penalolen**	**1.23**	**133**	*e*P	Pn	14 07 54.3	+1.1
FSR				*i* S	Sn	14 08 10.5	+2.0
FSR	**Penalolen**	**1.23**	**133**	*e*P	Pn	14 07 54.3	+1.1
FSR				*i* S	Sn	14 08 10.5	+2.0
FSR				AML	AML	14 08 11.7	
	comp=E,527nm,0.3s						
ANTU	**Antumapu**	**1.23**	**139**	⇑*iP*	Pn	14 07 54.3	+1.1
ANTU				*i* S	Sn	14 08 10.5	+1.9
ANTU	**Antumapu**	**1.23**	**139**	⇑*iP*	Pn	14 07 54.3	+1.1
ANTU				*i* S	Sn	14 08 10.5	+1.9
ANTU				AML	AML	14 08 14.6	
	comp=N,2μm,0.2s						
FCH	**Farellones**	**1.29**	**122**	⇓*iP*	Pn	14 07 53.7	-0.4
FCH				*i* S	Sn	14 08 11.3	+1.1
FCH				AML	AML	14 08 14.3	
	comp=N,2μm,0.2s						
LNV	**Longovilo**	**1.32**	**173**	*e*P	Pn	14 07 54.0	-0.4
LNV				*e*S	Sn	14 08 11.4	+0.6
PCH	**Pirque**	**1.33**	**137**	⇑*iP*	Pn	14 07 55.7	+1.0
PCH				*i* S	Sn	14 08 13.6	+2.4
SJCH	**San Jose de Ma**	**1.44**	**134**	*e*P	Pn	14 07 57.5	+1.3
SJCH				*i* S	Sn	14 08 16.2	+2.3
SJCH	**San Jose de Ma**	**1.44**	**134**	*e*P	Pn	14 07 57.5	+1.3
SJCH				*i* S	Sn	14 08 16.2	+2.3
SJCH				AML	AML	14 08 19.8	
	comp=E,911nm,0.4s						
CHCH	**Chadas Angostu**	**1.51**	**149**	*e*P	Pn	14 07 58.3	+1.2
CHCH				*e*S	Sn	14 08 18.5	+2.9
CMCH	**Combarbala**	**1.55**	**19**	⇑*iP*	Pn	14 07 58.9	+1.3
CMCH				*i* S	Sn	14 08 19.4	+2.9
CMCH	**Combarbala**	**1.55**	**19**	⇑*iP*	Pn	14 07 58.9	+1.3
CMCH				*i* S	Sn	14 08 19.4	+2.9
CMCH				AML	AML	14 08 23.8	
	comp=N,8μm,0.8s						
LMEL	**Las Melosas**	**1.68**	**136**	⇓*iP*	Pn	14 08 01.1	+1.7
LMEL				*i* S	Sn	14 08 22.9	+3.3
LMEL	**Las Melosas**	**1.68**	**136**	⇓*iP*	Pn	14 08 01.1	+1.7
LMEL				*i* S	Sn	14 08 22.9	+3.3
LMEL				AML	AML	14 08 26.8	
	comp=N,2μm,0.3s						
CACH	**El Canelo**	**1.69**	**151**	⇓*iP*	Pn	14 08 01.9	+2.3
CACH				*e*S	Sn	14 08 24.6	+4.5
OVCH	**Ovalle**	**2.06**	**10**	*e*P	Pn	14 08 05.9	+1.3
OVCH				*e*S	Sn	14 08 31.7	+2.7
OVCH	**Ovalle**	**2.06**	**10**	*e*P	Pn	14 08 05.9	+1.3
OVCH				*e*S	Sn	14 08 31.7	+2.7
OVCH				AML	AML	14 08 41.6	
	comp=N,1μm,0.5s						
LCO	**Las Campanas**	**3.70**	**12**	*e*P	Pn	14 08 28.1	+0.9
LCO				*e*S	Sn	14 09 12.4	+2.8

*IDC **04** 14:18:50.1±4.2, 2°44S×99°12E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/21, mbtmp3.7/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/23, Error ellipse: s-maj=168.9km s-min=24.0km az=57.0*

*DJA **04** 14:19:07, 1°14S×99°11E, h11km, MLv3.2/4*

ISC 04 14:18:53.5±6.5, 2°3S±0°2×99°4E±0°2, h16km±40km, n14, σ0°33/10, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.97**	**341**	P	**Pb**	**14 19 12.1**	**+0.1**
PDSI	**Padang**	**1.70**	**39**	P	**Pn**	**14 19 22.4**	**-0.2**
PPI	**Padang Panjang**	**2.04**	**29**	P	**Pn**	**14 19 27.6**	**+0.3**
SDSI	**Sungai Dareh**	**2.42**	**57**	P	**Pg**	**14 19 45.4**	**+5.5**
MNSI	**Mandailing Nat**	**3.03**	**3**	P	**Pn**	**14 19 40.4**	**-0.5**
BKNI	**Bangkinang**	**3.04**	**33**	P	**Pn**	**14 19 46.2**	**+5.2**
KSI	**Kapahiang**	**3.48**	**114**	P	Px	14 20 12.0	
PSI	**Prapat**	**5.04**	**355**	LR	LR	14 22 42.8	
	comp=Z,110nm,18.3s,baz=198,slow=46						
WRA	**Warramunga Arr**	**38.39**	**120**	P	**P**	**14 26 14.1**	**-0.2**
	0.4nm,0.5s,mb3.4,baz=293,slow=8.5,SNR=7.1						
ASAR	**Alice Springs**	**39.59**	**125**	P	**P**	**14 26 24.6**	**+0.2**
	0.2nm,0.4s,mb3.2,baz=300,slow=8.2,SNR=14						
SONM	**Songino Array**	**50.26**	**6**	P	**P**	**14 27 49.4**	**+0.5**
	1.1nm,0.7s,mb4.0,baz=188,slow=9.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**57.31**	**350**	P	**P**	**14 28 40.1**	**-0.3**
	1.0nm,0.5s,mb4.1,baz=174,slow=6.0,SNR=7.0						
AKTO	**Aktyubinsk**	**63.29**	**332**	LR	LR	14 59 14.3	
	comp=Z,22nm,18.4s,baz=333,slow=38						
TXAR	**Lajitas Array**	**145.27**	**37**	PKPbc	PKPbc	14 38 31.6	+0.7
	0.6nm,0.7s,baz=329,slow=1.1,SNR=9.5						

*IDC **04** 14:24:38.8±0.9, 35°07N×81°47E, h0km, mb3.5/9, mb1 3.6/13, mb1mx3.5/27, mbtmp3.5/13, ML3.4/4, MS3.1/5, Ms1 3.2/5, ms1mx2.7/27, Error ellipse: s-maj=25.2km s-min=17.9km az=48.0*

*ISCJB **04** 14:24:40.6±0.5, 35°32N±0°06×81°5E±0°1, h10km, mb3.4/9, MS3.1/3, Error ellipse: s-maj=15.1km s-min=5.6km az=150.9*

*NEIC **04** 14:24:40.5±0.8, 35°07N×81°48E, h10km, Error ellipse: s-maj=18.0km s-min=14.8km az=56.0*

*BJI **04** 14:24:52.8, 36°15N×81°20E, h15km, ML3.6/4*

ISC 04 14:24:42.9±0.5, 35°35N±0°06×81°5E±0°1, h10km, n25, σ1°24/25, mb3.4/9, MS3.1/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.07**	**315**	*e*Pn	**Pn**	**14 26 13.8**	**+1.1**
KSH				Sn	**Sn**	**14 27 22.6**	**+0.4**
KSH				smax			
	comp=N,140nm,1.0s						
KSH				smax			
	comp=E,110nm,0.9s						
KOLN	**Koldanda**	**7.76**	**166**	*e*P	**Pn**	**14 26 34.8**	**-1.1**
	comp=E,12nm,0.4s						
GKN	**Gorkha**	**7.79**	**159**	*e*P	**Pn**	**14 26 36.8**	**+0.5**
	comp=E,9.8nm,0.4s						
KKN	**Kakani**	**8.19**	**156**	*e*P	**Pn**	**14 26 43.0**	**+1.2**
	comp=E,10nm,0.5s						
GUN	**Gumba**	**8.29**	**152**	*e*P	**Pn**	**14 26 44.6**	**+1.4**
	comp=E,10nm,0.4s						
PKI	**Pulchoki**	**8.43**	**156**	*e*P	**Pn**	**14 26 46.0**	**+0.9**
	comp=E,9.0nm,0.4s						
AAK	**Ala-Archa**	**9.10**	**325**	Pn	**Pn**	**14 26 59.6**	**+5.4**
	comp=E,0.0nm,0.3s,baz=120,slow=8.1,SNR=3.9						
AAK				Pg	Pn	14 27 22.6	+28
	comp=E,0.0nm,0.3s,baz=131,slow=9.5,SNR=6.6						
AAK	**Ala-Archa**	**9.10**	**325**	*e*Pn	**Pn**	**14 26 59.1**	**+4.9**
	comp=E,9.3nm,0.7s						
AAK				Pg	Pn	14 27 22.6	+28
MKAR	**Makanchi Array**	**11.45**	**3**	Pn	**Pn**	**14 27 26.7**	**+0.3**
	comp=E,0.3nm,0.3s,baz=186,slow=14,SNR=9.3						
KURK	**Kurchatov**	**15.50**	**353**	Pn	**Pn**	**14 28 17.6**	**-3.9**
	comp=E,0.0nm,0.3s,baz=178,slow=11,SNR=4.3						
KURK				LR	LR	14 35 15.2	
	comp=E,47nm,19.5s,baz=255,slow=40						
ZALV	**Zalesovo Beam**	**18.74**	**6**	P	**Pn**	**14 29 02.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=189,slow=8.4,SNR=3.6						
BVAR	**Borovoye Array**	**19.35**	**339**	P	**Pn**	**14 29 09.9**	**+0.4**
	comp=E,0.4nm,0.3s,baz=144,slow=12,SNR=3.7						
BVAR				LR	LR	14 37 11.2	
	comp=E,78nm,18.1s,slow=38						
SONM	**Songino Array**	**22.28**	**48**	P	**P**	**14 29 41.1**	**+1.0**
	comp=E,0.2nm,0.3s,mb3.1,baz=328,slow=5.1,SNR=3.2						
AKTK	**Aktyubinsk**	**22.75**	**319**	P	**P**	**14 29 45.8**	**+0.7**
AKTK				LR	LR	14 40 47.4	
AKTO	**Aktyubinsk**	**22.75**	**319**	P	**P**	**14 29 45.8**	**+0.7**
	comp=E,0.5nm,0.5s,mb3.2,baz=108,slow=15,SNR=3.0						
AKTO				LR	LR	14 40 47.4	
	comp=E,65nm,21.1s,MS3.0,baz=312,slow=42						
KSRS	**Korea Array**	**37.11**	**73**	LR	LR	14 49 37.6	
	comp=E,19nm,20.1s,MS2.9,baz=215,slow=40						
BRTR	**Keskin Array B**	**37.87**	**291**	P	**P**	**14 31 59.7**	**-0.3**
	comp=E,0.4nm,0.7s,mb3.3,baz=72,slow=5.2,SNR=2.5						
FINES	**FINESS Array B**	**43.29**	**325**	P	**P**	**14 32 42.8**	**-1.7**
	comp=E,0.9nm,0.6s,mb3.6,baz=103,slow=8.2,SNR=5.2						
NOA	**NORSAR Array B**	**50.42**	**324**	P	**P**	**14 33 39.2**	**-1.0**
	comp=E,0.5nm,0.7s,mb3.6,baz=88,slow=7.5,SNR=3.2						
NOA				LR	LR	14 57 16.4	
	comp=E,35nm,19.5s,MS3.4,baz=180,slow=39						
NOA	**NORSAR Array B**	**50.42**	**324**	P	**P**	**14 33 39.2**	**-1.0**
NOA				LR	LR	14 57 16.4	
TORD	**Torodi Ar. Bea**	**74.29**	**275**	P	**P**	**14 36 16.9**	**-3.9**
	comp=E,0.5nm,0.8s,mb3.5,baz=42,slow=4.8,SNR=3.3						
WRA	**Warramunga Arr**	**74.36**	**129**	P	**P**	**14 36 17.9**	**-3.0**
	comp=E,0.3nm,0.7s,mb3.3,baz=320,slow=5.7,SNR=3.5						
ASAR	**Alice Springs**	**76.84**	**132**	P	**P**	**14 36 32.4**	**-2.7**
	comp=E,0.3nm,0.7s,mb3.3,baz=316,slow=5.4,SNR=6.6						
YKA	**Yellowknife Ar**	**81.63**	**7**	P	**P**	**14 36 58.4**	**-2.3**
	comp=E,0.3nm,0.6s,mb3.4,baz=342,slow=5.3,SNR=7.8						
YKA	**Yellowknife Ar**	**81.63**	**7**	P	**P**	**14 36 58.4**	**-2.3**

*ISCJB **04** 14:26:13.0±0.4, 35°32N±0°05×81°2E±0°1, h10km, mb3.6/13, Error ellipse: s-maj=13.1km s-min=5.2km az=151.8*

*IDC **04** 14:26:12.1±0.8, 35°23N×81°39E, h0km, mb3.7/9, mb1 3.8/13, mb1mx3.7/24, mbtmp3.7/13, ML3.3/4, Error ellipse: s-maj=29.8km s-min=16.4km az=57.0*

*NEIC **04** 14:26:14.5±0.7, 35°29N×81°16E, h10km, mb3.7/2, Error ellipse: s-maj=16.4km s-min=11.5km az=53.0*

*BJI **04** 14:26:15.6, 35°40N×81°17E, h19km, ML4.1/3*

ISC 04 14:26:15.1±0.4, 35°38N±0°04×81°22E±0°09, h10km, n29, σ1°26/30, mb3.6/13, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.87**	**316**	*e*Pn	**Pn**	**14 27 42.0**	**-0.2**
KSH				Sn	**Sn**	**14 28 50.7**	**+1.2**
KSH				smax			
	comp=N,310nm,0.7s						
KSH				smax			
	comp=E,190nm,0.7s						
PYUN	**Piuthan**	**7.41**	**168**	*e*P	**Pn**	**14 28 01.5**	**-1.8**
KOLN	**Koldanda**	**7.85**	**164**	*e*P	**Pn**	**14 28 08.0**	**-1.3**
	comp=E,12nm,0.4s						
GKN	**Gorkha**	**7.91**	**157**	*e*P	**Pn**	**14 28 10.4**	**+0.3**
	comp=E,9.9nm,0.4s						
KKN	**Kakani**	**8.32**	**154**	*e*P	**Pn**	**14 28 16.4**	**+0.6**
	comp=E,13nm,0.5s						
GUN	**Gumba**	**8.44**	**151**	*e*P	**Pn**	**14 28 19.1**	**+1.7**
	comp=E,12nm,0.3s						
PKI	**Pulchoki**	**8.56**	**154**	*e*P	**Pn**	**14 28 20.3**	**+1.2**
	comp=E,14nm,0.4s						
AAK	**Ala-Archa**	**8.94**	**326**	Pg	Px	14 28 56.5	
	comp=E,0.0nm,0.3s,baz=167,slow=9.5,SNR=5.1						
AAK				Lg		14 30 57.8	
	comp=E,0.0nm,0.3s,baz=349,slow=19,SNR=5.0						
MKAR	**Makanchi Array**	**11.44**	**4**	Pn	**Pn**	**14 28 59.6**	**+1.2**
	comp=E,0.4nm,0.3s,baz=188,slow=14,SNR=7.3						
MKAR				Sn	**Sn**	**14 31 05.1**	**-1.1**
	comp=E,0.2nm,0.3s,baz=182,slow=23,SNR=3.9						
GTA	**Gaotai**	**15.32**	**69**	*e*P	**Pn**	**14 29 59.0**	**+7.7**
GTA				pP	pP	14 30 03.9	+4.9
GTA				sP	sP	14 30 06.1	+5.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**15.45**	**354**	Pn	**Pn**	**14 29 50.8**	**-2.2**
	comp=Z,0.0nm,0.3s,baz=173,slow=12,SNR=11						
KURK	**Kurchatov**	**15.45**	**354**	*e*Pn	**Pn**	**14 29 52.6**	**-0.4**
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**18.74**	**7**	P	**Pn**	**14 30 32.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=2.9						
BVAR	**Borovoye Array**	**19.24**	**340**	P	**Pn**	**14 30 39.1**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=129,slow=12,SNR=4.6						
SONM	**Songino Array**	**22.46**	**49**	P	**P**	**14 31 15.9**	**+1.7**
	comp=Z,1.8nm,0.8s,mb3.6,baz=232,slow=11,SNR=10						
AKTK	**Aktyubinsk**	**22.57**	**319**	P	**P**	**14 31 16.4**	**+1.1**
AKTO	**Aktyubinsk**	**22.57**	**319**	P	**P**	**14 31 16.4**	**+1.1**
	comp=Z,0.6nm,0.4s,mb3.3,baz=112,slow=13,SNR=2.2						
ULN	**Ulaanbaatar**	**22.87**	**49**	*e*P	**P**	**14 31 19.8**	**+1.2**
	comp=Z,4.1nm,1.0s,mb3.8						
CMAR	**Chiang Mai Arr**	**23.04**	**132**	P	**P**	**14 31 21.9**	**+1.3**
	comp=Z,2.1nm,1.0s,mb3.5,baz=315,slow=11,SNR=6.0						
BRTR	**Keskin Array B**	**37.62**	**291**	P	**P**	**14 33 36.9**	**+6.8**
	comp=Z,0.5nm,0.9s,mb3.2,baz=122,slow=4.7,SNR=3.8						
AKASG	**Malin Array Be**	**40.11**	**309**	P	**P**	**14 33 49.7**	**-1.1**
	comp=Z,0.3nm,0.3s,mb3.5,baz=78,slow=8.2,SNR=3.3						
FINES	**FINESS Array B**	**43.12**	**325**	P	**P**	**14 34 16.0**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.8,baz=111,slow=11,SNR=5.5						
NOA	**NORSAR Array B**	**50.25**	**323**	P	**P**	**14 35 11.5**	**+0.4**
	comp=Z,1.2nm,0.9s,mb3.9,baz=87,slow=7.3,SNR=3.2						
GERES	**GERESS Array B**	**50.27**	**307**	P	**P**	**14 35 12.2**	**+0.8**
	comp=Z,0.5nm,0.7s,mb3.6,baz=109,slow=12,SNR=4.2						
TORD	**Torodi Ar. Bea**	**74.04**	**275**	P	**P**	**14 37 50.8**	**-0.7**
	comp=Z,1.4nm,0.9s,mb3.9,baz=42,slow=4.6,SNR=9.1						
WRA	**Warramunga Arr**	**74.58**	**129**	P	**P**	**14 37 52.1**	**-2.3**
	comp=Z,1.2nm,1.0s,mb3.8,baz=323,slow=5.8,SNR=3.6						
ASAR	**Alice Springs**	**77.05**	**132**	P	**P**	**14 38 06.2**	**-2.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=317,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	**81.64**	**7**	P	**P**	**14 38 31.7**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.4,baz=340,slow=5.7,SNR=7.0						
YKA	**Yellowknife Ar**	**81.64**	**7**	P	**P**	**14 38 31.7**	**-1.3**

*IDC **04** 14:43:04.0±0.9, 35°28N×81°47E, h0km, mb3.5/9, mb1 3.7/14, mb1mx3.6/27, mbtmp3.6/14, ML3.3/5, MS3.5/3, Ms1 3.5/3, ms1mx2.8/23, Error ellipse: s-maj=23.4km s-min=16.3km az=60.0*

*ISCJB **04** 14:43:04.9±0.4, 35°47N±0°04×81°62E±0°08, h10km, mb3.6/12, Error ellipse: s-maj=9.7km s-min=4.2km az=158.7*

*NEIC **04** 14:43:05.7±0.7, 35°25N×81°45E, h10km, mb4.0/2, Error ellipse: s-maj=12.8km s-min=9.3km az=219.0*

*NNC **04** 14:43:08.3±0.6, 35°80N×81°45E, h0km, mb3.8, Error ellipse: s-maj=7.1km s-min=2.7km az=127.0*

*BJI **04** 14:43:09.7, 35°64N×81°36E, h11km, mB4.4/2, mb4.2/3, ML4.0/5*

*DMN **04** 14:44:06.8±10.0, 31°10N×82°93E, h10km, Error ellipse: s-maj=288.1km s-min=24.3km az=160.0*

ISC 04 14:43:07.4±0.4, 35°43N±0°04×81°55E±0°07, h10km, n46, σ1°43/48, mb3.6/12, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.88**	**211**	*ex*	**Pn**	**14 44 31.0**	**-3.5**
KSH	**Kashi**	**6.03**	**314**	*e*Pn	**Pn**	**14 44 37.1**	**+0.6**
KSH				Sn	**Sn**	**14 45 46.2**	**+0.7**
KSH				smax			
	comp=N,550nm,1.2s						
KSH				smax			
	comp=E,390nm,0.7s						
PYUN	**Piuthan**	**7.41**	**170**	*e*P	**Pn**	**14 44 56.0**	**+0.5**
KOLN	**Koldanda**	**7.83**	**167**	*e*P	**Pn**	**14 45 00.4**	**-0.9**
	comp=E,17nm,0.5s						
GKN	**Gorkha**	**7.85**	**160**	*e*P	**Pn**	**14 45 02.0**	**+0.3**
	comp=E,12nm,0.3s						
KKN	**Kakani**	**8.25**	**156**	*e*P	**Pn**	**14 45 08.7**	**+1.6**
	comp=E,19nm,0.5s						
KZA	**Kyzart**	**8.26**	**325**	P	**Pn**	**14 45 09.3**	**+2.1**
	SNR=5.2						
GUN	**Gumba**	**8.35**	**153**	*e*P	**Pn**	**14 45 11.1**	**+2.6**
	comp=E,22nm,0.4s						
PKI	**Pulchoki**	**8.50**	**156**	*e*P	**Pn**	**14 45 12.0**	**+1.5**
	comp=E,23nm,0.6s						
UCH	**Uchtor**	**8.73**	**323**	P	**Pn**	**14 45 14.8**	**+1.2**
	SNR=26						
UCH	**Uchtor**	**8.73**	**323**	*e*P	**Pn**	**14 45 14.8**	**+1.2**
TKM2	**Tokmak 2**	**8.79**	**330**	P	**Pn**	**14 45 16.9**	**+2.4**
	SNR=6.0						
TKM2	**Tokmak 2**	**8.79**	**330**	*e*Pn	**Pn**	**14 45 15.8**	**+1.3**
AAK	**Ala-Archa**	**9.05**	**325**	Pn	**Pn**	**14 45 19.3**	**+1.4**
	comp=E,0.0nm,0.3s,baz=177,slow=9.1,SNR=7.5						
AAK				Pg	Pn	14 45 49.5	+32
	comp=E,0.0nm,0.3s,baz=160,slow=10,SNR=7.1						
AAK				Lg		14 47 46.7	
	comp=E,0.0nm,0.3s,baz=238,slow=19,SNR=3.0						
AAK				LR	LR	14 49 21.5	
	comp=E,373nm,18.4s,baz=132,slow=41						
AAK	**Ala-Archa**	**9.05**	**325**	Pn	**Pn**	**14 45 19.3**	**+1.4**
AAK				Pg	Pn	14 45 49.5	+32
AAK				Lg		14 47 46.7	
AAK				LR	LR	14 49 21.5	
AML	**Almayashu**	**9.07**	**320**	P	**Pn**	**14 45 19.4**	**+1.1**
	SNR=10						
CHMS	**Chumysh**	**9.21**	**327**	P	**Pn**	**14 45 22.5**	**+2.2**
	SNR=5.6						
EKS2	**Erkin-Say**	**9.41**	**322**	P	**Pn**	**14 45 25.4**	**+2.4**
	SNR=6.8						
EKS2	**Erkin-Say**	**9.41**	**322**	P	**Pn**	**14 45 22.5**	**-0.5**
WMQ	**Urumqi**	**9.63**	**28**	*e*P	**Pn**	**14 45 30.0**	**+4.1**
MK31	**Makanchi Array**	**11.37**	**3**	Pn	**Pn**	**14 45 49.5**	**-0.3**
	comp=E,2.3nm,0.7s,baz=181,slow=11,SNR=30						
MK31				⇑Sn	**Sn**	**14 47 57.1**	**+0.3**
	comp=E,13nm,1.1s						
MK31	**Makanchi Array**	**11.37**	**3**	*e*Pn	**Pn**	**14 45 49.5**	**-0.2**
MKAR	**Makanchi Array**	**11.37**	**3**	Pn	**Pn**	**14 45 49.8**	**0.0**
	comp=E,0.3nm,0.3s,baz=177,slow=12,SNR=27						
MKAR				Sn	**Sn**	**14 47 56.7**	**-0.1**
	comp=E,0.3nm,0.3s,baz=183,slow=21,SNR=4.1						
MKAR				Lg		14 49 08.7	
	baz=181,slow=29,SNR=2.1						
KK31	**Karatay Array**	**11.48**	**315**	⇓Pn	**Pn**	**14 45 51.7**	**+0.4**
	comp=E,0.7nm,0.6s,baz=124,slow=12,SNR=8.5						
KURBB	**Kurchatov Arra**	**15.35**	**353**	⇓Pn	**Pn**	**14 46 41.1**	**-2.8**
	comp=E,0.9nm,1.2s						
KURK	**Kurchatov**	**15.43**	**353**	⇑Pn	**Pn**	**14 46 42.0**	**-2.9**
	comp=E,5.0nm,1.1s						
KURK	**Kurchatov**	**15.43**	**353**	Pn	**Pn**	**14 46 41.1**	**-3.8**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=13						
KURK				Lg		14 51 18.6	
	comp=E,0.0nm,0.3s,baz=171,slow=26,SNR=3.4						
KURK				LR	LR	14 53 18.2	
	comp=E,108nm,18.3s,baz=160,slow=40						
KURK	**Kurchatov**	**15.43**	**353**	*e*Pn	**Pn**	**14 46 41.8**	**-3.2**
KURK				Lg		14 51 18.6	
KURK				LR	LR	14 53 18.2	
ZALV	**Zalesovo Beam**	**18.66**	**6**	P	**Pn**	**14 47 24.5**	**-1.1**
	comp=E,0.1nm,0.3s,baz=210,slow=12,SNR=7.5						
BVAR	**Borovoye Array**	**19.28**	**339**	P	**Pn**	**14 47 32.0**	**-1.1**
	comp=E,0.3nm,0.3s,baz=141,slow=9.6,SNR=6.9						
BRVK	**Borovoye**	**19.34**	**339**	*e*P	**Pn**	**14 47 32.0**	**-1.8**
ABKAR	**Akbulak array**	**21.02**	**318**	*e*P	**P**	**14 47 49.8**	**-1.2**
	comp=E,5.7nm,0.9s,mb3.9						
SONM	**Songino Array**	**22.22**	**48**	P	**P**	**14 48 04.3**	**+0.4**
	comp=E,0.5nm,0.4s,mb3.3,baz=246,slow=9.3,SNR=3.8						
ULN	**Ulaanbaatar**	**22.64**	**49**	P	**P**	**14 48 11.1**	**+2.8**
	comp=E,4.4nm,0.9s,mb3.9						
AKTK	**Aktyubinsk**	**22.71**	**319**	P	**P**	**14 48 08.9**	**-0.1**
AKTO	**Aktyubinsk**	**22.71**	**319**	P	**P**	**14 48 08.9**	**-0.1**
	comp=E,1.7nm,0.6s,mb3.6,baz=124,slow=8.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**22.88**	**133**	P	**P**	**14 48 14.2**	**+3.1**
	comp=E,1.5nm,0.9s,mb3.4,baz=315,slow=10,SNR=5.2						
BRTR	**Keskin Array B**	**37.86**	**291**	P	**P**	**14 50 22.0**	**-2.2**
	comp=E,0.3nm,0.8s,mb3.1,baz=102,slow=6.2,SNR=2.1						
FINES	**FINESS Array B**	**43.24**	**325**	P	**P**	**14 51 07.7**	**-0.8**
	comp=E,1.4nm,0.6s,mb3.9,baz=106,slow=12,SNR=7.7						
NB2	**NORSAR Subarra**	**50.37**	**323**	P	**P**	**14 52 03.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=87,slow=7.9						
NOA	**NORSAR Array B**	**50.37**	**323**	P	**P**	**14 52 03.5**	**-0.7**
	comp=Z,1.2nm,0.7s,mb4.0,baz=88,slow=7.5,SNR=6.4						
GERES	**GERESS Array B**	**50.45**	**307**	LR	LR	15 17 41.9	
	comp=Z,40nm,19.6s,baz=72,slow=41						
TORD	**Torodi Ar. Bea**	**74.30**	**275**	P	**P**	**14 54 43.1**	**-2.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=52,slow=6.5,SNR=3.3						
WRA	**Warramunga Arr**	**74.40**	**129**	P	**P**	**14 54 43.8**	**-1.8**
	comp=Z,0.6nm,1.0s,mb3.5,baz=320,slow=6.7,SNR=3.1						
ASAR	**Alice Springs**	**76.88**	**132**	P	**P**	**14 54 58.0**	**-1.8**
	comp=Z,0.3nm,0.8s,mb3.3,baz=324,slow=5.4,SNR=4.5						
YKA	**Yellowknife Ar**	**81.56**	**8**	P	**P**	**14 55 23.4**	**-1.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=343,slow=5.2,SNR=5.4						

*NNC **04** 14:52:36.0±6.6, 36°67N×69°59E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=51.9km s-min=37.4km az=179.0*

ISC 04 14:52:37.5±2.4, 36°4N±0°1×69°6E±0°2, h96km±63km, n11, σ0°89/14, 2C-4D, Hindu Kush region

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

*IDC **04** 15:20:36.3±1.2, 24°.07N×121°.29E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/24, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=72.5km s-min=19.2km az=68.0*
*ISCJB **04** 15:20:43.6±0.3, 24°.49N±0'.02×122°.32E±0'.02, h76km±3km, mb3.4/5, Error ellipse: s-maj=4.1km s-min=2.5km az=162.8*
*NEIC **04** 15:20:43.7±1.7, 24°.48N×122°.29E, h72km±14km, Error ellipse: s-maj=31.8km s-min=8.7km az=77.0*
*JMA **04** 15:20:44.4±0.1, 24°.66N×122°.36E, h73km±1km, M2.7*
*TAP **04** 15:20:44.3, 24°.45N×122°.26E, h70km, ML3.8, C*
ISC 04 15:20:44.4±0.3, 24°.49N±0'.02×122°.31E±0'.02, h71km±3km, n73, σ0°84/122, mb3.4/5, 14C-12D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.44**	**286**	⇑*i*P	**Pn**	**15 20 56.5**	**-0.2**
	baz=297						
TWC				S	**Sn**	**15 21 05.2**	**-0.6**
	baz=297						
EGS		**0.49**	**316**	⇑*i*P	**Pn**	**15 20 57.7**	**+0.4**
	baz=323						
EGS				S	**Sn**	**15 21 06.1**	**-0.6**
	baz=323						
ENA	**Nanau**	**0.52**	**263**	P	**Pn**	**15 20 57.3**	**-0.2**
	baz=265						
ENA				*e*S	**Sn**	**15 21 06.9**	**-0.3**
	baz=265						
ILA	**Ilan**	**0.58**	**298**	*i* P	**Pn**	**15 20 58.3**	**+0.2**
	baz=309						
ILA				S	**Sn**	**15 21 08.6**	**+0.4**
	baz=309						
TWB1	**Santiao Chiao**	**0.59**	**330**	⇑*i*P	**Pn**	**15 20 58.1**	**-0.1**
	baz=329						
TWB1				S	**Sn**	**15 21 08.1**	**-0.4**
	baz=329						
TWE	**Neicheng**	**0.63**	**292**	⇑*i*P	**Pn**	**15 20 58.8**	**+0.2**
	baz=299						
TWE				S	**Sn**	**15 21 09.3**	**+0.2**
	baz=299						
YOJ	**Yonaguni jima**	**0.64**	**92**	P	**Pn**	**15 20 58.8**	**+0.1**
YOJ				S	**Sn**	**15 21 09.4**	**+0.2**
NACB	**Ninganchiao**	**0.73**	**244**	*e*P	**Pn**	**15 20 58.4**	**-1.2**
NWF	**Wu-fen Shan**	**0.75**	**320**	⇑*i*P	**Pn**	**15 21 00.2**	**+0.3**
	baz=325						
NWF				*e*S	**Sn**	**15 21 10.8**	**-0.8**
	baz=325						
TWD	**Chiawan**	**0.77**	**238**	⇓*i*P	**Pn**	**15 20 59.4**	**-0.7**
	baz=233						
TWD				S	**Sn**	**15 21 10.8**	**-1.1**
	baz=233						
HWA	**Hwalien**	**0.82**	**232**	⇓P	**Pn**	**15 21 00.3**	**-0.5**
	baz=232						
TWA	**Mucha**	**0.82**	**307**	⇑*i*P	**Pn**	**15 21 00.9**	**+0.2**
	baz=318						
TWA				S	**Sn**	**15 21 12.5**	**-0.4**
	baz=318						
NNS	**Nan Shan**	**0.86**	**267**	⇑*i*P	**Pn**	**15 21 01.1**	**-0.1**
	baz=263						
NNS				*e*S	**Sn**	**15 21 13.4**	**-0.3**
	baz=263						
YHNB	**Yeheng**	**0.87**	**282**	*e*P	**Pn**	**15 21 01.0**	**-0.3**
NSK	**Sanguang**	**0.89**	**282**	⇑*i*P	**Pn**	**15 21 01.9**	**+0.3**
	baz=277						
NSK				*e*S	**Sn**	**15 21 13.8**	**-0.5**
	baz=277						
TATO	**Taipei**	**0.89**	**303**	*e*P	**Pn**	**15 21 01.0**	**-0.6**
TAP1	**Taipei**	**0.90**	**307**	⇑*i*P	**Pn**	**15 21 01.7**	**0.0**
	baz=311						
TAP1				*e*S	**Sn**	**15 21 14.4**	**-0.2**
	baz=311						
TWS1	**Kuangyinshan**	**1.01**	**307**	⇑*i*P	**Pn**	**15 21 03.4**	**+0.2**
	baz=318						
TWS1				*e*S	**Sn**	**15 21 16.9**	**-0.2**
	baz=318						
WHF	**Hehuan Shan**	**1.01**	**250**	⇓P	**Pn**	**15 21 03.1**	**0.0**
	baz=252						
WHF				*e*S	**Sn**	**15 21 16.6**	**-0.5**
	baz=252						
TWY	**Chenhua**	**1.02**	**321**	⇑*i*P	**Pn**	**15 21 03.4**	**+0.2**
	baz=324						
ESL	**Shilin**	**1.05**	**230**	⇓*i*P	**Pn**	**15 21 02.5**	**-1.0**
	baz=224						
ESL				*e*S	**Sn**	**15 21 15.0**	**-2.8**
	baz=224						
TWT	**Tachien**	**1.06**	**257**	⇓*i*P	**Pn**	**15 21 04.4**	**+0.7**
	baz=256						
TWT				*e*S	**Sn**	**15 21 18.4**	**+0.3**
	baz=256						
NCU	**National Centr**	**1.13**	**295**	⇑*i*P	**Pn**	**15 21 05.1**	**+0.6**
	baz=286						
NCU				S	**Sn**	**15 21 20.4**	**+0.8**
	baz=286						
PCYT	**Pengchaiyu**	**1.16**	**349**	⇑*i*P	**Pn**	**15 21 05.6**	**+0.7**
	baz=342						
NSTT	**Nanjuang**	**1.20**	**277**	⇑*i*P	**Pn**	**15 21 05.8**	**+0.4**
	baz=279						
NSTT				*e*S	**Sn**	**15 21 21.8**	**+0.5**
	baz=279						
HSN	**Hsinchu**	**1.26**	**285**	*e*P	**Pn**	**15 21 05.6**	**-0.6**
	baz=288						
IRIF	**Iriomote-Funau**	**1.30**	**97**	P	**Pn**	**15 21 06.8**	**0.0**
IRIF				S	**Sn**	**15 21 23.4**	**-0.2**
EHY	**Hungye**	**1.33**	**223**	⇓P	**Pn**	**15 21 05.9**	**-1.3**
	baz=223						
EHY				*e*S	**Sn**	**15 21 21.6**	**-2.7**
	baz=223						
TWQ1	**Liyutan**	**1.41**	**265**	*e*P	**Pn**	**15 21 08.6**	**+0.4**
	baz=266						
NSY	**Sanyi**	**1.42**	**267**	*e*P	**Pn**	**15 21 08.6**	**+0.3**
	baz=269						
NSY				*e*S	**Sn**	**15 21 26.8**	**+0.6**
	baz=269						
SMLT	**Sun Moon Lake**	**1.42**	**245**	*e*P	**Pn**	**15 21 08.6**	**+0.2**
	baz=240						
SMLT				*e*S	**Sn**	**15 21 26.8**	**+0.3**
	baz=240						
SSLB	**Suanglung**	**1.42**	**241**	*e*P	**Pn**	**15 21 07.7**	**-0.7**
HATJ	**Hateruma jima**	**1.43**	**107**	P	**Pn**	**15 21 09.3**	**+0.9**
HATJ				S	**Sn**	**15 21 28.0**	**+1.4**
YULB	**Yu-li**	**1.43**	**221**	*e*P	**Pn**	**15 21 06.9**	**-1.6**
TYC	**Yuchr**	**1.45**	**247**	*e*P	**Pn**	**15 21 09.0**	**+0.3**
	baz=242						
TYC				*e*S	**Sn**	**15 21 27.3**	**+0.2**
	baz=242						
TWF1	**Yuli**	**1.47**	**220**	⇓*i*P	**Pn**	**15 21 07.6**	**-1.3**
	baz=228						
TCU	**Taichung**	**1.53**	**257**	*e*P	**Pn**	**15 21 10.3**	**+0.6**
	baz=259						
JKRS	**Kuro-shima**	**1.57**	**99**	P	**Pn**	**15 21 10.8**	**+0.5**
JKRS				S	**Sn**	**15 21 30.3**	**+0.5**
YUS	**Yu-Shan**	**1.59**	**232**	⇓*i*P	**Pn**	**15 21 11.1**	**+0.4**
	baz=226						
YUS				*e*S	**Sn**	**15 21 30.3**	**-0.1**
	baz=226						
WNT	**Mingjian**	**1.61**	**248**	*e*P	**Pn**	**15 21 11.7**	**+0.9**
	baz=261						
WNT				*e*S	**Sn**	**15 21 32.2**	**+1.5**
	baz=261						
CHKT	**Chengkung**	**1.63**	**212**	⇓P	**Pn**	**15 21 09.6**	**-1.6**
	baz=203						
CHKT				*e*S	**Sn**	**15 21 27.9**	**-3.4**
	baz=203						
JIJ	**Ishigaki jima**	**1.67**	**94**	P	**Pn**	**15 21 11.7**	**0.0**
JIJ				S	**Sn**	**15 21 31.8**	**-0.5**
ALS	**Alishan**	**1.69**	**235**	⇓P	**Pn**	**15 21 12.5**	**+0.6**
	baz=228						
ALS				*e*S	**Sn**	**15 21 33.4**	**+0.7**
	baz=228						
CHN5	**Tsauling**	**1.74**	**240**	⇓P	**Pn**	**15 21 13.2**	**+0.7**
	baz=231						
CHN5				*e*S	**Sn**	**15 21 34.8**	**+0.9**
	baz=231						
ELDTW	**Lidau**	**1.76**	**223**	⇓*i*P	**Pn**	**15 21 11.8**	**-1.0**
	baz=218						
ELDTW				*e*S	**Sn**	**15 21 31.8**	**-2.5**
	baz=218						
WGK	**Gukeng**	**1.79**	**244**	*e*P	**Pn**	**15 21 13.8**	**+0.6**
	baz=258						
WGK				*e*S	**Sn**	**15 21 36.5**	**+1.4**
	baz=258						
CHN2	**Minshiung**	**1.93**	**241**	*e*P	**Pn**	**15 21 15.5**	**+0.4**
	baz=255						
CHN2				*e*S	**Sn**	**15 21 40.3**	**+1.7**
	baz=255						
CHN4	**Tsaushan**	**1.94**	**235**	*e*P	**Pn**	**15 21 16.1**	**+0.9**
	baz=235						
CHN4				*e*S	**Sn**	**15 21 39.7**	**+1.0**
	baz=235						
STYT	**Tauyuan**	**1.94**	**227**	P	**Pn**	**15 21 15.6**	**+0.3**
	baz=227						
STYT				*e*S	**Sn**	**15 21 38.5**	**-0.3**
	baz=227						
TPUB	**Ta-pu**	**1.94**	**233**	*e*P	**Pn**	**15 21 15.8**	**+0.5**
WTP	**Ta-pu**	**1.99**	**232**	P	**Pn**	**15 21 16.5**	**+0.6**
	baz=232						
WTP				*e*S	**Sn**	**15 21 41.1**	**+1.3**
	baz=232						
CHY	**Chiayi**	**1.99**	**241**	*e*P	**Pn**	**15 21 16.7**	**+0.8**
	baz=254						
CHY				*e*S	**Sn**	**15 21 41.0**	**+1.1**
	baz=254						
TWG	**Pinlang**	**2.01**	**215**	*e*P	**Pn**	**15 21 14.6**	**-1.6**
TWG	**Pinlang**	**2.01**	**215**	*e*P	**Pn**	**15 21 14.7**	**-1.5**
	baz=219						
TWG				*e*S	**Sn**	**15 21 36.9**	**-3.6**
	baz=219						
TWK	**Hsinying**	**2.07**	**234**	*e*P	**Pn**	**15 21 17.2**	**+0.3**
	baz=234						
TWK				*e*S	**Sn**	**15 21 42.4**	**+0.6**
	baz=234						
CHN1	**Nanshi**	**2.09**	**232**	P	**Pn**	**15 21 17.7**	**+0.5**
	baz=232						
CHN1				*e*S	**Sn**	**15 21 42.6**	**+0.3**
	baz=232						
SGST	**Jiashian**	**2.12**	**229**	*e*P	**Pn**	**15 21 18.4**	**+0.8**
	baz=229						
SGST				*e*S	**Sn**	**15 21 43.8**	**+0.9**
	baz=229						
JTJ	**Tarama**	**2.18**	**86**	P	**Pn**	**15 21 19.1**	**+0.6**
JTJ				*e*S	**Sn**	**15 21 45.0**	**+0.5**
ECL	**Taimali**	**2.26**	**214**	P	**Pn**	**15 21 17.9**	**-1.6**
	baz=218						
ECL				*e*S	**Sn**	**15 21 42.7**	**-3.7**
	baz=218						
SSD	**Sandimen**	**2.32**	**222**	*e*P	**Pn**	**15 21 20.7**	**+0.3**
	baz=212						
SSD				*e*S	**Sn**	**15 21 47.8**	**-0.1**
	baz=212						
EAST	**Anshuo**	**2.49**	**213**	*e*P	**Pn**	**15 21 21.4**	**-1.3**
	baz=207						
SCZT	**Fangliau**	**2.62**	**217**	*e*P	**Pn**	**15 21 25.0**	**+0.5**
	baz=216						
SCZT				*e*S	**Sn**	**15 21 56.2**	**+1.0**
	baz=216						
JMJ	**Miyako jima 2**	**2.73**	**83**	*e*S	**Sn**	**15 21 57.1**	**-0.8**
JOGS	**Gusukube**	**2.83**	**84**	P	**Pn**	**15 21 28.3**	**+1.0**
JOGS				S	**Sn**	**15 22 00.6**	**+0.3**
QZH	**Quanzhou**	**3.41**	**278**	Pn	**Pn**	**15 21 35.2**	**0.0**
QZH				Sn	**Sn**	**15 22 11.7**	**-2.8**
QZH				smax			
	comp=N,70nm,0.7s						
QZH				smax			
	comp=E,60nm,0.6s						
KSRS	**Korea Array**	**13.79**	**19**	Pn	**Pn**	**15 24 04.0**	**+7.5**
	comp=E,0.1nm,0.3s,baz=196,slow=11,SNR=5.0						
SONM	**Songino Array**	**26.50**	**336**	P	**P**	**15 26 14.9**	**0.0**
	comp=E,0.2nm,0.5s,mb3.0,baz=152,slow=11,SNR=3.6						
SONM	**Songino Array**	**26.50**	**336**	P	**P**	**15 26 14.9**	**0.0**
MKAR	**Makanchi Array**	**38.84**	**315**	P	**P**	**15 28 01.4**	**-1.0**
	comp=E,0.3nm,0.5s,mb3.4,baz=104,slow=9.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**40.55**	**326**	P	**P**	**15 28 15.0**	**-1.5**
	comp=E,0.3nm,0.4s,mb3.5,baz=122,slow=5.4,SNR=3.0						
WRA	**Warramunga Arr**	**45.69**	**164**	P	**P**	**15 28 57.7**	**-0.5**
	comp=E,1.0nm,0.5s,mb3.8,baz=346,slow=8.7,SNR=20						
WB2	**Warramunga Arr**	**45.69**	**164**	*e*P	**P**	**15 28 57.6**	**-0.7**
ASAR	**Alice Springs**	**49.17**	**166**	P	**P**	**15 29 25.2**	**-0.1**
	comp=E,0.4nm,0.8s,mb3.4,baz=345,slow=9.7,SNR=6.6						

*DDA **04** 15:49:10.6, 38°.54N×27°.26E, h5km±1km, Md2.6*
*ISK **04** 15:49:10.5, 38°.56N×27°.19E, h19km, MD2.6*
*ISCJB **04** 15:49:11.3±0.8, 38°.49N±0'.07×27°.24E±0'.09, h23km±9km, Error ellipse: s-maj=12.8km s-min=10.1km az=35.6*
*CSEM **04** 15:49:11.4±0.2, 38°.53N×27°.27E, h15km, MD2.6, Error ellipse: s-maj=8.0km s-min=4.2km az=128.0*
ISC 04 15:49:11.6±0.7, 38°.52N±0'.07×27°.26E±0'.09, h17km±7km, n16, σ0°65/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.12**	**180**	PG	**Pg**	**15 49 15.4**	**+0.1**
IZM				*e*SG	**Sg**	**15 49 19.0**	**+1.2**
IZM	**Izmir**	**0.12**	**180**	*i* Pg	**Pg**	**15 49 15.4**	**+0.1**
IZM				*e*Sg	**Sg**	**15 49 19.0**	**+1.2**
BLCB	**Balcova**	**0.22**	**232**	*e*PG	**Pg**	**15 49 16.1**	**-0.6**
BLCB				*e*SG	**Sg**	**15 49 19.9**	**-0.3**
BLCB	**Balcova**	**0.22**	**232**	*e*Pg	**Pg**	**15 49 16.1**	**-0.6**
BLCB				*e*Sg	**Sg**	**15 49 19.9**	**-0.3**
AKHS	**Akhisar**	**0.56**	**50**	*e*P	**Pg**	**15 49 21.6**	**-1.1**
AKHS	**Akhisar**	**0.56**	**50**	*e*P	**Pg**	**15 49 21.6**	**-1.1**
AKS	**Akhisar**	**0.56**	**50**	*e*PG	**Pg**	**15 49 22.6**	**-0.1**
AKS	**Akhisar**	**0.56**	**50**	*e*Pg	**Pg**	**15 49 22.6**	**-0.1**
MANT	**Manisa**	**1.02**	**91**	*i* P	**Pb**	**15 49 30.5**	**-0.3**
MANT	**Manisa**	**1.02**	**91**	*i* P	**Pb**	**15 49 30.5**	**-0.2**
KULA	**Kula-Manisa**	**1.10**	**90**	*e*PN	**Pn**	**15 49 32.2**	**0.0**
KULA	**Kula-Manisa**	**1.10**	**90**	*e*Pn	**Pn**	**15 49 32.2**	**0.0**
BALY	**Balya**	**1.25**	**13**	*i* P	**Pn**	**15 49 34.0**	**-0.3**
BALY				*i* S	**Sb**	**15 49 51.7**	**+1.1**
BALY	**Balya**	**1.25**	**13**	*i* P	**Pn**	**15 49 34.0**	**-0.3**
BALY				*i* S	**Sb**	**15 49 51.7**	**+1.1**
DST	**Dursunbey**	**1.52**	**44**	*e*PN	**Pn**	**15 49 38.3**	**+0.3**
DST	**Dursunbey**	**1.52**	**44**	*e*Pn	**Pn**	**15 49 38.3**	**+0.3**

*SZGRF **04** 16:05:50.9, 30°.17N×42°.64W, h33km, mb4.7, MS4.0, Northern Mid-Atlantic Ridge*
*ISCJB **04** 16:05:52.4±0.6, 30°.6N±0'.1×41°.88W±0'.05, h10km, mb4.4/56, MS3.8/32, Error ellipse: s-maj=17.4km s-min=6.1km az=173.6*
*IDC **04** 16:05:52.3±1.0, 30°.63N×41°.91W, h0km, mb3.8/19, mb1 4.0/19, mb1mx3.9/29, mbtmp3.8/19, MS3.8/25, Ms1 3.8/25, ms1mx3.8/30, Error ellipse: s-maj=28.1km s-min=14.3km az=0.0*
*NEIC **04** 16:05:54.1±0.4, 30°.58N×41°.84W, h10km, mb4.6/33, Error ellipse: s-maj=12.2km s-min=4.3km az=175.0*
ISC 04 16:05:54.3±0.6, 30°.6N±0'.1×41°.85W±0'.05, h10km, n127, σ0°69/113, mb4.4/56, MS3.8/32, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.32**	**246**	LR	LR	16 19 10.3	
	comp=Z,346nm,20.0s,MS3.9,baz=98,slow=32						
BBTS	**Babate**	**28.14**	**119**	LR	LR	16 20 19.1	
	comp=Z,487nm,20.3s,MS4.1,baz=35,slow=31						
PCRV	**Puerto La Cruz**	**29.36**	**231**	LR	LR	16 21 21.5	
	comp=Z,83nm,18.9s,MS3.4,baz=232,slow=32						
SCHQ	**Schefferville**	**30.10**	**331**	P	**P**	**16 12 00.8**	**-2.9**
	1.7nm,0.9s,mb3.8,baz=96,slow=15,SNR=2.7						
SCHQ				LR	LR	16 23 52.0	
	comp=Z,326nm,18.4s,MS4.0,baz=100,slow=36						
SCHQ	**Schefferville**	**30.10**	**331**	P	**P**	**16 12 03.4**	**-0.3**
	4.9nm,1.0s,mb4.2						
ESDC	**Sonseca Array**	**32.09**	**63**	P	**P**	**16 12 21.2**	**-0.3**
	0.1nm,0.2s,baz=265,slow=9.2,SNR=4.9						
ESDC				LR	LR	16 22 06.4	
	comp=Z,122nm,20.8s,MS3.6,baz=290,slow=30						
SADO	**Sadowa**	**32.43**	**306**	LR	LR	16 23 44.3	
	comp=Z,228nm,18.4s,MS3.9,baz=93,slow=33						
ROSF	**Rostrenen**	**34.22**	**48**	*e*P	**P**	**16 12 39.9**	**0.0**
	204nm,1.8s,mb5.4						
ROSF	**Rostrenen**	**34.22**	**48**	*e*P	**P**	**16 12 39.9**	**0.0**
	102nm,1.8s,mb5.5						
SDV	**Santo Domingo**	**34.45**	**237**	P	**P**	**16 12 41.7**	**-0.7**
	1.9nm,0.5s,mb4.3,baz=44,slow=12,SNR=4.6						
SDV	**Santo Domingo**	**34.45**	**237**	P	**P**	**16 12 43.1**	**+0.7**
	9.8nm,1.0s,mb4.7						
SJPF	**Ste Jean**	**34.51**	**57**	*e*P	**P**	**16 12 43.4**	**+0.9**
ETSF	**Etsaut**	**34.96**	**58**	*e*P	**P**	**16 12 47.6**	**+1.1**
TKL	**Tuckaleechee C**	**35.28**	**290**	LR	LR	16 25 04.7	
	comp=Z,253nm,18.9s,MS4.0,baz=94,slow=33						
EPF	**Esparros**	**35.63**	**58**	*e*P	**P**	**16 12 53.1**	**+0.8**
GRR	**Gorron**	**35.78**	**48**	*e*P	**P**	**16 12 53.7**	**+0.3**
MFF	**Saint Martin d**	**35.84**	**52**	*e*P	**P**	**16 12 53.0**	**-1.0**
	88nm,1.8s,mb5.1						
MFF	**Saint Martin d**	**35.84**	**52**	*e*P	**P**	**16 12 53.0**	**-1.0**
	44nm,1.8s,mb5.1						
LDF	**La Druitiere**	**36.30**	**48**	*e*P	**P**	**16 12 58.3**	**+0.4**
RJF	**Les Rejaudoux**	**36.76**	**54**	*e*P	**P**	**16 13 02.0**	**+0.1**
RJF				*e*MLR	MLR		
	comp=Z,167nm,21.2s,MS3.5						
RJF	**Les Rejaudoux**	**36.76**	**54**	*e*P	**P**	**16 13 02.0**	**+0.1**
RJF				LR	LR		
	comp=Z,170nm,21.3s,MS3.8						
MTLF	**Montolieu**	**37.03**	**57**	*e*P	**P**	**16 13 04.4**	**+0.2**
	comp=Z,10nm,1.1s,mb4.2						
MTLF	**Montolieu**	**37.03**	**57**	*e*P	**P**	**16 13 04.4**	**+0.2**
	comp=Z,5.1nm,1.1s,mb4.3						
FRB	**Frobisher Bay**	**37.24**	**341**	P	**P**	**16 13 04.5**	**-1.2**
	comp=Z,4.0nm,1.0s,mb4.2,baz=127,slow=7.0,SNR=4.3						
FRB				LR	LR	16 26 13.9	
	comp=Z,104nm,21.3s,MS3.6,baz=30,slow=33						
FRB	**Frobisher Bay**	**37.24**	**341**	P	**P**	**16 13 04.5**	**-1.2**
FRB				LR	LR	16 26 13.9	
TCF	**Toulx Ste Croi**	**37.39**	**53**	*e*P	**P**	**16 13 06.7**	**-0.5**
	comp=Z,16nm,1.1s,mb4.4						
TCF	**Toulx Ste Croi**	**37.39**	**53**	*e*P	**P**	**16 13 06.7**	**-0.5**
	comp=Z,7.8nm,1.1s,mb4.5						
BGF	**Bois d'Agland**	**37.87**	**52**	*e*P	**P**	**16 13 11.3**	**0.0**
AVF	**Avril sur Loir**	**38.25**	**52**	*e*P	**P**	**16 13 13.7**	**-0.8**
	comp=Z,44nm,1.7s,mb4.6						
AVF	**Avril sur Loir**	**38.25**	**52**	*e*P	**P**	**16 13 13.7**	**-0.8**
	comp=Z,22nm,1.7s,mb4.6						
LASF	**Ste Croix**	**38.28**	**56**	*e*P	**P**	**16 13 14.6**	**-0.2**
SSF	**Saint Saulge**	**38.39**	**52**	*e*P	**P**	**16 13 15.4**	**-0.3**
SMF	**Signal de Mont**	**38.56**	**52**	*e*P	**P**	**16 13 17.2**	**+0.1**
	comp=Z,53nm,1.5s,mb4.8						
SMF	**Signal de Mont**	**38.56**	**52**	*e*P	**P**	**16 13 17.2**	**+0.1**
	comp=Z,26nm,1.5s,mb4.7						
LOR	**Lormes**	**38.66**	**51**	*e*P	**P**	**16 13 18.0**	**+0.1**
	comp=Z,21nm,1.2s,mb4.4						
LOR				*e*MLR	MLR		
	comp=Z,77nm,19.0s,MS3.2						
LOR	**Lormes**	**38.66**	**51**	*e*P	**P**	**16 13 18.0**	**+0.1**
	comp=Z,10nm,1.3s,mb4.4						
LOR				LR	LR		
	comp=Z,80nm,19.0s,MS3.6						
VIVF	**Saint-Julien-l**	**38.93**	**55**	*e*P	**P**	**16 13 19.1**	**-1.1**
BAIF	**Baives**	**39.40**	**47**	*e*P	**P**	**16 13 23.9**	**-0.1**
	comp=Z,54nm,1.6s,mb4.7						
BAIF	**Baives**	**39.40**	**47**	*e*P	**P**	**16 13 23.9**	**-0.1**
	comp=Z,27nm,1.6s,mb4.7						
MEZF	**Maizieres J'vi**	**39.65**	**50**	*e*P	**P**	**16 13 26.0**	**-0.2**
	comp=Z,12nm,0.6s,mb4.5						
MEZF	**Maizieres J'vi**	**39.65**	**50**	*e*P	**P**	**16 13 26.0**	**-0.2**
	comp=Z,12nm,0.6s,mb4.8						
ORIF	**Oris-en-Rattie**	**39.79**	**55**	*e*P	**P**	**16 13 28.9**	**+1.5**
	comp=Z,39nm,1.6s,mb4.6						
ORIF				*e*MLR	MLR		
	comp=Z,126nm,22.8s,MS3.4						
ORIF	**Oris-en-Rattie**	**39.79**	**55**	*e*P	**P**	**16 13 28.9**	**+1.5**
	comp=Z,20nm,1.6s,mb4.6						
ROSC	**El Rosal**	**39.87**	**237**	LR	LR	16 26 24.7	
	comp=Z,82nm,21.4s,MS3.5,baz=200,slow=31						
CABF	**La Chapelle**	**40.09**	**53**	*e*P	**P**	**16 13 29.5**	**-0.4**
MBDF	**Montbardon**	**40.41**	**56**	*e*P	**P**	**16 13 33.2**	**+0.7**
HAU	**Haudompre**	**40.44**	**51**	*e*P	**P**	**16 13 32.6**	**-0.1**
HAU				*e*MLR	MLR		
	comp=Z,96nm,18.8s,MS3.4						
HAU	**Haudompre**	**40.44**	**51**	*e*P	**P**	**16 13 32.6**	**-0.1**
HAU				LR	LR		
	comp=Z,100nm,18.8s,MS3.7						
LPL	**La Plagne**	**40.44**	**54**	*e*P	**P**	**16 13 32.9**	**+0.1**
LPG	**La Plagne**	**40.45**	**54**	*e*P	**P**	**16 13 33.4**	**+0.5**
HINF	**Hinteralfeld**	**40.75**	**51**	*e*P	**P**	**16 13 35.4**	**+0.1**
SBF	**Sospel**	**40.85**	**57**	*e*P	**P**	**16 13 36.9**	**+0.7**
CDF	**Champ du Feu**	**41.10**	**50**	*e*P	**P**	**16 13 37.9**	**-0.3**
	comp=Z,16nm,1.2s,mb4.2						
CDF	**Champ du Feu**	**41.10**	**50**	*e*P	**P**	**16 13 37.9**	**-0.3**
	comp=Z,8.3nm,1.2s,mb4.2						
BFO	**Black Forest**	**41.79**	**50**	*e*P	**P**	**16 13 43.7**	**-0.2**
	comp=Z,16nm,1.5s,mb4.4						
IBBN	**Ibbenburen**	**42.04**	**44**	*e*P	**P**	**16 13 45.7**	**-0.1**
	comp=Z,24nm,1.6s,mb4.6						
DBIC	**Dimbokro**	**42.05**	**117**	LR	LR	16 28 44.5	
	comp=Z,313nm,20.3s,MS4.2,baz=287,slow=33						
DAVOX	**Davos/Dischmat**	**42.71**	**53**	P	**P**	**16 13 51.4**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.8,baz=254,slow=11,SNR=3.7						
KEST	**Kesra**	**42.77**	**69**	P	**P**	**16 13 52.4**	**+0.3**
	comp=Z,0.9nm,0.9s,mb3.5,baz=244,slow=2.2,SNR=4.7						
KEST				LR	LR	16 29 56.3	
	comp=Z,26nm,18.1s,MS3.2,baz=196,slow=34						
NRDL	**Niedersach Rie**	**43.49**	**44**	*e*P	**P**	**16 13 57.6**	**0.0**
	comp=Z,17nm,1.4s,mb4.6						
TOA0	**Torodi Ar. Sit**	**43.67**	**104**	P	**P**	**16 13 58.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**43.67**	**104**	P	**P**	**16 13 58.8**	**-0.7**
	comp=Z,1.4nm,0.9s,mb3.7,baz=317,slow=6.3,SNR=6.0						
TORD				LR	LR	16 30 33.7	
	comp=Z,156nm,19.9s,MS3.9,baz=285,slow=34						
GRF	**Grafenberg Arr**	**43.83**	**49**	*e*P	**P**	**16 13 59.6**	**-0.7**
	comp=Z,38nm,2.1s,mb4.8						
GRF				*e*L		16 29 50.7	
	comp=Z,165nm,18.1s						
BSEG	**Bad Segeberg**	**43.86**	**42**	*e*P	**P**	**16 14 00.5**	**0.0**
	comp=Z,28nm,1.4s,mb4.8						
MOX	**Moxa**	**44.17**	**47**	*e*P	**P**	**16 14 03.2**	**+0.1**
MOX							
	comp=Z,100nm,19.0s						
ROTZ	**Rotzenmuhle**	**44.47**	**49**	*e*P	**P**	**16 14 05.8**	**+0.3**
	comp=Z,7.0nm,1.5s,mb4.2						
ULM	**Lac du Bonnet**	**44.49**	**312**	LR	LR	16 30 23.6	
	comp=Z,111nm,18.3s,MS3.

comp=Z,67nm,20.5s,MS3.7,baz=15,slow=32
PDAR Pinedale Array 54.31 303 P **P 16 15 20.3 -0.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=79,slow=9.2,SNR=10.0
PDAR LR LR 16 37 24.4
comp=Z,426nm,18.8s,MS4.5,baz=118,slow=35
IMW Indian Meadow 55.09 305 *eP* **P 16 15 26.1 -0.3**
comp=Z,5.7nm,1.3s,mb4.4
REDW Red Top Meadow 55.13 304 P **P 16 15 27.1 +0.4**
comp=Z,22nm,1.8s,mb4.9
TPAW Teton Pass 55.17 304 *eP* **P 16 15 27.5 +0.4**
comp=Z,4.3nm,1.2s,mb4.3
AKASG Malin Array Be 55.35 47 P **P 16 15 27.3 -0.9**
comp=Z,1.6nm,0.8s,mb4.1,baz=275,slow=6.6,SNR=8.6
YKA Yellowknife Ar 55.45 327 P **P 16 15 28.2 -0.6**
comp=Z,0.8nm,0.9s,mb3.8,baz=89,slow=6.8,SNR=11
YKA LR LR 16 38 48.6
comp=Z,35nm,18.2s,MS3.5,baz=30,slow=36
YKA Yellowknife Ar 55.45 327 P **P 16 15 28.2 -0.6**
YKA LR LR 16 38 48.6
RRI2 Red Ridge 55.47 304 *eP* **P 16 15 29.5 +0.3**
comp=Z,19nm,1.8s,mb4.8
SLMT Seeley Lake 56.25 309 *eP* **P 16 15 35.1 +0.4**
comp=Z,8.2nm,1.4s,mb4.6
MSU Marysvale 57.20 298 *eP* **P 16 15 42.7 +1.1**
comp=Z,16nm,1.9s,mb4.7
CPUP Villa Florida 58.50 196 LR LR 16 38 12.0
comp=Z,119nm,18.4s,MS4.0,baz=234,slow=33
BRTR Keskin Array B 60.73 59 P **P 16 16 05.8 -0.3**
comp=Z,1.2nm,0.9s,mb4.0,baz=267,slow=4.9,SNR=7.7
BRTR LR LR 16 41 41.3
comp=Z,35nm,18.8s,MS3.5,baz=285,slow=35
NVAR Mina Array Bea 61.84 300 P **P 16 16 13.5 -0.1**
comp=Z,0.4nm,0.8s,mb3.6,baz=68,slow=6.1,SNR=3.3
INK Inuvik 62.57 335 P **P 16 16 17.4 -0.7**
comp=Z,4.1nm,1.0s,mb4.5,baz=61,slow=9.8,SNR=11
INK Inuvik 62.57 335 *eP* **P 16 16 17.6 -0.5**
comp=Z,33nm,1.9s,mb5.1
MALT Malatya 64.72 59 *eP* **P 16 16 32.3 -0.5**
comp=Z,10nm,1.4s,mb4.7
ARU Arti 70.47 35 *eP* **P 16 17 08.4 -0.3**
comp=Z,19nm,1.6s,mb4.8
TIXI Tiksi 77.84 3 *eP* **P 16 17 51.9 +0.4**
comp=Z,1.0nm,0.5s,mb4.0
BVAR Borovoye Array 78.09 35 P **P 16 17 53.5 +0.2**
comp=Z,0.5nm,0.7s,mb3.6,baz=307,slow=5.2,SNR=4.4
BVAR LR LR 16 48 51.8
comp=Z,66nm,19.3s,MS4.0,slow=33
KURK Kurchatov 83.53 33 *eP* **P 16 18 22.1 -0.2**
comp=Z,16nm,1.7s,mb4.9
ZAA0 Zalesovo Array 84.04 28 *eP* **P 16 18 24.7 -0.2**
ZALV Zalesovo Beam 84.04 28 P **P 16 18 25.0 +0.1**
comp=Z,0.8nm,0.8s,mb3.9,baz=286,slow=6.0,SNR=8.2
ZALV LR LR 16 55 00.3
comp=Z,24nm,20.6s,MS3.6,baz=54,slow=35
ZALV Zalesovo Beam 84.04 28 P **P 16 18 25.0 +0.1**
ZALV LR LR 16 55 00.3
AML Almayashu 86.46 42 *eP* **P 16 18 38.4 +1.2**
comp=Z,24nm,1.8s,mb5.1
MKAR Makanchi Array 87.98 35 P **P 16 18 43.8 -0.7**
comp=Z,0.9nm,1.1s,mb3.9,baz=318,slow=3.4,SNR=4.3
MKAR LR LR 16 57 36.4
comp=Z,65nm,19.1s,MS4.1,baz=333,slow=35
WMQ Urumqi 92.76 34 *eP* **P 16 19 08.1 +1.2**
PETK Petropavlovsk- 94.94 348 LR LR 17 01 25.6
comp=Z,31nm,20.1s,MS3.8,baz=192,slow=35
BJI Beijing 106.83 17 Pdif Pdif 16 20 07.8 -2.2
BJI SS SS 16 39 37.4 -2.0
BJI LR LR
comp=N,96nm,25.1s,MS4.4
BJI LR LR
comp=E,100nm,24.0s,MS4.4
BJI LR LR
comp=Z,33nm,25.9s,MS3.8
CD2 Chengdu 110.66 31 PKP PKiKP 16 24 27.8 +0.2
KMI Kunming 115.05 35 PKP PKiKP 16 24 32.9 -3.2
GYA Guiyang 115.78 31 *e*Pdif Pdif 16 20 48.6 -1.2
GYA PKP PKPdf 16 24 35.4 -2.1
GYA PP PP 16 25 41.8 +2.3
GYA PKS 16 28 12.0
GYA SKS SKSdf 16 31 45.2 -4.8
GYA SKKS SKKSac 16 32 33.6 -8.7
GYA SS SS 16 41 36.4 -3.1
GYA AMB AMB
comp=Z,80nm,8.0s
GYA LR LR
comp=N,180nm,20.7s,MS4.8
GYA LR LR
comp=E,140nm,19.0s,MS4.8
GYA LR LR
comp=Z,160nm,20.9s,MS4.6

IDC 04 16:06:49.7±1.7, 1°.02S×127°.55E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=156.8km s-min=22.3km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.95**	**161**	P	Pn	16 11 22.6	-2.6
	0.2nm,0.3s,baz=340,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**23.34**	**165**	P	P	16 11 59.6	-0.3
	0.7nm,0.5s,baz=344,slow=12,SNR=14						
STKA	**Stephens Creek**	**33.44**	**158**	P	P	16 13 31.3	+0.9
	2.1nm,1.0s,baz=354,slow=9.2,SNR=3.5						
MKAR	**Makanchi Array**	**61.91**	**326**	P	P	16 17 11.2	0.0
	0.4nm,0.4s,baz=124,slow=7.6,SNR=13						

*ISCJB **04** 16:18:45.2±1.4, 1°.21S±0°.05×127°.31E±0°.05, h16km±13km, mb3.9/6, Error ellipse: s-maj=10.0km s-min=7.5km az=140.7*
*DJA **04** 16:18:45, 0°.95S×127°.39E, h52km, MLv3.6/4*
*IDC **04** 16:18:45.1±1.3, 1°.16S×127°.34E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.8/5, ML3.7/1, MS4.5/1, Ms1 4.5/1, ms1mx2.8/24, Error ellipse: s-maj=129.9km s-min=19.4km az=68.0*
*NEIC **04** 16:18:50.1±0.7, 1°.43S×126°.85E, h35km, mb4.1/1, Error ellipse: s-maj=21.7km s-min=10.8km az=63.0*
ISC 04 16:18:46.1±1.6, 1°.18S±0°.05×127°.33E±0°.07, h8km±13km, n19, σ1°.41/22, mb3.9/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.56**	**17**	P	**Pg**	**16 18 56.9**	**-0.1**
LBMI				S	**Sg**	**16 19 04.2**	**-0.2**
NLAI	**Namlea**	**2.06**	**186**	P	**Pn**	**16 19 22.9**	**+1.9**
NLAI				S	**Sn**	**16 19 48.2**	**+1.3**
AAI	**Ambon**	**2.63**	**161**	P	**Pn**	**16 19 26.5**	**-2.4**
MSAI	**Masohi**	**2.68**	**143**	P	**Pn**	**16 19 27.6**	**-1.9**
LUWI	**Luwuk**	**4.56**	**272**	P	**Pn**	**16 19 56.7**	**+1.3**
LUWI				S	**Sn**	**16 20 46.7**	**-2.0**
APSI	**Ampana**	**5.69**	**273**	P	**Pn**	**16 20 13.1**	**+2.2**
APSI				S	**Sn**	**16 21 15.0**	**-1.5**
KAPI	**Kappang**	**8.47**	**243**	P	**Pn**	**16 20 42.8**	**-6.4**
KAKA	**Kakadu**	**12.53**	**156**	*eP*	**Pn**	**16 21 44.1**	**-0.7**
WRA	**Warramunga Arr**	**19.87**	**160**	P	**Pn**	**16 23 16.7**	**-2.7**
	0.3nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**23.24**	**165**	P	**P**	**16 23 54.4**	**+0.3**
	1.0nm,0.5s,mb3.5,baz=344,slow=11,SNR=39						
JOW	**Kunigami**	**27.86**	**2**	LR	LR	16 34 37.0	
	comp=Z,1μm,22.0s,baz=60,slow=34						
STKA	**Stephens Creek**	**33.37**	**158**	P	**P**	**16 25 26.8**	**+1.8**
	1.0nm,0.7s,mb3.9,baz=335,slow=11,SNR=4.3						
STKA	**Stephens Creek**	**33.37**	**158**	P	**P**	**16 25 26.7**	**+1.7**
GTA	**Gaotai**	**47.62**	**331**	*eP*	**P**	**16 27 24.6**	**+1.9**
GTA				pP	pP	16 27 28.6	+3.4
GTA				sP	sP	16 27 31.1	+4.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
SONM	**Songino Array**	**52.12**	**342**	P	**P**	**16 27 57.0**	**+0.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=144,slow=4.6,SNR=3.7						
MK31	**Makanchi Array**	**61.93**	**327**	*eP*	**P**	**16 29 05.9**	**-0.4**
MKAR	**Makanchi Array**	**61.93**	**327**	P	**P**	**16 29 06.6**	**+0.3**
	comp=Z,1.0nm,0.4s,mb4.3,baz=124,slow=7.9,SNR=27						
MKAR	**Makanchi Array**	**61.93**	**327**	P	**P**	**16 29 06.6**	**+0.2**
KURK	**Kurchatov**	**66.20**	**329**	*eP*	**P**	**16 29 33.9**	**-0.4**
	comp=Z,1.6nm,0.8s,mb4.1						

*IDC **04** 16:33:25.6±1.1, 9°.46N×138°.31E, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, ML4.2/1, Error ellipse: s-maj=28.5km s-min=25.9km az=80.0*
*ISCJB **04** 16:33:26.2±6.3, 9°.5N±0°.2×138°.5E±0°.1, h17km±46km, mb3.8/8, Error ellipse: s-maj=27.7km s-min=13.8km az=151.7*
*NEIC **04** 16:33:30.7±0.7, 9°.46N×138°.37E, h35km, mb4.5/1, Error ellipse: s-maj=17.3km s-min=13.5km az=161.0*
ISC 04 16:33:29.1±6.4, 9°.5N±0°.1×138°.4E±0°.1, h22km±46km, n10, σ0°.65/11, mb3.8/8, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO Guam		**7.53**	**57**	Pn	**Pn**	**16 35 18.0**	**+0.5**
	3.4nm,0.3s,baz=124,slow=3.6,SNR=3.7						
GUMO				Sn	**Sn**	**16 36 41.4**	**-0.8**
	1.1nm,0.3s,baz=165,slow=19,SNR=2.6						
ASAR Alice Springs		**33.24**	**188**	P	**P**	**16 40 04.2**	**-0.6**
	0.4nm,0.5s,mb3.6,baz=18,slow=12,SNR=16						
CMAR Chiang Mai Arr		**39.25**	**288**	P	**P**	**16 40 56.0**	**-0.2**
	1.2nm,0.7s,mb3.8,baz=88,slow=7.0,SNR=8.5						
SONM Songino Array		**46.80**	**331**	P	**P**	**16 41 57.1**	**+0.2**
	0.5nm,0.8s,mb3.5,baz=142,slow=7.3,SNR=3.3						
MKAR Makanchi Array		**60.21**	**319**	P	**P**	**16 43 34.7**	**-0.7**
	0.5nm,0.7s,mb3.6,baz=123,slow=8.8,SNR=6.8						
MKAR Makanchi Array		**60.21**	**319**	P	**P**	**16 43 34.7**	**-0.7**
KURK Kurchatov		**63.77**	**322**	*eP*	**P**	**16 43 59.3**	**0.0**
	1.9nm,0.5s,mb4.4						
BVAR Borovoye Array		**69.30**	**323**	P	**P**	**16 44 34.4**	**-0.1**
	1.0nm,0.6s,mb3.9,baz=101,slow=8.0,SNR=6.6						
YKA Yellowknife Ar		**89.36**	**26**	P	**P**	**16 46 23.9**	**+0.3**
	0.3nm,0.7s,mb3.8,baz=292,slow=5.4,SNR=5.0						
NVAR Mina Array Bea		**94.40**	**50**	P	**P**	**16 46 49.1**	**+1.6**
	0.3nm,0.6s,mb3.9,baz=261,slow=5.1,SNR=3.6						

*ISCJB **04** 17:13:34.6±0.8, 17°.56N±0°.09×122°.6E±0°.2, h33km, mb3.5/6, Error ellipse: s-maj=23.3km s-min=10.1km az=158.7*
*NEIC **04** 17:13:36.0±0.7, 17°.74N×123°.14E, h35km, mb3.6/1, Error ellipse: s-maj=25.1km s-min=9.6km az=73.0*
*IDC **04** 17:13:42.0±9.1, 17°.51N×122°.61E, h85km±82km, mb3.3/5, mb1 3.5/6, mb1mx3.2/24, mbtmp3.4/6, ML4.2/1, Error ellipse: s-maj=130.8km s-min=17.5km az=66.0*
ISC 04 17:13:37.0±0.8, 17°.5N±0°.1×122°.4E±0°.2, h35km, n12, σ0°.82/12, mb3.5/6, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP Palanan		**0.40**	**177**	⇑*eP*	**Pn**	**17 13 46.6**	**+0.4**
CVP Callao Caves		**0.60**	**293**	*eP*	**Pn**	**17 13 47.2**	**-1.9**
GQP Guinayangan		**3.54**	**179**	‖*eP*	**Pn**	**17 14 30.5**	**+1.0**
TGY Tagaytay City		**3.63**	**203**	P	**Pn**	**17 14 37.8**	**+7.1**
	19nm,0.3s,baz=297,slow=2.3,SNR=5.5						
SONM Songino Array		**33.01**	**340**	P	**P**	**17 20 09.0**	**+0.3**
	0.2nm,0.4s,mb3.4,baz=134,slow=6.2,SNR=3.0						
WRAB Tennant Creek		**38.97**	**162**	*eP*	**P**	**17 20 58.9**	**-1.0**
	0.8nm,0.7s,mb3.6						
WRA Warramunga Arr		**38.98**	**162**	P	**P**	**17 20 59.4**	**-0.6**
	2.2nm,0.7s,mb4.0,baz=342,slow=9.2,SNR=10.0						
WB2 Warramunga Arr		**38.98**	**162**	*eP*	**P**	**17 20 59.4**	**-0.6**
ASAR Alice Springs		**42.39**	**164**	P	**P**	**17 21 28.4**	**+0.3**
	0.7nm,0.6s,mb3.4,baz=341,slow=6.7,SNR=20						
MK31 Makanchi Array		**44.09**	**320**	*eP*	**P**	**17 21 41.7**	**+0.1**
MKAR Makanchi Array		**44.09**	**320**	P	**P**	**17 21 42.6**	**+1.0**
	0.2nm,0.4s,mb3.2,baz=116,slow=8.8,SNR=5.7						
KURK Kurchatov		**48.06**	**324**	P	**P**	**17 22 13.0**	**+0.1**
	0.5nm,0.6s,mb3.7,baz=118,slow=7.5,SNR=2.4						

*BJI **04** 17:15:58.6, 22°.30N×144°.89E, h35km, mB4.8/25, mb4.7/32, Ms4.6/26, Ms7 4.3/24*
*ISCJB **04** 17:16:01.4±1.5, 22°.75N±0°.05×144°.34E±0°.06, h16km±10km, mb4.5/50, MS4.3/12, Error ellipse: s-maj=10.6km s-min=7.6km az=151.1*
*NEIC **04** 17:16:05.7±0.3, 22°.75N×144°.33E, h35km, mb4.7/20, Error ellipse: s-maj=9.1km s-min=6.6km az=76.0*
*IDC **04** 17:16:05.6±5.9, 22°.79N×144°.41E, h34km±46km, mb3.8/17, mb1 4.0/19, mb1mx3.9/29, mbtmp3.9/19, ML4.2/2, Error ellipse: s-maj=23.4km s-min=13.1km az=85.0*
ISC 04 17:16:06.0±1.4, 22.77N±0°.05×144°.35E±0°.06, h35km±9km, h35km±.2km: pP-P, n70, σ0°.90/81, mb4.5/50, MS4.3/12, 3C, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ Chichi jima		**4.73**	**336**	Pn	**Pn**	**17 17 14.5**	**-0.4**
	27nm,0.3s,baz=266,slow=11,SNR=10						
CBIJ				Sn	**Sn**	**17 18 07.5**	**-1.0**
	42nm,0.3s,baz=300,slow=23,SNR=6.1						
MJAR Matsushiro Arr		**14.72**	**340**	Pn	**Pn**	**17 19 30.9**	**-0.8**
	0.5nm,0.3s,baz=157,slow=11,SNR=16						
MAJO Matsushiro		**14.72**	**340**	*e*Pn	**Pn**	**17 19 31.5**	**-0.2**
MAT Matsushiro		**14.72**	**340**	P	**Pn**	**17 19 31.6**	**-0.1**
MAT				S	**Sn**	**17 22 20.0**	**+6.4**
KSRS Korea Array		**20.35**	**320**	P	**P**	**17 20 39.4**	**0.0**
	5.0nm,0.7s,baz=130,slow=12,SNR=8.7						
KS15 Wonju Array Si		**20.37**	**320**	*eP*	**P**	**17 20 35.7**	**-3.8**
TATO Taipei		**21.02**	**281**	*eP*	**P**	**17 20 42.3**	**-4.4**
	149nm,1.2s,mb5.2						
QZH Quanzhou		**23.65**	**280**	*eP*	**P**	**17 21 13.5**	**-0.9**
QZH				S	**S**	**17 25 25.3**	**-1.4**
QZH				LR	LR		
	comp=N,2μm,14.0s,MS4.7						
QZH				LR	LR		
	comp=E,800nm,14.8s,MS4.7						
QZH				LR	LR		
	comp=Z,1μm,9.6s						
NJ2 Nanjing		**24.40**	**298**	*eP*	**P**	**17 21 22.2**	**+1.0**
NJ2				pP		17 21 32.1	
NJ2				sP	sP	17 21 35.3	0.0
NJ2				PP		17 21 57.3	
NJ2				S	**S**	**17 25 36.5**	**-2.2**
NJ2				sS	sS	17 25 55.5	+0.5
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
NJ2				pmax	pmax		
	comp=Z,120nm,5.1s						
NJ2				LR	LR		
	comp=N,450nm,14.4s,MS4.3						
NJ2				LR	LR		
	comp=E,520nm,12.0s,MS4.3						
NJ2				LR	LR		
	comp=Z,410nm,12.1s,MS4.1						
MDJ Mudanjiang		**24.93**	**334**	P	**P**	**17 21 26.5**	**+0.6**
MDJ				pP		17 21 34.6	
MDJ				sP	sP	17 21 39.0	-1.0
MDJ				S	**S**	**17 25 48.0**	**+1.0**
MDJ				ScP	ScP	17 28 37.2	0.0
MDJ				PcS	PcS	17 28 41.1	+0.3
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,83nm,6.5s						
MDJ				LR	LR		
	comp=N,160nm,12.3s,MS4.2						
MDJ				LR	LR		
	comp=E,430nm,15.0s,MS4.2						
MDJ				LR	LR		
	comp=Z,260nm,13.2s,MS3.9						
MDJ Mudanjiang		**24.93**	**334**	*eP*	**P**	**17 21 27.3**	**+1.4**
	comp=Z,9.5nm,0.8s,mb4.4						
CN2 Changchun		**26.14**	**328**	*eP*	**P**	**17 21 39.4**	**+2.5**
CN2				*e*pP	pP	17 21 48.7	+1.9
CN2				*e*S	**S**	**17 26 07.0**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,17.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,17.0s,MS4.0						
CN2				LR	LR		
	comp=Z,200nm,16.0s,MS3.8						
BJI Beijing		**29.40**	**312**	P	**P**	**17 22 06.0**	**0.0**
BJI				S	**S**	**17 26 58.1**	**+0.5**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
BJI				pmax	pmax		
	comp=Z,74nm,6.0s						
BJI				LR	LR		
	comp=N,430nm,15.6s,MS4.4						
BJI				LR	LR		
	comp=E,490nm,14.8s,MS4.4						
BJI				LR	LR		
	comp=Z,240nm,18.3s,MS3.9						
HHC Hu-ho-hao-te		**32.93**	**311**	*eP*	**P**	**17 22 37.5**	**+0.4**
HHC				pP	pP	17 22 47.0	-0.1
HHC				sP	sP	17 22 51.1	-0.2
HHC				PP	PP	17 23 48.4	-3.4
HHC				PcP	PcP	17 25 22.3	+1.4
HHC				S	**S**	**17 27 51.5**	**-1.2**
HHC				ScP	ScP	17 29 02.4	-0.1
HHC				PcS	PcS	17 29 06.8	+0.6
HHC				ScS	ScS	17 33 00.7	-1.8
HHC				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
HHC				pmax	pmax		
	comp=Z,84nm,8.0s						
HHC				LR	LR		
	comp=N,540nm,14.4s,MS4.5						
HHC				LR	LR		
	comp=E,560nm,15.1s,MS4.5						
HHC				LR	LR		
	comp=Z,450nm,15.4s,MS4.3						
GYA Guiyang		**34.38**	**284**	pP	pP	17 23 01.0	+1.0
GYA				sP	sP	17 23 06.9	+2.8
GYA				PP	PP	17 24 05.4	-2.8
GYA				PcP	PcP	17 25 25.3	0.0
GYA				S	**S**	**17 28 14.9**	**-0.7**
GYA				sS	sS	17 28 31.0	-1.1
GYA				ScP	ScP	17 29 07.5	-0.4
GYA				SS	SS	17 30 23.0	-22
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,15.9s,MS4.5						
GYA				LR	LR		
	comp=E,460nm,16.3s,MS4.5						
GYA				LR	LR		
	comp=Z,450nm,15.7s,MS4.3						
CD2 Chengdu		**36.96**	**292**	P	**P**	**17 23 10.5**	**-1.5**
CD2				pP	pP	17 23 20.2	-1.9
CD2				sP	sP	17 23 24.2	-2.0
CD2				PP	PP	17 24 36.4	-0.1
CD2				PcP	PcP	17 25 32.6	-0.2
CD2				S	**S**	**17 28 51.9**	**-3.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1						
CD2				pmax	pmax		
	comp=Z,80nm,7.7s						
CD2				LR	LR		
	comp=N,300nm,15.8s						
CD2				LR	LR		
	comp=Z,230nm,15.1s,MS4.1						
LZH Lanzhou		**37.43**	**300**	*eP*	**P**	**17 23 17.5**	**+1.6**
LZH				pP	pP	17 23 27.5	+1.5
LZH				sP	sP	17 23 31.4	+1.2
LZH				PP	PP	17 24 44.0	+2.4
LZH				*e*S	**S**	**17 29 02.5**	**+0.4**
LZH				sS	sS	17 29 20.2	+1.5
LZH				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,80nm,4.0s						
LZH				LR	LR		
	comp=N,400nm,13.8s						
LZH				LR	LR		
	comp=Z,580nm,14.5s,MS4.5						
ULN Ulaanbaatar		**38.84**	**319**	*eP*	**P**	**17 23 27.5**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.0						
SONM Songino Array		**39.22**	**319**	P	**P**	**17 23 31.6**	**+0.8**
	comp=Z,2.9nm,0.8s,mb4.0,baz=131,slow=7.8,SNR=23						
GTA Gaotai		**41.15**	**304**	P	**P**	**17 23 47.6**	**+0.7**
GTA				pP	pP	17 23 57.4	+0.3
GTA				sP	sP	17 24 01.5	+0.2
GTA				PP	PP	17 25 25.7	+3.5
GTA				S	**S**	**17 29 58.5**	**+0.6**
GTA				sS	sS	17 30 14.3	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
GTA				pmax	pmax		
	comp=Z,72nm,6.2s						
GTA				LR	LR		
	comp=N,170nm,12.5s,MS4.3						
GTA				LR	LR		
	comp=E,210nm,13.1s,MS4.3						
GTA				LR	LR		
	comp=Z,270nm,11.9s,MS4.3						
WRAB Tennant Creek		**43.55**	**194**	*eP*	**P**	**17 24 05.1**	**-1.5**
	comp=Z,4.1nm,0.6s,mb4.3						
WRA Warramunga Arr		**43.56**	**194**	P	**P**	**17 24 06.7**	**0.0**
	comp=Z,2.1nm,0.5s,mb4.1,baz=19,slow=8.9,SNR=21						
FITZ Fitzroy Crossi		**44.55**	**206**	P	**P**	**17 24 15.2**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.7,baz=74,slow=19,SNR=5.4						
BILL Bilibino		**47.26**	**11**	*eP*	**P**	**17 24 35.0**	**-0.4**
	comp=Z,5.3nm,0.9s,mb4.5						
ASAR Alice Springs		**47.26**	**193**	P	**P**	**17 24 35.3**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.8,baz=12,slow=9.2,SNR=17						
LSA Lhasa		**47.88**	**290**	*eP*	**P**	**17 24 42.1**	**+1.3**
	comp=Z,22nm,1.1s,mb5.1						
TIXI Tiksi		**49.70**	**354**	*eP*	**P**	**17 24 53.6**	**-0.5**
	comp=Z,3.2nm,1.1s,mb4.3						
WMQ Urumqi		**50.75**	**309**	*eP*	**P**	**17 25 03.9**	**+1.4**
WMQ				LR	LR		
	comp=N,140nm,16.0s,MS4.2						
WMQ				LR	LR		
	comp=E,130nm,18.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,120nm,15.0s,MS4.0						
RAMN Ramite		**52.19**	**287**	*eP*	**P**	**17 25 13.0**	**-0.6**
GUN Gumba		**52.68**	**288**	*eP*	**P**	**17 25 18.6**	**+1.4**
PKI Pulchoki		**53.14**	**288**	*eP*	**P**	**17 25 21.1**	**+0.5**
	comp=Z,15nm,1.1s,mb4.8						
KKN Kakani		**53.22**	**288**	*eP*	**P**	**17 25 22.3**	**+1.1**
	comp=Z,15nm,0.9s,mb4.9						
GKN Gorkha		**53.75**	**289**	*eP*	**P**	**17 25 26.0**	**+0.9**
	comp=Z,21nm,1.0s,mb5.0						
ZALV Zalesovo Beam		**54.05**	**321**	P	**P**	**17 25 26.4**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.2,baz=101,slow=7.6,SNR=11						
ZALV Zalesovo Beam		**54.05**	**321**	P	**P**	**17 25 26.4**	**-0.4**
STKA Stephens Creek		**54.40**	**183**	P	**P**	**17 25 28.8**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.0,baz=315,slow=3.3,SNR=4.3						
KOLN Koldanda		**54.69**	**289**	*eP*	**P**	**17 25 33.0**	**+1.0**
	comp=Z,14nm,0.8s,mb5.0						
MK31 Makanchi Array		**54.78**	**312**	⇑P	**P**	**17 25 32.5**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=81,slow=13						
MK31 Makanchi Array		**54.78**	**312**	*eP*	**P**	**17 25 32.0**	**-0.3**
MKAR Makanchi Array		**54.78**	**312**	P	**P**	**17 25 32.5**	**+0.2**
	comp=Z,1.6nm,0.7s,mb4.2,baz=100,slow=7.4,SNR=19						
PYUN Piuthan		**55.17**	**289**	*eP*	**P**	**17 25 36.4**	**+1.0**
	comp=Z,20nm,0.9s,mb5.2						
KURK Kurchatov		**57.44**	**317**	⇑P	**P**	**17 25 50.8**	**-0.4**
	comp=Z,4.8nm,0.9s,mb4.5						
KURK Kurchatov		**57.44**	**317**	P	**P**	**17 25 51.4**	**+0.2**
	comp=Z,4.2nm,0.7s,mb4.6,baz=92,slow=7.7,SNR=28						
KURK Kurchatov		**57.44**	**317**	*eP*	**P**	**17 25 51.0**	**-0.2**
	comp=Z,22nm,1.1s,mb5.1						
KURBB Kurchatov Arra		**57.49**	**316**	⇑P	**P**	**17 25 51.3**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.8						
KSH Kashi		**59.54**	**303**	*eP*	**P**	**17 26 10.3**	**+4.2**
KSH				*e*pP	pP	17 26 20.5	+3.9
KSH				*e*sP	sP	17 26 24.4	+3.7
KSH				*e*PcP	PcP	17 26 56.3	+3.0
KSH				*e*PP	PP	17 28 23.4	+5.8
KSH				*e*ScP	ScP	17 30 53.4	+1.8
KSH				*e*PcS	PcS	17 30 56.5	+1.2
KSH				*e*S	**S**	**17 34 16.6**	**+3.0**
KSH				*e*sS	sS	17 34 34.5	+3.6
KSH				*e*ScS	ScS	17 35 54.4	+0.6
KSH				*e*SS	SS	17 38 14.

KBL	**Kabul**	65.77	299	*e*P	P	17 26 48.2	+0.5
	comp=Z,14nm,0.8s,mb5.0						
INK	**Inuvik**	66.16	24	P	P	17 26 48.7	-0.8
	comp=Z,0.9nm,1.0s,mb3.8,baz=310,slow=5.7,SNR=2.8						
INK	**Inuvik**	66.16	24	P	P	17 26 48.7	-0.8
ABKAR	**Akbulak array**	69.53	316	*e*P	P	17 27 10.4	-0.8
	comp=Z,3.2nm,0.8s,mb4.3						
AKTK	**Aktyubinsk**	70.51	317	P	P	17 27 16.5	-0.6
AKTO	**Aktyubinsk**	70.51	317	P	P	17 27 16.5	-0.6
	comp=Z,0.7nm,0.4s,mb4.0,baz=50,slow=8.7,SNR=3.9						
YKA	**Yellowknife Ar**	75.00	28	P	P	17 27 43.2	-0.4
	comp=Z,0.5nm,0.6s,mb3.6,baz=291,slow=5.8,SNR=12						
YKA	**Yellowknife Ar**	75.00	28	P	P	17 27 43.2	-0.4
NVAR	**Mina Array Bea**	81.63	52	P	P	17 28 21.1	+0.3
	comp=Z,1.8nm,0.8s,mb4.1,baz=288,slow=4.7,SNR=12						
FINES	**FINESS Array B**	82.68	335	P	P	17 28 24.9	-0.9
	comp=Z,1.2nm,0.7s,mb4.0,baz=57,slow=7.0,SNR=7.0						
FFC	**Flin Flon**	84.35	32	*e*P	P	17 28 34.0	-0.4
	comp=Z,7.1nm,1.2s,mb4.7						
BGU	**Big Grassy Mou**	84.36	48	*e*P	P	17 28 35.4	+0.6
	comp=Z,3.8nm,1.3s,mb4.4						
DUG	**Dugway**	84.82	49	*e*P	P	17 28 37.7	+0.6
	comp=Z,48nm,3.0s						
RLMT	**Red Lodge**	84.98	43	*e*P	P	17 28 39.1	+1.3
	comp=Z,8.8nm,1.5s,mb4.7						
CCUT	**Cedar City**	85.56	51	*e*P	P	17 28 41.6	+0.7
	comp=Z,40nm,2.8s,mb5.2						
PDAR	**Pinedale Array**	85.87	45	P	P	17 28 41.6	-0.7
	comp=Z,0.3nm,0.6s,mb3.7,baz=32,slow=1.4,SNR=3.5						
WUAZ	**Wupatki**	87.88	52	*e*P	P	17 28 52.1	-0.1
	comp=Z,4.3nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	90.39	314	P	P	17 29 03.0	-0.9
	comp=Z,0.7nm,0.8s,mb4.0,baz=104,slow=5.0,SNR=5.1						
PLCA	**Paso Flores**	145.63	130	PKPbc	PKPbc	17 35 40.3	-0.8
	comp=Z,2.1nm,0.8s,baz=241,slow=8.5,SNR=3.2						

IDC ***04*** *17:18:46.1±0.5, 17°.48N×122°.50E, h0km, mb4.2/25, mb1 4.4/26, mb1mx4.3/31, mbtmp4.3/26, MS3.8/8, Ms1 3.8/8, ms1mx3.5/36, Error ellipse: s-maj=20.2km s-min=11.0km az=76.0*

MOS ***04*** *17:18:49.7±1.0, 17°.50N×122°.52E, h33km, mb4.9/30, MS4.2/6, Error ellipse: s-maj=12.9km s-min=6.2km az=115.3*

MAN ***04*** *17:18:49, 17°.68N×122°.63E, h22km, mb5.3, ML4.3, MS4.5*

ISCJB ***04*** *17:18:50.8±0.4, 17°.62N±0°.02×122°.66E±0°.04, h40km±3km, mb4.6/77, MS4.0/25, Error ellipse: s-maj=5.8km s-min=3.6km az=174.5*

BJI ***04*** *17:18:50.1, 17°.55N×122°.62E, h30km, mB4.8/35, mb4.6/47, Ms4.3/46, Ms7 4.1/43*

NEIC ***04*** *17:18:51.4±0.3, 17°.51N×122°.61E, h35km, mb4.8/27, Error ellipse: s-maj=8.0km s-min=5.3km az=84.0*

NEIC Felt at Tuguegarao City.

DJA ***04*** *17:19:33, 16°.05N×121°.68E, h357km, Mw4.8/7*

ISC 04 17:18:52.7±0.4, 17°.58N±0°.02×122°.59E±0°.04, h41km±3km, h33km±2.5km:pP-P,n192,σ1§22/214,mb4.6/77,MS4.0/25, 14C-6D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	0.53	197	*e*P	Pn	17 19 02.0	-2.0
CVP	**Callao Caves**	0.74	280	*e*P	Pn	17 19 02.1	-4.7
SGCP	**Mt. Cagua**	0.84	322	*e*P	Pn	17 19 05.5	-2.6
SGCP				*e*S	Sn	17 19 17.2	-2.0
CAUP	**Cauayan**	0.97	230	*e*P	Pn	17 19 09.5	-0.3
APYP	**Conner**	1.32	283	*e*P	Pn	17 19 12.6	-1.9
APYP				*e*S	Sn	17 19 26.3	-4.7
ABRA	**Dolores**	1.79	273	*e*P	Pn	17 19 20.3	-0.8
ABRA				*e*S	Sn	17 19 37.5	-5.2
PIP	**Pasuquin**	2.02	292	⇑*i*P	Pn	17 19 23.4	-0.9
PIP				*e*S	Sn	17 19 49.0	+0.7
BALP	**Baler**	2.07	208	*e*P	Pn	17 19 24.7	-0.2
BALP				*e*S	Sn	17 19 46.2	-3.3
BOLP	**Bolinao**	2.82	246	*e*P	Pn	17 19 36.4	+1.1
BOLP				*e*S	Sn	17 20 16.8	+8.7
BBP	**Basco**	2.91	348	*e*P	Pn	17 19 35.0	-1.5
BBP				*e*S	Sn	17 20 05.9	-4.4
SCZP	**Santa Cruz**	3.13	236	*e*P	Pn	17 19 40.8	+1.3
GQP	**Guinayangan**	3.65	182	⇓*e*P	Pn	17 19 46.6	0.0
TGY	**Tagaytay City**	3.80	205	Pn	Pn	17 19 50.8	+2.1
	125nm,0.3s,baz=28,slow=3.7,SNR=6.9						
BOAC	**Boac**	4.16	190	*e*P	Pn	17 19 57.8	+4.2
PVCP	**Virac**	4.23	159	*e*P	Pn	17 19 56.2	+1.5
LUBP	**Lubang**	4.44	211	*e*P	Pn	17 19 59.5	+2.0
SJMP	**San Jose**	5.28	196	*e*P	Pn	17 20 12.4	+3.3
TWG	**Pinlang**	5.41	345	*e*Pn	Pn	17 20 09.1	-1.7
	57nm,0.6s						
TWG				*e*Sn	Sn	17 21 11.7	-0.1
CNP	**Catarman**	5.42	158	*e*P	Pn	17 20 13.2	+2.2
YULB	**Yu-li**	5.91	348	*e*Pn	Pn	17 20 16.3	-1.5
	52nm,0.7s						
YULB				*e*Sn	Sn	17 21 22.4	-1.8
TPUB	**Ta-pu**	5.99	342	*e*Pn	Pn	17 20 18.1	-0.6
	106nm,0.8s						
TPUB				*e*Sn	Sn	17 21 28.0	+2.0
BUSP	**Coron**	6.00	203	*e*P	Pn	17 20 20.4	+1.3
SSLB	**Suanglung**	6.37	346	*e*Pn	Pn	17 20 25.6	+1.6
	95nm,1.1s						
NACB	**Ninganchiao**	6.63	352	*e*Pn	Pn	17 20 27.8	+0.2
	78nm,0.9s						
YHNB	**Yeheng**	7.15	351	*e*Pn	Pn	17 20 35.8	+1.1
	124nm,1.0s						
TATO	**Taipei**	7.43	352	*e*Pn	Pn	17 20 38.3	-0.3
	69nm,0.8s						
TATO				*e*Sn	Sn	17 22 02.3	+0.6
QZH	**Quanzhou**	8.22	334	*e*P	Pn	17 20 52.2	+2.7
QZH				S	Sn	17 22 27.5	+6.4
QZH				LR	LR		
	comp=N,3μm,20.3s						
QZH				LR	LR		
	comp=E,2μm,13.4s						
QZH				LR	LR		
	comp=Z,1μm,15.6s						
GZH	**Guangzhou**	10.26	304	P	Pn	17 21 16.2	-1.2
GZH				S	Sn	17 23 09.5	-1.6
GZH				LR	LR		
	comp=N,1μm,15.0s						
GZH				LR	LR		
	comp=E,840nm,18.4s						
GZH				LR	LR		
	comp=Z,2μm,15.2s						
JOW	**Kunigami**	10.61	29	Pn	Pn	17 21 22.2	+0.1
	baz=185,slow=16						
DAV	**Davao City (W)**	10.84	164	LR	LR	17 26 21.8	
	comp=Z,497nm,18.9s,baz=357,slow=42						
QIZ	**Qiongzhong**	12.19	279	P	Pn	17 21 45.6	+1.7
QIZ				S	Sn	17 24 04.5	+6.0
QIZ				pmax	pmax		
	comp=Z,15nm,1.6s						
QIZ				LR	LR		
	comp=N,710nm,20.5s						
QIZ				LR	LR		
	comp=Z,670nm,17.4s						
QIZ	**Qiongzhong**	12.19	279	*e*Pn	Pn	17 21 42.4	-1.5
	comp=Z,6.2nm,0.5s						
SSE	**Sheshan**	13.52	355	P	Pn	17 22 01.4	-0.5
SSE				S	Sn	17 24 35.2	+4.4
SSE				pmax	pmax		
	comp=Z,32nm,0.7s						
SSE				pmax	pmax		
	comp=Z,84nm,4.3s						
SSE				LR	LR		
	comp=N,360nm,12.3s						
SSE				LR	LR		
	comp=E,550nm,12.4s						
SSE				LR	LR		
	comp=Z,450nm,12.6s						
NJ2	**Nanjing**	14.80	347	*e*P	Pn	17 22 22.2	+2.9
NJ2				pP	pP	17 22 30.4	-4.1
NJ2				sP	sP	17 22 34.7	-5.1
NJ2				S	Sn	17 25 07.5	+5.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,70nm,4.3s						
NJ2				LR	LR		
	comp=N,550nm,18.3s						
NJ2				LR	LR		
	comp=E,800nm,17.8s						
NJ2				LR	LR		
	comp=Z,410nm,19.3s						
WHN	**Wuhan**	14.93	331	P	Pn	17 22 23.5	+2.5
WHN				LR	LR		
	comp=N,1μm,12.6s						
WHN				LR	LR		
	comp=E,790nm,15.6s						
WHN				LR	LR		
	comp=Z,1μm,13.6s						
GYA	**Guiyang**	17.20	304	⇑*i*P	Pn	17 22 50.0	+0.1
GYA				pP	pP	17 22 59.0	-2.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=N,790nm,15.5s						
GYA				LR	LR		
	comp=E,560nm,16.0s						
GYA				LR	LR		
	comp=Z,650nm,15.4s						
ENH	**Enshi**	17.39	319	*e*Pn	Pn	17 22 53.5	+1.2
	comp=Z,38nm,1.2s						
KKTK	**Khon Kaen**	18.95	269	⇓P	Pn	17 23 12.0	+0.6
	comp=Z,309nm,0.8s						
KMI	**Kunming**	19.94	296	P	Pn	17 23 23.1	0.0
KMI				pP	pP	17 23 31.6	+0.2
KMI				sP	sP	17 23 36.3	-0.4
KMI				PP		17 23 42.3	
KMI				S	S	17 26 59.1	-4.4
KMI				sS	sS	17 27 12.7	-7.1
KMI				SS		17 27 28.2	
KMI				pmax	pmax		
	comp=Z,15nm,1.4s						
KMI				pmax	pmax		
	comp=Z,170nm,3.7s						
KMI				LR	LR		
	comp=N,920nm,14.2s						
KMI				LR	LR		
	comp=E,660nm,14.6s						
KMI				LR	LR		
	comp=Z,870nm,15.5s						
KSM	**Kuching**	20.04	218	*e*P	P	17 23 21.7	-0.7
	comp=Z,74nm,1.3s						
KSRS	**Korea Array**	20.35	12	P	P	17 23 26.1	+0.6
	comp=Z,12nm,0.8s,baz=197,slow=11,SNR=17						
KSRS				LR	LR	17 32 21.4	
	comp=Z,308nm,18.9s,MS3.7,baz=300,slow=40						
XAN	**Xi'an**	20.46	326	P	P	17 23 27.4	+0.6
XAN				pP		17 23 42.3	
XAN				S	S	17 27 15.2	+1.5
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN				pmax	pmax		
	comp=Z,45nm,9.5s						
XAN				LR	LR		
	comp=N,410nm,17.2s,MS3.9						
XAN				LR	LR		
	comp=E,110nm,17.2s,MS3.9						
XAN				LR	LR		
	comp=Z,130nm,15.1s,MS3.4						
DL2	**Dalian**	21.27	358	*e*P	P	17 23 38.6	+3.2
DL2				S	S	17 27 36.0	+6.5
DL2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
DL2				LR	LR		
	comp=N,200nm,15.7s,MS3.9						
DL2				LR	LR		
	comp=E,320nm,13.5s,MS3.9						
DL2				LR	LR		
	comp=Z,230nm,14.5s,MS3.7						
CD2	**Chengdu**	21.66	311	P	P	17 23 41.9	+2.2
CD2				pP		17 23 51.0	
CD2				sP	sP	17 23 55.2	-0.1
CD2				PP		17 24 07.0	
CD2				S	S	17 27 34.9	-2.4
CD2				sS	sS	17 27 49.8	-4.1
CD2				SS		17 28 11.0	
CD2				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.2						
CD2				pmax	pmax		
	comp=Z,320nm,8.3s						
CD2				LR	LR		
	comp=N,650nm,11.3s						
CD2				LR	LR		
	comp=Z,900nm,13.7s,MS4.3						
CHRT	**Chiangrai**	21.72	280	⇓P	P	17 23 41.5	+1.0
	comp=Z,105nm,1.0s,mb5.2						
GUMO	**Guam**	21.82	97	LR	LR	17 30 25.0	
	comp=Z,152nm,19.5s,MS3.4,baz=182,slow=32						
CHTO	**Chiang Mai**	22.50	277	*e*P	P	17 23 48.2	-0.6
CHTO				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.5						
CHTO	**Chiang Mai**	22.50	277	*e*P	P	17 23 48.2	-0.6
	comp=Z,31nm,1.5s,mb4.5						
CM31	**Chiang Mai Arr**	22.50	276	*e*P	P	17 23 50.4	+1.5
CMAR	**Chiang Mai Arr**	22.50	276	P	P	17 23 48.1	-0.7
	comp=Z,5.1nm,0.9s,mb3.9,baz=77,slow=9.0,SNR=24						
CMAR				LR	LR	17 33 56.4	
	comp=Z,238nm,18.0s,MS3.7,baz=95,slow=41						
KAPI	**Kappang**	22.62	187	P	P	17 23 49.2	-0.8
	comp=Z,8.4nm,0.9s,mb4.2,baz=355,slow=9.9,SNR=6.8						
KAPI				LR	LR	17 34 31.9	
	comp=Z,246nm,19.5s,MS3.6,baz=0.8,slow=42						
KAPI	**Kappang**	22.62	187	*e*P	P	17 23 49.8	-0.2
	comp=Z,48nm,1.3s,mb4.8						
BJI	**Beijing**	23.07	347	P	P	17 23 59.7	+5.2
BJI				S	S	17 28 01.9	-0.5
BJI				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.7						
BJI				pmax	pmax		
	comp=Z,220nm,3.9s						
BJI				LR	LR		
	comp=N,390nm,13.5s,MS4.2						
BJI				LR	LR		
	comp=E,470nm,14.6s,MS4.2						
BJI				LR	LR		
	comp=Z,240nm,17.2s,MS3.7						
MAJO	**Matsushiro**	23.40	33	*e*P	P	17 24 01.5	+3.5
MAJO				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.5						
MAJO	**Matsushiro**	23.40	33	*e*P	P	17 24 01.5	+3.5
	comp=Z,23nm,1.2s,mb4.5						
MAT	**Matsushiro**	23.40	33	P	P	17 23 57.1	-0.9
MJAR	**Matsushiro Arr**	23.40	33	P	P	17 23 57.6	-0.4
	comp=Z,2.0nm,0.9s,baz=215,slow=8.5,SNR=5.0						
SNY	**Shenyang**	24.19	2	⇓P	P	17 24 05.0	-0.1
SNY				S	S	17 28 16.5	-4.1
SNY				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.2						
SNY				LR	LR		
	comp=N,350nm,15.6s,MS4.1						
SNY				LR	LR		
	comp=E,390nm,15.3s,MS4.1						
SNY				LR	LR		
	comp=Z,390nm,14.4s,MS4.0						
LZH	**Lanzhou**	24.82	322	*e*P	P	17 24 12.7	+1.8
LZH				pP		17 24 23.0	
LZH				sP	sP	17 24 27.5	+0.4
LZH				PP		17 24 50.5	
LZH				*e*S	S	17 28 35.0	+4.2
LZH				sS	sS	17 28 48.0	-1.5
LZH				SS		17 29 28.2	
LZH				pmax	pmax		
	comp=Z,49nm,1.4s,mb4.8						
LZH				pmax	pmax		
	comp=Z,120nm,4.4s						
LZH				LR	LR		
	comp=N,800nm,11.8s						
LZH				LR	LR		
	comp=Z,1μm,12.5s,MS4.7						
HHC	**Hu-ho-hao-te**	25.07	340	⇑P	P	17 24 15.2	+2.0
HHC				pP	pP	17 24 25.1	+0.7
HHC				sP	sP	17 24 28.6	-0.8
HHC				PP		17 24 53.8	
HHC				PcP	PcP	17 27 49.4	+2.4
HHC				S	S	17 28 36.9	+2.2
HHC				sS	sS	17 28 50.9	-2.5
HHC				SS		17 29 36.9	
HHC				ScP	ScP	17 31 25.1	+2.2
HHC				PcS	PcS	17 31 29.0	+1.8
HHC				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.7						
HHC				pmax	pmax		
	comp=Z,200nm,5.1s						
HHC				LR	LR		
	comp=N,540nm,13.7s,MS4.4						
HHC				LR	LR		
	comp=E,580nm,13.8s,MS4.4						
HHC				LR	LR		
	comp=Z,470nm,16.7s,MS4.1						
BTO	**Baotou**	25.39	337	*e*P	P	17 24 13.7	-2.4
CN2	**Changchun**	26.26	5	*e*P	P	17 24 27.3	+3.4
CN2				*es*P	sP	17 24 40.7	+0.6
CN2				*e*S	S	17 28 56.4	+2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.3						
CN2				LR	LR		
	comp=E,600nm,15.0s,MS4.3						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.0						
PSI	**Prapat**	27.48	240	LR	LR	17 35 52.6	
	comp=Z,284nm,19.2s,MS3.9,baz=235,slow=37						
MDJ	**Mudanjiang**	27.59	11	P	P	17 24 38.0	+2.1
MDJ				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,39nm,6.0s						
MDJ	**Mudanjiang**	27.59	11	*e*Pn	P	17 24 34.9	-1.0
	comp=Z,30nm,1.1s,mb4.8						
GTA	**Gaotai**	29.41	322	*e*P	P	17 24 52.7	+0.5
GTA				pP	pP	17 25 02.5	-0.9
GTA				sP	sP	17 25 06.5	-1.9
GTA				PP	PP	17 25 49.4	-10
GTA				S	S	17 29 43.8	+0.5
GTA				sS	sS	17 30 00.2	-1.9
GTA				SS	SS	17 31 19.4	-30
GTA				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.2						
GTA				pmax	pmax		
	comp=Z,97nm,5.9s						
GTA				LR	LR		
	comp=N,200nm,15.5s,MS4.1						
GTA				LR	LR		
	comp=E,260nm,14.9s,MS4.1						
GTA				LR	LR		
	comp=Z,280nm,12.5s,MS4.1						
KLR	**Kul'dur**	32.44	11	*e*P	P	17 25 13.7	-5.0
KLR				MLR	MLR		
	comp=Z,900nm,13.0s,MS4.7						
HABR	**Khabarovsk**	32.45	16	*e*P	P	17 25 16.8	-2.0
HABR				*e**SP	sP	17 25 30.7	-4.4
HABR				*e*PPP		17 26 33.8	
HABR				*e*		17 28 04.6	
HABR				*e*S	S	17 30 28.2	-2.4
HABR				*e**SS	sS	17 30 44.5	-5.0
HABR				*e*SS	SS	17 32 22.2	-29
HABR				*e*		17 35 44.5	
HABR				MLR	MLR		
	comp=Z,67nm,17.0s,MS3.4						
ULN	**Ulaanbaatar**	32.78	341	*e*P	P	17 25 22.2	+0.4
ULN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	32.78	341	*e*P	P	17 25 22.2	+0.5
	comp=Z,12nm,1.1s,mb4.7						
SONM	**Songino Array**	32.97	340	P	P	17 25 24.0	+0.6
	comp=Z,2.9nm,0.8s,mb4.3,baz=156,slow=9.1,SNR=11						
YSS	**Yuzh-Sakhalins**	33.69	25	*e*P	P	17 25 33.0	+3.3
FITZ	**Fitzroy Crossi**	35.58	175	P	P	17 25 42.7	-3.6
	comp=Z,2.4nm,0.9s,mb4.1,baz=59,slow=12,SNR=2.5						
ZAK	**Zakamensk**	36.21	339	*e*P	P	17 25 51.4	+0.1
ZAK				*e*		17 27 09.9	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
TLY	**Talaya**	37.20	340	*e*P	pP	17 26 10.4	-0.8
TLY				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.7						
TLY				MLR	MLR		
	comp=Z,292nm,16.0s,MS4.2						
MOY	**Mondy**	38.08	338	*e*P	pP	17 26 18.9	+0.2
WRAB	**Tennant Creek**	39.02	162	*e*P	P	17 26 14.6	-0.8
WRAB				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.1						
WRAB	**Tennant Creek**	39.02	162	*e*P	P	17 26 14.6	-0.8
	comp=Z,50nm,1.3s,mb5.1						
WRA	**Warramunga Arr**	39.03	162	P	P	17 26 14.2	-1.3
	comp=Z,20nm,1.0s,mb4.8,baz=342,slow=9.3,SNR=28						
WB2	**Warramunga Arr**	39.03	162	*e*P	P	17 26 14.3	-1.2
WMQ	**Urumqi**	39.34	319	*e*P	P	17 26 20.1	+2.2
WMQ				PP	PP	17 27 58.2	+10
WMQ				S	S	17 32 18.7	+2.4
WMQ				sS	sS	17 32 37.4	+2.0
WMQ				SS	SS	17 35 05.0	-6.0
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,110nm,4.5s						
WMQ				LR	LR		
	comp=N,140nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=E,110nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,150nm,15.0s,MS4.0						
BOD	**Bodaibo**	40.69	353	*e*P	P	17 26 27.9	-0.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.0						
ASAR	**Alice Springs**	42.45	165	P	P	17 26 43.2	-0.5
	comp=Z,4.5nm,0.9s,mb4.1,baz=344,slow=6.9,SNR=24						
MK31	**Makanchi Array**	44.12	320	*e*P	P	17 26 57.7	+0.8
MK31	**Makanchi Array**	44.12	320	S	P	17 26 57.1	+0.2
	comp=Z,7.0nm,0.7s,mb4.5,baz=121,slow=8.3,SNR=27						
MKAR	**Makanchi Array**	44.12	320	*ce*P	P	17 26 57.2	+0.3
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	44.12	320	P	P	17 26 56.5	-0.4
	comp=Z,8.4nm,0.8s,mb4.5,baz=122,slow=8.6,SNR=24						
YAK	**Yakutsk**	44.69	5	*e*P	P	17 26 59.3	-1.9
YAK				*e**PP	pP	17 27 06.4	-6.5
YAK				*e*		17 28 43.1	
YAK				*e*S	S	17 33 40.4	+5.8
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
YAK				smax			
	comp=N,42nm,10.4s						
YAK				MLR	MLR		
	comp=Z,142nm,16.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,76nm,13.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,156nm,13.0s,MS4.2						
KSH	**Kashi**	45.81	308	*e*P	P	17 27 13.0	+2.5
KSH				*ep*P	pP	17 27 24.0	+1.8
KSH				*es*P	sP	17 27 26.3	-0.8
KSH				*e*PcP	PcP	17 28 50.1	+2.6
KSH				*e*PP	PP	17 29 00.0	+1.7
KSH				*e*ScP	ScP	17 32 39.2	+1.8
KSH				*e*PcS	PcS	17 32 43.0	+1.3
KSH				*e*S	S	17 33 53.4	+1.8
KSH				*es*S	sS	17 34 10.0	-1.0
KSH				*e*ScS	ScS	17 37 03.1	-0.1
KSH				*e*SS	SS	17 37 10.1	-6.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.2s,mb4.9						
KSH				pmax	pmax		
	comp=Z,88nm,3.5s						
KSH				LR	LR		
	comp=N,390nm,11.4s,MS4.8						
KSH				LR	LR		
	comp=E,510nm,10.6s,MS4.8						
KSH				LR	LR		
	comp=Z,440nm,13.4s,MS4.6						
ZALV	**Zalesovo Beam**	46.55	330	P	P	17 27 14.4	-1.6
	comp=Z,1.2nm,0.7s,mb4.0,baz=115,slow=7.0,SNR=4.1						
UCH	**Uchtor**	47.60	312	*e*P	P	17 27 25.7	+1.2
UCH				*e*		17 28 50.3	
UCH				pmax	pmax		
	comp=Z,520nm,0.6s						
UCH	**Uchtor**	47.60	312	*e*P	P	17 27 25.7	+1.3
	comp=Z,520nm,0.6s						
UCH				*e*PcP	PcP	17 28 50.3	-3.5
AAK	**Ala-Archa**	47.73	312	P	P	17 27 26.7	+1.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=180,slow=12,SNR=2.2						
NVS	**Novosibirsk**	47.82	330	*i*P	P	17 27 25.4	-0.6
NVS				*e*		17 28 54.9	
NVS				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9						
NVS				pmax	pmax		
	comp=N,18nm,1.7s						
NVS				pmax	pmax		
	comp=E,15nm,1.7s						
KURK	**Kurchatov**	48.08	324	*c i*P	P	17 27 27.9	-0.1

KURK pmax pmax
comp=Z,24nm,1.7s,mb5.0
KURK Kurchatov 48.08 324 P **P 17 27 28.1 0.0**
comp=Z,9.4nm,0.8s,mb4.8,baz=116,slow=8.6,SNR=22
KURK Kurchatov 48.08 324 *eP* **P 17 27 28.0 0.0**
comp=Z,22nm,1.1s,mb5.1
KURK Kurchatov 48.08 324 ⇓S **P 17 27 27.9 -0.1**
comp=Z,25nm,1.3s,mb5.1
KURBB Kurchatov Arra 48.09 323 ⇑S **P 17 27 28.0 -0.1**
comp=Z,3.8nm,1.2s,mb4.3
SEY Seymchan 49.79 17 ⇓*iP* **P 17 27 41.8 +0.9**
KBL Kabul 50.41 301 *eP* **P 17 27 46.1 -0.1**
KBL pmax pmax
comp=Z,18nm,1.1s,mb5.0
KBL Kabul 50.41 301 *eP* **P 17 27 46.1 -0.1**
comp=Z,18nm,1.1s,mb5.0
NWAO Narrogin (SRO) 50.48 186 P **P 17 27 44.7 -1.8**
comp=Z,3.4nm,0.4s,mb4.7,baz=48,slow=12,SNR=9.8
NWAO Narrogin (SRO) 50.48 186 P **P 17 27 44.7 -1.8**
STKA Stephens Creek 52.44 160 *eP* **P 17 28 00.7 -0.5**
STKA pmax pmax
comp=Z,2.0nm,1.2s
STKA Stephens Creek 52.44 160 P **P 17 28 00.1 -1.1**
comp=Z,4.2nm,0.9s,mb4.3,baz=335,slow=9.5,SNR=5.4
STKA Stephens Creek 52.44 160 *eP* **P 17 28 00.7 -0.5**
comp=Z,2.0nm,1.2s,mb3.9
BVAR Borovoye Array 53.68 324 P **P 17 28 08.2 -1.9**
BVAR 17 29 16.2
BVAR Borovoye Array 53.68 324 P **P 17 28 08.2 -1.9**
comp=Z,1.4nm,0.9s,mb3.9,baz=91,slow=10,SNR=3.2
BVAR PcP PcP 17 29 16.2 +0.2
comp=Z,1.3nm,0.7s,baz=64,slow=6.6,SNR=1.9
BVAR LR LR 17 51 19.3
comp=Z,97nm,18.6s,MS3.9,slow=36
BRVK Borovoye 53.75 324*c iP* **P 17 28 11.0 +0.4**
BRVK pmax pmax
comp=Z,11nm,1.2s,mb4.7
BRVK Borovoye 53.75 324 *eP* **P 17 28 10.0 -0.7**
comp=Z,9.9nm,1.0s,mb4.7
TIXI Tiksi 54.20 2 *eP* **P 17 28 14.5 +0.9**
TIXI pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
TIXI Tiksi 54.20 2 *eP* **P 17 28 12.2 -1.4**
comp=Z,7.9nm,1.1s,mb4.6
BILL Biiibino 57.48 18⇑*eP* **P 17 28 37.5 +0.3**
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
BILL Bilibino 57.48 18 *eP* **P 17 28 36.6 -0.6**
comp=Z,147nm,1.3s,mb5.8
SVE Sverdlovsk 60.18 326⇑*eP* **P 17 28 56.4 +0.3**
SVE *eS* **S 17 36 57.2 -9.5**
SVE pmax pmax
comp=Z,28nm,1.5s,mb5.1
SVE MLR MLR
comp=Z,185nm,18.0s,MS4.3
AKTK Aktyubinsk 60.49 318 P **P 17 28 58.2 -0.1**
AKTO Aktyubinsk 60.49 318 P **P 17 28 58.2 -0.1**
comp=Z,2.1nm,0.4s,mb4.5,baz=98,slow=9.1,SNR=7.1
ARU Arti 61.21 325*c iP* **P 17 29 02.3 -0.8**
ARU *e* 17 31 13.6
ARU S **S 17 37 18.7 -1.1**
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.9
ARU Arti 61.21 325 *eP* **P 17 29 01.7 -1.4**
comp=Z,38nm,1.7s,mb5.2
GNI Garni 69.72 307 *eP* **P 17 29 59.3 +0.9**
GNI pmax pmax
comp=Z,12nm,1.7s
ZEI Tsey 70.08 310 *eP* **P 17 29 59.9 -0.7**
ZEI pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KIV Kislovodsk 70.83 311 *eP* **P 17 30 05.5 +0.3**
KIV *e* 17 30 28.1
KIV *eS* S 17 39 14.7 -2.6
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIV Kislovodsk 70.83 311 *eP* **P 17 30 05.2 0.0**
comp=Z,10.0nm,0.9s,mb4.8
VRHR Novokhopersk 70.89 319 *eP* **P 17 30 05.1 -0.3**
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
VRHR pmax pmax
comp=E,10.0nm,0.8s
KLMR Klimovskoe 71.46 329 *eP* **P 17 30 08.4 -0.2**
KLMR *i* *PP pP 17 30 18.3 -2.6
KLMR pmax pmax
comp=Z,57nm,1.8s,mb5.2
VORD Divnogorie 72.37 319 *eP* **P 17 30 13.3 -1.0**
VORD pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,1.0s
VSR Storozhevoye 72.42 319 *eP* **P 17 30 14.2 -0.4**
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,1.3s
KDAK Kodiak Island 72.57 34 P **P 17 30 16.5 +1.2**
comp=E,11nm,0.8s,mb4.8,baz=207,slow=16,SNR=4.1
KDAK Kodiak Island 72.57 34 P **P 17 30 16.5 +1.2**
BPAW Bear Paw Mtn. 72.80 27 *eP* **P 17 30 15.1 -1.5**
comp=E,12nm,0.9s,mb4.8
MOS Moscow 72.85 324 *eP* **P 17 30 25.0 +7.9**
KTH Kantishna Hill 72.87 28 *eP* **P 17 30 14.2 -2.9**
comp=E,5.7nm,0.9s,mb4.5
OBN Obninsk 73.52 323⇑*eP* **P 17 30 21.1 +0.1**
OBN pmax pmax
comp=Z,26nm,1.5s,mb4.9
APA Apatity 73.60 336⇑*iP* **P 17 30 22.0 +0.7**
APA pmax pmax
comp=Z,46nm,1.6s,mb5.2
APA MLR MLR
comp=Z,300nm,14.0s,MS4.7
MCK McKinley 73.74 28 *eP* **P 17 30 23.6 +1.5**
MCK pmax pmax
comp=Z,27nm,1.2s,mb5.0
MCK McKinley 73.74 28 *eP* **P 17 30 23.6 +1.4**
comp=Z,27nm,1.2s,mb5.0
JOF Joensuu 75.10 332 *eP* **P 17 30 29.4 -0.7**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
JOF Joensuu 75.10 332 *ep* **P 17 30 29.4 -0.7**
comp=Z,3.3nm,0.7s,mb4.4
KEV Kevo 75.58 339 *eP* **P 17 30 24.3 -8.4**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
KEV Kevo 75.58 339 *ep* **P 17 30 24.3 -8.4**
comp=Z,1.7nm,0.3s,mb4.5
ARCES ARCESS Array B 76.14 339 P **P 17 30 36.5 +0.6**
comp=Z,4.1nm,0.9s,mb4.3,baz=63,slow=8.2,SNR=4.8
SPB4 Spitsbergen Ar 76.19 348 *eP* **P 17 30 36.7 +0.6**
KAF Kangasniemi 77.54 331 *eP* **P 17 30 43.1 -0.8**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KAF Kangasniemi 77.54 331 *ep* **P 17 30 43.1 -0.8**
comp=Z,3.0nm,0.8s,mb4.3
FINES FINESS Array B 77.81 331 P **P 17 30 44.9 -0.5**
comp=Z,1.3nm,0.5s,mb4.2,baz=70,slow=4.6,SNR=9.4
DAWY Dawson 77.82 26 *eP* **P 17 30 46.9 +1.5**
BRTR Keskin Array B 78.20 308 *iP* **P 17 30 47.9 -0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 78.20 308 P **P 17 30 47.0 -1.1**
comp=Z,0.6nm,0.7s,mb3.6,baz=42,slow=9.9,SNR=3.8
BRTR LR LR 18 05 15.8
comp=Z,34nm,21.0s,MS3.6,baz=250,slow=36
VSU Vasula 78.22 328 *eP* **P 17 30 47.2 -0.6**
VSU pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
AKASG Malin Array Be 78.70 320 *iP* **P 17 30 48.7 -1.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 78.70 320 P **P 17 30 48.6 -1.9**
comp=Z,0.6nm,0.3s,mb4.0,baz=61,slow=7.2,SNR=5.2
INK Inuvik 78.84 22 P **P 17 30 50.1 -1.0**
comp=Z,1.9nm,1.0s,mb4.0,baz=254,slow=5.8,SNR=3.3
IDID Didziasalis 79.01 325 *eP* **P 17 30 52.3 +0.1**
IZAR Zarasai 79.17 325 *eP* **P 17 30 52.5 -0.5**
ISAL Salakas 79.28 325 *eP* **P 17 30 53.2 -0.5**
IIGN Ignalina 79.29 325 *eP* **P 17 30 53.9 +0.2**
SUW Suwalki 81.36 324 *eP* **P 17 31 04.1 -0.8**
SUW pmax pmax
comp=Z,32nm,0.9s,mb5.2
SUW Suwalki 81.36 324 *eP* **P 17 31 04.1 -0.8**
comp=Z,32nm,0.9s,mb5.2
DAG Danmarks Havn 83.07 352⇑*iP* **P 17 31 13.3 -0.1**
DAG pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
DAG Danmarks Havn 83.07 352⇑*iP* **P 17 31 13.3 -0.1**
comp=Z,7.8nm,1.2s,mb4.6
KOLS Kolonicke sedl 83.52 319 *eP* PcP 17 31 21.0 +0.5
KOLS Kolonicke sedl 83.52 319 *e*PCP PcP 17 31 21.0 +0.5
UZH Uzhgorod 83.60 319 *eP* pP 17 31 27.4 -1.8
STHS Stebnicka Huta 83.99 320 *eP* **P 17 31 17.7 -0.9**
STHS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
STHS Stebnicka Huta 83.99 320 *eP* **P 17 31 17.7 -0.9**
comp=Z,1.1nm,0.7s,mb4.1
STHS *e*PcP PcP 17 31 21.0 -1.5
STHS Stebnicka Huta 83.99 320 *eP* **P 17 31 17.7 -0.9**
STHS *e*PCP PcP 17 31 21.0 -1.5
OJC Ojcow 84.59 321 *eP* **P 17 31 21.7 0.0**
NB2 NORSAR Subarra 84.67 333 P **P 17 31 20.9 -0.9**
comp=Z,8.9nm,1.0s,mb4.8,baz=60,slow=5.3
NOA NORSAR Array B 84.67 333 P **P 17 31 21.1 -0.8**
comp=Z,3.9nm,0.9s,mb4.5,baz=64,slow=4.9,SNR=7.9
KECS Kecovo 84.78 319 *eP* **P 17 31 23.1 +0.4**
KECS *e* pP 17 31 33.6 -1.6
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
KECS Kecovo 84.78 319 *eP* **P 17 31 23.1 +0.4**
comp=Z,2.0nm,1.0s,mb4.2
KECS *e*PP pP 17 31 33.6 -1.6
KECS Kecovo 84.78 319 *eP* **P 17 31 23.1 +0.4**
KECS *e*pP pP 17 31 33.6 -1.6
NAO01 NORSAR Array S 84.90 333 *eP* **P 17 31 23.0 0.0**
comp=Z,3.6nm,0.8s,mb4.5
RES Resolute Bay 84.94 9 *eP* **P 17 31 23.4 +0.4**
RES pmax pmax
comp=Z,21nm,1.6s,mb5.0
RES Resolute Bay 84.94 9 *eP* **P 17 31 23.4 +0.4**
comp=Z,21nm,1.6s,mb5.0
VYHS Vyhne 85.80 320 *eP* **P 17 31 28.1 +0.3**
VYHS *e* 17 31 36.8
VYHS pmax pmax
comp=Z,3.0nm,1.3s,mb4.4
VYHS Vyhne 85.80 320 *eP* **P 17 31 28.1 +0.3**
comp=Z,2.9nm,1.3s,mb4.3
VYHS *e*PP pP 17 31 36.8 -3.6
VYHS Vyhne 85.80 320 *eP* **P 17 31 28.1 +0.3**
VYHS *e*pP pP 17 31 36.8 -3.6
KMBO Kilima Mbogo 85.89 268 *eP* **P 17 31 28.5 -0.4**
KMBO pmax pmax
comp=Z,68nm,2.6s
KMBO Kilima Mbogo 85.89 268 *eP* **P 17 31 28.5 -0.3**
comp=Z,68nm,2.6s,mb5.4
YKA Yellowknife Ar 88.52 23 P **P 17 31 41.2 +0.6**
comp=Z,0.8nm,0.8s,mb4.1,baz=344,slow=4.6,SNR=12
YKA Yellowknife Ar 88.52 23 P **P 17 31 41.2 +0.6**
GERES GERESS Array B 88.78 321 P **P 17 31 41.8 -0.4**
comp=Z,0.4nm,0.7s,mb3.9,baz=297,slow=5.8,SNR=3.9
SUMG Summit 89.18 354 *eP* **P 17 31 44.9 +1.4**
SUMG pmax pmax
comp=Z,26nm,1.2s
SUMG Summit 89.18 354 *eP* **P 17 31 44.9 +1.3**
comp=Z,26nm,1.2s,mb5.4
LPG La Plagne 94.54 321 *eP* **P 17 32 09.0 +0.1**
comp=Z,7.7nm,1.0s,mb4.8
LPG La Plagne 94.54 321 *eP* **P 17 32 09.0 +0.1**
LPG pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
LPG La Plagne 94.54 321 *eP* **P 17 32 09.0 +0.1**
comp=Z,3.8nm,1.0s,mb4.8
LPL La Plagne 94.54 321 *eP* **P 17 32 09.8 +0.9**
TXAR Lajitas Array 115.44 44 PKP PKPdf 17 37 31.8 +1.2
comp=Z,0.1nm,0.5s,baz=46,slow=2.6,SNR=3.2
SDV Santo Domingo 150.64 27 *e*PKPbc PKPbc 17 38 41.3 +0.1

*IDC **04** 17:23:14.4±0.7, 17°.49N×122°.55E, h0km, mb4.0/16, mb1 4.1/16, mb1mx4.0/25, mbtmp4.0/16, MS3.6/1, Ms1 3.6/1, ms1mx2.9/38, Error ellipse: s-maj=32.8km s-min=12.0km az=72.0*
*ISCJB **04** 17:23:18.6±0.6, 17°.65N±0°.03×122°.59E±0°.05, h43km±6km, mb4.0/18, Error ellipse: s-maj=8.8km s-min=4.4km az=175.6*
*MAN **04** 17:23:19, 17°.60N×122°.48E, h25km, mb4.9, ML3.8, MS3.8*
*NEIC **04** 17:23:19.1±0.3, 17°.57N×122°.73E, h35km, mb4.2/3, Error ellipse: s-maj=12.3km s-min=5.3km az=83.0*
*BJI **04** 17:23:19.0, 17°.61N×122°.75E, h35km, mB4.7/5, mb4.2/10*
ISC 04 17:23:18.6±0.8, 17°.63N±0°.03×122°.56E±0°.05, h24km±6km, n45, σ1°25/53, mb4.0/18, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.58**	**193**	*eP*	**Pb**	**17 23 30.2**	**+0.1**
PALP				*eS*	**Sb**	**17 23 41.2**	**+3.3**
CVP	**Callao Caves**	**0.71**	**276**	*eP*	**Pb**	**17 23 30.1**	**-2.3**
SGCP	**Mt. Cagua**	**0.78**	**321**	*eP*	**Pb**	**17 23 33.6**	**0.0**
SGCP				*eS*	**Sb**	**17 23 42.3**	**-1.5**
CAUP	**Cauayan**	**0.98**	**226**	*eP*	**Pn**	**17 23 36.8**	**-0.1**
CAUP				*eS*	**Sb**	**17 23 49.2**	**-0.3**
APYP	**Conner**	**1.28**	**281**	*eP*	**Pn**	**17 23 40.9**	**-0.1**
APYP				*eS*	**Sn**	**17 23 55.2**	**-2.1**
ABRA	**Dolores**	**1.77**	**271**	*eP*	**Pn**	**17 23 48.5**	**+0.8**
ABRA				*eS*	**Sn**	**17 24 08.9**	**-0.4**
BALP	**Baler**	**2.10**	**207**	*eP*	**Pn**	**17 23 53.0**	**+0.7**
BALP				*eS*	**Sn**	**17 24 17.3**	**-0.4**
BOLP	**Bolinao**	**2.82**	**244**	*eP*	**Pn**	**17 24 04.0**	**+1.8**
BBP	**Basco**	**2.85**	**349**	*eP*	**Pn**	**17 24 03.8**	**+1.1**
POLP	**Polilio Island**	**2.95**	**192**	*eP*	**Pn**	**17 24 06.4**	**+2.4**
POLP				*eS*	**Sn**	**17 24 33.3**	**-5.2**
SCZP	**Santa Cruz**	**3.14**	**234**	*eP*	**Pn**	**17 24 09.6**	**+3.0**
GQP	**Guinayangan**	**3.70**	**182**	*eP*	**Pn**	**17 24 15.1**	**+0.8**
TGY	**Tagaytay City**	**3.84**	**204**	Pn	**Pn**	**17 24 16.3**	**+0.1**
	37nm,0.3s,baz=162,slow=13,SNR=1.8						
TGY				Sn	**Sn**	**17 25 03.0**	**+2.4**
	60nm,0.3s,baz=58,slow=9.5,SNR=2.3						
BOAC	**Boac**	**4.20**	**190**	*eP*	**Pn**	**17 24 25.3**	**+4.1**
PVCP	**Virac**	**4.29**	**159**⇑	*eP*	**Pn**	**17 24 22.7**	**+0.2**
YULB	**Yu-li**	**5.86**	**349**	*e*Pn	**Pn**	**17 24 45.3**	**+1.4**
	52nm,1.0s						
YULB				*e*Sn	**Sn**	**17 25 52.7**	**+2.4**
NACB	**Ninganchiao**	**6.58**	**352**	*e*Pn	**Pn**	**17 24 53.3**	**-0.5**
	20nm,0.8s						
YHNB	**Yeheng**	**7.09**	**351**	*e*Pn	**Pn**	**17 25 01.1**	**+0.2**
	23nm,0.7s						
KS15	**Wonju Array Si**	**20.29**	**12**	*eP*	**P**	**17 27 51.6**	**-0.9**
KSRS	**Korea Array**	**20.30**	**12**	P	**P**	**17 27 54.4**	**+1.6**
	2.1nm,0.8s,baz=198,slow=11,SNR=7.0						
JHJ	**Hachijo jima 2**	**21.86**	**42**	LR	LR	17 35 12.8	
	comp=Z,148nm,19.1s,baz=268,slow=33						
CMAR	**Chiang Mai Arr**	**22.47**	**276**	P	**P**	**17 28 16.0**	**-0.2**
	1.4nm,0.7s,mb3.5,baz=81,slow=9.3,SNR=6.9						
KAPI	**Kappang**	**22.67**	**187**	P	**P**	**17 28 17.6**	**-0.7**
	2.4nm,0.3s,mb4.1,baz=354,slow=5.6,SNR=4.3						
MAJO	**Matsushiro**	**23.37**	**33**	*eP*	**P**	**17 28 23.7**	**-1.8**
	9.3nm,1.3s,mb4.0						
SONM	**Songino Array**	**32.91**	**340**	P	**P**	**17 29 52.1**	**+1.2**
	0.7nm,0.5s,mb3.9,baz=157,slow=11,SNR=6.4						
FITZ	**Fitzroy Crossi**	**35.63**	**175**	P	**P**	**17 30 12.1**	**-2.6**
	1.8nm,1.0s,mb4.0,baz=332,slow=17,SNR=3.2						
WRAB	**Tennant Creek**	**39.08**	**162**	*eP*	**P**	**17 30 42.0**	**-1.9**
	8.0nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**39.09**	**162**	P	**P**	**17 30 42.4**	**-1.6**
	11nm,0.9s,mb4.6,baz=342,slow=9.3,SNR=25						
ASAR	**Alice Springs**	**42.51**	**165**	P	**P**	**17 31 11.2**	**-0.9**
	3.6nm,0.8s,mb4.2,baz=342,slow=6.7,SNR=28						
MK31	**Makanchi Array**	**44.06**	**320**	*eP*	**P**	**17 31 25.3**	**+0.8**
MKAR	**Makanchi Array**	**44.06**	**320**	P	**P**	**17 31 25.6**	**+1.0**
	2.1nm,0.7s,mb4.0,baz=118,slow=8.0,SNR=16						
PETK	**Petropavlovsk-**	**44.74**	**30**	P	**P**	**17 31 34.7**	**+4.8**
	2.8nm,0.9s,mb4.1,baz=239,slow=9.0,SNR=4.3						
PETK	**Petropavlovsk-**	**44.74**	**30**	P	**P**	**17 31 34.7**	**+4.8**
ZALV	**Zalesovo Beam**	**46.49**	**330**	P	**P**	**17 31 42.9**	**-0.8**
	0.7nm,0.6s,mb3.8,baz=120,slow=6.7,SNR=3.3						
KURK	**Kurchatov**	**48.02**	**324**	P	**P**	**17 31 56.5**	**+0.8**
	2.3nm,0.7s,mb4.3,baz=120,slow=7.9,SNR=10						
KURK	**Kurchatov**	**48.02**	**324**	P	**P**	**17 31 56.5**	**+0.8**
NWAO	**Narrogin (SRO)**	**50.53**	**186**	P	**P**	**17 32 12.1**	**-2.9**
	5.6nm,1.0s,mb4.5,baz=11,slow=10,SNR=5.6						
STKA Stephens Creek 52.50 160 P **P 17 32 28.7 -1.0**
3.1nm,0.8s,mb4.3,baz=343,slow=7.6,SNR=7.3
STKA Stephens Creek 52.50 160 *eP* **P 17 32 28.0 -1.7**
1.2nm,1.0s,mb3.8
BVAR Borovoye Array 53.62 324 P **P 17 32 38.2 +0.4**
0.4nm,0.5s,mb3.6,baz=86,slow=7.4,SNR=4.1
BVAR PcP PcP 17 33 47.4 +3.3
0.8nm,0.6s,baz=96,slow=4.5,SNR=4.3
BRVK Borovoye 53.69 324 *eP* **P 17 32 38.6 +0.3**
ABKAR Akbulak array 59.02 317 *eP* **P 17 33 16.7 +0.3**
FINES FINESS Array B 77.75 331 P **P 17 35 12.7 -0.7**
1.3nm,0.8s,mb3.9,baz=46,slow=8.5,SNR=4.9
NOA NORSAR Array B 84.61 333 P **P 17 35 49.1 -0.7**
1.2nm,0.9s,mb4.0,baz=64,slow=5.1,SNR=3.3
YKA Yellowknife Ar 88.48 23 P **P 17 36 09.0 +0.3**
0.3nm,0.6s,mb3.7,baz=300,slow=4.2,SNR=5.8

MAN 04 17:26:32, 17°.62N×122°.56E, h20km, mb4.8, ML3.7, MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.57**	**193**	*eP*	Pb	17 26 42.5	-0.7
SGCP	**Mt. Cagua**	**0.79**	**322**	*eP*	Pb	17 26 47.9	+0.8
SGCP				*eS*	Sb	17 26 59.8	+2.4
CAUP	**Cauayan**	**0.97**	**227**	*eP*	Pb	17 26 51.1	+0.9
APYP	**Conner**	**1.28**	**281**	*eP*	Pn	17 26 55.5	+0.7
APYP				*eS*	Sn	17 27 12.0	+0.6
ABRA	**Dolores**	**1.77**	**271**	*eP*	Pn	17 27 02.6	+1.2
ABRA				*eS*	Sn	17 27 21.3	-2.0
BALP	**Baler**	**2.09**	**207**	*eP*	Pn	17 27 07.1	+1.1

*NEIC **04** 17:31:04.5±0.6, 5°.06N×124°.15E, h35km, mb3.5/1, Error ellipse: s-maj=22.4km s-min=10.2km az=81.0*
*IDC **04** 17:31:06.2±5.7, 5°.15N×124°.39E, h52km±62km, mb3.2/5, mb1 3.4/6, mb1mx3.2/24, mbtmp3.3/6, ML4.0/1, Error ellipse: s-maj=57.8km s-min=15.2km az=80.0*
*MAN **04** 17:31:08, 5°.33N×126°.28E, h146km, mb4.9, ML3.8, MS3.8*
*ISCJB **04** 17:31:13.1±0.7, 5°.77N±0°.10×125°.9E±0°.1, h159km±7km, mb3.4/6, Error ellipse: s-maj=24.3km s-min=14.4km az=160.5*
ISC 04 17:31:14.3±0.7, 5°.80N±0°.10×126°.0E±0°.2, h150km±7km, n14, σ0°89/20, mb3.4/6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.06**	**286**⇓	*eP*	**Pn**	**17 31 35.8**	**-3.8**
GSPH				*eS*	**Sn**	**17 31 58.5**	**-0.4**
MATI	**Mati**	**1.17**	**14**	*eP*	**Pn**	**17 31 39.4**	**-1.2**
MATI				*eS*	**Sn**	**17 31 49.8**	**-11**
DAV	**Davao City (W)**	**1.32**	**343**	P	**Pn**	**17 31 42.1**	**+0.1**
	39nm,0.3s,baz=0.0,slow=1.0,SNR=3.5						
DAV				S	**Sn**	**17 32 08.0**	**+4.7**
	46nm,0.3s,baz=128,slow=22,SNR=7.9						
DAV	**Davao City (W)**	**1.32**	**343**	P	**Pn**	**17 31 42.1**	**+0.1**
DAV				S	**Sn**	**17 32 08.0**	**+4.7**
KCP	**Kidapawan**	**1.49**	**324**⇑	*iP*	**Pn**	**17 31 44.3**	**+0.5**
KCP				*i* S	**Sn**	**17 32 11.2**	**+4.9**
BUKP	**Musuan**	**2.25**	**336**	*eP*	**Pn**	**17 31 54.4**	**+1.9**
BUKP				*eS*	**Sn**	**17 32 08.8**	**-13**
FITZ	**Fitzroy Crossi**	**23.75**	**181**	P	**P**	**17 36 06.8**	**-6.2**
	1.1nm,0.5s,mb3.6,baz=24,slow=9.8,SNR=7.3						
WRAB	**Tennant Creek**	**26.87**	**162**	*eP*	**P**	**17 36 41.8**	**+0.6**
	0.9nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**26.87**	**162**	P	**P**	**17 36 41.0**	**-0.2**
	0.2nm,0.4s,mb3.1,baz=338,slow=11,SNR=2.9						
WB2	**Warramunga Arr**	**26.88**	**162**	P	**P**	**17 36 40.6**	**-0.7**
ASAR	**Alice Springs**	**30.29**	**165**	P	**P**	**17 37 12.4**	**+0.9**
	0.2nm,0.4s,mb3.2,baz=349,slow=7.4,SNR=8.3						
MK31	**Makanchi Array**	**55.44**	**325**	*eP*	**P**	**17 40 32.4**	**-0.8**
MKAR	**Makanchi Array**	**55.44**	**325**	P	**P**	**17 40 33.5**	**+0.3**
	0.5nm,0.5s,mb3.5,baz=125,slow=8.0,SNR=10						
KURK	**Kurchatov**	**59.60**	**327**	P	**P**	**17 41 01.6**	**-0.6**
	0.7nm,0.7s,mb3.6,baz=122,slow=7.3,SNR=8.9						

MAN 04 17:35:26, 17°.57N×122°.56E, h26km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.52**	**194**	*eP*	Pb	17 35 37.1	+0.6
PALP				*eS*	Sb	17 35 46.6	+2.9
SGCP	**Mt. Cagua**	**0.83**	**324**	*eP*	Pb	17 35 41.0	-0.8
SGCP				*eS*	Sb	17 35 49.2	-3.4
CAUP	**Cauayan**	**0.94**	**229**	*eP*	Pn	17 35 44.5	+1.1
APYP	**Conner**	**1.29**	**283**	*eP*	Pn	17 35 48.8	+0.5
APYP				*eS*	Sn	17 36 02.4	-2.3
ABRA	**Dolores**	**1.76**	**273**	*eP*	Pn	17 35 55.5	+0.6
ABRA				*eS*	Sn	17 36 16.9	+0.5
BALP	**Baler**	**2.04**	**208**	*eP*	Pn	17 36 00.5	+1.8

*IDC **04** 17:41:48.1±1.2, 17°.62N×122°.95E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.5/23, mbtmp3.7/5, ML4.3/1, Error ellipse: s-maj=48.8km s-min=19.1km az=75.0*
*ISCJB **04** 17:41:52.0±0.7, 17°.61N±0°.03×122°.55E±0°.07, h43km±8km, mb3.5/6, Error ellipse: s-maj=10.6km s-min=5.2km az=170.2*
*MAN **04** 17:41:52, 17°.61N×122°.54E, h32km, mb4.7, ML3.5, MS3.5*
*NEIC **04** 17:41:52.5±0.8, 17°.61N×122°.96E, h35km, mb3.5/2, Error ellipse: s-maj=28.6km s-min=11.7km az=72.0*
ISC 04 17:41:53.3±0.7, 17°.60N±0°.03×122°.49E±0°.06, h37km±9km, n22, σ1°38/31, mb3.5/6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.54**	**186**	*eP*	**Pn**	**17 42 03.1**	**-1.3**
PALP				*eS*	**Sn**	**17 42 10.6**	**-1.6**
CVP	**Callao Caves**	**0.64**	**279**	*eP*	**Pn**	**17 42 03.1**	**-2.8**
SGCP	**Mt. Cagua**	**0.77**	**327**	*eP*	**Pn**	**17 42 07.1**	**-0.5**
SGCP				*eS*	**Sn**	**17 42 16.6**	**-1.3**
CAUP	**Cauayan**	**0.91**	**224**	*eP*	**Pn**	**17 42 10.3**	**+0.7**
CAUP				*eS*	**Sn**	**17 42 21.5**	**+0.1**
APYP	**Conner**	**1.21**	**283**	*eP*	**Pn**	**17 42 13.8**	**0.0**
APYP				*eS*	**Sn**	**17 42 26.4**	**-2.6**
ABRA	**Dolores**	**1.69**	**272**	*eP*	**Pn**	**17 42 21.0**	**+0.7**
ABRA				*eS*	**Sn**	**17 42 41.5**	**+0.7**
BALP	**Baler**	**2.04**	**205**	*eP*	**Pn**	**17 42 26.3**	**+1.1**
BALP				*eS*	**Sn**	**17 42 49.4**	**-0.1**
BOLP	**Bolinao**	**2.74**	**244**	*eP*	**Pn**	**17 42 36.8**	**+2.0**
BOLP				*eS*	**Sn**	**17 43 04.8**	**-1.9**
BBP	**Basco**	**2.87**	**350**	*eP*	**Pn**	**17 42 37.0**	**+0.4**
BBP				*eS*	**Sn**	**17 43 09.6**	**-0.3**
POLP	**Polilio Island**	**2.90**	**190**	*eP*	**Pn**	**17 42 37.9**	**+0.9**
SCZP	**Santa Cruz**	**3.06**	**234**	*eP*	**Pn**	**17 42 42.3**	**+3.1**
TGY	**Tagaytay City**	**3.78**	**203**	Pn	**Pn**	**17 42 51.5**	**+2.4**
	18nm,0.3s,baz=324,slow=3.7,SNR=5.7						
TGY				Sn	**Sn**	**17 43 38.7**	**+6.3**
	14nm,0.3s,baz=308,slow=19,SNR=2.1						
BOAC	**Boac**	**4.16**	**189**	*eP*	**Pn**	**17 42 55.7**	**+1.4**
PVCP	**Virac**	**4.29**	**158**	*eP*	**Pn**	**17 42 56.1**	**0.0**
SONM	**Songino Array**	**32.91**	**340**	P	**P**	**17 48 25.7**	**+1.8**
	0.2nm,0.5s,mb3.3,baz=168,slow=8.8,SNR=2.1						
WRAB	**Tennant Creek**	**39.07**	**162**	*eP*	**P**	**17 49 13.7**	**-3.2**
	1.6nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**39.08**	**162**	P	**P**	**17 49 15.8**	**-1.2**
	4.9nm,1.2s,mb4.1,baz=342,slow=9.2,SNR=13						
WB2	**Warramunga Arr**	**39.08**	**162**	*eP*	**P**	**17 49 14.7**	**-2.3**
ASAR	**Alice Springs**	**42.50**	**164**	P	**P**	**17 49 44.6**	**-0.5**
	0.9nm,0.7s,mb3.6,baz=347,slow=7.1,SNR=19						
MK31	**Makanchi Array**	**44.04**	**320**	*eP*	**P**	**17 49 58.0**	**+0.6**
MKAR	**Makan

ISC 04 17:44:04.7±1.2, 20°.19S±0°.10×168°.1E±0°.2, h35km, (h41km±3.7km:pP-P), n18, σ0°.98/20, mb3.9/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.28**	**211**	*e*S	**Sn**	**17 45 08.2**	**+1.6**
DZM	**Mont Dzumac**	**2.45**	**220**	*e*Pn	**Pn**	**17 44 41.0**	**-1.2**
	17nm,0.2s						
DZM				*e*Sn	**Sn**	**17 45 09.3**	**-1.6**
	624nm,0.9s						
DZM	**Mont Dzumac**	**2.45**	**220**	*e*P	**Pn**	**17 44 40.8**	**-1.4**
DZM				*e*S	**Sn**	**17 45 11.3**	**+0.4**
DZM				AMP		17 45 22.8	
	comp=Z,995nm,0.0s						
LASL	**Noumea**	**2.52**	**216**	*e*P	**Pn**	**17 44 42.6**	**-0.5**
LASL				*e*S	**Sn**	**17 45 13.1**	**+0.4**
NOUC	**Port Laguerre**	**2.56**	**222**	*e*P	**Pn**	**17 44 42.5**	**-1.2**
NOUC				*e*S	**Sn**	**17 45 14.1**	**+0.5**
NOUC				AMP		17 45 28.5	
	comp=Z,67nm,2.3s						
CTA	**Charters Tower**	**20.55**	**266**	P	**P**	**17 48 44.0**	**+3.6**
	comp=Z,4.7nm,1.0s,baz=114,slow=14,SNR=3.0						
CTAO	**Charters Tower**	**20.55**	**266**	P	**P**	**17 48 42.2**	**+1.8**
	comp=Z,2.5nm,0.8s						
STKA	**Stephens Creek**	**26.47**	**239**	P	**P**	**17 49 39.6**	**+1.0**
	comp=Z,1.5nm,0.5s,mb3.8,baz=81,slow=11,SNR=5.3						
STKA				pP	pP	17 49 50.6	+2.0
	comp=Z,4.7nm,0.7s,baz=66,slow=8.9,SNR=6.7						
STKA				LR	LR	17 58 51.5	
	comp=Z,91nm,21.8s,baz=25,slow=34						
STKA	**Stephens Creek**	**26.47**	**239**	*e*P	**P**	**17 49 37.3**	**-1.3**
	comp=Z,0.4nm,0.6s,mb3.1						
STKA				*e*	pP	17 49 49.7	+1.1
WB2	**Warramunga Arr**	**31.71**	**265**	P	**P**	**17 50 24.9**	**-0.5**
WRAB	**Tennant Creek**	**31.71**	**265**	*e*P	**P**	**17 50 24.4**	**-1.0**
	comp=Z,3.2nm,1.1s,mb4.1						
WRA	**Warramunga Arr**	**31.72**	**265**	P	**P**	**17 50 24.9**	**-0.5**
	comp=Z,0.6nm,0.8s,mb3.5,baz=92,slow=8.4,SNR=4.0						
WRA				pP	pP	17 50 35.1	-0.4
	comp=Z,0.9nm,0.6s,baz=92,slow=8.5,SNR=4.5						
ASAR	**Alice Springs**	**31.90**	**257**	P	**P**	**17 50 27.1**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.1,baz=87,slow=8.8,SNR=33						
ASAR				pP	pP	17 50 37.3	+0.2
	comp=Z,5.7nm,0.8s,baz=82,slow=8.6,SNR=27						
PPT	**Papeete**	**40.02**	**94**	*e*LR	LR	18 02 24.5	
	comp=Z,106nm,30.0s						
CMAR	**Chiang Mai Arr**	**77.96**	**295**	P	**P**	**17 56 01.1**	**+1.3**
	comp=Z,1.5nm,0.9s,mb3.9,baz=139,slow=4.7,SNR=7.9						
SONM	**Songino Array**	**87.36**	**324**	P	**P**	**17 56 48.6**	**+0.7**
	comp=Z,0.4nm,0.8s,mb3.7,baz=95,slow=3.7,SNR=4.0						
NVAR	**Mina Array Bea**	**90.20**	**49**	P	**P**	**17 57 01.7**	**+0.1**
	comp=Z,1.5nm,0.8s,mb4.3,baz=226,slow=8.1,SNR=7.6						
GERES	**GERESS Array B**	**144.82**	**330**	PKP	PKPdf	18 03 38.1	+0.3
	comp=Z,0.2nm,0.5s,baz=101,slow=1.0,SNR=3.3						

*DDA **04** 17:44:06.3, 39°.82N×41°.93E, h7km±2km, Md2.8*
*ISK **04** 17:44:06.2, 39°.91N×41°.88E, h5km, MD2.7*
*ISCJB **04** 17:44:07.6±0.7, 39°.82N±0°.04×41°.86E±0°.04, h8km±5km, Error ellipse: s-maj=6.1km s-min=4.8km az=174.2*
*CSEM **04** 17:44:07.6±0.3, 39°.86N×41°.86E, h2km, MD2.8, Error ellipse: s-maj=5.7km s-min=4.8km az=172.0*

ISC 04 17:44:08.2±0.7, 39°.84N±0°.04×41°.86E±0°.04, h12km±4km, n21, σ0°.98/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.21**	**9**	*i* P	**Pg**	**17 44 12.4**	**-0.4**
HOMI				*i* S	**Sg**	**17 44 17.0**	**+1.1**
ERZM	**Erzurum**	**0.39**	**280**	*i* P	**Pg**	**17 44 14.6**	**-1.3**
ERZM				*i* S	**Sg**	**17 44 22.0**	**+0.8**
ERZM	**Erzurum**	**0.39**	**280**	*i* P	**Pg**	**17 44 14.6**	**-1.3**
ERZM				*i* S	**Sg**	**17 44 22.0**	**+0.8**
EZM	**Erzurum**	**0.39**	**280**	*e*PG	**Pg**	**17 44 14.8**	**-1.2**
EZM				*e*SG	**Sg**	**17 44 21.8**	**+0.5**
AGRB	**Hanur-Agry**	**0.91**	**106**	*e*PG	**Pg**	**17 44 25.3**	**-0.4**
AGRB				*e*SG	**Sg**	**17 44 39.0**	**+1.4**
AGRB	**Hanur-Agry**	**0.91**	**106**	*e*Pg	**Pg**	**17 44 25.3**	**-0.4**
AGRB				*e*Sg	**Sg**	**17 44 39.0**	**+1.4**
DDEM	**Demirkent**	**1.06**	**355**	*i* P	**Pg**	**17 44 26.9**	**-1.7**
DDEM				*i* S	**Sg**	**17 44 42.7**	**+0.2**
DDEM	**Demirkent**	**1.06**	**355**	*i* P	**Pg**	**17 44 26.9**	**-1.7**
DDEM				*i* S	**Sg**	**17 44 42.7**	**+0.3**
KOPT	**Kop Dagi**	**1.07**	**280**	*i* P	**Pg**	**17 44 27.8**	**-0.9**
KOPT				*i* S	**Sg**	**17 44 43.6**	**+1.0**
KOPT	**Kop Dagi**	**1.07**	**280**	*i* P	**Pg**	**17 44 27.8**	**-0.9**
KOPT				*i* S	**Sg**	**17 44 43.6**	**+1.0**
DBAD	**Bademkaya**	**1.19**	**354**	*i* P	**Pn**	**17 44 29.6**	**-1.1**
DBAD				*i* S	**Sb**	**17 44 46.4**	**+0.3**
DBAD	**Bademkaya**	**1.19**	**354**	*i* P	**Pn**	**17 44 29.5**	**-1.1**
DBAD				*i* S	**Sb**	**17 44 46.4**	**+0.4**
DAGI	**Agillar**	**1.24**	**2**	*i* P	**Pn**	**17 44 30.2**	**-1.2**
DAGI				*i* S	**Sb**	**17 44 48.4**	**+0.9**
ARTV	**Artvin**	**1.35**	**2**	*i* P	**Pn**	**17 44 32.4**	**-0.4**
ARTV				*i* S	**Sb**	**17 44 51.2**	**+0.6**
ARTV	**Artvin**	**1.35**	**2**	*i* P	**Pn**	**17 44 32.4**	**-0.4**
ARTV				*i* S	**Sb**	**17 44 51.2**	**+0.6**
BCA	**Borcka**	**1.62**	**354**	*e*PN	**Pn**	**17 44 35.3**	**-1.2**
BCA				*e*SN	**Sn**	**17 44 57.8**	**+0.5**
BCA	**Borcka**	**1.62**	**354**	*e*Pn	**Pn**	**17 44 35.3**	**-1.3**
BCA				*e*Sn	**Sn**	**17 44 57.8**	**+0.5**
PTK	**Pertek**	**2.13**	**245**	*e*PN	**Pn**	**17 44 45.3**	**+1.7**
PTK	**Pertek**	**2.13**	**245**	*e*Pn	**Pn**	**17 44 45.3**	**+1.7**
ESPY	**Espiye-Giresun**	**2.63**	**295**	*e*PN	**Pn**	**17 44 51.2**	**+0.8**
ESPY	**Espiye-Giresun**	**2.63**	**295**	*e*Pn	**Pn**	**17 44 51.2**	**+0.8**

*IDC **04** 17:57:32.2±0.6, 22°.79N×144°.35E, h0km, mb3.9/19, mb1 4.1/21, mb1mx4.0/28, mbtmp3.9/21, ML4.0/2, MS4.0/22, Ms1 4.0/22, ms1mx3.8/38, Error ellipse: s-maj=20.9km s-min=14.8km az=81.0*
*ISCJB **04** 17:57:35.8±1.3, 22°.75N±0°.04×144°.27E±0°.05, h30km±8km, mb4.4/52, MS4.1/44, Error ellipse: s-maj=8.2km s-min=6.7km az=43.1*
*MOS **04** 17:57:35.6±1.1, 22°.72N×144°.28E, h33km, mb4.8/16, Error ellipse: s-maj=15.0km s-min=7.4km az=107.6*
*BJI **04** 17:57:36.5, 22°.76N×144°.76E, h60km, mB4.9/28, mb4.6/40, Ms4.4/39, Ms7 4.2/37*
*NEIC **04** 17:57:37.8±0.3, 22°.76N×144°.26E, h35km, mb4.7/16, Error ellipse: s-maj=8.4km s-min=7.7km az=168.0*

ISC 04 17:57:39.0±0.9, 22°.79N±0°.05×144°.30E±0°.05, h41km±7km, h57km±2.4km:pP-P, n111, σ1§13/118, mb4.4/52, MS4.1/44, 3C-1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.70**	**336**	Pn	**Pn**	**17 58 46.3**	**-1.1**
	20nm,0.3s,baz=130,slow=15,SNR=8.2						
CBIJ				Sn	**Sn**	**17 59 40.1**	**-0.5**
	11nm,0.3s,baz=270,slow=20,SNR=4.0						
MJAR	**Matsushiro Arr**	**14.69**	**340**	Pn	**Pn**	**18 01 02.1**	**-1.9**
	0.4nm,0.3s,baz=280,slow=29,SNR=7.5						
MAJO	**Matsushiro**	**14.69**	**340**	*e*P	**Pn**	**18 01 04.6**	**+0.6**
MAT	**Matsushiro**	**14.69**	**340**	P	**Pn**	**18 01 03.8**	**-0.2**
MAT				S	**Sn**	**18 03 50.0**	**+4.5**
KSRS	**Korea Array**	**20.31**	**320**	P	**P**	**18 02 10.1**	**-1.3**
	2.2nm,0.7s,baz=129,slow=11,SNR=3.3						
KSRS				LR	LR	18 10 22.3	
	comp=Z,913nm,18.1s,MS4.2,baz=140,slow=38						
KS15	**Wonju Array Si**	**20.32**	**320**	*e*P	**P**	**18 02 07.0**	**-4.6**
TATO	**Taipei**	**20.97**	**281**	*e*P	**P**	**18 02 15.2**	**-3.5**
	266nm,1.6s						
YHNB	**Yeheng**	**21.07**	**280**	*e*P	**P**	**18 02 17.9**	**-1.8**
	6.7nm,0.8s,mb4.0						
SSLB	**Suanglung**	**21.47**	**277**	*e*P	**P**	**18 02 24.2**	**+0.2**
	123nm,1.2s,mb5.1						
TPUB	**Ta-pu**	**21.79**	**276**	*e*P	**P**	**18 02 28.0**	**+0.6**
	63nm,1.3s,mb4.9						
SSE	**Sheshan**	**22.18**	**297**	P	**P**	**18 02 32.2**	**+0.7**
SSE				S	**S**	**18 06 37.8**	**+4.2**
SSE				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.7						
SSE				pmax	pmax		
	comp=Z,150nm,3.4s						
SSE				LR	LR		
	comp=N,220nm,18.8s,MS3.7						
SSE				LR	LR		
	comp=E,140nm,18.8s,MS3.7						
SSE				LR	LR		
	comp=Z,240nm,19.3s,MS3.6						
QZH	**Quanzhou**	**23.60**	**280⇓**	*i*P	**P**	**18 02 50.0**	**+3.7**
QZH				S	**S**	**18 06 58.5**	**+0.8**
QZH				pmax	pmax		
	comp=Z,480nm,2.8s,mb5.4						
QZH				LR	LR		
	comp=Z,740nm,18.7s,MS4.2						
DAV	**Davao City (W)**	**23.86**	**232**	LR	LR	18 10 30.3	
	comp=Z,718nm,18.3s,MS4.2,baz=6.2,slow=33						
YSS	**Yuzh-Sakhalins**	**24.14**	**357**	*e*P	**P**	**18 02 52.7**	**+1.7**
YSS				*e*S	**S**	**18 07 04.0**	**-2.0**
YSS				MLR	MLR		
	comp=Z,200nm,14.0s,MS3.8						
YSS				MLR	MLR		
	comp=E,400nm,12.0s						
NJ2	**Nanjing**	**24.35**	**298**	*e*P	**P**	**18 02 53.8**	**+0.7**
NJ2				pP		18 03 08.1	
NJ2				sP	sP	18 03 15.4	+6.2
NJ2				PP		18 03 29.4	
NJ2				S	**S**	**18 07 08.5**	**-1.3**
NJ2				sS	sS	18 07 33.0	+4.6
NJ2				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.3						
NJ2				pmax	pmax		
	comp=Z,230nm,4.6s						
NJ2				LR	LR		
	comp=N,270nm,17.0s,MS4.1						
NJ2				LR	LR		
	comp=E,450nm,16.7s,MS4.1						
NJ2				LR	LR		
	comp=Z,490nm,20.3s,MS4.0						
MDJ	**Mudanjiang**	**24.90**	**334**	P	**P**	**18 02 58.4**	**+0.5**
MDJ				pP		18 03 11.4	
MDJ				sP	sP	18 03 17.3	+3.2
MDJ				PcP	PcP	18 06 34.7	+1.9
MDJ				S	**S**	**18 07 19.4**	**+1.2**
MDJ				ScP	ScP	18 10 06.7	-1.9
MDJ				PcS	PcS	18 10 13.4	+0.6
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,180nm,5.3s						
MDJ				LR	LR		
	comp=N,410nm,15.2s,MS4.2						
MDJ				LR	LR		
	comp=E,350nm,12.9s,MS4.2						
MDJ				LR	LR		
	comp=Z,490nm,15.6s,MS4.1						
CN2	**Changchun**	**26.10**	**328**	*e*P	**P**	**18 03 11.7**	**+2.9**
CN2				*e*pP	pP	18 03 26.2	+6.2
CN2				*e*S	**S**	**18 07 37.3**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=E,600nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=Z,400nm,19.0s,MS4.0						
HABR	**Khabarovsk**	**26.67**	**346**	*e*P	**P**	**18 03 12.0**	**-1.9**
HABR				*e**PP	pP	18 03 27.1	+2.0
HABR				*e*		18 03 55.0	
HABR				*e*		18 06 35.6	
HABR				*e*S	**S**	**18 07 42.2**	**-4.0**
HABR				pmax	pmax		
	comp=E,11nm,1.3s						
HABR				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.3						
HABR				pmax	pmax		
	comp=N,33nm,2.3s						
HABR				MLR	MLR		
	comp=Z,174nm,18.0s,MS3.6						
WHN	**Wuhan**	**27.80**	**293**	P	**P**	**18 03 27.8**	**+3.6**
WHN				S	**S**	**18 08 02.2**	**-2.2**
WHN				LR	LR		
	comp=N,700nm,16.4s,MS4.6						
WHN				LR	LR		
	comp=E,1μm,21.4s,MS4.6						
WHN				LR	LR		
	comp=Z,920nm,17.0s,MS4.4						
KLR	**Kul'dur**	**28.20**	**342**	*e*P	**P**	**18 03 23.7**	**-3.8**
KLR				MLR	MLR		
	comp=Z,2μm,13.0s,MS4.8						
BJI	**Beijing**	**29.35**	**312**	P	**P**	**18 03 39.0**	**+1.0**
BJI				pP	pP	18 03 51.9	+2.7
BJI				sP	sP	18 03 58.2	+4.0
BJI				S	**S**	**18 08 29.6**	**+0.9**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
BJI				pmax	pmax		
	comp=Z,47nm,5.4s						
BJI				LR	LR		
	comp=N,350nm,15.8s,MS4.2						
BJI				LR	LR		
	comp=E,270nm,17.0s,MS4.2						
BJI				LR	LR		
	comp=Z,200nm,16.4s,MS3.8						
QIZ	**Qiongzhong**	**32.36**	**270**	*e*P	**P**	**18 04 11.4**	**+6.7**
QIZ				LR	LR		
	comp=E,100nm,17.4s						
QIZ				LR	LR		
	comp=Z,270nm,17.1s,MS4.0						
HHC	**Hu-ho-hao-te**	**32.88**	**311**	*e*P	**P**	**18 04 10.6**	**+1.6**
HHC				pP	pP	18 04 25.7	+5.4
HHC				sP	sP	18 04 33.3	+8.0
HHC				PP	PP	18 05 23.4	-0.4
HHC				PcP	PcP	18 06 53.8	+0.9
HHC				S	**S**	**18 09 24.4**	**+0.6**
HHC				sS	sS	18 09 49.6	+6.9
HHC				ScP	ScP	18 10 31.2	-2.6
HHC				PcS	PcS	18 10 38.5	+0.3
HHC				SS	SS	18 11 26.7	-20
HHC				ScS	ScS	18 14 30.3	-3.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,100nm,6.3s						
HHC				LR	LR		
	comp=N,250nm,16.6s,MS4.3						
HHC				LR	LR		
	comp=E,380nm,16.4s,MS4.3						
HHC				LR	LR		
	comp=Z,390nm,16.6s,MS4.2						
GYA	**Guiyang**	**34.33**	**284**	P	**P**	**18 04 23.1**	**+1.3**
GYA				pP	pP	18 04 37.8	+4.6
GYA				sP	sP	18 04 45.0	+6.9
GYA				PP	PP	18 05 41.2	+1.1
GYA				PcP	PcP	18 06 58.9	+1.6
GYA				S	**S**	**18 09 45.3**	**-1.3**
GYA				sS	sS	18 10 11.2	+5.6
GYA				ScP	ScP	18 10 39.0	-0.2
GYA				PcS	PcS	18 10 43.2	-0.6
GYA				SS	SS	18 11 57.8	-19
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,690nm,16.9s,MS4.6						
GYA				LR	LR		
	comp=E,560nm,17.3s,MS4.6						
GYA				LR	LR		
	comp=Z,650nm,16.7s,MS4.4						
KAPI	**Kappang**	**36.60**	**224**	LR	LR	18 17 44.3	
	comp=Z,123nm,20.0s,MS3.7,baz=250,slow=33						
CD2	**Chengdu**	**36.91**	**292**	P	**P**	**18 04 45.5**	**+1.6**
CD2				pP	pP	18 04 59.2	+3.9
CD2				sP	sP	18 05 05.5	+5.2
CD2				PP	PP	18 06 12.5	+4.1
CD2				S	**S**	**18 10 26.1**	**+0.1**
CD2				sS	sS	18 10 49.2	+4.1
CD2				SS	SS	18 12 55.6	-13
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,130nm,9.4s						
CD2				LR	LR		
	comp=N,430nm,15.5s						
CD2				LR	LR		
	comp=Z,460nm,18.4s,MS4.3						
LZH	**Lanzhou**	**37.38**	**300⇑**	P	**P**	**18 04 49.2**	**+1.4**
LZH				pP	pP	18 05 02.5	+3.2
LZH				sP	sP	18 05 10.0	+5.8
LZH				PP	PP	18 06 18.0	+4.4
LZH				*e*S	**S**	**18 10 33.1**	**0.0**
LZH				sS	sS	18 10 58.0	+5.8
LZH				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.2						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=E,790nm,14.8s						
LZH				LR	LR		
	comp=Z,940nm,15.5s,MS4.7						
CIT	**Chita**	**37.54**	**329**	*e*P	**P**	**18 04 50.7**	**+1.7**
CIT				*e*	pP	18 05 00.0	-0.4
KMI	**Kunming**	**37.95**	**282**	P	**P**	**18 04 53.8**	**+1.0**
KMI				pP	pP	18 05 08.3	+4.1
KMI				sP	sP	18 05 14.4	+5.2
KMI				S	**S**	**18 10 42.0**	**0.0**
KMI				sS	sS	18 11 06.5	+5.4
KMI				SS	SS	18 13 19.7	-9.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
KMI				pmax	pmax		
	comp=Z,68nm,4.9s						
KMI				LR	LR		
	comp=N,95nm,18.0s,MS3.8						
KMI				LR	LR		
	comp=E,110nm,18.6s,MS3.8						
KMI				LR	LR		
	comp=Z,130nm,19.3s,MS3.8						
ULN	**Ulaanbaatar**	**38.80**	**319**	*e*P	**P**	**18 05 00.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.7						
ULN	**Ulaanbaatar**	**38.80**	**319**	*e*P	**P**	**18 05 00.2**	**+0.6**
	comp=Z,28nm,2.0s,mb4.6						
SONM	**Songino Array**	**39.18**	**319**	P	**P**	**18 05 03.6**	**+0.8**
	comp=Z,1.4nm,0.9s,mb3.7,baz=128,slow=6.5,SNR=11						
SONM				LR	LR	18 22 23.3	
	comp=Z,394nm,18.5s,MS4.3,baz=117,slow=38						
YAK	**Yakutsk**	**40.48**	**349**	*e*P	**P**	**18 05 09.9**	**-3.5**
YAK				*e**PP	pP	18 05 16.9	-8.0
YAK				*e*S	**S**	**18 11 11.4**	**-7.7**
YAK				*e*		18 15 09.6	
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
YAK				smax			
	comp=E,56nm,12.0s						
YAK				MLR	MLR		
	comp=Z,179nm,15.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,128nm,16.0s,MS4.1						
YAK				MLR	MLR		
	comp=E,149nm,14.0s,MS4.1						
SEY	**Seymchan**	**40.50**	**6**	*e*P	**P**	**18 05 14.1**	**+0.6**
GTA	**Gaotai**	**41.10**	**304**	P	**P**	**18 05 19.7**	**+0.9**
GTA				pP	pP	18 05 34.5	+4.1
GTA				sP	sP	18 05 41.8	+6.5
GTA				PP	PP	18 06 59.6	+5.5
GTA				S	**S**	**18 11 29.4**	**+0.5**
GTA				sS	sS	18 11 55.0	+6.9
GTA				SS	SS	18 14 28.8	-3.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.9s,mb3.9						
GTA				pmax	pmax		
	comp=Z,130nm,5.3s						
GTA				LR	LR		
	comp=N,210nm,15.5s,MS4.3						
GTA				LR	LR		
	comp=E,220nm,16.7s,MS4.3						
GTA				LR	LR		
	comp=Z,350nm,15.5s,MS4.3						
BOD	**Bodaibo**	**41.26**	**336**	*e*P	**P**	**18 05 12.5**	**-7.3**
ZAK	**Zakamensk**	**42.13**	**321**	*e*P	**P**	**18 05 27.2**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
CMAR	**Chiang Mai Arr**	**42.55**	**273**	P	**P**	**18 05 29.7**	**-1.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=55,slow=7.3,SNR=4.7						
CMAR				LR	LR	18 25 09.7	
	comp=Z,171nm,18.2s,MS4.0,baz=92,slow=39						
WRAB	**Tennant Creek**	**43.56**	**194**	*e*P	**P**	**18 05 40.0**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.8						
WRAB	**Tennant Creek**	**43.56**	**194**	*e*P	**P**	**18 05 40.0**	**+1.1**
	comp=Z,27nm,1.4s,mb4.8						
WB2	**Warramunga Arr**	**43.57**	**194**	*e*P	**P**	**18 05 38.5**	**-0.5**
WRA	**Warramunga Arr**	**43.57**	**194**	P	**P**	**18 05 38.2**	**-0.9**
	comp=Z,1.2nm,0.3s,mb4.1,baz=16,slow=8.9,SNR=29						
BILL	**Bilibino**	**47.25**	**11⇑**	*e*P	**P**	**18 06 07.8**	**+0.1**
BILL				*e*		18 08 00.2	
BILL				*e*S	**S**	**18 13 09.0**	**+11**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
BILL	**Bilibino**	**47.25**	**11**	*e*P	**P**	**18 06 07.6**	**-0.1**
	comp=Z,13nm,1.2s,mb4.7						
ASAR	**Alice Springs**	**47.27**	**193**	P	**P**	**18 06 07.2**	**-1.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=15,slow=8.9,SNR=18						
LSA	**Lhasa**	**47.83**	**290**	*e*P	**P**	**18 06 12.1**	**-0.6**
LSA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
LSA	**Lhasa**	**47.83**	**290**	*e*P	**P**	**18 06 12.1**	**-0.6**
	comp=Z,11nm,1.1s,mb4.8						
PSI	**Prapat**	**48.23**	**252**	LR	LR	18 25 08.5	
	comp=Z,111nm,19.7s,MS3.9,baz=296,slow=34						
DZM	**Mont Dzumac**	**49.53**	**153**	*e*LR	LR	18 20 41.4	
	comp=Z,199nm,21.0s						
TIXI	**Tiksi**	**49.68**	**354**	*e*P	**P**	**18 06 26.6**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,153nm,16.0s,MS4.1						
TIXI	**Tiksi**	**49.68**	**354**	*e*P	**P**	**18 06 28.2**	**+1.9**
	comp=Z,5.0nm,1.1s,mb4.5						
WMQ	**Urumqi**	**50.70**	**309**	*e*P	**P**	**18 06 35.0**	**+0.6**
WMQ				PcS	PcS	18 11 49.2	+0.6
WMQ				S	**S**	**18 13 44.5**	**-2.3**
WMQ				sS	sS	18 14 11.4	+5.0
WMQ				ScS	ScS	18 16 18.2	-3.7
WMQ				SS	SS	18 17 17.2	-4.2
WMQ				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,79nm,3.0s						
WMQ				LR	LR		
	comp=N,130nm,17.0s,MS4.1						
WMQ				LR	LR		
	comp=E,92nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,120nm,16.0s,MS4.0						
ZALV	**Zalesovo Beam**	**54.01**	**321**	P	**P**	**18 06 58.1**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.9,baz=108,slow=8.8,SNR=5.2						
ZALV				LR	LR	18 28 31.1	
	comp=Z,68nm,19.3s,MS3.7,baz=80,slow=34						
STKA	**Stephens Creek**	**54.42**	**183**	*e*P	**P**	**18 07 00.7**	**-1.2**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
STKA	**Stephens Creek**	**54.42**	**183**	P	**P**	**18 07 02.2**	**+0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=328,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**54.42**	**183**	*e*P	**P**	**18 07 00.7**	**-1.3**
	comp=Z,2.1nm,1.3s,mb3.9						
MK31	**Makanchi Array**	**54.73**	**312**	*e*P	**P**	**18 07 04.3**	**+0.1**
MKAR	**Makanchi Array**	**54.73**	**312**	P	**P**	**18 07 04.5**	**+0.4**
	comp=Z,1.7nm,1.0s,mb4.0,baz=99,slow=7.5,SNR=9.2						
MKAR				LR	LR	18 32 02.4	
	comp=Z,114nm,18.1s,MS4.0,baz=275,slow=38						
KURK	**Kurchatov**	**57.39**

comp=Z,13nm,0.9s,mb5.0
INK Inuvik 66.16 24 P **P 18 08 21.2 -0.6**
comp=Z,1.5nm,0.9s,mb4.0,baz=247,slow=8.2,SNR=2.5
INK LR LR 18 32 41.0
comp=Z,42nm,21.5s,MS3.6,baz=41,slow=32
ARU Arti 69.00 324*c i*P **P 18 08 29.5 -10**
ARU pmax pmax
comp=Z,7.0nm,2.5s,mb4.2
ABKAR Akbulak array 69.49 316 *e*P **P 18 08 42.2 -1.0**
comp=Z,2.3nm,0.8s,mb4.2
AKTO Aktyubinsk 70.47 317 LR LR 18 41 52.5
comp=Z,122nm,18.5s,MS4.2,baz=224,slow=38
YKA Yellowknife Ar 75.01 28 P **P 18 09 15.0 -0.8**
comp=Z,1.1nm,0.8s,mb3.8,baz=292,slow=5.7,SNR=11
YKA LR LR 18 41 08.0
comp=Z,7.3nm,20.4s,MS3.0,baz=130,slow=35
YKA Yellowknife Ar 75.01 28 P **P 18 09 15.0 -0.8**
YKA LR LR 18 41 08.0
RES Resolute Bay 75.78 14 P **P 18 09 19.1 -0.9**
comp=Z,0.6nm,0.9s,mb3.5,baz=297,slow=4.5,SNR=3.0
PPT Papeete 76.06 116 *e*S S 18 19 11.8 +8.4
PPT comp=Z,237nm,26.5s *e*LR LR 18 33 06.9
comp=Z,60nm,21.2s
ETW Entiat 76.99 44 *e*P **P 18 09 31.5 +4.1**
KLMR Klimovskoe 77.26 331 *e*P **P 18 09 27.6 -1.1**
KLMR pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
YBH Yreka Blue Hor 77.33 50 LR LR 18 43 36.2
comp=Z,69nm,18.1s,MS4.0,baz=76,slow=36
CMB Columbia Colle 80.28 53 *e*P **P 18 09 43.2 -2.5**
CMB pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CMB Columbia Colle 80.28 53 *e*P **P 18 09 43.1 -2.6**
comp=Z,6.1nm,1.0s,mb4.5
BSMT Bassoo Peak 80.39 42 *e*P **P 18 09 45.8 -0.3**
JTMT Jette 80.74 42 *e*P **P 18 09 48.0 0.0**
YBMT Yellow Bay 80.86 42 *e*P **P 18 09 49.9 +1.3**
SLMT Seeley Lake 81.44 42 *e*P **P 18 09 52.4 +0.7**
NVAR Mina Array Bea 81.66 52 P **P 18 09 53.4 +0.3**
comp=Z,1.5nm,0.7s,mb4.0,baz=273,slow=5.5,SNR=8.5
ZEI Tsey 82.08 313 *e*P **P 18 09 52.9 -2.3**
ZEI pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
HLID Hailey 82.35 46 *e*P **P 18 09 56.8 +0.3**
KIV Kislovodsk 82.41 314 *e*P **P 18 09 59.0 +2.1**
KIV pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KIV MLR MLR
comp=Z,261nm,20.0s,MS4.6
FINES FINESS Array B 82.64 335 P **P 18 09 56.5 -1.2**
comp=Z,0.7nm,0.7s,mb3.8,baz=44,slow=5.8,SNR=5.7
FINES LR LR 18 50 11.1
comp=Z,66nm,18.0s,MS4.0,baz=180,slow=38
FFC Flin Flon 84.36 32 *e*P **P 18 10 05.9 -0.8**
FFC pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
FFC Flin Flon 84.36 32 *e*P **P 18 10 05.8 -0.8**
comp=Z,7.4nm,1.3s,mb4.7
DCID1 Drake Creek 84.46 45 *e*P **P 18 10 07.1 -0.4**
IMW Indian Meadow 84.48 45 *e*P **P 18 10 08.0 +0.5**
DUG Dugway 84.84 49 *e*P **P 18 10 09.7 +0.3**
RLMT Red Lodge 85.00 43 *e*P **P 18 10 10.8 +0.6**
HWUT Hardware Ranch 85.08 47 *e*P **P 18 10 11.6 +1.0**
JLU Jordanelle 85.60 48 *e*P **P 18 10 13.9 +0.7**
FCC Fort Churchill 85.61 26 *e*P **P 18 10 13.8 +0.9**
PDAR Pinedale Array 85.89 45 P **P 18 10 14.8 +0.1**
comp=Z,0.3nm,0.5s,mb3.8,baz=235,slow=3.2,SNR=2.6
PDAR LR LR 18 49 03.5
comp=Z,61nm,18.4s,MS4.0,baz=150,slow=36
PDAR Pinedale Array 85.89 45 P **P 18 10 14.8 +0.1**
PDAR LR LR 18 49 03.5
SRU San Rafael 86.91 49 *e*P **P 18 10 18.9 -0.8**
AKASG Malin Array Be 87.22 325 P **P 18 10 19.1 -1.9**
comp=Z,0.3nm,0.4s,mb3.9,baz=56,slow=5.1,SNR=3.1
HFS Hagfors 88.12 338 LR LR 18 49 21.7
comp=Z,37nm,18.5s,MS3.8,baz=43,slow=35
NOA NORSAR Array B 88.30 339 P **P 18 10 24.3 -1.6**
comp=Z,0.4nm,0.7s,mb3.8,baz=50,slow=4.9,SNR=2.2
NOA LR LR 18 53 41.2
comp=Z,80nm,19.1s,MS4.2,baz=70,slow=38
SMCO Snowmass 89.31 47 *e*P **P 18 10 32.9 +1.8**
ULM Lac du Bonnet 89.97 34 LR LR 18 51 03.9
comp=Z,66nm,19.4s,MS4.1,baz=278,slow=36
BRTR Keskin Array B 90.34 314 P **P 18 10 34.1 -1.8**
comp=Z,0.5nm,0.9s,mb3.9,baz=96,slow=6.5,SNR=3.7
BRTR LR LR 18 55 36.8
comp=Z,67nm,18.6s,MS4.1,baz=241,slow=39
ANMO Albuquerque 91.73 51 LR LR 18 50 10.9
comp=Z,96nm,18.6s,MS4.3,baz=177,slow=34
GERES GERESS Array B 96.18 330 LR LR 18 58 44.8
comp=Z,133nm,18.2s,MS4.5,baz=251,slow=38
TXAR Lajitas Array 96.58 55 LR LR 18 56 13.7
comp=Z,45nm,18.5s,MS4.0,baz=175,slow=36

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*IDC **04** 17:56:53.8±40.0, 17°.42S×177°.07E, h35km±8km, mb3.5/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=704.8km s-min=105.5km az=76.0*
*NOU **04** 17:58:03.5±0.7, 20°.07S×168°.49E, h30km, MD2.8, ML3.0*
ISC 04 17:58:07.0±2.9, 20°.3S±0°.2×168°.4E±0°.4, h35km, (h38km±3km:pP-P), n7, σ0°84/9, mb3.5/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.31**	**218**	*e*S	**Sn**	**17 59 09.8**	**-0.1**
DZM	**Mont Dzumac**	**2.54**	**227**	*e*P	**Pn**	**17 58 44.6**	**-1.1**
DZM				*e*S	**Sn**	**17 59 15.4**	**0.0**
DZM				AMP		17 59 24.4	
	comp=Z,945nm,2.8s						
NOUC	**Port Laguerre**	**2.65**	**228**	*e*P	**Pn**	**17 58 47.0**	**-0.3**
NOUC				*e*S	**Sn**	**17 59 18.6**	**+0.4**
NOUC				AMP		17 59 32.0	
	comp=Z,62nm,1.1s						
MVNO	**Noumea**	**2.67**	**224**	*e*S	**Sn**	**17 59 18.9**	**+0.1**
MVNO				AMP		17 59 19.7	
	comp=Z,27nm,2.8s						
STKA	**Stephens Creek**	**26.63**	**239**	P	**P**	**18 03 44.8**	**+2.4**
	comp=Z,1.4nm,0.9s,mb3.5,baz=70,slow=12,SNR=4.0						
STKA				pP	pP	18 03 54.9	+2.5
	comp=Z,2.0nm,0.6s,baz=71,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**31.98**	**265**	P	**P**	**18 04 29.3**	**-0.8**
	comp=Z,0.3nm,0.7s,mb3.3,baz=99,slow=8.8,SNR=3.6						
WRA				pP	pP	18 04 39.4	-0.7
	comp=Z,1.4nm,0.9s,baz=93,slow=8.4,SNR=3.4						
ASAR	**Alice Springs**	**32.14**	**258**	P	**P**	**18 04 31.6**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=85,slow=8.7,SNR=23						
ASAR				pP	pP	18 04 41.8	+0.3
	comp=Z,3.0nm,0.6s,baz=86,slow=8.8,SNR=19						

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*IDC **04** 18:03:38.9±2.8, 43°.48N×105°.36W, h0km, mb1 3.5/3, mb1mx3.2/25, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=68.0km s-min=9.4km az=154.0*
*ISCJB **04** 18:03:39.2±0.6, 43°.74N±0°.05×105°.20W±0°.06, h0km, Error ellipse: s-maj=7.8km s-min=6.6km az=160.9*
*NEIC **04** 18:03:40.4±0.8, 43°.71N×105°.18W, h0km, ML2.8, Error ellipse: s-maj=9.7km s-min=9.0km az=58.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 04 18:03:40.6±0.5, 43°.72N±0°.05×105°.19W±0°.07, h0km, n25, σ0°92/25, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**64**	*e*Pn	**Pn**	**18 03 59.6**	**-1.3**
PHWY	**Pilot Hill**	**2.42**	**185**	*e*Pn	**Pn**	**18 04 21.6**	**+0.3**
RWWY	**Rawlins**	**2.51**	**217**	*e*Pn	**Pn**	**18 04 23.2**	**+0.5**
LAO	**LASA Array**	**3.06**	**347**	*e*Pn	**Pn**	**18 04 31.9**	**+1.7**
RLMT	**Red Lodge**	**3.24**	**297**	*e*Pn	**Pn**	**18 04 32.3**	**-0.4**
PDAR	**Pinedale Array**	**3.33**	**255**	Pn	**Pn**	**18 04 33.5**	**-0.4**
PDAR	2.9nm,0.3s,baz=70,slow=16,SNR=43			Lg		18 05 16.8	
	6.8nm,0.3s,baz=71,slow=33,SNR=7.5						
GCMT	**Greycliff**	**3.81**	**305**	*e*Pn	**Pn**	**18 04 40.9**	**+0.4**
ISCO	**Idaho Springs**	**3.92**	**185**	*e*Pn	**Pn**	**18 04 42.4**	**+0.3**
LOHW	**Long Hollow**	**3.93**	**270**	*e*Pn	**Pn**	**18 04 43.5**	**+1.3**
SNOW	**Snow King Moun**	**4.05**	**268**	*e*Pn	**Pn**	**18 04 41.9**	**-2.0**
REDW	**Red Top Meadow**	**4.13**	**267**	*e*Pn	**Pn**	**18 04 44.8**	**-0.1**
IMW	**Indian Meadow**	**4.17**	**274**	*e*Pn	**Pn**	**18 04 45.3**	**-0.1**
TPAW	**Teton Pass**	**4.19**	**269**	*e*Pn	**Pn**	**18 04 45.5**	**-0.2**
DCID1	**Drake Creek**	**4.35**	**270**	*e*Pn	**Pn**	**18 04 49.7**	**+1.7**
RRI2	**Red Ridge**	**4.47**	**267**	*e*Pn	**Pn**	**18 04 49.2**	**-0.4**
SMCO	**Snowmass**	**4.73**	**197**	*e*Pn	**Pn**	**18 05 01.7**	**+8.6**
BOZ	**Bozeman (W)**	**4.98**	**295**	*e*Pn	**Pn**	**18 04 55.4**	**-1.3**
HWUT	**Hardware Ranch**	**5.15**	**248**	*e*Pn	**Pn**	**18 04 59.2**	**+0.3**
	5.0nm,0.4s						
HRY	**Holter Researc**	**5.57**	**305**	*e*Pn	**Pn**	**18 05 04.8**	**+0.1**
	4.6nm,0.4s						
DAU	**Daniels Canyon**	**5.59**	**236**	*e*Pn	**Pn**	**18 05 05.6**	**+0.6**
	4.1nm,0.5s						
SRU	**San Rafael**	**6.10**	**223**	*e*Pn	**Pn**	**18 05 10.3**	**-1.7**
	5.5nm,0.4s						
ECSD	**EROS Data Cent**	**6.21**	**87**	*e*Pn	**Pn**	**18 05 14.7**	**+1.1**
	1.6nm,0.3s						
YBMT	**Yellow Bay**	**7.43**	**307**	*e*Pn	**Pn**	**18 05 30.7**	**+0.5**
	2.4nm,0.3s						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**18 05 52.6**	**-0.8**
	2.0nm,0.3s,baz=233,slow=14,SNR=21						
YKA	**Yellowknife Ar**	**19.60**	**347**	P	**Pn**	**18 08 11.1**	**-0.3**
	0.1nm,0.3s,baz=154,slow=11,SNR=5.4						

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*IDC **04** 18:05:07.2±1.0, 17°.46N×122°.45E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/23, mbtmp3.7/7, Error ellipse: s-maj=63.5km s-min=17.4km az=69.0*
*ISCJB **04** 18:05:10.7±0.8, 17°.60N±0°.03×122°.60E±0°.06, h42km±8km, mb3.7/8, Error ellipse: s-maj=10.2km s-min=5.0km az=169.1*
*MAN **04** 18:05:11, 17°.55N×122°.45E, h21km, mb4.9, ML3.8, MS3.8*
*NEIC **04** 18:05:11.7±0.6, 17°.50N×122°.64E, h35km, mb3.6/2, Error ellipse: s-maj=55.3km s-min=8.3km az=68.0*
ISC 04 18:05:11.0±0.9, 17°.59N±0°.03×122°.57E±0°.05, h26km±6km, n25, σ1°23/36, mb3.7/8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.54**	**195**	*e*P	**Pb**	**18 05 21.2**	**-0.6**
PALP				*e*S	**Sb**	**18 05 31.6**	**+2.4**
CVP	**Callao Caves**	**0.72**	**279**	*e*P	**Pb**	**18 05 22.8**	**-2.1**
SGCP	**Mt. Cagua**	**0.82**	**323**	*e*P	**Pb**	**18 05 25.6**	**-0.9**
SGCP				*e*S	**Sb**	**18 05 36.7**	**-0.6**
CAUP	**Cauayan**	**0.96**	**228**	*e*P	**Pn**	**18 05 28.6**	**-0.1**
APYP	**Conner**	**1.29**	**282**	*e*P	**Pn**	**18 05 32.9**	**-0.4**
APYP				*e*S	**Sn**	**18 05 48.6**	**-1.2**
ABRA	**Dolores**	**1.77**	**272**	*e*P	**Pn**	**18 05 39.8**	**-0.2**
ABRA				*e*S	**Sn**	**18 05 59.8**	**-1.9**
PIP	**Pasuquin**	**2.00**	**292**	⇑*i*P	**Pn**	**18 05 43.4**	**+0.4**
PIP				*e*S	**Sn**	**18 06 09.5**	**+2.3**
BALP	**Baler**	**2.07**	**208**	*e*P	**Pn**	**18 05 44.9**	**+0.9**
BALP				*e*S	**Sn**	**18 06 09.1**	**+0.2**
BOLP	**Bolinao**	**2.81**	**245**	*e*P	**Pn**	**18 05 56.0**	**+1.8**
BOLP				*e*S	**Sn**	**18 06 27.5**	**+0.3**
POLP	**Polilio Island**	**2.90**	**192**	*e*P	**Pn**	**18 05 57.0**	**+1.4**
POLP				*e*S	**Sn**	**18 06 28.8**	**-0.9**
SCZP	**Santa Cruz**	**3.12**	**235**	*e*P	**Pn**	**18 06 01.5**	**+3.0**
SCZP				*e*S	**Sn**	**18 06 40.9**	**+6.0**
TGY	**Tagaytay City**	**3.80**	**205**	Pn	**Pn**	**18 06 12.0**	**+4.1**
	19nm,0.3s,baz=153,slow=6.8,SNR=5.1						
TGY				Sn	**Sn**	**18 06 58.8**	**+7.0**
	32nm,0.3s,baz=79,slow=22,SNR=3.8						
YULB	**Yu-li**	**5.90**	**349**	*e*Pn	**Pn**	**18 06 38.0**	**+1.2**
	5.8nm,0.4s						
YULB				*e*Sn	**Sn**	**18 07 44.0**	**+0.4**
KSRS	**Korea Array**	**20.35**	**12**	P	**P**	**18 09 46.6**	**+1.3**
	1.4nm,0.9s,baz=197,slow=8.7,SNR=4.7						
WRAB	**Tennant Creek**	**39.04**	**162**	P	**P**	**18 12 34.1**	**-1.7**
	1.3nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**39.04**	**162**	P	**P**	**18 12 34.9**	**-0.8**
	2.4nm,0.7s,mb4.0,baz=342,slow=9.3,SNR=10						
WB2	**Warramunga Arr**	**39.05**	**162**	*e*P	**P**	**18 12 34.0**	**-1.8**
ASAR	**Alice Springs**	**42.47**	**165**	P	**P**	**18 13 03.5**	**-0.5**
	1.0nm,0.7s,mb3.6,baz=345,slow=7.0,SNR=21						
MK31	**Makanchi Array**	**44.10**	**320**	*e*P	**P**	**18 13 16.9**	**-0.1**
MKAR	**Makanchi Array**	**44.10**	**320**	P	**P**	**18 13 17.6**	**+0.6**
	0.6nm,0.5s,mb3.6,baz=118,slow=8.4,SNR=10						
ZALV	**Zalesovo Beam**	**46.53**	**330**	P	**P**	**18 13 35.6**	**-0.5**
	0.3nm,0.3s,mb3.7,baz=121,slow=5.6,SNR=2.2						
ZALV	**Zalesovo Beam**	**46.53**	**330**	P	**P**	**18 13 35.6**	**-0.5**
KURK	**Kurchatov**	**48.06**	**324**	P	**P**	**18 13 48.5**	**+0.4**
	0.9nm,0.6s,mb4.0,baz=120,slow=7.8,SNR=9.7						
STKA	**Stephens Creek**	**52.46**	**160**	P	**P**	**18 14 19.5**	**-2.0**
	0.3nm,1.0s,mb3.2						
FINES	**FINESS Array B**	**77.79**	**331**	P	**P**	**18 17 07.2**	**+1.5**
	0.3nm,0.5s,mb3.5,baz=68,slow=9.1,SNR=2.2						

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*ISCJB **04** 18:16:28.5±0.2, 33°.21N±0°.02×116°.71W±0°.02, h10km, Error ellipse: s-maj=2.4km s-min=1.9km az=22.1*
*NEIC **04** 18:16:30.0, 33°.22N×116°.74W, h4km, ML3.7(PAS), After PAS.*
NEIC Felt [IV] at Warner Springs; [III] at Escondido, Julian, Pala, Ramona, San Marcos, Santa Ysabel, Santee and Vista; [II] at Alpine, El Cajon, Fallbrook, Lakeside, Poway, San Diego and Valley Center. Also felt at Bloomington, Borrego Springs, Carlsbad, Claremont, Del Mar, Descanso, Hemet, Idyllwild, La Jolla, La Mesa, La Quinta, Oceanside, Palm Desert, Pauma Valley, Pine Valley, Rancho Santa Fe, Riverside, Solana Beach, Spring Valley, Temecula and Winchester.
ISC 04 18:16:29.1±0.2, 33°.21N±0°.02×116°.73W±0°.02, h10km, n78, σ0°89/114, 46C-47D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MONP	**Monument Peak**	**0.41**	**141**	⇑P	**Pg**	**18 16 37.9**	**+0.9**
	baz=0.4,SNR=1000						
MONP				⇓S	**Sg**	**18 16 43.4**	**+0.9**
	baz=0.4						
109C	**Camp Elliot, M**	**0.45**	**225**	⇓P	**Pg**	**18 16 38.5**	**+0.6**
	baz=0.5						
109C				⇓S	**Sg**	**18 16 44.8**	**+1.1**
	baz=0.5						
PFO	**Pinyon Flat Ob**	**0.46**	**29**	⇑P	**Pg**	**18 16 38.5**	**+0.4**
	baz=0.5,SNR=1000						
PFO				⇑S	**Sg**	**18 16 44.4**	**+0.1**
	baz=0.5						
PFO	**Pinyon Flat Ob**	**0.46**	**29**	*e*Pg	**Pg**	**18 16 38.5**	**+0.4**
PFO				*e*Sg	**Sg**	**18 16 43.8**	**-0.5**
BAR	**Barrett**	**0.53**	**175**	*e*Pg	**Pg**	**18 16 39.7**	**+0.4**
BAR				*e*Sg	**Sg**	**18 16 49.0**	**+2.8**
DVTC	**Desert V Tower**	**0.76**	**136**	⇑P	**Pg**	**18 16 44.6**	**+0.9**
	baz=0.8,SNR=698						
DVTC				⇓S	**Sg**	**18 16 54.3**	**+0.7**
	baz=0.8						
SWSC	**Sam W. Stewart**	**0.82**	**108**	⇓P	**Pg**	**18 16 45.3**	**+0.3**
	baz=0.8,SNR=639						
SWSC				⇑S	**Sg**	**18 16 56.2**	**+0.5**
	baz=0.8						
BELC	**Belle Mtn.**	**1.00**	**37**	⇓P	**Pg**	**18 16 48.5**	**+0.1**
	baz=1.0,SNR=161						
BELC				⇓S	**Sg**	**18 17 00.8**	**-0.5**
	baz=1.0						
BBRC	**Big Bear Sol-O**	**1.07**	**351**	⇓P	**Pg**	**18 16 49.7**	**+0.1**
	baz=1.1,SNR=68						
BBRC				⇑S	**Sg**	**18 17 03.3**	**-0.2**
	baz=1.1						
BC3	**Big Chuckw Mtn**	**1.16**	**67**	⇑P	**Pb**	**18 16 50.4**	**-0.7**
	baz=1.1,SNR=123						
BC3				⇑S	**Sb**	**18 17 05.1**	**-1.0**
	baz=1.1						
BFSC	**Mount Baldy St**	**1.29**	**323**	⇑Pb	**Pb**	**18 16 52.9**	**-0.6**
	baz=1.3,SNR=22						
BFSC				⇓S	**Sb**	**18 17 09.3**	**-0.8**
	baz=1.3						
FMP	**Fort Macarthur**	**1.41**	**292**	⇓Pb	**Pb**	**18 16 54.8**	**-0.5**
	baz=1.4,SNR=22						
CIS	**Catalina Islan**	**1.42**	**279**	⇑Pn	**Pn**	**18 16 54.1**	**-0.8**
	baz=1.4						
CIS				⇓S	**Sn**	**18 17 13.3**	**-0.4**
	baz=1.4						
MWC	**Mount Wilson**	**1.50**	**313**	*e*Pn	**Pn**	**18 16 56.2**	**+0.1**
MWC				*e*Sn	**Sn**	**18 17 15.3**	**-0.4**
SCI	**San Clemente I**	**1.54**	**262**	⇑Pn	**Pn**	**18 16 56.1**	**-0.5**
	baz=1.5,SNR=14						
SCI				⇓S	**Sn**	**18 17 16.0**	**-0.7**
	baz=1.5						
PASC	**Pasadena Art C**	**1.55**	**309**	*e*Pn	**Pn**	**18 16 56.5**	**-0.2**
PASC				*e*Sn	**Sn**	**18 17 16.4**	**-0.5**
GLA	**Glamis**	**1.60**	**95**	⇓Pn	**Pn**	**18 16 56.6**	**-0.8**
	baz=1.6,SNR=82						
GLA	**Glamis**	**1.60**	**95**	*e*Pn	**Pn**	**18 16 56.6**	**-0.9**
IRM	**Iron Mountain**	**1.62**	**54**	⇓Pn	**Pn**	**18 16 57.1**	**-0.6**
	baz=1.6,SNR=102						
IRM				⇑Sb	**Sb**	**18 17 20.3**	**+0.6**
	baz=1.6						
HEC	**Hector,Ludlow**	**1.65**	**11**	⇑Pb	**Pb**	**18 16 58.8**	**-0.9**
	baz=1.6,SNR=92						
HEC				⇓Pg	**Pg**	**18 17 00.1**	**-0.7**
	baz=1.6						
HEC				⇓Sb	**Sb**	**18 17 20.8**	**+0.3**
	baz=1.6						
DECC	**Green Verdugo**	**1.69**	**308**	⇓Pn	**Pn**	**18 16 57.9**	**-0.8**
	baz=1.7						
DECC				⇑Pb	**Pb**	**18 16 59.5**	**-0.8**
	baz=1.7						
DECC				⇑Sn	**Sn**	**18 17 19.8**	**-0.6**
	baz=1.7						
DECC				⇓Sb	**Sb**	**18 17 22.2**	**+0.5**
	baz=1.7						
GMRC	**Granite Mounta**	**1.80**	**29**	⇓Pg	**Pg**	**18 17 03.2**	**-0.5**
	baz=1.8,SNR=133						
GMRC				⇑Sb	**Sb**	**18 17 25.4**	**+0.6**
	baz=1.8						
Y12C	**Blythe**	**1.92**	**73**	⇓Pn	**Pn**	**18 17 01.1**	**-0.7**
	baz=1.9,SNR=18						
Y12C				⇓Sn	**Sn**	**18 17 25.1**	**-0.9**
	baz=1.9						
112A	**Yuma**	**1.93**	**110**	⇑Pn	**Pn**	**18 17 00.8**	**-1.1**
	baz=1.9,SNR=22						
112A				⇓Sn	**Sn**	**18 17 25.3**	**-0.9**
	baz=1.9						
EDW2	**Edwards Air Fo**	**1.97**	**328**	⇓P	**Pn**	**18 17 03.5**	**+1.0**
	baz=2.0,SNR=222						
EDW2				⇑Sb	**Sb**	**18 17 30.1**	**+0.4**
	baz=2.0						
GSC	**Goldstone**	**2.09**	**358**	⇑Pn	**Pn**	**18 17 03.9**	**-0.3**
	baz=2.1						
GSC				⇑Sb	**Sb**	**18 17 34.4**	**+1.2**
	baz=2.1						
GSC	**Goldstone**	**2.09**	**358**	*e*Sn	**Sn**	**18 17 33.1**	**+2.8**
BLG	**Laguna Peak**	**2.15**	**295**	⇓Pn	**Pn**	**18 17 04.3**	**-0.7**
	baz=2.1						
OSI	**Osito Adit**	**2.18**	**311**	⇑Pn	**Pn**	**18 17 05.4**	**+0.1**
	baz=2.2						
OSI	**Osito Adit**	**2.18**	**311**	*e*Pn	**Pn**	**18 17 06.0**	**+0.7**
LDFC	**Landfair**	**2.30**	**35**	*e*Pn	**Pn**	**18 17 07.6**	**+0.5**
TUQ	**Turquoise Moun**	**2.32**	**16**	⇓Pn	**Pn**	**18 17 07.3**	**0.0**
	baz=2.3,SNR=310						
NEE2	**Needles Airpor**	**2.34**	**48**	⇑Pn	**Pn**	**18 17 07.7**	**+0.1**
	baz=2.3,SNR=5.8						
NEE2				⇑Sb	**Sb**	**18 17 41.4**	**+1.0**
	baz=2.3						
SNCC	**San Nicolas Is**	**2.34**	**272**	⇓Pn	**Pn**	**18 17 07.3**	**-0.4**
	baz=2.3,SNR=20						
PDMCI	**Parker Dam,Lak**	**2.42**	**62**	⇓Sn	**Sn**	**18 17 36.2**	**-2.1**
	baz=2.4						
Y13A	**Salome**	**2.50**	**75**	⇑Pn	**Pn**	**18 17 09.0**	**-0.7**
	baz=2.5,SNR=9.2						
113A	**Mohawk Valley,**	**2.53**	**99**	⇓Pn	**Pn**	**18 17 09.4**	**-0.7**
	baz=2.5,SNR=14						
113A				⇓Pb	**Pb**	**18 17 14.4**	**-0.1**
	baz=2.5						
BSC	**Santa Cruz Isl**	**2.55**	**289**	⇓Pn	**Pn**	**18 17 09.8**	**-0.6**
	baz=2.5						
BSC				⇑Pb	**Pb**	**18 17 14.4**	**-0.5**
	baz=2.5						
Z13A	**Yuma Proving G**	**2.57**	**89**	⇑Pn	**Pn**	**18 17 09.9**	**-0.9**
	baz=2.6,SNR=28						
ARVC	**Arvin**	**2.59**	**318**	⇑Pb	**Pb**	**18 17 15.0**	**-0.7**
	baz=2.6						
ARVC				⇓Sb	**Sb**	**18 17 48.8**	**+1.3**
	baz=2.6						
W12A	**Cal Nev Ari**	**2.59**	**36**	⇑Pg	**Pg**	**18 17 17.7**	**-1.1**
	baz=2.6						
X13A	**Yucca**	**2.78**	**59**	⇓Pn	**Pn**	**18 17 13.3**	**-0.3**
	baz=2.8,SNR=26						
V11A	**Goodsprings**	**2.84**	**22**	⇑Pn	**Pn**	**18 17 13.8**	**-0.6**
	baz=2.8,SNR=20						
V11A				⇑Sb	**Sb**	**18 17 56.4**	**+1.9**
	baz=2.8						
ISA	**Isabella**	**2.84**	**330**	⇑Sb	**Sb**	**18 17 56.5**	**+1.7**
	baz=2.8						
ISA	**Isabella**	**2.84**	**330**	*e*Pn	**Pn**	**18 17 15.7**	**+1.2**
MPMC	**Manual Prospec**	**2.92**	**348**	⇓Pn	**Pn**	**18 17 15.6**	**+0.1**
	baz=2.9,SNR=240						
V12A	**Nelson**	**2.95**	**31**	⇑Pn	**Pn**	**18 17 16.3**	**+0.3**
	baz=2.9,SNR=12						
V12A				⇑Pg	**Pg**	**18 17 25.3**	**-0.4**
	baz=2.9						
W13A	**Hualapai Mount**	**3.02**	**50**	⇑Pn	**Pn**	**18 17 16.6**	**-0.4**
	baz=3.0,SNR=21						
W13A				⇓Sb	**Sb**	**18 18 01.8**	**+1.9**
	baz=3.0						
PKM	**Peak Mountain**	**3.07**	**304**	⇑Pn	**Pn**	**18 17 18.2**	**+0.6**
	baz=3.1,SNR=104						
Z14A	**Wintersburg**	**3.17**	**86**	⇓Pn	**Pn**	**18 17 18.5**	**-0.5**
	baz=3.2						
Y14A	**Wickenburg**	**3.19**	**76**	⇓Pn	**Pn**	**18 17 19.3**	**0.0**
	baz=3.2,SNR=7.9						
U10A	**Ash Meadows, A**	**3.22**	**6**	⇓Pg	**Pg**	**18 17 30.6**	**-0.3**
	baz=3.2						
FURC	**Furnace Creek,**	**3.26**	**358**	⇑Sg	**Sg**	**18 18 15.5**	**+1.8**
	baz=3.3						
114A	**Black Gap (USA**	**3.26**	**97**	⇑Pn	**Pn**	**18 17 19.8**	**-0.4**
	baz=3.3,SNR=24						
114A				⇓Sn	**Sn**	**18 17 58.6**	**-0.6**
	baz=3.3						
X14A	**Yava**	**3.43**	**67**	⇓Pn	**Pn**	**18 17 22.9**	**+0.3**
	baz=3.4						
V13A	**Grand Canyon W**	**3.48**	**40**	⇑Pn	**Pn**	**18 17 24.0**	**+0.8**
	baz=3.5						
SHPR	**Sheep Range**	**3.54**	**21**	*e*Pn	**Pn**	**18 17 26.1**	**+2.1**
U12A	**Valley of Fire**	**3.69**	**29**	⇑Pn	**Pn**	**18 17 26.2**	**+0.1**
	baz=3.7,SNR=15						
U12A				⇑Pg	**Pg**	**18 17 38.8**	**-0.9**
	baz=3.7						
Y15A	**Casa Rosa Ranc**	**3.74**	**77**	⇓Pn	**Pn**	**18 17 26.6**	**-0.3**

MONV	Montecano	3.48	69	eP	Pn	18 45 41.6	-1.0
MONV				eS	Sn	18 46 18.8	-3.9
SANV	Sanarito	3.90	108	eP	Pn	18 45 48.0	-0.2
TEPV	Terepaima	4.11	100⇑	eP	Pn	18 45 50.5	-0.7
TURV	Turiamo	5.37	92⇓	eP	Pn	18 46 06.1	-2.5
BAUV	El Baul	5.47	108	eP	Pn	18 46 08.6	-1.3
BIRV	Birongo	6.91	91	eP	Pn	18 46 27.3	-2.4
CAOV	Caicara del Or	7.67	116	eP	Pn	18 46 36.7	-3.4

CASC 04 19:38:55.4±1.5, 12°.64N×88°.04W, h55km±29km, MD3.5, ML3.4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	0.67	17	eP	Pn	19 39 09.3	+0.3
CNCH				eS	Sn	19 39 19.8	+1.0
VSM	San Miguel	0.82	344	eP	Pn	19 39 11.6	+0.7
BLLM	Bellamira	0.82	346	eP	Pn	19 39 11.1	+0.1
CRIN	San Cristobal	0.96	86	eP	Pn	19 39 13.1	+0.3
CRIN				eS	Sn	19 39 26.6	+1.0
CRIN				AML	AML	19 39 32.3	
	comp=E,790nm,0.2s						
CAHU	Cacacuatique	1.14	351	eP	Pn	19 39 15.4	+0.2
TELN	Telica	1.18	91	eP	Pn	19 39 14.8	-0.8
CNGN	Cerro Negro	1.31	96	eP	Pn	19 39 17.6	+0.2
CNGN				eS	Sn	19 39 34.1	+0.1
LFRS	El Faro	1.40	315	eP	Pn	19 39 18.9	+0.3
LFRS				eS	Sn	19 39 36.6	+0.5
COPN	Copaltepe	1.48	108	eP	Pn	19 39 19.2	-0.5
TGUH	Tegucigalpa,Un	1.59	28	eP	Pn	19 39 21.6	+0.3

DJA 04 19:47:14, 8°.13S×107°.82E, h50km, MLv4.1/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	1.31	351	P	Pn	19 47 36.4	+0.5
UGM	Wanagama	2.69	86	P	Pn	19 47 53.3	-1.5
UGM				S	Sn	19 48 22.3	-3.8
SMRI	Semarang	2.81	68	P	Pn	19 47 56.7	+0.2
XMIS	Christmas Isla	3.17	222	P	Pn	19 48 01.2	-0.2
PCJI	Pacitan	3.32	91	P	Pn	19 48 02.8	-0.7
PCJI				S	Sn	19 48 38.8	-3.0
SJI	Sawahan	3.93	85	P	Pn	19 48 12.6	+0.8
SJI				S	Sn	19 48 59.3	+2.6
PWJI	Pagerwojo	3.95	89	P	Pn	19 48 12.0	-0.1
PWJI				S	Sn	19 48 53.2	-3.9

*IDC **04** 19:50:37.4±2.5, 3°.49S×99°.91E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/22, mbtmp3.6/7, Error ellipse: s-maj=107.9km s-min=18.8km az=55.0*
*ISCJB **04** 19:50:39.1±1.7, 3°.6S±0°.3×99°.8E±0°.4, h33km, mb3.6/9, Error ellipse: s-maj=70.6km s-min=12.6km az=143.0*
*NEIC **04** 19:50:41.8±1.3, 3°.54S×99°.97E, h35km, mb3.8/2, Error ellipse: s-maj=55.6km s-min=10.3km az=53.0*
ISC 04 19:50:41.9±1.6, 3°.5S±0°.3×100°.0E±0°.4, h35km, n12, σ0$73/11, mb3.6/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.89	357	P	P	19 55 31.9	-0.1
	0.6nm,0.9s,mb3.0,baz=187,slow=9.9,SNR=4.3						
WRA	Warramunga Arr	37.27	119	P	P	19 57 51.3	+0.6
	0.3nm,0.4s,mb3.5,baz=307,slow=8.5,SNR=10.0						
WRAB	Tennant Creek	37.27	119	eP	P	19 57 49.1	-1.6
	0.8nm,0.7s,mb3.7						
WB2	Warramunga Arr	37.28	119	eP	P	19 57 50.3	-0.5
ASAR	Alice Springs	38.40	124	P	P	19 58 01.5	+1.3
	0.3nm,0.4s,mb3.4,baz=299,slow=7.8,SNR=11						
SONM	Songino Array	51.47	6	P	P	19 59 43.7	0.0
	0.6nm,0.6s,mb3.7,baz=187,slow=11,SNR=6.4						
MK31	Makanchi Array	52.50	345	eP	P	19 59 51.3	0.0
MKAR	Makanchi Array	52.50	345	P	P	19 59 52.1	+0.7
	1.1nm,0.6s,mb4.0,baz=150,slow=7.9,SNR=14						
ZALV	Zalesovo Beam	58.67	350	P	P	20 00 36.0	+0.4
	0.3nm,0.3s,mb3.8,baz=168,slow=7.6,SNR=6.4						
BVAR	Borovoye Array	61.61	340	P	P	20 00 55.4	-0.4
	0.4nm,0.6s,mb3.7,baz=154,slow=8.3,SNR=3.0						
ABKAR	Akbulak array	62.97	332	eP	P	20 01 04.4	-0.6
	1.1nm,0.9s,mb4.0						
TXAR	Lajitas Array	145.94	39	PKPbc	PKPbc	20 10 20.1	+1.7
	1.3nm,0.8s,baz=293,slow=0.3,SNR=16						

*ISK **04** 19:54:14.5, 37°.01N×29°.12E, h3km, MD3.2*
*IDC **04** 19:54:14.7±1.6, 36°.91N×29°.20E, h0km, mb3.6/1, mb1 3.4/5, mb1mx3.1/25, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=34.7km s-min=18.5km az=152.0*
*ISCJB **04** 19:54:15.6±0.5, 37°.01N±0°.02×29°.13E±0°.03, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=135.8*
*CSEM **04** 19:54:15.3±0.1, 37°.00N×29°.12E, h2km, MD3.2, Error ellipse: s-maj=3.4km s-min=3.0km az=179.0*
*DDA **04** 19:54:15.5, 36°.99N×29°.17E, h7km±3km, mb4.2*
ISC 04 19:54:16.0±0.5, 37°.00N±0°.02×29°.13E±0°.03, h4km±4km, n72, σ1$07/91, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.33	62	ePG	Pg	19 54 21.2	-1.2
GLHS				eSG	Sg	19 54 27.2	+0.5
GLHS	Glhisar (BURDU	0.33	62	ePg	Pg	19 54 21.2	-1.2
GLHS				eSg	Sg	19 54 27.2	+0.5
FETY	Fethiye	0.37	186	ePG	Pg	19 54 21.9	-1.1
FETY				eSG	Sg	19 54 28.6	+0.8
FETY	Fethiye	0.37	186	ePg	Pg	19 54 21.9	-1.1
FETY				eSg	Sg	19 54 28.6	+0.9
GOLH	Golhisar	0.42	55	iP	Pg	19 54 23.0	-1.0
GOLH				iS	Sg	19 54 30.3	+0.9
GOLH	Golhisar	0.42	55	iP	Pg	19 54 23.0	-1.0
GOLH				iS	Sg	19 54 30.3	+0.9
TURN	Turunc	0.44	254	iP	Pg	19 54 29.2	+4.7
TURN				iS	Sg	19 54 41.6	+11
ELL	Elmali	0.67	112	ePG	Pg	19 54 28.7	-0.1
ELL	Elmali	0.67	112	ePg	Pg	19 54 28.7	-0.1
DNZL	Cakiroluk	0.69	354	iP	Pg	19 54 28.2	-1.0
DNZL				iS	Sg	19 54 39.7	+1.5
DNZL	Cakiroluk	0.69	354	iP	Pg	19 54 28.2	-1.1
DNZL				iS	Sg	19 54 39.7	+1.4
YER	Yerkesik	0.69	281	ePG	Pg	19 54 28.7	-0.6
YER	Yerkesik	0.69	281	ePg	Pg	19 54 28.7	-0.6
DENT	Denizli	0.76	354	ePG	Pg	19 54 29.9	-0.7
DENT	Denizli	0.76	354	ePg	Pg	19 54 29.9	-0.6
AKAS	Kas	0.85	153	iP	Pg	19 54 31.8	-0.5
AKAS				iS	Sg	19 54 46.5	+3.1
AKAS	Kas	0.85	153	iP	Pg	19 54 31.8	-0.5
AKAS				iS	Sg	19 54 46.5	+3.1
KSL	Kastellorizon	0.92	157	eP	Pg	19 54 34.5	+0.9
MLSB	Milas	1.12	286	ePN	Pn	19 54 36.7	-1.7
MLSB	Milas	1.12	286	ePn	Pn	19 54 36.7	-1.7
ARG	Arkhangelos	1.13	226	eP	Pg	19 54 36.0	-1.5
ANTB	Antalya	1.22	94	ePN	Pn	19 54 39.1	-0.6
ANTB	Antalya	1.22	94	ePn	Pn	19 54 39.2	-0.6
BCK	Bucak	1.25	68	ePN	Pn	19 54 39.1	-1.0
BCK	Bucak	1.25	68	ePn	Pn	19 54 39.1	-1.0
DAT	Datca	1.28	258	ePN	Pn	19 54 39.6	-0.9
DAT	Datca	1.28	258	ePn	Pn	19 54 39.7	-0.8
BDRM	Kayabasi	1.35	273	iP	Pn	19 54 41.7	+0.1
BDRM				iS	Sg	19 55 00.5	+1.0
BDRM	Kayabasi	1.35	273	iP	Pn	19 54 41.7	+0.1
BDRM				iS	Sg	19 55 00.5	+1.0
KHL	Karahalli	1.36	13	ePN	Pn	19 54 40.6	-1.0
KHL	Karahalli	1.36	13	ePn	Pn	19 54 40.6	-1.0
ISP	Isparta	1.38	52	ePN	Pn	19 54 42.4	+0.4
ISP	Isparta	1.38	52	ePn	Pn	19 54 42.4	+0.4
KHAL	Karahalli	1.40	12	iP	Pn	19 54 42.2	0.0
KHAL				iS	Sg	19 55 02.6	+1.7
KHAL	Karahalli	1.40	12	iP	Pn	19 54 42.2	0.0
KHAL				iS	Sg	19 55 02.6	+1.7
BODT	Bodrum	1.46	273	ePN	Pn	19 54 42.4	-0.6
BODT	Bodrum	1.46	273	ePn	Pn	19 54 42.4	-0.6
MANT	Manisa	1.56	343	iP	Pn	19 54 43.8	-0.6
MANT	Manisa	1.56	343	iP	Pn	19 54 43.8	-0.6
KULA	Kula-Manisa	1.56	346	ePN	Pn	19 54 43.9	-0.5
KULA	Kula-Manisa	1.56	346	ePn	Pn	19 54 43.9	-0.5
SUTC	Sutluce-Ispart	1.56	72	ePN	Pn	19 54 44.6	+0.1
SUTC	Sutluce-Ispart	1.56	72	ePn	Pn	19 54 44.6	+0.1
SHUT	Suhut-Afyon	1.92	35	ePN	Pn	19 54 48.9	-0.4
SHUT	Suhut-Afyon	1.92	35	ePn	Pn	19 54 48.9	-0.4
SMG	Samos	1.96	292	eP	Pn	19 54 50.5	+0.6
IZM	Izmir	2.04	314	ePN	Pn	19 54 50.7	-0.3
AKS	Akhisar	2.15	331	ePN	Pn	19 54 51.7	-0.8
AKS	Akhisar	2.15	331	ePn	Pn	19 54 51.7	-0.8
KARP	Karpathos	2.15	228	eP	Pn	19 54 53.5	+0.9
BLCB	Balcova	2.16	310	ePN	Pn	19 54 52.9	+0.2
BLCB	Balcova	2.16	310	ePn	Pn	19 54 52.9	+0.2
ALT	Altintas	2.19	20	ePN	Pn	19 54 52.9	-0.3
ALT	Altintas	2.19	20	ePn	Pn	19 54 52.9	-0.2
HDMB	Hadim	2.69	90	ePN	Pn	19 55 00.3	+0.4
HDMB	Hadim	2.69	90	ePn	Pn	19 55 00.3	+0.4
KONT	Konya--Tatoy	2.73	69	ePN	Pn	19 55 01.5	+0.9
KONT	Konya--Tatoy	2.73	69	ePn	Pn	19 55 01.5	+0.9
LADK	Ladik-KONYA	2.83	64	ePN	Pn	19 55 02.6	+0.7
LADK	Ladik-KONYA	2.83	64	ePn	Pn	19 55 02.6	+0.7
KIZT	Kizilcal	2.87	48	ePN	Pn	19 55 02.6	+0.2
KIZT	Kizilcal	2.87	48	ePn	Pn	19 55 02.6	+0.2
APE	Apeiranthos	2.88	272	eP	Pn	19 55 00.0	-2.6
ZKR	Zakros	3.02	232	eP	Pn	19 55 06.5	+2.0
NPS	Neapolis	3.34	240	eP	Pn	19 55 10.0	+1.2
LAST	Lasithi	3.48	239	eP	Pn	19 55 12.5	+1.7
IDI	Anoyia	3.83	245	Pn	Pn	19 55 16.5	+0.8
	1.5nm,0.3s,baz=28,slow=14,SNR=13						
IDI				Sn	Sn	19 56 01.9	+0.7
	2.0nm,0.3s,baz=112,slow=18,SNR=7.6						
BRTR	Keskin Array B	4.47	51	Pn	Pn	19 55 25.2	+0.8
	0.3nm,0.3s,baz=228,slow=17,SNR=11						
BRTR				Pg	Pg	19 55 35.4	-6.1
	0.2nm,0.3s,baz=227,slow=14,SNR=5.7						
BRTR				Sn	Sn	19 56 17.8	+1.1
	0.3nm,0.3s,baz=236,slow=26,SNR=7.2						
KARN	Karanos	4.51	251	eP	Pn	19 55 28.0	+3.0
MMAI	Mount Meron Ar	6.50	126	Pn	Pn	19 55 50.6	-1.7
	1.2nm,0.3s,baz=304,slow=13,SNR=9.6						
MMAI				Sn	Sn	19 56 58.5	-8.4
	baz=316,slow=18,SNR=1.8						
EIL	Elat	8.78	145	Pn	Pn	19 56 21.5	-2.1
	0.3nm,0.3s,baz=10,slow=4.3,SNR=4.0						
TORD	Torodi Ar. Bea	34.15	233	P	P	20 01 00.9	-1.3
	0.5nm,0.6s,baz=34,slow=8.6,SNR=6.8						

MEX 04 20:12:41.2±0.8, 16°.91N×95°.48W, h129km±10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.21	278	eP	Pn	20 13 05.8	-0.2
VHO				iS	Sn	20 13 23.2	-1.8
HUIG	Huatulco	1.29	208	eP	Pn	20 13 05.7	-1.2
HUIG				iS	Sn	20 13 24.7	-1.7
TGIG		2.26	93	iP	Pn	20 13 17.2	-1.2
TGIG				iS	Sn	20 13 45.0	-1.8
TPIG	Tehuac#an	2.34	310	iP	Pn	20 13 17.8	-1.5
TPIG				iS	Sn	20 13 46.9	-1.7
PCIG		2.48	119	eP	Pn	20 13 19.3	-1.8
PCIG				iS	Sn	20 13 50.2	-1.6
PNIG	Pinotepa	2.59	259	iP	Pn	20 13 21.1	-1.4
PNIG				iS	Sn	20 13 52.1	-2.2
CCIG	Comitan	3.27	101	iP	Pn	20 13 30.9	-0.4
CCIG				iS	Sn	20 14 08.3	-1.6

GUC 04 20:13:11.7±0.6, 22°.20S×68°.85W, h95km±4km, ML3.8, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.42	188⇓	iP	Pn	20 13 25.8	-0.6
LVC				iS	Sn	20 13 37.9	+0.6
PB04	Plate Boundary	0.59	264⇑	iP	Pn	20 13 34.5	+6.8
PB04				iS	Sn	20 13 52.3	+13
PB04				AML	AML	20 13 56.8	
	comp=N,1μm,0.3s						
MACH	Maria Elena	0.84	270⇑	iP	Pn	20 13 30.9	+0.8
MACH				iS	Sn	20 13 45.4	+1.6
PECH	Pedro de Valdi	0.86	242⇑	iP	Pn	20 13 30.8	+0.6
PECH				iS	Sn	20 13 45.3	+1.2
PECH				AML	AML	20 13 45.7	
	comp=N,5μm,0.4s						
PB01	Plate Boundary	1.29	333⇑	iP	Pn	20 13 35.6	+0.4
PB01				iS	Sn	20 13 53.8	+0.9
PB01				AML	AML	20 13 55.0	
	comp=E,3μm,0.2s						
ANCH	Antofagasta	2.06	224	eP	Pn	20 13 45.7	+0.8
ANCH				iS	Sn	20 14 11.1	+0.9
ANCH				AML	AML	20 14 18.1	
	comp=N,1μm,0.3s						

*IDC **04** 20:15:08.9±2.3, 35°.00N×81°.21E, h0km, mb3.3/4, mb1 3.4/7, mb1mx3.2/25, mbtmp3.3/7, ML3.1/3, MS2.3/1, Ms1 2.3/1, ms1mx1.8/24, Error ellipse: s-maj=52.6km s-min=31.3km az=143.0*
*ISCJB **04** 20:15:11.0±0.5, 35°.27N±0°.07×81°.1E±0°.1, h10km, mb3.5/5, Error ellipse: s-maj=16.9km s-min=6.2km az=153.2*
*BJI **04** 20:15:20.9, 35°.82N×81°.15E, h15km, ML3.3/5*
ISC 04 20:15:13.4±0.5, 35°.36N±0°.05×81°.2E±0°.1, h10km, n14, σ1$24/16, mb3.5/5, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.88	316	Pn	Pn	20 16 43.7	+3.2
KSH				Sn	Sn	20 17 48.6	+0.7
KSH				smax			
	comp=N,80nm,1.1s						
KSH				smax			
	comp=E,110nm,1.1s						
KOLN	Koldanda	7.84	164	eP	Pn	20 17 05.7	-1.7
GKN	Gorkha	7.89	157	eP	Pn	20 17 09.3	+1.1
	comp=E,2.9nm,0.3s						
KKN	Kakani	8.31	154	eP	Pn	20 17 14.1	+0.2
GUN	Gumba	8.43	151	eP	Pn	20 17 16.0	+0.5
	comp=E,14nm,0.6s						
PKI	Pulchoki	8.55	154	eP	Pn	20 17 17.6	+0.3
	comp=E,11nm,0.6s						
MKAR	Makanchi Array	11.45	4	Pn	Pn	20 17 57.7	+0.8
	comp=E,0.1nm,0.3s,baz=172,slow=9.8,SNR=4.3						
MKAR				Sn	Sn	20 20 02.8	-2.0
	comp=E,0.1nm,0.3s,baz=182,slow=24,SNR=3.2						
ZALV	Zalesovo Beam	18.76	7	P	Pn	20 19 33.4	+0.6
	comp=E,0.1nm,0.3s,baz=184,slow=10,SNR=4.1						
BVAR	Borovoye Array	19.25	340	P	Pn	20 19 39.4	+0.7
	comp=E,0.1nm,0.3s,baz=145,slow=11,SNR=5.2						
BVAR				LR	LR	20 26 41.8	
	comp=E,7.9nm,19.4s,slow=35						
SONM	Songino Array	22.47	49	P	P	20 20 13.8	+1.2
	comp=E,0.4nm,0.8s,mb2.9,baz=243,slow=9.8,SNR=3.7						
BRG	Berggiesshubel	49.77	310	eP	P	20 24 05.9	0.0
	comp=E,9.2nm,1.9s,mb4.5						
NOA	NORSAR Array B	50.25	324	P	P	20 24 09.2	-0.2
	comp=E,0.4nm,0.7s,mb3.6,baz=311,slow=18,SNR=2.2						
TORD	Torodi Ar. Bea	74.03	275	P	P	20 26 47.4	-2.3
	comp=E,0.6nm,0.7s,mb3.6,baz=44,slow=5.5,SNR=5.3						
YKA	Yellowknife Ar	81.66	7	P	P	20 27 29.1	-2.3
	comp=E,0.1nm,0.6s,mb2.9,baz=346,slow=5.1,SNR=4.4						

*DDA **04** 20:25:29.3, 36°.89N×27°.40E, h5km±3km, Md3.0*
*ISK **04** 20:25:30.4, 36°.85N×27°.47E, h5km, ML3.1*
*CSEM **04** 20:25:32.0±0.4, 36°.87N×27°.49E, h2km, ML3.1, Error ellipse: s-maj=9.1km s-min=4.5km az=53.0*
ISC 04 20:25:30.1±0.7, 36°.81N±0°.04×27°.41E±0°.06, h3km±5km, n54, σ0$95/58, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.16	119	ePG	Pg	20 25 34.2	+1.1
DAT				eSG	Sg	20 25 36.4	+1.2
DAT	Datca	0.16	119	ePg	Pg	20 25 34.3	+1.1
DAT				eSg	Sg	20 25 36.4	+1.2
BDRM	Kayabasi	0.26	7	iP	Pg	20 25 32.9	-2.3
BDRM	Kayabasi	0.26	7	iP	Pg	20 25 32.9	-2.3
BODT	Bodrum	0.27	343	ePG	Pg	20 25 36.2	+0.9
BODT				eSG	Sg	20 25 40.5	+1.7
BODT	Bodrum	0.27	343	ePg	Pg	20 25 36.3	+1.0
BODT				eSg	Sg	20 25 40.5	+1.7
MLSB	Milas	0.57	31	ePG	Pg	20 25 41.3	+0.2
MLSB	Milas	0.57	31	ePg	Pg	20 25 41.3	+0.2
YER	Yerkesik	0.78	65	ePG	Pg	20 25 45.0	0.0
YER	Yerkesik	0.78	65	ePg	Pg	20 25 45.0	0.0
ARG	Arkhangelos	0.82	135	eP	Pg	20 25 46.0	+0.1
GCAM	G?zelcaml?	0.90	351	iP	Pg	20 25 48.0	+0.5
GCAM	G?zelcaml?	0.90	351	iP	Pg	20 25 48.0	+0.5
AYDN	Tasoluk	0.93	24	iP	Pg	20 25 46.8	-1.3
AYDN	Tasoluk	0.93	24	iP	Pg	20 25 46.8	-1.3
TURN	Turunc	0.96	86	iP	Pg	20 25 40.3	-8.3
SMG	Samos	1.01	333	eP	Pg	20 25 49.5	0.0
KARP	Karpathos	1.27	189	eP	Pg	20 25 53.0	-1.5
FETY	Fethiye	1.36	97	ePN	Pn	20 25 56.5	+0.5
FETY	Fethiye	1.36	97	ePn	Pn	20 25 56.5	+0.5
DNZL	Cakiroluk	1.58	55	iP	Pn	20 25 58.7	-0.4
DNZL	Cakiroluk	1.58	55	iP	Pn	20 25 58.7	-0.4
IZM	Izmir	1.59	356	ePN	Pg	20 26 00.6	-0.1
IZM	Izmir	1.59	356	ePn	Pg	20 26 00.6	-0.1
BLCB	Balcova	1.60	350	ePN	Pg	20 26 01.1	+0.2
BLCB	Balcova	1.60	350	ePn	Pg	20 26 01.1	+0.2
DENT	Denizli	1.61	53	ePN	Pb	20 26 00.0	-0.5
DENT	Denizli	1.61	53	ePn	Pb	20 26 00.0	-0.5
GLHS	Glhisar (BURDU	1.71	78	ePN	Pb	20 26 02.0	-0.2
GLHS	Glhisar (BURDU	1.71	78	ePn	Pb	20 26 02.0	-0.2
GOLH	Golhisar	1.78	75	iP	Pb	20 26 02.9	-0.5
GOLH	Golhisar	1.78	75	iP	Pb	20 26 02.9	-0.5
AKAS	Kas	1.86	107	iP	Pg	20 26 05.4	-0.4
AKAS	Kas	1.86	107	iP	Pg	20 26 05.4	-0.4
MANT	Manisa	1.92	28	iP	Pg	20 26 06.0	-0.9
MANT	Manisa	1.92	28	iP	Pg	20 26 05.9	-0.9
KULA	Kula-Manisa	1.98	30	ePN	Pb	20 26 05.2	-1.6
KULA	Kula-Manisa	1.98	30	ePn	Pb	20 26 05.2	-1.6
ELL	Elmali	2.01	91	ePN	Pb	20 26 06.5	-0.8
ELL	Elmali	2.01	91	ePn	Pb	20 26 06.5	-0.8
NPS	Neapolis	2.12	224	eP	Sn	20 26 21.0	-12
KHL	Karahalli	2.26	47	ePN	Pn	20 26 09.2	+0.8
KHL	Karahalli	2.26	47	ePn	Pn	20 26 09.2	+0.7
KHAL	Karahalli	2.28	46	iP	Pg	20 26 13.2	-0.6
KHAL	Karahalli	2.28	46	iP	Pg	20 26 13.2	-0.6
KORT	Korkueli	2.37	84	iP	Pb	20 26 13.1	-0.3
KORT	Korkueli	2.37	84	iP	Pb	20 26 13.1	-0.3
BCK	Bucak	2.63	75	ePN	Pn	20 26 14.7	+1.2
BCK	Bucak	2.63	75	ePn	Pn	20 26 14.7	+1.2
BALB	Balikesir	2.85	7	ePN	Pn	20 26 18.2	+1.6
BALB	Balikesir	2.85	7	ePn	Pn	20 26 18.2	+1.6
SUTC	Sutluce-Ispart	2.95	76	ePN	Pn	20 26 19.4	+1.5
SUTC	Sutluce-Ispart	2.95	76	ePn	Pn	20 26 19.4	+1.5
LIA	Limnos Island	3.55	331	eP	Pn	20 26 25.5	-0.6

*ISCJB **04** 20:25:57.0±0.6, 36°.81N±0°.03×27°.35E±0°.04, h1km±6km, Error ellipse: s-maj=5.6km s-min=4.7km az=147.2*
*ISK **04** 20:25:57.3, 36°.85N×27°.45E, h5km, MD3.2*
*CSEM **04** 20:25:58.7±0.3, 36°.85N×27°.45E, h2km, MD3.2, Error ellipse: s-maj=9.2km s-min=3.8km az=48.0*
ISC 04 20:25:57.9±0.6, 36°.81N±0°.03×27°.36E±0°.04, h3km±5km, n53, σ0$95/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.19	114	ePG	Pg	20 26 01.4	-0.2
DAT				eSG	Sg	20 26 03.8	-0.3
DAT	Datca	0.19	114	ePg	Pg	20 26 01.4	-0.2
DAT				eSg	Sg	20 26 03.8	-0.3
BODT	Bodrum	0.26	351	ePG	Pg	20 26 03.5	+0.6
BODT				eSG	Sg	20 26 07.6	+1.3
BODT	Bodrum	0.26	351	ePg	Pg	20 26 03.5	+0.6
BODT				eSg	Sg	20 26 07.6	+1.4
BDRM	Kayabasi	0.27	15	iS	Pg	20 26 02.6	-0.4
BDRM	Kayabasi	0.27	15	iS	Pg	20 26 02.6	-0.5
MLSB	Milas	0.59	34	ePG	Pg	20 26 07.8	-1.4
MLSB	Milas	0.59	34	ePg	Pg	20 26 07.8	-1.4
YER	Yerkesik	0.81	66	ePG	Pg	20 26 12.5	-0.9
YER	Yerkesik	0.81	66	ePg	Pg	20 26 12.5	-0.9
GCAM	G?zelcaml?	0.90	354	iS	Pg	20 26 16.3	+1.2
AYDN	Tasoluk	0.95	26	iS	Pg	20 26 14.6	-1.5
TURN	Turunc	1.00	86	iS	Px	20 26 18.6	
FETY	Fethiye	1.40	97	ePN	Pn	20 26 23.7	-0.6
FETY	Fethiye	1.40	97	ePn	Pn	20 26 23.7	-0.6
IZM	Izmir	1.59	357	ePN	Pn	20 26 26.5	-0.4
IZM	Izmir	1.59	357	ePn	Pn	20 26 26.5	-0.5
BLCB	Balcova	1.59	351	ePN	Pn	20 26 27.0	0.0
BLCB	Balcova	1.59	351	ePn	Pn	20 26 27.0	0.0
DNZL	Cakiroluk	1.61	56	iS	Sn	20 26 43.8	-4.7
DNZL	Cakiroluk	1.61	56	iS	Sn	20 26 43.8	-4.7
DENT	Denizli	1.64	54	ePN	Pn	20 26 26.9	-0.7
DENT	Denizli	1.64	54	ePn	Pn	20 26 26.9	-0.7
URLA	Izmir	1.66	339	iP	Pg	20 26 29.5	-0.3
URLA	Izmir	1.66	339	iP	Pg	20 26 29.5	-0.3
GLHS	Glhisar (BURDU	1.75	78	ePN	Pb	20 26 29.2	-1.4
GLHS	Glhisar (BURDU	1.75	78	ePn	Pb	20 26 29.2	-1.4
AKAS	Kas	1.90	107	iS	Sg	20 27 02.1	+3.2
ZKR	Zakros	1.93	209	eP	Pg	20 26 36.5	+1.6
MANT	Manisa	1.93	29	iS	Sg	20 26 59.3	-0.6
MANT	Manisa	1.93	29	iS	Sg	20 26 59.3	-0.6
KULA	Kula-Manisa	1.99	31

UDYN				*i* S		**Sn**	**21 07 40.1**	**+0.6**
UDYN				AML		AML	21 07 48.9	
	comp=E,2μm,0.7s							
LBOS		**3.36**	**46⇑**	*i* P		**Pn**	**21 07 14.8**	**-1.5**
LBOS				*i* S		**Sn**	**21 07 57.8**	**+1.4**
DHBB	**Dhamar BB**	**3.41**	**28**	*i* P		**Pn**	**21 07 16.7**	**-0.2**
DHBB				*i* S		**Sn**	**21 07 58.5**	**+1.2**
BDHA	**Al Bayda'**	**3.66**	**49⇑**	*i* P		**Pn**	**21 07 19.4**	**-1.0**
BDHA				*i* S		**Sn**	**21 08 04.8**	**+1.1**
BDHA				AML		AML	21 08 16.6	
	comp=N,966nm,0.6s							
HAJJ	**Hajjah**	**4.21**	**11**	*i* P		**Pn**	**21 07 27.5**	**-0.4**
HAJJ				*i* S		**Sn**	**21 08 17.7**	**+0.5**
HAJJ				AML		AML	21 08 38.1	
	comp=Z,561nm,0.8s							
FURI	**Furi**	**4.79**	**237**	*e*P		**Pg**	**21 07 55.3**	**-0.2**
FURI				S		**Sg**	**21 08 58.9**	**+1.3**

*IDC **04** 21:24:28.0±20.0, 21°.23S×68°.16W, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.5/13, mbtmp3.6/2, Error ellipse: s-maj=855.8km s-min=62.3km az=19.0*
*ISCJB **04** 21:24:40.8±1.0, 21°.45S±0°.05×68°.4W±0°.2, h126km±10km, mb3.5/3, Error ellipse: s-maj=25.7km s-min=7.3km az=173.0*
*NEIC **04** 21:24:41.7, 21°.42S×68°.47W, h114km, mb3.9/2, After GUC.*
*GUC **04** 21:24:41.7±0.7, 21°.42S×68°.47W, h114km±7km, ML3.8*

ISC 04 21:24:41.8±0.9, 21°.44S±0°.05×68°.4W±0°.2, h120km±10km, n18, σ0°56/25, mb3.5/3, 4C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.09**	**291⇑**	*i*P		**Pn**	**21 25 04.2**	**-0.5**
PB01				*i* S		**Sn**	**21 25 20.9**	**-1.2**
PB01				AML		AML	21 25 23.2	
	comp=E,2μm,0.2s							
LVC	**Limon Verde**	**1.26**	**202**	*e*Pn		**Pn**	**21 25 07.3**	**+0.7**
LVC				*e*Sn		**Sn**	**21 25 25.4**	**0.0**
LVC	**Limon Verde**	**1.26**	**202⇑**	*i*P		**Pn**	**21 25 07.3**	**+0.7**
LVC				*i* S		**Sn**	**21 25 26.1**	**+0.7**
PB04	**Plate Boundary**	**1.30**	**231⇑**	*i*P		**Pn**	**21 25 13.0**	**+6.0**
PB04				*i* S		**Sn**	**21 25 37.0**	**+11**
PB04				AML		AML	21 25 45.4	
	comp=E,586nm,0.4s							
MACH	**Maria Elena**	**1.47**	**239**	*i* P		**Pn**	**21 25 09.0**	**+0.1**
MACH				*i* S		**Sn**	**21 25 29.6**	**+0.1**
PECH	**Pedro de Valdi**	**1.65**	**225⇑**	*i*P		**Pn**	**21 25 11.1**	**0.0**
PECH				*i* S		**Sn**	**21 25 33.2**	**-0.1**
PECH				AML		AML	21 25 34.0	
	comp=E,1μm,0.2s							
MNMC	**Miæe Miæ**	**2.56**	**334**	*e*P		**Pn**	**21 25 22.8**	**+0.4**
MNMC				*i* S		**Sn**	**21 25 53.9**	**+0.3**
MNMC				AML		AML	21 25 57.2	
	comp=N,705nm,0.3s							
ANCH	**Antofagasta**	**2.90**	**219**	*e*P		**Pn**	**21 25 27.6**	**+0.7**
LCO	**Las Campanas**	**7.82**	**195**	Pn		**Pn**	**21 26 33.0**	**+0.1**
LCO				*e*Sn		**Sn**	**21 27 54.3**	**-5.5**
TRQA	**Tornquist**	**17.46**	**163**	*e*P		**Pn**	**21 28 36.8**	**-1.1**
	comp=N,2.9nm,0.5s							
PLCA	**Paso Flores**	**19.32**	**185**	P		**P**	**21 28 56.9**	**-0.6**
OTAV	**Otavalo**	**23.67**	**334**	*e*P		**P**	**21 29 42.3**	**-0.2**
SDV	**Santo Domingo**	**30.21**	**356**	*e*P		**P**	**21 30 41.2**	**0.0**
	comp=N,2.0nm,0.7s,mb3.9							
JTS	**JuntasAbangare**	**35.48**	**331**	P		**P**	**21 31 26.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.89**	**70**	P		**P**	**21 36 21.0**	**-0.2**
	comp=N,0.6nm,0.5s,mb3.6,baz=257,slow=5.4,SNR=8.7							
YKA	**Yellowknife Ar**	**91.29**	**340**	P		**P**	**21 37 34.2**	**+1.1**
	comp=N,0.1nm,0.5s,mb3.2,baz=130,slow=4.3,SNR=6.1							
YKA	**Yellowknife Ar**	**91.29**	**340**	P		**P**	**21 37 34.2**	**+1.1**
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc		PKPbc	21 44 06.2	+0.9
	comp=N,0.2nm,0.7s,baz=306,slow=2.9,SNR=3.7							

MAN 04 21:54:14, 8°.53N×122°.80E, h32km, mb3.7, ML2.5, MS2.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.55**	**85⇓**	*e*P		Pb	21 54 26.2	+0.8
DCPH				*e*S		Sb	21 54 34.4	+1.2
IPIL	**Ipil**	**0.77**	**197**	*e*P		Pn	21 54 30.0	+1.3
IPIL				*e*S		Sn	21 54 39.7	+0.5
PAGZ	**Pagadian**	**0.89**	**139**	*e*P		Pn	21 54 31.4	+1.1
PAGZ				*e*S		Sn	21 54 41.1	-1.1
GUIM	**Jordan**	**2.09**	**354**	*e*P		Pn	21 54 41.9	-5.0
CUYO	**Cuyo Island**	**2.89**	**323**	*e*P		Pn	21 54 59.8	+1.9
ENPP	**El Nido**	**4.25**	**309**	*e*P		Pn	21 55 18.2	+1.6

*BJI **04** 21:57:02.8, 17°.60N×122°.80E, h37km, mB4.4/3, mb4.3/5*
*ISCJB **04** 21:57:03.1±0.7, 17°.60N±0°.03×122°.72E±0°.05, h37km±6km, mb3.9/18, MS3.0/2, Error ellipse: s-maj=8.5km s-min=4.6km az=1.3*
*MAN **04** 21:57:03, 17°.62N×122°.60E, h27km, mb5.0, ML3.9, MS4.0*
*NEIC **04** 21:57:06.8±0.6, 17°.63N×122°.79E, h58km±6km, mb4.0/8, Error ellipse: s-maj=8.5km s-min=4.9km az=81.0*
*IDC **04** 21:57:07.3±2.5, 17°.64N×122°.76E, h58km±24km, mb3.5/12, mb1 3.7/13, mb1mx3.5/24, mbtmp3.6/13, ML4.3/2, MS3.0/2, Ms1 3.0/2, ms1mx2.7/20, Error ellipse: s-maj=22.0km s-min=11.7km az=81.0*

ISC 04 21:57:04.8±1.1, 17°.56N±0°.03×122°.64E±0°.05, h34km±9km, n53, σ1°09/60, mb3.9/18, MS3.0/2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**203**	*e*P		**Pb**	**21 57 15.4**	**-0.5**
CVP	**Callao Caves**	**0.80**	**281**	*e*P		**Pb**	**21 57 15.6**	**-4.7**
SGCP	**Mt. Cagua**	**0.89**	**320**	*e*P		**Pn**	**21 57 18.7**	**-2.2**
CAUP	**Cauayan**	**0.99**	**232**	*e*P		**Pn**	**21 57 21.9**	**-0.4**
APYP	**Conner**	**1.37**	**283**	*e*P		**Pn**	**21 57 26.0**	**-1.5**
ABRA	**Dolores**	**1.84**	**273**	*e*P		**Pn**	**21 57 33.6**	**-0.4**
ABRA				*e*S		**Sn**	**21 57 55.0**	**-1.2**
BALP	**Baler**	**2.07**	**210**	*e*P		**Pn**	**21 57 38.3**	**+1.1**
BALP				*e*S		**Sn**	**21 58 01.7**	**-0.2**
PIP	**Pasuquin**	**2.07**	**292⇑**	*i*P		**Pn**	**21 57 37.9**	**+0.7**
PIP				*e*S		**Sn**	**21 58 01.8**	**-0.1**
BOLP	**Bolinao**	**2.86**	**246**	*e*P		**Pn**	**21 57 49.1**	**+1.1**
POLP	**Polilio Island**	**2.89**	**194**	*e*P		**Pn**	**21 57 49.7**	**+1.3**
BBP	**Basco**	**2.94**	**347**	*e*P		**Pn**	**21 57 47.9**	**-1.3**
SCZP	**Santa Cruz**	**3.16**	**236**	*e*P		**Pn**	**21 57 54.7**	**+2.5**
SCZP				*e*S		**Sn**	**21 58 26.8**	**-2.0**
GQP	**Guinayangan**	**3.63**	**183**	*e*P		**Pn**	**21 57 56.9**	**-1.7**
TGY	**Tagaytay City**	**3.81**	**206**	P		**Pn**	**21 58 05.8**	**+4.8**
	49nm,0.3s,baz=69,slow=8.6,SNR=3.5							
TGY				S		**Sn**	**21 58 51.5**	**+6.8**
	67nm,0.3s,baz=188,slow=19,SNR=2.5							
YULB	**Yu-li**	**5.94**	**348**	*e*Pn		**Pn**	**21 58 32.5**	**+2.1**
	22nm,1.0s							
YULB				*e*Sn		**Sn**	**21 59 35.9**	**-1.4**
TPUB	**Ta-pu**	**6.02**	**342**	*e*Pn		**Pn**	**21 58 32.3**	**+0.9**
TPUB				*e*Sn		**Sn**	**21 59 42.3**	**+3.1**
SSLB	**Suanglung**	**6.40**	**346**	*e*Pn		**Pn**	**21 58 34.0**	**-2.6**
NACB	**Ninganchiao**	**6.66**	**352**	Pn		**Pn**	**21 58 41.5**	**+1.3**
YHNB	**Yeheng**	**7.18**	**351**	*e*Pn		**Pn**	**21 58 49.0**	**+1.7**
YHNB				*e*Sn		**Sn**	**22 00 07.5**	**-0.2**
JOW	**Kunigami**	**10.60**	**28**	P		**Pn**	**21 59 33.0**	**-1.3**
	3.4nm,0.3s,baz=220,slow=29,SNR=7.8							
ENH	**Enshi**	**17.44**	**319**	*e*Pn		**Pn**	**22 01 06.7**	**+1.2**
KSRS	**Korea Array**	**20.36**	**12**	P		**P**	**22 01 39.3**	**+1.0**
	1.4nm,0.6s,baz=197,slow=11,SNR=5.4							
CD2	**Chengdu**	**21.71**	**311**	P		**P**	**22 01 54.2**	**+1.2**
CD2				pmax		pmax		
	comp=Z,20nm,0.7s,mb4.7							
CD2				pmax		pmax		
	comp=Z,90nm,4.7s							
CHTO	**Chiang Mai**	**22.55**	**277**	*e*P		**P**	**22 02 03.7**	**+1.6**
	comp=Z,2.0nm,0.9s,mb3.5							
CMAR	**Chiang Mai Arr**	**22.56**	**276**	P		**P**	**22 02 02.5**	**+0.4**
	comp=Z,1.0nm,0.7s,mb3.4,baz=92,slow=8.0,SNR=7.6							
KAPI	**Kappang**	**22.61**	**188**	LR		LR	22 11 24.5	
	comp=Z,46nm,20.1s,MS2.9,baz=309,slow=38							
KULM	**Kulim**	**24.73**	**243**	P		**P**	**22 02 25.1**	**+1.9**
MDJ	**Mudanjiang**	**27.60**	**11**	*e*P		**P**	**22 02 48.1**	**-0.8**
LSA	**Lhasa**	**31.18**	**299**	*e*P		**P**	**22 03 21.2**	**+0.4**
	comp=Z,1.3nm,0.4s,mb4.1							
HIA	**Hailar**	**31.72**	**356**	*e*P		**P**	**22 03 25.0**	**-0.2**
ULN	**Ulaanbaatar**	**32.82**	**340**	*e*P		**P**	**22 03 34.5**	**-0.4**
	comp=Z,1.2nm,1.0s,mb3.8							
SONM	**Songino Array**	**33.01**	**340**	P		**P**	**22 03 36.1**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=158,slow=11,SNR=6.2							
WRAB	**Tennant Creek**	**38.99**	**162**	*e*P		**P**	**22 04 27.6**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.3							
WRA	**Warramunga Arr**	**38.99**	**162**	P		**P**	**22 04 27.8**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.4,baz=342,slow=9.2,SNR=28							
WB2	**Warramunga Arr**	**39.00**	**162**	*e*P		**P**	**22 04 27.7**	**-0.4**
ASAR	**Alice Springs**	**42.42**	**165**	P		**P**	**22 04 56.7**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.8,baz=353,slow=7.3,SNR=26							
MK31	**Makanchi Array**	**44.16**	**320**	*e*P		**P**	**22 05 10.2**	**-0.1**
MKAR	**Makanchi Array**	**44.16**	**320**	P		**P**	**22 05 10.6**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.6,baz=118,slow=9.2,SNR=12							
MKAR				LR		LR	22 26 35.8	
	comp=Z,19nm,19.8s,MS3.0,baz=55,slow=40							
ZALV	**Zalesovo Beam**	**46.59**	**330**	P		**P**	**22 05 28.8**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=125,slow=7.6,SNR=2.2							
KURK	**Kurchatov**	**48.12**	**324**	P		**P**	**22 05 41.5**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=120,slow=7.8,SNR=14							
KURK	**Kurchatov**	**48.12**	**324**	*e*P		**P**	**22 05 41.5**	**+0.2**
	comp=Z,2.5nm,0.8s,mb4.3							
AML	**Almayashu**	**48.21**	**311**	*e*P		**P**	**22 05 41.9**	**-0.2**
	comp=Z,2.7nm,1.0s,mb4.2							
EKS2	**Erkin-Say**	**48.29**	**312**	P		**P**	**22 05 44.6**	**+1.9**
NWAO	**Narrogin (SRO)**	**50.46**	**186**	P		**P**	**22 05 58.2**	**-1.1**
KBL	**Kabul**	**50.47**	**301**	*e*P		**P**	**22 05 59.6**	**+0.1**
STKA	**Stephens Creek**	**52.40**	**160**	P		**P**	**22 06 14.2**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=339,slow=8.3,SNR=6.6							
STKA	**Stephens Creek**	**52.40**	**160**	*e*P		**P**	**22 06 14.1**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.4							
BVAR	**Borovoye Array**	**53.72**	**324**	P		**P**	**22 06 23.8**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.5,baz=112,slow=7.6,SNR=3.3							
BRVK	**Borovoye**	**53.80**	**324**	P		**P**	**22 06 22.9**	**-1.0**
ABKAR	**Akbulak array**	**59.13**	**317**	*e*P		**P**	**22 07 01.3**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.1							
ARU	**Arti**	**61.25**	**325**	*e*P		**P**	**22 07 16.1**	**-0.2**
FINES	**FINESS Array B**	**77.85**	**331**	P		**P**	**22 08 58.1**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=321,slow=2.4,SNR=3.9							
YKA	**Yellowknife Ar**	**88.52**	**23**	P		**P**	**22 09 53.5**	**-0.1**
	comp=Z,0.1nm,0.6s,mb3.3,baz=304,slow=4.6,SNR=4.3							

*ISCJB **04** 22:06:20.9±0.5, 40°.56N±0°.03×34°.83E±0°.04, h7km±5km, Error ellipse: s-maj=6.3km s-min=4.6km az=148.7*
*CSEM **04** 22:06:20.7±0.2, 40°.57N×34°.83E, h8km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.1km az=150.0*
*DDA **04** 22:06:20.4, 40°.54N×34°.83E, h18km±2km, Md2.9*
*ISK **04** 22:06:20.0, 40°.59N×34°.84E, h6km, MD2.7*

ISC 04 22:06:21.2±0.5, 40°.56N±0°.03×34°.86E±0°.04, h7km±5km, n25, σ1°04/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.08**	**320**	*i* P		**Pg**	**22 06 24.3**	**+1.0**
CTKT				*i* S		**Sg**	**22 06 26.7**	**+2.0**
CTKT	**Corum**	**0.08**	**320**	*i* P		**Pg**	**22 06 24.3**	**+1.1**
CTKT				*i* S		**Sg**	**22 06 26.7**	**+2.0**
CORM	**Corum**	**0.42**	**205**	PG		**Pg**	**22 06 29.2**	**-0.1**
CORM				SG		**Sg**	**22 06 35.7**	**+0.9**
CORM	**Corum**	**0.42**	**205**	*i* Pg		**Pg**	**22 06 29.2**	**-0.1**
CORM				*i* Sg		**Sg**	**22 06 35.7**	**+0.9**
BYBT	**Boyabat**	**0.91**	**356**	*e*PG		**Pg**	**22 06 37.4**	**-1.3**
BYBT	**Boyabat**	**0.91**	**356**	*e*Pg		**Pg**	**22 06 37.4**	**-1.3**
CANT	**Cankiri**	**0.95**	**273**	*e*PG		**Pg**	**22 06 38.4**	**-1.0**
CANT				*e*SG		**Sg**	**22 06 51.4**	**-0.2**
YOZ	**Yozgat**	**0.98**	**159**	*e*PG		**Pg**	**22 06 39.1**	**-0.9**
YOZ	**Yozgat**	**0.98**	**159**	*e*Pg		**Pg**	**22 06 39.1**	**-0.9**
CDAG	**Cicekdag**	**1.01**	**202**	*i* P		**Pg**	**22 06 39.4**	**-1.1**
CDAG				*i* S		**Sg**	**22 06 53.3**	**-0.2**
CDAG	**Cicekdag**	**1.01**	**202**	*i* P		**Pg**	**22 06 39.4**	**-1.1**
CDAG				*i* S		**Sg**	**22 06 53.3**	**-0.2**
KVT	**Kavak**	**1.04**	**60**	*e*PG		**Pg**	**22 06 40.3**	**-0.8**
KVT	**Kavak**	**1.04**	**60**	*e*Pg		**Pg**	**22 06 40.3**	**-0.8**
DIKM	**Dikmen**	**1.13**	**15**	*e*PN		**Pn**	**22 06 41.6**	**-1.7**
DIKM	**Dikmen**	**1.13**	**15**	*e*Pn		**Pn**	**22 06 41.6**	**-1.8**
TOKA	**Tokat**	**1.26**	**100**	*i* P		**Pn**	**22 06 45.3**	**+0.2**
TOKA				*i* S		**Sb**	**22 07 02.3**	**+0.8**
TOKA	**Tokat**	**1.26**	**100**	*i* P		**Pn**	**22 06 45.3**	**+0.2**
TOKA				*i* S		**Sb**	**22 07 02.3**	**+0.8**
ERBA	**Erbaa**	**1.45**	**85**	*i* P		**Pn**	**22 06 47.3**	**-0.4**
ERBA				*i* S		**Sn**	**22 07 08.7**	**+1.8**
ERBA	**Erbaa**	**1.45**	**85**	*i* P		**Pn**	**22 06 47.3**	**-0.4**
ERBA				*i* S		**Sn**	**22 07 08.7**	**+1.8**
BALT	**Daday**	**1.48**	**312**	*i* P		**Pn**	**22 06 48.8**	**+0.7**
BALT				*i* S		**Sn**	**22 07 11.9**	**+4.2**
BALT	**Daday**	**1.48**	**312**	*i* P		**Pn**	**22 06 48.8**	**+0.6**
BBAL	**Bala**	**1.68**	**233**	*i* P		**Pn**	**22 06 49.8**	**-1.0**
BBAL				*i* S		**Sn**	**22 07 14.0**	**+1.5**
BBAL	**Bala**	**1.68**	**233**	*i* P		**Pn**	**22 06 49.8**	**-1.0**
BBAL				*i* S		**Sn**	**22 07 14.0**	**+1.5**
SVSK	**Karacayir**	**1.76**	**111**	*e*PN		**Pn**	**22 06 52.1**	**+0.1**
SVSK	**Karacayir**	**1.76**	**111**	*e*Pn		**Pn**	**22 06 52.1**	**+0.1**

IDC 04 22:19:00.0±1.3, 1°.02N×126°.22E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=52.9km s-min=22.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.81**	**227**	Pn		Pn	22 21 08.4	-0.4
	0.7nm,0.3s,baz=21,slow=8.6,SNR=3.8							
WRA	**Warramunga Arr**	**22.30**	**160**	P		P	22 23 58.9	-0.3
	1.6nm,0.7s,baz=339,slow=11,SNR=19							
ASAR	**Alice Springs**	**25.65**	**164**	P		P	22 24 31.9	+0.4
	0.6nm,0.4s,baz=345,slow=11,SNR=12							
ASAR				PcP		PcP	22 28 03.0	+0.4
	0.2nm,0.5s,baz=359,slow=2.4,SNR=4.9							
STKA	**Stephens Creek**	**35.81**	**157**	P		P	22 26 01.0	-0.3
	1.0nm,0.6s,baz=331,slow=9.5,SNR=3.5							
MKAR	**Makanchi Array**	**59.50**	**326**	P		P	22 29 04.9	-0.1
	0.6nm,0.5s,baz=132,slow=7.4,SNR=12							

IDC 04 22:42:09.7±6.0, 30°.11S×179°.00E, h511km±55km, mb2.5/2, mb1 2.9/3, mb1mx2.8/14, mbtmp2.8/3, Error ellipse: s-maj=75.2km s-min=30.6km az=37.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.28**	**190**	P		P	22 44 10.3	+1.3
	3.0nm,0.3s,baz=5.1,slow=6.1,SNR=15							
URZ				S		S	22 45 45.4	-1.7
	0.5nm,0.3s,baz=68,slow=19,SNR=3.5							
ASAR	**Alice Springs**	**40.53**	**268**	P		P	22 49 04.2	0.0
	0.3nm,0.5s,baz=103,slow=7.4,SNR=3.9							
WRA	**Warramunga Arr**	**41.49**	**273**	P		P	22 49 12.0	+0.1
	0.5nm,0.4s,baz=107,slow=9.4,SNR=7.9							
FINES	**FINESS Array B**	**143.95**	**338**	PKP		PKPdf	23 00 45.2	-0.7
	1.8nm,0.4s,baz=55,slow=3.5,SNR=25							
BRTR	**Keskin Array B**	**150.18**	**298**	PKPbc		PKPbc	23 01 02.3	-0.3
	0.3nm,0.7s,baz=108,slow=3.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	**162.94**	**189**	PKPab		PKPab	23 02 06.1	-0.3
	0.1nm,0.3s,baz=165,slow=5.9,SNR=4.7							

*ISCJB **04** 22:55:33.9±0.3, 45°.36N±0°.01×3°.48E±0°.02, h5km±3km, Error ellipse: s-maj=2.5km s-min=2.2km az=135.4*
*CSEM **04** 22:55:35.4±0.1, 45°.34N×3°.47E, h5km, ML2.7/24, Error ellipse: s-maj=2.3km s-min=2.2km az=65.0*
*LDG **04** 22:55:36.6±0.0, 45°.35N×3°.46E, h5km, Md2.7/3, Ml2.7/27, Error ellipse: s-maj=0.6km s-min=0.5km az=91.0*
*NEIC **04** 22:55:37.2, 45°.34N×3°.44E, h5km, ML2.7(LDG), ML2.8(STR), After STR.*
*STR **04** 22:55:37.2±0.3, 45°.34N×3°.44E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 04 22:55:35.6±0.2, 45°.35N±0°.01×3°.46E±0°.02, h15km±2km, n109, σ0°92/215, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBL	**Lubilhac**	**0.19**	**231**	Pg		**Pg**	**22 55 41.2**	**+1.1**
LBL				Sg		**Sg**	**22 55 43.6**	**+0.5**
LBL	**Lubilhac**	**0.19**	**231**	Pg		**Pg**	**22 55 41.2**	**+1.1**
LBL				Sg		**Sg**	**22 55 43.6**	**+0.5**
CFF	**Clermont-Ferra**	**0.48**	**330**	Pg		**Pg**	**22 55 47.1**	**+1.9**
CFF	**Clermont-Ferra**	**0.48**	**330**	Pg		**Pg**	**22 55 47.1**	**+1.9**
PYM	**Petit Puy Mans**	**0.51**	**322**	Pg		**Pg**	**22 55 47.2**	**+1.5**
PYM	**Petit Puy Mans**	**0.51**	**322**	Pg		**Pg**	**22 55 47.2**	**+1.5**
PLDF	**La Plantade**	**0.63**	**10**	Pg		**Pg**	**22 55 49.5**	**+1.5**
PLDF				Sg		**Sg**	**22 55 58.0**	**+1.6**
PLDF	**La Plantade**	**0.63**	**10**	Pg		**Pg**	**22 55 49.5**	**+1.5**
PLDF				Sg		**Sg**	**22 55 58.0**	**+1.6**
AGO	**Saint Agoulin**	**0.74**	**342**	Pg		**Pg**	**22 55 51.6**	**+1.6**
AGO				Sg		**Sg**	**22 56 01.6**	**+1.8**
AGO	**Saint Agoulin**	**0.74**	**342**	Pg		**Pg**	**22 55 51.6**	**+1.6**
AGO				Sg		**Sg**	**22 56 01.6**	**+1.8**
SSB	**Saint Sauveur**	**0.77**	**95**	P		**Pg**	**22 55 52.2**	**+1.6**
SSB				*e*S		**Sg**	**22 56 01.4**	**+0.7**
SSB	**Saint Sauveur**	**0.77**	**95**	P		**Pg**	**22 55 52.2**	**+1.6**
SSB				*e*S		**Sg**	**22 56 01.5**	**+0.8**
VIVF	**Saint-Julien-l**	**0.99**	**119**	*e*Pn		**Pn**	**22 55 55.7**	**+0.7**
	SNR=1.0							
VIVF				*e*Sg		**Sg**	**22 56 08.2**	**+0.4**
	33nm,0.2s,SNR=1.0							
VIVF	**Saint-Julien-l**	**0.99**	**119**	*e*Pg		**Pg**	**22 55 55.4**	**+0.6**
VIVF				*e*Pn		**Pn**	**22 55 55.7**	**+0.7**
VIVF				*e*Sg		**Sg**	**22 56 08.2**	**+0.4**
VIVF	**Saint-Julien-l**	**0.99**	**119**	*e*Pg		**Pg**	**22 55 55.4**	**+0.6**
VIVF	**Saint-Julien-l**	**0.99**	**119**	*e*Pn		**Pn**	**22 55 55.7**	**+0.7**
	SNR=1.0							
VIVF				*e*Sg		**Sg**	**22 56 08.2**	**+0.4**
	16nm,0.2s,SNR=1.0							
CAF	**Calviac**	**1.07**	**247**	*e*Pg		**Pg**	**22 55 56.6**	**+0.2**
	SNR=1.0							
CAF				*e*Sg		**Sg**	**22 56 10.6**	**+0.2**
	17nm,0.2s,SNR=1.0							
CAF	**Calviac**	**1.07**	**247**	*e*Pg		**Pg**	**22 55 56.6**	**+0.2**
	SNR=1.0							
CAF				*e*Sg		**Sg**	**22 56 10.6**	**+0.2**
	8.6nm,0.2s,SNR=1.0							
BGF	**Bois d'Agland**	**1.28**	**341**	*e*P		**Pn**	**22 56 01.4**	**+2.5**
BGF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
	52nm,0.2s,SNR=1.0							
BGF	**Bois d'Agland**	**1.28**	**341**	*e*Pn		**Pn**	**22 55 59.5**	**+0.6**
BGF				*e*P			22 56 01.4	
BGF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
BGF	**Bois d'Agland**	**1.28**	**341**	*e*Pn		**Pn**	**22 55 59.5**	**+0.6**
BGF	**Bois d'Agland**	**1.28**	**341**	*e*P		**Pn**	**22 56 01.4**	**+2.5**
BGF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
	26nm,0.2s,SNR=1.0							
TCF	**Toulx Ste Croi**	**1.28**	**318**	*e*P		**Pn**	**22 56 01.3**	**+2.4**
	SNR=1.0							
TCF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
	11nm,0.2s,SNR=1.0							
TCF	**Toulx Ste Croi**	**1.28**	**318**	*e*Pn		**Pn**	**22 55 59.5**	**+0.6**
TCF				*e*P			22 56 01.3	
TCF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
TCF	**Toulx Ste Croi**	**1.28**	**318**	*e*Pn		**Pn**	**22 55 59.5**	**+0.6**
	SNR=1.0							
TCF	**Toulx Ste Croi**	**1.28**	**318**	*e*P		**Pn**	**22 56 01.3**	**+2.4**
	SNR=1.0							
TCF				*e*Sg		**Sg**	**22 56 17.1**	**+0.1**
	5.7nm,0.2s,SNR=1.0							
LASF	**Ste Croix**	**1.31**	**167**	*e*Pg		**Pg**	**22 56 01.1**	**+0.3**
LASF				*e*Sn		**Sn**	**22 56 16.7**	**+0.3**
	SNR=1.0							
LASF				*e*Sg		**Sg**	**22 56 18.0**	**+0.2**
	12nm,0.2s,SNR=1.0							
LASF	**Ste Croix**	**1.31**	**167**	*e*Pn		**Pn**	**22 55 59.9**	**+0.6**
LASF				*e*Pg		**Pg**	**22 56 01.1**	**+0.3**
LASF				*e*Sn		**Sn**	**22 56 16.7**	**+0.3**
LASF				*e*Sg		**Sg**	**22 56 18.0**	**+0.2**
LASF	**Ste Croix**	**1.31**	**167**	*e*Pn		**Pn**	**22 55 59.9**	**+0.6**
	SNR=1.0

MTLF	**Montolieu**	**2.20**	**204**	*e*Pn	**Pn**	**22 56 12.1**	**+0.6**
MTLF				*e*Pg	**Pg**	**22 56 17.7**	**-0.1**
MTLF				*e*Sg	**Sg**	**22 56 45.3**	**-1.0**
MTLF	**Montolieu**	**2.20**	**204**	*e*Pn	**Pn**	**22 56 12.1**	**+0.6**
	SNR=1.0						
MTLF	**Montolieu**	**2.20**	**204**	*e*Pg	**Pg**	**22 56 17.7**	**-0.1**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**22 56 45.3**	**-1.0**
	5.2nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**2.23**	**55**	*e*Pg	**Pg**	**22 56 17.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 56 46.7**	**-0.5**
	4.6nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**2.23**	**55**	*e*Pn	**Pn**	**22 56 12.6**	**+0.7**
CABF				*e*Pg	**Pg**	**22 56 17.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 56 46.7**	**-0.5**
CABF	**La Chapelle**	**2.23**	**55**	*e*Pn	**Pn**	**22 56 12.6**	**+0.7**
	SNR=1.0						
CABF	**La Chapelle**	**2.23**	**55**	*e*Pg	**Pg**	**22 56 17.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 56 46.7**	**-0.5**
	2.3nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**2.31**	**85**	*e*Pg	**Pg**	**22 56 19.6**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**22 56 49.4**	**-0.5**
	6.4nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**2.31**	**85**	*e*Pg	**Pg**	**22 56 19.6**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**22 56 49.4**	**-0.5**
	3.2nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**2.33**	**85**	*e*Pg	**Pg**	**22 56 20.0**	**-0.2**
LPG				*e*Sg	**Sg**	**22 56 50.1**	**-0.2**
	5.9nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**2.33**	**85**	*e*P	**Pn**	**22 56 16.5**	**+3.2**
LPG				*e*Pg	**Pg**	**22 56 20.0**	**-0.2**
LPG				*e*Sg	**Sg**	**22 56 50.1**	**-0.2**
LPG	**La Plagne**	**2.33**	**85**	*e*P	**Pn**	**22 56 16.5**	**+3.2**
LPG	**La Plagne**	**2.33**	**85**	*e*Pg	**Pg**	**22 56 20.0**	**-0.2**
LPG				*e*Sg	**Sg**	**22 56 50.1**	**-0.2**
	3.0nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**2.43**	**104**	*e*Sg	**Sg**	**22 56 53.4**	**-0.3**
	1.1nm,0.3s						
MBDF	**Montbardon**	**2.43**	**104**	*e*Sg	**Sg**	**22 56 53.4**	**-0.3**
	0.6nm,0.3s						
MFF	**Saint Martin d**	**2.81**	**298**	*e*Pg	**Pg**	**22 56 28.6**	**-0.8**
MFF				*e*Sn	**Sn**	**22 56 52.7**	**-0.7**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**22 57 04.5**	**-1.3**
	3.0nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**2.81**	**298**	*e*Pn	**Pn**	**22 56 20.1**	**+0.2**
MFF				*e*Pg	**Pg**	**22 56 28.6**	**-0.8**
MFF				*e*Sn	**Sn**	**22 56 52.7**	**-0.7**
MFF				*e*Sg	**Sg**	**22 57 04.5**	**-1.3**
MFF	**Saint Martin d**	**2.81**	**298**	*e*Pn	**Pn**	**22 56 20.1**	**+0.2**
MFF	**Saint Martin d**	**2.81**	**298**	*e*Pg	**Pg**	**22 56 28.6**	**-0.8**
MFF				*e*Sn	**Sn**	**22 56 52.7**	**-0.7**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**22 57 04.5**	**-1.3**
	1.5nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**2.90**	**127**	*e*Pg	**Pg**	**22 56 30.4**	**-0.8**
FRF				*e*Sn	**Sn**	**22 56 54.2**	**-1.6**
	1.6nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**2.90**	**127**	*e*Pn	**Pn**	**22 56 21.5**	**+0.3**
FRF				*e*Pg	**Pg**	**22 56 30.4**	**-0.8**
FRF				*e*Sn	**Sn**	**22 56 54.2**	**-1.6**
FRF	**La Foret Royal**	**2.90**	**127**	*e*Pn	**Pn**	**22 56 21.5**	**+0.3**
	SNR=1.0						
FRF	**La Foret Royal**	**2.90**	**127**	*e*Pg	**Pg**	**22 56 30.4**	**-0.8**
FRF				*e*Sn	**Sn**	**22 56 54.2**	**-1.6**
	0.8nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**2.98**	**132**	*e*Pn	**Pn**	**22 56 22.6**	**+0.4**
LMR				*e*Pg	**Pg**	**22 56 31.6**	**-1.1**
LMR	**La Mourre**	**2.98**	**132**	*e*Pn	**Pn**	**22 56 22.6**	**+0.4**
	SNR=1.0						
SFTF	**Sexfontaines**	**3.06**	**20**	*e*Pg	**Pg**	**22 56 33.1**	**-1.1**
SFTF				*e*Sg	**Sg**	**22 57 12.4**	**-1.3**
	2.9nm,0.2s						
SFTF	**Sexfontaines**	**3.06**	**20**	*e*Pn	**Pn**	**22 56 23.7**	**+0.4**
SFTF				*e*Pg	**Pg**	**22 56 33.1**	**-1.1**
SFTF				*e*Sg	**Sg**	**22 57 12.4**	**-1.3**
SFTF	**Sexfontaines**	**3.06**	**20**	*e*Pn	**Pn**	**22 56 23.7**	**+0.4**
SFTF	**Sexfontaines**	**3.06**	**20**	*e*Pg	**Pg**	**22 56 33.1**	**-1.1**
SFTF				*e*Sg	**Sg**	**22 57 12.4**	**-1.3**
	1.5nm,0.2s						
EPF	**Esparros**	**3.23**	**225**	*e*Pg	**Pg**	**22 56 36.2**	**-1.2**
EPF				*e*Sn	**Sn**	**22 57 01.7**	**-2.1**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**22 57 17.8**	**-1.4**
	1.6nm,0.2s,SNR=1.0						
EPF	**Esparros**	**3.23**	**225**	*e*Pn	**Pn**	**22 56 26.0**	**+0.3**
EPF				*e*Pg	**Pg**	**22 56 36.2**	**-1.2**
EPF				*e*Sn	**Sn**	**22 57 01.7**	**-2.1**
EPF				*e*Sg	**Sg**	**22 57 17.8**	**-1.4**
EPF	**Esparros**	**3.23**	**225**	*e*Pn	**Pn**	**22 56 26.0**	**+0.3**
	SNR=1.0						
EPF	**Esparros**	**3.23**	**225**	*e*Pg	**Pg**	**22 56 36.2**	**-1.2**
EPF				*e*Sn	**Sn**	**22 57 01.7**	**-2.1**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**22 57 17.8**	**-1.4**
	0.8nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**3.32**	**36**	*e*Pg	**Pg**	**22 56 38.0**	**-1.2**
HAU				*e*Sg	**Sg**	**22 57 21.3**	**-0.9**
	3.5nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**3.32**	**36**	*e*Pn	**Pn**	**22 56 27.3**	**+0.4**
HAU				*e*Pg	**Pg**	**22 56 38.0**	**-1.2**
HAU				*e*Sg	**Sg**	**22 57 21.3**	**-0.9**
HAU	**Haudompre**	**3.32**	**36**	*e*Pn	**Pn**	**22 56 27.3**	**+0.4**
	SNR=1.0						
HAU	**Haudompre**	**3.32**	**36**	*e*Pg	**Pg**	**22 56 38.0**	**-1.2**
HAU				*e*Sg	**Sg**	**22 57 21.3**	**-0.9**
	1.8nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**3.34**	**19**	*e*Pg	**Pg**	**22 56 38.3**	**-1.2**
MEZF				*e*Sg	**Sg**	**22 57 21.4**	**-1.3**
	7.7nm,0.4s						
MEZF	**Maizieres J'vi**	**3.34**	**19**	*e*Pg	**Pg**	**22 56 38.3**	**-1.2**
MEZF				*e*Sg	**Sg**	**22 57 21.4**	**-1.3**
	3.8nm,0.4s						
HINF	**Hinteralfeld**	**3.40**	**42**	*e*Pg	**Pg**	**22 56 39.7**	**-1.1**
HINF				*e*Sg	**Sg**	**22 57 22.7**	**-2.1**
	3.0nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.40**	**42**	*e*Pn	**Pn**	**22 56 28.8**	**+0.7**
HINF				*e*Pg	**Pg**	**22 56 39.7**	**-1.1**
HINF				*e*Sg	**Sg**	**22 57 22.7**	**-2.1**
HINF	**Hinteralfeld**	**3.40**	**42**	*e*Pn	**Pn**	**22 56 28.8**	**+0.7**
	SNR=1.0						
HINF	**Hinteralfeld**	**3.40**	**42**	*e*Pg	**Pg**	**22 56 39.7**	**-1.1**
HINF				*e*Sg	**Sg**	**22 57 22.7**	**-2.1**
	1.5nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**4.88**	**123**	*e*Pn	**Pn**	**22 56 49.1**	**+0.6**
	SNR=1.0						
PGF	**Pioggiola**	**4.88**	**123**	*e*Pn	**Pn**	**22 56 49.1**	**+0.6**
	SNR=1.0						
SGMF	**Saint Gilles**	**5.05**	**307**	*e*Sn	**Sn**	**22 57 46.0**	**-2.7**
	9.4nm,1.1s,SNR=1.0						
SGMF	**Saint Gilles**	**5.05**	**307**	*e*Sn	**Sn**	**22 57 46.0**	**-2.7**
	4.7nm,1.1s,SNR=1.0						

*ISCJB **04** 23:02:30.2±5.0, 11°.91N±0°.06×143°.44E±0°.09, h10km±31km, mb4.1/15, Error ellipse: s-maj=15.0km s-min=9.2km az=24.5*
*IDC **04** 23:02:30.5±0.9, 11°.97N×143°.53E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.0/25, mbtmp4.0/13, ML4.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/26, Error ellipse: s-maj=26.7km s-min=18.5km az=107.0*
*NEIC **04** 23:02:35.3±0.3, 11°.95N×143°.55E, h35km, mb4.3/4, Error ellipse: s-maj=11.8km s-min=6.4km az=91.0*

ISC 04 23:02:31.1±6.0, 11°.94N±0°.06×143°.50E±0°.09, h5km±37km, n32, σ0s63/31, mb4.1/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.12**	**39**	Pn	**Pn**	**23 03 07.1**	**-0.1**
	130nm,0.3s,baz=191,slow=5.8,SNR=35						
GUMO				Sn	**Sn**	**23 03 34.2**	**+0.2**
	190nm,0.3s,baz=161,slow=23,SNR=13						
JHJ	**Hachijo jima 2**	**21.36**	**351**	LR	LR	23 13 33.7	
	comp=Z,18nm,19.9s,baz=117,slow=31						
MJAR	**Matsushiro Arr**	**24.96**	**350**	LR	LR	23 17 21.4	
	comp=Z,88nm,18.0s,baz=170,slow=36						
MAJO	**Matsushiro**	**24.96**	**350**	*e*P	**P**	**23 07 55.7**	**+0.2**
INCN	**Inchon**	**29.59**	**332**	P	**P**	**23 08 36.7**	**-0.4**
CTAO	**Charters Tower**	**31.94**	**175**	P	**P**	**23 08 57.2**	**-0.8**
WB2	**Warramunga Arr**	**32.93**	**196**	*e*P	**P**	**23 09 07.0**	**+0.3**
WRA	**Warramunga Arr**	**32.94**	**196**	P	**P**	**23 09 07.0**	**+0.2**
	1.0nm,0.6s,mb3.9,baz=20,slow=9.7,SNR=7.8						
FITZ	**Fitzroy Crossi**	**34.66**	**211**	P	**P**	**23 09 21.9**	**+0.1**
ASAR	**Alice Springs**	**36.61**	**195**	P	**P**	**23 09 39.5**	**+1.1**
	0.4nm,0.8s,mb3.3,baz=17,slow=12,SNR=5.1						
HIA	**Hailar**	**42.09**	**337**	P	**P**	**23 10 23.2**	**-0.8**
KULM	**Kulim**	**42.83**	**265**	P	**P**	**23 10 30.2**	**-0.3**
ULN	**Ulaanbaatar**	**46.99**	**327**	P	**P**	**23 11 03.0**	**-0.2**
SONM	**Songino Array**	**47.33**	**326**	P	**P**	**23 11 07.8**	**+1.9**
	0.4nm,0.4s,mb3.7,baz=143,slow=6.8,SNR=3.3						
TAU	**Tasmania Unive**	**54.69**	**177**	P	**P**	**23 12 00.5**	**-0.7**
MK31	**Makanchi Array**	**61.76**	**317**	*e*P	**P**	**23 12 51.2**	**+0.4**
MKAR	**Makanchi Array**	**61.76**	**317**	P	**P**	**23 12 51.1**	**+0.4**
	0.4nm,0.4s,mb3.9,baz=98,slow=8.7,SNR=9.1						
ZALV	**Zalesovo Beam**	**62.19**	**325**	P	**P**	**23 12 53.4**	**-0.1**
	1.1nm,0.4s,mb4.3,baz=114,slow=6.9,SNR=6.9						
ZALV	**Zalesovo Beam**	**62.19**	**325**	P	**P**	**23 12 53.4**	**-0.1**
KURK	**Kurchatov**	**64.99**	**321**	P	**P**	**23 13 12.5**	**+0.5**
	2.3nm,0.6s,mb4.4,baz=106,slow=6.6,SNR=7.9						
KURK	**Kurchatov**	**64.99**	**321**	*e*P	**P**	**23 13 10.6**	**-1.5**
	2.8nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**65.80**	**312**	P	**P**	**23 13 17.5**	**0.0**
AML	**Almayashu**	**67.13**	**311**	*e*P	**P**	**23 13 26.1**	**+0.1**
	0.7nm,0.3s,mb4.2						
BVAR	**Borovoye Array**	**70.39**	**322**	P	**P**	**23 13 46.4**	**+0.3**
	1.7nm,0.3s,mb4.4,baz=107,slow=8.1,SNR=38						
BRVK	**Borovoye**	**70.46**	**322**	*e*P	**P**	**23 13 46.8**	**+0.3**
	1.5nm,0.4s,mb4.3						
ABKAR	**Akbulak array**	**76.86**	**318**	*e*P	**P**	**23 14 24.2**	**-0.1**
	1.6nm,0.5s,mb4.2						
AKTK	**Aktyubinsk**	**78.03**	**319**	P	**P**	**23 14 30.6**	**-0.2**
AKTO	**Aktyubinsk**	**78.03**	**319**	P	**P**	**23 14 30.6**	**-0.2**
	0.8nm,0.5s,mb3.9,baz=106,slow=8.8,SNR=5.6						
YKA	**Yellowknife Ar**	**84.93**	**27**	P	**P**	**23 15 06.8**	**-0.3**
	0.5nm,0.5s,mb3.9,baz=286,slow=5.1,SNR=18						
ARCES	**ARCESS Array B**	**88.23**	**342**	P	**P**	**23 15 22.7**	**-0.4**
	2.0nm,0.5s,mb4.6,baz=69,slow=6.8,SNR=10						
NVAR	**Mina Array Bea**	**88.99**	**51**	P	**P**	**23 15 28.2**	**+0.9**
	1.0nm,0.6s,mb4.3,baz=263,slow=6.2,SNR=8.5						
FINES	**FINESS Array B**	**92.08**	**335**	P	**P**	**23 15 39.8**	**-1.4**
	0.5nm,0.4s,mb4.2,baz=60,slow=3.1,SNR=11						

FUNV 04 23:15:10.7, 10°.87N×64°.82W, h5km, MW3.6, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**0.71**	**165**	*e*P	Pg	23 15 23.9	-0.4
PCRV				*e*S	Sg	23 15 35.1	+1.6
CUPV	**Cœpira**	**1.25**	**230**	*e*P	Pg	23 15 33.7	-1.0
CUPV				*e*S	Sg	23 15 51.2	+0.3
BIRV	**Birongo**	**1.48**	**255**	*e*P	Pn	23 15 37.2	-0.7
BIRV				*e*S	Sn	23 15 57.8	+0.1
CRUV	**Carupano**	**1.57**	**97**	*e*P	Pn	23 15 39.9	+0.7
CRUV				*e*S	Sn	23 16 01.6	+1.8
ORCV	**Isla La Orchil**	**1.65**	**305**	*e*P	Pn	23 15 39.2	-1.1
ORCV				*e*S	Sn	23 16 02.0	+0.2
ITEV	**Isla Los Testi**	**1.73**	**73**	*e*P	Pn	23 15 40.6	-0.8
ITEV				*e*S	Sn	23 16 02.9	-0.9
GUNV	**Guanoco**	**1.97**	**111**	*e*P	Pn	23 15 44.1	-0.7
GUNV				*e*S	Sn	23 16 09.6	-0.3
PRGV	**PARIAGUAN**	**2.10**	**175**	*e*P	Pn	23 15 45.3	-1.2
PRGV				*e*S	Sn	23 16 12.1	-0.9
MERV	**Las Mercedes**	**2.17**	**222**	*e*P	Pn	23 15 46.6	-0.8
MERV				*e*S	Sn	23 16 13.5	-1.2
GUIV	**Guiria**	**2.56**	**95**	*e*P	Pn	23 15 51.8	-1.1
GUIV				*e*S	Sn	23 16 23.3	-1.1

*NEIC **04** 23:27:37.0, 33°.45S×72°.69W, h47km, MD3.7(GUC), After GUC.*

GUC 04 23:27:37.0±0.8, 33°.45S×72°.69W, h47km±6km, MD3.7, ML3.4, 5C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.18**	**116**	⇑*i*P	Pn	23 27 57.5	+0.4
LNV				*i* S	Sn	23 28 13.1	+1.0
TACH	**Talagante**	**1.48**	**99**	⇑*i*P	Pn	23 28 01.3	+0.1
TACH				*i* S	Sn	23 28 20.6	+1.2
PEL	**Peldehue**	**1.71**	**80**	⇓*i*P	Pn	23 28 04.9	+0.6
PEL				*i* S	Sn	23 28 26.7	+1.7
PEL				AML	AML	23 28 31.0	
	comp=E,1μm,0.5s						
ANTU	**Antumapu**	**1.73**	**95**	*e*P	Pn	23 28 05.7	+1.1
ANTU				*i* S	Sn	23 28 26.5	+1.2
ANTU	**Antumapu**	**1.73**	**95**	*e*P	Pn	23 28 05.7	+1.1
ANTU				*i* S	Sn	23 28 26.5	+1.2
ANTU				AML	AML	23 28 34.6	
	comp=N,476nm,0.7s						
CHCH	**Chadas Angostu**	**1.77**	**107**	*e*P	Pn	23 28 05.7	+0.5
CHCH				*i* S	Sn	23 28 27.6	+1.2
CLCH	**Cerro Calan**	**1.80**	**89**	*e*P	Pn	23 28 06.6	+1.0
CLCH				*i* S	Sn	23 28 28.3	+1.1
CLCH				AML	AML	23 28 42.0	
	comp=E,529nm,0.8s						
PCH	**Pirque**	**1.83**	**96**	⇑*i*P	Pn	23 28 07.0	+1.0
PCH				*i* S	Sn	23 28 29.1	+1.2
CHNG	**Los Chungos**	**1.85**	**33**	⇓*i*P	Pn	23 28 06.3	0.0
JACH	**Jahuel**	**1.92**	**67**	*e*P	Pn	23 28 08.1	+0.9
FCH	**Farellones**	**2.01**	**87**	⇑*i*P	Pn	23 28 10.2	+1.7
FCH				*i* S	Sn	23 28 35.0	+2.5
LMEL	**Las Melosas**	**2.12**	**102**	⇑*i*P	Pn	23 28 11.1	+1.2
LMEL				*i* S	Sn	23 28 36.4	+1.5

*VIE **04** 23:28:21.0±0.5, 43°.18N×13°.24E, h10km, mb2.8/5, ML3.6/5, Error ellipse: s-maj=10.3km s-min=3.2km az=83.0 103 km SE of San Marino*
*ISCJB **04** 23:28:21.0±0.2, 43°.18N±0°.01×13°.45E±0°.02, h10km, Error ellipse: s-maj=2.3km s-min=1.8km az=157.8*
*LDG **04** 23:28:21.6±0.2, 43°.21N×13°.52E, h10km, ML3.3/15, Error ellipse: s-maj=4.7km s-min=3.1km az=67.0*
*ROM **04** 23:28:21.6±0.2, 43°.11N×13°.43E, h4km±1km, Md3.1/44, Ml2.8/42, Error ellipse: s-maj=1.5km s-min=0.9km az=51.0*
*NEIC **04** 23:28:21.0, 43°.11N×13°.42E, h4km, ML2.8(ROM), ML3.3(LDG), After ROM.*
*CSEM **04** 23:28:21.5±0.1, 43°.10N×13°.44E, h20km, ML3.7/18, Error ellipse: s-maj=3.4km s-min=2.0km az=57.0*

ISC 04 23:28:21.7±0.2, 43°.17N±0°.01×13°.45E±0°.02, h10km, n177, σ1s20/255, 8C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.28**	**318**	Pg	**Pg**	**23 28 28.9**	**+1.5**
CING				Sg	**Sg**	**23 28 34.4**	**+3.2**
	2μm,0.5s						
CING	**Cingoli**	**0.28**	**318**	Pg	**Pg**	**23 28 28.9**	**+1.5**
CING				Sg	**Sg**	**23 28 34.4**	**+3.2**
	2μm,0.5s						
FDMO	**Fiordimonte**	**0.30**	**244**	⇑*i*Pg	**Pg**	**23 28 27.9**	**+0.2**
FDMO				Sg	**Sg**	**23 28 32.6**	**+0.9**
	4μm,0.4s						
FDMO	**Fiordimonte**	**0.30**	**244**	⇑*i*Pg	**Pg**	**23 28 27.9**	**+0.2**
FDMO				Sg	**Sg**	**23 28 32.6**	**+0.9**
	4μm,0.4s						
SNTG	**Esanatoglia**	**0.39**	**283**	Pg	**Pg**	**23 28 30.0**	**+0.7**
SNTG				Sg	**Sg**	**23 28 35.9**	**+1.5**
SNTG	**Esanatoglia**	**0.39**	**283**	Pg	**Pg**	**23 28 30.0**	**+0.7**
SNTG				Sg	**Sg**	**23 28 35.9**	**+1.5**
AOI	**Ancona**	**0.40**	**16**	Pg	**Pg**	**23 28 31.2**	**+1.7**
AOI				Sg	**Sg**	**23 28 39.6**	**+4.8**
	660nm,0.3s						
AOI	**Ancona**	**0.40**	**16**	Pg	**Pg**	**23 28 31.2**	**+1.7**
AOI				Sg	**Sg**	**23 28 39.6**	**+4.8**
	660nm,0.3s						
NRCA	**Norcia**	**0.42**	**217**	Pg	**Pg**	**23 28 29.6**	**-0.2**
NRCA	**Norcia**	**0.42**	**217**	Pg	**Pg**	**23 28 29.6**	**-0.2**
CESI	**CESI - Serrava**	**0.43**	**248**	Pg	**Pg**	**23 28 30.2**	**0.0**
CESI				Sg	**Sg**	**23 28 36.4**	**+0.5**
	2μm,0.3s						
CESI	**CESI - Serrava**	**0.43**	**248**	Pg	**Pg**	**23 28 30.2**	**0.0**
CESI				Sg	**Sg**	**23 28 36.4**	**+0.5**
	2μm,0.3s						
TRTR	**Tortoreto Alta**	**0.49**	**137**	Pg	**Pg**	**23 28 32.5**	**+1.2**
	2μm,0.4s						
TRTR	**Tortoreto Alta**	**0.49**	**137**	Pg	**Pg**	**23 28 32.5**	**+1.2**
	2μm,0.4s						
ARVD	**Arcevia**	**0.50**	**312**	Pg	**Pg**	**23 28 32.2**	**+0.8**
ARVD				Sg	**Sg**	**23 28 40.7**	**+2.7**
	351nm,0.3s						
ARVD	**Arcevia**	**0.50**	**312**	Pg	**Pg**	**23 28 32.2**	**+0.8**
ARVD				Sg	**Sg**	**23 28 40.7**	**+2.7**
	351nm,0.3s						
TERO	**Teramo**	**0.56**	**168**	Pg	**Pg**	**23 28 31.8**	**-0.7**
TERO				Sg	**Sg**	**23 28 40.1**	**+0.4**
	884nm,0.2s						
TERO	**Teramo**	**0.56**	**168**	Pg	**Pg**	**23 28 31.8**	**-0.7**
TERO				Sg	**Sg**	**23 28 40.1**	**+0.4**
	884nm,0.2s						
SENI	**Senigallia**	**0.56**	**343**	Pg	**Pg**	**23 28 34.6**	**+2.0**
	752nm,0.5s						
SENI	**Senigallia**	**0.56**	**343**	Pg	**Pg**	**23 28 34.6**	**+2.0**
	752nm,0.5s						
ASS	**Assisi**	**0.60**	**260**	Pg	**Pg**	**23 28 33.3**	**0.0**
	191nm,0.6s						
ASS	**Assisi**	**0.60**	**260**	Pg	**Pg**	**23 28 33.3**	**0.0**
	191nm,0.6s						
CAMP	**Campotosto**	**0.63**	**183**	Pg	**Pg**	**23 28 32.9**	**-1.0**
CAMP				Sg	**Sg**	**23 28 42.4**	**+0.2**
	161nm,0.5s						
CAMP	**Campotosto**	**0.63**	**183**	Pg	**Pg**	**23 28 32.9**	**-1.0**
CAMP				Sg	**Sg**	**23 28 42.4**	**+0.2**
	161nm,0.5s						
LNSS	**Leonessa**	**0.64**	**208**	Pg	**Pg**	**23 28 33.2**	**-0.9**
LNSS				Sg	**Sg**	**23 28 42.5**	**0.0**
	2μm,0.3s						
LNSS	**Leonessa**	**0.64**	**208**	Pg	**Pg**	**23 28 33.2**	**-0.9**
LNSS				Sg	**Sg**	**23 28 42.5**	**0.0**
	2μm,0.3s						
MURB	**Monte Urbino**	**0.69**	**278**	Pg	**Pg**	**23 28 34.9**	**-0.1**
MURB				Sg	**Sg**	**23 28 45.7**	**+1.8**
	2μm,0.3s						
MURB	**Monte Urbino**	**0.69**	**278**	Pg	**Pg**	**23 28 34.9**	**-0.1**
MURB				Sg	**Sg**	**23 28 45.7**	**+1.8**
	2μm,0.3s						
FSSB	**Fossombrone**	**0.72**	**317**	Pg	**Pg**	**23 28 36.1**	**+0.5**
FSSB				Sg	**Sg**	**23 28 48.5**	**+3.5**
	2μm,0.4s						
FSSB	**Fossombrone**	**0.72**	**317**	Pg	**Pg**	**23 28 36.1**	**+0.5**
FSSB				Sg	**Sg**	**23 28 48.5**	**+3.5**
	2μm,0.4s						
PIEI	**Pieia**	**0.77**	**299**	Pg	**Pg**	**23 28 36.3**	**-0.2**
PIEI				Sg	**Sg**	**23 28 48.7**	**+2.3**
	299nm,0.3s						
PIEI	**Pieia**	**0.77**	**299**	Pg	**Pg**	**23 28 36.3**	**-0.2**
PIEI				Sg	**Sg**	**23 28 48.7**	**+2.3**
	299nm,0.3s						
AQU	**L'Aquila**	**0.81**	**183**	*e*P	**Pg**	**23 28 36.1**	**-1.3**
AQU				*e*S	**Sg**	**23 28 48.6**	**+0.6**
AQU	**L'Aquila**	**0.81**	**183**	Pg	**Pg**	**23 28 36.2**	**-1.2**
AQU	**L'Aquila**	**0.81**	**183**	*e*P	**Pg**	**23 28 36.1**	**-1.3**
AQU				*e*S	**Sg**	**23 28 48.6**	**+0.6**
VCEL	**Villa Celiera**	**0.82**	**160**	Pg	**Pg**	**23 28 36.7**	**-0.8**
VCEL				Sg	**Sg**	**23 28 49.6**	**+1.3**
	551nm,0.2s						
VCEL	**Villa Celiera**	**0.82**	**160**	Pg	**Pg**	**23 28 36.7**	**-0.8**
VCEL				Sg	**Sg**	**23 28 49.6**	**+1.3**
	551nm,0.2s						
PESA	**Pesaro**	**0.89**	**330**	Pg	**Pg**	**23 28 40.2**	**+1.3**
	690nm,0.5s						
PESA	**Pesaro**	**0.89**	**330**	Pg	**Pg**	**23 28 40.2**	**+1.3**
	690nm,0.5s						
FAGN	**Fagnano**	**0.91**	**174**	Pg	**Pg**	**23 28 38.1**	**-1.0**
	721nm,0.5s						
FAGN	**Fagnano**	**0.91**	**174**	Pg	**Pg**	**23 28 38.1**	**-1.0**
	721nm,0.5s						
FIAM	**Fiamignano**	**0.93**	**196**	Pg	**Pg**	**23 28 37.7**	**-1.9**
FIAM				Sg	**Sg**	**23 28 51.6**	**-0.1**
FIAM	**Fiamignano**	**0.93**	**196**	Pg	**Pg**	**23 28 37.7**	**-1.9**
FIAM				Sg	**Sg**	**23 28 51.6**	**-0.1**
BADI	**Badiali**	**0.95**	**292**	Pg	**Pg**	**23 28 39.5**	**-0.4**
BADI				Sg	**Sg**	**23 28 54.2**	**+2.0**
	427nm,0.6s						
BADI	**Badiali**	**0.95**	**292**	Pg	**Pg**	**23 28 39.5**	**-0.4**
BADI				Sg	**Sg**	**23 28 54.2**	**+2.0**
	427nm,0.6s						
PARC	**Parchiule**	**1.01**	**299**	Pg	**Pg**	**23 28 40.9**	**-0.2**
	214nm,0.4s						
PARC	**Parchiule**	**1.01**	**299**	Pg	**Pg**	**23 28 40.9**	**-0.2**
	214nm,0.4s						
MGAB	**Montegabbione**	**1.02**	**256**	Pg	**Pg**	**23 28 40.7**	**-0.5**
MGAB				Sg	**Sg**	**23 28 55.0**	**+0.6**
	406nm,0.4

NVLJ	Novalja	1.73	36⇑	*i*Pn	Pn	23 28 51.7	-0.1
NVLJ				Sn	Sn	23 29 14.0	+0.1
NVLJ	Novalja	1.73	36⇑	*i*Pn	Pn	23 28 51.7	-0.1
NVLJ				Sn	Sn	23 29 14.0	0.0
SEI	Scarperia	1.76	301	Pg	Pn	23 28 54.1	+1.8
	150nm,0.5s						
SEI	Scarperia	1.76	301	Pg	Pn	23 28 54.1	+1.8
	150nm,0.5s						
BSSO	Busso	1.83	152	Pg	Pn	23 28 54.5	+1.4
BSSO	Busso	1.83	152	Pg	Pn	23 28 54.5	+1.4
VAGA	Valle Agricola	1.84	161	Pg	Pn	23 28 55.2	+1.8
	66nm,0.9s						
VAGA	Valle Agricola	1.84	161	Pg	Pn	23 28 55.2	+1.8
	66nm,0.9s						
SGG	Gregorio Mates	1.91	159	Pg	Pn	23 28 55.0	+0.8
	52nm,0.8s						
SGG	Gregorio Mates	1.91	159	Pg	Pn	23 28 55.0	+0.8
	52nm,0.8s						
CRMI	Carmignano	1.91	290	Pg	Pn	23 28 55.3	+1.0
	68nm,1.4s						
MELA	Melanico ??? S	1.92	139	Pg	Pn	23 28 55.3	+1.0
	66nm,0.7s						
MELA	Melanico ??? S	1.92	139	Pg	Pn	23 28 55.3	+1.0
	66nm,0.7s						
FNVD	Fontana Vidola	1.96	301	Pg	Pn	23 28 57.2	+2.2
	67nm,0.8s						
PII	Pisa	2.20	286	Pg	Pn	23 28 59.3	+1.0
	13nm,0.3s						
MAIM	Mastiano	2.28	290	Pg	Pn	23 29 00.6	+1.2
	23nm,0.5s						
MAIM	Mastiano	2.28	290	P	Pn	23 28 59.0	-0.4
FG5	Orsara di Pugl	2.32	144	Pg	Pn	23 29 00.6	+0.8
	13nm,0.4s						
GSCL	Gusciola	2.39	301	Pg	Pn	23 29 03.0	+2.1
	8.0nm,0.6s						
SKDS	Skadanscina	2.41	9	*i* Pn	Pn	23 29 00.6	-0.5
SKDS				*i* Sn	Sn	23 29 29.8	-1.0
SKDS							
	comp=Z,27nm,0.2s						
SARO	Sassorosso	2.44	296	P	Pn	23 29 01.4	-0.1
SARO				S	Sn	23 29 28.4	-3.0
VALM	Valbona	2.61	298	P	Pn	23 29 04.8	+1.0
VALM				S	Sn	23 29 33.2	-2.3
BOJS	Bojanci	2.67	28	*i* Pn	Pn	23 29 05.3	+0.6
BOJS	Bojanci	2.67	28	*i* Pn	Pn	23 29 05.3	+0.6
GRAM	Graiana	2.79	300	P	Pn	23 29 07.5	+1.2
GRAM				S	Sn	23 29 38.0	-2.0
VOY	Vojsko	2.88	6	*e*Pn	Pn	23 29 07.3	-0.3
VOY				*e*Sn	Sn	23 29 41.0	-1.3
VOY	Vojsko	2.88	6	*e*Pn	Pn	23 29 07.3	-0.3
VOY				*e*Sn	Sn	23 29 41.0	-1.3
CODM	Codolo	2.88	296	P	Pn	23 29 08.2	+0.6
CODM				S	Sn	23 29 39.5	-2.8
CRNS	Crni Vrh	2.97	11	*i* Pn	Pn	23 29 09.6	+0.7
SC2M	Scurtabo	3.10	295	P	Pn	23 29 11.5	+0.9
SC2M				S	Sn	23 29 44.4	-3.2
STON	Ston	3.13	94	*i* Pn	Pn	23 29 10.8	-0.2
STON				Sn	Sn	23 29 46.8	-1.6
STON	Ston	3.13	94	*i* Pn	Pn	23 29 10.7	-0.3
STON				Sn	Sn	23 29 46.8	-1.6
PGF	Pioggiola	3.33	261	*e*Pn	Pn	23 29 14.7	+0.9
	SNR=1.0						
PGF				*e*Sn	Sn	23 29 51.3	-2.2
	comp=Z,3.4nm,0.4s						
PGF	Pioggiola	3.33	261	*e*Pn	Pn	23 29 14.7	+0.9
	SNR=1.0						
OBKA	Obir	3.43	13⇓	*i*Pn	Pn	23 29 15.5	+0.3
OBKA			⇑	*i*Sn	Sn	23 29 56.7	+0.9
OBKA	Obir	3.43	13	Pn	Pn	23 29 15.5	+0.3
OBKA				Sn	Sn	23 29 56.7	+0.8
ZAVS	Zavodnje	3.45	18	*i* Pn	Pn	23 29 16.2	+0.7
ABTA	Abfaltersbach	3.64	350⇓	*i*Pn	Pn	23 29 18.8	+0.7
	SNR=7.0						
ABTA			⇑	*i*Sn	Sn	23 29 59.6	-1.4
ABTA	Abfaltersbach	3.64	350	Pn	Pn	23 29 18.8	+0.7
	SNR=7.0						
ABTA				Sn	Sn	23 29 59.6	-1.5
PCP	Piancastagn	3.81	293	P	Pn	23 29 19.5	-0.8
PCP				S	Sn	23 29 59.0	-6.1
RORO	Rocca Rossa	4.02	285	P	Pn	23 29 22.0	-1.3
VSL	Villasalto	4.78	221	*e*Pn	Pn	23 29 34.2	+0.4
VSL				*e*Sn	Sn	23 30 27.5	-1.7
VSL	Villasalto	4.78	221	*e*Pn	Pn	23 29 34.2	+0.5
VSL				*e*Sn	Sn	23 30 27.5	-1.7
FRF	La Foret Royal	4.98	277	*e*Pn	Pn	23 29 37.3	+0.9
	SNR=1.0						
FRF				*e*Sn	Sn	23 30 30.6	-3.4
	comp=Z,2.6nm,0.4s,SNR=1.0						
FRF	La Foret Royal	4.98	277	*e*Pn	Pn	23 29 37.3	+0.9
	SNR=1.0						
FRF				*e*Sn	Sn	23 30 30.6	-3.4
	comp=Z,1.3nm,0.4s,SNR=1.0						
MBDF	Montbardon	5.07	290	*e*Pn	Pn	23 29 36.8	-0.9
	SNR=1.0						
MBDF				*e*Sn	Sn	23 30 32.2	-4.1
	comp=Z,2.8nm,0.2s						
MBDF	Montbardon	5.07	290	*e*Pn	Pn	23 29 36.8	-0.9
	SNR=1.0						
MBDF				*e*Sn	Sn	23 30 32.2	-4.1
	comp=Z,1.4nm,0.2s						
LMR	La Mourre	5.08	274	*e*Pn	Pn	23 29 38.0	+0.2
	SNR=1.0						
LMR	La Mourre	5.08	274	*e*Pn	Pn	23 29 38.0	+0.2
	SNR=1.0						
LPG	La Plagne	5.34	298	*e*Pn	Pn	23 29 40.8	-0.6
	SNR=1.0						
LPG				*e*Sn	Sn	23 30 38.6	-4.4
	comp=Z,6.8nm,0.4s,SNR=1.0						
LPG	La Plagne	5.34	298	*e*Pn	Pn	23 29 40.8	-0.6
	SNR=1.0						
LPG				*e*Sn	Sn	23 30 38.6	-4.4
	comp=Z,3.4nm,0.4s,SNR=1.0						
LPL	La Plagne	5.36	298	*e*Pn	Pn	23 29 40.3	-1.4
	SNR=1.0						
LPL				*e*Sn	Sn	23 30 38.6	-4.9
	comp=Z,6.8nm,0.3s						
LPL	La Plagne	5.36	298	*e*Pn	Pn	23 29 40.3	-1.4
	SNR=1.0						
LPL				*e*Sn	Sn	23 30 38.6	-4.9
	comp=Z,3.4nm,0.3s						
ORIF	Oris-en-Rattie	5.73	290	*e*Pn	Pn	23 29 45.9	-0.9
	SNR=1.0						
ORIF				*e*Sn	Sn	23 30 49.0	-3.6
	comp=Z,3.3nm,0.4s,SNR=1.0						
ORIF	Oris-en-Rattie	5.73	290	*e*Pn	Pn	23 29 45.9	-0.9
	SNR=1.0						
ORIF				*e*Sn	Sn	23 30 49.0	-3.6
	comp=Z,1.6nm,0.4s,SNR=1.0						
SMRF	Simiane la Rot	5.78	281	*e*P	Pn	23 29 49.6	+2.1
	SNR=1.0						
KHC	Kasperske Hory	5.97	1	*e*PN	Pn	23 29 49.1	-0.9
KHC				*e*PG	Pg	23 30 07.0	-8.9
KHC				*e*SG	Sn	23 30 53.9	-4.4
CABF	La Chapelle	6.26	306	*e*Pn	Pn	23 29 53.3	-0.8
	SNR=1.0						
CABF				*e*Sn	Sn	23 31 00.7	-4.9
	comp=Z,2.4nm,0.3s,SNR=1.0						
CABF	La Chapelle	6.26	306	*e*Pn	Pn	23 29 53.3	-0.8
	SNR=1.0						
VIVF	Saint-Julien-l	6.55	288	*e*Pn	Pn	23 29 56.8	-1.3
VIVF	Saint-Julien-l	6.55	288	*e*Pn	Pn	23 29 56.8	-1.3
HINF	Hinteralfeld	6.57	317	*e*Pn	Pn	23 29 56.4	-1.8
	SNR=1.0						
HINF				*e*Sn	Sn	23 31 07.1	-6.0
	comp=Z,5.7nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	6.57	317	*e*Pn	Pn	23 29 56.4	-1.8
	SNR=1.0						
CDF	Champ du Feu	6.79	323	*e*Pn	Pn	23 30 00.0	-1.3
	SNR=1.0						
CDF				*e*Sn	Sn	23 31 12.5	-6.2
	comp=Z,3.6nm,0.4s						
CDF	Champ du Feu	6.79	323	*e*Pn	Pn	23 30 00.0	-1.3
	SNR=1.0						
PRU	Pruhonice	6.86	6	*e*SG	Sn	23 31 01.1	-19
HAU	Haudompre	6.95	317	*e*Pn	Pn	23 30 01.4	-2.0
	SNR=1.0						
HAU				*e*Sn	Sn	23 31 15.6	-6.8
	comp=Z,6.9nm,0.2s,SNR=1.0						
HAU	Haudompre	6.95	317	*e*Pn	Pn	23 30 01.4	-2.0
	SNR=1.0						
LASF	Ste Croix	7.02	281	*e*Pn	Pn	23 30 03.6	-0.9
	SNR=1.0						
LASF	Ste Croix	7.02	281	*e*Pn	Pn	23 30 03.6	-0.9
	SNR=1.0						
SMF	Signal de Mont	7.66	300	*e*Pn	Pn	23 30 12.9	-0.3
	SNR=1.0						
SMF				*e*Sn	Sn	23 31 33.4	-6.6
	comp=Z,2.6nm,0.2s						
SMF	Signal de Mont	7.66	300	*e*Pn	Pn	23 30 12.9	-0.3
	SNR=1.0						
BRG	Berggiesshubel	7.72	2	*e*(P)	Sg	23 32 38.7	+10
	comp=Z,3.2nm,1.2s						
SFTF	Sexfontaines	7.75	313	*e*Pn	Pn	23 30 11.9	-2.6
	baz=139						
SFTF				*e*Sn	Sn	23 31 35.4	-6.8
	comp=Z,2.9nm,0.4s						
SFTF	Sexfontaines	7.75	313	*e*Pn	Pn	23 30 11.9	-2.6
	baz=139						
LOR	Lormes	7.92	304	*e*Pn	Pn	23 30 14.4	-2.4
	baz=128,SNR=1.0						
LOR				*e*Sn	Sn	23 31 40.2	-6.1
	comp=Z,7.3nm,0.3s,SNR=1.0						
LOR	Lormes	7.92	304	*e*Pn	Pn	23 30 14.4	-2.4
	baz=128,SNR=1.0						
MEZF	Maizieres J'vi	7.93	315	*e*Pn	Pn	23 30 14.4	-2.5
MEZF	Maizieres J'vi	7.93	315	*e*Pn	Pn	23 30 14.4	-2.5
AVF	Avril sur Loir	8.02	300	*e*Pn	Pn	23 30 16.9	-1.3
	SNR=1.0						
AVF	Avril sur Loir	8.02	300	*e*Pn	Pn	23 30 16.9	-1.3
	SNR=1.0						
SSF	Saint Saulge	8.04	302	*e*Pn	Pn	23 30 15.4	-3.1
	SNR=1.0						
SSF				*e*Sn	Sn	23 31 41.8	-7.6
	comp=Z,2.9nm,0.4s						
SSF	Saint Saulge	8.04	302	*e*Pn	Pn	23 30 15.4	-3.1
	SNR=1.0						
CLL	Collm	8.15	358	*e*Sg	Sx	23 32 56.0	
MTLF	Montolieu	8.21	275	*e*Pn	Pn	23 30 18.6	-2.1
MTLF	Montolieu	8.21	275	*e*Pn	Pn	23 30 18.6	-2.1
BGF	Bois d'Agland	8.26	298	*e*Pn	Pn	23 30 20.9	-0.6
	SNR=1.0						
BGF				*e*Sn	Sn	23 31 47.6	-7.2
	comp=Z,4.6nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	8.26	298	*e*Pn	Pn	23 30 20.9	-0.6
	SNR=1.0						

IDC ***05*** *00:08:53.4±1.5,20°.12S×168°.56E,h0km,mb4.3/9, mb1 4.5/9,mb1mx4.3/15,mbtmp4.3/9,MS3.8/7,Ms1 3.8/7, ms1mx3.5/22, Error ellipse: s-maj=51.5km s-min=21.6km az=144.0*

NOU ***05*** *00:08:54.8±0.4,19°.89S×168°.38E,h30km,MD3.2,ML2.9*

SZGRF ***05*** *00:08:55.4,21°.58S×169°.19E,h103km,Southeast of Loyalty Islands*

BJI ***05*** *00:08:55.7,20°.10S×168°.40E,h24km,mB4.9/3,mb4.5/5*

ISCJB ***05*** *00:08:57.0±0.4,20°.21S±0°.06×168°.44E±0°.07,h33km, mb4.6/20,MS3.8/5,Error ellipse: s-maj=11.5km s-min=5.0km az=39.5*

NEIC ***05*** *00:09:00.7±1.4,20°.08S×168°.42E,h44km±13km,mb4.9/12, Error ellipse: s-maj=12.9km s-min=7.8km az=161.0*

ISC 05 00:08:58.7±0.4,20°.28S±0°.06×168°.52E±0°.07,h35km,n110,σ1°.08/47,mb4.6/20,MS3.8/5,4C,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.41	219	*e*S	Sn	00 10 03.6	-0.3
DZM	Mont Dzumac	2.63	227	*e*Pn	Pn	00 09 37.0	-1.7
	37nm,0.2s						
DZM				*e*Sn	Sn	00 10 06.0	-3.4
	90nm,0.3s						
DZM	Mont Dzumac	2.63	227	AMP		00 09 33.6	
	comp=Z,2μm,5.6s						
LASL	Noumea	2.68	223	*e*S	Sn	00 10 09.7	-0.9
NOUC	Port Laguerre	2.75	228	*e*P	Pn	00 09 39.0	-1.4
NOUC				*e*S	Sn	00 10 11.6	-0.8
NOUC				AMP		00 10 35.7	
	comp=Z,88nm,1.6s						
RAO	Raoul Island	15.21	129	Pn	Pn	00 12 35.6	+4.8
FUNA	Funafuti	15.59	43	*e*Pn	Pn	00 12 36.5	+0.6
	comp=Z,71nm,1.0s						
EIDS	Eidsvold	16.85	249	*e*Pn	Pn	00 12 54.4	+2.5
	comp=Z,13nm,1.3s						
ARMA	Armidale	18.28	233	*e*P	Pn	00 13 11.5	+1.9
URZ	Urewera	19.40	159	LR	LR	00 19 15.9	
	comp=Z,425nm,19.6s,baz=132,slow=32						
AFI	Afiamalu	19.86	75	LR	LR	00 18 31.2	
	comp=Z,127nm,20.7s,baz=75,slow=29						
AFI	Afiamalu	19.86	75	P	Pn	00 13 28.2	-0.5
CTA	Charters Tower	20.90	267	*e*P	P	00 13 38.2	0.0
	comp=Z,14nm,1.5s						
CTA	Charters Tower	20.90	267	P	P	00 13 37.9	-0.3
	comp=Z,5.0nm,0.8s,baz=92,slow=12,SNR=2.5						
CTA				LR	LR	00 19 56.5	
	comp=Z,120nm,20.2s,MS3.3,baz=58,slow=32						
CTAO	Charters Tower	20.90	267	*e*P	P	00 13 39.9	+1.7
	comp=Z,98nm,1.6s						
CNB	Canberra Magne	22.55	224	*e*P	P	00 13 58.1	+2.3
CAN	Canberra	22.80	225	*e*P	P	00 14 01.2	+2.8
	comp=Z,53nm,1.4s,mb4.8						
RPZ	Rata Peaks	23.46	175	LR	LR	00 21 59.6	
	comp=Z,524nm,18.4s,MS4.0,baz=261,slow=33						
STKA	Stephens Creek	26.72	239	*e*P	P	00 14 36.3	+1.4
	comp=Z,6.9nm,0.9s,mb4.2						
STKA	Stephens Creek	26.72	239	P	P	00 14 35.9	+0.9
	comp=Z,7.1nm,0.8s,mb4.2,baz=74,slow=7.0,SNR=11						
STKA				LR	LR	00 25 10.2	
	comp=Z,296nm,20.8s,MS3.8,baz=216,slow=36						
STKA	Stephens Creek	26.72	239	*e*P	P	00 14 35.6	+0.7
	comp=Z,1.3nm,0.7s,mb3.6						
STKA				LR	LR	00 25 10.2	
WB2	Warramunga Arr	32.05	265	*e*P	P	00 15 22.2	-0.2
WRA	Warramunga Arr	32.07	265	P	P	00 15 22.2	-0.3
	comp=Z,3.6nm,0.9s,mb4.2,baz=88,slow=7.1,SNR=8.0						
ASAR	Alice Springs	32.23	258	P	P	00 15 24.5	+0.6
	comp=Z,5.7nm,0.8s,mb4.5,baz=85,slow=8.8,SNR=72						
PPT	Papeete	39.66	93	*e*LR	LR	00 27 34.0	
	comp=Z,89nm,30.0s						
PPT	Papeete	39.66	93	LR	LR	00 29 54.6	
	comp=Z,40nm,19.8s,MS3.3,baz=355,slow=32						
FITZ	Fitzroy Crossi	40.48	266	*e*P	P	00 16 35.3	+0.9
	comp=Z,24nm,0.8s,mb5.0						
FITZ	Fitzroy Crossi	40.48	266	*e*P	P	00 16 35.8	+1.4
	comp=Z,24nm,1.1s,mb4.8						
GUMO	Guam	40.91	323	*e*P	P	00 16 36.7	-1.2
MBWA	Marble Bar	45.50	260	*e*P	P	00 17 15.2	+0.2
	comp=Z,34nm,1.4s,mb5.0						
NWAO	Narrogin (SRO)	47.14	244	*e*P	P	00 17 28.3	+0.5
	comp=Z,11nm,0.7s,mb4.9						
SBA	Scott Base	57.62	180	*e*P	P	00 18 45.5	+0.7
	comp=Z,17nm,1.4s,mb4.9						
KSM	Kuching	60.95	284	*e*P	P	00 19 08.2	-0.6
	comp=Z,7.3nm,0.3s,mb5.3						
MJAR	Matsushiro Arr	63.36	333	P	P	00 19 22.9	-1.6
	comp=Z,0.2nm,0.3s,mb3.8,baz=158,slow=10,SNR=3.3						
NACB	Ninganchiao	63.56	312	P	P	00 19 25.6	-0.4
TATO	Taipei	64.15	312	P	P	00 19 28.7	-1.2
PETK	Petropavlovsk-	73.68	353	P	P	00 20 28.4	-0.1
	comp=Z,9.8nm,1.0s,mb4.7,baz=144,slow=5.5,SNR=5.0						
CN2	Changchun	75.00	329	*e*P	P	00 20 30.1	-6.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
MAW	Mawson	77.22	202	LR	LR	00 49 15.3	
	comp=Z,165nm,19.7s,MS4.4,baz=291,slow=31						
BJT	Baijiatuau	77.31	321	P	P	00 20 49.0	-0.7
	comp=Z,65nm,0.3s						
CMAR	Chiang Mai Arr	78.32	295	P	P	00 20 56.1	+0.4
	comp=Z,2.4nm,0.8s,mb4.2,baz=134,slow=4.7,SNR=9.7						
CHTO	Chiang Mai	78.47	295	*e*P	P	00 20 56.7	+0.1
	comp=Z,3.0nm,0.8s,mb4.3						
LZH	Lanzhou	82.92	312	*e*P	P	00 21 28.5	+8.5
LZH				pP	pP	00 21 35.0	+3.9
LZH				sP	sP	00 21 38.3	+3.2
LZH				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
ULN	Ulaanbaatar	87.29	324	*e*P	P	00 21 41.4	-0.3
	comp=Z,7.8nm,1.0s,mb4.9						
GTA	Gaotai	87.35	314	*e*P	P	00 21 44.8	+2.7
GTA				pP	pP	00 21 48.1	-5.2
GTA				sP	sP	00 21 49.8	-7.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
SONM	Songino Array	87.64	323	P	P	00 21 43.8	+0.5
	comp=Z,3.2nm,0.9s,mb4.6,baz=116,slow=6.8,SNR=6.8						
BILL	Bilibino	88.08	359	*e*P	P	00 21 44.8	-0.1
	comp=Z,6.0nm,1.1s,mb4.7						
ISA	Isabella	88.66	51	P	P	00 21 47.7	-0.8
VNA3	Neumayer Olymp	88.71	181	*e*	P	00 21 47.3	-0.9
VNA2	Neumayer--Watz	89.00	181	*e*	P	00 21 48.9	-0.6
	baz=169,slow=2.8						
VNA1	Neumayer--Stat	89.29	181	*e*	P	00 21 51.4	+0.5
NVAR	Mina Array Bea	89.99	49	P	P	00 21 54.6	0.0
	comp=Z,0.7nm,0.5s,mb4.2,baz=216,slow=4.5,SNR=3.6						
TKM2	Tokmak 2	105.60	310	PKiKP	PKiKP	00 27 19.0	+0.7
CPUP	Villa Florida	115.78	134	Pdif	Pdif	00 23 52.5	+2.2
BRG	Berggiesshubel	143.49	333	*e*(P)	PKPdf	00 28 29.2	-0.3
	comp=Z,2.5nm,0.9s						
CLL	Collm	143.56	334	*e*PKPbc	PKPdf	00 28 27.6	-2.0
CLL	Collm	143.56	334	P	PKPdf	00 28 33.0	+3.4
CLL	Collm	143.56	334	*e*PKiKP	PKiKP	00 28 33.0	+0.1
CLZ	Clausthal	144.17	337	*e*PKPbc	PKPdf	00 28 29.7	-0.9
EKA	Eskdalemuir Ar	144.44	352	PKP	PKPdf	00 28 28.6	-2.4
	comp=Z,2.4nm,0.9s,baz=339,slow=2.4,SNR=5.0						
TANN	Tannenbergstha	144.46	333	*e*PKPbc	PKPdf	00 28 30.8	-0.4
WERD	Werda	144.50	334	*e*PKPbc	PKPdf	00 28 30.6	-0.6
WERD				*ep*PKPbc		00 28 58.1	
GUNZ	Gunzen	144.56	334	*e*PKPbc	PKPdf	00 28 31.4	+0.1
WERN	Wernitzgruen	144.59	333	*e*PKPbc	PKPdf	00 28 31.2	-0.2
WERN				*ep*PKPbc		00 28 59.1	
NKC	Novy Kostel	144.60	333	*e*PKP	PKPdf	00 28 30.6	-0.8
MOX	Moxa	144.63	334	*e*PKPbc	PKPdf	00 28 31.2	-0.3
MOX	Moxa	144.63	334	*e*PKP	PKPdf	00 28 31.5	0.0
CSNA	Conrad Observa	144.67	328⇑	*i*PKPdf	PKPdf	00 28 32.1	+0.5
	comp=Z,14nm,1.7s						
IBBN	Ibbenburen	144.70	340	*e*PKPbc	PKPdf	00 28 31.4	-0.1
KHC	Kasperske Hory	144.92	331	*e*PKPdf	PKPdf	00 28 31.8	-0.2
ROTZ	Rotzenmuhle	145.06	333	*e*PKPbc	PKPbc	00 28 33.2	+1.5
ROTZ				*ep*PKPbc	pPKPbc	00 29 01.5	+19
GEC2	GERESS Array S	145.07	331	*e*PKPbc	PKPbc	00 28 32.0	+0.3
GERES	GERESS Array B	145.07	331	PKP	PKPdf	00 28 31.3	-1.0
	comp=Z,1.3nm,0.8s,baz=42,slow=4.2,SNR=12						
UBBA	Unterbreizbach	145.13	336	*e*PKPbc	PKPbc	00 28 33.0	+1.1
UBBA				*ep*PKPbc	pPKPbc	00 29 00.1	+17
WET	Wettzell	145.23	332	*e*PKPbc	PKPbc	00 28 33.4	+1.2
ARSA	Arzberg	145.29	327⇑	*i*PKPbc	PKPbc	00 28 33.9	+1.4
	comp=Z,11nm,1.7s						
KOGS	Kog	145.43	325	*e*PKPbc	PKPbc	00 28 34.3	+1.4
MOA	Molln	145.51	329⇑	*i*PKPbc	PKPbc	00 28 34.2	+1.0
	comp=Z,12nm,1.1s						
GRA1	Grafenberg Arr	145.53	334	*e*PKPbc	PKPbc	00 28 33.8	+0.6
GRF	Grafenberg Arr	145.53	334	*e*PKPbc	PKPbc	00 28 33.8	+0.6
BUG	Bochum--Univer	145.60	339	*e*PKPbc	PKPbc	00 28 34.3	+1.0
TNS	Taunus Mts	146.20	337	*e*PKPbc	PKPbc	00 28 36.6	+1.4
TNS				*ep*PKPbc	pPKPbc	00 29 05.2	+19
RJOB	Jochberg	146.29	330	*e*PKPbc	PKPbc	00 28 37.3	+1.7
PDKS	Podkum	146.35	326	*e*PKPbc	PKPbc	00 28 37.8	+2.0
JAVS	Javornik	146.94	326	*e*PKPbc	PKPbc	00 28 38.5	+0.9
STU	Stuttgart	147.08	335	*e*PKPbc	PKPbc	00 28 39.4	+1.6
STU				*ep*PKPbc	pPKPbc	00 29 07.5	+18
WLF	Walferdange	147.48	339	*e*PKPbc	PKPbc	00 28 40.2	+1.3
WLF				*ep*PKPbc	pPKPbc	00 29 07.8	+18
WLF	Walferdange	147.48	339	*e*PKPab	PKPab	00 28 40.8	-0.2
GIVF	Givet	147.55	340	*e*PKP1	PKPbc	00 28 39.1	0.0
FETA	Feichten	147.77	331⇑	*i*PKPdf	PKPdf	00 28 40.3	+3.4
	comp=Z,12nm,1.4s						
BAIF	Baives	147.78	341	*e*PKP1	PKPbc	00 28 40.0	+0.3
BFO	Black Forest	147.78	335	*e*PKPbc	PKPbc	00 28 40.3	+0.5
BFO	Black Forest	147.78	335	*e*PKPdf	PKPdf	00 28 36.8	0.0
BFO				*e*PKPbc	PKPbc	00 28 39.8	0.0
BFO				*e*PKPbc	PKPbc	00 28 40.3	+0.5
BFO				*e*PKPab	PKPab	00 28 41.9	-0.3
CDF	Champ du Feu	148.12	336	*e*PKP1	PKPbc	00 28 40.9	+0.2
	comp=Z,25nm,1.2s						
DAVOX	Davos/Dischmat	148.34	332	PKPbc	PKPbc	00 28 41.7	+0.4
	comp=Z,4.5nm,0.9s,baz=60,slow=4.7,SNR=10						
HINF	Hinteralfeld	148.78	336	*e*PKP1	PKPbc	00 28 42.5	+0.1
HAU	Haudompre	148.81	337	*e*PKP1	PKPbc	00 28 42.6	+0.1
MEZF	Maizieres J'vi	148.85	339	*e*PKP1	PKPbc	00 28 43.2	+0.6
CABF	La Chapelle	150.06	335	*e*PKP1	PKPbc	00 28 46.2	+0.6
LPG	La Plagne	150.70	333	*e*PKP1	PKPbc	00 28 47.8	+0.6
SMF	Signal de Mont	150.87	338	*e*PKP1	PKPbc	00 28 49.1	+1.6
	comp=Z,29nm,1.3s						
AVF	Avril sur Loir	150.91	339	*e*PKP1	PKPbc	00 28 48.8	+1.2
	comp=Z,24nm,1.3s						
BNI	Bardonecchia	151.08	333	*e*PKPdf	PKPdf	00 28 42.2	0.0
BNI				*e*PKPbc	PKPbc	00 28 49.0	+0.9
ORIF	Oris-en-Rattie	151.53	334	*e*PKP1	PKPbc	00 28 49.3	+0.2
PGF	Pioggiola	151.89	327	*e*PKP1	PKPbc	00 28 51.4	+1.4
FRF	La Foret Royal

MJAR			Lg			00 28 31.2
MAJO	**Matsushiro**	**2.87 277**	*e*Pn	**Pn**		**00 27 43.2 +0.4**
MAJO			*e*Sn	**Sn**		**00 28 15.8 -0.6**
MAT	**Matsushiro**	**2.87 277**	P	**Pn**		**00 27 44.0 +1.2**
MAT			S	**Sn**		**00 28 18.0 +1.5**
JYK	**Kaneyama**	**2.87 338**	⇑P	**Pn**		**00 27 42.7 -0.1**
JJN	**Nakama**	**3.00 287**	P	**Pn**		**00 27 46.6 +2.0**
JRG	**Rokugo**	**3.25 345**	P	**Pn**		**00 27 48.0 -0.1**
JHJ	**Hachijo jima 2**	**3.53 208**	Pn	**Pn**		**00 27 51.4 -0.5**
	330nm,0.3s,baz=255,slow=2.3,SNR=94					
JHJ			Sn	**Sn**		**00 28 31.6 -1.2**
	632nm,0.3s,baz=236,slow=23,SNR=11					
JHJ			LR	LR		00 28 36.4
	comp=Z,397nm,20.8s,baz=6.8,slow=28					
JGN	**Niukaw**	**3.58 271**	P	**Pn**		**00 27 54.5 +1.9**
JSZ	**Suzu**	**3.71 290**	P	**Pn**		**00 27 55.7 +1.4**
JAO	**Obara**	**3.78 256**	⇑P	**Pn**		**00 27 57.2 +1.8**
ERM	**Erimo**	**5.85 10**	Pn	**Pn**		**00 28 21.3 -2.4**
	1μm,0.5s,SNR=46					
ERM	**Erimo**	**5.85 10**	*e*Pn	**Pn**		**00 28 21.0 -2.7**
ERM			*e*Sn	**Sn**		**00 29 26.0 -3.9**
ASAJ	**Asahikawa**	**7.87 4**	P	**Pn**		**00 28 49.7 -1.8**
ASAJ						00 30 16.4
ASAJ			pmax	pmax		
	comp=Z,14nm,0.3s					
ASAJ			smax			
	comp=N,8.0nm,0.3s					
ASAJ			MLR	MLR		
	comp=Z,3μm,19.1s					
ASAJ	**Asahikawa**	**7.87 4**	Pn	**Pn**		**00 28 49.6 -1.9**
	comp=Z,14nm,0.3s,baz=231,slow=10,SNR=26					
ASAJ			Sn	**Sn**		**00 30 16.4 -3.3**
	comp=Z,7.5nm,0.3s,baz=57,slow=30,SNR=5.8					
ASAJ			Lg			00 30 56.4
	comp=Z,4.9nm,0.3s,baz=64,slow=26,SNR=7.5					
ASAJ			LR	LR		00 32 55.9
	comp=Z,3μm,19.1s,baz=173,slow=45					
CBIJ	**Chichi jima**	**9.15 178**	Pn	**Pn**		**00 29 05.3 -3.7**
	comp=Z,21nm,0.3s,baz=277,slow=20,SNR=13					
CBIJ			Sn	**Sn**		**00 30 41.1 -10**
	comp=Z,74nm,0.3s,baz=89,slow=23,SNR=6.3					
KUR	**Kuril'sk**	**10.09 25**	P	**Pn**		**00 29 31.0 +9.1**
KUR			*e*S	**Sn**		**00 31 04.0 -10**
KUR			pmax	pmax		
	comp=N,110nm,0.9s					
KUR			pmax	pmax		
	comp=E,130nm,0.9s					
KUR			pmax	pmax		
	comp=Z,180nm,0.9s					
KUR			smax			
	comp=N,260nm,0.7s					
KUR			smax			
	comp=E,190nm,0.7s					
VLA	**Vladivostok**	**10.22 315**	*e*P	**Pn**		**00 29 25.4 +1.7**
VLA			*e*			00 31 19.0
VLA			pmax	pmax		
	comp=Z,83nm,0.7s					
VLA			MLR	MLR		
	comp=Z,2μm,13.7s					
YSS	**Yuzh-Sakhalins**	**10.71 4⇓**	*e*P	**Pn**		**00 29 29.1 -1.3**
YSS			*e*S	**Sn**		**00 31 26.0 -3.4**
YSS			pmax	pmax		
	comp=Z,100nm,1.0s					
YSS			pmax	pmax		
	comp=N,90nm,0.9s					
YSS			MLR	MLR		
	comp=Z,900nm,15.0s					
YSS			MLR	MLR		
	comp=N,800nm,16.0s					
YSS	**Yuzh-Sakhalins**	**10.71 4**	*e*Pn	**Pn**		**00 29 29.3 -1.1**
KSRS	**Korea Array**	**11.14 280**	P	**Pn**		**00 29 38.7 +2.4**
KSRS			pmax	pmax		
	comp=Z,2.0nm,0.3s					
KSRS			MLR	MLR		
	comp=Z,2μm,18.0s					
KSRS	**Korea Array**	**11.14 280**	Pn	**Pn**		**00 29 38.7 +2.4**
	comp=Z,1.8nm,0.3s,baz=94,slow=13,SNR=59					
KSRS			LR	LR		00 34 00.9
	comp=Z,2μm,18.0s,baz=83,slow=38					
INCN	**Inchon**	**12.17 280**	Pn	**Pn**		**00 29 47.9 -2.5**
MDJ	**Mudanjiang**	**12.45 316**	P	**Pn**		**00 29 55.6 +1.4**
MDJ			pP			00 29 58.9
MDJ			S	**Sn**		**00 32 17.8 +5.8**
MDJ			SS			00 32 29.1
MDJ			PcP	PcP		00 35 34.2 +0.9
MDJ			pmax	pmax		
	comp=Z,49nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,230nm,9.9s					
MDJ			LR	LR		
	comp=N,2μm,17.8s					
MDJ			LR	LR		
	comp=E,2μm,16.6s					
MDJ			LR	LR		
	comp=Z,3μm,17.2s					
MDJ	**Mudanjiang**	**12.45 316**	*e*Pn	**Pn**		**00 29 55.5 +1.2**
	comp=Z,44nm,0.8s					
HABR	**Khabarovsk**	**13.16 340**	*e*P	**Pn**		**00 30 02.1 -1.8**
HABR			*e*			00 32 27.8
HABR			pmax	pmax		
	comp=N,20nm,1.5s					
HABR			pmax	pmax		
	comp=Z,37nm,1.5s					
HABR			pmax	pmax		
	comp=E,16nm,0.8s					
HABR			MLR	MLR		
	comp=Z,2μm,17.0s					
CN2	**Changchun**	**14.56 306**	*e*P	**Pn**		**00 30 22.9 -0.2**
CN2			*es*P	sP		00 30 28.6 -11
CN2			*e*S	**Sn**		**00 33 05.6 +2.0**
CN2			pmax	pmax		
	comp=Z,20nm,0.8s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,2μm,15.0s					
CN2			LR	LR		
	comp=E,2μm,15.0s					
CN2			LR	LR		
	comp=Z,2μm,15.0s					
JOW	**Kunigami**	**14.83 234**	Pn	**Pn**		**00 30 29.5 +2.8**
	comp=Z,5.7nm,0.3s,baz=41,slow=13,SNR=9.3					
JOW	**Kunigami**	**14.83 234**	Pn	**Pn**		**00 30 29.5 +2.8**
KLR	**Kul'dur**	**14.88 334**	*e*P	**Pn**		**00 30 21.2 -6.0**
KLR			MLR	MLR		
	comp=E,900nm,13.5s					
KLR			MLR	MLR		
	comp=Z,4μm,13.5s					
SNY	**Shenyang**	**15.16 297**	⇑P	**Pn**		**00 30 31.0 -0.1**
SNY			S	**Sn**		**00 33 24.7 +6.5**
SNY			pmax	pmax		
	comp=Z,33nm,1.1s					
SNY			pmax	pmax		
	comp=Z,170nm,5.4s					
SNY			LR	LR		
	comp=N,1μm,13.7s					
SNY			LR	LR		
	comp=E,3μm,16.7s					
SNY			LR	LR		
	comp=Z,3μm,17.2s					
DL2	**Dalian**	**16.16 285**	P	**Pn**		**00 30 44.9 +0.8**
DL2			*e*S	**Sn**		**00 33 42.0 -0.6**
DL2			pmax	pmax		
	comp=Z,40nm,0.6s					
DL2			pmax	pmax		
	comp=Z,200nm,6.6s					
DL2			LR	LR		
	comp=N,690nm,11.9s					
DL2			LR	LR		
	comp=E,2μm,14.2s					
DL2			LR	LR		
	comp=Z,2μm,15.0s					
SSE	**Sheshan**	**17.86 259**	*e*P	**Pn**		**00 31 03.8 -1.6**
SSE			pP	pP		00 31 06.9 -5.9
SSE			sP	sP		00 31 10.2 -5.9
SSE			S	**Sn**		**00 34 23.1 -0.7**
SSE			sS	sS		00 34 28.4 -12
SSE			pmax	pmax		
	comp=Z,22nm,0.8s					
SSE			pmax	pmax		
	comp=Z,180nm,10.4s					
SSE			LR	LR		
	comp=N,870nm,17.0s					
SSE			LR	LR		
	comp=E,930nm,17.0s					
SSE			LR	LR		
	comp=Z,1μm,12.9s					
NJ2	**Nanjing**	**19.39 264**	*e*P	**Pn**		**00 31 26.7 +2.7**
NJ2			pP	pP		00 31 30.3 +0.6
NJ2			sP	sP		00 31 33.7 +0.7
NJ2			PP			00 31 44.1
NJ2			S	**Sn**		**00 35 00.0 -0.8**
NJ2			sS	sS		00 35 06.0 -5.9
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
NJ2			pmax	pmax		
	comp=Z,150nm,9.5s					
NJ2			LR	LR		
	comp=N,2μm,14.7s					
NJ2			LR	LR		
	comp=E,1μm,14.8s					
NJ2			LR	LR		
	comp=Z,980nm,14.7s					
TIA	**Tai'an**	**19.85 277**	P	**Pn**		**00 31 29.8 +0.4**
TIA			LR	LR		
	comp=N,720nm,13.0s					
TIA			LR	LR		
	comp=E,1μm,13.0s					
PETK	**Petropavlovsk-**	**20.23 29**	P	**P**		**00 31 30.8 -0.9**
PETK			pmax	pmax		
	comp=Z,8.0nm,0.8s					
PETK	**Petropavlovsk-**	**20.23 29**	P	**P**		**00 31 30.8 -0.9**
	comp=Z,8.4nm,0.8s,baz=186,slow=8.3,SNR=7.4					
BJI	**Beijing**	**20.44 288**	P	**P**		**00 31 32.6 -1.5**
BJI			S	**S**		**00 35 23.7 +2.1**
BJI			pmax	pmax		
	comp=Z,43nm,1.3s					
BJI			pmax	pmax		
	comp=Z,140nm,3.6s					
BJI			LR	LR		
	comp=N,1μm,13.6s,MS4.6					
BJI			LR	LR		
	comp=E,1μm,12.6s,MS4.6					
BJI			LR	LR		
	comp=Z,600nm,18.3s					
BJT	**Baijiatuau**	**20.44 288**	*e*P	**P**		**00 31 32.7 -1.4**
BJT			pmax	pmax		
	comp=Z,48nm,0.5s					
BJT	**Baijiatuau**	**20.44 288**	*e*P	**P**		**00 31 32.6 -1.5**
	comp=Z,48nm,0.5s					
PET	**Petropavlovsk**	**20.54 30**	*e*P	**P**		**00 31 34.2 -0.9**
PET			*e*S	**S**		**00 35 17.7 -5.8**
PET			pmax	pmax		
	comp=Z,100nm,15.2s					
PET			MLR	MLR		
	comp=Z,300nm,17.0s,MS3.7					
PET			MLR	MLR		
	comp=Z,800nm,18.0s					
PET	**Petropavlovsk**	**20.54 30**	*e*P	**P**		**00 31 34.5 -0.6**
	comp=Z,16nm,0.5s					
HIA	**Hailar**	**20.64 316**	*e*P	**P**		**00 31 36.2 0.0**
HIA			pmax	pmax		
	comp=Z,34nm,0.7s					
HIA	**Hailar**	**20.64 316**	*e*P	**P**		**00 31 36.1 0.0**
	comp=Z,34nm,0.7s					
TATO	**Taipei**	**20.70 243**	P	**P**		**00 31 35.9 -1.2**
YHNB	**Yeheng**	**20.97 242**	*e*P	**P**		**00 31 37.8 -2.2**
	comp=Z,21nm,0.6s					
NACB	**Ninganchiao**	**21.13 241**	*e*P	**P**		**00 31 38.5 -3.1**
	comp=Z,30nm,0.6s,mb4.8					
SSLB	**Suanglung**	**21.82 241**	*e*P	**P**		**00 31 46.2 -2.9**
	comp=Z,28nm,0.6s,mb4.9					
YULB	**Yu-li**	**21.84 240**	*e*P	**P**		**00 31 44.8 -4.5**
	comp=Z,23nm,0.7s,mb4.7					
TPUB	**Ta-pu**	**22.36 241**	*e*P	**P**		**00 31 51.9 -3.0**
	comp=Z,60nm,0.7s,mb5.1					
TWG	**Pinlang**	**22.36 239**	*e*P	**P**		**00 31 51.0 -3.9**
	comp=Z,39nm,0.6s,mb5.0					
QZH	**Quanzhou**	**22.84 247**	P	**P**		**00 31 58.2 -1.8**
QZH			S	**S**		**00 36 02.4 -5.7**
QZH			pmax	pmax		
	comp=Z,90nm,1.0s,mb5.2					
QZH			LR	LR		
	comp=N,3μm,12.8s,MS5.0					
QZH			LR	LR		
	comp=E,3μm,15.0s,MS5.0					
QZH			LR	LR		
	comp=Z,2μm,19.2s,MS4.6					
NRGR	**Nerungri**	**23.41 336**	*e*P	**P**		**00 32 04.0 -1.6**
NRGR			S	**S**		**00 36 15.8 -0.9**
NRGR			smax			
	comp=N,38nm,1.2s					
CLNS	**Chul'man**	**23.50 336**	*e*P	**P**		**00 32 04.1 -2.4**
CLNS			*e**PP			00 32 10.6
CLNS			*e*PPP			00 32 36.5
CLNS			*e*			00 35 52.6
CLNS			*e*S	**S**		**00 36 13.2 -4.9**
CLNS			*e*SS			00 36 52.3
CLNS			pmax	pmax		
	comp=E,14nm,0.9s					
CLNS			pmax	pmax		
	comp=Z,90nm,1.2s,mb5.1					
CLNS			pmax	pmax		
	comp=N,41nm,1.0s					
CLNS			smax			
	comp=E,201nm,13.3s					
CLNS			smax			
	comp=N,196nm,12.0s					
CLNS			MLR	MLR		
	comp=Z,1μm,13.0s,MS4.5					
CLNS			MLR	MLR		
	comp=N,988nm,13.0s,MS4.5					
CLNS			MLR	MLR		
	comp=E,604nm,14.0s,MS4.5					
WHN	**Wuhan**	**23.53 264**	⇓P	**P**		**00 32 04.9 -2.2**
WHN			S	**S**		**00 36 14.7 -4.5**
WHN			LR	LR		
	comp=N,2μm,12.3s,MS4.9					
WHN			LR	LR		
	comp=E,2μm,13.0s,MS4.9					
WHN			LR	LR		
	comp=Z,4μm,15.8s,MS4.9					
HHC	**Hu-ho-hao-te**	**23.98 290**	*e*P	**P**		**00 32 11.7 +0.6**
HHC			PP			00 32 45.3
HHC			PcP	PcP		00 35 55.8 +3.1
HHC			S	**S**		**00 36 23.5 -2.8**
HHC			sS	sS		00 36 37.0 -1.6
HHC			SS			00 37 13.7
HHC			ScP	ScP		00 39 30.2 +0.8
HHC			PcS	PcS		00 39 34.3 +2.1
HHC			pmax	pmax		
	comp=Z,47nm,1.0s,mb4.9					
HHC			pmax	pmax		
	comp=Z,120nm,5.7s					
HHC			LR	LR		
	comp=N,740nm,12.7s,MS4.6					
HHC			LR	LR		
	comp=E,1μm,14.9s,MS4.6					
HHC			LR	LR		
	comp=Z,1μm,14.8s,MS4.5					
BTO	**Baotou**	**25.15 290**	*e*P	**P**		**00 32 22.1 +0.3**
XAN	**Xi'an**	**26.86 275**	P	**P**		**00 32 36.3 -1.0**
XAN			pmax	pmax		
	comp=Z,24nm,0.7s,mb4.8					
XAN			pmax	pmax		
	comp=Z,40nm,9.2s					
XAN			LR	LR		
	comp=N,380nm,14.5s,MS4.2					
XAN			LR	LR		
	comp=E,220nm,13.5s,MS4.2					
XAN			LR	LR		
	comp=Z,290nm,13.5s,MS4.0					
YAK	**Yakutsk**	**26.88 347**	*c i*P	**P**		**00 32 36.7 -0.4**
YAK			*e*			00 33 18.7
YAK			*e*PPP			00 33 27.8
YAK			*e*			00 36 00.1
YAK			*e*S	**S**		**00 37 11.6 -0.4**
YAK			*e*SS			00 38 18.9
YAK			*e*SSS			00 38 33.9
YAK			*e*			00 43 23.5
YAK			pmax	pmax		
	comp=Z,152nm,0.9s,mb5.5					
YAK			pmax	pmax		
	comp=N,93nm,1.3s					
YAK			pmax	pmax		
	comp=E,30nm,1.3s					
YAK			pmax	pmax		
	comp=Z,63nm,1.4s,mb5.0					
YAK			pmax	pmax		
	comp=N,37nm,1.3s					
YAK			pmax	pmax		
	comp=E,27nm,1.3s					
YAK			smax			
	comp=E,101nm,2.2s					
YAK			smax			
	comp=N,54nm,2.4s					
YAK			MLR	MLR		
	comp=Z,1μm,14.0s,MS4.5					
YAK			MLR	MLR		
	comp=N,908nm,14.0s,MS4.5					
YAK			MLR	MLR		
	comp=E,38nm,10.0s,MS4.5					
YAK	**Yakutsk**	**26.88 347**	*e*P	**P**		**00 32 37.0 -0.2**
	comp=E,177nm,0.6s,mb5.8					
SEY	**Seymchan**	**27.50 11⇑**	*i*P	**P**		**00 32 43.0 +0.3**
ENH	**Enshi**	**27.55 267**	*e*P	**P**		**00 32 42.8 -0.7**
	comp=E,214nm,0.6s,mb6.0					
GZH	**Guangzhou**	**27.84 250**	P	**P**		**00 32 41.4 -4.7**
GZH			S	**S**		**00 37 21.7 -6.2**
GZH			LR	LR		
	comp=N,660nm,12.6s,MS4.6					
GZH			LR	LR		
	comp=E,570nm,11.4s,MS4.6					
ULN	**Ulaanbaatar**	**28.01 305**	*e*P	**P**		**00 32 47.8 +0.3**
ULN			*e*			00 36 02.2
ULN			pmax	pmax		
	comp=Z,38nm,0.7s,mb5.1					
ULN	**Ulaanbaatar**	**28.01 305**	*e*P	**P**		**00 32 47.8 +0.3**
	comp=Z,38nm,0.7s,mb5.1					
ULN			*e*PcP	PcP		00 36 02.1 +0.3
ULN	**Ulaanbaatar**	**28.01 305**	P	**P**		**00 32 48.2 +0.8**
	SNR=21					
ULN			P			00 32 48.2
	SNR=21					
BOD	**Bodaibo**	**28.32 328**	*e*P	**P**		**00 32 49.4 -0.7**
BOD			pmax	pmax		
	comp=Z,44nm,0.8s,mb5.1					
SONM	**Songino Array**	**28.44 305**	P	**P**		**00 32 51.4 +0.1**
SONM						00 36 03.4
SONM			pmax	pmax		
	comp=Z,64nm,0.8s					
SONM			MLR	MLR		
	comp=Z,686nm,18.1s					
SONM	**Songino Array**	**28.44 305**	P	**P**		**00 32 51.4 +0.1**
	comp=Z,64nm,0.8s,mb5.3,baz=107,slow=8.9,SNR=106					
SONM			PcP	PcP		00 36 03.4 +0.5
	comp=Z,2.0nm,0.6s,baz=122,slow=2.8,SNR=4.6					
SONM			LR	LR		00 44 44.4
	comp=Z,686nm,18.1s,MS4.3,baz=83,slow=37					
LZH	**Lanzhou**	**30.47 281**	*e*P	**P**		**00 33 09.5 +0.1**
LZH			pP	pP		00 33 14.7 -2.2
LZH			sP	sP		00 33 17.6 -2.5
LZH			PP	PP		00 34 09.0 -9.3
LZH			S	**S**		**00 38 12.0 +3.0**
LZH			sS	sS		00 38 20.0 -1.5
LZH			SS	SS		00 39 47.2 -32
LZH			pmax	pmax		
	comp=Z,81nm,1.5s,mb5.2					
LZH			pmax	pmax		
	comp=Z,130nm,4.0s					
LZH			LR	LR		
	comp=N,1μm,13.6s					
LZH			LR	LR		
	comp=Z,2μm,16.7s,MS4.8					
IRK	**Irkutsk**	**30.82 313**	*e*P	**P**		**00 33 06.6 -5.7**
IRK			pmax	pmax		
	comp=Z,52nm,1.3s,mb5.2					
ZAK	**Zakamensk**	**30.96 309⇓**	*i*P	**P**		**00 33 13.8 +0.2**
ZAK			pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0					
TLY	**Talaya**	**31.04 312**	P	**P**		**00 33 15.5 +1.2**
	comp=Z,317nm,1.2s,mb6.0,SNR=5.6					
TLY	**Talaya**	**31.04 312**	*e*P	**P**		**00 33 13.9 -0.4**
TLY			*e*S	**S**		**00 38 23.2 +5.6**
TLY			*e*SS	SS		00 40 14.4 -16
TLY			pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3					
TLY			MLR	MLR		
	comp=Z,1μm,16.0s,MS4.6					
TLY	**Talaya**	**31.04 312**	*e*P	**P**		**00 33 15.0 +0.7**
	comp=Z,44nm,0.9s,mb5.3					
TLY	**Talaya**	**31.04 312**	P	**P**		**00 33 15.2 +1.0**
	SNR=17					
TLY			P			00 33 15.2
	SNR=17					
GYA	**Guiyang**	**31.36 262⇑**	*i*P	**P**		**00 33 17.8 +0.4**
GYA			PP	PP		00 34 20.1 -8.3
GYA			PcP	PcP		00 36 11.0 +0.2
GYA			S	**S**		**00 38 24.3 +1.1**
GYA			ScP	ScP		00 39 54.6 +2.4
GYA			SS	SS		00 40 09.2 -29
GYA			pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2					
GYA			pmax	pmax		
	comp=Z,140nm,4.9s					
GYA			LR	LR		
	comp=N,790nm,17.0s,MS4.5					
GYA			LR	LR		
	comp=E,560nm,18.3s,MS4.5					
GYA			LR	LR		
	comp=Z,680nm,16.7s,MS4.4					
MOY	**Mondy**	**32.64 311**	*e*P	**P**		**00 33 29.0 +0.7**
MOY			pmax	pmax		
	comp=Z,38nm,1.2s,mb5.2					
QIZ	**Qiongzhong**	**32.86 247**	P	**P**		**00 33 30.8 +0.2**
QIZ			PP	PP		00 34 40.5 -4.6
QIZ			S	**S**		**00 38 44.3 -2.4**
QIZ			SS	SS		00 40 43.4 -25
QIZ			pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7					
QIZ			LR	LR		
	comp=N,510nm,16.5s					
QIZ			LR	LR		
	comp=Z,550nm,16.7s,MS4.3					
GTA	**Gaotai**	**33.05 288**	⇓P	**P**		**00 33 32.5 +0.4**
GTA			pP	pP		00 33 37.1 -2.5
GTA			sP	sP		00 33 39.5 -3.2
GTA			PP	PP		00 34 43.8 -3.1
GTA			PcP	PcP		00 36 14.3 -0.9
GTA			S	**S**		**00 38 51.8 +2.5**
GTA			sS	sS		00 38 59.0 -2.8
GTA			pmax	pmax		
	comp=Z,52nm,0.9s,mb5.5					
GTA			pmax	pmax		
	comp=Z,160nm,3.9s					
GTA			LR	LR		
	comp=N,450nm,18.6s,MS4.6					
GTA			LR	LR		
	comp=E,910nm,17.4s,MS4.6					
GTA			LR	LR		
	comp=Z,960nm,17.1s,MS4.6					
BILL	**Bilibino**	**34.69 16**	*c i*P	**P**		**00 33 44.8 -1.2**
BILL			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8					
BILL			MLR	MLR		
	comp=Z,300nm,18.0s,MS4.1					
BILL	**Bilibino**	**34.69 16**	*e*P	**P**		**00 33 45.2 -0.7**
	comp=Z,16nm,1.0s,mb4.9					
KMI	**Kunming**	**35.12 263**	P	**P**		**00 33 50.2 +0.1**
KMI			pP	pP		00 33 53.7 -4.0
KMI			sP	sP		00 33 55.3 -5.5
KMI			PP	PP		00 35 08.6 -1.4
KMI			PcP	PcP		00 36 22.0 +0.6
KMI			S	**S**		**00 39 21.6 +0.1**
KMI			sS	sS		00 39 27.6 -6.4
KMI			ScP	ScP		00 40 06.3 +1.0
KMI			SS	SS		00 41 36.4 -18
KMI			ScS	ScS		00 44 08.8 -0.5
KMI			pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4					
KMI			pmax	pmax		
	comp=Z,93nm,4.0s					
KMI			LR	LR		
	comp=N,640nm,15.1s,MS4.7					
KMI			LR	LR		
	comp=E,870nm,16.0s,MS4.7					
KMI			LR	LR		
	comp=Z,990nm,15.1s,MS4.7					
TIXI	**Tiksi**	**36.09 353**	*e*P	**P**		**00 33 57.1 -0.8**
TIXI			*e*			00 35 19.9
TIXI			*e*S	**S**		**00 39 35.7 +0.3**
TIXI			pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0					
TIXI			MLR	MLR		
	comp=Z,678nm,14.0s,MS4.6					
TIXI	**Tiksi**	**36.09 353**	*e*P	**P**		**00 33 57.5 -0.4**
	comp=Z,18nm,1.0s,mb5.0					

KKM	**Kota Kinabalu**	**38.10 224**	*e*P	P		**00 34 15.1 -0.6**
CHRT	**Chiangrai**	**40.13 258**	⇑P	P		**00 34 33.5 +0.9**
	comp=Z,316nm,0.9s,mb6.0					
CHG	**Chiang Mai**	**41.37 257**	⇑P	P		**00 34 42.9 +0.1**
	comp=Z,32nm,0.7s,mb5.0					
CHTO	**Chiang Mai**	**41.37 257**	*e*P	P		**00 34 42.8 0.0**
CHTO			pmax	pmax		
	comp=Z,15nm,0.6s,mb4.8					
CHTO	**Chiang Mai**	**41.37 257**	*e*P	P		**00 34 42.8 0.0**
	comp=Z,15nm,0.6s,mb4.8					
CHTO	**Chiang Mai**	**41.37 257**	P	P		**00 34 43.3 +0.5**
	SNR=6.1					
CHTO			P			00 34 43.3
	SNR=6.1					
WMQ	**Urumqi**	**41.43 298**	P	P		**00 34 44.4 +1.4**
WMQ			sP	sP		00 34 51.2 -2.6
WMQ			PP	PP		00 36 23.5 +4.7
WMQ			PcP	PcP		00 36 42.0 +1.4
WMQ			S	S		**00 40 58.6 +2.1**
WMQ			sS	sS		00 41 04.7 -4.5
WMQ			SS	SS		00 43 58.4 -2.5
WMQ			ScS	ScS		00 44 45.5 +0.5
WMQ			pmax	pmax		
	comp=Z,100nm,1.0s,mb5.4					
WMQ			pmax	pmax		
	comp=Z,560nm,4.0s					
WMQ			LR	LR		
	comp=N,280nm,13.0s,MS4.8					
WMQ			LR	LR		
	comp=E,810nm,16.0s,MS4.8					
WMQ			LR	LR		
	comp=Z,490nm,18.0s,MS4.4					
CMAR	**Chiang Mai Arr**	**41.57 256**	P	P		**00 34 44.8 +0.4**
CMAR						00 36 39.9
CMAR			pmax	pmax		
	comp=Z,11nm,0.7s					
CMAR	**Chiang Mai Arr**	**41.57 256**	P	P		**00 34 44.8 +0.4**
	comp=Z,11nm,0.7s,mb4.6,baz=51,slow=5.6,SNR=67					
CMAR			PcP	PcP		00 36 39.9 -1.6
	comp=Z,1.4nm,0.4s,baz=29,slow=3.9,SNR=4.1					
BDT	**Bhumibol Dam**	**42.21 255**	P	P		**00 34 50.0 +0.3**
	comp=Z,27nm,0.8s,mb4.9					
NST	**Nakhon Sawan**	**42.25 252**	P	P		**00 34 51.0 +0.9**
LSA	**Lhasa**	**42.55 276**	P	P		**00 34 54.8 +2.4**
LSA			S	S		**00 41 21.6 +8.2**
LSA			pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8					
LSA			pmax	pmax		
	comp=Z,350nm,5.0s					
LSA			LR	LR		
	comp=N,270nm,15.0s,MS4.6					
LSA			LR	LR		
	comp=E,590nm,16.0s,MS4.6					
LSA			LR	LR		
	comp=Z,890nm,16.0s,MS4.8					
LSA	**Lhasa**	**42.55 276**	*e*P	P		**00 34 52.8 +0.4**
LSA			pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2					
LSA	**Lhasa**	**42.55 276**	*e*P	P		**00 34 52.8 +0.4**
	comp=Z,37nm,0.8s,mb5.2					
ZAA0	**Zalesovo Array**	**42.63 313**	*e*P	P		**00 34 52.4 -0.3**
ZAA0			*e*PcP	PcP		00 36 44.2 -0.2
ZALV	**Zalesovo Beam**	**42.63 313**	P	P		**00 34 52.5 -0.2**
	comp=Z,48nm,0.8s,mb5.3,baz=91,slow=7.4,SNR=184					
ZALV			PcP	PcP		00 36 44.3 -0.1
	comp=Z,13nm,0.7s,baz=90,slow=3.8,SNR=5.7					
ZALV			ScP	ScP		00 40 33.5 -0.1
	comp=Z,0.7nm,0.7s,baz=75,slow=6.3,SNR=3.8					
ZALV			LR	LR		00 53 27.1
	comp=Z,632nm,18.3s,MS4.5,baz=79,slow=37					
NVS	**Novosibirsk**	**43.57 314**	⇑*i*P	P		**00 35 00.3 0.0**
NVS			*e*			00 36 44.4
NVS			pmax	pmax		
	comp=E,54nm,1.1s					
NVS			pmax	pmax		
	comp=Z,72nm,1.1s,mb5.3					
NVS			pmax	pmax		
	comp=N,10.0nm,1.0s					
SHL	**Shillong**	**43.67 270**	*e*P	P		**00 35 02.0 +0.5**
SHL			*e*x	x		00 41 53.0
MK31	**Makanchi Array**	**44.76 303**	*e*P	P		**00 35 10.1 +0.2**
MKAR	**Makanchi Array**	**44.76 303**	P	P		**00 35 10.3 +0.4**
MKAR						00 36 51.8
MKAR			pmax	pmax		
	comp=Z,43nm,0.7s					
MKAR			MLR	MLR		
	comp=Z,486nm,20.0s					
MKAR	**Makanchi Array**	**44.76 303**	P	P		**00 35 10.3 +0.4**
	comp=Z,43nm,0.7s,mb5.4,baz=94,slow=9.0,SNR=294					
MKAR			PcP	PcP		00 36 51.8 0.0
	comp=Z,9.0nm,0.8s,baz=108,slow=4.7,SNR=3.0					
MKAR			LR	LR		00 54 33.3
	comp=Z,486nm,20.0s,MS4.4,baz=85,slow=37					
KSM	**Kuching**	**45.22 227**	*e*P	P		**00 35 15.0 +1.0**
	comp=Z,43nm,0.7s,mb5.4					
KAPI	**Kappang**	**45.94 211**	P	P		**00 35 19.7 +0.1**
	comp=Z,558nm,1.0s,mb6.5,SNR=9.7					
KAPI	**Kappang**	**45.94 211**	P	P		**00 35 19.1 -0.5**
	comp=Z,46nm,0.8s,mb5.5,baz=37,slow=11					
KAPI	**Kappang**	**45.94 211**	*e*P	P		**00 35 19.2 -0.4**
	comp=Z,124nm,1.1s,mb5.8					
KAPI			*e*PcP	PcP		00 36 55.3 -0.9
KAPI	**Kappang**	**45.94 211**	P	P		**00 35 19.9 +0.3**
	SNR=16					
KAPI			P			00 35 19.9
	SNR=16					
TAPN	**Taplejung**	**46.27 275**	*e*P	P		**00 35 23.2 +1.1**
KURK	**Kurchatov**	**46.62 309**	P	P		**00 35 24.3 -0.3**
	comp=Z,738nm,0.6s					
KURK	**Kurchatov**	**46.62 309**	*e*P	P		**00 35 24.4 -0.2**
KURK			pmax	pmax		
	comp=Z,84nm,0.7s,mb5.8					
KURK	**Kurchatov**	**46.62 309**	*e*P	P		**00 35 24.4 -0.1**
	comp=Z,84nm,0.7s,mb5.8					
KURK	**Kurchatov**	**46.62 309**	P	P		**00 35 24.9 +0.3**
	SNR=39					
KURK			P			00 35 24.9
	SNR=39					
RAMN	**Ramite**	**47.33 275**	*e*P	P		**00 35 31.3 +0.8**
	comp=Z,383nm,0.9s,mb6.3					
KDAK	**Kodiak Island**	**47.50 41**	P	P		**00 35 29.8 -1.5**
KDAK			pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0					
KDAK	**Kodiak Island**	**47.50 41**	P	P		**00 35 29.8 -1.6**
	comp=Z,11nm,0.6s,mb5.0,baz=8,8,slow=16,SNR=8.1					
GUN	**Gumba**	**47.50 277**	*e*P	P		**00 35 32.7 +0.9**
	comp=Z,159nm,0.9s,mb6.0					
CHUM	**Lake Minchumin**	**47.63 33**	*e*P	P		**00 35 32.3 0.0**
	comp=Z,12nm,0.9s,mb4.9					
CHUM			*e*PcP	PcP		00 37 02.1 +0.6
PKI	**Pulchoki**	**48.02 276**	*e*P	P		**00 35 36.5 +0.7**
	comp=Z,64nm,0.8s,mb5.7					
PKIN	**Phulchoki**	**48.03 276**	*e*P	P		**00 35 36.3 +0.4**
	comp=Z,40nm,0.8s,mb5.5					
PKIN	**Phulchoki**	**48.03 276**	*e*P	P		**00 35 36.8 +0.9**
	comp=Z,65nm,0.7s,mb5.8					
KKN	**Kakani**	**48.03 277**	*e*P	P		**00 35 36.7 +0.8**
	comp=Z,81nm,0.7s,mb5.8					
BPAW	**Bear Paw Mtn.**	**48.23 33**	*e*P	P		**00 35 37.6 +0.7**
	comp=Z,3.8nm,0.8s,mb4.5					
GKN	**Gorkha**	**48.46 277**	*e*P	P		**00 35 39.9 +0.7**
	comp=Z,144nm,0.8s,mb6.0					
KULM	**Kulim**	**48.66 241**	*e*P	P		**00 35 39.8 -1.1**
PMR	**Palmer**	**49.09 36**	*e*P	P		**00 35 43.1 -0.4**
MCK	**McKinley**	**49.13 33**	*e*P	P		**00 35 43.9 +0.1**
MCK			pmax	pmax		
	comp=Z,62nm,2.0s,mb5.3					
MCK	**McKinley**	**49.13 33**	*e*P	P		**00 35 43.9 +0.1**
	comp=Z,62nm,2.0s,mb5.3					
KOLN	**Koldanda**	**49.39 278**	*e*P	P		**00 35 47.1 +0.8**
	comp=Z,48nm,0.6s,mb5.7					
KAKA	**Kakadu**	**49.49 192**	*e*P	P		**00 35 45.2 -1.9**
	comp=Z,58nm,0.9s,mb5.6					
KAKA	**Kakadu**	**49.49 192**	*e*P	P		**00 35 46.2 -0.9**
	comp=Z,158nm,0.8s,mb6.1					
COLA	**College**	**49.59 32**	*e*P	P		**00 35 46.4 -0.9**
COLA			pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9					
COLA	**College**	**49.59 32**	*e*P	P		**00 35 46.4 -0.9**
	comp=Z,8.0nm,0.7s,mb4.9					
PYUN	**Piuthan**	**49.74 278**	*e*P	P		**00 35 49.8 +0.8**
	comp=Z,43nm,0.5s,mb5.7					
TKM2	**Tokmak 2**	**50.23 299**	P	P		**00 35 54.0 +1.4**
	SNR=69					
TKM2	**Tokmak 2**	**50.23 299**	*e*P	P		**00 35 54.0 +1.5**
TKM2			pmax	pmax		
	comp=Z,40nm,0.6s,mb5.6					
TKM2	**Tokmak 2**	**50.23 299**	*e*P	P		**00 35 54.0 +1.4**
	comp=Z,40nm,0.6s,mb5.6					
KZA	**Kyzart**	**50.72 298**	P	P		**00 35 58.5 +2.3**
	SNR=20					
KBK	**Karagaybulak**	**50.77 299**	P	P		**00 35 57.8 +1.2**
	SNR=53					
CHMS	**Chumysh**	**50.81 299**	P	P		**00 35 57.6 +0.8**
	SNR=14					
USP	**Ospenovka**	**50.91 300**	P	P		**00 35 58.4 +0.7**
	SNR=7.3					
FRU	**Bishkek**	**50.95 299**	*e*P	P		**00 35 58.0 +0.1**
FRU			*e*			00 36 10.0
FRU			pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1					
FRU			MLR	MLR		
	comp=N,2μm,18.0s					
KSH	**Kashi**	**50.97 295**	*e*P	P		**00 36 02.5 +4.4**
KSH			*e*pP	pP		00 36 07.0 +1.0
KSH			*e*sP	sP		00 36 09.6 +0.6
KSH			*e*PcP	PcP		00 37 17.1 +3.0
KSH			*e*ScP	ScP		00 41 11.5 +2.8
KSH			*e*PcS	PcS		00 41 13.5 +1.9
KSH			*e*S	S		**00 43 19.9 +6.4**
KSH			*e*sS	sS		00 43 27.5 +1.2
KSH			*e*ScS	ScS		00 45 49.0 +1.9
KSH			*e*SS	SS		00 46 53.5 +5.3
KSH			pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2					
KSH			LR	LR		
	comp=N,2μm,14.1s,MS5.3					
KSH			LR	LR		
	comp=E,2μm,15.7s,MS5.3					
KSH			LR	LR		
	comp=Z,3μm,15.4s,MS5.3					
AAK	**Ala-Archa**	**51.09 299**	P	P		**00 35 59.3 +0.3**
	comp=Z,247nm,0.6s,mb6.3,SNR=22					
AAK	**Ala-Archa**	**51.09 299**	P	P		**00 35 59.9 +0.9**
	SNR=30					
AAK	**Ala-Archa**	**51.09 299**	*c i*P	P		**00 35 59.6 +0.6**
AAK			pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0					
AAK	**Ala-Archa**	**51.09 299**	LR	LR		00 59 03.8
	comp=Z,2μm,18.6s,MS5.1,baz=57,slow=38					
AAK	**Ala-Archa**	**51.09 299**	*e*P	P		**00 35 59.8 +0.8**
	comp=Z,25nm,0.6s,mb5.3					
AAK	**Ala-Archa**	**51.09 299**	P	P		**00 36 00.2 +1.2**
	SNR=8.2					
AAK			P			00 36 00.2
	SNR=8.2					
UCH	**Uchtor**	**51.20 299**	P	P		**00 36 01.5 +1.7**
	SNR=16					
UCH	**Uchtor**	**51.20 299**	*e*P	P		**00 36 01.0 +1.2**
	comp=Z,12nm,0.7s,mb4.9					
BVAR	**Borovoye Array**	**51.29 313**	P	P		**00 36 00.5 +0.2**
BVAR						00 37 15.1
BVAR			pmax	pmax		
	comp=Z,19nm,0.8s					
BVAR			MLR	MLR		
	comp=Z,1μm,18.5s					
BVAR	**Borovoye Array**	**51.29 313**	P	P		**00 36 00.5 +0.2**
	comp=Z,19nm,0.8s,mb5.1,baz=81,slow=9.2,SNR=67					
BVAR			PcP	PcP		00 37 15.1 +0.1
	comp=Z,11nm,0.7s,baz=92,slow=4.4,SNR=5.4					
BVAR			LR	LR		00 58 55.1
	comp=Z,1μm,18.5s,MS4.9,slow=37					
BRVK	**Borovoye**	**51.35 313**	P	P		**00 36 01.0 +0.3**
	comp=Z,238nm,0.9s,mb6.1,SNR=14					
BRVK	**Borovoye**	**51.35 313**	*c i*P	P		**00 36 00.8 +0.1**
BRVK			pmax	pmax		
	comp=Z,36nm,0.8s,mb5.3					
BRVK	**Borovoye**	**51.35 313**	*e*P	P		**00 36 01.1 +0.3**
	comp=Z,36nm,0.9s,mb5.3					
BRVK	**Borovoye**	**51.35 313**	P	P		**00 36 01.4 +0.7**
	SNR=17					
BRVK			P			00 36 01.4
	SNR=17					
MENT	**Mentasta**	**51.52 34**	*e*P	P		**00 36 02.8 +0.9**
EKS2	**Erkin-Say**	**51.59 299**	P	P		**00 36 03.6 +0.8**
	SNR=20					
EKS2	**Erkin-Say**	**51.59 299**	*e*P	P		**00 36 03.0 +0.3**
	comp=Z,17nm,0.7s,mb5.1					
EKS2			*e*PcP	PcP		00 37 16.5 +0.2
AML	**Almayashu**	**51.81 299**	P	P		**00 36 06.0 +1.6**
	SNR=78					
AML	**Almayashu**	**51.81 299**	*e*P	P		**00 36 06.0 +1.7**
	comp=Z,42nm,0.5s,mb5.6					
AML			*e*PcP	PcP		00 37 16.9 -0.3
EGAK	**Eagle**	**52.45 32**	*e*P	P		**00 36 08.9 0.0**
	comp=Z,139nm,2.7s,mb5.4					
SMLA	**Simla**	**53.10 284**	⇑*i*P	P		**00 36 13.7 -0.5**
SMLA			*i* x	x		00 40 21.9
SDNR	**Sundarnagar**	**53.10 285**	*e*P	P		**00 36 14.1 0.0**
NDI	**New Delhi**	**54.09 282**	*e*P	P		**00 36 19.0 -2.4**
HYT	**Haines Junctio**	**54.76 36**	*e*P	P		**00 36 26.8 +1.0**
INK	**Inuvik**	**54.95 27**	*e*P	P		**00 36 27.5 +0.4**
INK			pmax	pmax		
	comp=Z,14nm,0.7s					
INK	**Inuvik**	**54.95 27**	*e*P	P		**00 36 27.4 +0.4**
	comp=Z,14nm,0.7s,mb5.1					
SVE	**Sverdlovsk**	**55.90 319**	⇓*e*P	P		**00 36 34.5 +0.4**
SVE			*e*PPP			00 39 55.7
SVE			pmax	pmax		
	comp=Z,62nm,1.0s,mb5.6					
SVE			MLR	MLR		
	comp=Z,1μm,15.0s,MS5.0					
FITZ	**Fitzroy Crossi**	**56.17 199**	*e*P	P		**00 36 36.2 -0.2**
	comp=Z,20nm,0.6s,mb5.3					
FITZ	**Fitzroy Crossi**	**56.17 199**	P	P		**00 36 36.0 -0.4**
	baz=15,slow=10.0					
FITZ	**Fitzroy Crossi**	**56.17 199**	*e*P	P		**00 36 36.5 +0.1**
	comp=Z,13nm,0.8s,mb5.0					
CTAO	**Charters Tower**	**56.20 175**	*e*P	P		**00 36 35.5 -1.0**
WRAB	**Tennant Creek**	**56.32 188**	P	P		**00 36 36.9 -0.5**
	comp=Z,161nm,0.6s,mb6.2,SNR=8.2					
WRAB	**Tennant Creek**	**56.32 188**	*e*P	P		**00 36 36.3 -1.1**
WRAB			pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2					
WRAB	**Tennant Creek**	**56.32 188**	*e*P	P		**00 36 36.3 -1.1**
	comp=Z,22nm,0.8s,mb5.2					
WRA	**Warramunga Arr**	**56.34 188**	P	P		**00 36 36.4 -1.0**
	comp=Z,12nm,0.8s,mb5.0,baz=6.5,slow=7.4,SNR=67					
WRA			LR	LR		00 59 29.4
	comp=Z,54nm,22.0s,MS3.6,baz=270,slow=35					
BHPL	**Bhopal**	**56.41 276**	*e*P	P		**00 36 37.6 -0.7**
BHPL			AMb	AMB		00 36 40.8
	comp=Z,23nm,1.1s,mb5.1					
SOKR	**Solikamsk**	**57.11 323**	*c i*P	P		**00 36 42.9 +0.3**
SOKR			pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2					
SOKR			MLR	MLR		
	comp=Z,330nm,12.0s,MS4.7					
AJM	**Ajmer**	**57.11 281**	*e*P	P		**00 36 43.1 -0.1**
ARU	**Arti**	**57.12 319**	P	P		**00 36 42.7 0.0**
	comp=Z,340nm,0.9s,mb6.4,SNR=19					
ARU	**Arti**	**57.12 319**	*c i*P	P		**00 36 42.7 0.0**
ARU						00 37 35.5
ARU			*e*			00 38 46.0
ARU			S	S		**00 44 37.2 +1.2**
ARU			SS	SS		00 48 23.0 -1.4
ARU			pmax	pmax		
	comp=Z,109nm,1.7s,mb5.6					
ARU			MLR	MLR		
	comp=Z,832nm,17.0s,MS4.9					
ARU	**Arti**	**57.12 319**	*e*P	P		**00 36 42.4 -0.3**
	comp=Z,47nm,0.8s,mb5.6					
KBL	**Kabul**	**57.94 292**	*e*P	P		**00 36 49.0 +0.1**
KBL			pmax	pmax		
	comp=Z,39nm,1.3s,mb5.3					
KBL	**Kabul**	**57.94 292**	*e*P	P		**00 36 49.0 +0.1**
	comp=Z,39nm,1.3s,mb5.3					
HYB	**Hyderabad**	**58.45 269**	*i* P	P		**00 36 52.0 -0.7**
HYB			*e*			00 37 10.0
ABKAR	**Akbulak array**	**58.64 311**	*e*P	P		**00 36 53.2 -0.3**
	comp=Z,26nm,0.6s,mb5.4					
ABKAR			*e*	pP		00 36 59.8 -1.6
DLBC	**Dease Lake**	**59.07 38**	*e*P	P		**00 36 58.1 +1.7**
ASAR	**Alice Springs**	**60.06 188**	P	P		**00 37 02.7 -0.8**
ASAR			pmax	pmax		
	comp=Z,5.0nm,0.7s					
ASAR	**Alice Springs**	**60.06 188**	P	P		**00 37 02.7 -0.8**
	comp=Z,4.7nm,0.7s,mb4.6,baz=16,slow=8.3,SNR=51					
MBWA	**Marble Bar**	**60.79 204**	*e*P	P		**00 37 08.2 -0.3**
	comp=Z,13nm,0.5s,mb5.3					
ALE	**Alert**	**60.86 4**	P	P		**00 37 08.0 -0.4**
	comp=Z,167nm,0.7s,mb6.3,SNR=10					
KBS	**Kingsbay**	**61.46 350**	*c i*P	P		**00 37 12.9 +0.4**
KBS			pmax	pmax		
	comp=Z,39nm,1.0s,mb5.5					
KBS	**Kingsbay**	**61.46 350**	*e*P	P		**00 37 13.5 +1.1**
POO	**Poona**	**61.67 273**	*e*P	P		**00 37 14.8 0.0**
POO			AMb	AMB		00 37 15.9
	comp=Z,38nm,0.7s,mb5.6					
KAD	**Karad**	**62.04 272**	*e*P	P		**00 37 16.2 -1.0**
KAD			AMb	AMB		00 37 18.5
	comp=Z,37nm,0.9s,mb5.5					
PALK	**Pallekele**	**62.47 258**	P	P		**00 37 20.0 -0.1**
DZM	**Mont Dzumac**	**62.54 154**	*e*S	S		**00 45 42.2 -4.2**
	comp=Z,113nm,24.5s					
DZM			*e*LR	LR		00 55 51.6
	comp=Z,408nm,21.1s					
DZM	**Mont Dzumac**	**62.54 154**	P	P		**00 37 21.0 +0.7**
	comp=Z,32nm,1.3s,mb5.3					
BHJ	**Bhuj**	**62.63 280**	*e*P	P		**00 37 21.5 +0.4**
RES	**Resolute Bay**	**63.28 14**	P	P		**00 37 24.4 -0.3**
RES			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3					
RES	**Resolute Bay**	**63.28 14**	P	P		**00 37 24.4 -0.2**
	comp=Z,20nm,0.8s,mb5.3,baz=308,slow=6.7,SNR=99					
RES	**Resolute Bay**	**63.28 14**	*e*P	P		**00 37 24.4 -0.2**
	comp=Z,23nm,0.8s,mb5.4					
APA	**Apatity**	**63.50 336**	⇑*i*P	P		**00 37 24.4 -1.8**
APA			pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4					
APA			MLR	MLR		
	comp=Z,700nm,15.0s,MS5.0					
KEV	**Kevo**	**64.26 339**	*e*P	P		**00 37 29.1 -2.0**
KEV			pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2					
KEV	**Kevo**	**64.26 339**	*e*p	P		**00 37 29.1 -2.0**
	comp=Z,18nm,0.8s,mb5.2					
YKA	**Yellowknife Ar**	**64.34 30**	P	P		**00 37 31.4 -0.4**
YKA			pmax	pmax		
	comp=Z,7.0nm,0.7s					
YKA	**Yellowknife Ar**	**64.34 30**	P	P		**00 37 31.4 -0.4**
	comp=Z,6.7nm,0.7s,mb4.8,baz=302,slow=6.7,SNR=83					
YKA	**Yellowknife Ar**	**64.34 30**	P	P		**00 37 31.4 -0.4**
ABKT	**Ailbek**	**64.44 299**	P	P		**00 37 33.5 +0.6**
	comp=Z,109nm,0.8s,mb5.9,SNR=7.4					
KLMR	**Klimovskoe**	**64.55 328**	⇑*i*P	P		**00 37 33.2 0.0**
KLMR			pmax	pmax		
	comp=Z,25nm,0.7s,mb5.3					
ARCES	**ARCESS Array B**	**64.81 340**	P	P		**00 37 35.1 +0.3**
ARCES			pmax	pmax		
	comp=Z,17nm,0.7s					
ARCES	**ARCESS Array B**	**64.81 340**	P	P		**00 37 35.1 +0.3**
	comp=Z,17nm,0.7s,mb5.2,baz=49,slow=7.6,SNR=32					
DAG	**Danmarks Havn**	**66.56 355**	⇓*e*P	P		**00 37 46.1 +0.1**
DAG			pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7					
DAG	**Danmarks Havn**	**66.56 355**	⇓*i*P	P		**00 37 46.1 +0.1**
	comp=Z,6.7nm,0.8s,mb4.7					
JOF	**Joensuu**	**66.77 332**	*e*P	P		**00 37 45.5 -2.0**
JOF			pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2					
JOF	**Joensuu**	**66.77 332**	*e*p	P		**00 37 45.5 -2.0**
	comp=Z,17nm,0.6s,mb5.2					
ARMA	**Armidale**	**66.97 171**	*e*P	P		**00 37 48.8 -0.3**
NLWA	**Neilton Lookou**	**67.04 47**	⇓pP	P		**00 37 50.8 +1.3**
	baz=67					
NLWA	**Neilton Lookou**	**67.04 47**	*e*P	P		**00 37 51.0 +1.5**
E03A	**Lebam**	**67.64 48**	⇑P	P		**00 37 53.1 -0.1**
	baz=68					
STKA	**Stephens Creek**	**67.78 180**	*e*P	P		**00 37 53.6 -0.5**
	comp=Z,9.1nm,0.8s,mb4.9					
STKA	**Stephens Creek**	**67.78 180**	P	P		**00 37 53.8 -0.3**
	comp=Z,7.8nm,0.8s,mb4.8,baz=335,slow=7.0,SNR=20					
STKA			LR	LR		01 06 58.8
	comp=Z,195nm,18.8s,MS4.4,baz=23,slow=36					
STKA	**Stephens Creek**	**67.78 180**	*e*P	P		**00 37 53.9 -0.3**
JCW	**Jim Creek**	**67.79 46**	P	P		**00 37 55.1 +0.9**
FORT	**Forrest**	**67.91 193**	*e*P	P		**00 37 54.3 -0.7**
	comp=Z,43nm,0.7s,mb5.6					
FORT	**Forrest**	**67.91 193**	*e*P	P		**00 37 54.6 -0.4**
	comp=Z,52nm,0.8s,mb5.6					
MOS	**Moscow**	**68.03 324**	*e*P	P		**00 37 54.6 -1.0**
MOS			pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6					
MOS			MLR	MLR		
	comp=Z,700nm,17.0s,MS5.0					
D05A	**Enumclaw**	**68.25 47**	⇓P	P		**00 37 55.6 -1.5**
	baz=68					
VRHR	**Novokhopersk**	**68.44 318**	*e*P	P		**00 37 57.4 -0.8**
VRHR			pmax	pmax		
	comp=E,10.0nm,0.8s					
VRHR			pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4					
VRHR			pmax	pmax		
	comp=N,10.0nm,1.2s					
VRHR			MLR	MLR		
	comp=Z,930nm,17.0s,MS5.1					
VRHR			MLR	MLR		
	comp=N,690nm,14.0s,MS5.1					
VRHR			MLR	MLR		
	comp=E,360nm,12.0s,MS5.1					
TDL	**Tradedollar La**	**68.54 48**	P	P		**00 38 00.1 +1.1**
LON	**Longmire**	**68.58 47**	*e*P	P		**00 37 59.3 +0.1**
LON			pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7					
LON	**Longmire**	**68.58 47**	*e*P	P		**00 37 59.3 +0.1**
	comp=Z,7.6nm,0.9s,mb4.6					
F04A	**Amboy**	**68.63 48**	⇓P	P		**00 37 58.1 -1.4**
	baz=68					
B07A	**Winthrop**	**68.69 45**	⇓P	P		**00 37 58.9 -1.0**
	baz=68					
OBN	**Obninsk**	**68.87 324**	*c i*P	P		**00 38 00.6 -0.3**
OBN			*i*			00 38 22.6
OBN			*e*S	S		00 47 04.2 +1.0
OBN			*e*SS	SS		00 51 32.1 +4.4
OBN			pmax	pmax		
	comp=Z,75nm,1.6s,mb5.4					
OBN			MLR	MLR		
	comp=Z,600nm,16.0s,MS4.9					
OBN	**Obninsk**	**68.87 324**	*e*P	P		**00 38 00.8 0.0**
	comp=Z,19nm,0.6s,mb5.2					
A08A	**Turner Farm, O**	**68.92 44**	⇑P	P		**00 38 00.9 -0.4**
	baz=69					
D06A	**Cle Elum**	**68.92 46**	⇓P	P		**00 38 00.2 -1.1**
	baz=69					
ETW	**Entiat**	**69.01 46**	*e*P	P		**00 38 02.3 +0.4**
KAF	**Kangasniemi**	**69.11 333**	*e*P	P		**00 38 00.3 -1.9**
KAF			pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2					
KAF	**Kangasniemi**	**69.11 333**	*e*p	P		**00 38 00.3 -1.9**
	comp=Z,17nm,0.6s,mb5.2					
C07A	**Waterville**	**69.12 46**	⇓P	P		**00 38 01.7 -0.9**
	baz=69,SNR=6.1					
E06A	**Yakima**	**69.18 47**	⇑P	P		**00 38 02.8 -0.1**
	baz=69					
WTV	**Waterville**	**69.18 46**	P	P		**00 38 03.3 +0.4**
B08A	**Colville Reser**	**69.20 45**	⇑P	P		**00 38 01.7 -1.3**
	baz=69,SNR=7.5					
EBG	**Ellensburg**	**69.23 47**	P	P		**00 38 04.2 +1.0**
A09A	**Danville**	**69.30 44**	⇓pP	P		**00 38 04.0 +0.4**
	baz=69					
HOOD	**Mount Hood Mea**	**69.40 48**	*e*P	P		**00 38 05.0 +0.7**
	comp=Z,30nm,0.9s,mb5.2					
H04A	**Detroit Lake**	**69.41 49**	⇓P	P		**00 38 03.1 -1.2**
	baz=69					
D07A	**Quincy**	**69.43 46**	⇑P	P		**00 38 03.9 -0.6**
	baz=69					
FINES	**FIN

VSR MLR MLR
comp=N,330nm,15.0s,MS5.1
VSR MLR MLR
comp=E,700nm,16.0s,MS5.1
VORD Divnogorie 69.76 319 *e*P **P 00 38 05.9 -0.5**
VORD *e**PP pP 00 38 12.8 -1.7
VORD pmax pmax
comp=Z,20nm,0.7s,mb5.2
VORD pmax pmax
comp=N,5.0nm,0.4s
VORD pmax pmax
comp=E,5.0nm,0.5s
VORD MLR MLR
comp=Z,830nm,16.0s,MS5.1
VORD MLR MLR
comp=N,250nm,15.0s,MS5.0
VORD MLR MLR
comp=E,650nm,17.0s,MS5.0
EDM Edmonton 69.79 38 *e*P **P 00 38 06.7 +0.2**
B09A Rice 69.83 44 ⇓P **P 00 38 06.1 -0.8**
baz=70,SNR=6.1
A10A Northport 69.87 44 ⇓P **P 00 38 07.6 +0.5**
baz=70
OD2 Odessa Site #2 70.06 45 P **P 00 38 08.5 +0.2**
G06A Carlson Farm, 70.06 48 ⇓P **P 00 38 07.8 -0.6**
baz=70
C09A Chrisman Ranch 70.09 45 ⇓P **P 00 38 07.7 -0.8**
baz=70
HAWA Hanford 70.11 47 *e*P **P 00 38 09.8 +1.1**
D08A Wollman Farm, 70.12 46 ⇓P **P 00 38 07.8 -0.8**
baz=70,SNR=6.3
F07A Phinny Hill Vi 70.14 47 ⇓P **P 00 38 06.7 -2.1**
baz=70
VIPM Ingram Point 70.45 49 P **P 00 38 11.7 +0.9**
D09A Jones Farm, Ri 70.47 46 ⇓P **P 00 38 10.4 -0.4**
baz=70
NEW Newport 70.50 44 *e*P **P 00 38 11.4 +0.4**
A11A Hall Mountain, 70.54 43 ⇑P **P 00 38 11.4 +0.1**
baz=70,SNR=10
YBH Yreka Blue Hor 70.61 52 *e*P **P 00 38 12.3 +0.5**
E09A Wood Farm, Sta 70.86 46 ⇓P **P 00 38 13.0 -0.2**
baz=71
F08A Pendleton 70.87 47 ⇑P **P 00 38 12.3 -1.1**
baz=71
G08A Pilot Rock 71.04 47 ⇓P **P 00 38 13.9 -0.4**
baz=71
D10A Wagner Farm, O 71.07 45 ⇑P **P 00 38 13.8 -0.6**
baz=71
LNOR Lincton Mounta 71.12 47 *e*P **P 00 38 16.1 +1.3**
K05A Summer Lake 71.23 51 ⇑P **P 00 38 14.3 -1.3**
baz=71
K05A ⇓pP pP 00 38 17.0 -6.6
baz=71
VSU Vasula 71.25 330*c i*P **P 00 38 15.5 +0.1**
VSU pmax pmax
comp=Z,66nm,0.9s,mb5.6
I07A Izee 71.36 49 ⇓P **P 00 38 16.3 0.0**
baz=71
SUMG Summit 71.46 0 *e*P **P 00 38 17.3 +0.9**
E10A Myers Farm, Un 71.47 46 ⇑P **P 00 38 17.2 +0.3**
baz=71,SNR=5.0
ZEI Tsey 71.51 310 *e*P **P 00 38 15.7 -1.5**
ZEI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CAN Canberra 71.54 174 P **P 00 38 17.0 -0.2**
CAN pmax pmax
comp=Z,38nm,1.5s,mb5.1
CAN Canberra 71.54 174 P **P 00 38 17.0 -0.2**
comp=Z,38nm,1.5s,mb5.1
BIDO Bidbid 71.57 286 P **P 00 38 19.3 +1.4**
SNR=5.4
D11A Klaveano Farm, 71.61 45 ⇑P **P 00 38 17.5 -0.3**
baz=71,SNR=12
KIV Kislovodsk 71.61 311 P **P 00 38 18.2 +0.4**
comp=Z,306nm,0.7s,mb6.3,SNR=6.6
KIV Kislovodsk 71.61 311*c i*P **P 00 38 18.3 +0.5**
KIV *e* 00 38 35.4
KIV *e*PPP 00 42 37.1
KIV *e*S S 00 47 36.4 +0.8
KIV pmax pmax
comp=Z,47nm,1.0s,mb5.4
KIV pmax pmax
comp=Z,43nm,5.0s
KIV MLR MLR
comp=Z,352nm,19.0s,MS4.7
KIV Kislovodsk 71.61 311 *e*P **P 00 38 17.6 -0.3**
comp=Z,38nm,0.8s,mb5.4
KIV Kislovodsk 71.61 311 P **P 00 38 18.8 +1.0**
SNR=14
KIV P 00 38 18.8
SNR=14
H08A Prairie City 71.63 48 ⇑P **P 00 38 17.9 0.0**
baz=72
A13A Flathead Natio 71.63 42 ⇓pP **P 00 38 18.5 +0.7**
baz=72
F10A Beach Ranch, E 71.69 46 ⇑pP **P 00 38 19.2 +1.0**
baz=72
G09A Cove 71.74 47 ⇓P **P 00 38 18.8 +0.3**
baz=72
WALA Waterton Lakes 71.83 42 *e*P **P 00 38 19.7 +0.6**
B13A Whitefish 71.91 43 ⇓P **P 00 38 19.7 +0.1**
baz=72,SNR=8.9
LBCM Butte Creek Ri 71.95 52 P **P 00 38 20.5 +0.6**
BSMT Bassoo Peak 72.03 44 *e*P **P 00 38 21.1 +0.9**
E11A Bogner Ranch, 72.06 45 ⇑P **P 00 38 20.3 -0.2**
baz=72,SNR=8.0
G10A Bishop Farm, J 72.12 47 ⇑P **P 00 38 20.6 -0.3**
baz=72,SNR=9.8
A14A Double T Ranch 72.14 42 ⇑P **P 00 38 20.9 -0.1**
baz=72,SNR=5.3
D12A Red Ives Fores 72.16 44 ⇑P **P 00 38 21.0 -0.1**
baz=72
C13A Hot Springs 72.25 44 ⇑P **P 00 38 21.9 +0.3**
baz=72,SNR=5.6
BMO Blue Mountains 72.26 47 *e*P **P 00 38 22.4 +0.7**
F11A Grangeville 72.36 46 ⇑P **P 00 38 22.4 +0.1**
baz=72,SNR=5.9
JTMT Jette 72.37 43 *e*P **P 00 38 23.2 +0.9**
J08A Circle Bar Ran 72.38 49 ⇑P **P 00 38 21.8 -0.6**
baz=72
GNI Garni 72.38 307 *e*P **P 00 38 22.8 +0.3**
GNI pmax pmax
comp=Z,17nm,1.0s
GNI Garni 72.38 307 *e*P **P 00 38 22.8 +0.3**
comp=Z,17nm,1.0s,mb4.9
E12A Beaver Dam Sad 72.40 45 ⇓P **P 00 38 22.9 +0.4**
baz=72,SNR=30
YBMT Yellow Bay 72.45 43 *e*P **P 00 38 23.6 +0.8**
I09A Lost Marbles R 72.48 48 ⇓P **P 00 38 22.4 -0.6**
baz=72,SNR=5.2
NWAO Narrogin (SRO) 72.55 201 P **P 00 38 22.1 -1.2**
NWAO pmax pmax
comp=Z,11nm,0.8s
NWAO Narrogin (SRO) 72.55 201 P **P 00 38 22.1 -1.3**
comp=Z,11nm,0.8s,mb4.9,baz=28,slow=7.4,SNR=6.0
NWAO Narrogin (SRO) 72.55 201 P **P 00 38 22.9 -0.5**
G11A Walters Elk Ra 72.56 46 ⇓P **P 00 38 23.4 -0.1**
baz=72,SNR=30
D13A Huson 72.64 44 ⇓P **P 00 38 23.0 -1.0**
baz=72,SNR=11
C14A Swan Lake 72.66 43 ⇓P **P 00 38 23.9 -0.1**
baz=72
SWMT Swartz Lake 72.66 43 *e*P **P 00 38 24.4 +0.4**
BSY Bisya 72.70 286 P **P 00 38 25.3 +0.6**
SNR=5.4
J09A Fry Pan Ranch, 72.82 49 ⇓P **P 00 38 23.6 -1.5**
baz=73,SNR=5.3
J09A ⇑pP pP 00 38 25.6 -7.6
baz=73
SCO Scoresbysund 72.91 354 *i*P **P 00 38 25.8 +0.7**
SCO pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SCO MLR MLR
comp=Z,100nm,18.0s,MS4.1
SCO Scoresbysund 72.91 354 *i*P **P 00 38 25.8 +0.7**
comp=Z,9.0nm,0.9s,mb4.7
SCO
comp=Z,100nm,18.0s
ARQ Araqi 72.91 287 P **P 00 38 26.9 +1.0**
SNR=7.4
F12A Elk City 72.95 46 ⇑P **P 00 38 26.0 +0.2**
baz=73,SNR=9.7
B15A Bradely Ranch, 72.99 42 ⇑P **P 00 38 26.2 +0.2**
baz=73,SNR=8.4
MSO Missoula 73.09 44 *e*P **P 00 38 25.9 -0.7**
comp=Z,4.5nm,1.0s,mb4.3
SLMT Seeley Lake 73.10 44 *e*P **P 00 38 26.8 +0.1**

H11A Donnelly 73.11 47 ⇓P **P 00 38 26.6 -0.1**
baz=73,SNR=10
BEKR Beckwourth 73.11 53 ⇑P **P 00 38 27.0 +0.2**
baz=73
A16A West Butte Ran 73.14 41 ⇓P **P 00 38 26.8 -0.1**
baz=73
E13A Victor 73.17 44 ⇑P **P 00 38 26.6 -0.4**
baz=73
D14A Greenough 73.19 44 ⇑P **P 00 38 26.7 -0.5**
baz=73,SNR=8.2
IZAR Zarasai 73.20 328 *i*P **P 00 38 27.6 +0.5**
G12A Big Creek, Yel 73.27 46 ⇓P **P 00 38 26.2 -1.4**
baz=73
IDID Didziasalis 73.27 327 *i*P **P 00 38 27.9 +0.4**
C15A Salmond Ranch, 73.28 43 ⇑P **P 00 38 27.9 +0.2**
baz=73,SNR=16
ISAL Salakas 73.37 328 *i*P **P 00 38 28.6 +0.5**
B16A M & M Farms, S 73.39 42 ⇑P **P 00 38 27.1 -1.3**
baz=73,SNR=5.3
CHMT Chamberlain Mo 73.42 44 *e*P **P 00 38 28.7 +0.1**
F13A Darby 73.46 45 ⇑P **P 00 38 28.1 -0.8**
baz=73,SNR=8.7
NACGM Naroch 73.52 327 *e* **P 00 38 26.0 -3.0**
E14A Clinton 73.58 44 ⇓P **P 00 38 28.2 -1.2**
baz=73
SOC Sochi 73.61 312*c i*P **P 00 38 28.8 -0.9**
SOC *e**PP pP 00 38 38.8 +0.9
SOC *e* 00 38 41.9
SOC *e* 00 41 22.8
SOC *e*S S 00 47 55.2 -3.2
SOC *e*S S 00 47 57.5 -0.9
SOC *e* 00 48 39.2
SOC *e*SS SS 00 52 43.5 +2.6
SOC pmax pmax
comp=Z,18nm,0.8s,mb5.0
SOC MLR MLR
comp=Z,328nm,17.0s,MS4.7
A17A Triple J Farms 73.62 41 ⇓P **P 00 38 29.2 -0.5**
baz=73
K10A MacKenzie Ranc 73.68 49 ⇑P **P 00 38 28.5 -1.6**
baz=74
C16A Fuhringer Ranc 73.73 42 ⇑P **P 00 38 30.4 0.0**
baz=74,SNR=10
D15A Lincoln 73.76 43 ⇓P **P 00 38 28.7 -1.8**
baz=74
H12A Diamond D Ranc 73.87 46 ⇓P **P 00 38 30.6 -0.6**
baz=74,SNR=10
G13A Cobalt 73.92 46 ⇓P **P 00 38 30.6 -1.0**
baz=74,SNR=11
MFID Camas Ranch 73.95 48 ⇑P **P 00 38 30.7 -1.0**
baz=74
B17A L&G Farms, Che 73.95 42 ⇓P **P 00 38 31.6 -0.1**
baz=74,SNR=9.5
E15A Deer Lodge 74.05 44 ⇑P **P 00 38 31.9 -0.4**
baz=74,SNR=13
A18A Metzger Ranch, 74.08 41 ⇓P **P 00 38 31.4 -1.0**
baz=74
CMB Columbia Colle 74.10 54 *e*P **P 00 38 32.9 +0.2**
I12A Atlanta 74.14 47 ⇓P **P 00 38 32.6 -0.2**
baz=74,SNR=7.9
K11A Parker Ranch, 74.19 48 ⇑P **P 00 38 32.5 -0.6**
baz=74
FFC Flin Flon 74.21 33 P **P 00 38 32.6 -0.4**
comp=Z,65nm,0.8s,mb5.6,SNR=6.2
FFC Flin Flon 74.21 33 *e*P **P 00 38 32.7 -0.3**
H13A Challis 74.21 46 ⇑P **P 00 38 33.4 +0.1**
baz=74,SNR=15
ANN Anapa 74.26 314 *e*P **P 00 38 32.1 -1.4**
ANN *e**PP pP 00 38 44.3 +2.7
ANN *e* 00 38 48.1
ANN *e* 00 41 17.9
ANN *e*S S 00 48 02.4 -3.2
ANN pmax pmax
comp=Z,72nm,1.3s,mb5.4
D16A Dana Ranch, Ca 74.30 43 ⇑P **P 00 38 33.4 -0.3**
baz=74,SNR=9.6
HRY Holter Researc 74.33 43 *e*P **P 00 38 34.6 +0.7**
C17A Wharram Farm, 74.37 42 ⇑P **P 00 38 33.0 -1.0**
baz=74
B18A Beardsley Farm 74.44 41 ⇓P **P 00 38 33.6 -0.8**
baz=74,SNR=8.4
F15A Butte 74.48 44 ⇓P **P 00 38 35.2 +0.4**
baz=74,SNR=30
LRM Limekiln Ridge 74.51 44 *e*P **P 00 38 35.5 +0.5**
E16A East Helena 74.52 43 ⇓P **P 00 38 34.6 -0.4**
baz=74,SNR=12
FCC Fort Churchill 74.57 27 *e*P **P 00 38 34.6 -0.4**
comp=Z,0.4nm,1.1s
I13A Wildhorse Cree 74.67 47 ⇑P **P 00 38 35.9 0.0**
baz=74,SNR=6.3
EGMT Eagleton 74.67 41 ⇓P **P 00 38 35.8 -0.1**
baz=74,SNR=7.3
EGMT Eagleton 74.67 41 *e*P **P 00 38 35.8 -0.1**
comp=Z,13nm,0.9s,mb4.9
D17A Six Diamond Ra 74.70 42 ⇑P **P 00 38 35.6 -0.4**
baz=74,SNR=6.4
H14A Leadore 74.70 46 ⇓P **P 00 38 35.4 -0.7**
baz=74
DLMT Dillon 74.70 45 *e*P **P 00 38 37.0 +1.0**
HLID Hailey 74.70 47 ⇑P **P 00 38 35.2 -0.9**
baz=74
HLID Hailey 74.70 47 *e*P **P 00 38 37.0 +0.9**
L11A Cat Creek Ranc 74.70 49 ⇑P **P 00 38 35.6 -0.5**
baz=74,SNR=5.2
MCMT McKenzie Canyo 74.87 45 P **P 00 38 37.5 +0.4**
comp=Z,1.7nm,0.8s,mb4.0
G15A Dillon 74.88 45 ⇑P **P 00 38 35.4 -1.6**
baz=75,SNR=13
HFS Hagfors 74.90 336 P **P 00 38 36.1 -0.8**
HFS pmax pmax
comp=Z,21nm,0.8s
HFS Hagfors 74.90 336 P **P 00 38 36.1 -0.9**
comp=Z,21nm,0.8s,mb5.1,baz=57,slow=5.5,SNR=53
F16A Kennard Place, 75.00 44 ⇓pP **P 00 38 38.4 +0.6**
baz=75,SNR=5.7
NB2 NORSAR Subarra 75.00 337 P **P 00 38 37.2 -0.3**
comp=Z,44nm,0.9s,mb5.4,baz=39,slow=5.9
NB2 NORSAR Subarra 75.00 337 P **P 00 38 37.2 -0.3**
NB2 NORSAR Subarra 75.00 337 P **P 00 38 37.2 -0.3**
NOA NORSAR Array B 75.00 337 P **P 00 38 37.6 +0.1**
NOA pmax pmax
comp=Z,30nm,0.8s
NOA MLR MLR
comp=Z,334nm,18.9s
NOA NORSAR Array B 75.00 337 P **P 00 38 37.6 +0.1**
comp=Z,30nm,0.8s,mb5.3,baz=39,slow=5.8,SNR=126
NOA LR LR 01 15 04.2
comp=Z,334nm,18.9s,MS4.7,baz=55,slow=38
E17A Martinsdale 75.02 43 ⇑P **P 00 38 36.7 -1.1**
baz=75,SNR=11
E17A ⇓pP pP 00 38 39.0 -7.1
baz=75
I14A Mackay 75.05 46 ⇓pP **P 00 38 39.5 +1.4**
baz=75,SNR=15
AKASG Malin Array Be 75.07 323 P **P 00 38 37.9 -0.2**
AKASG pmax pmax
comp=Z,46nm,0.7s
AKASG MLR MLR
comp=Z,753nm,18.1s
AKASG Malin Array Be 75.07 323 P **P 00 38 37.9 -0.2**
comp=Z,46nm,0.7s,mb5.5,baz=46,slow=5.9,SNR=124
AKASG LR LR 01 14 39.4
comp=Z,753nm,18.1s,MS5.0,baz=55,slow=38
AKBB Malin Array Si 75.07 323 *e*P **P 00 38 37.5 -0.6**
BOZ Bozeman (W) 75.08 44 ⇑pP **P 00 38 38.9 +0.6**
baz=75,SNR=17
BOZ Bozeman (W) 75.08 44 *e*P **P 00 38 38.9 +0.6**
L12A House Creek Ra 75.17 48 ⇑P **P 00 38 38.3 -0.5**
baz=75
G16A Moss Hill, Enn 75.23 44 ⇓P **P 00 38 37.5 -1.6**
baz=75,SNR=5.1
NVAR Mina Array Bea 75.24 53 P **P 00 38 39.4 +0.1**
comp=Z,4.1nm,0.7s,mb4.5,baz=299,slow=6.8,SNR=11
NAO01 NORSAR Array S 75.25 337 *e*P **P 00 38 38.8 -0.1**
comp=Z,19nm,0.8s,mb5.1
J14A Carey 75.37 47 ⇓P **P 00 38 40.1 +0.1**
baz=75,SNR=8.0
F17A Fitzpatrick Pl 75.47 43 ⇓P **P 00 38 40.2 -0.2**
baz=75,SNR=8.3
E18A Harlowton 75.48 43 ⇓P **P 00 38 39.6 -0.9**
baz=75,SNR=7.0
M12A Wells 75.65 49 ⇓P **P 00 38 40.1 -1.5**
baz=76
QLMT Earthquake Lak 75.68 45 *e*P **P 00 38 42.8 +1.1**
SUW Suwalki 75.68 328 *e*P **P 00 38 41.2 -0.4**
SUW *e*pP pP 00 38 46.7 -3.0
SUW *e*PcP PcP 00 38 52.3 -1.9
SUW LMZ 01 14 48.8
comp=Z,600nm,18.1s
SUW Suwalki 75.68 328 *e*P **P 00 38 41.4 -0.1**
G17A Pierce Place, 75.78 44 ⇑P **P 00 38 40.9 -1.3**
baz=76
ELK Elko 75.84 50 P **P 00 38 43.1 +0.4**
H16A Russell Place, 75.86 45 ⇑P **P 00 38 41.4 -1.4**
baz=76,SNR=7.4
N12A Clover Valley, 75.91 50 ⇑P **P 00 38 42.2 -0.8**
baz=76
O11A Cowboy Ranch, 75.94 50 ⇓P **P 00 38 42.2 -1.1**
baz=76
J15A Blackfoot 75.96 46 ⇓P **P 00 38 43.0 -0.3**
baz=76,SNR=5.7
F18A Big Timber 75.99 43 ⇑P **P 00 38 41.5 -2.0**
baz=76,SNR=5.8
K14A Jones Ranch, D 76.03 47 ⇑P **P 00 38 42.7 -1.1**
baz=76
YMR Madison River 76.04 45 *e*P **P 00 38 44.1 +0.4**
comp=Z,12nm,0.4s,mb5.2
SIM Simferopol' 76.07 316*c i*P **P 00 38 44.0 +0.1**
SIM S S 00 48 27.0 +1.3
SIM pmax pmax
comp=Z,36nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,320nm,16.7s,MS4.7
GCMT Greycliff 76.09 43 *e*P **P 00 38 44.2 +0.3**
comp=Z,4.0nm,0.7s,mb4.5
M13A Montello 76.14 49 ⇑P **P 00 38 43.1 -1.3**
baz=76
M13A Montello 76.14 49 *e*P **P 00 38 44.7 +0.3**
comp=Z,2.2nm,0.8s,mb4.1
UMR Umm Al-Rimmam 76.14 296 *e*P **P 00 38 43.8 -0.9**
UMR AMb AMB 00 38 45.9
comp=Z,21nm,0.5s,mb5.3
I16A Newdale 76.23 45 ⇓pP **P 00 38 46.6 +1.8**
baz=76,SNR=21
MIB Mutribah 76.28 297 *e*P **P 00 38 44.5 -0.9**
MIB AMb AMB 00 38 46.7
comp=Z,22nm,0.9s,mb5.1
L14A Malta 76.30 48 ⇑P **P 00 38 43.8 -1.5**
baz=76,SNR=6.2
K15A Arbon 76.33 47 ⇑pP **P 00 38 46.9 +1.5**
baz=76
LKWY Lake 76.43 44 *e*P **P 00 38 48.7 +2.7**
O12A Currie 76.43 50 ⇑pP **P 00 38 47.2 +1.1**
baz=76
H17A Grant Village 76.43 45 ⇑pP **P 00 38 48.3 +2.3**
baz=76,SNR=14
QRN Al-Qurain 76.45 296 *e*P **P 00 38 45.9 -0.4**
QRN AMb AMB 00 38 47.1
comp=Z,44nm,0.7s,mb5.5
J16A Bone 76.52 46 ⇓P **P 00 38 45.3 -1.1**
baz=76
J16A ⇓pP pP 00 38 47.9 -6.8
baz=76
IMW Indian Meadow 76.53 45 *e*P **P 00 38 47.4 +0.8**
M14A Sheep Mountain 76.55 48 ⇑pP **P 00 38 47.6 +0.9**
baz=76,SNR=6.5
DCID1 Drake Creek 76.57 46 *e*P **P 00 38 48.9 +2.1**
RDF Al-Radifah 76.61 296 *e*P **P 00 38 46.7 -0.6**
RDF AMb AMB 00 38 48.5
comp=Z,49nm,0.9s,mb5.4
S10A Tonopah Range, 76.63 53 ⇑P **P 00 38 45.6 -1.6**
baz=76
S10A ⇓pP pP 00 38 48.0 -7.4
baz=76
SFJD Kangerlussuaq 76.63 5 P **P 00 38 45.8 -0.9**
SFJD pmax pmax
comp=Z,13nm,0.8s,mb4.9
SFJD Kangerlussuaq 76.63 5 P **P 00 38 45.8 -0.9**
comp=Z,13nm,0.8s,mb4.9,baz=313,slow=4.0,SNR=8.0
SFJD Kangerlussuaq 76.63 5 *i*P **P 00 38 46.2 -0.5**
comp=Z,13nm,0.8s,mb4.9
RRI2 Red Ridge 76.64 46 *e*P **P 00 38 48.7 +1.5**
Q11A Duckwater 76.69 52 ⇓pP **P 00 38 48.6 +1.0**
baz=76
RLMT Red Lodge 76.72 43 ⇓pP **P 00 38 48.7 +1.1**
baz=76
RLMT Red Lodge 76.72 43 *e*P **P 00 38 48.0 +0.4**
comp=Z,7.8nm,1.2s,mb4.5
RLMT *e*PcP PcP 00 38 58.5 -0.4
I17A Pilgrim Ck. 76.72 45 ⇓pP **P 00 38 49.8 +2.1**
baz=76,SNR=11
HVU Hansel Valley 76.73 48 *e*P **P 00 38 48.9 +1.2**
TPAW Teton Pass 76.77 46 *e*P **P 00 38 48.6 +0.7**
P12A McGill 76.80 51 ⇓pP **P 00 38 49.2 +1.1**
baz=77
K16A Soda Springs 76.80 46 ⇑pP **P 00 38 49.8 +1.7**
baz=77,SNR=8.6
L15A Malad City 76.83 47 ⇑pP **P 00 38 49.1 +0.8**
baz=77
LOHW Long Hollow 76.89 45 *e*P **P 00 38 49.6 +1.0**
REDW Red Top Meadow 76.90 46 *e*P **P 00 38 49.9 +1.2**
J17A Brown Place, J 76.98 46 ⇓pP pP 00 38 50.4 -6.8
baz=77
R11A Troy Canyon, C 77.03 52 ⇓P **P 00 38 48.4 -1.1**
baz=77
R11A ⇑pP pP 00 38 50.2 -7.4
baz=77
N14A Grayback Hills 77.04 49 ⇓pP pP 00 38 50.4 -7.2
baz=77,SNR=7.6
BGU Big Grassy Mou 77.09 49 *e*P **P 00 38 50.1 +0.3**
comp=Z,4.7nm,0.8s,mb4.5
BGU *e*PcP PcP 00 39 01.0 +0.5
Q12A Willow Creek R 77.10 51 ⇓pP **P 00 38 51.3 +1.4**
baz=77
M15A Larsen Ranch, 77.12 48 ⇑pP **P 00 38 50.9 +1.0**
baz=77,SNR=9.6
MPMC Manual Prospec 77.13 55 ⇑P **P 00 38 49.6 -0.5**
baz=77
SPUT South Promonto 77.21 48 *e*P **P 00 38 51.6 +1.1**
I18A Diamond G Ranc 77.29 45 ⇑pP **P 00 38 52.5 +1.6**
baz=77
LAO LASA Array 77.38 41 *e*P **P 00 38 51.9 +0.6**
comp=Z,13nm,1.0s,mb4.8
LAO *e*PcP PcP 00 39 01.9 +0.2
L16A Fish Haven 77.39 47 ⇑pP **P 00 38 52.6 +1.2**
baz=77,SNR=5.6
MALT Malatya 77.46 308 *e*P **P 00 38 52.8 +0.9**
MALT pmax pmax
comp=Z,15nm,1.0s,mb4.9
MALT Malatya 77.46 308 *e*P **P 00 38 52.8 +0.8**
comp=Z,15nm,1.0s,mb4.9
MALT Malatya 77.46 308 ⇑*i*P **P 00 38 53.1 +1.2**
FRB Frobisher Bay 77.46 13 P **P 00 38 51.3 -0.1**
FRB pmax pmax
comp=Z,14nm,0.7s
FRB Frobisher Bay 77.46 13 P **P 00 38 51.3 -0.2**
comp=Z,14nm,0.7s,mb5.0,baz=328,slow=6.2,SNR=31
J18A Kendall Valley 77.48 45 ⇓pP **P 00 38 53.0 +1.1**
baz=77,SNR=9.1
HWUT Hardware Ranch 77.56 47 *e*P **P 00 38 53.5 +1.1**
DUG Dugway 77.66 49 ⇑pP **P 00 38 54.1 +1.1**
baz=78,SNR=9.8
DUG Dugway 77.66 49 *e*P **P 00 38 53.7 +0.7**
DUG *e* 00 39 03.8
DUG pmax pmax
comp=Z,11nm,0.9s,mb4.8
DUG Dugway 77.66 49 *e*P **P 00 38 53.7 +0.7**
comp=Z,11nm,0.9s,mb4.8
DUG *e*PcP PcP 00 39 03.8 +0.8
R12A Pony Springs, 77.66 51 ⇓pP **P 00 38 53.7 +0.7**
baz=78
L17A Cokeville 77.66 47 ⇑P **P 00 38 52.1 -0.9**
baz=78
M16A Huntsville 77.70 48 ⇑pP **P 00 38 54.0 +0.8**
baz=78
K18A Toltan Ranch, 77.82 46 ⇑P **P 00 38 51.6 -2.2**
baz=78
K18A ⇓pP pP 00 38 54.8 -7.2
baz=78
P14A Drum Mountains 77.87 50 ⇑pP **P 00 38 55.2 +1.1**
baz=78,SNR=5.4
BW06 Boulder Array 78.02 45 ⇑P **P 00 38 53.7 -1.2**
baz=78,SNR=6.3
BW06 Boulder Array 78.02 45 *e*P **P 00 38 54.8 -0.1**
comp=Z,5.1nm,1.0s,mb4.4
BW06 *e*PcP PcP 00 39 05.0 +0.4
PDAR Pinedale Array 78.02 45 P **P 00 38 54.6 -0.3**
comp=Z,3.3nm,0.6s,mb4.4,baz=286,slow=1.8,SNR=35
Q14A Sevier Lake (B 78.10 50 ⇑pP **P 00 38 56.5 +1.0**
baz=78
LVV L'vov 78.16 324 *e*P **P 00 38 53.8 -1.8**
M17A Scullys Gap (B 78.17 47 ⇓P **P 00 38 54.4 -1.4**
baz=78

JLU Jordanelle 78.24 48 eP P 00 38 57.2 +1.1
BSD Bornholm Skovb 78.25 332⇑iP P 00 38 55.6 -0.4
BSD pmax pmax
comp=Z,21nm,0.8s,mb5.1
BSD MLR MLR
comp=Z,220nm,19.0s,MS4.5
BSD Bornholm Skovb 78.25 332⇑iP P 00 38 55.6 -0.4
comp=Z,21nm,0.8s,mb5.1
BSD
comp=Z,210nm,19.0s
NLU North Lily Min 78.25 49 eP P 00 38 57.3 +1.0
L18A Fontenelle, Gr 78.26 46 ⇓pP P 00 38 57.1 +0.8
baz=78
LEOM Leova 78.29 320 ⇑P P 00 38 56.7 +0.3
LEOM Leova 78.29 320⇑iP P 00 38 56.7 +0.3
P15A Leamington 78.36 49 ⇓pP P 00 38 57.8 +0.9
baz=78
SHPR Sheep Range 78.39 53 eP P 00 38 58.4 +1.3
N17A Moffit Pass 78.40 48 ⇑pP P 00 38 57.9 +0.9
baz=78
O16A Springville 78.45 48 ⇓pP P 00 38 58.3 +1.0
baz=78,SNR=7.0
DAU Daniels Canyon 78.47 48 eP P 00 38 58.8 +1.3
MPU Maple Canyon 78.49 49 eP P 00 38 58.6 +1.0
L19A Farson 78.55 46 ⇓pP P 00 38 58.6 +0.7
baz=78
Q15A Fillmore 78.65 50 ⇓pP P 00 38 59.6 +1.1
baz=78
GKP Gorka Klasztor 78.71 330 eP P 00 38 58.6 +0.1
GKP LMZ 01 20 38.0
comp=Z,500nm,17.8s
COP Copenhagen 78.73 333⇑iP P 00 38 58.9 +0.3
COP pmax pmax
comp=Z,17nm,0.8s,mb5.0
COP MLR MLR
comp=Z,150nm,17.0s,MS4.4
COP Copenhagen 78.73 333⇑iP P 00 38 58.9 +0.3
comp=Z,17nm,0.8s,mb5.0
COP
comp=Z,140nm,17.0s
TLCR 78.83 318 ⇑P P 00 38 59.5 +0.1
TLCR 78.83 318⇑iP P 00 38 59.5 +0.1
T13A Saint George 78.89 52 ⇑pP P 00 39 01.0 +1.2
baz=79
KWP Kalwaria Pacla 78.91 325 eP P 00 39 00.5 +0.8
KWP LMZ 01 17 21.1
comp=Z,900nm,16.9s
KWP Kalwaria Pacla 78.91 325 eP P 00 39 00.4 +0.7
comp=Z,70nm,1.0s,mb5.5
KWP Kalwaria Pacla 78.91 325⇑iP P 00 39 00.6 +0.9
CCUT Cedar City 78.91 52 eP P 00 39 00.5 +0.5
O17A Robinson Place 78.92 48 ⇓pP P 00 39 01.0 +1.1
baz=79
N18A Larsen Ranch, 79.07 47 ⇑pP P 00 39 01.6 +0.9
baz=79
BUR08 Bucovina Ar. S 79.07 322 eP P 00 39 01.4 +0.8
BURAR Bucovina Array 79.08 322 ⇑P P 00 39 01.2 +0.5
BURAR Bucovina Array 79.08 322⇑iP P 00 39 01.2 +0.5
R15A Junction 79.19 50 ⇓pP P 00 39 03.1 +1.6
baz=79
U13A Pakoon Wash 79.21 53 ⇑pP P 00 39 02.6 +1.0
baz=79,SNR=6.8
PFO Pinyon Flat Ob 79.25 56 eP P 00 39 02.4 +0.5
PFO pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PFO Pinyon Flat Ob 79.25 56 eP P 00 39 02.4 +0.5
comp=Z,6.6nm,0.8s,mb4.6
MUD Monsted U'grnd 79.27 335 iP P 00 39 01.6 +0.1
MUD pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MUD MLR MLR
comp=Z,380nm,19.0s,MS4.8
MUD Monsted U'grnd 79.27 335 iP P 00 39 01.6 +0.1
comp=Z,9.4nm,0.9s,mb4.7
MUD
comp=Z,380nm,19.0s
O18A Roosevelt 79.31 48 ⇓pP P 00 39 03.4 +1.3
baz=79
P17A Butcher Ranch, 79.36 49 ⇓pP P 00 39 03.5 +1.1
baz=79
T14A Hurricane 79.39 52 ⇑pP P 00 39 03.7 +1.2
baz=79
Q16A Castle Valley 79.44 49 ⇑pP P 00 39 04.0 +1.2
baz=79,SNR=5.2
VRI Vrincioaia 79.49 320 ⇓P P 00 39 03.8 +0.9
VRI Vrincioaia 79.49 320⇓iP P 00 39 03.8 +0.9
BR131 Keskin Array S 79.56 312 eP P 00 39 03.5 0.0
comp=Z,9.1nm,0.7s,mb4.8
BRTR Keskin Array B 79.56 312 P P 00 39 03.9 +0.4
comp=Z,11nm,0.7s,mb4.9,baz=100,slow=4.0,SNR=74
BRTR LR LR 01 20 22.5
comp=Z,137nm,18.1s,MS4.3,baz=262,slow=40
KOLS Kolonicke sedl 79.60 324 eP P 00 39 04.0 +0.5
KOLS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KOLS Kolonicke sedl 79.60 324 eP P 00 39 04.0 +0.5
comp=Z,8.2nm,0.9s,mb4.7
KOLS Kolonicke sedl 79.60 324 eP P 00 39 04.0 +0.5
R16A Teasdale 79.64 50 ⇓pP P 00 39 05.6 +1.6
baz=80,SNR=9.8
U14A Mt Trumbull 79.72 52 ⇑pP P 00 39 05.3 +1.0
baz=80
SRU San Rafael 79.72 49 ⇓pP P 00 39 05.1 +0.8
baz=80,SNR=16
SRU San Rafael 79.72 49 eP P 00 39 04.9 +0.6
STHS Stebnicka Huta 79.74 325 eP P 00 39 05.1 +0.8
STHS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
STHS Stebnicka Huta 79.74 325 eP P 00 39 05.1 +0.8
comp=Z,8.9nm,0.9s,mb4.7
STHS Stebnicka Huta 79.74 325 eP P 00 39 05.1 +0.8
UZH Uzhgorod 79.81 324 eP P 00 39 04.5 -0.1
UZH e pP 00 39 13.0 +0.2
OJC Ojcow 79.83 326 iP P 00 39 05.2 +0.5
BMR Baia Mare 79.89 323 ⇑P P 00 39 06.3 +1.2
BMR Baia Mare 79.89 323⇑iP P 00 39 06.3 +1.2
Q18A Rafter H Ranch 79.96 49 ⇓P P 00 39 04.8 -0.9
baz=80
N20A Spence Gulch, 79.99 46 ⇑pP P 00 39 06.8 +1.1
baz=80,SNR=11
ULM Lac du Bonnet 80.00 33 P P 00 39 04.6 -1.0
comp=Z,4.7nm,0.9s,mb4.4,baz=304,slow=8.1,SNR=12
R17A Hanksville Air 80.03 50 ⇑pP P 00 39 06.7 +0.7
baz=80,SNR=10
TRPA Tarpa 80.04 324⇓iP P 00 39 06.5 +0.6
MLR Muntele Rosu 80.15 320 P P 00 39 07.3 +0.8
MLR Muntele Rosu 80.15 320⇓iP P 00 39 07.8 +1.3
NIE Niedzica 80.17 326⇑iP P 00 39 07.6 +1.0
RSSD Black Hills 80.23 42 eP P 00 39 06.9 -0.1
V14A Boquillas Ranc 80.24 53 ⇑pP P 00 39 08.4 +1.2
baz=80,SNR=8.4
U15A North Rim 80.28 52 ⇑pP P 00 39 08.7 +1.3
baz=80
P19A Cripple Cowboy 80.32 48 ⇑pP P 00 39 08.3 +0.7
baz=80,SNR=11
X13A Yucca 80.40 54 ⇑P P 00 39 07.7 -0.4
baz=80
S17A Black Ridge (B 80.47 50 ⇑pP P 00 39 08.9 +0.5
baz=80,SNR=8.2
N21A Black Mountain 80.47 46 ⇑pP P 00 39 09.0 +0.7
baz=80,SNR=6.2
W14A Seligman 80.51 53 ⇓pP P 00 39 09.6 +0.9
baz=80
R18A Canyonlands Na 80.56 49 ⇑P P 00 39 05.7 -3.2
baz=80
R18A ⇑pP pP 00 39 09.2 -7.9
baz=80,SNR=8.8
VOIR 80.65 320 ⇓P P 00 39 10.3 +1.1
VOIR 80.65 320⇓iP P 00 39 10.3 +1.1
V15A Kaibab Nationa 80.73 52 ⇓pP P 00 39 11.3 +1.5
baz=81,SNR=5.0
KECS Kecovo 80.76 325 eP P 00 39 10.2 +0.4
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 80.76 325 eP P 00 39 10.2 +0.4
comp=Z,4.1nm,0.9s,mb4.4
KECS ePP PP 00 42 13.5 +0.2
KECS Kecovo 80.76 325 eP P 00 39 10.2 +0.4
KECS ePP PP 00 42 13.5 +0.2
T17A Navajo Res., N 80.86 51 ⇑P P 00 39 09.6 -0.9
baz=81
BSEG Bad Segeberg 80.87 333 eP P 00 39 10.4 +0.2
comp=Z,24nm,1.0s,mb5.1
BSEG Bad Segeberg 80.87 333 eP P 00 39 10.4 +0.2
BSEG pmax pmax
comp=Z,24nm,1.0s,mb5.1

KSP Ksiaz 80.90 328 eP P 00 39 11.0 +0.5
KSP LMZ 01 18 56.2
comp=Z,600nm,18.3s
KSP Ksiaz 80.90 328⇑iP P 00 39 10.9 +0.5
S18A Hurst Farm, Bl 80.93 50 ⇓pP P 00 39 11.4 +0.5
baz=81,SNR=9.3
R19A Curley Farm, L 81.00 49 ⇓pP P 00 39 11.9 +0.6
baz=81
N22A Wattenberg Ran 81.06 46 ⇓pP P 00 39 12.6 +1.1
baz=81
X14A Yava 81.09 54 ⇓pP P 00 39 12.8 +1.0
baz=81
MORC Moravsky Berou 81.15 327 eP P 00 39 12.3 +0.5
comp=Z,11nm,0.9s,mb4.8
MORC Moravsky Berou 81.15 327⇑iP P 00 39 12.2 +0.4
Q20A Ridgley Place, 81.16 48 ⇓pP P 00 39 12.7 +0.6
baz=81,SNR=6.6
U16A Tuba City 81.19 52 ⇑pP P 00 39 13.5 +1.2
baz=81,SNR=6.1
U17A Shonto 81.20 51 ⇓pP P 00 39 13.2 +0.8
baz=81
P21A Newcastle 81.30 47 ⇓pP P 00 39 14.2 +1.4
baz=81
Y14A Wickenburg 81.34 54 ⇑P P 00 39 12.5 -0.6
baz=81
T18A Mexican Hat 81.35 50 ⇓P P 00 39 12.5 -0.6
baz=81,SNR=8.3
Z13A Yuma Proving G 81.36 55 ⇑P P 00 39 12.8 -0.5
baz=81,SNR=5.2
AGMN Agassiz Refuge 81.42 35 eP P 00 39 12.0 -1.3
comp=Z,3.6nm,0.9s,mb4.3
S19A Harvey Farm, M 81.42 49 ⇓P P 00 39 13.4 -0.1
baz=81,SNR=10.0
WUAZ Wupatki 81.42 52 ⇑P P 00 39 12.8 -0.8
baz=81
WUAZ Wupatki 81.42 52 eP P 00 39 14.0 +0.5
comp=Z,9.4nm,0.9s,mb4.7
PSZ Piszkesteto 81.44 325 eP P 00 39 13.5 +0.1
PSZ pmax pmax
comp=Z,18nm,0.9s,mb5.0
PSZ Piszkesteto 81.44 325 eP P 00 39 13.5 +0.2
comp=Z,18nm,0.9s,mb5.0
PSZ Piszkesteto 81.44 325⇑eP P 00 39 14.0 +0.6
PSZ Piszkesteto 81.44 325⇑iP P 00 39 13.9 +0.5
X15A Humboldt 81.51 53 ⇓P P 00 39 13.9 -0.1
baz=81,SNR=8.2
VYHS Vyhne 81.51 326 eP P 00 39 14.4 +0.6
VYHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VYHS Vyhne 81.51 326 eP P 00 39 14.4 +0.6
comp=Z,6.3nm,0.8s,mb4.6
VYHS ePP PP 00 42 19.4 -0.1
VYHS Vyhne 81.51 326 eP P 00 39 14.4 +0.6
VYHS ePP PP 00 42 19.4 -0.1
R20A Redvale 81.60 49 ⇑P P 00 39 13.5 -0.9
baz=81
KOLL Kolacno 81.65 326 eP P 00 39 15.3 +0.8
KOLL Kolacno 81.65 326 eP P 00 39 15.3 +0.8
V17A Tonalea, Kykot 81.73 52 ⇑pP P 00 39 16.2 +1.1
baz=82,SNR=12
SMCO Snowmass 81.81 47 eP P 00 39 16.3 +0.8
U18A Rough Rock, Ch 81.81 51 ⇓pP P 00 39 16.8 +1.2
baz=82,SNR=8.0
GZR Gura Zlata 81.83 321 P P 00 39 15.8 +0.3
GZR Gura Zlata 81.83 321⇑iP P 00 39 15.6 +0.1
BRG Berggiesshubel 81.85 330 eP P 00 39 15.4 -0.1
comp=Z,14nm,0.8s,mb4.9
BRG Berggiesshubel 81.85 330 iP P 00 39 15.6 +0.1
comp=Z,14nm,0.8s,mb5.0
BRG e 00 42 15.7
comp=Z,6.7nm,1.4s
BRG PP PP 00 42 25.0 +2.8
BRG S S 00 49 35.0 +7.8
BRG
comp=N,329nm,13.0s
BRG
comp=E,172nm,17.1s
BRG
comp=Z,528nm,14.7s
BRG Berggiesshubel 81.85 330 iP P 00 39 15.6 +0.1
BRG 00 42 25.0
BRG S S 00 49 35.0 +7.8
BRG pmax pmax
BRG MLR MLR
comp=N,197nm,13.0s,MS4.7
BRG MLR MLR
comp=E,103nm,17.1s,MS4.7
BRG MLR MLR
comp=Z,316nm,14.7s,MS4.8
CLL Collm 81.90 330 eP P 00 39 15.3 -0.4
comp=Z,25nm,0.8s,mb5.2
CLL Collm 81.90 330⇑iP P 00 39 15.4 -0.3
CLL eS S 00 49 31.0 +3.4
CLL pmax pmax
comp=Z,25nm,0.8s,mb5.2
CLL Collm 81.90 330⇑iP P 00 39 15.4 -0.3
comp=Z,25nm,0.8s,mb5.2
CLL eS S 00 49 31.0 +3.4
CLL Collm 81.90 330⇑iP P 00 39 15.4 -0.3
comp=Z,25nm,0.8s,mb5.2
CLL e 00 39 32.0
CLL eS S 00 49 31.0 +3.4
CLL eSS SS 00 55 18.0 +33
CLL e(SSS) 00 59 06.0
MVH1 Achvaich 81.91 342 eP P 00 39 14.9 -0.8
VRAC Vranov 81.91 327 P P 00 39 16.5 +0.7
comp=Z,10nm,0.7s,mb4.9,baz=46,slow=4.0,SNR=15
VRAC Vranov 81.91 327⇓iP P 00 39 16.4 +0.5
R21A Cimarron 81.99 48 ⇑pP P 00 39 17.7 +1.3
baz=82,SNR=7.0
Q22A Crested Butte, 82.05 47 ⇓pP P 00 39 18.0 +1.2
baz=82,SNR=15
T19A Beclabito 82.07 50 ⇓P P 00 39 16.1 -0.9
baz=82
NRDL Niedersach Rie 82.09 333 eP P 00 39 16.5 -0.2
comp=Z,9.0nm,0.9s,mb4.7
SMOL Smolenice 82.13 326 eP P 00 39 18.3 +1.3
SMOL Smolenice 82.13 326 eP P 00 39 18.3 +1.3
114A Black Gap (USA 82.15 55 ⇑P P 00 39 16.2 -1.3
baz=82
MVCO Mesa Verde 82.16 49 ⇑pP P 00 39 18.2 +0.9
baz=82
MVCO Mesa Verde 82.16 49 eP P 00 39 18.2 +0.8
BUD Budapest 82.16 325⇑eP P 00 39 17.7 +0.5
ISCO Idaho Springs 82.20 46 eP P 00 39 18.1 +0.6
ISCO pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ISCO Idaho Springs 82.20 46 eP P 00 39 18.1 +0.6
comp=Z,3.0nm,0.8s,mb4.3
BZS Buzias 82.26 322 P P 00 39 17.4 -0.3
BZS Buzias 82.26 322⇑iP P 00 39 17.9 +0.2
S21A Coal Bank Pass 82.30 49 ⇑pP P 00 39 19.4 +1.3
baz=82,SNR=6.8
U19A Dine' College, 82.30 50 ⇑pP P 00 39 19.0 +0.8
baz=82,SNR=7.3
MDO Dochfour 82.38 342 eP P 00 39 18.5 +0.3
CLZ Clausthal 82.51 332 eP P 00 39 19.2 +0.3
comp=Z,19nm,1.0s,mb5.1
CLZ Clausthal 82.51 332 eP P 00 39 19.2 +0.3
CLZ pmax pmax
comp=Z,19nm,1.0s,mb5.1
ZST Bratislava 82.52 326 eP P 00 39 20.2 +1.2
ZST pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ZST Bratislava 82.52 326 eP P 00 39 20.2 +1.2
comp=Z,4.4nm,0.8s,mb4.5
ZST Bratislava 82.52 326 eP P 00 39 20.2 +1.2
R22A Saguache, Gunn 82.55 48 ⇑pP P 00 39 21.2 +1.7
baz=82
KAC Achnashellach 82.56 343⇑eP P 00 39 19.6 +0.5
ISP Isparta 82.65 312 eP P 00 39 19.9 -0.1
comp=Z,15nm,0.9s,mb5.0
ISP Isparta 82.65 312⇓iP P 00 39 19.8 -0.1
CSS Prodhromos 82.75 308 eP P 00 39 20.1 -0.4
comp=Z,9.5nm,0.8s,mb4.9
KPL Plockton 82.78 343 eP P 00 39 20.8 +0.5
KPL AMb AMB 00 39 28.6
comp=Z,90nm,3.6s
TANN Tannenbergstha 82.81 330 eP P 00 39 20.2 -0.3
comp=Z,5.0nm,0.8s,mb4.6
MOX Moxa 82.97 331 eP P 00 39 21.0 -0.3
comp=Z,10.0nm,0.8s,mb4.9
MOX Moxa 82.97 331 eP P 00 39 21.1 -0.2
MOX pmax pmax
comp=Z,11nm,0.8s,mb4.9

MOX MLR MLR
comp=Z,200nm,17.0s,MS4.6
MOX Moxa 82.97 331 eP P 00 39 21.1 -0.2
comp=Z,11nm,0.8s,mb4.9
MOX LR LR
comp=Z,200nm,17.0s,MS4.6
V20A Brimhall 83.08 50 ⇓pP P 00 39 22.9 +0.7
baz=83
IBBN Ibbenburen 83.10 334 eP P 00 39 22.1 +0.1
comp=Z,30nm,0.5s,mb5.6
ALN Alexandroupoli 83.20 317 P P 00 39 18.0 -4.7
EBH Black Hill 83.23 341 eP P 00 39 22.5 -0.1
T22A Edith 83.25 49 ⇓pP P 00 39 24.4 +1.3
baz=83,SNR=5.1
CONA Conrad Observa 83.27 327⇑iP P 00 39 23.7 +0.8
comp=Z,13nm,0.9s,mb4.9
ESY Stoneypath 83.29 341 eP P 00 39 22.6 -0.3
RDO Rodhopi 83.31 317 P P 00 39 22.8 -0.5
KHC Kasperske Hory 83.34 329 eP P 00 39 23.2 -0.1
comp=Z,17nm,0.8s,mb5.1
KHC ePP PP 00 42 35.4 +1.0
Y18A Canyon Day Jun 83.37 53 ⇑pP P 00 39 24.7 +1.0
baz=83
RZN Rozhen 83.39 318 P P 00 39 24.7 +1.0
ROTZ Rotzenmuhle 83.42 330 eP P 00 39 23.9 +0.2
comp=Z,12nm,0.8s,mb5.0
X19A St. Johns 83.44 52 ⇑pP P 00 39 25.1 +1.0
baz=83,SNR=6.7
UBBA Unterbreizbach 83.46 332 eP P 00 39 23.4 -0.5
comp=Z,4.0nm,0.7s,mb4.6
W20A Ramah 83.49 51 ⇑P P 00 39 23.6 -0.8
baz=83
EAB Aberfoyle 83.50 342 eP P 00 39 24.3 +0.3
GEC2 GERESS Array S 83.51 328 eP P 00 39 24.0 -0.2
comp=Z,11nm,0.7s,mb5.1
GEC2 GERESS Array S 83.51 328 eP P 00 39 24.0 -0.2
GEC2 pmax pmax
comp=Z,11nm,0.7s,mb5.1
GERES GERESS Array B 83.51 328 P P 00 39 24.1 -0.1
GERES 00 42 32.6
GERES pmax pmax
comp=Z,8.0nm,0.6s
GERES pmax pmax
comp=Z,1.0nm,0.8s
GERES MLR MLR
comp=Z,302nm,18.0s
GERES GERESS Array B 83.51 328 P P 00 39 24.1 0.0
comp=Z,8.0nm,0.6s,mb5.0,baz=36,slow=5.3,SNR=106
GERES PP PP 00 42 32.6 -3.2
comp=Z,1.3nm,0.8s,baz=42,slow=8.1,SNR=3.7
GERES LR LR 01 19 58.6
comp=Z,302nm,18.0s,MS4.7,baz=20,slow=38
GERES GERESS Array B 83.51 328 P P 00 39 24.1 0.0
GERES PP PP 00 42 32.6 -3.2
GERES LR LR 01 19 58.6
EBL Broad Law 83.53 341 eP P 00 39 23.8 -0.3
EAU Auchinoon 83.57 341 eP P 00 39 24.5 +0.2
VTS Vitosha 83.57 319 P P 00 39 24.8 +0.2
VTS Vitosha 83.57 319 P P 00 39 25.5 +0.9
V21A Milan 83.59 50 ⇑pP P 00 39 25.7 +0.9
baz=83,SNR=6.0
SDCO Great Sand Dun 83.62 47 eP P 00 39 25.5 +0.5
comp=Z,4.6nm,1.1s,mb4.5
WET Wettzell 83.62 329 eP P 00 39 25.0 +0.3
comp=Z,8.0nm,0.8s,mb4.9
WET Wettzell 83.62 329 eP P 00 39 25.0 +0.3
WET pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
X20A Quemado 83.87 51 ⇑pP P 00 39 27.5 +1.3
baz=84,SNR=5.9
GRA1 Grafenberg Arr 83.87 330 eP P 00 39 26.6 +0.6
comp=Z,37nm,0.9s,mb5.5
GRA1 LR LR
comp=Z,300nm,18.7s,MS4.7
GRF Grafenberg Arr 83.87 330 eP P 00 39 26.6 +0.6
comp=Z,37nm,0.9s,mb5.5
GRF eL 01 22 11.2
comp=Z,306nm,18.7s
GRF Grafenberg Arr 83.87 330 eP P 00 39 26.6 +0.6
GRF pmax pmax
comp=Z,37nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,300nm,18.7s,MS4.7
ARSA Arzberg 83.93 326⇑iP P 00 39 26.7 +0.4
comp=Z,5.1nm,0.7s,mb4.8
EKA Eskdalemuir Ar 83.95 341 P P 00 39 26.7 +0.4
EKA pmax pmax
comp=Z,4.0nm,0.6s
EKA Eskdalemuir Ar 83.95 341 P P 00 39 26.6 +0.4
comp=Z,4.4nm,0.6s,mb4.8,baz=29,slow=4.6,SNR=28
V22A San Miguel Ran 83.97 49 ⇓pP P 00 39 27.6 +0.8
baz=84
ESK Eskdalemuir 83.97 341 eP P 00 39 25.6 -0.8
ESK AMb AMB 00 39 31.5
comp=Z,39nm,3.3s
BUG Bochum--Univer 83.98 333 eP P 00 39 26.2 -0.3
comp=Z,8.0nm,0.7s,mb5.0
MMB Musomiste 84.00 318 P P 00 39 27.4 +0.6
MOA Molln 84.03 327⇑iP P 00 39 27.2 +0.4
comp=Z,10nm,1.1s,mb4.9
PPT Papeete 84.05 117 eSS SS 00 55 19.9 +0.3
comp=Z,62nm,24.5s
PPT eLR LR 01 05 43.7
comp=Z,254nm,21.5s,baz=311
PPT Papeete 84.05 117 LR LR 01 09 52.9
comp=Z,254nm,21.8s,MS4.6,baz=304,slow=31
ECK Cauldkaine Hil 84.07 341 eP P 00 39 27.0 +0.1
217A Green Valley 84.13 55 ⇑pP P 00 39 28.6 +0.9
baz=84
118A Homack Ranch, 84.14 54 ⇑pP P 00 39 28.4 +0.7
baz=84
KKB Krupnik 84.15 319 P P 00 39 28.4 +0.8
Y20A Horse Springs, 84.35 52 ⇑pP P 00 39 30.0 +1.2
baz=84,SNR=6.6
ECSD EROS Data Cent 84.36 38 eP P 00 39 28.2 -0.3
X21A Alamocita Cree 84.38 51 ⇓pP P 00 39 30.0 +1.2
baz=84,SNR=7.9
SRS Serrai 84.40 318 P P 00 39 28.7 -0.1
218A Dragoon 84.51 54 ⇑pP P 00 39 30.5 +0.9
baz=84,SNR=7.9
TNS Taunus Mts 84.53 332 eP P 00 39 29.3 0.0
comp=Z,19nm,1.2s,mb5.1
TNS Taunus Mts 84.53 332 eP P 00 39 29.3 0.0
TNS pmax pmax
comp=Z,19nm,1.2s,mb5.1
PERS Pernice 84.58 326 iP P 00 39 29.6 0.0
SOKA Soboth 84.58 326⇑iP P 00 39 29.8 +0.1
comp=Z,13nm,0.7s,mb5.2
Z20A Nine Sixteen R 84.72 53 ⇑pP P 00 39 31.7 +1.0
baz=85,SNR=10
OUR Ouranopolis 84.73 317 P P 00 39 30.1 -0.4
SOH Sokhos 84.73 318 P P 00 39 29.9 -0.7
GAL1 Galloway 84.77 341 eP P 00 39 30.1 -0.4
GAL1 AMb AMB 00 39 35.7
comp=Z,38nm,4.5s
VAY Valandovo 84.80 319 eP P 00 39 30.0 -0.9
GOLS Golise 84.82 326 iP P 00 39 30.6 -0.3
ANMO Albuquerque 84.88 50 eP P 00 39 32.8 +1.4
318A Bisbee 84.89 55 ⇑pP P 00 39 32.2 +0.7
baz=85
SKO Skopje 84.94 320 eP P 00 39 33.1 +1.5
PLG Polygyros 85.00 318 P P 00 39 31.6 -0.3
219A White Tail Can 85.01 54 ⇓pP P 00 39 32.8 +0.7
baz=85,SNR=7.9
LEGS Legarje 85.01 326 iP P 00 39 31.4 -0.4
KBA Koelnbreinsper 85.02 327⇑iP P 00 39 32.5 +0.6
comp=Z,7.6nm,0.8s,mb4.9,SNR=6.1
HORT Hortiatis 85.03 318 P P 00 39 31.8 -0.2
FUR Furstenfeldbru 85.05 329 eP P 00 39 32.2 +0.2
comp=Z,31nm,0.8s,mb5.5
FUR Furstenfeldbru 85.05 329 eP P 00 39 32.2 +0.2
FUR pmax pmax
comp=Z,31nm,0.8s,mb5.5
120A U Bar Ranch, L 85.06 53 ⇓P P 00 39 31.4 -1.0
baz=85
BEBN Eben Emael 85.08 334 P P 00 39 31.9 -0.2
comp=Z,6.5nm,1.3s,mb4.6
MEM Membach 85.12 333 P P 00 39 32.0 -0.3
comp=Z,8.0nm,1.0s,mb4.8
LHO Holmfirth 85.16 339⇑eP P 00 39 32.4 -0.1
PAIG Paliouri 85.18 317 P P 00 39 31.9 -0.9
Z21A St. Cloud Mine 85.19 52 ⇑P P 00 39 32.0 -1.0
baz=85,SNR=7.0
Y22A Socorro 85.22 51 ⇑pP P 00 39 33.9 +0.8
baz=85
MYKA Terra Mystica 85.24 327⇑iP P 00 39 32.4 -0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,6.7nm,0.6s,mb5.0						
LJU	Ljubljana	85.29	326	iP	P	00 39 32.6	-0.7
BOJS	Bojanci	85.38	325	iP	P	00 39 33.3	-0.3
STU	Stuttgart	85.41	331	eP	P	00 39 33.8	0.0
	comp=Z,32nm,0.8s,mb5.5						
STU	Stuttgart	85.41	331	eP	P	00 39 33.9	+0.1
STU				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.5						
STU	Stuttgart	85.41	331	eP	P	00 39 33.9	+0.1
	comp=Z,31nm,0.8s,mb5.5						
KRUS	Krusevo	85.47	319	eP	P	00 39 33.9	-0.4
BCLA	Clavier	85.53	334	P	P	00 39 34.0	-0.3
JAVS	Javornik	85.62	326	iP	P	00 39 33.9	-1.0
ABTA	Abfaltersbach	85.64	328	⇓iP	P	00 39 34.2	-0.7
	comp=Z,8.7nm,1.2s,mb4.8,SNR=7.7						
LIT	Litokhoron	85.71	318	P	P	00 39 34.5	-0.9
CWF	Charnwood Fore	85.71	338	eP	P	00 39 34.5	-0.7
CWF				AMb	AMB	00 39 35.1	
	comp=Z,20nm,1.2s,mb5.2						
TAOE	Nuku Hiva Isla	85.72	104	eLR	LR	01 06 35.9	
	comp=Z,249nm,22.6s						
MOTA	Moosalm	85.77	329	⇑iP	P	00 39 35.6	0.0
	comp=Z,8.5nm,0.9s,mb5.0,SNR=7.8						
Y23A	Lovelace Mesa,	85.80	51	⇓pP	P	00 39 36.8	+0.8
	baz=86						
WLF	Walferdange	85.85	333	P	P	00 39 36.6	+0.7
OHR	Ohrid	85.89	319	eP	P	00 39 35.7	-0.6
W25A	X Bar L Ranch,	85.92	49	⇓pP	P	00 39 37.9	+1.3
	baz=86						
GIVF	Givet	85.97	334	eP	P	00 39 35.9	-0.6
SCHQ	Schefferville	86.00	16	P	P	00 39 36.8	+0.2
	comp=Z,5.6nm,0.8s,mb4.8,baz=346,slow=4.7,SNR=10						
SCHQ				LR	LR	01 17 27.1	
	comp=Z,178nm,21.3s,MS4.4,baz=141,slow=35						
SCHQ	Schefferville	86.00	16	eP	P	00 39 36.6	0.0
	comp=Z,4.4nm,0.8s,mb4.7						
DOU	Dourbes	86.05	334	P	P	00 39 36.5	-0.4
	comp=Z,4.5nm,1.2s,mb4.6						
BFO	Black Forest	86.11	331	P	P	00 39 37.9	+0.6
	comp=Z,163nm,0.7s,mb6.4,SNR=11						
BFO	Black Forest	86.11	331	eP	P	00 39 37.0	-0.3
	comp=Z,23nm,0.9s,mb5.4						
BFO	Black Forest	86.11	331	eP	P	00 39 37.0	-0.3
BFO				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.4						
FETA	Feichten	86.18	329	⇑iP	P	00 39 37.5	-0.2
	comp=Z,4.9nm,0.7s,mb4.8,SNR=10						
BAIF	Baives	86.22	334	⇑iP	P	00 39 37.2	-0.6
	comp=Z,15nm,0.9s,mb5.0						
BAIF	Baives	86.22	334	⇑iP	P	00 39 37.2	-0.6
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
BAIF	Baives	86.22	334	⇑iP	P	00 39 37.2	-0.6
	comp=Z,7.7nm,0.9s,mb4.9						
DAVA	Damuels	86.32	329	⇑iP	P	00 39 38.2	-0.1
	comp=Z,15nm,0.9s,mb5.2						
HLM1	Long Mynd	86.36	339	eP	P	00 39 37.7	-0.7
LKR	Lokris	86.45	317	P	P	00 39 37.3	-1.8
CDF	Champ du Feu	86.45	332	⇑iP	P	00 39 38.5	-0.4
	comp=Z,31nm,0.8s,mb5.3						
CDF	Champ du Feu	86.45	332	⇑iP	P	00 39 38.5	-0.4
CDF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.3						
CDF	Champ du Feu	86.45	332	⇑iP	P	00 39 38.5	-0.4
	comp=Z,16nm,0.8s,mb5.3						
AGG	Agios Georgios	86.56	317	P	P	00 39 37.5	-2.2
Y25A	Mesa, Roswell	86.65	50	⇑P	P	00 39 39.3	-0.9
	baz=86						
ECH	Echery	86.66	332	eP	P	00 39 39.6	-0.4
ECH				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
ECH	Echery	86.66	332	eP	P	00 39 39.6	-0.4
	comp=Z,7.8nm,0.8s,mb5.0						
DAVOS	Davos	86.72	329	P	P	00 39 39.9	-0.4
DAVOX	Davos/Dischmat	86.73	329	P	P	00 39 39.9	-0.5
	comp=Z,3.5nm,0.7s,mb4.7,baz=29,slow=11,SNR=9.2						
X26A	CR and CF Fran	86.77	49	⇑P	P	00 39 39.4	-1.4
	baz=87						
MCH1	Michaelchurch	86.86	339	eP	P	00 39 40.2	-0.7
MCH1				AMb	AMB	00 39 41.8	
	comp=Z,34nm,0.7s,mb5.7						
HTR	Trewern Hill	86.86	339	eP	P	00 39 40.8	-0.1
SWN1	Swindon	86.93	338	eP	P	00 39 40.5	-0.7
SWN1				AMb	AMB	00 39 42.8	
	comp=Z,74nm,2.3s,mb5.5						
WOL	Wolverton	86.93	338	eP	P	00 39 40.2	-1.0
WOL				AMb	AMB	00 39 41.9	
	comp=Z,68nm,1.0s,mb5.8						
124A	Stringfield Ra	86.99	51	⇑P	P	00 39 40.8	-1.1
	baz=87						
HINF	Hinteralfeld	87.10	331	⇑iP	P	00 39 41.2	-0.9
	comp=Z,6.9nm,0.8s,mb4.7						
HINF	Hinteralfeld	87.10	331	⇑iP	P	00 39 41.2	-0.9
HINF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
HINF	Hinteralfeld	87.10	331	⇑iP	P	00 39 41.2	-0.9
	comp=Z,3.5nm,0.8s,mb4.6						
DID	Didima	87.12	316	P	P	00 39 39.4	-3.0
HGH	Gray Hill	87.12	339	⇑eP	P	00 39 42.0	-0.2
HAU	Haudompre	87.14	332	⇑iP	P	00 39 41.4	-0.9
	comp=Z,9.6nm,0.7s,mb4.9						
HAU				eMLR	MLR		
	comp=Z,319nm,21.5s,MS4.4						
HAU	Haudompre	87.14	332	⇑iP	P	00 39 41.4	-0.9
HAU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
HAU				MLR	MLR		
	comp=Z,320nm,21.5s,MS4.7						
HAU	Haudompre	87.14	332	⇑iP	P	00 39 41.4	-0.9
	comp=Z,4.8nm,0.7s,mb4.8						
HAU				LR	LR		
	comp=Z,320nm,21.5s,MS4.7						
TRIZ	Trizonia	87.16	317	P	P	00 39 41.6	-1.0
EFP	Efpalio	87.21	317	P	P	00 39 42.1	-0.8
MEZF	Maizieres J'vi	87.22	333	⇑iP	P	00 39 42.4	-0.3
	comp=Z,23nm,1.0s,mb5.1						
MEZF	Maizieres J'vi	87.22	333	⇑iP	P	00 39 42.4	-0.3
	comp=Z,23nm,1.0s,mb5.4						
IGT	Igoumenitsa	87.27	319	P	P	00 39 41.2	-1.9
LAKA	Lakka	87.31	317	P	P	00 39 42.1	-1.2
GUR	Goura	87.32	316	P	P	00 39 41.4	-2.0
LAST	Lasithi	87.45	313	P	P	00 39 43.7	-0.4
HEX	Exmoor	87.92	339	eP	P	00 39 45.4	-0.6
KFL	Anninata	88.05	317	P	P	00 39 46.0	-0.9
JFWS	Jewell Farm	88.06	35	eP	P	00 39 45.0	-1.8
JFWS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
JFWS	Jewell Farm	88.06	35	eP	P	00 39 45.0	-1.8
	comp=Z,6.7nm,0.8s,mb4.9						
ITM	Ithomi	88.09	316	P	P	00 39 45.3	-1.8
VLS	Valsamata	88.11	318	P	P	00 39 42.8	-4.4
KARN	Karanos	88.20	314	P	P	00 39 46.0	-1.7
CABF	La Chapelle	88.39	331	⇑iP	P	00 39 47.7	-0.6
PYL	PYLOS	88.39	316	P	P	00 39 46.8	-1.7
AQU	L'Aquila	88.65	324	eP	P	00 39 50.3	+0.7
AQU				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.4						
AQU	L'Aquila	88.65	324	eP	P	00 39 50.3	+0.7
	comp=Z,17nm,0.8s,mb5.4						
AQU	L'Aquila	88.65	324	⇑iP	P	00 39 50.6	+1.0
LOR	Lormes	88.69	333	eP	P	00 39 49.1	-0.6
	comp=Z,19nm,1.1s,mb5.0						
LOR				eMLR	MLR		
	comp=Z,390nm,18.2s,MS4.6						
LOR	Lormes	88.69	333	eP	P	00 39 49.1	-0.6
LOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
LOR				MLR	MLR		
	comp=Z,390nm,18.3s,MS4.9						
LOR	Lormes	88.69	333	eP	P	00 39 49.1	-0.6
	comp=Z,9.6nm,1.1s,mb5.0						
LOR				LR	LR		
	comp=Z,390nm,18.3s,MS4.9						
FLN	La Foliniere	88.92	336	eP	P	00 39 50.1	-0.7
	comp=Z,13nm,0.7s,mb5.1						
FLN				eMLR	MLR		
	comp=Z,453nm,20.0s,MS4.6						
FLN	La Foliniere	88.92	336	eP	P	00 39 50.1	-0.7
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.2						
FLN				MLR	MLR		
	comp=Z,450nm,20.0s,MS4.9						
FLN	La Foliniere	88.92	336	eP	P	00 39 50.1	-0.7
	comp=Z,6.7nm,0.6s,mb5.2						
FLN				LR	LR		
	comp=Z,450nm,20.0s,MS4.9						
LDF	La Druitiere	88.95	336	eP	P	00 39 50.3	-0.6
	comp=Z,11nm,0.7s,mb5.0						
LDF	La Druitiere	88.95	336	eP	P	00 39 50.3	-0.6
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb5.0						
LDF	La Druitiere	88.95	336	eP	P	00 39 50.3	-0.6
	comp=Z,5.7nm,0.7s,mb5.0						
SSF	Saint Saulge	88.99	333	eP	P	00 39 50.7	-0.5
	comp=Z,4.6nm,0.7s,mb4.6						
SSF	Saint Saulge	88.99	333	eP	P	00 39 50.7	-0.5
SSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
SSF	Saint Saulge	88.99	333	eP	P	00 39 50.7	-0.5
	comp=Z,2.3nm,0.7s,mb4.6						
LPL	La Plagne	89.03	330	⇑iP	P	00 39 51.0	-0.4
	comp=Z,9.3nm,0.6s,mb5.0						
LPL	La Plagne	89.03	330	⇑iP	P	00 39 51.0	-0.4
LPL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.0						
LPL	La Plagne	89.03	330	⇑iP	P	00 39 51.0	-0.4
	comp=Z,4.7nm,0.6s,mb5.0						
LPG	La Plagne	89.04	330	⇑iP	P	00 39 51.1	-0.3
	comp=Z,13nm,0.6s,mb5.1						
LPG	La Plagne	89.04	330	⇑iP	P	00 39 51.1	-0.3
LPG				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.2						
LPG	La Plagne	89.04	330	⇑iP	P	00 39 51.1	-0.3
	comp=Z,6.6nm,0.6s,mb5.1						
JSA	Saint Aubin	89.09	337	eP	P	00 39 50.5	-1.0
SMF	Signal de Mont	89.22	332	eP	P	00 39 51.8	-0.4
	comp=Z,24nm,1.1s,mb5.1						
SMF	Signal de Mont	89.22	332	eP	P	00 39 51.8	-0.4
SMF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
SMF	Signal de Mont	89.22	332	eP	P	00 39 51.8	-0.4
	comp=Z,12nm,1.1s,mb5.1						
AVF	Avril sur Loir	89.28	333	⇑iP	P	00 39 52.2	-0.3
	comp=Z,37nm,1.1s,mb5.3						
AVF	Avril sur Loir	89.28	333	⇑iP	P	00 39 52.2	-0.3
AVF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.3						
AVF	Avril sur Loir	89.28	333	⇑iP	P	00 39 52.2	-0.3
	comp=Z,18nm,1.1s,mb5.3						
GRR	Gorron	89.37	336	eP	P	00 39 52.6	-0.3
	comp=Z,43nm,0.9s,mb5.5						
GRR	Gorron	89.37	336	eP	P	00 39 52.6	-0.3
GRR				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.5						
GRR	Gorron	89.37	336	eP	P	00 39 52.6	-0.3
	comp=Z,21nm,0.9s,mb5.5						
526A	Mary Lane Ranc	89.62	52	⇑P	P	00 39 52.5	-1.9
	baz=90						
WMOK	Wichita Mounta	89.63	46	eP	P	00 39 53.6	-0.8
BGF	Bois d'Agland	89.66	333	eP	P	00 39 53.7	-0.6
	comp=Z,4.2nm,0.6s,mb4.7						
BGF	Bois d'Agland	89.66	333	eP	P	00 39 53.7	-0.6
BGF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
BGF	Bois d'Agland	89.66	333	eP	P	00 39 53.7	-0.6
	comp=Z,2.1nm,0.6s,mb4.6						
MBDF	Montbardon	89.67	330	⇑iP	P	00 39 53.2	-1.2
	comp=Z,9.4nm,0.6s,mb5.0						
MBDF	Montbardon	89.67	330	⇑iP	P	00 39 53.2	-1.2
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.0						
MBDF	Montbardon	89.67	330	⇑iP	P	00 39 53.2	-1.2
	comp=Z,4.7nm,0.6s,mb5.0						
ORIF	Oris-en-Rattie	89.87	330	⇑iP	P	00 39 54.7	-0.6
	comp=Z,8.3nm,0.8s,mb4.8						
ORIF				eMLR	MLR		
	comp=Z,283nm,18.2s,MS4.4						
ORIF	Oris-en-Rattie	89.87	330	⇑iP	P	00 39 54.7	-0.6
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
ORIF	Oris-en-Rattie	89.87	330	⇑iP	P	00 39 54.7	-0.6
	comp=Z,4.2nm,0.8s,mb4.8						
626A	Big Bend Ranch	89.93	53	⇓P	P	00 39 54.5	-1.4
	baz=90						
SGMF	Saint Gilles	90.03	337	eP	P	00 39 55.7	-0.3
	comp=Z,23nm,0.7s,mb5.3						
SGMF	Saint Gilles	90.03	337	eP	P	00 39 55.7	-0.3
SGMF				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
SGMF	Saint Gilles	90.03	337	eP	P	00 39 55.7	-0.3
	comp=Z,11nm,0.7s,mb5.3						
428A	Kincaid Ranch,	90.06	51	⇓P	P	00 39 54.9	-1.6
	baz=90						
TCF	Toulx Ste Croi	90.12	333	eP	P	00 39 56.1	-0.4
	comp=Z,6.5nm,0.7s,mb4.8						
TCF	Toulx Ste Croi	90.12	333	eP	P	00 39 56.1	-0.4
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
TCF	Toulx Ste Croi	90.12	333	eP	P	00 39 56.1	-0.4
	comp=Z,3.3nm,0.7s,mb4.8						
ROSF	Rostrenen	90.19	338	⇑iP	P	00 39 56.4	-0.3
	comp=Z,32nm,0.9s,mb5.3						
ROSF	Rostrenen	90.19	338	⇑iP	P	00 39 56.4	-0.3
ROSF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.3						
ROSF	Rostrenen	90.19	338	⇑iP	P	00 39 56.4	-0.3
	comp=Z,16nm,0.9s,mb5.3						
TXAR	Lajitas Array	90.38	53	P	P	00 39 57.3	-0.7
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR				MLR	MLR		
	comp=Z,153nm,18.3s						
TXAR	Lajitas Array	90.38	53	P	P	00 39 57.2	-0.7
	comp=Z,3.1nm,0.8s,mb4.7,baz=290,slow=3.1,SNR=24						
TXAR				LR	LR	01 22 28.4	
	comp=Z,153nm,18.3s,MS4.5,baz=80,slow=37						
VIVF	Saint-Julien-l	90.40	331	eP	P	00 39 57.3	-0.5
	comp=Z,14nm,0.8s,mb5.1						
VIVF	Saint-Julien-l	90.40	331	eP	P	00 39 57.3	-0.5
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
VIVF	Saint-Julien-l	90.40	331	eP	P	00 39 57.3	-0.5
	comp=Z,7.2nm,0.8s,mb5.0						
PGF	Pioggiola	90.50	327	⇑iP	P	00 39 57.1	-1.2
	comp=Z,16nm,0.9s,mb5.1						
PGF	Pioggiola	90.50	327	⇑iP	P	00 39 57.1	-1.2
PGF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
PGF	Pioggiola	90.50	327	⇑iP	P	00 39 57.1	-1.2
	comp=Z,8.0nm,0.9s,mb5.0						
QUIF	Quistinic	90.52	337	eP	P	00 39 57.7	-0.6
	comp=Z,11nm,0.7s,mb5.0						
QUIF	Quistinic	90.52	337	eP	P	00 39 57.7	-0.6
QUIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.0						
QUIF	Quistinic	90.52	337	eP	P	00 39 57.7	-0.6
	comp=Z,5.3nm,0.7s,mb5.0						
CEL	Celeste	90.55	320	eP	P	00 39 58.3	-0.3
	comp=Z,11nm,0.8s,mb5.2						
FRF	La Foret Royal	90.68	329	⇑iP	P	00 39 57.8	-1.3
	comp=Z,13nm,0.9s,mb4.9						
FRF	La Foret Royal	90.68	329	⇑iP	P	00 39 57.8	-1.3
FRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
FRF	La Foret Royal	90.68	329	⇑iP	P	00 39 57.8	-1.3
	comp=Z,6.4nm,0.9s,mb5.0						
MFF	Saint Martin d	90.69	335	eP	P	00 39 58.9	-0.2
	comp=Z,38nm,1.0s,mb5.4						
MFF	Saint Martin d	90.69	335	eP	P	00 39 58.9	-0.2
MFF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
MFF	Saint Martin d	90.69	335	eP	P	00 39 58.9	-0.2
	comp=Z,19nm,1.0s,mb5.4						
SMRF	Simiane la Rot	90.77	330	eP	P	00 39 59.0	-0.5
	comp=Z,12nm,1.1s,mb4.8						
SMRF	Simiane la Rot	90.77	330	eP	P	00 39 59.0	-0.5
	comp=Z,12nm,1.1s,mb5.1						
LMR	La Mourre	90.92	329	⇑iP	P	00 39 59.1	-1.1
	comp=Z,25nm,0.9s,mb5.2						
LMR	La Mourre	90.92	329	⇑iP	P	00 39 59.1	-1.1
LMR				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.3						
LMR	La Mourre	90.92	329	⇑iP	P	00 39 59.1	-1.1
	comp=Z,13nm,0.9s,mb5.2						
RJF	Les Rejaudoux	91.21	333	⇑iP	P	00 40 01.4	-0.2
	comp=Z,24nm,0.9s,mb5.2						
RJF				eMLR	MLR		
	comp=Z,314nm,17.5s,MS4.5						
RJF	Les Rejaudoux	91.21	333	⇑iP	P	00 40 01.4	-0.2
RJF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
RJF				MLR	MLR		
	comp=Z,310nm,17.5s,MS4.8						
RJF	Les Rejaudoux	91.21	333	⇑iP	P	00 40 01.4	-0.2
	comp=Z,12nm,0.9s,mb5.2						
RJF				LR	LR		
	comp=Z,310nm,17.5s,MS4.8						
CCM	Cathedral Cave	91.29	39	eP	P	00 40 01.3	-0.8
CCM				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
CCM	Cathedral Cave	91.29	39	eP	P	00 40 01.3	-0.8
	comp=Z,6.6nm,0.8s,mb5.0						
CAF	Calviac	91.34	333	⇑iP	P	00 40 02.2	+0.1
	comp=Z,23nm,0.9s,mb5.2						
CAF	Calviac	91.34	333	⇑iP	P	00 40 02.2	+0.1
CAF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
CAF	Calviac	91.34	333	⇑iP	P	00 40 02.2	+0.1
	comp=Z,12nm,0.9s,mb5.2						
LASF	Ste Croix	91.37	331	eP	P	00 40 02.1	-0.2
	comp=Z,13nm,0.8s,mb5.0						
LFF	La Frestale	91.81	333	⇑iP	P	00 40 04.3	0.0
	comp=Z,30nm,0.9s,mb5.3						
LFF	La Frestale	91.81	333	⇑iP	P	00 40 04.3	0.0
LFF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
LFF	La Frestale	91.81	333	⇑iP	P	00 40 04.3	0.0
	comp=Z,15nm,0.9s,mb5.3						
MTLF	Montolieu	92.63	332	⇑iP	P	00 40 08.0	-0.1
	comp=Z,14nm,0.9s,mb5.1						
MTLF	Montolieu	92.63	332	⇑iP	P	00 40 08.0	-0.1
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
MTLF	Montolieu	92.63	332	⇑iP	P	00 40 08.0	-0.1
	comp=Z,7.2nm,0.9s,mb5.1						
MIAR	Mount Ida	92.71	43	eP	P	00 40 08.5	-0.2
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
MIAR	Mount Ida	92.71	43	eP	P	00 40 08.5	-0.2
	comp=Z,10nm,1.0s,mb5.2						
EPF	Esparros	93.60	333	eP	P	00 40 12.0	-0.6
	comp=Z,7.6nm,1.0s,mb4.8						
EPF	Esparros	93.60	333	eP	P	00 40 12.0	-0.6
EPF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
EPF	Esparros	93.60	333	eP	P	00 40 12.0	-0.6
	comp=Z,3.8nm,1.0s,mb4.8						
ETSF	Etsaut	94.05	333	eP	P	00 40 14.9	+0.2
	comp=Z,13nm,0.9s,mb5.1						
ETSF	Etsaut	94.05	333	eP	P	00 40 14.9	+0.2
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
ETSF	Etsaut	94.05	333	eP	P	00 40 14.9	+0.2
	comp=Z,6.4nm,0.9s,mb5.0						
KEST	Kesra	95.80	323	P	P	00 40 21.7	-1.1
	comp=Z,1.0nm,0.8s,mb4.3,baz=2.6,slow=2.1,SNR=3.8						
KEST				LR	LR	01 29 02.4	
	comp=Z,101nm,18.9s,MS4.3,baz=309,slow=39						
ESDC	Sonseca Array	98.10	334	P	P	00 40 32.4	-0.8
	comp=Z,1.5nm,0.9s,mb4.5,baz=19,slow=4.4,SNR=9.5						
ESDC				LR	LR	01 29 20.8	
	comp=Z,222nm,20.4s,MS4.6,baz=10.0,slow=38						
CMLA	Cha da Macela	105.41	350	eLR	LR	01 16 54.6	
LSZ	Lusaka	117.77	271	PKIKP	PKPdf	00 45 42.7	-0.5
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LSZ	Lusaka	117.77	271	PKP	PKPdf	00 45 42.7	-0.5
	comp=Z,1.3nm,0.8s,baz=321,slow=4.1,SNR=5.1						
TORD	Torodi Ar. Bea	118.06	315	PKP	PKPdf	00 45 41.9	-2.0
	comp=Z,0.6nm,0.5s,baz=25,slow=2.1,SNR=18						
TORD				PP	PP	00 46 47.4	-10
	comp=Z,1.5nm,0.8s,baz=28,slow=4.3,SNR=7.8						
TORD				PKKPbc	PKKPbc	00 56 12.2	+10
	comp=Z,1.2nm,1.0s,baz=211,slow=2.7,SNR=4.6						
TORD	Torodi Ar. Bea	118.06	315	PKP	PKPdf	00 45 41.9	-2.0
TORD				PP	PP	00 46 47.4	-10
TORD				PKKPbc	PKKPbc	00 56 12.2	+10
SDV	Santo Domingo	125.74	41	ePKPdf	PKPdf	00 45 57.9	-0.7
DBIC	Dimbokro	127.03	317	PKIKP	PKPdf	00 45 59.7	-1.4
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DBIC	Dimbokro	127.03	317	PKP	PKPdf	00 45 59.6	-1.5
	comp=Z,1.4nm,0.6s,baz=351,slow=17,SNR=4.2						
VNA2	Neumayer--Watz	141.65	196	ePKPdf	PKPdf	00 46 21.6	-5.0
	baz=118,slow=1.9						
VNA2				e		00 46 26.6	
VNA2				e		00 46 40.3	
VNA3	Neumayer Olymp	141.89	195	ePKPdf	PKPdf	00 46 21.4	-5.6
VNA3				e		00 46 27.3	
VNA3				e		00 46 40.1	
VNA1	Neumayer--Stat	142.05	196	ePKPdf	PKPdf	00 46 25.4	-1.9
LPAZ	La Paz	146.84	61	ePKIKP	PKPdf	00 46 38.4	+1.1
LVC	Limon Verde	150.18	71	ePKPdf	PKPdf	00 46 43.2	+0.6
LCO	Las Campanas	151.83	84	ePKPbc	PKPbc	00 46 51.6	+0.3

*ISCJB **05** 00:35:41.2±1.1, 3°.11N±0°.08×97°.68E±0°.09, h104km±9km, mb3.9/13, Error ellipse: s-maj=17.3km s-min=9.6km az=140.6*

*IDC **05** 00:35:41.5±3.0, 3°.14N×97°.76E, h85km±25km, mb3.6/9, mb1 3.7/9, mb1mx3.4/22, mbtmp3.6/9, Error ellipse: s-maj=63.0km s-min=18.5km az=57.0*

*NEIC **05** 00:35:43.1±1.2, 3°.14N×97°.69E, h104km±10km, mb4.1/4, Error ellipse: s-maj=10.2km s-min=6.0km az=49.0*

ISC 05 00:35:42.4±1.1**, 3°.11N**±0°.08×**97°.68E**±0°.09**, h98**km±9km**,**
n34, σ0s.75/35**, mb3.9**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	1.28	104	P	Pn	00 36 03.8	-2.1
PSI	Prapat	1.28	104	P	Pn	00 36 03.8	-2.1
	24nm,0.3s,baz=36,slow=3.6,SNR=54						
PSI				S	Sn	00 36 24.6	+1.0
	82nm,0.3s,baz=333,slow=16,SNR=27						
PSI	Prapat	1.28	104	P	Pn	00 36 03.8	-2.1
PSI				S	Sn	00 36 24.6	+1.0
KULM	Kulim	3.67	54	ePn	Pn	00 36 38.9	+1.8
CHTO	Chiang Mai	15.66	4	Pn	Pn	00 39 16.0	-1.6
PALK	Pallekele	17.41	284	Pn	Pn	00 39 38.8	-0.4
LSA	Lhasa	27.17	347	eP	P	00 41 17.3	+0.6
	2.8nm,0.4s,mb4.2						
NACB	Ninganchiao	31.17	46	P	P	00 41 51.0	-1.3
BJT	Baijiatuau	40.38	22	P	P	00 43 10.3	-0.4
KBL	Kabul	41.08	323	P	P	00 43 16.5	-0.1
WRA	Warramunga Arr	42.66	124	P	P	00 43 30.2	+0.5
	0.7nm,0.6s,mb3.5,baz=302,slow=9.1,SNR=5.2						
WRA				pP	pP	00 43 46.5	-6.1
	0.7nm,0.6s,baz=302,slow=9.2,SNR=3.9						
WRAB	Tennant Creek	42.67	124	eP	P	00 43 30.4	+0.7
	1.5nm,0.6s,mb3.9						
WB2	Warramunga Arr	42.67	124	eP	P	00 43 30.3	+0.5
UCH	Uchtor	44.12	335	eP	P	00 43 41.9	+0.8
ASAR	Alice Springs	44.18	129	P	P	00 43 41.1	-0.7
	0.1nm,0.4s,mb2.9,baz=300,slow=7.4,SNR=2.9						
AAK	Ala-Archa	44.46	335	P	P	00 43 43.8	0.0
EKS2	Erkin-Say	44.79	335	eP	P	00 43 46.6	+0.2
	0.4nm,0.3s,mb3.6						
ULN	Ulaanbaatar	45.32	9	P	P	00 43 50.0	-0.4
MK31	Makanchi Array	45.53	345	eP	P	00 43 52.1	0.0
MKAR	Makanchi Array	45.53	345	P	P	00 43 52.5	+0.4
	0.9nm,0.6s,mb3.7,baz=162,slow=8.7,SNR=6.8						
MKAR				pP	pP	00 44 12.2	-3.1
	0.4nm,0.7s,baz=171,slow=7.1,SNR=2.6						
GUMO	Guam	47.74	75	eP	P	00 44 09.0	-1.0
TLY	Talaya	48.67	5	eP	P	00 44 16.4	-0.1
KURK	Kurchatov	50.09	344	P	P	00 44 27.4	+0.1
	0.8nm,0.4s,mb4.0,baz=160,slow=7.6,SNR=12						
KURK	Kurchatov	50.09	344	eP	P	00 44 26.8	-0.6
ZAA0	Zalesovo Array	51.77	350	eP	P	00 44 39.8	-0.1
ZALV	Zalesovo Beam	51.77	350	P	P	00 44 40.1	+0.3
	3.2nm,0.4s,mb4.8,baz=167,slow=6.7,SNR=22						
BVAR	Borovoye Array	54.63	340	P	P	00 45 00.8	+0.1
	0.9nm,0.5s,mb4.0,baz=134,slow=10,SNR=6.5						
TAU	Tasmania Unive	63.98	141	eP	P	00 46 05.3	-0.2
BRTR	Keskin Array B	68.20	312	P	P	00 46 33.1	+0.6
	0.4nm,0.5s,mb3.5,baz=113,slow=6.4,SNR=3.4						
CASY	Casey	69.84	174	eP	P	00 46 41.6	-0.5
FINES	FINESS Array B	78.55	332	P	P	00 47 33.6	+0.8
	0.6nm,0.4s,mb3.8,baz=104,slow=3.9,SNR=6.6						
ARCES	ARCESS Array B	80.92	340	P	P	00 47 45.8	+0.3
	3.5nm,1.0s,mb4.2,baz=90,slow=4.9,SNR=5.4						
PMR	Palmer	98.09	26	eP	P	00 49 08.0	+0.1
	3.5nm,0.9s,mb4.9						
CPUP	Villa Florida	146.72	224	PKPbc	PKPbc	00 55 14.5	+0.8
	0.5nm,0.4s,baz=186,slow=6.6,SNR=3.0						

ISCJB ***05*** *00:38:59.4±0.3, 25°.67N±0°.06×124°.22E±0°.04, h147km±6km, mb3.7/8, Error ellipse: s-maj=11.1km s-min=4.8km az=156.2*
NEIC ***05*** *00:39:00.7±0.7, 25°.73N×124°.23E, h145km±7km, mb4.0/4, Error ellipse: s-maj=11.5km s-min=9.9km az=158.0*
JMA ***05*** *00:39:01.8±0.2, 25°.51N×124°.28E, h149km, M3.5*
IDC ***05*** *00:39:02.2±7.9, 25°.79N×124°.42E, h161km±93km, mb3.2/5, mb1 3.2/6, mb1mx3.0/26, mbtmp3.2/6, Error ellipse: s-maj=94.3km s-min=19.5km az=61.0*

ISC 05 00:39:00.5±0.3, 25°.70N±0°.06×124°.21E±0°.04, h140km±6km, n36, σ0s84/48, mb3.7/8, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.14**	**157**	P	**Pn**	**00 39 26.3**	**+0.7**
JTJ				S	**Sn**	**00 39 44.5**	**-0.3**
JMJ	**Miyako jima 2**	**1.32**	**131**	P	**Pn**	**00 39 28.1**	**+0.7**
JMJ				S	**Sn**	**00 39 47.4**	**-0.5**
JIJ	**Ishigaki jima**	**1.33**	**183**	P	**Pn**	**00 39 27.5**	**0.0**
JIJ				S	**Sn**	**00 39 46.4**	**-1.7**
IRIF	**Iriomote-Funau**	**1.42**	**198**	P	**Pn**	**00 39 29.0**	**+0.5**
IRIF				S	**Sn**	**00 39 50.1**	**+0.3**
JOGS	**Gusukube**	**1.43**	**130**	P	**Pn**	**00 39 29.6**	**+1.0**
JOGS				S	**Sn**	**00 39 49.8**	**-0.2**
JKRS	**Kuro-shima**	**1.46**	**187**	P	**Pn**	**00 39 29.0**	**+0.1**
JKRS				S	**Sn**	**00 39 49.7**	**-0.9**
YOJ	**Yonaguni jima**	**1.64**	**222**	P	**Pn**	**00 39 32.4**	**+1.6**
YOJ				S	**Sn**	**00 39 56.0**	**+2.0**
HATJ	**Hateruma jima**	**1.67**	**193**	P	**Pn**	**00 39 31.6**	**+0.4**
HATJ				S	**Sn**	**00 39 53.8**	**-0.9**
JKE	**Kume jima 2**	**2.40**	**74**	P	**Pn**	**00 39 41.1**	**+1.2**
TATO	**Taipei**	**2.56**	**254**	*e*Pn	**Pn**	**00 39 41.8**	**-0.2**
YHNB	**Yeheng**	**2.76**	**249**	*e*Pn	**Pn**	**00 39 47.9**	**+3.4**
YHNB				*e*Sn	**Sn**	**00 40 16.8**	**-1.5**
NACB	**Ninganchiao**	**2.81**	**238**	*e*Pn	**Pn**	**00 39 45.9**	**+0.8**
NACB				*e*Sn	**Sn**	**00 40 14.6**	**-4.8**
JAGN	**Aguni-jima**	**2.87**	**71**	P	**Pn**	**00 39 46.5**	**+0.7**
JJT2	**Tamagusuku 2**	**3.22**	**81**	P	**Pn**	**00 39 51.0**	**+0.7**
YULB	**Yu-li**	**3.50**	**230**	*e*Pn	**Pn**	**00 39 53.2**	**-0.8**
JIH	**Iheya**	**3.63**	**68**	P	**Pn**	**00 39 56.0**	**+0.4**
JOW	**Kunigami**	**3.82**	**72**	P	**Pn**	**00 39 57.9**	**-0.2**
JOW	**Kunigami**	**3.82**	**72**	P	**Pn**	**00 39 57.8**	**-0.3**
JOW	14nm,0.3s,baz=130,slow=18,SNR=43			S	**Sn**	**00 40 41.5**	**-1.4**
TPUB	**Ta-pu**	**4.04**	**235**	*e*Pn	**Pn**	**00 40 02.3**	**+1.3**
TPUB	3.6nm,0.3s,baz=142,slow=19,SNR=3.7			*e*Sn	**Sn**	**00 40 46.8**	**-1.1**
JTK	**Tokunoshima**	**4.72**	**63**	P	**Pn**	**00 40 09.4**	**-0.7**
JAM	**Amami Oshima**	**5.52**	**59**	P	**Pn**	**00 40 19.4**	**-1.3**
ENH	**Enshi**	**13.78**	**293**	Pn	**Pn**	**00 42 09.4**	**-0.6**
LSA	**Lhasa**	**29.48**	**285**	P	**P**	**00 44 50.1**	**-1.2**
TLY	**Talaya**	**30.30**	**334**	*e*P	**P**	**00 44 58.5**	**+0.2**
KULM	**Kulim**	**30.34**	**232**	*e*P	**P**	**00 44 59.4**	**+0.3**
MKAR	**Makanchi Array**	**39.23**	**313**	P	**P**	**00 46 15.3**	**+0.3**
ZALV	**Zalesovo Beam**	**40.54**	**325**	P	**P**	**00 46 25.2**	**-0.5**
ZALV	**Zalesovo Beam**	**40.54**	**325**	P	**P**	**00 46 25.2**	**-0.5**
KURK	**Kurchatov**	**42.76**	**318**	P	**P**	**00 46 43.9**	**+0.1**
KURK	**Kurchatov**	**42.76**	**318**	*e*P	**P**	**00 46 43.4**	**-0.4**
TKM2	**Tokmak 2**	**43.05**	**306**	*e*P	**P**	**00 46 46.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**43.55**	**178**	P	**P**	**00 46 50.7**	**+0.2**
UCH	**Uchtor**	**43.76**	**305**	P	**P**	**00 46 51.8**	**-0.2**
BVAR	**Borovoye Array**	**48.29**	**319**	P	**P**	**00 47 27.7**	**+0.5**
ASAR	**Alice Springs**	**49.96**	**168**	P	**P**	**00 47 40.3**	**0.0**
INK	**Inuvik**	**70.79**	**23**	P	**P**	**00 50 00.9**	**-0.3**

ISCJB ***05*** *00:48:25.6±0.6, 39°.92N±0°.03×34°.18E±0°.04, h5km±7km, Error ellipse: s-maj=5.6km s-min=5.4km az=17.8*
CSEM ***05*** *00:48:25.4±0.4, 39°.93N×34°.20E, h15km, MD3.1, Error ellipse: s-maj=9.5km s-min=8.4km az=23.0*
DDA ***05*** *00:48:25.9, 39°.92N×34°.16E, h7km±2km, Md3.1*
ISK ***05*** *00:48:25.7, 40°.04N×34°.21E, h30km, MD2.8*

ISC 05 00:48:26.2±0.5, 39°.91N±0°.03×34°.18E±0°.04, h11km±7km, n21, σ0s92/32, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAG	**Cicekdag**	**0.32**	**153**	⇓*i*P	**Pg**	**00 48 32.8**	**+0.2**
CDAG				*i* S	**Sg**	**00 48 38.0**	**+1.0**
CDAG	**Cicekdag**	**0.32**	**153**	*i* P	**Pg**	**00 48 32.8**	**+0.2**
CDAG				*i* S	**Sg**	**00 48 38.0**	**+1.1**
CORM	**Corum**	**0.43**	**52**	*e*PG	**Pg**	**00 48 34.1**	**-0.6**
CORM				*e*SG	**Sg**	**00 48 41.1**	**+0.5**
CORM	**Corum**	**0.43**	**52**	*e*Pg	**Pg**	**00 48 34.1**	**-0.6**
CANT	**Cankiri**	**0.82**	**328**	*e*PG	**Pg**	**00 48 40.5**	**-1.5**
ELDT	**Eldivan**	**0.82**	**315**	*e*P	**Pg**	**00 48 40.9**	**-1.1**
ELDT				*e*S	**Sg**	**00 48 53.0**	**+0.3**
ELDT	**Eldivan**	**0.82**	**315**	*e*P	**Pg**	**00 48 40.8**	**-1.2**
ELDT				*e*S	**Sg**	**00 48 53.0**	**+0.3**
CTKT	**Corum**	**0.85**	**33**	*e*P	**Pg**	**00 48 42.5**	**0.0**
CTKT				*e*S	**Sg**	**00 48 54.7**	**+1.0**
CTKT	**Corum**	**0.85**	**33**	*e*P	**Pg**	**00 48 42.5**	**-0.1**
CTKT				*e*S	**Sg**	**00 48 54.7**	**+1.0**
BBAL	**Bala**	**0.90**	**246**	⇑*i*P	**Pg**	**00 48 43.1**	**-0.3**
BBAL				*i* S	**Sg**	**00 48 55.7**	**+0.6**
BBAL	**Bala**	**0.90**	**246**	*i* P	**Pg**	**00 48 43.1**	**-0.3**
BBAL				*i* S	**Sg**	**00 48 55.7**	**+0.6**
YOZ	**Yozgat**	**0.92**	**107**	*e*PG	**Pg**	**00 48 43.6**	**-0.2**
YOZ				*e*SG	**Sg**	**00 48 55.6**	**-0.2**
YOZ	**Yozgat**	**0.92**	**107**	*e*Pg	**Pg**	**00 48 43.6**	**-0.2**
BYBT	**Boyabat**	**1.62**	**16**	*e*PN	**Pn**	**00 48 50.0**	**-4.6**
BYBT	**Boyabat**	**1.62**	**16**	*e*Pn	**Pn**	**00 48 50.0**	**-4.6**
BALT	**Daday**	**1.73**	**340**	*e*P	**Pn**	**00 48 57.5**	**+1.3**
BALT				*e*S	**Sn**	**00 49 19.2**	**+1.0**
BALT	**Daday**	**1.73**	**340**	*e*P	**Pn**	**00 48 57.5**	**+1.3**
DIKM	**Dikmen**	**1.92**	**25**	*e*PN	**Pn**	**00 48 54.7**	**-4.1**
DIKM	**Dikmen**	**1.92**	**25**	*e*Pn	**Pn**	**00 48 54.7**	**-4.1**
SVSK	**Karacayir**	**2.17**	**89**	*e*PN	**Pn**	**00 49 00.3**	**-1.9**
SVSK	**Karacayir**	**2.17**	**89**	*e*Pn	**Pn**	**00 49 00.3**	**-1.8**

ISCJB ***05*** *01:17:45.0±0.5, 6°.92N±0°.05×73°.05W±0°.05, h167km±5km, mb3.5/7, Error ellipse: s-maj=10.1km s-min=5.8km az=144.0*
NEIC ***05*** *01:17:45.8±0.7, 6°.77N×73°.07W, h168km±8km, Error ellipse: s-maj=13.3km s-min=10.3km az=173.0*
IDC ***05*** *01:17:45.4±0.6, 6°.76N×72°.96W, h164km±7km, mb3.3/7, mb1 3.6/11, mb1mx3.4/24, mbtmp3.4/11, MS2.6/1, Ms1 2.6/1, ms1mx2.2/18, Error ellipse: s-maj=15.7km s-min=7.3km az=133.0*
FUNV ***05*** *01:17:46.9, 6°.92N×73°.16W, h162km, MW4.0*

ISC 05 01:17:46.1±0.5, 6°.91N±0°.05×73°.04W±0°.05, h161km±5km, n28, σ1s10/40, mb3.5/7, 4C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**37**	⇑*i*P	**Pn**	**01 18 14.8**	**+1.3**
CAPV				*e*S	**Sn**	**01 18 34.9**	**+0.3**
ROSC	**El Rosal**	**2.41**	**212**	P	**Pn**	**01 18 26.1**	**-0.6**
ROSC	61nm,0.3s,baz=320,slow=2.5,SNR=163			S	**Sn**	**01 18 57.0**	**-1.0**
ROSC	**El Rosal**	**2.41**	**212**	*e*Pn	**Pn**	**01 18 26.6**	**-0.1**
ROSC	135nm,0.3s,baz=108,slow=18,SNR=8.6			*e*S	**Sn**	**01 18 58.0**	**0.0**
VIGV	**El Vigia**	**2.54**	**41**	⇑*i*P	**Pn**	**01 18 29.3**	**+1.1**
VIGV				*e*S	**Sn**	**01 19 00.2**	**-0.6**
SOCV	**Socops**	**2.56**	**58**	⇑*i*P	**Pn**	**01 18 29.5**	**+1.0**
SOCV				*e*S	**Sn**	**01 19 01.0**	**-0.3**
SDV	**Santo Domingo**	**3.09**	**50**	P	**Pn**	**01 18 36.2**	**+1.2**
SDV	35nm,0.3s,baz=246,slow=7.5,SNR=221			S	**Sn**	**01 19 13.3**	**+0.4**
SDV	**Santo Domingo**	**3.09**	**50**	*e*Pn	**Pn**	**01 18 36.1**	**+1.1**
SDV	68nm,0.3s,baz=68,slow=22,SNR=32			*e*Sn	**Sn**	**01 19 13.9**	**+0.9**
ELOV	**Elorza**	**3.53**	**88**	*e*P	**Pn**	**01 18 40.9**	**+0.3**
ELOV				*e*S	**Sn**	**01 19 22.8**	**-0.2**
VIRV	**Villa del Rosa**	**3.62**	**10**	⇑*i*P	**Pn**	**01 18 41.6**	**-0.2**
VIRV				*e*S	**Sn**	**01 19 21.8**	**-3.4**
QARV	**Quebrada Arrib**	**4.12**	**37**	*e*P	**Pn**	**01 18 49.0**	**+0.8**
QARV				*e*S	**Sn**	**01 19 34.7**	**-1.8**
SANV	**Sanarito**	**4.32**	**53**	*e*P	**Pn**	**01 18 51.2**	**+0.4**
SANV				*e*S	**Sn**	**01 19 39.5**	**-1.8**
CURV	**Curarigua**	**4.33**	**44**	*e*P	**Pn**	**01 18 51.6**	**+0.7**
CURV				*e*S	**Sn**	**01 19 38.7**	**-3.0**
TEPV	**Terepaima**	**4.87**	**51**	*e*P	**Pn**	**01 18 58.2**	**+0.3**
SIQV	**Siquisique**	**4.90**	**40**	*e*P	**Pn**	**01 18 58.4**	**+0.1**
SIQV				*e*S	**Sn**	**01 19 51.1**	**-3.8**
BCIP	**Isla Barro Col**	**7.09**	**289**	*e*Pn	**Pn**	**01 19 25.1**	**-2.3**
PCRV	**Puerto La Cruz**	**8.92**	**68**	P	**Pn**	**01 19 53.1**	**+1.4**
PCRV	0.5nm,0.3s,baz=280,slow=4.5,SNR=7.0			S	**Sn**	**01 21 31.8**	**+0.7**
PCRV	0.4nm,0.3s,baz=343,slow=19,SNR=3.0			LR	LR	01 23 18.4	
JTS	**JuntasAbangare**	**12.25**	**287**	P	**Pn**	**01 20 36.2**	**+0.9**
SIV	**San Ignacio**	**25.66**	**153**	P	**P**	**01 22 58.8**	**-2.3**
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**01 24 35.9**	**+0.2**
ULM	**Lac du Bonnet**	**47.23**	**340**	P	**P**	**01 26 02.5**	**-0.1**
SCHQ	**Schefferville**	**48.05**	**5**	P	**P**	**01 26 09.8**	**+0.9**
SCHQ	**Schefferville**	**48.05**	**5**	P	**P**	**01 26 09.8**	**+0.9**
PDAR	**Pinedale Array**	**48.05**	**324**	P	**P**	**01 26 10.1**	**+1.0**
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**01 27 57.0**	**+0.2**
YKA				pP	pP	01 28 35.3	+0.5
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**01 27 57.0**	**+0.2**
YKA				pP	pP	01 28 35.4	+0.5
TORD	**Torodi Ar. Bea**	**73.64**	**78**	P	**P**	**01 29 00.8**	**-1.7**
ASAR	**Alice Springs**	**149.23**	**234**	PKPbc	PKPbc	01 37 14.8	-1.6
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	01 37 18.2	-1.2

CASC 05 01:17:48.8±1.3, 13°.22N×89°.79W, h30km±3km, MD3.6, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.63**	**15**	*e*P	Pb	01 18 01.4	-0.1
RTR	**El Retiro**	**0.68**	**12**	*e*P	Pb	01 18 02.4	+0.1
BOQS	**Boqueron**	**0.71**	**44**	*e*P	Pb	01 18 02.4	-0.3
LFRS	**El Faro**	**0.81**	**61**	*e*P	Pn	01 18 03.5	-0.6
LFRS				*e*S	Sb	01 18 15.2	+0.2
LFU	**La Fuente**	**0.84**	**51**	*e*P	Pn	01 18 04.3	-0.2
LBRS	**Las Brisas**	**0.89**	**55**	*e*P	Pn	01 18 05.0	-0.2
LBRS				*e*S	Sn	01 18 17.8	+0.8
RBDL	**Robledal**	**0.89**	**6**	*e*P	Pn	01 18 05.4	+0.2
RBDL				*e*S	Sn	01 18 18.3	+1.2
SNVI	**San Vicente**	**1.00**	**67**	*e*P	Pn	01 18 06.4	-0.4
SNVI				*e*S	Sn	01 18 21.6	+1.8
IXG	**Ixpaco**	**1.15**	**326**	*e*P	Pn	01 18 09.2	+0.4
IXG				*e*S	Sn	01 18 23.3	-0.2
MTO2	**Montecristo 2**	**1.24**	**19**	*e*P	Pn	01 18 10.1	+0.1
MTO2				*e*S	Sn	01 18 26.8	+1.0
VSM	**San Miguel**	**1.49**	**82**	*e*P	Pn	01 18 13.3	-0.1
VSM				*e*S	Sn	01 18 34.0	+2.2
BLLM	**Bellamira**	**1.52**	**82**	*e*P	Pn	01 18 14.1	+0.1
BLLM				*e*S	Sn	01 18 33.9	+1.1
FUG	**Fuego 3**	**1.59**	**320**	*e*P	Pn	01 18 15.9	+1.0
FUG				*e*S	Sn	01 18 36.0	+1.6
CAHU	**Cacacuatique**	**1.63**	**70**	*e*P	Pn	01 18 15.1	-0.3
CNCH	**Conchagua**	**1.90**	**88**	*e*P	Pn	01 18 19.4	+0.2
CNCH				*e*S	Sn	01 18 43.0	+0.9

IDC 05 01:21:37.6±4.2, 18°.90S×175°.96W, h0km, mb4.7/3, mb1 4.9/3, mb1mx4.0/17, mbtmp4.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/27, 1C, Error ellipse: s-maj=245.7km s-min=34.7km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**27.05**	**201**	LR	LR	01 35 12.4	
CTA	102nm,20.4s,baz=26,slow=30						
CTA	**Charters Tower**	**35.59**	**262**	P	P	01 28 38.2	+1.1
WRA	7.0nm,0.4s,baz=92,slow=11,SNR=9.7 **Warramunga Arr**	**46.75**	**260**	P	P	01 30 08.6	-0.3
ASAR	1.4nm,0.3s,baz=96,slow=7.8,SNR=28 **Alice Springs**	**46.77**	**255**	P	P	01 30 08.0	-1.1
ARCES	0.6nm,0.3s,baz=87,slow=8.0,SNR=4.1 **ARCESS Array B**	**127.68**	**351**	PKP	PKPdf	01 40 43.6	-0.6
CLL	3.9nm,0.9s,baz=14,slow=1.2,SNR=6.8 **Collm**	**146.90**	**350**	⇑*i*P	PKPbc	01 41 22.5	+0.7
BRTR	comp=Z,7.0nm,1.1s **Keskin Array B**	**147.12**	**315**	PKPbc	PKPbc	01 41 21.6	-1.2
BRG	comp=Z,0.5nm,0.7s,baz=138,slow=3.8,SNR=3.9 **Berggiesshubel**	**147.14**	**348**	*i* (P)	PKPbc	01 41 22.7	+0.2
KHC	comp=Z,5.5nm,1.3s **Kasperske Hory**	**148.88**	**348**	*e*P	PKPbc	01 41 27.9	+0.7
BAIF	**Baives**	**148.91**	**360**	*e*PKP1	PKPbc	01 41 27.5	+0.3
GERES	**GERESS Array B**	**149.12**	**348**	PKPbc	PKPbc	01 41 28.2	+0.4
FLN	comp=Z,1.0nm,0.6s,baz=29,slow=3.0,SNR=12 **La Foliniere**	**149.99**	**6**	*e*PKP1	PKPbc	01 41 30.3	+0.4
LDF	comp=Z,2.9nm,0.4s **La Druitiere**	**150.19**	**6**	*e*PKP1	PKPbc	01 41 30.5	+0.1
GRR	**Gorron**	**150.32**	**7**	*e*PKP1	PKPbc	01 41 31.8	+1.1
CDF	**Champ du Feu**	**150.45**	**356**	*e*PKP1	PKPbc	01 41 31.0	-0.1
HAU	comp=Z,4.1nm,0.6s **Haudompre**	**150.91**	**357**	*e*PKP1	PKPbc	01 41 32.0	-0.2
HINF	comp=Z,7.4nm,0.6s **Hinteralfeld**	**151.07**	**356**	*e*PKP1	PKPbc	01 41 32.1	-0.4
LOR	comp=Z,2.4nm,0.6s **Lormes**	**151.71**	**0**	*e*PKP1	PKPbc	01 41 34.0	0.0
SSF	comp=Z,4.2nm,0.6s **Saint Saulge**	**151.91**	**1**	*e*PKP1	PKPbc	01 41 34.5	0.0
AVF	comp=Z,5.3nm,0.8s **Avril sur Loir**	**152.18**	**1**	*e*PKP1	PKPbc	01 41 34.6	-0.5
CABF	**La Chapelle**	**152.31**	**357**	*e*PKP1	PKPbc	01 41 35.7	+0.3
	comp=Z,5.3nm,0.8s						

NIED ***05*** *01:29:00, 43°.60N×147°.30E, h59km, Mw4.1 Best double couple: M0=1.62000×10^15 NP1:φs=196.00000°, δ70.00000°, λ74.00000°. NP2:φs=57.00000°, δ25.00000°, λ127.00000°.*
MOS ***05*** *01:29:53.7±1.0, 43°.79N×147°.24E, h45km, mb4.5/34, Error ellipse: s-maj=11.4km s-min=6.8km az=85.8*
MOS Felt (II-III) at Malokuril'skoe.
ISCJB ***05*** *01:29:55.5±0.6, 43°.76N±0°.04×147°.35E±0°.05, h59km±4km, mb4.3/58, MS3.5/5, Error ellipse: s-maj=7.9km s-min=4.2km az=148.5*
BJI ***05*** *01:29:55.8, 43°.87N×147°.39E, h67km, mB4.7/16, mb4.7/25, Ms3.9/11, Ms7 3.7/11*
JMA ***05*** *01:29:56.0±0.2, 43°.63N×147°.31E, h33km, M4.4*
IDC ***05*** *01:29:56.7±0.6, 43°.84N×147°.29E, h58km±5km, mb3.8/19, mb1 4.0/23, mb1mx3.9/31, mbtmp3.8/23, MS2.9/2, Ms1 2.9/2, ms1mx2.3/40, Error ellipse: s-maj=16.9km s-min=11.9km az=156.0*
NEIC ***05*** *01:29:57.1±0.7, 43°.76N×147°.29E, h60km±6km, mb4.5/25, Error ellipse: s-maj=8.4km s-min=5.3km az=155.0*

ISC 05 01:29:57.0±0.5, 43°.78N±0°.04×147°.32E±0°.05, h56km±4km, h61km±2.6km: pP-P, n169, σ1s02/182, mb4.3/58, MS3.5/5, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.08**	**284**	⇓*i*PN	**Pn**	**01 30 15.1**	**-0.8**
YUK				*i* S	**Sn**	**01 30 28.9**	**-1.1**
YUK	comp=Z,4μm,0.8s			pmax	pmax		
YUK	comp=E,2μm,1.0s			pmax	pmax		
YUK	comp=Z,3440μm,0.3s			pmax	pmax		
YUK	comp=N,530nm,0.4s			pmax	pmax		
YUK	comp=E,920nm,0.4s			pmax	pmax		
YUK	comp=E,1μm,0.5s			smax			
YUK	comp=N,2μm,0.5s			smax			
YUK	comp=N,45μm,1.0s			smax			
YUK	comp=E,36μm,0.8s			smax			
NEM2	**Nemuro 2**	**1.22**	**250**	P	**Pn**	**01 30 16.7**	**-1.0**
NEM2				*e*S	**Sn**	**01 30 31.7**	**-1.5**
KUR	**Kuril'sk**	**1.50**	**15**	*e*PN	**Pn**	**01 30 21.0**	**-0.6**
KUR				*e*S	**Sn**	**01 30 40.0**	**-0.2**
KUR	comp=N,200nm,0.4s			pmax	pmax		
KUR	comp=E,200nm,0.4s			pmax	pmax		
KUR	comp=Z,240nm,0.4s			pmax	pmax		
KUR	comp=N,1μm,0.4s			smax			
KUR	comp=E,820nm,0.4s			smax			
JRA	**Rausu**	**1.59**	**276**	P	**Pn**	**01 30 23.0**	**+0.2**
JRA				*e*S	**Sn**	**01 30 42.7**	**+0.4**
JNK	**Nakash**	**1.89**	**265**	P	**Pn**	**01 30 26.6**	**-0.3**
JNK				*e*S	**Sn**	**01 30 49.3**	**-0.3**
JAK	**Akkeshi**	**2.06**	**249**	P	**Pn**	**01 30 28.4**	**-0.8**
JAK				*e*S	**Sn**	**01 30 52.5**	**-1.3**
JTKR	**Abashiri--Toko**	**2.47**	**276**	P	**Pn**	**01 30 35.7**	**+0.9**
JTKR				*e*S	**Sn**	**01 31 06.7**	**+3.0**
JAR	**Ashorobuto**	**2.62**	**261**	P	**Pn**	**01 30 37.2**	**+0.3**
JAR				*e*S	**Sn**	**01 31 08.1**	**+0.6**
JOB	**Onbets**	**2.69**	**252**	P	**Pn**	**01 30 37.7**	**0.0**
JOB				*e*S	**Sn**	**01 31 08.4**	**-0.6**
JMP	**Maruseppu**	**2.87**	**276**	P	**Pn**	**01 30 41.4**	**+1.2**
JCH	**Churui**	**3.12**	**249**	P	**Pn**	**01 30 43.0**	**-0.6**
JCH				*e*S	**Sn**	**01 31 18.4**	**-1.2**
JKK2	**Kamakawa 2**	**3.31**	**273**	P	**Pn**	**01 30 48.2**	**+2.0**
ASAJ	**Asahikawa**	**3.42**	**277**	P	**Pn**	**01 30 49.7**	**+1.9**
ASAJ	**Asahikawa**	**3.42**	**277**	P	**Pn**	**01 30 48.9**	**+1.1**
ASAJ	comp=E,6.2nm,0.3s,baz=92,slow=17,SNR=23			S	**Sn**	**01 31 36.1**	**+9.0**
JFR	comp=E,3.2nm,0.3s,baz=63,slow=18,SNR=2.4 **Furan**	**3.49**	**261**	P	**Pn**	**01 30 50.1**	**+1.3**
JEM	**Erimo**	**3.53**	**241**	P	**Pn**	**01 30 50.6**	**+1.3**
ERM	**Erimo**	**3.53**	**241**	*e*Pn	**Pn**	**01 30 51.0**	**+1.8**
ERM				*e*Sn	**Sn**	**01 31 29.7**	**0.0**
JSE	**Soyaes**	**3.59**	**291**	P	**Pn**	**01 30 51.3**	**+1.2**
JNBK	**Urakawa-nobuka**	**3.67**	**247**	P	**Pn**	**01 30 50.9**	**-0.2**
YSS	**Yuzh-Sakhalins**	**4.51**	**316**	*e*PN	**Pn**	**01 31 04.0**	**+1.3**
YSS				*e*S	**Sn**	**01 31 53.6**	**-0.3**
YSS	comp=Z,40nm,0.9s			pmax	pmax		
YSS	comp=N,50nm,0.6s			smax			
YSS	comp=E,60nm,0.6s			smax			
YSS	comp=Z,200nm,14.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**4.51**	**316**	*e*Pn	**Pn**	**01 31 04.2**	**+1.5**
MAJO	**Matsushiro**	**10.04**	**227**	*e*PN	**Pn**	**01 32 17.5**	**-0.9**
MJAR	**Matsushiro Arr**	**10.04**	**227**	P	**Pn**	**01 32 16.6**	**-1.8**
PETK	comp=Z,0.4nm,0.3s,baz=28,slow=13,SNR=5.2 **Petropavlovsk-**	**11.59**	**33**	*e*PN	**Pn**	**01 32 38.0**	**-1.5**
PETK	**Petropavlovsk-**	**11.59**	**33**	P	**Pn**	**01 32 38.5**	**-1.0**
PETK	comp=Z,0.4nm,0.3s,baz=185,slow=9.0,SNR=7.7 **Petropavlovsk-**	**11.59**	**33**	P	**Pn**	**01 32 38.5**	**-1.0**
JHJ	**Hachijo jima 2**	**12.17**	**211**	LR	LR	01 37 42.3	
MDJ	comp=Z,49nm,19.6s,baz=80,slow=38 **Mudanjiang**	**12.75**	**280**	P	**Pn**	**01 32 55.7**	**+0.4**
MDJ	comp=Z,7.0nm,0.8s			pmax	pmax		
MDJ	comp=Z,53nm,5.4s			pmax	pmax		
CN2	**Changchun**	**15.79**	**278**	*e*P	**Pn**	**01 33 36.8**	**+1.3**
CN2				*es*P	sP	01 33 58.8	+0.9
CN2				*e*S	**S**	**01 36 29.0**	**-12**
CN2	comp=Z,10.0nm,0.5s			pmax	pmax		
CN2	comp=Z,200nm,3.0s			pmax	pmax		
CN2	comp=N,500nm,23.0s			LR	LR		
CN2	comp=E,300nm,23.0s			LR	LR		
CN2	comp=Z,500nm,21.0s			LR	LR		
KSRS	**Korea Array**	**16.01**	**253**	P	**Pn**	**01 33 37.5**	**-0.9**
KSRS	comp=Z,0.3nm,0.3s,baz=68,slow=9.1,SNR=5.6			LR	LR	01 40 07.7	
SEY	comp=Z,39nm,19.9s,baz=158,slow=38 **Seymchan**	**19.41**	**7**	⇑*e*P	**Pn**	**01 34 16.5**	**-3.3**
BJI	**Beijing**	**23.40**	**272**	P	**P**	**01 34 58.9**	**-1.9**
BJI				S	**S**	**01 39 07.8**	**-1.7**
BJI	comp=Z,16nm,1.3s,mb4.3			pmax	pmax		
BJI	comp=Z,79nm,4.9s			pmax	pmax		
BJI	comp=N,83nm,20.0s,MS3.3			LR	LR		
BJI	comp=E,72nm,18.7s,MS3.3			LR	LR		
BJI	comp=Z,67nm,22.5s,MS3.0			LR	LR		
NJ2	**Nanjing**	**25.20**	**252**	*e*P	**P**	**01 35 19.6**	**+2.4**
NJ2	comp=Z,20nm,0.5s,mb4.9			pmax	pmax		
BILL	**Bilibino**	**26.30**	**16**	*e*P	**P**	**01 35 25.3**	**-1.5**
BILL	comp=Z,1.0nm,1.0s,mb3.3			pmax	pmax		
HHC	**Hu-ho-hao-te**	**26.47**	**276**	⇑P	**P**	**01 35 30.7**	**+2.0**
HHC				pP	pP	01 35 45.2	+2.5
HHC				sP	sP	01 35 53.2	+3.9
HHC				PP		01 36 15.6	
HHC				PcP	PcP	01 38 55.3	+3.0
HHC				S	**S**	**01 39 58.7**	**+0.2**
HHC				sS	sS	01 40 23.3	+1.0
HHC				SS		01 41 11.6	
HHC				ScP	ScP	01 42 29.5	+2.2
HHC				PcS	PcS	01 42 34.9	+1.5
HHC				ScS	ScS	01 46 17.4	-0.1
HHC	comp=Z,19nm,1.0s,mb4.6			pmax	pmax		
HHC	comp=N,120nm,11.6s,MS4.0			LR	LR		
HHC	comp=E,200nm,11.7s,MS4.0			LR	LR		
HHC	comp=Z,88nm,12.9s,MS3.5			LR	LR		
SONM	**Songino Array**	**28.57**	**293**	P	**P**	**01 35 47.0**	**-0.3**
SONM	comp=Z,1.0nm,0.5s			pmax	pmax		
SONM	**Songino Array**	**28.57**	**293**	P	**P**	**01 35 47.0**	**-0.3**
WHN	comp=Z,1.2nm,0.5s,mb3.9,baz=72,slow=9.5,SNR=3.7 **Wuhan**	**29.20**	**254**	P	**

TTA pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
TTA Tatalina 37.33 39 *eP* **P 01 37 03.9 +0.5**
comp=Z,3.2nm,0.7s,mb4.3
CHUM Lake Minchumin 39.03 38 *eP* **P 01 37 18.6 +0.9**
comp=Z,5.3nm,0.8s,mb4.3
KDAK Kodiak Island 39.14 47 P **P 01 37 17.8 -0.9**
KDAK pmax pmax
comp=Z,19nm,1.1s,mb4.7
KDAK Kodiak Island 39.14 47 P **P 01 37 17.8 -0.9**
comp=Z,19nm,1.1s,mb4.7,baz=340,slow=6.6,SNR=4.3
KDAK Kodiak Island 39.14 47 P **P 01 37 17.8 -0.9**
KTH Kantishna Hill 39.65 38 *eP* **P 01 37 23.9 +1.1**
comp=Z,15nm,0.9s,mb4.7
MCK McKinley 40.53 38 *eP* **P 01 37 30.4 +0.2**
MCK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
MCK McKinley 40.53 38 *eP* **P 01 37 30.4 +0.2**
comp=Z,9.9nm,0.9s,mb4.4
KMI Kunming 40.64 258 P **P 01 37 31.1 -0.4**
KMI pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
COLA College 40.98 36 *eP* **P 01 37 34.3 +0.5**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
COLA College 40.98 36 *eP* **P 01 37 34.2 +0.5**
comp=Z,4.0nm,0.8s,mb4.1
ZALV Zalesovo Beam 41.08 307 P **P 01 37 32.8 -1.9**
ZALV 01 39 33.4
ZALV 01 39 47.8
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV Zalesovo Beam 41.08 307 P **P 01 37 32.8 -2.0**
comp=Z,0.6nm,0.5s,mb3.5,baz=90,slow=6.8,SNR=3.6
ZALV PcP PcP 01 39 33.4 0.0
comp=Z,1.5nm,0.6s,baz=92,slow=2.9,SNR=7.3
ZALV pPcP 01 39 47.8
comp=Z,0.8nm,0.4s,baz=89,slow=2.8,SNR=4.1
WMQ Urumqi 42.20 292 *eP* **P 01 37 46.6 +2.6**
WMQ pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
WMQ LR LR
comp=N,21nm,19.0s,MS3.1
WMQ LR LR
comp=E,14nm,23.0s,MS3.1
WMQ LR LR
comp=Z,33nm,20.0s,MS3.2
MK31 Makanchi Array 44.68 298 *eP* **P 01 38 04.2 +0.2**
MKAR Makanchi Array 44.68 298 P **P 01 38 04.0 0.0**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 44.68 298 P **P 01 38 04.0 +0.1**
comp=Z,1.4nm,0.5s,mb4.0,baz=86,slow=8.9,SNR=8.1
KURK Kurchatov 45.61 304 P **P 01 38 10.5 -0.8**
KURK 01 39 48.5
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KURK Kurchatov 45.61 304 P **P 01 38 10.5 -0.8**
comp=Z,2.2nm,0.5s,mb4.3,baz=74,slow=8.7,SNR=11
KURK PcP PcP 01 39 48.5 -0.3
comp=Z,0.7nm,0.4s,baz=75,slow=3.5,SNR=3.7
KURK Kurchatov 45.61 304 P **P 01 38 10.5 -0.8**
KURK PcP PcP 01 39 48.5 -0.3
INK Inuvik 46.32 30 P **P 01 38 16.4 -0.2**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 46.32 30 P **P 01 38 16.4 -0.3**
comp=Z,2.9nm,0.6s,mb4.4,baz=296,slow=7.2,SNR=25
INK Inuvik 46.32 30 *eP* **P 01 38 16.7 +0.1**
comp=Z,10nm,1.4s,mb4.6
BRVK Borovoye 49.62 309 *eP* **P 01 38 40.1 -2.3**
BRVK pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
TKM2 Tokmak 2 50.60 295 P **P 01 38 50.5 +0.6**
SNR=8.1
TKM2 Tokmak 2 50.60 295 *eP* **P 01 38 50.6 +0.7**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TKM2 Tokmak 2 50.60 295 *eP* **P 01 38 50.6 +0.6**
comp=Z,6.5nm,0.8s,mb4.6
KBK Karagaybulak 51.15 295 P **P 01 38 54.6 +0.6**
SNR=7.2
USP Ospenovka 51.16 296 P **P 01 38 54.4 +0.3**
SNR=7.4
KZA Kyzart 51.22 295 P **P 01 38 56.0 +1.4**
SNR=9.6
AAK Ala-Archa 51.45 296 *d iP* **P 01 38 56.4 +0.1**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
AAK Ala-Archa 51.45 296 P **P 01 38 56.5 +0.2**
comp=Z,2.8nm,0.5s,mb4.4,baz=110,slow=4.3,SNR=11
AAK Ala-Archa 51.45 296 *eP* **P 01 38 56.5 +0.2**
comp=Z,2.2nm,0.6s,mb4.3
EKS2 Erkin-Say 51.91 296 *eP* **P 01 39 00.1 +0.4**
comp=Z,2.7nm,0.6s,mb4.3
AML Almayashu 52.21 295 P **P 01 39 03.0 +1.0**
SNR=6.8
AML Almayashu 52.21 295 *eP* **P 01 39 02.9 +0.9**
comp=Z,5.0nm,0.8s,mb4.5
RES Resolute Bay 54.90 17 *eP* **P 01 39 20.3 -0.9**
RES pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
RES Resolute Bay 54.90 17 *eP* **P 01 39 20.3 -0.9**
comp=Z,3.2nm,1.0s,mb4.3
YKA Yellowknife Ar 55.71 34 P **P 01 39 26.8 -0.3**
YKA *PP pP 01 39 41.2 -1.1
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 55.71 34 P **P 01 39 26.8 -0.3**
comp=Z,1.2nm,0.6s,mb4.1,baz=300,slow=7.0,SNR=22
YKA pP pP 01 39 41.2 -1.1
comp=Z,0.6nm,0.8s,baz=301,slow=6.5,SNR=4.2
YKA Yellowknife Ar 55.71 34 P **P 01 39 26.8 -0.3**
YKA pP pP 01 39 41.2 -1.1
ABKAR Akbulak array 57.14 309 *eP* **P 01 39 37.2 -0.3**
comp=Z,4.6nm,0.4s,mb4.9
JOF Joensuu 62.12 332 *eP* **P 01 40 09.3 -2.2**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
JOF Joensuu 62.12 332 *ep* **P 01 40 09.3 -2.2**
comp=Z,1.7nm,0.5s,mb4.4
KAF Kangasniemi 64.34 333 *eP* **P 01 40 24.3 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KAF Kangasniemi 64.34 333 *ep* **P 01 40 24.3 -1.9**
comp=Z,1.5nm,0.5s,mb4.3
SWMT Swartz Lake 64.36 48 *eP* **P 01 40 27.4 +0.7**
WRA Warramunga Arr 64.52 194 P **P 01 40 27.4 -0.4**
WRA pmax pmax
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 64.52 194 P **P 01 40 27.4 -0.4**
comp=Z,2.4nm,0.9s,mb4.2,baz=13,slow=6.8,SNR=5.7
SLMT Seeley Lake 64.80 48 *eP* **P 01 40 29.7 +0.3**
MSO Missoula 64.81 49 *eP* **P 01 40 30.0 +0.4**
FINES FINESS Array B 64.90 333 P **P 01 40 28.7 -1.2**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 64.90 333 P **P 01 40 28.7 -1.2**
comp=Z,2.3nm,0.5s,mb4.5,baz=42,slow=7.9,SNR=33
FFC Flin Flon 65.60 37 *cePP* **01 40 35.0 +0.4**
FCC Fort Churchill 65.94 30 *eP* **P 01 40 35.8 -0.8**
LRM Limekiln Ridge 66.24 49 *eP* **P 01 40 39.6 +0.7**
BOZ Bozeman (W) 66.80 49 *eP* **P 01 40 42.9 +0.5**
BOZ pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
BOZ Bozeman (W) 66.80 49 *eP* **P 01 40 42.9 +0.5**
comp=Z,1.4nm,0.7s,mb4.1
NVAR Mina Array Bea 67.46 58 P **P 01 40 46.8 +0.1**
comp=Z,1.8nm,0.7s,mb4.2,baz=294,slow=6.5,SNR=9.2
NVAR pP pP 01 41 02.7 +0.5
comp=Z,1.1nm,0.7s,baz=289,slow=6.9,SNR=3.0
NVAR sP sP 01 41 09.3 +0.8
comp=Z,1.5nm,0.8s,baz=294,slow=8.2,SNR=3.4
ASAR Alice Springs 68.23 193 P **P 01 40 51.5 0.0**
ASAR *PP pP 01 41 07.9 +0.8
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 68.23 193 P **P 01 40 51.5 0.0**
comp=Z,0.6nm,0.6s,mb3.8,baz=3.4,slow=4.5,SNR=4.3
ASAR pP pP 01 41 07.9 +0.8
comp=Z,1.0nm,0.8s,baz=15,slow=5.2,SNR=3.9
IMW Indian Meadow 68.30 50 *eP* **P 01 40 53.3 +1.4**
RRI2 Red Ridge 68.44 50 *eP* **P 01 40 54.1 +1.3**
comp=Z,5.6nm,0.9s,mb4.6
TPAW Teton Pass 68.55 50 *eP* **P 01 40 54.6 +1.2**
NB2 NORSAR Subarra 69.62 339 P **P 01 40 58.8 -0.9**
comp=Z,0.7nm,0.5s,mb3.9,baz=41,slow=6.2
NOA NORSAR Array B 69.62 339 P **P 01 40 58.2 -1.5**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 69.62 339 P **P 01 40 58.2 -1.5**
comp=Z,0.7nm,0.5s,mb3.9,baz=32,slow=6.4,SNR=6.4
PDAR Pinedale Array 69.80 50 P **P 01 41 00.4 -0.8**
comp=Z,1.3nm,0.8s,mb3.9,baz=259,slow=0.9,SNR=10
KIV Kislovodsk 69.83 312 *eP* **P 01 41 00.2 -1.2**
KIV pmax pmax
comp=Z,14nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,32nm,19.0s,MS3.6
KIV Kislovodsk 69.83 312 *eP* **P 01 41 02.2 +0.8**
ZEI Tsey 69.96 310 *eP* **P 01 41 01.1 -1.1**
ZEI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
AKASG Malin Array Be 71.63 324 P **P 01 41 11.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 71.63 324 P **P 01 41 11.5 -0.7**
comp=Z,2.1nm,0.5s,mb4.4,baz=40,slow=6.0,SNR=9.0
SRU San Rafael 71.67 53 *eP* **P 01 41 13.1 +0.5**
ANN Anapa 72.01 315 *eP* **P 01 41 13.3 -1.3**
ANN *e*PP pP 01 41 29.2 -1.0
ANN *e* 01 43 52.8
ANN *e*S S 01 50 30.8 -0.8
ANN pmax pmax
comp=Z,44nm,1.1s,mb5.3
KWP Kalwaria Pacla 75.15 326 *eP* **P 01 41 33.0 +0.1**
KWP pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KWP Kalwaria Pacla 75.15 326 *eP* **P 01 41 33.0 +0.1**
comp=Z,3.4nm,0.6s,mb4.5
OJC Ojcow 75.82 328 *eP* **P 01 41 36.9 +0.2**
CLL Collm 77.34 333 *i P* **P 01 41 44.8 -0.5**
CLL *e*PP pP 01 42 00.0 -1.1
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.34 333 *i P* **P 01 41 44.8 -0.5**
comp=Z,7.0nm,1.1s,mb4.5
CLL *ep*P pP 01 42 00.0 -1.1
CLL Collm 77.34 333 *i P* **P 01 41 44.8 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
CLL *ep*P pP 01 42 00.0 -1.1
SCHQ Schefferville 77.55 19 P **P 01 41 45.4 -1.0**
comp=Z,0.7nm,0.4s,mb4.0,baz=43,slow=18,SNR=3.9
SCHQ Schefferville 77.55 19 P **P 01 41 45.4 -1.0**
BRTR Keskin Array B 77.61 314 P **P 01 41 47.0 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 77.61 314 P **P 01 41 47.0 -0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=45,slow=3.4,SNR=4.9
GERES GERESS Array B 79.19 331 P **P 01 41 54.6 -0.9**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 79.19 331 P **P 01 41 54.6 -0.9**
comp=Z,0.6nm,0.5s,mb3.8,baz=34,slow=6.1,SNR=7.4
MEZF Maizieres J'vi 82.31 336 *eP* **P 01 42 14.5 +2.3**
comp=Z,8.9nm,0.6s,mb4.6
MEZF Maizieres J'vi 82.31 336 *eP* **P 01 42 14.5 +2.3**
comp=Z,8.9nm,0.6s,mb4.9
HINF Hinteralfeld 82.36 334 *eP* **P 01 42 13.5 +1.0**
comp=Z,1.5nm,0.5s,mb3.9
HINF Hinteralfeld 82.36 334 *eP* **P 01 42 13.5 +1.0**
HINF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
HINF Hinteralfeld 82.36 334 *eP* **P 01 42 13.5 +1.0**
comp=Z,0.8nm,0.5s,mb3.9
TXAR Lajitas Array 82.53 56 P **P 01 42 13.7 0.0**
TXAR *PP pP 01 42 29.2 -0.5
TXAR pmax pmax
comp=Z,2.0nm,0.9s
TXAR Lajitas Array 82.53 56 P **P 01 42 13.7 -0.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=286,slow=3.3,SNR=9.0
TXAR pP pP 01 42 29.2 -0.5
comp=Z,1.0nm,0.8s,baz=290,slow=3.6,SNR=4.5
TXAR Lajitas Array 82.53 56 P **P 01 42 13.7 -0.1**
TXAR pP pP 01 42 29.2 -0.5
FLN La Foliniere 83.60 339 *eP* **P 01 42 18.2 -0.7**
LDF La Druitiere 83.67 339 *eP* **P 01 42 18.9 -0.3**
LOR Lormes 83.77 336 *eP* **P 01 42 19.6 -0.2**
GRR Gorron 84.05 339 *eP* **P 01 42 20.7 -0.5**
SMF Signal de Mont 84.33 336 *eP* **P 01 42 22.2 -0.5**
comp=Z,5.3nm,0.7s,mb4.5
SMF Signal de Mont 84.33 336 *eP* **P 01 42 22.2 -0.5**
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
SMF Signal de Mont 84.33 336 *eP* **P 01 42 22.2 -0.5**
comp=Z,2.7nm,0.7s,mb4.5
AVF Avril sur Loir 84.35 336 *eP* **P 01 42 22.3 -0.4**
comp=Z,4.2nm,0.8s,mb4.3
AVF Avril sur Loir 84.35 336 *eP* **P 01 42 22.3 -0.4**
AVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
AVF Avril sur Loir 84.35 336 *eP* **P 01 42 22.3 -0.4**
comp=Z,2.1nm,0.8s,mb4.3
LPL La Plagne 84.44 333 *eP* **P 01 42 23.9 +0.7**
LPG La Plagne 84.45 333 *eP* **P 01 42 23.5 +0.2**
comp=Z,2.3nm,0.6s,mb4.2
LPG La Plagne 84.45 333 *eP* **P 01 42 23.5 +0.2**
LPG pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
LPG La Plagne 84.45 333 *eP* **P 01 42 23.5 +0.2**
comp=Z,1.1nm,0.6s,mb4.2
ORIF Oris-en-Rattie 85.25 334 *eP* **P 01 42 27.3 0.0**
MFF Saint Martin d 85.51 338 *eP* **P 01 42 28.5 0.0**
comp=Z,10nm,0.9s,mb4.8
MFF Saint Martin d 85.51 338 *eP* **P 01 42 28.5 0.0**
MFF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
MFF Saint Martin d 85.51 338 *eP* **P 01 42 28.5 0.0**
comp=Z,5.1nm,0.9s,mb4.8
RJF Les Rejaudoux 86.23 337 *eP* **P 01 42 32.1 -0.1**
comp=Z,4.3nm,0.8s,mb4.4
RJF Les Rejaudoux 86.23 337 *eP* **P 01 42 32.1 -0.1**
RJF pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
RJF Les Rejaudoux 86.23 337 *eP* **P 01 42 32.1 -0.1**
comp=Z,2.2nm,0.8s,mb4.4
CAF Calviac 86.42 336 *eP* **P 01 42 33.5 +0.4**
comp=Z,3.6nm,0.6s,mb4.5
CAF Calviac 86.42 336 *eP* **P 01 42 33.5 +0.4**
CAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
CAF Calviac 86.42 336 *eP* **P 01 42 33.5 +0.4**
comp=Z,1.8nm,0.6s,mb4.5
LMR La Mourre 86.45 332 *eP* **P 01 42 32.6 -0.7**
comp=Z,3.5nm,0.7s,mb4.4
LMR La Mourre 86.45 332 *eP* **P 01 42 32.6 -0.7**
LMR pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
LMR La Mourre 86.45 332 *eP* **P 01 42 32.6 -0.7**
comp=Z,1.8nm,0.7s,mb4.4
TORD Torodi Ar. Bea 115.25 323 PKP PKPdf 01 48 30.7 -1.7
comp=Z,0.4nm,0.9s,baz=335,slow=1.2,SNR=4.6
PLCA Paso Flores 151.97 97 PKIKP PKPbc 01 49 45.5 +0.3
PLCA pmax pmax
comp=Z,2.0nm,0.7s
PLCA Paso Flores 151.97 97 PKPbc PKPbc 01 49 45.5 +0.3
comp=Z,2.0nm,0.7s,baz=235,slow=12,SNR=3.1
PLCA Paso Flores 151.97 97 PKPbc PKPbc 01 49 45.5 +0.3

IDC 05 01:35:23.2±2.1, 6°.91S×129°.04E, h0km, mb3.9/1, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=115.1km s-min=31.7km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.94**	**159**	Pn	Pn	01 38 42.1	0.0
	0.7nm,0.3s,baz=338,slow=13,SNR=5.8						
WRA				Sn	Sn	01 41 03.7	-14
	1.8nm,0.3s,baz=336,slow=21,SNR=8.5						
ASAR	**Alice Springs**	**17.30**	**165**	P	Pn	01 39 26.5	+0.2
	0.3nm,0.3s,baz=339,slow=10.0,SNR=19						
ASAR				S	Sn	01 42 25.1	-15
	0.3nm,0.3s,baz=350,slow=26,SNR=6.3						
MKAR	**Makanchi Array**	**67.63**	**327**	P	P	01 46 22.0	+0.1
	0.8nm,0.6s,baz=138,slow=7.6,SNR=6.2						

NIED ***05*** *01:45:00, 36°.30N×141°.90E, h23km, Mw3.8 Best double couple: M0=6.54000×10^14 NP1:φs=11.00000°, δ=66.00000°, λ=79.00000°. NP2:φs=216.00000°, δ=26.00000°, λ=113.00000°.*

NEIC ***05*** *01:45:19.3, 36°.30N×141°.90E, h60km, MG3.6(JMA), After JMA.*

JMA ***05*** *01:45:19.3±0.2, 36°.30N×141°.90E, h60km±5km, M3.6*

IDC ***05*** *01:45:19.7±0.9, 36°.81N×141°.76E, h0km, mb3.9/13, mb1 3.9/14, mb1mx3.8/26, mbtmp3.8/14, ML3.7/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=25.7km s-min=19.9km az=77.0*

ISC 05 01:45:18.9±1.1, 36°.29N±0°.03×141°.82E±0°.05, h12km±6km, n34, σ0=86/43, mb3.8/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.98**	**233**	P	**Pg**	**01 45 38.0**	**+0.2**
CHOJ				S	**Sg**	**01 45 51.5**	**+1.0**
JHO	**Hitachi**	**1.06**	**288**	P	**Pb**	**01 45 38.6**	**-0.6**
ONAJ	**Iwakimizuishiy**	**1.15**	**315**	P	**Pb**	**01 45 39.9**	**-0.9**
JFK	**Kawauchi**	**1.31**	**325**	P	**Pn**	**01 45 42.3**	**-0.8**
JFK				S	**Sb**	**01 46 00.2**	**-0.1**
JFT	**Otama**	**1.71**	**316**	P	**Pn**	**01 45 48.9**	**+0.4**
JFT				S	**Sn**	**01 46 11.4**	**+1.2**
JMM	**Marumori**	**1.77**	**333**	P	**Pn**	**01 45 49.7**	**+0.3**
BSO1	**Boso 1**	**1.77**	**203**	P	**Pn**	**01 45 48.8**	**-0.6**
BSO1				*e*S	**Sn**	**01 46 12.5**	**+0.6**
BSO3	**Boso 3**	**1.83**	**216**	P	**Pn**	**01 45 50.0**	**-0.2**
JAG	**Ashikaga**	**1.91**	**275**	P	**Pn**	**01 45 51.9**	**+0.5**
JAG				*e*S	**Sn**	**01 46 14.9**	**-0.5**
JFY	**Yanaizu**	**2.03**	**304**	P	**Pn**	**01 45 53.9**	**+1.0**
JKT	**Katashina**	**2.12**	**284**	P	**Pn**	**01 45 54.8**	**+0.6**
JKT				S	**Sn**	**01 46 19.5**	**-1.0**
JRY	**Ryogami san**	**2.38**	**264**	P	**Pn**	**01 45 57.6**	**-0.1**
JRY				*e*S	**Sn**	**01 46 26.3**	**-0.5**
MJAR	**Matsushiro Arr**	**2.92**	**276**	Pn	**Pn**	**01 46 06.1**	**+0.9**
	12nm,0.3s,baz=108,slow=9.0,SNR=83						
MJAR				LR	LR	01 47 29.0	
	comp=Z,221nm,18.1s,baz=115,slow=46						
MAJO	**Matsushiro**	**2.92**	**276**	*e*Pn	**Pn**	**01 46 06.8**	**+1.5**
MAJO				*e*Sg	**Sg**	**01 46 50.5**	**-2.4**
MAT	**Matsushiro**	**2.92**	**276**	P	**Pn**	**01 46 06.6**	**+1.4**
MAT				S	**Sn**	**01 46 41.0**	**+0.7**
JHJ	**Hachijo jima 2**	**3.58**	**208**	Pn	**Pn**	**01 46 14.2**	**-0.1**
	31nm,0.3s,baz=58,slow=20,SNR=11						
JHJ				Sn	**Sn**	**01 46 54.0**	**-2.6**
	50nm,0.3s,baz=257,slow=23,SNR=9.7						
ERM	**Erimo**	**5.81**	**10**	*e*Pn	**Pn**	**01 46 36.4**	**-8.5**
ASAJ	**Asahikawa**	**7.84**	**4**	Pn	**Pn**	**01 47 11.5**	**-1.2**
	1.0nm,0.3s,baz=323,slow=10,SNR=3.9						
PETK	**Petropavlovsk-**	**20.17**	**29**	LR	LR	01 56 24.6	
	comp=Z,16nm,20.7s,baz=52,slow=34						
SONM	**Songino Array**	**28.47**	**305**	P	**P**	**01 51 15.4**	**+1.7**
	3.0nm,0.8s,mb4.0,baz=100,slow=9.2,SNR=9.1						
ZALV	**Zalesovo Beam**	**42.66**	**313**	P	**P**	**01 53 14.8**	**-0.3**
	2.0nm,0.9s,mb3.9,baz=101,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**44.79**	**303**	P	**P**	**01 53 32.1**	**-0.3**
	1.3nm,0.6s,mb3.9,baz=90,slow=8.5,SNR=8.9						
KURK	**Kurchatov**	**46.65**	**309**	P	**P**	**01 53 46.9**	**-0.2**
	2.0nm,0.6s,mb4.2,baz=82,slow=8.1,SNR=9.2						
BVAR	**Borovoye Array**	**51.31**	**313**	P	**P**	**01 54 22.7**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=81,slow=9.2,SNR=4.3						
INK	**Inuvik**	**54.90**	**27**	P	**P**	**01 54 49.4**	**+0.5**
	1.0nm,0.9s,mb3.9,baz=322,slow=17,SNR=3.7						
WRA	**Warramunga Arr**	**56.37**	**188**	P	**P**	**01 55 06.3**	**+6.3**
	0.7nm,0.3s,mb4.2,baz=4.6,slow=8.2,SNR=8.6						
ASAR	**Alice Springs**	**60.10**	**188**	P	**P**	**01 55 32.4**	**+6.3**
	0.4nm,0.6s,mb3.6,baz=354,slow=5.9,SNR=6.2						
YKA	**Yellowknife Ar**	**64.29**	**30**	P	**P**	**01 55 53.2**	**-0.5**
	0.2nm,0.7s,mb3.3,baz=302,slow=6.7,SNR=4.1						
YKA	**Yellowknife Ar**	**64.29**	**30**	P	**P**	**01 55 53.2**	**-0.5**
FINES	**FINESS Array B**	**69.62**	**333**	P	**P**	**01 56 27.5**	**-0.2**
	1.4nm,0.8s,mb3.9,baz=151,slow=4.4,SNR=4.1						
FINES	**FINESS Array B**	**69.62**	**333**	P	**P**	**01 56 27.5**	**-0.2**
NOA	**NORSAR Array B**	**75.00**	**338**	P	**P**	**01 56 59.6**	**-0.2**
	1.0nm,0.8s,mb3.8,baz=39,slow=5.7,SNR=4.0						
AKASG	**Malin Array Be**	**75.08**	**323**	P	**P**	**01 56 59.8**	**-0.7**
	1.1nm,0.6s,mb4.0,baz=44,slow=6.4,SNR=5.3						
BRTR	**Keskin Array B**	**79.59**	**312**	P	**P**	**01 57 26.1**	**+0.1**
	0.4nm,0.8s,mb3.4,baz=29,slow=2.8,SNR=4.1						

ISCJB ***05*** *01:47:20.0±0.3, 18°.73N±0°.05×69°.68W±0°.03, h135km±4km, mb3.5/7, Error ellipse: s-maj=8.3km s-min=4.2km az=9.8*

NEIC ***05*** *01:47:21.7, 18°.83N×69°.62W, h130km, mb3.8/1, MD4.2(RSPR), After RSPR.*

RSPR ***05*** *01:47:21.7, 18°.83N×69°.62W, h130km±1km, MD4.2/14, MD4.2/14*

IDC ***05*** *01:47:21.8±2.3, 18°.68N×69°.62W, h136km±28km, mb3.4/7, mb1 3.6/11, mb1mx3.4/24, mbtmp3.5/11, Error ellipse: s-maj=25.9km s-min=20.0km az=24.0*

ISC 05 01:47:21.1±0.3, 18°.72N±0°.05×69°.69W±0°.03, h128km±4km, n44, σ0=96/64, mb3.5/7, 14C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.30**	**76⇑**	*e*P	**Pn**	**01 47 38.2**	**-0.8**
DR12				*e*S	**Sn**	**01 47 51.3**	**-1.2**
PCDR	**Punta Cana, DR**	**1.26**	**99⇓**	*e*P	**Pn**	**01 47 46.8**	**+0.4**
PCDR	**Punta Cana, DR**	**1.26**	**99**	*e*S	**Sn**	**01 48 07.6**	**+1.9**
SDDR	**Presa de Saban**	**1.54**	**280⇑**	*e*P	**Pn**	**01 47 49.9**	**+0.4**
SDDR				*e*S	**Sn**	**01 48 13.6**	**+2.5**
IMO	**Isla Mona**	**1.80**	**109**	*e*S	**Sn**	**01 48 17.7**	**+1.2**
AGP	**Aguadilla**	**2.44**	**97**	*e*Pn	**Pn**	**01 48 01.9**	**+1.5**
AGPR	**Aguadilla, PR**	**2.46**	**95⇑**	*e*P	**Pn**	**01 48 01.6**	**+0.9**
AGPR				*e*S	**Sn**	**01 48 31.1**	**0.0**
MPR	**Mayaguez**	**2.47**	**101**	*e*Pn	**Pn**	**01 48 01.5**	**+0.6**
LSP	**Las Mesas**	**2.53**	**102⇓**	*e*P	**Pn**	**01 48 01.9**	**+0.3**
LSP				*e*S	**Sn**	**01 48 32.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.55**	**106⇑**	*e*P	**Pn**	**01 48 01.3**	**-0.6**
CRPR				*e*S	**Sn**	**01 48 33.6**	**+0.4**
LRS	**Lares**	**2.73**	**98**	*e*S	**Sn**	**01 48 37.6**	**+0.2**
LRS	**Lares**	**2.73**	**98**	*e*Pn	**Pn**	**01 48 04.9**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.77**	**105⇑**	*e*P	**Pn**	**01 48 05.3**	**+0.6**
GBPR				*e*S	**Sn**	**01 48 38.6**	**+0.3**
AOPR	**Arecibo Observ**	**2.81**	**97⇑**	*e*P	**Pn**	**01 48 04.9**	**-0.3**
AOPR				*e*S	**Sn**	**01 48 39.3**	**+0.2**
OBIP	**Obispado Ponce**	**3.00**	**102⇑**	*e*P	**Pn**	**01 48 06.7**	**-1.0**
OBIP				*e*S	**Sn**	**01 48 44.4**	**+0.7**
CELP	**Cerrillos**	**3.02**	**102⇑**	*e*P	**Pn**	**01 48 07.6**	**-0.4**
CELP				*e*S	**Sn**	**01 48 44.8**	**+0.7**
GRTK	**Grand Turk**	**3.09**	**334**	*e*Pn	**Pn**	**01 48 07.9**	**-1.0**
ICM	**Isla Caja Muer**	**3.12**	**105**	*e*S	**Sn**	**01 48 46.2**	**-0.1**
SJG	**San Juan**	**3.41**	**100⇓**	*e*P	**Pn**	**01 48 12.5**	**-0.6**
SJG	**San Juan**	**3.41**	**100⇑**	*e*P	**Pn**	**01 48 13.2**	**+0.1**
SJG				*e*S	**Sn**	**01 48 53.2**	**-0.1**
SJG	**San Juan**	**3.41**	**100**	P	**Pn**	**01 48 13.4**	**+0.3**
	18nm,0.3s,baz=315,slow=10,SNR=7.2						
SJG				S	**Sn**	**01 48 49.9**	**-3.4**
	70nm,0.3s,baz=307,slow=19,SNR=11						
SJG	**San Juan**	**3.41**	**100⇓**	*e*P	**Pn**	**01 48 12.5**	**-0.6**
SJG				*e*S	**Sn**	**01 48 53.2**	**-0.1**
CPD	**Cerro la Pandu**	**3.65**	**100⇑**	*e*P	**Pn**	**01 48 16.1**	**-0.1**
CPD				*e*S	**Sn**	**01 48 59.0**	**+0.2**
HUMP	**Col San Antoni**	**3.69**	**98⇑**	*e*P	**Pn**	**01 48 16.1**	**-0.6**
HUMP				*e*S	**Sn**	**01 48 59.2**	**-0.6**
MTP	**Monte Pirata**	**3.98**	**98⇑**	*e*P	**Pn**	**01 48 20.3**	**-0.2**
MTP				*e*S	**Sn**	**01 49 05.8**	**-0.8**
STVI	**Saint Thomas**	**4.51**	**94⇑**	*e*P	**Pn**	**01 48 26.7**	**-0.9**
STVI				*e*S	**Sn**	**01 49 17.7**	**-1.6**
TBVI	**Tortola**	**4.82**	**93⇑**	*e*P	**Pn**	**01 48 31.7**	**-0.1**
TBVI				*e*S	**Sn**	**01 49 25.0**	**-1.8**
GTBY	**Guantanamo Bay**	**5.26**	**284**	*e*Pn	**Pn**	**01 48 34.9**	**-2.7**
GTBY				*e*Sn	**Sn**	**01 49 35.2**	**-2.0**
PCRV	**Puerto La Cruz**	**9.80**	**149**	P	**Pn**	**01 49 39.0**	**+0.1**
	1.9nm,0.3s,baz=47,slow=1.7,SNR=25						
PCRV				S	**Sn**	**01 51 16.7**	**-10**
	1.3nm,0.3s,baz=321,slow=20,SNR=6.3						
SDV	**Santo Domingo**	**9.81**	**185**	P	**Pn**	**01 49 39.5**	**+0.4**
	2.2nm,0.3s,baz=62,slow=5.8,SNR=20						
SDV				S	**Sn**	**01 51 25.6**	**-2.0**

PDAR	Pinedale Array	41.28	314	P	P	01 54 54.7	+1.0
	0.2nm,0.4s,mb3.1,baz=120,slow=10,SNR=3.2						
NVAR	Mina Array Bea	46.41	306	P	P	01 55 36.7	+1.9
	0.6nm,0.5s,mb3.5,baz=92,slow=7.1,SNR=5.2						
NVAR	Mina Array Bea	46.41	306	P	P	01 55 36.7	+1.9
YKA	Yellowknife Ar	53.55	336	P	P	01 56 28.1	-0.2
	0.7nm,0.7s,mb3.5,baz=113,slow=7.2,SNR=12						
YKA	Yellowknife Ar	53.55	336	P	P	01 56 28.1	-0.2
TORD	Torodi Ar. Bea	68.48	83	P	P	01 58 09.3	-0.6
	0.3nm,0.5s,mb3.2,baz=296,slow=7.0,SNR=7.7						
ARCES	ARCESS Array B	74.43	21	P	P	01 58 45.1	+0.4
	3.2nm,0.9s,mb4.1,baz=289,slow=2.8,SNR=3.7						

*NEIC **05** 01:54:53.6, 32°.54S×68°.85W, h10km, ML3.2(GUC), After GUC.*

GUC 05 01:54:53.6±0.5, 32°.54S×68°.85W, h10km, MD3.7, ML3.2, 1C-5D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
FCH	Farellones	1.45	237	⇓iP	Pn	01 55 17.3	-2.6
FCH				i S	Sn	01 55 37.1	-1.7
FCH				AML	AML	01 55 37.5	
	comp=N,506nm,0.4s						
CLCH	Cerro Calan	1.66	238	⇓iP	Pn	01 55 22.3	-0.4
CLCH				i S	Sn	01 55 44.1	0.0
CLCH				AML	AML	01 55 45.9	
	comp=N,743nm,0.4s						
LMEL	Las Melosas	1.73	221	⇓iP	Pn	01 55 23.8	+0.1
LMEL				i S	Sn	01 55 47.3	+1.3
LMEL	Las Melosas	1.73	221	⇓iP	Pn	01 55 23.8	+0.1
LMEL				i S	Sn	01 55 47.3	+1.3
LMEL				AML	AML	01 55 48.1	
	comp=N,300nm,0.2s						
CHCH	Chadas Angostu	2.06	227	⇓iP	Pn	01 55 29.8	+1.5
CHCH				i S	Sn	01 55 56.4	+2.4
CACH	El Canelo	2.15	222	i S	Sn	01 55 58.7	+2.4
CMCH	Combarbala	2.28	306	eP	Pn	01 55 32.2	+0.9
CMCH				i S	Sn	01 56 01.9	+2.5
CMCH	Combarbala	2.28	306	eP	Pn	01 55 32.2	+0.9
CMCH				i S	Sn	01 56 01.9	+2.5
CMCH				AML	AML	01 56 07.8	
	comp=E,586nm,0.7s						
CHNG	Los Chungos	2.34	285	⇑iP	Pn	01 55 34.0	+1.9
CHNG				i S	Sn	01 56 04.0	+3.1
CHNG				AML	AML	01 56 06.8	
	comp=N,86nm,0.5s						
LCO	Las Campanas	3.86	335	ePn	Pn	01 55 53.2	+0.2
LCO				eSn	Sn	01 56 37.4	-1.0

ISC 05 02:25:26.9±1.8, 24°.4N±0°.2×93°.49E±0°.08, h35km, n14, σ0s72/16, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	0.59	43	i PG	Pn	02 25 39.0	+0.2
IMP				i SG	Sn	02 25 47.0	-0.2
SHL	Shillong	1.90	310	i PN	Pn	02 25 56.0	-0.8
SHL				i SN	Sn	02 26 19.5	+0.1
TAPN	Taplejung	6.00	301	eP	Pn	02 26 54.1	+0.9
	50nm,0.3s						
ODAN	Odare	6.05	296	eP	Pn	02 26 54.6	+0.8
	84nm,0.3s						
RAMN	Ramite	6.74	294	eP	Pn	02 27 04.0	+0.7
	29nm,0.3s						
JIRN	Jiri	7.35	298	eP	Pn	02 27 12.5	+0.8
	54nm,0.2s						
GUN	Gumba	7.71	299	eP	Pn	02 27 16.9	+0.3
	35nm,0.3s						
PKI	Pulchoki	7.95	296	eP	Pn	02 27 20.2	+0.3
	15nm,0.3s						
PKIN	Phulchoki	7.96	296	eP	Pn	02 27 20.3	+0.2
	22nm,0.3s						
PKIN	Phulchoki	7.96	296	eP	Pn	02 27 20.4	+0.3
	24nm,0.3s						
KKN	Kakani	8.14	297	eP	Pn	02 27 22.5	0.0
	23nm,0.2s						
GKN	Gorkha	8.75	296	eP	Pn	02 27 30.1	-0.8
	44nm,0.3s						
KOLN	Koldanda	9.52	293	eP	Pn	02 27 40.6	-0.9
	12nm,0.2s						
PYUN	Piuthan	10.14	294	eP	Pn	02 27 48.2	-1.8

*DDA **05** 02:39:13.9, 38°.21N×26°.66E, h16km±2km, Md3.3*
*ATH **05** 02:39:13.7, 38°.15N×26°.84E, h44km±14km, MD3.3/4*
*CSEM **05** 02:39:14.2±0.2, 38°.22N×26°.60E, h2km, MD3.3, Error ellipse: s-maj=3.9km s-min=2.4km az=73.0*
*ISCJB **05** 02:39:14.4±0.6, 38°.20N±0°.02×26°.62E±0°.04, h5km±4km, Error ellipse: s-maj=5.6km s-min=3.3km az=163.5*
*NEIC **05** 02:39:14.0, 38°.23N×26°.65E, h5km, MD3.0(ISK), MD3.3(ATH), After ISK.*
*ISK **05** 02:39:14.8, 38°.23N×26°.66E, h7km, MD3.1*

ISC 05 02:39:14.8±0.6, 38°.20N±0°.02×26°.62E±0°.04, h6km±3km, n51, σ0s86/77, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.16	353	i P	Pg	02 39 17.7	-0.3
URLA				i S	Sg	02 39 20.8	+0.5
URLA	Izmir	0.16	353	i P	Pg	02 39 17.7	-0.4
URLA				i S	Sg	02 39 20.8	+0.5
BLCB	Balcova	0.38	61	ePG	Pg	02 39 21.5	-0.6
BLCB				eSG	Sg	02 39 26.8	-0.3
BLCB	Balcova	0.38	61	ePg	Pg	02 39 21.5	-0.6
BLCB				eSg	Sg	02 39 26.8	-0.3
SMG	Samos	0.52	161	eP	Pg	02 39 24.3	-0.5
SMG				eS	Sg	02 39 32.3	+0.8
SMG	Samos	0.52	161	eP	Pg	02 39 24.3	-0.5
SMG				eS	Sg	02 39 32.3	+0.8
IZM	Izmir	0.54	68	ePG	Pg	02 39 25.8	+0.6
IZM				eSG	Sg	02 39 32.9	+0.7
GCAM	G?zelcaml?	0.69	136	i P	Pg	02 39 27.6	-0.6
GCAM				i S	Sg	02 39 37.6	+0.4
GCAM	G?zelcaml?	0.69	136	i P	Pg	02 39 27.5	-0.6
GCAM				i S	Sg	02 39 37.6	+0.4
PRK	Paraskevi	1.08	345	eP	Pg	02 39 34.8	-0.7
PRK				eS	Sg	02 39 50.9	+1.4
PRK	Paraskevi	1.08	345	eP	Pg	02 39 34.8	-0.7
PRK				eS	Sg	02 39 50.9	+1.4
AYVA	Ayvalik	1.11	3	i P	Pg	02 39 35.0	-1.0
AYVA				i S	Sg	02 39 52.7	+2.3
AYVA	Ayvalik	1.11	3	i P	Pg	02 39 35.0	-1.1
AYDN	Tasoluk	1.13	118	i P	Pg	02 39 35.6	-0.9
AYDN				i S	Sg	02 39 50.8	-0.3
AYDN	Tasoluk	1.13	118	i P	Pg	02 39 35.6	-0.9
AYDN				i S	Sg	02 39 50.8	-0.3
AKHS	Akhisar	1.15	54	i P	Pg	02 39 35.4	-1.6
AKHS				i S	Sg	02 39 51.7	-0.2
AKHS	Akhisar	1.15	54	i P	Pg	02 39 35.4	-1.5
AKHS				i S	Sg	02 39 51.7	-0.2
AKS	Akhisar	1.15	54	ePN	Pn	02 39 36.6	-0.7
AKS				eSN	Sn	02 39 52.2	-1.2
AKS	Akhisar	1.15	54	ePn	Pn	02 39 36.7	-0.7
AKS				eSn	Sn	02 39 52.2	-1.3
BODT	Bodrum	1.26	154	ePN	Pn	02 39 39.4	+0.6
BODT	Bodrum	1.26	154	ePn	Pn	02 39 39.4	+0.6
MLSB	Milas	1.29	134	ePN	Pn	02 39 39.2	0.0
MLSB	Milas	1.29	134	ePn	Pn	02 39 39.2	0.0
BDRM	Kayabasi	1.31	150	i P	Pn	02 39 39.3	-0.2
BDRM				i S	Sb	02 39 56.0	-0.7
BDRM	Kayabasi	1.31	150	i P	Pn	02 39 39.3	-0.2
BDRM				i S	Sb	02 39 56.0	-0.7
MANT	Manisa	1.55	79	i P	Pn	02 39 43.0	+0.2
MANT				i S	Sn	02 40 02.6	-0.6
MANT	Manisa	1.55	79	i P	Pn	02 39 43.0	+0.2
MANT				i S	Sn	02 40 02.6	-0.6
KULA	Kula-Manisa	1.63	78	ePN	Pn	02 39 44.9	+0.9
KULA	Kula-Manisa	1.63	78	ePn	Pn	02 39 44.9	+0.9
EZN	Ezine	1.64	352	ePN	Pn	02 39 44.0	-0.1
EZN	Ezine	1.64	352	ePn	Pn	02 39 44.0	-0.1
DAT	Datca	1.65	152	ePN	Pn	02 39 44.9	+0.6
DAT	Datca	1.65	152	ePn	Pn	02 39 44.9	+0.6
YER	Yerkesik	1.69	128	ePN	Pn	02 39 45.8	+1.0
YER	Yerkesik	1.69	128	ePn	Pn	02 39 45.8	+1.0
BALY	Balya	1.72	27	i P	Pn	02 39 44.2	-1.1
BALY				i S	Sn	02 40 06.5	-1.0
BALY	Balya	1.72	27	i P	Pn	02 39 44.2	-1.0
BALY				i S	Sn	02 40 06.5	-1.0
BALB	Balikesir	1.74	34	ePN	Pn	02 39 45.9	+0.4
BALB	Balikesir	1.74	34	ePn	Pn	02 39 45.9	+0.4
DEMI	Demirci	1.84	62	i P	Pn	02 39 47.8	+0.9
DEMI				i S	Sn	02 40 13.0	+2.6
DEMI	Demirci	1.84	62	i P	Pn	02 39 47.8	+0.9
DEMI				i S	Sn	02 40 13.0	+2.5
DENT	Denizli	1.96	102	ePN	Pn	02 39 48.9	+0.5
DENT	Denizli	1.96	102	ePn	Pn	02 39 48.9	+0.5
LIA	Limnos Island	2.03	327	eP	Pn	02 39 48.7	-0.8
LIA	Limnos Island	2.03	327	eP	Pn	02 39 48.7	-0.8
DST	Dursunbey	2.10	47	ePN	Pn	02 39 50.9	+0.4
DST	Dursunbey	2.10	47	ePn	Pn	02 39 50.9	+0.5
KHL	Karahalli	2.29	86	ePN	Pn	02 39 53.9	+0.9
KHL	Karahalli	2.29	86	ePn	Pn	02 39 53.9	+0.9
RDO	Rodhopi	3.06	344	eP	Pn	02 40 02.8	-0.8
RDO	Rodhopi	3.06	344	eP	Pn	02 40 02.8	-0.8

*BJI **05** 02:50:26.4, 23°.62S×174°.36E, h35km, mB5.2/31, mb5.0/36, Ms5.1/29, Ms7 4.6/31*
*LDG **05** 02:50:29.6±0.1, 22°.57S×173°.90E, h10km, Mb4.9/2, Ms4.6/8, Error ellipse: s-maj=15.7km s-min=3.4km az=179.0*
*SZGRF **05** 02:50:31.3, 23°.22S×174°.46E, h35km, mb4.9, Southeast of Loyalty Islands*
*MOS **05** 02:50:33.7±1.5, 22°.63S×173°.38E, h33km, mb5.3/32, MS4.8/12, Error ellipse: s-maj=10.1km s-min=9.6km az=61.5*
*ISCJB **05** 02:50:33.8±1.1, 22°.83S±0°.04×173°.41E±0°.03, h41km±9km, mb5.2/86, MS4.6/43, Error ellipse: s-maj=6.1km s-min=5.3km az=173.7*
*DJA **05** 02:50:33, 23°.01S×173°.11E, h10km, mb5.3/10*
*IDC **05** 02:50:34.8±1.9, 22°.74S×173°.47E, h40km±15km, mb4.8/22, mb1 4.9/23, mb1mx4.9/24, mbtmp4.8/23, ML4.0/1, MS4.5/20, Ms1 4.5/20, ms1mx4.4/31, Error ellipse: s-maj=14.6km s-min=13.0km az=152.0*
*NEIC **05** 02:50:36.2±1.2, 22°.75S×173°.43E, h53km±10km, mb5.4/59, Error ellipse: s-maj=7.3km s-min=6.0km az=181.0*
*GCMT **05** 02:50:37.8±0.2, 22°.78S×173°.60E, h18km±1km, MW5.2/92, Moment Tensor Solution. s43,c55; s92,c147; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.01±.18; $M_{\theta\theta}$=-2.17±.12; $M_{\phi\phi}$=4.17±.16; $M_{r\theta}$=7.07±.70; $M_{\theta\phi}$=3.02±.10; $M_{\phi r}$=3.24±.37; Best double couple: M_0=9.09200×10^{16} NP1:ϕ_s344.00000°, δ29.00000°, λ-165.00000°. NP2: ϕ_s241.00000°, δ83.00000°, λ-62.00000°. Principal axes: T 9.0210, Plg32.0000°, Azm307.0000°; N 0.1300, Plg28.0000°, Azm57.0000°; P -9.1620, Plg45.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 05 02:50:36.2±0.9, 22°.82S±0°.04×173°.44E±0°.03, h49km±8km, h35km±1.0km: pP-P, n648, σ0s72/394, mb5.2/86, MS4.6/43, 137C-128D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	6.10	275	eS	Sn	02 53 12.9	+0.7
DZM	Mont Dzumac	6.51	275	ePn	Pn	02 52 08.8	-0.7
	23nm,0.2s						
DZM				eSn	Sn	02 53 21.4	-1.1
	44nm,0.2s						
DZM				eLR	LR	02 53 59.5	
	6μm,25.8s						
DZM	Mont Dzumac	6.51	275	P	Pn	02 52 08.8	-0.6
	200nm,0.7s						
NOUC	Port Laguerre	6.64	275	eP	Pn	02 52 12.0	+0.9
NOUC				eS	Sn	02 53 21.1	-4.4
RAO	Raoul Island	10.06	131	LR	LR	02 55 54.4	
	comp=Z,7μm,18.6s,baz=125,slow=32						
OUZ	Omahuta	12.35	179	ePn	Pn	02 53 28.4	-0.9
	85nm,1.0s						
OUZ				eSn	Sn	02 55 36.7	-8.8
URZ	Urewera	15.71	169	Pn	Pn	02 54 14.0	-0.1
	0.5nm,0.3s,baz=18,slow=8.1,SNR=9.4						
URZ				LR	LR	02 58 43.1	
	comp=Z,5μm,20.3s,baz=26,slow=31						
URZ	Urewera	15.71	169	ePn	Pn	02 54 15.9	+1.9
	334nm,1.1s						
SNZO	South Karori	18.46	177	eP	Pn	02 54 47.9	-0.4
	384nm,1.4s						
KHZ	Kahutara	19.54	180	eP	Pn	02 54 59.6	-1.6
	231nm,1.0s						
LTZ	Lake Taylor	19.93	183	P	Pn	02 55 04.0	-1.8
EIDS	Eidsvold	20.57	258	eP	P	02 55 13.0	+2.1
	604nm,1.7s						
ARMA	Armidale	20.89	244	eP	P	02 55 16.6	+2.2
ARMA				eS	S	02 59 15.4	+11
ARMA	Armidale	20.89	244	eP	P	02 55 17.6	+3.2
	102nm,1.0s						
RPZ	Rata Peaks	20.93	185	P	P	02 55 15.3	+0.6
	141nm,0.9s,baz=34,slow=3.5,SNR=39						
RPZ				LR	LR	03 02 32.5	
	comp=Z,6μm,20.3s,MS4.9,baz=358,slow=34						
RPZ	Rata Peaks	20.93	185	eP	P	02 55 14.9	+0.3
	238nm,1.0s						
JCZ	Jackson Bay	21.54	189	P	P	02 55 22.5	+1.3
LBZ	Lake Benmore	21.67	186	eP	P	02 55 22.2	-0.4
ODZ	Otahua Downs	22.28	185	eP	P	02 55 29.1	0.0
	107nm,1.1s,mb5.2						
RIV	Riverview	22.42	236	eP	P	02 55 34.3	+3.6
CNB	Canberra Magne	24.38	234	⇓iP	P	02 55 51.8	+2.1
CAN	Canberra	24.65	234	eP	P	02 55 54.1	+1.9
CAN				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.1						
CAN	Canberra	24.65	234	eP	P	02 55 54.1	+1.8
	comp=Z,75nm,1.1s,mb5.1						
CTA	Charters Tower	25.43	271	eP	P	02 55 59.6	+0.1
	comp=Z,19nm,0.8s,mb4.7						
CTA	Charters Tower	25.43	271	P	P	02 55 59.3	-0.2
	comp=Z,12nm,0.6s,mb4.6,baz=99,slow=11,SNR=21						
CTA				LR	LR	03 04 42.3	
	comp=Z,912nm,21.4s,MS4.3,baz=94,slow=33						
CTAO	Charters Tower	25.43	271	eP	P	02 56 00.2	+0.7
CTAO				pmax	pmax		
	comp=Z,48nm,1.1s,mb4.9						
CTAO	Charters Tower	25.43	271	eP	P	02 56 00.1	+0.6
	comp=Z,48nm,1.1s,mb4.9						
TOO	Toolangi	28.14	232	eP	P	02 56 25.3	+1.6
MOO	Moorlands	29.33	222	eP	P	02 56 32.4	-1.7
TAU	Tasmania Unive	29.51	221	eP	P	02 56 37.5	+1.7
TAU				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.3						
TAU	Tasmania Unive	29.51	221	eP	P	02 56 37.5	+1.7
	comp=Z,36nm,1.2s,mb5.0						
STKA	Stephens Creek	29.60	245	eP	P	02 56 37.4	+0.7
	comp=Z,19nm,1.1s,mb4.7						
STKA	Stephens Creek	29.60	245	P	P	02 56 37.5	+0.8
	comp=Z,24nm,1.0s,mb4.9,baz=87,slow=9.4,SNR=18						
STKA				LR	LR	03 07 35.5	
	comp=Z,1μm,19.2s,MS4.6,baz=71,slow=34						
STKA	Stephens Creek	29.60	245	eP	P	02 56 38.0	+1.3
	comp=Z,10nm,1.2s,mb4.4						
COEN	Coen	29.99	282	eP	P	02 56 40.5	+0.2
	comp=Z,920nm,2.2s,mb6.1						
PAE	Paea	35.01	88	eP	P	02 57 23.4	-0.8
	comp=Z,13nm,1.3s,mb4.7						
PAE	Paea	35.01	88	eP	P	02 57 23.4	-0.8
PAE				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
PPT	Papeete	35.04	88	eS	S	03 02 53.7	+0.2
	comp=Z,480nm,26.5s						
PPT				eLQ		03 05 01.9	
	comp=Z,1μm,27.2s						
PPT				eLR	LR	03 06 36.6	
	comp=Z,914nm,30.0s,baz=247						
PPT	Papeete	35.04	88	LR	LR	03 07 59.7	
	comp=Z,105nm,18.0s,MS3.6,baz=260,slow=30						
TIAR	Tiarei	35.25	88	eP	P	02 57 25.9	-0.4
	comp=Z,114nm,1.2s,mb5.7						
ASAR	Alice Springs	36.26	261	P	P	02 57 34.7	-0.2
	comp=Z,18nm,0.8s,mb5.1,baz=84,slow=9.0,SNR=155						
ASAR				S	S	03 03 13.2	+1.1
	comp=Z,1.9nm,1.1s,baz=92,slow=18,SNR=5.2						
MEH	Mehetia	36.35	89	eP	P	02 57 36.3	+0.5
	comp=Z,122nm,1.2s,mb5.7						
WB2	Warramunga Arr	36.44	267	eP	P	02 57 35.2	-1.3
WRAB	Tennant Creek	36.44	267	P	P	02 57 35.6	-0.9
	comp=Z,110nm,0.6s,mb6.0,SNR=14						
WRAB	Tennant Creek	36.44	267	eP	P	02 57 35.0	-1.5
WRAB				pmax	pmax		
	comp=Z,96nm,1.9s,mb5.4						
WRAB	Tennant Creek	36.44	267	eP	P	02 57 35.0	-1.5
	comp=Z,57nm,1.9s,mb5.2						
WRA	Warramunga Arr	36.45	267	P	P	02 57 35.3	-1.3
	comp=Z,11nm,0.7s,mb4.9,baz=105,slow=8.1,SNR=34						
PMOR	Pomariorio Ree	37.31	85	eP	P	02 57 43.4	-0.5
	comp=Z,145nm,1.2s,mb5.7						
KAKA	Kakadu	40.20	277	eP	P	02 58 05.5	-2.6
	comp=Z,14nm,0.5s,mb4.9						
FORT	Forrest	41.05	249	eP	P	02 58 15.2	+0.2
	comp=Z,60nm,0.6s,mb5.4						
FORT	Forrest	41.05	249	eP	P	02 58 15.4	+0.4
	comp=Z,85nm,0.7s,mb5.5						
FITZ	Fitzroy Crossi	44.88	267	⇑iP	P	02 58 46.5	+0.4
	comp=Z,113nm,0.8s,mb5.8						
FITZ	Fitzroy Crossi	44.88	267	P	P	02 58 46.6	+0.5
	comp=Z,65nm,0.8s,mb5.5,baz=166,slow=7.4,SNR=115						
FITZ				LR	LR	03 16 02.6	
	comp=Z,570nm,18.5s,MS4.5,baz=105,slow=34						
FITZ	Fitzroy Crossi	44.88	267	eP	P	02 58 46.6	+0.5
	comp=Z,64nm,0.8s,mb5.5						
GUMO	Guam	45.75	320	P	P	02 58 51.5	-1.4
	comp=Z,59nm,0.8s,mb5.6,baz=168,slow=19,SNR=2.6						
TAOE	Nuku Hiva Isla	46.56	80	eS	S	03 05 43.6	-1.3
	comp=Z,120nm,25.9s						
TAOE				eLQ		03 09 50.3	
	comp=Z,976nm,25.2s						
TAOE				eLR	LR	03 11 55.8	
	comp=Z,659nm,27.6s,baz=246						
DRV	Dumont d'Urvil	48.66	197	S	S	03 06 12.0	-1.4
DRV				L		03 13 00.0	
MBWA	Marble Bar	49.60	261	eP	P	02 59 23.1	+0.2
	comp=Z,50nm,0.6s,mb5.7						
NWAO	Narrogin (SRO)	50.19	245	eP	P	02 59 27.6	+0.4
NWAO				pmax	pmax		
	comp=Z,49nm,1.1s						
NWAO	Narrogin (SRO)	50.19	245	P	P	02 59 27.6	+0.5
	comp=Z,30nm,0.8s,mb5.3,baz=95,slow=6.7,SNR=12						
NWAO	Narrogin (SRO)	50.19	245	eP	P	02 59 27.6	+0.5
	comp=Z,49nm,1.1s,mb5.5						
KAPI	Kappang	54.70	280	P	P	03 00 00.2	-0.7
	comp=Z,3.3nm,0.5s,mb4.6,baz=356,slow=0.7,SNR=6.8						
KAPI	Kappang	54.70	280	eP	P	03 00 00.3	-0.6
	comp=Z,72nm,1.5s,mb5.5						
SBA	Scott Base	55.18	182	eP	P	03 00 04.8	+1.5
SBA				pmax	pmax		
	comp=Z,78nm,1.2s,mb5.6						
SBA	Scott Base	55.18	182	eP	P	03 00 04.8	+1.4
	comp=Z,78nm,1.2s,mb5.6						
CASY	Casey	58.48	205	⇓iP	P	03 00 26.6	-0.3
CASY	Casey	58.48	205	eP	P	03 00 26.6	-0.3
	comp=Z,49nm,1.1s,mb5.5						
MIR	Mirnyy	65.49	206	d iP	P	03 01 14.6	+0.7
MIR				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.8						
MIR				MLR	MLR		
	comp=N,590nm,16.0s,MS5.1						
MIR				MLR	MLR		
	comp=E,890nm,16.0s,MS5.1						
MIR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.3						
JOW	Kunigami	65.91	316	P	P	03 01 17.1	-0.1
	comp=Z,61nm,0.8s,mb5.7,baz=118,slow=10,SNR=6.2						
KSM	Kuching	65.98	283	eP	P	03 01 15.0	-3.0
	comp=Z,14nm,1.4s,mb4.8						
QSPA	South Pole Qui	67.25	180	P	P	03 01 25.1	+0.2
	comp=Z,58nm,1.0s,mb5.6,baz=27,slow=2.1,SNR=123						
QSPA	South Pole Qui	67.25	180	eP	P	03 01 24.9	0.0
	comp=Z,79nm,1.1s,mb5.7						
MJAR	Matsushiro Arr	67.77	330	P	P	03 01 27.6	-1.2
	comp=Z,14nm,1.1s,mb4.9,baz=164,slow=6.6,SNR=23						
MJAR				LR	LR	03 26 41.8	
	comp=Z,290nm,22.0s,MS4.5,baz=155,slow=32						
MAJO	Matsushiro	67.77	330	eP	P	03 01 28.4	-0.4
MAJO				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.4						
MAJO	Matsushiro	67.77	330	eP	P	03 01 28.4	-0.4
	comp=Z,47nm,1.1s,mb5.4						
MAT	Matsushiro	67.77	330	P	P	03 01 27.4	-1.4
MAT				S	S	03 10 25.0	+1.9
KSRS	Korea Array	73.68	324	P	P	03 02 04.3	-0.4
	comp=Z,16nm,1.0s,mb4.9,baz=147,slow=5.4,SNR=10						
KSRS				LR	LR	03 30 51.8	
	comp=Z,198nm,18.3s,MS4.4,baz=149,slow=33						
QIZ	Qiongzhong	74.74	299	P	P	03 02 08.0	-3.3
QIZ				S	S	03 11 50.4	+6.0
QIZ				pmax	pmax		
	comp=Z,130nm,12.8s						
QIZ				LR	LR		
	comp=N,160nm,14.8s						
QIZ				LR	LR		
	comp=Z,210nm,19.5s,MS4.4						
YSS	Yuzh-Sakhalins	74.78	339	eP	P	03 02 13.0	+2.1
YSS				eS	S	03 11 52.0	+8.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
NJ2	Nanjing	75.50	314	eP	P	03 02 17.3	+1.9
NJ2				pP	pP	03 02 27.8	-1.7
NJ2				sP	sP	03 02 31.5	-3.5
NJ2				S	S	03 11 56.0	+3.6
NJ2				SKS		03 12 23.0	
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				pmax	pmax		
	comp=Z,210nm,4.7s						
NJ2				LR	LR		
	comp=N,370nm,25.4s,MS4.7						
NJ2				LR	LR		
	comp=E,290nm,25.2s,MS4.7						
NJ2				LR	LR		
	comp=Z,280nm,25.9s,MS4.5						
MAW	Mawson	76.58	202	eP	P	03 02 21.6	+0.5
MAW				pmax	pmax		
	comp=Z,11nm,0.9s						
MAW	Mawson	76.58	202	⇓iP	P	03 02 21.6	+0.5
	comp=Z,34nm,0.9s,mb5.3						
MAW	Mawson	76.58	202	P	P	03 02 21.7	+0.7
	comp=Z,49nm,0.9s,mb5.4,baz=115,slow=7.0,SNR=46						
MAW				LR	LR	03 33 08.0	
	comp=Z,470nm,18.7s,MS4.8,baz=175,slow=33						
MAW	Mawson	76.58	202	eP	P	03 02 21.6	+0.5
	comp=Z,11nm,0.9s,mb4.8						
PET	Petropavlovsk	76.61	351	eP	P	03 02 24.9	+3.7
PET				eS	S	03 12 06.4	+2.8
PET				pmax	pmax		
	comp=Z

HABR e 03 12 37.0
HABR e 03 12 47.9
HABR eSS SS 03 17 27.0 -7.4
HABR eSSS 03 20 51.3
HABR pmax pmax
comp=N,28nm,1.1s
HABR pmax pmax
comp=Z,83nm,2.2s,mb5.3
HABR pmax pmax
comp=E,46nm,1.9s
HABR MLR MLR
comp=Z,120nm,17.0s,MS4.3
CN2 Changchun 79.57 327 eP **P 03 02 40.8 +3.0**
CN2 epP pP 03 02 51.2 -0.8
CN2 esP sP 03 02 55.1 -2.4
CN2 eS S 03 12 39.5 +3.7
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,13.0s,MS5.0
CN2 LR LR
comp=E,200nm,13.0s,MS5.0
CN2 LR LR
comp=Z,200nm,16.0s,MS4.5
ENH Enshi 80.97 308 eP **P 03 02 45.5 -0.2**
comp=Z,112nm,0.4s,mb6.2
GYA Guiyang 81.07 303 P **P 03 02 48.0 +1.7**
GYA pP pP 03 02 58.7 -1.8
GYA sP sP 03 03 02.5 -3.5
GYA PP PP 03 05 54.8 +2.7
GYA S S 03 12 55.0 +2.7
GYA SKS 03 13 01.0
GYA sS sS 03 13 13.9 -2.3
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,150nm,5.6s
BJI Beijing 82.19 319 P **P 03 02 50.9 -1.0**
BJI S S 03 13 10.1 +6.8
BJI pmax pmax
comp=Z,15nm,1.3s,mb4.8
BJI pmax pmax
comp=Z,270nm,5.6s
BJI LR LR
comp=N,230nm,27.4s,MS4.5
BJI LR LR
comp=E,230nm,28.0s,MS4.5
BJI LR LR
comp=Z,650nm,31.2s,MS4.8
SYO Syowa Base 82.56 195⇓eP **P 03 02 51.4 -2.1**
XAN Xi'an 83.41 311 P **P 03 02 57.6 -0.8**
XAN pP pP 03 03 08.6 -4.1
XAN pmax pmax
comp=Z,3.0nm,1.6s,mb4.1
XAN pmax pmax
comp=Z,34nm,10.4s
XAN LR LR
comp=N,130nm,17.0s,MS4.7
XAN LR LR
comp=E,220nm,13.5s,MS4.7
XAN LR LR
comp=Z,64nm,25.0s
CHRT Chiangrai 83.45 295 P **P 03 03 00.2 +1.3**
KMI Kunming 83.48 301 P **P 03 02 59.1 +0.2**
KMI pP pP 03 03 09.7 -3.5
KMI sP sP 03 03 13.8 -4.9
KMI SKS 03 13 15.3
KMI S S 03 13 18.1 +1.0
KMI SS SS 03 18 49.8 +5.5
KMI pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
KMI pmax pmax
comp=Z,100nm,4.3s
KMI LR LR
comp=N,170nm,15.8s,MS4.7
KMI LR LR
comp=E,160nm,16.6s,MS4.7
KMI LR LR
comp=Z,250nm,19.0s,MS4.6
CMAR Chiang Mai Arr 83.53 293 P **P 03 02 59.0 -0.4**
comp=Z,1.4nm,0.4s,mb4.5,baz=134,slow=3.9,SNR=4.1
CMAR LR LR 03 39 03.3
comp=Z,159nm,19.9s,MS4.4,baz=322,slow=35
CHG Chiang Mai 83.69 293⇑P pP 03 03 14.7 +0.3
comp=Z,12nm,0.9s
KDAK Kodiak Island 85.17 17 LR LR 03 37 46.3
comp=Z,211nm,19.9s,MS4.5,baz=10.0,slow=33
HHC Hu-ho-hao-te 85.49 318 eP **P 03 03 11.2 +2.5**
HHC pP pP 03 03 21.7 -1.4
HHC sP sP 03 03 25.3 -3.2
HHC PP PP 03 06 31.4 +3.4
HHC SKS 03 13 30.3
HHC S S 03 13 40.0 +3.5
HHC sS sS 03 13 58.2 -2.3
HHC pmax pmax
comp=Z,17nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,270nm,19.6s,MS5.0
HHC LR LR
comp=E,500nm,18.1s,MS5.0
HHC LR LR
comp=Z,440nm,22.1s,MS4.8
MAIT Maitri 85.77 186 eP **P 03 03 08.7 -1.1**
NVL N'lazarevskaya 85.77 186 eP **P 03 03 05.8 -4.0**
NVL e*PP pP 03 03 15.6 -8.5
NVL eSP 03 03 20.9
NVL i 03 08 25.6
NVL e 03 13 41.5
NVL pmax pmax
comp=Z,549nm,8.9s
VNA3 Neumayer Olymp 86.16 179 eP **P 03 03 10.3 -1.4**
ARVC Arvin 86.23 49⇓P **P 03 03 13.0 +0.4**
baz=86
VNA2 Neumayer--Watz 86.51 180 eP **P 03 03 12.1 -1.3**
VNA2 e 03 03 14.4
CMB Columbia Colle 86.69 46 eP **P 03 03 14.3 -0.5**
CMB pmax pmax
comp=Z,17nm,1.1s,mb5.2
CMB Columbia Colle 86.69 46 eP **P 03 03 14.3 -0.4**
comp=Z,17nm,1.1s,mb5.2
EDW2 Edwards Air Fo 86.70 50⇑P **P 03 03 14.7 -0.1**
baz=87
ISA Isabella 86.76 49⇓P **P 03 03 14.7 -0.4**
baz=87
ISA Isabella 86.76 49 eP **P 03 03 15.2 +0.1**
ISA pmax pmax
comp=Z,22nm,1.2s,mb5.3
ISA Isabella 86.76 49 eP **P 03 03 15.2 +0.1**
comp=Z,22nm,1.2s,mb5.3
VNA1 Neumayer--Stat 86.78 179 eP **P 03 03 14.4 -0.3**
MONP Monument Peak 86.83 52⇑P **P 03 03 15.9 +0.3**
baz=87
SEY Seymchan 87.08 351ceP **P 03 03 15.1 -0.9**
GAMB Gambell 87.10 7 eP **P 03 03 16.1 0.0**
comp=Z,25nm,1.3s,mb5.3
YBH Yreka Blue Hor 87.22 42 LR LR 03 35 03.9
comp=Z,306nm,19.0s,MS4.7,baz=236,slow=31
HUMO Hull Mountain 87.55 41 eP **P 03 03 19.1 +0.3**
comp=Z,22nm,1.1s,mb5.3
MPMC Manual Prospec 87.65 49⇑P **P 03 03 18.9 -0.5**
baz=88
BELC Belle Mtn. 87.68 52⇓P **P 03 03 19.3 -0.3**
baz=88
BEKR Beckwourth 87.69 45⇑P **P 03 03 19.4 -0.1**
baz=88
GSC Goldstone 87.75 50⇑P **P 03 03 19.8 -0.1**
baz=88
WCN Washoe City 87.78 46⇑P **P 03 03 19.9 -0.1**
baz=88
BC3 Big Chuckw Mtn 87.91 52⇓P **P 03 03 20.5 -0.2**
baz=88
LZH Lanzhou 88.03 311 eP **P 03 03 22.0 +0.8**
LZH pP pP 03 03 32.1 -3.5
LZH sP sP 03 03 36.0 -5.1
LZH PP PP 03 06 51.5 +2.9
LZH SKS 03 13 45.6
LZH eS S 03 14 02.7 +1.4
LZH sS sS 03 14 20.0 -5.4
LZH pmax pmax
comp=Z,27nm,1.3s,mb5.3
LZH pmax pmax
comp=Z,100nm,6.1s
LZH LR LR
comp=N,550nm,16.3s
LZH LR LR
comp=Z,830nm,17.0s,MS5.2
GRAC Grapevine Rang 88.21 48⇓P **P 03 03 22.2 +0.2**
baz=88
NVAR Mina Array Bea 88.30 47 P **P 03 03 22.5 +0.1**
comp=Z,6.2nm,1.1s,mb4.7,baz=229,slow=6.1,SNR=11
NVAR Mina Array Bea 88.30 47 P **P 03 03 22.5 +0.1**
113A Mohawk Valley, 88.73 54⇑P **P 03 03 24.4 -0.3**
baz=89
K05A Summer Lake 88.89 42⇓P **P 03 03 25.7 +0.6**
baz=89
V11A Goodsprings 88.99 50⇑P **P 03 03 26.0 +0.2**
baz=89
Z13A Yuma Proving G 89.01 53⇑P **P 03 03 26.1 +0.1**
baz=89
H04A Detroit Lake 89.18 40⇓P **P 03 03 26.5 +0.1**
baz=89
S10A Tonopah Range, 89.20 48⇑P **P 03 03 26.4 -0.3**
baz=89
G04A Mulino 89.30 39⇓P **P 03 03 27.7 +0.7**
baz=89
V12A Nelson 89.35 51⇓P **P 03 03 27.3 -0.2**
baz=90
114A Black Gap (USA 89.38 54⇓P **P 03 03 27.5 -0.2**
baz=90
E03A Lebam 89.42 38⇓P **P 03 03 28.0 +0.5**
baz=90
X13A Yucca 89.54 52⇓P **P 03 03 28.7 +0.3**
baz=90
R10A Warm Springs 89.58 48⇓P **P 03 03 28.1 -0.4**
baz=90
Z14A Wintersburg 89.61 53⇑P **P 03 03 28.5 -0.3**
baz=90
S11A Rachel 89.65 49⇑P **P 03 03 28.7 -0.1**
baz=90
F04A Amboy 89.73 39⇑P **P 03 03 29.3 +0.3**
baz=90
NLWA Neilton Lookou 89.73 37⇓P **P 03 03 29.5 +0.5**
baz=90
W13A Hualapai Mount 89.74 52⇑P **P 03 03 29.1 -0.2**
baz=90
Q10A Clear Creek Ra 89.78 47⇓P **P 03 03 29.5 +0.1**
baz=90
T11A Corn Creek, Al 89.82 49⇑P **P 03 03 29.3 -0.4**
baz=90
115A Sonoran Desert 89.84 54⇓P **P 03 03 29.7 -0.2**
baz=90
U12A Valley of Fire 89.91 50⇑P **P 03 03 29.9 -0.1**
baz=90
VIPM Ingram Point 90.02 41 P **P 03 03 29.6 -0.8**
V13A Grand Canyon W 90.03 51⇓P **P 03 03 30.7 +0.1**
baz=90
BMN Battle Mountai 90.04 46 eP **P 03 03 31.1 +0.5**
BMN pmax pmax
comp=Z,32nm,1.2s,mb5.5
BMN Battle Mountai 90.04 46 eP **P 03 03 31.1 +0.5**
comp=Z,32nm,1.2s,mb5.5
R11A Troy Canyon, C 90.10 48⇓P **P 03 03 31.1 +0.2**
baz=90
P10A Eureka 90.14 47⇓P **P 03 03 31.5 +0.5**
baz=90
WVOR Wild Horse Val 90.15 43 eP **P 03 03 29.7 -1.3**
WVOR pmax pmax
comp=Z,22nm,1.3s,mb5.3
WVOR Wild Horse Val 90.15 43 eP **P 03 03 29.7 -1.3**
comp=Z,22nm,1.3s,mb5.3
X14A Yava 90.17 52⇓P **P 03 03 31.7 +0.4**
baz=90
S12A Delamar Landin 90.25 49⇓P **P 03 03 31.4 -0.2**
baz=90
Q11A Duckwater 90.30 48⇑P **P 03 03 31.5 -0.3**
baz=90,SNR=14
U13A Pakoon Wash 90.31 50⇑P **P 03 03 31.6 -0.3**
baz=90
H06A Lindquist Farm 90.31 41⇑P **P 03 03 30.9 -0.8**
baz=90,SNR=20
Y15A Casa Rosa Ranc 90.34 53⇑P **P 03 03 32.0 -0.1**
baz=90
W14A Seligman 90.37 52⇑P **P 03 03 32.4 +0.2**
baz=90
BBB Bella Bella 90.38 32 LR LR 03 39 26.7
comp=Z,367nm,18.2s,MS4.8,baz=252,slow=32
G06A Carlson Farm, 90.40 40⇑P **P 03 03 32.3 +0.2**
baz=90
GNW Green Mountain 90.42 37 eP **P 03 03 32.5 +0.4**
comp=Z,9.4nm,1.1s,mb5.0
O10A Cortez Mining, 90.44 46⇑P **P 03 03 32.6 +0.1**
baz=91
I07A Izee 90.47 42⇑P **P 03 03 32.4 -0.1**
baz=91,SNR=13
217A Green Valley 90.49 56⇓P **P 03 03 33.1 +0.2**
baz=91
LON Longmire 90.54 38 eP **P 03 03 32.7 0.0**
LON pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
LON Longmire 90.54 38 eP **P 03 03 32.7 0.0**
comp=Z,8.1nm,1.1s,mb5.0
V14A Boquillas Ranc 90.55 51⇓P **P 03 03 33.3 +0.2**
baz=91
TRF Thorofare Moun 90.59 15 eP **P 03 03 31.8 -0.8**
comp=Z,9.1nm,0.9s,mb5.1
T13A Saint George 90.63 50⇓P **P 03 03 33.8 +0.4**
baz=91
X15A Humboldt 90.66 53⇑P **P 03 03 33.9 +0.3**
baz=91
WPW White Pass 90.66 39 P **P 03 03 33.0 -0.3**
D05A Enumclaw 90.68 38⇑P **P 03 03 33.5 +0.1**
baz=91
J08A Circle Bar Ran 90.73 43⇓P **P 03 03 33.5 -0.2**
baz=91
Z16A Peralta Trail, 90.73 54⇑P **P 03 03 33.5 -0.5**
baz=91
BILL Bilibino 90.75 357⇑iP **P 03 03 31.3 -1.9**
BILL i pP 03 03 43.6 -4.0
BILL pmax pmax
comp=Z,13nm,1.2s,mb5.1
BILL Bilibino 90.75 357 eP **P 03 03 32.4 -0.8**
comp=Z,24nm,1.1s,mb5.4
TUC Tucson 90.75 55 eP **P 03 03 35.1 +1.0**
TUC pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
TUC Tucson 90.75 55 eP **P 03 03 35.1 +1.0**
comp=Z,8.0nm,1.2s,mb4.9
R12A Pony Springs, 90.77 48⇓P **P 03 03 33.8 -0.2**
baz=91,SNR=13
GSM Grass Mountain 90.80 38 P **P 03 03 34.3 +0.4**
U14A Mt Trumbull 90.87 51⇑P **P 03 03 34.5 0.0**
baz=91,SNR=19
E06A Yakima 90.91 39⇑P **P 03 03 34.5 +0.1**
baz=91,SNR=6.9
117A Oracle 90.91 55⇓P **P 03 03 34.7 -0.1**
baz=91
O11A Cowboy Ranch, 90.93 46⇑P **P 03 03 34.6 -0.2**
baz=91
S13A Holt Ranch, En 90.93 49⇓P **P 03 03 34.4 -0.4**
baz=91,SNR=11
Y16A Circle Bar Ran 90.94 54⇑P **P 03 03 34.7 -0.3**
baz=91,SNR=10
W15A Williams 90.95 52⇑P **P 03 03 34.5 -0.5**
baz=91
Q12A Willow Creek R 90.96 48⇑P **P 03 03 34.8 -0.1**
baz=91
318A Bisbee 90.97 56⇓P **P 03 03 34.9 -0.2**
baz=91
M10A I.L. Ranch, Tu 91.03 45⇑P **P 03 03 35.4 +0.3**
baz=91,SNR=11
P12A McGill 91.11 47⇑P **P 03 03 35.6 +0.1**
baz=91
R13A O'Grain Ranch, 91.14 49⇓P **P 03 03 35.8 0.0**
baz=91
218A Dragoon 91.17 56⇓P **P 03 03 35.7 -0.3**
baz=91
J09A Fry Pan Ranch, 91.17 43⇑P **P 03 03 35.1 -0.7**
baz=91,SNR=19
F07A Phinny Hill Vi 91.17 40⇓P **P 03 03 36.1 +0.4**
baz=91
H08A Prairie City 91.21 42⇓P **P 03 03 36.1 +0.2**
baz=91
X16A Lo Mia Camp, P 91.21 53⇑P **P 03 03 36.3 +0.1**
baz=91
T14A Hurricane 91.23 50⇓P **P 03 03 36.6 +0.3**
baz=91
CCUT Cedar City 91.27 50 eP **P 03 03 35.9 -0.5**
comp=Z,16nm,1.4s,mb5.2
V15A Kaibab Nationa 91.31 52⇓P **P 03 03 37.0 +0.4**
baz=91
ARUT Antelope Range 91.32 49 eP **P 03 03 36.3 -0.3**
ARUT pmax pmax
comp=Z,14nm,1.2s,mb5.2
ARUT Antelope Range 91.32 49 eP **P 03 03 36.2 -0.4**
comp=Z,14nm,1.2s,mb5.2
Y17A Roosevelt 91.33 54⇓P **P 03 03 36.6 -0.2**
baz=91
D06A Cle Elum 91.33 38⇓P **P 03 03 36.8 +0.3**
baz=92
L10A Juniper Basin 91.35 44⇓P **P 03 03 35.9 -0.7**
baz=92,SNR=14
G08A Pilot Rock 91.43 41⇓P **P 03 03 36.6 -0.4**
baz=92,SNR=14
K10A MacKenzie Ranc 91.44 44⇓P **P 03 03 36.8 -0.2**
baz=92,SNR=8.9
W16A Flagstaff 91.45 52⇓P **P 03 03 37.2 -0.1**
baz=92
Q13A Wheeler Ranch, 91.47 48⇑P **P 03 03 37.2 -0.1**
baz=92
M11A Holland Ranch, 91.47 45⇓P **P 03 03 37.0 -0.3**
baz=92,SNR=13
YAK Yakutsk 91.49 341 eP **P 03 03 37.9 +1.1**
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.4
319A Douglas 91.49 57⇓P **P 03 03 37.2 -0.4**
baz=92
I09A Lost Marbles R 91.50 42⇑P **P 03 03 37.9 +0.6**
baz=92
S14A Cedar City 91.50 49⇑P **P 03 03 37.5 +0.1**
baz=92
ELK Elko 91.50 46 LR LR 03 36 48.9
comp=Z,131nm,19.5s,MS4.4,baz=259,slow=30
U15A North Rim 91.51 51⇑P **P 03 03 37.8 +0.3**
baz=92,SNR=14
118A Homack Ranch, 91.52 55⇑P **P 03 03 37.6 -0.1**
baz=92
O12A Currie 91.60 47⇓P **P 03 03 38.3 +0.4**
baz=92
MBW Mount Baker 91.61 37 P **P 03 03 39.3 +1.6**
RSW Rattlesnake Hi 91.64 40 eP **P 03 03 38.3 +0.5**
comp=Z,20nm,1.0s,mb5.4
X17A Forest Lakes 91.64 53⇓P **P 03 03 38.3 +0.1**
baz=92
HAWA Hanford 91.67 40 eP **P 03 03 37.8 -0.2**
comp=Z,23nm,1.3s,mb5.3
N12A Clover Valley, 91.69 46⇓P **P 03 03 38.4 +0.2**
baz=92
N12A Clover Valley, 91.69 46 eP **P 03 03 38.6 +0.4**
comp=Z,23nm,1.2s,mb5.4
P13A Bates Ranch, G 91.71 48⇓P **P 03 03 37.9 -0.5**
baz=92,SNR=15
T15A Red Dirt Ranch 91.71 50⇓P **P 03 03 38.8 +0.3**
baz=92
GBB Gable Butte 91.73 39 P **P 03 03 38.3 +0.1**
WUAZ Wupatki 91.75 52⇑P **P 03 03 38.9 +0.3**
baz=92
WUAZ Wupatki 91.75 52 eP **P 03 03 39.6 +0.9**
comp=Z,13nm,1.3s,mb5.1
219A White Tail Can 91.78 56⇓P **P 03 03 39.1 +0.3**
baz=92
F08A Pendleton 91.81 40⇓P **P 03 03 39.3 +0.6**
baz=92
D07A Quincy 91.84 39⇓P **P 03 03 39.4 +0.7**
baz=92
ETW Entiat 91.85 38 eP **P 03 03 38.5 -0.3**
comp=Z,15nm,1.0s,mb5.3
L11A Cat Creek Ranc 91.86 45⇓P **P 03 03 39.5 +0.5**
baz=92
H09A Durkee 91.90 42⇑P **P 03 03 39.5 +0.3**
baz=92
MENT Mentasta 91.92 18 eP **P 03 03 38.5 -0.3**
Y18A Canyon Day Jun 91.97 54⇑P **P 03 03 39.7 -0.1**
baz=92
K11A Parker Ranch, 91.98 44⇓P **P 03 03 39.9 +0.4**
baz=92
Q14A Sevier Lake (B 92.00 48⇑P **P 03 03 39.6 -0.1**
baz=92,SNR=14
E08A Dider Farm, El 92.00 40⇑P **P 03 03 39.8 +0.3**
baz=92
S15A Panguitch 92.03 50⇑P **P 03 03 39.7 -0.2**
baz=92
M12A Wells 92.04 46⇓P **P 03 03 40.2 +0.3**
baz=92
C07A Waterville 92.05 38⇓P **P 03 03 40.2 +0.5**
baz=92
320A Kipp Ranch, An 92.06 57⇑P **P 03 03 40.3 +0.1**
baz=92
ULN Ulaanbaatar 92.08 322 eP **P 03 03 39.2 -0.7**
ULN pmax pmax
comp=Z,12nm,1.2s,mb5.1
ULN Ulaanbaatar 92.08 322 eP **P 03 03 39.2 -0.7**
comp=Z,12nm,1.2s,mb5.1
G09A Cove 92.14 41⇓P **P 03 03 39.9 -0.3**
baz=92,SNR=7.4
I10A Payette 92.14 43⇑P **P 03 03 40.3 +0.1**
baz=92
U16A Tuba City 92.21 52⇑P **P 03 03 40.9 +0.2**
baz=92
V17A Tonalea, Kykot 92.22 52⇓P **P 03 03 40.7 -0.1**
baz=92,SNR=8.1
N13A Wendover, West 92.25 46⇑P **P 03 03 41.3 +0.4**
baz=92
N13A Wendover, West 92.25 46 eP **P 03 03 41.1 +0.3**
comp=Z,26nm,1.3s,mb5.4
220A Playas Peak, P 92.30 56⇓P **P 03 03 41.3 0.0**
baz=92
T16A Glen Canyon Da 92.32 51⇓P **P 03 03 41.6 +0.3**
baz=92
R15A Junction 92.33 49⇑P **P 03 03 41.8 +0.5**
baz=92
X18A Snowflake 92.36 54⇓P **P 03 03 41.6 +0.1**
baz=92
COLA College 92.37 16 eP **P 03 03 38.6 -2.2**
COLA pmax pmax
comp=Z,33nm,1.0s,mb5.6
COLA College 92.37 16 eP **P 03 03 38.6 -2.2**
comp=Z,33nm,1.0s,mb5.6
D08A Wollman Farm, 92.38 39⇑P **P 03 03 41.4 +0.2**
baz=92
P14A Drum Mountains 92.42 48⇑P **P 03 03 41.8 +0.1**
baz=92
MFID Camas Ranch 92.42 44⇓P **P 03 03 41.7 +0.2**
baz=93
GTA Gaotai 92.43 312 eP **P 03 03 41.4 -0.3**
GTA pP pP 03 03 52.0 -4.1
GTA sP sP 03 03 56.1 -5.4
GTA PP PP 03 07 25.6 +2.1
GTA SKS 03 14 10.4
GTA S S 03 14 40.7 -1.0
GTA sS sS 03 14 58.4 -7.6
GTA pmax pmax
comp=Z,6.0nm,1.5s,mb4.7
GTA pmax pmax
comp=Z,110nm,7.5s
GTA LR LR
comp=N,150nm,18.0s,MS4.6
GTA LR LR
comp=E,150nm,18.0s,MS4.6
GTA LR LR
comp=Z,160nm,16.2s,MS4.6
SONM Songino Array 92.44 322 P **P 03 03 40.6 -0.9**
comp=Z,4.1nm,1.1s,mb4.7,baz=149,slow=3.1,SNR=8.7
SONM LR LR 03 42 27.8
comp=Z,158nm,21.1s,MS4.4,baz=249,slow=34
120A U Bar Ranch, L 92.49 56⇓P **P 03 03 42.1 -0.1**
baz=93
M13A Montello 92.51 46⇓P **P 03 03 42.4 +0.3**
baz=93
MSU Marysvale 92.54 49 eP **P 03 03 43.6 +1.4**
MSU pmax pmax
comp=Z,8.0nm,1.3s,mb5.0
MSU Marysvale 92.54 49 eP **P 03 03 43.5 +1.3**
comp=Z,8.1nm,1.3s,mb5.0
G10A Bishop Farm, J 92.55 41⇑P **P 03 03 42.1 0.0**
baz=93
E09A Wood Farm, Sta 92.55 40⇓P **P 03 03 42.5 +0.4**
baz=93
I11A Placerville 92.58 43⇑P **P 03 03 42.3 +0.1**
baz=93
A07A Ashnola River, 92.59 37⇓P **P 03 03 42.4 +0.2**
baz=93
Q15A Fillmore 92.62 49⇓P **P 03 03 42.5 -0.1**
baz=93
Y19A Nutrioso 92.63 54⇓P **P 03 03 42.1 -0.7**
baz=93
K12A Draper Farm, C 92.64 45⇓P **P 03 03 42.3 -0.2**
baz=93

OD2	Odessa Site #2	92.67	39	*e*P	P	03 03 42.5	-0.1
	comp=Z,16nm,1.1s,mb5.3						
C08A	Higginbotham F	92.68	39	⇓P	P	03 03 42.5	-0.2
	baz=93						
D09A	Jones Farm, Ri	92.74	39	⇑P	P	03 03 43.1	+0.2
	baz=93						
U17A	Shonto	92.75	51	⇓P	P	03 03 43.0	-0.2
	baz=93						
Z20A	Nine Sixteen R	92.77	55	⇓P	P	03 03 43.3	-0.1
	baz=93						
J12A	Stokes Ranch,	92.81	44	⇑P	P	03 03 43.0	-0.4
	baz=93,SNR=8.8						
B08A	Colville Reser	92.82	38	⇓P	P	03 03 43.0	-0.3
	baz=93						
F10A	Beach Ranch, E	92.83	41	⇓P	P	03 03 43.3	0.0
	baz=93						
T17A	Navajo Res., N	92.83	51	⇑P	P	03 03 42.9	-0.7
	baz=93,SNR=12						
DUG	Dugway	92.87	47	⇑P	P	03 03 43.8	0.0
	baz=93						
V18A	Ganado	92.89	52	⇑P	P	03 03 43.9	0.0
	baz=93						
221A	Mesquite Ranch	92.92	57	⇓P	P	03 03 44.1	0.0
	baz=93						
R16A	Teasdale	92.92	50	⇓P	P	03 03 44.2	+0.2
	baz=93						
N14A	Grayback Hills	92.93	47	⇑P	P	03 03 44.0	+0.1
	baz=93						
H11A	Donnelly	92.94	42	⇓P	P	03 03 43.1	-0.8
	baz=93,SNR=12						
I12A	Atlanta	93.05	43	⇑P	P	03 03 44.8	+0.4
	baz=93						
S17A	Black Ridge (B	93.11	50	⇓P	P	03 03 44.0	-0.9
	baz=93,SNR=9.4						
M14A	Sheep Mountain	93.12	46	⇓P	P	03 03 44.8	-0.1
	baz=93						
G11A	Walters Elk Ra	93.12	42	⇓P	P	03 03 44.3	-0.4
	baz=93						
121A	Cookes Peak, D	93.14	56	⇑P	P	03 03 44.9	-0.3
	baz=93						
C09A	Chrisman Ranch	93.14	39	⇓P	P	03 03 45.0	+0.3
	baz=93						
A08A	Turner Farm, O	93.16	38	⇑P	P	03 03 44.9	+0.1
	baz=93						
K13A	Stover Farm, H	93.17	45	⇓P	P	03 03 45.2	+0.1
	baz=93						
EFI	East Falkland	93.20	151	*e*P	P	03 03 45.2	0.0
EFI				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.8						
EFI	East Falkland	93.20	151	*e*P	P	03 03 45.2	0.0
	comp=Z,30nm,0.8s,mb5.8						
U18A	Rough Rock, Ch	93.25	52	⇑P	P	03 03 45.2	-0.4
	baz=93						
PLCA	Paso Flores	93.25	137	P	P	03 03 45.6	0.0
	comp=Z,1.0nm,0.3s,mb4.8,baz=202,slow=5.4,SNR=5.1						
PLCA				LR	LR	03 34 54.9	
	comp=Z,373nm,22.0s,MS4.8,baz=282,slow=28						
Y20A	Horse Springs,	93.27	55	⇑P	P	03 03 45.5	-0.2
	baz=93						
HLID	Hailey	93.39	44	⇓P	P	03 03 46.1	0.0
	baz=94						
HLID	Hailey	93.39	44	*e*P	P	03 03 46.4	+0.4
	comp=Z,6.6nm,1.4s,mb4.9						
HLID				*e*PP	PP	03 07 29.6	-1.4
Q16A	Castle Valley	93.42	49	⇓P	P	03 03 46.3	0.0
	baz=94						
X20A	Quemado	93.45	54	⇓P	P	03 03 46.2	-0.3
	baz=94						
J13A	Cove Ranch, Pi	93.47	44	⇑P	P	03 03 46.5	+0.1
	baz=94						
R17A	Hanksville Air	93.53	50	⇑P	P	03 03 47.0	+0.2
	baz=94						
B09A	Rice	93.53	38	⇓P	P	03 03 46.2	-0.3
	baz=94						
Z21A	St. Cloud Mine	93.55	55	⇑P	P	03 03 47.2	+0.1
	baz=94						
T18A	Mexican Hat	93.56	51	⇑P	P	03 03 46.6	-0.4
	baz=94,SNR=11						
A09A	Danville	93.56	38	⇓P	P	03 03 46.4	-0.3
	baz=94						
G12A	Big Creek, Yel	93.57	42	⇑P	P	03 03 46.5	-0.3
	baz=94						
H12A	Diamond D Ranc	93.59	43	⇓P	P	03 03 47.1	+0.2
	baz=94						
U19A	Dine' College,	93.67	52	⇓P	P	03 03 47.3	-0.3
	baz=94						
W20A	Ramah	93.69	53	⇑P	P	03 03 47.2	-0.4
	baz=94						
M15A	Larsen Ranch,	93.70	46	⇓P	P	03 03 47.6	0.0
	baz=94						
S18A	Hurst Farm, Bl	93.71	51	⇑P	P	03 03 47.7	0.0
	baz=94						
K14A	Jones Ranch, D	93.72	45	⇓P	P	03 03 47.3	-0.3
	baz=94						
I13A	Wildhorse Cree	93.75	44	⇑P	P	03 03 47.4	-0.2
	baz=94						
COLD	Coldfoot	93.78	13	*e*P	P	03 03 46.4	-0.8
	comp=Z,19nm,1.0s,mb5.5						
J14A	Carey	93.86	44	⇑P	P	03 03 48.5	+0.4
	baz=94						
D11A	Klaveano Farm,	93.90	40	⇑P	P	03 03 48.5	+0.2
	baz=94						
F12A	Elk City	93.92	42	⇑P	P	03 03 48.0	-0.4
	baz=94						
X21A	Alamocita Cree	93.94	54	⇑P	P	03 03 48.3	-0.5
	baz=94						
SRU	San Rafael	93.96	49	⇓P	P	03 03 48.3	-0.4
	baz=94						
H13A	Challis	93.97	43	⇓P	P	03 03 49.4	+0.8
	baz=94						
L15A	Malad City	93.99	46	⇑P	P	03 03 49.5	+0.7
	baz=94						
Z22A	Elephant Butte	94.06	56	⇓P	P	03 03 49.6	+0.2
	baz=94						
EGAK	Eagle	94.07	18	*e*P	P	03 03 47.1	-1.5
	comp=Z,30nm,1.1s,mb5.6						
R18A	Canyonlands Na	94.09	50	⇓P	P	03 03 49.4	0.0
	baz=94						
N16A	Rees Ranch, Co	94.12	47	⇓P	P	03 03 50.0	+0.5
	baz=94						
A10A	Northport	94.15	38	⇑P	P	03 03 49.9	+0.5
	baz=94						
I14A	Mackay	94.18	44	⇑P	P	03 03 50.0	+0.4
	baz=94						
M16A	Huntsville	94.18	47	⇓P	P	03 03 50.0	+0.3
	baz=94						
Q18A	Rafter H Ranch	94.23	49	⇑P	P	03 03 50.1	+0.1
	baz=94						
G13A	Cobalt	94.23	43	⇑P	P	03 03 49.6	-0.2
	baz=94						
BOD	Bodaibo	94.29	332	*e*P	P	03 03 47.0	-2.8
BOD				pmax	pmax		
	comp=Z,3.0nm,1.9s,mb4.4						
O17A	Robinson Place	94.29	48	⇓P	P	03 03 50.4	+0.1
	baz=94						
Y22A	Socorro	94.35	55	⇑P	P	03 03 50.7	0.0
	baz=94						
S19A	Harvey Farm, M	94.35	51	⇓P	P	03 03 50.6	0.0
	baz=94						
324A	Moseley Ranch,	94.47	58	⇑P	P	03 03 50.9	-0.3
	baz=95						
D12A	Red Ives Fores	94.48	40	⇓P	P	03 03 51.0	+0.1
	baz=95						
F13A	Darby	94.50	42	⇑P	P	03 03 50.7	-0.3
	baz=95						
H14A	Leadore	94.56	43	⇑P	P	03 03 51.6	+0.2
	baz=95						
B11A	Sandpoint	94.56	39	⇑P	P	03 03 51.8	+0.5
	baz=95						
425A	Indio Mountain	94.59	59	⇑P	P	03 03 52.0	+0.1
	baz=95						
J15A	Blackfoot	94.59	45	⇑P	P	03 03 52.0	+0.4
	baz=95						
L16A	Fish Haven	94.63	46	⇓P	P	03 03 51.8	0.0
	baz=95						
C12B	Naegeli Ranch,	94.73	40	⇑P	P	03 03 52.7	+0.6
	baz=95						
325A	Bean Ranch, Si	94.84	58	⇑P	P	03 03 52.9	-0.1
	baz=95						
M17A	Scullys Gap (B	94.90	47	⇓P	P	03 03 53.4	+0.4
	baz=95						
526A	Mary Lane Ranc	95.01	60	⇓P	P	03 03 54.2	+0.3
	baz=95						
Y23A	Lovelace Mesa,	95.03	55	⇓P	P	03 03 54.3	+0.5
	baz=95						
TXAR	Lajitas Array	95.07	60	P	P	03 03 54.2	+0.1
	comp=Z,2.1nm,1.0s,mb4.5,baz=212,slow=4.4,SNR=13						
TXAR				PKKP	PKKPbc	03 20 49.5	+0.4
	comp=Z,0.4nm,0.8s,baz=105,slow=2.8,SNR=5.0						
TXAR				LR	LR	03 42 55.8	
	comp=Z,112nm,18.1s,MS4.4,baz=265,slow=33						
TXAR	Lajitas Array	95.07	60	P	P	03 03 54.2	+0.1
TXAR				PKKP	PKKPbc	03 20 49.5	+0.4
TXAR				LR	LR	03 42 55.8	
J16A	Bone	95.07	45	⇑P	P	03 03 54.6	+0.8
	baz=95						
ANMO	Albuquerque	95.14	54	*e*P	P	03 03 53.9	-0.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ANMO	Albuquerque	95.14	54	*e*P	P	03 03 53.9	-0.4
	comp=Z,1.3nm,1.4s,mb4.2						
S21A	Coal Bank Pass	95.28	51	⇑P	P	03 03 55.4	+0.6
	baz=95						
RRI2	Red Ridge	95.30	45	*e*P	P	03 03 54.2	-0.5
	comp=Z,8.8nm,1.2s,mb5.1						
627A	Terlingua Ranc	95.34	60	⇑P	P	03 03 55.7	+0.4
	baz=95						
I16A	Newdale	95.42	45	⇑P	P	03 03 56.1	+0.8
	baz=96						
527A	Woodward Ranch	95.43	60	⇓P	P	03 03 56.4	+0.7
	baz=96						
Q20A	Ridgley Place,	95.46	50	⇓P	P	03 03 56.1	+0.5
	baz=96						
ZAK	Zakamensk	95.50	323	*e*P	P	03 03 54.1	-1.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.8						
Y24A	Capitan	95.50	56	⇓P	P	03 03 56.4	+0.4
	baz=96						
125A	Gardner Draw,	95.60	57	⇑P	P	03 03 56.3	-0.1
	baz=96						
F15A	Butte	95.67	42	⇓P	P	03 03 57.2	+0.9
	baz=96						
J17A	Brown Place, J	95.70	45	⇑P	P	03 03 57.3	+0.6
	baz=96						
C14A	Swan Lake	95.78	40	⇓P	P	03 03 58.0	+1.2
	baz=96						
K18A	Toltan Ranch,	95.83	46	⇓P	P	03 03 57.8	+0.6
	baz=96						
427A	Hayter Ranch,	95.87	59	⇑P	P	03 03 57.8	+0.1
	baz=96						
TLY	Talaya	95.94	324	*e*P	P	03 03 56.0	-1.5
TLY				*e*S	S	03 15 07.6	-4.2
TLY				*e*		03 16 36.5	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.8						
TLY				MLR	MLR		
	comp=Z,209nm,21.0s,MS4.6						
H16A	Russell Place,	95.94	44	⇑P	P	03 03 58.2	+0.6
	baz=96						
Y25A	Mesa, Roswell	96.07	56	⇑P	P	03 03 59.1	+0.5
	baz=96						
J18A	Kendall Valley	96.09	46	⇓P	P	03 03 58.4	0.0
	baz=96						
BOZ	Bozeman (W)	96.12	43	⇓P	P	03 03 58.4	0.0
	baz=96						
BW06	Boulder Array	96.21	46	⇑P	P	03 03 59.2	+0.2
	baz=96						
PDAR	Pinedale Array	96.21	46	P	P	03 03 58.5	-0.4
	comp=Z,1.1nm,1.1s,mb4.2,baz=225,slow=1.5,SNR=6.3						
PDAR				PP	PP	03 07 48.3	-4.6
	comp=Z,1.3nm,1.1s,baz=253,slow=4.5,SNR=5.1						
PDAR				PKKP	PKKPbc	03 20 56.5	+10
	comp=Z,0.5nm,0.8s,baz=78,slow=7.7,SNR=3.8						
PDAR				LR	LR	03 39 49.3	
	comp=Z,95nm,20.1s,MS4.3,baz=160,slow=31						
LKWY	Lake	96.43	44	*e*P	P	03 03 59.3	-0.6
LKWY				pmax	pmax		
	comp=Z,16nm,0.2s,mb6.1						
LKWY	Lake	96.43	44	*e*P	P	03 03 59.3	-0.6
	comp=Z,16nm,0.2s,mb6.1						
W25A	X Bar L Ranch,	96.75	55	⇓P	P	03 04 01.7	+0.1
	baz=97						
D16A	Dana Ranch, Ca	96.78	42	⇑P	P	03 04 01.3	-0.2
	baz=97						
D17A	Six Diamond Ra	97.36	42	⇑P	P	03 04 04.4	+0.3
	baz=98						
RLMT	Red Lodge	97.39	44	⇓P	P	03 04 05.2	+1.0
	baz=98						
F18A	Big Timber	97.44	43	⇑P	P	03 04 05.9	+1.5
	baz=98						
E18A	Harlowton	97.59	43	⇓P	P	03 04 05.1	0.0
	baz=98						
YKA	Yellowknife Ar	102.06	27	P	Pdif	03 04 23.3	-1.8
	comp=Z,0.5nm,0.9s,baz=248,slow=4.6,SNR=5.2						
YKA				PP	PP	03 08 24.9	-12
	comp=Z,0.7nm,1.1s,baz=240,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	102.06	27	P	Pdif	03 04 23.3	-1.8
YKA				PP	PP	03 08 24.9	-12
WMQ	Urumqi	102.51	312	*e*P	Pdif	03 04 27.6	+0.5
WMQ				LR	LR		
	comp=N,150nm,24.0s						
WMQ				LR	LR		
	comp=E,280nm,32.0s						
WMQ				LR	LR		
	comp=Z,170nm,26.0s,MS4.5						
MKAR	Makanchi Array	107.03	314	P	Pdif	03 04 50.9	+3.6
MKAR						03 09 10.9	
MKAR	Makanchi Array	107.03	314	Pdiff	Pdif	03 04 50.9	+3.7
	comp=Z,0.9nm,0.8s,baz=110,slow=5.4,SNR=6.6						
MKAR				PP	PP	03 09 10.9	-3.5
	comp=Z,1.9nm,1.0s,baz=105,slow=6.6,SNR=7.6						
MKAR				PKKPbc	PKKPbc	03 20 13.3	-1.7
	comp=Z,0.9nm,0.6s,baz=270,slow=5.8,SNR=5.9						
MKAR	Makanchi Array	107.03	314	Pdif	Pdif	03 04 50.9	+3.7
MKAR				PP	PP	03 09 10.9	-3.5
MKAR				PKKPbc	PKKPbc	03 20 13.3	-1.7
ZALV	Zalesovo Beam	107.34	322	PP	PKiKP	03 09 05.6	+8.8
	comp=Z,0.6nm,0.3s,baz=79,slow=3.1,SNR=4.0						
KURK	Kurchatov	110.30	318	PKiKP	PKiKP	03 09 04.0	+1.5
	comp=Z,1.6nm,0.8s,baz=110,slow=1.8,SNR=5.1						
KURK				PP	PP	03 09 30.6	-7.4
	comp=Z,1.8nm,0.9s,baz=100,slow=6.6,SNR=5.9						
KURK				PKKPbc	PKKPbc	03 20 02.8	-1.9
	comp=Z,2.1nm,0.9s,baz=276,slow=3.9,SNR=6.7						
KURK	Kurchatov	110.30	318	PKPdf	PKiKP	03 09 04.0	+1.5
KURK				PP	PP	03 09 30.6	-7.4
KURK				PKKPbc	PKKPbc	03 20 02.8	-1.9
AAK	Ala-Archa	111.48	308	PKKPbc	PKKPbc	03 20 02.0	+1.4
	comp=Z,0.6nm,0.5s,baz=172,slow=11,SNR=4.7						
RES	Resolute Bay	112.27	17	*e*PKIKP	PKiKP	03 09 04.1	-1.5
BVAR	Borovoye Array	115.67	319	PKP	PKPdf	03 09 12.3	-0.3
	comp=Z,1.5nm,0.7s,baz=108,slow=4.8,SNR=5.1						
BVAR				PP	PP	03 10 22.1	+5.9
	comp=Z,0.9nm,0.6s,baz=67,slow=12,SNR=3.9						
BRVK	Borovoye	115.74	319	*i* PKIKP	PKPdf	03 09 13.3	+0.5
ABKAR	Akbulak array	122.17	315	*e*PKPdf	PKPdf	03 09 24.8	-0.5
ARU	Arti	122.43	323	*i* PKIKP	PKPdf	03 09 23.5	-2.0
ARU						03 16 18.1	
ARU	Arti	122.43	323	*e*PKPdf	PKPdf	03 09 24.8	-0.7
SOKR	Solikamsk	122.86	327	*e*PKIKP	PKPdf	03 09 25.6	-0.7
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AKTK	Aktyubinsk	123.35	316	PKP	PKPdf	03 09 25.9	-1.6
AKTK				PKKPbc	PKKPbc	03 19 16.6	-1.5
AKTO	Aktyubinsk	123.35	316	PKP	PKPdf	03 09 25.9	-1.6
	comp=Z,4.4nm,0.8s,baz=26,slow=1.2,SNR=7.3						
AKTO				PKKPbc	PKKPbc	03 19 16.6	-1.5
	comp=Z,3.2nm,0.9s,baz=221,slow=4.2,SNR=10.0						
SCHQ	Schefferville	125.40	38	PKP	PKPdf	03 09 29.5	-1.8
	comp=Z,4.5nm,0.9s,baz=326,slow=2.1,SNR=5.0						
DAG	Danmarks Havn	125.67	3	*e*PKIKP	PKPdf	03 09 30.0	-1.3
DAG	Danmarks Havn	125.67	3	*i* P	PKPdf	03 09 30.0	-1.3
SFJD	Kangerlussuaq	127.97	20	*e*PKIKP	PKPdf	03 09 36.3	+0.4
SFJD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SFJD	Kangerlussuaq	127.97	20	*i* P	PKPdf	03 09 36.3	+0.4
	comp=Z,6.3nm,0.9s						
APA	Apatity	128.87	342	⇑*i* PKIKP	PKPdf	03 09 45.0	+7.4
KEV	Kevo	128.99	346	*e*pkp	PKPdf	03 09 28.7	-9.0
ARCES	ARCESS Array B	129.50	346	PKP	PKPdf	03 09 37.2	-1.5
	comp=Z,2.5nm,0.7s,baz=71,slow=2.9,SNR=9.7						
KLMR	Klimovskoe	130.51	332	*e*PKIKP	PKPdf	03 09 42.9	+2.0
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KMBO	Kilima Mbogo	131.16	247	PKP	PKPdf	03 09 47.9	+4.3
	comp=Z,2.1nm,1.1s,baz=242,slow=18,SNR=3.8						
JOF	Joensuu	132.55	338	*e*pkp	PKPdf	03 09 43.4	-1.3
VRHR	Novokhopersk	133.41	320	*e*PKIKP	PKiKP	03 09 56.7	+8.8
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,5.0nm,0.5s						
ZEI	Tsey	133.91	308	*i* PKIKP	PKPdf	03 09 52.3	+4.5
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV	Kislovodsk	134.57	310	*i* PKIKP	PKPdf	03 09 49.8	+0.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	134.63	326	*i* PKIKP	PKPdf	03 09 48.9	+0.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KAF	Kangasniemi	134.81	339	*e*pkp	PKPdf	03 09 49.2	+0.3
VSR	Storozhevoye	134.82	321	*e*PKIKP	PKiKP	03 09 59.8	+9.1
VSR				pmax	pmax		
	comp=E,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,6.0nm,0.4s						
VORD	Divnogorie	134.84	320	*e*PKIKP	PKPdf	03 09 56.2	+6.9
VORD				pmax	pmax		
	comp=N,7.0nm,0.9s						
VORD				pmax	pmax		
	comp=E,8.0nm,0.9s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	135.36	338	PKP	PKPdf	03 09 48.4	-1.6
	comp=Z,4.0nm,0.9s,baz=100,slow=2.3,SNR=6.9						
FINES				SKPbc	SKPbc	03 13 16.9	-0.1
	comp=Z,2.8nm,0.9s,baz=111,slow=10,SNR=3.9						
FINES	FINESS Array B	135.36	338	PKP	PKPdf	03 09 48.4	-1.6
FINES				SKPbc	SKPbc	03 13 16.9	-0.1
ANN	Anapa	138.02	312	*i* PKIKP	PKPdf	03 09 54.4	-1.0
ANN				pmax	pmax		
	comp=Z,61nm,1.1s						
NB2	NORSAR Subarra	139.87	347	PKPdf	PKPdf	03 10 00.0	+1.7
	comp=Z,3.9nm,1.1s,baz=31,slow=1.9						
NOA	NORSAR Array B	139.87	347	PKP	PKPdf	03 09 57.3	-1.0
	comp=Z,1.1nm,0.8s,baz=31,slow=2.7,SNR=4.1						
NOA	NORSAR Array B	139.87	347	PKP	PKPdf	03 09 57.3	-1.0
AKASG	Malin Array Be	140.68	324	PKP	PKPdf	03 10 00.2	+0.1
	comp=Z,0.6nm,0.5s,baz=54,slow=2.6,SNR=6.6						
AKASG				SKPbc	SKPbc	03 13 32.4	-0.2
	comp=Z,1.4nm,0.7s,baz=46,slow=2.7,SNR=4.3						
AKASG	Malin Array Be	140.68	324	PKP	PKPdf	03 10 00.2	+0.1
AKASG				SKPbc	SKPbc	03 13 32.4	-0.2
SUW	Suwalki	141.64	332	*e*PKIKP	PKPdf	03 10 03.0	+1.3
BRTR	Keskin Array B	142.09	306	PKP	PKPdf	03 10 03.1	+0.2
	comp=Z,1.6nm,0.9s,baz=147,slow=2.5,SNR=8.2						
LVV	L'vov	143.93	326	*e*PKIKP	PKPdf	03 10 08.8	+2.9
BSD	Bornholm Skovb	144.00	339	⇑*e*PKHKP	PKPdf	03 10 01.2	-4.6
BSD				pmax	pmax		
	comp=Z,19nm,1.0s						
BSD	Bornholm Skovb	144.00	339	⇑*i* P	PKPdf	03 10 01.2	-4.6
	comp=Z,19nm,1.0s						
COP	Copenhagen	144.29	342	*e*PKHKP	PKPdf	03 10 02.4	-3.9
COP				pmax	pmax		
	comp=Z,10.0nm,0.9s						
COP	Copenhagen	144.29	342	*i* P	PKPdf	03 10 02.4	-3.9
	comp=Z,10nm,0.9s						
HARR	Harsova	144.36	316	⇑*i* P	PKPdf	03 10 05.2	-1.6
MUD	Monsted U'grnd	144.47	345	*e*PKHKP	PKPdf	03 10 03.7	-2.9
MUD				pmax	pmax		
	comp=Z,12nm,1.0s						
MUD	Monsted U'grnd	144.47	345	*i* P	PKPdf	03 10 03.7	-2.9
	comp=Z,12nm,1.0s						
BUR08	Bucovina Ar. S	144.55	322	*e*PKPdf	PKPdf	03 10 05.8	-1.2
BURAR	Bucovina Array	144.56	322	⇑PKIKP	PKPdf	03 10 06.0	-1.1
BURAR	Bucovina Array	144.56	322	⇑*i* P	PKPdf	03 10 05.5	-1.6
VRI	Vrincioaia	144.57	319	⇓*i* P	PKPdf	03 10 05.3	-1.8
PLOR	Plostina	144.62	319	⇑PKIKP	PKPdf	03 10 05.0	-2.2
PLOR	Plostina	144.62	319	⇑*i* P	PKPdf	03 10 05.0	-2.2
GKP	Gorka Klasztor	144.63	335	*e*PKP	PKPdf	03 10 05.0	-2.0
GKP	Gorka Klasztor	144.63	335	*e*PKP	PKPdf	03 10 05.0	-2.0
KWP	Kalwaria Pacla	144.72	327	*e*PKP	PKPdf	03 10 05.4	-1.9
KWP	Kalwaria Pacla	144.72	327	*e*PKPdf	PKPdf	03 10 05.3	-2.0
KWP	Kalwaria Pacla	144.72	327	⇑*i* P	PKPdf	03 10 05.2	-2.1
ISP	Isparta	144.93	304	⇑P	PKPdf	03 10 08.7	+0.7
ISP	Isparta	144.93	304	⇑*i* P	PKPdf	03 10 08.7	+0.7
ISP	Isparta	144.93	304	P	PKPdf	03 10 05.6	-2.4
RGN	Rugen	144.98	340	*e*PKPdf	PKPdf	03 10 04.5	-3.1
MLR	Muntele Rosu	145.23	318	⇓*i* P	PKPdf	03 10 06.8	-1.5
KOLS	Kolonicke sedl	145.38	326	*e*PKIKP	PKPdf	03 10 07.6	-0.8
KOLS	Kolonicke sedl	145.38	326	*e*PKP	PKPdf	03 10 07.6	-0.8
BMR	Baia Mare	145.48	323	⇑*i* P	PKPdf	03 10 09.7	+1.0
UZH	Uzhgorod	145.56	326	⇓*i* PKP2	PKPdf	03 10 07.5	-1.3
STHS	Stebnicka Huta	145.59	327	*e*PKIKP	PKPdf	03 10 08.7	-0.1
STHS				*e*		03 10 20.7	
STHS	Stebnicka Huta	145.59	327	*e*PKP	PKPdf	03 10 08.7	-0.1
STHS				*e*		03 10 20.7	
TRPA	Tarpa	145.73	325	⇓*i* P	PKPdf	03 10 08.3	-0.8
OJC	Ojcow	145.76	330	*e*PKP	PKPdf	03 10 08.1	-0.9
VOIR		145.80	319	⇓P	PKPdf	03 10 08.8	-0.4
VOIR				P		03 10 12.2	
VOIR		145.80	319	⇓*i* P	PKPdf	03 10 09.3	0.0
NIE	Niedzica	146.05	328	*e*PKP2	PKPdf	03 10 09.7	+0.1
JMB	Yambol	146.21	313	P	PKPdf	03 10 07.2	-2.9
BSEG	Bad Segeberg	146.42	342	*e*PKPbc	PKPbc	03 10 10.1	-1.3
RUE	Ruedersdorf	146.54	337	*e*PKPbc	PKPbc	03 10 11.2	-0.6
KECS	Kecovo	146.58	327	*e*PKP2	PKPbc	03 10 11.7	-0.4
KECS	Kecovo	146.58	327	*e*PKP	PKPbc	03 10 11.7	-0.4
KSP	Ksiaz	146.86	333	*e*PKP	PKPdf	03 10 12.2	+1.3
KSP	Ksiaz	146.86	333	*e*PKP	PKPdf	03 10 11.6	+0

CLL			*i* PKPab	PKPab	03 10 16.9	-0.9
	comp=Z,60nm,1.3s					
CLL			*e*		03 10 20.0	
	comp=Z,75nm,1.3s					
CLL			*e*		03 10 23.0	
CLL			*e*PP	PP	03 13 40.0	-2.1
CLL			*e*SKPbc	SKPbc	03 13 50.0	+0.7
CLL			*e*		03 14 22.0	
CLL			*e*SSS		03 38 30.0	
CLL			*e*		03 44 00.0	
CLL			LV		04 17 00.0	
	comp=Z,200nm,21.5s					
CLL			Lm		04 25 00.0	
	comp=N,100nm,18.5s					
CLL			Lm		04 25 00.0	
	comp=E,100nm,18.4s					
VRAC	**Vranov**	**147.87 331**	PKP2	PKPbc	03 10 15.0	-0.6
VRAC	**Vranov**	**147.87 331** ⇓	*i*P	PKPbc	03 10 15.2	-0.4
SMOL	**Smolenice**	**148.06 329**	*e*PKP2	PKPbc	03 10 16.1	-0.1
SMOL	**Smolenice**	**148.06 329**	*e*PKP	PKPbc	03 10 16.1	-0.1
CLZ	**Clausthal**	**148.22 340**	*e*PKPbc	PKPbc	03 10 15.4	-1.1
PKSG		**148.36 327** ⇑	*e*P	PKPdf	03 10 15.4	+1.9
VTS	**Vitosha**	**148.37 316**	P	PKPdf	03 10 15.3	+1.6
WIT	**Witteveen**	**148.40 345**	*e*PKP	PKPbc	03 10 15.5	-1.4
	comp=E,199nm,0.8s					
ZST	**Bratislava**	**148.44 329**	*e*PKP2	PKPbc	03 10 17.5	+0.3
ZST	**Bratislava**	**148.44 329**	*e*PKP	PKPbc	03 10 17.5	+0.3
IBBN	**Ibbenburen**	**148.58 343**	*e*PKPbc	PKPbc	03 10 15.9	-1.5
TANN	**Tannenbergstha**	**148.70 336**	*e*PKPbc	PKPbc	03 10 16.6	-1.2
SRS	**Serrai**	**148.81 313**	P	PKPdf	03 10 15.4	+1.0
MOX	**Moxa**	**148.82 337**	*e*PKPbc	PKPbc	03 10 16.7	-1.4
MOX	**Moxa**	**148.82 337**	*e*PKIKP	PKPbc	03 10 16.6	-1.5
MOX			pmax	pmax		
	comp=Z,46nm,1.3s					
MOX			MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9					
MOX	**Moxa**	**148.82 337**	*e*PKP	PKPbc	03 10 16.6	-1.5
MOX			LR	LR		
	comp=Z,200nm,20.0s,MS4.9					
OUR	**Ouranopolis**	**148.88 311**	P	PKPab	03 10 26.5	+3.9
PKSM	**Moragy**	**149.01 325**	PKP2	PKPbc	03 10 18.0	-0.7
PKSM	**Moragy**	**149.01 325** ⇓	*i*P	PKPdf	03 10 16.2	+1.6
SOP	**Sopron**	**149.06 329** ⇑	*e*P	PKPbc	03 10 17.4	-1.4
SOH	**Sokhos**	**149.10 313**	P	PKPdf	03 10 16.3	+1.4
WTSB	**Winterswijk**	**149.14 344**	*e*PKP	PKPbc	03 10 17.2	-1.6
	comp=Z,76nm,1.0s					
CONA	**Conrad Observa**	**149.21 330** ⇑	*i*PKPbc	PKPbc	03 10 17.7	-1.4
	comp=Z,47nm,1.4s,SNR=17					
UBBA	**Unterbreizbach**	**149.22 339**	*e*PKPbc	PKPbc	03 10 17.5	-1.6
KHC	**Kasperske Hory**	**149.29 334**	*e*PKPbc	PKPbc	03 10 18.1	-1.2
KHC	**Kasperske Hory**	**149.29 334**	*e*PKP	PKPbc	03 10 18.0	-1.3
KHC			*ex*	x	03 10 24.6	
KHC			*e*PKP	PKPab	03 10 30.4	+6.4
ROTZ	**Rotzenmuhle**	**149.32 336**	*e*PKPbc	PKPbc	03 10 17.9	-1.5
HORT	**Hortiatis**	**149.37 312**	P	PKPdf	03 10 15.1	-0.3
VAY	**Valandovo**	**149.40 314**	*e*PKP	PKPdf	03 10 15.9	+0.6
VAY	**Valandovo**	**149.40 314**	P	PKPdf	03 10 15.7	+0.3
RHK3	**Tenkes**	**149.42 325** ⇑	*e*P	PKPbc	03 10 18.0	-1.7
THE	**Thessaloniki**	**149.45 312**	P	PKPdf	03 10 16.5	+1.0
GEC2	**GERESS Array S**	**149.47 333**	*e*PKPbc	PKPbc	03 10 18.1	-1.6
GERES	**GERESS Array B**	**149.47 333**	PKP	PKPdf	03 10 16.5	+1.3
	comp=Z,22nm,1.2s,baz=166,slow=1.6,SNR=29					
GERES			PKPbc	PKPbc	03 10 18.2	-1.6
	comp=Z,21nm,1.2s,baz=66,slow=1.6,SNR=28					
BUG	**Bochum--Univer**	**149.49 343**	*e*PKPbc	PKPbc	03 10 18.5	-1.2
LAST	**Lasithi**	**149.53 301**	P	PKPbc	03 10 20.9	+0.5
DIVS	**Divibare**	**149.55 321**	P	PKPbc	03 10 18.1	-2.0
WET	**Wettzell**	**149.57 334**	*e*PKPbc	PKPbc	03 10 18.5	-1.5
GRA1	**Grafenberg Arr**	**149.75 337**	*e*PKPbc	PKPbc	03 10 19.1	-1.3
GRA1			LR	LR		
	comp=Z,200nm,21.3s,MS4.9					
GRF	**Grafenberg Arr**	**149.75 337**	*e*PKPbc	PKPbc	03 10 19.1	-1.3
GRF			*e*L		04 18 05.4	
	comp=Z,216nm,21.3s					
SKO	**Skopje**	**149.82 316**	*e*PKP	PKPbc	03 10 19.9	-0.9
SKO	**Skopje**	**149.82 316**	P	PKPbc	03 10 18.4	-2.4
ATHU	**Athens Univers**	**149.95 307**	P	PKPbc	03 10 18.6	-2.7
MOA	**Molln**	**149.99 331** ⇑	*i*PKPbc	PKPbc	03 10 18.8	-2.2
	comp=Z,19nm,1.1s,SNR=8.0					
LIT	**Litokhoron**	**150.01 312**	P	PKPdf	03 10 18.4	+2.0
KOGS	**Kog**	**150.08 327**	*e*PKPbc	PKPbc	03 10 19.2	-2.1
SIVA	**Sivas**	**150.10 301**	P	PKPbc	03 10 24.3	+2.5
TNS	**Taunus Mts**	**150.23 340**	*e*PKPbc	PKPbc	03 10 20.3	-1.3
KRUS	**Krusevo**	**150.25 315**	*e*PKP	PKPbc	03 10 19.7	-2.2
LKR	**Lokris**	**150.26 309**	P	PKPdf	03 10 19.0	+2.2
BIA	**Bitola**	**150.37 314**	P	PKPdf	03 10 18.6	+1.7
FNA	**Florina**	**150.45 314**	P	PKPbc	03 10 20.2	-2.2
HGN	**Heimansgroeve**	**150.46 344**	*e*PKP	PKPbc	03 10 20.5	-1.6
	comp=Z,35nm,1.4s					
BEBN	**Eben Emael**	**150.49 344**	PKPbc	PKPbc	03 10 21.9	-0.3
PERS	**Pernice**	**150.49 329**	*e*PKPbc	PKPbc	03 10 20.2	-2.1
DID	**Didima**	**150.52 307**	P	PKPdf	03 10 18.4	+1.1
LTK	**Loutraki**	**150.53 308**	P	PKPdf	03 10 15.5	-1.8
THL	**Klokotos Trika**	**150.58 311**	P	PKPdf	03 10 19.3	+2.0
MEM	**Membach**	**150.58 344**	PKPbc	PKPbc	03 10 21.1	-1.2
AGG	**Agios Georgios**	**150.59 310**	P	PKPbc	03 10 20.0	-2.8
TOD	**Tromm**	**150.66 339**	PKIKP	PKPbc	03 10 20.8	-1.8
OHR	**Ohrid**	**150.67 315**	*e*PKP	PKPbc	03 10 20.4	-2.5
OHR	**Ohrid**	**150.67 315**	P	PKPdf	03 10 18.9	+1.5
GOLS	**Golise**	**150.69 327**	*e*PKPbc	PKPbc	03 10 21.3	-1.5
KARN	**Karanos**	**150.69 302**	P	PKPdf	03 10 15.7	-1.9
ABH	**Alteburg**	**150.81 341**	PKP	PKPbc	03 10 21.5	-1.4
UCC	**Uccle**	**150.81 346**	PKPbc	PKPbc	03 10 21.8	-1.1
BCLA	**Clavier**	**150.93 344**	PKPbc	PKPbc	03 10 22.5	-0.7
KBA	**Koelnbreinsper**	**150.98 331** ⇑	*i*PKPbc	PKPdf	03 10 19.8	+2.1
	comp=Z,52nm,1.0s,SNR=11					
KALE	**Kalithea**	**150.98 309**	P	PKPdf	03 10 18.4	+0.4
FUR	**Furstenfeldbru**	**150.99 335**	*e*PKPbc	PKPbc	03 10 21.9	-1.5
GUR	**Goura**	**151.02 308**	P	PKPdf	03 10 14.8	-3.2
TRIZ	**Trizonia**	**151.04 309**	P	PKPbc	03 10 22.3	-1.6
RUP	**Ruppelstein**	**151.11 342**	PKIKP	PKPbc	03 10 21.9	-1.7
EFP	**Efpalio**	**151.14 309**	P	PKPdf	03 10 19.0	+0.8
LAKA	**Lakka**	**151.16 309**	P	PKPbc	03 10 22.1	-2.1
LJU	**Ljubljana**	**151.21 329**	*e*PKPdf	PKPdf	03 10 17.0	-1.0
LJU			*e*		03 10 23.0	
VLX	**Vlachokerasia**	**151.21 307**	P	PKPbc	03 10 22.6	-1.7
STU	**Stuttgart**	**151.24 338**	*e*PKPbc	PKPbc	03 10 22.8	-1.2
STU	**Stuttgart**	**151.24 338**	*e*PKPbc	PKPbc	03 10 23.3	-0.7
WLF	**Walferdange**	**151.40 343**	PKPbc	PKPbc	03 10 23.3	-1.0
WLF	**Walferdange**	**151.40 343**	*e*PKPbc	PKPbc	03 10 23.2	-1.1
WLF	**Walferdange**	**151.40 343**	*e*PKPbc	PKPbc	03 10 23.7	-0.7
DOU	**Dourbes**	**151.41 345**	E	PKPdf	03 10 21.2	+3.0
DOU			PKPbc	PKPbc	03 10 22.9	-1.4
VOY	**Vojsko**	**151.51 329**	*e*PKPbc	PKPbc	03 10 22.3	-2.4
VOY			*e*		03 10 29.0	
VOY			*e*		03 10 33.6	
LANF	**Langenberg**	**151.52 340**	PKP	PKPbc	03 10 23.0	-1.6
ROBS	**Robic**	**151.54 330**	*e*PKPbc	PKPbc	03 10 21.9	-2.9
WTTA	**Wattenberg**	**151.57 333** ⇑	*i*PKPbc	PKPbc	03 10 21.7	-3.1
	comp=Z,33nm,1.0s,SNR=9.5					
ITM	**Ithomi**	**151.61 307**	P	PKPbc	03 10 22.9	-2.3
IGT	**Igoumenitsa**	**151.75 312**	P	PKPbc	03 10 23.8	-1.7
PYL	**PYLOS**	**151.86 306**	P	PKPbc	03 10 22.6	-3.2
BFO	**Black Forest**	**151.92 339**	*e*PKPbc	PKPbc	03 10 23.8	-1.8
SPAK	**Spaichingen-Ko**	**151.96 338**	PKP	PKPbc	03 10 23.4	-2.2
KFL	**Anninata**	**152.07 309**	P	PKPbc	03 10 25.2	-1.0
CDF	**Champ du Feu**	**152.19 340**	*e*PKIKP	PKPdf	03 10 18.6	-0.9
	comp=Z,79nm,1.1s					
DAVA	**Damuels**	**152.25 336**	*i*PKPbc	PKPbc	03 10 25.6	-0.7
	comp=Z,29nm,1.3s,SNR=8.2					
ECH	**Echery**	**152.40 340**	PKP	PKPbc	03 10 25.4	-1.2
FELD	**Feldberg im Sc**	**152.42 339**	PKP	PKPbc	03 10 24.3	-2.4
MOF	**Molkenrain**	**152.73 340**	PKP	PKPbc	03 10 25.8	-1.6
MEZF	**Maizieres J'vi**	**152.76 343**	*e*PKIKP	PKPdf	03 10 19.1	-1.2
	comp=Z,130nm,1.1s					
HAU	**Haudompre**	**152.84 341**	*e*PKIKP	PKPdf	03 10 18.8	-1.6
	comp=Z,44nm,1.0s					
HAU			*e*MLR	MLR		
	comp=Z,158nm,19.8s,MS4.5					
HAU	**Haudompre**	**152.84 341**	*e*PKPdf	PKPdf	03 10 18.8	-1.6
HAU			LR	LR		
	comp=Z,160nm,19.8s,MS4.8					
HINF	**Hinteralfeld**	**152.85 340**	*e*PKIKP	PKPdf	03 10 18.7	-1.7
	comp=Z,33nm,0.9s					
LOMF	**Lomont**	**153.27 340**	PKP	PKPbc	03 10 27.3	-1.3
FLN	**La Foliniere**	**153.67 351**	*e*PKIKP	PKPdf	03 10 20.4	-1.2
	comp=Z,36nm,0.9s					
FLN			*e*MLR	MLR		
	comp=Z,169nm,21.0s,MS4.5					
FLN	**La Foliniere**	**153.67 351**	*e*PKPdf	PKPdf	03 10 20.4	-1.2
FLN			LR	LR		
	comp=Z,170nm,21.0s,MS4.8					
LDF	**La Druitiere**	**153.78 350**	*e*PKIKP	PKPdf	03 10 20.4	-1.4
	comp=Z,37nm,1.3s					
GRR	**Gorron**	**154.09 351**	*e*PKIKP	PKPdf	03 10 21.3	-0.9
CABF	**La Chapelle**	**154.16 340**	*e*PKIKP	PKPdf	03 10 20.8	-1.6
	comp=Z,55nm,1.2s					
LOR	**Lormes**	**154.21 344**	*e*PKIKP	PKPdf	03 10 21.7	-0.7
	comp=Z,32nm,1.1s					
LOR			*e*MLR	MLR		
	comp=Z,315nm,23.0s,MS4.8					
LOR	**Lormes**	**154.21 344**	*e*PKPdf	PKPdf	03 10 21.7	-0.7
LOR			LR	LR		
	comp=Z,310nm,23.0s,MS5.1					
TIP	**Timpagrande**	**154.32 315**	*e*PKPbc	PKPbc	03 10 32.8	+1.6
SSF	**Saint Saulge**	**154.49 344**	*e*PKIKP	PKPdf	03 10 22.1	-0.7
	comp=Z,31nm,1.0s					
AVF	**Avril sur Loir**	**154.78 344**	*e*PKIKP	PKPdf	03 10 22.0	-1.2
SMF	**Signal de Mont**	**154.79 343**	*e*PKIKP	PKPdf	03 10 22.2	-1.0
LPL	**La Plagne**	**154.90 338**	*e*PKIKP	PKPdf	03 10 22.8	-0.6
LPG	**La Plagne**	**154.91 338**	*e*PKIKP	PKPdf	03 10 22.7	-0.7
	comp=Z,15nm,1.1s					
BNI	**Bardonecchia**	**155.32 337**	*e*PKIKP	PKPdf	03 10 23.8	-0.2
TCF	**Toulx Ste Croi**	**155.53 345**	*e*PKIKP	PKPdf	03 10 23.2	-1.1
	comp=Z,42nm,1.4s					
MBDF	**Montbardon**	**155.57 337**	*e*PKIKP	PKPdf	03 10 23.5	-0.9
	comp=Z,24nm,1.3s					
MFF	**Saint Martin d**	**155.72 349**	*e*PKIKP	PKPdf	03 10 23.6	-0.9
	comp=Z,56nm,1.4s					
ORIF	**Oris-en-Rattie**	**155.72 338**	*e*PKIKP	PKPdf	03 10 23.7	-0.9
	comp=Z,15nm,1.0s					
ORIF			*e*MLR	MLR		
	comp=Z,136nm,21.0s,MS4.5					
PYM	**Petit Puy Mans**	**155.84 343**	PKP	PKPdf	03 10 23.5	-1.2
AUTN	**L'Aution**	**155.94 335**	PKIKP	PKPdf	03 10 30.1	+5.2
TOUF	**Mont Tournerai**	**155.99 335**	PKIKP	PKPdf	03 10 30.4	+5.4
LBL	**Lubilhac**	**156.25 343**	PKP	PKPdf	03 10 27.4	+2.1
PGF	**Pioggiola**	**156.44 330**	*e*PKIKP	PKPdf	03 10 24.3	-1.3
	comp=Z,30nm,1.2s					
FRF	**La Foret Royal**	**156.61 335**	*e*PKIKP	PKPdf	03 10 24.4	-1.4
SMRF	**Simiane la Rot**	**156.65 337**	*e*PKIKP	PKPdf	03 10 24.2	-1.6
ESDC	**Sonseca Array**	**163.06 353**	PKP	PKPdf	03 10 32.5	-0.7
	comp=Z,0.1nm,0.3s,baz=10.0,slow=2.4,SNR=6.1					
ESDC			PKPab	PKPab	03 11 19.6	-3.4
	comp=Z,0.1nm,0.3s,baz=343,slow=4.0,SNR=5.1					
LIC	**Lamto**	**163.43 185**	*e*PKP2	PKPab	03 11 24.4	-0.8
	comp=Z,64nm,1.3s					
LIC			*e*MLR	MLR		
	comp=Z,384nm,20.2s					
LIC	**Lamto**	**163.43 185**	*e*P	PKPdf	03 10 31.7	-2.7
	comp=Z,61nm,1.3s					
KIC	**Kosan Boka**	**163.54 186**	*e*P	PKPdf	03 10 30.1	-4.4
	comp=Z,74nm,1.4s					
TIC	**Toumodi**	**163.85 186**	*e*P	PKPdf	03 10 31.2	-3.5
	comp=Z,40nm,1.2s					
DBIC	**Dimbokro**	**163.86 186**	PKP	PKPdf	03 10 36.4	+1.7
	comp=Z,9.7nm,1.2s,baz=105,slow=4.1,SNR=4.1					
DBIC			PKPab	PKPab	03 11 25.5	-1.6
	comp=Z,10.0nm,1.0s,baz=175,slow=4.8,SNR=6.4					
DBIC	**Dimbokro**	**163.86 186**	PKP	PKPdf	03 10 36.4	+1.7
DBIC			PKPab	PKPab	03 11 25.5	-1.6
TORD	**Torodi Ar. Bea**	**167.59 221**	PKP	PKPdf	03 10 36.9	-0.8
	comp=Z,3.1nm,1.1s,baz=318,slow=0.9,SNR=11					
TORD			PKPab	PKPab	03 11 42.3	-1.3
	comp=Z,8.4nm,1.0s,baz=131,slow=3.5,SNR=12					

ISCJB ***05*** *03:09:38.7±0.5, 24°.73N±0°.03×122°.52E±0°.02, h109km±5km, Error ellipse: s-maj=5.1km s-min=2.8km az=164.9*
JMA ***05*** *03:09:38.4±0.2, 24°.89N×122°.53E, h111km±3km, M3.0*
TAP ***05*** *03:09:38.7, 24°.76N×122°.46E, h114km, ML3.8, C*
NEIC ***05*** *03:09:38.4, 24°.89N×122°.54E, h110km, MG3.0(JMA), After JMA.*

ISC 05 03:09:39.3±0.5, 24°.73N±0°.03×122°.52E±0°.02, h108km±5km, n56, σ0°70/105, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.53**	**121**	P	**Pn**	**03 09 56.1**	**0.0**
YOJ				*e*S	**Sn**	**03 10 09.7**	**+1.0**
EGS		**0.54**	**282**	*e*P	**Pn**	**03 09 53.9**	**-2.3**
baz=274							
TWB1	**Santiao Chiao**	**0.55**	**300** ⇓	*i*P	**Pn**	**03 09 56.5**	**+0.2**
baz=293							
TWB1				*i* S	**Sn**	**03 10 09.0**	**0.0**
baz=293							
TWC	**Suao**	**0.62**	**259**	*i* P	**Pn**	**03 09 56.5**	**-0.3**
baz=252							
TWC				*i* S	**Sn**	**03 10 09.4**	**-0.4**
baz=252							
ILA	**Ilan**	**0.70**	**273**	*e*P	**Pn**	**03 09 57.2**	**-0.2**
baz=270							
NWF	**Wu-fen Shan**	**0.75**	**297** ⇓	*i*P	**Pn**	**03 09 58.0**	**+0.2**
baz=289							
NWF				*i* S	**Sn**	**03 10 12.1**	**+0.2**
baz=289							
ENA	**Nanau**	**0.77**	**247** ⇓	*i*P	**Pn**	**03 09 58.2**	**+0.2**
baz=241							
ENA				*e*S	**Sn**	**03 10 12.6**	**+0.5**
baz=241							
TWE	**Neicheng**	**0.77**	**269**	*i* P	**Pn**	**03 09 58.0**	**0.0**
baz=272							
TWE				*e*S	**Sn**	**03 10 11.8**	**-0.4**
baz=272							
TWA	**Mucha**	**0.88**	**287**	*i* P	**Pn**	**03 09 58.9**	**-0.2**
baz=278							
TWA				S	**Sn**	**03 10 13.6**	**-0.4**
baz=278							
TATO	**Taipei**	**0.96**	**285**	*e*Pn	**Pn**	**03 09 59.3**	**-0.6**
TATO				*e*Sn	**Sn**	**03 10 14.9**	**-0.6**
TWY	**Chenhua**	**0.99**	**303**	*e*P	**Pn**	**03 09 60.0**	**-0.3**
baz=303							
NACB	**Ninganchiao**	**1.00**	**237**	*e*Pn	**Pn**	**03 09 59.7**	**-0.6**
NACB				*e*S	**Sn**	**03 10 16.3**	**0.0**
YHNB	**Yeheng**	**1.04**	**267**	*e*Pn	**Pn**	**03 10 00.7**	**0.0**
YHNB				*e*S	**Sn**	**03 10 17.0**	**+0.1**
NSK	**Sanguang**	**1.05**	**267**	*i* P	**Pn**	**03 10 00.9**	**0.0**
baz=273							
NSK				S	**Sn**	**03 10 17.2**	**+0.1**
baz=273							
TWD	**Chiawan**	**1.06**	**232**	*i* P	**Pn**	**03 10 00.4**	**-0.5**
baz=226							
TWD				S	**Sn**	**03 10 17.1**	**-0.2**
baz=226							
TWS1	**Kuangyinshan**	**1.06**	**291**	P	**Pn**	**03 10 00.8**	**-0.2**
baz=283							
TWS1				S	**Sn**	**03 10 17.3**	**-0.1**
baz=283							
NNS	**Nan Shan**	**1.08**	**255**	*e*P	**Pn**	**03 10 01.2**	**+0.1**
baz=248							
NNS				*e*S	**Sn**	**03 10 18.2**	**+0.6**
baz=248							
HWA	**Hwalien**	**1.12**	**228**	*e*P	**Pn**	**03 10 01.3**	**-0.3**
baz=218							
HWA				*e*S	**Sn**	**03 10 18.6**	**+0.1**
baz=218							
IRIF	**Iriomote-Funau**	**1.17**	**109**	P	**Pn**	**03 10 01.9**	**-0.3**
IRIF				*e*S	**Sn**	**03 10 20.1**	**+0.6**
NCU	**National Centr**	**1.23**	**281**	P	**Pn**	**03 10 02.7**	**-0.1**
baz=280							
NCU				*e*S	**Sn**	**03 10 21.0**	**+0.4**
baz=280							
WHF	**Hehuan Shan**	**1.28**	**243**	*e*P	**Pn**	**03 10 03.6**	**+0.3**
baz=241							
WHF				*e*S	**Sn**	**03 10 22.1**	**+0.5**
baz=241							
TWT	**Tachien**	**1.31**	**249**	*i* P	**Pn**	**03 10 04.4**	**+0.7**
baz=247							
TWT				*e*S	**Sn**	**03 10 23.0**	**+0.8**
baz=247							
ESL	**Shilin**	**1.34**	**227**	*e*P	**Pn**	**03 10 03.2**	**-1.0**
baz=233							
ESL				*e*S	**Sn**	**03 10 21.7**	**-1.3**
baz=233							
HATJ	**Hateruma jima**	**1.35**	**119**	P	**Pn**	**03 10 04.8**	**+0.6**
HATJ				*e*S	**Sn**	**03 10 24.2**	**+1.1**
NSTT	**Nanjuang**	**1.38**	**266**	*e*P	**Pn**	**03 10 04.5**	**0.0**
baz=264							
NSTT				*e*S	**Sn**	**03 10 23.3**	**-0.4**
baz=264							
HSN	**Hsinchu**	**1.41**	**273**	*e*P	**Pn**	**03 10 04.2**	**-0.6**
baz=265							
JKRS	**Kuro-shima**	**1.45**	**110**	P	**Pn**	**03 10 05.5**	**+0.2**
JKRS				*e*S	**Sn**	**03 10 25.8**	**+0.7**
JIJ	**Ishigaki jima**	**1.53**	**104**	P	**Pn**	**03 10 05.8**	**-0.5**
JIJ				*e*S	**Sn**	**03 10 26.3**	**-0.5**
NSY	**Sanyi**	**1.63**	**259**	*e*P	**Pn**	**03 10 07.8**	**+0.3**
baz=257							
NSY				*e*S	**Sn**	**03 10 29.2**	**+0.2**
baz=257							
TWQ1	**Liyutan**	**1.63**	**257**	*e*P	**Pn**	**03 10 07.5**	**-0.1**
baz=255							
TWQ1				*e*S	**Sn**	**03 10 28.8**	**-0.3**
baz=255							
EHY	**Hungye**	**1.64**	**222**	*e*P	**Pn**	**03 10 06.5**	**-1.2**
baz=227							
EHY				*e*S	**Sn**	**03 10 27.7**	**-1.5**
baz=227							
SMLT	**Sun Moon Lake**	**1.70**	**241**	P	**Pn**	**03 10 09.2**	**+0.8**
baz=236							
SMLT				*e*S	**Sn**	**03 10 31.7**	**+1.1**
baz=236							
SSLB	**Suanglung**	**1.71**	**237**	*e*Pn	**Pn**	**03 10 08.3**	**-0.2**
SSLB				*e*S	**Sn**	**03 10 32.5**	**+1.7**
TYC	**Yuchr**	**1.72**	**242**	P	**Pn**	**03 10 09.4**	**+0.7**
baz=238							
TYC				*e*S	**Sn**	**03 10 31.9**	**+0.8**
baz=238							
YULB	**Yu-li**	**1.74**	**220**	*e*Pn	**Pn**	**03 10 07.4**	**-1.4**
YULB				*e*S	**Sn**	**03 10 29.6**	**-1.8**
TWF1	**Yuli**	**1.77**	**219**	*e*P	**Pn**	**03 10 08.1**	**-1.2**
baz=224							
TWF1				*e*S	**Sn**	**03 10 30.8**	**-1.3**
baz=224							
TCU	**Taichung**	**1.77**	**251**	*e*P	**Pn**	**03 10 09.7**	**+0.4**
baz=249							
TCU				*e*S	**Sn**	**03 10 32.2**	**0.0**
baz=249							
YUS	**Yu-Shan**	**1.89**	**229**	*e*P	**Pn**	**03 10 11.4**	**+0.7**
baz=222							
YUS				*e*S	**Sn**	**03 10 35.4**	**+0.6**
baz=222							
CHKT	**Chengkung**	**1.94**	**213**	*e*P	**Pn**	**03 10 10.1**	**-1.3**
baz=206							
CHKT				*e*S	**Sn**	**03 10 34.0**	**-1.8**
baz=206							
ALS	**Alishan**	**1.98**	**232**	*e*P	**Pn**	**03 10 12.7**	**+0.8**
baz=226							
ALS				*e*S	**Sn**	**03 10 37.9**	**+1.1**
baz=226							
JTJ	**Tarama**	**1.99**	**92**	P	**Pn**	**03 10 12.2**	**+0.1**
JTJ				*e*S	**Sn**	**03 10 37.0**	**-0.1**
CHN5	**Tsauling**	**2.02**	**236**	P	**Pn**	**03 10 13.0**	**+0.5**
baz=243							
CHN5				S	**Sn**	**03 10 38.4**	**+0.5**
baz=243							
ELDTW	**Lidau**	**2.06**	**222**	*e*P	**Pn**	**03 10 13.4**	**+0.4**
baz=220							
ELDTW				*e*S	**Sn**	**03 10 37.6**	**-1.0**
baz=220							
WGK	**Gukeng**	**2.06**	**240**	*e*P	**Pn**	**03 10 13.9**	**+0.9**
baz=248							
CHN4	**Tsaushan**	**2.23**	**232**	*e*P	**Pn**	**03 10 15.7**	**+0.5**
baz=231							
CHN4				S	**Sn**	**03 10 43.0**	**+0.4**
baz=231							
TPUB	**Ta-pu**	**2.24**	**231**	*e*Pn	**Pn**	**03 10 15.0**	**-0.3**
TPUB				*e*S	**Sn**	**03 10 43.0**	**+0.3**
STYT	**Tauyuan**	**2.24**	**226**	*e*P	**Pn**	**03 10 15.6**	**+0.3**
baz=225							
STYT				*e*S	**Sn**	**03 10 43.6**	**+0.8**
baz=225							
WTP	**Ta-pu**	**2.28**	**230**	P	**Pn**	**03 10 16.4**	**+0.6**
baz=239							
WTP				*e*S	**Sn**	**03 10 44.1**	**+0.3**
baz=239							
TWG	**Pinlang**	**2.32**	**215**	*e*Pn	**Pn**	**03 10 15.0**	**-1.2**
TWG	**Pinlang**	**2.32**	**215**	*e*P	**Pn**	**03 10 14.4**	**-1.8**
baz=214							
TWG				*e*S	**Sn**	**03 10 43.4**	**-1.1**
baz=214							
TWK	**Hsinying**	**2.36**	**232**	*e*P	**Pn**	**03 10 17.6**	**+0.8**
baz=231							
TWK				*e*S	**Sn**	**03 10 45.8**	**+0.3**
baz=231							
CHN1	**Nanshi**	**2.38**	**230**	*e*P	**Pn**	**03 10 17.4**	**+0.3**
baz=229							
CHN1				*e*S	**Sn**	**03 10 46.5**	**+0.4**
baz=229							
SGST	**Jiashian**	**2.41**	**228**	*e*P	**Pn**	**03 10 18.2**	**+0.7**
baz=226							
SGST				*e*S	**Sn**	**03 10 47.1**	**+0.2**
baz=226							
JMJ	**Miyako jima 2**	**2.53**	**88**	*e*S	**Sn**	**03 10 49.6**	**+0.1**
SSD	**Sandimen**	**

HUIG Huatulco 4.01 279 *eP* **Pn 03 19 51.9 +0.5**
HUIG *i* S **Sn 03 20 36.9 -2.9**
VHO Vista Hermosa 4.94 293 *i* P **Pn 03 20 02.9 -0.2**
VHO *i* S **Sn 03 21 00.4 -0.6**
PNIG Pinotepa 6.03 283 *eP* **Pn 03 20 17.3 0.0**
PNIG *i* S **Sn 03 21 25.8 -0.7**
JTS JuntasAbangare 8.40 124 LR LR 03 23 52.1
comp=Z,66nm,21.7s,baz=62,slow=37
TXAR Lajitas Array 17.75 325 P **Pn 03 22 47.2 +2.1**
0.1nm,0.3s,baz=148,slow=12,SNR=7.5
TKL Tuckaleechee C 21.70 18 P **P 03 23 25.5 0.0**
2.4nm,0.6s,mb3.9,baz=197,slow=13,SNR=8.4
SADO Sadowa 31.46 18 P **P 03 24 52.2 -0.7**
1.2nm,0.4s,mb3.9,baz=244,slow=9.6,SNR=3.6
NVAR Mina Array Bea 32.79 320 P **P 03 25 08.7 +4.1**
1.0nm,0.8s,mb3.4,baz=130,slow=9.3,SNR=4.9
SIV San Ignacio 43.48 134 P **P 03 26 33.9 -0.2**
0.9nm,0.9s,mb3.2,baz=282,slow=11,SNR=5.1
YKA Yellowknife Ar 49.91 347 P **P 03 27 24.5 +1.2**
0.8nm,0.6s,mb3.2,baz=148,slow=7.5,SNR=20
EKA Eskdalemuir Ar 77.03 36 P **P 03 30 19.9 -1.3**
0.9nm,0.9s,mb3.4,baz=294,slow=6.3,SNR=5.1

*IDC **05** 03:20:25.8±0.7,34°.25N×74°.00E,h0km,mb4.1/18,*
mb1 4.3/23,mb1mx4.1/33,mbtmp4.1/23,ML4.3/4,MS2.9/2,
Ms1 2.9/2,ms1mx2.4/37,Error ellipse: s-maj=17.7km
s-min=13.4km az=39.0
*ISCJB **05** 03:20:29.2±0.5,34°.27N±0°.03×74°.23E±0°.04,h40km±6km,*
mb4.0/20,Error ellipse: s-maj=5.8km s-min=3.8km
az=153.6
*NEIC **05** 03:20:31.0±0.9,34°.20N×74°.04E,h35km,mb3.9/3,Error*
ellipse: s-maj=14.2km s-min=10.2km az=147.0
*NDI **05** 03:20:32.4±2.5,34°.23N×73°.99E,h35km,ML4.0,*
mb3.9(NEIC)
*NNC **05** 03:20:35.4±2.8,34°.94N×73°.44E,h0km,mb4.0,mpv4.4,*
Error ellipse: s-maj=33.5km s-min=21.4km az=65.0
*BJI **05** 03:20:36.9,34°.66N×74°.75E,h35km,mB4.4/1,mb3.9/2,*
ML3.8/4
ISC 05 03:20:31.4±0.4,34°.28N±0°.02×74°.18E±0°.04,h41km±5km,
n83,σ1§40/100,mb4.0/20,9C-5D,Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**0.58**	**108**	*eS*		**Pn**		**03 20 39.5**	**-3.7**
CHCP	**Chirah Chowk**	**0.98**	**231**	⇑P		**Pn**		**03 20 45.5**	**-3.2**
JMU	**Jammu**	**1.67**	**159**	*ex*		**Pn**		**03 20 57.0**	**-1.1**
JMU				*eS*		**Sn**		**03 21 20.5**	**+2.2**
CEP	**Cherat**	**1.94**	**257**	⇓P		**Pn**		**03 21 01.1**	**-0.8**
CEP				S		**Sn**		**03 21 27.0**	**+2.0**
THN	**Thein Dam**	**2.24**	**145**	*eP*		**Pn**		**03 21 08.5**	**+2.5**
THN				*ex*		x		03 21 42.1	
SDNR	**Sundarnagar**	**3.63**	**139**	*eP*		**Pn**		**03 21 26.6**	**+1.5**
SDNR				*ex*		x		03 25 56.0	
SMLA	**Simla**	**4.02**	**140**	⇑*P*		**Pn**		**03 21 30.7**	**+0.2**
SMLA				*ex*		x		03 21 40.1	
	comp=E,2μm,0.3s								
SMLA				*ex*		x		03 21 40.9	
	comp=N,3μm,0.3s								
SMLA				*i* x		x		03 22 33.9	
KBL	**Kabul**	**4.26**	**275**	*e*Pn		**Pn**		**03 21 34.6**	**+0.9**
KBL				*e*Sn		**Sn**		**03 22 20.5**	**-1.6**
DDI	**Dehra Dun**	**5.13**	**139**	*eP*		**Pn**		**03 21 48.8**	**+3.1**
KSH	**Kashi**	**5.42**	**15**	P		**Pn**		**03 21 48.9**	**-0.7**
KSH				S		**Sn**		**03 22 43.0**	**-7.7**
KSH				smax					
	comp=N,170nm,0.3s								
KSH				smax					
	comp=E,110nm,0.4s								
NDI	**New Delhi**	**6.15**	**154**	*eP*		**Pn**		**03 22 02.0**	**+2.3**
NDI				*ex*		**Sn**		**03 23 10.0**	**+1.3**
AYAN	**Aya Nagar**	**6.30**	**156**	*eP*		**Pn**		**03 22 03.0**	**+1.2**
AYAN				*e*S		**Sn**		**03 23 08.8**	**-3.7**
AYAN				AML		AML		03 23 15.1	
	comp=Z,48nm,0.4s								
KHET	**Khetri**	**6.34**	**167**	*eP*		**Pn**		**03 22 02.7**	**+0.4**
KHET				*e*S		**Sn**		**03 23 09.2**	**-4.2**
SONA	**Sohna**	**6.50**	**157**	*eP*		**Pn**		**03 22 06.0**	**+1.5**
SONA				*e*S		**Sn**		**03 23 12.2**	**-5.2**
AJM	**Ajmer**	**7.78**	**177**	*eP*		**Pn**		**03 22 21.4**	**-0.7**
AJM				*e*S		**Sn**		**03 23 42.3**	**-6.7**
AJM				AML		AML		03 23 48.9	
	comp=E,30nm,0.2s								
AJM				AML		AML		03 23 55.2	
	comp=N,49nm,0.6s								
KZA	**Kyzart**	**7.83**	**6**	P		**Pn**		**03 22 25.7**	**+3.0**
	SNR=22								
AML	**Almayashu**	**7.85**	**357**	P		**Pn**		**03 22 25.6**	**+2.7**
	SNR=30								
AML	**Almayashu**	**7.85**	**357**	*e*Pn		**Pn**		**03 22 25.2**	**+2.3**
	comp=N,16nm,0.5s								
AML				*e*Sn		**Sn**		**03 23 45.6**	**-4.8**
AML				*e*Sg		**Sn**		**03 23 54.8**	**+4.4**
UCH	**Uchtor**	**7.94**	**2**	P		**Pn**		**03 22 26.9**	**+2.7**
	SNR=15								
UCH	**Uchtor**	**7.94**	**2**	*e*Pn		**Pn**		**03 22 26.7**	**+2.5**
	comp=N,9.7nm,0.5s								
AAK	**Ala-Archa**	**8.35**	**2**	Pn		**Pn**		**03 22 31.3**	**+1.6**
	comp=N,0.0nm,0.3s,baz=156,slow=5.1,SNR=9.4								
AAK				Sn		**Sn**		**03 24 05.7**	**+3.1**
	comp=N,0.0nm,0.3s,baz=30,slow=20,SNR=3.5								
AAK				LR		LR		03 25 57.5	
	comp=N,86nm,19.6s,baz=304,slow=40								
AAK	**Ala-Archa**	**8.35**	**2**	*e*Pn		**Pn**		**03 22 32.3**	**+2.6**
	comp=N,9.1nm,0.8s								
EKS2	**Erkin-Say**	**8.38**	**358**	P		**Pn**		**03 22 32.8**	**+2.6**
	SNR=14								
EKS2	**Erkin-Say**	**8.38**	**358**	*e*Pn		**Pn**		**03 22 32.4**	**+2.2**
	comp=N,22nm,0.8s								
EKS2				*e*Sg		**Sn**		**03 24 03.1**	**-0.3**
TKM2	**Tokmak 2**	**8.70**	**7**	⇓Pn		**Pn**		**03 22 37.2**	**+2.6**
	comp=N,6.7nm,0.6s								
TKM2				⇑Sn		**Sn**		**03 24 10.3**	**-1.0**
	comp=N,24nm,0.7s								
TKM2	**Tokmak 2**	**8.70**	**7**	P		**Pn**		**03 22 37.8**	**+3.2**
	SNR=20								
TKM2	**Tokmak 2**	**8.70**	**7**	*e*Pn		**Pn**		**03 22 37.0**	**+2.4**
	comp=N,7.0nm,0.4s								
KK31	**Karatay Array**	**9.27**	**343**	⇓Pn		**Pn**		**03 22 42.3**	**0.0**
	comp=N,7.3nm,0.2s,baz=153,slow=12								
KK31				⇓Sn		**Sn**		**03 24 22.0**	**-3.1**
	comp=N,7.0nm,0.4s,baz=146,slow=22								
PYUN	**Piuthan**	**9.73**	**127**	*eP*		**Pn**		**03 22 47.9**	**-0.9**
	comp=N,47nm,0.2s								
KOLN	**Koldanda**	**10.36**	**126**	*eP*		**Pn**		**03 22 56.4**	**-1.0**
	comp=N,36nm,0.3s								
GKN	**Gorkha**	**10.92**	**122**	*eP*		**Pn**		**03 23 04.1**	**-1.0**
	comp=N,91nm,0.3s								
KKN	**Kakani**	**11.50**	**121**	*eP*		**Pn**		**03 23 11.5**	**-1.5**
	comp=N,104nm,0.5s								
PKIN	**Phulchoki**	**11.71**	**122**	*eP*		**Pn**		**03 23 14.6**	**-1.3**
	comp=N,55nm,0.4s								
PKIN	**Phulchoki**	**11.71**	**122**	*eP*		**Pn**		**03 23 14.9**	**-1.0**
	comp=N,64nm,0.4s								
PKI	**Pulchoki**	**11.72**	**122**	*eP*		**Pn**		**03 23 14.4**	**-1.7**
	comp=N,65nm,0.4s								
GUN	**Gumba**	**11.86**	**119**	*eP*		**Pn**		**03 23 16.7**	**-1.2**
	comp=N,108nm,0.3s								
JIRN	**Jiri**	**12.23**	**119**	*eP*		**Pn**		**03 23 21.7**	**-1.3**
	comp=N,191nm,0.3s								
RAMN	**Ramite**	**12.94**	**121**	*eP*		**Pn**		**03 23 30.8**	**-1.9**
	comp=N,78nm,0.4s								
TAPN	**Taplejung**	**13.52**	**117**	*eP*		**Pn**		**03 23 38.6**	**-1.9**
	comp=N,64nm,0.3s								
ODAN	**Odare**	**13.56**	**119**	*eP*		**Pn**		**03 23 39.6**	**-1.6**
	comp=N,126nm,0.6s								
MK31	**Makanchi Array**	**13.93**	**24**	⇑P		**Pn**		**03 23 47.4**	**+1.4**
	comp=N,2.8nm,0.6s								
MK31	**Makanchi Array**	**13.93**	**24**	*e*Pn		**Pn**		**03 23 47.4**	**+1.3**
MKAR	**Makanchi Array**	**13.93**	**24**	Pn		**Pn**		**03 23 46.9**	**+0.9**
	comp=N,0.2nm,0.3s,baz=205,slow=14,SNR=4.1								
LSA	**Lhasa**	**15.10**	**103**	P		**Pn**		**03 24 08.8**	**+7.0**
KURBB	**Kurchatov Arra**	**16.64**	**10**	⇑P		**Pn**		**03 24 19.5**	**-1.9**
	comp=N,0.9nm,0.8s								
KURK	**Kurchatov**	**16.74**	**10**	⇓P		**Pn**		**03 24 20.3**	**-2.4**
	comp=N,9.6nm,0.9s								
KURK	**Kurchatov**	**16.74**	**10**	Pn		**Pn**		**03 24 19.3**	**-3.4**
	comp=N,0.3nm,0.3s,baz=198,slow=11,SNR=15								
KURK				LR		LR		03 31 07.7	
	comp=N,42nm,20.3s,baz=185,slow=38								
KURK	**Kurchatov**	**16.74**	**10**	*eP*		**Pn**		**03 24 20.8**	**-1.9**
	comp=N,7.4nm,0.7s								
SHL	**Shillong**	**17.61**	**115**	*ex*		**Pn**		**03 24 28.0**	**-5.7**
SHL	**Shillong**	**17.61**	**115**	*eP*		**Pn**		**03 24 28.0**	**-5.7**
AB31	**Akbulak array**	**18.30**	**329**	⇑P		**Pn**		**03 24 41.3**	**-0.7**
	comp=N,0.8nm,0.4s								
AB31				⇑S		**S**		**03 27 53.9**	**-15**
	comp=N,1.2nm,0.6s								
ABKAR	**Akbulak array**	**18.30**	**329**	*eP*		**Pn**		**03 24 41.2**	**-0.7**
	comp=N,1.9nm,0.4s								
VOSK	**Vostochnaya**	**18.58**	**354**	⇑P		**Pn**		**03 24 44.7**	**-0.6**
	comp=N,4.5nm,0.7s								
BVA0	**Borovoye Array**	**18.93**	**353**	P		**Pn**		**03 24 49.2**	**-0.4**
	comp=N,0.9nm,0.4s,baz=158,slow=9.9,SNR=38								
BVAR	**Borovoye Array**	**18.93**	**353**	P		**Pn**		**03 24 49.4**	**-0.2**
	comp=N,3.5nm,0.3s,baz=168,slow=10,SNR=33								
BRVK	**Borovoye**	**18.98**	**353**	*eP*		**Pn**		**03 24 49.5**	**-0.6**
	comp=N,6.8nm,0.6s								
AKTK	**Aktyubinsk**	**20.01**	**329**	P		**P**		**03 24 59.3**	**-1.1**
AKTO	**Aktyubinsk**	**20.01**	**329**	⇑P		**P**		**03 25 00.2**	**-0.2**
	comp=N,0.9nm,0.5s								
AKTO	**Aktyubinsk**	**20.01**	**329**	P		**P**		**03 24 59.3**	**-1.1**
	comp=N,1.1nm,0.3s,baz=134,slow=10,SNR=24								
ZAA0	**Zalesovo Array**	**21.05**	**18**	*eP*		**P**		**03 25 11.8**	**+0.2**
ZALV	**Zalesovo Beam**	**21.05**	**18**	P		**P**		**03 25 11.7**	**+0.1**
	comp=N,5.1nm,0.3s,mb4.3,baz=208,slow=9.9,SNR=15								
ZALV				S		**S**		**03 29 00.9**	**-2.6**
	comp=N,0.8nm,0.7s,baz=195,slow=19,SNR=2.7								
GTA	**Gaotai**	**21.11**	**68**	*eP*		**P**		**03 25 14.5**	**+2.1**
GTA				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb3.8								
CMAR	**Chiang Mai Arr**	**27.11**	**119**	P		**P**		**03 26 12.2**	**+1.8**
	comp=Z,2.5nm,0.4s,mb4.0,baz=303,slow=9.4,SNR=9.8								
SONM	**Songino Array**	**27.59**	**51**	P		**P**		**03 26 16.9**	**+2.4**
	comp=Z,2.2nm,0.8s,mb3.9,baz=258,slow=9.2,SNR=6.9								
AKASG	**Malin Array Be**	**36.36**	**311**	P		**P**		**03 27 31.3**	**0.0**
	comp=Z,0.4nm,0.3s,mb3.8,baz=81,slow=7.4,SNR=3.5								
MLR	**Muntele Rosu**	**38.15**	**302**	P		**P**		**03 27 47.0**	**+0.5**
	comp=Z,5.6nm,0.8s,mb4.3,baz=202,slow=4.5,SNR=13								
MLR	**Muntele Rosu**	**38.15**	**302**	P		**P**		**03 27 47.0**	**+0.5**
IDI	**Anoyia**	**40.16**	**286**	P		**P**		**03 28 03.1**	**-0.4**
	comp=Z,11nm,0.9s,mb4.6,baz=43,slow=4.4,SNR=3.4								
FINES	**FINESS Array B**	**40.77**	**327**	P		**P**		**03 28 08.5**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.5,baz=120,slow=7.7,SNR=5.0								
ARCES	**ARCESS Array B**	**44.18**	**338**	P		**P**		**03 28 35.5**	**-0.2**
	comp=Z,3.5nm,0.8s,mb4.1,baz=105,slow=7.6,SNR=7.8								
HFS	**Hagfors**	**46.41**	**323**	P		**P**		**03 28 52.6**	**-0.9**
	comp=Z,2.4nm,0.6s,mb4.3,baz=90,slow=8.9,SNR=11								
NB2	**NORSAR Subarra**	**47.71**	**324**	P		**P**		**03 29 02.7**	**-0.9**
	comp=Z,0.9nm,0.6s,mb4.0,baz=96,slow=7.9								
NOA	**NORSAR Array B**	**47.71**	**324**	P		**P**		**03 29 02.5**	**-1.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=96,slow=7.6,SNR=6.2								
NOA	**NORSAR Array B**	**47.71**	**324**	P		**P**		**03 29 02.5**	**-1.1**
LPG	**La Plagne**	**51.53**	**304**	*eP*		**P**		**03 29 34.3**	**+1.3**
	comp=Z,4.3nm,0.9s,mb4.1								
KEST	**Kesra**	**52.23**	**291**	P		**P**		**03 29 39.0**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=15,slow=6.0,SNR=5.3								
EKA	**Eskdalemuir Ar**	**55.68**	**318**	P		**P**		**03 30 01.9**	**-1.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=87,slow=8.4,SNR=4.4								
PETK	**Petropavlovsk-**	**59.76**	**44**	P		**P**		**03 30 32.0**	**+0.1**
	comp=Z,2.9nm,0.8s,mb4.3,baz=284,slow=8.0,SNR=3.4								
TORD	**Torodi Ar. Bea**	**68.32**	**271**	P		**P**		**03 31 27.1**	**-1.5**
	comp=Z,0.8nm,0.8s,mb3.8,baz=46,slow=5.6,SNR=25								
INK	**Inuvik**	**75.65**	**10**	P		**P**		**03 32 12.1**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=20,slow=7.2,SNR=5.3								
WRA	**Warramunga Arr**	**78.60**	**124**	P		**P**		**03 32 30.2**	**+1.2**
	comp=Z,2.1nm,0.6s,mb4.2,baz=324,slow=5.4,SNR=19								
ASAR	**Alice Springs**	**80.85**	**127**	P		**P**		**03 32 42.4**	**+1.3**
	comp=Z,2.4nm,0.6s,mb4.3,baz=310,slow=5.2,SNR=43								
YKA	**Yellowknife Ar**	**83.31**	**4**	P		**P**		**03 32 54.1**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.8,baz=346,slow=5.3,SNR=12								

*IDC **05** 03:33:25.9±0.6,18°.60N×145°.71E,h156km±5km,mb3.9/17,*
mb1 4.0/21,mb1mx3.9/28,mbtmp3.9/21,Error ellipse:
s-maj=16.8km s-min=8.5km az=93.0
*ISCJB **05** 03:33:27.2±1.0,18°.60N±0°.04×145°.6E±0°.1,h183km±9km,*
mb4.2/27,Error ellipse: s-maj=17.8km s-min=6.1km
az=176.6
*NEIC **05** 03:33:28.8±1.2,18°.58N×145°.65E,h183km±11km,mb4.5/5,*
Error ellipse: s-maj=13.0km s-min=6.9km az=90.0
ISC 05 03:33:27.9±0.9,18°.61N±0°.04×145°.6E±0°.1,h174km±9km,
h156km±2.6km:pP-P,n46,σ0§85/47,mb4.2/27,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.04**	**188**	P		**Pn**		**03 34 41.9**	**-0.4**
	45nm,0.3s,baz=129,slow=6.6,SNR=11								
GUMO				S		**Sn**		**03 35 39.7**	**-0.9**
	79nm,0.3s,baz=338,slow=21,SNR=4.1								
GUMO	**Guam**	**5.04**	**188**	*e*Pn		**Pn**		**03 34 42.7**	**+0.3**
GUMO				*e*S		**Sn**		**03 35 42.3**	**+1.6**
CBIJ	**Chichi jima**	**9.02**	**340**	P		**Pn**		**03 35 33.9**	**-0.7**
	7.0nm,0.3s,baz=239,slow=18,SNR=4.0								
CBIJ				S		**Sn**		**03 37 13.9**	**-1.1**
	16nm,0.3s,baz=288,slow=19,SNR=5.9								
JOW	**Kunigami**	**17.95**	**300**	P		**Pn**		**03 37 26.2**	**-0.5**
	0.6nm,0.3s,baz=117,slow=11,SNR=1.9								
MJAR	**Matsushiro Arr**	**19.02**	**341**	P		**P**		**03 37 37.2**	**+0.8**
	1.3nm,0.3s,baz=168,slow=9.5,SNR=17								
MAJO	**Matsushiro**	**19.02**	**341**	*eP*		**P**		**03 37 37.9**	**+1.4**
	12nm,0.6s								
MAT	**Matsushiro**	**19.02**	**341**	P		**P**		**03 37 38.0**	**+1.6**
KSRS	**Korea Array**	**24.34**	**324**	P		**P**		**03 38 30.6**	**+1.0**
	1.6nm,0.7s,mb3.7,baz=151,slow=9.1,SNR=4.4								
PETK	**Petropavlovsk-**	**35.70**	**13**	P		**P**		**03 40 09.2**	**-0.1**
	1.2nm,0.4s,mb3.9,baz=199,slow=7.5,SNR=6.9								
MTSU	**Mount Surprise**	**36.53**	**182**	*eP*		**P**		**03 40 16.3**	**-0.6**
	12nm,0.5s,mb4.8								
WRAB	**Tennant Creek**	**39.86**	**197**	*eP*		**P**		**03 40 44.8**	**+0.1**
	6.8nm,0.6s,mb4.5								
WB2	**Warramunga Arr**	**39.87**	**197**	*eP*		**P**		**03 40 44.8**	**+0.1**
WRA	**Warramunga Arr**	**39.87**	**197**	P		**P**		**03 40 45.1**	**+0.4**
	5.7nm,0.3s,mb4.6,baz=15,slow=8.3,SNR=56								
WRA				PcP		PcP		03 42 46.1	-1.0
	0.9nm,0.5s,baz=8.8,slow=3.5,SNR=5.3								
FITZ	**Fitzroy Crossi**	**41.42**	**209**	*eP*		**P**		**03 40 58.3**	**+0.8**
	14nm,0.3s,mb5.1								
FITZ	**Fitzroy Crossi**	**41.42**	**209**	*eP*		**P**		**03 40 58.3**	**+0.8**
	7.8nm,0.3s,mb4.8								
ASAR	**Alice Springs**	**43.54**	**196**	P		**P**		**03 41 14.7**	**+0.2**
	2.8nm,0.5s,mb4.2,baz=18,slow=9.1,SNR=46								
ASAR				PcP		PcP		03 42 59.0	-0.2
	0.9nm,0.7s,baz=22,slow=4.1,SNR=4.1								
EIDS	**Eidsvold**	**44.04**	**173**	*eP*		**P**		**03 41 16.5**	**-1.9**
MBWA	**Marble Bar**	**46.95**	**214**	*eP*		**P**		**03 41 42.3**	**+0.9**
STKA	**Stephens Creek**	**50.34**	**184**	*eP*		**P**		**03 42 05.8**	**-1.3**
	2.4nm,0.4s,mb4.2								
STKA	**Stephens Creek**	**50.34**	**184**	P		**P**		**03 42 05.5**	**-1.6**
	2.7nm,0.4s,mb4.2,baz=1,4,slow=7.4,SNR=15								
FORT	**Forrest**	**51.92**	**199**	*eP*		**P**		**03 42 19.2**	**+0.4**
	7.2nm,0.4s,mb4.7								
BBOO	**Buckleboo**	**51.94**	**190**	*eP*		**P**		**03 42 18.7**	**-0.2**
	6.6nm,1.3s,mb4.1								
MEEK	**Meekatharra**	**52.05**	**211**	*eP*		**P**		**03 42 19.9**	**0.0**
	6.5nm,0.7s,mb4.4								
MORW	**Morawa**	**55.33**	**212**	*eP*		**P**		**03 42 44.1**	**+0.4**
ZALV	**Zalesovo Beam**	**58.03**	**323**	P		**P**		**03 43 02.6**	**+0.2**
	0.9nm,0.4s,mb3.9,baz=102,slow=7.4,SNR=6.0								
MKAR	**Makanchi Array**	**58.46**	**314**	P		**P**		**03 43 06.3**	**+0.8**
	1.0nm,0.5s,mb3.9,baz=97,slow=6.4,SNR=10								
MKAR	**Makanchi Array**	**58.46**	**314**	P		**P**		**03 43 06.3**	**+0.8**
KDAK	**Kodiak Island**	**59.48**	**33**	P		**P**		**03 43 12.9**	**+0.6**
	14nm,1.0s,mb4.8,baz=292,slow=5.4,SNR=5.2								
BVAR	**Borovoye Array**	**66.49**	**320**	P		**P**		**03 43 59.0**	**+0.4**
	3.0nm,0.6s,mb4.3,baz=92,slow=7.4,SNR=17								
BVAR				pP		pP		03 44 37.5	-2.2
	1.3nm,0.5s,baz=115,slow=6.5,SNR=2.4								
INK	**Inuvik**	**69.49**	**23**	P		**P**		**03 44 17.7**	**+0.6**
	1.6nm,0.7s,mb3.9,baz=321,slow=3.8,SNR=7.3								
INK				pP		pP		03 44 53.5	-5.0
	1.3nm,0.7s,baz=277,slow=4.4,SNR=1.8								
INK	**Inuvik**	**69.49**	**23**	P		**P**		**03 44 17.7**	**+0.6**
INK				pP		pP		03 44 53.5	-5.0
ABKAR	**Akbulak array**	**73.34**	**317**	*eP*		**P**		**03 44 40.0**	**-0.5**
	1.9nm,0.4s,mb4.2								
YKA	**Yellowknife Ar**	**78.11**	**28**	P		**P**		**03 45 07.5**	**+0.2**
	0.9nm,0.4s,mb3.7,baz=287,slow=5.5,SNR=25								
YKA				pP		pP		03 45 44.9	-4.7
	1.3nm,0.7s,baz=287,slow=5.5,SNR=6.0								
YKA	**Yellowknife Ar**	**78.11**	**28**	P		**P**		**03 45 07.5**	**+0.3**
YKA				pP		pP		03 45 44.9	-4.7
KEV	**Kevo**	**81.99**	**342**	*ep*		**P**		**03 45 26.6**	**-1.4**
	0.9nm,0.4s,mb3.8								
ARCES	**ARCESS Array B**	**82.55**	**342**	P		**P**		**03 45 30.7**	**-0.2**
	2.1nm,0.7s,mb4.0,baz=64,slow=8.2,SNR=15								
NVAR	**Mina Array Bea**	**83.27**	**52**	P		**P**		**03 45 34.8**	**-0.4**
	0.4nm,0.3s,mb3.6,baz=271,slow=5.7,SNR=4.2								
NVAR				pP		pP		03 46 13.7	-4.3
	0.7nm,0.6s,baz=275,slow=6.6,SNR=1.6								
JOF	**Joensuu**	**84.06**	**335**	*ep*		**P**		**03 45 37.4**	**-1.3**
	3.2nm,0.5s,mb4.3								
ELK	**Elko**	**84.75**	**49**	P		**P**		**03 45 43.3**	**+0.6**
	1.0nm,0.6s,mb3.8,baz=266,slow=7.1,SNR=4.1								
HRY	**Holter Researc**	**84.94**	**42**	*eP*		**P**		**03 45 44.3**	**+0.8**
	4.4nm,0.6s,mb4.4								
KAF	**Kangasniemi**	**86.46**	**336**	*ep*		**P**		**03 45 44.5**	**-6.1**
FINES	**FINESS Array B**	**86.93**	**335**	P		**P**		**03 45 51.5**	**-1.4**
	1.3nm,0.3s,mb4.2,baz=59,slow=4.4,SNR=19								
FINES				pP		pP		03 46 30.9	-5.2
	0.9nm,0.4s,baz=72,slow=6.2,SNR=2.1								
PDAR	**Pinedale Array**	**87.95**	**45**	P		**P**		**03 45 58.3**	**+0.1**
	0.5nm,0.3s,mb3.8,baz=184,slow=1.4,SNR=12								
HFS	**Hagfors**	**92.43**	**338**	P		**P**		**03 46 17.2**	**-1.5**
	0.7nm,0.4s,mb4.0,baz=102,slow=4.7,SNR=11								
ULM	**Lac du Bonnet**	**92.72**	**34**	pP		pP		03 47 02.4	-1.3
	1.8nm,0.8s,baz=286,slow=5.2,SNR=4.0								
TORD	**Torodi Ar. Bea**	**132.44**	**309**	PKP		PKPdf		03 52 24.1	+1.6
	0.3nm,0.8s,baz=11,slow=1.6,SNR=5.1								

*IDC **05** 03:46:29.6±1.1,2°.75S×126°.48E,h0km,mb3.7/4,*
mb1 3.9/7,mb1mx3.7/20,mbtmp3.7/7,ML3.6/3,Error
ellipse: s-maj=47.6km s-min=13.7km az=68.0
*DJA **05** 03:46:31.2°.95S×126°.64E,h140km,MLv3.8/6*
*ISCJB **05** 03:46:34.2±0.8,2°.82S±0°.05×126°.17E±0°.05,h46km±11km,*
mb3.7/4,Error ellipse: s-maj=9.3km s-min=8.5km
az=137.7
*NEIC **05** 03:46:35.4±0.6,2°.78S×126°.31E,h35km,mb3.4/1,Error*
ellipse: s-maj=17.1km s-min=9.0km az=61.0
ISC 05 03:46:35.6±0.7,2°.81S±0°.05×126°.24E±0°.06,h37km±11km,
n16,σ0§81/20,mb3.7/4,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.96**	**116**	P		**Pn**		**03 46 52.9**	**+0.3**
AAI	**Ambon**	**2.14**	**114**	P		**Pn**		**03 47 02.0**	**-6.8**
LBMI	**Labuha**	**2.50**	**30**	P		**Pn**		**03 47 13.9**	**0.0**
LBMI				S		**Sn**		**03 47 43.0**	**-0.2**
KDI	**Kendari**	**3.79**	**252**	P		**Pn**		**03 47 33.4**	**+1.9**
KDI				S		**Sn**		**03 48 10.9**	**-4.0**
APSI	**Ampana**	**4.96**	**292**	P		**Pn**		**03 47 47.8**	**+0.1**
	80nm,1.0s,2μm0.3nm								
MRSI	**Marisa**	**5.40**	**307**	P		**Pn**		**03 47 53.4**	**-0.3**
	50nm,1.1s,916nm								
KAPI	**Kappang**	**6.83**	**251**	Pn		**Pn**		**03 48 14.5**	**+

KBL Kabul 8.57 20 *e*P **Pn 04 19 52.1 +0.8**
KBL pmax pmax
comp=Z,12nm,0.7s
KBL Kabul 8.57 20 *e*Pn **Pn 04 19 52.1 +0.8**
comp=Z,12nm,0.7s
ITEG Tejag 8.63 319 *e*Pn **Pn 04 19 51.5 -0.6**
NAZ Nazwa, Dubai 8.96 262 ⇑P **Pn 04 19 58.2 +1.4**
SNR=19
FAQ Al Faqa, Dubai 9.08 261 P **Pn 04 19 59.7 +1.4**
SNR=23
CEP Cherat 9.17 36 P **Pn 04 20 01.0 +1.4**
KHET Khetri 9.33 78 *e*P **Pn 04 20 01.4 -0.4**
KHET *e*S **Sn 04 21 38.8 -8.3**
KHET AML AML 04 21 43.4
comp=N,62nm,0.3s
KHET AML AML 04 21 44.3
comp=E,66nm,0.4s
ASUD Al Ashush, Dub 9.34 261 ⇓P **Pn 04 20 03.0 +1.1**
SNR=66
CHCP Chirah Chowk 9.81 42 P **Pn 04 20 10.4 +2.1**
IBAF Bafgh 10.02 303 *e*Pn **Pn 04 20 11.7 +0.5**
SONA Sohna 10.47 78 *e*P **Pn 04 20 16.0 -1.5**
SONA *e*S **Sn 04 22 07.0 -8.1**
SONA AML AML 04 22 12.4
comp=E,93nm,0.4s
SONA AML AML 04 22 13.4
comp=N,87nm,0.5s
AYAN Aya Nagar 10.54 77 *e*P **Pn 04 20 19.2 +0.8**
NDI New Delhi 10.65 76 *e*P **Pn 04 20 19.0 -0.8**
NDI *e*S **Sn 04 22 12.0 -7.4**
IMEH Mehriz 10.67 300 *e*Pn **Pn 04 20 22.4 +2.3**
THN Thein Dam 10.70 54 *e*P **Pn 04 20 20.5 -0.1**
THN *e*x x 04 22 15.3
IMYA Miami 10.81 336 *e*Pn **Pn 04 20 22.2 +0.2**
SDNR Sundarnagar 11.23 61 *e*P **Pn 04 20 27.6 -0.2**
SDNR *e*S **Sn 04 22 23.6 -10**
SMLA Simla 11.24 63 *i* P **Pn 04 20 25.8 -2.1**
SMLA *i* S **Sn 04 22 25.9 -8.0**
SMLA *e*x x 04 22 28.4
comp=N,1μm,0.3s
SMLA *e*x x 04 22 29.9
comp=E,1μm,0.4s
ISRV Sarvestan 11.28 287 *e*Pn **Pn 04 20 28.6 +0.1**
IPAY Payeh 11.33 332 *e*Pn **Pn 04 20 29.7 +0.6**
BHPL Bhopal 11.34 104 *e*P **Pn 04 20 29.7 +0.4**
BHPL *e*S **Sn 04 22 28.3 -8.1**
BHPL AML AML 04 22 33.9
comp=E,10nm,0.5s
BHPL AML AML 04 22 34.2
comp=N,13nm,0.3s
IPAR Pars 11.44 290 *e*Pn **Pn 04 20 30.2 -0.5**
IAKL Akhelmad 11.56 332 *e*Pn **Pn 04 20 31.9 -0.4**
IKRD Kardeh 11.81 332 *e*Pn **Pn 04 20 30.6 -5.1**
KLP Kalpa 12.25 63 *e*P **Pn 04 20 42.3 +0.5**
KLP *e*S **Sn 04 22 50.0 -8.7**
KLP AML AML 04 22 58.1
comp=E,220nm,0.8s
KLP AML AML 04 22 59.4
comp=N,166nm,0.8s
RBK Rabkut 13.76 232 ⇑P **Pn 04 21 02.0 -0.4**
SNR=7.1
WHFO Wadi Hawf 13.79 234 ⇑P **Pn 04 21 01.7 -1.2**
SNR=5.9
ALBI Allahabad 14.76 91 *e*x x 04 22 04.2
KSH Kashi 15.66 32 *e*P **Pn 04 21 22.2 -5.7**
KSH *e*pP pP 04 21 24.9 -9.2
KSH *e*sP sP 04 21 28.3 -6.8
KSH *e*PP 04 21 32.4
KSH *e*S **Sn 04 24 06.2 -15**
KSH pmax pmax
comp=Z,11nm,0.5s
KSH LR LR
comp=N,800nm,12.3s
KSH LR LR
comp=E,700nm,11.0s
KSH LR LR
comp=Z,290nm,8.4s
PYUN Piuthan 15.66 80 *e*P **Pn 04 21 26.2 -1.9**
comp=Z,46nm,0.4s
QRN Al-Qurain 15.71 282 *e*P **Pn 04 21 26.2 -2.4**
QRN AMb AMB 04 21 27.6
comp=Z,198nm,0.3s
UMR Umm Al-Rimmam 15.96 285 *e*P **Pn 04 21 29.9 -1.9**
UMR AMb AMB 04 21 31.7
comp=Z,473nm,0.5s
RDF Al-Radifah 16.04 283 *e*P **Pn 04 21 30.3 -2.6**
RDF AMb AMB 04 21 33.5
comp=Z,88nm,0.3s
KOLN Koldanda 16.20 81 *e*P **Pn 04 21 33.2 -1.8**
comp=Z,24nm,0.3s
MIB Mutribah 16.31 286 *e*P **Pn 04 21 34.0 -2.4**
MIB AMb AMB 04 21 36.9
comp=Z,120nm,0.5s
AML Almayashu 16.98 21 *e*Pn **Pn 04 21 43.5 -1.3**
comp=Z,20nm,0.6s
GKN Gorkha 17.12 81 *e*P **Pn 04 21 45.0 -1.6**
comp=Z,30nm,0.5s
UCH Uchtor 17.34 23 *e*Pn **Pn 04 21 48.5 -0.9**
comp=Z,26nm,0.9s
UCH *e*S **Sn 04 24 50.6 -12**
EKS2 Erkin-Say 17.48 21 *e*Pn **Pn 04 21 51.1 0.0**
comp=Z,8.2nm,0.9s
KKN Kakani 17.69 81 *e*P **Pn 04 21 53.0 -0.7**
comp=Z,20nm,0.5s
AAK Ala-Archa 17.69 22 *e*P **Pn 04 21 52.5 -1.2**
AAK pmax pmax
comp=Z,4.0nm,1.6s
AAK Ala-Archa 17.69 22 P **Pn 04 21 53.2 -0.5**
comp=Z,0.0nm,0.3s,baz=191,slow=8.9,SNR=6.8
AAK S **Sn 04 25 02.3 -8.7**
comp=Z,0.0nm,0.3s,baz=5.7,slow=18,SNR=4.4
AAK Ala-Archa 17.69 22 *e*Pn **Pn 04 21 53.6 -0.1**
comp=Z,4.2nm,0.5s
AAK *e*S **Sn 04 25 02.1 -8.9**
PKIN Phulchoki 17.79 82 *e*P **Pn 04 21 53.7 -1.3**
comp=Z,33nm,0.5s
PKI Pulchoki 17.80 82 *e*P **Pn 04 21 53.7 -1.5**
comp=Z,39nm,0.5s
GUN Gumba 18.22 81 *e*P **Pn 04 21 59.9 -0.4**
comp=Z,116nm,0.7s
TKM2 Tokmak 2 18.34 24 *e*P **Pn 04 22 01.8 +0.2**
TKM2 pmax pmax
comp=Z,10.0nm,0.9s
TKM2 Tokmak 2 18.34 24 *e*P **Pn 04 22 01.8 +0.2**
comp=Z,9.9nm,0.9s
JIRN Jiri 18.50 82 *e*P **Pn 04 22 03.0 -0.7**
RAMN Ramite 18.89 84 *e*P **Pn 04 22 06.9 -1.6**
comp=Z,58nm,0.6s
ODAN Odare 19.60 84 *e*P **Pn 04 22 17.0 0.0**
comp=Z,51nm,0.7s
TAPN Taplejung 19.86 83 *e*P **Pn 04 22 20.4 +0.3**
comp=Z,29nm,0.6s
GNI Garni 21.94 313 P **P 04 22 44.4 +3.5**
GNI pmax pmax
comp=Z,5.0nm,0.4s
GNI Garni 21.94 313 P **P 04 22 44.4 +3.5**
comp=Z,4.9nm,0.4s,mb4.3,baz=8.3,slow=12,SNR=3.3
LSA Lhasa 22.87 76 *e*P **P 04 22 54.1 +3.2**
LSA pmax pmax
comp=Z,16nm,0.8s,mb4.5
LSA Lhasa 22.87 76 *e*P **P 04 22 54.1 +3.2**
comp=Z,16nm,0.8s,mb4.5
ABKAR Akbulak array 23.10 351 *e*P **P 04 22 53.8 +0.7**
comp=Z,9.2nm,0.5s,mb4.5
SHL Shillong 23.75 86 *e*P **P 04 23 02.0 +2.0**
ZEI Tsey 23.93 318 *e*P **P 04 23 01.6 +0.2**
ZEI pmax pmax
comp=Z,11nm,0.7s,mb4.4
MK31 Makanchi Array 24.23 29 *e*P **P 04 23 04.6 +0.5**
MKAR Makanchi Array 24.23 29 P **P 04 23 04.8 +0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
MKAR MLR MLR
comp=Z,154nm,20.8s
MKAR Makanchi Array 24.23 29 P **P 04 23 04.8 +0.7**
comp=Z,7.8nm,0.7s,mb4.2,baz=212,slow=9.2,SNR=50
MKAR LR LR 04 34 30.6
comp=Z,154nm,20.8s,MS3.5,baz=221,slow=42
MKAR Makanchi Array 24.23 29 P **P 04 23 04.8 +0.7**
MKAR LR LR 04 34 30.6
AKTK Aktyubinsk 24.55 348 P **P 04 23 07.1 0.0**
AKTK LR LR 04 34 04.4
AKTO Aktyubinsk 24.55 348 P **P 04 23 07.1 0.0**
AKTO pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
AKTO MLR MLR
comp=Z,69nm,19.4s,MS3.2
AKTO Aktyubinsk 24.55 348 P **P 04 23 07.1 0.0**
comp=Z,8.1nm,0.8s,mb4.3,baz=162,slow=7.5,SNR=19
AKTO LR LR 04 34 04.4
comp=Z,69nm,19.4s,MS3.2,baz=163,slow=40
WMQ Urumqi 24.94 41 *e*P **P 04 23 12.3 +1.6**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.5
WMQ LR LR
comp=N,130nm,25.0s
WMQ LR LR
comp=E,160nm,19.0s
WMQ LR LR
comp=Z,54nm,19.0s
KIV Kislovodsk 25.34 319 *e*P **P 04 23 16.0 +1.7**
KIV *e*S **S 04 27 38.3 -2.4**
KIV pmax pmax
comp=Z,17nm,0.7s,mb4.7
KIV Kislovodsk 25.34 319 *e*P **P 04 23 17.3 +3.0**
comp=Z,18nm,0.8s,mb4.6
ATD Arta Tunnel 26.00 239 P **P 04 23 23.2 +2.7**
comp=Z,3.3nm,0.3s,mb4.3,baz=100,slow=23,SNR=3.8
KURK Kurchatov 26.18 19 *c i* P **P 04 23 22.6 +0.8**
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.5
KURK Kurchatov 26.18 19 P **P 04 23 20.6 -1.2**
comp=Z,11nm,0.8s,mb4.4,baz=212,slow=8.9,SNR=41
KURK Kurchatov 26.18 19 *e*P **P 04 23 22.7 +0.9**
comp=Z,12nm,0.8s,mb4.5
KURK Kurchatov 26.18 19 ⇓P **P 04 23 24.9 +3.1**
SNR=6.6
KURK ⇓P pP 04 23 24.9 +0.9
SNR=6.6
BVAR Borovoye Array 26.73 7 P **P 04 23 28.1 +1.4**
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR Borovoye Array 26.73 7 P **P 04 23 28.1 +1.4**
comp=Z,13nm,0.7s,mb4.6,baz=186,slow=10,SNR=35
BRVK Borovoye 26.75 6 *d i* P **P 04 23 28.2 +1.3**
BRVK pmax pmax
comp=Z,17nm,0.7s,mb4.7
BRVK Borovoye 26.75 6 *e*P **P 04 23 28.8 +1.8**
comp=Z,18nm,0.8s,mb4.7
BRVK Borovoye 26.75 6 ⇑P **P 04 23 30.7 +3.8**
SNR=8.1
BRVK ⇑P pP 04 23 30.7 +1.6
SNR=8.1
ANN Anapa 28.96 316 *e*P **P 04 23 51.7 +4.9**
ANN pmax pmax
comp=Z,46nm,1.1s,mb5.1
ZAA0 Zalesovo Array 30.92 22 *e*P **P 04 24 04.0 0.0**
ZALV Zalesovo Beam 30.92 22 P **P 04 24 04.2 +0.2**
ZALV pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
ZALV MLR MLR
comp=Z,49nm,19.0s,MS3.2
ZALV Zalesovo Beam 30.92 22 P **P 04 24 04.2 +0.2**
comp=Z,5.6nm,0.5s,mb4.7,baz=225,slow=10,SNR=30
ZALV LR LR 04 39 14.5
comp=Z,49nm,19.0s,MS3.2,baz=271,slow=42
NVS Novosibirsk 31.15 20 *i* P **P 04 24 06.4 +0.3**
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax
comp=E,4.0nm,0.8s
NVS pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CMAR Chiang Mai Arr 31.89 98 P **P 04 24 14.3 +1.3**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,41nm,18.7s
CMAR Chiang Mai Arr 31.89 98 P **P 04 24 14.3 +1.3**
comp=Z,1.2nm,0.3s,mb4.2,baz=287,slow=9.2,SNR=3.5
CMAR LR LR 04 39 32.3
comp=Z,40nm,18.7s,MS3.1,baz=315,slow=41
KMI Kunming 33.51 84 P **P 04 24 32.2 +5.0**
KMI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LZH Lanzhou 33.97 64 *e*P **P 04 24 32.8 +1.8**
LZH pP pP 04 24 36.5 +3.3
LZH sP sP 04 24 37.9 +3.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.8
OBN Obninsk 35.49 331 *e*P **P 04 24 45.4 +1.5**
OBN pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
AKASG Malin Array Be 36.65 321 P **P 04 24 52.3 -1.6**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 36.65 321 P **P 04 24 52.3 -1.6**
comp=Z,1.6nm,0.6s,mb4.0,baz=128,slow=7.1,SNR=6.2
GYA Guiyang 36.76 81 P **P 04 24 58.8 +3.6**
GYA PP PP 04 26 22.6 +3.8
GYA PcP PcP 04 27 23.0 +5.5
GYA S **S 04 30 41.2 +1.7**
GYA ScP ScP 04 31 08.9 +4.1
GYA SS SS 04 33 04.8 -15
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,70nm,4.8s
GYA LR LR
comp=N,320nm,15.8s,MS4.3
GYA LR LR
comp=E,240nm,14.7s,MS4.3
GYA LR LR
comp=Z,280nm,16.2s,MS4.1
KLMR Klimovskoe 38.59 340 *e*P **P 04 25 09.1 -1.0**
KLMR *e* 04 26 35.1
KLMR pmax pmax
comp=Z,16nm,1.2s,mb4.6
HHC Hu-ho-hao-te 40.48 57 *e*P **P 04 25 27.7 +1.5**
HHC pP pP 04 25 32.2 +3.7
HHC sP sP 04 25 34.7 +5.3
HHC PP PP 04 27 03.9 +4.6
HHC PcP PcP 04 27 32.3 +3.4
HHC ScP ScP 04 31 20.2 +1.5
HHC S **S 04 31 33.7 -1.6**
HHC SS SS 04 34 26.2 -8.3
HHC ScS ScS 04 35 31.9 -0.9
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,63nm,5.1s
HHC LR LR
comp=N,140nm,15.7s,MS4.5
HHC LR LR
comp=E,440nm,14.9s,MS4.5
HHC LR LR
comp=Z,81nm,12.3s,MS3.8
JOF Joensuu 42.76 338 *e*P **P 04 25 43.3 -1.3**
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
JOF Joensuu 42.76 338 *e*p **P 04 25 43.3 -1.3**
comp=Z,8.2nm,0.5s,mb4.7
FINES FINESS Array B 43.76 334 P **P 04 25 51.8 -0.9**
FINES pmax pmax
comp=Z,6.0nm,0.5s
FINES FINESS Array B 43.76 334 P **P 04 25 51.8 -0.9**
comp=Z,6.0nm,0.5s,mb4.6,baz=129,slow=8.2,SNR=38
BJI Beijing 43.94 59 P **P 04 25 55.0 +0.6**
BJI pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KAF Kangasniemi 44.06 335 *e*P **P 04 25 54.2 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
KAF Kangasniemi 44.06 335 *e*p **P 04 25 54.2 -0.9**
comp=Z,5.8nm,0.6s,mb4.5
APA Apatity 45.45 343 ⇑*e*P **P 04 26 06.4 +0.3**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.0
APA MLR MLR
comp=Z,200nm,17.0s,MS4.1
GERES GERESS Array B 45.59 313 P **P 04 26 06.9 -0.6**
comp=Z,0.3nm,0.6s,mb3.4,baz=118,slow=7.7,SNR=4.2
CLL Collm 46.50 317 *e*P **P 04 26 18.0 +3.4**
CLL Collm 46.50 317 *e*(P) **P 04 26 17.0 +2.4**
NJ2 Nanjing 46.51 70 *e*P **P 04 26 17.9 +2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
HFS Hagfors 48.55 328 P **P 04 26 29.4 -1.0**
HFS pmax pmax
comp=Z,4.0nm,0.7s
HFS Hagfors 48.55 328 P **P 04 26 29.4 -1.0**
comp=Z,3.6nm,0.7s,mb4.5,baz=106,slow=7.9,SNR=16
KEV Kevo 48.66 343 *e*P **P 04 26 30.2 -0.9**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 48.66 343 *ep* **P 04 26 30.2 -0.9**
comp=Z,0.9nm,0.4s,mb4.2
ARCES ARCESS Array B 48.91 343 P **P 04 26 33.0 0.0**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 48.91 343 P **P 04 26 33.0 -0.1**
comp=Z,2.5nm,0.5s,mb4.5,baz=142,slow=7.9,SNR=37
ARCES ARCESS Array B 48.91 343 P **P 04 26 33.0 -0.1**
NB2 NORSAR Subarra 50.00 329 P **P 04 26 40.5 -1.0**
comp=Z,1.6nm,0.5s,mb4.3,baz=107,slow=7.9
NOA NORSAR Array B 50.00 329 P **P 04 26 40.8 -0.7**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 50.00 329 P **P 04 26 40.8 -0.7**
comp=Z,1.1nm,0.5s,mb4.2,baz=108,slow=7.5,SNR=7.2
KSRS Korea Array 53.23 62 P **P 04 27 05.7 -0.4**
KSRS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KSRS MLR MLR
comp=Z,25nm,18.3s,MS3.3
KSRS Korea Array 53.23 62 P **P 04 27 05.7 -0.3**
comp=Z,2.8nm,1.0s,mb4.2,baz=75,slow=33,SNR=2.9
KSRS LR LR 04 52 54.1
comp=Z,24nm,18.3s,MS3.3,baz=305,slow=40
MDJ Mudanjiang 53.84 53 P **P 04 27 11.2 +0.8**
MDJ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MDJ pmax pmax
comp=Z,35nm,4.5s
SPITS Spitsbergen Ar 56.25 349 P **P 04 27 27.9 +0.6**
SPITS pmax pmax
comp=Z,3.0nm,0.7s
SPITS Spitsbergen Ar 56.25 349 P **P 04 27 27.9 +0.6**
comp=Z,3.2nm,0.7s,mb4.5,baz=128,slow=13,SNR=17
TORD Torodi Ar. Bea 60.91 271 P **P 04 28 00.1 -0.6**
comp=Z,1.2nm,0.9s,mb4.0,baz=59,slow=4.7,SNR=10.0
SEY Seymchan 65.36 30 *e*P **P 04 28 29.8 +0.3**
WRA Warramunga Arr 81.19 117 P **P 04 30 07.5 +3.9**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 81.19 117 P **P 04 30 07.5 +3.9**
comp=Z,0.8nm,1.1s,mb3.6,baz=310,slow=5.0,SNR=2.8
ASAR Alice Springs 82.84 121 P **P 04 30 15.2 +2.9**
comp=Z,0.2nm,0.6s,mb3.3,baz=302,slow=5.3,SNR=3.3
YKA Yellowknife Ar 91.30 0 P **P 04 30 52.5 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 91.30 0 P **P 04 30 52.5 -0.3**
comp=Z,1.2nm,0.7s,mb4.4,baz=352,slow=4.7,SNR=30
YKA Yellowknife Ar 91.30 0 P **P 04 30 52.5 -0.3**
ULM Lac du Bonnet 101.80 348 P Pdif 04 31 40.1 -0.6
comp=Z,0.8nm,0.6s,baz=339,slow=1.4,SNR=3.5

NEIC ***05*** *04:40:11.2, 19°.07N×68°.07W, h7km, MD3.5(RSPR), After RSPR.*

RSPR 05 04:40:11.2, 19°.07N×68°.07W, h7km±25km, MD3.5/3, MD3.5/3, 9C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.09**	**123**	⇑*e*P	Pg	04 40 28.8	-3.3
LSP	**Las Mesas**	**1.29**	**134**	⇑*e*P	Pn	04 40 31.9	-3.7
LSP				*e*S	Sb	04 40 48.3	-4.2
CRPR	**Cabo Rojo, PR**	**1.40**	**139**	⇑*e*P	Pn	04 40 34.6	-2.4
CRPR				*e*S	Sb	04 40 51.7	-3.9
AOPR	**Arecibo Observ**	**1.44**	**120**	⇑*e*P	Pn	04 40 34.2	-3.5
AOPR				*e*S	Sn	04 40 52.6	-4.2
OBIP	**Obispado Ponce**	**1.72**	**126**	*e*S	Sn	04 41 00.2	-3.6
CELP	**Cerrillos**	**1.72**	**125**	⇑*e*P	Pn	04 40 39.4	-2.2
CELP				*e*S	Sn	04 41 00.5	-3.4
SJG	**San Juan**	**2.05**	**117**	⇑*e*P	Pn	04 40 43.4	-2.8
SJG				*e*S	Sn	04 41 08.0	-4.0
CBYP	**Canovanas**	**2.24**	**110**	⇑*e*P	Pn	04 40 45.6	-3.2
CBYP				*e*S	Sn	04 41 13.4	-3.3
HUMP	**Col San Antoni**	**2.30**	**113**	⇑*e*P	Pn	04 40 47.4	-2.1
HUMP				*e*S	Sn	04 41 14.0	-4.0
MTP	**Monte Pirata**	**2.57**	**112**	⇑*e*P	Pn	04 40 50.2	-3.1
MTP				*e*S	Sn	04 41 21.2	-3.7

MEX 05 05:06:44.6±0.5, 15°.78N×95°.58W, h12km±5km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.51**	**269**	*i* P	Pg	05 06 53.4	-1.2
HUIG				*e*S	Sg	05 07 00.8	-0.5
CMIG	**Matias Romero**	**1.46**	**27**	*i* P	Pn	05 07 07.3	-3.6
CMIG				*i* S	Sn	05 07 25.1	-4.8
VHO	**Vista Hermosa**	**1.69**	**319**	*i* P	Pn	05 07 10.8	-3.2
VHO				*i* S	Sn	05 07 31.2	-4.4
PCIG		**2.28**	**92**	*i* P	Pn	05 07 19.3	-2.8
PCIG				*i* S	Sn	05 07 45.3	-4.7
PNIG	**Pinotepa**	**2.52**	**284**	*i* P	Pn	05 07 21.7	-3.7
PNIG				*i* S	Sn	05 07 51.3	-4.8
TGIG		**2.56**	**67**	*i* P	Pn	05 07 23.3	-2.7
TGIG				*e*S	Sn	05 07 52.3	-4.8
TPIG	**Tehuac#an**	**3.13**	**327**	*i* P	Pn	05 07 31.3	-2.4
TPIG				*i* S	Sn	05 08 07.9	-3.1
CCIG	**Comitan**	**3.35**	**81**	*i* P	Pn	05 07 33.8	-3.0
CCIG				*i* S	Sn	05 08 13.2	-3.3

ISCJB ***05*** *05:09:25.4±2.0, 25°.1N±0°.1×123°.53E±0°.07, h24km±14km, mb3.5/5, Error ellipse: s-maj=19.5km s-min=9.8km az=9.2*
JMA ***05*** *05:09:25.5±0.3, 25°.09N×123°.53E, h28km, M3.0*
IDC ***05*** *05:09:25.4±1.2, 24°.76N×122°.99E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/23, mbtmp3.6/5, MS2.7/1, Ms1 2.7/1, ms1mx1.9/27, Error ellipse: s-maj=46.8km s-min=24.6km az=81.0*

ISC 05 05:09:24.9±1.7, 25°.08N±0°.09×123°.55E±0°.06, h7km±11km, n12, σ0°.41/15, mb3.5/5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.76**	**168**	P	**Pg**	**05 09 39.8**	**+0.3**
YOJ	**Yonaguni jima**	**0.79**	**219**	P	**Pg**	**05 09 40.1**	**0.0**
YOJ				*e*S	**Sg**	**05 09 50.6**	**+0.3**
JIJ	**Ishigaki jima**	**0.90**	**143**	P	**Pg**	**05 09 41.7**	**-0.4**
JIJ				*e*S	**Sg**	**05 09 54.7**	**+1.0**
JKRS	**Kuro-shima**	**0.94**	**154**	P	**Pg**	**05 09 42.9**	**0.0**
JKRS				*e*S	**Sg**	**05 09 55.2**	**+0.1**
HATJ	**Hateruma jima**	**1.05**	**167**	P	**Pg**	**05 09 44.6**	**-0.4**
HATJ				*e*S	**Sg**	**05 09 57.7**	**-0.9**
JTJ	**Tarama**	**1.13**	**113**	P	**Pg**	**05 09 46.5**	**-0.2**
KSRS	**Korea Array**	**12.88**	**16**	LR	LR	05 17 05.0	
	comp=Z,37nm,21.8s,baz=157,slow=34						
PETK	**Petropavlovsk-**	**37.93**	**33**	P	**P**	**05 16 48.0**	**+5.3**
	0.7nm,0.4s,mb3.8,baz=270,slow=5.7,SNR=4.3						
MKAR	**Makanchi Array**	**39.23**	**314**	P	**P**	**05 16 53.8**	**+0.1**
	0.6nm,0.7s,mb3.4,baz=106,slow=8.9,SNR=5.1						
WRA	**Warramunga Arr**	**45.97**	**166**	P	**P**	**05 17 48.8**	**0.0**
	0.4nm,0.3s,mb3.8,baz=348,slow=8.6,SNR=4.6						
ASAR	**Alice Springs**	**49.49**	**167**	P	**P**	**05 18 15.9**	**-0.1**
	0.3nm,0.6s,mb3.5,baz=355,slow=12,SNR=4.6						
YKA	**Yellowknife Ar**	**81.30**	**24**	P	**P**	**05 21 47.2**	**+5.6**
	0.3nm,0.9s,mb3.2,baz=322,slow=5.7,SNR=3.6						

ISCJB ***05*** *05:27:29.2±0.7, 17°.61N±0°.02×122°.68E±0°.04, h23km±5km, mb4.5/49, MS3.7/19, Error ellipse: s-maj=6.0km s-min=4.0km az=7.9*
MAN ***05*** *05:27:30, 17°.58N×122°.45E, h4km, mb4.9, ML3.9, MS3.9*
MOS ***05*** *05:27:30.1±1.1, 17°.53N×122°.59E, h33km, mb4.9/18, Error ellipse: s-maj=13.9km s-min=6.7km az=111.0*
BJI ***05*** *05:27:30.9, 17°.66N×122°.72E, h32km, mB4.7/19, mb4.6/24, Ms4.0/16, Ms7 3.8/16*
IDC ***05*** *05:27:32.7±2.5, 17°.51N×122°.61E, h41km±24km, mb4.0/23, mb1 4.2/25, mb1mx4.2/28, mbtmp4.1/25, ML4.4/2, MS3.7/12, Ms1 3.7/12, ms1mx3.4/34, Error ellipse: s-maj=18.5km s-min=11.1km az=76.0*
NEIC ***05*** *05:27:32.7±0.6, 17°.50N×122°.64E, h42km±5km, mb4.8/14, Error ellipse: s-maj=8.0km s-min=4.5km az=86.0*

ISC 05 05:27:29.7±0.8, 17°.60N±0°.02×122°.61E±0°.04, h13km±4km, n117, σ1°.22/129, mb4.5/49, MS3.7/18, 7C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.56**	**198**	*eP*	**Pg**	**05 27 41.5**	**+0.8**
PALP				*eS*	**Sg**	**05 27 52.3**	**+4.2**
CVP	**Callao Caves**	**0.76**	**278**	⇓*eP*	**Pg**	**05 27 43.0**	**-1.4**
CVP				*eS*	**Sg**	**05 27 53.4**	**-1.0**
SGCP	**Mt. Cagua**	**0.83**	**320**	*eP*	**Pg**	**05 27 45.9**	**0.0**
SGCP				*eS*	**Sg**	**05 27 54.4**	**-2.4**
CAUP	**Cauayan**	**0.99**	**229**	*eP*	**Pb**	**05 27 48.7**	**-0.1**
APYP	**Conner**	**1.33**	**282**	*eP*	**Pn**	**05 27 52.7**	**-1.2**
APYP				*eS*	**Sb**	**05 28 08.1**	**-3.4**
ABRA	**Dolores**	**1.81**	**272**	*eP*	**Pn**	**05 28 00.5**	**-0.1**
ABRA				*eS*	**Sn**	**05 28 23.1**	**-0.3**
BALP	**Baler**	**2.10**	**208**	*eP*	**Pn**	**05 28 05.3**	**+0.8**
BALP				*eS*	**Sn**	**05 28 31.6**	**+1.2**
BCPH	**Baguio City Da**	**2.29**	**238**	⇑*iP*	**Pn**	**05 28 07.9**	**+0.7**
BCPH				*i* S	**Sn**	**05 28 38.3**	**+3.1**
BOLP	**Bolinao**	**2.85**	**245**	*eP*	**Pn**	**05 28 16.5**	**+1.6**
BOLP				*eS*	**Sn**	**05 28 50.1**	**+1.0**
BBP	**Basco**	**2.89**	**348**	*eP*	**Pn**	**05 28 14.8**	**-0.7**
POLP	**Polilio Island**	**2.93**	**193**	*eP*	**Pn**	**05 28 06.5**	**-9.4**
SCZP	**Santa Cruz**	**3.16**	**235**	*eP*	**Pn**	**05 28 20.9**	**+1.7**
SCZP				*eS*	**Sn**	**05 29 04.9**	**+8.2**
GQP	**Guinayangan**	**3.68**	**182**	*eP*	**Pn**	**05 28 25.4**	**-0.8**
TGY	**Tagaytay City**	**3.83**	**205**	P	**Pn**	**05 28 28.6**	**+0.2**
	76nm,0.3s,baz=171,slow=8.2,SNR=4.0						
BOAC	**Boac**	**4.18**	**190**	*eP*	**Pn**	**05 28 33.5**	**+0.2**
LUBP	**Lubang**	**4.47**	**211**	*eP*	**Pn**	**05 28 41.0**	**+3.9**
SJMP	**San Jose**	**5.31**	**196**	*eP*	**Pn**	**05 28 52.0**	**+3.3**
TWG	**Pinlang**	**5.39**	**345**	*ePn*	**Pn**	**05 28 51.8**	**+2.0**
	95nm,0.8s						
TWG				*eSn*	**Sn**	**05 29 55.5**	**+3.7**
YULB	**Yu-li**	**5.89**	**348**	*ePn*	**Pn**	**05 28 58.0**	**+1.2**
	60nm,0.7s						
YULB				*eSn*	**Sn**	**05 30 09.5**	**+5.3**
TPUB	**Ta-pu**	**5.97**	**342**	*ePn*	**Pn**	**05 29 01.4**	**+3.6**
	53nm,0.6s						
NACB	**Ninganchiao**	**6.61**	**352**	*ePn*	**Pn**	**05 29 07.9**	**+1.3**
	46nm,0.8s						
YHNB	**Yeheng**	**7.13**	**351**	*ePn*	**Pn**	**05 29 16.0**	**+2.3**
	85nm,0.8s						
YHNB				*eSn*	**Sn**	**05 30 29.6**	**-5.0**
JOW	**Kunigami**	**10.58**	**29**	P	**Pn**	**05 30 02.2**	**+1.2**
	4.9nm,0.3s,baz=229,slow=5.9,SNR=8.6						
QIZ	**Qiongzhong**	**12.21**	**279**	P	**Pn**	**05 30 26.7**	**+3.3**
QIZ				S	**Sn**	**05 32 47.5**	**+8.1**
QIZ				LR	LR		
	comp=N,240nm,13.4s						
QIZ				LR	LR		
	comp=Z,340nm,12.8s						
NJ2	**Nanjing**	**14.79**	**347**	*eP*	**Pn**	**05 30 58.7**	**+0.2**
NJ2				pP	pP	05 31 06.3	-1.8
NJ2				sP	sP	05 31 10.9	+1.0
NJ2				S	**Sn**	**05 33 41.5**	**-0.8**
NJ2				sS	sS	05 33 54.0	-13
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,180nm,6.9s						
NJ2				LR	LR		
	comp=N,320nm,12.3s						
NJ2				LR	LR		
	comp=E,410nm,11.7s						
NJ2				LR	LR		
	comp=Z,240nm,11.6s						
WHN	**Wuhan**	**14.92**	**331**	⇓P	**Pn**	**05 31 07.7**	**+7.3**
WHN				*eS*	**Sn**	**05 33 59.0**	**+13**
WHN				pmax	pmax		
	comp=Z,47nm,0.8s						
WHN				LR	LR		
	comp=N,890nm,9.7s						
WHN				LR	LR		
	comp=E,390nm,10.4s						
WHN				LR	LR		
	comp=Z,570nm,12.8s						
GYA	**Guiyang**	**17.20**	**304**	P	**Pn**	**05 31 31.9**	**+2.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ENH	**Enshi**	**17.39**	**319**	*eP*	**Pn**	**05 31 34.8**	**+2.7**
	comp=Z,18nm,0.8s						
KMI	**Kunming**	**19.95**	**295**	P	**Pn**	**05 32 03.5**	**+0.2**
KMI				S	**Sn**	**05 35 44.2**	**-3.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.8s						
KMI				pmax	pmax		
	comp=Z,210nm,10.1s						
KMI				LR	LR		
	comp=N,510nm,13.0s						
KMI				LR	LR		
	comp=E,370nm,11.9s						
KMI				LR	LR		
	comp=Z,430nm,16.1s						
KSM	**Kuching**	**20.07**	**218**	*eP*	**P**	**05 32 02.1**	**-0.9**
	comp=Z,75nm,1.3s						
KSRS	**Korea Array**	**20.32**	**12**	P	**P**	**05 32 05.8**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=196,slow=11,SNR=14						
KSRS				LR	LR	05 41 01.6	
	comp=Z,131nm,18.9s,MS3.3,baz=200,slow=40						
CBIJ	**Chichi jima**	**20.40**	**59**	LR	LR	05 38 10.4	
	comp=Z,88nm,20.9s,MS3.1,baz=147,slow=31						
XAN	**Xi'an**	**20.45**	**326**	P	**P**	**05 32 07.0**	**0.0**
XAN				pP		05 32 18.4	
XAN				LR	LR		
	comp=N,210nm,17.6s,MS3.6						
XAN				LR	LR		
	comp=E,74nm,17.6s,MS3.6						
XAN				LR	LR		
	comp=Z,69nm,17.6s,MS3.1						
CD2	**Chengdu**	**21.66**	**311**	P	**P**	**05 32 20.9**	**+0.8**
CD2				pP		05 32 29.0	
CD2				sP	sP	05 32 31.4	+5.9
CD2				PP		05 32 51.0	
CD2				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.2						
CD2				pmax	pmax		
	comp=Z,260nm,3.6s						
CD2				LR	LR		
	comp=N,410nm,11.6s						
CD2				LR	LR		
	comp=Z,460nm,12.5s,MS4.1						
GUMO	**Guam**	**21.80**	**97**	LR	LR	05 39 04.1	
	comp=Z,90nm,20.0s,MS3.2,baz=315,slow=32						
CMAR	**Chiang Mai Arr**	**22.52**	**276**	P	**P**	**05 32 29.9**	**+0.6**
	comp=Z,5.6nm,0.8s,mb4.0,baz=95,slow=8.4,SNR=18						
CMAR				LR	LR	05 42 36.5	
	comp=Z,95nm,18.9s,MS3.2,baz=31,slow=40						
KAPI	**Kappang**	**22.64**	**187**	P	**P**	**05 32 29.7**	**-1.0**
	comp=Z,14nm,0.8s,mb4.4,baz=30,slow=22,SNR=8.1						
KAPI	**Kappang**	**22.64**	**187**	P	**P**	**05 32 29.7**	**-1.0**
MAT	**Matsushiro**	**23.37**	**33**	P	**P**	**05 32 41.4**	**+3.2**
MJAR	**Matsushiro Arr**	**23.37**	**33**	P	**P**	**05 32 37.9**	**-0.2**
	comp=Z,1.3nm,0.7s,mb3.5,baz=218,slow=7.8,SNR=7.7						
LZH	**Lanzhou**	**24.81**	**322**	*eP*	**P**	**05 32 52.7**	**+1.2**
LZH				pP		05 33 02.7	
LZH				sP	sP	05 33 07.0	+10
LZH				*eS*	**S**	**05 37 00.3**	**-14**
LZH				pmax	pmax		
	comp=Z,56nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,150nm,4.0s						
LZH				LR	LR		
	comp=N,610nm,12.5s						
LZH				LR	LR		
	comp=Z,990nm,13.1s,MS4.5						
HHC	**Hu-ho-hao-te**	**25.05**	**340**	⇓P	**P**	**05 32 55.7**	**+2.0**
HHC				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.6						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
BTO	**Baotou**	**25.37**	**337**	*eP*	**P**	**05 32 51.7**	**-4.9**
PSI	**Prapat**	**27.50**	**240**	LR	LR	05 42 54.5	
	comp=Z,181nm,19.3s,MS3.7,baz=196,slow=34						
GTA	**Gaotai**	**29.40**	**322**	*eP*	**P**	**05 33 34.8**	**+2.0**
GTA				pP	pP	05 33 47.1	+10
GTA				sP	sP	05 33 52.3	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.0						
GTA				pmax	pmax		
	comp=Z,85nm,5.1s						
GTA				LR	LR		
	comp=N,110nm,16.8s,MS3.7						
GTA				LR	LR		
	comp=E,130nm,17.4s,MS3.7						
GTA				LR	LR		
	comp=Z,140nm,14.4s,MS3.7						
KLR	**Kul'dur**	**32.41**	**11**	*eP*	**P**	**05 33 55.6**	**-3.6**
ULN	**Ulaanbaatar**	**32.77**	**341**	*eP*	**P**	**05 34 02.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
ULN	**Ulaanbaatar**	**32.77**	**341**	*eP*	**P**	**05 34 02.8**	**+0.4**
	comp=Z,12nm,1.3s,mb4.7						
SONM	**Songino Array**	**32.95**	**340**	P	**P**	**05 34 04.3**	**+0.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=165,slow=9.7,SNR=7.0						
ZAK	**Zakamensk**	**36.19**	**339**	*eP*	**P**	**05 34 30.9**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
TLY	**Talaya**	**37.18**	**340**	*eP*	**P**	**05 34 38.6**	**-1.7**
TLY				*e*		05 34 47.3	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,110nm,17.0s,MS3.7						
TLY	**Talaya**	**37.18**	**340**	*eP*	**P**	**05 34 40.5**	**+0.2**
	comp=Z,5.9nm,0.8s,mb4.5						
MOY	**Mondy**	**38.06**	**338**	*eP*	**P**	**05 34 48.0**	**+0.2**
WRAB	**Tennant Creek**	**39.04**	**162**	*eP*	**P**	**05 34 54.5**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**39.04**	**162**	*eP*	**P**	**05 34 54.5**	**-1.8**
	comp=Z,36nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**39.04**	**162**	P	**P**	**05 34 54.4**	**-2.0**
	comp=Z,26nm,0.9s,mb4.9,baz=343,slow=9.3,SNR=58						
WRA				PcP	PcP	05 37 05.0	-1.5
	comp=Z,1.3nm,0.8s,baz=346,slow=3.9,SNR=4.2						
WB2	**Warramunga Arr**	**39.05**	**162**	*eP*	**P**	**05 34 54.8**	**-1.7**
WB2				*e*		05 35 04.2	
BOD	**Bodaibo**	**40.66**	**353**	*eP*	**P**	**05 35 09.8**	**+0.3**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.9						
ASAR	**Alice Springs**	**42.47**	**165**	P	**P**	**05 35 23.4**	**-1.2**
	comp=Z,6.8nm,0.8s,mb4.3,baz=356,slow=7.6,SNR=82						
MK31	**Makanchi Array**	**44.11**	**320**	*eP*	**P**	**05 35 37.7**	**0.0**
MKAR	**Makanchi Array**	**44.11**	**320**	*i* P	**P**	**05 35 37.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MKAR	**Makanchi Array**	**44.11**	**320**	P	**P**	**05 35 37.8**	**+0.1**
	comp=Z,4.2nm,0.4s,mb4.5,baz=117,slow=8.6,SNR=48						
MKAR				PcP	PcP	05 37 21.9	-0.8
	comp=Z,0.6nm,0.7s,baz=134,slow=6.2,SNR=2.1						
MKAR	**Makanchi Array**	**44.11**	**320**	P	**P**	**05 35 37.8**	**+0.1**
MKAR				PcP	PcP	05 37 21.9	-0.8
PETK	**Petropavlovsk-**	**44.74**	**29**	P	**P**	**05 35 43.6**	**+1.0**
	comp=Z,5.5nm,1.0s,mb4.3,baz=225,slow=4.3,SNR=5.5						
PETK				LR	LR	05 53 58.0	
	comp=Z,23nm,18.4s,MS3.1,baz=57,slow=35						
ZALV	**Zalesovo Beam**	**46.53**	**330**	P	**P**	**05 35 55.9**	**-1.0**
	comp=Z,1.3nm,0.4s,mb4.2,baz=116,slow=6.8,SNR=6.6						
ZALV				LR	LR	05 55 44.2	
	comp=Z,21nm,18.9s,MS3.1,baz=60,slow=36						
UCH	**Uchtor**	**47.60**	**312**	*eP*	**P**	**05 36 06.4**	**+1.1**
UCH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
UCH	**Uchtor**	**47.60**	**312**	*eP*	**P**	**05 36 06.4**	**+1.1**
	comp=Z,15nm,1.1s,mb4.9						
AAK	**Ala-Archa**	**47.72**	**312**	*eP*	**P**	**05 36 06.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
AAK	**Ala-Archa**	**47.72**	**312**	P	**P**	**05 36 06.4**	**+0.1**
	comp=Z,0.8nm,0.3s,mb4.2,baz=97,slow=17,SNR=2.0						
NVS	**Novosibirsk**	**47.81**	**330**	*eP*	**P**	**05 36 07.2**	**+0.5**
NVS				*e*		05 37 32.2	
NVS				pmax	pmax		
	comp=Z,21nm,2.6s,mb4.7						
NVS				pmax	pmax		
	comp=N,11nm,2.0s						
KURK	**Kurchatov**	**48.07**	**324**	*c iP*	**P**	**05 36 08.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
KURK	**Kurchatov**	**48.07**	**324**	P	**P**	**05 36 08.6**	**-0.2**
	comp=Z,6.9nm,0.6s,mb4.9,baz=120,slow=7.7,SNR=48						
AML	**Almayashu**	**48.16**	**311**	*eP*	**P**	**05 36 10.7**	**+1.0**
AML				*e*		05 36 21.4	
AML				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
AML	**Almayashu**	**48.16**	**311**	*eP*	**P**	**05 36 10.7**	**+1.0**
	comp=Z,10.0nm,1.1s,mb4.8						
AML				*e*		05 36 21.4	
SEY	**Seymchan**	**49.76**	**17**	⇓*iP*	**P**	**05 36 22.3**	**+0.7**
STKA	**Stephens Creek**	**52.45**	**160**	P	**P**	**05 36 40.0**	**-2.2**
	comp=Z,7.1nm,0.8s,mb4.6,baz=334,slow=8.7,SNR=16						
BVAR	**Borovoye Array**	**53.67**	**324**	P	**P**	**05 36 50.4**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=104,slow=12,SNR=6.5						
BVAR				PcP	PcP	05 37 57.0	-0.2
	comp=Z,1.2nm,0.8s,baz=58,slow=3.6,SNR=2.4						
BRVK	**Borovoye**	**53.74**	**324**	*c iP*	**P**	**05 36 51.2**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BRVK	**Borovoye**	**53.74**	**324**	*eP*	**P**	**05 36 51.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**53.74**	**324**	*eP*	**P**	**05 36 51.5**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.3						
BILL	**Bilibino**	**57.45**	**18**	*eP*	**P**	**05 37 18.1**	**+0.2**
BILL				*e*		05 37 26.8	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BILL	**Bilibino**	**57.45**	**18**	*eP*	**P**	**05 37 18.1**	**+0.2**
	comp=Z,8.8nm,0.8s,mb4.8						
BILL				*e*		05 37 26.8	
ABKAR	**Akbulak array**	**59.07**	**317**	*eP*	**P**	**05 37 29.0**	**-0.6**
	comp=Z,4.0nm,0.4s,mb4.8						
AKTK	**Aktyubinsk**	**60.48**	**318**	P	**P**	**05 37 38.4**	**-0.9**
AKTO	**Aktyubinsk**	**60.48**	**318**	P	**P**	**05 37 38.4**	**-0.9**
	comp=Z,2.6nm,0.5s,mb4.6,baz=110,slow=8.9,SNR=11						
ARU	**Arti**	**61.20**	**325**	*c iP*	**P**	**05 37 42.7**	**-1.3**
ARU						05 38 23.7	
ARU				*e*		05 39 54.0	
ARU				S	**S**	**05 46 02.5**	**-0.8**
ARU				SS	SS	05 49 59.1	-4.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
ZEI	**Tsey**	**70.08**	**310**	P	**P**	**05 38 39.5**	**-2.1**
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
KIV	**Kislovodsk**	**70.83**	**311**	*eP*	**P**	**05 38 46.2**	**0.0**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,44nm,19.0s,MS3.7						
KLMR	**Klimovskoe**	**71.45**	**329**	*eP*	**P**	**05 38 47.0**	**-2.6**
KLMR				*i*		05 41 24.9	
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.8						
BPAW	**Bear Paw Mtn.**	**72.77**	**27**	*eP*	**P**	**05 38 58.4**	**+0.9**
	comp=Z,32nm,1.5s,mb5.0						
BPAW				*e*		05 39 07.6	
OBN	**Obninsk**	**73.51**	**323**	⇑*eP*	**P**	**05 39 02.5**	**+0.4**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
MCK	**McKinley**	**73.71**	**28**	*eP*	**P**	**05 39 03.7**	**+0.7**
MCK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
MCK	**McKinley**	**73.71**	**28**	*eP*	**P**	**05 39 03.7**	**+0.7**
	comp=Z,17nm,1.1s,mb4.9						
RAO	**Raoul Island**	**73.90**	**128**	LR	LR	06 06 05.4	
	comp=Z,206nm,18.1s,MS4.5,baz=32,slow=31						
ANN	**Anapa**	**74.45**	**313**	*eP*	**P**	**05 39 05.2**	**-2.5**
ANN				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.4						
ARCES	**ARCESS Array B**	**76.12**	**339**	P	**P**	**05 39 16.4**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.4,baz=57,slow=14,SNR=4.1						
FINES	**FINESS Array B**	**77.80**	**331**	P	**P**	**05 39 25.1**	**-1.3**
	comp=Z,3.1nm,0.8s,mb4.3,baz=335,slow=4.7,SNR=5.9						
FINES				LR	LR	06 19 45.7	
	comp=Z,62nm,18.8s,MS4.0,baz=160,slow=40						
BRTR	**Keskin Array B**	**78.20**	**308**	*i* P	**P**	**05 39 31.5**	**+2.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRTR	**Keskin Array B**	**78.20**	**308**	P	**P**	**05 39 28.5**	**-0.7**
	comp=Z,0.8nm,1.0s,mb3.6,baz=34,slow=9.2,SNR=4.0						
AKASG	**Malin Array Be**	**78.69**	**320**	*i* P	**P**	**05 39 31.0**	**-0.6**
AKASG	**Malin Array Be**	**78.69**	**320**	P	**P**	**05 39 29.3**	**-2.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=58,slow=7.0,SNR=5.1						
DAG	**Danmarks Havn**	**83.05**	**352**	⇑*iP*	**P**	**05 39 54.0**	**-0.5**
DAG				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
DAG	**Danmarks Havn**	**83.05**	**352**	⇑*iP*	**P**	**05 39 54.0**	**-0.5**
	comp=Z,6.3nm,1.2s,mb4.5						
NB2	**NORSAR Subarra**	**84.66**	**333**	P	**P**	**05 40 01.5**	**-1.4**
	comp=Z,1.3nm,0.7s,mb4.2,baz=64,slow=4.8						
NOA	**NORSAR Array B**	**84.66**	**333**	P	**P**	**05 40 00.5**	**-2.4**
	comp=Z,2.9nm,0.9s,mb4.4,baz=64,slow=5.0,SNR=7.7						
NOA				LR	LR	06 21 36.6	
	comp=Z,68nm,18.4s,MS4.1,baz=190,slow=38						
NOA	**NORSAR Array B**	**84.66**	**333**	P	**P**	**05 40 00.5**	**-2.4**
NOA				LR	LR	06 21 36.6	
RES	**Resolute Bay**	**84.92**	**9**	*eP*	**P**	**05 40 04.2**	**+0.2**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
RES	**Resolute Bay**	**84.92**	**9**	*eP*	**P**	**05 40 04.2**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.4						
KMBO	**Kilima Mbogo**	**85.91**	**268**	P	**P**	**05 40 10.2**	**0.0**
	comp=Z,0.5nm,0.3s,mb4.2,baz=39,slow=7.9,SNR=3.9						
YKA	**Yellowknife Ar**	**88.49**	**23**	P	**P**	**05 40 21.7**	**+0.1**
	comp=Z,0.9nm,0.7s,mb4.1,baz=304,slow=4.3,SNR=22						
YKA				PKKPbc	PKKPbc	05 58 02.1	-3.3
	comp=Z,0.1nm,0.8s,baz=130,slow=2.3,SNR=4.0						
GERES	**GERESS Array B**	**88.77**	**321**	P	**P**	**05 40 24.6**	**+1.3**
	comp=Z,0.2nm,0.3s,mb3.9,baz=119,slow=3.5,SNR=2.7						
GERES				LR	LR	06 25 36.8	
	comp=Z,50nm,19.1s,MS4.0,baz=243,slow=39						
SUMG	**Summit**	**89.16**	**354**	*eP*	**P**	**05 40 24.0**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**89.16**	**354**	*eP*	**P**	**05 40 24.0**	**-0.6**
	comp=Z,11nm,1.0s,mb5.1						
PPT	**Papeete**	**93.18**	**107**	LR	LR	06 20 58.2	
	comp=Z,94nm,18.3s,MS4.3,baz=151,slow=34						
LPG	**La Plagne**	**94.53**	**321**	*eP*	**P**	**05 40 49.2**	**-0.9**
	comp=Z,5.3nm,0.7s,mb4.8						
LPL	**La Plagne**	**94.53**	**321**	*eP*	**P**	**05 40 49.8**	**-0.3**
ROSC	**El Rosal**	**152.12**	**38**	PKP	PKPdf	05 47 18.3	-1.1
	comp=Z,1.3nm,0.7s,baz=115,slow=16,SNR=3.5						
ROSC				PKPbc	PKPbc	05 47 25.7	-0.2
	comp=Z,3.5nm,0.8s,baz=85,slow=16,SNR=5.9						

CASC 05 05:35:08.3±2.4, 13°.18N×89°.07W, h13km±4km, MD3.5, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.44**	**1**	*eP*	Pg	05 35 18.4	+1.3
SNVI	**San Vicente**	**0.49**	**28**	*eP*	Pg	05 35 19.0	+1.1
SNET	**Serv Nac Est T**	**0.53**	**343**	*eP*	Pg	05 35 19.3	+0.6
SNET				*eS*	Sg	05 35 29.5	+3.7
LBRS	**Las Brisas**	**0.56**	**3**	*eP*	Pg	05 35 20.3	+1.0
LBRS				*eS*	Sg	05 35 29.6	+2.9
LFU	**La Fuente**	**0.57**	**356**	*eP*	Pg	05 35 20.3	+0.8
BOQS	**Boqueron**	**0.59**	**340**	*eP*	Pg	05 35 20.5	+0.7
BOQS				*eS*	Sg	05 35 30.8	+3.1
VSM	**San Miguel**	**0.81**	**72**	*eP*	Pg	05 35 23.1	-1.0
VSM				*eS*	Sg	05 35 35.8	+1.0
SBLS	**San Blas**	**0.85**	**321**	*eP*	Pg	05 35 23.8	-1.0
SBLS				*eS*	Sg	05 35 36.9	+1.0
BLLM	**Bellamira**	**0.85**	**72**	*eP*	Pg	05 35 23.3	-1.5
BLLM				*eS*	Sg	05 35 36.9	+0.9
SNJE	**San Jose**	**0.86**	**323**	*eP*	Pg	05 35 23.8	-1.2
SNJE				*eS*	Sg	05 35 36.8	+0.6
RTR	**El Retiro**	**0.91**	**322**	*eP*	Pg	05 35 24.8	-1.1
CAHU	**Cacacuatique**	**1.02**	**55**	*eP*	Pb	05 35 26.0	-1.9
CAHU				*eS*	Sb	05 35 41.0	-0.2
RBDL	**Robledal**	**1.10**	**327**	*eP*	Pb	05 35 27.4	-1.9
RBDL				*eS*	Sb	05 35 42.8	-0.7
CNCH	**Conchagua**	**1.21**	**85**	*eP*	Pn	05 35 27.3	-3.6
CNCH				*eS*	Sb	05 35 44.3	-2.3
MTO2	**Montecristo 2**	**1.25**	**347**	*eP*	Pn	05 35 29.5	-1.9
TGUH	**Tegucigalpa,Un**	**1.96**	**63**	*eP*	Pn	05 35 38.5	-2.7
CRIN	**San Cristobal**	**2.03**	**103**	*eP*	Pn	05 35 44.0	+1.9
CSAN		**2.77**	**111**	*eP*	Pn	05 35 49.8	-2.6

ISCJB ***05*** *05:55:17.2±0.4, 7°.63S±0°.04×119°.34E±0°.04, h276km±4km, mb4.1/12, Error ellipse: s-maj=7.8km s-min=5.2km az=33.6*

NEIC ***05*** *05:55:19.3±1.2, 7°.43S×119°.59E, h285km±11km, mb4.5/2, Error ellipse: s-maj=37.5km s-min=8.2km az=58.0*

IDC ***05*** *05:55:19.6±1.7, 7°.37S×119°.67E, h286km±13km, mb3.4/6, mb1 3.4/9, mb1mx3.3/20, mbtmp3.3/9, Error ellipse: s-maj=50.9km s-min=8.8km az=56.0*

DJA ***05*** *05:55:20, 7°.60S×119°.27E, h223km, MLv4.4/11*

ISC 05 05:55:17.8±0.4, 7°.69S±0°.04×119°.35E±0°.04, h271km±4km, n39, σ1°.08/50, mb4.1/12, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.18**	**155**	P	**Pn**	**05 56 04.3**	**+0.8**
WSI				S	**S**	**05 56 38.5**	**-1.3**
KAPI	**Kappang**	**2.69**	**9**	P	**Pn**	**05 56 08.3**	**-0.1**
	5.6nm,0.3s,baz=184,slow=8.5,SNR=12						
KAPI				S	**S**	**05 56 47.2**	**-1.4**
	baz=301,slow=21,SNR=1.8						
KAPI	**Kappang**	**2.69**	**9**	P	**Pn**	**05 56 03.1**	**-5.3**
KHKI	**Kahang-Kahang**	**3.77**	**259**	P	**Pn**	**05 56 20.3**	**+0.4**
IGBI	**Denpasar**	**4.31**	**255**	P	**Pn**	**05 56 27.3**	**+1.2**
IGBI				S	**S**	**05 57 19.8**	**-0.8**
TTSI	**Tana Toraja**	**4.64**	**6**	P	**Pn**	**05 56 30.7**	**+0.7**
NBBI	**Negara**	**4.73**	**261**	P	**Pn**

ZALV Zalesovo Beam 67.95 339 P P 06 05 46.3 -1.1
1.1nm,0.4s,mb3.9,baz=156,slow=4.4,SNR=8.1
BVAR Borovoye Array 73.31 332 P P 06 06 19.3 -0.5
0.7nm,0.6s,mb3.5,baz=101,slow=1.5,SNR=4.1
TORD Torodi Ar. Bea 118.57 281 PKP PKPdf 06 13 33.1 -1.3
0.2nm,0.4s,baz=28,slow=2.4,SNR=4.9

IDC 05 05:56:03.1±5.8, 21°.99S×175°.59W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.2/4, Error ellipse: s-maj=284.1km s-min=42.1km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.61**	**266**	P	P	06 03 03.5	+0.7
	5.4nm,1.0s,baz=94,slow=13,SNR=4.4						
ASAR	**Alice Springs**	**46.39**	**258**	P	P	06 04 31.8	+0.2
	1.8nm,0.6s,baz=95,slow=7.8,SNR=8.2						
WRA	**Warramunga Arr**	**46.64**	**263**	P	P	06 04 32.4	-1.2
	0.6nm,0.3s,baz=98,slow=6.9,SNR=5.6						
FITZ	**Fitzroy Crossi**	**55.07**	**263**	P	P	06 05 37.2	0.0
	1.4nm,0.5s,baz=75,slow=12,SNR=6.5						
AKASG	**Malin Array Be**	**145.39**	**332**	PKPbc	PKPbc	06 15 42.0	-0.8
	1.3nm,0.4s,baz=40,slow=4.1,SNR=11						
BRTR	**Keskin Array B**	**149.50**	**312**	PKPbc	PKPbc	06 15 54.3	-0.2
	0.5nm,0.6s,baz=129,slow=3.9,SNR=3.0						

DJA 05 06:31:31, 9°.38S×112°.75E, h17km, MLv3.4/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.30**	**32**	P	Pn	06 31 52.2	-2.1
GMJI				S	Sn	06 32 10.6	-0.7
PWJI	**Pagerwojo**	**1.64**	**325**	P	Pn	06 31 57.6	-1.5
PWJI				S	Sn	06 32 18.3	-1.5
SJI	**Sawahan**	**1.90**	**329**	P	Pn	06 32 02.5	-0.2
PCJI	**Pacitan**	**1.95**	**307**	P	Pn	06 32 02.7	-0.6
NBBI	**Negara**	**2.10**	**62**	P	Pn	06 32 06.0	+0.6
ABJI	**Asem Bagus**	**2.15**	**43**	P	Pn	06 32 06.4	+0.3
NGJI	**Ngawi**	**2.37**	**327**	P	Pn	06 32 09.3	+0.2
KMMI	**Kalianget**	**2.61**	**28**	P	Pn	06 32 12.8	+0.4
UGM	**Wanagama**	**2.64**	**303**	P	Pn	06 32 13.8	+0.9
UGM				S	Sn	06 32 45.0	+0.5
SRBI	**Singaraja**	**2.75**	**62**	P	Pn	06 32 13.6	-0.8
KHKI	**Kahang-Kahang**	**3.00**	**71**	P	Pn	06 32 16.4	-1.4

*IDC **05** 06:36:28.3±0.5, 17°.49N×122°.57E, h0km, mb4.3/22, mb1 4.4/23, mb1mx4.4/28, mbtmp4.3/23, ML4.2/1, MS3.3/10, Ms1 3.4/10, ms1mx3.2/26, Error ellipse: s-maj=20.8km s-min=11.0km az=75.0*
*ISCJB **05** 06:36:30.9±0.8, 17°.59N±0°.02×122°.70E±0°.04, h26km±6km, mb4.4/39, MS3.5/14, Error ellipse: s-maj=6.1km s-min=3.8km az=5.3*
*MOS **05** 06:36:31.7±1.2, 17°.47N×122°.55E, h33km, mb4.7/11, Error ellipse: s-maj=15.2km s-min=7.9km az=114.3*
*MAN **05** 06:36:32, 17°.61N×122°.58E, h18km, mb5.0, ML4.0, MS4.1*
*BJI **05** 06:36:32.4, 17°.65N×122°.56E, h20km, mB4.8/9, mb4.5/17, Ms3.8/9, Ms7 3.7/9*
*NEIC **05** 06:36:34.8±0.9, 17°.50N×122°.67E, h47km±9km, mb4.6/8, Error ellipse: s-maj=12.7km s-min=6.7km az=84.0*
ISC 05 06:36:31.1±0.8, 17°.58N±0°.02×122°.64E±0°.03, h14km±5km, n107, σ1°30/114, mb4.4/39, MS3.5/13, 7C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**201**	*e*P	**Pg**	**06 36 42.2**	**+0.3**
CVP	**Callao Caves**	**0.79**	**279**	*e*P	**Pg**	**06 36 44.6**	**-1.7**
CVP				*e*S	**Sg**	**06 36 55.5**	**-1.2**
SGCP	**Mt. Cagua**	**0.87**	**320**	*e*P	**Pg**	**06 36 47.7**	**-0.2**
CAUP	**Cauayan**	**1.00**	**231**	*e*P	**Pb**	**06 36 50.0**	**-0.2**
APYP	**Conner**	**1.36**	**282**	*e*P	**Pn**	**06 36 54.4**	**-1.2**
APYP				*e*S	**Sn**	**06 37 12.4**	**-1.1**
ABRA	**Dolores**	**1.84**	**272**	*e*P	**Pn**	**06 37 02.3**	**+0.1**
ABRA				*e*S	**Sn**	**06 37 20.5**	**-4.8**
BALP	**Baler**	**2.09**	**209**	*e*P	**Pn**	**06 37 06.5**	**+0.8**
BALP				*e*S	**Sn**	**06 37 32.2**	**+0.7**
BCPH	**Baguio City Da**	**2.30**	**239⇓**	*e*P	**Pn**	**06 37 09.2**	**+0.7**
BCPH				*e*S	**Sn**	**06 37 38.3**	**+1.6**
BOLP	**Bolinao**	**2.87**	**246**	*e*P	**Pn**	**06 37 17.9**	**+1.6**
BOLP				*e*S	**Sn**	**06 37 51.5**	**+0.8**
POLP	**Polilio Island**	**2.91**	**193**	*e*P	**Pn**	**06 37 18.4**	**+1.4**
BBP	**Basco**	**2.92**	**348**	*e*P	**Pn**	**06 37 16.8**	**-0.3**
SCZP	**Santa Cruz**	**3.17**	**236**	*e*P	**Pn**	**06 37 22.4**	**+1.9**
SCZP				*e*S	**Sn**	**06 38 02.8**	**+4.7**
GQP	**Guinayangan**	**3.66**	**183**	*e*P	**Pn**	**06 37 28.1**	**+0.8**
GQP				*e*S	**Sn**	**06 38 10.6**	**+0.4**
TGY	**Tagaytay City**	**3.82**	**206**	Pn	**Pn**	**06 37 32.4**	**+2.8**
	221nm,0.3s,baz=68,slow=7.5,SNR=9.5						
TGY				Sn	**Sn**	**06 38 18.0**	**+3.6**
	136nm,0.3s,baz=102,slow=17,SNR=3.3						
BOAC	**Boac**	**4.17**	**191**	*e*P	**Pn**	**06 37 37.8**	**+3.5**
PVCP	**Virac**	**4.22**	**160**	*e*P	**Pn**	**06 37 37.9**	**+2.8**
LUBP	**Lubang**	**4.46**	**211**	*e*P	**Pn**	**06 37 40.6**	**+2.2**
YULB	**Yu-li**	**5.92**	**348**	*e*Pn	**Pn**	**06 37 57.8**	**-0.6**
	53nm,0.8s						
TPUB	**Ta-pu**	**6.00**	**342**	*e*Pn	**Pn**	**06 38 05.5**	**+6.1**
	134nm,1.1s						
SSLB	**Suanglung**	**6.37**	**346**	*e*Pn	**Pn**	**06 38 07.4**	**+2.8**
	61nm,0.6s						
YHNB	**Yeheng**	**7.15**	**351**	*e*Pn	**Pn**	**06 38 18.5**	**+3.2**
	36nm,0.6s						
JOW	**Kunigami**	**10.58**	**29**	Pn	**Pn**	**06 39 03.1**	**+0.8**
	4.0nm,0.3s,baz=181,slow=14,SNR=6.0						
JOW				Sn	**Sn**	**06 40 57.3**	**-3.4**
	2.2nm,0.3s,baz=316,slow=19,SNR=2.7						
JOW				LR	LR	06 42 55.9	
	comp=Z,142nm,18.0s,baz=0.3,slow=36						
QIZ	**Qiongzhong**	**12.24**	**279**	P	**Pn**	**06 39 23.1**	**-1.9**
QIZ				S	**Sn**	**06 41 38.5**	**-2.8**
QIZ				pmax	pmax		
	comp=Z,22nm,1.8s						
QIZ				LR	LR		
	comp=N,270nm,18.4s						
QIZ				LR	LR		
	comp=Z,270nm,15.6s						
NJ2	**Nanjing**	**14.81**	**347**	*e*P	**Pn**	**06 40 00.4**	**+0.3**
NJ2				pP	pP	06 40 07.9	-2.0
NJ2				sP	sP	06 40 12.8	+1.1
NJ2				S	**Sn**	**06 42 46.0**	**+1.9**
NJ2				sS	sS	06 42 58.0	-11
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,220nm,7.2s						
NJ2				LR	LR		
	comp=N,450nm,17.7s						
NJ2				LR	LR		
	comp=E,370nm,16.4s						
NJ2				LR	LR		
	comp=Z,170nm,12.6s						
WHN	**Wuhan**	**14.95**	**331**	⇓P	**Pn**	**06 40 03.4**	**+1.3**
WHN				pP	pP	06 40 09.7	-1.8
WHN				S	**Sn**	**06 42 54.1**	**+6.6**
WHN				LR	LR		
	comp=Z,420nm,12.9s						
GYA	**Guiyang**	**17.23**	**304**	P	**Pn**	**06 40 33.8**	**+2.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**19.98**	**295**	P	Px	06 41 15.6	
KMI				S	**Sn**	**06 44 49.4**	**-0.1**
KMI				pmax	pmax		
	comp=Z,180nm,9.5s						
KMI				LR	LR		
	comp=N,380nm,15.3s						
KMI				LR	LR		
	comp=E,240nm,12.2s						
KMI				LR	LR		
	comp=Z,300nm,14.7s						
KSM	**Kuching**	**20.07**	**218**	*e*P	**P**	**06 41 03.6**	**-0.6**
	comp=Z,51nm,1.1s						
KSRS	**Korea Array**	**20.34**	**12**	P	**P**	**06 41 08.2**	**+1.3**
	comp=Z,2.5nm,0.6s,baz=200,slow=11,SNR=9.5						
KSRS				LR	LR	06 50 03.0	
	comp=Z,93nm,18.4s,MS3.2,baz=358,slow=40						
CBIJ	**Chichi jima**	**20.39**	**59**	LR	LR	06 47 25.3	
	comp=Z,32nm,20.1s,baz=139,slow=32						
XAN	**Xi'an**	**20.48**	**326**	P	**P**	**06 41 09.1**	**+0.5**
XAN				pP		06 41 19.7	
XAN				LR	LR		
	comp=N,170nm,19.6s,MS3.5						
XAN				LR	LR		
	comp=E,55nm,17.8s,MS3.5						
XAN				LR	LR		
	comp=Z,60nm,14.3s,MS3.1						
GUMO Guam		**21.77**	**97**	LR	LR	06 47 57.5	
	comp=Z,58nm,19.2s,MS3.0,baz=325,slow=32						
CMAR Chiang Mai Arr		**22.55**	**276**	P	**P**	**06 41 31.1**	**+0.2**
	comp=Z,4.7nm,0.8s,mb4.0,baz=105,slow=8.2,SNR=15						
CMAR				LR	LR	06 51 31.0	
	comp=Z,99nm,18.5s,MS3.3,baz=85,slow=40						
KAPI Kappang		**22.63**	**187**	P	**P**	**06 41 30.5**	**-1.2**
	comp=Z,8.6nm,0.3s,mb4.6,baz=218,slow=8.5,SNR=7.3						
KAPI				LR	LR	06 49 39.0	
	comp=Z,98nm,21.5s,MS3.2,baz=29,slow=35						
KAPI Kappang		**22.63**	**187**	P	**P**	**06 41 30.5**	**-1.2**
KAPI				LR	LR	06 49 39.0	
MJAR Matsushiro Arr		**23.37**	**33**	P	**P**	**06 41 38.8**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=185,slow=39,SNR=3.0						
LZH Lanzhou		**24.84**	**322**	*e*P	**P**	**06 41 54.0**	**+1.0**
LZH				pP		06 42 04.8	
LZH				sP	sP	06 42 10.2	+11
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,140nm,4.2s						
LZH				LR	LR		
	comp=N,1μm,12.3s						
LZH				LR	LR		
	comp=Z,2μm,14.0s,MS4.7						
PSI Prapat		**27.51**	**240**	P	**P**	**06 42 15.8**	**-1.6**
	comp=Z,3.3nm,0.7s,mb4.1,baz=310,slow=18,SNR=2.6						
PSI				LR	LR	06 52 17.9	
	comp=Z,125nm,18.2s,MS3.5,baz=183,slow=35						
PSI Prapat		**27.51**	**240**	P	**P**	**06 42 15.8**	**-1.6**
PSI				LR	LR	06 52 17.9	
MDJ Mudanjiang		**27.58**	**11**	P	**P**	**06 42 19.4**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,15nm,2.7s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,68nm,3.4s						
GTA Gaotai		**29.43**	**322**	*e*P	**P**	**06 42 38.1**	**+3.8**
GTA				pP	pP	06 42 45.1	+6.6
GTA				sP	sP	06 42 49.2	+8.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
KLR Kul'dur		**32.42**	**11**	*e*P	**P**	**06 42 57.2**	**-3.3**
SONM Songino Array		**32.98**	**340**	P	**P**	**06 43 05.9**	**+0.5**
	comp=Z,1.2nm,0.5s,mb4.1,baz=165,slow=12,SNR=6.0						
FITZ Fitzroy Crossi		**35.58**	**175**	P	**P**	**06 43 26.0**	**-2.3**
	comp=Z,2.4nm,0.8s,mb4.2,baz=349,slow=4.2,SNR=4.3						
ZAK Zakamensk		**36.22**	**339**	*e*P	**P**	**06 43 38.3**	**+4.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
TLY Talaya		**37.21**	**340**	*e*P	**P**	**06 43 41.6**	**-0.2**
TLY				*e*	pP	06 43 46.6	+0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
TLY				MLR	MLR		
	comp=Z,76nm,18.0s,MS3.5						
WRAB Tennant Creek		**39.01**	**162**	*e*P	**P**	**06 43 56.3**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.9						
WRAB Tennant Creek		**39.01**	**162**	*e*P	**P**	**06 43 56.3**	**-1.1**
	comp=Z,29nm,1.1s,mb4.9						
WRA Warramunga Arr		**39.02**	**162**	P	**P**	**06 43 56.0**	**-1.4**
	comp=Z,14nm,0.6s,mb4.8,baz=342,slow=9.2,SNR=81						
WB2 Warramunga Arr		**39.02**	**162**	*e*P	**P**	**06 43 56.3**	**-1.1**
ASAR Alice Springs		**42.44**	**165**	P	**P**	**06 44 25.0**	**-0.7**
	comp=Z,5.0nm,0.7s,mb4.2,baz=356,slow=7.7,SNR=82						
CTA Charters Tower		**44.03**	**147**	P	**P**	**06 44 39.3**	**+0.7**
	comp=Z,5.6nm,0.9s,mb4.3,baz=330,slow=9.4,SNR=3.6						
MKAR Makanchi Array		**44.14**	**320**	P	**P**	**06 44 39.5**	**+0.3**
	comp=Z,3.8nm,0.4s,mb4.5,baz=120,slow=9.3,SNR=48						
MKAR Makanchi Array		**44.14**	**320**	P	**P**	**06 44 39.5**	**+0.3**
PETK Petropavlovsk-		**44.75**	**29**	LR	LR	07 05 14.7	
	comp=Z,23nm,19.0s,MS3.1,baz=14,slow=38						
ZAA0 Zalesovo Array		**46.56**	**330**	*e*P	**P**	**06 44 57.8**	**-0.5**
ZALV Zalesovo Beam		**46.56**	**330**	P	**P**	**06 44 57.6**	**-0.7**
	comp=Z,2.0nm,0.6s,mb4.2,baz=119,slow=8.1,SNR=8.8						
MORW Morawa		**46.81**	**188**	*e*P	**P**	**06 44 57.7**	**-2.7**
UCH Uchtor		**47.63**	**312**	*e*P	**P**	**06 45 08.3**	**+1.5**
UCH				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
UCH Uchtor		**47.63**	**312**	*e*P	**P**	**06 45 08.3**	**+1.5**
	comp=Z,6.5nm,0.9s,mb4.7						
AAK Ala-Archa		**47.76**	**312**	*ce*P	**P**	**06 45 09.4**	**+1.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
AAK Ala-Archa		**47.76**	**312**	P	**P**	**06 45 10.5**	**+2.8**
	comp=Z,1.1nm,0.5s,mb4.2,baz=85,slow=6.6,SNR=6.0						
NVS Novosibirsk		**47.84**	**330**	*e*P	**P**	**06 45 10.2**	**+2.0**
KURK Kurchatov		**48.10**	**324**	*ce*P	**P**	**06 45 09.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
KURK Kurchatov		**48.10**	**324**	P	**P**	**06 45 10.1**	**-0.2**
	comp=Z,7.2nm,0.6s,mb4.9,baz=116,slow=7.8,SNR=35						
KURK Kurchatov		**48.10**	**324**	P	**P**	**06 45 10.1**	**-0.2**
EKS2 Erkin-Say		**48.27**	**312**	*e*P	**P**	**06 45 12.4**	**+0.6**
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
EKS2 Erkin-Say		**48.27**	**312**	*e*P	**P**	**06 45 12.4**	**+0.6**
	comp=Z,2.1nm,0.7s,mb4.3						
KMBL Kambalda		**48.67**	**181**	*e*P	**P**	**06 45 12.6**	**-2.2**
	comp=Z,99nm,0.5s						
SEY Seymchan		**49.77**	**17**	*ce*P	**P**	**06 45 24.2**	**+1.3**
NWAO Narrogin (SRO)		**50.48**	**186**	P	**P**	**06 45 26.3**	**-2.4**
	comp=Z,4.3nm,0.6s,mb4.7,baz=3.1,slow=9.0,SNR=6.1						
NWAO Narrogin (SRO)		**50.48**	**186**	P	**P**	**06 45 26.3**	**-2.4**
BBOO Buckleboo		**51.72**	**166**	*e*P	**P**	**06 45 36.7**	**-1.3**
	comp=Z,8.4nm,0.7s,mb4.8						
STKA Stephens Creek		**52.43**	**160**	*e*P	**P**	**06 45 42.3**	**-0.9**
	comp=Z,3.3nm,0.8s,mb4.3						
STKA Stephens Creek		**52.43**	**160**	P	**P**	**06 45 41.2**	**-2.0**
	comp=Z,4.2nm,0.8s,mb4.4,baz=348,slow=8.5,SNR=9.9						
CMSA Cobar Meteorol		**53.62**	**155**	*e*P	**P**	**06 45 51.9**	**-0.1**
BVAR Borovoye Array		**53.70**	**324**	P	**P**	**06 45 52.3**	**-0.1**
BVAR						06 46 57.7	
BVAR Borovoye Array		**53.70**	**324**	P	**P**	**06 45 52.3**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=122,slow=12,SNR=5.6						
BVAR				PcP	PcP	06 46 57.6	-0.9
	comp=Z,0.5nm,0.4s,baz=117,slow=1.7,SNR=3.6						
BVAR				LR	LR	07 13 20.9	
	comp=Z,38nm,18.6s,MS3.5,slow=41						
BRVK Borovoye		**53.77**	**324**	*ce*P	**P**	**06 45 52.2**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BRVK Borovoye		**53.77**	**324**	*e*P	**P**	**06 45 52.7**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.5						
BILL Biiibino		**57.47**	**18⇑**	*e*P	**P**	**06 46 19.1**	**-0.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.9						
BILL Biiibino		**57.47**	**18**	*e*P	**P**	**06 46 19.6**	**+0.4**
	comp=Z,4.3nm,0.8s,mb4.5						
ABKAR Abkulak array		**59.10**	**317**	*e*P	**P**	**06 46 30.5**	**-0.5**
	comp=Z,4.6nm,0.4s,mb4.9						
ZEI Tsey		**70.11**	**310**	*e*P	**P**	**06 47 42.0**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
KIV Kislovodsk		**70.86**	**311**	*e*P	**P**	**06 47 47.6**	**-0.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
KIV				MLR	MLR		
	comp=Z,27nm,19.0s,MS3.5						
KLMR Klimovskoe		**71.48**	**329**	P	**P**	**06 47 50.2**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
KDAK Kodiak Island		**72.55**	**34**	*i* P	**P**	**06 47 59.8**	**+2.3**
OBN Obninsk		**73.54**	**323⇑**	*e*P	**P**	**06 48 02.0**	**-1.5**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ANN Anapa		**74.48**	**313**	*e*P	**P**	**06 48 05.9**	**-3.3**
ARCES ARCESS Array B		**76.15**	**339**	P	**P**	**06 48 18.2**	**-0.1**
	comp=Z,4.0nm,0.9s,mb4.3,baz=327,slow=13,SNR=3.7						
FINES FINESS Array B		**77.83**	**331**	P	**P**	**06 48 26.9**	**-1.0**
	comp=Z,1.2nm,0.4s,mb4.2,baz=69,slow=6.3,SNR=6.7						
AKASG Malin Array Be		**78.72**	**320**	*ce*P	**P**	**06 48 31.3**	**-1.7**
AKASG Malin Array Be		**78.72**	**320**	P	**P**	**06 48 31.4**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=61,slow=7.8,SNR=4.6						
DAG Danmarks Havn		**83.07**	**352**	*e*P	**P**	**06 48 55.0**	**-0.8**
DAG Danmarks Havn		**83.07**	**352**	*i* P	**P**	**06 48 55.0**	**-0.8**
OJC Ojcow		**84.61**	**321**	*e*P	**P**	**06 49 03.7**	**-0.5**
NB2 NORSAR Subarra		**84.68**	**333**	P	**P**	**06 49 03.0**	**-1.3**
	comp=Z,3.9nm,0.9s,mb4.5,baz=62,slow=5.3						
NOA NORSAR Array B		**84.68**	**333**	P	**P**	**06 49 02.6**	**-1.7**
	comp=Z,2.1nm,0.9s,mb4.3,baz=62,slow=5.1,SNR=5.5						
NOA				LR	LR	07 29 56.6	
	comp=Z,37nm,20.2s,MS3.8,baz=250,slow=38						
RES Resolute Bay		**84.93**	**9**	*e*P	**P**	**06 49 05.8**	**+0.5**
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
RES Resolute Bay		**84.93**	**9**	*e*P	**P**	**06 49 05.8**	**+0.5**
	comp=Z,1.8nm,0.8s,mb4.2						
KMBO Kilima Mbogo		**85.94**	**268**	P	**P**	**06 49 12.3**	**+0.9**
	comp=Z,3.1nm,0.9s,mb4.5,baz=17,slow=4.9,SNR=4.6						
YKA Yellowknife Ar		**88.50**	**23**	P	**P**	**06 49 23.3**	**+0.4**
	comp=Z,0.8nm,0.7s,mb4.1,baz=305,slow=4.4,SNR=21						
YKA				PKKPbc	PKKPbc	07 07 02.8	-3.7
	comp=Z,0.2nm,0.7s,baz=120,slow=2.8,SNR=4.4						
YKA Yellowknife Ar		**88.50**	**23**	P	**P**	**06 49 23.3**	**+0.4**
YKA				PKKPbc	PKKPbc	07 07 02.9	-3.7
GERES GERESS Array B		**88.80**	**321**	P	**P**	**06 49 24.1**	**-0.6**
	comp=Z,0.2nm,0.3s,mb3.9,baz=266,slow=32,SNR=3.6						
TXAR Lajitas Array		**115.41**	**44**	PKP	PKPdf	06 55 13.1	0.0
	comp=Z,0.2nm,0.5s,baz=220,slow=3.0,SNR=3.9						
SDV Santo Domingo		**150.62**	**28**	*e*PKPdf	PKPdf	06 56 18.4	+0.2
SDV				*e*PKPbc	PKPbc	06 56 23.8	+0.1
SDV				*e*PKPab	PKPab	06 56 31.8	+1.5
ROSC El Rosal		**152.12**	**38**	PKPbc	PKPbc	06 56 28.5	+1.3
	comp=Z,2.3nm,0.4s,baz=90,slow=24,SNR=4.8						

GUC 05 06:47:36.0±0.5, 35°.81S×72°.92W, h30km±13km, ML3.5, 4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**1.12**	**69⇓**	*i*P	Pn	06 47 55.7	0.0
TALC				*i* S	Sn	06 48 10.8	+0.7
TALC				AML	AML	06 48 11.6	
	comp=N,4μm,0.1s						
ANTU	**Antumapu**	**2.92**	**41⇓**	*i*P	Pn	06 48 22.1	+1.7
ANTU				*e*S	Sn	06 48 56.9	+2.5
ANTU				AML	AML	06 48 58.2	
	comp=E,110nm,0.4s						
LMEL	**Las Melosas**	**2.97**	**50⇓**	*i*P	Pn	06 48 22.7	+1.7
LMEL				*i* S	Sn	06 48 58.3	+2.7
LMEL				AML	AML	06 49 05.2	
	comp=N,81nm,0.2s						
CLCH	**Cerro Calan**	**3.10**	**40**	*i* P	Pn	06 48 24.4	+1.5
CLCH				*i* S	Sn	06 49 00.9	+1.9
CLCH				AML	AML	06 49 24.3	
	comp=N,104nm,0.7s						
FCH	**Farellones**	**3.29**	**42⇓**	*i*P	Pn	06 48 29.0	+3.6
FCH				*i* S	Sn	06 49 08.2	+4.7
FCH				AML	AML	06 49 11.8	
	comp=N,69nm,0.2s						

DJA 05 06:51:23, 9°.46S×112°.83E, h12km, MLv3.4/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.33**	**27**	P	Pn	06 51 45.8	-1.6
PWJI	**Pagerwojo**	**1.75**	**325**	P	Pn	06 51 51.7	-1.5
PWJI				S	Sn	06 52 15.5	0.0
SJI	**Sawahan**	**2.01**	**328**	P	Pn	06 51 57.9	+1.1
PCJI	**Pacitan**	**2.06**	**307**	P	Pn	06 51 56.7	-0.8
NBBI	**Negara**	**2.07**	**59**	P	Pn	06 51 57.7	+0.1
ABJI	**Asem Bagus**	**2.16**	**40**	P	Pn	06 51 59.1	+0.3
NGJI	**Ngawi**	**2.48**	**327**	P	Pn	06 52 04.6	+1.3
KMMI	**Kalianget**	**2.65**	**25**	P	Pn	06 52 06.0	+0.5
SRBI	**Singaraja**	**2.72**	**60**	P	Pn	06 52 07.3	+0.7
KHKI	**Kahang-Kahang**	**2.95**	**69**	P	Pn	06 52 09.3	-0.4
SMRI	**Semarang**	**3.37**	**315**	P	Pn	06 52 16.1	+0.7

DJA 05 06:55:15, 9°.37S×112°.93E, h19km, MLv3.2/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.20**	**25**	P	Pn	06 55 36.8	0.0
PWJI	**Pagerwojo**	**1.74**	**320**	P	Pn	06 55 43.3	-0.9
PWJI				S	Sn	06 56 08.5	+2.6
ABJI	**Asem Bagus**	**2.03**	**40**	P	Pn	06 55 47.1	-1.1
PCJI	**Pacitan**	**2.09**	**304**	P	Pn	06 55 50.3	+1.3
NGJI	**Ngawi**	**2.46**	**324**	P	Pn	06 55 54.7	+0.5
KMMI	**Kalianget**	**2.52**	**24**	P	Pn	06 55 54.7	-0.3
SRBI	**Singaraja**	**2.59**	**61**	P	Pn	06 55 56.7	+0.8
UGM	**Wanagama**	**2.79**	**301**	P	Pn	06 55 58.9	+0.3
KHKI	**Kahang-Kahang**	**2.83**	**70**	P	Pn	06 56 02.1	+2.9

*ISCJB **05** 06:58:54.9±0.6, 17°.88S±0°.04×70°.14W±0°.07, h115km±6km, mb4.3/12, Error ellipse: s-maj=10.3km s-min=6.9km az=178.5*
*IDC **05** 06:58:54.8±0.7, 17°.89S×70°.16W, h99km±5km, mb4.0/8, mb1 4.0/11, mb1mx3.7/20, mbtmp3.9/11, Error ellipse: s-maj=23.6km s-min=11.1km az=76.0*
*NEIC **05** 06:58:54.2±1.1, 17°.87S×70°.35W, h100km±11km, mb4.4/1, Error ellipse: s-maj=16.0km s-min=11.7km az=72.0*
NEIC Felt [II] at Tacna.
*GUC **05** 06:58:56.3±

comp=N,0.2nm,0.5s,mb3.2,baz=113,slow=8.9,SNR=3.0
ULM Lac du Bonnet 71.54 343 P P 07 10 05.0 0.0
comp=N,1.9nm,0.3s,mb4.4,baz=153,slow=6.3,SNR=13
ULM pP pP 07 10 29.4 -2.8
comp=N,0.7nm,0.4s,baz=190,slow=6.1,SNR=1.7
ULM sP sP 07 10 40.3 -3.6
comp=N,1.2nm,0.7s,baz=108,slow=1.3,SNR=2.0
TORD Torodi Ar. Bea 77.26 72 P P 07 10 38.6 -0.4
comp=N,4.8nm,0.6s,mb4.4,baz=257,slow=5.0,SNR=73
TORD pP pP 07 11 04.8 -1.7
comp=N,2.3nm,1.0s,baz=253,slow=5.3,SNR=2.9
TORD Torodi Ar. Bea 77.26 72 P P 07 10 38.6 -0.4
TORD pP pP 07 11 04.8 -1.7
ESDC Sonseca Array 84.09 45 P P 07 11 15.4 +0.6
comp=N,0.5nm,0.4s,mb3.7,baz=244,slow=5.2,SNR=4.0
YKA Yellowknife Ar 87.41 341 P P 07 11 30.0 -0.7
comp=N,0.7nm,0.6s,mb3.8,baz=133,slow=4.9,SNR=27
YKA pP pP 07 11 56.8 -2.0
comp=N,1.5nm,0.7s,baz=135,slow=4.9,SNR=9.6

*DDA **05** 07:05:38.1, 38°.40N×28°.56E, h6km±2km, Md2.3*
*CSEM **05** 07:05:53.8, 39°.26N×30°.50E, h5km, MD2.7, After ISK*
ISK 05 07:05:53.8, 39°.26N×30°.50E, h5km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.37**	**237**	*e*PG	Pg	07 06 00.7	-0.2
ALT				*e*SG	Sg	07 06 06.8	+1.2
ALT	**Altintas**	**0.37**	**237**	*e*Pg	Pg	07 06 00.7	-0.2
ALT				*e*Sg	Sg	07 06 06.8	+1.1
ESKT	**Eskisehir**	**0.37**	**46**	*e*PG	Pg	07 06 01.3	+0.3
ESKT				*e*SG	Sg	07 06 07.1	+1.2
ESKT	**Eskisehir**	**0.37**	**46**	*e*Pg	Pg	07 06 01.3	+0.3
ESKT				*e*Sg	Sg	07 06 07.1	+1.2
SVRH	**Sivrihisar-ESK**	**0.81**	**76**	*e*PG	Pg	07 06 10.3	+0.9
SVRH	**Sivrihisar-ESK**	**0.81**	**76**	*e*Pg	Pg	07 06 10.3	+0.9
GDZ	**Gediz**	**0.81**	**258**	*i* P	Pg	07 06 07.9	-1.5
GDZ				*i* S	Sg	07 06 21.2	+1.3
GDZ	**Gediz**	**0.81**	**258**	*i* P	Pg	07 06 07.9	-1.5
GDZ				*i* S	Sg	07 06 21.2	+1.3
GPA	**Golpazari**	**1.04**	**352**	*e*PG	Pg	07 06 14.7	+1.0
GPA	**Golpazari**	**1.04**	**352**	*e*Pg	Pg	07 06 14.7	+1.0
KIZT	**Kizilcal**	**1.14**	**109**	*e*PN	Pn	07 06 16.4	+0.1
KIZT	**Kizilcal**	**1.14**	**109**	*e*Pn	Pn	07 06 16.4	+0.1
GULT	**Gulveren**	**1.17**	**0**	*e*PN	Pn	07 06 16.8	-0.1
GULT	**Gulveren**	**1.17**	**0**	*e*Pn	Pn	07 06 16.8	0.0
KHAL	**Karahalli**	**1.19**	**222**	*i* P	Pg	07 06 15.8	-0.8
KHAL				*i* S	Sg	07 06 33.2	+1.2
KHAL	**Karahalli**	**1.19**	**222**	*i* P	Pg	07 06 15.8	-0.8
KHAL				*i* S	Sg	07 06 33.2	+1.2
MDU	**Mudurnu**	**1.32**	**24**	*e*PN	Pn	07 06 19.5	+0.6
MDU	**Mudurnu**	**1.32**	**24**	*e*Pn	Pn	07 06 19.5	+0.6
ULDT	**Uludag**	**1.38**	**310**	*i* P	Pn	07 06 20.7	+1.0
ULDT				*i* S	Sb	07 06 40.5	+2.7
ULDT	**Uludag**	**1.38**	**310**	*i* P	Pn	07 06 20.7	+1.1
ULDT				*i* S	Sb	07 06 40.5	+2.6
YLV	**Yalova**	**1.57**	**327**	*e*PN	Pn	07 06 23.0	+0.7
YLV	**Yalova**	**1.57**	**327**	*e*Pn	Pn	07 06 23.0	+0.7

*IDC **05** 07:24:34.8±1.4, 4°.16S×101°.93E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/21, mbtmp4.0/11, Error ellipse: s-maj=67.3km s-min=16.8km az=53.0*
*ISCJB **05** 07:24:40.3±0.8, 4°.42S±0°.08×101°.95E±0°.07, h68km±7km, mb4.0/12, Error ellipse: s-maj=16.6km s-min=5.7km az=44.4*
*NEIC **05** 07:24:40.2±0.7, 4°.11S×102°.03E, h35km, mb4.1/1, Error ellipse: s-maj=35.6km s-min=9.1km az=53.0*
*DJA **05** 07:24:40, 4°.44S×101°.96E, h28km, MLv4.2/13*
ISC 05 07:24:41.7±0.8, 4°.40S±0°.07×101°.97E±0°.07, h61km±7km, n33, σ1s22/34, mb4.0/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.97**	**40**	P	**Pn**	**07 24 56.9**	**-2.6**
MNAI	**Manna**	**0.99**	**88**	P	**Pn**	**07 24 58.5**	**-1.1**
LHSI	**Lahat**	**1.66**	**70**	P	**Pn**	**07 25 08.8**	**+0.3**
LWLI	**Liwa**	**2.17**	**106**	P	**Pn**	**07 25 18.2**	**+2.6**
MDSI	**Maura Dua**	**2.21**	**92**	P	**Pn**	**07 25 16.6**	**+0.6**
KRJI	**Kerinci**	**2.35**	**348**	P	**Pn**	**07 25 18.4**	**+0.4**
KRJI				S	**Sn**	**07 25 47.1**	**+1.3**
PPSI	**Pulau Pagai**	**2.54**	**310**	P	**Pn**	**07 25 20.9**	**+0.3**
KASI	**Kota Agung**	**2.75**	**114**	P	**Pn**	**07 25 21.1**	**-2.4**
KASI				S	**Sn**	**07 25 55.1**	**-0.5**
KLI	**Kotabumi**	**2.92**	**99**	P	**Pn**	**07 25 27.8**	**+2.1**
PMBI	**Palembang**	**3.16**	**62**	P	**Pn**	**07 25 28.2**	**-0.9**
SDSI	**Sungai Dareh**	**3.49**	**351**	P	**Pn**	**07 25 33.9**	**+0.3**
PDSI	**Padang**	**3.78**	**337**	P	**Pn**	**07 25 37.3**	**-0.3**
SISI	**Saibi**	**4.20**	**317**	P	**Pn**	**07 25 43.3**	**+0.1**
PPI	**Padang Panjang**	**4.22**	**338**	P	**Pn**	**07 25 44.4**	**+0.8**
CGJI	**Cibinong**	**4.31**	**121**	P	**Pn**	**07 25 44.4**	**-0.4**
PPBI	**Pangkal Pinang**	**4.72**	**62**	P	**Pn**	**07 25 51.3**	**+0.9**
BKNI	**Bangkinang**	**4.79**	**349**	P	**Pn**	**07 25 51.8**	**+0.4**
XMIS	**Christmas Isla**	**7.06**	**149**	P	**Pn**	**07 26 20.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**22.91**	**353**	P	**P**	**07 29 38.2**	**-2.4**
	1.0nm,0.4s,mb3.6,baz=186,slow=9.0,SNR=4.2						
WRA	**Warramunga Arr**	**35.10**	**119**	P	**P**	**07 31 31.4**	**+1.8**
	0.2nm,0.3s,mb3.5,baz=301,slow=9.0,SNR=5.3						
ASAR	**Alice Springs**	**36.27**	**125**	P	**P**	**07 31 41.4**	**+1.9**
	0.7nm,1.1s,mb3.5,baz=301,slow=7.4,SNR=4.6						
STKA	**Stephens Creek**	**46.10**	**131**	P	**P**	**07 33 02.4**	**+2.4**
	1.1nm,0.5s,mb4.0,baz=305,slow=9.4,SNR=5.4						
STKA	**Stephens Creek**	**46.10**	**131**	P	**P**	**07 33 02.4**	**+2.4**
SONM	**Songino Array**	**52.16**	**4**	P	**P**	**07 33 44.5**	**-1.5**
	2.3nm,0.7s,mb4.2,baz=180,slow=10,SNR=4.5						
MK31	**Makanchi Array**	**53.87**	**343**	*e*P	**P**	**07 33 58.5**	**-0.1**
MKAR	**Makanchi Array**	**53.87**	**343**	P	**P**	**07 33 58.6**	**+0.1**
	2.7nm,0.5s,mb4.4,baz=154,slow=8.1,SNR=30						
KURK	**Kurchatov**	**58.46**	**343**	P	**P**	**07 34 30.3**	**-0.9**
	0.9nm,0.6s,mb4.0,baz=175,slow=6.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**59.89**	**348**	P	**P**	**07 34 40.5**	**-0.5**
	3.3nm,0.4s,mb4.7,baz=176,slow=5.6,SNR=14						
BVAR	**Borovoye Array**	**63.11**	**339**	P	**P**	**07 35 02.1**	**-0.7**
	0.9nm,0.5s,mb4.1,baz=139,slow=6.3,SNR=5.8						
ABKAR	**Akbulak array**	**64.68**	**331**	*e*P	**P**	**07 35 13.3**	**+0.1**
	1.0nm,0.5s,mb4.1						
BRTR	**Keskin Array B**	**76.38**	**312**	P	**P**	**07 36 25.6**	**+0.9**
	0.7nm,0.7s,mb3.7,baz=138,slow=6.9,SNR=4.0						
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**07 37 30.3**	**-1.1**
	3.8nm,1.0s,mb4.7,baz=78,slow=5.6,SNR=3.7						
TXAR	**Lajitas Array**	**145.30**	**42**	PKPbc	PKPbc	07 44 14.7	+1.5
	2.0nm,0.4s,baz=258,slow=0.8,SNR=44						

NEIC 05 07:37:45.9, 53°.69N×164°.52W, h28km, ML3.5(AEIC), After AEIC., Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKA	**Akutan**	**0.86**	**302**	P	Pn	07 38 02.0	-0.2
AKUT	**Akutan**	**0.87**	**302**	P	Pn	07 38 01.9	-0.3
AKUT				S	Sb	07 38 13.9	+0.5
AKLV	**Akutan Long Va**	**0.97**	**300**	P	Pn	07 38 03.3	-0.4
AKLV				S	Sn	07 38 16.4	-0.1
AKGG	**Akutan Green G**	**1.01**	**301**	P	Pn	07 38 04.0	-0.2
UNV	**Unalaska Valle**	**1.19**	**278**	P	Pn	07 38 05.7	-0.9
FALS	**False Pass**	**1.34**	**28**	P	Pn	07 38 08.2	-0.5
FALS				S	Sn	07 38 26.8	+1.3
OKFG	**Magazine Ridge**	**2.04**	**264**	P	Pn	07 38 19.3	+0.9
NIKO	**Nikolski**	**2.70**	**256**	*e*Pn	Pn	07 38 27.9	+0.5
NIKO				*e*Sn	Sn	07 38 58.9	-0.1
SDPT	**Sand Point**	**2.88**	**53**	P	Pn	07 38 30.4	+0.5
CHGN	**Chignik**	**4.38**	**51**	*e*Pn	Pn	07 38 53.5	+3.0
CHGN				*e*Sn	Sn	07 39 41.9	+1.3
SPIA	**Saint Paul Isl**	**4.78**	**319**	P	Pn	07 38 58.1	+2.1

DJA 05 07:56:04, 2°.18S×99°.28E, h72km, MLv3.3/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.87**	**347**	P	Pn	07 56 21.4	+0.4
SISI				S	Sn	07 56 36.0	+2.4
PPSI	**Pulau Pagai**	**0.93**	**128**	P	Pn	07 56 23.3	+1.5
PDSI	**Padang**	**1.73**	**43**	P	Pn	07 56 32.3	+0.2
PDSI				S	Sn	07 56 54.9	+1.6
PPI	**Padang Panjang**	**2.04**	**33**	P	Pn	07 56 37.0	+0.7
KRJI	**Kerinci**	**2.18**	**88**	P	Pn	07 56 38.8	+0.6
KRJI				S	Sn	07 57 05.3	+1.0
SDSI	**Sungai Dareh**	**2.48**	**60**	P	Pn	07 56 43.5	+1.3
MNAI	**Manna**	**4.26**	**121**	P	Pn	07 57 06.5	0.0

GUC 05 07:57:48.4±0.8, 23°.95S×70°.94W, h47km±8km, ML4.0, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.55**	**61**	⇓*i*P	Pn	07 57 60.0	-0.1
ANCH				*i* S	Sn	07 58 08.7	+0.3
MECH	**Mejillones**	**0.95**	**28**	*e*P	Pn	07 58 06.4	+1.0
MECH				*i* S	Sn	07 58 19.3	+1.5
MECH				AML	AML	07 58 36.2	
	comp=N,4μm,0.6s						
PECH	**Pedro de Valdi**	**1.78**	**41**	⇓*i*P	Pn	07 58 20.6	+4.0
PECH				*i* S	Sn	07 58 43.2	+5.1
PECH				AML	AML	07 58 50.1	
	comp=E,3μm,0.7s						
MACH	**Maria Elena**	**2.05**	**32**	*i* S	Sn	07 58 47.5	+2.7
PB01	**Plate Boundary**	**3.19**	**25**	*e*P	Pn	07 58 37.7	+1.6
PB01				AML	AML	07 59 34.5	
	comp=E,442nm,0.4s						
HMBC	**Humberston**	**3.78**	**15**	*e*P	Pn	07 58 45.8	+1.7
HMBC				*e*S	Sn	07 59 29.4	+2.0
MNMC	**Miæe Miæ**	**4.95**	**15**	*e*P	Pn	07 59 02.3	+2.0

NEIC 05 08:07:43.0, 51°.38N×177°.63W, h26km, ML3.5(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.21**	**53**	*e*Pn	Pn	08 08 04.0	-0.2
ATKA	**Atka Island**	**2.29**	**67**	P	Pn	08 08 19.1	+0.2
ATKA				S	Sn	08 08 46.5	+0.3
SMY	**Shemya**	**5.28**	**288**	P	Pn	08 09 00.5	+0.5
UNV	**Unalaska Valle**	**7.21**	**66**	P	Pn	08 09 27.8	+1.2
SPIA	**Saint Paul Isl**	**7.24**	**34**	P	Pn	08 09 27.8	+0.9

*ISCJB **05** 08:10:48.7±2.0, 39°.06N±0°.10×27°.5E±0°.2, h3km±14km, Error ellipse: s-maj=26.3km s-min=8.1km az=145.4*
*CSEM **05** 08:10:49.4, 39°.06N×27°.53E, h14km, MD2.6, After ISK*
*ISK **05** 08:10:49.4, 39°.06N×27°.53E, h14km, MD2.6*
ISC 05 08:10:49.2±2.0, 39°.05N±0°.09×27°.5E±0°.2, h12km±15km, n12, σ0s46/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.32**	**121**	*e*PG	**Pg**	**08 10 55.8**	**+0.1**
AKS				*e*SG	**Sg**	**08 11 00.6**	**+0.5**
AKS	**Akhisar**	**0.32**	**121**	*e*Pg	**Pg**	**08 10 55.8**	**+0.1**
AKS				*e*Sg	**Sg**	**08 11 00.6**	**+0.5**
AKHS	**Akhisar**	**0.32**	**121**	*i* P	**Pg**	**08 10 55.3**	**-0.4**
BALY	**Balya**	**0.71**	**10**	*i* P	**Pg**	**08 11 02.8**	**-0.2**
DEMI	**Demirci**	**0.98**	**90**	*i* P	**Pg**	**08 11 08.6**	**+0.5**
MANT	**Manisa**	**1.02**	**122**	*i* P	**Pb**	**08 11 08.2**	**-0.7**
DST	**Dursunbey**	**1.07**	**58**	*e*PG	**Pg**	**08 11 09.3**	**-0.4**
DST	**Dursunbey**	**1.07**	**58**	*e*Pg	**Pg**	**08 11 09.3**	**-0.5**
KULA	**Kula-Manisa**	**1.08**	**119**	*e*PG	**Pg**	**08 11 09.7**	**-0.3**
KULA				*e*SG	**Sg**	**08 11 24.4**	**+0.4**
KULA	**Kula-Manisa**	**1.08**	**119**	*e*Pg	**Pg**	**08 11 09.7**	**-0.3**
KULA				*e*Sg	**Sg**	**08 11 24.4**	**+0.4**
LPK	**Lapseki**	**1.43**	**338**	*e*PN	**Pn**	**08 11 15.7**	**+0.7**
LPK	**Lapseki**	**1.43**	**338**	*e*Pn	**Pn**	**08 11 15.7**	**+0.7**

*TIR **05** 08:11:41.1±0.4, 42°.35N×19°.52E, h4km±932km, ML3.7*
*ISCJB **05** 08:11:41.8±0.3, 42°.43N±0°.01×19°.83E±0°.02, h4km±2km, mb3.4/2, Error ellipse: s-maj=2.5km s-min=1.8km az=149.7*
*NEIC **05** 08:11:42.7, 42°.42N×19°.77E, h2km, MD3.9(ATH), ML3.3(PDG), After PDG.*
*PDG **05** 08:11:42.7±0.2, 42°.42N×19°.77E, h2km±1km, MD3.2/10, ML3.3/10, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*CSEM **05** 08:11:42.2±0.1, 42°.44N×19°.80E, h2km, ML3.3/10, Error ellipse: s-maj=2.7km s-min=2.2km az=68.0*
*IDC **05** 08:11:42.9±1.4, 42°.36N×19°.68E, h0km, mb3.4/2, mb1 3.6/6, mb1mx3.4/24, mbtmp3.3/6, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.0/30, Error ellipse: s-maj=21.7km s-min=18.0km az=49.0*
*BEO **05** 08:11:43.2±0.3, 42°.45N×19°.77E, h6km±3km*
*THE **05** 08:11:45.8, 42°.44N×19°.87E, h26km±2km, ML4.0/3, Error ellipse: s-maj=3.0km s-min=0.9km az=295.0*
ISC 05 08:11:42.7±0.3, 42°.43N±0°.01×19°.82E±0°.02, h4km±2km, n131, σ1s17/220, mb3.4/2, 29C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVY	**Plav**	**0.20**	**34**	*e*PN	**Pg**	**08 11 46.4**	**-0.1**
PVY				*i* SN	**Sg**	**08 11 50.1**	**+1.0**
PVY	**Plav**	**0.20**	**34**	⇑*i*Pg	**Pg**	**08 11 46.4**	**-0.1**
PVY				*e*Sg	**Sg**	**08 11 50.1**	**+1.0**
PVY	**Plav**	**0.20**	**34**	⇑*i*Pg	**Pg**	**08 11 46.4**	**-0.1**
PVY				*e*Sg	**Sg**	**08 11 50.1**	**+1.0**
PUK	**Puka**	**0.39**	**172**	*e*PG	**Pg**	**08 11 49.6**	**-0.6**
PUK				*i* SG	**Sg**	**08 11 55.7**	**+0.4**
PUK	**Puka**	**0.39**	**172**	*e*Pg	**Pg**	**08 11 49.6**	**-0.6**
	SNR=90						
PUK				*i* Sg	**Sg**	**08 11 55.7**	**+0.4**
	SNR=90						
PDG	**Podgorica**	**0.42**	**270**	*e*PN	**Pg**	**08 11 49.4**	**-1.3**
PDG				*i* SN	**Sg**	**08 11 55.5**	**-0.6**
PDG	**Podgorica**	**0.42**	**270**	⇑*i*Pg	**Pg**	**08 11 49.4**	**-1.3**
PDG				*e*Sg	**Sg**	**08 11 55.5**	**-0.6**
TTG	**Podgorica**	**0.42**	**270**	⇑*i*Pg	**Pg**	**08 11 49.4**	**-1.3**
TTG				*e*Sg	**Sg**	**08 11 55.5**	**-0.6**
TTG	**Podgorica**	**0.42**	**270**	⇑*i*Pg	**Pg**	**08 11 49.4**	**-1.3**
TTG				*e*Sg	**Sg**	**08 11 55.5**	**-0.6**
BEY	**Berane**	**0.44**	**7**	*e*PN	**Pg**	**08 11 51.1**	**-0.1**
BEY				*i* SN	**Sg**	**08 11 58.2**	**+1.2**
BEY	**Berane**	**0.44**	**7**	⇑*i*Pg	**Pg**	**08 11 51.1**	**-0.1**
BEY				*e*Sg	**Sg**	**08 11 58.2**	**+1.2**
IVA	**Berane**	**0.44**	**7**	⇑*i*Pg	**Pg**	**08 11 51.1**	**-0.1**
IVA				*e*Sg	**Sg**	**08 11 58.2**	**+1.2**
IVA	**Berane**	**0.44**	**7**	⇑*i*Pg	**Pg**	**08 11 51.1**	**-0.1**
ULC	**Ulcinj**	**0.63**	**223**	*e*PN	**Pg**	**08 11 53.8**	**-1.0**
ULC	**Ulcinj**	**0.63**	**223**	⇓*i*Pg	**Pg**	**08 11 53.8**	**-1.0**
ULC				*e*Sg	**Sg**	**08 12 02.9**	**-0.1**
ULC	**Ulcinj**	**0.63**	**223**	⇓*i*Pg	**Pg**	**08 11 53.8**	**-1.0**
ULC				*e*Sg	**Sg**	**08 12 02.9**	**-0.1**
BUM	**Brajici-Budva**	**0.70**	**259**	*e*PN	**Pg**	**08 11 54.6**	**-1.4**
BUM				*i* SN	**Sg**	**08 12 05.6**	**+0.5**
BUM	**Brajici-Budva**	**0.70**	**259**	⇑*i*Pg	**Pg**	**08 11 54.6**	**-1.4**
BUM				*e*Sg	**Sg**	**08 12 05.6**	**+0.5**
BUM	**Brajici-Budva**	**0.70**	**259**	⇑*i*Pg	**Pg**	**08 11 54.6**	**-1.4**
BUM				*e*Sg	**Sg**	**08 12 05.6**	**+0.5**
NKY	**Niksic**	**0.72**	**302**	*i* SN	**Sg**	**08 12 06.6**	**+0.8**
NKY	**Niksic**	**0.72**	**302**	⇑*i*Pg	**Pg**	**08 11 55.1**	**-1.3**
NKY				*e*Sg	**Sg**	**08 12 06.6**	**+0.8**
NKY	**Niksic**	**0.72**	**302**	⇑*i*Pg	**Pg**	**08 11 55.1**	**-1.3**
NKY				*e*Sg	**Sg**	**08 12 06.6**	**+0.8**
SJES	**Sjenica**	**0.84**	**8**	⇓*i*Pg	**Pg**	**08 11 58.1**	**-0.6**
SJES				*i* Sg	**Sg**	**08 12 10.0**	**+0.4**
SJES	**Sjenica**	**0.84**	**8**	⇓*i*Pg	**Pg**	**08 11 58.1**	**-0.6**
SJES				*i* Sg	**Sg**	**08 12 10.0**	**+0.4**
PLE	**Pljevlja**	**0.95**	**341**	⇑*i*Pg	**Pg**	**08 12 00.4**	**-0.5**
PLE				*e*Sg	**Sg**	**08 12 15.3**	**+2.0**
PLE	**Pljevlja**	**0.95**	**341**	⇑*i*Pg	**Pg**	**08 12 00.4**	**-0.5**
HCY	**Herceg Novi**	**0.98**	**271**	*e*PN	**Pg**	**08 12 00.0**	**-1.5**
HCY				*i* SN	**Sg**	**08 12 15.3**	**+1.1**
HCY	**Herceg Novi**	**0.98**	**271**	⇑*i*Pg	**Pg**	**08 12 00.0**	**-1.5**
HCY				*e*Sg	**Sg**	**08 12 15.3**	**+1.1**
HCY	**Herceg Novi**	**0.98**	**271**	⇑*i*Pg	**Pg**	**08 12 00.0**	**-1.5**
HCY				*e*Sg	**Sg**	**08 12 15.3**	**+1.1**
UPM	**Unac-Piva**	**1.02**	**319**	⇑*i*Pg	**Pg**	**08 12 01.6**	**-0.7**
UPM				*e*Sg	**Sg**	**08 12 17.1**	**+1.6**
UPM	**Unac-Piva**	**1.02**	**319**	⇑*i*Pg	**Pg**	**08 12 01.6**	**-0.7**
UPM				*e*Sg	**Sg**	**08 12 17.1**	**+1.6**
BRY	**Bratogost**	**1.05**	**297**	*e*PN	**Pg**	**08 12 00.6**	**-2.3**
BRY				*i* SN	**Sg**	**08 12 17.9**	**+1.4**
BRY	**Bratogost**	**1.05**	**297**	⇓*i*Pg	**Pg**	**08 12 00.6**	**-2.3**
BRY				*e*Sg	**Sg**	**08 12 17.9**	**+1.4**
BRY	**Bratogost**	**1.05**	**297**	⇓*i*Pg	**Pg**	**08 12 00.6**	**-2.3**
BRY				*e*Sg	**Sg**	**08 12 17.9**	**+1.4**
TIR	**Tirane**	**1.08**	**178**	*e*Pg	**Pg**	**08 12 02.7**	**-0.7**
TIR				*i* Sg	**Sg**	**08 12 18.6**	**+1.1**
TIR	**Tirane**	**1.08**	**178**	*e*Pg	**Pg**	**08 12 02.4**	**-1.1**
TIR				*e*Sg	**Sg**	**08 12 16.0**	**-1.5**
TIR	**Tirane**	**1.08**	**178**	P	**Pg**	**08 12 04.0**	**+0.6**
TIR				S	**Sg**	**08 12 19.4**	**+1.9**
TIR	**Tirane**	**1.08**	**178**	*e*Pg	**Pg**	**08 12 02.7**	**-0.7**
TIR	**Tirane**	**1.08**	**178**	P	**Pg**	**08 12 04.0**	**+0.6**
TIR				*e*Sg	**Sg**	**08 12 16.0**	**-1.5**
TIR				S	**Sg**	**08 12 19.4**	**+1.9**
SKO	**Skopje**	**1.29**	**110**	⇓*i*Pg	**Pg**	**08 12 06.6**	**-0.7**
SKO				*i* Sg	**Sg**	**08 12 26.0**	**+2.0**
SKO	**Skopje**	**1.29**	**110**	*e*Pn	**Pn**	**08 12 06.5**	**-0.9**
SKO				*e*Sg	**Sg**	**08 12 26.3**	**+2.4**
SKO	**Skopje**	**1.29**	**110**	P	**Pg**	**08 12 07.3**	**0.0**
SKO				S	**Sg**	**08 12 26.1**	**+2.1**
SKO	**Skopje**	**1.29**	**110**	⇓*i*Pg	**Pg**	**08 12 06.6**	**-0.7**
SKO				*e*Sg	**Sg**	**08 12 26.3**	**+2.3**
BBLS	**Lazići**	**1.47**	**348**	*i* Pg	**Pn**	**08 12 09.4**	**-0.5**
BBLS				*i* Sg	**Sg**	**08 12 28.6**	**-1.2**
BBLS	**Lazići**	**1.47**	**348**	*i* Pg	**Pn**	**08 12 09.4**	**-0.5**
BBLS				*i* Sg	**Sg**	**08 12 28.6**	**-1.2**
KRUS	**Krusevo**	**1.50**	**134**	*i* Pn	**Pn**	**08 12 09.2**	**-1.2**
KRUS				*e*Sg	**Sg**	**08 12 32.0**	**+1.0**
OHR	**Ohrid**	**1.51**	**151**	*e*Pn	**Pn**	**08 12 10.8**	**+0.4**
OHR				*e*Sg	**Sg**	**08 12 31.0**	**-0.1**
OHR	**Ohrid**	**1.51**	**151**	P	**Pn**	**08 12 10.7**	**+0.2**
OHR				S	**Sn**	**08 12 30.0**	**-0.6**
BARS	**Barje**	**1.52**	**75**	⇑*i*Pg	**Pn**	**08 12 10.5**	**-0.1**
BARS				*i* Sg	**Sg**	**08 12 31.9**	**+0.4**
BARS	**Barje**	**1.52**	**75**	⇑*i*Pg	**Pn**	**08 12 10.5**	**-0.1**
BARS				*i* Sg	**Sg**	**08 12 31.9**	**+0.4**
GRUS	**Gruza**	**1.60**	**24**	*e*Pg	**Pn**	**08 12 11.6**	**-0.1**
GRUS				*i* Sg	**Sg**	**08 12 33.9**	**0.0**
GRUS	**Gruza**	**1.60**	**24**	*e*Pg	**Pn**	**08 12 11.6**	**-0.1**
GRUS				*i* Sg	**Sg**	**08 12 33.9**	**0.0**
STON	**Ston**	**1.63**	**286**	*e*Pn	**Pn**	**08 12 11.8**	**-0.3**
STON				Sn	**Sn**	**08 12 37.3**	**+3.8**
STON	**Ston**	**1.63**	**286**	*e*Pn	**Pn**	**08 12 11.7**	**-0.4**
STON				Sn	**Sn**	**08 12 37.3**	**+3.8**
DIVS	**Divibare**	**1.67**	**4**	*e*Pg	**Pn**	**08 12 13.1**	**+0.4**
DIVS				*i* Sn	**Sn**	**08 12 33.8**	**-0.8**
DIVS	**Divibare**	**1.67**	**4**	P	**Pn**	**08 12 12.7**	**0.0**
DIVS				S	**Sn**	**08 12 34.2**	**-0.4**
DIVS	**Divibare**	**1.67**	**4**	P	**Pn**	**08 12 12.7**	**0.0**
DIVS	**Divibare**	**1.67**	**4**	*e*Pg	**Pn**	**08 12 13.1**	**+0.4**
DIVS				*i* Sn	**Sn**	**08 12 33.8**	**-0.8**
DIVS				S	**Sn**	**08 12 34.2**	**-0.4**
BIA	**Bitola**	**1.80**	**141**	*e*Pn	**Pn**	**08 12 16.8**	**+2.3**
BIA				*e*Sg	**Sg**	**08 12 40.3**	**-0.3**
BIA	**Bitola**	**1.80**	**141**	P	**Pn**	**08 12 15.1**	**+0.6**
BIA				S	**Sn**	**08 12 37.1**	**-0.8**
BIA	**Bitola**	**1.80**	**141**	P	**Pn**	**08 12 15.1**	**+0.6**
BIA	**Bitola**	**1.80**	**141**	*e*Pn	**Pn**	**08 12 16.8**	**+2.3**
BIA				*e*Sg	**Sg**	**08 12 40.2**	**-0.4**
TRUS	**Trudelj**	**1.84**	**13**	*e*Pg	**Pg**	**08 12 16.2**	**-1.8**
TRUS				*e*Sg	**Sg**	**08 12 41.5**	**-0.3**
TRUS	**Trudelj**	**1.84**	**13**	*e*Pg	**Pg**	**08 12 16.2**	**-1.8**
TRUS				*e*Sg	**Sg**	**08 12 41.5**	**-0.3**
KBN	**Korca**	**1.95**	**158**	*e*PG	**Pg**	**08 12 19.4**	**-0.6**
KBN				*i* SG	**Sg**	**08 12 47.4**	**+2.2**
KBN	**Korca**	**1.95**	**158**	*e*Pg	**Pg**	**08 12 19.4**	**-0.6**
	SNR=90						
KBN				*i* Sg	**Sg**	**08 12 47.4**	**+2.2**
	SNR=90						
FNA	**Florina**	**2.02**	**144**	P	**Pn**	**08 12 18.0**	**+0.5**
FNA				S	**Sn**	**08 12 42.4**	**-0.7**
FNA	**Florina**	**2.02**	**144**	P	**Pn**	**

comp=Z,20nm,18.1s,baz=205,slow=38
TORD Torodi Ar. Bea 33.14 214 P P 08 18 20.4 +0.3
0.6nm,1.0s,mb3.5,baz=35,slow=5.3,SNR=3.2
YKA Yellowknife Ar 69.22 339 P P 08 22 49.6 -0.6
0.3nm,0.8s,mb3.3,baz=36,slow=5.4,SNR=6.9
YKA Yellowknife Ar 69.22 339 P P 08 22 49.6 -0.6

*ISCJB **05** 08:12:23.8±0.6, 13°.96N×0°.08×144°.54E±0°.10, h188km±5km, mb4.0/24, Error ellipse: s-maj=16.0km s-min=12.1km az=159.6*
*IDC **05** 08:12:24.1±0.3, 13°.99N×144°.86E, h185km±2km, mb3.6/16, mb1 3.8/17, mb1mx3.8/24, mbtmp3.7/17, Error ellipse: s-maj=20.0km s-min=10.9km az=89.0*
*NEIC **05** 08:12:25.1±0.8, 13°.95N×144°.71E, h188km±8km, mb4.3/8, Error ellipse: s-maj=12.9km s-min=11.2km az=61.0*
ISC 05 08:12:25.0±0.6, 13°.99N±0°.08×144°.65E±0°.10, h186km±5km, n41, σ0°99/42, mb4.0/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.45**	**152**	P	**Pn**	**08 12 50.5**	**+0.2**
	324nm,0.3s,baz=279,slow=1.4,SNR=173						
GUMO				S	**Sn**	**08 13 09.5**	**-0.2**
	654nm,0.3s,baz=47,slow=22,SNR=52						
GUMO	**Guam**	**0.45**	**152**	*e*Pn	**Pn**	**08 12 50.5**	**+0.2**
GUMO				*e*Sn	**Sn**	**08 13 09.9**	**+0.2**
CBIJ	**Chichi jima**	**13.24**	**350**	P	**Pn**	**08 15 26.4**	**+0.4**
	17nm,0.3s,baz=208,slow=11,SNR=8.0						
JOW	**Kunigami**	**19.94**	**312**	P	**P**	**08 16 46.0**	**+3.2**
	15nm,0.6s,baz=128,slow=19,SNR=3.1						
MJAR	**Matsushiro Arr**	**23.19**	**347**	P	**P**	**08 17 13.8**	**-1.4**
	7.9nm,0.8s,mb4.2,baz=172,slow=11,SNR=28						
MJAR	**Matsushiro Arr**	**23.19**	**347**	P	**P**	**08 17 13.8**	**-1.4**
MAJO	**Matsushiro**	**23.19**	**347**	*e*P	**P**	**08 17 14.5**	**-0.8**
	21nm,0.8s,mb4.6						
MAT	**Matsushiro**	**23.19**	**347**	P	**P**	**08 17 14.0**	**-1.2**
KSRS	**Korea Array**	**27.72**	**330**	P	**P**	**08 17 55.1**	**-0.8**
	3.2nm,0.8s,mb4.1,baz=149,slow=10,SNR=8.9						
WRA	**Warramunga Arr**	**35.21**	**197**	P	**P**	**08 19 01.3**	**-0.3**
	1.7nm,0.6s,mb3.9,baz=18,slow=9.7,SNR=25						
WRA				pP	pP	08 19 38.8	-1.8
	1.4nm,0.8s,baz=16,slow=9.3,SNR=4.0						
ASAR	**Alice Springs**	**38.87**	**196**	P	**P**	**08 19 32.0**	**-0.4**
	0.3nm,0.4s,mb3.3,baz=17,slow=7.3,SNR=9.4						
ASAR				pP	pP	08 20 08.3	-3.6
	0.4nm,0.8s,baz=22,slow=10,SNR=1.9						
PETK	**Petropavlovsk-**	**40.38**	**12**	P	**P**	**08 19 42.3**	**-2.2**
	0.8nm,0.4s,mb3.8,baz=163,slow=10,SNR=11						
CMAR	**Chiang Mai Arr**	**44.03**	**282**	P	**P**	**08 20 15.9**	**+1.3**
	1.2nm,0.4s,mb3.9,baz=92,slow=5.9,SNR=4.2						
STKA	**Stephens Creek**	**45.70**	**184**	P	**P**	**08 20 25.6**	**-1.8**
	1.2nm,0.5s,mb3.8,baz=10,slow=7.6,SNR=6.8						
SONM	**Songino Array**	**46.29**	**325**	P	**P**	**08 20 33.4**	**+1.5**
	0.7nm,0.5s,mb3.6,baz=136,slow=6.7,SNR=5.6						
MK31	**Makanchi Array**	**61.06**	**316**	*e*P	**P**	**08 22 20.0**	**+0.9**
MKAR	**Makanchi Array**	**61.06**	**316**	P	**P**	**08 22 19.9**	**+0.8**
	1.6nm,0.6s,mb4.0,baz=96,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**61.18**	**324**	P	**P**	**08 22 19.7**	**-0.1**
	0.6nm,0.5s,mb3.7,baz=111,slow=6.3,SNR=3.6						
KURK	**Kurchatov**	**64.15**	**320**	*e*P	**P**	**08 22 39.5**	**+0.1**
BVAR	**Borovoye Array**	**69.49**	**322**	P	**P**	**08 23 13.2**	**+0.1**
	2.8nm,0.6s,mb4.2,baz=101,slow=7.7,SNR=14						
ARU	**Arti**	**76.32**	**325**	*e*P	**P**	**08 23 52.5**	**-0.7**
YKA	**Yellowknife Ar**	**82.61**	**27**	P	**P**	**08 24 25.5**	**-1.5**
	0.5nm,0.5s,mb3.5,baz=286,slow=5.1,SNR=19						
NEW	**Newport**	**85.07**	**42**	*e*P	**P**	**08 24 39.5**	**-0.4**
CMB	**Columbia Colle**	**85.35**	**52**	*e*P	**P**	**08 24 42.1**	**+0.6**
	1.9nm,0.6s,mb4.0						
BMO	**Blue Mountains**	**85.86**	**45**	*e*P	**P**	**08 24 40.0**	**-3.8**
	2.1nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**86.64**	**342**	P	**P**	**08 24 47.6**	**+0.4**
	3.9nm,0.9s,mb4.2,baz=78,slow=5.6,SNR=4.0						
BSMT	**Bassoo Peak**	**86.69**	**42**	*e*P	**P**	**08 24 48.0**	**+0.2**
NVAR	**Mina Array Bea**	**86.84**	**51**	P	**P**	**08 24 48.9**	**+0.2**
	1.6nm,0.6s,mb4.0,baz=268,slow=5.7,SNR=18						
HLID	**Hailey**	**88.22**	**46**	*e*P	**P**	**08 24 55.6**	**+0.4**
N12A	**Clover Valley,**	**88.58**	**48**	*e*P	**P**	**08 24 58.0**	**+1.0**
GSC	**Goldstone**	**88.84**	**54**	*e*P	**P**	**08 24 59.2**	**+0.9**
	5.1nm,0.8s,mb4.5						
M13A	**Montello**	**89.06**	**48**	*e*P	**P**	**08 24 60.0**	**+0.8**
	2.9nm,0.9s,mb4.2						
SHPR	**Sheep Range**	**89.78**	**52**	*e*P	**P**	**08 25 03.8**	**+1.1**
LDFC	**Landfair**	**90.23**	**54**	*e*P	**P**	**08 25 05.6**	**+0.7**
	8.3nm,0.5s,mb4.9						
DUG	**Dugway**	**90.40**	**48**	*e*P	**P**	**08 25 05.7**	**+0.3**
FINES	**FINESS Array B**	**90.72**	**335**	P	**P**	**08 25 04.8**	**-1.7**
	2.5nm,0.8s,mb4.3,baz=76,slow=5.9,SNR=5.1						
CCUT	**Cedar City**	**90.83**	**51**	*e*P	**P**	**08 25 08.6**	**+1.1**
	1.2nm,0.8s,mb4.0						
NLU	**North Lily Min**	**91.01**	**48**	*e*P	**P**	**08 25 04.6**	**-3.7**
PDAR	**Pinedale Array**	**91.83**	**45**	P	**P**	**08 25 11.4**	**-0.7**
	0.6nm,0.6s,mb3.8,baz=245,slow=1.7,SNR=8.4						
SRU	**San Rafael**	**92.43**	**49**	*e*P	**P**	**08 25 15.0**	**+0.1**
	1.1nm,0.4s,mb4.2						
TORD	**Torodi Ar. Bea**	**134.47**	**305**	PKP	PKPdf	08 31 21.0	-0.9
	0.3nm,0.7s,baz=48,slow=2.8,SNR=3.1						
TORD				SKPbc	SKPbc	08 34 32.6	-1.9
	0.5nm,0.9s,baz=48,slow=2.1,SNR=3.2						

IDC 05 09:18:46.0±18.0, 7°.75S×129°.75E, h167km±127km, mb3.4/1, mb1 3.0/3, mb1mx2.8/15, mbtmp2.8/3, Error ellipse: s-maj=137.7km s-min=105.6km az=166.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.91**	**160**	P	Pn	09 21 42.9	-0.6
	0.0nm,0.3s,baz=342,slow=8.8,SNR=5.5						
WRA				S	Sn	09 24 07.2	+0.5
	0.1nm,0.3s,baz=335,slow=24,SNR=3.9						
ASAR	**Alice Springs**	**16.32**	**166**	P	Pn	09 22 26.9	+1.1
	0.1nm,0.3s,baz=344,slow=10,SNR=6.4						
STKA	**Stephens Creek**	**26.42**	**157**	P	P	09 24 07.0	-0.2
	0.6nm,0.4s,baz=321,slow=6.5,SNR=3.9						

*IDC **05** 09:29:37.1±1.8, 6°.78N×126°.86E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=52.7km s-min=19.5km az=53.0*
*NEIC **05** 09:29:38.8±1.4, 6°.73N×126°.77E, h10km, Error ellipse: s-maj=37.6km s-min=12.3km az=52.0*
*ISCJB **05** 09:29:43.0±0.9, 6°.58N±0°.08×126°.53E±0°.10, h54km±10km, mb3.5/4, Error ellipse: s-maj=16.5km s-min=11.8km az=158.1*
*MAN **05** 09:29:46, 6°.75N×126°.40E, h32km, mb4.5, ML3.4, MS3.3*
ISC 05 09:29:44.1±1.0, 6°.59N±0°.08×126°.51E±0°.10, h45km±13km, n14, σ0°78/19, mb3.5/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.43**	**325**	*e*P	**Pn**	**09 29 54.8**	**+0.5**
MATI				*e*S	**Sn**	**09 30 00.3**	**-1.0**
DAV	**Davao City (W)**	**1.04**	**297**	Pn	**Pn**	**09 30 02.6**	**+0.3**
	383nm,0.3s,baz=86,slow=7.5,SNR=17						
DAV				Sn	**Sn**	**09 30 16.8**	**+1.2**
	169nm,0.3s,baz=94,slow=17,SNR=17						
DAV	**Davao City (W)**	**1.04**	**297**	*e*Pn	**Pn**	**09 30 02.3**	**0.0**
DAV				Sn	**Sn**	**09 30 16.8**	**+1.2**
DMPH	**Davao City--Mi**	**1.10**	**296**	*e*P	**Pn**	**09 30 03.3**	**+0.1**
BIPH	**Bislig**	**1.59**	**355**	↑*i*P	**Pn**	**09 30 10.6**	**+0.8**
BIPH				*i* S	**Sn**	**09 30 29.3**	**+0.2**
BUKP	**Musuan**	**1.92**	**312**	*e*P	**Pn**	**09 30 14.2**	**-0.1**
BUKP				*e*S	**Sn**	**09 30 36.0**	**-1.3**
CGP	**Cagayan de Oro**	**2.58**	**316**	*i* S	**Sn**	**09 30 58.1**	**+4.5**
KAKA	**Kakadu**	**20.06**	**163**	P	**P**	**09 34 12.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.55**	**182**	P	**P**	**09 35 00.8**	**+1.0**
	1.8nm,0.4s,mb3.9,baz=357,slow=8.2,SNR=16						
WRA	**Warramunga Arr**	**27.47**	**164**	P	**P**	**09 35 26.9**	**+0.7**
	0.7nm,0.8s,mb3.2,baz=344,slow=9.3,SNR=9.2						
MBWA	**Marble Bar**	**28.37**	**193**	*e*P	**P**	**09 35 34.4**	**+0.1**
ASAR	**Alice Springs**	**30.93**	**167**	P	**P**	**09 35 55.6**	**-1.2**
	0.3nm,0.6s,mb3.3,baz=346,slow=7.2,SNR=11						
MKAR	**Makanchi Array**	**55.10**	**324**	P	**P**	**09 39 11.4**	**-0.3**
	0.2nm,0.3s,mb3.6,baz=118,slow=7.1,SNR=2.8						
MKAR	**Makanchi Array**	**55.10**	**324**	P	**P**	**09 39 11.4**	**-0.3**

IDC 05 09:49:26.9±7.2, 2°.24S×101°.35E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=402.9km s-min=30.0km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.71**	**121**	P	P	09 56 36.0	0.0
	0.1nm,0.4s,baz=311,slow=8.7,SNR=4.8						
ASAR	**Alice Springs**	**38.02**	**127**	P	P	09 56 47.4	+0.2
	0.2nm,0.5s,baz=306,slow=8.2,SNR=5.0						
MKAR	**Makanchi Array**	**51.63**	**343**	P	P	09 58 35.6	+0.4
	0.6nm,0.6s,baz=145,slow=7.9,SNR=3.7						
TXAR	**Lajitas Array**	**144.05**	**39**	PKP	PKPdf	10 09 03.2	-2.1
	0.5nm,0.7s,baz=270,slow=0.9,SNR=6.0						

*CSEM **05** 09:51:53.2±0.7, 36°.23N×22°.04E, h30km, Error ellipse: s-maj=15.4km s-min=8.3km az=35.0*
*ISCJB **05** 09:51:54.4±1.3, 36°.30N±0°.07×22°.11E±0°.08, h27km±9km, Error ellipse: s-maj=13.1km s-min=8.1km az=42.1*
*THE **05** 09:51:54.7, 36°.36N×22°.22E, h7km±3km, Error ellipse: s-maj=4.8km s-min=1.3km az=272.0*
*ATH **05** 09:51:54.2, 36°.39N×22°.19E, h58km±35km, MD2.9/3*
ISC 05 09:51:54.2±1.4, 36°.30N±0°.07×22°.1E±0°.1, h17km±13km, n15, σ0°77/25, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.67**	**333**	P	**Pg**	**09 52 06.4**	**-0.9**
PYL				S	**Sg**	**09 52 17.4**	**+1.2**
PYL	**PYLOS**	**0.67**	**333**	*e*P	**Pg**	**09 52 06.6**	**-0.7**
PYL				S	**Sg**	**09 52 17.4**	**+1.2**
KYTH	**Kithira**	**0.74**	**91**	*e*P	**Pb**	**09 52 09.2**	**+0.6**
KYTH	**Kithira**	**0.74**	**91**	*e*P	**Pb**	**09 52 09.2**	**+0.6**
VLI	**Veliai**	**0.78**	**57**	*e*P	**Pb**	**09 52 08.4**	**-0.8**
VLI				*e*S	**Sb**	**09 52 19.9**	**+0.4**
VLI	**Veliai**	**0.78**	**57**	*e*P	**Pb**	**09 52 08.4**	**-0.8**
VLI				*e*S	**Sb**	**09 52 19.9**	**+0.4**
ITM	**Ithomi**	**0.89**	**350**	*e*P	**Pb**	**09 52 10.2**	**-1.0**
ITM	**Ithomi**	**0.89**	**350**	P	**Pb**	**09 52 10.2**	**-1.0**
ITM				S	**Sb**	**09 52 23.5**	**+0.7**
ITM	**Ithomi**	**0.89**	**350**	*e*P	**Pb**	**09 52 10.2**	**-1.0**
ITM				S	**Sb**	**09 52 23.5**	**+0.7**
VLX	**Vlachokerasia**	**1.09**	**11**	*e*P	**Pb**	**09 52 13.4**	**-1.1**
VLX	**Vlachokerasia**	**1.09**	**11**	P	**Pb**	**09 52 13.5**	**-1.0**
VLX				S	**Sb**	**09 52 28.8**	**+0.4**
VLX	**Vlachokerasia**	**1.09**	**11**	*e*P	**Pb**	**09 52 13.4**	**-1.1**
VLX				S	**Sb**	**09 52 28.8**	**+0.4**
DID	**Didima**	**1.50**	**36**	P	**Pn**	**09 52 20.4**	**+0.1**
DID				S	**Sn**	**09 52 38.9**	**-0.5**
DID	**Didima**	**1.50**	**36**	P	**Pn**	**09 52 20.4**	**+0.1**
DID				S	**Sn**	**09 52 38.9**	**-0.5**
KARN	**Karanos**	**1.71**	**121**	P	**Pn**	**09 52 24.0**	**+0.8**

*NEIC **05** 09:52:38.1±0.5, 2°.52S×100°.50E, h35km, mb4.6/4, Error ellipse: s-maj=19.4km s-min=6.8km az=53.0*
NEIC Felt [II] in Pesisir Selatan.
*ISCJB **05** 09:52:42.2±0.4, 2°.23S±0°.04×100°.74E±0°.04, h80km±4km, mb4.5/25, Error ellipse: s-maj=7.5km s-min=4.8km az=141.1*
*DJA **05** 09:52:43, 2°.20S×100°.72E, h58km, MLv4.4/10*
*IDC **05** 09:52:45.0±3.0, 2°.21S×100°.85E, h88km±24km, mb3.9/15, mb1 4.0/17, mb1mx3.8/28, mbtmp3.9/17, MS2.9/3, Ms1 3.0/3, ms1mx2.6/28, Error ellipse: s-maj=41.7km s-min=10.2km az=49.0*
ISC 05 09:52:43.3±0.4, 2°.25S±0°.04×100°.74E±0°.04, h72km±4km, n62, σ1°06/60, mb4.5/25, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.89**	**235**	P	**Pn**	**09 52 58.7**	**-1.8**
PPSI				S	**Sn**	**09 53 15.3**	**+1.9**
PDSI	**Padang**	**1.36**	**348**	P	**Pn**	**09 53 04.8**	**-1.7**
PDSI				S	**Sn**	**09 53 22.2**	**-1.7**
SDSI	**Sungai Dareh**	**1.48**	**28**	P	**Pn**	**09 53 07.4**	**-0.7**
PPI	**Padang Panjang**	**1.81**	**349**	P	**Pn**	**09 53 11.8**	**-0.7**
SISI	**Saibi**	**1.89**	**299**	P	**Pn**	**09 53 13.0**	**-0.5**
SISI				S	**Sn**	**09 53 35.3**	**-1.1**
KSI	**Kapahiang**	**2.31**	**127**	P	**Pn**	**09 53 20.0**	**+0.8**
KSI				S	**Sn**	**09 53 48.2**	**+1.5**
RGRI	**Rengat**	**2.47**	**40**	P	**Pn**	**09 53 20.6**	**-0.7**
BKNI	**Bangkinang**	**2.58**	**7**	P	**Pn**	**09 53 22.6**	**-0.2**
MNAI	**Manna**	**3.05**	**134**	P	**Pn**	**09 53 25.2**	**-4.0**
MNSI	**Mandailing Nat**	**3.24**	**339**	P	**Pn**	**09 53 31.9**	**+0.1**
MDSI	**Maura Dua**	**4.09**	**123**	P	**Pn**	**09 53 44.6**	**+1.2**
LWLI	**Liwa**	**4.30**	**130**	P	**Pn**	**09 53 48.0**	**+1.7**
GSI	**Gunungsitoli**	**4.74**	**318**	P	**Pn**	**09 53 51.3**	**-1.0**
KGM	**Kluang**	**4.96**	**31**	P	**Pn**	**09 53 55.9**	**+0.6**
KASI	**Kota Agung**	**4.96**	**131**	P	**Pn**	**09 53 53.5**	**-1.8**
	52nm,1.1s,1μm0.4nm						
MYKOM	**Kota Tinggi**	**5.08**	**38**	P	**Pn**	**09 53 57.3**	**+0.4**
MYKOM	**Kota Tinggi**	**5.08**	**38**	P	**Pn**	**09 53 56.3**	**-0.6**
PSI	**Prapat**	**5.34**	**340**	P	**Pn**	**09 54 00.9**	**+0.5**
	3.3nm,0.3s,baz=161,slow=12,SNR=11						
PSI				LR	LR	09 56 44.0	
	comp=Z,84nm,18.9s,baz=345,slow=46						
FRIM	**Kepong**	**5.52**	**9**	P	**Pn**	**09 54 04.3**	**+1.3**
IPM	**Ipoh**	**6.69**	**2**	P	**Pn**	**09 54 20.5**	**+1.6**
KULM	**Kulim**	**7.49**	**359**	P	**Pn**	**09 54 31.6**	**+1.7**
KULM	**Kulim**	**7.49**	**359**	*e*Pn	**Pn**	**09 54 30.6**	**+0.7**
	14nm,0.8s						
KTGM	**Kuala Trenggan**	**7.90**	**18**	P	**Pn**	**09 54 36.2**	**+0.8**
KAPI	**Kappang**	**19.17**	**99**	P	**Pn**	**09 57 01.1**	**-1.7**
	1.2nm,0.3s,baz=275,slow=14,SNR=5.0						
CMAR	**Chiang Mai Arr**	**20.65**	**355**	P	**P**	**09 57 16.7**	**-0.5**
	2.4nm,0.7s,baz=187,slow=9.6,SNR=11						
CMAR				LR	LR	10 04 55.1	
	comp=Z,42nm,20.0s,baz=165,slow=35						
FITZ	**Fitzroy Crossi**	**29.06**	**124**	P	**P**	**09 58 36.2**	**-0.8**
	1.8nm,0.7s,mb3.8,baz=270,slow=20,SNR=3.8						
PKI	**Pulchoki**	**33.12**	**335**	*e*P	**P**	**09 59 14.3**	**+1.7**
	8.5nm,0.5s,mb4.8						
GUN	**Gumba**	**33.22**	**336**	*e*P	**P**	**09 59 15.2**	**+1.7**
	17nm,0.2s,mb5.5						
DMN	**Daman**	**33.29**	**334**	*e*P	**P**	**09 59 15.6**	**+1.5**
	4.6nm,0.2s,mb4.9						
KKN	**Kakani**	**33.37**	**335**	*e*P	**P**	**09 59 16.0**	**+1.2**
	11nm,0.4s,mb5.1						
GKN	**Gorkha**	**33.83**	**334**	*e*P	**P**	**09 59 19.8**	**+1.0**
	17nm,0.3s,mb5.3						
KOLN	**Koldanda**	**34.10**	**332**	*e*P	**P**	**09 59 21.4**	**+0.2**
	22nm,0.7s,mb5.1						
PYUN	**Piuthan**	**34.67**	**332**	*e*P	**P**	**09 59 25.1**	**-0.9**
	21nm,0.7s,mb5.1						
WRA	**Warramunga Arr**	**37.23**	**121**	P	**P**	**09 59 47.2**	**-0.9**
	1.6nm,0.5s,mb4.2,baz=308,slow=9.6,SNR=40						
WRA				PcP	PcP	10 02 06.0	-0.7
	0.4nm,0.6s,baz=308,slow=2.2,SNR=4.9						
WRAB	**Tennant Creek**	**37.23**	**121**	*e*P	**P**	**09 59 47.5**	**-0.6**
	1.6nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**38.51**	**126**	P	**P**	**09 59 58.4**	**-0.5**
	2.8nm,0.6s,mb4.2,baz=304,slow=7.9,SNR=33						
ASAR				PcP	PcP	10 02 11.1	+0.6
	0.5nm,0.4s,baz=295,slow=2.5,SNR=5.5						
ASAR				S	**S**	**10 05 47.5**	**-1.9**
	0.4nm,0.8s,baz=298,slow=17,SNR=4.8						
KSRS	**Korea Array**	**46.86**	**30**	LR	LR	10 24 52.6	
	comp=Z,20nm,19.2s,baz=233,slow=41						
STKA	**Stephens Creek**	**48.43**	**132**	P	**P**	**10 01 18.7**	**+0.1**
	1.2nm,0.3s,mb4.2,baz=318,slow=8.7,SNR=6.0						
STKA	**Stephens Creek**	**48.43**	**132**	P	**P**	**10 01 18.7**	**+0.1**
SONM	**Songino Array**	**50.12**	**5**	P	**P**	**10 01 31.2**	**+0.1**
	1.6nm,0.5s,mb4.2,baz=185,slow=8.1,SNR=14						
SONM				PcP	PcP	10 02 49.5	-0.1
	0.6nm,0.5s,baz=198,slow=2.9,SNR=2.5						
AML	**Almayashu**	**50.51**	**334**	*e*P	**P**	**10 01 35.3**	**+1.1**
	3.1nm,0.5s,mb4.6						
AAK	**Ala-Archa**	**50.58**	**335**	P	**P**	**10 01 36.2**	**+1.6**
	0.6nm,0.3s,mb4.2,baz=202,slow=12,SNR=3.9						
EKS2	**Erkin-Say**	**50.90**	**334**	*e*P	**P**	**10 01 37.9**	**+0.8**
	8.3nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**51.47**	**344**	*e*P	**P**	**10 01 41.5**	**+0.2**
MKAR	**Makanchi Array**	**51.47**	**344**	P	**P**	**10 01 41.5**	**+0.3**
	10nm,0.6s,mb5.1,baz=150,slow=8.3,SNR=59						
KURK	**Kurchatov**	**56.06**	**343**	P	**P**	**10 02 13.8**	**-0.9**
	5.2nm,0.9s,mb4.6,baz=165,slow=7.3,SNR=14						
ZAA0	**Zalesovo Array**	**57.55**	**349**	*e*P	**P**	**10 02 25.0**	**-0.2**
ZALV	**Zalesovo Beam**	**57.55**	**349**	P	**P**	**10 02 25.1**	**-0.1**
	4.0nm,0.3s,mb4.9,baz=171,slow=5.5,SNR=48						
BVAR	**Borovoye Array**	**60.67**	**340**	P	**P**	**10 02 46.2**	**-0.6**
	1.3nm,0.4s,mb4.3,baz=136,slow=9.5,SNR=6.8						
ABKAR	**Akbulak array**	**62.21**	**331**	*e*P	**P**	**10 02 56.9**	**-0.3**
	3.7nm,0.6s,mb4.6						
AKTK	**Aktyubinsk**	**63.93**	**331**	P	**P**	**10 03 07.9**	**-0.7**
AKTO	**Aktyubinsk**	**63.93**	**331**	P	**P**	**10 03 07.9**	**-0.7**
	0.8nm,0.4s,mb3.9,baz=135,slow=2.9,SNR=3.8						
BRTR	**Keskin Array B**	**74.04**	**312**	P	**P**	**10 04 11.6**	**+0.1**
	0.8nm,0.5s,mb3.7,baz=116,slow=6.6,SNR=5.2						
OUZ	**Omahuta**	**74.72**	**126**	P	**P**	**10 04 13.3**	**-2.3**
FINES	**FINESS Array B**	**84.68**	**332**	P	**P**	**10 05 08.7**	**-0.2**
	1.5nm,0.7s,mb4.0,baz=107,slow=4.7,SNR=4.3						
ARCES	**ARCESS Array B**	**86.96**	**340**	P	**P**	**10 05 20.1**	**+0.1**
	3.2nm,0.8s,mb4.3,baz=98,slow=4.5,SNR=12						
TXAR	**Lajitas Array**	**144.44**	**38**	PKP	PKPdf	10 12 11.6	-0.5
	2.7nm,0.7s,baz=302,slow=1.1,SNR=35						
CPUP	**Villa Florida**	**144.55**	**215**	PKP	PKPdf	10 12 11.6	-0.7
	0.8nm,0.5s,baz=145,slow=2.4,SNR=3.9						
CPUP	**Villa Florida**	**144.55**	**215**	PKP	PKPdf	10 12 11.6	-0.7
MIAR	**Mount Ida**	**145.21**	**21**	*e*PKPdf	PKPdf	10 12 13.1	-0.1
TZTN	**Tazewell**	**145.65**	**6**	*e*PKPdf	PKPdf	10 12 13.9	0.0
JCT	**Junction City**	**145.84**	**33**	*e*PKPab	PKPab	10 12 15.2	-0.3

CASC 05 11:13:19.3±1.6, 13°.47N×90°.79W, h14km±7km, MD3.6, ML2.9, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.94**	**11**	*e*P	Pb	11 13 37.0	-0.4
FUG	**Fuego 3**	**0.97**	**357**	*e*P	Pb	11 13 37.1	-0.9
JAT	**Jato**	**1.18**	**316**	*e*P	Pn	11 13 39.3	-2.1
RTR	**El Retiro**	**1.19**	**69**	*e*P	Pn	11 13 41.0	-0.5
RTR				*e*S	Sb	11 13 56.5	-0.5
NBG	**Las Nubes**	**1.19**	**21**	*e*P	Pn	11 13 41.8	+0.2
NBG				*e*S	Sb	11 13 57.0	0.0
SBLS	**San Blas**	**1.19**	**72**	*e*P	Pn	11 13 40.8	-0.8
SBLS				*e*S	Sb	11 13 57.1	+0.1
SBLS				AML	AML	11 13 59.9	
	comp=Z,193nm,0.2s						
SNJE	**San Jose**	**1.22**	**71**	*e*P	Pn	11 13 41.1	-0.9
RBDL	**Robledal**	**1.25**	**59**	*e*P	Pn	11 13 41.8	-0.5
BOQS	**Boqueron**	**1.49**	**80**	*e*P	Pn	11 13 45.6	-0.1
BOQS				*e*S	Sn	11 14 07.1	+2.1
SNET	**Serv Nac Est T**	**1.53**	**82**	*e*P	Pn	11 13 46.5	+0.3
MTO2	**Montecristo 2**	**1.67**	**56**	*e*P	Pn	11 13 47.1	-1.0
LFRS	**El Faro**	**1.69**	**85**	*e*P	Pn	11 13 48.1	-0.2
LFRS				*e*S	Sn	11 14 11.5	+1.6
LBRS	**Las Brisas**	**1.72**	**81**	*e*P	Pn	11 13 48.3	-0.6
SNVI	**San Vicente**	**1.90**	**85**	*e*P	Pn	11 13 52.1	+0.7
SNVI				*e*S	Sn	11 14 15.5	+0.4
MRL	**Marmol**	**1.91**	**34**	*e*P	Pn	11 13 52.3	+0.8
CAHU	**Cacacuatique**	**2.52**	**83**	*e*P	Pn	11 13 59.6	-0.3
CNCH	**Conchagua**	**2.88**	**93**	*e*P	Pn	11 14 04.5	-0.4

*TIR **05** 11:27:12.2±3.0, 40°.04N×20°.98E, h4km±11km, ML3.7*
*PDG **05** 11:27:12.8±0.2, 39°.62N×20°.43E, h11km±11km, ML3.4/10, Error ellipse: s-maj=62.1km s-min=23.8km az=90.0*
*SKO **05** 11:27:14.6, 40°.08N×20°.65E, h4km*
*ATH **05** 11:27:15.9, 40°.29N×20°.61E, h6km±2km, MD3.8/8*
*NEIC **05** 11:27:15.9, 40°.29N×20°.61E, h6km, MD3.8(ATH), After ATH.*
*ISCJB **05** 11:27:16.8±0.3, 40°.21N±0°.01×20°.69E±0°.02, h2km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=175.4*
*BEO **05** 11:27:17.5±0.7, 40°.13N×20°.78E, h0km, ML3.1/9*
*THE **05** 11:27:17.0, 40°.22N×20°.61E, h14km±1km, ML3.9/15, Error ellipse: s-maj=1.8km s-min=0.7km az=285.0*
*CSEM **05** 11:27:17.5±0.2, 40°.23N×20°.66E, h8km, ML3.7, Error ellipse: s-maj=4.5km s-min=3.6km az=93.0*
**ISC 05 11:27:17.7±0.3, 40°.19N±0°.01×20°.71E±0°.02, h2km±3km, n159, σ1°36/223, 10C-17D, Greece-Albania

VAY				*e*Sg		**Sn**	**11 28 13.6**	**+0.3**
SKO	**Skopje**	**1.86**	**17**	*e*Pn		**Pg**	**11 27 52.7**	**-0.7**
SKO				*e*Sg		**Sg**	**11 28 19.0**	**+1.5**
SKO	**Skopje**	**1.86**	**17**	*e*Pn		**Pn**	**11 27 50.4**	**-0.2**
SKO				*e*Sg		**Sg**	**11 28 15.8**	**-1.7**
SKO	**Skopje**	**1.86**	**17**	P		**Pn**	**11 27 50.6**	**0.0**
SKO	**Skopje**	**1.86**	**17**	*e*Pn		**Pn**	**11 27 50.4**	**-0.2**
SKO				*e*Sg		**Sg**	**11 28 15.7**	**-1.8**
HORT	**Hortiatis**	**1.87**	**77**	P		**Pn**	**11 27 49.2**	**-1.5**
HORT				S		**Sn**	**11 28 13.5**	**-1.4**
HORT	**Hortiatis**	**1.87**	**77**	P		**Pn**	**11 27 49.2**	**-1.5**
HORT				S		**Sn**	**11 28 13.5**	**-1.4**
PUK	**Puka**	**1.95**	**342**	*e*PG		**Pg**	**11 27 53.2**	**-1.9**
PUK				*i* SG		**Sg**	**11 28 22.9**	**+2.6**
PUK	**Puka**	**1.95**	**342**	*e*Pg		**Pg**	**11 27 53.2**	**-1.9**
	SNR=90							
EFP	**Efpalio**	**1.99**	**152**	P		**Pn**	**11 27 53.7**	**+1.3**
EFP	**Efpalio**	**1.99**	**152**	P		**Pn**	**11 27 53.7**	**+1.3**
VLS	**Valsamata**	**2.02**	**183**	*e*PN		**Pn**	**11 27 53.8**	**+1.1**
VLS	**Valsamata**	**2.02**	**183**	P		**Pn**	**11 27 50.6**	**-2.1**
VLS				S		**Sn**	**11 28 15.5**	**-3.0**
VLS	**Valsamata**	**2.02**	**183**	P		**Pn**	**11 27 50.6**	**-2.1**
VLS	**Valsamata**	**2.02**	**183**	*e*Pn		**Pn**	**11 27 53.8**	**+1.1**
VLS				S		**Sn**	**11 28 15.5**	**-3.0**
KFL	**Anninata**	**2.08**	**178**	P		**Pn**	**11 27 53.5**	**-0.1**
ULC	**Ulcinj**	**2.08**	**329**	*e*PN		**Pn**	**11 27 54.7**	**+1.1**
ULC				*i* SN		**Sg**	**11 28 27.3**	**+2.6**
ULC	**Ulcinj**	**2.08**	**329** ⇑	*i*Pn		**Pn**	**11 27 54.7**	**+1.1**
ULC				*e*Sn		**Sg**	**11 28 27.3**	**+2.6**
ULC	**Ulcinj**	**2.08**	**329** ⇑	*i*Pn		**Pn**	**11 27 54.7**	**+1.1**
PLG	**Polygyros**	**2.10**	**84**	*e*PN		**Pn**	**11 27 55.0**	**+0.9**
PLG	**Polygyros**	**2.10**	**84**	P		**Pn**	**11 27 53.0**	**-0.9**
PLG	**Polygyros**	**2.10**	**84**	P		**Pn**	**11 27 53.0**	**-0.9**
PLG	**Polygyros**	**2.10**	**84**	*e*Pn		**Pn**	**11 27 55.0**	**+1.1**
TRIZ	**Trizonia**	**2.11**	**149**	P		**Pn**	**11 27 55.2**	**+1.2**
TRIZ	**Trizonia**	**2.11**	**149**	P		**Pn**	**11 27 55.2**	**+1.2**
SOH	**Sokhos**	**2.11**	**72**	P		**Pn**	**11 27 54.3**	**+0.3**
SOH	**Sokhos**	**2.11**	**72**	P		**Pn**	**11 27 54.3**	**+0.3**
KALE	**Kalithea**	**2.12**	**148**	P		**Pn**	**11 27 55.0**	**+0.9**
KALE	**Kalithea**	**2.12**	**148**	P		**Pn**	**11 27 55.0**	**+0.9**
NEO	**Neokhori**	**2.13**	**114**	*e*PN		**Pn**	**11 27 56.4**	**+2.1**
NEO	**Neokhori**	**2.13**	**114**	*e*Pn		**Pn**	**11 27 56.4**	**+2.1**
LAKA	**Lakka**	**2.19**	**153**	P		**Pn**	**11 27 57.0**	**+1.9**
LAKA	**Lakka**	**2.19**	**153**	P		**Pn**	**11 27 57.0**	**+1.9**
PAIG	**Paliouri**	**2.30**	**96**	P		**Pn**	**11 27 55.9**	**-0.7**
PAIG				S		**Sn**	**11 28 23.9**	**-1.5**
PAIG	**Paliouri**	**2.30**	**96**	P		**Pn**	**11 27 55.9**	**-0.7**
PAIG				S		**Sn**	**11 28 23.9**	**-1.5**
ATAL	**Atalanti**	**2.33**	**129**	P		**Pn**	**11 27 55.0**	**-2.1**
ATAL	**Atalanti**	**2.33**	**129**	P		**Pn**	**11 27 55.0**	**-2.1**
LKR	**Lokris**	**2.35**	**130**	*e*PN		**Pn**	**11 27 58.7**	**+1.4**
LKR	**Lokris**	**2.35**	**130**	P		**Pn**	**11 27 57.9**	**+0.6**
LKR	**Lokris**	**2.35**	**130**	P		**Pn**	**11 27 57.9**	**+0.6**
LKR	**Lokris**	**2.35**	**130**	*e*Pn		**Pn**	**11 27 58.7**	**+1.4**
SRS	**Serrai**	**2.38**	**66**	P		**Pn**	**11 27 55.6**	**-2.1**
SRS	**Serrai**	**2.38**	**66**	P		**Pn**	**11 27 55.6**	**-2.1**
PVY	**Plav**	**2.46**	**347**	*e*Pn		**Pn**	**11 28 01.4**	**+2.6**
PVY				*e*Sn		**Sg**	**11 28 38.7**	**+1.9**
PVY	**Plav**	**2.46**	**347**	*e*Pn		**Pn**	**11 28 01.4**	**+2.6**
PDG	**Podgorica**	**2.49**	**334**	*e*PN		**Pn**	**11 28 00.5**	**+1.3**
PDG				*i* SN		**Sg**	**11 28 37.2**	**-0.4**
PDG	**Podgorica**	**2.49**	**334** ⇑	*i*Pn		**Pn**	**11 28 00.5**	**+1.3**
TTG	**Podgorica**	**2.49**	**334** ⇑	*i*Pn		**Pn**	**11 28 00.5**	**+1.3**
TTG				*e*Sn		**Sg**	**11 28 37.2**	**-0.4**
TTG	**Podgorica**	**2.49**	**334** ⇑	*i*Pn		**Pn**	**11 28 00.5**	**+1.3**
BUM	**Brajici-Budva**	**2.51**	**328**	*e*PN		**Pn**	**11 28 00.0**	**+0.5**
BUM				*i* SN		**Sg**	**11 28 37.2**	**-1.1**
BUM	**Brajici-Budva**	**2.51**	**328** ⇓	*i*Pn		**Pn**	**11 28 00.0**	**+0.5**
BUM				*e*Sn		**Sg**	**11 28 37.2**	**-1.1**
BUM	**Brajici-Budva**	**2.51**	**328** ⇓	*i*Pn		**Pn**	**11 28 00.0**	**+0.5**
OUR	**Ouranopolis**	**2.51**	**86**	P		**Pn**	**11 27 57.4**	**-2.1**
OUR				S		**Sn**	**11 28 30.1**	**-0.5**
OUR	**Ouranopolis**	**2.51**	**86**	P		**Pn**	**11 27 57.4**	**-2.1**
OUR				S		**Sn**	**11 28 30.1**	**-0.5**
GUR	**Goura**	**2.59**	**150**	P		**Pn**	**11 28 00.6**	**0.0**
GUR	**Goura**	**2.59**	**150**	P		**Pn**	**11 28 00.6**	**0.0**
NVR	**Nevrokopi**	**2.66**	**63**	*e*PB		**Pn**	**11 28 01.3**	**-0.2**
NVR	**Nevrokopi**	**2.66**	**63**	*e*Pb		**Pn**	**11 28 01.3**	**-0.2**
BEY	**Berane**	**2.74**	**347**	*e*PN		**Pn**	**11 28 05.0**	**+2.3**
BEY	**Berane**	**2.74**	**347** ⇓	*i*Pn		**Pn**	**11 28 05.0**	**+2.3**
IVA	**Berane**	**2.74**	**347** ⇓	*i*Pn		**Pn**	**11 28 05.0**	**+2.3**
IVA				*e*Sn		**Sg**	**11 28 45.5**	**-0.4**
IVA	**Berane**	**2.74**	**347** ⇓	*i*Pn		**Pn**	**11 28 05.0**	**+2.3**
BARS	**Barje**	**2.75**	**17** ⇑	*i*Pn		**Pn**	**11 28 02.7**	**-0.1**
LTK	**Loutraki**	**2.79**	**140**	P		**Pn**	**11 28 04.0**	**+0.6**
LTK	**Loutraki**	**2.79**	**140**	P		**Pn**	**11 28 04.0**	**+0.6**
HCY	**Herceg Novi**	**2.80**	**324**	*e*PN		**Pn**	**11 28 04.2**	**+0.7**
HCY	**Herceg Novi**	**2.80**	**324** ⇓	*i*Pn		**Pn**	**11 28 04.2**	**+0.7**
HCY				*e*Sn		**Sg**	**11 28 43.0**	**-4.7**
HCY	**Herceg Novi**	**2.80**	**324** ⇓	*i*Pn		**Pn**	**11 28 04.2**	**+0.7**
NKY	**Niksic**	**2.92**	**334**	*e*PN		**Pn**	**11 28 06.7**	**+1.6**
NKY				*i* SN		**Sg**	**11 28 47.7**	**-3.7**
NKY	**Niksic**	**2.92**	**334** ⇓	*i*Pn		**Pn**	**11 28 06.7**	**+1.6**
NKY				*e*Sn		**Sg**	**11 28 47.7**	**-3.7**
NKY	**Niksic**	**2.92**	**334** ⇓	*i*Pn		**Pn**	**11 28 06.7**	**+1.6**
VTS	**Vitosha**	**3.04**	**37**	*e*Pn		**Pn**	**11 28 07.4**	**+0.5**
VTS	**Vitosha**	**3.04**	**37**	P		**Pn**	**11 28 07.0**	**+0.1**
VTS	**Vitosha**	**3.04**	**37**	P		**Pn**	**11 28 07.0**	**+0.1**
VTS	**Vitosha**	**3.04**	**37**	*e*Pn		**Pn**	**11 28 07.4**	**+0.5**
BRY	**Bratogost**	**3.15**	**330**	*e*Sn		**Sn**	**11 28 52.6**	**+6.0**
BRY	**Bratogost**	**3.15**	**330** ⇓	*i*Pn		**Sg**	**11 28 53.4**	**-5.7**
ITM	**Ithomi**	**3.16**	**162**	*e*PN		**Pn**	**11 28 10.4**	**+2.0**
ITM	**Ithomi**	**3.16**	**162**	P		**Pn**	**11 28 09.6**	**+1.2**
ITM	**Ithomi**	**3.16**	**162**	P		**Pn**	**11 28 09.6**	**+1.2**
ITM	**Ithomi**	**3.16**	**162**	*e*Pn		**Pn**	**11 28 10.4**	**+2.0**
TIP	**Timpagrande**	**3.21**	**253**	*e*Pn		**Pn**	**11 28 08.1**	**-1.0**
TIP	**Timpagrande**	**3.21**	**253**	*e*Pn		**Pn**	**11 28 08.1**	**-1.1**
PLE	**Pljevlja**	**3.28**	**343** ⇓	*i*Pn		**Pn**	**11 28 12.9**	**+2.8**
PLE				*e*Sn		**Sg**	**11 28 57.8**	**-5.4**
PLE	**Pljevlja**	**3.28**	**343** ⇓	*i*Pn		**Pn**	**11 28 12.9**	**+2.8**
UPM	**Unac-Piva**	**3.29**	**336** ⇓	*i*Pn		**Pn**	**11 28 12.2**	**+1.9**
UPM				*e*Sn		**Sn**	**11 28 57.2**	**+7.2**
UPM	**Unac-Piva**	**3.29**	**336** ⇓	*i*Pn		**Pn**	**11 28 12.2**	**+1.9**
DID	**Didima**	**3.33**	**143**	P		**Pn**	**11 28 11.7**	**+0.9**
DID	**Didima**	**3.33**	**143**	P		**Pn**	**11 28 11.7**	**+0.9**
STON	**Ston**	**3.50**	**321** ⇑	*i*Pn		**Pn**	**11 28 11.3**	**-1.8**
STON				Sn		**Sn**	**11 28 53.6**	**-1.5**
STON	**Ston**	**3.50**	**321** ⇑	*i*Pn		**Pn**	**11 28 11.4**	**-1.7**
STON				Sn		**Sn**	**11 28 53.6**	**-1.5**
BBLS	**Lazići**	**3.79**	**346**	*e*Pn		**Pn**	**11 28 18.9**	**+1.7**
BBLS	**Lazići**	**3.79**	**346**	*e*Pn		**Pn**	**11 28 18.9**	**+1.7**
VLI	**Veliai**	**3.89**	**153**	*e*PN		**Pn**	**11 28 19.8**	**+1.4**
VLI	**Veliai**	**3.89**	**153**	*e*Pn		**Pn**	**11 28 19.8**	**+1.4**
DIVS	**Divibare**	**3.94**	**352** ⇑	*i*Pn		**Pn**	**11 28 20.2**	**+1.1**
DIVS	**Divibare**	**3.94**	**352** ⇑	*i*Pn		**Pn**	**11 28 20.2**	**+1.1**
ALN	**Alexandroupoli**	**4.13**	**78**	P		**Pn**	**11 28 20.8**	**-0.9**
ALN	**Alexandroupoli**	**4.13**	**78**	P		**Pn**	**11 28 20.8**	**-0.9**
CEL	**Celeste**	**4.21**	**244**	*e*Pn		**Pn**	**11 28 20.3**	**-2.6**
CEL	**Celeste**	**4.21**	**244**	*e*Pn		**Pn**	**11 28 20.3**	**-2.6**
KYTH	**Kithira**	**4.32**	**154**	*e*PN		**Pn**	**11 28 26.8**	**+2.5**
KYTH	**Kithira**	**4.32**	**154**	*e*Pn		**Pn**	**11 28 26.8**	**+2.5**
KARN	**Karanos**	**5.42**	**151**	P		**Pn**	**11 28 40.1**	**+0.6**
KARN	**Karanos**	**5.42**	**151**	P		**Pn**	**11 28 40.1**	**+0.6**
NVLJ	**Novalja**	**6.14**	**317**	*e*Pn		**Pn**	**11 28 48.0**	**-1.4**
NVLJ				Sn		**Sn**	**11 29 56.1**	**-4.1**
NVLJ	**Novalja**	**6.14**	**317**	*e*Pn		**Pn**	**11 28 48.0**	**-1.4**
NVLJ				Sn		**Sn**	**11 29 56.1**	**-4.1**

IDC ***05*** *11:53:44.0±0.4, 7°.06N×92°.48E, h0km, mb4.4/24, mb1 4.5/26, mb1mx4.4/30, mbtmp4.4/26, ML4.4/2, MS3.5/9, Ms1 3.5/9, ms1mx3.2/29, Error ellipse: s-maj=17.3km s-min=11.0km az=61.0*

ISCJB ***05*** *11:53:45.2±2.4, 6°.99N±0°.05×92°.46E±0°.05, h20km±17km, mb4.5/51, MS3.6/9, Error ellipse: s-maj=10.4km s-min=6.2km az=140.0*

BJI ***05*** *11:53:45.7, 6°.75N×92°.46E, h42km, mB4.7/10, mb4.7/18, Ms4.2/4, Ms7 3.6/3*

MOS ***05*** *11:53:46.6±1.1, 6°.96N×92°.42E, h33km, mb4.9/15, Error ellipse: s-maj=11.2km s-min=6.5km az=108.4*

NEIC ***05*** *11:53:48.2±2.2, 6°.99N×92°.44E, h30km±16km, mb4.7/16, Error ellipse: s-maj=8.4km s-min=5.4km az=52.0*

DJA ***05*** *11:53:49, 6°.96N×92°.45E, h24km, mb4.7/14*

ISC 05 11:53:48.9±2.2, 6°.99N±0°.05×92°.44E±0°.05, h33km±16km, n121, σ1°01/113, mb4.5/51, MS3.6/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.69**	**122**	Pn	**Pn**	**11 55 37.8**	**-0.8**
	1.5nm,0.3s,baz=336,slow=12,SNR=15						
KULM	**Kulim**	**8.34**	**101**	*e*Pn	**Pn**	**11 55 47.0**	**-0.6**
PALK	**Pallekele**	**11.65**	**272**	*e*P	**Pn**	**11 56 31.6**	**-1.4**
PALK				*e*		11 58 39.2	
PALK				pmax	pmax		
	comp=Z,30nm,0.6s						
PALK	**Pallekele**	**11.65**	**272**	*e*Pn	**Pn**	**11 56 31.6**	**-1.4**
	comp=Z,30nm,0.6s						
PALK				*e*Sn	**Sn**	**11 58 39.2**	**-2.8**
CM31	**Chiang Mai Arr**	**13.04**	**28**	*e*Pn	**Pn**	**11 56 55.6**	**+3.6**
CMAR	**Chiang Mai Arr**	**13.04**	**28**	Pn	**Pn**	**11 56 50.9**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=220,slow=16,SNR=8.2						
CMAR				LR	LR	12 01 48.0	
	comp=Z,134nm,19.3s,baz=28,slow=37						
CHG	**Chiang Mai**	**13.35**	**28**	PG	**Pn**	**11 57 05.3**	**+9.2**
	comp=Z,32nm,1.0s						
CHTO	**Chiang Mai**	**13.35**	**28**	*e*P	**Pn**	**11 56 57.8**	**+1.7**
KKTK	**Khon Kaen**	**13.76**	**47**	P	Px	11 57 18.0	
	comp=Z,309nm,0.5s						
VIS	**Vishakhapatnam**	**13.88**	**321**	*i* P	**Pn**	**11 57 03.0**	**-0.4**
VIS				*i* S	**Sn**	**11 59 29.5**	**-7.1**
VIS				*ex*	x	11 59 32.6	
	comp=E,36nm,0.6s						
VIS				*ex*	x	11 59 36.5	
	comp=N,38nm,0.8s						
HYB	**Hyderabad**	**17.06**	**309**	*i* P	**Pn**	**11 57 47.0**	**+1.9**
SHL	**Shillong**	**18.48**	**358**	*ex*	**Pn**	**11 58 01.0**	**-1.5**
SHL				*i* x	x	12 01 08.0	
SHL	**Shillong**	**18.48**	**358**	*e*P	**Pn**	**11 58 01.0**	**-1.5**
SHL				*i* S	x	12 01 08.0	
KSM	**Kuching**	**18.64**	**106**	*e*P	**Pn**	**11 58 04.2**	**-0.3**
	comp=N,19nm,1.0s						
KMI	**Kunming**	**20.54**	**28**	P	**P**	**11 58 26.3**	**+1.5**
PKI	**Pulchoki**	**21.53**	**343**	*e*P	**P**	**11 58 35.9**	**+0.6**
	comp=N,95nm,1.0s,mb5.2						
PKIN	**Phulchoki**	**21.54**	**343**	*e*P	**P**	**11 58 36.3**	**+0.9**
	comp=N,76nm,0.8s,mb5.2						
PKIN	**Phulchoki**	**21.54**	**343**	*e*P	**P**	**11 58 36.5**	**+1.1**
GUN	**Gumba**	**21.71**	**344**	*e*P	**P**	**11 58 38.1**	**+0.8**
	comp=N,58nm,0.7s,mb5.1						
KKN	**Kakani**	**21.77**	**343**	*e*P	**P**	**11 58 38.2**	**+0.3**
	comp=N,46nm,0.9s,mb4.9						
GKN	**Gorkha**	**22.17**	**341**	*e*P	**P**	**11 58 42.5**	**+0.3**
	comp=N,133nm,1.0s,mb5.3						
KOLN	**Koldanda**	**22.30**	**339**	*e*P	**P**	**11 58 44.1**	**+0.5**
	comp=N,33nm,0.6s,mb4.9						
LSA	**Lhasa**	**22.62**	**357**	*e*P	**P**	**11 58 48.9**	**+1.9**
LSA				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.7						
LSA	**Lhasa**	**22.62**	**357**	*e*P	**P**	**11 58 48.9**	**+1.9**
	comp=Z,18nm,0.6s,mb4.7						
GYA	**Guiyang**	**23.63**	**33**	P	**P**	**11 58 56.9**	**-0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				pmax	pmax		
	comp=Z,70nm,4.5s						
KKM	**Kota Kinabalu**	**23.64**	**91**	*e*P	**P**	**11 58 56.3**	**-1.3**
	comp=Z,45nm,1.4s,mb4.7						
CD2	**Chengdu**	**26.05**	**23**	P	**P**	**11 59 18.7**	**-0.6**
CD2				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.9						
CD2				pmax	pmax		
	comp=Z,140nm,4.9s						
XAN	**Xi'an**	**30.93**	**27**	P	**P**	**12 00 01.5**	**-1.3**
XAN				pP	pP	12 00 15.3	+3.0
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
XAN				pmax	pmax		
	comp=Z,19nm,10.4s						
GTA	**Gaotai**	**32.95**	**11**	P	**P**	**12 00 21.2**	**+0.7**
GTA				pP	pP	12 00 28.5	-1.6
GTA				sP	sP	12 00 32.3	-1.8
GTA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
GTA				pmax	pmax		
	comp=Z,55nm,5.4s						
GTA				LR	LR		
	comp=N,67nm,14.1s,MS3.8						
GTA				LR	LR		
	comp=E,110nm,14.4s,MS3.8						
GTA				LR	LR		
	comp=Z,85nm,14.1s,MS3.6						
UCH	**Uchtor**	**38.51**	**338**	P	**P**	**12 01 09.5**	**+1.3**
	SNR=14						
UCH	**Uchtor**	**38.51**	**338**	*e*P	**P**	**12 01 09.0**	**+0.8**
UCH				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
UCH	**Uchtor**	**38.51**	**338**	*e*P	**P**	**12 01 08.9**	**+0.8**
	comp=Z,12nm,0.8s,mb4.7						
KBK	**Karagaybulak**	**38.73**	**339**	P	**P**	**12 01 11.5**	**+1.5**
	SNR=11						
AML	**Almayashu**	**38.73**	**338**	P	**P**	**12 01 11.5**	**+1.4**
	SNR=33						
AML	**Almayashu**	**38.73**	**338**	*e*P	**P**	**12 01 11.2**	**+1.2**
TKM2	**Tokmak 2**	**38.74**	**340**	*e*P	**P**	**12 01 10.6**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
TKM2	**Tokmak 2**	**38.74**	**340**	*e*P	**P**	**12 01 10.6**	**+0.5**
	comp=Z,9.0nm,1.2s,mb4.4						
AAK	**Ala-Archa**	**38.87**	**339**	P	**P**	**12 01 12.8**	**+1.6**
	SNR=8.1						
AAK	**Ala-Archa**	**38.87**	**339**	*e*P	**P**	**12 01 12.4**	**+1.2**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
AAK	**Ala-Archa**	**38.87**	**339**	P	**P**	**12 01 12.5**	**+1.3**
	comp=Z,5.1nm,0.8s,mb4.3,baz=164,slow=7.1,SNR=16						
AAK	**Ala-Archa**	**38.87**	**339**	*e*P	**P**	**12 01 12.4**	**+1.2**
	comp=Z,11nm,0.9s,mb4.6						
FRU	**Bishkek**	**39.01**	**339**	*e*P	**P**	**12 01 14.0**	**+1.7**
EKS2	**Erkin-Say**	**39.16**	**338**	P	**P**	**12 01 14.9**	**+1.3**
	SNR=8.3						
EKS2	**Erkin-Say**	**39.16**	**338**	*e*P	**P**	**12 01 14.5**	**+0.9**
EKS2				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
EKS2	**Erkin-Say**	**39.16**	**338**	*e*P	**P**	**12 01 14.5**	**+1.0**
	comp=Z,13nm,0.8s,mb4.7						
JOW	**Kunigami**	**39.34**	**56**	LR	LR	12 19 53.1	
	comp=Z,152nm,19.3s,MS3.9,baz=118,slow=40						
USP	**Ospenovka**	**39.43**	**339**	P	**P**	**12 01 16.3**	**+0.5**
	SNR=17						
MK31	**Makanchi Array**	**40.60**	**349**	*e*P	**P**	**12 01 25.1**	**-0.4**
MKAR	**Makanchi Array**	**40.60**	**349**	P	**P**	**12 01 25.1**	**-0.5**
	comp=Z,9.2nm,0.7s,mb4.5,baz=165,slow=8.4,SNR=66						
FITZ	**Fitzroy Crossi**	**41.18**	**128**	*e*P	**P**	**12 01 30.2**	**-0.4**
	comp=Z,18nm,0.8s,mb4.8						
FITZ				*e*		12 01 37.3	
FITZ	**Fitzroy Crossi**	**41.18**	**128**	P	**P**	**12 01 30.0**	**-0.6**
	comp=Z,9.8nm,0.7s,mb4.5,baz=311,slow=5.8,SNR=20						
FITZ	**Fitzroy Crossi**	**41.18**	**128**	*e*P	**P**	**12 01 29.8**	**-0.8**
	comp=Z,8.6nm,0.7s,mb4.5						
SONM	**Songino Array**	**42.40**	**14**	P	**P**	**12 01 40.1**	**-0.1**
SONM						12 03 33.5	
SONM	**Songino Array**	**42.40**	**14**	P	**P**	**12 01 40.1**	**-0.1**
	comp=Z,4.1nm,0.7s,mb4.2,baz=196,slow=8.6,SNR=20						
SONM				PcP	PcP	12 03 33.5	+0.4
	comp=Z,1.3nm,0.5s,baz=207,slow=3.6,SNR=3.1						
SONM				LR	LR	12 21 19.0	
	comp=Z,42nm,21.4s,MS3.3,baz=2.7,slow=39						
ULN	**Ulaanbaatar**	**42.59**	**15**	*e*P	**P**	**12 01 41.7**	**-0.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**42.59**	**15**	*e*P	**P**	**12 01 41.7**	**-0.1**
	comp=Z,3.9nm,0.9s,mb4.1						
ZAK	**Zakamensk**	**44.19**	**10**	*e*P	**P**	**12 01 54.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
KSRS	**Korea Array**	**44.23**	**41**	P	**P**	**12 01 53.9**	**-1.3**
	comp=Z,0.7nm,0.7s,mb3.5,baz=217,slow=6.1,SNR=2.9						
KSRS				LR	LR	12 20 28.5	
	comp=Z,42nm,19.8s,MS3.4,baz=199,slow=36						
KURK	**Kurchatov**	**45.08**	**348**	*e*P	**P**	**12 02 01.7**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.8						
KURK	**Kurchatov**	**45.08**	**348**	P	**P**	**12 02 01.0**	**-0.7**
	comp=Z,16nm,0.8s,mb4.9,baz=169,slow=6.9,SNR=34						
KURK				PcP	PcP	12 03 42.1	+0.1
	comp=Z,2.5nm,0.7s,baz=157,slow=2.9,SNR=3.8						
KURK	**Kurchatov**	**45.08**	**348**	*e*P	**P**	**12 02 01.7**	**0.0**
	comp=Z,17nm,1.1s,mb4.8						
NWAO	**Narrogin (SRO)**	**46.17**	**151**	P	**P**	**12 02 11.3**	**+0.7**
NWAO	**Narrogin (SRO)**	**46.17**	**151**	P	**P**	**12 02 11.3**	**+0.7**
ZAA0	**Zalesovo Array**	**47.22**	**354**	*e*P	**P**	**12 02 18.2**	**-0.3**
ZALV	**Zalesovo Beam**	**47.22**	**354**	P	**P**	**12 02 18.0**	**-0.5**
	comp=Z,4.0nm,0.6s,mb4.5,baz=160,slow=9.1,SNR=22						
ZALV				LR	LR	12 27 03.0	
	comp=Z,27nm,18.4s,MS3.2,baz=69,slow=42						
NVS	**Novosibirsk**	**48.28**	**353**	*e*P	**P**	**12 02 25.6**	**-1.1**
WRA	**Warramunga Arr**	**49.15**	**124**	P	**P**	**12 02 33.4**	**-0.6**
	comp=Z,8.8nm,0.8s,mb4.8,baz=303,slow=8.9,SNR=52						
WRAB	**Tennant Creek**	**49.15**	**124**	*e*P	**P**	**12 02 33.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**49.15**	**124**	*e*P	**P**	**12 02 33.8**	**-0.2**
	comp=Z,14nm,0.7s,mb5.1						
BVAR	**Borovoye Array**	**49.30**	**343**	P	**P**	**12 02 34.1**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.5,baz=146,slow=8.2,SNR=24						
BRVK	**Borovoye**	**49.36**	**343**	*e*P	**P**	**12 02 34.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
BRVK	**Borovoye**	**49.36**	**343**	*e*P	**P**	**12 02 34.8**	**-0.3**
	comp=Z,10.0nm,1.2s,mb4.7						
ABKAR	**Akbulak array**	**50.21**	**333**	*e*P	**P**	**12 02 41.4**	**-0.2**
	comp=Z,6.4nm,0.7s,mb4.8						
ASAR	**Alice Springs**	**50.67**	**128**	P	**P**	**12 02 45.3**	**-0.2**
	comp=Z,7.0nm,0.8s,mb4.6,baz=309,slow=7.5,SNR=68						
FORT	**Forrest**	**50.73**	**140**	*e*P	**P**	**12 02 47.0**	**+1.2**
	comp=Z,15nm,0.8s,mb5.0						
FORT				*e*		12 03 00.3	
MJAR	**Matsushiro Arr**	**51.00**	**48**	P	**P**	**12 02 48.1**	**+0.3**
MJAR						12 04 03.9	
MJAR	**Matsushiro Arr**	**51.00**	**48**	P	**P**	**12 02 48.1**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=238,slow=6.6,SNR=4.9						
MJAR				PcP	PcP	12 04 03.9	+0.3
	comp=Z,2.8nm,0.8s,baz=235,slow=2.6,SNR=5.9						
MJAR				LR	LR	12 26 02.7	
	comp=Z,93nm,18.9s,MS3.8,baz=215,slow=38						
MJAR	**Matsushiro Arr**	**51.00**	**48**	P	**P**	**12 02 48.1**	**+0.3**
MJAR				PcP	PcP	12 04 03.9	+0.3
MJAR				LR	LR	12 26 02.7	
OPO	**Ambohidratompo**	**51.35**	**240**	P	**P**	**12 02 52.2**	**+1.6**
	comp=Z,1.2nm,0.7s,mb3.9,baz=78,slow=20,SNR=3.8						
AKTK	**Aktyubinsk**	**51.93**	**333**	P	**P**	**12 02 54.0**	**-0.4**
AKTO	**Aktyubinsk**	**51.93**	**333**	P	**P**	**12 02 54.0**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.3,baz=135,slow=7.9,SNR=9.7						
BOD	**Bodaibo**	**53.40**	**14**	*e*P	**P**	**12 03 05.3**	**+0.1**
BOD				pmax	pmax		
	comp=Z,15nm

BVA0	**Borovoye Array**	**15.52 357**	⇓P		**Pn**	**12 22 04.0**	**+1.2**
	0.2nm,0.6s,baz=165,slow=6.5,SNR=8.6						
AKTO	**Aktyubinsk**	**16.25 327**	⇓P		**P**	**12 22 11.4**	**+1.3**
	0.2nm,0.8s						

*ISK **05** 13:28:35.0, 36°.90N×37°.56E, h5km, MD3.0*
*CSEM **05** 13:28:37.4±0.6, 37°.06N×37°.53E, h2km, MD3.0, Error ellipse: s-maj=15.7km s-min=8.4km az=158.0*
*ISCJB **05** 13:28:38.6±0.7, 37°.10N±0°.05×37°.55E±0°.05, h10km, Error ellipse: s-maj=7.2km s-min=4.1km az=147.4*
*DDA **05** 13:28:38.9, 37°.18N×37°.43E, h7km±5km, Md3.0*
ISC 05 13:28:39.0±0.7, 37°.14N±0°.04×37°.51E±0°.05, h7km±7km, n21, σ1§00/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.22**	**11**	*i* P	**Pg**	**13 28 41.4**	**-2.0**
GZT				*i* S	**Sg**	**13 28 46.4**	**+0.1**
GAZ	**Gaziantep**	**0.24**	**278**	*e*PG	**Pg**	**13 28 43.8**	**0.0**
GAZ				*e*SG	**Sg**	**13 28 50.8**	**+3.8**
GAZ	**Gaziantep**	**0.24**	**278**	*e*Pg	**Pg**	**13 28 43.8**	**0.0**
GAZ				*e*Sg	**Sg**	**13 28 50.8**	**+3.8**
KUZU	**Kuzuini**	**0.51**	**224**	*i* P	**Pg**	**13 28 47.5**	**-1.2**
KUZU				*i* S	**Sg**	**13 28 56.6**	**+1.3**
KUZU	**Kuzuini**	**0.51**	**224**	*i* P	**Pg**	**13 28 47.5**	**-1.2**
KUZU				*i* S	**Sg**	**13 28 56.6**	**+1.3**
KMRS	**Kahramanmaras**	**0.61**	**307**	*e*PG	**Pg**	**13 28 50.9**	**+0.1**
KMRS	**Kahramanmaras**	**0.61**	**307**	*e*Pg	**Pg**	**13 28 50.9**	**+0.2**
URFA	**Urfa**	**1.09**	**73**	*e*PN	**Pg**	**13 28 58.5**	**-1.3**
URFA				*e*SN	**Sg**	**13 29 14.7**	**+0.7**
URFA	**Urfa**	**1.09**	**73**	*e*Pn	**Pg**	**13 28 58.5**	**-1.3**
URFA				*e*Sn	**Sg**	**13 29 14.7**	**+0.8**
AKCD	**Akcadag**	**1.20**	**16**	*i* P	**Pg**	**13 29 02.3**	**+0.3**
AKCD				*i* S	**Sg**	**13 29 18.7**	**+1.2**
AKCD	**Akcadag**	**1.20**	**16**	*i* P	**Pg**	**13 29 02.3**	**+0.3**
AKCD				*i* S	**Sg**	**13 29 18.7**	**+1.1**
MALT	**Malatya**	**1.38**	**31**	*e*PN	**Pn**	**13 29 05.1**	**+0.4**
MALT	**Malatya**	**1.38**	**31**	*e*Pn	**Pn**	**13 29 05.1**	**+0.4**
KOZT	**Kozan**	**1.39**	**285**	*e*PN	**Pn**	**13 29 04.7**	**-0.1**
KOZT	**Kozan**	**1.39**	**285**	*e*Pn	**Pn**	**13 29 04.7**	**-0.1**
MYA	**Malataya**	**1.39**	**31**	*e*PN	**Pn**	**13 29 05.2**	**+0.4**
MYA	**Malataya**	**1.39**	**31**	*e*Pn	**Pn**	**13 29 05.2**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.67**	**337**	*e*PN	**Pn**	**13 29 07.0**	**-1.7**
SARI	**SarD1z-Kayseri**	**1.67**	**337**	*e*Pn	**Pn**	**13 29 07.0**	**-1.6**
SVRC	**Sivrice-ELAZID**	**1.89**	**48**	*e*PN	**Pn**	**13 29 12.4**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.89**	**48**	*e*Pn	**Pn**	**13 29 12.4**	**+0.8**

*CSEM **05** 14:09:05.9, 38°.62N×36°.02E, h5km, MD2.9, After ISK*
*ISK **05** 14:09:05.9, 38°.62N×36°.02E, h5km, MD2.9*
*ISCJB **05** 14:09:08.5±1.9, 38°.62N±0°.04×36°.1E±0°.1, h17km±24km, Error ellipse: s-maj=17.7km s-min=7.1km az=175.3*
ISC 05 14:09:08.9±1.5, 38°.62N±0°.04×36°.1E±0°.1, h18km±14km, n13, σ0§96/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.26**	**77**	*i* P	**Pg**	**14 09 15.7**	**+0.9**
KOZT	**Kozan**	**1.15**	**190**	*e*PN	**Pn**	**14 09 29.2**	**-0.9**
KOZT				*e*SN	**Sn**	**14 09 45.4**	**+0.1**
YOZ	**Yozgat**	**1.18**	**330**	*e*PN	**Pn**	**14 09 28.8**	**-1.7**
YOZ	**Yozgat**	**1.18**	**330**	*e*Pn	**Pn**	**14 09 28.8**	**-1.7**
KMRS	**Kahramanmaras**	**1.28**	**150**	*e*PN	**Pn**	**14 09 32.0**	**+0.1**
KMRS	**Kahramanmaras**	**1.28**	**150**	*e*Pn	**Pn**	**14 09 32.0**	**+0.1**
SVSK	**Karacayir**	**1.48**	**28**	*e*PN	**Pn**	**14 09 34.7**	**+0.1**
SVSK	**Karacayir**	**1.48**	**28**	*e*Pn	**Pn**	**14 09 34.7**	**+0.1**
KARA	**Karaisali**	**1.58**	**211**	*e*PN	**Pn**	**14 09 35.5**	**-0.4**
KARA	**Karaisali**	**1.58**	**211**	*e*Pn	**Pn**	**14 09 35.5**	**-0.4**
GULE	**Gulek**	**1.68**	**218**	*i* P	**Pn**	**14 09 36.5**	**-0.9**
GULE				*i* S	**Sn**	**14 10 00.2**	**+1.7**
CORM	**Corum**	**1.92**	**325**	*e*PN	**Pn**	**14 09 40.3**	**-0.4**
CORM				*e*SN	**Sn**	**14 10 05.7**	**+1.4**
CORM	**Corum**	**1.92**	**325**	*e*Pn	**Pn**	**14 09 40.3**	**-0.4**
CORM				*e*Sn	**Sn**	**14 10 05.7**	**+1.3**

*ISCJB **05** 14:21:51.4±1.1, 35°.04N±0°.08×45°.0E±0°.1, h10km, Error ellipse: s-maj=18.6km s-min=6.0km az=148.4*
*KISR **05** 14:21:54.8±0.4, 34°.53N×44°.90E, h34km, ML3.3*
*CSEM **05** 14:21:57.0±0.6, 34°.83N×44°.87E, h10km, ML3.3, Error ellipse: s-maj=12.5km s-min=10.3km az=20.0*
ISC 05 14:21:53.5±1.0, 35°.01N±0°.08×44°.8E±0°.1, h10km, n8, σ1§07/16, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHD	**Baghdad**	**1.77**	**192**	*e*PN	**Pn**	**14 22 25.0**	**+0.8**
BHD				*e*Sn	**Sn**	**14 22 47.0**	**+0.3**
BHD	**Baghdad**	**1.77**	**192**	*e*Pn	**Pn**	**14 22 25.0**	**+0.8**
BHD				*e*Sn	**Sn**	**14 22 47.0**	**+0.3**
MSL	**Mosul**	**1.96**	**316**	*e*Pn	**Pn**	**14 22 27.0**	**+0.3**
MSL				*e*Sn	**Sn**	**14 22 50.0**	**-1.3**
MIB	**Mutribah**	**5.62**	**157**	*e*P	**Pn**	**14 23 18.1**	**+1.0**
MIB				*e*S	**Sn**	**14 24 20.1**	**-1.4**
MIB				AML	AML	14 24 23.2	
	comp=Z,16nm,0.6s						
MIB	**Mutribah**	**5.62**	**157**	*e*P	**Pn**	**14 23 18.0**	**+1.0**
MIB				*e*S	**Sn**	**14 24 20.1**	**-1.5**
RDF	**Al-Radifah**	**6.50**	**158**	*e*P	**Pn**	**14 23 30.4**	**+1.3**
RDF				*e*S	**Sn**	**14 24 42.0**	**-1.3**
RDF				AML	AML	14 24 42.6	
	comp=Z,10nm,0.5s						
RDF	**Al-Radifah**	**6.50**	**158**	*e*P	**Pn**	**14 23 30.5**	**+1.4**
RDF				*e*S	**Sn**	**14 24 42.0**	**-1.3**
QRN	**Al-Qurain**	**6.78**	**156**	*e*P	**Pn**	**14 23 34.2**	**+1.2**
QRN				*e*S	**Sn**	**14 24 49.4**	**-0.9**

IDC 05 14:23:23.6±17.0, 23°.00S×174°.14W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.9/18, mbtmp4.2/5, Error ellipse: s-maj=327.4km s-min=144.1km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.88**	**267**	P	P	14 30 34.5	+0.4
	3.6nm,0.5s,baz=90,slow=12,SNR=5.0						
STKA	**Stephens Creek**	**40.05**	**247**	P	P	14 31 00.4	-0.2
	1.7nm,0.6s,baz=106,slow=7.4,SNR=5.8						
ASAR	**Alice Springs**	**47.49**	**258**	P	P	14 32 00.2	-0.4
	0.4nm,0.3s,baz=94,slow=6.7,SNR=33						
WRA	**Warramunga Arr**	**47.85**	**263**	P	P	14 32 02.9	-0.6
	1.4nm,0.3s,baz=103,slow=8.2,SNR=65						
FITZ	**Fitzroy Crossi**	**56.28**	**263**	P	P	14 33 07.0	+0.7
	2.6nm,0.7s,baz=78,slow=8.5,SNR=6.5						

*ISCJB **05** 14:35:48.0±1.2, 24°.7N±0°.2×95°.0E±0°.2, h128km±12km, mb3.4/4, Error ellipse: s-maj=38.3km s-min=9.9km az=37.4*
*IDC **05** 14:35:50.4±3.4, 24°.65N×94°.94E, h138km±35km, mb3.1/4, mb1 3.2/5, mb1mx2.9/27, mbtmp3.0/5, Error ellipse: s-maj=84.9km s-min=15.8km az=60.0*
ISC 05 14:35:49.2±1.3, 24°.7N±0°.2×95°.0E±0°.2, h121km±14km, n13, σ0§69/16, mb3.4/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.97**	**274**	*e*P	**Pn**	**14 36 11.0**	**0.0**
IMP				*i* S	**Sn**	**14 36 26.0**	**-1.5**
SHL	**Shillong**	**2.94**	**287**	*e*PN	**Pn**	**14 36 36.0**	**+1.2**
SHL				*i* SN	**Sn**	**14 37 10.0**	**0.0**
CMAR	**Chiang Mai Arr**	**7.23**	**149**	P	**Pn**	**14 37 33.2**	**+0.8**
	0.2nm,0.3s,baz=325,slow=13,SNR=9.2						
GUN	**Gumba**	**8.78**	**293**	*e*P	**Pn**	**14 37 54.0**	**+0.8**
	9.9nm,0.3s						
GUN				*e*S	**Sn**	**14 39 29.7**	**-0.6**
PKI	**Pulchoki**	**9.07**	**290**	*e*P	**Pn**	**14 37 57.7**	**+0.5**
	6.5nm,0.4s						
PKIN	**Phulchoki**	**9.08**	**290**	*e*P	**Pn**	**14 37 57.7**	**+0.3**
	6.8nm,0.3s						
KKN	**Kakani**	**9.24**	**291**	*e*P	**Pn**	**14 37 59.8**	**+0.2**
	7.3nm,0.3s						
GKN	**Gorkha**	**9.85**	**292**	*e*P	**Pn**	**14 38 07.6**	**-0.1**
	6.8nm,0.3s						
KOLN	**Koldanda**	**10.67**	**289**	*e*P	**Pn**	**14 38 19.1**	**+0.4**
	3.2nm,0.3s						
MKAR	**Makanchi Array**	**24.26**	**338**	P	**P**	**14 40 55.2**	**+0.3**
	1.0nm,0.4s,mb3.5,baz=152,slow=9.4,SNR=25						
KURK	**Kurchatov**	**28.88**	**338**	P	**P**	**14 41 35.4**	**-0.8**
	0.4nm,0.4s,mb3.4,baz=146,slow=9.3,SNR=3.5						
WRA	**Warramunga Arr**	**58.62**	**136**	P	**P**	**14 45 33.0**	**-0.8**
	0.3nm,0.8s,mb3.4,baz=322,slow=7.4,SNR=6.9						
ASAR	**Alice Springs**	**61.12**	**139**	P	**P**	**14 45 50.2**	**-0.6**
	0.1nm,0.4s,mb3.2,baz=319,slow=6.6,SNR=10						

*CSEM **05** 14:38:10.3, 39°.45N×29°.71W, h0km, ML2.5, After PDA*
PDA 05 14:38:10.3±0.8, 39°.45N×29°.71W, h0km, MD3.6, ML2.5, Error ellipse: s-maj=14.3km s-min=6.3km az=54.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.14**	**136**	*e*S	Sg	14 38 42.0	-4.8
PCED				A		14 38 42.8	
	34nm,0.4s						
PCED	**Cedros**	**1.14**	**136**	*e*S	Sg	14 38 42.0	-4.8
CALA	**Caldeira**	**1.17**	**137**	*e*P	Pg	14 38 29.1	-3.7
CALA				*e*S	Sg	14 38 43.0	-4.9
CALA	**Caldeira**	**1.17**	**137**	*e*P	Pg	14 38 29.1	-3.7
CALA				*e*S	Sg	14 38 43.0	-4.9
HOR	**Horta**	**1.25**	**137**	*e*S	Sg	14 38 45.2	-5.3
HOR	**Horta**	**1.25**	**137**	*e*S	Sg	14 38 45.2	-5.3
ROSA	**Rosais**	**1.36**	**122**	*e*P	Pg	14 38 31.5	-4.8
ROSA				*e*S	Sg	14 38 47.8	-6.1
ROSA	**Rosais**	**1.36**	**122**	*e*P	Pg	14 38 31.5	-4.8
ROSA				*e*S	Sg	14 38 47.8	-6.1
PICO	**Pico**	**1.38**	**133**	*e*P	Pg	14 38 32.4	-4.4
PICO				*e*S	Sg	14 38 48.5	-6.2
PICO	**Pico**	**1.38**	**133**	*e*P	Pg	14 38 32.4	-4.4
PICO				*e*S	Sg	14 38 48.5	-6.2
PMAN	**Manadas**	**1.51**	**122**	*e*S	Sg	14 38 51.1	-7.6
PMAN				A		14 38 51.4	
	26nm,0.2s						
PMAN	**Manadas**	**1.51**	**122**	*e*S	Sg	14 38 51.1	-7.6
PID	**Ribeirinha**	**1.60**	**129**	*e*P	Pn	14 38 34.7	-5.1
PID				*e*S	Sn	14 38 53.3	-7.8
PID	**Ribeirinha**	**1.60**	**129**	*e*P	Pn	14 38 34.7	-5.1
PID				*e*S	Sn	14 38 53.3	-7.8

*IDC **05** 14:53:12.9±8.3, 6°.67S×129°.61E, h54km±79km, mb3.7/4, mb1 4.0/7, mb1mx3.6/18, mbtmp3.8/7, ML4.1/3, Error ellipse: s-maj=96.3km s-min=25.9km az=58.0*
*NEIC **05** 14:53:20.0±2.9, 7°.08S×129°.04E, h121km±31km, mb4.2/1, Error ellipse: s-maj=39.5km s-min=21.6km az=63.0*
*ISCJB **05** 14:53:22.3±0.7, 7°.22S±0°.07×129°.2E±0°.1, h167km±10km, mb3.6/4, Error ellipse: s-maj=22.7km s-min=8.7km az=161.8*
*DJA **05** 14:53:23, 7°.20S×129°.20E, h174km, MLv4.2/3*
ISC 05 14:53:23.2±0.7, 7°.21S±0°.07×129°.1E±0°.1, h153km±10km, n19, σ1§21/23, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.62**	**345**	P	**Pn**	**14 54 18.4**	**-0.1**
TLE	**Tual**	**3.92**	**67**	P	**Pn**	**14 54 22.3**	**-0.2**
NLAI	**Namlea**	**4.42**	**333**	P	**Pn**	**14 54 30.4**	**+1.3**
KAKA	**Kakadu**	**6.37**	**149**	*e*P	**Pn**	**14 54 54.6**	**-0.3**
	253nm,0.6s						
KAKA	**Kakadu**	**6.37**	**149**	P	**Pn**	**14 54 54.7**	**-0.2**
	132nm,0.6s						
LBMI	**Labuha**	**6.72**	**346**	P	**Pn**	**14 55 00.2**	**+0.6**
	54nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.35**	**197**	P	**Pn**	**14 56 00.3**	**-0.6**
	0.3nm,0.3s,baz=19,slow=11,SNR=50						
FITZ				S	**Sn**	**14 57 59.3**	**-7.1**
	1.8nm,0.3s,baz=83,slow=21,SNR=9.8						
FITZ	**Fitzroy Crossi**	**11.35**	**197**	*e*P	**Pn**	**14 56 00.0**	**-0.8**
FITZ				S	**Sn**	**14 57 59.3**	**-7.1**
FITZ	**Fitzroy Crossi**	**11.35**	**197**	P	**Pn**	**14 56 00.1**	**-0.8**
WRAB	**Tennant Creek**	**13.63**	**159**	*e*P	**Pn**	**14 56 28.5**	**-1.8**
	7.1nm,0.6s						
WRAB	**Tennant Creek**	**13.63**	**159**	P	**Pn**	**14 56 27.6**	**-2.7**
WRA	**Warramunga Arr**	**13.63**	**159**	P	**Pn**	**14 56 28.7**	**-1.6**
	1.8nm,0.3s,baz=346,slow=13,SNR=38						
WRA				S	**Sn**	**14 58 52.6**	**-8.9**
	0.5nm,0.3s,baz=335,slow=22,SNR=3.8						
ASAR	**Alice Springs**	**17.00**	**165**	P	**Pn**	**14 57 13.7**	**+1.8**
	1.1nm,0.3s,baz=344,slow=10,SNR=239						
ASAR				S	**S**	**15 00 23.9**	**+3.2**
	0.3nm,0.3s,baz=347,slow=24,SNR=6.2						
STKA	**Stephens Creek**	**27.16**	**156**	P	**P**	**14 58 54.2**	**+1.9**
	1.7nm,0.9s,mb3.6,baz=324,slow=14,SNR=2.3						
STKA	**Stephens Creek**	**27.16**	**156**	P	**P**	**14 58 54.2**	**+1.9**
MK31	**Makanchi Array**	**67.92**	**327**	*e*P	**P**	**15 04 05.1**	**-0.2**
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**15 04 04.9**	**-0.4**
	0.5nm,0.3s,mb3.7,baz=128,slow=7.4,SNR=19						
ZALV	**Zalesovo Beam**	**71.38**	**334**	P	**P**	**15 04 24.9**	**-1.4**
	0.5nm,0.4s,mb3.6,baz=129,slow=5.7,SNR=3.3						
KURK	**Kurchatov**	**72.24**	**329**	P	**P**	**15 04 31.4**	**-0.2**
	0.7nm,0.5s,mb3.6,baz=123,slow=5.2,SNR=7.1						

*ISCJB **05** 15:24:40.5±0.5, 37°.36N±0°.03×72°.08E±0°.06, h146km±6km, mb3.9/16, Error ellipse: s-maj=8.7km s-min=3.6km az=160.3*
*IDC **05** 15:24:42.4±4.7, 37°.44N×72°.08E, h146km±35km, mb3.4/8, mb1 3.5/13, mb1mx3.3/30, mbtmp3.5/13, Error ellipse: s-maj=38.0km s-min=23.8km az=179.0*
*BJI **05** 15:24:42.7, 37°.62N×71°.99E, h153km, mB4.7/4, mb4.5/9*
*NEIC **05** 15:24:44.3±0.8, 37°.53N×71°.99E, h160km±8km, mb3.9/4, Error ellipse: s-maj=11.5km s-min=9.3km az=132.0*
*NNC **05** 15:24:49.4±4.3, 37°.96N×71°.98E, h202km±35km, mb2.9, mpv4.0, Error ellipse: s-maj=38.0km s-min=21.4km az=11.0*
ISC 05 15:24:40.9±0.5, 37°.34N±0°.03×72°.02E±0°.06, h134km±5km, h165km±2.8km: pP-P, n79, σ1§40/104, mb3.9/16, 10C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.51**	**182**	P	**Pn**	**15 25 39.8**	**+5.4**
CEP				S	**Sn**	**15 26 12.0**	**-3.7**
KBL	**Kabul**	**3.69**	**222**	*e*P	**Pn**	**15 25 42.8**	**+6.0**
KBL				*e*S	**Sn**	**15 26 27.3**	**+7.3**
KSH	**Kashi**	**3.79**	**54**	⇓*i*P	**Pn**	**15 25 35.5**	**-2.4**
KSH				*e*S	**Sn**	**15 26 14.7**	**-7.4**
KSH				smax			
	comp=N,920nm,0.7s						
KSH				smax			
	comp=E,960nm,0.7s						
KSH				SMZ			
	comp=E,260nm,4.1s						
CHCP	**Chirah Chowk**	**3.81**	**164**	P	**Pn**	**15 25 43.8**	**+5.5**
AML	**Almayashu**	**4.96**	**15**	P	**Pn**	**15 25 55.6**	**+2.2**
	SNR=225						
AML	**Almayashu**	**4.96**	**15**	*e*P	**Pn**	**15 25 55.6**	**+2.2**
AML				*e*S	**Sn**	**15 26 37.0**	**-13**
UCH	**Uchtor**	**5.24**	**21**	P	**Pn**	**15 25 59.6**	**+2.3**
	SNR=153						
UCH	**Uchtor**	**5.24**	**21**	*e*P	**Pn**	**15 25 59.3**	**+2.0**
	comp=E,55nm,0.4s						
KZA	**Kyzart**	**5.34**	**27**	P	**Pn**	**15 26 00.2**	**+1.6**
	SNR=18						
EKS2	**Erkin-Say**	**5.48**	**14**	P	**Pn**	**15 26 02.5**	**+2.1**
	SNR=26						
EKS2	**Erkin-Say**	**5.48**	**14**	*e*P	**Pn**	**15 26 02.2**	**+1.8**
	comp=E,66nm,0.7s						
EKS2				*e*S	**Sn**	**15 27 00.3**	**-2.2**
AAK	**Ala-Archa**	**5.62**	**19**	P	**Pn**	**15 26 04.7**	**+2.5**
	SNR=83						
AAK	**Ala-Archa**	**5.62**	**19**	P	**Pn**	**15 26 04.6**	**+2.3**
	comp=E,0.2nm,0.3s,baz=177,slow=5.9,SNR=107						
AAK				S	**Sn**	**15 27 04.6**	**-1.1**
	comp=E,0.1nm,0.3s,baz=150,slow=22,SNR=16						
AAK	**Ala-Archa**	**5.62**	**19**	*e*P	**Pn**	**15 26 04.2**	**+1.9**
	comp=E,40nm,0.5s						
AAK				*e*S	**Sn**	**15 26 58.1**	**-7.5**
THN	**Thein Dam**	**5.76**	**147**	*e*P	**Pn**	**15 26 07.2**	**+2.9**
THN				*e*S	**Sn**	**15 27 09.6**	**+0.3**
KBK	**Karagaybulak**	**5.76**	**22**	P	**Pn**	**15 26 07.3**	**+3.0**
	SNR=25						
KK31	**Karatay Array**	**5.87**	**349**	⇑P	**Pn**	**15 26 07.5**	**+1.9**
	comp=E,12nm,0.4s,baz=172,slow=13						
KK31				⇑S	**Sn**	**15 27 09.0**	**-2.8**
	comp=E,64nm,0.6s,baz=166,slow=22						
CHMS	**Chumysh**	**6.03**	**19**	P	**Pn**	**15 26 09.8**	**+2.1**
	SNR=24						
TKM2	**Tokmak 2**	**6.21**	**25**	⇓P	**Pn**	**15 26 11.8**	**+1.6**
	comp=E,9.0nm,0.7s						
TKM2				⇑S	**Sn**	**15 27 19.4**	**-0.6**
	comp=E,18nm,0.8s						
TKM2	**Tokmak 2**	**6.21**	**25**	P	**Pn**	**15 26 11.9**	**+1.7**
	SNR=9.6						
TKM2	**Tokmak 2**	**6.21**	**25**	*e*P	**Pn**	**15 26 11.7**	**+1.5**
	comp=E,8.8nm,0.5s						
TKM2				*e*S	**Sn**	**15 27 18.6**	**-1.3**
USP	**Ospenovka**	**6.21**	**17**	P	**Pn**	**15 26 12.3**	**+2.0**
	SNR=7.3						
SDNR	**Sundarnagar**	**7.12**	**144**	*e*P	**Pn**	**15 26 23.1**	**+0.6**
SDNR				*ex*	x	15 27 40.1	
SMLA	**Simla**	**7.52**	**144**	⇓*i*P	**Pn**	**15 26 27.3**	**-0.6**
SMLA				*i* S	**Sn**	**15 27 46.5**	**-5.2**
KLP	**Kalpa**	**7.75**	**137**	*e*P	**Pn**	**15 26 32.3**	**+1.3**
KLP				*e*S	**Sn**	**15 27 50.0**	**-7.2**
KLP				AML	AML	15 28 00.9	
	comp=N,109nm,0.3s						
KLP				AML	AML	15 28 01.4	
	comp=E,154nm,0.3s						
KKR	**Kurukshetra**	**8.37**	**150**	*e*P	**Pn**	**15 26 39.9**	**+0.4**
BHGR	**Bahadurgarh**	**9.56**	**153**	*ex*	x	15 27 52.8	
NDI	**New Delhi**	**9.67**	**152**	*e*P	**Pn**	**15 26 56.0**	**-0.8**
NDI				*e*S	**Sn**	**15 28 36.0**	**-7.7**
KHET	**Khetri**	**9.77**	**160**	*e*P	**Pn**	**15 26 58.2**	**+0.1**
KHET				*e*S	**Sn**	**15 28 38.8**	**-7.4**
KHET				AML	AML	15 28 43.8	
	comp=E,33nm,0.6s						
KHET				AML	AML	15 28 45.9	
	comp=N,25nm,0.4s						
AYAN	**Aya Nagar**	**9.82**	**153**	*e*P	**Pn**	**15 26 58.4**	**-0.4**
SONA	**Sohna**	**10.01**	**153**	*e*P	**Pn**	**15 27 00.5**	**-0.9**
SONA				*e*S	**Sn**	**15 28 45.0**	**-7.0**
SONA				AML	AML	15 28 50.0	
	comp=N,28nm,0.3s						
SONA				AML	AML	15 28 50.0	
	comp=E,41nm,0.3s						
AGRA	**Agra**	**11.25**	**152**	*e*P	**Pn**	**15 27 18.1**	**+0.3**
AGRA				*e*S	**Sn**	**15 29 14.4**	**-7.6**
AGRA				AML	AML	15 29 21.8	
	comp=E,54nm,0.3s						
AGRA				AML	AML	15 29 22.9	
	comp=N,48nm,0.1s						
MK31	**Makanchi Array**	**12.13**	**36**	⇑P	**Pn**	**15 27 28.4**	**-0.8**
	comp=N,1.3nm,0.4s,baz=217,slow=8.9,SNR=4.5						
MKAR	**Makanchi Array**	**12.13**	**36**	P	**Pn**	**15 27 28.4**	**-0.8**
	comp=N,0.3nm,0.3s,baz=214,slow=14,SNR=15						
PYUN	**Piuthan**	**13.03**	**132**	*e*P	**Pn**	**15 27 39.7**	**-1.4**
	comp=N,38nm,0.5s						
WMQ	**Urumqi**	**13.55**	**57**	*e*P	**Pn**	**15 27 51.3**	**+3.8**
KOLN	**Koldanda**	**13.64**	**131**	*e*P	**Pn**	**15 27 48.0**	**-0.9**
	comp=N,25nm,0.3s						
KURBB	**Kurchatov Arra**	**14.07**	**17**	⇑P	**Pn**	**15 27 51.5**	**-2.7**
	comp=N,1.3nm,0.8s						
GKN	**Gorkha**	**14.11**	**128**	*e*P	**Pn**	**15 27 53.9**	**-1.0**
	comp=N,40nm,0.3s						
KURK	**Kurchatov**	**14.18**	**17**	⇑P	**Pn**	**15 27 52.8**	**-2.7**
	comp=N,8.0nm,0.9s						
KURK	**Kurchatov**	**14.18**	**17**	P	**Pn**	**15 27 51.1**	**-4.4**
	comp=N,0.2nm,0.3s,baz=207,slow=10,SNR=9.3						
KURK	**Kurchatov**	**14.18**	**17**	*e*P	**Pn**	**15 27 58.5**	**+3.0**
KKN	**Kakani**	**14.67**	**127**	*e*P	**Pn**	**15 28 00.5**	**-1.4**
	comp=N,37nm,0.6s						
AB31	**Akbulak array**	**14.78**	**327**	⇓P	**Pn**	**15 28 04.5**	**+1.4**
	comp=N,5.8nm,0.5s,baz=74,slow=1.6,SNR=3.6						
AB31				⇓S	**Sn**	**15 30 33.6**	**-13**
	comp=N,2.4nm,0.5s						
ABKAR	**Akbulak array**	**14.78**	**327**	*e*P	**Pn**	**15 28 01.6**	**-1.5**
	comp=N,10nm,0.6s						
ABKAR				*e*S	**Sn**	**15 30 30.8**	**-16**
PKIN	**Phulchoki**	**14.89**	**127**	*e*P	**Pn**	**15 28 03.5**	**-1.2**
	comp=N,25nm,0.5s						
PKIN	**Phulchoki**	**14.89**	**127**	*e*P	**Pn**	**15 28 04.2**	**-0.5**
	comp=N,19nm,0.2s						
PKI	**Pulchoki**	**14.90**	**127**	*e*P	**Pn**	**15 28 04.3**	**-0.5**
	comp=N,15nm,0.2s						
GUN	**Gumba**	**14.98**	**125**	*e*P	**Pn**	**15 28 04.5**	**-1.2**
	comp=N,43nm,0.4s						
VOSK	**Vostochnaya**	**15.40**	**358**	⇑P	**Pn**	**15 28 09.8**	**-1.0**
	comp=N,0.9nm,0.5s						
BVA0	**Borovoye Array**	**15.73**	**356**	⇓P	**Pn**	**15 28 13.8**	**-1.0**
	comp=N,0.3nm,0.8s,baz=163,slow=12,SNR=16						
BVA0				⇓S	**S**	**15 31 02.8**	**-12**
	comp=N,1.3nm,1.8s,baz=173,slow=25,SNR=3.9						
BVAR	**Borovoye Array**	**15.73**	**356**	P	**Pn**	**15 28 13.7**	**-1.1**
	comp=N,0.5nm,0.3s,baz=163,slow=12,SNR=16						
BRVK	**Borovoye**	**15.77**	**356**	*e*P	**Pn**	**15 28 13.9**	**-1.3**
	comp=N,2.0nm,0.4s						
AKTK	**Aktyubinsk**	**16.49**	**327**	P	**Pn**	**15 28 25.2**	**+1.0**
AKTK				S	**S**	**15 31 22.9**	**-5.0**
AKTO	**Aktyubinsk**	**16.49**	**327**	⇑P	**Pn**	**15 28 24.7**	**+0.5**
	comp=N,0.8nm,0.6s				

BJI	**Beijing**	**34.31**	**72**	P	**P**	**15 31 10.5**	**-3.9**
BJI				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.5							
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**15 31 39.5**	**+0.3**
comp=Z,2.3nm,0.7s,mb3.9,baz=115,slow=12,SNR=4.2							
FINES	**FINESS Array B**	**37.25**	**325**	P	**P**	**15 31 39.5**	**+0.3**
CN2	**Changchun**	**40.50**	**64**	*e*P	**P**	**15 32 07.8**	**+1.4**
ARCES	**ARCESS Array B**	**40.69**	**337**	P	**P**	**15 32 07.8**	**+0.2**
comp=Z,0.7nm,0.4s,mb3.6,baz=117,slow=8.8,SNR=12							
HFS	**Hagfors**	**42.92**	**321**	P	**P**	**15 32 25.9**	**0.0**
comp=Z,1.5nm,0.7s,mb3.8,baz=84,slow=14,SNR=4.1							
MDJ	**Mudanjiang**	**43.28**	**62**	P	**P**	**15 32 28.6**	**-0.4**
MDJ				pmax	pmax		
comp=Z,57nm,3.8s							
NOA	**NORSAR Array B**	**44.21**	**322**	P	**P**	**15 32 36.1**	**-0.1**
comp=Z,0.4nm,0.5s,mb3.3,baz=97,slow=7.2,SNR=3.9							
SPITS	**Spitsbergen Ar**	**46.87**	**347**	P	**P**	**15 32 57.4**	**+0.6**
comp=Z,2.4nm,0.8s,mb3.9,baz=116,slow=22,SNR=3.6							
TORD	**Torodi Ar. Bea**	**66.56**	**269**	P	**P**	**15 35 16.4**	**-0.3**
comp=Z,0.3nm,0.4s,mb3.4,baz=45,slow=5.5,SNR=5.0							
TORD	**Torodi Ar. Bea**	**66.56**	**269**	P	**P**	**15 35 16.4**	**-0.3**
YKA	**Yellowknife Ar**	**80.37**	**3**	P	**P**	**15 36 35.9**	**-0.9**
comp=Z,0.1nm,0.3s,mb2.9,baz=348,slow=5.2,SNR=5.2							

IDC 05 15:54:18.2±5.2, 39°.42N×110°.41E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, ML2.8/1, Error ellipse: s-maj=110.0km s-min=24.2km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**8.90**	**342**	Pn	Pn	15 56 28.1	+0.2
0.1nm,0.3s,baz=154,slow=13,SNR=8.6							
SONM				Lg		15 58 58.4	
0.1nm,0.3s,baz=165,slow=29,SNR=4.1							
MKAR	**Makanchi Array**	**21.73**	**299**	P	P	15 59 11.8	+0.8
1.5nm,0.9s,baz=116,slow=10,SNR=7.9							
CMAR	**Chiang Mai Arr**	**23.13**	**209**	P	P	15 59 25.6	-0.5
1.4nm,0.8s,baz=11,slow=9.0,SNR=10							
KURK	**Kurchatov**	**24.94**	**307**	P	P	15 59 43.4	+0.5
1.5nm,1.1s,baz=106,slow=8.5,SNR=5.4							

*ISCJB **05** 15:59:50.7±0.4, 38°.52N±0°.01×21°.54E±0°.02, h6km±2km, Error ellipse: s-maj=3.2km s-min=2.2km az=160.5*
*CSEM **05** 15:59:51.8±0.1, 38°.50N×21°.57E, h15km, ML3.0, Error ellipse: s-maj=3.8km s-min=2.7km az=66.0*
*ATH **05** 15:59:51.1, 38°.50N×21°.56E, h23km±1km, MD3.4/22, ML3.0*
*NEIC **05** 15:59:51.1, 38°.50N×21°.56E, h23km, MD3.4(ATH), After ATH.*
*THE **05** 15:59:51.4, 38°.51N×21°.55E, h6km, ML3.5/11, Error ellipse: s-maj=0.9km s-min=0.5km az=119.0*
ISC 05 15:59:51.5±0.3, 38°.51N±0°.01×21°.54E±0°.02, h10km±2km, n92, σ1°.06/153, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.30**	**106**	*e*PB	**Pg**	**15 59 57.6**	**+0.2**
EFP				*e*SB	**Sg**	**16 00 03.0**	**+1.6**
EFP	**Efpalio**	**0.30**	**106**	P	**Pg**	**15 59 57.5**	**+0.1**
EFP				S	**Sg**	**16 00 02.3**	**+0.9**
EFP	**Efpalio**	**0.30**	**106**	*e*Pb	**Pg**	**15 59 57.6**	**+0.2**
EFP				S	**Sg**	**16 00 02.3**	**+0.9**
UPR	**University Cam**	**0.30**	**140**	*e*PB	**Pg**	**15 59 57.8**	**+0.4**
UPR	**University Cam**	**0.30**	**140**	P	**Pg**	**15 59 57.6**	**+0.2**
UPR				S	**Sg**	**16 00 02.4**	**+1.0**
UPR	**University Cam**	**0.30**	**140**	P	**Pg**	**15 59 57.6**	**+0.2**
UPR				S	**Sg**	**16 00 02.4**	**+1.0**
LAKA	**Lakka**	**0.43**	**128**	P	**Pg**	**15 59 59.6**	**-0.4**
LAKA				S	**Sg**	**16 00 06.3**	**+0.5**
LAKA	**Lakka**	**0.43**	**128**	P	**Pg**	**15 59 59.6**	**-0.4**
LAKA				S	**Sg**	**16 00 06.3**	**+0.5**
TRIZ	**Trizonia**	**0.44**	**109**	P	**Pg**	**15 59 59.6**	**-0.5**
TRIZ				S	**Sg**	**16 00 06.2**	**+0.3**
TRIZ	**Trizonia**	**0.44**	**109**	P	**Pg**	**15 59 59.6**	**-0.5**
TRIZ				S	**Sg**	**16 00 06.2**	**+0.3**
RLS	**Riolos of Patr**	**0.46**	**188**	*e*PB	**Pg**	**16 00 00.4**	**0.0**
RLS				*e*SB	**Sg**	**16 00 07.8**	**+1.4**
RLS	**Riolos of Patr**	**0.46**	**188**	*e*Pb	**Pg**	**16 00 00.4**	**0.0**
RLS				*e*Sb	**Sg**	**16 00 07.8**	**+1.4**
EVR	**Evrytania**	**0.46**	**27**	*e*PB	**Pg**	**16 00 00.5**	**+0.1**
EVR				*e*SB	**Sg**	**16 00 07.8**	**+1.3**
EVR	**Evrytania**	**0.46**	**27**	*e*Pb	**Pg**	**16 00 00.5**	**+0.1**
EVR				*e*Sb	**Sg**	**16 00 07.8**	**+1.3**
KALE	**Kalithea**	**0.48**	**104**	P	**Pg**	**16 00 00.4**	**-0.5**
KALE				S	**Sg**	**16 00 08.2**	**+0.9**
KALE	**Kalithea**	**0.48**	**104**	P	**Pg**	**16 00 00.4**	**-0.5**
KALE				S	**Sg**	**16 00 08.2**	**+0.9**
KFL	**Anninata**	**0.72**	**236**	P	**Pg**	**16 00 04.5**	**-0.8**
AGG	**Agios Georgios**	**0.80**	**50**	*e*PB	**Pg**	**16 00 06.1**	**-0.8**
AGG	**Agios Georgios**	**0.80**	**50**	P	**Pg**	**16 00 06.0**	**-0.9**
AGG				S	**Sg**	**16 00 18.0**	**+0.6**
AGG	**Agios Georgios**	**0.80**	**50**	*e*Pb	**Pg**	**16 00 06.1**	**-0.8**
AGG				S	**Sg**	**16 00 18.0**	**+0.6**
VLS	**Valsamata**	**0.82**	**246**	*e*PN	**Pg**	**16 00 06.1**	**-1.2**
VLS	**Valsamata**	**0.82**	**246**	P	**Pg**	**16 00 06.0**	**-1.3**
VLS				S	**Sg**	**16 00 19.1**	**+1.1**
VLS	**Valsamata**	**0.82**	**246**	P	**Pg**	**16 00 06.0**	**-1.3**
VLS				S	**Sg**	**16 00 19.1**	**+1.1**
GUR	**Goura**	**0.85**	**132**	*e*PB	**Pg**	**16 00 06.3**	**-1.6**
GUR				*e*SN	**Sg**	**16 00 19.1**	**+0.1**
GUR	**Goura**	**0.85**	**132**	P	**Pg**	**16 00 06.2**	**-1.7**
GUR				S	**Sg**	**16 00 19.4**	**+0.4**
GUR	**Goura**	**0.85**	**132**	*e*Pb	**Pg**	**16 00 06.3**	**-1.6**
GUR				*e*Sn	**Sg**	**16 00 19.1**	**+0.1**
GUR				S	**Sg**	**16 00 19.4**	**+0.4**
THL	**Klokotos Trika**	**1.11**	**19**	*e*PN	**Pg**	**16 00 11.9**	**-1.1**
THL	**Klokotos Trika**	**1.11**	**19**	P	**Pb**	**16 00 11.8**	**-1.1**
THL				S	**Sg**	**16 00 28.8**	**+1.3**
THL	**Klokotos Trika**	**1.11**	**19**	P	**Pb**	**16 00 11.8**	**-1.1**
THL				S	**Sg**	**16 00 28.8**	**+1.3**
LKR	**Lokris**	**1.15**	**83**	*e*PN	**Pn**	**16 00 13.3**	**-0.3**
LKR	**Lokris**	**1.15**	**83**	P	**Pb**	**16 00 12.7**	**-0.8**
LKR				S	**Sb**	**16 00 29.0**	**+0.6**
LKR	**Lokris**	**1.15**	**83**	P	**Pb**	**16 00 12.7**	**-0.8**
LKR	**Lokris**	**1.15**	**83**	*e*Pn	**Pn**	**16 00 13.3**	**-0.3**
LKR				S	**Sb**	**16 00 29.0**	**+0.6**
LTK	**Loutraki**	**1.22**	**113**	*e*PN	**Pn**	**16 00 13.7**	**-0.9**
LTK				*e*SN	**Sn**	**16 00 31.5**	**+0.3**
LTK	**Loutraki**	**1.22**	**113**	P	**Pn**	**16 00 13.3**	**-1.3**
LTK				S	**Sb**	**16 00 31.0**	**+0.5**
LTK	**Loutraki**	**1.22**	**113**	P	**Pn**	**16 00 13.3**	**-1.3**
LTK	**Loutraki**	**1.22**	**113**	*e*Pn	**Pn**	**16 00 13.7**	**-0.9**
LTK				S	**Sb**	**16 00 31.0**	**+0.5**
LTK				*e*Sn	**Sn**	**16 00 31.5**	**+0.3**
JAN	**Janina**	**1.27**	**335**	*e*PN	**Pn**	**16 00 15.9**	**+0.7**
JAN	**Janina**	**1.27**	**335**	*e*Pn	**Pn**	**16 00 15.9**	**+0.7**
MEV	**Metsovon**	**1.30**	**349**	P	**Pn**	**16 00 15.3**	**-0.4**
MEV				S	**Sb**	**16 00 33.8**	**+1.1**
MEV	**Metsovon**	**1.30**	**349**	P	**Pn**	**16 00 15.3**	**-0.4**
MEV				S	**Sb**	**16 00 33.8**	**+1.1**
VLX	**Vlachokerasia**	**1.32**	**150**	*e*PN	**Pn**	**16 00 15.7**	**-0.2**
VLX				*e*SN	**Sn**	**16 00 34.1**	**+0.6**
VLX	**Vlachokerasia**	**1.32**	**150**	P	**Pn**	**16 00 14.6**	**-1.3**
VLX				S	**Sb**	**16 00 34.4**	**+1.2**
VLX	**Vlachokerasia**	**1.32**	**150**	P	**Pn**	**16 00 14.6**	**-1.3**
VLX	**Vlachokerasia**	**1.32**	**150**	*e*Pn	**Pn**	**16 00 15.7**	**-0.2**
VLX				*e*Sn	**Sn**	**16 00 34.1**	**+0.6**
VLX				S	**Sb**	**16 00 34.4**	**+1.2**
ITM	**Ithomi**	**1.36**	**167**	*e*PN	**Pn**	**16 00 16.3**	**-0.3**
ITM	**Ithomi**	**1.36**	**167**	P	**Pn**	**16 00 15.4**	**-1.2**
ITM				S	**Sb**	**16 00 35.2**	**+0.7**
ITM	**Ithomi**	**1.36**	**167**	P	**Pn**	**16 00 15.4**	**-1.2**
ITM	**Ithomi**	**1.36**	**167**	*e*Pn	**Pn**	**16 00 16.3**	**-0.3**
ITM				S	**Sb**	**16 00 35.2**	**+0.7**
IGT	**Igoumenitsa**	**1.39**	**318**	P	**Pn**	**16 00 16.8**	**-0.2**
IGT				S	**Sb**	**16 00 36.5**	**+1.1**
IGT	**Igoumenitsa**	**1.39**	**318**	P	**Pn**	**16 00 16.8**	**-0.2**
IGT				S	**Sb**	**16 00 36.5**	**+1.1**
NEO	**Neokhori**	**1.53**	**58**	*e*PB	**Pb**	**16 00 18.1**	**-1.9**
PYL	**PYLOS**	**1.62**	**174**	*e*PN	**Pn**	**16 00 20.0**	**-0.1**
PYL	**PYLOS**	**1.62**	**174**	P	**Pn**	**16 00 20.5**	**+0.4**
PYL				S	**Sn**	**16 00 42.0**	**+1.0**
PYL	**PYLOS**	**1.62**	**174**	*e*Pn	**Pn**	**16 00 20.0**	**-0.1**
PYL	**PYLOS**	**1.62**	**174**	P	**Pn**	**16 00 20.5**	**+0.4**
PYL				S	**Sn**	**16 00 42.0**	**+1.0**
DID	**Didima**	**1.67**	**126**	*e*PN	**Pn**	**16 00 20.8**	**0.0**
DID	**Didima**	**1.67**	**126**	P	**Pn**	**16 00 20.6**	**-0.2**
DID				S	**Sn**	**16 00 43.0**	**+0.7**
DID	**Didima**	**1.67**	**126**	*e*Pn	**Pn**	**16 00 20.8**	**0.0**
DID				S	**Sn**	**16 00 43.0**	**+0.7**
NAIG	**Nisos Aigina**	**1.71**	**115**	*e*PN	**Pn**	**16 00 21.7**	**+0.4**
NAIG	**Nisos Aigina**	**1.71**	**115**	*e*Pn	**Pn**	**16 00 21.7**	**+0.4**
LIT	**Litokhoron**	**1.75**	**25**	*e*PB	**Pb**	**16 00 21.6**	**-2.1**
LIT	**Litokhoron**	**1.75**	**25**	P	**Pn**	**16 00 21.1**	**-0.8**
LIT				S	**Sn**	**16 00 44.7**	**+0.4**
LIT	**Litokhoron**	**1.75**	**25**	P	**Pn**	**16 00 21.1**	**-0.8**
LIT				S	**Sn**	**16 00 44.7**	**+0.4**
ATH	**Athens Observa**	**1.79**	**107**	*e*PB	**Pb**	**16 00 21.0**	**-3.4**
KZN	**Kozani**	**1.80**	**6**	*e*PN	**Pn**	**16 00 24.2**	**+1.6**
KZN	**Kozani**	**1.80**	**6**	P	**Pn**	**16 00 24.6**	**+2.0**
KZN				S	**Sn**	**16 00 46.2**	**+0.6**
KZN	**Kozani**	**1.80**	**6**	*e*Pn	**Pn**	**16 00 24.2**	**+1.6**
KZN	**Kozani**	**1.80**	**6**	P	**Pn**	**16 00 24.6**	**+2.0**
KZN				S	**Sn**	**16 00 46.2**	**+0.6**
KEK	**Kerkira**	**1.81**	**312**	*e*PN	**Pn**	**16 00 23.4**	**+0.6**
KEK	**Kerkira**	**1.81**	**312**	P	**Pn**	**16 00 23.1**	**+0.3**
KEK				S	**Sn**	**16 00 47.0**	**+1.2**
KEK	**Kerkira**	**1.81**	**312**	P	**Pn**	**16 00 23.1**	**+0.3**
KEK	**Kerkira**	**1.81**	**312**	*e*Pn	**Pn**	**16 00 23.4**	**+0.6**
KEK				S	**Sn**	**16 00 47.0**	**+1.2**
ATHU	**Athens Univers**	**1.85**	**106**	P	**Pn**	**16 00 23.3**	**+0.1**
ATHU				S	**Sn**	**16 00 47.8**	**+1.2**
ATHU	**Athens Univers**	**1.85**	**106**	P	**Pn**	**16 00 23.3**	**+0.1**
ATHU				S	**Sn**	**16 00 47.8**	**+1.2**
VLI	**Veliai**	**2.10**	**148**	*e*PB	**Pb**	**16 00 26.7**	**-3.0**
PAIG	**Paliouri**	**2.18**	**49**	P	**Pn**	**16 00 26.4**	**-1.4**
PAIG	**Paliouri**	**2.18**	**49**	P	**Pn**	**16 00 26.4**	**-1.4**
FNA	**Florina**	**2.27**	**357**	P	**Pn**	**16 00 28.8**	**-0.3**
FNA	**Florina**	**2.27**	**357**	P	**Pn**	**16 00 28.8**	**-0.3**
PLG	**Polygyros**	**2.37**	**38**	P	**Pn**	**16 00 29.4**	**-1.1**
PLG	**Polygyros**	**2.37**	**38**	P	**Pn**	**16 00 29.4**	**-1.1**
KYTH	**Kithira**	**2.52**	**151**	*e*PB	**Pb**	**16 00 34.4**	**-2.5**
OUR	**Ouranopolis**	**2.62**	**45**	P	**Pn**	**16 00 32.6**	**-1.3**
OUR				S	**Sn**	**16 01 06.1**	**+0.3**
OUR	**Ouranopolis**	**2.62**	**45**	P	**Pn**	**16 00 32.6**	**-1.3**
OUR				S	**Sn**	**16 01 06.1**	**+0.3**
OHR	**Ohrid**	**2.66**	**348**	*e*Pn	**Pn**	**16 00 31.9**	**-2.6**
OHR				*e*Sg	**Sg**	**16 01 19.6**	**+2.6**
OHR	**Ohrid**	**2.66**	**348**	*e*Pn	**Pn**	**16 00 31.8**	**-2.6**
OHR				*e*Sg	**Sg**	**16 01 19.6**	**+2.6**
SOH	**Sokhos**	**2.70**	**31**	*e*PB	**Pb**	**16 00 37.5**	**-2.4**
SOH	**Sokhos**	**2.70**	**31**	P	**Pn**	**16 00 35.4**	**+0.5**
SOH				S	**Sn**	**16 01 08.7**	**+1.1**
SOH	**Sokhos**	**2.70**	**31**	P	**Pn**	**16 00 35.4**	**+0.5**
SOH				S	**Sn**	**16 01 08.7**	**+1.1**
KRUS	**Krusevo**	**2.87**	**356**	*e*Pn	**Pn**	**16 00 36.4**	**-0.8**
KRUS				*e*Sg	**Sg**	**16 01 24.0**	**+0.5**
KRUS	**Krusevo**	**2.87**	**356**	*e*Pn	**Pn**	**16 00 36.4**	**-0.8**
KRUS				*e*Sg	**Sg**	**16 01 24.0**	**+0.5**

*IDC **05** 16:10:10.0±4.3, 2°.42N×126°.08E, h58km±36km, mb3.4/4, mb1 3.6/4, mb1mx3.2/20, mbtmp3.4/4, Error ellipse: s-maj=105.9km s-min=20.6km az=68.0*
*ISCJB **05** 16:10:14.0±1.1, 2°.57N±0°.09×126°.4E±0°.1, h123km±12km, mb3.5/3, Error ellipse: s-maj=21.1km s-min=11.5km az=146.6*
*DJA **05** 16:10:15, 2°.59N×126°.44E, h112km, Mw4.8/5*
ISC 05 16:10:15.1±1.1, 2°.56N±0°.09×126°.4E±0°.1, h114km±11km, n14, σ0°.95/15, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.41**	**322**	P	**Pn**	**16 10 40.1**	**-1.0**
LBMI	**Labuha**	**3.37**	**161**	P	**Pn**	**16 11 07.1**	**+1.0**
MRSI	**Marisa**	**4.91**	**245**	P	**Pn**	**16 11 26.9**	**+0.1**
LUWI	**Luwuk**	**5.09**	**225**	P	**Pn**	**16 11 30.3**	**+1.0**
48nm,0.7s,927nm0.3nm							
NLAI	**Namlea**	**5.81**	**173**	P	**Pn**	**16 11 38.0**	**-0.9**
16nm,0.6s,3μm0.9nm							
APSI	**Ampana**	**5.87**	**234**	P	**Pn**	**16 11 39.6**	**-0.1**
52nm,0.6s,626nm0.2nm							
AAI	**Ambon**	**6.46**	**164**	P	**Pn**	**16 11 48.7**	**+0.9**
25nm,1.2s,760nm0.2nm							
KDI	**Kendari**	**7.50**	**210**	P	**Pn**	**16 11 59.6**	**-2.2**
17nm,0.9s,732nm0.1nm							
MYLDM	**Lahad Datu**	**8.29**	**288**	P	**Pn**	**16 12 14.1**	**+1.5**
19nm,1.4s							
FITZ	**Fitzroy Crossi**	**20.55**	**182**	P	**P**	**16 14 43.9**	**-0.8**
1.7nm,0.4s,baz=30,slow=8.0,SNR=15							
FITZ	**Fitzroy Crossi**	**20.55**	**182**	P	**P**	**16 14 44.2**	**-0.5**
WRA	**Warramunga Arr**	**23.69**	**161**	P	**P**	**16 15 16.6**	**+0.1**
2.6nm,0.3s,mb4.0,baz=335,slow=11,SNR=72							
WRA				S	**S**	**16 19 27.2**	**+4.1**
0.4nm,0.7s,baz=342,slow=18,SNR=7.6							
ASAR	**Alice Springs**	**27.08**	**165**	P	**P**	**16 15 47.1**	**0.0**
0.3nm,0.5s,mb3.1,baz=344,slow=7.6,SNR=18							
MKAR	**Makanchi Array**	**58.32**	**326**	P	**P**	**16 19 58.0**	**-0.1**
0.4nm,0.7s,mb3.5,baz=114,slow=7.3,SNR=4.5							

*NIED **05** 16:18:00, 46°.60N×153°.20E, h59km, Mw5.0 Best double couple: M0=3.66000×10^16 NP1:φs=251.00000°, δ89.00000°, λ96.00000°. NP2:φs=345.00000°, δ6.00000°, λ5.00000°.*
*JMA **05** 16:18:32.9±0.7, 46°.64N×153°.18E, h30km, M5.4*
*ISCJB **05** 16:18:32.9±0.6, 46°.62N±0°.05×152°.96E±0°.05, h40km±5km, mb4.4/69, MS3.8/19, Error ellipse: s-maj=9.1km s-min=3.9km az=148.4*
*SKHL **05** 16:18:33.7±0.7, 46°.54N×153°.26E, h72km±7km, mb5.3/5*
*MOS **05** 16:18:34.5±1.1, 46°.82N×152°.82E, h51km, mb4.4/32, Error ellipse: s-maj=10.0km s-min=7.2km az=74.4*
*IDC **05** 16:18:34.3±6.0, 46°.78N×152°.68E, h33km±45km, mb4.0/24, mb1 4.1/26, mb1mx4.1/31, mbtmp4.0/26, ML4.0/2, MS3.7/13, Ms1 3.8/13, ms1mx3.5/41, Error ellipse: s-maj=16.5km s-min=11.5km az=139.0*
*BJI **05** 16:18:35.1, 46°.73N×152°.83E, h51km, mB4.7/22, mb4.6/32, Ms4.1/19, Ms7 3.8/20*
*NEIC **05** 16:18:36.3±0.9, 46°.81N×152°.76E, h50km±8km, mb4.5/27, MS4.4/1, Error ellipse: s-maj=9.7km s-min=5.0km az=152.0*
ISC 05 16:18:35.7±0.5, 46°.67N±0°.05×152°.91E±0°.05, h45km±4km, h48km±2.7km: pP-P, n187, σ1°.24/212, mb4.4/69, MS3.8/19, 3C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.80**	**250**	⇓*i*PN	**Pn**	**16 19 32.0**	**+0.4**
KUR				*e*S	**Sn**	**16 20 16.0**	**+1.0**
KUR				pmax	pmax		
comp=N,270nm,0.3s							
KUR				pmax	pmax		
comp=E,90nm,0.3s							
KUR				pmax	pmax		
comp=Z,720nm,0.3s							
KUR				pmax	pmax		
comp=N,8μm,4.0s							
KUR				pmax	pmax		
comp=E,4μm,4.0s							
KUR				smax			
comp=N,810nm,0.6s							
KUR				smax			
comp=E,3μm,0.6s							
KUR	**Kuril'sk**	**3.80**	**250**	⇓*i*P	**Pn**	**16 19 32.0**	**+0.4**
KUR				AMB	AMB	16 19 32.5	
comp=E,270nm,0.3s							
KUR				AMB	AMB	16 19 32.5	
comp=E,90nm,0.3s							
KUR				AMB	AMB	16 19 32.5	
comp=E,720nm,0.3s							
KUR				*e*S	**Sn**	**16 20 16.0**	**+1.0**
KUR				A		16 20 36.0	
comp=E,2μm,1.0s							
KUR				A		16 20 36.0	
comp=E,6μm,1.0s							
KUR				A		16 20 36.4	
comp=E,810nm,0.6s							
KUR				A		16 20 36.4	
comp=E,3μm,0.6s							
SKR	**Severo-Kuril's**	**4.54**	**27**	*e*PN	**Pn**	**16 19 40.2**	**-1.6**
SKR				*e*S	**Sn**	**16 20 30.0**	**-3.2**
SKR				pmax	pmax		
comp=N,250nm,0.5s							
SKR				pmax	pmax		
comp=E,60nm,0.5s							
SKR				pmax	pmax		
comp=Z,390nm,0.5s							
SKR				smax			
comp=N,1μm,5.0s							
SKR				smax			
comp=E,3μm,5.0s							
SKR				smax			
comp=N,900nm,1.0s							
SKR				smax			
comp=E,410nm,0.7s							
SKR				MLR	MLR		
comp=Z,2μm,10.0s							
SKR	**Severo-Kuril's**	**4.54**	**27**	*e*P	**Pn**	**16 19 40.2**	**-1.6**
SKR				AMB	AMB	16 19 43.1	
comp=Z,250nm,0.5s							
SKR				AMB	AMB	16 19 43.1	
comp=Z,60nm,0.5s							
SKR				AMB	AMB	16 19 43.1	
comp=Z,390nm,0.5s							
SKR				*e*S	**Sn**	**16 20 30.0**	**-3.2**
SKR				A		16 20 38.0	
comp=Z,1μm,5.0s							
SKR				A		16 20 38.0	
comp=Z,3μm,5.0s							
SKR				A		16 20 38.0	
comp=Z,2μm,5.0s							
SKR				A		16 21 02.2	
comp=Z,900nm,0.9s							
SKR				A		16 21 02.2	
comp=Z,410nm,0.9s							
SKR				AMS	AMS	16 21 48.0	
comp=Z,2μm,10.0s							
YUK	**Yuzh-Kuril'sk**	**5.62**	**245**	⇑*i*PN	**Pn**	**16 19 58.0**	**+1.3**
YUK				S	**Sn**	**16 21 00.5**	**+0.6**
YUK				pmax	pmax		
comp=Z,390nm,0.5s							
YUK				pmax	pmax		
comp=E,620nm,0.9s							
YUK				smax			
comp=N,6μm,1.2s							
YUK				smax			
comp=E,4μm,2.0s							
YUK				smax			
comp=N,2μm,0.5s							
YUK				smax			
comp=E,1μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**5.62**	**245**	⇑*i*P	**Pn**	**16 19 58.0**	**+1.3**
YUK				AMB	AMB	16 19 58.3	
comp=E,390nm,0.5s							
YUK				AMB	AMB	16 19 58.3	
comp=E,620nm,0.8s							
YUK				*e*S	**Sn**	**16 21 00.5**	**+0.6**
YUK				A		16 21 20.0	
comp=E,6μm,1.2s							
YUK				A		16 21 20.0	
comp=E,4μm,2.0s							
YUK				A		16 21 23.9	
comp=E,2μm,0.5s							
YUK				A		16 21 23.9	
comp=E,1μm,0.5s							
NEM2	**Nemuro 2**	**6.06**	**240**	P	**Pn**	**16 20 01.4**	**-1.2**
NEM2				*e*S	**Sn**	**16 21 07.0**	**-3.7**
JRA	**Rausu**	**6.14**	**246**	P	**Pn**	**16 20 05.4**	**+1.7**
JNK	**Nakash**	**6.56**	**245**	P	**Pn**	**16 20 10.5**	**+0.9**
JNK				*e*S	**Sn**	**16 21 23.3**	**+0.3**
JTKR	**Abashiri--Toko**	**6.90**	**250**	P	**Pn**	**16 20 16.0**	**+1.9**
JAK	**Akkeshi**	**6.90**	**241**	P	**Pn**	**16 20 13.2**	**-0.9**
JAK				*e*S	**Sn**	**16 21 27.4**	**-3.9**
YSS	**Yuzh-Sakhalins**	**6.98**	**276**	*e*PN	**Pn**	**16 20 17.8**	**+2.6**
YSS				*e*S	**Sn**	**16 21 36.4**	**+3.3**
YSS				pmax	pmax		
comp=N,40nm,1.0s							
YSS				pmax	pmax		
comp=Z,60nm,1.0s							
YSS				MLR	MLR		
comp=Z,1μm,17.0s							
YSS				MLR	MLR		
comp=E,1μm,19.0s							
YSS	**Yuzh-Sakhalins**	**6.98**	**276**	*e*P	**Pn**	**16 20 17.9**	**+2.7**
comp=E,44nm,0.8s							
YSS	**Yuzh-Sakhalins**	**6.98**	**276**	*e*P	**Pn**	**16 20 17.8**	**+2.6**
YSS				AMB	AMB	16 20 20.1	
comp=E,40nm,1.0s							
YSS				AMB	AMB	16 20 20.1	
comp=E,60nm,1.0s							
YSS				*e*S	**Sn**	**16 21 36.4**	**+3.3**
YSS				AMS	AMS	16 22 42.0	
comp=E,1μm,17.0s							
YSS				AMS	AMS	16 22 42.0	
comp=E,1μm,19.0s							
PETK	**Petropavlovsk-**	**7.14**	**24**	PN	**Pn**	**16 20 17.3**	**-0.1**
PETK				pmax	pmax		
comp=Z,4.0nm,0.3s							
PETK				MLR	MLR		
comp=Z,272nm,20.5s							
PETK	**Petropavlovsk-**	**7.14**	**24**	Pn	**Pn**	**16 20 17.3**	**-0.1**
comp=Z,3.5nm,0.3s,baz=176,slow=12,SNR=44							
PETK				LR	LR	16 23 01.6	
comp=Z,272nm,20.5s,baz=211,slow=38							
JMP	**Maruseppu**	**7.24**	**252**	P	**Pn**	**16 20 21.0**	**+2.2**
JAR	**Ashorobuto**	**7.31**	**246**	P	**Pn**	**16 20 20.7**	**+1.0**
JAR				*e*S	**Sn**	**16 21 42.1**	**+0.8**
PET	**Petropavlovsk**	**7.36**	**28**	*e*PN	**Pn**	**16 20 19.7**	**-0.7**
PET				pmax	pmax		
comp=Z,82nm,0.8s							
PET				MLR	MLR		
comp=Z,500nm,21.0s							
PET	**Petropavlovsk**	**7.36**	**28**	*e*P	**Pn**	**16 20 19.1**	**-1.3**
comp=Z,40nm,0.6s							
JOB	**Onbets**	**7.47**	**243**	P	**Pn**	**16 20 22.4**	**+0.4**
JOB				*e*S	**Sn**	**16 21 42.7**	**-2.7**
UGL	**Uglegorsk**	**7.68**	**292**	*e*P	**Pn**	**16 20 30

comp=Z,34nm,0.8s
MAT Matsushiro 14.92 233 P Pn 16 22 03.6 +0.1
MAT S **Sn 16 24 47.0 -0.5**
MJAR Matsushiro Arr 14.92 233 P Pn 16 22 00.2 -3.3
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 14.92 233 Pn **Pn 16 22 00.2 -3.3**
comp=Z,0.6nm,0.3s,baz=28,slow=15,SNR=13
MDJ Mudanjiang 16.43 271 P Pn 16 22 22.9 +0.1
MDJ pP pP 16 22 36.0 +0.4
MDJ S **S 16 25 30.0 -4.3**
MDJ pmax pmax
comp=Z,8.0nm,1.4s
MDJ pmax pmax
comp=Z,67nm,5.0s
MDJ LR LR
comp=N,180nm,18.1s
MDJ LR LR
comp=E,210nm,26.1s
MDJ LR LR
comp=Z,310nm,17.6s
MDJ Mudanjiang 16.43 271 *e*P **Pn 16 22 23.2 +0.4**
comp=Z,16nm,1.1s
ZEA Zeya 17.82 303 *e*P **Pn 16 22 40.7 +0.7**
ZEA AMB AMB 16 22 43.0
comp=Z,12nm,1.0s
CN2 Changchun 19.52 272 *e*P **Pn 16 22 59.4 -1.1**
CN2 *e*pP pP 16 23 09.4 -0.3
CN2 *e*sP sP 16 23 15.6 +0.2
CN2 *e*S **S 16 26 32.3 -4.5**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,300nm,18.0s
YAK Yakutsk 20.31 328 *e*P **P 16 23 07.6 +0.2**
YAK *e* 16 23 24.8
YAK *e*S **S 16 26 53.3 +0.9**
YAK *e*SS 16 27 11.7
YAK *e* 16 27 21.1
YAK *e*SSS 16 27 25.6
YAK *e* 16 34 36.2
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,53nm,2.7s
YAK pmax pmax
comp=N,18nm,1.3s
YAK pmax pmax
comp=E,47nm,3.0s
YAK smax
comp=N,93nm,2.5s
YAK smax
comp=E,20nm,1.3s
YAK MLR MLR
comp=Z,73nm,18.0s,MS3.1
YAK MLR MLR
comp=N,123nm,14.0s,MS3.5
YAK MLR MLR
comp=E,94nm,15.0s,MS3.5
YAK Yakutsk 20.31 328 *e*P **P 16 23 07.4 0.0**
comp=E,16nm,0.5s
KSRS Korea Array 20.64 252 P P 16 23 11.6 +0.4
KSRS pmax pmax
comp=Z,8.0nm,0.9s
KSRS MLR MLR
comp=Z,134nm,19.5s,MS3.3
KSRS Korea Array 20.64 252 P P 16 23 11.6 +0.3
comp=Z,7.5nm,0.9s,baz=57,slow=10,SNR=20
KSRS LR LR 16 30 05.4
comp=Z,134nm,19.4s,MS3.3,baz=205,slow=34
CBIJ Chichi jima 21.30 207 LR LR 16 29 46.0
comp=Z,92nm,19.8s,MS3.2,baz=294,slow=32
BILL Bilibino 22.50 13 *e*P **P 16 23 28.6 -2.2**
BILL pmax pmax
comp=Z,2.0nm,0.5s,mb3.8
BILL Bilibino 22.50 13 *e*P **P 16 23 28.6 -2.3**
comp=Z,2.5nm,0.5s,mb3.9
BOD Bodaibo 25.93 310 *e*P **P 16 24 00.1 -3.2**
BOD pmax pmax
comp=Z,3.0nm,1.4s,mb3.6
BJI Beijing 27.34 269 P P 16 24 19.6 +3.5
BJI S **S 16 28 50.2 -2.4**
BJI pmax pmax
comp=Z,13nm,1.2s,mb4.3
BJI pmax pmax
comp=Z,37nm,3.9s
BJI LR LR
comp=N,180nm,17.4s,MS3.9
BJI LR LR
comp=E,280nm,20.8s,MS3.9
BJI LR LR
comp=Z,250nm,21.3s,MS3.8
NJ2 Nanjing 29.84 253 *e*P **P 16 24 40.9 +2.5**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
HHC Hu-ho-hao-te 30.16 274 *e*P **P 16 24 42.5 +1.3**
HHC pP pP 16 24 54.2 +1.0
HHC sP sP 16 24 59.9 +1.3
HHC PP PP 16 25 41.4 -8.3
HHC PcP PcP 16 27 44.2 +2.8
HHC S **S 16 29 36.8 -0.2**
HHC sS sS 16 29 55.6 -1.5
HHC SS SS 16 31 15.0 -31
HHC PcS PcS 16 31 25.9 +1.1
HHC ScS ScS 16 35 15.3 -0.1
HHC pmax pmax
comp=Z,16nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,100nm,6.8s
HHC LR LR
comp=N,200nm,15.2s,MS4.0
HHC LR LR
comp=E,190nm,15.4s,MS4.0
HHC LR LR
comp=Z,170nm,14.7s,MS3.8
ULN Ulaanbaatar 30.79 289 *e*P **P 16 24 49.8 +3.1**
ULN pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
ULN Ulaanbaatar 30.79 289 *e*P **P 16 24 49.8 +3.1**
comp=Z,6.4nm,1.0s,mb4.4
SONM Songino Array 31.23 289 P P 16 24 47.8 -2.7
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,201nm,19.5s
SONM Songino Array 31.23 289 P P 16 24 47.8 -2.7
comp=Z,0.6nm,0.8s,mb3.5,baz=56,slow=5.4,SNR=2.5
SONM LR LR 16 38 17.3
comp=Z,201nm,19.5s,MS3.8,baz=270,slow=38
TLY Talaya 32.09 297 *e*P **P 16 24 58.7 +0.6**
TLY pmax pmax
comp=Z,1.0nm,0.7s,mb3.8
TLY MLR MLR
comp=Z,157nm,20.0s,MS3.7
ZAK Zakamensk 32.59 295 *e*P **P 16 25 02.7 +0.3**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KTH Kantishna Hill 34.91 41 *e*P **P 16 25 23.2 +0.8**
comp=Z,18nm,1.3s,mb4.8
XAN Xi'an 35.37 265 P P 16 25 26.3 -0.4
XAN pP pP 16 25 37.1 -1.8
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
XAN pmax pmax
comp=Z,5.0nm,3.9s
COLA College 36.28 38 *e*P **P 16 25 34.5 +0.3**
COLA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
COLA College 36.28 38 *e*P **P 16 25 34.5 +0.3**
comp=Z,5.5nm,0.6s,mb4.7
ENH Enshi 37.22 260 P P 16 25 41.4 -1.1
comp=Z,12nm,1.4s,mb4.5
LZH Lanzhou 37.75 272 *e*P **P 16 25 48.0 +1.0**
LZH pP pP 16 26 03.5 +4.3
LZH sP sP 16 26 08.0 +3.4
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,89nm,4.3s
GTA Gaotai 38.85 279 *e*P **P 16 25 57.9 +1.7**
GTA pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
EGAK Eagle 39.15 38 *e*P **P 16 25 58.0 -0.4**
comp=Z,6.4nm,0.9s,mb4.3
CD2 Chengdu 40.73 265 P P 16 26 13.0 +1.1
CD2 pP pP 16 26 25.3 +1.0
CD2 sP sP 16 26 30.7 +1.1
CD2 PP PP 16 27 50.8 +4.5
CD2 PcP PcP 16 28 15.1 +2.5
CD2 S **S 16 32 19.2 0.0**
CD2 sS sS 16 32 39.8 0.0
CD2 SS SS 16 35 15.4 -5.5
CD2 pmax pmax
comp=Z,30nm,0.9s,mb4.9
CD2 pmax pmax
comp=Z,120nm,6.5s
CD2 LR LR
comp=N,220nm,8.9s
CD2 LR LR
comp=Z,150nm,16.0s,MS3.9
GYA Guiyang 41.56 257 P P 16 26 17.5 -1.3
GYA pP pP 16 26 29.9 -1.2
GYA sP sP 16 26 35.2 -1.3
GYA PP PP 16 28 01.0 +5.7
GYA PcP PcP 16 28 18.5 +3.1
GYA ScP ScP 16 32 02.3 +0.7
GYA S **S 16 32 27.8 -3.7**
GYA SS SS 16 35 27.5 -10
GYA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
GYA pmax pmax
comp=Z,60nm,5.4s
GYA LR LR
comp=N,220nm,15.2s,MS4.2
GYA LR LR
comp=E,120nm,15.6s,MS4.2
GYA LR LR
comp=Z,250nm,15.8s,MS4.2
INK Inuvik 41.79 32 P P 16 26 20.7 +0.5
INK pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 41.79 32 P P 16 26 20.7 +0.6
comp=Z,6.0nm,0.8s,mb4.3,baz=294,slow=6.3,SNR=22
INK Inuvik 41.79 32 *e*P **P 16 26 20.6 +0.4**
comp=Z,5.1nm,0.8s,mb4.2
ZALV Zalesovo Beam 42.55 306 P P 16 26 23.0 -3.5
ZALV 16 28 18.8
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ZALV MLR MLR
comp=Z,110nm,19.6s,MS3.8
ZALV Zalesovo Beam 42.55 306 P P 16 26 23.0 -3.5
comp=Z,0.5nm,0.4s,mb3.6,baz=50,slow=8.3,SNR=3.4
ZALV PcP PcP 16 28 18.8 +0.6
comp=Z,0.5nm,0.3s,baz=116,slow=3.4,SNR=4.1
ZALV LR LR 16 45 06.5
comp=Z,110nm,19.6s,MS3.8,baz=251,slow=38
ZALV Zalesovo Beam 42.55 306 P P 16 26 23.0 -3.5
ZALV PcP PcP 16 28 18.8 +0.6
ZALV LR LR 16 45 06.5
WMQ Urumqi 44.83 291 *e*P **P 16 26 47.3 +2.4**
WMQ LR LR
comp=N,93nm,17.0s,MS3.8
WMQ LR LR
comp=E,64nm,20.0s,MS3.8
WMQ LR LR
comp=Z,100nm,20.0s,MS3.7
KMI Kunming 45.09 259 P P 16 26 49.0 +1.7
KMI pP pP 16 27 02.2 +2.5
KMI sP sP 16 27 07.4 +2.4
KMI pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
DLBC Dease Lake 45.75 46 P P 16 26 53.2 +1.1
comp=Z,1.0nm,0.6s,mb4.0,baz=322,slow=25,SNR=3.4
DLBC Dease Lake 45.75 46 P P 16 26 53.2 +1.1
MK31 Makanchi Array 46.85 297 *e*P **P 16 26 59.4 -1.5**
MKAR Makanchi Array 46.85 297 P P 16 26 59.7 -1.2
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,204nm,18.8s
MKAR Makanchi Array 46.85 297 P P 16 26 59.7 -1.2
comp=Z,1.6nm,0.6s,mb4.1,baz=74,slow=5.2,SNR=11
MKAR LR LR 16 48 00.2
comp=Z,204nm,18.8s,MS4.1,baz=356,slow=38
MKAR Makanchi Array 46.85 297 P P 16 26 59.7 -1.2
MKAR LR LR 16 48 00.2
KURK Kurchatov 47.29 304 P P 16 27 03.1 -1.1
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KURK Kurchatov 47.29 304 P P 16 27 03.1 -1.1
comp=Z,2.2nm,0.8s,mb4.2,baz=69,slow=8.4,SNR=15
KURK Kurchatov 47.29 304 P P 16 27 02.3 -2.0
comp=Z,2.2nm,0.6s,mb4.3
LSA Lhasa 50.14 273 P P 16 27 28.2 +1.8
LSA pmax pmax
comp=Z,20nm,1.0s,mb5.1
LSA Lhasa 50.14 273 *e*P **P 16 27 28.3 +1.9**
LSA pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
LSA Lhasa 50.14 273 *e*P **P 16 27 28.3 +1.9**
comp=Z,7.0nm,0.6s,mb4.9
BVAR Borovoye Array 50.80 309 P P 16 27 29.7 -1.3
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR MLR MLR
comp=Z,102nm,21.2s
BVAR Borovoye Array 50.80 309 P P 16 27 29.7 -1.3
comp=Z,0.8nm,0.4s,mb4.0,baz=46,slow=9.4,SNR=7.1
BVAR LR LR 16 48 17.9
comp=Z,102nm,21.2s,MS3.8,slow=35
RES Resolute Bay 50.95 18 P P 16 27 31.0 -0.9
RES pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
RES Resolute Bay 50.95 18 P P 16 27 31.0 -0.9
comp=Z,0.6nm,0.4s,mb3.9,baz=0.2,slow=11,SNR=6.4
YKA Yellowknife Ar 51.07 37 P P 16 27 33.0 +0.1
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 51.07 37 P P 16 27 33.0 +0.1
comp=Z,2.3nm,0.8s,mb4.2,baz=295,slow=7.2,SNR=25
YKA Yellowknife Ar 51.07 37 P P 16 27 33.0 +0.1
CHTO Chiang Mai 51.97 257 *e*P **P 16 27 40.8 +0.6**
CHTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CHTO Chiang Mai 51.97 257 *e*P **P 16 27 40.8 +0.6**
comp=Z,5.1nm,0.9s,mb4.5
CMAR Chiang Mai Arr 52.22 256 P P 16 27 42.1 +0.1
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR MLR MLR
comp=Z,58nm,19.7s
CMAR Chiang Mai Arr 52.22 256 P P 16 27 42.2 +0.2
CMAR Chiang Mai Arr 52.22 256 P P 16 27 42.1 +0.1
comp=Z,2.9nm,0.9s,mb4.2,baz=29,slow=7.7,SNR=16
CMAR LR LR 16 52 07.5
comp=Z,58nm,19.7s,MS3.6,baz=35,slow=39
AAK Ala-Archa 53.75 296 LR LR 16 52 02.7
comp=Z,151nm,18.5s,MS4.1,baz=34,slow=38
GUN Gumba 54.87 275 *e*P **P 16 28 03.0 +1.6**
comp=Z,16nm,0.7s,mb5.2
KKN Kakani 55.36 275 *e*P **P 16 28 05.4 +0.5**
comp=Z,14nm,0.5s,mb5.2
PKI Pulchoki 55.41 275 *e*P **P 16 28 05.8 +0.5**
comp=Z,12nm,0.6s,mb5.1
PKIN Phulchoki 55.41 275 *e*P **P 16 28 05.7 +0.4**
comp=Z,8.3nm,0.5s,mb5.0
PKIN Phulchoki 55.41 275 *e*P **P 16 28 05.9 +0.6**
comp=Z,14nm,0.7s,mb5.1
GKN Gorkha 55.66 276 *e*P **P 16 28 07.2 +0.1**
comp=Z,37nm,0.9s,mb5.4
KOLN Koldanda 56.52 276 *e*P **P 16 28 13.8 +0.6**
comp=Z,17nm,0.8s,mb5.1
ARCES ARCESS Array B 57.88 341 P P 16 28 20.7 -1.5
ARCES pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 57.88 341 P P 16 28 20.7 -1.6
comp=Z,3.8nm,1.0s,mb4.4,baz=44,slow=7.5,SNR=4.2
ARCES ARCESS Array B 57.88 341 P P 16 28 20.7 -1.6
YBH Yreka Blue Hor 57.90 62 LR LR 16 52 32.6
comp=Z,73nm,18.2s,MS3.8,baz=260,slow=35
WALA Waterton Lakes 58.60 50 *e*P **P 16 28 27.9 +0.3**
comp=Z,0.2nm,1.0s
AKTO Aktyubinsk 58.68 312 LR LR 16 56 03.7
comp=Z,112nm,18.5s,MS4.0,baz=50,slow=38
BSMT Bassoo Peak 58.85 52 *e*P **P 16 28 30.0 +0.7**
comp=Z,4.2nm,1.2s,mb4.3
SWMT Swartz Lake 59.48 52 *e*P **P 16 28 34.3 +0.6**
comp=Z,0.4nm,0.3s,mb3.9
SLMT Seeley Lake 59.91 52 *e*P **P 16 28 37.3 +0.6**
comp=Z,11nm,1.3s,mb4.7
FFC Flin Flon 60.89 40 *e*P **P 16 28 43.1 -0.1**
FFC pmax pmax
comp=Z,13nm,1.4s,mb4.9
FFC Flin Flon 60.89 40 *e*P **P 16 28 43.1 -0.1**
comp=Z,13nm,1.4s,mb4.9
JOF Joensuu 61.34 334 *e*P **P 16 28 43.5 -2.6**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
JOF Joensuu 61.34 334 *e*p **P 16 28 43.5 -2.6**
comp=Z,1.3nm,0.5s,mb4.3
LRM Limekiln Ridge 61.35 53 *e*P **P 16 28 47.2 +0.7**
comp=Z,23nm,1.0s,mb5.3
FCC Fort Churchill 61.40 33 *e*P **P 16 28 46.0 -0.6**
comp=Z,0.1nm,0.6s
QLMT Earthquake Lak 62.54 53 *e*P **P 16 28 55.4 +1.0**
comp=Z,0.8nm,0.3s,mb4.3
NVAR Mina Array Bea 62.59 62 P P 16 28 55.8 +0.8
comp=Z,0.5nm,0.4s,mb4.0,baz=290,slow=5.9,SNR=7.8
ELK Elko 62.96 58 LR LR 16 53 39.0
comp=Z,73nm,18.9s,MS3.9,baz=288,slow=33
RRI2 Red Ridge 63.55 54 *e*P **P 16 29 02.7 +1.5**
comp=Z,3.2nm,0.8s,mb4.4
FINES FINESS Array B 64.05 335 P P 16 29 03.1 -1.1
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 64.05 335 P P 16 29 03.1 -1.1
comp=Z,2.3nm,0.4s,mb4.6,baz=37,slow=7.3,SNR=21
PDAR Pinedale Array 64.91 54 P P 16 29 10.7 +0.6
comp=Z,1.6nm,0.9s,mb4.1,baz=321,slow=2.1,SNR=13
ULM Lac du Bonnet 66.67 41 P P 16 29 20.1 -1.2
comp=Z,1.3nm,0.4s,mb4.3,baz=325,slow=9.1,SNR=4.8
AGMN Agassiz Refuge 68.08 42 *e*P **P 16 29 29.3 -1.0**
comp=Z,6.6nm,1.3s,mb4.5
NB2 NORSAR Subarra 68.26 341 P P 16 29 30.3 -0.8
comp=Z,5.3nm,0.7s,mb4.7,baz=28,slow=6.5
NOA NORSAR Array B 68.26 341 P P 16 29 30.4 -0.7
NOA pmax pmax
comp=Z,6.0nm,0.6s
NOA NORSAR Array B 68.26 341 P P 16 29 30.4 -0.8
comp=Z,5.5nm,0.6s,mb4.7,baz=28,slow=6.2,SNR=28
WRA Warramunga Arr 68.39 199 P P 16 29 31.7 -0.7
WRA pmax pmax
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 68.39 199 P P 16 29 31.7 -0.7
comp=Z,2.0nm,0.9s,mb4.2,baz=16,slow=6.5,SNR=11
FITZ Fitzroy Crossi 69.01 208 P P 16 29 36.6 +0.3
comp=Z,5.1nm,0.8s,mb4.5,baz=75,slow=2.6,SNR=8.3
ISCO Idaho Springs 69.10 54 *e*P **P 16 29 37.6 +0.8**
ISCO pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
ISCO Idaho Springs 69.10 54 *e*P **P 16 29 37.6 +0.9**
comp=Z,1.1nm,0.7s,mb3.9
AKASG Malin Array Be 71.53 326 P P 16 29 50.3 -1.1
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 71.53 326 P P 16 29 50.3 -1.1
comp=Z,2.0nm,0.4s,mb4.4,baz=35,slow=6.2,SNR=16
ASAR Alice Springs 72.09 198 P P 16 29 55.7 +0.8
ASAR pmax pmax
comp=Z,3.0nm,0.6s
ASAR Alice Springs 72.09 198 P P 16 29 55.6 +0.7
comp=Z,2.7nm,0.6s,mb4.3,baz=11,slow=5.2,SNR=69
SCHQ Schefferville 73.44 23 P P 16 30 02.4 -0.3
comp=Z,0.7nm,0.6s,mb3.8,baz=30,slow=13,SNR=2.8
STHS Stebnicka Huta 75.51 330 *e*P **P 16 30 13.3 -1.5**
STHS pmax pmax
comp=Z,1.0nm,1.0s,mb3.7
STHS Stebnicka Huta 75.51 330 *e*P **P 16 30 13.3 -1.5**
comp=Z,1.4nm,1.0s,mb3.9
STHS Stebnicka Huta 75.51 330 *e*P **P 16 30 13.3 -1.5**
BUR08 Bucovina Ar. S 75.56 326 *e*P **P 16 30 14.9 -0.2**
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 30 15.3 +0.2**
KOLS pmax pmax
comp=Z,23nm,2.8s,mb4.6
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 30 15.3 +0.2**
comp=Z,23nm,2.8s,mb4.6
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 30 15.3 +0.2**
CLL Collm 76.48 335⇓*i*P **P 16 30 19.8 -0.5**
CLL *e* pP 16 30 32.0 -1.6
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLL MLR MLR
comp=Z,200nm,19.4s,MS4.4
CLL Collm 76.48 335⇓*i*P **P 16 30 19.8 -0.5**
comp=Z,6.0nm,0.9s,mb4.5
CLL *e* pP 16 30 32.0 -1.6
CLL LR LR
comp=Z,200nm,19.4s,MS4.4
CLL Collm 76.48 335⇓*i*P **P 16 30 19.8 -0.5**
comp=Z,6.0nm,0.9s,mb4.5
CLL Lm 16 19 00.0
comp=N,100nm,20.0s
CLL Lm 16 19 00.0
comp=E,200nm,19.3s
CLL Lm 16 19 00.0
comp=Z,200nm,19.4s
CLL *e*PcP PcP 16 30 32.0 +0.2
KECS Kecovo 76.57 330 *e*P **P 16 30 21.6 +0.7**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 76.57 330 *e*P **P 16 30 21.6 +0.7**
comp=Z,2.1nm,0.8s,mb4.1
KECS Kecovo 76.57 330 *e*P **P 16 30 21.6 +0.7**
VYHS Vyhne 77.13 331 *e*P **P 16 30 23.6 -0.4**
VYHS pmax pmax
comp=Z,11nm,2.3s,mb4.4
VYHS Vyhne 77.13 331 *e*P **P 16 30 23.6 -0.4**
comp=Z,11nm,2.3s,mb4.4
VYHS Vyhne 77.13 331 *e*P **P 16 30 23.6 -0.4**
KHC Kasperske Hory 78.25 334 *e*P **P 16 30 30.0 -0.2**
KHC pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KHC Kasperske Hory 78.25 334 *e*P **P 16 30 30.0 -0.2**
comp=Z,2.3nm,0.8s,mb4.2
BRTR Keskin Array B 78.35 317 P P 16 30 31.3 +0.3
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 78.35 317 P P 16 30 31.3 +0.3
comp=Z,1.1nm,0.8s,mb3.9,baz=60,slow=5.0,SNR=5.3
GERES GERESS Array B 78.47 334 P P 16 30 31.3 -0.1
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 78.47 334 P P 16 30 31.3 -0.2
comp=Z,1.2nm,0.7s,mb3.9,baz=27,slow=6.3,SNR=9.4
UMR Umm Al-Rimmam 78.55 301 *e*P **P 16 30 30.8 -1.4**
MIB Mutribah 78.59 301 *e*P **P 16 30 31.8 -0.7**
MIB AMb AMB 16 30 34.1
comp=Z,21nm,0.7s,mb5.2
CSNA Conrad Observa 78.60 332⇓*i*P **P 16 30 33.1 +0.9**
comp=Z,3.5nm,0.7s,mb4.4
RDF Al-Radifah 79.11 301 *e*P **P 16 30 35.5 +0.2**
RDF AMb AMB 16 30 37.2
comp=Z,19nm,1.0s,mb5.0
KBA Koelnbreinsper 80.15 333⇑*i*P **P 16 30 41.8 +1.1**
comp=Z,5.5nm,0.7s,mb4.6

PRE 05 16:20:32.6±0.6, 21.13S×33.26E, h5km, ML4.0, Mozambique

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.25**	**247**	*e*P	Pn	16 21 25.6	+1.4
MSNA				*e*S	Sn	16 22 04.0	+0.8
MSNA				AML	AML	16 22 26.0	
comp=Z,77nm,0.2s							
POGA	**Pongola**	**6.39**	**193**	*e*P	Pn	16 22 07.8	+0.3
POGA				*e*S	Sn	16 23 17.4	-3.5
POGA				AML	AML	16 24 07.9	
comp=Z,21nm,0.5s							
PRYS	**Parys**	**7.90**	**222**	*e*P	Pn	16 22 29.2	+1.1
PRYS				*e*S	Sn	16 23 54.1	-3.8
PRYS				AML	AML	16 24 54.5	
comp=Z,20nm,0.6s							
LBTB	**Lobatse**	**8.05**	**240**	*e*P	Pn	16 22 31.0	+0.8
LBTB				*e*S	Sn	16 23 58.1	-3.5
LBTB				AML	AML	16 24 51.1	
comp=Z,16nm,0.7s							

BOSA	Boshof	10.41	223	eP	Pn	16 23 03.9 +1.3
BOSA				eS	Sn	16 24 54.5 -5.1
BOSA				AML	AML	16 26 15.7
	comp=Z,9.5nm,0.6s					

*BJI **05** 16:28:04.1,24°.80N×109°.60W,h10km,mB4.6/1,mb4.8/3, Ms4.6/3,Ms7 4.5/3*
*GCMT **05** 16:28:06.2±0.4,25°.22N×109°.79W,h12km±1km,MW4.9/66, Moment Tensor Solution. s19,c24; s66,c97; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.14±.10; Mθθ-2.56±.10; Mφφ2.70±.11; Mrθ-0.13±.24; Mrφ-0.17±.09; Mθφ0.31±.26; Best double couple: M0=2.65600×10^16 NP1:φ=43.00000°,δ=84.00000°,λ=2.00000°. NP2: φ=313.00000°,δ=88.00000°,λ=174.00000°. Principal axes: T 2.7400, Plg6.0000°, Azm268.0000°; N -0.1640, Plg83.0000°, Azm113.0000°; P -2.5720, Plg3.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **05** 16:28:06.2±1.0,24°.80N×109°.58W,h10km,mb4.4/51 Error ellipse: s-maj=13.0km s-min=7.3km az=191.0*
NEIC Felt at La Paz, Mexico.
*IDC **05** 16:28:10.7±1.4,25°.51N×109°.57W,h0km,mb3.8/6, mb1 4.1/12,mb1mx3.9/30,mbtmp3.9/12,ML4.0/4,MS4.1/26, Ms1 4.1/26,ms1mx4.0/38,Error ellipse: s-maj=30.0km s-min=17.4km az=45.0*
ISC 05 16:28:08.9±2.8,24°.96N±0°.09×109°.51W±0°.03, h17km±14km,n406,σ0°.84/382,mb4.3/25,MS4.1/23, 143C-150D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
319A	Douglas baz=6.6,SNR=21	6.39	2	⇑P	Pn	16 29 38.7	-3.5
319A				⇑Sb	Sb	16 31 20.9	+5.1
320A	Kipp Ranch, An baz=6.6	6.41	8	⇑P	Pn	16 29 39.6	-2.9
318A	Bisbee baz=6.6,SNR=22	6.47	356	⇓P	Pn	16 29 39.3	-3.9
626A	Big Bend Ranch baz=6.8,SNR=12	6.62	45	⇑P	Pn	16 29 43.8	-1.5
TXAR	Lajitas Array 0.9nm,0.3s,baz=230,slow=14,SNR=41	6.78	49	Pn	Pn	16 29 46.6	-1.0
TXAR				Sn	Sn	16 31 03.3	-1.1
	6.4nm,0.3s,baz=233,slow=23,SNR=11						
TXAR				Lg		16 31 39.6	
	3.8nm,0.3s,baz=218,slow=28,SNR=6.0						
217A	Green Valley baz=7.0,SNR=24	6.88	351	⇓P	Pn	16 29 45.6	-3.3
220A	Playas Peak, P baz=7.2,SNR=13	6.97	7	⇓P	Pn	16 29 47.5	-2.6
526A	Mary Lane Ranc baz=7.2,SNR=9.1	7.00	42	⇓P	Pn	16 29 48.8	-1.7
218A	Dragoon baz=7.2	7.00	356	⇓P	Pn	16 29 47.6	-2.9
219A	White Tail Can baz=7.2,SNR=6.7	7.01	2	⇑P	Pn	16 29 48.3	-2.4
425A	Indio Mountain baz=7.3,SNR=11	7.05	34	⇓P	Pn	16 29 50.2	-1.0
425A				⇑Sb	Sb	16 31 41.3	+6.7
	baz=7.3						
627A	Terlingua Ranc baz=7.3	7.05	49	⇓P	Pn	16 29 50.2	-1.0
221A	Mesquite Ranch baz=7.4,SNR=16	7.18	12	⇑P	Pn	16 29 50.5	-2.6
216A	Three Points, baz=7.3,SNR=9.4	7.22	347	⇓P	Pn	16 29 50.6	-3.0
324A	Moseley Ranch, baz=7.6,SNR=8.4	7.37	28	⇓P	Pn	16 29 54.3	-1.2
628A	Black Gap, Mar baz=7.6	7.42	51	⇓P	Pn	16 29 55.9	-0.3
222A	Williams Famil baz=7.6,SNR=14	7.42	16	⇑P	Pn	16 29 54.2	-2.2
426A	McDonald Obser baz=7.7,SNR=12	7.47	39	⇑P	Pn	16 29 56.9	-0.2
325A	Bean Ranch, Si baz=7.8,SNR=9.0	7.54	31	⇑P	Pn	16 29 56.7	-1.2
214A	Organ Pipe Nat baz=7.6	7.55	338	⇓P	Pn	16 29 55.7	-2.4
120A	U Bar Ranch, L baz=7.8	7.60	6	⇓P	Pn	16 29 56.9	-1.9
117A	Oracle baz=7.8,SNR=16	7.66	352	⇓P	Pn	16 29 56.0	-3.5
121A	Cookes Peak, D baz=7.9,SNR=11	7.69	11	⇑P	Pn	16 29 57.2	-2.8
119A	Ashpeak Ranch, baz=7.9	7.78	1	⇓P	Pn	16 29 58.7	-2.5
116A	Eloy baz=7.9,SNR=16	7.81	346	⇑P	Pn	16 29 58.9	-2.8
528A	Cox Ranch, San baz=8.1	7.90	48	⇓P	Pn	16 30 02.4	-0.5
224A	Corundas Mount baz=8.1,SNR=5.2	7.91	25	⇓P	Pn	16 30 01.5	-1.5
326A	Caldwell Ranch baz=8.2,SNR=12	7.99	36	⇓P	Pn	16 30 03.2	-0.9
Z20A	Nine Sixteen R baz=8.3,SNR=15	8.16	5	⇑P	Pn	16 30 05.4	-1.1
114A	Black Gap (USA baz=8.4	8.30	340	⇑P	Pn	16 30 05.9	-2.6
Z17A	San Carlos Hig baz=8.5	8.35	354	⇑P	Pn	16 30 08.5	-0.5
Z21A	St. Cloud Mine baz=8.7,SNR=12	8.47	10	⇑P	Pn	16 30 11.2	+0.4
124A	Stringfield Ra baz=8.7,SNR=11	8.49	24	⇓P	Pn	16 30 11.2	+0.2
Z22A	Elephant Butte baz=8.8,SNR=26	8.56	14	⇓P	Pn	16 30 12.4	+0.5
Y17A	Roosevelt baz=8.9,SNR=9.0	8.78	353	⇓P	Pn	16 30 12.2	-2.8
Y18A	Canyon Day Jun baz=9.0,SNR=5.9	8.80	357	⇓P	Pn	16 30 14.7	-0.5
Y19A	Nutrioso baz=9.1,SNR=5.5	8.97	1	⇓P	Pn	16 30 17.7	+0.2
Y20A	Horse Springs, baz=9.2,SNR=7.0	8.97	6	⇑P	Pn	16 30 17.5	-0.1
Z13A	Yuma Proving G baz=9.1	8.97	337	⇓P	Pn	16 30 15.3	-2.4
Y16A	Circle Bar Ran baz=9.2,SNR=6.1	9.05	350	⇓P	Pn	16 30 18.2	-0.5
Y21A	Point of Rocks baz=9.3,SNR=20	9.15	10	⇑P	Pn	16 30 20.6	+0.5
Y22A	Socorro baz=9.4,SNR=9.2	9.21	13	⇓P	Pn	16 30 21.5	+0.6
Z25A	Roswell baz=9.5,SNR=6.1	9.29	26	⇑P	Pn	16 30 22.7	+0.8
Y15A	Casa Rosa Ranc baz=9.4	9.29	345	⇑P	Pn	16 30 20.4	-1.5
X17A	Forest Lakes baz=9.6,SNR=5.5	9.41	353	⇑P	Pn	16 30 22.8	-0.9
Y23A	Lovelace Mesa, baz=9.6,SNR=19	9.43	18	⇓P	Pn	16 30 23.8	-0.1
X19A	St. Johns baz=9.6	9.44	1	⇓P	Pn	16 30 24.5	+0.5
Y14A	Wickenburg baz=9.6,SNR=6.6	9.45	342	⇑P	Pn	16 30 22.6	-1.6
X18A	Snowflake baz=9.7	9.54	358	⇑P	Pn	16 30 24.6	-0.8
X21A	Alamocita Cree baz=9.8,SNR=12	9.57	9	⇑P	Pn	16 30 26.2	+0.5
X16A	Lo Mia Camp, P baz=9.7,SNR=8.9	9.57	350	⇓P	Pn	16 30 25.7	-0.1
X20A	Quemado baz=9.8,SNR=9.4	9.59	5	⇑P	Pn	16 30 26.4	+0.3
DVTC	Desert V Tower baz=9.6	9.60	325	⇑P	Pn	16 30 26.2	-0.1
Y24A	Capitan baz=9.8,SNR=5.2	9.61	21	⇓P	Pn	16 30 27.5	+1.1
X15A	Humboldt baz=9.9	9.78	347	⇓P	Pn	16 30 27.6	-1.1
Y12C	Blythe baz=9.9	9.79	335	⇑P	Pn	16 30 28.2	-0.6
Y25A	Mesa, Roswell baz=10,SNR=6.6	9.86	24	⇑P	Pn	16 30 30.4	+0.5
MONP	Monument Peak baz=10.0	9.95	324	⇑P	Pn	16 30 30.9	-0.1
X23A	Hourglass Bar baz=10,SNR=8.5	10.01	16	⇑P	Pn	16 30 32.5	+0.6
BC3	Big Chuckw Mtn baz=10	10.09	330	⇑P	Pn	16 30 32.6	-0.4
W19A	Sanders baz=10	10.12	1	⇓P	Pn	16 30 34.2	+0.9
W18A	Petrified Fore baz=10,SNR=9.7	10.12	359	⇓P	Pn	16 30 34.1	+0.7
W20A	Ramah baz=10,SNR=9.3	10.17	5	⇓P	Pn	16 30 34.2	+0.2
W21A	San Fidel baz=10	10.25	9	⇓P	Pn	16 30 35.8	+0.7
W16A	Flagstaff baz=10	10.25	351	⇑P	Pn	16 30 35.2	+0.1
ANMO	Albuquerque 0.1nm,0.3s,baz=205,slow=13,SNR=22	10.30	14	Pn	Pn	16 30 36.5	+0.7
ANMO				Lg		16 33 25.5	
	0.2nm,0.3s,baz=325,slow=16,SNR=3.4						
ANMO				LR	LR	16 34 53.1	
	comp=Z,1μm,19.2s,baz=3.2,slow=41						
ANMO	Albuquerque 84nm,2.0s	10.30	14	ePn	Pn	16 30 37.4	+1.6
X13A	Yucca baz=10	10.30	340	⇑P	Pn	16 30 36.2	+0.3
IRM	Iron Mountain baz=10	10.40	333	⇓P	Pn	16 30 37.3	+0.2
X25A	Clemmons Ranch baz=11	10.42	23	⇑P	Pn	16 30 37.8	+0.4
W15A	Williams baz=11	10.46	347	⇓P	Pn	16 30 38.6	+0.6
Y27A	Causey baz=11	10.47	30	⇑P	Pn	16 30 39.0	+0.9
PFO	Pinyon Flat Ob baz=11	10.53	326	⇓P	Pn	16 30 39.0	0.0
PFO	Pinyon Flat Ob 45nm,1.6s	10.53	326	eP	Pn	16 30 38.7	-0.3
W23A	Werner Place, baz=11,SNR=13	10.57	15	⇓P	Pn	16 30 40.7	+1.1
BELC	Belle Mtn. baz=11	10.63	329	⇑P	Pn	16 30 40.5	+0.1
WUAZ	Wupatki baz=11	10.64	352	⇑P	Pn	16 30 41.1	+0.7
WUAZ	Wupatki 51nm,1.6s	10.64	352	eP	Pn	16 30 41.7	+1.2
W14A	Seligman baz=11,SNR=13	10.67	344	⇑P	Pn	16 30 41.3	+0.4
V18A	Ganado baz=11	10.72	358	⇑P	Pn	16 30 41.6	+0.1
V19A	Window Rock baz=11	10.72	2	⇑P	Pn	16 30 42.1	+0.5
NEE2	Needles Airpor baz=11	10.73	337	⇑P	Pn	16 30 41.9	+0.2
X26A	CR and CF Fran baz=11	10.76	26	⇓P	Pn	16 30 42.4	+0.3
W13A	Hualapai Mount baz=11,SNR=8.5	10.79	340	⇑P	Pn	16 30 42.3	-0.2
V20A	Brimhall baz=11,SNR=9.9	10.84	5	⇑P	Pn	16 30 44.2	+1.0
V21A	Milan baz=11	10.93	8	⇑P	Pn	16 30 45.3	+0.9
V15A	Kaibab Nationa baz=11,SNR=13	11.06	349	⇑P	Pn	16 30 47.0	+0.8
V14A	Boquillas Ranc baz=11,SNR=10	11.08	345	⇓P	Pn	16 30 46.8	+0.4
W25A	X Bar L Ranch, baz=11	11.11	22	⇓P	Pn	16 30 48.2	+1.3
GMRC	Granite Mounta baz=11	11.14	333	⇑P	Pn	16 30 48.0	+0.7
LDFC	Landfair 7.3nm,0.9s	11.19	336	eP	Pn	16 30 49.3	+1.4
U16A	Tuba City baz=11,SNR=32	11.23	353	⇓P	Pn	16 30 49.1	+0.6
U19A	Dine' College, baz=12	11.30	1	⇓P	Pn	16 30 50.4	+1.0
U20A	Newcomb baz=12	11.41	4	⇓P	Pn	16 30 51.4	+0.4
U18A	Rough Rock, Ch baz=12,SNR=7.3	11.43	359	⇑P	Pn	16 30 51.4	+0.2
V13A	Grand Canyon W baz=12,SNR=8.5	11.52	341	⇑P	Pn	16 30 52.2	-0.3
U17A	Shonto baz=12	11.64	355	⇑P	Pn	16 30 54.4	+0.2
V12A	Nelson baz=12,SNR=6.3	11.68	338	⇓P	Pn	16 30 54.6	0.0
U15A	North Rim baz=12,SNR=16	11.68	349	⇓P	Pn	16 30 54.9	+0.3
TUQ	Turquoise Moun baz=12	11.82	334	⇑P	Pn	16 30 56.4	-0.2
T19A	Beclabito baz=12	11.84	2	⇑P	Pn	16 30 56.9	0.0
U14A	Mt Trumbull baz=12,SNR=12	11.85	345	⇑P	Pn	16 30 57.0	0.0
U13A	Pakoon Wash baz=12,SNR=9.8	12.04	343	⇓P	Pn	16 30 59.4	-0.2
T17A	Navajo Res., N baz=12	12.05	355	⇑P	Pn	16 31 00.4	+0.7
GSC	Goldstone 4.1nm,0.3s	12.08	330	eP	Pn	16 31 00.9	+0.7
T16A	Glen Canyon Da baz=12	12.11	352	⇑P	Pn	16 31 01.6	+1.1
T18A	Mexican Hat baz=12,SNR=11	12.14	359	⇓P	Pn	16 31 01.2	+0.2
T22A	Edith baz=12	12.22	10	⇓P	Pn	16 31 03.0	+0.9
MVCO	Mesa Verde baz=12	12.24	4	⇓P	Pn	16 31 02.5	+0.2
MVCO	Mesa Verde 132nm,1.5s	12.24	4	eP	Pn	16 31 03.0	+0.6
T15A	Red Dirt Ranch baz=12,SNR=10	12.27	349	⇓P	Pn	16 31 02.8	+0.1
EDW2	Edwards Air Fo baz=12	12.31	325	⇓P	Pn	16 31 03.8	+0.4
T14A	Hurricane baz=13	12.44	347	⇑P	Pn	16 31 05.3	+0.2
T13A	Saint George baz=13	12.60	344	⇓P	Pn	16 31 07.3	+0.2
LRMC	Laurel Mountai baz=13	12.64	328	⇓P	Pn	16 31 07.8	0.0
S17A	Black Ridge (B baz=13	12.68	355	⇑P	Pn	16 31 08.1	-0.3
S18A	Hurst Farm, Bl baz=13,SNR=16	12.70	358	⇑P	Pn	16 31 08.6	0.0
S21A	Coal Bank Pass baz=13,SNR=8.5	12.74	6	⇓P	Pn	16 31 09.5	+0.3
S19A	Harvey Farm, M baz=13	12.75	1	⇓P	Pn	16 31 09.0	-0.3
CCUT	Cedar City 49nm,1.5s	12.97	346	eP	Pn	16 31 14.4	+2.0
MPMC	Manual Prospec baz=13,SNR=11	13.02	330	⇓P	Pn	16 31 12.8	-0.2
FURC	Furnace Creek, baz=13	13.09	333	⇓P	Pn	16 31 15.0	+1.0
S13A	Holt Ranch, En baz=13	13.12	345	⇑P	Pn	16 31 14.4	0.0
S14A	Cedar City baz=13	13.13	347	⇑P	Pn	16 31 15.9	+1.3
ISA	Isabella baz=13	13.17	326	⇓P	Pn	16 31 15.5	+0.4
ISA	Isabella 27nm,1.6s	13.17	326	eP	Pn	16 31 14.8	-0.2
SDCO	Great Sand Dun 4.0nm,1.1s	13.19	14	eP	Pn	16 31 16.5	+1.1
R20A	Redvale baz=13	13.22	4	⇑P	Pn	16 31 16.4	+0.7
R16A	Teasdale baz=14	13.39	353	⇓P	Pn	16 31 18.9	+0.9
R18A	Canyonlands Na baz=14,SNR=15	13.39	359	⇑P	Pn	16 31 17.7	-0.3
S12A	Delamar Landin baz=14	13.40	341	⇓P	Pn	16 31 18.6	+0.4
R15A	Junction baz=14	13.42	351	⇓P	Pn	16 31 20.5	+2.1
R17A	Hanksville Air baz=14,SNR=21	13.46	356	⇑P	Pn	16 31 19.0	0.0
WMOK	Wichita Mounta 6.7nm,1.1s	13.46	41	eP	Pn	16 31 19.8	+0.7
R21A	Cimarron baz=14	13.47	7	⇓P	Pn	16 31 20.2	+1.1
MSU	Marysvale 44nm,1.5s	13.70	351	ePn	Pn	16 31 23.5	+1.2
R13A	O'Grain Ranch, baz=14	13.71	345	⇓P	Pn	16 31 23.4	+0.9
S11A	Rachel baz=14,SNR=8.3	13.72	339	⇓P	Pn	16 31 22.9	+0.4
GRAC	Grapevine Rang baz=14,SNR=11	13.76	333	⇓P	Pn	16 31 22.8	-0.2
Q16A	Castle Valley baz=14,SNR=11	13.98	355	⇑P	Pn	16 31 26.4	+0.3
R12A	Pony Springs, baz=14	14.01	343	⇓P	Pn	16 31 27.1	+0.6
Q18A	Rafter H Ranch baz=14,SNR=8.3	14.11	358	⇓P	Pn	16 31 27.3	-0.6
SRU	San Rafael baz=14,SNR=5.4	14.13	357	⇓P	Pn	16 31 28.0	-0.2
SRU	San Rafael 54nm,1.8s	14.13	357	eP	Pn	16 31 28.5	+0.3
S10A	Tonopah Range, baz=14,SNR=19	14.26	337	⇑P	Pn	16 31 30.3	+0.4
R11A	Troy Canyon, C baz=14,SNR=13	14.31	340	⇑P	Pn	16 31 30.4	-0.2
SMCO	Snowmass 12nm,0.9s	14.33	8	P	Pn	16 31 32.4	+1.4
Q14A	Sevier Lake (B baz=14	14.34	348	⇑P	Pn	16 31 31.2	+0.1
TMUT	Trail Mountain 59nm,1.8s	14.36	355	P	Pn	16 31 32.2	+0.9
Q13A	Wheeler Ranch, baz=15,SNR=16	14.46	346	⇑P	Pn	16 31 32.9	+0.2
R10A	Warm Springs baz=15,SNR=5.8	14.48	338	⇑P	Pn	16 31 32.9	-0.1
P17A	Butcher Ranch, baz=15	14.51	356	⇑P	Pn	16 31 33.4	+0.2
P20A	De Beque baz=15	14.53	3	⇓P	Pn	16 31 34.3	+0.7
P19A	Cripple Cowboy baz=15	14.64	2	⇑P	Pn	16 31 35.4	+0.3
P18A	Preston Nutter baz=15,SNR=6.9	14.64	358	⇓P	Pn	16 31 34.5	-0.6
Q12A	Willow Creek R baz=15,SNR=16	14.74	344	⇓P	Pn	16 31 36.4	-0.1
Q11A	Duckwater baz=15,SNR=9.4	14.79	341	⇑P	Pn	16 31 36.9	-0.2
P14A	Drum Mountains baz=15,SNR=9.3	14.89	349	⇓P	Pn	16 31 38.3	-0.2
P13A	Bates Ranch, G baz=15	14.94	346	⇑P	Pn	16 31 38.9	-0.3
Q10A	Clear Creek Ra baz=15,SNR=7.5	15.00	339	⇓P	Pn	16 31 39.6	-0.5
NLU	North Lily Min 2.8nm,0.6s	15.11	352	eP	Pn	16 31 41.6	+0.2
ISCO	Idaho Springs 15nm,1.3s	15.15	12	eP	Pn	16 31 43.1	+1.1
O20A	White River Ci baz=15	15.17	4	⇓P	Pn	16 31 42.8	+0.6
P12A	McGill baz=15	15.17	344	⇓P	Pn	16 31 42.7	+0.5
O17A	Robinson Place baz=15	15.22	356	⇓P	Pn	16 31 43.1	+0.2
O19A	Miners Draw (B baz=16,SNR=6.8	15.30	1	⇑P	Pn	16 31 43.1	-0.8
NVAR	Mina Array Bea 0.0nm,0.3s,baz=149,slow=11,SNR=14	15.36	333	Pn	Pn	16 31 44.2	-0.6
NVAR	Mina Array Bea	15.36	333	Pn	Pn	16 31 44.2	-0.6
DUG	Dugway baz=16,SNR=6.8	15.44	350	⇓P	Pn	16 31 46.0	+0.3
DUG	Dugway 6.8nm,0.3s	15.44	350	eP	Pn	16 31 46.2	+0.4
DAU	Daniels Canyon 74nm,1.8s	15.48	355	eP	Pn	16 31 46.2	0.0
JLU	Jordanelle 4.1nm,0.4s	15.68	355	eP	Pn	16 31 50.1	+1.2
CMIG	Matias Romero 0.2nm,0.3s,baz=299,slow=6.9,SNR=2.3	15.73	117	Pn	Pn	16 31 58.6	+8.9
N21A	Black Mountain baz=16	15.84	6	⇓P	Pn	16 31 51.4	+0.4
N20A	Spence Gulch, baz=16	15.86	3	⇑P	Pn	16 31 51.5	+0.3
O12A	Currie baz=16	15.88	345	⇑P	Pn	16 31 52.0	+0.5
N19A	John Jarvie Ra baz=16	15.89	1	⇑P	Pn	16 31 52.0	+0.4
N16A	Rees Ranch, Co baz=16	15.96	355	⇑P	Pn	16 31 52.6	+0.1
N18A	Larsen Ranch, baz=16	15.97	360	⇓P	Pn	16 31 52.4	-0.3
N17A	Moffit Pass baz=16	15.97	356	⇓P	Pn	16 31 52.6	-0.2
CMB	Columbia Colle 15nm,1.2s	15.98	327	P	Pn	16 31 55.5	+2.8
O11A	Cowboy Ranch, baz=16,SNR=7.0	15.98	343	⇓P	Pn	16 31 52.9	+0.1
N22A	Wattenberg Ran baz=16,SNR=8.5	16.00	8	⇓P	Pn	16 31 53.3	+0.3
N15A	Stansbury Isla baz=16	16.08	352	⇑P	Pn	16 31 54.3	+0.2
N14A	Grayback Hills baz=16	16.14	350	⇑P	Pn	16 31 55.0	+0.2
BGU	Big Grassy Mou 56nm,1.8s	16.19	350	eP	Pn	16 31 55.7	+0.2
N13A	Wendover, West baz=16	16.33	347	⇑P	Pn	16 31 57.8	+0.5
O10A	Cortez Mining, baz=16	16.37	341	⇑P	Pn	16 31 57.8	0.0
M16A	Huntsville baz=17	16.40	354	⇓P	Pn	16 31 58.1	-0.1
ELK	Elko 0.1nm,0.3s,baz=170,slow=8.5,SNR=16	16.45	344	Pn	Pn	16 31 58.8	-0.1
ELK				LR	LR	16 39 13.3	
	comp=Z,764nm,18.1s,baz=165,slow=42						
ELK	Elko 80nm,1.7s	16.45	344	eP	Pn	16 31 57.7	-1.1
M17A	Scullys Gap (B baz=17	16.50	357	⇑P	Pn	16 31 59.2	-0.1
N12A	Clover Valley, baz=17	16.51	345	⇑P	Pn	16 32 00.0	+0.5
N12A	Clover Valley, 36nm,1.2s	16.51	345	eP	Pn	16 31 59.5	0.0
M20A	Sweetwater, Wa baz=17	16.52	3	⇓P	Pn	16 32 00.7	+1.0
M22A	Cedar Creek Ra baz=17	16.57	8	⇓P	Pn	16 32 01.3	+0.9
M15A	Larsen Ranch, baz=17	16.64	352	⇑P	Pn	16 32 01.5	+0.4
PHWY	Pilot Hill 68nm,1.8s	16.64	11	eP	Pn	16 32 01.9	+0.7
HWUT	Hardware Ranch 58nm,1.5s	16.69	355	eP	Pn	16 32 02.1	+0.3
M21A	Separation Pea baz=17	16.70	6	⇓P	Pn	16 32 02.5	+0.6
WCN	Washoe City baz=17	16.71	331	⇑P	Pn	16 32 02.6	+0.5
BMN	Battle Mountai 23nm,1.2s	16.72	339	eP	Pn	16 32 02.4	+0.1
RWWY	Rawlins 62nm,1.9s	16.79	6	eP	Pn	16 32 05.2	+2.1
M14A	Sheep Mountain baz=17,SNR=5.3	16.80	350	⇓P	Pn	16 32 02.9	-0.4
M13A	Montello baz=17	16.81	348	⇓P	Pn	16 32 02.9	-0.4
M13A	Montello 104nm,2.3s	16.81	348	eP	Pn	16 32 03.4	+0.1
HVU	Hansel Valley 108nm,1.9s	16.99	352	eP	Pn	16 32 05.8	+0.2
M12A	Wells baz=17	17.02	346	⇑P	Pn	16 32 05.9	0.0
L21A	Rawlins baz=17	17.05	5	⇓P	Pn	16 32 07.4	+1.1
L19A	Farson baz=17,SNR=7.6	17.09	0	⇓P	Pn	16 32 06.1	-0.8
L17A	Cokeville baz=17	17.13	357	⇓P	Pn	16 32 07.8	+0.4
L15A	Malad City baz=17	17.16	353	⇓P	Pn	16 32 08.1	+0.3
L14A	Malta baz=18,SNR=9.7	17.31	351	⇓P	Pn	16 32 09.2	-0.4
BEKR	Beckwourth baz=18	17.43	331	⇓P	Pn	16 32 12.0	+0.8
L13A	Double Diamond baz=18	17.47	349	⇑P	Pn	16 32 12.4	+0.8
M10A	I.L. Ranch, Tu baz=18,SNR=9.9	17.52	342	⇑P	Pn	16 32 12.3	+0.1
K18A	Toltan Ranch, baz=18	17.64	359	⇓P	Pn	16 32 13.5	-0.2
K20A	Yellowstone Ra baz=18	17.68	3	⇓P	Pn	16 32 14.5	+0.4
L12A	House Creek Ra baz=18	17.73	346	⇓P	Pn	16 32 15.0	+0.1
BW06	Boulder Array baz=18,SNR=18	17.76	360	⇑P	Pn	16 32 14.2	-1.0
PDAR	Pinedale Array 0.2nm,0.3s,baz=171,slow=10,SNR=26	17.76	360	P	Pn	16 32 14.4	-0.7
PDAR				LR	LR	16 39 07.2	
	comp=Z,759nm,20.6s,baz=189,slow=38						
K17A	Gardner Place, baz=18	17.78	357	⇓P	Pn	16 32 15.7	+0.2
K14A	Jones Ranch, D baz=18,SNR=8.5	17.80	351	⇓P	Pn	16 32 15.3	-0.3
K19A	Absolon Red Bu baz=18	17.83	2	⇓P	Pn	16 32 15.4	-0.6
K15A	Arbon baz=18	17.85	353	⇑P	Pn	16 32 16.1	-0.2
K16A	Soda Springs baz=18	17.91	355	⇓P	Pn	16 32 17.3	+0.3
L11A	Cat Creek Ranc baz=18,SNR=12	17.92	345	⇓P	Pn	16 32 17.3	+0.1
L10A	Juniper Basin	18.02	343	⇓P	Pn	16 32 18.0	-0.4

baz=18,SNR=7.2
K13A **Stover Farm, H** 18.04 349 ⇑P Pn 16 32 18.4 -0.2
baz=18
K12A **Draper Farm, C** 18.18 347 ⇑P Pn 16 32 20.4 0.0
baz=18
J18A **Kendall Valley** 18.21 359 ⇓P Pn 16 32 19.8 -0.9
baz=18,SNR=11
J17A **Brown Place, J** 18.38 357 ⇑P Pn 16 32 23.1 +0.2
baz=19
REDW **Red Top Meadow** 18.39 357 *e*P Pn 16 32 22.3 -0.6
41nm,1.7s
RRI2 **Red Ridge** 18.40 356 *e*P Pn 16 32 22.6 -0.4
47nm,1.8s
SNOW **Snow King Moun** 18.48 357 *e*P Pn 16 32 23.6 -0.5
TPAW **Teton Pass** 18.52 357 *e*P Pn 16 32 23.9 -0.6
16nm,1.3s
J15A **Blackfoot** 18.55 353 ⇑P Pn 16 32 24.1 -0.7
baz=19
K11A **Parker Ranch,** 18.56 345 ⇓P Pn 16 32 24.8 -0.2
baz=19,SNR=7.5
J14A **Carey** 18.61 351 ⇓P Pn 16 32 25.8 +0.2
baz=19,SNR=8.6
LOHW **Long Hollow** 18.63 358 *e*P Pn 16 32 25.1 -0.7
40nm,1.8s
I18A **Diamond G Ranc** 18.70 359 ⇑P Pn 16 32 26.1 -0.5
baz=19,SNR=16
K10A **MacKenzie Ranc** 18.78 343 ⇑P Pn 16 32 27.7 +0.1
baz=19,SNR=5.1
J13A **Cove Ranch, Pi** 18.79 349 ⇑P Pn 16 32 27.6 -0.1
baz=19,SNR=7.5
J12A **Stokes Ranch,** 18.81 347 ⇑P Pn 16 32 27.7 -0.3
baz=19,SNR=13
IMW **Indian Meadow** 18.93 357 *e*P Pn 16 32 29.1 -0.3
172nm,2.4s
I17A **Pilgrim Ck.** 18.93 358 ⇓P Pn 16 32 28.9 -0.6
baz=19
I16A **Newdale** 18.94 356 ⇓P Pn 16 32 29.3 -0.3
baz=19
HLID **Hailey** 18.98 349 ⇓P Pn 16 32 29.4 -0.7
baz=19,SNR=9.6
HLID **Hailey** 18.98 349 *e*P Pn 16 32 29.8 -0.3
26nm,1.7s
WVOR **Wild Horse Val** 18.99 339 *e*P Pn 16 32 30.4 +0.2
74nm,1.8s
MOD **Modoc** 19.12 335 *e*P Pn 16 32 32.3 +0.5
68nm,1.9s
MFID **Camas Ranch** 19.12 346 ⇓P Pn 16 32 30.5 -1.3
baz=19,SNR=8.2
I14A **Mackay** 19.19 351 ⇑P Pn 16 32 32.4 -0.2
baz=19,SNR=8.0
I13A **Wildhorse Cree** 19.28 350 ⇓P Pn 16 32 33.1 -0.5
baz=19,SNR=13
I12A **Atlanta** 19.34 348 ⇓P Pn 16 32 34.0 -0.4
baz=20
H17A **Grant Village** 19.41 358 ⇑P Pn 16 32 35.1 -0.1
baz=20
J09A **Fry Pan Ranch,** 19.55 342 ⇑P Pn 16 32 36.0 -0.9
baz=20,SNR=8.4
I11A **Placerville** 19.63 346 ⇑P Pn 16 32 36.5 -1.3
baz=20
H16A **Russell Place,** 19.75 356 ⇓P Pn 16 32 37.9 -1.3
baz=20,SNR=11
J08A **Circle Bar Ran** 19.77 340 ⇓P Pn 16 32 38.5 -1.0
baz=20
H15A **Lima** 19.77 353 ⇓P Pn 16 32 39.2 -0.4
baz=20
H14A **Leadore** 19.86 352 ⇓P Pn 16 32 39.7 -0.8
baz=20
QLMT **Earthquake Lak** 19.88 356 *e*P Pn 16 32 41.1 +0.2
20nm,1.4s
H13A **Challis** 19.93 350 ⇓P Pn 16 32 39.8 -1.7
baz=20,SNR=5.1
YBH **Yreka Blue Hor** 19.99 330 P Pn 16 32 40.7 -1.5
0.1nm,0.3s,baz=292,slow=19,SNR=1.8
MCMT **McKenzie Canyo** 20.00 353 *e*P P 16 32 42.0 +1.5
7.4nm,1.3s
H12A **Diamond D Ranc** 20.02 349 ⇓P P 16 32 42.0 +1.3
baz=20
K05A **Summer Lake** 20.05 335 ⇑P P 16 32 41.9 +0.9
baz=20
RLMT **Red Lodge** 20.11 0 ⇑P P 16 32 42.6 +0.8
baz=20
RLMT **Red Lodge** 20.11 0 *e*P P 16 32 42.0 +0.2
51nm,1.9s
I09A **Lost Marbles R** 20.12 343 ⇑P P 16 32 41.8 0.0
baz=20
CCM **Cathedral Cave** 20.27 46 *e*P P 16 32 46.6 +3.2
25nm,1.5s
G15A **Dillon** 20.30 354 ⇑P P 16 32 44.6 +0.8
baz=20
G16A **Moss Hill, Enn** 20.31 355 ⇑P P 16 32 44.6 +0.8
baz=20
G18A **Lazy EL Ranch,** 20.31 360 ⇑P P 16 32 43.7 -0.1
baz=20,SNR=9.5
G17A **Pierce Place,** 20.34 357 ⇓P P 16 32 44.6 +0.5
baz=20
H11A **Donnelly** 20.39 347 ⇓P P 16 32 44.9 +0.1
baz=20,SNR=7.2
APG **El Apazote** 20.43 115 P P 16 32 54.3 +8.9
7.2nm,1.0s,baz=36,slow=12,SNR=4.3
G13A **Cobalt** 20.45 350 ⇑P P 16 32 45.1 -0.2
baz=21,SNR=7.5
G14A **Jackson** 20.49 352 ⇓P P 16 32 45.7 -0.1
baz=21
DLMT **Dillon** 20.51 354 *e*P P 16 32 46.1 +0.1
BOZ **Bozeman (W)** 20.71 356 ⇑P P 16 32 48.3 +0.1
baz=21,SNR=11
BOZ **Bozeman (W)** 20.71 356 *e*P P 16 32 48.4 +0.2
32nm,1.7s
H09A **Durkee** 20.75 343 ⇑P P 16 32 48.9 +0.4
baz=21
I07A **Izee** 20.75 339 ⇓P P 16 32 48.4 -0.2
baz=21
FVM **French Village** 20.77 47 P P 16 32 53.5 +4.6
21nm,1.1s
GCMT **Greycliff** 20.78 360 *e*P P 16 32 49.0 0.0
19nm,1.6s
BMO **Blue Mountains** 20.83 344 *e*P P 16 32 48.4 -1.1
12nm,1.1s
F16A **Kennard Place,** 20.85 356 ⇑P P 16 32 50.2 +0.6
baz=21
H08A **Prairie City** 20.89 341 ⇓P P 16 32 49.7 -0.4
baz=21,SNR=9.6
F18A **Big Timber** 20.90 360 ⇑P P 16 32 50.2 0.0
baz=21,SNR=9.5
F17A **Fitzpatrick Pl** 20.92 358 ⇓P P 16 32 51.6 +1.2
baz=21,SNR=11
LRM **Limekiln Ridge** 20.95 354 *e*P P 16 32 51.0 +0.3
81nm,1.4s
F15A **Butte** 20.97 354 ⇑P P 16 32 51.5 +0.5
baz=21
PLAL **Pickwick Lake** 21.04 57 *e*P P 16 32 55.0 +3.1
22nm,1.4s,mb4.3
G11A **Walters Elk Ra** 21.11 347 ⇑P P 16 32 51.8 -0.7
baz=21,SNR=5.5
F13A **Darby** 21.14 351 ⇑P P 16 32 52.6 -0.2
baz=21,SNR=14
G10A **Bishop Farm, J** 21.20 345 ⇓P P 16 32 53.0 -0.5
baz=21,SNR=9.1
F12A **Elk City** 21.26 349 ⇑P P 16 32 54.0 -0.1
baz=21,SNR=7.6
G09A **Cove** 21.35 344 ⇑P P 16 32 54.7 -0.4
baz=22,SNR=13
E17A **Martinsdale** 21.48 357 ⇑P P 16 32 56.6 +0.1
baz=22,SNR=7.1
ECSD **EROS Data Cent** 21.49 26 *e*P P 16 33 00.3 +3.7
38nm,1.5s,mb4.5
F11A **Grangeville** 21.55 347 ⇑P P 16 32 57.3 0.0
baz=22
E18A **Harlowton** 21.56 359 ⇑P P 16 32 57.6 +0.3
baz=22,SNR=6.7
E15A **Deer Lodge** 21.56 354 ⇑P P 16 32 57.8 +0.5
baz=22
E16A **East Helena** 21.60 356 ⇓P P 16 32 57.7 0.0
baz=22
H06A **Lindquist Farm** 21.60 339 ⇓P P 16 32 57.9 +0.2
baz=22
E14A **Clinton** 21.65 353 ⇓P P 16 32 58.2 0.0
baz=22
G08A **Pilot Rock** 21.68 342 ⇑P P 16 32 58.4 -0.1
baz=22
WVT **Waverly** 21.69 54 *e*P P 16 33 00.2 +1.4
11nm,0.9s,mb4.3
E13A **Victor** 21.76 351 ⇓P P 16 32 59.6 +0.1
baz=22
F09A **S2 Ranch, Elgi** 21.78 344 ⇓P P 16 33 00.2 +0.5
baz=22
HRY **Holter Researc** 21.78 356 *e*P P 16 32 59.7 0.0
32nm,1.3s,mb4.6
F10A **Beach Ranch, E** 21.87 345 ⇓P P 16 33 00.4 -0.2
baz=22
E12A **Beaver Dam Sad** 21.95 349 ⇑P P 16 33 00.6 -0.9
baz=22,SNR=11
E11A **Bogner Ranch,** 22.01 348 ⇑P P 16 33 00.9 -1.3
baz=22,SNR=13
LNOR **Lincton Mounta** 22.03 343 *e*P P 16 33 01.9 -0.5
9.5nm,1.1s,mb4.1
D16A **Dana Ranch, Ca** 22.08 356 ⇑P P 16 33 02.6 -0.4
baz=22,SNR=9.6
MSO **Missoula** 22.11 352 *e*P P 16 33 03.0 -0.2
30nm,1.5s,mb4.5
CHMT **Chamberlain Mo** 22.11 353 *e*P P 16 33 03.0 -0.2
8.5nm,1.0s,mb4.1
G06A **Carlson Farm,** 22.14 339 ⇓P P 16 33 03.1 -0.4
baz=22
D15A **Lincoln** 22.16 355 ⇑P P 16 33 03.3 -0.5
baz=22,SNR=5.3
D17A **Six Diamond Ra** 22.16 358 ⇑P P 16 33 03.4 -0.4
baz=22,SNR=11
H04A **Detroit Lake** 22.21 336 ⇓P P 16 33 05.1 +0.8
baz=22
D14A **Greenough** 22.30 353 ⇑P P 16 33 04.1 -1.1
baz=22,SNR=16
D13A **Huson** 22.44 351 ⇓P P 16 33 07.4 +0.7
baz=23
SLMT **Seeley Lake** 22.46 353 *e*P P 16 33 06.6 -0.4
32nm,1.4s,mb4.5
D12A **Red Ives Fores** 22.53 350 ⇓P P 16 33 07.5 -0.2
baz=23
C17A **Wharram Farm,** 22.65 358 ⇑P P 16 33 09.3 +0.4
baz=23
D11A **Klaveano Farm,** 22.70 348 ⇓P P 16 33 09.0 -0.5
baz=23
SWMT **Swartz Lake** 22.78 352 *e*P P 16 33 09.4 -1.0
16nm,1.3s,mb4.3
C16A **Fuhringer Ranc** 22.86 356 ⇑P P 16 33 11.7 +0.5
baz=23
D10A **Wagner Farm, O** 22.90 346 ⇓P P 16 33 11.7 +0.1
baz=23
EGMT **Eagleton** 23.02 360 ⇓P P 16 33 13.4 +0.5
baz=23
EGMT **Eagleton** 23.02 360 *e*P P 16 33 12.6 -0.2
18nm,1.2s,mb4.4
C13A **Hot Springs** 23.03 351 ⇑P P 16 33 13.0 +0.1
baz=23
JTMT **Jette** 23.05 352 *e*P P 16 33 12.3 -0.9
47nm,2.1s,mb4.5
YBMT **Yellow Bay** 23.13 352 *e*P P 16 33 14.1 +0.1
31nm,1.8s,mb4.4
BSMT **Bassoo Peak** 23.22 351 P P 16 33 17.5 +2.5
3.0nm,1.0s,mb3.7
B17A **L&G Farms, Che** 23.31 358 ⇓P P 16 33 15.9 0.0
baz=24
B18A **Beardsley Farm** 23.39 360 ⇑P P 16 33 17.3 +0.5
baz=24
E06A **Yakima** 23.41 340 ⇓P P 16 33 16.7 -0.2
baz=24
B15A **Bradely Ranch,** 23.43 355 ⇑P P 16 33 16.6 -0.6
baz=24,SNR=8.6
B16A **M & M Farms, S** 23.47 356 ⇑P P 16 33 17.5 -0.1
baz=24
OD2 **Odessa Site #2** 23.55 344 *e*P P 16 33 17.4 -1.0
5.1nm,0.9s,mb4.0
B13A **Whitefish** 23.69 352 ⇑P P 16 33 20.0 +0.3
baz=24
DGMT **Dagmar** 23.83 9 ⇓P P 16 33 22.3 +1.4
baz=24
LON **Longmire** 23.86 339 *e*P P 16 33 20.2 -1.0
58nm,1.8s,mb4.7
A18A **Metzger Ranch,** 23.91 359 ⇑P P 16 33 22.9 +1.2
baz=24
CPCT **Cooper Cave** 23.93 58 *e*P P 16 33 23.0 +1.0
B12A **Libby** 23.95 350 ⇓P P 16 33 22.4 +0.4
baz=24
A17A **Triple J Farms** 23.96 358 ⇓P P 16 33 22.5 +0.5
baz=24
A16A **West Butte Ran** 24.00 357 ⇑P P 16 33 22.9 +0.5
baz=24
C08A **Higginbotham F** 24.00 344 ⇓P P 16 33 22.9 +0.5
baz=24
NEW **Newport** 24.02 347 *e*P P 16 33 20.4 -2.3
176nm,1.2s
B11A **Sandpoint** 24.05 349 ⇑P P 16 33 22.0 -0.8
baz=24
A15A **Johnson Ranch,** 24.11 355 ⇑P P 16 33 23.7 +0.3
baz=24
A14A **Double T Ranch** 24.16 354 ⇓P P 16 33 23.9 -0.1
baz=24,SNR=7.2
ETW **Entiat** 24.18 342 *e*P P 16 33 24.3 +0.2
18nm,1.5s,mb4.3
C07A **Waterville** 24.18 342 ⇑P P 16 33 24.2 +0.1
baz=24
WALA **Waterton Lakes** 24.30 353 *e*P P 16 33 25.2 0.0
0.5nm,1.1s
B09A **Rice** 24.39 346 ⇓P P 16 33 26.0 0.0
baz=24
A11A **Hall Mountain,** 24.55 349 ⇑P P 16 33 28.0 +0.5
baz=25
TKL **Tuckaleechee C** 24.57 58 P P 16 33 33.4 +5.5
2.8nm,0.5s,mb4.0,baz=211,slow=8.9,SNR=3.9
TKL LR LR 16 43 18.5
comp=Z,510nm,18.2s,MS4.0,baz=256,slow=37
B08A **Colville Reser** 24.60 344 ⇓P P 16 33 28.1 +0.1
baz=25,SNR=6.6
A10A **Northport** 24.79 347 ⇓P P 16 33 30.3 +0.6
baz=25
A09A **Danville** 25.00 346 ⇑P P 16 33 33.2 +1.6
baz=25
A08A **Turner Farm, O** 25.14 345 ⇓P P 16 33 33.6 +0.7
baz=25
ULM **Lac du Bonnet** 27.37 19 LR LR 16 44 56.6
comp=Z,262nm,18.2s,MS3.8,baz=208,slow=37
SADO **Sadowa** 31.53 44 LR LR 16 46 48.4
comp=Z,612nm,18.4s,MS4.3,baz=252,slow=36
FCC **Fort Churchill** 35.49 14 P P 16 35 03.0 -1.3
0.1nm,1.0s
DLBC **Dease Lake** 36.48 342 P P 16 35 13.4 +0.7
3.3nm,0.9s,mb4.2,baz=156,slow=16,SNR=3.1
YKA **Yellowknife Ar** 37.68 356 P P 16 35 22.5 -0.3
1.5nm,1.1s,mb3.6,baz=178,slow=8.6,SNR=9.9
YKA LR LR 16 51 20.8
comp=Z,70nm,19.1s,MS3.5,baz=300,slow=37
ROSC **El Rosal** 39.23 115 LR LR 16 54 04.2
comp=Z,134nm,19.6s,MS3.8,baz=351,slow=39
SDV **Santo Domingo** 40.30 106 P P 16 35 51.2 +5.7
3.0nm,0.7s,mb3.9,baz=288,slow=19,SNR=2.7
SCHQ **Schefferville** 43.25 35 LR LR 16 55 04.7
comp=Z,474nm,18.6s,MS4.4,baz=67,slow=38
DAWY **Dawson** 43.70 342 *e*P P 16 36 15.3 +2.8
KDAK **Kodiak Island** 44.80 329 LR LR 16 52 38.0
comp=Z,193nm,18.8s,MS4.0,baz=126,slow=33
INK **Inuvik** 45.74 348 P P 16 36 28.7 -0.1
0.3nm,0.3s,mb3.7,baz=141,slow=6.5,SNR=2.6
INK LR LR 16 57 06.5
comp=Z,476nm,18.2s,MS4.5,baz=30,slow=38
INK **Inuvik** 45.74 348 P P 16 36 28.7 -0.1
INK LR LR 16 57 06.5
TRF **Thorofare Moun** 46.86 336 P P 16 36 41.4 +3.7
30nm,1.5s,mb5.0
RES **Resolute Bay** 50.36 5 P P 16 37 04.5 +0.1
0.8nm,0.6s,mb4.0,baz=194,slow=9.3,SNR=7.3
RES LR LR 16 58 35.6
comp=Z,191nm,18.2s,MS4.2,baz=217,slow=37
RES **Resolute Bay** 50.36 5 *e*P P 16 37 04.2 -0.2
6.5nm,1.3s,mb4.5
PPT **Papeete** 57.54 227 *e*LR LR 16 54 43.1
230nm,28.2s,baz=36
PPT **Papeete** 57.54 227 LR LR 16 57 21.1
comp=Z,111nm,19.3s,MS4.0,baz=16,slow=30
PETK **Petropavlovsk-** 72.05 321 LR LR 17 04 07.2
comp=Z,67nm,21.8s,MS3.9,baz=274,slow=30
PLCA **Paso Flores** 74.72 150 LR LR 17 07 55.6
comp=Z,178nm,21.4s,MS4.3,baz=308,slow=32
TIXI **Tiksi** 75.68 344 *e*P P 16 39 53.2 +0.5
5.1nm,1.0s,mb4.4
ARCES **ARCESS Array B** 80.38 15 LR LR 17 17 56.1
comp=Z,116nm,19.1s,MS4.2,baz=359,slow=37
FINES **FINESS Array B** 86.76 20 LR LR 17 19 03.8
comp=Z,153nm,18.6s,MS4.4,baz=38,slow=35
GERES **GERESS Array B** 90.77 34 LR LR 17 20 36.3
comp=Z,205nm,18.9s,MS4.6,baz=106,slow=35
MJAR **Matsushiro Arr** 91.63 312 LR LR 17 18 18.1
comp=Z,103nm,18.7s,MS4.3,baz=70,slow=33
MDJ **Mudanjiang** 92.24 322 P P 16 41 16.0 -1.9
MDJ pmax pmax
comp=Z,7.0nm,2.2s,mb4.6
MDJ pmax pmax
comp=Z,28nm,3.3s
MDJ LR LR
comp=N,51nm,38.2s
MDJ LR LR
comp=Z,37nm,24.2s
URZ **Urewera** 93.12 229 LR LR 17 12 48.7
comp=Z,116nm,20.4s,MS4.3,baz=47,slow=29
CBIJ **Chichi jima** 93.67 302 LR LR 17 13 08.6
comp=Z,140nm,21.4s,MS4.4,baz=75,slow=29
DZM **Mont Dzumac** 93.98 248 *e*LR LR 17 11 35.2
comp=Z,221nm,25.6s
CN2 **Changchun** 95.04 323 *e*P P 16 41 29.4 -1.4
AKASG **Malin Array Be** 96.31 25 LR LR 17 23 05.1
comp=Z,130nm,19.0s,MS4.4,baz=310,slow=34
KEST **Kesra** 96.45 46 LR LR 17 26 56.0
comp=Z,34nm,19.8s,MS3.8,baz=217,slow=37
KSRS **Korea Array** 97.74 317 LR LR 17 24 27.3
comp=Z,24nm,18.4s,MS3.7,baz=75,slow=35
GUMO **Guam** 98.03 289 LR LR 17 17 13.8
comp=Z,89nm,21.3s,MS4.2,baz=88,slow=30
ZALV **Zalesovo Beam** 100.45 351 LR LR 17 34 23.6
comp=Z,50nm,19.4s,MS4.0,baz=50,slow=40
BJI **Beijing** 102.59 326 P Pdif 16 42 01.0 -3.5
LZH **Lanzhou** 111.59 331 *e*PKP PKiKP 16 46 37.0 -5.7
CD2 **Chengdu** 115.96 328 PKP PKPdf 16 46 50.4 -0.8
ASAR **Alice Springs** 122.68 257 PKP PKPdf 16 47 08.6 +4.4
comp=Z,0.2nm,0.7s,baz=94,slow=2.2,SNR=6.1

ISK 05 16:30:39.8, 39°.51N×35°.34E, h3km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.13**	**353**	*e*PG			Pg	16 30 42.5	+0.2
YOZ				*e*SG			Sg	16 30 45.6	+1.7
CDAG	**Cicekdag**	**0.76**	**279**	*i* P			Pg	16 30 53.4	-0.9
CDAG				*i* S			Sg	16 31 04.2	+0.1
CORM	**Corum**	**0.86**	**321**	*e*PG			Pg	16 30 57.4	+1.1
CORM				*e*SG			Sg	16 31 09.6	+2.2
SVSK	**Karacayir**	**1.34**	**72**	*e*PN			Pn	16 31 06.4	+1.0

*NEIC **05** 16:31:45.6, 18°.31N×67°.93W, h102km, MD3.5(RSPR), After RSPR.*
NEIC Felt at La Romana.

RSPR 05 16:31:45.6, 18°.31N×67°.93W, h102km±1km, MD3.5/3, MD3.5/3, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.79**	**78**	⇓*e*P			Pn	16 32 03.7	-0.3
AGPR				*e*S			Sn	16 32 17.7	-0.2
CRPR	**Cabo Rojo, PR**	**0.83**	**111**	⇓*e*P			Pn	16 32 04.8	+0.3
CRPR				*e*S			Sn	16 32 18.4	-0.2
LRS	**Lares**	**1.03**	**91**	*e*S			Sn	16 32 22.2	0.0
AOPR	**Arecibo Observ**	**1.11**	**88**	⇑*e*P			Pn	16 32 06.8	-0.6
AOPR				*e*S			Sn	16 32 23.5	-0.4
CPD	**Cerro la Pandu**	**1.93**	**98**	⇑*e*P			Pn	16 32 17.8	+0.4
CBYP	**Canovanas**	**1.97**	**91**	⇓*e*P			Pn	16 32 17.5	-0.4
MTP	**Monte Pirata**	**2.27**	**95**	⇓*e*P			Pn	16 32 21.6	-0.1

DJA 05 16:40:02, 1°.27N×98°.25E, h15km, MLv3.5/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.68**	**273**	P			Pg	16 40 15.7	+0.5
TRSI	**Tarutung**	**1.03**	**43**	P			Pb	16 40 21.0	-0.6
MNSI	**Mandailing Nat**	**1.41**	**110**	P			Pn	16 40 26.9	-0.3
MNSI				S			Sn	16 40 45.6	+0.1

KRSC 05 16:42:49.0±1.1, 55°.29N×159°.66E, h297km±26km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMNR	**Kamenistaya**	**0.57**	**35**	P			Pn	16 43 29.0	+1.7
ESO	**Esso**	**0.84**	**320**	*e*P			Pn	16 43 29.3	+1.1
ESO				*i* S			S	16 43 58.2	-1.2
BZGR	**Bezymyannyi-Gr**	**0.88**	**42**	*e*P			Pn	16 43 29.4	+1.0
ZLN	**Zelenaya**	**0.97**	**41**	P			Pn	16 43 29.9	+1.1
KLY	**Klyuchi**	**1.17**	**28**	P			Pn	16 43 30.4	+0.7
GNL	**Ganaly**	**1.89**	**213**	*e*P			Pn	16 43 35.4	+0.8
GNL				*e*S			S	16 44 09.9	-1.0
AVH	**Avacha**	**2.10**	**195**	P			Pn	16 43 37.3	+1.0
MIPR	**Malaya Ipel'ka**	**3.48**	**211**	P			Pn	16 43 49.3	-0.1

*ISCJB **05** 16:48:23.5±0.5, 17°.38N±0°.03×99°.87W±0°.04, h33km, Error ellipse: s-maj=5.7km s-min=4.2km az=38.5*
*MEX **05** 16:48:25.7±0.9, 17°.37N×99°.87W, h30km±15km, MD3.6*
*NEIC **05** 16:48:25.7, 17°.37N×99°.87W, h30km, MD3.6(MEX), After MEX.*

ISC 05 16:48:23.7±0.7, 17°.38N±0°.05×99°.88W±0°.04, h31km±10km, n16, σ0°59/31, Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.50**	**229**	*i* P			**Pb**	**16 48 33.6**	**-0.5**
CAIG				*i* S			**Sb**	**16 48 41.6**	**+0.3**
CAIG	**El Cayaco**	**0.50**	**229**	*i* P			**Pb**	**16 48 33.6**	**-0.5**
CAIG				*i* S			**Sb**	**16 48 41.6**	**+0.3**
ACX	**Acapulco**	**0.51**	**184**	*i* P			**Pb**	**16 48 34.0**	**-0.4**
ACX				*i* S			**Sb**	**16 48 41.9**	**+0.2**
ACX	**Acapulco**	**0.51**	**184**	*i* P			**Pb**	**16 48 34.0**	**-0.4**
ACX				*i* S			**Sb**	**16 48 41.9**	**+0.2**
PLIG	**Platanillo**	**1.07**	**19**	*i* P			**Pn**	**16 48 43.2**	**+0.6**
PLIG				*i* S			**Sn**	**16 48 55.5**	**-0.9**
PLIG	**Platanillo**	**1.07**	**19**	*i* P			**Pn**	**16 48 43.2**	**+0.6**
PLIG				*i* S			**Sn**	**16 48 55.5**	**-0.9**
ZIIG	**Zihuatanejo**	**1.53**	**279**	*i* P			**Pn**	**16 48 49.5**	**+0.5**
ZIIG				*i* S			**Sn**	**16 49 07.8**	**-0.2**
ZIIG	**Zihuatanejo**	**1.53**	**279**	*i* P			**Pn**	**16 48 49.5**	**+0.5**
ZIIG				*i* S			**Sn**	**16 49 07.8**	**-0.2**
MZVM		**1.90**	**19**	*i* P			**Pn**	**16 48 54.7**	**+0.7**
PNIG	**Pinotepa**	**1.94**	**120**	*e*P			**Pn**	**16 48 54.7**	**+0.1**
PNIG				*i* S			**Sn**	**16 49 17.7**	**-0.2**
PNIG	**Pinotepa**	**1.94**	**120**	*e*P			**Pn**	**16 48 54.7**	**+0.1**
PNIG				*i* S			**Sn**	**16 49 17.7**	**-0.2**
UTMO	**Huajuapan**	**2.02**	**77**	*e*P			**Pn**	**16 48 55.4**	**-0.4**
UTMO				*i* S			**Sn**	**16 49 20.3**	**+0.2**
PPM	**Popocatepetl**	**2.05**	**35**	*e*P			**Pn**	**16 48 56.5**	**+0.3**
PPM				*i* S			**Sn**	**16 49 22.1**	**+1.4**
PPM	**Popocatepetl**	**2.05**	**35**	*e*P			**Pn**	**16 48 56.5**	**+0.3**
PPM				*i* S			**Sn**	**16 49 22.1**	**+1.4**
IIO	**Organos**	**2.46**	**26**	*i* P			**Pn**	**16 49 01.2**	**-0.5**
IIO				*i* S			**Sn**	**16 49 29.6**	**-1.1**
IIO	**Organos**	**2.46**	**26**	*i* P			**Pn**	**16 49 01.2**	**-0.5**
IIO				*i* S			**Sn**	**16 49 29.6**	**-1.1**

*IDC **05** 17:05:58.5±1.1, 2°.72S×129°.20E, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.9/20, mbtmp3.9/9, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=50.3km s-min=18.0km az=72.0*
*ISCJB **05** 17:06:03.1±2.2, 2°.9S±0°.1×129°.1E±0°.2, h46km±20km, mb3.9/10, Error ellipse: s-maj=31.4km s-min=10.2km az=143.7*
*NEIC **05** 17:06:03.8±0.5, 2°.85S×129°.14E, h35km, mb4.2/5, Error ellipse: s-maj=16.6km s-min=7.2km az=72.0*
*DJA **05** 17:06:08, 3°.13S×128°.86E, h15km, MLv4.0/6*

ISC 05 17:06:03.0±2.6, 2°.83S±0°.09×129°.1E±0°.1, h27km±18km, n28, σ0°91/27, mb3.9/10, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.54**	**197**	P			**Pb**	**17 06 14.5**	**+0.5**
AAI	**Ambon**	**1.23**	**226**	P			**Pn**	**17 06 24.2**	**-0.3**
NLAI	**Namlea**	**2.02**	**258**	P			**Pn**	**17 06 35.0**	**-0.4**
TLE	**Tual**	**4.59**	**128**	P			**Pn**	**17 07 17.0**	**+6.3**
LUWI	**Luwuk**	**6.55**	**286**	P			**Pn**	**17 07 42.6**	**+4.9**
52nm,0.9s,0.4nm									
APSI	**Ampana**	**7.67**	**284**	P			**Pn**	**17 07 51.0**	**-2.1**
KAPI	**Kappang**	**9.56**	**257**	Pn			**Pn**	**17 08 19.5**	**+0.5**
0.4nm,0.3s,baz=108,slow=16,SNR=4.6									
KAPI	**Kappang**	**9.56**	**257**	P			**Pn**	**17 08 21.3**	**+2.3**
8.1nm,1.4s									
FITZ	**Fitzroy Crossi**	**15.55**	**192**	Pn			**Pn**	**17 09 41.5**	**+0.9**
0.1nm,0.3s,baz=65,slow=11,SNR=4.2									

FITZ LR LR 17 15 55.7
comp=Z,110nm,19.2s,baz=12,slow=38
FITZ Fitzroy Crossi 15.55 192 *e*P **Pn 17 09 39.9 -0.7**
FITZ LR LR 17 15 55.7
FITZ Fitzroy Crossi 15.55 192 P **Pn 17 09 43.3 +2.7**
13nm,1.1s
SBUM Sibu 17.65 287 P **Pn 17 10 13.1 +5.9**
3.5nm,3.0s
WRAB Tennant Creek 17.76 164 *e*P **Pn 17 10 08.4 -0.1**
11nm,0.8s
WRAB Tennant Creek 17.76 164 P **Pn 17 10 09.1 +0.6**
WRA Warramunga Arr 17.77 164 P **Pn 17 10 07.9 -0.7**
0.9nm,0.3s,baz=334,slow=13,SNR=36
WB2 Warramunga Arr 17.77 164 *e*P **Pn 17 10 07.5 -1.1**
ASAR Alice Springs 21.24 168 P **P 17 10 46.9 -0.2**
15nm,0.8s,mb4.4,baz=347,slow=11,SNR=139
STKA Stephens Creek 31.21 159 P **P 17 12 20.6 +0.4**
1.2nm,0.8s,mb3.8,baz=324,slow=12,SNR=4.6
LSA Lhasa 48.60 315 P **P 17 14 45.3 +0.7**
SONM Songino Array 54.22 341 P **P 17 15 26.0 -0.3**
0.2nm,0.6s,mb3.3,baz=175,slow=6.8,SNR=2.4
MKAR Makanchi Array 64.26 326 P **P 17 16 35.7 -0.1**
0.8nm,0.8s,mb3.8,baz=140,slow=6.9,SNR=5.7
ZALV Zalesovo Beam 67.46 333 P **P 17 16 55.4 -0.9**
0.4nm,0.5s,mb3.7,baz=93,slow=5.9,SNR=3.1
KURK Kurchatov 68.51 328 *e*P **P 17 17 02.8 -0.2**
2.8nm,0.8s,mb4.2
BVAR Borovoye Array 74.07 328 P **P 17 17 36.0 -0.6**
0.3nm,0.4s,mb3.6,baz=134,slow=8.5,SNR=4.8
BRVK Borovoye 74.14 328 *e*P **P 17 17 38.6 +1.7**
3.9nm,1.0s,mb4.3
TIXI Tiksi 74.34 360 *e*P **P 17 17 37.7 -0.1**
2.4nm,0.8s,mb4.2
ABKAR Akbulak array 78.69 321 *e*P **P 17 18 04.2 +1.3**
1.6nm,0.9s,mb4.0
OLIL Olney 130.76 39 *e*PKPdf PKPdf 17 25 09.9 -2.4

IDC ***05*** *17:06:59.6±0.8, 3.92S×77.18W, h104km±7km, mb3.8/9, mb1 3.9/15, mb1mx3.8/24, mbtmp3.8/15, Error ellipse: s-maj=18.8km s-min=9.8km az=104.0*
ISCJB ***05*** *17:07:00.2±0.8, 3.97S±0.05×77.05W±0.07, h128km±8km, mb4.2/16, Error ellipse: s-maj=11.8km s-min=8.2km az=174.7*
NEIC ***05*** *17:07:02.0±0.9, 3.89S×77.15W, h124km±8km, mb4.3/7, Error ellipse: s-maj=13.0km s-min=7.0km az=74.0*
ISC 05 17:07:01.8±0.7, 3.92S±0.05×77.04W±0.07, h120km±7km, n204, σ0.55/197, mb4.2/16, 80C-87D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.35**	**204**	P	**Pn**	**17 07 53.2**	**+0.5**
ATAH	8.2nm,0.3s,baz=25,slow=8.1,SNR=95			S	**Sn**	**17 08 31.1**	**-1.0**
OTAV	**Otavalo**	**4.36**	**341**	*e*P	**Pn**	**17 08 07.2**	**+0.9**
NNA	**Nana**	**8.02**	**179**	P	**Pn**	**17 08 54.6**	**-1.0**
NNA	27nm,0.3s,baz=267,slow=1.6,SNR=18 3.1nm,0.3s,baz=1.9,slow=14,SNR=6.6			S	**Sn**	**17 10 15.4**	**-9.4**
ROSC	**El Rosal**	**9.12**	**17**	P	**Pn**	**17 09 10.4**	**-0.2**
SDV	**Santo Domingo**	**14.23**	**27**	P	**Pn**	**17 10 17.7**	**-0.3**
LPAZ	**La Paz**	**15.09**	**145**	P	**Pn**	**17 10 30.9**	**+2.1**
LPAZ	**La Paz**	**15.09**	**145**	*e*P	**Pn**	**17 10 26.5**	**-2.4**
PCRV	**Puerto La Cruz**	**18.67**	**41**	P	**P**	**17 11 12.4**	**+1.7**
SIV	**San Ignacio**	**19.75**	**128**	P	**P**	**17 11 25.6**	**+3.1**
LVC	**Limon Verde**	**20.18**	**158**	*e*P	**P**	**17 11 29.0**	**+2.0**
PLCA	**Paso Flores**	**37.11**	**172**	P	**P**	**17 14 00.8**	**+0.1**
PLCA	**Paso Flores**	**37.11**	**172**	*e*P	**P**	**17 14 00.9**	**+0.2**
628A	**Black Gap, Mar**	**41.45**	**325**	⇓P	**P**	**17 14 36.9**	**0.0**
TXAR	**Lajitas Array**	**41.78**	**324**	P	**P**	**17 14 39.4**	**-0.2**
TXAR	0.7nm,0.7s,mb3.5,baz=141,slow=10,SNR=2.9 0.7nm,0.8s,baz=146,slow=6.1,SNR=4.9			PcP	PcP	17 16 33.3	-0.4
528A	**Cox Ranch, San**	**41.90**	**326**	⇓P	**P**	**17 14 40.1**	**-0.4**
626A	**Big Bend Ranch**	**42.22**	**324**	⇓P	**P**	**17 14 43.2**	**+0.1**
428A	**Kincaid Ranch,**	**42.27**	**326**	⇑P	**P**	**17 14 42.7**	**-0.8**
527A	**Woodward Ranch**	**42.35**	**325**	⇑P	**P**	**17 14 44.0**	**-0.2**
328A	**Wristen Ranch,**	**42.84**	**327**	⇓P	**P**	**17 14 47.3**	**-0.8**
426A	**McDonald Obser**	**42.98**	**325**	⇑P	**P**	**17 14 49.1**	**-0.2**
326A	**Caldwell Ranch**	**43.44**	**326**	⇑P	**P**	**17 14 52.6**	**-0.3**
WMOK	**Wichita Mounta**	**43.56**	**334**	*e*P	**P**	**17 14 52.8**	**-1.0**
425A	**Indio Mountain**	**43.62**	**324**	⇓P	**P**	**17 14 54.1**	**-0.4**
226A	**Malaga, Loving**	**44.07**	**326**	⇓P	**P**	**17 14 58.3**	**+0.3**
324A	**Moseley Ranch,**	**44.39**	**324**	⇑P	**P**	**17 14 59.9**	**-0.7**
Z27A	**Tatum**	**44.55**	**328**	⇑P	**P**	**17 15 01.4**	**-0.4**
125A	**Gardner Draw,**	**44.83**	**326**	⇑P	**P**	**17 15 03.6**	**-0.4**
MSTX	**Muleshoe**	**44.83**	**329**	⇓P	**P**	**17 15 03.4**	**-0.6**
224A	**Corundas Mount**	**44.88**	**325**	⇑P	**P**	**17 15 04.8**	**+0.4**
Z26A	**Caprock**	**44.92**	**327**	⇓P	**P**	**17 15 04.8**	**0.0**
124A	**Stringfield Ra**	**45.30**	**326**	⇓P	**P**	**17 15 08.0**	**+0.2**
Z25A	**Roswell**	**45.33**	**327**	⇓P	**P**	**17 15 07.9**	**-0.1**
Y25A	**Mesa, Roswell**	**45.80**	**327**	⇑P	**P**	**17 15 11.5**	**-0.2**
222A	**Williams Famil**	**45.82**	**324**	⇑P	**P**	**17 15 12.5**	**+0.7**
X26A	**CR and CF Fran**	**45.82**	**329**	⇓P	**P**	**17 15 11.6**	**-0.2**
BINY	**Binghamton**	**45.91**	**1**	*e*P	**P**	**17 15 10.0**	**-2.3**
Y24A	**Capitan**	**46.21**	**327**	⇓P	**P**	**17 15 14.9**	**+0.1**
220A	**Playas Peak, P**	**46.54**	**322**	⇑P	**P**	**17 15 18.3**	**+0.8**
Y23A	**Lovelace Mesa,**	**46.55**	**326**	⇓P	**P**	**17 15 17.7**	**+0.2**
Z22A	**Elephant Butte**	**46.57**	**325**	⇑P	**P**	**17 15 17.9**	**+0.2**
319A	**Douglas**	**46.64**	**321**	⇓P	**P**	**17 15 19.1**	**+0.8**
W25A	**X Bar L Ranch,**	**46.67**	**329**	⇓P	**P**	**17 15 18.0**	**-0.5**
120A	**U Bar Ranch, L**	**47.05**	**323**	⇑P	**P**	**17 15 21.8**	**+0.3**
219A	**White Tail Can**	**47.05**	**322**	⇑P	**P**	**17 15 21.7**	**+0.2**
Z20A	**Nine Sixteen R**	**47.42**	**323**	⇓P	**P**	**17 15 24.7**	**+0.3**
Y21A	**Point of Rocks**	**47.52**	**325**	⇑P	**P**	**17 15 25.1**	**0.0**
218A	**Dragoon**	**47.52**	**321**	⇓P	**P**	**17 15 28.5**	**+0.6**
ANMO	**Albuquerque**	**47.53**	**327**	*e*P	**P**	**17 15 24.6**	**-0.5**
Y20A	**Horse Springs,**	**47.86**	**324**	⇑P	**P**	**17 15 28.2**	**+0.5**
X21A	**Alamocita Cree**	**47.90**	**325**	⇑P	**P**	**17 15 28.3**	**+0.3**
W21A	**San Fidel**	**48.31**	**326**	⇑P	**P**	**17 15 31.5**	**+0.3**
117A	**Oracle**	**48.36**	**321**	⇓P	**P**	**17 15 31.7**	**+0.1**
216A	**Three Points,**	**48.44**	**320**	⇑P	**P**	**17 15 32.3**	**+0.1**
V21A	**Milan**	**48.81**	**327**	⇓P	**P**	**17 15 35.3**	**+0.4**
SDCO	**Great Sand Dun**	**49.16**	**330**	*e*P	**P**	**17 15 37.5**	**-0.1**
W18A	**Petrified Fore**	**49.50**	**324**	⇓P	**P**	**17 15 40.6**	**+0.4**

Y16A	**Circle Bar Ran**	**49.70**	**322**	⇑P	**P**	**17 15 42.5**	**+0.8**
X16A	**Lo Mia Camp, P**	**50.03**	**322**	⇓P	**P**	**17 15 44.6**	**+0.3**
MVCO	**Mesa Verde**	**50.31**	**327**	⇑P	**P**	**17 15 46.0**	**-0.4**
T19A	**Beclabito**	**50.32**	**326**	⇓P	**P**	**17 15 46.6**	**+0.1**
U18A	**Rough Rock, Ch**	**50.50**	**325**	⇑P	**P**	**17 15 47.7**	**0.0**
W16A	**Flagstaff**	**50.55**	**323**	⇑P	**P**	**17 15 49.0**	**+0.8**
X15A	**Humboldt**	**50.57**	**322**	⇑P	**P**	**17 15 48.8**	**+0.5**
R21A	**Cimarron**	**50.68**	**329**	⇑P	**P**	**17 15 49.1**	**0.0**
WUAZ	**Wupatki**	**50.74**	**324**	⇑P	**P**	**17 15 50.2**	**+0.6**
WUAZ	**Wupatki**	**50.74**	**324**	*e*P	**P**	**17 15 50.0**	**+0.4**
T18A	**Mexican Hat**	**51.02**	**326**	⇑P	**P**	**17 15 51.2**	**-0.4**
S19A	**Harvey Farm, M**	**51.05**	**327**	⇓P	**P**	**17 15 51.8**	**0.0**
V15A	**Kaibab Nationa**	**51.42**	**323**	⇑P	**P**	**17 15 54.9**	**+0.2**
T17A	**Navajo Res., N**	**51.44**	**325**	⇑P	**P**	**17 15 54.8**	**+0.1**
S18A	**Hurst Farm, Bl**	**51.48**	**327**	⇓P	**P**	**17 15 55.3**	**+0.2**
W14A	**Seligman**	**51.57**	**322**	⇓P	**P**	**17 15 56.5**	**+0.8**
V14A	**Boquillas Ranc**	**51.86**	**322**	⇓P	**P**	**17 15 58.5**	**+0.6**
U15A	**North Rim**	**51.91**	**324**	⇑P	**P**	**17 15 58.8**	**+0.5**
R18A	**Canyonlands Na**	**51.93**	**327**	⇑P	**P**	**17 15 58.0**	**-0.3**
W13A	**Hualapai Mount**	**51.99**	**321**	⇑P	**P**	**17 15 60.0**	**+1.1**
BC3	**Big Chuckw Mtn**	**52.08**	**319**	⇓P	**P**	**17 15 59.9**	**+0.3**
IRM	**Iron Mountain**	**52.19**	**320**	⇑P	**P**	**17 16 00.6**	**+0.2**
V13A	**Grand Canyon W**	**52.54**	**322**	⇓P	**P**	**17 16 03.5**	**+0.6**
M22A	**Cedar Creek Ra**	**52.55**	**332**	⇓P	**P**	**17 16 02.8**	**-0.1**
BELC	**Belle Mtn.**	**52.65**	**319**	⇑P	**P**	**17 16 03.8**	**0.0**
R16A	**Teasdale**	**52.73**	**326**	⇓P	**P**	**17 16 04.7**	**+0.4**
SRU	**San Rafael**	**52.79**	**327**	⇓P	**P**	**17 16 04.7**	**-0.1**
N20A	**Spence Gulch,**	**52.90**	**330**	⇓P	**P**	**17 16 05.5**	**-0.1**
GMRC	**Granite Mounta**	**52.91**	**320**	⇑P	**P**	**17 16 06.3**	**+0.6**
O19A	**Miners Draw (B**	**52.93**	**329**	⇓P	**P**	**17 16 05.7**	**-0.1**
V12A	**Nelson**	**53.00**	**321**	⇑P	**P**	**17 16 06.7**	**+0.4**
M21A	**Separation Pea**	**53.06**	**332**	⇓P	**P**	**17 16 06.4**	**-0.3**
L21A	**Rawlins**	**53.34**	**332**	⇓P	**P**	**17 16 09.3**	**+0.6**
N19A	**John Jarvie Ra**	**53.40**	**330**	⇓P	**P**	**17 16 09.2**	**0.0**
TUQ	**Turquoise Moun**	**53.49**	**320**	⇓P	**P**	**17 16 10.1**	**+0.1**
S13A	**Holt Ranch, En**	**53.61**	**324**	⇓P	**P**	**17 16 11.8**	**+1.0**
RSSD	**Black Hills**	**53.62**	**336**	*e*P	**P**	**17 16 10.5**	**-0.2**
N18A	**Larsen Ranch,**	**53.71**	**330**	⇓P	**P**	**17 16 11.9**	**+0.5**
GSC	**Goldstone**	**53.97**	**320**	⇑P	**P**	**17 16 13.9**	**+0.5**
R13A	**O'Grain Ranch,**	**54.08**	**324**	⇑P	**P**	**17 16 15.3**	**+1.1**
Q14A	**Sevier Lake (B**	**54.23**	**325**	⇓P	**P**	**17 16 15.7**	**+0.5**
M18A	**Lyman**	**54.25**	**330**	⇑P	**P**	**17 16 15.1**	**-0.2**
EDW2	**Edwards Air Fo**	**54.49**	**319**	⇑P	**P**	**17 16 17.1**	**-0.1**
P14A	**Drum Mountains**	**54.52**	**326**	⇑P	**P**	**17 16 17.7**	**+0.3**
R12A	**Pony Springs,**	**54.55**	**324**	⇑P	**P**	**17 16 17.9**	**+0.4**
M17A	**Scullys Gap (B**	**54.59**	**329**	⇓P	**P**	**17 16 17.3**	**-0.5**
L18A	**Fontenelle, Gr**	**54.60**	**330**	⇑P	**P**	**17 16 17.5**	**-0.4**
Q13A	**Wheeler Ranch,**	**54.63**	**325**	⇑P	**P**	**17 16 18.5**	**+0.4**
K19A	**Absolon Red Bu**	**54.70**	**332**	⇑P	**P**	**17 16 18.1**	**-0.5**
MPMC	**Manual Prospec**	**54.87**	**320**	⇑P	**P**	**17 16 19.7**	**-0.3**
P13A	**Bates Ranch, G**	**54.96**	**325**	⇓P	**P**	**17 16 21.0**	**+0.5**
BW06	**Boulder Array**	**55.00**	**331**	⇓P	**P**	**17 16 20.3**	**-0.4**
PDAR	**Pinedale Array**	**55.00**	**331**	P	**P**	**17 16 20.2**	**-0.5**
PDAR	1.8nm,0.6s,mb4.3,baz=124,slow=8.7,SNR=14 0.4nm,0.5s,baz=106,slow=5.9,SNR=3.6			PcP	PcP	17 17 20.2	-0.8
K18A	**Toltan Ranch,**	**55.14**	**331**	⇑P	**P**	**17 16 21.6**	**-0.1**
R11A	**Troy Canyon, C**	**55.14**	**323**	⇑P	**P**	**17 16 22.1**	**+0.3**
L17A	**Cokeville**	**55.15**	**330**	⇓P	**P**	**17 16 21.1**	**-0.8**
S10A	**Tonopah Range,**	**55.47**	**322**	⇓P	**P**	**17 16 24.9**	**+0.6**
M15A	**Larsen Ranch,**	**55.50**	**328**	⇑P	**P**	**17 16 24.5**	**+0.1**
Q11A	**Duckwater**	**55.51**	**324**	⇓P	**P**	**17 16 24.9**	**+0.5**
J18A	**Kendall Valley**	**55.56**	**331**	⇑P	**P**	**17 16 24.1**	**-0.7**
I18A	**Diamond G Ranc**	**55.83**	**332**	⇑P	**P**	**17 16 26.4**	**-0.3**
L15A	**Malad City**	**55.86**	**329**	⇑P	**P**	**17 16 26.6**	**-0.3**
O12A	**Currie**	**55.93**	**326**	⇑P	**P**	**17 16 27.5**	**+0.1**
J17A	**Brown Place, J**	**56.01**	**331**	⇓P	**P**	**17 16 27.6**	**-0.4**
M14A	**Sheep Mountain**	**56.01**	**328**	⇑P	**P**	**17 16 27.4**	**-0.6**
RRI2	**Red Ridge**	**56.29**	**330**	*e*P	**P**	**17 16 30.0**	**0.0**
ULM	**Lac du Bonnet**	**56.35**	**346**	P	**P**	**17 16 28.1**	**-2.1**
I17A	**Pilgrim Ck.**	**56.36**	**331**	⇓P	**P**	**17 16 30.6**	**+0.2**
K14A	**Jones Ranch, D**	**56.65**	**329**	⇓P	**P**	**17 16 31.8**	**-0.7**
L13A	**Double Diamond**	**56.74**	**328**	⇑P	**P**	**17 16 33.1**	**-0.1**
M12A	**Wells**	**56.80**	**327**	⇓P	**P**	**17 16 33.2**	**-0.4**
NVAR	**Mina Array Bea**	**56.84**	**322**	P	**P**	**17 16 33.9**	**-0.1**
J15A	**Blackfoot**	**56.88**	**330**	⇓P	**P**	**17 16 34.3**	**+0.2**
O10A	**Cortez Mining,**	**56.94**	**325**	⇑P	**P**	**17 16 34.7**	**0.0**
G18A	**Lazy EL Ranch,**	**56.95**	**333**	⇑P	**P**	**17 16 34.3**	**-0.3**
H16A	**Russell Place,**	**57.26**	**332**	⇓P	**P**	**17 16 37.2**	**+0.4**
J14A	**Carey**	**57.38**	**329**	⇑P	**P**	**17 16 38.1**	**+0.5**
F18A	**Big Timber**	**57.47**	**333**	⇓P	**P**	**17 16 38.2**	**0.0**
L11A	**Cat Creek Ranc**	**57.77**	**327**	⇓P	**P**	**17 16 40.6**	**+0.2**
J13A	**Cove Ranch, Pi**	**57.77**	**329**	⇑P	**P**	**17 16 40.2**	**-0.2**
I14A	**Mackay**	**57.78**	**330**	⇑P	**P**	**17 16 40.8**	**+0.4**
F17A	**Fitzpatrick Pl**	**57.89**	**333**	⇑P	**P**	**17 16 41.5**	**+0.4**
HLID	**Hailey**	**58.01**	**329**	⇑P	**P**	**17 16 42.1**	**+0.1**
E18A	**Harlowton**	**58.06**	**334**	⇓P	**P**	**17 16 41.8**	**-0.5**

L10A	**Juniper Basin**	**58.10**	**326**	⇑P	**P**	**17 16 42.7**	**-0.1**
I13A	**Wildhorse Cree**	**58.11**	**329**	⇑P	**P**	**17 16 42.8**	**+0.1**
BOZ	**Bozeman (W)**	**58.15**	**332**	⇓P	**P**	**17 16 42.5**	**-0.5**
J12A	**Stokes Ranch,**	**58.15**	**328**	⇓P	**P**	**17 16 43.6**	**+0.5**
H14A	**Leadore**	**58.23**	**330**	⇑P	**P**	**17 16 43.8**	**+0.2**
K11A	**Parker Ranch,**	**58.33**	**327**	⇓P	**P**	**17 16 44.7**	**+0.4**
E17A	**Martinsdale**	**58.40**	**333**	⇓P	**P**	**17 16 44.4**	**-0.3**
I12A	**Atlanta**	**58.55**	**328**	⇓P	**P**	**17 16 45.8**	**0.0**
H13A	**Challis**	**58.64**	**330**	⇓P	**P**	**17 16 46.2**	**-0.2**
MFID	**Camas Ranch**	**58.66**	**328**	⇓P	**P**	**17 16 46.9**	**+0.3**
F15A	**Butte**	**58.70**	**332**	⇑P	**P**	**17 16 46.5**	**-0.3**
E16A	**East Helena**	**58.83**	**333**	⇑P	**P**	**17 16 47.8**	**+0.1**
D17A	**Six Diamond Ra**	**58.85**	**334**	⇑P	**P**	**17 16 47.6**	**-0.2**
H12A	**Diamond D Ranc**	**58.93**	**329**	⇓P	**P**	**17 16 48.6**	**+0.2**
BEKR	**Beckwourth**	**58.98**	**322**	⇑P	**P**	**17 16 49.4**	**+0.5**
G13A	**Cobalt**	**59.00**	**330**	⇓P	**P**	**17 16 49.0**	**+0.1**
I11A	**Placerville**	**59.06**	**328**	⇓P	**P**	**17 16 49.4**	**0.0**
D16A	**Dana Ranch, Ca**	**59.15**	**333**	⇑P	**P**	**17 16 49.7**	**-0.1**
SCHQ	**Schefferville**	**59.15**	**7**	P	**P**	**17 16 49.5**	**-0.3**
C17A	**Wharram Farm,**	**59.25**	**334**	⇓P	**P**	**17 16 50.2**	**-0.3**
B18A	**Beardsley Farm**	**59.42**	**335**	⇓P	**P**	**17 16 51.5**	**-0.2**
F13A	**Darby**	**59.55**	**331**	⇑P	**P**	**17 16 52.6**	**0.0**
E14A	**Clinton**	**59.59**	**332**	⇓P	**P**	**17 16 53.0**	**+0.1**
H11A	**Donnelly**	**59.63**	**329**	⇓P	**P**	**17 16 52.5**	**-0.7**
J09A	**Fry Pan Ranch,**	**59.65**	**327**	⇑P	**P**	**17 16 53.3**	**-0.1**
C16A	**Fuhringer Ranc**	**59.81**	**334**	⇓P	**P**	**17 16 54.0**	**-0.4**
F12A	**Elk City**	**59.98**	**330**	⇑P	**P**	**17 16 55.2**	**-0.4**
J08A	**Circle Bar Ran**	**60.06**	**326**	⇓P	**P**	**17 16 55.8**	**-0.4**
C15A	**Salmond Ranch,**	**60.18**	**333**	⇓P	**P**	**17 16 56.7**	**-0.2**
F11A	**Grangeville**	**60.52**	**330**	⇑P	**P**	**17 16 58.6**	**-0.7**
D13A	**Huson**	**60.54**	**332**	⇓P	**P**	**17 16 59.2**	**-0.1**
B15A	**Bradely Ranch,**	**60.56**	**334**	⇓P	**P**	**17 16 59.2**	**-0.3**
E12A	**Beaver Dam Sad**	**60.60**	**330**	⇑P	**P**	**17 16 59.6**	**-0.2**
G10A	**Bishop Farm, J**	**60.61**	**329**	⇑P	**P**	**17 16 59.7**	**-0.2**
E11A	**Bogner Ranch,**	**60.87**	**330**	⇓P	**P**	**17 17 01.1**	**-0.6**
H08A	**Prairie City**	**60.92**	**327**	⇓P	**P**	**17 17 02.8**	**+0.7**
G09A	**Cove**	**60.95**	**328**	⇓P	**P**	**17 17 01.9**	**-0.3**
C13A	**Hot Springs**	**61.02**	**332**	⇓P	**P**	**17 17 02.4**	**-0.2**
K05A	**Summer Lake**	**61.04**	**324**	⇓P	**P**	**17 17 02.7**	**-0.2**
I07A	**Izee**	**61.10**	**326**	⇓P	**P**	**17 17 03.5**	**+0.3**
F10A	**Beach Ranch, E**	**61.13**	**329**	⇑P	**P**	**17 17 02.6**	**-0.8**
BSMT	**Bassoo Peak**	**61.24**	**332**	*e*P	**P**	**17 17 04.3**	**+0.2**
A14A	**Double T Ranch**	**61.43**	**334**	⇑P	**P**	**17 17 05.4**	**0.0**
G08A	**Pilot Rock**	**61.58**	**328**	⇓P	**P**	**17 17 06.6**	**+0.1**
D10A	**Wagner Farm, O**	**61.89**	**330**	⇑P	**P**	**17 17 07.6**	**-0.8**
H06A	**Lindquist Farm**	**61.97**	**326**	⇓P	**P**	**17 17 09.2**	**+0.2**
B11A	**Sandpoint**	**62.40**	**332**	⇓P	**P**	**17 17 11.6**	**-0.3**
A11A	**Hall Mountain,**	**62.76**	**332**	⇓P	**P**	**17 17 13.6**	**-0.7**
B09A	**Rice**	**63.25**	**331**	⇓P	**P**	**17 17 17.3**	**-0.2**
D07A	**Quincy**	**63.35**	**329**	⇓P	**P**	**17 17 18.4**	**+0.2**
A08A	**Turner Farm, O**	**64.16**	**331**	⇑P	**P**	**17 17 23.3**	**-0.2**
A07A	**Ashnola River,**	**64.77**	**330**	⇓P	**P**	**17 17 28.2**	**+0.7**
YKA	**Yellowknife Ar**	**72.12**	**343**	P	**P**	**17 18 11.6**	**-1.3**
DBIC	**Dimbokro**	**72.81**	**82**	P	**P**	**17 18 17.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**79.95**	**76**	P	**P**	**17 18 58.1**	**-0.2**
TORD	1.6nm,0.7s,mb3.9,baz=140,slow=5.6,SNR=25 1.8nm,0.7s,mb4.0,baz=240,slow=6.3,SNR=3.1 0.9nm,0.5s,mb3.8,baz=286,slow=6.1,SNR=14 0.7nm,0.4s,baz=280,slow=5.7,SNR=3.3			pP	pP	17 19 25.7	-3.0
BVAR	**Borovoye Array**	**124.19**	**23**	PKP	PKPdf	17 25 45.8	-0.5
BVAR	**Borovoye Array**	**124.19**	**23**	PKP	PKPdf	17 25 45.8	-0.5
ZALV	**Zalesovo Beam**	**127.96**	**14**	PKP	PKPdf	17 25 53.1	-0.4
ZALV	0.5nm,0.5s,baz=264,slow=1.5,SNR=4.2 0.8nm,0.4s,baz=250,slow=3.0,SNR=7.8 0.8nm,0.6s,baz=222,slow=2.0,SNR=2.7			pPKP	pPKPdf	17 26 21.3	-4.7
KURK	**Kurchatov**	**129.07**	**20**	PKP	PKPdf	17 25 56.0	+0.3
KURK	1.9nm,0.8s,baz=318,slow=2.3,SNR=10 0.2nm,0.4s,baz=333,slow=2.9,SNR=2.3			pPKP	pPKPdf	17 26 22.4	-5.7
MKAR	**Makanchi Array**	**133.68**	**20**	PKP	PKPdf	17 26 04.0	-0.5
ASAR	**Alice Springs**	**139.25**	**226**	PKhKP		17 26 07.3	
ASAR	0.5nm,0.5s,baz=129,slow=4.0,SNR=4.4 0.7nm,0.8s,baz=125,slow=2.7,SNR=6.2			sPKP		17 26 52.8	
WRA	**Warramunga Arr**	**141.11**	**231**	PKhKP		17 26 09.7	
WRA	0.2nm,0.5s,baz=126,slow=2.7,SNR=6.6 0.5nm,0.5s,baz=117,slow=2.1,SNR=8.2			PKP	PKPdf	17 26 19.9	+0.9
GTA	**Gaotai**	**144.56**	**4**	*e*P	PKPdf	17 26 23.1	-1.5
GTA				pP		17 26 27.2	
GTA				sP		17 26 29.3	
GTA	comp=Z,2.0nm,1.0s			pmax	pmax		
FITZ	**Fitzroy Crossi**	**148.72**	**225**	PKPbc	PKPbc	17 26 35.2	-0.8
	comp=Z,1.5nm,0.5s,baz=228,slow=2.9,SNR=8.7						

ISCJB ***05*** *17:09:17.1±0.8, 5.8S±0.2×151.5E±0.2, h33km, mb4.2/10, Error ellipse: s-maj=33.7km s-min=12.1km az=38.6*
NEIC ***05*** *17:09:18.5±0.7, 5.91S×151.60E, h35km, mb4.8/2, Error ellipse: s-maj=31.5km s-min=11.8km az=129.0*
IDC ***05*** *17:09:23.9±13.0, 5.98S×151.47E, h80km±118km, mb3.9/9, mb1 4.1/9, mb1mx3.8/16, mbtmp3.9/9, MS2.3/1, Ms1 2.3/1, ms1mx2.0/30, Error ellipse: s-maj=47.3km s-min=38.1km az=81.0*
ISC 05 17:09:18.6±0.8, 5.9S±0.1×151.6E±0.2, h35km, n20, σ0.97/18, mb4.2/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**20.08**	**249**	*e*P	**P**	**17 13 49.6**	**+0.4**
KAKA	18nm,0.6s **Kakadu**	**20.08**	**249**	*e*P	**P**	**17 13 49.1**	**-0.1**
WRAB	32nm,0.6s **Tennant Creek**	**21.81**	**229**	*e*P	**P**	**17 14 09.4**	**+1.5**
WRA	**Warramunga Arr**	**21.83**	**229**	P	**P**	**17 14 08.3**	**+0.2**
ASAR	12nm,0.8s,mb4.3,baz=53,slow=9.9,SNR=32 **Alice Springs**	**24.54**	**222**	P	**P**	**17 14 35.2**	**+0.1**
STKA	11nm,0.8s,mb4.4,baz=55,slow=8.9,SNR=50 **Stephens Creek**	**27.48**	**199**	P	**P**	**17 15 00.2**	**-1.4**
	3.0nm,0.8s,mb3.9,baz=348,slow=11,SNR=4.6						

STKA	Stephens Creek	27.48 199	*eP*		P	17 14 59.8	-1.9
FITZ	Fitzroy Crossi	28.09 242	*eP*		P	17 15 07.7	+0.4
	16nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	28.09 242	P		P	17 15 07.8	+0.5
	9.6nm,0.6s,mb4.6,baz=72,slow=6.5,SNR=30						
MBWA	Marble Bar	34.40 241	*eP*		P	17 16 01.6	-1.1
TGY	Tagaytay City	36.35 303	LR		LR	17 29 56.7	
	comp=Z,4.3nm,19.6s,baz=196,slow=34						
SONM	Songino Array	66.63 329	P		P	17 20 05.5	0.0
	0.5nm,0.6s,mb3.7,baz=151,slow=5.7,SNR=4.0						
SVW2	Sparrevohn	78.30 23	*eP*		P	17 21 14.4	-0.3
ZALV	Zalesovo Beam	81.41 327	P		P	17 21 31.6	-0.2
	0.8nm,0.5s,mb3.9,baz=120,slow=7.6,SNR=4.1						
MCK	McKinley	82.33 23	*eP*		P	17 21 35.2	-1.2
	7.2nm,0.9s,mb4.6						
BVAR	Borovoye Array	89.41 323	P		P	17 22 11.1	-0.6
	0.9nm,0.7s,mb4.2,baz=97,slow=4.9,SNR=7.0						
BVAR	Borovoye Array	89.41 323	P		P	17 22 11.1	-0.6
NVAR	Mina Array Bea	93.70 52	P		P	17 22 34.2	+2.3
	0.3nm,0.5s,mb4.0,baz=234,slow=7.7,SNR=3.5						
YKA	Yellowknife Ar	96.95 28	P		P	17 22 46.9	+0.7
	0.2nm,0.6s,mb3.7,baz=272,slow=4.9,SNR=3.9						
TORD	Torodi Ar. Bea	149.49 286	PKPbc	PKPbc		17 29 04.2	-1.1
	1.1nm,0.7s,baz=62,slow=2.4,SNR=8.4						

*ISCJB **05** 17:46:58.4±0.5, 12°.16N±0°.09×86°.59W±0°.09, h145km±5km, mb3.5/3, Error ellipse: s-maj=20.9km s-min=4.2km az=43.1*
*CASC **05** 17:46:58.2±2.1, 12°.00N×86°.74W, h141km±12km, MD3.9, ML2.8*
*IDC **05** 17:46:59.3±1.3, 12°.16N×86°.43W, h149km±16km, mb3.2/3, mb1 3.3/5, mb1mx3.1/23, mbtmp3.2/5, Error ellipse: s-maj=45.1km s-min=15.5km az=48.0*
ISC 05 17:46:59.2±0.5, 12°.16N±0°.09×86°.60W±0°.09, h143km±5km, n34, σ0°81/40, mb3.5/3, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.02	9	*eP*	Pn	17 47 17.7	-0.7
CSAN		0.17	82	*eP*	Pn	17 47 18.3	-0.2
APYN	Apoyeque	0.25	73	*eP*	Pn	17 47 19.7	+1.0
MOMN	Momotombo	0.25	12	*eP*	Pn	17 47 18.6	-0.1
XAVN	Gruta Xavier	0.26	93	*eP*	Pn	17 47 18.4	-0.3
MIRN	Miramar	0.30	338	*eP*	Pn	17 47 18.5	-0.3
TISN	Laguna Tiscapa	0.32	93	*eP*	Pn	17 47 18.5	-0.4
CRUN	El Crucero	0.34	121	*eP*	Pn	17 47 17.9	-1.1
MGAN	Managua	0.34	92	*eP*	Pn	17 47 18.6	-0.4
MGAN				*eS*	Sn	17 47 34.0	+0.1
CNGN	Cerro Negro	0.35	343	*eP*	Pn	17 47 18.6	-0.5
CNGN				AML	AML	17 47 35.7	
	comp=E,140nm,0.4s						
TICN	Ticuantepe	0.38	110	*eP*	Pn	17 47 19.9	+0.8
WILN	Americas 2	0.40	90	*eP*	Pn	17 47 18.7	-0.5
HUEN		0.45	67	*eP*	Pn	17 47 19.7	+0.2
TELN	Telica	0.50	332	*eP*	Pn	17 47 19.9	+0.2
APON	Apoyo	0.57	115	*eP*	Pn	17 47 20.5	+0.4
CRIN	San Cristobal	0.70	320	*eP*	Pn	17 47 20.9	0.0
BOAB	BOACO BROADBAN	0.95	72	*eP*	Pn	17 47 22.9	0.0
CONN	Concepcion	1.12	122	*eP*	Pn	17 47 24.8	+0.5
SSN	San Juan del S	1.12	140	*eP*	Pn	17 47 24.2	-0.2
CNCH	Conchagua	1.64	313	*eP*	Pn	17 47 29.6	-0.2
CNCH				*eS*	Sn	17 47 53.1	0.0
VSM	San Miguel	2.07	308	*eP*	Pn	17 47 35.4	+0.7
VSM				*eS*	Sn	17 48 02.2	+0.3
JTS	JuntasAbangare	2.46	139	P	Pn	17 47 39.3	-0.2
	comp=E,13nm,0.3s,baz=317,slow=16,SNR=16						
JTS				S	Sn	17 48 09.6	-0.9
	comp=E,8.9nm,0.3s,baz=284,slow=23,SNR=13						
JCR	Jicaral	2.72	147	*eS*	Sn	17 48 15.7	-0.6
LFRS	El Faro	2.81	301	*eP*	Pn	17 47 44.0	+0.1
LFRS				*eS*	Sn	17 48 17.6	-0.7
CGA2	Cerro Gallo 2	2.98	135	*eP*	Pn	17 47 43.6	-2.6
CGA2				*eS*	Sn	17 48 22.6	+0.2
PRS1	Puriscal	3.12	134	*eS*	Sn	17 48 26.1	+0.8
BUS	Buena Vista	3.80	133	*eP*	Pn	17 47 58.8	+2.0
BUS				*eS*	Sn	17 48 41.8	+0.5
BAR1		4.34	132	*eP*	Pn	17 48 05.1	+1.3
BAR1				*eS*	Sn	17 48 54.5	+0.6
APG	El Apazote	4.71	307	P	Pn	17 48 10.7	+2.1
	comp=E,0.4nm,0.3s,baz=141,slow=17,SNR=6.3						
TXAR	Lajitas Array	23.33	320	P	P	17 51 55.4	+0.7
	comp=E,0.6nm,0.7s,mb3.1,baz=153,slow=11,SNR=5.5						
SIV	San Ignacio	37.68	137	P	P	17 53 59.5	-1.4
	comp=E,0.6nm,0.4s,mb3.5,baz=291,slow=11,SNR=4.3						
SCHQ	Schefferville	45.32	16	P	P	17 55 01.4	-1.3
	comp=E,0.9nm,0.4s,mb3.7,baz=228,slow=7.4,SNR=5.9						
ASAR	Alice Springs	139.94	248	PKP	PKPdf	18 06 11.3	0.0
	comp=E,0.4nm,0.8s,baz=110,slow=2.2,SNR=5.6						
WRA	Warramunga Arr	139.99	253	PKP	PKPdf	18 06 11.5	0.0
	comp=E,0.6nm,0.8s,baz=94,slow=2.2,SNR=9.8						

*IDC **05** 17:55:45.3±13.0, 48°.95N×173°.87W, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/27, mbtmp3.8/5, MS3.0/3, Ms1 3.0/3, ms1mx2.7/40, Error ellipse: s-maj=347.7km s-min=81.5km az=172.0*
*NEIC **05** 17:56:03.6, 51°.28N×175°.08W, h8km, mb3.8/1, ML3.5(AEIC), After AEIC.*
ISC 05 17:56:06.7±8.0, 51°.5N±0°.7×174°.9W±0°.4, h41km±37km, n14, σ0°79/13, mb3.9/6, MS3.0/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.95	311	*eP*	Pn	17 56 23.0	-0.6
PETK	Petropavlovsk-	16.81	286	P	Pn	18 00 00.2	+1.5
	0.1nm,0.3s,baz=95,slow=11,SNR=5.8						
PETK				LR	LR	18 05 58.0	
	comp=Z,35nm,19.4s,baz=265,slow=34						
PETK	Petropavlovsk-	16.81	286	P	Pn	18 00 00.2	+1.5
PETK				LR	LR	18 05 58.0	
EGAK	Eagle	21.90	40	*eP*	P	18 00 55.9	+0.1
	3.8nm,0.9s,mb3.8						
YKA	Yellowknife Ar	33.39	47	LR	LR	18 16 38.8	
	comp=Z,7.5nm,19.3s,MS2.4,baz=90,slow=36						
MDJ	Mudanjiang	36.96	282	P	P	18 03 11.1	-0.5
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,44nm,3.5s						
SONM	Songino Array	48.77	299	P	P	18 04 46.2	-0.9
	comp=Z,0.5nm,0.8s,mb3.6,baz=50,slow=8.4,SNR=4.5						
SONM	Songino Array	48.77	299	P	P	18 04 46.2	-0.9
MKAR	Makanchi Array	61.86	311	P	P	18 06 20.1	-1.2
	comp=Z,0.3nm,0.3s,mb3.9,baz=46,slow=4.8,SNR=13						
MKAR	Makanchi Array	61.86	311	P	P	18 06 20.1	-1.2
BVAR	Borovoye Array	62.36	322	P	P	18 06 25.1	+0.5
	comp=Z,0.4nm,0.3s,mb4.0,baz=58,slow=6.3,SNR=6.4						
BVAR				LR	LR	18 35 60.0	
	comp=Z,46nm,18.5s,MS3.7,slow=37						
BVAR	Borovoye Array	62.36	322	P	P	18 06 25.1	+0.5
BVAR				LR	LR	18 35 60.0	
AKTK	Aktyubinsk	68.98	327	P	P	18 07 07.8	+0.5
AKTO	Aktyubinsk	68.98	327	P	P	18 07 07.8	+0.5
	comp=Z,0.7nm,0.5s,mb3.9,baz=0.0,slow=8.1,SNR=3.7						

*NEIC **05** 18:04:33.0±4.9, 31°.06S×179°.19W, h129km±37km, mb4.1/1, Error ellipse: s-maj=48.7km s-min=20.3km az=218.0*
*IDC **05** 18:04:35.4±7.8, 31°.30S×179°.41W, h138km±59km, mb3.6/4, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, Error ellipse: s-maj=61.4km s-min=25.1km az=46.0*
ISC 05 18:04:42.7±6.4, 31°.6S±0°.3×179°.8W±0°.4, h185km±45km, n10, σ0°30/10, mb3.8/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.08	200	P	Pn	18 06 23.8	+0.1
	0.3nm,0.3s,baz=238,slow=7.5,SNR=5.0						
URZ				S	Sn	18 07 43.6	-0.1
	1.4nm,0.3s,baz=104,slow=19,SNR=7.4						
ASAR	Alice Springs	41.50	269	P	P	18 12 12.2	+0.4
	1.1nm,0.7s,mb3.6,baz=109,slow=7.3,SNR=34						
WB2	Warramunga Arr	42.59	274	*eP*	P	18 12 20.3	-0.3
WRAB	Tennant Creek	42.59	274	*eP*	P	18 12 20.6	-0.1
	2.7nm,0.6s,mb4.0						
WRA	Warramunga Arr	42.60	274	P	P	18 12 20.8	0.0
	1.8nm,0.4s,mb4.0,baz=112,slow=7.9,SNR=52						
FITZ	Fitzroy Crossi	50.81	272	P	P	18 13 24.3	-0.1
	1.3nm,0.8s,mb3.6,baz=96,slow=14,SNR=3.4						
QSPA	South Pole Qui	58.48	180	P	P	18 14 19.2	+0.6
	0.9nm,0.6s,mb3.8,baz=288,slow=1.6,SNR=8.6						
VNA3	Neumayer Olymp	77.18	177	*e*	P	18 16 14.9	-0.5
VNA2	Neumayer--Watz	77.59	177	*e*	P	18 16 17.7	0.0
	baz=201,slow=5.8						
FINES	FINESS Array B	145.73	338	PKPbc	PKPdf	18 23 55.0	-3.2
	3.6nm,0.8s,baz=46,slow=6.0,SNR=3.6						

*ISCJB **05** 18:07:00.7±0.4, 43°.84N±0°.02×105°.16W±0°.04, h0km, mb3.9/2, Error ellipse: s-maj=4.7km s-min=2.7km az=179.1*
*NEIC **05** 18:07:03.2±0.4, 43°.80N×105°.26W, h0km, ML3.3, Error ellipse: s-maj=4.8km s-min=4.1km az=87.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
*IDC **05** 18:07:04.0±0.9, 44°.05N×105°.76W, h0km, mb3.8/2, mb1 3.7/8, mb1mx3.5/29, mbtmp3.5/8, ML3.4/5, Error ellipse: s-maj=24.1km s-min=7.8km az=145.0*
ISC 05 18:07:02.6±0.4, 43°.81N±0°.02×105°.17W±0°.04, h0km, n124, σ0°76/133, mb3.9/2, 50C-31D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
L21A	Rawlins	2.45	222	↑P	Pn	18 07 43.3	-0.5
	baz=2.4						
L21A				↑S	Sn	18 08 14.5	0.0
	baz=2.4						
PHWY	Pilot Hill	2.52	185	*e*Pn	Pn	18 07 44.5	-0.2
K20A	Yellowstone Ra	2.59	245	↑P	Pn	18 07 45.7	-0.1
	baz=2.5						
K20A				↓S	Sn	18 08 18.3	+0.4
	baz=2.5						
RWWY	Rawlins	2.60	216	*e*Pn	Pn	18 07 45.9	0.0
M22A	Cedar Creek Ra	2.63	204	↓P	Pn	18 07 47.0	+0.7
	baz=2.6						
M21A	Separation Pea	2.73	217	↓P	Pn	18 07 48.4	+0.7
	baz=2.7						
M21A				↑S	Sn	18 08 21.8	+0.5
	baz=2.7						
K19A	Absolon Red Bu	2.86	251	↓P	Pn	18 07 49.1	-0.3
	baz=2.8						
K19A				↑S	Sn	18 08 26.1	+1.6
	baz=2.8						
L20A	Wamsutter	2.94	233	↑P	Pn	18 07 51.3	+0.7
	baz=2.9						
LAO	LASA Array	2.97	346	*e*Pn	Pn	18 07 50.3	-0.7
N22A	Wattenberg Ran	3.15	198	↑P	Pn	18 07 54.0	+0.6
	baz=3.1						
N22A				↑Sb	Sb	18 08 39.3	+0.9
	baz=3.1						
M20A	Sweetwater, Wa	3.21	225	↑P	Pn	18 07 54.4	+0.1
	baz=3.2						
RLMT	Red Lodge	3.21	296	*e*Pn	Pn	18 07 54.1	-0.2
RLMT	Red Lodge	3.21	296	↓P	Pn	18 07 54.5	+0.2
	baz=3.2						
I18A	Diamond G Ranc	3.37	270	↓P	Pn	18 07 57.2	+0.8
	baz=3.3						
BW06	Boulder Array	3.37	253	*e*Pn	Pn	18 07 56.0	-0.5
BW06	Boulder Array	3.37	253	↑P	Pn	18 07 56.3	-0.2
	baz=3.3						
PDAR	Pinedale Array	3.37	253	Pn	Pn	18 07 56.0	-0.4
	5.1nm,0.3s,baz=72,slow=17,SNR=44						
PDAR				Lg		18 08 39.5	
	8.9nm,0.3s,baz=77,slow=35,SNR=6.3						
G18A	Lazy EL Ranch,	3.48	297	↓P	Pn	18 07 58.0	0.0
	baz=3.4,SNR=55						
N21A	Black Mountain	3.51	211	↓P	Pn	18 07 59.0	+0.6
	baz=3.5						
L19A	Farson	3.52	242	↑P	Pn	18 07 58.9	+0.4
	baz=3.4						
J18A	Kendall Valley	3.58	262	↓P	Pn	18 07 59.6	+0.3
	baz=3.5						
OGNE	Ogallala	3.69	140	*e*Pn	Pn	18 08 01.6	+0.7
K18A	Toltan Ranch,	3.75	253	↑P	Pn	18 08 02.4	+0.7
	baz=3.7						
GCMT	Greycliff	3.76	303	*e*Pn	Pn	18 08 02.1	+0.2
LKWY	Lake	3.84	283	*e*Pn	Pn	18 08 03.7	+0.8
F18A	Big Timber	3.85	305	↑P	Pn	18 08 03.5	+0.4
	baz=3.8,SNR=20						
H17A	Grant Village	3.94	280	↓P	Pn	18 08 05.1	+0.8
	baz=3.9						
LOHW	Long Hollow	3.94	269	*e*Pn	Pn	18 08 03.9	-0.5
ISCO	Idaho Springs	4.02	185	*e*P	Pn	18 08 06.0	+0.6
L18A	Fontenelle, Gr	4.04	244	↓P	Pn	18 08 05.4	-0.3
	baz=4.0						
YNR	Norris Junctio	4.06	285	*e*Pn	Pn	18 08 07.5	+1.5
SNOW	Snow King Moun	4.07	267	*e*Pn	Pn	18 08 11.9	+5.9
YFT	Old Faithful	4.13	281	*e*Pn	Pn	18 08 06.3	-0.5
REDW	Red Top Meadow	4.15	266	*e*Pn	Pn	18 08 08.5	+1.3
N19A	John Jarvie Ra	4.16	227	↓P	Pn	18 08 06.4	-0.9
	baz=4.1						
IMW	Indian Meadow	4.17	273	*e*Pn	Pn	18 08 07.8	+0.2
TPAW	Teton Pass	4.21	268	*e*Pn	Pn	18 08 07.4	-0.6
G17A	Pierce Place,	4.26	293	↑P	Pn	18 08 08.0	-0.7
	baz=4.2,SNR=7.1						
G17A				↑Sb	Sb	18 09 13.0	+2.8
	baz=4.2						
M18A	Lyman	4.33	238	↑Sb	Sb	18 09 15.9	+3.7
	baz=4.3						
O20A	White River Ci	4.33	213	↑P	Pn	18 08 09.8	+0.1
	baz=4.3						
E18A	Harlowton	4.34	311	↓P	Pn	18 08 10.1	+0.3
	baz=4.3						
E18A				↑S	Sn	18 09 02.1	+1.1
	baz=4.3						
DCID1	Drake Creek	4.37	269	*e*Pn	Pn	18 08 11.3	+1.1
N18A	Larsen Ranch,	4.38	231	↓P	Pn	18 08 09.9	-0.3
	baz=4.3						
F17A	Fitzpatrick Pl	4.43	300	↑P	Pn	18 08 11.3	+0.3
	baz=4.4,SNR=18						
F17A				↑S	Sn	18 09 04.3	+1.1
	baz=4.4						
AHID	Auburn Hatcher	4.45	258	*e*Pn	Pn	18 08 18.9	+7.6
RRI2	Red Ridge	4.49	266	*e*Pn	Pn	18 08 11.5	-0.4
O19A	Miners Draw (B	4.58	221	↑P	Pn	18 08 12.7	-0.4
	baz=4.5						
M17A	Scullys Gap (B	4.68	242	↑P	Pn	18 08 13.9	-0.6
	baz=4.6						
D18A	Linhart Farms,	4.70	318	↑Sb	Sb	18 09 28.5	+5.7
	baz=4.7						
DGMT	Dagmar	4.71	8	*e*Pn	Pn	18 08 17.4	+2.5
DGMT	Dagmar	4.71	8	↓Sb	Sb	18 09 30.2	+7.0
	baz=4.7						
J16A	Bone	4.71	266	↓Sb	Sb	18 09 27.8	+4.5
	baz=4.6						
E17A	Martinsdale	4.82	305	↑P	Pn	18 08 16.7	+0.3
	baz=4.8,SNR=16						
SMCO	Snowmass	4.82	197	*e*Pn	Pn	18 08 24.3	+7.9
L16A	Fish Haven	4.94	251	↓P	Pn	18 08 17.8	-0.1
	baz=4.9						
G16A	Moss Hill, Enn	4.95	289	↓P	Pn	18 08 17.8	-0.4
	baz=4.9						
BOZ	Bozeman (W)	4.96	294	*e*Pn	Pn	18 08 17.1	-1.1
BOZ	Bozeman (W)	4.96	294	↑P	Pn	18 08 17.5	-0.8
	baz=4.9						
N17A	Moffit Pass	5.08	238	↓P	Pn	18 08 19.2	-0.8
	baz=5.0						
D17A	Six Diamond Ra	5.12	313	↓P	Pn	18 08 20.3	-0.2
	baz=5.1						
HWUT	Hardware Ranch	5.20	247	*e*Pn	Pn	18 08 20.8	-0.8
	9.1nm,0.3s						
EGMT	Eagleton	5.29	324	*e*Pn	Pn	18 08 22.4	-0.4
	24nm,0.5s						
EGMT	Eagleton	5.29	324	↓P	Pn	18 08 22.6	-0.2
	baz=5.3						
E16A	East Helena	5.34	303	↓P	Pn	18 08 23.4	-0.2
	baz=5.3,SNR=15						
M16A	Huntsville	5.38	245	↓P	Pn	18 08 23.6	-0.5
	baz=5.3						
C17A	Wharram Farm,	5.47	316	↑P	Pn	18 08 25.5	+0.2
	baz=5.4						
N16A	Rees Ranch, Co	5.49	240	↑P	Pn	18 08 25.6	0.0
	baz=5.4						
HRY	Holter Researc	5.52	304	*e*Pn	Pn	18 08 26.3	+0.3
	14nm,0.3s						
LRM	Limekiln Ridge	5.56	294	*e*Pn	Pn	18 08 25.8	-0.7
	26nm,0.4s						
F15A	Butte	5.59	294	↑P	Pn	18 08 27.1	+0.2
	baz=5.5						
B18A	Beardsley Farm	5.59	327	↓P	Pn	18 08 26.9	-0.1
	baz=5.6						
L15A	Malad City	5.60	254	↓P	Pn	18 08 27.2	+0.1
	baz=5.5						
MCMT	McKenzie Canyo	5.60	283	*e*Pn	Pn	18 08 30.7	+3.5
	2.4nm,0.4s						
P18A	Preston Nutter	5.65	224	↓P	Pn	18 08 27.3	-0.4
	baz=5.6						
DAU	Daniels Canyon	5.66	235	*e*Pn	Pn	18 08 27.2	-0.7
	8.4nm,0.4s						
JLU	Jordanelle	5.66	238	P	Pn	18 08 27.5	-0.4
	7.7nm,0.5s						
M15A	Larsen Ranch,	5.86	249	↑P	Pn	18 08 30.4	-0.3
	baz=5.8						
E15A	Deer Lodge	5.90	299	↑P	Pn	18 08 31.0	-0.2
	baz=5.8,SNR=20						
HVU	Hansel Valley	5.95	253	*e*Pn	Pn	18 08 31.1	-0.9
	5.6nm,0.5s						
B17A	L&G Farms, Che	5.95	321	↑P	Pn	18 08 32.0	0.0
	baz=5.9						
Q18A	Rafter H Ranch	6.00	220	↑P	Pn	18 08 31.9	-0.7
	baz=5.9						
P17A	Butcher Ranch,	6.01	226	↑P	Pn	18 08 32.9	+0.1
	baz=6.0						
A18A	Metzger Ranch,	6.05	329	↑P	Pn	18 08 33.2	0.0
	baz=6.0						
SDCO	Great Sand Dun	6.06	182	*e*Pn	Pn	18 08 34.4	+0.9
	1.9nm,0.6s						
C16A	Fuhringer Ranc	6.09	313	↑P	Pn	18 08 33.2	-0.5
	baz=6.0						
D15A	Lincoln	6.10	305	↓P	Pn	18 08 33.7	-0.2
	baz=6.0,SNR=7.2						
SRU	San Rafael	6.18	222	*e*Pn	Pn	18 08 33.5	-1.6
	9.6nm,0.3s						
SRU	San Rafael	6.18	222	↑P	Pn	18 08 34.5	-0.6
	baz=6.1						
ECSD	EROS Data Cent	6.20	88	*e*Pn	Pn	18 08 37.2	+2.0
	6.9nm,0.5s						
TMUT	Trail Mountain	6.39	227	*e*Pn	Pn	18 08 37.8	-0.1
	9.8nm,0.4s						
E14A	Clinton	6.44	297	↑P	Pn	18 08 38.5	-0.1
	baz=6.4,SNR=8.9						
M14A	Sheep Mountain	6.45	252	↑P	Pn	18 08 38.4	-0.5
	baz=6.4						
B16A	M & M Farms, S	6.47	318	↑P	Pn	18 08 38.8	-0.2
	baz=6.4						
CHMT	Chamberlain Mo	6.48	301	*e*Pn	Pn	18 08 38.9	-0.3
	2.3nm,0.4s						
R18A	Canyonlands Na	6.49	215	↑P	Pn	18 08 38.3	-1.0
	baz=6.4						
BGU	Big Grassy Mou	6.50	246	*e*Pn	Pn	18 08 40.5	+1.1
	2.0nm,0.3s						
C15A	Salmond Ranch,	6.54	310	↓P	Pn	18 08 39.4	-0.6
	baz=6.5						
Q16A	Castle Valley	6.65	225	↓P	Pn	18 08 40.8	-0.7
	baz=6.6						
D14A	Greenough	6.71	302	↓P	Pn	18 08 42.0	-0.4
	baz=6.7,SNR=18						
DUG	Dugway	6.74	240	↑P	Pn	18 08 42.1	-0.7
	baz=6.7						
SLMT	Seeley Lake	6.78	303	*e*Pn	Pn	18 08 43.0	-0.2
	3.8nm,0.5s						
A16A	West Butte Ran	6.79	321	↑P	Pn	18 08 42.9	-0.6
	baz=6.8						
R17A	Hanksville Air	6.82	220	↑P	Pn	18 08 42.5	-1.3
	baz=6.8						
B15A	Bradely Ranch,	6.83	314	↑P	Pn	18 08 43.2	-0.8
	baz=6.8						
MVCO	Mesa Verde	7.06	202	*e*P	Pn	18 08 49.4	+2.2
	5.6nm,0.6s						
S18A	Hurst Farm, Bl	7.12	213	↑P	Pn	18 08 47.2	-0.8
	baz=7.1						
C14A	Swan Lake	7.18	306	↑P	Pn	18 08 48.9	+0.1
	baz=7.1						
SWMT	Swartz Lake	7.21	304	*e*Pn	Pn	18 08 48.8	-0.3
	2.6nm,0.4s						
D13A	Huson	7.31	300	↑P	Pn	18 08 50.3	-0.3
	baz=7.2						
YBMT	Yellow Bay	7.38	306	*e*Pn	Pn	18 08 51.9	+0.3
	6.1nm,0.3s						
F12A	Elk City	7.43	289	↑P	Pn	18 08 52.0	-0.3
	baz=7.4						
MSU	Marysvale	7.48	227	*e*Pn	Pn	18 08 52.6	-0.3
	3.4nm,0.4s						
JTMT	Jette	7.49	305	*e*Pn	Pn	18 08 53.4	+0.4
	2.1nm,0.4s						
S17A	Black Ridge (B	7.50	217	↑P	Pn	18 08 52.3	-1.0
	baz=7.5						
T18A	Mexican Hat	7.57	210	↓P	Pn	18 08 53.1	-1.1
	baz=7.5						
A14A	Double T Ranch	7.69	315	↑P	Pn	18 08 54.9	-0.9
	baz=7.6						
ELK	Elko	8.07	251	Pn	Pn	18 09 02.1	+1.2
	0.8nm,0.3s,baz=66,slow=10,SNR=12						
ULM	Lac du Bonnet	9.04	41	Pn	Pn	18 09 15.7	+1.4
	0.9nm,0.3s,baz=234,slow=11,SNR=11						
ULM				Pg	Pg	18 09 47.6	-8.0
	1.3nm,0.3s,baz=231,slow=16,SNR=7.0						
ULM				Lg		18 11 45.3	
	0.8nm,0.3s,baz=305,slow=23,SNR=3.0						
FFC	Flin Flon	11.12	10	*e*Pn	Pn	18 09 42.2	-0.5
	3.0nm,0.5s						
NVAR	Mina Array Bea	11.27	246	Pn	Pn	18 09 44.7	-0.1
	0.2nm,0.3s,baz=55,slow=13,SNR=4.5						
TXAR	Lajitas Array	14.50	175	Pn	Pn	18 10 36.1	+7.1
	baz=5.2,slow=11,SNR=3.1						
TXAR				Pg	Pn	18 11 32.0	+63
	0.1nm,0.3s,baz=0.4,slow=16,SNR=3.8						
YKA	Yellowknife Ar	19.51	347	P	Pn	18 11 30.1	-2.2
	0.1nm,0.3s,baz=164,slow=12,SNR=6.1						
ARCES	ARCESS Array B	61.33	18	P	P	18 17 18.9	-0.5
	1.0nm,0.8s,mb4.0,baz=317,slow=6.6,SNR=4.8						
MKAR	Makanchi Array	89.54	355	P	P	18 20 01.2	-0.4
	0.3nm,0.6s,mb3.7,baz=12,slow=4.6,SNR=2.5					

	200nm,0.4s					
LPEL	Lama dei Pelig	1.67 244	Pg	Pn	18 14 22.7	+0.1
	200nm,0.4s					
BRY	Bratogost	1.73 86⇑	iPn	Pn	18 14 22.3	-1.1
BRY			eSn	Sg	18 14 47.9	0.0
BRY	Bratogost	1.73 86⇑	iPn	Pn	18 14 22.3	-1.1
BRY			eSn	Sg	18 14 47.9	0.0
BSSO	Busso	1.73 224	Pg	Pn	18 14 24.3	+0.9
	270nm,0.9s					
BSSO	Busso	1.73 224	Pg	Pn	18 14 24.3	+0.9
	270nm,0.9s					
HCY	Herceg Novi	1.73 101⇑	iPn	Pn	18 14 22.0	-1.4
HCY			eSn	Sg	18 14 48.0	0.0
HCY	Herceg Novi	1.73 101⇑	iPn	Pn	18 14 22.0	-1.4
HCY			eSn	Sg	18 14 48.0	0.0
MRVN	Minervino Murg	1.73 180	Pg	Pn	18 14 21.1	-2.3
	193nm,0.4s					
MRVN	Minervino Murg	1.73 180	Pg	Pn	18 14 21.1	-2.3
	193nm,0.4s					
SGTA	Sant Agata di	1.77 201	Pg	Pn	18 14 23.4	-0.6
	418nm,0.4s					
SGTA	Sant Agata di	1.77 201	Pg	Pn	18 14 23.4	-0.6
	418nm,0.4s					
SACR	S. Croce Del S	1.78 219	Pg	Pn	18 14 23.2	-1.0
	250nm,0.9s					
SACR	S. Croce Del S	1.78 219	Pg	Pn	18 14 23.2	-1.0
	250nm,0.9s					
VCEL	Villa Celiera	1.79 258	Pg	Pn	18 14 24.3	+0.1
	318nm,0.5s					
VCEL	Villa Celiera	1.79 258	Pg	Pn	18 14 24.3	+0.1
	318nm,0.5s					
PALZ	Palazzo San Ge	1.85 186	Pg	Pn	18 14 24.8	-0.3
PALZ	Palazzo San Ge	1.85 186	Pg	Pn	18 14 24.8	-0.3
RNI2	Rionero Sannit	1.87 235	Pg	Pn	18 14 26.6	+1.2
	261nm,0.6s					
RNI2	Rionero Sannit	1.87 235	Pg	Pn	18 14 26.6	+1.2
	261nm,0.6s					
INTR	Introdacqua	1.87 246	Pg	Pn	18 14 25.6	+0.2
INTR	Introdacqua	1.87 246	Pg	Pn	18 14 25.6	+0.2
PSB1	Pescosannita	1.88 214	Pg	Pn	18 14 25.0	-0.5
	328nm,1.2s					
PSB1	Pescosannita	1.88 214	Pg	Pn	18 14 25.0	-0.5
	328nm,1.2s					
VULT	Monte Vulture	1.89 194	Pg	Pn	18 14 26.0	+0.4
	679nm,0.5s					
VULT	Monte Vulture	1.89 194	Pg	Pn	18 14 26.0	+0.4
	679nm,0.5s					
MRB1	Monte Rocchett	1.90 209	Pg	Pn	18 14 27.1	+1.3
	383nm,0.7s					
MRB1	Monte Rocchett	1.90 209	Pg	Pn	18 14 27.1	+1.3
	383nm,0.7s					
CAFE	Carife	1.90 203	Pg	Pn	18 14 26.3	+0.5
CAFE	Carife	1.90 203	Pg	Pn	18 14 26.3	+0.5
AMUR	Altamura	1.91 171	Pg	Pn	18 14 23.4	-2.4
	292nm,0.4s					
AMUR	Altamura	1.91 171	Pg	Pn	18 14 23.4	-2.4
	292nm,0.4s					
TERO	Teramo	1.92 266	Pg	Pn	18 14 26.4	+0.3
	141nm,0.4s					
TERO	Teramo	1.92 266	Pg	Pn	18 14 26.4	+0.3
	141nm,0.4s					
SGG	Gregorio Mates	1.95 225	Pg	Pn	18 14 27.3	+0.8
	123nm,0.5s					
SGG	Gregorio Mates	1.95 225	Pg	Pn	18 14 27.3	+0.8
	123nm,0.5s					
SG1	Sgolgore (BA)	1.98 169	ePn	Pn	18 14 24.0	-2.9
SNAL	S. Angelo Dei	2.01 202	Pg	Pn	18 14 26.1	-1.1
SNAL	S. Angelo Dei	2.01 202	Pg	Pn	18 14 26.1	-1.1
VAGA	Valle Agricola	2.01 227	Pg	Pn	18 14 27.2	-0.1
	212nm,0.7s					
VAGA	Valle Agricola	2.01 227	Pg	Pn	18 14 27.2	-0.1
	212nm,0.7s					
CERA	Filignano	2.01 234	Pg	Pn	18 14 29.0	+1.7
	287nm,0.8s					
CERA	Filignano	2.01 234	Pg	Pn	18 14 29.0	+1.7
	287nm,0.8s					
NVLJ	Novalja	2.02 332⇑	iPn	Pn	18 14 28.0	+0.6
NVLJ			Sn	Sn	18 14 53.1	0.0
NVLJ	Novalja	2.02 332⇑	iPn	Pn	18 14 28.0	+0.6
NVLJ			Sn	Sn	18 14 53.1	0.0
UPM	Unac-Piva	2.03 77⇑	iPn	Pn	18 14 27.5	0.0
UPM			eSn	Sg	18 14 55.2	-2.5
UPM	Unac-Piva	2.03 77⇑	iPn	Pn	18 14 27.5	0.0
UPM			eSn	Sg	18 14 55.2	-2.5
BUM	Brajici-Budva	2.05 103⇓	iPn	Pn	18 14 26.9	-0.9
BUM			eSn	Sn	18 14 55.6	+1.7
BUM	Brajici-Budva	2.05 103⇓	iPn	Pn	18 14 26.9	-0.9
BUM			eSn	Sn	18 14 55.6	+1.7
NKY	Niksic	2.06 88⇑	iPn	Pn	18 14 27.3	-0.6
NKY			eSn	Sn	18 14 55.5	+1.4
NKY	Niksic	2.06 88⇑	iPn	Pn	18 14 27.3	-0.6
NKY			eSn	Sn	18 14 55.5	+1.4
CAMP	Campotosto	2.08 264	Pg	Pn	18 14 28.6	+0.4
	18nm,0.4s					
CAMP	Campotosto	2.08 264	Pg	Pn	18 14 28.6	+0.4
	18nm,0.4s					
SDI	San Donato	2.08 239	Pg	Pn	18 14 28.8	+0.6
	65nm,0.4s					
SDI	San Donato	2.08 239	Pg	Pn	18 14 28.8	+0.6
	65nm,0.4s					
BLY	Banja Luka	2.08 20	ePn	Pn	18 14 30.8	+2.5
NOCI	Noci	2.10 162	Pg	Pn	18 14 26.0	-2.5
	201nm,0.2s					
NOCI	Noci	2.10 162	Pg	Pn	18 14 26.0	-2.5
	201nm,0.2s					
AQU	L'Aquila	2.12 259	ePn	Pn	18 14 28.1	-0.6
AQU	L'Aquila	2.12 259	ePn	Pn	18 14 28.1	-0.6
VVLD	Villa Vallelon	2.12 245	Pg	Pn	18 14 29.7	+0.9
	316nm,0.9s					
VVLD	Villa Vallelon	2.12 245	Pg	Pn	18 14 29.7	+0.9
	316nm,0.9s					
POFI	Posta Fibreno	2.14 241	Pg	Pn	18 14 28.9	-0.1
	127nm,0.8s					
POFI	Posta Fibreno	2.14 241	Pg	Pn	18 14 28.9	-0.1
	127nm,0.8s					
MCRV	Calabrutti - M	2.15 201	Pg	Pn	18 14 28.0	-1.2
	307nm,0.7s					
MCRV	Calabrutti - M	2.15 201	Pg	Pn	18 14 28.0	-1.2
	307nm,0.7s					
MIGL	Miglionico	2.19 175	Pg	Pn	18 14 28.0	-1.8
MIGL	Miglionico	2.19 175	Pg	Pn	18 14 28.0	-1.8
RFI	Roccamonfina	2.22 229	Pg	Pn	18 14 30.8	+0.6
	3.0nm,0.4s					
RFI	Roccamonfina	2.22 229	Pg	Pn	18 14 30.8	+0.6
	3.0nm,0.4s					
LTRZ	Laterza	2.23 168	Pg	Pn	18 14 27.9	-2.5
	177nm,0.5s					
NRCA	Norcia	2.27 272	Pg	Pn	18 14 31.4	+0.5
	24nm,0.3s					
NRCA	Norcia	2.27 272	Pg	Pn	18 14 31.4	+0.5
	24nm,0.3s					
CING	Cingoli	2.28 286	Pg	Pn	18 14 31.2	+0.2
	104nm,0.6s					
CING	Cingoli	2.28 286	Pg	Pn	18 14 31.2	+0.2
	104nm,0.6s					
PDG	Podgorica	2.29 98⇓	iPn	Pn	18 14 30.3	-0.8
PDG			eSn	Sn	18 15 01.4	+1.7
TTG	Podgorica	2.29 98⇓	iPn	Pn	18 14 30.3	-0.8
TTG			eSn	Sn	18 15 01.4	+1.7
TTG	Podgorica	2.29 98⇓	iPn	Pn	18 14 30.3	-0.8
TTG			eSn	Sn	18 15 01.4	+1.7
FDMO	Fiordimonte	2.30 277	Pg	Pn	18 14 31.8	+0.5
	106nm,0.9s					
FDMO	Fiordimonte	2.30 277	Pg	Pn	18 14 31.8	+0.5
	106nm,0.9s					
LNSS	Leonessa	2.34 266	Pg	Pn	18 14 32.5	+0.7
	421nm,0.6s					
LNSS	Leonessa	2.34 266	Pg	Pn	18 14 32.5	+0.7
	421nm,0.6s					
FIAM	Fiamignano	2.34 258	Pg	Pn	18 14 33.0	+1.2
	97nm,0.6s					
FIAM	Fiamignano	2.34 258	Pg	Pn	18 14 33.0	+1.2
	97nm,0.6s					
CDRU	Civita di Ruta	2.40 197	Pg	Pn	18 14 31.2	-1.4
	73nm,0.5s					
CDRU	Civita di Ruta	2.40 197	Pg	Pn	18 14 31.2	-1.4
	73nm,0.5s					
PLE	Pljevlja	2.40 76⇑	iPn	Pn	18 14 32.5	-0.1
PLE			eSn	Sn	18 15 03.8	+1.3
PLE	Pljevlja	2.40 76⇑	iPn	Pn	18 14 32.5	-0.1
PLE			eSn	Sn	18 15 03.8	+1.3
TAR1	Taranto	2.40 160	ePn	Pn	18 14 30.3	-2.4
ULC	Ulcinj	2.40 109⇑	iPn	Pn	18 14 32.0	-0.7
ULC			eSn	Sn	18 15 04.4	+1.8
ULC	Ulcinj	2.40 109⇑	iPn	Pn	18 14 32.0	-0.7
ULC			eSn	Sn	18 15 04.4	+1.8
CESI	CESI - Serrava	2.43 276	Pg	Pn	18 14 33.6	+0.5
	56nm,0.4s					
CESI	CESI - Serrava	2.43 276	Pg	Pn	18 14 33.6	+0.5
	56nm,0.4s					
ARVD	Arcevia	2.49 288	Pg	Pn	18 14 33.8	-0.1
	41nm,0.5s					
CERT	Cerreto	2.53 252	Pg	Pn	18 14 35.9	+1.5
	148nm,1.3s					
CERT	Cerreto	2.53 252	Pg	Pn	18 14 35.9	+1.5
	148nm,1.3s					
MTSN	Montesano sull	2.54 188	Pg	Pn	18 14 33.4	-1.2
MTSN	Montesano sull	2.54 188	Pg	Pn	18 14 33.4	-1.2
BBLS	Lazići	2.57 64	ePn	Pn	18 14 35.1	+0.1
SCHR	S. Chirico Rap	2.59 182	Pg	Pn	18 14 35.9	+0.6
SCHR	S. Chirico Rap	2.59 182	Pg	Pn	18 14 35.9	+0.6
SIRI	Monte Sirino -	2.62 186	Pg	Pn	18 14 34.9	-0.7
	99nm,0.5s					
SIRI	Monte Sirino -	2.62 186	Pg	Pn	18 14 34.9	-0.7
	99nm,0.5s					
FSSB	Fossombrone	2.66 291	Pg	Pn	18 14 36.1	-0.1
	35nm,0.3s					
SISC	Sisak	2.68 3	ePn	Pn	18 14 35.4	-1.1
SISC			Sn	Sn	18 15 10.5	+1.0
SISC	Sisak	2.68 3	ePn	Pn	18 14 35.4	-1.1
SISC			Sn	Sn	18 15 10.5	+1.0
MGR	Morigerati	2.69 191	Pg	Pn	18 14 35.3	-1.4
	99nm,0.8s					
BEY	Berane	2.72 87⇑	iPn	Pn	18 14 37.3	+0.3
BEY			eSn	Sn	18 15 11.6	+1.2
IVA	Berane	2.72 87⇑	iPn	Pn	18 14 37.3	+0.3
IVA			eSn	Sn	18 15 11.6	+1.2
IVA	Berane	2.72 87⇑	iPn	Pn	18 14 37.3	+0.3
IVA			eSn	Sn	18 15 11.6	+1.2
MURB	Monte Urbino	2.74 281	Pg	Pn	18 14 38.0	+0.7
	205nm,0.3s					
BULG	Bulgheria - Ca	2.78 193	Pg	Pn	18 14 37.0	-0.9
	212nm,0.8s					
PIEI	Pieia	2.79 287	Pg	Pn	18 14 37.9	0.0
	58nm,0.4s					
PVY	Plav	2.79 93⇑	iPn	Pn	18 14 38.4	+0.4
PVY			eSn	Sn	18 15 13.5	+1.5
PVY	Plav	2.79 93⇑	iPn	Pn	18 14 38.4	+0.4
PVY			eSn	Sn	18 15 13.5	+1.5
BOJS	Bojanci	2.80 346	i Pn	Pn	18 14 39.1	+1.0
BOJS	Bojanci	2.80 346	i Pn	Pn	18 14 39.1	+1.0
PUK	Puka	2.83 104	ePG	Pn	18 14 38.2	-0.4
PUK			i SG	Pb	18 14 45.5	+1.8
BCI	Bajram Curri	2.88 97	ePG	Pn	18 14 38.6	-0.7
BCI			i SG	Pb	18 14 46.9	+2.3
MGAB	Montegabbione	3.01 274	Pg	Pn	18 14 42.1	+1.1
	115nm,0.4s					
PARC	Parchiule	3.02 288	Pg	Pn	18 14 41.5	+0.3
	51nm,0.4s					
DIVS	Divibare	3.05 63	ePn	Pn	18 14 45.2	+3.6
CAFI	Castiglion Fio	3.15 281	Pg	Pn	18 14 43.6	+0.6
	28nm,0.3s					
SACS	San Casciano d	3.16 273	Pg	Pn	18 14 43.6	+0.5
	45nm,0.7s					
VISS	Visnje	3.17 342	i Pn	Pn	18 14 44.0	+0.8
VISS	Visnje	3.17 342	i Pn	Pn	18 14 44.0	+0.8
SKDS	Skadanscina	3.17 331	i Pn	Pn	18 14 43.1	-0.2
SKDS			eSg	Sn	18 15 20.0	-1.6
CRE	Caprese Michel	3.22 286	Pg	Pn	18 14 44.7	+0.8
	22nm,0.3s					
ASQU	Asqua	3.38 289	Pg	Pn	18 14 47.0	+0.9
TRUS	Trudelj	3.38 63	ePn	Pn	18 14 48.8	+2.7
TRI	Trieste	3.40 330	eP	Pn	18 14 44.6	-1.8
TRI	Trieste	3.40 330	eP	Pn	18 14 44.6	-1.8
RHK3	Tenkes	3.43 25⇑	ePn	Pn	18 14 45.9	-0.9
LJU	Ljubljana	3.47 340	ePn	Pn	18 14 48.5	+1.2
LJU			eSn	Sn	18 15 28.0	-0.8
LJU	Ljubljana	3.47 340	ePn	Pn	18 14 48.5	+1.2
LJU			eSn	Sn	18 15 28.0	-0.8
GRUS	Gruza	3.47 70	ePn	Pn	18 14 50.5	+3.2
TIP	Timpagrande	3.63 173	ePn	Pn	18 14 50.9	+1.3
VOY	Vojsko	3.64 334	ePn	Pn	18 14 50.0	+0.3
VOY			eSn	Sn	18 15 31.0	-2.0
VOY			e		18 15 31.7	
VOY	Vojsko	3.64 334	ePn	Pn	18 14 50.0	+0.3
VOY			eSn	Sn	18 15 31.0	-2.0
PKSM	Moragy	3.84 26	ePn	Pn	18 14 56.4	+4.0
OBKA	Obir	3.90 343	⇓iPn	Pn	18 14 54.0	+0.7
	SNR=18					
OBKA			⇑iSn	Sn	18 15 38.4	-1.1
OBKA	Obir	3.90 343	Pn	Pn	18 14 54.0	+0.7
	SNR=18					
OBKA			Sn	Sn	18 15 38.4	-1.1
SOKA	Soboth	3.98 348	⇓iPn	Pn	18 14 54.6	+0.3
SOKA			⇑iSn	Sn	18 15 40.0	-1.4
SOKA	Soboth	3.98 348	Pn	Pn	18 14 54.6	+0.3
SOKA			Sn	Sn	18 15 40.0	-1.4
KRUS	Krusevo	4.01 109	ePn	Pn	18 14 53.9	-0.9
KRUS			eSg	Sn	18 15 38.9	-3.5
KRUS	Krusevo	4.01 109	ePn	Pn	18 14 53.9	-0.9
GMNA	Gemona	4.08 330	Pg	Pn	18 14 55.8	+0.1
	297nm,0.7s					
KEK	Kerkira	4.10 137	ePG	Pb	18 15 03.0	-2.3
KEK	Kerkira	4.10 137	ePg	Pb	18 15 03.0	-2.3
BARS	Barje	4.13 88	ePn	Pn	18 14 59.0	+2.6
PTCC	Patocco-Chiusa	4.15 332	Pg	Pn	18 14 56.5	-0.2
	61nm,0.8s					
MYKA	Terra Mystica	4.25 335	⇑iPn	Pn	18 14 58.6	+0.5
MYKA	Terra Mystica	4.25 335	Pn	Pn	18 14 58.6	+0.5
ARSA	Arzberg	4.49 354	⇓iPn	Pn	18 15 02.0	+0.7
	SNR=11					
ARSA			⇑iSn	Sn	18 15 53.0	-0.9
ARSA	Arzberg	4.49 354	Pn	Pn	18 15 02.0	+0.7
	SNR=11					
ARSA			Sn	Sn	18 15 53.0	-0.9
FVI	Forni Avoltri	4.52 329	Pg	Pn	18 15 01.6	-0.2
	42nm,0.5s					
KBA	Koelnbreinsper	4.74 336	⇓iPn	Pn	18 15 05.5	+0.7
	SNR=12					
KBA			⇓iSn	Sn	18 15 59.1	-1.1
KBA	Koelnbreinsper	4.74 336	Pn	Pn	18 15 05.5	+0.7
	SNR=12					
KBA			Sn	Sn	18 15 59.1	-1.2
ABTA	Abfaltersbach	4.75 328	i Pn	Pn	18 15 05.2	+0.3
	SNR=13					
ABTA			⇑iSn	Sn	18 15 59.1	-1.4
ABTA	Abfaltersbach	4.75 328	Pn	Pn	18 15 05.2	+0.3
	SNR=13					
ABTA			Sn	Sn	18 15 59.1	-1.3
PKSG		4.86 18⇑	ePn	Pn	18 15 08.4	+2.0
PKSG			eSn	Sn	18 16 06.5	+3.5
SOP	Sopron	4.90 3	eSn	Sn	18 16 04.6	+0.5
CONA	Conrad Observa	5.14 357	⇓iPn	Pn	18 15 11.2	+0.9
CONA	Conrad Observa	5.14 357	Pn	Pn	18 15 11.2	+0.9
MOA	Molln	5.24 346	⇓iPn	Pn	18 15 12.3	+0.6
	SNR=21					
MOA			⇓iSn	Sn	18 16 11.7	-0.9
MOA	Molln	5.24 346	Pn	Pn	18 15 12.3	+0.6
	SNR=21					
MOA			Sn	Sn	18 16 11.7	-0.8
PGF	Pioggiola	5.32 270	ePn	Pn	18 15 13.4	+0.7
PGF			eSn	Sn	18 16 08.8	-5.6
	2.1nm,0.5s					
PGF	Pioggiola	5.32 270	ePn	Pn	18 15 13.4	+0.7
PGF			eSn	Sn	18 16 08.8	-5.6
	1.0nm,0.5s					
THL	Klokotos Trika	5.44 124	ePB	Pn	18 15 13.1	-1.3
THL	Klokotos Trika	5.44 124	ePb	Pn	18 15 13.1	-1.3
PENC	Penc	5.45 22⇑	ePn	Pn	18 15 16.8	+2.2
PENC			eSn	Sn	18 16 22.1	+4.4
WTTA	Wattenberg	5.52 326	⇓iPn	Pn	18 15 15.9	+0.4
	SNR=7.0					
WTTA			⇓iSn	Sn	18 16 18.4	-1.0
WTTA	Wattenberg	5.52 326	Pn	Pn	18 15 15.9	+0.4
	SNR=7.0					
WTTA			Sn	Sn	18 16 18.4	-1.0
VLS	Valsamata	5.69 143	ePB	Pn	18 15 15.1	-2.8
VLS	Valsamata	5.69 143	ePb	Pn	18 15 15.1	-2.8
EVR	Evrytania	5.75 130	ePG	Pn	18 15 12.1	-6.5
EVR	Evrytania	5.75 130	ePg	Pn	18 15 12.1	-6.5
PSZ	Piszkesteto	5.75 26	eSn	Sn	18 16 24.1	-1.0
KOLL	Kolacno	5.99 14	ePn	Pn	18 15 18.8	-3.2
KOLL			eSn	Sn	18 16 26.2	-4.8
KOLL	Kolacno	5.99 14	ePN	Pn	18 15 18.8	-3.2
KOLL			eSN	Sn	18 16 26.2	-4.8
VYHS	Vyhne	6.00 17	ePn	Pn	18 15 21.4	-0.6
VYHS			eSn	Sn	18 16 24.7	-6.4
VYHS	Vyhne	6.00 17	ePN	Pn	18 15 21.4	-0.6
VYHS			eSN	Sn	18 16 24.7	-6.4
VYHS	Vyhne	6.00 17	ePn	Pn	18 15 21.4	-0.6
KECS	Kecovo	6.43 26	eSN	Sn	18 16 36.9	-5.0
SBF	Sospel	6.48 282	ePn	Pn	18 15 28.3	-0.5
SBF			eSn	Sn	18 16 37.2	-6.0
	6.8nm,0.3s					
SBF	Sospel	6.48 282	ePn	Pn	18 15 28.3	-0.5
SBF			eSn	Sn	18 16 37.2	-6.0
	3.4nm,0.3s					
KHC	Kasperske Hory	6.60 345	ePN	Pn	18 15 29.1	-1.2
KHC			ex	x	18 15 39.5	
KHC			eSN	Sn	18 16 41.4	-4.6
KHC			ex	x	18 16 49.0	
KHC			ex	x	18 16 59.0	
FRF	La Foret Royal	7.03 280	ePn	Pn	18 15 36.4	+0.2
FRF			eSn	Sn	18 16 49.8	-6.8
	4.5nm,0.5s					
MBDF	Montbardon	7.10 289	ePn	Pn	18 15 36.7	-0.5
MBDF			eSn	Sn	18 16 51.9	-6.4
	5.6nm,0.5s					
MBDF	Montbardon	7.10 289	ePn	Pn	18 15 36.7	-0.5
LMR	La Mourre	7.12 278	eSn	Sn	18 16 52.6	-6.3
	2.3nm,0.4s					
LMR	La Mourre	7.12 278	eSn	Sn	18 16 52.6	-6.3
	1.1nm,0.4s					
OKC	Ostrava-Krasne	7.18 10	eSG	Sn	18 17 04.7	+4.5
LPG	La Plagne	7.32 295	ePn	Pn	18 15 40.5	+0.3
LPG			eSn	Sn	18 16 56.7	-7.0
	21nm,0.6s					
LPG	La Plagne	7.32 295	ePn	Pn	18 15 40.5	+0.3
LPL	La Plagne	7.34 295	ePn	Pn	18 15 40.4	0.0
LPL			eSn	Sn	18 16 56.8	-7.3
	14nm,0.4s					
LPL	La Plagne	7.34 295	ePn	Pn	18 15 40.4	0.0
HINF	Hinteralfeld	8.29 311	eSn	Sn	18 17 19.7	-7.8
	6.7nm,0.4s					
MOX	Moxa	8.46 340	ePn	Pn	18 15 55.3	-0.6
MOX			eSn	Sn	18 17 25.2	-6.6
MOX	Moxa	8.46 340	ePn	Pn	18 15 55.3	-0.6
HAU	Haudompre	8.67 310	ePn	Pn	18 15 56.2	-2.6
HAU			eSn	Sn	18 17 28.6	-8.4
	7.2nm,0.3s					
HAU	Haudompre	8.67 310	ePn	Pn	18 15 56.2	-2.6
CLL	Collm	8.79 347	ePn	Pn	18 16 02.0	+1.6
CLL			e		18 17 53.0	
CLL			eSg	Sx	18 18 36.0	
CLL	Collm	8.79 347	ePn	Pn	18 16 02.0	+1.6
CLL			e		18 17 53.0	
CLL			eSg	Sx	18 18 36.0	
CLL	Collm	8.79 347	ePn	Pn	18 16 02.0	+1.6
SMF	Signal de Mont	9.61 298	eSn	Sn	18 17 51.2	-8.7
	5.8nm,0.4s					
LOR	Lormes	9.82 301	eSn	Sn	18 17 56.7	-8.4
	5.8nm,0.3s					

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*IDC **05** 18:14:04.3±1.2, 0.°85N×126.°17E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/21, mbtmp3.7/6, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.3/31, Error ellipse: s-maj=53.3km s-min=19.1km az=66.0*

*ISCJB **05** 18:14:07.1±1.0, 0.°8N±0.°1×126.°1E±0.°2, h33km, mb3.6/6, Error ellipse: s-maj=25.0km s-min=15.3km az=152.5*

*NEIC **05** 18:14:09.3±1.0, 0.°78N×126.°17E, h35km, mb3.8/1, Error ellipse: s-maj=26.2km s-min=15.1km az=62.0*

ISC 05 18:14:09.4±1.0, 0.°8N±0.°1×126.°2E±0.°2, h35km, n10, σ1°03/9, mb3.6/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	8.61	228	Pn	Pn	18 16 11.6	0.0
	0.5nm,0.3s,baz=311,slow=3.2,SNR=4.8						
WRAB	Tennant Creek	22.09	159	eP	P	18 19 02.6	+0.9
	2.7nm,0.8s,mb3.7						
WRA	Warramunga Arr	22.10	159	P	P	18 19 01.9	+0.1
	2.0nm,0.8s,mb3.6,baz=336,slow=11,SNR=13						
WB2	Warramunga Arr	22.10	159	eP	P	18 18 59.6	-2.2
ASAR	Alice Springs	25.44	163	P	P	18 19 35.4	+1.3
	0.4nm,0.3s,mb3.4,baz=346,slow=12,SNR=26						
CTA	Charters Tower	28.60	138	LR	LR	18 30 28.8	
	comp=2,74nm,19.9s,baz=238,slow=34						
STKA	Stephens Creek	35.62	157	P	P	18 21 03.6	-0.3
	2.7nm,1.0s,mb4.1,baz=324,slow=9.7,SNR=7.0						
STKA	Stephens Creek	35.62	157	eP	P	18 21 03.5	-0.5
MKAR	Makanchi Array	59.66	327	P	P	18 24 09.2	-1.0
	0.2nm,0.4s,mb3.5,baz=130,slow=7.4,SNR=8.5						
KURK	Kurchatov	63.93	329	P	P	18 24 39.8	+0.9
	0.1nm,0.3s,mb3.3,baz=123,slow=11,SNR=4.8						

IDC 05 18:17:11.8±1.9, 2.°25N×127.°43E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/19, mbtmp3.2/4, Error ellipse: s-maj=152.0km s-min=22.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.07	163	P	P	18 22 18.4	-0.8
	0.9nm,0.8s,baz=343,slow=11,SNR=6.4						
ASAR	Alice Springs	26.52	167	P	P	18 22 51.8	+0.5
	0.2nm,0.9s,baz=347,slow=13,SNR=3.3						
MKAR	Makanchi Array	59.16	325	P	P	18 27 15.1	+0.6
	0.1nm,0.3s,baz=132,slow=7.6,SNR=4.1						
KURK	Kurchatov	63.36	328	P	P	18 27 42.4	-0.4
	0.2nm,0.6s,baz=129,slow=6.0,SNR=2.3						

IDC 05 18:29:08.8±1.3, 46.°97N×155.°98E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=33.3km s-min=29.1km az=99.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.25	10	Pn	Pn	18 30 41.2	-0.9
	0.2nm,0.3s,baz=186,slow=13,SNR=3.5						
PETK				Sn	Sn	18 31 54.4	+0.2
	0.7nm,0.3s,baz=184,slow=32,SNR=8.8						
ZALV	Zalesovo Beam	44.07	306	P	P	18 37 18.0	-0.1
	0.3nm,0.4s,baz=76,slow=6.1,SNR=2.9						
MKAR	Makanchi Array	48.58	298	P	P	18 37 53.7	+0.1
	0.5nm,0.7s,baz=59,slow=5.6,SNR=2.5						
BVAR	Borovoye Array	52.23	310	P	P	18 38 21.4

KALE	**Kalithea**	**0.32**	**87**	P	**Pg**	**18 47 27.7**	**-0.7**
KALE				S	**Sg**	**18 47 32.4**	**-0.2**
KALE	**Kalithea**	**0.32**	**87**	P	**Pg**	**18 47 27.7**	**-0.7**
KALE				S	**Sg**	**18 47 32.4**	**-0.2**
RLS	**Riolos of Patr**	**0.39**	**214**	*e*PB	**Pg**	**18 47 29.5**	**-0.1**
RLS	**Riolos of Patr**	**0.39**	**214**	*e*Pb	**Pg**	**18 47 29.5**	**-0.1**
EVR	**Evrytania**	**0.54**	**6**	*e*PN	**Pg**	**18 47 32.4**	**-0.2**
EVR				*e*SN	**Sg**	**18 47 41.4**	**+1.7**
EVR	**Evrytania**	**0.54**	**6**	*e*Pn	**Pg**	**18 47 32.4**	**-0.2**
GUR	**Goura**	**0.65**	**133**	*e*PB	**Pg**	**18 47 33.4**	**-1.2**
GUR				*e*SN	**Sg**	**18 47 44.2**	**+1.1**
GUR	**Goura**	**0.65**	**133**	P	**Pg**	**18 47 33.4**	**-1.2**
GUR				S	**Sg**	**18 47 43.6**	**+0.5**
GUR	**Goura**	**0.65**	**133**	P	**Pg**	**18 47 33.4**	**-1.2**
GUR				S	**Sg**	**18 47 43.6**	**+0.5**
AGG	**Agios Georgios**	**0.79**	**36**	P	**Pg**	**18 47 36.0**	**-1.4**
AGG				S	**Sg**	**18 47 47.9**	**+0.2**
AGG	**Agios Georgios**	**0.79**	**36**	P	**Pg**	**18 47 36.0**	**-1.4**
AGG				S	**Sg**	**18 47 47.9**	**+0.2**
VLS	**Valsamata**	**0.93**	**258**	*e*PN	**Pg**	**18 47 38.7**	**-1.2**
VLS	**Valsamata**	**0.93**	**258**	P	**Pg**	**18 47 38.7**	**-1.2**
VLS				S	**Sg**	**18 47 53.7**	**+1.7**
VLS	**Valsamata**	**0.93**	**258**	P	**Pg**	**18 47 38.7**	**-1.2**
VLS				S	**Sg**	**18 47 53.7**	**+1.7**
LKR	**Lokris**	**1.03**	**74**	P	**Pg**	**18 47 42.0**	**+0.2**
LKR				S	**Sg**	**18 47 56.4**	**+1.2**
LKR	**Lokris**	**1.03**	**74**	P	**Pg**	**18 47 42.0**	**+0.2**
LKR				S	**Sg**	**18 47 56.4**	**+1.2**
LTK	**Loutraki**	**1.03**	**110**	*e*PN	**Pn**	**18 47 41.5**	**-1.3**
LTK				*e*SN	**Sn**	**18 47 56.9**	**-0.5**
LTK	**Loutraki**	**1.03**	**110**	P	**Pg**	**18 47 41.3**	**-0.6**
LTK				S	**Sg**	**18 47 55.7**	**+0.4**
LTK	**Loutraki**	**1.03**	**110**	P	**Pg**	**18 47 41.3**	**-0.6**
LTK				S	**Sg**	**18 47 55.7**	**+0.4**
LTK				*e*Sn	**Sn**	**18 47 56.9**	**-0.5**
VLX	**Vlachokerasia**	**1.13**	**153**	*e*PN	**Pn**	**18 47 42.6**	**-1.5**
VLX	**Vlachokerasia**	**1.13**	**153**	P	**Pg**	**18 47 42.4**	**-1.4**
VLX				S	**Sg**	**18 48 00.3**	**+1.9**
VLX	**Vlachokerasia**	**1.13**	**153**	P	**Pg**	**18 47 42.4**	**-1.4**
VLX				S	**Sg**	**18 48 00.3**	**+1.9**
ITM	**Ithomi**	**1.21**	**173**	*e*PN	**Pn**	**18 47 44.0**	**-1.2**
ITM	**Ithomi**	**1.21**	**173**	P	**Pb**	**18 47 44.1**	**-1.1**
ITM				S	**Sb**	**18 48 03.3**	**+2.5**
ITM	**Ithomi**	**1.21**	**173**	*e*Pn	**Pn**	**18 47 44.0**	**-1.2**
ITM				S	**Sb**	**18 48 03.3**	**+2.5**
THL	**Klokotos Trika**	**1.21**	**10**	P	**Pb**	**18 47 44.8**	**-0.4**
THL				S	**Sb**	**18 48 02.5**	**+1.6**
THL	**Klokotos Trika**	**1.21**	**10**	P	**Pb**	**18 47 44.8**	**-0.4**
THL				S	**Sb**	**18 48 02.5**	**+1.6**
DID	**Didima**	**1.47**	**126**	*e*PN	**Pn**	**18 47 49.8**	**+0.9**
DID	**Didima**	**1.47**	**126**	P	**Pn**	**18 47 48.3**	**-0.6**
DID				S	**Sn**	**18 48 10.2**	**+2.0**
DID	**Didima**	**1.47**	**126**	P	**Pn**	**18 47 48.3**	**-0.6**
DID	**Didima**	**1.47**	**126**	*e*Pn	**Pn**	**18 47 49.8**	**+0.9**
DID				S	**Sn**	**18 48 10.2**	**+2.0**
PYL	**PYLOS**	**1.48**	**180**	*e*PN	**Pn**	**18 47 49.2**	**+0.2**
PYL	**PYLOS**	**1.48**	**180**	P	**Pn**	**18 47 49.1**	**+0.1**
PYL				S	**Sn**	**18 48 11.9**	**+3.4**
PYL	**PYLOS**	**1.48**	**180**	*e*Pn	**Pn**	**18 47 49.2**	**+0.2**

IDC 05 18:49:12.0±2.3, 23°.34N×142°.08E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=93.8km s-min=23.0km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.75**	**1**	Pn	Pn	18 50 10.2	-0.8
	3.2nm,0.3s,baz=24,slow=21,SNR=6.1						
CBIJ				Sn	Sn	18 50 51.7	-4.2
	36nm,0.3s,baz=306,slow=23,SNR=15						
WRA	**Warramunga Arr**	**43.67**	**191**	P	P	18 57 18.7	+0.1
	0.2nm,0.5s,baz=6.1,slow=7.5,SNR=8.3						
ASAR	**Alice Springs**	**47.39**	**190**	P	P	18 57 47.5	-0.6
	0.2nm,0.7s,baz=12,slow=5.9,SNR=3.1						
MKAR	**Makanchi Array**	**52.85**	**312**	P	P	18 58 28.7	-0.6
	0.2nm,0.5s,baz=96,slow=7.2,SNR=2.6						
BVAR	**Borovoye Array**	**60.77**	**319**	P	P	18 59 26.9	+1.3
	0.5nm,0.4s,baz=97,slow=7.4,SNR=4.0						

IDC 05 18:57:18.8±3.5, 15°.93S×174°.30W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.7/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/27, Error ellipse: s-maj=231.4km s-min=31.4km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.16**	**51**	Pn	Pn	18 58 02.7	-7.1
	16nm,0.3s,baz=350,slow=2.2,SNR=12						
AFI				Sn	Sn	18 58 39.0	-9.2
	4.6nm,0.3s,baz=98,slow=21,SNR=3.3						
AFI				LR	LR	18 59 07.9	
	comp=Z,674nm,18.7s,baz=80,slow=35						
AFI				T		19 01 13.9	
	21nm,0.3s,baz=70,slow=19,SNR=7.0						
WRA	**Warramunga Arr**	**48.88**	**257**	P	P	19 06 06.7	0.0
	0.2nm,0.6s,baz=94,slow=6.3,SNR=4.7						
ASAR	**Alice Springs**	**49.12**	**252**	P	P	19 06 08.4	0.0
	2.5nm,0.6s,baz=86,slow=7.9,SNR=52						
GUMO	**Guam**	**49.90**	**304**	LR	LR	19 25 01.3	
	comp=Z,41nm,18.2s,baz=161,slow=33						
CBIJ	**Chichi jima**	**60.10**	**315**	LR	LR	19 28 45.5	
	comp=Z,76nm,20.1s,baz=152,slow=31						
MJAR	**Matsushiro Arr**	**68.79**	**320**	LR	LR	19 32 31.3	
	comp=Z,104nm,21.8s,baz=130,slow=31						
JOW	**Kunigami**	**70.10**	**307**	LR	LR	19 32 19.5	
	comp=Z,61nm,21.9s,baz=123,slow=30						
PETK	**Petropavlovsk-**	**72.87**	**343**	LR	LR	19 35 11.1	
	comp=Z,26nm,20.0s,baz=327,slow=31						
KSRS	**Korea Array**	**75.93**	**316**	LR	LR	19 36 01.8	
	comp=Z,38nm,20.9s,baz=140,slow=31						
TXAR	**Lajitas Array**	**81.63**	**56**	LR	LR	19 38 35.7	
	comp=Z,56nm,18.4s,baz=5.0,slow=30						
PDAR	**Pinedale Array**	**83.24**	**42**	P	P	19 09 47.7	+0.5
	0.6nm,0.8s,baz=270,slow=6.3,SNR=2.7						
PLCA	**Paso Flores**	**89.80**	**132**	LR	LR	19 40 10.9	
	comp=Z,105nm,20.2s,baz=96,slow=29						
SONM	**Songino Array**	**94.66**	**318**	LR	LR	19 49 58.1	
	comp=Z,51nm,20.4s,baz=204,slow=33						
BRTR	**Keskin Array B**	**146.01**	**320**	PKPbc	PKPbc	19 16 60.0	-0.8
	0.9nm,0.9s,baz=86,slow=1.9,SNR=3.1						
GERES	**GERESS Array B**	**146.53**	**350**	PKPbc	PKPbc	19 17 04.8	+2.8
	0.5nm,0.6s,baz=47,slow=5.9,SNR=5.0						

CSEM ***05*** *19:01:48.9±0.2, 50°.07N×19°.08E, h2km, ML3.1/4, Error ellipse: s-maj=4.3km s-min=2.3km az=176.0*
IPEC ***05*** *19:01:48.9±0.1, 50°.08N×19°.11E, h2km±1km, ML2.3/3, Error ellipse: s-maj=1.4km s-min=0.8km az=167.0*
PRU ***05*** *19:01:49.3, 50°.07N×19°.05E, h0km*
VIE ***05*** *19:01:52.6±0.6, 49°.85N×18°.91E, h0km, mb2.0/4, ML2.5/4, Error ellipse: s-maj=4.5km s-min=3.3km az=13.0 45 km S of Katowice Suspected Mining induced.*

WAR 05 19:01:49.0, 50°.08N×19°.15E, 5D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	19 01 57.8	+0.4
OJC				*e*Sg	Sg	19 02 04.3	+1.2
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	19 01 57.7	+0.3
	baz=252						
OJC				*e*Sg	Sg	19 02 04.0	+0.9
	baz=252						
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*PG	Pg	19 02 02.3	0.0
OKC				*e*SG	Sg	19 02 12.8	+1.6
	comp=Z,46nm,0.4s						
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*Pg	Pg	19 02 02.1	-0.2
	baz=68						
NIE	**Niedzica**	**1.00**	**131**	*e*Pg	Pg	19 02 08.6	+0.5
NIE				*e*Sg	Sg	19 02 24.6	+3.5
NIE	**Niedzica**	**1.00**	**131**	*e*Pg	Pg	19 02 08.6	+0.5
NIE				*e*Sg	Sg	19 02 24.6	+3.5
MORC	**Moravsky Berou**	**1.08**	**255**	*e*Pg	Pg	19 02 08.7	-1.1
	baz=73						
MORC				*e*Sg	Sg	19 02 23.7	-0.1
	comp=Z,55nm,0.4s,baz=73						
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*PN	Pn	19 02 18.2	+1.0
STHS				*e*SN	Sn	19 02 39.6	+2.0
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*Pn	Pn	19 02 18.2	+1.0
STHS				*e*Sg	Sg	19 02 39.6	+2.2
JAVC	**Velka Javorina**	**1.56**	**219**	*e*Pn	Pn	19 02 17.5	-0.4
	baz=37						
KOLL	**Kolacno**	**1.58**	**198**	*e*PN	Pn	19 02 18.2	0.0
KOLL				*e*SN	Sn	19 02 38.9	-0.4
KOLL	**Kolacno**	**1.58**	**198**	*e*Pn	Pn	19 02 18.2	0.0
KOLL				*e*Sg	Sg	19 02 38.9	-0.8
VYHS	**Vyhne**	**1.60**	**188**	*e*PN	Pn	19 02 17.7	-0.8
VYHS				*e*SN	Sn	19 02 38.7	-1.1
VYHS	**Vyhne**	**1.60**	**188**	*e*Pn	Pn	19 02 17.6	-0.9
	baz=6.3						
VYHS				*e*Sg	Sg	19 02 38.6	-1.7
	baz=6.3						
KECS	**Kecovo**	**1.82**	**151**	*e*PN	Pn	19 02 20.4	-1.1
KECS				*e*SN	Sn	19 02 43.1	-2.1
VRAC	**Vranov**	**1.83**	**246**	*e*Pn	Pn	19 02 21.2	-0.5
	baz=64						
VRAC				*e*Sg	Sg	19 02 45.0	-2.8
	comp=Z,24nm,0.4s,baz=64						
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*PG	Pg	19 02 21.1	-3.1
DPC				*e*SG	Sg	19 02 45.2	-2.9
	comp=Z,29nm,0.3s						
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*Pn	Pn	19 02 20.6	-1.2
	baz=98						
DPC				*e*Sg	Sg	19 02 44.8	-3.3
	baz=98						
SMOL	**Smolenice**	**1.93**	**216**	*e*PN	Pn	19 02 21.8	-1.2
SMOL	**Smolenice**	**1.93**	**216**	*e*Pn	Pn	19 02 21.8	-1.2
KSP	**Ksiaz**	**1.98**	**294**	*e*Pn	Pn	19 02 27.5	+3.7
KSP				*e*Pg	Pg	19 02 29.8	+2.8
KSP				*e*Sg	Sg	19 02 51.7	-1.0
UPC	**Upice**	**2.06**	**283**	*e*PG	Pg	19 02 27.3	-1.2
UPC				*e*SG	Sg	19 02 51.6	-3.6
	comp=Z,5.3nm,0.4s						
KRUC	**Moravsky**	**2.06**	**242**	*e*Pn	Pn	19 02 25.4	+0.5
	baz=59						
KRUC				*e*Sg	Sg	19 02 52.2	-3.1
	comp=Z,11nm,0.3s,baz=59						
KOLS	**Kolonicke sedl**	**2.33**	**118**	*e*PN	Pn	19 02 31.9	+3.3
KOLS	**Kolonicke sedl**	**2.33**	**118**	*e*Pn	Pn	19 02 31.9	+3.3
TREC	**Trest**	**2.51**	**253**	*e*SG	Sg	19 03 07.9	-1.6
PVCC	**Panska Ves**	**2.97**	**280**	*e*PG	Pg	19 02 40.8	-5.2
PVCC				*e*SG	Sg	19 03 22.2	-2.3
	comp=Z,23nm,0.3s						
PRU	**Pruhonice**	**2.98**	**270**	*e*SG	Sg	19 03 20.2	-4.3
	comp=Z,9.3nm,0.6s						
CONA	**Conrad Observa**	**3.05**	**226**	⇓*i*Pn	Pn	19 02 38.4	-0.1
CONA				⇓*i*Pg	Pg	19 02 46.1	-1.4
CONA				⇓*i*Sn	Sn	19 03 14.1	-1.6
CONA	**Conrad Observa**	**3.05**	**226**	Pn	Pn	19 02 38.4	-0.1
BRG	**Berggiesshubel**	**3.42**	**285**	PG	Pg	19 02 49.6	-5.0
BRG				SG	Sg	19 03 35.1	-3.8
	comp=Z,7.5nm,0.5s						
KHC	**Kasperske Hory**	**3.75**	**257**	*e*PN	Pn	19 02 48.0	0.0
KHC				*e*PG	Pg	19 02 54.7	-6.1
KHC				*e*SG	Sg	19 03 46.7	-2.7
	comp=Z,8.1nm,0.7s						
MOA	**Molln**	**3.92**	**237**	⇓*i*Pg	Pg	19 03 03.0	-1.0
MOA				⇓*i*Sg	Sg	19 03 53.2	-1.6
	comp=Z,4.8nm,0.6s						
MOA	**Molln**	**3.92**	**237**	Pg	Pg	19 03 03.0	-1.0
MOA				Sg	Sg	19 03 53.2	-1.6
	comp=Z,4.8nm,0.6s						
CLL	**Collm**	**4.10**	**290**	*e*SG	Sg	19 03 58.0	-2.7
	comp=Z,6.0nm,0.6s						
NKC	**Novy Kostel**	**4.32**	**275**	*e*SG	Sg	19 04 02.7	-4.8

ISCJB ***05*** *19:03:35.0±0.5, 43°.83N±0°.05×105°.28W±0°.06, h0km, mb4.2/1, Error ellipse: s-maj=8.4km s-min=5.7km az=144.1*
IDC ***05*** *19:03:36.6±1.9, 43°.70N×105°.46W, h0km, mb4.1/1, mb1 3.8/5, mb1mx3.5/27, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=54.1km s-min=8.1km az=150.0*
NEIC ***05*** *19:03:37.0±0.4, 43°.76N×105°.28W, h0km, ML3.0, Error ellipse: s-maj=7.5km s-min=4.9km az=144.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.

ISC 05 19:03:37.0±0.5, 43°.79N±0°.05×105°.28W±0°.06, h0km, n22, σ0s86/22, mb4.2/1, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.96**	**69**	*e*P	**Pg**	**19 03 56.5**	**+1.1**
PHWY	**Pilot Hill**	**2.49**	**183**	*e*P	**Pn**	**19 04 17.8**	**-0.9**
RWWY	**Rawlins**	**2.53**	**215**	*e*P	**Pn**	**19 04 19.9**	**+0.5**
PDAR	**Pinedale Array**	**3.29**	**253**	Pn	**Pn**	**19 04 29.9**	**+0.2**
	4.1nm,0.3s,baz=78,slow=14,SNR=78						
PDAR				Lg		19 05 14.5	
	8.0nm,0.3s,baz=70,slow=26,SNR=10						
OGNE	**Ogallala**	**3.72**	**139**	*e*P	**Pn**	**19 04 36.3**	**+0.6**
ISCO	**Idaho Springs**	**3.99**	**184**	*e*P	**Pn**	**19 04 39.1**	**-0.3**
YFT	**Old Faithful**	**4.05**	**281**	P	**Pn**	**19 04 41.3**	**+1.0**
YMR	**Madison River**	**4.18**	**284**	P	**Pn**	**19 04 41.0**	**-0.9**
SMCO	**Snowmass**	**4.78**	**196**	*e*P	**Pn**	**19 04 47.9**	**-2.3**
SPUT	**South Promonto**	**5.84**	**247**	*e*P	**Pn**	**19 05 04.6**	**-0.2**
	4.3nm,0.5s						
HVU	**Hansel Valley**	**5.87**	**253**	*e*P	**Pn**	**19 05 05.3**	**+0.1**
	4.8nm,0.5s						
SRU	**San Rafael**	**6.11**	**222**	*e*P	**Pn**	**19 05 07.7**	**-0.8**
	11nm,0.4s						
ECSD	**EROS Data Cent**	**6.28**	**88**	*e*P	**Pn**	**19 05 11.4**	**+0.7**
	3.7nm,0.3s						
TMUT	**Trail Mountain**	**6.32**	**227**	*e*P	**Pn**	**19 05 12.0**	**+0.7**
	6.4nm,0.5s						
DUG	**Dugway**	**6.66**	**240**	*e*P	**Pn**	**19 05 16.6**	**+0.6**
AGMN	**Agassiz Refuge**	**7.95**	**52**	*e*P	**Pn**	**19 05 33.7**	**-0.1**
	14nm,0.5s						
ELK	**Elko**	**7.99**	**251**	Pn	**Pn**	**19 05 36.0**	**+1.8**
	0.2nm,0.3s,baz=49,slow=9.6,SNR=4.9						
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn	**Pn**	**19 05 49.2**	**-0.4**
ULM				Lg		19 08 22.1	
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn	**Pn**	**19 05 49.2**	**-0.4**
	4.6nm,0.3s,baz=232,slow=11,SNR=24						
ULM				Lg		19 08 22.1	
	0.4nm,0.3s,baz=323,slow=19,SNR=2.2						
FFC	**Flin Flon**	**11.16**	**10**	*e*P	**Pn**	**19 06 16.4**	**-1.3**
	2.5nm,0.6s						
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**Pn**	**19 08 06.4**	**-0.3**
	0.1nm,0.3s,baz=154,slow=11,SNR=4.8						
ARCES	**ARCESS Array B**	**61.37**	**18**	P	**P**	**19 13 54.0**	**-0.1**
	1.2nm,0.5s,mb4.2,baz=328,slow=6.5,SNR=8.9						

IDC ***05*** *19:04:00.3±1.6, 8°.87S×158°.11E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.1/18, mbtmp4.1/9, ML4.3/1, MS3.7/7, Ms1 3.7/7, ms1mx3.2/28, Error ellipse: s-maj=46.9km s-min=23.0km az=121.0*
ISCJB ***05*** *19:04:04.0±1.2, 8°.9S±0°.2×158°.0E±0°.2, h33km, mb3.9/10, MS3.8/6, Error ellipse: s-maj=35.1km s-min=15.4km az=30.9*
NEIC ***05*** *19:04:05.6±0.9, 8°.92S×158°.08E, h35km, mb4.0/2, Error ellipse: s-maj=28.5km s-min=12.6km az=121.0*

ISC 05 19:04:05.9±1.2, 8°.9S±0°.2×158°.1E±0°.2, h35km, n20, σ0s64/12, mb3.9/10, MS3.8/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.34**	**149**	*e*LR	LR	19 11 14.6	
	174nm,23.2s						
CTA	**Charters Tower**	**15.92**	**225**	Pn	**Pn**	**19 07 47.2**	**0.0**
	0.8nm,0.3s,baz=51,slow=10,SNR=5.5						
CTA				LR	LR	19 12 56.2	
	comp=Z,134nm,20.1s,baz=53,slow=34						
WRAB	**Tennant Creek**	**25.40**	**242**	*e*P	**P**	**19 09 30.1**	**-0.1**
	4.9nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**25.41**	**242**	P	**P**	**19 09 30.1**	**-0.3**
	2.8nm,0.9s,mb3.8,baz=68,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**27.36**	**235**	P	**P**	**19 09 46.9**	**-1.0**
	1.3nm,0.9s,mb3.5,baz=64,slow=9.1,SNR=8.7						
STKA	**Stephens Creek**	**27.48**	**212**	P	**P**	**19 09 50.1**	**+1.3**
	2.1nm,0.4s,mb4.0,baz=16,slow=12,SNR=6.9						
AFI	**Afiamalu**	**29.95**	**102**	LR	LR	19 18 49.1	
	comp=Z,174nm,20.1s,MS3.7,baz=68,slow=30						
FITZ	**Fitzroy Crossi**	**32.77**	**250**	P	**P**	**19 10 35.6**	**-0.3**
	1.9nm,0.7s,mb4.1,baz=96,slow=8.2,SNR=5.3						
URZ	**Urewera**	**33.86**	**153**	LR	LR	19 23 19.9	
	comp=Z,121nm,19.1s,MS3.6,baz=325,slow=34						
PPT	**Papeete**	**51.54**	**105**	*e*LR	LR	19 27 57.7	
	64nm,22.2s						
PPT	**Papeete**	**51.54**	**105**	LR	LR	19 31 49.1	
	comp=Z,176nm,18.8s,MS4.1,baz=290,slow=32						
CMAR	**Chiang Mai Arr**	**64.36**	**295**	P	**P**	**19 14 39.2**	**+0.5**
	1.0nm,0.9s,mb3.9,baz=111,slow=6.5,SNR=4.6						
SONM	**Songino Array**	**72.61**	**326**	P	**P**	**19 15 30.1**	**+0.5**
	1.3nm,0.6s,mb4.0,baz=134,slow=6.7,SNR=7.7						
LSA	**Lhasa**	**74.87**	**304**	*e*P	**P**	**19 15 44.0**	**+0.6**
	0.8nm,0.5s,mb3.9						
MKAR	**Makanchi Array**	**86.87**	**318**	P	**P**	**19 16 46.1**	**-0.8**
	0.5nm,0.6s,mb3.9,baz=128,slow=4.4,SNR=5.3						
ZALV	**Zalesovo Beam**	**87.49**	**325**	LR	LR	19 57 37.2	
	comp=Z,22nm,18.8s,MS3.6,baz=46,slow=37						
KURK	**Kurchatov**	**90.23**	**321**	LR	LR	19 59 29.8	
	comp=Z,23nm,18.2s,MS3.6,baz=105,slow=37						
NVAR	**Mina Array Bea**	**90.54**	**51**	P	**P**	**19 17 04.1**	**-0.4**
	0.7nm,0.5s,mb4.3,baz=265,slow=4.5,SNR=4.7						
NVAR	**Mina Array Bea**	**90.54**	**51**	P	**P**	**19 17 04.1**	**-0.4**
BVAR	**Borovoye Array**	**95.67**	**323**	LR	LR	20 00 45.4	
	comp=Z,44nm,19.7s,MS3.9,slow=36						

IDC ***05*** *19:04:54.4±2.6, 20°.00S×169°.06E, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/15, mbtmp4.0/6, Error ellipse: s-maj=111.8km s-min=28.0km az=156.0*
ISCJB ***05*** *19:05:00.9±2.4, 20°.0S±0°.3×168°.9E±0°.2, h54km±26km, mb3.9/6, Error ellipse: s-maj=58.0km s-min=20.4km az=142.6*
NEIC ***05*** *19:05:00.0±1.1, 19°.90S×168°.99E, h35km, Error ellipse: s-maj=37.8km s-min=14.4km az=138.0*
NOU ***05*** *19:05:00.5±0.5, 19°.59S×168°.68E, h30km, MD3.0, ML3.2*

ISC 05 19:05:01.8±2.6, 20°.0S±0°.3×169°.0E±0°.2, h50km±30km, n23, σ0s36/12, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.88**	**222**	*e*S	**Sn**	**19 06 18.9**	**+0.2**
DZM	**Mont Dzumac**	**3.12**	**228**	*e*P	**Pn**	**19 05 48.3**	**-0.2**
PLUM	**Mont Dore**	**3.12**	**223**	*e*P	**Pn**	**19 05 48.9**	**+0.4**
LASL	**Noumea**	**3.16**	**225**	*e*P	**Pn**	**19 05 49.2**	**+0.1**
NOUC	**Port Laguerre**	**3.24**	**229**	*e*P	**Pn**	**19 05 49.9**	**-0.2**
NOUC				*e*S	**Sn**	**19 06 27.2**	**-0.2**
NOUC				AMP		19 06 41.9	
	comp=Z,159nm,2.9s						
WRA	**Warramunga Arr**	**32.50**	**264**	P	**P**	**19 11 27.2**	**-0.8**
	comp=Z,0.7nm,0.4s,mb3.8,baz=89,slow=8.5,SNR=8.7						
ASAR	**Alice Springs**	**32.69**	**257**	P	**P**	**19 11 29.6**	**0.0**
	comp=Z,4.8nm,0.6s,mb4.6,baz=86,slow=8.9,SNR=43						
FITZ	**Fitzroy Crossi**	**40.90**	**265**	P	**P**	**19 12 39.8**	**+0.3**
	comp=Z,1.6nm,0.6s,mb3.8,baz=91,slow=11,SNR=4.6						
CMAR	**Chiang Mai Arr**	**78.57**	**294**	P	**P**	**19 16 59.3**	**+0.7**
	comp=Z,0.6nm,0.6s,mb3.7,baz=130,slow=5.1,SNR=4.4						
SONM	**Songino Array**	**87.66**	**323**	P	**P**	**19 17 44.7**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.9,baz=132,slow=4.1,SNR=3.4						
NVAR	**Mina Array Bea**	**89.50**	**49**	P	**P**	**19 17 53.4**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.8,baz=207,slow=5.6,SNR=3.0						
GERES	**GERESS Array B**	**145.03**	**331**	PKPbc	PKPbc	19 24 32.7	-0.2
	comp=Z,0.4nm,0.5s,baz=39,slow=5.1,SNR=5.5						
CDF	**Champ du Feu**	**148.03**	**337**	*e*PKP1	PKPbc	19 24 40.6	-1.1
	comp=Z,5.9nm,0.8s						
HAU	**Haudompre**	**148.71**	**337**	*e*PKP1	PKPbc	19 24 42.2	-1.3
CABF	**La Chapelle**	**149.98**	**336**	*e*PKP1	PKPbc	19 24 45.9	-0.8
	comp=Z,9.0nm,0.8s						
LOR	**Lormes**	**150.21**	**339**	*e*PKP1	PKPbc	19 24 46.1	-1.1
SSF	**Saint Saulge**	**150.51**	**340**	*e*PKP1	PKPbc	19 24 46.8	-1.1
	comp=Z,4.2nm,0.6s						
LPL	**La Plagne**	**150.62**	**334**	*e*PKP1	PKPbc	19 24 47.6	-0.7
	comp=Z,5.2nm,0.9s						
LPG	**La Plagne**	**150.63**	**334**	*e*PKP1	PKPbc	19 24 47.7	-0.6
	comp=Z,7.9nm,1.0s						
ORIF	**Oris-en-Rattie**	**151.46**	**334**	*e*PKP1	PKPbc	19 24 49.2	-1.0
	comp=Z,5.9nm,0.8s						
TCF	**Toulx Ste Croi**	**151.61**	**340**	*e*PKP1	PKPbc	19 24 49.2	-1.3
	comp=Z,4.5nm,0.9s						
VIVF	**Saint-Julien-l**	**151.99**	**336**	*e*PKP1	PKPbc	19 24 50.3	-1.1
LASF	**Ste Croix**	**152.96**	**336**	*e*PKP1	PKPbc	19 24 52.5	-1.1
	comp=Z,7.7nm,1.0s						

ISCJB ***05*** *19:08:46.2±0.5, 45°.30N±0°.03×16°.19E±0°.03, h3km±4km, Error ellipse: s-maj=4.8km s-min=3.2km az=37.0*
NEIC ***05*** *19:08:47.8±

PKSM *e*Sg **Sg** **19 09 48.4 -0.3**
PKSM Moragy 1.92 61 *e*Pn **Pn** **19 09 21.0 +0.3**
PKSM *e*Sg **Sg** **19 09 48.4 -0.3**
ARSA Arzberg 2.00 346 *e*Pn **Pn** **19 09 22.0 +0.3**
ARSA Arzberg 2.00 346 ⇑*i*Pn **Pn** **19 09 21.5 -0.2**
ARSA Arzberg 2.00 346 *e*Pn **Pn** **19 09 22.0 +0.3**
FRGS Fruska Gora 2.55 92 *e*Pn **Pn** **19 09 30.3 +1.1**
FRGS *e*Sg **Sg** **19 10 07.1 -1.6**
FRGS Fruska Gora 2.55 92 *e*Pn **Pn** **19 09 30.3 +1.1**
FRGS *e*Sg **Sg** **19 10 07.1 -1.6**
FGSL Fruska Gora 2.55 92 *e*Pn **Pn** **19 09 30.3 +1.1**
FGSL *e*Sg **Sg** **19 10 07.1 -1.6**
PKSG 2.57 35 *e*Sn **Sn** **19 10 01.2 -0.2**
CONA Conrad Observa 2.63 355⇓*e*Pn **Pn** **19 09 31.1 +0.7**
SNR=15
STON Ston 2.66 156 *e*Pn **Pn** **19 09 31.5 +0.7**
STON Sn **Sn** **19 10 04.8 +1.1**
STON Ston 2.66 156 *e*Pn **Pn** **19 09 31.5 +0.7**
STON Sn **Sn** **19 10 04.8 +1.1**
BBLS Lazići 2.70 121 *e*Pn **Pn** **19 09 32.5 +1.2**
BBLS *e*Sg **Sg** **19 10 13.5 -0.1**
BBLS Lazići 2.70 121 *e*Pn **Pn** **19 09 32.5 +1.2**
BBLS *e*Sg **Sg** **19 10 13.5 -0.1**
DIVS Divibare 2.96 113 *e*Pn **Pn** **19 09 35.2 +0.4**
DIVS *e*Sg **Sg** **19 10 21.0 -0.8**
DIVS Divibare 2.96 113 *e*Pn **Pn** **19 09 35.2 +0.4**
DIVS *e*Sg **Sg** **19 10 21.0 -0.8**
KOLL Kolacno 3.60 24 *e*Pn **Pn** **19 09 43.9 +0.2**
KOLL Kolacno 3.60 24 *e*PN **Pn** **19 09 43.9 +0.2**
KOLL Kolacno 3.60 24 *e*Pn **Pn** **19 09 43.9 +0.2**
VYHS Vyhne 3.66 29 *e*Pn **Pn** **19 09 43.7 -0.8**
VYHS Vyhne 3.66 29 *e*PN **Pn** **19 09 43.7 -0.8**
VYHS Vyhne 3.66 29 *e*Pn **Pn** **19 09 43.7 -0.8**
BZS Buzias 3.81 83 *e*Pn **Pn** **19 09 47.6 +0.9**
BZS *e*Sg **Sg** **19 10 47.6 -1.8**
BZS Buzias 3.81 83 *e*Pn **Pn** **19 09 47.6 +0.9**
BZS *e*Sg **Sg** **19 10 47.6 -1.8**
GEC2 GERESS Array S 3.93 335 *e*Pn **Pn** **19 09 48.8 +0.6**
GEC2 *e*Sn **Sn** **19 10 31.3 -3.6**
GEC2 GERESS Array S 3.93 335 *e*Pn **Pn** **19 09 48.8 +0.6**
KHC Kasperske Hory 4.22 336 *e*PG **Pn** **19 09 53.1 +0.9**
KHC *e*SG **Sn** **19 10 40.2 -1.9**

IDC 05 19:17:14.4±2.0, 2°.59N×128°.09E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=138.9km s-min=23.8km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.22**	**165**	P	P	19 22 23.3	+0.1
	0.6nm,0.4s,baz=344,slow=10,SNR=18						
ASAR	**Alice Springs**	**26.71**	**168**	P	P	19 22 55.0	-0.4
	0.4nm,0.5s,baz=353,slow=7.3,SNR=19						
MKAR	**Makanchi Array**	**59.26**	**325**	P	P	19 27 18.1	+0.4
	0.3nm,0.4s,baz=118,slow=7.9,SNR=9.7						

*ISCJB **05** 19:41:50.7±0.8, 26°.12N×0°.09×92°.1E±0°.1, h57km±10km, mb3.4/5, Error ellipse: s-maj=19.1km s-min=13.0km az=155.4*
*NEIC **05** 19:41:50.6±0.9, 26°.10N×92°.05E, h35km, mb3.6/1, Error ellipse: s-maj=23.5km s-min=12.4km az=51.0*
*IDC **05** 19:41:50.2±1.1, 26°.12N×92°.00E, h32km±5km, mb3.2/5, mb1 3.5/5, mb1mx3.2/26, mbtmp3.2/5, Error ellipse: s-maj=94.5km s-min=16.5km az=57.0*
ISC 05 19:41:51.7±0.8, 26°.13N±0°.08×92°.1E±0°.1, h46km±12km, n10, σ0°51/12, mb3.4/5, 2D, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.58**	**197**	⇓*i*PG	**Pn**	**19 42 04.0**	**+0.3**
SHL				*i* SG	**Sn**	**19 42 12.0**	**-0.4**
SHL	**Shillong**	**0.58**	**197**	⇓*i*PG	**Pn**	**19 42 04.0**	**+0.3**
SHL				*e*SG	**Sn**	**19 42 12.0**	**-0.4**
IMP	**Imphal**	**2.15**	**128**	*e*P	**Pn**	**19 42 25.0**	**0.0**
LSA	**Lhasa**	**3.65**	**347**	*e*Pn	**Pn**	**19 42 46.5**	**+0.9**
ENH	**Enshi**	**15.90**	**71**	*e*P	**Pn**	**19 45 31.8**	**-0.5**
	3.0nm,0.6s						
MKAR	**Makanchi Array**	**22.04**	**342**	P	**P**	**19 46 41.3**	**-1.0**
	0.4nm,0.6s,mb3.1,baz=160,slow=10.0,SNR=6.3						
MKAR				sP	sP	19 46 54.6	-4.4
	0.4nm,0.6s,baz=164,slow=11,SNR=3.5						
KURK	**Kurchatov**	**26.63**	**341**	P	**P**	**19 47 25.8**	**0.0**
	0.4nm,0.6s,mb3.1,baz=162,slow=9.5,SNR=3.3						
WRA	**Warramunga Arr**	**61.48**	**134**	P	**P**	**19 52 04.0**	**+0.1**
	0.3nm,0.7s,mb3.5,baz=324,slow=7.4,SNR=3.9						
WRA				pP	pP	19 52 14.2	-2.7
	0.3nm,0.7s,baz=321,slow=7.6,SNR=1.8						
GERES	**GERESS Array B**	**63.35**	**314**	P	**P**	**19 52 16.0**	**-0.1**
	0.5nm,0.6s,mb3.8,baz=77,slow=7.0,SNR=5.7						
ASAR	**Alice Springs**	**63.94**	**137**	P	**P**	**19 52 20.9**	**+0.7**
	0.4nm,1.0s,mb3.4,baz=316,slow=6.6,SNR=3.4						
ASAR				pP	pP	19 52 30.8	-2.5
	0.2nm,0.5s,baz=320,slow=7.0,SNR=2.2						
ASAR				sP	sP	19 52 34.8	-3.7
	0.1nm,0.5s,baz=322,slow=7.0,SNR=1.5						

*BJI **05** 19:50:13.7, 17°.90S×173°.90W, h22km, mB4.9/1, mb5.0/6*
*VIE **05** 19:50:13.8, 17°.82S×173°.95W, h0km, mb4.4 394 km NNE of Nuku'alofa*
*NEIC **05** 19:50:16.8, 17°.95S×173°.88W, h22km±20km, mb4.5/6, Error ellipse: s-maj=14.4km s-min=6.9km az=150.0*
*SZGRF **05** 19:50:16.8, 18°.23S×172°.80W, h85km, Tonga Islands region*
*IDC **05** 19:50:22.6±6.8, 17°.98S×173°.95W, h75km±60km, mb4.1/19, mb1 4.2/19, mb1mx4.2/26, mbtmp4.1/19, MS3.7/12, Ms1 3.7/12, ms1mx3.4/34, Error ellipse: s-maj=25.5km s-min=16.3km az=157.0*
*ISCJB **05** 19:50:23.7±0.4, 17°.99S±0°.09×173°.99W±0°.08, h100km, mb4.3/26, Error ellipse: s-maj=14.9km s-min=8.1km az=145.1*
ISC 05 19:50:24.9±0.4, 18°.12S±0°.09×173°.93W±0°.08, h100km, n121, σ1°12/45, mb4.3/26, 10C-3D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.67**	**27**	P	**Pn**	**19 51 21.7**	**-11**
	34nm,0.3s,baz=184,slow=7.3,SNR=34						
AFI				S	**Sn**	**19 52 09.6**	**-17**
	290nm,0.3s,baz=68,slow=23,SNR=16						
RAO	**Raoul Island**	**11.67**	**197**	S	**Sn**	**19 55 10.5**	**-5.9**
	70nm,0.3s,baz=271,slow=23,SNR=3.9						
DZM	**Mont Dzumac**	**18.85**	**255**	*e*LR	LR	19 58 49.4	
	510nm,27.5s						
DZM	**Mont Dzumac**	**18.85**	**255**	P	**P**	**19 54 35.6**	**-1.4**
	22nm,1.0s						
URZ	**Urewera**	**21.54**	**200**	P	**P**	**19 55 08.1**	**+2.1**
	17nm,0.3s,mb4.8,baz=12,slow=5.5,SNR=28						
URZ				S	**S**	**19 58 58.0**	**-1.1**
	5.5nm,0.5s,baz=86,slow=14,SNR=5.2						
URZ	**Urewera**	**21.54**	**200**	*e*P	**P**	**19 55 06.7**	**+0.7**
URZ				S	**S**	**19 58 58.0**	**-1.1**
PAE	**Paea**	**23.17**	**93**	*e*P	**P**	**19 55 19.9**	**-3.0**
	13nm,1.3s,mb4.1						
PAE				*e*T		20 18 19.0	
	16nm,0.3s						
PPT	**Papeete**	**23.18**	**92**	*e*P	**P**	**19 55 20.6**	**-2.4**
	43nm,1.3s,mb4.6						
PPT				*e*LR	LR	20 00 40.1	
	591nm,31.2s						
PPT	**Papeete**	**23.18**	**92**	LR	LR	20 02 42.3	
	comp=Z,120nm,19.4s,baz=208,slow=32						
TIAR	**Tiarei**	**23.41**	**92**	*e*T		20 18 36.3	
	14nm,0.3s						
MEH	**Mehetia**	**24.59**	**93**	*e*T		20 20 05.8	
	52nm,0.2s						
PMOR	**Pomariorio Ree**	**25.14**	**87**	*e*T		20 20 45.3	
	6.8nm,0.2s						
KHZ	**Kahutara**	**26.47**	**201**	*e*P	**P**	**19 55 58.2**	**+5.6**
RPZ	**Rata Peaks**	**28.49**	**203**	P	**P**	**19 56 16.9**	**+6.3**
	7.1nm,0.4s,mb4.6,baz=28,slow=3.2,SNR=13						
RPZ				LR	LR	20 06 59.0	
	comp=Z,174nm,18.7s,baz=179,slow=35						
RPZ	**Rata Peaks**	**28.49**	**203**	*e*P	**P**	**19 56 15.8**	**+5.2**
RPZ				LR	LR	20 06 59.0	
ARMA	**Armidale**	**33.57**	**242**	*e*P	**P**	**19 56 57.3**	**+1.9**
TAOE	**Nuku Hiva Isla**	**34.06**	**79**	*e*T		20 31 52.8	
	90nm,0.3s						
RKT	**Rikitea**	**36.72**	**105**	*e*T		20 35 15.9	
	4.3nm,0.3s						

CTA	**Charters Tower**	**37.62**	**260**	P	**P**	**19 57 30.9**	**+0.8**
	4.5nm,0.7s,mb4.4,baz=16,slow=20,SNR=3.9						
CTA				LR	LR	20 09 20.1	
	comp=Z,81nm,18.3s,baz=70,slow=30						
CTAO	**Charters Tower**	**37.62**	**260**	*e*P	**P**	**19 57 30.6**	**+0.5**
STKA	**Stephens Creek**	**42.29**	**242**	P	**P**	**19 58 08.2**	**-0.5**
	1.3nm,0.6s,mb3.8,baz=70,slow=5.9,SNR=6.0						
STKA				LR	LR	20 12 35.2	
	comp=Z,123nm,21.2s,baz=25,slow=32						
WRAB	**Tennant Creek**	**48.77**	**259**	*e*P	**P**	**19 58 58.8**	**-1.2**
WRA	**Warramunga Arr**	**48.78**	**259**	P	**P**	**19 58 59.8**	**-0.3**
	1.0nm,0.3s,mb4.2,baz=98,slow=6.9,SNR=32						
ASAR	**Alice Springs**	**48.84**	**254**	P	**P**	**19 59 00.2**	**-0.2**
	11nm,0.7s,mb4.9,baz=87,slow=8.6,SNR=125						
ASAR				S	**S**	**20 05 55.4**	**-1.1**
	1.0nm,0.7s,baz=92,slow=14,SNR=11						
KAKA	**Kakadu**	**51.84**	**268**	*e*P	**P**	**19 59 19.9**	**-3.3**
FITZ	**Fitzroy Crossi**	**57.19**	**260**	P	**P**	**20 00 02.5**	**+0.5**
	0.8nm,0.4s,mb4.1,baz=22,slow=15,SNR=6.5						
FITZ				LR	LR	20 23 41.2	
	comp=Z,75nm,21.9s,baz=77,slow=35						
CBIJ	**Chichi jima**	**61.90**	**316**	LR	LR	20 25 06.1	
	comp=Z,39nm,18.1s,baz=146,slow=34						
MBWA	**Marble Bar**	**62.15**	**255**	*e*P	**P**	**20 00 34.6**	**-1.3**
MJAR	**Matsushiro Arr**	**70.69**	**321**	P	**P**	**20 01 29.6**	**-0.3**
	2.7nm,1.0s,mb4.0,baz=166,slow=6.8,SNR=5.1						
MJAR				LR	LR	20 25 04.8	
	comp=Z,96nm,21.7s,baz=200,slow=30						
PETK	**Petropavlovsk-**	**75.06**	**343**	P	**P**	**20 01 55.4**	**0.0**
	9.8nm,0.7s,mb4.6,baz=134,slow=8.3,SNR=17						
YBH	**Yreka Blue Hor**	**76.06**	**37**	P	**P**	**20 02 02.7**	**+1.3**
	1.0nm,0.5s,mb3.9,baz=286,slow=3.7,SNR=4.1						
YBH				LR	LR	20 27 51.9	
	comp=Z,40nm,19.8s,baz=119,slow=30						
NVAR	**Mina Array Bea**	**76.68**	**42**	P	**P**	**20 02 05.4**	**+0.4**
	2.8nm,0.8s,mb4.0,baz=225,slow=8.8,SNR=12						
KSRS	**Korea Array**	**77.75**	**316**	P	**P**	**20 02 12.1**	**+1.2**
	5.1nm,1.0s,mb4.2,baz=129,slow=5.7,SNR=9.6						
KSRS				LR	LR	20 34 22.4	
	comp=Z,37nm,20.2s,baz=141,slow=34						
ELK	**Elko**	**79.95**	**41**	P	**P**	**20 02 23.1**	**+0.2**
	0.8nm,0.8s,mb3.6,baz=215,slow=11,SNR=3.8						
MSU	**Marysvale**	**80.71**	**44**	*e*P	**P**	**20 02 28.1**	**+1.1**
	2.5nm,1.0s,mb4.0						
TTA	**Tatalina**	**82.00**	**8**	*e*P	**P**	**20 02 33.3**	**0.0**
	3.5nm,0.7s,mb4.3						
TXAR	**Lajitas Array**	**82.54**	**56**	P	**P**	**20 02 36.9**	**0.0**
	4.3nm,1.2s,mb4.2,baz=237,slow=3.9,SNR=16						
TXAR				LR	LR	20 30 19.5	
	comp=Z,48nm,20.2s,baz=180,slow=29						
ANMO	**Albuquerque**	**82.93**	**50**	P	**P**	**20 02 39.1**	**+0.3**
	1.1nm,0.5s,mb4.0,baz=157,slow=5.1,SNR=4.1						
TRF	**Thorofare Moun**	**83.37**	**10**	*e*P	**P**	**20 02 39.4**	**-1.0**
DLBC	**Dease Lake**	**84.40**	**21**	P	**P**	**20 02 44.8**	**-0.9**
	1.0nm,0.6s,mb3.8,baz=231,slow=15,SNR=3.4						
BOZ	**Bozeman (W)**	**84.85**	**39**	*e*PKPdf	**P**	**20 02 48.6**	**+0.4**
CMIG	**Matias Romero**	**85.26**	**70**	LR	LR	20 30 32.8	
	comp=Z,52nm,20.6s,baz=223,slow=28						
BILL	**Bilibino**	**87.12**	**353**	*e*P	**P**	**20 02 58.7**	**-0.3**
	5.9nm,0.9s,mb4.5						
PSI	**Prapat**	**88.15**	**274**	P	**P**	**20 03 05.9**	**+0.7**
	2.1nm,0.4s,mb4.5,baz=174,slow=11,SNR=3.9						
VNA2	**Neumayer--Watz**	**90.70**	**176**	*e*	**P**	**20 03 17.8**	**+1.8**
	baz=213,slow=3.8						
INK	**Inuvik**	**91.01**	**14**	P	**P**	**20 03 16.1**	**-1.1**
	2.3nm,0.9s,mb4.3,baz=191,slow=2.8,SNR=5.8						
KMI	**Kunming**	**91.74**	**296**	P	**P**	**20 03 24.6**	**+2.9**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
YKA	**Yellowknife Ar**	**92.78**	**24**	P	**P**	**20 03 25.4**	**-0.1**
	comp=Z,0.6nm,0.8s,mb4.0,baz=233,slow=3.8,SNR=10						
YKA	**Yellowknife Ar**	**92.78**	**24**	P	**P**	**20 03 25.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**92.98**	**288**	P	**P**	**20 03 28.4**	**+0.8**
	comp=Z,2.7nm,0.9s,mb4.6,baz=88,slow=3.0,SNR=14						
LPAZ	**La Paz**	**99.35**	**111**	LR	LR	20 38 16.1	
	comp=Z,33nm,20.2s,baz=312,slow=29						
MKAR	**Makanchi Array**	**112.35**	**314**	PKiKP	PKiKP	20 08 48.9	-0.1
	comp=Z,0.4nm,0.6s,baz=153,slow=1.1,SNR=4.8						
KURK	**Kurchatov**	**114.83**	**318**	PKP	PKiKP	20 08 52.1	-1.5
	comp=Z,0.6nm,0.7s,baz=87,slow=1.8,SNR=3.8						
BVAR	**Borovoye Array**	**119.69**	**321**	PKP	PKPdf	20 09 03.3	+0.4
	comp=Z,1.5nm,0.7s,baz=85,slow=1.6,SNR=11						
ARCES	**ARCESS Array B**	**127.21**	**352**	PKP	PKPdf	20 09 17.8	+0.9
	comp=Z,1.5nm,0.7s,baz=345,slow=0.7,SNR=8.8						
AKASG	**Malin Array Be**	**142.62**	**336**	PKP	PKPdf	20 09 47.4	+1.4
	comp=Z,0.4nm,0.4s,baz=354,slow=0.7,SNR=4.0						
AKASG	**Malin Array Be**	**142.62**	**336**	PKP	PKPdf	20 09 47.4	+1.3
KMBO	**Kilima Mbogo**	**143.85**	**241**	PKP	PKPdf	20 09 48.9	-0.6
	comp=Z,2.3nm,0.3s,baz=117,slow=7.5,SNR=8.5						
MALT	**Malatya**	**145.37**	**312**	*e*PKPdf	PKPdf	20 09 53.2	+1.9
MALT	**Malatya**	**145.37**	**312**	⇑*i*PKPdf	PKPdf	20 09 53.1	+1.8
NRDL	**Niedersach Rie**	**145.55**	**356**	*e*PKPbc	PKPbc	20 09 51.5	+0.1
KWP	**Kalwaria Pacla**	**145.83**	**341**	*e*PKPdf	PKPdf	20 09 52.9	+1.2
KWP	**Kalwaria Pacla**	**145.83**	**341**	⇓*i*P	PKPdf	20 09 52.5	+0.8
IBBN	**Ibbenburen**	**145.86**	**358**	*e*PKPbc	PKPbc	20 09 52.8	+0.4
IBBN				*e*pPKPbc	pPKPbc	20 10 16.2	-3.3
OJC	**Ojcow**	**146.14**	**344**	*e*PX		20 09 53.6	
CLZ	**Clausthal**	**146.18**	**355**	*e*PKPbc	PKPbc	20 09 53.7	+0.3
CLZ				*e*pPKPbc	pPKPbc	20 10 17.2	-3.3
CLL	**Collm**	**146.43**	**352**	*e*PKPbc	PKPbc	20 09 54.2	+0.1
CLL				*e*pPKPbc	pPKPbc	20 10 17.8	-3.5
CLL	**Collm**	**146.43**	**352**	⇑*i*PKPbc	PKPbc	20 09 54.4	+0.3
	comp=Z,27nm,1.0s						
CLL				*i* PKiKP	PKiKP	20 09 58.2	+1.2
CLL				*e*pPKPbc	pPKPbc	20 10 01.0	-20
CLL				*i*		20 10 17.7	
CLL				*i*		20 10 20.6	
STHS	**Stebnicka Huta**	**146.46**	**342**	*e*PKP	PKPdf	20 09 53.6	+0.8
KOLS	**Kolonicke sedl**	**146.58**	**340**	*e*PKP	PKPdf	20 09 54.5	+1.5
BUR08	**Bucovina Ar. S**	**146.65**	**336**	*e*PKPdf	PKPdf	20 09 55.8	+2.6
BURAR	**Bucovina Array**	**146.66**	**336**	⇑*i*P	PKPdf	20 09 55.2	+2.0
NEUB	**Neuenburg**	**146.68**	**353**	*e*PKPbc	PKPbc	20 09 55.3	+0.5
BRG	**Berggiesshubel**	**146.72**	**351**	*e*PKPbc	PKPbc	20 09 55.6	+0.6
BRG				*e*pPKPbc	pPKPbc	20 10 19.0	-3.2
BRG	**Berggiesshubel**	**146.72**	**351**	*e*P	PKPbc	20 09 55.8	+0.8
	comp=Z,8.7nm,1.1s						
UPC	**Upice**	**146.72**	**348**	*e*PKP	PKPbc	20 09 55.9	+0.9
DPC	**Dobruska-Polom**	**146.81**	**348**	*e*PKP	PKPbc	20 09 56.5	+1.2
OKC	**Ostrava-Krasne**	**146.90**	**346**	*e*PKP	PKPbc	20 09 55.8	+0.3
PVCC	**Panska Ves**	**146.96**	**350**	*e*PKP	PKPbc	20 09 56.9	+1.2
MORC	**Moravsky Berou**	**147.10**	**346**	⇑*i*P	PKPdf	20 09 55.3	+1.5
MOX	**Moxa**	**147.25**	**353**	*e*PKPbc	PKPbc	20 09 56.9	+0.4
WERD	**Werda**	**147.36**	**353**	*e*PKPbc	PKPbc	20 09 57.3	+0.5
TANN	**Tannenbergstha**	**147.38**	**352**	*e*PKPbc	PKPbc	20 09 57.3	+0.5
GUNZ	**Gunzen**	**147.44**	**353**	*e*PKPbc	PKPbc	20 09 58.0	+1.0
VRI	**Vrincioaia**	**147.45**	**333**	⇑*i*P	PKPdf	20 09 55.3	+0.8
PRU	**Pruhonice**	**147.49**	**350**	*e*PKP	PKPbc	20 09 58.1	+1.0
WERN	**Wernitzgruen**	**147.51**	**352**	*e*PKPbc	PKPbc	20 09 57.9	+0.7
KECS	**Kecovo**	**147.52**	**342**	*e*PKP	PKPbc	20 09 58.1	+0.8
HARR	**Harsova**	**147.80**	**330**	⇑*i*P	PKPbc	20 09 59.3	+1.1
BRTR	**Keskin Array B**	**147.88**	**311**	PKPbc	PKPbc	20 09 59.5	+1.0
	comp=Z,6.7nm,0.9s,baz=130,slow=3.6,SNR=15						
VYHS	**Vyhne**	**147.97**	**344**	*e*PKP	PKPbc	20 09 58.7	+0.2
TREC	**Trest**	**147.98**	**348**	*e*PKP	PKPbc	20 09 59.4	+0.9
KOLL	**Kolacno**	**148.01**	**344**	*e*PKP	PKPbc	20 09 59.8	+1.2
ROTZ	**Rotzenmuhle**	**148.04**	**352**	*e*PKPbc	PKPbc	20 09 59.4	+0.8
MLR	**Muntele Rosu**	**148.09**	**333**	⇑*i*P	PKPbc	20 09 59.5	+0.6
BAIF	**Baives**	**148.10**	**2**	*e*PKP1	PKPbc	20 09 59.6	+0.8
	comp=Z,13nm,1.0s						
GRF	**Grafenberg Arr**	**148.23**	**354**	*e*PKPbc	PKPbc	20 09 59.6	+0.5
DRGR		**148.28**	**338**	⇑*i*P	PKPbc	20 09 59.9	+0.5
KHC	**Kasperske Hory**	**148.47**	**351**	*e*PKPbc	PKPbc	20 09 59.7	-0.1
GEC2	**GERESS Array S**	**148.73**	**350**	*e*PKPbc	PKPbc	20 10 00.9	+0.5
GERES	**GERESS Array B**	**148.73**	**350**	PKPbc	PKPbc	20 10 01.5	+1.0
	comp=Z,1.4nm,0.7s,baz=23,slow=3.1,SNR=13						
FLN	**La Foliniere**	**148.97**	**8**	*e*PKP1	PKPbc	20 10 01.3	+0.2
	comp=Z,17nm,0.9s						
SGMF	**Saint Gilles**	**149.13**	**11**	*e*PKP1	PKPbc	20 10 01.5	0.0
	comp=Z,23nm,1.0s						
LDF	**La Druitiere**	**149.19**	**8**	*e*PKP1	PKPbc	20 10 01.9	+0.3
CONA	**Conrad Observa**	**149.21**	**347**	⇑*i*PKPbc	PKPbc	20 10 02.9	+1.2
	comp=Z,7.0nm,1.0s						
GRR	**Gorron**	**149.28**	**9**	*e*PKP1	PKPbc	20 10 02.2	+0.3
	comp=Z,18nm,0.9s						
BZS	**Buzias**	**149.68**	**338**	⇑*i*P	PKPbc	20 10 03.9	+1.0
MEZF	**Maizieres J'vi**	**149.68**	**1**	*e*PKP1	PKPbc	20 10 03.8	+1.0
CDF	**Champ du Feu**	**149.77**	**358**	*e*PKP1	PKPbc	20 10 03.8	+0.8
	comp=Z,8.8nm,0.8s						
BFO	**Black Forest**	**149.81**	**357**	*e*PKPbc	PKPbc	20 10 03.4	+0.3
HAU	**Haudompre**	**150.19**	**360**	*e*PKP1	PKPbc	20 10 04.8	+0.7
	comp=Z,7.3nm,0.7s						
LOR	**Lormes**	**150.87**	**3**	*e*PKP1	PKPbc	20 10 06.5	+0.8
	comp=Z,14nm,1.1s						
FETA	**Feichten**	**150.92**	**353**	⇓*i*PKPbc	PKPbc	20 10 06.1	+0.3
	comp=Z,6.8nm,1.0s						

ABTA	**Abfaltersbach**	**150.96**	**351**	⇓*i*PKPbc	PKPbc	20 10 06.2	+0.3
	comp=Z,9.5nm,1.0s						
SSF	**Saint Saulge**	**151.06**	**4**	*e*PKP1	PKPbc	20 10 07.0	+0.8
	comp=Z,12nm,0.9s						
AVF	**Avril sur Loir**	**151.32**	**4**	*e*PKP1	PKPbc	20 10 07.1	+0.3
	comp=Z,5.1nm,0.8s						
BGF	**Bois d'Agland**	**151.51**	**5**	*e*PKP1	PKPbc	20 10 07.8	+0.6
	comp=Z,9.5nm,0.8s						
CABF	**La Chapelle**	**151.59**	**360**	*e*PKP1	PKPbc	20 10 08.7	+1.3
	comp=Z,12nm,0.8s						
TCF	**Toulx Ste Croi**	**151.73**	**6**	*e*PKP1	PKPbc	20 10 08.1	+0.4
MBDF	**Montbardon**	**153.46**	**359**	*e*PKP1	PKPbc	20 10 13.3	+1.7
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**173.50**	**139**	PKP	PKPdf	20 10 22.9	-0.5
	comp=Z,0.6nm,0.9s,baz=180,slow=0.7,SNR=3.8						
TORD				PKPab	PKPab	20 11 54.3	+1.6
	comp=Z,0.8nm,1.0s,baz=239,slow=3.6,SNR=2.8						

*CSEM **05** 20:05:14.9±0.6, 36°.12N×21°.66E, h2km, MD3.1, Error ellipse: s-maj=13.5km s-min=5.6km az=64.0*
*ATH **05** 20:05:15.3, 36°.14N×21°.61E, h4km, MD3.1/7*
*NEIC **05** 20:05:15.3, 36°.14N×21°.61E, h4km, MD3.1(ATH), After ATH.*
*THE **05** 20:05:17.0, 36°.19N×21°.86E, h0km±2km, Error ellipse: s-maj=4.1km s-min=1.2km az=245.0*
ISC 05 20:05:14.5±2.1, 36°.11N±0°.07×21°.6E±0°.1, h1km±9km, n30, σ0°69/41, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.79**	**6**	*e*PB	**Pg**	**20 05 30.0**	**+0.3**
PYL				*e*SG	**Sg**	**20 05 41.1**	**+1.1**
PYL	**PYLOS**	**0.79**	**6**	P	**Pg**	**20 05 30.0**	**+0.3**
PYL				S	**Sg**	**20 05 41.5**	**+1.5**
PYL	**PYLOS**	**0.79**	**6**	P	**Pg**	**20 05 30.0**	**+0.3**
PYL				*e*Sg	**Sg**	**20 05 41.1**	**+1.1**
PYL				S	**Sg**	**20 05 41.5**	**+1.5**
ITM	**Ithomi**	**1.09**	**12**	*e*PB	**Pb**	**20 05 35.1**	**-1.2**
ITM				*e*SG	**Sg**	**20 05 50.1**	**+0.4**
ITM	**Ithomi**	**1.09**	**12**	P	**Pg**	**20 05 35.2**	**-0.3**
ITM				S	**Sg**	**20 05 50.3**	**+0.6**
ITM	**Ithomi**	**1.09**	**12**	P	**Pg**	**20 05 35.2**	**-0.3**
ITM				*e*Sg	**Sg**	**20 05 50.1**	**+0.4**
KYTH	**Kithira**	**1.14**	**81**	*e*PB	**Pb**	**20 05 37.7**	**+0.6**
KYTH	**Kithira**	**1.14**	**81**	*e*Pb	**Pb**	**20 05 37.7**	**+0.6**
VLI	**Veliai**	**1.21**	**59**	*e*PG	**Pg**	**20 05 37.9**	**+0.2**
VLI	**Veliai**	**1.21**	**59**	*e*Pg	**Pg**	**20 05 37.9**	**+0.2**
VLX	**Vlachokerasia**	**1.39**	**25**	*e*PG	**Pg**	**20 05 40.5**	**-0.7**
VLX	**Vlachokerasia**	**1.39**	**25**	P	**Pn**	**20 05 40.2**	**-0.9**
VLX				S	**Sg**	**20 05 58.7**	**-0.6**
VLX	**Vlachokerasia**	**1.39**	**25**	P	**Pn**	**20 05 40.2**	**-0.9**
VLX	**Vlachokerasia**	**1.39**	**25**	*e*Pg	**Pg**	**20 05 40.5**	**-0.7**
VLX				S	**Sg**	**20 05 58.7**	**-0.6**
DID	**Didima**	**1.90**	**42**	*e*PB

ellipse: s-maj=7.2km s-min=3.5km az=73.0
DDA ***05*** *20:18:40.6, 37°.82N×27°.18E, h7km±3km, Md2.7*
ISC 05 20:18:41.0±0.6, 37.77N±0°.03×27.15E±0°.06, h13km±4km, n30, σ0.86/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.09**	**135**	*i* P	**Pg**	**20 18 43.7**	**-0.1**
GCAM				*i* S	**Sg**	**20 18 45.8**	**0.0**
GCAM	**G?zelcaml?**	**0.09**	**135**	*i* P	**Pg**	**20 18 43.7**	**-0.1**
GCAM				*i* S	**Sg**	**20 18 45.8**	**0.0**
AYDN	**Tasoluk**	**0.59**	**100**	*i* P	**Pg**	**20 18 52.4**	**-0.1**
AYDN				*i* S	**Sg**	**20 18 59.9**	**-0.3**
AYDN	**Tasoluk**	**0.59**	**100**	*i* P	**Pg**	**20 18 52.4**	**-0.1**
AYDN				*i* S	**Sg**	**20 18 59.9**	**-0.3**
BLCB	**Balcova**	**0.62**	**352**	*e*PG	**Pg**	**20 18 52.2**	**-1.0**
BLCB				*e*SG	**Sg**	**20 19 01.5**	**0.0**
BLCB	**Balcova**	**0.62**	**352**	*e*Pg	**Pg**	**20 18 52.2**	**-1.0**
BLCB				*e*Sg	**Sg**	**20 19 01.5**	**0.0**
IZM	**Izmir**	**0.64**	**8**	*e*PG	**Pg**	**20 18 53.7**	**+0.3**
IZM				*e*SG	**Sg**	**20 19 03.4**	**+1.6**
IZM	**Izmir**	**0.64**	**8**	*e*Pg	**Pg**	**20 18 53.7**	**+0.3**
IZM				*e*Sg	**Sg**	**20 19 03.4**	**+1.5**
MLSB	**Milas**	**0.68**	**133**	*e*PG	**Pg**	**20 18 55.4**	**+1.1**
MLSB	**Milas**	**0.68**	**133**	*e*Pg	**Pg**	**20 18 55.4**	**+1.1**
BODT	**Bodrum**	**0.71**	**170**	*e*PG	**Pg**	**20 18 54.8**	**0.0**
BODT	**Bodrum**	**0.71**	**170**	*e*Pg	**Pg**	**20 18 54.8**	**0.0**
BDRM	**Kayabasi**	**0.74**	**161**	*i* P	**Pg**	**20 18 54.8**	**-0.5**
BDRM	**Kayabasi**	**0.74**	**161**	*i* P	**Pg**	**20 18 54.8**	**-0.5**
URLA	**Izmir**	**0.74**	**324**	*i* P	**Pg**	**20 18 54.5**	**-0.8**
URLA				*i* S	**Sg**	**20 19 05.0**	**0.0**
URLA	**Izmir**	**0.74**	**324**	*i* P	**Pg**	**20 18 54.5**	**-0.8**
URLA				*i* S	**Sg**	**20 19 05.0**	**0.0**
DAT	**Datca**	**1.09**	**162**	*e*PN	**Pn**	**20 19 01.5**	**-0.5**
DAT	**Datca**	**1.09**	**162**	*e*Pn	**Pn**	**20 19 01.5**	**-0.5**
YER	**Yerkesik**	**1.10**	**125**	*e*PN	**Pn**	**20 19 02.7**	**+0.6**
YER	**Yerkesik**	**1.10**	**125**	*e*Pn	**Pn**	**20 19 02.7**	**+0.6**
AKHS	**Akhisar**	**1.23**	**25**	*i* P	**Pn**	**20 19 03.3**	**-0.6**
AKHS				*i* S	**Sb**	**20 19 19.4**	**-0.5**
AKHS	**Akhisar**	**1.23**	**25**	*i* P	**Pn**	**20 19 03.3**	**-0.6**
AKHS				*i* S	**Sb**	**20 19 19.4**	**-0.5**
AKS	**Akhisar**	**1.23**	**25**	*e*PN	**Pn**	**20 19 03.9**	**0.0**
AKS	**Akhisar**	**1.23**	**25**	*e*Pn	**Pn**	**20 19 03.9**	**0.0**
MANT	**Manisa**	**1.32**	**56**	*i* P	**Pn**	**20 19 05.6**	**+0.4**
MANT				*i* S	**Sb**	**20 19 20.3**	**-2.3**
MANT	**Manisa**	**1.32**	**56**	*i* P	**Pn**	**20 19 05.6**	**+0.4**
KULA	**Kula-Manisa**	**1.41**	**57**	*e*PN	**Pn**	**20 19 07.1**	**+0.7**
KULA	**Kula-Manisa**	**1.41**	**57**	*e*Pn	**Pn**	**20 19 07.1**	**+0.7**
DEMI	**Demirci**	**1.77**	**43**	*i* P	**Pn**	**20 19 13.8**	**+2.4**
DEMI	**Demirci**	**1.77**	**43**	*i* P	**Pn**	**20 19 13.8**	**+2.4**

IDC ***05*** *20:43:16.7±2.2, 23°.63S×175°.28W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/17, mbtmp4.0/7, MS3.7/1, Ms1 3.7/1, ms1mx2.6/22, Error ellipse: s-maj=142.2km s-min=23.9km az=158.0*
ISCJB ***05*** *20:43:20.8±1.7, 23°.4S±0°.7×175°.5W±0°.3, h33km, mb4.0/7, Error ellipse: s-maj=112.1km s-min=18.7km az=158.4*
NEIC ***05*** *20:43:22.0±1.5, 23°.62S×175°.36W, h35km, Error ellipse: s-maj=94.6km s-min=16.6km az=159.0*
ISC 05 20:43:22.4±1.7, 23°.5S±0°.7×175°.4W±0°.3, h35km, n13, σ0.95/11, mb4.0/7, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**24.89**	**81**	LR	LR	20 56 04.2	
	comp=Z,195nm,21.8s,baz=178,slow=31						
CTA	**Charters Tower**	**35.68**	**268**	P	**P**	**20 50 17.9**	**+0.4**
	14nm,1.1s,mb4.8,baz=96,slow=11,SNR=3.0						
CTAO	**Charters Tower**	**35.68**	**268**	P	**P**	**20 50 18.1**	**+0.6**
STKA	**Stephens Creek**	**38.75**	**248**	P	**P**	**20 50 44.3**	**+0.9**
	1.8nm,0.9s,mb3.8,baz=60,slow=8.1,SNR=2.2						
ASAR	**Alice Springs**	**46.23**	**259**	P	**P**	**20 51 44.6**	**+0.3**
	1.4nm,0.9s,mb3.9,baz=92,slow=8.3,SNR=12						
WB2	**Warramunga Arr**	**46.61**	**264**	*e*P	**P**	**20 51 46.6**	**-0.7**
WRAB	**Tennant Creek**	**46.61**	**264**	P	**P**	**20 51 46.2**	**-1.2**
WRA	**Warramunga Arr**	**46.62**	**264**	P	**P**	**20 51 46.5**	**-0.9**
	0.9nm,0.5s,mb4.0,baz=94,slow=8.3,SNR=27						
WRA	**Warramunga Arr**	**46.62**	**264**	P	**P**	**20 51 46.5**	**-0.9**
NVAR	**Mina Array Bea**	**81.63**	**42**	P	**P**	**20 55 36.6**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=215,slow=10.0,SNR=4.3						
TXAR	**Lajitas Array**	**86.71**	**56**	P	**P**	**20 56 02.5**	**-0.3**
	0.7nm,1.0s,mb3.8,baz=197,slow=10,SNR=4.8						
CMAR	**Chiang Mai Arr**	**93.37**	**289**	P	**P**	**20 56 36.5**	**+2.2**
	1.9nm,0.8s,mb4.6,baz=139,slow=3.1,SNR=13						
BRTR	**Keskin Array B**	**150.64**	**310**	PKPbc	PKPbc	21 03 10.4	-0.3
	0.6nm,0.9s,baz=7.6,slow=4.4,SNR=2.3						

NEIC ***05*** *20:45:36.0, 18°.04N×66°.10W, h7km, MD2.5(RSPR), After RSPR.*
NEIC Felt [III] at Guayama.
RSPR 05 20:45:36.6, 18°.04N×66°.10W, h7km, MD2.5/6, MD2.5/6, 1C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**0.09**	**327**	⇑*i*P	Pg	20 45 39.0	+0.3
SJG	**San Juan**	**0.09**	**327**	||*e*P	Pg	20 45 38.6	-0.1
SJG	**San Juan**	**0.09**	**327**	⇑*i*P	Pg	20 45 39.0	+0.3
SJG	**San Juan**	**0.09**	**327**	||*e*P	Pg	20 45 38.6	-0.1
SJG	**San Juan**	**0.09**	**327**	||*e*P	Pg	20 45 38.6	-0.1
CPD	**Cerro la Pandu**	**0.17**	**90**	⇑*i*P	Pg	20 45 40.7	+0.5
CPD				*e*S	Sg	20 45 43.2	+0.6
CPD	**Cerro la Pandu**	**0.17**	**90**	⇑*i*P	Pg	20 45 40.7	+0.5
CPD				*e*S	Sg	20 45 43.2	+0.6
HUMP	**Col San Antoni**	**0.26**	**66**	⇑*i*P	Pg	20 45 42.1	+0.4
HUMP	**Col San Antoni**	**0.26**	**66**	*e*S	Sg	20 45 46.0	+0.7
HUMP	**Col San Antoni**	**0.26**	**66**	⇑*i*P	Pg	20 45 42.1	+0.4
HUMP				*e*S	Sg	20 45 46.0	+0.7
CBYP	**Canovanas**	**0.33**	**45**	||*e*P	Pg	20 45 44.1	+1.1
CBYP	**Canovanas**	**0.33**	**45**	*e*S	Sg	20 45 49.0	+1.6
CBYP	**Canovanas**	**0.33**	**45**	||*e*P	Pg	20 45 44.1	+1.1
CBYP				*e*S	Sg	20 45 49.0	+1.6
CELP	**Cerrillos**	**0.46**	**275**	*e*S	Sg	20 45 52.4	+0.9
CELP	**Cerrillos**	**0.46**	**275**	*e*S	Sg	20 45 52.4	+0.9
MTP	**Monte Pirata**	**0.52**	**83**	||*i*P	Pg	20 45 47.0	+0.3
MTP	**Monte Pirata**	**0.52**	**83**	*e*S	Sg	20 45 54.1	+0.5
MTP	**Monte Pirata**	**0.52**	**83**	||*i*P	Pg	20 45 47.0	+0.3
MTP				*e*S	Sg	20 45 54.1	+0.5
AOPR	**Arecibo Observ**	**0.69**	**296**	||*e*P	Pg	20 45 50.2	+0.2
AOPR	**Arecibo Observ**	**0.69**	**296**	*e*S	Sg	20 45 59.0	0.0
AOPR	**Arecibo Observ**	**0.69**	**296**	||*e*P	Pg	20 45 50.2	+0.2
AOPR				*e*S	Sg	20 45 59.0	0.0
LRS	**Lares**	**0.75**	**290**	*e*S	Sg	20 46 00.5	-0.5
LRS	**Lares**	**0.75**	**290**	*e*S	Sg	20 46 00.5	-0.4
CRPR	**Cabo Rojo, PR**	**0.96**	**268**	*e*P	Pg	20 45 56.1	+1.0

ISK ***05*** *20:47:58.6, 37°.68N×26°.74E, h9km, ML3.7*
NEIC ***05*** *20:47:59.2, 37°.83N×26°.91E, h15km, ML3.3(ATH), ML3.7(ISK), After ATH.*
ATH ***05*** *20:47:59.2, 37°.83N×26°.91E, h15km, MD3.9/19, ML3.3*
IDC ***05*** *20:47:59.5±1.6, 37°.77N×26°.85E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.2/25, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=38.4km s-min=24.2km az=129.0*
DDA ***05*** *20:48:00.3, 37°.78N×26°.99E, h21km±1km, Md3.4*
CSEM ***05*** *20:48:00.5±0.1, 37°.73N×26°.88E, h5km, ML3.3, Error ellipse: s-maj=2.7km s-min=2.5km az=24.0*
ISCJB ***05*** *20:48:00.1±0.3, 37°.75N±0°.02×26°.89E±0°.02, h8km±3km, mb3.3/2, Error ellipse: s-maj=2.8km s-min=2.6km az=148.2*
THE ***05*** *20:48:01.7, 37°.79N×27°.01E, h15km±2km, ML4.5/2, Error ellipse: s-maj=2.3km s-min=0.8km az=63.0*
ISC 05 20:48:00.8±0.3, 37.74N±0°.02×26.90E±0°.02, h6km±2km, n227, σ1.01/253, mb3.3/2, 8C-3D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.06**	**237**	*e*PB	**Pg**	**20 48 03.3**	**+0.9**
SMG				*e*SB	**Sg**	**20 48 05.3**	**+1.8**
SMG	**Samos**	**0.06**	**237**	*e*Pb	**Pg**	**20 48 03.3**	**+0.9**
SMG				*e*Sb	**Sg**	**20 48 05.3**	**+1.8**
GCAM	**G?zelcaml?**	**0.27**	**98**	*i* P	**Pg**	**20 48 06.0**	**-0.1**
GCAM				*i* S	**Sg**	**20 48 09.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.27**	**98**	*i* P	**Pg**	**20 48 06.0**	**-0.1**
GCAM				*i* S	**Sg**	**20 48 09.9**	**+0.2**
BLCB	**Balcova**	**0.65**	**10**	PG	**Pg**	**20 48 12.9**	**-0.5**
BLCB	**Balcova**	**0.65**	**10**	P	**Pg**	**20 48 13.1**	**-0.3**
BLCB				S	**Sg**	**20 48 22.4**	**+0.5**
BLCB	**Balcova**	**0.65**	**10**	P	**Pg**	**20 48 13.1**	**-0.3**
BLCB				S	**Sg**	**20 48 22.4**	**+0.5**
URLA	**Izmir**	**0.66**	**339**	*i* P	**Pg**	**20 48 13.5**	**-0.1**
URLA				*i* S	**Sg**	**20 48 22.5**	**+0.2**
URLA	**Izmir**	**0.66**	**339**	*i* P	**Pg**	**20 48 13.5**	**-0.1**
URLA				*i* S	**Sg**	**20 48 22.5**	**+0.3**
IZM	**Izmir**	**0.72**	**24**	PG	**Pg**	**20 48 15.3**	**+0.7**
IZM	**Izmir**	**0.72**	**24**	*i* Pg	**Pg**	**20 48 15.4**	**+0.8**
BODT	**Bodrum**	**0.75**	**154**	PG	**Pg**	**20 48 14.4**	**-0.9**
BODT				*e*SG	**Sg**	**20 48 24.5**	**-0.5**
BODT	**Bodrum**	**0.75**	**154**	*i* Pg	**Pg**	**20 48 14.4**	**-0.9**
BODT				*e*Sg	**Sg**	**20 48 24.5**	**-0.5**
AYDN	**Tasoluk**	**0.78**	**96**	*i* P	**Pg**	**20 48 14.9**	**-0.9**
AYDN				*i* S	**Sg**	**20 48 24.7**	**-1.3**
AYDN	**Tasoluk**	**0.78**	**96**	*i* P	**Pg**	**20 48 14.9**	**-1.0**
AYDN				*i* S	**Sg**	**20 48 24.7**	**-1.3**
BDRM	**Kayabasi**	**0.80**	**147**	*i* P	**Pg**	**20 48 15.5**	**-0.8**
BDRM				*i* S	**Sg**	**20 48 27.6**	**+1.0**
BDRM	**Kayabasi**	**0.80**	**147**	*i* P	**Pg**	**20 48 15.5**	**-0.7**
BDRM				*i* S	**Sg**	**20 48 27.6**	**+1.0**
MLSB	**Milas**	**0.83**	**122**	*e*PG	**Pg**	**20 48 16.2**	**-0.5**
MLSB	**Milas**	**0.83**	**122**	*e*Pg	**Pg**	**20 48 16.3**	**-0.4**
DAT	**Datca**	**1.15**	**152**	*e*PN	**Pg**	**20 48 21.1**	**-1.7**
DAT	**Datca**	**1.15**	**152**	*e*Pn	**Pg**	**20 48 21.1**	**-1.7**
YER	**Yerkesik**	**1.26**	**118**	*e*PN	**Pn**	**20 48 23.8**	**-1.1**
YER	**Yerkesik**	**1.26**	**118**	*e*Pn	**Pn**	**20 48 23.8**	**-1.1**
APE	**Apeiranthos**	**1.28**	**239**	*e*PN	**Pn**	**20 48 24.5**	**-0.7**
APE				*e*SN	**Sn**	**20 48 43.2**	**+0.6**
APE	**Apeiranthos**	**1.28**	**239**	P	**Pn**	**20 48 24.5**	**-0.7**
APE				S	**Sb**	**20 48 43.3**	**+1.4**
APE	**Apeiranthos**	**1.28**	**239**	P	**Pn**	**20 48 24.5**	**-0.7**
APE				*e*Sn	**Sn**	**20 48 43.2**	**+0.6**
AKHS	**Akhisar**	**1.35**	**32**	*i* P	**Pn**	**20 48 24.1**	**-2.1**
AKHS				*i* S	**Sb**	**20 48 43.2**	**-0.7**
AKHS	**Akhisar**	**1.35**	**32**	*i* P	**Pn**	**20 48 24.1**	**-2.0**
AKHS				*i* S	**Sb**	**20 48 43.2**	**-0.7**
AKS	**Akhisar**	**1.35**	**32**	*e*PN	**Pn**	**20 48 25.4**	**-0.8**
AKS	**Akhisar**	**1.35**	**32**	*e*Pn	**Pn**	**20 48 25.4**	**-0.7**
MANT	**Manisa**	**1.51**	**60**	*i* P	**Pn**	**20 48 26.8**	**-1.6**
MANT	**Manisa**	**1.51**	**60**	*i* P	**Pn**	**20 48 26.8**	**-1.6**
AYVA	**Ayvalik**	**1.57**	**354**	*i* P	**Pn**	**20 48 29.6**	**+0.4**
AYVA	**Ayvalik**	**1.57**	**354**	*i* P	**Pn**	**20 48 29.6**	**+0.3**
PRK	**Paraskevi**	**1.58**	**342**	*e*PN	**Pn**	**20 48 27.6**	**-1.8**
PRK				*e*SN	**Sn**	**20 48 47.6**	**-2.5**
PRK	**Paraskevi**	**1.58**	**342**	P	**Pn**	**20 48 27.7**	**-1.7**
PRK				S	**Sn**	**20 48 47.6**	**-2.5**
PRK	**Paraskevi**	**1.58**	**342**	P	**Pn**	**20 48 27.7**	**-1.7**
PRK				S	**Sn**	**20 48 47.6**	**-2.5**
KULA	**Kula-Manisa**	**1.59**	**60**	*e*PN	**Pn**	**20 48 29.6**	**+0.1**
KULA	**Kula-Manisa**	**1.59**	**60**	*e*Pn	**Pn**	**20 48 29.6**	**+0.1**
TURN	**Turunc**	**1.61**	**122**	*i* P	**Pn**	**20 48 25.5**	**-4.3**
TURN	**Turunc**	**1.61**	**122**	*i* P	**Pn**	**20 48 25.5**	**-4.3**
SIGR	**SIGRI**	**1.68**	**331**	P	**Pn**	**20 48 29.3**	**-1.4**
SIGR				S	**Sn**	**20 48 51.7**	**-0.9**
SIGR	**SIGRI**	**1.68**	**331**	P	**Pn**	**20 48 29.3**	**-1.4**
SIGR				S	**Sn**	**20 48 51.7**	**-0.9**
DENT	**Denizli**	**1.69**	**89**	*e*PN	**Pn**	**20 48 30.9**	**0.0**
DENT	**Denizli**	**1.69**	**89**	*e*Pn	**Pn**	**20 48 30.9**	**0.0**
DNZL	**Cakiroluk**	**1.70**	**91**	*i* P	**Pn**	**20 48 29.7**	**-1.3**
DNZL	**Cakiroluk**	**1.70**	**91**	*i* P	**Pn**	**20 48 29.7**	**-1.3**
THR4	**Thira Island,**	**1.75**	**224**	P	**Pn**	**20 48 32.6**	**+0.9**
THR4	**Thira Island,**	**1.75**	**224**	P	**Pn**	**20 48 32.6**	**+0.9**
THR1	**Thera Island**	**1.79**	**221**	P	**Pn**	**20 48 30.3**	**-1.9**
THR1	**Thera Island**	**1.79**	**221**	P	**Pn**	**20 48 30.3**	**-1.9**
THR3	**Thira Island,**	**1.79**	**222**	P	**Pn**	**20 48 33.0**	**+0.8**
THR3	**Thira Island,**	**1.79**	**222**	P	**Pn**	**20 48 33.0**	**+0.8**
ARG	**Arkhangelos**	**1.81**	**147**	P	**Pn**	**20 48 31.1**	**-0.7**
ARG	**Arkhangelos**	**1.81**	**147**	P	**Pn**	**20 48 31.1**	**-1.4**
ARG				S	**Sn**	**20 48 54.0**	**-1.8**
ARG	**Arkhangelos**	**1.81**	**147**	P	**Pn**	**20 48 31.8**	**-0.7**
ARG				S	**Sn**	**20 48 54.0**	**-1.8**
THR5	**Thira Island,**	**1.81**	**224**	P	**Pn**	**20 48 34.3**	**+1.8**
THR5	**Thira Island,**	**1.81**	**224**	P	**Pn**	**20 48 34.3**	**+1.8**
DEMI	**Demirci**	**1.93**	**47**	*i* P	**Pn**	**20 48 34.3**	**+0.2**
DEMI	**Demirci**	**1.93**	**47**	*i* P	**Pn**	**20 48 34.3**	**+0.1**
BALB	**Balikesir**	**2.05**	**22**	*e*PN	**Pn**	**20 48 35.8**	**0.0**
BALB	**Balikesir**	**2.05**	**22**	*e*Pn	**Pn**	**20 48 35.8**	**0.0**
FETY	**Fethiye**	**2.06**	**122**	*e*PN	**Pn**	**20 48 35.4**	**-0.6**
FETY	**Fethiye**	**2.06**	**122**	*e*Pn	**Pn**	**20 48 35.4**	**-0.6**
BALY	**Balya**	**2.08**	**16**	*i* P	**Pn**	**20 48 35.0**	**-1.2**
BALY	**Balya**	**2.08**	**16**	*i* P	**Pn**	**20 48 35.0**	**-1.2**
EZN	**Ezine**	**2.13**	**348**	*e*PN	**Pn**	**20 48 35.9**	**-1.0**
EZN	**Ezine**	**2.13**	**348**	*e*Pn	**Pn**	**20 48 35.9**	**-1.0**
KHAL	**Karahalli**	**2.14**	**72**	*i* P	**Pg**	**20 48 41.1**	**-0.8**
KHAL	**Karahalli**	**2.14**	**72**	*i* P	**Pg**	**20 48 41.1**	**-0.8**
GLHS	**Glhisar (BURDU**	**2.15**	**105**	*e*PN	**Pn**	**20 48 37.0**	**-0.2**
GLHS	**Glhisar (BURDU**	**2.15**	**105**	*e*Pn	**Pn**	**20 48 37.0**	**-0.2**
KHL	**Karahalli**	**2.15**	**74**	*e*PN	**Pn**	**20 48 37.4**	**+0.2**
KHL	**Karahalli**	**2.15**	**74**	*e*Pn	**Pn**	**20 48 37.4**	**+0.2**
GOLH	**Golhisar**	**2.18**	**103**	*i* P	**Pn**	**20 48 37.4**	**-0.2**
GOLH	**Golhisar**	**2.18**	**103**	*i* P	**Pn**	**20 48 37.3**	**-0.2**
KARP	**Karpathos**	**2.20**	**174**	*e*PN	**Pn**	**20 48 39.3**	**+1.5**
KARP	**Karpathos**	**2.20**	**174**	*e*Pn	**Pn**	**20 48 39.3**	**+1.5**
BOZC	**Bozcaada**	**2.20**	**343**	*i* P	**Pn**	**20 48 40.8**	**+3.0**
DURS	**Dursunbey**	**2.23**	**33**	*i* P	**Pn**	**20 48 37.8**	**-0.5**
DURS	**Dursunbey**	**2.23**	**33**	*i* P	**Pn**	**20 48 37.8**	**-0.5**
DST	**Dursunbey**	**2.30**	**35**	*e*PN	**Pn**	**20 48 39.9**	**+0.6**
PTL	**Penteli**	**2.42**	**278**	*e*PN	**Pn**	**20 48 39.6**	**-1.3**
PTL	**Penteli**	**2.42**	**278**	*e*Pn	**Pn**	**20 48 39.6**	**-1.3**
GDZ	**Gediz**	**2.44**	**56**	*i* P	**Pg**	**20 48 45.6**	**-1.9**
GDZ	**Gediz**	**2.44**	**56**	*i* P	**Pg**	**20 48 45.6**	**-1.9**
VLY	**Voula,Athens**	**2.46**	**274**	*e*PB	**Pn**	**20 48 40.8**	**-0.7**
ATH	**Athens Observa**	**2.53**	**276**	*e*PB	**Pn**	**20 48 42.1**	**-0.3**
LIA	**Limnos Island**	**2.54**	**329**	*e*PN	**Pn**	**20 48 41.4**	**-1.1**
LIA	**Limnos Island**	**2.54**	**329**	P	**Pn**	**20 48 41.5**	**-1.0**
LIA	**Limnos Island**	**2.54**	**329**	P	**Pn**	**20 48 41.5**	**-1.0**
GADA	**Gvkgeada**	**2.57**	**343**	*e*PN	**Pn**	**20 48 41.6**	**-1.3**
GADA	**Gvkgeada**	**2.57**	**343**	*e*Pn	**Pn**	**20 48 41.6**	**-1.3**
ELL	**Elmali**	**2.60**	**111**	*e*PN	**Pn**	**20 48 43.3**	**0.0**
ELL	**Elmali**	**2.60**	**111**	*e*Pn	**Pn**	**20 48 43.3**	**0.0**
LPK	**Lapseki**	**2.63**	**358**	*e*PN	**Pn**	**20 48 43.5**	**-0.3**
LPK	**Lapseki**	**2.63**	**358**	*e*Pn	**Pn**	**20 48 43.5**	**-0.3**
AKAS	**Kas**	**2.64**	**124**	*i* P	**Pn**	**20 48 43.8**	**0.0**
AKAS	**Kas**	**2.64**	**124**	*i* P	**Pn**	**20 48 43.8**	**-0.1**
KSL	**Kastellorizon**	**2.67**	**126**	*e*PN	**Pn**	**20 48 44.7**	**+0.3**
NPS	**Neapolis**	**2.68**	**203**	*e*P	**Pn**	**20 48 45.4**	**+0.9**
NPS	**Neapolis**	**2.68**	**203**	*e*P	**Pn**	**20 48 45.4**	**+0.9**
NPS	**Neapolis**	**2.68**	**203**	*e*P	**Pn**	**20 48 45.4**	**+0.9**
NAIG	**Nisos Aigina**	**2.70**	**271**	*e*PN	**Pn**	**20 48 43.8**	**-1.0**
NAIG	**Nisos Aigina**	**2.70**	**271**	*e*Pn	**Pn**	**20 48 43.8**	**-1.0**
EDC	**Edincik**	**2.71**	**16**	*e*PN	**Pn**	**20 48 45.2**	**+0.3**
EDC	**Edincik**	**2.71**	**16**	*e*Pn	**Pn**	**20 48 45.2**	**+0.3**
BNT	**Bandirma**	**2.73**	**17**	*e*PN	**Pn**	**20 48 45.4**	**+0.2**
BNT	**Bandirma**	**2.73**	**17**	*e*Pn	**Pn**	**20 48 45.4**	**+0.2**
KCT	**Karacabey**	**2.77**	**24**	*e*PN	**Pn**	**20 48 46.1**	**+0.5**
KCT	**Karacabey**	**2.77**	**24**	*e*Pn	**Pn**	**20 48 46.1**	**+0.5**
LAST	**Lasithi**	**2.82**	**204**	*e*P	**Pn**	**20 48 44.9**	**-1.4**
LAST	**Lasithi**	**2.82**	**204**	*e*P	**Pn**	**20 48 44.9**	**-1.4**
LAST	**Lasithi**	**2.82**	**204**	P	**Pn**	**20 48 45.5**	**-0.8**
LAST	**Lasithi**	**2.82**	**204**	P	**Pn**	**20 48 45.5**	**-0.8**
LAST	**Lasithi**	**2.82**	**204**	*e*P	**Pn**	**20 48 44.9**	**-1.4**
ALT	**Altintas**	**2.84**	**62**	*e*PN	**Pn**	**20 48 47.3**	**+0.6**
ALT	**Altintas**	**2.84**	**62**	*e*Pn	**Pn**	**20 48 47.3**	**+0.6**
ISP	**Isparta**	**2.86**	**87**	*e*PN	**Pn**	**20 48 47.9**	**+0.9**
DID	**Didima**	**2.92**	**267**	*e*PN	**Pn**	**20 48 46.7**	**-1.0**
DID	**Didima**	**2.92**	**267**	P	**Pn**	**20 48 46.7**	**-1.0**
DID	**Didima**	**2.92**	**267**	P	**Pn**	**20 48 46.7**	**-1.0**
BCK	**Bucak**	**2.94**	**94**	*e*PN	**Pn**	**20 48 48.9**	**+0.8**
BCK	**Bucak**	**2.94**	**94**	*e*Pn	**Pn**	**20 48 48.9**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.95**	**4**	*e*PN	**Pn**	**20 48 48.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.95**	**4**	*e*Pn	**Pn**	**20 48 48.0**	**-0.2**
SHUT	**Suhut-Afyon**	**2.99**	**73**	*e*PN	**Pn**	**20 48 49.8**	**+1.0**
SHUT	**Suhut-Afyon**	**2.99**	**73**	*e*Pn	**Pn**	**20 48 49.8**	**+1.0**
ENEZ	**Enez**	**3.05**	**349**	*e*PN	**Pn**	**20 48 48.9**	**-0.7**
ENEZ	**Enez**	**3.05**	**349**	*e*Pn	**Pn**	**20 48 48.9**	**-0.6**
ANTB	**Antalya**	**3.11**	**105**	*e*PN	**Pn**	**20 48 50.9**	**+0.5**
ANTB	**Antalya**	**3.11**	**105**	*e*Pn	**Pn**	**20 48 50.9**	**+0.5**
LTK	**Loutraki**	**3.12**	**276**	*e*PN	**Pn**	**20 48 49.7**	**-0.9**
LTK	**Loutraki**	**3.12**	**276**	P	**Pn**	**20 48 50.2**	**-0.4**
LTK	**Loutraki**	**3.12**	**276**	*e*Pn	**Pn**	**20 48 49.7**	**-0.9**
LTK	**Loutraki**	**3.12**	**276**	P	**Pn**	**20 48 50.2**	**-0.4**
ALN	**Alexandroupoli**	**3.22**	**348**	*e*PN	**Pn**	**20 48 50.6**	**-1.3**
ALN	**Alexandroupoli**	**3.22**	**348**	P	**Pn**	**20 48 50.8**	**-1.1**
ALN	**Alexandroupoli**	**3.22**	**348**	P	**Pn**	**20 48 50.8**	**-1.1**
SUTC	**Sutluce-Ispart**	**3.27**	**93**	*e*PN	**Pn**	**20 48 53.6**	**+1.0**
SUTC	**Sutluce-Ispart**	**3.27**	**93**	*e*Pn	**Pn**	**20 48 53.6**	**+1.1**
TKR	**Tekirdag**	**3.28**	**8**	*e*PN	**Pn**	**20 48 53.1**	**+0.4**
TKR	**Tekirdag**	**3.28**	**8**	*e*Pn	**Pn**	**20 48 53.1**	**+0.3**
VLI	**Veliai**	**3.32**	**253**	*e*PN	**Pn**	**20 48 52.5**	**-0.8**
VLI	**Veliai**	**3.32**	**253**	*e*Pn	**Pn**	**20 48 52.5**	**-0.8**
YLV	**Yalova**	**3.42**	**34**	*e*PN	**Pn**	**20 48 56.2**	**+1.6**
YLV	**Yalova**	**3.42**	**34**	*e*Pn	**Pn**	**20 48 56.2**	**+1.6**
CRLT	**Corlu**	**3.45**	**11**	*e*PN	**Pn**	**20 48 55.4**	**+0.4**
CRLT	**Corlu**	**3.45**	**11**	*e*Pn	**Pn**	**20 48 55.4**	**+0.4**
ADVT	**Abdulvahap**	**3.48**	**39**	*e*PN	**Pn**	**20 48 56.4**	**+0.9**
ADVT	**Abdulvahap**	**3.48**	**39**	*e*Pn	**Pn**	**20 48 56.4**	**+0.9**
BORA	**Eskisehir**	**3.50**	**51**	*i* P	**Pg**	**20 49 05.7**	**-2.2**
RDO	**Rodhopi**	**3.56**	**343**	*e*PN	**Pn**	**20 48 55.9**	**-0.7**
RDO	**Rodhopi**	**3.56**	**343**	P	**Pn**	**20 48 55.5**	**-1.1**
RDO	**Rodhopi**	**3.56**	**343**	P	**Pn**	**20 48 55.5**	**-1.1**
RDO	**Rodhopi**	**3.56**	**343**	*e*Pn	**Pn**	**20 48 55.9**	**-0.7**
ESKT	**Eskisehir**	**3.57**	**59**	*e*PN	**Pn**	**20 48 58.2**	**+1.5**
ESKT	**Eskisehir**	**3.57**	**59**	*e*Pn	**Pn**	**20 48 58.2**	**+1.5**
VLX	**Vlachokerasia**	**3.61**	**266**	*e*PN	**Pn**	**20 48 57.3**	**+

h23km±15km, mb3.9/15, MS3.2/10, Error ellipse: s-maj=8.1km s-min=6.1km az=164.6
NEIC ***05*** *20:55:12.6±0.6, 25°.98N×104°.55E, h10km, mb4.1/3, Error ellipse: s-maj=13.1km s-min=10.9km az=97.0*
ISC 05 20:55:12.9±1.1, 25°.78N±0°.04×104°.54E±0°.04, h20km±7km, n42, σ1§12/45, mb3.9/15, MS3.2/10, 1C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.76**	**249**	Pg	**Pg**	**20 55 45.7**	**-1.0**
KMI				Sg	**Sg**	**20 56 09.6**	**0.0**
KMI	comp=N,560nm,1.1s			smax			
KMI	comp=E,600nm,1.1s			smax			
KMI	comp=N,3μm,4.1s			LR	LR		
KMI	comp=E,3μm,4.7s			LR	LR		
KMI	comp=Z,2μm,5.2s			LR	LR		
GYA	**Guiyang**	**2.02**	**70**	Pg	**Pn**	**20 55 44.9**	**-1.0**
GYA				Sg	**Sn**	**20 56 10.5**	**-0.2**
GYA	comp=N,3μm,0.6s			smax			
GYA	comp=E,2μm,0.6s			smax			
GYA	comp=N,11μm,7.1s			LR	LR		
GYA	comp=E,4μm,8.5s			LR	LR		
GYA	comp=Z,6μm,7.1s			LR	LR		
CD2	**Chengdu**	**5.16**	**352**	Pn	**Pn**	**20 56 30.1**	**+1.1**
CD2				Sn	**Sn**	**20 57 23.1**	**-4.9**
CD2				Sg	**Sg**	**20 57 59.2**	**+0.7**
CD2	comp=N,300nm,1.4s			smax			
CD2	comp=E,350nm,1.1s			smax			
CD2	comp=N,5μm,4.1s			LR	LR		
CD2	comp=Z,610nm,4.5s			LR	LR		
ENH	**Enshi**	**6.25**	**43**	*e*Pn	**Pn**	**20 56 45.1**	**+1.0**
QIZ	**Qiongzhong**	**8.31**	**143**	P	**Pn**	**20 57 12.6**	**+0.1**
QIZ	comp=Z,9.0nm,0.9s			pmax	pmax		
QIZ	comp=N,510nm,12.2s			LR	LR		
QIZ	comp=Z,610nm,10.6s			LR	LR		
GZH	**Guangzhou**	**8.46**	**107**	P	**Pn**	**20 57 14.5**	**+0.1**
GZH				S	**Sn**	**20 58 46.1**	**-3.2**
CMAR	**Chiang Mai Arr**	**8.95**	**217**	Pn	**Pn**	**20 57 25.1**	**+4.0**
CMAR	comp=Z,0.3nm,0.3s,baz=29,slow=12,SNR=12			Pg	Pn	20 58 06.4	+45
CMAR	comp=Z,0.1nm,0.3s,baz=30,slow=17,SNR=5.4			Lg		21 00 03.9	
CMAR	comp=Z,0.0nm,0.3s,baz=46,slow=29,SNR=5.8			LR	LR	21 01 10.3	
XAN	**Xi'an**	**9.06**	**24**	P	**Pn**	**20 57 20.8**	**-1.9**
XAN				S	**Sn**	**20 58 56.9**	**-7.3**
WHN	**Wuhan**	**9.87**	**59**	⇑P	**Pn**	**20 57 34.9**	**+1.2**
WHN				S	**Sn**	**20 59 18.4**	**-5.5**
WHN	comp=Z,130nm,0.6s			pmax	pmax		
WHN	comp=N,960nm,6.2s			LR	LR		
WHN	comp=E,2μm,5.6s			LR	LR		
WHN	comp=Z,2μm,8.1s			LR	LR		
LZH	**Lanzhou**	**10.29**	**357**	*e*P	**Pn**	**20 57 40.0**	**+0.5**
LZH				pP		20 57 42.2	
LZH				sP		20 57 44.4	
LZH				PP		20 57 48.1	
LZH				*e*S	**Sn**	**20 59 34.3**	**0.0**
LZH				sS		20 59 40.0	
LZH				SS		20 59 48.4	
LZH	comp=Z,35nm,1.0s			pmax	pmax		
LZH	comp=Z,130nm,4.0s			pmax	pmax		
LZH	comp=E,1μm,9.8s			LR	LR		
LZH	comp=Z,3μm,11.0s			LR	LR		
LSA	**Lhasa**	**12.49**	**291**	P	**Pn**	**20 58 11.7**	**+2.1**
LSA	comp=Z,30nm,0.9s			pmax	pmax		
LSA	**Lhasa**	**12.49**	**291**	*e*Pn	**Pn**	**20 58 11.5**	**+2.0**
GUN	comp=Z,7.5nm,0.8s **Gumba**	**16.79**	**281**	*e*P	**Pn**	**20 59 06.4**	**-0.6**
PKI	comp=Z,19nm,1.0s **Pulchoki**	**17.20**	**280**	*e*P	**Pn**	**20 59 10.7**	**-1.4**
BJI	comp=Z,8.6nm,0.7s **Beijing**	**17.23**	**32**	P	**Pn**	**20 59 12.3**	**-0.1**
BJI				S	**Sn**	**21 02 18.7**	**-4.7**
BJI	comp=Z,13nm,1.5s			pmax	pmax		
BJI	comp=N,180nm,18.3s			LR	LR		
BJI	comp=E,250nm,19.1s			LR	LR		
BJI	comp=Z,160nm,20.0s			LR	LR		
KKN	**Kakani**	**17.32**	**281**	*e*P	**Pn**	**20 59 12.4**	**-1.2**
GKN	comp=Z,14nm,0.8s **Gorkha**	**17.89**	**282**	*e*P	**Pn**	**20 59 21.7**	**+1.0**
KOLN	comp=Z,3.9nm,0.5s **Koldanda**	**18.80**	**281**	*e*P	**Pn**	**20 59 31.7**	**-0.2**
PYUN	comp=Z,6.1nm,0.8s **Piuthan**	**19.35**	**282**	*e*P	**Pn**	**20 59 41.8**	**+3.3**
JOW	comp=Z,74nm,1.5s **Kunigami**	**21.30**	**82**	LR	LR	21 07 52.0	
SONM	comp=Z,68nm,20.5s,MS3.0,baz=185,slow=36 **Songino Array**	**22.06**	**3**	P	**P**	**21 00 06.0**	**-0.5**
SONM	comp=Z,2.9nm,0.8s,mb3.8,baz=187,slow=11,SNR=15			LR	LR	21 08 53.2	
SONM	comp=Z,84nm,18.5s,MS3.2,baz=230,slow=38 **Songino Array**	**22.06**	**3**	P	**P**	**21 00 06.0**	**-0.5**
SONM				LR	LR	21 08 53.2	
ULN	**Ulaanbaatar**	**22.13**	**4**	*e*P	**P**	**21 00 05.8**	**-1.3**
KSRS	comp=Z,6.3nm,1.0s,mb4.0 **Korea Array**	**23.00**	**54**	P	**P**	**21 00 15.4**	**-1.1**
KSRS	comp=Z,3.0nm,0.7s,mb3.8,baz=247,slow=10,SNR=10.0			LR	LR	21 09 16.1	
CN2	comp=Z,61nm,19.9s,MS3.0,baz=160,slow=37 **Changchun**	**24.74**	**38**	*e*P	**P**	**21 00 34.7**	**+1.7**
CN2	comp=Z,10.0nm,0.9s,mb4.3			pmax	pmax		
MKAR	**Makanchi Array**	**27.42**	**326**	P	**P**	**21 00 57.6**	**+0.3**
MKAR	comp=Z,1.2nm,0.7s,mb3.5,baz=134,slow=10,SNR=11			LR	LR	21 13 21.3	
AAK	comp=Z,36nm,20.4s,MS2.9,baz=317,slow=40 **Ala-Archa**	**29.79**	**312**	LR	LR	21 16 05.2	
MJAR	comp=Z,47nm,19.0s,MS3.1,baz=81,slow=42 **Matsushiro Arr**	**30.60**	**61**	LR	LR	21 14 41.3	
ZALV	comp=Z,89nm,18.9s,MS3.4,baz=260,slow=38 **Zalesovo Beam**	**31.73**	**338**	P	**P**	**21 01 34.9**	**-0.4**
ZALV	comp=Z,2.0nm,0.6s,mb4.2,baz=153,slow=11,SNR=11			LR	LR	21 13 40.6	
KURK	comp=Z,20nm,19.8s,MS2.8,baz=290,slow=35 **Kurchatov**	**31.85**	**328**	P	**P**	**21 01 36.2**	**-0.2**
KURK	comp=Z,1.4nm,0.6s,mb4.0,baz=132,slow=10,SNR=3.7 **Kurchatov**	**31.85**	**328**	*e*P	**P**	**21 01 36.3**	**-0.2**
BVAR	comp=Z,2.7nm,0.7s,mb4.2 **Borovoye Array**	**37.31**	**326**	P	**P**	**21 02 24.4**	**+0.8**
BVAR	comp=Z,0.5nm,0.4s,mb3.7,baz=107,slow=4.8,SNR=3.5			LR	LR	21 17 28.4	
BRVK	comp=Z,59nm,18.4s,MS3.4,slow=36 **Borovoye**	**37.38**	**326**	*e*P	**P**	**21 02 21.7**	**-2.5**
PETK	comp=Z,3.6nm,0.9s,mb4.2 **Petropavlovsk-**	**47.85**	**41**	LR	LR	21 23 17.8	
WRA	comp=Z,38nm,20.6s,MS3.4,baz=78,slow=35 **Warramunga Arr**	**53.88**	**145**	P	**P**	**21 04 36.7**	**+1.7**
ASAR	comp=Z,0.7nm,0.8s,mb3.6,baz=331,slow=8.8,SNR=6.4 **Alice Springs**	**56.78**	**147**	P	**P**	**21 04 58.4**	**+2.5**
ARCES	comp=Z,0.4nm,0.7s,mb3.5,baz=325,slow=6.6,SNR=4.6 **ARCESS Array B**	**62.28**	**337**	P	**P**	**21 05 33.0**	**-0.1**
NOA	comp=Z,3.5nm,1.0s,mb4.5,baz=93,slow=8.2,SNR=2.2 **NORSAR Array B**	**69.37**	**329**	P	**P**	**21 06 18.1**	**-0.9**
	comp=Z,1.0nm,0.9s,mb3.8,baz=74,slow=6.4,SNR=3.7						
NOA	comp=Z,25nm,18.4s,MS3.5,baz=0.0,slow=35			LR	LR	21 35 57.1	
GERES	**GERESS Array B**	**71.58**	**316**	P	**P**	**21 06 32.8**	**+0.1**
YKA	comp=Z,0.4nm,0.6s,mb3.5,baz=75,slow=11,SNR=3.1 **Yellowknife Ar**	**86.65**	**17**	P	**P**	**21 07 54.8**	**0.0**
SDV	comp=Z,0.4nm,0.7s,mb3.8,baz=328,slow=5.2,SNR=5.5 **Santo Domingo**	**145.23**	**352**	PKPbc	PKPbc	21 14 50.1	+0.4
SDV	comp=Z,15nm,0.8s,baz=32,slow=5.9,SNR=25 **Santo Domingo**	**145.23**	**352**	PKPbc	PKPbc	21 14 50.1	+0.4

IDC ***05*** *21:05:22.4±1.6, 2°.32N×96°.06E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.4/2, Error ellipse: s-maj=42.8km s-min=19.1km az=47.0*
ISCJB ***05*** *21:05:25.4±0.8, 2°.35N±0°.06×96°.02E±0°.07, h33km, mb3.8/6, Error ellipse: s-maj=12.4km s-min=5.7km az=141.1*
DJA ***05*** *21:05:25, 2°.33N×95°.95E, h20km, MLv3.8/4*
ISC 05 21:05:27.4±0.8, 2°.36N±0°.06×96°.05E±0°.07, h35km, n15, σ0§71/18, mb3.8/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.85**	**124**	P	**Pn**	**21 05 56.0**	**-0.6**
GSI				S	**Sn**	**21 06 17.3**	**-1.4**
TSI	**Tuntungan**	**2.76**	**66**	P	**Pn**	**21 06 10.4**	**+1.3**
PSI	**Prapat**	**2.90**	**81**	Pn	**Pn**	**21 06 10.5**	**-0.6**
PSI	2.9nm,0.3s,baz=307,slow=6.9,SNR=20			Sn	**Sn**	**21 06 45.0**	**+0.2**
LHMI	3.0nm,0.3s,baz=106,slow=8.2,SNR=4.5 **Lhok Sumawe**	**2.99**	**17**	P	**Pn**	**21 06 12.8**	**+0.5**
BSI	**Banda Aceh**	**3.21**	**346**	P	**Pn**	**21 06 14.2**	**-1.2**
BSI				S	**Sn**	**21 06 51.2**	**-1.2**
MNSI	**Mandailing Nat**	**3.85**	**114**	P	**Pn**	**21 06 24.5**	**+0.3**
SISI	**Saibi**	**4.75**	**140**	P	**Pn**	**21 06 37.3**	**+0.7**
IPM	**Ipoh**	**5.39**	**67**	P	**Pn**	**21 06 45.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**16.25**	**10**	Pn	**Pn**	**21 09 13.2**	**+0.1**
WRA	0.1nm,0.3s,baz=200,slow=12,SNR=8.6 **Warramunga Arr**	**43.62**	**122**	P	**P**	**21 13 28.4**	**-0.3**
ASAR	0.8nm,0.3s,mb3.9,baz=301,slow=9.1,SNR=13 **Alice Springs**	**45.00**	**127**	P	**P**	**21 13 39.8**	**0.0**
MKAR	0.2nm,0.7s,mb3.0,baz=303,slow=8.5,SNR=3.1 **Makanchi Array**	**45.86**	**347**	P	**P**	**21 13 46.8**	**+0.6**
SONM	2.0nm,0.6s,mb4.2,baz=158,slow=8.2,SNR=22 **Songino Array**	**46.18**	**10**	P	**P**	**21 13 48.8**	**+0.2**
ZALV	0.9nm,0.7s,mb3.8,baz=189,slow=7.3,SNR=4.6 **Zalesovo Beam**	**52.25**	**352**	P	**P**	**21 14 35.3**	**+0.4**
BVAR	1.4nm,0.5s,mb4.1,baz=178,slow=6.1,SNR=8.8 **Borovoye Array**	**54.79**	**341**	P	**P**	**21 14 54.2**	**+0.6**
	0.5nm,0.6s,mb3.7,baz=149,slow=3.0,SNR=4.8						

IDC 05 21:18:12.1±56.0, 18°.69S×174°.67W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/17, mbtmp4.0/3, Error ellipse: s-maj=1054.0km s-min=174.5km az=82.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.40**	**243**	P	P	21 26 00.5	+0.2
WRA	2.4nm,0.9s,baz=87,slow=9.9,SNR=4.6 **Warramunga Arr**	**47.98**	**260**	P	P	21 26 52.9	-0.1
ASAR	0.4nm,0.3s,baz=96,slow=8.1,SNR=25 **Alice Springs**	**48.00**	**255**	P	P	21 26 53.0	-0.2
	1.9nm,0.6s,baz=93,slow=8.0,SNR=35						

IDC 05 21:37:04.9±2.0, 6°.80S×129°.35E, h0km, mb3.8/1, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=79.3km s-min=27.3km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.80**	**198**	Pn	Pn	21 39 53.9	-0.7
WRA	0.1nm,0.3s,baz=19,slow=12,SNR=11 **Warramunga Arr**	**13.93**	**160**	Pn	Pn	21 40 24.1	+0.4
WRA	0.5nm,0.3s,baz=340,slow=13,SNR=27			Sn	Sn	21 42 47.2	-12
ASAR	0.8nm,0.3s,baz=334,slow=22,SNR=11 **Alice Springs**	**17.33**	**166**	P	Pn	21 41 08.6	+0.3
ASAR	0.2nm,0.3s,baz=342,slow=11,SNR=14			S	Sn	21 44 09.0	-13
MKAR	0.2nm,0.3s,baz=343,slow=23,SNR=4.3 **Makanchi Array**	**67.71**	**327**	P	P	21 48 04.2	+0.1
	0.5nm,0.5s,baz=134,slow=8.0,SNR=8.6						

BJI ***05*** *21:46:22.1, 41°.61S×92°.50W, h10km, mB5.1/5, Ms5.1/5, Ms7 4.9/5*
IDC ***05*** *21:46:22.0±1.1, 41°.13S×91°.66W, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.1/16, mbtmp4.0/8, MS3.9/9, Ms1 3.9/9, ms1mx3.7/20, Error ellipse: s-maj=34.0km s-min=25.2km az=110.0*
ISCJB ***05*** *21:46:23.1±0.5, 41°.06S±0°.10×91°.54W±0°.09, h10km, mb4.6/34, MS3.9/9, Error ellipse: s-maj=14.6km s-min=9.1km az=17.9*
NEIC ***05*** *21:46:23.7±0.5, 41°.08S×91°.71W, h10km, mb4.8/30, Error ellipse: s-maj=13.7km s-min=10.1km az=203.0*
ISC 05 21:46:24.7±0.5, 41°.09S±0°.10×91°.57W±0°.09, h10km, n190, σ0§66/174, mb4.6/34, MS3.9/9, 78C-51D, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.90**	**96**	LR	LR	21 54 50.6	
PLCA	comp=Z,1μm,18.2s,baz=283,slow=32 **Paso Flores**	**15.90**	**96**	*e*Pn	**Pn**	**21 50 09.4**	**+1.0**
RPN	10nm,1.3s **Rapa Nui**	**20.20**	**308**	LR	LR	21 56 19.0	
LCO	comp=Z,427nm,21.8s,MS3.8,baz=118,slow=30 **Las Campanas**	**20.85**	**61**	*e*P	**P**	**21 51 07.5**	**+0.9**
CFAA	16nm,1.0s **Coronel Fontan**	**20.99**	**71**	P	**P**	**21 51 08.0**	**-0.1**
CFAA	0.2nm,0.5s,baz=216,slow=7.1,SNR=3.5			LR	LR	21 57 18.6	
CFAA	comp=Z,88nm,21.2s,MS3.1,baz=241,slow=31 **Coronel Fontan**	**20.99**	**71**	P	**P**	**21 51 08.0**	**-0.1**
CFAA				LR	LR	21 57 18.6	
TRQA	**Tornquist**	**22.96**	**92**	*e*P	**P**	**21 51 29.8**	**+0.7**
LVC	50nm,1.8s,mb4.6 **Limon Verde**	**26.51**	**53**	LR	LR	21 59 54.8	
LVC	comp=Z,306nm,20.9s,MS3.8,baz=194,slow=31 **Limon Verde**	**26.51**	**53**	P	**P**	**21 52 01.7**	**-0.7**
PMSA	**Palmer Station**	**28.50**	**155**	LR	LR	21 59 09.6	
CPUP	comp=Z,123nm,21.9s,MS3.5,baz=318,slow=27 **Villa Florida**	**31.83**	**73**	LR	LR	22 03 50.3	
LPAZ	comp=Z,323nm,18.4s,MS4.0,baz=203,slow=33 **La Paz**	**31.95**	**46**	P	**P**	**21 52 50.9**	**+0.2**
LPAZ	0.4nm,0.5s,baz=208,slow=12,SNR=3.6			LR	LR	22 03 04.3	
LPAZ	comp=Z,91nm,18.3s,MS3.5,baz=214,slow=31 **La Paz**	**31.95**	**46**	*e*P	**P**	**21 52 51.3**	**+0.6**
ATAH	6.7nm,1.4s,mb4.3 **Atahualpa**	**35.92**	**23**	P	**P**	**21 53 23.4**	**-1.8**
SIV	5.0nm,0.7s,mb4.6,baz=187,slow=8.1,SNR=3.5 **San Ignacio**	**36.33**	**55**	P	**P**	**21 53 27.8**	**-0.9**
OTAV	2.7nm,1.1s,mb4.1,baz=238,slow=14,SNR=4.2 **Otavalo**	**42.83**	**20**	*e*P	**P**	**21 54 23.4**	**+0.5**
ROSC	13nm,1.1s,mb4.6 **El Rosal**	**48.37**	**23**	P	**P**	**21 55 07.5**	**+0.8**
ROSC	2.0nm,0.3s,mb4.6,baz=287,slow=19,SNR=5.2			LR	LR	22 14 16.5	
QSPA	comp=Z,91nm,18.9s,MS3.8,baz=17,slow=35 **South Pole Qui**	**49.14**	**180**	P	**P**	**21 55 10.9**	**-1.0**
SDV	0.6nm,0.6s,mb3.8,baz=85,slow=9.3,SNR=3.8 **Santo Domingo**	**53.34**	**26**	*e*P	**P**	**21 55 42.5**	**-1.6**
TAOE	12nm,1.1s,mb4.7 **Nuku Hiva Isla**	**53.54**	**293**	*e*LR	LR	22 11 09.4	
PPT	259nm,25.9s **Papeete**	**54.66**	**277**	*e*S	**S**	**22 03 27.3**	**-6.6**
PPT	125nm,25.0s			*e*LR	LR	22 11 32.5	
PPT	371nm,27.2s **Papeete**	**54.66**	**277**	LR	LR	22 12 13.0	
MAW	comp=Z,243nm,21.1s,MS4.2,baz=139,slow=28 **Mawson**	**69.91**	**170**	*e*P	**P**	**21 57 35.6**	**+0.3**
TXAR	1.9nm,1.4s,mb3.8 **Lajitas Array**	**70.96**	**349**	P	**P**	**21 57 41.1**	**-1.0**
JCT	0.4nm,0.8s,baz=168,slow=8.7,SNR=6.1 **Junction City**	**71.62**	**353**	*e*P	**P**	**21 57 44.8**	**-1.2**
526A	11nm,1.0s,mb4.8 **Mary Lane Ranc**	**71.74**	**349**	⇑P	**P**	**21 57 47.2**	**+0.4**
	baz=72,SNR=5.2						
426A	**McDonald Obser**	**72.33**	**349**	⇑P	**P**	**21 57 50.1**	**-0.2**
324A	baz=73 **Moseley Ranch,**	**73.31**	**348**	⇓P	**P**	**21 57 56.7**	**+0.5**
224A	baz=74 **Corundas Mount**	**73.94**	**348**	⇓P	**P**	**21 58 00.1**	**+0.3**
319A	baz=74 **Douglas**	**73.94**	**344**	⇑P	**P**	**21 58 00.2**	**+0.3**
318A	baz=74 **Bisbee**	**74.15**	**344**	⇑P	**P**	**21 58 01.8**	**+0.7**
220A	baz=74 **Playas Peak, P**	**74.30**	**345**	⇑P	**P**	**21 58 01.9**	**0.0**
125A	baz=74 **Gardner Draw,**	**74.37**	**349**	⇓P	**P**	**21 58 01.9**	**-0.4**
124A	baz=75 **Stringfield Ra**	**74.54**	**348**	⇑P	**P**	**21 58 02.7**	**-0.6**
219A	baz=75 **White Tail Can**	**74.54**	**344**	⇑P	**P**	**21 58 03.2**	**-0.1**
217A	baz=75 **Green Valley**	**74.65**	**343**	⇓P	**P**	**21 58 03.7**	**-0.3**
218A	baz=75 **Dragoon**	**74.68**	**344**	⇑P	**P**	**21 58 03.8**	**-0.3**
Z27A	baz=75 **Tatum**	**74.81**	**350**	⇓P	**P**	**21 58 05.1**	**+0.2**
Z26A	baz=75 **Caprock**	**74.88**	**349**	⇑P	**P**	**21 58 05.1**	**-0.1**
120A	baz=75 **U Bar Ranch, L**	**74.95**	**345**	⇑P	**P**	**21 58 05.7**	**0.0**
Z25A	baz=75 **Roswell**	**74.99**	**349**	⇑P	**P**	**21 58 06.0**	**+0.1**
TUC	baz=75 **Tucson**	**75.16**	**343**	*e*P	**P**	**21 58 06.2**	**-0.7**
214A	7.3nm,1.1s,mb4.5 **Organ Pipe Nat**	**75.29**	**341**	⇓P	**P**	**21 58 08.2**	**+0.5**
119A	baz=76 **Ashpeak Ranch,**	**75.29**	**345**	⇓P	**P**	**21 58 07.9**	**+0.3**
118A	baz=76 **Homack Ranch,**	**75.31**	**344**	⇓P	**P**	**21 58 08.3**	**+0.6**
Z22A	baz=76 **Elephant Butte**	**75.33**	**347**	⇑P	**P**	**21 58 08.7**	**+0.8**
Y27A	baz=76 **Causey**	**75.37**	**350**	⇑P	**P**	**21 58 08.7**	**+0.6**
MSTX	baz=76 **Muleshoe**	**75.40**	**350**	⇑P	**P**	**21 58 08.6**	**+0.4**
117A	baz=76 **Oracle**	**75.40**	**343**	⇑P	**P**	**21 58 08.5**	**+0.2**
Z20A	baz=76 **Nine Sixteen R**	**75.49**	**345**	⇑P	**P**	**21 58 09.1**	**+0.3**
Y26A	baz=76 **Elida**	**75.50**	**349**	⇑P	**P**	**21 58 09.5**	**+0.7**
Z21A	baz=76 **St. Cloud Mine**	**75.51**	**346**	⇓P	**P**	**21 58 09.0**	**+0.2**
116A	baz=76 **Eloy**	**75.61**	**343**	⇑P	**P**	**21 58 09.6**	**+0.1**
Y25A	baz=76 **Mesa, Roswell**	**75.62**	**349**	⇑P	**P**	**21 58 09.5**	**0.0**
Y24A	baz=76 **Capitan**	**75.73**	**348**	⇑P	**P**	**21 58 10.5**	**+0.4**
Y23A	baz=76 **Lovelace Mesa,**	**75.84**	**348**	⇑P	**P**	**21 58 11.1**	**+0.3**
115A	baz=76 **Sonoran Desert**	**75.86**	**342**	⇑P	**P**	**21 58 11.2**	**+0.3**
X26A	baz=76 **CR and CF Fran**	**76.11**	**350**	⇑P	**P**	**21 58 12.8**	**+0.5**
Y21A	baz=76 **Point of Rocks**	**76.19**	**346**	⇓P	**P**	**21 58 13.2**	**+0.4**
Y20A	baz=76 **Horse Springs,**	**76.22**	**346**	⇑P	**P**	**21 58 13.0**	**+0.1**
Y19A	baz=76 **Nutrioso**	**76.44**	**345**	⇑P	**P**	**21 58 14.6**	**+0.4**
CPCT	baz=77 **Cooper Cave**	**76.44**	**6**	P	**P**	**21 58 13.5**	**-0.7**
Y17A	**Roosevelt**	**76.51**	**344**	⇓P	**P**	**21 58 15.2**	**+0.6**
Z13A	baz=77 **Yuma Proving G**	**76.68**	**341**	⇓P	**P**	**21 58 16.1**	**+0.6**
Y16A	baz=77 **Circle Bar Ran**	**76.83**	**343**	⇓P	**P**	**21 58 16.6**	**+0.2**
W25A	baz=77 **X Bar L Ranch,**	**76.86**	**349**	⇑P	**P**	**21 58 16.4**	**-0.1**
SWSC	baz=77 **Sam W. Stewart**	**76.98**	**339**	⇓P	**P**	**21 58 17.8**	**+0.5**
X16A	baz=77 **Lo Mia Camp, P**	**77.33**	**343**	⇓P	**P**	**21 58 20.0**	**+0.8**
Y12C	baz=78 **Blythe**	**77.42**	**341**	⇓P	**P**	**21 58 19.9**	**+0.2**
BC3	baz=78 **Big Chuckw Mtn**	**77.57**	**340**	⇑P	**P**	**21 58 20.6**	**0.0**
X15A	baz=78 **Humboldt**	**77.58**	**343**	⇑P	**P**	**21 58 20.9**	**+0.4**
X14A	baz=78 **Yava**	**77.71**	**342**	⇓P	**P**	**21 58 22.2**	**+0.9**
X13A	baz=78 **Yucca**	**78.05**	**341**	⇓P	**P**	**21 58 23.9**	**+0.7**
CIS	baz=78 **Catalina Islan**	**78.15**	**337**	⇑P	**P**	**21 58 24.3**	**+0.5**
V17A	baz=78 **Tonalea, Kykot**	**78.36**	**344**	⇑P	**P**	**21 58 24.1**	**-0.8**
W14A	baz=79 **Seligman**	**78.47**	**342**	⇑P	**P**	**21 58 25.2**	**-0.2**
W13A	baz=79 **Hualapai Mount**	**78.55**	**341**	⇑P	**P**	**21 58 26.3**	**+0.4**
GMRC	baz=79 **Granite Mounta**	**78.69**	**340**	⇓P	**P**	**21 58 27.1**	**+0.3**
BFSC	baz=79 **Mount Baldy St**	**78.72**	**338**	⇑P	**P**	**21 58 27.3**	**+0.4**
CCM	baz=79 **Cathedral Cave**	**78.77**	**0**	*e*P	**P**	**21 58 25.7**	**-1.4**
V15A	15nm,1.1s,mb4.8 **Kaibab Nationa**	**78.84**	**343**	⇓P	**P**	**21 58 27.8**	**+0.3**
V14A	baz=79 **Boquillas Ranc**	**78.87**	**342**	⇓P	**P**	**21 58 28.2**	**+0.5**
HEC	baz=79 **Hector,Ludlow**	**78.91**	**339**	⇑P	**P**	**21 58 28.7**	**+0.8**
U16A	baz=79 **Tuba City**	**78.93**	**344**	⇑P	**P**	**21 58 28.4**	**+0.4**
U18A	baz=79 **Rough Rock, Ch**	**78.94**	**345**	⇓P	**P**	**21 58 28.4**	**+0.3**
T22A	baz=79 **Edith**	**78.99**	**348**	⇑P	**P**	**21 58 29.1**	**+0.8**
T19A	baz=79 **Beclabito**	**79.18**	**346**	⇓P	**P**	**21 58 29.5**	**+0.1**
MVCO	baz=79 **Mesa Verde**	**79.45**	**346**	*e*P	**P**	**21 58 30.2**	**-0.6**
SDCO	14nm,1.3s,mb4.8 **Great Sand Dun**	**79.49**	**349**	*e*P	**P**	**21 58 30.1**	**-1.0**
T18A	5.1nm,1.2s,mb4.3 **Mexican Hat**	**79.64**	**345**	⇑P	**P**	**21 58 32.9**	**+1.0**
T17A	baz=80 **Navajo Res., N**	**79.69**	**344**	⇑P	**P**	**21 58 32.2**	**+0.1**
S21A	baz=80 **Coal Bank Pass**	**79.77**	**347**	⇑P	**P**	**21 58 32.8**	**+0.3**
PKM	baz=80 **Peak Mountain**	**79.95**	**337**	⇑P	**P**	**21 58 34.0**	**+0.3**
T15A	baz=80 **Red Dirt Ranch**	**80.04**	**343**	⇑P	**P**	**21 58 34.6**	**+0.5**
S19A	baz=80 **Harvey Farm, M**	**80.09**	**346**	⇑P	**P**	**21 58 33.5**	**-0.8**
R22A	baz=80 **Saguache, Gunn**	**80.15**	**348**	⇑P	**P**	**21 58 34.4**	**-0.2**
SHPR	baz=80 **Sheep Range**	**80.20**	**341**	*e*P	**P**	**21 58 34.2**	**-0.7**
S18A	**Hurst Farm, Bl**	**80.20**	**345**	⇑P	**P**	**21 58 34.3**	**-0.6**
R21A	baz=80 **Cimarron**	**80.42**	**347**	⇑P	**P**	**21 58 36.1**	**+0.1**
R19A	baz=81,SNR=7.0 **Curley Farm, L**	**80.64**	**346**	⇑P	**P**	**21 58 37.2**	**0.0**
CCUT	baz=81 **Cedar City**	**80.77**	**343**	*e*P	**P**	**21 58 37.7**	**-0.2**
R18A	6.5nm,1.1s,mb4.5 **Canyonlands Na**	**80.85**	**346**	⇓P	**P**	**21 58 38.0**	**-0.4**
T11A	baz=81 **Corn Creek, Al**	**80.91**	**341**	⇑P	**P**	**21 58 38.6**	**-0.1**
R17A	baz=81 **Hanksville Air**	**81.04**	**345**	⇑P	**P**	**21 58 39.2**	**-0.2**
Q20A	baz=81 **Ridgley Place,**	**81.12**	**347**	⇓P	**P**	**21 58 40.2**	**+0.4**
S12A	baz=81 **Delamar Landin**	**81.17**	**341**	⇓P	**P**	**21 58 41.1**	**+1.0**
GRAC	baz=81 **Grapevine Rang**	**81.23**	**339**	⇑P	**P**	**21 58 40.7**	**+0.3**
R13A	baz=81 **O'Grain Ranch,**	**81.51**	**342**	⇓P	**P**	**21 58 42.5**	**+0.7**
Q18A	baz=82 **Rafter H Ranch**	**81.59**	**345**	⇑P	**P**	**21 58 42.6**	**+0.4**
SRU	baz=82 **San Rafael**	**81.67**	**345**	⇑P	**P**	**21 58 43.2**	**+0.5**
SRU	baz=82 **San Rafael**	**81.67**	**345**	*e*P	**P**	**21 58 41.6**	**-1.1**
	4.3nm,1.0s,mb4.3						

P19A	Cripple Cowboy	81.90 347	⇓P	P	21 58 44.9	+1.0
	baz=82					
R11A	Troy Canyon, C	82.05 341	⇓P	P	21 58 45.2	+0.5
	baz=82					
Q14A	Sevier Lake (B	82.12 343	⇑P	P	21 58 45.5	+0.4
	baz=82					
R10A	Warm Springs	82.17 341	⇓P	P	21 58 45.9	+0.5
	baz=82					
Q13A	Wheeler Ranch,	82.26 343	⇑P	P	21 58 46.2	+0.4
	baz=82					
Q11A	Duckwater	82.54 341	⇓P	P	21 58 47.9	+0.6
	baz=83					
N22A	Wattenberg Ran	82.63 349	⇑P	P	21 58 48.0	+0.3
	baz=83					
O18A	Roosevelt	82.69 346	⇓P	P	21 58 48.5	+0.5
	baz=83					
P13A	Bates Ranch, G	82.74 343	⇓P	P	21 58 48.8	+0.5
	baz=83					
N21A	Black Mountain	82.75 348	⇑P	P	21 58 49.0	+0.7
	baz=83					
O17A	Robinson Place	82.76 345	⇑P	P	21 58 48.9	+0.5
	baz=83					
NLU	North Lily Min	82.80 344	eP	P	21 58 47.6	-1.0
	1.9nm,0.4s,mb4.5					
NVAR	Mina Array Bea	82.83 339	P	P	21 58 48.6	-0.2
	2.5nm,0.9s,mb4.2,baz=162,slow=7.2,SNR=3.6					
O16A	Springville	82.92 345	⇑P	P	21 58 50.0	+0.7
	baz=83					
N20A	Spence Gulch,	82.94 347	⇑P	P	21 58 49.2	-0.1
	baz=83,SNR=6.2					
DAU	Daniels Canyon	83.08 345	eP	P	21 58 49.4	-0.6
N19A	John Jarvie Ra	83.16 347	⇑P	P	21 58 49.9	-0.5
	baz=83					
DUG	Dugway	83.18 344	⇑P	P	21 58 50.4	-0.2
	baz=83					
DUG	Dugway	83.18 344	eP	P	21 58 49.5	-1.1
	11nm,1.1s,mb4.8					
N17A	Moffit Pass	83.50 345	⇑P	P	21 58 52.3	0.0
	baz=84,SNR=6.4					
M20A	Sweetwater, Wa	83.57 348	⇓P	P	21 58 53.1	+0.5
	baz=84					
RWWY	Rawlins	83.61 348	eP	P	21 58 52.5	-0.2
	11nm,0.8s,mb5.0					
O12A	Currie	83.68 342	⇓P	P	21 58 53.0	-0.1
	baz=84					
N14A	Grayback Hills	83.89 344	⇑P	P	21 58 54.3	+0.1
	baz=84					
L21A	Rawlins	83.90 348	⇓P	P	21 58 54.3	0.0
	baz=84					
M17A	Scullys Gap (B	83.99 346	⇓P	P	21 58 54.4	-0.3
	baz=84,SNR=5.8					
M16A	Huntsville	84.02 345	⇑P	P	21 58 55.2	+0.3
	baz=84					
L20A	Wamsutter	84.10 348	⇓P	P	21 58 55.3	0.0
	baz=84					
SPUT	South Promonto	84.18 344	eP	P	21 58 54.0	-1.6
	9.9nm,1.1s,mb4.8					
HWUT	Hardware Ranch	84.29 345	eP	P	21 58 53.6	-2.6
	12nm,1.4s,mb4.8					
N12A	Clover Valley,	84.30 342	⇑P	P	21 58 55.1	-1.2
	baz=84					
N12A	Clover Valley,	84.30 342	eP	P	21 58 55.7	-0.6
	7.9nm,1.0s,mb4.8					
DZM	Mont Dzumac	84.32 246	eLR	LR	22 25 21.2	
	165nm,29.5s					
M15A	Larsen Ranch,	84.33 344	⇑P	P	21 58 55.1	-1.3
	baz=85,SNR=7.7					
L19A	Farson	84.36 347	⇓P	P	21 58 55.7	-0.9
	baz=85					
M14A	Sheep Mountain	84.55 344	⇓P	P	21 58 56.2	-1.3
	baz=85,SNR=5.1					
ECSD	EROS Data Cent	84.56 356	eP	P	21 58 56.4	-1.1
	12nm,1.1s,mb4.9					
L17A	Cokeville	84.63 346	⇑P	P	21 58 57.5	-0.4
	baz=85					
L16A	Fish Haven	84.66 345	⇓P	P	21 58 56.6	-1.4
	baz=85,SNR=6.8					
HVU	Hansel Valley	84.70 344	eP	P	21 58 58.6	+0.3
	8.3nm,1.1s,mb4.8					
BEKR	Beckwourth	84.73 338	⇑P	P	21 58 58.3	-0.2
	baz=85					
K20A	Yellowstone Ra	84.73 348	⇓P	P	21 58 58.0	-0.5
	baz=85					
L15A	Malad City	84.83 345	⇓P	P	21 58 59.2	+0.2
	baz=85					
K18A	Toltan Ranch,	85.00 346	⇑P	P	21 59 00.2	+0.4
	baz=85					
BW06	Boulder Array	85.04 347	⇓P	P	21 58 59.4	-0.6
	baz=85					
BW06	Boulder Array	85.04 347	eP	P	21 58 59.0	-1.0
	11nm,1.0s,mb5.0					
PDAR	Pinedale Array	85.04 347	P	P	21 58 59.2	-0.7
	1.8nm,0.8s,mb4.3,baz=157,slow=3.9,SNR=16					
K16A	Soda Springs	85.47 345	⇑P	P	21 59 02.0	-0.1
	baz=86					
J18A	Kendall Valley	85.55 347	⇑P	P	21 59 02.3	-0.2
	baz=86					
RSSD	Black Hills	85.57 351	eP	P	21 59 01.3	-1.2
	7.1nm,1.0s,mb4.8					
L11A	Cat Creek Ranc	85.72 342	⇓P	P	21 59 02.4	-1.0
	baz=86,SNR=5.9					
REDW	Red Top Meadow	85.85 346	eP	P	21 59 02.2	-1.8
	17nm,1.3s,mb5.1					
J16A	Bone	85.91 345	⇓P	P	21 59 03.9	-0.4
	baz=86					
RRI2	Red Ridge	85.92 346	eP	P	21 59 03.6	-0.7
	16nm,1.5s,mb5.0					
TPAW	Teton Pass	85.99 346	eP	P	21 59 03.4	-1.3
	11nm,1.0s,mb5.1					
LOHW	Long Hollow	86.05 346	eP	P	21 59 06.1	+1.2
	8.2nm,1.1s,mb4.9					
J14A	Carey	86.33 344	⇑P	P	21 59 06.7	+0.3
	baz=87					
I17A	Pilgrim Ck.	86.34 346	⇓P	P	21 59 06.2	-0.2
	baz=87					
IMW	Indian Meadow	86.38 346	eP	P	21 59 05.8	-0.8
	7.7nm,1.0s,mb4.9					
J13A	Cove Ranch, Pi	86.54 344	⇓P	P	21 59 08.0	+0.6
	baz=87					
K10A	MacKenzie Ranc	86.56 342	⇑P	P	21 59 08.0	+0.5
	baz=87					
J12A	Stokes Ranch,	86.60 343	⇓P	P	21 59 08.4	+0.7
	baz=87					
HLID	Hailey	86.75 344	⇑P	P	21 59 09.1	+0.7
	baz=87					
I13A	Wildhorse Cree	87.02 344	⇓P	P	21 59 09.9	+0.2
	baz=87					
RLMT	Red Lodge	87.28 348	⇑P	P	21 59 11.0	0.0
	baz=88					
J09A	Fry Pan Ranch,	87.31 341	⇓P	P	21 59 11.4	+0.2
	baz=88					
BOZ	Bozeman (W)	88.20 346	eP	P	21 59 14.2	-1.2
	0.8nm,0.8s,mb4.0					
G12A	Big Creek, Yel	88.44 343	⇑P	P	21 59 17.1	+0.7
	baz=89					
E18A	Harlowton	88.79 347	⇑P	P	21 59 18.6	+0.5
	baz=89					
F12A	Elk City	89.02 344	⇑P	P	21 59 19.3	0.0
	baz=89					
G08A	Pilot Rock	89.43 341	⇑P	P	21 59 21.5	+0.4
	baz=90					
MDJ	Mudanjiang	149.85 291	P	PKPbc	22 06 15.8	+1.3
MDJ			pmax	pmax		
	comp=Z,8.0nm,1.5s					
MDJ			pmax	pmax		
	comp=Z,66nm,4.1s					
NJ2	Nanjing	154.06 259	ePKPbc	PKPdf	22 06 11.5	-4.4
BJI	Beijing	158.93 276	PKP	PKPdf	22 06 20.0	-2.5
GYA	Guiyang	159.02 232	ePKP	PKPdf	22 06 21.3	-1.7
GYA			PKS		22 09 53.8	
GYA			SKS	SKSdf	22 13 23.2	-5.4
GYA			AMB	AMB		
	comp=Z,110nm,7.8s					
GYA			LR	LR		
	comp=N,170nm,20.8s,MS5.0					
GYA			LR	LR		
	comp=E,140nm,21.7s,MS5.0					
GYA			LR	LR		
	comp=Z,180nm,20.2s,MS4.9					
HHC	Hu-ho-hao-te	162.53 277	ePKP	PKPdf	22 06 21.9	-4.4
HHC			PKS		22 09 54.2	
HHC			PP	PP	22 10 57.7	-1.9
HHC			SS	SS	22 31 16.8	-5.3
HHC			AMB	AMB		
	comp=Z,66nm,5.3s					
HHC			LR	LR		
	comp=N,130nm,20.6s					
HHC			LR	LR		
	comp=E,130nm,20.4s					
HHC			LR	LR		
	comp=Z,100nm,22.5s					
CD2	Chengdu	163.99 235	PKP	PKPdf	22 06 27.0	-1.1
CD2			SKS	SKSdf	22 13 26.0	-6.5
CD2			AMB	AMB		
	comp=Z,150nm,4.8s					
CD2			LR	LR		
	comp=N,220nm,10.1s					
CD2			LR	LR		
	comp=Z,290nm,13.1s					
LZH	Lanzhou	166.95 252	pPKP	PKPdf	22 06 29.5	-0.8
LZH			sPKP		22 06 31.0	
WMQ	Urumqi	177.22 11	ePKP	PKPdf	22 06 34.6	-0.2

IDC ***05*** *21:57:48.8±0.5,28°.28N×54°.12E,h0km,mb5.1/36, mb1 5.1/40,mb1mx5.1/41,mbtmp5.1/40,ML4.3/3,MS4.5/34, Ms1 4.5/34,ms1mx4.4/40,Error ellipse: s-maj=13.2km s-min=10.0km az=180.0*

ISCJB ***05*** *21:57:53.0±0.3,28°.38N±0°.02×54°.09E±0°.01,h37km±2km, mb5.3/352,MS4.5/80,Error ellipse: s-maj=2.6km s-min=1.9km az=18.1*

MOS ***05*** *21:57:52.7±0.8,28°.39N×54°.06E,h33km,mb5.5/130, MS4.3/50,Error ellipse: s-maj=5.1km s-min=2.5km az=127.4*

BJI ***05*** *21:57:52.7,28°.47N×53°.92E,h48km,mB5.3/36,mb5.2/59, Ms5.0/60,Ms7 4.7/52*

BGS ***05*** *21:57:52.6±1.3,28°.20N×54°.26E,h40km,mb5.4*

GCMT ***05*** *21:57:53.8±0.2,28°.19N×53°.99E,h12km,MW5.2/81, Moment Tensor Solution. s64,c106; s81,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.34±.15; $M_{\theta\theta}$-5.94±.13; $M_{\phi\phi}$-0.40±.12; $M_{r\theta}$1.90±.30; $M_{\theta\phi}$2.65±.10; $M_{\phi r}$-0.91±.30; Best double couple: $M_0$6.99700×10^{16} NP1:ϕ_s290.00000°,δ36.00000°,λ88.00000°. NP2: ϕ_s113.00000°,δ54.00000°,λ92.00000°. Principal axes: T 6.6670, Plg81.0000°, Azm31.0000°; N 0.6600, Plg1.0000°, Azm292.0000°; P -7.3270, Plg9.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

THR ***05*** *21:57:53.8±1.2,28°.36N×54°.05E,h45km±6km,ML5.1*

NEIC ***05*** *21:57:53.8,28°.37N×54°.05E,h46km,mb5.4/173,After THR.*

CSEM ***05*** *21:57:55.1±0.1,28°.39N×54°.08E,h41km,mb5.3/99,Ms4.4, Mw5.2,Error ellipse: s-maj=2.7km s-min=2.0km az=22.0*

SZGRF ***05*** *21:57:55.1,27°.45N×52°.69E,h33km,mb5.3,MS4.1, Southern Iran*

TEH ***05*** *21:57:55.6,28°.27N×54°.10E,h35km*

OMAN ***05*** *21:57:56.5±0.3,28°.34N×54°.05E,h50km,Error ellipse: s-maj=7.1km s-min=3.9km az=81.0*

DJA ***05*** *21:58:02,28°.65N×53°.95E,h111km,mb5.2/31*

ISC 05 21:57:55.1±0.2**,28°.36N**±0°.02×**54°.08E**±0°.01**,h40**km±2km**, h48**km±2.8km**:pP-P,n1950,**σ**0**9**2/**1982**,mb5.3/**352**, MS4.5/80,407C-31D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.97**	**266**	*e*Pg	**Pn**	**21 58 12.0**	**-0.2**
GHIR				*e*Sg	**Sn**	**21 58 25.0**	**+0.3**
GHIR	**Ghir-Karzin**	**0.97**	**266**	*e*Pg	**Pn**	**21 58 12.0**	**-0.1**
GHIR				*e*Sg	**Sn**	**21 58 25.9**	**+1.2**
GHIR	**Ghir-Karzin**	**0.97**	**266**	*e*Pg	**Pn**	**21 58 12.0**	**-0.2**
GHIR				*e*Sg	**Sn**	**21 58 25.9**	**+1.2**
ISRV	**Sarvestan**	**1.32**	**320**	Pn	**Pn**	**21 58 18.8**	**+1.7**
ISRV				Sg	**Sn**	**21 58 40.3**	**+6.8**
ISRV	**Sarvestan**	**1.32**	**320**	*e*Pn	**Pn**	**21 58 18.9**	**+1.8**
ISRV				*e*Sg	**Sn**	**21 58 40.3**	**+6.8**
ISRV				*e*		21 58 56.1	
	comp=Z,47μm,0.7s						
ISRV	**Sarvestan**	**1.32**	**320**	*e*Pn	**Pn**	**21 58 18.9**	**+1.8**
ISRV				*e*Sg	**Sn**	**21 58 40.3**	**+6.8**
IMOK	**Mouk**	**1.38**	**300**	Pn	**Pn**	**21 58 19.6**	**+1.8**
IMOK				Sg	**Sn**	**21 58 41.8**	**+6.9**
IMOK	**Mouk**	**1.38**	**300**	*e*Pn	**Pn**	**21 58 19.6**	**+1.8**
IMOK				*e*Sg	**Sn**	**21 58 41.9**	**+7.0**
IMOK				*e*		21 58 48.1	
	comp=Z,100μm,0.4s						
IMOK	**Mouk**	**1.38**	**300**	*e*Pn	**Pn**	**21 58 19.6**	**+1.8**
IMOK				*e*Sg	**Sn**	**21 58 41.9**	**+7.0**
IPAR	**Pars**	**1.73**	**329**	Pn	**Pn**	**21 58 24.3**	**+1.7**
IPAR	**Pars**	**1.73**	**329**	*e*Pn	**Pn**	**21 58 24.4**	**+1.8**
IPAR				*e*		21 58 56.9	
	comp=Z,80μm,0.4s						
IPAR	**Pars**	**1.73**	**329**	*e*Pn	**Pn**	**21 58 24.4**	**+1.8**
SHI	**Shiraz**	**1.88**	**313**	Pn	**Pn**	**21 58 26.4**	**+1.8**
SHI				Sg	**Sn**	**21 58 57.8**	**+11**
SHI	**Shiraz**	**1.88**	**313**	*e*Pn	**Pn**	**21 58 26.5**	**+1.9**
SHI				*e*Sg	**Sn**	**21 58 57.8**	**+11**
SHI				*e*		21 59 14.9	
	comp=Z,37μm,0.4s						
SHI	**Shiraz**	**1.88**	**313**	*e*Pn	**Pn**	**21 58 26.5**	**+1.9**
SHI				Sg	**Sn**	**21 58 57.8**	**+11**
BNDS	**Bandar-Abbas**	**2.08**	**117**	*e*Pn	**Pn**	**21 58 27.0**	**-0.5**
BNDS	**Bandar-Abbas**	**2.08**	**117**	*e*Pn	**Pn**	**21 58 27.2**	**-0.3**
BNDS	**Bandar-Abbas**	**2.08**	**117**	*e*Pn	**Pn**	**21 58 27.0**	**-0.5**
IBND	**Bandar-abas**	**2.36**	**112**	*e*Pn	**Pn**	**21 58 30.9**	**-0.4**
IBND				*e*		21 59 28.8	
	comp=Z,42μm,0.3s						
IBND	**Bandar-abas**	**2.36**	**112**	*e*Pn	**Pn**	**21 58 30.9**	**-0.4**
KRBR	**Kerman**	**2.85**	**55**	*e*Pn	**Pn**	**21 58 39.0**	**+1.0**
KRBR				*e*Sg	**Sn**	**21 59 21.0**	**+10**
KRBR	**Kerman**	**2.85**	**55**	*e*Pn	**Pn**	**21 58 39.4**	**+1.4**
KRBR				*e*Sg	**Sn**	**21 59 21.6**	**+11**
KRBR	**Kerman**	**2.85**	**55**	*e*Pn	**Pn**	**21 58 39.0**	**+1.0**
KRBR				*e*Sg	**Sn**	**21 59 21.6**	**+11**
IMEH	**Mehriz**	**3.05**	**9**	Pn	**Pn**	**21 58 42.7**	**+1.9**
IMEH	**Mehriz**	**3.05**	**9**	*e*Pn	**Pn**	**21 58 42.8**	**+2.0**
IMEH				*e*		21 59 44.9	
	comp=Z,28μm,0.5s						
IMEH	**Mehriz**	**3.05**	**9**	*e*Pn	**Pn**	**21 58 42.8**	**+2.0**
BANOM	**Banah**	**3.13**	**140**	P	**Pn**	**21 58 43.7**	**+1.8**
BANOM	SNR=37						
				P		21 58 43.7	
	SNR=37						
BANOM	**Banah**	**3.13**	**140**	P	**Pn**	**21 58 41.7**	**-0.2**
BANOM	SNR=178						
				S	**Sn**	**21 59 19.4**	**+1.4**
IBAF	**Bafgh**	**3.47**	**21**	Pn	**Pn**	**21 58 47.5**	**+1.0**
IBAF	**Bafgh**	**3.47**	**21**	*e*Pn	**Pn**	**21 58 47.5**	**+1.0**
IBAF				*e*		21 59 56.4	
	comp=Z,52μm,0.7s						
IBAF	**Bafgh**	**3.47**	**21**	*e*Pn	**Pn**	**21 58 47.5**	**+1.0**
ISAD	**Sadrabad**	**3.56**	**355**	Pn	**Pn**	**21 58 49.9**	**+2.2**
ISAD	**Sadrabad**	**3.56**	**355**	*e*Pn	**Pn**	**21 58 50.0**	**+2.3**
ISAD				*e*		21 59 53.5	
	comp=Z,70μm,0.6s						
ISAD	**Sadrabad**	**3.56**	**355**	*e*Pn	**Pn**	**21 58 50.0**	**+2.3**
NAZ	**Nazwa, Dubai**	**3.64**	**157**	P	**Pn**	**21 58 50.1**	**+1.2**
NAZ	SNR=83						
				P		21 58 50.1	
	SNR=83						
NAZ	**Nazwa, Dubai**	**3.64**	**157**	P	**Pn**	**21 58 49.9**	**+0.9**
	SNR=113						
FAQ	**Al Faqa, Dubai**	**3.85**	**159**	P	**Pn**	**21 58 52.7**	**+1.0**
FAQ	SNR=47						
				P		21 58 52.7	
	SNR=47						
FAQ	**Al Faqa, Dubai**	**3.85**	**159**	P	**Pn**	**21 58 52.4**	**+0.7**
	SNR=80						
ICHK	**Chekchek**	**3.88**	**4**	Pn	**Pn**	**21 58 53.5**	**+1.3**
ICHK	**Chekchek**	**3.88**	**4**	*e*Pn	**Pn**	**21 58 53.6**	**+1.4**
ICHK				*e*		22 00 03.0	
	comp=Z,60μm,0.6s						
ICHK	**Chekchek**	**3.88**	**4**	*e*Pn	**Pn**	**21 58 53.6**	**+1.4**
ASUD	**Al Ashush, Dub**	**3.88**	**163**	P	**Pn**	**21 58 53.8**	**+1.5**
ASUD	SNR=46						
				P		21 58 53.8	
	SNR=46						
ASUD	**Al Ashush, Dub**	**3.88**	**163**	P	**Pn**	**21 58 53.5**	**+1.2**
	SNR=427						
HATD	**Hatta, Dubai**	**3.97**	**152**	P	**Pn**	**21 58 53.8**	**+0.4**
	SNR=49						
HATD	**Hatta, Dubai**	**3.97**	**152**	P	**Pn**	**21 58 53.6**	**+0.2**
	SNR=130						
IGAR	**Gharneh**	**4.40**	**337**	*e*Pn	**Pn**	**21 59 00.1**	**+0.8**
IGAR				*e*		22 00 25.3	
	comp=Z,16μm,0.4s						
NASN	**Na'in**	**4.56**	**346**	*e*Pn	**Pn**	**21 59 02.0**	**+0.5**
NASN	**Na'in**	**4.56**	**346**	*e*Pn	**Pn**	**21 59 02.0**	**+0.5**
NASN	**Na'in**	**4.56**	**346**	*e*Pn	**Pn**	**21 59 02.0**	**+0.5**
BOQSS		**4.87**	**240**	P	**Pn**	**21 59 06.5**	**+0.6**
BTHS		**5.19**	**215**	P	**Pn**	**21 59 09.1**	**-1.1**
BTHS		**5.19**	**215**	P	**Pn**	**21 59 09.1**	**-1.1**
KFJS		**5.42**	**270**	P	**Pn**	**21 59 13.2**	**-0.1**
KFJS		**5.42**	**270**	P	**Pn**	**21 59 13.2**	**-0.1**
QRN	**Al-Qurain**	**5.43**	**275**	*e*P	**Pn**	**21 59 12.3**	**-1.2**
QRN				AML	AML	22 00 17.8	
	comp=Z,773nm,0.7s						
ARQ	**Araqi**	**5.46**	**156**	P	**Pn**	**21 59 14.4**	**+0.4**
	SNR=28						
ARQ	**Araqi**	**5.46**	**156**	P	**Pn**	**21 59 14.4**	**+0.4**
	SNR=28						
HOQ	**Hoqain**	**5.58**	**148**	P	**Pn**	**21 59 15.1**	**-0.4**
	SNR=34						
KBD	**Kabd**	**5.67**	**280**	*e*P	**Pn**	**21 59 15.4**	**-1.3**
KBD				AML	AML	22 00 27.3	
	comp=Z,336nm,0.4s						
KBD	**Kabd**	**5.67**	**280**	*e*P	**Pn**	**21 59 15.4**	**-1.3**
UMR	**Umm Al-Rimmam**	**5.70**	**284**	*e*P	**Pn**	**21 59 15.7**	**-1.5**
UMR				AML	AML	22 00 27.6	
	comp=Z,614nm,0.5s						
UMR	**Umm Al-Rimmam**	**5.70**	**284**	*e*P	**Pn**	**21 59 15.7**	**-1.5**
RDF	**Al-Radifah**	**5.77**	**277**	*e*P	**Pn**	**21 59 17.1**	**-1.0**
RDF				AML	AML	22 00 27.3	
	comp=Z,280nm,0.5s						
RDF	**Al-Radifah**	**5.77**	**277**	*e*P	**Pn**	**21 59 17.1**	**-1.0**
IKOO	**Kooshah**	**5.87**	**45**	*e*Pn	**Pn**	**21 59 20.0**	**+0.5**
IKOO				*e*		22 01 18.6	
	comp=Z,25μm,0.8s						
IKOO	**Kooshah**	**5.87**	**45**	*e*Pn	**Pn**	**21 59 20.0**	**+0.5**
SHGR	**Shooshtar-Gavs**	**5.90**	**311**	*e*Pn	**Pn**	**21 59 20.0**	**+0.1**
SHGR	**Shooshtar-Gavs**	**5.90**	**311**	*e*Pn	**Pn**	**21 59 20.1**	**+0.2**
SHGR				AML	AML	22 01 15.9	
	comp=E,542nm,0.8s						
SHGR				AML	AML	22 01 24.8	
	comp=N,540nm,0.8s						
SHGR	**Shooshtar-Gavs**	**5.90**	**311**	*e*Pn	**Pn**	**21 59 20.0**	**+0.1**
ZHSF	**Zahedan**	**5.99**	**76**	*e*Pn	**Pn**	**21 59 22.9**	**+1.7**
BIDO	**Bidbid**	**6.04**	**142**	P	**Pn**	**21 59 22.0**	**+0.1**
	SNR=50						
BIDO	**Bidbid**	**6.04**	**142**	P	**Pn**	**21 59 22.0**	**+0.1**
	SNR=50						
ITEG	**Tejag**	**6.05**	**41**	*e*Pn	**Pn**	**21 59 22.4**	**+0.4**
ITEG				*e*		22 01 51.1	
	comp=Z,7μm,0.8s						
ITEG	**Tejag**	**6.05**	**41**	*e*Pn	**Pn**	**21 59 22.4**	**+0.4**
ISFB	**Sefidab**	**6.18**	**346**	Pn	**Pn**	**21 59 23.6**	**-0.1**
ISFB	**Sefidab**	**6.18**	**346**	*e*Pn	**Pn**	**21 59 23.6**	**-0.1**
ISFB				*e*		22 01 26.3	
	comp=Z,32μm,1.0s						
ISFB	**Sefidab**	**6.18**	**346**	*e*Pn	**Pn**	**21 59 23.6**	**-0.1**
BSY	**Bisya**	**6.26**	**153**	P	**Pn**	**21 59 25.1**	**+0.2**
	SNR=38						
BSYO	**Bisya**	**6.29**	**152**	P	**Pn**	**21 59 25.1**	**-0.2**
	SNR=38						
SMDO	**Samad**	**6.38**	**145**	P	**Pn**	**21 59 26.7**	**+0.2**
	SNR=73						
SMDO	**Samad**	**6.38**	**145**	P	**Pn**	**21 59 26.7**	**+0.2**
	SNR=73						
GHVR	**GHOM**	**6.55**	**339**	*e*Pn	**Pn**	**21 59 29.0**	**+0.2**
GHVR	**GHOM**	**6.55**	**339**	*e*Pn	**Pn**	**21 59 29.2**	**+0.4**
GHVR	**GHOM**	**6.55**	**339**	*e*Pn	**Pn**	**21 59 29.0**	**+0.2**
JMDO	**Jabal Madar**	**6.99**	**148**	P	**Pn**	**21 59 34.9**	**+0.1**
	SNR=24						
JMDO	**Jabal Madar**	**6.99**	**148**	P	**Pn**	**21 59 34.9**	**0.0**
	SNR=24						
ILAS	**Lasjerd**	**7.07**	**353**	Pn	**Pn**	**21 59 37.1**	**+1.2**
ILAS	**Lasjerd**	**7.07**	**353**	*e*Pn	**Pn**	**21 59 37.1**	**+1.2**
ILAS				*e*		22 02 08.0	
	comp=Z,3μm,0.6s						
ILAS	**Lasjerd**	**7.07**	**353**	*e*Pn	**Pn**	**21 59 37.1**	**+1.2**
ASAO	**Ashtian**	**7.07**	**332**	*e*Pn	**Pn**	**21 59 35.0**	**-1.0**
ASAO	**Ashtian**	**7.07**	**332**	*e*Pn	**Pn**	**21 59 35.9**	**-0.2**
ASAO				AML	AML	22 01 07.3	
	comp=N,410nm,0.7s						
ASAO				AML	AML	22 01 11.6	
	comp=E,288nm,0.7s						
ASAO	**Ashtian**	**7.07**	**332**	*e*Pn	**Pn**	**21 59 35.0**	**-1.0**
IANJ	**Anjilo**	**7.09**	**359**	Pn	**Pn**	**21 59 36.5**	**+0.3**
IANJ	**Anjilo**	**7.09**	**359**	*e*Pn	**Pn**	**21 59 36.6**	**+0.4**
IANJ				*e*		21 59 45.0	
	comp=Z,2μm,0.3s						
IANJ	**Anjilo**	**7.09**	**359**	*e*Pn	**Pn**	**21 59 36.6**	**+0.4**
WBK	**Wadi Bani Khal**	**7.23**	**141**	P	**Pn**	**21 59 37.5**	**-0.8**
	SNR=28						
IDMV	**Damavand**	**7.40**	**347**	Pn	**Pn**	**21 59 40.9**	**+0.4**
IDMV	**Damavand**	**7.40**	**347**	*e*Pn	**Pn**	**21 59 40.9**	**+0.4**
IDMV				*e*		22 02 04.5	
	comp=Z,7μm,0.8s						
IDMV	**Damavand**	**7.40**	**347**	*e*Pn	**Pn**	**21 59 40.9**	**+0.4**
ISHM	**Shahmirzad**	**7.45**	**355**	Pn	**Pn**	**21 59 42.0**	**+0.8**
ISHM	**Shahmirzad**	**7.45**	**355**	*e*Pn	**Pn**	**21 59 42.0**	**+0.8**
ISHM				*e*		22 02 16.0	
	comp=Z,5μm,0.6s						
ISHM	**Shahmirzad**	**7.45**	**355**	*e*Pn	**Pn**	**21 59 42.0**	**+0.8**
DAMV	**Damavand**	**7.47**	**347**	*e*Pn	**Pn**	**21 59 41.0**	**-0.4**
DAMV	**Damavand**	**7.47**	**347**	*e*Pn	**Pn**	**21 59 41.9**	**+0.5**
DAMV	**Damavand**	**7.47**	**347**	*e*Pn	**Pn**	**21 59 41.0**	**-0.4**
IALA	**Alasht**	**7.77**	**352**	Pn	**Pn**	**21 59 46.6**	**+1.0**
IALA	**Alasht**	**7.77**	**352**	*e*Pn	**Pn**	**21 59 46.7**	**+1.1**
IALA				*e*		21 59 56.6	
	comp=Z,6μm,0.3s						
IALA	**Alasht**	**7.77**	**352**	*e*Pn	**Pn**	**21 59 46.7**	**+1.1**
IKIA	**Kiasar**	**7.83**	**358**	Pn	**Pn**	**21 59 47.6**	**+1.2**
IKIA	**Kiasar**	**7.83**	**358**	*e*Pn	**Pn**	**21 59 47.7**	**+1.3**
IKIA				*e*		22 02 18.4	
	comp=Z,7μm,0.9s						
IKIA	**Kiasar**	**7.83**	**358**	*e*Pn	**Pn**	**21 59 47.7**	**+1.3**
CHTH	**Charan**	**7.93**	**342**	*e*Pn	**Pn**	**21 59 47.0**	**-0.8**
CHTH	**Charan**	**7.93**	**342**	*e*Pn	**Pn**	**21 59 47.8**	**+0.1**
CHTH	**Charan**	**7.93**	**342**	*e*Pn	**Pn**	**21 59 47.0**	**-0.8**
THKV	**Tehran--Karaj**	**8.01**

GNI Garni 14.06 329 *e*Pn **Pn 22 01 12.7 +1.2**
KBL Kabul 14.17 61 *e*Pn **Pn 22 01 15.0 +1.8**
KBL *e*S **Sn 22 04 08.1 +19**
KBL Kabul 14.17 61 *e*Pn **Pn 22 01 15.0 +1.8**
KBL *e*S **Sn 22 04 08.1 +19**
AGRB Hanur-Agry 14.47 323 *e*P **Pn 22 01 16.3 -0.8**
MUKL Al Mukalla 14.59 200 *e*P **Pn 22 01 14.7 -4.3**
MUKL *i* S **Sn 22 04 00.2 +0.9**
JHLN Al Jahlan 15.13 303‖ *i*P **22 01 29.5 +3.6**
KARS Kars 15.21 326 *e*P **Pn 22 01 26.0 -1.0**
MTA Mtatsminda 15.31 333 P **Pn 22 01 27.0 -1.2**
ASF Jabal al Asfar 15.33 289 Pn **Pn 22 01 24.2 -4.3**
comp=Z,2.3nm,0.3s,baz=328,slow=6.0,SNR=22
ASF Sn **Sn 22 04 05.7 -11**
comp=Z,1.0nm,0.3s,baz=332,slow=18,SNR=2.7
ASF LR LR 22 07 52.4
comp=Z,266nm,19.3s,baz=178,slow=39
TBLG Delisi 15.36 333 *i* P **Pn 22 01 27.9 -1.0**
TBLG Delisi 15.36 333 P **Pn 22 01 27.9 -1.0**
HOMI Horasan 15.39 322 *i* P **Pn 22 01 29.2 0.0**
BINT Bingol 15.41 316 *e*P **Pn 22 01 26.3 -3.3**
MAK Makhachkala 15.51 342*c i*P **Pn 22 01 30.3 -0.5**
MAK *i* 22 04 25.3
MAK pmax pmax
comp=Z,180nm,1.7s
MAK MLR MLR
comp=Z,2μm,16.0s
EZM Erzurum 15.59 321 *e*P **Pn 22 01 30.9 -0.9**
URFA Urfa 15.68 309 *e*P **Pn 22 01 34.8 +1.8**
URFA Urfa 15.68 309 *e*P **Pn 22 01 34.8 +1.8**
GOR Gori 15.83 332 P **Pn 22 01 35.3 +0.3**
SVRC Sivrice-ELAZID 15.86 313 *e*P **Pn 22 01 30.4 -4.9**
HAJJ Hajjah 15.90 220 *e*P **Pn 22 01 31.5 -4.5**
HAJJ *i* S **S 22 04 31.9 -12**
HAJJ Hajjah 15.90 220 *e*P **Pn 22 01 31.5 -4.5**
HAJJ *i* S **S 22 04 31.9 -12**
PTK Pertek 16.10 314 *e*P **Pn 22 01 32.3 -6.2**
KEH Kehvi 16.17 332 P **Pn 22 01 42.5 +3.2**
CEP Cherat 16.21 66‖ P **Pn 22 01 39.1 -0.7**
BDHA Al Bayda' 16.36 211 *i* P **Pn 22 01 36.8 -5.0**
BDHA AMb AMB 22 01 38.6
comp=Z,204nm,1.4s
BDHA *i* S **S 22 04 42.6 -11**
MALT Malatya 16.40 311 *e*P **Pn 22 01 38.3 -3.9**
MALT Malatya 16.40 311 *e*P **Pn 22 01 39.4 -2.8**
MALT pmax pmax
comp=Z,176nm,1.0s
MALT Malatya 16.40 311 *e*P **Pn 22 01 39.2 -3.0**
MALT Malatya 16.40 311 *e*Pn **Pn 22 01 39.4 -2.8**
comp=Z,176nm,1.0s
MALT *e* 22 01 45.7
MALT *e*S **S 22 04 55.9 +1.9**
MALT Malatya 16.40 311 *e*Pn **Pn 22 01 39.4 -2.8**
DHBB Dhamar BB 16.41 215 *e*P **Pn 22 01 37.7 -4.8**
DHBB AMb AMB 22 01 38.2
comp=Z,129nm,1.1s
DHBB *i* S **S 22 04 43.4 -11**
MYA Malataya 16.41 311 *e*P **Pn 22 01 39.9 -2.5**
RCY Rachaya 16.48 293 *e*P **Pn 22 01 42.2 -1.0**
KSDI Kefar Szold 16.55 291 *e*P **Pn 22 01 43.2 -0.9**
KSDI Kefar Szold 16.55 291 P **Pn 22 01 43.3 -0.8**
BCA Borcka 16.55 325 *e*P **Pn 22 01 43.6 -0.5**
BCA Borcka 16.55 325 *e*P **Pn 22 01 43.6 -0.5**
ZEI Tsey 16.57 333 *e*P **Pn 22 01 44.6 +0.2**
ZEI *e*S **S 22 04 51.5 -6.0**
ZEI pmax pmax
comp=Z,643nm,1.2s
ZEI MLR MLR
comp=Z,874nm,9.0s
ZEI Tsey 16.57 333 *e*P **Pn 22 01 44.6 +0.2**
comp=Z,643nm,1.2s
HWQ Hawqa 16.57 295 *e*P **Pn 22 01 43.3 -1.2**
LBOS 16.59 211 *e*P **Pn 22 01 39.9 -4.9**
LBOS AMb AMB 22 01 40.7
comp=Z,105nm,1.6s
LBOS *i* S **S 22 04 48.3 -10**
ONI Oni 16.61 332 P **Pn 22 01 44.7 -0.1**
ONI S **S 22 04 51.4 -6.8**
EZC Erzincan 16.65 317 *e*P **Pn 22 01 43.8 -1.5**
GAZ Gaziantep 16.67 306 *e*P **Pn 22 01 43.9 -1.7**
BHL Bhannes 16.71 294 *e*P **Pn 22 01 44.5 -1.7**
MMAI Mount Meron Ar 16.72 291 Pn **Pn 22 01 43.3 -3.0**
comp=Z,2.1nm,0.3s,baz=99,slow=14,SNR=55
MMAI Sn **Sn 22 04 48.8 -2.2**
comp=Z,0.9nm,0.3s,baz=104,slow=28,SNR=3.3
MMAI LR LR 22 09 40.9
comp=Z,1μm,20.1s,baz=75,slow=42
PZAR Pazar-Rize 16.73 323 *e*P **Pn 22 01 47.6 +1.2**
PZAR Pazar-Rize 16.73 323 *e*P **Pn 22 01 47.6 +1.2**
EIL Elat 16.79 279 Pn **Pn 22 01 44.0 -3.2**
comp=Z,0.8nm,0.3s,baz=38,slow=5.5,SNR=17
EIL LR LR 22 09 05.4
comp=Z,887nm,20.7s,baz=95,slow=40
MATL Matirih 16.88 292 *e*P **Pn 22 01 47.2 -1.1**
MATL Matirih 16.88 292 *e*P **Pn 22 01 47.2 -1.1**
GUMT Gumushane 17.02 319 *e*P **Pn 22 01 50.4 +0.3**
GUMT Gumushane 17.02 319 *e*P **Pn 22 01 50.4 +0.3**
KMRS Kahramanmaras 17.04 307 *e*P **Pn 22 01 47.5 -2.8**
DARE Darende-Malaty 17.16 312 *e*P **Pn 22 01 50.3 -1.4**
DARE Darende-Malaty 17.16 312 *e*P **Pn 22 01 50.3 -1.4**
KTUT Trabzon 17.21 321 *e*P **Pn 22 01 50.5 -1.9**
NIL Nilore 17.25 67 P **Pn 22 01 53.6 +0.6**
NIL Nilore 17.25 67 P **Pn 22 01 53.6 +0.6**
CHCP Chirah Chowk 17.27 67 P **Pn 22 01 51.7 -1.4**
KZIT Kziot 17.30 283 P **Pn 22 01 53.2 -0.4**
KZIT Kziot 17.30 283 P **Pn 22 01 53.2 -0.4**
ESPY Espiye-Giresun 17.76 319 *e*P **Pn 22 01 57.9 -1.2**
ESPY Espiye-Giresun 17.76 319 *e*P **Pn 22 01 57.9 -1.2**
KRTS Karatas 17.76 302 *e*P **Pn 22 01 57.3 -1.9**
KRTS Karatas 17.76 302 *e*P **Pn 22 01 57.3 -1.9**
KOZT Kozan 17.80 305 *e*P **Pn 22 01 57.8 -1.8**
KOZT Kozan 17.80 305 *e*P **Pn 22 01 57.8 -1.8**
KIV Kislovodsk 18.05 333 Pn **Pn 22 02 03.5 +0.8**
comp=Z,1μm,0.9s,SNR=42
KIV Kislovodsk 18.05 333*c i*P **Pn 22 02 02.0 -0.7**
KIV *e*S **S 22 05 24.2 -3.3**
KIV pmax pmax
comp=Z,236nm,0.9s
KIV MLR MLR
comp=Z,351nm,14.0s
KIV Kislovodsk 18.05 333 *e*P **Pn 22 02 02.9 +0.3**
comp=Z,212nm,0.9s
KIV Kislovodsk 18.05 333 P **Pn 22 02 03.4 +0.8**
SNR=72
KIV P 22 02 03.4
SNR=72
KIV Kislovodsk 18.05 333 *i* P **Pn 22 02 02.0 -0.7**
comp=Z,236nm,0.9s
SVSK Karacayir 18.21 314 *e*P **Pn 22 02 03.3 -1.3**
SVSK Karacayir 18.21 314 *e*P **Pn 22 02 03.3 -1.4**
KARA Karaisali 18.27 304 *e*P **Pn 22 02 04.0 -1.3**
KARA Karaisali 18.27 304 *e*P **Pn 22 02 04.0 -1.4**
EREN Erenkoy 18.33 298 *e*P **Pn 22 02 09.1 +2.9**
AJM Ajmer 18.35 91 *e*P **Pn 22 02 04.8 -1.7**
AJM *e*S **S 22 05 29.3 -4.6**
MERS Mersin 18.51 302 *e*P **Pn 22 02 04.5 -3.9**
TOKT Tokat 18.72 314 *e*P **Pn 22 02 11.1 +0.2**
TOKT Tokat 18.72 314 *e*P **Pn 22 02 11.1 +0.2**
LFK Lefkose 18.76 297 *e*P **Pn 22 02 08.9 -2.4**
LFK Lefkose 18.76 297 *e*P **Pn 22 02 08.9 -2.5**
CSS Prodhromos 18.84 296 *e*P **Pn 22 02 10.0 -2.3**
CSS Prodhromos 18.84 296 *e*P **Pn 22 02 10.0 -2.3**
comp=Z,70nm,1.0s
CSS Prodhromos 18.84 296 P **S 22 05 49.1 +5.9**
CSS Prodhromos 18.84 296 *e*P **Pn 22 02 10.0 -2.3**
comp=Z,70nm,1.0s
IKL Isikli 18.92 300 *e*P **Pn 22 02 09.4 -3.9**
SOC Sochi 19.09 327*c i*P **Pn 22 02 13.5 -1.7**
SOC *e* 22 05 44.1
SOC pmax pmax
comp=Z,169nm,1.0s
SOC pmax pmax
comp=Z,777nm,3.7s
SOC MLR MLR
comp=Z,1μm,14.0s
SOC Sochi 19.09 327 *i* P **Pn 22 02 13.5 -1.7**
comp=Z,777nm,3.7s
THN Thein Dam 19.09 72 *ex* **Pn 22 02 10.7 -4.7**
LEF Lefka 19.22 296 *e*P **Pn 22 02 15.2 -1.8**
LEF Lefka 19.22 296 *e*P **Pn 22 02 15.2 -1.8**
KVT Kavak 19.47 315 *e*P **Pn 22 02 18.5 -1.3**
KVT Kavak 19.47 315 *e*P **Pn 22 02 18.5 -1.3**
ERMK Ermenek 19.64 300 *i* P **Pn 22 02 21.4 -0.6**
ERMK Ermenek 19.64 300 *i* P **Pn 22 02 21.4 -0.5**
SULT Sultanhani-AKS 19.76 305 *e*P **Pn 22 02 22.4 -0.9**
SULT Sultanhani-AKS 19.76 305 *e*P **Pn 22 02 22.4 -0.9**
ATD Arta Tunnel 19.77 214 Pn **Pn 22 02 22.9 -0.7**
comp=Z,0.7nm,0.3s,baz=16,slow=7.3,SNR=13
ATD LR LR 22 11 00.6
comp=Z,2μm,20.6s,baz=26,slow=40
ATD Arta Tunnel 19.77 214 Pn **Pn 22 02 22.9 -0.7**
ATD LR LR 22 11 00.6
ATD Arta Tunnel 19.77 214 Pn **Pn 22 02 22.9 -0.7**
CDAG Cicekdag 19.79 310 *i* P **Pn 22 02 22.0 -1.6**
CDAG Cicekdag 19.79 310 *i* P **Pn 22 02 22.0 -1.6**
CORM Corum 19.89 311 *e*P **Pn 22 02 19.5 -5.3**
GAZI Gazipasa 19.98 299 *i* P **Pn 22 02 23.4 -2.5**
GAZI Gazipasa 19.98 299 *i* P **Pn 22 02 23.4 -2.5**
CTKT Corum 20.01 313 *i* P **P 22 02 25.9 +1.6**
CTKT Corum 20.01 313 *i* P **P 22 02 25.9 +1.6**
HDMB Hadim 20.07 301 *e*P **P 22 02 24.8 -0.2**
HDMB Hadim 20.07 301 *e*P **P 22 02 24.8 -0.2**
SDNR Sundarnagar 20.08 75 *e*P **P 22 02 23.1 -2.0**
SMLA Simla 20.23 77 *i* P **P 22 02 24.5 -2.2**
SMLA *ex* x 22 02 28.2
comp=Z,228nm,0.5s
SMLA *i* x x 22 06 20.3
DIKM Dikmen 20.28 316 *e*P **P 22 02 24.8 -2.4**
DIKM Dikmen 20.28 316 *e*P **P 22 02 24.8 -2.4**
NDI New Delhi 20.33 84 *e*P **P 22 02 26.0 -1.8**
BRTR Keskin Array B 20.33 309 P **P 22 02 28.3 +0.5**
comp=Z,67nm,0.7s,baz=128,slow=11,SNR=169
BRTR ScP ScP 22 10 16.8 +3.8
comp=Z,0.7nm,0.8s,baz=123,slow=4.9,SNR=3.0
BRTR LR LR 22 10 37.7
comp=Z,682nm,21.3s,MS4.0,baz=110,slow=38
BRTR Keskin Array B 20.33 309 P **P 22 02 28.3 +0.5**
comp=Z,683nm,21.3s
BOYT Boyabat 20.37 315 *i* P **P 22 02 28.4 +0.3**
BOYT Boyabat 20.37 315 *i* P **P 22 02 28.4 +0.2**
BYBT Boyabat 20.48 315 *e*P **P 22 02 30.2 +0.8**
BYBT Boyabat 20.48 315 *e*P **P 22 02 30.2 +0.8**
KONT Konya--Tatoy 20.50 303 *e*P **P 22 02 30.9 +1.3**
KONT Konya--Tatoy 20.50 303 *e*P **P 22 02 30.9 +1.2**
POO Poona 20.58 114 *e*P **P 22 02 29.5 -1.1**
LADK Ladik-KONYA 20.59 304 *e*P **P 22 02 31.8 +1.1**
LADK Ladik-KONYA 20.59 304 *e*P **P 22 02 31.8 +1.2**
BBAL Bala 20.61 308 *i* P **P 22 02 31.9 +1.2**
BBAL Bala 20.61 308 *i* P **P 22 02 32.0 +1.3**
TOS Tosya 20.72 313 *e*P **P 22 02 32.3 +0.3**
TOS Tosya 20.72 313 *e*P **P 22 02 32.3 +0.3**
CANT Cankiri 20.77 311 *e*P **P 22 02 32.9 +0.4**
KDHN Kadinhani 20.90 305 *i* P **P 22 02 34.4 +0.5**
KDHN Kadinhani 20.90 305 *i* P **P 22 02 34.4 +0.5**
LOD Lodumlu 21.01 309 *e*P **P 22 02 35.6 +0.6**
LOD Lodumlu 21.01 309 *e*P **P 22 02 35.6 +0.5**
AML Almayashu 21.04 44 P **P 22 02 35.4 +0.1**
SNR=46
AML Almayashu 21.04 44 *e*P **P 22 02 35.4 0.0**
comp=Z,132nm,1.0s,mb5.2
AML *e* 22 02 38.5
AML *e*PcP PcP 22 06 42.5 +1.5
AML Almayashu 21.04 44 P **P 22 02 35.2 -0.2**
SNR=76
ANN Anapa 21.10 325⇑ *i*P **P 22 02 36.6 +0.6**
ANN *e**PP 22 02 44.7
ANN *e*S **S 22 06 30.4 +2.0**
ANN *e*SS 22 06 38.2
ANN pmax pmax
comp=Z,239nm,1.3s,mb5.4
ANN MLR MLR
comp=N,2μm,22.0s
ANN MLR MLR
comp=Z,2μm,22.0s,MS4.3
ANN Anapa 21.10 325 *i* P **P 22 02 36.6 +0.6**
comp=Z,239nm,1.3s,mb5.4
KIZT Kizilcal 21.21 305 *e*P **P 22 02 38.2 +0.9**
KIZT Kizilcal 21.21 305 *e*P **P 22 02 38.2 +1.0**
KSH Kashi 21.25 53 *e*P **P 22 02 30.5 -7.1**
KSH *e*pP 22 02 40.7
KSH *e*sP sP 22 02 46.6 -6.2
KSH *e*PP 22 02 50.5
KSH *e*S S 22 06 08.1 -23
KSH pmax pmax
comp=Z,8.0nm,0.6s,mb4.2
KSH LR LR
comp=N,4μm,6.3s
KSH LR LR
comp=E,3μm,10.9s
KSH LR LR
comp=Z,4μm,9.5s
ABKAR Akbulak array 21.34 11 *e*P **P 22 02 38.2 -0.4**
comp=Z,139nm,0.9s,mb5.3
ABKAR *e*S **S 22 06 37.7 +4.5**
ABKAR Akbulak array 21.34 11 *e*P **P 22 02 38.2 -0.4**
comp=Z,139nm,0.9s,mb5.3
SUTC Sutluce-Ispart 21.36 301 *e*P **P 22 02 39.5 +0.6**
SUTC Sutluce-Ispart 21.36 301 *e*P **P 22 02 39.5 +0.6**
EKS2 Erkin-Say 21.39 43 P **P 22 02 40.2 +1.0**
SNR=18
EKS2 Erkin-Say 21.39 43 *e*P **P 22 02 39.9 +0.7**
comp=Z,76nm,1.0s,mb5.0
EKS2 Erkin-Say 21.39 43 *e*P **P 22 02 39.9 +0.7**
comp=Z,76nm,1.0s,mb5.0
ANTB Antalya 21.45 299 *e*P **P 22 02 39.0 -0.8**
ANTB Antalya 21.45 299 *e*P **P 22 02 39.1 -0.8**
KAD Karad 21.51 116 *e*P **P 22 02 40.1 -0.6**
UCH Uchtor 21.60 45 P **P 22 02 41.6 +0.3**
SNR=19
UCH Uchtor 21.60 45 *e*P **P 22 02 41.4 0.0**
comp=Z,81nm,1.0s,mb5.1
UCH Uchtor 21.60 45 *e*P **P 22 02 41.3 -0.1**
comp=Z,81nm,1.0s,mb5.1
BHPL Bhopal 21.61 98 *e*P **P 22 02 41.9 +0.2**
BCK Bucak 21.67 301 *e*P **P 22 02 43.8 +1.6**
BCK Bucak 21.67 301 *e*P **P 22 02 43.8 +1.6**
SVRH Sivrihisar-ESK 21.69 306 *e*P **P 22 02 42.4 0.0**
SVRH Sivrihisar-ESK 21.69 306 *e*P **P 22 02 42.4 0.0**
SAFT Safranbolu 21.70 312 *e*P **P 22 02 42.3 -0.2**
SAFT Safranbolu 21.70 312 *e*P **P 22 02 42.3 -0.1**
KORT Korkueli 21.71 299 *i* P **P 22 02 40.9 -1.8**
KORT Korkueli 21.71 299 *i* P **P 22 02 40.9 -1.8**
AAK Ala-Archa 21.81 44 P **P 22 02 45.6 +2.0**
comp=Z,400nm,0.8s,mb5.9,SNR=27
AAK Ala-Archa 21.81 44 P **P 22 02 44.8 +1.2**
comp=Z,6.4nm,0.7s,mb4.2,baz=210,slow=13,SNR=20
AAK PcP PcP 22 06 43.2 +0.7
comp=Z,3.0nm,0.6s,baz=202,slow=2.9,SNR=5.2
AAK LR LR 22 12 49.6
comp=Z,2μm,19.8s,MS4.5,baz=233,slow=41
AAK Ala-Archa 21.81 44 *e*P **P 22 02 44.7 +1.1**
comp=Z,64nm,0.9s,mb5.0
AAK Ala-Archa 21.81 44 P **P 22 02 45.2 +1.6**
SNR=34
AAK P 22 02 45.2
SNR=34
AAK Ala-Archa 21.81 44 P **P 22 02 45.2 +1.6**
SNR=34
AAK Ala-Archa 21.81 44 PcP PcP 22 06 43.2 +0.7
comp=Z,2μm,19.8s
ISP Isparta 21.83 302 *e*P **P 22 02 43.5 -0.4**
ISP Isparta 21.83 302 *e*P **P 22 02 45.0 +1.1**
ISP pmax pmax
comp=Z,497nm,1.7s,mb5.7
ISP Isparta 21.83 302 *e*P **P 22 02 45.0 +1.1**
comp=Z,497nm,1.7s,mb5.7
ISP Isparta 21.83 302 P **P 22 02 44.1 +0.2**
KZA Kyzart 21.98 46 P **P 22 02 49.2 +3.8**
SNR=63
ELL Elmali 21.98 299 *e*P **P 22 02 45.4 -0.1**
FRU Bishkek 22.00 44 *e*P **P 22 02 47.0 +1.4**
FRU pmax pmax
comp=Z,60nm,1.8s,mb4.7
FRU MLR MLR
comp=Z,3μm,22.0s,MS4.7
SHUT Suhut-Afyon 22.05 304 *e*P **P 22 02 46.9 +0.6**
KSL Kastellorizon 22.09 297 *e*P **P 22 02 47.5 +0.8**
AKAS Kas 22.09 297 *i* P **P 22 02 45.5 -1.3**
KBK Karagaybulak 22.10 44 P **P 22 02 47.1 +0.3**
SNR=52
CHMS Chumysh 22.17 43 P **P 22 02 45.3 -2.2**
SNR=19
USP Ospenovka 22.17 42 P **P 22 02 49.9 +2.4**
SNR=33
ESKT Eskisehir 22.19 306 *e*P **P 22 02 48.3 +0.5**
ESKT Eskisehir 22.19 306 *i* P **P 22 02 48.4 +0.6**
AKTK Aktyubinsk 22.25 7 P **P 22 02 48.2 0.0**
AKTK LR LR 22 13 20.1
AKTK Aktyubinsk 22.25 7 P **P 22 02 48.2 0.0**
AKTO Aktyubinsk 22.25 7 P **P 22 02 48.2 0.0**
AKTO pmax pmax
comp=Z,56nm,0.8s,mb5.0
AKTO MLR MLR
comp=Z,1μm,19.5s,MS4.4
AKTO Aktyubinsk 22.25 7 P **P 22 02 48.2 0.0**
comp=Z,56nm,0.8s,mb5.0,baz=203,slow=11,SNR=163
AKTO LR LR 22 13 20.1
comp=Z,1μm,19.5s,MS4.4,baz=184,slow=42
MDU Mudurnu 22.33 309 *e*P **P 22 02 49.0 -0.2**
GOLH Golhisar 22.38 300 *i* P **P 22 02 50.4 +0.6**
GLHS Glhisar (BURDU 22.41 299 *e*P **P 22 02 50.2 +0.1**
ALT Altintas 22.55 304 *e*P **P 22 02 52.0 +0.4**
KDZE Karadeniz Ereo 22.55 311 *e*P **P 22 02 51.5 -0.1**
FETY Fethiye 22.59 298 *e*P **P 22 02 51.1 -0.9**
BORA Eskisehir 22.62 307 *i* P **P 22 02 51.9 -0.4**
TKM2 Tokmak 2 22.64 44 P **P 22 02 52.8 +0.2**
SNR=10.0
TKM2 Tokmak 2 22.64 44 *e*P **P 22 02 51.4 -1.1**
TKM2 pmax pmax
comp=Z,20nm,0.7s,mb4.7
TKM2 Tokmak 2 22.64 44 *e*P **P 22 02 51.4 -1.2**
comp=Z,20nm,0.7s,mb4.7
TKM2 Tokmak 2 22.64 44 *e*P **P 22 02 51.4 -1.1**
comp=Z,20nm,0.7s,mb4.7
HENT Hendek 22.70 309 *i* P **P 22 02 52.1 -1.0**
KHL Karahalli 22.74 302 *e*P **P 22 02 54.4 +0.8**
KHAL Karahalli 22.77 302 *i* P **P 22 02 54.4 +0.4**
GULT Gulveren 22.80 308 *e*P **P 22 02 53.3 -0.9**
GPA Golpazari 22.88 308 *e*P **P 22 02 56.9 +1.9**
PTH Pithoragarh 22.89 81 *e*P **P 22 02 55.0 -0.2**
PTH *ex* x 22 04 48.0
DNZL Cakiroluk 22.90 300 *i* P **P 22 02 55.4 +0.1**
DENT Denizli 22.93 301 *e*P **P 22 02 55.3 -0.3**
SIM Simferopol' 22.94 322*c i*P **P 22 02 55.0 -0.6**
SIM *e*S **S 22 07 05.0 +2.2**
SIM pmax pmax
comp=Z,90nm,0.8s,mb5.2
SIM MLR MLR
comp=Z,750nm,21.4s,MS4.1
GDZ Gediz 23.02 304 *i* P **P 22 02 56.5 -0.1**
TURN Turunc 23.03 298 *i* P **P 22 02 58.5 +1.9**
ARG Arkhangelos 23.25 296 *e*P **P 22 02 51.8 -7.2**
ARG Arkhangelos 23.25 296 P **P 22 03 00.0 +1.0**
ARG Arkhangelos 23.25 296 P **P 22 02 58.0 -1.0**
ARG Arkhangelos 23.25 296 P **P 22 02 58.0 -1.0**
ADVT Abdulvahap 23.34 307 *e*P **P 22 03 00.1 +0.3**
YER Yerkesik 23.34 299 *e*P **P 22 02 59.6 -0.3**
KULA Kula-Manisa 23.44 302 *e*P **P 22 03 00.9 +0.1**
DEMI Demirci 23.57 303 *i* P **P 22 03 02.1 +0.1**
ULDT Uludag 23.65 306 *i* P **P 22 03 03.3 +0.6**
GEMT Gemlik 23.73 307 *e*P **P 22 03 03.5 +0.1**
NGP Nagpur 23.75 102 *ex* P **P 22 02 59.3 -4.6**
NGP *e*P 22 03 01.9
NGP *ex* x 22 07 06.7
MLSB Milas 23.77 299 *e*P **P 22 03 04.3 +0.4**
AYDN Tasoluk 23.79 300 *i* P **P 22 03 02.7 -1.3**
DAT Datca 23.79 297 *e*P **P 22 03 02.6 -1.4**
DST Dursunbey 23.83 305 *e*P **P 22 03 06.2 +1.8**
JBP Jabalpur 23.87 97‖ *e*P **P 22 03 05.2 +0.3**
JBP *ex* x 22 03 11.1
comp=Z,197nm,1.5s
JBP *ex* x 22 07 27.3
KARP Karpathos 23.89 294 *e*P **P 22 03 03.6 -1.4**
DURS Dursunbey 23.93 305 *i* P **P 22 03 02.3 -3.0**
BDRM Kayabasi 23.98 298 *i* P **P 22 03 04.2 -1.6**
ISK Istanbul-Kandi 24.07 308 *e*P **P 22 03 05.8 -0.7**
BODT Bodrum 24.08 298 *e*P **P 22 03 04.7 -2.0**
KLYT Kilyos 24.15 309 *e*P **P 22 03 06.5 -0.8**
AKHS Akhisar 24.18 303 *i* P **P 22 03 08.5 +0.9**
AKS Akhisar 24.18 303 *e*P **P 22 03 08.2 +0.6**
BGKT Bogazkoy 24.31 308 *e*P **P 22 03 07.1 -1.6**
BALB Balikesir 24.38 304 *e*P **P 22 03 10.1 +0.7**
IZM Izmir 24.45 301 *e*P **P 22 03 12.6 +2.5**
CTKS Kestanelik-??a 24.52 308 *e*P **P 22 03 11.5 +0.9**
VRHR Novokhopersk 24.58 341*c i*P **P 22 03 11.3 +0.3**
VRHR *e**SP sP 22 03 19.2 -7.6
VRHR *e*S **S 22 07 32.1 +2.9**
VRHR pmax pmax
comp=N,80nm,0.7s
VRHR pmax pmax
comp=Z,350nm,0.7s,mb6.0
VRHR pmax pmax
comp=E,60nm,0.9s
VRHR smax
comp=E,590nm,3.9s
VRHR smax
comp=Z,130nm,2.6s
VRHR smax
comp=N,420nm,2.1s
ZKR Zakros 24.59 293 *e*P **P 22 03 12.4 +1.1**
BNT Bandirma 24.59 306 *e*P **P 22 03 12.4 +1.1**
SMG Samos 24.60 299 *e*P **P 22 03 12.3 +0.9**
BALY Balya 24.60 304 *i* P **P 22 03 12.1 +0.7**
BLCB Balcova 24.62 301 *e*P **P 22 03 12.5 +0.9**
BLCB Balcova 24.62 301 P **P 22 03 12.8 +1.2**
BLCB Balcova 24.62 301 P **P 22 03 12.8 +1.2**
SLVT Silivri 24.72 308 *e*P **P 22 03 12.8 +0.3**
CTYL Yal??k??y-??at 24.76 309 *e*P **P 22 03 12.9 0.0**
URLA Izmir 24.95 301 *i* P **P 22 03 13.1 -1.5**
HYB Hyderabad 24.99 111 *i* P **P 22 03 15.5 +0.4**
comp=N,50nm,1.0s,mb5.0
CRLT Corlu 25.01 308 *e*P **P 22 03 16.1 +1.0**
NPS Neapolis 25.10 293 *e*P **P 22 03 17.3 +1.3**
TKR Tekirdag 25.10 307 *e*P **P 22 03 16.7 +0.8**
AYVA Ayvalik 25.14 303 *i* P **P 22 03 17.0 +0.7**
LAST Lasithi 25.19 293 *e*P **P 22 03 17.9 +1.1**
LAST Lasithi 25.19 293 P **P 22 03 18.1 +1.2**
SART Tekirdag 25.24 306 *i* P **P 22 03 17.7 +0.4**
RKY Sarkoy-Tekirda 25.24 306 *e*P **P 22 03 17.4 +0.2**
THR1 Thera Island 25.39 296 P **P 22 03 18.8 +0.1**
LPK Lapseki 25.43 305 *e*P **P 22 03 17.7 -1.2**
PRK Paraskevi 25.44 302 *e*P **P 22 03 19.8 +0.8**
PRK Paraskevi 25.44 302 P **P 22 03 19.9 +0.9**
VSR Storozhevoye 25.45 338*c i*P **P 22 03 18.7 -0.2**
VSR *e**SP pP 22 03 26.4 -3.5
VSR *e*S **S 22 07 46.5 +3.5**
VSR pmax pmax
comp=Z,280nm,0.8s,mb5.8
VSR pmax pmax
comp=N,300nm,0.9s
VSR pmax pmax
comp=E,240nm,1.0s
VSR smax
comp=N,130nm,1.3s
VSR smax
comp=Z,30nm,1.3s
VSR smax
comp=E,120nm,1.6s
PYUN Piuthan 25.45 84 *e*P **P 22 03 19.6 +0.4**
comp=E,91nm,0.7s,mb5.4
THR3 Thira Island, 25.45 296 P **P 22 03 19.5 +0.3**
THR4 Thira Island, 25.46 296 P **P 22 03 19.3 0.0**
APE Apeiranthos 25.47 297 P **P 22 03 20.4 +1.1**
APE Apeiranthos 25.47 297 *e*P **P 22 03 19.7 +0.4**
APE Apeiranthos 25.47 297 P **P 22 03 20.3 +1.0**
APE Apeiranthos 25.47 297 P **P 22 03 19.8 +0.5**
APE Apeiranthos 25.47 297 P **P 22 03 19.8 +0.5**
THR5 Thira Island, 25.49 296 P **P 22 03 20.0 +0.5**
IDI Anoyia 25.69 293 P **P 22 03 22.1 +0.8**
comp=E,74nm,0.7s,mb5.3,baz=108,slow=8.8,SNR=60
IDI Anoyia 25.69 293 *e*P **P 22 03 21.7 +0.4**
WNDE Wendo Genet 25.70 218 *i* P **P 22 03 25.1 +3.5**
SIVA Sivas 25.72 292 *e*P **P 22 03 22.4 +0.8**
SIVA Sivas 25.72 292 P **P 22 03 22.3 +0.7**
SIGR SIGRI 25.74 302 P **P 22 03 22.7 +1.0**
PSN Preselentsi 25.79 313 *i* P **P 22 03 21.7 -0.5**
VOR Voronezh 25.87 339 *e*P **P 22 03 22.0 -0.8**
VOR pmax pmax
comp=Z,700nm,1.2s,mb6.1
TIRR Tirgusor 26.02 315 P **P 22 03 25.1 +0.9**
TIRR Tirgusor 26.02 315 *e*P **P 22 03 23.9 -0.3**
comp=Z,74nm,0.9s,mb5.2
TIRR S **S 22 07 55.6 +3.4**
TIRR Tirgusor 26.02 315⇑ *i*P **P 22 03 24.1 -0.1**
TIRR Tirgusor 26.02 315⇑ *i*P **P 22 03 24.1 -0.1**
KOLN Koldanda 26.03 84 *e*P **P 22 03 24.6 +0.1**
comp=Z,34nm,0.6s,mb5.0
ALN Alexandroupoli 26.12 306 *e*P **P 22 03 26.0 +0.8**
ALN Alexandroupoli 26.12 306 P **P 22 03 25.9 +0.7**

ALN	**Alexandroupoli**	**26.12 306**	P	**P**	**22 03 25.4**	**+0.2**
ALN	**Alexandroupoli**	**26.12 306**	P	**P**	**22 03 25.4**	**+0.2**
VAM	**Vamos**	**26.26 293**	*e*P	**P**	**22 03 27.3**	**+0.8**
GVD	**Gavdhos**	**26.29 292**	*e*P	**P**	**22 03 26.8**	**0.0**
GVD	**Gavdhos**	**26.29 292**	*e*P	**P**	**22 03 27.0**	**+0.2**
comp=Z,143nm,0.6s,mb5.7						
GVD	**Gavdhos**	**26.29 292**	P	**P**	**22 03 26.6**	**-0.2**
GVD	**Gavdhos**	**26.29 292**	P	**P**	**22 03 26.6**	**-0.2**
JMB	**Yambol**	**26.32 310**	P	**P**	**22 03 28.0**	**+1.0**
JMB	**Yambol**	**26.32 310**	*i* P	**P**	**22 03 27.6**	**+0.6**
JMB	**Yambol**	**26.32 310**	P	**P**	**22 03 28.0**	**+1.0**
HARR	**Harsova**	**26.43 315** ⇑P		**P**	**22 03 28.3**	**+0.4**
HARR	**Harsova**	**26.43 315** ⇑*i*P		**P**	**22 03 28.3**	**+0.4**
HARR	**Harsova**	**26.43 315** ⇑*i*P		**P**	**22 03 28.3**	**+0.4**
LIA	**Limnos Island**	**26.43 303** *e*P		**P**	**22 03 29.0**	**+1.0**
LIA	**Limnos Island**	**26.43 303**	P	**P**	**22 03 28.6**	**+0.6**
KARN	**Karanos**	**26.49 293** *e*P		**P**	**22 03 29.2**	**+0.6**
KARN	**Karanos**	**26.49 293**	P	**P**	**22 03 30.0**	**+1.4**
LOS	**Limnos**	**26.52 303**	P	**P**	**22 03 30.1**	**+1.3**
RDO	**Rodhopi**	**26.57 306** *e*P		**P**	**22 03 29.9**	**+0.7**
RDO	**Rodhopi**	**26.57 306**	P	**P**	**22 03 29.9**	**+0.7**
GKN	**Gorkha**	**26.90 83** *e*P		**P**	**22 03 31.8**	**-0.6**
comp=Z,36nm,0.8s,mb5.0						
PTL	**Penteli**	**26.97 299** *e*P		**P**	**22 03 33.5**	**+0.6**
VLY	**Voula,Athens**	**26.98 298** *e*P		**P**	**22 03 33.3**	**+0.3**
ATHU	**Athens Univers**	**27.01 299**	P	**P**	**22 03 33.4**	**+0.1**
ATHU	**Athens Univers**	**27.01 299**	P	**P**	**22 03 33.4**	**+0.1**
KIS	**Kishinev**	**27.12 320** *e*P		**P**	**22 03 31.0**	**-3.1**
comp=Z,400nm,2.4s,mb5.5						
KIS		*i* pP	pP		22 03 48.0	+2.9
KIS	**Kishinev**	**27.12 320** *e*PP			22 04 24.0	
KIS	**Kishinev**	**27.12 320** *e*PPP			22 04 38.0	
KIS		*e*S	**S**		**22 08 08.0**	**-1.6**
KIS		*e*sS	sS		22 08 48.0	+20
KIS		*e*SS			22 09 33.0	
KIS		*e*SSS			22 09 52.0	
KIS		LRM			22 15 40.0	
comp=Z,700nm,20.0s						
KIS	**Kishinev**	**27.12 320** *e*P		**P**	**22 03 31.0**	**-3.1**
KIS		*i*	pP		22 03 44.0	-1.1
KIS		*e*			22 04 24.0	
KIS		*e*PPP			22 04 38.0	
KIS		*e*S	**S**		**22 08 08.0**	**-1.6**
KIS		pmax	pmax			
comp=Z,400nm,2.4s,mb5.5						
KIS		MLR	MLR			
comp=Z,700nm,18.0s,MS4.3						
KIS		MLR	MLR			
comp=Z,700nm,20.0s						
KYTH	**Kithira**	**27.31 295** *e*P		**P**	**22 03 35.8**	**-0.2**
RZN	**Rozhen**	**27.33 307** *i* P		**P**	**22 03 36.4**	**+0.3**
RZN	**Rozhen**	**27.33 307** *i* P		**P**	**22 03 36.4**	**+0.3**
DID	**Didima**	**27.35 297** *e*P		**P**	**22 03 35.6**	**-0.7**
DID	**Didima**	**27.35 297**	P	**P**	**22 03 35.3**	**-1.0**
DID	**Didima**	**27.35 297**	P	**P**	**22 03 35.3**	**-1.0**
BRVK	**Borovoye**	**27.43 21**	P	**P**	**22 03 37.2**	**+0.4**
comp=Z,201nm,1.0s,mb5.6,SNR=30						
BRVK	**Borovoye**	**27.43 21** *e*P		**P**	**22 03 36.7**	**-0.1**
BRVK		pmax	pmax			
comp=Z,47nm,1.1s,mb4.9						
BRVK	**Borovoye**	**27.43 21** *e*P		**P**	**22 03 36.6**	**-0.2**
comp=Z,47nm,1.1s,mb4.9						
BRVK	**Borovoye**	**27.43 21** P		**P**	**22 03 37.4**	**+0.6**
SNR=26						
BRVK		P			22 03 37.4	
SNR=26						
BRVK	**Borovoye**	**27.43 21** *e*P		**P**	**22 03 36.7**	**-0.1**
comp=Z,47nm,1.1s,mb4.9						
BVAR	**Borovoye Array**	**27.43 22** P		**P**	**22 03 37.1**	**+0.2**
comp=Z,37nm,0.9s,mb4.9,baz=201,slow=7.8,SNR=186						
BVAR		PcP	PcP		22 06 55.5	+0.8
comp=Z,2.8nm,0.5s,baz=205,slow=2.8,SNR=11						
BVAR		ScP	ScP		22 10 34.9	+2.9
comp=Z,1.5nm,0.9s,baz=204,slow=3.2,SNR=2.7						
BVAR		LR	LR		22 16 03.5	
comp=Z,3μm,19.1s,MS4.8,slow=40						
BVAR	**Borovoye Array**	**27.43 22** P		**P**	**22 03 37.1**	**+0.2**
comp=Z,37nm,0.9s,mb4.9						
BVAR	**Borovoye Array**	**27.43 22** PcP	PcP		22 06 55.5	+0.8
comp=Z,3μm,19.1s						
OUR	**Ouranopolis**	**27.44 304** P		**P**	**22 03 37.8**	**+0.7**
OUR	**Ouranopolis**	**27.44 304** P		**P**	**22 03 37.8**	**+0.7**
VLI	**Veliai**	**27.45 296** *e*P		**P**	**22 03 36.5**	**-0.8**
PLD	**Plovdiv**	**27.48 308** P		**P**	**22 03 38.1**	**+0.7**
PLD	**Plovdiv**	**27.48 308** P		**P**	**22 03 38.0**	**+0.6**
PLD	**Plovdiv**	**27.48 308** P		**P**	**22 03 38.0**	**+0.6**
KKN	**Kakani**	**27.50 84** *e*P		**P**	**22 03 37.5**	**-0.2**
comp=Z,36nm,0.6s,mb5.1						
PAIG	**Paliouri**	**27.55 303** P		**P**	**22 03 39.1**	**+1.0**
PAIG	**Paliouri**	**27.55 303** P		**P**	**22 03 39.0**	**+0.9**
PAIG	**Paliouri**	**27.55 303** P		**P**	**22 03 39.0**	**+0.9**
PKIN	**Phulchoki**	**27.63 84** *e*P		**P**	**22 03 37.9**	**-1.0**
PKIN	**Phulchoki**	**27.63 84** *e*P		**P**	**22 03 38.4**	**-0.5**
comp=Z,46nm,0.7s,mb5.2						
PKI	**Pulchoki**	**27.64 84** *e*P		**P**	**22 03 38.7**	**-0.3**
comp=Z,43nm,0.8s,mb5.1						
LTK	**Loutraki**	**27.66 298** *e*P		**P**	**22 03 38.6**	**-0.4**
LTK	**Loutraki**	**27.66 298** P		**P**	**22 03 38.6**	**-0.4**
LTK	**Loutraki**	**27.66 298** P		**P**	**22 03 38.6**	**-0.4**
NEO	**Neokhori**	**27.73 301** *e*P		**P**	**22 03 40.3**	**+0.6**
VRI	**Vrincioaia**	**27.75 316** P		**P**	**22 03 40.4**	**+0.6**
LKR	**Lokris**	**27.76 300** *e*P		**P**	**22 03 40.1**	**+0.2**
LKR	**Lokris**	**27.76 300** P		**P**	**22 03 40.1**	**+0.2**
LKR	**Lokris**	**27.76 300** P		**P**	**22 03 40.1**	**+0.2**
PLOR	**Plostina**	**27.79 316** P		**P**	**22 03 41.1**	**+1.0**
PLOR	**Plostina**	**27.79 316** ⇓*i*P		**P**	**22 03 40.9**	**+0.8**
PLOR	**Plostina**	**27.79 316** ⇓*i*P		**P**	**22 03 40.9**	**+0.8**
NVR	**Nevrokopi**	**27.83 306** *e*P		**P**	**22 03 41.3**	**+0.8**
PLG	**Polygyros**	**27.84 304** *e*P		**P**	**22 03 41.8**	**+1.1**
PLG	**Polygyros**	**27.84 304** P		**P**	**22 03 41.9**	**+1.2**
PLG	**Polygyros**	**27.84 304** P		**P**	**22 03 41.9**	**+1.2**
IAS	**Iasi**	**27.95 319** P		**P**	**22 03 41.6**	**+0.1**
SRS	**Serrai**	**27.95 305** P		**P**	**22 03 42.1**	**+0.5**
SRS	**Serrai**	**27.95 305** P		**P**	**22 03 42.5**	**+0.9**
SRS	**Serrai**	**27.95 305** P		**P**	**22 03 42.1**	**+0.5**
LKFR	**Kufra**	**27.96 269** *i* P		**P**	**22 03 41.3**	**-0.6**
SNR=152						
MMB	**Musomiste**	**28.00 306** *i* P		**P**	**22 03 42.2**	**+0.2**
MMB	**Musomiste**	**28.00 306** *i* P		**P**	**22 03 42.2**	**+0.2**
VLX	**Vlachokerasia**	**28.00 297** *e*P		**P**	**22 03 41.9**	**-0.2**
VLX	**Vlachokerasia**	**28.00 297** P		**P**	**22 03 41.5**	**-0.6**
VLX	**Vlachokerasia**	**28.00 297** P		**P**	**22 03 41.5**	**-0.6**
GUN	**Gumba**	**28.00 83** *e*P		**P**	**22 03 42.1**	**-0.2**
comp=Z,168nm,1.5s,mb5.5						
SOH	**Sokhos**	**28.04 304** *e*P		**P**	**22 03 43.6**	**+1.2**
SOH	**Sokhos**	**28.04 304** P		**P**	**22 03 43.3**	**+0.9**
SOH	**Sokhos**	**28.04 304** P		**P**	**22 03 43.7**	**+1.3**
SOH	**Sokhos**	**28.04 304** P		**P**	**22 03 43.3**	**+0.9**
MLR	**Muntele Rosu**	**28.05 315** P		**P**	**22 03 44.0**	**+1.5**
MLR	**Muntele Rosu**	**28.05 315** P		**P**	**22 03 44.3**	**+1.8**
comp=Z,27nm,0.9s,mb4.9,baz=71,slow=3.5,SNR=35						
MLR		LR	LR		22 17 59.5	
comp=Z,980nm,18.7s,MS4.4,baz=263,slow=43						
MLR	**Muntele Rosu**	**28.05 315** ⇑*i*P		**P**	**22 03 45.2**	**+2.7**
MLR	**Muntele Rosu**	**28.05 315** P		**P**	**22 03 44.0**	**+1.5**
GUR	**Goura**	**28.12 298** *e*P		**P**	**22 03 43.0**	**-0.2**
GUR	**Goura**	**28.12 298** P		**P**	**22 03 42.9**	**-0.3**
GUR	**Goura**	**28.12 298** P		**P**	**22 03 42.9**	**-0.3**
HORT	**Hortiatis**	**28.16 304** P		**P**	**22 03 44.3**	**+0.8**
HORT	**Hortiatis**	**28.16 304** P		**P**	**22 03 44.5**	**+1.0**
HORT	**Hortiatis**	**28.16 304** P		**P**	**22 03 44.5**	**+1.0**
ARU	**Arti**	**28.23 5** P		**P**	**22 03 44.6**	**+0.6**
comp=Z,102nm,1.2s,mb5.3,SNR=11						
ARU	**Arti**	**28.23 5***c i*P		**P**	**22 03 44.2**	**+0.2**
ARU		*e*			22 04 35.0	
ARU		*e*PPP			22 04 47.0	
ARU		S	**S**		**22 08 28.2**	**+1.3**
ARU		SS			22 09 48.7	
ARU		pmax	pmax			
comp=Z,31nm,1.2s,mb4.8						
ARU		MLR	MLR			
comp=Z,1μm,21.0s,MS4.6						
ARU	**Arti**	**28.23 5** *e*P		**P**	**22 03 42.8**	**-1.1**
comp=Z,15nm,0.8s,mb4.7						
ARU	**Arti**	**28.23 5** *e*P		**P**	**22 03 42.8**	**-1.2**
comp=Z,15nm,0.8s,mb4.7						
THE	**Thessaloniki**	**28.27 304** P		**P**	**22 03 45.0**	**+0.5**
THE	**Thessaloniki**	**28.27 304** P		**P**	**22 03 45.0**	**+0.5**
ITM	**Ithomi**	**28.32 296** *e*P		**P**	**22 03 44.5**	**-0.5**
ITM	**Ithomi**	**28.32 296** P		**P**	**22 03 44.1**	**-0.9**
ITM	**Ithomi**	**28.32 296** P		**P**	**22 03 44.1**	**-0.9**
AGG	**Agios Georgios**	**28.35 300** *e*P		**P**	**22 03 44.9**	**-0.3**
AGG	**Agios Georgios**	**28.35 300** P		**P**	**22 03 45.3**	**+0.1**
AGG	**Agios Georgios**	**28.35 300** P		**P**	**22 03 44.5**	**-0.7**
AGG	**Agios Georgios**	**28.35 300** P		**P**	**22 03 44.5**	**-0.7**
KALE	**Kalithea**	**28.36 299** P		**P**	**22 03 44.3**	**-1.1**
KALE	**Kalithea**	**28.36 299** P		**P**	**22 03 44.3**	**-1.1**
TRIZ	**Trizonia**	**28.41 299** P		**P**	**22 03 44.7**	**-1.1**
TRIZ	**Trizonia**	**28.41 299** P		**P**	**22 03 44.7**	**-1.1**
PYL	**PYLOS**	**28.43 296** *e*P		**P**	**22 03 45.1**	**-0.9**
PYL	**PYLOS**	**28.43 296** P		**P**	**22 03 45.0**	**-1.0**
PYL	**PYLOS**	**28.43 296** P		**P**	**22 03 45.0**	**-1.0**
LAKA	**Lakka**	**28.46 299** P		**P**	**22 03 46.1**	**-0.1**
LAKA	**Lakka**	**28.46 299** P		**P**	**22 03 46.1**	**-0.1**
LIT	**Litokhoron**	**28.48 303** *e*P		**P**	**22 03 46.5**	**+0.2**
LIT	**Litokhoron**	**28.48 303** P		**P**	**22 03 46.3**	**0.0**
LIT	**Litokhoron**	**28.48 303** P		**P**	**22 03 46.3**	**0.0**
KKB	**Krupnik**	**28.54 306** *i* P		**P**	**22 03 47.4**	**+0.5**
KKB	**Krupnik**	**28.54 306** *i* P		**P**	**22 03 47.4**	**+0.5**
EFP	**Efpalio**	**28.55 299** *e*P		**P**	**22 03 46.7**	**-0.3**
EFP	**Efpalio**	**28.55 299** P		**P**	**22 03 46.4**	**-0.6**
EFP	**Efpalio**	**28.55 299** P		**P**	**22 03 46.4**	**-0.6**
VOIR		**28.59 314** P		**P**	**22 03 48.3**	**+1.1**
VOIR		**28.59 314** ⇓*i*P		**P**	**22 03 48.0**	**+0.8**
VOIR		**28.59 314** ⇓*i*P		**P**	**22 03 48.0**	**+0.8**
VTS	**Vitosha**	**28.69 308** P		**P**	**22 03 48.8**	**+0.6**
VTS	**Vitosha**	**28.69 308** P		**P**	**22 03 48.8**	**+0.6**
THL	**Klokotos Trika**	**28.71 301** *e*P		**P**	**22 03 47.6**	**-0.8**
THL	**Klokotos Trika**	**28.71 301** P		**P**	**22 03 46.8**	**-1.6**
THL	**Klokotos Trika**	**28.71 301** P		**P**	**22 03 46.8**	**-1.6**
MK31	**Makanchi Array**	**28.72 43** *e*P		**P**	**22 03 48.7**	**+0.3**
MK31	**Makanchi Array**	**28.72 43** *e*P		**P**	**22 03 48.7**	**+0.3**
MKAR	**Makanchi Array**	**28.72 43** P		**P**	**22 03 48.6**	**+0.2**
MKAR					22 06 56.6	
MKAR		pmax	pmax			
comp=Z,14nm,0.8s						
MKAR		MLR	MLR			
comp=Z,1μm,18.3s						
MKAR	**Makanchi Array**	**28.72 43** P		**P**	**22 03 48.6**	**+0.2**
comp=Z,14nm,0.8s,mb4.7,baz=224,slow=9.4,SNR=91						
MKAR		PcP	PcP		22 06 56.5	-1.4
comp=Z,1.4nm,0.6s,baz=230,slow=3.6,SNR=2.9						
MKAR		ScP	ScP		22 10 39.0	+2.9
comp=Z,0.7nm,0.8s,baz=182,slow=2.1,SNR=3.0						
MKAR		LR	LR		22 16 34.9	
comp=Z,1μm,18.3s,MS4.6,baz=230,slow=39						
MKAR		P3KPbc			22 36 02.6	
comp=Z,0.7nm,0.8s,baz=66,slow=3.0,SNR=4.7						
MKAR	**Makanchi Array**	**28.72 43** P		**P**	**22 03 48.6**	**+0.2**
MKAR		PcP	PcP		22 06 56.5	-1.4
MKAR		ScP	ScP		22 10 39.0	+2.9
MKAR		LR	LR		22 16 34.9	
MKAR		*e*			22 36 02.6	
MKAR	**Makanchi Array**	**28.72 43** P		**P**	**22 03 48.6**	**+0.2**
MKAR	**Makanchi Array**	**28.72 43** PcP	PcP		22 06 56.6	-1.4
comp=Z,1μm,18.3s						
VAY	**Valandovo**	**28.75 305** P		**P**	**22 03 48.9**	**+0.2**
VAY	**Valandovo**	**28.75 305** *i* P		**P**	**22 03 49.0**	**+0.2**
VAY	**Valandovo**	**28.75 305** P		**P**	**22 03 48.8**	**+0.1**
VAY	**Valandovo**	**28.75 305** P		**P**	**22 03 48.8**	**+0.1**
RLS	**Riolos of Patr**	**28.83 298** *e*P		**P**	**22 03 50.4**	**+0.9**
SVE	**Sverdlovsk**	**28.83 7**⇓*e*P		**P**	**22 03 49.4**	**+0.2**
SVE		*e*			22 04 37.9	
SVE		*e*S	**S**		**22 08 43.6**	**+7.3**
SVE		pmax	pmax			
comp=Z,41nm,1.2s,mb5.0						
SVE		MLR	MLR			
comp=Z,558nm,13.0s,MS4.4						
KURK	**Kurchatov**	**29.02 33** P		**P**	**22 03 51.6**	**+0.6**
comp=Z,178nm,0.9s,mb5.8,SNR=28						
KURK	**Kurchatov**	**29.02 33** *e*P		**P**	**22 03 51.3**	**+0.3**
KURK		pmax	pmax			
comp=Z,33nm,1.0s,mb5.0						
KURK	**Kurchatov**	**29.02 33** P		**P**	**22 03 50.3**	**-0.7**
comp=Z,21nm,0.9s,mb4.9,baz=232,slow=8.6,SNR=39						
KURK		LR	LR		22 17 07.3	
comp=Z,3μm,19.0s,MS4.9,baz=230,slow=40						
KURK	**Kurchatov**	**29.02 33** *e*P		**P**	**22 03 51.3**	**+0.3**
comp=Z,33nm,1.0s,mb5.0						
KURK	**Kurchatov**	**29.02 33** P		**P**	**22 03 51.8**	**+0.7**
SNR=19						
KURK		P			22 03 51.8	
SNR=19						
KURK	**Kurchatov**	**29.02 33** *e*P		**P**	**22 03 51.3**	**+0.3**
comp=Z,33nm,1.0s,mb5.0						
KZN	**Kozani**	**29.06 303** *e*P		**P**	**22 03 51.5**	**0.0**
KZN	**Kozani**	**29.06 303** P		**P**	**22 03 51.5**	**0.0**
KZN	**Kozani**	**29.06 303** P		**P**	**22 03 51.5**	**0.0**
AKASG	**Malin Array Be**	**29.17 327** P		**P**	**22 03 51.5**	**-0.8**
AKASG		pmax	pmax			
comp=Z,25nm,0.8s						
AKASG		MLR	MLR			
comp=Z,468nm,19.4s						
AKASG	**Malin Array Be**	**29.17 327** P		**P**	**22 03 51.5**	**-0.9**
comp=Z,25nm,0.8s,mb5.0,baz=134,slow=7.8,SNR=130						
AKASG		LR	LR		22 17 34.7	
comp=Z,468nm,19.4s,MS4.1,baz=120,slow=40						
AKASG	**Malin Array Be**	**29.17 327** P		**P**	**22 03 51.5**	**-0.8**
AKBB	**Malin Array Si**	**29.17 327** *e*P		**P**	**22 03 51.0**	**-1.3**
AKBB	**Malin Array Si**	**29.17 327** *e*P		**P**	**22 03 51.0**	**-1.3**
MDB	**Medias**	**29.32 315** P		**P**	**22 03 55.3**	**+1.6**
MDB	**Medias**	**29.32 315** P		**P**	**22 03 55.3**	**+1.6**
KFL	**Anninata**	**29.36 298** P		**P**	**22 03 54.0**	**-0.2**
FNA	**Florina**	**29.47 303** P		**P**	**22 03 55.2**	**0.0**
FNA	**Florina**	**29.47 303** P		**P**	**22 03 55.2**	**0.0**
BURAR	**Bucovina Array**	**29.52 318** P		**P**	**22 03 56.1**	**+0.6**
BURAR	**Bucovina Array**	**29.52 318** P		**P**	**22 03 55.8**	**+0.3**
BURAR	**Bucovina Array**	**29.52 318** ⇓*i*P		**P**	**22 03 55.9**	**+0.4**
BURAR	**Bucovina Array**	**29.52 318** ⇓*i*P		**P**	**22 03 55.9**	**+0.4**
VLS	**Valsamata**	**29.53 298** *e*P		**P**	**22 03 55.1**	**-0.6**
VLS	**Valsamata**	**29.53 298** P		**P**	**22 03 51.4**	**-4.3**
BUR08	**Bucovina Ar. S**	**29.55 319** *e*P		**P**	**22 03 55.5**	**-0.3**
BUR08		*e*PcP	PcP		22 07 01.2	+1.2
BUR08		*e*S	**S**		**22 08 48.9**	**+1.1**
BIA	**Bitola**	**29.57 304** P		**P**	**22 03 57.9**	**+1.9**
BIA	**Bitola**	**29.57 304** *e*P		**P**	**22 03 56.3**	**+0.3**
BIA	**Bitola**	**29.57 304** P		**P**	**22 03 56.3**	**+0.3**
BIA	**Bitola**	**29.57 304** *e*P		**P**	**22 03 56.3**	**+0.3**
OBN	**Obninsk**	**29.58 340** P		**P**	**22 03 56.8**	**+0.9**
comp=Z,1μm,1.0s,mb6.5,SNR=34						
OBN	**Obninsk**	**29.58 340***c i*P		**P**	**22 03 56.5**	**+0.6**
OBN		*e*			22 07 00.3	
OBN		*e*S	**S**		**22 08 52.4**	**+4.3**
OBN		*e*SS	SS		22 10 22.0	-33
OBN		pmax	pmax			
comp=Z,233nm,1.3s,mb5.8						
OBN		MLR	MLR			
comp=Z,300nm,15.0s,MS4.0						
OBN	**Obninsk**	**29.58 340** *e*P		**P**	**22 03 56.1**	**+0.2**
comp=Z,577nm,1.7s,mb6.0						
OBN	**Obninsk**	**29.58 340** *e*PcP	PcP		22 07 00.3	+0.3
JAN	**Janina**	**29.60 301** *e*P		**P**	**22 03 56.3**	**0.0**
KRUS	**Krusevo**	**29.72 305** *e*P		**P**	**22 03 57.8**	**+0.4**
KRUS	**Krusevo**	**29.72 305** *e*P		**P**	**22 03 57.7**	**+0.4**
BARS	**Barje**	**29.73 308** P		**P**	**22 03 58.0**	**+0.5**
BARS	**Barje**	**29.73 308** ⇑*i*P		**P**	**22 03 57.9**	**+0.4**
SKO	**Skopje**	**29.75 306** *i* P		**P**	**22 03 58.6**	**+1.1**
SKO	**Skopje**	**29.75 306** P		**P**	**22 03 58.6**	**+1.0**
SKO	**Skopje**	**29.75 306** *i* P		**P**	**22 03 58.6**	**+1.0**
MOS	**Moscow**	**29.80 341** *e*P		**P**	**22 03 53.9**	**-4.0**
MOS		*e*			22 04 48.3	
MOS		*e*			22 07 01.0	
MOS		*e*			22 10 50.2	
MOS		pmax	pmax			
comp=Z,216nm,1.3s,mb5.7						
MOS	**Moscow**	**29.80 341** *e*PcP	PcP		22 07 01.0	+0.5
NISS		**29.83 309** ⇑*i*P		**P**	**22 03 58.9**	**+0.6**
DJES	**Djerdap**	**29.90 311** P		**P**	**22 03 58.9**	**0.0**
IGT	**Igoumenitsa**	**29.97 301** P		**P**	**22 03 58.6**	**-1.0**
IGT	**Igoumenitsa**	**29.97 301** P		**P**	**22 03 58.6**	**-1.0**
BOLS	**Boljevac**	**29.97 310** ⇓*i*P		**P**	**22 04 00.9**	**+1.3**
OHR	**Ohrid**	**29.98 304** *i* P		**P**	**22 03 59.8**	**+0.2**
OHR	**Ohrid**	**29.98 304** P		**P**	**22 03 59.5**	**-0.1**
OHR	**Ohrid**	**29.98 304** P		**P**	**22 03 59.5**	**-0.1**
GZR	**Gura Zlata**	**30.02 313** P		**P**	**22 04 00.3**	**+0.4**
GZR	**Gura Zlata**	**30.02 313** P		**P**	**22 04 00.3**	**+0.4**
KEK	**Kerkira**	**30.41 301** P		**P**	**22 04 02.8**	**-0.7**
KEK	**Kerkira**	**30.41 301** P		**P**	**22 04 02.8**	**-0.7**
BMR	**Baia Mare**	**30.57 317** P		**P**	**22 04 05.8**	**+1.1**
BMR	**Baia Mare**	**30.57 317** ⇑*i*P		**P**	**22 04 05.4**	**+0.7**
BMR	**Baia Mare**	**30.57 317** ⇑*i*P		**P**	**22 04 05.4**	**+0.7**
SVIS	**Svilajnac**	**30.62 310** P		**P**	**22 04 06.0**	**+0.7**
SVIS	**Svilajnac**	**30.62 310** ⇑*i*P		**P**	**22 04 05.0**	**-0.3**
DRGR		**30.64 315** P		**P**	**22 04 06.0**	**+0.6**
DRGR		**30.64 315** ⇑*i*P		**P**	**22 04 06.4**	**+1.0**
DRGR		**30.64 315** ⇑*i*P		**P**	**22 04 06.4**	**+1.0**
TIR	**Tirane**	**30.72 304** *e*P		**P**	**22 04 06.2**	**0.0**
TIR		pmax	pmax			
comp=Z,202nm,0.8s,mb6.0						
TIR	**Tirane**	**30.72 304** *e*P		**P**	**22 04 05.9**	**-0.3**
TIR	**Tirane**	**30.72 304** *e*P		**P**	**22 04 06.2**	**0.0**
comp=Z,202nm,0.8s,mb6.0						
TIR	**Tirane**	**30.72 304** P		**P**	**22 04 06.0**	**-0.2**
TIR	**Tirane**	**30.72 304** P		**P**	**22 04 06.0**	**-0.2**
GRUS	**Gruza**	**30.84 309** P		**P**	**22 04 07.1**	**-0.1**
GRUS	**Gruza**	**30.84 309** ⇑*i*P		**P**	**22 04 06.8**	**-0.4**
PVY	**Plav**	**30.96 306** ⇑*i*P		**P**	**22 04 07.7**	**-0.6**
PVY	**Plav**	**30.96 306** ⇑*i*P		**P**	**22 04 07.7**	**-0.6**
WMQ	**Urumqi**	**30.99 51** P		**P**	**22 04 09.0**	**+0.5**
WMQ		PP	PP		22 05 10.5	-8.3
WMQ		PcP	PcP		22 07 04.1	+0.2
WMQ		S	**S**		**22 09 08.9**	**-1.5**
WMQ		sS	sS		22 09 28.7	-0.1
WMQ		SS	SS		22 10 52.9	-31
WMQ		ScS	ScS		22 14 38.5	-1.9
WMQ		pmax	pmax			
comp=Z,27nm,1.0s,mb5.0						
WMQ		pmax	pmax			
comp=Z,350nm,4.0s						
WMQ		LR	LR			
comp=E,260nm,21.0s						
WMQ		LR	LR			
comp=Z,910nm,25.0s,MS4.3						
BEY	**Berane**	**31.10 307** *e*P		**P**	**22 04 09.3**	**-0.2**
IVA	**Berane**	**31.10 307** *e*P		**P**	**22 04 09.3**	**-0.2**
IVA	**Berane**	**31.10 307** *e*P		**P**	**22 04 09.3**	**-0.2**
IVA	**Berane**	**31.10 307** *e*P		**P**	**22 04 09.3**	**-0.2**
TIM	**Timisoara**	**31.16 313** P		**P**	**22 04 11.9**	**+1.9**
TIM	**Timisoara**	**31.16 313** P		**P**	**22 04 11.9**	**+1.9**
TRUS	**Trudelj**	**31.16 310** ⇑*i*P		**P**	**22 04 09.0**	**-1.0**
SOKR	**Solikamsk**	**31.26 3***c i*P		**P**	**22 04 11.8**	**+1.1**
SOKR		S	**S**		**22 09 06.0**	**-8.2**
SOKR		pmax	pmax			
comp=Z,60nm,0.9s,mb5.4						
SOKR		MLR	MLR			
comp=Z,810nm,19.0s,MS4.4						
SOKR	**Solikamsk**	**31.26 3** *i* P		**P**	**22 04 11.8**	**+1.1**
comp=Z,60nm,0.9s,mb5.4						
BEO	**Beograd**	**31.31 311** ⇓*i*P		**P**	**22 04 10.9**	**-0.5**
ULC	**Ulcinj**	**31.32 305** ⇑*i*P		**P**	**22 04 10.9**	**-0.5**
ULC	**Ulcinj**	**31.32 305** ⇑*i*P		**P**	**22 04 10.9**	**-0.5**
ULC	**Ulcinj**	**31.32 305** *i* P		**P**	**22 04 11.0**	**-0.4**
LVV	**L'vov**	**31.34 321** *e*P		**P**	**22 04 10.9**	**-0.6**
LVV		*e*			22 05 21.3	
LVV		*e*PPP			22 05 37.7	
LVV		*e*S	**S**		**22 09 09.7**	**-6.0**
LVV		*e*SS	SS		22 11 01.7	-29
LVV		MLR	MLR			
comp=N,200nm,16.0s,MS4.1						
LVV		MLR	MLR			
comp=E,300nm,16.0s,MS4.1						
LVV		MLR	MLR			
comp=Z,300nm,17.0s,MS4.0						
LVV	**L'vov**	**31.34 321** *e*P		**P**	**22 04 10.9**	**-0.6**
TRPA	**Tarpa**	**31.35 318**⇑*e*P		**P**	**22 04 11.6**	**0.0**
DIVS	**Divibare**	**31.40 309** P		**P**	**22 04 11.5**	**-0.6**
DIVS	**Divibare**	**31.40 309** P		**P**	**22 04 11.5**	**-0.6**
PDG	**Podgorica**	**31.43 306** ⇑*i*P		**P**	**22 04 11.9**	**-0.5**

PSZ	**Piszkesteto**	**32.85 316**	⇑ *i* P	**P**	**22 04 24.9**	**0.0**
GRI	**Girifalco**	**32.86 298**	P	**P**	**22 04 26.3**	**+1.3**
MSEY	**Mahe Island**	**32.87 177**	*e*P	**P**	**22 04 26.9**	**+1.6**
MSEY			pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3					
MSEY	**Mahe Island**	**32.87 177**	*e*P	**P**	**22 04 26.9**	**+1.7**
	comp=Z,50nm,1.2s,mb5.3					
MSEY	**Mahe Island**	**32.87 177**	*e*P	**P**	**22 04 26.9**	**+1.6**
	comp=Z,50nm,1.2s,mb5.3					
PKSM	**Moragy**	**33.00 312**	⇑ *i*P	**P**	**22 04 26.8**	**+0.6**
PKSM	**Moragy**	**33.00 312**	⇑ *e*P	**P**	**22 04 26.4**	**+0.2**
ORI	**Oriolo Calabro**	**33.01 301**	P	**P**	**22 04 27.0**	**+0.7**
SOI	**Samo**	**33.06 297**	P	**P**	**22 04 27.7**	**+0.9**
NACGM	**Naroch**	**33.06 331**	*e*P	**P**	**22 04 23.0**	**-3.6**
RHK3	**Tenkes**	**33.15 312**	⇑ *e*P	**P**	**22 04 27.5**	**0.0**
PENC	**Penc**	**33.18 315**	⇑ *e*P	**P**	**22 04 28.3**	**+0.6**
CEL	**Celeste**	**33.20 297**	*e*P	**P**	**22 04 28.7**	**+0.6**
CEL	**Celeste**	**33.20 297**	*e*P	**P**	**22 04 28.6**	**+0.5**
	comp=Z,75nm,1.3s,mb5.5					
CEL			*e*PcP	PcP	22 07 10.5	+0.4
CEL	**Celeste**	**33.20 297**	*e*P	**P**	**22 04 28.5**	**+0.4**
	comp=Z,75nm,1.3s,mb5.5					
CEL	**Celeste**	**33.20 297**	*e*PcP	PcP	22 07 10.5	+0.5
BUD	**Budapest**	**33.22 315**	*e*P	**P**	**22 04 28.4**	**+0.3**
BUD	**Budapest**	**33.22 315**	⇑ *e*P	**P**	**22 04 28.4**	**+0.3**
NIE	**Niedzica**	**33.25 319**	*e*P	**P**	**22 04 29.1**	**+0.8**
NIE	**Niedzica**	**33.25 319**	*e*P	**P**	**22 04 29.1**	**+0.8**
MTTG	**Motta San Giov**	**33.34 297**	P	**P**	**22 04 30.2**	**+1.0**
MTTG	**Motta San Giov**	**33.34 297**	P	**P**	**22 04 30.2**	**+1.0**
SCLL	**Scilla**	**33.35 297**	P	**P**	**22 04 30.6**	**+1.3**
SCLL	**Scilla**	**33.35 297**	P	**P**	**22 04 30.6**	**+1.3**
IDID	**Didziasalis**	**33.36 331**	*i* P	**P**	**22 04 29.5**	**+0.4**
IDID	**Didziasalis**	**33.36 331**	*i* P	**P**	**22 04 29.5**	**+0.3**
	SNR=27					
PKS9	**Tamasi**	**33.37 313**	⇓ *e*P	**P**	**22 04 29.9**	**+0.5**
PTRP	**Pietrapertosa**	**33.37 301**	P	**P**	**22 04 30.9**	**+1.4**
PTRP	**Pietrapertosa**	**33.37 301**	P	**P**	**22 04 30.9**	**+1.4**
KMBO	**Kilima Mbogo**	**33.47 212**	P	**P**	**22 04 32.2**	**+1.7**
KMBO			pmax	pmax		
	comp=Z,21nm,1.1s					
KMBO			MLR	MLR		
	comp=Z,2μm,18.9s					
KMBO	**Kilima Mbogo**	**33.47 212**	P	**P**	**22 04 32.2**	**+1.7**
	comp=Z,21nm,1.1s,mb5.0,baz=20,slow=11,SNR=18					
KMBO			LR	LR	22 19 31.8	
	comp=Z,2μm,18.9s,MS4.8,baz=190,slow=39					
KMBO	**Kilima Mbogo**	**33.47 212**	*e*P	**P**	**22 04 33.0**	**+2.4**
	comp=Z,31nm,1.2s,mb5.1					
KMBO	**Kilima Mbogo**	**33.47 212**	P	**P**	**22 04 33.0**	**+2.4**
	SNR=8.8					
KMBO			P		22 04 33.0	
	SNR=8.8					
KMBO	**Kilima Mbogo**	**33.47 212**	⇓ *i*P	**P**	**22 04 32.8**	**+2.3**
KMBO	**Kilima Mbogo**	**33.47 212**	*e*P	**P**	**22 04 33.0**	**+2.5**
	comp=Z,31nm,1.2s,mb5.1					
PKSG		**33.59 314**	⇓ *e*P	**P**	**22 04 31.8**	**+0.6**
MGR	**Morigerati**	**33.70 301**	P	**P**	**22 04 33.0**	**+0.7**
MGR	**Morigerati**	**33.70 301**	P	**P**	**22 04 33.0**	**+0.7**
VYHS	**Vyhne**	**33.73 316**	*e*P	**P**	**22 04 32.4**	**-0.1**
VYHS			pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9					
VYHS	**Vyhne**	**33.73 316**	*e*P	**P**	**22 04 32.4**	**-0.1**
	comp=Z,18nm,1.1s,mb4.9					
VYHS			*e*S	**S**	**22 10 02.2**	**+9.1**
VYHS	**Vyhne**	**33.73 316**	*e*P	**P**	**22 04 32.4**	**-0.1**
VYHS			*e*S	**S**	**22 10 02.2**	**+9.1**
VYHS	**Vyhne**	**33.73 316**	*e*P	**P**	**22 04 32.4**	**-0.1**
	comp=Z,18nm,1.1s,mb4.9					
ISAL	**Salakas**	**33.79 331**	*e*P	**P**	**22 04 33.2**	**+0.3**
ISAL	**Salakas**	**33.79 331**	*e*P	**P**	**22 04 33.2**	**+0.3**
	SNR=27					
LIKS	**Likavka**	**33.80 317**	*e*P	**P**	**22 04 33.1**	**0.0**
LIKS			pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4					
LIKS	**Likavka**	**33.80 317**	*e*P	**P**	**22 04 33.1**	**0.0**
	comp=Z,60nm,1.2s,mb5.4					
LIKS	**Likavka**	**33.80 317**	*e*P	**P**	**22 04 33.1**	**0.0**
LIKS	**Likavka**	**33.80 317**	*e*P	**P**	**22 04 33.1**	**0.0**
	comp=Z,60nm,1.2s,mb5.4					
NVS	**Novosibirsk**	**33.83 30**	⇑ *i*P	**P**	**22 04 32.9**	**-0.4**
NVS			*e*S	**S**	**22 09 55.6**	**+1.2**
NVS			pmax	pmax		
	comp=E,15nm,1.3s					
NVS			pmax	pmax		
	comp=Z,47nm,1.3s,mb5.3					
NVS			pmax	pmax		
	comp=N,37nm,1.5s					
NVS			smax			
	comp=N,27nm,1.7s					
IZAR	**Zarasai**	**33.86 332**	*e*P	**P**	**22 04 33.9**	**+0.4**
IZAR	**Zarasai**	**33.86 332**	*e*P	**P**	**22 04 33.9**	**+0.4**
	SNR=27					
OJC	**Ojcow**	**33.91 320**	*i* P	**P**	**22 04 33.8**	**-0.2**
OJC			*e*pP	pP	22 04 45.1	0.0
OJC			*e*sP	sP	22 04 50.5	+0.6
OJC			*e*PcP	PcP	22 07 12.3	+0.5
OJC	**Ojcow**	**33.91 320**	P	**P**	**22 04 33.6**	**-0.4**
OJC	**Ojcow**	**33.91 320**	P	**P**	**22 04 33.6**	**-0.4**
OJC			*e*pP	pP	22 04 45.1	0.0
KLMR	**Klimovskoe**	**33.94 347**	⇑ *i*P	**P**	**22 04 34.1**	**0.0**
KLMR			pmax	pmax		
	comp=Z,85nm,0.7s,mb5.8					
SGO	**Sicignano**	**33.95 301**	P	**P**	**22 04 35.8**	**+1.3**
ZALV	**Zalesovo Beam**	**34.01 33**	P	**P**	**22 04 34.5**	**-0.3**
ZALV			pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5					
ZALV			MLR	MLR		
	comp=Z,2μm,19.4s,MS4.8					
ZALV	**Zalesovo Beam**	**34.01 33**	P	**P**	**22 04 34.5**	**-0.3**
	comp=Z,45nm,0.8s,mb5.5,baz=241,slow=9.0,SNR=204					
ZALV			LR	LR	22 20 17.6	
	comp=Z,2μm,19.4s,MS4.8,baz=225,slow=40					
FG5	**Orsara di Pugl**	**34.09 303**	P	**P**	**22 04 37.1**	**+1.4**
FG5	**Orsara di Pugl**	**34.09 303**	P	**P**	**22 04 37.1**	**+1.4**
SUW	**Suwalki**	**34.13 327**	*e*P	**P**	**22 04 35.4**	**-0.5**
	comp=Z,300nm,1.2s,mb6.1					
SUW			LMZ		22 19 34.0	
	comp=Z,600nm,26.1s					
SUW	**Suwalki**	**34.13 327**	*e*P	**P**	**22 04 35.5**	**-0.4**
SUW			pmax	pmax		
	comp=Z,214nm,1.1s,mb6.0					
SUW	**Suwalki**	**34.13 327**	*e*P	**P**	**22 04 35.5**	**-0.4**
	comp=Z,214nm,1.1s,mb6.0					
SUW	**Suwalki**	**34.13 327**	⇑ *e*P	**P**	**22 04 35.4**	**-0.5**
	comp=Z,0.2nm,1.2s					
WDD	**Wield Dalam**	**34.15 293**	*e*P	**P**	**22 04 36.4**	**0.0**
	comp=Z,69nm,1.1s,mb5.5					
WDD	**Wield Dalam**	**34.15 293**	*e*P	**P**	**22 04 36.4**	**+0.1**
	comp=Z,69nm,1.1s,mb5.5					
CSSN	**Cassano Irpino**	**34.21 302**	P	**P**	**22 04 37.8**	**+1.1**
CSSN	**Cassano Irpino**	**34.21 302**	P	**P**	**22 04 37.8**	**+1.1**
FG2	**Serracapriola**	**34.26 303**	P	**P**	**22 04 38.4**	**+1.2**
FG2	**Serracapriola**	**34.26 303**	P	**P**	**22 04 38.4**	**+1.2**
SISC	**Sisak**	**34.27 310**	P	**P**	**22 04 37.6**	**+0.4**
SISC	**Sisak**	**34.27 310**	*i* P	**P**	**22 04 37.6**	**+0.4**
SISC	**Sisak**	**34.27 310**	*i* P	**P**	**22 04 37.6**	**+0.4**
MRB1	**Monte Rocchett**	**34.29 302**	P	**P**	**22 04 39.0**	**+1.6**
MRB1	**Monte Rocchett**	**34.29 302**	P	**P**	**22 04 39.0**	**+1.6**
BEHE	**Becsehely**	**34.31 312**	⇑ *e*P	**P**	**22 04 38.4**	**+0.9**
PSB1	**Pescosannita**	**34.42 302**	P	**P**	**22 04 39.8**	**+1.2**
PSB1	**Pescosannita**	**34.42 302**	P	**P**	**22 04 39.8**	**+1.2**
CIGN	**Sant'Elia a Pi**	**34.42 303**	P	**P**	**22 04 39.9**	**+1.3**
CIGN	**Sant'Elia a Pi**	**34.42 303**	P	**P**	**22 04 39.9**	**+1.3**
KOGS	**Kog**	**34.65 312**	*i* P	**P**	**22 04 40.7**	**+0.3**
KOGS	**Kog**	**34.65 312**	*i* P	**P**	**22 04 40.7**	**+0.3**
ZST	**Bratislava**	**34.69 315**	*e*P	pP	22 04 57.3	+5.4
ZST	**Bratislava**	**34.69 315**	*e*pP	pP	22 04 57.3	+5.4
OKC	**Ostrava-Krasne**	**34.70 318**	*e*P	**P**	**22 04 40.7**	**-0.2**
OKC	**Ostrava-Krasne**	**34.70 318**	P	**P**	**22 04 40.7**	**-0.2**
OKC	**Ostrava-Krasne**	**34.70 318**	*e*P	**P**	**22 04 40.7**	**-0.2**
OKC	**Ostrava-Krasne**	**34.70 318**	P	**P**	**22 04 40.7**	**-0.2**
RAC	**Raciborz**	**34.77 319**	*e*P	**P**	**22 04 41.5**	**0.0**
RAC	**Raciborz**	**34.77 319**	*e*P	**P**	**22 04 41.5**	**0.0**
SOP	**Sopron**	**34.85 314**	⇑ *e*P	**P**	**22 04 42.2**	**0.0**
MIDA	**Miranda**	**34.90 303**	P	**P**	**22 04 43.8**	**+1.1**
MIDA	**Miranda**	**34.90 303**	P	**P**	**22 04 43.8**	**+1.1**
LUMB	**Murzuk**	**34.93 276**	*e*S	**S**	**22 10 13.0**	**+0.9**
	SNR=152					
RNI2	**Rionero Sannit**	**34.99 303**	P	**P**	**22 04 44.9**	**+1.4**
RNI2	**Rionero Sannit**	**34.99 303**	P	**P**	**22 04 44.9**	**+1.4**
MORC	**Moravsky Berou**	**35.03 318**	*e*P	**P**	**22 04 43.5**	**-0.2**
	comp=Z,81nm,1.4s,mb5.5					
MORC	**Moravsky Berou**	**35.03 318**	⇑ *i*P	**P**	**22 04 43.7**	**0.0**
MORC	**Moravsky Berou**	**35.03 318**	*e*P	**P**	**22 04 43.5**	**-0.2**
BOJS	**Bojanci**	**35.04 310**	*i* P	**P**	**22 04 44.2**	**+0.4**
BOJS	**Bojanci**	**35.04 310**	*i* P	**P**	**22 04 44.2**	**+0.4**
RFI	**Roccamonfina**	**35.05 302**	P	**P**	**22 04 44.9**	**+0.9**
RFI	**Roccamonfina**	**35.05 302**	P	**P**	**22 04 44.9**	**+0.9**
NVLJ	**Novalja**	**35.06 308**	P	**P**	**22 04 42.8**	**-1.2**
NVLJ	**Novalja**	**35.06 308**	*i* P	**P**	**22 04 42.8**	**-1.2**
NVLJ	**Novalja**	**35.06 308**	*i* P	**P**	**22 04 42.8**	**-1.2**
INTR	**Introdacqua**	**35.22 304**	P	**P**	**22 04 46.3**	**+0.8**
INTR	**Introdacqua**	**35.22 304**	P	**P**	**22 04 46.3**	**+0.8**
SDI	**San Donato**	**35.24 303**	P	**P**	**22 04 46.0**	**+0.3**
ARSA	**Arzberg**	**35.37 313**	P	**P**	**22 04 46.9**	**+0.2**
ARSA	**Arzberg**	**35.37 313**	*i* P	**P**	**22 04 47.0**	**+0.3**
	comp=Z,55nm,1.6s,mb5.2,SNR=18					
ARSA	**Arzberg**	**35.37 313**	P	**P**	**22 04 46.9**	**+0.2**
CONA	**Conrad Observa**	**35.38 314**	*i* P	**P**	**22 04 46.7**	**0.0**
	comp=Z,76nm,1.5s,mb5.4,SNR=24					
CONA	**Conrad Observa**	**35.38 314**	P	**P**	**22 04 46.7**	**0.0**
	comp=Z,76nm,1.5s,mb5.4,SNR=24					
VENT	**Ventotene**	**35.40 301**	P	**P**	**22 04 47.5**	**+0.5**
VENT	**Ventotene**	**35.40 301**	P	**P**	**22 04 47.5**	**+0.5**
VVLD	**Villa Vallelon**	**35.41 303**	P	**P**	**22 04 47.6**	**+0.5**
VVLD	**Villa Vallelon**	**35.41 303**	P	**P**	**22 04 47.6**	**+0.5**
VRAC	**Vranov**	**35.42 317**	P	**P**	**22 04 47.4**	**+0.4**
VRAC	**Vranov**	**35.42 317**	P	**P**	**22 04 47.3**	**+0.2**
	comp=Z,29nm,0.8s,mb5.3,baz=109,slow=8.6,SNR=59					
VRAC			LR	LR	22 21 30.2	
	comp=Z,681nm,18.8s,MS4.4,baz=112,slow=40					
VRAC	**Vranov**	**35.42 317**	⇑ *i*P	**P**	**22 04 47.2**	**+0.2**
VRAC	**Vranov**	**35.42 317**	*e*P	**P**	**22 04 47.1**	**+0.1**
PERS	**Pernice**	**35.45 312**	*i* P	**P**	**22 04 47.3**	**0.0**
PERS	**Pernice**	**35.45 312**	*i* P	**P**	**22 04 47.3**	**-0.1**
SOKA	**Soboth**	**35.52 312**	⇑ *i*P	**P**	**22 04 47.9**	**0.0**
	comp=Z,23nm,1.1s,mb5.0					
SOKA	**Soboth**	**35.52 312**	P	**P**	**22 04 47.9**	**0.0**
	comp=Z,23nm,1.1s,mb5.0					
OFFI	**Offida**	**35.55 305**	P	**P**	**22 04 50.0**	**+1.8**
OFFI	**Offida**	**35.55 305**	P	**P**	**22 04 50.0**	**+1.8**
VSU	**Vasula**	**35.56 335**	P	**P**	**22 04 48.2**	**0.0**
PTQR	**Pietraquaria**	**35.59 303**	P	**P**	**22 04 49.8**	**+1.1**
PTQR	**Pietraquaria**	**35.59 303**	P	**P**	**22 04 49.8**	**+1.1**
GUAR	**Guarcino**	**35.62 303**	P	**P**	**22 04 48.5**	**-0.4**
GUAR	**Guarcino**	**35.62 303**	P	**P**	**22 04 48.5**	**-0.4**
AQU	**L'Aquila**	**35.65 304**	*e*P	**P**	**22 04 50.4**	**+1.2**
	comp=Z,166nm,1.1s,mb5.9					
AQU	**L'Aquila**	**35.65 304**	⇑ *i*P	**P**	**22 04 50.2**	**+1.1**
AQU	**L'Aquila**	**35.65 304**	⇑ *i*P	**P**	**22 04 50.2**	**+1.1**
LJU	**Ljubljana**	**35.67 310**	*e*P	**P**	**22 04 49.8**	**+0.5**
LJU			*e*PP	PP	22 06 15.6	+4.8
LJU			*e*PcP	PcP	22 07 17.3	+0.3
LJU	**Ljubljana**	**35.67 310**	*e*P	**P**	**22 04 49.8**	**+0.5**
AOI	**Ancona**	**35.73 306**	P	**P**	**22 04 50.2**	**+0.4**
AOI	**Ancona**	**35.73 306**	P	**P**	**22 04 50.2**	**+0.4**
OBKA	**Obir**	**35.79 311**	P	**P**	**22 04 51.0**	**+0.7**
OBKA	**Obir**	**35.79 311**	⇑ *i*P	**P**	**22 04 50.4**	**+0.1**
	comp=Z,42nm,1.4s,mb5.2,SNR=11					
OBKA	**Obir**	**35.79 311**	P	**P**	**22 04 50.4**	**+0.1**
	comp=Z,42nm,1.4s,mb5.2,SNR=11					
SKDS	**Skadanscina**	**35.89 310**	*i* P	**P**	**22 04 50.6**	**-0.5**
NRCA	**Norcia**	**35.94 305**	P	**P**	**22 04 52.7**	**+1.1**
NRCA	**Norcia**	**35.94 305**	P	**P**	**22 04 52.7**	**+1.1**
CING	**Cingoli**	**35.98 306**	P	**P**	**22 04 52.6**	**+0.6**
CING	**Cingoli**	**35.98 306**	P	**P**	**22 04 52.6**	**+0.6**
DPC	**Dobruska-Polom**	**35.98 318**	*e*P	**P**	**22 04 51.9**	**0.0**
DPC	**Dobruska-Polom**	**35.98 318**	P	**P**	**22 04 51.5**	**-0.4**
DPC	**Dobruska-Polom**	**35.98 318**	*e*P	**P**	**22 04 51.9**	**0.0**
DPC	**Dobruska-Polom**	**35.98 318**	P	**P**	**22 04 51.5**	**-0.4**
RDP	**Rocca di Papa**	**36.06 303**	P	**P**	**22 04 53.4**	**+0.7**
RDP	**Rocca di Papa**	**36.06 303**	P	**P**	**22 04 53.4**	**+0.7**
MTCE	**Montecelio**	**36.08 303**	P	**P**	**22 04 52.8**	**0.0**
MTCE	**Montecelio**	**36.08 303**	P	**P**	**22 04 52.8**	**0.0**
TREC	**Trest**	**36.08 316**	*e*P	**P**	**22 04 53.0**	**+0.2**
TREC	**Trest**	**36.08 316**	*e*P	**P**	**22 04 53.0**	**+0.2**
VOY	**Vojsko**	**36.09 310**	⇑ *e*P	**P**	**22 04 53.0**	**+0.1**
VOY	**Vojsko**	**36.09 310**	⇑ *e*P	**P**	**22 04 53.0**	**+0.1**
TRI	**Trieste**	**36.10 310**	*e*P	**P**	**22 04 52.5**	**-0.5**
TRI			pmax	pmax		
	comp=Z,60nm,0.9s,mb5.5					
TRI	**Trieste**	**36.10 310**	*e*P	**P**	**22 04 52.5**	**-0.4**
	comp=Z,60nm,0.9s,mb5.5					
TRI	**Trieste**	**36.10 310**	*e*P	**P**	**22 04 52.5**	**-0.5**
	comp=Z,60nm,0.9s,mb5.5					
KSP	**Ksiaz**	**36.20 319**	*e*P	**P**	**22 04 53.5**	**-0.2**
	comp=Z,300nm,2.1s,mb5.8					
KSP			LMZ		22 20 20.0	
	comp=Z,1μm,25.6s					
KSP	**Ksiaz**	**36.20 319**	P	**P**	**22 04 55.3**	**+1.6**
KSP	**Ksiaz**	**36.20 319**	⇑ *e*P	**P**	**22 04 53.4**	**-0.3**
UPC	**Upice**	**36.23 318**	*e*P	**P**	**22 04 53.9**	**-0.1**
UPC	**Upice**	**36.23 318**	*e*P	**P**	**22 04 53.9**	**-0.1**
CADS	**Cadrg**	**36.25 311**	*e*P	**P**	**22 04 54.1**	**-0.1**
CADS	**Cadrg**	**36.25 311**	*e*P	**P**	**22 04 54.1**	**-0.1**
FSSB	**Fossombrone**	**36.34 306**	P	**P**	**22 04 56.1**	**+1.1**
FSSB	**Fossombrone**	**36.34 306**	P	**P**	**22 04 56.1**	**+1.1**
PESA	**Pesaro**	**36.34 307**	P	**P**	**22 04 56.7**	**+1.6**
PESA	**Pesaro**	**36.34 307**	P	**P**	**22 04 56.7**	**+1.6**
MOA	**Molln**	**36.37 313**	P	**P**	**22 04 55.2**	**0.0**
MOA	**Molln**	**36.37 313**	*i* P	**P**	**22 04 55.2**	**0.0**
	comp=Z,47nm,0.9s,mb5.4,SNR=34					
MOA	**Molln**	**36.37 313**	P	**P**	**22 04 55.2**	**0.0**
	comp=Z,47nm,0.9s,mb5.4,SNR=34					
MYKA	**Terra Mystica**	**36.42 311**	⇓ *i*P	**P**	**22 04 55.7**	**0.0**
	comp=Z,28nm,0.9s,mb5.2					
MYKA	**Terra Mystica**	**36.42 311**	P	**P**	**22 04 55.7**	**0.0**
	comp=Z,28nm,0.9s,mb5.2					
PIEI	**Pieia**	**36.48 306**	P	**P**	**22 04 57.3**	**+1.0**
PIEI	**Pieia**	**36.48 306**	P	**P**	**22 04 57.3**	**+1.0**
RSM	**Repubblica di**	**36.62 306**	P	**P**	**22 04 59.3**	**+1.9**
TOLF	**Tolfa**	**36.63 303**	P	**P**	**22 04 57.9**	**+0.3**
TOLF	**Tolfa**	**36.63 303**	P	**P**	**22 04 57.9**	**+0.3**
ALAS	**Alassa**	**36.65 288**	*i* P	**P**	**22 04 59.1**	**+1.3**
	SNR=154					
BADI	**Badiali**	**36.69 306**	P	**P**	**22 04 58.7**	**+0.7**
BADI	**Badiali**	**36.69 306**	P	**P**	**22 04 58.7**	**+0.7**
GKP	**Gorka Klasztor**	**36.73 323**	*e*P	**P**	**22 04 57.8**	**-0.4**
GKP			LMZ		22 20 56.7	
	comp=Z,600nm,24.0s					
GKP	**Gorka Klasztor**	**36.73 323**	P	**P**	**22 04 58.2**	**0.0**
GKP	**Gorka Klasztor**	**36.73 323**	P	**P**	**22 04 58.2**	**0.0**
KBA	**Koelnbreinsper**	**36.74 312**	*i* P	**P**	**22 04 58.4**	**0.0**
	comp=Z,98nm,1.4s,mb5.4,SNR=61					
KBA	**Koelnbreinsper**	**36.74 312**	P	**P**	**22 04 58.4**	**0.0**
	comp=Z,98nm,1.4s,mb5.4,SNR=61					
PRU	**Pruhonice**	**36.91 317**	*e*P	**P**	**22 04 59.7**	**-0.1**
PRU	**Pruhonice**	**36.91 317**	*e*P	**P**	**22 04 59.7**	**-0.1**
PRU			*ex*	x	22 05 04.4	
PRU	**Pruhonice**	**36.91 317**	*e*P	**P**	**22 04 59.7**	**-0.1**
GEC2	**GERESS Array S**	**37.04 315**	*e*P	**P**	**22 05 00.5**	**-0.4**
	comp=Z,71nm,1.7s,mb5.2					
GEC2			*e*PcP	PcP	22 07 21.4	+0.4
GEC2	**GERESS Array S**	**37.04 315**	*e*P	**P**	**22 05 00.5**	**-0.4**
GEC2			*e*		22 07 21.4	
GEC2			pmax	pmax		
	comp=Z,71nm,1.7s,mb5.2					
GEC2	**GERESS Array S**	**37.04 315**	*e*P	**P**	**22 05 00.5**	**-0.4**
	comp=Z,71nm,1.7s,mb5.2					
GERES	**GERESS Array B**	**37.04 315**	P	**P**	**22 05 00.4**	**-0.5**
	comp=Z,11nm,0.8s,mb4.7,baz=118,slow=8.0,SNR=64					
GERES			PcP	PcP	22 07 20.4	-0.6
	comp=Z,3.7nm,0.8s,baz=125,slow=3.9,SNR=4.7					
GERES			ScP	ScP	22 11 08.2	+3.3
	comp=Z,0.5nm,0.7s,baz=86,slow=5.5,SNR=3.9					
GERES	**GERESS Array B**	**37.04 315**	P	**P**	**22 05 00.4**	**-0.5**
	comp=Z,11nm,0.8s,mb4.7					
GERES	**GERESS Array B**	**37.04 315**	PcP	PcP	22 07 20.4	-0.6
PVCC	**Panska Ves**	**37.09 318**	*e*P	**P**	**22 05 01.0**	**-0.3**
PVCC	**Panska Ves**	**37.09 318**	P	**P**	**22 05 00.8**	**-0.5**
PVCC	**Panska Ves**	**37.09 318**	*e*P	**P**	**22 05 01.0**	**-0.3**
PVCC	**Panska Ves**	**37.09 318**	*e*P	**P**	**22 05 01.0**	**-0.3**
ABTA	**Abfaltersbach**	**37.20 311**	*i* P	**P**	**22 05 02.3**	**0.0**
	comp=Z,47nm,0.9s,mb5.3,SNR=43					
ABTA	**Abfaltersbach**	**37.20 311**	P	**P**	**22 05 02.3**	**0.0**
	comp=Z,47nm,0.9s,mb5.3,SNR=43					
KHC	**Kasperske Hory**	**37.20 315**	*e*P	**P**	**22 05 01.8**	**-0.5**
KHC			*e*		22 06 25.3	
KHC			*e*		22 07 21.5	
KHC			pmax	pmax		
	comp=Z,168nm,1.4s,mb5.7					
KHC	**Kasperske Hory**	**37.20 315**	*e*P	**P**	**22 05 01.8**	**-0.5**
	comp=Z,168nm,1.4s,mb5.7					
KHC			*e*PP	PP	22 06 25.2	-2.3
KHC			*e*PcP	PcP	22 07 21.5	0.0
KHC	**Kasperske Hory**	**37.20 315**	*e*P	**P**	**22 05 02.1**	**-0.2**
KHC			*ex*	x	22 07 21.5	
KHC	**Kasperske Hory**	**37.20 315**	*e*P	**P**	**22 05 01.8**	**-0.5**
	comp=Z,168nm,1.4s,mb5.7					
KHC	**Kasperske Hory**	**37.20 315**	*e*PP	PP	22 06 25.2	-2.3
KHC	**Kasperske Hory**	**37.20 315**	*e*PcP	PcP	22 07 21.5	0.0
RJOB	**Jochberg**	**37.28 313**	*e*P	**P**	**22 05 02.6**	**-0.4**
	comp=Z,63nm,1.6s,mb5.2					
RJOB			*e*PP	PP	22 06 24.6	-3.8
RJOB			*e*PcP	PcP	22 07 21.2	-0.6
BRG	**Berggiesshubel**	**37.58 318**	*e*P	**P**	**22 05 05.0**	**-0.5**
	comp=Z,52nm,1.3s,mb5.1					
BRG			*e*PcP	PcP	22 07 22.0	-0.6
BRG	**Berggiesshubel**	**37.58 318**	*i* P	**P**	**22 05 05.2**	**-0.3**
	comp=Z,38nm,1.0s,mb5.1					
BRG			PP	PP	22 06 29.0	-2.6
BRG			*e*		22 07 21.9	
	comp=Z,13nm,1.3s					
BRG			S	**S**	**22 10 55.0**	**+3.0**
BRG						
	comp=N,782nm,20.3s					
BRG						
	comp=E,421nm,14.5s					
BRG						
	comp=Z,528nm,16.9s					
BRG	**Berggiesshubel**	**37.58 318**	*i* P	**P**	**22 05 05.2**	**-0.3**
BRG					22 06 29.0	
BRG			*e*		22 07 21.9	
BRG			S	**S**	**22 10 55.0**	**+3.0**
BRG			pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9					
BRG			MLR	MLR		
	comp=N,468nm,20.3s					
BRG			MLR	MLR		
	comp=E,252nm,14.5s					
BRG			MLR	MLR		
	comp=Z,316nm,16.9s,MS4.2					
BRG	**Berggiesshubel**	**37.58 318**	*i* P	**P**	**22 05 05.2**	**-0.3**
	comp=Z,23nm,1.0s,mb4.9					
BRG	**Berggiesshubel**	**37.58 318**	*e*PcP	PcP	22 07 21.9	-0.7
	comp=Z,468nm,20.3s					
JOF	**Joensuu**	**37.62 343**	*e*P	**P**	**22 05 04.2**	**-1.4**
JOF			pmax	pmax		
	comp=Z,46nm,0.7s,mb5.3					
JOF	**Joensuu**	**37.62 343**	*e*p	**P**	**22 05 04.2**	**-1.4**
	comp=Z,46nm,0.7s,mb5.3					
JOF	**Joensuu**	**37.62 343**	*e*P	**P**	**22 05 04.2**	**-1.4**
	comp=Z,46nm,0.7s,mb5.3					
WET	**Wettzell**	**37.65 315**	*e*P	**P**	**22 05 05.2**	**-0.8**
	comp=Z,68nm,1.5s,mb5.2					
WET			*e*PcP	PcP	22 07 22.8	-0.1
WET	**Wettzell**	**37.65 315**	*e*P	**P**	**22 05 05.2**	**-0.8**
WET			*e*		22 07 22.8	
WET			pmax	pmax		
	comp=Z,68nm,1.5s,mb5.2					
WET	**Wettzell**	**37.65 315**	*e*P	**P**	**22 05 05.2**	**-0.8**
	comp=Z,68nm,1.5s,mb5.2					
WTTA	**Wattenberg**	**37.91 312**	*i* P	**P**	**22 05 08.0**	**-0.3**
	comp=Z,140nm,1.2s,mb5.6,SNR=34					
WTTA	**Wattenberg**	**37.91 312**	P	**P**	**22 05 08.0**	**-0.3**
	comp=Z,140nm,1.2s,mb5.6,SNR=34					
FINES	**FINESS Array B**	**37.97 338**	P	**P**	**22 05 08.7**	**+0.1**
FINES		

comp=Z,51nm,1.4s,mb5.0,SNR=6.5
OSPF L'Ospedale 38.67 302⇑ eP P 22 05 14.8 0.0
OSPF L'Ospedale 38.67 302⇑ eP P 22 05 14.8 0.0
OSPF L'Ospedale 38.67 302⇑ eP P 22 05 14.8 0.0
FUORN Ofenpass-Fuorn 38.68 310⇑ iP P 22 05 15.1 +0.3
comp=Z,334nm,2.5s,mb5.6
FUORN Ofenpass-Fuorn 38.68 310⇑ iP P 22 05 15.1 +0.3
comp=Z,334nm,2.5s,mb5.6
BERNI Berninapass 38.80 310⇑ iP P 22 05 16.2 +0.4
comp=Z,364nm,1.8s,mb5.8
BERNI Berninapass 38.80 310⇑ iP P 22 05 16.2 +0.4
comp=Z,364nm,1.8s,mb5.8
BSD Bornholm Skovb 38.80 325⇑ iP P 22 05 14.1 -1.6
BSD pmax pmax
comp=Z,79nm,0.8s,mb5.5
BSD MLR MLR
comp=Z,300nm,19.0s,MS4.1
BSD Bornholm Skovb 38.80 325⇑ iP P 22 05 14.1 -1.6
comp=Z,79nm,0.8s,mb5.5
BSD
comp=Z,290nm,19.0s
BSD Bornholm Skovb 38.80 325 i P P 22 05 14.1 -1.6
comp=Z,300nm,19.0s
LGHD Ghdames 38.82 284 i P P 22 05 17.0 +0.8
SNR=154
GRA1 Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
comp=Z,182nm,1.3s,mb5.7
GRA1 LR LR
comp=Z,300nm,22.0s,MS4.1
GRA1 Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
comp=Z,300nm,22.0s
GRF Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
comp=Z,182nm,1.3s,mb5.7
GRF eL 22 22 19.9
comp=Z,329nm,22.0s
GRF Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
GRF pmax pmax
comp=Z,182nm,1.3s,mb5.7
GRF MLR MLR
comp=Z,300nm,22.0s,MS4.1
GRF Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
GRF pmax pmax
comp=Z,182nm,1.3s,mb5.7
GRF MLR MLR
comp=Z,300nm,22.0s,MS4.1
GRF Grafenberg Arr 38.84 315 eP P 22 05 15.9 -0.2
comp=Z,300nm,22.0s
MOX Moxa 38.89 317 eP P 22 05 16.2 -0.3
comp=Z,44nm,1.3s,mb5.0
MOX ePcP PcP 22 07 27.0 +0.3
MOX Moxa 38.89 317 eP P 22 05 16.2 -0.3
MOX eS S 22 11 20.0 +8.2
MOX pmax pmax
comp=Z,52nm,1.5s,mb5.0
MOX MLR MLR
comp=Z,300nm,23.0s,MS4.0
MOX Moxa 38.89 317 eP P 22 05 16.2 -0.3
comp=Z,52nm,1.5s,mb5.0
MOX eS S 22 11 20.0 +8.2
MOX LR LR
comp=Z,300nm,23.0s,MS4.0
MOX Moxa 38.89 317 eP P 22 05 16.2 -0.3
comp=Z,52nm,1.5s,mb5.0
PGF Pioggiola 38.90 304⇑ iP P 22 05 16.4 -0.3
comp=Z,138nm,1.1s,mb5.3
PGF Pioggiola 38.90 304⇑ iP P 22 05 16.4 -0.3
PGF Pioggiola 38.90 304⇑ iP P 22 05 16.4 -0.3
comp=Z,69nm,1.1s,mb5.3
DAVOX Davos/Dischmat 38.97 310⇑ iP P 22 05 17.1 -0.1
comp=Z,198nm,1.6s,mb5.6
DAVOX Davos/Dischmat 38.97 310 P P 22 05 17.1 -0.1
comp=Z,41nm,0.8s,mb5.2,baz=109,slow=7.1,SNR=38
DAVOX Davos/Dischmat 38.97 310⇑ iP P 22 05 17.1 -0.1
comp=Z,198nm,1.6s,mb5.6
UBR Ueberruh 39.02 312 P P 22 05 17.2 -0.4
UBR Ueberruh 39.02 312 P P 22 05 17.2 -0.4
DAVOS Davos 39.04 310 P P 22 05 17.1 -0.7
DAVOS Davos 39.04 310 P P 22 05 17.1 -0.7
DAVA Damuels 39.08 311 P P 22 05 17.6 -0.5
DAVA Damuels 39.08 311 i P P 22 05 17.7 -0.5
comp=Z,148nm,0.8s,mb5.7,SNR=70
DAVA Damuels 39.08 311 P P 22 05 17.6 -0.5
GTA Gaotai 39.16 61 ⇑P P 22 05 20.0 +1.1
GTA pP pP 22 05 32.4 +2.2
GTA sP sP 22 05 38.3 +3.3
GTA PP PP 22 06 55.0 +5.9
GTA S S 22 11 17.7 +1.5
GTA sS sS 22 11 36.8 +1.9
GTA SS SS 22 14 03.6 -6.3
GTA pmax pmax
comp=Z,46nm,1.1s,mb5.1
GTA pmax pmax
comp=Z,400nm,5.4s
GTA LR LR
comp=N,1μm,17.1s,MS4.8
GTA LR LR
comp=E,620nm,19.5s,MS4.8
GTA LR LR
comp=Z,1μm,18.9s,MS4.7
VDL Val di Lei 39.20 310⇑ iP P 22 05 19.1 0.0
comp=Z,245nm,1.7s,mb5.7
VDL Val di Lei 39.20 310⇑ iP P 22 05 19.1 0.0
comp=Z,245nm,1.7s,mb5.7
LIENZ Kamor/St.Gall 39.34 311⇑ iP P 22 05 19.7 -0.6
comp=Z,449nm,2.1s,mb5.8
LIENZ Kamor/St.Gall 39.34 311⇑ iP P 22 05 19.7 -0.6
comp=Z,449nm,2.1s,mb5.8
PLONS Plons/SG 39.36 311⇑ iP P 22 05 19.7 -0.8
comp=Z,289nm,1.2s,mb5.9
MUGIO Muggio 39.37 309⇑ iP P 22 05 19.8 -0.8
comp=Z,323nm,2.2s,mb5.7
MUGIO Muggio 39.37 309⇑ iP P 22 05 19.8 -0.8
comp=Z,323nm,2.2s,mb5.7
RGN Rugen 39.38 323 eP P 22 05 20.2 -0.3
comp=Z,205nm,1.1s,mb5.8
RGN Rugen 39.38 323 eP P 22 05 20.2 -0.3
comp=Z,205nm,1.1s,mb5.8
LLS Linth-Limmern 39.57 310⇑ iP P 22 05 21.7 -0.5
comp=Z,227nm,1.1s,mb5.8
BUCH Bad Urach 39.70 313 P P 22 05 22.7 -0.5
WEIN Weingarten 39.73 311⇑ iP P 22 05 23.0 -0.5
WEIN Weingarten 39.73 311⇑ iP P 22 05 23.0 -0.5
WILA Wila 39.75 311⇑ iP P 22 05 23.3 -0.4
comp=Z,551nm,1.4s,mb6.1
WILA Wila 39.75 311⇑ iP P 22 05 23.3 -0.4
comp=Z,551nm,1.4s,mb6.1
SIND Sindeldorf 39.76 314 P P 22 05 23.2 -0.6
GUT Gutenstein 39.76 312 P P 22 05 23.0 -0.8
SISB Singen-Schiene 39.77 312 P P 22 05 23.6 -0.3
STEIN Stein am Rhein 39.83 312⇑ iP P 22 05 23.8 -0.6
STEIN Stein am Rhein 39.83 312⇑ iP P 22 05 23.8 -0.6
MUO Muotathal 39.84 310⇑ iP P 22 05 24.0 -0.5
comp=Z,572nm,2.0s,mb6.0
MUO Muotathal 39.84 310⇑ iP P 22 05 24.0 -0.5
comp=Z,572nm,2.0s,mb6.0
ABSA Djebel Ababsia 39.86 294 P P 22 05 26.4 +1.6
ABSA Djebel Ababsia 39.86 294 P P 22 05 26.4 +1.6
STU Stuttgart 39.88 313 eP P 22 05 23.4 -1.3
comp=Z,33nm,1.2s,mb4.9
CMAH Djebel Manchou 39.89 294 P P 22 05 26.0 +1.0
CMAH Djebel Manchou 39.89 294 P P 22 05 26.0 +1.0
UBBA Unterbreizbach 39.92 317 eP P 22 05 24.8 -0.3
comp=Z,60nm,1.4s,mb5.1
UBBA ePP PP 22 06 53.7 -3.5
ZUR Degenried 39.96 311⇑ iP P 22 05 24.8 -0.7
comp=Z,583nm,1.2s,mb6.2
ZUR Degenried 39.96 311⇑ iP P 22 05 24.8 -0.7
comp=Z,583nm,1.2s,mb6.2
BNALP Bannalp 39.97 310⇑ iP P 22 05 25.0 -0.5
comp=Z,304nm,1.7s,mb5.8
BNALP Bannalp 39.97 310⇑ iP P 22 05 25.0 -0.5
comp=Z,304nm,1.7s,mb5.8
CLZ Clausthal 40.02 318 eP P 22 05 26.2 +0.3
comp=Z,229nm,1.3s,mb5.8
CLZ ePcP PcP 22 07 30.4 +0.1
CLZ Clausthal 40.02 318 eP P 22 05 26.2 +0.3
CLZ e 22 07 30.4
CLZ pmax pmax
comp=Z,229nm,1.3s,mb5.8
CLZ Clausthal 40.02 318 eP P 22 05 26.2 +0.3
CLZ ePcP PcP 22 07 30.4 +0.1
CLZ Clausthal 40.02 318 eP P 22 05 26.2 +0.3
comp=Z,229nm,1.3s,mb5.8
SLE Schleitheim 40.10 312⇑ iP P 22 05 25.6 -1.0
comp=Z,296nm,2.9s,mb5.5
SLE Schleitheim 40.10 312⇑ iP P 22 05 25.6 -1.0
comp=Z,296nm,2.9s,mb5.5
LBG Lerchenberg 40.11 313 P P 22 05 25.9 -0.8
SAOF Saorge 40.12 306⇑ eP P 22 05 26.7 -0.1
SAOF Saorge 40.12 306⇑ eP P 22 05 26.7 -0.1
HASLI Hasliberg/Brie 40.13 310⇑ iP P 22 05 25.9 -1.0
comp=Z,320nm,1.6s,mb5.8
HASLI Hasliberg/Brie 40.13 310⇑ iP P 22 05 25.9 -1.0
comp=Z,320nm,1.6s,mb5.8
SBF Sospel 40.19 305⇑ iP P 22 05 27.2 -0.2
comp=Z,300nm,0.9s,mb5.7
SBF Sospel 40.19 305⇑ iP P 22 05 27.2 -0.2
SBF pmax pmax
comp=Z,150nm,0.9s,mb5.7
SBF Sospel 40.19 305⇑ iP P 22 05 27.2 -0.2
comp=Z,150nm,0.9s,mb5.7
SBF Sospel 40.19 305⇑ iP P 22 05 27.2 -0.2
comp=Z,150nm,0.9s,mb5.7
AUTN L'Aution 40.21 306⇑ eP P 22 05 28.0 +0.4
AUTN L'Aution 40.21 306⇑ eP P 22 05 28.0 +0.4
LUCF Luceram 40.26 305⇑ eP P 22 05 28.0 0.0
LUCF Luceram 40.26 305⇑ eP P 22 05 28.0 0.0
SULZ Cheisacher 40.31 311⇑ iP P 22 05 27.4 -0.9
comp=Z,631nm,3.1s
SULZ Cheisacher 40.31 311⇑ iP P 22 05 27.4 -0.9
comp=Z,631nm,3.1s
COP Copenhagen 40.32 324⇑ iP P 22 05 28.8 +0.5
COP e 22 14 32.6
COP pmax pmax
comp=Z,48nm,0.8s,mb5.3
COP MLR MLR
comp=Z,170nm,20.0s,MS3.9
COP Copenhagen 40.32 324⇑ iP P 22 05 28.8 +0.5
comp=Z,48nm,0.8s,mb5.3
COP e 22 14 32.6
COP
comp=Z,170nm,20.0s
COP Copenhagen 40.32 324 i P P 22 05 28.8 +0.5
comp=Z,48nm,0.8s,mb5.3
TOD Tromm 40.33 314 P P 22 05 28.3 -0.2
BFO Black Forest 40.33 312 P P 22 05 28.0 -0.5
comp=Z,108nm,0.7s,mb5.7,SNR=6.8
BFO Black Forest 40.33 312 eP P 22 05 27.1 -1.4
comp=Z,25nm,1.4s,mb4.8
BFO Black Forest 40.33 312 eP P 22 05 27.1 -1.4
BFO pmax pmax
comp=Z,25nm,1.4s,mb4.8
BFO Black Forest 40.33 312 eP P 22 05 27.1 -1.4
comp=Z,25nm,1.4s,mb4.8
TOUF Mont Tournerai 40.34 306⇑ eP P 22 05 29.0 +0.3
TOUF Mont Tournerai 40.34 306⇑ eP P 22 05 29.0 +0.3
SWS Schriesheim-Wi 40.37 314 P P 22 05 28.3 -0.5
NRDL Niedersach Rie 40.38 319 eP P 22 05 29.6 +0.7
comp=Z,230nm,1.2s,mb5.8
NRDL ePP PP 22 07 04.1 +1.9
NRDL ePcP PcP 22 07 32.1 +0.7
MVIF Mont Vial 40.40 305⇑ eP P 22 05 29.2 +0.1
MVIF Mont Vial 40.40 305⇑ eP P 22 05 29.2 +0.1
LKBD Leukerbad 40.42 309⇑ iP P 22 05 28.3 -1.0
LKBD Leukerbad 40.42 309⇑ iP P 22 05 28.3 -1.0
FELD Feldberg im Sc 40.45 312 eP P 22 05 28.5 -1.0
FELD Feldberg im Sc 40.45 312 eP P 22 05 28.5 -1.0
CKFL Kef-Lekhel 40.46 294 P P 22 05 30.9 +1.1
CKFL Kef-Lekhel 40.46 294 P P 22 05 30.9 +1.1
WIMIS Wimmis 40.47 310⇑ iP P 22 05 28.7 -1.0
comp=Z,205nm,0.8s,mb5.9
WIMIS Wimmis 40.47 310⇑ iP P 22 05 28.7 -1.0
comp=Z,205nm,0.8s,mb5.9
DIX Grande Dixence 40.52 309⇑ iP P 22 05 29.6 -0.5
comp=Z,168nm,1.1s,mb5.6
DIX Grande Dixence 40.52 309⇑ iP P 22 05 29.6 -0.5
comp=Z,168nm,1.1s,mb5.6
KIZ Kirchzarten 40.52 312 P P 22 05 29.3 -0.8
KIZ Kirchzarten 40.52 312 P P 22 05 29.3 -0.8
BALST Balsthal 40.55 311⇑ iP P 22 05 29.7 -0.6
comp=Z,558nm,1.5s,mb6.0
BALST Balsthal 40.55 311⇑ iP P 22 05 29.7 -0.6
comp=Z,558nm,1.5s,mb6.0
CALN Calern 40.57 305⇑ eP P 22 05 30.6 0.0
CALN Calern 40.57 305⇑ eP P 22 05 30.6 0.0
CASM Ain Smara 40.66 294 P P 22 05 32.5 +1.1
CASM Ain Smara 40.66 294 P P 22 05 32.5 +1.1
BBS Basel-Blauen 40.69 311 P P 22 05 31.3 -0.2
BBS Basel-Blauen 40.69 311 P P 22 05 31.3 -0.2
SURF Saint Ours 40.71 306⇑ eP P 22 05 32.1 +0.4
SURF Saint Ours 40.71 306⇑ eP P 22 05 32.1 +0.4
KTD Kalmit 40.72 314 eP P 22 05 30.7 -1.0
KTD Kalmit 40.72 314 eP P 22 05 30.7 -1.0
FRF La Foret Royal 40.72 305⇑ iP P 22 05 31.2 -0.6
comp=Z,43nm,0.9s,mb4.8
FRF La Foret Royal 40.72 305⇑ iP P 22 05 31.2 -0.6
FRF pmax pmax
comp=Z,22nm,0.9s,mb4.8
FRF La Foret Royal 40.72 305⇑ iP P 22 05 31.2 -0.6
comp=Z,22nm,0.9s,mb4.8
FRF La Foret Royal 40.72 305⇑ iP P 22 05 31.2 -0.6
comp=Z,22nm,0.9s,mb4.8
CTEI Djebel Teioual 40.73 293 P P 22 05 33.5 +1.5
CTEI Djebel Teioual 40.73 293 P P 22 05 33.5 +1.5
BSEG Bad Segeberg 40.76 321 eP P 22 05 32.2 +0.2
comp=Z,115nm,1.4s,mb5.3
BSEG Bad Segeberg 40.76 321 eP P 22 05 32.2 +0.2
BSEG pmax pmax
comp=Z,115nm,1.4s,mb5.3
BSEG Bad Segeberg 40.76 321 eP P 22 05 32.2 +0.2
BSEG Bad Segeberg 40.76 321 eP P 22 05 32.2 +0.2
comp=Z,115nm,1.4s,mb5.3
MBDF Montbardon 40.77 307⇑ iP P 22 05 31.5 -0.7
comp=Z,150nm,0.7s,mb5.4
MBDF Montbardon 40.77 307⇑ iP P 22 05 31.5 -0.7
MBDF pmax pmax
comp=Z,75nm,0.7s,mb5.4
MBDF Montbardon 40.77 307⇑ iP P 22 05 31.5 -0.7
comp=Z,75nm,0.7s,mb5.4
MBDF Montbardon 40.77 307⇑ iP P 22 05 31.5 -0.7
comp=Z,75nm,0.7s,mb5.4
LIBD Limburg 40.77 312 eP P 22 05 31.3 -0.8
LIBD Limburg 40.77 312 eP P 22 05 31.3 -0.8
LMR La Mourre 40.80 304⇑ iP P 22 05 31.8 -0.7
comp=Z,29nm,1.0s,mb4.6
LMR La Mourre 40.80 304⇑ iP P 22 05 31.8 -0.7
LMR pmax pmax
comp=Z,15nm,1.0s,mb4.6
LMR La Mourre 40.80 304⇑ iP P 22 05 31.8 -0.7
comp=Z,15nm,1.0s,mb4.6
LMR La Mourre 40.80 304⇑ iP P 22 05 31.8 -0.7
comp=Z,15nm,1.0s,mb4.6
LANF Langenberg 40.82 313⇑ eP P 22 05 31.2 -1.3
LANF Langenberg 40.82 313⇑ eP P 22 05 31.2 -1.3
BOURR Bourrignon 40.87 311⇑ iP P 22 05 32.5 -0.5
comp=Z,574nm,1.9s,mb5.9
BOURR Bourrignon 40.87 311⇑ iP P 22 05 32.5 -0.5
comp=Z,574nm,1.9s,mb5.9
BNI Bardonecchia 40.88 307 eP P 22 05 32.3 -0.8
BNI pmax pmax
comp=Z,143nm,1.1s,mb5.5
BNI Bardonecchia 40.88 307 eP P 22 05 32.3 -0.7
comp=Z,144nm,1.1s,mb5.5
BNI Bardonecchia 40.88 307 eP P 22 05 32.3 -0.8
comp=Z,143nm,1.1s,mb5.5
LPG La Plagne 40.88 308⇑ iP P 22 05 32.6 -0.5
comp=Z,226nm,0.8s,mb5.5
LPG La Plagne 40.88 308⇑ iP P 22 05 32.6 -0.5
LPG pmax pmax
comp=Z,113nm,0.8s,mb5.5
LPG La Plagne 40.88 308⇑ iP P 22 05 32.6 -0.5
comp=Z,113nm,0.8s,mb5.5
LPG La Plagne 40.88 308⇑ iP P 22 05 32.6 -0.5
comp=Z,113nm,0.8s,mb5.5
LPL La Plagne 40.90 308⇑ iP P 22 05 32.6 -0.7
comp=Z,290nm,0.9s,mb5.6
LPL La Plagne 40.90 308⇑ iP P 22 05 32.6 -0.7
LPL pmax pmax
comp=Z,145nm,0.9s,mb5.6
LPL La Plagne 40.90 308⇑ iP P 22 05 32.6 -0.7
comp=Z,145nm,0.9s,mb5.6
LPL La Plagne 40.90 308⇑ iP P 22 05 32.6 -0.7
comp=Z,145nm,0.9s,mb5.6
TORNY Torny/Romont 40.94 310⇑ iP P 22 05 32.9 -0.7
comp=Z,312nm,1.0s,mb5.9
TORNY Torny/Romont 40.94 310⇑ iP P 22 05 32.9 -0.7
comp=Z,312nm,1.0s,mb5.9
MOF Molkenrain 41.02 311⇑ eP P 22 05 33.4 -0.8
MOF Molkenrain 41.02 311⇑ eP P 22 05 33.4 -0.8
CDF Champ du Feu 41.04 312⇑ iP P 22 05 33.0 -1.3
comp=Z,76nm,1.4s,mb4.8
CDF Champ du Feu 41.04 312⇑ iP P 22 05 33.0 -1.3
CDF pmax pmax
comp=Z,38nm,1.4s,mb4.8
CDF Champ du Feu 41.04 312⇑ iP P 22 05 33.0 -1.3
comp=Z,38nm,1.4s,mb4.8
CDF Champ du Feu 41.04 312⇑ iP P 22 05 33.0 -1.3
comp=Z,38nm,1.4s,mb4.8
ECH Echery 41.07 312⇑ eP P 22 05 33.8 -0.8
ECH Echery 41.07 312 eP P 22 05 33.7 -0.9
ECH e 22 07 09.3
ECH pmax pmax
comp=Z,81nm,1.3s,mb5.2
ECH Echery 41.07 312 eP P 22 05 33.7 -1.0
comp=Z,81nm,1.3s,mb5.2
ECH ePP PP 22 07 09.3 -0.5
ECH Echery 41.07 312⇑ eP P 22 05 33.8 -0.8
ECH Echery 41.07 312 ePP PP 22 07 09.3 -0.5
LOMF Lomont 41.13 311⇑ eP P 22 05 34.7 -0.4
LOMF Lomont 41.13 311⇑ eP P 22 05 34.7 -0.4
DFRA Djebel Bou Aff 41.13 294 P P 22 05 37.0 +1.7
DFRA Djebel Bou Aff 41.13 294 P P 22 05 37.0 +1.7
APA Apatity 41.17 348⇑ iP P 22 05 35.0 -0.1
APA i 22 07 13.0
APA i 22 07 29.0
APA i S S 22 11 46.0 +0.6
APA i SS SS 22 14 52.0 +3.0
APA pmax pmax
comp=Z,65nm,1.0s,mb5.2
APA pmax pmax
comp=Z,600nm,3.2s
APA MLR MLR
comp=Z,800nm,17.0s,MS4.7
APA Apatity 41.17 348 i P P 22 05 35.0 -0.1
comp=Z,600nm,3.2s
ABH Alteburg 41.19 315 P P 22 05 35.5 -0.1
ABH Alteburg 41.19 315 P P 22 05 35.5 -0.1
HINF Hinteralfeld 41.20 311⇑ iP P 22 05 34.7 -1.0
comp=Z,130nm,1.3s,mb5.1
HINF Hinteralfeld 41.20 311⇑ iP P 22 05 34.7 -1.0
HINF pmax pmax
comp=Z,65nm,1.3s,mb5.1
HINF Hinteralfeld 41.20 311⇑ iP P 22 05 34.7 -1.0
comp=Z,65nm,1.3s,mb5.1
HINF Hinteralfeld 41.20 311⇑ iP P 22 05 34.7 -1.0
comp=Z,65nm,1.3s,mb5.1
GDM Grand'Maison 41.29 307 eP P 22 05 35.0 -1.5
GDM Grand'Maison 41.29 307 eP P 22 05 35.0 -1.5
BRANT Les Verrieres 41.30 310⇑ iP P 22 05 36.3 -0.2
comp=Z,614nm,2.0s,mb5.9
BRANT Les Verrieres 41.30 310⇑ iP P 22 05 36.3 -0.2
comp=Z,614nm,2.0s,mb5.9
STOF St-Etienne Org 41.30 305 eP P 22 05 36.3 -0.3
STOF St-Etienne Org 41.30 305 eP P 22 05 36.3 -0.3
GIMEL St. Georges / 41.37 309⇑ iP P 22 05 36.8 -0.3
comp=Z,264nm,1.1s,mb5.8
GIMEL St. Georges / 41.37 309⇑ iP P 22 05 36.8 -0.3
comp=Z,264nm,1.1s,mb5.8
BERF Bertagne 41.40 304 eP P 22 05 37.1 -0.3
BERF Bertagne 41.40 304 eP P 22 05 37.1 -0.3
ORIF Oris-en-Rattie 41.42 307 eP P 22 05 35.6 -1.9
comp=Z,55nm,0.9s,mb4.9
ORIF eMLR MLR
comp=Z,857nm,23.0s,MS4.2
ORIF Oris-en-Rattie 41.42 307 eP P 22 05 35.6 -1.9
ORIF pmax pmax
comp=Z,28nm,0.9s,mb4.9
ORIF Oris-en-Rattie 41.42 307 eP P 22 05 35.6 -1.9
comp=Z,28nm,0.9s,mb4.9
ORIF Oris-en-Rattie 41.42 307 eP P 22 05 35.6 -1.9
comp=Z,28nm,0.9s,mb4.9
VILF Villemus 41.42 305 eP P 22 05 37.4 -0.2
VILF Villemus 41.42 305 eP P 22 05 37.4 -0.2
RUP Ruppelstein 41.45 314 P P 22 05 37.6 -0.1
CKHR Kef el Ahmar 41.46 293 P P 22 05 39.6 +1.6
CKHR Kef el Ahmar 41.46 293 P P 22 05 39.6 +1.6
CABF La Chapelle 41.51 309⇑ iP P 22 05 37.9 -0.3
comp=Z,174nm,0.8s,mb5.4
CABF La Chapelle 41.51 309⇑ iP P 22 05 37.9 -0.3
CABF pmax pmax
comp=Z,87nm,0.8s,mb5.4
CABF La Chapelle 41.51 309⇑ iP P 22 05 37.9 -0.3
comp=Z,87nm,0.8s,mb5.4
CABF La Chapelle 41.51 309⇑ iP P 22 05 37.9 -0.3
comp=Z,87nm,0.8s,mb5.4
SET Setif 41.54 294 P P 22 05 41.0 +2.4
SMRF Simiane la Rot 41.54 305 eP P 22 05 37.1 -1.4
comp=Z,38nm,1.0s,mb4.7
SMRF Simiane la Rot 41.54 305 eP P 22 05 37.1 -1.4
comp=Z,38nm,1.0s,mb5.0
SMRF Simiane la Rot 41.54 305 eP P 22 05 37.1 -1.4
comp=Z,19nm,1.0s,mb4.7
GRN Grenoble 41.55 307 eP P 22 05 37.3 -1.3
GRN Grenoble 41.55 307 eP P 22 05 37.3 -1.3
HAU Haudompre 41.57 311⇑ iP P 22 05 37.5 -1.2
comp=Z,73nm,1.1s,mb4.9
HAU eMLR MLR
comp=Z,371nm,22.0s,MS3.9
HAU Haudompre 41.57 311⇑ iP P 22 05 37.5 -1.2
HAU pmax pmax
comp=Z,37nm,1.1s,mb4.9
HAU MLR MLR
comp=Z,370nm,22.0s,MS4.2
HAU Haudompre 41.57 311⇑ iP P 22 05 37.5 -1.2
comp=Z,36nm,1.1s,mb4.9
HAU LR LR
comp=Z,370nm,22.0s,MS4.2
HAU Haudompre 41.57 311⇑ iP P 22 05 37.5 -1.2
comp=Z,36nm,1.1s,mb4.9
TREF Treveresse 41.64 305 eP P 22 05 38.9 -0.5
TREF Treveresse 41.64 305 eP P 22 05 38.9 -0.5
IBBN Ibbenburen 41.70 318 eP P 22 05 40.4 +0.7
comp=Z,161nm,1.1s,mb5.6
IBBN ePcP PcP 22 07 35.0 -0.7
BUG Bochum--Univer 41.75 317 eP P 22 05 40.6 +0.5
comp=Z,194nm,1.4s,mb5.5
BUG ePP PP 22 07 12.1 -4.9
BUG ePcP PcP 22 07 35.9 0.0
HFS Hagfors 41.83 331 P P 22 05 40.4 -0.3
HFS pmax pmax
comp=Z,28nm,0.5s
HFS Hagfors 41.83 331 P P 22 05 40.4 -0.3
comp=Z,28nm,0.5s,mb5.2,baz=127,slow=9.6,SNR=94
HFS Hagfors 41.83 331 P P 22 05 40.4 -0.3
comp=Z,28nm,0.5s,mb5.2
HFA0 Hagfors New Ar 41.84 331 P P 22 05 39.0 -1.8
THEF They Montfort 41.84 312 eP P 22 05 39.8 -1.2
THEF They Montfort 41.84 312 eP P 22 05 39.8 -1.2
MOY Mondy 41.87 43 eP P 22 05 42.3 +1.2
MOY pmax pmax
comp=Z,120nm,3.0s
MOY Mondy 41.87 43 eP P 22 05 42.3 +1.2
comp=Z,120nm,3.0s
CHG Chiang Mai 42.00 93 ⇑P P 22 05 42.6 0.0
comp=Z,72nm,0.8s,mb5.3
CHTO Chiang Mai 42.00 93 eP P 22 05 42.5 -0.1
CHTO Chiang Mai 42.00 93 P P 22 05 43.1 +0.5
SNR=18
CHTO P 22 05 43.1
SNR=18
CHTO Chiang Mai 42.00 93 eP P 22 05 42.5 -0.1
WLF Walferdange 42.02 314 P P 22 05 41.8 -0.6
comp=Z,44nm,1.5s,mb4.9
WLF Walferdange 42.02 314 eP P 22 05 41.8 -0.6
comp=Z,68nm,1.2s,mb5.2
WLF ePP PP 22 07 13.1 -6.9
WLF Walferdange 42.02 314 eP P 22 05 41.8 -0.6
WLF Walferdange 42.02 314 P P 22 05 41.8 -0.6
comp=Z,44nm,1.5s,mb4.9
CM31 Chiang Mai Arr 42.13 93 eP P 22 05 44.2 +0.5
CM31 Chiang Mai Arr 42.13 93 eP P 22 05 44.2 +0.6
CMAR Chiang Mai Arr 42.13 93 P P 22 05 43.7 0.0
CMAR pmax pmax
comp=Z,16nm,0.9s
CMAR MLR MLR
comp=Z,287nm,21.7s
CMAR Chiang Mai Arr 42.13 93 P P 22 05 43.7 0.0
comp=Z,16nm,0.9s,mb4.7,baz=286,slow=8.8,SNR=56
CMAR LR LR 22 26 02.7
comp=Z,287nm,21.6s,MS4.1,baz=288,slow=40
CMAR Chiang Mai Arr 42.13 93 P P 22 05 43.7 0.0
comp=Z,287nm,21.7s
WTSB Winterswijk 42.17 317⇑ iP P 22 05 44.3 +0.7
comp=Z,154nm,1.1s,mb5.5
WTSB Winterswijk 42.17 317⇑ iP P 22 05 44.3 +0.7
comp=Z,154nm,1.1s,mb5.5

VIVF	**Saint-Julien-I**	**42.27 307**	⇑ *i* P	**P**	**22 05 43.5**	**-1.0**
	comp=Z,118nm,1.0s,mb5.2					
VIVF	**Saint-Julien-I**	**42.27 307**	⇑ *i* P	**P**	**22 05 43.5**	**-1.0**
VIVF			pmax	pmax		
	comp=Z,59nm,1.0s,mb5.2					
VIVF	**Saint-Julien-I**	**42.27 307**	⇑ *i* P	**P**	**22 05 43.5**	**-1.0**
	comp=Z,59nm,1.0s,mb5.2					
VIVF	**Saint-Julien-I**	**42.27 307**	⇑ *i* P	**P**	**22 05 43.5**	**-1.0**
	comp=Z,59nm,1.0s,mb5.2					
MUD	**Monsted U'grnd**	**42.31 324**	⇑ *i* P	**P**	**22 05 45.0**	**+0.4**
MUD			*i*		22 07 25.9	
MUD			pmax	pmax		
	comp=Z,41nm,0.9s,mb5.1					
MUD			MLR	MLR		
	comp=Z,440nm,19.0s,MS4.4					
MUD	**Monsted U'grnd**	**42.31 324**	⇑ *i* P	**P**	**22 05 45.0**	**+0.4**
	comp=Z,41nm,0.9s,mb5.1					
MUD			*i*		22 07 25.9	
MUD						
	comp=Z,430nm,19.0s					
MUD	**Monsted U'grnd**	**42.31 324**	*i* P	**P**	**22 05 45.0**	**+0.4**
	comp=Z,41nm,0.9s,mb5.1					
MEM	**Membach**	**42.32 315**	P	**P**	**22 05 44.9**	**+0.1**
	comp=Z,39nm,2.3s,mb4.6					
MEM	**Membach**	**42.32 315**	P	**P**	**22 05 44.9**	**+0.1**
	comp=Z,39nm,2.3s,mb4.6					
HGN	**Heimansgroeve**	**42.40 315**	⇑ *i* P	**P**	**22 05 45.9**	**+0.4**
	comp=Z,103nm,1.5s,mb5.2					
HGN	**Heimansgroeve**	**42.40 315**	*e*S	**S**	**22 12 07.6**	**+3.6**
HGN	**Heimansgroeve**	**42.40 315**	⇑ *i* P	**P**	**22 05 45.9**	**+0.4**
	comp=Z,103nm,1.5s,mb5.2					
SSB	**Saint Sauveur**	**42.40 307**	*e*P	**P**	**22 05 44.4**	**-1.2**
SSB			*e*		22 07 38.5	
SSB			pmax	pmax		
	comp=Z,36nm,0.9s,mb5.0					
SSB	**Saint Sauveur**	**42.40 307**	*e*P	**P**	**22 05 44.4**	**-1.1**
	comp=Z,36nm,0.9s,mb5.0					
SSB			*e*PcP	PcP	22 07 38.5	+0.3
SSB	**Saint Sauveur**	**42.40 307**	*e*P	**P**	**22 05 44.4**	**-1.2**
	comp=Z,36nm,0.9s,mb5.0					
LZH	**Lanzhou**	**42.42 66**	*e*P	**P**	**22 05 46.5**	**+0.7**
LZH			pP	pP	22 06 00.4	+3.2
LZH			sP	sP	22 06 05.8	+3.9
LZH			PP	PP	22 07 27.9	+3.4
LZH			*e*S	**S**	**22 12 01.1**	**-3.6**
LZH			sS	sS	22 12 23.2	-0.4
LZH			SS	SS	22 15 06.4	-8.3
LZH			pmax	pmax		
	comp=Z,50nm,1.3s,mb5.0					
LZH			pmax	pmax		
	comp=Z,160nm,4.0s					
LZH			LR	LR		
	comp=E,690nm,13.7s					
LZH			LR	LR		
	comp=Z,770nm,14.6s,MS4.7					
ATAF	**Djebel Tarf**	**42.47 293**	P	**P**	**22 05 50.0**	**+3.8**
WIT	**Witteveen**	**42.48 319**	⇑ *e*P	**P**	**22 05 46.6**	**+0.5**
	comp=Z,258nm,0.9s,mb5.9					
WIT	**Witteveen**	**42.48 319**	⇑ *e*P	**P**	**22 05 46.6**	**+0.5**
	comp=Z,258nm,0.9s,mb5.9					
MEZF	**Maizieres J'vi**	**42.51 312**	⇑ *i* P	**P**	**22 05 46.1**	**-0.3**
	comp=Z,230nm,1.1s,mb5.5					
MEZF	**Maizieres J'vi**	**42.51 312**	⇑ *i* P	**P**	**22 05 46.1**	**-0.3**
	comp=Z,230nm,1.1s,mb5.8					
MEZF	**Maizieres J'vi**	**42.51 312**	⇑ *i* P	**P**	**22 05 46.1**	**-0.3**
	comp=Z,115nm,1.1s,mb5.5					
BEBN	**Eben Emael**	**42.57 315**	P	**P**	**22 05 47.3**	**+0.5**
	comp=Z,22nm,1.6s,mb4.7					
BEBN	**Eben Emael**	**42.57 315**	P	**P**	**22 05 47.3**	**+0.5**
	comp=Z,22nm,1.6s,mb4.7					
BDT	**Bhumibol Dam**	**42.65 95**	P	**P**	**22 05 48.5**	**+0.6**
	comp=Z,22nm,1.0s,mb4.8					
BCLA	**Clavier**	**42.72 315**	P	**P**	**22 05 48.3**	**+0.2**
	comp=Z,52nm,2.1s,mb4.9					
BCLA	**Clavier**	**42.72 315**	P	**P**	**22 05 48.2**	**+0.2**
	comp=Z,52nm,2.1s,mb4.9					
AKET	**Djebel Ketaf**	**42.77 294**	P	**P**	**22 05 51.4**	**+2.7**
LASF	**Ste Croix**	**42.78 305**	⇑ *i* P	**P**	**22 05 48.1**	**-0.5**
	comp=Z,128nm,1.0s,mb5.3					
LASF	**Ste Croix**	**42.78 305**	⇑ *i* P	**P**	**22 05 48.1**	**-0.5**
	comp=Z,64nm,1.0s,mb5.3					
GIVF	**Givet**	**42.95 314**	⇑ *i* P	**P**	**22 05 50.2**	**+0.3**
	comp=Z,237nm,1.4s,mb5.4					
GIVF	**Givet**	**42.95 314**	⇑ *i* P	**P**	**22 05 50.2**	**+0.3**
GIVF			pmax	pmax		
	comp=Z,118nm,1.4s,mb5.4					
GIVF	**Givet**	**42.95 314**	⇑ *i* P	**P**	**22 05 50.2**	**+0.3**
	comp=Z,118nm,1.4s,mb5.4					
GIVF	**Givet**	**42.95 314**	⇑ *i* P	**P**	**22 05 50.2**	**+0.3**
	comp=Z,118nm,1.4s,mb5.4					
CD2	**Chengdu**	**42.97 74**	P	**P**	**22 05 52.7**	**+2.3**
CD2			pP	pP	22 06 05.0	+3.3
CD2			sP	sP	22 06 10.4	+3.9
CD2			PP	PP	22 07 35.1	+4.5
CD2			PcP	PcP	22 07 43.0	+2.6
CD2			S	**S**	**22 12 14.5**	**+1.5**
CD2			sS	sS	22 12 35.3	+3.5
CD2			SS	SS	22 15 21.0	-4.7
CD2			pmax	pmax		
	comp=Z,20nm,0.5s,mb5.1					
CD2			pmax	pmax		
	comp=Z,140nm,3.6s					
CD2			LR	LR		
	comp=N,680nm,16.1s					
CD2			LR	LR		
	comp=Z,670nm,17.2s,MS4.6					
CD2	**Chengdu**	**42.97 74**	P	**P**	**22 05 50.0**	**-0.4**
CD2			pmax	pmax		
	comp=Z,20nm,0.5s,mb5.1					
CD2			pmax	pmax		
	comp=Z,140nm,3.6s					
ZAK	**Zakamensk**	**42.97 45**	⇓ *i* P	**P**	**22 05 50.2**	**+0.1**
ZAK			*e*		22 07 37.8	
ZAK			pmax	pmax		
	comp=Z,18nm,1.6s,mb4.5					
ZAK	**Zakamensk**	**42.97 45**	*i* P	**P**	**22 05 50.2**	**+0.1**
	comp=Z,18nm,1.6s,mb4.5					
ZAK	**Zakamensk**	**42.97 45**	*e*PcP	PcP	22 07 37.8	-2.2
OSL	**Oslo**	**43.04 330**	*e*P	**P**	**22 05 49.6**	**-0.9**
OSL			AMB	AMB	22 05 50.9	
	comp=Z,76nm,1.0s,mb5.4					
OSL	**Oslo**	**43.04 330**	*e*P	**P**	**22 05 49.6**	**-0.9**
	comp=Z,76nm,1.0s,mb5.4,SNR=36					
SMF	**Signal de Mont**	**43.04 309**	⇑ *i* P	**P**	**22 05 49.9**	**-0.8**
	comp=Z,243nm,0.9s,mb5.6					
SMF	**Signal de Mont**	**43.04 309**	⇑ *i* P	**P**	**22 05 49.9**	**-0.8**
SMF			pmax	pmax		
	comp=Z,122nm,0.9s,mb5.6					
SMF	**Signal de Mont**	**43.04 309**	⇑ *i* P	**P**	**22 05 49.9**	**-0.8**
	comp=Z,122nm,0.9s,mb5.6					
SMF	**Signal de Mont**	**43.04 309**	⇑ *i* P	**P**	**22 05 49.9**	**-0.8**
	comp=Z,122nm,0.9s,mb5.6					
DOU	**Dourbes**	**43.09 314**	P	**P**	**22 05 50.5**	**-0.5**
	comp=Z,51nm,1.5s,mb5.0					
DOU	**Dourbes**	**43.09 314**	P	**P**	**22 05 50.5**	**-0.6**
	comp=Z,51nm,1.5s,mb5.0					
LOR	**Lormes**	**43.11 310**	⇑ *i* P	**P**	**22 05 50.4**	**-0.9**
	comp=Z,111nm,1.1s,mb5.2					
LOR			*e*MLR	MLR		
	comp=Z,602nm,19.8s,MS4.2					
LOR	**Lormes**	**43.11 310**	⇑ *i* P	**P**	**22 05 50.4**	**-0.9**
LOR			pmax	pmax		
	comp=Z,55nm,1.1s,mb5.2					
LOR			MLR	MLR		
	comp=Z,600nm,19.8s,MS4.5					
LOR	**Lormes**	**43.11 310**	⇑ *i* P	**P**	**22 05 50.4**	**-0.9**
	comp=Z,56nm,1.1s,mb5.2					
LOR			LR	LR		
	comp=Z,600nm,19.8s,MS4.5					
LOR	**Lormes**	**43.11 310**	⇑ *i* P	**P**	**22 05 50.4**	**-0.9**
	comp=Z,56nm,1.1s,mb5.2					
PLDF	**La Plantade**	**43.12 308**	⇑ *e*P	**P**	**22 05 50.9**	**-0.4**
PLDF	**La Plantade**	**43.12 308**	⇑ *e*P	**P**	**22 05 50.9**	**-0.4**
ADJB	**Djebel Djouab**	**43.12 294**	P	**P**	**22 05 52.8**	**+1.2**
ADJB	**Djebel Djouab**	**43.12 294**	P	**P**	**22 05 52.8**	**+1.2**
LBL	**Lubilhac**	**43.31 307**	⇑ *e*P	**P**	**22 05 52.6**	**-0.3**
LBL	**Lubilhac**	**43.31 307**	⇑ *e*P	**P**	**22 05 52.6**	**-0.3**
SSF	**Saint Saulge**	**43.32 310**	⇑ *i* P	**P**	**22 05 52.3**	**-0.7**
	comp=Z,226nm,1.1s,mb5.5					
SSF	**Saint Saulge**	**43.32 310**	⇑ *i* P	**P**	**22 05 52.3**	**-0.7**
SSF			pmax	pmax		
	comp=Z,113nm,1.1s,mb5.5					
SSF	**Saint Saulge**	**43.32 310**	⇑ *i* P	**P**	**22 05 52.3**	**-0.7**
	comp=Z,113nm,1.1s,mb5.5					
SSF	**Saint Saulge**	**43.32 310**	⇑ *i* P	**P**	**22 05 52.3**	**-0.7**
	comp=Z,113nm,1.1s,mb5.5					
BAIF	**Baives**	**43.33 314**	⇑ *i* P	**P**	**22 05 53.4**	**+0.4**
	comp=Z,337nm,1.3s,mb5.6					
BAIF	**Baives**	**43.33 314**	⇑ *i* P	**P**	**22 05 53.4**	**+0.4**
BAIF			pmax	pmax		
	comp=Z,169nm,1.3s,mb5.6					
BAIF	**Baives**	**43.33 314**	⇑ *i* P	**P**	**22 05 53.4**	**+0.4**
	comp=Z,168nm,1.3s,mb5.6					
BAIF	**Baives**	**43.33 314**	⇑ *i* P	**P**	**22 05 53.4**	**+0.4**
	comp=Z,168nm,1.3s,mb5.6					
KMI	**Kunming**	**43.34 83**	P	**P**	**22 05 53.2**	**-0.3**
KMI			pP	pP	22 06 07.2	+2.4
KMI			sP	sP	22 06 12.7	+3.1
KMI			PP	PP	22 07 36.9	+2.2
KMI			PcP	PcP	22 07 40.7	-1.0
KMI			S	**S**	**22 12 18.0**	**-0.6**
KMI			sS	sS	22 12 41.5	+4.0
KMI			SS	SS	22 15 26.0	-7.2
KMI			ScS	ScS	22 15 45.6	-4.8
KMI			pmax	pmax		
	comp=Z,30nm,1.4s,mb4.8					
KMI			pmax	pmax		
	comp=Z,230nm,3.9s					
KMI			LR	LR		
	comp=N,420nm,17.5s,MS4.5					
KMI			LR	LR		
	comp=E,380nm,16.8s,MS4.5					
KMI			LR	LR		
	comp=Z,410nm,16.8s,MS4.4					
NB2	**NORSAR Subarra**	**43.35 331**	P	**P**	**22 05 52.2**	**-0.8**
	comp=Z,41nm,0.9s,mb5.2,baz=118,slow=8.6					
NB2	**NORSAR Subarra**	**43.35 331**	P	**P**	**22 05 52.0**	**-1.0**
NB2	**NORSAR Subarra**	**43.35 331**	P	**P**	**22 05 52.2**	**-0.8**
	comp=Z,41nm,0.9s,mb5.2,baz=118,slow=8.0,SNR=5.7					
NOA	**NORSAR Array B**	**43.35 331**	P	**P**	**22 05 52.1**	**-0.9**
	comp=Z,22nm,0.8s,mb4.9,baz=120,slow=8.1,SNR=68					
NOA			PP	PP	22 07 27.3	-6.8
	comp=Z,6.8nm,0.7s,baz=129,slow=11,SNR=9.0					
NOA			LR	LR	22 27 23.7	
	comp=Z,387nm,18.2s,MS4.3,baz=120,slow=41					
NOA	**NORSAR Array B**	**43.35 331**	P	**P**	**22 05 52.1**	**-0.9**
	comp=Z,387nm,18.2s					
SNF	**Seneffe**	**43.37 315**	P	**P**	**22 05 53.8**	**+0.4**
	comp=Z,52nm,1.6s,mb5.0					
SNF	**Seneffe**	**43.37 315**	P	**P**	**22 05 53.7**	**+0.4**
	comp=Z,52nm,1.6s,mb5.0					
UCC	**Uccle**	**43.38 315**	P	**P**	**22 05 53.8**	**+0.4**
UCC	**Uccle**	**43.38 315**	P	**P**	**22 05 53.7**	**+0.3**
AVF	**Avril sur Loir**	**43.40 309**	⇑ *i* P	**P**	**22 05 52.7**	**-0.9**
	comp=Z,177nm,1.3s,mb5.3					
AVF	**Avril sur Loir**	**43.40 309**	⇑ *i* P	**P**	**22 05 52.7**	**-0.9**
AVF			pmax	pmax		
	comp=Z,88nm,1.3s,mb5.3					
AVF	**Avril sur Loir**	**43.40 309**	⇑ *i* P	**P**	**22 05 52.7**	**-0.9**
	comp=Z,88nm,1.3s,mb5.3					
AVF	**Avril sur Loir**	**43.40 309**	⇑ *i* P	**P**	**22 05 52.7**	**-0.9**
	comp=Z,88nm,1.3s,mb5.3					
NAO01	**NORSAR Array S**	**43.40 331**	*e*P	**P**	**22 05 53.0**	**-0.4**
	comp=Z,23nm,0.8s,mb5.0					
NAO01			*e*PP	PP	22 07 33.6	-1.0
NAO01			*e*PcP	PcP	22 07 41.7	+0.5
NAO01	**NORSAR Array S**	**43.40 331**	*e*P	**P**	**22 05 53.0**	**-0.4**
	comp=Z,23nm,0.8s,mb5.0					
ABA	**Alger-Bouzarea**	**43.40 295**	P	**P**	**22 05 55.3**	**+1.5**
ABA	**Alger-Bouzarea**	**43.40 295**	P	**P**	**22 05 55.3**	**+1.5**
EJON	**La Jonquera**	**43.40 303**	P	**P**	**22 05 53.3**	**-0.4**
	comp=Z,16nm,0.9s,mb4.8					
EJON	**La Jonquera**	**43.40 303**	P	**P**	**22 05 53.3**	**-0.4**
	comp=Z,16nm,0.9s,mb4.8					
SJAF	**Saint Jean de**	**43.41 303**	⇑ *e*P	**P**	**22 05 53.2**	**-0.5**
SJAF	**Saint Jean de**	**43.41 303**	⇑ *e*P	**P**	**22 05 53.2**	**-0.5**
KONO	**Kongsberg**	**43.42 329**	*e*P	**P**	**22 05 52.5**	**-1.0**
KONO			*e*		22 07 40.9	
KONO			pmax	pmax		
	comp=Z,51nm,1.1s,mb5.2					
KONO	**Kongsberg**	**43.42 329**	*e*P	**P**	**22 05 52.5**	**-1.1**
	comp=Z,52nm,1.1s,mb5.2					
KONO			*e*PcP	PcP	22 07 40.9	-0.4
KONO	**Kongsberg**	**43.42 329**	*e*P	**P**	**22 05 52.5**	**-1.0**
	comp=Z,51nm,1.1s,mb5.2					
KONO	**Kongsberg**	**43.42 329**	*e*PcP	PcP	22 07 40.9	-0.4
KONO			*e*S	**S**	**22 12 18.1**	**-0.6**
	SNR=36					
KONO			*e*SS	SS	22 15 33.6	+0.1
	SNR=52					
ETOS	**Mallorca**	**43.44 299**	P	**P**	**22 05 55.0**	**+0.9**
	comp=Z,47nm,0.9s,mb5.2					
ETOS	**Mallorca**	**43.44 299**	P	**P**	**22 05 55.0**	**+1.0**
	comp=Z,47nm,0.9s,mb5.2					
AGO	**Saint Agoulin**	**43.47 308**	⇑ *e*P	**P**	**22 05 53.9**	**-0.3**
AGO	**Saint Agoulin**	**43.47 308**	⇑ *e*P	**P**	**22 05 53.9**	**-0.3**
TLY	**Talaya**	**43.47 44**	P	**P**	**22 05 55.9**	**+1.8**
	comp=Z,94nm,1.2s,mb5.4,SNR=8.2					
TLY	**Talaya**	**43.47 44**	*e*P	**P**	**22 05 55.2**	**+1.1**
TLY			*e*		22 07 46.5	
TLY			*e*S	**S**	**22 12 25.6**	**+5.8**
TLY			*e*SSS		22 16 18.2	
TLY			pmax	pmax		
	comp=Z,31nm,1.3s,mb4.9					
TLY			MLR	MLR		
	comp=Z,1μm,14.0s,MS5.0					
TLY	**Talaya**	**43.47 44**	*e*P	**P**	**22 05 55.1**	**+1.0**
	comp=Z,50nm,1.5s,mb5.0					
TLY	**Talaya**	**43.47 44**	⇑P	**P**	**22 05 54.7**	**+0.6**
	SNR=19					
TLY			⇑P		22 05 54.7	
	SNR=19					
TLY	**Talaya**	**43.47 44**	P	**P**	**22 05 54.7**	**+0.6**
	SNR=19					
EMHD	**Djebel Mahouad**	**43.51 294**	P	**P**	**22 05 56.0**	**+1.3**
EMHD	**Djebel Mahouad**	**43.51 294**	P	**P**	**22 05 56.0**	**+1.3**
PYM	**Petit Puy Mans**	**43.52 308**	⇑ *e*P	**P**	**22 05 54.3**	**-0.3**
PYM	**Petit Puy Mans**	**43.52 308**	⇑ *e*P	**P**	**22 05 54.3**	**-0.3**
FILF	**Fillols**	**43.65 303**	⇑ *e*P	**P**	**22 05 56.4**	**+0.7**
FILF	**Fillols**	**43.65 303**	⇑ *e*P	**P**	**22 05 56.4**	**+0.7**
LRDF	**Laroque-de-Fa**	**43.68 304**	⇑ *e*P	**P**	**22 05 56.0**	**+0.1**
LRDF	**Laroque-de-Fa**	**43.68 304**	⇑ *e*P	**P**	**22 05 56.0**	**+0.1**
BGF	**Bois d'Agland**	**43.72 309**	⇑ *i* P	**P**	**22 05 55.6**	**-0.6**
	comp=Z,93nm,0.8s,mb5.2					
BGF	**Bois d'Agland**	**43.72 309**	⇑ *i* P	**P**	**22 05 55.6**	**-0.6**
BGF			pmax	pmax		
	comp=Z,46nm,0.8s,mb5.3					
BGF	**Bois d'Agland**	**43.72 309**	⇑ *i* P	**P**	**22 05 55.6**	**-0.6**
	comp=Z,46nm,0.8s,mb5.3					
BGF	**Bois d'Agland**	**43.72 309**	⇑ *i* P	**P**	**22 05 55.6**	**-0.6**
	comp=Z,46nm,0.8s,mb5.2					
FRNF	**Fournols**	**43.80 307**	⇑ *e*P	**P**	**22 05 57.3**	**+0.4**
FRNF	**Fournols**	**43.80 307**	⇑ *e*P	**P**	**22 05 57.3**	**+0.4**
MTLF	**Montolieu**	**43.93 304**	⇑ *i* P	**P**	**22 05 58.0**	**+0.1**
	comp=Z,123nm,1.1s,mb5.2					
MTLF	**Montolieu**	**43.93 304**	⇑ *i* P	**P**	**22 05 58.0**	**+0.1**
MTLF			pmax	pmax		
	comp=Z,62nm,1.1s,mb5.2					
MTLF	**Montolieu**	**43.93 304**	⇑ *i* P	**P**	**22 05 58.0**	**+0.1**
	comp=Z,62nm,1.1s,mb5.2					
MTLF	**Montolieu**	**43.93 304**	⇑ *i* P	**P**	**22 05 58.0**	**+0.1**
	comp=Z,62nm,1.1s,mb5.2					
HYF	**Humbligny**	**43.94 310**	*e*P	**P**	**22 05 58.0**	**+0.1**
HYF	**Humbligny**	**43.94 310**	*e*P	**P**	**22 05 58.0**	**+0.1**
IRK	**Irkutsk**	**43.98 43**	*e*P	**P**	**22 05 58.3**	**+0.1**
IRK			pmax	pmax		
	comp=Z,71nm,2.1s,mb5.0					
IRK	**Irkutsk**	**43.98 43**	*e*P	**P**	**22 05 58.3**	**+0.1**
	comp=Z,71nm,2.1s,mb5.0					
CARF	**Carcanieres**	**43.99 303**	⇑ *e*P	**P**	**22 05 58.3**	**-0.1**
CARF	**Carcanieres**	**43.99 303**	⇑ *e*P	**P**	**22 05 58.3**	**-0.1**
VALF	**Valcebollere**	**44.05 303**	⇑ *e*P	**P**	**22 05 59.6**	**+0.7**
VALF	**Valcebollere**	**44.05 303**	⇑ *e*P	**P**	**22 05 59.6**	**+0.7**
CAF	**Calviac**	**44.12 306**	⇑ *i* P	**P**	**22 05 59.3**	**-0.1**
	comp=Z,128nm,0.9s,mb5.3					
CAF	**Calviac**	**44.12 306**	⇑ *i* P	**P**	**22 05 59.3**	**-0.1**
CAF			pmax	pmax		
	comp=Z,64nm,0.9s,mb5.3					
CAF	**Calviac**	**44.12 306**	⇑ *i* P	**P**	**22 05 59.3**	**-0.1**
	comp=Z,64nm,0.9s,mb5.3					
CAF	**Calviac**	**44.12 306**	⇑ *i* P	**P**	**22 05 59.3**	**-0.1**
	comp=Z,64nm,0.9s,mb5.3					
TCF	**Toulx Ste Croi**	**44.13 308**	⇑ *i* P	**P**	**22 05 59.1**	**-0.4**
	comp=Z,122nm,0.9s,mb5.3					
TCF	**Toulx Ste Croi**	**44.13 308**	⇑ *i* P	**P**	**22 05 59.1**	**-0.4**
TCF			pmax	pmax		
	comp=Z,61nm,0.9s,mb5.3					
TCF	**Toulx Ste Croi**	**44.13 308**	⇑ *i* P	**P**	**22 05 59.1**	**-0.4**
	comp=Z,61nm,0.9s,mb5.3					
TCF	**Toulx Ste Croi**	**44.13 308**	⇑ *i* P	**P**	**22 05 59.1**	**-0.4**
	comp=Z,61nm,0.9s,mb5.3					
KEV	**Kevo**	**44.26 347**	*e*P	**P**	**22 06 00.5**	**+0.3**
KEV			*e*		22 07 43.3	
KEV			pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2					
KEV	**Kevo**	**44.26 347**	*e*P	**P**	**22 06 00.5**	**+0.3**
	comp=Z,40nm,0.8s,mb5.2					
KEV			*e*PP	PP	22 07 43.3	-0.4
KEV	**Kevo**	**44.26 347**	*e*p	**P**	**22 05 59.6**	**-0.6**
	comp=Z,32nm,0.7s,mb5.2					
KEV	**Kevo**	**44.26 347**	*e*P	**P**	**22 06 00.5**	**+0.3**
	comp=Z,40nm,0.8s,mb5.2					
KEV	**Kevo**	**44.26 347**	*e*PP	PP	22 07 43.3	-0.4
ARCES	**ARCESS Array B**	**44.39 346**	P	**P**	**22 06 01.6**	**+0.4**
ARCES					22 07 43.1	
ARCES			pmax	pmax		
	comp=Z,14nm,0.8s					
ARCES			MLR	MLR		
	comp=Z,523nm,19.5s					
ARCES	**ARCESS Array B**	**44.39 346**	P	**P**	**22 06 01.6**	**+0.3**
	comp=Z,14nm,0.8s,mb4.8,baz=149,slow=9.5,SNR=41					
ARCES			PcP	PcP	22 07 43.0	-1.4
	comp=Z,10.0nm,0.8s,baz=135,slow=5.5,SNR=6.1					
ARCES			LR	LR	22 27 21.7	
	comp=Z,523nm,19.5s,MS4.5,baz=144,slow=40					
ARCES	**ARCESS Array B**	**44.39 346**	P	**P**	**22 06 01.5**	**+0.3**
ARCES	**ARCESS Array B**	**44.39 346**	PcP	PcP	22 07 43.0	-1.4
ARE0	**ARCESS Array S**	**44.39 346**	*e*P	**P**	**22 06 01.2**	**0.0**
ARE0			*e*PP	PP	22 07 44.0	-1.1
ARE0	**ARCESS Array S**	**44.39 346**	*e*P	**P**	**22 06 01.2**	**0.0**
ARE0	**ARCESS Array S**	**44.39 346**	*e*PP	PP	22 07 44.0	-1.1
EMIR	**Miracle**	**44.41 302**	P	**P**	**22 06 01.9**	**+0.1**
EMIR	**Miracle**	**44.41 302**	P	**P**	**22 06 01.9**	**+0.1**
RJF	**Les Rejaudoux**	**44.53 307**	⇑ *i* P	**P**	**22 06 02.8**	**+0.1**
	comp=Z,271nm,1.1s,mb5.7					
RJF			*e*MLR	MLR		
	comp=Z,357nm,20.8s,MS4.0					
RJF	**Les Rejaudoux**	**44.53 307**	⇑ *i* P	**P**	**22 06 02.8**	**+0.1**
RJF			pmax	pmax		
	comp=Z,135nm,1.1s,mb5.7					
RJF			MLR	MLR		
	comp=Z,360nm,20.8s,MS4.3					
RJF	**Les Rejaudoux**	**44.53 307**	⇑ *i* P	**P**	**22 06 02.8**	**+0.1**
	comp=Z,135nm,1.1s,mb5.7					
RJF			LR	LR		
	comp=Z,360nm,20.8s,MS4.3					
RJF	**Les Rejaudoux**	**44.53 307**	⇑ *i* P	**P**	**22 06 02.8**	**+0.1**
	comp=Z,135nm,1.1s,mb5.7					
SONM	**Songino Array**	**44.59 49**	P	**P**	**22 06 03.7**	**+0.6**
SONM			pmax	pmax		
	comp=Z,25nm,1.0s					
SONM			MLR	MLR		
	comp=Z,607nm,18.4s					
SONM	**Songino Array**	**44.59 49**	P	**P**	**22 06 03.7**	**+0.6**
	comp=Z,25nm,1.0s,mb5.0,baz=260,slow=8.4,SNR=107					
SONM			LR	LR	22 27 49.3	
	comp=Z,607nm,18.4s,MS4.6,baz=359,slow=40					
SONM	**Songino Array**	**44.59 49**	P	**P**	**22 06 03.7**	**+0.6**
	comp=Z,607nm,18.4s					
EIBI	**Ibiza**	**44.60 298**	P	**P**	**22 06 03.9**	**+0.5**
	comp=Z,48nm,0.8s,mb5.4					
EIBI	**Ibiza**	**44.60 298**	P	**P**	**22 06 03.9**	**+0.5**
	comp=Z,48nm,0.8s,mb5.4					
EBNR	**Beni Rached**	**44.65 294**	P	**P**	**22 06 05.0**	**+1.2**
EBNR	**Beni Rached**	**44.65 294**	P	**P**	**22 06 05.0**	**+1.2**
SALF	**Salau**	**44.66 303**	*e*P	**P**	**22 06 03.6**	**-0.2**
SALF	**Salau**	**44.66 303**	*e*P	**P**	**22 06 03.6**	**-0.2**
MLS	**Moulis**	**44.74 304**	⇑ *e*P	**P**	**22 06 03.5**	**-0.9**
MLS	**Moulis**	**44.74 304**	⇑ *e*P	**P**	**22 06 03.5**	**-0.9**
EPOB	**Poblet**	**44.74 301**	P	**P**	**22 06 04.8**	**+0.4**
	comp=Z,48nm,0.9s,mb5.3					
EPOB	**Poblet**	**44.74 301**	P	**P**	**22 06 04.8**	**+0.4**
	comp=Z,48nm,0.9s,mb5.3					
ECHA	**Ech Chlef**	**44.80 294**	P	**P**	**22 06 06.0**	**+1.0**
ECHA	**Ech Chlef**	**44.80 294**	P	**P**	**22 06 06.0**	**+1.0**
ETRT	**Tiaret**	**44.93 293**	P	**P**	**22 06 07.0**	**+1.0**
ETRT	**Tiaret**	**44.93 293**	P	**P**	**22 06 07.0**	**+1.0**
MOR8	**Moi Rana**	**44.97 338**	*e*P	**P**	**22 06 05.4**	**-0.5**
MOR8			AMB	AMB	22 06 09.5	
	comp=Z,40nm,1.3s,mb5.1					
MOR8	**Moi Rana**	**44.97 338**	*e*P	**P**	**22 06 05.4**	**-0.5**
	comp=Z,40nm,1.3s,mb5.1,SNR=35					
MELF	**Melles**	**44.98 303**	*e*P	**P**	**22 06 06.7**	**+0.4**
MELF	**Melles**	**44.98 303**	*e*P	**P**	**22 06 06.7**	**+0.4**
EANR	**'Ain N'Sour**	**45.03 294**	P	**P**	**22 06 07.6**	**+0.8**
EANR	**'Ain N'Sour**	**45.03 294**	P	**P**	**22 06 07.6**	**+0.8**
**

comp=Z,62nm,1.0s,mb5.5
TRO Tromso 45.98 344 *e*P **P 22 06 14.1 +0.3**
TRO *e*S **S 22 12 55.2 -0.4**
TRO *e*SS SS 22 16 21.2 +0.7
TRO AMS AMS 22 28 07.7
comp=Z,593nm,20.8s,MS4.5
TRO Tromso 45.98 344 *e*P **P 22 06 14.1 +0.3**
SNR=35
TRO *e*S **S 22 12 55.2 -0.4**
SNR=35
TRO *e*SS SS 22 16 21.2 +0.7
SNR=41
FLN La Foliniere 46.18 312⇑*i*P **P 22 06 14.8 -0.9**
comp=Z,101nm,0.8s,mb5.5
FLN *e*MLR MLR
comp=Z,466nm,20.0s,MS4.1
FLN La Foliniere 46.18 312⇑*i*P **P 22 06 14.8 -0.9**
FLN pmax pmax
comp=Z,51nm,0.8s,mb5.5
FLN MLR MLR
comp=Z,470nm,20.0s,MS4.4
FLN La Foliniere 46.18 312⇑*i*P **P 22 06 14.8 -0.9**
comp=Z,51nm,0.8s,mb5.5
FLN LR LR
comp=Z,470nm,20.0s,MS4.4
FLN La Foliniere 46.18 312⇑*i*P **P 22 06 14.8 -0.9**
comp=Z,51nm,0.8s,mb5.5
ORDF Ordiarp 46.23 304⇑*e*P **P 22 06 15.7 -0.5**
ORDF Ordiarp 46.23 304⇑*e*P **P 22 06 15.7 -0.5**
ECHE Chera 46.36 299 P **P 22 06 18.8 +1.5**
ECHE pmax pmax
comp=Z,21nm,0.7s,mb5.2
ECHE Chera 46.36 299 P **P 22 06 18.8 +1.5**
comp=Z,21nm,0.7s,mb5.2
ECHE Chera 46.36 299 P **P 22 06 18.8 +1.5**
comp=Z,21nm,0.7s,mb5.2
GRR Gorron 46.39 311 *e*P **P 22 06 16.6 -0.8**
comp=Z,211nm,1.2s,mb5.7
GRR Gorron 46.39 311 *e*P **P 22 06 16.6 -0.8**
GRR pmax pmax
comp=Z,106nm,1.2s,mb5.7
GRR Gorron 46.39 311 *e*P **P 22 06 16.6 -0.8**
comp=Z,106nm,1.2s,mb5.6
GRR Gorron 46.39 311 *e*P **P 22 06 16.6 -0.8**
comp=Z,106nm,1.2s,mb5.7
GYA Guiyang 46.41 79⇑*i*P **P 22 06 17.0 -0.9**
GYA pP pP 22 06 29.4 +0.1
GYA sP sP 22 06 34.7 +0.6
GYA PP PP 22 08 06.5 -0.8
GYA ScP ScP 22 11 40.0 -2.6
GYA PcS PcS 22 11 45.2 -1.9
GYA S **S 22 13 00.8 -2.2**
GYA sS sS 22 13 22.0 0.0
GYA SS SS 22 16 20.1 -8.9
GYA pmax pmax
comp=Z,20nm,0.9s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.1s
GYA LR LR
comp=N,820nm,15.7s,MS4.8
GYA LR LR
comp=E,480nm,15.4s,MS4.8
GYA LR LR
comp=Z,610nm,15.2s,MS4.7
SJPF Ste Jean 46.44 304 *e*P **P 22 06 18.1 +0.3**
comp=Z,108nm,0.8s,mb5.5
SJPF Ste Jean 46.44 304 *e*P **P 22 06 18.1 +0.3**
SJPF pmax pmax
comp=Z,54nm,0.8s,mb5.5
SJPF Ste Jean 46.44 304 *e*P **P 22 06 18.1 +0.3**
comp=Z,54nm,0.8s,mb5.5
SJPF Ste Jean 46.44 304 *e*P **P 22 06 18.1 +0.3**
comp=Z,54nm,0.8s,mb5.5
LOF Lofoten 46.45 340 *e*P **P 22 06 20.4 +2.9**
OSSF Osses 46.46 304 *e*P **P 22 06 17.3 -0.7**
OSSF Osses 46.46 304 *e*P **P 22 06 17.3 -0.7**
CART Cartagena 46.55 296 *e*P **P 22 06 18.4 -0.4**
comp=Z,24nm,1.0s,mb5.1
CART *e*PcP PcP 22 07 52.6 0.0
CART Cartagena 46.55 296 *e*P **P 22 06 18.4 -0.4**
comp=Z,24nm,1.0s,mb5.1
EALK Alkurruntz 46.64 304 P **P 22 06 20.6 +1.2**
comp=Z,12nm,0.7s,mb4.9
EALK Alkurruntz 46.64 304 P **P 22 06 20.6 +1.2**
comp=Z,12nm,0.7s,mb4.9
ELIZ Elizondo 46.66 304 P **P 22 06 20.5 +0.9**
ELIZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ELIZ Elizondo 46.66 304 P **P 22 06 20.5 +0.9**
comp=Z,9.3nm,0.8s,mb4.8
ELIZ Elizondo 46.66 304 P **P 22 06 20.5 +0.9**
comp=Z,9.0nm,0.8s,mb4.8
EMUR La Murta 46.71 297 P **P 22 06 19.7 -0.4**
comp=Z,36nm,1.2s,mb5.2
EMUR La Murta 46.71 297 P **P 22 06 19.7 -0.4**
comp=Z,36nm,1.2s,mb5.2
XAN Xi'an 46.79 69 P **P 22 06 19.1 -1.6**
XAN pP pP 22 06 31.9 -0.3
XAN S **S 22 13 07.8 -0.4**
XAN pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
XAN pmax pmax
comp=Z,40nm,5.7s
XAN LR LR
comp=N,47nm,17.7s,MS4.0
XAN LR LR
comp=E,180nm,21.6s,MS4.0
XAN LR LR
comp=Z,160nm,19.7s,MS4.0
ETOB Tobarra 46.88 298 P **P 22 06 22.2 +0.9**
comp=Z,48nm,0.9s,mb5.4
ETOB Tobarra 46.88 298 P **P 22 06 22.2 +0.8**
comp=Z,48nm,0.9s,mb5.4
WOL Wolverton 46.94 315⇑*e*P **P 22 06 21.3 -0.4**
WOL AMb AMB 22 06 22.2
comp=Z,211nm,1.1s,mb6.0
WOL Wolverton 46.94 315⇑*e*P **P 22 06 21.3 -0.3**
BTO Baotou 46.99 60 *e*P **P 22 06 21.7 -0.5**
ETOR Torete 47.12 301 P **P 22 06 23.6 +0.4**
ETOR pmax pmax
comp=Z,15nm,0.7s,mb5.0
ETOR Torete 47.12 301 P **P 22 06 23.6 +0.3**
comp=Z,15nm,0.7s,mb5.0
ETOR Torete 47.12 301 P **P 22 06 23.6 +0.4**
comp=Z,15nm,0.7s,mb5.0
CWF Charnwood Fore 47.19 317⇑*e*P **P 22 06 22.7 -0.8**
CWF Charnwood Fore 47.19 317⇑*e*P **P 22 06 22.7 -0.9**
JSA Saint Aubin 47.33 312⇑*e*P **P 22 06 23.8 -0.9**
JSA AMb AMB 22 06 24.6
comp=Z,100nm,1.1s,mb5.7
JSA Saint Aubin 47.33 312⇑*e*P **P 22 06 23.8 -0.9**
SWN1 Swindon 47.33 315⇑*e*P **P 22 06 24.2 -0.5**
SWN1 AMb AMB 22 06 28.2
comp=Z,234nm,1.8s,mb5.8
SWN1 Swindon 47.33 315⇑*e*P **P 22 06 24.2 -0.4**
ECRI Cripan 47.39 303 P **P 22 06 25.4 +0.1**
SGMF Saint Gilles 47.51 311⇑*i*P **P 22 06 25.5 -0.6**
comp=Z,104nm,0.9s,mb5.5
SGMF Saint Gilles 47.51 311⇑*i*P **P 22 06 25.5 -0.6**
SGMF pmax pmax
comp=Z,52nm,0.9s,mb5.6
SGMF Saint Gilles 47.51 311⇑*i*P **P 22 06 25.5 -0.6**
comp=Z,52nm,0.9s,mb5.6
SGMF Saint Gilles 47.51 311⇑*i*P **P 22 06 25.5 -0.6**
comp=Z,52nm,0.9s,mb5.5
ABPO Ambohimpanom 47.56 189 *e*P **P 22 06 27.9 +1.2**
ABPO pmax pmax
comp=Z,34nm,1.1s,mb5.3
ABPO Ambohimpanom 47.56 189 *e*P **P 22 06 27.9 +1.2**
comp=Z,34nm,1.1s,mb5.3
ABPO Ambohimpanom 47.56 189 *e*P **P 22 06 27.9 +1.2**
comp=Z,34nm,1.1s,mb5.3
ENIJ Nijar 47.57 295 P **P 22 06 27.1 +0.3**
ENIJ pmax pmax
comp=Z,15nm,0.8s,mb5.1
ENIJ Nijar 47.57 295 P **P 22 06 27.1 +0.3**
comp=Z,15nm,0.8s,mb5.1
ENIJ Nijar 47.57 295 P **P 22 06 27.1 +0.3**
comp=Z,15nm,0.8s,mb5.1
EVIA Vianos 47.63 298 P **P 22 06 28.0 +0.8**
EVIA pmax pmax
comp=Z,39nm,0.8s,mb5.5
EVIA Vianos 47.63 298 P **P 22 06 28.0 +0.8**
comp=Z,39nm,0.8s,mb5.5
EVIA Vianos 47.63 298 P **P 22 06 28.0 +0.8**
comp=Z,39nm,0.8s,mb5.5

LHO Holmfirth 47.64 318⇑*e*P **P 22 06 26.1 -0.9**
LHO Holmfirth 47.64 318⇑*e*P **P 22 06 26.1 -1.0**
QUIF Quistinic 47.90 310⇑*i*P **P 22 06 28.2 -1.0**
comp=Z,127nm,0.9s,mb5.6
QUIF Quistinic 47.90 310⇑*i*P **P 22 06 28.2 -1.0**
QUIF pmax pmax
comp=Z,64nm,0.9s,mb5.7
QUIF Quistinic 47.90 310⇑*i*P **P 22 06 28.2 -1.0**
comp=Z,64nm,0.9s,mb5.7
QUIF Quistinic 47.90 310⇑*i*P **P 22 06 28.2 -1.0**
comp=Z,64nm,0.9s,mb5.7
ENH Enshi 47.94 74 *e*P **P 22 06 29.2 -0.5**
comp=Z,50nm,1.1s,mb5.5
ENH Enshi 47.94 74 *e*P **P 22 06 29.2 -0.5**
comp=Z,50nm,1.1s,mb5.5
HGH Gray Hill 47.96 315⇑*i*P **P 22 06 28.6 -1.0**
HGH Gray Hill 47.96 315⇑*i*P **P 22 06 28.5 -1.1**
ROSF Rostrenen 48.00 311⇑*i*P **P 22 06 29.1 -0.8**
comp=Z,177nm,1.1s,mb5.7
ROSF Rostrenen 48.00 311⇑*i*P **P 22 06 29.1 -0.8**
ROSF pmax pmax
comp=Z,89nm,1.1s,mb5.7
ROSF Rostrenen 48.00 311⇑*i*P **P 22 06 29.1 -0.8**
comp=Z,89nm,1.1s,mb5.7
ROSF Rostrenen 48.00 311⇑*i*P **P 22 06 29.1 -0.8**
comp=Z,89nm,1.1s,mb5.7
ELAN Lanestosa 48.05 304 P **P 22 06 30.5 +0.1**
comp=Z,36nm,0.8s,mb5.5
ELAN Lanestosa 48.05 304 P **P 22 06 30.5 +0.1**
comp=Z,36nm,0.8s,mb5.5
XAL Allendale 48.06 320⇑*e*P **P 22 06 30.1 -0.2**
XAL Allendale 48.06 320⇑*e*P **P 22 06 30.1 -0.2**
HLM1 Long Mynd 48.11 317⇑*i*P **P 22 06 29.8 -0.9**
HLM1 Long Mynd 48.11 317⇑*i*P **P 22 06 29.8 -0.9**
EBER Berja 48.12 295 P **P 22 06 32.0 +1.0**
comp=Z,44nm,0.8s,mb5.5
EBER Berja 48.12 295 P **P 22 06 32.0 +1.0**
comp=Z,44nm,0.8s,mb5.5
MCH1 Michaelchurch 48.12 316⇑*i*P **P 22 06 29.8 -1.0**
MCH1 AMb AMB 22 06 30.8
comp=Z,118nm,1.0s,mb5.9
MCH1 Michaelchurch 48.12 316⇑*i*P **P 22 06 29.8 -1.0**
HHC Hu-ho-hao-te 48.14 59⇑P **P 22 06 32.3 +1.2**
HHC pP pP 22 06 47.9 +5.3
HHC PcP PcP 22 07 59.5 +1.3
HHC PP PP 22 08 24.9 +1.4
HHC ScP ScP 22 11 48.3 -1.3
HHC PcS PcS 22 11 55.0 +1.1
HHC S **S 22 13 27.0 -0.3**
HHC sS sS 22 13 52.3 +6.0
HHC ScS ScS 22 16 17.2 -3.7
HHC SS SS 22 16 49.1 -7.5
HHC pmax pmax
comp=Z,30nm,1.1s,mb5.2
HHC pmax pmax
comp=Z,190nm,5.7s
HHC LR LR
comp=N,710nm,18.9s,MS4.8
HHC LR LR
comp=E,580nm,17.7s,MS4.8
HHC LR LR
comp=Z,670nm,19.6s,MS4.6
EQES Quesada 48.16 297 P **P 22 06 31.3 0.0**
comp=Z,47nm,1.0s,mb5.5
EQES Quesada 48.16 297 P **P 22 06 31.3 0.0**
comp=Z,47nm,1.0s,mb5.5
HTR Trewern Hill 48.30 316⇑*i*P **P 22 06 31.0 -1.2**
HTR Trewern Hill 48.30 316⇑*i*P **P 22 06 31.0 -1.2**
EALB Alboran 48.36 294 P **P 22 06 34.7 +1.8**
comp=Z,24nm,1.0s,mb5.2
EALB Alboran 48.36 294 P **P 22 06 34.7 +1.8**
comp=Z,24nm,1.0s,mb5.2
ESY Stoneypath 48.47 321⇑*i*P **P 22 06 33.0 -0.4**
ESY Stoneypath 48.47 321⇑*i*P **P 22 06 33.0 -0.4**
HEX Exmoor 48.53 315⇑*e*P **P 22 06 33.0 -1.0**
HEX Exmoor 48.53 315⇑*e*P **P 22 06 33.0 -1.0**
DYA Yadsworthy 48.56 314⇑*e*P **P 22 06 33.7 -0.5**
DYA AMb AMB 22 06 34.5
comp=Z,82nm,1.1s,mb5.7
DYA Yadsworthy 48.56 314⇑*e*P **P 22 06 33.7 -0.5**
ECOG Cogollos-Vega 48.61 296 P **P 22 06 34.7 -0.1**
ECOG pmax pmax
comp=Z,24nm,0.9s,mb5.2
ECOG Cogollos-Vega 48.61 296 P **P 22 06 34.7 -0.1**
comp=Z,24nm,0.9s,mb5.2
ECOG Cogollos-Vega 48.61 296 P **P 22 06 34.7 -0.1**
comp=Z,24nm,0.9s,mb5.2
ECK Cauldkaine Hill 48.63 320⇑*i*P **P 22 06 33.6 -1.1**
ECK Cauldkaine Hill 48.63 320⇑*i*P **P 22 06 33.6 -1.1**
ESDC Sonseca Array 48.66 299 P **P 22 06 35.3 +0.1**
comp=Z,7.9nm,0.6s,mb4.9,baz=72,slow=7.5,SNR=62
ESDC Sonseca Array 48.66 299 P **P 22 06 34.0 -1.2**
ESDC Sonseca Array 48.66 299 P **P 22 06 34.0 -1.2**
ESLA Sonseca Array 48.66 299 *e*P **P 22 06 35.4 +0.2**
ESLA Sonseca Array 48.66 299 *e*P **P 22 06 35.4 +0.2**
LRW Lerwick 48.66 327⇑*e*P **P 22 06 34.1 -0.7**
LRW AMb AMB 22 06 37.9
comp=Z,78nm,1.4s,mb5.5
LRW Lerwick 48.66 327 P **P 22 06 34.1 -0.7**
LRW AMb AMB 22 06 37.9
comp=Z,78nm,1.4s,mb5.5
LRW Lerwick 48.66 327⇑*e*P **P 22 06 34.1 -0.7**
EKA Eskdalemuir Ar 48.68 320 P **P 22 06 34.3 -0.7**
EKA pmax pmax
comp=Z,20nm,0.9s
EKA Eskdalemuir Ar 48.68 320 P **P 22 06 34.3 -0.7**
comp=Z,20nm,0.9s,mb5.2,baz=111,slow=7.5,SNR=66
EKA Eskdalemuir Ar 48.68 320 P **P 22 06 34.3 -0.7**
comp=Z,20nm,0.9s,mb5.2
EBAN Banos Encina 48.68 297 P **P 22 06 35.6 +0.3**
EBAN pmax pmax
comp=Z,49nm,0.8s,mb5.6
EBAN Banos Encina 48.68 297 P **P 22 06 35.6 +0.3**
comp=Z,49nm,0.8s,mb5.6
EBAN Banos Encina 48.68 297 P **P 22 06 35.6 +0.3**
comp=Z,49nm,0.8s,mb5.6
EBL Broad Law 48.69 321⇑*i*P **P 22 06 34.7 -0.4**
EBL Broad Law 48.69 321⇑*i*P **P 22 06 34.7 -0.4**
ESK Eskdalemuir 48.70 320 P **P 22 06 34.1 -1.1**
comp=Z,152nm,1.1s,mb5.9,SNR=12
ESK Eskdalemuir 48.70 320⇑*e*P **P 22 06 34.1 -1.1**
ESK Eskdalemuir 48.70 320 *e*P **P 22 06 35.0 -0.2**
ESK *e* 22 08 00.2
ESK pmax pmax
comp=Z,34nm,1.0s,mb5.3
ESK Eskdalemuir 48.70 320 *e*P **P 22 06 35.0 -0.2**
comp=Z,34nm,1.0s,mb5.3
ESK *e*PcP PcP 22 08 00.1 +0.3
ESK Eskdalemuir 48.70 320 *e*P **P 22 06 35.0 -0.2**
comp=Z,34nm,1.0s,mb5.3
ESK Eskdalemuir 48.70 320 *e*PcP PcP 22 08 00.2 +0.3
GUD Guadarrama 48.73 301 P **P 22 06 35.5 -0.2**
GUD Guadarrama 48.73 301 P **P 22 06 35.5 -0.2**
XDE Dent Fell 48.74 319 *e*P **P 22 06 34.8 -0.7**
XDE Dent Fell 48.74 319 *e*P **P 22 06 34.8 -0.7**
EDI Edinburgh 48.79 321⇑*e*P **P 22 06 35.1 -0.8**
EDI Edinburgh 48.79 321⇑*e*P **P 22 06 35.1 -0.8**
ERON Agron 48.83 296 P **P 22 06 35.6 -0.9**
ERON Agron 48.83 296 P **P 22 06 35.6 -0.9**
EAU Auchinoon 48.92 321⇑*i*P **P 22 06 35.7 -1.2**
EAU Auchinoon 48.92 321⇑*i*P **P 22 06 35.7 -1.2**
MME1 Meikle Cairn 48.92 323⇑*i*P **P 22 06 36.2 -0.6**
MME1 Meikle Cairn 48.92 323⇑*i*P **P 22 06 36.2 -0.7**
HTL Hartland 48.95 314 *e*P **P 22 06 36.7 -0.5**
HTL AMb AMB 22 06 37.5
comp=Z,55nm,1.1s,mb5.5
HTL Hartland 48.95 314 *e*P **P 22 06 36.7 -0.5**
PAB San Pablo 48.97 299 *e*P **P 22 06 38.2 +0.7**
PAB pmax pmax
comp=Z,83nm,1.2s,mb5.6
PAB San Pablo 48.97 299 *e*P **P 22 06 38.2 +0.6**
comp=Z,83nm,1.2s,mb5.6
PAB San Pablo 48.97 299 *e*P **P 22 06 38.2 +0.7**
comp=Z,83nm,1.2s,mb5.6
EBH Black Hill 49.02 321⇑*i*P **P 22 06 36.9 -0.8**
EBH Black Hill 49.02 321⇑*i*P **P 22 06 36.9 -0.8**
GCD Castle Douglas 49.05 320⇑*i*P **P 22 06 37.5 -0.4**
GCD Castle Douglas 49.05 320⇑*i*P **P 22 06 37.5 -0.4**
ELOJ Sierra Loja 49.09 296 P **P 22 06 37.7 -0.8**
ELOJ pmax pmax
comp=Z,22nm,0.8s,mb5.2
ELOJ Sierra Loja 49.09 296 P **P 22 06 37.7 -0.8**
comp=Z,22nm,0.8s,mb5.2
ELOJ Sierra Loja 49.09 296 P **P 22 06 37.7 -0.8**

comp=Z,22nm,0.8s,mb5.2
TIY Taiyuan 49.11 63 *e*P **P 22 06 39.8 +1.2**
TIY PP PP 22 08 26.6 -5.8
TIY S **S 22 13 41.8 +0.8**
TIY LR LR
comp=E,92nm,3.9s
TIY LR LR
comp=Z,690nm,19.8s,MS4.7
WLF1 Llynfaes 49.12 317⇑*e*P **P 22 06 37.7 -0.7**
WLF1 AMb AMB 22 06 41.7
comp=Z,165nm,1.4s,mb5.9
WLF1 Llynfaes 49.12 317⇑*e*P **P 22 06 37.7 -0.7**
ELUQ Luque 49.13 297 P **P 22 06 36.9 -1.9**
MCD Coleburn Disti 49.13 323⇑*i*P **P 22 06 37.9 -0.6**
MCD Coleburn Disti 49.13 323⇑*i*P **P 22 06 37.9 -0.5**
MPAL Palemas 49.20 293 *e*P **P 22 06 37.0 -2.3**
GIM North Isle of 49.28 319⇑*e*P **P 22 06 39.0 -0.7**
GIM North Isle of 49.28 319⇑*e*P **P 22 06 39.0 -0.6**
EADA Adamuz 49.30 297 P **P 22 06 40.1 0.0**
comp=Z,62nm,0.9s,mb5.6
EADA Adamuz 49.30 297 P **P 22 06 40.1 0.0**
comp=Z,62nm,0.9s,mb5.6
EARI Arriondas 49.34 304 P **P 22 06 40.4 0.0**
comp=Z,27nm,0.8s,mb5.3
EARI Arriondas 49.34 304 P **P 22 06 40.4 +0.1**
comp=Z,27nm,0.8s,mb5.3
EAB Aberfoyle 49.47 321⇑*i*P **P 22 06 40.3 -0.8**
EAB Aberfoyle 49.47 321⇑*i*P **P 22 06 40.3 -0.8**
GAL1 Galloway 49.49 319⇑*e*P **P 22 06 40.1 -1.1**
GAL1 AMb AMB 22 06 41.6
comp=Z,47nm,1.0s,mb5.5
GAL1 Galloway 49.49 319⇑*e*P **P 22 06 40.1 -1.2**
TZK Tazeka 49.58 292 *i* P **P 22 06 44.0 +1.7**
ORE Reay 49.59 324 *e*P **P 22 06 41.0 -0.9**
ORE Reay 49.59 324 *e*P **P 22 06 41.0 -0.9**
CIT Chita 49.60 44 *e*P **P 22 06 41.8 -0.3**
CIT Chita 49.60 44 *e*P **P 22 06 41.8 -0.3**
EMIJ Mijas 49.66 295 P **P 22 06 42.0 -0.9**
comp=Z,68nm,0.9s,mb5.7
EMIJ Mijas 49.66 295 P **P 22 06 42.0 -0.9**
comp=Z,68nm,0.9s,mb5.7
PSI Prapat 49.68 113 LR LR 22 26 35.4
comp=Z,223nm,21.5s,MS4.1,baz=317,slow=35
MVH1 Achvaich 49.68 323⇑*i*P **P 22 06 41.8 -0.8**
MVH1 Achvaich 49.68 323⇑*i*P **P 22 06 41.8 -0.9**
MDO Dochfour 49.69 323⇑*e*P **P 22 06 42.0 -0.7**
MDO Dochfour 49.69 323⇑*e*P **P 22 06 42.0 -0.7**
KULM Kulim 49.71 109 P **P 22 06 43.1 -0.4**
LSZ Lusaka 50.10 213 *e*P **P 22 06 47.1 +0.8**
LSZ pmax pmax
comp=Z,57nm,1.1s,mb5.5
LSZ Lusaka 50.10 213 *e*P **P 22 06 47.1 +0.8**
comp=Z,57nm,1.1s,mb5.5
LSZ Lusaka 50.10 213 P **P 22 06 47.9 +1.6**
SNR=9.9
LSZ P 22 06 47.9
SNR=9.9
LSZ Lusaka 50.10 213⇓*i*P **P 22 06 47.5 +1.3**
LSZ Lusaka 50.10 213 *e*P **P 22 06 47.1 +0.8**
comp=Z,57nm,1.1s,mb5.5
ZFT Errachidia 50.11 289 *i* P **P 22 06 47.5 +1.2**
LIJA Lijar 50.12 296 *i* P **P 22 06 45.2 -1.1**
GMM Mts of Mourne 50.13 319⇑*i*P **P 22 06 45.5 -0.6**
GMM Mts of Mourne 50.13 319⇑*i*P **P 22 06 45.5 -0.7**
KAC Achnashellach 50.20 323⇑*e*P **P 22 06 45.9 -0.7**
KAC Achnashellach 50.20 323⇑*e*P **P 22 06 45.9 -0.7**
KSB Sheil Bridge 50.22 322 *e*P **P 22 06 45.4 -1.4**
KSB Sheil Bridge 50.22 322 *e*P **P 22 06 45.4 -1.4**
DSB Dublin 50.30 317 *e*P **P 22 06 47.2 -0.2**
comp=Z,24nm,0.8s,mb5.3
DSB *e*PP PP 22 08 43.2 +0.3
DSB Dublin 50.30 317 *e*P **P 22 06 47.2 -0.2**
comp=Z,24nm,0.8s,mb5.3
DKH Dar Kharkhour 50.30 294 *i* P **P 22 06 48.0 +0.3**
KPL Plockton 50.37 323 *e*P **P 22 06 46.9 -0.9**
KPL AMb AMB 22 06 53.4
comp=Z,72nm,1.3s,mb5.5
KPL Plockton 50.37 323 *e*P **P 22 06 46.9 -0.9**
KAR1 Arisaig 50.40 322⇑*i*P **P 22 06 47.8 -0.3**
KAR1 Arisaig 50.40 322⇑*i*P **P 22 06 47.8 -0.3**
ESPR Espera 50.48 296 P **P 22 06 48.1 -0.9**
comp=Z,39nm,0.8s,mb5.5
ESPR Espera 50.48 296 P **P 22 06 48.1 -1.0**
comp=Z,39nm,0.8s,mb5.5
BOD Bodaibo 50.54 37 *e*P **P 22 06 48.7 -0.4**
BOD pmax pmax
comp=Z,82nm,1.4s,mb5.5
BOD Bodaibo 50.54 37 *e*P **P 22 06 48.7 -0.4**
comp=Z,82nm,1.4s,mb5.5
ECAL Calabor 50.56 302 P **P 22 06 49.9 +0.3**
comp=Z,24nm,0.8s,mb5.2
ECAL Calabor 50.56 302 P **P 22 06 49.9 +0.3**
comp=Z,24nm,0.8s,mb5.2
MIF Mishlifen 50.56 291 *i* P **P 22 06 51.0 +1.3**
PBRG Braganca 50.58 302 *e*P **P 22 06 49.7 0.0**
comp=Z,71nm,1.5s,mb5.4
DMUB Kingscourt 50.67 318⇑*i*P **P 22 06 50.0 -0.2**
EPON Pontenova 50.76 304 P **P 22 06 51.5 +0.4**
comp=Z,22nm,0.9s,mb5.1
EPON Pontenova 50.76 304 P **P 22 06 51.5 +0.5**
comp=Z,22nm,0.9s,mb5.1
RSA Sarsar 50.78 293 *i* P **P 22 06 52.0 +0.6**
SFS San Fernando 50.82 295 *e*P **P 22 06 51.3 -0.3**
SFS San Fernando 50.82 295 *e*P **P 22 06 51.3 -0.3**
ERUA La Rua 50.82 303 P **P 22 06 51.6 0.0**
ERUA La Rua 50.82 303 P **P 22 06 51.6 0.0**
DCN Croghan 50.84 317⇑*i*P **P 22 06 51.6 +0.1**
DCN Croghan 50.84 317⇑*i*P **P 22 06 51.6 +0.1**
MVO Moncorvo 50.85 302 *i* P **P 22 06 52.2 +0.4**
comp=Z,76nm,1.3s,mb5.5
MVO *e*S SS 22 18 08.2 +28
MVO *e*LQ 22 26 24.9
TORD Torodi Ar. Bea 50.89 264 P **P 22 06 51.6 -0.8**
comp=Z,66nm,0.7s,mb5.7,baz=62,slow=7.8,SNR=594
TORD LR LR 22 27 27.5
comp=Z,588nm,19.7s,MS4.6,baz=70,slow=35
EMIN Mina Concepcio 50.99 297 P **P 22 06 52.6 -0.3**
comp=Z,27nm,0.9s,mb5.2
EMIN Mina Concepcio 50.99 297 P **P 22 06 52.6 -0.3**
comp=Z,27nm,0.9s,mb5.2
EBAD Badajoz 51.12 298 P **P 22 06 53.5 -0.3**
comp=Z,18nm,0.8s,mb5.0
EBAD Badajoz 51.12 298 P **P 22 06 53.5 -0.4**
comp=Z,18nm,0.8s,mb5.0
PBAR Barrancos 51.22 298 *i* P **P 22 06 54.6 0.0**
comp=Z,160nm,1.4s,mb5.8
PBAR *e*LQ 22 27 27.0
PBAR *e*LR LR 22 29 01.0
comp=Z,154nm,18.0s
MTE Manteigas 51.32 301 *i* P **P 22 06 55.5 +0.2**
comp=Z,107nm,1.5s,mb5.5
MTE *e*S SS 22 18 26.8 +39
MTE *e*LQ 22 27 45.8
MTE Manteigas 51.32 301 *e*P **P 22 06 56.1 +0.7**
MTE Manteigas 51.32 301 *e*P **P 22 06 56.1 +0.8**
PMRV Marv??o 51.33 299 *i* P **P 22 06 55.2 -0.2**
comp=Z,70nm,1.4s,mb5.4
PMRV *e*S SS 22 18 11.8 +24
PMRV *e*LQ 22 25 28.4
PCBR Castelo Branco 51.34 300 *i* P **P 22 06 55.8 +0.3**
comp=Z,138nm,1.4s,mb5.7
PVRL Vila Real 51.36 302 *e*P **P 22 06 56.0 +0.4**
comp=Z,103nm,1.4s,mb5.6
PVRL Vila Real 51.36 302 *e*P **P 22 06 56.0 +0.4**
comp=Z,103nm,1.4s,mb5.6
KIB El Ksiba 51.40 290 *i* P **P 22 06 57.0 +1.0**
QIZ Qiongzhong 51.52 88 P **P 22 06 57.0 -0.1**
QIZ pmax pmax
comp=Z,15nm,1.3s,mb4.8
QIZ pmax pmax
comp=Z,180nm,3.5s
QIZ LR LR
comp=N,280nm,16.4s
QIZ LR LR
comp=Z,340nm,16.8s,MS4.5
QIZ Qiongzhong 51.52 88 *e*P **P 22 06 57.2 +0.1**
comp=Z,39nm,1.3s,mb5.2
QIZ Qiongzhong 51.52 88 *e*P **P 22 06 57.2 +0.1**
comp=Z,39nm,1.3s,mb5.2
PCAB Cabril 51.54 302 *e*P **P 22 06 57.4 +0.4**
comp=Z,73nm,1.3s,mb5.5
PCAB Cabril 51.54 302 *e*P **P 22 06 57.4 +0.4**
comp=Z,73nm,1.3s,mb5.5
ELOB Lobios 51.55 303 P **P 22 06 57.7 +0.7**
comp=Z,18nm,0.8s,mb5.1

ELOB Lobios 51.55 303 P **P** **22 06 57.7 +0.7**
comp=Z,18nm,0.8s,mb5.1
PESTR Estremoz 51.55 299 *e*P **P** **22 06 56.8 -0.3**
comp=Z,54nm,1.5s,mb5.3
PESTR *e*S SS 22 18 49.9 +59
PESTR *e*LQ 22 27 51.0
PESTR *e*LR LR 22 29 36.7
comp=Z,196nm,20.0s
PESTR Estremoz 51.55 299 *e*P **P** **22 06 56.8 -0.3**
comp=Z,54nm,1.5s,mb5.3
PVIS Viseu 51.55 301 *i* P **P** **22 06 57.8 +0.8**
comp=Z,107nm,1.5s,mb5.5
BJT Baijiatuau 51.72 60 *e*P **P** **22 06 58.1 -0.2**
BJT pmax pmax
comp=Z,12nm,0.3s
BJT Baijiatuau 51.72 60 *e*P **P** **22 06 58.0 -0.3**
comp=Z,12nm,0.3s,mb5.3
BJT Baijiatuau 51.72 60 *e*P **P** **22 06 58.1 -0.2**
comp=Z,12nm,0.3s,mb5.3
BJI Beijing 51.72 60 P **P** **22 06 58.3 0.0**
BJI PP PP 22 08 58.3 +2.2
BJI S **S** **22 14 14.3 -2.9**
BJI pmax pmax
comp=Z,23nm,1.4s,mb4.9
BJI pmax pmax
comp=Z,280nm,5.5s
BJI LR LR
comp=N,870nm,18.2s,MS4.9
BJI LR LR
comp=E,270nm,13.5s,MS4.9
BJI LR LR
comp=Z,320nm,42.6s
STS Santiago 51.82 304 P **P** **22 06 59.6 +0.6**
STS pmax pmax
comp=Z,23nm,0.8s,mb5.2
STS Santiago 51.82 304 P **P** **22 06 59.6 +0.6**
comp=Z,23nm,0.8s,mb5.2
STS Santiago 51.82 304 P **P** **22 06 59.6 +0.6**
comp=Z,23nm,0.8s,mb5.2
TZC Tazercounte 51.86 290 *i* P **P** **22 07 01.0 +1.5**
PVAQ Vaqueiros 51.87 297 *e*P **P** **22 06 59.1 -0.4**
comp=Z,59nm,1.2s,mb5.4
PVAQ *e*LQ 22 27 36.0
PVAQ Vaqueiros 51.87 297 *e*P **P** **22 06 59.1 -0.4**
comp=Z,59nm,1.2s,mb5.4
PBEJ Beja 51.89 298 *i* P **P** **22 06 59.6 0.0**
comp=Z,74nm,1.0s,mb5.6
EVO Evora 51.93 298 *i* P **P** **22 07 00.0 +0.1**
comp=Z,88nm,1.3s,mb5.5
WHN Wuhan 51.97 72 ⇑P **P** **22 06 57.6 -2.8**
WHN PP PP 22 09 02.1 +3.5
WHN S **S** **22 14 18.1 -2.8**
WHN pmax pmax
comp=Z,600nm,4.4s
WHN LR LR
comp=N,630nm,12.5s,MS5.1
WHN LR LR
comp=E,980nm,13.6s,MS5.1
WHN LR LR
comp=Z,880nm,16.8s,MS4.9
PBDV Barranco-do-Ve 52.06 297 *e*P **P** **22 07 00.7 -0.2**
comp=Z,60nm,1.5s,mb5.3
PBDV Barranco-do-Ve 52.06 297 *e*P **P** **22 07 00.7 -0.2**
comp=Z,60nm,1.5s,mb5.3
PTOM Tomar 52.08 300 *e*P **P** **22 07 01.5 +0.5**
comp=Z,156nm,1.6s,mb5.7
PTOM Tomar 52.08 300 *e*P **P** **22 07 01.5 +0.5**
comp=Z,156nm,1.6s,mb5.7
EMAZ Mazaricos 52.12 304 P **P** **22 07 01.5 +0.2**
comp=Z,44nm,0.9s,mb5.4
EMAZ Mazaricos 52.12 304 P **P** **22 07 01.5 +0.2**
comp=Z,44nm,0.9s,mb5.4
MORF Marmelete 52.62 297 *e*P **P** **22 07 04.7 -0.3**
comp=Z,60nm,2.0s,mb5.2
MORF Marmelete 52.62 297 *e*P **P** **22 07 04.7 -0.3**
comp=Z,60nm,2.0s,mb5.2
PTEO Sao Teotonio 52.64 297 *e*P **P** **22 07 05.6 +0.4**
comp=Z,83nm,1.7s,mb5.4
PTEO Sao Teotonio 52.64 297 *e*P **P** **22 07 05.6 +0.4**
comp=Z,83nm,1.7s,mb5.4
SPITS Spitsbergen Ar 52.69 351 P **P** **22 07 05.6 +0.7**
SPITS pmax pmax
comp=Z,11nm,0.6s
SPITS Spitsbergen Ar 52.69 351 P **P** **22 07 05.6 +0.6**
comp=Z,11nm,0.6s,mb4.9,baz=135,slow=11,SNR=20
SPITS Spitsbergen Ar 52.69 351 P **P** **22 07 05.6 +0.7**
comp=Z,11nm,0.6s,mb5.0
SPB4 Spitsbergen Ar 52.69 351 *e*P **P** **22 07 05.3 +0.3**
SPB4 Spitsbergen Ar 52.69 351 *e*P **P** **22 07 05.3 +0.3**
PFVI Vila Bisbo 52.79 297 *e*P **P** **22 07 06.2 -0.1**
comp=Z,148nm,1.4s,mb5.7
PFVI Vila Bisbo 52.79 297 *e*P **P** **22 07 06.2 -0.1**
comp=Z,148nm,1.4s,mb5.7
PMAFR Mafra 52.85 299 *e*P **P** **22 07 07.3 +0.6**
comp=Z,134nm,2.0s,mb5.5
PMAFR Mafra 52.85 299 *e*P **P** **22 07 07.3 +0.6**
comp=Z,134nm,2.0s,mb5.5
OUK Oukaimeden 53.22 289 *i* P **P** **22 07 11.0 +1.4**
HIA Hailar 53.49 48 *e*P **P** **22 07 11.9 +0.7**
HIA *e* 22 08 18.4
HIA pmax pmax
comp=Z,16nm,0.6s
HIA Hailar 53.49 48 *e*P **P** **22 07 11.9 +0.7**
comp=Z,16nm,0.6s,mb5.1
HIA *e*PcP PcP 22 08 18.4 +0.6
HIA Hailar 53.49 48 *e*P **P** **22 07 11.9 +0.7**
comp=Z,16nm,0.6s,mb5.1
KGM Kluang 53.73 110 P **P** **22 07 13.2 -0.3**
KBS Kingsbay 53.84 351 *e* SS SS 22 18 55.5 +30
KBS AMS AMS 22 35 01.4
comp=Z,445nm,15.6s,MS4.6
KBS Kingsbay 53.84 351 ⇓*i*P **P** **22 07 12.3 -1.1**
SNR=23
CIA Chichaoua 53.88 290 *i* P **P** **22 07 15.0 +0.6**
MYKOM Kota Tinggi 54.30 110 P **P** **22 07 16.9 -0.7**
JHA Jbel Lahdid 54.41 290 *i* P **P** **22 07 20.0 +1.7**
NJ2 Nanjing 55.35 69 *e*P **P** **22 07 25.2 +0.1**
NJ2 pP pP 22 07 37.8 +1.1
NJ2 sP sP 22 07 43.1 +1.7
NJ2 PP PP 22 09 30.8 +1.9
NJ2 S **S** **22 15 07.5 +0.8**
NJ2 sS sS 22 15 27.0 +1.0
NJ2 pmax pmax
comp=Z,80nm,1.0s,mb5.7
NJ2 pmax pmax
comp=Z,100nm,7.6s
NJ2 LR LR
comp=N,4μm,16.6s,MS5.7
NJ2 LR LR
comp=E,4μm,18.6s,MS5.7
NJ2 LR LR
comp=Z,2μm,14.1s,MS5.4
CLNS Chul'man 56.36 39 *e*P **P** **22 07 32.1 +0.2**
CLNS *e**PP pP 22 07 40.2 -3.4
CLNS *e* 22 08 26.9
CLNS *e* 22 09 36.4
CLNS *e*PPP 22 10 51.6
CLNS *e*S **S** **22 15 20.7 +1.4**
CLNS *e* 22 17 18.4
CLNS *e*SSS 22 21 20.7
CLNS pmax pmax
comp=Z,32nm,1.1s,mb5.3
CLNS pmax pmax
comp=E,17nm,1.2s
CLNS pmax pmax
comp=N,5.0nm,1.1s
CLNS pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CLNS pmax pmax
comp=E,5.0nm,1.2s
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS smax
comp=N,26nm,14.1s
CLNS smax
comp=E,97nm,17.0s
CLNS MLR MLR
comp=E,566nm,14.0s,MS4.8
CLNS MLR MLR
comp=Z,545nm,14.0s,MS4.8
CLNS MLR MLR
comp=N,343nm,16.0s,MS4.8
CLNS Chul'man 56.36 39 *e*P **P** **22 07 32.1 +0.2**
comp=N,5.0nm,1.1s,mb4.5
SNY Shenyang 57.00 57 ⇑P **P** **22 07 35.7 -1.0**
SNY pP pP 22 07 54.8 +6.4
SNY PcP PcP 22 08 30.3 -1.2
SNY S **S** **22 15 32.1 +3.9**
SNY pmax pmax
comp=Z,13nm,1.3s,mb4.8
SNY pmax pmax
comp=Z,220nm,3.3s
SNY LR LR
comp=N,430nm,14.3s
SNY LR LR
comp=E,710nm,20.8s
SNY LR LR
comp=Z,760nm,19.2s,MS4.8
SSE Sheshan 57.52 70 *e*P **P** **22 07 43.8 +3.3**
SSE pmax pmax
comp=Z,36nm,0.8s,mb5.5
SSE pmax pmax
comp=Z,66nm,3.5s
CN2 Changchun 58.01 54 *e*P **P** **22 07 44.5 +0.8**
CN2 *e*pP pP 22 07 59.6 +4.1
CN2 *e*sP sP 22 08 04.5 +4.4
CN2 *e*S **S** **22 15 38.7 -2.7**
CN2 pmax pmax
comp=Z,40nm,1.2s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,300nm,22.0s,MS4.4
BORG Borgarnes 58.53 331 P **P** **22 07 48.0 +1.0**
BORG pmax pmax
comp=Z,25nm,1.0s
BORG Borgarnes 58.53 331 P **P** **22 07 48.0 +1.0**
comp=Z,24nm,1.0s,mb5.2,baz=60,slow=12,SNR=3.7
BORG Borgarnes 58.53 331 P **P** **22 07 48.0 +1.0**
TIXI Tiksi 58.57 21 *c i*P **P** **22 07 46.9 -0.3**
TIXI *e*S **S** **22 15 46.0 -1.9**
TIXI *e* 22 17 34.4
TIXI pmax pmax
comp=Z,45nm,1.1s,mb5.4
TIXI MLR MLR
comp=Z,661nm,18.0s,MS4.8
TIXI Tiksi 58.57 21 *e*P **P** **22 07 46.8 -0.4**
comp=Z,49nm,1.1s,mb5.5
TIXI *e*PcP PcP 22 08 36.8 -0.3
TIXI Tiksi 58.57 21 *e*P **P** **22 07 46.8 -0.4**
comp=Z,49nm,1.1s,mb5.5
TIXI Tiksi 58.57 21 *e*PcP PcP 22 08 36.8 -0.3
DAG Danmarks Havn 58.66 345 ⇓*i*P **P** **22 07 46.0 -1.8**
DAG pmax pmax
comp=Z,29nm,1.3s,mb5.2
DAG Danmarks Havn 58.66 345 ⇓*i*P **P** **22 07 46.0 -1.8**
comp=Z,29nm,1.3s,mb5.2
YAK Yakutsk 58.66 32 *c i*P **P** **22 07 47.3 -0.7**
YAK pmax pmax
comp=Z,69nm,1.4s,mb5.5
YAK pmax pmax
comp=E,43nm,1.4s
YAK MLR MLR
comp=Z,1μm,17.0s,MS5.1
YAK MLR MLR
comp=E,948nm,17.0s
YAK Yakutsk 58.66 32 *e*P **P** **22 07 47.4 -0.6**
comp=E,50nm,0.8s,mb5.6
YAK Yakutsk 58.66 32 *e*P **P** **22 07 47.4 -0.6**
comp=E,50nm,0.8s,mb5.6
SCO Scoresbysund 58.90 338 ⇑*i*P **P** **22 07 50.6 +1.1**
SCO pmax pmax
comp=Z,13nm,1.1s,mb4.9
SCO MLR MLR
comp=Z,140nm,21.0s,MS4.1
SCO Scoresbysund 58.90 338 ⇑*i*P **P** **22 07 50.6 +1.1**
comp=Z,13nm,1.1s,mb4.9
SCO
comp=Z,140nm,21.0s
SCO Scoresbysund 58.90 338 ⇑*i*P **P** **22 07 50.6 +1.1**
comp=Z,13nm,1.1s,mb4.9
CFTV Fuerteventura 59.17 288 P **P** **22 07 52.8 +0.7**
comp=Z,27nm,0.7s,mb5.4
CFTV Fuerteventura 59.17 288 P **P** **22 07 52.8 +0.7**
comp=Z,27nm,0.7s,mb5.4
SLR Silverton 59.23 207 ⇓*i*P **P** **22 07 53.4 +1.1**
SLR AMb AMB 22 07 59.3
comp=Z,57nm,1.4s,mb5.4
DBIC Dimbokro 59.59 261 P **P** **22 07 54.6 -0.5**
DBIC pmax pmax
comp=Z,40nm,0.8s
DBIC MLR MLR
comp=Z,715nm,18.4s
DBIC Dimbokro 59.59 261 P **P** **22 07 54.6 -0.6**
comp=Z,40nm,0.8s,mb5.5,baz=47,slow=9.1,SNR=53
DBIC LR LR 22 35 15.4
comp=Z,715nm,18.4s,MS4.8,baz=39,slow=38
DBIC Dimbokro 59.59 261 *e*P **P** **22 07 54.5 -0.6**
comp=Z,43nm,0.8s,mb5.5
DBIC PcP PcP 22 08 42.1 0.0
DBIC Dimbokro 59.59 261 *e*P **P** **22 07 54.0 -1.1**
DBIC Dimbokro 59.59 261 *e*P **P** **22 07 54.5 -0.6**
comp=Z,43nm,0.8s,mb5.5
DBIC Dimbokro 59.59 261 PcP PcP 22 08 42.1 -0.1
YHNB Yeheng 59.63 77 *e*P **P** **22 07 56.0 +0.8**
comp=Z,123nm,1.2s,mb5.8
YHNB *e*PP PP 22 10 07.7 +0.6
YHNB Yeheng 59.63 77 *e*P **P** **22 07 56.0 +0.7**
comp=Z,123nm,1.2s,mb5.8
KIC Kosan Boka 59.64 260 *e*P **P** **22 07 54.9 -0.6**
comp=Z,94nm,0.9s,mb5.8
KIC Kosan Boka 59.64 260 *e*P **P** **22 07 54.9 -0.6**
comp=Z,94nm,0.9s,mb5.8
LBTB Lobatse 59.73 210 *e*P **P** **22 07 56.6 +0.8**
LBTB pmax pmax
comp=Z,63nm,1.3s,mb5.5
LBTB Lobatse 59.73 210 *e*P **P** **22 07 56.6 +0.8**
comp=Z,63nm,1.3s,mb5.5
LBTB Lobatse 59.73 210 ⇓*i*P **P** **22 07 56.8 +1.1**
LBTB AMb AMB 22 07 59.4
comp=Z,50nm,1.2s,mb5.4
LBTB Lobatse 59.73 210 *e*P **P** **22 07 56.6 +0.8**
comp=Z,63nm,1.3s,mb5.5
TIC Toumodi 59.74 261 *e*P **P** **22 07 55.6 -0.6**
comp=Z,61nm,0.8s,mb5.7
TIC Toumodi 59.74 261 *e*P **P** **22 07 55.6 -0.6**
TIC pmax pmax
comp=Z,61nm,0.8s,mb5.7
TIC Toumodi 59.74 261 *e*P **P** **22 07 55.6 -0.6**
comp=Z,61nm,0.8s,mb5.7
ERPM east rand prop 59.79 207 ⇑*i*P **P** **22 07 56.5 +0.4**
ERPM AMb AMB 22 08 02.7
comp=Z,68nm,1.2s,mb5.6
KSM Kuching 59.88 106 P **P** **22 07 56.9 -0.2**
LIC Lamto 59.95 260 ⇑*i*P **P** **22 07 56.9 -0.7**
comp=Z,86nm,0.8s,mb5.5
LIC *e*MLR MLR
comp=Z,732nm,19.0s,MS4.5
LIC Lamto 59.95 260 *e*P **P** **22 07 57.0 -0.6**
comp=Z,130nm,0.8s,mb6.0
LIC Lamto 59.95 260 ⇑*i*P **P** **22 07 56.9 -0.7**
comp=Z,43nm,0.8s,mb5.5
LIC LR LR
comp=Z,370nm,19.0s,MS4.5
PMAR Madeira 60.25 293 *i* P **P** **22 07 59.8 +0.3**
comp=Z,265nm,1.3s,mb6.1
PRYS Parys 60.66 207 ⇓*i*P **P** **22 08 02.3 +0.1**
PRYS AMb AMB 22 08 05.0
comp=Z,47nm,1.2s,mb5.5
MDJ Mudanjiang 60.77 52 P **P** **22 08 02.6 -0.2**
MDJ pP pP 22 08 14.5 -0.1
MDJ S **S** **22 16 16.2 -0.9**
MDJ SS SS 22 20 16.8 +0.8
MDJ pmax pmax
comp=Z,11nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,79nm,4.9s
MDJ LR LR
comp=N,580nm,24.6s
MDJ LR LR
comp=Z,600nm,21.5s,MS4.7
SBUM Sibu 61.00 104 P **P** **22 08 04.5 -0.3**
EBAJ Bajamar 61.03 289 P **P** **22 08 05.7 +0.8**
comp=Z,50nm,0.8s,mb5.7
EBAJ Bajamar 61.03 289 P **P** **22 08 05.7 +0.9**
comp=Z,50nm,0.8s,mb5.7
KSRS Korea Array 61.23 61 P **P** **22 08 05.2 -0.8**
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
KSRS MLR MLR
comp=Z,458nm,19.6s,MS4.6
KSRS Korea Array 61.23 61 P **P** **22 08 05.2 -0.9**
comp=Z,8.2nm,0.7s,mb5.0,baz=281,slow=6.8,SNR=26
KSRS LR LR 22 38 02.0
comp=Z,458nm,19.6s,MS4.6,baz=289,slow=39
KLR Kul'dur 61.30 47 *e*P **P** **22 08 01.7 -4.6**
KLR pmax pmax
comp=E,80nm,2.0s
KLR pmax pmax
comp=Z,110nm,2.0s,mb5.6
KLR MLR MLR
comp=E,500nm,13.0s
BTM Bintulu 61.35 103 P **P** **22 08 07.4 +0.2**
SEK Senekal 61.80 206 ⇓*i*P **P** **22 08 10.4 +0.6**
SEK AMb AMB 22 08 16.3
comp=Z,86nm,1.2s,mb5.8
KKM Kota Kinabalu 62.67 98 P **P** **22 08 16.0 0.0**
KKM Kota Kinabalu 62.67 98 *e*P **P** **22 08 15.6 -0.5**
comp=Z,62nm,1.4s,mb5.5
KKM Kota Kinabalu 62.67 98 *e*P **P** **22 08 15.6 -0.4**
comp=Z,62nm,1.4s,mb5.5
KDM Kudat 62.80 97 P **P** **22 08 17.1 +0.2**
BOSA Boshof 63.02 208 P **P** **22 08 18.2 +0.3**
BOSA pmax pmax
comp=Z,23nm,0.7s,mb5.4
BOSA MLR MLR
comp=Z,629nm,22.0s,MS4.7
BOSA Boshof 63.02 208 P **P** **22 08 18.2 +0.3**
comp=Z,23nm,0.7s,mb5.4,baz=29,slow=6.5,SNR=44
BOSA LR LR 22 35 06.2
comp=Z,629nm,22.0s,MS4.7,baz=25,slow=36
BOSA Boshof 63.02 208 ⇓*i*P **P** **22 08 18.4 +0.4**
BOSA AMb AMB 22 08 21.5
comp=Z,51nm,1.8s,mb5.4
BOSA Boshof 63.02 208 P **P** **22 08 18.2 +0.3**
HABR Khabarovsk 63.59 47 *e*P **P** **22 08 19.7 -1.9**
HABR *e*SS SS 22 20 58.8 -1.1
HABR pmax pmax
comp=Z,165nm,1.4s,mb5.9
HABR pmax pmax
comp=N,111nm,2.5s
HABR pmax pmax
comp=E,136nm,1.8s
SDKM Sandakan 63.72 98 P **P** **22 08 22.3 -0.7**
SUMG Summit 63.97 340 *e*P **P** **22 08 24.7 +1.0**
comp=E,78nm,1.0s,mb5.7
SUMG *e*PP PP 22 10 42.9 -1.4
SUMG Summit 63.97 340 *e*P **P** **22 08 24.7 +1.0**
comp=E,78nm,1.0s,mb5.7
UPI Upington 64.57 212 *e*P **P** **22 08 27.4 -0.8**
UPI AMb AMB 22 08 31.7
comp=Z,48nm,1.3s,mb5.4
JOW Kunigami 64.74 72 LR LR 22 39 20.7
comp=Z,391nm,19.3s,MS4.6,baz=289,slow=38
TSM Tawau 64.96 99 P **P** **22 08 30.6 -0.5**
ALE Alert 65.36 353 P **P** **22 08 33.5 +0.8**
comp=Z,193nm,1.0s,mb6.1,SNR=6.5
CVNA Calvinia 67.89 211 ⇓*i*P **P** **22 08 50.4 +1.0**
CVNA AMb AMB 22 09 05.5
comp=Z,63nm,1.9s,mb5.3
SUR Sutherland 68.18 210 *e*P **P** **22 08 52.2 +1.0**
comp=Z,21nm,0.9s,mb5.2
SUR Sutherland 68.18 210 *e*P **P** **22 08 52.2 +1.0**
comp=Z,21nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 69.01 47 ⇓*e*P **P** **22 08 56.0 -0.3**
YSS *e* pP 22 09 10.0 +1.7
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 69.01 47 *e*P **P** **22 08 56.3 0.0**
comp=Z,121nm,1.3s,mb5.7
YSS Yuzh-Sakhalins 69.01 47 *e*P **P** **22 08 56.3 0.0**
comp=Z,121nm,1.3s,mb5.7
MAJO Matsushiro 69.34 59 *e*P **P** **22 08 57.6 -1.0**
MAJO pmax pmax
comp=Z,19nm,1.0s,mb5.0
MAJO Matsushiro 69.34 59 *e*P **P** **22 08 57.6 -1.0**
comp=Z,19nm,1.0s,mb5.0
MAJO Matsushiro 69.34 59 *e*P **P** **22 08 57.6 -1.0**
comp=Z,19nm,1.0s,mb5.0
MAT Matsushiro 69.34 59 P **P** **22 08 56.5 -2.1**
MAT S S 22 18 00.0 -2.6
MJAR Matsushiro Arr 69.34 59 P **P** **22 08 57.9 -0.7**
MJAR pmax pmax
comp=Z,8.0nm,1.1s
MJAR MLR MLR
comp=Z,286nm,19.0s
MJAR Matsushiro Arr 69.34 59 P **P** **22 08 57.9 -0.8**
comp=Z,7.7nm,1.1s,mb4.6,baz=286,slow=8.4,SNR=15
MJAR LR LR 22 42 45.3
comp=Z,286nm,19.0s,MS4.5,baz=295,slow=39
MJAR Matsushiro Arr 69.34 59 P **P** **22 08 57.9 -0.7**
SFJD Kangerlussuaq 69.72 336 ⇑*i*P **P** **22 09 00.1 -0.3**
SFJD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SFJD MLR MLR
comp=Z,210nm,20.0s,MS4.4
SFJD Kangerlussuaq 69.72 336 *e*P **P** **22 09 00.1 -0.3**
comp=Z,48nm,1.4s,mb5.2
SFJD Kangerlussuaq 69.72 336 ⇑*i*P **P** **22 09 00.1 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
SFJD
comp=Z,210nm,20.0s
SFJD Kangerlussuaq 69.72 336 ⇑*i*P **P** **22 09 00.1 -0.3**
comp=Z,10.0nm,0.9s,mb4.8,SNR=19
KAPI Kappang 71.30 107 P **P** **22 09 10.7 -0.1**
comp=Z,293nm,1.8s,mb5.9,SNR=8.1
KAPI Kappang 71.30 107 *e*P **P** **22 09 09.2 -1.7**
comp=Z,173nm,1.6s,mb5.7
BILL Bilibino 71.78 22 ⇑*i*P **P** **22 09 13.7 +0.8**
BILL *i* 22 09 32.6
BILL *e*S S 22 18 35.8 +5.9
BILL pmax pmax
comp=Z,49nm,1.1s,mb5.3
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.7
BILL Bilibino 71.78 22 *e*P **P** **22 09 13.1 +0.2**
comp=Z,36nm,1.0s,mb5.3
BILL Bilibino 71.78 22 *e*P **P** **22 09 13.1 +0.2**
comp=Z,36nm,1.0s,mb5.3
RES Resolute Bay 75.24 352 *e*P **P** **22 09 33.2 +0.1**
RES pmax pmax
comp=Z,89nm,2.0s,mb5.3
RES Resolute Bay 75.24 352 *e*P **P** **22 09 33.1 0.0**
comp=Z,90nm,2.0s,mb5.3
RES Resolute Bay 75.24 352 *e*P **P** **22 09 33.2 +0.1**
comp=Z,90nm,2.0s,mb5.3
PETK Petropavlovsk- 75.41 37 P **P** **22 09 33.2 -1.3**
PETK pmax pmax
comp=Z,13nm,1.0s,mb4.8
PETK MLR MLR
comp=Z,464nm,19.7s,MS4.8
PETK Petropavlovsk- 75.41 37 P **P** **22 09 33.2 -1.3**
comp=Z,13nm,1.0s,mb4.8,baz=280,slow=0.9,SNR=13
PETK LR LR 22 45 51.2
comp=Z,464nm,19.7s,MS4.8,baz=294,slow=38
PETK Petropavlovsk- 75.41 37 P **P** **22 09 33.2 -1.3**
PET Petropavlovsk 75.96 37 *e*P **P** **22 09 35.9 -1.7**
PET *e*S S 22 19 13.8 -3.6
PET *e*SS SS 22 24 15.7 +6.0
PET pmax pmax
comp=Z,26nm,1.8s,mb4.9
PET MLR MLR
comp=Z,600nm,17.0s,MS5.0
PET MLR MLR
comp=Z,600nm,18.0s
CBIJ Chichi jima 76.11 67 LR LR 22 47 53.9
comp=Z,146nm,19.3s,MS4.3,baz=251,slow=40
MBWA Marble Bar 80.23 120 *e*P **P** **22 10 01.2 -0.5**
MBWA Marble Bar 80.23 120 *e*P **P** **22 10 01.3 -0.5**
comp=Z,17nm,1.0s,mb4.9
MBWA *e*PcP PcP 22 10 08.4 -0.5
MBWA Marble Bar 80.23 120 *e*P **P** **22 10 01.3 -0.4**
comp=Z,17nm,1.0s,mb4.9
MBWA Marble Bar 80.23 120 *e*PcP PcP 22 10 08.4 -0.5
SCHQ Schefferville 82.91 330 P **P** **22 10 15.6 +0.2**
comp=Z,25nm,1.0s,mb5.2,baz=46,slow=6.5,SNR=27
SCHQ LR LR 22 49 24.5
comp=Z,160nm,21.6s,MS4.3,baz=273,slow=37
SCHQ Schefferville 82.91 330 P **P** **22 10 15.6 +0.2**
SCHQ LR LR 22 49 24.5
SCHQ Schefferville 82.91 330 P **P** **22 10 15.6 +0.2**
COLD Coldfoot 82.96 9 *e*P **P** **22 10 15.9 +0.5**
comp=Z,29nm,1.2s,mb5.2
COLD Coldfoot 82.96 9 *e*P **P** **22 10 15.9 +0.5**
comp=Z,29nm,1.2s,mb5.2
FITZ Fitzroy Crossi 83.15 115 *e*P **P** **22 10 17.1 -0.1**
comp=Z,28nm,0.9s,mb5.3
FITZ Fitzroy Crossi 83.15 115 *e*P **P** **22 10 17.2 0.0**

comp=Z,15nm,0.8s,mb5.1
FITZ Fitzroy Crossi 83.15 115 *e*P P 22 10 17.2 0.0
comp=Z,15nm,0.8s,mb5.1
INK Inuvik 83.46 3 *e*P P 22 10 18.1 +0.1
INK pmax pmax
comp=Z,38nm,1.3s
INK Inuvik 83.46 3 *e*P P 22 10 18.1 +0.1
comp=Z,38nm,1.3s,mb5.3
INK Inuvik 83.46 3 *e*P P 22 10 18.1 +0.1
comp=Z,38nm,1.3s,mb5.3
NWAO Narrogin (SRO) 85.46 131 *e*P P 22 10 27.8 -0.8
NWAO pmax pmax
comp=Z,15nm,0.8s
NWAO Narrogin (SRO) 85.46 131 *e*P P 22 10 27.9 -0.7
comp=Z,100nm,0.8s,mb6.0
NWAO Narrogin (SRO) 85.46 131 *e*P P 22 10 27.8 -0.8
comp=Z,15nm,0.8s,mb5.2
NWAO Narrogin (SRO) 85.46 131 *e*P P 22 10 27.8 -0.8
comp=Z,15nm,0.8s,mb5.2
COLA College 85.51 9 *e*P P 22 10 28.6 +0.2
COLA pmax pmax
comp=Z,49nm,1.4s,mb5.5
COLA College 85.51 9 *e*P P 22 10 28.6 +0.2
comp=Z,49nm,1.4s,mb5.5
COLA College 85.51 9 *e*P P 22 10 28.6 +0.2
comp=Z,49nm,1.4s,mb5.5
BPAW Bear Paw Mtn. 85.76 11 *e*P P 22 10 29.9 +0.3
comp=Z,118nm,1.3s,mb6.0
BPAW Bear Paw Mtn. 85.76 11 *e*P P 22 10 30.0 +0.3
comp=Z,118nm,1.3s,mb6.0
TTA Tatalina 85.91 13 *e*P P 22 10 31.6 +1.2
TTA pmax pmax
comp=Z,52nm,1.3s,mb5.6
TTA Tatalina 85.91 13 *e*P P 22 10 31.6 +1.2
comp=Z,52nm,1.3s,mb5.6
TTA Tatalina 85.91 13 *e*P P 22 10 31.6 +1.2
comp=Z,52nm,1.3s,mb5.6
KAKA Kakadu 85.97 107 *e*P P 22 10 30.4 -1.1
comp=Z,26nm,0.6s,mb5.6
KAKA Kakadu 85.97 107 *e*P P 22 10 30.4 -1.1
comp=Z,89nm,0.7s,mb6.1
KTH Kantishna Hill 86.28 11 *e*P P 22 10 32.0 -0.3
comp=Z,32nm,1.2s,mb5.4
KTH Kantishna Hill 86.28 11 *e*P P 22 10 32.0 -0.2
comp=Z,32nm,1.2s,mb5.4
EGAK Eagle 86.41 6 *e*P P 22 10 33.1 +0.3
comp=Z,75nm,1.3s,mb5.8
EGAK Eagle 86.41 6 *e*P P 22 10 33.1 +0.2
comp=Z,75nm,1.3s,mb5.8
MCK McKinley 86.43 10 *e*P P 22 10 32.8 -0.2
MCK pmax pmax
comp=Z,71nm,1.2s,mb5.8
MCK McKinley 86.43 10 *e*P P 22 10 32.8 -0.2
comp=Z,71nm,1.2s,mb5.8
MCK McKinley 86.43 10 *e*P P 22 10 32.8 -0.2
comp=Z,71nm,1.2s,mb5.8
TRF Thorofare Moun 86.48 11 *e*P P 22 10 33.4 +0.2
comp=Z,34nm,1.2s,mb5.5
TRF *e*PP PP 22 13 54.0 -0.2
TRF Thorofare Moun 86.48 11 *e*P P 22 10 33.4 +0.2
comp=Z,34nm,1.2s,mb5.5
PPLA Purkeypile 86.67 12 *e*P P 22 10 34.5 +0.4
comp=Z,38nm,1.3s,mb5.5
PPLA Purkeypile 86.67 12 *e*P P 22 10 34.5 +0.3
comp=Z,38nm,1.3s,mb5.5
DAWY Dawson 87.28 6 *e*P P 22 10 37.6 +0.5
DAWY Dawson 87.28 6 *e*P P 22 10 37.6 +0.5
SVW2 Sparrevohn 87.65 14 *e*P P 22 10 39.9 +1.0
SVW2 Sparrevohn 87.65 14 *e*P P 22 10 39.9 +0.9
MENT Mentasta 87.91 8 *e*P P 22 10 41.0 +0.8
MENT Mentasta 87.91 8 *e*P P 22 10 41.0 +0.8
PMR Palmer 88.42 11 *e*P P 22 10 43.0 +0.4
PMR pmax pmax
comp=Z,22nm,1.0s,mb5.3
PMR Palmer 88.42 11 *e*P P 22 10 43.0 +0.4
comp=Z,22nm,1.0s,mb5.3
PMR Palmer 88.42 11 *e*P P 22 10 43.0 +0.4
comp=Z,22nm,1.0s,mb5.3
YKA Yellowknife Ar 89.01 355 P P 22 10 45.8 +0.5
comp=Z,15nm,0.7s,mb5.4,baz=4.1,slow=5.0,SNR=269
YKA LR LR 22 58 55.3
comp=Z,17nm,18.3s,MS3.5,baz=60,slow=41
YKA Yellowknife Ar 89.01 355 P P 22 10 45.8 +0.5
FCC Fort Churchill 89.25 344 *e*P P 22 10 47.7 +1.2
comp=Z,2.2nm,2.1s,mb4.1
FCC Fort Churchill 89.25 344 *e*P P 22 10 47.7 +1.1
comp=Z,2.2nm,2.1s,mb4.1
WRA Warramunga Arr 91.14 112 P P 22 10 55.4 -0.6
comp=Z,6.6nm,0.9s,mb5.0,baz=309,slow=4.1,SNR=29
WRA PKKPbc PKKPbc 22 28 19.7 +1.2
comp=Z,0.7nm,0.8s,baz=110,slow=2.5,SNR=4.9
WRA Warramunga Arr 91.14 112 P P 22 10 55.4 -0.6
WRAB Tennant Creek 91.14 112 P P 22 10 55.9 -0.1
comp=Z,62nm,1.0s,mb5.9,SNR=5.2
WRAB Tennant Creek 91.14 112 *e*P P 22 10 55.9 -0.1
WRAB pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
WRAB Tennant Creek 91.14 112 *e*P P 22 10 55.9 -0.1
comp=Z,8.8nm,0.9s,mb5.1
WRAB Tennant Creek 91.14 112 *e*P P 22 10 55.9 -0.1
comp=Z,8.8nm,0.9s,mb5.1
FORT Forrest 91.79 124 *e*P P 22 10 56.8 -2.0
comp=Z,13nm,0.7s,mb5.4
FORT Forrest 91.79 124 *e*P P 22 10 58.5 -0.2
comp=Z,16nm,0.8s,mb5.4
FORT Forrest 91.79 124 *e*P P 22 10 58.5 -0.3
comp=Z,16nm,0.8s,mb5.4
ASAR Alice Springs 92.63 115 P P 22 11 02.2 -0.6
ASAR pmax pmax
comp=Z,5.0nm,0.8s
ASAR Alice Springs 92.63 115 P P 22 11 02.1 -0.6
comp=Z,5.4nm,0.8s,mb5.0,baz=303,slow=4.5,SNR=44
ASAR Alice Springs 92.63 115 P P 22 11 02.2 -0.6
RCBR Riachuelo 92.72 265 *e*P P 22 11 05.0 +1.5
comp=Z,17nm,1.0s,mb5.4
RCBR Riachuelo 92.72 265 *e*P P 22 11 05.0 +1.5
comp=Z,17nm,1.0s,mb5.4
DLBC Dease Lake 93.47 2 P P 22 11 07.0 +0.9
comp=Z,4.6nm,0.9s,mb4.9,baz=332,slow=22,SNR=5.9
DLBC Dease Lake 93.47 2 *e*P P 22 11 06.6 +0.5
DLBC Dease Lake 93.47 2 *e*P P 22 11 06.6 +0.5
FFC Flin Flon 94.72 346 P P 22 11 11.6 -0.4
comp=Z,52nm,1.4s,mb5.8,SNR=7.1
FFC Flin Flon 94.72 346 *e*P P 22 11 11.6 -0.4
FFC pmax pmax
comp=Z,19nm,1.4s,mb5.3
FFC Flin Flon 94.72 346 *e*P P 22 11 11.6 -0.3
comp=Z,19nm,1.4s,mb5.3
FFC Flin Flon 94.72 346 *e*P P 22 11 11.6 -0.4
comp=Z,19nm,1.4s,mb5.3
MAW Mawson 95.89 177 LR LR 22 53 20.2
comp=Z,239nm,18.2s,MS4.7,baz=21,slow=35
ULM Lac du Bonnet 97.32 341 P P 22 11 23.2 -0.6
comp=Z,1.9nm,1.0s,mb4.5,baz=358,slow=1.2,SNR=4.1
ULM LR LR 22 55 19.0
comp=Z,182nm,20.8s,MS4.5,baz=3.6,slow=35
ULM Lac du Bonnet 97.32 341 P P 22 11 23.2 -0.7
EDM Edmonton 98.03 352 *e*P P 22 11 27.7 +0.7
EDM Edmonton 98.03 352 *e*P P 22 11 27.7 +0.7
STKA Stephens Creek 102.46 119 PP PP 22 16 01.9 +1.2
comp=Z,2.8nm,1.1s,baz=254,slow=9.5,SNR=2.9
NEW Newport 103.32 354 P Pdif 22 11 50.8 +0.1
NEW pmax pmax
comp=Z,8.0nm,1.4s
NEW Newport 103.32 354 Pdif Pdif 22 11 50.8 +0.1
comp=Z,8.0nm,1.4s
PDAR Pinedale Array 107.64 347 PP PP 22 16 35.8 -1.4
comp=Z,0.4nm,0.7s,baz=31,slow=5.4,SNR=5.6
NVAR Mina Array Bea 113.18 353 PKiKP PKiKP 22 16 29.6 +1.2
comp=Z,0.3nm,0.5s,baz=17,slow=0.9,SNR=5.0
TXAR Lajitas Array 118.81 338 PKP PKPdf 22 16 38.8 -0.7
comp=Z,0.7nm,0.9s,baz=48,slow=1.9,SNR=5.4
TXAR PP PP 22 17 59.4 +2.6
comp=Z,1.7nm,1.1s,baz=50,slow=3.9,SNR=4.5
DZM Mont Dzumac 119.18 101 *e*LR LR 22 53 19.4
comp=Z,179nm,23.1s
CPUP Villa Florida 119.81 254 PKIKP PKPdf 22 16 40.4 -0.9
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP Villa Florida 119.81 254 PKP PKPdf 22 16 40.4 -0.9
comp=Z,1.1nm,0.5s,baz=107,slow=6.7,SNR=5.1
CPUP Villa Florida 119.81 254 PKP PKPdf 22 16 40.4 -0.9
ROSC El Rosal 120.39 295 PKP PKPdf 22 16 43.3 +0.5
comp=Z,2.1nm,0.4s,baz=86,slow=19,SNR=2.3
LPAZ La Paz 125.65 270 PKIKP PKPdf 22 16 53.4 +0.6
LPAZ 22 18 45.2
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ La Paz 125.65 270 PKP PKPdf 22 16 53.4 +0.6
comp=Z,2.6nm,0.9s,baz=19,slow=2.3,SNR=10
LPAZ PP PP 22 18 45.2 +0.1
comp=Z,2.4nm,0.8s,baz=75,slow=6.5,SNR=5.1
LPAZ La Paz 125.65 270 *e*PKPdf PKPdf 22 16 53.6 +0.9
LPAZ *e*PP PP 22 18 43.2 -1.9
OTAV Otavalo 126.43 294 *e*PKPdf PKPdf 22 16 55.8 +1.3
TRQA Tornquist 126.56 242 *e*PKPdf PKPdf 22 16 54.5 +0.6
LVC Limon Verde 128.62 263 *e*PKPdf PKPdf 22 16 59.0 +0.7
PLCA Paso Flores 133.45 239 PKIKP PKPdf 22 17 08.2 +1.3
PLCA pmax pmax
comp=Z,2.0nm,0.6s
PLCA Paso Flores 133.45 239 PKP PKPdf 22 17 08.2 +1.3
comp=Z,1.8nm,0.6s,baz=152,slow=2.8,SNR=5.2
PPT Papeete 155.76 69 *e*LR LR 23 10 16.2
comp=Z,301nm,24.5s
TAOE Nuku Hiva Isla 156.42 37 *e*LR LR 23 10 35.9
comp=Z,358nm,29.4s

ISCJB ***05*** *22:08:43.8±0.8, 10.°30N±0.°04×62.°29W±0.°03, h4km±7km, Error ellipse: s-maj=7.3km s-min=4.7km az=171.0*
NEIC ***05*** *22:08:44.2, 10.°33N×62.°27W, h3km, MD3.2(TRN), After TRN.*
TRN ***05*** *22:08:44.2, 10.°33N×62.°27W, h3km, MD3.2*
FUNV ***05*** *22:08:45.1, 10.°36N×62.°25W, h3km, MW2.9*
ISC 05 22:08:44.5±0.7, 10.°33N±0.°04×62.°29W±0.°03, h3km±6km, n22, σ0°75/32, 4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**12**	*e*P	**Pg**	**22 08 50.3**	**-0.3**
GUIV				*e*S	**Sg**	**22 08 55.1**	**+0.3**
TCE	**Chacachacare**	**0.64**	**56**	⇓*i*P	**Pg**	**22 08 55.7**	**-1.2**
TCE				*e*S	**Sg**	**22 09 05.6**	**+0.4**
TCE	**Chacachacare**	**0.64**	**56**	⇓*i*P	**Pg**	**22 08 55.7**	**-1.2**
TCE				*e*S	**Sg**	**22 09 05.6**	**+0.4**
GUNV	**Guanoco**	**0.66**	**255**	⇓*e*P	**Pg**	**22 08 58.2**	**+0.9**
GUNV				*e*S	**Sg**	**22 09 09.5**	**+3.5**
TPP	**Pointe-a-Pierr**	**0.83**	**91**	*e*P	**Pg**	**22 09 00.7**	**+0.3**
TPP				*e*S	**Sg**	**22 09 13.4**	**+2.3**
TPP	**Pointe-a-Pierr**	**0.83**	**91**	*e*P	**Pg**	**22 09 00.7**	**+0.3**
TPP				*e*S	**Sg**	**22 09 12.1**	**+1.0**
TRN	**Trinidad (W)**	**0.93**	**70**	*e*P	**Pg**	**22 09 00.8**	**-1.5**
TRN	**Trinidad (W)**	**0.93**	**70**	*e*P	**Pg**	**22 09 01.0**	**-1.3**
CRUV	**Carupano**	**0.99**	**290**	*e*P	**Pg**	**22 09 02.8**	**-0.7**
CRUV				*e*S	**Sg**	**22 09 16.8**	**+0.4**
TBH	**Brigand Hill**	**1.21**	**83**	*e*P	**Pg**	**22 09 07.4**	**-0.4**
TBH	**Brigand Hill**	**1.21**	**83**	*e*P	**Pg**	**22 09 07.4**	**-0.4**
ITEV	**Isla Los Testi**	**1.31**	**321**	*e*P	**Pg**	**22 09 09.1**	**-0.5**
ITEV				*e*S	**Sg**	**22 09 26.9**	**+0.3**
TPR	**Prospect**	**1.71**	**60**	*e*P	**Pn**	**22 09 15.3**	**0.0**
TPR	**Prospect**	**1.71**	**60**	*e*P	**Pn**	**22 09 15.3**	**0.0**
BOT	**Bacolet**	**1.75**	**62**	*e*P	**Pn**	**22 09 16.4**	**+0.6**
BOT	**Bacolet**	**1.75**	**62**	*e*P	**Pn**	**22 09 16.4**	**+0.6**
GRW	**Mount Saint Ca**	**1.92**	**19**	*e*P	**Pn**	**22 09 17.6**	**-0.4**
GRW				*e*S	**Sn**	**22 09 43.5**	**+0.8**
GRW	**Mount Saint Ca**	**1.92**	**19**	*e*P	**Pn**	**22 09 17.6**	**-0.4**
GRW				*e*S	**Sn**	**22 09 43.5**	**+0.8**
PCRV	**Puerto La Cruz**	**2.31**	**266**	*e*P	**Pn**	**22 09 22.9**	**-0.6**
BIRV	**Birongo**	**3.92**	**272**	*e*P	**Pn**	**22 09 45.8**	**+0.2**
CAOV	**Caicara del Or**	**4.98**	**233**	⇓*e*P	**Pn**	**22 09 59.8**	**-0.5**
BAUV	**El Baul**	**5.84**	**257**	*e*P	**Pn**	**22 10 11.8**	**-0.3**

ISCJB ***05*** *22:19:44.9±1.0, 1.°38N±0.°07×126.°96E±0.°08, h132km±10km, mb3.5/3, Error ellipse: s-maj=14.7km s-min=10.7km az=142.0*
DJA ***05*** *22:19:44, 1.°41N×126.°94E, h11km, MLv4.1/6*
IDC ***05*** *22:19:46.5±10.0, 1.°30N×126.°98E, h127km±101km, mb3.2/3, mb1 3.4/5, mb1mx3.1/21, mbtmp3.3/5, ML3.8/2, Error ellipse: s-maj=76.6km s-min=21.2km az=55.0*
ISC 05 22:19:45.9±1.0, 1.°37N±0.°08×126.°97E±0.°08, h123km±10km, n12, σ0°83/14, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.07**	**165**	P	**Pn**	**22 20 20.8**	**+0.4**
LBMI				S	**Sn**	**22 20 46.9**	**+0.1**
SGSI	**Sangihe**	**2.71**	**328**	P	**Pn**	**22 20 27.3**	**-1.3**
NLAI	**Namlea**	**4.58**	**178**	P	**Pn**	**22 20 53.3**	**-0.1**
LUWI	**Luwuk**	**4.83**	**240**	P	**Pn**	**22 20 56.4**	**-0.3**
MRSI	**Marisa**	**5.11**	**260**	P	**Pn**	**22 21 01.2**	**+0.8**
	31nm,0.6s,496nm0.1nm						
APSI	**Ampana**	**5.78**	**247**	P	**Pn**	**22 21 10.1**	**+0.6**
	32nm,0.5s,876nm0.2nm						
KDI	**Kendari**	**6.85**	**219**	P	**Pn**	**22 21 24.8**	**+0.8**
KAPI	**Kappang**	**9.60**	**229**	P	**Pn**	**22 22 02.2**	**+1.0**
	1.7nm,0.3s,baz=80,slow=20,SNR=8.2						
KAPI				S	**Sn**	**22 23 45.7**	**-1.6**
	1.0nm,0.3s,baz=233,slow=20,SNR=4.1						
FITZ	**Fitzroy Crossi**	**19.40**	**184**	P	**P**	**22 24 02.1**	**-0.3**
	0.1nm,0.3s,baz=14,slow=13,SNR=6.0						
WRA	**Warramunga Arr**	**22.38**	**162**	P	**P**	**22 24 32.9**	**-1.4**
	1.9nm,0.5s,mb3.7,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.79**	**165**	P	**P**	**22 25 06.0**	**+0.5**
	0.3nm,0.4s,mb3.1,baz=344,slow=12,SNR=6.5						
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**22 29 37.5**	**+0.6**
	0.2nm,0.3s,mb3.6,baz=122,slow=7.9,SNR=7.7						

GUC 05 22:25:32.9±0.7, 33.°26S×72.°36W, h35km±3km, MD3.5, ML2.9, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.06**	**131**	*e*P	Pn	22 25 51.7	+0.5
LNV				*e*S	Sn	22 26 06.1	+1.4
PEL	**Peldehue**	**1.41**	**86**	⇑*i*P	Pn	22 25 57.4	+1.3
PEL				*i* S	Sn	22 26 16.0	+2.6
PEL				AML	AML	22 26 21.9	
	comp=N,609nm,0.5s						
CLCH	**Cerro Calan**	**1.54**	**96**	*e*P	Pn	22 25 59.1	+1.3
CLCH				*i* S	Sn	22 26 20.0	+3.5
CLCH				AML	AML	22 26 30.1	
	comp=E,241nm,0.5s						
CACH	**El Canelo**	**1.70**	**121**	*e*P	Pn	22 26 02.4	+2.4
FCH	**Farellones**	**1.74**	**93**	*e*P	Pn	22 26 03.3	+2.7
FCH				*i* S	Sn	22 26 25.4	+3.9
FCH				AML	AML	22 26 30.1	
	comp=N,152nm,0.7s						
LMEL	**Las Melosas**	**1.90**	**109**	*e*P	Pn	22 26 04.7	+1.9
LMEL				*i* S	Sn	22 26 28.6	+3.1
LMEL				AML	AML	22 26 35.6	
	comp=N,107nm,0.8s						

JMA 05 22:26:18.8±0.3, 44.°30N×147.°28E, h95km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.45**	**230**	P	Pn	22 26 44.3	+0.1
NEM2				*e*S	Sn	22 27 02.8	-0.6
JRA	**Rausu**	**1.60**	**258**	P	Pn	22 26 46.2	+0.3
JNK	**Nakash**	**1.98**	**250**	P	Pn	22 26 51.4	+0.5
JAK	**Akkeshi**	**2.28**	**236**	P	Pn	22 26 55.0	+0.2
JAK				*e*S	Sn	22 27 21.9	-0.5
JTKR	**Abashiri--Toko**	**2.45**	**263**	P	Pn	22 26 57.1	+0.1
JTKR				*e*S	Sn	22 27 25.9	-0.5
JAR	**Ashorobuto**	**2.73**	**250**	P	Pn	22 27 01.9	+1.1
JAR				*e*S	Sn	22 27 35.0	+1.9
JMP	**Maruseppu**	**2.84**	**265**	P	Pn	22 27 02.5	+0.3
JMP				*e*S	Sn	22 27 35.7	+0.1
JOB	**Onbets**	**2.87**	**242**	P	Pn	22 27 03.3	+0.7
JOB				*e*S	Sn	22 27 36.5	+0.2
JKK2	**Kamakawa 2**	**3.29**	**264**	*e*S	Sn	22 27 46.9	+0.4
JCH	**Churui**	**3.31**	**241**	P	Pn	22 27 08.7	+0.1
JCH				*e*S	Sn	22 27 45.5	-1.5
ASAJ	**Asahikawa**	**3.37**	**269**	P	Pn	22 27 09.9	+0.5
JSE	**Soyaes**	**3.42**	**283**	P	Pn	22 27 09.6	-0.3
JNBK	**Urakawa-nobuka**	**3.87**	**240**	P	Pn	22 27 15.8	-0.3
JNBK				*e*S	Sn	22 27 59.3	-1.2
JWK2	**Keihoku**	**3.96**	**287**	P	Pn	22 27 18.2	+0.9

ISCJB ***05*** *22:28:06.6±1.1, 40.°28N±0.°06×41.°02E±0.°05, h5km±13km, Error ellipse: s-maj=10.4km s-min=6.0km az=166.9*
ISK ***05*** *22:28:06.0, 40.°30N×41.°09E, h9km, MD2.7*
CSEM ***05*** *22:28:06.7±0.2, 40.°28N×41.°07E, h10km, MD2.7, Error ellipse: s-maj=5.2km s-min=3.8km az=104.0*
DDA ***05*** *22:28:06.8, 40.°28N×41.°05E, h7km±4km, Md2.8*
ISC 05 22:28:07.1±0.7, 40.°28N±0.°03×41.°02E±0.°06, h11km±7km, n19, σ0°81/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.45**	**145**	*e*PG	**Pg**	**22 28 15.0**	**-1.0**
EZM				*e*SG	**Sg**	**22 28 21.9**	**-0.1**
ERZM	**Erzurum**	**0.46**	**145**	*i* P	**Pg**	**22 28 14.9**	**-1.1**
ERZM				*i* S	**Sg**	**22 28 22.5**	**+0.4**
ERZM	**Erzurum**	**0.46**	**145**	*i* P	**Pg**	**22 28 14.9**	**-1.1**
ERZM				*i* S	**Sg**	**22 28 22.5**	**+0.4**
KOPT	**Kop Dagi**	**0.48**	**238**	*i* P	**Pg**	**22 28 16.9**	**+0.4**
KOPT				*i* S	**Sg**	**22 28 27.5**	**+4.6**
KOPT	**Kop Dagi**	**0.48**	**238**	*i* P	**Pg**	**22 28 16.9**	**+0.4**
HOMI	**Horasan**	**0.71**	**109**	*i* P	**Pg**	**22 28 21.7**	**+0.7**
HOMI				*i* S	**Sg**	**22 28 31.1**	**+0.8**
DBAD	**Bademkaya**	**0.90**	**34**	*i* P	**Pg**	**22 28 23.3**	**-1.2**
DBAD				*i* S	**Sg**	**22 28 36.9**	**+0.7**
DBAD	**Bademkaya**	**0.90**	**34**	*i* P	**Pg**	**22 28 23.3**	**-1.2**
DBAD				*i* S	**Sg**	**22 28 36.9**	**+0.7**
DAGI	**Agillar**	**1.05**	**40**	*i* P	**Pg**	**22 28 26.2**	**-1.1**
DAGI				*i* S	**Sg**	**22 28 41.9**	**+1.0**
ARTV	**Artvin**	**1.14**	**37**	*i* P	**Pb**	**22 28 27.9**	**-0.9**
ARTV				*i* S	**Sb**	**22 28 44.6**	**+1.1**
ARTV	**Artvin**	**1.14**	**37**	*i* P	**Pb**	**22 28 27.9**	**-0.9**
ARTV				*i* S	**Sb**	**22 28 44.6**	**+1.0**
MACK	**Trabzon**	**1.17**	**305**	*i* P	**Pb**	**22 28 29.8**	**+0.6**
MACK	**Trabzon**	**1.17**	**305**	*i* P	**Pb**	**22 28 29.8**	**+0.6**
GUMT	**Gumushane**	**1.19**	**279**	*e*PN	**Pn**	**22 28 30.1**	**+0.4**
GUMT	**Gumushane**	**1.19**	**279**	*e*Pn	**Pn**	**22 28 30.1**	**+0.4**
BCA	**Borcka**	**1.25**	**21**	*e*PN	**Pn**	**22 28 29.6**	**-0.9**
BCA				*e*SN	**Sn**	**22 28 46.8**	**-0.5**
BCA	**Borcka**	**1.25**	**21**	*e*Pn	**Pn**	**22 28 29.6**	**-0.9**
BCA				*e*Sn	**Sn**	**22 28 46.8**	**-0.5**
PTK	**Pertek**	**1.87**	**223**	*e*PN	**Pn**	**22 28 39.7**	**+0.7**
PTK	**Pertek**	**1.87**	**223**	*e*Pn	**Pn**	**22 28 39.7**	**+0.7**

IDC ***05*** *22:48:55.7±0.7, 28.°31N×54.°05E, h0km, mb3.9/21, mb1 4.1/21, mb1mx3.9/31, mbtmp3.9/21, Error ellipse: s-maj=17.7km s-min=14.9km az=170.0*
MOS ***05*** *22:48:58.8±0.7, 28.°35N×54.°06E, h33km, mb4.4/25, Error ellipse: s-maj=11.2km s-min=6.4km az=125.6*
THR ***05*** *22:48:58.5±0.5, 28.°21N×54.°16E, h14km±6km, ML3.6*
CSEM ***05*** *22:48:59.4±0.2, 28.°36N×54.°04E, h20km, mb4.1/34, Ms4.5, Error ellipse: s-maj=6.1km s-min=5.3km az=42.0*
KISR ***05*** *22:49:00.7±1.1, 28.°43N×52.°33E, h34km±120km, ML3.2*
ISCJB ***05*** *22:49:00.7±0.4, 28.°33N±0.°03×54.°02E±0.°03, h53km±4km, mb4.0/42, Error ellipse: s-maj=4.6km s-min=4.3km az=162.8*
NEIC ***05*** *22:49:01.4, 28.°30N×54.°08E, h23km, mb4.1/19, ML3.6(THR), MN3.6(TEH), After TEH.*
TEH ***05*** *22:49:01.4, 28.°30N×54.°08E, h23km*
OMAN ***05*** *22:49:34.5±99.0, 26.°25N×55.°54E, h34km, Error ellipse: s-maj=54.9km s-min=7.7km az=331.0*
ISC 05 22:49:02.2±0.3, 28.°33N±0.°03×54.°04E±0.°03, h50km±4km, n233, σ0°88/252, mb4.0/42, 5C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.93**	**268**	*e*Pg	**Pn**	**22 49 17.0**	**-1.9**
GHIR	**Ghir-Karzin**	**0.93**	**268**	*e*Pg	**Pn**	**22 49 18.0**	**-0.9**
GHIR				AML	AML	22 49 40.3	
	comp=N,1μm,0.6s						
GHIR				AML	AML	22 49 41.9	
	comp=E,2μm,0.6s						
GHIR	**Ghir-Karzin**	**0.93**	**268**	*e*Pg	**Pn**	**22 49 17.0**	**-1.9**
ISRV	**Sarvestan**	**1.33**	**323**	Pn	**Pn**	**22 49 25.5**	**+1.2**
ISRV				Sg	**Sn**	**22 49 45.0**	**+4.1**
ISRV	**Sarvestan**	**1.33**	**323**	*e*Pn	**Pn**	**22 49 25.6**	**+1.3**
ISRV				*e*Sg	**Sn**	**22 49 45.0**	**+4.1**
ISRV				*e*		22 50 02.3	
	comp=Z,9μm,0.5s						
ISRV	**Sarvestan**	**1.33**	**323**	*e*Pn	**Pn**	**22 49 25.6**	**+1.3**
ISRV				*e*Sg	**Sn**	**22 49 45.0**	**+4.1**
IMOK	**Mouk**	**1.37**	**302**	Pn	**Pn**	**22 49 26.4**	**+1.5**
IMOK	**Mouk**	**1.37**	**302**	*e*Pn	**Pn**	**22 49 26.5**	**+1.6**
IMOK				*e*		22 50 02.8	
	comp=Z,10μm,0.5s						
IMOK	**Mouk**	**1.37**	**302**	*e*Pn	**Pn**	**22 49 26.5**	**+1.6**
IPAR	**Pars**	**1.74**	**330**	Pn	**Pn**	**22 49 31.2**	**+1.2**
IPAR	**Pars**	**1.74**	**330**	*e*Pn	**Pn**	**22 49 31.2**	**+1.2**
IPAR				*e*		22 50 03.5	
	comp=Z,6μm,0.4s						
IPAR	**Pars**	**1.74**	**330**	*e*Pn	**Pn**	**22 49 31.2**	**+1.2**
BNDS	**Bandar-Abbas**	**2.10**	**116**	*e*Pn	**Pn**	**22 49 33.0**	**-1.9**
BNDS	**Bandar-Abbas**	**2.10**	**116**	*e*Pg	**Pn**	**22 49 34.2**	**-0.7**
BNDS				AML	AML	22 50 13.3	
	comp=N,321nm,0.6s						
BNDS	**Bandar-Abbas**	**2.10**	**116**	*e*Pn	**Pn**	**22 49 33.8**	**-1.1**
IBND	**Bandar-abas**	**2.38**	**111**	*e*Pn	**Pn**	**22 49 38.4**	**-0.3**
IBND				*e*		22 50 33.0	
	comp=Z,9μm,0.3s						
KRBR	**Kerman**	**2.90**	**55**	*e*Pn	**Pn**	**22 49 46.0**	**+0.2**
KRBR				*e*Sg	**Sn**	**22 50 28.0**	**+8.6**
KRBR	**Kerman**	**2.90**	**55**	*e*Pn	**Pn**	**22 49 46.4**	**+0.6**
KRBR				*e*Sg	**Sn**	**22 50 28.6**	**+9.2**
KRBR				AML	AML	22 50 34.2	
	comp=E,241nm,0.8s						
KRBR				AML	AML	22 50 41.5	
	comp=N,318nm,0.5s						
KRBR	**Kerman**	**2.90**	**55**	*e*Pn	**Pn**	**22 49 46.4**	**+0.6**
IMEH	**Mehriz**	**3.09**	**9**	*e*Pn	**Pn**	**22 49 49.4**	**+0.9**
IMEH				*e*Sn	**Sn**	**22 50 24.7**	**+0.5**
IMEH				*e*		22 50 39.2	
	comp=Z,986nm,0.3s						
IMEH	**Mehriz**	**3.09**	**9**	*e*Pn	**Pn**	**22 49 49.4**	**+0.9**
IMEH				*e*Sn	**Sn**	**22 50 24.7**	**+0.5**
BANOM	**Banah**	**3.13**	**139**	⇑P	**Pn**	**22 49 48.7**	**-0.3**
	SNR=32						
BANOM				⇑P		22 49 48.7	
	SNR=32						
BANOM	**Banah**	**3.13**	**139**	P	**Pn**	**22 49 48.7**	**-0.3**
	SNR=32						
IBAF	**Bafgh**	**3.51**	**22**	Pn	**Pn**	**22 49 54.2**	**-0.1**
IBAF	**Bafgh**	**3.51**	**22**	*e*Pn	**Pn**	**22 49 54.3**	**0.0**
IBAF				*e*		22 50 51.6	
	comp=Z,565nm,0.3s						
IBAF	**Bafgh**	**3.51**	**22**	*e*Pn	**Pn**	**22 49 54.3**	**0.0**
ISAD	**Sadrabad**	**3.59**	**355**	Pn	**Pn**	**22 49 56.9**	**+1.6**
ISAD				Sn	**Sn**	**22 50 36.9**	**+0.5**
ISAD	**Sadrabad**	**3.59**	**355**	*e*Pn	**Pn**	**22 49 57.0**	**+1.7**

BTHS S Sn 22 51 14.0 -0.6
IKLH Kolahrood 5.41 338 Pn Pn 22 50 19.9 -0.3
IKLH Kolahrood 5.41 338 *e*Pn Pn 22 50 20.0 -0.2
IKLH *e* 22 52 03.8
comp=Z,259nm,0.6s
IKLH Kolahrood 5.41 338 *e*Pn Pn 22 50 20.0 -0.2
UMR Umm Al-Rimmam 5.67 284 *e*P Pn 22 50 23.9 0.0
UMR *e*S Sn 22 51 27.6 -0.1
UMR AML AML 22 51 33.0
comp=Z,7.9nm,0.4s
UMR Umm Al-Rimmam 5.67 284 *e*P Pn 22 50 23.9 0.0
UMR *e*S Sn 22 51 27.6 -0.1
RDF Al-Radifah 5.74 278 *e*P Pn 22 50 25.1 +0.3
RDF *e*S Sn 22 51 27.9 -1.4
RDF AML AML 22 51 28.5
comp=Z,6.0nm,0.5s
RDF Al-Radifah 5.74 278 *e*P Pn 22 50 25.1 +0.3
RDF *e*S Sn 22 51 27.9 -1.4
MIB Mutribah 6.05 286 *e*P Pn 22 50 29.0 0.0
MIB *e*S Sn 22 51 34.3 -2.6
MIB AML AML 22 51 40.4
comp=Z,12nm,0.6s
MIB Mutribah 6.05 286 *e*P Pn 22 50 29.0 0.0
MIB *e*S Sn 22 51 34.3 -2.6
ISFB Sefidab 6.20 346 Pn Pn 22 50 30.8 -0.3
ISFB Sefidab 6.20 346 *e*Pn Pn 22 50 30.8 -0.3
ISFB *e* 22 52 11.2
comp=Z,71nm,0.4s
ISFB Sefidab 6.20 346 *e*Pn Pn 22 50 30.8 -0.3
IANJ Anjilo 7.12 359 Pn Pn 22 50 43.6 -0.1
IANJ Anjilo 7.12 359 *e*Pn Pn 22 50 43.6 -0.1
IANJ *e* 22 51 05.4
comp=Z,92nm,0.2s
IANJ Anjilo 7.12 359 *e*Pn Pn 22 50 43.6 -0.1
WBK Wadi Bani Khal 7.23 141 ⇑P Pn 22 50 44.2 -1.0
SNR=7.5
WBK ⇑P 22 50 44.2
SNR=7.5
GNI Garni 14.07 329 Pn Pn 22 52 23.7 +5.1
comp=Z,0.0nm,0.3s,baz=180,slow=20,SNR=1.8
GNI Garni 14.07 329 P Pn 22 52 23.8 +5.1
MALT Malatya 16.39 311 *e*P Pn 22 52 47.3 -1.5
ZEI Tsey 16.59 333 *e*P Pn 22 52 54.7 +3.5
ZEI pmax pmax
comp=Z,14nm,0.7s
ZEI Tsey 16.59 333 *e*P Pn 22 52 54.7 +3.5
comp=Z,14nm,0.7s
KIV Kislovodsk 18.06 333 *e*P Pn 22 53 08.7 -0.7
KIV pmax pmax
comp=Z,4.0nm,0.4s
KIV Kislovodsk 18.06 333 *e*Pn Pn 22 53 08.7 -0.8
comp=Z,4.1nm,0.4s
KIV Kislovodsk 18.06 333 *e*P Pn 22 53 08.7 -0.7
comp=Z,4.0nm,0.4s
CSS Prodhromos 18.82 296 *e*P Pn 22 53 16.7 -1.9
CSS Prodhromos 18.82 296 *e*P Pn 22 53 16.7 -1.9
BR131 Keskin Array S 20.33 309 *e*Pn P 22 53 33.0 -1.1
comp=Z,1.8nm,0.6s
BRTR Keskin Array B 20.33 309 P P 22 53 35.5 +1.4
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 20.33 309 P P 22 53 35.5 +1.4
comp=Z,2.5nm,0.7s,baz=130,slow=12,SNR=15
BRTR Keskin Array B 20.33 309 P P 22 53 35.5 +1.4
comp=Z,3.0nm,0.7s
ABKAR Akbulak array 21.39 11 *e*P P 22 53 44.0 -1.4
comp=Z,4.2nm,0.8s,mb3.8
ABKAR Akbulak array 21.39 11 *e*P P 22 53 44.0 -1.4
comp=Z,4.2nm,0.8s,mb3.8
EKS2 Erkin-Say 21.44 43 *e*P P 22 53 45.0 -1.1
comp=Z,4.4nm,1.1s,mb3.7
EKS2 Erkin-Say 21.44 43 *e*P P 22 53 45.0 -1.1
comp=Z,4.3nm,1.1s,mb3.7
UCH Uchtor 21.65 45 *e*P P 22 53 46.0 -2.2
comp=Z,2.5nm,1.0s,mb3.6
AAK Ala-Archa 21.86 44 P P 22 53 53.1 +2.5
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
AAK Ala-Archa 21.86 44 P P 22 53 53.1 +2.5
comp=Z,0.5nm,0.4s,mb3.3,baz=190,slow=12,SNR=2.6
AAK Ala-Archa 21.86 44 *e*P P 22 53 49.9 -0.7
AAK Ala-Archa 21.86 44 P P 22 53 53.1 +2.5
comp=Z,1.0nm,0.4s,mb3.6
AKTK Aktyubinsk 22.29 7 P P 22 53 54.8 -0.2
AKTK Aktyubinsk 22.29 7 P P 22 53 54.8 -0.2
comp=Z,2.0nm,0.6s,mb3.7
AKTO Aktyubinsk 22.29 7 P P 22 53 54.8 -0.2
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.7
AKTO Aktyubinsk 22.29 7 P P 22 53 54.8 -0.2
comp=Z,1.9nm,0.6s,mb3.7,baz=185,slow=14,SNR=5.5
BRVK Borovoye 27.48 21 *e*P P 22 54 42.5 -0.9
BRVK pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
BRVK Borovoye 27.48 21 *e*P P 22 54 42.5 -1.0
comp=Z,0.7nm,0.6s,mb3.4
BRVK Borovoye 27.48 21 *e*P P 22 54 42.5 -0.9
comp=Z,1.0nm,0.6s,mb3.5
BVAR Borovoye Array 27.48 22 P P 22 54 43.9 +0.4
BVAR 22 58 01.9
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 27.48 22 P P 22 54 43.9 +0.4
comp=Z,1.6nm,0.8s,mb3.6,baz=210,slow=7.8,SNR=10
BVAR PcP PcP 22 58 01.9 +1.2
comp=Z,0.4nm,0.4s,baz=161,slow=2.3,SNR=5.3
BVAR Borovoye Array 27.48 22 P P 22 54 43.9 +0.4
comp=Z,2.0nm,0.9s,mb3.6
BVAR Borovoye Array 27.48 22 PcP PcP 22 58 01.9 +1.2
MK31 Makanchi Array 28.77 43 *e*P P 22 54 52.3 -2.8
MKAR Makanchi Array 28.77 43 P P 22 54 54.7 -0.4
MKAR 22 58 04.7
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 28.77 43 P P 22 54 54.7 -0.4
comp=Z,0.6nm,0.6s,mb3.5,baz=207,slow=6.2,SNR=9.2
MKAR PcP PcP 22 58 04.7 +0.6
comp=Z,0.4nm,0.8s,baz=252,slow=3.8,SNR=2.7
MKAR Makanchi Array 28.77 43 P P 22 54 54.7 -0.4
MKAR PcP PcP 22 58 04.7 +0.6
KURK Kurchatov 29.07 33 P P 22 54 56.9 -0.8
KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KURK Kurchatov 29.07 33 P P 22 54 56.9 -0.8
comp=Z,0.7nm,0.7s,mb3.5,baz=234,slow=8.3,SNR=6.1
KURK Kurchatov 29.07 33 *e*P P 22 54 56.2 -1.4
KURK Kurchatov 29.07 33 P P 22 54 56.9 -0.8
comp=Z,1.0nm,0.7s,mb3.6
AKSG Malin Array Be 29.18 327 P P 22 54 58.5 -0.1
comp=Z,0.3nm,0.3s,mb3.5,baz=137,slow=8.0,SNR=4.0
AKSG Malin Array Be 29.18 327 P P 22 54 58.5 -0.1
OBN Obninsk 29.60 340 P P 22 55 00.9 -1.4
OBN Obninsk 29.60 340 P P 22 55 00.9 -1.4
ZAA0 Zalesovo Array 34.06 33 *e*P P 22 55 41.1 -0.4
ZAA0 Zalesovo Array 34.06 33 *e*P P 22 55 41.1 -0.4
ZALV Zalesovo Beam 34.06 33 P P 22 55 41.2 -0.3
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV Zalesovo Beam 34.06 33 P P 22 55 41.2 -0.3
comp=Z,1.3nm,0.4s,mb4.2,baz=242,slow=8.8,SNR=11
MORC Moravsky Berou 35.03 318 *e*P P 22 55 49.5 -0.4
MORC Moravsky Berou 35.03 318 *e*P P 22 55 49.5 -0.4
VRAC Vranov 35.41 317 P P 22 55 53.8 +0.6
comp=Z,0.4nm,0.3s,mb3.8,baz=90,slow=10,SNR=3.6
VRAC Vranov 35.41 317 P P 22 55 53.8 +0.6
FINES FINESS Array B 37.99 339 P P 22 56 15.2 +0.2
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 37.99 339 P P 22 56 15.2 +0.2
comp=Z,4.5nm,0.8s,mb4.2,baz=118,slow=11,SNR=4.9
FINES FINESS Array B 37.99 339 P P 22 56 15.2 +0.2
comp=Z,5.0nm,0.8s,mb4.3
PGF Pioggiola 38.89 304 *e*P P 22 56 23.8 +1.0
comp=Z,1.6nm,1.1s,mb4.4
PGF Pioggiola 38.89 304 *e*P P 22 56 23.8 +1.0
comp=Z,8.3nm,1.1s,mb4.4
PGF Pioggiola 38.89 304 *e*P P 22 56 23.8 +1.0
comp=Z,8.2nm,1.1s,mb4.4
MBDF Montbardon 40.76 307 *e*P P 22 56 38.1 -0.2
comp=Z,5.5nm,0.7s,mb4.0
MBDF Montbardon 40.76 307 *e*P P 22 56 38.1 -0.2
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
MBDF Montbardon 40.76 307 *e*P P 22 56 38.1 -0.2
comp=Z,2.8nm,0.7s,mb4.0
MBDF Montbardon 40.76 307 *e*P P 22 56 38.1 -0.2
comp=Z,2.8nm,0.7s,mb4.0
LPG La Plagne 40.88 308 *e*P P 22 56 39.3 +0.1
comp=Z,6.2nm,0.7s,mb4.1
LPG La Plagne 40.88 308 *e*P P 22 56 39.3 +0.1
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
LPG La Plagne 40.88 308 *e*P P 22 56 39.3 +0.1
comp=Z,3.1nm,0.7s,mb4.0
LPG La Plagne 40.88 308 *e*P P 22 56 39.3 +0.1
comp=Z,3.1nm,0.7s,mb4.1
LPL La Plagne 40.89 308 *e*P P 22 56 39.4 0.0
comp=Z,7.3nm,0.8s,mb4.0
LPL La Plagne 40.89 308 *e*P P 22 56 39.4 0.0
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
LPL La Plagne 40.89 308 *e*P P 22 56 39.4 0.0
comp=Z,3.7nm,0.8s,mb4.1
LPL La Plagne 40.89 308 *e*P P 22 56 39.4 0.0
comp=Z,3.7nm,0.8s,mb4.0
ORIF Oris-en-Rattie 41.41 307 *e*P P 22 56 43.4 -0.2
ORIF Oris-en-Rattie 41.41 307 *e*P P 22 56 43.4 -0.2
CABF La Chapelle 41.50 309 *e*P P 22 56 44.7 +0.4
comp=Z,9.5nm,0.8s,mb4.2
CABF La Chapelle 41.50 309 *e*P P 22 56 44.7 +0.4
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
CABF La Chapelle 41.50 309 *e*P P 22 56 44.7 +0.4
comp=Z,4.8nm,0.8s,mb4.2
CABF La Chapelle 41.50 309 *e*P P 22 56 44.7 +0.4
comp=Z,4.8nm,0.8s,mb4.2
HFS Hagfors 41.85 331 P P 22 56 46.8 -0.2
HFS pmax pmax
comp=Z,2.0nm,0.7s
HFS Hagfors 41.85 331 P P 22 56 46.8 -0.1
comp=Z,2.0nm,0.7s,mb3.9,baz=160,slow=4.7,SNR=5.3
HFS Hagfors 41.85 331 P P 22 56 46.8 -0.2
comp=Z,2.0nm,0.7s,mb3.9
CHTO Chiang Mai 42.03 93 P P 22 56 48.1 -0.9
CHTO Chiang Mai 42.03 93 P P 22 56 48.1 -0.9
CMAR Chiang Mai Arr 42.16 93 P P 22 56 50.8 +0.7
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 42.16 93 P P 22 56 50.8 +0.6
comp=Z,0.8nm,0.3s,mb3.8,baz=293,slow=7.7,SNR=4.3
CMAR Chiang Mai Arr 42.16 93 P P 22 56 50.8 +0.7
comp=Z,1.0nm,0.3s,mb3.9
VIVF Saint-Julien-l 42.26 307 *e*P P 22 56 50.1 -0.4
VIVF Saint-Julien-l 42.26 307 *e*P P 22 56 50.1 -0.4
LASF Ste Croix 42.77 305 *e*P P 22 56 56.0 +1.3
comp=Z,1.1nm,1.0s,mb4.2
LASF Ste Croix 42.77 305 *e*P P 22 56 56.0 +1.3
comp=Z,5.3nm,1.0s,mb4.2
SMF Signal de Mont 43.04 309 *e*P P 22 56 56.7 -0.1
comp=Z,4.8nm,0.7s,mb4.1
SMF Signal de Mont 43.04 309 *e*P P 22 56 56.7 -0.1
SMF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
SMF Signal de Mont 43.04 309 *e*P P 22 56 56.7 -0.1
comp=Z,2.4nm,0.6s,mb4.1
SMF Signal de Mont 43.04 309 *e*P P 22 56 56.7 -0.1
comp=Z,2.4nm,0.7s,mb4.1
BAIF Baives 43.33 314 *e*P P 22 57 00.2 +1.1
comp=Z,7.6nm,0.9s,mb4.1
BAIF Baives 43.33 314 *e*P P 22 57 00.2 +1.1
BAIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BAIF Baives 43.33 314 *e*P P 22 57 00.2 +1.1
comp=Z,3.8nm,0.9s,mb4.1
BAIF Baives 43.33 314 *e*P P 22 57 00.2 +1.1
comp=Z,3.8nm,0.9s,mb4.1
NB2 NORSAR Subarra 43.36 331 P P 22 56 58.9 -0.3
comp=Z,1.5nm,0.8s,mb3.8,baz=119,slow=7.9
NB2 NORSAR Subarra 43.36 331 P P 22 56 58.9 -0.3
comp=Z,1.5nm,0.8s,mb3.8,baz=119,slow=7.9,SNR=4.5
NOA NORSAR Array B 43.36 331 P P 22 56 59.1 -0.1
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 43.36 331 P P 22 56 59.1 -0.2
comp=Z,0.9nm,0.7s,mb3.6,baz=119,slow=8.0,SNR=4.9
NOA NORSAR Array B 43.36 331 P P 22 56 59.1 -0.1
comp=Z,1.0nm,0.7s,mb3.6
BGF Bois d'Agland 43.71 309 *e*P P 22 57 02.3 +0.1
BGF Bois d'Agland 43.71 309 *e*P P 22 57 02.3 +0.1
MTLF Montolieu 43.91 304 *e*P P 22 57 04.7 +0.7
comp=Z,5.7nm,1.0s,mb3.9
MTLF Montolieu 43.91 304 *e*P P 22 57 04.7 +0.7
MTLF pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
MTLF Montolieu 43.91 304 *e*P P 22 57 04.7 +0.7
comp=Z,2.8nm,1.0s,mb4.0
MTLF Montolieu 43.91 304 *e*P P 22 57 04.7 +0.7
comp=Z,2.8nm,1.0s,mb3.9
CAF Calviac 44.11 306 *e*P P 22 57 06.0 +0.5
comp=Z,5.0nm,0.8s,mb4.0
CAF Calviac 44.11 306 *e*P P 22 57 06.0 +0.5
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
CAF Calviac 44.11 306 *e*P P 22 57 06.0 +0.5
comp=Z,2.5nm,0.8s,mb4.0
CAF Calviac 44.11 306 *e*P P 22 57 06.0 +0.5
comp=Z,2.5nm,0.8s,mb4.0
TCF Toulx Ste Croi 44.12 308 *e*P P 22 57 05.8 +0.3
comp=Z,3.8nm,0.7s,mb3.9
TCF Toulx Ste Croi 44.12 308 *e*P P 22 57 05.8 +0.3
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
TCF Toulx Ste Croi 44.12 308 *e*P P 22 57 05.8 +0.3
comp=Z,1.9nm,0.7s,mb3.9
TCF Toulx Ste Croi 44.12 308 *e*P P 22 57 05.8 +0.3
comp=Z,1.9nm,0.7s,mb3.9
KEV Kevo 44.29 347 P P 22 57 06.1 -0.5
KEV Kevo 44.29 347 P P 22 57 06.1 -0.5
RJF Les Rejaudoux 44.52 307 *e*P P 22 57 09.5 +0.7
comp=Z,6.4nm,0.8s,mb4.2
RJF Les Rejaudoux 44.52 307 *e*P P 22 57 09.5 +0.7
RJF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
RJF Les Rejaudoux 44.52 307 *e*P P 22 57 09.5 +0.7
comp=Z,2.3nm,0.8s,mb4.2
RJF Les Rejaudoux 44.52 307 *e*P P 22 57 09.5 +0.7
comp=Z,3.2nm,0.8s,mb4.2
SONM Songino Array 44.64 49 P P 22 57 10.8 +1.1
comp=Z,0.2nm,0.4s,mb3.3,baz=270,slow=8.9,SNR=4.9
SONM Songino Array 44.64 49 P P 22 57 10.8 +1.1
LFF La Frestale 45.05 306 *e*P P 22 57 13.7 +0.7
comp=Z,9.8nm,0.8s,mb4.4
LFF La Frestale 45.05 306 *e*P P 22 57 13.7 +0.7
LFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
LFF La Frestale 45.05 306 *e*P P 22 57 13.7 +0.7
comp=Z,4.9nm,0.8s,mb4.4
LFF La Frestale 45.05 306 *e*P P 22 57 13.7 +0.7
comp=Z,4.9nm,0.8s,mb4.4
MFF Saint Martin d 45.77 309 *e*P P 22 57 19.2 +0.6
comp=Z,5.1nm,0.9s,mb4.2
MFF Saint Martin d 45.77 309 *e*P P 22 57 19.2 +0.6
MFF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MFF Saint Martin d 45.77 309 *e*P P 22 57 19.2 +0.6
comp=Z,2.5nm,0.9s,mb4.1
MFF Saint Martin d 45.77 309 *e*P P 22 57 19.2 +0.6
comp=Z,2.5nm,0.9s,mb4.2
LDF La Druitiere 45.92 311 *e*P P 22 57 19.9 +0.1
comp=Z,13nm,1.0s,mb4.5
LDF La Druitiere 45.92 311 *e*P P 22 57 19.9 +0.1
LDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LDF La Druitiere 45.92 311 *e*P P 22 57 19.9 +0.1
comp=Z,6.6nm,1.0s,mb4.5
LDF La Druitiere 45.92 311 *e*P P 22 57 19.9 +0.1
comp=Z,6.6nm,1.0s,mb4.5
ETSF Etsaut 45.94 304 *e*P P 22 57 20.4 +0.3
ETSF Etsaut 45.94 304 *e*P P 22 57 20.4 +0.3
FLN La Foliniere 46.17 312 *e*P P 22 57 21.5 -0.3
FLN La Foliniere 46.17 312 *e*P P 22 57 21.5 -0.3
SJPF Ste Jean 46.43 304 *e*P P 22 57 24.9 +1.0
SJPF Ste Jean 46.43 304 *e*P P 22 57 24.9 +1.0
ESDC Sonseca Array 48.65 299 P P 22 57 41.8 +0.7
comp=Z,0.7nm,0.6s,mb3.9,baz=60,slow=6.6,SNR=4.5
ESDC Sonseca Array 48.65 299 P P 22 57 41.8 +0.6
ESLA Sonseca Array 48.65 299 P P 22 57 41.2 +0.1
ESLA Sonseca Array 48.65 299 P P 22 57 41.2 0.0
EKA Eskdalemuir Ar 48.68 320 P P 22 57 40.4 -0.8
EKA pmax pmax
comp=Z,1.0nm,1.0s
EKA Eskdalemuir Ar 48.68 320 P P 22 57 40.4 -0.7
comp=Z,1.1nm,1.0s,mb3.9,baz=95,slow=7.1,SNR=4.0
EKA Eskdalemuir Ar 48.68 320 P P 22 57 40.4 -0.8
comp=Z,1.0nm,1.0s,mb3.8
BOD Bodaibo 50.59 37 *e*P P 22 57 55.3 -0.3
BOD pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOD Bodaibo 50.59 37 *e*P P 22 57 55.3 -0.3
comp=Z,3.0nm,0.8s,mb4.3
TORD Torodi Ar. Bea 50.85 264 P P 22 57 58.6 +0.4
comp=Z,3.4nm,0.6s,mb4.5,baz=59,slow=7.9,SNR=82
YAK Yakutsk 58.71 32 P P 22 58 54.1 -0.3
YAK Yakutsk 58.71 32 P P 22 58 54.1 -0.3
DBIC Dimbokro 59.55 261 P P 22 59 00.6 -0.3
DBIC pmax pmax
comp=Z,4.0nm,0.9s
DBIC Dimbokro 59.55 261 P P 22 59 00.6 -0.3
comp=Z,4.2nm,0.8s,mb4.5,baz=45,slow=4.9,SNR=4.9
DBIC Dimbokro 59.55 261 P P 22 59 00.6 -0.3
comp=Z,4.0nm,0.9s,mb4.5
BOSA Boshof 62.97 208 P P 22 59 24.9 +1.2
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BOSA Boshof 62.97 208 P P 22 59 24.9 +1.2
comp=Z,2.8nm,0.8s,mb4.4,baz=10,slow=7.7,SNR=5.8
BOSA Boshof 62.97 208 P P 22 59 24.9 +1.2
comp=Z,3.0nm,0.8s,mb4.5
RES Resolute Bay 75.27 352 P P 23 00 39.2 -0.1
RES Resolute Bay 75.27 352 P P 23 00 39.2 -0.1
YKA Yellowknife Ar 89.04 355 P P 23 01 52.6 +1.2
comp=Z,0.8nm,0.6s,mb4.2,baz=5,3,slow=5.2,SNR=15
YKA Yellowknife Ar 89.04 355 P P 23 01 52.7 +1.2
WRA Warramunga Arr 91.16 112 P P 23 02 02.1 0.0
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 91.16 112 P P 23 02 02.1 +0.1
comp=Z,0.5nm,0.8s,mb3.9,baz=318,slow=4.1,SNR=3.9
WRA Warramunga Arr 91.16 112 P P 23 02 02.1 0.0
comp=Z,1.0nm,0.8s,mb4.2
ASAR Alice Springs 92.65 115 P P 23 02 08.9 0.0
comp=Z,0.3nm,0.8s,mb3.8,baz=304,slow=4.6,SNR=5.0
ASAR Alice Springs 92.65 115 P P 23 02 08.9 0.0

NEIC ***05*** *22:51:16.9, 16°.45N×99°.64W, h5km, MD3.8(MEX), After MEX.*

MEX 05 22:51:16.9±0.6, 16°.45N×99°.64W, h5km±5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.49**	**327**	*i* P		Pg		22 51 25.8	-0.7
ACX				*i* S		Sg		22 51 33.6	+0.7
ACX	**Acapulco**	**0.49**	**327**	*i* P		Pg		22 51 25.8	-0.7
ACX				*i* S		Sg		22 51 33.6	+0.7
CAIG	**El Cayaco**	**0.85**	**315**	*i* P		Pg		22 51 31.4	-1.8
CAIG				*i* S		Sg		22 51 42.9	-1.3
CAIG	**El Cayaco**	**0.85**	**315**	*i* P		Pg		22 51 31.4	-1.8
CAIG				*i* S		Sg		22 51 42.9	-1.3
PNIG	**Pinotepa**	**1.45**	**92**	*i* P		Pn		22 51 40.7	-3.0
PNIG				*i* S		Sb		22 51 57.9	-5.1
PNIG	**Pinotepa**	**1.45**	**92**	*i* P		Pn		22 51 40.7	-3.0
PNIG				*i* S		Sb		22 51 57.9	-5.1
ZIIG	**Zihuatanejo**	**2.10**	**304**	*e*P		Pn		22 51 49.6	-3.0
ZIIG				*i* S		Sn		22 52 14.0	-5.1
ZIIG	**Zihuatanejo**	**2.10**	**304**	*e*P		Pn		22 51 49.6	-3.0
ZIIG				*i* S		Sn		22 52 14.0	-5.1
UTMO	**Huajuapan**	**2.23**	**52**	*e*P		Pn		22 51 51.4	-3.0
UTMO				*i* S		Sn		22 52 18.2	-4.1
MZVM		**2.75**	**8**	*e*P		Pn		22 51 59.0	-2.7
MZVM				*i* S		Sn		22 52 32.2	-3.1
PPM	**Popocatepetl**	**2.77**	**20**	*e*P		Pn		22 51 58.4	-3.5
PPM				*i* S		Sn		22 52 33.2	-2.6
PPM	**Popocatepetl**	**2.77**	**20**	*e*P		Pn		22 51 58.4	-3.5
PPM				*i* S		Sn		22 52 33.2	-2.6
VHO	**Vista Hermosa**	**2.85**	**77**	*i* P		Pn		22 52 00.0	-3.0
VHO				*i* S		Sn		22 52 34.1	-3.5
VHO	**Vista Hermosa**	**2.85**	**77**	*i* P		Pn		22 52 00.0	-3.0
VHO				*i* S		Sn		22 52 34.1	-3.5
IIO	**Organos**	**3.24**	**15**	*e*P		Pn		22 52 04.1	-4.3
IIO				*i* S		Sn		22 52 42.7	-4.7
IIO	**Organos**	**3.24**	**15**	*e*P		Pn		22 52 04.1	-4.3
IIO				*i* S		Sn		22 52 42.7	-4.7

MOS ***05*** *22:52:55.7±1.1, 34°.42N×24°.62E, h33km, mb4.0/8, Error ellipse: s-maj=9.7km s-min=5.4km az=91.7*
ISCJB ***05*** *22:52:57.9±0.3, 34°.59N±0°.02×24°.74E±0°.03, h57km±3km, mb3.7/14, Error ellipse: s-maj=4.7km s-min=2.9km az=135.3*
IDC ***05*** *22:52:58.8±2.1, 34°.59N×24°.78E, h35km±13km, mb3.6/10, mb1 3.8/19, mb1mx3.7/33, mbtmp3.7/19, ML3.9/8, MS3.0/3, Ms1 3.1/3, ms1mx2.5/41, Error ellipse: s-maj=19.6km s-min=15.6km az=22.0*
CSEM ***05*** *22:52:59.5±0.2, 34°.60N×24°.70E, h47km±2km, mb3.9/6, Error ellipse: s-maj=5.2km s-min=3.0km az=50.0*
NEIC ***05*** *22:53:00.4, 34°.76N×24°.68E, h43km, mb4.0/5, MD4.0(ATH), After ATH.*
HLW ***05*** *22:53:00.4, 34°.57N×24°.96E, h33km±39km, MJ3.7*
THE ***05*** *22:53:01.9, 34°.77N×24°.69E, h33km±2km, ML4.0/3, Error ellipse: s-maj=2.4km s-min=0.7km az=173.0*
ATH ***05*** *22:53:01.1, 34°.85N×24°.67E, h42km±1km, MD3.9/28, ML3.4*
GII ***05*** *22:53:06.7±0.0, 34°.42N×25°.81E, h1km, Mb4.1/3, Md3.8/4*

ISC 05 22:52:59.6±0.3, 34°.61N±0°.02×24°.72E±0°.03, h45km±4km, n243, σ1§11/293, mb3.7/14, 1C, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.41**	**10**	*e*P		Pn		22 53 08.5	-1.0
SIVA				*e*S		Sn		22 53 14.5	-2.0
SIVA	**Sivas**	**0.41**	**10**	P		Pn		22 53 08.2	-1.3
SIVA				S		Sn		22 53 14.8	-1.7
SIVA	**Sivas**	**0.41**	**10**	*e*P		Pn		22 53 08.5	-1.0
SIVA				*e*S		Sn		22 53 14.5	-2.0
GVD	**Gavdhos**	**0.57**	**294**	*e*P		Pn		22 53 12.3	+0.9
GVD				*e*S		Sn		22 53 20.9	+1.0
GVD	**Gavdhos**	**0.57**	**294**	P		Pn		22 53 11.9	+0.5
GVD				S		Sn		22 53 19.2	-0.7
GVD	**Gavdhos**	**0.57**	**294**	P		Pn		22 53 11.9	+0.5
GVD				*e*S		Sn		22 53 20.9	+1.0
IDI	**Anoyia**	**0.69**	**12**	Pg		Pn		22 53 12.7	-0.4
	238nm,0.3s,baz=194,slow=16,SNR=1649								
IDI				Lg				22 53 23.6	
	1μm,0.3s,baz=287,slow=17,SNR=39								
IDI	**Anoyia**	**0.69**	**12**	*e*P		Pn		22 53 12.5	-0.5
IDI				*e*S		Sn		22 53 22.5	-0.2
IDI	**Anoyia**	**0.69**	**12**	*e*P		Pn		22 53 12.5	-0.5
IDI				*e*S		Sn		22 53 22.5	-0.2
LAST	**Lasithi**	**0.83**	**48**	*e*P		Pn		22 53 15.9	+1.0
LAST				*e*S		Sn		22 53 27.1	+1.0
LAST	**Lasithi**	**0.83**	**48**	P		Pn		22 53 15.7	+0.8
LAST				S		Sn		22 53 25.5	-0.6
LAST	**Lasithi**	**0.83**	**48**	P		Pn		22 53 15.7	+0.8
LAST				*e*S		Sn		22 53 27.1	+1.0
VAM	**Vamos**	**0.90**	**332**	*e*P		Pn		22 53 16.2	+0.3
VAM				*e*S		Sn		22 53 28.3	+0.5
VAM	**Vamos**	**0.90**	**332**	*e*P		Pn		22 53 16.2	+0.3
VAM				*e*S		Sn		22 53 28.3	+0.5
NPS	**Neapolis**	**0.98**	**48**	*e*P		Pn		22 53 18.5	+1.6
NPS				*e*S		Sn		22 53 30.5	+0.8
NPS	**Neapolis**	**0.98**	**48**	*e*P		Pn		22 53 18.5	+1.6
NPS				*e*S		Sn		22 53 30.5	+0.8
KARN	**Karanos**	**1.03**	**320**	*e*P		Pn		22 53 18.4	+0.8
KARN	**Karanos**	**1.03**	**320**	P		Pn		22 53 18.1	+0.5
KARN				S		Sn		22 53 30.0	-0.9
KARN	**Karanos**	**1.03**	**320**	P		Pn		22 53 18.1	+0.5
KARN				S		Sn		22 53 30.0	-0.9
ZKR	**Zakros**	**1.33**	**67**	*e*P		Pn		22 53 23.9	+2.2
ZKR	**Zakros**	**1.33**	**67**	P		Pn		22 53 23.9	+2.2
ZKR				S		Sn		22 53 40.1	+1.9
ZKR	**Zakros**	**1.33**	**67**	P		Pn		22 53 23.9	+2.2
ZKR				S		Sn		22 53 40.1	+1.9
THR1	**Thera Island**	**1.86**	**19**	P		Pn		22 53 29.0	+0.1
THR1	**Thera Island**	**1.86**	**19**	P		Pn		22 53 29.0	+0.1
THR3	**Thira Island,**	**1.88**	**17**	P		Pn		22 53 29.5	+0.3
THR3	**Thira Island,**	**1.88**	**17**	P		Pn		22 53 29.5	+0.3
THR4	**Thira Island,**	**1.93**	**16**	P		Pn		22 53 30.5	+0.6
THR4	**Thira Island,**	**1.93**	**16**	P		Pn		22 53 30.5	+0.6
KYTH	**Kithira**	**2.16**	**321**	*e*P		Pn		22 53 34.2	+1.1

KYTH Kithira 2.16 321 *e*P **Pn 22 53 34.2 +1.1**
KARP Karpathos 2.21 64 *e*P **Pn 22 53 36.2 +2.4**
KARP Karpathos 2.21 64 *e*P **Pn 22 53 36.2 +2.4**
APE Apeiranthos 2.54 15 *e*P **Pn 22 53 38.2 -0.1**
APE Apeiranthos 2.54 15 P **Pn 22 53 37.8 -0.5**
APE S **Sn 22 54 07.0 -1.0**
APE Apeiranthos 2.54 15 *e*P **Pn 22 53 38.2 -0.1**
APE S **Sn 22 54 07.0 -1.0**
VLI Veliai 2.56 326 *e*P **Pn 22 53 38.7 +0.2**
VLI Veliai 2.56 326 *e*P **Pn 22 53 38.7 +0.2**
DID Didima 3.13 338 *e*P **Pn 22 53 46.1 -0.3**
DID Didima 3.13 338 P **Pn 22 53 46.0 -0.4**
DID S **Sn 22 54 21.1 -1.4**
DID Didima 3.13 338 *e*P **Pn 22 53 46.1 -0.3**
DID S **Sn 22 54 21.1 -1.4**
SLUM 3.14 172 P **Pn 22 53 47.2 +0.7**
baz=175
SLUM 3.14 172 P **Pn 22 53 47.2 +0.7**
ARG Arkhangelos 3.21 59 *e*P **Pn 22 53 48.8 +1.3**
ARG Arkhangelos 3.21 59 P **Pn 22 53 48.8 +1.3**
ARG S **Sn 22 54 25.1 +0.6**
ARG Arkhangelos 3.21 59 P **Pn 22 53 48.8 +1.3**
ARG S **Sn 22 54 25.1 +0.6**
VLY Voula,Athens 3.32 347 *e*P **Pn 22 53 48.7 -0.3**
VLY Voula,Athens 3.32 347 *e*P **Pn 22 53 48.7 -0.3**
PYL PYLOS 3.33 314 P **Pn 22 53 47.9 -1.2**
PYL PYLOS 3.33 314 P **Pn 22 53 47.9 -1.2**
VLX Vlachokerasia 3.35 326 *e*P **Pn 22 53 49.7 +0.3**
VLX Vlachokerasia 3.35 326 P **Pn 22 53 50.2 +0.8**
VLX Vlachokerasia 3.35 326 *e*P **Pn 22 53 49.7 +0.3**
ITM Ithomi 3.42 319 *e*P **Pn 22 53 50.4 0.0**
ITM Ithomi 3.42 319 P **Pn 22 53 50.3 -0.1**
ITM Ithomi 3.42 319 *e*P **Pn 22 53 50.4 0.0**
ATHU Athens Univers 3.44 348 P **Pn 22 53 50.5 -0.1**
ATHU Athens Univers 3.44 348 P **Pn 22 53 50.5 -0.1**
ATH Athens Observa 3.45 347 *e*P **Pn 22 53 52.0 +1.2**
ATH Athens Observa 3.45 347 *e*P **Pn 22 53 52.0 +1.2**
PTL Penteli 3.50 349 *e*P **Pn 22 53 50.9 -0.6**
PTL Penteli 3.50 349 *e*P **Pn 22 53 50.9 -0.6**
SMG Samos 3.54 28 P **Pn 22 53 53.2 +1.2**
SMG Samos 3.54 28 P **Pn 22 53 53.2 +1.2**
LTK Loutraki 3.69 338 *e*P **Pn 22 53 53.7 -0.4**
LTK Loutraki 3.69 338 P **Pn 22 53 53.8 -0.3**
LTK Loutraki 3.69 338 P **Pn 22 53 53.8 -0.3**
GUR Goura 3.84 331 *e*P **Pn 22 53 55.8 -0.3**
GUR Goura 3.84 331 P **Pn 22 53 55.6 -0.5**
GUR Goura 3.84 331 *e*P **Pn 22 53 55.8 -0.3**
TURN Turunc 3.88 53 *i*P **Pn 22 53 53.6 -3.1**
TURN Turunc 3.88 53 *i*P **Pn 22 53 53.6 -3.1**
HMAT Matruh 4.04 150 P **Pn 22 53 58.5 -0.3**
baz=151
HMAT S **Sn 22 54 39.7 -5.1**
baz=151
HMAT Matruh 4.04 150 P **Pn 22 53 58.5 -0.4**
HMAT S **Sn 22 54 39.7 -5.1**
BLCB Balcova 4.21 26 P **Pn 22 54 02.0 +0.8**
BLCB S **Sn 22 54 47.6 -1.4**
BLCB Balcova 4.21 26 P **Pn 22 54 02.0 +0.8**
BLCB S **Sn 22 54 47.6 -1.4**
LAKA Lakka 4.25 329 P **Pn 22 54 01.9 +0.2**
LAKA Lakka 4.25 329 P **Pn 22 54 01.9 +0.2**
LKR Lokris 4.26 342 *e*P **Pn 22 54 01.9 -0.1**
LKR Lokris 4.26 342 *e*P **Pn 22 54 01.9 -0.1**
AKAS Kas 4.30 66 *i*P **Pn 22 54 00.4 -2.2**
AKAS Kas 4.30 66 *i*P **Pn 22 54 00.4 -2.1**
KALE Kalithea 4.31 332 P **Pn 22 54 02.9 +0.3**
KALE S **Sn 22 54 50.9 -0.6**
KALE Kalithea 4.31 332 P **Pn 22 54 02.9 +0.3**
KALE S **Sn 22 54 50.9 -0.6**
TRIZ Trizonia 4.31 331 P **Pn 22 54 02.9 +0.3**
TRIZ Trizonia 4.31 331 P **Pn 22 54 02.9 +0.3**
EFP Efpalio 4.43 330 *e*P **Pn 22 54 05.7 +1.4**
EFP Efpalio 4.43 330 *e*P **Pn 22 54 05.7 +1.4**
GOLH Golhisar 4.72 55 *i*P **Pn 22 54 09.2 +0.9**
GOLH Golhisar 4.72 55 *i*P **Pn 22 54 09.1 +0.8**
PRK Paraskevi 4.79 15 P **Pn 22 54 08.8 -0.4**
PRK Paraskevi 4.79 15 P **Pn 22 54 08.8 -0.4**
AGG Agios Georgios 4.80 337 *e*P **Pn 22 54 10.3 +0.9**
AGG Agios Georgios 4.80 337 P **Pn 22 54 09.6 +0.2**
AGG S **Sn 22 55 02.7 -1.0**
AGG Agios Georgios 4.80 337 P **Pn 22 54 09.6 +0.2**
AGG S **Sn 22 55 02.7 -1.0**
NEO Neokhori 4.84 346 *e*P **Pn 22 54 10.1 +0.2**
NEO Neokhori 4.84 346 *e*P **Pn 22 54 10.1 +0.2**
VLS Valsamata 4.88 318 P **Pn 22 54 11.8 +1.4**
VLS S **Sn 22 55 05.5 0.0**
VLS Valsamata 4.88 318 P **Pn 22 54 11.8 +1.4**
VLS S **Sn 22 55 05.5 0.0**
EVR Evrytania 4.89 332 *e*P **Pn 22 54 12.3 +1.7**
EVR Evrytania 4.89 332 *e*P **Pn 22 54 12.3 +1.7**
PAIG Paliouri 5.37 351 P **Pn 22 54 16.6 -0.6**
PAIG Paliouri 5.37 351 P **Pn 22 54 16.6 -0.6**
SWA2 5.39 173 P **Pn 22 54 18.2 +0.8**
baz=175
SWA2 AMP 22 55 00.0
comp=N,100μm,0.3s,logA/T=5.5,baz=175
SWA2 S **Sn 22 55 12.4 -5.7**
baz=175
SWA2 5.39 173 P **Pn 22 54 18.2 +0.8**
SWA2 S **Sn 22 55 12.4 -5.7**
THL Klokotos Trika 5.40 337 P **Pn 22 54 17.6 +0.1**
THL S **Sn 22 55 17.5 -0.8**
THL Klokotos Trika 5.40 337 P **Pn 22 54 17.6 +0.1**
THL S **Sn 22 55 17.5 -0.8**
DEMI Demirci 5.46 35 *i*P **Pn 22 54 19.5 +1.1**
DEMI Demirci 5.46 35 *i*P **Pn 22 54 19.5 +1.1**
OUR Ouranopolis 5.75 354 P **Pn 22 54 22.3 0.0**
OUR Ouranopolis 5.75 354 P **Pn 22 54 22.3 0.0**
LIT Litokhoron 5.76 343 *e*P **Pn 22 54 23.6 +1.1**
LIT Litokhoron 5.76 343 *e*P **Pn 22 54 23.6 +1.1**
DURS Dursunbey 5.81 30 *i*P **Pn 22 54 24.0 +0.8**
GDZ Gediz 5.88 39 *i*P **Pn 22 54 25.1 +1.0**
IGT Igoumenitsa 6.04 326 P **Pn 22 54 26.6 +0.3**
IGT Igoumenitsa 6.04 326 P **Pn 22 54 26.6 +0.3**
SOH Sokhos 6.30 350 *e*P **Pn 22 54 30.0 +0.2**
SOH Sokhos 6.30 350 *e*P **Pn 22 54 30.0 +0.2**
GAZI Gazipasa 6.41 73 *i*P **Pn 22 54 30.4 -1.0**
GAZI Gazipasa 6.41 73 *i*P **Pn 22 54 30.4 -1.0**
KEK Kerkira 6.43 324 P **Pn 22 54 30.0 -1.7**
KEK Kerkira 6.43 324 P **Pn 22 54 30.0 -1.7**
SRS Serrai 6.56 353 P **Pn 22 54 34.6 +1.2**
SRS Serrai 6.56 353 P **Pn 22 54 34.6 +1.2**
CSS Prodhromos 7.09 85 *e*Pn **Pn 22 54 39.0 -1.7**
CSS *e*Sn **Sn 22 55 52.9 -7.2**
AWBH 7.21 149 P **Pn 22 54 41.9 -0.6**
baz=150
AWBH 7.21 149 P **Pn 22 54 41.9 -0.6**
AYT Al 'Ayyat 7.32 130 P **Pn 22 54 43.9 -0.1**
baz=131
AYT Al 'Ayyat 7.32 130 P **Pn 22 54 43.9 -0.1**
KOT Kottamia 7.62 126 P **Pn 22 54 47.6 -0.4**
baz=126
KOT AMP 22 56 00.0
comp=E,30μm,0.2s,logA/T=5.2,baz=126
KOT Kottamia 7.62 126 P **Pn 22 54 47.6 -0.4**
HSAF As Saff 7.64 129 P **Pn 22 54 48.2 0.0**
baz=129
HSAF As Saff 7.64 129 P **Pn 22 54 48.7 +0.4**
GLL Jalalah 7.76 128 P **Pn 22 54 48.8 -1.2**
baz=129
GLL Jalalah 7.76 128 P **Pn 22 54 48.8 -1.2**
HHAG Hagoal 7.78 125 P **Pn 22 54 50.4 +0.1**
baz=125
HHAG S **Sn 22 56 07.3 -10**
baz=125
HHAG Hagoal 7.78 125 P **Pn 22 54 50.4 +0.1**
HHAG S **Sn 22 56 07.3 -10**
HFRF Wahat Farafira 8.05 157 P **Pn 22 54 53.8 -0.1**
baz=157
HFRF Wahat Farafira 8.05 157 P **Pn 22 54 53.8 -0.2**
SUZ 8.35 122 P **Pn 22 54 57.7 -0.4**
baz=123
SUZ 8.35 122 P **Pn 22 54 57.7 -0.4**
BR131 Keskin Array S 8.76 52 *e*Pn **Pn 22 55 03.7 +0.1**
BR131 Keskin Array S 8.76 52 *e*Pn **Pn 22 55 03.7 +0.1**
BRTR Keskin Array B 8.76 52 Pn **Pn 22 55 03.9 +0.3**
comp=E,0.2nm,0.3s,baz=228,slow=13,SNR=7.5
BRTR Sn **Sn 22 56 38.0 -2.9**
comp=E,0.1nm,0.3s,baz=218,slow=25,SNR=3.8
BRTR Keskin Array B 8.76 52 P **Pn 22 55 03.9 +0.3**
VAE Valguarnera 8.83 292 Pn **Pn 22 55 09.6 +5.0**
comp=E,0.3nm,0.3s,baz=76,slow=12,SNR=2.0
VAE Sn **Sn 22 56 41.0 -1.6**
comp=E,0.5nm,0.3s,baz=265,slow=8.5,SNR=3.7
VAE Valguarnera 8.83 292 Sn **Sn 22 56 41.0 -1.6**
MMAI Mount Meron Ar 9.03 97 Pn **Pn 22 55 05.3 -2.0**
comp=E,2.1nm,0.3s,baz=279,slow=11,SNR=15
MMAI Sn **Sn 22 56 41.6 -6.1**
comp=E,6.6nm,0.3s,baz=308,slow=8.3,SNR=12
HNKL Nakhl 9.12 118 P **Pn 22 55 07.7 -0.9**
baz=118
HNKL Nakhl 9.12 118 P **Pn 22 55 07.7 -0.9**
HDK1 Dakhla 9.90 155 P **Pn 22 55 20.0 +0.7**
baz=155
HDK1 Dakhla 9.90 155 P **Pn 22 55 20.0 +0.7**
STON Ston 9.90 328 *i*Pn **Pn 22 55 13.5 -5.7**
STON Sn **Sn 22 56 55.4 -14**
EIL Elat 9.97 117 Pn **Pn 22 55 18.9 -1.3**
comp=E,0.7nm,0.3s,baz=39,slow=18,SNR=13
EIL Sn **Sn 22 57 04.2 -6.5**
comp=E,3.0nm,0.3s,baz=341,slow=17,SNR=7.5
EIL Elat 9.97 117 Pn **Pn 22 55 18.9 -1.3**
EIL Sn **Sn 22 57 04.2 -6.6**
EIL Elat 9.97 117 Pn **Pn 22 55 19.0 -1.3**
HAQS Haql 10.29 120 P **Pn 22 55 24.9 +0.2**
HAQS Haql 10.29 120 P **Pn 22 55 24.9 +0.3**
ASF Jabal al Asfar 10.47 100 P **Pn 22 55 25.9 -1.1**
ASF 22 57 16.0
ASF smax
comp=N,1.0nm,0.3s
ASF Jabal al Asfar 10.47 100 Pn **Pn 22 55 25.9 -1.1**
comp=N,0.1nm,0.3s,baz=245,slow=17,SNR=2.6
ASF Sn **Sn 22 57 16.0 -6.8**
comp=N,0.7nm,0.3s,baz=90,slow=17,SNR=4.2
RSHS 10.65 123 P **Pn 22 55 28.3 -1.3**
RSHS 10.65 123 P **Pn 22 55 28.3 -1.3**
BDAS Al Bad' **10.78 122** P **Pn 22 55 28.1 -3.3**
JLOS 10.88 120 P **Pn 22 55 30.2 -2.5**
MLR Muntele Rosu 10.91 5 P **Pn 22 55 34.9 +1.9**
MLR MLR MLR
comp=Z,75nm,18.3s
MLR Muntele Rosu 10.91 5 Pn **Pn 22 55 34.9 +2.0**
comp=Z,0.1nm,0.3s,baz=176,slow=14,SNR=2.9
MLR LR LR 23 00 36.0
comp=Z,74nm,18.3s,baz=229,slow=42
MLR Muntele Rosu 10.91 5 Pn **Pn 22 55 34.9 +1.9**
MLR LR LR 23 00 36.0
MLR Muntele Rosu 10.91 5 P **Pn 22 55 34.9 +1.9**
comp=Z,75nm,18.3s
HSFG 11.27 133 P **Pn 22 55 38.8 +0.7**
baz=133
HSFG 11.27 133 P **Pn 22 55 38.8 +0.7**
MALT Malatya 11.64 68 *e*P **Pn 22 55 44.1 +1.1**
MALT Malatya 11.64 68 *e*P **Pn 22 55 44.1 +1.1**
NVLJ Novalja 12.50 326 *e*Pn **Pn 22 55 51.0 -3.7**
NVLJ Sn **Sn 22 57 59.9 -13**
NVLJ Novalja 12.50 326 *e*Pn **Pn 22 55 51.0 -3.7**
PSZ Piszkesteto 13.78 346 P **Pn 22 56 12.0 -0.1**
VRAC Vranov 15.87 340 Pn **Pn 22 56 41.6 +1.9**
comp=Z,0.2nm,0.3s,baz=134,slow=8.5,SNR=9.8
VRAC Vranov 15.87 340 P **Pn 22 56 41.6 +1.9**
MORC Moravsky Berou 16.05 343 *e*P **Pn 22 56 42.2 +0.2**
MORC pmax pmax
comp=Z,1.0nm,0.7s
MORC Moravsky Berou 16.05 343 *e*P **Pn 22 56 42.2 +0.2**
comp=Z,1.5nm,0.7s
MORC Moravsky Berou 16.05 343 *e*P **Pn 22 56 42.2 +0.2**
comp=Z,1.5nm,0.7s
GEC2 GERESS Array S 16.40 333 *e*P **Pn 22 56 47.1 +0.6**
GEC2 pmax pmax
comp=Z,1μm,0.8s
GEC2 GERESS Array S 16.40 333 *e*Pn **Pn 22 56 47.1 +0.6**
comp=Z,1μm,0.8s
GEC2 GERESS Array S 16.40 333 *e*P **Pn 22 56 47.1 +0.6**
comp=Z,1μm,0.8s
GERES GERESS Array B 16.40 333 Pn **Pn 22 56 48.2 +1.7**
comp=Z,0.4nm,0.3s,baz=148,slow=12,SNR=32
GERES GERESS Array B 16.40 333 P **Pn 22 56 48.2 +1.7**
AKASG Malin Array Be 16.41 10 P **Pn 22 56 44.4 -2.2**
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG Malin Array Be 16.41 10 Pn **Pn 22 56 44.4 -2.2**
comp=Z,3.7nm,0.3s,baz=200,slow=11,SNR=40
AKASG Malin Array Be 16.41 10 Pn **Pn 22 56 44.4 -2.2**
AKBB Malin Array Si 16.41 10 *e*P **Pn 22 56 46.1 -0.5**
AKBB Malin Array Si 16.41 10 *e*P **Pn 22 56 46.1 -0.5**
KIV Kislovodsk 16.72 51 *e*P **Pn 22 56 50.0 -0.5**
KIV pmax pmax
comp=Z,5.0nm,0.7s
KIV Kislovodsk 16.72 51 *e*Pn **Pn 22 56 50.0 -0.5**
comp=Z,4.5nm,0.7s
KIV Kislovodsk 16.72 51 *e*P **Pn 22 56 50.0 -0.5**
comp=Z,5.0nm,0.7s
GNI Garni 16.84 65 P **Pn 22 56 54.1 +2.1**
GNI Garni 16.84 65 Pn **Pn 22 56 54.1 +2.2**
comp=Z,0.1nm,0.3s,baz=221,slow=20,SNR=2.9
GNI Garni 16.84 65 *e*P **Pn 22 56 54.3 +2.3**
GNI Garni 16.84 65 P **Pn 22 56 54.1 +2.1**
GRA1 Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
comp=Z,32nm,1.8s
GRA1 Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
comp=Z,32nm,1.8s
GRF Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
GRF pmax pmax
comp=Z,32nm,1.8s
GRF Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
GRF pmax pmax
comp=Z,32nm,1.8s
GRF Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
comp=Z,32nm,1.8s
GRF Grafenberg Arr 18.05 331 *e*P **Pn 22 57 06.5 -0.4**
comp=Z,32nm,1.8s
CLL Collm 18.72 337 *e*P **Pn 22 57 13.0 -2.0**
SUW Suwalki 19.43 357 *e*P **Pn 22 57 18.4 -5.1**
SUW pmax pmax
comp=Z,39nm,0.8s
SUW Suwalki 19.43 357 *e*P **Pn 22 57 18.4 -5.1**
comp=Z,39nm,0.8s
MEM Membach 21.01 325 P **P 22 57 40.1 +0.9**
comp=Z,5.6nm,1.0s,mb3.9
MEM Membach 21.01 325 P **P 22 57 40.0 +0.9**
comp=Z,5.6nm,1.0s,mb3.9
DOU Dourbes 21.36 323 P **P 22 57 42.7 -0.3**
DOU Dourbes 21.36 323 P **P 22 57 42.6 -0.3**
ESLA Sonseca Array 23.37 291 *e*P **P 22 58 05.4 +1.2**
ESLA Sonseca Array 23.37 291 *e*P **P 22 58 05.4 +1.2**
HFS Hagfors 26.53 348 P **P 22 58 31.9 -0.9**
HFS pmax pmax
comp=Z,2.0nm,0.9s
HFS Hagfors 26.53 348 P **P 22 58 31.9 -0.8**
comp=Z,2.3nm,0.9s,mb3.7,baz=159,slow=14,SNR=6.6
HFS Hagfors 26.53 348 P **P 22 58 31.9 -0.9**
comp=Z,2.0nm,0.9s,mb3.6
FINES FINESS Array B 26.87 1 P **P 22 58 33.3 -2.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES MLR MLR
comp=Z,60nm,19.5s
FINES FINESS Array B 26.87 1 P **P 22 58 33.3 -2.4**
comp=Z,3.1nm,0.9s,mb3.8,baz=185,slow=11,SNR=3.2
FINES LR LR 23 10 02.1
comp=Z,60nm,19.5s,baz=3.7,slow=38
NOA NORSAR Array B 27.84 346 P **P 22 58 42.8 -1.7**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA MLR MLR
comp=Z,20nm,19.3s
NOA NORSAR Array B 27.84 346 P **P 22 58 42.8 -1.7**
comp=Z,0.5nm,0.5s,mb3.4,baz=156,slow=7.8,SNR=4.1
NOA LR LR 23 11 18.4
comp=Z,20nm,19.3s,baz=180,slow=40
EKA Eskdalemuir Ar 28.29 326 P **P 22 58 47.9 -0.6**
EKA pmax pmax
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 28.29 326 P **P 22 58 47.9 -0.7**
comp=Z,0.6nm,0.7s,mb3.4,baz=131,slow=10,SNR=3.6
EKA Eskdalemuir Ar 28.29 326 P **P 22 58 47.9 -0.6**
comp=Z,1.0nm,0.7s,mb3.5
TORD Torodi Ar. Bea 29.86 230 P **P 22 59 04.5 +1.6**
comp=Z,2.0nm,0.7s,mb4.0,baz=41,slow=8.9,SNR=8.3
ARCES ARCESS Array B 34.98 0 P **P 22 59 44.3 -2.8**
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 34.98 0 P **P 22 59 44.3 -2.8**
comp=Z,1.3nm,0.8s,mb3.9,baz=170,slow=8.6,SNR=6.5
BVAR Borovoye Array 36.99 46 P **P 23 00 05.6 +1.1**
comp=Z,0.2nm,0.4s,mb3.3,baz=243,slow=6.3,SNR=3.4
BVAR Borovoye Array 36.99 46 P **P 23 00 05.6 +1.1**
UCH Uchtor 39.28 64 *e*P **P 23 00 26.9 +3.0**
UCH Uchtor 39.28 64 *e*P **P 23 00 26.9 +3.0**
KURK Kurchatov 41.81 50 P **P 23 00 43.8 -0.9**
comp=Z,1.1nm,0.6s,mb3.6,baz=275,slow=8.7,SNR=6.1
KURK Kurchatov 41.81 50 *e*P **P 23 00 47.1 +2.4**
KURK Kurchatov 41.81 50 *e*P **P 23 00 47.1 +2.4**
MKAR Makanchi Array 44.38 56 P **P 23 01 05.8 +0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 44.38 56 P **P 23 01 05.8 +0.3**
comp=Z,1.2nm,0.5s,mb3.9,baz=264,slow=7.8,SNR=20
ZALV Zalesovo Beam 45.65 46 P **P 23 01 15.0 -0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ZALV Zalesovo Beam 45.65 46 P **P 23 01 14.9 -0.5**
comp=Z,1.5nm,0.5s,mb4.2,baz=269,slow=8.9,SNR=6.1
SONM Songino Array 60.12 50 P **P 23 03 02.6 +0.4**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 60.12 50 P **P 23 03 02.6 +0.4**
comp=Z,0.5nm,0.6s,mb3.8,baz=278,slow=8.1,SNR=4.3
SONM Songino Array 60.12 50 P **P 23 03 02.6 +0.4**
comp=Z,1.0nm,0.6s,mb4.0
SCHQ Schefferville 63.37 320 P **P 23 03 24.9 +0.9**
comp=Z,0.9nm,0.5s,mb4.1,baz=53,slow=5.1,SNR=3.8
SCHQ Schefferville 63.37 320 P **P 23 03 24.9 +0.9**
YKA Yellowknife Ar 77.86 342 P **P 23 04 51.9 -0.2**
comp=Z,0.1nm,0.3s,mb3.2,baz=31,slow=5.5,SNR=4.5
YKA Yellowknife Ar 77.86 342 P **P 23 04 51.9 -0.2**

NIED ***05*** *23:01:00,26°.30N×128°.80E,h17km,Mw4.0 Best double couple: M0 1.26000×10^15 NP1:φ0=38.00000°,δ75.00000°, λ108.00000°. NP2:φ0=168.00000°,δ23.00000°,λ42.00000°.*
ISCJB ***05*** *23:01:37.7±0.5,26°.29N±0°.03×128°.80E±0°.03,h38km±5km, mb3.8/23,MS3.5/4,Error ellipse: s-maj=6.5km s-min=4.2km az=143.4*
JMA ***05*** *23:01:38.7±0.2,26°.34N×128°.80E,h39km±3km,M3.8*
NEIC ***05*** *23:01:40.6±1.3,26°.36N×128°.56E,h39km±9km,mb4.2/7, Error ellipse: s-maj=14.3km s-min=7.6km az=84.0*
IDC ***05*** *23:01:40.6±0.9,26°.32N×128°.48E,h34km±6km,mb3.6/15, mb1 3.7/15,mb1mx3.7/25,mbtmp3.6/15,MS3.3/6, Ms1 3.4/6,ms1mx2.9/30,Error ellipse: s-maj=41.1km s-min=11.5km az=72.0*

ISC 05 23:01:38.5±0.9,26°.33N±0°.03×128°.77E±0°.04,h28km±6km, h36km±.8km:pP-P,n53,σ0°92/61,mb3.8/23,MS3.5/4,
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.67**	**318**	P		**Pb**		**23 01 51.9**	**+0.3**
JOW				S		**Sb**		**23 02 00.8**	**+0.3**
JOW	**Kunigami**	**0.67**	**318**	Pn		**Pn**		**23 01 51.8**	**-0.3**
JOW	942nm,0.3s,baz=135,slow=17,SNR=3056			Sn		**Sn**		**23 02 00.4**	**-1.2**
JJT2	**Tamagusuku 2**	**0.94**	**258**	P		**Pn**		**23 01 56.0**	**+0.2**
JJT2	1μm,0.3s,baz=119,slow=18,SNR=41			*e*S		**Sb**		**23 02 08.7**	**+0.6**
NAH1	**Naha**	**0.98**	**263**	P		**Pn**		**23 01 56.6**	**+0.2**
NAH1				*e*S		**Sb**		**23 02 09.4**	**+0.1**
JIH	**Iheya**	**1.00**	**314**	P		**Pn**		**23 01 57.0**	**+0.3**
JIH				S		**Sn**		**23 02 10.3**	**+0.4**
JAGN	**Aguni-jima**	**1.39**	**281**	P		**Pn**		**23 02 02.8**	**+0.7**
JAGN				*e*S		**Sn**		**23 02 19.7**	**+0.1**
JTK	**Tokunoshima**	**1.46**	**6**	P		**Pn**		**23 02 03.4**	**+0.5**
JTK				S		**Sn**		**23 02 20.2**	**-0.9**
JKE	**Kume jima 2**	**1.78**	**270**	P		**Pn**		**23 02 07.3**	**-0.1**
JAM	**Amami Oshima**	**2.20**	**20**	P		**Pn**		**23 02 13.2**	**0.0**
JAM				*e*S		**Sn**		**23 02 39.4**	**-0.1**
JZK	**Kikaishima**	**2.24**	**28**	P		**Pn**		**23 02 14.5**	**+0.7**
JZK				*e*S		**Sn**		**23 02 41.6**	**+1.0**
JMZ	**Minamidaito 2**	**2.26**	**103**	P		**Pn**		**23 02 13.4**	**-0.7**
JMZ				*e*S		**Sn**		**23 02 37.8**	**-3.2**
JOGS	**Gusukube**	**3.42**	**243**	P		**Pn**		**23 02 31.5**	**+1.5**
JOGS				*e*S		**Sn**		**23 03 09.9**	**+0.3**
JNN	**Nakanoshima**	**3.63**	**15**	*e*S		**Sn**		**23 03 14.5**	**-0.2**
TATO	**Taipei**	**6.71**	**260**	Pn		**Pn**		**23 03 14.4**	**-0.8**
YHNB	**Yeheng**	**6.88**	**258**	*e*Pn		**Pn**		**23 03 16.4**	**-1.2**
YULB	**Yu-li**	**7.39**	**248**	*e*Pn		**Pn**		**23 03 21.3**	**-3.2**
YULB				Sn		**Sn**		**23 04 47.2**	**-0.3**
SSLB	**Suanglung**	**7.53**	**252**	Pn		**Pn**		**23 03 26.1**	**-0.3**
TWG	**Pinlang**	**7.83**	**245**	*e*Pn		**Pn**		**23 03 29.6**	**-1.0**
TPUB	**Ta-pu**	**7.99**	**250**	*e*Pn		**Pn**		**23 03 32.1**	**-0.7**
KSRS	**Korea Array**	**11.11**	**356**	LR		LR		23 08 54.5	
	comp=Z,115nm,19.0s,baz=175,slow=39								
CBIJ	**Chichi jima**	**12.02**	**83**	LR		LR		23 08 59.9	
	comp=Z,27nm,18.4s,baz=16,slow=36								
MAJO	**Matsushiro**	**12.97**	**36**	Pn		**Pn**		**23 04 39.6**	**-1.3**
ULN	**Ulaanbaatar**	**27.43**	**327**	*e*P		**P**		**23 07 21.0**	**-0.7**
	7.1nm,1.4s,mb4.0								
GTA	**Gaotai**	**27.46**	**306**	*e*P		**P**		**23 07 22.3**	**+0.1**
GTA				pP		pP		23 07 32.7	+2.4
GTA				sP		sP		23 07 35.6	+1.9
GTA				pmax		pmax			
	comp=Z,4.0nm,1.5s,mb3.7								
SONM	**Songino Array**	**27.73**	**327**	P		**P**		**23 07 27.3**	**+2.8**
	comp=Z,1.7nm,0.4s,mb4.0,baz=133,slow=10,SNR=18								
SONM				LR		LR		23 19 12.2	
	comp=Z,75nm,20.1s,MS3.3,baz=264,slow=38								
CMAR	**Chiang Mai Arr**	**28.62**	**260**	LR		LR		23 18 19.7	
	comp=Z,40nm,20.8s,MS3.0,baz=70,slow=35								
TLY	**Talaya**	**31.67**	**330**	P		**P**		**23 07 57.9**	**-1.4**
MKAR	**Makanchi Array**	**41.83**	**312**	P		**P**		**23 09 25.9**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.5,baz=108,slow=7.7,SNR=22								
ZALV	**Zalesovo Beam**	**42.46**	**323**	P		**P**		**23 09 30.1**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.5,baz=108,slow=4.8,SNR=4.9								
KURK	**Kurchatov**	**45.08**	**316**	P		**P**		**23 09 52.0**	**0.0**
	comp=Z,0.8nm,0.3s,mb4.0,baz=103,slow=9.0,SNR=7.6								
KURK	**Kurchatov**	**45.08**	**316**	*e*P		**P**		**23 09 50.4**	**-1.5**
	comp=Z,5.2nm,1.4s,mb4.2								
WRAB	**Tennant Creek**	**46.31**	**173**	*e*P		**P**		**23 10 01.3**	**-0.7**
WRA	**Warramunga Arr**	**46.32**	**173**	P		**P**		**23 10 03.1**	**+1.1**
	comp=Z,0.6nm,0.8s,mb3.6,baz=354,slow=8.4,SNR=2.8								
WRA				pP		pP		23 10 13.3	+2.9
	comp=Z,0.8nm,0.4s,baz=353,slow=8.6,SNR=3.7								
UCH	**Uchtor**	**46.78**	**304**	*e*P		**P**		**23 10 05.3**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.3								
AAK	**Ala-Archa**	**46.81**	**305**	P		**P**		**23 10 04.5**	**-1.3**
ASAR	**Alice Springs**	**49.95**	**174**	P		**P**		**23 10 31.9**	**+1.9**
	comp=Z,0.3nm,0.6s,mb3.5,baz=7.3,slow=10,SNR=4.6								
ASAR				pP		pP		23 10 41.6	+3.1
	comp=Z,0.6nm,0.6s,baz=5.9,slow=14,SNR=5.0								
BVAR	**Borovoye Array**	**50.52**	**318**	P		**P**		**23 10 34.8**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=92,slow=10,SNR=5.0								
BVAR				LR		LR		23 33 56.5	
	comp=Z,107nm,18.5s,MS3.9,slow=38								
BRVK	**Borovoye**	**50.59**	**318**	*e*P		**P**		**23 10 33.6**	**-1.0**
	comp=Z,1.2nm,0.5s,mb4.1								
KBL	**Kabul**	**51.50**	**294**	*e*P		**P**		**23 10 41.7**	**-0.1**
	comp=Z,2.2nm,0.8s,mb4.1								
ABKAR	**Akbulak array**	**56.93**	**313**	*e*P		**P**		**23 11 20.5**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.9								
ARU	**Arti**	**57.61**	**322**	*e*P		**P**		**23 11 25.3**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.2								
ARCES	**ARCESS Array B**	**70.09**	**339**	P		**P**		**23 12 50.1**	**+2.5**
	comp=Z,2.3nm,0.9s,mb4.1,baz=91,slow=10,SNR=4.3								
FINES	**FINESS Array B**	**73.01**	**331**	P		**P**		**23 13 06.0**	**+0.5**
	comp=Z,1.8nm,0.7s,mb4.1,baz=56,slow=5.4,SNR=3.9								
FINES				pP		pP		23 13 16.6	+2.4
	comp=Z,2.3nm,0.8s,baz=56,slow=6.1,SNR=1.7								
AKASG	**Malin Array Be**	**75.77**	**320**	P		**P**		**23 13 22.4**

Error ellipse: s-maj=34.8km s-min=10.5km az=20.5, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.90**	**279**	⇓*i*PG	Pg	23 21 02.9	+2.5
SNJR				*e*S	Sb	23 21 18.8	+7.2
BTKR	**Batakoyurt**	**1.17**	**292**	⇓*i*PG	Pg	23 21 05.6	+0.1
BTKR				*i* S	Sb	23 21 23.5	+4.2
TRKR	**Terskaya**	**1.23**	**310**	⇓*i*PG	Pg	23 21 05.1	-1.4
TRKR				*e*S	Sb	23 21 23.4	+2.4
ARNR	**Ardon**	**1.31**	**282**	⇓*i*PG	Pg	23 21 07.3	-0.7
ARNR				*i* S	Sn	23 21 26.4	+3.3
KMSR	**Komsomolskaya**	**1.34**	**289**	⇑*i*PG	Pg	23 21 07.7	-1.0
KMSR				*i* S	Sn	23 21 27.0	+3.0
KORR	**Kora**	**1.45**	**276**	*e*PG	Pg	23 21 08.9	-1.8
KORR				*e*S	Sn	23 21 29.5	+3.0
PRTR	**Priterechnaya**	**1.51**	**303**	⇓*i*PG	Pg	23 21 09.1	-2.8
PRTR				*i* S	Sn	23 21 30.5	+2.4
ZEI	**Tsey**	**1.58**	**265**	⇑*i*PG	Pg	23 21 10.3	-2.8
ZEI				*i* S	Sn	23 21 31.8	+2.1
LSNR	**Lesken**	**1.66**	**282**	⇓*i*PN	Pn	23 21 11.5	+0.6
LSNR				*i* S	Sn	23 21 34.0	+2.3
DIGR	**Digorskoe uzhe**	**1.80**	**270**	⇓*i*PN	Pn	23 21 13.2	+0.3

MAN 05 23:31:29, 11°.04N×124°.65E, h4km, mb4.5, ML3.3, MS3.2, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.04**	**286**	*e*P	Pg	23 31 31.1	+1.1
OCLP				*e*S	Sg	23 31 35.8	+5.1
MSLP	**Maasin**	**0.92**	**167**	*e*P	Pg	23 31 47.8	+1.1
MSLP				*e*S	Sg	23 32 03.4	+4.7
LLP	**Lapu-Lapu**	**0.98**	**223**	*e*P	Pg	23 31 48.4	+0.6
LLP				*e*S	Sg	23 32 03.4	+2.8
TBP	**Tagbilaran**	**1.55**	**210**	*e*P	Pn	23 31 58.1	+0.7
RCP	**Roxas**	**1.94**	**286**	⇑*e*P	Pn	23 32 01.7	-1.0
GUIM	**Jordan**	**2.06**	**259**	*e*P	Pn	23 32 06.7	+2.2
PVCP	**Virac**	**2.59**	**349**	*e*P	Pn	23 32 12.3	+0.7

*CSEM **05** 23:35:55.9±0.3, 34°.57N×24°.70E, h30km, MD3.6, Error ellipse: s-maj=8.6km s-min=5.5km az=53.0*
*HLW **05** 23:35:55.9, 34°.69N×25°.04E, h33km±44km, Md3.0*
*ATH **05** 23:35:57.6, 34°.81N×24°.65E, h41km±1km, MD3.6/14*
*NEIC **05** 23:35:57.6, 34°.81N×24°.65E, h41km, MD3.6(ATH), After ATH.*

ISC 05 23:35:55.6±0.7, 34°.56N±0°.03×24°.70E±0°.04, h27km±7km, n52, σ1°.13/66, 2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.47**	**11**	⇓*i*P	**Pb**	**23 36 05.1**	**-0.3**
SIVA				*e*S	**Sb**	**23 36 11.2**	**-0.8**
SIVA	**Sivas**	**0.47**	**11**	⇓*i*P	**Pb**	**23 36 05.1**	**-0.3**
SIVA				*e*S	**Sb**	**23 36 11.2**	**-0.8**
GVD	**Gavdhos**	**0.57**	**299**	*e*P	**Pb**	**23 36 08.8**	**+1.6**
GVD				*e*S	**Sb**	**23 36 17.1**	**+2.1**
GVD	**Gavdhos**	**0.57**	**299**	*e*P	**Pb**	**23 36 08.8**	**+1.6**
GVD				*e*S	**Sb**	**23 36 17.1**	**+2.1**
IDI	**Anoyia**	**0.74**	**12**	*e*P	**Pb**	**23 36 09.0**	**-1.0**
IDI				*e*S	**Sb**	**23 36 18.4**	**-1.4**
IDI	**Anoyia**	**0.74**	**12**	*e*P	**Pb**	**23 36 09.0**	**-1.0**
IDI				*e*S	**Sb**	**23 36 18.4**	**-1.4**
VAM	**Vamos**	**0.94**	**334**	*e*P	**Pn**	**23 36 12.6**	**-0.5**
VAM	**Vamos**	**0.94**	**334**	*e*P	**Pn**	**23 36 12.6**	**-0.5**
NPS	**Neapolis**	**1.03**	**47**	*e*P	**Pn**	**23 36 15.4**	**+1.1**
NPS				*e*S	**Sb**	**23 36 28.1**	**+0.2**
NPS	**Neapolis**	**1.03**	**47**	*e*P	**Pn**	**23 36 15.4**	**+1.1**
NPS				*e*S	**Sb**	**23 36 28.1**	**+0.2**
KARN	**Karanos**	**1.06**	**323**	*e*P	**Pn**	**23 36 14.9**	**+0.2**
KARN	**Karanos**	**1.06**	**323**	*e*P	**Pn**	**23 36 14.9**	**+0.2**
ZKR	**Zakros**	**1.37**	**66**	*e*P	**Pn**	**23 36 21.3**	**+2.4**
ZKR				*e*S	**Sn**	**23 36 38.6**	**+2.4**
ZKR	**Zakros**	**1.37**	**66**	*e*P	**Pn**	**23 36 21.3**	**+2.4**
ZKR				*e*S	**Sn**	**23 36 38.6**	**+2.4**
KARP	**Karpathos**	**2.25**	**63**	*e*P	**Pn**	**23 36 32.3**	**+1.2**
KARP	**Karpathos**	**2.25**	**63**	*e*P	**Pn**	**23 36 32.3**	**+1.2**
VLI	**Veliai**	**2.59**	**327**	*e*P	**Pn**	**23 36 35.4**	**-0.3**
VLI	**Veliai**	**2.59**	**327**	*e*P	**Pn**	**23 36 35.4**	**-0.3**
SLUM		**3.09**	**172**	P	**Pn**	**23 36 43.6**	**+1.0**
	baz=177						
SLUM				S	**Sn**	**23 37 17.7**	**-1.0**
	baz=177						
SLUM		**3.09**	**172**	P	**Pn**	**23 36 43.6**	**+1.0**
SLUM				S	**Sn**	**23 37 17.7**	**-1.0**
DID	**Didima**	**3.17**	**338**	*e*P	**Pn**	**23 36 42.5**	**-1.2**
DID	**Didima**	**3.17**	**338**	*e*P	**Pn**	**23 36 42.5**	**-1.2**
ARG	**Arkhangelos**	**3.25**	**58**	*e*P	**Pn**	**23 36 45.5**	**+0.6**
ARG	**Arkhangelos**	**3.25**	**58**	*e*P	**Pn**	**23 36 45.5**	**+0.6**
VLY	**Voula,Athens**	**3.37**	**348**	*e*P	**Pn**	**23 36 45.5**	**-0.9**
VLY	**Voula,Athens**	**3.37**	**348**	*e*P	**Pn**	**23 36 45.5**	**-0.9**
VLX	**Vlachokerasia**	**3.38**	**327**	*e*P	**Pn**	**23 36 46.5**	**-0.1**
VLX	**Vlachokerasia**	**3.38**	**327**	*e*P	**Pn**	**23 36 46.5**	**-0.1**
ITM	**Ithomi**	**3.45**	**320**	*e*P	**Pn**	**23 36 47.0**	**-0.6**
ITM	**Ithomi**	**3.45**	**320**	*e*P	**Pn**	**23 36 47.0**	**-0.6**
LTK	**Loutraki**	**3.73**	**338**	*e*P	**Pn**	**23 36 51.1**	**-0.3**
LTK	**Loutraki**	**3.73**	**338**	*e*P	**Pn**	**23 36 51.1**	**-0.3**
GUR	**Goura**	**3.87**	**331**	*e*P	**Pn**	**23 36 53.0**	**-0.4**
GUR	**Goura**	**3.87**	**331**	*e*P	**Pn**	**23 36 53.0**	**-0.4**
HMAT	**Matruh**	**4.00**	**149**	P	**Pn**	**23 36 55.6**	**+0.5**
	baz=153						
HMAT	**Matruh**	**4.00**	**149**	P	**Pn**	**23 36 55.7**	**+0.5**
EFP	**Efpalio**	**4.47**	**331**	*e*P	**Pn**	**23 37 01.1**	**-0.5**
EFP	**Efpalio**	**4.47**	**331**	*e*P	**Pn**	**23 37 01.1**	**-0.5**
AGG	**Agios Georgios**	**4.84**	**338**	*e*P	**Pn**	**23 37 06.7**	**0.0**
AGG	**Agios Georgios**	**4.84**	**338**	*e*P	**Pn**	**23 37 06.7**	**0.0**
SWA2		**5.34**	**173**	P	**Pn**	**23 37 14.8**	**+1.2**
	baz=176						
SWA2				S	**Sn**	**23 38 11.0**	**-3.2**
	baz=176						
SWA2		**5.34**	**173**	P	**Pn**	**23 37 14.8**	**+1.2**
SWA2				S	**Sn**	**23 38 11.0**	**-3.2**
THL	**Klokotos Trika**	**5.44**	**338**	*e*P	**Pn**	**23 37 15.6**	**+0.7**
THL	**Klokotos Trika**	**5.44**	**338**	*e*P	**Pn**	**23 37 15.6**	**+0.7**
GLL	**Jalalah**	**7.75**	**128**	P	**Pn**	**23 37 45.7**	**-0.9**
	baz=130						
GLL	**Jalalah**	**7.75**	**128**	P	**Pn**	**23 37 45.7**	**-1.0**
AMAG	**Maghara**	**8.17**	**116**	P	**Pn**	**23 37 49.7**	**-2.8**
	baz=118						
AMAG	**Maghara**	**8.17**	**116**	P	**Pn**	**23 37 49.7**	**-2.8**
HNKL	**Nakhl**	**9.12**	**118**	P	**Pn**	**23 38 03.8**	**-1.6**
	baz=119						
HNKL	**Nakhl**	**9.12**	**118**	P	**Pn**	**23 38 03.8**	**-1.6**
STON	**Ston**	**9.93**	**329**	Sg	**Sn**	**23 39 53.4**	**-14**
AKRG	**Al Kharijah**	**10.33**	**149**	P	**Pn**	**23 38 22.3**	**+0.3**
	baz=151						

CASC 05 23:52:26.9±1.7, 13°.34N×89°.82W, h48km±42km, MD3.6, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.53**	**21**	*e*P	Pn	23 52 38.6	+0.2
SBLS				*e*S	Sn	23 52 48.4	+1.8
RTR	**El Retiro**	**0.58**	**17**	*e*P	Pn	23 52 39.0	0.0
RTR				*e*S	Sn	23 52 48.1	+0.4
BOQS	**Boqueron**	**0.66**	**53**	*e*P	Pn	23 52 40.0	0.0
BOQS				*e*S	Sn	23 52 50.9	+1.5
LFRS	**El Faro**	**0.79**	**69**	*e*P	Pn	23 52 41.5	-0.3
LFRS				*e*S	Sn	23 52 54.2	+1.6
IXG	**Ixpaco**	**1.03**	**323**	*e*P	Pn	23 52 45.3	+0.2
IXG				*e*S	Sn	23 52 57.8	-0.6
FUG	**Fuego 3**	**1.48**	**318**	*e*P	Pn	23 52 51.9	+0.7
FUG				*e*S	Sn	23 53 11.0	+1.6

IDC 06 00:12:34.4±2.8, 3°.08S×135°.71E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/15, mbtmp3.6/4, ML3.4/1, MS3.5/1, Ms1 3.4/1, ms1mx2.4/20, Error ellipse: s-maj=132.4km s-min=27.2km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.81**	**184**	Pn	Pn	00 16 32.0	+0.7
	0.1nm,0.3s,baz=5.4,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**20.54**	**185**	P	P	00 17 14.4	-0.1
	1.9nm,0.8s,baz=21,slow=11,SNR=17						
STKA	**Stephens Creek**	**29.18**	**170**	LR	LR	00 32 57.8	
	comp=Z,80nm,18.6s,baz=26,slow=42						
MKAR	**Makanchi Array**	**68.28**	**324**	P	P	00 23 38.0	+0.8
	0.1nm,0.3s,baz=128,slow=6.3,SNR=3.0						
BVAR	**Borovoye Array**	**77.92**	**326**	P	P	00 24 33.4	-0.7
	0.7nm,0.5s,baz=123,slow=7.9,SNR=5.1						

*ISCJB **06** 00:16:02.7±0.7, 38°.33N±0°.04×42°.33E±0°.04, h0km±6km, Error ellipse: s-maj=6.5km s-min=4.6km az=151.3*
*DDA **06** 00:16:02.3, 38°.37N×42°.27E, h5km±5km, Md3.1*
*CSEM **06** 00:16:03.3±0.1, 38°.35N×42°.34E, h5km, MD3.2, Error ellipse: s-maj=3.5km s-min=2.0km az=4.0*
*ISK **06** 00:16:03.5, 38°.37N×42°.38E, h8km, MD3.2*

ISC 06 00:16:03.4±0.7, 38°.33N±0°.04×42°.34E±0°.04, h3km±6km, n28, σ0°.88/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.19**	**343**	*i* P	**Pg**	**00 16 06.5**	**-0.6**
TATV				*i* S	**Sg**	**00 16 09.5**	**-0.1**
TATV	**Tatvan**	**0.19**	**343**	*i* P	**Pg**	**00 16 06.6**	**-0.5**
TATV				*i* S	**Sg**	**00 16 09.5**	**-0.1**
VANT	**Van**	**0.73**	**82**	*e*PG	**Pg**	**00 16 17.7**	**+0.2**
VANB	**Van**	**0.87**	**72**	*e*PG	**Pg**	**00 16 19.7**	**-0.3**
VANB				*e*SG	**Sg**	**00 16 31.7**	**+0.4**
VANB	**Van**	**0.87**	**72**	*e*Pg	**Pg**	**00 16 19.7**	**-0.3**
VANB				*e*Sg	**Sg**	**00 16 31.7**	**+0.4**
BEST	**Besiri**	**0.95**	**243**	*i* P	**Pg**	**00 16 21.1**	**-0.5**
BEST				*i* S	**Sg**	**00 16 33.5**	**-0.3**
HKR	**Hakkari**	**1.34**	**123**	*e*PN	**Pn**	**00 16 28.9**	**0.0**
HKR	**Hakkari**	**1.34**	**123**	*e*Pn	**Pn**	**00 16 28.9**	**0.0**
AGRB	**Hanur-Agry**	**1.35**	**22**	*e*PN	**Pn**	**00 16 27.8**	**-1.2**
AGRB				*e*SN	**Sn**	**00 16 46.8**	**-0.6**
AGRB	**Hanur-Agry**	**1.35**	**22**	*e*Pn	**Pn**	**00 16 27.8**	**-1.3**
AGRB				*e*Sn	**Sn**	**00 16 46.8**	**-0.6**
CLDR	**Caldiran**	**1.48**	**56**	*e*PN	**Pn**	**00 16 30.5**	**-0.4**
CLDR	**Caldiran**	**1.48**	**56**	*e*Pn	**Pn**	**00 16 30.5**	**-0.4**
BINT	**Bingol**	**1.55**	**291**	*e*PN	**Pn**	**00 16 32.5**	**+0.6**
BINT	**Bingol**	**1.55**	**291**	*e*Pn	**Pn**	**00 16 32.5**	**+0.7**
ERZM	**Erzurum**	**1.75**	**335**	*i* P	**Pn**	**00 16 35.7**	**+1.1**
ERZM	**Erzurum**	**1.75**	**335**	*i* P	**Pn**	**00 16 35.7**	**+1.1**
HOMI	**Horasan**	**1.75**	**349**	*i* P	**Pn**	**00 16 34.6**	**0.0**
HOMI				*i* S	**Sg**	**00 16 59.7**	**+0.1**
EZM	**Erzurum**	**1.75**	**335**	*e*PN	**Pn**	**00 16 34.8**	**+0.2**
DIYA	**Diyarbakir**	**1.79**	**258**	*i* P	**Pn**	**00 16 33.9**	**-1.2**
DIYA				*i* S	**Sn**	**00 16 56.0**	**-2.4**
DIYA	**Diyarbakir**	**1.79**	**258**	*i* P	**Pn**	**00 16 33.9**	**-1.3**
DIYA				*i* S	**Sn**	**00 16 56.0**	**-2.4**
PTK	**Pertek**	**2.38**	**285**	*e*PN	**Pn**	**00 16 44.2**	**+1.0**
PTK	**Pertek**	**2.38**	**285**	*e*Pn	**Pn**	**00 16 44.2**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.38**	**272**	*e*PN	**Pn**	**00 16 43.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**2.38**	**272**	*e*Pn	**Pn**	**00 16 43.5**	**+0.2**
URFA	**Urfa**	**2.92**	**253**	*e*PN	**Pn**	**00 16 52.2**	**+1.6**
URFA	**Urfa**	**2.92**	**253**	*e*Pn	**Pn**	**00 16 52.2**	**+1.6**
MALT	**Malatya**	**3.08**	**271**	*e*PN	**Pn**	**00 16 54.5**	**+1.7**
MALT	**Malatya**	**3.08**	**271**	*e*Pn	**Pn**	**00 16 54.5**	**+1.7**

*ATH **06** 00:20:55.8, 41°.60N×23°.50E, h21km±1km, MD3.6/11*
*NEIC **06** 00:20:55.8, 41°.60N×23°.50E, h21km, MD3.6(ATH), MD2.9(SOF), ML3.8(THE), After ATH.*
*ISCJB **06** 00:20:55.9±0.3, 41°.58N±0°.01×23°.46E±0°.02, h7km±2km, Error ellipse: s-maj=2.4km s-min=2.1km az=160.6*
*SOF **06** 00:20:56.8, 41°.64N×23°.55E, h10km, MD3.3*
*CSEM **06** 00:20:56.5±0.1, 41°.57N×23°.46E, h5km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.8km az=91.0*
*SKO **06** 00:20:57.2, 41°.58N×23°.44E, h2km, M2.6, ML3.0*
*THE **06** 00:20:57.2, 41°.56N×23°.48E, h10km±1km, ML3.8/9, Error ellipse: s-maj=1.0km s-min=0.5km az=239.0*
*BEO **06** 00:20:57.3±0.8, 41°.60N×23°.49E, h7km±4km, ML3.2/11*

ISC 06 00:20:57.0±0.3, 41°.57N±0°.01×23°.47E±0°.02, h9km±2km, n161, σ0°.96/230, 10C-23D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.20**	**83**	*i* Pg	**Pg**	**00 21 01.0**	**0.0**
MMB	**Musomiste**	**0.20**	**83**	*i* Pg	**Pg**	**00 21 01.0**	**0.0**
NVR	**Nevrokopi**	**0.37**	**126**	*e*PB	**Pg**	**00 21 03.9**	**-0.2**
NVR				*e*SB	**Sg**	**00 21 09.0**	**0.0**
NVR	**Nevrokopi**	**0.37**	**126**	*e*Pb	**Pg**	**00 21 03.9**	**-0.2**
NVR				*e*Sb	**Sg**	**00 21 09.0**	**0.0**
KKB	**Krupnik**	**0.42**	**317**	*i* Pg	**Pg**	**00 21 04.6**	**-0.5**
KKB	**Krupnik**	**0.42**	**317**	*i* Pg	**Pg**	**00 21 04.6**	**-0.5**
SRS	**Serrai**	**0.46**	**168**	P	**Pg**	**00 21 06.0**	**+0.2**
SRS				S	**Sg**	**00 21 12.7**	**+0.9**
SRS	**Serrai**	**0.46**	**168**	P	**Pg**	**00 21 06.0**	**+0.2**
SRS				S	**Sg**	**00 21 12.7**	**+0.9**
SRS	**Serrai**	**0.46**	**168**	P	**Pg**	**00 21 06.0**	**+0.2**
SRS				S	**Sg**	**00 21 12.7**	**+0.9**
VAY	**Valandovo**	**0.72**	**250**	*i* Pg	**Pg**	**00 21 11.6**	**+0.9**
VAY				*i* Sg	**Sg**	**00 21 21.1**	**+1.0**
VAY	**Valandovo**	**0.72**	**250**	*e*Pg	**Pg**	**00 21 10.3**	**-0.4**
VAY				*e*Sg	**Sg**	**00 21 20.2**	**+0.1**
VAY				*e*Lg		00 21 24.0	
	comp=N,1μm,0.6s						
VAY				*e*Lg		00 21 24.1	
	comp=E,741nm,0.3s						
VAY	**Valandovo**	**0.72**	**250**	P	**Pg**	**00 21 10.3**	**-0.4**
VAY				S	**Sg**	**00 21 22.0**	**+1.9**
VAY	**Valandovo**	**0.72**	**250**	P	**Pg**	**00 21 10.3**	**-0.4**
VAY				*e*Sg	**Sg**	**00 21 20.1**	**0.0**
VAY				S	**Sg**	**00 21 22.0**	**+1.9**
VAY				*e*Lg		00 21 24.0	
	comp=E,741nm,0.3s						
SOH	**Sokhos**	**0.75**	**187**	*e*Pn	**Pg**	**00 21 11.3**	**0.0**
SOH				S	**Sg**	**00 21 22.1**	**+1.1**
SOH	**Sokhos**	**0.75**	**187**	P	**Pg**	**00 21 11.2**	**-0.1**
SOH				S	**Sg**	**00 21 22.1**	**+1.1**
SOH	**Sokhos**	**0.75**	**187**	P	**Pg**	**00 21 11.2**	**-0.1**
SOH				S	**Sg**	**00 21 22.1**	**+1.1**
RZN	**Rozhen**	**0.94**	**82**	*i* Pg	**Pg**	**00 21 14.4**	**-0.7**
RZN	**Rozhen**	**0.94**	**82**	*i* Pg	**Pg**	**00 21 14.4**	**-0.7**
HORT	**Hortiatis**	**1.00**	**196**	P	**Pg**	**00 21 16.1**	**-0.1**
HORT				S	**Sg**	**00 21 29.9**	**+0.6**
HORT	**Hortiatis**	**1.00**	**196**	P	**Pg**	**00 21 16.1**	**-0.1**
HORT				S	**Sg**	**00 21 29.9**	**+0.6**
HORT	**Hortiatis**	**1.00**	**196**	P	**Pg**	**00 21 16.1**	**-0.1**
HORT				S	**Sg**	**00 21 29.9**	**+0.6**
THE	**Thessaloniki**	**1.01**	**202**	P	**Pg**	**00 21 16.2**	**-0.1**
THE				S	**Sg**	**00 21 29.9**	**+0.6**
THE	**Thessaloniki**	**1.01**	**202**	P	**Pg**	**00 21 16.2**	**-0.1**
THE				S	**Sg**	**00 21 29.9**	**+0.6**
THE	**Thessaloniki**	**1.01**	**202**	P	**Pg**	**00 21 16.2**	**-0.1**
THE				S	**Sg**	**00 21 29.9**	**+0.6**
VTS	**Vitosha**	**1.04**	**350**	P	**Pg**	**00 21 16.2**	**-0.8**
VTS				S	**Sg**	**00 21 31.7**	**+1.1**
VTS	**Vitosha**	**1.04**	**350**	P	**Pg**	**00 21 16.3**	**-0.7**
VTS				S	**Sg**	**00 21 31.7**	**+1.1**
VTS	**Vitosha**	**1.04**	**350**	*i* Pg	**Pg**	**00 21 16.4**	**-0.6**
VTS	**Vitosha**	**1.04**	**350**	*i* Pg	**Pg**	**00 21 16.4**	**-0.6**
VTS				S	**Sg**	**00 21 31.7**	**+1.1**
PLD	**Plovdiv**	**1.07**	**59**	P	**Pg**	**00 21 16.9**	**-0.6**
PLD				S	**Sg**	**00 21 33.0**	**+1.6**
PLD	**Plovdiv**	**1.07**	**59**	P	**Pg**	**00 21 16.9**	**-0.6**
PLD				S	**Sg**	**00 21 33.0**	**+1.6**
PLD	**Plovdiv**	**1.07**	**59**	Pg	**Pg**	**00 21 17.3**	**-0.2**
PLD	**Plovdiv**	**1.07**	**59**	P	**Pg**	**00 21 16.9**	**-0.6**
PLD	**Plovdiv**	**1.07**	**59**	Pg	**Pg**	**00 21 17.3**	**-0.2**
PLD				S	**Sg**	**00 21 33.0**	**+1.6**
PGB	**Panagyurishte**	**1.11**	**28**	*i* Pg	**Pg**	**00 21 16.8**	**-1.6**
PGB	**Panagyurishte**	**1.11**	**28**	*i* Pg	**Pg**	**00 21 16.8**	**-1.6**
PLG	**Polygyros**	**1.19**	**181**	*e*PN	**Pn**	**00 21 18.8**	**-1.0**
PLG				*e*SN	**Sn**	**00 21 35.4**	**-0.7**
PLG	**Polygyros**	**1.19**	**181**	P	**Pb**	**00 21 18.9**	**-0.8**
PLG				S	**Sb**	**00 21 35.5**	**+0.3**
PLG	**Polygyros**	**1.19**	**181**	P	**Pb**	**00 21 18.9**	**-0.8**
PLG				S	**Sb**	**00 21 35.5**	**+0.3**
OUR	**Ouranopolis**	**1.29**	**162**	P	**Pn**	**00 21 20.2**	**-1.0**
OUR				S	**Sb**	**00 21 37.5**	**-0.6**
OUR	**Ouranopolis**	**1.29**	**162**	P	**Pn**	**00 21 20.2**	**-1.0**
OUR				S	**Sb**	**00 21 37.5**	**-0.6**
OUR	**Ouranopolis**	**1.29**	**162**	P	**Pn**	**00 21 20.2**	**-1.0**
OUR				S	**Sb**	**00 21 37.5**	**-0.6**
KDZ	**Kurdzhali**	**1.47**	**86**	P	**Pn**	**00 21 22.5**	**-1.1**
KDZ	**Kurdzhali**	**1.47**	**86**	P	**Pn**	**00 21 22.5**	**-1.1**
SKO	**Skopje**	**1.57**	**286**	*i* Pn	**Pn**	**00 21 25.7**	**+0.7**
SKO	**Skopje**	**1.57**	**286**	*e*Pg	**Pn**	**00 21 25.1**	**+0.1**
SKO				*e*Sg	**Sg**	**00 21 46.4**	**-1.0**
SKO				*e*Lg		00 21 50.1	
	comp=N,65nm,0.4s						
SKO				*e*Lg		00 21 50.1	
	comp=E,86nm,0.9s						
SKO	**Skopje**	**1.57**	**286**	*e*Pg	**Pn**	**00 21 25.0**	**0.0**
SKO	**Skopje**	**1.57**	**286**	*i* Pn	**Pn**	**00 21 25.7**	**+0.7**
SKO				*e*Sg	**Sg**	**00 21 46.3**	**-1.1**
SKO				*e*Lg		00 21 50.1	
	comp=E,86nm,0.9s						
RDO	**Rodhopi**	**1.61**	**104**	*e*PN	**Pn**	**00 21 24.9**	**-0.7**
RDO				*e*SN	**Sn**	**00 21 46.5**	**-0.1**
RDO	**Rodhopi**	**1.61**	**104**	P	**Pn**	**00 21 24.8**	**-0.8**
RDO				S	**Sn**	**00 21 46.6**	**0.0**
RDO	**Rodhopi**	**1.61**	**104**	*e*Pn	**Pn**	**00 21 24.9**	**-0.7**
RDO				*e*Sn	**Sn**	**00 21 46.5**	**-0.1**
DIM	**Dimitrovgrad**	**1.62**	**72**	P	**Pn**	**00 21 27.0**	**+1.3**
DIM	**Dimitrovgrad**	**1.62**	**72**	P	**Pn**	**00 21 27.0**	**+1.3**
LIT	**Litokhoron**	**1.64**	**207**	*e*Pb	**Pn**	**00 21 25.3**	**-0.7**
LIT				S	**Sn**	**00 21 47.5**	**+0.3**
LIT	**Litokhoron**	**1.64**	**207**	P	**Pn**	**00 21 25.4**	**-0.6**
LIT				S	**Sn**	**00 21 47.5**	**+0.3**
LIT	**Litokhoron**	**1.64**	**207**	P	**Pn**	**00 21 25.4**	**-0.6**
LIT				S	**Sn**	**00 21 47.5**	**+0.3**
PAIG	**Paliouri**	**1.64**	**174**	P	**Pn**	**00 21 25.6**	**-0.4**
PAIG				S	**Sn**	**00 21 46.7**	**-0.6**
PAIG	**Paliouri**	**1.64**	**174**	P	**Pn**	**00 21 25.6**	**-0.4**
PAIG				S	**Sn**	**00 21 46.7**	**-0.6**
PAIG	**Paliouri**	**1.64**	**174**	P	**Pn**	**00 21 25.6**	**-0.4**
PAIG				S	**Sn**	**00 21 46.7**	**-0.6**
KRUS	**Krusevo**	**1.68**	**264**	*e*Pg	**Pn**	**00 21 25.9**	**-0.6**
KRUS				*e*Sg	**Sg**	**00 21 49.4**	**-1.4**
KRUS				*e*Lg		00 21 51.9	
	comp=N,16nm,0.3s						
KRUS				*e*Lg		00 21 52.0	
	comp=E,12nm,0.3s						
KRUS	**Krusevo**	**1.68**	**264**	*e*Pg	**Pn**	**00 21 25.8**	**-0.7**
KRUS				*e*Sg	**Sg**	**00 21 49.4**	**-1.5**
KRUS				*e*Lg		00 21 51.8	
	comp=E,16nm,0.3s						
BIA	**Bitola**	**1.70**	**252**	*e*Pg	**Pn**	**00 21 26.6**	**-0.2**
BIA				*e*Sg	**Sg**	**00 21 50.8**	**-0.9**
BIA				*e*Lg		00 21 53.0	
	comp=E,28nm,0.3s						
BIA				*e*Lg		00 21 53.8	
	comp=N,22nm,0.3s						
BIA	**Bitola**	**1.70**	**252**	P	**Pn**	**00 21 26.9**	**0.0**
BIA	**Bitola**	**1.70**	**252**	*e*Pg	**Pn**	**00 21 26.6**	**-0.3**
BIA	**Bitola**	**1.70**	**252**	P	**Pn**	**00 21 26.9**	**0.0**
BIA				*e*Sg	**Sg**	**00 21 50.7**	**-1.0**
BIA				*e*Lg		00 21 52.9	
	comp=N,28nm,0.3s						
BARS	**Barje**	**1.75**	**316**	⇓*i*Pn	**Pn**	**00 21 27.5**	**0.0**
BARS				*i* Sg	**Sg**	**00 21 52.5**	**-0.8**
BARS	**Barje**	**1.75**	**316**	⇓*i*Pn	**Pn**	**00 21 27.5**	**0.0**
BARS				*i* Sg	**Sg**	**00 21 52.5**	**-0.8**
FNA	**Florina**	**1.76**	**244**	P	**Pn**	**00 21 28.0**	**+0.4**
FNA				S	**Sn**	**00 21 50.4**	**+0.2**
FNA	**Florina**	**1.76**	**244**	P	**Pn**	**00 21 28.0**	**+0.4**
FNA				S	**Sn**	**00 21 50.4**	**+0.2**
FNA	**Florina**	**1.76**	**244**	P	**Pn**	**00 21 28.0**	**+0.4**
FNA				S	**Sn**	**00 21 50.4**	**+0.2**
KZN	**Kozani**	**1.80**	**226**	*e*Pn	**Pn**	**00 21 28.2**	**+0.1**
KZN				S	**Sn**	**00 21 50.5**	**-0.6**
KZN	**Kozani**	**1.80**	**226**	P	**Pn**	**00 21 28.1**	**0.0**
KZN				S	**Sn**	**00 21 50.5**	**-0.6**
KZN	**Kozani**	**1.80**	**226**	*e*Pn	**Pn**	**00 21 28.2**	**+0.1**
KZN				S	**Sn**	**00 21 50.5**	**-0.6**
MPEP	**Malo Peshtene**	**

TLCR		**5.32**	**45**	⇓*i*P	**Pn**	**00 22 18.3**	**+1.8**
TLCR		**5.32**	**45**	⇓*i*P	**Pn**	**00 22 18.3**	**+1.8**
ESKT	**Eskisehir**	**5.98**	**108**	*i* P	**Pn**	**00 22 25.8**	**+0.1**
SEYT	**Eskypehyr**	**5.98**	**108**	*i* P	**Pn**	**00 22 25.8**	**+0.1**
BURAR	**Bucovina Array**	**6.18**	**11**	⇓*i*P	**Pn**	**00 22 28.0**	**-0.3**
BURAR	**Bucovina Array**	**6.18**	**11**	⇓*i*P	**Pn**	**00 22 28.0**	**-0.3**
BUR08	**Bucovina Ar. S**	**6.20**	**11**	*e*Pn	**Pn**	**00 22 28.8**	**+0.1**
BUR08				Sn	**Sn**	**00 23 37.4**	**-2.3**
BUR08	**Bucovina Ar. S**	**6.20**	**11**	*e*Pn	**Pn**	**00 22 28.8**	**+0.1**
BUR08				Sn	**Sn**	**00 23 37.4**	**-2.3**

*ISCJB **06** 00:25:26.0±0.3, 56°.10N±0°.02×109°.65E±0°.04, h10km, mb3.9/15, Error ellipse: s-maj=3.3km s-min=2.8km az=147.4*
*IDC **06** 00:25:26.8±0.8, 56°.31N×109°.69E, h0km, mb3.9/11, mb1 4.1/15, mb1mx3.8/30, mbtmp3.9/15, ML3.9/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/28, Error ellipse: s-maj=19.4km s-min=16.1km az=64.0*
*MOS **06** 00:25:26.4±1.0, 56°.27N×109°.56E, h9km, mb4.6/3, Error ellipse: s-maj=9.1km s-min=5.9km az=85.8*
*NEIC **06** 00:25:27.9±0.3, 56°.24N×109°.69E, h10km, mb3.7/4, Error ellipse: s-maj=6.9km s-min=4.6km az=220.0*
*BYKL **06** 00:25:28.1±0.5, 56°.18N×109°.66E, h2km±5km*

ISC 06 00:25:27.9±0.2, 56°.14N±0°.02×109°.69E±0°.03, h10km, n83, σ1944/136, mb3.9/15, 13C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.38**	**193**	*e*PG	**Pg**	**00 25 36.0**	**+0.7**
NIZ				*e*		00 25 41.5	
NIZ				pmax	pmax		
	comp=Z,857nm,0.2s						
NIZ				smax			
	comp=N,7μm,0.5s						
NIZ	**Nizh Angarsk**	**0.38**	**193**	⇑*i*Pg	**Pg**	**00 25 36.0**	**+0.7**
NIZ				Pmax		00 25 36.2	
	comp=N,844nm,0.4s						
NIZ				*e*Sg	**Sg**	**00 25 41.5**	**+1.1**
NIZ				Smax		00 25 42.9	
	comp=N,7μm,0.5s						
NIZ	**Nizh Angarsk**	**0.38**	**193**	*e*Pg	**Pg**	**00 25 36.0**	**+0.7**
NIZ				*e*Sg	**Sg**	**00 25 41.5**	**+1.1**
KMO	**Kumora**	**0.88**	**106**	*e*PG	**Pg**	**00 25 44.7**	**-0.2**
KMO				*e*		00 25 55.8	
KMO				pmax	pmax		
	comp=Z,298nm,0.3s						
KMO				smax			
	comp=N,2μm,1.0s						
KMO	**Kumora**	**0.88**	**106**	⇑*i*Pg	**Pg**	**00 25 44.7**	**-0.2**
KMO				*e*		00 25 48.3	
KMO				max		00 25 48.9	
	comp=N,402nm,0.3s						
KMO				*e*Sg	**Sg**	**00 25 56.6**	**+0.2**
KMO				Smax		00 26 05.6	
	comp=N,2μm,0.9s						
KMO	**Kumora**	**0.88**	**106**	*e*Pg	**Pg**	**00 25 44.7**	**-0.2**
KMO				*e*Sg	**Sg**	**00 25 55.8**	**-0.6**
YLYR	**Ulyunkhan**	**1.52**	**146**	*e*PN	**Pg**	**00 25 56.5**	**-0.5**
YLYR				*e*		00 26 16.6	
YLYR				pmax	pmax		
	comp=Z,812nm,0.2s						
YLYR				smax			
	comp=N,1μm,0.3s						
YLYR	**Ulyunkhan**	**1.52**	**146**	⇓*i*Pg	**Pg**	**00 25 56.6**	**-0.4**
	comp=N,123nm,1.2s						
YLYR				⇑*i*Pg	**Pg**	**00 25 56.6**	**-0.4**
	comp=N,79nm,1.2s						
YLYR				⇑*i*Pg	**Pg**	**00 25 56.6**	**-0.4**
	comp=N,115nm,1.2s						
YLYR				*e*Pb	**Pb**	**00 25 57.8**	**+1.7**
YLYR				max		00 25 58.1	
	comp=N,879nm,0.5s						
YLYR				*e*Sg	**Sg**	**00 26 17.6**	**+0.9**
YLYR				*e*		00 26 20.4	
YLYR				max		00 26 20.8	
	comp=N,1μm,0.4s						
YLYR	**Ulyunkhan**	**1.52**	**146**	*e*Pg	**Pg**	**00 25 56.5**	**-0.5**
YLYR				*e*Sg	**Sg**	**00 26 16.6**	**-0.1**
SVKR	**Severomuysk**	**2.16**	**89**	*e*PN	**Pn**	**00 26 06.5**	**+2.6**
SVKR				*e*		00 26 34.6	
SVKR				pmax	pmax		
	comp=Z,494nm,0.7s						
SVKR				smax			
	comp=N,5μm,0.8s						
SVKR	**Severomuysk**	**2.16**	**89**	*e*	**Pn**	**00 26 06.1**	**+2.2**
SVKR				*e*Pg	**Pg**	**00 26 07.4**	**-1.9**
SVKR				Pmax		00 26 11.1	
	comp=N,518nm,0.4s						
SVKR				*e*Sg	**Sg**	**00 26 35.1**	**-2.2**
SVKR				Smax		00 26 40.3	
	comp=N,5μm,0.5s						
UKT	**Uakit**	**2.31**	**105**	*e*PN	**Pn**	**00 26 08.0**	**+2.0**
UKT				*e*		00 26 38.7	
UKT				pmax	pmax		
	comp=Z,144nm,0.2s						
UKT				smax			
	comp=N,970nm,0.4s						
UKT	**Uakit**	**2.31**	**105**	⇑*i*Pg	**Pg**	**00 26 08.3**	**-3.9**
UKT				Pmax		00 26 15.2	
	comp=N,183nm,0.5s						
UKT				*e*Sg	**Sg**	**00 26 39.0**	**-3.2**
UKT				Smax		00 26 44.3	
	comp=N,1μm,1.5s						
SYVR	**Suvo**	**2.50**	**176**	*e*PN	**Pn**	**00 26 10.6**	**+2.1**
SYVR				*e*		00 26 13.8	
SYVR				*e*		00 26 47.1	
SYVR				pmax	pmax		
	comp=Z,137nm,0.4s						
SYVR				smax			
	comp=N,2μm,0.4s						
SYVR	**Suvo**	**2.50**	**176**	⇑*i*Pn	**Pn**	**00 26 10.8**	**+2.3**
SYVR				⇑*i*Pg	**Pg**	**00 26 13.6**	**-2.1**
SYVR				Pmax		00 26 19.0	
	comp=N,112nm,0.8s						
SYVR				*e*Sg	**Sg**	**00 26 47.3**	**-0.8**
SYVR				Smax		00 26 49.3	
	comp=N,2μm,0.5s						
OGRR	**Ongureny**	**2.78**	**207**	*e*PN	**Pn**	**00 26 14.5**	**+2.1**
OGRR				*e*		00 26 19.3	
OGRR				*e*		00 26 54.6	
OGRR				pmax	pmax		
	comp=Z,109nm,0.8s						
OGRR				smax			
	comp=E,711nm,0.7s						
OGRR	**Ongureny**	**2.78**	**207**	⇑*i*Pn	**Pn**	**00 26 14.0**	**+1.6**
OGRR				*e*Pg	**Pg**	**00 26 18.1**	**-3.1**
OGRR				Pmax		00 26 23.4	
	comp=E,109nm,0.5s						
OGRR				*e*Sg	**Sg**	**00 26 54.3**	**-2.9**
OGRR				Smax		00 26 57.8	
	comp=E,712nm,0.5s						
BOD	**Bodaibo**	**2.90**	**53**	*e*PN	**Pn**	**00 26 15.2**	**+1.2**
BOD				*e*		00 26 20.3	
BOD				*e*S	**Sn**	**00 26 49.7**	**+0.9**
BOD				*e*		00 26 55.2	
BOD				pmax	pmax		
	comp=Z,79nm,0.4s						
BOD				smax			
	comp=N,558nm,0.7s						
BOD	**Bodaibo**	**2.90**	**53**	⇑*i*Pn	**Pn**	**00 26 15.9**	**+1.9**
BOD				*e*Pg	**Pg**	**00 26 21.3**	**-2.0**
BOD				Pmax		00 26 25.2	
	comp=N,79nm,0.3s						
BOD				*e*Sn	**Sn**	**00 26 50.7**	**+1.9**
BOD				*e*Sg	**Sg**	**00 26 58.5**	**-2.3**
BOD				Smax		00 27 00.6	
	comp=N,554nm,0.7s						
MXMB	**Maximikha**	**2.94**	**191**	⇑*i*Pn	**Pn**	**00 26 16.7**	**+2.1**
MXMB				*e*Pg	**Pg**	**00 26 21.6**	**-2.6**
MXMB				Pmax		00 26 22.3	
	comp=N,75nm,0.7s						
MXMB				*e*Sn	**Sn**	**00 26 52.4**	**+2.5**
MXMB				*e*Sg	**Sg**	**00 27 01.4**	**-0.8**
MXMB				Smax		00 27 14.7	
	comp=N,615nm,0.9s						
NLYR	**Nelyaty**	**3.37**	**82**	*e*PN	**Pn**	**00 26 22.3**	**+1.9**
NLYR				*e*		00 26 29.9	
NLYR				*e*		00 27 10.5	
NLYR				pmax	pmax		
	comp=Z,110nm,0.7s						
NLYR				smax			
	comp=N,625nm,1.0s						
NLYR	**Nelyaty**	**3.37**	**82**	⇑*i*Pn	**Pn**	**00 26 22.4**	**+2.0**
NLYR				*e*Pg	**Pg**	**00 26 28.0**	**-4.3**
NLYR				Pmax		00 26 35.6	
	comp=N,109nm,0.5s						
NLYR				*e*		00 27 02.6	
NLYR				*e*Sg	**Sg**	**00 27 10.6**	**-5.2**
NLYR				Smax		00 27 22.1	
	comp=N,625nm,1.1s						
ZRHB	**Zarechye**	**3.89**	**204**	*e*Pn	**Pn**	**00 26 31.7**	**+4.0**
ZRHB				*e*Pg	**Pg**	**00 26 39.5**	**-2.9**
ZRHB				Pmax		00 26 53.5	
	comp=N,128nm,0.6s						
ZRHB				*e*		00 27 12.3	
ZRHB				*e*Sg	**Sg**	**00 27 29.2**	**-3.6**
ZRHB				Smax		00 27 46.9	
	comp=N,1μm,1.0s						
TRG	**Tyrgan**	**3.91**	**211**	*e*PN	**Pn**	**00 26 29.4**	**+1.4**
TRG				*e*		00 26 38.5	
TRG				*e*S	**Sn**	**00 27 12.9**	**-1.0**
TRG	**Tyrgan**	**3.91**	**211**	*e*Pn	**Pn**	**00 26 29.5**	**+1.5**
TRG				*e*Pg	**Pg**	**00 26 39.0**	**-3.8**
TRG				Pmax		00 26 40.7	
	comp=N,43nm,0.8s						
TRG				*e*Sg	**Sg**	**00 27 29.2**	**-4.2**
TRG				Smax		00 27 41.3	
	comp=N,294nm,1.1s						
FFNB	**Fofonovo**	**4.45**	**204**	*e*	**Sn**	**00 27 20.5**	**-6.7**
FFNB				*e*Sg	**Sg**	**00 27 46.0**	**-4.7**
FFNB				Smax		00 27 49.5	
	comp=N,1μm,0.8s						
CIT	**Chita**	**4.71**	**150**	*e*Sg	**Sg**	**00 27 57.0**	**-2.1**
CIT				Smax		00 27 57.9	
	comp=N,339nm,0.8s						
HRMR	**Khuramsha**	**4.81**	**201**	⇑*i*Pn	**Pn**	**00 26 42.1**	**+1.9**
HRMR				*e*		00 26 55.7	
HRMR				max		00 27 03.6	
	comp=N,50nm,0.6s						
HRMR				*e*Sg	**Sg**	**00 27 56.0**	**-6.1**
HRMR				Smax		00 28 10.2	
	comp=N,567nm,0.8s						
CRS	**Chara**	**4.81**	**77**	*e*PN	**Pn**	**00 26 42.6**	**+2.4**
CRS				*e*		00 26 56.0	
CRS				*e*		00 27 56.3	
CRS				pmax	pmax		
	comp=Z,43nm,0.9s						
CRS				smax			
	comp=E,259nm,1.1s						
CRS	**Chara**	**4.81**	**77**	*e*Pn	**Pn**	**00 26 42.3**	**+2.1**
CRS				*e*Pg	**Pg**	**00 26 55.2**	**-4.7**
CRS				Pmax		00 27 01.7	
	comp=E,44nm,0.8s						
CRS				*e*Sg	**Sg**	**00 27 56.3**	**-5.8**
CRS				Smax		00 28 10.3	
	comp=E,262nm,1.0s						
TLY	**Talaya**	**5.72**	**221**	*e*PN	**Pn**	**00 26 52.8**	**0.0**
TLY				*e*S	**Sn**	**00 27 56.3**	**-2.2**
TLY				*e*S	**Sg**	**00 28 24.2**	**-7.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.3s						
TLY				smax			
	comp=E,100nm,0.6s						
TLY	**Talaya**	**5.72**	**221**	*e*Pn	**Pn**	**00 26 53.0**	**+0.1**
	comp=E,16nm,0.6s						
TLY				*e*Sn	**Sn**	**00 27 57.8**	**-0.7**
ARS	**Arshan**	**6.02**	**228**	*e*PN	**Pn**	**00 26 58.4**	**+1.5**
ARS				*e*S	**Sg**	**00 28 33.8**	**-7.2**
ARS				smax			
	comp=E,773nm,0.7s						
ARS	**Arshan**	**6.02**	**228**	*e*Pn	**Pn**	**00 26 58.6**	**+1.7**
ARS				*e*Pg	**Pg**	**00 27 17.6**	**-5.5**
ARS				Pmax		00 27 23.2	
	comp=E,58nm,0.4s						
ARS				*e*Sn	**Sn**	**00 28 05.7**	**-0.1**
ARS				*e*Sg	**Sg**	**00 28 34.8**	**-6.2**
ARS				Smax		00 28 49.1	
	comp=E,769nm,0.5s						
TUP	**Tupik**	**6.11**	**102**	*e*PN	**Pn**	**00 26 58.9**	**+0.8**
TUP				*e*		00 27 18.6	
TUP				*e*S	**Sn**	**00 28 08.0**	**0.0**
TUP				*e*		00 28 39.9	
TUP				pmax	pmax		
	comp=Z,13nm,0.6s						
TUP				smax			
	comp=N,163nm,1.0s						
TUP	**Tupik**	**6.11**	**102**	*e*Pn	**Pn**	**00 26 58.7**	**+0.6**
TUP				*e*Pg	**Pg**	**00 27 19.5**	**-5.3**
TUP				Pmax		00 27 25.7	
	comp=N,13nm,0.7s						
TUP				*e*Sn	**Sn**	**00 28 07.3**	**-0.7**
TUP				*e*Sg	**Sg**	**00 28 39.0**	**-4.9**
TUP				Smax		00 28 56.1	
	comp=N,162nm,2.0s						
KPC	**Khapcheranga**	**6.65**	**165**	*e*Pn	**Pn**	**00 27 07.1**	**+1.5**
KPC				*e*Pg	**Pg**	**00 27 28.7**	**-6.5**
KPC				Pmax		00 27 38.9	
	comp=N,7.0nm,0.7s						
KPC				*e*Sg	**Sg**	**00 28 54.6**	**-6.6**
KPC				Smax		00 29 05.2	
	comp=N,116nm,1.9s						
ORL	**Orlik**	**6.81**	**242**	*e*PN	**Pn**	**00 27 09.1**	**+1.3**
ORL				*e*		00 27 31.0	
ORL				*e*S	**Sn**	**00 28 24.5**	**-0.8**
ORL				*e*		00 29 00.0	
ORL				pmax	pmax		
	comp=Z,16nm,0.7s						
ORL				smax			
	comp=N,267nm,1.3s						
ORL	**Orlik**	**6.81**	**242**	⇑*i*Pn	**Pn**	**00 27 09.3**	**+1.5**
ORL				*e*Sn	**Sn**	**00 28 24.7**	**-0.6**
ORL				*e*Sg	**Sg**	**00 28 59.3**	**-7.1**
ORL				Smax		00 29 05.5	
	comp=N,267nm,1.4s						
MOY	**Mondy**	**6.82**	**233**	*e*PN	**Pn**	**00 27 10.5**	**+2.6**
MOY				*e*		00 27 31.8	
MOY				*e*S	**Sn**	**00 28 24.2**	**-1.3**
MOY				*e*		00 28 58.3	
MOY				pmax	pmax		
	comp=Z,25nm,0.7s						
ZAK	**Zakamensk**	**6.93**	**216**	*e*PN	**Pn**	**00 27 12.8**	**+3.4**
ZAK				*e*		00 27 34.7	
ZAK				*e*S	**Sn**	**00 28 29.3**	**+1.0**
ZAK				*e*		00 29 03.7	
ZAK				pmax	pmax		
	comp=Z,12nm,0.6s						
ZAK				smax			
	comp=E,180nm,1.3s						
ZAK	**Zakamensk**	**6.93**	**216**	*e*	**Pn**	**00 27 14.2**	**+4.8**
ZAK				*e*		00 28 29.5	
ZAK				*e*Sg	**Sg**	**00 29 03.2**	**-7.1**
ZAK				Smax		00 29 07.4	
	comp=E,178nm,1.2s						
SONM	**Songino Array**	**8.57**	**195**	Pn	**Pn**	**00 27 34.4**	**+2.6**
	comp=E,0.7nm,0.3s,baz=9.0,slow=14,SNR=8.9						
SONM				Lg		00 30 02.7	
	comp=E,1.2nm,0.3s,baz=17,slow=28,SNR=6.2						
SONM				LR	LR	00 31 14.0	
	comp=E,44nm,20.3s,baz=64,slow=40						
HIA	**Hailar**	**9.19**	**134**	Pn	**Pn**	**00 27 43.7**	**+3.3**
HIA				Sn	**Sn**	**00 29 29.9**	**+6.1**
ZALV	**Zalesovo Beam**	**14.40**	**272**	Pn	**Pn**	**00 28 51.2**	**-0.4**
	comp=E,0.3nm,0.3s,baz=59,slow=12,SNR=4.0						
ZALV				Lg		00 33 03.5	
	comp=E,0.1nm,0.3s,baz=69,slow=36,SNR=4.6						
BJT	**Baijiatuau**	**16.69**	**162**	P	**Pn**	**00 29 23.8**	**+2.1**
TIXI	**Tiksi**	**17.55**	**20**	*e*P	**Pn**	**00 29 30.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURK	**Kurchatov**	**19.19**	**267**	P	**Pn**	**00 29 52.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=63,slow=12,SNR=11						
KURK				Lg		00 35 39.3	
	comp=Z,0.0nm,0.3s,baz=69,slow=31,SNR=4.2						
KURK	**Kurchatov**	**19.19**	**267**	*e*P	**Pn**	**00 29 51.3**	**-1.1**
	comp=Z,2.7nm,0.6s						
KURK				Lg		00 35 39.3	
MK31	**Makanchi Array**	**19.35**	**253**	*e*P	**Pn**	**00 29 53.4**	**-0.9**
MKAR	**Makanchi Array**	**19.35**	**253**	P	**Pn**	**00 29 53.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=55,slow=8.3,SNR=47						
YSS	**Yuzh-Sakhalins**	**22.32**	**100**	*e*P	**P**	**00 30 25.3**	**-0.1**
BVAR	**Borovoye Array**	**22.77**	**279**	P	**P**	**00 30 30.3**	**+0.2**
	comp=Z,3.4nm,0.5s,mb4.1,baz=67,slow=11,SNR=22						
BRVK	**Borovoye**	**22.82**	**279**	*e*P	**P**	**00 30 30.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
BRVK	**Borovoye**	**22.82**	**279**	*e*P	**P**	**00 30 30.4**	**-0.2**
	comp=Z,2.5nm,0.6s,mb3.8						
TKM2	**Tokmak 2**	**25.48**	**253**	P	**P**	**00 30 57.0**	**+1.1**
AAK	**Ala-Archa**	**26.27**	**254**	P	**P**	**00 31 03.4**	**+0.4**
UCH	**Uchtor**	**26.54**	**253**	*e*P	**P**	**00 31 06.5**	**+1.0**
	comp=Z,0.5nm,0.4s,mb3.4						
KEV	**Kevo**	**36.71**	**325**	P	**P**	**00 32 33.4**	**-1.1**
ARCES	**ARCESS Array B**	**37.28**	**325**	P	**P**	**00 32 38.6**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.0,baz=68,slow=8.5,SNR=6.7						
JOF	**Joensuu**	**37.96**	**313**	*e*P	**P**	**00 32 44.6**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
JOF	**Joensuu**	**37.96**	**313**	*e*p	**P**	**00 32 44.6**	**-0.6**
	comp=Z,1.8nm,0.7s,mb3.9						
OBN	**Obninsk**	**39.50**	**300**	P	**P**	**00 32 57.0**	**-1.1**
KAF	**Kangasniemi**	**40.39**	**314**	*e*P	**P**	**00 33 03.6**	**-1.8**
KAF	**Kangasniemi**	**40.39**	**314**	*e*p	**P**	**00 33 03.6**	**-1.8**
FINES	**FINESS Array B**	**40.83**	**313**	P	**P**	**00 33 08.1**	**-1.0**
	comp=Z,4.6nm,0.6s,mb4.3,baz=64,slow=9.2,SNR=20						
NB2	**NORSAR Subarra**	**46.86**	**319**	P	**P**	**00 33 56.9**	**-0.6**
	comp=Z,2.0nm,0.6s,mb4.2,baz=48,slow=7.4						
NOA	**NORSAR Array B**	**46.86**	**319**	P	**P**	**00 33 57.0**	**-0.5**
	comp=Z,1.4nm,0.5s,mb4.1,baz=50,slow=7.7,SNR=8.2						
RES	**Resolute Bay**	**48.42**	**9**	P	**P**	**00 34 08.3**	**-1.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=345,slow=12,SNR=5.0						
MALT	**Malatya**	**49.23**	**280**	P	**P**	**00 34 16.6**	**+0.5**
BUR08	**Bucovina Ar. S**	**49.70**	**298**	*e*P	**P**	**00 34 19.1**	**-0.4**
BRTR	**Keskin Array B**	**50.84**	**285**	P	**P**	**00 34 29.4**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=42,slow=6.0,SNR=2.9						
BRG	**Berggiesshubel**	**52.73**	**308**	*e*P	**P**	**00 34 42.5**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.3						
BRG	**Berggiesshubel**	**52.73**	**308**	*e*P	**P**	**00 34 42.5**	**+0.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CLL	**Collm**	**52.83**	**309**	*i* P	**P**	**00 34 42.8**	**-0.2**
KHC	**Kasperske Hory**	**54.15**	**306**	*e*P	**P**	**00 34 53.0**	**+0.3**
GERES	**GERESS Array B**	**54.30**	**306**	P	**P**	**00 34 54.2**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=7.6,SNR=12						
SCHQ	**Schefferville**	**69.35**	**358**	P	**P**	**00 36 34.2**	**-0.8**
	comp=Z,2.1nm,0.5s,mb4.3,baz=359,slow=5.5,SNR=6.4						
SCHQ	**Schefferville**	**69.35**	**358**	P	**P**	**00 36 34.2**	**-0.8**
WRA	**Warramunga Arr**	**78.60**	**156**	P	**P**	**00 37 31.3**	**+1.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=347,slow=5.6,SNR=3.5						
ASAR	**Alice Springs**	**82.11**	**158**	P	**P**	**00 37 49.8**	**+1.6**
	comp=Z,0.5nm,0.5s,mb3.7,baz=355,slow=5.2,SNR=8.6						
TORD	**Torodi Ar. Bea**	**88.92**	**292**	P	**P**	**00 38 22.5**	**-0.1**
	comp=Z,0.4nm,1.0s,mb3.7,baz=35,slow=5.2,SNR=3.9						
QSPA	**South Pole Qui**	**145.91**	**180**	PKPbc	PKPbc	00 45 06.1	+0.5
	comp=Z,0.3nm,0.5s,baz=311,slow=2.9,SNR=3.3						

*ISK **06** 00:47:39.1, 39°.95N×41°.02E, h5km, MD3.2*
*ISCJB **06** 00:47:40.6±0.6, 39°.91N±0°.03×41°.03E±0°.03, h3km±5km, Error ellipse: s-maj=5.5km s-min=4.0km az=154.1*
*CSEM **06** 00:47:41.1±0.2, 39°.92N×41°.02E, h8km, MD3.2, Error ellipse: s-maj=5.2km s-min=3.9km az=159.0*
*DDA **06** 00:47:41.3, 39°.94N×41°.12E, h7km±3km, Md3.4, Ml3.5*

ISC 06 00:47:41.3±0.6, 39°.91N±0°.03×41°.05E±0°.03, h6km±4km, n42, σ0°93/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.24**	**92**	PG	**Pg**	**00 47 45.6**	**-0.5**
ERZM	**Erzurum**	**0.25**	**91**	*i* P	**Pg**	**00 47 45.6**	**-0.5**
ERZM	**Erzurum**	**0.25**	**91**	*i* P	**Pg**	**00 47 45.6**	**-0.5**
KOPT	**Kop Dagi**	**0.43**	**284**	*i* P	**Pg**	**00 47 50.2**	**+0.5**
KOPT				*i* S	**Sg**	**00 47 58.3**	**+2.9**
KOPT	**Kop Dagi**	**0.43**	**284**	*i* P	**Pg**	**00 47 50.2**	**+0.5**
KOPT				*i* S	**Sg**	**00 47 58.3**	**+2.9**
HOMI	**Horasan**	**0.67**	**78**	*i* P	**Pg**	**00 47 53.2**	**-1.0**
HOMI				*i* S	**Sg**	**00 48 03.9**	**+0.9**
DDEM	**Demirkent**	**1.12**	**29**	*i* P	**Pg**	**00 48 02.3**	**-0.4**
DDEM				*i* S	**Sg**	**00 48 18.6**	**+1.4**
DDEM	**Demirkent**	**1.12**	**29**	*i* P	**Pg**	**00 48 02.3**	**-0.4**
DDEM				*i* S	**Sg**	**00 48 18.6**	**+1.4**
BINT	**Bingol**	**1.12**	**203**	*e*PN	**Pg**	**00 48 02.2**	**-0.6**
BINT	**Bingol**	**1.12**	**203**	*e*Pn	**Pg**	**00 48 02.2**	**-0.6**
DBAD	**Bademkaya**	**1.21**	**24**	*i* P	**Pg**	**00 48 03.7**	**-0.8**
DBAD	**Bademkaya**	**1.21**	**24**	*i* P	**Pg**	**00 48 03.7**	**-0.8**
PZAR	**Pazar-Rize**	**1.27**	**355**	*e*PN	**Pn**	**00 48 03.9**	**-1.6**
PZAR				*e*SN	**Sn**	**00 48 22.0**	**-0.8**
PZAR	**Pazar-Rize**	**1.27**	**355**	*e*Pn	**Pn**	**00 48 03.9**	**-1.6**
PZAR				*e*Sn	**Sn**	**00 48 22.0**	**-0.8**
EZC	**Erzincan**	**1.31**	**264**	*e*PN	**Pn**	**00 48 05.1**	**-1.0**
GUMT	**Gumushane**	**1.32**	**295**	*e*PN	**Pn**	**00 48 04.9**	**-1.3**
GUMT				*e*SN	**Sn**	**00 48 23.8**	**-0.2**
GUMT	**Gumushane**	**1.32**	**295**	*e*Pn	**Pn**	**00 48 04.9**	**-1.3**
GUMT				*e*Sn	**Sn**	**00 48 23.8**	**-0.2**
DAGI	**Agillar**	**1.34**	**29**	*i* P	**Pn**	**00 48 06.2**	**-0.3**
DAGI				*i* S	**Sb**	**00 48 23.2**	**-0.9**
MACK	**Trabzon**	**1.42**	**317**	*i* P	**Pn**	**00 48 08.5**	**+0.9**
MACK				*i* S	**Sb**	**00 48 28.8**	**+2.4**
MACK	**Trabzon**	**1.42**	**317**	*i* P	**Pn**	**00 48 08.5**	**+1.0**
MACK				*i* S	**Sb**	**00 48 28.8**	**+2.4**
ARTV	**Artvin**	**1.44**	**28**	*i* P	**Pn**	**00 48 07.9**	**+0.1**
ARTV				*i* S	**Sb**	**00 48 27.1**	**+0.1**
ARTV	**Artvin**	**1.44**	**28**	*i* P	**Pn**	**00 48 07.9**	**+0.1**
ARTV				*i* S	**Sb**	**00 48 27.1**	**+0.1**
AGRB	**Hanur-Agry**	**1.54**	**102**	*e*PN	**Pn**	**00 48 09.3**	**+0.1**
AGRB				*e*SN	**Sn**	**00 48 31.1**	**+1.7**
AGRB	**Hanur-Agry**	**1.54**	**102**	*e*Pn	**Pn**	**00 48 09.3**	**+0.1**
AGRB				*e*Sn	**Sn**	**00 48 31.1**	**+1.7**
BCA	**Borcka**	**1.59**	**16**	*e*PN	**Pn**	**00 48 09.1**	**-0.8**
BCA				*e*SN	**Sn**	**00 48 31.2**	**+0.4**
BCA	**Borcka**	**1.59**	**16**	*e*Pn	**Pn**	**00 48 09.1**	**-0.8**
BCA				*e*Sn	**Sn**	**00 48 31.2**	**+0.4**
PTK	**Pertek**	**1.64**	**232**	*e*PN	**Pn**	**00 48 10.3**	**-0.2**
PTK	**Pertek**	**1.64**	**232**	*e*Pn	**Pn**	**00 48 10.3**	**-0.2**
KARS	**Kars**	**1.71**	**65**	*e*PN	**Pn**	**00 48 11.4**	**-0.2**

SLPE			*e*S		**Sg**	**01 33 06.6 +0.6**
SLB	**Belfond**	**0.46 211**	⇓*i*P		**Pg**	**01 33 01.0 +0.1**
SLB	**Belfond**	**0.46 211**	⇓*i*P		**Pg**	**01 33 01.0 +0.1**
SLDE	**Delcer**	**0.49 211**	*e*P		**Pg**	**01 33 01.6 +0.1**
SLDE			*e*S		**Sg**	**01 33 08.4 +0.4**
SLDE	**Delcer**	**0.49 211**	*e*P		**Pg**	**01 33 01.6 +0.1**
SLDE			*e*S		**Sg**	**01 33 08.4 +0.4**
FDF	**Fort de France**	**0.61 326**	*e*Pg		**Pg**	**01 33 02.8 -0.9**
FDF			*e*S		**Sg**	**01 33 11.2 -0.7**
FDF	**Fort de France**	**0.61 326**	*e*P		**Pg**	**01 33 02.8 -0.9**
FDF	**Fort de France**	**0.61 326**	⇑*e*P		**Pg**	**01 33 02.8 -0.9**
FDF			⇑*e*S		**Sg**	**01 33 11.0 -0.9**
FDF			*e*S		**Sg**	**01 33 11.2 -0.6**
SSV	**Crater Summit**	**0.97 203**	⇑*i*P		**Pb**	**01 33 09.9 -0.5**
SSV			*e*S		**Sb**	**01 33 23.9 +0.8**
SSV	**Crater Summit**	**0.97 203**	⇑*i*P		**Pb**	**01 33 09.9 -0.5**
SSV			*e*S		**Sb**	**01 33 23.9 +0.8**
BHS	**Barnard House**	**0.98 199**	⇑*i*P		**Pb**	**01 33 10.3 -0.2**
BHS			*e*S		**Sb**	**01 33 23.1 -0.3**
BHS	**Barnard House**	**0.98 199**	⇑*i*P		**Pb**	**01 33 10.3 -0.2**
BHS			*e*S		**Sb**	**01 33 23.1 -0.3**
SVV	**Soufriere Volc**	**0.99 204**	*e*P		**Pb**	**01 33 10.9 +0.2**
SVV			*e*S		**Sb**	**01 33 23.5 -0.2**
SVV	**Soufriere Volc**	**0.99 204**	*e*P		**Pb**	**01 33 10.9 +0.2**
SVV			*e*S		**Sb**	**01 33 23.5 -0.2**
DSTT	**Stowe**	**1.13 334**	⇑*e*P		**Pb**	**01 33 12.7 -0.5**
DSTT			*i* S		**Sb**	**01 33 27.9 +0.2**
DSTT	**Stowe**	**1.13 334**	⇑*e*P		**Pb**	**01 33 12.7 -0.5**
DSTT			*i* S		**Sb**	**01 33 27.9 +0.2**
DSHT	**Scott's Head**	**1.13 331**	*e*P		**Pb**	**01 33 13.5 +0.3**
DSHT			*e*S		**Sb**	**01 33 28.8 +1.1**
DSHT	**Scott's Head**	**1.13 331**	*e*P		**Pb**	**01 33 13.5 +0.3**
DSHT			*e*S		**Sb**	**01 33 28.8 +1.1**
DFBT	**Forest Bistro**	**1.14 332**	⇑*i*P		**Pb**	**01 33 12.8 -0.7**
DFBT			*e*S		**Sb**	**01 33 27.9 -0.3**
DFBT	**Forest Bistro**	**1.14 332**	⇑*i*P		**Pb**	**01 33 12.8 -0.7**
DFBT			*e*S		**Sb**	**01 33 27.9 -0.3**
FCV	**Fort Charlotte**	**1.15 202**	*e*P		**Pb**	**01 33 12.6 -0.9**
FCV			*e*S		**Sb**	**01 33 27.9 -0.3**
FCV	**Fort Charlotte**	**1.15 202**	*e*P		**Pb**	**01 33 12.6 -0.9**
FCV			*e*S		**Sb**	**01 33 27.9 -0.3**
DBCT	**Belle View Cho**	**1.17 333**	*e*S		**Sb**	**01 33 28.5 -0.3**
DPMT	**Pointe Michel**	**1.17 332**	*e*P		**Pn**	**01 33 13.8 0.0**
DPMT			*e*S		**Sb**	**01 33 28.9 0.0**
DPMT	**Pointe Michel**	**1.17 332**	*e*P		**Pn**	**01 33 13.8 0.0**
DPMT			*e*S		**Sb**	**01 33 28.9 0.0**
MDN	**Morne-Daniel**	**1.23 332**	⇑*i*P		**Pn**	**01 33 15.0 +0.3**
MDN			*e*S		**Sb**	**01 33 30.1 -0.5**
MDN	**Morne-Daniel**	**1.23 332**	⇑*i*P		**Pn**	**01 33 15.0 +0.3**
MDN			*e*S		**Sb**	**01 33 31.5 +0.8**
DWS	**Wesley**	**1.43 340**	⇑*i*P		**Pn**	**01 33 18.6 +1.2**
DWS			*e*S		**Sn**	**01 33 36.9 +0.9**
DWS	**Wesley**	**1.43 340**	⇑*i*P		**Pn**	**01 33 18.6 +1.2**
DWS			*e*S		**Sn**	**01 33 36.9 +0.9**
MGG	**Marie-Galante**	**1.76 344**	*e*P		**Pn**	**01 33 21.4 -0.5**
TBG	**Guadaloupe-3**	**1.81 333**	*e*P		**Pn**	**01 33 22.3 -0.4**
HMG	**Houelmont**	**1.95 334**	*e*P		**Pn**	**01 33 25.2 +0.6**
PHG	**Guadaloupe-2**	**1.96 336**	*e*P		**Pn**	**01 33 25.3 +0.6**
DOG	**Dongo Capester**	**1.96 336**	*e*P		**Pn**	**01 33 25.2 +0.5**
SCG	**Saint Claude**	**1.99 335**	*e*P		**Pn**	**01 33 25.3 +0.2**
BCG	**Bois Riant Cap**	**2.01 337**	*e*P		**Pn**	**01 33 25.5 +0.1**
DEG	**La Desirade**	**2.09 353**	*e*P		**Pn**	**01 33 25.2 -1.4**
LZG	**Guadaloupe-1**	**2.12 334**	*e*P		**Pn**	**01 33 27.6 +0.6**
GRHS	**Sauteurs**	**2.15 202**	*e*S		**Sn**	**01 33 52.7 -1.1**
GRGR	**Grenville**	**2.24 202**	*e*Pn		**Pn**	**01 33 28.7 +0.1**
GRGR			*e*Sg		**Sg**	**01 34 00.4 -3.5**

*NEIC **06** 01:37:50.2, 16°.64N×99°.24W, h16km, MD3.8(MEX), After MEX.*

MEX 06 01:37:50.2±0.7, 16°.64N×99°.24W, h16km±326km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.69**	**289**	*i* P	Pg	01 38 01.2	-2.5
ACX				*i* S	Sg	01 38 09.1	-3.6
ACX	**Acapulco**	**0.69**	**289**	*i* P	Pg	01 38 01.2	-2.5
ACX				*i* S	Sg	01 38 09.1	-3.6
CAIG	**El Cayaco**	**1.06**	**292**	*e*P	Pb	01 38 07.0	-3.2
CAIG				*i* S	Sb	01 38 20.0	-4.0
CAIG	**El Cayaco**	**1.06**	**292**	*e*P	Pb	01 38 07.0	-3.2
CAIG				*i* S	Sb	01 38 20.0	-4.0
PNIG	**Pinotepa**	**1.10**	**103**	*e*P	Pb	01 38 07.1	-3.7
PNIG				*i* S	Sb	01 38 20.6	-4.3
PNIG	**Pinotepa**	**1.10**	**103**	*e*P	Pb	01 38 07.1	-3.7
PNIG				*i* S	Sb	01 38 20.6	-4.3
PLIG	**Platanillo**	**1.76**	**352**	*i* P	Pn	01 38 17.7	-2.3
PLIG				*i* S	Sn	01 38 37.2	-4.8
PLIG	**Platanillo**	**1.76**	**352**	*i* P	Pn	01 38 17.7	-2.3
PLIG				*i* S	Sn	01 38 37.2	-4.8
UTMO	**Huajuapan**	**1.81**	**49**	*i* P	Pn	01 38 16.8	-4.0
UTMO				*i* S	Sn	01 38 38.0	-5.4
YAIG	**Yautepec**	**2.21**	**4**	*e*P	Pn	01 38 24.0	-2.2
YAIG				*i* S	Sn	01 38 49.6	-3.7
YAIG	**Yautepec**	**2.21**	**4**	*e*P	Pn	01 38 24.0	-2.2
YAIG				*i* S	Sn	01 38 49.6	-3.7
ZIIG	**Zihuatanejo**	**2.33**	**295**	*e*P	Pn	01 38 24.7	-3.2
ZIIG				*i* S	Sn	01 38 51.6	-4.7
ZIIG	**Zihuatanejo**	**2.33**	**295**	*e*P	Pn	01 38 24.7	-3.2
ZIIG				*i* S	Sn	01 38 51.6	-4.7
VHO	**Vista Hermosa**	**2.44**	**80**	*e*P	Pn	01 38 28.5	-0.8
VHO				*i* S	Sn	01 38 54.4	-4.4
VHO	**Vista Hermosa**	**2.44**	**80**	*e*P	Pn	01 38 28.5	-0.8
VHO				*i* S	Sn	01 38 54.4	-4.4
PPM	**Popocatepetl**	**2.48**	**14**	*e*P	Pn	01 38 27.9	-2.0
PPM				*i* S	Sn	01 38 55.6	-4.3
PPM	**Popocatepetl**	**2.48**	**14**	*e*P	Pn	01 38 27.9	-2.0
PPM				*i* S	Sn	01 38 55.3	-4.5
TPIG	**Tehuac#an**	**2.52**	**45**	*i* P	Pn	01 38 27.7	-2.7
TPIG				*i* S	Sn	01 38 56.4	-4.4
MZVM		**2.53**	**0**	*i* P	Pn	01 38 29.4	-1.2
MZVM				*i* S	Sn	01 38 56.7	-4.5
PTVM	**Pico Tres Padr**	**2.94**	**2**	*e*P	Pn	01 38 36.6	+0.4
PTVM				*i* S	Sn	01 39 12.7	+1.6
PTVM	**Pico Tres Padr**	**2.94**	**2**	*e*P	Pn	01 38 36.6	+0.4
IIO	**Organos**	**2.97**	**9**	*e*P	Pn	01 38 32.9	-3.8
IIO				*i* S	Sn	01 39 08.2	-3.8
IIO	**Organos**	**2.97**	**9**	*e*P	Pn	01 38 32.9	-3.8

*ISCJB **06** 01:45:33.6±0.2, 44°.43N±0°.01×7°.29E±0°.02, h23km±2km, Error ellipse: s-maj=3.1km s-min=2.1km az=157.5*
*CSEM **06** 01:45:33.6±0.1, 44°.43N×7°.30E, h15km, ML2.8/30, Error ellipse: s-maj=2.2km s-min=1.4km az=68.0*
*ROM **06** 01:45:33.3±0.2, 44°.43N×7°.27E, h18km±3km, Md2.7/10, Ml2.5/13, Error ellipse: s-maj=3.5km s-min=1.8km az=55.0*
*GEN **06** 01:45:33.9, 44°.42N×7°.26E, h16km, ML2.3*
*LDG **06** 01:45:34.4±0.1, 44°.40N×7°.30E, h3km, Ml2.7/23, Error ellipse: s-maj=1.8km s-min=1.0km az=71.0*
*NEIC **06** 01:45:35.2, 44°.37N×7°.26E, h5km, ML2.6(STR), ML2.7(LDG), After STR.*
*STR **06** 01:45:35.2±0.2, 44°.37N×7°.26E, h5km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 06 01:45:33.7±0.2, 44°.42N±0°.01×7°.29E±0°.02, h16km±1km, n115, σ0°83/218, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.09**	**340**	Pg	**Pg**	**01 45 37.4**	**+0.4**
DOI				Sg	**Sg**	**01 45 39.5**	**+0.3**
	6μm,0.2s						
DOI	**San Damiano**	**0.09**	**340**	Pg	**Pg**	**01 45 37.4**	**+0.4**
DOI				Sg	**Sg**	**01 45 39.5**	**+0.3**
	6μm,0.2s						
PZZ	**Stroppo**	**0.15**	**305**	Pg	**Pg**	**01 45 38.1**	**+0.4**
PZZ				Sg	**Sg**	**01 45 40.6**	**+0.2**
	2μm,0.2s						
PZZ	**Stroppo**	**0.15**	**305**	P	**Pg**	**01 45 38.1**	**+0.4**
PZZ				Sg	**Sg**	**01 45 40.6**	**+0.2**
	2μm,0.2s						
STV	**Sant Anna di V**	**0.18**	**171**	Pg	**Pg**	**01 45 38.4**	**+0.3**
STV				Sg	**Sg**	**01 45 41.1**	**+0.1**
	5μm,0.2s						
STV	**Sant Anna di V**	**0.18**	**171**	P	**Pg**	**01 45 38.4**	**+0.3**
STV				S	**Sg**	**01 45 41.1**	**+0.1**
ENR	**Entracque**	**0.22**	**154**	P	**Pg**	**01 45 38.9**	**+0.2**
ENR				S	**Sg**	**01 45 42.1**	**+0.1**
SURF	**Saint Ours**	**0.35**	**280**	Pg	**Pg**	**01 45 41.0**	**+0.1**
SURF				Sg	**Sg**	**01 45 46.5**	**+0.8**
SURF	**Saint Ours**	**0.35**	**280**	Pg	**Pg**	**01 45 41.0**	**+0.1**
SURF				Sg	**Sg**	**01 45 46.5**	**+0.8**
TOUF	**Mont Tournerai**	**0.41**	**184**	Pg	**Pg**	**01 45 42.1**	**+0.1**
TOUF				Sg	**Sg**	**01 45 47.0**	**-0.5**
TOUF	**Mont Tournerai**	**0.41**	**184**	Pg	**Pg**	**01 45 42.1**	**+0.1**
TOUF				Sg	**Sg**	**01 45 47.0**	**-0.5**
AUTN	**L'Aution**	**0.44**	**167**	Pg	**Pg**	**01 45 42.8**	**+0.3**
AUTN				Sg	**Sg**	**01 45 48.6**	**+0.2**
AUTN	**L'Aution**	**0.44**	**167**	Pg	**Pg**	**01 45 42.8**	**+0.3**
AUTN				Sg	**Sg**	**01 45 48.6**	**+0.2**
SAOF	**Saorge**	**0.47**	**156**	Pg	**Pg**	**01 45 43.3**	**+0.1**
SAOF				Sg	**Sg**	**01 45 49.3**	**-0.3**
SAOF	**Saorge**	**0.47**	**156**	Pg	**Pg**	**01 45 43.3**	**+0.1**
SAOF				Sg	**Sg**	**01 45 49.3**	**-0.3**
MBDF	**Montbardon**	**0.48**	**310**	*e*Pg	**Pg**	**01 45 43.3**	**0.0**
MBDF				*e*Sg	**Sg**	**01 45 50.1**	**+0.3**
	174nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**0.48**	**310**	*e*Pg	**Pg**	**01 45 43.3**	**0.0**
MBDF				*e*Sg	**Sg**	**01 45 50.1**	**+0.3**
	87nm,0.3s,SNR=1.0						
MONE	**Monesi**	**0.48**	**135**	P	**Pg**	**01 45 43.5**	**+0.2**
MONE				S	**Sg**	**01 45 49.8**	**+0.1**
LUCF	**Luceram**	**0.53**	**175**	Pg	**Pg**	**01 45 44.4**	**+0.2**
LUCF				Sg	**Sg**	**01 45 51.9**	**+0.6**
LUCF	**Luceram**	**0.53**	**175**	Pg	**Pg**	**01 45 44.4**	**+0.2**
LUCF				Sg	**Sg**	**01 45 51.9**	**+0.6**
MVIF	**Mont Vial**	**0.53**	**191**	Pg	**Pg**	**01 45 44.6**	**+0.3**
MVIF				Sg	**Sg**	**01 45 51.7**	**+0.3**
MVIF	**Mont Vial**	**0.53**	**191**	Pg	**Pg**	**01 45 44.6**	**+0.3**
MVIF				Sg	**Sg**	**01 45 51.7**	**+0.3**
SBF	**Sospel**	**0.57**	**169**	*e*P	**Pg**	**01 45 46.0**	**+1.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**01 45 52.4**	**-0.1**
	124nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.57**	**169**	*e*Pg	**Pg**	**01 45 44.8**	**-0.1**
SBF				*e*Sg	**Sg**	**01 45 52.4**	**-0.1**
SBF	**Sospel**	**0.57**	**169**	*e*Pg	**Pg**	**01 45 44.8**	**-0.1**
SBF	**Sospel**	**0.57**	**169**	*e*P	**Pg**	**01 45 46.0**	**+1.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**01 45 52.4**	**-0.1**
	62nm,0.2s,SNR=1.0						
RONM	**Roccetta Nervi**	**0.59**	**158**	P	**Pg**	**01 45 45.1**	**-0.2**
RONM				S	**Sg**	**01 45 52.7**	**-0.4**
RORO	**Rocca Rossa**	**0.64**	**119**	P	**Pg**	**01 45 46.1**	**-0.1**
RORO				S	**Sg**	**01 45 54.3**	**-0.4**
NEGI	**Seborga**	**0.65**	**152**	P	**Pg**	**01 45 46.3**	**-0.1**
NEGI				S	**Sg**	**01 45 54.6**	**-0.4**
IMI	**Imperia**	**0.67**	**139**	Pg	**Pg**	**01 45 46.7**	**-0.1**
IMI				Sg	**Sg**	**01 45 55.7**	**0.0**
	102nm,0.2s						
IMI	**Imperia**	**0.67**	**139**	P	**Pg**	**01 45 46.7**	**-0.1**
IMI				S	**Sg**	**01 45 55.4**	**-0.3**
IMI				Sg	**Sg**	**01 45 55.7**	**0.0**
	102nm,0.2s						
REVF	**Revere**	**0.68**	**175**	Pg	**Pg**	**01 45 47.3**	**+0.2**
REVF				Sg	**Sg**	**01 45 56.9**	**+0.8**
REVF	**Revere**	**0.68**	**175**	Pg	**Pg**	**01 45 47.3**	**+0.2**
REVF				Sg	**Sg**	**01 45 56.9**	**+0.8**
RSP	**Reno Superiore**	**0.73**	**359**	Pg	**Pg**	**01 45 46.6**	**-1.3**
RSP				Sg	**Sg**	**01 45 55.8**	**-1.8**
	65nm,0.2s						
RSP	**Reno Superiore**	**0.73**	**359**	P	**Pg**	**01 45 46.7**	**-1.2**
RSP				Sg	**Sg**	**01 45 55.8**	**-1.8**
	65nm,0.2s						
RSP				S	**Sg**	**01 45 56.2**	**-1.4**
CALN	**Calern**	**0.73**	**203**	Pg	**Pg**	**01 45 48.3**	**+0.4**
CALN				Sg	**Sg**	**01 45 57.7**	**+0.2**
CALN	**Calern**	**0.73**	**203**	Pg	**Pg**	**01 45 48.3**	**+0.4**
CALN				Sg	**Sg**	**01 45 57.7**	**+0.2**
QLNO	**Quiliano**	**0.77**	**97**	Pg	**Pg**	**01 45 48.6**	**0.0**
QLNO				Sg	**Sg**	**01 45 58.6**	**-0.1**
	70nm,0.4s						
QLNO	**Quiliano**	**0.77**	**97**	Pg	**Pg**	**01 45 48.6**	**0.0**
QLNO				Sg	**Sg**	**01 45 58.6**	**-0.1**
	70nm,0.4s						
BNI	**Bardonecchia**	**0.77**	**326**	*e*Pg	**Pg**	**01 45 48.2**	**-0.4**
BNI				*e*Sg	**Sg**	**01 45 58.2**	**-0.6**
BNI	**Bardonecchia**	**0.77**	**326**	Pg	**Pg**	**01 45 48.7**	**+0.1**
BNI				Sg	**Sg**	**01 45 58.4**	**-0.4**
	30nm,0.6s						
BNI	**Bardonecchia**	**0.77**	**326**	Pg	**Pg**	**01 45 48.7**	**+0.1**
BNI				Sg	**Sg**	**01 45 58.4**	**-0.4**
	30nm,0.6s						
MONC	**Moncucco Torin**	**0.80**	**35**	Pg	**Pg**	**01 45 49.3**	**+0.1**
	137nm,0.4s						
MONC	**Moncucco Torin**	**0.80**	**35**	Pg	**Pg**	**01 45 49.3**	**+0.1**
	137nm,0.4s						
ROTM	**Rocchetta Tana**	**0.87**	**60**	P	**Pb**	**01 45 51.5**	**+1.1**
PCP	**Piancastagn**	**0.91**	**82**	Pg	**Pg**	**01 45 51.3**	**0.0**
PCP				Sg	**Sg**	**01 46 03.3**	**+0.1**
	80nm,0.3s						
PCP	**Piancastagn**	**0.91**	**82**	P	**Pb**	**01 45 51.0**	**0.0**
PCP	**Piancastagn**	**0.91**	**82**	Pg	**Pg**	**01 45 51.3**	**0.0**
PCP				Sg	**Sg**	**01 46 03.3**	**+0.1**
	80nm,0.3s						
FRF	**La Foret Royal**	**0.98**	**209**	*e*Pg	**Pg**	**01 45 52.2**	**-0.4**
FRF				*e*Pn	**Pn**	**01 45 53.2**	**+0.5**
FRF				*e*Sg	**Sg**	**01 46 04.7**	**-0.7**
FRF	**La Foret Royal**	**0.98**	**209**	*e*Pg	**Pg**	**01 45 52.2**	**-0.4**
LSD	**Lago del Serru**	**1.04**	**354**	Pg	**Pg**	**01 45 52.1**	**-1.8**
	5μm,0.6s						
LSD	**Lago del Serru**	**1.04**	**354**	Pg	**Pg**	**01 45 52.1**	**-1.8**
	5μm,0.6s						
ORIF	**Oris-en-Rattie**	**1.12**	**297**	*e*Pn	**Pn**	**01 45 55.0**	**+0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**01 46 10.6**	**+0.6**
	32nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.12**	**297**	*e*Pn	**Pn**	**01 45 55.0**	**+0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**01 46 10.6**	**+0.6**
	16nm,0.2s						
TRAV	**Traversella**	**1.14**	**16**	Pg	**Pg**	**01 45 52.9**	**-2.8**
	19nm,0.3s						
TRAV	**Traversella**	**1.14**	**16**	P	**Pn**	**01 45 52.4**	**-2.6**
LPG	**La Plagne**	**1.14**	**341**	*e*Pn	**Pn**	**01 45 54.8**	**-0.2**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**01 46 11.6**	**+0.9**
	28nm,0.2s						
LPG	**La Plagne**	**1.14**	**341**	*e*Pn	**Pn**	**01 45 54.8**	**-0.2**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**01 46 11.6**	**+0.9**
	14nm,0.2s						
LPL	**La Plagne**	**1.16**	**340**	*e*Pn	**Pn**	**01 45 55.3**	**0.0**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**01 46 12.2**	**+0.8**
	28nm,0.3s						
LPL	**La Plagne**	**1.16**	**340**	*e*Pn	**Pn**	**01 45 55.3**	**0.0**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**01 46 12.2**	**+0.8**
	14nm,0.3s						
LMR	**La Mourre**	**1.22**	**208**	*e*Pg	**Pg**	**01 45 56.9**	**-0.4**
LMR				*e*Sg	**Sg**	**01 46 11.8**	**-1.5**
	291nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**1.22**	**208**	*e*Pn	**Pn**	**01 45 56.3**	**+0.2**
LMR				*e*Pg	**Pg**	**01 45 56.9**	**-0.4**
LMR				*e*Sg	**Sg**	**01 46 11.8**	**-1.5**
LMR	**La Mourre**	**1.22**	**208**	*e*Pn	**Pn**	**01 45 56.3**	**+0.2**
	SNR=1.0						
LMR	**La Mourre**	**1.22**	**208**	*e*Pg	**Pg**	**01 45 56.9**	**-0.4**
LMR				*e*Sg	**Sg**	**01 46 11.8**	**-1.5**
	146nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.31**	**251**	*e*Pg	**Pg**	**01 45 58.9**	**0.0**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**01 46 15.8**	**-0.2**
	124nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.31**	**251**	*e*Pg	**Pg**	**01 45 58.9**	**0.0**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**01 46 15.8**	**-0.2**
	62nm,0.3s,SNR=1.0						
RSL	**Roselend**	**1.35**	**340**	Pn	**Pn**	**01 46 00.6**	**+2.7**
RSL				Pg	**Pg**	**01 46 02.0**	**+2.3**
RSL	**Roselend**	**1.35**	**340**	Pn	**Pn**	**01 46 00.6**	**+2.7**
MRGE	**Morge**	**1.36**	**353**	Pg	**Pg**	**01 45 58.1**	**-1.8**
	26nm,0.6s						
MRGE	**Morge**	**1.36**	**353**	Pg	**Pg**	**01 45 58.1**	**-1.8**
	26nm,0.6s						
DIX	**Grande Dixence**	**1.66**	**3**	Pg	**Pg**	**01 46 01.9**	**-3.7**
VIVF	**Saint-Julien-I**	**1.92**	**284**	*e*Pg	**Pg**	**01 46 10.4**	**-0.1**
VIVF				*e*Sn	**Sn**	**01 46 29.8**	**+0.4**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**01 46 35.3**	**-0.1**
	10nm,0.3s						
VIVF	**Saint-Julien-I**	**1.92**	**284**	*e*Pn	**Pn**	**01 46 06.7**	**+1.1**
VIVF				*e*Pg	**Pg**	**01 46 10.4**	**-0.1**
VIVF				*e*Sn	**Sn**	**01 46 29.8**	**+0.4**
VIVF				*e*Sg	**Sg**	**01 46 35.3**	**-0.1**
VIVF	**Saint-Julien-I**	**1.92**	**284**	*e*Pn	**Pn**	**01 46 06.7**	**+1.1**
	SNR=1.0						
VIVF	**Saint-Julien-I**	**1.92**	**284**	*e*Pg	**Pg**	**01 46 10.4**	**-0.1**
VIVF				*e*Sn	**Sn**	**01 46 29.8**	**+0.4**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**01 46 35.3**	**-0.1**
	5.1nm,0.3s						
PGF	**Pioggiola**	**2.25**	**146**	*e*Pn	**Pn**	**01 46 10.4**	**+0.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**01 46 35.7**	**-1.9**
	6.3nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**2.25**	**146**	*e*Pn	**Pn**	**01 46 10.4**	**+0.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**01 46 35.7**	**-1.9**
	3.2nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**2.35**	**339**	*e*Pg	**Pg**	**01 46 18.1**	**-0.6**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**01 46 42.6**	**+2.6**
	10nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**2.35**	**339**	*e*Pn	**Pn**	**01 46 12.1**	**+0.5**
CABF				*e*Pg	**Pg**	**01 46 18.1**	**-0.6**
CABF				*e*Sn	**Sn**	**01 46 42.6**	**+2.6**
CABF	**La Chapelle**	**2.35**	**339**	*e*Pn	**Pn**	**01 46 12.1**	**+0.5**
CABF	**La Chapelle**	**2.35**	**339**	*e*Pg	**Pg**	**01 46 18.1**	**-0.6**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**01 46 42.6**	**+2.6**
	5.2nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**2.49**	**263**	*e*Pg	**Pg**	**01 46 20.5**	**-0.9**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**01 46 43.4**	**-0.1**
	5.7nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**2.49**	**263**	*e*Pn	**Pn**	**01 46 13.9**	**+0.4**
LASF				*e*Pg	**Pg**	**01 46 20.5**	**-0.9**
LASF				*e*Sn	**Sn**	**01 46 43.4**	**-0.1**
LASF	**Ste Croix**	**2.49**	**263**	*e*Pn	**Pn**	**01 46 13.9**	**+0.4**
	SNR=1.0						
LASF	**Ste Croix**	**2.49**	**263**	*e*Pg	**Pg**	**01 46 20.5**	**-0.9**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**01 46 43.4**	**-0.1**
	2.8nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**3.29**	**314**	*e*Pn	**Pn**	**01 46 25.0**	**+0.5**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**01 47 03.3**	**+0.1**
	4.1nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**3.29**	**314**	*e*Pn	**Pn**	**01 46 25.0**	**+0.5**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**01 47 03.3**	**+0.1**
	2.0nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.41**	**355**	*e*Pn	**Pn**	**01 46 26.5**	**+0.3**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**01 47 06.1**	**-0.1**
	2.3nm,0.4s,SNR=1.0						
HINF	**Hinteralfeld**	**3.41**	**355**	*e*Pn	**Pn**	**01 46 26.5**	**+0.3**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**01 47 06.1**	**-0.1**
	1.1nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**3.64**	**312**	*e*Pn	**Pn**	**01 46 30.9**	**+1.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**01 47 10.7**	**-1.2**
	2.8nm,0.5s,SNR=1.0						
AVF	**Avril sur Loir**	**3.64**	**312**	*e*Pn	**Pn**	**01 46 30.9**	**+1.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**01 47 10.7**	**-1.2**
	1.4nm,0.5s,SNR=1.0						
HAU	**Haudompre**	**3.64**	**350**	*e*Pn	**Pn**	**01 46 30.1**	**+0.7**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**01 47 11.8**	**-0.2**
	3.2nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**3.64**	**350**	*e*Pn	**Pn**	**01 46 30.1**	**+0.7**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**01 47 11.8**	**-0.2**
	1.6nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.72**	**321**	*e*Pn	**Pn**	**01 46 32.1**

NOUC	Port Laguerre	3.06	237	*e*P	Pn	01 59 57.6	+0.1
NOUC				*e*S	Sn	02 00 33.3	-0.5
NOUC				AMP		02 00 45.9	
	comp=Z,83nm,4.4s						
AFI	Afiamalu	19.41	73	LR	LR	02 10 04.2	
	comp=Z,124nm,19.1s,baz=59,slow=33						
CTA	Charters Tower	21.41	267	P	P	02 03 58.6	+1.5
	comp=Z,5.7nm,0.9s,mb3.9,baz=110,slow=12,SNR=3.9						
CTA				LR	LR	02 10 57.5	
	comp=Z,40nm,19.7s,baz=234,slow=34						
STKA	Stephens Creek	27.08	240	P	P	02 04 53.6	+1.8
	comp=Z,2.5nm,0.8s,mb3.8,baz=100,slow=8.0,SNR=3.2						
WRA	Warramunga Arr	32.57	265	P	P	02 05 36.2	-4.3
	comp=Z,1.3nm,0.9s,mb3.9,baz=91,slow=9.3,SNR=2.9						
ASAR	Alice Springs	32.70	258	P	P	02 05 40.1	-1.6
	comp=Z,2.1nm,0.6s,mb4.2,baz=85,slow=8.4,SNR=24						
SONM	Songino Array	88.10	323	P	P	02 11 58.9	-0.5
	comp=Z,0.8nm,0.8s,mb4.0,baz=143,slow=5.8,SNR=4.7						
GERES	GERESS Array B	145.48	331	PKPbc	PKPbc	02 18 48.0	+1.0
	comp=Z,0.2nm,0.5s,baz=27,slow=3.3,SNR=3.2						

IDC 06 02:05:42.0±2.1, 26°.73N×94°.35W, h0km, mb3.0/4, mb1 3.6/6, mb1mx3.4/26, mbtmp3.3/6, ML3.7/2, Error ellipse: s-maj=35.9km s-min=29.1km az=30.0, Gulf of Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	8.63	290	Pn	Pn	02 07 51.1	+3.0
	0.4nm,0.3s,baz=119,slow=14,SNR=28						
TXAR				Sn	Sn	02 09 29.4	+3.2
	0.4nm,0.3s,baz=116,slow=26,SNR=6.5						
APG	El Apazote	12.22	162	Pn	Pn	02 08 39.2	+1.8
	0.2nm,0.3s,baz=298,slow=15,SNR=4.6						
PDAR	Pinedale Array	20.25	326	P	P	02 10 20.3	+1.5
	0.4nm,0.7s,baz=135,slow=12,SNR=4.7						
NVAR	Mina Array Bea	23.24	306	P	P	02 10 51.1	+0.1
	0.1nm,0.3s,baz=111,slow=10,SNR=2.3						
ULM	Lac du Bonnet	23.51	358	P	P	02 10 55.1	+1.4
	1.4nm,0.8s,baz=179,slow=11,SNR=3.1						
YKA	Yellowknife Ar	38.20	345	P	P	02 13 01.3	-1.9
	0.1nm,0.6s,baz=147,slow=8.5,SNR=3.1						

SZGRF ***06*** *02:07:19.2, 24°.36S×179°.63E, h33km, South of Fiji Islands*
ISCJB ***06*** *02:08:25.5±2.0, 22°.0S±0°.1×179°.64W±0°.07, h591km±27km, mb4.4/36, Error ellipse: s-maj=18.2km s-min=9.6km az=167.9*
NEIC ***06*** *02:08:27.0±1.3, 22°.00S×179°.61W, h598km±15km, mb4.6/22, Error ellipse: s-maj=12.2km s-min=6.8km az=169.0*
IDC ***06*** *02:08:30.6±2.2, 22°.15S×179°.72W, h644km±26km, mb3.7/16, mb1 3.9/16, mb1mx3.8/19, mbtmp3.7/16, Error ellipse: s-maj=21.7km s-min=10.9km az=159.0*
DJA ***06*** *02:08:32, 22°.115S×179°.92W, h640km, mb4.9/6*
ISC 06 02:08:27.1±2.0, 22°.0S±0°.1×179°.63W±0°.07, h595km±25km, n121, σ0°79/54, mb4.4/36, 14C-6D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	16.43	189	S	S	02 14 23.9	-8.4
	1.0nm,0.3s,baz=347,slow=19,SNR=8.5						
EIDS	Eidsvold	27.00	257	*e*P	P	02 13 23.8	+0.6
	12nm,0.5s,mb4.8						
ARMA	Armidale	27.05	246	⇓*i*P	P	02 13 24.9	+1.4
ARMA	Armidale	27.05	246	*e*P	P	02 13 25.1	+1.6
	21nm,0.8s,mb4.8						
PAE	Paea	28.57	87	*e*P	P	02 13 36.9	0.0
	2.9nm,0.9s,mb3.9						
CNB	Canberra Magne	30.12	237	*e*P	P	02 13 50.7	+0.6
PMOR	Pomariorio Ree	30.85	82	*e*P	P	02 13 54.3	-2.2
	162nm,1.4s,mb5.5						
CTA	Charters Tower	31.86	267	⇓*i*P	P	02 14 05.5	+0.4
	26nm,0.4s,mb5.2						
CTA	Charters Tower	31.86	267	P	P	02 14 05.7	+0.6
	28nm,0.4s,mb5.2,baz=92,slow=11,SNR=50						
CTAO	Charters Tower	31.86	267	*e*P	P	02 14 05.6	+0.5
	34nm,0.5s,mb5.2						
TOO	Toolangi	33.78	235	*e*P	P	02 14 21.3	+0.3
STKA	Stephens Creek	35.77	246	⇓*i*P	P	02 14 38.1	+0.5
	13nm,0.6s,mb4.6						
STKA	Stephens Creek	35.77	246	P	P	02 14 38.1	+0.5
	15nm,0.5s,mb4.8,baz=89,slow=10.0,SNR=50						
STKA	Stephens Creek	35.77	246	*e*P	P	02 14 38.2	+0.6
	3.3nm,0.6s,mb4.0						
ASAR	Alice Springs	42.71	259	P	P	02 15 33.3	0.0
	40nm,0.8s,mb5.0,baz=99,slow=8.1,SNR=303						
ASAR				PcP	PcP	02 17 11.2	+0.1
	1.7nm,0.5s,baz=119,slow=4.0,SNR=4.4						
ASAR				S	S	02 21 12.9	-2.1
	2.4nm,0.9s,baz=96,slow=16,SNR=12						
WB2	Warramunga Arr	42.90	264	*e*P	P	02 15 34.3	-0.5
WRAB	Tennant Creek	42.90	264	*e*P	P	02 15 34.2	-0.6
	35nm,0.9s,mb4.9						
WRA	Warramunga Arr	42.91	264	P	P	02 15 33.4	-1.5
	15nm,0.4s,mb4.9,baz=98,slow=7.8,SNR=100						
WRA				S	S	02 21 12.2	-5.7
	0.4nm,0.3s,baz=100,slow=15,SNR=4.2						
KAKA	Kakadu	46.52	273	⇓*i*P	P	02 16 00.8	-1.7
	18nm,0.3s,mb5.1						
KAKA	Kakadu	46.52	273	*e*P	P	02 16 01.0	-1.5
	66nm,0.6s,mb5.3						
FORT	Forrest	47.31	248	⇑*i*P	P	02 16 07.9	-0.4
	38nm,0.6s,mb5.1						
FORT	Forrest	47.31	248	*e*P	P	02 16 07.9	-0.4
	53nm,0.7s,mb5.2						
FITZ	Fitzroy Crossi	51.34	264	*e*P	P	02 16 37.8	-0.2
	15nm,0.3s,mb4.9						
FITZ	Fitzroy Crossi	51.34	264	*e*P	P	02 16 38.4	+0.3
	9.1nm,0.5s,mb4.5						
MBWA	Marble Bar	56.05	259	*e*P	P	02 17 10.4	-0.7
	31nm,0.6s,mb4.7						
SBA	Scott Base	56.27	183	P	P	02 17 12.0	+0.3
NWAO	Narrogin (SRO)	56.34	244	*e*P	P	02 17 12.4	-0.5
	4.7nm,0.6s,mb3.9						
QSPA	South Pole Qui	68.05	180	*e*P	P	02 18 27.8	+0.1
	12nm,1.0s,mb4.3						
KKM	Kota Kinabalu	68.70	286	*e*P	P	02 18 33.0	+0.3
	14nm,0.6s,mb4.6						
MJAR	Matsushiro Arr	70.55	325	P	P	02 18 42.8	-0.5
	3.8nm,0.6s,mb4.1,baz=162,slow=5.9,SNR=10						
MAJO	Matsushiro	70.56	325	*e*P	P	02 18 43.2	0.0
	4.4nm,0.5s,mb4.2						
KSM	Kuching	72.14	279	*e*P	P	02 18 53.4	+0.4
	12nm,0.8s,mb4.5						
TPUB	Ta-pu	73.55	304	*e*P	P	02 19 00.1	-0.7
	92nm,1.3s,mb5.2						
KSRS	Korea Array	77.04	320	P	P	02 19 20.7	+0.8
	1.2nm,0.4s,mb3.6,baz=122,slow=5.6,SNR=5.6						
PETK	Petropavlovsk-	77.36	346	P	P	02 19 21.2	0.0
	9.6nm,0.7s,mb4.3,baz=122,slow=4.8,SNR=15						
CMB	Columbia Colle	81.60	43	*e*P	P	02 19 44.0	+0.2
	3.5nm,0.9s,mb3.9						
YBH	Yreka Blue Hor	82.42	39	P	P	02 19 48.5	+0.6
	2.3nm,0.8s,mb3.8,baz=90,slow=7.1,SNR=3.3						
NVAR	Mina Array Bea	83.17	44	P	P	02 19 52.0	+0.3
	2.1nm,0.9s,mb3.7,baz=224,slow=8.9,SNR=13						
LDFC	Landfair	83.44	48	*e*P	P	02 19 54.0	+0.8
ELK	Elko	86.42	43	P	P	02 20 06.5	-0.9
	1.0nm,0.7s,mb3.5,baz=247,slow=5.8,SNR=4.9						
XAN	Xi'an	87.86	308	P	P	02 20 15.0	+0.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
XAN				pmax	pmax		
	comp=Z,15nm,6.0s						
HLID	Hailey	88.46	41	*e*P	P	02 20 17.7	+0.8
TXAR	Lajitas Array	89.15	58	P	P	02 20 21.0	+0.5
	comp=Z,2.4nm,0.9s,mb4.0,baz=215,slow=5.6,SNR=23						
CMAR	Chiang Mai Arr	89.20	290	P	P	02 20 21.4	+0.6
	comp=Z,5.8nm,0.6s,mb4.6,baz=114,slow=2.2,SNR=29						
PLCA	Paso Flores	89.32	134	P	P	02 20 20.4	-0.8
	comp=Z,1.4nm,1.0s,mb3.8,baz=242,slow=10,SNR=4.3						
PLCA	Paso Flores	89.32	134	*e*P	P	02 20 21.1	-0.1
	comp=Z,2.5nm,0.8s,mb4.1						
CHTO	Chiang Mai	89.34	290	*e*P	P	02 20 23.2	+1.7
	comp=Z,7.5nm,0.6s,mb4.7						
ANMO	Albuquerque	89.53	52	P	P	02 20 21.9	-0.2
	comp=Z,1.4nm,0.8s,mb3.8,baz=197,slow=9.4,SNR=4.5						
RRI2	Red Ridge	90.27	43	*e*P	P	02 20 25.9	+0.6
	comp=Z,2.4nm,0.8s,mb4.1						
BILL	Bilibino	90.39	355	*e*P	P	02 20 24.8	-0.5
	comp=Z,2.0nm,0.8s,mb4.0						
PDAR	Pinedale Array	91.10	44	P	P	02 20 27.9	-1.3
	comp=Z,0.7nm,0.8s,mb3.6,baz=255,slow=4.5,SNR=6.2						
SONM	Songino Array	95.91	319	P	P	02 20 50.8	0.0
	comp=Z,0.2nm,0.4s,mb3.7,baz=126,slow=2.5,SNR=2.5						
AAK	Ala-Archa	116.03	308	PKPdf	PKPdf	02 26 02.7	-0.6
BVAR	Borovoye Array	119.25	319	PKP	PKPdf	02 26 07.9	-1.3
	comp=Z,1.6nm,0.3s,baz=112,slow=2.3,SNR=7.3						
ARCES	ARCESS Array B	130.12	349	PKP	PKPdf	02 26 28.6	-0.9
	comp=Z,0.7nm,0.4s,baz=112,slow=3.7,SNR=10						
FINES	FINESS Array B	136.78	342	PKP	PKPdf	02 26 40.1	-2.0
	comp=Z,0.8nm,0.3s,baz=5,2,slow=2.1,SNR=5.3						
AKASG	Malin Array Be	143.56	329	PKP	PKPdf	02 26 52.5	-2.2
	comp=Z,5.8nm,0.4s,baz=42,slow=4.0,SNR=32						
AKASG	Malin Array Be	143.56	329	PKP	PKPdf	02 26 52.5	-2.2
MALT	Malatya	143.60	305	*e*PKP	PKPdf	02 26 54.6	-0.6
MALT	Malatya	143.60	305	⇓*i*P	PKPdf	02 26 54.5	-0.7
SUW	Suwalki	143.68	337	*e*PKP	PKPdf	02 26 53.1	-1.7
MUD	Monsted U'grnd	145.00	351	*i* P	PKPdf	02 26 56.2	-0.8
	comp=Z,5.1nm,1.0s						
BSD	Bornholm Skovb	145.20	345	⇓*i*P	PKPdf	02 26 57.0	-0.4
	comp=Z,11nm,0.9s						
BR131	Keskin Array S	146.68	310	*e*PKP	PKPdf	02 27 01.6	+1.2
BRTR	Keskin Array B	146.69	310	PKPbc	PKPbc	02 27 02.7	-0.5
	comp=Z,2.6nm,0.6s,baz=132,slow=4.7,SNR=18						
TLCR		147.20	322	⇑*i*P	PKPbc	02 27 04.1	-0.2
BSEG	Bad Segeberg	147.25	349	*e*PKPbc	PKPbc	02 27 04.0	-0.2
BSEG	Bad Segeberg	147.25	349	*e*PKPbc	PKPbc	02 27 04.0	-0.2
KWP	Kalwaria Pacla	147.28	333	*e*PKPbc	PKPbc	02 27 04.2	-0.2
BUR08	Bucovina Ar. S	147.58	328	*e*PKPdf	PKPdf	02 27 01.6	+0.1
BUR08				*e*PKPbc	PKPbc	02 27 05.3	+0.1
BURAR	Bucovina Array	147.59	328	⇑*i*P	PKPdf	02 27 01.9	+0.3
VRI	Vrincioaia	147.96	324	⇑*i*P	PKPbc	02 27 05.7	-0.6
OJC	Ojcow	147.98	336	*e*PX	PKPbc	02 27 05.8	-0.4
KOLS	Kolonicke sedl	147.99	332	*e*PKP	PKPbc	02 27 06.4	+0.2
KOLS	Kolonicke sedl	147.99	332	*e*PKP	PKPbc	02 27 06.4	+0.2
STHS	Stebnicka Huta	148.05	334	*e*PKP	PKPbc	02 27 06.1	-0.3
STHS	Stebnicka Huta	148.05	334	*e*PKP	PKPbc	02 27 06.1	-0.3
TRPA	Tarpa	148.48	331	⇑*i*P	PKPbc	02 27 07.0	-0.5
MLR	Muntele Rosu	148.62	324	⇑*i*P	PKPbc	02 27 07.3	-0.6
UPC	Upice	149.03	340	*e*PKPbc	PKPbc	02 27 09.0	+0.3
DPC	Dobruska-Polom	149.07	340	*e*PKPbc	PKPbc	02 27 09.2	+0.4
DPC				*e*PKPab	PKPab	02 27 16.4	+0.8
KECS	Kecovo	149.09	334	*e*PKP	PKPbc	02 27 09.1	+0.1
KECS				*e*	PKPab	02 27 15.4	-0.4
KECS	Kecovo	149.09	334	*e*PKP	PKPbc	02 27 09.1	+0.1
KECS				*e*	PKPab	02 27 15.4	-0.4
VOIR		149.14	325	⇑*i*P	PKPab	02 27 16.9	+0.8
CLL	Collm	149.15	344	*e*PKPbc	PKPbc	02 27 08.8	-0.2
CLL	Collm	149.15	344	⇑*i*PKP	PKPbc	02 27 08.9	-0.1
CLL				⇑*i*PKP	PKPab	02 27 15.6	-0.3
CLL	Collm	149.15	344	⇑*i*PKPbc	PKPbc	02 27 08.9	-0.1
	comp=Z,10.0nm,0.8s						
CLL				⇑*i*PKPab	PKPab	02 27 15.6	-0.3
	comp=Z,6.0nm,0.8s						
MORC	Moravsky Berou	149.16	338	⇑*i*P	PKPbc	02 27 08.6	-0.5
CLZ	Clausthal	149.24	348	*e*PKPbc	PKPbc	02 27 08.7	-0.5
CLZ	Clausthal	149.24	348	*e*PKPbc	PKPbc	02 27 08.7	-0.5
BRG	Berggiesshubel	149.31	343	*e*PKPbc	PKPbc	02 27 09.4	0.0
BRG	Berggiesshubel	149.31	343	*i* PKP	PKPbc	02 27 09.3	-0.1
	comp=Z,7.5nm,0.7s						
BRG				*e*		02 27 16.5	
	comp=Z,5.0nm,0.8s						
DRGR		149.38	329	⇑*i*P	PKPbc	02 27 09.3	-0.4
PVCC	Panska Ves	149.44	342	*e*PKPbc	PKPbc	02 27 10.0	+0.3
PVCC				*e*PKPab	PKPab	02 27 17.6	+0.5
VYHS	Vyhne	149.75	335	*e*PKP	PKPbc	02 27 09.7	-0.8
VYHS				*e*	PKPab	02 27 17.4	-1.1
VYHS	Vyhne	149.75	335	*e*PKP	PKPbc	02 27 09.7	-0.8
VYHS				*e*	PKPab	02 27 17.4	-1.1
KOLL	Kolacno	149.84	336	*e*PKP	PKPbc	02 27 10.2	-0.5
KOLL	Kolacno	149.84	336	*e*PKP	PKPbc	02 27 10.2	-0.5
PRU	Pruhonice	149.93	342	*e*PKPbc	PKPbc	02 27 11.1	+0.2
PRU				*e*PKPab	PKPab	02 27 19.8	+0.6
MOX	Moxa	150.10	346	*e*PKPbc	PKPbc	02 27 11.1	-0.2
MOX	Moxa	150.10	346	*e*PKP	PKPbc	02 27 11.0	-0.3
TANN	Tannenbergstha	150.11	344	*e*PKPbc	PKPbc	02 27 11.3	0.0
WERD	Werda	150.12	345	*e*PKPbc	PKPbc	02 27 11.0	-0.3
GUNZ	Gunzen	150.19	345	*e*PKPbc	PKPbc	02 27 11.5	0.0
WERN	Wernitzgruen	150.25	344	*e*PKPbc	PKPbc	02 27 11.4	-0.2
UBBA	Unterbreizbach	150.28	348	*e*PKPbc	PKPbc	02 27 12.5	+0.8
BZS	Buzias	150.76	329	⇑*i*P	PKPdf	02 27 00.6	-6.1
KHC	Kasperske Hory	150.98	342	*e*PKPdf	PKPdf	02 27 06.7	-0.2
KHC				*e*PKPbc	PKPbc	02 27 13.1	-0.2
KHC				*e*PKPab	PKPab	02 27 23.9	+0.3
GEC2	GERESS Array S	151.20	342	*e*PKPbc	PKPbc	02 27 13.6	-0.2
GEC2	GERESS Array S	151.20	342	*e*PKPbc	PKPbc	02 27 13.6	-0.2
GERES	GERESS Array B	151.20	342	PKPbc	PKPbc	02 27 13.3	-0.5
	comp=Z,0.9nm,0.4s,baz=15,slow=1.3,SNR=13						
GERES				PKPab	PKPab	02 27 24.6	0.0
	comp=Z,0.7nm,0.4s,baz=23,slow=4.9,SNR=6.8						
RJOB	Jochberg	152.47	342	*e*PKPbc	PKPbc	02 27 15.7	-1.0
LOR	Lormes	154.65	354	*e*PKP2	PKPab	02 27 38.5	-0.8
SSF	Saint Saulge	154.89	355	*e*PKP2	PKPab	02 27 39.7	-0.6
	comp=Z,7.0nm,0.8s						
CABF	La Chapelle	155.03	351	*e*PKP2	PKPab	02 27 41.7	+0.7
AVF	Avril sur Loir	155.17	355	*e*PKP2	PKPab	02 27 40.9	-0.7
SMF	Signal de Mont	155.27	354	*e*PKP2	PKPab	02 27 41.3	-0.7
LPL	La Plagne	155.99	349	*e*PKP2	PKPab	02 27 45.5	+0.4
LPG	La Plagne	156.01	349	*e*PKP2	PKPab	02 27 45.7	+0.5
ORIF	Oris-en-Rattie	156.72	350	*e*PKP2	PKPab	02 27 48.3	0.0
TORD	Torodi Ar. Bea	171.09	188	PKPab	PKPab	02 28 49.5	-2.6
	comp=Z,0.9nm,0.9s,baz=170,slow=5.3,SNR=7.2						

ATH ***06*** *02:19:54.9, 36°.64N×25°.67E, h22km±2km, MD3.3/11*
NEIC ***06*** *02:19:54.8, 36°.61N×25°.73E, h7km, MD3.3(ATH), After ATH.*
CSEM ***06*** *02:19:55.0±0.2, 36°.66N×25°.78E, h2km, ML3.7/3, Error ellipse: s-maj=5.0km s-min=3.7km az=113.0*
ISCJB ***06*** *02:19:56.0±0.5, 36°.68N±0°.02×25°.69E±0°.04, h11km±4km, Error ellipse: s-maj=5.2km s-min=3.0km az=16.9*
THE ***06*** *02:19:56.0, 36°.69N×25°.71E, h4km, ML3.7/3, Error ellipse: s-maj=1.0km s-min=0.3km az=273.0*
ISC 06 02:19:56.5±0.5, 36°.67N±0°.02×25°.69E±0°.04, h12km±4km, n65, σ1°03/96, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR4	Thira Island,	0.32	229	P	Pg	02 20 02.8	-0.1
THR4				S	Sg	02 20 08.2	+1.0
THR4	Thira Island,	0.32	229	P	Pg	02 20 02.8	-0.1
THR4				S	Sg	02 20 08.2	+1.0
THR3	Thira Island,	0.35	222	P	Pg	02 20 03.4	-0.1
THR3	Thira Island,	0.35	222	P	Pg	02 20 03.4	-0.1
THR1	Thera Island	0.35	212	P	Pg	02 20 03.2	-0.4
THR1				S	Sg	02 20 09.2	+0.9
THR1	Thera Island	0.35	212	P	Pg	02 20 03.2	-0.4
THR1				S	Sg	02 20 09.2	+0.9
THR5	Thira Island,	0.38	228	P	Pg	02 20 03.7	-0.3
THR5				S	Sg	02 20 09.9	+0.9
THR5	Thira Island,	0.38	228	P	Pg	02 20 03.7	-0.3
THR5				S	Sg	02 20 09.9	+0.9
APE	Apeiranthos	0.42	342	*e*PB	Pg	02 20 04.2	-0.6
APE	Apeiranthos	0.42	342	P	Pg	02 20 04.2	-0.6
APE				S	Sg	02 20 10.4	0.0
APE	Apeiranthos	0.42	342	P	Pg	02 20 04.2	-0.6
APE				S	Sg	02 20 10.4	0.0
SMG	Samos	1.38	41	*e*PN	Pn	02 20 21.2	-0.4
SMG				*e*SN	Sb	02 20 41.0	+1.1
SMG	Samos	1.38	41	*e*Pb	Pn	02 20 21.2	-0.4
SMG				*e*Sb	Sb	02 20 41.0	+1.1
NPS	Neapolis	1.41	183	*e*PN	Pn	02 20 20.4	-1.5
NPS				*e*SN	Sn	02 20 38.2	-2.2
NPS	Neapolis	1.41	183	*e*Pg	Pn	02 20 20.4	-1.5
NPS				*e*Sb	Sn	02 20 38.2	-2.2
BDRM	Kayabasi	1.46	74	*e*P	Pn	02 20 23.2	+0.6
BDRM	Kayabasi	1.46	74	*e*P	Pn	02 20 23.2	+0.5
BDRM				*e*S	Sn	02 20 42.6	+0.9
LAST	Lasithi	1.52	187	*e*PN	Pn	02 20 22.1	-1.3
LAST	Lasithi	1.52	187	P	Pn	02 20 22.9	-0.5
LAST				S	Sn	02 20 43.3	+0.2
LAST	Lasithi	1.52	187	*e*Pg	Pn	02 20 22.1	-1.3
LAST	Lasithi	1.52	187	P	Pn	02 20 22.9	-0.5
LAST				S	Sn	02 20 43.3	+0.2
IDI	Anoyia	1.52	206	*e*PN	Pn	02 20 22.3	-1.3
IDI	Anoyia	1.52	206	*e*Pg	Pn	02 20 22.3	-1.3
GCAM	G?zelcaml?	1.60	50	*e*P	Pn	02 20 26.4	+1.8
GCAM	G?zelcaml?	1.60	50	*e*P	Pn	02 20 26.4	+1.7
ZKR	Zakros	1.61	165	*e*PN	Pn	02 20 24.2	-0.5
ZKR	Zakros	1.61	165	P	Pn	02 20 23.8	-0.9
ZKR				S	Sn	02 20 46.2	+0.8
ZKR	Zakros	1.61	165	P	Pn	02 20 23.8	-0.9
ZKR	Zakros	1.61	165	*e*Pb	Pn	02 20 24.2	-0.5
ZKR				S	Sn	02 20 46.2	+0.8
KARP	Karpathos	1.63	133	*e*PN	Pn	02 20 23.8	-1.3
KARP	Karpathos	1.63	133	*e*Pg	Pn	02 20 23.8	-1.3
VAM	Vamos	1.75	224	*e*Pg	Pn	02 20 26.2	-0.4
VAM				*e*Sn	Sn	02 20 52.1	+3.3
VAM	Vamos	1.75	224	*e*Pg	Pn	02 20 26.2	-0.4
VAM				*e*Sn	Sn	02 20 52.1	+3.3
SIVA	Sivas	1.80	204	*e*Pn	Pn	02 20 27.6	+0.3
SIVA				*e*Sb	Sb	02 20 53.3	+1.4
SIVA	Sivas	1.80	204	P	Pn	02 20 26.8	-0.5
SIVA				S	Sn	02 20 51.2	+1.1
SIVA	Sivas	1.80	204	P	Pn	02 20 26.8	-0.5
SIVA	Sivas	1.80	204	*e*Pn	Pn	02 20 27.6	+0.3
SIVA				S	Sn	02 20 51.2	+1.1
SIVA				*e*Sb	Sb	02 20 53.3	+1.4
URLA	Izmir	1.83	23	*e*P	Pn	02 20 29.8	+1.9
URLA	Izmir	1.83	23	*e*P	Pn	02 20 29.8	+2.0
URLA				*e*S	Sn	02 20 54.5	+3.5
KARN	Karanos	1.92	229	*e*PN	Pn	02 20 27.8	-1.2
KARN	Karanos	1.92	229	*e*Pb	Pn	02 20 27.8	-1.2
VLY	Voula,Athens	1.92	308	P	Pn	02 20 33.3	+4.3
VLY	Voula,Athens	1.92	308	P	Pn	02 20 33.3	+4.3
ATHU	Athens Univers	2.00	311	P	Pn	02 20 29.1	-1.0
ATHU				S	Sn	02 20 55.4	+0.4
ATHU	Athens Univers	2.00	311	P	Pn	02 20 29.1	-1.0
ATHU				S	Sn	02 20 55.4	+0.4
AYDN	Tasoluk	2.01	60	*e*P	Pn	02 20 32.3	+2.1
AYDN	Tasoluk	2.01	60	*e*P	Pn	02 20 32.3	+2.1
ARG	Arkhangelos	2.01	102	*e*PN	Pn	02 20 30.6	+0.3
ARG	Arkhangelos	2.01	102	P	Pn	02 20 29.7	-0.6
ARG	Arkhangelos	2.01	102	P	Pn	02 20 29.7	-0.6
ARG	Arkhangelos	2.01	102	*e*Pn	Pn	02 20 30.6	+0.3
BLCB	Balcova	2.02	32	P	Pn	02 20 29.5	-0.9
BLCB	Balcova	2.02	32	P	Pn	02 20 29.5	-0.9
ATH	Athens Observa	2.04	310	P	Pg	02 20 35.4	-0.3
ATH	Athens Observa	2.04	310	P	Pg	02 20 35.4	-0.3
DID	Didima	2.13	294	P	Pn	02 20 31.6	-0.4
DID	Didima	2.13	294	P	Pn	02 20 31.6	-0.4
GVD	Gavdhos	2.25	216	*e*Pn	Pn	02 20 34.1	+0.6
TURN	Turunc	2.34	84	*e*P	Pn	02 20 33.2	-1.6
TURN	Turunc	2.34	84	*e*P	Pn	02 20 33.2	-1.7
TURN				*e*S	Sn	02 21 03.6	0.0
SIGR	SIGRI	2.54	3	P	Pn	02 20 36.3	-1.3
SIGR				S	Sn	02 21 08.3	-0.1
SIGR	SIGRI	2.54	3	P	Pn	02 20 36.3	-1.3
SIGR				S	Sn	02 21 08.3	-0.1
PRK	Paraskevi	2.61	10	P	Pn	02 20 38.7	+0.2
PRK	Paraskevi	2.61	10	P	Pn	02 20 37.3	-1.2
PRK				S	Sn	02 21 10.3	+0.1
PRK	Paraskevi	2.61	10	P	Pn	02 20 38.7	+0.2
PRK				S	Sn	02 21 10.3	+0.1

ISCJB ***06*** *02:20:14.7±0.7, 38°.44N±0°.03×21°.85E±0°.06, h15km±4km, Error ellipse: s-maj=7.4km s-min=4.9km az=1.5*
CSEM ***06*** *02:20:14.4±0.2, 38°.43N×21°.85E, h15km, ML2.4/4, Error ellipse: s-maj=5.5km s-min=3.0km az=96.0*
THE ***06*** *02:20:15.6, 38°.43N×21°.86E, h10km, ML2.4/4, Error ell

MONV **Montecano** 5.88 29⇑ *i*P Pn 02 49 53.2 -0.8
TURV **Turiamo** 6.17 54 *e*P Pn 02 49 57.5 -0.4
CAOV **Caicara del Or** 6.54 85⇑ *i*P Pn 02 50 02.3 -0.5
MERV **Las Mercedes** 6.97 69 *e*P Pn 02 50 08.0 -0.5
FUNV **FUNVISIS** 7.03 58 *e*P Pn 02 50 09.7 +0.4
BCIP **Isla Barro Col** 7.27 289 *e*Pn Pn 02 50 07.0 -5.5
BIRV **Birongo** 7.50 60 *e*P Pn 02 50 14.2 -1.3
CUPV **Cœpira** 7.74 65 *e*P Pn 02 50 18.2 -0.5
OTAV **Otavalo** 8.56 221 *e*Pn Pn 02 50 26.9 -2.7
PCRV **Puerto La Cruz** 8.83 67 P Pn 02 50 33.5 +0.4
3.2nm,0.3s,baz=256,slow=4.7,SNR=18
PCRV **Puerto La Cruz** 8.83 67 *e*P Pn 02 50 33.6 +0.5
GUNV **Guanoco** 10.39 71 *e*P Pn 02 50 53.0 -0.8
SDDR **Presa de Saban** 12.21 7 *e*Pn Pn 02 51 19.9 +2.5
SDDR *e*Sn Sn 02 53 27.1 -5.6
MTDJ **Mount Denham** 12.23 339 *e*Pn Pn 02 51 18.8 +1.2
MTDJ *e*Sn Sn 02 53 25.6 -7.6
JTS **JuntasAbangare** 12.42 287 P Pn 02 51 17.6 -2.6
0.7nm,0.3s,baz=114,slow=1.2,SNR=6.1
JTS **JuntasAbangare** 12.42 287 *e*Pn Pn 02 51 19.8 -0.4
SJG **San Juan** 13.03 30 P Pn 02 51 26.3 -1.5
13nm,0.3s,baz=208,slow=14,SNR=7.4
SJG **San Juan** 13.03 30 *e*Pn Pn 02 51 27.3 -0.6
GTBY **Guantanamo Bay** 13.23 351 *e*Pn Pn 02 51 31.2 +0.8
GTBY *e*Sn Sn 02 53 53.4 -3.8
CBYP **Canovanas** 13.31 30 *e*Pn Pn 02 51 31.6 +0.2
MTP **Monte Pirata** 13.32 32 *e*Pn Pn 02 51 31.0 -0.5
FDF **Fort de France** 13.97 55 *e*Pn Pn 02 51 40.9 +1.2
ATAH **Atahualpa** 14.76 202 P Pn 02 51 51.7 +2.0
0.4nm,0.3s,baz=132,slow=16,SNR=2.8
APG **El Apazote** 19.07 297 P P 02 52 36.5 -2.3
0.1nm,0.3s,baz=109,slow=7.0,SNR=6.6
APG pP 02 53 06.6
0.2nm,0.3s,baz=132,slow=14,SNR=3.3
LPAZ **La Paz** 23.41 168 P P 02 53 23.4 +0.2
1.1nm,0.3s,mb3.7,baz=347,slow=7.2,SNR=18
LPAZ pP 02 53 55.9
4.8nm,0.8s,baz=344,slow=9.7,SNR=6.1
SIV **San Ignacio** 25.49 153 P P 02 53 41.3 -0.7
2.5nm,0.8s,mb3.8,baz=331,slow=9.2,SNR=16
SIV pP pP 02 54 15.8 0.0
1.8nm,0.7s,baz=330,slow=8.2,SNR=4.5
PLAL **Pickwick Lake** 31.34 336 *e*P P 02 54 34.0 +0.2
6.2nm,0.9s,mb4.3
WVT **Waverly** 32.24 337 *e*P P 02 54 41.7 0.0
90nm,0.9s,mb5.5
SIUC **Southern Illin** 34.16 337 *e*P P 02 54 58.4 +0.1
10nm,0.7s,mb4.7
BLO **Bloomington** 34.50 341 *e*P P 02 55 02.0 +0.9
12nm,0.6s,mb4.8
FVM **French Village** 34.88 335 *e*P P 02 55 04.2 -0.3
9.5nm,0.8s,mb4.5
CCM **Cathedral Cave** 35.29 335 *e*P P 02 55 07.5 -0.4
14nm,0.7s,mb4.7
CCM *e*pP pP 02 55 42.2 -0.7
628A **Black Gap, Mar** 36.15 312 ⇓P P 02 55 14.3 -1.1
baz=36
528A **Cox Ranch, San** 36.45 313 ⇑P P 02 55 17.2 -0.7
baz=37
627A **Terlingua Ranc** 36.50 312 ⇓P P 02 55 17.7 -0.7
baz=37,SNR=6.5
TXAR **Lajitas Array** 36.65 312 P P 02 55 19.0 -0.6
1.1nm,0.7s,mb3.6,baz=126,slow=9.1,SNR=15
TXAR pP pP 02 55 52.6 -2.1
0.4nm,0.5s,baz=127,slow=10,SNR=3.0
428A **Kincaid Ranch,** 36.69 314 ⇑P P 02 55 19.5 -0.4
baz=37
527A **Woodward Ranch** 37.04 313 ⇑P P 02 55 22.7 -0.3
baz=37
328A **Wristen Ranch,** 37.15 315 ⇑P P 02 55 22.9 -0.9
baz=37
427A **Hayter Ranch,** 37.27 314 ⇓P P 02 55 23.8 -1.1
baz=37
426A **McDonald Obser** 37.62 313 ⇓P P 02 55 27.2 -0.6
baz=38
425A **Indio Mountain** 38.38 313 ⇑P P 02 55 33.6 -0.5
baz=38
Z27A **Tatum** 38.55 317 ⇓P P 02 55 34.5 -1.1
baz=39,SNR=6.9
325A **Bean Ranch, Si** 38.68 313 ⇑P P 02 55 36.2 -0.5
baz=39
RCBR **Riachuelo** 38.99 108 *e*P P 02 55 40.5 +1.1
324A **Moseley Ranch,** 39.09 313 ⇑P P 02 55 39.9 -0.1
baz=39
JFWS **Jewell Farm** 39.09 340 *e*P P 02 55 49.3 +9.4
4.6nm,0.6s,mb4.3
MNTX **Cornudas Mount** 39.15 314 *e*P P 02 55 40.0 -0.6
1.3nm,0.6s,mb3.7
125A **Gardner Draw,** 39.16 315 ⇓P P 02 55 40.1 -0.5
baz=39
X27A **F and S Farms,** 39.27 319 ⇑P P 02 55 41.3 -0.2
baz=39
224A **Corundas Mount** 39.45 314 ⇓P P 02 55 42.8 -0.2
baz=40,SNR=11
Z25A **Roswell** 39.55 316 ⇑P P 02 55 43.7 -0.1
baz=40,SNR=6.0
X26A **CR and CF Fran** 39.68 318 ⇑P P 02 55 45.0 +0.1
baz=40
Y25A **Mesa, Roswell** 39.91 317 ⇑P P 02 55 47.4 +0.6
baz=40
Y24A **Capitan** 40.41 316 ⇓P P 02 55 50.9 0.0
baz=41,SNR=6.8
W25A **X Bar L. Ranch,** 40.51 319 ⇓P P 02 55 51.7 0.0
baz=41
222A **Williams Famil** 40.61 313 ⇓P P 02 55 52.7 +0.1
baz=41
Y23A **Lovelace Mesa,** 40.84 316 ⇓P P 02 55 54.6 +0.1
baz=41
320A **Kipp Ranch, An** 41.28 311 ⇑P P 02 55 58.5 +0.3
baz=41
220A **Playas Peak, P** 41.56 312 ⇓P P 02 56 00.7 +0.4
baz=42
W23A **Werner Place,** 41.60 317 ⇓P P 02 56 01.4 +0.8
baz=42
Z21A **St. Cloud Mine** 41.64 314 ⇓P P 02 56 01.6 +0.6
baz=42
120A **U Bar Ranch, L** 41.95 312 ⇑P P 02 56 03.9 +0.4
baz=42
ECSD **EROS Data Cent** 42.27 334 *e*P P 02 56 04.2 -1.7
4.8nm,1.1s,mb4.0
X21A **Alamocita Cree** 42.32 315 ⇑P P 02 56 06.7 +0.2
baz=42
318A **Bisbee** 42.43 310 ⇑P P 02 56 07.6 +0.2
baz=42
Y20A **Horse Springs,** 42.46 314 ⇓P P 02 56 08.0 +0.4
baz=43
119A **Ashpeak Ranch,** 42.55 312 ⇑P P 02 56 08.8 +0.4
baz=43
W21A **San Fidel** 42.59 316 ⇓P P 02 56 08.9 +0.2
baz=43
SDCO **Great Sand Dun** 42.71 321 *e*P P 02 56 10.4 +0.8
2.6nm,0.8s,mb3.9
218A **Dragoon** 42.72 311 ⇓P P 02 56 10.1 +0.3
baz=43
X20A **Quemado** 42.87 315 ⇓P P 02 56 11.7 +0.8
baz=43
Y19A **Nutrioso** 43.11 314 ⇓P P 02 56 13.5 +0.7
baz=43
X19A **St. Johns** 43.37 314 ⇑P P 02 56 15.6 +0.6
baz=44
117A **Oracle** 43.52 311 ⇓P P 02 56 16.3 +0.1
baz=44
X18A **Snowflake** 43.89 314 ⇓P P 02 56 19.3 +0.2
baz=44
ISCO **Idaho Springs** 44.06 323 *e*P P 02 56 21.0 +0.7
3.7nm,1.0s,mb4.0
S21A **Coal Bank Pass** 44.12 319 ⇑P P 02 56 21.4 +0.6
baz=44
Q22A **Crested Butte,** 44.27 321 ⇓P P 02 56 22.7 +0.6
baz=44
U19A **Dine' College,** 44.30 317 ⇑P P 02 56 22.4 +0.1
baz=44
MVCO **Mesa Verde** 44.32 318 ⇓P P 02 56 22.6 +0.1
baz=44
R21A **Cimarron** 44.38 320 ⇑P P 02 56 23.6 +0.7
baz=44
X17A **Forest Lakes** 44.41 313 ⇑P P 02 56 23.9 +0.6
baz=44
Y16A **Circle Bar Ran** 44.68 312 ⇓P P 02 56 25.7 +0.3
baz=45
R20A **Redvale** 44.80 320 ⇓P P 02 56 26.8 +0.6
baz=45
U18A **Rough Rock, Ch** 44.81 316 ⇑P P 02 56 26.6 +0.2
baz=45
X16A **Lo Mia Camp, P** 44.91 313 ⇑P P 02 56 27.1 -0.1
baz=45
V17A **Tonalea, Kykot** 45.04 315 ⇓P P 02 56 28.4 +0.2
baz=45
S19A **Harvey Farm, M** 45.04 319 ⇓P P 02 56 28.1 -0.1
baz=45
Q20A **Ridgley Place,** 45.19 320 ⇓P P 02 56 29.9 +0.6
baz=45,SNR=5.8
N22A **Wattenberg Ran** 45.19 324 ⇑P P 02 56 30.3 +1.0
baz=45
T18A **Mexican Hat** 45.20 317 ⇓P P 02 56 29.3 -0.2
baz=45
114A **Black Gap (USA** 45.22 310 ⇓P P 02 56 29.8 +0.1
baz=45
W16A **Flagstaff** 45.30 314 ⇓P P 02 56 30.7 +0.4
baz=45
Y15A **Casa Rosa Ranc** 45.34 312 ⇑P P 02 56 30.7 +0.1
baz=46
WUAZ **Wupatki** 45.40 315 ⇓P P 02 56 31.2 +0.2
baz=46,SNR=6.5
WUAZ **Wupatki** 45.40 315 *e*P P 02 56 31.4 +0.4
5.7nm,0.9s,mb4.2
WUAZ *e*pP pP 02 57 06.7 -0.7
U17A **Shonto** 45.45 316 ⇓P P 02 56 32.2 +0.8
baz=46
X15A **Humboldt** 45.52 313 ⇑P P 02 56 32.0 0.0
baz=46
AGMN **Agassiz Refuge** 45.73 339 *e*P P 02 56 32.4 -1.0
4.3nm,0.6s,mb4.3
TRQA **Tornquist** 45.77 168 *e*P P 02 56 29.6 -4.2
Y14A **Wickenburg** 45.83 312 ⇑P P 02 56 33.9 -0.6
baz=46
O20A **White River Ci** 45.85 322 ⇑P P 02 56 35.2 +0.6
baz=46
R18A **Canyonlands Na** 45.90 319 ⇑P P 02 56 35.1 +0.3
baz=46
Z13A **Yuma Proving G** 45.99 310 ⇑P P 02 56 35.5 -0.3
baz=46
S17A **Black Ridge (B** 46.09 317 ⇓P P 02 56 36.7 +0.3
baz=46
V15A **Kaibab Nationa** 46.11 314 ⇓P P 02 56 37.4 +0.8
baz=46,SNR=7.1
M21A **Separation Pea** 46.23 324 ⇓P P 02 56 38.6 +1.1
baz=46
N20A **Spence Gulch,** 46.29 323 ⇓P P 02 56 39.0 +1.0
baz=46
Q18A **Rafter H Ranch** 46.45 319 ⇓P P 02 56 39.3 +0.2
baz=47
R17A **Hanksville Air** 46.45 318 ⇑P P 02 56 39.4 +0.2
baz=47
L21A **Rawlins** 46.46 324 ⇓P P 02 56 40.2 +1.0
baz=47
W14A **Seligman** 46.48 313 ⇓P P 02 56 39.8 +0.4
baz=47
U15A **North Rim** 46.49 315 ⇑P P 02 56 39.9 +0.3
baz=47,SNR=5.7
M20A **Sweetwater, Wa** 46.64 323 ⇓P P 02 56 41.0 +0.3
baz=47
V14A **Boquillas Ranc** 46.69 314 ⇑P P 02 56 41.8 +0.6
baz=47
SRU **San Rafael** 46.71 319 ⇑P P 02 56 41.6 +0.4
baz=47
N19A **John Jarvie Ra** 46.88 322 ⇓P P 02 56 42.5 0.0
baz=47
R16A **Teasdale** 46.89 318 ⇓P P 02 56 43.2 +0.6
baz=47
U14A **Mt Trumbull** 47.12 315 ⇑P P 02 56 44.6 +0.2
baz=47
T14A **Hurricane** 47.36 315 ⇑P P 02 56 46.6 +0.3
baz=48
ULM **Lac du Bonnet** 47.38 340 P P 02 56 45.1 -1.1
6.1nm,0.6s,mb4.4,baz=139,slow=7.2,SNR=21
O17A **Robinson Place** 47.45 320 ⇑P P 02 56 47.1 +0.2
baz=48,SNR=6.5
K20A **Yellowstone Ra** 47.46 324 ⇑P P 02 56 47.5 +0.6
baz=48
MSU **Marysvale** 47.48 318 *e*P P 02 56 47.8 +0.7
U13A **Pakoon Wash** 47.67 314 ⇑P P 02 56 48.9 +0.1
baz=48
L19A **Farson** 47.71 323 ⇓P P 02 56 49.2 +0.3
baz=48
M18A **Lyman** 47.74 322 ⇓P P 02 56 49.3 +0.1
baz=48
K19A **Absolon Red Bu** 47.85 324 ⇓P P 02 56 50.3 +0.4
baz=48
T13A **Saint George** 47.92 315 ⇓P P 02 56 50.9 +0.3
baz=48
N17A **Moffit Pass** 47.93 321 ⇓P P 02 56 51.2 +0.6
baz=48
O16A **Springville** 47.94 320 ⇑P P 02 56 50.9 +0.2
baz=48
V12A **Nelson** 47.99 313 ⇑P P 02 56 51.1 -0.1
baz=48
L18A **Fontenelle, Gr** 48.01 323 ⇑P P 02 56 51.7 +0.5
baz=48
BELC **Belle Mtn.** 48.10 310 ⇓P P 02 56 51.7 -0.4
baz=48
M17A **Scullys Gap (B** 48.13 322 ⇑P P 02 56 51.9 -0.3
baz=48
SCHQ **Schefferville** 48.15 5 P P 02 56 52.6 +0.6
4.1nm,0.4s,mb4.5,baz=187,slow=6.3,SNR=22
SCHQ pP pP 02 57 29.2 +0.4
1.1nm,0.5s,baz=213,slow=9.9,SNR=1.7
SCHQ **Schefferville** 48.15 5 *e*P P 02 56 52.9 +0.9
3.9nm,0.7s,mb4.2
S13A **Holt Ranch, En** 48.15 316 ⇑P P 02 56 52.8 +0.4
baz=48,SNR=6.2
BW06 **Boulder Array** 48.23 324 ⇑P P 02 56 52.6 -0.3
baz=48
BW06 **Boulder Array** 48.23 324 *e*P P 02 56 51.9 -1.0
34nm,3.0s
PDAR **Pinedale Array** 48.23 324 P P 02 56 52.5 -0.4
1.1nm,0.6s,mb3.7,baz=125,slow=9.1,SNR=11
K18A **Tolan Ranch,** 48.44 323 ⇑P P 02 56 54.9 +0.4
baz=49
Q14A **Sevier Lake (B** 48.46 318 ⇓P P 02 56 55.6 +0.9
baz=49
R13A **O'Grain Ranch,** 48.52 316 ⇑P P 02 56 55.5 +0.3
baz=49
P14A **Drum Mountains** 48.63 318 ⇑P P 02 56 55.9 -0.1
baz=49
TUQ **Turquoise Moun** 48.65 312 ⇓P P 02 56 55.9 -0.3
baz=49
J18A **Kendall Valley** 48.77 324 ⇑P P 02 56 56.6 -0.4
baz=49,SNR=5.6
DUG **Dugway** 48.78 319 ⇑P P 02 56 57.4 +0.2
baz=49
DUG **Dugway** 48.78 319 *e*P P 02 56 57.3 +0.2
1.8nm,0.8s,mb3.8
L16A **Fish Haven** 48.91 322 ⇓P P 02 56 57.8 -0.3
baz=49,SNR=9.8
Q13A **Wheeler Ranch,** 48.94 317 ⇑P P 02 56 58.8 +0.4
baz=49
T11A **Corn Creek, Al** 48.95 315 ⇓P P 02 56 58.1 -0.4
baz=49
I18A **Diamond G Ranc** 48.95 325 ⇓P P 02 56 58.3 0.0
baz=49
N15A **Stansbury Isla** 48.96 320 ⇑P P 02 56 58.5 0.0
baz=49
R12A **Pony Springs,** 49.03 316 ⇑P P 02 56 59.3 +0.2
baz=49
P13A **Bates Ranch, G** 49.19 318 ⇑P P 02 57 01.1 +0.9
baz=49
M15A **Larsen Ranch,** 49.23 321 ⇓P P 02 56 60.0 -0.6
baz=49
GSC **Goldstone** 49.25 312 ⇓P P 02 57 00.8 0.0
baz=49
J17A **Brown Place, J** 49.26 324 ⇓P P 02 57 00.7 -0.1
baz=49,SNR=5.1
DGMT **Dagmar** 49.27 333 ⇓P P 02 57 00.9 +0.2
baz=50
REDW **Red Top Meadow** 49.35 324 *e*P P 02 57 01.5 +0.1
4.3nm,0.6s,mb4.3
LOHW **Long Hollow** 49.35 324 *e*P P 02 57 01.5 +0.1
2.3nm,0.6s,mb4.0
N14A **Grayback Hills** 49.37 320 ⇓P P 02 57 01.5 -0.1
baz=50,SNR=5.6
K16A **Soda Springs** 49.47 323 ⇑P P 02 57 02.6 +0.3
baz=50
TPAW **Teton Pass** 49.48 324 *e*P P 02 57 02.4 0.0
5.4nm,1.4s,mb4.0
L15A **Malad City** 49.49 321 ⇓P P 02 57 02.0 -0.6
baz=50
RRI2 **Red Ridge** 49.61 323 *e*P P 02 57 03.6 +0.2
4.7nm,0.6s,mb4.3
IMW **Indian Meadow** 49.72 324 *e*P P 02 57 03.9 -0.3
2.4nm,0.6s,mb4.0
R11A **Troy Canyon, C** 49.72 316 ⇓P P 02 57 04.5 +0.2
baz=50
J16A **Bone** 49.74 323 ⇓P P 02 57 04.4 0.0
baz=50
G18A **Lazy EL Ranch,** 49.81 327 ⇑P P 02 57 04.6 -0.2
baz=50
M14A **Sheep Mountain** 49.82 320 ⇑P P 02 57 04.8 -0.2
baz=50,SNR=6.6
Q11A **Duckwater** 50.00 316 ⇓P P 02 57 06.5 +0.1
baz=50
MPMC **Manual Prospec** 50.07 312 ⇑P P 02 57 06.4 -0.6
baz=50
S10A **Tonopah Range,** 50.23 315 ⇑P P 02 57 08.3 +0.1
baz=50
F18A **Big Timber** 50.27 327 ⇓P P 02 57 08.6 +0.3
baz=50
M13A **Montello** 50.27 320 ⇑P P 02 57 08.2 -0.1
baz=50
K14A **Jones Ranch, D** 50.28 322 ⇑P P 02 57 08.1 -0.3
baz=50
O11A **Cowboy Ranch,** 50.62 318 ⇑P P 02 57 11.4 +0.4
baz=51
F17A **Fitzpatrick Pl** 50.78 326 ⇑P P 02 57 11.9 -0.2
baz=51
E18A **Harlowton** 50.79 328 ⇑P P 02 57 12.4 +0.2
baz=51
J14A **Carey** 50.92 322 ⇑P P 02 57 13.5 +0.3
baz=51,SNR=6.6
G16A **Moss Hill, Enn** 51.01 325 ⇑P P 02 57 14.3 +0.5
baz=51
BOZ **Bozeman (W)** 51.16 326 ⇑P P 02 57 15.1 +0.1
baz=51
E17A **Martinsdale** 51.23 327 ⇓P P 02 57 15.5 0.0
baz=51
J13A **Cove Ranch, Pi** 51.36 322 ⇑P P 02 57 16.7 +0.2
baz=52
G15A **Dillon** 51.36 325 ⇓P P 02 57 16.8 +0.3
baz=52
H14A **Leadore** 51.55 324 ⇓P P 02 57 18.0 +0.1
baz=52
D17A **Six Diamond Ra** 51.57 328 ⇓P P 02 57 18.2 +0.2
baz=52
HLID **Hailey** 51.59 322 ⇓P P 02 57 18.5 +0.3
baz=52
HLID **Hailey** 51.59 322 *e*P P 02 57 18.3 +0.1
1.8nm,0.8s,mb3.8
I13A **Wildhorse Cree** 51.61 323 ⇑P P 02 57 18.4 +0.1
baz=52
NVAR **Mina Array Bea** 51.66 315 P P 02 57 18.0 -0.9
0.7nm,0.5s,mb3.5,baz=124,slow=7.1,SNR=6.7
L11A **Cat Creek Ranc** 51.70 320 ⇑P P 02 57 19.1 +0.1
baz=52
F15A **Butte** 51.76 325 ⇑P P 02 57 19.5 +0.1
baz=52
J12A **Stokes Ranch,** 51.85 321 ⇑P P 02 57 19.9 -0.2
baz=52
B18A **Beardsley Farm** 51.90 329 ⇓P P 02 57 20.5 +0.1
baz=52
C17A **Wharram Farm,** 51.92 328 ⇓P P 02 57 20.1 -0.4
baz=52
D16A **Dana Ranch, Ca** 51.96 327 ⇑P P 02 57 20.9 0.0
baz=52
H13A **Challis** 52.05 323 ⇑P P 02 57 21.2 -0.4
baz=52
L10A **Juniper Basin** 52.12 319 ⇑P P 02 57 21.9 -0.2
baz=52,SNR=5.3
I12A **Atlanta** 52.16 322 ⇓P P 02 57 22.2 -0.2
baz=52,SNR=5.3
K11A **Parker Ranch,** 52.18 320 ⇑P P 02 57 22.5 -0.1
baz=52
E15A **Deer Lodge** 52.19 326 ⇓P P 02 57 22.7 +0.1
baz=52
G13A **Cobalt** 52.33 324 ⇑P P 02 57 23.5 -0.1
baz=52
MFID **Camas Ranch** 52.39 321 ⇑P P 02 57 23.6 -0.5
baz=52,SNR=5.4
H12A **Diamond D Ranc** 52.40 323 ⇓P P 02 57 24.2 +0.1
baz=53
D15A **Lincoln** 52.49 327 ⇓P P 02 57 25.0 +0.2
baz=53
C16A **Fuhringer Ranc** 52.54 328 ⇓P P 02 57 25.2 0.0
baz=53
E14A **Clinton** 52.66 326 ⇑P P 02 57 26.0 -0.1
baz=53
A17A **Triple J Farms** 52.72 329 ⇓P P 02 57 26.4 0.0
baz=53
I11A **Placerville** 52.73 322 ⇑P P 02 57 26.7 +0.1
baz=53
F13A **Darby** 52.78 324 ⇓P P 02 57 26.7 -0.2
baz=53
C15A **Salmond Ranch,** 52.98 327 ⇓P P 02 57 27.9 -0.5
baz=53
G12A **Big Creek, Yel** 52.99 323 ⇑P P 02 57 28.2 -0.3
baz=53
D14A **Greenough** 53.06 326 ⇓P P 02 57 28.9 0.0
baz=53
H11A **Donnelly** 53.18 322 ⇑P P 02 57 29.1 -0.8
baz=53
A16A **West Butte Ran** 53.18 329 ⇑P P 02 57 30.1 +0.3
baz=53
B15A **Bradely Ranch,** 53.29 328 ⇑P P 02 57 30.5 -0.1
baz=54
F12A **Elk City** 53.30 324 ⇑P P 02 57 30.6 -0.1
baz=54
J09A **Fry Pan Ranch,** 53.56 320 ⇑P P 02 57 32.2 -0.6
baz=54
C14A **Swan Lake** 53.59 327 ⇓P P 02 57 32.7 -0.1
baz=54,SNR=5.3
D13A **Huson** 53.59 326 ⇑P P 02 57 32.7 -0.2
baz=54
E12A **Beaver Dam Sad** 53.84 324 ⇑P P 02 57 34.1 -0.6
baz=54
F11A **Grangeville** 53.90 324 ⇑P P 02 57 34.7 -0.4
baz=54
C13A **Hot Springs** 53.99 326 ⇑P P 02 57 36.0 +0.2
baz=54
D12A **Red Ives Fores** 54.07 325 ⇑P P 02 57 36.0 -0.3
baz=54
E11A **Bogner Ranch,** 54.18 324 ⇓P P 02 57 36.4 -0.8
baz=54
FCC **Fort Churchill** 54.35 347 *e*P P 02 57 37.0 -1.0
0.2nm,1.1s
G09A **Cove** 54.55 322 ⇓P P 02 57 39.5 -0.4
baz=55
F10A **Beach Ranch, E** 54.58 323 ⇑P P 02 57 39.3 -0.7
baz=55
D11A **Klaveano Farm,** 54.63 325 ⇑P P 02 57 39.9 -0.5
baz=55,SNR=5.3
H08A **Prairie City** 54.72 321 ⇑P P 02 57 40.4 -0.7
baz=55
I07A **Izee** 55.03 320 ⇑P P 02 57 42.9 -0.5
baz=55
G08A **Pilot Rock** 55.27 322 ⇓P P 02 57 44.8 -0.3
baz=55
A11A **Hall Mountain,** 55.70 327 ⇓P P 02 57 48.6 +0.6
baz=56
H04A **Detroit Lake** 57.02 320 ⇑P P 02 57 56.8 -0.6
baz=57
A07A **Ashnola River,** 57.99 325 ⇓P P 02 58 05.1 +0.9
baz=58
YKA **Yellowknife Ar** 63.36 340 P P 02 58 39.4 -0.8
3.8nm,0.6s,mb4.4,baz=133,slow=6.6,SNR=146
YKA pP pP 02 59 18.3 -0.6
0.8nm,0.5s,baz=134,slow=6.7,SNR=3.1
YKA sP sP 02 59 34.8 -2.0
0.9nm,0.7s,baz=132,slow=6.9,SNR=2.7
TIC **Toumodi** 67.35 86 *e*P P 02 59 07.4 +0.6
3.2nm,0.2s,mb4.8
LIC **Lamto** 67.38 86 *e*P P 02 59 06.3 -0.7
61nm,1.7s,mb5.2
DBIC **Dimbokro** 67.51 86 P P 02 59 07.5 -0.3
5.0nm,0.7s,mb4.4,baz=291,slow=4.5,SNR=22
KIC **Kosan Boka** 67.65 86 *e*P P 02 59 08.1 -0.6
14nm,0.6s,mb4.9
SUMG **Summit** 68.97 11 *e*P P 02 59 16.4 +0.7
17nm,1.2s,mb4.6
INK **Inuvik** 73.13 340 *e*P P 02 59 40.4 -0.5
6.4nm,1.4s,mb4.2
TOA0 **Torodi Ar. Sit** 73.52 78 *e*P P 02 59 43.3 -0.9
TORD **Torodi Ar. Bea** 73.52 78 P P 02 59 42.9 -1.3
0.4nm,0.3s,mb3.6,baz=285,slow=6.5,SNR=43
PPLA **Purkeypile** 79.11 333 *e*P P 03 00 14.7 0.0
PPLA *e*pP pP 03 00 55.5 +0.4
NOA **NORSAR Array B** 81.24 29 P P 03 00 25.9 -0.3
0.6nm,0.7s,mb3.3,baz=248,slow=6.3,SNR=2.5
ARCES **ARCESS Array B** 86.61 20 P P 03 00 53.0 -0.2
2.2nm,0.9s,mb4.0,baz=273,slow=4.1,SNR=13
FINES **FINESS Array B** 88.36 28 P P 03 01 01.1 -0.6
2.0nm,0.9s,mb3.9,baz=110,slow=28,SNR=3.0
ZALV **Zalesovo Beam** 116.64 15 PKP PKPdf 03 06 51.7 -1.6
0.7nm,0.3s,baz=302,slow=1.4,SNR=3.9
MKAR **Makanchi Array** 122.27 20 PKP PKPdf 03 07 03.8 -0.6

0.5nm,0.4s,baz=306,slow=2.0,SNR=8.8
SONM Songino Array 125.60 1 PKP PKPdf 03 07 10.8 +0.1
0.8nm,0.5s,baz=253,slow=2.5,SNR=6.5
WMQ Urumqi 126.64 17 *e*PKP PKPdf 03 07 12.6 -0.2
CN2 Changchun 126.97 343 *e*PKP PKPdf 03 07 13.0 -0.5
HHC Hu-ho-hao-te 132.41 355 *e*PKP PKPdf 03 07 23.2 -0.7
HHC sPKP 03 08 22.5
HHC PP PP 03 09 51.9 +4.5
HHC PKS 03 10 58.0
HHC SKS SKSdf 03 14 16.9 -3.1
HHC SKKS SKKSac 03 16 25.4 -3.2
HHC SS SS 03 27 17.0 +4.7
HHC AMB AMB
comp=Z,38nm,5.8s
HHC LR LR
comp=N,51nm,21.2s
HHC LR LR
comp=E,77nm,21.7s
HHC LR LR
comp=Z,67nm,23.5s
LZH Lanzhou 137.24 4 *e*PKP PKPdf 03 07 35.5 +2.4
LZH sPKP 03 08 34.2
CD2 Chengdu 142.37 5 PKP PKPdf 03 07 41.3 -1.2
GYA Guiyang 146.94 1 *e*PKPbc PKPbc 03 07 47.6 -5.1
GYA PKPab PKPab 03 07 53.2 -1.1
GYA pPKP pPKPdf 03 08 31.8 -2.0
GYA sPKP 03 08 51.0
GYA PP PP 03 11 19.4 +2.9
GYA AMB AMB
comp=Z,60nm,7.9s
ASAR Alice Springs 149.28 234 PKP PKPdf 03 07 52.8 -1.6
comp=Z,0.6nm,0.7s,baz=111,slow=2.8,SNR=4.1
ASAR PKPbc PKPbc 03 07 57.7 -1.2
comp=Z,0.9nm,0.5s,baz=117,slow=3.7,SNR=15
WB2 Warramunga Arr 150.51 241 *e*PKPbc PKPbc 03 08 01.1 -0.9
WRA Warramunga Arr 150.52 241 PKP PKPdf 03 07 55.6 -0.8
comp=Z,0.4nm,0.7s,baz=105,slow=2.4,SNR=3.8
WRA PKPbc PKPbc 03 08 01.1 -0.9
comp=Z,1.2nm,0.4s,baz=108,slow=2.2,SNR=7.4
CMAR Chiang Mai Arr 153.65 18 PKPbc PKPbc 03 08 08.3 -0.7
comp=Z,0.8nm,0.3s,baz=328,slow=3.5,SNR=3.2

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*NEIC **06** 03:14:57.0, 34°.64N×22°.98E, h10km, MD3.3(ATH), After ATH.*
*ATH **06** 03:15:01.5, 34°.75N×23°.37E, h27km±3km, MD3.3/7*
*CSEM **06** 03:15:02.0±0.8, 34°.75N×23°.37E, h28km±3km, MD3.3, Error ellipse: s-maj=21.5km s-min=12.5km az=80.0*
*HLW **06** 03:15:05.9, 34°.74N×24°.22E, h33km±32km, Ml3.2*
ISC 06 03:15:00.3±1.9, 34°.69N±0°.06×23°.28E±0°.10, h8km±12km, n31, σ0s85/41, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.68**	**77**	*e*PN	**Pg**	**03 15 13.9**	**+0.5**
GVD				*e*SN	**Sg**	**03 15 23.0**	**+0.7**
GVD	**Gavdhos**	**0.68**	**77**	*e*Pg	**Pg**	**03 15 13.9**	**+0.5**
GVD				*e*Sn	**Sg**	**03 15 23.0**	**+0.7**
GVD	**Gavdhos**	**0.68**	**77**	*e*Pn	**Pg**	**03 15 13.9**	**+0.5**
GVD				*e*Sn	**Sg**	**03 15 23.0**	**+0.7**
KARN	**Karanos**	**0.89**	**36**	*e*PN	**Pg**	**03 15 16.6**	**-0.7**
KARN				*e*SN	**Sg**	**03 15 28.5**	**-0.3**
KARN	**Karanos**	**0.89**	**36**	*e*Pn	**Pg**	**03 15 16.6**	**-0.7**
KARN				*e*Sn	**Sg**	**03 15 28.5**	**-0.3**
VAM	**Vamos**	**1.04**	**46**	*e*PB	**Pg**	**03 15 19.1**	**-1.2**
VAM	**Vamos**	**1.04**	**46**	*e*Pb	**Pg**	**03 15 19.1**	**-1.2**
SIVA	**Sivas**	**1.30**	**75**	*e*PN	**Pn**	**03 15 24.2**	**-0.5**
SIVA	**Sivas**	**1.30**	**75**	*e*Pn	**Pn**	**03 15 24.2**	**-0.5**
IDI	**Anoyia**	**1.45**	**65**	*e*Pn	**Pn**	**03 15 25.9**	**-0.8**
IDI				*e*Sn	**Sg**	**03 15 47.9**	**+0.9**
IDI	**Anoyia**	**1.45**	**65**	*e*Pn	**Pn**	**03 15 25.9**	**-0.9**
KYTH	**Kithira**	**1.60**	**353**	*e*PN	**Pn**	**03 15 29.4**	**+0.5**
KYTH	**Kithira**	**1.60**	**353**	*e*Pn	**Pn**	**03 15 29.4**	**+0.5**
LAST	**Lasithi**	**1.87**	**75**	*e*PN	**Pn**	**03 15 32.5**	**0.0**
LAST	**Lasithi**	**1.87**	**75**	*e*Pn	**Pn**	**03 15 32.5**	**0.0**
NPS	**Neapolis**	**2.00**	**73**	*e*PB	**Pn**	**03 15 34.5**	**+0.2**
NPS	**Neapolis**	**2.00**	**73**	*e*Pb	**Pn**	**03 15 34.5**	**+0.2**
VLI	**Veliai**	**2.05**	**352**	*e*PB	**Pn**	**03 15 36.1**	**+1.1**
VLI	**Veliai**	**2.05**	**352**	*e*Pb	**Pn**	**03 15 36.1**	**+1.1**
KARP	**Karpathos**	**3.29**	**74**	*e*PN	**Pn**	**03 15 52.0**	**-0.1**
KARP	**Karpathos**	**3.29**	**74**	*e*Pn	**Pn**	**03 15 52.0**	**-0.1**
SLUM		**3.57**	**152**	P	**Pn**	**03 15 56.5**	**+0.6**
baz=165
SLUM S **Sn** **03 16 31.9** **-6.5**
baz=165
SLUM 3.57 152 P **Pn** **03 15 56.5 +0.6**
SLUM S **Sn** **03 16 31.9 -6.4**
HMAT Matruh 4.81 137 P **Pn** **03 16 09.9 -3.0**
baz=145
HMAT Matruh 4.81 137 P **Pn** **03 16 09.9 -3.0**
SWA2 5.73 161 P **Pn** **03 16 26.8 +1.2**
baz=168
SWA2 AMP 03 17 00.0
comp=E,20μm,0.3s,logA/T=4.8,baz=168
SWA2 S **Sn** **03 17 24.2 -7.4**
baz=168
SWA2 5.73 161 P **Pn** **03 16 26.8 +1.2**
SWA2 S **Sn** **03 17 24.2 -7.3**
AMAG Maghara 9.29 113 P **Pn** **03 17 09.6 -4.9**
baz=115
AMAG Maghara 9.29 113 P **Pn** **03 17 09.6 -4.8**
HDK1 Dakhla 10.54 148 P **Pn** **03 17 31.2 -0.4**
baz=152
HDK1 Dakhla 10.54 148 P **Pn** **03 17 31.2 -0.4**

IDC 06 03:33:56.8±2.1, 6°.50S×128°.67E, h0km, mb4.2/1, mb1 3.9/4, mb1mx3.6/17, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=98.8km s-min=26.8km az=93.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.91**	**194**	Pn	Pn	03 36 48.1	+0.2
0.5nm,0.3s,baz=42,slow=12,SNR=22
FITZ Sn Sn 03 38 39.1 -23
0.6nm,0.3s,baz=47,slow=20,SNR=4.5
WRA Warramunga Arr 14.46 158 Pn Pn 03 37 22.1 -0.7
0.6nm,0.3s,baz=336,slow=14,SNR=6.0
WRA Sn Sn 03 39 38.9 -25
0.4nm,0.3s,baz=337,slow=22,SNR=5.0
ASAR Alice Springs 17.80 164 P Pn 03 38 06.5 +0.5
0.3nm,0.3s,baz=344,slow=12,SNR=12
PETK Petropavlovsk- 64.27 19 P P 03 44 33.8 +0.1
1.1nm,0.3s,baz=196,slow=6.1,SNR=7.9

IDC 06 04:02:16.4±2.7, 1°.64S×139°.47E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/16, mbtmp3.9/6, ML4.1/1, Error ellipse: s-maj=101.6km s-min=15.5km az=92.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.87**	**195**	P	Pn	04 06 36.9	-1.8
0.6nm,0.3s,baz=16,slow=11,SNR=12
FITZ Fitzroy Crossi 21.25 219 P P 04 07 03.8 -0.6
2.4nm,1.0s,baz=56,slow=15,SNR=5.3
ASAR Alice Springs 22.55 193 P P 04 07 17.9 -0.3
3.4nm,0.9s,baz=24,slow=9.4,SNR=22
ASAR S S 04 11 29.0 +2.3
0.5nm,0.8s,baz=17,slow=24,SNR=4.4
MKAR Makanchi Array 69.41 322 P P 04 13 26.5 +0.2
0.5nm,0.5s,baz=108,slow=7.8,SNR=5.7
ZALV Zalesovo Beam 71.40 329 P P 04 13 38.5 +0.2
1.0nm,0.6s,baz=103,slow=5.9,SNR=4.4
BVAR Borovoye Array 78.88 325 P P 04 14 21.5 +0.1
0.9nm,0.6s,baz=92,slow=4.9,SNR=5.1

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*NEIC **06** 04:07:38.9, 36°.08N×21°.83E, h8km, MD3.7(ATH), After ATH.*
*ATH **06** 04:07:38.9, 36°.08N×21°.83E, h8km±1km, MD3.7/15*
*ISCJB **06** 04:07:41.5±0.9, 36°.18N±0°.05×21°.93E±0°.07, h10km, Error ellipse: s-maj=9.3km s-min=5.5km az=148.1*
*CSEM **06** 04:07:41.1±0.6, 36°.16N×22°.00E, h2km, ML3.6/3, Error ellipse: s-maj=14.8km s-min=6.7km az=56.0*
*THE **06** 04:07:47.0, 36°.50N×22°.04E, h4km±1km, ML3.6/3, Error ellipse: s-maj=3.7km s-min=1.6km az=86.0*
ISC 06 04:07:41.6±0.8, 36°.17N±0°.05×21°.88E±0°.07, h10km, n45, σ1s26/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.94**	**83**	*e*PN	**Pg**	**04 07 58.2**	**-1.6**
KYTH	**Kithira**	**0.94**	**83**	*e*Pn	**Pg**	**04 07 58.2**	**-1.6**
ITM	**Ithomi**	**1.01**	**2**	*e*PB	**Pg**	**04 07 59.5**	**-1.6**
ITM *e*SB **Sb** **04 08 14.7 +0.2**
ITM Ithomi 1.01 2 P **Pg** **04 07 59.4 -1.7**
ITM S **Sg** **04 08 10.0 -4.2**
ITM Ithomi 1.01 2 P **Pg** **04 07 59.4 -1.7**
ITM S **Sg** **04 08 10.0 -4.2**
ITM *e*Sb **Sb** **04 08 14.7 +0.2**
VLI Veliai 1.01 57 *e*PG **Pg** **04 07 59.5 -1.6**
VLI *e*SB **Sg** **04 08 14.9 +0.6**
VLI Veliai 1.01 57 *e*Pg **Pg** **04 07 59.5 -1.6**
VLI *e*Sb **Sg** **04 08 14.9 +0.6**
VLX Vlachokerasia 1.27 18 *e*PN **Pn** **04 08 03.7 -1.6**
VLX *e*SB **Sb** **04 08 23.0 +1.1**
VLX Vlachokerasia 1.27 18 P **Pn** **04 08 03.6 -1.8**
VLX S **Sb** **04 08 17.6 -4.3**
VLX Vlachokerasia 1.27 18 P **Pn** **04 08 03.6 -1.8**
VLX S **Sb** **04 08 17.6 -4.3**
VLX *e*Sb **Sb** **04 08 23.0 +1.1**
DID Didima 1.72 39 *e*PG **Pn** **04 08 12.6 +1.0**
DID *e*SN **Sn** **04 08 37.0 +3.3**
DID Didima 1.72 39 *e*Pg **Pn** **04 08 12.6 +1.0**
DID *e*Sn **Sn** **04 08 37.0 +3.3**
GUR Goura 1.80 12 *e*PN **Pn** **04 08 13.4 +0.7**
GUR Goura 1.80 12 P **Pn** **04 08 13.3 +0.6**
GUR Goura 1.80 12 *e*Pn **Pn** **04 08 13.4 +0.7**
KARN Karanos 1.83 114 *e*PG **Pn** **04 08 12.9 -0.2**
KARN Karanos 1.83 114 *e*Pg **Pn** **04 08 12.9 -0.2**
VAM Vamos 2.03 111 *e*PN **Pn** **04 08 15.5 -0.4**
VAM Vamos 2.03 111 *e*Pn **Pn** **04 08 15.5 -0.4**
NAIG Nisos Aigina 2.04 39 *e*PN **Pn** **04 08 16.7 +0.6**
NAIG Nisos Aigina 2.04 39 *e*Pn **Pn** **04 08 16.7 +0.6**
LTK Loutraki 2.04 25 *e*PN **Pn** **04 08 17.1 +1.0**
LTK Loutraki 2.04 25 P **Pn** **04 08 16.2 +0.1**
LTK Loutraki 2.04 25 P **Pn** **04 08 16.2 +0.1**
LTK Loutraki 2.04 25 *e*Pn **Pn** **04 08 17.1 +1.0**
LAKA Lakka 2.07 2 P **Pn** **04 08 17.7 +1.3**
LAKA S **Sn** **04 08 39.9 -2.3**
LAKA Lakka 2.07 2 P **Pn** **04 08 17.7 +1.3**
LAKA S **Sn** **04 08 39.9 -2.3**
TRIZ Trizonia 2.20 4 P **Pn** **04 08 18.9 +0.7**
TRIZ S **Sn** **04 08 44.0 -1.4**
TRIZ Trizonia 2.20 4 P **Pn** **04 08 18.9 +0.7**
TRIZ S **Sn** **04 08 44.0 -1.4**
KALE Kalithea 2.23 5 P **Pn** **04 08 19.6 +1.0**
KALE Kalithea 2.23 5 P **Pn** **04 08 19.6 +1.0**
VLS Valsamata 2.25 333 *e*PN **Pn** **04 08 19.7 +0.8**
VLS Valsamata 2.25 333 *e*Pn **Pn** **04 08 19.7 +0.8**
EFP Efpalio 2.25 1 *e*PN **Pn** **04 08 20.5 +1.5**
EFP Efpalio 2.25 1 *e*Pn **Pn** **04 08 20.5 +1.5**
VLY Voula,Athens 2.27 42 *e*PN **Pn** **04 08 21.0 +1.8**
VLY Voula,Athens 2.27 42 *e*Pn **Pn** **04 08 21.0 +1.8**
IDI Anoyia 2.60 109 *e*Pn **Pn** **04 08 23.4 -0.4**
IDI Anoyia 2.60 109 *e*Pn **Pn** **04 08 23.4 -0.3**
AGG Agios Georgios 2.87 7 *e*PB **Pn** **04 08 29.0 +1.6**
AGG Agios Georgios 2.87 7 *e*Pb **Pn** **04 08 29.0 +1.6**
LAST Lasithi 3.10 108 *e*PN **Pn** **04 08 30.5 -0.1**
LAST Lasithi 3.10 108 *e*Pn **Pn** **04 08 30.5 -0.1**
TIP Timpagrande 5.05 308 *e*Pn **Pn** **04 08 55.3 -2.1**
TIP Timpagrande 5.05 308 *e*Pn **Pn** **04 08 55.3 -2.1**

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*ISCJB **06** 04:08:07.4±0.7, 17°.63N±0°.05×94°.96W±0°.03, h134km±7km, Error ellipse: s-maj=8.2km s-min=4.2km az=22.4*
*MEX **06** 04:08:09.0±1.1, 17°.66N×94°.95W, h142km±8km, MD4.1*
*NEIC **06** 04:08:09.0, 17°.66N×94°.96W, h142km, MD4.1(MEX), After MEX.*
ISC 06 04:08:08.3±0.7, 17°.63N±0°.05×94°.96W±0°.03, h134km±8km, n30, σ0s90/55, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.54**	**173**	*i* P	**Pn**	**04 08 28.7**	**+0.6**
CMIG *i* S **Sn** **04 08 43.3 +0.4**
CMIG Matias Romero 0.54 173 *i* P **Pn** **04 08 28.7 +0.6**
CMIG *i* S **Sn** **04 08 43.3 +0.4**
TUIG Tuzandepetl 0.65 51 *i* P **Pn** **04 08 28.8 +0.1**
TUIG *i* S **Sn** **04 08 44.4 +0.2**
TUIG Tuzandepetl 0.65 51 *i* P **Pn** **04 08 28.8 +0.1**
TUIG *i* S **Sn** **04 08 44.4 +0.2**
VHO Vista Hermosa 1.78 252 *i* P **Pn** **04 08 40.7 +0.8**
VHO *i* S **Sn** **04 09 05.1 +1.1**
VHO Vista Hermosa 1.78 252 *i* P **Pn** **04 08 40.7 +0.8**
VHO *i* S **Sn** **04 09 05.1 +1.1**
TGIG 1.95 115 *i* P **Pn** **04 08 42.1 +0.3**
TGIG *i* S **Sn** **04 09 06.6 -0.9**
HUIG Huatulco 2.15 211 *i* P **Pn** **04 08 43.1 -1.3**
HUIG *i* S **Sn** **04 09 11.7 -0.3**
HUIG Huatulco 2.15 211 *i* P **Pn** **04 08 43.1 -1.3**
HUIG *i* S **Sn** **04 09 11.7 -0.3**
TPIG Tehuac#an 2.42 289 *i* P **Pn** **04 08 48.0 +0.4**
TPIG *i* S **Sn** **04 09 17.8 -0.1**
LVIG Laguna Verde 2.50 327 *e*P **Pn** **04 08 47.6 -1.0**
LVIG *i* S **Sn** **04 09 16.9 -2.9**
LVIG Laguna Verde 2.50 327 *e*P **Pn** **04 08 47.6 -1.0**
LVIG *i* S **Sn** **04 09 16.9 -2.9**
PCIG 2.54 139 *i* P **Pn** **04 08 49.6 +0.4**
PCIG *i* S **Sn** **04 09 20.3 -0.2**
UTMO Huajuapan 2.72 275 *i* P **Pn** **04 08 51.8 +0.4**
UTMO *i* S **Sn** **04 09 24.1 -0.6**
CCIG Comitan 3.01 116 *i* P **Pn** **04 08 55.5 +0.2**
CCIG *i* S **Sn** **04 09 31.2 -0.2**
CCIG Comitan 3.01 116 *i* P **Pn** **04 08 55.5 +0.2**
CCIG *i* S **Sn** **04 09 31.2 -0.2**
PNIG Pinotepa 3.27 248 *i* P **Pn** **04 08 56.6 -2.0**
PNIG *i* S **Sn** **04 09 37.6 +0.2**
PNIG Pinotepa 3.27 248 *i* P **Pn** **04 08 56.6 -2.0**
PNIG *i* S **Sn** **04 09 37.6 +0.2**
THIG 3.74 136 *e*P **Pn** **04 09 05.0 +0.3**
THIG *i* S **Sn** **04 09 48.0 -0.5**
PPM Popocatepetl 3.77 293 *i* P **Pn** **04 09 06.0 +0.9**
PPM *i* S **Sn** **04 09 55.7 +6.6**
PPM Popocatepetl 3.77 293 *i* P **Pn** **04 09 06.0 +0.9**
PPM *i* S **Sn** **04 09 55.7 +6.6**
IIO Organos 4.07 299 *i* P **Pn** **04 09 11.1 +2.0**
IIO *i* S **Sn** **04 09 55.1 -1.2**
IIO Organos 4.07 299 *i* P **Pn** **04 09 11.1 +2.0**
IIO *i* S **Sn** **04 09 55.1 -1.2**
MZVM 4.34 292 *i* P **Pn** **04 09 14.4 +1.7**
PLIG Platanillo 4.39 281 *i* P **Pn** **04 09 13.7 +0.4**
PLIG Platanillo 4.39 281 *i* P **Pn** **04 09 13.7 +0.4**
ACX Acapulco 4.80 262 *e*P **Pn** **04 09 14.7 -4.1**
ACX Acapulco 4.80 262 *e*P **Pn** **04 09 14.7 -4.1**
CAIG El Cayaco 5.10 264 *e*P **Pn** **04 09 22.9 0.0**
CAIG *i* S **Sn** **04 10 20.1 -0.8**
CAIG El Cayaco 5.10 264 *e*P **Pn** **04 09 22.9 0.0**
CAIG *i* S **Sn** **04 10 20.1 -0.8**

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*ISCJB **06** 04:11:17.0±1.0, 23°.11N±0°.10×100°.6E±0°.2, h10km, Error ellipse: s-maj=27.3km s-min=6.1km az=28.0*
*BJI **06** 04:11:22.3, 22°.88N×100°.62E, h30km, ML3.5/5*
ISC 06 04:11:20.2±1.0, 23°.09N±0°.10×100°.7E±0°.2, h10km, n4, σ0s97/7, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.77**	**42**	Pg	**Pg**	**04 12 13.1**	**-0.1**
KMI Sg **Sg** **04 12 49.4 +0.3**
KMI smax
comp=N,59nm,1.0s
KMI smax
comp=E,63nm,0.7s
CHRT Chiangrai 3.31 195 PG **Pg** **04 12 22.0 -1.6**
CHRT SG **Pg** **04 12 22.0 -1.6**
CHG Chiang Mai 4.55 201 ⇑P **Pg** **04 12 49.2 +1.8**
comp=E,16nm,0.6s
CD2 Chengdu 8.26 19 Pn **Pn** **04 13 19.8 -0.3**
CD2 Sn **Sn** **04 14 53.4 -0.1**
CD2 smax
comp=E,65nm,0.7s
CD2 LR LR
comp=N,170nm,5.3s
CD2 LR LR
comp=Z,150nm,6.5s

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*ISCJB **06** 04:12:33.7±0.6, 67°.27S±0°.06×112°.3E±0°.2, h10km, mb4.6/10, MS4.0/6, Error ellipse: s-maj=10.6km s-min=7.7km az=156.4*
*IDC **06** 04:12:33.8±1.0, 67°.25S×112°.40E, h0km, mb4.5/5, mb1 4.6/6, mb1mx4.3/13, mbtmp4.4/6, ML4.3/1, MS4.0/7, Ms1 4.0/7, ms1mx3.7/16, Error ellipse: s-maj=45.3km s-min=20.3km az=116.0*
*NEIC **06** 04:12:34.5±0.7, 67°.35S×112°.46E, h10km, mb4.7/4, Error ellipse: s-maj=17.9km s-min=12.6km az=90.0*
ISC 06 04:12:35.4±0.6, 67°.27S±0°.06×112°.2E±0°.2, h10km, n26, σ0s78/23, mb4.6/10, MS4.0/6, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.19**	**325**	*e*Pn	**Pn**	**04 12 57.8**	**-0.3**
CASY *e*Sg **Sg** **04 13 14.4 +0.7**
SBA Scott Base 18.52 147 *e*Pn **Pn** **04 16 46.6 -4.9**
40nm,1.7s
MAW Mawson 18.54 246 P **Pn** **04 16 50.9 -1.0**
1.0nm,0.3s,baz=114,slow=12,SNR=18
MAW S **Sn** **04 20 03.9 -15**
0.3nm,0.3s,baz=319,slow=20,SNR=3.3
MAW LR LR 04 24 08.8
comp=Z,484nm,19.1s,baz=190,slow=37
MAW Mawson 18.54 246 *e*P **Pn** **04 16 50.6 -1.3**
MAW *e*S **Sn** **04 20 03.1 -16**
QSPA South Pole Qui 22.81 180 P **P** **04 17 37.3 -0.5**
38nm,0.9s,mb4.8,baz=332,slow=6.2,SNR=37
QSPA LR LR 04 27 09.3
comp=Z,475nm,20.0s,MS3.9,baz=330,slow=38
QSPA South Pole Qui 22.81 180 *e*P **P** **04 17 37.8 +0.1**
60nm,1.1s,mb4.9
NWAO Narrogin (SRO) 34.50 7 LR LR 04 30 30.9
comp=Z,163nm,19.0s,MS3.8,baz=197,slow=31
VNA2 Neumayer--Watz 36.19 209 *e* **P** **04 19 38.5 +1.0**
baz=136,slow=6.5
VNA3 Neumayer Olymp 36.35 208 *e* **P** **04 19 39.5 +0.7**
FORT Forrest 37.73 23 *e*P **P** **04 19 50.0 -0.9**
9.1nm,0.7s,mb4.6
FORT Forrest 37.73 23 *e*P **P** **04 19 50.2 -0.7**
10nm,0.8s,mb4.6
YNG Young 39.06 51 *e*P **P** **04 20 03.3 +1.2**
1.5nm,0.7s,mb3.8
STKA Stephens Creek 39.44 41 *e*P **P** **04 20 05.4 +0.1**
6.6nm,0.8s,mb4.4
STKA Stephens Creek 39.44 41 P **P** **04 20 04.0 -1.3**
7.7nm,0.6s,mb4.6,baz=192,slow=7.2,SNR=19
STKA LR LR 04 32 47.1
comp=Z,231nm,18.4s,MS4.0,baz=204,slow=31
MEEK Meekatharra 40.84 9 *e*P **P** **04 20 16.7 -0.2**
6.2nm,0.6s,mb4.4
QLP Quilpie 45.16 42 *e*P **P** **04 20 52.8 +0.9**
ASAR Alice Springs 45.66 28 P **P** **04 20 55.1 -0.8**
8.4nm,0.7s,mb4.8,baz=194,slow=6.9,SNR=70
RMQ Roma 46.49 47 *e*P **P** **04 21 03.4 +1.0**
20nm,1.1s,mb5.0
WRA Warramunga Arr 49.37 28 P **P** **04 21 24.1 -0.7**
7.3nm,0.8s,mb4.7,baz=193,slow=6.5,SNR=25
WRAB Tennant Creek 49.38 28 *e*P **P** **04 21 24.6 -0.2**
6.5nm,0.8s,mb4.7
FITZ Fitzroy Crossi 49.90 17 P **P** **04 21 28.3 -0.5**
2.4nm,1.0s,mb4.2,baz=150,slow=10,SNR=3.0
BOSA Boshof 62.80 261 LR LR 04 45 53.2
comp=Z,127nm,21.4s,MS4.1,baz=161,slow=32
CPUP Villa Florida 86.36 189 LR LR 05 05 07.5
comp=Z,122nm,21.5s,MS4.3,baz=174,slow=36
LPAZ La Paz 96.69 180 LR LR 05 09 17.1
comp=Z,72nm,20.4s,MS4.1,baz=125,slow=35
PDAR Pinedale Array 146.81 116 PKPbc PKPbc 04 32 17.4 +0.9
0.9nm,0.5s,baz=156,slow=4.2,SNR=8.1
ARCES ARCESS Array B 148.72 317 PKPbc PKPbc 04 32 21.9 +1.0
5.7nm,1.1s,baz=108,slow=2.9,SNR=5.5

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*ISCJB **06** 04:16:04.6±1.2, 67°.44S±0°.09×112°.0E±0°.3, h10km, mb4.1/4, Error ellipse: s-maj=18.1km s-min=10.8km az=151.5*
*NEIC **06** 04:16:06.3±1.1, 67°.45S×111°.99E, h10km, Error ellipse: s-maj=17.2km s-min=14.7km az=138.0*
*IDC **06** 04:16:06.5±1.4, 67°.01S×111°.21E, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.2/12, mbtmp4.2/5, Error ellipse: s-maj=57.7km s-min=23.0km az=117.0*
ISC 06 04:16:06.4±1.2, 67°.44S±0°.09×112°.0E±0°.3, h10km, n6, σ0s31/7, mb4.1/4, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.29**	**334**	*e*Pg	**Pg**	**04 16 31.3**	**+0.2**
CASY *e*Sg **Sg** **04 16 47.7 -0.1**
MAW Mawson 18.38 247 P **Pn** **04 20 20.9 -0.1**
0.4nm,0.3s,baz=92,slow=12,SNR=5.2
QSPA South Pole Qui 22.64 180 P **P** **04 21 13.5 +6.6**
5.2nm,0.8s,mb4.0,baz=309,slow=8.7,SNR=2.8
STKA Stephens Creek 39.63 41 P **P** **04 23 37.3 -0.6**
3.2nm,0.7s,mb4.2,baz=174,slow=4.5,SNR=5.7
ASAR Alice Springs 45.86 29 P **P** **04 24 28.9 +0.5**
2.3nm,0.7s,mb4.2,baz=194,slow=6.9,SNR=13
WRA Warramunga Arr 49.57 28 P **P** **04 24 57.4 +0.1**
1.6nm,0.7s,mb4.2,baz=192,slow=6.7,SNR=5.2

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*IDC **06** 04:17:09.8±3.8, 67°.07S×111°.46E, h0km, mb4.3/4, mb1 4.4/4, mb1mx4.2/11, mbtmp4.3/4, Error ellipse: s-maj=196.3km s-min=27.5km az=104.0*
*ISCJB **06** 04:17:10.9±1.1, 67°.1S±0°.1×112°.7E±0°.3, h10km, mb4.3/5, Error ellipse: s-maj=20.8km s-min=8.9km az=38.3*
*NEIC **06** 04:17:12.0±0.9, 67°.14S×112°.37E, h10km, mb4.4/1, Error ellipse: s-maj=19.2km s-min=12.8km az=61.0*
ISC 06 04:17:12.2±1.0, 67°.2S±0°.1×112°.6E±0°.3, h10km, n8, σ0s80/9, mb4.3/5, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.19**	**316**	*e*Pg	**Pg**	**04 17 33.7**	**-1.2**
CASY *e*Sg **Sg** **04 17 51.1 +0.8**
QSPA South Pole Qui 22.93 180 P **P** **04 22 16.1 +0.3**
23nm,0.9s,mb4.6,baz=357,slow=17,SNR=4.2
QSPA South Pole Qui 22.93 180 P **P** **04 22 16.1 +0.3**
STKA Stephens Creek 39.26 41 P **P** **04 24 41.4 +0.9**
2.5nm,0.6s,mb4.2,baz=195,slow=3.9,SNR=7.2
STKA Stephens Creek 39.26 41 P **P** **04 24 41.4 +0.9**
ASAR Alice Springs 45.49 28 P **P** **04 25 31.9 +0.5**
2.9nm,0.7s,mb4.2,baz=193,slow=7.3,SNR=11
WRA Warramunga Arr 49.20 27 P **P** **04 26 00.1 -0.2**
1.7nm,0.6s,mb4.2,baz=193,slow=6.7,SNR=3.1
WRAB Tennant Creek 49.22 27 P **P** **04 25 59.3 -1.1**
3.3nm,0.8s,mb4.4

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*ISCJB **06** 04:27:56.4±0.8, 67°.32S±0°.07×112°.2E±0°.2, h10km, mb4.4/5, Error ellipse: s-maj=14.4km s-min=8.0km az=153.2*
*IDC **06** 04:27:56.9±1.2, 67°.15S×111°.64E, h0km, mb4.4/4, mb1 4.4/5, mb1mx4.2/12, mbtmp4.3/5, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/14, Error ellipse: s-maj=53.9km s-min=21.2km az=115.0*
*NEIC **06** 04:27:58.5±0.6, 67°.24S×112°.22E, h10km, mb4.4/1, Error ellipse: s-maj=14.0km s-min=11.4km az=88.0*
ISC 06 04:27:58.5±0.8, 67°.29S±0°.07×112°.2E±0°.2, h10km, n12, σ0s76/15, mb4.4/5, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.21**	**326**	*e*Pg	**Pg**	**04 28 21.4**	**-0.4**
CASY *e*Sg **Sg** **04 28 38.1 +0.7**
MAW Mawson 18.53 246 P **Pn** **04 32 12.9 -2.0**
0.3nm,0.3s,baz=122,slow=14,SNR=7.3
MAW S **Sn** **04 35 25.6 -16**
0.1nm,0.3s,baz=67,slow=15,SNR=2.3
MAW Mawson 18.53 246 *e*Pn **Pn** **04 32 15.0 +0.1**
MAW S **Sn** **04 35 25.6 -16**
QSPA South Pole Qui 22.79 180 P **P** **04 33 02.1 +1.5**
16nm,0.9s,mb4.5,baz=310,slow=9.2,SNR=18
QSPA S **S** **04 37 02.5 -6.9**
1.9nm,0.8s,baz=334,slow=18,SNR=3.2
QSPA LR LR 04 42 32.8
comp=Z,88nm,19.8s,baz=322,slow=38
QSPA South Pole Qui 22.79 180 P **P** **04 33 02.1 +1.5**
QSPA S **S** **04 37 02.5 -6.9**
STKA Stephens Creek 39.45 41 P **P** **04 35 28.5 0.0**
3.7nm,0.5s,mb4.3,baz=184,slow=6.3,SNR=12
STKA Stephens Creek 39.45 41 P **P** **04 35 28.5 0.0**
ASAR Alice Springs 45.68 28 P **P** **04 36 19.1 -0.1**

4.6nm,0.8s,mb4.5,baz=195,slow=7.1,SNR=57
WRA Warramunga Arr 49.39 28 P **P 04 36 47.7 -0.4**
2.9nm,0.7s,mb4.4,baz=193,slow=6.5,SNR=12
WRAB Tennant Creek 49.40 28 *eP* **P 04 36 47.9 -0.2**
3.1nm,0.8s,mb4.4
PDAR Pinedale Array 146.80 116 PKPbc PKPbc 04 47 40.8 +1.2
0.5nm,0.6s,baz=153,slow=3.4,SNR=6.3
YKA Yellowknife Ar 159.98 81 PKP PKPdf 04 47 54.0 -1.9
0.2nm,1.0s,baz=256,slow=2.8,SNR=3.6

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*ISK **06** 04:28:50.6, 36°.32N×34°.01E, h5km, MD3.5*
*DDA **06** 04:28:50.5, 36°.34N×34°.03E, h7km±3km, Md3.3*
*ISCJB **06** 04:28:51.6±0.4, 36°.31N±0°.03×34°.01E±0°.03, h10km, Error ellipse: s-maj=5.1km s-min=3.2km az=168.1*
*CSEM **06** 04:28:51.6±0.1, 36°.30N×34°.01E, h4km±1km, MD3.5, Error ellipse: s-maj=2.0km s-min=1.6km az=9.0*
ISC 06 04:28:51.3±0.7, 36°.30N±0°.03×34°.03E±0°.03, h2km±5km, n50, σ0°73/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKL	**Isikli**	**0.28**	**258**	*e*PG	**Pg**	**04 28 57.1**	**+0.4**
IKL	**Isikli**	**0.28**	**258**	*e*Pg	**Pg**	**04 28 57.1**	**+0.4**
MERS	**Mersin**	**0.69**	**35**	*e*PG	**Pg**	**04 29 03.9**	**-0.7**
MERS				*e*SG	**Sg**	**04 29 14.1**	**+0.5**
MERS	**Mersin**	**0.69**	**35**	*e*Pg	**Pg**	**04 29 03.9**	**-0.7**
MERS				*e*Sg	**Sg**	**04 29 14.1**	**+0.5**
EREN	**Erenkoy**	**0.78**	**171**	*e*PG	**Pg**	**04 29 06.5**	**+0.3**
EREN	**Erenkoy**	**0.78**	**171**	*e*Pg	**Pg**	**04 29 06.5**	**+0.4**
ERMK	**Ermenek**	**0.96**	**291**	*i* P	**Pg**	**04 29 10.2**	**+0.4**
ERMK				*i* S	**Sg**	**04 29 22.6**	**+0.4**
ERMK	**Ermenek**	**0.96**	**291**	*i* P	**Pg**	**04 29 10.2**	**+0.5**
ERMK				*i* S	**Sg**	**04 29 22.6**	**+0.4**
LFK	**Lefkose**	**1.09**	**202**	*e*PN	**Pg**	**04 29 11.8**	**-0.4**
LFK	**Lefkose**	**1.09**	**202**	*e*Pn	**Pg**	**04 29 11.9**	**-0.3**
KRTS	**Karatas**	**1.12**	**75**	*e*PN	**Pn**	**04 29 12.9**	**-1.1**
KRTS				*e*SN	**Sn**	**04 29 29.0**	**-1.0**
KRTS	**Karatas**	**1.12**	**75**	*e*Pn	**Pn**	**04 29 13.0**	**-1.0**
KRTS				*e*Sn	**Sn**	**04 29 29.0**	**-1.0**
GULE	**Gulek**	**1.15**	**31**	*i* P	**Pg**	**04 29 11.9**	**-1.5**
GULE				*i* S	**Sg**	**04 29 28.4**	**0.0**
GULE	**Gulek**	**1.15**	**31**	*i* P	**Pg**	**04 29 11.9**	**-1.5**
GULE				*i* S	**Sg**	**04 29 28.4**	**0.0**
KARA	**Karaisali**	**1.27**	**40**	*e*PN	**Pn**	**04 29 14.8**	**-1.2**
KARA	**Karaisali**	**1.27**	**40**	*e*Pn	**Pn**	**04 29 14.8**	**-1.2**
GAZI	**Gazipasa**	**1.38**	**268**	*i* P	**Pn**	**04 29 16.6**	**-1.0**
GAZI				*i* S	**Sb**	**04 29 36.6**	**+0.6**
GAZI	**Gazipasa**	**1.38**	**268**	*i* P	**Pn**	**04 29 16.6**	**-1.0**
GAZI				*i* S	**Sb**	**04 29 36.6**	**+0.6**
YURE	**YUREGIR**	**1.40**	**67**	*i* P	**Pn**	**04 29 16.9**	**-0.9**
YURE				*i* S	**Sb**	**04 29 38.3**	**+1.9**
YURE	**YUREGIR**	**1.40**	**67**	*i* P	**Pn**	**04 29 16.9**	**-0.9**
YURE				*i* S	**Sb**	**04 29 38.3**	**+1.9**
HDMB	**Hadim**	**1.41**	**299**	*e*PN	**Pn**	**04 29 17.0**	**-1.0**
HDMB	**Hadim**	**1.41**	**299**	*e*Pn	**Pn**	**04 29 17.0**	**-0.9**
LEF	**Lefka**	**1.50**	**219**	*e*PN	**Pn**	**04 29 18.8**	**-0.4**
LEF	**Lefka**	**1.50**	**219**	*e*Pn	**Pn**	**04 29 18.8**	**-0.4**
YAYL	**Yayladag**	**1.70**	**98**	*i* P	**Pn**	**04 29 22.6**	**+0.6**
YAYL				*i* S	**Sn**	**04 29 44.8**	**+0.4**
YAYL	**Yayladag**	**1.70**	**98**	*i* P	**Pn**	**04 29 22.6**	**+0.6**
YAYL				*i* S	**Sn**	**04 29 44.8**	**+0.4**
HTY	**Hatay**	**1.72**	**95**	*e*PN	**Pn**	**04 29 22.6**	**+0.4**
HTY	**Hatay**	**1.72**	**95**	*e*Pn	**Pn**	**04 29 22.6**	**+0.4**
KOZT	**Kozan**	**1.86**	**50**	*e*PN	**Pn**	**04 29 24.5**	**+0.2**
SULT	**Sultanhani-AKS**	**1.94**	**348**	*e*PN	**Pn**	**04 29 25.1**	**-0.2**
SULT	**Sultanhani-AKS**	**1.94**	**348**	*e*Pn	**Pn**	**04 29 25.1**	**-0.2**
KONT	**Konya--Tatoy**	**2.12**	**321**	*e*PN	**Pn**	**04 29 27.3**	**-0.4**
KONT	**Konya--Tatoy**	**2.12**	**321**	*e*Pn	**Pn**	**04 29 27.3**	**-0.4**
LADK	**Ladik-KONYA**	**2.32**	**326**	*e*PN	**Pn**	**04 29 30.4**	**0.0**
LADK	**Ladik-KONYA**	**2.32**	**326**	*e*Pn	**Pn**	**04 29 30.4**	**0.0**
KMRS	**Kahramanmaras**	**2.60**	**62**	*e*PN	**Pn**	**04 29 34.8**	**+0.5**
KMRS	**Kahramanmaras**	**2.60**	**62**	*e*Pn	**Pn**	**04 29 34.8**	**+0.5**
KDHN	**Kadinhani**	**2.69**	**326**	*i* P	**Pn**	**04 29 36.0**	**+0.4**
KDHN	**Kadinhani**	**2.69**	**326**	*i* P	**Pn**	**04 29 36.0**	**+0.4**
SUTC	**Sutluce-Ispart**	**2.70**	**297**	*e*PN	**Pn**	**04 29 35.9**	**+0.2**
SUTC	**Sutluce-Ispart**	**2.70**	**297**	*e*Pn	**Pn**	**04 29 35.9**	**+0.2**
GAZ	**Gaziantep**	**2.70**	**70**	*e*PN	**Pn**	**04 29 36.5**	**+0.7**
GAZ	**Gaziantep**	**2.70**	**70**	*e*Pn	**Pn**	**04 29 36.5**	**+0.7**
SARI	**SarD1z-Kayseri**	**3.19**	**41**	*e*PN	**Pn**	**04 29 38.0**	**-4.5**
ELL	**Elmali**	**3.35**	**279**	*e*PN	**Pn**	**04 29 44.9**	**+0.2**
ELL	**Elmali**	**3.35**	**279**	*e*Pn	**Pn**	**04 29 44.9**	**+0.3**
YOZ	**Yozgat**	**3.49**	**17**	*e*PN	**Pn**	**04 29 47.3**	**+0.7**
YOZ	**Yozgat**	**3.49**	**17**	*e*Pn	**Pn**	**04 29 47.3**	**+0.7**
CORM	**Corum**	**3.90**	**7**	*e*PN	**Pn**	**04 29 53.1**	**+0.9**
CORM	**Corum**	**3.90**	**7**	*e*Pn	**Pn**	**04 29 53.1**	**+0.8**

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*ISCJB **06** 04:36:46.5±0.8, 21°.27N±0°.08×94°.13E±0°.07, h81km±10km, mb3.9/8, Error ellipse: s-maj=16.3km s-min=4.8km az=37.5*
*IDC **06** 04:36:49.0±5.6, 21°.38N×94°.40E, h83km±48km, mb3.6/7, mb1 3.6/8, mb1mx3.3/27, mbtmp3.6/8, ML3.7/1, Error ellipse: s-maj=112.7km s-min=17.1km az=57.0*
*NEIC **06** 04:36:50.7±2.8, 21°.46N×94°.58E, h97km±24km, mb4.0/2, Error ellipse: s-maj=74.2km s-min=12.0km az=56.0*
ISC 06 04:36:48.4±0.7, 21°.29N±0°.08×94°.17E±0°.07, h77km±8km, n25, σ1°15/36, mb3.9/8, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**3.48**	**356**	*e*P	**Pn**	**04 37 45.0**	**+4.7**
IMP				*ex*	x	04 38 05.0	
IMP				*e*S	**Sn**	**04 38 21.0**	**+0.6**
IMP				*ex*	x	04 38 28.0	
SHL	**Shillong**	**4.75**	**334**	||*i*P	**Pn**	**04 37 58.5**	**+1.0**
SHL				*i* S	**Sn**	**04 38 48.5**	**-2.7**
CHTO	**Chiang Mai**	**5.12**	**118**	*e*Pn	**Pn**	**04 38 02.4**	**-0.2**
CHTO				*e*S	**Sn**	**04 38 59.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**5.30**	**121**	P	**Pn**	**04 38 03.9**	**-1.3**
0.7nm,0.3s,baz=306,slow=14,SNR=26							
ODAN	**Odare**	**8.31**	**313**	*e*Sn	**Sn**	**04 40 18.1**	**-0.4**
119nm,0.4s							
TAPN	**Taplejung**	**8.43**	**317**	*e*Pn	**Pn**	**04 38 48.8**	**+1.0**
TAPN				*e*Sn	**Sn**	**04 40 20.5**	**-0.8**
LSA	**Lhasa**	**8.81**	**343**	P	**Pn**	**04 38 50.0**	**+0.1**
RAMN	**Ramite**	**8.92**	**311**	*e*Pn	**Pn**	**04 38 56.3**	**+1.9**
RAMN				*e*Sn	**Sn**	**04 40 31.8**	**-1.4**
35nm,0.4s							
GUN	**Gumba**	**10.01**	**313**	*e*Pn	**Pn**	**04 39 10.6**	**+1.2**
GUN				*e*Sn	**Sn**	**04 40 59.4**	**-0.6**
60nm,0.5s							
PKI	**Pulchoki**	**10.14**	**310**	*e*Pn	**Pn**	**04 39 12.4**	**+1.3**
PKI				*e*Sn	**Sn**	**04 41 02.8**	**-0.2**
28nm,0.4s							
PKIN	**Phulchoki**	**10.15**	**310**	*e*Pn	**Pn**	**04 39 12.1**	**+0.9**
PKIN				*e*Sn	**Sn**	**04 41 02.3**	**-1.0**
50nm,0.4s							
DMN	**Daman**	**10.38**	**309**	*e*Pn	**Pn**	**04 39 16.9**	**+2.6**
DMN				*e*Sn	**Sn**	**04 41 09.2**	**+0.3**
24nm,0.5s							
GKN	**Gorkha**	**10.94**	**310**	*e*Pn	**Pn**	**04 39 22.7**	**+0.6**
GKN				*e*Sn	**Sn**	**04 41 19.5**	**-3.2**
34nm,0.3s							
KOLN	**Koldanda**	**11.58**	**306**	*e*Pn	**Pn**	**04 39 31.3**	**+0.6**
KOLN				*e*Sn	**Sn**	**04 41 35.0**	**-3.2**
60nm,0.6s							
PYUN	**Piuthan**	**12.21**	**306**	*e*Sn	**Sn**	**04 41 52.1**	**-1.5**
20nm,0.6s							
MKAR	**Makanchi Array**	**27.21**	**342**	P	**P**	**04 42 25.1**	**+0.2**
0.6nm,0.5s,mb3.4,baz=146,slow=8.8,SNR=6.9							
KURK	**Kurchatov**	**31.81**	**341**	P	**P**	**04 43 04.8**	**-0.7**
1.3nm,0.5s,mb3.9,baz=151,slow=8.6,SNR=5.2							
KURK	**Kurchatov**	**31.81**	**341**	*e*P	**P**	**04 43 06.0**	**+0.5**
1.2nm,0.6s,mb3.8							
ZALV	**Zalesovo Beam**	**33.38**	**350**	P	**P**	**04 43 18.9**	**-0.2**
2.7nm,0.4s,mb4.4,baz=163,slow=8.2,SNR=13							
BVAR	**Borovoye Array**	**36.57**	**336**	P	**P**	**04 43 45.6**	**-1.0**
0.5nm,0.5s,mb3.8,baz=77,slow=6.4,SNR=3.2							
ABKAR	**Akbulak array**	**38.93**	**324**	*e*P	**P**	**04 44 08.8**	**+2.2**
1.7nm,0.5s,mb4.1							
AKTK	**Aktyubinsk**	**40.62**	**325**	P	**P**	**04 44 21.3**	**+0.8**
AKTO	**Aktyubinsk**	**40.62**	**325**	P	**P**	**04 44 21.3**	**+0.8**
1.6nm,0.4s,mb4.2,baz=122,slow=9.7,SNR=7.8							
WRA	**Warramunga Arr**	**56.77**	**133**	P	**P**	**04 46 23.8**	**-0.9**
0.3nm,0.6s,mb3.5,baz=323,slow=7.5,SNR=2.4							
ASAR	**Alice Springs**	**59.10**	**137**	P	**P**	**04 46 40.5**	**-0.5**
0.2nm,0.3s,mb3.6,baz=311,slow=6.6,SNR=3.3							

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*ISCJB **06** 04:45:37.3±0.6, 45°.76N±0°.04×82°.80E±0°.07, h10km, mb3.6/3, Error ellipse: s-maj=7.4km s-min=5.9km az=178.0*
*IDC **06** 04:45:37.6±1.2, 45°.76N×82°.80E, h0km, mb3.4/2, mb1 3.5/8, mb1mx3.4/30, mbtmp3.4/8, ML3.4/5, Error ellipse: s-maj=18.0km s-min=10.5km az=80.0*
*NNC **06** 04:45:38.8±0.9, 45°.83N×82°.93E, h7km±5km, mb3.7, mpv3.5, Error ellipse: s-maj=5.2km s-min=3.8km az=138.0*
*MOS **06** 04:45:40.6±2.0, 45°.90N×82°.73E, h33km, mb4.5/1, Error ellipse: s-maj=17.2km s-min=10.3km az=91.6*
*BJI **06** 04:45:40.0, 45°.68N×83°.09E, h22km, ML3.4/6*
*NEIC **06** 04:45:41.2±1.6, 45°.94N×82°.63E, h10km, mb3.5/1, Error ellipse: s-maj=24.3km s-min=9.1km az=116.0*
ISC 06 04:45:39.8±0.6, 45°.81N±0°.03×82°.75E±0°.07, h10km, n34, σ1°38/46, mb3.6/3, 9C-9D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.03**	**342**	||P	**Pg**	**04 45 59.3**	**-0.4**
38nm,0.4s,baz=152,slow=17,SNR=2032							
MK31				||S	**Sg**	**04 46 13.7**	**+0.7**
121nm,0.2s,baz=156,slow=30,SNR=38							
MKAR	**Makanchi Array**	**1.03**	**342**	Pg	**Pg**	**04 45 59.5**	**-0.1**
47nm,0.3s,baz=156,slow=16,SNR=686							
MKAR				Lg		04 46 12.9	
253nm,0.3s,baz=160,slow=31,SNR=73							
WMQ	**Urumqi**	**4.04**	**118**	*e*Pn	**Pn**	**04 46 33.5**	**-8.2**
WMQ				Sg	**Sg**	**04 47 40.6**	**-9.1**
WMQ				smax			
comp=N,41nm,0.5s							
WMQ				smax			
comp=E,57nm,0.7s							
UKR	**Ust'-Kan**	**5.30**	**14**	*e*PN	**Pn**	**04 47 00.8**	**+1.8**
UKR				*e*		04 48 03.0	
KURBB	**Kurchatov Arra**	**5.58**	**331**	||Pn	**Pn**	**04 47 03.0**	**+0.2**
comp=E,1.0nm,0.5s							
KURBB				||Sn	**Sn**	**04 48 08.6**	**+1.8**
comp=E,4.5nm,0.6s							
KURBB				⇑Lg		04 48 39.4	
comp=E,27nm,0.6s							
KURK	**Kurchatov**	**5.63**	**332**	⇑Pn	**Pn**	**04 47 03.5**	**0.0**
comp=E,2.8nm,0.4s							
KURK				⇑Sn	**Sn**	**04 48 09.8**	**+1.7**
comp=E,8.8nm,0.4s							
KURK				||Lg		04 48 38.0
comp=E,86nm,0.8s							
KURK	**Kurchatov**	**5.63**	**332**	Pn	**Pn**	**04 47 03.5**	**0.0**
comp=E,0.3nm,0.3s,baz=141,slow=13,SNR=14							
KURK				Lg		04 48 36.1	
comp=E,3.1nm,0.3s,baz=168,slow=30,SNR=7.7							
KURK	**Kurchatov**	**5.63**	**332**	*e*Pn	**Pn**	**04 47 03.5**	**+0.1**
KURK				*e*Sg	**Sg**	**04 48 38.9**	**-1.5**
TKM2	**Tokmak 2**	**5.88**	**243**	⇑Pn	**Pn**	**04 47 08.1**	**+1.1**
comp=E,8.6nm,0.8s							
TKM2				⇑Lg		04 48 48.9	
comp=E,40nm,0.8s							
TKM2	**Tokmak 2**	**5.88**	**243**	*e*PN	**Pn**	**04 47 08.8**	**+1.8**
TKM2				*e*		04 48 42.9	
TKM2				pmax	pmax		
comp=Z,3.0nm,0.3s							
TKM2	**Tokmak 2**	**5.88**	**243**	*e*Pn	**Pn**	**04 47 08.8**	**+1.8**
comp=Z,2.8nm,0.3s							
TKM2				*e*Sg	**Sg**	**04 48 42.9**	**-5.7**
AAK	**Ala-Archa**	**6.73**	**245**	Pn	**Pn**	**04 47 20.8**	**+2.2**
comp=Z,0.0nm,0.3s,baz=80,slow=11,SNR=2.5							
AAK				Lg		04 49 11.1	
comp=Z,0.0nm,0.3s,baz=199,slow=22,SNR=7.5							
AAK	**Ala-Archa**	**6.73**	**245**	*e*Pn	**Pn**	**04 47 18.9**	**+0.3**
comp=Z,4.8nm,0.7s							
AAK				*e*Sg	**Sg**	**04 49 09.1**	**-6.5**
UCH	**Uchtor**	**6.93**	**242**	*e*Pn	**Pn**	**04 47 25.1**	**+3.8**
comp=Z,6.5nm,0.7s							
EKS2	**Erkin-Say**	**7.17**	**247**	*e*Pn	**Pn**	**04 47 25.5**	**+0.8**
AML	**Almayashu**	**7.49**	**244**	*e*Pn	**Pn**	**04 47 31.4**	**+2.3**
AML				*e*Sg	**Sg**	**04 49 39.2**	**-1.1**
ELT	**Yel'tsovka**	**7.79**	**16**	*e*P	**Pn**	**04 47 33.2**	**0.0**
ELT				*e*		04 49 00.3	
ZALV	**Zalesovo Beam**	**8.25**	**9**	Pn	**Pn**	**04 47 38.3**	**-1.2**
comp=Z,0.9nm,0.3s,baz=191,slow=15,SNR=11							
ZALV				Lg		04 49 55.4	
comp=Z,0.5nm,0.3s,baz=195,slow=27,SNR=3.3							
KK31	**Karatay Array**	**9.16**	**257**	⇑Pn	**Pn**	**04 47 52.3**	**+0.4**
comp=Z,0.4nm,0.3s							
KK31				||Lg		04 50 33.7
comp=Z,3.4nm,0.4s							
VOSK	**Vostochnaya**	**10.33**	**316**	⇑Sn	**Sn**	**04 50 07.8**	**+4.1**
comp=Z,3.3nm,0.6s							
VOSK				||Lg		04 51 10.3
comp=Z,8.6nm,0.8s							
BVA0	**Borovoye Array**	**10.80**	**316**	||Sn	**Sn**	**04 50 19.5**	**+4.4**
comp=Z,0.4nm,0.5s,baz=127,slow=24,SNR=5.1							
BVA0				⇑Lg		04 51 25.2	
comp=Z,3.5nm,0.8s							
BVAR	**Borovoye Array**	**10.80**	**316**	Pn	**Pn**	**04 48 13.4**	**-1.0**
comp=Z,0.3nm,0.3s,baz=114,slow=14,SNR=3.1							
BVAR				Sn	**Sn**	**04 50 11.9**	**-3.3**
comp=Z,1.0nm,0.3s,baz=121,slow=23,SNR=8.1							
BVAR				Lg		04 51 21.7	
comp=Z,0.7nm,0.3s,baz=122,slow=27,SNR=4.5							
BVAR	**Borovoye Array**	**10.80**	**316**	Pn	**Pn**	**04 48 13.4**	**-1.0**
BVAR				Sn	**Sn**	**04 50 11.9**	**-3.3**
AB31	**Akbulak array**	**15.77**	**291**	⇑P	**Pn**	**04 49 18.8**	**-2.9**
comp=Z,0.4nm,0.3s							
ABKAR	**Akbulak array**	**15.77**	**291**	*e*Pn	**Pn**	**04 49 19.9**	**-1.9**
comp=Z,0.9nm,0.3s							
SONM	**Songino Array**	**16.30**	**74**	Pn	**Pn**	**04 49 27.1**	**-1.5**
comp=Z,0.1nm,0.3s,baz=252,slow=12,SNR=2.6							
AKTK	**Aktyubinsk**	**17.11**	**295**	P	**Pn**	**04 49 38.3**	**-0.6**
AKTK				S	**Sn**	**04 52 41.5**	**-7.6**
AKTO	**Aktyubinsk**	**17.11**	**295**	||P	**Pn**	**04 49 38.9**	**0.0**
comp=Z,0.3nm,0.8s							
AKTO	**Aktyubinsk**	**17.11**	**295**	P	**Pn**	**04 49 38.3**	**-0.6**
comp=Z,0.3nm,0.3s,baz=101,slow=14,SNR=5.6							
AKTO				S	**Sn**	**04 52 41.5**	**-7.6**
comp=Z,0.1nm,0.3s,baz=264,slow=18,SNR=3.6							
INK	**Inuvik**	**63.01**	**14**	P	**P**	**04 56 09.1**	**+2.9**
comp=Z,1.1nm,0.8s,mb4.0,baz=340,slow=9.2,SNR=4.6							
YKA	**Yellowknife Ar**	**71.15**	**8**	P	**P**	**04 56 58.8**	**+0.7**
comp=Z,0.3nm,0.7s,mb3.3,baz=344,slow=6.3,SNR=4.9							
YKA	**Yellowknife Ar**	**71.15**	**8**	P	**P**	**04 56 58.8**	**+0.7**
ASAR	**Alice Springs**	**83.28**	**134**	P	**P**	**04 58 04.8**	**-1.8**
comp=Z,0.3nm,0.7s,mb3.4,baz=333,slow=5.5,SNR=3.6							
ASAR	**Alice Springs**	**83.28**	**134**	P	**P**	**04 58 04.8**	**-1.8**

MAN 06 04:47:38, 17°.59N×122°.56E, h30km, mb4.5, ML3.4, MS3.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.54**	**194**	*e*P	Pb	04 47 49.6	+0.4
PALP				*e*S	Sb	04 47 59.2	+2.5
CAUP	**Cauayan**	**0.96**	**228**	*e*P	Pn	04 47 56.2	+0.8
CAUP				*e*S	Sn	04 48 09.6	+1.6
APYP	**Conner**	**1.29**	**282**	*e*P	Pn	04 48 00.7	+0.8
APYP				*e*S	Sn	04 48 14.2	-2.0
BALP	**Baler**	**2.07**	**207**	*e*P	Pn	04 48 12.7	+1.9

CASC 06 04:49:03.1±1.8, 12°.35N×88°.91W, h13km±10km, MD3.9, ML2.5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**1.23**	**30**	*e*P	Pn	04 49 25.7	-0.4
SNVI	**San Vicente**	**1.25**	**3**	*e*P	Pn	04 49 25.3	-1.0
SNVI				*e*P		04 49 25.5	
SNVI				AML	AML	04 49 48.3	
comp=Z,79nm,0.1s							
BLLM	**Bellamira**	**1.26**	**31**	*e*P	Pn	04 49 25.9	-0.5
BLLM				*e*S	Sb	04 49 43.0	0.0
LFRS	**El Faro**	**1.27**	**353**	*e*P	Pn	04 49 25.6	-1.0
LFRS				*e*S	Sb	04 49 41.7	-1.5
LBRS	**Las Brisas**	**1.38**	**354**	*e*P	Pn	04 49 27.1	-1.0
CNCH	**Conchagua**	**1.39**	**49**	*e*P	Pn	04 49 27.6	-0.7
CNCH				*e*P		04 49 27.6	
BOQS	**Boqueron**	**1.42**	**345**	*e*P	Pn	04 49 28.3	-0.4
BOQS				*e*P		04 49 28.3	
CAHU	**Cacacuatique**	**1.56**	**26**	*e*P	Pn	04 49 30.8	+0.2
CAHU				*e*S	Sn	04 49 51.8	+1.1
CAHU				*e*S	Sn	04 49 52.0	+1.3
CRIN	**San Cristobal**	**1.84**	**79**	*e*P	Pn	04 49 33.8	-0.6
RBDL	**Robledal**	**1.91**	**337**	*e*P	Pn	04 49 36.1	+0.7
MIRN	**Miramar**	**2.15**	**87**	*e*P	Pn	04 49 37.3	-1.3
COPN	**Copaltepe**	**2.27**	**94**	*e*P	Pn	04 49 39.1	-1.1
TGUH	**Tegucigalpa,Un**	**2.32**	**43**	*e*P	Pn	04 49 41.6	+0.6

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*BJI **06** 04:50:11.4, 71°.60N×12°.50W, h10km, mB4.7/8, mb4.7/12, Ms4.6/6, Ms7 4.4/6*
*ISCJB **06** 04:50:12.2±0.2, 71°.38N±0°.02×12°.59W±0°.07, h10km, mb4. 1/37, MS3.5/18, Error ellipse: s-maj=3.7km s-min=3.1km az=136.9*
*CSEM **06** 04:50:12.1±0.2, 71°.44N×12°.37W, h2km, mb4.2/13, Error ellipse: s-maj=5.9km s-min=5.7km az=80.0*
*IDC **06** 04:50:12.3±0.7, 71°.56N×12°.72W, h0km, mb3.8/13, mb1 4.1/18, mb1mx3.9/31, mbtmp3.9/18, ML3.3/4, MS3.6/22, Ms1 3.6/22, ms1mx3.4/42, Error ellipse: s-maj=21.3km s-min=12.8km az=9.0*
*NEIC **06** 04:50:14.4±0.3, 71°.58N×12°.48W, h10km, mb4.3/16, Error ellipse: s-maj=9.3km s-min=6.2km az=211.0*
*BER **06** 04:50:14.3±0.5, 71°.74N×11°.76W, h2km±999km, MD3.4, ML3.4*
*REY **06** 04:50:15.0, 70°.84N×10°.62W, h10km, ML3.0, ML3.2*
ISC 06 04:50:14.5±0.2, 71°.41N±0°.02×12°.64W±0°.08, h10km, (h13km±1.1km: pP-P), n246, σ0°94/250, mb4.1/37, MS3.5/18, 50C-55D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	**Jan Mayen**	**1.36**	**109**	*e*P	**Pn**	**04 50 35.3**	**-4.2**
JMI				*e*S	**Sb**	**04 50 50.9**	**-6.4**
JMI				AML	AML	04 50 58.3	
comp=Z,714nm,0.6s							
JMI	**Jan Mayen**	**1.36**	**109**	*e*P	**Pn**	**04 50 35.3**	**-4.2**
JMI				*e*S	**Sb**	**04 50 52.4**	**-5.0**
JMI	**Jan Mayen**	**1.36**	**109**	*e*P	**Pn**	**04 50 35.3**	**-4.2**
SNR=53							
JMI				*e*S	**Sb**	**04 50 52.4**	**-4.9**
JMIC	**Jan Mayen**	**1.40**	**106**	Pn	**Pn**	**04 50 35.0**	**-5.1**
comp=Z,21nm,0.3s,baz=264,slow=3.3,SNR=7.6							
JMIC				LR	LR	04 51 07.4	
comp=Z,2μm,19.5s,baz=275,slow=37							
JMIC	**Jan Mayen**	**1.40**	**106**	Pn	**Pn**	**04 50 35.0**	**-5.1**
JNW	**Jan Mayen West**	**1.42**	**104**	*e*P	**Pn**	**04 50 35.6**	**-4.7**
JNW				*e*S	**Sn**	**04 50 51.0**	**-7.9**
JNW	**Jan Mayen West**	**1.42**	**104**	*e*P	**Pn**	**04 50 35.6**	**-4.7**
SNR=53							
JNE	**Jan Mayen East**	**1.47**	**105**	*e*P	**Pn**	**04 50 36.6**	**-4.4**
JNE				*e*S	**Sn**	**04 50 52.7**	**-7.5**
JNE				AML	AML	04 51 00.8	
comp=Z,572nm,0.6s							
JNE	**Jan Mayen East**	**1.47**	**105**	*e*P	**Pn**	**04 50 36.6**	**-4.4**
JNE				*e*S	**Sn**	**04 50 52.7**	**-7.5**
JNE	**Jan Mayen East**	**1.47**	**105**	*e*P	**Pn**	**04 50 36.6**	**-4.4**
SNR=53							
SCO	**Scoresbysund**	**3.19**	**257**	*i* P	**Pn**	**04 51 01.1**	**-3.6**
SCO				*i* S	**Sn**	**04 51 36.2**	**-6.5**
SCO	**Scoresbysund**	**3.19**	**257**	*i* P	**Pn**	**04 51 01.1**	**-3.6**
SNR=49							
IGIL	**Gilhagi**	**5.53**	**196**	P	**Pn**	**04 51 34.3**	**-2.4**
IGIL				S	**Sn**	**04 52 38.0**	**-2.2**
IFLA	**Flatey**	**5.60**	**202**	P	**Pn**	**04 51 37.1**	**-0.6**
IFLA				S	**Sn**	**04 52 42.5**	**+0.5**
IHED	**Heoinshofoi**	**5.62**	**200**	P	**Pn**	**04 51 36.0**	**-1.9**
IHED				S	**Sn**	**04 52 40.8**	**-1.6**
DAG	**Danmarks Havn**	**5.63**	**346**	||*i*P	**Pn**	**04 51 34.4**	**-3.8**
IBRE	**Brettingsstaoi**	**5.65**	**202**	P	**Pn**	**04 51 38.0**	**-0.3**
IBRE				S	**Sn**	**04 52 42.7**	**-0.4**
ISIG	**Siglufjorour**	**5.77**	**206**	P	**Pn**	**04 51 40.2**	**+0.2**
IGRA	**Granastaoir**	**5.80**	**200**	P	**Pn**	**04 51 39.7**	**-0.8**
IGRA				S	**Sn**	**04 52 46.7**	**-0.3**
IGRS	**Grimsstaoir**	**5.94**	**194**	P	**Pn**	**04 51 39.9**	**-2.5**
IHRN	**Hraun**	**5.97**	**211**	P	**Pn**	**04 51 44.6**	**+1.8**
IGLU	**Glumsstadir**	**6.52**	**189**	P	**Pn**	**04 51 48.0**	**-2.4**
BORG	**Borgarnes**	**7.43**	**210**	Pn	**Pn

SMF	Signal de Mont	26.05	154	eP	P	04 55 47.9	+0.3
TCF	Toulx Ste Croi	26.18	156	eP	P	04 55 49.1	+0.4
	comp=Z,15nm,1.2s,mb4.1						
TCF	Toulx Ste Croi	26.18	156	eP	P	04 55 49.1	+0.4
	comp=Z,7.6nm,1.2s,mb4.1						
TCF	Toulx Ste Croi	26.18	156	eP	P	04 55 49.1	+0.4
	comp=Z,7.6nm,1.2s,mb4.1						
CABF	La Chapelle	26.42	150	eP	P	04 55 51.8	+0.9
CABF	La Chapelle	26.42	150	eP	P	04 55 51.8	+0.9
SCHQ	Schefferville	28.23	263	LR	LR	05 06 50.8	
	comp=Z,213nm,19.2s,MS3.8,baz=276,slow=35						
KIS	Kishinev	31.23	119	LRM		05 09 44.0	
	comp=Z,300nm,19.0s						
INK	Inuvik	35.11	326	LR	LR	05 14 54.9	
	comp=Z,59nm,18.1s,MS3.4,baz=357,slow=42						
YKA	Yellowknife Ar	36.10	310	P	P	04 57 15.2	-0.6
	comp=Z,2.0nm,0.9s,mb4.1,baz=33,slow=8.8,SNR=23						
YKA				LR	LR	05 11 21.1	
	comp=Z,14nm,20.7s,MS2.7,baz=65,slow=35						
YKA	Yellowknife Ar	36.10	310	P	P	04 57 15.2	-0.6
YKA				LR	LR	05 11 21.1	
YKA	Yellowknife Ar	36.10	310	P	P	04 57 15.2	-0.6
AKTK	Aktyubinsk	37.24	86	P	P	04 57 24.9	-0.8
AKTK				LR	LR	05 12 01.6	
AKTK	Aktyubinsk	37.24	86	P	P	04 57 24.9	-0.8
AKTO	Aktyubinsk	37.24	86	P	P	04 57 24.9	-0.8
	comp=Z,1.6nm,0.7s,mb3.9,baz=326,slow=6.8,SNR=4.3						
AKTO				LR	LR	05 12 01.6	
	comp=Z,129nm,19.3s,MS3.7,baz=163,slow=35						
BVAR	Borovoye Array	38.89	73	P	P	04 57 38.9	-0.7
	comp=Z,1.5nm,0.7s,mb3.8,baz=308,slow=7.4,SNR=6.7						
BVAR				LR	LR	05 14 34.7	
	comp=Z,40nm,19.6s,MS3.2,slow=38						
BVAR	Borovoye Array	38.89	73	P	P	04 57 38.9	-0.6
FFC	Flin Flon	39.32	294	eP	P	04 57 43.3	+0.2
FFC				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
FFC	Flin Flon	39.32	294	eP	P	04 57 43.3	+0.2
	comp=Z,6.8nm,1.1s,mb4.3						
FFC	Flin Flon	39.32	294	eP	P	04 57 43.3	+0.2
	comp=Z,6.8nm,1.1s,mb4.3						
ULM	Lac du Bonnet	41.37	285	P	P	04 58 00.1	0.0
	comp=Z,1.9nm,0.7s,mb3.8,baz=40,slow=6.1,SNR=5.2						
ULM				LR	LR	05 13 59.6	
	comp=Z,107nm,18.6s,MS3.7,baz=48,slow=35						
ULM	Lac du Bonnet	41.37	285	P	P	04 58 00.1	0.0
MALT	Malatya	41.98	114	eP	P	04 58 07.7	+2.4
	comp=Z,5.2nm,1.0s,mb4.1						
ZALV	Zalesovo Beam	42.32	61	LR	LR	05 16 44.6	
	comp=Z,38nm,21.5s,MS3.2,baz=331,slow=38						
DLBC	Dease Lake	43.29	317	LR	LR	05 17 30.2	
	comp=Z,83nm,20.3s,MS3.6,baz=54,slow=38						
KURK	Kurchatov	43.39	68	LR	LR	05 16 49.0	
	comp=Z,57nm,18.7s,MS3.5,baz=235,slow=37						
EDM	Edmonton	43.87	302	eP	P	04 58 20.6	+0.3
EDM	Edmonton	43.87	302	eP	P	04 58 20.6	+0.2
A17A	Triple J Farms	46.96	297	⇑P	P	04 58 44.4	-0.5
	baz=47						
B18A	Beardsley Farm	47.19	296	⇓P	P	04 58 46.4	-0.3
	baz=47						
A16A	West Butte Ran	47.21	297	⇑P	P	04 58 46.9	0.0
	baz=47						
A15A	Johnson Ranch,	47.51	298	⇑P	P	04 58 48.7	-0.5
	baz=47						
EGMT	Eagleton	47.52	295	⇑P	P	04 58 49.5	+0.2
	baz=47						
A14A	Double T Ranch	47.71	299	⇑P	P	04 58 50.3	-0.5
	baz=47,SNR=5.3						
MKAR	Makanchi Array	47.99	67	P	P	04 58 52.0	-1.0
	comp=Z,0.6nm,0.5s,mb3.9,baz=331,slow=7.2,SNR=5.6						
A13A	Flathead Natio	48.02	300	⇓P	P	04 58 52.9	-0.3
	baz=48						
B15A	Bradely Ranch,	48.06	298	⇑P	P	04 58 53.1	-0.4
	baz=48						
C17A	Wharram Farm,	48.16	296	⇓P	P	04 58 54.0	-0.3
	baz=48						
A11A	Hall Mountain,	48.54	301	⇓P	P	04 58 57.1	-0.1
	baz=48						
C15A	Salmond Ranch,	48.56	298	⇓P	P	04 58 57.1	-0.3
	baz=48						
BBB	Bella Bella	48.59	312	LR	LR	05 20 01.7	
	comp=Z,95nm,18.2s,MS3.8,baz=58,slow=37						
E18A	Harlowton	48.88	295	⇓P	P	04 58 59.4	-0.4
	baz=49						
C14A	Swan Lake	48.89	299	⇑P	P	04 58 59.1	-0.8
	baz=49						
BSMT	Bassoo Peak	49.11	299	eP	P	04 59 01.9	+0.4
BSMT	Bassoo Peak	49.11	299	eP	P	04 59 01.9	+0.4
A09A	Danville	49.12	303	⇑P	P	04 59 01.0	-0.6
	baz=49						
C13A	Hot Springs	49.20	299	⇑P	P	04 59 02.1	-0.2
	baz=49,SNR=7.9						
D15A	Lincoln	49.20	297	⇑P	P	04 59 01.9	-0.4
	baz=49						
E17A	Martinsdale	49.25	295	⇓P	P	04 59 02.4	-0.3
	baz=49						
SLMT	Seeley Lake	49.30	298	eP	P	04 59 02.9	-0.1
SLMT	Seeley Lake	49.30	298	eP	P	04 59 02.9	-0.1
A08A	Turner Farm, O	49.33	304	⇓P	P	04 59 03.2	0.0
	baz=49						
F18A	Big Timber	49.43	294	⇑P	P	04 59 03.9	-0.1
	baz=49						
D14A	Greenough	49.45	298	⇓P	P	04 59 03.5	-0.7
	baz=49,SNR=5.4						
B09A	Rice	49.51	302	⇓P	P	04 59 04.4	-0.2
	baz=49						
CHMT	Chamberlain Mo	49.53	298	eP	P	04 59 05.8	+1.0
CHMT	Chamberlain Mo	49.53	298	eP	P	04 59 05.8	+1.0
A07A	Ashnola River,	49.54	305	⇓P	P	04 59 03.6	-1.2
	baz=49						
F17A	Fitzpatrick Pl	49.70	295	⇑P	P	04 59 06.1	0.0
	baz=49						
D13A	Huson	49.71	299	⇓P	P	04 59 05.6	-0.6
	baz=49						
MSO	Missoula	49.80	298	eP	P	04 59 07.1	+0.2
	comp=Z,3.7nm,1.2s,mb4.3						
MSO	Missoula	49.80	298	eP	P	04 59 07.1	+0.2
	comp=Z,3.7nm,1.2s,mb4.3						
D12A	Red Ives Fores	49.99	299	⇓P	P	04 59 07.7	-0.6
	baz=50,SNR=6.2						
B07A	Winthrop	50.01	304	⇑P	P	04 59 08.0	-0.4
	baz=50,SNR=6.8						
E13A	Victor	50.23	298	⇑P	P	04 59 09.4	-0.7
	baz=50						
D11A	Klaveano Farm,	50.27	300	⇓P	P	04 59 09.5	-0.9
	baz=50,SNR=7.7						
E12A	Beaver Dam Sad	50.64	299	⇓P	P	04 59 12.6	-0.6
	baz=50						
D09A	Jones Farm, Ri	50.80	302	⇑P	P	04 59 13.2	-1.2
	baz=50						
CCM	Cathedral Cave	50.84	274	eP	P	04 59 14.3	-0.6
	comp=Z,3.1nm,0.7s,mb4.3						
CCM	Cathedral Cave	50.84	274	eP	P	04 59 14.3	-0.6
	comp=Z,3.1nm,0.7s,mb4.3						
E11A	Bogner Ranch,	50.87	300	⇓P	P	04 59 14.1	-0.8
	baz=51						
F12A	Elk City	51.15	299	⇓P	P	04 59 16.9	-0.2
	baz=51						
F11A	Grangeville	51.28	299	⇑P	P	04 59 17.7	-0.3
	baz=51						
G13A	Cobalt	51.47	298	⇓P	P	04 59 19.6	+0.1
	baz=51						
H14A	Leadore	51.66	297	⇓P	P	04 59 21.1	+0.2
	baz=51						
H13A	Challis	51.96	297	⇑P	P	04 59 23.7	+0.5
	baz=52						
K20A	Yellowstone Ra	51.98	291	⇑P	P	04 59 23.1	-0.2
	baz=52						
H12A	Diamond D Ranc	52.15	298	⇑P	P	04 59 24.5	0.0
	baz=52						
PDAR	Pinedale Array	52.24	292	P	P	04 59 22.8	-2.4
	comp=Z,0.9nm,1.0s,mb3.6,baz=46,slow=8.5,SNR=5.0						
PDAR				LR	LR	05 21 45.8	
	comp=Z,150nm,20.6s,MS4.0,baz=49,slow=36						
WMQ	Urumqi	52.27	64	eP	P	04 59 26.9	+1.4
WMQ				LR	LR		
	comp=N,95nm,23.0s,MS3.8						
WMQ				LR	LR		
	comp=E,38nm,27.5s,MS3.8						
WMQ				LR	LR		
	comp=Z,50nm,25.0s,MS3.5						
G09A	Cove	52.30	301	⇓P	P	04 59 25.1	-0.5
	baz=52,SNR=7.6						
I14A	Mackay	52.31	296	⇓P	P	04 59 25.8	+0.1
	baz=52						
H11A	Donnelly	52.33	299	⇓P	P	04 59 25.1	-0.8
	baz=52,SNR=6.0						
I13A	Wildhorse Cree	52.52	297	⇑P	P	04 59 26.8	-0.4
	baz=52						
BMO	Blue Mountains	52.56	300	eP	P	04 59 26.8	-0.8
	comp=Z,2.7nm,1.0s,mb4.1						
BMO	Blue Mountains	52.56	300	eP	P	04 59 26.8	-0.7
	comp=Z,2.7nm,1.0s,mb4.1						
G08A	Pilot Rock	52.61	301	⇓P	P	04 59 27.7	-0.3
	baz=52,SNR=8.5						
H09A	Durkee	52.83	300	⇓P	P	04 59 29.2	-0.3
	baz=52						
I12A	Atlanta	52.92	298	⇓P	P	04 59 30.4	+0.2
	baz=53						
HLID	Hailey	52.93	297	⇓P	P	04 59 30.2	-0.1
	baz=53						
J12A	Stokes Ranch,	53.41	297	⇑P	P	04 59 33.4	-0.4
	baz=53						
SONM	Songino Array	53.48	47	P	P	04 59 33.1	-1.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=358,slow=10,SNR=2.2						
SONM	Songino Array	53.48	47	P	P	04 59 33.1	-1.2
I09A	Lost Marbles R	53.49	300	⇓P	P	04 59 34.1	-0.3
	baz=53						
H06A	Lindquist Farm	53.50	302	⇓P	P	04 59 33.8	-0.7
	baz=53						
K14A	Jones Ranch, D	53.51	295	⇑P	P	04 59 34.6	0.0
	baz=53						
N20A	Spence Gulch,	53.62	290	⇑P	P	04 59 35.8	+0.4
	baz=53						
K13A	Stover Farm, H	53.67	296	⇓P	P	04 59 35.8	0.0
	baz=53						
ISCO	Idaho Springs	53.77	287	eP	P	04 59 37.9	+1.3
	comp=Z,7.9nm,1.8s,mb4.3						
ISCO	Idaho Springs	53.77	287	eP	P	04 59 37.9	+1.4
	comp=Z,7.9nm,1.8s,mb4.3						
I07A	Izee	53.87	301	⇓P	P	04 59 37.3	0.0
	baz=54						
H04A	Detroit Lake	54.04	304	⇓P	P	04 59 38.6	+0.2
	baz=54						
J09A	Fry Pan Ranch,	54.07	300	⇓P	P	04 59 38.4	-0.3
	baz=54,SNR=14						
K11A	Parker Ranch,	54.12	298	⇑P	P	04 59 38.7	-0.3
	baz=54,SNR=5.0						
O20A	White River Ci	54.26	290	⇓P	P	04 59 40.8	+0.6
	baz=54						
M15A	Larsen Ranch,	54.29	294	⇓P	P	04 59 40.8	+0.5
	baz=54						
N17A	Moffit Pass	54.29	293	⇓P	P	04 59 40.9	+0.5
	baz=54						
K10A	MacKenzie Ranc	54.35	299	⇓P	P	04 59 41.1	+0.4
	baz=54						
L10A	Juniper Basin	54.88	298	⇓P	P	04 59 44.7	+0.1
	baz=55,SNR=6.2						
O17A	Robinson Place	54.95	292	⇑P	P	04 59 46.0	+0.8
	baz=55						
N14A	Grayback Hills	55.07	295	⇑P	P	04 59 46.2	+0.2
	baz=55						
K05A	Summer Lake	55.51	302	⇑P	P	04 59 49.7	+0.5
	baz=55						
DUG	Dugway	55.56	294	⇓P	P	04 59 50.1	+0.5
	baz=55						
DUG	Dugway	55.56	294	eP	P	04 59 47.7	-1.8
	comp=Z,6.6nm,1.3s,mb4.5						
DUG	Dugway	55.56	294	eP	P	04 59 47.7	-1.9
	comp=Z,6.6nm,1.3s,mb4.5						
Q18A	Rafter H Ranch	55.78	291	⇑P	P	04 59 51.7	+0.6
	baz=56						
SRU	San Rafael	55.89	291	⇑P	P	04 59 52.5	+0.6
	baz=56						
P15A	Leamington	55.98	293	⇑P	P	04 59 53.2	+0.7
	baz=56						
WMOK	Wichita Mounta	56.29	279	eP	P	04 59 57.7	+2.9
	comp=Z,5.1nm,1.3s,mb4.4						
R18A	Canyonlands Na	56.37	291	⇑P	P	04 59 55.4	0.0
	baz=56,SNR=6.3						
R17A	Hanksville Air	56.58	291	⇑P	P	04 59 57.0	+0.1
	baz=56						
S19A	Harvey Farm, M	56.73	290	⇑P	P	04 59 58.4	+0.5
	baz=56						
Q14A	Sevier Lake (B	56.81	294	⇑P	P	04 59 59.3	+0.8
	baz=56						
R16A	Teasdale	56.94	292	⇓P	P	05 00 00.2	+0.9
	baz=57						
MVCO	Mesa Verde	57.03	289	⇑P	P	05 00 01.2	+1.1
	baz=57						
MVCO	Mesa Verde	57.03	289	eP	P	05 00 01.2	+1.1
	comp=Z,4.3nm,1.0s,mb4.4						
MVCO	Mesa Verde	57.03	289	eP	P	05 00 01.2	+1.1
	comp=Z,4.3nm,1.0s,mb4.4						
S18A	Hurst Farm, Bl	57.04	290	⇑P	P	05 00 01.1	+0.9
	baz=57						
Q13A	Wheeler Ranch,	57.06	294	⇑P	P	05 00 00.9	+0.6
	baz=57						
S17A	Black Ridge (B	57.33	291	⇑P	P	05 00 02.7	+0.5
	baz=57						
T18A	Mexican Hat	57.52	290	⇑P	P	05 00 04.3	+0.8
	baz=57						
T19A	Beclabito	57.54	289	⇑P	P	05 00 04.7	+1.0
	baz=57						
Q11A	Duckwater	57.64	296	⇓P	P	05 00 04.8	+0.5
	baz=57						
R13A	O'Grain Ranch,	57.77	294	⇑P	P	05 00 06.4	+1.2
	baz=58						
Q10A	Clear Creek Ra	57.87	296	⇓P	P	05 00 06.8	+0.8
	baz=58						
T17A	Navajo Res., N	57.92	291	⇑P	P	05 00 06.7	+0.3
	baz=58						
R11A	Troy Canyon, C	58.08	295	⇓P	P	05 00 08.0	+0.6
	baz=58						
U19A	Dine' College,	58.09	289	⇑P	P	05 00 08.1	+0.5
	baz=58						
U18A	Rough Rock, Ch	58.18	290	⇑P	P	05 00 08.4	+0.3
	baz=58						
U17A	Shonto	58.25	290	⇓P	P	05 00 09.4	+0.7
	baz=58						
R10A	Warm Springs	58.34	296	⇓P	P	05 00 09.7	+0.5
	baz=58						
WCN	Washoe City	58.38	299	⇓P	P	05 00 09.8	+0.3
	baz=58						
NVAR	Mina Array Bea	58.78	298	P	P	05 00 11.7	-0.6
	comp=Z,1.4nm,1.1s,mb3.9,baz=19,slow=5.7,SNR=5.9						
NVAR	Mina Array Bea	58.78	298	P	P	05 00 11.7	-0.6
U16A	Tuba City	58.81	291	⇑P	P	05 00 13.0	+0.5
	baz=59						
TORD	Torodi Ar. Bea	58.88	164	P	P	05 00 12.8	-0.5
	comp=Z,1.2nm,0.8s,mb4.0,baz=352,slow=6.8,SNR=8.5						
TORD	Torodi Ar. Bea	58.88	164	P	P	05 00 12.8	-0.5
U15A	North Rim	58.90	292	⇓P	P	05 00 13.4	+0.3
	baz=59						
T11A	Corn Creek, Al	59.00	295	⇓P	P	05 00 14.6	+0.7
	baz=59						
Y24A	Capitan	59.13	285	⇑P	P	05 00 15.3	+0.5
	baz=59						
V17A	Tonalea, Kykot	59.20	290	⇑P	P	05 00 15.5	+0.3
	baz=59						
X21A	Alamocita Cree	59.37	287	⇑P	P	05 00 17.1	+0.7
	baz=59						
V15A	Kaibab Nationa	59.42	291	⇓P	P	05 00 17.4	+0.6
	baz=59						
WUAZ	Wupatki	59.47	291	⇑P	P	05 00 17.6	+0.5
	baz=59						
CMB	Columbia Colle	59.74	299	eP	P	05 00 19.8	+0.8
	comp=Z,5.3nm,1.2s,mb4.5						
CMB	Columbia Colle	59.74	299	eP	P	05 00 19.8	+0.8
	comp=Z,5.3nm,1.2s,mb4.5						
X19A	St. Johns	59.85	288	⇓P	P	05 00 20.0	+0.2
	baz=60						
V14A	Boquillas Ranc	59.88	292	⇑P	P	05 00 20.1	+0.2
	baz=60						
124A	Stringfield Ra	60.27	284	⇓P	P	05 00 23.2	+0.6
	baz=60						
Y19A	Nutrioso	60.27	288	⇑P	P	05 00 23.2	+0.5
	baz=60						
Z21A	St. Cloud Mine	60.39	286	⇑P	P	05 00 24.4	+1.0
	baz=60						
MDJ	Mudanjiang	61.19	30	P	P	05 00 25.8	-3.0
MDJ				pmax	pmax		
	comp=Z,44nm,4.1s						
CN2	Changchun	61.28	33	eP	P	05 00 28.9	-0.5
HHC	Hu-ho-hao-te	61.29	46	eP	P	05 00 29.0	-0.5
HHC				pP	pP	05 00 33.5	+0.8
HHC				sP	sP	05 00 36.0	+2.1
HHC				PcP	PcP	05 01 12.4	+0.5
HHC				PP	PP	05 02 45.7	+1.8
HHC				ScP	ScP	05 05 12.3	-0.7
HHC				S	S	05 08 44.9	-4.3
HHC				ScS	ScS	05 10 15.3	-5.1
HHC				SS	SS	05 12 44.2	-4.4
HHC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,45nm,5.3s						
HHC				LR	LR		
	comp=N,57nm,16.1s,MS4.2						
HHC				LR	LR		
	comp=E,130nm,16.7s,MS4.2						
HHC				LR	LR		
	comp=Z,100nm,18.4s,MS4.0						
426A	McDonald Obser	61.71	282	⇓P	P	05 00 33.2	+0.7
	baz=62						
626A	Big Bend Ranch	62.77	282	⇓P	P	05 00 39.9	+0.3
	baz=63						
TXAR	Lajitas Array	62.83	281	P	P	05 00 38.8	-1.2
	comp=Z,0.4nm,0.8s,mb3.6,baz=111,slow=4.9,SNR=4.6						
TXAR				LR	LR	05 27 58.2	
	comp=Z,99nm,20.1s,MS4.0,baz=35,slow=36						
TXAR	Lajitas Array	62.83	281	P	P	05 00 38.8	-1.2
LZH	Lanzhou	63.92	54	eP	P	05 00 48.1	+1.0
LZH				pP	pP	05 00 51.3	+0.9
LZH				sP	sP	05 00 53.5	+1.9
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
XAN	Xi'an	67.15	50	P	P	05 01 06.1	-1.9
XAN				pP	pP	05 01 09.3	-2.0
XAN				PP	PP	05 03 32.8	-2.6
XAN				S	S	05 09 58.6	-3.3
XAN				SS	SS	05 14 17.3	-2.8
XAN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
XAN				pmax	pmax		
	comp=Z,8.0nm,4.3s						
CD2	Chengdu	68.80	56	P	P	05 01 19.0	+0.6
CD2				pP	pP	05 01 23.3	+1.6
CD2				sP	sP	05 01 26.0	+3.1
CD2				PP	PP	05 03 52.1	+2.3
CD2				S	S	05 10 19.5	-2.3
CD2				sS	sS	05 10 26.4	-0.7
CD2				SS	SS	05 14 43.5	-2.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,4.2s						
CD2				LR	LR		
	comp=N,270nm,6.5s						
CD2				LR	LR		
	comp=Z,230nm,6.2s						
NJ2	Nanjing	71.35	42	eP	P	05 01 36.4	+2.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
GYA	Guiyang	73.80	54	P	P	05 01 48.9	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI	Kunming	74.02	58	P	P	05 01 50.7	+0.7
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CMAR	Chiang Mai Arr	79.28	64	P	P	05 02 18.1	-1.7
	comp=Z,0.7nm,0.5s,mb3.9,baz=315,slow=5.5,SNR=4.8						
CMAR	Chiang Mai Arr	79.28	64	P	P	05 02 18.1	-1.7

CASC 06 04:55:36.3±1.8, 8°.67N×83°.07W, h5km, MD3.7, 1C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	0.39	72	⇓iP	Pg	04 55 45.0	+1.1
BRU2				eS	Sg	04 55 52.0	+3.0
BAR1		0.62	337	⇓eP	Pg	04 55 48.5	+0.3
BAR1				eS	Sg	04 55 58.4	+2.2
CNI	Changuinola	0.92	36	⇓iP	Pg	04 55 53.3	-0.7
QCR	Quepos	1.32	305	eP	Pn	04 56 00.2	-1.1
QCR				eS	Sg	04 56 18.7	0.0
URSC	Urasca	1.35	329	⇑eP	Pn	04 55 59.9	-2.0
URSC				eS	Sb	04 56 19.3	-0.5
LAJ	Bijagual	1.58	319	eP	Pn	04 56 07.1	+2.1
LAJ				eS	Sn	04 56 34.3	+8.5
PRS1	Puriscal	1.79	317	⇓eP	Pn	04 56 05.8	-2.2
PRS1				eS	Sn	04 56 31.1	0.0
CGA2	Cerro Gallo 2	1.92	314	eP	Pn	04 56 09.8	+0.1
CGA2				eS	Sn	04 56 36.8	+2.5
JCR	Jicaral	2.33	300	eP	Pn	04 56 15.2	-0.2
FORC	Fortuna	2.38	319	eP	Pn	04 56 15.6	-0.4

ROM 06 04:59:29.4±0.3, 40°.49N×15°.80E, h10km±1km, Md1.6/3, Ml0.8/3, Error ellipse: s-maj=4.1km s-min=1.3km az=44.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCEL	Monticello	0.16	179	Pg	Pg	04 59 33.8	+0.9
MCEL				Sg	Sg	04 59 36.5	+1.1
	19nm,0.1s						
SIRI	Monte Sirino -	0.31	170	Pg	Pg	04 59 36.2	+0.7
SIRI				Sg	Sg	04 59 41.3	+1.6
	14nm,0.2s						
CDRU	Civita di Ruta	0.38	271	Pg	Pg	04 59 37.4	+0.6
CDRU				Sg	Sg	04 59 43.3	+1.4
	5.0nm,0.1s						

BJI ***06*** *05:00:22.3, 71°.50N×12°.20W, h10km, mB5.0/7, mb4.7/14, Ms4.6/7, Ms7 4.5/6*

ISCJB ***06*** *05:00:22.5±0.2, 71°.35N±0°.02×12°.43W±0°.06, h10km, mb4.2/43, MS3.4/12, Error ellipse: s-maj=3.6km s-min=2.8km az=26.0*

CSEM ***06*** *05:00:22.2±0.1, 71°.41N×12°.26W, h2km, mb4.3/18, Ms3.2, Error ellipse: s-maj=4.2km s-min=3.6km az=179.0*

BER ***06*** *05:00:23.6±0.5, 71°.53N×12°.42W, h2km±999km, MD3.5, ML3.3*

NAO ***06*** *05:00:23.0±7.9, 71°.21N×12°.22W, h26km±39km*

IDC ***06*** *05:00:23.1±0.6, 71°.59N×12°.39W, h0km, mb3.8/15, mb1 3.9/21, mb1mx3.8/34, mbtmp3.8/21, ML3.1/5, MS3.4/13, Ms1 3.4/13, ms1mx3.2/41, Error ellipse: s-maj=19.2km s-min=11.3km az=19.0*

NEIC ***06*** *05:00:24.3±0.3, 71°.51N×12°.24W, h10km, mb4.3/20, Error ellipse: s-maj=7.6km s-min=5.2km az=22.0*

REY ***06*** *05:00:24.4, 70°.95N×10°.68W, h10km, ML2.7, ML3.2*

ISC 06 05:00:24.4±0.2, 71°.38N±0°.02×12°.24W±0°.07, h10km, (h14km±9km:pP-P), n250, σ0.98/257, mb4.2/43, MS3.4/12, 58C-42D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMI	Jan Mayen	1.23	110	eP	Pn	05 00 45.5	-2.1
JMI				eS	Sb	05 01 01.8	-1.6
JMI				AML	AML	05 01 09.1	
	comp=Z,600nm,0.5s						
JMI	Jan Mayen	1.23	110	eP	Pn	05 00 45.5	-2.1
JMI				eS	Sb	05 01 02.5	-0.9
JMI	Jan Mayen	1.23	110	eP	Pn	05 00 45.5	-2.0
	SNR=53						
JMI				eS	Sb	05 01 01.8	-1.6
	comp=Z,600nm,0.5s,SNR=53						
JMIC	Jan Mayen	1.

IGIL **Gilhagi** 5.53 198 P Pn 05 01 45.6 -1.0
IGIL S Sn 05 02 49.8 -0.3
IFLA Flatey 5.62 204 P Pn 05 01 47.7 -0.2
IHED Heoinshofoi 5.63 202 P Pn 05 01 46.4 -1.6
IHED S Sn 05 02 51.8 -0.8
IBRE Brettingsstaoi 5.67 204 P Pn 05 01 48.7 +0.2
DAG Danmarks Havn 5.70 345 ⇓P Pn 05 01 44.7 -4.2
ISIG Siglufjorour 5.80 208 P Pn 05 01 50.0 -0.3
IGRA Granastaoir 5.82 202 P Pn 05 01 50.7 +0.1
IGRA S Sn 05 02 57.5 +0.3
IGRS Grimsstaoir 5.94 196 P Pn 05 01 50.5 -1.7
IGRS S Sn 05 02 59.1 -1.1
IREN Reynihlio 6.01 199 P Pn 05 01 52.0 -1.1
IGLU Glumsstadir 6.51 191 P Pn 05 01 58.8 -1.3
BORG Borgarnes 7.47 211 Pn Pn 05 02 16.7 +3.5
comp=Z,1.0nm,0.3s,baz=90,slow=8.1,SNR=3.8
BORG Borgarnes 7.47 211 *e*Pn Pn 05 02 16.7 +3.5
SUMG Summit 8.18 291 *e*Pn Pn 05 02 21.9 -1.0
SUMG Summit 8.18 291 *e*Pn Pn 05 02 22.0 -0.9
SUMG Summit 8.18 291 *i* P Pn 05 02 22.8 -0.1
SNR=47
HSP Hornsund 9.34 41 *e*P Pn 05 02 36.9 -1.9
KBS Kingsbay 9.67 28 Pn Pn 05 02 41.7 -1.6
KBS Kingsbay 9.67 28 *e*Pn Pn 05 02 41.0 -2.3
comp=Z,28nm,0.8s
KBS Kingsbay 9.67 28 Pn Pn 05 02 41.7 -1.6
KBS Kingsbay 9.67 28 *i* P Pn 05 02 42.0 -1.3
SNR=47
SPB4 Spitsbergen Ar 10.00 35 *e*Pn Pn 05 02 46.8 -1.0
SPB4 Spitsbergen Ar 10.00 35 *e*Pn Pn 05 02 46.8 -1.0
SPA0 Spitsbergen Ar 10.00 35 Pn Pn 05 02 47.2 -0.6
baz=225,slow=14
SPA0 Spitsbergen Ar 10.00 35 Pn Pn 05 02 47.2 -0.7
baz=225,slow=13,SNR=9.4
SPITS Spitsbergen Ar 10.00 35 Pn Pn 05 02 47.0 -0.9
baz=233,slow=15,SNR=28
SPITS Spitsbergen Ar 10.00 35 Pn Pn 05 02 47.0 -0.9
ARA0 ARCESS Array S 12.62 80 Pn Pn 05 03 20.7 -3.0
ARA0 ARCESS Array S 12.62 80 Pn Pn 05 03 20.7 -2.9
ARCES ARCESS Array B 12.62 80 Pn Pn 05 03 23.9 +0.2
comp=Z,0.1nm,0.3s,baz=299,slow=11,SNR=4.3
ARCES LR LR 05 07 28.7
comp=Z,186nm,18.5s,baz=36,slow=34
ARCES ARCESS Array B 12.62 80 Pn Pn 05 03 23.9 +0.3
KEV Kevo 13.00 78 *ep* Pn 05 03 26.4 -2.4
comp=Z,3.0nm,0.8s
KEV Kevo 13.00 78 *e*P Pn 05 03 26.4 -2.4
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 13.90 126 LR LR 05 08 32.1
comp=Z,106nm,20.1s,baz=325,slow=35
SFJD Kangerlussuaq 14.13 271 Pn Pn 05 03 39.6 -4.5
comp=Z,0.5nm,0.3s,baz=16,slow=12,SNR=4.4
HFS Hagfors 15.32 124 Pn Pn 05 04 02.8 +2.5
comp=Z,0.1nm,0.3s,baz=341,slow=17,SNR=2.2
HFS LR LR 05 09 27.6
comp=Z,145nm,19.4s,baz=352,slow=35
EKA Eskdalemuir Ar 16.58 162 Pn Pn 05 04 19.2 +2.7
baz=348,slow=12,SNR=2.6
KAF Kangasniemi 17.46 102 *ep* Pn 05 04 31.0 +3.4
comp=Z,3.3nm,0.8s
FIA0 FINESS Array S 17.89 104 P Pn 05 04 29.3 -3.7
FINES FINESS Array B 17.89 104 P Pn 05 04 35.9 +2.9
comp=Z,0.2nm,0.3s,baz=342,slow=10.0,SNR=10
FINES LR LR 05 10 44.9
comp=Z,205nm,19.3s,baz=199,slow=35
FRB Frobisher Bay 21.96 278 P P 05 05 16.7 -1.1
comp=Z,1.2nm,0.8s,mb3.4,baz=72,slow=13,SNR=2.8
FRB Frobisher Bay 21.96 278 P P 05 05 16.7 -1.1
RES Resolute Bay 22.51 316 P P 05 05 22.9 -0.7
comp=Z,1.5nm,0.8s,mb3.5,baz=38,slow=12,SNR=6.3
RES LR LR 05 13 03.0
comp=Z,109nm,18.3s,MS3.3,baz=166,slow=34
RES Resolute Bay 22.51 316 *e*P P 05 05 23.6 +0.1
comp=Z,6.8nm,1.2s,mb4.0
RES Resolute Bay 22.51 316 *e*P P 05 05 23.6 +0.1
comp=Z,6.8nm,1.2s,mb4.0
GIVF Givet 22.74 151 *e*P P 05 05 28.4 +2.3
CLL Collm 23.13 137 *e*P P 05 05 35.0 +4.7
CLL *e* 05 05 42.0
CLL LR LR
comp=Z,100nm,19.7s,MS3.3
CLL Collm 23.13 137 *e*(P) P 05 05 35.0 +4.7
CLL *e* 05 05 42.0
CLL Lm 05 13 00.0
comp=Z,100nm,19.7s
DPC Dobruska-Polom 24.78 133 *e*P P 05 05 50.8 +4.9
DPC AMS AMS 05 56 30.0
comp=Z,300nm,11.7s
KHC Kasperske Hory 25.31 138 *e*P P 05 05 53.9 +3.2
KHC AMS AMS 05 58 00.0
comp=Z,300nm,18.8s
LOR Lormes 25.36 154 *e*P P 05 05 52.3 +1.2
comp=Z,16nm,1.1s,mb4.2
LOR Lormes 25.36 154 *e*P P 05 05 52.3 +1.2
comp=Z,7.8nm,1.1s,mb4.2
LOR Lormes 25.36 154 *e*P P 05 05 52.3 +1.2
comp=Z,7.8nm,1.1s,mb4.2
SSF Saint Saulge 25.51 154 *e*P P 05 05 54.6 +2.1
GERES GERESS Array B 25.61 138 P P 05 05 56.8 +3.5
comp=Z,1.4nm,0.8s,mb3.6,baz=342,slow=8.4,SNR=8.6
GERES LR LR 05 15 15.2
comp=Z,75nm,18.7s,MS3.2,baz=163,slow=35
AVF Avril sur Loir 25.75 155 *e*P P 05 05 55.6 +0.9
AVF Avril sur Loir 25.75 155 *e*P P 05 05 55.6 +0.9
VRAC Vranov 25.82 134 LR LR 05 15 12.3
comp=Z,49nm,21.9s,MS3.0,baz=146,slow=34
BGF Bois d'Agland 25.91 156 *e*P P 05 05 57.2 +1.0
BGF Bois d'Agland 25.91 156 *e*P P 05 05 57.2 +1.0
TCF Toulx Ste Croi 26.10 157 *e*P P 05 05 58.5 +0.6
comp=Z,11nm,1.0s,mb4.0
TCF Toulx Ste Croi 26.10 157 *e*P P 05 05 58.5 +0.6
comp=Z,5.3nm,1.0s,mb4.0
TCF Toulx Ste Croi 26.10 157 *e*P P 05 05 58.5 +0.6
comp=Z,5.3nm,1.0s,mb4.0
DAVOX Davos/Dischmat 26.82 145 LR LR 05 16 20.4
comp=Z,45nm,18.9s,MS3.0,baz=263,slow=35
RJF Les Rejaudoux 26.98 158 *e*P P 05 06 06.4 +0.6
comp=Z,18nm,1.1s,mb4.2
RJF Les Rejaudoux 26.98 158 *e*P P 05 06 06.4 +0.6
comp=Z,8.9nm,1.1s,mb4.2
RJF Les Rejaudoux 26.98 158 *e*P P 05 06 06.4 +0.6
comp=Z,8.9nm,1.1s,mb4.2
AKASG Malin Array Be 27.88 116 P P 05 06 14.7 +0.9
comp=Z,0.8nm,0.4s,mb3.7,baz=333,slow=9.6,SNR=4.3
AKASG Malin Array Be 27.88 116 P P 05 06 14.7 +0.9
SCHQ Schefferville 28.35 263 LR LR 05 16 51.9
comp=Z,197nm,18.9s,MS3.7,baz=61,slow=35
ARU Arti 32.21 80 *e*P P 05 06 55.3 +3.3
comp=Z,5.9nm,1.0s,mb4.4
INK Inuvik 35.21 327 P P 05 07 16.7 -1.3
comp=Z,1.3nm,1.0s,mb3.8,baz=36,slow=10,SNR=3.9
INK Inuvik 35.21 327 *e*P P 05 07 16.5 -1.5
comp=Z,2.7nm,1.1s,mb4.1
INK Inuvik 35.21 327 *e*P P 05 07 16.5 -1.5
comp=Z,2.7nm,1.1s,mb4.1
YKA Yellowknife Ar 36.22 310 P P 05 07 26.0 -0.7
comp=Z,1.9nm,0.8s,mb4.1,baz=33,slow=8.6,SNR=20
YKA PcP PcP 05 09 51.3 -0.2
comp=Z,0.8nm,0.7s,baz=30,slow=2.8,SNR=14
YKA LR LR 05 21 30.0
comp=Z,13nm,21.3s,MS2.7,baz=305,slow=35
YKA Yellowknife Ar 36.22 310 P P 05 07 26.0 -0.7
YKA Yellowknife Ar 36.22 310 PcP PcP 05 09 51.3 -0.3
AKTK Aktyubinsk 37.11 86 P P 05 07 35.4 +0.9
AKTK LR LR 05 22 13.9
AKTK Aktyubinsk 37.11 86 P P 05 07 35.4 +0.9
AKTO Aktyubinsk 37.11 86 P P 05 07 35.4 +0.9
comp=Z,1.1nm,0.7s,mb3.8,baz=299,slow=13,SNR=2.2
AKTO LR LR 05 22 13.9
comp=Z,88nm,19.3s,MS3.6,baz=25,slow=35
BRVK Borovoye 38.72 73 P P 05 07 49.4 +1.5
comp=Z,3.8nm,0.8s,mb4.2
BRVK Borovoye 38.72 73 P P 05 07 49.4 +1.5
comp=Z,3.8nm,0.8s,mb4.2
BVAR Borovoye Array 38.78 73 P P 05 07 49.8 +1.4
comp=Z,2.0nm,0.8s,mb3.9,baz=316,slow=6.2,SNR=7.3
BVAR Borovoye Array 38.78 73 P P 05 07 49.8 +1.3
BRTR Keskin Array B 39.17 119 LR LR 05 25 53.8
comp=Z,52nm,18.1s,MS3.4,baz=302,slow=39
FFC Flin Flon 39.45 294 *e*P P 05 07 54.2 +0.2
comp=Z,64nm,2.5s,mb4.9
FFC Flin Flon 39.45 294 *e*P P 05 07 54.2 +0.1
comp=Z,64nm,2.5s,mb4.9
ULM Lac du Bonnet 41.50 286 P P 05 08 10.2 -0.9
comp=Z,1.9nm,0.9s,mb3.7,baz=40,slow=9.0,SNR=4.3
ULM LR LR 05 26 00.5
comp=Z,90nm,18.7s,MS3.7,baz=259,slow=37
ULM Lac du Bonnet 41.50 286 P P 05 08 10.1 -1.0
MALT Malatya 41.85 114 *e*P P 05 08 18.6 +4.6
comp=Z,5.3nm,1.0s,mb4.1
KURK Kurchatov 43.29 68 P P 05 08 23.9 -1.7
comp=Z,1.2nm,0.8s,mb3.7,baz=334,slow=8.2,SNR=2.6
KURK Kurchatov 43.29 68 P P 05 08 23.9 -1.7
KURK Kurchatov 43.29 68 P P 05 08 23.9 -1.7
EDM Edmonton 43.99 302 *e*P P 05 08 30.9 -0.3
EDM Edmonton 43.99 302 *e*P P 05 08 30.9 -0.3
A15A Johnson Ranch, 47.64 299 ⇑P P 05 08 59.9 -0.1
baz=47
A14A Double T Ranch 47.84 299 ⇓P P 05 09 01.2 -0.4
baz=47
MKAR Makanchi Array 47.88 67 P P 05 09 04.1 +2.1
comp=Z,0.3nm,0.4s,mb3.7,baz=318,slow=7.8,SNR=2.5
A13A Flathead Natio 48.15 300 ⇑P P 05 09 03.1 -0.9
baz=48
B15A Bradely Ranch, 48.19 298 ⇑P P 05 09 03.6 -0.7
baz=48
C17A Wharram Farm, 48.29 296 ⇑P P 05 09 04.9 -0.3
baz=48
C16A Fuhringer Ranc 48.42 297 ⇓P P 05 09 05.7 -0.4
baz=48
A11A Hall Mountain, 48.66 302 ⇓P P 05 09 07.8 -0.2
baz=48
C15A Salmond Ranch, 48.69 298 ⇑P P 05 09 08.3 +0.1
baz=48
D17A Six Diamond Ra 48.71 296 ⇑P P 05 09 08.3 0.0
baz=48
E18A Harlowton 49.02 295 ⇑P P 05 09 10.2 -0.5
baz=48
C14A Swan Lake 49.02 299 ⇑P P 05 09 10.4 -0.3
baz=48
D16A Dana Ranch, Ca 49.07 297 ⇑P P 05 09 10.2 -0.9
baz=49
A09A Danville 49.25 303 ⇑P P 05 09 12.1 -0.3
baz=49
C13A Hot Springs 49.33 300 ⇑P P 05 09 12.5 -0.6
baz=49,SNR=6.8
D15A Lincoln 49.33 297 ⇑P P 05 09 12.7 -0.4
baz=49
E17A Martinsdale 49.38 296 ⇑P P 05 09 13.3 -0.2
baz=49
SLMT Seeley Lake 49.43 298 *e*P P 05 09 13.8 -0.1
comp=Z,7.8nm,1.1s,mb4.7
SLMT Seeley Lake 49.43 298 *e*P P 05 09 13.8 -0.1
comp=Z,7.8nm,1.1s,mb4.7
A08A Turner Farm, O 49.45 304 ⇓P P 05 09 13.6 -0.5
baz=49
NEW Newport 49.50 302 *e*P P 05 09 14.2 -0.2
comp=Z,1.6nm,0.8s,mb4.1
NEW Newport 49.50 302 *e*P P 05 09 14.2 -0.2
comp=Z,1.6nm,0.8s,mb4.1
F18A Big Timber 49.56 295 ⇑P P 05 09 14.8 -0.1
baz=49
D14A Greenough 49.58 298 ⇓P P 05 09 14.2 -0.8
baz=49,SNR=6.0
B09A Rice 49.64 303 ⇓P P 05 09 15.3 -0.2
baz=49
CHMT Chamberlain Mo 49.66 298 *e*P P 05 09 14.9 -0.7
comp=Z,2.3nm,0.8s,mb4.3
CHMT Chamberlain Mo 49.66 298 *e*P P 05 09 14.9 -0.7
comp=Z,2.3nm,0.8s,mb4.3
A07A Ashnola River, 49.66 305 ⇓P P 05 09 15.4 -0.2
baz=49
D13A Huson 49.83 299 ⇑P P 05 09 16.9 -0.1
baz=49
B08A Colville Reser 50.01 304 ⇓P P 05 09 18.2 -0.1
baz=50
D12A Red Ives Fores 50.12 300 ⇓P P 05 09 18.7 -0.5
baz=50
B07A Winthrop 50.13 304 ⇓P P 05 09 18.8 -0.3
baz=50,SNR=5.7
E13A Victor 50.35 299 ⇑P P 05 09 20.5 -0.4
baz=50
D11A Klaveano Farm, 50.40 301 ⇑P P 05 09 20.6 -0.6
baz=50,SNR=8.8
SIUC Southern Illin 50.63 272 *e*P P 05 09 22.8 -0.3
comp=Z,6.8nm,0.7s,mb4.7
SIUC Southern Illin 50.63 272 *e*P P 05 09 22.8 -0.3
comp=Z,6.8nm,0.7s,mb4.7
E12A Beaver Dam Sad 50.77 300 ⇓P P 05 09 23.2 -0.8
baz=50
D09A Jones Farm, Ri 50.93 302 ⇑P P 05 09 24.7 -0.5
baz=50
CCM Cathedral Cave 50.97 274 *e*P P 05 09 24.3 -1.4
comp=Z,4.3nm,1.0s,mb4.3
CCM Cathedral Cave 50.97 274 *e*P P 05 09 24.3 -1.4
comp=Z,4.3nm,1.0s,mb4.3
F13A Darby 50.99 298 ⇓P P 05 09 25.3 -0.4
baz=50
E11A Bogner Ranch, 51.00 300 ⇓P P 05 09 25.1 -0.7
baz=50
H15A Lima 51.58 296 ⇑P P 05 09 29.9 -0.3
baz=51
G13A Cobalt 51.60 298 ⇑P P 05 09 29.8 -0.5
baz=51
H14A Leadore 51.79 297 ⇑P P 05 09 32.1 +0.4
baz=51
H13A Challis 52.09 298 ⇑P P 05 09 34.1 +0.2
baz=52
WMQ Urumqi 52.17 65 *e*P P 05 09 36.2 +1.6
WMQ LR LR
comp=N,120nm,22.0s,MS4.1
WMQ LR LR
comp=E,150nm,20.0s,MS4.1
WMQ LR LR
comp=Z,120nm,18.0s,MS4.0
H12A Diamond D Ranc 52.27 298 ⇓P P 05 09 35.0 -0.3
baz=52
BW06 Boulder Array 52.37 293 ⇓P P 05 09 35.9 -0.2
baz=52
BW06 Boulder Array 52.37 293 *e*P P 05 09 35.8 -0.3
comp=Z,3.2nm,1.1s,mb4.2
BW06 Boulder Array 52.37 293 *e*P P 05 09 35.8 -0.3
comp=Z,3.2nm,1.1s,mb4.2
PDAR Pinedale Array 52.37 293 P P 05 09 35.6 -0.4
comp=Z,1.0nm,1.0s,mb3.7,baz=32,slow=5.8,SNR=5.7
PDAR Pinedale Array 52.37 293 P P 05 09 35.7 -0.4
G09A Cove 52.42 301 ⇓P P 05 09 36.0 -0.4
baz=52,SNR=5.9
F07A Phinny Hill Vi 52.44 303 ⇑P P 05 09 36.3 -0.2
baz=52
H11A Donnelly 52.46 299 ⇓P P 05 09 36.1 -0.6
baz=52,SNR=5.4
G08A Pilot Rock 52.73 302 ⇑P P 05 09 38.7 -0.1
baz=52,SNR=5.5
J14A Carey 53.02 296 ⇓P P 05 09 41.1 +0.2
baz=52
I12A Atlanta 53.05 298 ⇑P P 05 09 41.5 +0.4
baz=53
HLID Hailey 53.06 297 ⇑P P 05 09 41.7 +0.6
baz=53
HLID Hailey 53.06 297 *e*P P 05 09 41.4 +0.2
comp=Z,2.6nm,1.1s,mb4.1
HLID Hailey 53.06 297 *e*P P 05 09 41.4 +0.3
comp=Z,2.6nm,1.1s,mb4.1
J12A Stokes Ranch, 53.54 298 ⇑P P 05 09 45.1 +0.5
baz=53
I09A Lost Marbles R 53.62 300 ⇑P P 05 09 44.7 -0.5
baz=53
H06A Lindquist Farm 53.62 303 ⇓P P 05 09 45.6 +0.3
baz=53
OXF Oxford 53.63 271 *e*P P 05 09 44.3 -1.1
comp=Z,4.9nm,0.6s,mb4.6
OXF Oxford 53.63 271 *e*P P 05 09 44.3 -1.2
comp=Z,4.8nm,0.6s,mb4.6
I07A Izee 54.00 302 ⇑P P 05 09 48.1 +0.1
baz=54
J09A Fry Pan Ranch, 54.20 300 ⇓P P 05 09 49.1 -0.3
baz=54,SNR=10
K11A Parker Ranch, 54.24 298 ⇑P P 05 09 50.3 +0.5
baz=54
O20A White River Ci 54.39 290 ⇑P P 05 09 51.3 +0.4
baz=54
K10A MacKenzie Ranc 54.48 299 ⇑P P 05 09 52.0 +0.4
baz=54
MIAR Mount Ida 54.94 274 *e*P P 05 09 54.5 -0.5
comp=Z,1.9nm,0.6s,mb4.3
MIAR Mount Ida 54.94 274 *e*P P 05 09 54.5 -0.5
comp=Z,1.9nm,0.6s,mb4.3
L10A Juniper Basin 55.01 298 ⇑P P 05 09 55.6 +0.2
baz=54,SNR=5.8
O17A Robinson Place 55.08 292 ⇓P P 05 09 56.1 +0.2
baz=55
Q22A Crested Butte, 55.16 289 ⇓P P 05 09 57.2 +0.7
baz=55
N14A Grayback Hills 55.20 295 ⇓P P 05 09 56.9 +0.1
baz=55
M11A Holland Ranch, 55.41 297 ⇑P P 05 09 58.7 +0.4
baz=55
K05A Summer Lake 55.64 302 ⇑P P 05 10 00.4 +0.5
baz=55
DUG Dugway 55.70 294 ⇑P P 05 10 00.9 +0.5
baz=55
DUG Dugway 55.70 294 *e*P P 05 10 00.6 +0.2
comp=Z,4.4nm,1.1s,mb4.4
DUG Dugway 55.70 294 *e*P P 05 10 00.6 +0.2
comp=Z,4.4nm,1.1s,mb4.4
Q18A Rafter H Ranch 55.91 291 ⇑P P 05 10 02.4 +0.5
baz=56
SRU San Rafael 56.02 292 ⇑P P 05 10 03.3 +0.6
baz=56
P14A Drum Mountains 56.33 294 ⇓P P 05 10 05.8 +0.9
baz=56
WMOK Wichita Mounta 56.42 279 *e*P P 05 10 04.4 -1.2
comp=Z,2.3nm,0.9s,mb4.2
WMOK Wichita Mounta 56.42 279 *e*P P 05 10 04.4 -1.2
comp=Z,2.3nm,0.9s,mb4.2
R18A Canyonlands Na 56.50 291 ⇑P P 05 10 06.4 +0.3
baz=56,SNR=6.9
O11A Cowboy Ranch, 56.58 297 ⇑P P 05 10 06.8 +0.1
baz=56
R17A Hanksville Air 56.71 292 ⇑P P 05 10 07.6 -0.1
baz=56
P13A Bates Ranch, G 56.73 295 ⇑P P 05 10 07.9 +0.2
baz=56
T22A Edith 56.86 288 ⇑P P 05 10 09.4 +0.7
baz=56
S19A Harvey Farm, M 56.86 290 ⇓P P 05 10 09.2 +0.5
baz=56
Q14A Sevier Lake (B 56.95 294 ⇑P P 05 10 09.7 +0.4
baz=56
R16A Teasdale 57.07 292 ⇑P P 05 10 10.3 +0.1
baz=57
MVCO Mesa Verde 57.16 289 ⇓P P 05 10 11.4 +0.5
baz=57
S18A Hurst Farm, Bl 57.17 291 ⇓P P 05 10 11.5 +0.6
baz=57
S17A Black Ridge (B 57.46 291 ⇑P P 05 10 13.4 +0.4
baz=57
T18A Mexican Hat 57.65 290 ⇓P P 05 10 15.0 +0.7
baz=57
T19A Beclabito 57.67 289 ⇑P P 05 10 14.7 +0.3
baz=57
Q11A Duckwater 57.77 296 ⇑P P 05 10 15.1 0.0
baz=57
S15A Panguitch 57.89 293 ⇑P P 05 10 16.8 +0.8
baz=57
R13A O'Grain Ranch, 57.90 294 ⇑P P 05 10 16.5 +0.5
baz=57
U20A Newcomb 57.94 289 ⇑P P 05 10 16.9 +0.6
baz=58
T17A Navajo Res., N 58.05 291 ⇓P P 05 10 17.5 +0.4
baz=58
R11A Troy Canyon, C 58.21 296 ⇓P P 05 10 18.3 +0.1
baz=58
U18A Rough Rock, Ch 58.31 290 ⇓P P 05 10 18.9 0.0
baz=58
S13A Holt Ranch, En 58.42 294 ⇓P P 05 10 20.1 +0.4
baz=58
R10A Warm Springs 58.47 296 ⇑P P 05 10 21.0 +0.9
baz=58
T15A Red Dirt Ranch 58.51 292 ⇓P P 05 10 20.9 +0.6
baz=58
WCN Washoe City 58.51 300 ⇓P P 05 10 21.0 +0.7
baz=58
TORD Torodi Ar. Bea 58.82 164 P P 05 10 23.5 +0.8
comp=Z,1.5nm,0.8s,mb4.1,baz=349,slow=6.9,SNR=11
S10A Tonopah Range, 58.90 297 ⇓P P 05 10 22.8 -0.2
baz=58
NVAR Mina Array Bea 58.91 298 P P 05 10 21.7 -1.4
comp=Z,0.2nm,0.4s,mb3.5,baz=15,slow=3.7,SNR=5.4
NVAR Mina Array Bea 58.91 298 P P 05 10 21.7 -1.4
U16A Tuba City 58.94 291 ⇑P P 05 10 23.7 +0.4
baz=58
U15A North Rim 59.03 292 ⇑P P 05 10 23.4 -0.5
baz=59
T11A Corn Creek, Al 59.13 295 ⇓P P 05 10 25.0 +0.4
baz=59
V15A Kaibab Nationa 59.56 292 ⇓P P 05 10 28.7 +1.1
baz=59
GTA Gaotai 59.65 56 *e*P P 05 10 31.5 +3.3
GTA pP pP 05 10 35.6 +4.2
GTA sP sP 05 10 39.2 +6.6
GTA pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
V14A Boquillas Ranc 60.01 293 ⇑P P 05 10 31.9 +1.3
baz=60
124A Stringfield Ra 60.40 284 ⇑P P 05 10 34.1 +0.7
baz=60
X16A Lo Mia Camp, P 60.64 291 ⇓P P 05 10 35.4 +0.4
baz=60
MDJ Mudanjiang 61.15 30 P P 05 10 37.3 -1.1
MDJ pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
MDJ pmax pmax
comp=Z,110nm,4.8s
326A Caldwell Ranch 61.22 283 ⇓P P 05 10 39.7 +0.7
baz=61
HHC Hu-ho-hao-te 61.22 46 *e*P P 05 10 39.1 +0.2
HHC pP pP 05 10 43.8 +1.7
HHC sP sP 05 10 46.1 +2.8
HHC PcP PcP 05 11 22.9 +1.4
HHC PP PP 05 12 55.3 +2.1
HHC ScP ScP 05 15 21.9 -0.7
HHC S S 05 18 55.2 -3.0
HHC sS sS 05 19 04.9 +1.4
HHC ScS ScS 05 20 26.0 -3.7
HHC SS SS 05 22 56.9 -0.5
HHC pmax pmax
comp=Z,18nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,100nm,5.2s
HHC LR LR
comp=N,110nm,15.2s,MS4.3
HHC LR LR
comp=E,110nm,15.2s,MS4.3
HHC LR LR
comp=Z,110nm,14.0s,MS4.2
CN2 Changchun 61.24 34 *e*P P 05 10 39.9 +0.9
119A Ashpeak Ranch, 61.52 288 ⇓P P 05 10 41.3 +0.3
baz=61
426A McDonald Obser 61.84 282 ⇓P P 05 10 44.2 +1.0
baz=62
626A Big Bend Ranch 62.91 282 ⇑P P 05 10 50.6 +0.2
baz=62
217A Green Valley 62.91 289 ⇑P P 05 10 51.1 +0.8
baz=62
TXAR Lajitas Array 62.96 281 P P 05 10 50.4 -0.3
comp=Z,0.6nm,0.7s,mb3.9,baz=45,slow=4.8,SNR=9.1
TXAR Lajitas Array 62.96 281 P P 05 10 50.4 -0.3
LZH Lanzhou 63.84 54 *e*P P 05 10 58.0 +1.6
LZH pP pP 05 11 01.5 +1.8
LZH sP sP 05 11 03.1 +2.2
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
XAN Xi'an 67.07 50 P P 05 11 17.5 +0.1
XAN pP pP 05 11 20.8 +0.2
XAN sP sP 05 11 22.1 +0.3
XAN PP PP 05 13 44.4 -0.2
XAN S S 05 20 10.4 -0.4
XAN sS sS 05 20 16.0 -0.2
XAN SS SS 05 24 29.4 +0.6
XAN pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
CD2 Chengdu 68.71 56 P P 05 11 29.0 +1.2
CD2 pP pP 05 11 33.7 +2.7
CD2 sP sP 05 11 35.5 +3.3
CD2 PP PP 05 14 02.1 +3.2
CD2 S S 05 20 29.5 -1.1
CD2 sS sS 05 20 37.0 +1.1
CD2 SS SS 05 24 54.4 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,100nm,3.8s
CD2 LR LR
comp=N,220nm,6.3s
CD2 LR LR
comp=Z,300nm,5.9s
NJ2 Nanjing 71.29 43 *e*P P 05 11 47.5 +3.9
NJ2 pmax pmax

comp=Z,10.0nm,0.5s,mb5.0
GYA Guiyang 73.71 55 P **P** **05 12 01.0 +2.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KMI Kunming 73.93 59 P **P** **05 12 01.3 +2.0**
KMI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CMAR Chiang Mai Arr 79.17 64 P **P** **05 12 28.6 -0.6**
comp=Z,0.6nm,0.3s,mb4.0,baz=319,slow=6.3,SNR=5.6
ASAR Alice Springs 128.51 41 PKP PKPdf 05 19 30.1 -0.7
comp=Z,0.2nm,0.5s,baz=346,slow=1.9,SNR=3.1

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*IDC **06** 05:00:37.4±0.7,35°.12N×81°.18E,h0km,mb4.1/14, mb1 4.2/19,mb1mx4.0/30,mbtmp4.0/19,ML3.8/4,MS3.2/4, Ms1 3.2/4,ms1mx2.8/34,Error ellipse: s-maj=21.6km s-min=14.0km az=57.0*
*ISCJB **06** 05:00:38.1±0.3,35°.27N±0°.04×81°.36E±0°.08,h10km, mb4.1/21,MS3.2/3,Error ellipse: s-maj=9.8km s-min=4.1km az=153.7*
*NEIC **06** 05:00:39.4±0.6,35°.12N×81°.36E,h10km,mb3.9/3,Error ellipse: s-maj=14.1km s-min=10.1km az=47.0*
*BJI **06** 05:00:42.4,35°.54N×81°.46E,h11km,mB4.9/1,mb4.1/3, ML3.9/6*
ISC 06 05:00:40.3±0.3,35°.29N±0°.04×81°.35E±0°.07,h10km,n54, σ1§41/54,mb4.1/21,MS3.2/3,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.68**	**210**	*ex*	**Pn**	**05 02 06.0**	**+1.3**
KSH	**Kashi**	**6.01**	**316**	Pn	**Pn**	**05 02 10.8**	**+1.5**
KSH				Sn	**Sn**	**05 03 20.8**	**+2.7**
KSH				smax			
	comp=N,78nm,0.5s						
KSH				smax			
	comp=E,120nm,0.7s						
PYUN	**Piuthan**	**7.30**	**169**	*eP*	**Pn**	**05 02 27.3**	**+0.3**
	comp=E,18nm,0.5s						
NDI	**New Delhi**	**7.46**	**209**	*eP*	**Pn**	**05 02 28.0**	**-1.3**
KOLN	**Koldanda**	**7.74**	**165**	*eP*	**Pn**	**05 02 32.1**	**-0.9**
	comp=E,20nm,0.4s						
GKN	**Gorkha**	**7.79**	**158**	*eP*	**Pn**	**05 02 34.8**	**+1.1**
	comp=E,18nm,0.4s						
KKN	**Kakani**	**8.19**	**155**	*eP*	**Pn**	**05 02 40.4**	**+1.1**
	comp=E,25nm,0.5s						
DMN	**Daman**	**8.30**	**156**	*eP*	**Pn**	**05 02 41.5**	**+0.8**
	comp=E,20nm,0.5s						
GUN	**Gumba**	**8.31**	**151**	*eP*	**Pn**	**05 02 42.2**	**+1.4**
	comp=E,26nm,0.4s						
PKIN	**Phulchoki**	**8.43**	**155**	*eP*	**Pn**	**05 02 44.0**	**+1.5**
	comp=E,34nm,0.6s						
PKI	**Pulchoki**	**8.44**	**155**	*eP*	**Pn**	**05 02 43.8**	**+1.2**
	comp=E,30nm,0.5s						
UCH	**Uchtor**	**8.74**	**324**	*e*Pn	**Pn**	**05 02 49.4**	**+2.7**
	comp=E,28nm,1.1s						
TKM2	**Tokmak 2**	**8.83**	**331**	*e*Pn	**Pn**	**05 02 51.9**	**+3.9**
	comp=E,13nm,0.9s						
AAK	**Ala-Archa**	**9.07**	**326**	Pn	**Pn**	**05 02 52.3**	**+1.1**
	comp=E,0.0nm,0.3s,baz=183,slow=19,SNR=4.7						
AAK				Pg	Pn	05 03 23.0	+32
	comp=E,0.0nm,0.3s,baz=126,slow=9.5,SNR=4.6						
AAK				Lg		05 05 22.0	
	comp=E,0.0nm,0.3s,baz=317,slow=20,SNR=3.6						
AAK				LR	LR	05 06 35.2	
	comp=E,95nm,20.2s,baz=293,slow=39						
AAK	**Ala-Archa**	**9.07**	**326**	*e*Pn	**Pn**	**05 02 53.4**	**+2.2**
AAK				Pg	Pn	05 03 23.0	+32
AAK				Lg		05 05 22.0	
AAK				LR	LR	05 06 35.2	
AML	**Almayashu**	**9.08**	**321**	*e*Pn	**Pn**	**05 02 53.5**	**+2.2**
	comp=E,18nm,0.6s						
EKS2	**Erkin-Say**	**9.43**	**324**	*e*Pn	**Pn**	**05 02 58.5**	**+2.4**
	comp=E,4.7nm,0.6s						
KBL	**Kabul**	**10.14**	**269**	*e*Pn	**Pn**	**05 03 08.2**	**+2.3**
	comp=E,4.5nm,0.5s						
MK31	**Makanchi Array**	**11.51**	**3**	*e*Pn	**Pn**	**05 03 21.4**	**-3.2**
MKAR	**Makanchi Array**	**11.51**	**3**	Pn	**Pn**	**05 03 24.8**	**+0.1**
	comp=E,0.5nm,0.3s,baz=181,slow=12,SNR=17						
MKAR				Sn	**Sn**	**05 05 29.4**	**-3.9**
	comp=E,0.3nm,0.3s,baz=188,slow=18,SNR=2.6						
KURK	**Kurchatov**	**15.54**	**354**	Pn	**Pn**	**05 04 16.4**	**-3.0**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=11						
KURK	**Kurchatov**	**15.54**	**354**	Pn	**Pn**	**05 04 16.4**	**-3.0**
ZALV	**Zalesovo Beam**	**18.81**	**6**	P	**Pn**	**05 05 00.0**	**-0.3**
	comp=E,0.5nm,0.3s,baz=194,slow=11,SNR=19						
BVAR	**Borovoye Array**	**19.36**	**340**	P	**Pn**	**05 05 06.3**	**-0.6**
	comp=E,0.6nm,0.3s,baz=149,slow=12,SNR=11						
BRVK	**Borovoye**	**19.41**	**340**	*e*P	**Pn**	**05 05 07.1**	**-0.5**
	comp=E,9.1nm,1.0s						
ABKAR	**Akbulak array**	**21.01**	**318**	*e*P	**P**	**05 05 23.8**	**-0.1**
	comp=E,4.4nm,0.7s,mb3.9						
SONM	**Songino Array**	**22.43**	**48**	P	**P**	**05 05 41.5**	**+2.4**
	comp=E,2.0nm,0.8s,mb3.6,baz=242,slow=10,SNR=11						
SONM				LR	LR	05 14 09.6	
	comp=E,25nm,21.2s,MS2.6,baz=284,slow=36						
AKTK	**Aktyubinsk**	**22.70**	**319**	P	**P**	**05 05 41.5**	**-0.5**
AKTO	**Aktyubinsk**	**22.70**	**319**	P	**P**	**05 05 41.5**	**-0.5**
	comp=E,1.4nm,0.6s,mb3.6,baz=117,slow=15,SNR=5.9						
ULN	**Ulaanbaatar**	**22.84**	**49**	*e*P	**P**	**05 05 45.2**	**+1.8**
	comp=E,3.3nm,1.0s,mb3.7						
CMAR	**Chiang Mai Arr**	**22.90**	**133**	P	**P**	**05 05 44.0**	**-0.3**
	comp=E,2.4nm,0.9s,mb3.6,baz=314,slow=11,SNR=9.0						
KSRS	**Korea Array**	**37.27**	**73**	LR	LR	05 24 46.0	
	comp=E,26nm,19.1s,MS3.0,baz=185,slow=39						
JOW	**Kunigami**	**40.76**	**89**	LR	LR	05 25 43.6	
	comp=E,178nm,19.4s,MS3.9,baz=94,slow=37						
FINES	**FINESS Array B**	**43.26**	**325**	P	**P**	**05 08 42.0**	**+0.5**
	comp=E,3.1nm,0.7s,mb4.1,baz=130,slow=8.2,SNR=3.9						
ARCES	**ARCESS Array B**	**45.58**	**336**	P	**P**	**05 09 01.1**	**+1.1**
	comp=E,6.4nm,0.8s,mb4.6,baz=97,slow=7.9,SNR=20						
ARE0	**ARCESS Array S**	**45.58**	**336**	*e*P	**P**	**05 09 00.9**	**+0.8**
NOA	**NORSAR Array B**	**50.38**	**324**	P	**P**	**05 09 34.7**	**-2.6**
	comp=E,0.4nm,0.6s,mb3.6,baz=109,slow=5.0,SNR=2.8						
GERES	**GERESS Array B**	**50.41**	**308**	P	**P**	**05 09 35.7**	**-2.0**
	comp=E,0.4nm,0.3s,mb4.0,baz=93,slow=6.8,SNR=6.4						
HINF	**Hinteralfeld**	**55.09**	**308**	*e*P	**P**	**05 10 11.5**	**-0.9**
	comp=E,5.5nm,0.8s,mb4.3						
LPG	**La Plagne**	**55.83**	**305**	*e*P	**P**	**05 10 17.8**	**+0.1**
	comp=E,12nm,0.9s,mb4.6						
LPL	**La Plagne**	**55.84**	**305**	*e*P	**P**	**05 10 17.8**	**0.0**
	comp=E,7.5nm,0.6s,mb4.6						
MBDF	**Montbardon**	**56.06**	**304**	*e*P	**P**	**05 10 18.0**	**-1.3**
	comp=E,5.4nm,0.7s,mb4.4						
LOR	**Lormes**	**57.20**	**308**	*e*P	**P**	**05 10 25.8**	**-1.6**
	comp=E,5.7nm,0.8s,mb4.3						
VIVF	**Saint-Julien-l**	**57.43**	**305**	*e*P	**P**	**05 10 28.2**	**-0.9**
LASF	**Ste Croix**	**58.24**	**304**	*e*P	**P**	**05 10 34.3**	**-0.5**
EPF	**Esparros**	**61.00**	**304**	*e*P	**P**	**05 10 51.9**	**-2.0**
SFJD	**Kangerlussuaq**	**71.71**	**342**	P	**P**	**05 12 00.9**	**-1.2**
	comp=E,7.9nm,0.6s,mb4.8,baz=135,slow=2.9,SNR=7.9						
TORD	**Torodi Ar. Bea**	**74.16**	**275**	P	**P**	**05 12 15.9**	**-1.5**
	comp=E,2.7nm,0.8s,mb4.2,baz=49,slow=5.1,SNR=20						
WRA	**Warramunga Arr**	**74.44**	**129**	P	**P**	**05 12 16.9**	**-1.9**
	comp=E,0.3nm,0.3s,mb3.6,baz=322,slow=5.7,SNR=2.3						
ASAR	**Alice Springs**	**76.91**	**132**	P	**P**	**05 12 31.1**	**-1.8**
	comp=E,0.7nm,0.8s,mb3.6,baz=317,slow=5.4,SNR=6.0						
YKA	**Yellowknife Ar**	**81.71**	**7**	P	**P**	**05 12 58.2**	**-0.4**
	comp=E,1.4nm,0.8s,mb3.9,baz=341,slow=5.1,SNR=20						
YKA	**Yellowknife Ar**	**81.71**	**7**	P	**P**	**05 12 58.2**	**-0.4**
BOSA	**Boshof**	**82.69**	**227**	P	**P**	**05 13 02.5**	**-1.7**
	comp=E,3.4nm,0.6s,mb4.5,baz=16,slow=7.7,SNR=7.1						
DBIC	**Dimbokro**	**83.10**	**273**	P	**P**	**05 13 05.0**	**-1.7**
	comp=E,3.3nm,1.0s,mb4.3,baz=76,slow=8.3,SNR=3.2						

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*ISCJB **06** 05:09:40.9±0.9,32°.16N±0°.06×35°.5E±0°.2,h10km,Error ellipse: s-maj=21.7km s-min=4.2km az=21.8*
*HLW **06** 05:09:40.1,32°.38N×35°.62E,h22km±21km,Ml2.6*
*CSEM **06** 05:09:42.3±0.1,32°.20N×35°.39E,h12km,ML2.6,Error ellipse: s-maj=3.6km s-min=2.2km az=106.0*
*GRAL **06** 05:09:46.4±0.8,32°.33N×35°.57E,h18km±6km,MD3.6*
ISC 06 05:09:41.8±0.8,32°.22N±0°.07×35°.4E±0°.2,h10km,n19, σ0§80/26,Dead Sea region
GII 06 05:09:42.2±0.1,32°.19N×35°.37E,h10km,Md2.7/8, Mm2.3/7,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**1.27**	**357**	*e*P	**Pn**	**05 10 06.7**	**+1.2**
MATL	**Matirih**	**1.27**	**357**	*e*P	**Pn**	**05 10 06.7**	**+1.2**
RCY	**Rachaya**	**1.31**	**16**	*e*P	**Pn**	**05 10 06.7**	**+0.6**
RCY				*e*S	**Sb**	**05 10 21.9**	**-1.4**
RCY	**Rachaya**	**1.31**	**16**	*e*P	**Pn**	**05 10 06.7**	**+0.6**
RCY				*e*S	**Sb**	**05 10 21.9**	**-1.4**
BHL	**Bhannes**	**1.69**	**7**	*e*P	**Pn**	**05 10 11.9**	**+0.6**
BHL				*e*S	**Sn**	**05 10 31.8**	**-1.3**
BHL	**Bhannes**	**1.69**	**7**	*e*P	**Pn**	**05 10 11.9**	**+0.5**
BHL				*e*S	**Sn**	**05 10 31.8**	**-1.3**
RSH		**1.90**	**229**	P	**Pn**	**05 10 14.0**	**-0.3**
RSH				S	**Sn**	**05 10 38.3**	**0.0**
HWQ	**Hawqa**	**2.10**	**12**	*e*P	**Pn**	**05 10 18.5**	**+1.5**
HWQ	**Hawqa**	**2.10**	**12**	*e*P	**Pn**	**05 10 18.5**	**+1.5**
AMAG	**Maghara**	**2.44**	**231**	P	**Pn**	**05 10 21.7**	**0.0**
	baz=231						
AMAG	**Maghara**	**2.44**	**231**	P	**Pn**	**05 10 21.7**	**0.0**
HNKL	**Nakhl**	**2.59**	**208**	P	**Pn**	**05 10 23.9**	**+0.2**
	baz=211						
HNKL				S	**Sn**	**05 10 54.5**	**-0.7**
	baz=211						
HNKL				AMP		05 11 00.0	
	comp=N,30μm,0.7s,logA/T=4.6,baz=211						
HNKL	**Nakhl**	**2.59**	**208**	P	**Pn**	**05 10 23.9**	**+0.2**
HNKL				S	**Sn**	**05 10 54.4**	**-0.8**
SUZ		**3.24**	**224**	P	**Pn**	**05 10 33.0**	**+0.4**
	baz=225						
SUZ		**3.24**	**224**	P	**Pn**	**05 10 33.0**	**+0.4**
HKAT	**Jabal Katrina**	**3.88**	**199**	P	**Pn**	**05 10 41.3**	**-0.2**
	baz=201						
HKAT	**Jabal Katrina**	**3.88**	**199**	P	**Pn**	**05 10 41.3**	**-0.1**
HHRG	**Al Ghardaqah**	**5.23**	**198**	P	**Pn**	**05 10 59.5**	**-0.6**
	baz=200						
HHRG	**Al Ghardaqah**	**5.23**	**198**	P	**Pn**	**05 10 59.5**	**-0.5**

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*NNC **06** 05:25:27.1±4.1,34°.90N×81°.57E,h0km,mb4.6,Error ellipse: s-maj=52.9km s-min=50.6km az=93.0*
*IDC **06** 05:25:31.5±0.5,35°.11N×81°.29E,h0km,mb4.4/24, mb1 4.5/29,mb1mx4.5/29,mbtmp4.4/29,ML3.8/5,MS4.0/21, Ms1 4.0/21,ms1mx3.7/44,Error ellipse: s-maj=14.8km s-min=11.2km az=40.0*
*LDG **06** 05:25:31.9±0.1,35°.22N×81°.05E,h10km,Mb4.9/25, Ms3.9/7,Error ellipse: s-maj=7.7km s-min=4.4km az=71.0*
*NEIC **06** 05:25:33.3±0.2,35°.10N×81°.26E,h10km,mb4.8/75,Error ellipse: s-maj=5.3km s-min=4.0km az=213.0*
*GCMT **06** 05:25:33.3±0.3,35°.23N×81°.28E,h17km±1km,MW4.9/53, Moment Tensor Solution. s25,c31; s53,c92; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~1.83±.15; Mθθ~1.32±.11; Mφφ3.15±.10; Mrθ0.21±.34; Mθφ~0.25±.07; Mφr~1.09±.24; Best double couple: M0=2.74200×10^16 NP1:φs=190.00000°,δ34.00000°,λ-71.00000°. NP2: φs=347.00000°,δ58.00000°,λ-102.00000°. Principal axes: T 3.3950, Plg12.0000°, Azm86.0000°; N -1.3060, Plg11.0000°, Azm354.0000°; P -2.0890, Plg74.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **06** 05:25:35.3,35°.39N×81°.32E,h22km,mB4.8/29,mb4.6/42, ML4.7/5,Ms4.5/41,Ms7 4.2/34*
*MOS **06** 05:25:35.2±1.0,35°.11N×81°.20E,h33km,mb5.0/65, MS4.2/21,Error ellipse: s-maj=8.0km s-min=4.0km az=125.7*
*ISCJB **06** 05:25:35.8±0.4,35°.14N±0°.02×81°.19E±0°.02,h38km±4km, mb4.7/135,MS4.1/48,Error ellipse: s-maj=3.7km s-min=2.8km az=34.7*
*DJA **06** 05:25:38,35°.08N×81°.30E,h30km,Mw5.1/6*
*SZGRF **06** 05:25:39.9,35°.32N×81°.24E,h33km,mb4.8,MS4.3, Southern Xinjiang, China*
ISC 06 05:25:38.4±0.3,35°.15N±0°.02×81°.24E±0°.02,h45km±3km, h37km±1.5km:pP-P,n378,σ1§00/399,mb4.7/135,MS4.1/48, 24C-19D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**4.39**	**216**	*e*P	**Pn**	**05 26 45.6**	**+3.0**
JOSI	**Joshimath**	**4.80**	**198**	*e*P	**Pn**	**05 26 48.3**	**+0.1**
JOSI				*ex*	x	05 27 08.6	
SDNR	**Sundarnagar**	**5.11**	**226**	*e*P	**Pn**	**05 26 54.1**	**+1.7**
SDNR				*ex*	x	05 27 57.5	
SMLA	**Simla**	**5.27**	**222**	*i* P	**Pn**	**05 26 55.8**	**+1.1**
SMLA				*i* x	x	05 27 59.4	
THN	**Thein Dam**	**5.34**	**241**	*ex*	**Pn**	**05 26 55.7**	**+0.1**
DDI	**Dehra Dun**	**5.51**	**210**	*e*P	**Pn**	**05 26 59.2**	**+1.2**
DDI				*ex*	x	05 28 35.6	
PTH	**Pithoragarh**	**5.65**	**189**	*ex*	**Pn**	**05 27 01.0**	**+1.1**
KSH	**Kashi**	**6.05**	**318**	Pn	**Pn**	**05 27 04.4**	**-0.9**
KSH				Sn	**Sn**	**05 28 10.3**	**-2.9**
KSH				LR	LR		
	comp=N,3μm,3.4s						
KSH				LR	LR		
	comp=E,4μm,2.7s						
KKR	**Kurukshetra**	**6.38**	**217**	*e*P	**Pn**	**05 27 11.2**	**+1.3**
CHCP	**Chirah Chowk**	**6.76**	**260**	P	**Pn**	**05 27 14.8**	**-0.3**
PYUN	**Piuthan**	**7.19**	**168**	*e*P	**Pn**	**05 27 16.1**	**-4.8**
	comp=E,38nm,0.5s						
NDI	**New Delhi**	**7.30**	**209**	*e*P	**Pn**	**05 27 21.0**	**-1.5**
NDI				*ex*	x	05 29 32.0	
AYAN	**Aya Nagar**	**7.52**	**209**	*e*P	**Pn**	**05 27 26.4**	**+0.9**
KOLN	**Koldanda**	**7.63**	**164**	*e*P	**Pn**	**05 27 25.7**	**-1.3**
	comp=E,62nm,0.5s						
GKN	**Gorkha**	**7.69**	**157**	*e*P	**Pn**	**05 27 27.7**	**-0.2**
	comp=E,69nm,0.6s						
SONA	**Sohna**	**7.74**	**208**	*e*P	**Pn**	**05 27 29.4**	**+0.8**
CEP	**Cherat**	**7.82**	**263**	P	**Pn**	**05 27 30.1**	**+0.5**
CEP				S	**Sn**	**05 28 55.0**	**-1.8**
KKN	**Kakani**	**8.11**	**154**	*e*P	**Pn**	**05 27 34.0**	**+0.4**
	comp=E,112nm,0.9s						
DMN	**Daman**	**8.21**	**155**	*e*P	**Pn**	**05 27 34.8**	**-0.2**
	comp=E,176nm,1.0s						
GUN	**Gumba**	**8.23**	**150**	*e*P	**Pn**	**05 27 36.2**	**+1.0**
	comp=E,85nm,0.6s						
PKIN	**Phulchoki**	**8.34**	**154**	*e*P	**Pn**	**05 27 37.3**	**+0.5**
	comp=E,78nm,0.5s						
KZA	**Kyzart**	**8.35**	**328**	P	**Pn**	**05 27 37.1**	**+0.2**
	SNR=44						
PKI	**Pulchoki**	**8.35**	**154**	*e*P	**Pn**	**05 27 37.7**	**+0.8**
	comp=E,117nm,0.8s						
AGRA	**Agra**	**8.39**	**201**	*e*P	**Pn**	**05 27 36.8**	**-0.6**
AGRA				*ex*	x	05 29 11.1	
KHET	**Khetri**	**8.44**	**215**	*e*P	**Pn**	**05 27 37.0**	**-1.1**
JIRN	**Jiri**	**8.58**	**149**	*e*P	**Pn**	**05 27 41.2**	**+1.2**
	comp=E,349nm,0.9s						
AAA	**Alma-Ata**	**8.77**	**339**	*e*P	**Pn**	**05 27 45.2**	**+2.7**
AAA				*e*S	**Sn**	**05 29 23.6**	**+3.7**
AAA				pmax	pmax		
	comp=Z,700nm,5.8s						
AAA				smax			
	comp=E,800nm,6.4s						
AAA				MLR	MLR		
	comp=Z,4μm,12.0s						
UCH	**Uchtor**	**8.80**	**325**	P	**Pn**	**05 27 43.4**	**+0.3**
	SNR=59						
UCH	**Uchtor**	**8.80**	**325**	*e*Pn	**Pn**	**05 27 42.8**	**-0.2**
	comp=Z,134nm,1.0s						
TKM2	**Tokmak 2**	**8.91**	**332**	⇓Pn	**Pn**	**05 27 43.1**	**-1.4**
	comp=Z,75nm,0.9s						
TKM2				⇑Lg		05 30 21.3	
	comp=Z,286nm,1.4s						
TKM2	**Tokmak 2**	**8.91**	**332**	P	**Pn**	**05 27 45.1**	**+0.6**
	SNR=23						
TKM2	**Tokmak 2**	**8.91**	**332**	*e*P	**Pn**	**05 27 45.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,82nm,0.9s						
TKM2	**Tokmak 2**	**8.91**	**332**	*e*Pn	**Pn**	**05 27 45.0**	**+0.5**
	comp=Z,82nm,0.9s						
TKM2				*e*		05 28 18.6	
KBK	**Karagaybulak**	**8.95**	**329**	P	**Pn**	**05 27 46.2**	**+1.1**
	SNR=34						
AML	**Almayashu**	**9.13**	**322**	P	**Pn**	**05 27 47.5**	**0.0**
	SNR=39						
AML	**Almayashu**	**9.13**	**322**	*e*Pn	**Pn**	**05 27 47.3**	**-0.1**
	comp=Z,107nm,0.9s						
AML				*e*		05 28 23.0	
AML				*e*		05 30 27.8	
AAK	**Ala-Archa**	**9.13**	**327**	P	**Pn**	**05 27 47.8**	**+0.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	**Ala-Archa**	**9.13**	**327**	Pn	**Pn**	**05 27 47.8**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=146,slow=11,SNR=34						
AAK				Pg	Pn	05 28 17.7	+30
	comp=Z,0.0nm,0.3s,baz=165,slow=12,SNR=7.2						
AAK				Lg		05 30 16.9	
	comp=Z,0.0nm,0.3s,baz=25,slow=18,SNR=3.2						
AAK	**Ala-Archa**	**9.13**	**327**	*e*Pn	**Pn**	**05 27 47.9**	**+0.4**
AAK				*e*		05 28 21.0	
FRU	**Bishkek**	**9.24**	**328**	⇑*i* P	**Pn**	**05 27 50.0**	**+1.0**
FRU				pmax	pmax		
	comp=Z,170nm,1.4s						
CHMS	**Chumysh**	**9.32**	**329**	P	**Pn**	**05 27 50.6**	**+0.5**
	SNR=12						
RAMN	**Ramite**	**9.38**	**149**	*e*P	**Pn**	**05 27 50.3**	**-0.6**
	comp=Z,479nm,1.0s						
EKS2	**Erkin-Say**	**9.49**	**324**	P	**Pn**	**05 27 53.3**	**+1.0**
	SNR=14						
EKS2	**Erkin-Say**	**9.49**	**324**	*e*Pn	**Pn**	**05 27 52.9**	**+0.5**
	comp=Z,33nm,0.8s						
EKS2				*e*		05 30 29.9	
TAPN	**Taplejung**	**9.54**	**143**	*e*P	**Pn**	**05 27 53.1**	**-0.1**
	comp=Z,66nm,0.9s						
USP	**Ospenovka**	**9.64**	**329**	P	**Pn**	**05 27 54.6**	**+0.2**
	SNR=11						
ODAN	**Odare**	**9.80**	**146**	*e*P	**Pn**	**05 27 55.3**	**-1.5**
	comp=Z,85nm,0.8s						
LSA	**Lhasa**	**9.98**	**120**	P	**Pn**	**05 28 01.6**	**+2.4**
LSA				S	**Sn**	**05 29 53.5**	**+3.7**
LSA				LR	LR		
	comp=N,2μm,17.9s						
LSA				LR	LR		
	comp=E,2μm,17.3s						
LSA	**Lhasa**	**9.98**	**120**	*e*P	**Pn**	**05 28 01.9**	**+2.7**
LSA				pmax	pmax		
	comp=Z,55nm,1.0s						
LSA	**Lhasa**	**9.98**	**120**	*e*Pn	**Pn**	**05 28 01.9**	**+2.8**
	comp=Z,55nm,1.0s						
WMQ	**Urumqi**	**9.98**	**28**	P	**Pn**	**05 27 59.3**	**+0.1**
WMQ				sP		05 28 10.7	
WMQ				S	**Sn**	**05 29 51.4**	**+1.6**
WMQ				sS		05 30 01.6	
WMQ				SS		05 30 05.2	
WMQ				pmax	pmax		
	comp=Z,36nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,10.0s						
WMQ				LR	LR		
	comp=E,2μm,11.0s						
WMQ				LR	LR		
	comp=Z,640nm,17.0s						
WMQ	**Urumqi**	**9.98**	**28**	*e*Pn	**Pn**	**05 27 57.5**	**-1.7**
WMQ				Sg	Sn	05 30 50.6	+61
WMQ				pmax	pmax		
	comp=Z,17nm,1.2s						
WMQ				smax			
	comp=N,130nm,2.2s						
WMQ				smax			
	comp=E,96nm,1.4s						
WMQ				LR	LR		
	comp=N,1μm,20.0s						
WMQ				LR	LR		
	comp=E,2μm,21.0s						
WMQ				LR	LR		
	comp=Z,640nm,17.0s						
AJM	**Ajmer**	**10.34**	**215**	*e*P	**Pn**	**05 28 03.7**	**-0.4**
AJM				*ex*	x	05 29 59.7	
KK31	**Karatay Array**	**11.50**	**317**	⇑Pn	**Pn**	**05 28 17.4**	**-2.5**
	comp=Z,18nm,1.0s,baz=0.0,slow=0.1,SNR=5.9						
KK31				⇓Lg		05 31 43.3	
	comp=Z,50nm,1.1s,baz=242,slow=45,SNR=3.9						
MK31	**Makanchi Array**	**11.66**	**4**	*e*P	**Pn**	**05 28 18.7**	**-3.3**
MKAR	**Makanchi Array**	**11.66**	**4**	Pn	**Pn**	**05 28 18.6**	**-3.4**
	comp=Z,1.1nm,0.3s,baz=185,slow=13,SNR=98						
JBP	**Jabalpur**	**11.99**	**186**	*i* P	**Pn**	**05 28 23.5**	**-3.2**
JBP				*i* x	x	05 30 37.8	
JASL	**Jaisalmer**	**12.07**	**230**	*ex*	**Pn**	**05 28 25.8**	**-2.0**
BHPL	**Bhopal**	**12.33**	**197**	*e*P	**Pn**	**05 28 28.9**	**-2.4**
BHPL				AMb	AMB	05 28 34.7	
	comp=Z,18nm,0.8s						
BHPL				*ex*	x	05 30 41.9	
SHL	**Shillong**	**13.24**	**133**	*e*P	**Pn**	**05 28 36.0**	**-7.8**
SHL				*ex*	x	05 31 07.0	
IMP	**Imphal**	**15.07**	**130**	*i* x	**Pn**	**05 29 13.0**	**+4.6**
GTA	**Gaotai**	**15.38**	**68**	P	**Pn**	**05 29 10.0**	**-2.3**
GTA				pP	pP	05 29 19.6	-7.2
GTA				sP	sP	05 29 23.5	-9.1
GTA				S	**S**	**05 31 59.7**	**-16**
GTA				sS	sS	05 32 10.1	-23
GTA				SS		05 32 16.7	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,110nm,4.2s						
GTA				LR	LR		
	comp=N,1μm,17.1s						
GTA				LR	LR		
	comp=E,470nm,13.2s						
GTA				LR	LR		
	comp=Z,760nm,11.1s						
KURBB	**Kurchatov Arra**	**15.59**	**354**	⇓P	**Pn**	**05 29 09.7**	**-5.1**
	comp=Z,13nm,1.4s						
KURK	**Kurchatov**	**15.67**	**354**	⇓P	**Pn**	**05 29 10.9**	**-5.1**
	comp=Z,104nm,1.3s						
KURK	**Kurchatov**	**15.67**	**354**	*e*P	**Pn**	**05 29 10.6**	**-5.3**
KURK				pmax	pmax		
	comp=Z,103nm,1.2s						
KURK	**Kurchatov**	**15.67**	**354**	Pn	**Pn**	**05 29 09.5**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=20						
KURK				Lg		05 33 49.2	
	comp=Z,0.0nm,0.3s,baz=185,slow=31,SNR=3.5						
KURK				LR	LR	05 35 57.2	
	comp=Z,470nm,18.8s,baz=185,slow=40						
KURK	**Kurchatov**	**15.67**	**354**	*e*P	**Pn**	**05 29 10.6**	**-5.3**
	comp=Z,103nm,1.2s						
HYB	**Hyderabad**	**17.83**	**188**	*i* P	**Pn**	**05 29 40.5**	**-2.7**
HYB				*e*S	**S**	**05 32 54.5**	**-11**
LZH	**

KMI Kunming 21.07 112 P **P** **05 30 18.7 -0.1**
KMI pP 05 30 28.6
KMI PP 05 30 43.1
KMI S **S** **05 34 07.5 -3.3**
KMI sS sS 05 34 23.8 -4.5
KMI SS 05 34 42.7
KMI pmax pmax
comp=Z,80nm,0.9s,mb5.0
KMI pmax pmax
comp=Z,89nm,3.1s
KMI LR LR
comp=N,410nm,8.7s
KMI LR LR
comp=E,130nm,8.7s
KMI LR LR
comp=Z,370nm,9.8s
MOY Mondy 21.76 35 *e*P **P** **05 30 25.7 -0.2**
MOY pmax pmax
comp=Z,39nm,1.2s,mb4.7
ZAK Zakamensk 22.09 40 *e*P **P** **05 30 28.6 -0.9**
ZAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
CHRT Chiangrai 22.35 128 P **P** **05 30 35.0 +2.5**
comp=Z,218nm,1.1s,mb5.5
SONM Songino Array 22.59 48 P **P** **05 30 35.5 +0.7**
comp=Z,16nm,1.1s,mb4.4,baz=241,slow=7.9,SNR=48
SONM LR LR 05 39 48.7
comp=Z,409nm,20.4s,MS3.9,baz=81,slow=38
CHG Chiang Mai 22.60 131 ⇓P **P** **05 30 33.9 -1.3**
comp=Z,26nm,0.9s,mb4.7
CHTO Chiang Mai 22.60 131 *e*P **P** **05 30 34.2 -1.0**
CHTO pmax pmax
comp=Z,26nm,1.1s,mb4.6
CHTO Chiang Mai 22.60 131 *e*P **P** **05 30 34.2 -1.0**
comp=Z,26nm,1.1s,mb4.6
AKTK Aktyubinsk 22.75 319 P **P** **05 30 34.8 -1.7**
AKTK LR LR 05 41 21.0
AKTO Aktyubinsk 22.75 319 ⇑P **P** **05 30 33.6 -2.8**
comp=Z,4.8nm,1.2s,mb3.8
AKTO Aktyubinsk 22.75 319 P **P** **05 30 34.8 -1.7**
comp=Z,9.3nm,0.9s,mb4.2,baz=112,slow=11,SNR=23
AKTO LR LR 05 41 21.0
comp=Z,126nm,18.7s,MS3.4,baz=305,slow=42
XAN Xi'an 22.79 85 P **P** **05 30 38.2 +1.2**
XAN pP 05 30 47.5
XAN sP sP 05 30 51.5 -2.2
XAN PP 05 31 07.5
XAN S **S** **05 34 39.3 -3.7**
XAN sS sS 05 34 54.3 -7.7
XAN SS 05 35 23.2
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb3.6
XAN pmax pmax
comp=Z,24nm,4.5s
XAN LR LR
comp=N,300nm,12.3s,MS4.0
XAN LR LR
comp=E,270nm,15.3s,MS4.0
XAN LR LR
comp=Z,270nm,17.5s,MS3.7
CMAR Chiang Mai Arr 22.87 132 P **P** **05 30 36.5 -1.6**
comp=Z,9.3nm,1.0s,mb4.2,baz=316,slow=9.2,SNR=28
CMAR PcP PcP 05 34 27.9 +0.2
comp=Z,2.1nm,0.6s,baz=307,slow=3.3,SNR=8.7
ULN Ulaanbaatar 23.00 49 *e*P **P** **05 30 39.7 +0.5**
ULN pmax pmax
comp=Z,19nm,0.9s,mb4.5
ULN Ulaanbaatar 23.00 49 *e*P **P** **05 30 39.7 +0.5**
comp=Z,19nm,0.9s,mb4.5
TLY Talaya 23.04 37 *e*P **P** **05 30 38.7 -0.8**
TLY *e*S **S** **05 34 39.4 -7.4**
TLY pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
TLY MLR MLR
comp=Z,397nm,18.0s,MS3.9
TLY Talaya 23.04 37 *e*P **P** **05 30 40.2 +0.6**
comp=Z,20nm,1.5s,mb4.3
BTO Baotou 23.30 68 *e*P **P** **05 30 42.3 -0.1**
GYA Guiyang 23.44 105 P **P** **05 30 44.5 +0.7**
GYA pP 05 30 53.8
GYA sP sP 05 30 57.8 -2.9
GYA PP 05 31 19.1
GYA S **S** **05 34 56.1 +2.3**
GYA ScP ScP 05 38 03.2 0.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,100nm,5.6s
GYA LR LR
comp=N,1μm,13.0s,MS4.6
GYA LR LR
comp=E,830nm,13.8s,MS4.6
GYA LR LR
comp=Z,790nm,11.7s,MS4.4
IRK Irkutsk 23.69 37 *e*P **P** **05 30 47.0 +1.2**
IRK pmax pmax
comp=E,36nm,1.8s
ENH Enshi 24.22 94 *e*P **P** **05 30 51.8 +0.9**
comp=E,16nm,0.9s,mb4.5
HHC Hu-ho-hao-te 24.49 68 *e*P **P** **05 30 53.3 +0.1**
HHC pP 05 31 05.2
HHC sP sP 05 31 09.6 -0.9
HHC PP 05 31 29.3
HHC PcP PcP 05 34 33.6 +2.8
HHC S **S** **05 35 09.7 -0.7**
HHC sS sS 05 35 25.8 -4.6
HHC SS 05 36 02.6
HHC ScP ScP 05 38 08.1 +2.3
HHC PcS PcS 05 38 11.7 +1.1
HHC pmax pmax
comp=Z,22nm,1.0s,mb4.5
HHC pmax pmax
comp=Z,91nm,5.5s
HHC LR LR
comp=N,420nm,11.2s,MS4.3
HHC LR LR
comp=E,410nm,10.4s,MS4.3
HHC LR LR
comp=Z,430nm,13.3s,MS4.1
TIY Taiyuan 25.17 75 *e*P **P** **05 30 59.2 -0.2**
TIY S **S** **05 35 16.0 -5.4**
TIY LR LR
comp=N,260nm,9.5s
TIY LR LR
comp=E,430nm,13.2s
TIY LR LR
comp=Z,730nm,19.3s
SVE Sverdlovsk 25.78 334 ⇓*e*P **P** **05 31 05.9 +1.1**
SVE *e*S **S** **05 35 25.8 -4.9**
SVE pmax pmax
comp=Z,61nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,746nm,13.0s,MS4.4
ARU Arti 26.29 331 *d i*P **P** **05 31 09.4 +0.1**
ARU *e* 05 31 48.8
ARU *e*PPP 05 31 58.1
ARU S **S** **05 35 42.6 +4.0**
ARU SS 05 36 43.2
ARU pmax pmax
comp=Z,60nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,317nm,14.0s,MS4.0
ARU Arti 26.29 331 *e*P **P** **05 31 09.6 +0.2**
comp=Z,39nm,1.1s,mb4.8
ARU *e* pP 05 31 20.0 -1.2
MAK Makhachkala 27.20 297 P **P** **05 31 20.0 +2.3**
MAK *e* 05 34 34.7
MAK *e*S **S** **05 35 55.7 +2.4**
MAK pmax pmax
comp=Z,142nm,1.2s,mb5.4
MAK MLR MLR
comp=Z,422nm,15.0s,MS4.1
PALK Pallekele 27.75 181 *e*P **P** **05 31 22.8 -0.1**
BJI Beijing 27.99 70 P **P** **05 31 23.6 -1.2**
BJI sP sP 05 31 37.2 -5.0
BJI S **S** **05 36 07.1 +1.2**
BJI pmax pmax
comp=Z,9.0nm,0.4s,mb4.8
BJI LR LR
comp=N,460nm,11.9s,MS4.3
BJI LR LR
comp=E,300nm,16.8s,MS4.3
BJI LR LR
comp=Z,310nm,29.3s
QRN Al-Qurain 28.90 267 *e*P **P** **05 31 32.7 -0.3**
QRN AMb AMB 05 31 34.4
comp=Z,47nm,1.2s,mb5.1
KBD Kabd 28.93 268 *e*P **P** **05 31 33.6 +0.3**
KBD AMb AMB 05 31 36.3
comp=Z,15nm,1.2s,mb4.6
MIB Mutribah 29.01 269 *e*P **P** **05 31 34.1 +0.1**
MIB AMb AMB 05 31 50.6
comp=Z,55nm,1.0s,mb5.3
RDF Al-Radifah 29.14 267 *e*P **P** **05 31 35.1 -0.1**
RDF AMb AMB 05 31 36.8
comp=Z,47nm,1.0s,mb5.2
SOKR Solikamsk 29.18 334 *d i*P **P** **05 31 36.1 +0.9**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,360nm,15.0s,MS4.1
GNI Garni 29.19 291 LR LR 05 46 06.0
comp=Z,198nm,19.2s,MS3.8,baz=98,slow=42
ZEI Tsey 29.83 296 *e*P **P** **05 31 39.9 -1.2**
ZEI pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
QIZ Qiongzhong 29.96 115 P **P** **05 31 46.5 +4.0**
QIZ S **S** **05 36 47.8 +11**
QIZ pmax pmax
comp=Z,13nm,1.5s,mb4.4
QIZ LR LR
comp=N,250nm,13.4s
QIZ LR LR
comp=Z,320nm,10.9s,MS4.2
KIV Kislovodsk 30.77 298 *e*P **P** **05 31 44.3 -5.1**
KIV *e*S **S** **05 36 45.3 -4.1**
KIV pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
KIV MLR MLR
comp=Z,112nm,14.0s,MS3.7
MALT Malatya 34.24 288 *e*P **P** **05 32 22.1 +2.3**
MALT *e* pP 05 32 31.7 -0.2
MALT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MALT Malatya 34.24 288 *e*P **P** **05 32 22.1 +2.3**
comp=Z,6.4nm,1.1s,mb4.5
MALT *e* pP 05 32 31.7 -0.2
CN2 Changchun 34.85 62 *e*P **P** **05 32 25.2 +0.1**
CN2 *e*pP pP 05 32 34.9 -2.3
CN2 *e*sP sP 05 32 38.7 -3.9
CN2 *e*S **S** **05 37 52.0 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,24.0s,MS4.7
CN2 LR LR
comp=E,700nm,24.0s,MS4.7
CN2 LR LR
comp=Z,400nm,17.0s
MOS Moscow 36.08 319 *e*P **P** **05 32 30.0 -5.5**
MOS pmax pmax
comp=Z,33nm,0.6s,mb5.4
OBN Obninsk 36.49 317 ⇑*e*P **P** **05 32 39.2 +0.2**
OBN *e*S SS 05 40 45.2 -13
OBN pmax pmax
comp=Z,11nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,300nm,15.0s,MS4.2
KLMR Klimovskoe 36.95 327 *e*P **P** **05 32 43.1 +0.3**
KLMR *e* 05 34 04.6
KLMR pmax pmax
comp=Z,55nm,1.4s,mb5.2
KSRS Korea Array 37.39 72 P **P** **05 32 46.8 -0.1**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
KSRS MLR MLR
comp=Z,316nm,18.2s,MS4.2
KSRS Korea Array 37.39 72 P **P** **05 32 46.8 -0.1**
comp=Z,1.0nm,0.5s,mb4.0,baz=292,slow=7.7,SNR=4.7
KSRS LR LR 05 49 59.5
comp=Z,316nm,18.2s,MS4.2,baz=165,slow=39
BR131 Keskin Array S 37.73 291 *e*P **P** **05 32 50.3 +0.7**
comp=Z,0.9nm,0.4s,mb3.9
BRTR Keskin Array B 37.73 291 P **P** **05 32 50.4 +0.7**
comp=Z,3.2nm,0.9s,mb4.0,baz=78,slow=8.1,SNR=9.1
BRTR LR LR 05 52 04.5
comp=Z,77nm,21.8s,MS3.5,baz=289,slow=42
MDJ Mudanjiang 37.80 61 P **P** **05 32 49.6 -0.6**
MDJ pP pP 05 32 58.4 -4.0
MDJ sP sP 05 33 02.4 -5.4
MDJ S **S** **05 38 38.5 +0.6**
MDJ ScP ScP 05 38 51.3 +1.4
MDJ sS sS 05 38 53.2 -5.1
MDJ PcS PcS 05 38 55.0 +0.3
MDJ pmax pmax
comp=Z,4.0nm,1.6s,mb3.9
MDJ pmax pmax
comp=Z,67nm,5.8s
MDJ LR LR
comp=N,210nm,13.4s,MS4.3
MDJ LR LR
comp=E,290nm,15.9s,MS4.3
MDJ LR LR
comp=Z,260nm,20.8s,MS4.0
MDJ Mudanjiang 37.80 61 *e*P **P** **05 32 52.0 +1.8**
comp=Z,21nm,1.2s,mb4.8
AKASG Malin Array Be 40.27 309 P **P** **05 33 09.8 -0.9**
comp=Z,2.2nm,0.6s,mb4.1,baz=81,slow=6.5,SNR=16
AKASG Malin Array Be 40.27 309 P **P** **05 33 09.8 -0.9**
YAK Yakutsk 40.38 33 *e*P **P** **05 33 03.6 -7.9**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.6
YAK pmax pmax
comp=N,2.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK MLR MLR
comp=Z,261nm,22.0s,MS4.0
YAK MLR MLR
comp=N,128nm,16.0s
YAK MLR MLR
comp=E,145nm,19.0s
KIS Kishinev 40.55 303 *e*P **P** **05 33 09.0 -4.1**
KIS *e* 05 34 50.0
KIS *e* 05 39 12.0
KIS MLR MLR
comp=Z,400nm,13.0s,MS4.5
KIS MLR MLR
comp=Z,300nm,14.0s
JOF Joensuu 41.32 328 *e*P **P** **05 33 17.6 -1.7**
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
JOF Joensuu 41.32 328 *e*p **P** **05 33 17.6 -1.7**
comp=Z,9.5nm,0.7s,mb4.5
VRI Vrincioaia 42.06 302 ⇑P **P** **05 33 27.3 +1.7**
VRI Vrincioaia 42.06 302 ⇑*i*P **P** **05 33 27.3 +1.7**
PLOR Plostina 42.12 302 ⇓P **P** **05 33 27.9 +1.9**
PLOR Plostina 42.12 302 ⇓*i*P **P** **05 33 27.9 +1.9**
APA Apatity 42.24 335 ⇑*e*P **P** **05 33 31.0 +4.3**
APA pmax pmax
comp=Z,13nm,0.9s,mb4.6
APA MLR MLR
comp=Z,1μm,10.0s,MS5.0
MLR Muntele Rosu 42.65 301 ⇑P **P** **05 33 32.3 +2.0**
MLR Muntele Rosu 42.65 301 ⇑*i*P **P** **05 33 32.3 +2.0**
BURAR Bucovina Array 42.96 305 ⇑P **P** **05 33 33.3 +0.5**
BURAR Bucovina Array 42.96 305 ⇑*i*P **P** **05 33 33.3 +0.5**
VOIR 43.28 301 ⇑P **P** **05 33 36.1 +0.7**
VOIR 43.28 301 ⇑*i*P **P** **05 33 36.1 +0.7**
KKM Kota Kinabalu 43.30 124 *e*P **P** **05 33 36.4 +0.4**
comp=Z,56nm,1.2s,mb5.2
FINES FINESS Array B 43.32 325 P **P** **05 33 36.0 +0.4**
comp=Z,8.2nm,0.8s,mb4.5,baz=101,slow=9.9,SNR=10
TIXI Tiksi 44.06 20 *e*P **P** **05 33 40.9 -0.5**
TIXI *e*S **S** **05 40 23.3 +13**
TIXI *e* 05 43 33.8
TIXI pmax pmax
comp=Z,10.0nm,1.6s,mb4.3
TIXI MLR MLR
comp=Z,396nm,14.0s,MS4.5
TIXI Tiksi 44.06 20 *e*P **P** **05 33 41.0 -0.4**
comp=Z,4.3nm,0.8s,mb4.2
SUW Suwalki 44.07 314 *e*P **P** **05 33 41.4 -0.3**
SUW *e* 05 33 43.1
KWP Kalwaria Pacla 44.47 308 *e*P **P** **05 33 45.8 +0.8**
KWP Kalwaria Pacla 44.47 308 *e*P **P** **05 33 45.0 0.0**
KWP *e* pP 05 33 55.8 -1.6
KWP pmax pmax
comp=Z,8.0nm,0.2s,mb5.1
KWP Kalwaria Pacla 44.47 308 *e*P **P** **05 33 45.0 +0.1**
comp=Z,8.2nm,0.2s,mb5.1
KWP *e* pP 05 33 55.8 -1.6
KWP Kalwaria Pacla 44.47 308 ⇑*i*P **P** **05 33 45.5 +0.5**
TRPA Tarpa 44.71 306 ⇑*i*P **P** **05 33 48.1 +1.2**
DRGR 44.74 304 ⇑P **P** **05 33 48.4 +1.3**
DRGR 44.74 304 ⇑*i*P **P** **05 33 48.4 +1.3**
KOLS Kolonicke sedl 44.81 307 *e*P **P** **05 33 45.8 -1.9**
KOLS pmax pmax
comp=Z,9.0nm,1.5s,mb4.4
KOLS Kolonicke sedl 44.81 307 *e*P **P** **05 33 45.8 -1.9**
comp=Z,8.7nm,1.5s,mb4.4
KOLS Kolonicke sedl 44.81 307 *e*P **P** **05 33 45.8 -1.9**
GZR Gura Zlata 44.87 302 ⇓P **P** **05 33 49.4 +1.2**
GZR Gura Zlata 44.87 302 ⇓*i*P **P** **05 33 49.4 +1.2**
KEV Kevo 45.25 337 *e*P **P** **05 33 50.7 -0.2**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
KEV Kevo 45.25 337 *e*p **P** **05 33 50.7 -0.2**
comp=Z,7.3nm,0.7s,mb4.6
STHS Stebnicka Huta 45.44 307 *e*P **P** **05 33 52.8 +0.1**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
STHS Stebnicka Huta 45.44 307 *e*P **P** **05 33 52.8 +0.1**
comp=Z,3.5nm,0.8s,mb4.2
STHS Stebnicka Huta 45.44 307 *e*P **P** **05 33 52.8 +0.1**
MJAR Matsushiro Arr 45.61 71 P **P** **05 33 53.5 -0.7**
comp=Z,3.2nm,0.8s,mb4.3,baz=287,slow=9.6,SNR=6.5
MJAR LR LR 05 53 45.3
comp=Z,87nm,20.8s,MS3.7,baz=265,slow=37
ARCES ARCESS Array B 45.67 336 P **P** **05 33 54.5 +0.3**
comp=Z,21nm,0.9s,mb5.1,baz=99,slow=7.5,SNR=42
ARCES LR LR 05 54 24.4
comp=Z,257nm,20.2s,MS4.2,baz=96,slow=38
ARE0 ARCESS Array S 45.67 336 *e*P **P** **05 33 54.8 +0.6**
ARE0 *e* 05 34 17.3
NIE Niedzica 46.05 308 *e*P **P** **05 33 58.9 +1.5**
OJC Ojcow 46.30 309 *e*P **P** **05 34 00.0 +0.6**
VYHS Vyhne 47.12 306 *e*P **P** **05 34 05.3 -0.6**
VYHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
VYHS Vyhne 47.12 306 *e*P **P** **05 34 05.3 -0.6**
comp=Z,8.4nm,1.5s,mb4.5
VYHS Vyhne 47.12 306 *e*P **P** **05 34 05.3 -0.6**
KOLL Kolacno 47.40 307 *e*P **P** **05 34 08.9 +0.9**
KOLL Kolacno 47.40 307 *e*P **P** **05 34 08.9 +0.9**
MORC Moravsky Berou 47.80 308 *e*P **P** **05 34 11.7 +0.6**
MORC pmax pmax
comp=Z,19nm,1.4s,mb4.9
MORC Moravsky Berou 47.80 308 *e*P **P** **05 34 11.7 +0.6**
comp=Z,19nm,1.4s,mb4.9
CSNA Conrad Observa 49.18 306 ⇓*i*P **P** **05 34 22.3 +0.5**
comp=Z,16nm,1.1s,mb4.9
BRG Berggiesshubel 49.92 310 *e*P **P** **05 34 28.0 +0.6**
comp=Z,12nm,0.9s,mb4.9
BRG Berggiesshubel 49.92 310 *i* P **P** **05 34 27.9 +0.5**
comp=Z,12nm,0.9s,mb4.9
BRG S **S** **05 41 46.0 +12**
BRG SS SS 05 45 18.0 +11
BRG
comp=N,798nm,18.5s
BRG
comp=E,286nm,22.9s
BRG
comp=Z,257nm,26.4s
BRG Berggiesshubel 49.92 310 *i* P **P** **05 34 27.9 +0.5**
BRG S **S** **05 41 46.0 +12**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BRG MLR MLR
comp=N,478nm,18.5s,MS4.5
BRG MLR MLR
comp=E,171nm,22.9s,MS4.5
BRG MLR MLR
comp=Z,154nm,26.4s,MS3.9
SOKA Soboth 49.97 305 ⇓*i*P **P** **05 34 28.4 +0.6**
comp=Z,24nm,1.0s,mb5.2
MOA Molln 50.25 306 ⇓*i*P **P** **05 34 30.0 +0.2**
comp=Z,8.8nm,1.1s,mb4.7
GEC2 GERESS Array S 50.43 308 *e*P **P** **05 34 31.7 +0.5**
comp=Z,12nm,1.2s,mb4.8
GEC2 GERESS Array S 50.43 308 *e*P **P** **05 34 31.7 +0.5**
GEC2 pmax pmax
comp=Z,12nm,1.2s,mb4.8
GERES GERESS Array B 50.43 308 P **P** **05 34 32.1 +0.9**
comp=Z,4.2nm,0.9s,mb4.5,baz=79,slow=6.9,SNR=30
GERES LR LR 05 59 13.8
comp=Z,130nm,18.6s,MS4.0,baz=73,slow=40
NB2 NORSAR Subarra 50.44 324 P **P** **05 34 30.7 -0.4**
comp=Z,9.1nm,1.0s,mb4.8,baz=87,slow=7.4
NOA NORSAR Array B 50.44 324 P **P** **05 34 31.2 +0.1**
comp=Z,3.1nm,0.8s,mb4.4,baz=88,slow=7.5,SNR=7.0
NOA LR LR 05 56 37.2
comp=Z,265nm,18.8s,MS4.3,baz=90,slow=37
LJU Ljubljana 50.44 304 *e*P **P** **05 34 32.0 +0.6**
CLL Collm 50.44 311 *e*P **P** **05 34 31.3 0.0**
comp=Z,7.0nm,0.9s,mb4.7
CLL Collm 50.44 311 ⇓*i*P **P** **05 34 31.2 -0.1**
CLL *e*S **S** **05 41 54.0 +13**
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CLL MLR MLR
comp=Z,300nm,18.3s,MS4.3
CLL Collm 50.44 311 ⇓*i*P **P** **05 34 31.2 -0.1**
comp=Z,7.0nm,0.9s,mb4.7
CLL *e*S **S** **05 41 54.0 +13**
CLL LR LR
comp=Z,300nm,18.3s,MS4.3
CLL Collm 50.44 311 ⇓*i*P **P** **05 34 31.2 -0.1**
comp=Z,7.0nm,0.9s,mb4.7
CLL *e*PcP PcP 05 35 49.0 0.0
CLL *e*PP PP 05 36 24.0 -3.0
CLL *e*S **S** **05 41 54.0 +13**
CLL *e*SS SS 05 45 36.0 +21
CLL LmV 05 58 00.0
comp=Z,300nm,18.3s
KHC Kasperske Hory 50.45 308 *e*P **P** **05 34 31.9 +0.5**
KHC pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
KHC Kasperske Hory 50.45 308 *e*P **P** **05 34 31.9 +0.5**
comp=Z,8.1nm,1.1s,mb4.7
TIP Timpagrande 50.58 295 *e*P **P** **05 34 32.1 -0.4**
comp=Z,16nm,1.1s,mb4.9
JAVS Javornik 50.79 304 *i* P **P** **05 34 33.7 -0.3**
SEY Seymchan 50.89 34 *d i*P **P** **05 34 33.8 -0.7**
WET Wettzell 50.90 308 *e*P **P** **05 34 35.4 +0.6**
comp=Z,9.0nm,1.0s,mb4.7
WET Wettzell 50.90 308 *e*P **P** **05 34 35.4 +0.6**
WET pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TANN Tannenbergstha 50.93 310 *e*P **P** **05 34 35.3 +0.3**
comp=Z,7.0nm,1.0s,mb4.5
TRI Trieste 51.03 304 *e*P **P** **05 34 35.5 -0.3**
TRI pmax pmax
comp=Z,19nm,1.0s,mb5.0
TRI Trieste 51.03 304 *e*P **P** **05 34 35.5 -0.4**
comp=Z,19nm,1.0s,mb5.0
ROTZ Rotzenmuhle 51.21 309 *e*P **P** **05 34 37.8 +0.7**
comp=Z,13nm,1.1s,mb4.8
MOX Moxa 51.42 310 *e*P **P** **05 34 39.2 +0.5**
comp=Z,5.0nm,1.0s,mb4.4
MOX Moxa 51.42 310 *e*P **P** **05 34 39.4 +0.7**
MOX LR LR
comp=Z,200nm,18.0s,MS4.2
BSEG Bad Segeberg 51.64 315 *e*P **P** **05 34 41.4 +1.1**
comp=Z,14nm,1.1s,mb4.8
BSEG Bad Segeberg 51.64 315 *e*P **P** **05 34 41.4 +1.1**
BSEG pmax pmax
comp=Z,14nm,1.1s,mb4.8
GRA1 Grafenberg Arr 51.85 309 *e*P **P** **05 34 43.3 +1.4**
comp=Z,34nm,1.3s,mb5.1
GRA1 LR LR
comp=Z,300nm,19.9s,MS4.3
GRF Grafenberg Arr 51.85 309 *e*P **P** **05 34 43.3 +1.4**
comp=Z,34nm,1.3s,mb5.1
GRF *e*L 05 57 55.8
comp=Z,261nm,19.9s
GRF Grafenberg Arr 51.85 309 *e*P **P** **05 34 43.3 +1.4**
GRF pmax pmax
comp=Z,34nm,1.3s,mb5.1
GRF MLR MLR
comp=Z,300nm,19.9s,MS4.3
GRF Grafenberg Arr 51.85 309 *e*P **P** **05 34 43.3 +1.4**
GRF pmax pmax
comp=Z,34nm,1.3s,mb5.1

GRF MLR MLR
comp=Z,300nm,19.9s,MS4.3
CLZ Clausthal 51.97 312 *eP* **P 05 34 43.4 +0.7**
comp=Z,16nm,1.0s,mb4.9
CLZ Clausthal 51.97 312 *eP* **P 05 34 43.4 +0.7**
CLZ pmax pmax
comp=Z,16nm,1.0s,mb4.9
CBIJ Chichi jima 52.09 81 LR LR 05 56 55.1
comp=Z,161nm,19.0s,MS4.1,baz=272,slow=36
FUR Furstenfeldbru 52.14 307 *eP* **P 05 34 45.0 +0.9**
comp=Z,33nm,0.9s,mb5.3
FUR Furstenfeldbru 52.14 307 *eP* **P 05 34 45.0 +0.9**
FUR pmax pmax
comp=Z,33nm,0.9s,mb5.3
UBBA Unterbreizbach 52.39 311 *eP* **P 05 34 46.3 +0.4**
comp=Z,5.0nm,0.8s,mb4.5
MOTA Moosalm 52.44 306⇑ *iP* **P 05 34 46.1 -0.2**
comp=Z,6.4nm,0.7s,mb4.6
FETA Feichten 52.77 306⇑ *iP* **P 05 34 48.5 -0.2**
comp=Z,6.9nm,0.9s,mb4.6
DAVA Damuels 53.27 306⇑ *iP* **P 05 34 52.5 +0.1**
comp=Z,17nm,1.0s,mb4.9
BUG Bochum--Univer 53.94 312 *eP* **P 05 34 58.1 +0.8**
comp=Z,14nm,1.0s,mb4.8
KMBO Kilima Mbogo 54.67 238 *eP* **P 05 35 03.1 0.0**
KMBO pmax pmax
comp=Z,13nm,1.5s
KMBO Kilima Mbogo 54.67 238 P **P 05 35 03.2 +0.1**
comp=Z,27nm,0.9s,mb4.3,baz=39,slow=11,SNR=6.7
KMBO Kilima Mbogo 54.67 238 *eP* **P 05 35 03.1 0.0**
comp=Z,13nm,1.5s,mb4.7
CDF Champ du Feu 54.68 308 *eP* **P 05 35 02.5 -0.2**
comp=Z,21nm,1.1s,mb4.8
CDF Champ du Feu 54.68 308 *eP* **P 05 35 02.5 -0.2**
CDF pmax pmax
comp=Z,11nm,1.1s,mb4.8
CDF Champ du Feu 54.68 308 *eP* **P 05 35 02.5 -0.2**
comp=Z,11nm,1.1s,mb4.8
PETK Petropavlovsk- 55.04 46 P **P 05 35 05.0 -0.2**
comp=Z,4.0nm,0.7s,mb4.6,baz=249,slow=2.2,SNR=6.4
PETK LR LR 05 58 56.2
comp=Z,94nm,19.1s,MS3.9,baz=170,slow=36
HINF Hinteralfeld 55.11 308 *eP* **P 05 35 05.5 -0.3**
comp=Z,26nm,1.0s,mb4.9
HINF Hinteralfeld 55.11 308 *eP* **P 05 35 05.5 -0.3**
HINF pmax pmax
comp=Z,13nm,1.0s,mb4.9
HINF Hinteralfeld 55.11 308 *eP* **P 05 35 05.5 -0.3**
comp=Z,13nm,1.0s,mb4.9
HAU Haudompre 55.38 308 *eP* **P 05 35 07.5 -0.3**
HAU *e*MLR MLR
comp=Z,252nm,19.8s,MS4.0
HAU Haudompre 55.38 308 *eP* **P 05 35 07.5 -0.3**
HAU LR LR
comp=Z,250nm,19.8s,MS4.3
GIVF Givet 55.78 311 *eP* **P 05 35 10.9 +0.3**
LPG La Plagne 55.84 305 *eP* **P 05 35 11.6 +0.5**
comp=Z,44nm,1.0s,mb5.1
LPG La Plagne 55.84 305 *eP* **P 05 35 11.6 +0.5**
LPG pmax pmax
comp=Z,22nm,1.0s,mb5.1
LPG La Plagne 55.84 305 *eP* **P 05 35 11.6 +0.5**
comp=Z,22nm,1.0s,mb5.1
LPL La Plagne 55.85 305 *eP* **P 05 35 11.5 +0.4**
comp=Z,44nm,1.0s,mb5.2
LPL La Plagne 55.85 305 *eP* **P 05 35 11.5 +0.4**
LPL pmax pmax
comp=Z,22nm,1.0s,mb5.1
LPL La Plagne 55.85 305 *eP* **P 05 35 11.5 +0.4**
comp=Z,22nm,1.0s,mb5.1
CABF La Chapelle 55.95 306 *eP* **P 05 35 11.7 -0.2**
comp=Z,14nm,1.0s,mb4.7
CABF La Chapelle 55.95 306 *eP* **P 05 35 11.7 -0.2**
CABF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CABF La Chapelle 55.95 306 *eP* **P 05 35 11.7 -0.2**
comp=Z,7.2nm,1.0s,mb4.7
BNI Bardonecchia 56.02 305 *eP* **P 05 35 10.4 -2.0**
BNI pmax pmax
comp=Z,13nm,1.1s,mb4.9
BNI Bardonecchia 56.02 305 *eP* **P 05 35 10.4 -2.0**
comp=Z,13nm,1.1s,mb4.9
MBDF Montbardon 56.06 304 *eP* **P 05 35 12.0 -0.7**
comp=Z,17nm,0.9s,mb4.8
MBDF Montbardon 56.06 304 *eP* **P 05 35 12.0 -0.7**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
MBDF Montbardon 56.06 304 *eP* **P 05 35 12.0 -0.7**
comp=Z,8.4nm,0.9s,mb4.8
BILL Bilibino 56.10 27 P **P 05 35 15.0 +2.4**
BILL pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
BILL MLR MLR
comp=Z,200nm,15.0s,MS4.3
ORIF Oris-en-Rattie 56.60 305 *eP* **P 05 35 15.9 -0.6**
comp=Z,8.6nm,0.8s,mb4.6
ORIF *e*MLR MLR
comp=Z,303nm,22.5s,MS4.0
ORIF Oris-en-Rattie 56.60 305 *eP* **P 05 35 15.9 -0.6**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ORIF Oris-en-Rattie 56.60 305 *eP* **P 05 35 15.9 -0.6**
comp=Z,4.3nm,0.8s,mb4.5
LOR Lormes 57.21 308 *eP* **P 05 35 20.0 -0.8**
comp=Z,33nm,1.2s,mb4.9
LOR *e*MLR MLR
comp=Z,316nm,22.5s,MS4.1
LOR Lormes 57.21 308 *eP* **P 05 35 20.0 -0.8**
LOR pmax pmax
comp=Z,17nm,1.2s,mb5.0
LOR MLR MLR
comp=Z,320nm,22.5s,MS4.4
LOR Lormes 57.21 308 *eP* **P 05 35 20.0 -0.8**
comp=Z,16nm,1.2s,mb4.9
LOR LR LR
comp=Z,320nm,22.5s,MS4.4
KEST Kesra 57.29 293 P **P 05 35 22.3 +0.8**
comp=Z,1.6nm,0.8s,mb4.1,baz=203,slow=4.3,SNR=5.0
SMF Signal de Mont 57.41 307 *eP* **P 05 35 21.7 -0.6**
comp=Z,23nm,1.0s,mb4.9
SMF Signal de Mont 57.41 307 *eP* **P 05 35 21.7 -0.6**
SMF pmax pmax
comp=Z,12nm,1.0s,mb4.9
SMF Signal de Mont 57.41 307 *eP* **P 05 35 21.7 -0.6**
comp=Z,12nm,1.0s,mb4.9
VIVF Saint-Julien-l 57.44 305 *eP* **P 05 35 22.2 -0.2**
SSF Saint Saulge 57.50 308 *eP* **P 05 35 22.3 -0.6**
comp=Z,26nm,1.1s,mb4.9
SSF Saint Saulge 57.50 308 *eP* **P 05 35 22.3 -0.6**
SSF pmax pmax
comp=Z,13nm,1.1s,mb4.9
SSF Saint Saulge 57.50 308 *eP* **P 05 35 22.3 -0.6**
comp=Z,13nm,1.1s,mb4.9
AVF Avril sur Loir 57.69 307 *eP* **P 05 35 23.7 -0.5**
comp=Z,33nm,1.3s,mb4.9
AVF Avril sur Loir 57.69 307 *eP* **P 05 35 23.7 -0.5**
AVF pmax pmax
comp=Z,16nm,1.3s,mb4.9
AVF Avril sur Loir 57.69 307 *eP* **P 05 35 23.7 -0.5**
comp=Z,16nm,1.3s,mb4.9
BGF Bois d'Agland 58.09 307 *eP* **P 05 35 26.5 -0.5**
LASF Ste Croix 58.25 304 *eP* **P 05 35 28.1 0.0**
DAG Danmarks Havn 58.31 345⇑ *eP* **P 05 35 28.0 -0.1**
DAG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
DAG Danmarks Havn 58.31 345⇑ *iP* **P 05 35 28.0 -0.1**
comp=Z,6.7nm,0.9s,mb4.7
TCF Toulx Ste Croi 58.60 307 *eP* **P 05 35 30.5 0.0**
comp=Z,32nm,1.2s,mb4.9
TCF Toulx Ste Croi 58.60 307 *eP* **P 05 35 30.5 0.0**
TCF pmax pmax
comp=Z,16nm,1.2s,mb4.9
TCF Toulx Ste Croi 58.60 307 *eP* **P 05 35 30.5 0.0**
comp=Z,16nm,1.2s,mb4.9
CAF Calviac 59.16 306 *eP* **P 05 35 34.5 0.0**
comp=Z,18nm,1.1s,mb4.7
CAF Calviac 59.16 306 *eP* **P 05 35 34.5 0.0**
CAF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CAF Calviac 59.16 306 *eP* **P 05 35 34.5 0.0**
comp=Z,9.1nm,1.1s,mb4.7
LDF La Druitiere 59.32 310 *eP* **P 05 35 34.9 -0.6**
comp=Z,25nm,1.0s,mb4.9
LDF La Druitiere 59.32 310 *eP* **P 05 35 34.9 -0.6**
LDF pmax pmax
comp=Z,12nm,1.0s,mb4.9
LDF La Druitiere 59.32 310 *eP* **P 05 35 34.9 -0.6**
comp=Z,12nm,1.0s,mb4.9
RJF Les Rejaudoux 59.39 306 *eP* **P 05 35 36.3 +0.3**
RJF *e*MLR MLR
comp=Z,117nm,21.2s,MS3.7
RJF Les Rejaudoux 59.39 306 *eP* **P 05 35 36.3 +0.3**
RJF LR LR
comp=Z,120nm,21.3s,MS4.0
FLN La Foliniere 59.48 311 *eP* **P 05 35 36.0 -0.6**
FLN *e*MLR MLR
comp=Z,253nm,21.8s,MS4.0
FLN La Foliniere 59.48 311 *eP* **P 05 35 36.0 -0.6**
FLN LR LR
comp=Z,250nm,21.8s,MS4.3
MTLF Montolieu 59.62 304 *eP* **P 05 35 37.5 -0.1**
comp=Z,3.7nm,0.7s,mb4.2
MTLF Montolieu 59.62 304 *eP* **P 05 35 37.5 -0.1**
MTLF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MTLF Montolieu 59.62 304 *eP* **P 05 35 37.5 -0.1**
comp=Z,1.9nm,0.7s,mb4.2
GRR Gorron 59.85 310 *eP* **P 05 35 38.6 -0.5**
comp=Z,35nm,1.1s,mb5.0
GRR Gorron 59.85 310 *eP* **P 05 35 38.6 -0.5**
GRR pmax pmax
comp=Z,17nm,1.1s,mb5.0
GRR Gorron 59.85 310 *eP* **P 05 35 38.6 -0.5**
comp=Z,17nm,1.1s,mb5.0
MFF Saint Martin d 60.02 308 *eP* **P 05 35 39.7 -0.7**
LFF La Frestale 60.03 306 *eP* **P 05 35 40.6 +0.1**
SGMF Saint Gilles 60.95 311 *eP* **P 05 35 46.5 -0.2**
EPF Esparros 61.01 304 *eP* **P 05 35 46.1 -1.1**
ROSF Rostrenen 61.37 311 *eP* **P 05 35 49.1 -0.4**
comp=Z,13nm,0.9s,mb4.7
ROSF Rostrenen 61.37 311 *eP* **P 05 35 49.1 -0.4**
ROSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
ROSF Rostrenen 61.37 311 *eP* **P 05 35 49.1 -0.4**
comp=Z,6.3nm,0.9s,mb4.8
QUIF Quistinic 61.46 310 *eP* **P 05 35 49.5 -0.6**
ETSF Etsaut 61.67 304 *eP* **P 05 35 51.7 +0.1**
comp=Z,7.7nm,0.6s,mb4.7
ETSF Etsaut 61.67 304 *eP* **P 05 35 51.7 +0.1**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
ETSF Etsaut 61.67 304 *eP* **P 05 35 51.7 +0.1**
comp=Z,3.8nm,0.6s,mb4.7
SJPF Ste Jean 62.03 305 *eP* **P 05 35 54.1 0.0**
comp=Z,15nm,1.1s,mb4.7
SJPF Ste Jean 62.03 305 *eP* **P 05 35 54.1 0.0**
SJPF pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
SJPF Ste Jean 62.03 305 *eP* **P 05 35 54.1 0.0**
comp=Z,7.6nm,1.1s,mb4.7
SUMG Summit 64.90 343 *eP* **P 05 36 13.3 +0.8**
comp=Z,31nm,1.1s,mb5.2
ESDC Sonseca Array 65.34 302 P **P 05 36 15.5 -0.4**
comp=Z,0.9nm,0.7s,mb3.9,baz=50,slow=7.8,SNR=4.1
ESDC LR LR 06 10 12.2
comp=Z,74nm,18.4s,MS3.9,baz=355,slow=41
MBWA Marble Bar 66.86 141 *eP* **P 05 36 24.8 -0.9**
comp=Z,10nm,0.8s,mb4.9
FITZ Fitzroy Crossi 67.67 134 LR LR 06 11 59.1
comp=Z,68nm,21.3s,MS3.9,baz=332,slow=41
RES Resolute Bay 70.41 359 *eP* **P 05 36 46.4 -0.8**
RES pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
RES Resolute Bay 70.41 359 *eP* **P 05 36 46.4 -0.9**
comp=Z,2.6nm,1.1s,mb4.1
COLD Coldfoot 70.78 19 *eP* **P 05 36 49.8 +0.2**
comp=Z,9.2nm,0.9s,mb4.7
LSZ Lusaka 71.02 235 *eP* **P 05 36 51.9 +0.2**
LSZ pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
LSZ Lusaka 71.02 235 *eP* **P 05 36 51.9 +0.2**
comp=Z,6.7nm,1.2s,mb4.5
SFJD Kangerlussuaq 71.81 342 *i P* **P 05 36 54.4 -1.4**
SFJD pmax pmax
comp=Z,11nm,0.9s,mb4.8
SFJD Kangerlussuaq 71.81 342 *eP* **P 05 36 55.4 -0.4**
comp=Z,12nm,0.9s,mb4.8
SFJD Kangerlussuaq 71.81 342 *i P* **P 05 36 54.4 -1.4**
comp=Z,11nm,0.9s,mb4.8
TTA Tatalina 72.13 24 *eP* **P 05 36 58.6 +0.8**
TTA *e* pP 05 37 09.7 -1.2
TTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TTA Tatalina 72.13 24 *eP* **P 05 36 58.5 +0.8**
comp=Z,3.5nm,0.7s,mb4.4
TTA *e* pP 05 37 09.7 -1.3
BPAW Bear Paw Mtn. 72.87 21 *eP* **P 05 37 01.0 -1.1**
comp=Z,16nm,1.2s,mb4.8
COLA College 73.19 20 *eP* **P 05 37 04.5 +0.5**
COLA *e* pP 05 37 15.9 -1.3
COLA pmax pmax
comp=Z,13nm,0.9s,mb4.9
COLA College 73.19 20 *eP* **P 05 37 04.5 +0.5**
comp=Z,14nm,0.9s,mb4.9
COLA *e* pP 05 37 15.9 -1.4
KTH Kantishna Hill 73.30 22 *eP* **P 05 37 04.8 +0.1**
comp=Z,40nm,1.6s,mb5.1
PPLA Purkeypile 73.39 23 *eP* **P 05 37 04.8 -0.4**
comp=Z,37nm,1.5s,mb5.1
SVW2 Sparrevohn 73.55 25 *eP* **P 05 37 07.3 +1.0**
INK Inuvik 73.63 13 *eP* **P 05 37 06.6 0.0**
INK pmax pmax
comp=Z,28nm,1.6s
INK Inuvik 73.63 13 *eP* **P 05 37 06.5 0.0**
comp=Z,28nm,1.6s,mb5.0
MCK McKinley 73.75 21 *eP* **P 05 37 08.2 +0.8**
MCK pmax pmax
comp=Z,11nm,1.2s,mb4.7
MCK McKinley 73.75 21 *eP* **P 05 37 08.2 +0.8**
comp=Z,11nm,1.2s,mb4.7
TORD Torodi Ar. Bea 74.08 275 P **P 05 37 09.7 -0.4**
comp=Z,11nm,0.9s,mb4.8,baz=45,slow=5.2,SNR=64
TORD PP PP 05 39 48.9 -6.8
comp=Z,0.8nm,0.9s,baz=50,slow=5.2,SNR=3.9
TORD LR LR 06 10 08.1
comp=Z,106nm,19.2s,MS4.1,baz=35,slow=36
TORD Torodi Ar. Bea 74.08 275 P **P 05 37 09.7 -0.4**
TORD PP PP 05 39 48.9 -6.8
TORD LR LR 06 10 08.1
WRA Warramunga Arr 74.42 129 P **P 05 37 10.8 -1.0**
comp=Z,5.6nm,1.0s,mb4.5,baz=326,slow=5.9,SNR=11
WRAB Tennant Creek 74.42 129 *eP* **P 05 37 10.9 -0.9**
WRAB pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
WRAB Tennant Creek 74.42 129 *eP* **P 05 37 10.9 -0.9**
comp=Z,8.6nm,0.9s,mb4.7
EGAK Eagle 75.01 17 *eP* **P 05 37 14.8 +0.2**
comp=Z,12nm,1.3s,mb4.7
DAWY Dawson 76.03 17 *eP* **P 05 37 20.4 -0.2**
ASAR Alice Springs 76.88 132 P **P 05 37 25.3 -0.5**
comp=Z,3.4nm,0.8s,mb4.3,baz=322,slow=5.8,SNR=20
LBTB Lobatse 79.72 230 *eP* **P 05 37 41.7 +0.2**
LBTB pmax pmax
comp=Z,23nm,1.1s,mb5.0
LBTB Lobatse 79.72 230 *eP* **P 05 37 41.7 +0.2**
comp=Z,23nm,1.1s,mb5.0
TSUM Tsumeb 81.01 239 *eP* **P 05 37 49.4 +0.8**
comp=Z,14nm,1.3s,mb4.7
YKA Yellowknife Ar 81.86 7 P **P 05 37 52.2 -0.2**
comp=Z,6.3nm,0.8s,mb4.6,baz=342,slow=5.0,SNR=74
YKA Yellowknife Ar 81.86 7 P **P 05 37 52.2 -0.2**
BOSA Boshof 82.53 227 *eP* **P 05 37 55.9 -0.5**
BOSA pmax pmax
comp=Z,24nm,1.3s,mb5.1
BOSA Boshof 82.53 227 P **P 05 37 56.2 -0.2**
comp=Z,17nm,0.9s,mb5.0,baz=30,slow=6.7,SNR=18
BOSA LR LR 06 12 45.8
comp=Z,110nm,18.4s,MS4.3,baz=340,slow=34
BOSA Boshof 82.53 227 *eP* **P 05 37 55.9 -0.5**
comp=Z,24nm,1.3s,mb5.1
CTAO Charters Tower 82.55 121 *eP* **P 05 37 56.6 0.0**
CTAO pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CTAO Charters Tower 82.55 121 *eP* **P 05 37 56.5 -0.1**
comp=Z,8.2nm,0.8s,mb4.8
DBIC Dimbokro 83.02 273 *eP* **P 05 37 59.3 -0.1**
DBIC pmax pmax
comp=Z,14nm,1.0s
DBIC Dimbokro 83.02 273 P **P 05 37 59.4 0.0**
comp=Z,8.2nm,1.0s,mb4.7,baz=19,slow=8.2,SNR=6.4
DBIC LR LR 06 17 46.6
comp=Z,103nm,18.1s,MS4.2,baz=293,slow=38
DBIC Dimbokro 83.02 273 *eP* **P 05 37 59.3 -0.1**
comp=Z,14nm,1.0s,mb5.0
KIC Kosan Boka 83.10 273 *e*PKIKP **P 05 37 59.7 -0.1**
comp=Z,102nm,1.5s,mb5.6
DLBC Dease Lake 83.16 16 LR LR 06 19 46.8
comp=Z,119nm,19.5s,MS4.3,baz=316,slow=39
DLBC Dease Lake 83.16 16 *eP* **P 05 38 00.1 +0.8**
TIC Toumodi 83.17 273 *e*PKIKP **P 05 37 59.7 -0.4**
comp=Z,60nm,1.2s,mb5.5
LIC Lamto 83.41 273 *eP* **P 05 38 01.6 +0.2**
comp=Z,47nm,1.3s,mb5.1
LIC *e*MLR MLR
comp=Z,197nm,22.8s,MS4.1
LIC Lamto 83.41 273 *e*PKIKP **P 05 37 59.5 -1.9**
comp=Z,77nm,1.7s,mb5.5
LIC Lamto 83.41 273 *eP* **P 05 38 01.6 +0.2**
comp=Z,24nm,1.3s,mb5.1
LIC LR LR
comp=Z,100nm,22.8s,MS4.1
SCHQ Schefferville 86.27 342 P **P 05 38 14.1 -0.9**
comp=Z,2.4nm,0.8s,mb4.5,baz=46,slow=11,SNR=5.0
SCHQ Schefferville 86.27 342 P **P 05 38 14.1 -1.0**
FCC Fort Churchill 86.36 358 *eP* **P 05 38 14.7 -0.7**
comp=Z,0.6nm,1.4s,mb3.6
STKA Stephens Creek 87.50 132 P **P 05 38 19.9 -1.3**
comp=Z,2.8nm,0.7s,mb4.6,baz=320,slow=8.6,SNR=6.2
STKA LR LR 06 21 40.9
comp=Z,79nm,18.4s,MS4.2,baz=25,slow=38
STKA Stephens Creek 87.50 132 *eP* **P 05 38 21.6 +0.4**
comp=Z,0.6nm,0.7s,mb3.9
BBTS Babate 87.89 286 LR LR 06 23 15.4
comp=Z,76nm,19.0s,MS4.1,baz=11,slow=39
FFC Flin Flon 90.44 2 *eP* **P 05 38 34.3 -0.6**
FFC pmax pmax
comp=Z,13nm,1.3s,mb5.1
FFC Flin Flon 90.44 2 *eP* **P 05 38 34.3 -0.6**
comp=Z,13nm,1.3s,mb5.1
EDM Edmonton 91.08 9 *eP* **P 05 38 37.5 -0.4**
ULM Lac du Bonnet 94.93 358 P **P 05 38 54.1 -1.6**
comp=Z,1.8nm,0.9s,mb4.5,baz=13,slow=6.9,SNR=4.2
BSMT Bassoo Peak 96.13 11 *eP* **P 05 39 01.4 +0.3**
comp=Z,2.8nm,1.0s,mb4.7
JTMT Jette 96.31 10 *eP* **P 05 39 01.9 -0.1**
comp=Z,2.5nm,1.0s,mb4.6
BOZ Bozeman (W) 98.74 9 *eP* **P 05 39 13.2 +0.2**
BOZ pmax pmax
comp=Z,2.0nm,1.1s,mb4.6
BOZ Bozeman (W) 98.74 9 *eP* **P 05 39 13.2 +0.2**
comp=Z,1.7nm,1.1s,mb4.5
QSPA South Pole Qui 124.94 180 *e*PKPdf PKPdf 05 44 30.9 -1.2
CPUP Villa Florida 143.54 272 PKhKP 05 45 04.9
comp=Z,2.4nm,0.8s,baz=76,slow=4.5,SNR=4.5
LPAZ La Paz 146.82 297 PKPbc PKPbc 05 45 15.2 -0.9
comp=Z,2.5nm,0.9s,baz=22,slow=5.5,SNR=12
LPAZ La Paz 146.82 297 *e*PKPdf PKPdf 05 45 14.6 +0.4
TRQA Tornquist 150.46 253 *e*PKPbc PKPbc 05 45 24.3 -0.6

NEIC ***06*** *05:47:08.4±0.6,2°.39N×128°.53E,h35km,mb4.4/4,Error ellipse: s-maj=21.5km s-min=10.3km az=86.0*
ISCJB ***06*** *05:47:10.5±4.5,2°.3N±0°.1×128°.3E±0°.2,h71km±44km, mb4.0/13,Error ellipse: s-maj=32.1km s-min=15.2km az=162.2*
IDC ***06*** *05:47:12.4±4.4,2°.28N×128°.37E,h75km±43km,mb3.7/9, mb1 3.9/10,mb1mx3.7/19,mbtmp3.8/10,ML4.3/1,Error ellipse: s-maj=39.9km s-min=18.1km az=79.0*
ISC 06 05:47:12.1±3.2,2°.3N±0°.1×128°.4E±0°.2,h70km±33km,n17, σ0°69/16,mb4.0/13,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.25**	**230**	P	**Pn**	**05 49 49.2**	**-0.9**
	1.9nm,0.3s,baz=66,slow=11,SNR=7.5						
KAPI	**Kappang**	**11.25**	**230**	*e*Pn	**Pn**	**05 49 50.6**	**+0.5**
WRAB	**Tennant Creek**	**22.84**	**165**	*eP*	**P**	**05 52 09.1**	**-0.4**
	3.1nm,0.9s,mb3.6						
WRA	**Warramunga Arr**	**22.85**	**165**	P	**P**	**05 52 09.6**	**0.0**
	0.8nm,0.5s,mb3.4,baz=342,slow=8.2,SNR=4.8						
ASAR	**Alice Springs**	**26.34**	**169**	P	**P**	**05 52 42.5**	**+0.8**
	0.4nm,0.6s,mb3.0,baz=345,slow=7.6,SNR=4.8						
KSRS	**Korea Array**	**35.01**	**359**	P	**P**	**05 53 58.5**	**+0.6**
	0.9nm,0.6s,mb3.8,baz=181,slow=10.0,SNR=2.7						
MAJO	**Matsushiro**	**35.29**	**14**	*eP*	**P**	**05 54 00.8**	**+0.5**
	2.5nm,0.4s,mb4.4						
MJAR	**Matsushiro Arr**	**35.29**	**14**	P	**P**	**05 53 59.0**	**-1.3**
	1.4nm,0.5s,mb4.1,baz=179,slow=9.7,SNR=5.6						
ULN	**Ulaanbaatar**	**49.01**	**341**	*eP*	**P**	**05 55 52.6**	**+1.0**
	3.9nm,1.0s,mb4.3						
ULN				*e*pP	pP	05 56 08.8	-0.6
SONM	**Songino Array**	**49.19**	**341**	P	**P**	**05 55 53.6**	**+0.5**
	1.8nm,0.6s,mb4.2,baz=151,slow=9.0,SNR=12						
MK31	**Makanchi Array**	**59.67**	**325**	*eP*	**P**	**05 57 09.3**	**+0.1**
MKAR	**Makanchi Array**	**59.67**	**325**	P	**P**	**05 57 09.8**	**+0.6**
	4.0nm,0.5s,mb4.7,baz=121,slow=8.2,SNR=47						
ZALV	**Zalesovo Beam**	**62.62**	**333**	P	**P**	**05 57 28.1**	**-0.8**
	0.7nm,0.4s,mb4.0,baz=133,slow=7.8,SNR=4.4						
KURK	**Kurchatov**	**63.84**	**327**	*eP*	**P**	**05 57 36.7**	**-0.3**
	6.8nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**69.42**	**327**	P	**P**	**05 58 12.5**	**-0.1**
	1.9nm,0.6s,mb4.1,baz=122,slow=7.2,SNR=10						
ARCES	**ARCESS Array B**	**92.37**	**340**	P	**P**	**06 00 13.4**	**-1.1**
	1.9nm,0.7s,mb4.4,baz=89,slow=6.2,SNR=11						
TORD	**Torodi Ar. Bea**	**124.92**	**288**	PKP	PKPdf	06 06 03.9	-1.3
	0.2nm,0.6s,baz=36,slow=2.4,SNR=2.8						

BJI ***06*** *06:01:56.5,27°.56N×128°.52E,h139km,mB4.2/5,mb4.5/13*
NIED ***06*** *06:02:00,28°.10N×127°.80E,h130km,Mw4.3 Best double couple: M0:3.40000×10^15 NP1:φ0=80.00000°, δ67.00000°,λ-105.00000°. NP2:φ0=293.00000°, δ27.00000°,λ-60.00000°.*
IDC ***06*** *06:02:03.6±0.8,28°.12N×127°.73E,h126km±7km,mb3.9/20, mb1 4.0/21,mb1mx3.9/28,mbtmp3.8/21,Error ellipse: s-maj=18.1km s-min=10.2km az=73.0*
ISCJB ***06*** *06:02:03.7±0.3,28°.08N±0°.03×127°.75E±0°.04, h136km±3km,mb4.1/44,Error ellipse: s-maj=6.9km s-min=4.0km az=41.3*
NEIC ***06*** *06:02:04.8±0.7,28°.08N×127°.66E,h134km±7km,mb4.4/25, Error ellipse: s-maj=8.8km s-min=7.3km az=145.0*
JMA ***06*** *06:02:06.0±0.1,28°.08N×127°.84E,h119km±4km,M4.2*
ISC 06 06:02:04.9±0.3,28°.06N±0°.03×127°.77E±0°.04,h133km±3km, n84,σ1°34/96,mb4.1/44,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**1.03**	**170**	P	**Pn**	**06 02 28.9**	**+0.5**
JIH				S	**Sn**	**06 02 45.9**	**+7.2**
JTK	**Tokunoshima**	**1.08**	**104**	P	**Pn**	**06 02 28.3**	**-0.4**
JTK				S	**Sn**	**06 02 45.4**	**+5.7**
JOW	**Kunigami**	**1.30**	**160**	P	**Pn**	**06 02 31.3**	**+0.3**
JOW				S	**Sn**	**06 02 49.5**	**+4.3**
JOW	**Kunigami**	**1.30**	**160**	P	**Pn**	**06 02 31.2**	**+0.2**
	baz=84,slow=10						
JOW				S	**Sn**	**06 02 49.5**	**+4.3**
	873nm,0.3s,baz=139,slow=19,SNR=40						
JOW	**Kunigami**	**1.30**	**160**	P	**Pn**	**06 02 31.2**	**+0.2**
JOW				S	**Sn**	**06 02 49.5**	**+4.3**
JAGN	**Aguni-jima**	**1.54**	**198**	P	**Pn**	**06 02 34.3**	**+0.7**
JAGN				S	**Sn**	**06 02 56.0**	**+5.0**
JAM	**Amami Oshima**	**1.65**	**77**	P	**Pn**	**06 02 34.4**	**-0.5**
JAM				S	**Sn**	**06 02 56.2**	**+2.5**
NAH1	**Naha**	**1.85**	**182**	P	**Pn**	**06 02 38.2**	**+1.0**
NAH1				S	**Sn**	**06 03 01.5**	**+3.0**
JJT2	**Tamagusuku 2**	**1.91**	**181**	P	**Pn**	**06 02 39.3**	**+1.3**
JJT2				*e*S	**Sn**	**06 03 03.7**	**+3.7**
JKE	**Kume jima 2**	**1.94**	**207**	P	**Pn**	**06 02 39.2**	**+0.9**
JKE				*e*S	**Sn**	**06 03 03.9**	**+3.3**
JZK	**Kikaishima**	**1.96**	**82**	P	**Pn**	**06 02 39.0**	**+0.5**
JZK				*e*S	**Sn**	**06 03 03.4**	**+2.4**
JNN	**Nakanoshima**	**2.56**	**46**	P	**Pn**	**06 02 46.5**	**+0.6**
JNN				*e*S	**Sn**	**06 03 17.4**	**+1.8**
JKC	**Kuchinoerabu**	**3.20**	**41**	P	**Pn**	**06 02 54.7**	**+0.6**
JKC				*e*S	**Sn**	**06 03 32.1**	**+1.1**
JTN	**Tanegashima 3**	**3.81**	**46**	P	**Pn**	**06 03 02.6**	**+0.4**
JTN				*e*S	**Sn**	**06 03 45.9**	**0.0**
YHNB	**Yeheng**	**6.66**	**241**	*e*Pn	**Pn**	**06 03 42.2**	**+1.9**
NACB	**Ninganchiao**	**6.77**	**237**	*e*Pn	**Pn**	**06 03 40.3**	**-1.5**
YULB	**Yu-li**	**7.46**	**233**	*e*Pn	**Pn**	**06 03 47.9**	**-3.3**
SSLB	**Suanglung**	**7.47**	**237**	*e*Pn	**Pn**	**06 03 49.4**	**-1.8**
TPUB	**Ta-pu**	**8.00**	**235**	*e*Pn	**Pn**	**06 03 57.6**	**-0.7**
KSRS	**Korea Array**	**9.37**	**1**	P	**Pn**	**06 04 18.4**	**+1.7**
	0.4nm,0.3s,baz=179,slow=14,SNR=10						
MAJO	**Matsushiro**	**12.22**	**44**	*e*Pn	**Pn**	**06 04 56.8**	**+2.4**

MAT	Matsushiro	12.22	44	P	Pn	06 04 57.1	+2.7
MJAR	Matsushiro Arr	12.22	44	P	Pn	06 04 54.0	-0.4
	0.6nm,0.3s,baz=243,slow=14,SNR=5.1						
CBIJ	Chichi jima	12.82	91	P	Pn	06 05 04.5	+2.2
	5.8nm,0.3s,baz=287,slow=18,SNR=7.6						
BJT	Baijiatuau	15.31	324	eP	Pn	06 05 37.4	+3.6
	21nm,0.3s						
CN2	Changchun	15.82	354	eP	Pn	06 05 43.5	+3.4
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
ENH	Enshi	16.13	282	eP	Pn	06 05 47.1	+3.1
	comp=Z,17nm,0.7s						
XAN	Xi'an	17.21	295	P	Pn	06 05 58.5	+1.4
XAN				pP		06 06 03.2	
XAN				pmax	pmax		
	comp=Z,12nm,0.7s						
XAN				pmax	pmax		
	comp=Z,11nm,3.1s						
HHC	Hu-ho-hao-te	18.44	318	eP	P	06 06 11.1	+1.1
HHC				sP	sP	06 06 51.9	+1.5
HHC				S	S	06 09 28.4	-5.2
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,79nm,6.3s						
HHC				LR	LR		
	comp=N,130nm,5.1s						
HHC				LR	LR		
	comp=E,140nm,5.9s						
HHC				LR	LR		
	comp=Z,120nm,9.0s						
ULN	Ulaanbaatar	25.51	326	eP	P	06 07 21.2	+0.5
	comp=Z,21nm,0.9s,mb4.8						
GTA	Gaotai	25.76	303	eP	P	06 07 22.9	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
SONM	Songino Array	25.81	326	P	P	06 07 24.1	+0.7
	comp=Z,14nm,0.8s,mb4.7,baz=135,slow=10.0,SNR=54						
WMQ	Urumqi	35.68	307	eP	P	06 08 51.3	+1.1
MK31	Makanchi Array	40.03	310	eP	P	06 09 26.9	+0.2
MKAR	Makanchi Array	40.03	310	P	P	06 09 26.2	-0.5
	comp=Z,24nm,0.7s,mb4.0,baz=104,slow=9.8,SNR=30						
MKAR				PcP	PcP	06 11 29.0	0.0
	comp=Z,1.5nm,0.4s,baz=86,slow=2.3,SNR=15						
MKAR	Makanchi Array	40.03	310	P	P	06 09 26.2	-0.5
MKAR				PcP	PcP	06 11 29.0	0.0
ZAA0	Zalesovo Array	40.56	322	eP	P	06 09 29.6	-1.3
ZALV	Zalesovo Beam	40.56	322	P	P	06 09 29.0	-1.9
	comp=Z,2.2nm,0.4s,mb4.1,baz=110,slow=9.4,SNR=13						
ZALV				PcP	PcP	06 11 29.9	-0.7
	comp=Z,1.8nm,0.4s,baz=110,slow=4.9,SNR=8.7						
ZALV				ScP	ScP	06 15 05.5	-2.1
	comp=Z,0.3nm,0.3s,baz=92,slow=4.6,SNR=2.5						
KURK	Kurchatov	43.23	315	eP	P	06 09 51.9	-0.7
	comp=Z,2.8nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	45.93	183	P	P	06 10 15.2	+0.8
	comp=Z,6.4nm,0.5s,mb4.5,baz=7.6,slow=7.7,SNR=27						
FITZ	Fitzroy Crossi	45.93	183	eP	P	06 10 15.0	+0.6
	comp=Z,5.9nm,0.5s,mb4.5						
WRAB	Tennant Creek	48.13	172	eP	P	06 10 31.6	+0.2
	comp=Z,5.5nm,0.9s,mb4.2						
WRA	Warramunga Arr	48.14	172	P	P	06 10 31.8	+0.3
	comp=Z,2.4nm,0.6s,mb4.0,baz=351,slow=8.3,SNR=9.7						
WRA				PcP	PcP	06 11 55.1	-1.9
	comp=Z,0.4nm,0.3s,baz=349,slow=4.3,SNR=3.2						
BVAR	Borovoye Array	48.65	317	P	P	06 10 34.5	-0.7
	comp=Z,1.1nm,0.3s,mb4.0,baz=94,slow=11,SNR=8.2						
BVAR				PcP	PcP	06 11 58.3	-0.1
	comp=Z,3.3nm,0.3s,baz=111,slow=3.9,SNR=12						
BRVK	Borovoye	48.72	317	eP	P	06 10 34.7	-1.0
	comp=Z,7.1nm,0.8s,mb4.3						
ASAR	Alice Springs	51.76	173	P	P	06 10 59.7	+0.9
	comp=Z,1.7nm,0.5s,mb4.0,baz=1.0,slow=15,SNR=25						
ASAR				PcP	PcP	06 12 10.2	-0.1
	comp=Z,0.6nm,0.6s,baz=0.1,slow=3.4,SNR=4.6						
ABKAR	Akbulak array	55.11	312	eP	P	06 11 22.0	-1.1
	comp=Z,2.0nm,0.5s,mb4.1						
STKA	Stephens Creek	61.04	167	P	P	06 12 02.7	-1.7
	comp=Z,0.8nm,0.5s,mb3.9,baz=338,slow=12,SNR=4.1						
STKA	Stephens Creek	61.04	167	P	P	06 12 02.7	-1.7
KDAK	Kodiak Island	61.30	37	P	P	06 12 05.5	-0.5
	comp=Z,12nm,1.0s,mb4.7,baz=19,slow=5.5,SNR=6.6						
DZM	Mont Dzumac	62.27	139	eLR	LR	06 10 52.2	
	comp=Z,137nm,29.4s						
MCK	McKinley	62.29	30	eP	P	06 12 11.4	-1.1
	comp=Z,7.5nm,1.0s,mb4.5						
COLA	College	62.61	29	eP	P	06 12 14.1	-0.4
	comp=Z,3.1nm,0.8s,mb4.2						
MENT	Mentasta	64.75	30	eP	P	06 12 28.4	-0.2
EGAK	Eagle	65.44	28	eP	P	06 12 32.0	-1.0
	comp=Z,4.0nm,0.7s,mb4.4						
INK	Inuvik	67.38	23	eP	P	06 12 44.5	-0.8
	comp=Z,6.0nm,1.1s,mb4.3						
ARCES	ARCESS Array B	68.16	338	P	P	06 12 48.4	-1.8
	comp=Z,1.0nm,0.8s,mb3.6,baz=66,slow=9.0,SNR=3.3						
FINES	FINESS Array B	71.08	330	P	P	06 13 06.0	-2.2
	comp=Z,1.0nm,0.3s,mb4.0,baz=62,slow=6.5,SNR=11						
DLBC	Dease Lake	72.56	33	P	P	06 13 16.4	-0.7
	comp=Z,2.1nm,0.9s,mb3.9,baz=260,slow=6.1,SNR=3.3						
RES	Resolute Bay	73.84	11	eP	P	06 13 23.1	-1.2
	comp=Z,1.6nm,0.8s,mb3.8						
AKASG	Malin Array Be	73.89	319	P	P	06 13 23.1	-2.0
	comp=Z,0.5nm,0.3s,mb3.7,baz=64,slow=5.7,SNR=4.3						
BRTR	Keskin Array B	75.60	307	P	P	06 13 34.6	-0.5
	comp=Z,0.7nm,0.8s,mb3.3,baz=75,slow=5.2,SNR=3.5						
YKA	Yellowknife Ar	77.05	25	P	P	06 13 42.5	-0.3
	comp=Z,5.4nm,0.9s,mb4.2,baz=300,slow=5.6,SNR=60						
YKA	Yellowknife Ar	77.05	25	P	P	06 13 42.5	-0.3
NOA	NORSAR Array B	77.50	334	P	P	06 13 42.9	-2.5
	comp=Z,0.3nm,0.5s,mb3.2,baz=74,slow=6.2,SNR=2.6						
GERES	GERESS Array B	83.50	323	P	P	06 14 19.0	+1.2
	comp=Z,0.5nm,0.6s,mb3.4,baz=46,slow=5.9,SNR=5.6						
NEW	Newport	84.40	37	eP	P	06 14 22.1	-0.2
	comp=Z,4.9nm,1.1s,mb4.2						
BSMT	Bassoo Peak	85.90	37	eP	P	06 14 30.8	+1.1
	comp=Z,2.0nm,0.8s,mb3.9						
SWMT	Swartz Lake	86.53	37	eP	P	06 14 33.3	+0.5
	comp=Z,2.0nm,1.0s,mb3.9						
FCC	Fort Churchill	86.77	20	eP	P	06 14 32.6	-1.2
	comp=Z,0.2nm,0.9s,mb3.0						
SLMT	Seeley Lake	86.96	37	eP	P	06 14 35.2	+0.2
	comp=Z,6.7nm,0.9s,mb4.5						
DLMT	Dillon	88.64	38	eP	P	06 14 44.0	+1.1
	comp=Z,2.6nm,0.6s,mb4.3						
HLID	Hailey	88.77	40	eP	P	06 14 44.7	+1.1
	comp=Z,3.6nm,0.9s,mb4.3						
NVAR	Mina Array Bea	89.53	46	P	P	06 14 48.2	+0.9
	comp=Z,1.0nm,0.7s,mb3.8,baz=281,slow=4.1,SNR=7.3						
LKWY	Lake	90.34	37	eP	P	06 14 53.7	+2.8
	comp=Z,6.0nm,1.0s,mb4.5						
RLMT	Red Lodge	90.57	36	eP	P	06 14 52.4	+0.5
	comp=Z,7.0nm,1.4s,mb4.5						
HWUT	Hardware Ranch	91.63	40	eP	P	06 14 58.3	+1.3
	comp=Z,5.0nm,1.1s,mb4.5						
DUG	Dugway	91.81	42	eP	P	06 14 58.5	+0.7
	comp=Z,2.7nm,0.8s,mb4.3						
BW06	Boulder Array	91.99	38	eP	P	06 14 58.9	+0.3
	comp=Z,2.7nm,1.0s,mb4.2						
PDAR	Pinedale Array	91.99	38	P	P	06 14 58.8	+0.1
	comp=Z,1.3nm,0.8s,mb4.0,baz=26,slow=1.9,SNR=9.7						
ULM	Lac du Bonnet	92.97	26	P	P	06 15 02.5	-0.5
	comp=Z,0.7nm,0.5s,mb4.0,baz=327,slow=7.9,SNR=3.6						
MSU	Marysvale	93.27	43	eP	P	06 15 05.9	+1.3
	comp=Z,2.4nm,1.1s,mb4.2						
VNA2	Neumayer–Watz	130.39	198	e	PKPdf	06 20 59.6	+1.0
	baz=90,slow=0.7						
VNA3	Neumayer Olymp	130.79	197	e	PKPdf	06 20 59.1	-0.3

*ISCJB **06** 06:04:35.3±0.9, 18°.98N×0°.07×67°.87W±0°.04, h15km±8km, mb4.0/18, MS3.6/2, Error ellipse: s-maj=11.7km s-min=4.6km az=22.6*
*NEIC **06** 06:04:35.7, 18°.98N×68°.00W, h92km, MD3.6(RSPR), After RSPR.*
*IDC **06** 06:04:41.2±1.5, 18°.85N×67°.76W, h48km±18km, mb3.7/18, mb1 4.0/21, mb1mx3.9/28, mbtmp3.8/21, ML2.8/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/35, Error ellipse: s-maj=18.2km s-min=11.3km az=10.0*

ISC 06 06:04:36.0±0.9, 18°.92N±0°.07×67°.82W±0°.04, h8km±6km, n44, σ1°15/54, mb4.0/18, MS3.6/2, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.81	124	ePn	Pn	06 04 52.0	-1.7
AGPR				eSn	Sn	06 05 03.8	-2.1
AGP	Aguadilla	0.82	128	ePg	Pg	06 04 52.3	+0.4
AGP				eSg	Sg	06 05 03.7	+1.1
MPR	Mayaguez	0.96	137	ePg	Pg	06 04 54.8	+0.3
LSP	Las Mesas	1.02	137	ePg	Pg	06 04 55.8	+0.2
LRS	Lares	1.12	124	ePg	Pg	06 04 56.9	-0.6
LRS				eSg	Sg	06 05 11.6	-0.5
CRPR	Cabo Rojo, PR	1.14	143	ePg	Pg	06 04 57.6	-0.2
CRPR				eSg	Sg	06 05 17.0	+4.5
AOPR	Arecibo Observ	1.16	119	ePg	Pg	06 04 57.4	-1.0
OBIP	Obispado Ponce	1.45	127	ePn	Pn	06 05 02.1	-0.4
CELP	Cerrillos	1.45	125	ePn	Pn	06 05 02.1	-0.4
ICM	Isla Caja Muer	1.60	129	ePn	Pn	06 05 05.7	+1.1
SJG	San Juan	1.78	117	P	Pn	06 05 06.3	-0.7
	600nm,0.3s,baz=307,slow=9.9,SNR=201						
SJG				S	Sn	06 05 29.3	-0.6
	549nm,0.3s,baz=59,slow=20,SNR=10.0						
SJG	San Juan	1.78	117	ePn	Pn	06 05 05.7	-1.3
SJG				eSn	Sn	06 05 29.9	+0.1
CBYP	Canovanas	1.97	109	ePn	Pn	06 05 09.2	-0.5
CBYP				eSn	Sn	06 05 35.4	+0.8
MTP	Monte Pirata	2.31	110	ePn	Pn	06 05 13.6	-0.6
STVI	Saint Thomas	2.78	101	ePn	Pn	06 05 21.1	+0.4
SDDR	Presa de Saban	3.28	272	ePn	Pn	06 05 31.5	+3.8
GRTK	Grand Turk	4.04	310	ePn	Pn	06 05 36.3	-1.8
MASC	Masc	6.17	283	eP	Pn	06 06 06.9	-0.5
MASC				eS	Sn	06 07 16.8	-1.3
	comp=N,0.6nm,0.0s						
MASC				e			
	comp=E,0.7nm,0.0s						
LZG	Guadaloupe-1	6.40	115	eP	Pn	06 06 12.3	+1.8
RCC	Rio Carpintero	7.50	279	eP	Pn	06 06 24.1	-1.6
RCC				eS	Sn	06 07 46.5	-4.5
	comp=N,10nm,0.3s						
RCC				e			
	comp=E,13nm,0.7s						
LMGC	Las Mercedes	8.73	279	eP	Pn	06 06 42.0	-0.6
LMGC				eS	Sn	06 08 16.7	-4.6
	comp=N,26nm,1.1s						
LMGC				e			
	comp=E,31nm,1.0s						
PCRV	Puerto La Cruz	9.22	160	P	Pn	06 06 51.0	+1.6
	comp=E,2.8nm,0.3s,baz=316,slow=8.5,SNR=15						
SDV	Santo Domingo	10.34	196	P	Pn	06 07 07.9	+3.2
	comp=E,0.4nm,0.3s,baz=11,slow=16,SNR=2.8						
SDV				LR	LR	06 10 57.8	
	comp=E,60nm,21.5s,baz=161,slow=37						
ROSC	El Rosal	15.36	205	P	Pn	06 08 16.0	+2.9
	comp=E,0.3nm,0.3s,baz=104,slow=19,SNR=4.0						
TKL	Tuckaleechee C	21.83	323	P	P	06 09 31.4	+2.6
	comp=E,4.0nm,0.8s,mb3.9,baz=147,slow=12,SNR=5.3						
TKL				S	S	06 13 20.3	-10
	comp=E,1.5nm,0.3s,baz=225,slow=1.4,SNR=3.0						
TKL				LR	LR	06 18 49.7	
	comp=E,106nm,18.6s,MS3.3,baz=82,slow=39						
APG	El Apazote	22.00	263	P	P	06 09 31.4	+0.7
	comp=E,2.3nm,0.9s,mb3.6,baz=112,slow=5.4,SNR=3.7						
TXAR	Lajitas Array	34.19	295	P	P	06 11 24.1	+2.1
	comp=E,0.7nm,0.7s,mb3.7,baz=108,slow=8.0,SNR=8.2						
TXAR				PcP	PcP	06 13 59.6	+0.6
	comp=E,0.4nm,0.7s,baz=147,slow=5.1,SNR=4.1						
SCHQ	Schefferville	35.85	1	P	P	06 11 36.4	+0.5
	comp=E,2.2nm,0.5s,mb4.4,baz=190,slow=7.8,SNR=13						
ULM	Lac du Bonnet	38.42	331	P	P	06 11 57.1	-0.8
	comp=E,2.2nm,0.7s,mb4.0,baz=120,slow=8.9,SNR=7.7						
PDAR	Pinedale Array	42.42	313	P	P	06 12 30.8	-0.3
	comp=E,0.2nm,0.5s,mb3.0,baz=110,slow=10.0,SNR=2.9						
PDAR				PcP	PcP	06 14 24.2	+0.1
	comp=E,0.4nm,0.6s,baz=117,slow=5.5,SNR=3.7						
CPUP	Villa Florida	46.12	167	P	P	06 12 58.1	-2.8
	comp=E,0.9nm,0.7s,mb3.8,baz=346,slow=16,SNR=2.9						
NVAR	Mina Array Bea	47.73	305	P	P	06 13 15.2	+1.7
	comp=E,1.0nm,0.6s,mb4.0,baz=106,slow=8.5,SNR=11						
YKA	Yellowknife Ar	54.09	335	P	P	06 14 00.9	0.0
	comp=E,2.5nm,0.8s,mb4.2,baz=112,slow=7.2,SNR=14						
ESDC	Sonseca Array	58.21	55	P	P	06 14 31.2	+0.5
	comp=E,0.4nm,0.3s,mb3.9,baz=273,slow=6.8,SNR=7.9						
DLBC	Dease Lake	59.58	327	P	P	06 14 41.5	+1.5
	comp=E,0.9nm,0.5s,mb4.0,baz=75,slow=2.0,SNR=4.5						
DBIC	Dimbokro	62.32	92	P	P	06 14 57.9	-1.4
	comp=E,5.3nm,0.7s,mb4.8,baz=188,slow=20,SNR=5.5						
INK	Inuvik	63.64	338	P	P	06 15 06.8	-0.4
	comp=E,1.5nm,0.7s,mb4.1,baz=164,slow=2.9,SNR=4.6						
INK				LR	LR	06 44 22.9	
	comp=E,70nm,19.3s,MS3.9,baz=148,slow=37						
NB2	NORSAR Subarra	68.33	31	P	P	06 15 37.9	+0.4
	comp=Z,1.7nm,0.7s,mb4.2,baz=272,slow=6.5						
NOA	NORSAR Array B	68.33	31	P	P	06 15 38.2	+0.7
	comp=Z,1.1nm,0.6s,mb4.1,baz=271,slow=6.4,SNR=5.5						
GERES	GERESS Array B	70.48	44	P	P	06 15 51.4	+0.4
	comp=Z,0.4nm,0.6s,mb3.6,baz=282,slow=5.9,SNR=3.1						
ARCES	ARCESS Array B	73.60	21	P	P	06 16 09.2	-0.2
	comp=Z,1.8nm,0.5s,mb4.3,baz=290,slow=4.6,SNR=22						
FINES	FINESS Array B	75.42	30	P	P	06 16 20.3	+0.3
	comp=Z,0.7nm,0.3s,mb4.0,baz=282,slow=7.0,SNR=3.6						
BRTR	Keskin Array B	86.56	49	P	P	06 17 20.2	+0.3
	comp=Z,0.7nm,0.6s,mb4.0,baz=262,slow=6.9,SNR=3.4						
ASAR	Alice Springs	159.22	253	PKPab	PKPab	06 25 12.3	-0.4
	comp=Z,1.0nm,0.6s,baz=101,slow=4.7,SNR=10						

IDC 06 06:07:11.9±3.4, 20°.14S×168°.62E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/15, mbtmp4.1/4, Error ellipse: s-maj=199.0km s-min=32.6km az=158.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.00	266	P	P	06 12 01.2	+4.1
	2.4nm,0.4s,baz=108,slow=9.6,SNR=3.9						
WRA	Warramunga Arr	32.17	264	P	P	06 13 40.6	-1.1
	1.2nm,0.7s,baz=93,slow=9.0,SNR=5.5						
ASAR	Alice Springs	32.35	257	P	P	06 13 43.6	+0.4
	3.9nm,0.7s,baz=83,slow=9.2,SNR=37						
FITZ	Fitzroy Crossi	40.58	265	P	P	06 14 53.8	+0.3
	1.6nm,0.7s,baz=102,slow=9.3,SNR=4.3						
PDAR	Pinedale Array	97.65	47	P	P	06 20 50.1	+1.6
	0.4nm,0.5s,baz=306,slow=3.2,SNR=5.8						
GERES	GERESS Array B	145.00	331	PKPbc	PKPbc	06 26 48.4	-2.0
	0.9nm,0.6s,baz=45,slow=2.9,SNR=3.9						

*IDC **06** 06:12:43.7±1.8, 51°.41N×174°.41W, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.8/31, mbtmp3.8/14, ML3.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/35, Error ellipse: s-maj=49.7km s-min=17.4km az=1.0*
*NEIC **06** 06:12:49.1, 51°.47N×174°.50W, h5km, ML3.2(AEIC), After AEIC.*

ISC 06 06:12:46.9±4.0, 51°.2N±0°.2×174°.32W±0°.09, h24km±26km, n20, σ0°.80/20, mb3.8/14, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	1.39	310	ePg	Pn	06 13 10.8	0.0
ADK	Adak	1.62	295	P	Pn	06 13 14.1	+0.1
ADK				S	Sn	06 13 34.9	+0.9
KDAK	Kodiak Island	14.19	54	Pn	Pn	06 16 06.1	0.0
	0.3nm,0.3s,baz=270,slow=7.1,SNR=5.4						
PETK	Petropavlovsk-	17.23	287	P	Pn	06 16 45.2	-0.5
	0.2nm,0.3s,baz=89,slow=11,SNR=5.3						
PETK	Petropavlovsk-	17.23	287	P	Pn	06 16 45.2	-0.5
INK	Inuvik	26.00	34	P	P	06 18 17.1	-0.3
	1.1nm,0.8s,mb3.5,baz=250,slow=11,SNR=5.4						
DLBC	Dease Lake	26.10	57	P	P	06 18 18.8	+0.4
	1.3nm,0.8s,mb3.5,baz=265,slow=8.0,SNR=3.2						
YKA	Yellowknife Ar	33.29	47	P	P	06 19 23.2	+1.1
	0.1nm,0.4s,mb3.1,baz=271,slow=9.1,SNR=5.6						
YKA				PcP	PcP	06 22 04.2	+0.6
	0.3nm,0.7s,baz=289,slow=2.5,SNR=3.8						
YKA				LR	LR	06 33 24.3	
	comp=Z,9.8nm,18.9s,baz=50,slow=37						
ULM	Lac du Bonnet	47.39	59	P	P	06 21 18.6	-0.1
	1.2nm,0.5s,mb4.1,baz=302,slow=9.5,SNR=3.2						
SONM	Songino Array	49.21	299	P	P	06 21 32.2	-0.6
	0.6nm,0.7s,mb3.8,baz=45,slow=8.6,SNR=2.9						
TXAR	Lajitas Array	55.88	84	P	P	06 22 22.8	+0.3
	0.2nm,0.7s,mb3.2,baz=299,slow=4.0,SNR=2.5						
ARCES	ARCESS Array B	58.68	352	P	P	06 22 40.0	-1.7
	1.3nm,0.7s,mb4.1,baz=21,slow=7.7,SNR=5.6						
MKAR	Makanchi Array	62.30	311	P	P	06 23 06.0	-0.7
	0.3nm,0.3s,mb3.3,baz=64,slow=5.0,SNR=5.6						
BVAR	Borovoye Array	62.79	322	P	P	06 23 09.7	-0.1
	1.0nm,0.5s,mb4.2,baz=68,slow=7.6,SNR=4.3						
GYA	Guiyang	63.13	279	eP	P	06 23 13.2	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
NOA	NORSAR Array B	68.00	357	P	P	06 23 42.7	-0.7
	comp=Z,0.6nm,0.7s,mb3.7,baz=211,slow=21,SNR=2.8						
AKTO	Aktyubinsk	69.39	327	P	P	06 23 51.2	-1.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=34,slow=11,SNR=4.3						
AKASG	Malin Array Be	76.50	345	P	P	06 24 36.5	+2.2
	comp=Z,0.2nm,0.3s,mb3.5,baz=23,slow=6.9,SNR=4.8						
GERES	GERESS Array B	80.08	355	P	P	06 24 54.5	+0.3
	comp=Z,0.3nm,0.2s,mb3.8,baz=28,slow=6.8,SNR=3.5						
BOSA	Boshof	153.05	319	PKPbc	PKPbc	06 32 47.4	+5.4
	comp=Z,1.2nm,0.7s,baz=333,slow=2.3,SNR=2.9						

IDC 06 06:15:09.8±3.6, 30°.21S×138°.54E, h0km, mb1 2.9/3, mb1mx2.9/14, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=105.1km s-min=16.3km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.10	123	Pn	Pn	06 15 58.7	-1.2
	0.2nm,0.3s,baz=305,slow=16,SNR=2.5						
STKA				Pg	Pg	06 16 06.2	-2.9
	0.6nm,0.3s,baz=290,slow=12,SNR=5.0						
STKA				Sn	Sn	06 16 35.7	-2.0
	0.5nm,0.3s,baz=322,slow=17,SNR=4.3						
STKA				Lg		06 16 49.5	
	1.3nm,0.3s,baz=194,slow=22,SNR=7.4						
ASAR	Alice Springs	7.72	326	Pn	Pn	06 17 03.5	0.0
	0.1nm,0.3s,baz=148,slow=12,SNR=5.0						
ASAR				Sn	Sn	06 18 32.6	+0.9
	0.1nm,0.3s,baz=149,slow=22,SNR=3.6						
WRA	Warramunga Arr	10.91	339	Pn	Pn	06 17 48.1	+0.9
	0.1nm,0.3s,baz=156,slow=14,SNR=2.7						

CASC 06 06:18:21.6±1.8, 10°.84N×86°.72W, h62km±37km, MD4.0, ML2.7, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.97	62	eP	Pn	06 18 39.2	-0.1
NY14	Universidad de	1.18	99	iP	Pn	06 18 42.4	+0.2
NY14				iS	Sn	06 18 59.0	+1.6
CRUN	El Crucero	1.21	20	eP	Pn	06 18 42.9	+0.5
GBS3	Finca Las lm¯¡	1.25	93	iP	Pn	06 18 42.8	-0.1
APON	Apoyo	1.25	31	eP	Pn	06 18 43.5	+0.5
LAPC	Finca la Perla	1.27	93	iP	Pn	06 18 43.0	-0.2
TICN	Ticuantepe	1.28	22	eP	Pn	06 18 43.2	-0.2
BUEV	Buena Vista	1.29	92	iP	Pn	06 18 43.6	+0.1
CONN	Concepcion	1.29	56	eP	Pn	06 18 44.1	+0.6
GPS3	Bodega del ICE	1.33	94	iP	Pn	06 18 44.2	0.0
COPN	Copalitepe	1.34	5	eP	Pn	06 18 43.9	-0.3
GPS2	Hotel Rinc¯‡n	1.35	94	iP	Pn	06 18 44.5	+0.2
XAVN	Gruta Xavier	1.36	17	eP	Pn	06 18 44.4	-0.1
CSAN		1.37	12	eP	Pn	06 18 44.1	-0.5
MGAN	Managua	1.38	20	eP	Pn	06 18 44.8	0.0
WILN	Americas 2	1.41	22	eP	Pn	06 18 45.0	-0.2
APYN	Apoyeque	1.43	15	eP	Pn	06 18 44.7	-0.7
LIM1	Limonal	1.45	95	iP	Pn	06 18 45.5	-0.1
COLC	Colonia	1.50	97	iP	Pn	06 18 46.6	+0.3
CUI	Cuipilapa	1.54	97	iP	Pn	06 18 47.3	+0.4
MOMN	Momotombo	1.57	6	eP	Pn	06 18 47.1	-0.2
HUEN		1.58	20	eP	Pn	06 18 47.4	-0.1
MIRN	Miramar	1.59	0	eP	Pn	06 18 47.4	-0.2
CNGN	Cerro Negro	1.65	1	eP	Pn	06 18 48.0	-0.4
CNGN				AML	AML	06 19 10.2	
	comp=E,154nm,0.3s						
JCR	Jicaral	1.86	122	eP	Pn	06 18 51.0	-0.3
JCR				eS	Sn	06 19 13.2	-0.6
CRIN	San Cristobal	1.88	350	eP	Pn	06 18 51.1	-0.3
BOAB	BOACO BROADBAN	.90	33	eP	Pn	06 18 51.8	0.0
BOAB				AML	AML	06 19 24.9	
	comp=N,48nm,0.4s						
CGA2	Cerro Gallo 2	2.37	110	eP	Pn	06 18 58.6	+0.5
CGA2				eS	Sn	06 19 26.7	+0.7
PRS1	Puriscal	2.52	110	eP	Pn	06 19 01.3	+1.1
PRS1				eS	Sn	06 19 30.4	+0.6
LAJ	Bijagual	2.74	111	eP	Pn	06 19 00.7	-2.5
URSC	Urasca

EBEN S Sn 06 36 23.8 -0.8
EBEN Beniarda 2.33 337 P Pn 06 35 57.5 +0.8
0.8nm,0.1s,SNR=8.7
EBEN S Sn 06 36 23.8 -0.8
2.2nm,0.2s,SNR=8.6
EBEN Beniarda 2.33 337 P Pn 06 35 57.5 +0.8
0.8nm,0.1s,SNR=8.7
EBEN S Sn 06 36 23.8 -0.8
2.2nm,0.2s,SNR=8.6
EBEN Beniarda 2.33 337 P Pn 06 35 57.5 +0.8
0.8nm,0.1s,SNR=8.7
EBEN S Sn 06 36 23.8 -0.8
2.2nm,0.2s,SNR=8.6
EIBI Ibiza 2.49 8 P Pn 06 35 59.8 +0.9
EIBI S Sn 06 36 27.2 -1.4
EIBI Ibiza 2.49 8 P Pn 06 35 59.8 +0.9
2.8nm,0.1s,SNR=14
EIBI S Sn 06 36 27.2 -1.4
5.3nm,0.2s
EIBI Ibiza 2.49 8 P Pn 06 35 59.8 +0.9
2.8nm,0.1s,SNR=14
EIBI S Sn 06 36 27.2 -1.4
5.3nm,0.2s
EIBI Ibiza 2.49 8 P Pn 06 35 59.8 +0.9
2.8nm,0.1s,SNR=14
EIBI S Sn 06 36 27.2 -1.4
5.3nm,0.2s
ETOB Tobarra 2.86 318 P Pn 06 36 05.2 +1.3
ETOB S Sn 06 36 36.3 -1.4
ETOB Tobarra 2.86 318 P Pn 06 36 05.2 +1.3
1.8nm,0.2s,SNR=14
ETOB S Sn 06 36 36.3 -1.4
2.6nm,0.2s,SNR=6.3
ETOB Tobarra 2.86 318 P Pn 06 36 05.2 +1.3
1.8nm,0.2s,SNR=14
ETOB S Sn 06 36 36.3 -1.4
2.6nm,0.2s,SNR=6.3
ETOB Tobarra 2.86 318 P Pn 06 36 05.2 +1.2
1.8nm,0.2s,SNR=14
ETOB S Sn 06 36 36.3 -1.5
2.6nm,0.2s,SNR=6.3
EBER Berja 3.08 277 P Pn 06 36 07.6 +0.6
EBER S Sn 06 36 42.9 -0.2
EBER Berja 3.08 277 P Pn 06 36 07.6 +0.6
1.3nm,0.2s,SNR=5.0
EBER S Sn 06 36 42.9 -0.2
2.8nm,0.3s
EBER Berja 3.08 277 P Pn 06 36 07.6 +0.6
1.3nm,0.2s,SNR=5.0
EBER S Sn 06 36 42.9 -0.2
2.8nm,0.3s
EBER Berja 3.08 277 P Pn 06 36 07.6 +0.6
1.3nm,0.2s,SNR=5.0
EBER S Sn 06 36 42.9 -0.2
2.8nm,0.3s
EALB Alboran 3.25 260 S Sn 06 36 45.3 -2.2
1.8nm,0.3s,SNR=7.9
EALB Alboran 3.25 260 S Sn 06 36 45.3 -2.2
1.8nm,0.3s,SNR=7.9
EALB Alboran 3.25 260 S Sn 06 36 45.3 -2.2
1.8nm,0.3s,SNR=7.9
ECHE Chera 3.37 334 P Pn 06 36 12.4 +1.3
ECHE S Sn 06 36 51.4 +1.0
ECHE Chera 3.37 334 P Pn 06 36 12.4 +1.3
0.0nm,0.2s,SNR=7.9
ECHE S Sn 06 36 49.7 -0.7
0.9nm,0.2s,SNR=7.9
ECHE Chera 3.37 334 P Pn 06 36 12.4 +1.3
0.0nm,0.2s,SNR=7.9
ECHE S Sn 06 36 49.7 -0.7
0.9nm,0.2s,SNR=7.9
ECHE Chera 3.37 334 P Pn 06 36 12.4 +1.3
SNR=7.9
ECHE S Sn 06 36 51.4 +0.9
0.9nm,0.2s,SNR=7.9
EQES Quesada 3.42 293 P Pn 06 36 13.8 +2.1
EQES S Sn 06 36 50.3 -1.2
EQES Quesada 3.42 293 P Pn 06 36 13.8 +2.1
2.4nm,0.1s,SNR=4.7
EQES S Sn 06 36 50.3 -1.2
2.5nm,0.2s,SNR=4.6
EQES Quesada 3.42 293 P Pn 06 36 13.8 +2.1
2.4nm,0.1s,SNR=4.7
EQES S Sn 06 36 50.3 -1.2
2.5nm,0.2s,SNR=4.6
EQES Quesada 3.42 293 P Pn 06 36 13.8 +2.1
2.4nm,0.1s,SNR=4.7
EQES S Sn 06 36 50.3 -1.3
2.5nm,0.2s,SNR=4.6
EVIA Vianos 3.42 308 P Pn 06 36 12.3 +0.6
EVIA S Sn 06 36 51.9 +0.3
EVIA Vianos 3.42 308 P Pn 06 36 12.3 +0.6
0.9nm,0.2s,SNR=7.9
EVIA S Sn 06 36 51.9 +0.3
2.8nm,0.3s,SNR=7.9
EVIA Vianos 3.42 308 P Pn 06 36 12.3 +0.6
0.9nm,0.2s,SNR=7.9
EVIA S Sn 06 36 51.9 +0.3
2.8nm,0.3s,SNR=7.9
EVIA Vianos 3.42 308 P Pn 06 36 12.3 +0.6
0.9nm,0.2s,SNR=7.9
EVIA S Sn 06 36 51.9 +0.3
2.8nm,0.3s,SNR=7.9
ETOS Mallorca 3.54 24 P Pn 06 36 13.6 +0.2
ETOS S Sn 06 36 53.2 -1.3
ETOS Mallorca 3.54 24 P Pn 06 36 13.6 +0.2
0.8nm,0.2s,SNR=7.9
ETOS S Sn 06 36 53.2 -1.3
2.2nm,0.3s,SNR=7.9
ETOS Mallorca 3.54 24 P Pn 06 36 13.6 +0.2
0.8nm,0.2s,SNR=7.9
ETOS S Sn 06 36 53.2 -1.3
2.2nm,0.3s,SNR=7.9
ETOS Mallorca 3.54 24 P Pn 06 36 13.6 +0.3
0.8nm,0.2s,SNR=7.9
ETOS S Sn 06 36 53.2 -1.3
2.2nm,0.3s,SNR=7.9
EQUE Quentar 3.55 282 P Pn 06 36 14.9 +1.4
0.6nm,0.2s,SNR=7.9
EQUE Quentar 3.55 282 P Pn 06 36 14.9 +1.4
0.6nm,0.2s,SNR=7.9
EQUE Quentar 3.55 282 P Pn 06 36 14.9 +1.4
0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 3.95 344 P Pn 06 36 21.5 +2.4
EMOS S Sn 06 37 04.5 -0.2
EMOS Mosqueruela 3.95 344 P Pn 06 36 21.5 +2.4
2.0nm,0.2s,SNR=6.6
EMOS S Sn 06 37 04.5 -0.2
3.2nm,0.3s,SNR=7.9
EMOS Mosqueruela 3.95 344 P Pn 06 36 21.5 +2.4
2.0nm,0.2s,SNR=6.6
EMOS S Sn 06 37 04.5 -0.2
3.2nm,0.3s,SNR=7.9
EMOS Mosqueruela 3.95 344 P Pn 06 36 21.5 +2.5
2.0nm,0.2s,SNR=6.6
EMOS S Sn 06 37 04.5 -0.3
3.2nm,0.3s,SNR=7.9
EADA Adamuz 4.66 292 P Pn 06 36 29.2 +0.4
EADA Adamuz 4.66 292 P Pn 06 36 29.2 +0.4
0.3nm,0.2s,SNR=7.9
EADA Adamuz 4.66 292 P Pn 06 36 29.2 +0.4
0.3nm,0.2s,SNR=7.9
EADA Adamuz 4.66 292 P Pn 06 36 29.2 +0.4
0.3nm,0.2s,SNR=7.9
EPOB Poblet 4.79 1 P Pn 06 36 32.2 +1.7
EPOB S Sn 06 37 23.3 -2.1
EPOB Poblet 4.79 1 P Pn 06 36 32.2 +1.6
0.7nm,0.3s,SNR=4.0
EPOB S Sn 06 37 23.3 -2.1
1.6nm,0.3s,SNR=7.9
EPOB Poblet 4.79 1 P Pn 06 36 32.2 +1.6
0.7nm,0.3s,SNR=4.0
EPOB S Sn 06 37 23.3 -2.1
1.6nm,0.3s,SNR=7.9
EPOB Poblet 4.79 1 P Pn 06 36 32.2 +1.7
0.7nm,0.3s,SNR=4.0

*IDC **06** 06:39:25.0±1.6, 51°.62N×174°.32W, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.7/30, mbtmp3.7/13, ML3.6/2, MS2.3/1, Ms1 2.3/1, ms1mx2.1/33, Error ellipse: s-maj=48.0km s-min=16.5km az=3.0*
*ISCJB **06** 06:39:29.7±2.1, 51°.5N±0°.2×174°.3W±0°.1, h54km±13km, mb3.6/12, Error ellipse: s-maj=30.3km s-min=12.1km az=168.6*
*NEIC **06** 06:39:29.9, 51°.36N×174°.29W, h16km, ML3.4(AEIC), After AEIC.*
ISC 06 06:39:29.7±1.9, 51°.4N±0°.1×174°.3W±0°.1, h35km±14km, n16, σ0°.67/17, mb3.6/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.79**	**5**	P	**Pn**	**06 39 44.6**	**+0.4**
ATKA				S	**Sn**	**06 39 55.1**	**+0.3**
ADK	**Adak**	**1.55**	**288**	P	**Pn**	**06 39 54.6**	**-0.1**
KDAK	**Kodiak Island**	**14.07**	**55**	Pn	**Pn**	**06 42 44.7**	**-1.5**
	0.3nm,0.3s,baz=270,slow=6.1,SNR=4.6						
PETK	**Petropavlovsk-**	**17.18**	**287**	P	**Pn**	**06 43 27.2**	**+0.6**
	0.2nm,0.3s,baz=274,slow=18,SNR=4.2						
INK	**Inuvik**	**25.83**	**34**	P	**P**	**06 44 57.2**	**0.0**
	0.9nm,0.9s,mb3.3,baz=219,slow=12,SNR=6.3						
DLBC	**Dease Lake**	**25.98**	**57**	P	**P**	**06 45 01.9**	**+3.3**
	0.9nm,0.9s,mb3.3,baz=277,slow=13,SNR=3.3						
YKA	**Yellowknife Ar**	**33.15**	**47**	P	**P**	**06 46 02.0**	**-0.1**
	0.1nm,0.5s,mb3.0,baz=274,slow=9.1,SNR=5.2						
YKA				PcP	PcP	06 48 44.4	+0.2
	0.2nm,0.7s,baz=292,slow=3.5,SNR=4.3						
YKA				LR	LR	07 00 12.4	
	comp=Z,5.2nm,19.0s,baz=35,slow=38						
PDAR	**Pinedale Array**	**43.60**	**75**	P	**P**	**06 47 30.9**	**+0.8**
	0.5nm,0.7s,mb3.3,baz=356,slow=3.3,SNR=5.1						
ULM	**Lac du Bonnet**	**47.28**	**59**	P	**P**	**06 47 59.1**	**0.0**
	0.4nm,0.4s,mb3.8,baz=300,slow=7.3,SNR=4.3						
SONM	**Songino Array**	**49.12**	**299**	P	**P**	**06 48 13.4**	**0.0**
	0.6nm,0.7s,mb3.8,baz=64,slow=4.9,SNR=3.2						
TXAR	**Lajitas Array**	**55.86**	**84**	P	**P**	**06 49 03.8**	**+0.3**
	0.1nm,0.6s,mb3.1,baz=322,slow=3.8,SNR=2.7						
ARCES	**ARCESS Array B**	**58.49**	**352**	P	**P**	**06 49 20.7**	**-0.8**
	1.3nm,0.7s,mb4.0,baz=3.3,slow=7.5,SNR=5.5						
KURK	**Kurchatov**	**60.99**	**316**	P	**P**	**06 49 38.5**	**-0.4**
	0.4nm,0.3s,mb4.0,baz=43,slow=7.0,SNR=5.8						
MKAR	**Makanchi Array**	**62.17**	**311**	P	**P**	**06 49 46.6**	**-0.3**
	0.4nm,0.3s,mb4.1,baz=47,slow=5.3,SNR=14						
BVAR	**Borovoye Array**	**62.63**	**322**	P	**P**	**06 49 49.9**	**0.0**
	1.0nm,0.5s,mb4.2,baz=59,slow=6.8,SNR=6.8						
AKASG	**Malin Array Be**	**76.31**	**345**	P	**P**	**06 51 14.1**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=15,slow=5.5,SNR=2.4						

MAN 06 06:49:18, 17°.50N×122°.49E, h32km, mb4.2, ML3.1, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.44**	**188**	eP	Pb	06 49 28.6	+1.1
PALP				eS	Sb	06 49 37.2	+3.1
CAUP	**Cauayan**	**0.84**	**229**	eP	Pn	06 49 36.3	+2.7
APYP	**Conner**	**1.24**	**287**	eP	Pn	06 49 39.3	+0.3
APYP				eS	Sn	06 49 54.8	+0.1
ABRA	**Dolores**	**1.70**	**275**	eP	Pn	06 49 46.4	+1.0

*ISCJB **06** 06:52:04.4±0.5, 24°.49S±0°.03×69°.78W±0°.05, h57km±4km, mb4.6/73, Error ellipse: s-maj=8.8km s-min=5.0km az=156.1*
*GUC **06** 06:52:04.8±1.0, 24°.49S×69°.87W, h45km±13km, ML5.3*
*NEIC **06** 06:52:04.8, 24°.49S×69°.87W, h45km, mb4.7/64, After GUC.*
NEIC Felt [III] at Antofagasta.
*BJI **06** 06:52:06.8, 24°.50S×69°.90W, h44km, mB5.1/4, Ms4.9/2, Ms7 4.7/2*
*IDC **06** 06:52:06.1±0.4, 24°.53S×70°.02W, h62km±3km, mb4.2/11, mb1 4.3/15, mb1mx4.3/18, mbtmp4.2/15, MS3.3/4, Ms1 3.3/4, ms1mx3.1/25, Error ellipse: s-maj=14.6km s-min=8.3km az=111.0*
ISC 06 06:52:05.7±0.5, 24°.49S±0°.04×69°.79W±0°.05, h52km±4km, h63km±.3km:pP-P, n390, σ0°.76/366, mb4.6/73, 124C-130D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.98**	**325**	⇓iP	**Pn**	**06 52 22.4**	**-0.9**
ANCH				iS	**Sn**	**06 52 34.9**	**-1.3**
ANCH	**Antofagasta**	**0.98**	**325**	⇓iP	**Pn**	**06 52 22.4**	**-0.9**
ANCH				iS	**Sn**	**06 52 34.9**	**-1.3**
ANCH				AML	AML	06 52 36.3	
	comp=N,81μm,0.3s						
MECH	**Mejillones**	**1.51**	**336**	⇑iP	**Pn**	**06 52 30.0**	**-0.3**
MECH				AML	AML	06 52 56.8	
	comp=E,36μm,0.5s						
PECH	**Pedro de Valdi**	**1.89**	**3**	⇑iP	**Pn**	**06 52 36.2**	**+0.7**
PECH				iS	**Sn**	**06 52 60.0**	**+1.8**
PECH				AML	AML	06 53 05.2	
	comp=E,49μm,0.3s						
LVC	**Limon Verde**	**2.04**	**23**	P	**Pn**	**06 52 40.5**	**+3.0**
	comp=E,812nm,0.3s,baz=208,slow=9.9,SNR=2059						
LVC				S	**Sn**	**06 53 07.1**	**+5.3**
	comp=E,2μm,0.3s,baz=76,slow=19,SNR=11						
LVC				LR	LR	06 53 34.9	
	comp=E,1μm,19.3s,baz=354,slow=41						
LVC	**Limon Verde**	**2.04**	**23**	P	**Pn**	**06 52 40.5**	**+3.0**
LVC				S	**Sn**	**06 53 07.1**	**+5.3**
LVC				LR	LR	06 53 34.9	
PB04	**Plate Boundary**	**2.23**	**7**	⇑iP	**Pn**	**06 52 39.0**	**-1.2**
PB04				AML	AML	06 53 21.9	
	comp=E,30μm,0.3s						
MACH	**Maria Elena**	**2.29**	**1**	⇓iP	**Pn**	**06 52 41.2**	**+0.2**
CPCH	**Copiapo**	**2.90**	**190**	⇓iP	**Pn**	**06 52 49.8**	**+0.4**
PB01	**Plate Boundary**	**3.44**	**5**	⇑iP	**Pn**	**06 52 56.8**	**-0.1**
PB01				AML	AML	06 53 46.5	
	comp=E,10μm,0.5s						
LCO	**Las Campanas**	**4.58**	**190**	ePn	**Pn**	**06 53 10.8**	**-1.6**
LCO				eSn	**Sn**	**06 54 17.0**	**+13**
CFAA	**Coronel Fontan**	**7.22**	**169**	P	**Pn**	**06 53 49.7**	**+1.1**
	comp=E,0.9nm,0.3s,baz=339,slow=14,SNR=64						
CFAA				S	**Sn**	**06 55 14.6**	**+5.4**
	comp=E,3.8nm,0.3s,baz=228,slow=22,SNR=3.0						
CFAA				LR	LR	06 56 51.1	
	comp=E,60nm,20.5s,baz=343,slow=40						
LPAZ	**La Paz**	**8.31**	**11**	P	**Pn**	**06 54 05.0**	**+1.4**
	comp=E,2.8nm,0.3s,baz=196,slow=6.8,SNR=81						
LPAZ	**La Paz**	**8.31**	**11**	ePn	**Pn**	**06 54 05.1**	**+1.5**
CPUP	**Villa Florida**	**11.41**	**102**	P	**Pn**	**06 54 48.8**	**+2.8**
	comp=E,1.1nm,0.3s,baz=256,slow=13,SNR=17						
CPUP	**Villa Florida**	**11.41**	**102**	ePn	**Pn**	**06 54 47.7**	**+1.7**
SIV	**San Ignacio**	**11.76**	**46**	P	**Pn**	**06 54 50.1**	**-0.8**
	comp=E,33nm,0.3s,baz=238,slow=11,SNR=135						
SIV				S	**Sn**	**06 56 53.9**	**-6.8**
	comp=E,1.0nm,0.3s,baz=270,slow=18,SNR=2.5						
SIV				LR	LR	07 00 33.8	
	comp=E,283nm,21.1s,baz=266,slow=42						
TRQA	**Tornquist**	**15.07**	**156**	eP	**Pn**	**06 55 34.4**	**-1.0**
TRQA				e		06 56 02.1	
PLCA	**Paso Flores**	**16.21**	**182**	P	**Pn**	**06 55 47.8**	**-2.1**
	comp=E,0.1nm,0.3s,baz=1.3,slow=8.7,SNR=11						
PLCA	**Paso Flores**	**16.21**	**182**	eP	**Pn**	**06 55 49.1**	**-0.8**
	comp=E,14nm,1.0s						
SPB	**Sao Paulo**	**20.44**	**92**	eP	**P**	**06 56 39.5**	**+0.7**
	comp=E,24nm,0.6s						
OTAV	**Otavalo**	**25.98**	**340**	eP	**P**	**06 57 35.8**	**+2.2**
	comp=E,13nm,1.0s,mb4.4						
OTAV				e	pP	06 57 50.3	+3.5
ROSC	**El Rosal**	**29.50**	**351**	LR	LR	07 10 37.3	
	comp=E,58nm,18.4s,baz=22,slow=38						
RCBR	**Riachuelo**	**37.44**	**66**	eP	**P**	**06 59 14.7**	**+0.5**
	comp=E,19nm,0.9s,mb4.9						
RCBR				e		06 59 35.7	
TGUH	**Tegucigalpa,Un**	**41.94**	**334**	eP	**P**	**06 59 51.0**	**-0.5**
	comp=E,22nm,0.9s,mb4.8						
TGUH				epP	pP	07 00 07.0	+1.7
VNA3	**Neumayer Olymp**	**57.53**	**161**	eP	**P**	**07 01 49.4**	**+0.1**
VNA3				e	pP	07 02 06.2	+2.6
VNA2	**Neumayer--Watz**	**58.12**	**160**	eP	**P**	**07 01 53.7**	**+0.2**
VNA2				e	pP	07 02 10.8	+3.0
JSC	**Jenkinsville**	**59.45**	**349**	eP	**P**	**07 02 00.9**	**-2.2**
JSC				epP	pP	07 02 17.6	+0.1
SWET	**Sewanee**	**61.32**	**345**	eP	**P**	**07 02 13.6**	**-2.2**
SWET				epP	pP	07 02 29.4	-0.8
SWET				esP	sP	07 02 37.9	+1.8
OXF	**Oxford**	**61.56**	**342**	eP	**P**	**07 02 14.5**	**-3.0**
	comp=E,15nm,1.0s,mb5.1						
OXF				epP	pP	07 02 31.6	-0.4
OXF				esP	sP	07 02 39.2	+1.3
PLAL	**Pickwick Lake**	**61.64**	**343**	eP	**P**	**07 02 15.2**	**-2.8**
	comp=E,7.1nm,1.0s,mb4.8						
PLAL				epP	pP	07 02 31.9	-0.5
PLAL				esP	sP	07 02 39.3	+1.0
JCT	**Junction City**	**61.77**	**331**	eP	**P**	**07 02 17.6**	**-1.4**
	comp=E,11nm,0.6s,mb5.2						
JCT				epP	pP	07 02 34.2	+0.8
JCT				esP	sP	07 02 40.7	+1.4
628A	**Black Gap, Mar**	**62.38**	**327**	⇓P	**P**	**07 02 22.7**	**-0.4**
	baz=63						
627A	**Terlingua Ranc**	**62.60**	**327**	⇓P	**P**	**07 02 24.3**	**-0.3**
	baz=63						
TXAR	**Lajitas Array**	**62.64**	**327**	P	**P**	**07 02 24.1**	**-0.8**
	comp=E,1.1nm,0.7s,mb4.1,baz=152,slow=8.1,SNR=12						
TXAR				pP	pP	07 02 40.2	+0.9
	comp=E,1.3nm,0.8s,baz=153,slow=8.0,SNR=7.5						
TXAR				sP	sP	07 02 47.3	+2.1
	comp=E,1.4nm,0.7s,baz=151,slow=9.1,SNR=6.3						
WVT	**Waverly**	**62.66**	**344**	eP	**P**	**07 02 22.3**	**-2.5**
	comp=E,9.2nm,0.7s,mb5.0						
WVT				epP	pP	07 02 38.1	-1.2
WVT				esP	sP	07 02 46.7	+1.6
528A	**Cox Ranch, San**	**62.89**	**328**	⇓P	**P**	**07 02 25.5**	**-1.0**
	baz=63,SNR=5.7						
MIAR	**Mount Ida**	**62.90**	**338**	eP	**P**	**07 02 25.2**	**-1.3**
	comp=E,12nm,1.1s,mb4.9						
MIAR				epP	pP	07 02 40.7	-0.2
626A	**Big Bend Ranch**	**63.05**	**327**	⇓P	**P**	**07 02 27.5**	**-0.1**
	baz=63,SNR=12						
527A	**Woodward Ranch**	**63.28**	**327**	⇓P	**P**	**07 02 28.5**	**-0.6**
	baz=64,SNR=6.2						
428A	**Kincaid Ranch,**	**63.31**	**328**	⇑P	**P**	**07 02 28.8**	**-0.5**
	baz=64,SNR=6.5						
526A	**Mary Lane Ranc**	**63.45**	**327**	⇓P	**P**	**07 02 30.1**	**-0.1**
	baz=64						
427A	**Hayter Ranch,**	**63.76**	**328**	⇓P	**P**	**07 02 31.6**	**-0.6**
	baz=64						
328A	**Wristen Ranch,**	**63.91**	**329**	⇑P	**P**	**07 02 33.1**	**-0.1**
	baz=64						
426A	**McDonald Obser**	**63.91**	**327**	⇑P	**P**	**07 02 33.1**	**-0.2**
	baz=64,SNR=5.5						
WCI	**Wyandotte Cave**	**64.28**	**346**	eP	**P**	**07 02 32.5**	**-3.0**
	comp=E,9.6nm,0.7s,mb4.9						
WCI				epP	pP	07 02 49.8	-0.3
326A	**Caldwell Ranch**	**64.42**	**328**	⇓P	**P**	**07 02 35.9**	**-0.7**
	baz=65						
425A	**Indio Mountain**	**64.48**	**327**	⇑P	**P**	**07 02 36.4**	**-0.6**
	baz=65,SNR=7.9						
SIUC	**Southern Illin**	**64.52**	**343**	eP	**P**	**07 02 34.4**	**-2.6**
	comp=E,5.9nm,0.6s,mb4.8						
SIUC				epP	pP	07 02 52.1	+0.5
227A	**Bennet, Jal**	**64.66**	**329**	⇓P	**P**	**07 02 37.8**	**-0.4**
	baz=65						
325A	**Bean Ranch, Si**	**64.95**	**327**	⇓P	**P**	**07 02 39.2**	**-0.8**
	baz=65,SNR=13						
WMOK	**Wichita Mounta**	**65.01**	**334**	eP	**P**	**07 02 37.9**	**-2.4**
	comp=E,0.9nm,0.5s,mb4.1						
WMOK				epP	pP	07 02 56.9	+2.0
226A	**Malaga, Loving**	**65.09**	**328**	⇑P	**P**	**07 02 40.9**	**0.0**
	baz=65,SNR=5.9						
FVM	**French Village**	**65.10**	**342**	eP	**P**	**07 02 39.0**	**-1.8**
	comp=E,18nm,0.6s,mb5.3						
FVM				epP	pP	07 02 55.7	+0.4
FVM				esP	sP	07 03 03.1	+1.9
127A	**Arkansas Junct**	**65.25**	**329**	⇓P	**P**	**07 02 41.4**	**-0.5**
	baz=66						
324A	**Moseley Ranch,**	**65.26**	**327**	⇓P	**P**	**07 02 40.7**	**-1.3**
	baz=66,SNR=8.3						
CCM	**Cathedral Cave**	**65.40**	**341**	eP	**P**	**07 02 40.8**	**-1.9**
	comp=E,8.4nm,0.7s,mb4.9						
CCM				epP	pP	07 02 57.4	+0.1
CCM				esP	sP	07 03 04.2	+1.0
MNTX	**Cornudas Mount**	**65.42**	**327**	eP	**P**	**07 02 41.2**	**-1.9**
	comp=E,1.4nm,0.8s,mb4.0						
MNTX				epP	pP	07 02 57.6	0.0
225A	**Deer Hill, Car**	**65.48**	**328**	⇓P	**P**	**07 02 43.0**	**-0.4**
	baz=66						
ACSO	**Alum Creek Sta**	**65.55**	**349**	eP	**P**	**07 02 41.7**	**-2.0**
	comp=E,6.1nm,0.5s,mb4.9						
Z27A	**Tatum**	**65.71**	**330**	⇑P	**P**	**07 02 43.7**	**-1.2**
	baz=66,SNR=8.3						
QSPA	**South Pole Qui**	**65.71**	**180**	eP	**P**	**07 02 44.5**	**+0.1**
	comp=E,7.5nm,0.6s,mb4.9						
QSPA				epP	pP	07 03 01.5	+2.6
224A	**Corundas Mount**	**65.80**	**327**	⇑P	**P**	**07 02 44.1**	**-1.4**
	baz=66,SNR=6.1						
125A	**Gardner Draw,**	**65.85**	**328**	⇑P	**P**	**07 02 44.4**	**-1.4**
	baz=66,SNR=5.2						
Z26A	**Caprock**	**66.03**	**329**	⇓P	**P**	**07 02 46.1**	**-0.8**
	baz=66,SNR=8.3						
MSTX	**Muleshoe**	**66.05**	**330**	⇑P	**P**	**07 02 45.9**	**-1.2**
	baz=66,SNR=6.0						
Y27A	**Causey**	**66.16**	**330**	⇑P	**P**	**07 02 46.2**	**-1.5**
	baz=66,SNR=7.4						
124A	**Stringfield Ra**	**66.27**	**328**	⇓P	**P**	**07 02 47.8**	**-0.7**
	baz=66,SNR=7.0						
Z25A	**Roswell**	**66.39**	**328**	⇑P	**P**	**07 02 47.9**	**-1.4**
	baz=67,SNR=6.1						
Y25A	**Mesa, Roswell**	**66.90**	**329**	⇓P	**P**	**07 02 51.8**	**-0.7**
	baz=67						
X26A	**CR and CF Fran**	**67.01**	**330**	⇓P	**P**	**07 02 52.9**	**-0.3**
	baz=67						
319A	**Douglas**	**67.18**	**324**	⇓P	**P**	**07 02 54.7**	**+0.3**
	baz=67						
220A	**Playas Peak, P**	**67.19**	**325**	⇑P	**P**	**07 02 54.5**	**+0.1**
	baz=67						
Y24A	**Capitan**	**67.26**	**328**	⇓P	**P**	**07 02 55.1**	**+0.4**
	baz=68						
121A	**Cookes Peak, D**	**67.30**	**326**	⇓P	**P**	**07 02 55.6**	**+0.5**
	baz=68						
Z22A	**Elephant Butte**	**67.46**	**327**	⇓P	**P**	**07 02 56.9**	**+0.8**
	baz=68,SNR=12						
318A	**Bisbee**	**67.61**	**323**	⇑P	**P**	**07 02 57.5**	**+0.4**
	baz=68						
ACCN	**Adirondack Com**	**67.63**	**357**	eP	**P**	**07 02 56.7**	**-0.2**
	comp=E,84nm,2.7s,mb5.3						
219A	**White Tail Can**	**67.66**	**324**	⇑P	**P**	**07 02 57.7**	**+0.3**
	baz=68						
X24A	**Lazy VL Ranch,**	**67.78**	**329**	⇑P	**P**	**07 02 58.6**	**+0.5**
	baz=68						
Z21A	**St. Cloud Mine**	**67.86**	**326**	⇓P	**P**	**07 02 59.3**	**+0.7**
	baz=68						
W25A	**X Bar L Ranch,**	**67.86**	**330**	⇓P	**P**	**07 02 58.2**	**-0.3**
	baz=68,SNR=6.8						
Y22A	**Socorro**	**68.01**	**327**	⇑P	**P**	**07 03 00.1**	**+0.6**
	baz=68						
BNM	**Barren Site**	**68.02**	**328**	eP	**P**	**07 02 59.2**	**-0.4**
	comp=E,3.1nm,1.3s,mb4.2						
BNM				epP	pP	07 03 15.6	+1.5
218A	**Dragoon**	**68.06**	**324**	⇓P	**P**	**07 03 00.7**	**+0.8**
	baz=68						
Z20A	**Nine Sixteen R**	**68.18**	**325**	⇑P	**P**	**07 03 01.5**	**+0.9**
	baz=68						
217A	**Green Valley**	**68.32**	**323**	⇑P	**P**	**07 03 02.2**	**+0.7**
	baz=68						
Y21A	**Point of Rocks**	**68.42**	**327**	⇓P	**P**	**07 03 02.8**	**+0.7**
	baz=69						
LAZ	**Ladron**	**68.47**	**327**	eP	**P**	**07 03 02.4**	**+0.1**
	comp=E,0.4nm,0.5s,mb3.7						
LAZ				epP	pP	07 03 18.4	+1.4
118A	**Homack Ranch,**	**68.53**	**324**	⇑P	**P**	**07 03 03.4**	**+0.6**
	baz=69						
ANMO	**Albuquerque**	**68.58**	**328**	eP	**P**	**07 03 03.2**	**+0.2**
	comp=E,5.2nm,1.0s,mb4.4						
ANMO				epP	pP	07 03 19.9	+2.2
ANMO				esP	sP	07 03 25.2	+1.7
W23A	**Werner Place,**	**68.60**	**329**	⇓P	**P**	**07 03 03.7**	**+0.5**
	baz=69,SNR=5.4						
Y20A	**Horse Springs,**	**68.69**	**326**	⇓P	**P**	**07 03 04.3**	**+0.5**
	baz=69						
TUC	**Tucson**	**68.71**	**323**	eP	**P**	**07 03 03.6**	**-0.4**
	comp=E,6.9nm,1.2s,mb4.5						
TUC				epP	pP	07 03 19.6	+1.0
X21A	**Alamocita Cree**	**68.82**	**327**	⇑P	**P**	**07 03 05.2**	**+0.6**
	baz=69,SNR=6.0						
W22A	**Albuquerque**	**68.88**	**328**	⇓P	**P**	**07 03 05.8**	**+0.9**
	baz=69						
117A	**Oracle**	**68.89**	**324**	⇑P	**P**	**07 03 05.5**	**+0.4**
	baz=69						
FRNY	**Flat Rock**	**69.08**	**357**	eP	**P**	**07 03 05.5**	**-0.4**
	comp=E,13nm,1.3s,mb4.7						
FRNY				epP	pP	07 03 22.1	+1.6
Y19A	**Nutrioso**	**69.18**	**326**	⇑P	**P**	**07 03 07.7**	**+0.9**
	baz=69,SNR=7.1						
X20A	**Quemado**	**69.25**	**326**	⇓P	**P**	**07 03 08.3**	**+1.1**
	baz=70						
214A	**Organ Pipe Nat**	**69.57**	**322**	⇑P	**P**	**07 03 10.1**	**+0.8**
	baz=70						
JFWS	**Jewell Farm**	**69.67**	**344**	eP	**P**	**07 03 07.7**	**-1.9**
	comp=E,9.7nm,0.6s,mb4.9						
JFWS				epP	pP	07 03 24.7	+0.4
W20A	**Ramah**	**69.72**	**327**	⇓P	**P**	**07 03 10.9**	**+0.8**
	baz=70						
Y17A	**Roosevelt**	**69.81**	**324**	⇓P	**P**	**07 03 10.7**	**0.0**

baz=70
LIC Lamto 70.01 73 *eP* **P 07 03 11.9 -0.5**
comp=E,55nm,1.3s,mb5.3
TIC Toumodi 70.22 73 *eP* **P 07 03 13.2 -0.5**
comp=E,19nm,0.8s,mb5.1
V20A Brimhall 70.24 327 ⇓P **P 07 03 13.7 +0.5**
baz=70
X17A Forest Lakes 70.28 325 ⇑P **P 07 03 14.1 +0.5**
baz=70
Y16A Circle Bar Ran 70.29 324 ⇓P **P 07 03 14.3 +0.7**
baz=70
KIC Kosan Boka 70.33 73 *eP* **P 07 03 14.1 -0.2**
comp=E,21nm,0.7s,mb5.2
DBIC Dimbokro 70.38 73 P **P 07 03 14.6 -0.1**
comp=E,9.0nm,0.6s,mb4.9,baz=216,slow=6.4,SNR=16
SDCO Great Sand Dun 70.42 331 *eP* **P 07 03 14.4 +0.1**
comp=E,8.0nm,1.0s,mb4.6
SDCO *epP* pP 07 03 30.9 +1.8
SDCO *esP* sP 07 03 37.1 +2.3
V19A Window Rock 70.46 327 ⇑P **P 07 03 15.4 +0.8**
baz=71
T22A Edith 70.46 329 ⇑P **P 07 03 15.3 +0.7**
baz=71
X16A Lo Mia Camp, P 70.68 324 ⇑P **P 07 03 16.3 +0.3**
baz=71
U20A Newcomb 70.72 328 ⇓P **P 07 03 16.6 +0.4**
baz=71
V18A Ganado 70.90 326 ⇑P **P 07 03 17.4 0.0**
baz=71
U19A Dine' College, 70.99 327 ⇓P **P 07 03 17.7 -0.2**
baz=71
X15A Humboldt 71.16 324 ⇑P **P 07 03 19.3 +0.4**
baz=71
Y14A Wickenburg 71.16 323 ⇑P **P 07 03 19.0 0.0**
baz=71
W16A Flagstaff 71.25 325 ⇓P **P 07 03 20.2 +0.7**
baz=72,SNR=6.2
V17A Tonalea, Kykot 71.27 326 ⇓P **P 07 03 20.3 +0.8**
baz=72,SNR=5.1
T19A Beclabito 71.33 328 ⇑P **P 07 03 20.5 +0.6**
baz=72,SNR=5.5
MVCO Mesa Verde 71.38 328 ⇓P **P 07 03 20.5 +0.4**
baz=72,SNR=5.1
MVCO Mesa Verde 71.38 328 *eP* **P 07 03 20.5 +0.3**
comp=E,8.9nm,0.8s,mb4.8
MVCO *epP* pP 07 03 37.0 +2.2
MVCO *esP* sP 07 03 44.0 +3.2
U18A Rough Rock, Ch 71.42 327 ⇓P **P 07 03 20.8 +0.3**
baz=72,SNR=5.4
WUAZ Wupatki 71.49 325 ⇓P **P 07 03 21.6 +0.7**
baz=72
WUAZ Wupatki 71.49 325 *eP* **P 07 03 21.1 +0.2**
comp=E,9.1nm,1.0s,mb4.7
WUAZ *epP* pP 07 03 38.0 +2.4
WUAZ *esP* sP 07 03 43.8 +2.3
X14A Yava 71.50 323 ⇑P **P 07 03 21.6 +0.7**
baz=72
U16A Tuba City 71.84 326 ⇓P **P 07 03 23.6 +0.6**
baz=72
R21A Cimarron 71.86 330 ⇑P **P 07 03 23.6 +0.5**
baz=72
U17A Shonto 71.96 326 ⇓P **P 07 03 24.5 +0.8**
baz=72
Q22A Crested Butte, 71.97 330 ⇑P **P 07 03 24.1 +0.4**
baz=72
T18A Mexican Hat 71.99 327 ⇑P **P 07 03 24.3 +0.5**
baz=72,SNR=8.5
R20A Redvale 72.10 329 ⇓P **P 07 03 25.3 +0.8**
baz=72,SNR=7.4
S19A Harvey Farm, M 72.11 328 ⇓P **P 07 03 25.0 +0.5**
baz=72,SNR=7.5
V15A Kaibab Nationa 72.14 325 ⇓P **P 07 03 25.6 +0.9**
baz=72
W14A Seligman 72.16 324 ⇓P **P 07 03 25.7 +0.8**
baz=72
ISCO Idaho Springs 72.16 332 *eP* **P 07 03 24.8 -0.1**
comp=E,28nm,2.0s,mb4.8
ISCO *epP* pP 07 03 41.0 +1.5
ECSD EROS Data Cent 72.22 340 *eP* **P 07 03 23.1 -2.0**
comp=E,4.3nm,0.8s,mb4.4
ECSD *epP* pP 07 03 40.1 +0.4
SMCO Snowmass 72.25 330 *eP* **P 07 03 26.0 +0.6**
comp=E,4.9nm,0.8s,mb4.5
SMCO *epP* pP 07 03 42.1 +2.0
SMCO *esP* sP 07 03 49.1 +3.2
BC3 Big Chuckw Mtn 72.32 321 ⇓P **P 07 03 26.6 +0.7**
baz=72
T17A Navajo Res., N 72.34 327 ⇓P **P 07 03 26.9 +0.9**
baz=73
S18A Hurst Farm, Bl 72.48 328 ⇑P **P 07 03 27.6 +0.8**
baz=73,SNR=13
V14A Boquillas Ranc 72.49 324 ⇑P **P 07 03 27.7 +0.8**
baz=73
R19A Curley Farm, L 72.60 328 ⇑P **P 07 03 27.6 +0.1**
baz=73
U15A North Rim 72.66 325 ⇓P **P 07 03 28.5 +0.6**
baz=73
S17A Black Ridge (B 72.83 327 ⇑P **P 07 03 29.7 +0.8**
baz=73
R18A Canyonlands Na 72.98 328 ⇑P **P 07 03 29.8 +0.1**
baz=73
U14A Mt Trumbull 73.12 325 ⇓P **P 07 03 31.2 +0.6**
baz=73
V13A Grand Canyon W 73.12 324 ⇓P **P 07 03 30.9 +0.3**
baz=73
T15A Red Dirt Ranch 73.16 326 ⇓P **P 07 03 31.8 +1.0**
baz=73
GMRC Granite Mounta 73.26 322 ⇑P **P 07 03 31.9 +0.5**
baz=74
N22A Wattenberg Ran 73.35 332 ⇑P **P 07 03 33.0 +1.1**
baz=74
R17A Hanksville Air 73.40 328 ⇓P **P 07 03 32.5 +0.3**
baz=74,SNR=6.6
V12A Nelson 73.50 323 ⇓P **P 07 03 33.0 +0.1**
baz=74
P19A Cripple Cowboy 73.54 329 ⇑P **P 07 03 33.4 +0.4**
baz=74,SNR=10
T14A Hurricane 73.56 325 ⇑P **P 07 03 33.9 +0.7**
baz=74
O20A White River Ci 73.60 330 ⇑P **P 07 03 33.6 +0.3**
baz=74,SNR=7.6
Q18A Rafter H Ranch 73.66 328 ⇓P **P 07 03 34.3 +0.6**
baz=74
R16A Teasdale 73.68 327 ⇑P **P 07 03 34.3 +0.4**
baz=74
N21A Black Mountain 73.78 331 ⇓P **P 07 03 35.4 +1.0**
baz=74
SRU San Rafael 73.85 328 ⇑P **P 07 03 34.8 0.0**
baz=74,SNR=5.9
SRU San Rafael 73.85 328 *eP* **P 07 03 35.0 +0.2**
comp=E,7.4nm,1.0s,mb4.6
SRU *epP* pP 07 03 51.4 +1.8
SRU *esP* sP 07 03 58.7 +3.2
M22A Cedar Creek Ra 73.91 332 ⇓P **P 07 03 36.9 +1.7**
baz=74
T13A Saint George 73.96 325 ⇓P **P 07 03 36.3 +0.8**
baz=74
Q16A Castle Valley 74.02 328 ⇓P **P 07 03 36.6 +0.8**
baz=74
CCUT Cedar City 74.07 325 *eP* **P 07 03 36.8 +0.7**
comp=E,5.6nm,0.9s,mb4.5
CCUT *epP* pP 07 03 53.0 +2.1
O19A Miners Draw (B 74.13 330 ⇓P **P 07 03 36.5 0.0**
baz=74
N20A Spence Gulch, 74.17 331 ⇑P **P 07 03 37.0 +0.3**
baz=74
MSU Marysvale 74.20 327 *eP* **P 07 03 37.0 +0.1**
MSU *epP* pP 07 03 54.4 +2.7
P17A Butcher Ranch, 74.24 328 ⇓P **P 07 03 37.4 +0.4**
baz=74
ARUT Antelope Range 74.29 325 *eP* **P 07 03 37.9 +0.5**
comp=E,2.4nm,0.7s,mb4.2
ARUT *epP* pP 07 03 54.6 +2.4
ARUT *esP* sP 07 04 01.9 +3.9
S13A Holt Ranch, En 74.35 325 ⇓P **P 07 03 38.4 +0.6**
baz=75,SNR=5.7
O18A Roosevelt 74.52 329 ⇑P **P 07 03 39.3 +0.6**
baz=75
N19A John Jarvie Ra 74.63 330 ⇓P **P 07 03 39.4 +0.1**
baz=75
M20A Sweetwater, Wa 74.67 331 ⇓P **P 07 03 39.9 +0.3**
baz=75
Q15A Fillmore 74.67 327 ⇑P **P 07 03 40.2 +0.5**
baz=75
L21A Rawlins 74.70 332 ⇑P **P 07 03 40.1 +0.4**
baz=75
O17A Robinson Place 74.81 329 ⇓P **P 07 03 41.1 +0.7**
baz=75,SNR=8.4

T11A Corn Creek, Al 74.82 324 ⇑P **P 07 03 41.1 +0.6**
baz=75,SNR=5.8
R13A O'Grain Ranch, 74.86 325 ⇑P **P 07 03 41.7 +1.0**
baz=75
N18A Larsen Ranch, 74.93 330 ⇑P **P 07 03 42.2 +1.2**
baz=75
Q14A Sevier Lake (B 75.12 326 ⇑P **P 07 03 43.0 +0.8**
baz=75,SNR=5.2
RSSD Black Hills 75.14 335 *eP* **P 07 03 41.6 -0.6**
comp=E,5.0nm,1.0s,mb4.4
RSSD *epP* pP 07 03 58.5 +1.5
FURC Furnace Creek, 75.15 322 ⇑P **P 07 03 43.3 +0.9**
baz=75
L20A Wamsutter 75.16 331 ⇓P **P 07 03 42.5 +0.2**
baz=75
DAU Daniels Canyon 75.22 328 *eP* **P 07 03 42.0 -0.8**
comp=E,5.6nm,1.1s,mb4.4
DAU *epP* pP 07 03 59.1 +1.6
R12A Pony Springs, 75.30 325 ⇓P **P 07 03 44.0 +0.7**
baz=76,SNR=8.8
N17A Moffit Pass 75.44 329 ⇓P **P 07 03 44.4 +0.4**
baz=76,SNR=5.5
JLU Jordanelle 75.46 328 *eP* **P 07 03 43.9 -0.3**
comp=E,3.2nm,1.1s,mb4.2
JLU *epP* pP 07 04 01.2 +2.3
M18A Lyman 75.47 330 ⇑P **P 07 03 44.3 +0.2**
baz=76
Q13A Wheeler Ranch, 75.47 326 ⇓P **P 07 03 44.7 +0.5**
baz=76
P14A Drum Mountains 75.47 327 ⇓P **P 07 03 44.9 +0.7**
baz=76,SNR=5.3
ISA Isabella 75.49 321 ⇑P **P 07 03 44.8 +0.4**
baz=76
ISA Isabella 75.49 321 *eP* **P 07 03 44.4 0.0**
comp=E,6.5nm,1.4s,mb4.4
ISA *epP* pP 07 04 01.5 +2.3
L19A Farson 75.68 331 ⇓P **P 07 03 45.5 +0.2**
baz=76,SNR=5.3
K20A Yellowstone Ra 75.68 332 ⇓P **P 07 03 45.3 0.0**
baz=76
DUG Dugway 75.81 327 ⇓P **P 07 03 46.4 +0.3**
baz=76,SNR=5.5
DUG Dugway 75.81 327 *eP* **P 07 03 45.7 -0.4**
comp=E,3.7nm,1.0s,mb4.3
DUG *epP* pP 07 04 03.3 +2.4
R11A Troy Canyon, C 75.83 324 ⇑P **P 07 03 46.7 +0.4**
baz=76,SNR=5.7
P13A Bates Ranch, G 75.84 326 ⇑P **P 07 03 47.0 +0.6**
baz=76
L18A Fontenelle, Gr 75.84 330 ⇑P **P 07 03 46.3 0.0**
baz=76,SNR=5.1
Q12A Willow Creek R 75.95 325 ⇑P **P 07 03 47.2 +0.2**
baz=76
S10A Tonopah Range, 76.06 324 ⇑P **P 07 03 48.1 +0.5**
baz=76
AGMN Agassiz Refuge 76.14 342 *eP* **P 07 03 46.4 -1.4**
comp=E,4.0nm,0.8s,mb4.4
AGMN *epP* pP 07 04 02.9 +0.3
R10A Warm Springs 76.17 324 ⇑P **P 07 03 48.9 +0.7**
baz=76,SNR=6.1
Q11A Duckwater 76.24 325 ⇓P **P 07 03 48.5 0.0**
baz=76,SNR=5.5
HWUT Hardware Ranch 76.30 329 *eP* **P 07 03 48.1 -0.7**
comp=E,3.5nm,0.9s,mb4.3
HWUT *epP* pP 07 04 05.1 +1.4
HWUT *esP* sP 07 04 12.8 +3.3
PDAR Pinedale Array 76.30 331 P **P 07 03 48.2 -0.6**
comp=E,0.6nm,0.5s,mb3.8,baz=130,slow=7.2,SNR=9.1
PDAR pP pP 07 04 05.8 +2.1
comp=E,0.6nm,0.5s,baz=137,slow=6.9,SNR=3.7
P12A McGill 76.31 326 ⇑P **P 07 03 49.7 +0.7**
baz=76
L17A Cokeville 76.36 330 ⇑P **P 07 03 49.1 -0.1**
baz=77
K18A Toltan Ranch, 76.41 331 ⇓P **P 07 03 49.6 +0.1**
baz=77,SNR=9.4
L16A Fish Haven 76.56 329 ⇑P **P 07 03 50.6 +0.3**
baz=77,SNR=6.1
M15A Larsen Ranch, 76.61 328 ⇓P **P 07 03 50.3 -0.3**
baz=77,SNR=7.3
O12A Currie 76.83 326 ⇓P **P 07 03 52.3 +0.4**
baz=77
J18A Kendall Valley 76.86 331 ⇑P **P 07 03 51.5 -0.6**
baz=77,SNR=12
K17A Gardner Place, 76.90 330 ⇑P **P 07 03 52.0 -0.2**
baz=77,SNR=6.7
L15A Malad City 76.99 329 ⇓P **P 07 03 52.4 -0.4**
baz=77,SNR=5.6
M14A Sheep Mountain 77.07 328 ⇑P **P 07 03 52.9 -0.3**
baz=77,SNR=5.5
I18A Diamond G Ranc 77.16 331 ⇑P **P 07 03 53.6 0.0**
baz=77,SNR=7.5
O11A Cowboy Ranch, 77.19 326 ⇑P **P 07 03 54.0 +0.1**
baz=77
P10A Eureka 77.23 325 ⇑P **P 07 03 55.0 +0.8**
baz=78
K16A Soda Springs 77.27 330 ⇓P **P 07 03 54.6 +0.3**
baz=78,SNR=7.2
J17A Brown Place, J 77.29 331 ⇓P **P 07 03 54.8 +0.4**
baz=78
REDW Red Top Meadow 77.35 331 *eP* **P 07 03 54.1 -0.7**
comp=E,4.7nm,0.8s,mb4.5
NVAR Mina Array Bea 77.36 323 P **P 07 03 54.7 -0.2**
comp=E,1.1nm,0.8s,mb3.8,baz=151,slow=6.0,SNR=7.8
NVAR pP pP 07 04 11.8 +2.0
comp=E,0.6nm,0.6s,baz=151,slow=6.6,SNR=3.3
NVAR sP sP 07 04 18.7 +3.1
NVAR Mina Array Bea 77.36 323 P **P 07 03 54.7 -0.2**
NVAR pP pP 07 04 11.8 +2.0
NVAR sP sP 07 04 18.7 +3.1
M13A Montello 77.36 327 ⇓P **P 07 03 55.0 +0.2**
baz=78
M13A Montello 77.36 327 *eP* **P 07 03 54.1 -0.8**
comp=E,1.5nm,1.0s,mb3.9
M13A *epP* pP 07 04 11.2 +1.4
M13A *esP* sP 07 04 18.2 +2.7
SNOW Snow King Moun 77.39 331 *eP* **P 07 03 55.0 0.0**
comp=E,5.8nm,0.8s,mb4.6
SNOW *epP* pP 07 04 11.6 +1.7
LOHW Long Hollow 77.44 331 *eP* **P 07 03 54.6 -0.6**
comp=E,3.8nm,1.0s,mb4.3
LOHW *epP* pP 07 04 11.2 +1.0
TPAW Teton Pass 77.50 331 *eP* **P 07 03 55.8 +0.3**
comp=E,5.4nm,0.9s,mb4.5
TPAW *epP* pP 07 04 12.8 +2.3
TPAW *esP* sP 07 04 20.0 +3.8
RRI2 Red Ridge 77.55 330 *eP* **P 07 03 55.8 0.0**
comp=E,47nm,2.3s,mb5.0
RRI2 *epP* pP 07 04 12.2 +1.4
J16A Bone 77.62 330 ⇑P **P 07 03 56.1 -0.2**
baz=78
I17A Pilgrim Ck. 77.67 331 ⇓P **P 07 03 57.2 +0.7**
baz=78
M12A Wells 77.77 327 ⇑P **P 07 03 57.3 +0.1**
baz=78
K14A Jones Ranch, D 77.78 329 ⇑P **P 07 03 57.2 0.0**
baz=78
L13A Double Diamond 77.80 328 ⇓P **P 07 03 57.5 +0.2**
baz=78,SNR=6.2
IMW Indian Meadow 77.81 331 *eP* **P 07 03 57.2 -0.1**
comp=E,2.0nm,0.8s,mb4.1
IMW *epP* pP 07 04 13.9 +1.7
ULM Lac du Bonnet 77.92 343 P **P 07 03 56.0 -1.8**
comp=E,6.6nm,1.1s,mb4.5,baz=166,slow=5.3,SNR=7.5
ULM pP pP 07 04 13.1 +0.5
comp=E,2.8nm,0.7s,baz=156,slow=5.7,SNR=4.7
ULM sP sP 07 04 20.7 +2.2
comp=E,2.7nm,0.5s,baz=159,slow=7.8,SNR=4.6
ULM Lac du Bonnet 77.92 343 *eP* **P 07 03 56.1 -1.6**
comp=E,2.9nm,0.7s,mb4.3
ULM *epP* pP 07 04 13.2 +0.6
ULM *esP* sP 07 04 20.5 +2.0
I16A Newdale 78.04 331 ⇑P **P 07 03 59.0 +0.4**
baz=78
RLMT Red Lodge 78.07 333 ⇑P **P 07 03 58.9 +0.2**
baz=78,SNR=6.4
RLMT Red Lodge 78.07 333 *eP* **P 07 03 58.6 -0.1**
comp=E,5.2nm,0.7s,mb4.6
RLMT *epP* pP 07 04 15.5 +1.9
RLMT *esP* sP 07 04 22.5 +3.1
J15A Blackfoot 78.10 330 ⇑P **P 07 03 59.2 +0.2**
baz=78,SNR=5.8
M11A Holland Ranch, 78.22 326 ⇓P **P 07 04 00.3 +0.6**
baz=78
K13A Stover Farm, H 78.30 328 ⇑P **P 07 04 00.7 +0.7**
baz=78

G18A Lazy EL Ranch, 78.35 333 ⇓P **P 07 04 00.3 +0.1**
baz=79,SNR=7.1
L12A House Creek Ra 78.37 327 ⇓P **P 07 04 00.8 +0.4**
baz=79
J14A Carey 78.54 329 ⇓P **P 07 04 02.3 +1.0**
baz=79
H16A Russell Place, 78.58 331 ⇑P **P 07 04 02.2 +0.7**
baz=79,SNR=6.3
I15A Monteview 78.59 330 ⇑P **P 07 04 02.6 +1.0**
baz=79
K12A Draper Farm, C 78.68 328 ⇑P **P 07 04 02.9 +0.8**
baz=79,SNR=5.4
L11A Cat Creek Ranc 78.75 327 ⇑P **P 07 04 03.0 +0.5**
baz=79
QLMT Earthquake Lak 78.77 331 *eP* **P 07 04 03.3 +0.7**
QLMT *epP* pP 07 04 20.0 +2.5
GCMT Greycliff 78.77 333 *eP* **P 07 04 01.9 -0.7**
comp=E,0.9nm,0.5s,mb4.0
GCMT *epP* pP 07 04 19.0 +1.6
WCN Washoe City 78.78 323 ⇑P **P 07 04 03.1 +0.3**
baz=79
G17A Pierce Place, 78.85 332 ⇑P **P 07 04 03.7 +0.7**
baz=79
PAHR Pah Rah Range 78.86 323 *eP* **P 07 04 03.9 +0.7**
comp=E,40nm,1.9s,mb5.0
F18A Big Timber 78.89 333 ⇓P **P 07 04 02.8 -0.4**
baz=79,SNR=10
DGMT Dagmar 78.90 337 ⇑P **P 07 04 03.3 +0.1**
baz=79
DGMT Dagmar 78.90 337 *eP* **P 07 04 02.9 -0.2**
comp=E,6.1nm,0.6s,mb4.7
DGMT *epP* pP 07 04 20.0 +1.9
DGMT *esP* sP 07 04 27.0 +3.1
J13A Cove Ranch, Pi 78.91 329 ⇓P **P 07 04 03.7 +0.3**
baz=79,SNR=6.2
I14A Mackay 78.98 329 ⇓P **P 07 04 04.2 +0.5**
baz=79,SNR=6.9
SCHQ Schefferville 79.04 2 P **P 07 04 02.5 -1.3**
comp=E,1.4nm,0.5s,mb4.1,baz=214,slow=5.5,SNR=7.5
SCHQ pP pP 07 04 20.0 +1.3
comp=E,1.3nm,0.5s,baz=294,slow=5.0,SNR=2.9
L10A Juniper Basin 79.04 327 ⇓P **P 07 04 04.2 +0.1**
baz=79,SNR=10
TORD Torodi Ar. Bea 79.12 70 P **P 07 04 05.2 0.0**
comp=E,19nm,0.5s,mb5.3,baz=257,slow=5.2,SNR=323
HLID Hailey 79.15 329 ⇓P **P 07 04 05.1 +0.4**
baz=79,SNR=13
HLID Hailey 79.15 329 *eP* **P 07 04 05.1 +0.4**
comp=E,6.9nm,0.9s,mb4.6
HLID *epP* pP 07 04 21.7 +2.1
J12A Stokes Ranch, 79.24 328 ⇓P **P 07 04 05.6 +0.4**
baz=80,SNR=6.4
G16A Moss Hill, Enn 79.24 331 ⇓P **P 07 04 05.1 -0.1**
baz=80
I13A Wildhorse Cree 79.28 329 ⇑P **P 07 04 05.8 +0.5**
baz=80,SNR=8.5
F17A Fitzpatrick Pl 79.28 332 ⇓P **P 07 04 05.7 +0.3**
baz=80,SNR=5.0
K11A Parker Ranch, 79.34 327 ⇓P **P 07 04 05.6 -0.1**
baz=80
MCMT McKenzie Canyo 79.39 330 *eP* **P 07 04 06.3 +0.3**
comp=E,3.6nm,1.2s,mb4.2
MCMT *epP* pP 07 04 23.2 +2.3
H14A Leadore 79.47 330 ⇓P **P 07 04 07.1 +0.7**
baz=80,SNR=6.2
BOZ Bozeman (W) 79.49 332 ⇑P **P 07 04 06.1 -0.5**
baz=80
BOZ Bozeman (W) 79.49 332 *eP* **P 07 04 05.4 -1.1**
comp=E,1.3nm,0.8s,mb3.9
BOZ *epP* pP 07 04 23.2 +1.8
G15A Dillon 79.50 331 ⇓P **P 07 04 06.5 0.0**
baz=80,SNR=5.8
E18A Harlowton 79.50 333 ⇓P **P 07 04 06.5 0.0**
baz=80
BEKR Beckwourth 79.50 323 ⇓P **P 07 04 06.8 +0.1**
baz=80
I12A Atlanta 79.66 328 ⇑P **P 07 04 07.9 +0.4**
baz=80
DLMT Dillon 79.69 331 *eP* **P 07 04 07.4 -0.2**
comp=E,43nm,2.3s,mb5.0
DLMT *epP* pP 07 04 24.4 +1.8
MFID Camas Ranch 79.71 328 ⇓P **P 07 04 08.3 +0.5**
baz=80
K10A MacKenzie Ranc 79.76 327 ⇓P **P 07 04 07.9 -0.1**
baz=80
E17A Martinsdale 79.81 333 ⇑P **P 07 04 08.1 -0.1**
baz=80,SNR=5.2
H13A Challis 79.83 329 ⇓P **P 07 04 09.0 +0.6**
baz=80,SNR=13
D18A Linhart Farms, 79.96 334 ⇑P **P 07 04 09.1 +0.1**
baz=80
TSUM Tsumeb 79.97 107 *eP* **P 07 04 10.6 +0.7**
comp=E,26nm,1.3s,mb5.0
LRM Limekiln Ridge 79.99 331 *eP* **P 07 04 09.5 +0.3**
LRM *epP* pP 07 04 25.8 +1.6
F15A Butte 80.02 331 ⇓P **P 07 04 09.3 -0.1**
baz=80
H12A Diamond D Ranc 80.10 329 ⇓P **P 07 04 10.0 +0.2**
baz=80
I11A Placerville 80.15 328 ⇓P **P 07 04 09.9 -0.2**
baz=80
E16A East Helena 80.21 332 ⇑P **P 07 04 10.4 0.0**
baz=80
G13A Cobalt 80.23 330 ⇑P **P 07 04 11.0 +0.5**
baz=80,SNR=15
D17A Six Diamond Ra 80.29 333 ⇑P **P 07 04 10.6 -0.2**
baz=81,SNR=9.3
E15A Deer Lodge 80.54 332 ⇑P **P 07 04 11.9 -0.2**
baz=81
D16A Dana Ranch, Ca 80.55 332 ⇑P **P 07 04 12.3 +0.2**
baz=81,SNR=7.4
C17A Wharram Farm, 80.70 333 ⇓P **P 07 04 12.4 -0.6**
baz=81,SNR=7.0
H11A Donnelly 80.76 329 ⇑P **P 07 04 13.3 -0.1**
baz=81
F13A Darby 80.80 330 ⇑P **P 07 04 13.3 -0.3**
baz=81,SNR=10.0
E14A Clinton 80.91 331 ⇑P **P 07 04 14.3 +0.2**
baz=81
B18A Beardsley Farm 80.91 334 ⇓P **P 07 04 13.6 -0.5**
baz=81,SNR=6.5
D15A Lincoln 80.97 332 ⇓P **P 07 04 14.6 +0.1**
baz=81
J08A Circle Bar Ran 80.98 326 ⇑P **P 07 04 14.5 -0.1**
baz=81
F12A Elk City 81.20 330 ⇓P **P 07 04 15.6 -0.1**
baz=81
E13A Victor 81.24 331 ⇑P **P 07 04 16.1 +0.2**
baz=82
C16A Fuhringer Ranc 81.24 333 ⇓P **P 07 04 15.1 -0.7**
baz=82
B17A L&G Farms, Che 81.24 334 ⇑P **P 07 04 15.0 -0.8**
baz=82
A18A Metzger Ranch, 81.36 335 ⇑P **P 07 04 15.6 -0.9**
baz=82
G11A Walters Elk Ra 81.40 329 ⇓P **P 07 04 16.8 0.0**
baz=82,SNR=6.1
D14A Greenough 81.43 331 ⇑P **P 07 04 16.8 0.0**
baz=82
SLMT Seeley Lake 81.54 332 *eP* **P 07 04 17.5 +0.1**
SLMT *epP* pP 07 04 34.6 +2.2
C15A Salmond Ranch, 81.58 332 ⇓P **P 07 04 17.5 -0.1**
baz=82,SNR=12
MAW Mawson 81.71 163 P **P 07 04 18.2 0.0**
comp=E,4.3nm,0.6s,mb4.6,baz=216,slow=7.9,SNR=16
MAW pP pP 07 04 34.5 +1.3
comp=E,2.5nm,0.7s,baz=80,slow=4.1,SNR=3.8
MAW sP sP 07 04 42.0 +3.0
comp=E,7.6nm,0.8s,baz=215,slow=7.0,SNR=7.1
F11A Grangeville 81.71 329 ⇓P **P 07 04 17.6 -0.8**
baz=82,SNR=5.2
A17A Triple J Farms 81.72 334 ⇑P **P 07 04 17.7 -0.7**
baz=82,SNR=8.7
K05A Summer Lake 81.79 325 ⇓P **P 07 04 18.7 -0.1**
baz=82
E12A Beaver Dam Sad 81.84 330 ⇓P **P 07 04 19.0 -0.1**
baz=82
D13A Huson 81.85 331 ⇑P **P 07 04 19.2 +0.1**
baz=82,SNR=5.3
H08A Prairie City 81.92 327 ⇓P **P 07 04 19.2 -0.3**
baz=82
SWMT Swartz Lake 81.97 331 *eP* **P 07 04 20.3 +0.6**
SWMT *epP* pP 07 04 36.3 +1.6
B15A Bradely Ranch, 81.98 333 ⇓P **P 07 04 18.6 -1.1**
baz=82,SNR=9.5
I07A Izee 82.02 326 ⇓P **P 07 04 19.7 -0.3**
baz=82
G09A Cove 82.03 328 ⇓P **P 07 04 20.0 -0.1**

baz=82,SNR=10
C14A Swan Lake 82.06 332 ⇓P P 07 04 20.0 -0.1
baz=82
A16A West Butte Ran 82.08 334 ⇓P P 07 04 20.1 -0.2
baz=82,SNR=20
E11A Bogner Ranch, 82.09 330 ⇑P P 07 04 19.4 -1.0
baz=82
D12A Red Ives Fores 82.22 330 ⇓P P 07 04 21.2 +0.2
baz=82
YBMT Yellow Bay 82.25 332 *e*P **P 07 04 20.7 -0.5**
YBMT *e*pP pP 07 04 37.8 +1.7
JTMT Jette 82.28 331 *e*P **P 07 04 21.4 +0.1**
JTMT *e*pP pP 07 04 37.9 +1.6
F10A Beach Ranch, E 82.28 329 ⇓P P 07 04 21.2 -0.1
baz=82
C13A Hot Springs 82.35 331 ⇑P P 07 04 21.5 -0.2
baz=83
A15A Johnson Ranch, 82.57 333 ⇑P P 07 04 21.9 -0.9
baz=83
BSMT Bassoo Peak 82.58 331 *e*P **P 07 04 23.0 +0.2**
BSMT *e*pP pP 07 04 40.0 +2.2
E10A Myers Farm, Un 82.60 329 ⇑P P 07 04 22.9 -0.1
baz=83
G08A Pilot Rock 82.62 327 ⇓P P 07 04 23.0 -0.2
baz=83
D11A Klaveano Farm, 82.66 330 ⇓P P 07 04 22.7 -0.6
baz=83
BOSA Boshof 82.76 118 P **P 07 04 24.8 +0.2**
comp=E,7.8nm,0.5s,mb5.0,baz=265,slow=3.2,SNR=29
BOSA Boshof 82.76 118 *e*P **P 07 04 24.3 -0.2**
comp=E,8.6nm,0.6s,mb5.0
B13A Whitefish 82.83 332 ⇑P P 07 04 24.0 -0.2
baz=83
A14A Double T Ranch 82.85 333 ⇑P P 07 04 23.6 -0.6
baz=83
H06A Lindquist Farm 82.91 326 ⇓P P 07 04 24.9 +0.3
baz=83
WALA Waterton Lakes 83.12 333 *e*P **P 07 04 25.1 -0.6**
comp=E,0.2nm,0.7s,mb3.3
WALA *e*pP pP 07 04 41.8 +1.1
A13A Flathead Natio 83.24 332 ⇑P P 07 04 26.6 +0.3
baz=84
FFC Flin Flon 83.60 342 *e*P **P 07 04 26.7 -1.2**
comp=E,3.8nm,1.0s,mb4.5
FFC *e*pP pP 07 04 43.6 +0.6
OD2 Odessa Site #2 84.01 329 *e*P **P 07 04 29.0 -1.3**
comp=E,6.1nm,1.2s,mb4.6
OD2 *e*pP pP 07 04 46.6 +1.3
A11A Hall Mountain, 84.10 331 ⇑P P 07 04 30.5 -0.2
baz=84,SNR=5.1
C09A Chrisman Ranch 84.11 330 ⇑P P 07 04 30.6 -0.2
baz=84
LBTB Lobatse 84.50 115 *e*P **P 07 04 33.3 -0.2**
comp=E,7.4nm,0.4s,mb5.2
A09A Danville 85.10 330 ⇑P P 07 04 35.1 -0.7
baz=85
FCC Fort Churchill 85.36 348 *e*P **P 07 04 35.6 -1.2**
comp=E,0.1nm,0.6s
FCC *e*pP pP 07 04 53.0 +1.2
A08A Turner Farm, O 85.40 330 ⇑P P 07 04 36.3 -0.9
baz=86,SNR=5.3
A07A Ashnola River, 85.98 329 ⇑P P 07 04 39.8 -0.3
baz=86,SNR=5.2
EDM Edmonton 86.12 335 *e*P **P 07 04 38.5 -2.2**
EDM *e*pP pP 07 04 56.0 +0.2
ESDC Sonseca Array 88.52 45 P **P 07 04 52.1 -0.5**
comp=E,0.3nm,0.3s,mb4.1,baz=242,slow=2.8,SNR=3.8
YKA Yellowknife Ar 93.73 341 P **P 07 05 14.6 -1.6**
comp=E,2.2nm,0.7s,mb4.7,baz=140,slow=4.4,SNR=48
YKA pP pP 07 05 32.2 +0.8
comp=E,2.0nm,0.7s,baz=138,slow=4.4,SNR=12
YKA sP sP 07 05 39.4 +2.2
comp=E,2.1nm,0.7s,baz=139,slow=4.4,SNR=8.0
YKA Yellowknife Ar 93.73 341 P **P 07 05 14.7 -1.6**
YKA pP pP 07 05 32.2 +0.8
YKA sP sP 07 05 39.4 +2.2
ASAR Alice Springs 126.90 207 PKP PKPdf 07 11 03.0 -1.4
comp=E,1.9nm,0.7s,baz=136,slow=1.9,SNR=20
ASAR pPKP pPKPdf 07 11 21.7 +1.6
comp=E,1.1nm,0.4s,baz=125,slow=1.7,SNR=7.6
WRA Warramunga Arr 129.97 210 PKP PKPdf 07 11 09.4 -0.9
comp=E,1.2nm,0.4s,baz=164,slow=1.5,SNR=12
WRA pPKP pPKPdf 07 11 28.2 +2.2
comp=E,1.2nm,0.4s,baz=146,slow=1.9,SNR=7.5
FITZ Fitzroy Crossi 135.07 201 PKP PKPdf 07 11 20.2 +0.3
comp=E,2.5nm,0.9s,baz=239,slow=4.6,SNR=3.5
KURK Kurchatov 144.25 35 *e*PKPdf PKPdf 07 11 33.6 -1.9
EKS2 Erkin-Say 144.99 50 P PKPdf 07 11 37.4 +0.3
SNR=10.0
EKS2 Erkin-Say 144.99 50 *e*PKPdf PKPdf 07 11 37.0 -0.1
ZALV Zalesovo Beam 144.99 26 PKPbc PKPdf 07 11 36.0 -0.8
comp=E,26nm,0.5s,baz=317,slow=4.3,SNR=137
AML Almayashu 145.10 51 P PKPbc 07 11 38.0 +1.1
SNR=26
AML Almayashu 145.10 51 *e*PKPdf PKPdf 07 11 37.7 +0.4
USP Ospenovka 145.28 48 P PKPbc 07 11 38.1 +0.7
SNR=7.6
AAK Ala-Archa 145.50 50 P PKPbc 07 11 39.4 +1.3
SNR=18
AAK Ala-Archa 145.50 50 *e*PKPdf PKPbc 07 11 39.3 +1.2
CHMS Chumysh 145.54 49 P PKPdf 07 11 38.8 +0.8
SNR=5.7
UCH Uchtor 145.65 50 P PKPbc 07 11 40.1 +1.5
SNR=21
UCH Uchtor 145.65 50 *e*PKPdf PKPbc 07 11 39.8 +1.2
KBK Karagaybulak 145.80 49 P PKPbc 07 11 40.1 +1.0
SNR=8.5
TKM2 Tokmak 2 146.15 49 P PKPdf 07 11 40.0 +0.9
SNR=11
TKM2 Tokmak 2 146.15 49 *e*PKPbc PKPbc 07 11 39.7 -0.5
KZA Kyzart 146.21 50 P PKPbc 07 11 41.7 +1.4
SNR=7.8
MK31 Makanchi Array 148.50 38 *e*PKPbc PKPbc 07 11 46.1 -0.3
MKAR Makanchi Array 148.50 38 PKPbc PKPbc 07 11 46.1 -0.4
comp=E,7.7nm,0.7s,baz=298,slow=2.6,SNR=33
MKAR pPKPbc pPKPbc 07 12 04.2 +2.1
comp=E,2.6nm,0.6s,baz=286,slow=3.5,SNR=4.9
DDI Dehra Dun 150.93 71 *ex* PKPbc 07 11 52.5 -0.5
MJAR Matsushiro Arr 153.16 303 PKPbc PKPbc 07 11 56.9 -0.9
comp=E,0.4nm,0.5s,baz=94,slow=3.3,SNR=4.5
MJAR pPKPbc pPKPbc 07 12 16.1 +2.6
comp=E,1.2nm,0.7s,baz=103,slow=1.2,SNR=3.0
MAJO Matsushiro 153.16 303 *e*PKPbc PKPbc 07 11 57.0 -0.9
WMQ Urumqi 153.33 38 *e*PKPbc PKPdf 07 11 48.9 -1.5
SONM Songino Array 156.51 6 PKPab PKPab 07 12 23.1 -0.3
comp=E,1.4nm,0.9s,baz=333,slow=5.6,SNR=4.3
HHC Hu-ho-hao-te 163.65 356 *e*PKP PKPdf 07 12 00.0 -2.8
HHC PKS 07 15 32.6
HHC SKS SKSdf 07 19 00.8 -2.2
HHC AMB AMB
comp=Z,67nm,5.1s
HHC LR LR
comp=N,90nm,23.3s
HHC LR LR
comp=E,110nm,23.1s
HHC LR LR
comp=Z,100nm,23.9s
LZH Lanzhou 167.21 24 *e*PKP PKPdf 07 12 04.5 -1.4
LZH pPKP pPKPdf 07 12 16.3 -5.4
NJ2 Nanjing 169.29 317 *e*PKP PKPdf 07 12 09.2 +1.7
CD2 Chengdu 171.42 40 PKP PKPdf 07 12 05.5 -3.2
GYA Guiyang 176.24 58 *e*PKP PKPdf 07 12 07.6 -2.9
GYA pPKP pPKPdf 07 12 24.8 -1.5
GYA sPKP 07 12 32.1
GYA PKPab PKPab 07 13 50.7 -0.4
GYA PKS 07 15 39.8
GYA PP PP 07 17 44.7 +0.7
GYA AMB AMB
comp=Z,90nm,7.9s

MAN 06 06:53:43.17±34N×122°58E, h54km, mb4.2, ML3.0, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.31**	**208**	*e*P	Pn	06 53 55.0	+2.4
PALP				*e*S	Sn	06 54 05.3	+5.9
CAUP	**Cauayan**	**0.82**	**242**	*e*P	Pn	06 54 02.7	+4.2
CAUP				*e*S	Sn	06 54 13.1	+3.4
APYP	**Conner**	**1.37**	**293**	*e*P	Pn	06 54 07.2	+1.3

*ISK **06** 06:55:15.7, 39°26N×30°46E, h10km, MD2.7*
*ISCJB **06** 06:55:16.3±0.7, 39°34N±0°05×30°42E±0°04, h2km±8km,*
Error ellipse: s-maj=9.4km s-min=5.0km az=165.8
*CSEM **06** 06:55:16.4±0.2, 39°29N×30°44E, h10km, MD2.7, Error ellipse: s-maj=8.4km s-min=4.5km az=157.0*
*DDA **06** 06:55:16.1, 39°26N×30°50E, h7km±2km, Md2.8*
ISC 06 06:55:16.8±0.7, 39°34N±0°06×30°42E±0°04, h6km±7km, n20, σ1°01/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.38**	**220**	*e*PG	**Pg**	**06 55 22.7**	**-1.3**
ALT	**Altintas**	**0.38**	**220**	*e*Pg	**Pg**	**06 55 22.7**	**-1.4**
ESKT	**Eskisehir**	**0.38**	**62**	*e*PG	**Pg**	**06 55 24.0**	**-0.2**
ESKT				*e*SG	**Sg**	**06 55 30.1**	**+1.1**
ESKT	**Eskisehir**	**0.38**	**62**	*i* P	**Pg**	**06 55 23.8**	**-0.3**
ESKT				*i* S	**Sg**	**06 55 29.8**	**+0.8**
ESKT	**Eskisehir**	**0.38**	**62**	*e*Pg	**Pg**	**06 55 24.0**	**-0.1**
ESKT				*e*Sg	**Sg**	**06 55 30.1**	**+1.0**
SEYT	**Eskypehyr**	**0.38**	**62**	*i* P	**Pg**	**06 55 23.8**	**-0.3**
SEYT				*i* S	**Sg**	**06 55 29.8**	**+0.7**
GDZ	**Gediz**	**0.77**	**251**	*e*P	**Pg**	**06 55 31.4**	**-0.3**
GDZ				*i* S	**Sg**	**06 55 43.6**	**+1.9**
GDZ	**Gediz**	**0.77**	**251**	*e*P	**Pg**	**06 55 31.4**	**-0.3**
GDZ				*i* S	**Sg**	**06 55 43.6**	**+1.9**
SVRH	**Sivrihisar-ESK**	**0.86**	**83**	*e*PG	**Pg**	**06 55 32.5**	**-0.9**
SVRH				*e*SG	**Sg**	**06 55 45.1**	**+0.6**
SVRH	**Sivrihisar-ESK**	**0.86**	**83**	*e*Pg	**Pg**	**06 55 32.5**	**-0.8**
SVRH				*e*Sg	**Sg**	**06 55 45.1**	**+0.6**
GULT	**Gulveren**	**1.09**	**4**	*e*PN	**Pn**	**06 55 38.5**	**-0.2**
GULT	**Gulveren**	**1.09**	**4**	*e*Pn	**Pn**	**06 55 38.5**	**-0.2**
KIZT	**Kizilcal**	**1.23**	**112**	*e*PN	**Pn**	**06 55 38.4**	**-2.1**
KIZT	**Kizilcal**	**1.23**	**112**	*e*Pn	**Pn**	**06 55 38.4**	**-2.1**
MDU	**Mudurnu**	**1.28**	**28**	*e*PN	**Pn**	**06 55 40.9**	**-0.4**
MDU	**Mudurnu**	**1.28**	**28**	*e*Pn	**Pn**	**06 55 40.9**	**-0.3**
YLV	**Yalova**	**1.47**	**327**	*e*PN	**Pn**	**06 55 44.0**	**+0.2**
YLV	**Yalova**	**1.47**	**327**	*e*Pn	**Pn**	**06 55 44.0**	**+0.2**
KDHN	**Kadinhani**	**1.56**	**121**	*i* P	**Pn**	**06 55 45.4**	**+0.3**
KDHN				*i* S	**Sn**	**06 56 06.9**	**+1.4**
KDHN	**Kadinhani**	**1.56**	**121**	*i* P	**Pn**	**06 55 45.4**	**+0.3**

*ISCJB **06** 06:58:14.9±1.8, 1°09N±0°09×96°99E±0°10, h33km±14km, mb4.2/17, MS3.5/2, Error ellipse: s-maj=19.8km s-min=9.4km az=137.8*
*BJI **06** 06:58:15.4, 1°10N×97°20E, h25km, mB4.6/2, mb4.4/8*
*NEIC **06** 06:58:17.4±0.6, 1°10N×97°18E, h35km, mb4.3/4, Error ellipse: s-maj=13.8km s-min=10.6km az=48.0*
*IDC **06** 06:58:17.5±1.1, 1°37N×97°49E, h23km±4km, mb3.9/9, mb1 4.0/10, mb1mx3.8/22, mbtmp3.9/10, ML4.4/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/34, Error ellipse: s-maj=39.6km s-min=14.0km az=57.0*
*DJA **06** 06:58:18, 1°53N×97°25E, h38km, MLv4.1/3*
ISC 06 06:58:17.9±1.7, 1°15N±0°09×97°10E±0°08, h35km±9km, h25km±1.8km: pP-P, n29, σ1°06/30, mb4.1/17, MS3.5/2, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.50**	**72**	P	**Pb**	**06 58 27.6**	**-0.9**
GSI				S	**Sb**	**06 58 37.3**	**+1.4**
PSI	**Prapat**	**2.45**	**48**	Pn	**Pn**	**06 58 54.8**	**-0.6**
4.5nm,0.3s,baz=254,slow=6.9,SNR=31							
PSI				LR	LR	06 59 45.8	
comp=Z,341nm,20.0s,baz=289,slow=45							
MNSI	**Mandailing Nat**	**2.50**	**98**	P	**Pn**	**06 58 56.1**	**0.0**
MNSI				S	**Sn**	**06 59 25.7**	**+0.3**
PPI	**Padang Panjang**	**3.66**	**116**	P	**Pn**	**06 59 12.6**	**+0.5**
BSI	**Banda Aceh**	**4.68**	**337**	P	**Pn**	**06 59 23.4**	**-2.7**
BSI				S	**Sn**	**07 00 14.2**	**-5.0**
KULM	**Kulim**	**5.43**	**41**	*e*Pn	**Pn**	**06 59 35.2**	**-1.1**
48nm,0.9s							
CMAR	**Chiang Mai Arr**	**17.30**	**6**	P	**Pn**	**07 02 15.4**	**-1.3**
0.5nm,0.3s,baz=199,slow=12,SNR=8.6							
KMI	**Kunming**	**24.45**	**12**	P	**P**	**07 03 35.2**	**+1.7**
KMI				pmax	pmax		
comp=Z,16nm,1.1s,mb4.4							
SHL	**Shillong**	**24.79**	**349**	*e*P	**P**	**07 03 37.0**	**+0.3**
GYA	**Guiyang**	**26.79**	**19**	P	**P**	**07 03 56.8**	**+2.0**
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.4							
XAN	**Xi'an**	**34.54**	**17**	P	**P**	**07 05 02.1**	**-1.0**
XAN				pP	pP	07 05 08.7	-4.5
XAN				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.9							
XAN				pmax	pmax		
comp=Z,11nm,4.0s							
GTA	**Gaotai**	**38.16**	**3**	*e*P	**P**	**07 05 34.3**	**+0.4**
GTA				pP	pP	07 05 39.1	-5.0
GTA				sP	sP	07 05 42.2	-6.1
GTA				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.3							
WRA	**Warramunga Arr**	**42.09**	**122**	P	**P**	**07 06 05.8**	**-1.1**
comp=Z,1.1nm,0.6s,mb3.6,baz=301,slow=9.1,SNR=5.2							
WRA				pP	pP	07 06 13.4	-3.6
comp=Z,1.3nm,0.7s,baz=301,slow=9.0,SNR=5.1							
ASAR	**Alice Springs**	**43.44**	**127**	P	**P**	**07 06 16.6**	**-1.1**
comp=Z,0.9nm,0.8s,mb3.5,baz=302,slow=7.8,SNR=7.6							
ASAR				pP	pP	07 06 25.6	-2.4
comp=Z,1.1nm,0.8s,baz=303,slow=7.8,SNR=6.7							
UCH	**Uchtor**	**45.66**	**336**	*e*P	**P**	**07 06 36.2**	**+1.1**
comp=Z,2.3nm,0.8s,mb4.2							
AML	**Almayashu**	**45.91**	**336**	*e*P	**P**	**07 06 38.2**	**+1.1**
comp=Z,3.9nm,0.9s,mb4.3							
KSRS	**Korea Array**	**45.95**	**35**	P	**P**	**07 06 34.8**	**-2.8**
comp=Z,4.9nm,0.9s,mb4.4,baz=224,slow=8.7,SNR=9.4							
KSRS				pP	pP	07 06 43.5	-4.3
comp=Z,2.7nm,0.8s,baz=220,slow=10,SNR=4.5							
KSRS				LR	LR	07 26 21.3	
comp=Z,35nm,18.8s,MS3.3,baz=332,slow=37							
EKS2	**Erkin-Say**	**46.32**	**336**	*e*P	**P**	**07 06 41.3**	**+1.0**
comp=Z,1.9nm,0.5s,mb4.3							
SONM	**Songino Array**	**47.20**	**9**	P	**P**	**07 06 47.3**	**+0.1**
comp=Z,1.2nm,0.5s,mb4.1,baz=193,slow=8.9,SNR=7.5							
SONM				PcP	PcP	07 08 19.2	+1.0
comp=Z,0.8nm,0.7s,baz=167,slow=7.0,SNR=2.6							
MK31	**Makanchi Array**	**47.27**	**346**	*e*P	**P**	**07 06 48.2**	**+0.6**
MKAR	**Makanchi Array**	**47.27**	**346**	P	**P**	**07 06 48.2**	**+0.5**
comp=Z,1.7nm,0.5s,mb4.2,baz=161,slow=7.7,SNR=13							
MKAR	**Makanchi Array**	**47.27**	**346**	P	**P**	**07 06 48.2**	**+0.5**
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**07 07 34.7**	**+0.4**
comp=Z,1.0nm,0.6s,mb3.9,baz=331,slow=10,SNR=3.0							
ZALV	**Zalesovo Beam**	**53.59**	**351**	P	**P**	**07 07 35.4**	**0.0**
comp=Z,4.1nm,0.7s,mb4.5,baz=177,slow=6.2,SNR=25							
ZALV				pP	pP	07 07 42.1	-3.8
comp=Z,1.2nm,0.3s,baz=179,slow=5.9,SNR=4.8							
BVAR	**Borovoye Array**	**56.27**	**341**	P	**P**	**07 07 54.3**	**-0.5**
comp=Z,1.8nm,0.7s,mb4.2,baz=134,slow=8.5,SNR=11							
BVAR				pP	pP	07 08 01.3	-4.0
comp=Z,1.1nm,0.6s,baz=132,slow=11,SNR=4.4							
ABKAR	**Akbulak array**	**57.51**	**332**	*e*P	**P**	**07 08 03.4**	**-0.3**
comp=Z,3.0nm,0.8s,mb4.4							
BRTR	**Keskin Array B**	**69.07**	**312**	P	**P**	**07 09 24.7**	**+4.2**
comp=Z,0.6nm,0.7s,mb3.6,baz=126,slow=6.3,SNR=4.0							
GERES	**GERESS Array B**	**84.79**	**319**	LR	LR	07 48 33.9	
comp=Z,31nm,21.0s,MS3.7,baz=272,slow=36							
TXAR	**Lajitas Array**	**143.76**	**32**	PKP	PKPdf	07 17 48.6	-1.5
comp=Z,0.3nm,0.8s,baz=302,slow=4.1,SNR=3.1							

IDC 06 07:06:55.5±2.0, 5°43N×127°58E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/20, mbtmp3.9/4, MS3.8/2, Ms1 3.7/2, ms1mx3.0/33, Error ellipse: s-maj=118.6km s-min=25.0km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.45**	**185**	P	P	07 12 06.2	-0.7
1.5nm,0.8s,baz=90,slow=8.1,SNR=3.7							
WRA	**Warramunga Arr**	**26.07**	**165**	P	P	07 12 32.4	+1.5
1.2nm,0.4s,baz=347,slow=10,SNR=5.0							
STKA	**Stephens Creek**	**39.43**	**161**	P	P	07 14 26.3	-1.0
2.5nm,1.0s,baz=337,slow=10.0,SNR=3.9							
STKA				LR	LR	07 32 03.5	
comp=Z,79nm,20.3s,baz=16,slow=38							
MKAR	**Makanchi Array**	**56.67**	**324**	P	P	07 16 40.7	0.0
1.2nm,0.4s,baz=117,slow=7.5,SNR=7.1							
AFI	**Afiamalu**	**63.16**	**108**	LR	LR	07 41 41.2	
comp=Z,103nm,18.6s,baz=92,slow=33							

*NEIC **06** 07:16:00.9, 17°05N×98°89W, h16km, MD3.7(MEX), After MEX.*
MEX 06 07:16:00.9±0.7, 17°05N×98°89W, h16km±7km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.98**	**132**	*i* P	Pb	07 16 16.4	-3.2
PNIG				*i* S	Sb	07 16 27.8	-4.5
PNIG	**Pinotepa**	**0.98**	**132**	*i* P	Pb	07 16 16.4	-3.2
PNIG				*i* S	Sb	07 16 27.8	-4.5
ACX	**Acapulco**	**1.00**	**260**	*i* P	Pb	07 16 16.9	-2.9
ACX				*i* S	Sb	07 16 28.2	-4.4
ACX	**Acapulco**	**1.00**	**260**	*i* P	Pb	07 16 16.9	-2.9
ACX				*i* S	Sb	07 16 28.2	-4.4
UTMO	**Huajuapan**	**1.30**	**53**	*i* P	Pn	07 16 20.6	-3.7
UTMO				*i* S	Sb	07 16 36.4	-4.9
CAIG	**El Cayaco**	**1.31**	**270**	*i* P	Pn	07 16 20.3	-4.2
CAIG				*i* S	Sn	07 16 35.7	-6.1
CAIG	**El Cayaco**	**1.31**	**270**	*i* P	Pn	07 16 20.3	-4.2
CAIG				*i* S	Sn	07 16 35.7	-6.1
TPIG	**Tehuac#an**	**2.00**	**47**	*e*P	Pn	07 16 31.1	-2.9
TPIG				*i* S	Sn	07 16 54.1	-4.6
PPM	**Popocatepetl**	**2.02**	**7**	*i* P	Pn	07 16 32.0	-2.3
PPM				*i* S	Sn	07 16 54.8	-4.5
PPM	**Popocatepetl**	**2.02**	**7**	*i* P	Pn	07 16 32.0	-2.3
PPM				*i* S	Sn	07 16 54.8	-4.5
VHO	**Vista Hermosa**	**2.07**	**89**	*e*P	Pn	07 16 30.5	-4.4
VHO				*i* S	Sn	07 16 56.6	-3.8
VHO	**Vista Hermosa**	**2.07**	**89**	*e*P	Pn	07 16 30.5	-4.4
VHO				*i* S	Sn	07 16 56.6	-3.8
MZVM		**2.15**	**352**	*e*P	Pn	07 16 32.6	-3.5
MZVM				*i* S	Sn	07 16 58.1	-4.4
ZIIG	**Zihuatanejo**	**2.52**	**283**	*e*P	Pn	07 16 38.8	-2.3
ZIIG				*i* S	Sn	07 17 07.4	-4.1
ZIIG	**Zihuatanejo**	**2.52**	**283**	*e*P	Pn	07 16 38.8	-2.3
ZIIG				*i* S	Sn	07 17 07.4	-4.1
IIO	**Organos**	**2.53**	**4**	*e*P	Pn	07 16 39.3	-2.1
IIO				*i* S	Sn	07 17 09.0	-2.8
IIO	**Organos**	**2.53**	**4**	*e*P	Pn	07 16 39.3	-2.1
IIO				*i* S	Sn	07 17 09.0	-2.8

*IDC **06** 07:21:12.4±6.7, 1°71S×101°13E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, Error ellipse: s-maj=356.3km s-min=20.5km az=53.0*
*DJA **06** 07:21:16, 2°08S×100°59E, h9km, MLv3.7/6*
*ISCJB **06** 07:21:17.0±0.5, 2°10S±0°04×100°53E±0°05, h67km±7km, mb3.7/5, Error ellipse: s-maj=9.1km s-min=6.6km az=171.4*
ISC 06 07:21:18.1±0.5, 2°10S±0°04×100°54E±0°05, h58km±7km, n13, σ1°26/20, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.84**	**219**	P	**Pn**	**07 21 32.3**	**-1.7**
PPSI				S	**Sn**	**07 21 45.6**	**-0.2**
PDSI	**Padang**	**1.19**	**356**	P	**Pn**	**07 21 35.6**	**-2.9**
PDSI				S	**Sn**	**07 21 51.9**	**-1.8**
SDSI	**Sungai Dareh**	**1.46**	**37**	P	**Pn**	**07 21 40.4**	**-1.8**
SDSI				S	**Sn**	**07 22 01.4**	**+1.0**
PPI	**Padang Panjang**	**1.64**	**355**	P	**Pn**	**07 21 43.5**	**-1.2**
PPI				S	**Sn**	**07 22 05.3**	**+0.6**
SISI	**Saibi**	**1.64**	**298**	P	**Pn**	**07 21 45.4**	**+0.7**
SISI				S	**Sn**	**07 22 07.3**	**+2.5**
BKNI	**Bangkinang**	**2.46**	**12**	P	**Pn**	**07 21 57.8**	**+1.9**
BKNI				S	**Sn**	**07 22 31.5**	**+6.7**
KSI	**Kapahiang**	**2.56**	**127**	P	**Pn**	**07 21 58.1**	**+0.9**
KSI				S	**Sn**	**07 22 28.6**	**+1.4**
MNSI	**Mandailing Nat**	**3.04**	**342**	P	**Pn**	**07 22 04.1**	**+0.4**
WRA	**Warramunga Arr**	**37.47**	**121**	P	**P**	**07 28 25.5**	**-0.9**
0.2nm,0.3s,mb3.4,baz=303,slow=9.2,SNR=2.4							
ASAR	**Alice Springs**	**38.76**	**126**	P	**P**	**07 28 36.6**	**-0.6**
0.6nm,0.6s,mb3.5,baz=302,slow=7.8,SNR=11							
MKAR	**Makanchi Array**	**51.27**	**344**	P	**P**	**07 30 16.9**	**+0.8**
0.6nm,0.6s,mb3.7,baz=140,slow=7.8,SNR=7.5							
KURK	**Kurchatov**	**55.86**	**343**	P	**P**	**07 30 49.2**	**-0.4**
0.4nm,0.6s,mb3.6,baz=166,slow=7.0,SNR=3.6							
ZALV	**Zalesovo Beam**	**57.37**	**349**	P	**P**	**07 31 00.5**	**+0.2**
0.8nm,0.6s,mb4.0,baz=168,slow=7.4,SNR=4.4							

*IDC **06** 07:24:41.8±1.3, 22°63N×107°26W, h0km, mb3.4/6, mb1 3.8/9, mb1mx3.7/25, mbtmp3.5/9, ML3.6/3, MS3.5/7, Ms1 3.5/7, ms1mx3.2/29, Error ellipse: s-maj=34.5km s-min=16.3km az=78.0*
*ISCJB **06** 07:24:42.4±0.8, 22°53N±0°09×107°2W±0°1, h10km, mb3.7/14, MS3.5/4, Error ellipse: s-maj=20.1km s-min=8.7km az=149.7*
*NEIC **06** 07:24:44.1±1.2, 22°50N×107°33W, h10km, mb3.8/13, Error ellipse: s-maj=24.2km s-min=10.5km az=50.0*
ISC 06 07:24:44.1±0.8, 22°49N±0°09×107°2W±0°1, h10km, n40, σ1°09/33, mb3.7/14, MS3.5/4, Off coast of central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**7.53**	**25**	Pn	**Pn**	**07 26 33.9**	**-0.1**
0.7nm,0.3s,baz=205,slow=14,SNR=25							
TXAR				Lg		07 28 34.9	
0.4nm,0.3s,baz=226,slow=16,SNR=2.9							
MNTX	**Cornudas Mount**	**9.32**	**10**	*e*Pn	**Pn**	**07 26 58.1**	**-0.4**
0.4nm,0.5s							
TUC	**Tucson**	**10.27**	**343**	*e*Pn	**Pn**	**07 27 10.5**	**-1.1**
ANMO	**Albuquerque**	**12.43**	**3**	Pn	**Pn**	**07 27 42.2**	**+1.1**
0.1nm,0.3s,baz=180,slow=15,SNR=6.3							
ANMO				Lg		07 31 14.1	
0.1nm,0.3s,baz=97,slow=18,SNR=3.7							
ANMO				LR	LR	07 32 11.5	
comp=Z,107nm,19.6s,baz=28,slow=37							
ANMO	**Albuquerque**	**12.43**	**3**	*e*Pn	**Pn**	**07 27 43.4**	**+2.3**
3.5nm,1.3s							
CMIG	**Matias Romero**	**12.81**	**113**	Pn	**Pn**	**07 27 50.0**	**+3.7**
0.2nm,0.3s,baz=286,slow=13,SNR=6.2							
CMIG				LR	LR	07 32 53.9	
comp=Z,138nm,20.1s,baz=98,slow=38							
WUAZ	**Wupatki**	**13.47**	**345**	*e*Pn	**Pn**	**07 27 56.8**	**+1.5**
10nm,1.5s							
MVCO	**Mesa Verde**	**14.71**	**356**	*e*Pn	**Pn**	**07 28 12.5**	**+0.3**
SHPR	**Sheep Range**	**15.56**	**336**	*e*Pn	**Pn**	**07 28 24.4**	**+0.8**
CCUT	**Cedar City**	**15.91**	**342**	*e*Pn	**Pn**	**07 28 30.1**	**+2.0**
11nm,1.6s							
ARUT	**Antelope Range**	**16.15**	**342**	*e*P	**Pn**	**07 28 34.3**	**+3.1**
15nm,1.4s							
APG	**El Apazote**	**17.54**	**112**	LR	LR	07 35 56.0	
comp=Z,261nm,18.1s,baz=54,slow=38							
DAU	**Daniels Canyon**	**18.19**	**350**	*e*Pn	**Pn**	**07 28 57.7**	**+1.0**
NVAR	**Mina Array Bea**	**18.50**	**332**	P	**Pn**	**07 29 00.1**	**-0.4**
0.1nm,0.3s,baz=152,slow=12,SNR=11							
HWUT	**Hardware Ranch**	**19.40**	**350**	*e*Pn	**Pn**	**07 29 11.7**	**+0.3**

RPN Rapa Nui 49.37 182 LR LR 07 47 33.0
comp=Z,118nm,20.5s,MS3.9,baz=252,slow=28
RKT Rikitea 52.76 213 eT 08 30 22.1
1.9nm,0.2s
LPAZ La Paz 54.33 132 P P 07 34 12.2 +1.1
0.6nm,0.8s,mb3.6,baz=304,slow=3.6,SNR=2.4
PPT Papeete 57.45 230 eLR LR 07 51 11.1
92nm,26.2s
SIV San Ignacio 59.21 126 P P 07 34 44.7 -1.1
0.7nm,0.9s,mb3.7,baz=264,slow=13,SNR=3.4
CFAA Coronel Fontan 65.49 144 P P 07 35 28.1 +0.5
0.4nm,1.0s,mb3.4,baz=279,slow=4.8,SNR=5.9
BORG Borgarnes 68.17 27 LR LR 08 05 33.0
comp=Z,102nm,18.5s,MS4.1,baz=168,slow=36

*IDC **06** 07:26:21.6±2.5, 9.53S×123.43E, h0km, mb3.7/1, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/23, Error ellipse: s-maj=363.4km s-min=32.4km az=54.0*
*ISCJB **06** 07:26:31.3±3.7, 10.3S±0.2×123.2E±0.1, h122km±47km, Error ellipse: s-maj=32.4km s-min=20.5km az=176.7*
ISC 06 07:26:31.8±3.0, 10.2S±0.2×123.2E±0.1, h104km±38km, n6, σ1§14/9, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	Kununurra	7.78	136	eP	Pn	07 28 20.8	-1.5
KNA				eS	Sn	07 29 49.4	+0.5
	10nm,0.2s						
FITZ	Fitzroy Crossi	8.23	163	eP	Pn	07 28 29.6	+1.2
FITZ				eS	Sn	07 29 55.2	-4.6
	7.9nm,0.4s						
KAKA	Kakadu	9.45	106	eP	Pn	07 28 45.3	+0.3
KAKA				eS	Sn	07 30 29.8	+0.4
	4.6nm,0.5s						
WRA	Warramunga Arr	14.51	133	Pn	Pn	07 29 50.6	-1.6
	0.2nm,0.3s,baz=303,slow=14,SNR=3.9						
WRA				Sn	Sx	07 32 27.7	
	0.4nm,0.3s,baz=305,slow=24,SNR=5.4						
WRA				LR	LR	07 35 18.5	
	comp=Z,45nm,21.7s,baz=320,slow=36						
ASAR	Alice Springs	16.89	144	P	Pn	07 30 25.1	+3.4
	0.2nm,0.3s,baz=318,slow=12,SNR=14						
ASAR				S	Sx	07 33 24.2	
	0.1nm,0.3s,baz=326,slow=24,SNR=6.5						
MKAR	Makanchi Array	67.42	331	P	P	07 37 16.4	+0.3
	0.4nm,0.4s,baz=138,slow=7.8,SNR=5.2						

BJI 06 07:27:29.6, 22.77N×100.73E, h32km, ML3.5/5, Ms3.7/2, Ms7 3.4/2, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.98	38	Pg	Pn	07 28 23.6	+9.0
KMI				Sg	Sn	07 29 00.0	+11
KMI				smax			
	comp=N,59nm,1.2s						
KMI				smax			
	comp=E,84nm,1.1s						
CD2	Chengdu	8.55	18	P	Pn	07 29 30.5	-0.6
CD2				S	Sn	07 31 06.3	-0.1
CD2				LR	LR		
	comp=N,190nm,7.1s						
CD2				LR	LR		
	comp=Z,150nm,6.0s						

IDC 06 07:42:09.9±2.6, 16.47S×174.76W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=195.7km s-min=29.9km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.38	241	P	P	07 50 06.6	+0.5
	1.1nm,0.5s,baz=103,slow=13,SNR=3.5						
WRA	Warramunga Arr	48.34	258	P	P	07 50 53.1	-0.5
	0.8nm,0.7s,baz=96,slow=7.0,SNR=4.2						
ASAR	Alice Springs	48.55	253	P	P	07 50 55.1	0.0
	3.3nm,0.6s,baz=87,slow=8.6,SNR=49						
PDAR	Pinedale Array	83.93	42	P	P	07 54 42.2	+0.4
	0.2nm,0.6s,baz=219,slow=4.2,SNR=2.6						

*NIED **06** 07:51:00, 43.00N×146.60E, h56km, Mw3.6 Best double couple: M0 3.25000×10^14 NP1:φ=64.00000°, δ=76.00000°, λ=142.00000°. NP2:φ=165.00000°, δ=53.00000°, λ=18.00000°.*
*JMA **06** 07:51:07.0±0.1, 43.03N×146.58E, h57km±2km, M3.5*
ISC 06 07:51:07.9±1.8, 43.0N±0.1×146.6E±0.1, h44km±44km, n9, σ0§45/17, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.70	302	P	Pn	07 51 21.2	-0.3
NEM2				eS	Sn	07 51 31.6	+0.4
JAK	Akkeshi	1.37	271	P	Pn	07 51 30.4	-0.1
JAK				eS	Sn	07 51 47.5	+0.1
JRA	Rausu	1.41	313	P	Pn	07 51 30.6	-0.5
JRA				eS	Sn	07 51 48.1	-0.3
JNK	Nakash	1.47	294	P	Pn	07 51 31.3	-0.6
JNK				eS	Sn	07 51 49.1	-0.8
JOB	Onbets	2.00	268	P	Pn	07 51 39.3	+0.1
JOB				eS	Sn	07 52 03.0	0.0
JAR	Ashorobuto	2.06	279	P	Pn	07 51 40.2	+0.2
JAR				eS	Sn	07 52 05.1	+0.6
JTKR	Abashiri--Toko	2.16	298	P	Pn	07 51 41.8	+0.4
JTKR				eS	Sn	07 52 07.5	+0.5
JCH	Churui	2.38	262	P	Pn	07 51 44.5	+0.1
JCH				eS	Sn	07 52 11.6	-0.8
JMP	Maruseppu	2.54	295	P	Pn	07 51 47.3	+0.7

IDC 06 07:59:51.3±2.2, 5.79N×124.41E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/22, mbtmp4.0/3, Error ellipse: s-maj=216.4km s-min=25.4km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.37	159	P	P	08 05 38.8	+0.4
	0.8nm,0.3s,baz=339,slow=9.7,SNR=8.5						
ASAR	Alice Springs	30.71	163	P	P	08 06 08.0	-0.2
	0.7nm,0.4s,baz=339,slow=7.1,SNR=22						
MKAR	Makanchi Array	54.56	326	P	P	08 09 21.3	0.0
	0.6nm,0.4s,baz=121,slow=8.2,SNR=7.3						

*FUNV **06** 08:03:07.2, 10.77N×62.43W, h92km, MW2.8*
*TRN **06** 08:03:08.3, 10.97N×62.31W, h91km, MD3.0*
*NEIC **06** 08:03:08.3, 10.97N×62.31W, h91km, MD3.0(TRN), After TRN.*
ISC 06 08:03:06.1±1.0, 10.82N±0.06×62.46W±0.03, h96km±8km, n19, σ1§04/34, 5C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.29	126⇑	iP	Pn	08 03 20.5	+0.4
GUIV				eS	Sn	08 03 29.6	-0.9
TCE	Chacachacare	0.70	100	eP	Pn	08 03 23.9	+0.8
TCE				eS	Sn	08 03 35.8	-0.1
TCE	Chacachacare	0.70	100	eP	Pn	08 03 23.9	+0.8
TCE				eS	Sn	08 03 35.8	-0.1
CRUV	Carupano	0.78	260⇑	eP	Pn	08 03 24.4	+0.6
CRUV				eS	Sn	08 03 37.0	-0.1
GUNV	Guanoco	0.81	216⇑	eP	Pn	08 03 25.0	+0.9
GUNV				eS	Sn	08 03 37.9	+0.3
ITEV	Isla Los Testi	0.85	309⇓	iP	Pn	08 03 25.9	+1.3
ITEV				eS	Sn	08 03 39.0	+0.6
TRN	Trinidad (W)	1.05	99⇑	eP	Pn	08 03 27.6	+0.9
TRN				eS	Sn	08 03 41.7	-0.6
TRN	Trinidad (W)	1.05	99⇑	eP	Pn	08 03 27.6	+0.9
TRN				eS	Sn	08 03 41.7	-0.6
TPP	Pointe-a-Pierr	1.11	116	eP	Pn	08 03 29.1	+1.7
TPP				eS	Sn	08 03 44.2	+0.7
TPP	Pointe-a-Pierr	1.11	116	eP	Pn	08 03 29.1	+1.7
TPP				eS	Sn	08 03 44.2	+0.7
TBH	Brigand Hill	1.41	103	eP	Pn	08 03 31.3	+0.3
TBH				eS	Sn	08 03 49.4	-0.4
TBH	Brigand Hill	1.41	103	eP	Pn	08 03 31.3	+0.3
TBH				eS	Sn	08 03 49.4	-0.4
GRW	Mount Saint Ca	1.55	30	eP	Pn	08 03 32.8	+0.1
GRW				eS	Sn	08 03 49.8	-3.1
GRW	Mount Saint Ca	1.55	30	eP	Pn	08 03 32.8	+0.1
GRW				eS	Sn	08 03 49.8	-3.1
TPR	Prospect	1.69	77	eS	Sn	08 03 53.7	-2.5
ORIV	Oritupano	1.97	208	eP	Pn	08 03 38.6	+0.4
PCRV	Puerto La Cruz	2.23	254	eP	Pn	08 03 41.6	0.0
PCRV				eS	Sn	08 04 07.0	-1.8
RIOV	Rio Grande	2.80	167	eP	Pn	08 03 48.5	-0.6
PRGV	PARIAGUAN	2.97	227	eS	Sn	08 04 23.4	-2.8

*IDC **06** 08:06:52.3±3.9, 51.68N×174.26W, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/29, mbtmp3.7/7, Error ellipse: s-maj=103.8km s-min=26.9km az=8.0*
*NEIC **06** 08:06:58.8, 51.56N×174.48W, h5km, ML3.1(AEIC), After AEIC.*
ISC 06 08:06:54.4±7.0, 51.7N±0.4×174.2W±0.1, h13km±48km, n9, σ1§00/10, mb3.9/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	1.56	279	P	Pn	08 07 22.2	+0.4
ADK				S	Sn	08 07 42.5	+0.7
YKA	Yellowknife Ar	32.93	47	P	P	08 13 29.4	+1.4
	0.2nm,0.6s,mb3.2,baz=276,slow=7.4,SNR=3.7						
MDJ	Mudanjiang	37.35	282	P	P	08 14 04.2	-2.0
MDJ				pP	pP	08 14 10.4	0.0
MDJ				sP	sP	08 14 13.1	+1.1
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,150nm,4.0s						
PDAR	Pinedale Array	43.46	75	P	P	08 14 58.1	+1.2
	comp=Z,0.3nm,0.8s,mb3.1,baz=307,slow=5.4,SNR=3.7						
ULM	Lac du Bonnet	47.09	59	P	P	08 15 24.6	-0.9
	comp=Z,0.5nm,0.3s,mb3.9,baz=299,slow=10,SNR=2.1						
FRB	Frobisher Bay	51.23	33	P	P	08 15 56.0	-1.0
	comp=Z,0.8nm,0.7s,mb3.8,baz=323,slow=5.1,SNR=3.8						
ARCES	ARCESS Array B	58.25	352	P	P	08 16 47.6	-0.1
	comp=Z,2.7nm,1.0s,mb4.2,baz=21,slow=8.0,SNR=4.3						
BVAR	Borovoye Array	62.48	322	P	P	08 17 17.4	+0.5
	comp=Z,0.7nm,0.5s,mb4.1,baz=37,slow=6.3,SNR=5.0						
AKTO	Aktyubinsk	69.05	327	P	P	08 17 58.9	-0.5
	comp=Z,1.1nm,0.7s,mb3.9,baz=23,slow=7.7,SNR=3.4						

IDC 06 08:30:37.6±2.2, 52.27N×35.43W, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/30, mbtmp3.6/7, ML2.2/1, MS4.1/2, Ms1 4.1/2, ms1mx3.1/46, Error ellipse: s-maj=67.6km s-min=23.6km az=179.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.75	290	P	Pn	08 34 57.0	-1.1
	0.1nm,0.3s,baz=90,slow=12,SNR=2.5						
RES	Resolute Bay	32.49	335	P	P	08 37 08.8	-0.5
	1.2nm,1.0s,baz=95,slow=11,SNR=2.5						
ULM	Lac du Bonnet	36.92	292	P	P	08 37 47.5	-0.3
	0.4nm,0.3s,baz=22,slow=5.4,SNR=2.6						
TKL	Tuckaleechee C	37.77	263	LR	LR	08 53 09.9	
	comp=Z,178nm,19.8s,baz=90,slow=36						
YKA	Yellowknife Ar	41.21	316	P	P	08 38 24.5	+1.0
	0.5nm,0.9s,baz=60,slow=7.9,SNR=3.2						
PDAR	Pinedale Array	48.89	290	P	P	08 39 24.9	+0.1
	0.4nm,0.9s,baz=68,slow=9.8,SNR=3.1						
ANMO	Albuquerque	52.12	280	LR	LR	09 01 29.2	
	comp=Z,233nm,19.6s,baz=54,slow=36						
BVAR	Borovoye Array	58.16	43	P	P	08 40 33.4	+0.7
	0.5nm,0.7s,baz=319,slow=5.7,SNR=5.0						
MKAR	Makanchi Array	67.66	41	P	P	08 41 36.2	-1.1
	0.4nm,0.6s,baz=312,slow=7.3,SNR=4.0						
WRA	Warramunga Arr	146.76	18	PKPbc	PKPbc	08 50 20.1	-1.3
	0.7nm,0.8s,baz=357,slow=3.2,SNR=4.8						
ASAR	Alice Springs	150.30	20	PKPbc	PKPbc	08 50 30.9	+0.5
	0.4nm,0.7s,baz=351,slow=2.4,SNR=7.6						

*IDC **06** 08:36:27.4±0.5, 53.45N×35.23W, h0km, mb3.9/22, mb1 4.1/26, mb1mx4.0/37, mbtmp3.9/26, ML3.2/4, MS4.3/1, Ms1 4.3/1, ms1mx3.3/48, Error ellipse: s-maj=17.7km s-min=10.2km az=177.0*
*ISCJB **06** 08:36:28.2±0.2, 53.47N±0.06×35.31W±0.04, h10km, mb4.4/95, MS4.2/9, Error ellipse: s-maj=8.1km s-min=3.2km az=13.9*
*BJI **06** 08:36:28.6, 54.03N×36.23W, h10km, mB4.9/7, mb5.0/11, Ms4.8/6, Ms7 4.5/6*
*NEIC **06** 08:36:29.7±0.2, 53.44N×35.28W, h10km, mb4.5/70, Error ellipse: s-maj=8.3km s-min=3.1km az=12.0*
*GCMT **06** 08:36:29.7±0.3, 53.43N×35.18W, h14km±1km, MW4.9/66, Moment Tensor Solution. s24,c25; s66,c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~3.01±.16; Mθθ0.20±.13; Mφφ2.80±.15; Mrθ0.34±.34; Mθφ0.21±.10; Mφr0.03±.32; Best double couple: M0 2.93100×10^16 NP1:φs=359.00000°, δ=45.00000°, λ=-98.00000°. NP2: φs=190.00000°, δ=46.00000°, λ=-82.00000°. Principal axes: T 2.8170, Plg1.0000°, Azm275.0000°; N 0.2230, Plg6.0000°, Azm5.0000°; P -3.0450, Plg84.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*CSEM **06** 08:36:29.6±0.1, 53.51N×35.27W, h10km, mb4.5/68, Ms4.0, Mw4.9 Error ellipse: s-maj=8.9km s-min=3.2km az=14.0*
ISC 06 08:36:29.9±0.2, 53.46N±0.05×35.28W±0.04, h10km, (h14km±8km:pP-P), n274, σ1§03/259, mb4.4/95, MS4.2/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	15.50	337	Pn	Pn	08 40 06.8	-1.4
	0.3nm,0.3s,baz=209,slow=19,SNR=2.2						
SFJD	Kangerlussuaq	15.50	337	Pn	Pn	08 40 06.8	-1.4
SCHQ	Schefferville	18.46	287	P	Pn	08 40 43.8	-1.7
	0.3nm,0.3s,baz=95,slow=9.8,SNR=12						
SCHQ	Schefferville	18.46	287	P	Pn	08 40 43.8	-1.7
EKA	Eskdalemuir Ar	18.71	71	P	Pn	08 40 45.6	-3.0
	baz=286,slow=12,SNR=2.9						
EKA	Eskdalemuir Ar	18.71	71	P	Pn	08 40 45.6	-3.0
SUMG	Summit	19.24	357	eP	Pn	08 40 58.5	+3.6
	23nm,1.4s						
FRB	Frobisher Bay	19.91	314	P	Pn	08 41 00.1	-2.8
	0.1nm,0.3s,baz=62,slow=9.5,SNR=2.5						
FRB	Frobisher Bay	19.91	314	P	Pn	08 41 00.1	-2.8
EMAZ	Mazaricos	20.32	110	P	P	08 41 06.1	+0.2
	18nm,1.0s						
EMAZ	Mazaricos	20.32	110	P	P	08 41 06.1	+0.2
	18nm,1.0s						
STS	Santiago	20.60	110	P	P	08 41 09.3	+0.4
	8.0nm,0.7s						
STS	Santiago	20.60	110	P	P	08 41 09.4	+0.4
	8.0nm,0.7s						
ROSF	Rostrenen	20.72	91	eP	P	08 41 11.8	+1.7
	20nm,1.0s						
ROSF	Rostrenen	20.72	91	eP	P	08 41 11.8	+1.7
	10nm,1.0s						
ROSF	Rostrenen	20.72	91	eP	P	08 41 11.8	+1.7
	10nm,1.0s						
QUIF	Quistinic	20.97	92	eP	P	08 41 13.2	+0.3
	58nm,1.2s						
QUIF	Quistinic	20.97	92	eP	P	08 41 13.2	+0.3
	29nm,1.2s						
QUIF	Quistinic	20.97	92	eP	P	08 41 13.2	+0.3
	29nm,1.2s						
EPON	Pontenova	21.12	107	P	P	08 41 12.7	-1.8
	20nm,1.1s,mb4.3						
EPON	Pontenova	21.12	107	P	P	08 41 12.7	-1.8
	20nm,1.1s,mb4.3						
SGMF	Saint Gilles	21.18	91	eP	P	08 41 15.3	+0.1
	138nm,1.5s,mb4.8						
SGMF	Saint Gilles	21.18	91	eP	P	08 41 15.3	+0.1
	69nm,1.5s,mb4.8						
SGMF	Saint Gilles	21.18	91	eP	P	08 41 15.3	+0.1
	69nm,1.5s,mb4.8						
JMIC	Jan Mayen	21.22	24	eP	P	08 41 12.1	-3.3
ELOB	Lobios	21.55	112	P	P	08 41 20.8	+1.7
	11nm,1.1s,mb4.2						
ELOB	Lobios	21.55	112	P	P	08 41 20.8	+1.7
	11nm,1.1s,mb4.2						
PCAB	Cabril	21.67	112	eP	P	08 41 23.1	+2.6
PCAB	Cabril	21.67	112	eP	P	08 41 23.1	+2.6
GRR	Gorron	22.14	89	eP	P	08 41 25.4	0.0
GRR	Gorron	22.14	89	eP	P	08 41 25.4	0.0
FLN	La Foliniere	22.20	88	eP	P	08 41 26.5	+0.4
	86nm,1.3s,mb4.7						
FLN				eMLR	MLR		
	comp=Z,1μm,22.2s,MS3.9						
FLN	La Foliniere	22.20	88	eP	P	08 41 26.5	+0.4
	comp=Z,43nm,1.3s,mb4.7						
FLN				LR	LR		
	comp=Z,1μm,22.3s,MS4.2						
FLN	La Foliniere	22.20	88	eP	P	08 41 26.5	+0.4
	comp=Z,43nm,1.3s,mb4.7						
ECAL	Calabor	22.24	110	P	P	08 41 26.3	-0.3
	comp=Z,12nm,1.1s,mb4.2						
ECAL	Calabor	22.24	110	P	P	08 41 26.3	-0.2
	comp=Z,12nm,1.1s,mb4.2						
EARI	Arriondas	22.25	105	P	P	08 41 25.6	-1.1
	comp=Z,25nm,1.0s,mb4.6						
EARI	Arriondas	22.25	105	P	P	08 41 25.6	-1.0
	comp=Z,25nm,1.0s,mb4.6						
PBRG	Braganca	22.32	110	eP	P	08 41 28.4	+0.9
	comp=Z,28nm,1.3s,mb4.5						
PBRG	Braganca	22.32	110	eP	P	08 41 28.4	+0.9
	comp=Z,28nm,1.3s,mb4.5						
LDF	La Druitiere	22.49	88	eP	P	08 41 27.9	-1.2
	comp=Z,63nm,1.3s,mb4.6						
LDF	La Druitiere	22.49	88	eP	P	08 41 27.9	-1.2
	comp=Z,32nm,1.3s,mb4.6						
LDF	La Druitiere	22.49	88	eP	P	08 41 27.9	-1.2
	comp=Z,32nm,1.3s,mb4.6						
MVO	Moncorvo	22.59	112	eP	P	08 41 31.3	+1.0
	comp=Z,35nm,2.1s,mb4.4						
MVO				eLR	LR	08 47 09.6	
MVO	Moncorvo	22.59	112	eP	P	08 41 31.3	+1.0
	comp=Z,35nm,2.1s,mb4.4						
MTE	Manteigas	22.83	114	eP	P	08 41 32.1	-0.7
	comp=Z,27nm,1.5s,mb4.5						
MTE				eLR	LR	08 47 15.5	
MTE	Manteigas	22.83	114	eP	P	08 41 31.4	-1.4
	comp=Z,8.1nm,0.9s,mb4.2						
MTE	Manteigas	22.83	114	eP	P	08 41 32.1	-0.7
	comp=Z,27nm,1.5s,mb4.5						
PMAFR	Mafra	22.93	119	eLR	LR	08 47 17.1	
LIS	Lisbon	23.18	119	eP	P	08 41 35.7	-0.9
PCBR	Castelo Branco	23.26	115	eP	P	08 41 37.4	0.0
	comp=Z,35nm,1.9s,mb4.5						
PCBR	Castelo Branco	23.26	115	eP	P	08 41 37.4	0.0
	comp=Z,35nm,1.9s,mb4.5						
ELAN	Lanestosa	23.32	103	P	P	08 41 37.8	-0.2
	comp=Z,7.5nm,1.0s,mb4.1						
ELAN	Lanestosa	23.32	103	P	P	08 41 37.8	-0.2
	comp=Z,7.5nm,1.0s,mb4.1						
MFF	Saint Martin d	23.41	93	eP	P	08 41 37.9	-1.0
	comp=Z,60nm,1.4s,mb4.5						
MFF	Saint Martin d	23.41	93	eP	P	08 41 37.9	-1.0
	comp=Z,30nm,1.4s,mb4.5						
MFF	Saint Martin d	23.41	93	eP	P	08 41 37.9	-1.0
	comp=Z,30nm,1.4s,mb4.5						
PMRV	Marv??o	23.60	115	eP	P	08 41 40.8	-0.1
	comp=Z,23nm,2.3s,mb4.2						
PMRV				eLR	LR	08 47 35.0	
PMRV	Marv??o	23.60	115	eP	P	08 41 40.8	-0.1
	comp=Z,23nm,2.3s,mb4.2						
PESTR	Estremoz	23.90	116	eLR	LR	08 47 48.9	
EBAD	Badajoz	24.29	116	P	P	08 41 46.6	-0.6
	comp=Z,11nm,1.2s,mb4.2						
EBAD	Badajoz	24.29	116	P	P	08 41 46.6	-0.6
	comp=Z,11nm,1.2s,mb4.2						
BAIF	Baives	24.46	82	eP	P	08 41 48.8	+0.2
BAIF	Baives	24.46	82	eP	P	08 41 48.8	+0.2
MORF	Marmelete	24.50	120	eLR	LR	08 48 07.3	
PFVI	Vila Bisbo	24.54	121	eLR	LR	08 48 04.9	
GUD	Guadarrama	24.55	109	P	P	08 41 49.8	+0.2
	comp=Z,3.3nm,0.8s,mb3.9						
GUD	Guadarrama	24.55	109	P	P	08 41 49.8	+0.2
	comp=Z,3.3nm,0.8s,mb3.9						
DOU	Dourbes	24.67	82	E	P	08 41 52.0	+1.4
PBAR	Barrancos	24.70	117	eP	P	08 41 51.1	+0.2
	comp=Z,30nm,1.8s,mb4.5						
PBAR				eLR	LR	08 48 09.8	
PBAR	Barrancos	24.70	117	eP	P	08 41 51.1	+0.2
	comp=Z,30nm,1.8s,mb4.5						
LFF	La Frestale	24.80	95	eP	P	08 41 52.5	+0.7
LFF	La Frestale	24.80	95	eP	P	08 41 52.5	+0.7
PVAQ	Vaqueiros	24.91	119	eLR	LR	08 48 12.9	
PBDV	Barranco-do-Ve	24.92	120	eLR	LR	08 48 11.2	
TCF	Toulx Ste Croi	24.97	91	eP	P	08 41 53.3	0.0
	comp=Z,31nm,1.2s,mb4.4						
TCF	Toulx Ste Croi	24.97	91	eP	P	08 41 53.3	0.0
	comp=Z,16nm,1.2s,mb4.4						
TCF	Toulx Ste Croi	24.97	91	eP	P	08 41 53.3	0.0
	comp=Z,16nm,1.2s,mb4.4						
RJF	Les Rejaudoux	25.07	94	eP	P	08 41 53.9	-0.3
	comp=Z,37nm,1.2s,mb4.5						
RJF				eMLR	MLR		
	comp=Z,778nm,19.5s,MS3.9						
RJF	Les Rejaudoux	25.07	94	eP	P	08 41 53.9	-0.3
	comp=Z,19nm,1.2s,mb4.5						
RJF				LR	LR		
	comp=Z,780nm,19.5s,MS4.2						
RJF	Les Rejaudoux	25.07	94	eP	P	08 41 53.9	-0.3
	comp=Z,19nm,1.2s,mb4.5						
ETSF	Etsaut	25.20	101	eP	P	08 41 55.9	+0.4
ETSF	Etsaut	25.20	101	eP	P	08 41 55.9	+0.4
BGF	Bois d'Agland	25.22	90	eP	P	08 41 54.9	-0.6
BGF	Bois d'Agland	25.22	90	eP	P	08 41 54.9	-0.6
ESDC	Sonseca Array	25.32	110	P	P	08 41 55.7	-0.8
	comp=Z,5.8nm,0.9s,mb4.1,baz=313,slow=8.6,SNR=28						
ESDC	Sonseca Array	25.32	110	P	P	08 41 55.7	-0.8
	comp=Z,8.9nm,1.1s,mb4.2						
ESDC	Sonseca Array	25.32	110	P	P	08 41 55.7	-0.8
	comp=Z,8.9nm,1.1s,mb4.2						
ESLA	Sonseca Array	25.32	110	eP	P	08 41 55.4	-1.1
	comp=Z,4.3nm,1.1s,mb3.9						
ESLA	Sonseca Array	25.32	110	eP	P	08 41 55.4	-1.1
	comp=Z,4.3nm,1.1s,mb3.9						
SSF	Saint Saulge	25.36	89	eP	P	08 41 56.6	-0.3
	comp=Z,59nm,1.3s,mb4.7						
SSF	Saint Saulge	25.36	89	eP	P	08 41 56.6	-0.3
	comp=Z,29nm,1.3s,mb4.7						
SSF	Saint Saulge	25.36	89	eP	P	08 41 56.6	-0.3
	comp=Z,29nm,1.3s,mb4.7						
AVF	Avril sur Loir	25.40	89	eP	P	08 41 56.7	-0.5
	comp=Z,44nm,1.2s,mb4.6						
AVF	Avril sur Loir	25.40	89	eP	P	08 41 56.7	-0.5
	comp=Z,22nm,1.2s,mb4.6						
AVF	Avril sur Loir	25.40	89	eP	P	08 41 56.7	-0.5
	comp=Z,22nm,1.2s,mb4.6						
LOR	Lormes	25.48	88	eP	P	08 41 57.6	-0.3
LOR				eMLR	MLR		
	comp=Z,693nm,21.5s,MS3.8						
LOR	Lormes	25.48	88	eP	P	08 41 57.6	-0.3
LOR				LR	LR		
	comp=Z,690nm,21.5s,MS4.1						
LOR	Lormes	25.48	88	eP	P	08 41 57.6	-0.3
CAF	Calviac	25.60	94	eP	P	08 41 58.9	-0.1
	comp=Z,47nm,1.4s,mb4.5						
CAF	Calviac	25.60	94	eP	P	08 41 58.9	-0.1

MTLF	Montolieu	26.58	97	eP	P	08 42 08.0	+0.1
	comp=Z,22nm,1.2s,mb4.3						
MTLF	Montolieu	26.58	97	eP	P	08 42 08.0	+0.1
	comp=Z,11nm,1.2s,mb4.3						
MTLF	Montolieu	26.58	97	eP	P	08 42 08.0	+0.1
	comp=Z,11nm,1.2s,mb4.3						
HAU	Haudompre	26.61	85	eP	P	08 42 07.9	-0.3
HAU				eMLR	MLR		
	comp=Z,738nm,23.0s,MS3.9						
HAU	Haudompre	26.61	85	eP	P	08 42 07.9	-0.3
HAU				LR	LR		
	comp=Z,740nm,23.0s,MS4.2						
HAU	Haudompre	26.61	85	eP	P	08 42 07.9	-0.3
ECHE	Chera	27.07	107	P	P	08 42 13.3	+0.9
	comp=Z,11nm,1.2s,mb4.2						
ECHE	Chera	27.07	107	P	P	08 42 13.3	+0.9
	comp=Z,11nm,1.2s,mb4.2						
LASF	Ste Croix	27.14	94	eP	P	08 42 13.3	+0.4
LASF	Ste Croix	27.14	94	eP	P	08 42 13.3	+0.4
ETOB	Tobarra	27.39	109	P	P	08 42 15.7	+0.5
	comp=Z,5.9nm,1.0s,mb4.1						
ETOB	Tobarra	27.39	109	P	P	08 42 15.7	+0.5
	comp=Z,5.9nm,1.0s,mb4.1						
EJON	La Jonquera	27.51	98	P	P	08 42 17.1	+0.8
	comp=Z,6.9nm,1.1s,mb4.2						
EJON	La Jonquera	27.51	98	P	P	08 42 17.1	+0.8
	comp=Z,6.9nm,1.1s,mb4.2						
CLL	Collm	29.11	74	eP	P	08 42 31.0	+0.6
CLL				e		08 42 40.0	
CLL				LR	LR		
	comp=Z,400nm,20.6s,MS4.0						
CLL	Collm	29.11	74	eP	P	08 42 31.0	+0.6
CLL				e		08 42 40.0	
CLL				ePP	PP	08 43 19.0	-17
CLL				Lm		08 53 06.0	
	comp=N,300nm,19.4s						
CLL				Lm		08 53 06.0	
	comp=E,300nm,21.0s						
CLL				Lm		08 53 06.0	
	comp=Z,400nm,20.6s						
CLL	Collm	29.11	74	eP	P	08 42 31.0	+0.6
GERES	GERESS Array B	30.57	78	P	P	08 42 44.2	+0.8
	comp=Z,2.2nm,0.9s,mb4.0,baz=295,slow=7.2,SNR=12						
GERES	GERESS Array B	30.57	78	P	P	08 42 44.2	+0.8
RES	Resolute Bay	31.46	334	P	P	08 42 50.3	-0.7
	comp=Z,2.0nm,1.1s,mb3.9,baz=112,slow=13,SNR=3.4						
RES	Resolute Bay	31.46	334	eP	P	08 42 52.0	+1.1
	comp=Z,5.0nm,1.1s,mb4.3						
RES	Resolute Bay	31.46	334	eP	P	08 42 52.0	+1.0
	comp=Z,5.0nm,1.1s,mb4.3						
FCC	Fort Churchill	32.28	303	eP	P	08 42 57.7	-0.7
	comp=Z,0.5nm,1.5s						
FCC	Fort Churchill	32.28	303	eP	P	08 42 57.7	-0.6
	comp=Z,0.4nm,1.5s						
ACSO	Alum Creek Sta	34.54	267	eP	P	08 43 18.2	0.0
	comp=Z,8.5nm,0.9s,mb4.7						
ACSO	Alum Creek Sta	34.54	267	eP	P	08 43 18.2	0.0
	comp=Z,8.5nm,0.9s,mb4.7						
EYMN	Ely	35.23	284	eP	P	08 43 24.3	+0.2
	comp=Z,16nm,1.4s,mb4.8						
EYMN	Ely	35.23	284	eP	P	08 43 24.3	+0.2
	comp=Z,16nm,1.4s,mb4.8						
KEST	Kesra	35.68	102	P	P	08 43 26.4	-1.7
	comp=Z,4.9nm,1.0s,mb4.4,baz=158,slow=1.6,SNR=9.4						
ULM	Lac du Bonnet	36.58	290	P	P	08 43 34.6	-1.0
	comp=Z,2.3nm,0.8s,mb4.0,baz=66,slow=12,SNR=3.6						
ULM	Lac du Bonnet	36.58	290	P	P	08 43 34.7	-1.0
AGMN	Agassiz Refuge	37.56	287	eP	P	08 43 42.0	-2.0
	comp=Z,12nm,1.4s,mb4.5						
AGMN	Agassiz Refuge	37.56	287	eP	P	08 43 42.0	-2.0
	comp=Z,12nm,1.4s,mb4.5						
BUR08	Bucovina Ar. S	37.84	74	eP	P	08 43 47.4	+1.0
BUR08	Bucovina Ar. S	37.84	74	eP	P	08 43 47.4	+1.0
HDIL	Hopedale	38.11	273	eP	P	08 43 49.3	+0.6
	comp=Z,4.8nm,0.6s,mb4.4						
HDIL	Hopedale	38.11	273	eP	P	08 43 49.3	+0.6
	comp=Z,4.8nm,0.6s,mb4.4						
AKASG	Malin Array Be	38.53	67	P	P	08 43 50.8	-1.3
	comp=Z,0.4nm,0.4s,mb3.5,baz=297,slow=8.6,SNR=7.8						
AKASG	Malin Array Be	38.53	67	P	P	08 43 50.8	-1.4
SIUC	Southern Illin	39.88	269	eP	P	08 44 02.1	-1.5
	comp=Z,24nm,1.1s,mb4.8						
SIUC	Southern Illin	39.88	269	eP	P	08 44 02.1	-1.5
	comp=Z,24nm,1.1s,mb4.8						
WVT	Waverly	40.10	266	eP	P	08 44 04.4	-1.0
	comp=Z,8.9nm,1.3s,mb4.3						
WVT	Waverly	40.10	266	eP	P	08 44 04.4	-1.0
	comp=Z,8.9nm,1.3s,mb4.3						
YKA	Yellowknife Ar	40.42	315	P	P	08 44 07.4	-0.3
	comp=Z,0.4nm,0.6s,mb3.3,baz=62,slow=8.8,SNR=7.2						
YKA				PcP	PcP	08 46 09.8	-0.6
	comp=Z,0.3nm,0.7s,baz=70,slow=3.5,SNR=4.9						
YKA	Yellowknife Ar	40.42	315	P	P	08 44 07.4	-0.4
YKA	Yellowknife Ar	40.42	315	PcP	PcP	08 46 09.9	-0.5
FVM	French Village	40.43	270	eP	P	08 44 08.2	+0.1
	comp=Z,15nm,1.2s,mb4.6						
FVM	French Village	40.43	270	eP	P	08 44 08.2	+0.1
	comp=Z,15nm,1.2s,mb4.6						
ECSD	EROS Data Cent	40.53	282	eP	P	08 44 09.7	+0.8
	comp=Z,12nm,1.3s,mb4.4						
ECSD	EROS Data Cent	40.53	282	eP	P	08 44 09.7	+0.8
	comp=Z,12nm,1.3s,mb4.4						
CCM	Cathedral Cave	40.87	271	eP	P	08 44 11.9	+0.1
	comp=Z,10nm,1.0s,mb4.4						
CCM	Cathedral Cave	40.87	271	eP	P	08 44 11.9	+0.2
	comp=Z,10nm,1.0s,mb4.4						
OXF	Oxford	42.15	266	eP	P	08 44 19.6	-2.7
	comp=Z,20nm,1.1s,mb4.7						
SJG	San Juan	42.62	226	LR	LR	08 57 36.6	
	comp=Z,368nm,21.4s,MS4.2,baz=88,slow=30						
LAO	LASA Array	44.30	291	eP	P	08 44 40.9	+1.4
	comp=Z,12nm,0.9s,mb4.6						
LAO	LASA Array	44.30	291	eP	P	08 44 40.9	+1.4
	comp=Z,12nm,0.9s,mb4.6						
INK	Inuvik	44.59	328	eP	P	08 44 41.5	-0.1
	comp=Z,9.4nm,1.4s,mb4.4						
INK	Inuvik	44.59	328	eP	P	08 44 41.5	-0.1
	comp=Z,9.4nm,1.4s,mb4.4						
MIAR	Mount Ida	44.61	269	eP	P	08 44 41.4	-0.8
	comp=Z,17nm,1.1s,mb4.8						
MIAR	Mount Ida	44.61	269	eP	P	08 44 41.4	-0.8
	comp=Z,17nm,1.1s,mb4.8						
EGMT	Eagleton	45.45	295	eP	P	08 44 50.4	+1.7
	comp=Z,7.5nm,0.9s,mb4.5						
EGMT	Eagleton	45.45	295	eP	P	08 44 50.4	+1.7
	comp=Z,7.5nm,0.9s,mb4.5						
WALA	Waterton Lakes	47.06	298	eP	P	08 45 01.6	+0.3
	comp=Z,0.2nm,1.1s						
WALA	Waterton Lakes	47.06	298	eP	P	08 45 01.6	+0.3
	comp=Z,0.2nm,1.1s						
HRY	Holter Researc	47.37	295	eP	P	08 45 04.5	+0.7
HRY	Holter Researc	47.37	295	eP	P	08 45 04.4	+0.6
BRTR	Keskin Array B	47.46	78	P	P	08 45 04.0	-0.5
	comp=Z,3.9nm,1.0s,mb4.3,baz=306,slow=4.4,SNR=11						
BRTR	Keskin Array B	47.46	78	P	P	08 45 04.1	-0.5
BOZ	Bozeman (W)	47.92	293	eP	P	08 45 07.7	-0.4
	comp=Z,5.7nm,1.2s,mb4.5						
BOZ	Bozeman (W)	47.92	293	eP	P	08 45 07.7	-0.3
	comp=Z,5.7nm,1.2s,mb4.5						
ISCO	Idaho Springs	48.24	283	eP	P	08 45 10.7	+0.1
	comp=Z,28nm,2.3s,mb4.9						
ISCO	Idaho Springs	48.24	283	eP	P	08 45 10.7	+0.1
	comp=Z,28nm,2.3s,mb4.9						
BW06	Boulder Array	48.58	289	eP	P	08 45 12.4	-0.8
	comp=Z,5.8nm,1.3s,mb4.5						
BW06	Boulder Array	48.58	289	eP	P	08 45 12.4	-0.8
	comp=Z,5.8nm,1.3s,mb4.5						
PDAR	Pinedale Array	48.58	289	P	P	08 45 12.7	-0.5
	comp=Z,0.9nm,0.6s,mb4.0,baz=61,slow=8.6,SNR=9.4						
PDAR	Pinedale Array	48.58	289	P	P	08 45 12.7	-0.5
DLMT	Dillon	48.63	294	eP	P	08 45 14.6	+1.1
	comp=Z,6.6nm,1.3s,mb4.5						
DLMT	Dillon	48.63	294	eP	P	08 45 14.6	+1.1
	comp=Z,6.6nm,1.3s,mb4.5						
DAWY	Dawson	49.03	326	eP	P	08 45 16.8	+0.5
DAWY	Dawson	49.03	326	eP	P	08 45 16.8	+0.5
MCMT	McKenzie Canyo	49.10	293	eP	P	08 45 16.8	-0.3
	comp=Z,2.0nm,1.1s,mb4.1						
MCMT	McKenzie Canyo	49.10	293	eP	P	08 45 16.8	-0.4
	comp=Z,2.0nm,1.1s,mb4.1						
EGAK	Eagle	49.15	327	eP	P	08 45 18.0	+0.7
	comp=Z,12nm,1.3s,mb4.8						
EGAK	Eagle	49.15	327	eP	P	08 45 18.0	+0.7
	comp=Z,12nm,1.3s,mb4.8						
NEW	Newport	49.23	299	eP	P	08 45 20.5	+2.4
	comp=Z,6.9nm,1.4s,mb4.5						
NEW	Newport	49.23	299	eP	P	08 45 20.5	+2.4
	comp=Z,6.9nm,1.4s,mb4.5						
SMCO	Snowmass	49.44	284	eP	P	08 45 23.1	+3.3
	comp=Z,5.1nm,1.3s,mb4.4						
SDCO	Great Sand Dun	49.54	281	eP	P	08 45 25.0	+4.4
	comp=Z,14nm,2.0s,mb4.7						
HWUT	Hardware Ranch	50.47	289	eP	P	08 45 27.9	+0.3
	comp=Z,8.4nm,0.9s,mb4.8						
HWUT	Hardware Ranch	50.47	289	eP	P	08 45 27.9	+0.3
	comp=Z,8.4nm,0.9s,mb4.8						
HLID	Hailey	50.78	293	eP	P	08 45 31.0	+1.1
	comp=Z,3.1nm,1.1s,mb4.2						
HLID	Hailey	50.78	293	eP	P	08 45 31.0	+1.1
	comp=Z,3.1nm,1.1s,mb4.2						
JCT	Junction City	51.20	270	eP	P	08 45 32.9	-0.3
	comp=Z,9.4nm,1.0s,mb4.7						
JCT	Junction City	51.20	270	eP	P	08 45 32.9	-0.4
	comp=Z,9.4nm,1.0s,mb4.7						
SRU	San Rafael	51.53	286	eP	P	08 45 37.0	+1.3
	comp=Z,4.7nm,1.1s,mb4.3						
SRU	San Rafael	51.53	286	eP	P	08 45 37.0	+1.4
	comp=Z,4.7nm,1.1s,mb4.3						
ANMO	Albuquerque	52.01	279	P	P	08 45 40.3	+1.0
	comp=Z,2.3nm,1.0s,mb4.1,baz=86,slow=9.7,SNR=4.2						
ANMO	Albuquerque	52.01	279	eP	P	08 45 40.6	+1.3
	comp=Z,4.9nm,1.2s,mb4.3						
ANMO	Albuquerque	52.01	279	eP	P	08 45 40.6	+1.4
	comp=Z,4.9nm,1.2s,mb4.3						
MCK	McKinley	52.34	329	eP	P	08 45 43.0	+1.7
	comp=Z,32nm,1.7s,mb5.0						
MCK	McKinley	52.34	329	eP	P	08 45 43.0	+1.7
	comp=Z,32nm,1.7s,mb5.0						
BNM	Barren Site	52.67	279	eP	P	08 45 44.7	+0.6
	comp=Z,8.0nm,1.5s,mb4.4						
BNM	Barren Site	52.67	279	eP	P	08 45 44.7	+0.6
	comp=Z,8.0nm,1.5s,mb4.4						
ELK	Elko	53.11	291	P	P	08 45 48.0	+0.7
	comp=Z,0.3nm,0.3s,mb3.6,baz=38,slow=11,SNR=2.1						
ELK	Elko	53.11	291	P	P	08 45 48.0	+0.7
AKTK	Aktyubinsk	53.55	53	P	P	08 45 49.4	-1.0
AKTK	Aktyubinsk	53.55	53	P	P	08 45 49.3	-1.1
AKTO	Aktyubinsk	53.55	53	P	P	08 45 49.4	-1.0
	comp=Z,0.9nm,0.5s,mb3.9,baz=288,slow=6.0,SNR=7.2						
WVOR	Wild Horse Val	53.84	294	eP	P	08 45 53.2	+0.5
	comp=Z,7.4nm,1.1s,mb4.5						
WVOR	Wild Horse Val	53.84	294	eP	P	08 45 53.2	+0.5
	comp=Z,7.4nm,1.1s,mb4.5						
TXAR	Lajitas Array	54.34	272	P	P	08 45 56.2	-0.3
	comp=Z,1.5nm,1.0s,mb3.9,baz=63,slow=5.8,SNR=9.9						
TXAR	Lajitas Array	54.34	272	P	P	08 45 56.2	-0.3
TXAR	Lajitas Array	54.34	272	P	P	08 45 56.2	-0.3
ASF	Jabal al Asfar	54.55	82	P	P	08 45 58.1	+0.1
	comp=Z,2.3nm,0.6s,mb4.4,baz=10.0,slow=4.0,SNR=3.2						
TIXI	Tiksi	54.69	6	eP	P	08 45 59.6	+1.2
	comp=Z,4.2nm,0.8s,mb4.5						
TIXI	Tiksi	54.69	6	eP	P	08 45 59.6	+1.2
	comp=Z,4.2nm,0.8s,mb4.5						
NVAR	Mina Array Bea	56.42	291	P	P	08 46 09.7	-1.7
	comp=Z,0.2nm,0.5s,mb3.4,baz=64,slow=10,SNR=3.0						
NVAR	Mina Array Bea	56.42	291	P	P	08 46 09.7	-1.6
BRVK	Borovoye	57.17	44	eP	P	08 46 16.7	+0.3
	comp=Z,7.2nm,1.4s,mb4.5						
BRVK	Borovoye	57.17	44	eP	P	08 46 16.7	+0.3
	comp=Z,7.2nm,1.4s,mb4.5						
BVAR	Borovoye Array	57.24	44	P	P	08 46 15.8	-1.1
	comp=Z,2.2nm,0.9s,mb4.2,baz=336,slow=3.3,SNR=9.5						
BVAR	Borovoye Array	57.24	44	P	P	08 46 15.8	-1.1
ROSC	El Rosal	57.98	228	P	P	08 46 22.7	+0.1
	comp=Z,18nm,0.9s,mb5.1,baz=93,slow=5.2,SNR=14						
ROSC	El Rosal	57.98	228	eP	P	08 46 23.5	+0.9
ROSC	El Rosal	57.98	228	eP	P	08 46 23.5	+0.9
KURK	Kurchatov	62.31	41	P	P	08 46 51.0	-0.8
	comp=Z,1.4nm,0.9s,mb4.1,baz=330,slow=7.6,SNR=4.0						
KURK	Kurchatov	62.31	41	P	P	08 46 51.0	-0.9
MK31	Makanchi Array	66.91	41	eP	P	08 47 22.2	+0.2
MK31	Makanchi Array	66.91	41	eP	P	08 47 22.2	+0.2
MKAR	Makanchi Array	66.91	41	P	P	08 47 20.6	-1.4
	comp=Z,1.4nm,0.9s,mb4.0,baz=316,slow=5.1,SNR=8.2						
AAK	Ala-Archa	66.95	49	eP	P	08 47 23.9	+1.7
	comp=Z,19nm,1.9s,mb4.8						
AAK	Ala-Archa	66.95	49	eP	P	08 47 23.9	+1.6
	comp=Z,19nm,1.9s,mb4.8						
WMQ	Urumqi	71.50	40	eP	P	08 47 53.4	+3.0
SONM	Songino Array	73.97	26	P	P	08 48 05.3	+0.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=335,slow=6.5,SNR=3.6						
SONM	Songino Array	73.97	26	P	P	08 48 05.3	+0.2
LPAZ	La Paz	74.98	213	P	P	08 48 11.3	+0.1
	comp=Z,1.9nm,0.8s,mb4.1,baz=6.9,slow=4.6,SNR=12						
LPAZ	La Paz	74.98	213	eP	P	08 48 10.7	-0.5
	comp=Z,3.5nm,0.6s,mb4.5						
LPAZ	La Paz	74.98	213	eP	P	08 48 10.7	-0.5
	comp=Z,3.5nm,0.6s,mb4.5						
GTA	Gaotai	79.71	34	eP	P	08 48 37.8	+0.2
GTA				pP	pP	08 48 42.0	+1.1
GTA				sP	sP	08 48 45.1	+3.0
GTA				PP	PP	08 51 38.3	+0.5
GTA				S	S	08 58 39.7	-0.1
GTA				sS	sS	08 58 46.3	+1.0
GTA				SS	SS	09 03 51.2	+4.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
GTA				pmax	pmax		
	comp=Z,34nm,5.1s						
GTA				LR	LR		
	comp=N,120nm,17.1s,MS4.4						
GTA				LR	LR		
	comp=E,93nm,16.5s,MS4.4						
GTA				LR	LR		
	comp=Z,110nm,19.2s,MS4.2						
CPUP	Villa Florida	81.73	200	P	P	08 48 46.1	-2.2
	comp=Z,1.4nm,0.8s,mb4.0,baz=348,slow=10,SNR=4.0						
HHC	Hu-ho-hao-te	81.81	25	eP	P	08 48 48.4	-0.4
HHC				pP	pP	08 48 53.2	+1.1
HHC				sP	sP	08 48 55.4	+2.1
HHC				PP	PP	08 51 58.1	+3.0
HHC				S	S	08 59 00.2	-1.6
HHC				SKS		08 59 03.6	
HHC				sS	sS	08 59 08.1	+0.9
HHC				SS	SS	09 04 19.4	+1.2
HHC				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,70nm,5.3s						
HHC				LR	LR		
	comp=N,170nm,17.1s,MS4.5						
HHC				LR	LR		
	comp=E,140nm,19.8s,MS4.5						
HHC				LR	LR		
	comp=Z,170nm,16.7s,MS4.5						
BJI	Beijing	83.67	22	P	P	08 48 57.0	-1.5
BJI				S	S	08 59 20.2	-0.5
BJI				SS	SS	09 04 45.2	-0.5
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
BJI				LR	LR		
	comp=N,180nm,24.0s,MS4.5						
BJI				LR	LR		
	comp=E,170nm,19.3s,MS4.5						
BJI				LR	LR		
	comp=Z,270nm,26.4s						
LZH	Lanzhou	84.05	32	eP	P	08 49 02.0	+1.5
LZH				pP	pP	08 49 05.5	+1.7
LZH				sP	sP	08 49 07.0	+2.0
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
XAN	Xi'an	87.49	29	P	P	08 49 17.2	-0.4
XAN				pP	pP	08 49 20.5	-0.4
XAN				sP	sP	08 49 21.8	-0.3
XAN				PP	PP	08 52 41.2	-0.2
XAN				S	S	08 59 58.1	-0.4
XAN				sS	sS	09 00 03.8	-0.2
XAN				SS	SS	09 05 43.6	+1.4
XAN				pmax	pmax		
	comp=Z,7.0nm,3.5s						
CD2	Chengdu	88.77	34	P	P	08 49 22.8	-0.9
CD2				pP	pP	08 49 27.6	+0.5
CD2				sP	sP	08 49 29.8	+1.6
CD2				PP	PP	08 52 53.0	+1.2
CD2				SKS		08 59 48.9	
CD2				S	S	09 00 06.6	-4.2
CD2				SS	SS	09 05 59.1	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,6.5s						
CD2				LR	LR		
	comp=N,470nm,10.6s						
CD2				LR	LR		
	comp=Z,330nm,17.8s						
NJ2	Nanjing	91.93	22	eP	P	08 49 41.0	+2.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI	Kunming	93.70	37	P	P	08 49 47.2	+0.5
KMI				pP	pP	08 49 51.7	+1.6
KMI				sP	sP	08 49 54.2	+2.9
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.3						
GYA	Guiyang	93.84	34	P	P	08 49 47.6	+0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
TAOE	Nuku Hiva Isla	105.92	277	eLR	LR	09 25 42.2	
	comp=Z,378nm,22.3s						
PPT	Papeete	118.37	279	eLR	LR	09 31 28.3	
	comp=Z,311nm,21.2s						
WRAB	Tennant Creek	145.59	17	ePKPdf	PKPdf	08 56 08.2	-0.1
WRAB	Tennant Creek	145.59	17	ePKIKP	PKPdf	08 56 08.2	0.0
WRA	Warramunga Arr	145.60	17	PKPbc	PKPbc	08 56 06.2	-2.2
	comp=Z,1.9nm,0.7s,baz=347,slow=3.1,SNR=14						
WRA	Warramunga Arr	145.60	17	PKPbc	PKPbc	08 56 06.2	-2.2
ASAR	Alice Springs	149.15	20	PKPbc	PKPbc	08 56 14.7	-3.5
	comp=Z,1.5nm,0.5s,baz=350,slow=2.3,SNR=30						

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*BJI **06** 08:39:47.3, 53.°20N×35.°20W, h10km, mB5.1/5, mb5.0/7, Ms4.8/6, Ms7 4.7/5*

*IDC **06** 08:39:49.6±0.5, 53.°32N×35.°22W, h0km, mb4.0/27, mb1 4.1/30, mb1mx4.1/38, mbtmp4.0/30, ML3.0/3, MS4.5/4, Ms1 4.5/4, ms1mx3.8/46, Error ellipse: s-maj=15.7km s-min=9.8km az=177.0*

*GCMT **06** 08:39:51.3±0.4, 53.°43N×35.°20W, h15km±1km, MW5.1/72, Moment Tensor Solution. s18,c18; s72,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.85±.40; $M_{\theta\theta}$1.94±.27; $M_{\phi\phi}$3.91±.27; $M_{r\theta}$2.35±.62; $M_{r\phi}$1.64±.20; $M_{\theta f}$1.13±.50; Best double couple: $M_0$5.90800×10^{16} NP1:ϕ_s21.00000°, δ35.00000°, λ-108.00000°. NP2: ϕ_s222.00000°, δ57.00000°, λ-78.00000°. Principal axes: T 5.2700, Plg11.0000°, Azm304.0000°; N 1.2750, Plg10.0000°, Azm36.0000°; P -6.5460, Plg75.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*CSEM **06** 08:39:51.3±0.1, 53.°35N×35.°25W, h10km, mb4.5/56, Ms4.1, Mw5.1 Error ellipse: s-maj=9.7km s-min=4.1km az=5.0*

*NEIC **06** 08:39:51.3±0.2, 53.°25N×35.°23W, h10km, mb4.5/54, Error ellipse: s-maj=8.7km s-min=3.7km az=3.0*

ISC 06 08:39:50.6±4.5, 53.°33N±0.°06×35.°23W±0.°05, h3km±29km, h14km±.8km; pP-P, n237, σ1.9s07/221, mb4.4/85, MS4.4/11, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	15.62	337	Pn	Pn	08 43 30.7	-0.7
	0.1nm,0.3s,baz=225,slow=20,SNR=1.9						
SFJD	Kangerlussuaq	15.62	337	eP	Pn	08 43 34.9	+3.5
	15nm,0.8s						
SFJD	Kangerlussuaq	15.62	337	i P	Pn	08 43 34.4	+3.0
SFJD	Kangerlussuaq	15.62	337	i P	Pn	08 43 35.1	+3.7
	17nm,0.8s						
SFJD	Kangerlussuaq	15.62	337	eP	Pn	08 43 34.9	+3.5
	15nm,0.8s						
SCHQ	Schefferville	18.52	287	P	Pn	08 44 06.3	-1.6
	0.1nm,0.3s,baz=91,slow=9.9,SNR=11						
SCHQ	Schefferville	18.52	287	P	Pn	08 44 06.3	-1.6
EKA	Eskdalemuir Ar	18.72	71	P	Pn	08 44 07.8	-2.6
	baz=271,slow=11,SNR=3.5						
EKA	Eskdalemuir Ar	18.72	71	P	Pn	08 44 07.8	-2.5
SUMG	Summit	19.37	357	eP	Pn	08 44 18.9	+0.9
	34nm,1.4s						
SUMG	Summit	19.37	357	eP	Pn	08 44 18.9	+0.9
	34nm,1.4s						
FRB	Frobisher Bay	20.02	314	P	P	08 44 23.0	-1.1
	2.4nm,0.6s,baz=120,slow=13,SNR=4.3						
FRB	Frobisher Bay	20.02	314	P	P	08 44 23.0	-1.1
ROSF	Rostrenen	20.69	91	eP	P	08 44 32.1	+0.6
ROSF	Rostrenen	20.69	91	eP	P	08 44 32.1	+0.6
QUIF	Quistinic	20.94	92	eP	P	08 44 34.6	+0.4
QUIF	Quistinic	20.94	92	eP	P	08 44 34.6	+0.4
PCAB	Cabril	21.60	112	eP	P	08 44 47.6	+6.3
	38nm,1.9s,mb4.5						
FLN	La Foliniere	22.18	88	eP	P	08 44 49.8	+2.3
	72nm,1.3s,mb4.7						
FLN				eMLR	MLR		
	comp=Z,1μm,22.0s,MS4.1						
FLN	La Foliniere	22.18	88	eP	P	08 44 49.8	+2.3
	comp=Z,36nm,1.3s,mb4.7						
FLN				LR	LR		
	comp=Z,1μm,22.0s,MS4.4						
FLN	La Foliniere	22.18	88	eP	P	08 44 49.8	+2.3
	comp=Z,36nm,1.3s,mb4.7						
PBRG	Braganca	22.26	110	eP	P	08 44 50.7	+2.3
	comp=Z,40nm,1.9s,mb4.5						
PBRG	Braganca	22.26	110	eP	P	08 44 50.7	+2.3
	comp=Z,40nm,1.9s,mb4.5						
LDF	La Druitiere	22.46	88	eP	P	08 44 48.7	-1.9
	comp=Z,84nm,1.4s,mb4.7						
LDF	La Druitiere	22.46	88	eP	P	08 44 48.7	-1.9
	comp=

LOR LR LR
comp=Z,1μm,21.0s,MS4.3
LOR Lormes 25.45 88 *eP* **P 08 45 18.1 -1.3**
comp=Z,16nm,1.0s,mb4.5
SMF Signal de Mont 25.74 89 *eP* **P 08 45 22.4 +0.4**
SMF Signal de Mont 25.74 89 *eP* **P 08 45 22.4 +0.4**
NB2 NORSAR Subarra 25.82 54 P **P 08 45 22.5 -0.1**
comp=Z,30nm,2.0s,mb4.5,baz=274,slow=9.3
NB2 NORSAR Subarra 25.82 54 P **P 08 45 22.5 -0.1**
comp=Z,30nm,2.0s,mb4.5,baz=274,slow=9.0,SNR=5.2
NOA NORSAR Array B 25.82 54 P **P 08 45 22.3 -0.4**
comp=Z,2.0nm,0.8s,mb3.7,baz=275,slow=10,SNR=3.6
NOA NORSAR Array B 25.82 54 P **P 08 45 22.3 -0.4**
NOA NORSAR Array B 25.82 54 P **P 08 45 22.3 -0.3**
CLL Collm 29.11 74 *eP* **P 08 45 53.0 +0.8**
CLL *e* 08 46 01.0
CLL LR LR
comp=Z,1μm,18.9s,MS4.5
CLL Collm 29.11 74 *eP* **P 08 45 53.0 +0.8**
CLL *e* 08 46 01.0
CLL *e*(PPP) 08 46 57.0
CLL Collm 29.11 74 *eP* **P 08 45 53.0 +0.8**
SADO Sadowa 29.61 271 P **P 08 45 54.4 -2.3**
comp=Z,3.6nm,0.7s,mb4.2,baz=77,slow=11,SNR=4.1
SADO Sadowa 29.61 271 P **P 08 45 54.3 -2.4**
GERES GERESS Array B 30.57 78 P **P 08 46 03.9 -1.2**
comp=Z,1.8nm,1.0s,mb3.9,baz=293,slow=8.1,SNR=8.1
GERES GERESS Array B 30.57 78 P **P 08 46 03.9 -1.2**
VRAC Vranov 32.05 76 LR LR 08 58 15.6
comp=Z,1μm,19.4s,MS4.5,baz=337,slow=34
FCC Fort Churchill 32.37 304 *eP* **P 08 46 19.9 -0.9**
comp=Z,1.6nm,2.1s,mb3.5
FCC Fort Churchill 32.37 304 *eP* **P 08 46 20.0 -0.9**
comp=Z,1.6nm,2.1s,mb3.5
FINES FINESS Array B 32.85 51 P **P 08 46 24.7 -0.3**
comp=Z,2.3nm,0.8s,mb4.2,baz=287,slow=13,SNR=4.4
FINES FINESS Array B 32.85 51 P **P 08 46 24.7 -0.3**
ACSO Alum Creek Sta 34.56 267 *eP* **P 08 46 39.6 -0.5**
comp=Z,14nm,1.0s,mb4.8
ACSO Alum Creek Sta 34.56 267 *eP* **P 08 46 39.6 -0.5**
comp=Z,14nm,1.0s,mb4.8
EYMN Ely 35.28 285 *eP* **P 08 46 45.2 -1.1**
comp=Z,8.1nm,0.8s,mb4.7
EYMN Ely 35.28 285 *eP* **P 08 46 45.2 -1.1**
comp=Z,8.1nm,0.8s,mb4.7
KEST Kesra 35.63 101 P **P 08 46 49.0 -0.4**
comp=Z,2.0nm,0.8s,mb4.1,baz=27,slow=0.1,SNR=5.6
ULM Lac du Bonnet 36.65 290 P **P 08 46 56.7 -1.3**
comp=Z,3.9nm,0.8s,mb4.3,baz=49,slow=4.1,SNR=8.8
ULM Lac du Bonnet 36.65 290 P **P 08 46 56.7 -1.3**
AGMN Agassiz Refuge 37.62 288 *eP* **P 08 47 08.3 +2.1**
comp=Z,8.2nm,1.2s,mb4.3
AGMN Agassiz Refuge 37.62 288 *eP* **P 08 47 08.3 +2.1**
comp=Z,8.2nm,1.2s,mb4.3
FFC Flin Flon 37.90 300 *eP* **P 08 47 08.3 -0.2**
comp=Z,39nm,2.4s,mb4.7
FFC Flin Flon 37.90 300 *eP* **P 08 47 08.3 -0.2**
comp=Z,39nm,2.4s,mb4.7
AKASG Malin Array Be 38.56 67 P **P 08 47 14.1 -0.1**
comp=Z,0.2nm,0.3s,mb3.4,baz=300,slow=8.2,SNR=5.2
AKASG Malin Array Be 38.56 67 P **P 08 47 14.1 0.0**
MLR Muntele Rosu 39.45 76 LR LR 09 01 50.1
comp=Z,743nm,19.0s,MS4.5,baz=284,slow=34
SIUC Southern Illin 39.91 269 *eP* **P 08 47 25.9 +0.4**
comp=Z,20nm,0.9s,mb4.8
SIUC Southern Illin 39.91 269 *eP* **P 08 47 25.9 +0.4**
comp=Z,20nm,0.9s,mb4.8
WVT Waverly 40.12 266 *eP* **P 08 47 26.5 -0.8**
comp=Z,2.8nm,0.8s,mb4.0
WVT Waverly 40.12 266 *eP* **P 08 47 26.5 -0.9**
comp=Z,2.8nm,0.8s,mb4.0
FVM French Village 40.45 271 *eP* **P 08 47 30.5 +0.4**
comp=Z,9.7nm,0.9s,mb4.5
FVM French Village 40.45 271 *eP* **P 08 47 30.5 +0.4**
comp=Z,9.6nm,0.9s,mb4.5
YKA Yellowknife Ar 40.53 315 P **P 08 47 30.1 -0.3**
comp=Z,1.7nm,0.9s,mb3.7,baz=60,slow=9.3,SNR=7.1
YKA PcP PcP 08 49 32.3 -0.3
comp=Z,0.5nm,0.7s,baz=63,slow=3.5,SNR=6.4
YKA Yellowknife Ar 40.53 315 P **P 08 47 30.1 -0.3**
YKA PcP PcP 08 49 32.3 -0.3
YKA Yellowknife Ar 40.53 315 P **P 08 47 30.1 -0.3**
YKA Yellowknife Ar 40.53 315 PcP PcP 08 49 32.3 -0.3
ECSD EROS Data Cent 40.58 282 *eP* **P 08 47 30.5 -0.6**
comp=Z,6.2nm,0.9s,mb4.2
ECSD EROS Data Cent 40.58 282 *eP* **P 08 47 30.5 -0.6**
comp=Z,6.2nm,0.9s,mb4.2
CCM Cathedral Cave 40.90 271 *eP* **P 08 47 33.2 -0.5**
comp=Z,8.2nm,0.9s,mb4.4
CCM Cathedral Cave 40.90 271 *eP* **P 08 47 33.2 -0.5**
comp=Z,8.2nm,0.9s,mb4.4
OXF Oxford 42.17 266 *eP* **P 08 47 42.7 -1.5**
comp=Z,13nm,0.8s,mb4.6
OXF Oxford 42.17 266 *eP* **P 08 47 42.7 -1.5**
comp=Z,13nm,0.8s,mb4.6
LAO LASA Array 44.37 291 *eP* **P 08 48 02.4 +0.6**
comp=Z,11nm,0.8s,mb4.6
LAO LASA Array 44.37 291 *eP* **P 08 48 02.4 +0.6**
comp=Z,11nm,0.8s,mb4.6
MIAR Mount Ida 44.64 269 *eP* **P 08 48 04.2 +0.1**
comp=Z,160nm,3.0s
MIAR Mount Ida 44.64 269 *eP* **P 08 48 04.2 +0.1**
comp=Z,160nm,3.0s
INK Inuvik 44.71 328 *eP* **P 08 48 02.3 -2.0**
comp=Z,8.4nm,1.3s,mb4.4
INK Inuvik 44.71 328 *eP* **P 08 48 02.3 -2.0**
comp=Z,8.4nm,1.3s,mb4.4
EGMT Eagleton 45.53 295 *eP* **P 08 48 11.4 +0.4**
comp=Z,31nm,1.8s,mb4.9
EGMT Eagleton 45.53 295 *eP* **P 08 48 11.4 +0.3**
comp=Z,31nm,1.8s,mb4.9
PHWY Pilot Hill 47.23 285 *eP* **P 08 48 24.7 +0.2**
comp=Z,5.3nm,1.0s,mb4.4
PHWY Pilot Hill 47.23 285 *eP* **P 08 48 24.7 +0.2**
comp=Z,5.3nm,1.0s,mb4.4
HRY Holter Researc 47.45 295 *eP* **P 08 48 26.7 +0.6**
HRY Holter Researc 47.45 295 *eP* **P 08 48 26.7 +0.6**
BRTR Keskin Array B 47.46 78 P **P 08 48 26.7 +0.4**
comp=Z,2.7nm,0.8s,mb4.2,baz=308,slow=6.1,SNR=9.4
BRTR Keskin Array B 47.46 78 P **P 08 48 26.7 +0.4**
LKWY Lake 47.99 292 *eP* **P 08 48 32.6 +2.3**
comp=Z,2.8nm,0.8s,mb4.3
LKWY Lake 47.99 292 *eP* **P 08 48 32.6 +2.3**
comp=Z,2.8nm,0.8s,mb4.3
BOZ Bozeman (W) 47.99 293 *eP* **P 08 48 31.1 +0.7**
comp=Z,4.5nm,1.3s,mb4.3
BOZ Bozeman (W) 47.99 293 *eP* **P 08 48 31.1 +0.7**
comp=Z,4.5nm,1.3s,mb4.3
ISCO Idaho Springs 48.30 284 *eP* **P 08 48 33.6 +0.9**
comp=Z,3.6nm,0.9s,mb4.4
ISCO Idaho Springs 48.30 284 *eP* **P 08 48 33.6 +0.8**
comp=Z,3.6nm,0.9s,mb4.4
BW06 Boulder Array 48.65 289 *eP* **P 08 48 33.8 -1.7**
comp=Z,2.9nm,0.9s,mb4.3
BW06 Boulder Array 48.65 289 *eP* **P 08 48 33.8 -1.7**
comp=Z,2.9nm,0.9s,mb4.3
PDAR Pinedale Array 48.65 289 P **P 08 48 34.4 -1.1**
comp=Z,14nm,0.7s,mb4.1,baz=55,slow=8.8,SNR=11
PDAR Pinedale Array 48.65 289 P **P 08 48 34.4 -1.1**
DLMT Dillon 48.70 294 *eP* **P 08 48 37.0 +1.1**
comp=Z,27nm,2.0s,mb4.9
DLMT Dillon 48.70 294 *eP* **P 08 48 37.0 +1.2**
comp=Z,27nm,2.0s,mb4.9
IMW Indian Meadow 48.71 291 *eP* **P 08 48 36.9 +1.0**
comp=Z,1.6nm,1.0s,mb4.0
IMW Indian Meadow 48.71 291 *eP* **P 08 48 36.9 +1.0**
comp=Z,1.6nm,1.0s,mb4.0
SNOW Snow King Moun 48.88 291 *eP* **P 08 48 37.3 +0.1**
comp=Z,3.8nm,1.0s,mb4.4
SNOW Snow King Moun 48.88 291 *eP* **P 08 48 37.3 +0.1**
comp=Z,3.8nm,1.0s,mb4.4
TPAW Teton Pass 48.97 291 *eP* **P 08 48 38.4 +0.5**
comp=Z,3.5nm,0.8s,mb4.4
TPAW Teton Pass 48.97 291 *eP* **P 08 48 38.4 +0.5**
comp=Z,3.5nm,0.8s,mb4.4
DCID1 Drake Creek 49.04 291 *eP* **P 08 48 40.1 +1.7**
comp=Z,3.6nm,0.4s,mb4.8
DCID1 Drake Creek 49.04 291 *eP* **P 08 48 40.1 +1.7**
comp=Z,3.6nm,0.4s,mb4.8
DAWY Dawson 49.15 326 *eP* **P 08 48 39.3 +0.3**
DAWY Dawson 49.15 326 *eP* **P 08 48 39.3 +0.3**
MCMT McKenzie Canyo 49.18 293 *eP* **P 08 48 40.2 +0.7**
comp=Z,1.2nm,1.0s,mb3.9
MCMT McKenzie Canyo 49.18 293 *eP* **P 08 48 40.2 +0.7**
comp=Z,1.2nm,1.0s,mb3.9
AMTX Amarillo 49.26 276 *eP* **P 08 48 40.7 +0.4**
comp=Z,20nm,1.0s,mb5.1
AMTX Amarillo 49.26 276 *eP* **P 08 48 40.7 +0.4**
comp=Z,20nm,1.0s,mb5.1
EGAK Eagle 49.27 327 *eP* **P 08 48 40.5 +0.5**
comp=Z,14nm,1.4s,mb4.8
EGAK Eagle 49.27 327 *eP* **P 08 48 40.5 +0.6**
comp=Z,14nm,1.4s,mb4.8
SMCO Snowmass 49.50 284 *eP* **P 08 48 44.1 +2.1**
comp=Z,6.0nm,1.6s,mb4.4
SMCO Snowmass 49.50 284 *eP* **P 08 48 44.1 +2.1**
comp=Z,6.0nm,1.6s,mb4.4
SDCO Great Sand Dun 49.59 281 *eP* **P 08 48 40.5 -2.2**
comp=Z,2.6nm,1.1s,mb4.2
SDCO Great Sand Dun 49.59 281 *eP* **P 08 48 40.5 -2.2**
comp=Z,2.6nm,1.1s,mb4.2
TORD Torodi Ar. Bea 49.62 130 P **P 08 48 41.8 -1.3**
comp=Z,3.2nm,0.7s,mb4.4,baz=333,slow=7.8,SNR=18
TORD PcP PcP 08 50 03.7 -0.9
comp=Z,0.8nm,0.9s,baz=320,slow=5.6,SNR=2.9
ARU Arti 49.97 46 *eP* **P 08 48 45.5 +0.2**
comp=Z,8.3nm,1.0s,mb4.7
ARU Arti 49.97 46 *eP* **P 08 48 45.5 +0.2**
comp=Z,8.2nm,1.0s,mb4.7
HWUT Hardware Ranch 50.54 289 *eP* **P 08 48 50.0 +0.1**
comp=Z,12nm,0.9s,mb4.8
HWUT Hardware Ranch 50.54 289 *eP* **P 08 48 50.0 +0.1**
comp=Z,12nm,0.9s,mb4.8
HLID Hailey 50.85 293 *eP* **P 08 48 52.4 +0.1**
comp=Z,2.2nm,0.9s,mb4.1
HLID Hailey 50.85 293 *eP* **P 08 48 52.4 +0.2**
comp=Z,2.2nm,0.9s,mb4.1
JCT Junction City 51.23 270 *eP* **P 08 48 54.7 -0.6**
comp=Z,7.0nm,0.9s,mb4.6
JCT Junction City 51.23 270 *eP* **P 08 48 54.7 -0.5**
comp=Z,7.0nm,0.9s,mb4.6
SRU San Rafael 51.60 286 *eP* **P 08 48 57.8 -0.1**
comp=Z,4.4nm,0.9s,mb4.4
SRU San Rafael 51.60 286 *eP* **P 08 48 57.8 -0.1**
comp=Z,4.4nm,0.9s,mb4.4
BGU Big Grassy Mou 51.81 290 *eP* **P 08 48 58.5 -1.0**
comp=Z,2.7nm,0.9s,mb4.2
BGU Big Grassy Mou 51.81 290 *eP* **P 08 48 58.5 -1.0**
comp=Z,2.7nm,0.9s,mb4.2
ANMO Albuquerque 52.06 280 P **P 08 49 01.9 +0.5**
comp=Z,1.3nm,0.9s,mb3.9,baz=81,slow=11,SNR=4.1
ANMO Albuquerque 52.06 280 *eP* **P 08 49 02.5 +1.1**
comp=Z,2.8nm,1.0s,mb4.2
ANMO Albuquerque 52.06 280 *eP* **P 08 49 02.5 +1.1**
comp=Z,2.8nm,1.0s,mb4.2
DUG Dugway 52.18 289 *eP* **P 08 49 02.4 +0.2**
comp=Z,67nm,2.8s,mb5.1
DUG Dugway 52.18 289 *eP* **P 08 49 02.4 +0.2**
comp=Z,67nm,2.8s,mb5.1
MCK McKinley 52.46 329 *eP* **P 08 49 05.2 +1.2**
comp=Z,64nm,1.9s,mb5.2
MCK McKinley 52.46 329 *eP* **P 08 49 05.2 +1.2**
comp=Z,64nm,1.9s,mb5.2
DBIC Dimbokro 52.68 141 P **P 08 49 05.0 -1.1**
comp=Z,4.0nm,0.7s,mb4.5,baz=351,slow=9.2,SNR=5.1
DBIC Dimbokro 52.68 141 P **P 08 49 05.0 -1.1**
BNM Barren Site 52.71 279 *eP* **P 08 49 06.8 +0.5**
comp=Z,9.8nm,1.5s,mb4.5
BNM Barren Site 52.71 279 *eP* **P 08 49 06.8 +0.6**
comp=Z,9.8nm,1.5s,mb4.5
ELK Elko 53.18 291 P **P 08 49 10.4 +0.9**
comp=Z,1.3nm,0.8s,mb3.9,baz=41,slow=11,SNR=5.1
ELK Elko 53.18 291 P **P 08 49 10.4 +0.8**
AKTK Aktyubinsk 53.60 52 P **P 08 49 11.6 -1.0**
AKTK LR LR 09 10 23.1
AKTK Aktyubinsk 53.60 52 P **P 08 49 11.6 -1.0**
AKTO Aktyubinsk 53.60 52 P **P 08 49 11.6 -1.0**
comp=Z,1.8nm,0.9s,mb4.0,baz=329,slow=10,SNR=6.6
AKTO LR LR 09 10 23.1
comp=Z,416nm,19.2s,MS4.5,baz=319,slow=34
WVOR Wild Horse Val 53.92 295 *eP* **P 08 49 15.2 +0.2**
comp=Z,4.1nm,0.9s,mb4.4
WVOR Wild Horse Val 53.92 295 *eP* **P 08 49 15.2 +0.2**
comp=Z,4.1nm,0.9s,mb4.4
TXAR Lajitas Array 54.37 273 P **P 08 49 18.6 +0.1**
comp=Z,0.8nm,0.8s,mb3.7,baz=57,slow=6.6,SNR=10
TXAR Lajitas Array 54.37 273 P **P 08 49 18.6 +0.1**
ASF Jabal al Asfar 54.54 82 LR LR 09 12 58.0
comp=Z,201nm,20.9s,MS4.2,baz=357,slow=36
TIXI Tiksi 54.81 6 *eP* **P 08 49 21.4 +0.3**
comp=Z,3.7nm,0.8s,mb4.5
TIXI Tiksi 54.81 6 *eP* **P 08 49 21.4 +0.3**
comp=Z,3.7nm,0.8s,mb4.5
NVAR Mina Array Bea 56.49 291 P **P 08 49 33.9 +0.3**
comp=Z,0.2nm,0.4s,mb3.5,baz=51,slow=5.9,SNR=2.8
NVAR Mina Array Bea 56.49 291 P **P 08 49 33.9 +0.3**
BRVK Borovoye 57.24 44 *eP* **P 08 49 39.3 +0.6**
comp=Z,4.1nm,0.9s,mb4.5
BRVK Borovoye 57.24 44 *eP* **P 08 49 39.3 +0.6**
comp=Z,4.1nm,0.9s,mb4.5
BVAR Borovoye Array 57.31 44 P **P 08 49 39.5 +0.3**
comp=Z,2.0nm,0.7s,mb4.2,baz=307,slow=5.4,SNR=11
BVAR Borovoye Array 57.31 44 P **P 08 49 39.5 +0.3**
ROSC El Rosal 57.92 228 *eP* **P 08 49 45.4 +1.4**
comp=Z,15nm,0.7s,mb5.1,baz=87,slow=9.9,SNR=14
ROSC El Rosal 57.92 228 *eP* **P 08 49 45.9 +2.0**
ROSC El Rosal 57.92 228 *eP* **P 08 49 45.9 +2.0**
ZALV Zalesovo Beam 62.11 35 P **P 08 50 12.4 +0.2**
comp=Z,0.8nm,0.6s,mb4.0,baz=336,slow=6.6,SNR=2.8
KURK Kurchatov 62.39 41 P **P 08 50 13.9 -0.3**
comp=Z,1.4nm,0.8s,mb4.1,baz=322,slow=7.5,SNR=5.1
KURK Kurchatov 62.39 41 P **P 08 50 13.9 -0.3**
EKS2 Erkin-Say 66.66 49 *eP* **P 08 50 43.8 +1.6**
comp=Z,37nm,0.7s,mb5.5
EKS2 Erkin-Say 66.66 49 *eP* **P 08 50 43.8 +1.6**
comp=Z,37nm,0.7s,mb5.5
MK31 Makanchi Array 66.99 41 *eP* **P 08 50 42.9 -1.4**
MK31 Makanchi Array 66.99 41 *eP* **P 08 50 42.9 -1.3**
MKAR Makanchi Array 66.99 41 P **P 08 50 43.2 -1.0**
comp=Z,1.0nm,0.7s,mb4.0,baz=317,slow=5.9,SNR=7.6
MKAR Makanchi Array 66.99 41 P **P 08 50 43.2 -1.0**
AAK Ala-Archa 67.01 49 P **P 08 50 44.6 +0.1**
comp=Z,0.5nm,0.3s,mb4.0,baz=284,slow=14,SNR=4.3
AAK Ala-Archa 67.01 49 *eP* **P 08 50 45.9 +1.4**
comp=Z,10nm,1.4s,mb4.7
AAK Ala-Archa 67.01 49 *eP* **P 08 50 45.9 +1.4**
comp=Z,10nm,1.4s,mb4.7
UCH Uchtor 67.34 49 *eP* **P 08 50 49.2 +2.6**
comp=Z,5.8nm,1.0s,mb4.6
UCH Uchtor 67.34 49 *eP* **P 08 50 49.2 +2.6**
comp=Z,5.8nm,1.0s,mb4.6
WMQ Urumqi 71.57 40 *eP* **P 08 51 15.6 +2.9**
SONM Songino Array 74.07 26 P **P 08 51 27.6 +0.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=344,slow=4.9,SNR=4.4
SONM Songino Array 74.07 26 P **P 08 51 27.6 +0.1**
LPAZ La Paz 74.89 213 P **P 08 51 32.3 -0.2**
comp=Z,1.2nm,0.9s,mb3.8,baz=84,slow=4.1,SNR=4.1
LPAZ La Paz 74.89 213 P **P 08 51 32.3 -0.2**
GTA Gaotai 79.80 34 *eP* **P 08 51 53.5 -6.4**
GTA pP pP 08 51 57.8 -3.1
GTA sP sP 08 52 00.9 -0.3
GTA PP PP 08 54 59.8 -0.5
GTA S S 09 01 54.3 -9.0
GTA sS sS 09 02 02.1 -2.9
GTA SS SS 09 07 04.3 -6.5
GTA pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
GTA pmax pmax
comp=Z,45nm,5.1s
GTA LR LR
comp=N,120nm,17.1s,MS4.5
GTA LR LR
comp=E,120nm,15.0s,MS4.5
GTA LR LR
comp=Z,160nm,17.7s,MS4.4
CPUP Villa Florida 81.62 200 P **P 08 52 08.8 -0.7**
comp=Z,1.0nm,0.6s,mb4.0,baz=14,slow=6.6,SNR=5.0
CPUP Villa Florida 81.62 200 P **P 08 52 08.8 -0.7**
HHC Hu-ho-hao-te 81.92 25 *eP* **P 08 52 09.2 -2.0**
HHC pP pP 08 52 14.0 +1.8
HHC sP sP 08 52 16.3 +3.8
HHC S S 09 02 20.9 -4.5
HHC SKS 09 02 24.4
HHC sS sS 09 02 29.6 +2.6
HHC SS SS 09 07 41.6 -0.6
HHC pmax pmax
comp=Z,21nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,120nm,6.5s
HHC LR LR
comp=N,210nm,21.4s,MS4.6
HHC LR LR
comp=E,140nm,19.3s,MS4.6
HHC LR LR
comp=Z,290nm,18.8s,MS4.7
LZH Lanzhou 84.14 32 *eP* **P 08 52 20.0 -2.8**
LZH pP pP 08 52 24.5 +0.7
LZH sP sP 08 52 26.9 +2.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.0
CD2 Chengdu 88.86 34 P **P 08 52 44.8 -1.2**
CD2 pP pP 08 52 49.6 +2.6
CD2 sP sP 08 52 51.7 +4.4
CD2 PP PP 08 56 15.0 +0.8
CD2 SKS 09 03 10.7
CD2 S S 09 03 28.6 -5.6
CD2 SS SS 09 09 21.1 -3.6
CD2 pmax pmax
comp=Z,110nm,5.9s
CD2 LR LR
comp=N,630nm,11.9s
CD2 LR LR
comp=Z,430nm,17.8s
KMI Kunming 93.79 37 P **P 08 53 08.7 -0.2**
KMI pP pP 08 53 12.1 +2.2
KMI sP sP 08 53 13.6 +3.3
KMI PP PP 08 56 58.5 +5.2
KMI S S 09 04 15.3 -3.9
KMI SS SS 09 10 38.0 +2.0
KMI pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
KMI pmax pmax
comp=Z,37nm,4.1s
KMI LR LR
comp=N,220nm,17.8s,MS4.7
KMI LR LR
comp=E,99nm,20.6s,MS4.7
KMI LR LR
comp=Z,190nm,23.1s,MS4.5
GYA Guiyang 93.93 34 P **P 08 53 10.0 +0.4**
WRAB Tennant Creek 145.71 18 *e*PKPdf PKPdf 08 59 29.7 -0.6
WRAB Tennant Creek 145.71 18 *e*PKIKP PKPdf 08 59 29.7 -0.6
WRA Warramunga Arr 145.72 18 PKPbc PKPbc 08 59 29.4 -1.2
comp=Z,2.1nm,0.7s,baz=346,slow=3.2,SNR=14
WRA Warramunga Arr 145.72 18 PKPbc PKPbc 08 59 29.4 -1.2
ASAR Alice Springs 149.26 20 PKPbc PKPbc 08 59 38.5 -1.9
comp=Z,2.7nm,0.5s,baz=351,slow=2.4,SNR=52
ASAR Alice Springs 149.26 20 PKPbc PKPbc 08 59 38.5 -1.9

ISC 06 08:43:49.1±5.4, 38°.8N±0°.4×74°.55E±0°.09, h10km, n10, σ0s89/11, 4C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.30**	**58**	Pg	**Pg**	**08 44 14.4**	**+0.3**
KSH				Sg	**Sg**	**08 44 30.2**	**-0.8**
KSH				smax			
	comp=N,82nm,0.4s						
KSH				smax			
	comp=E,64nm,0.2s						
KZA	**Kyzart**	**3.28**	**9**	P	**Pn**	**08 44 41.1**	**+0.5**
	SNR=6.0						
AML	**Almayashu**	**3.36**	**349**	P	**Pn**	**08 44 40.8**	**-0.7**
	SNR=13						
UCH	**Uchtor**	**3.39**	**360**	P	**Pn**	**08 44 41.9**	**-0.2**
	SNR=21						
ULHL	**Ulahol**	**3.64**	**20**	P	**Pn**	**08 44 51.4**	**+5.8**
	SNR=6.6						
AAK	**Ala-Archa**	**3.79**	**359**	P	**Pn**	**08 44 47.9**	**+0.3**
	SNR=6.5						
KBK	**Karagaybulak**	**3.83**	**4**	P	**Pn**	**08 44 49.0**	**+0.9**
	SNR=7.6						
EKS2	**Erkin-Say**	**3.87**	**352**	P	**Pn**	**08 44 49.3**	**+0.7**
	SNR=5.4						
TKM2	**Tokmak 2**	**4.16**	**11**	⇑Pn	**Pn**	**08 44 53.3**	**+0.7**
	comp=E,1.3nm,0.5s						
TKM2				⇑Lg		08 45 38.8	
	comp=E,5.4nm,0.5s						
KK31	**Karatay Array**	**5.24**	**326**	⇑Pn	**Pn**	**08 45 05.1**	**-2.4**
	comp=E,0.6nm,0.3s,baz=129,slow=12,SNR=7.4						
KK31				⇑Lg		08 46 14.4	
	comp=E,2.2nm,0.4s,baz=127,slow=31,SNR=4.8						

SZGRF ***06*** *08:46:56.7, 52°.30N×37°.99W, h33km, mb5.0, MS4.6, North Atlantic Ocean*

IDC ***06*** *08:47:07.5±0.4, 53°.34N×35°.22W, h0km, mb4.4/37, mb1 4.5/38, mb1mx4.5/44, mbtmp4.4/38, ML2.7/1, MS4.5/33, Ms1 4.5/33, ms1mx4.5/39, Error ellipse: s-maj=14.2km s-min=8.4km az=176.0*

ISCJB ***06*** *08:47:08.9±0.1, 53°.48N±0°.04×35°.22W±0°.02, h10km, mb4.7/221, MS4.5/41, Error ellipse: s-maj=5.3km s-min=1.7km az=7.8*

GCMT ***06*** *08:47:10.9±0.2, 53°.47N×35°.20W, h12km, MW5.2/95, Moment Tensor Solution. s32,c39; s95,c164; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.83±.03; Mθθ0.07±.02; Mφφ0.76±.02; Mrθ0.32±.07; Mrφ0.15±.01; Mθφ0.29±.05; Best double couple: M0 0.91500×10^17 NP1:φs359.00000°, δ35.00000°, λ-113.00000°. NP2: φs207.00000°, δ58.00000°, λ-75.00000°. Principal axes: T 0.8670, Plg12.0000°, Azm286.0000°; N 0.0980, Plg13.0000°, Azm19.0000°; P -0.9640, Plg72.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***06*** *08:47:10.6±0.1, 53°.50N×35°.13W, h10km, mb4.8/99, Ms4.4, Mw5.2 Error ellipse: s-maj=7.0km s-min=2.6km az=10.0*

NEIC ***06*** *08:47:10.9±0.1, 53°.48N×35°.13W, h10km, mb4.8/170, Error ellipse: s-maj=6.9km s-min=2.4km az=8.0*

BJI ***06*** *08:47:10.4, 54°.08N×34°.98W, h10km, mB5.0/14, mb4.9/25, Ms4.9/10, Ms7 4.6/10*

ISC 06 08:47:10.7±0.1, 53°.47N±0°.04×35°.17W±0°.02, h10km, (h13km±1.0km: pP-P), n944, σ0s83/902, mb4.7/221, MS4.5/41, 174C-174D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.32**	**26**	LR	LR	08 53 50.4	
	comp=Z,2μm,20.3s,baz=94,slow=30						
SFJD	**Kangerlussuaq**	**15.51**	**337**	**Pn**	**Pn**	**08 50 53.2**	**+4.1**
	0.6nm,0.3s,baz=124,slow=9.8,SNR=12						
SFJD	**Kangerlussuaq**	**15.51**	**337**	*e*P	**Pn**	**08 50 54.6**	**+5.4**
	50nm,0.8s						
SFJD	**Kangerlussuaq**	**15.51**	**337**	*i* P	**Pn**	**08 50 53.4**	**+4.2**
	49nm,0.8s						
SFJD	**Kangerlussuaq**	**15.51**	**337**	*e*P	**Pn**	**08 50 54.6**	**+5.4**
	50nm,0.8s						
SCO	**Scoresbysund**	**18.09**	**14**	*i* P	**Pn**	**08 51 23.2**	**+1.5**
	5.6nm,1.0s						
SCO	**Scoresbysund**	**18.09**	**14**	*e*P	**Pn**	**08 51 23.2**	**+1.5**
	5.6nm,1.0s,SNR=63						
SCHQ	**Schefferville**	**18.52**	**287**	P	**Pn**	**08 51 23.6**	**-3.5**
	0.2nm,0.3s,baz=95,slow=9.2,SNR=11						
SCHQ				LR	LR	08 57 44.1	
	comp=Z,1μm,19.8s,baz=85,slow=34						
ESK	**Eskdalemuir**	**18.62**	**71**	*e*P	**Pn**	**08 51 29.2**	**+0.9**
	14nm,1.0s						
ESK	**Eskdalemuir**	**18.62**	**71**	*e*P	**Pn**	**08 51 29.2**	**+0.9**
	14nm,1.0s						
EKA	**Eskdalemuir Ar**	**18.64**	**71**	P	**Pn**	**08 51 30.8**	**+2.2**
	baz=280,slow=10,SNR=13						
EKA	**Eskdalemuir Ar**	**18.64**	**71**	P	**Pn**	**08 51 30.8**	**+2.2**
SUMG	**Summit**	**19.23**	**357**	*e*P	**Pn**	**08 51 35.9**	**+0.3**
	147nm,2.0s						
SUMG	**Summit**	**19.23**	**357**	*e*P	**Pn**	**08 51 35.9**	**+0.3**
	147nm,2.0s						
FRB	**Frobisher Bay**	**19.95**	**314**	P	**Pn**	**08 51 40.8**	**-3.3**
	4.2nm,0.9s,baz=102,slow=13,SNR=7.6						
FRB				LR	LR	08 57 52.2	
	comp=Z,3μm,18.1s,baz=84,slow=32						
FRB	**Frobisher Bay**	**19.95**	**314**	P	**Pn**	**08 51 40.8**	**-3.3**
EMAZ	**Mazaricos**	**20.27**	**111**	P	**P**	**08 51 47.0**	**+0.8**
	23nm,0.9s						
EMAZ	**Mazaricos**	**20.27**	**111**	P	**P**	**08 51 47.0**	**+0.9**
	23nm,0.9s						
STS	**Santiago**	**20.55**	**110**	P	**P**	**08 51 50.7**	**+1.5**
	14nm,0.8s						
STS	**Santiago**	**20.55**	**110**	P	**P**	**08 51 50.7**	**+1.5**
	14nm,0.8s						
ROSF	**Rostrenen**	**20.65**	**91**	*e*P	**P**	**08 51 51.5**	**+1.2**
	75nm,1.2s						
ROSF	**Rostrenen**	**20.65**	**91**	*e*P	**P**	**08 51 51.5**	**+1.2**
	37nm,1.2s						
ROSF	**Rostrenen**	**20.65**	**91**	*e*P	**P**	**08 51 51.5**	**+1.2**
	37nm,1.2s						
QUIF	**Quistinic**	**20.91**	**92**	*e*P	**P**	**08 51 53.9**	**+0.9**
	83nm,1.2s						

QUIF **Quistinic** 20.91 92 *eP* P 08 51 53.9 +0.9
42nm,1.2s
QUIF **Quistinic** 20.91 92 *eP* P 08 51 53.9 +0.9
42nm,1.2s
EPON **Pontenova** 21.06 107 P P 08 51 55.9 +1.1
29nm,1.2s,mb4.5
EPON **Pontenova** 21.06 107 P P 08 51 55.8 +1.1
29nm,1.2s,mb4.5
SGMF **Saint Gilles** 21.12 91 *eP* P 08 51 54.4 -0.9
129nm,1.3s,mb4.8
SGMF **Saint Gilles** 21.12 91 *eP* P 08 51 54.4 -0.9
64nm,1.3s,mb4.8
SGMF **Saint Gilles** 21.12 91 *eP* P 08 51 54.4 -0.9
64nm,1.3s,mb4.8
JMIC **Jan Mayen** 21.18 24 LR LR 08 58 02.9
comp=Z,2µm,19.2s,MS4.5,baz=218,slow=31
ELOB **Lobios** 21.49 112 P P 08 52 01.6 +2.2
13nm,0.9s,mb4.3
ELOB **Lobios** 21.49 112 P P 08 52 01.5 +2.1
13nm,0.9s,mb4.3
PCAB **Cabril** 21.61 112 *eP* P 08 52 05.3 +4.6
GRR **Gorron** 22.07 89 *eP* P 08 52 06.1 +0.5
GRR **Gorron** 22.07 89 *eP* P 08 52 06.1 +0.5
FLN **La Foliniere** 22.14 88 *eP* P 08 52 07.4 +1.2
95nm,1.2s,mb4.8
FLN *e*MLR MLR
comp=Z,3µm,23.0s,MS4.3
FLN **La Foliniere** 22.14 88 *eP* P 08 52 07.4 +1.2
comp=Z,48nm,1.2s,mb4.8
FLN LR LR
comp=Z,3µm,23.0s,MS4.6
FLN **La Foliniere** 22.14 88 *eP* P 08 52 07.4 +1.2
comp=Z,48nm,1.2s,mb4.8
ECAL **Calabor** 22.18 110 P P 08 52 06.2 -0.5
comp=Z,15nm,1.1s,mb4.3
ECAL **Calabor** 22.18 110 P P 08 52 06.2 -0.6
comp=Z,15nm,1.1s,mb4.3
EARI **Arriondas** 22.19 105 P P 08 52 05.6 -1.2
comp=Z,22nm,0.8s,mb4.7
EARI **Arriondas** 22.19 105 P P 08 52 05.6 -1.2
comp=Z,22nm,0.8s,mb4.7
PBRG **Braganca** 22.27 110 *eP* P 08 52 07.9 +0.2
comp=Z,51nm,1.7s,mb4.7
PBRG **Braganca** 22.27 110 *eP* P 08 52 07.9 +0.2
comp=Z,51nm,1.7s,mb4.7
LDF **La Druitiere** 22.42 88 *eP* P 08 52 07.6 -1.7
comp=Z,99nm,1.3s,mb4.8
LDF **La Druitiere** 22.42 88 *eP* P 08 52 07.6 -1.7
comp=Z,50nm,1.3s,mb4.8
LDF **La Druitiere** 22.42 88 *eP* P 08 52 07.6 -1.7
comp=Z,50nm,1.3s,mb4.8
MVO **Moncorvo** 22.54 112 *eP* P 08 52 10.6 +0.1
comp=Z,46nm,2.2s,mb4.5
MVO *e*LR LR 08 57 40.8
comp=Z,3µm,20.0s
MVO **Moncorvo** 22.54 112 *eP* P 08 52 10.6 +0.1
comp=Z,46nm,2.2s,mb4.5
MTE **Manteigas** 22.78 114 *eP* P 08 52 14.3 +1.2
comp=Z,31nm,2.3s,mb4.3
MTE *e*LR LR 08 57 45.8
comp=Z,3µm,18.0s
MTE **Manteigas** 22.78 114 *eP* P 08 52 09.7 -3.4
comp=Z,18nm,1.0s,mb4.4
MTE **Manteigas** 22.78 114 *eP* P 08 52 14.3 +1.2
comp=Z,31nm,2.3s,mb4.3
PMAFR **Mafra** 22.89 119 *e*LR LR 08 57 43.8
comp=Z,2µm,20.0s
PCBR **Castelo Branco** 23.21 115 *eP* P 08 52 18.0 +0.4
comp=Z,38nm,1.7s,mb4.5
PCBR **Castelo Branco** 23.21 115 *eP* P 08 52 18.0 +0.4
comp=Z,38nm,1.7s,mb4.5
ELAN **Lanestosa** 23.26 103 P P 08 52 16.6 -1.6
comp=Z,9.3nm,0.9s,mb4.2
ELAN **Lanestosa** 23.26 103 P P 08 52 16.6 -1.6
comp=Z,9.3nm,0.9s,mb4.2
MFF **Saint Martin d** 23.34 93 *eP* P 08 52 17.5 -1.5
comp=Z,116nm,1.4s,mb4.8
MFF **Saint Martin d** 23.34 93 *eP* P 08 52 17.5 -1.5
comp=Z,58nm,1.4s,mb4.8
MFF **Saint Martin d** 23.34 93 *eP* P 08 52 17.5 -1.5
comp=Z,58nm,1.4s,mb4.8
PKME **Peaks-Kenny Pk** 23.50 263 *eP* P 08 52 16.7 -4.0
comp=Z,222nm,2.3s,mb5.2
PMRV **Marv??o** 23.55 115 *eP* P 08 52 19.2 -2.0
comp=Z,36nm,2.5s,mb4.4
PMRV *e*LR LR 08 58 06.0
comp=Z,3µm,18.0s
PMRV **Marv??o** 23.55 115 *eP* P 08 52 19.2 -2.0
comp=Z,36nm,2.5s,mb4.4
PESTR **Estremoz** 23.85 117 *e*LR LR 08 58 15.3
comp=Z,3µm,18.0s
EVO **Evora** 23.87 118 *eP* P 08 52 24.3 +0.2
comp=Z,13nm,1.7s,mb4.1
EVO **Evora** 23.87 118 *eP* P 08 52 24.3 +0.2
comp=Z,13nm,1.7s,mb4.1
EBAD **Badajoz** 24.24 116 P P 08 52 26.7 -0.8
comp=Z,9.7nm,1.4s,mb4.0
EBAD **Badajoz** 24.24 116 P P 08 52 26.7 -0.8
comp=Z,9.7nm,1.4s,mb4.0
PBEJ **Beja** 24.32 118 *eP* P 08 52 29.3 +1.0
comp=Z,22nm,1.3s,mb4.4
PBEJ **Beja** 24.32 118 *eP* P 08 52 29.3 +1.0
comp=Z,22nm,1.3s,mb4.4
BAIF **Baives** 24.39 82 *eP* P 08 52 28.3 -0.5
comp=Z,58nm,1.0s,mb4.7
BAIF **Baives** 24.39 82 *eP* P 08 52 28.3 -0.5
comp=Z,29nm,1.0s,mb4.7
BAIF **Baives** 24.39 82 *eP* P 08 52 28.3 -0.5
comp=Z,29nm,1.0s,mb4.7
EALK **Alkurruntz** 24.40 101 P P 08 52 28.9 0.0
comp=Z,7.9nm,0.8s,mb4.2
EALK **Alkurruntz** 24.40 101 P P 08 52 29.0 +0.1
comp=Z,7.9nm,0.8s,mb4.2
MORF **Marmelete** 24.45 121 *eP* P 08 52 28.9 -0.6
comp=Z,41nm,1.3s,mb4.7
MORF *e*LR LR 08 58 49.8
comp=Z,957nm,20.0s
MORF **Marmelete** 24.45 121 *eP* P 08 52 28.9 -0.6
comp=Z,41nm,1.3s,mb4.7
PFVI **Vila Bisbo** 24.50 121 *eP* P 08 52 30.1 +0.2
comp=Z,86nm,1.5s,mb5.0
PFVI *e*LR LR 08 58 41.5
comp=Z,994nm,20.0s
PFVI **Vila Bisbo** 24.50 121 *eP* P 08 52 30.1 +0.2
comp=Z,86nm,1.5s,mb5.0
GUD **Guadarrama** 24.50 109 P P 08 52 30.8 +0.9
comp=Z,5.2nm,0.9s,mb4.0
GUD **Guadarrama** 24.50 109 P P 08 52 30.8 +0.9
comp=Z,5.2nm,0.9s,mb4.0
DOU **Dourbes** 24.61 82 P P 08 52 31.3 +0.5
SJPF **Ste Jean** 24.62 101 *eP* P 08 52 30.3 -0.7
comp=Z,23nm,1.1s,mb4.3
SJPF **Ste Jean** 24.62 101 *eP* P 08 52 30.3 -0.7
comp=Z,11nm,1.1s,mb4.3
SJPF **Ste Jean** 24.62 101 *eP* P 08 52 30.3 -0.7
comp=Z,11nm,1.1s,mb4.3
PBAR **Barrancos** 24.65 117 *eP* P 08 52 31.0 -0.2
comp=Z,31nm,1.6s,mb4.6
PBAR *e*LR LR 08 58 50.5
comp=Z,3µm,18.0s
PBAR **Barrancos** 24.65 117 *eP* P 08 52 31.0 -0.2
comp=Z,31nm,1.6s,mb4.6
GIVF **Givet** 24.74 81 *eP* P 08 52 32.2 +0.2
comp=Z,25nm,0.8s,mb4.5
GIVF **Givet** 24.74 81 *eP* P 08 52 32.2 +0.2
comp=Z,13nm,0.8s,mb4.5
GIVF **Givet** 24.74 81 *eP* P 08 52 32.2 +0.2
comp=Z,13nm,0.8s,mb4.5
PVAQ **Vaqueiros** 24.86 119 *eP* P 08 52 33.3 +0.1
PVAQ *e*LR LR 08 58 54.9
comp=Z,1µm,20.0s
PVAQ **Vaqueiros** 24.86 119 *eP* P 08 52 33.3 +0.1
PBDV **Barranco-do-Ve** 24.87 120 *eP* P 08 52 33.3 0.0
comp=Z,41nm,1.7s,mb4.7
PBDV *e*LR LR 08 58 55.5
comp=Z,1µm,20.0s
PBDV **Barranco-do-Ve** 24.87 120 *eP* P 08 52 33.3 0.0
comp=Z,41nm,1.7s,mb4.7
TCF **Toulx Ste Croi** 24.91 91 *eP* P 08 52 32.7 -0.9
comp=Z,60nm,1.3s,mb4.7
TCF **Toulx Ste Croi** 24.91 91 *eP* P 08 52 32.7 -0.9
comp=Z,30nm,1.3s,mb4.7
TCF **Toulx Ste Croi** 24.91 91 *eP* P 08 52 32.7 -0.9
comp=Z,30nm,1.3s,mb4.7
RJF **Les Rejaudoux** 25.01 94 *eP* P 08 52 33.3 -1.2
RJF *e*MLR MLR
comp=Z,3µm,21.8s,MS4.4
RJF **Les Rejaudoux** 25.01 94 *eP* P 08 52 33.3 -1.2
RJF LR LR
comp=Z,3µm,21.8s,MS4.7
RJF **Les Rejaudoux** 25.01 94 *eP* P 08 52 33.3 -1.2
KONO **Kongsberg** 25.03 58 *eP* P 08 52 34.4 -0.2
comp=Z,28nm,1.3s,mb4.6
KONO **Kongsberg** 25.03 58 *eP* P 08 52 34.3 -0.2
comp=Z,28nm,1.3s,mb4.6
PAB **San Pablo** 25.14 111 *eP* P 08 52 33.6 -2.1
comp=Z,11nm,1.0s,mb4.3
PAB **San Pablo** 25.14 111 *eP* P 08 52 33.6 -2.1
comp=Z,11nm,1.0s,mb4.3
EMIN **Mina Concepcio** 25.14 117 P P 08 52 36.8 +1.1
comp=Z,6.8nm,0.9s,mb4.2
EMIN **Mina Concepcio** 25.14 117 P P 08 52 36.8 +1.0
comp=Z,6.8nm,0.9s,mb4.2
ETSF **Etsaut** 25.14 101 *eP* P 08 52 35.0 -0.7
comp=Z,31nm,1.1s,mb4.5
ETSF **Etsaut** 25.14 101 *eP* P 08 52 35.0 -0.7
comp=Z,15nm,1.1s,mb4.5
ETSF **Etsaut** 25.14 101 *eP* P 08 52 35.0 -0.7
comp=Z,15nm,1.1s,mb4.5
BGF **Bois d'Agland** 25.15 90 *eP* P 08 52 34.7 -1.1
comp=Z,84nm,1.0s,mb4.9
BGF **Bois d'Agland** 25.15 90 *eP* P 08 52 34.7 -1.1
comp=Z,42nm,1.0s,mb4.9
BGF **Bois d'Agland** 25.15 90 *eP* P 08 52 34.7 -1.1
comp=Z,42nm,1.0s,mb4.9
ESDC **Sonseca Array** 25.26 110 P P 08 52 34.8 -2.0
comp=Z,10nm,0.9s,mb4.3,baz=312,slow=8.4,SNR=23
ESDC LR LR 09 00 32.9
comp=Z,2µm,18.8s,MS4.7,baz=305,slow=32
ESDC **Sonseca Array** 25.26 110 P P 08 52 36.5 -0.3
comp=Z,12nm,0.9s,mb4.4
ESDC **Sonseca Array** 25.26 110 P P 08 52 36.5 -0.3
comp=Z,12nm,0.9s,mb4.4
SSF **Saint Saulge** 25.30 89 *eP* P 08 52 36.0 -1.1
comp=Z,70nm,1.2s,mb4.8
SSF **Saint Saulge** 25.30 89 *eP* P 08 52 36.0 -1.1
comp=Z,35nm,1.3s,mb4.7
SSF **Saint Saulge** 25.30 89 *eP* P 08 52 36.0 -1.1
comp=Z,35nm,1.2s,mb4.7
AVF **Avril sur Loir** 25.34 90 *eP* P 08 52 36.1 -1.4
comp=Z,83nm,1.2s,mb4.8
AVF **Avril sur Loir** 25.34 90 *eP* P 08 52 36.1 -1.4
comp=Z,42nm,1.2s,mb4.8
AVF **Avril sur Loir** 25.34 90 *eP* P 08 52 36.1 -1.4
comp=Z,42nm,1.2s,mb4.8
LOR **Lormes** 25.41 88 *eP* P 08 52 37.3 -0.8
comp=Z,99nm,1.3s,mb4.9
LOR *e*MLR MLR
comp=Z,2µm,20.2s,MS4.3
LOR **Lormes** 25.41 88 *eP* P 08 52 37.3 -0.8
comp=Z,49nm,1.3s,mb4.9
LOR LR LR
comp=Z,2µm,20.3s,MS4.6
LOR **Lormes** 25.41 88 *eP* P 08 52 37.3 -0.8
comp=Z,49nm,1.3s,mb4.9
CAF **Calviac** 25.54 94 *eP* P 08 52 38.2 -1.1
CAF **Calviac** 25.54 94 *eP* P 08 52 38.2 -1.1
MEZF **Maizieres J'vi** 25.55 85 *eP* P 08 52 40.2 +0.8
comp=Z,54nm,0.7s,mb4.9
MEZF **Maizieres J'vi** 25.55 85 *eP* P 08 52 40.2 +0.8
comp=Z,54nm,0.7s,mb5.2
MEZF **Maizieres J'vi** 25.55 85 *eP* P 08 52 40.2 +0.8
comp=Z,27nm,0.7s,mb4.9
NAO01 **NORSAR Array S** 25.57 55 *eP* P 08 52 39.9 +0.5
comp=Z,7.7nm,0.9s,mb4.2
NAO01 **NORSAR Array S** 25.57 55 *eP* P 08 52 39.9 +0.5
comp=Z,7.7nm,0.9s,mb4.2
ETOR **Torete** 25.58 106 P P 08 52 39.2 -0.5
comp=Z,12nm,1.4s,mb4.2
ETOR **Torete** 25.58 106 P P 08 52 39.2 -0.5
comp=Z,12nm,1.4s,mb4.2
EBIE **Bielsa** 25.68 100 P P 08 52 39.7 -0.9
comp=Z,12nm,1.1s,mb4.3
EBIE **Bielsa** 25.68 100 P P 08 52 39.7 -0.9
comp=Z,12nm,1.1s,mb4.3
SMF **Signal de Mont** 25.70 89 *eP* P 08 52 40.6 -0.2
comp=Z,61nm,1.2s,mb4.7
SMF **Signal de Mont** 25.70 89 *eP* P 08 52 40.6 -0.2
comp=Z,30nm,1.2s,mb4.7
SMF **Signal de Mont** 25.70 89 *eP* P 08 52 40.6 -0.2
comp=Z,30nm,1.2s,mb4.7
NB2 **NORSAR Subarra** 25.71 54 P P 08 52 41.6 +0.9
comp=Z,20nm,1.2s,mb4.5,baz=274,slow=9.3
NB2 **NORSAR Subarra** 25.71 54 P P 08 52 41.6 +0.9
comp=Z,20nm,1.2s,mb4.5,baz=274,slow=9.0,SNR=5.9
NOA **NORSAR Array B** 25.71 54 P P 08 52 41.5 +0.8
comp=Z,4.6nm,0.9s,mb4.0,baz=275,slow=9.9,SNR=5.7
NOA LR LR 09 01 50.8
comp=Z,940nm,18.4s,MS4.3,baz=270,slow=34
NOA **NORSAR Array B** 25.71 54 P P 08 52 41.5 +0.8
EADA **Adamuz** 25.98 114 P P 08 52 43.5 +0.2
comp=Z,9.0nm,0.9s,mb4.3
EADA **Adamuz** 25.98 114 P P 08 52 43.5 +0.1
comp=Z,9.0nm,0.9s,mb4.3
HNH **Hanover** 26.15 263 *eP* P 08 52 46.6 +1.8
ESPR **Espera** 26.25 117 P P 08 52 47.7 +1.9
comp=Z,21nm,1.2s,mb4.5
ESPR **Espera** 26.25 117 P P 08 52 47.7 +1.9
comp=Z,21nm,1.2s,mb4.5
FRNY **Flat Rock** 26.29 267 *eP* P 08 52 46.4 +0.3
comp=Z,91nm,2.1s,mb4.9
FRNY **Flat Rock** 26.29 267 *eP* P 08 52 46.4 +0.3
comp=Z,91nm,2.1s,mb4.9
EBAN **Banos Encina** 26.42 113 P P 08 52 48.4 +1.1
comp=Z,12nm,0.9s,mb4.4
EBAN **Banos Encina** 26.42 113 P P 08 52 48.4 +1.1
comp=Z,12nm,0.9s,mb4.4
MTLF **Montolieu** 26.52 97 *eP* P 08 52 47.1 -1.1
comp=Z,27nm,1.0s,mb4.4
MTLF **Montolieu** 26.52 97 *eP* P 08 52 47.1 -1.1
comp=Z,13nm,1.0s,mb4.4
MTLF **Montolieu** 26.52 97 *eP* P 08 52 47.1 -1.1
comp=Z,13nm,1.0s,mb4.4
HAU **Haudompre** 26.55 85 *eP* P 08 52 47.1 -1.3
comp=Z,76nm,1.2s,mb4.8
HAU *e*MLR MLR
comp=Z,2µm,20.8s,MS4.2
HAU **Haudompre** 26.55 85 *eP* P 08 52 47.1 -1.3
comp=Z,38nm,1.2s,mb4.8
HAU LR LR
comp=Z,2µm,20.8s,MS4.5
HAU **Haudompre** 26.55 85 *eP* P 08 52 47.1 -1.3
comp=Z,38nm,1.2s,mb4.8
EMOS **Mosqueruela** 26.79 105 P P 08 52 53.1 +2.5
comp=Z,17nm,1.0s,mb4.5
EMOS **Mosqueruela** 26.79 105 P P 08 52 53.1 +2.5
comp=Z,17nm,1.0s,mb4.5
EVIA **Vianos** 26.80 110 P P 08 52 52.2 +1.5
comp=Z,14nm,1.0s,mb4.5
EVIA **Vianos** 26.80 110 P P 08 52 52.2 +1.5
comp=Z,14nm,1.0s,mb4.5
ERTA **Horta de San J** 26.87 103 P P 08 52 52.8 +1.4
comp=Z,19nm,1.1s,mb4.5
ERTA **Horta de San J** 26.87 103 P P 08 52 52.8 +1.4
comp=Z,19nm,1.1s,mb4.5
CDF **Champ du Feu** 26.91 83 *eP* P 08 52 52.0 +0.3
CDF **Champ du Feu** 26.91 83 *eP* P 08 52 52.0 +0.3
HINF **Hinteralfeld** 26.94 85 *eP* P 08 52 52.0 +0.1
HINF **Hinteralfeld** 26.94 85 *eP* P 08 52 52.0 +0.1
ECHE **Chera** 27.02 107 P P 08 52 54.0 +1.3
comp=Z,8.7nm,0.8s,mb4.3
ECHE **Chera** 27.02 107 P P 08 52 54.0 +1.3
comp=Z,8.7nm,0.8s,mb4.3
HFS **Hagfors** 27.02 56 P P 08 52 53.6 +1.0
comp=Z,3.5nm,1.0s,mb3.9,baz=252,slow=9.2,SNR=4.7
HFS LR LR 09 02 12.4
comp=Z,1µm,20.0s,MS4.5,baz=276,slow=33
HFS **Hagfors** 27.02 56 P P 08 52 53.6 +1.0
EMIJ **Mijas** 27.05 116 P P 08 52 56.0 +3.0
comp=Z,13nm,1.3s,mb4.3
EMIJ **Mijas** 27.05 116 P P 08 52 56.0 +3.0
comp=Z,13nm,1.3s,mb4.3
CABF **La Chapelle** 27.06 88 *eP* P 08 52 53.3 +0.2
comp=Z,38nm,1.2s,mb4.5
CABF **La Chapelle** 27.06 88 *eP* P 08 52 53.3 +0.2
comp=Z,19nm,1.2s,mb4.5
CABF **La Chapelle** 27.06 88 *eP* P 08 52 53.3 +0.2
comp=Z,19nm,1.2s,mb4.5
LASF **Ste Croix** 27.08 94 *eP* P 08 52 52.8 -0.4
comp=Z,22nm,1.0s,mb4.3
LASF **Ste Croix** 27.08 94 *eP* P 08 52 52.8 -0.4
comp=Z,11nm,1.0s,mb4.3
NCB **Newcomb** 27.15 265 *eP* P 08 52 52.8 -1.0
comp=Z,93nm,2.1s,mb5.0
NCB **Newcomb** 27.15 265 *eP* P 08 52 52.8 -1.0
comp=Z,93nm,2.1s,mb5.0
ETOB **Tobarra** 27.33 109 P P 08 52 56.8 +1.3
comp=Z,12nm,1.0s,mb4.4
ETOB **Tobarra** 27.33 109 P P 08 52 56.8 +1.3
comp=Z,12nm,1.0s,mb4.4
EJON **La Jonquera** 27.45 98 P P 08 52 59.0 +2.5
comp=Z,8.2nm,1.0s,mb4.2
EJON **La Jonquera** 27.45 98 P P 08 52 59.0 +2.5
comp=Z,8.2nm,1.0s,mb4.2
EGUA **Guajares** 27.50 114 P P 08 52 59.9 +2.8
comp=Z,38nm,0.8s,mb5.1
EGUA **Guajares** 27.50 114 P P 08 52 59.9 +2.8
comp=Z,38nm,0.8s,mb5.1
EBER **Berja** 27.82 113 P P 08 53 02.5 +2.6
comp=Z,11nm,1.2s,mb4.4
EBER **Berja** 27.82 113 P P 08 53 02.5 +2.5
comp=Z,11nm,1.2s,mb4.4
LPL **La Plagne** 28.01 89 *eP* P 08 53 01.9 +0.3
LPL **La Plagne** 28.01 89 *eP* P 08 53 01.9 +0.3
LPG **La Plagne** 28.03 89 *eP* P 08 53 02.4 +0.7
LPG **La Plagne** 28.03 89 *eP* P 08 53 02.4 +0.7
EBEN **Beniarda** 28.04 108 P P 08 53 03.4 +1.5
comp=Z,6.5nm,0.8s,mb4.3
EBEN **Beniarda** 28.04 108 P P 08 53 03.4 +1.5
comp=Z,6.5nm,0.8s,mb4.3
GRA1 **Grafenberg Arr** 28.68 79 *eP* P 08 53 06.9 -0.5
comp=Z,22nm,1.2s,mb4.8
GRA1 LR LR
comp=Z,1µm,18.8s,MS4.6
GRA1 **Grafenberg Arr** 28.68 79 *eP* P 08 53 06.9 -0.5
comp=Z,22nm,1.2s,mb4.8
GRF **Grafenberg Arr** 28.68 79 *eP* P 08 53 06.9 -0.5
comp=Z,22nm,1.2s,mb4.8
GRF *e*L 09 03 40.5
comp=Z,1µm,18.8s
GRF **Grafenberg Arr** 28.68 79 *eP* P 08 53 06.9 -0.5
comp=Z,22nm,1.2s,mb4.8
BSD **Bornholm Skovb** 28.78 66 *i* P P 08 53 08.7 +0.4
comp=Z,12nm,1.0s,mb4.6
BSD **Bornholm Skovb** 28.78 66 *eP* P 08 53 08.8 +0.5
comp=Z,12nm,1.0s,mb4.5,SNR=48
CLL **Collm** 29.04 74 *eP* P 08 53 08.0 -2.7
CLL **Collm** 29.04 74 *eP* P 08 53 08.0 -2.7
CLL *i* P(2) pP 08 53 11.6 -2.1
comp=Z,18nm,1.1s
CLL *e* 08 53 16.0
CLL **Collm** 29.04 74 *eP* P 08 53 08.0 -2.7
LMR **La Mourre** 29.08 93 *eP* P 08 53 11.2 +0.1
comp=Z,35nm,1.1s,mb4.7
LMR **La Mourre** 29.08 93 *eP* P 08 53 11.2 +0.1
comp=Z,17nm,1.1s,mb4.7
LMR **La Mourre** 29.08 93 *eP* P 08 53 11.2 +0.1
comp=Z,17nm,1.1s,mb4.7
NKC **Novy Kostel** 29.16 77 AMS AMS 09 04 00.0
comp=Z,2µm,16.1s
DAVOX **Davos/Dischmat** 29.24 85 P P 08 53 11.4 -1.1
comp=Z,1.9nm,0.4s,mb4.2,baz=315,slow=20,SNR=7.0
DAVOX LR LR 09 04 27.9
comp=Z,1µm,18.6s,MS4.6,baz=263,slow=36
DAVOX **Davos/Dischmat** 29.24 85 P P 08 53 11.4 -1.1
FETA **Feichten** 29.63 84⇓ *i* P P 08 53 17.0 +1.2
comp=Z,12nm,1.3s,mb4.5
SADO **Sadowa** 29.64 271 P P 08 53 15.2 -0.9
comp=Z,9.0nm,0.9s,mb4.5,baz=73,slow=10,SNR=6.0
SADO LR LR 09 04 14.9
comp=Z,3µm,19.0s,MS4.9,baz=66,slow=35
SADO **Sadowa** 29.64 271 P P 08 53 15.2 -0.9
BRG **Berggiesshubel** 29.76 75 *eP* P 08 53 16.3 -0.7
comp=Z,9.2nm,1.1s,mb4.4
MDT **Midelt** 30.02 121 LR LR 09 03 49.8
comp=Z,530nm,19.9s,MS4.2,baz=347,slow=33
PVCC **Panska Ves** 30.27 75 AMS AMS 09 05 40.0
comp=Z,2µm,14.5s
KHC **Kasperske Hory** 30.31 78 AMS AMS 09 04 30.0
comp=Z,2µm,17.0s
PRU **Pruhonice** 30.48 76 AMS AMS 09 04 40.0
comp=Z,2µm,17.0s
GERES **GERESS Array B** 30.51 79 P P 08 53 22.7 -0.9
comp=Z,3.3nm,0.9s,mb4.2,baz=297,slow=8.8,SNR=14
GERES LR LR 09 05 05.4
comp=Z,1µm,18.2s,MS4.6,baz=282,slow=35
GERES **GERESS Array B** 30.51 79 P P 08 53 22.7 -1.0
SPITS **Spitsbergen Ar** 30.57 19 LR LR 09 02 59.5
comp=Z,397nm,21.2s,MS4.0,baz=245,slow=31
KBA **Koelnbreinsper** 31.15 82⇑ *i* P P 08 53 31.5 +2.1
comp=Z,11nm,1.2s,mb4.6
MOA **Molln** 31.31 80⇑ *i* P P 08 53 30.3 -0.5
comp=Z,18nm,1.5s,mb4.7
TREC **Trest** 31.34 77 AMS AMS 09 05 20.0
comp=Z,2µm,16.6s
DPC **Dobruska-Polom** 31.36 74 AMS AMS 09 06 30.0
comp=Z,2µm,13.9s
RES **Resolute Bay** 31.47 334 P P 08 53 31.2 -0.7
comp=Z,5.2nm,1.1s,mb4.3,baz=100,slow=8.6,SNR=15
RES **Resolute Bay** 31.47 334 *eP* P 08 53 31.4 -0.6
comp=Z,13nm,1.2s,mb4.6
RES **Resolute Bay** 31.47 334 *eP* P 08 53 31.4 -0.5
comp=Z,13nm,1.2s,mb4.6
MORC **Moravsky Berou** 32.31 75 *eP* P 08 53 39.0 -0.6
comp=Z,6.6nm,0.9s,mb4.5
MORC **Moravsky Berou** 32.31 75 *eP* P 08 53 39.0 -0.6
comp=Z,6.6nm,0.9s,mb4.5
FCC **Fort Churchill** 32.33 303 *eP* P 08 53 39.3 -0.3
comp=Z,0.5nm,0.8s,mb3.4
FCC **Fort Churchill** 32.33 303 *eP* P 08 53 39.3 -0.3
comp=Z,0.5nm,0.8s,mb3.4
OKC **Ostrava-Krasne** 32.64 74 AMS AMS 09 07 10.0
comp=Z,2µm,14.6s
FINES **FINESS Array B** 32.74 51 P P 08 53 43.4 +0.2
comp=Z,4.9nm,0.9s,mb4.5,baz=293,slow=10,SNR=7.6
FINES LR LR 09 05 44.2
comp=Z,1µm,19.7s,MS4.6,baz=102,slow=34
FINES **FINESS Array B** 32.74 51 P P 08 53 43.3 +0.2
GLMI **Grayling** 32.88 275 *eP* P 08 53 44.8 +0.2
comp=Z,63nm,1.1s,mb5.5
GLMI **Grayling** 32.88 275 *eP* P 08 53 44.8 +0.2
comp=Z,63nm,1.1s,mb5.5
OJC **Ojcow** 33.41 73 *eP* P 08 53 48.1 -1.0
OJC **Ojcow** 33.41 73 *eP* P 08 53 48.1 -1.0
VYHS **Vyhne** 33.67 76 *eP* P 08 53 48.8 -2.6
comp=Z,5.7nm,1.3s,mb4.3
VYHS **Vyhne** 33.67 76 *eP* P 08 53 48.8 -2.6
VYHS **Vyhne** 33.67 76 *eP* P 08 53 48.8 -2.6
comp=Z,5.7nm,1.3s,mb4.3
ACSO **Alum Creek Sta** 34.60 267 *eP* P 08 53 59.8 +0.2
comp=Z,26nm,0.8s,mb5.2
ACSO **Alum Creek Sta** 34.60 267 *eP* P 08 53 59.8 +0.2
comp=Z,26nm,0.8s,mb5.2
STHS **Stebnicka Huta** 34.61 73 *eP* P 08 54 01.3 +1.7
comp=Z,5.9nm,1.2s,mb4.4
STHS **Stebnicka Huta** 34.61 73 *eP* P 08 54 01.3 +1.7
STHS **Stebnicka Huta** 34.61 73 *eP* P 08 54 01.3 +1.7
comp=Z,5.9nm,1.2s,mb4.4
COWI **Conover** 34.87 280 *eP* P 08 54 00.5 -1.4
comp=Z,12nm,0.9s,mb4.8
COWI **Conover** 34.87 280 *eP* P 08 54 00.5 -1.3
comp=Z,12nm,0.9s,mb4.8
EYMN **Ely** 35.28 284 *eP* P 08 54 04.8 -0.6
comp=Z,26nm,0.8s,mb5.2
EYMN **Ely** 35.28 284 *eP* P 08 54 04.8 -0.6
comp=Z,26nm,0.8s,mb5.2
KOLS **Kolonicke sedl** 35.44 73 *eP* P 08 54 07.4 +0.7
comp=Z,5.8nm,1.2s,mb4.4
KOLS **Kolonicke sedl** 35.44 73 *eP* P 08 54 07.4 +0.7
KOLS **Kolonicke sedl** 35.44 73 *eP* P 08 54 07.4 +0.7
comp=Z,5.8nm,1.2s,mb4.4
KEST **Kesra** 35.62 102 P P 08 54 08.1 -0.3
comp=Z,6.8nm,1.0s,mb4.5,baz=292,slow=0.6,SNR=12
KEST LR LR 09 06 54.9
comp=Z,390nm,19.8s,MS4.2,baz=262,slow=33
ULM **Lac du Bonnet** 36.64 290 P P 08 54 16.1 -0.8
comp=Z,10nm,0.8s,mb4.7,baz=70,slow=7.8,SNR=8.8
ULM LR LR 09 07 55.9
comp=Z,1µm,18.9s,MS4.8,baz=57,slow=34
ULM **Lac du Bonnet** 36.64 290 P P 08 54 16.1 -0.8
JFWS **Jewell Farm** 37.32 276 *eP* P 08 54 24.1 +1.2
comp=Z,13nm,0.9s,mb4.8
JFWS **Jewell Farm** 37.32 276 *eP* P 08 54 24.0 +1.2
comp=Z,13nm,0.9s,mb4.8
TZTN **Tazewell** 37.34 263 *eP* P 08 54 23.1 0.0
comp=Z,21nm,1.0s,mb4.9
TZTN **Tazewell** 37.34 263 *eP* P 08 54 23.1 0.0
comp=Z,21nm,1.0s,mb4.9
BLO **Bloomington** 37.39 269 *eP* P 08 54 22.8 -0.6
comp=Z,24nm,1.1s,mb4.9
BLO **Bloomington** 37.39 269 *eP* P 08 54 22.8 -0.6
comp=Z,24nm,1.1s,mb4.9
VAE **Valguarnera** 37.44 95 LR LR 09 08 04.3

comp=Z,963nm,18.2s,MS4.6,baz=124,slow=34
AGMN Agassiz Refuge 37.61 287 eP P 08 54 26.3 +1.1
comp=Z,8.0nm,0.8s,mb4.5
AGMN Agassiz Refuge 37.61 287 eP P 08 54 26.3 +1.0
comp=Z,7.9nm,0.8s,mb4.5
BUR08 Bucovina Ar. S 37.78 74 eP P 08 54 26.7 0.0
BUR08 Bucovina Ar. S 37.78 74 eP P 08 54 26.7 +0.1
FFC Flin Flon 37.86 300 eP P 08 54 27.5 +0.3
comp=Z,8.8nm,0.9s,mb4.5
FFC Flin Flon 37.86 300 eP P 08 54 27.5 +0.3
comp=Z,8.8nm,0.9s,mb4.5
WCI Wyandotte Cave 37.86 267 eP P 08 54 27.2 -0.2
comp=Z,16nm,0.8s,mb4.8
WCI Wyandotte Cave 37.86 267 eP P 08 54 27.2 -0.2
comp=Z,16nm,0.8s,mb4.8
TKL Tuckaleechee C 38.08 262 P P 08 54 26.0 -3.3
comp=Z,2.7nm,1.0s,mb3.9,baz=248,slow=3.4,SNR=4.8
HDIL Hopedale 38.17 273 eP P 08 54 30.7 +0.6
comp=Z,21nm,1.0s,mb4.8
HDIL Hopedale 38.17 273 eP P 08 54 30.7 +0.6
comp=Z,21nm,1.0s,mb4.8
AKASG Malin Array Be 38.47 67 P P 08 54 29.4 -3.1
comp=Z,2.5nm,0.7s,mb4.1,baz=300,slow=8.8,SNR=18
AKASG LR LR 09 10 25.8
comp=Z,623nm,18.4s,MS4.5,baz=295,slow=36
AKBB Malin Array Si 38.47 67 eP P 08 54 30.3 -2.1
AKBB Malin Array Si 38.47 67 eP P 08 54 30.3 -2.1
CPCT Cooper Cave 38.66 263 eP P 08 54 35.1 +0.9
CPCT Cooper Cave 38.66 263 eP P 08 54 35.1 +0.9
USIN University of 38.85 268 eP P 08 54 34.5 -1.3
comp=Z,25nm,0.8s,mb5.0
USIN University of 38.85 268 eP P 08 54 34.5 -1.3
comp=Z,25nm,0.8s,mb5.0
MLR Muntele Rosu 39.39 76 P P 08 54 40.2 0.0
comp=Z,5.9nm,1.0s,mb4.2,baz=153,slow=8.1,SNR=4.3
MLR PcP PcP 08 56 48.3 +0.1
comp=Z,2.4nm,0.7s,baz=225,slow=4.3,SNR=3.2
MLR Muntele Rosu 39.39 76 P P 08 54 40.2 0.0
MLR Muntele Rosu 39.39 76 PcP PcP 08 56 48.3 +0.1
SWET Sewanee 39.66 264 eP P 08 54 42.7 +0.1
SWET Sewanee 39.66 264 eP P 08 54 42.7 +0.1
SIUC Southern Illin 39.94 269 eP P 08 54 45.5 +0.6
comp=Z,47nm,0.7s,mb5.3
SIUC Southern Illin 39.94 269 eP P 08 54 45.5 +0.6
comp=Z,47nm,0.7s,mb5.3
WVT Waverly 40.17 266 eP P 08 54 46.6 -0.2
comp=Z,8.0nm,0.8s,mb4.5
WVT Waverly 40.17 266 eP P 08 54 46.6 -0.2
comp=Z,8.0nm,0.8s,mb4.5
YKA Yellowknife Ar 40.46 315 P P 08 54 47.2 -1.7
comp=Z,3.2nm,1.1s,mb4.0,baz=63,slow=8.9,SNR=19
YKA PcP PcP 08 56 50.5 -0.8
comp=Z,1.1nm,0.8s,baz=60,slow=3.6,SNR=7.6
YKA LR LR 09 10 11.8
comp=Z,92nm,18.1s,MS3.7,baz=10.0,slow=34
YKA Yellowknife Ar 40.46 315 P P 08 54 47.2 -1.7
YKA PcP PcP 08 56 50.5 -0.8
YKA LR LR 09 10 11.8
YKA Yellowknife Ar 40.46 315 P P 08 54 47.2 -1.7
YKA Yellowknife Ar 40.46 315 PcP PcP 08 56 50.5 -0.8
FVM French Village 40.49 270 eP P 08 54 49.3 -0.1
comp=Z,19nm,0.8s,mb4.9
FVM French Village 40.49 270 eP P 08 54 49.3 -0.1
comp=Z,19nm,0.8s,mb4.9
ECSD EROS Data Cent 40.59 282 eP P 08 54 49.4 -0.8
comp=Z,19nm,0.8s,mb4.8
ECSD EROS Data Cent 40.59 282 eP P 08 54 49.4 -0.8
comp=Z,19nm,0.8s,mb4.8
CCM Cathedral Cave 40.93 271 eP P 08 54 52.1 -0.9
comp=Z,22nm,0.9s,mb4.8
CCM Cathedral Cave 40.93 271 eP P 08 54 52.2 -0.9
comp=Z,22nm,0.9s,mb4.8
PLAL Pickwick Lake 41.10 265 eP P 08 54 54.1 -0.3
comp=Z,11nm,1.0s,mb4.5
PLAL Pickwick Lake 41.10 265 eP P 08 54 54.1 -0.4
comp=Z,11nm,1.0s,mb4.5
HALT Halls 41.22 267 eP P 08 54 54.4 -1.1
HALT Halls 41.22 267 eP P 08 54 54.4 -1.1
LRAL Lakeview Retre 41.81 262 eP P 08 54 59.3 -1.1
comp=Z,12nm,1.0s,mb4.5
LRAL Lakeview Retre 41.81 262 eP P 08 54 59.3 -1.1
comp=Z,12nm,1.0s,mb4.5
DGMT Dagmar 42.20 292 ⇓P P 08 55 02.0 -1.4
baz=42
DGMT Dagmar 42.20 292 eP P 08 55 04.2 +0.9
comp=Z,18nm,1.0s,mb4.7
DGMT Dagmar 42.20 292 eP P 08 55 04.2 +0.8
comp=Z,18nm,1.0s,mb4.7
OXF Oxford 42.22 266 eP P 08 55 02.1 -1.5
comp=Z,38nm,0.8s,mb5.1
OXF Oxford 42.22 266 eP P 08 55 02.1 -1.5
comp=Z,38nm,0.8s,mb5.1
KSU1 Kansas State U 43.45 276 eP P 08 55 13.5 -0.2
comp=Z,47nm,0.8s,mb5.3
KSU1 Kansas State U 43.45 276 eP P 08 55 13.5 -0.1
comp=Z,47nm,0.8s,mb5.3
LAO LASA Array 44.35 291 eP P 08 55 22.1 +1.3
comp=Z,39nm,0.9s,mb5.1
LAO LASA Array 44.35 291 eP P 08 55 22.1 +1.4
comp=Z,39nm,0.9s,mb5.1
EDM Edmonton 44.43 303 eP P 08 55 20.8 -0.4
EDM Edmonton 44.43 303 eP P 08 55 20.8 -0.5
VBMS Vicksburg 44.48 264 eP P 08 55 21.1 -0.8
comp=Z,43nm,0.9s,mb5.2
VBMS Vicksburg 44.48 264 eP P 08 55 21.1 -0.9
comp=Z,43nm,0.9s,mb5.2
INK Inuvik 44.61 328 eP P 08 55 22.4 -0.1
comp=Z,14nm,1.1s,mb4.7
INK Inuvik 44.61 328 eP P 08 55 22.4 -0.1
comp=Z,14nm,1.1s,mb4.7
RSSD Black Hills 44.65 287 eP P 08 55 24.3 +1.1
comp=Z,3.6nm,0.9s,mb4.2
RSSD Black Hills 44.65 287 eP P 08 55 24.3 +1.1
comp=Z,3.6nm,0.9s,mb4.2
MIAR Mount Ida 44.68 269 eP P 08 55 22.7 -0.8
comp=Z,26nm,0.9s,mb5.0
MIAR Mount Ida 44.68 269 eP P 08 55 22.7 -0.8
comp=Z,26nm,0.9s,mb5.0
B18A Beardsley Farm 45.30 295 ⇑P P 08 55 27.8 -0.5
baz=45
A17A Triple J Farms 45.47 296 ⇓P P 08 55 28.6 -1.0
baz=45
EGMT Eagleton 45.51 295 ⇓P P 08 55 30.0 +0.1
baz=46,SNR=12
EGMT Eagleton 45.51 295 eP P 08 55 29.9 0.0
comp=Z,20nm,0.9s,mb5.0
EGMT Eagleton 45.51 295 eP P 08 55 29.9 0.0
comp=Z,20nm,0.9s,mb5.0
B17A L&G Farms, Che 45.91 296 ⇓P P 08 55 32.2 -0.9
baz=46
A16A West Butte Ran 45.95 297 ⇓P P 08 55 32.8 -0.6
baz=46,SNR=8.7
D18A Linhart Farms, 46.02 294 ⇓P P 08 55 33.8 -0.2
baz=46
C17A Wharram Farm, 46.28 295 ⇑P P 08 55 35.9 -0.2
baz=46,SNR=14
B16A M & M Farms, S 46.33 296 ⇓P P 08 55 35.7 -0.7
baz=46,SNR=17
E18A Harlowton 46.46 293 ⇑P P 08 55 37.4 -0.1
baz=46
D17A Six Diamond Ra 46.53 294 ⇑P P 08 55 37.3 -0.7
baz=46
A15A Johnson Ranch, 46.54 298 ⇓P P 08 55 37.7 -0.3
baz=46
C16A Fuhringer Ranc 46.71 296 ⇑P P 08 55 39.0 -0.4
baz=47,SNR=16
F18A Big Timber 46.76 292 ⇓P P 08 55 39.3 -0.5
baz=47
GCMT Greycliff 46.80 292 eP P 08 55 41.1 +1.0
comp=Z,4.0nm,0.7s,mb4.5
GCMT Greycliff 46.80 292 eP P 08 55 41.2 +1.1
comp=Z,4.0nm,0.7s,mb4.5
B15A Bradely Ranch, 46.84 297 ⇑P P 08 55 39.4 -1.0
baz=47
A14A Double T Ranch 46.91 298 ⇓P P 08 55 40.9 0.0
baz=47,SNR=15
RLMT Red Lodge 46.99 291 ⇑P P 08 55 41.6 0.0
baz=47,SNR=10
RLMT Red Lodge 46.99 291 eP P 08 55 42.8 +1.2
comp=Z,15nm,1.1s,mb4.8
RLMT Red Lodge 46.99 291 eP P 08 55 42.8 +1.2
comp=Z,15nm,1.1s,mb4.8
G18A Lazy EL Ranch, 47.03 292 ⇓P P 08 55 41.7 -0.2
baz=47,SNR=7.7
E17A Martinsdale 47.05 294 ⇓P P 08 55 41.5 -0.6
baz=47
D16A Dana Ranch, Ca 47.07 295 ⇑P P 08 55 42.1 -0.2
baz=47,SNR=18
WALA Waterton Lakes 47.11 298 eP P 08 55 43.1 +0.6
comp=Z,0.4nm,0.9s,mb3.4
WALA Waterton Lakes 47.11 298 eP P 08 55 43.1 +0.6
comp=Z,0.4nm,0.9s,mb3.4
C15A Salmond Ranch, 47.19 296 ⇓P P 08 55 42.9 -0.3
baz=47,SNR=8.3
PHWY Pilot Hill 47.23 285 eP P 08 55 45.1 +1.6
comp=Z,12nm,0.9s,mb4.8
PHWY Pilot Hill 47.23 285 eP P 08 55 45.1 +1.5
comp=Z,12nm,0.9s,mb4.8
F17A Fitzpatrick Pl 47.28 293 ⇑P P 08 55 43.3 -0.6
baz=47,SNR=6.5
BRTR Keskin Array B 47.40 78 P P 08 55 44.7 -0.2
comp=Z,7.5nm,0.9s,mb4.6,baz=311,slow=6.4,SNR=16
BRTR LR LR 09 17 32.2
comp=Z,762nm,18.1s,MS4.7,baz=305,slow=38
BRTR Keskin Array B 47.40 78 P P 08 55 44.7 -0.2
HRY Holter Researc 47.42 295 eP P 08 55 46.3 +1.3
HRY Holter Researc 47.42 295 eP P 08 55 46.3 +1.3
E16A East Helena 47.45 294 ⇓P P 08 55 44.8 -0.3
baz=47
A13A Flathead Natio 47.45 298 ⇓P P 08 55 44.4 -0.8
baz=47
D15A Lincoln 47.59 295 ⇓P P 08 55 45.8 -0.5
baz=48,SNR=15
WMOK Wichita Mounta 47.66 274 eP P 08 55 46.5 -0.5
comp=Z,12nm,0.9s,mb4.9
WMOK Wichita Mounta 47.66 274 eP P 08 55 46.5 -0.5
comp=Z,12nm,0.9s,mb4.9
G17A Pierce Place, 47.68 292 ⇑P P 08 55 46.3 -0.7
baz=48
C14A Swan Lake 47.81 297 ⇓P P 08 55 47.3 -0.7
baz=48
B13A Whitefish 47.82 298 ⇑P P 08 55 47.9 -0.2
baz=48,SNR=11
M22A Cedar Creek Ra 47.82 286 ⇓P P 08 55 47.5 -0.7
baz=48
F16A Kennard Place, 47.88 293 ⇑P P 08 55 47.7 -0.8
baz=48
YBMT Yellow Bay 47.89 297 eP P 08 55 49.9 +1.3
YBMT Yellow Bay 47.89 297 eP P 08 55 49.8 +1.2
L21A Rawlins 47.91 287 ⇑P P 08 55 48.3 -0.5
baz=48
LKWY Lake 47.97 291 eP P 08 55 52.2 +3.0
comp=Z,9.0nm,0.9s,mb4.8
LKWY Lake 47.97 291 eP P 08 55 52.2 +3.0
comp=Z,9.0nm,0.9s,mb4.8
BOZ Bozeman (W) 47.97 293 ⇑P P 08 55 48.8 -0.5
baz=48,SNR=12
BOZ Bozeman (W) 47.97 293 eP P 08 55 48.6 -0.6
comp=Z,12nm,1.1s,mb4.8
BOZ Bozeman (W) 47.97 293 eP P 08 55 48.6 -0.6
comp=Z,12nm,1.1s,mb4.8
RWWY Rawlins 47.99 286 eP P 08 55 51.4 +2.0
comp=Z,34nm,1.1s,mb5.3
RWWY Rawlins 47.99 286 eP P 08 55 51.4 +1.9
comp=Z,34nm,1.1s,mb5.3
SLMT Seeley Lake 47.99 296 eP P 08 55 50.2 +0.8
SLMT Seeley Lake 47.99 296 eP P 08 55 50.2 +0.8
K20A Yellowstone Ra 48.02 288 ⇑P P 08 55 48.9 -0.8
baz=48
E15A Deer Lodge 48.04 295 ⇑P P 08 55 48.9 -0.8
baz=48
CHMT Chamberlain Mo 48.07 296 eP P 08 55 50.6 +0.7
CHMT Chamberlain Mo 48.07 296 eP P 08 55 50.7 +0.7
D14A Greenough 48.10 296 ⇑P P 08 55 49.6 -0.6
baz=48
SWMT Swartz Lake 48.10 297 eP P 08 55 50.9 +0.6
SWMT Swartz Lake 48.10 297 eP P 08 55 50.8 +0.6
JTMT Jette 48.11 297 eP P 08 55 50.4 +0.1
JTMT Jette 48.11 297 eP P 08 55 50.4 +0.1
N22A Wattenberg Ran 48.13 285 ⇓P P 08 55 49.9 -0.7
baz=48
M21A Separation Pea 48.13 287 ⇓P P 08 55 50.0 -0.5
baz=48,SNR=5.2
H17A Grant Village 48.17 291 ⇑P P 08 55 50.4 -0.4
baz=48,SNR=7.4
I18A Diamond G Ranc 48.19 290 ⇑P P 08 55 50.4 -0.5
baz=48
K19A Absolon Red Bu 48.20 289 ⇑P P 08 55 50.4 -0.6
baz=48,SNR=13
YFT Old Faithful 48.28 292 eP P 08 55 54.5 +2.8
comp=Z,18nm,0.9s,mb5.1
YFT Old Faithful 48.28 292 eP P 08 55 54.5 +2.8
comp=Z,18nm,0.9s,mb5.1
ISCO Idaho Springs 48.30 284 eP P 08 55 52.2 +0.3
comp=Z,12nm,0.9s,mb4.9
ISCO Idaho Springs 48.30 284 eP P 08 55 52.2 +0.4
comp=Z,12nm,0.9s,mb4.9
C13A Hot Springs 48.30 297 ⇓P P 08 55 51.7 -0.1
baz=48,SNR=12
BSMT Bassoo Peak 48.31 297 eP P 08 55 53.6 +1.8
BSMT Bassoo Peak 48.31 297 eP P 08 55 53.6 +1.8
G16A Moss Hill, Enn 48.33 293 ⇓P P 08 55 51.9 -0.1
baz=48
H16A Russell Place, 48.35 292 ⇑P P 08 55 51.8 -0.4
baz=48
L20A Wamsutter 48.43 288 ⇓P P 08 55 52.6 -0.3
baz=48,SNR=6.4
A11A Hall Mountain, 48.46 300 ⇑P P 08 55 52.5 -0.4
baz=48,SNR=7.8
I17A Pilgrim Ck. 48.47 291 ⇓P P 08 55 53.3 +0.1
baz=48
MSO Missoula 48.49 296 eP P 08 55 53.7 +0.5
comp=Z,3.4nm,0.9s,mb4.4
MSO Missoula 48.49 296 eP P 08 55 53.7 +0.5
comp=Z,3.4nm,0.9s,mb4.4
E14A Clinton 48.51 295 ⇑P P 08 55 53.0 -0.3
baz=48,SNR=20
D13A Huson 48.60 296 ⇑P P 08 55 53.9 -0.2
baz=48,SNR=5.5
J18A Kendall Valley 48.61 290 ⇑P P 08 55 53.1 -1.1
baz=49,SNR=14
PDAR Pinedale Array 48.64 289 P P 08 55 53.5 -0.9
comp=Z,4.7nm,1.0s,mb4.5,baz=62,slow=10,SNR=12
PDAR LR LR 09 15 11.6
comp=Z,1μm,19.6s,MS4.8,baz=42,slow=35
PDAR Pinedale Array 48.64 289 P P 08 55 53.5 -0.9
BW06 Boulder Array 48.64 289 ⇓P P 08 55 53.6 -0.8
baz=49,SNR=15
BW06 Boulder Array 48.64 289 eP P 08 55 53.3 -1.1
comp=Z,10nm,1.1s,mb4.8
BW06 Boulder Array 48.64 289 eP P 08 55 53.3 -1.1
comp=Z,10nm,1.1s,mb4.8
DLMT Dillon 48.68 294 eP P 08 55 56.8 +2.1
comp=Z,12nm,1.0s,mb4.9
DLMT Dillon 48.68 294 eP P 08 55 56.8 +2.1
comp=Z,12nm,1.0s,mb4.9
M20A Sweetwater, Wa 48.68 287 ⇓P P 08 55 54.6 -0.2
baz=49
LOHW Long Hollow 48.68 291 eP P 08 55 55.7 +1.0
comp=Z,11nm,1.4s,mb4.7
LOHW Long Hollow 48.68 291 eP P 08 55 55.7 +0.9
comp=Z,11nm,1.4s,mb4.7
IMW Indian Meadow 48.69 291 eP P 08 55 56.8 +2.0
comp=Z,3.6nm,0.9s,mb4.4
IMW Indian Meadow 48.69 291 eP P 08 55 56.8 +2.0
comp=Z,3.6nm,0.9s,mb4.4
G15A Dillon 48.74 293 ⇑P P 08 55 54.6 -0.6
baz=49,SNR=9.5
C12B Naegeli Ranch, 48.76 298 ⇑P P 08 55 54.9 -0.5
baz=49
N21A Black Mountain 48.77 286 ⇓P P 08 55 55.2 -0.3
baz=49,SNR=7.5
SNOW Snow King Moun 48.86 291 eP P 08 55 57.8 +1.6
comp=Z,11nm,1.0s,mb4.8
SNOW Snow King Moun 48.86 291 eP P 08 55 57.8 +1.6
comp=Z,11nm,1.0s,mb4.8
E13A Victor 48.87 296 ⇓P P 08 55 56.0 -0.1
baz=49
J17A Brown Place, J 48.90 290 ⇓P P 08 55 56.2 -0.3
baz=49
L19A Farson 48.95 288 ⇑P P 08 55 56.8 0.0
baz=49,SNR=14
TPAW Teton Pass 48.96 291 eP P 08 55 56.6 -0.2
comp=Z,7.9nm,0.8s,mb4.8
TPAW Teton Pass 48.96 291 eP P 08 55 56.6 -0.3
comp=Z,7.9nm,0.8s,mb4.8
REDW Red Top Meadow 48.98 291 eP P 08 55 57.6 +0.5
comp=Z,24nm,1.7s,mb5.0
REDW Red Top Meadow 48.98 291 eP P 08 55 57.6 +0.5
comp=Z,24nm,1.7s,mb5.0
K18A Toltan Ranch, 48.99 289 ⇓P P 08 55 57.1 0.0
baz=49
I16A Newdale 49.01 291 ⇑P P 08 55 57.1 -0.1
baz=49
DCID1 Drake Creek 49.02 291 eP P 08 55 57.6 +0.3
comp=Z,22nm,0.5s,mb5.4
DCID1 Drake Creek 49.02 291 eP P 08 55 57.6 +0.2
comp=Z,22nm,0.5s,mb5.4
DAWY Dawson 49.05 326 eP P 08 55 57.6 +0.3
DAWY Dawson 49.05 326 eP P 08 55 57.6 +0.3
DLBC Dease Lake 49.07 316 eP P 08 55 59.3 +1.8
DLBC Dease Lake 49.07 316 eP P 08 55 59.3 +1.8
O21A Pagoda 49.10 285 ⇑P P 08 55 57.6 -0.4
baz=49
D12A Red Ives Fores 49.11 297 ⇓P P 08 55 57.1 -0.8
baz=49
N20A Spence Gulch, 49.15 286 ⇓P P 08 55 58.5 +0.1
baz=49,SNR=5.7
MCMT McKenzie Canyo 49.16 293 eP P 08 56 00.2 +1.8
comp=Z,2.4nm,1.0s,mb4.2
MCMT McKenzie Canyo 49.16 293 eP P 08 56 00.2 +1.8
comp=Z,2.4nm,1.0s,mb4.2
EGAK Eagle 49.17 327 eP P 08 55 58.7 +0.4
comp=Z,13nm,0.9s,mb5.0
EGAK Eagle 49.17 327 eP P 08 55 58.7 +0.5
comp=Z,13nm,0.9s,mb5.0
H15A Lima 49.18 293 ⇑P P 08 55 58.0 -0.5
baz=49
G14A Jackson 49.23 294 ⇑P P 08 55 58.4 -0.5
baz=49
RRI2 Red Ridge 49.25 291 eP P 08 55 59.3 +0.1
comp=Z,2.9nm,0.7s,mb4.4
RRI2 Red Ridge 49.25 291 eP P 08 55 59.3 +0.2
comp=Z,2.9nm,0.7s,mb4.4
NEW Newport 49.28 299 eP P 08 56 00.7 +1.4
comp=Z,16nm,1.4s,mb4.9
NEW Newport 49.28 299 eP P 08 56 00.6 +1.3
comp=Z,16nm,1.4s,mb4.9
AMTX Amarillo 49.28 276 eP P 08 56 00.1 +0.6
comp=Z,46nm,0.9s,mb5.5
AMTX Amarillo 49.28 276 eP P 08 56 00.1 +0.6
comp=Z,46nm,0.9s,mb5.5
F13A Darby 49.35 295 ⇑P P 08 56 00.0 +0.1
baz=49,SNR=7.1
K17A Gardner Place, 49.41 290 ⇑P P 08 55 59.5 -0.9
baz=49
L18A Fontenelle, Gr 49.45 289 ⇑P P 08 56 00.3 -0.4
baz=49
J16A Bone 49.46 291 ⇑P P 08 56 00.6 -0.1
baz=49
I15A Monteview 49.48 292 ⇑P P 08 56 01.0 +0.1
baz=49
SMCO Snowmass 49.50 284 eP P 08 56 02.1 +1.1
comp=Z,7.8nm,1.0s,mb4.7
SMCO Snowmass 49.50 284 eP P 08 56 02.1 +1.0
comp=Z,7.8nm,1.0s,mb4.7
AHID Auburn Hatcher 49.51 290 eP P 08 56 02.5 +1.4
comp=Z,5.6nm,0.8s,mb4.7
AHID Auburn Hatcher 49.51 290 eP P 08 56 02.5 +1.4
comp=Z,5.6nm,0.8s,mb4.7
P21A Newcastle 49.54 284 ⇓P P 08 56 00.7 -0.7
baz=50
H14A Leadore 49.58 293 ⇓P P 08 56 01.6 0.0
baz=50
A09A Danville 49.59 301 ⇑P P 08 56 01.7 +0.1
baz=50
SDCO Great Sand Dun 49.59 281 eP P 08 56 03.2 +1.4
comp=Z,56nm,2.5s,mb5.2
SDCO Great Sand Dun 49.59 281 eP P 08 56 03.2 +1.4
comp=Z,56nm,2.5s,mb5.2
O20A White River Ci 49.60 286 ⇓P P 08 56 01.7 -0.1
baz=50,SNR=9.3
E12A Beaver Dam Sad 49.62 296 ⇓P P 08 56 01.7 -0.2
baz=50
D11A Klaveano Farm, 49.63 298 ⇓P P 08 56 01.5 -0.5
baz=50,SNR=8.6
N19A John Jarvie Ra 49.63 287 ⇑P P 08 56 01.7 -0.4
baz=50
C10A Spilker Farm, 49.66 299 ⇑P P 08 56 01.7 -0.5
baz=50
Q22A Crested Butte, 49.67 283 ⇓P P 08 56 01.9 -0.5
baz=50,SNR=8.3
TORD Torodi Ar. Bea 49.68 130 P P 08 55 59.6 -3.0
comp=Z,9.7nm,0.9s,mb4.8,baz=333,slow=6.0,SNR=34
B09A Rice 49.72 300 ⇑P P 08 56 02.3 -0.3
baz=50,SNR=14
K16A Soda Springs 49.74 290 ⇓P P 08 56 02.6 -0.3
baz=50
G13A Cobalt 49.74 294 ⇑P P 08 56 02.6 -0.2
baz=50,SNR=8.7
L17A Cokeville 49.81 289 ⇓P P 08 56 03.0 -0.4
baz=50
J15A Blackfoot 49.84 292 ⇓P P 08 56 03.4 -0.3
baz=50,SNR=8.2
ARU Arti 49.84 46 eP P 08 56 03.8 +0.3
comp=Z,19nm,1.0s,mb5.1
ARU Arti 49.84 46 eP P 08 56 03.8 +0.4
comp=Z,19nm,1.0s,mb5.1
N18A Larsen Ranch, 49.86 287 ⇑P P 08 56 02.9 -0.9
baz=50
F12A Elk City 49.87 296 ⇑P P 08 56 03.5 -0.4
baz=50,SNR=7.4
A08A Turner Farm, O 49.96 301 ⇓P P 08 56 04.9 +0.4
baz=50
O19A Miners Draw (B 50.00 286 ⇑P P 08 56 04.7 -0.2
baz=50,SNR=21
E11A Bogner Ranch, 50.00 297 ⇓P P 08 56 04.8 0.0
baz=50
R22A Saguache, Gunn 50.00 283 ⇓P P 08 56 04.2 -0.7
baz=50
I14A Mackay 50.06 293 ⇑P P 08 56 05.2 -0.1
baz=50
Q21A Lamborn Mesa, 50.07 284 ⇓P P 08 56 04.9 -0.6
baz=50,SNR=5.7
H13A Challis 50.09 294 ⇓P P 08 56 05.4 -0.1
baz=50,SNR=6.0
M17A Scullys Gap (B 50.10 289 ⇑P P 08 56 06.1 +0.4
baz=50
P20A De Beque 50.10 285 ⇓P P 08 56 05.7 +0.1
baz=50
D10A Wagner Farm, O 50.12 298 ⇓P P 08 56 05.6 -0.1
baz=50
C09A Chrisman Ranch 50.17 299 ⇑P P 08 56 05.9 -0.2
baz=50
L16A Fish Haven 50.18 290 ⇓P P 08 56 05.8 -0.4
baz=50,SNR=5.1
COLD Coldfoot 50.22 333 eP P 08 56 06.5 +0.4
comp=Z,2.1nm,0.6s,mb4.3
COLD Coldfoot 50.22 333 eP P 08 56 06.5 +0.4
comp=Z,2.1nm,0.6s,mb4.3
F11A Grangeville 50.27 296 ⇓P P 08 56 06.5 -0.4
baz=50,SNR=15
X27A F and S Farms, 50.29 277 ⇑P P 08 56 07.0 -0.1
baz=50,SNR=6.2
G12A Big Creek, Yel 50.31 295 ⇑P P 08 56 06.8 -0.4
baz=50
P19A Cripple Cowboy 50.35 286 ⇓P P 08 56 07.4 -0.2
baz=50
K15A Arbon 50.36 291 ⇓P P 08 56 07.9 +0.3
baz=50
B08A Colville Reser 50.37 301 ⇑P P 08 56 07.6 0.0
baz=50,SNR=12
R21A Cimarron 50.37 283 ⇑P P 08 56 08.3 +0.5
baz=50
E10A Myers Farm, Un 50.40 297 ⇓P P 08 56 08.5 +0.6
baz=50
Q20A Ridgley Place, 50.41 284 ⇑P P 08 56 08.3 +0.3
baz=50
H12A Diamond D Ranc 50.43 294 ⇑P P 08 56 07.6 -0.5
baz=50,SNR=9.3
I13A Wildhorse Cree 50.44 293 ⇑P P 08 56 07.6 -0.5
baz=50,SNR=6.0
A07A Ashnola River, 50.47 302 ⇓P P 08 56 07.7 -0.6
baz=50,SNR=9.5
HYT Haines Junctio 50.49 322 eP P 08 56 11.5 +3.2
HYT Haines Junctio 50.49 322 eP P 08 56 11.5 +3.2
J14A Carey 50.49 292 ⇑P P 08 56 08.3 -0.3
baz=50,SNR=6.4
O18A Roosevelt 50.52 287 ⇑P P 08 56 08.4 -0.4
baz=50,SNR=12
N17A Moffit Pass 50.55 288 ⇓P P 08 56 08.5 -0.6
baz=50
MSTX Muleshoe 50.57 276 ⇑P P 08 56 08.7 -0.5
baz=50,SNR=14
G11A Walters Elk Ra 50.65 296 ⇓P P 08 56 09.3 -0.4
baz=51,SNR=17
D09A Jones Farm, Ri 50.66 299 ⇓P P 08 56 09.6 -0.2
baz=51
W25A X Bar L Ranch, 50.70 278 ⇑P P 08 56 09.5 -0.7
baz=51,SNR=19
B07A Winthrop 50.71 301 ⇑P P 08 56 10.1 0.0
baz=51
L15A Malad City 50.72 290 ⇓P P 08 56 10.3 0.0

baz=51
M16A Huntsville 50.75 289 ⇓P P 08 56 10.4 -0.2
baz=51
X26A CR and CF Fran 50.78 277 ⇑P P 08 56 11.1 +0.2
baz=51
F10A Beach Ranch, E 50.79 297 ⇓P P 08 56 11.0 +0.3
baz=51
J13A Cove Ranch, Pi 50.81 293 ⇓P P 08 56 10.7 -0.3
baz=51,SNR=9.3
K14A Jones Ranch, D 50.81 291 ⇓P P 08 56 10.1 -0.9
baz=51,SNR=15
HLID Hailey 50.83 293 ⇑P P 08 56 10.3 -0.8
baz=51,SNR=8.4
HLID Hailey 50.83 293 eP P 08 56 11.6 +0.4
comp=Z,5.8nm,0.9s,mb4.5
HLID Hailey 50.83 293 eP P 08 56 11.6 +0.5
comp=Z,5.8nm,0.9s,mb4.5
Y27A Causey 50.86 276 ⇑P P 08 56 11.5 0.0
baz=51
T22A Edith 50.91 282 ⇓P P 08 56 12.1 +0.3
baz=51
N16A Rees Ranch, Co 50.93 288 ⇓P P 08 56 12.2 +0.3
baz=51
E09A Wood Farm, Sta 50.93 298 ⇑P P 08 56 12.0 +0.1
baz=51
H11A Donnelly 50.96 295 ⇓P P 08 56 11.4 -0.6
baz=51,SNR=7.8
R20A Redvale 50.98 284 ⇑P P 08 56 12.4 +0.2
baz=51,SNR=17
D08A Wollman Farm, 50.99 299 ⇑P P 08 56 12.3 0.0
baz=51
O17A Robinson Place 50.99 287 ⇑P P 08 56 12.4 +0.1
baz=51
S21A Coal Bank Pass 50.99 283 ⇓P P 08 56 12.7 +0.3
baz=51,SNR=11
I12A Atlanta 51.08 294 ⇓P P 08 56 12.7 -0.3
baz=51,SNR=14
P18A Preston Nutter 51.09 286 ⇓P P 08 56 12.1 -0.9
baz=51
HVU Hansel Valley 51.09 290 eP P 08 56 14.2 +1.1
comp=Z,4.6nm,0.8s,mb4.5
HVU Hansel Valley 51.09 290 eP P 08 56 14.2 +1.1
comp=Z,4.6nm,0.8s,mb4.5
M15A Larsen Ranch, 51.12 290 ⇑P P 08 56 13.2 -0.1
baz=51,SNR=19
MALT Malatya 51.12 76 eP P 08 56 13.5 +0.1
comp=Z,9.0nm,1.1s,mb4.6
MALT Malatya 51.12 76 eP P 08 56 13.5 +0.1
comp=Z,9.0nm,1.1s,mb4.6
JLU Jordanelle 51.12 288 eP P 08 56 15.0 +1.6
comp=Z,7.4nm,1.1s,mb4.5
JLU Jordanelle 51.12 288 eP P 08 56 15.0 +1.6
comp=Z,7.4nm,1.1s,mb4.5
DAU Daniels Canyon 51.14 288 eP P 08 56 13.8 +0.3
DAU Daniels Canyon 51.14 288 eP P 08 56 13.8 +0.3
C07A Waterville 51.17 300 ⇑P P 08 56 13.1 -0.5
baz=51
COLA College 51.21 330 eP P 08 56 14.3 +0.6
comp=Z,27nm,1.6s,mb4.9
COLA College 51.21 330 eP P 08 56 14.3 +0.6
comp=Z,27nm,1.6s,mb4.9
SPUT South Promonto 51.22 289 eP P 08 56 13.5 -0.6
comp=Z,19nm,1.4s,mb4.8
SPUT South Promonto 51.22 289 eP P 08 56 13.5 -0.6
comp=Z,19nm,1.4s,mb4.8
Y26A Elida 51.23 277 ⇓P P 08 56 14.2 0.0
baz=51
K13A Stover Farm, H 51.25 292 ⇑P P 08 56 14.0 -0.3
baz=51
MENT Mentasta 51.25 326 eP P 08 56 14.4 +0.4
MENT Mentasta 51.25 326 eP P 08 56 14.4 +0.4
JCT Junction City 51.27 270 eP P 08 56 14.4 -0.2
comp=Z,22nm,0.9s,mb5.1
JCT Junction City 51.27 270 eP P 08 56 14.4 -0.1
comp=Z,22nm,0.9s,mb5.1
Z27A Tatum 51.29 276 ⇑P P 08 56 14.2 -0.5
baz=51,SNR=19
X25A Clemmons Ranch 51.30 278 ⇓P P 08 56 15.0 +0.3
baz=51
F09A S2 Ranch, Elgi 51.33 297 ⇓P P 08 56 15.2 +0.4
baz=51
ETW Entiat 51.37 300 eP P 08 56 15.4 +0.3
ETW Entiat 51.37 300 eP P 08 56 15.4 +0.3
Q18A Rafter H Ranch 51.37 286 ⇑P P 08 56 14.9 -0.3
baz=51,SNR=12
J12A Stokes Ranch, 51.41 293 ⇑P P 08 56 15.6 +0.1
baz=51,SNR=14
O16A Springville 51.42 288 ⇓P P 08 56 15.2 -0.3
baz=51
R19A Curley Farm, L 51.42 285 ⇓P P 08 56 15.1 -0.5
baz=51
I11A Placerville 51.45 294 ⇓P P 08 56 16.2 +0.5
baz=51
P17A Butcher Ranch, 51.47 287 ⇑P P 08 56 16.3 +0.3
baz=51
N15A Stansbury Isla 51.54 289 ⇑P P 08 56 16.6 +0.2
baz=52
G09A Cove 51.54 297 ⇓P P 08 56 16.1 -0.3
baz=52,SNR=6.0
L13A Double Diamond 51.54 291 ⇓P P 08 56 15.9 -0.5
baz=52
BMO Blue Mountains 51.56 296 eP P 08 56 16.7 +0.2
comp=Z,4.1nm,1.0s,mb4.3
BMO Blue Mountains 51.56 296 eP P 08 56 16.7 +0.1
comp=Z,4.1nm,1.0s,mb4.3
SRU San Rafael 51.59 286 ⇓P P 08 56 16.9 0.0
baz=52,SNR=8.4
SRU San Rafael 51.59 286 eP P 08 56 17.9 +1.0
comp=Z,9.0nm,0.9s,mb4.7
SRU San Rafael 51.59 286 eP P 08 56 17.9 +1.0
comp=Z,9.0nm,0.9s,mb4.7
M14A Sheep Mountain 51.59 290 ⇓P P 08 56 16.6 -0.3
baz=52,SNR=7.2
MPU Maple Canyon 51.62 288 eP P 08 56 18.2 +1.1
comp=Z,9.4nm,1.1s,mb4.6
MPU Maple Canyon 51.62 288 eP P 08 56 18.2 +1.1
comp=Z,9.4nm,1.1s,mb4.6
MFID Camas Ranch 51.70 294 ⇓P P 08 56 17.4 -0.3
baz=52
MVCO Mesa Verde 51.71 283 ⇓P P 08 56 17.7 -0.1
baz=52
MVCO Mesa Verde 51.71 283 eP P 08 56 20.4 +2.6
comp=Z,20nm,1.2s,mb4.9
MVCO Mesa Verde 51.71 283 eP P 08 56 20.4 +2.6
comp=Z,20nm,1.2s,mb4.9
K12A Draper Farm, C 51.71 292 ⇓P P 08 56 18.1 +0.3
baz=52
S19A Harvey Farm, M 51.72 284 ⇓P P 08 56 17.1 -0.7
baz=52,SNR=8.0
R18A Canyonlands Na 51.72 285 ⇓P P 08 56 17.9 0.0
baz=52
F08A Pendleton 51.73 298 ⇑P P 08 56 18.3 +0.5
baz=52
X24A Lazy VL Ranch, 51.73 278 ⇓P P 08 56 18.2 +0.3
baz=52
Y25A Mesa, Roswell 51.74 277 ⇓P P 08 56 17.2 -0.9
baz=52,SNR=7.7
Z26A Caprock 51.77 276 ⇑P P 08 56 18.4 +0.1
baz=52
I10A Payette 51.79 295 ⇑P P 08 56 18.2 -0.1
baz=52
BGU Big Grassy Mou 51.80 290 eP P 08 56 19.4 +1.0
comp=Z,4.8nm,0.9s,mb4.4
BGU Big Grassy Mou 51.80 290 eP P 08 56 19.4 +1.0
comp=Z,4.8nm,0.9s,mb4.4
127A Arkansas Junct 51.82 275 ⇓P P 08 56 18.9 +0.2
baz=52
TMUT Trail Mountain 51.86 287 eP P 08 56 21.9 +3.0
comp=Z,4.5nm,0.9s,mb4.4
TMUT Trail Mountain 51.86 287 eP P 08 56 21.9 +3.0
comp=Z,4.5nm,0.9s,mb4.4
CPRX Cap Rock 51.88 276 eP P 08 56 20.7 +1.6
comp=Z,2.8nm,0.8s,mb4.2
CPRX Cap Rock 51.88 276 eP P 08 56 20.7 +1.6
comp=Z,2.8nm,0.8s,mb4.2
H09A Durkee 51.88 296 ⇓P P 08 56 19.4 +0.5
baz=52
D06A Cle Elum 51.90 300 ⇓P P 08 56 19.1 0.0
baz=52
P16A Fountain Green 51.91 287 ⇓P P 08 56 19.0 -0.2
baz=52
O15A The Old Anders 51.92 289 ⇓P P 08 56 19.6 +0.3
baz=52
N14A Grayback Hills 51.94 290 ⇑P P 08 56 19.8 +0.3
baz=52
ANMO Albuquerque 52.07 279 P P 08 56 19.5 -1.0
comp=Z,4.6nm,0.9s,mb4.4,baz=61,slow=7.2,SNR=9.0
ANMO Albuquerque 52.07 279 eP P 08 56 22.1 +1.6
comp=Z,9.3nm,1.1s,mb4.6
ANMO Albuquerque 52.07 279 eP P 08 56 22.1 +1.6
comp=Z,9.3nm,1.1s,mb4.6
Q16A Castle Valley 52.09 286 ⇑P P 08 56 20.9 +0.3
baz=52
M13A Montello 52.15 291 ⇓P P 08 56 21.4 +0.4
baz=52
M13A Montello 52.15 291 eP P 08 56 22.8 +1.7
comp=Z,6.1nm,1.2s,mb4.4
M13A Montello 52.15 291 eP P 08 56 22.8 +1.8
comp=Z,6.1nm,1.2s,mb4.4
G08A Pilot Rock 52.16 297 ⇑P P 08 56 20.8 -0.3
baz=52,SNR=10
X23A Hourglass Bar 52.17 279 ⇑P P 08 56 21.2 0.0
baz=52
DUG Dugway 52.17 289 ⇓P P 08 56 20.9 -0.3
baz=52,SNR=12
DUG Dugway 52.17 289 eP P 08 56 21.2 0.0
comp=Z,11nm,1.0s,mb4.7
DUG Dugway 52.17 289 eP P 08 56 21.2 0.0
comp=Z,11nm,1.0s,mb4.7
R17A Hanksville Air 52.17 286 ⇑P P 08 56 20.9 -0.3
baz=52,SNR=23
V21A Milan 52.17 281 ⇓P P 08 56 22.3 +1.0
baz=52,SNR=5.4
Y24A Capitan 52.18 278 ⇑P P 08 56 21.0 -0.4
baz=52,SNR=13
Z25A Roswell 52.21 277 ⇓P P 08 56 21.3 -0.2
baz=52,SNR=6.3
J10A Berg Farm, Mel 52.21 294 ⇓P P 08 56 21.8 +0.3
baz=52
K11A Parker Ranch, 52.24 293 ⇑P P 08 56 21.5 -0.2
baz=52
S18A Hurst Farm, Bl 52.25 284 ⇓P P 08 56 21.7 -0.1
baz=52,SNR=10
227A Bennet, Jal 52.26 274 ⇑P P 08 56 21.9 0.0
baz=52
F07A Phinny Hill Vi 52.27 298 ⇑P P 08 56 22.2 +0.4
baz=52
T19A Beclabito 52.28 283 ⇑P P 08 56 22.0 0.0
baz=52
P15A Leamington 52.28 288 ⇑P P 08 56 22.3 +0.3
baz=52
U20A Newcomb 52.29 282 ⇓P P 08 56 22.8 +0.6
baz=52
MCK McKinley 52.36 329 eP P 08 56 23.1 +0.9
comp=Z,31nm,1.0s,mb5.2
MCK McKinley 52.36 329 eP P 08 56 23.1 +0.8
comp=Z,31nm,1.0s,mb5.2
I09A Lost Marbles R 52.38 295 ⇑P P 08 56 22.6 0.0
baz=52,SNR=11
E06A Yakima 52.40 300 ⇑P P 08 56 22.6 -0.1
baz=52,SNR=6.7
328A Wristen Ranch, 52.42 274 ⇓P P 08 56 22.7 -0.4
baz=52,SNR=5.6
L11A Cat Creek Ranc 52.49 292 ⇓P P 08 56 22.9 -0.7
baz=52,SNR=9.3
N13A Wendover, West 52.51 290 ⇑P P 08 56 23.5 -0.2
baz=52
H08A Prairie City 52.52 296 ⇑P P 08 56 23.7 0.0
baz=52
M12A Wells 52.53 291 ⇑P P 08 56 23.9 +0.1
baz=52
Y23A Lovelace Mesa, 52.54 278 ⇓P P 08 56 23.7 -0.4
baz=52,SNR=10
G07A Ruggs Ranch, H 52.55 298 ⇓P P 08 56 23.6 -0.4
baz=52
T18A Mexican Hat 52.56 284 ⇓P P 08 56 23.9 -0.2
baz=52
125A Gardner Draw, 52.61 276 ⇑P P 08 56 24.3 -0.3
baz=53,SNR=10
LPM Los Pinos Moun 52.62 279 eP P 08 56 26.3 +1.7
LPM Los Pinos Moun 52.62 279 eP P 08 56 26.3 +1.7
W21A San Fidel 52.65 280 ⇑P P 08 56 24.8 0.0
baz=53
V20A Brimhall 52.66 282 ⇑P P 08 56 25.1 +0.3
baz=53
K10A MacKenzie Ranc 52.70 294 ⇓P P 08 56 24.9 -0.2
baz=53
226A Malaga, Loving 52.70 275 ⇑P P 08 56 25.3 +0.1
baz=53
R16A Teasdale 52.70 286 ⇓P P 08 56 25.6 +0.4
baz=53
BPAW Bear Paw Mtn. 52.71 330 eP P 08 56 25.4 +0.6
comp=Z,12nm,1.1s,mb4.7
BPAW Bear Paw Mtn. 52.71 330 eP P 08 56 25.4 +0.6
comp=Z,12nm,1.1s,mb4.7
P14A Drum Mountains 52.72 288 ⇑P P 08 56 25.2 -0.1
baz=53
BNM Barren Site 52.73 279 eP P 08 56 27.3 +1.9
comp=Z,16nm,1.3s,mb4.8
BNM Barren Site 52.73 279 eP P 08 56 27.3 +1.9
comp=Z,16nm,1.3s,mb4.8
Q15A Fillmore 52.73 287 ⇑P P 08 56 25.4 0.0
baz=53
U19A Dine' College, 52.75 283 ⇑P P 08 56 25.0 -0.6
baz=53,SNR=14
S17A Black Ridge (B 52.76 285 ⇑P P 08 56 25.6 0.0
baz=53
GDL2 Guadalupe Moun 52.76 275 eP P 08 56 26.2 +0.5
GDL2 Guadalupe Moun 52.76 275 eP P 08 56 26.2 +0.5
DBIC Dimbokro 52.76 141 P P 08 56 24.5 -1.3
comp=Z,11nm,0.9s,mb4.8,baz=299,slow=5.1,SNR=6.0
DBIC LR LR 09 16 04.1
comp=Z,881nm,19.9s,MS4.8,baz=326,slow=33
DBIC Dimbokro 52.76 141 eP P 08 56 24.3 -1.5
comp=Z,13nm,0.9s,mb4.9
DBIC Dimbokro 52.76 141 eP P 08 56 24.3 -1.5
comp=Z,13nm,0.9s,mb4.9
J09A Fry Pan Ranch, 52.80 295 ⇑P P 08 56 25.1 -0.7
baz=53
428A Kincaid Ranch, 52.81 273 ⇑P P 08 56 25.3 -0.8
baz=53
LAZ Ladron 52.85 279 eP P 08 56 28.7 +2.4
comp=Z,2.8nm,1.0s,mb4.2
LAZ Ladron 52.85 279 eP P 08 56 28.7 +2.4
comp=Z,2.8nm,1.0s,mb4.2
O13A Hicks Ranch, I 52.87 289 ⇓P P 08 56 27.2 +0.8
baz=53
MSU Marysvale 52.95 287 eP P 08 56 27.7 +0.8
MSU Marysvale 52.95 287 eP P 08 56 27.7 +0.7
L10A Juniper Basin 52.95 293 ⇑P P 08 56 27.1 +0.2
baz=53
N12A Clover Valley, 52.98 291 ⇓P P 08 56 27.0 -0.2
baz=53
N12A Clover Valley, 52.98 291 eP P 08 56 29.2 +2.1
comp=Z,7.0nm,0.9s,mb4.6
N12A Clover Valley, 52.98 291 eP P 08 56 29.2 +2.0
comp=Z,7.0nm,0.9s,mb4.6
TRF Thorofare Moun 52.98 329 eP P 08 56 26.9 0.0
comp=Z,33nm,1.3s,mb5.1
TRF Thorofare Moun 52.98 329 eP P 08 56 26.9 +0.1
comp=Z,33nm,1.3s,mb5.1
MMAI Mount Meron Ar 53.01 83 P P 08 56 25.6 -1.9
comp=Z,2.5nm,0.6s,mb4.3,baz=318,slow=10.0,SNR=3.7
M11A Holland Ranch, 53.01 292 ⇑P P 08 56 27.3 -0.1
baz=53,SNR=7.6
U18A Rough Rock, Ch 53.05 283 ⇑P P 08 56 27.3 -0.5
baz=53
124A Stringfield Ra 53.05 277 ⇓P P 08 56 27.9 +0.1
baz=53,SNR=14
V19A Window Rock 53.06 282 ⇓P P 08 56 28.1 +0.3
baz=53
Y22A Socorro 53.08 279 ⇓P P 08 56 28.3 +0.4
baz=53,SNR=10
G06A Carlson Farm, 53.08 298 ⇑P P 08 56 27.7 -0.1
baz=53
225A Deer Hill, Car 53.10 276 ⇑P P 08 56 28.0 -0.1
baz=53,SNR=8.3
KTH Kantishna Hill 53.10 330 eP P 08 56 28.5 +0.8
comp=Z,15nm,1.0s,mb4.9
KTH Kantishna Hill 53.10 330 eP P 08 56 28.5 +0.8
comp=Z,15nm,1.0s,mb4.9
W20A Ramah 53.15 281 ⇓P P 08 56 28.6 +0.1
baz=53
427A Hayter Ranch, 53.15 274 ⇑P P 08 56 28.7 +0.1
baz=53
326A Caldwell Ranch 53.16 274 ⇑P P 08 56 29.1 +0.5
baz=53
ELK Elko 53.16 291 P P 08 56 28.6 +0.1
comp=Z,3.5nm,0.9s,mb4.3,baz=49,slow=6.0,SNR=7.6
ELK Elko 53.16 291 P P 08 56 28.6 +0.1
J08A Circle Bar Ran 53.18 295 ⇓P P 08 56 28.7 +0.1
baz=53,SNR=15
T17A Navajo Res., N 53.20 284 ⇓P P 08 56 29.3 +0.5
baz=53
X21A Alamocita Cree 53.20 280 ⇑P P 08 56 29.2 +0.3
baz=53,SNR=9.3
O12A Currie 53.21 290 ⇓P P 08 56 29.0 +0.2
baz=53,SNR=6.0
Q14A Sevier Lake (B 53.25 288 ⇓P P 08 56 28.9 -0.3
baz=53,SNR=5.6
I07A Izee 53.25 296 ⇑P P 08 56 29.3 +0.2
baz=53
H06A Lindquist Farm 53.26 298 ⇓P P 08 56 29.1 0.0
baz=53,SNR=13
528A Cox Ranch, San 53.28 272 ⇓P P 08 56 29.4 -0.1
baz=53
NLWA Neilton Lookou 53.32 302 ⇓P P 08 56 29.6 0.0
baz=53
NLWA Neilton Lookou 53.32 302 eP P 08 56 31.8 +2.3
comp=Z,42nm,1.1s,mb5.3
NLWA Neilton Lookou 53.32 302 eP P 08 56 31.8 +2.3
comp=Z,42nm,1.1s,mb5.3
P13A Bates Ranch, G 53.35 289 ⇑P P 08 56 30.0 0.0
baz=53,SNR=7.9
M10A I.L. Ranch, Tu 53.36 292 ⇓P P 08 56 30.2 +0.2
baz=53
U17A Shonto 53.39 284 ⇑P P 08 56 30.5 +0.3
baz=53
N11A Elko Archery C 53.39 291 ⇓P P 08 56 30.5 +0.3
baz=53
Y21A Point of Rocks 53.44 280 ⇑P P 08 56 31.1 +0.4
baz=53
AKTK Aktyubinsk 53.49 53 P P 08 56 30.0 -0.8
AKTK Aktyubinsk 53.49 53 P P 08 56 30.0 -0.8
AKTO Aktyubinsk 53.49 53 P P 08 56 30.0 -0.8
comp=Z,5.6nm,0.8s,mb4.5,baz=309,slow=6.7,SNR=16
224A Corundas Mount 53.54 276 ⇓P P 08 56 30.9 -0.5
baz=54,SNR=19
F04A Amboy 53.55 300 ⇓P P 08 56 31.5 +0.2
baz=54
X20A Quemado 53.55 281 ⇓P P 08 56 31.2 -0.2
baz=54
Z22A Elephant Butte 53.55 278 ⇑P P 08 56 31.4 -0.1
baz=54,SNR=12
V18A Ganado 53.58 283 ⇑P P 08 56 31.5 -0.1
baz=54
T16A Glen Canyon Da 53.61 285 ⇓P P 08 56 32.0 +0.2
baz=54
S15A Panguitch 53.63 286 ⇑P P 08 56 31.9 -0.1
baz=54
426A McDonald Obser 53.65 274 ⇑P P 08 56 31.5 -0.8
baz=54,SNR=7.4
Q13A Wheeler Ranch, 53.69 288 ⇓P P 08 56 32.4 -0.1
baz=54
325A Bean Ranch, Si 53.71 275 ⇓P P 08 56 32.9 +0.2
baz=54
MNTX Cornudas Mount 53.72 276 eP P 08 56 31.4 -1.4
comp=Z,4.5nm,0.9s,mb4.4
MNTX Cornudas Mount 53.72 276 eP P 08 56 31.4 -1.3
comp=Z,4.5nm,0.9s,mb4.4
E03A Lebam 53.73 301 ⇑P P 08 56 32.4 -0.1
baz=54
527A Woodward Ranch 53.78 273 ⇑P P 08 56 32.5 -0.8
baz=54
O11A Cowboy Ranch, 53.81 290 ⇑P P 08 56 32.6 -0.7
baz=54
628A Black Gap, Mar 53.83 272 ⇓P P 08 56 32.8 -0.8
baz=54
P12A McGill 53.84 289 ⇓P P 08 56 33.1 -0.5
baz=54
WVOR Wild Horse Val 53.90 294 eP P 08 56 35.4 +1.5
comp=Z,12nm,0.9s,mb4.8
WVOR Wild Horse Val 53.90 294 eP P 08 56 35.4 +1.5
comp=Z,12nm,0.9s,mb4.8
Y20A Horse Springs, 53.93 280 ⇓P P 08 56 34.4 +0.1
baz=54
Z21A St. Cloud Mine 53.94 279 ⇑P P 08 56 34.5 +0.3
baz=54
324A Moseley Ranch, 53.97 276 ⇑P P 08 56 33.7 -0.9
baz=54
122A Conniff Cattle 53.97 278 ⇑P P 08 56 34.9 +0.4
baz=54
U16A Tuba City 53.98 284 ⇑P P 08 56 34.2 -0.3
baz=54,SNR=14
PMR Palmer 53.99 327 eP P 08 56 35.1 +0.8
comp=Z,22nm,1.2s,mb5.0
PMR Palmer 53.99 327 eP P 08 56 35.1 +0.8
comp=Z,22nm,1.2s,mb5.0
S14A Cedar City 54.03 287 ⇑P P 08 56 35.1 +0.2
baz=54
T15A Red Dirt Ranch 54.09 285 ⇑P P 08 56 35.7 +0.3
baz=54
Q12A Willow Creek R 54.09 289 ⇑P P 08 56 35.8 +0.4
baz=54
X19A St. Johns 54.10 281 ⇓P P 08 56 35.2 -0.2
baz=54
526A Mary Lane Ranc 54.13 273 ⇑P P 08 56 35.7 0.0
baz=54
F03A Seaside 54.14 301 ⇑P P 08 56 35.7 +0.1
baz=54
425A Indio Mountain 54.14 275 ⇓P P 08 56 35.7 -0.1
baz=54
V17A Tonalea, Kykot 54.14 283 ⇓P P 08 56 35.8 0.0
baz=54
627A Terlingua Ranc 54.15 272 ⇓P P 08 56 35.3 -0.6
baz=54,SNR=26
R13A O'Grain Ranch, 54.20 288 ⇓P P 08 56 36.4 +0.3
baz=54
CCUT Cedar City 54.29 287 eP P 08 56 37.8 +1.0
comp=Z,4.2nm,1.0s,mb4.3
CCUT Cedar City 54.29 287 eP P 08 56 37.8 +1.0
comp=Z,4.2nm,1.0s,mb4.3
TXAR Lajitas Array 54.40 272 P P 08 56 36.8 -0.9
comp=Z,2.9nm,1.0s,mb4.2,baz=58,slow=7.5,SNR=15
TXAR LR LR 09 19 16.2
comp=Z,965nm,18.9s,MS4.9,baz=260,slow=36
TXAR Lajitas Array 54.40 272 P P 08 56 36.8 -0.9
Y19A Nutrioso 54.41 281 ⇑P P 08 56 37.3 -0.5
baz=54,SNR=16
X18A Snowflake 54.41 282 ⇑P P 08 56 38.0 +0.3
baz=54
U15A North Rim 54.45 285 ⇓P P 08 56 38.0 0.0
baz=54
R12A Pony Springs, 54.46 288 ⇑P P 08 56 38.2 +0.2
baz=54
T14A Hurricane 54.47 286 ⇑P P 08 56 37.9 -0.2
baz=54
ASF Jabal al Asfar 54.49 82 P P 08 56 37.9 -0.5
comp=Z,8.4nm,1.0s,mb4.6,baz=153,slow=3.1,SNR=6.4
626A Big Bend Ranch 54.52 273 ⇓P P 08 56 38.1 -0.5
baz=54
S13A Holt Ranch, En 54.55 287 ⇓P P 08 56 39.0 +0.3
baz=54
121A Cookes Peak, D 54.55 278 ⇑P P 08 56 38.8 0.0
baz=54
WUAZ Wupatki 54.55 283 ⇑P P 08 56 38.3 -0.5
baz=54
WUAZ Wupatki 54.55 283 eP P 08 56 41.0 +2.3
comp=Z,103nm,2.6s,mb5.4
WUAZ Wupatki 54.55 283 eP P 08 56 41.0 +2.2
comp=Z,103nm,2.6s,mb5.4
P10A Eureka 54.62 291 ⇓P P 08 56 38.7 -0.4
baz=55
Z20A Nine Sixteen R 54.62 279 ⇓P P 08 56 38.3 -1.0
baz=55
TIXI Tiksi 54.67 6 eP P 08 56 38.8 -0.4
comp=Z,13nm,0.9s,mb5.0
TIXI Tiksi 54.67 6 eP P 08 56 38.8 -0.3
comp=Z,13nm,0.9s,mb5.0
Q11A Duckwater 54.69 289 ⇓P P 08 56 39.3 -0.5
baz=55
V15A Kaibab Nationa 54.81 284 ⇓P P 08 56 39.9 -0.7
baz=55,SNR=5.2
K05A Summer Lake 54.92 296 ⇑P P 08 56 40.7 -0.6
baz=55,SNR=7.6
221A Mesquite Ranch 54.92 278 ⇓P P 08 56 41.7 +0.3
baz=55
W16A Flagstaff 54.94 283 ⇓P P 08 56 41.8 +0.3
baz=55
T13A Saint George 54.97 287 ⇑P P 08 56 42.0 +0.3
baz=55
U14A Mt Trumbull 54.97 286 ⇑P P 08 56 42.0 +0.3
baz=55
Y18A Canyon Day Jun 54.99 281 ⇓P P 08 56 42.5 +0.5
baz=55
R11A Troy Canyon, C 55.00 289 ⇑P P 08 56 41.9 -0.1
baz=55
120A U Bar Ranch, L 55.04 279 ⇑P P 08 56 41.7 -0.6
baz=55
X17A Forest Lakes 55.05 282 ⇓P P 08 56 41.8 -0.6
baz=55,SNR=6.1
TTA Tatalina 55.07 331 eP P 08 56 42.2 +0.2
TTA Tatalina 55.07 331 eP P 08 56 42.2 +0.1
S12A Delamar Landin 55.09 288 ⇑P P 08 56 41.8 -0.8

baz=55
Q10A Clear Creek Ra 55.13 290 ⇑P P 08 56 42.1 -0.8
baz=55,SNR=7.7
EIL Elat 55.13 86 P P 08 56 40.4 -2.6
comp=Z,7.3nm,1.0s,mb4.7,baz=321,slow=13,SNR=2.8
EIL Elat 55.13 86 P P 08 56 40.4 -2.6
MOD Modoc 55.16 295 *eP* **P 08 56 45.0 +2.0**
comp=Z,9.1nm,0.9s,mb4.8
MOD Modoc 55.16 295 *eP* **P 08 56 45.0 +1.9**
comp=Z,9.1nm,0.9s,mb4.8
ABKAR Akbulak array 55.20 53 *eP* **P 08 56 43.1 -0.2**
comp=Z,9.5nm,1.3s,mb4.7
ABKAR Akbulak array 55.20 53 *eP* **P 08 56 43.1 -0.2**
comp=Z,9.5nm,1.3s,mb4.7
119A Ashpeak Ranch, 55.28 280 ⇓P P 08 56 43.8 -0.2
baz=55
W15A Williams 55.31 284 ⇓P P 08 56 43.8 -0.5
baz=55
X16A Lo Mia Camp, P 55.37 283 ⇓P P 08 56 43.8 -0.9
baz=55,SNR=6.4
U13A Pakoon Wash 55.42 286 ⇑P P 08 56 44.4 -0.6
baz=55,SNR=9.8
220A Playas Peak, P 55.44 278 ⇓P P 08 56 45.6 +0.4
baz=55
R10A Warm Springs 55.45 289 ⇑P P 08 56 45.8 +0.7
baz=55
V14A Boquillas Ranc 55.48 285 ⇓P P 08 56 46.2 +0.8
baz=55
Z18A Geronimo 55.49 280 ⇓P P 08 56 46.2 +0.6
baz=55
Y17A Roosevelt 55.53 282 ⇓P P 08 56 46.5 +0.6
baz=56
T11A Corn Creek, Al 55.56 288 ⇓P P 08 56 45.8 -0.2
baz=56
S11A Rachel 55.58 288 ⇑P P 08 56 45.1 -1.1
baz=56,SNR=9.7
Z17A San Carlos Hig 55.59 281 ⇑P P 08 56 46.4 +0.1
baz=56
U12A Valley of Fire 55.74 286 ⇑P P 08 56 47.7 +0.4
baz=56
W14A Seligman 55.76 284 ⇑P P 08 56 47.2 -0.2
baz=56
118A Homack Ranch, 55.77 280 ⇓P P 08 56 47.4 -0.1
baz=56,SNR=5.9
Y16A Circle Bar Ran 55.77 282 ⇑P P 08 56 48.4 +0.9
baz=56
X15A Humboldt 55.78 283 ⇓P P 08 56 48.0 +0.4
baz=56
219A White Tail Can 55.81 279 ⇑P P 08 56 48.1 +0.3
baz=56
V13A Grand Canyon W 55.83 286 ⇑P P 08 56 48.0 0.0
baz=56
320A Kipp Ranch, An 55.85 278 ⇑P P 08 56 48.8 +0.6
baz=56
S10A Tonopah Range, 55.87 289 ⇓P P 08 56 47.9 -0.3
baz=56,SNR=14
Z16A Peralta Trail, 56.12 282 ⇑P P 08 56 49.6 -0.5
baz=56
X14A Yava 56.17 284 ⇓P P 08 56 51.1 +0.6
baz=56
PAHR Pah Rah Range 56.18 293 *eP* **P 08 56 52.4 +2.0**
comp=Z,14nm,0.9s,mb5.0
PAHR Pah Rah Range 56.18 293 *eP* **P 08 56 52.4 +2.0**
comp=Z,14nm,0.9s,mb5.0
Y15A Casa Rosa Ranc 56.22 283 ⇑P P 08 56 50.9 +0.1
baz=56
319A Douglas 56.27 278 ⇓P P 08 56 51.7 +0.5
baz=56
117A Oracle 56.27 281 ⇓P P 08 56 52.2 +1.0
baz=56
218A Dragoon 56.29 279 ⇓P P 08 56 51.4 +0.1
baz=56
W13A Hualapai Mount 56.30 285 ⇓P P 08 56 51.6 +0.3
baz=56
V12A Nelson 56.42 286 ⇑P P 08 56 52.3 +0.2
baz=56
NVAR Mina Array Bea 56.47 291 P P 08 56 51.0 -1.6
comp=Z,1.5nm,0.9s,mb4.0,baz=69,slow=5.3,SNR=9.4
NVAR Mina Array Bea 56.47 291 P P 08 56 51.0 -1.5
TUC Tucson 56.48 280 *eP* **P 08 56 54.7 +2.0**
comp=Z,6.7nm,0.9s,mb4.7
TUC Tucson 56.48 280 *eP* **P 08 56 54.7 +2.0**
comp=Z,6.7nm,0.9s,mb4.7
YBH Yreka Blue Hor 56.58 296 *eP* **P 08 56 55.4 +2.1**
comp=Z,12nm,1.1s,mb4.8
YBH Yreka Blue Hor 56.58 296 *eP* **P 08 56 55.4 +2.2**
comp=Z,12nm,1.1s,mb4.8
Z15A Gila River Ind 56.59 282 ⇑P P 08 56 53.2 -0.2
baz=56
BEKR Beckwourth 56.60 293 ⇓P P 08 56 52.9 -0.6
baz=56
X13A Yucca 56.63 284 ⇓P P 08 56 53.8 +0.1
baz=57
318A Bisbee 56.64 279 ⇓P P 08 56 53.7 -0.1
baz=57
WCN Washoe City 56.67 292 ⇑P P 08 56 53.6 -0.3
baz=57
U10A Ash Meadows, A 56.77 288 ⇓P P 08 56 55.0 +0.3
baz=57
GRAC Grapevine Rang 56.95 289 ⇑P P 08 56 56.1 +0.2
baz=57
Z14A Wintersburg 56.99 283 ⇑P P 08 56 56.7 +0.4
baz=57
FURC Furnace Creek, 57.04 288 ⇑P P 08 56 56.9 +0.3
baz=57
115A Sonoran Desert 57.05 282 ⇓P P 08 56 56.8 +0.1
baz=57
216A Three Points, 57.10 281 ⇓P P 08 56 56.5 -0.6
baz=57
SHOC Shoshone 57.11 287 ⇑P P 08 56 56.6 -0.5
baz=57
BRVK Borovoye 57.12 44 *eP* **P 08 56 56.6 -0.3**
comp=Z,13nm,1.0s,mb4.9
BRVK Borovoye 57.12 44 *eP* **P 08 56 56.6 -0.3**
comp=Z,13nm,1.0s,mb4.9
BVAR Borovoye Array 57.18 44 P P 08 56 56.8 -0.5
comp=Z,7.6nm,0.8s,mb4.8,baz=308,slow=4.9,SNR=35
BVAR LR LR 09 19 39.0
comp=Z,979nm,21.4s,MS4.9,slow=34
BVAR Borovoye Array 57.18 44 P P 08 56 56.8 -0.5
Y13A Salome 57.18 284 ⇓P P 08 56 57.0 -0.6
baz=57
114A Black Gap (USA 57.40 282 ⇑P P 08 56 59.5 +0.4
baz=58
Z13A Yuma Proving G 57.52 283 ⇑P P 08 57 00.1 0.0
baz=58
GMRC Granite Mounta 57.55 286 ⇓P P 08 57 00.7 +0.5
baz=58
OHCM Honcut 57.59 294 *eP* **P 08 57 01.0 +0.6**
OHCM Honcut 57.59 294 *eP* **P 08 57 01.0 +0.5**
Y12C Blythe 57.63 284 ⇑P P 08 57 00.3 -0.5
baz=58
MPMC Manual Prospec 57.69 288 ⇓P P 08 57 00.6 -0.6
baz=58,SNR=7.2
IRM Iron Mountain 57.70 285 ⇑P P 08 57 00.9 -0.4
baz=58
GSC Goldstone 57.84 287 ⇑P P 08 57 02.5 +0.3
baz=58
GSC Goldstone 57.84 287 *eP* **P 08 57 04.2 +2.0**
comp=Z,5.0nm,1.0s,mb4.5
GSC Goldstone 57.84 287 *eP* **P 08 57 04.2 +2.0**
comp=Z,5.0nm,1.0s,mb4.5
113A Mohawk Valley, 57.90 283 ⇑P P 08 57 03.1 +0.4
baz=58
ROSC El Rosal 58.04 228 P P 08 57 03.3 -0.5
comp=Z,38nm,1.0s,mb5.4,baz=88,slow=11,SNR=18
ROSC LR LR 09 17 07.4
comp=Z,223nm,20.5s,MS4.3,baz=19,slow=31
ROSC El Rosal 58.04 228 *eP* **P 08 57 04.0 +0.2**
ROSC El Rosal 58.04 228 *eP* **P 08 57 04.0 +0.2**
BC3 Big Chuckw Mtn 58.24 285 ⇓P P 08 57 04.5 -0.6
baz=58
BELC Belle Mtn. 58.31 285 ⇓P P 08 57 05.3 -0.2
baz=58
GLA Glamis 58.31 284 ⇓P P 08 57 05.0 -0.6
baz=58
ISA Isabella 58.53 289 ⇑P P 08 57 07.2 +0.2
baz=58
ISA Isabella 58.53 289 *eP* **P 08 57 08.4 +1.4**
comp=Z,6.8nm,0.9s,mb4.7
ISA Isabella 58.53 289 *eP* **P 08 57 08.4 +1.3**
comp=Z,6.8nm,0.9s,mb4.7
EDW2 Edwards Air Fo 58.82 288 ⇑P P 08 57 08.6 -0.5
baz=59
PFO Pinyon Flat Ob 58.85 285 ⇓P P 08 57 09.5 +0.2
baz=59
PFO Pinyon Flat Ob 58.85 285 *eP* **P 08 57 10.3 +1.0**
comp=Z,13nm,0.9s,mb5.0
PFO Pinyon Flat Ob 58.85 285 *eP* **P 08 57 10.3 +1.0**
comp=Z,13nm,0.9s,mb5.0
BAR Barrett 59.65 285 *eP* **P 08 57 15.5 +0.6**
comp=Z,9.0nm,1.0s,mb4.8
BAR Barrett 59.65 285 *eP* **P 08 57 15.5 +0.6**
comp=Z,9.0nm,1.0s,mb4.8
ZALV Zalesovo Beam 61.97 35 P P 08 57 28.7 -1.6
comp=Z,1.1nm,0.5s,mb4.2,baz=316,slow=8.4,SNR=4.4
ZALV LR LR 09 23 34.7
comp=Z,160nm,20.6s,MS4.2,baz=137,slow=35
ZALV Zalesovo Beam 61.97 35 P P 08 57 28.7 -1.6
ZALV LR LR 09 23 34.7
KURK Kurchatov 62.26 41 P P 08 57 31.4 -0.9
comp=Z,5.8nm,0.9s,mb4.7,baz=322,slow=7.3,SNR=18
KURK Kurchatov 62.26 41 P P 08 57 31.4 -0.9
OTAV Otavalo 63.99 230 *eP* **P 08 57 45.7 +1.5**
comp=Z,7.3nm,1.0s,mb4.7
OTAV Otavalo 63.99 230 *eP* **P 08 57 45.7 +1.5**
comp=Z,7.3nm,1.0s,mb4.7
EKS2 Erkin-Say 66.55 50 *eP* **P 08 58 00.9 +0.4**
comp=Z,20nm,1.0s,mb5.1
EKS2 Erkin-Say 66.55 50 *eP* **P 08 58 00.9 +0.4**
comp=Z,20nm,1.0s,mb5.1
MK31 Makanchi Array 66.86 42 *eP* **P 08 58 03.0 +0.6**
MK31 Makanchi Array 66.86 42 *eP* **P 08 58 03.0 +0.6**
MKAR Makanchi Array 66.86 42 P P 08 58 00.7 -1.7
comp=Z,4.6nm,0.8s,mb4.5,baz=311,slow=5.9,SNR=23
MKAR LR LR 09 25 28.1
comp=Z,424nm,20.4s,MS4.7,baz=328,slow=34
AAK Ala-Archa 66.89 49 P P 08 58 01.9 -0.8
comp=Z,4.3nm,0.9s,mb4.5,baz=279,slow=3.2,SNR=11
AAK Ala-Archa 66.89 49 *eP* **P 08 58 02.7 0.0**
comp=Z,19nm,1.3s,mb5.0
AAK Ala-Archa 66.89 49 *eP* **P 08 58 02.7 0.0**
comp=Z,19nm,1.3s,mb5.0
AML Almayashu 66.92 50 *eP* **P 08 58 05.3 +2.3**
comp=Z,6.5nm,0.8s,mb4.7
AML Almayashu 66.92 50 *eP* **P 08 58 05.3 +2.4**
comp=Z,6.5nm,0.8s,mb4.7
TKM2 Tokmak 2 67.16 48 *eP* **P 08 58 04.8 +0.4**
comp=Z,22nm,1.2s,mb5.1
TKM2 Tokmak 2 67.16 48 *eP* **P 08 58 04.8 +0.4**
comp=Z,22nm,1.2s,mb5.1
UCH Uchtor 67.22 49 *eP* **P 08 58 05.9 +1.1**
comp=Z,21nm,1.1s,mb5.1
UCH Uchtor 67.22 49 *eP* **P 08 58 05.9 +1.1**
comp=Z,21nm,1.1s,mb5.1
WMQ Urumqi 71.44 40 *eP* **P 08 58 33.0 +2.1**
PETK Petropavlovsk- 73.25 352 LR LR 09 32 06.1
comp=Z,318nm,19.2s,MS4.6,baz=18,slow=37
SONM Songino Array 73.93 26 P P 08 58 44.8 -0.9
comp=Z,5.1nm,0.9s,mb4.5,baz=318,slow=6.6,SNR=15
SONM LR LR 09 30 45.5
comp=Z,210nm,21.5s,MS4.4,baz=59,slow=35
SONM Songino Array 73.93 26 P P 08 58 44.8 -0.8
ULN Ulaanbaatar 74.07 25 *eP* **P 08 58 48.1 +1.6**
comp=Z,14nm,1.1s,mb4.8
ULN Ulaanbaatar 74.07 25 *eP* **P 08 58 48.1 +1.6**
comp=Z,14nm,1.1s,mb4.8
LPAZ La Paz 75.03 213 P P 08 58 50.3 -1.9
comp=Z,9.4nm,0.9s,mb4.7,baz=3.9,slow=8.2,SNR=27
LPAZ La Paz 75.03 213 P P 08 58 50.3 -2.0
DDI Dehra Dun 78.53 54 *ex* **P 08 59 13.0 +0.9**
GTA Gaotai 79.66 34 *eP* **P 08 59 17.0 -1.1**
GTA pP pP 08 59 21.1 -0.3
GTA sP sP 08 59 24.7 +2.1
GTA PP PP 09 02 19.1 +0.9
GTA S S 09 09 19.7 -0.4
GTA sS sS 09 09 27.2 +1.6
GTA pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
GTA pmax pmax
comp=Z,42nm,5.1s
GTA LR LR
comp=N,550nm,18.3s,MS5.0
GTA LR LR
comp=E,230nm,16.2s,MS5.0
GTA LR LR
comp=Z,280nm,18.0s,MS4.7
KMBO Kilima Mbogo 80.51 105 LR LR 09 35 57.8
comp=Z,347nm,19.4s,MS4.7,baz=276,slow=36
MDJ Mudanjiang 81.42 11 P P 08 59 25.7 -1.8
MDJ pmax pmax
comp=Z,21nm,2.1s,mb4.7
CN2 Changchun 81.69 14 *eP* **P 08 59 28.3 -0.6**
CPUP Villa Florida 81.76 200 P P 08 59 25.1 -4.2
comp=Z,3.7nm,0.8s,mb4.4,baz=349,slow=5.5,SNR=10.0
CPUP LR LR 09 29 50.2
comp=Z,91nm,20.1s,MS4.1,baz=346,slow=31
HHC Hu-ho-hao-te 81.78 25 *eP* **P 08 59 28.9 -0.5**
HHC pP pP 08 59 33.8 +1.1
HHC sP sP 08 59 35.9 +2.0
HHC PP PP 09 02 37.5 +1.9
HHC S S 09 09 39.4 -2.8
HHC SKS 09 09 43.1
HHC sS sS 09 09 47.8 +0.2
HHC SS SS 09 14 59.5 +1.0
HHC pmax pmax
comp=Z,21nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,92nm,6.1s
HHC LR LR
comp=N,230nm,18.0s,MS4.7
HHC LR LR
comp=E,160nm,18.4s,MS4.7
HHC LR LR
comp=Z,300nm,20.6s,MS4.6
BJI Beijing 83.63 22 P P 08 59 37.6 -1.5
BJI S S 09 10 00.9 -0.3
BJI SS SS 09 15 24.3 -1.7
BJI pmax pmax
comp=Z,12nm,0.6s,mb5.2
BJI LR LR
comp=N,190nm,18.7s,MS4.6
BJI LR LR
comp=E,180nm,20.8s,MS4.6
BJI LR LR
comp=Z,150nm,25.1s,MS4.3
LZH Lanzhou 84.00 32 *eP* **P 08 59 42.4 +1.3**
LZH pP pP 08 59 45.5 +1.1
LZH sP sP 08 59 48.1 +2.5
LZH pmax pmax
comp=Z,23nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,120nm,4.5s
XAN Xi'an 87.45 29 P P 08 59 56.5 -1.7
XAN pP pP 08 59 59.9 -1.6
XAN sP sP 09 00 01.1 -1.6
XAN PP PP 09 03 20.1 -1.8
XAN S S 09 10 36.8 -2.1
XAN sS sS 09 10 42.5 -1.9
XAN SS SS 09 16 21.7 -0.6
XAN pmax pmax
comp=Z,1.0nm,0.9s,mb4.0
XAN pmax pmax
comp=Z,15nm,5.8s
XAN LR LR
comp=N,220nm,23.8s,MS4.5
XAN LR LR
comp=E,53nm,21.3s,MS4.5
XAN LR LR
comp=Z,81nm,20.6s,MS4.1
KSRS Korea Array 88.27 13 LR LR 09 41 18.0
comp=Z,128nm,18.1s,MS4.4,baz=341,slow=37
CD2 Chengdu 88.72 34 P P 09 00 03.8 -0.5
CD2 pP pP 09 00 08.6 +1.0
CD2 sP sP 09 00 10.8 +2.0
CD2 PP PP 09 03 34.0 +1.8
CD2 SKS 09 10 29.9
CD2 S S 09 10 47.6 -3.5
CD2 sS sS 09 10 54.8 -1.8
CD2 SS SS 09 16 40.1 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,90nm,4.9s
CD2 LR LR
comp=N,230nm,14.6s
CD2 LR LR
comp=Z,330nm,15.5s,MS4.9
MJAR Matsushiro Arr 90.17 5 LR LR 09 41 40.0
comp=Z,118nm,19.6s,MS4.3,baz=25,slow=36
NJ2 Nanjing 91.89 22 *eP* **P 09 00 20.5 +1.4**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.7
KMI Kunming 93.65 38 P P 09 00 25.9 -1.4
KMI pmax pmax
comp=Z,7.0nm,0.5s,mb5.3
GYA Guiyang 93.79 34 P P 09 00 26.8 -1.1
GYA PP PP 09 04 14.8 +2.4
GYA SKS 09 11 01.2
GYA S S 09 11 39.0 +1.6
GYA SS SS 09 17 55.0 +0.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,70nm,5.2s
GYA LR LR
comp=N,480nm,20.0s,MS5.1
GYA LR LR
comp=E,430nm,21.8s,MS5.1
GYA LR LR
comp=Z,490nm,20.7s,MS5.0
CMAR Chiang Mai Arr 98.21 44 P P 09 00 47.4 -0.7
comp=Z,0.6nm,0.3s,mb4.5,baz=324,slow=4.5,SNR=4.0
CMAR LR LR 09 47 12.7
comp=Z,226nm,21.4s,MS4.6,baz=122,slow=37
CMAR Chiang Mai Arr 98.21 44 P P 09 00 47.4 -0.7
QSPA South Pole Qui 143.36 180 PKhKP 09 06 37.7
comp=Z,2.8nm,0.8s,baz=199,slow=3.8,SNR=6.3
QSPA South Pole Qui 143.36 180 PKP 09 06 37.7
QSPA *e*PKPdf PKPdf 09 06 41.4 -2.0
WRAB Tennant Creek 145.56 18 *e*PKPdf PKPdf 09 06 48.4 -0.6
WRAB Tennant Creek 145.56 18 *e*PKIKP PKPdf 09 06 48.4 -0.6
WRA Warramunga Arr 145.57 18 PKPbc PKPbc 09 06 46.6 -2.6
comp=Z,8.2nm,1.0s,baz=343,slow=3.5,SNR=23
WRA Warramunga Arr 145.57 18 PKPbc PKPbc 09 06 46.6 -2.6
WB2 Warramunga Arr 145.57 18 *e*PKPdf PKPdf 09 06 48.6 -0.5
WB2 Warramunga Arr 145.57 18 *e*PKIKP PKPdf 09 06 48.6 -0.4
CTA Charters Tower 146.66 358 PKPbc PKPbc 09 06 51.2 -1.3
comp=Z,9.3nm,1.0s,baz=135,slow=5.1,SNR=4.4
CTA Charters Tower 146.66 358 PKPbc PKPbc 09 06 51.2 -1.3
CTA Charters Tower 146.66 358 PKPbc PKPbc 09 06 51.2 -1.2
CTAO Charters Tower 146.66 358 *e*PKPdf PKPdf 09 06 51.3 +0.4
CTAO Charters Tower 146.66 358 *e*PKIKP PKPdf 09 06 51.3 +0.4
ASAR Alice Springs 149.11 20 PKPbc PKPbc 09 06 56.4 -2.6
comp=Z,8.5nm,0.7s,baz=347,slow=2.2,SNR=42
ASAR Alice Springs 149.11 20 PKPbc PKPbc 09 06 56.4 -2.6
EIDS Eidsvold 151.55 348 *e*PKPbc PKPbc 09 07 04.2 -0.5
EIDS Eidsvold 151.55 348 *e*PKPbc PKPbc 09 07 04.2 -0.5
NWAO Narrogin (SRO) 151.56 55 PKPbc PKPbc 09 07 01.4 -3.2
comp=Z,13nm,0.9s,baz=341,slow=4.4,SNR=6.5
NWAO Narrogin (SRO) 151.56 55 *e*PKPbc PKPbc 09 07 03.8 -0.8
NWAO Narrogin (SRO) 151.56 55 *e*PKPbc PKPbc 09 07 03.8 -0.7
FORT Forrest 154.27 35 *e*PKPbc PKPbc 09 07 09.6 -1.0
FORT *e*PKPab PKPab 09 07 20.1 -4.5
FORT Forrest 154.27 35 *e*PKPbc PKPbc 09 07 09.6 -1.0

ISCJB ***06*** *08:58:01.4±0.9, 49°.8S±0°.1×125°.6E±0°.5, h10km, mb4.1/6, MS3.6/3, Error ellipse: s-maj=46.3km s-min=16.8km az=10.9*
IDC ***06*** *08:58:01.3±1.0, 49°.84S×125°.66E, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.2/12, mbtmp4.2/6, MS3.7/4, Ms1 3.6/4, ms1mx3.3/20, Error ellipse: s-maj=59.4km s-min=20.4km az=98.0*
ISC 06 08:58:03.4±0.9, 49°.9S±0°.1×125°.9E±0°.4, h10km, n12, σ0°.95/7, mb4.0/6, MS3.6/3, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**18.11**	**336**	LR		LR	09 07 30.3	
	comp=Z,192nm,19.6s,baz=148,slow=32							
STKA	**Stephens Creek**	**21.47**	**39**	P		**P**	**09 02 52.8**	**+0.9**
	2.4nm,0.8s,mb3.6,baz=228,slow=14,SNR=4.0							
STKA				PcP		PcP	09 06 52.9	-1.8
	2.5nm,0.9s,baz=140,slow=10,SNR=2.8							
STKA				LR		LR	09 09 46.5	
	comp=Z,156nm,18.9s,MS3.4,baz=204,slow=33							
MORW	**Morawa**	**22.09**	**337**	*eP*		**P**	**09 03 01.7**	**+3.1**
ASAR	**Alice Springs**	**26.90**	**16**	P		**P**	**09 03 43.9**	**-0.6**
	6.6nm,0.6s,mb4.3,baz=193,slow=9.1,SNR=134							
WRA	**Warramunga Arr**	**30.61**	**16**	P		**P**	**09 04 16.7**	**-0.9**
	1.5nm,0.5s,mb4.1,baz=194,slow=8.2,SNR=31							
WRA				LR		LR	09 16 06.8	
	comp=Z,140nm,20.1s,MS3.6,baz=180,slow=35							
MAW	**Mawson**	**35.24**	**216**	LR		LR	09 15 49.5	
	comp=Z,170nm,21.0s,MS3.8,baz=301,slow=30							
QSPA	**South Pole Qui**	**40.25**	**180**	P		**P**	**09 05 39.8**	**+0.1**
	3.7nm,1.1s,mb4.0,baz=327,slow=3.0,SNR=9.0							
CMAR	**Chiang Mai Arr**	**72.09**	**333**	P		**P**	**09 09 27.1**	**-0.6**
	0.4nm,0.3s,mb3.8,baz=198,slow=5.7,SNR=4.5							
PLCA	**Paso Flores**	**88.62**	**168**	P		**P**	**09 10 56.5**	**0.0**
	2.3nm,0.9s,mb4.5,baz=212,slow=10,SNR=5.2							
TXAR	**Lajitas Array**	**137.56**	**100**	PKhKP			09 17 20.2	
	0.2nm,0.8s,baz=222,slow=1.7,SNR=3.5							
TXAR				PKP		PKPdf	09 17 24.6	-2.6
	0.4nm,0.8s,baz=158,slow=2.6,SNR=2.8							
PDAR	**Pinedale Array**	**141.81**	**79**	PKhKP			09 17 29.3	
	0.3nm,0.8s,baz=264,slow=1.7,SNR=3.1							
YKA	**Yellowknife Ar**	**145.41**	**45**	PKPbc		PKPbc	09 17 40.0	-0.2
	4.3nm,1.1s,baz=264,slow=3.2,SNR=27							

NIED ***06*** *09:10:00, 43°.70N×147°.20E, h59km, Mw3.8 Best double couple: M0=5.15000×10^14 NP1:φ=256.00000°, δ=68.00000°, λ=126.00000°. NP2:φ=14.00000°, δ=41.00000°, λ=34.00000°.*
ISCJB ***06*** *09:10:04.6±1.1, 43°.77N±0°.08×147°.3E±0°.1, h69km±9km, mb3.5/9, Error ellipse: s-maj=15.5km s-min=9.2km az=141.0*
MOS ***06*** *09:10:04.9±1.3, 43°.88N×147°.27E, h74km, mb4.4/1, Error ellipse: s-maj=20.6km s-min=18.1km az=98.1*
JMA ***06*** *09:10:05.4±0.2, 43°.68N×147°.23E, h29km, M4.0*
NEIC ***06*** *09:10:05.4±2.7, 43°.84N×147°.20E, h58km±24km, Error ellipse: s-maj=20.9km s-min=18.2km az=85.0*
IDC ***06*** *09:10:07.6±3.0, 43°.85N×147°.24E, h79km±26km, mb3.3/9, mb1 3.5/11, mb1mx3.4/25, mbtmp3.4/11, Error ellipse: s-maj=22.9km s-min=19.3km az=116.0*
ISC 06 09:10:06.0±1.0, 43°.78N±0°.08×147°.28E±0°.10, h62km±9km, n29, σ1°.02/38, mb3.6/9, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.06**	**284**	⇓ *i* PN		**Pn**	**09 10 23.7**	**-1.1**
YUK				*i* S		**Sn**	**09 10 37.2**	**-1.6**
YUK				pmax	pmax			
	comp=Z,710nm,0.4s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=E,4μm,0.5s							
YUK				smax				
	comp=E,8μm,0.8s							
NEM2	**Nemuro 2**	**1.19**	**250**	P		**Pn**	**09 10 25.6**	**-1.0**
NEM2				*e*S		**Sn**	**09 10 40.1**	**-1.9**
JRA	**Rausu**	**1.57**	**276**	P		**Pn**	**09 10 31.7**	**+0.1**
JRA				*e*S		**Sn**	**09 10 51.2**	**+0.3**
JNK	**Nakash**	**1.87**	**265**	P		**Pn**	**09 10 35.5**	**-0.1**
JNK				*e*S		**Sn**	**09 10 57.4**	**-0.8**
JAK	**Akkeshi**	**2.04**	**248**	P		**Pn**	**09 10 37.7**	**-0.3**
JAK				*e*S		**Sn**	**09 11 01.4**	**-1.0**
JTKR	**Abashiri--Toko**	**2.45**	**276**	P		**Pn**	**09 10 44.3**	**+0.8**
JAR	**Ashorobuto**	**2.60**	**260**	P		**Pn**	**09 10 46.3**	**+0.7**
JAR				*e*S		**Sn**	**09 11 16.4**	**+0.4**
JOB	**Onbets**	**2.66**	**252**	P		**Pn**	**09 10 46.8**	**+0.4**
JOB				*e*S		**Sn**	**09 11 17.7**	**+0.2**
JMP	**Maruseppu**	**2.84**	**276**	P		**Pn**	**09 10 50.7**	**+1.8**
JCH	**Churui**	**3.10**	**249**	P		**Pn**	**09 10 52.5**	**+0.2**
JCH				*e*S		**Sn**	**09 11 27.0**	**-1.1**
JKK2	**Kamakawa 2**	**3.28**	**273**	P		**Pn**	**09 10 57.1**	**+2.2**
ASAJ	**Asahikawa**	**3.40**	**277**	P		**Pn**	**09 10 58.6**	**+2.1**
ASAJ	**Asahikawa**	**3.40**	**277**	P		**Pn**	**09 10 58.5**	**+2.0**
	comp=E,5.1nm,0.3s,baz=87,slow=15,SNR=24							
ASAJ				S		**Sn**	**09 11 43.4**	**+7.8**
	comp=E,5.3nm,0.3s,baz=220,slow=28,SNR=5.9							
JFR	**Furan**	**3.47**	**261**	*e*S		**Sn**	**09 11 38.3**	**+1.1**
JSE	**Soyaes**	**3.57**	**291**	P		**Pn**	**09 11 00.0**	**+1.2**
JNBK	**Urakawa-nobuka**	**3.64**	**247**	P		**Pn**	**09 11 00.8**	**+1.0**
PETK	**Petropavlovsk-**	**11.60**	**33**	P		**Pn**	**09 12 47.7**	**-0.9**
	comp=E,0.3nm,0.3s,baz=210,slow=12,SNR=9.3							
PETK	**Petropavlovsk-**	**11.60**	**33**	P		**Pn**	**09 12 47.7**	**-0.9**
ZALV	**Zalesovo Beam**	**41.06**	**307**	P		**P**	**09 17 43.2**	**+0.3**
	comp=E,0.4nm,0.4s,mb3.4,baz=74,slow=11,SNR=2.2							
MKAR	**Makanchi Array**	**44.66**	**298**	P		**P**	**09 18 12.0**	**-0.2**
	comp=E,0.2nm,0.4s,mb3.3,baz=82,slow=7.8,SNR=3.9							
YKA	**Yellowknife Ar**	**55.72**	**34**	P		**P**	**09 19 36.4**	**+0.9**
	comp=E,0.2nm,0.6s,mb3.4,baz=301,slow=7.0,SNR=4.6							

YKA	Yellowknife Ar	55.72	34	P	P	09 19 36.4	+0.8
WRA	Warramunga Arr	64.51	193	P	P	09 20 35.8	-0.3
	comp=E,0.5nm,0.8s,mb3.6,baz=9.1,slow=6.7,SNR=5.8						
FINES	FINESS Array B	64.89	333	P	P	09 20 36.3	-1.9
	comp=E,1.3nm,0.5s,mb4.2,baz=36,slow=10.0,SNR=4.6						
ASAR	Alice Springs	68.23	193	P	P	09 21 00.4	+0.6
	comp=E,0.3nm,0.6s,mb3.5,baz=9.7,slow=6.3,SNR=6.1						
NB2	NORSAR Subarra	69.61	339	P	P	09 21 07.4	-0.6
	comp=Z,0.9nm,0.5s,mb4.0,baz=38,slow=5.9						
NOA	NORSAR Array B	69.61	339	P	P	09 21 07.4	-0.6
	comp=Z,0.6nm,0.4s,mb3.8,baz=40,slow=5.6,SNR=4.6						
AKASG	Malin Array Be	71.61	324	P	P	09 21 19.0	-1.4
	comp=Z,1.4nm,0.6s,mb4.1,baz=39,slow=5.1,SNR=4.7						
TXAR	Lajitas Array	82.55	56	P	P	09 22 22.3	+0.2
	comp=Z,0.1nm,0.5s,mb3.1,baz=270,slow=7.1,SNR=3.0						

*IDC **06** 09:30:04.1±1.0,32°.58N×85°.17E,h0km,mb3.7/9, mb1 3.9/12,mb1mx3.8/27,mbtmp3.8/12,ML3.7/3,MS3.6/1, Ms1 3.6/1,ms1mx2.6/51,Error ellipse: s-maj=41.9km s-min=15.5km az=59.0*

*ISCJB **06** 09:30:05.7±2.5,32°.64N±0°.05×85°.21E±0°.06,h22km±21km, mb3.7/10,Error ellipse: s-maj=9.2km s-min=8.6km az=19.4*

*BJI **06** 09:30:08.1,32°.76N×85°.60E,h35km,mB4.3/2,mb3.9/4*

*NDI **06** 09:30:10.0±3.1,32°.62N×85°.29E,h35km,ML3.5, mb3.6(NEIC)*

*NEIC **06** 09:30:10.0±1.5,32°.73N×85°.26E,h35km±15km,mb3.6/1, Error ellipse: s-maj=25.0km s-min=9.6km az=47.0*

ISC 06 09:30:09.3±2.4,32°.68N±0°.05×85°.22E±0°.06,h32km±20km, n29,σ1s36/30,mb3.7/10,1D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	Joshimath	5.28	248	eP	Pn	09 31 27.1	+1.2
JOSI				eS	Sn	09 32 23.8	-1.8
JOSI				AML	AML	09 32 46.8	
	comp=E,140nm,0.7s						
JOSI				AML	AML	09 32 50.7	
	comp=N,201nm,1.0s						
LSA	Lhasa	5.88	119	ePn	Pn	09 31 36.7	+2.5
	comp=N,34nm,0.9s						
DDI	Dehra Dun	6.56	251	ex	x	09 32 19.0	
SMLA	Simla	7.02	259	i P	Px	09 32 00.6	
SMLA				i S	Sn	09 33 15.7	+7.1
SDNR	Sundarnagar	7.10	263	ex	x	09 32 03.0	
SDNR				eS	Sn	09 33 05.0	-5.6
AYAN	Aya Nagar	8.14	241	eS	Sn	09 33 27.8	-8.2
SONA	Sohna	8.30	240	eP	Pn	09 32 07.4	0.0
SONA				eS	Sn	09 33 34.2	-5.7
SONA				AML	AML	09 33 53.1	
	comp=N,11nm,0.4s						
SONA				AML	AML	09 33 53.2	
	comp=E,17nm,0.3s						
SHL	Shillong	9.17	139	eP	Pn	09 32 18.0	-1.3
SHL				i x	x	09 32 58.0	
KHET	Khetri	9.34	243	eP	Pn	09 32 23.1	+1.4
KHET				eS	Sn	09 33 56.8	-8.8
UCH	Uchtor	12.77	321	ePn	Pn	09 33 08.0	-0.5
	comp=E,3.7nm,0.8s						
AML	Almayashu	13.14	319	ePn	Pn	09 33 16.1	+2.5
	comp=E,5.0nm,0.9s						
MK31	Makanchi Array	14.28	352	ePn	Pn	09 33 28.4	-0.6
MKAR	Makanchi Array	14.28	352	Pn	Pn	09 33 27.0	-2.0
	comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=11						
KURK	Kurchatov	18.67	347	P	Pn	09 34 23.0	-2.0
	comp=E,0.1nm,0.3s,baz=159,slow=11,SNR=9.5						
CMAR	Chiang Mai Arr	18.78	136	P	Pn	09 34 24.4	-2.1
	comp=E,0.5nm,0.3s,baz=318,slow=12,SNR=11						
ENH	Enshi	20.82	90	P	P	09 34 48.6	+0.4
ZALV	Zalesovo Beam	21.26	359	P	P	09 34 51.3	-1.3
	comp=E,2.0nm,0.6s,mb3.6,baz=183,slow=9.7,SNR=4.0						
SONM	Songino Array	22.04	40	P	P	09 35 03.1	+2.1
	comp=E,1.7nm,0.7s,mb3.6,baz=204,slow=14,SNR=3.3						
BVAR	Borovoye Array	22.97	337	P	P	09 35 10.3	-0.6
	comp=E,0.2nm,0.4s,mb2.9,baz=149,slow=9.4,SNR=2.8						
ABKAR	Akbulak array	25.10	319	eP	P	09 35 33.2	+2.3
	comp=E,1.3nm,0.7s,mb3.6						
MLR	Muntele Rosu	46.77	304	LR	LR	09 58 36.3	
	comp=E,77nm,21.1s,baz=151,slow=37						
FINES	FINESS Array B	47.23	326	P	P	09 38 39.4	+0.6
	comp=E,1.2nm,0.6s,mb4.0,baz=120,slow=13,SNR=2.8						
ARCES	ARCESS Array B	49.26	336	P	P	09 38 54.7	+0.3
	comp=E,2.1nm,0.9s,mb4.1,baz=74,slow=9.6,SNR=3.5						
ARCES	ARCESS Array B	49.26	336	P	P	09 38 54.7	+0.3
NB2	NORSAR Subarra	54.38	325	P	P	09 39 33.8	+1.2
	comp=Z,1.6nm,0.7s,mb4.1,baz=86,slow=7.4						
NOA	NORSAR Array B	54.38	325	P	P	09 39 33.6	+1.0
	comp=Z,1.3nm,0.7s,mb4.0,baz=86,slow=7.1,SNR=5.3						
WRA	Warramunga Arr	70.30	131	P	P	09 41 19.2	-0.5
	comp=Z,0.7nm,0.5s,mb3.9,baz=325,slow=6.5,SNR=17						
ASAR	Alice Springs	72.78	134	P	P	09 41 34.4	-0.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=315,slow=6.1,SNR=9.3						
YKA	Yellowknife Ar	83.83	9	P	P	09 42 35.1	0.0
	comp=Z,0.7nm,0.8s,mb3.9,baz=341,slow=5.4,SNR=9.1						

KRSC 06 09:36:05.1±2.0,49°.86N×156°.68E,h10km±10km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.24	325	P	Pn	09 36 28.4	-0.1
MIPR	Malaya Ipel'ka	2.42	1	P	Pn	09 36 45.5	+0.8
RUS	Russkaya	2.82	23	eP	Pn	09 36 52.5	+2.3
RUS				i S	Sn	09 37 27.1	+2.9
PET	Petropavlovsk	3.40	21	P	Pn	09 37 00.9	+2.8
AVH	Avacha	3.64	20	eP	Pn	09 37 04.8	+3.3
GNL	Ganaly	3.92	11	eP	Pn	09 37 07.7	+2.4
MKZ	Mys Kozlova	5.63	31	eP	Pn	09 37 30.3	+1.5
KBTR	Krutoberegovo	7.36	28	P	Pn	09 37 54.6	+2.2

*ISCJB **06** 09:38:18.2±0.6,53°.4N±0°.1×35°.3W±0°.1,h10km,mb3.8/14, MS3.4/10,Error ellipse: s-maj=18.5km s-min=8.6km az=4.9*

*IDC **06** 09:38:18.2±0.8,53°.40N×35°.31W,h0km,mb3.8/12, mb1 3.9/16,mb1mx3.8/33,mbtmp3.8/16,ML3.0/4,MS3.5/12, Ms1 3.5/12,ms1mx3.2/47,Error ellipse: s-maj=29.0km s-min=14.1km az=2.0*

*NEIC **06** 09:38:19.8±0.5,53°.38N×35°.34W,h10km,mb4.3/2,Error ellipse: s-maj=17.1km s-min=8.1km az=186.0*

*CSEM **06** 09:38:19.8,53°.38N×35°.34W,h10km,mb4.3,After NEIC*

ISC 06 09:38:20.2±0.6,53°.4N±0°.1×35°.3W±0°.1,h10km,n33, σ1s03/22,mb3.8/14,MS3.4/10,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	13.40	27	LR	LR	09 45 00.1	
	comp=Z,129nm,21.9s,baz=132,slow=30						
SFJD	Kangerlussuaq	15.52	337	Pn	Pn	09 41 59.6	+0.8
	0.1nm,0.3s,baz=153,slow=11,SNR=2.5						
SFJD	Kangerlussuaq	15.52	337	Pn	Pn	09 41 59.6	+0.8
SCHQ	Schefferville	18.44	287	P	Pn	09 42 33.5	-2.2
	0.1nm,0.3s,baz=86,slow=11,SNR=6.8						
SCHQ				LR	LR	09 48 27.1	
	comp=Z,163nm,19.9s,baz=66,slow=33						
EKA	Eskdalemuir Ar	18.75	71	P	Pn	09 42 38.9	-0.5
	baz=272,slow=11,SNR=5.7						
FRB	Frobisher Bay	19.92	314	P	Pn	09 42 50.4	-2.9
	0.0nm,0.3s,baz=104,slow=12,SNR=2.7						
JMIC	Jan Mayen	21.27	24	LR	LR	09 48 50.2	
	comp=Z,94nm,19.4s,MS3.2,baz=102,slow=30						
ESDC	Sonseca Array	25.33	110	P	P	09 43 45.6	-1.3
	0.5nm,0.4s,mb3.4,baz=310,slow=8.4,SNR=7.3						
NOA	NORSAR Array B	25.82	54	LR	LR	09 53 25.3	
	comp=Z,42nm,18.3s,MS3.0,baz=245,slow=35						
HFS	Hagfors	27.13	56	LR	LR	09 54 15.0	
	comp=Z,84nm,18.7s,MS3.3,baz=256,slow=35						
CLL	Collm	29.15	74	eP	P	09 44 22.0	+0.9
CLL	Collm	29.15	74	eP	P	09 44 22.0	+0.9
DAVOX	Davos/Dischmat	29.34	84	LR	LR	09 54 54.9	
	comp=Z,95nm,18.7s,MS3.4,baz=263,slow=34						
SADO	Sadowa	29.55	271	LR	LR	09 54 48.9	
	comp=Z,165nm,21.5s,MS3.6,baz=268,slow=34						
GERES	GERESS Array B	30.61	78	P	P	09 44 33.5	-0.6
	0.4nm,0.2s,mb3.8,baz=308,slow=6.6,SNR=5.4						
GERES				LR	LR	09 56 31.5	
	comp=Z,86nm,18.4s,MS3.4,baz=86,slow=36						
VRAC	Vranov	32.08	76	LR	LR	09 57 47.1	
	comp=Z,97nm,18.5s,MS3.5,baz=37,slow=36						
FINES	FINESS Array B	32.84	51	LR	LR	09 56 57.3	
	comp=Z,107nm,20.9s,MS3.5,baz=150,slow=34						
ULM	Lac du Bonnet	36.57	290	P	P	09 45 25.1	-0.7
	2.3nm,1.0s,mb4.0,baz=81,slow=6.2,SNR=5.0						
ULM				LR	LR	09 59 39.1	
	comp=Z,117nm,19.2s,MS3.7,baz=43,slow=35						
YKA	Yellowknife Ar	40.43	315	P	P	09 45 58.9	+0.7
	0.2nm,0.7s,mb2.9,baz=68,slow=7.6,SNR=2.6						
YKA				PcP	PcP	09 47 58.9	-1.8
	0.4nm,0.8s,baz=61,slow=4.0,SNR=3.9						
YKA	Yellowknife Ar	40.43	315	P	P	09 45 58.9	+0.7
YKA				PcP	PcP	09 47 58.9	-1.8
LAO	LASA Array	44.28	291	eP	P	09 46 31.0	+1.4
	4.2nm,0.9s,mb4.2						
IDI	Anoyia	45.26	88	LR	LR	10 05 12.1	
	comp=Z,50nm,19.0s,MS3.5,baz=84,slow=36						
BRTR	Keskin Array B	47.50	78	P	P	09 46 55.8	+0.7
	1.5nm,0.8s,mb4.0,baz=316,slow=5.2,SNR=6.0						
PDAR	Pinedale Array	48.57	289	P	P	09 47 02.6	-0.7
	0.6nm,0.7s,mb3.7,baz=69,slow=8.1,SNR=5.2						
HWUT	Hardware Ranch	50.45	289	eP	P	09 47 17.8	+0.1
	2.9nm,0.8s,mb4.4						
TXAR	Lajitas Array	54.31	272	P	P	09 47 46.6	0.0
	0.6nm,0.9s,mb3.5,baz=58,slow=12,SNR=5.0						
NVAR	Mina Array Bea	56.40	291	P	P	09 48 03.4	+1.9
	0.4nm,0.7s,mb3.6,baz=65,slow=9.1,SNR=3.2						
BVAR	Borovoye Array	57.29	44	P	P	09 48 07.8	+0.3
	1.0nm,0.7s,mb4.0,baz=316,slow=6.2,SNR=5.8						
ROSC	El Rosal	57.93	228	P	P	09 48 13.4	+0.8
	3.7nm,0.5s,mb4.7,baz=252,slow=16,SNR=4.4						
KURK	Kurchatov	62.36	41	P	P	09 48 42.4	-0.1
	1.0nm,0.8s,mb4.0,baz=321,slow=6.9,SNR=3.2						
SONM	Songino Array	74.02	26	P	P	09 49 55.3	-0.3
	0.6nm,0.7s,mb3.6,baz=327,slow=6.9,SNR=3.2						
WRA	Warramunga Arr	145.65	17	PKPbc	PKPbc	09 57 57.5	-1.4
	0.9nm,0.8s,baz=343,slow=3.4,SNR=9.6						
ASAR	Alice Springs	149.19	20	PKPbc	PKPbc	09 58 07.3	-1.3
	0.7nm,0.8s,baz=352,slow=2.4,SNR=6.9						

*IDC **06** 09:43:17.8±2.0,19°.39S×167°.89E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.8/14,mbtmp3.8/4,Error ellipse: s-maj=120.0km s-min=32.0km az=154.0*

*NOU **06** 09:43:18.9±1.4,19°.87S×168°.12E,h30km,MD2.4,ML3.4*

*ISCJB **06** 09:43:19.3±3.3,20°.1S±0°.1×168°.1E±0°.2,h24km±26km, mb3.7/4,Error ellipse: s-maj=40.3km s-min=10.3km az=28.9*

ISC 06 09:43:19.7±3.4,20°.2S±0°.1×168°.2E±0°.2,h16km±23km,n9, σ0s72/13,mb3.7/4,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.29	211	eS	Sn	09 44 24.7	-0.1
DZM	Mont Dzumac	2.47	220	eP	Pn	09 43 59.0	-0.2
DZM				eS	Sn	09 44 27.9	-1.2
DZM				AMP		09 44 37.9	
	comp=Z,1μm,2.8s						
NORM	Noumea	2.56	217	eP	Pn	09 44 00.7	+0.1
NORM				eS	Sn	09 44 31.9	+0.5
NORM				AMP		09 44 32.7	
	comp=Z,299nm,0.9s						
NOUC	Port Laguerre	2.58	222	eP	Pn	09 44 00.9	+0.2
NOUC				eS	Sn	09 44 31.9	+0.2
NOUC				AMP		09 44 46.3	
	comp=Z,77nm,0.0s						
ONTRN	Noumea	2.64	217	eP	Pn	09 44 01.2	-0.4
ONTRN				eS	Sn	09 44 33.7	+0.3
ONTRN				AMP		09 44 37.3	
	comp=Z,364nm,0.5s						
STKA	Stephens Creek	26.49	239	P	P	09 48 58.7	+2.4
	comp=Z,2.0nm,0.8s,mb3.7,baz=90,slow=11,SNR=4.2						
WRA	Warramunga Arr	31.74	265	P	P	09 49 42.6	-0.6
	comp=Z,0.3nm,0.6s,mb3.3,baz=91,slow=8.4,SNR=5.0						
ASAR	Alice Springs	31.93	257	P	P	09 49 44.5	-0.2
	comp=Z,1.1nm,0.7s,mb3.8,baz=86,slow=8.7,SNR=21						
NVAR	Mina Array Bea	90.18	49	P	P	09 56 19.1	-0.3
	comp=Z,0.8nm,0.8s,mb4.1,baz=236,slow=7.5,SNR=4.9						

MAN 06 09:53:44,17°.59N×122°.37E,h12km,mb4.5,ML3.4,MS3.3, Luzon

KRSC 06 09:58:59.2±1.8,49°.80N×158°.44E,h10km±10km,ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	2.14	301	P	Pn	09 59 38.0	+3.1
RUS	Russkaya	2.64	1	i P	Pn	09 59 43.2	+1.5
RUS				eS	Sn	10 00 15.2	+1.4
PET	Petropavlovsk	3.23	2	P	Pn	09 59 51.6	+1.7
PET				i S	Sn	10 00 29.9	+1.5
NLC	Nalytchevo	3.42	9	P	Pn	09 59 54.4	+1.9
NLC				i S	Sn	10 00 34.5	+1.4
SDLR	Sedlovina	3.49	4	eP	Pn	09 59 55.7	+2.2
GNL	Ganaly	3.91	356	i P	Pn	10 00 00.0	+0.7
MKZ	Mys Kozlova	5.17	22	i P	Pn	10 00 20.6	+4.0
KBTR	Krutoberegovo	6.94	21	P	Pn	10 00 44.3	+3.5

*ISCJB **06** 09:59:23.4±0.7,53°.4N±0°.2×35°.3W±0°.1,h10km,mb3.7/14, MS3.4/12,Error ellipse: s-maj=25.9km s-min=8.3km az=5.3*

*IDC **06** 09:59:23.4±1.0,53°.35N×35°.27W,h0km,mb3.7/13, mb1 3.9/16,mb1mx3.8/32,mbtmp3.7/16,ML2.9/3,MS3.5/13, Ms1 3.4/13,ms1mx3.2/45,Error ellipse: s-maj=35.4km s-min=13.1km az=7.0*

*NEIC **06** 09:59:24.1±0.8,53°.06N×35°.27W,h10km,mb4.2/1,Error ellipse: s-maj=25.3km s-min=9.8km az=187.0*

*CSEM **06** 09:59:24.1,53°.06N×35°.27W,h10km,mb4.2,After NEIC*

ISC 06 09:59:25.1±0.7,53°.3N±0°.2×35°.3W±0°.1,h10km,n32, σ0s97/23,mb3.7/14,MS3.4/12,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	15.64	337	Pn	Pn	10 03 09.4	+4.2
	0.6nm,0.3s,baz=158,slow=8.3,SNR=4.0						
SCHQ	Schefferville	18.51	287	P	Pn	10 03 40.5	-0.8
	0.1nm,0.3s,baz=92,slow=9.6,SNR=5.4						
SCHQ				LR	LR	10 09 38.4	
	comp=Z,128nm,21.9s,baz=238,slow=33						
SCHQ	Schefferville	18.51	287	P	Pn	10 03 40.5	-0.8
SCHQ				LR	LR	10 09 38.4	
EKA	Eskdalemuir Ar	18.76	71	P	Pn	10 03 41.9	-2.5
	baz=202,slow=24,SNR=3.6						
FRB	Frobisher Bay	20.02	315	P	P	10 03 58.9	+1.2
	0.1nm,0.3s,baz=93,slow=11,SNR=3.1						
JMIC	Jan Mayen	21.36	24	LR	LR	10 09 55.4	
	comp=Z,89nm,18.5s,MS3.2,baz=105,slow=30						
ESDC	Sonseca Array	25.26	110	P	P	10 04 51.5	+0.3
	1.0nm,0.5s,mb3.6,baz=312,slow=9.6,SNR=11						
ESDC				LR	LR	10 12 26.9	
	comp=Z,81nm,21.6s,MS3.2,baz=235,slow=31						
NOA	NORSAR Array B	25.87	54	P	P	10 04 56.7	+0.2
	0.9nm,0.8s,mb3.4,baz=273,slow=8.7,SNR=2.7						
NOA				LR	LR	10 13 35.7	
	comp=Z,51nm,19.0s,MS3.1,baz=295,slow=33						
HFS	Hagfors	27.17	56	LR	LR	10 14 27.2	
	comp=Z,77nm,20.2s,MS3.3,baz=237,slow=33						
CLL	Collm	29.15	74	eP	P	10 05 27.0	+1.0
CLL	Collm	29.15	74	eP	P	10 05 27.0	+1.0
DAVOX	Davos/Dischmat	29.32	84	LR	LR	10 16 11.1	
	comp=Z,95nm,18.9s,MS3.4,baz=264,slow=34						
SADO	Sadowa	29.59	271	LR	LR	10 16 06.2	
	comp=Z,127nm,19.2s,MS3.6,baz=268,slow=34						
GERES	GERESS Array B	30.61	78	P	P	10 05 39.0	+0.1
	0.7nm,0.7s,mb3.6,baz=290,slow=8.4,SNR=6.7						
GERES				LR	LR	10 16 09.6	
	comp=Z,47nm,20.7s,MS3.1,baz=77,slow=33						
VRAC	Vranov	32.08	76	LR	LR	10 18 17.8	
	comp=Z,79nm,18.4s,MS3.4,baz=255,slow=35						
FINES	FINESS Array B	32.89	51	LR	LR	10 19 12.4	
	comp=Z,67nm,18.2s,MS3.4,baz=181,slow=36						
KEST	Kesra	35.65	101	P	P	10 06 23.8	+0.8
	2.6nm,1.0s,mb4.1,baz=320,slow=2.9,SNR=5.1						
ULM	Lac du Bonnet	36.64	290	P	P	10 06 30.9	-0.4
	1.5nm,0.7s,mb4.0,baz=61,slow=4.7,SNR=4.6						
ULM				LR	LR	10 20 11.1	
	comp=Z,96nm,19.3s,MS3.6,baz=41,slow=34						
ULM	Lac du Bonnet	36.64	290	P	P	10 06 30.9	-0.4
ULM				LR	LR	10 20 11.1	
AKASG	Malin Array Be	38.59	67	P	P	10 06 47.3	-0.6
	0.2nm,0.2s,mb3.4,baz=302,slow=8.4,SNR=4.1						
MLR	Muntele Rosu	39.49	76	LR	LR	10 22 06.2	
	comp=Z,61nm,18.3s,MS3.5,baz=294,slow=34						
YKA	Yellowknife Ar	40.54	315	P	P	10 07 04.3	+0.4
	0.4nm,0.9s,mb3.1,baz=59,slow=9.5,SNR=2.9						
BRTR	Keskin Array B	47.49	77	P	P	10 07 60.0	0.0
	2.2nm,0.8s,mb4.1,baz=330,slow=7.1,SNR=7.7						
PDAR	Pinedale Array	48.63	289	P	P	10 08 07.1	-1.7
	0.4nm,0.8s,mb3.5,baz=51,slow=7.1,SNR=3.9						
HWUT	Hardware Ranch	50.52	289	eP	P	10 08 22.8	-0.4
	2.2nm,0.7s,mb4.2						
AKTK	Aktyubinsk	53.64	52	P	P	10 08 46.6	+0.3
AKTK				LR	LR	10 29 45.4	
AKTO	Aktyubinsk	53.64	52	P	P	10 08 46.6	+0.3
	0.7nm,0.5s,mb3.9,baz=225,slow=4.3,SNR=3.5						
AKTO				LR	LR	10 29 45.4	
	comp=Z,52nm,18.1s,MS3.6,baz=225,slow=34						
TXAR	Lajitas Array	54.35	272	P	P	10 08 53.0	+1.3
	0.5nm,0.9s,mb3.4,baz=56,slow=9.5,SNR=3.7						
BVAR	Borovoye Array	57.35	44	P	P	10 09 13.3	+0.4
	1.6nm,0.8s,mb4.1,baz=303,slow=6.9,SNR=9.6						
MKAR	Makanchi Array	67.03	41	P	P	10 10 15.9	-2.0
	0.8nm,0.8s,mb3.8,baz=311,slow=6.3,SNR=5.8						
WRA	Warramunga Arr	145.75	18	PKPbc	PKPbc	10 19 02.9	-1.2
	0.9nm,0.9s,baz=334,slow=2.9,SNR=3.7						
ASAR	Alice Springs	149.30	20	PKPbc	PKPbc	10 19 11.9	-1.9
	0.5nm,0.8s,baz=349,slow=2.4,SNR=4.5						

*IDC **06** 10:06:29.7±0.6,20°.34S×168°.83E,h0km,mb4.8/20, mb1 4.9/22,mb1mx4.8/24,mbtmp4.8/22,ML3.3/2,MS4.4/19, Ms1 4.4/19,ms1mx4.3/28,Error ellipse: s-maj=18.6km s-min=14.5km az=146.0*

*BJI **06** 10:06:30.6,20°.40S×168°.80E,h10km,mB5.2/22,mb4.9/31, Ms5.0/21,Ms7 4.6/24*

*NOU **06** 10:06:30.2±1.1,20°.02S×168°.62E,h30km,MD3.5,ML3.8, MS2.5*

*ISCJB **06** 10:06:31.4±1.8,20°.52S±0°.04×168°.83E±0°.03,h15km±11km, mb4.9/77,MS4.5/41,Error ellipse: s-maj=8.2km s-min=3.5km az=146.3*

*LDG **06** 10:06:31.6±0.2,20°.18S×168°.53E,h10km,Mb5.2/3, Ms4.6/8,Error ellipse: s-maj=18.1km s-min=4.1km az=127.0*

*SZGRF **06** 10:06:34.6,21°.00S×168°.58E,h36km,Loyalty Islands*

*GCMT **06** 10:06:35.7±0.2,20°.49S×168°.63E,h20km,MW5.3/91, Moment Tensor Solution. s68,c100; s91,c144; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.77±.02; $M_{\theta\theta}$-0.08±.01; $M_{\phi\phi}$-0.68±.02; $M_{r\theta}$0.27±.03; $M_{\theta\phi}$0.31±.01; $M_{\phi r}$-0.59±.03; Best double couple: $M_0$1.01900×10^{17} NP1:ϕ_s338.00000°, δ25.00000°, λ92.00000°. NP2:ϕ_s156.00000°, δ65.00000°, λ89.00000°. Principal axes: T 0.9950, Plg70.0000°, Azm64.0000°; N 0.0490, Plg1.0000°, Azm157.0000°; P -1.0440, Plg20.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **06** 10:06:35.7±0.2,20°.40S×168°.83E,h35km,mb5.1/47 Error ellipse: s-maj=10.7km s-min=7.2km az=151.0*

*MOS **06** 10:06:36.5±1.9,19°.93S×168°.52E,h33km,mb5.3/31, MS4.8/8,Error ellipse: s-maj=10.9km s-min=9.5km az=142.1*

*DJA **06** 10:07:33,22°.03S×166°.80E,h500km,mb4.7/15*

ISC 06 10:06:31.9±2.3,20°.52S±0°.05×168°.87E±0°.03,h16km±14km, h15km±1.4km:pP-P,n472,σ0s81/333,mb4.9/77,MS4.5/41, 94C-89D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.46	228	eP	Pn	10 07 10.2	-1.3
BAYA				eS	Sn	10 07 39.3	-1.9
PLUM	Mont Dore	2.71	230	eP	Pn	10 07 12.4	-2.4
PLUM				AMP		10 07 49.7	
	comp=Z,979nm,0.0s						
DZM	Mont Dzumac	2.74	235	ePn	Pn	10 07 13.1	-2.1
	comp=Z,101nm,0.2s						
DZM				eSn	Sn	10 07 42.7	-5.3
	comp=Z,1μm,0.3s						
DZM				eLR	LR	10 07 51.5	
	comp=Z,16μm,26.6s						
DZM	Mont Dzumac	2.74	235	ePn	Pn	10 07 13.2	-2.1
DZM				eSn	Sn	10 07 46.0	-2.0
NORM	Noumea	2.80	232	eP	Pn	10 07 14.3	-1.8
NORM				eS	Sn	10 07 46.6	-2.9
NORM				AMP		10 07 50.7	
	comp=Z,1μm,1.4s						
MVNO	Noumea	2.85	232	eP	Pn	10 07 15.4	-1.4
MVNO				eS	Sn	10 07 47.6	-3.3
MVNO				AMP		10 07 48.7	
	comp=Z,105nm,4.2s						
NOUC	Port Laguerre	2.86	236	eP	Pn	10 07 15.0	-2.0
NOUC				eS	Sn	10 07 48.5	-2.6
NOUC				AMP		10 08 00.4	
	comp=Z,562nm,21.4s						
ONTRN	Noumea	2.87	231	eP	Pn	10 07 15.4	-1.6
ONTRN				eS	Sn	10 07 49.0	-2.2
ONTRN				AMP		10 07 53.5	
	comp=Z,2μm,0.9s						
RAO	Raoul Island	14.80	129	eP	Pn	10 10 01.2	+0.6
RAO	Raoul Island	14.80	129	LR	LR	10 14 42.1	
	comp=Z,2μm,18.8s,baz=326,slow=33						
EIDS	Eidsvold	17.08	250	ePn	Pn	10 10 31.5	+1.4
	comp=Z,154nm,1.8s						
ARMA	Armidale	18.40	234	eP	Pn	10 10 46.9	+0.4
ARMA				eS	Sn	10 14 34.4	+23
ARMA	Armidale	18.40	234	eP	Pn	10 10 47.3	+0.9
	comp=Z,103nm,1.5s			

WRAB pmax pmax
comp=Z,45nm,1.4s,mb5.1
WRAB Tennant Creek 32.36 265 *eP* **P 10 12 59.9 -1.0**
comp=Z,45nm,1.4s,mb5.1
WRA Warramunga Arr 32.37 265 P **P 10 12 59.5 -1.5**
WRA 10 15 47.6
WRA Warramunga Arr 32.37 265 P **P 10 12 59.5 -1.5**
comp=Z,3.1nm,0.4s,mb4.5,baz=92,slow=8.5,SNR=102
WRA PcP PcP 10 15 47.6 -1.0
comp=Z,2.1nm,1.0s,baz=100,slow=1.9,SNR=3.6
WRA LR LR 10 26 18.5
comp=Z,1µm,19.7s,MS4.7,baz=90,slow=37
ASAR Alice Springs 32.50 258 P **P 10 13 01.2 -0.9**
comp=Z,22nm,0.7s,mb5.2,baz=84,slow=8.9,SNR=315
ASAR PcP PcP 10 15 49.3 +0.3
comp=Z,2.5nm,1.0s,baz=91,slow=4.0,SNR=4.1
KAKA Kakadu 35.70 277 *eP* **P 10 13 26.2 -3.8**
comp=Z,26nm,1.1s,mb5.1
KAKA Kakadu 35.70 277 *eP* **P 10 13 30.1 +0.1**
comp=Z,81nm,1.1s,mb5.6
FORT Forrest 38.00 246 *eP* **P 10 13 49.1 -0.3**
comp=Z,18nm,0.7s,mb4.9
FORT Forrest 38.00 246 *eP* **P 10 13 49.3 -0.1**
comp=Z,34nm,0.9s,mb5.1
PPT Papeete 39.32 93 *eS* **S 10 19 57.8 -3.5**
comp=Z,480nm,26.0s
PPT *e*LQ 10 23 06.4
comp=Z,2µm,28.8s
PPT *e*LR LR 10 24 48.3
comp=Z,2µm,27.5s,baz=255
PPT Papeete 39.32 93 LR LR 10 25 54.2
comp=Z,630nm,21.4s,MS4.4,baz=261,slow=30
FITZ Fitzroy Crossi 40.78 266 *eP* **P 10 14 12.2 -0.6**
comp=Z,57nm,1.3s,mb5.0
FITZ *e*S **S 10 20 15.0 -8.3**
FITZ Fitzroy Crossi 40.78 266 P **P 10 14 12.4 -0.4**
comp=Z,20nm,0.7s,mb4.8,baz=101,slow=10,SNR=47
FITZ LR LR 10 30 45.5
comp=Z,1µm,19.9s,MS4.8,baz=99,slow=36
GUMO Guam 41.30 323 LR LR 10 30 46.0
comp=Z,341nm,18.8s,MS4.2,baz=120,slow=35
MBWA Marble Bar 45.78 260 *eP* **P 10 14 53.0 -0.1**
MBWA Marble Bar 45.78 260 *eP* **P 10 14 53.4 +0.2**
comp=Z,52nm,1.1s,mb5.4
NWAO Narrogin (SRO) 47.33 244 *eP* **P 10 15 05.0 -0.1**
NWAO pmax pmax
comp=Z,26nm,1.0s
NWAO Narrogin (SRO) 47.33 244 LR LR 10 33 55.1
comp=Z,1µm,21.8s,MS4.8,baz=92,slow=35
NWAO Narrogin (SRO) 47.33 244 *eP* **P 10 15 05.0 -0.2**
comp=Z,26nm,1.0s,mb5.1
MORW Morawa 48.38 249 *eP* **P 10 15 12.8 -0.5**
KAPI Kappang 50.10 281 P **P 10 15 26.1 -0.6**
comp=Z,18nm,1.1s,mb5.0,baz=53,slow=7.8,SNR=6.4
KAPI Kappang 50.10 281 *eP* **P 10 15 28.6 +1.8**
comp=Z,38nm,1.1s,mb5.3
TAOE Nuku Hiva Isla 50.47 85 *eS* **S 10 22 46.0 +2.9**
comp=Z,506nm,25.5s
TAOE *e*LR LR 10 29 56.3
comp=Z,966nm,26.9s
DAV Davao City (W) 50.62 298 LR LR 10 33 08.8
comp=Z,180nm,19.9s,MS4.1,baz=194,slow=32
CBIJ Chichi jima 53.94 330 LR LR 10 34 38.1
comp=Z,129nm,19.9s,MS4.0,baz=134,slow=31
SBA Scott Base 57.38 181 *eP* **P 10 16 20.2 +1.1**
SBA pmax pmax
comp=Z,37nm,1.3s,mb5.2
SBA Scott Base 57.38 181 *eP* **P 10 16 20.2 +1.1**
comp=Z,37nm,1.3s,mb5.2
KKM Kota Kinabalu 58.06 291 *eP* **P 10 16 29.3 +4.5**
comp=Z,12nm,1.0s,mb4.9
CASY Casey 58.82 204 *eP* **P 10 16 32.4 +3.2**
comp=Z,26nm,1.4s,mb5.1
KSM Kuching 61.33 284 *eP* **P 10 16 48.1 +0.7**
comp=Z,37nm,1.0s,mb5.5
JOW Kunigami 61.35 319 LR LR 10 39 56.1
comp=Z,136nm,20.7s,MS4.1,baz=178,slow=33
MJAR Matsushiro Arr 63.72 333 P **P 10 17 01.9 -1.0**
comp=Z,3.3nm,1.0s,mb4.3,baz=167,slow=6.9,SNR=6.8
MAJO Matsushiro 63.72 333 *eP* **P 10 16 59.3 -3.5**
MAJO pmax pmax
comp=Z,23nm,1.4s,mb5.0
MAJO Matsushiro 63.72 333 *eP* **P 10 16 59.3 -3.5**
comp=Z,23nm,1.4s,mb5.0
TATO Taipei 64.55 312 *eP* **P 10 17 08.6 0.0**
comp=Z,59nm,1.0s,mb5.6
MIR Mirnyy 65.73 205 *eP* **P 10 17 19.0 +3.4**
MIR pmax pmax
comp=Z,23nm,1.2s,mb5.1
QZH Quanzhou 66.57 310 P **P 10 17 25.0 +3.4**
QZH S S 10 26 18.1 +5.8
ASAJ Asahikawa 68.68 340 P **P 10 17 34.1 -0.3**
comp=Z,22nm,1.1s,mb5.0,baz=249,slow=16,SNR=3.9
KSRS Korea Array 69.37 326 P **P 10 17 39.3 +0.4**
comp=Z,2.6nm,0.9s,mb4.2,baz=147,slow=7.0,SNR=6.1
KS15 Wonju Array Si 69.38 326 *eP* **P 10 17 38.4 -0.6**
QSPA South Pole Qui 69.54 180 *eP* **P 10 17 40.3 +0.9**
comp=Z,33nm,1.1s,mb5.2
QIZ Qiongzhong 69.92 300 P **P 10 17 45.3 +2.6**
QIZ S S 10 26 57.6 +5.2
QIZ pmax pmax
comp=Z,13nm,1.4s,mb4.7
QIZ LR LR
comp=Z,160nm,22.0s,MS4.2
NJ2 Nanjing 70.89 316 *eP* **P 10 17 49.4 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
NJ2 LR LR
comp=N,220nm,16.7s,MS4.6
NJ2 LR LR
comp=E,180nm,16.9s,MS4.6
NJ2 LR LR
comp=Z,310nm,21.0s,MS4.5
YSS Yuzh-Sakhalins 71.18 341 *eP* **P 10 17 49.8 0.0**
YSS pmax pmax
comp=Z,53nm,1.1s,mb5.4
YSS Yuzh-Sakhalins 71.18 341 *eP* **P 10 17 49.8 0.0**
comp=Z,53nm,1.1s,mb5.4
KULM Kulim 71.67 283 *eP* **P 10 17 54.7 +1.2**
comp=Z,33nm,1.3s,mb5.1
PSI Prapat 72.30 280 P **P 10 17 58.2 +0.9**
comp=Z,2.4nm,0.4s,mb4.5,baz=335,slow=4.4,SNR=3.8
PET Petropavlovsk 73.77 354 *eP* **P 10 18 13.8 +8.7**
PET pmax pmax
comp=Z,31nm,1.7s,mb5.0
PET pmax pmax
comp=Z,300nm,15.0s
PET pmax pmax
comp=Z,200nm,14.3s
PET MLR MLR
comp=Z,300nm,18.0s,MS4.6
PET MLR MLR
comp=Z,500nm,14.0s
PETK Petropavlovsk- 73.96 353 P **P 10 18 06.5 +0.3**
comp=Z,22nm,1.0s,mb5.0,baz=116,slow=6.8,SNR=14
PETK LR LR 10 47 27.3
comp=Z,270nm,19.9s,MS4.5,baz=165,slow=33
PETK Petropavlovsk- 73.96 353 P **P 10 18 06.5 +0.3**
PETK LR LR 10 47 27.3
MDJ Mudanjiang 74.08 332 P **P 10 18 08.4 +1.3**
MDJ pP pP 10 18 11.6 -0.7
MDJ sP sP 10 18 12.9 -1.3
MDJ pmax pmax
comp=Z,26nm,2.1s,mb4.8
MDJ Mudanjiang 74.08 332 *eP* **P 10 18 08.7 +1.5**
comp=Z,21nm,1.1s,mb5.0
HABR Khabarovsk 75.04 337 *eP* pP 10 18 24.4 +6.6
HABR *e*S S 10 27 47.0 -2.9
HABR *e* 10 28 20.6
HABR *e*SS SS 10 32 37.6 -1.9
HABR pmax pmax
comp=Z,40nm,1.4s,mb5.2
HABR pmax pmax
comp=N,25nm,1.6s
HABR pmax pmax
comp=E,18nm,1.1s
HABR MLR MLR
comp=Z,95nm,17.0s,MS4.2
CN2 Changchun 75.37 329 *eP* **P 10 18 15.4 +0.8**
CN2 *e*sP sP 10 18 22.0 +0.3
CN2 *e*S S 10 27 53.6 -0.2
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,20.0s,MS4.8
CN2 LR LR
comp=E,400nm,20.0s,MS4.8
CN2 LR LR
comp=Z,600nm,21.0s,MS4.9
GYA Guiyang 76.27 305⇑ *iP* **P 10 18 21.7 +1.5**
GYA PP PP 10 21 14.8 +3.0
GYA S S 10 28 05.4 +1.0
GYA SKS 10 28 27.9
GYA SS SS 10 33 01.8 +2.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.8s
GYA LR LR
comp=N,580nm,19.0s,MS5.0
GYA LR LR
comp=E,470nm,20.8s,MS5.0
GYA LR LR
comp=Z,590nm,19.7s,MS4.9
KLR Kul'dur 76.89 336 *eP* **P 10 18 19.6 -3.6**
KLR *e* 10 18 30.8
KLR pmax pmax
comp=Z,74nm,1.8s,mb5.3
MAW Mawson 77.12 202 *eP* **P 10 18 26.6 +2.3**
MAW pmax pmax
comp=Z,6.0nm,1.2s
MAW Mawson 77.12 202 P **P 10 18 25.8 +1.5**
comp=Z,6.1nm,0.9s,mb4.5,baz=125,slow=9.3,SNR=8.3
MAW Mawson 77.12 202 *eP* **P 10 18 26.6 +2.3**
comp=Z,6.2nm,1.2s,mb4.4
BJI Beijing 77.71 321 P **P 10 18 28.4 +0.4**
BJI S S 10 28 21.5 +1.9
BJI pmax pmax
comp=Z,15nm,1.0s,mb4.9
BJI pmax pmax
comp=Z,170nm,4.9s
BJI LR LR
comp=N,200nm,15.4s,MS4.6
BJI LR LR
comp=E,77nm,12.1s,MS4.6
BJI LR LR
comp=Z,120nm,22.9s
KMI Kunming 78.66 302 P **P 10 18 35.8 +2.2**
KMI PcP PcP 10 18 45.2 +2.7
KMI PP PP 10 21 34.8 +2.9
KMI S S 10 28 31.3 +0.9
KMI SKS 10 28 46.1
KMI SS SS 10 33 36.7 +1.7
KMI pmax pmax
comp=Z,26nm,1.2s,mb5.0
KMI LR LR
comp=N,130nm,17.1s,MS4.5
KMI LR LR
comp=E,150nm,17.1s,MS4.5
KMI LR LR
comp=Z,150nm,16.3s,MS4.4
CMAR Chiang Mai Arr 78.72 295 P **P 10 18 35.6 +1.6**
comp=Z,5.9nm,0.8s,mb4.5,baz=130,slow=3.9,SNR=12
XAN Xi'an 78.72 313 P **P 10 18 34.7 +1.0**
XAN pP pP 10 18 38.0 -0.9
XAN sP sP 10 18 39.3 -1.5
XAN PP PP 10 21 32.6 +0.3
XAN S S 10 28 32.8 +2.1
XAN sS sS 10 28 38.5 -0.8
XAN SS SS 10 33 38.0 +2.3
XAN pmax pmax
comp=Z,35nm,7.3s
XAN LR LR
comp=N,63nm,16.8s,MS4.1
XAN LR LR
comp=E,50nm,17.5s,MS4.1
XAN LR LR
comp=Z,62nm,18.2s,MS4.0
CHTO Chiang Mai 78.87 295 *eP* **P 10 18 36.6 +1.7**
CHTO pmax pmax
comp=Z,24nm,1.0s,mb5.1
CHTO Chiang Mai 78.87 295 *eP* **P 10 18 36.6 +1.7**
comp=Z,24nm,1.0s,mb5.1
CD2 Chengdu 80.74 308 P **P 10 18 46.4 +1.6**
CD2 pP pP 10 18 51.1 +1.1
CD2 sP sP 10 18 53.2 +1.4
CD2 PP PP 10 21 52.7 +3.6
CD2 S S 10 28 53.2 +1.0
CD2 SKS 10 28 59.7
CD2 sS sS 10 29 00.6 -0.2
CD2 SS SS 10 34 09.1 +3.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,120nm,5.5s
CD2 LR LR
comp=N,240nm,13.1s
CD2 LR LR
comp=Z,180nm,10.7s,MS4.7
HHC Hu-ho-hao-te 80.97 320 *eP* **P 10 18 46.7 +1.0**
HHC pP pP 10 18 51.5 +0.6
HHC sP sP 10 18 53.9 +1.1
HHC PP PP 10 21 54.2 +3.4
HHC S S 10 28 53.9 -0.2
HHC sS sS 10 29 02.4 -0.3
HHC SS SS 10 34 10.9 +1.8
HHC pmax pmax
comp=Z,22nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,100nm,6.2s
HHC LR LR
comp=N,140nm,18.3s,MS5.2
HHC LR LR
comp=E,900nm,19.0s,MS5.2
HHC LR LR
comp=Z,470nm,19.2s,MS4.9
LZH Lanzhou 83.33 312 *eP* **P 10 19 00.3 +2.1**
LZH pP pP 10 19 03.4 -0.1
LZH sP sP 10 19 05.3 0.0
LZH PP PP 10 22 13.8 +3.4
LZH *e*S S 10 29 13.0 -5.6
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,130nm,4.9s
LZH LR LR
comp=E,430nm,14.5s
LZH LR LR
comp=Z,680nm,16.6s,MS5.1
SYO Syowa Base 83.61 196⇓ *eP* **P 10 19 01.8 +2.6**
OHAK Old Harbor 83.67 20 *eP* **P 10 18 59.3 -0.1**
comp=Z,44nm,1.0s,mb5.5
KDAK Kodiak Island 84.35 20 P **P 10 19 01.9 -1.1**
comp=Z,11nm,0.9s,mb5.0,baz=294,slow=4.2,SNR=4.5
KDAK LR LR 10 54 46.9
comp=Z,258nm,18.3s,MS4.7,baz=123,slow=34
GAMB Gambell 85.38 9 *eP* **P 10 19 07.8 -0.1**
comp=Z,10nm,1.0s,mb4.9
CLNS Chul'man 85.44 337 *eP* **P 10 19 08.9 +0.5**
CLNS *e* pP 10 19 15.1 +1.5
CLNS *e* 10 22 28.0
CLNS *e*S S 10 29 24.5 -14
CLNS *e**SS sS 10 30 32.1 +45
CLNS *e*SS SS 10 35 06.4 -8.3
CLNS pmax pmax
comp=Z,15nm,1.0s,mb5.1
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,2.0nm,0.8s
CLNS pmax pmax
comp=E,3.0nm,0.9s
CLNS smax
comp=E,125nm,15.5s
CLNS smax
comp=N,83nm,13.4s
PKM Peak Mountain 87.22 51 ⇓P **P 10 19 17.8 +0.1**
baz=87
NVL N'lazarevskaya 87.55 187 *eP* **P 10 19 27.6 +8.8**
NVL *e*SP 10 19 38.1
NVL *e**PP PP 10 22 55.1 +12
NVL *e*S S 10 30 01.3 +2.1
NVL *e*SP 10 31 45.3
NVL pmax pmax
comp=Z,20nm,0.9s,mb5.3
NVL MLR MLR
comp=Z,423nm,17.0s,MS4.9
MAIT Maitri 87.55 187 *eP* **P 10 19 18.7 -0.1**
MAIT *e*E 10 19 28.6
SHL Shillong 87.65 298 *eP* **P 10 19 21.0 +1.0**
ULN Ulaanbaatar 87.68 324 *eP* **P 10 19 20.2 +0.6**
ULN pmax pmax
comp=Z,17nm,1.1s,mb5.2
ULN Ulaanbaatar 87.68 324 *eP* **P 10 19 20.2 +0.5**
comp=Z,17nm,1.1s,mb5.2
GTA Gaotai 87.75 314 *eP* **P 10 19 20.7 +0.5**
GTA pP pP 10 19 24.8 -0.7
GTA sP sP 10 19 28.5 +1.2
GTA PP PP 10 22 49.4 +3.2
GTA SKS 10 29 46.1
GTA S S 10 30 03.5 +1.4
GTA sS sS 10 30 11.6 +0.9
GTA pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,100nm,6.0s
GTA LR LR
comp=N,94nm,13.8s,MS4.5
GTA LR LR
comp=E,89nm,16.2s,MS4.5
GTA LR LR
comp=Z,110nm,17.1s,MS4.3
YAK Yakutsk 87.98 343 *eP* **P 10 19 18.7 -2.0**
YAK *e**PP pP 10 19 30.0 +4.0
YAK *e*S S 10 29 43.0 -20
YAK pmax pmax
comp=Z,14nm,1.2s,mb5.1
YAK pmax pmax
comp=E,5.0nm,1.7s
YAK pmax pmax
comp=N,5.0nm,1.6s
YAK smax
comp=N,100nm,12.9s
YAK smax
comp=E,129nm,12.9s
YAK MLR MLR
comp=Z,512nm,23.0s,MS4.9
YAK MLR MLR
comp=E,185nm,21.0s,MS4.8
YAK MLR MLR
comp=N,284nm,18.0s,MS4.8
YAK Yakutsk 87.98 343 *eP* **P 10 19 19.7 -1.1**
comp=N,32nm,1.0s,mb5.5
WDC Whiskeytown Da 88.01 45 *eP* **P 10 19 21.3 -0.1**
SONM Songino Array 88.03 323 P **P 10 19 21.7 +0.4**
comp=N,4.7nm,0.9s,mb4.7,baz=139,slow=5.1,SNR=17
SONM LR LR 10 59 43.0
comp=N,194nm,18.0s,MS4.6,baz=265,slow=36
OHCM Honcut 88.12 47 *eP* **P 10 19 21.9 0.0**
CMB Columbia Colle 88.27 48 *eP* **P 10 19 22.6 -0.1**
CMB pmax pmax
comp=Z,15nm,1.3s,mb5.1
CMB Columbia Colle 88.27 48 *eP* **P 10 19 22.6 -0.1**
comp=Z,15nm,1.3s,mb5.1
BILL Bilibino 88.32 359 *ωeP* **P 10 19 21.4 -0.8**
BILL *i* 10 19 31.2
BILL PS 10 31 25.0
BILL pmax pmax
comp=Z,15nm,1.1s,mb5.1
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.3
BILL Bilibino 88.32 359 *eP* **P 10 19 21.7 -0.5**
comp=Z,11nm,1.0s,mb5.0
PMR Palmer 88.45 19 *eP* **P 10 19 24.0 +1.0**
PMR pmax pmax
comp=Z,11nm,1.2s,mb5.0
PMR Palmer 88.45 19 *eP* **P 10 19 24.0 +1.1**
comp=Z,11nm,1.2s,mb5.0
YBH Yreka Blue Hor 88.46 44 *eP* **P 10 19 24.1 +0.6**
YBH pmax pmax
comp=Z,18nm,1.4s
YBH Yreka Blue Hor 88.46 44 *eP* **P 10 19 24.1 +0.6**
comp=Z,18nm,1.4s,mb5.1
VNA3 Neumayer Olymp 88.47 180 *e*PKPdf **P 10 19 23.1 -0.1**
VNA3 *e* 10 19 33.9
BFSC Mount Baldy St 88.53 53 ⇑P **P 10 19 24.4 +0.4**
baz=89
ISA Isabella 88.55 51 ⇑P **P 10 19 23.9 -0.2**
baz=89
ISA Isabella 88.55 51 *eP* **P 10 19 23.9 -0.2**
ISA pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
ISA Isabella 88.55 51 *eP* **P 10 19 23.9 -0.2**
comp=Z,6.6nm,0.8s,mb5.0
EDW2 Edwards Air Fo 88.56 52 ⇑P **P 10 19 24.2 0.0**
baz=89
HUMO Hull Mountain 88.73 43 *eP* **P 10 19 25.2 +0.5**
comp=Z,11nm,0.9s,mb5.2
VNA2 Neumayer--Watz 88.76 181 *e*PKPdf **P 10 19 24.4 -0.1**
VNA2 *e* pP 10 19 30.1 +0.3
VNA2 *e* 10 19 35.1
MONP Monument Peak 88.88 54 ⇑P **P 10 19 26.0 +0.3**
baz=89
LRMC Laurel Mountai 89.05 51 ⇑P **P 10 19 26.5 +0.1**
baz=89
VNA1 Neumayer--Stat 89.05 181 *e*PKPdf **P 10 19 26.6 +0.7**
BEKR Beckwourth 89.14 47 ⇑P **P 10 19 26.5 -0.2**
baz=89
WAKR Walker 89.14 48 *eP* **P 10 19 27.5 +0.7**
CWC Cottonwood Cre 89.18 50 ⇓P **P 10 19 27.0 -0.1**
baz=89
WCN Washoe City 89.29 47 ⇑P **P 10 19 27.7 +0.3**
baz=89
SWSC Sam W. Stewart 89.37 54 ⇑P **P 10 19 28.0 0.0**
baz=89
MPMC Manual Prospec 89.44 51 ⇓P **P 10 19 28.3 0.0**
baz=90
GSC Goldstone 89.62 52 ⇓P **P 10 19 28.9 -0.2**
baz=90
BELC Belle Mtn. 89.67 53 ⇓P **P 10 19 29.1 -0.3**
baz=90
PAHR Pah Rah Range 89.73 47 *eP* **P 10 19 30.0 +0.5**
NVAR Mina Array Bea 89.91 49 P **P 10 19 30.6 +0.2**
comp=Z,6.8nm,0.9s,mb5.0,baz=226,slow=7.6,SNR=36
GRAC Grapevine Rang 89.94 50 ⇓P **P 10 19 31.0 +0.4**
baz=90
FURC Furnace Creek, 90.08 51 ⇑P **P 10 19 31.0 -0.2**
baz=90,SNR=9.6
K05A Summer Lake 90.12 44 ⇑P **P 10 19 31.0 -0.3**
baz=90
MOD Modoc 90.12 45 *eP* **P 10 19 31.5 +0.2**
comp=Z,11nm,1.0s,mb5.1
112A Yuma 90.14 55 ⇓P **P 10 19 31.7 +0.1**
baz=90
GLA Glamis 90.16 55 ⇓P **P 10 19 31.9 +0.2**
baz=90
H04A Detroit Lake 90.23 42 ⇑P **P 10 19 31.9 +0.1**
baz=90
GMRC Granite Mounta 90.25 53 ⇓P **P 10 19 32.2 +0.1**
baz=90
SHOC Shoshone 90.26 52 ⇓P **P 10 19 31.8 -0.3**
baz=90,SNR=5.2
G04A Mulino 90.30 41 ⇓P **P 10 19 31.9 -0.1**
baz=90
E03A Lebam 90.30 40 ⇓P **P 10 19 31.8 -0.2**
baz=90,SNR=6.7
TUQ Turquoise Moun 90.33 52 ⇑P **P 10 19 32.1 -0.4**
baz=90
BOD Bodaibo 90.33 334 *eP* **P 10 19 31.1 -0.7**
BOD pmax pmax
comp=Z,15nm,1.5s,mb5.1
IRM Iron Mountain 90.37 54 ⇑P **P 10 19 32.3 -0.4**
baz=90,SNR=5.7
U10A Ash Meadows, A 90.45 51 ⇑P **P 10 19 33.2 +0.3**
baz=90,SNR=8.3
NLWA Neilton Lookou 90.55 39 ⇑P **P 10 19 33.6 +0.4**
baz=91
Y12C Blythe 90.68 54 ⇑P **P 10 19 34.3 +0.2**
baz=91
F04A Amboy 90.69 41 ⇓P **P 10 19 33.8 -0.1**
baz=91
113A Mohawk Valley, 90.86 55 ⇑P **P 10 19 34.8 -0.2**
baz=91
V11A Goodsprings 90.86 52 ⇑P **P 10 19 34.7 -0.2**
baz=91,SNR=6.3
S10A Tonopah Range, 90.90 50 ⇑P **P 10 19 34.9 -0.1**
baz=91,SNR=19
Z13A Yuma Proving G 91.12 55 ⇓P **P 10 19 35.8 -0.3**
baz=91
ZAK Zakamensk 91.13 324 *eP* **P 10 19 35.5 -0.3**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
U11A Corn Creek 91.14 51 ⇑P **P 10 19 35.9 -0.2**

baz=91
PDMCI Parker Dam,Lak 91.19 54 ⇑P P 10 19 36.4 0.0
baz=91
Y13A Salome 91.23 54 ⇑P P 10 19 37.1 +0.4
baz=91
V12A Nelson 91.24 52 ⇑P P 10 19 36.4 -0.3
baz=91,SNR=5.3
R10A Warm Springs 91.26 49 ⇓P P 10 19 36.9 +0.2
baz=91,SNR=12
214A Organ Pipe Nat 91.27 56 ⇑P P 10 19 37.6 +0.6
baz=91
SHPR Sheep Range 91.34 51 eP P 10 19 37.3 +0.2
S11A Rachel 91.39 50 ⇑P P 10 19 36.8 -0.5
baz=91,SNR=6.5
H06A Lindquist Farm 91.42 42 ⇑P P 10 19 37.0 -0.3
baz=92,SNR=20
Q10A Clear Creek Ra 91.42 49 ⇓P P 10 19 37.0 -0.4
baz=92,SNR=6.7
G06A Carlson Farm, 91.46 42 ⇑P P 10 19 37.3 -0.1
baz=92
WVOR Wild Horse Val 91.46 45 eP P 10 19 37.3 -0.2
WVOR pmax pmax
comp=Z,11nm,1.0s,mb5.1
WVOR Wild Horse Val 91.46 45 eP P 10 19 37.3 -0.3
comp=Z,11nm,1.0s,mb5.1
114A Black Gap (USA 91.53 56 ⇓P P 10 19 37.6 -0.5
baz=92
D05A Enumclaw 91.56 40 ⇓P P 10 19 38.1 +0.3
baz=92
T11A Corn Creek, Al 91.60 51 ⇑P P 10 19 38.2 -0.1
baz=92,SNR=12
TLY Talaya 91.61 326 eP P 10 19 36.5 -1.5
TLY e 10 30 07.6
TLY eS S 10 30 31.3 -6.1
TLY ePS PS 10 31 38.5 -10
TLY pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
TLY MLR MLR
comp=Z,69nm,16.0s,MS4.2
I07A Izee 91.64 43 ⇑P P 10 19 38.4 +0.1
baz=92,SNR=9.3
W13A Hualapai Mount 91.71 53 ⇓P P 10 19 39.1 +0.2
baz=92
P10A Eureka 91.71 48 ⇑P P 10 19 38.7 0.0
baz=92
Z14A Wintersburg 91.73 55 ⇓P P 10 19 39.2 +0.2
baz=92
T12A Moapa 91.75 51 ⇓P P 10 19 38.5 -0.5
baz=92
U12A Valley of Fire 91.76 52 ⇑P P 10 19 39.3 +0.3
baz=92
R11A Troy Canyon, C 91.80 50 ⇓P P 10 19 38.7 -0.4
baz=92,SNR=6.2
E06A Yakima 91.86 41 ⇓P P 10 19 39.3 0.0
baz=92
Y14A Wickenburg 91.91 54 ⇑P P 10 19 39.6 -0.2
baz=92
V13A Grand Canyon W 91.94 52 ⇓P P 10 19 39.8 -0.1
baz=92,SNR=6.4
Q11A Duckwater 91.96 49 ⇑P P 10 19 39.6 -0.3
baz=92,SNR=9.3
J08A Circle Bar Ran 91.98 44 ⇑P P 10 19 40.1 +0.2
baz=92,SNR=13
S12A Delamar Landin 92.02 51 ⇓P P 10 19 40.6 +0.4
baz=92,SNR=13
115A Sonoran Desert 92.02 56 ⇑P P 10 19 40.5 +0.2
baz=92
U13A Pakoon Wash 92.18 52 ⇑P P 10 19 40.6 -0.4
baz=92
X14A Yava 92.21 54 ⇓P P 10 19 41.5 +0.3
baz=92
D06A Cle Elum 92.25 40 ⇑P P 10 19 40.9 -0.1
baz=92
Z15A Gila River Ind 92.30 55 ⇓P P 10 19 41.6 -0.1
baz=92
216A Three Points, 92.35 57 ⇑P P 10 19 42.3 +0.4
baz=92
W14A Seligman 92.36 53 ⇓P P 10 19 42.0 +0.2
baz=92,SNR=5.5
116A Eloy 92.37 56 ⇓P P 10 19 42.4 +0.4
baz=92
H08A Prairie City 92.38 43 ⇓P P 10 19 41.0 -0.7
baz=92
Y15A Casa Rosa Ranc 92.43 55 ⇑P P 10 19 42.0 -0.2
baz=92,SNR=6.1
J09A Fry Pan Ranch, 92.45 44 ⇑P P 10 19 41.6 -0.5
baz=92,SNR=16
T13A Saint George 92.47 51 ⇑P P 10 19 42.4 +0.1
baz=92,SNR=8.5
M10A I.L. Ranch, Tu 92.47 46 ⇑P P 10 19 42.3 +0.1
baz=92,SNR=5.5
R12A Pony Springs, 92.49 50 ⇑P P 10 19 42.2 -0.2
baz=92,SNR=9.1
V14A Boquillas Ranc 92.50 53 ⇑P P 10 19 42.6 +0.1
baz=92,SNR=6.1
G08A Pilot Rock 92.54 42 ⇓P P 10 19 42.3 -0.2
baz=93,SNR=8.3
X15A Humboldt 92.71 54 ⇑P P 10 19 43.8 +0.3
baz=93,SNR=8.5
S13A Holt Ranch, En 92.72 51 ⇓P P 10 19 43.5 0.0
baz=93,SNR=7.3
I09A Lost Marbles R 92.73 44 ⇓P P 10 19 42.8 -0.6
baz=93,SNR=6.9
P12A McGill 92.74 49 ⇓P P 10 19 43.6 +0.1
baz=93
L10A Juniper Basin 92.75 46 ⇑P P 10 19 43.3 -0.2
baz=93,SNR=6.1
U14A Mt Trumbull 92.76 52 ⇑P P 10 19 44.0 +0.4
baz=93,SNR=10
217A Green Valley 92.77 57 ⇑P P 10 19 44.1 +0.2
baz=93
K10A MacKenzie Ranc 92.79 45 ⇑P P 10 19 43.5 -0.1
baz=93,SNR=6.3
R13A O'Grain Ranch, 92.89 50 ⇓P P 10 19 44.7 +0.5
baz=93
Z16A Peralta Trail, 92.89 56 ⇓P P 10 19 44.6 +0.3
baz=93
M11A Holland Ranch, 92.94 47 ⇓P P 10 19 44.9 +0.5
baz=93
W15A Williams 92.96 54 ⇓P P 10 19 45.3 +0.7
baz=93
TUC Tucson 93.00 57 eP P 10 19 45.4 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
TUC Tucson 93.00 57 eP P 10 19 45.4 +0.5
comp=Z,5.2nm,1.0s,mb4.9
Y16A Circle Bar Ran 93.06 55 ⇓P P 10 19 45.4 +0.3
baz=93
CCUT Cedar City 93.08 51 eP P 10 19 45.8 +0.7
H09A Durkee 93.08 43 ⇑P P 10 19 44.6 -0.3
baz=93,SNR=7.2
T14A Hurricane 93.09 52 ⇑P P 10 19 45.3 +0.1
baz=93,SNR=7.9
117A Oracle 93.13 56 ⇑P P 10 19 45.6 +0.1
baz=93
J10A Berg Farm, Mel 93.13 45 ⇑P P 10 19 45.1 -0.1
baz=93
Q13A Wheeler Ranch, 93.16 50 ⇑P P 10 19 45.3 -0.2
baz=93
O12A Currie 93.18 48 ⇑P P 10 19 45.7 +0.2
baz=93,SNR=5.2
N12A Clover Valley, 93.22 48 ⇓P P 10 19 45.6 0.0
baz=93
N12A Clover Valley, 93.22 48 eP P 10 19 45.8 +0.1
comp=Z,3.1nm,0.8s,mb4.8
EGAK Eagle 93.24 19 eP P 10 19 45.2 0.0
comp=Z,3.8nm,0.8s,mb4.9
B07A Winthrop 93.27 39 ⇓P P 10 19 45.7 0.0
baz=93
V15A Kaibab Nationa 93.28 53 ⇓P P 10 19 46.4 +0.3
baz=93,SNR=6.0
L11A Cat Creek Ranc 93.28 46 ⇑P P 10 19 45.8 -0.1
baz=93,SNR=5.0
G09A Cove 93.28 43 ⇓P P 10 19 45.2 -0.7
baz=93
X16A Lo Mia Camp, P 93.29 55 ⇓P P 10 19 46.1 -0.1
baz=93
318A Bisbee 93.30 58 ⇓P P 10 19 47.1 +0.8
baz=93
DAWY Dawson 93.31 20 eP P 10 19 44.1 -1.4
DLBC Dease Lake 93.33 27 eP P 10 19 46.0 +0.2
K11A Parker Ranch, 93.34 45 ⇓P P 10 19 45.8 -0.4
baz=93
P13A Bates Ranch, G 93.37 49 ⇑P P 10 19 46.2 -0.2
baz=93,SNR=8.3
A07A Ashnola River, 93.39 38 ⇓P P 10 19 46.0 -0.2
baz=93
I10A Payette 93.39 44 ⇑P P 10 19 46.0 -0.3
baz=93
U15A North Rim 93.42 52 ⇓P P 10 19 46.9 +0.2
baz=94,SNR=6.4
Y17A Roosevelt 93.47 55 ⇓P P 10 19 47.1 0.0
baz=94
M12A Wells 93.54 47 ⇑P P 10 19 47.0 -0.2
baz=94
T15A Red Dirt Ranch 93.58 52 ⇓P P 10 19 47.4 0.0
baz=94
B08A Colville Reser 93.69 39 ⇑P P 10 19 47.4 -0.2
baz=94
Q14A Sevier Lake (B 93.71 50 ⇓P P 10 19 47.8 -0.2
baz=94,SNR=6.9
X17A Forest Lakes 93.75 55 ⇑P P 10 19 48.4 +0.1
baz=94
MFID Camas Ranch 93.75 45 ⇓P P 10 19 47.4 -0.6
baz=94
118A Homack Ranch, 93.76 57 ⇓P P 10 19 48.5 +0.1
baz=94
WUAZ Wupatki 93.76 54 ⇓P P 10 19 48.4 +0.1
baz=94
WUAZ Wupatki 93.76 54 eP P 10 19 48.7 +0.4
comp=Z,5.8nm,1.0s,mb5.0
319A Douglas 93.83 58 ⇓P P 10 19 49.1 +0.3
baz=94
S15A Panguitch 93.86 51 ⇓P P 10 19 48.6 -0.1
baz=94
I11A Placerville 93.87 44 ⇓P P 10 19 48.0 -0.6
baz=94,SNR=5.6
F10A Beach Ranch, E 93.93 42 ⇑P P 10 19 47.9 -0.9
baz=94
A08A Turner Farm, O 94.00 39 ⇓P P 10 19 48.9 -0.1
baz=94
219A White Tail Can 94.08 57 ⇓P P 10 19 50.3 +0.5
baz=94
P14A Drum Mountains 94.09 49 ⇑P P 10 19 50.0 +0.3
baz=94
Y18A Canyon Day Jun 94.13 56 ⇓P P 10 19 49.9 -0.1
baz=94
J12A Stokes Ranch, 94.17 45 ⇓P P 10 19 50.0 0.0
baz=94,SNR=6.3
H11A Donnelly 94.17 44 ⇓P P 10 19 49.3 -0.6
baz=94,SNR=11
U16A Tuba City 94.18 53 ⇓P P 10 19 50.4 +0.2
baz=94
V17A Tonalea, Kykot 94.24 54 ⇑P P 10 19 50.2 -0.3
baz=94
G11A Walters Elk Ra 94.29 43 ⇓P P 10 19 50.4 -0.1
baz=94
Q15A Fillmore 94.36 50 ⇑P P 10 19 50.8 -0.1
baz=94
I12A Atlanta 94.36 45 ⇑P P 10 19 50.7 -0.1
baz=94
320A Kipp Ranch, An 94.42 58 ⇑P P 10 19 52.0 +0.6
baz=94
X18A Snowflake 94.47 55 ⇓P P 10 19 50.8 -0.9
baz=94
N14A Grayback Hills 94.51 48 ⇑P P 10 19 51.3 -0.3
baz=94
R16A Teasdale 94.73 51 ⇓P P 10 19 53.0 +0.3
baz=95
T17A Navajo Res., N 94.75 52 ⇑P P 10 19 52.6 -0.2
baz=95
HLID Hailey 94.75 45 ⇓P P 10 19 52.2 -0.4
baz=95
Y19A Nutrioso 94.80 56 ⇓P P 10 19 52.6 -0.5
baz=95
J13A Cove Ranch, Pi 94.84 45 ⇑P P 10 19 52.7 -0.4
baz=95,SNR=5.6
H12A Diamond D Ranc 94.86 44 ⇓P P 10 19 52.4 -0.8
baz=95,SNR=7.5
NEW Newport 94.97 40 eP P 10 19 52.9 -0.7
NEW pmax pmax
comp=Z,3.0nm,1.2s
NEW Newport 94.97 40 eP P 10 19 52.9 -0.6
comp=Z,2.9nm,1.2s,mb4.6
I13A Wildhorse Cree 95.08 45 ⇓P P 10 19 53.4 -0.8
baz=95
F12A Elk City 95.09 43 ⇓P P 10 19 53.0 -1.1
baz=95
U18A Rough Rock, Ch 95.23 53 ⇓P P 10 19 54.9 -0.1
baz=95
J14A Carey 95.25 46 ⇑P P 10 19 54.9 -0.1
baz=95
H13A Challis 95.25 44 ⇓P P 10 19 55.2 +0.2
baz=95
M15A Larsen Ranch, 95.26 48 ⇑P P 10 19 54.9 -0.1
baz=95
O16A Springville 95.44 49 ⇑P P 10 19 56.3 +0.4
baz=96
T18A Mexican Hat 95.49 53 ⇑P P 10 19 55.9 -0.3
baz=96
L15A Malad City 95.51 47 ⇓P P 10 19 55.9 -0.2
baz=96
I14A Mackay 95.53 45 ⇓P P 10 19 56.3 +0.1
baz=96
S18A Hurst Farm, Bl 95.60 52 ⇑P P 10 19 56.9 +0.2
baz=96
U19A Dine' College, 95.68 53 ⇓P P 10 19 57.0 -0.1
baz=96
F13A Darby 95.69 43 ⇓P P 10 19 55.8 -1.1
baz=96
SRU San Rafael 95.73 50 ⇑P P 10 19 56.6 -0.7
baz=96
W20A Ramah 95.80 55 ⇓P P 10 19 57.1 -0.5
baz=96
H14A Leadore 95.86 45 ⇑P P 10 19 57.6 -0.1
baz=96
HWUT Hardware Ranch 95.92 48 eP P 10 19 57.7 -0.4
comp=Z,1.2nm,0.6s,mb4.5
R18A Canyonlands Na 95.93 51 ⇑P P 10 19 57.3 -0.8
baz=96
O17A Robinson Place 95.98 49 ⇑P P 10 19 58.5 +0.1
baz=96
L16A Fish Haven 96.17 48 ⇓P P 10 19 58.8 -0.4
baz=96
H15A Lima 96.33 45 ⇑P P 10 19 59.7 -0.2
baz=96
Z22A Elephant Butte 96.34 57 ⇑P P 10 19 59.8 -0.3
baz=96
E14A Clinton 96.48 43 ⇓P P 10 19 59.5 -0.9
baz=96
J16A Bone 96.52 46 ⇑P P 10 20 00.4 -0.4
baz=96
G15A Dillon 96.64 44 ⇑P P 10 20 00.2 -1.1
baz=97
324A Moseley Ranch, 96.90 59 ⇓P P 10 20 02.2 -0.5
baz=97
REDW Red Top Meadow 97.06 46 eP P 10 20 03.1 -0.1
ANMO Albuquerque 97.31 56 eP P 10 20 03.4 -1.1
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO Albuquerque 97.31 56 eP P 10 20 03.4 -1.2
comp=Z,0.8nm,0.9s,mb4.2
D15A Lincoln 97.33 43 ⇓P P 10 20 03.5 -0.8
baz=97
L19A Farson 97.64 48 ⇑P P 10 20 05.1 -0.7
baz=98
TXAR Lajitas Array 97.68 62 P P 10 20 05.2 -1.1
comp=Z,0.5nm,0.9s,mb4.1,baz=258,slow=6.1,SNR=6.0
TXAR PKKP PKKPbc 10 36 53.6 +11
comp=Z,0.6nm,0.9s,baz=106,slow=2.7,SNR=6.9
TXAR LR LR 10 59 34.5
comp=Z,477nm,18.1s,MS5.0,baz=80,slow=33
PDAR Pinedale Array 97.74 47 P P 10 20 05.7 -0.6
comp=Z,0.6nm,1.0s,mb4.1,baz=259,slow=1.5,SNR=5.4
PDAR LR LR 10 55 23.6
comp=Z,134nm,20.8s,MS4.4,baz=249,slow=30
426A McDonald Obser 97.82 60 ⇑P P 10 20 06.6 -0.4
baz=98
WMQ Urumqi 97.84 314 eP P 10 20 06.3 -0.4
WMQ LR LR
comp=Z,40nm,30.0s,MS3.7
INK Inuvik 97.87 18 eP P 10 20 04.3 -1.9
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 97.87 18 P P 10 20 04.1 -2.1
comp=Z,3.4nm,1.1s,mb4.8,baz=233,slow=5.0,SNR=6.1
INK Inuvik 97.87 18 eP P 10 20 04.3 -1.9
comp=Z,5.1nm,1.2s,mb4.9
D17A Six Diamond Ra 98.54 43 ⇑P P 10 20 09.5 -0.3
baz=99
YKA Yellowknife Ar 101.96 27 P Pdif 10 20 25.1 +0.1
comp=Z,0.4nm,0.7s,baz=252,slow=4.9,SNR=5.8
YKA PKKPab 10 36 59.8
comp=Z,0.8nm,0.9s,baz=71,slow=5.8,SNR=7.0
MKAR Makanchi Array 102.40 315 P Pdif 10 20 25.3 -1.7
comp=Z,0.5nm,0.7s,baz=153,slow=4.4,SNR=2.8
MKAR PP PP 10 24 37.6 -2.4
comp=Z,0.2nm,0.4s,baz=107,slow=4.8,SNR=2.2
ZALV Zalesovo Beam 102.92 323 PP PP 10 24 37.1 -6.6
comp=Z,0.7nm,0.6s,baz=142,slow=5.6,SNR=4.3
APA Apatity 125.33 341 ⇑iPKIKP PKPdf 10 25 28.0 -3.4
APA MLR MLR
comp=Z,500nm,23.0s,MS5.1
ARCES ARCESS Array B 126.21 345 PKP PKPdf 10 25 32.4 -0.6
comp=Z,2.3nm,0.8s,baz=8.9,slow=8.6,SNR=4.7
OBN Obninsk 130.37 326 ⇓iPKHKP 10 25 26.2
OBN pmax pmax
comp=Z,7.0nm,0.5s
MALT Malatya 133.91 304 ePKIKP PKPdf 10 25 51.5 +2.9
AKASG Malin Array Be 136.32 323 PKP PKPdf 10 25 50.0 -2.6
comp=Z,0.3nm,0.3s,baz=37,slow=1.1,SNR=2.7
BRTR Keskin Array B 137.31 307 PKP PKPdf 10 25 54.6 -0.3
comp=Z,0.7nm,0.9s,baz=353,slow=5.8,SNR=2.7
BSEG Bad Segeberg 142.84 339 ePKPbc PKPdf 10 26 00.6 -3.8
PSZ Piszkesteto 142.96 325⇓ ePKP PKiKP 10 26 09.6 +1.6
DPC Dobruska-Polom 143.17 330 ePKP PKPdf 10 26 02.0 -3.1
DPC ex x 10 26 13.2
BRG Berggiesshubel 143.86 333 ePKPbc PKPdf 10 26 03.6 -2.7
BRG epPKPbc 10 26 14.2
BRG Berggiesshubel 143.86 333 ePKP PKPdf 10 26 04.9 -1.4
comp=Z,13nm,1.3s
BRG e 10 26 15.3
comp=Z,52nm,1.6s
BRG Berggiesshubel 143.86 333 ePKIKP PKPdf 10 26 04.9 -1.4
BRG e 10 26 15.3
BRG pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 143.92 334 ePKPbc PKPdf 10 26 04.0 -2.4
CLL Collm 143.92 334 i PKIKP PKPdf 10 26 04.5 -1.9
CLL i 10 26 14.7
CLL pmax pmax
comp=Z,26nm,1.7s
CLL MLR MLR
comp=Z,200nm,19.1s,MS4.9
CLL Collm 143.92 334 i PKP PKPdf 10 26 04.5 -1.9
CLL i 10 26 14.7
CLL LR LR
comp=Z,200nm,19.1s,MS4.9
CLL Collm 143.92 334 i PKPdf PKPdf 10 26 04.5 -1.9
comp=Z,26nm,1.7s
CLL ePKiKP PKiKP 10 26 12.0 +2.1
CLL i pPKPdf pPKPdf 10 26 14.7 +2.9
comp=Z,105nm,2.2s
CLL Lm 11 37 00.0
comp=Z,200nm,19.1s
NEUB Neuenburg 144.49 335 ePKPbc PKPdf 10 26 06.1 -1.3
CLZ Clausthal 144.53 337 ePKPbc PKPdf 10 26 06.5 -0.9
EKA Eskdalemuir Ar 144.73 352 PKP PKPdf 10 26 05.5 -2.2
comp=Z,4.9nm,0.9s,baz=347,slow=2.9,SNR=9.5
VAY Valandovo 144.75 314 ePKP PKPdf 10 26 05.7 -2.5
TANN Tannenbergstha 144.82 334 ePKPbc PKPdf 10 26 06.5 -1.5
TANN epPKPbc 10 26 17.2
WERD Werda 144.87 334 ePKPbc PKPdf 10 26 06.7 -1.4
WERD epPKPbc 10 26 17.2
GUNZ Gunzen 144.92 334 ePKPbc PKPdf 10 26 06.6 -1.6
WERN Wernitzgruen 144.96 334 ePKPbc PKPdf 10 26 07.3 -0.9
MOX Moxa 145.00 335 ePKPbc PKPdf 10 26 07.1 -1.2
MOX Moxa 145.00 335 ePKP PKPdf 10 26 07.7 -0.6
MOX e 10 26 18.5
IBBN Ibbenburen 145.04 340 ePKPbc PKPbc 10 26 07.9 +0.2
CONA Conrad Observa 145.05 328⇓iPKPbc PKPbc 10 26 08.6 +0.7
comp=Z,62nm,1.6s
SKO Skopje 145.21 315 ePKP PKPdf 10 26 09.4 +0.5
KHC Kasperske Hory 145.29 331 ePKIKP PKPdf 10 26 08.8 -0.1
KHC e 10 26 20.0
KHC Kasperske Hory 145.29 331 ePKPbc PKPbc 10 26 09.1 +0.4
KHC Kasperske Hory 145.29 331 ePKP PKPdf 10 26 08.8 -0.1
KHC epPKP pPKPdf 10 26 20.0 +5.7
KHC ex x 10 26 38.0
ROTZ Rotzenmuhle 145.42 333 ePKPbc PKPbc 10 26 08.2 -0.8
ROTZ epPKPbc pPKPbc 10 26 19.7 +5.3
GEC2 GERESS Array S 145.44 331 ePKPbc PKPbc 10 26 08.3 -0.8
GERES GERESS Array B 145.44 331 PKPbc PKPbc 10 26 09.0 -0.2
comp=Z,15nm,1.1s,baz=37,slow=3.3,SNR=42
UBBA Unterbreizbach 145.49 336 ePKPbc PKPbc 10 26 09.6 +0.4
WET Wettzell 145.60 332 ePKPbc PKPbc 10 26 09.2 -0.4
KRUS Krusevo 145.62 314 ePKP PKPdf 10 26 08.6 -1.1
WTSB Winterswijk 145.64 340 ePKP PKPdf 10 26 09.0 -0.4
comp=Z,44nm,1.6s
WTSB Winterswijk 145.64 340 ex PKiKP 10 26 18.9 +5.5
comp=Z,71nm,1.8s
ARSA Arzberg 145.67 327⇓iPKPbc PKPbc 10 26 10.5 +0.6
comp=Z,36nm,1.5s
MOA Molln 145.89 329⇑iPKPdf PKPdf 10 26 10.6 +0.7
comp=Z,32nm,1.4s
GRA1 Grafenberg Arr 145.89 334 ePKPbc PKPbc 10 26 10.5 0.0
GRF Grafenberg Arr 145.89 334 ePKPbc PKPbc 10 26 10.5 0.0
BUG Bochum--Univer 145.94 339 ePKPbc PKPbc 10 26 10.3 -0.3
OHR Ohrid 146.03 314 ePKP PKPdf 10 26 10.4 0.0
PERS Pernice 146.29 327 eP PKPdf 10 26 11.2 +0.6
PERS i 10 26 22.1
SOKA Soboth 146.30 327⇓iPKPdf PKPdf 10 26 11.8 +1.1
comp=Z,10nm,1.2s
TNS Taunus Mts 146.55 337 ePKPbc PKPbc 10 26 11.9 -0.5
TOD Tromm 146.92 336 PKP PKPbc 10 26 12.7 -0.8
HGN Heimansgroeve 146.96 340 ePKP PKPbc 10 26 13.0 -0.6
comp=Z,19nm,2.9s
HGN Heimansgroeve 146.96 340 ex PKiKP 10 26 22.9 +6.8
comp=Z,38nm,2.7s
BOJS Bojanci 146.96 325 i P PKPbc 10 26 13.8 +0.1
BOJS i 10 26 23.8
LJU Ljubljana 146.99 326 i P PKPbc 10 26 13.4 -0.4
LJU i 10 26 23.4
MEM Membach 147.07 340 PKPbc PKPbc 10 26 13.9 0.0
ABH Alteburg 147.16 338 PKP PKPbc 10 26 13.7 -0.5
VOY Vojsko 147.32 327 eP PKPbc 10 26 13.8 -1.0
VOY e 10 26 22.6
JAVS Javornik 147.33 327 i P PKPbc 10 26 13.9 -0.9
JAVS i 10 26 24.3
UCC Uccle 147.41 342 PKPbc PKPbc 10 26 14.9 0.0
KTD Kalmit 147.43 336 PKIKP PKPbc 10 26 14.4 -0.6
STU Stuttgart 147.44 335 ePKPbc PKPbc 10 26 15.2 +0.2
STU Stuttgart 147.44 335 ePKPbc PKPbc 10 26 16.7 +1.7
BCLA Clavier 147.46 340 PKP PKPbc 10 26 16.6 +1.6
RUP Ruppelstein 147.48 338 PKP PKPbc 10 26 14.8 -0.3
ABTA Abfaltersbach 147.51 329⇑iPKPdf PKPbc 10 26 14.4 -0.9
comp=Z,12nm,0.8s
WTTA Wattenberg 147.55 331⇑iPKPdf PKPbc 10 26 15.2 -0.2
comp=Z,34nm,1.4s
SNF Seneffe 147.69 341 E PKPbc 10 26 16.4 +0.8
MOTA Moosalm 147.73 331⇓iPKPdf PKPbc 10 26 15.6 -0.3
comp=Z,17nm,1.1s
LANF Langenberg 147.81 336 PKP PKPbc 10 26 15.6 -0.4
WLF Walferdange 147.83 339 PKP PKPbc 10 26 16.7 +0.6
WLF Walferdange 147.83 339 ePKPdf PKPdf 10 26 13.6 +0.5
WLF ePKPbc PKPbc 10 26 16.7 +0.6
WLF ePKPab PKPab 10 26 18.5 +0.1
GIVF Givet 147.88 341 ePKP1 PKPbc 10 26 15.5 -0.7
comp=Z,93nm,1.2s
DOU Dourbes 147.96 341 PKPbc PKPbc 10 26 16.1 -0.3
BAIF Baives 148.11 341 ePKP1 PKPbc 10 26 16.3 -0.5
comp=Z,48nm,1.0s
BFO Black Forest 148.14 335 ePKPbc PKPbc 10 26 16.0 -0.9
BFO Black Forest 148.14 335 ePKPbc PKPbc 10 26 16.6 -0.3
SPAK Spaichingen-Ko 148.14 334 PKP PKPbc 10 26 15.8 -1.1
FETA Feichten 148.14 331⇑iPKPdf PKPbc 10 26 16.7 -0.2
comp=Z,20nm,0.9s
MENF Mencas 148.24 344 PKP PKPbc 10 26 15.3 -1.8
CDF Champ du Feu 148.48 336 ePKP1 PKPbc 10 26 17.3 -0.5
comp=Z,81nm,1.3s
FELD Feldberg im Sc 148.63 335 PKP PKPbc 10 26 17.1 -1.1
ECH Echery 148.68 336 PKP PKPbc 10 26 17.5 -0.8
DAVOS Davos 148.70 332 PKP2 PKPbc 10 26 18.3 -0.1
DAVOX Davos/Dischmat 148.71 332 PKPbc PKPbc 10 26 18.2 -0.2
comp=Z,9.1nm,0.7s,baz=156,slow=5.4,SNR=10
MOF Molkenrain 148.99 336 PKP PKPbc 10 26 17.1 -2.0
THEF They Montfort 149.11 337 PKP PKPbc 10 26 18.4 -1.0
HINF Hinteralfeld 149.13 336 ePKP1 PKPbc 10 26 18.8 -0.7
comp=Z,125nm,1.6s
HAU Haudompre 149.16 337 ePKP1 PKPbc 10 26 18.9 -0.6
comp=Z,50nm,1.0s
HAU eMLR MLR
comp=Z,174nm,19.8s,MS4.5
HAU Haudompre 149.16 337 ePKP PKPbc 10 26 18.9 -0.6
HAU LR LR
comp=Z,170nm,19.8s,MS4.8
MEZF Maizieres J'vi 149.20 339 ePKP1 PKPbc 10 26 19.5 -0.1
comp=Z,124nm,1.2s
LOMF Lomont 149.52 336 PKP PKPbc 10 26 17.9 -2.6

TIP	Timpagrande	149.68	314	ePKPbc	PKPbc	10 26 21.4	+0.2
CABF	La Chapelle	150.42	336	ePKP1	PKPbc	10 26 22.7	0.0
	comp=Z,77nm,1.2s						
FLN	La Foliniere	150.56	346	ePKP1	PKPbc	10 26 22.0	-0.9
FLN				eMLR	MLR		
	comp=Z,164nm,20.8s,MS4.5						
FLN	La Foliniere	150.56	346	ePKP	PKPbc	10 26 22.0	-0.9
FLN				LR	LR		
	comp=Z,160nm,20.8s,MS4.8						
LDF	La Druitiere	150.63	345	ePKP1	PKPbc	10 26 22.0	-1.1
LOR	Lormes	150.67	339	ePKP1	PKPbc	10 26 22.6	-0.6
	comp=Z,41nm,1.1s						
LOR				eMLR	MLR		
	comp=Z,184nm,19.0s,MS4.6						
LOR	Lormes	150.67	339	ePKP	PKPbc	10 26 22.6	-0.6
LOR				LR	LR		
	comp=Z,180nm,19.0s,MS4.9						
CEL	Celeste	150.72	313	ePKPdf	PKPdf	10 26 18.9	+0.7
CEL				ePKPbc	PKPbc	10 26 23.7	0.0
CEL				ePKPab	PKPab	10 26 31.1	+0.4
SSF	Saint Saulge	150.97	339	ePKP1	PKPbc	10 26 23.4	-0.6
	comp=Z,44nm,1.1s						
GRR	Gorron	150.99	346	ePKP1	PKPbc	10 26 23.1	-0.9
LPL	La Plagne	151.05	334	ePKP1	PKPbc	10 26 24.1	-0.1
	comp=Z,58nm,1.2s						
LPG	La Plagne	151.06	333	ePKP1	PKPbc	10 26 24.3	+0.1
	comp=Z,46nm,1.0s						
SMF	Signal de Mont	151.22	338	ePKP1	PKPbc	10 26 23.8	-0.7
	comp=Z,155nm,1.6s						
AVF	Avril sur Loir	151.26	339	ePKP1	PKPbc	10 26 23.8	-0.8
	comp=Z,72nm,1.2s						
BNI	Bardonecchia	151.45	333	ePKIKP	PKPbc	10 26 25.4	+0.3
SGMF	Saint Gilles	151.48	348	ePKP1	PKPbc	10 26 23.9	-1.2
	comp=Z,58nm,1.1s						
ROSF	Rostrenen	151.54	349	ePKP1	PKPbc	10 26 23.8	-1.4
	comp=Z,53nm,1.2s						
BGF	Bois d'Agland	151.63	339	ePKP1	PKPbc	10 26 25.7	+0.2
MBDF	Montbardon	151.67	333	ePKP1	PKPbc	10 26 25.0	-0.7
	comp=Z,36nm,1.2s						
PLDF	La Plantade	151.88	338	PKP	PKPbc	10 26 23.1	-3.0
ORIF	Oris-en-Rattie	151.89	334	ePKP1	PKPbc	10 26 25.6	-0.6
	comp=Z,36nm,1.1s						
ORIF				eMLR	MLR		
	comp=Z,226nm,18.8s,MS4.7						
QUIF	Quistinic	151.92	349	ePKP1	PKPbc	10 26 24.7	-1.4
	comp=Z,39nm,1.1s						
AGO	Saint Agoulin	151.97	339	PKP	PKPbc	10 26 23.6	-2.7
TCF	Toulx Ste Croi	152.07	340	ePKP1	PKPbc	10 26 25.8	-0.7
	comp=Z,75nm,1.6s						
SSB	Saint Sauveur	152.13	336	ePKIKP	PKPbc	10 26 26.6	-0.1
SSB				e		10 26 36.8	
PGF	Pioggiola	152.27	327	ePKP1	PKPbc	10 26 26.3	-0.8
	comp=Z,39nm,0.9s						
PYM	Petit Puy Mans	152.28	338	PKP	PKPbc	10 26 23.7	-3.3
VIVF	Saint-Julien-l	152.43	335	ePKP1	PKPbc	10 26 26.8	-0.6
MFF	Saint Martin d	152.48	343	ePKP1	PKPbc	10 26 26.5	-0.9
	comp=Z,57nm,1.2s						
FRF	La Foret Royal	152.64	331	ePKP1	PKPbc	10 26 26.8	-1.1
LBL	Lubilhac	152.65	338	PKP	PKPbc	10 26 25.1	-2.7
SMRF	Simiane la Rot	152.78	333	ePKP1	PKPbc	10 26 27.9	-0.3
LMR	La Mourre	152.88	331	ePKP1	PKPbc	10 26 28.5	+0.1
RJF	Les Rejaudoux	153.17	340	ePKP1	PKPbc	10 26 29.0	0.0
	comp=Z,24nm,1.0s						
RJF				eMLR	MLR		
	comp=Z,175nm,18.8s,MS4.6						
RJF	Les Rejaudoux	153.17	340	ePKP	PKPbc	10 26 29.0	0.0
RJF				LR	LR		
	comp=Z,180nm,18.8s,MS4.9						
CAF	Calviac	153.32	339	ePKP1	PKPbc	10 26 29.9	+0.6
	comp=Z,40nm,1.1s						
LASF	Ste Croix	153.40	335	ePKP1	PKPbc	10 26 28.9	-0.6
LFF	La Frestale	153.74	341	ePKP1	PKPbc	10 26 30.2	-0.1
MTLF	Montolieu	154.65	337	ePKP1	PKPbc	10 26 32.4	+0.1
EPF	Esparros	155.58	339	ePKP1	PKPdf	10 26 34.4	+9.4
PBRG	Braganca	158.46	351	ePKPab	PKPab	10 27 01.2	-2.1
PVRL	Vila Real	159.11	353	ePKPab	PKPab	10 27 06.0	-0.1
PVRL				i P		10 27 17.0	
MVO	Moncorvo	159.13	351	ePKPab	PKPab	10 27 06.0	-0.2
ESDC	Sonseca Array	159.94	344	PKPab	PKPab	10 27 09.2	-0.7
	comp=Z,1.1nm,0.6s,baz=18,slow=3.3,SNR=6.2						
MTE	Manteigas	159.95	352	ePKPab	PKPab	10 27 08.3	-1.5
PBEJ	Beja	162.33	351	ePKPab	PKPab	10 27 20.7	+0.5
MORF	Marmelete	163.14	353	ePKPab	PKPab	10 27 24.6	+0.8

*IDC **06** 10:15:59.7±0.6, 7°.74S×125°.57E, h0km, mb4.4/14, mb1 4.4/16, mb1mx4.3/22, mbtmp4.4/16, ML4.1/2, Error ellipse: s-maj=24.8km s-min=13.6km az=66.0*
*BJI **06** 10:16:00.6, 7°.90S×125°.60E, h35km, mB5.0/3, mb4.8/5*
*ISCJB **06** 10:16:02.1±0.3, 7°.86S±0°.05×125°.63E±0°.06, h33km, mb4.5/28, Error ellipse: s-maj=10.4km s-min=4.7km az=139.7*
*NEIC **06** 10:16:04.6±0.3, 7°.85S×125°.58E, h35km, mb4.6/7, Error ellipse: s-maj=13.4km s-min=5.6km az=58.0*
*DJA **06** 10:16:10, 7°.42S×126°.06E, h76km, mb4.6/8*
ISC 06 10:16:04.5±0.3, 7°.90S±0°.04×125°.61E±0°.06, h35km, n60, σ0=90/63, mb4.5/28, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.48	296	Pn	Pn	10 17 36.9	-0.6
	3.8nm,0.3s,baz=148,slow=13,SNR=12						
KAPI				Sn	Sn	10 18 49.8	-0.5
	2.1nm,0.3s,baz=349,slow=21,SNR=2.2						
KAPI	Kappang	6.48	296	Pn	Pn	10 17 36.9	-0.6
KAPI				Sn	Sn	10 18 49.8	-0.5
KAPI	Kappang	6.48	296	P	Pn	10 17 45.1	+7.6
	24nm,1.1s,0.1nm						
KAKA	Kakadu	8.25	126	eP	Pn	10 18 03.2	+1.5
	28nm,0.6s						
KAKA	Kakadu	8.25	126	ePn	Pn	10 18 03.3	+1.6
	84nm,0.6s						
KAKA				eSn	Sn	10 19 33.6	-0.1
KAKA	Kakadu	8.25	126	P	Pn	10 18 07.0	+5.3
	82nm,0.6s,612nm0.3nm						
KNA	Kununurra	8.39	159	eP	Pn	10 18 04.9	+1.2
	38nm,0.7s						
KNA				eS	Sn	10 19 34.7	-2.5
FITZ	Fitzroy Crossi	10.14	180	eP	Pn	10 18 27.5	-0.1
	22nm,0.5s						
FITZ	Fitzroy Crossi	10.14	180	Pn	Pn	10 18 28.3	+0.7
	1.4nm,0.3s,baz=19,slow=9.4,SNR=19						
FITZ				Sn	Sn	10 20 19.0	-1.2
	2.7nm,0.3s,baz=111,slow=13,SNR=5.5						
FITZ	Fitzroy Crossi	10.14	180	P		10 18 40.2	
	48nm,0.8s						
WRAB	Tennant Creek	14.66	146	ePn	Pn	10 19 29.3	-0.1
	10nm,0.8s						
WRAB	Tennant Creek	14.66	146	P	Pn	10 19 32.6	+3.2
	23nm,0.9s						
WRA	Warramunga Arr	14.66	146	Pn	Pn	10 19 26.1	-3.3
	0.7nm,0.3s,baz=315,slow=14,SNR=24						
WRA				Sn	Sn	10 22 05.2	-5.6
	0.7nm,0.3s,baz=317,slow=24,SNR=7.2						
SBUM	Sibu	16.85	307	P	Pn	10 20 02.6	+4.8
	13nm,1.1s						
ASAR	Alice Springs	17.58	154	P	Pn	10 20 05.7	-1.2
	0.6nm,0.3s,baz=318,slow=9.2,SNR=29						
ASAR				S	S	10 23 12.9	-16
	0.3nm,0.3s,baz=325,slow=24,SNR=5.3						
COEN	Coen	18.26	111	eP	Pn	10 20 15.3	0.0
MEEK	Meekatharra	19.79	199	eP	Pn	10 20 33.9	+0.4
	14nm,1.1s						
MORW	Morawa	22.90	202	eP	P	10 21 06.2	+0.9
NWAO	Narrogin (SRO)	26.09	196	P	P	10 21 35.9	+1.0
	3.4nm,0.7s,mb4.0,baz=15,slow=11,SNR=3.5						
STKA	Stephens Creek	28.12	150	eP	P	10 21 51.5	-1.7
	3.4nm,0.7s,mb4.1						
STKA	Stephens Creek	28.12	150	P	P	10 21 54.7	+1.5
	1.1nm,0.4s,mb3.8,baz=314,slow=14,SNR=3.2						
PSI	Prapat	28.66	291	P	P	10 21 58.2	0.0
	12nm,1.0s,mb4.6,baz=123,slow=2.7,SNR=5.1						
CMAR	Chiang Mai Arr	37.12	315	P	P	10 23 12.4	+0.5
	4.4nm,0.7s,mb4.4,baz=141,slow=7.0,SNR=18						
CHTO	Chiang Mai	37.36	316	eP	P	10 23 14.4	+0.4
	12nm,1.3s,mb4.6						
CHTO	Chiang Mai	37.36	316	P	P	10 23 14.9	+0.9
	12nm,1.0s,mb4.7						
KSRS	Korea Array	45.17	3	P	P	10 24 16.5	-1.3
	2.0nm,0.9s,mb3.9,baz=186,slow=8.8,SNR=5.9						
MJAR	Matsushiro Arr	45.76	14	P	P	10 24 21.3	-1.3
	3.3nm,0.9s,mb4.2,baz=190,slow=9.3,SNR=5.9						
MJAR	Matsushiro Arr	45.76	14	P	P	10 24 21.3	-1.3
ODAN	Odare	50.66	314	eP	P	10 25 00.0	-0.5
TAPN	Taplejung	50.73	315	eP	P	10 25 00.8	-0.3
	33nm,1.0s,mb5.2						
RAMN	Ramite	51.27	314	eP	P	10 25 05.3	+0.1
	15nm,0.6s,mb5.1						
JIRN	Jiri	51.99	314	eP	P	10 25 10.7	+0.2
GUN	Gumba	52.36	314	eP	P	10 25 13.3	0.0
	19nm,0.7s,mb5.1						
PKI	Pulchoki	52.49	314	eP	P	10 25 14.6	+0.3
PKIN	Phulchoki	52.51	314	eP	P	10 25 14.9	+0.5
	22nm,0.7s,mb5.2						
KKN	Kakani	52.71	314	eP	P	10 25 15.7	-0.2
DMN	Daman	52.73	314	eP	P	10 25 15.9	-0.1
	27nm,1.1s,mb5.1						
RPZ	Rata Peaks	53.28	140	P	P	10 25 21.9	+2.1
	9.5nm,0.9s,mb4.7,baz=315,slow=4.3,SNR=3.2						
GKN	Gorkha	53.30	314	eP	P	10 25 20.0	-0.2
	7.3nm,0.5s,mb4.9						
KOLN	Koldanda	53.91	313	eP	P	10 25 24.6	-0.1
	17nm,0.7s,mb5.1						
SONM	Songino Array	58.03	345	P	P	10 25 54.3	+0.5
	0.8nm,0.7s,mb3.9,baz=188,slow=6.0,SNR=3.9						
PETK	Petropavlovsk-	66.61	20	P	P	10 26 51.9	+0.8
	4.7nm,0.8s,mb4.6,baz=170,slow=4.1,SNR=4.8						
PETK	Petropavlovsk-	66.61	20	P	P	10 26 51.9	+0.8
MKAR	Makanchi Array	66.67	329	P	P	10 26 51.3	-0.3
	3.9nm,0.7s,mb4.6,baz=140,slow=7.9,SNR=34						
KBL	Kabul	68.06	312	eP	P	10 27 00.9	+0.1
	7.8nm,0.8s,mb4.8						
AAK	Ala-Archa	68.48	322	P	P	10 27 02.7	-0.4
	1.0nm,0.4s,mb4.2,baz=266,slow=3.8,SNR=6.1						
AAK	Ala-Archa	68.48	322	P	P	10 27 04.4	+1.2
AML	Almayashu	68.69	321	eP	P	10 27 05.6	+1.1
	2.4nm,0.7s,mb4.2						
EKS2	Erkin-Say	68.94	322	eP	P	10 27 06.5	+0.5
ZALV	Zalesovo Beam	70.53	336	P	P	10 27 14.2	-1.4
	3.5nm,0.8s,mb4.3,baz=113,slow=4.4,SNR=11						
KURK	Kurchatov	71.08	331	eP	P	10 27 18.6	-0.4
	3.6nm,0.8s,mb4.3						
BVAR	Borovoye Array	76.55	329	P	P	10 27 50.4	-0.6
	4.5nm,1.0s,mb4.3,baz=138,slow=6.9,SNR=14						
BRVK	Borovoye	76.62	329	eP	P	10 27 51.2	-0.2
	6.3nm,0.9s,mb4.5						
ABKAR	Akbulak array	80.54	323	eP	P	10 28 12.6	-0.5
	3.0nm,0.9s,mb4.2						
QSPA	South Pole Qui	82.08	180	eP	P	10 28 22.5	+1.7
	53nm,2.2s,mb5.1						
AKTK	Aktyubinsk	82.15	323	P	P	10 28 21.2	-0.4
AKTO	Aktyubinsk	82.15	323	P	P	10 28 21.2	-0.4
	2.7nm,0.7s,mb4.3,baz=108,slow=6.5,SNR=9.0						
CPUP	Villa Florida	145.86	175	PKPbc	PKPbc	10 35 40.3	-0.6
	0.8nm,0.4s,baz=170,slow=2.9,SNR=5.9						
LPAZ	La Paz	152.39	151	PKPbc	PKPbc	10 36 01.9	+4.1
	0.6nm,0.8s,baz=206,slow=9.2,SNR=2.8						
LPAZ	La Paz	152.39	151	PKPbc	PKPbc	10 36 01.9	+4.1

IDC 06 10:18:31.4±16.0, 20°.10S×66°.70W, h240km±87km, mb3.3/1, mb1 3.5/2, mb1mx3.0/17, mbtmp3.2/2, Error ellipse: s-maj=450.0km s-min=134.6km az=44.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.03	340	P	Pn	10 19 35.9	+0.6
	1.4nm,0.3s,baz=161,slow=6.9,SNR=43						
YKA	Yellowknife Ar	90.58	340	P	P	10 31 05.8	0.0
	0.4nm,0.6s,baz=130,slow=4.5,SNR=9.3						
MKAR	Makanchi Array	143.29	36	PKP	PKPdf	10 37 36.5	-0.5
	0.4nm,0.6s,baz=300,slow=3.2,SNR=4.1						

*ISCJB **06** 10:20:49.9±0.7, 39°.42N±0°.03×33°.00E±0°.04, h8km±5km, Error ellipse: s-maj=6.6km s-min=4.6km az=140.5*
*CSEM **06** 10:20:49.9±0.1, 39°.47N×33°.01E, h12km, MD2.9, Error ellipse: s-maj=1.9km s-min=1.3km az=136.0*
*DDA **06** 10:20:49.7, 39°.40N×33°.08E, h7km±2km, Md2.9*
*ISK **06** 10:20:50.2, 39°.47N×33°.01E, h20km, MD3.0*
ISC 06 10:20:50.2±0.6, 39°.43N±0°.04×33°.02E±0°.04, h12km±5km, n32, σ0=84/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	Bala	0.14	34	i P	Pg	10 20 53.4	-0.1
BBAL				i S	Sg	10 20 55.9	0.0
BBAL	Bala	0.14	34	i P	Pg	10 20 53.4	-0.1
BBAL				i S	Sg	10 20 55.9	0.0
LOD	Lodumlu	0.50	336	ePG	Pg	10 21 00.0	0.0
LOD				eSG	Sg	10 21 07.4	+0.7
LOD	Lodumlu	0.50	336	ePg	Pg	10 21 00.0	0.0
LOD				eSg	Sg	10 21 07.4	+0.7
KIZT	Kizilcal	1.04	239	ePG	Pg	10 21 10.4	0.0
KIZT	Kizilcal	1.04	239	ePg	Pg	10 21 10.4	+0.1
CDAG	Cicekdag	1.06	79	i P	Pb	10 21 09.1	-1.4
CDAG				i S	Sb	10 21 24.3	0.0
CDAG	Cicekdag	1.06	79	i P	Pb	10 21 09.1	-1.4
CDAG				i S	Sb	10 21 24.3	0.0
ELDT	Eldivan	1.10	16	i P	Pb	10 21 10.6	-0.6
ELDT				i S	Sb	10 21 27.0	+1.4
ELDT	Eldivan	1.10	16	i P	Pb	10 21 10.6	-0.6
KDHN	Kadinhani	1.15	218	i P	Pb	10 21 11.3	-0.7
KDHN				i S	Sb	10 21 28.6	+1.7
KDHN	Kadinhani	1.15	218	i P	Pb	10 21 11.4	-0.6
KDHN				i S	Sb	10 21 28.6	+1.7
SVRH	Sivrihisar-ESK	1.16	271	ePN	Pn	10 21 11.7	-0.6
SVRH				eSN	Sn	10 21 27.5	-0.6
SVRH	Sivrihisar-ESK	1.16	271	ePn	Pn	10 21 11.7	-0.6
SVRH				eSn	Sn	10 21 27.5	-0.6
SULT	Sultanhani-AKS	1.29	162	ePN	Pn	10 21 14.3	+0.2
SULT	Sultanhani-AKS	1.29	162	ePn	Pn	10 21 14.3	+0.3
LADK	Ladik-KONYA	1.33	203	ePN	Pn	10 21 15.1	+0.5
LADK	Ladik-KONYA	1.33	203	ePn	Pn	10 21 15.1	+0.5
CORM	Corum	1.45	58	ePN	Pn	10 21 15.7	-0.6
CORM	Corum	1.45	58	ePn	Pn	10 21 15.7	-0.5
KONT	Konya--Tatoy	1.57	199	ePN	Pn	10 21 18.2	+0.3
KONT	Konya--Tatoy	1.57	199	ePn	Pn	10 21 18.2	+0.3
ESKT	Eskisehir	1.69	274	ePN	Pn	10 21 18.5	-1.0
ESKT	Eskisehir	1.69	274	ePn	Pn	10 21 18.5	-1.0
TOS	Tosya	1.78	25	ePN	Pn	10 21 20.2	-0.5
TOS	Tosya	1.78	25	ePn	Pn	10 21 20.3	-0.5
YOZ	Yozgat	1.79	83	ePN	Pn	10 21 21.0	+0.1
YOZ	Yozgat	1.79	83	ePn	Pn	10 21 21.0	+0.1
CTKT	Corum	1.81	48	i P	Pn	10 21 23.4	+2.3
CTKT				i S	Sn	10 21 48.1	+4.2
CTKT	Corum	1.81	48	i P	Pn	10 21 23.4	+2.3
SAFT	Safranbolu	1.82	352	ePN	Pn	10 21 20.7	-0.7
SAFT	Safranbolu	1.82	352	ePn	Pn	10 21 20.7	-0.7

*IDC **06** 10:30:56.1±2.5, 20°.31S×177°.73W, h440km±30km, mb3.3/7, mb1 3.6/9, mb1mx3.4/18, mbtmp3.3/9, Error ellipse: s-maj=21.3km s-min=12.7km az=132.0*
*NEIC **06** 10:30:57.0±1.2, 20°.55S×177°.63W, h456km±16km, mb3.9/1, Error ellipse: s-maj=25.0km s-min=10.6km az=145.0*
ISC 06 10:30:52.2±1.6, 20°.3S±0°.1×177°.7W±0°.1, h396km±20km, n10, σ0=41/12, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.48	42	P	Pn	10 32 59.7	+6.9
	3.5nm,0.3s,baz=182,slow=13,SNR=4.5						
AFI				S	S	10 34 31.6	0.0
	2.1nm,0.3s,baz=45,slow=20,SNR=4.2						
URZ	Urewera	18.47	193	P	P	10 34 41.4	-0.2
	2.9nm,0.3s,baz=314,slow=5.1,SNR=15						
URZ				S	S	10 37 51.6	+0.1
	0.3nm,0.3s,baz=76,slow=23,SNR=4.3						
STKA	Stephens Creek	38.16	244	P	P	10 37 35.9	+0.3
	1.7nm,0.5s,mb3.6,baz=71,slow=9.2,SNR=7.1						
ASAR	Alice Springs	44.88	256	P	P	10 38 30.1	+0.6
	3.2nm,0.5s,mb3.9,baz=98,slow=7.5,SNR=82						
WRAB	Tennant Creek	44.94	262	eP	P	10 38 30.4	+0.4
	5.7nm,1.2s,mb3.8						
WRA	Warramunga Arr	44.94	262	P	P	10 38 29.4	-0.6
	1.0nm,0.3s,mb3.7,baz=97,slow=7.2,SNR=98						
FITZ	Fitzroy Crossi	53.37	262	P	P	10 39 32.4	-0.6
	0.8nm,0.5s,mb3.2,baz=83,slow=20,SNR=6.9						
NVAR	Mina Array Bea	80.66	43	P	P	10 42 22.7	+0.5
	0.8nm,0.6s,mb3.6,baz=223,slow=10,SNR=6.2						
TXAR	Lajitas Array	86.68	57	P	P	10 42 52.3	-0.3
	0.7nm,0.7s,mb3.5,baz=218,slow=6.9,SNR=13						
PDAR	Pinedale Array	88.59	43	P	P	10 43 01.1	-0.2
	0.1nm,0.3s,mb3.0,baz=225,slow=2.0,SNR=5.9						

IDC 06 11:01:18.9±1.8, 4°.76N×125°.74E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=108.1km s-min=24.5km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.72	180	P	P	11 06 23.2	+0.7
	1.4nm,0.4s,baz=360,slow=7.8,SNR=28						
WRA	Warramunga Arr	25.96	161	P	P	11 06 53.1	-0.2
	0.3nm,0.3s,baz=340,slow=9.8,SNR=15						
ASAR	Alice Springs	29.36	165	P	P	11 07 23.1	-0.6
	0.2nm,0.4s,baz=338,slow=6.8,SNR=12						
STKA	Stephens Creek	39.44	159	P	P	11 08 51.3	+0.5
	2.5nm,1.1s,baz=328,slow=8.8,SNR=4.8						
MKAR	Makanchi Array	56.15	325	P	P	11 11 00.4	0.0
	0.4nm,0.5s,baz=124,slow=7.5,SNR=4.8						

*CSEM **06** 11:01:39.9, 34°.32N×26°.36E, h29km, MD3.6, After ATH*
*NEIC **06** 11:01:39.9, 34°.32N×26°.36E, h29km, MD3.6(ATH), After ATH.*
ATH 06 11:01:39.9, 34°.32N×26°.36E, h29km±1km, MD3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.78	315	ePN	Pn	11 01 55.4	+0.5
XRY	Khrisi	0.78	315	ePn	Pn	11 01 55.4	+0.5
ZKR	Zakros	0.80	352	ePN	Pn	11 01 55.5	+0.3
ZKR				eSN	Sn	11 02 07.5	+1.3
ZKR	Zakros	0.80	352	ePn	Pn	11 01 55.5	+0.3
ZKR				eSn	Sn	11 02 07.5	+1.3
LAST	Lasithi	1.11	319	ePN	Pn	11 02 01.6	+2.1
LAST				eSN	Sn	11 02 16.4	+2.6
LAST	Lasithi	1.11	319	ePn	Pn	11 02 01.6	+2.1
LAST				eSn	Sn	11 02 16.4	+2.6
KARP	Karpathos	1.39	28	ePN	Pn	11 02 05.3	+2.0
KARP	Karpathos	1.39	28	ePn	Pn	11 02 05.3	+2.0

IDC 06 11:20:05.9±1.0, 67°.02S×109°.61E, h0km, mb4.0/5, mb1 4.1/5, mb1mx4.0/11, mbtmp4.0/5, MS3.3/1, Ms1 3.3/1, ms1mx3.0/11, Error ellipse: s-maj=42.3km s-min=21.7km az=120.0, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	South Pole Qui	23.06	180	P	P	11 25 13.3	+1.0
	4.1nm,0.7s,baz=321,slow=5.3,SNR=19						
QSPA				S	S	11 29 18.7	-4.9
	1.2nm,0.8s,baz=351,slow=15,SNR=3.6						
NWAO	Narrogin (SRO)	34.43	11	LR	LR	11 38 43.3	
	comp=Z,46nm,19.1s,baz=0.7,slow=32						
STKA	Stephens Creek	39.95	45	P	P	11 27 41.0	-0.5
	1.1nm,0.4s,baz=204,slow=5.0,SNR=6.0						
ASAR	Alice Springs	45.96	32	P	P	11 28 31.1	+0.8
	1.1nm,0.6s,baz=193,slow=6.8,SNR=30						
WRA	Warramunga Arr	49.66	31	P	P	11 28 58.9	-0.1
	0.8nm,0.7s,baz=196,slow=7.3,SNR=8.6						
BOSA	Boshof	61.83	263	P	P	11 30 26.4	+0.1
	1.9nm,0.5s,baz=176,slow=14,SNR=5.9						
PDAR	Pinedale Array	147.82	119	PKPbc	PKPbc	11 39 50.3	-1.2
	0.2nm,0.4s,baz=152,slow=4.1,SNR=3.2						

*IDC **06** 12:06:51.5±0.9, 18°.95N×67°.74W, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.8/23, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=26.8km s-min=16.6km az=48.0*
*ISCJB **06** 12:06:52.5±0.8, 19°.04N±0°.04×67°.74W±0°.03, h11km±5km, mb3.8/6, Error ellipse: s-maj=6.3km s-min=4.0km az=25.9*
*NEIC **06** 12:06:54.9, 18°.98N×67°.80W, h7km, MD3.9(RSPR), After RSPR.*
NEIC Felt [III] at Mayaguez, Puerto Rico.
*RSPR **06** 12:06:54.9, 18°.98N×67°.80W, h7km±1km, MD3.9/14, MD3.9/14*
ISC 06 12:06:53.9±0.8, 18°.96N±0°.04×67°.75W±0°.03, h13km±5km, n46, σ0=84/59, mb3.8/6, 11C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.75	234	eS	Sg	12 07 19.4	+1.1
PCDR	Punta Cana, DR	0.75	234	⇑iP	Pg	12 07 08.7	+0.2
AGPR	Aguadilla, PR	0.78	129	eS	Sg	12 07 20.7	+1.5
AGPR	Aguadilla, PR	0.78	129	⇑iP	Pg	12 07 09.0	0.0
AGPR	Aguadilla, PR	0.78	129	ePg	Pg	12 07 09.0	0.0
AGPR				eS	Sg	12 07 20.7	+1.5
AGPR				eSg	Sg	12 07 21.1	+1.9
AGP	Aguadilla	0.79	134	eSg	Pg	12 07 09.1	-0.3
IMO	Isla Mona	0.86	190	⇑iP	Pg	12 07 10.6	0.0
IMO				eS	Sg	12 07 21.9	0.0
MPR	Mayaguez	0.94	142	eS	Sg	12 07 25.0	+0.6
MPR	Mayaguez	0.94	142	ePg	Pg	12 07 10.5	-1.6
LSP	Las Mesas	1.00	141	⇓iP	Pb	12 07 12.6	-0.5
LRS	Lares	1.08	128	⇓iP	Pb	12 07

ISC 06 12:09:42.2±1.2, 35°.40N±0°.05×76°.9E±0°.3, h10km, n9, σ1°.09/8, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.16**	**169**	*eP*	**Pb**	**12 11 11.6**	**-0.9**
DDI				*eS*	**Sb**	**12 12 15.6**	**+1.0**
JOSI	**Joshimath**	**5.33**	**154**	*eP*	**Pn**	**12 11 01.4**	**-0.4**
JOSI				AML	AML	12 11 21.5	
	comp=E,17nm,0.1s						
JOSI				*eS*	**Sn**	**12 11 58.0**	**-5.3**
JOSI				AML	AML	12 12 39.5	
	comp=E,52nm,0.0s						
JOSI				AML	AML	12 12 39.5	
	comp=N,49nm,0.1s						
AYAN	**Aya Nagar**	**6.90**	**178**	*ex*	Sx	12 12 19.3	
SONA	**Sohna**	**7.13**	**179**	*eS*	Sx	12 12 08.2	
SONA				AML	AML	12 12 40.8	
	comp=N,11nm,0.2s						
SONA				AML	AML	12 12 43.2	
	comp=E,16nm,0.2s						
KHET	**Khetri**	**7.37**	**187**	*eS*	Sx	12 12 31.3	
KHET				AML	AML	12 13 32.5	
	comp=N,7.0nm,0.1s						
KHET				AML	AML	12 13 32.5	
	comp=E,3.5nm,0.1s						
MKAR	**Makanchi Array**	**12.08**	**18**	Pn	**Pn**	**12 12 36.2**	**+1.9**
	comp=E,0.1nm,0.3s,baz=212,slow=14,SNR=3.6						
BVAR	**Borovoye Array**	**18.21**	**347**	P	**Pn**	**12 13 55.3**	**+0.4**
	comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=3.6						
ZALV	**Zalesovo Beam**	**19.36**	**14**	P	**Pn**	**12 14 07.1**	**-1.7**
	comp=E,0.3nm,0.3s,baz=211,slow=13,SNR=3.3						
SONM	**Songino Array**	**25.15**	**51**	P	**P**	**12 15 07.1**	**-0.2**
	comp=E,1.0nm,0.7s,baz=250,slow=10,SNR=8.6						

IDC 06 12:13:13.6±51.0, 17°.53S×176°.90E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/15, mbtmp4.0/3, Error ellipse: s-maj=895.7km s-min=139.5km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.94**	**239**	P	P	12 20 08.0	+0.7
	4.0nm,0.8s,baz=85,slow=11,SNR=7.0						
WRA	**Warramunga Arr**	**40.30**	**260**	P	P	12 20 53.3	+0.4
	0.5nm,0.7s,baz=94,slow=8.5,SNR=4.9						
ASAR	**Alice Springs**	**40.59**	**254**	P	P	12 20 54.4	-0.9
	2.5nm,0.7s,baz=86,slow=8.8,SNR=26						

*IDC **06** 12:12:47.7±58.0, 16°.89S×178°.86E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=1047.0km s-min=146.5km az=76.0*
*NOU **06** 12:14:19.0±1.3, 20°.05S×168°.25E, h10km, MD2.4, ML3.3*

ISC 06 12:14:19.8±3.3, 20°.2S±0°.2×168°.2E±0°.6, h14km±41km, n9, σ0°.56/14, mb3.5/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.30**	**212**	*eS*	**Sn**	**12 15 24.6**	**-0.8**
DZM	**Mont Dzumac**	**2.48**	**221**	*eP*	**Pn**	**12 14 59.2**	**-0.6**
DZM				*eS*	**Sn**	**12 15 29.8**	**0.0**
DZM				AMP		12 15 38.5	
	comp=Z,1μm,2.1s						
LASL	**Noumea**	**2.54**	**217**	*eP*	**Pn**	**12 15 00.5**	**-0.2**
LASL				*eS*	**Sn**	**12 15 31.9**	**+0.4**
NORM	**Noumea**	**2.57**	**218**	*eP*	**Pn**	**12 15 00.9**	**-0.2**
NORM				*eS*	**Sn**	**12 15 31.9**	**-0.3**
NORM				AMP		12 15 32.8	
	comp=Z,334nm,0.2s						
NOUC	**Port Laguerre**	**2.59**	**223**	*eP*	**Pn**	**12 15 02.1**	**+0.8**
NOUC				*eS*	**Sn**	**12 15 32.7**	**+0.1**
NOUC				AMP		12 15 46.3	
	comp=Z,66nm,1.7s						
ONTRN	**Noumea**	**2.65**	**218**	*eP*	**Pn**	**12 15 02.3**	**+0.1**
ONTRN				*eS*	**Sn**	**12 15 34.6**	**+0.4**
ONTRN				AMP		12 15 38.3	
	comp=Z,326nm,0.5s						
STKA	**Stephens Creek**	**26.51**	**239**	P	**P**	**12 19 58.2**	**+1.3**
	comp=Z,1.1nm,0.6s,mb3.6,baz=86,slow=15,SNR=2.9						
WRA	**Warramunga Arr**	**31.78**	**265**	P	**P**	**12 20 43.1**	**-0.9**
	comp=Z,0.4nm,0.9s,mb3.3,baz=92,slow=8.3,SNR=3.7						
ASAR	**Alice Springs**	**31.96**	**257**	P	**P**	**12 20 45.4**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.7,baz=87,slow=8.8,SNR=16						

MAN 06 12:16:48, 17°.40N×122°.43E, h27km, mb4.2, ML3.0, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.33**	**180**	*eP*	Pb	12 16 57.0	+1.3
PALP				*eS*	Sb	12 17 05.6	+4.7
CAUP	**Cauayan**	**0.73**	**232**	*eP*	Pb	12 17 04.6	+2.4
CAUP				*eS*	Sb	12 17 14.1	+2.2
APYP	**Conner**	**1.22**	**292**	*eP*	Pn	12 17 08.2	-1.0
APYP				*eS*	Sn	12 17 26.0	+1.1
BALP	**Baler**	**1.84**	**206**	*eP*	Pn	12 17 20.8	+3.0

BJI 06 12:29:55.7, 23°.02N×100°.91E, h31km, ML3.1/5, Ms3.4/1, Ms7 3.5/1, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.68**	**38**	Pg	Pn	12 30 42.0	+5.3
KMI				Sg	Sn	12 31 19.8	+12
KMI				smax			
	comp=N,30nm,1.0s						
KMI				smax			
	comp=E,40nm,1.2s						
CD2	**Chengdu**	**8.26**	**17**	P	Pn	12 31 53.8	+0.5
CD2				S	Sn	12 33 27.4	+1.8
CD2				LR	LR		
	comp=N,160nm,7.3s						
CD2				LR	LR		
	comp=Z,200nm,6.5s						

IDC 06 12:34:47.2±5.7, 6°.36S×154°.47E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=168.3km s-min=30.5km az=110.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.76**	**233**	P	P	12 40 01.6	0.0
	1.4nm,0.7s,baz=57,slow=9.4,SNR=9.9						
ASAR	**Alice Springs**	**26.21**	**227**	P	P	12 40 23.7	-0.2
	0.4nm,0.8s,baz=58,slow=12,SNR=4.3						
SONM	**Songino Array**	**68.52**	**327**	P	P	12 45 52.1	+0.6
	0.6nm,0.7s,baz=143,slow=7.0,SNR=6.1						
MKAR	**Makanchi Array**	**82.58**	**319**	P	P	12 47 12.1	-0.1
	0.4nm,0.8s,baz=91,slow=5.8,SNR=2.3						

*IDC **06** 12:42:12.3±0.4, 20°.39S×168°.83E, h0km, mb5.2/24, mb1 5.3/26, mb1mx5.3/27, mbtmp5.2/26, ML3.8/2, MS4.9/18, Ms1 4.9/18, ms1mx4.7/27, Error ellipse: s-maj=14.7km s-min=12.2km az=150.0*
*NOU **06** 12:42:13.7±1.1, 20°.28S×168°.81E, h30km, MD3.0, ML3.7*
*ISCJB **06** 12:42:13.3±1.7, 20°.48S±0°.04×168°.81E±0°.03, h15km±10km, mb5.3/112, MS4.9/47, Error ellipse: s-maj=6.4km s-min=3.9km az=159.8*
*LDG **06** 12:42:14.5±0.2, 20°.21S×168°.56E, h10km, Mb5.8/4, Ms5.0/9, Error ellipse: s-maj=17.8km s-min=4.7km az=127.0*
*SZGRF **06** 12:42:14.3, 20°.54S×171°.64E, h33km, mb5.2, Vanuatu Islands region*
*BJI **06** 12:42:14.5, 20°.06S×168°.81E, h13km, mB5.3/29, mb5.2/42, Ms5.1/37, MS7 4.7/36*
*MOS **06** 12:42:16.5±1.6, 20°.38S×168°.82E, h33km, mb5.4/36, MS4.9/15, Error ellipse: s-maj=9.8km s-min=8.6km az=135.1*
*GCMT **06** 12:42:17.8±0.2, 20°.45S×168°.75E, h16km±1km, MW5.5/86, Moment Tensor Solution. s75,c119; s86,c137; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.55±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-0.52±.02; $M_{r\theta}$0.70±.07; $M_{\theta\phi}$0.32±.01; $M_{\phi r}$-1.61±.14; Best double couple: $M_0$1.86100×10^{17} NP1:ϕ_s330.00000°, δ10.00000°, λ83.00000°. NP2:ϕ_s156.00000°, δ80.00000°, λ91.00000°.*

Principal axes: T 1.7980, Plg55.0000°, Azm68.0000°; N 0.1260, Plg1.0000°, Azm336.0000°; P -1.9240, Plg35.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
*BGS **06** 12:42:17.7±6.3, 20°.46S×168°.84E, h33km, mb5.3(NEIC)*
*NEIC **06** 12:42:17.8±0.2, 20°.46S×168°.84E, h35km, mb5.3/64, Error ellipse: s-maj=7.3km s-min=5.0km az=155.0*
*DJA **06** 12:42:31, 20°.26S×168°.50E, h146km, mb5.5/14*

ISC 06 12:42:12.9±1.8, 20°.44S±0°.04×168°.88E±0°.03, h3km±11km, h14km±2.4km: pP-P, n710, σ0°.72/444, mb5.3/112, MS4.9/47, 121C-91D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.52**	**227**	*eP*	**Pn**	**12 42 51.6**	**-3.1**
BAYA				*eS*	**Sn**	**12 43 21.4**	**-4.5**
BAYA				AMP		12 43 32.8	
	comp=Z,260nm,4.2s						
DZM	**Mont Dzumac**	**2.79**	**234**	*e*Pn	**Pn**	**12 42 56.0**	**-2.4**
	comp=Z,392nm,0.2s						
DZM				*e*Sn	**Sn**	**12 43 26.2**	**-6.3**
	comp=Z,4μm,0.3s						
DZM				*e*LR	LR	12 43 38.8	
	comp=Z,43μm,24.2s						
DZM	**Mont Dzumac**	**2.79**	**234**	*eP*	**Pn**	**12 42 56.3**	**-2.0**
DZM				*eS*	**Sn**	**12 43 27.1**	**-5.4**
DZM	**Mont Dzumac**	**2.79**	**234**	*e*Pn	**Pn**	**12 42 55.9**	**-2.5**
NOUC	**Port Laguerre**	**2.91**	**235**	*eP*	**Pn**	**12 42 58.8**	**-1.3**
NOUC				*eS*	**Sn**	**12 43 31.2**	**-4.4**
NOUC				AMP		12 43 32.6	
	comp=Z,2μm,0.8s						
RAO	**Raoul Island**	**14.84**	**129**	LR	LR	12 50 18.2	
	comp=Z,3μm,20.6s,baz=173,slow=33						
OUZ	**Omahuta**	**15.30**	**165**	*e*Pn	**Pn**	**12 45 51.5**	**+1.7**
	comp=Z,142nm,0.9s						
EIDS	**Eidsvold**	**17.11**	**250**	*e*Pn	**Pn**	**12 46 13.0**	**-0.1**
	comp=Z,55nm,1.0s						
ARMA	**Armidale**	**18.45**	**234**	*eP*	**Pn**	**12 46 30.6**	**+0.9**
ARMA				*eS*	**Sn**	**12 50 07.1**	**+11**
ARMA	**Armidale**	**18.45**	**234**	*eP*	**Pn**	**12 46 30.3**	**+0.6**
	comp=Z,39nm,0.8s						
URZ	**Urewera**	**19.13**	**160**	P	**Pn**	**12 46 38.9**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=337,slow=7.8,SNR=24						
URZ	**Urewera**	**19.13**	**160**	*eP*	**Pn**	**12 46 39.4**	**+1.5**
	comp=Z,186nm,1.1s						
AFI	**Afiamalu**	**19.58**	**74**	*eP*	**Pn**	**12 46 42.6**	**-0.8**
AFI				pmax	pmax		
	comp=Z,63nm,0.7s						
AFI	**Afiamalu**	**19.58**	**74**	P	**Pn**	**12 46 42.1**	**-1.3**
	comp=Z,5.0nm,0.3s,baz=39,slow=18,SNR=11						
AFI				LR	LR	12 52 54.5	
	comp=Z,8μm,18.4s,baz=271,slow=33						
AFI	**Afiamalu**	**19.58**	**74**	*eP*	**Pn**	**12 46 42.5**	**-0.9**
	comp=Z,63nm,0.7s						
RIV	**Riverview**	**20.61**	**226**	*eP*	**P**	**12 46 55.5**	**+2.3**
CTA	**Charters Tower**	**21.23**	**267**	*eP*	**P**	**12 47 01.4**	**+1.4**
	comp=Z,100nm,0.8s,mb5.2						
CTA				*eS*	**S**	**12 50 58.0**	**+1.4**
CTA	**Charters Tower**	**21.23**	**267**	P	**P**	**12 47 01.4**	**+1.4**
	comp=Z,150nm,0.9s,mb5.3,baz=93,slow=11,SNR=31						
CTAO	**Charters Tower**	**21.23**	**267**	*eP*	**P**	**12 47 01.5**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,134nm,0.8s,mb5.3						
CTAO	**Charters Tower**	**21.23**	**267**	*eP*	**P**	**12 47 01.5**	**+1.5**
	comp=Z,134nm,0.8s,mb5.3						
SNZO	**South Karori**	**21.38**	**168**	*eP*	Px	12 47 14.3	
KHZ	**Kahutara**	**22.26**	**171**	*eP*	**P**	**12 47 11.1**	**+0.3**
	comp=Z,163nm,1.5s,mb5.2						
CNB	**Canberra Magne**	**22.68**	**225**	*eP*	**P**	**12 47 16.8**	**+1.4**
CNB				*eS*	**S**	**12 51 26.7**	**+2.0**
CAN	**Canberra**	**22.92**	**226**	*eP*	**P**	**12 47 19.0**	**+1.0**
CAN				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.2						
CAN	**Canberra**	**22.92**	**226**	*eP*	**P**	**12 47 19.0**	**+1.0**
	comp=Z,93nm,0.9s,mb5.2						
RPZ	**Rata Peaks**	**23.28**	**176**	P	**P**	**12 47 22.7**	**+1.1**
	comp=Z,30nm,0.8s,mb4.8,baz=22,slow=7.3,SNR=17						
RPZ				LR	LR	12 55 29.2	
	comp=Z,2μm,20.1s,MS4.6,baz=349,slow=34						
RPZ	**Rata Peaks**	**23.28**	**176**	P	**P**	**12 47 22.7**	**+1.1**
RPZ				LR	LR	12 55 29.2	
COEN	**Coen**	**25.37**	**281**	*eP*	**P**	**12 47 41.6**	**+0.2**
	comp=Z,1μm,0.8s,mb6.4						
TOO	**Toolangi**	**26.52**	**225**	*eP*	**P**	**12 47 52.6**	**+0.9**
TOO				*eS*	**S**	**12 52 27.0**	**+0.4**
STKA	**Stephens Creek**	**26.93**	**239**	*eP*	**P**	**12 47 55.4**	**0.0**
	comp=Z,74nm,0.6s,mb5.4						
STKA				*eS*	**S**	**12 52 38.8**	**+5.7**
STKA	**Stephens Creek**	**26.93**	**239**	P	**P**	**12 47 55.6**	**+0.1**
	comp=Z,90nm,0.7s,mb5.4,baz=86,slow=10,SNR=144						
STKA				PcP	PcP	12 51 17.9	+0.3
	comp=Z,4.3nm,0.6s,baz=63,slow=0.3,SNR=2.8						
STKA				LR	LR	12 58 25.4	
	comp=Z,4μm,18.3s,MS5.0,baz=49,slow=36						
STKA	**Stephens Creek**	**26.93**	**239**	*eP*	**P**	**12 47 55.5**	**0.0**
	comp=Z,17nm,0.6s,mb4.8						
ARPS	**Mount Arapiles**	**28.64**	**230**	*eP*	**P**	**12 48 09.4**	**-1.3**
	comp=Z,158nm,0.8s,mb5.8						
WB2	**Warramunga Arr**	**32.37**	**265**	*eP*	**P**	**12 48 42.5**	**-1.3**
WRAB	**Tennant Creek**	**32.38**	**265**	P	**P**	**12 48 42.0**	**-1.9**
	comp=Z,222nm,0.8s,mb6.0,SNR=34						
WRAB	**Tennant Creek**	**32.38**	**265**	*eP*	**P**	**12 48 43.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.2						
WRAB	**Tennant Creek**	**32.38**	**265**	*eP*	**P**	**12 48 43.5**	**-0.4**
	comp=Z,33nm,0.9s,mb5.2						
WRA	**Warramunga Arr**	**32.39**	**265**	P	**P**	**12 48 41.9**	**-2.1**
WRA						12 51 31.3	
WRA	**Warramunga Arr**	**32.39**	**265**	P	**P**	**12 48 41.9**	**-2.1**
	comp=Z,18nm,0.5s,mb5.2,baz=92,slow=8.5,SNR=271						
WRA				PcP	PcP	12 51 31.3	-0.4
	comp=Z,8.5nm,0.9s,baz=94,slow=2.9,SNR=5.3						
WRA				LR	LR	13 02 09.4	
	comp=Z,6μm,18.3s,MS5.3,baz=95,slow=37						
ASAR	**Alice Springs**	**32.52**	**258**	P	**P**	**12 48 43.9**	**-1.3**
ASAR						12 51 31.6	
ASAR	**Alice Springs**	**32.52**	**258**	P	**P**	**12 48 43.9**	**-1.3**
	comp=Z,124nm,0.6s,mb6.0,baz=85,slow=9.1,SNR=1737						
ASAR				PcP	PcP	12 51 31.6	-0.5
	comp=Z,12nm,0.8s,baz=93,slow=2.8,SNR=7.0						
ASAR				ScP	ScP	12 55 22.2	+5.3
	comp=Z,0.7nm,0.6s,baz=97,slow=3.4,SNR=4.0						
KAKA	**Kakadu**	**35.70**	**277**	*eP*	**P**	**12 49 10.8**	**-2.0**
	comp=Z,48nm,0.8s,mb5.5						
KAKA	**Kakadu**	**35.70**	**277**	*eP*	**P**	**12 49 11.1**	**-1.7**
	comp=Z,148nm,0.8s,mb6.0						
FORT	**Forrest**	**38.04**	**246**	*eP*	**P**	**12 49 31.4**	**-1.2**
	comp=Z,63nm,0.6s,mb5.5						
FORT	**Forrest**	**38.04**	**246**	*eP*	**P**	**12 49 31.4**	**-1.1**
	comp=Z,72nm,0.7s,mb5.5						
KNA	**Kununurra**	**38.34**	**270**	*eP*	**P**	**12 49 34.2**	**-1.1**
	comp=Z,199nm,0.7s,mb6.0						
PAE	**Paea**	**39.29**	**93**	*eP*	**P**	**12 49 44.2**	**+1.0**
	comp=Z,3.9nm,0.7s,mb4.2						
PAE	**Paea**	**39.29**	**93**	*eP*	**P**	**12 49 44.2**	**+1.0**
PAE				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
PPT	**Papeete**	**39.31**	**93**	*eP*	**P**	**12 49 44.2**	**+0.8**
	comp=Z,23nm,0.8s,mb5.0						
PPT				*eS*	**S**	**12 55 44.5**	**-0.8**
	comp=Z,798nm,24.4s						
PPT				*e*LQ		12 58 46.3	
	comp=Z,4μm,26.2s						
PPT				*e*LR	LR	13 00 29.4	
	comp=Z,4μm,24.5s,baz=252						
PPT	**Papeete**	**39.31**	**93**	P	**P**	**12 49 45.1**	**+1.6**
	comp=Z,30nm,0.7s,mb5.1,baz=231,slow=6.5,SNR=8.6						
PPT				LR	LR	13 02 21.5	
	comp=Z,1μm,21.4s,MS4.7,baz=262,slow=31						
TIAR	**Tiarei**	**39.53**	**93**	*eP*	**P**	**12 49 45.5**	**+0.3**
	comp=Z,90nm,0.8s,mb5.5						
MEH	**Mehetia**	**40.67**	**94**	*eP*	**P**	**12 49 55.5**	**+0.8**
	comp=Z,63nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**40.80**	**266**	*eP*	**P**	**12 49 54.9**	**-0.9**
	comp=Z,254nm,0.8s,mb5.9						
FITZ	**Fitzroy Crossi**	**40.80**	**266**	P	**P**	**12 49 55.2**	**-0.6**
	comp=Z,115nm,0.7s,mb5.6,baz=101,slow=8.0,SNR=310						
GUMO	**Guam**	**41.24**	**323**	LR	LR	13 04 33.5	
	comp=Z,792nm,20.1s,MS4.6,baz=277,slow=33						
PMOR	**Pomariorio Ree**	**41.44**	**90**	*eP*	**P**	**12 50 00.7**	**-0.4**
	comp=Z,60nm,1.0s,mb5.2						
MBWA	**Marble Bar**	**45.80**	**260**	*eP*	**P**	**12 50 35.3**	**-0.9**
MBWA	**Marble Bar**	**45.80**	**260**	*eP*	**P**	**12 50 35.7**	**-0.4**
	comp=Z,130nm,0.8s,mb5.9						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	*eP*	**P**	**12 50 46.9**	**-1.5**
NWAO				pmax	pmax		
	comp=Z,91nm,0.9s						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	*eP*	**P**	**12 50 46.6**	**-1.8**
	comp=Z,619nm,0.8s						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	P	**P**	**12 50 47.5**	**-0.8**
	comp=Z,103nm,0.8s,mb5.8,baz=93,slow=7.1,SNR=63						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	*eP*	**P**	**12 50 46.9**	**-1.5**
	comp=Z,91nm,0.9s,mb5.7						
MORW	**Morawa**	**48.41**	**249**	*eP*	**P**	**12 50 55.0**	**-1.5**
KAPI	**Kappang**	**50.09**	**281**	P	**P**	**12 51 08.7**	**-0.9**
	comp=Z,423nm,0.8s,mb6.5,SNR=7.6						
KAPI	**Kappang**	**50.09**	**281**	P	**P**	**12 51 07.7**	**-1.9**
	comp=Z,53nm,0.8s,mb5.7,baz=149,slow=3.7,SNR=37						
KAPI	**Kappang**	**50.09**	**281**	*eP*	**P**	**12 51 08.8**	**-0.7**
	comp=Z,55nm,0.8s,mb5.6						
TAOE	**Nuku Hiva Isla**	**50.46**	**85**	*eS*	**S**	**12 58 26.4**	**-0.6**
	comp=Z,862nm,25.9s						
TAOE				*e*LR	LR	13 05 37.6	
	comp=Z,3μm,25.2s,baz=255						
DAV	**Davao City (W)**	**50.59**	**298**	LR	LR	13 12 06.3	
	comp=Z,489nm,18.1s,MS4.6,baz=156,slow=36						
CBIJ	**Chichi jima**	**53.87**	**330**	P	**P**	**12 51 36.6**	**-0.7**
	comp=Z,48nm,0.6s,mb5.6,baz=296,slow=22,SNR=9.5						
CBIJ				LR	LR	13 13 28.5	
	comp=Z,417nm,18.8s,MS4.5,baz=126,slow=35						
MYLDM	**Lahad Datu**	**55.63**	**292**	P	**P**	**12 51 53.3**	**+2.8**
SDKM	**Sandakan**	**56.99**	**291**	P	**P**	**12 51 59.6**	**-0.6**
SBA	**Scott Base**	**57.46**	**181**	*eP*	**P**	**12 52 03.4**	**+0.8**
SBA				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.5						
SBA	**Scott Base**	**57.46**	**181**	*eP*	**P**	**12 52 03.4**	**+0.8**
	comp=Z,41nm,0.9s,mb5.5						
KDM	**Kudat**	**57.92**	**292**	P	**P**	**12 52 08.3**	**+1.6**
KKM	**Kota Kinabalu**	**58.04**	**291**	P	**P**	**12 52 08.1**	**+0.5**
KKM	**Kota Kinabalu**	**58.04**	**291**	*eP*	**P**	**12 52 07.1**	**-0.5**
	comp=Z,44nm,1.0s,mb5.4						
CASY	**Casey**	**58.89**	**204**	*eP*	**P**	**12 52 11.7**	**-1.1**
	comp=Z,48nm,1.1s,mb5.4						
BTM	**Bintulu**	**59.53**	**287**	P	**P**	**12 52 18.5**	**+0.5**
SBUM	**Sibu**	**59.98**	**285**	P	**P**	**12 52 21.7**	**+0.6**
JOW	**Kunigami**	**61.29**	**318**	LR	LR	13 15 28.6	
	comp=Z,413nm,18.8s,MS4.6,baz=133,slow=33						
KSM	**Kuching**	**61.31**	**284**	P	**P**	**12 52 30.4**	**+0.2**
KSM	**Kuching**	**61.31**	**284**	*eP*	**P**	**12 52 29.9**	**-0.4**
	comp=Z,56nm,0.8s,mb5.7						
XMIS	**Christmas Isla**	**61.43**	**269**	*eP*	**P**	**12 52 30.9**	**-0.1**
	comp=Z,54nm,0.8s,mb5.7						
MJAR	**Matsushiro Arr**	**63.66**	**333**	P	**P**	**12 52 44.8**	**-0.5**
	comp=Z,6.3nm,0.8s,mb4.7,baz=171,slow=8.0,SNR=20						
MAJO	**Matsushiro**	**63.66**	**333**	*eP*	**P**	**12 52 45.1**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,112nm,0.4s,mb6.2						
MAJO	**Matsushiro**	**63.66**	**333**	*eP*	**P**	**12 52 45.1**	**-0.2**
	comp=Z,112nm,0.4s,mb6.2						
MAT	**Matsushiro**	**63.66**	**333**	P	**P**	**12 52 44.9**	**-0.5**
MAT				S	**S**	**13 01 17.0**	**-3.3**
TPUB	**Ta-pu**	**64.05**	**310**	*eP*	**P**	**12 52 48.4**	**+0.2**
	comp=Z,45nm,0.8s,mb5.5						
YHNB	**Yeheng**	**64.39**	**312**	*eP*	**P**	**12 52 51.1**	**+0.6**
	comp=Z,58nm,1.0s,mb5.6						
TATO	**Taipei**	**64.51**	**312**	*eP*	**P**	**12 52 50.8**	**-0.4**
	comp=Z,162nm,1.4s,mb5.9						
MIR	**Mirnyy**	**65.80**	**205**	*c iP*	**P**	**12 52 59.0**	**0.0**
MIR				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
QZH	**Quanzhou**	**66.53**	**310**	P	**P**	**12 53 07.2**	**+2.9**
QZH				S	S	13 01 56.3	+0.3
MYKOM	**Kota Tinggi**	**67.36**	**281**	P	**P**	**12 53 10.4**	**+0.5**
KGM	**Kluang**	**67.94**	**281**	P	**P**	**12 53 14.3**	**+0.8**
ASAJ	**Asahikawa**	**68.61**	**340**	P	**P**	**12 53 17.9**	**+0.9**
	comp=Z,56nm,1.0s,mb5.4,baz=229,slow=11,SNR=13						
ASAJ				LR	LR	13 20 30.3	
	comp=Z,1μm,19.8s,MS5.2,baz=161,slow=34						
SSE	**Sheshan**	**68.71**	**317**	*eP*	**P**	**12 53 18.3**	**+0.3**
SSE				sP	sP	12 53 22.8	+3.3
SSE				S	S	13 02 22.2	+0.2
SSE				sS	sS	13 02 28.1	+4.2
SSE				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.5						
SSE				pmax	pmax		
	comp=Z,29nm,3.5s						
SSE				LR	LR		
	comp=N,260nm,21.9s,MS4.4						
SSE				LR	LR		
	comp=E,66nm,21.9s,MS4.4						
SSE				LR	LR		
	comp=Z,270nm,21.4s,MS4.5						
KSRS	**Korea Array**	**69.31**	**326**	P	**P**	**12 53 21.8**	**+0.2**
	comp=Z,7.6nm,0.9s,mb4.6,baz=144,slow=6.1,SNR=17						
KSRS				LR	LR	13 22 45.7	
	comp=Z,396nm,18.4s,MS4.7,baz=27,slow=35						
KTGM	**Kuala Trenggan**	**69.42**	**284**	P	**P**	**12 53 23.3**	**+0.6**
QSPA	**South Pole Qui**	**69.62**	**180**	*eP*	**P**	**12 53 22.5**	**-0.3**
	comp=Z,90nm,1.1s,mb5.6						
QIZ	**Qiongzhong**	**69.88**	**300**	P	**P**	**12 53 26.8**	**+1.3**
QIZ				S	S	13 02 38.2	+1.9
QIZ				sS	sS	13 02 43.9	+5.7
QIZ				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.9						
QIZ				pmax	pmax		
	comp=Z,150nm,11.6s						
QIZ				LR	LR		
	comp=N,230nm,18.5s						
QIZ				LR	LR		
	comp=Z,300nm,23.4s,MS4.5						
FRIM	**Kepong**	**69.97**	**281**	P	**P**	**12 53 26.0**	**-0.1**
INCN	**

MDJ pmax pmax
comp=Z,130nm,3.5s
MDJ LR LR
comp=N,320nm,21.7s,MS4.8
MDJ LR LR
comp=E,410nm,20.1s,MS4.8
MDJ LR LR
comp=Z,600nm,19.3s,MS4.9
HABR Khabarovsk 74.97 337 *e*P **P** **12 53 56.3 +1.1**
HABR *e**PP pP 12 54 03.7 +7.4
HABR *e* 12 54 07.6
HABR 12 56 40.8
HABR *e*PPP 12 58 27.4
HABR S S 13 03 32.0 -1.4
HABR 13 04 02.7
HABR *e*SS SS 13 08 18.9 -3.6
HABR pmax pmax
comp=Z,41nm,1.5s,mb5.1
HABR pmax pmax
comp=E,11nm,0.7s
HABR pmax pmax
comp=N,11nm,1.1s
HABR MLR MLR
comp=Z,254nm,17.0s,MS4.6
CN2 Changchun 75.31 329 *e*P **P** **12 53 57.8 +0.6**
CN2 *e*sP sP 12 54 04.0 +5.2
CN2 *e*S S 13 03 36.0 -1.3
CN2 pmax pmax
comp=Z,50nm,0.8s,mb5.5
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,17.0s,MS4.9
CN2 LR LR
comp=E,300nm,17.0s,MS4.9
CN2 LR LR
comp=Z,400nm,18.0s,MS4.8
ENH Enshi 76.18 310 *e*P **P** **12 54 02.2 -0.4**
comp=Z,21nm,0.8s,mb5.1
GYA Guiyang 76.23 305⇑*i*P **P** **12 54 03.8 +0.9**
GYA PP PP 12 56 58.0 +3.7
GYA S S 13 03 47.5 -0.8
GYA SKS 13 04 11.0
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,160nm,5.6s
GYA LR LR
comp=N,880nm,19.0s,MS5.2
GYA LR LR
comp=E,670nm,20.8s,MS5.2
GYA LR LR
comp=Z,790nm,19.7s,MS5.0
KLR Kul'dur 76.82 336 *e*P **P** **12 54 03.0 -2.7**
MAW Mawson 77.20 202 P **P** **12 54 08.0 +0.3**
comp=Z,35nm,0.9s,mb5.3,baz=115,slow=6.8,SNR=53
MAW LR LR 13 25 18.7
comp=Z,1μm,18.3s,MS5.2,baz=101,slow=34
BJI Beijing 77.66 321 P **P** **12 54 11.5 +0.8**
BJI S S 13 04 04.7 +1.4
BJI pmax pmax
comp=Z,38nm,0.8s,mb5.4
BJI pmax pmax
comp=Z,160nm,3.8s
BJI LR LR
comp=N,380nm,19.1s,MS4.8
BJI LR LR
comp=E,240nm,20.5s,MS4.8
BJI LR LR
comp=Z,260nm,20.0s,MS4.5
KMI Kunming 78.62 302 P **P** **12 54 17.6 +1.2**
KMI sP sP 12 54 21.9 +4.0
KMI PP PP 12 57 19.0 +4.5
KMI S S 13 04 16.0 +1.7
KMI pmax pmax
comp=Z,13nm,0.8s,mb4.9
KMI pmax pmax
comp=Z,180nm,3.7s
KMI LR LR
comp=N,190nm,18.5s,MS4.6
KMI LR LR
comp=E,210nm,18.5s,MS4.6
KMI LR LR
comp=Z,280nm,20.9s,MS4.6
XAN Xi'an 78.67 313 P **P** **12 54 17.0 +0.6**
XAN pP pP 12 54 20.3 +2.7
XAN sP sP 12 54 21.6 +3.6
XAN PP PP 12 57 15.0 +0.3
XAN S S 13 04 15.4 +0.9
XAN sS sS 13 04 21.1 +4.7
XAN SS SS 13 09 20.9 +1.9
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
XAN LR LR
comp=N,220nm,22.0s,MS4.5
XAN LR LR
comp=E,120nm,17.4s,MS4.5
XAN LR LR
comp=Z,140nm,17.4s,MS4.3
CM31 Chiang Mai Arr 78.69 295 *e*P **P** **12 54 18.3 +1.4**
CMAR Chiang Mai Arr 78.69 295 P **P** **12 54 18.1 +1.2**
comp=Z,26nm,0.8s,mb5.2,baz=133,slow=4.3,SNR=124
CMAR PKKPbc PKKPbc 13 13 16.9 +4.8
comp=Z,0.6nm,0.5s,baz=288,slow=3.9,SNR=4.1
CHTO Chiang Mai 78.84 295 *e*P **P** **12 54 18.3 +0.6**
CHTO pmax pmax
comp=Z,33nm,0.9s,mb5.3
CHTO Chiang Mai 78.84 295 *e*P **P** **12 54 18.2 +0.5**
comp=Z,33nm,0.9s,mb5.3
CD2 Chengdu 80.70 308 P **P** **12 54 28.4 +0.9**
CD2 pP pP 12 54 33.1 +4.4
CD2 sP sP 12 54 35.4 +6.3
CD2 PP PP 12 57 34.7 +3.0
CD2 S S 13 04 35.2 -0.9
CD2 sS sS 13 04 42.6 +4.6
CD2 SS SS 13 09 51.1 +1.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,230nm,7.8s
CD2 LR LR
comp=N,500nm,19.0s
CD2 LR LR
comp=Z,380nm,23.8s,MS4.7
HHC Hu-ho-hao-te 80.91 320⇑P **P** **12 54 30.0 +1.6**
HHC pP pP 12 54 34.7 +5.1
HHC sP sP 12 54 37.1 +7.1
HHC PP PP 12 57 37.2 +4.0
HHC S S 13 04 37.9 0.0
HHC sS sS 13 04 45.7 +5.9
HHC pmax pmax
comp=Z,26nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,120nm,6.0s
HHC LR LR
comp=N,440nm,19.5s,MS5.3
HHC LR LR
comp=E,1μm,18.4s,MS5.3
HHC LR LR
comp=Z,400nm,18.4s,MS4.8
CHGN Chignik 81.28 18 *e*P **P** **12 54 29.0 -1.0**
LZH Lanzhou 83.28 312 *e*P **P** **12 54 42.5 +1.5**
LZH pP pP 12 54 46.5 +4.4
LZH sP sP 12 54 49.5 +6.9
LZH PP PP 12 57 56.0 +3.2
LZH *e*S S 13 05 01.0 -1.5
LZH sS sS 13 05 06.2 +1.8
LZH SS SS 13 10 29.0 +1.2
LZH pmax pmax
comp=Z,41nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,150nm,4.0s
LZH LR LR
comp=E,580nm,16.4s
LZH LR LR
comp=Z,650nm,17.2s,MS5.1
OHAK Old Harbor 83.60 20 *e*P **P** **12 54 41.9 -0.1**
SYO Syowa Base 83.69 196⇑*e*P **P** **12 54 40.0 -2.6**
SYO Syowa Base 83.69 196⇓*e*P **P** **12 54 51.6 +9.0**
SEY Seymchan 84.11 352 *d*/P **P** **12 54 43.9 -0.7**
KDAK Kodiak Island 84.28 20 P **P** **12 54 45.2 -0.3**
comp=Z,13nm,0.7s,mb5.1,baz=228,slow=3.7,SNR=8.9
KDAK Kodiak Island 84.28 20 *e*P **P** **12 54 45.3 -0.2**
GAMB Gambell 85.31 9 *e*P **P** **12 54 50.9 +0.3**
comp=Z,14nm,0.5s,mb5.3

CLNS Chul'man 85.37 337 *e*P **P** **12 54 49.6 -1.5**
CLNS *e* 12 54 56.8
CLNS *e**PP pP 12 55 02.8 +11
CLNS *e* 12 58 08.2
CLNS *e*PPP 13 00 00.4
CLNS *e*S S 13 05 09.9 -12
CLNS pmax pmax
comp=Z,27nm,1.0s,mb5.3
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS smax
comp=N,201nm,13.6s
CLNS smax
comp=E,284nm,12.4s
CLNS MLR MLR
comp=E,253nm,18.0s,MS4.8
CLNS MLR MLR
comp=N,270nm,17.0s,MS4.8
CLNS MLR MLR
comp=Z,200nm,15.0s,MS4.6
SVW2 Sparrevohn 86.14 16 *e*P **P** **12 54 55.2 +0.4**
RSO Redoubt South 86.40 18 *e*P **P** **12 54 57.0 +0.9**
KHMM Horse Mountain 87.30 44 *e*P **P** **12 55 02.1 +1.1**
comp=Z,20nm,0.8s,mb5.4
TTA Tatalina 87.58 15 *e*P **P** **12 55 01.2 -0.6**
TTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
TTA Tatalina 87.58 15 *e*P **P** **12 55 01.2 -0.6**
comp=Z,4.7nm,0.6s,mb4.9
SHL Shillong 87.62 298 *e*P **P** **12 55 03.0 +0.1**
ULN Ulaanbaatar 87.62 324 *e*P **P** **12 55 03.4 +1.0**
ULN pmax pmax
comp=Z,31nm,1.0s,mb5.5
ULN Ulaanbaatar 87.62 324 *e*P **P** **12 55 03.4 +1.0**
comp=Z,31nm,1.0s,mb5.5
NVL N'lazarevskaya 87.63 187 *e*P **P** **12 54 59.2 -3.0**
NVL *e**PP pP 12 55 10.8 +7.5
NVL *e*S S 13 05 34.0 -10
NVL pmax pmax
comp=Z,31nm,0.9s,mb5.5
MAIT Maitri 87.63 187 *e*P **P** **12 55 01.2 -1.0**
MAIT *e*E 12 55 10.6
GTA Gaotai 87.70 314 P **P** **12 55 03.6 +0.6**
GTA pP pP 12 55 07.8 +3.7
GTA sP sP 12 55 10.9 +6.4
GTA PP PP 12 58 33.5 +4.8
GTA SKS 13 05 31.0
GTA S S 13 05 45.4 -0.5
GTA sS sS 13 05 56.5 +8.7
GTA pmax pmax
comp=Z,16nm,0.8s,mb5.3
GTA pmax pmax
comp=Z,110nm,7.5s
GTA LR LR
comp=N,240nm,17.1s,MS4.8
GTA LR LR
comp=E,280nm,19.2s,MS4.8
GTA LR LR
comp=Z,290nm,20.4s,MS4.7
YAK Yakutsk 87.91 343*c i*P **P** **12 55 03.2 -0.2**
YAK *e**PP pP 12 55 12.0 +7.4
YAK *e*S SKSac 13 05 28.4 -3.7
YAK pmax pmax
comp=Z,21nm,0.8s,mb5.4
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK smax
comp=E,447nm,13.1s
YAK smax
comp=N,125nm,12.2s
YAK MLR MLR
comp=Z,755nm,15.0s,MS5.2
YAK MLR MLR
comp=E,444nm,19.0s,MS5.2
YAK MLR MLR
comp=N,807nm,22.0s,MS5.2
YAK Yakutsk 87.91 343 *e*P **P** **12 55 03.5 +0.1**
comp=N,35nm,0.6s,mb5.8
WDC Whiskeytown Da 87.94 45 *e*P **P** **12 55 03.7 -0.4**
WDC *e*P pP 12 55 03.9 -1.4
SONM Songino Array 87.97 323 P **P** **12 55 04.5 +0.5**
comp=N,12nm,0.8s,mb5.2,baz=142,slow=5.1,SNR=68
SONM PKKPbc PKKPbc 13 12 56.2 +4.5
comp=N,0.4nm,0.5s,baz=273,slow=3.6,SNR=3.7
SONM LR LR 13 35 35.0
comp=N,438nm,18.4s,MS4.9,baz=119,slow=36
OHCM Honcut 88.06 47 *e*P **P** **12 55 04.7 0.0**
MWC Mount Wilson 88.17 52 *e*P **P** **12 55 05.4 +0.1**
MWC pmax pmax
comp=Z,79nm,2.0s,mb5.6
MWC Mount Wilson 88.17 52 *e*P **P** **12 55 05.4 +0.1**
comp=Z,79nm,2.0s,mb5.6
CMB Columbia Colle 88.21 48 *e*P **P** **12 55 05.1 -0.3**
CMB pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
CMB Columbia Colle 88.21 48 *e*P **P** **12 55 05.1 -0.3**
comp=Z,9.9nm,0.8s,mb5.1
BILL Bilibino 88.24 359*ce*P **P** **12 55 04.3 -0.6**
BILL *e* 12 55 16.4
BILL 13 05 32.0
BILL pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
BILL MLR MLR
comp=Z,400nm,19.0s,MS4.8
BILL Bilibino 88.24 359 *e*P **P** **12 55 03.7 -1.2**
comp=Z,12nm,0.8s,mb5.2
PMR Palmer 88.37 19 *e*P **P** **12 55 03.9 -1.7**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
PMR Palmer 88.37 19 *e*P **P** **12 55 03.9 -1.7**
comp=Z,7.8nm,0.6s,mb5.1
YBH Yreka Blue Hor 88.39 44 *e*P **P** **12 55 06.6 +0.4**
YBH pmax pmax
comp=Z,11nm,0.8s
YBH Yreka Blue Hor 88.39 44 P **P** **12 55 06.6 +0.4**
comp=Z,8.6nm,0.7s,mb5.1,baz=147,slow=1.1,SNR=24
YBH Yreka Blue Hor 88.39 44 *e*P **P** **12 55 06.6 +0.4**
comp=Z,11nm,0.8s,mb5.2
BFSC Mount Baldy St 88.47 53⇑P **P** **12 55 06.2 -0.5**
baz=89,SNR=6.0
ISA Isabella 88.50 51⇑P **P** **12 55 07.0 +0.1**
baz=89,SNR=13
ISA Isabella 88.50 51 *e*P **P** **12 55 07.3 +0.5**
ISA pmax pmax
comp=Z,12nm,0.8s,mb5.2
ISA Isabella 88.50 51 *e*P **P** **12 55 07.3 +0.4**
comp=Z,12nm,0.8s,mb5.2
EDW2 Edwards Air Fo 88.51 52⇑P **P** **12 55 06.9 0.0**
baz=89,SNR=5.9
VNA3 Neumayer Olymp 88.55 180 *e*P **P** **12 55 05.2 -1.4**
VNA3 *e* 12 55 10.4
HUMO Hull Mountain 88.67 43 *e*P **P** **12 55 07.8 +0.3**
MONP Monument Peak 88.82 54⇑P **P** **12 55 08.5 0.0**
baz=89,SNR=9.1
VNA2 Neumayer--Watz 88.84 181 *e*P **P** **12 55 06.9 -1.0**
baz=188,slow=4.6
VNA2 *e* 12 55 12.1
LBCM Butte Creek Ri 88.86 45 P **P** **12 55 08.5 +0.1**
BUOR Burton Butte 88.96 44 P **P** **12 55 09.3 +0.5**
BEKR Beckwourth 89.08 47⇓P **P** **12 55 09.2 -0.2**
baz=89,SNR=6.6
WAKR Walker 89.09 48 *e*P **P** **12 55 09.9 +0.3**
PFO Pinyon Flat Ob 89.10 54⇓P **P** **12 55 09.4 -0.3**
baz=89
PFO Pinyon Flat Ob 89.10 54 *e*P **P** **12 55 09.6 -0.2**
CWC Cottonwood Cre 89.13 50⇑P **P** **12 55 09.7 -0.1**
baz=89,SNR=7.0
VNA1 Neumayer--Stat 89.13 181 *e*P **P** **12 55 08.4 -0.9**
VNA1 *e* 12 55 13.5
WCN Washoe City 89.23 47⇓P **P** **12 55 10.4 +0.3**
baz=89
TIN Tinemaha 89.29 50⇑P **P** **12 55 10.7 +0.2**
baz=89
CHUM Lake Minchumin 89.31 16 *e*P **P** **12 55 10.8 +0.8**
comp=Z,8.3nm,0.6s,mb5.2
MPMC Manual Prospec 89.39 51⇓P **P** **12 55 11.2 +0.1**

baz=90,SNR=13
KTH Kantishna Hill 89.41 17 *e*P **P** **12 55 08.3 -2.1**
comp=Z,6.5nm,0.8s,mb5.0
TRF Thorofare Moun 89.50 17 *e*P **P** **12 55 09.1 -1.8**
comp=Z,5.3nm,0.6s,mb5.0
GSC Goldstone 89.56 52⇑P **P** **12 55 12.1 +0.2**
baz=90
GSC Goldstone 89.56 52 *e*P **P** **12 55 12.1 +0.2**
GSC pmax pmax
comp=Z,27nm,1.8s,mb5.3
GSC Goldstone 89.56 52 *e*P **P** **12 55 12.1 +0.3**
comp=Z,27nm,1.8s,mb5.3
BELC Belle Mtn. 89.61 53⇑P **P** **12 55 12.2 0.0**
baz=90,SNR=8.5
PAHR Pah Rah Range 89.67 47 *e*P **P** **12 55 12.6 +0.4**
comp=Z,18nm,1.2s,mb5.3
BPAW Bear Paw Mtn. 89.83 16 *e*P **P** **12 55 13.4 +1.0**
comp=Z,2.4nm,0.6s,mb4.7
NVAR Mina Array Bea 89.85 49 P **P** **12 55 13.2 +0.1**
comp=Z,9.2nm,0.8s,mb5.2,baz=226,slow=8.1,SNR=48
NVAR PKPPKP 13 20 56.0
comp=Z,0.6nm,0.7s,baz=106,slow=3.1,SNR=5.1
LSA Lhasa 89.87 302 P **P** **12 55 14.0 +0.6**
LSA pmax pmax
comp=Z,20nm,0.5s,mb5.7
LSA Lhasa 89.87 302 *e*P **P** **12 55 14.6 +1.2**
LSA pmax pmax
comp=Z,14nm,0.7s,mb5.4
LSA Lhasa 89.87 302 *e*P **P** **12 55 14.6 +1.2**
comp=Z,14nm,0.7s,mb5.4
BC3 Big Chuckw Mtn 89.88 54⇓P **P** **12 55 13.7 +0.3**
baz=90
GRAC Grapevine Rang 89.89 50⇑P **P** **12 55 13.4 0.0**
baz=90,SNR=7.5
FURC Furnace Creek, 90.03 51⇓P **P** **12 55 14.1 +0.1**
baz=90,SNR=13
K05A Summer Lake 90.06 44⇑P **P** **12 55 14.6 +0.6**
baz=90,SNR=10
MOD Modoc 90.06 45 *e*P **P** **12 55 14.1 +0.1**
MCK McKinley 90.10 17 *e*P **P** **12 55 13.0 -0.7**
GLA Glamis 90.11 55⇓P **P** **12 55 14.6 +0.1**
baz=90,SNR=5.0
GLA Glamis 90.11 55 *e*P **P** **12 55 14.9 +0.4**
GLA pmax pmax
comp=Z,13nm,0.8s,mb5.3
GLA Glamis 90.11 55 *e*P **P** **12 55 14.9 +0.4**
comp=Z,13nm,0.8s,mb5.3
H04A Detroit Lake 90.17 42⇓P **P** **12 55 14.0 -0.4**
baz=90,SNR=11
GMRC Granite Mounta 90.19 53⇓P **P** **12 55 15.0 +0.2**
baz=90
G04A Mulino 90.24 41⇑P **P** **12 55 15.6 +0.8**
baz=90
E03A Lebam 90.24 40⇓P **P** **12 55 15.0 +0.2**
baz=90
BOD Bodaibo 90.26 334 *e*P **P** **12 55 13.5 -1.0**
BOD pmax pmax
comp=Z,17nm,1.5s,mb5.2
TUQ Turquoise Moun 90.27 52⇑P **P** **12 55 14.9 -0.3**
baz=90,SNR=6.5
IRM Iron Mountain 90.32 54⇑P **P** **12 55 15.8 +0.4**
baz=90
U10A Ash Meadows, A 90.39 51⇓P **P** **12 55 16.1 +0.4**
baz=90,SNR=7.3
OOW Octopus West 90.47 38 P **P** **12 55 16.6 +0.9**
NLWA Neilton Lookou 90.48 39⇑P **P** **12 55 16.5 +0.6**
baz=91
Y12C Blythe 90.62 54⇑P **P** **12 55 17.1 +0.3**
baz=91
F04A Amboy 90.63 41⇑P **P** **12 55 16.3 -0.3**
baz=91,SNR=8.2
LVP Lakeview Peak 90.70 40 P **P** **12 55 17.2 +0.3**
LDFC Landfair 90.73 53 *e*P **P** **12 55 17.7 +0.4**
comp=Z,21nm,0.9s,mb5.5
113A Mohawk Valley, 90.81 55⇓P **P** **12 55 17.4 -0.3**
baz=91
V11A Goodsprings 90.81 52⇑P **P** **12 55 18.0 +0.3**
baz=91
S10A Tonopah Range, 90.84 50⇑P **P** **12 55 18.2 +0.4**
baz=91,SNR=37
TDL Tradedollar La 90.95 40 P **P** **12 55 18.8 +0.7**
MENT Mentasta 91.06 20 *e*P **P** **12 55 16.8 -1.3**
Z13A Yuma Proving G 91.06 55⇑P **P** **12 55 19.0 +0.1**
baz=91,SNR=6.5
VIPM Ingram Point 91.07 42 P **P** **12 55 18.5 -0.1**
ZAK Zakamensk 91.07 324 *e*P **P** **12 55 19.4 +0.9**
ZAK pmax pmax
comp=Z,14nm,1.5s,mb5.1
U11A Corn Creek 91.08 51⇑P **P** **12 55 19.5 +0.6**
baz=91
GULW Guler Mountain 91.13 41 P **P** **12 55 19.2 +0.3**
PDMCI Parker Dam,Lak 91.14 54⇑P **P** **12 55 19.6 +0.4**
baz=91
Y13A Salome 91.18 54⇑P **P** **12 55 19.6 +0.1**
baz=91,SNR=8.9
V12A Nelson 91.19 52⇓P **P** **12 55 19.4 -0.1**
baz=91
R10A Warm Springs 91.20 49⇓P **P** **12 55 19.6 +0.2**
baz=91,SNR=11
214A Organ Pipe Nat 91.22 56⇑P **P** **12 55 20.0 +0.3**
baz=91
SHPR Sheep Range 91.28 51 *e*P **P** **12 55 20.1 +0.2**
COLA College 91.29 17 *e*P **P** **12 55 17.1 -2.1**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
COLA College 91.29 17 *e*P **P** **12 55 17.1 -2.1**
comp=Z,7.3nm,0.8s,mb5.1
S11A Rachel 91.33 50⇓P **P** **12 55 20.0 0.0**
baz=92,SNR=6.3
H06A Lindquist Farm 91.35 42⇓P **P** **12 55 20.0 0.0**
baz=92,SNR=27
Q10A Clear Creek Ra 91.36 49⇓P **P** **12 55 20.3 +0.2**
baz=92,SNR=6.7
LON Longmire 91.39 40 *e*P **P** **12 55 19.8 -0.3**
LON pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LON Longmire 91.39 40 *e*P **P** **12 55 19.8 -0.3**
comp=Z,5.0nm,0.7s,mb5.0
G06A Carlson Farm, 91.40 42⇓P **P** **12 55 19.9 -0.2**
baz=92
WVOR Wild Horse Val 91.40 45 *e*P **P** **12 55 20.2 -0.1**
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
WVOR Wild Horse Val 91.40 45 *e*P **P** **12 55 20.2 0.0**
comp=Z,9.9nm,0.9s,mb5.1
BMN Battle Mountai 91.48 47 *e*P **P** **12 55 20.7 0.0**
114A Black Gap (USA 91.48 56⇑P **P** **12 55 20.7 -0.2**
baz=92
D05A Enumclaw 91.50 40⇑P **P** **12 55 21.1 +0.6**
baz=92
IRK Irkutsk 91.52 326 *e*P **P** **12 55 26.4 +5.9**
IRK pmax pmax
comp=Z,21nm,2.2s,mb5.1
WPW White Pass 91.53 40 P **P** **12 55 20.8 +0.1**
T11A Corn Creek, Al 91.54 51⇓P **P** **12 55 21.3 +0.2**
baz=92,SNR=20
TLY Talaya 91.55 326 *e*P **P** **12 55 20.1 -0.6**
TLY *e* 12 55 35.4
TLY *e*S S 13 06 10.8 -10
TLY *e*SS SS 13 12 31.9 +3.8
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,206nm,20.0s,MS4.6
TLY Talaya 91.55 326 *e*P **P** **12 55 21.2 +0.5**
I07A Izee 91.58 43⇓P **P** **12 55 21.0 0.0**
baz=92,SNR=23
GSM Grass Mountain 91.62 40 P **P** **12 55 21.4 +0.3**
W13A Hualapai Mount 91.65 53⇓P **P** **12 55 21.5 -0.1**
baz=92,SNR=5.9
P10A Eureka 91.66 48⇓P **P** **12 55 21.8 +0.3**
baz=92
Z14A Wintersburg 91.68 55⇑P **P** **12 55 21.8 +0.1**
baz=92
U12A Valley of Fire 91.71 52⇓P **P** **12 55 21.9 +0.1**
baz=92
HYT Haines Junctio 91.73 23 *e*P **P** **12 55 20.8 -0.5**
R11A Troy Canyon, C 91.74 50⇑P **P** **12 55 21.7 -0.2**
baz=92,SNR=8.7
TAPN Taplejung 91.75 298 *e*P **P** **12 55 22.7 +0.4**
comp=Z,20nm,0.7s,mb5.5
E06A Yakima 91.80 41⇓P **P** **12 55 21.8 -0.2**
baz=92,SNR=5.9
ODAN Odare 91.83 298 *e*P **P** **12 55 23.0 +0.4**
Y14A Wickenburg 91.86 54⇑P **P** **12 55 22.6 0.0**
baz=92
V13A Grand Canyon W 91.88 52⇑P **P** **12 55 22.7 0.0**

baz=92,SNR=8.7
Q11A Duckwater 91.90 49 ⇓P P 12 55 22.7 0.0
baz=92,SNR=9.4
O10A Cortez Mining, 91.92 48 ⇓P P 12 55 23.1 +0.5
baz=92
J08A Circle Bar Ran 91.92 44 ⇑P P 12 55 22.7 +0.1
baz=92,SNR=13
S12A Delamar Landin 91.96 51 ⇑P P 12 55 23.3 +0.4
baz=92,SNR=14
U13A Pakoon Wash 92.12 52 ⇓P P 12 55 23.7 -0.1
baz=92,SNR=5.9
X14A Yava 92.15 54 ⇑P P 12 55 24.2 +0.2
baz=92,SNR=12
216A Three Points, 92.30 57 ⇑P P 12 55 24.8 +0.1
baz=92,SNR=6.6
W14A Seligman 92.30 53 ⇓P P 12 55 24.7 +0.1
baz=92,SNR=6.4
H08A Prairie City 92.31 43 ⇓P P 12 55 24.4 0.0
baz=92
116A Eloy 92.32 56 ⇓P P 12 55 24.8 0.0
baz=92,SNR=6.8
Y15A Casa Rosa Ranc 92.38 55 ⇓P P 12 55 25.1 +0.1
baz=92,SNR=11
RPW Rockport 92.38 39 *e*P **P 12 55 24.3 -0.3**
comp=Z,2.1nm,0.5s,mb4.7
J09A Fry Pan Ranch, 92.39 44 ⇑P P 12 55 24.8 +0.1
baz=92,SNR=19
T13A Saint George 92.41 51 ⇑P P 12 55 25.3 +0.2
baz=93
M10A I.L. Ranch, Tu 92.41 46 ⇓P P 12 55 24.9 0.0
baz=93,SNR=6.1
R12A Pony Springs, 92.43 50 ⇑P P 12 55 25.0 -0.1
baz=93,SNR=6.9
V14A Boquillas Ranc 92.45 53 ⇑P P 12 55 25.7 +0.4
baz=93,SNR=7.3
G08A Pilot Rock 92.47 42 ⇑P P 12 55 25.1 0.0
baz=93,SNR=14
COLD Coldfoot 92.52 15 *e*P **P 12 55 24.7 -0.1**
comp=Z,3.6nm,0.8s,mb4.8
RAMN Ramite 92.52 298 *e*P **P 12 55 26.2 +0.4**
Q12A Willow Creek R 92.56 49 ⇑P P 12 55 25.2 -0.5
baz=93,SNR=6.9
HAWA Hanford 92.61 41 *e*P **P 12 55 26.0 +0.2**
comp=Z,5.6nm,0.8s,mb5.0
X15A Humboldt 92.66 54 ⇑P P 12 55 26.6 +0.3
baz=93,SNR=11
S13A Holt Ranch, En 92.67 51 ⇓P P 12 55 26.6 +0.3
baz=93,SNR=10
I09A Lost Marbles R 92.67 44 ⇑P P 12 55 25.7 -0.4
baz=93,SNR=5.2
ETW Entiat 92.69 40 *e*P **P 12 55 26.1 +0.1**
P12A McGill 92.69 49 ⇓P P 12 55 26.1 -0.2
baz=93,SNR=6.9
L10A Juniper Basin 92.69 46 ⇓P P 12 55 26.0 -0.3
baz=93,SNR=11
U14A Mt Trumbull 92.71 52 ⇓P P 12 55 26.6 +0.2
baz=93,SNR=12
D07A Quincy 92.71 40 ⇓P P 12 55 26.1 -0.1
baz=93
217A Green Valley 92.72 57 ⇑P P 12 55 26.9 +0.2
baz=93
K10A MacKenzie Ranc 92.73 45 ⇓P P 12 55 26.1 -0.2
baz=93,SNR=8.1
R13A O'Grain Ranch, 92.83 50 ⇑P P 12 55 27.3 +0.3
baz=93
M11A Holland Ranch, 92.88 47 ⇑P P 12 55 27.8 +0.7
baz=93
MOY Mondy 92.97 325 *e*P **P 12 55 28.1 +0.8**
Y16A Circle Bar Ran 93.00 55 ⇓P P 12 55 28.4 +0.6
baz=93
CCUT Cedar City 93.02 51 *e*P **P 12 55 28.1 +0.2**
comp=Z,81nm,2.9s,mb5.7
H09A Durkee 93.02 43 ⇓P P 12 55 27.8 +0.1
baz=93
117A Oracle 93.08 56 ⇓P P 12 55 28.5 +0.3
baz=93,SNR=7.2
Q13A Wheeler Ranch, 93.11 50 ⇓P P 12 55 28.1 -0.1
baz=93,SNR=8.4
O12A Currie 93.13 48 ⇓P P 12 55 28.3 0.0
baz=93
N12A Clover Valley, 93.16 48 ⇑P P 12 55 28.9 +0.4
baz=93
N12A Clover Valley, 93.16 48 *e*P **P 12 55 28.7 +0.3**
EGAK Eagle 93.17 19 *e*P **P 12 55 27.9 0.0**
B07A Winthrop 93.21 39 ⇑P P 12 55 28.4 -0.1
baz=93
G09A Cove 93.22 43 ⇑P P 12 55 28.4 -0.2
baz=93
L11A Cat Creek Ranc 93.22 46 ⇑P P 12 55 28.5 -0.1
baz=93,SNR=8.2
V15A Kaibab Nationa 93.22 53 ⇑P P 12 55 29.0 +0.1
baz=93,SNR=5.7
DAWY Dawson 93.24 20 *e*P **P 12 55 28.8 +0.6**
X16A Lo Mia Camp, P 93.24 55 ⇓P P 12 55 29.2 +0.2
baz=93,SNR=7.9
318A Bisbee 93.25 58 ⇓P P 12 55 29.2 +0.1
baz=93
DLBC Dease Lake 93.26 27 P **P 12 55 27.8 -0.6**
comp=Z,8.1nm,1.1s,mb5.1,baz=261,slow=7.7,SNR=9.6
DLBC Dease Lake 93.26 27 *e*P **P 12 55 28.3 -0.1**
K11A Parker Ranch, 93.28 45 ⇑P P 12 55 28.9 0.0
baz=93
P13A Bates Ranch, G 93.31 49 ⇑P P 12 55 29.0 -0.1
baz=94,SNR=7.9
A07A Ashnola River, 93.32 38 ⇓P P 12 55 29.0 +0.1
baz=94
BMO Blue Mountains 93.33 43 *e*P **P 12 55 28.6 -0.5**
U15A North Rim 93.37 52 ⇓P P 12 55 29.8 +0.3
baz=94,SNR=11
218A Dragoon 93.40 57 ⇑P P 12 55 30.1 +0.4
baz=94
Y17A Roosevelt 93.42 55 ⇑P P 12 55 29.6 -0.2
baz=94
W16A Flagstaff 93.43 54 ⇑P P 12 55 29.8 0.0
baz=94
GUN Gumba 93.47 298 *e*P **P 12 55 30.4 +0.2**
comp=Z,29nm,0.8s,mb5.8
M12A Wells 93.48 47 ⇓P P 12 55 29.7 -0.2
baz=94
B08A Colville Reser 93.63 39 ⇑P P 12 55 30.1 -0.3
baz=94
Q14A Sevier Lake (B 93.65 50 ⇑P P 12 55 30.7 0.0
baz=94,SNR=9.8
D09A Jones Farm, Ri 93.67 41 ⇓P P 12 55 30.7 +0.1
baz=94
MFID Camas Ranch 93.69 45 ⇑P P 12 55 30.5 -0.2
baz=94,SNR=6.2
X17A Forest Lakes 93.69 55 ⇑P P 12 55 31.5 +0.4
baz=94,SNR=5.2
L12A House Creek Ra 93.71 46 ⇓P P 12 55 31.1 +0.2
baz=94
WUAZ Wupatki 93.71 54 ⇓P P 12 55 31.2 +0.1
baz=94,SNR=5.5
WUAZ Wupatki 93.71 54 *e*P **P 12 55 31.5 +0.4**
118A Homack Ranch, 93.71 57 ⇑P P 12 55 31.4 +0.2
baz=94
PKI Pulchoki 93.74 298 *e*P **P 12 55 31.4 0.0**
N13A Wendover, West 93.74 48 *e*P **P 12 55 31.1 0.0**
comp=Z,8.2nm,1.0s,mb5.1
319A Douglas 93.79 58 ⇑P P 12 55 31.5 -0.1
baz=94
S15A Panguitch 93.80 51 ⇑P P 12 55 32.3 +0.8
baz=94
I11A Placerville 93.81 44 ⇑P P 12 55 30.7 -0.6
baz=94,SNR=7.8
F10A Beach Ranch, E 93.86 42 ⇓P P 12 55 31.0 -0.5
baz=94
KKN Kakani 93.92 298 *e*P **P 12 55 32.4 +0.1**
comp=Z,36nm,0.7s,mb5.9
A08A Turner Farm, O 93.93 39 ⇓P P 12 55 32.2 +0.4
baz=94
M13A Montello 93.97 47 ⇑P P 12 55 31.7 -0.5
baz=94,SNR=8.1
K12A Draper Farm, C 93.98 46 ⇓P P 12 55 32.1 0.0
baz=94
DMN Daman 94.00 298 *e*P **P 12 55 33.0 +0.4**
comp=Z,48nm,0.7s,mb6.1
219A White Tail Can 94.03 57 ⇓P P 12 55 32.5 -0.2
baz=94
P14A Drum Mountains 94.04 49 ⇓P P 12 55 32.2 -0.3
baz=94
Y18A Canyon Day Jun 94.08 56 ⇓P P 12 55 32.6 -0.2
baz=94
H11A Donnelly 94.10 44 ⇑P P 12 55 32.0 -0.7
baz=94,SNR=9.6
J12A Stokes Ranch, 94.10 45 ⇑P P 12 55 32.4 -0.3
baz=94,SNR=8.5
U16A Tuba City 94.13 53 ⇑P P 12 55 33.0 0.0
baz=94
V17A Tonalea, Kykot 94.19 54 ⇓P P 12 55 33.6 +0.3
baz=94,SNR=6.7
G11A Walters Elk Ra 94.23 43 ⇑P P 12 55 32.7 -0.6
baz=94,SNR=12
MSU Marysvale 94.26 51 *e*P **P 12 55 34.4 +0.9**
MSU pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
MSU Marysvale 94.26 51 *e*P **P 12 55 34.4 +0.8**
comp=Z,2.6nm,0.9s,mb4.7
119A Ashpeak Ranch, 94.28 57 ⇑P P 12 55 33.9 +0.1
baz=94
I12A Atlanta 94.30 45 ⇑P P 12 55 33.5 -0.1
baz=94,SNR=5.5
B09A Rice 94.36 40 ⇓P P 12 55 33.9 +0.1
baz=94
320A Kipp Ranch, An 94.37 58 ⇓P P 12 55 34.2 -0.1
baz=94
X18A Snowflake 94.42 55 ⇑P P 12 55 34.6 +0.2
baz=95
GKN Gorkha 94.53 298 *e*P **P 12 55 34.5 -0.5**
comp=Z,28nm,0.7s,mb5.8
M14A Sheep Mountain 94.59 47 ⇑P P 12 55 34.6 -0.3
baz=95,SNR=13
E11A Bogner Ranch, 94.67 42 ⇑P P 12 55 35.0 -0.2
baz=95
R16A Teasdale 94.67 51 ⇑P P 12 55 35.6 +0.2
baz=95,SNR=5.3
HLID Hailey 94.69 45 ⇓P P 12 55 35.2 -0.2
baz=95,SNR=5.7
T17A Navajo Res., N 94.69 52 ⇑P P 12 55 35.6 0.0
baz=95
J13A Cove Ranch, Pi 94.78 45 ⇓P P 12 55 36.1 +0.3
baz=95
H12A Diamond D Ranc 94.79 44 ⇑P P 12 55 35.0 -0.9
baz=95,SNR=10
L14A Malta 94.87 47 ⇓P P 12 55 36.1 -0.2
baz=95
N15A Stansbury Isla 94.93 48 ⇓P P 12 55 36.5 0.0
baz=95
S17A Black Ridge (B 94.93 52 ⇓P P 12 55 36.3 -0.4
baz=95
I13A Wildhorse Cree 95.03 45 ⇓P P 12 55 36.6 -0.3
baz=95,SNR=5.8
F12A Elk City 95.03 43 ⇓P P 12 55 35.9 -1.0
baz=95
HVU Hansel Valley 95.09 47 *e*P **P 12 55 37.2 -0.1**
HVU pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
HVU Hansel Valley 95.09 47 *e*P **P 12 55 37.2 -0.1**
comp=Z,4.4nm,0.8s,mb4.9
K14A Jones Ranch, D 95.12 47 ⇓P P 12 55 37.3 -0.1
baz=95
J14A Carey 95.19 46 ⇑P P 12 55 37.6 -0.1
baz=95,SNR=6.1
H13A Challis 95.19 44 ⇓P P 12 55 37.4 -0.3
baz=95
M15A Larsen Ranch, 95.20 48 ⇑P P 12 55 37.2 -0.6
baz=95
TMUT Trail Mountain 95.25 50 *e*P **P 12 55 40.3 +2.2**
TMUT *e*P pP 12 55 40.5 +1.2
R17A Hanksville Air 95.29 51 ⇓P P 12 55 37.8 -0.5
baz=95
KOLN Koldanda 95.31 298 *e*P **P 12 55 38.0 -0.6**
comp=Z,20nm,0.7s,mb5.6
G13A Cobalt 95.42 44 ⇑P P 12 55 38.0 -0.6
baz=96
T18A Mexican Hat 95.43 53 ⇓P P 12 55 39.3 +0.3
baz=96
L15A Malad City 95.45 47 ⇓P P 12 55 38.7 -0.2
baz=96
I14A Mackay 95.47 45 ⇑P P 12 55 38.8 -0.2
baz=96
F13A Darby 95.63 43 ⇑P P 12 55 38.8 -0.9
baz=96
SRU San Rafael 95.68 50 ⇑P P 12 55 39.8 -0.2
baz=96
SRU San Rafael 95.68 50 *e*P **P 12 55 39.7 -0.3**
H14A Leadore 95.80 45 ⇓P P 12 55 40.0 -0.4
baz=96
TIXI Tiksi 95.84 348 *e*P **P 12 55 37.8 -2.2**
TIXI *e*S SKSac 13 06 11.1 -5.5
TIXI *e* S 13 06 59.5 +1.2
TIXI *e*SS SS 13 13 21.7 -6.9
TIXI pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
TIXI Tiksi 95.84 348 *e*P **P 12 55 38.8 -1.2**
comp=Z,2.5nm,0.7s,mb4.8
R18A Canyonlands Na 95.87 51 ⇑P P 12 55 40.4 -0.5
baz=96
O17A Robinson Place 95.92 49 ⇓P P 12 55 41.0 -0.1
baz=96
Q18A Rafter H Ranch 95.96 51 ⇑P P 12 55 41.3 0.0
baz=96
G14A Jackson 95.98 44 ⇑P P 12 55 40.9 -0.3
baz=96
BSMT Bassoo Peak 96.17 41 *e*P **P 12 55 41.5 -0.5**
comp=Z,2.1nm,0.7s,mb4.7
HYB Hyderabad 96.22 286 *i* P **P 12 55 43.0 0.0**
H15A Lima 96.27 45 ⇓P P 12 55 42.5 -0.1
baz=96
Z22A Elephant Butte 96.29 57 ⇓P P 12 55 42.5 -0.5
baz=96
K16A Soda Springs 96.31 47 ⇑P P 12 55 42.4 -0.4
baz=96
J16A Bone 96.46 46 ⇑P P 12 55 43.2 -0.3
baz=97
DLMT Dillon 96.59 44 *e*P **P 12 55 43.7 -0.3**
AHID Auburn Hatcher 96.62 47 *e*P **P 12 55 39.3 -4.9**
RRI2 Red Ridge 96.68 46 *e*P **P 12 55 44.0 -0.5**
F15A Butte 96.84 44 ⇓P P 12 55 44.7 -0.4
baz=97
M18A Lyman 96.85 48 ⇓P P 12 55 44.8 -0.5
baz=97
W22A Albuquerque 96.98 55 ⇓P P 12 55 47.0 +0.9
baz=97
224A Corundas Mount 97.03 59 ⇑P P 12 55 46.1 -0.3
baz=97
425A Indio Mountain 97.03 60 ⇓P P 12 55 46.3 -0.1
baz=97
IMW Indian Meadow 97.14 46 *e*P **P 12 55 46.5 0.0**
H16A Russell Place, 97.23 45 ⇑P P 12 55 46.9 0.0
baz=97
BOZ Bozeman (W) 97.33 44 ⇑P P 12 55 47.1 -0.2
baz=98
C15A Salmond Ranch, 97.49 42 ⇑P P 12 55 47.5 -0.6
baz=98
J18A Kendall Valley 97.52 47 ⇑P P 12 55 48.1 -0.2
baz=98
H17A Grant Village 97.56 46 ⇑P P 12 55 49.4 +1.0
baz=98
L19A Farson 97.58 48 ⇑P P 12 55 48.2 -0.4
baz=98
R21A Cimarron 97.59 52 ⇑P P 12 55 49.5 +0.8
baz=98
225A Deer Hill, Car 97.60 59 ⇑P P 12 55 49.4 +0.4
baz=98
E16A East Helena 97.62 43 ⇑P P 12 55 48.2 -0.5
baz=98
TXAR Lajitas Array 97.64 62 P **P 12 55 48.5 -0.7**
comp=Z,0.7nm,0.7s,mb4.3,baz=231,slow=5.9,SNR=9.4
TXAR PKKPbc PKKPbc 13 12 26.0 +0.3
comp=Z,1.3nm,0.8s,baz=104,slow=4.3,SNR=16
TXAR LR LR 13 33 04.6
comp=Z,1μm,18.8s,MS5.4,baz=100,slow=31
PDAR Pinedale Array 97.68 47 P **P 12 55 48.9 -0.1**
comp=Z,0.7nm,0.7s,mb4.3,baz=222,slow=2.0,SNR=6.8
PDAR PKKPbc PKKPbc 13 12 25.6 -0.5
comp=Z,0.3nm,0.8s,baz=93,slow=5.9,SNR=3.5
PDAR LR LR 13 33 03.1
comp=Z,374nm,20.5s,MS4.9,baz=252,slow=31
PDAR Pinedale Array 97.68 47 P **P 12 55 48.9 -0.1**
PDAR PKKPbc PKKPbc 13 12 25.6 -0.5
PDAR LR LR 13 33 03.1
Y24A Capitan 97.72 57 ⇓P P 12 55 49.0 -0.4
baz=98
B15A Bradely Ranch, 97.72 41 ⇑P P 12 55 48.6 -0.4
baz=98
INK Inuvik 97.79 18 P **P 12 55 46.8 -2.1**
comp=Z,2.2nm,0.9s,mb4.7,baz=207,slow=7.9,SNR=7.2
INK PKKPbc PKKPbc 13 12 24.1 -2.5
comp=Z,0.8nm,0.8s,baz=51,slow=4.6,SNR=4.4
INK Inuvik 97.79 18 *e*P **P 12 55 47.3 -1.6**
WMQ Urumqi 97.79 314 *e*P **P 12 55 48.2 -1.3**
WMQ PP PP 12 59 49.5 +1.6
WMQ SKS 13 06 24.8
WMQ S S 13 07 09.8 -6.4
WMQ SS SS 13 13 54.0 -3.3
WMQ pmax pmax
comp=Z,6.0nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,110nm,4.5s
WMQ LR LR
comp=N,100nm,24.0s,MS4.7
WMQ LR LR
comp=E,270nm,24.0s,MS4.7
WMQ LR LR
comp=Z,270nm,23.0s,MS4.7
D16A Dana Ranch, Ca 97.88 43 ⇑P P 12 55 49.5 -0.4
baz=98
527A Woodward Ranch 97.94 61 ⇓P P 12 55 50.2 -0.3
baz=98
B16A M & M Farms, S 98.29 41 ⇓P P 12 55 51.6 0.0
baz=98
Y25A Mesa, Roswell 98.30 57 ⇓P P 12 55 51.3 -0.7
baz=98
D17A Six Diamond Ra 98.48 43 ⇑P P 12 55 52.2 -0.3
baz=99
YKA Yellowknife Ar 101.89 27 P Pdif 12 56 05.9 -1.8
comp=Z,0.9nm,0.7s,baz=255,slow=4.8,SNR=18
YKA PP PP 13 00 35.7 +17
comp=Z,0.3nm,0.7s,baz=257,slow=1.3,SNR=5.1
YKA PKKPbc PKKPbc 13 12 20.4 +5.7
comp=Z,0.2nm,0.7s,baz=69,slow=2.7,SNR=4.5
YKA Yellowknife Ar 101.89 27 P Pdif 12 56 06.0 -1.8
YKA PP PP 13 00 35.7 +17
YKA PKKPbc PKKPbc 13 12 20.4 +5.7
MKAR Makanchi Array 102.35 315 P Pdif 12 56 09.9 +0.1
MKAR 13 00 20.0
MKAR Makanchi Array 102.35 315 P Pdif 12 56 09.9 +0.1
comp=Z,2.8nm,0.7s,baz=110,slow=5.3,SNR=27
MKAR PP PP 13 00 20.0 -2.5
comp=Z,0.4nm,0.4s,baz=117,slow=7.4,SNR=3.5
MKAR PKKPbc PKKPbc 13 12 15.8 +3.0
comp=Z,0.4nm,0.6s,baz=289,slow=3.7,SNR=4.6
MKAR Makanchi Array 102.35 315 P Pdif 12 56 09.9 +0.1
MKAR PP PP 13 00 20.0 -2.5
MKAR PKKPbc PKKPbc 13 12 15.8 +3.0
ZALV Zalesovo Beam 102.87 323 P Pdif 12 56 12.2 +0.1
comp=Z,1.7nm,0.6s,baz=111,slow=3.3,SNR=6.3
KURK Kurchatov 105.71 319 P Pdif 12 56 25.7 +1.0
KURK 13 00 52.3
KURK Kurchatov 105.71 319 Pdiff Pdif 12 56 25.7 +1.0
comp=Z,0.9nm,0.7s,baz=106,slow=4.2,SNR=5.3
KURK PP PP 13 00 52.2 +4.9
comp=Z,1.0nm,0.9s,baz=103,slow=6.6,SNR=6.0
KURK PKKPbc PKKPbc 13 11 59.4 -3.5
comp=Z,0.5nm,0.7s,baz=281,slow=3.7,SNR=4.3
RES Resolute Bay 111.21 16 PKiKP PKiKP 13 00 45.0 -2.2
comp=Z,1.0nm,0.7s,baz=251,slow=1.4,SNR=6.7
CPUP Villa Florida 115.42 134 PKP PKPdf 13 00 55.0 -1.7
comp=Z,0.4nm,0.3s,baz=125,slow=2.6,SNR=3.2
ARU Arti 118.01 324 *e*PKIKP PKPdf 13 01 00.2 -0.5
ARU Arti 118.01 324 *e*PKPdf PKPdf 13 01 00.2 -0.5
SDV Santo Domingo 121.56 92 *e*PKPdf PKPdf 13 01 07.7 -1.1
NCB Newcomb 123.13 50 *e*PKPdf PKPdf 13 01 09.2 -1.7
KEV Kevo 125.61 345 *e*PKIKP PKPdf 13 01 08.4 -6.5
KEV pmax pmax
comp=Z,3.0nm,0.7s
KEV Kevo 125.61 345 *e*pkp PKPdf 13 01 08.4 -6.5
comp=Z,2.8nm,0.7s
SCHQ Schefferville 126.08 36 PKP PKPdf 13 01 15.3 -0.9
comp=Z,2.1nm,0.7s,baz=310,slow=0.9,SNR=5.8
ARCES ARCESS Array B 126.14 345 PKP PKPdf 13 01 15.2 -0.7
comp=Z,2.9nm,0.6s,baz=43,slow=0.2,SNR=16
PKME Peaks-Kenny Pk 126.52 48 *e*PKPdf PKPdf 13 01 16.1 -1.3
LSZ Lusaka 127.54 230 *e*PKIKP PKPdf 13 01 20.1 -0.1
LSZ *e* 13 01 31.6
KMBO Kilima Mbogo 128.03 252 PKP PKPdf 13 01 21.6 +0.3
comp=Z,5.5nm,0.9s,baz=50,slow=5.1,SNR=11
KMBO Kilima Mbogo 128.03 252 PKP PKPdf 13 01 21.6 +0.3
KMBO *e*PKPdf PKPdf 13 01 22.7 +1.5
JOF Joensuu 128.72 337 *e*PKIKP PKPdf 13 01 19.3 -1.7
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 128.72 337 *e*pkp PKPdf 13 01 19.3 -1.7
comp=Z,3.0nm,0.6s
ONI Oni 129.46 309 P PKPdf 13 01 27.9 +4.9
ONI S PKiKP 13 01 29.5 +5.7
OBN Obninsk 130.31 326 *i* PKIKP PKiKP 13 01 30.0 +4.9
OBN *e*SSS SS 13 21 32.7 +28
OBN pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 131.04 338 *e*PKIKP PKPdf 13 01 23.6 -1.9
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 131.04 338 *e*pkp PKPdf 13 01 23.6 -1.9
comp=Z,2.7nm,0.6s
FINES FINESS Array B 131.56 337 PKhKP 13 01 23.4
comp=Z,1.9nm,0.7s,baz=72,slow=6.2,SNR=4.1
FINES SKPbc SKPbc 13 04 50.5 -2.2
comp=Z,7.8nm,0.8s,baz=94,slow=5.7,SNR=9.5
TSUM Tsumeb 131.59 217 *e*PKPdf PKPdf 13 01 28.8 +0.9
TSUM *e*pPKPdf pPKPdf 13 01 40.7 +12
AKASG Malin Array Be 136.26 323 PKhKP 13 01 25.7
comp=Z,0.3nm,0.3s,baz=21,slow=1.8,SNR=3.2
AKASG SKPbc SKPbc 13 05 08.0 -0.7
comp=Z,0.5nm,0.3s,baz=48,slow=2.9,SNR=4.5
NB2 NORSAR Subarra136.51 344 PKPdf 13 01 29.1
comp=Z,0.8nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B 136.51 344 PKhKP 13 01 23.1
comp=Z,0.2nm,0.5s,baz=33,slow=2.1,SNR=2.4
NOA SKP 13 05 14.2
comp=Z,1.4nm,0.7s,baz=32,slow=4.2,SNR=5.7
KOLS Kolonicke sedl 141.02 325 *e*PKIKP PKPdf 13 01 41.2 -3.2
KOLS Kolonicke sedl 141.02 325 *e*PKP PKPdf 13 01 41.2 -3.2
MCD Coleburn Disti 142.46 353 *e*P PKPdf 13 01 40.8 -5.9
OKC Ostrava-Krasne 142.59 329 AMS AMS 14 07 30.0
comp=Z,300nm,15.9s
KPL Plockton 142.93 355 *e*P PKPdf 13 01 42.0 -5.5
RZN Rozhen 143.08 313 *i* P PKPdf 13 01 45.1 -3.2
VYHS Vyhne 143.10 326 *e*PKHKP 13 01 41.7
VYHS Vyhne 143.10 326 *e*PKP 13 01 41.7
DPC Dobruska-Polom 143.11 331 *e*PKP PKPdf 13 01 45.8 -2.3
DPC AMS AMS 14 03 50.0
comp=Z,300nm,25.1s
VTS Vitosha 143.71 315 *i* P PKPdf 13 01 46.7 -2.7
ZAPS Zavoj 143.77 317 *e*P PKPdf 13 01 48.7 -0.8
BRG Berggiesshubel 143.79 333 *e*PKPbc PKPdf 13 01 46.1 -3.2
BRG Berggiesshubel 143.79 333 *e*PKP PKPdf 13 01 47.8 -1.4
comp=Z,11nm,1.2s
BRG *e* 13 02 00.2
comp=Z,20nm,1.0s
BRG
comp=N,210nm,16.6s
BRG
comp=E,127nm,15.0s
BRG
comp=Z,372nm,14.6s
BRG Berggiesshubel 143.79 333 *e*PKIKP PKPdf 13 01 47.8 -1.5
BRG *e* 13 02 00.2
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG MLR MLR
comp=N,126nm,16.6s,MS4.8
BRG MLR MLR
comp=E,76nm,15.0s,MS4.8
BRG MLR MLR
comp=Z,223nm,14.6s,MS5.1
MMB Musomiste 143.79 313 *i* P PKPdf 13 01 47.2 -2.4
EBH Black Hill 143.80 353 *e*P PKPdf 13 01 46.3 -2.8
CLL Collm 143.85 334 *e*PKPbc PKPdf 13 01 46.1 -3.3
CLL Collm 143.85 334 *e*PKIKP PKPdf 13 01 47.0 -2.4
CLL *e* 13 01 57.0
CLL pmax pmax
comp=Z,6.0nm,0.8s
CLL MLR MLR
comp=Z,300nm,18.6s,MS5.1
CLL Collm 143.85 334 *e*PKP PKPdf 13 01 47.0 -2.4
CLL *e*PKP PKPdf 13 01 51.0 +1.6
CLL *e* 13 01 57.0
CLL LR LR
comp=Z,300nm,18.6s,MS5.1
CLL Collm 143.85 334 *e*PKPdf PKPdf 13 01 47.0 -2.4
comp=Z,6.0nm,0.8s
CLL *e*PKiKP PKiKP 13 01 51.0 -1.8
CLL *e*pPKPdf pPKPdf 13 01 57.0 +6.5
comp=Z,62nm,1.8s
CLL Lm 14 12 00.0
comp=N,200nm,21.2s
CLL Lm 14 12 00.0
comp=E,200nm,18.9s

CLL Lm 14 12 00.0
comp=Z,300nm,18.6s
EAB Aberfoyle 143.95 354 eP PKPdf 13 01 46.5 -2.8
NRDL Niedersach Rie 144.02 338 ePKPbc PKPdf 13 01 46.9 -2.7
SRS Serrai 144.09 313 P PKPdf 13 01 47.5 -2.6
KKB Krupnik 144.11 314 i P PKPdf 13 01 49.0 -1.1
NISS 144.15 317 ||iP PKPdf 13 01 47.9 -2.2
PRU Pruhonice 144.18 331 ePKIKP PKPdf 13 01 50.0 0.0
PRU e 13 01 59.3
PRU e 13 23 43.7
PRU MLR MLR
comp=N,200nm,16.9s
EAU Auchinoon 144.19 353 eP PKPdf 13 01 47.5 -2.3
EBL Broad Law 144.21 352 eP PKPdf 13 01 47.5 -2.4
TREC Trest 144.23 330 AMS AMS 14 11 40.0
comp=N,400nm,20.9s
RCBR Riachuelo 144.30 134 ePKPdf PKPdf 13 01 47.8 -3.5
CLZ Clausthal 144.46 337 ePKPbc PKPdf 13 01 48.6 -1.8
CLZ Clausthal 144.46 337 ePKIKP PKPdf 13 01 48.6 -1.8
CLZ Clausthal 144.46 337 ePKPbc PKPdf 13 01 48.6 -1.8
BARS Barje 144.51 316 ||iP PKPdf 13 01 49.9 -0.9
FRGS Fruska Gora 144.54 321 eP PKPdf 13 01 50.1 -0.7
NPS Neapolis 144.55 302 eP PKPdf 13 01 50.1 -1.0
ESK Eskdalemuir 144.67 352 ePKIKP PKPdf 13 01 49.1 -1.6
GRUS Gruza 144.68 319 ||iP PKPdf 13 01 49.8 -1.2
LAST Lasithi 144.68 302 P PKPdf 13 01 50.5 -0.8
VAY Valandovo 144.70 314 i PKP PKPdf 13 01 48.1 -3.1
TANN Tannenbergstha 144.76 334 ePKPbc PKPdf 13 01 49.8 -1.2
ECK Cauldkaine Hil 144.79 352 eP PKPdf 13 01 49.2 -1.7
MOX Moxa 144.93 335 ePKPbc PKPdf 13 01 50.1 -1.1
MOX Moxa 144.93 335 ePKIKP PKPdf 13 01 50.4 -0.8
MOX MLR MLR
comp=Z,300nm,21.0s,MS5.0
MOX Moxa 144.93 335 ePKP PKPdf 13 01 50.4 -0.8
MOX LR LR
comp=Z,300nm,21.0s,MS5.0
IBBN Ibbenburen 144.97 340 ePKPbc PKPdf 13 01 49.8 -1.5
XAL Allendale 144.98 351 eP PKPdf 13 01 50.1 -1.1
CONA Conrad Observa 144.99 328⇑iPKPbc PKPdf 13 01 51.4 0.0
comp=Z,19nm,0.8s,SNR=12
CSNA Conrad Observa 144.99 328⇑iPKPbc PKPdf 13 01 51.4 0.0
comp=Z,17nm,0.8s
DIVS Divibare 145.01 320 ||iP PKPbc 13 01 51.5 +0.6
DIVS Divibare 145.01 320 P PKPbc 13 01 51.4 +0.5
SKO Skopje 145.16 315 ePKP PKPdf 13 01 52.3 +0.4
VLY Voula,Athens 145.17 307 eP PKPbc 13 01 45.3 -6.4
KHC Kasperske Hory 145.23 331 ePKPdf PKPdf 13 01 51.5 -0.3
KHC Kasperske Hory 145.23 331 ePKP PKPdf 13 01 51.6 -0.2
KHC epPKP pPKPdf 13 02 02.7 +10
KHC eSS SS 13 24 09.5 +7.9
KHC AMS AMS 14 12 10.0
comp=Z,500nm,21.4s
SIVA Sivas 145.25 302 P PKPbc 13 01 52.9 +0.9
LIT Litokhoron 145.27 312 eP PKPbc 13 01 51.9 0.0
LIT Litokhoron 145.27 312 P PKPbc 13 01 47.8 -4.1
GAL1 Galloway 145.29 353 eP PKPbc 13 01 50.2 -1.3
ROTZ Rotzenmuhle 145.36 333 ePKPbc PKPbc 13 01 52.1 +0.2
GEC2 GERESS Array S 145.38 331 ePKPbc PKPbc 13 01 51.8 -0.2
GEC2 GERESS Array S 145.38 331 ePKIKP PKPdf 13 01 51.8 -0.3
GEC2 GERESS Array S 145.38 331 ePKPbc PKPbc 13 01 51.8 -0.2
GERES GERESS Array B 145.38 331 PKPbc PKPbc 13 01 52.0 +0.1
comp=Z,12nm,0.7s,baz=46,slow=3.9,SNR=46
UBBA Unterbreizbach 145.42 336 ePKPbc PKPbc 13 01 51.7 -0.3
LKR Lokris 145.47 309 P PKPdf 13 01 48.5 -4.1
BBLS Lazići 145.49 320 ||iP PKPdf 13 01 53.2 +0.8
WET Wettzell 145.53 332 ePKPbc PKPbc 13 01 52.6 +0.2
WET Wettzell 145.53 332 ePKIKP PKPdf 13 01 52.6 +0.3
WET Wettzell 145.53 332 ePKPbc PKPbc 13 01 52.6 +0.2
KRUS Krusevo 145.56 315 i PKP PKPdf 13 01 51.7 -1.0
WTSB Winterswijk 145.57 340 eP PKPdf 13 01 52.2 -0.1
comp=Z,48nm,1.5s
ARSA Arzberg 145.61 327⇑iPKPbc PKPbc 13 01 53.9 +1.2
comp=Z,14nm,1.1s,SNR=6.6
VAM Vamos 145.62 303 eP PKPdf 13 01 53.6 +0.7
DID Didima 145.71 307 eP PKPdf 13 01 50.9 -2.1
DID Didima 145.71 307 P PKPdf 13 01 51.7 -1.3
LTK Loutraki 145.73 308 eP PKPdf 13 01 50.2 -2.8
LTK Loutraki 145.73 308 P PKPdf 13 01 52.1 -0.9
FNA Florina 145.74 314 P PKPdf 13 01 52.6 -0.4
AGG Agios Georgios 145.81 310 eP PKPdf 13 01 51.2 -2.0
AGG Agios Georgios 145.81 310 P PKPdf 13 01 53.3 +0.1
MOA Molln 145.82 329⇑ePKPdf PKPdf 13 01 53.5 +0.6
comp=Z,24nm,1.1s,SNR=10
THL Klokotos Trika 145.82 311 P PKPdf 13 01 52.4 -0.8
GRA1 Grafenberg Arr 145.83 334 ePKPbc PKPbc 13 01 53.6 +0.3
GRA1 LR LR
comp=Z,400nm,19.3s,MS5.2
GRF Grafenberg Arr 145.83 334 ePKPbc PKPbc 13 01 53.6 +0.3
GRF eL 14 19 20.6
comp=Z,387nm,19.3s
GRF Grafenberg Arr 145.83 334 ePKP2 PKPab 13 01 53.6 -0.1
GRF Grafenberg Arr 145.83 334 ePKP2 PKPab 13 01 53.6 -0.1
GRF MLR MLR
comp=Z,400nm,19.3s,MS5.2
GRF Grafenberg Arr 145.83 334 ePKP PKPdf 13 01 53.6 +0.8
GRF LR LR
comp=Z,400nm,19.3s,MS5.2
KARN Karanos 145.84 303 P PKPdf 13 01 53.6 +0.3
GVD Gavdhos 145.86 302 ePKPdf PKPdf 13 01 52.7 -0.7
BUG Bochum--Univer 145.87 339 ePKPbc PKPbc 13 01 52.8 -0.6
OHR Ohrid 145.98 314 ePKP PKPdf 13 01 53.6 +0.2
KALE Kalithea 146.19 309 P PKPdf 13 01 54.6 +0.8
LHO Holmfirth 146.20 350 eP PKPdf 13 01 53.9 +0.6
VLI Veliai 146.20 306 eP PKPdf 13 01 54.1 +0.2
GUR Goura 146.22 308 eP PKPdf 13 01 54.7 +0.8
GUR Goura 146.22 308 P PKPdf 13 01 54.9 +1.0
PERS Pernice 146.23 327 i PKPbc PKPbc 13 01 54.7 0.0
SOKA Soboth 146.24 327⇑iPKPdf PKPdf 13 01 54.4 +0.8
comp=Z,8.9nm,0.8s
ABA1 Baconsthorpe 146.25 347 eP PKPdf 13 01 54.2 +0.8
TRIZ Trizonia 146.25 309 P PKPdf 13 01 54.8 +0.9
KYTH Kithira 146.26 305 eP PKPdf 13 01 55.1 +1.1
EFP Efpalio 146.35 309 eP PKPdf 13 01 55.8 +1.7
EFP Efpalio 146.35 309 P PKPdf 13 01 55.9 +1.8
LAKA Lakka 146.37 309 P PKPdf 13 01 56.0 +1.9
VLX Vlachokerasia 146.39 307 P PKPdf 13 01 55.7 +1.5
TNS Taunus Mts 146.48 337 ePKPbc PKPbc 13 01 55.2 -0.1
TNS Taunus Mts 146.48 337 ePKP2 PKPab 13 01 55.2 -1.0
TNS Taunus Mts 146.48 337 ePKPbc PKPbc 13 01 55.2 -0.1
OBKA Obir 146.60 327⇑iPKPdf PKPbc 13 01 55.3 -0.5
comp=Z,10nm,1.2s
ITM Ithomi 146.80 307 eP PKPdf 13 01 55.9 +1.0
ITM Ithomi 146.80 307 P PKPdf 13 01 54.5 -0.4
WLF1 Llynfaes 146.81 353 eP PKPdf 13 01 56.0 +0.7
KBA Koelnbreinsper 146.81 329⇑iPKPdf PKPbc 13 01 55.8 -0.5
comp=Z,17nm,0.8s,SNR=10
RLS Riolos of Patr 146.81 309 eP PKiKP 13 02 00.8 +1.5
TOD Tromm 146.85 336 PKP PKPbc 13 01 56.3 -0.1
CWF Charnwood Fore 146.88 349 eP PKPbc 13 01 55.8 -0.6
HGN Heimansgroeve 146.89 340 eP PKPdf 13 01 56.2 +1.6
comp=Z,36nm,1.3s
BOJS Bojanci 146.90 325 i PKPbc PKPbc 13 01 56.8 +0.1
LJU Ljubljana 146.93 326 i PKPbc PKPbc 13 01 56.5 -0.2
FUR Furstenfeldbru 146.97 332 ePKPbc PKPbc 13 01 58.1 +1.3
FUR Furstenfeldbru 146.97 332 ePKP2 PKPab 13 01 58.1 -0.1
MYKA Terra Mystica 146.98 328⇑iPKPdf PKPbc 13 01 56.1 -0.7
comp=Z,11nm,0.7s
MEM Membach 147.00 340 PKPbc PKPbc 13 01 57.0 +0.2
PYL PYLOS 147.04 307 eP PKPdf 13 01 56.3 +1.0
PYL PYLOS 147.04 307 P PKPdf 13 01 56.2 +0.9
DSB Dublin 147.05 355 ePKPbc PKPbc 13 01 56.3 -0.5
VOY Vojsko 147.26 327 ePKPbc PKPbc 13 01 56.8 -0.9
VOY e 13 02 02.8
VOY e 13 02 21.9
VOY e 13 02 26.0
JAVS Javornik 147.27 327 ePKPbc PKPbc 13 01 56.5 -1.2
UCC Uccle 147.34 342 PKP PKPbc 13 01 58.0 +0.3
HLM1 Long Mynd 147.35 351 eP PKPdf 13 01 56.5 +1.2
STU Stuttgart 147.37 335 ePKPbc PKPbc 13 01 57.7 -0.2
BCLA Clavier 147.38 340 PKPbc PKPbc 13 01 57.1 -0.8
VLS Valsamata 147.40 310 eP PKPbc 13 01 58.1 -0.2
RUP Ruppelstein 147.41 338 PKP PKPbc 13 01 58.6 +0.6
ABTA Abfaltersbach 147.44 329⇑iPKPdf PKPdf 13 01 57.3 +1.7
comp=Z,12nm,0.8s,SNR=7.9
WATA Walderalm 147.46 331⇑iPKPdf PKPbc 13 01 59.6 +1.5
comp=Z,12nm,0.7s
WTTA Wattenberg 147.48 331⇑iPKPdf PKPbc 13 01 58.9 +0.6
comp=Z,22nm,0.9s,SNR=5.7
SNF Seneffe 147.62 342 PKPbc PKPbc 13 01 58.6 +0.1
MOTA Moosalm 147.66 331⇑iPKPdf PKPbc 13 01 58.4 -0.3
comp=Z,21nm,0.7s,SNR=9.7
RETA Reutte 147.71 332⇑iPKPdf PKPbc 13 01 58.5 -0.3
comp=Z,6.1nm,0.5s
SQTA Sankt Quirin 147.71 331⇑iPKPdf PKPbc 13 01 58.6 -0.3
comp=Z,21nm,0.7s
LANF Langenberg 147.74 336 PKP PKPbc 13 01 58.9 0.0
WLF Walferdange 147.76 339 PKP PKPbc 13 01 59.2 +0.3
WLF Walferdange 147.76 339 ePKPbc PKPbc 13 01 59.7 +0.8
GIVF Givet 147.81 341 ePKP1 PKPbc 13 01 58.7 -0.3
comp=Z,71nm,0.8s
HTR Trewern Hill 147.84 351 eP PKPbc 13 01 58.4 -0.6
MCH1 Michaelchurch 147.88 351 eP PKPbc 13 01 58.7 -0.4
DOU Dourbes 147.89 341 PKPbc PKPbc 13 01 59.2 -0.1
BAIF Baives 148.04 341 ePKP1 PKPbc 13 01 59.5 -0.1
comp=Z,52nm,0.8s
BFO Black Forest 148.07 335 ePKPbc PKPbc 13 01 59.0 -0.8
BFO Black Forest 148.07 335 ePKP2 PKPbc 13 01 59.8 0.0
BFO Black Forest 148.07 335 ePKPbc PKPbc 13 01 59.8 0.0
SPAK Spaichingen-Ko 148.07 334 PKP PKPbc 13 01 59.3 -0.5
FETA Feichten 148.08 331⇑iPKPdf PKPbc 13 01 59.9 0.0
comp=Z,31nm,0.9s,SNR=17
SWN1 Swindon 148.14 349 eP PKPdf 13 01 58.0 +1.4
MENF Mencas 148.17 344 PKP PKPbc 13 01 58.8 -1.2
HGH Gray Hill 148.19 350 eP PKPbc 13 01 59.0 -0.9
DAVA Damuels 148.25 332⇑iPKPdf PKPbc 13 02 00.2 -0.1
comp=Z,13nm,0.8s
CDF Champ du Feu 148.41 336 ePKP1 PKPbc 13 02 00.3 -0.4
comp=Z,43nm,0.7s
FELD Feldberg im Sc 148.56 335 PKP PKPbc 13 02 00.8 -0.3
ECH Echery 148.62 336 PKP PKPbc 13 02 00.5 -0.7
MOF Molkenrain 148.93 336 PKP PKPbc 13 02 01.5 -0.5
THEF They Montfort 149.04 338 PKP PKPbc 13 02 02.4 +0.1
HINF Hinteralfeld 149.06 336 ePKP1 PKPbc 13 02 01.7 -0.7
comp=Z,36nm,1.0s
HTL Hartland 149.07 352 eP PKPbc 13 02 01.1 -1.2
HTL Hartland 149.07 352 P PKPbc 13 02 01.1 -1.2
HAU Haudompre 149.09 337 ePKP1 PKPbc 13 02 02.0 -0.4
comp=Z,44nm,0.7s
HAU eMLR MLR
comp=Z,502nm,20.2s,MS5.0
HAU Haudompre 149.09 337 ePKP PKPbc 13 02 02.0 -0.4
HAU LR LR
comp=Z,500nm,20.3s,MS5.3
MEZF Maizieres J'vi 149.13 339 ePKP1 PKPbc 13 02 02.6 +0.1
comp=Z,76nm,0.9s
LOMF Lomont 149.45 336 PKP PKPbc 13 02 02.6 -0.8
TIP Timpagrande 149.63 314 ePKPdf PKPdf 13 01 59.8 +0.3
TIP ePKPbc PKPbc 13 02 04.1 0.0
TIP ePKPab PKPab 13 02 09.2 +0.1
AQU L'Aquila 149.94 322 ePKIKP PKPdf 13 01 58.8 -1.0
AQU e 13 02 05.5
AQU e 13 02 10.0
CABF La Chapelle 150.35 336 ePKP1 PKPbc 13 02 05.5 -0.1
comp=Z,56nm,0.8s
JSA Saint Aubin 150.44 348 eP PKPbc 13 02 04.5 -1.2
FLN La Foliniere 150.48 346 ePKP1 PKPbc 13 02 05.0 -0.8
comp=Z,79nm,0.9s
FLN eMLR MLR
comp=Z,369nm,19.2s,MS4.9
FLN La Foliniere 150.48 346 ePKP PKPbc 13 02 05.0 -0.8
FLN LR LR
comp=Z,370nm,19.3s,MS5.2
LDF La Druitiere 150.55 345 ePKP1 PKPbc 13 02 05.0 -1.0
comp=Z,47nm,0.8s
LOR Lormes 150.60 339 ePKP1 PKPbc 13 02 05.6 -0.5
comp=Z,45nm,0.8s
LOR eMLR MLR
comp=Z,435nm,17.8s,MS5.0
LOR Lormes 150.60 339 ePKP PKPbc 13 02 05.6 -0.5
LOR LR LR
comp=Z,430nm,17.8s,MS5.3
CEL Celeste 150.67 313 ePKPdf PKPdf 13 01 60.0 -1.1
CEL ePKPbc PKPbc 13 02 06.8 +0.1
SSF Saint Saulge 150.90 339 ePKP1 PKPbc 13 02 06.4 -0.4
comp=Z,47nm,1.0s
GRR Gorron 150.92 346 ePKP1 PKPbc 13 02 06.1 -0.7
comp=Z,72nm,0.8s
LPL La Plagne 150.99 334 ePKP1 PKPbc 13 02 07.1 0.0
comp=Z,32nm,0.8s
LPG La Plagne 150.99 334 ePKP1 PKPbc 13 02 07.2 +0.1
comp=Z,47nm,0.7s
SMF Signal de Mont 151.15 338 ePKP1 PKPbc 13 02 06.7 -0.7
comp=Z,41nm,0.8s
AVF Avril sur Loir 151.19 339 ePKP1 PKPbc 13 02 06.6 -0.9
comp=Z,16nm,0.6s
SGMF Saint Gilles 151.41 348 ePKP1 PKPbc 13 02 06.9 -1.1
comp=Z,69nm,0.8s
ROSF Rostrenen 151.46 349 ePKP1 PKPbc 13 02 06.9 -1.2
comp=Z,56nm,0.9s
BGF Bois d'Agland 151.56 340 ePKP1 PKPbc 13 02 07.7 -0.7
comp=Z,38nm,0.7s
MBDF Montbardon 151.60 333 ePKP1 PKPbc 13 02 07.9 -0.7
comp=Z,29nm,0.8s
PLDF La Plantade 151.81 338 PKP PKPbc 13 02 10.8 +1.8
ORIF Oris-en-Rattie 151.82 334 ePKP1 PKPbc 13 02 08.6 -0.5
comp=Z,38nm,0.7s
ORIF eMLR MLR
comp=Z,540nm,19.0s,MS5.1
SAOF Saorge 151.83 331 PKP PKPbc 13 02 08.2 -0.9
QUIF Quistinic 151.85 349 ePKP1 PKPbc 13 02 07.7 -1.3
comp=Z,14nm,0.7s
AUTN L'Aution 151.88 331 PKP PKPbc 13 02 09.0 -0.2
AGO Saint Agoulin 151.90 339 PKP PKPbc 13 02 09.9 +0.7
TOUF Mont Tournerai 151.95 331 PKP PKPbc 13 02 08.7 -0.7
SBF Sospel 151.98 331 ePKP1 PKPbc 13 02 10.1 +0.6
comp=Z,49nm,0.8s
LUCF Luceram 152.00 331 PKP PKPbc 13 02 09.8 +0.3
TCF Toulx Ste Croi 152.00 340 ePKP1 PKPbc 13 02 08.8 -0.6
comp=Z,30nm,0.7s
SSB Saint Sauveur 152.06 336 ePKIKP PKPdf 13 02 03.5 +0.5
SSB e 13 02 09.4
PGF Pioggiola 152.21 327 ePKP1 PKPbc 13 02 09.4 -0.6
comp=Z,56nm,0.8s
VIVF Saint-Julien-l 152.36 335 ePKP1 PKPbc 13 02 09.7 -0.6
comp=Z,25nm,0.7s
MFF Saint Martin d 152.41 344 ePKP1 PKPbc 13 02 09.4 -0.9
comp=Z,27nm,0.7s
LBL Lubilhac 152.57 338 PKP PKPbc 13 02 11.6 +0.9
FRF La Foret Royal 152.58 331 ePKP1 PKPbc 13 02 09.9 -0.9
SMRF Simiane la Rot 152.72 333 ePKP1 PKPbc 13 02 10.8 -0.3
comp=Z,24nm,0.8s
LMR La Mourre 152.82 331 ePKP1 PKPbc 13 02 11.1 -0.2
comp=Z,24nm,0.9s
RJF Les Rejaudoux 153.10 340 ePKP1 PKPbc 13 02 12.1 +0.2
comp=Z,37nm,0.8s
RJF eMLR MLR
comp=Z,487nm,19.2s,MS5.0
RJF Les Rejaudoux 153.10 340 ePKP PKPbc 13 02 12.1 +0.2
RJF LR LR
comp=Z,490nm,19.3s,MS5.3
CAF Calviac 153.25 339 ePKP1 PKPbc 13 02 12.7 +0.4
comp=Z,28nm,0.8s
LASF Ste Croix 153.33 335 ePKP1 PKPbc 13 02 12.0 -0.5
comp=Z,37nm,0.9s
LFF La Frestale 153.67 341 ePKP1 PKPbc 13 02 13.2 0.0
comp=Z,30nm,0.8s
MTLF Montolieu 154.58 337 ePKP1 PKPbc 13 02 15.2 0.0
comp=Z,19nm,0.7s
EPF Esparros 155.51 339 ePKP1 PKPdf 13 02 16.9 +8.9
ETSF Etsaut 155.91 341 ePKP1 PKPdf 13 02 17.8 +9.3
comp=Z,16nm,0.7s
KEST Kesra 156.45 315 PKPab PKPab 13 02 38.1 +0.2
comp=Z,2.2nm,0.7s,baz=271,slow=0.9,SNR=6.8
PVRL Vila Real 159.03 353 ePKPab PKPab 13 02 48.9 +0.1
MVO Moncorvo 159.05 351 ePKPab PKPab 13 02 49.0 +0.1
MVO eLR LR 14 11 04.4
comp=Z,358nm,23.0s
ESDC Sonseca Array 159.87 344 PKPab PKPab 13 02 50.8 -1.7
comp=Z,3.1nm,0.6s,baz=18,slow=2.9,SNR=12
MTE Manteigas 159.87 352 ePKPab PKPab 13 02 52.4 -0.1
MTE eLR LR 14 08 48.8
comp=Z,361nm,14.9s
PCBR Castelo Branco 160.42 352 ePKPab PKPab 13 02 54.5 -0.3
PMRV Marv??o 160.81 351 eLR LR 14 06 05.9
comp=Z,448nm,18.0s
PESTR Estremoz 161.39 351 eLR LR 14 04 59.9
comp=Z,352nm,13.4s
PMAFR Mafra 161.48 355 eLR LR 14 11 10.3
comp=Z,669nm,12.2s
EVO Evora 161.77 352 ePKPab PKPab 13 03 00.9 +0.1
PBAR Barrancos 161.98 350 ePKPab PKPab 13 03 01.5 -0.2
PBAR eLR LR 14 05 01.3
comp=Z,620nm,19.4s
PBEJ Beja 162.25 352 ePKPab PKPab 13 03 03.3 +0.4
PVAQ Vaqueiros 162.84 351 ePKPab PKPab 13 03 06.0 +0.5
PVAQ eLR LR 14 07 21.5
comp=Z,654nm,12.2s
PBDV Barranco-do-Ve 163.03 351 eLR LR 14 07 47.0
comp=Z,533nm,17.1s
MORF Marmelete 163.06 353 eLR LR 14 07 57.5
PFVI Vila Bisbo 163.25 354 eLR LR 14 06 42.2
comp=Z,287nm,20.6s
LIC Lamto 164.68 204 ePKP2 PKPab 13 03 14.0 -0.2
comp=Z,70nm,1.1s
LIC eMLR MLR
comp=Z,970nm,20.0s
LIC Lamto 164.68 204 eP PKPab 13 03 13.7 -0.5
comp=Z,87nm,1.1s
DBIC Dimbokro 165.02 205 PKPab PKPab 13 03 15.8 +0.1
comp=Z,14nm,0.8s,baz=130,slow=5.3,SNR=12
TORD Torodi Ar. Bea 165.75 241 PKP PKPdf 13 02 17.6 -2.3
comp=Z,0.4nm,0.6s,baz=31,slow=1.6,SNR=2.6

DJA 06 13:07:49,0.94S×126.85E,h10km,MLv3.6/6,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.72**	**65**	P	Pg	13 08 03.0	+0.1
LBMI				S	Sg	13 08 13.2	+0.9
NLAI	**Namlea**	**2.30**	**174**	P	Pn	13 08 26.8	-0.2
AAI	**Ambon**	**3.04**	**154**	P	Pn	13 08 37.9	+0.7
LUWI	**Luwuk**	**4.08**	**269**	P	Pn	13 08 51.3	-0.2
APSI	**Ampana**	**5.20**	**270**	P	Pn	13 09 07.8	+0.9

*ISCJB **06** 13:22:10.9±0.7, 13.50N±0.07×144.7E±0.2, h120km±6km, mb3.8/14, Error ellipse: s-maj=30.7km s-min=11.2km az=174.6*
*IDC **06** 13:22:11.7±0.5, 13.55N×144.82E, h115km±7km, mb3.5/12, mb1 3.6/12, mb1mx3.6/24, mbtmp3.5/12, Error ellipse: s-maj=31.5km s-min=12.5km az=84.0*
*NEIC **06** 13:22:11.9±0.8, 13.53N×144.84E, h118km±7km, mb4.1/3, Error ellipse: s-maj=22.0km s-min=8.6km az=84.0*
NEIC Felt at Santa Rita.
ISC 06 13:22:12.0±0.7, 13.52N±0.07×144.8E±0.2, h116km±6km, n22, σ0.58/23, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.10**	**47**	P	**Pn**	**13 22 27.9**	**0.0**
	749nm,0.3s,baz=171,slow=1.7,SNR=600						
GUMO				S	**Sn**	**13 22 39.9**	**+0.1**
	1μm,0.3s,baz=58,slow=21,SNR=110						
GUMO	**Guam**	**0.10**	**47**	ePn	**Pn**	**13 22 27.8**	**-0.1**
GUMO				eSn	**Sn**	**13 22 39.5**	**-0.3**
JOW	**Kunigami**	**20.36**	**313**	P	**P**	**13 26 40.5**	**+1.1**
	6.9nm,0.5s,baz=162,slow=8.7,SNR=3.1						
MJAR	**Matsushiro Arr**	**23.67**	**347**	P	**P**	**13 27 13.0**	**0.0**
	1.9nm,0.5s,mb3.7,baz=172,slow=8.2,SNR=7.7						
MAJO	**Matsushiro**	**23.68**	**347**	eP	**P**	**13 27 13.7**	**+0.7**
	4.8nm,0.5s,mb4.1						
MAT	**Matsushiro**	**23.68**	**347**	P	**P**	**13 27 13.1**	**+0.1**
YULB	**Yu-li**	**24.32**	**297**	eP	**P**	**13 27 18.9**	**-0.1**
KSRS	**Korea Array**	**28.19**	**331**	P	**P**	**13 27 53.6**	**0.0**
	1.0nm,0.5s,mb3.6,baz=139,slow=10.0,SNR=5.4						
WRAB	**Tennant Creek**	**34.79**	**197**	eP	**P**	**13 28 51.7**	**0.0**
	1.8nm,0.8s,mb4.0						
WB2	**Warramunga Arr**	**34.80**	**197**	eP	**P**	**13 28 52.1**	**+0.3**
WRA	**Warramunga Arr**	**34.80**	**197**	P	**P**	**13 28 51.5**	**-0.3**
	1.1nm,0.8s,mb3.7,baz=24,slow=9.1,SNR=12						
FITZ	**Fitzroy Crossi**	**36.66**	**212**	P	**P**	**13 29 07.0**	**-0.7**
	1.4nm,0.7s,mb4.0,baz=76,slow=1.3,SNR=6.4						
ASAR	**Alice Springs**	**38.46**	**196**	P	**P**	**13 29 23.4**	**+0.7**
	0.4nm,0.4s,mb3.6,baz=19,slow=12,SNR=15						
CMAR	**Chiang Mai Arr**	**44.26**	**283**	P	**P**	**13 30 11.2**	**+0.8**
	1.0nm,0.6s,mb3.7,baz=87,slow=6.3,SNR=8.5						
STKA	**Stephens Creek**	**45.24**	**184**	P	**P**	**13 30 17.9**	**+0.1**
	0.9nm,0.5s,mb3.8,baz=328,slow=19,SNR=3.3						
SONM	**Songino Array**	**46.74**	**325**	P	**P**	**13 30 28.1**	**-1.4**
	0.3nm,0.5s,mb3.3,baz=95,slow=36,SNR=3.1						
MK31	**Makanchi Array**	**61.49**	**316**	eP	**P**	**13 32 16.2**	**-0.3**
MKAR	**Makanchi Array**	**61.49**	**316**	P	**P**	**13 32 16.1**	**-0.4**
	0.9nm,0.4s,mb4.2,baz=103,slow=6.5,SNR=19						
BVAR	**Borovoye Array**	**69.93**	**322**	P	**P**	**13 33 09.6**	**-1.1**
	0.5nm,0.4s,mb3.7,baz=108,slow=9.5,SNR=4.0						
BRVK	**Borovoye**	**70.00**	**322**	eP	**P**	**13 33 10.9**	**-0.1**
	1.5nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**82.96**	**27**	P	**P**	**13 34 24.4**	**+0.5**
	0.4nm,0.7s,mb3.4,baz=288,slow=5.1,SNR=5.3						
DBIC	**Dimbokro**	**143.80**	**302**	PKP	PKPdf	13 41 32.1	-2.5
	1.8nm,0.7s,baz=157,slow=7.7,SNR=3.4						

IDC 06 13:45:52.3±45.0, 17.28S×172.62W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=873.6km s-min=179.3km az=81.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.79**	**242**	P	P	13 54 00.8	+0.7
	1.0nm,0.6s,baz=90,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**50.18**	**258**	P	P	13 54 49.6	-0.5
	0.3nm,0.4s,baz=98,slow=6,SNR=15						
ASAR	**Alice Springs**	**50.27**	**253**	P	P	13 54 50.7	-0.1
	2.1nm,0.5s,baz=90,slow=8.9,SNR=94						
GUMO	**Guam**	**51.98**	**303**	LR	LR	14 13 47.5	
	comp=Z,42nm,18.9s,baz=121,slow=32						

IDC 06 13:51:49.7±56.0, 15.29S×168.53W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=1124.0km s-min=205.2km az=81.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**48.18**	**241**	P	P	14 00 32.2	+0.1
	1.1nm,0.5s,baz=164,slow=23,SNR=5.7						
WRA	**Warramunga Arr**	**54.44**	**256**	P	P	14 01 19.2	-0.1
	0.3nm,0.7s,baz=96,slow=6.7,SNR=7.9						
ASAR	**Alice Springs**	**54.61**	**252**	P	P	14 01 20.2	-0.2
	0.1nm,0.3s,baz=86,slow=7.7,SNR=4.5						

DJA 06 14:07:29,9.44S×110.33E,h14km,MLv4.0/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.49**	**34**	P	Pn	14 07 55.6	+0.2
UGM	**Wanagama**	**1.53**	**7**	P	Pn	14 07 54.6	-1.3
PWJI	**Pagerwojo**	**2.03**	**46**	P	Pn	14 08 02.4	-0.4
PWJI				S	Sn	14 08 25.8	-2.1
SJI	**Sawahan**	**2.21**	**40**	P	Pn	14 08 06.1	+0.8
SJI				S	Sn	14 08 34.0	+1.5
NGJI	**Ngawi**	**2.34**	**29**	P	Pn	14 08 10.5	+3.4
NGJI				S	Sn	14 08 40.2	+4.5
SMRI	**Semarang**	**2.38**	**3**	P	Pn	14 08 09.1	+1.5
SMRI				S	Sn	14 08 37.8	+1.2
GMJI	**Gumukmas**	**3.29**	**70**	P	Pn	14 08 20.6	+0.5
GRJI	**Gresik**	**3.29**	**40**	P	Pn	14 08 19.6	-0.5
KMMI	**Kalianget**	**4.31**	**57**	P	Pn	14 08 34.2	0.0
RBSI	**Rajabasa**	**5.78**	**308**	P	Pn	14 08 55.9	+1.5
KBKI	**Kotabaru**	**8.42**	**44**	P	Pn	14 09 31.6	+1.0

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*IDC **06** 14:10:08.5±1.6, 8.70S×126.54E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.5/17, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=92.3km s-min=25.3km az=72.0*
*ISCJB **06** 14:10:11.0±1.0, 8.8S±0.1×126.5E±0.2, h33km, mb3.5/2, Error ellipse: s-maj=28.6km s-min=12.6km az=151.8*
*NEIC **06** 14:10:13.5±0.9, 8.81S×126.48E, h35km, Error ellipse: s-maj=26.0km s-min=11.1km az=62.0*
ISC 06 14:10:13.6±1.0, 8.8S±0.1×126.5E±0.2, h35km, n9, σ0.72/9, mb3.5/2, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.00**	**124**	ePn	**Pn**	**14 11 54.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**9.28**	**185**	Pn	**Pn**	**14 12 25.8**	**+0.8**
	0.6nm,0.3s,baz=49,slow=8.9,SNR=13						
FITZ	**Fitzroy Crossi**	**9.28**	**185**	eP	**Pn**	**14 12 25.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.2nm,0.3s,baz=320,slow=11,SNR=12						
SONM	Songino Array	59.14	344	P	P	14 20 11.5	+0.8
	0.2nm,0.5s,mb3.4,baz=174,slow=4.2,SNR=2.6						
MKAR	Makanchi Array	67.90	329	P	P	14 21 07.6	-1.0
	0.4nm,0.7s,mb3.5,baz=123,slow=7.1,SNR=4.7						

MAN 06 14:19:35,17.59N×122.44E,h17km,mb4.5,ML3.3,MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.52	182	eP	Pg	14 19 46.9	+1.5
PALP				eS	Sg	14 19 56.7	+4.2
SGCP	Mt. Cagua	0.75	330	eP	Pb	14 19 49.6	0.0
APYP	Conner	1.17	284	eP	Pn	14 19 57.4	+0.8
APYP				eS	Sb	14 20 13.0	+1.2
ABRA	Dolores	1.65	272	eP	Pn	14 20 04.2	+1.0
BALP	Baler	2.01	204	eP	Pn	14 20 10.0	+1.8

IDC 06 14:22:41.9±16.0,31.03S×179.69E,h355km±193km, mb2.9/2,mb1 3.3/3,mb1mx3.1/15,mbtmp3.2/3,Error ellipse: s-maj=237.7km s-min=41.4km az=2.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.52	196	P	Pn	14 24 30.4	0.0
	4.8nm,0.3s,baz=340,slow=0.8,SNR=40						
ASAR	Alice Springs	41.09	269	P	P	14 29 52.2	-0.3
	0.5nm,0.6s,baz=107,slow=7.1,SNR=15						
WRA	Warramunga Arr	42.14	274	P	P	14 30 01.1	+0.1
	0.4nm,0.3s,baz=111,slow=8.1,SNR=18						
FINES	FINESS Array B	145.02	338	PKPbc	PKPbc	14 41 35.9	-0.8
	1.9nm,0.6s,baz=58,slow=4.7,SNR=5.7						

DDA 06 15:07:33.6,37.12N×28.17E, h7km±3km, Md2.9
ISCJB 06 15:07:35.5±0.9,37.13N±0.08×28.18E±0.05,h14km±6km, Error ellipse: s-maj=12.6km s-min=7.0km az=5.0
CSEM 06 15:07:35.4±0.1,37.20N×28.23E,h13km±1km,MD2.6, Error ellipse: s-maj=4.3km s-min=2.8km az=1.0
ISK 06 15:07:35.1,37.20N×28.21E,h14km,MD2.6
ISC 06 15:07:35.7±0.8,37.15N±0.08×28.19E±0.05,h15km±6km, n12,σ0.72/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.07	103	ePG	Pg	15 07 38.2	-0.5
YER				eSG	Sg	15 07 40.8	+0.2
YER	Yerkesik	0.07	103	ePg	Pg	15 07 38.2	-0.5
YER				eSg	Sg	15 07 40.8	+0.2
MLSB	Milas	0.36	294	ePG	Pg	15 07 43.0	-0.2
MLSB				eSG	Sg	15 07 48.4	+0.3
MLSB	Milas	0.36	294	ePg	Pg	15 07 43.0	-0.1
MLSB				eSg	Sg	15 07 48.4	+0.3
DAT	Datca	0.65	230	ePG	Pg	15 07 48.9	+0.5
DAT	Datca	0.65	230	ePg	Pg	15 07 48.9	+0.5
DNZL	Cakiroluk	0.87	51	iP	Pb	15 07 51.2	-1.3
DNZL				iS	Sb	15 08 05.4	+1.5
DNZL	Cakiroluk	0.87	51	iP	Pb	15 07 51.2	-1.3
DNZL				iS	Sb	15 08 05.4	+1.5
FETY	Fethiye	0.88	126	ePG	Pg	15 07 52.9	+0.1
FETY	Fethiye	0.88	126	ePg	Pg	15 07 52.9	+0.1
KULA	Kula-Manisa	1.41	15	ePN	Pn	15 08 00.3	-0.6
KULA	Kula-Manisa	1.41	15	ePn	Pn	15 08 00.3	-0.6

ISCJB 06 15:10:19.3±0.3,39.75N±0.01×3.50W±0.01,h0km±1km, Error ellipse: s-maj=2.0km s-min=1.6km az=135.7
CSEM 06 15:10:21.8±0.1,39.72N×3.45W,h5km,ML3.5/47,Error ellipse: s-maj=2.0km s-min=1.7km az=139.0
MDD 06 15:10:23.7±0.3,39.71N×3.44W,h5km±2km,mbLg3.0/51, Error ellipse: s-maj=2.2km s-min=1.9km az=109.0,PRIMO
MDD EMS: IV INTENSIDAD MIMA.
SFS 06 15:10:23.0,39.70N×3.41W,h0km,ML3.0
NEIC 06 15:10:23.7,39.70N×3.44W,h5km,ML3.5(LDG), MN3.0(MDD),After MDD.
NEIC Felt [IV] in the El Romeral area.
LDG 06 15:10:23.8±0.1,39.70N×3.43W,h5km,Ml3.5/8,Error ellipse: s-maj=1.8km s-min=1.3km az=120.0
INMG 06 15:10:24.4±1.7,39.73N×3.47W,h11km±2km,MD3.4, ML3.2,Error ellipse: s-maj=1.7km s-min=1.3km az=103.0
STR 06 15:10:30.0±0.8,40.04N×2.95W,h10km,Ml3.5,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 06 15:10:21.5±0.2,39.73N±0.01×3.47W±0.01,h5km±1km, n346,σ1.25/677,6C-9D,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	0.38	262	⇓Pg	Pg	15 10 31.2	+2.3
ESDC				Lg		15 10 36.2	
ESDC	Sonseca Array	0.38	262	⇓Pg	Pg	15 10 31.2	+2.3
	205nm,0.2s,baz=85,slow=19,SNR=18						
ESDC				Lg		15 10 36.2	
	241nm,0.4s,baz=88,slow=32,SNR=7.9						
ESDC	Sonseca Array	0.38	262	⇓Pg	Pg	15 10 31.2	+2.3
	205nm,0.2s,baz=85,slow=19,SNR=18						
ESDC				Lg		15 10 36.2	
	241nm,0.4s,baz=88,slow=32,SNR=7.9						
ESDC	Sonseca Array	0.38	262	Pg	Pg	15 10 31.2	+2.3
	205nm,0.2s,SNR=18						
ESDC				Lg		15 10 36.2	
	241nm,0.4s,SNR=7.9						
ESLA	Sonseca Array	0.38	262	ePg	Pg	15 10 31.3	+2.4
ESLA				eSg	Sg	15 10 36.5	+2.6
ESLA	Sonseca Array	0.38	262	ePg	Pg	15 10 31.3	+2.4
ESLA				eSg	Sg	15 10 36.5	+2.6
PAB	San Pablo	0.70	255	ePg	Pg	15 10 37.2	+2.2
PAB				ePn	Pn	15 10 39.1	+1.1
PAB				eSg	Sg	15 10 46.5	+2.4
PAB	San Pablo	0.70	255	ePg	Pg	15 10 37.2	+2.3
GUD	Guadarrama	1.05	330	⇑Pg	Pg	15 10 43.8	+2.1
GUD				Lg		15 10 57.7	
GUD	Guadarrama	1.05	330	⇑Pg	Pg	15 10 43.8	+2.1
	36nm,0.2s,SNR=18						
GUD				Lg		15 10 57.7	
	164nm,0.2s,SNR=7.9						
GUD	Guadarrama	1.05	330	⇑Pg	Pg	15 10 43.8	+2.1
	36nm,0.2s,SNR=18						
GUD				Lg		15 10 57.7	
	164nm,0.2s,SNR=7.9						
GUD	Guadarrama	1.05	330	Pg	Pg	15 10 43.8	+2.1
	36nm,0.2s,SNR=18						
GUD				Lg		15 10 57.7	
	164nm,0.2s,SNR=7.9						
EVIA	Vianos	1.32	145	⇑Pg	Pg	15 10 46.9	+0.1
EVIA				Lg		15 11 04.1	
EVIA	Vianos	1.32	145	⇑Pg	Pg	15 10 46.9	+0.1
	64nm,0.1s,SNR=18						
EVIA				Lg		15 11 04.1	
	64nm,0.1s,SNR=17						
EVIA	Vianos	1.32	145	⇑Pg	Pg	15 10 46.9	+0.1
	64nm,0.1s,SNR=18						
EVIA				Lg		15 11 04.1	
	64nm,0.1s,SNR=17						
EVIA	Vianos	1.32	145	Pg	Pg	15 10 46.9	+0.1
	64nm,0.1s,SNR=18						
EVIA				Lg		15 11 04.1	
	64nm,0.1s,SNR=17						
ETOR	Torete	1.54	44	Pg	Pg	15 10 50.9	-0.1
ETOR				Sn	Sn	15 11 09.6	-0.3
ETOR				Lg		15 11 11.8	
ETOR	Torete	1.54	44	Pg	Pg	15 10 50.9	-0.1
	8.6nm,0.1s,SNR=99						
ETOR				Sn	Sn	15 11 09.6	-0.3
	138nm,0.1s,SNR=66						
ETOR				Lg		15 11 11.8	
	1μm,0.2s,SNR=7.9						
ETOR	Torete	1.54	44	Pg	Pg	15 10 50.9	-0.1
	8.6nm,0.1s,SNR=99						
ETOR				Sn	Sn	15 11 09.6	-0.3
	138nm,0.1s,SNR=66						
ETOR				Lg		15 11 11.8	
	1μm,0.2s,SNR=7.9						
ETOR	Torete	1.54	44	Pg	Pg	15 10 50.8	-0.1
	8.6nm,0.1s,SNR=99						
ETOR				Sn	Sn	15 11 09.6	-0.3
	138nm,0.1s,SNR=66						
ETOR				Lg		15 11 11.8	
	1μm,0.2s,SNR=7.9						
EBAN	Banos Encina	1.58	189	Pn	Pn	15 10 50.7	+0.6
EBAN				Pg	Pg	15 10 51.9	+0.1
EBAN				Sn	Sn	15 11 11.1	+0.1
EBAN				Lg		15 11 13.0	
EBAN	Banos Encina	1.58	189	Pn	Pn	15 10 50.7	+0.6
	5.3nm,0.1s,SNR=113						
EBAN				Pg	Pg	15 10 51.9	+0.1
	81nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	15 11 11.1	+0.1
	29nm,0.1s,SNR=7.9						
EBAN				Lg		15 11 13.0	
	83nm,0.1s,SNR=35						
EBAN	Banos Encina	1.58	189	Pn	Pn	15 10 50.7	+0.6
	5.3nm,0.1s,SNR=113						
EBAN				Pg	Pg	15 10 51.9	+0.1
	81nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	15 11 11.1	+0.1
	29nm,0.1s,SNR=7.9						
EBAN				Lg		15 11 13.0	
	83nm,0.1s,SNR=35						
EBAN	Banos Encina	1.58	189	Pn	Pn	15 10 50.7	+0.6
	5.3nm,0.1s,SNR=113						
EBAN	Banos Encina	1.58	189	Pg	Pg	15 10 51.9	+0.1
	81nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	15 11 11.1	+0.1
	29nm,0.1s,SNR=7.9						
EBAN				Lg		15 11 13.0	
	83nm,0.1s,SNR=35						
EADA	Adamuz	1.78	209	⇓Pn	Pn	15 10 53.8	+0.9
EADA				Pg	Pg	15 10 56.1	+0.5
EADA				Sn	Sn	15 11 16.0	+0.1
EADA				Lg		15 11 19.6	
EADA	Adamuz	1.78	209	⇓Pn	Pn	15 10 53.8	+0.9
	0.8nm,0.1s,SNR=18						
EADA				Pg	Pg	15 10 56.1	+0.5
	40nm,0.1s,SNR=7.9						
EADA				Sn	Sn	15 11 16.0	+0.1
	25nm,0.1s,SNR=7.9						
EADA				Lg		15 11 19.6	
	333nm,0.2s,SNR=68						
EADA	Adamuz	1.78	209	⇓Pn	Pn	15 10 53.8	+0.9
	0.8nm,0.1s,SNR=18						
EADA				Pg	Pg	15 10 56.1	+0.5
	40nm,0.1s,SNR=7.9						
EADA				Sn	Sn	15 11 16.0	+0.1
	25nm,0.1s,SNR=7.9						
EADA				Lg		15 11 19.6	
	333nm,0.2s,SNR=68						
EADA	Adamuz	1.78	209	Pn	Pn	15 10 53.8	+0.9
	0.8nm,0.1s,SNR=18						
EADA	Adamuz	1.78	209	Pg	Pg	15 10 56.1	+0.5
	40nm,0.1s,SNR=7.9						
EADA				Sn	Sn	15 11 16.0	+0.1
	25nm,0.1s,SNR=7.9						
EADA				Lg		15 11 19.6	
	333nm,0.2s,SNR=68						
ETOB	Tobarra	1.84	125	Pn	Pn	15 10 54.5	+0.7
ETOB				Pg	Pg	15 10 57.2	+0.4
ETOB				Sn	Sn	15 11 16.0	-1.5
ETOB				Lg		15 11 20.4	
ETOB	Tobarra	1.84	125	Pn	Pn	15 10 54.5	+0.7
	0.3nm,0.1s,SNR=63						
ETOB				Pg	Pg	15 10 57.2	+0.4
	24nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	15 11 16.0	-1.5
	13nm,0.1s,SNR=28						
ETOB				Lg		15 11 20.4	
	113nm,0.1s						
ETOB	Tobarra	1.84	125	Pn	Pn	15 10 54.5	+0.7
	0.3nm,0.1s,SNR=63						
ETOB				Pg	Pg	15 10 57.2	+0.4
	24nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	15 11 16.0	-1.5
	13nm,0.1s,SNR=28						
ETOB				Lg		15 11 20.4	
	113nm,0.1s						
ETOB	Tobarra	1.84	125	Pn	Pn	15 10 54.5	+0.7
	0.3nm,0.1s,SNR=63						
ETOB	Tobarra	1.84	125	Pg	Pg	15 10 57.2	+0.4
	24nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	15 11 16.0	-1.5
	13nm,0.1s,SNR=28						
ETOB				Lg		15 11 20.4	
	113nm,0.1s						
ECHE	Chera	1.94	93	Pn	Pn	15 10 56.4	+1.4
ECHE				Pg	Pg	15 10 59.9	+1.3
ECHE				Sn	Sn	15 11 18.1	-1.6
ECHE				Lg		15 11 24.0	
ECHE	Chera	1.94	93	Pn	Pn	15 10 56.4	+1.4
	1.1nm,0.2s,SNR=50						
ECHE				Pg	Pg	15 10 59.2	+0.6
	22nm,0.2s,SNR=7.9						
ECHE				Sn	Sn	15 11 18.6	-1.2
	6.8nm,0.2s,SNR=7.9						
ECHE				Lg		15 11 24.0	
	21nm,0.2s,SNR=13						
ECHE	Chera	1.94	93	Pn	Pn	15 10 56.4	+1.4
	1.1nm,0.2s,SNR=50						
ECHE				Pg	Pg	15 10 59.2	+0.6
	22nm,0.2s,SNR=7.9						
ECHE				Sn	Sn	15 11 18.6	-1.2
	6.8nm,0.2s,SNR=7.9						
ECHE				Lg		15 11 24.0	
	21nm,0.2s,SNR=13						
ECHE	Chera	1.94	93	Pn	Pn	15 10 56.4	+1.4
	1.1nm,0.2s,SNR=50						
EQES	Quesada	1.95	171	Pg	Pg	15 10 59.0	+0.2
EQES				Sn	Sn	15 11 19.5	-0.5
EQES				Lg		15 11 24.2	
EQES	Quesada	1.95	171	Pg	Pg	15 10 59.0	+0.2
	31nm,0.3s,SNR=34						
EQES				Sn	Sn	15 11 19.5	-0.5
	9.3nm,0.1s,SNR=7.9						
EQES				Lg		15 11 24.2	
	21nm,0.1s,SNR=11						
EQES	Quesada	1.95	171	Pg	Pg	15 10 59.0	+0.2
	31nm,0.3s,SNR=34						
EQES				Sn	Sn	15 11 19.5	-0.5
	9.3nm,0.1s,SNR=7.9						
EQES				Lg		15 11 24.2	
	21nm,0.1s,SNR=11						
EQES	Quesada	1.95	171	Pg	Pg	15 10 59.0	+0.2
	31nm,0.3s,SNR=34						
EQES				Sn	Sn	15 11 19.5	-0.5
	9.3nm,0.1s,SNR=7.9						
EQES				Lg		15 11 24.2	
	21nm,0.1s,SNR=11						
ELUQ	Luque	2.25	196	Pg	Pg	15 11 04.5	-0.1
ELUQ				Sn	Sn	15 11 27.9	+0.4
ELUQ				Lg		15 11 34.7	
ELUQ	Luque	2.25	196	Pg	Pg	15 11 04.5	-0.1
	8.5nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	15 11 27.9	+0.4
	6.0nm,0.1s,SNR=7.9						
ELUQ				Lg		15 11 34.7	
	30nm,0.2s,SNR=7.9						
ELUQ	Luque	2.25	196	Pg	Pg	15 11 04.5	-0.1
	8.5nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	15 11 27.9	+0.4
	6.0nm,0.1s,SNR=7.9						
ELUQ				Lg		15 11 34.7	
	30nm,0.2s,SNR=7.9						
ELUQ	Luque	2.25	196	Pg	Pg	15 11 04.5	-0.1
	SNR=7.9						
ELUQ				Sn	Sn	15 11 27.9	+0.4
	6.0nm,0.1s,SNR=7.9						
ELUQ				Lg		15 11 34.7	
	30nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.39	74	Pn	Pn	15 11 03.5	+2.2
EMOS				Pg	Pg	15 11 08.7	+1.5
EMOS				Sn	Sn	15 11 29.4	-1.5
EMOS				Lg		15 11 38.5	
EMOS	Mosqueruela	2.39	74	Pn	Pn	15 11 03.5	+2.2
	0.7nm,0.1s,SNR=14						
EMOS				Pg	Pg	15 11 08.5	+1.2
	59nm,0.8s,SNR=26						
EMOS				Sn	Sn	15 11 29.4	-1.5
	1.8nm,0.1s,SNR=7.9						
EMOS				Lg		15 11 38.5	
	12nm,0.2s,SNR=7.2						
EMOS	Mosqueruela	2.39	74	Pn	Pn	15 11 03.5	+2.2
	0.7nm,0.1s,SNR=14						
EMOS				Pg	Pg	15 11 08.5	+1.2
	59nm,0.8s,SNR=26						
EMOS				Sn	Sn	15 11 29.4	-1.5
	1.8nm,0.1s,SNR=7.9						
EMOS				Lg		15 11 38.5	
	12nm,0.2s,SNR=7.2						
EMOS	Mosqueruela	2.39	74	Pn	Pn	15 11 03.5	+2.3
	0.7nm,0.1s,SNR=14						
ECOG	Cogollos-Vega	2.45	182	Pg	Pg	15 11 07.8	-0.5
ECOG				Sn	Sn	15 11 32.2	-0.2
ECOG				Lg		15 11 40.0	
ECOG	Cogollos-Vega	2.45	182	Pg	Pg	15 11 07.9	-0.5
	26nm,0.2s,SNR=10						
ECOG				Sn	Sn	15 11 32.2	-0.2
	5.8nm,0.1s,SNR=5.0						
ECOG				Lg		15 11 40.0	
	9.9nm,0.2s,SNR=5.0						
ECOG	Cogollos-Vega	2.45	182	Pg	Pg	15 11 07.9	-0.5
	26nm,0.2s,SNR=10						
ECOG				Sn	Sn	15 11 32.2	-0.2
	5.8nm,0.1s,SNR=5.0						
ECOG				Lg		15 11 40.0	
	9.9nm,0.2s,SNR=5.0						
ECOG	Cogollos-Vega	2.45	182	Pg	Pg	15 11 07.9	-0.5
	26nm,0.2s,SNR=10						
ECOG				Sn	Sn	15 11 32.2	-0.2
	5.8nm,0.1s,SNR=5.0						
ECOG				Lg		15 11 40.0	
	9.9nm,0.2s,SNR=5.0						
EQUE	Quentar	2.52	179	Pn	Pn	15 11 05.3	+2.2
	1.2nm,0.2s,SNR=7.9						
EQUE				Pg	Pg	15 11 09.2	-0.6
	35nm,0.3s,SNR=21						
EQUE				Sn	Sn	15 11 33.7	-0.5
	7.6nm,0.2s,SNR=5.3						
EQUE				Lg		15 11 42.7	
	18nm,0.2s,SNR=8.4						
EQUE	Quentar	2.52	179	Pn	Pn	15 11 05.3	+2.2
	1.2nm,0.2s,SNR=7.9						
EQUE				Pg	Pg	15 11 09.2	-0.6
	35nm,0.3s,SNR=21						
EQUE				Sn	Sn	15 11 33.7	-0.5
	7.6nm,0.2s,SNR=5.3						
EQUE				Lg		15 11 42.7	
	18nm,0.2s,SNR=8.4						
EQUE	Quentar	2.52	179	Pn	Pn	15 11 05.3	+2.3
	1.2nm,0.2s,SNR=7.9						
EMUR	La Murta	2.56	137	Pn	Pn	15 11 04.9	+1.2
EMUR				Pg	Pg	15 11 11.0	+0.3
EMUR				Lg		15 11 42.9	
EMUR	La Murta	2.56	137	Pn	Pn	15 11 04.9	+1.2
	1.4nm,0.1s,SNR=7.9						
EMUR				Pg	Pg	15 11 11.0	+0.3
	52nm,0.3s,SNR=41						
EMUR				Lg		15 11 43.4	
	12nm,0.2s,SNR=5.0						
EMUR	La Murta	2.56	137	Pn	Pn	15 11 04.9	+1.2
	1.4nm,0.1s,SNR=7.9						
EMUR				Pg	Pg	15 11 11.0	+0.3
	52nm,0.3s,SNR=41						
EMUR				Lg		15 11 43.4	
	12nm,0.2s,SNR=5.0						
EMUR	La Murta	2.56	137	Pn	Pn	15 11 04.9	+1.2
	1.4nm,0.1s,SNR=7.9						
EMUR	La Murta	2.56	137	Pg	Pg	15 11 11.0	+0.4
	52nm,0.3s,SNR=41						
EMUR				Lg		15 11 42.9	
	12nm,0.2s,SNR=5.0						
ELOJ	Sierra Loja	2.63	192	Pg	Pg	15 11 11.9	0.0
ELOJ				Sn	Sn	15 11 36.0	-0.9
ELOJ				Lg		15 11 46.2	
ELOJ	Sierra Loja	2.63	192	Pg	Pg	15 11 11.9	0.0
	7.0nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	15 11 36.0	-0.9
	7.2nm,0.2s,SNR=9.1						
ELOJ				Lg		15 11 46.2	
	12nm,0.2s,SNR=5.5						
ELOJ	Sierra Loja	2.63	192	Pg	Pg	15 11 11.9	0.0
	7.0nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	15 11 36.0	-0.9
	7.2nm,0.2s,SNR=9.1						
ELOJ				Lg		15 11 46.2	
	12nm,0.2s,SNR=5.5						
ELOJ	Sierra Loja	2.63	192	Pg	Pg	15 11 11.9	0.0
	SNR=7.9						
ELOJ				Sn	Sn	15 11 36.0	-0.9
	7.2nm,0.2s,SNR=9.1						
ELOJ				Lg		15 11 46.2	
	12nm,0.2s,SNR=5.5						
ERON	Agron	2.72	186	Pn	Pn	15 11 08.2	+2.4
ERON				Pg	Pg	15 11 14.1	+0.5
ERON				Lg		15 11 49.3	
ERON	Agron	2.72	186	Pn	Pn	15 11 08.2	+2.4
	SNR=7.9						
ERON				Pg	Pg	15 11 14.1	+0.5
	17nm,0.3s,SNR=7.9						
ERON				Lg		15 11 49.3	
	38nm,0.4s,SNR=7.9						
ERON	Agron	2.72	186	Pn	Pn	15 11 08.2	+2.4
	SNR=7.9						
ERON				Pg	Pg	15 11 14.1	+0.5
	17nm,0.3s,SNR=7.9						
ERON				Lg		15 11 49.3	
	38nm,0.4s,SNR=7.9						
ERON	Agron	2.72	186	Pn	Pn	15 11 08.2	+2.4
	SNR=7.9						
EBEN	Beniarda	2.72	111	Pn	Pn	15 11 06.3	+0.5
EBEN				Pg	Pg	15 11 13.1	-0.5
EBEN				Sn	Sn	15 11 37.7	-1.4
EBEN				Lg		15 11 48.1	
EBEN	Beniarda	2.72	111	Pn	Pn	15 11 06.3	+0.5
	0.5nm,0.1s,SNR=12						
EBEN				Pg	Pg	15 11 13.1	-0.5
	6.1nm,0.4s,SNR=9.9						
EBEN				Sn	Sn	15 11 37.7	-1.4
	2.3nm,0.2s,SNR=7.9						
EBEN				Lg		15 11 48.1	
	7.9nm,0.2s,SNR=8.4						
EBEN	Beniarda	2.72	111	Pn	Pn	15 11 06.3	+0.5
	0.5nm,0.1s,SNR=12						
EBEN				Pg	Pg	15 11 13.1	-0.5
	6.1nm,0.4s,SNR=9.9						
EBEN				Sn	Sn	15 11 37.7	-1.4
	2.3nm,0.2s,SNR=7.9						
EBEN				Lg		15 11 48.1	
	7.9nm,0.2s,SNR=8.4						
EBEN	Beniarda	2.72	111	Pn	Pn	15 11 06.3	+0.5
	0.5nm,0.1s,SNR=12						
EBER	Berja	2.86	171	Pn	Pn	15 11 07.6	-0.2
EBER				Pg	Pg	15 11 16.2	-0.1
EBER				Sn	Sn	15 11 41.9	-0.7
EBER				Lg		15 11 53.7	
EBER	Berja	2.86	171	Pn	Pn	15 11 07.6	-0.2
	0.2nm,0.1s,SNR=7.9						
EBER				Pg	Pg	15 11 16.2	-0.1
	25nm,0.3s,SNR=34						
EBER				Sn	Sn	15 11 41.9	-0.7
	13nm,0.2s,SNR=5.3						
EBER				Lg		15 11 53.7	
	17nm,0.3s,SNR=4.6						
EBER	Berja	2.86	171	Pn	Pn	15 11 07.6	-0.2
	0.2nm,0.1s,SNR=7.9						
EBER				Pg	Pg	15 11 16.2	-0.1
	25nm,0.3s,SNR=34						
EBER				Sn	Sn	15 11 41.9	-0.7
	13nm,0.2s,SNR=5.3						
EBER				Lg		15 11 53.7	
	17nm,0.3s,SNR=4.6						
EBER	Berja	2.86	171	Pn	Pn	15 11 07.6	-0.2
	0.2nm,0.1s,SNR=7.9						
CART	Cartagena	2.88	137	Pg	Pg	15 11 16.9	+0.2
CART				Lg		15 11 52.0	
CART	Cartagena	2.88	137	Pg	Pg	15 11 16.9	+0.2
CART				Lg		15 11 52.0	
CART	Cartagena	2.88	137	eP	Pn	15 11 16.9	+8.9
CART				eS	Sn	15 11 52.0	+8.9
EGUA	Guajares	2.89	182	Pg	Pg	15 11 16.7	-0.2
EGUA				Sn	Sn	15 11 41.9	-1.4
EGUA				Lg		15 11 57.9	
EGUA	Guajares	2.89	182	Pg	Pg	15 11 16.7	-0.2
	SNR=7.9						
EGUA				Sn	Sn	15 11 41.9	-1.4
	19nm,0.2s,SNR=7.9						
EGUA				Lg		15 11 57.6	
	30nm,0.3s,SNR=7.9						
EGUA	Guajares	2.89	182	Pg	Pg	15 11 16.7	-0.2
	SNR=7.9						
EGUA				Sn	Sn	15 11 41.9	-1.4
	19nm,0.2s,SNR=7.9						
EGUA				Lg		15 11 57.6	
	30nm,0.3s,SNR=7.9						
EGUA	Guajares	2.89	182	Pg	Pg	15 11 16.7	-0.2

	SNR=7.9					
EGUA			Sn	Sn	15 11 41.9	-1.4
	19nm,0.2s,SNR=7.9					
EGUA			Lg		15 11 57.9	
	30nm,0.3s,SNR=7.9					
EBAD	**Badajoz**	**2.92 252**	⇓Pn	**Pn**	**15 11 09.4**	**+0.9**
EBAD			Pg	**Pg**	**15 11 16.6**	**-0.8**
EBAD			Sn	**Sn**	**15 11 44.1**	**+0.2**
EBAD			Lg		15 11 54.9	
EBAD	**Badajoz**	**2.92 252**	⇓Pn	**Pn**	**15 11 09.4**	**+0.9**
	3.5nm,0.1s,SNR=18					
EBAD			Pg	**Pg**	**15 11 16.5**	**-0.8**
	15nm,0.3s,SNR=22					
EBAD			Sn	**Sn**	**15 11 44.1**	**+0.2**
	5.8nm,0.1s,SNR=5.4					
EBAD			Lg		15 11 54.9	
	133nm,0.2s,SNR=11					
EBAD	**Badajoz**	**2.92 252**	⇓Pn	**Pn**	**15 11 09.4**	**+0.9**
	3.5nm,0.1s,SNR=18					
EBAD			Pg	**Pg**	**15 11 16.5**	**-0.8**
	15nm,0.3s,SNR=22					
EBAD			Sn	**Sn**	**15 11 44.1**	**+0.2**
	5.8nm,0.1s,SNR=5.4					
EBAD			Lg		15 11 54.9	
	133nm,0.2s,SNR=11					
EBAD	**Badajoz**	**2.92 252**	Pn	**Pn**	**15 11 09.4**	**+0.9**
	3.5nm,0.1s,SNR=18					
ENIJ	**Nijar**	**2.92 160**	Pg	**Pg**	**15 11 16.9**	**-0.6**
ENIJ			Lg		15 11 57.5	
ENIJ	**Nijar**	**2.92 160**	Pg	**Pg**	**15 11 17.0**	**-0.6**
	24nm,0.3s,SNR=7.9					
ENIJ			Lg		15 11 56.9	
	25nm,0.4s,SNR=7.9					
ENIJ	**Nijar**	**2.92 160**	Pg	**Pg**	**15 11 17.0**	**-0.6**
	24nm,0.3s,SNR=7.9					
ENIJ			Lg		15 11 56.9	
	25nm,0.4s,SNR=7.9					
ENIJ	**Nijar**	**2.92 160**	Pg	**Pg**	**15 11 17.0**	**-0.5**
	24nm,0.3s,SNR=7.9					
ENIJ			Lg		15 11 57.5	
	25nm,0.4s,SNR=7.9					
ECRI	**Cripan**	**2.97 14**	Pn	**Pn**	**15 11 11.1**	**+1.9**
ECRI			Pg	**Pg**	**15 11 18.4**	**0.0**
ECRI			Sn	**Sn**	**15 11 44.5**	**-0.8**
ECRI			Lg		15 11 58.8	
ECRI	**Cripan**	**2.97 14**	Pn	**Pn**	**15 11 11.1**	**+1.9**
	0.6nm,0.1s,SNR=7.9					
ECRI			Pg	**Pg**	**15 11 18.4**	**0.0**
	17nm,0.2s,SNR=7.9					
ECRI			Sn	**Sn**	**15 11 44.5**	**-0.8**
	6.8nm,0.2s,SNR=4.0					
ECRI			Lg		15 11 58.8	
	6.1nm,0.2s,SNR=7.9					
ECRI	**Cripan**	**2.97 14**	Pn	**Pn**	**15 11 11.1**	**+1.9**
	0.6nm,0.1s,SNR=7.9					
ECRI			Pg	**Pg**	**15 11 18.4**	**0.0**
	17nm,0.2s,SNR=7.9					
ECRI			Sn	**Sn**	**15 11 44.5**	**-0.8**
	6.8nm,0.2s,SNR=4.0					
ECRI			Lg		15 11 58.8	
	6.1nm,0.2s,SNR=7.9					
ECRI	**Cripan**	**2.97 14**	Pn	**Pn**	**15 11 11.1**	**+1.9**
	0.6nm,0.1s,SNR=7.9					
ECRI	**Cripan**	**2.97 14**	Pg	**Pg**	**15 11 18.4**	**0.0**
	17nm,0.2s,SNR=7.9					
ECRI			Sn	**Sn**	**15 11 44.5**	**-0.7**
	6.8nm,0.2s,SNR=4.0					
ECRI			Lg		15 11 58.8	
	6.1nm,0.2s,SNR=7.9					
ESAC	**San Caprasio**	**3.03 48**	Pn	**Pn**	**15 11 11.4**	**+1.4**
ESAC			Pg	**Pg**	**15 11 18.2**	**-1.3**
ESAC			Lg		15 11 58.8	
ESAC	**San Caprasio**	**3.03 48**	Pn	**Pn**	**15 11 11.4**	**+1.4**
	5.4nm,0.2s,SNR=7.8					
ESAC			Pg	**Pg**	**15 11 18.2**	**-1.3**
	27nm,0.3s,SNR=8.8					
ESAC			Sn	**Sn**	**15 11 47.1**	**+0.4**
	97nm,0.3s,SNR=7.9					
ESAC			Lg		15 11 59.9	
	64nm,0.2s,SNR=14					
ESAC	**San Caprasio**	**3.03 48**	Pn	**Pn**	**15 11 11.4**	**+1.4**
	5.4nm,0.2s,SNR=7.8					
ESAC			Pg	**Pg**	**15 11 18.2**	**-1.3**
	27nm,0.3s,SNR=8.8					
ESAC			Sn	**Sn**	**15 11 47.1**	**+0.4**
	97nm,0.3s,SNR=7.9					
ESAC			Lg		15 11 59.9	
	64nm,0.2s,SNR=14					
ESAC	**San Caprasio**	**3.03 48**	Pn	**Pn**	**15 11 11.4**	**+1.4**
	5.4nm,0.2s,SNR=7.8					
ESAC	**San Caprasio**	**3.03 48**	Pg	**Pg**	**15 11 18.2**	**-1.3**
	27nm,0.3s,SNR=8.8					
ESAC			Lg		15 11 58.8	
	64nm,0.2s,SNR=14					
PMRV	**Marv??o**	**3.04 266**	*e*Pn	**Pn**	**15 11 11.4**	**+1.1**
PMRV	**Marv??o**	**3.04 266**	*e*Pg	**Pg**	**15 11 18.3**	**-1.5**
PMRV			*e*Sg	**Sg**	**15 11 57.4**	**-1.9**
PMRV			A		15 12 04.3	
	90nm,0.6s					
PMRV	**Marv??o**	**3.04 266**	Pn	**Pn**	**15 11 11.4**	**+1.1**
PMRV			Pg	**Pg**	**15 11 18.3**	**-1.5**
PMRV			Lg		15 11 57.4	
	45nm,0.6s					
PMRV	**Marv??o**	**3.04 266**	Pn	**Pn**	**15 11 11.4**	**+1.1**
PMRV			Pg	**Pg**	**15 11 18.3**	**-1.5**
PMRV			Lg		15 11 57.4	
	45nm,0.6s					
PMRV	**Marv??o**	**3.04 266**	*e*Pn	**Pn**	**15 11 11.4**	**+1.1**
PMRV	**Marv??o**	**3.04 266**	*e*Pg	**Pg**	**15 11 18.3**	**-1.5**
PMRV			*e*Sg	**Sg**	**15 11 57.4**	**-1.9**
	90nm,0.6s					
EMAL	**Malaga-Limoner**	**3.06 195**	Pg	**Pg**	**15 11 20.2**	**+0.2**
EMAL			Lg		15 11 56.8	
EMAL	**Malaga-Limoner**	**3.06 195**	Pg	**Pg**	**15 11 20.2**	**+0.2**
EMAL			Lg		15 11 56.8	
EMAL	**Malaga-Limoner**	**3.06 195**	*e*P	**Pn**	**15 11 20.2**	**+10**
EMAL			*e*S	**Sn**	**15 11 56.8**	**+9.4**
MVO	**Moncorvo**	**3.07 299**	*e*Pn	**Pn**	**15 11 12.3**	**+1.7**
MVO			*e*Sn	**Sn**	**15 11 47.2**	**-0.5**
MVO			*e*Sg	**Sg**	**15 12 00.8**	**+0.7**
MVO			A		15 12 06.8	
	111nm,0.6s					
MVO	**Moncorvo**	**3.07 299**	*e*Pn	**Pn**	**15 11 12.3**	**+1.7**
MVO			*e*Sn	**Sn**	**15 11 47.2**	**-0.5**
MVO			*e*Sg	**Sg**	**15 12 00.8**	**+0.7**
	111nm,0.6s					
PCBR	**Castelo Branco**	**3.09 273**	*e*Pn	**Pn**	**15 11 12.3**	**+1.4**
PCBR			*e*Sn	**Sn**	**15 11 47.8**	**-0.4**
PCBR			*e*Sg	**Sg**	**15 11 59.1**	**-1.6**
PCBR			A		15 12 04.0	
	59nm,0.4s					
PCBR	**Castelo Branco**	**3.09 273**	Pn	**Pn**	**15 11 12.3**	**+1.4**
PCBR			Sn	**Sn**	**15 11 47.8**	**-0.4**
PCBR			Lg		15 11 59.1	
	30nm,0.4s					
PCBR	**Castelo Branco**	**3.09 273**	Pn	**Pn**	**15 11 12.3**	**+1.4**
PCBR			Sn	**Sn**	**15 11 47.8**	**-0.4**
PCBR			Lg		15 11 59.1	
	30nm,0.4s					
PCBR	**Castelo Branco**	**3.09 273**	*e*Pn	**Pn**	**15 11 12.3**	**+1.4**
PCBR			*e*Sn	**Sn**	**15 11 47.8**	**-0.4**
PCBR			*e*Sg	**Sg**	**15 11 59.1**	**-1.6**
	59nm,0.4s					
ERTA	**Horta de San J**	**3.16 66**	Pn	**Pn**	**15 11 12.5**	**+0.7**
ERTA			Pg	**Pg**	**15 11 19.2**	**-2.8**
ERTA			Sn	**Sn**	**15 11 50.0**	**+0.2**
ERTA			Lg		15 12 04.2	
ERTA	**Horta de San J**	**3.16 66**	Pn	**Pn**	**15 11 12.5**	**+0.7**
	0.5nm,0.1s,SNR=7.9					
ERTA			Pg	**Pg**	**15 11 21.9**	**0.0**
	12nm,0.4s,SNR=7.9					
ERTA			Sn	**Sn**	**15 11 50.0**	**+0.2**
	7.0nm,0.1s,SNR=5.7					
ERTA			Lg		15 12 04.2	
	23nm,0.2s,SNR=6.4					
ERTA	**Horta de San J**	**3.16 66**	Pn	**Pn**	**15 11 12.5**	**+0.7**
	0.5nm,0.1s,SNR=7.9					
ERTA			Pg	**Pg**	**15 11 21.9**	**0.0**
	12nm,0.4s,SNR=7.9					
ERTA			Sn	**Sn**	**15 11 50.0**	**+0.2**
	7.0nm,0.1s,SNR=5.7					
ERTA			Lg		15 12 04.2	
	23nm,0.2s,SNR=6.4					
ERTA	**Horta de San J**	**3.16 66**	Pn	**Pn**	**15 11 12.5**	**+0.7**
	0.5nm,0.1s,SNR=7.9					
ERTA	**Horta de San J**	**3.16 66**	Pg	**Pg**	**15 11 19.2**	**-2.7**
	12nm,0.4s,SNR=7.9					
ERTA			Sn	**Sn**	**15 11 50.0**	**+0.2**
	7.0nm,0.1s,SNR=5.7					
ERTA			Lg		15 12 04.2	
	23nm,0.2s,SNR=6.4					
EMIN	**Mina Concepcio**	**3.18 233**	Pn	**Pn**	**15 11 13.5**	**+1.4**
EMIN			Pg	**Pg**	**15 11 21.5**	**-0.9**
EMIN			Sn	**Sn**	**15 11 50.6**	**+0.2**
EMIN			Lg		15 12 00.5	
EMIN	**Mina Concepcio**	**3.18 233**	Pn	**Pn**	**15 11 13.5**	**+1.4**
	1.3nm,0.1s,SNR=18					
EMIN			Pg	**Pg**	**15 11 21.5**	**-0.9**
	4.7nm,0.3s,SNR=11					
EMIN			Sn	**Sn**	**15 11 50.6**	**+0.2**
	3.0nm,0.1s,SNR=5.9					
EMIN			Lg		15 12 00.5	
	26nm,0.2s,SNR=17					
EMIN	**Mina Concepcio**	**3.18 233**	Pn	**Pn**	**15 11 13.5**	**+1.4**
	1.3nm,0.1s,SNR=18					
EMIN			Pg	**Pg**	**15 11 21.5**	**-0.9**
	4.7nm,0.3s,SNR=11					
EMIN			Sn	**Sn**	**15 11 50.6**	**+0.2**
	3.0nm,0.1s,SNR=5.9					
EMIN			Lg		15 12 00.5	
	26nm,0.2s,SNR=17					
EMIN	**Mina Concepcio**	**3.18 233**	Pn	**Pn**	**15 11 13.5**	**+1.4**
	1.3nm,0.1s,SNR=18					
PBAR	**Barrancos**	**3.19 242**	*e*Pn	**Pn**	**15 11 13.5**	**+1.3**
PBAR	**Barrancos**	**3.19 242**	*e*Pg	**Pg**	**15 11 23.8**	**+1.3**
PBAR			*e*Sn	**Sn**	**15 11 50.3**	**-0.3**
PBAR			*e*Sg	**Sg**	**15 12 02.2**	**-1.6**
PBAR			A		15 12 07.4	
	95nm,0.4s					
PBAR	**Barrancos**	**3.19 242**	Pn	**Pn**	**15 11 13.5**	**+1.3**
PBAR			Pg	**Pg**	**15 11 23.8**	**+1.3**
PBAR			Sn	**Sn**	**15 11 50.3**	**-0.3**
PBAR			Lg		15 12 02.2	
	95nm,0.4s					
PBAR	**Barrancos**	**3.19 242**	Pn	**Pn**	**15 11 13.5**	**+1.3**
PBAR			Pg	**Pg**	**15 11 23.8**	**+1.3**
PBAR			Sn	**Sn**	**15 11 50.3**	**-0.3**
PBAR			Lg		15 12 02.2	
	95nm,0.4s					
PBAR	**Barrancos**	**3.19 242**	*e*Pn	**Pn**	**15 11 13.5**	**+1.3**
PBAR	**Barrancos**	**3.19 242**	*e*Pg	**Pg**	**15 11 23.8**	**+1.3**
PBAR			*e*Sn	**Sn**	**15 11 50.3**	**-0.3**
PBAR			*e*Sg	**Sg**	**15 12 02.2**	**-1.6**
	95nm,0.4s					
MTE	**Manteigas**	**3.20 283**	*e*Pn	**Pn**	**15 11 13.7**	**+1.3**
MTE	**Manteigas**	**3.20 283**	*e*Pg	**Pg**	**15 11 23.3**	**+0.6**
MTE			*e*Sg	**Sg**	**15 12 02.2**	**-2.0**
MTE			A		15 12 07.8	
	89nm,0.3s					
MTE	**Manteigas**	**3.20 283**	*e*Pn	**Pn**	**15 11 13.8**	**+1.4**
MTE			*e*Pg	**Pg**	**15 11 23.2**	**+0.4**
MTE			*e*Sg	**Sg**	**15 12 01.7**	**-2.5**
MTE	**Manteigas**	**3.20 283**	*e*Pn	**Pn**	**15 11 13.7**	**+1.3**
MTE	**Manteigas**	**3.20 283**	*e*Pg	**Pg**	**15 11 23.2**	**+0.5**
MTE			*e*Sg	**Sg**	**15 12 02.2**	**-2.0**
	89nm,0.3s					
LIJA	**Lijar**	**3.20 209**	Pg	**Pg**	**15 11 27.0**	**+4.2**
LIJA			Lg		15 12 02.4	
LIJA	**Lijar**	**3.20 209**	Pg	**Pg**	**15 11 27.0**	**+4.2**
LIJA			Lg		15 12 02.4	
LIJA	**Lijar**	**3.20 209**	*e*P	**Pg**	**15 11 27.0**	**+4.2**
LIJA			*e*S	**Sn**	**15 12 02.4**	**+11**
PBRG	**Braganca**	**3.24 311**	*e*Pn	**Pn**	**15 11 14.7**	**+1.8**
PBRG			*e*Sn	**Sn**	**15 11 51.4**	**-0.4**
PBRG			*e*Sg	**Sg**	**15 12 04.4**	**-1.0**
PBRG			A		15 12 09.8	
	90nm,0.3s					
PBRG	**Braganca**	**3.24 311**	Pn	**Pn**	**15 11 14.7**	**+1.8**
PBRG			Sn	**Sn**	**15 11 51.4**	**-0.4**
PBRG			Lg		15 12 04.4	
	45nm,0.3s					
PBRG	**Braganca**	**3.24 311**	Pn	**Pn**	**15 11 14.7**	**+1.8**
PBRG			Sn	**Sn**	**15 11 51.4**	**-0.4**
PBRG			Lg		15 12 04.4	
	45nm,0.3s					
PBRG	**Braganca**	**3.24 311**	*e*Pn	**Pn**	**15 11 14.7**	**+1.8**
PBRG			*e*Sn	**Sn**	**15 11 51.4**	**-0.4**
PBRG			*e*Sg	**Sg**	**15 12 04.4**	**-1.0**
	90nm,0.3s					
PESTR	**Estremoz**	**3.31 256**	*e*Pn	**Pn**	**15 11 15.0**	**+1.1**
PESTR	**Estremoz**	**3.31 256**	*e*Pg	**Pg**	**15 11 23.1**	**-1.8**
PESTR			*e*Sg	**Sg**	**15 12 05.5**	**-2.3**
PESTR			A		15 12 14.8	
	64nm,0.4s					
PESTR	**Estremoz**	**3.31 256**	Pn	**Pn**	**15 11 15.0**	**+1.1**
PESTR			Pg	**Pg**	**15 11 23.1**	**-1.8**
PESTR			Lg		15 12 05.5	
	32nm,0.4s					
PESTR	**Estremoz**	**3.31 256**	Pn	**Pn**	**15 11 15.0**	**+1.1**
PESTR			Pg	**Pg**	**15 11 23.1**	**-1.8**
PESTR			Lg		15 12 05.5	
	32nm,0.4s					
PESTR	**Estremoz**	**3.31 256**	*e*Pn	**Pn**	**15 11 15.0**	**+1.1**
PESTR	**Estremoz**	**3.31 256**	*e*Pg	**Pg**	**15 11 23.1**	**-1.8**
PESTR			*e*Sg	**Sg**	**15 12 05.5**	**-2.3**
	64nm,0.4s					
ECAL	**Calabor**	**3.32 313**	Pn	**Pn**	**15 11 15.9**	**+1.9**
ECAL			Pg	**Pg**	**15 11 24.6**	**-0.5**
ECAL			Sn	**Sn**	**15 11 54.0**	**+0.1**
ECAL			Lg		15 12 09.3	
ECAL	**Calabor**	**3.32 313**	Pn	**Pn**	**15 11 15.9**	**+1.9**
	0.6nm,0.1s,SNR=9.7					
ECAL			Pg	**Pg**	**15 11 24.6**	**-0.5**
	7.8nm,0.3s,SNR=9.9					
ECAL			Sn	**Sn**	**15 11 54.0**	**+0.1**
	5.9nm,0.2s,SNR=5.1					
ECAL			Lg		15 12 09.3	
	13nm,0.1s,SNR=7.6					
ECAL	**Calabor**	**3.32 313**	Pn	**Pn**	**15 11 15.9**	**+1.9**
	0.6nm,0.1s,SNR=9.7					
ECAL			Pg	**Pg**	**15 11 24.6**	**-0.5**
	7.8nm,0.3s,SNR=9.9					
ECAL			Sn	**Sn**	**15 11 54.0**	**+0.1**
	5.9nm,0.2s,SNR=5.1					
ECAL			Lg		15 12 09.3	
	13nm,0.1s,SNR=7.6					
ECAL	**Calabor**	**3.32 313**	Pn	**Pn**	**15 11 15.9**	**+1.8**
	0.6nm,0.1s,SNR=9.7					
ECAL	**Calabor**	**3.32 313**	Pg	**Pg**	**15 11 24.6**	**-0.5**
	7.8nm,0.3s,SNR=9.9					
ECAL			Sn	**Sn**	**15 11 54.0**	**+0.1**
	5.9nm,0.2s,SNR=5.1					
ECAL			Lg		15 12 09.3	
	13nm,0.1s,SNR=7.6					
EMIJ	**Mijas**	**3.32 198**	Pn	**Pn**	**15 11 13.5**	**-0.6**
EMIJ			Pg	**Pg**	**15 11 19.8**	**-5.3**
EMIJ			Pg	**Pg**	**15 11 22.7**	**-2.4**
EMIJ			Sn	**Sn**	**15 11 52.3**	**-1.6**
EMIJ			Lg		15 12 08.5	
EMIJ			Lg		15 12 09.9	
EMIJ	**Mijas**	**3.32 198**	Pg	**Pg**	**15 11 19.8**	**-5.3**
	SNR=7.9					
EMIJ			Sn	**Sn**	**15 11 52.3**	**-1.6**
	1.1nm,0.1s,SNR=7.9					
EMIJ			Lg		15 12 09.9	
	7.7nm,0.2s,SNR=4.7					
EMIJ	**Mijas**	**3.32 198**	Pg	**Pg**	**15 11 19.8**	**-5.3**
	SNR=7.9					
EMIJ			Sn	**Sn**	**15 11 52.3**	**-1.6**
	1.1nm,0.1s,SNR=7.9					
EMIJ			Lg		15 12 09.9	
	7.7nm,0.2s,SNR=4.7					
EMIJ	**Mijas**	**3.32 198**	Pn	**Pn**	**15 11 13.5**	**-0.6**
EMIJ	**Mijas**	**3.32 198**	Pg	**Pg**	**15 11 19.8**	**-5.3**
	SNR=7.9					
EMIJ			Sn	**Sn**	**15 11 52.3**	**-1.6**
	1.1nm,0.1s,SNR=7.9					
EMIJ			Lg		15 12 09.9	
	7.7nm,0.2s,SNR=4.7					
EARA	**Aranguren**	**3.36 24**	Pg	**Pg**	**15 11 25.7**	**-0.1**
	11nm,0.3s,SNR=7.9					
EARA			Sn	**Sn**	**15 11 53.1**	**-1.7**
	7.3nm,0.2s,SNR=7.9					
EARA			Lg		15 12 10.3	
	8.1nm,0.1s,SNR=6.2					
EARA	**Aranguren**	**3.36 24**	Pg	**Pg**	**15 11 25.7**	**-0.1**
	11nm,0.3s,SNR=7.9					
EARA			Sn	**Sn**	**15 11 53.1**	**-1.7**
	7.3nm,0.2s,SNR=7.9					
EARA			Lg		15 12 10.3	
	8.1nm,0.1s,SNR=6.2					
EARA	**Aranguren**	**3.36 24**	Pg	**Pg**	**15 11 25.7**	**-0.1**
	11nm,0.3s,SNR=7.9					
EARA			Sn	**Sn**	**15 11 53.2**	**-1.7**
	7.3nm,0.2s,SNR=7.9					
EARA			Lg		15 12 10.3	
	8.1nm,0.1s,SNR=6.2					
IUNC	**Unciti**	**3.37 26**	Pn	**Pn**	**15 11 15.9**	**+1.2**
	2.1nm,0.1s,SNR=7.9					
IUNC			Sn	**Sn**	**15 11 54.9**	**-0.2**
	4.3nm,0.2s,SNR=7.9					
IUNC			Lg		15 12 11.8	
	4.8nm,0.2s,SNR=7.9					
IUNC	**Unciti**	**3.37 26**	Pn	**Pn**	**15 11 15.9**	**+1.2**
	2.1nm,0.1s,SNR=7.9					
IUNC			Sn	**Sn**	**15 11 54.9**	**-0.2**
	4.3nm,0.2s,SNR=7.9					
IUNC			Lg		15 12 11.8	
	4.8nm,0.2s,SNR=7.9					
IUNC	**Unciti**	**3.37 26**	Pn	**Pn**	**15 11 15.9**	**+1.1**
	2.1nm,0.1s,SNR=7.9					
IUNC			Sn	**Sn**	**15 11 54.9**	**-0.2**
	4.3nm,0.2s,SNR=7.9					
IUNC			Lg		15 12 11.8	
	4.8nm,0.2s,SNR=7.9					
ESPR	**Espera**	**3.42 214**	Pn	**Pn**	**15 11 18.6**	**+3.3**
ESPR			Pg	**Pg**	**15 11 25.5**	**-1.5**
ESPR			Sn	**Sn**	**15 11 56.9**	**+0.6**
ESPR			Lg		15 12 12.9	
ESPR	**Espera**	**3.42 214**	Pn	**Pn**	**15 11 17.0**	**+1.6**
	3.8nm,0.3s,SNR=4.0					
ESPR			Lg		15 12 12.9	
	14nm,0.2s,SNR=9.6					
ESPR	**Espera**	**3.42 214**	Pn	**Pn**	**15 11 17.0**	**+1.6**
	3.8nm,0.3s,SNR=4.0					
ESPR			Lg		15 12 12.9	
	14nm,0.2s,SNR=9.6					
ESPR	**Espera**	**3.42 214**	Pn	**Pn**	**15 11 18.6**	**+3.2**
	SNR=4.0					
ESPR	**Espera**	**3.42 214**	Pg	**Pg**	**15 11 25.5**	**-1.4**
ESPR			Lg		15 12 12.9	
	14nm,0.2s,SNR=9.6					
IZUN	**Zunzarren**	**3.48 25**	Pn	**Pn**	**15 11 17.4**	**+1.2**
	0.2nm,0.1s,SNR=7.9					
IZUN			Lg		15 12 15.2	
	3.4nm,0.2s,SNR=7.9					
IZUN	**Zunzarren**	**3.48 25**	Pn	**Pn**	**15 11 17.4**	**+1.2**
	0.2nm,0.1s,SNR=7.9					
IZUN			Lg		15 12 15.2	
	3.4nm,0.2s,SNR=7.9					
IZUN	**Zunzarren**	**3.48 25**	Pn	**Pn**	**15 11 17.4**	**+1.2**
	0.2nm,0.1s,SNR=7.9					
IZUN			Lg		15 12 13.0	
	3.4nm,0.2s,SNR=7.9					
GIBL	**Gibalbin**	**3.50 215**	Lg		15 12 15.6	
GIBL	**Gibalbin**	**3.50 215**	Lg		15 12 15.6	
GIBL	**Gibalbin**	**3.50 215**	*e*S	**Sn**	**15 12 15.6**	**+17**
ELAN	**Lanestosa**	**3.50 0**	Pn	**Pn**	**15 11 16.4**	**-0.1**
ELAN			Pg	**Pg**	**15 11 27.2**	**-1.4**
ELAN			Sn	**Sn**	**15 11 58.5**	**+0.1**
ELAN			Lg		15 12 15.6	
ELAN	**Lanestosa**	**3.50 0**	Pn	**Pn**	**15 11 17.2**	**+0.7**
	0.8nm,0.1s,SNR=6.6					
ELAN			Pg	**Pg**	**15 11 27.2**	**-1.4**
	15nm,0.3s,SNR=17					
ELAN			Sn	**Sn**	**15 11 58.5**	**+0.1**
	4.9nm,0.2s,SNR=4.0					
ELAN			Lg		15 12 15.6	
	8.9nm,0.2s,SNR=4.5					
ELAN	**Lanestosa**	**3.50 0**	Pn	**Pn**	**15 11 17.2**	**+0.7**
	0.8nm,0.1s,SNR=6.6					
ELAN			Pg	**Pg**	**15 11 27.2**	**-1.4**
	15nm,0.3s,SNR=17					
ELAN			Sn	**Sn**	**15 11 58.5**	**+0.1**
	4.9nm,0.2s,SNR=4.0					
ELAN			Lg		15 12 15.6	
	8.9nm,0.2s,SNR=4.5					
ELAN	**Lanestosa**	**3.50 0**	Pn	**Pn**	**15 11 16.4**	**-0.1**
	0.8nm,0.1s,SNR=6.6					
IUSE	**Utxeti**	**3.53 24**	Pn	**Pn**	**15 11 18.6**	**+1.6**
	0.7nm,0.2s,SNR=7.9					
IUSE			Pg	**Pg**	**15 11 29.9**	**+0.9**
	2.1nm,0.2s,SNR=7.9					
IUSE			Sn	**Sn**	**15 11 59.8**	**+0.8**
	1.8nm,0.2s,SNR=4.0					
IUSE			Lg		15 12 16.1	
	0.9nm,0.1s,SNR=6.5					
IUSE	**Utxeti**	**3.53 24**	Pn	**Pn**	**15 11 18.6**	**+1.6**
	0.7nm,0.2s,SNR=7.9					
IUSE			Pg	**Pg**	**15 11 29.9**	**+0.9**
	2.1nm,0.2s,SNR=7.9					
IUSE			Sn	**Sn**	**15 11 59.8**	**+0.8**
	1.8nm,0.2s,SNR=4.0					
IUSE			Lg		15 12 16.1	
	0.9nm,0.1s,SNR=6.5					
IUSE	**Utxeti**	**3.53 24**	Sn	**Sn**	**15 12 00.7**	**+1.7**
	1.8nm,0.2s,SNR=4.0					
IUSE			Lg		15 12 16.1	
	0.9nm,0.1s,SNR=6.5					
PVIS	**Viseu**	**3.53 288**	*e*Pn	**Pn**	**15 11 18.2**	**+1.3**
PVIS			*e*Sn	**Sn**	**15 11 58.8**	**-0.2**
PVIS			*e*Sg	**Sg**	**15 12 12.8**	**-2.0**
PVIS			A		15 12 19.1	
	44nm,0.5s					
PVIS	**Viseu**	**3.53 288**	Pn	**Pn**	**15 11 18.2**	**+1.3**
PVIS			Sn	**Sn**	**15 11 58.8**	**-0.2**
PVIS			Lg		15 12 12.8	
	22nm,0.5s					
PVIS	**Viseu**	**3.53 288**	Pn	**Pn**	**15 11 18.2**	**+1.3**
PVIS			Sn	**Sn**	**15 11 58.8**	**-0.2**
PVIS			Lg		15 12 12.8	
	22nm,0.5s					
PVIS	**Viseu**	**3.53 288**	*e*Pn	**Pn**	**15 11 18.2**	**+1.3**
PVIS			*e*Sn	**Sn**	**15 11 58.8**	**-0.2**
PVIS			*e*Sg	**Sg**	**15 12 12.8**	**-2.0**
	44nm,0.5s					
EORO	**Oroz-Betelu**	**3.56 27**	Pn	**Pn**	**15 11 18.9**	**+1.6**
	0.9nm,0.1s,SNR=9.5					
EORO			Pg	**Pg**	**15 11 28.5**	**-1.1**
	16nm,0.5s,SNR=7.4					
EORO			Sn	**Sn**	**15 12 00.4**	**+0.7**
	7.9nm,0.2s,SNR=6.4					
EORO			Lg		15 12 17.2	
	15nm,0.2s,SNR=6.2					
EORO	**Oroz-Betelu**	**3.56 27**	Pn	**Pn**	**15 11 18.9**	**+1.6**
	0.9nm,0.1s,SNR=9.5					
EORO			Pg	**Pg**	**15 11 28.5**	**-1.1**
	16nm,0.5s,SNR=7.4					
EORO			Sn	**Sn**	**15 12 00.4**	**+0.7**
	7.9nm,0.2s,SNR=6.4					
EORO			Lg		15 12 17.2	
	15nm,0.2s,S

51nm,0.7s
ELIZ Elizondo 3.73 22 Pn Pn 15 11 21.2 +1.5
2.7nm,0.2s,SNR=7.9
ELIZ Pg **Pg 15 11 32.0 -0.9**
5.0nm,0.4s,SNR=7.9
ELIZ Sn **Sn 15 12 01.7 -2.3**
5.3nm,0.2s,SNR=7.9
ELIZ Elizondo 3.73 22 Pn Pn 15 11 21.2 +1.5
2.7nm,0.2s,SNR=7.9
ELIZ Pg **Pg 15 11 32.0 -0.9**
5.0nm,0.4s,SNR=7.9
ELIZ Sn **Sn 15 12 01.7 -2.3**
5.3nm,0.2s,SNR=7.9
SJPF Ste Jean 3.78 26 *e*Pn **Pn 15 11 21.3 +0.9**
SJPF *e*Sn **Sn 15 12 03.4 -1.8**
SJPF *e*Sg **Sg 15 12 22.5 -0.4**
41nm,0.4s
SJPF Ste Jean 3.78 26 Pn Pn 15 11 21.3 +0.9
SJPF Sn **Sn 15 12 03.4 -1.8**
SJPF Lg 15 12 22.5
21nm,0.4s
SJPF Ste Jean 3.78 26 Pn Pn 15 11 21.3 +0.9
SJPF Sn **Sn 15 12 03.4 -1.8**
SJPF Lg 15 12 22.5
21nm,0.4s
SJPF Ste Jean 3.78 26 *e*Pn **Pn 15 11 21.3 +0.9**
SJPF *e*Sn **Sn 15 12 03.4 -1.8**
SJPF *e*Sg **Sg 15 12 22.5 -0.4**
21nm,0.4s
EALK Alkurruntz 3.79 22 Pn Pn 15 11 21.6 +1.1
EALK Pg **Pg 15 11 31.6 -2.4**
EALK Sn **Sn 15 12 04.4 -1.0**
EALK Lg 15 12 25.3
EALK Alkurruntz 3.79 22 Pn Pn 15 11 21.5 +1.0
3.7nm,0.2s,SNR=7.9
EALK Pg **Pg 15 11 30.9 -3.1**
4.4nm,0.3s,SNR=7.9
EALK Sn **Sn 15 12 04.4 -1.0**
17nm,0.3s,SNR=7.5
EALK Lg 15 12 26.1
59nm,0.4s,SNR=4.7
EALK Alkurruntz 3.79 22 Pn Pn 15 11 21.5 +1.0
3.7nm,0.2s,SNR=7.9
EALK Pg **Pg 15 11 30.9 -3.1**
4.4nm,0.3s,SNR=7.9
EALK Sn **Sn 15 12 04.4 -1.0**
17nm,0.3s,SNR=7.5
EALK Lg 15 12 26.1
59nm,0.4s,SNR=4.7
EALK Alkurruntz 3.79 22 Pn Pn 15 11 21.6 +1.1
EALK Alkurruntz 3.79 22 Pg **Pg 15 11 31.6 -2.4**
EALK Sn **Sn 15 12 04.4 -1.0**
17nm,0.3s,SNR=7.5
EALK Lg 15 12 22.9
59nm,0.4s,SNR=4.7
EIBI Ibiza 3.80 99 Pn Pn 15 11 20.6 -0.1
EIBI Pg **Pg 15 11 31.8 -2.4**
EIBI Sn **Sn 15 12 03.9 -1.7**
EIBI Ibiza 3.80 99 Pn Pn 15 11 20.5 -0.1
0.6nm,0.1s,SNR=7.9
EIBI Pg **Pg 15 11 31.8 -2.4**
3.6nm,0.2s,SNR=7.9
EIBI Sn **Sn 15 12 03.9 -1.7**
0.8nm,0.1s,SNR=7.9
EIBI Ibiza 3.80 99 Pn Pn 15 11 20.5 -0.1
0.6nm,0.1s,SNR=7.9
EIBI Pg **Pg 15 11 31.8 -2.4**
3.6nm,0.2s,SNR=7.9
EIBI Sn **Sn 15 12 03.9 -1.7**
0.8nm,0.1s,SNR=7.9
EIBI Ibiza 3.80 99 Pn Pn 15 11 20.5 -0.1
0.6nm,0.1s,SNR=7.9
EALB Alboran 3.80 175 Pg **Pg 15 11 30.9 -3.4**
EALB Sn **Sn 15 12 03.8 -1.9**
EALB Lg 15 12 23.6
EALB Alboran 3.80 175 Pg **Pg 15 11 30.9 -3.3**
EALB Sn **Sn 15 12 03.8 -1.9**
EARI Arriondas 3.80 340 Pn Pn 15 11 22.2 +1.6
EARI Pg **Pg 15 11 34.9 +0.6**
EARI Sn **Sn 15 12 04.9 -0.8**
EARI Lg 15 12 23.5
EARI Arriondas 3.80 340 Pn Pn 15 11 22.2 +1.6
0.2nm,0.1s,SNR=8.8
EARI Pg **Pg 15 11 34.9 +0.6**
15nm,0.5s,SNR=32
EARI Sn **Sn 15 12 04.9 -0.8**
3.2nm,0.2s,SNR=7.9
EARI Lg 15 12 23.5
3.2nm,0.1s,SNR=6.0
EARI Arriondas 3.80 340 Pn Pn 15 11 22.2 +1.6
0.2nm,0.1s,SNR=8.8
EARI Pg **Pg 15 11 34.9 +0.6**
15nm,0.5s,SNR=32
EARI Sn **Sn 15 12 04.9 -0.8**
3.2nm,0.2s,SNR=7.9
EARI Lg 15 12 23.5
3.2nm,0.1s,SNR=6.0
EARI Arriondas 3.80 340 Pn Pn 15 11 22.2 +1.5
0.2nm,0.1s,SNR=8.8
PTOM Tomar 3.81 270 *e*Sg **Sg 15 12 20.7 -3.3**
PTOM A 15 12 27.6
57nm,0.8s
PTOM Tomar 3.81 270 Lg 15 12 20.7
28nm,0.8s
PTOM Tomar 3.81 270 Lg 15 12 20.7
28nm,0.8s
PTOM Tomar 3.81 270 *e*Sg **Sg 15 12 20.7 -3.3**
57nm,0.8s
EPOB Poblet 3.83 63 Pn Pn 15 11 21.8 +0.7
EPOB Sn **Sn 15 12 04.6 -1.8**
EPOB Lg 15 12 22.9
EPOB Poblet 3.83 63 Pn Pn 15 11 21.8 +0.7
0.6nm,0.1s,SNR=9.4
EPOB Sn **Sn 15 12 04.6 -1.8**
1.9nm,0.1s,SNR=6.3
EPOB Lg 15 12 22.9
6.2nm,0.2s,SNR=7.4
EPOB Poblet 3.83 63 Pn Pn 15 11 21.8 +0.7
0.6nm,0.1s,SNR=9.4
EPOB Sn **Sn 15 12 04.6 -1.8**
1.9nm,0.1s,SNR=6.3
EPOB Lg 15 12 22.9
6.2nm,0.2s,SNR=7.4
EPOB Poblet 3.83 63 Pn Pn 15 11 21.8 +0.8
0.6nm,0.1s,SNR=9.4
EPOB Sn **Sn 15 12 04.6 -1.8**
1.9nm,0.1s,SNR=6.3
EPOB Lg 15 12 22.9
6.2nm,0.2s,SNR=7.4
PBEJ Beja 3.83 245 *e*Pn **Pn 15 11 22.9 +1.8**
PBEJ *e*Sn **Sn 15 12 05.6 -0.8**
PBEJ *e*Sg **Sg 15 12 21.3 -3.1**
PBEJ A 15 12 34.7
39nm,0.7s
PBEJ Beja 3.83 245 Pn Pn 15 11 22.9 +1.8
PBEJ Sn **Sn 15 12 05.6 -0.8**
PBEJ Lg 15 12 21.3
20nm,0.7s
PBEJ Beja 3.83 245 Pn Pn 15 11 22.9 +1.8
PBEJ Sn **Sn 15 12 05.6 -0.8**
PBEJ Lg 15 12 21.3
20nm,0.7s
PBEJ Beja 3.83 245 *e*Pn **Pn 15 11 22.9 +1.8**
PBEJ *e*Sn **Sn 15 12 05.6 -0.8**
PBEJ *e*Sg **Sg 15 12 21.3 -3.1**
39nm,0.7s
EGRO El Granado 3.83 236 Pn Pn 15 11 21.9 +0.9
EGRO Lg 15 12 23.1
EGRO El Granado 3.83 236 Pn Pn 15 11 21.9 +0.9
2.9nm,0.2s,SNR=7.9
EGRO Pg **Pg 15 11 34.5 -0.4**
3.5nm,0.2s,SNR=7.9
EGRO Lg 15 12 23.1
7.2nm,0.1s,SNR=7.9
EGRO El Granado 3.83 236 Pn Pn 15 11 21.9 +0.9
2.9nm,0.2s,SNR=7.9
EGRO Pg **Pg 15 11 34.5 -0.4**
3.5nm,0.2s,SNR=7.9
EGRO Lg 15 12 23.1
7.2nm,0.1s,SNR=7.9
EGRO El Granado 3.83 236 Pn Pn 15 11 22.0 +0.9
2.9nm,0.2s,SNR=7.9
EGRO Lg 15 12 23.1
7.2nm,0.1s,SNR=7.9
ETSF Etsaut 3.85 34 *e*Pn **Pn 15 11 22.5 +1.1**
ETSF *e*Sn **Sn 15 12 04.3 -2.7**
ETSF *e*Sg **Sg 15 12 24.6 -0.6**
27nm,0.4s
ETSF Etsaut 3.85 34 Pn Pn 15 11 22.5 +1.1
ETSF Sn **Sn 15 12 04.3 -2.7**
ETSF Lg 15 12 24.6
14nm,0.4s
ETSF Etsaut 3.85 34 Pn Pn 15 11 22.5 +1.1
ETSF Sn **Sn 15 12 04.3 -2.7**
ETSF Lg 15 12 24.6
14nm,0.4s
ETSF Etsaut 3.85 34 *e*Pn **Pn 15 11 22.5 +1.1**
ETSF *e*Sn **Sn 15 12 04.3 -2.7**
ETSF *e*Sg **Sg 15 12 24.6 -0.6**
14nm,0.4s
OSSF Osses 3.90 24 P Pn 15 11 23.2 +1.2
OSSF S **Sn 15 12 08.0 -0.1**
OSSF Osses 3.90 24 P Pn 15 11 23.2 +1.2
OSSF S **Sn 15 12 08.0 -0.1**
MOE Montemor 3.98 254 *e*Pn **Pn 15 11 23.9 +0.7**
MOE *e*Sn **Sn 15 12 09.5 -0.7**
MOE *e*Sg **Sg 15 12 30.0 +0.7**
MOE Montemor 3.98 254 *e*Pn **Pn 15 11 23.9 +0.7**
MOE *e*Sn **Sn 15 12 09.5 -0.7**
MOE *e*Sg **Sg 15 12 30.0 +0.7**
PCAB Cabril 3.99 301 *e*Pn **Pn 15 11 25.0 +1.7**
PCAB *e*Sn **Sn 15 12 09.4 -1.0**
PCAB *e*Sg **Sg 15 12 28.4 -1.2**
PCAB A 15 12 33.2
51nm,0.7s
PCAB Cabril 3.99 301 Pn Pn 15 11 25.0 +1.7
PCAB Sn **Sn 15 12 09.4 -1.0**
PCAB Lg 15 12 28.4
26nm,0.7s
PCAB Cabril 3.99 301 Pn Pn 15 11 25.0 +1.7
PCAB Sn **Sn 15 12 09.4 -1.0**
PCAB Lg 15 12 28.4
26nm,0.7s
PCAB Cabril 3.99 301 *e*Pn **Pn 15 11 25.0 +1.7**
PCAB *e*Sn **Sn 15 12 09.4 -1.0**
PCAB *e*Sg **Sg 15 12 28.4 -1.2**
51nm,0.7s
EBIE Bielsa 4.02 42 Pn Pn 15 11 26.5 +2.8
EBIE Sn **Sn 15 12 09.4 -1.7**
EBIE Lg 15 12 30.9
EBIE Bielsa 4.02 42 Pn Pn 15 11 26.5 +2.8
0.2nm,0.1s,SNR=10
EBIE Sn **Sn 15 12 09.4 -1.7**
0.7nm,0.1s,SNR=7.9
EBIE Lg 15 12 30.9
6.9nm,0.2s
EBIE Bielsa 4.02 42 Pn Pn 15 11 26.5 +2.8
0.2nm,0.1s,SNR=10
EBIE Sn **Sn 15 12 09.4 -1.7**
0.7nm,0.1s,SNR=7.9
EBIE Lg 15 12 30.9
6.9nm,0.2s
EBIE Bielsa 4.02 42 Pn Pn 15 11 26.5 +2.8
0.2nm,0.1s,SNR=10
EBIE Sn **Sn 15 12 09.4 -1.7**
0.7nm,0.1s,SNR=7.9
EBIE Lg 15 12 30.9
6.9nm,0.2s
PVAQ Vaqueiros 4.06 236 *e*Pn **Pn 15 11 24.9 +0.7**
PVAQ *e*Sg **Sg 15 12 29.5 -2.3**
PVAQ A 15 12 35.1
35nm,0.4s
PVAQ Vaqueiros 4.06 236 Pn Pn 15 11 24.9 +0.7
PVAQ Lg 15 12 29.5
35nm,0.4s
PVAQ Vaqueiros 4.06 236 Pn Pn 15 11 24.9 +0.7
PVAQ Lg 15 12 29.5
35nm,0.4s
PVAQ Vaqueiros 4.06 236 *e*Pn **Pn 15 11 24.9 +0.7**
PVAQ *e*Sg **Sg 15 12 29.5 -2.3**
35nm,0.4s
REYF Montagne du Re 4.06 34 P Pn 15 11 25.6 +1.3
REYF S **Sn 15 12 11.8 -0.4**
REYF Montagne du Re 4.06 34 P Pn 15 11 25.6 +1.3
REYF S **Sn 15 12 11.8 -0.4**
ELOB Lobios 4.09 303 Pn Pn 15 11 26.1 +1.5
ELOB Sn **Sn 15 12 12.8 0.0**
ELOB Lg 15 12 32.8
ELOB Lobios 4.09 303 Pn Pn 15 11 26.1 +1.5
6.0nm,0.2s,SNR=24
ELOB Sn **Sn 15 12 12.8 0.0**
9.5nm,0.1s,SNR=7.4
ELOB Lg 15 12 32.8
14nm,0.2s,SNR=14
ELOB Lobios 4.09 303 Pn Pn 15 11 26.1 +1.5
6.0nm,0.2s,SNR=24
ELOB Sn **Sn 15 12 12.8 0.0**
9.5nm,0.1s,SNR=7.4
ELOB Lg 15 12 32.8
14nm,0.2s,SNR=14
ELOB Lobios 4.09 303 Pn Pn 15 11 26.1 +1.5
6.0nm,0.2s,SNR=24
ELOB Sn **Sn 15 12 12.8 0.0**
9.5nm,0.1s,SNR=7.4
ELOB Lg 15 12 32.8
14nm,0.2s,SNR=14
PBDV Barranco-do-Ve 4.29 236 *e*Pn **Pn 15 11 28.5 +1.1**
PBDV *e*Sn **Sn 15 12 16.5 -1.3**
PBDV *e*Sg **Sg 15 12 36.1 -3.1**
PBDV A 15 12 46.2
44nm,0.5s
PBDV Barranco-do-Ve 4.29 236 Pn Pn 15 11 28.5 +1.1
PBDV Sn **Sn 15 12 16.5 -1.3**
PBDV Lg 15 12 36.1
44nm,0.5s
PBDV Barranco-do-Ve 4.29 236 Pn Pn 15 11 28.5 +1.1
PBDV Sn **Sn 15 12 16.5 -1.3**
PBDV Lg 15 12 36.1
44nm,0.5s
PBDV Barranco-do-Ve 4.29 236 *e*Pn **Pn 15 11 28.5 +1.1**
PBDV *e*Sn **Sn 15 12 16.5 -1.3**
PBDV *e*Sg **Sg 15 12 36.1 -3.1**
44nm,0.5s
EPF Esparros 4.37 40 *e*Pn **Pn 15 11 29.5 +1.0**
EPF *e*Sn **Sn 15 12 17.1 -2.7**
EPF *e*Sg **Sg 15 12 40.8 -1.0**
41nm,0.3s
EPF Esparros 4.37 40 Pn Pn 15 11 29.5 +1.0
EPF Sn **Sn 15 12 17.1 -2.7**
EPF Lg 15 12 40.8
20nm,0.3s
EPF Esparros 4.37 40 Pn Pn 15 11 29.5 +1.0
EPF Sn **Sn 15 12 17.1 -2.7**
EPF Lg 15 12 40.8
20nm,0.3s
EPF Esparros 4.37 40 *e*Pn **Pn 15 11 29.5 +1.0**
EPF *e*Sn **Sn 15 12 17.1 -2.7**
EPF *e*Sg **Sg 15 12 40.8 -1.0**
20nm,0.3s
EMIR Miracle 4.38 58 Pg **Pg 15 11 41.0 -4.3**
EMIR Sn **Sn 15 12 16.3 -3.6**
EMIR Lg 15 12 40.3
EMIR Miracle 4.38 58 Lg 15 12 40.3
22nm,0.3s,SNR=7.9
EMIR Miracle 4.38 58 Lg 15 12 40.3
22nm,0.3s,SNR=7.9
EMIR Miracle 4.38 58 Pg **Pg 15 11 41.0 -4.3**
EMIR Sn **Sn 15 12 16.3 -3.6**
EMIR Lg 15 12 40.3
22nm,0.3s,SNR=7.9
EPON Pontenova 4.53 324 Pn Pn 15 11 31.5 +0.8
EPON Pg **Pg 15 11 48.1 -0.3**
EPON Sn **Sn 15 12 20.1 -3.7**
EPON Lg 15 12 46.5
EPON Pontenova 4.53 324 Pn Pn 15 11 31.5 +0.8
0.1nm,0.1s,SNR=7.9
EPON Pg **Pg 15 11 48.1 -0.3**
2.7nm,0.3s,SNR=4.6
EPON Sn **Sn 15 12 20.1 -3.7**
2.5nm,0.2s,SNR=7.9
EPON Lg 15 12 46.4
7.1nm,0.2s,SNR=8.4
EPON Pontenova 4.53 324 Pn Pn 15 11 31.5 +0.8
0.1nm,0.1s,SNR=7.9
EPON Pg **Pg 15 11 48.1 -0.3**
2.7nm,0.3s,SNR=4.6
EPON Sn **Sn 15 12 20.1 -3.7**
2.5nm,0.2s,SNR=7.9
EPON Lg 15 12 46.4
7.1nm,0.2s,SNR=8.4
EPON Pontenova 4.53 324 Pn Pn 15 11 31.5 +0.8
0.1nm,0.1s,SNR=7.9
PMAFR Mafra 4.57 262 *e*Pn **Pn 15 11 32.4 +1.1**
PMAFR *e*Sn **Sn 15 12 23.6 -1.2**
PMAFR Mafra 4.57 262 *e*Pn **Pn 15 11 32.4 +1.1**
PMAFR *e*Sn **Sn 15 12 23.6 -1.2**
EZAM Zamans 4.64 303 Pn Pn 15 11 33.1 +0.9
EZAM Sn **Sn 15 12 25.5 -0.8**
EZAM Lg 15 12 52.4
EZAM Zamans 4.64 303 Pn Pn 15 11 33.1 +0.9
0.9nm,0.1s,SNR=7.9
EZAM Sn **Sn 15 12 25.5 -0.8**
1.5nm,0.2s,SNR=7.9
EZAM Lg 15 12 52.4
10.0nm,0.3s,SNR=7.9
EZAM Zamans 4.64 303 Pn Pn 15 11 33.1 +0.9
0.9nm,0.1s,SNR=7.9
EZAM Sn **Sn 15 12 25.5 -0.8**
1.5nm,0.2s,SNR=7.9
EZAM Lg 15 12 52.4
10.0nm,0.3s,SNR=7.9
EZAM Zamans 4.64 303 Pn Pn 15 11 33.1 +0.9
0.9nm,0.1s,SNR=7.9
EZAM Sn **Sn 15 12 25.5 -0.9**
1.5nm,0.2s,SNR=7.9
EZAM Lg 15 12 52.4
10.0nm,0.3s,SNR=7.9
SALF Salau 4.64 48 P Pn 15 11 33.5 +1.3
SALF S **Sn 15 12 24.8 -1.6**
SALF Salau 4.64 48 P Pn 15 11 33.5 +1.3
SALF S **Sn 15 12 24.8 -1.6**
PTEO Sao Teotonio 4.66 244 *e*Pn **Pn 15 11 33.6 +1.2**
PTEO *e*Sn **Sn 15 12 26.1 -0.7**
PTEO *e*Sg **Sg 15 12 48.3 -2.7**
PTEO A 15 12 59.0
34nm,0.6s
PTEO Sao Teotonio 4.66 244 Pn Pn 15 11 33.6 +1.2
PTEO Sn **Sn 15 12 26.1 -0.7**
PTEO Lg 15 12 48.3
17nm,0.6s
PTEO Sao Teotonio 4.66 244 Pn Pn 15 11 33.6 +1.2
PTEO Sn **Sn 15 12 26.1 -0.7**
PTEO Lg 15 12 48.3
17nm,0.6s
PTEO Sao Teotonio 4.66 244 *e*Pn **Pn 15 11 33.6 +1.2**
PTEO *e*Sn **Sn 15 12 26.1 -0.7**
PTEO *e*Sg **Sg 15 12 48.3 -2.7**
34nm,0.6s
MORF Marmelete 4.73 241 *e*Pn **Pn 15 11 34.5 +1.1**
MORF *e*Sn **Sn 15 12 27.1 -1.5**
MORF A 15 12 56.8
16nm,0.5s
MORF Marmelete 4.73 241 Pn Pn 15 11 34.5 +1.1
MORF Sn **Sn 15 12 27.1 -1.5**
16nm,0.5s
MORF Marmelete 4.73 241 Pn Pn 15 11 34.5 +1.1
MORF Sn **Sn 15 12 27.1 -1.5**
16nm,0.5s
MORF Marmelete 4.73 241 *e*Pn **Pn 15 11 34.5 +1.1**
MORF *e*Sn **Sn 15 12 27.1 -1.5**
16nm,0.5s
ETOS Mallorca 4.84 88 Pn Pn 15 11 35.7 +0.7
ETOS Mallorca 4.84 88 Pn Pn 15 11 35.7 +0.7
0.6nm,0.1s,SNR=5.8
ETOS Mallorca 4.84 88 Pn Pn 15 11 35.7 +0.7
0.6nm,0.1s,SNR=5.8
ETOS Mallorca 4.84 88 Pn Pn 15 11 35.7 +0.7
0.6nm,0.1s,SNR=5.8
PFVI Vila Bisbo 4.94 240 *e*Pn **Pn 15 11 37.3 +1.0**
PFVI *e*Sn **Sn 15 12 33.0 -0.8**
PFVI *e*Sg **Sg 15 12 55.9 -4.2**
PFVI A 15 13 09.3
22nm,0.6s
PFVI Vila Bisbo 4.94 240 *e*Pn **Pn 15 11 37.3 +1.0**
PFVI *e*Sn **Sn 15 12 33.0 -0.8**
PFVI *e*Sg **Sg 15 12 55.9 -4.2**
22nm,0.6s
STS Santiago 4.96 311 Lg 15 13 01.3
6.5nm,0.1s,SNR=6.9
STS Santiago 4.96 311 Lg 15 13 01.3
6.5nm,0.1s,SNR=6.9
STS Santiago 4.96 311 Lg 15 13 01.3
6.5nm,0.1s,SNR=6.9
EMAZ Mazaricos 5.25 310 Pn Pn 15 11 42.2 +1.7
EMAZ Sn **Sn 15 12 39.7 -1.7**
EMAZ Lg 15 13 11.0
EMAZ Mazaricos 5.25 310 Pn Pn 15 11 42.2 +1.7
1.2nm,0.1s,SNR=7.9
EMAZ Sn **Sn 15 12 39.7 -1.7**
5.4nm,0.2s,SNR=7.9
EMAZ Lg 15 13 11.0
5.1nm,0.2s,SNR=7.9
EMAZ Mazaricos 5.25 310 Pn Pn 15 11 42.2 +1.7
1.2nm,0.1s,SNR=7.9
EMAZ Sn **Sn 15 12 39.7 -1.7**
5.4nm,0.2s,SNR=7.9
EMAZ Lg 15 13 11.0
5.1nm,0.2s,SNR=7.9
EMAZ Mazaricos 5.25 310 Pn Pn 15 11 42.2 +1.7
1.2nm,0.1s,SNR=7.9
EMAZ Sn **Sn 15 12 39.7 -1.7**
SNR=7.9
EMAZ Lg 15 13 11.0
5.1nm,0.2s,SNR=7.9
EJON La Jonquera 5.52 58 Lg 15 13 15.7
2.0nm,0.2s,SNR=7.9
EJON La Jonquera 5.52 58 Lg 15 13 15.7
2.0nm,0.2s,SNR=7.9
EJON La Jonquera 5.52 58 Lg 15 13 15.7
2.0nm,0.2s,SNR=7.9
MTLF Montolieu 5.59 48 *e*Pn **Pn 15 11 45.7 +0.5**
MTLF *e*Sn **Sn 15 12 45.1 -4.7**
MTLF *e*Sg **Sg 15 13 18.5 -2.4**
11nm,0.4s
MTLF Montolieu 5.59 48 Pn Pn 15 11 45.7 +0.5
MTLF Sn **Sn 15 12 45.1 -4.7**
MTLF Lg 15 13 18.5
5.6nm,0.4s
MTLF Montolieu 5.59 48 Pn Pn 15 11 45.7 +0.5
MTLF Sn **Sn 15 12 45.1 -4.7**
MTLF Lg 15 13 18.5
5.6nm,0.4s
MTLF Montolieu 5.59 48 *e*Pn **Pn 15 11 45.7 +0.5**
MTLF *e*Sn **Sn 15 12 45.1 -4.7**
MTLF *e*Sg **Sg 15 13 18.5 -2.4**
5.6nm,0.4s
LFF La Frestale 6.07 30 *e*Pn **Pn 15 11 52.0 +0.2**
LFF *e*Sn **Sn 15 12 57.2 -4.5**
7.9nm,0.3s
LFF La Frestale 6.07 30 Pn Pn 15 11 52.0 +0.2
LFF Sn **Sn 15 12 57.2 -4.5**
4.0nm,0.3s
LFF La Frestale 6.07 30 Pn Pn 15 11 52.0 +0.2
LFF Sn **Sn 15 12 57.2 -4.5**
4.0nm,0.3s
LFF La Frestale 6.07 30 *e*Pn **Pn 15 11 52.0 +0.2**
LFF *e*Sn **Sn 15 12 57.2 -4.5**
4.0nm,0.3s
CAF Calviac 6.62 36 *e*Pn **Pn 15 11 59.2 -0.1**
CAF *e*Sn **Sn 15 13 10.7 -4.4**
5.5nm,0.4s
CAF Calviac 6.62 36 Pn Pn 15 11 59.2 -0.1
CAF Sn **Sn 15 13 10.7 -4.4**
2.8nm,0.4s
CAF Calviac 6.62 36 Pn Pn 15 11 59.2 -0.1
CAF Sn **Sn 15 13 10.7 -4.4**
2.8nm,0.4s
CAF Calviac 6.62 36 *e*Pn **Pn 15 11 59.2 -0.1**
CAF *e*Sn **Sn 15 13 10.7 -4.4**
2.8nm,0.4s
RJF Les Rejaudoux 6.68 32 *e*Sn **Sn 15 13 12.4 -4.2**
5.8nm,0.3s
RJF Les Rejaudoux 6.68 32 Sn **Sn 15 13 12.4 -4.2**
2.9nm,0.3s
RJF Les Rejaudoux 6.68 32 Sn **Sn 15 13 12.4 -4.2**
2.9nm,0.3s
RJF Les Rejaudoux 6.68 32 *e*Sn **Sn 15 13 12.4 -4.2**
2.9nm,0.3s
LASF Ste Croix 6.98 49 *e*Pn **Pn 15 12 04.9 +0.6**
LASF *e*Sg **Sg 15 14 02.0 -3.5**
6.3nm,0.4s
LASF Ste Croix 6.98 49 Pn Pn 15 12 04.9 +0.6
LASF Lg 15 14 02.0
3.2nm,0.4s
LASF Ste Croix 6.98 49 Pn Pn 15 12 04.9 +0.6
LASF Lg 15 14 02.0

3.2nm,0.4s
LASF **Ste Croix** 6.98 49 *e*Pn Pn 15 12 04.9 +0.6
LASF *e*Sg Sg 15 14 02.0 -3.5
3.2nm,0.4s
TCF **Toulx Ste Croi** 7.76 31 *e*Sn Sn 15 13 37.7 -5.6
TCF **Toulx Ste Croi** 7.76 31 Sn Sn 15 13 37.7 -5.6
TCF **Toulx Ste Croi** 7.76 31 Sn Sn 15 13 37.7 -5.6
TCF **Toulx Ste Croi** 7.76 31 *e*Sn Sn 15 13 37.7 -5.6
ROSF **Rostrenen** 8.61 1 *e*Pn Pn 15 12 26.2 -0.4
ROSF *e*Sn Sn 15 13 58.7 -5.4
ROSF **Rostrenen** 8.61 1 Pn Pn 15 12 26.2 -0.4
ROSF Sn Sn 15 13 58.7 -5.4
ROSF **Rostrenen** 8.61 1 Pn Pn 15 12 26.2 -0.4
ROSF Sn Sn 15 13 58.7 -5.4
ROSF **Rostrenen** 8.61 1 *e*Pn Pn 15 12 26.2 -0.4
ROSF *e*Sn Sn 15 13 58.7 -5.4
PGF **Pioggiola** 9.82 69 *e*Pn Pn 15 12 42.4 -0.9
PGF **Pioggiola** 9.82 69 Pn Pn 15 12 42.4 -0.9
PGF **Pioggiola** 9.82 69 Pn Pn 15 12 42.4 -0.9
PGF **Pioggiola** 9.82 69 *e*Pn Pn 15 12 42.4 -0.9

*CSEM **06** 15:18:56.7±0.1,37°.64N×26°.83E,h12km,MD2.7,Error ellipse: s-maj=3.6km s-min=1.5km az=62.0*
*ISK **06** 15:18:56.8,37°.67N×26°.90E,h6km,MD2.8*
*ISCJB **06** 15:18:58.4±1.0,37°.69N±0°.05×26°.8E±0°.1,h33km,Error ellipse: s-maj=14.3km s-min=5.1km az=157.9*
*DDA **06** 15:18:58.3,37°.76N×26°.96E,h7km±1km,Md2.7*
ISC 06 15:18:57.7±1.1,37°.68N±0°.04×26°.85E±0°.09,h14km±7km, n19,σ0§86/26,1D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.30**	**86**	*i* S	**Sg**	**15 19 08.4**	**+0.1**
GCAM			|| *i*S	**Sg**	**15 19 03.9**	**-4.3**
GCAM	**G?zelcaml?**	**0.30**	**86**	*i* S	**Sg**	**15 19 08.4**	**+0.2**
URLA	**Izmir**	**0.71**	**344**	*i* P	**Pg**	**15 19 11.2**	**-0.3**
URLA				*i* S	**Sg**	**15 19 21.2**	**+0.3**
URLA	**Izmir**	**0.71**	**344**	*i* P	**Pg**	**15 19 11.2**	**-0.3**
URLA				*i* S	**Sg**	**15 19 21.2**	**+0.3**
BLCB	**Balcova**	**0.72**	**12**	*e*PG	**Pg**	**15 19 11.3**	**-0.5**
BLCB	**Balcova**	**0.72**	**12**	*e*Pg	**Pg**	**15 19 11.3**	**-0.4**
BDRM	**Kayabasi**	**0.77**	**142**	*e*P	**Pg**	**15 19 13.4**	**+0.7**
BDRM				*i* S	**Sg**	**15 19 25.2**	**+2.3**
BDRM	**Kayabasi**	**0.77**	**142**	*e*P	**Pg**	**15 19 13.4**	**+0.7**
IZM	**Izmir**	**0.79**	**24**	*e*PG	**Pg**	**15 19 12.4**	**-0.6**
IZM				*e*SG	**Sg**	**15 19 23.9**	**+0.5**
MLSB	**Milas**	**0.83**	**117**	*e*PG	**Pg**	**15 19 12.6**	**-1.2**
MLSB				*e*SG	**Sg**	**15 19 23.8**	**-0.9**
MLSB	**Milas**	**0.83**	**117**	*e*Pg	**Pg**	**15 19 12.6**	**-1.2**
MLSB				*e*Sg	**Sg**	**15 19 23.8**	**-0.9**
DAT	**Datca**	**1.11**	**148**	*e*PN	**Pn**	**15 19 17.9**	**-1.0**
DAT	**Datca**	**1.11**	**148**	*e*Pn	**Pn**	**15 19 17.9**	**-0.9**
YER	**Yerkesik**	**1.26**	**115**	*e*PN	**Pn**	**15 19 20.6**	**-0.3**
YER	**Yerkesik**	**1.26**	**115**	*e*Pn	**Pn**	**15 19 20.6**	**-0.3**
AKS	**Akhisar**	**1.42**	**32**	*e*PN	**Pn**	**15 19 23.7**	**+0.6**
AKS	**Akhisar**	**1.42**	**32**	*e*Pn	**Pn**	**15 19 23.7**	**+0.7**
KULA	**Kula-Manisa**	**1.65**	**59**	*e*PN	**Pn**	**15 19 27.1**	**+0.8**
KULA	**Kula-Manisa**	**1.65**	**59**	*e*Pn	**Pn**	**15 19 27.1**	**+0.8**

IDC 06 15:19:09.2±29.0,6°.53S×117°.50E,h136km±115km, mb3.5/3,mb1 3.6/4,mb1mx3.1/20,mbtmp3.5/4,ML3.8/1, Error ellipse: s-maj=298.1km s-min=167.5km az=151.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.98**	**146**	P	Pn	15 22 22.7	+1.3
	3.0nm,0.3s,baz=346,slow=9.5,SNR=11						
WRA	**Warramunga Arr**	**21.10**	**131**	P	P	15 23 43.0	0.0
	3.3nm,0.3s,baz=302,slow=12,SNR=184						
ASAR	**Alice Springs**	**23.22**	**139**	P	P	15 24 03.5	-0.7
	0.8nm,0.3s,baz=313,slow=8.3,SNR=50						
ASAR				ScP	ScP	15 31 13.7	-0.1
	0.2nm,0.6s,baz=322,slow=2.4,SNR=4.5						
STKA	**Stephens Creek**	**33.80**	**141**	P	P	15 25 38.9	+0.6
	1.7nm,0.8s,baz=318,slow=12,SNR=3.7						

IDC 06 15:27:20.1±5.1,16°.28S×176°.52W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/16,mbtmp4.0/3,Error ellipse: s-maj=158.0km s-min=99.1km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.00**	**240**	P	P	15 35 05.8	+0.8
	1.3nm,0.4s,baz=87,slow=11,SNR=9.9						
WRA	**Warramunga Arr**	**46.73**	**258**	P	P	15 35 50.6	-0.7
	0.3nm,0.5s,baz=96,slow=7.7,SNR=9.0						
ASAR	**Alice Springs**	**46.99**	**253**	P	P	15 35 53.1	-0.2
	4.4nm,0.5s,baz=90,slow=7.9,SNR=234						
ASAR				PcP	PcP	15 37 25.6	-0.3
	0.3nm,1.0s,baz=103,slow=3.9,SNR=4.1						

CASC 06 15:28:22.3±2.2,13°.33N×90°.33W,h30km±5km,MD3.7,1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.84**	**352**	*e*P	Pn	15 28 38.2	0.0
SBLS	**San Blas**	**0.85**	**54**	*e*P	Pn	15 28 38.4	+0.2
SBLS				*e*S	Sb	15 28 52.0	+2.4
RTR	**El Retiro**	**0.87**	**50**	*e*P	Pn	15 28 38.7	+0.3
RTR				*e*S	Sb	15 28 49.7	-0.4
SNJE	**San Jose**	**0.88**	**53**	*e*P	Pn	15 28 38.7	0.0
RBDL	**Robledal**	**0.99**	**39**	*e*P	Pn	15 28 40.6	+0.4
RBDL				*e*S	Sn	15 28 54.3	+1.0
PCG	**Pacaya**	**1.09**	**346**	*e*P	Pn	15 28 41.7	+0.2
BOQS	**Boqueron**	**1.09**	**69**	*e*P	Pn	15 28 41.5	-0.1
BOQS				*e*P		15 28 41.7	
BOQS				*e*S	Sn	15 28 56.0	+0.3
SNET	**Serv Nac Est T**	**1.12**	**72**	*e*P	Pn	15 28 41.8	-0.2
SNET				*e*S	Sn	15 28 56.0	-0.4
FUG	**Fuego 3**	**1.22**	**336**	*e*P	Pn	15 28 42.8	-0.5
NBG	**Las Nubes**	**1.25**	**359**	*e*P	Pn	15 28 45.7	+2.0
LFRS	**El Faro**	**1.26**	**77**	*e*P	Pn	15 28 43.4	-0.5
LFRS				*e*S	Sn	15 29 00.3	+0.4
LBRS	**Las Brisas**	**1.31**	**72**	*e*P	Pn	15 28 44.9	+0.3
FG6		**1.33**	**336**	*e*P	Pn	15 28 44.8	-0.1
MTO2	**Montecristo 2**	**1.42**	**41**	*e*P	Pn	15 28 46.9	+0.9
MTO2				*e*S	Sn	15 29 06.4	+2.7
SNVI	**San Vicente**	**1.47**	**79**	*e*P	Pn	15 28 47.1	+0.3
SNVI				*e*S	Sn	15 29 06.8	+1.7
TP2	**Tecpan 2**	**1.59**	**335**	*e*P	Pn	15 28 49.2	+0.7
TP2				*e*S	Sn	15 29 10.6	+2.6
JAT	**Jato**	**1.60**	**308**	*e*P	Pn	15 28 47.4	-1.2
MRL	**Marmol**	**1.83**	**20**	*e*P	Pn	15 28 54.5	+2.8
VSM	**San Miguel**	**2.00**	**87**	*e*P	Pn	15 28 54.8	+0.7
VSM				*e*S	Sn	15 29 18.8	+0.7
BLLM	**Bellamira**	**2.04**	**87**	*e*P	Pn	15 28 55.5	+1.0
BLLM				*e*S	Sn	15 29 20.9	+1.9
CAHU	**Cacacuatique**	**2.10**	**78**	*e*P	Pn	15 28 55.8	+0.3
CAHU				*e*S	Sn	15 29 22.5	+1.9
CNCH	**Conchagua**	**2.43**	**91**	*e*P	Pn	15 29 00.9	+0.9

MAN 06 15:31:33,17°.61N×122°.47E,h16km,mb4.9,ML3.8,MS3.9, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.54**	**184**	*e*P	Pg	15 31 44.4	+0.6
PALP				*e*S	Sg	15 31 52.2	+1.2
SGCP	**Mt. Cagua**	**0.75**	**328**	*e*P	Pg	15 31 47.0	-0.6
SGCP				*e*S	Sg	15 31 52.9	-4.6
CAUP	**Cauayan**	**0.90**	**223**	*e*P	Pb	15 31 51.0	+0.7
CAUP				*e*S	Sb	15 32 03.8	+1.8
APYP	**Conner**	**1.19**	**282**	*e*P	Pn	15 31 54.9	-0.2
APYP				*e*S	Sb	15 32 09.2	-1.2
ABRA	**Dolores**	**1.67**	**272**	*e*P	Pn	15 32 01.7	+0.1
ABRA				*e*S	Sn	15 32 23.9	+1.2
BALP	**Baler**	**2.04**	**205**	*e*P	Pn	15 32 07.6	+0.8
BALP				*e*S	Sn	15 32 22.5	-9.5
BCPH	**Baguio City Da**	**2.18**	**236**	*e*P	Pn	15 32 09.2	+0.6
BCPH				*e*S	Sn	15 32 38.0	+2.8

*IDC **06** 15:49:33.4±0.9,17°.56N×122°.65E,h0km,mb3.5/8, mb1 3.7/9,mb1mx3.6/24,mbtmp3.6/9,ML3.2/1,Error ellipse: s-maj=33.7km s-min=16.2km az=71.0*
*ISCJB **06** 15:49:37.0±0.9,17°.62N±0°.04×122°.61E±0°.07,h40km±9km, mb3.6/8,Error ellipse: s-maj=11.0km s-min=6.9km az=173.5*
*MAN **06** 15:49:38,12°.76N×123°.73E,h64km,mb4.3,ML3.1,MS2.9*
*NEIC **06** 15:49:38.0±0.5,17°.62N×122°.74E,h35km,mb4.1/1,Error ellipse: s-maj=14.7km s-min=8.4km az=73.0*
ISC 06 15:49:38.2±1.0,17°.59N±0°.04×122°.55E±0°.05,h34km±7km, n24,σ1§25/31,mb3.6/8,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**192**	*e*P	**Pb**	**15 49 48.5**	**-0.9**
PALP				*e*S	**Sb**	**15 49 57.1**	**+0.1**
SGCP	**Mt. Cagua**	**0.81**	**324**	*e*P	**Pn**	**15 49 51.2**	**-1.9**
SGCP				*e*S	**Sn**	**15 49 59.4**	**-4.5**
CAUP	**Cauayan**	**0.94**	**227**	*e*P	**Pn**	**15 49 55.1**	**+0.1**
CAUP				*e*S	**Sn**	**15 50 08.0**	**+0.7**
APYP	**Conner**	**1.27**	**283**	*e*P	**Pn**	**15 49 58.7**	**-0.8**
APYP				*e*S	**Sn**	**15 50 14.4**	**-1.0**
ABRA	**Dolores**	**1.75**	**272**	*e*P	**Pn**	**15 50 05.6**	**-0.5**
ABRA				*e*S	**Sn**	**15 50 25.5**	**-1.8**
BALP	**Baler**	**2.06**	**207**	*e*P	**Pn**	**15 50 11.6**	**+1.2**
BALP				*e*S	**Sn**	**15 50 33.0**	**-1.9**
BCPH	**Baguio City Da**	**2.23**	**238**	*e*P	**Pn**	**15 50 15.1**	**+2.3**
BCPH				*e*S	**Sn**	**15 50 43.2**	**+4.1**
BOLP	**Bolinao**	**2.79**	**245**	*e*P	**Pn**	**15 50 22.8**	**+2.3**
BBP	**Basco**	**2.89**	**349**	*e*P	**Pn**	**15 50 23.5**	**+1.7**
SCZP	**Santa Cruz**	**3.10**	**235**	*e*P	**Pn**	**15 50 28.3**	**+3.6**
YULB	**Yu-li**	**5.89**	**349**	P	**Pn**	**15 51 07.2**	**+4.1**
JOW	**Kunigami**	**10.62**	**29**	Pn	**Pn**	**15 52 05.8**	**-2.1**
	0.4nm,0.3s,baz=169,slow=28,SNR=2.2						
KSRS	**Korea Array**	**20.35**	**12**	P	**P**	**15 54 12.5**	**+0.8**
	0.8nm,0.6s,baz=200,slow=11,SNR=3.7						
CMAR	**Chiang Mai Arr**	**22.46**	**276**	P	**P**	**15 54 35.9**	**+1.4**
	0.2nm,0.4s,mb2.9,baz=96,slow=7.4,SNR=4.5						
SONM	**Songino Array**	**32.94**	**340**	P	**P**	**15 56 09.9**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=134,slow=12,SNR=3.2						
WRAB	**Tennant Creek**	**39.05**	**162**	*e*P	**P**	**15 57 01.1**	**-0.8**
	3.0nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**39.05**	**162**	P	**P**	**15 57 01.2**	**-0.8**
	3.5nm,0.9s,mb4.1,baz=343,slow=9.3,SNR=15						
WB2	**Warramunga Arr**	**39.06**	**162**	*e*P	**P**	**15 57 01.2**	**-0.8**
ASAR	**Alice Springs**	**42.48**	**164**	P	**P**	**15 57 30.2**	**+0.1**
	0.7nm,0.8s,mb3.4,baz=7.8,slow=9.3,SNR=12						
MKAR	**Makanchi Array**	**44.08**	**320**	P	**P**	**15 57 44.2**	**+1.2**
	0.5nm,0.7s,mb3.4,baz=118,slow=9.7,SNR=5.1						
MKAR	**Makanchi Array**	**44.08**	**320**	P	**P**	**15 57 44.2**	**+1.2**
KURK	**Kurchatov**	**48.04**	**324**	P	**P**	**15 58 14.2**	**+0.1**
	0.8nm,0.8s,mb3.8,baz=120,slow=7.4,SNR=7.1						
STKA	**Stephens Creek**	**52.47**	**160**	P	**P**	**15 58 48.0**	**+0.2**
	1.0nm,0.7s,mb3.9,baz=13,slow=15,SNR=2.9						
STKA	**Stephens Creek**	**52.47**	**160**	P	**P**	**15 58 48.0**	**+0.2**

*IDC **06** 16:08:52.4±0.7,55°.82N×162°.31E,h0km,mb3.7/14, mb1 3.9/16,mb1mx3.8/30,mbtmp3.8/16,ML3.3/2,MS3.1/2, Ms1 3.1/2,ms1mx2.2/29,Error ellipse: s-maj=24.3km s-min=13.7km az=160.0*
*KRSC **06** 16:08:54.5±0.3,55°.46N×162°.56E,h20km±14km,ML4.4*
*MOS **06** 16:08:54.7±1.4,55°.56N×162°.51E,h29km,mb4.5/4,Error ellipse: s-maj=15.5km s-min=8.0km az=73.3*
*ISCJB **06** 16:08:55.2±0.3,55°.46N±0°.02×162°.64E±0°.04,h33km, mb3.8/18,MS3.1/2,Error ellipse: s-maj=3.9km s-min=3.2km az=38.7*
*NEIC **06** 16:08:57.4±1.7,55°.65N×162°.31E,h37km±19km,mb4.1/4, Error ellipse: s-maj=17.8km s-min=10.5km az=161.0*
ISC 06 16:08:56.6±0.3,55°.49N±0°.02×162°.61E±0°.05,h35km,n51, σ1§18/69,mb3.8/18,MS3.1/2,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.73**	**9**	*i* P	**Pn**	**16 09 08.6**	**-1.8**
KBTR				*i* S	**Sn**	**16 09 19.2**	**-1.1**
MKZ	**Mys Kozlova**	**1.06**	**209**	*i* P	**Pn**	**16 09 12.8**	**-2.1**
MKZ				*e*S	**Sn**	**16 09 26.7**	**-1.7**
ZLN	**Zelenaya**	**1.15**	**298**	*i* P	**Pn**	**16 09 15.5**	**-0.6**
ZLN				*e*S	**Sn**	**16 09 30.7**	**+0.1**
KRSR	**Krestovskiy**	**1.36**	**303**	*i* P	**Pn**	**16 09 18.3**	**-0.8**
KRSR				*i* S	**Sn**	**16 09 35.3**	**-0.6**
KMNR	**Kamenistaya**	**1.37**	**282**	*e*P	**Pn**	**16 09 19.4**	**+0.2**
KMNR				*e*S	**Sn**	**16 09 37.1**	**+1.0**
KLY	**Klyuchi**	**1.38**	**308**	*i* P	**Pn**	**16 09 17.3**	**-1.9**
KLY				*i* S	**Sn**	**16 09 34.6**	**-1.6**
SRKR	**Sorokina**	**1.42**	**326**	*i* P	**Pn**	**16 09 19.4**	**-0.4**
SRKR				*e*S	**Sn**	**16 09 37.3**	**0.0**
KOZR	**Kozyr**	**1.64**	**292**	PN	**Pn**	**16 09 23.8**	**+1.0**
KOZR				S	**Sn**	**16 09 44.6**	**+2.0**
KOZ	**Kozyrevsk**	**1.65**	**291**	*e*P	**Pn**	**16 09 23.8**	**+0.8**
KOZ				*e*S	**Sn**	**16 09 44.6**	**+1.7**
BKI	**Bering**	**1.94**	**97**	*i* P	**Pn**	**16 09 26.3**	**-0.7**
BKI				*i* S	**Sn**	**16 09 50.1**	**0.0**
KII	**Karymskiy**	**2.34**	**233**	*i* P	**Pn**	**16 09 32.6**	**+0.2**
KII				*e*S	**Sn**	**16 10 01.3**	**+1.4**
SPN	**Mys Shipunski**	**2.83**	**213**	S	**Sn**	**16 10 09.8**	**-2.3**
NLC	**Nalytchevo**	**3.01**	**221**	*e*P	**Pn**	**16 09 41.3**	**-0.3**
NLC				*i* S	**Sn**	**16 10 15.2**	**-1.2**
SDLR	**Sedlovina**	**3.10**	**226**	*i* P	**Pn**	**16 09 43.3**	**+0.3**
SDLR				*e*S	**Sn**	**16 10 19.8**	**+1.0**
GNL	**Ganaly**	**3.25**	**238**	*e*P	**Pn**	**16 09 45.6**	**+0.6**
GNL				S	**Sn**	**16 10 23.5**	**+1.0**
PET	**Petropavlovsk**	**3.39**	**225**	*e*PN	**Pn**	**16 09 47.0**	**+0.2**
PET				*e*S	**Sn**	**16 10 26.4**	**+0.7**
PET				pmax	pmax		
	comp=Z,102nm,0.4s						
PET				smax			
	comp=N,246nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET	**Petropavlovsk**	**3.39**	**225**	*e*P	**Pn**	**16 09 47.1**	**+0.3**
PET				*e*S	**Sn**	**16 10 25.3**	**-0.4**
PET	**Petropavlovsk**	**3.39**	**225**	*e*Pn	**Pn**	**16 09 46.7**	**-0.1**
PETK	**Petropavlovsk-**	**3.74**	**232**	Pn	**Pn**	**16 09 52.4**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=58,slow=16,SNR=45						
PETK				Sn	**Sn**	**16 10 41.9**	**+7.6**
	comp=Z,1.3nm,0.3s,baz=68,slow=31,SNR=3.3						
PETK	**Petropavlovsk-**	**3.74**	**232**	Pn	**Pn**	**16 09 52.4**	**+0.8**
PETK				Sn	**Sn**	**16 10 41.9**	**+7.6**
RUS	**Russkaya**	**3.90**	**220**	*e*P	**Pn**	**16 09 53.7**	**-0.2**
RUS				*e*S	**Sn**	**16 10 37.4**	**-1.0**
ASAJ	**Asahikawa**	**17.14**	**237**	P	**Pn**	**16 12 55.0**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=346,slow=8.3,SNR=2.5						
TIXI	**Tiksi**	**21.60**	**331**	*e*P	**P**	**16 13 43.1**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb3.9						
TIXI	**Tiksi**	**21.60**	**331**	*e*P	**P**	**16 13 43.4**	**+0.5**
	comp=Z,4.4nm,0.7s,mb4.0						
TTA	**Tatalina**	**22.10**	**53**	*e*P	**P**	**16 13 50.9**	**+2.6**
TTA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
TTA	**Tatalina**	**22.10**	**53**	*e*P	**P**	**16 13 50.9**	**+2.6**
	comp=Z,5.3nm,0.6s,mb4.2						
KDAK	**Kodiak Island**	**24.41**	**66**	*i* P	**P**	**16 14 11.7**	**+0.4**
KDAK	**Kodiak Island**	**24.41**	**66**	P	**P**	**16 14 11.5**	**+0.3**
	comp=Z,3.9nm,0.4s,mb4.2,baz=315,slow=17,SNR=14						
KDAK	**Kodiak Island**	**24.41**	**66**	P	**P**	**16 14 11.5**	**+0.2**
COLD	**Coldfoot**	**24.78**	**43**	*e*P	**P**	**16 14 14.9**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.2						
MJAR	**Matsushiro Arr**	**25.20**	**231**	P	**P**	**16 14 18.5**	**-0.1**
	comp=Z,0.9nm,0.5s,mb3.5,baz=36,slow=7.8,SNR=6.8						
INK	**Inuvik**	**31.08**	**40**	P	**P**	**16 15 11.4**	**+0.6**
	comp=Z,0.3nm,0.3s,mb3.6,baz=288,slow=8.1,SNR=6.8						
INK	**Inuvik**	**31.08**	**40**	*e*P	**P**	**16 15 11.7**	**+0.9**
SONM	**Songino Array**	**34.83**	**281**	P	**P**	**16 15 44.2**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=79,slow=7.5,SNR=3.1						
YKA	**Yellowknife Ar**	**40.41**	**45**	P	**P**	**16 16 31.4**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.4,baz=300,slow=8.4,SNR=6.6						
YKA	**Yellowknife Ar**	**40.41**	**45**	P	**P**	**16 16 31.4**	**+0.7**
ZALV	**Zalesovo Beam**	**42.75**	**302**	LR	LR	16 35 54.5	
	comp=Z,20nm,20.2s,MS3.0,baz=61,slow=38						
KURK	**Kurchatov**	**47.73**	**301**	*e*P	**P**	**16 17 29.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,3.3s						
KURK	**Kurchatov**	**47.73**	**301**	P	**P**	**16 17 28.2**	**-1.3**
	comp=Z,0.8nm,0.4s,mb4.1,baz=57,slow=8.0,SNR=8.6						
MKAR	**Makanchi Array**	**48.46**	**295**	P	**P**	**16 17 34.8**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.8,baz=39,slow=3.2,SNR=4.3						
MKAR				LR	LR	16 39 15.1	
	comp=Z,32nm,21.1s,MS3.3,baz=272,slow=38						
BVAR	**Borovoye Array**	**50.06**	**308**	*e*P	**P**	**16 17 44.6**	**-2.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**50.06**	**308**	P	**P**	**16 17 44.7**	**-2.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=70,slow=8.3,SNR=4.0						
NVAR	**Mina Array Bea**	**53.59**	**73**	P	**P**	**16 18 15.6**	**+1.8**
	comp=Z,0.9nm,0.7s,mb3.8,baz=298,slow=6.2,SNR=5.1						
PDAR	**Pinedale Array**	**55.10**	**64**	P	**P**	**16 18 26.2**	**+1.4**
	comp=Z,0.2nm,0.5s,mb3.4,baz=0.0,slow=3.6,SNR=3.4						
ABKAR	**Akbulak array**	**57.36**	**311**	*e*P	**P**	**16 18 38.4**	**-2.4**
	comp=Z,0.5nm,0.5s,mb3.8						
FINES	**FINESS Array B**	**58.49**	**337**	P	**P**	**16 18 47.5**	**-1.0**
	comp=Z,1.2nm,0.6s,mb4.1,baz=39,slow=8.1,SNR=5.4						
FINES	**FINESS Array B**	**58.49**	**337**	P	**P**	**16 18 47.5**	**-1.1**
AKASG	**Malin Array Be**	**67.30**	**330**	*i* P	**P**	**16 19 47.9**	**+0.7**
AKASG	**Malin Array Be**	**67.30**	**330**	P	**P**	**16 19 44.6**	**-2.6**
	comp=Z,0.2nm,0.3s,mb3.6,baz=25,slow=6.9,SNR=4.2						
TXAR	**Lajitas Array**	**68.38**	**70**	P	**P**	**16 19 55.6**	**+1.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=300,slow=5.1,SNR=12						
ASAR	**Alice Springs**	**82.56**	**206**	P	**P**	**16 21 19.0**	**+3.6**
	comp=Z,0.1nm,0.5s,mb3.1,baz=14,slow=5.8,SNR=2.6						

*ISCJB **06** 16:18:40.7±0.3,2°.21S±0°.06×102°.12E±0°.07,h202km±4km, mb3.9/16,Error ellipse: s-maj=13.5km s-min=5.6km az=141.2*
*NEIC **06** 16:18:40.5±1.7,2°.10S×102°.20E,h181km±16km,mb4.3/4, Error ellipse: s-maj=21.2km s-min=8.3km az=46.0*
*IDC **06** 16:18:41.6±2.1,2°.07S×102°.25E,h192km±19km,mb3.8/13, mb1 3.8/15,mb1mx3.6/24,mbtmp3.8/15,Error ellipse: s-maj=21.8km s-min=9.0km az=51.0*
*DJA **06** 16:18:42,2°.22S×102°.14E,h170km,MLv4.3/12*
ISC 06 16:18:41.6±0.3,2°.20S±0°.06×102°.13E±0°.07,h194km±4km, n47,σ1§00/47,mb3.9/16,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDSI	**Sungai Dareh**	**1.44**	**331**	P	**Pn**	**16 19 13.9**	**-0.4**
KSI	**Kapahiang**	**1.51**	**162**	P	**Pn**	**16 19 15.6**	**+0.7**
PDSI	**Padang**	**2.10**	**308**	P	**Pn**	**16 19 20.5**	**-0.2**
PPSI	**Pulau Pagai**	**2.19**	**255**	P	**Pn**	**16 19 22.5**	**+0.8**
MNAI	**Manna**	**2.30**	**159**	P	**Pn**	**16 19 22.9**	**0.0**
MNAI				S	**Sn**	**16 19 54.2**	**+5.5**
PPI	**Padang Panjang**	**2.45**	**315**	P	**Pn**	**16 19 24.4**	**-0.2**
BKNI	**Bangkinang**	**2.74**	**337**	P	**Pn**	**16 19 27.9**	**0.0**
MDSI	**Maura Dua**	**3.06**	**138**	P	**Pn**	**16 19 36.1**	**+4.5**
SISI	**Saibi**	**3.16**	**286**	P	**Pn**	**16 19 33.0**	**+0.2**
MNSI	**Mandailing Nat**	**3.92**	**319**	P	**Pn**	**16 19 42.1**	**-0.1**
KASI	**Kota Agung**	**4.06**	**144**	P	**Pn**	**16 19 43.1**	**-0.8**
MYKOM	**Kota Tinggi**	**4.32**	**23**	P	**Pn**	**16 19 47.3**	**0.0**
GSI	**Gunungsitoli**	**5.73**	**307**	P	**Pn**	**16 20 04.9**	**-0.4**
	208nm,0.7s,4μm1.2nm						
PSI	**Prapat**	**5.91**	**327**	P	**Pn**	**16 20 04.3**	**-3.4**
	1.9nm,0.3s,baz=160,slow=11,SNR=8.0						
DBJI	**Dramaga**	**6.32**	**133**	P	**Pn**	**16 20 12.7**	**-0.3**
	31nm,0.9s,0.2nm						
TSI	**Tuntungan**	**6.69**	**328**	P	**Pn**	**16 20 18.0**	**+0.2**
	46nm,1.1s,0.2nm						
IPM	**Ipoh**	**6.73**	**351**	P	**Pn**	**16 20 19.7**	**+1.4**
	14nm,1.1s,0.0nm						
LEM	**Lembang**	**7.14**	**130**	P	**Pn**	**16 20 24.2**	**+0.5**
KHKI	**Kahang-Kahang**	**14.75**	**115**	P	**Pn**	**16 22 03.4**	**+2.3**
KAPI	**Kappang**	**17.81**	**100**	P	**Pn**	**16 22 36.3**	**-1.6**
	1.2nm,0.3s,baz=283,slow=11,SNR=9.2						
KAPI	**Kappang**	**17.81**	**100**	*e*P	**Pn**	**16 22 36.5**	**-1.4**
	45nm,1.1s						
KAPI	**Kappang**	**17.81**	**100**	P	**Pn**	**16 22 39.8**	**+1.9**
MRSI	**Marisa**	**19.99**	**83**	P	**P**	**16 23 01.1**	**+1.6**
CMAR	**Chiang Mai Arr**	**20.77**	**351**	P	**P**	**16 23 07.5**	**-0.2**
	0.7nm,0.6s,baz=183,slow=9.1,SNR=8.5						
FITZ	**Fitzroy Crossi**	**27.95**	**126**	P	**P**	**16 24 12.9**	**-1.4**
	1.2nm,0.6s,mb3.7,baz=79,slow=4.8,SNR=6.0						
FITZ	**Fitzroy Cr

TAKO	Tahkenitch	1.77	71	P	Pn	17 19 01.6	-2.1	
KBO	Bosley Butte	1.86	121	P	Pn	17 19 01.1	-4.0	
RNO	Roman Nose	2.05	68	P	Pn	17 19 06.2	-1.5	
DBO	Dodson Butte	2.30	91	P	Pn	17 19 08.8	-2.2	
HSO	Harness Mounta	2.42	81	P	Pn	17 19 10.9	-1.8	
MPOR	Mary's Peak	2.44	56	P	Pn	17 19 11.6	-1.3	
EUO	Eugene	2.55	70	P	Pn	17 19 13.2	-1.2	
HUMO	Hull Mountain	2.58	102	ePn	Pn	17 19 11.9	-3.0	
HUMO				eSn	Sn	17 19 45.2	-0.1	
COR	Corvallis	2.63	57	ePn	Pn	17 19 14.3	-1.2	
COR				eSn	Sn	17 19 46.5	0.0	
BBOR	Butler Butte	2.73	95	P	Pn	17 19 15.3	-1.6	
HEBO	Mount Hebo	2.77	42	ePn	Pn	17 19 16.1	-1.4	
HEBO				eSn	Sn	17 19 51.4	+1.5	
YBH	Yreka Blue Hor	3.08	117	Pn	Pn	17 19 19.7	-2.1	
	22nm,0.3s,baz=302,slow=12,SNR=108							
YBH				Sn	Sn	17 19 52.5	-5.1	
	2.6nm,0.3s,baz=32,slow=17,SNR=3.4							
YBH	Yreka Blue Hor	3.08	117	ePn	Pn	17 19 19.3	-2.5	
YBH				eSn	Sn	17 19 56.6	-1.0	
IRO	Indian Ridge	3.11	73	P	Pn	17 19 21.6	-0.5	
HUOR	Husband	3.42	73	P	Pn	17 19 26.3	-0.1	
WIFE	Three Sisters-	3.43	74	P	Pn	17 19 26.2	-0.3	
BKCOR	Black Crater	3.57	70	P	Pn	17 19 28.3	-0.2	
WDC	Whiskeytown Da	3.87	131	ePn	Pn	17 19 30.1	-2.6	
HOOD	Mount Hood Mea	4.01	56	ePn	Pn	17 19 34.6	+0.1	
GMO	Grizzlie Mount	4.12	70	P	Pn	17 19 35.3	-0.7	
VFP	Flag Point	4.12	57	P	Pn	17 19 36.1	0.0	
VIPM	Ingram Point	4.37	70	P	Pn	17 19 39.0	-0.5	
NLWA	Neilton Lookou	4.56	22	ePn	Pn	17 19 41.8	-0.3	
NLWA				eSn	Sn	17 20 35.1	+1.0	
MOD	Modoc	4.67	104	ePn	Pn	17 19 41.6	-2.0	
LON	Longmire	4.82	41	ePn	Pn	17 19 45.9	+0.3	
LON				eSn	Sn	17 20 30.8	-10	
HOPS	Hopland	4.88	148	ePn	Pn	17 19 44.1	-2.3	
GNW	Green Mountain	5.04	29	ePn	Pn	17 19 47.9	-0.9	
12nm,0.7s								
GNW				eSn	Sn	17 20 45.6	-0.4	
WVOR	Wild Horse Val	5.75	95	ePn	Pn	17 19 55.9	-2.5	
37nm,0.9s								
RSW	Rattlesnake Hi	5.80	54	ePn	Pn	17 19 58.8	-0.3	
22nm,0.4s								
HAWA	Hanford	5.83	54	ePn	Pn	17 19 58.6	-0.9	
28nm,0.6s								
PGC	Sidney	5.83	19	ePn	Pn	17 19 58.3	-1.2	
PGC				eSn	Sn	17 21 03.5	-1.9	
JCW	Jim Creek	5.90	30	ePn	Pn	17 20 00.9	+0.5	
JCW				eSn	Sn	17 21 07.3	+0.3	
ETW	Entiat	6.14	42	ePn	Pn	17 20 04.4	+0.7	
10.0nm,0.3s								
ETW				eSn	Sn	17 21 18.2	+5.3	
RPW	Rockport	6.26	31	ePn	Pn	17 20 05.7	+0.2	
8.6nm,0.4s								
RPW				eSn	Sn	17 21 16.5	+0.5	
LNOR	Lincton Mounta	6.38	62	ePn	Pn	17 20 05.7	-1.3	
13nm,0.7s								
BMO	Blue Mountains	6.75	73	ePn	Pn	17 20 11.2	-0.9	
23nm,0.8s								
CMB	Columbia Colle	6.87	136	ePn	Pn	17 20 15.4	+1.5	
9.5nm,0.6s								
BMN	Battle Mountai	7.38	109	eP	Pn	17 20 20.8	+0.1	
7.7nm,0.8s								
NVAR	Mina Array Bea	7.75	125	Pn	Pn	17 20 25.4	-0.5	
0.7nm,0.3s,baz=295,slow=14,SNR=23								
NEW	Newport	8.23	49	ePn	Pn	17 20 32.0	-0.4	
10nm,0.8s								
ELK	Elko	8.65	103	Pn	Pn	17 20 39.2	+1.0	
0.3nm,0.3s,baz=294,slow=11,SNR=28								
ELK	Elko	8.65	103	ePn	Pn	17 20 36.6	-1.7	
21nm,1.0s								
HLID	Hailey	8.73	83	ePn	Pn	17 20 40.1	+0.8	
15nm,0.7s								
N12A	Clover Valley,	8.76	102	ePn	Pn	17 20 41.3	+1.6	
29nm,0.8s								
BBB	Bella Bella	9.08	353	Pn	Pn	17 20 45.6	+1.6	
0.8nm,0.3s,baz=188,slow=12,SNR=7.0								
BBB				LR	LR	17 23 38.5		
comp=Z,648nm,19.8s,baz=193,slow=34								
M13A	Montello	9.24	97	ePn	Pn	17 20 46.8	+0.5	
18nm,0.6s								
N13A	Wendover, West	9.36	100	ePn	Pn	17 20 48.6	+0.7	
71nm,1.0s								
BSMT	Bassoo Peak	9.38	56	ePn	Pn	17 20 49.1	+0.9	
12nm,0.9s								
MSO	Missoula	9.53	63	ePn	Pn	17 20 49.7	-0.6	
34nm,1.2s								
JTMT	Jette	9.64	58	ePn	Pn	17 20 52.0	+0.2	
29nm,1.4s								
ISA	Isabella	9.68	138	ePn	Pn	17 20 53.5	+1.1	
14nm,1.0s								
SWMT	Swartz Lake	9.73	59	ePn	Pn	17 20 52.5	-0.5	
11nm,0.0s								
YBMT	Yellow Bay	9.86	57	ePn	Pn	17 20 54.6	-0.1	
21nm,1.3s								
MCMT	McKenzie Canyo	9.89	76	ePn	Pn	17 20 56.2	+1.0	
7.2nm,0.8s								
SLMT	Seeley Lake	9.96	62	eP	Pn	17 20 55.4	-0.7	
13nm,0.8s								
CHMT	Chamberlain Mo	10.01	64	ePn	Pn	17 20 56.2	-0.7	
30nm,1.4s								
DLMT	Dillon	10.12	73	ePn	Pn	17 20 58.5	+0.1	
32nm,1.0s								
HVU	Hansel Valley	10.15	93	ePn	Pn	17 20 59.9	+1.1	
32nm,1.7s								
BGU	Big Grassy Mou	10.18	98	ePn	Pn	17 20 59.8	+0.5	
46nm,1.3s								
LRM	Limekiln Ridge	10.29	70	ePn	Pn	17 21 00.6	-0.1	
73nm,0.8s								
DUG	Dugway	10.58	102	ePn	Pn	17 21 04.8	+0.1	
24nm,1.1s								
GSC	Goldstone	10.81	134	ePn	Pn	17 21 08.4	+0.5	
9.9nm,1.0s								
BOZ	Bozeman (W)	10.84	72	ePn	Pn	17 21 08.5	+0.4	
18nm,0.8s								
QLMT	Earthquake Lak	10.90	76	ePn	Pn	17 21 10.7	+1.7	
14nm,0.9s								
HRY	Holter Researc	10.90	66	ePn	Pn	17 21 08.4	-0.6	
12nm,0.8s								
RRI2	Red Ridge	10.99	84	ePn	Pn	17 21 11.8	+1.5	
86nm,1.5s								
DCID1	Drake Creek	11.07	83	ePn	Pn	17 21 12.7	+1.3	
34nm,0.9s								
HWUT	Hardware Ranch	11.07	93	ePn	Pn	17 21 11.8	+0.4	
9.7nm,0.9s								
NLU	North Lily Min	11.19	102	ePn	Pn	17 21 12.4	-0.7	
9.9nm,0.9s								
AHID	Auburn Hatcher	11.21	87	ePn	Pn	17 21 15.1	+1.8	
15nm,0.9s								
YMR	Madison River	11.22	77	ePn	Pn	17 21 15.2	+1.8	
37nm,0.9s								
IMW	Indian Meadow	11.23	81	ePn	Pn	17 21 14.9	+1.3	
20nm,0.9s								
TPAW	Teton Pass	11.25	83	ePn	Pn	17 21 15.8	+2.0	
50nm,0.9s								
YFT	Old Faithful	11.31	78	ePn	Pn	17 21 17.8	+3.2	
33nm,1.0s								
REDW	Red Top Meadow	11.33	84	ePn	Pn	17 21 16.0	+1.2	
85nm,1.6s								
SNOW	Snow King Moun	11.39	83	ePn	Pn	17 21 17.9	+2.1	
32nm,0.9s								
CCUT	Cedar City	11.41	115	ePn	Pn	17 21 16.9	+0.8	
12nm,0.9s								
YNR	Norris Junctio	11.43	77	ePn	Pn	17 21 17.9	+1.7	
48nm,1.1s								
JLU	Jordanelle	11.43	98	ePn	Pn	17 21 17.1	+0.8	
9.5nm,1.0s								
LOHW	Long Hollow	11.49	82	ePn	Pn	17 21 18.9	+1.8	
21nm,0.9s								
LKWY	Lake	11.62	78	ePn	Pn	17 21 14.2	-4.7	
67nm,1.4s								
DAU	Daniels Canyon	11.63	99	ePn	Pn	17 21 19.3	+0.3	
16nm,1.0s								
MSU	Marysvale	11.72	109	ePn	Pn	17 21 21.2	+0.9	
20nm,1.0s								
TMUT	Trail Mountain	12.06	104	ePn	Pn	17 21 25.6	+0.6	
16nm,0.9s								
GCMT	Greycliff	12.22	72	eP	Pn	17 21 27.6	+0.6	
11nm,0.9s								
PFO	Pinyon Flat Ob	12.32	138	ePn	Pn	17 21 26.3	-2.2	
PDAR	Pinedale Array	12.33	86	Pn	Pn	17 21 29.3	+0.7	
0.1nm,0.3s,baz=284,slow=13,SNR=33								
PDAR				LR	LR	17 26 39.7		
comp=Z,1μm,18.6s,baz=290,slow=40								
RLMT	Red Lodge	12.45	75	ePn	Pn	17 21 30.8	+0.7	
10nm,0.9s								
EGMT	Eagleton	12.60	62	ePn	Pn	17 21 31.4	-0.9	
39nm,1.2s								
SRU	San Rafael	12.62	103	ePn	Pn	17 21 33.3	+0.6	
13nm,1.0s								
EDM	Edmonton	13.26	36	ePn	Pn	17 21 41.5	+0.3	
GLA	Glamis	13.59	134	Pn	Pn	17 21 47.1	+1.2	
WUAZ	Wupatki	13.90	118	ePn	Pn	17 21 51.6	+1.6	
11nm,0.8s								
RWWY	Rawlins	14.24	89	ePn	Pn	17 21 53.5	-1.1	
8.6nm,0.9s								
LAO	LASA Array	14.70	69	ePn	Pn	17 21 59.9	-0.9	
20nm,0.8s								
MVCO	Mesa Verde	14.90	108	ePn	Pn	17 22 03.0	-0.6	
16nm,1.0s								
DLBC	Dease Lake	15.44	353	Pn	Pn	17 22 12.8	+2.3	
0.2nm,0.3s,baz=159,slow=16,SNR=4.0								
DLBC	Dease Lake	15.44	353	ePn	Pn	17 22 12.1	+1.5	
PHWY	Pilot Hill	15.61	90	ePn	Pn	17 22 12.6	-0.3	
7.2nm,1.0s								
ISCO	Idaho Springs	15.92	95	ePn	Pn	17 22 15.4	-1.5	
16nm,0.9s								
DGMT	Dagmar	16.32	63	ePn	Pn	17 22 21.1	-0.9	
20nm,0.6s								
TUC	Tucson	16.40	126	ePn	Pn	17 22 23.9	+0.7	
7.8nm,0.8s								
SDCO	Great Sand Dun	16.78	102	ePn	Pn	17 22 27.6	-0.2	
29nm,1.1s								
SKAG	Skagway	17.20	344	ePn	Pn	17 22 32.4	-0.6	
47nm,1.6s								
LAZ	Ladron	17.35	114	ePn	Pn	17 22 35.4	+0.4	
6.9nm,1.1s								
ANMO	Albuquerque	17.49	111	P	Pn	17 22 36.1	-0.7	
0.2nm,0.3s,baz=311,slow=12,SNR=24								
ANMO				LR	LR	17 28 50.5		
comp=Z,149nm,21.0s,baz=128,slow=36								
ANMO	Albuquerque	17.49	111	ePn	Pn	17 22 36.5	-0.3	
24nm,1.0s								
BNM	Barren Site	17.84	114	ePn	Pn	17 22 41.8	+0.7	
31nm,1.1s								
FFC	Flin Flon	19.64	45	eP	Pn	17 23 01.4	-1.2	
63nm,1.5s								
MNTX	Cornudas Mount	20.18	118	eP	P	17 23 08.1	+0.9	
7.5nm,1.0s								
GDL2	Guadalupe Moun	20.53	115	eP	P	17 23 13.1	+2.1	
11nm,1.1s								
YKA	Yellowknife Ar	20.54	16	P	P	17 23 10.9	0.0	
2.6nm,0.8s,baz=203,slow=11,SNR=19								
YKA				LR	LR	17 30 45.9		
comp=Z,10nm,21.6s,baz=140,slow=36								
YKA	Yellowknife Ar	20.54	16	P	P	17 23 10.9	0.0	
YKA				LR	LR	17 30 45.9		
AMTX	Amarillo	20.85	105	eP	P	17 23 14.3	-0.1	
63nm,1.0s								
ECSD	EROS Data Cent	21.57	78	eP	P	17 23 21.9	-0.3	
16nm,1.0s,mb4.4								
AGMN	Agassiz Refuge	21.82	66	eP	P	17 23 25.2	+0.4	
53nm,1.1s,mb4.9								
ULM	Lac du Bonnet	21.97	61	P	P	17 23 25.3	-1.1	
8.1nm,0.7s,mb4.3,baz=269,slow=11,SNR=18								
ULM				LR	LR	17 32 08.3		
comp=Z,312nm,21.3s,MS3.7,baz=136,slow=37								
ULM	Lac du Bonnet	21.97	61	P	P	17 23 25.3	-1.1	
ULM				LR	LR	17 32 08.3		
DAWY	Dawson	22.21	345	eP	P	17 23 30.8	+2.0	
KSU1	Kansas State U	22.73	90	P	P	17 23 35.3	+0.8	
50nm,0.9s,mb5.0								
TXAR	Lajitas Array	22.85	120	P	P	17 23 35.7	-0.2	
2.0nm,0.7s,mb3.7,baz=295,slow=8.2,SNR=17								
TXAR				LR	LR	17 32 00.9		
comp=Z,77nm,18.5s,MS3.2,baz=175,slow=36								
TXAR	Lajitas Array	22.85	120	P	P	17 23 35.7	-0.2	
TXAR				LR	LR	17 32 00.9		
WMOK	Wichita Mounta	22.98	102	eP	P	17 23 37.0	-0.2	
19nm,0.9s,mb4.5								
MCK	McKinley	24.32	336	eP	P	17 23 49.3	-0.5	
9.0nm,1.1s,mb4.1								
TRF	Thorofare Moun	24.54	334	eP	P	17 23 52.8	+1.0	
33nm,1.6s,mb4.6								
JCT	Junction City	24.65	112	eP	P	17 23 53.9	+0.7	
6.5nm,0.4s,mb4.5								
EYMN	Ely	24.75	67	eP	P	17 23 54.4	+0.6	
71nm,1.6s,mb5.0								
PPLA	Purkeypile	24.80	332	eP	P	17 23 55.3	+1.1	
39nm,1.4s,mb4.8								
BPAW	Bear Paw Mtn.	25.22	335	eP	P	17 23 58.4	+0.4	
17nm,1.3s,mb4.4								
FCC	Fort Churchill	25.28	41	eP	P	17 23 60.0	+1.3	
0.7nm,1.3s								
INK	Inuvik	25.46	354	P	P	17 24 00.8	+0.6	
2.7nm,0.9s,mb3.8,baz=160,slow=11,SNR=8.4								
INK				LR	LR	17 33 45.0		
comp=Z,276nm,20.4s,MS3.8,baz=304,slow=36								
INK	Inuvik	25.46	354	eP	P	17 24 00.5	+0.3	
5.8nm,1.1s,mb4.0								
CHUM	Lake Minchumin	25.50	333	eP	P	17 24 00.7	+0.2	
9.9nm,1.2s,mb4.2								
MIAR	Mount Ida	26.83	98	eP	P	17 24 13.2	+0.4	
10nm,0.9s,mb4.3								
CCM	Cathedral Cave	27.03	89	eP	P	17 24 13.8	-0.8	
70nm,1.7s,mb4.9								
BLO	Bloomington	30.07	84	P	P	17 24 41.5	-0.2	
WVT	Waverly	30.30	90	eP	P	17 24 43.9	+0.1	
9.0nm,0.9s,mb4.5								
PLAL	Pickwick Lake	30.63	92	eP	P	17 24 46.5	-0.2	
7.6nm,0.9s,mb4.5								
TKL	Tuckaleechee C	33.47	88	P	P	17 25 10.8	-0.9	
2.7nm,0.8s,mb4.2,baz=357,slow=5.8,SNR=2.9								
SADO	Sadowa	33.66	71	P	P	17 25 12.7	-0.5	
1.5nm,0.3s,mb4.4,baz=297,slow=14,SNR=4.7								
SADO				LR	LR	17 39 26.2		
comp=Z,353nm,20.0s,MS4.1,baz=71,slow=37								
RES	Resolute Bay	34.60	14	eP	P	17 25 21.2	+0.2	
1.9nm,0.8s,mb4.1								
GOGA	Godfrey	34.73	92	eP	P	17 25 22.3	-0.3	
20nm,1.1s,mb5.0								
JSC	Jenkinsville	35.93	89	eP	P	17 25 33.2	+0.3	
CMIG	Matias Romero	37.28	124	P	P	17 25 44.0	-0.5	
5.5nm,0.9s,mb4.4,baz=318,slow=8.7,SNR=5.3								
CMIG	Matias Romero	37.28	124	P	P	17 25 44.0	-0.5	
SCHQ	Schefferville	39.59	52	P	P	17 26 04.0	+0.5	
1.9nm,0.9s,mb3.8,baz=292,slow=16,SNR=2.9								
SCHQ				LR	LR	17 42 46.9		
comp=Z,354nm,18.5s,MS4.2,baz=268,slow=37								
SCHQ	Schefferville	39.59	52	P	P	17 26 04.0	+0.5	
SCHQ				LR	LR	17 42 46.9		
PETK	Petropavlovsk-	49.36	310	P	P	17 27 21.4	-0.1	
1.9nm,0.8s,mb4.2,baz=85,slow=11,SNR=4.1								
PETK	Petropavlovsk-	49.36	310	P	P	17 27 21.4	-0.1	
TIXI	Tiksi	54.00	338	eP	P	17 27 55.6	-0.3	
2.9nm,1.0s,mb4.2								
SPITS	Spitsbergen Ar	56.83	9	LR	LR	17 52 16.6		
comp=Z,92nm,18.1s,MS3.9,baz=65,slow=36								
ARCES	ARCESS Array B	65.70	10	LR	LR	17 58 18.9		
comp=Z,87nm,19.4s,MS4.0,baz=177,slow=36								
MDJ	Mudanjiang	69.47	312	P	P	17 29 38.4	-2.1	
MDJ				S	S	17 38 44.6	-1.4	
MDJ				ScS	ScS	17 39 39.1	-0.6	
MDJ				pmax	pmax			
comp=Z,9.0nm,2.0s,mb4.3								
MDJ				LR	LR			
comp=Z,34nm,23.7s,MS3.5								
NOA	NORSAR Array B	70.56	20	LR	LR	17 59 08.1		
comp=Z,32nm,18.7s,MS3.6,baz=240,slow=34								
CN2	Changchun	72.23	314	eP	P	17 29 56.5	-0.8	
CN2				pmax	pmax			
comp=Z,10.0nm,0.7s,mb4.8								
CBIJ	Chichi Jima	72.99	291	LR	LR	17 58 34.3		
comp=Z,25nm,20.1s,MS3.5,baz=72,slow=33								
ULN	Ulaanbaatar	77.83	326	P	P	17 30 30.1	+0.5	
comp=Z,4.2nm,1.5s,mb4.2								
SONM	Songino Array	78.12	327	P	P	17 30 31.5	+0.3	
comp=Z,1.4nm,1.0s,mb3.8,baz=295,slow=4.3,SNR=7.7								
SONM				LR	LR	18 06 42.2		
comp=Z,58nm,18.8s,MS3.9,baz=69,slow=37								
ZAA0	Zalesovo Array	79.62	342	P	P	17 30 38.2	-1.1	
ZALV	Zalesovo Beam	79.62	342	P	P	17 30 39.7	+0.5	
comp=Z,0.9nm,0.6s,mb3.9,baz=32,slow=5.8,SNR=5.0								
ZALV				LR	LR	18 03 54.4		
comp=Z,21nm,21.7s,MS3.4,baz=47,slow=34								
ZALV	Zalesovo Beam	79.62	342	P	P	17 30 39.7	+0.5	
ZALV				LR	LR	18 03 54.4		
LPAZ	La Paz	79.66	124	P	P	17 30 39.2	-0.7	
comp=Z,0.7nm,0.7s,mb3.7,baz=319,slow=8.2,SNR=3.5								
GUMO	Guam	79.94	279	LR	LR	18 03 41.5		
comp=Z,18nm,19.5s,MS3.4,baz=91,slow=34								
BRG	Berggiesshubel	80.16	24	eP	P	17 30 48.7	+6.5	
comp=Z,2.7nm,0.7s,mb4.3								
HHC	Hu-ho-hao-te	81.38	319	eP	P	17 30 48.8	-0.2	
HHC				pP	pP	17 30 53.5	-4.6	
HHC				sP	sP	17 30 55.8	-5.6	
HHC				PP	PP	17 33 56.0	+1.6	
HHC				S	S	17 40 57.4	-0.6	
HHC				sS	sS	17 41 05.5	-7.6	
HHC				SS	SS	17 46 15.5	+2.3	
HHC				pmax	pmax			
comp=Z,18nm,1.0s,mb5.0								
HHC				pmax	pmax			
comp=Z,130nm,5.5s								
HHC				LR	LR			
comp=N,84nm,17.8s,MS4.3								
HHC				LR	LR			
comp=E,100nm,16.4s,MS4.3								
HHC				LR	LR			
comp=Z,94nm,18.0s,MS4.2								
GERES	GERESS Array B	81.88	25	LR	LR	18 04 30.9		
comp=Z,44nm,20.1s,MS3.8,baz=230,slow=34								
ESDC	Sonseca Array	82.47	41	LR	LR	18 05 11.8		
comp=Z,92nm,18.8s,MS4.2,baz=310,slow=34								
BRVK	Borovoye	83.07	350	P	P	17 30 57.2	-0.4	
comp=Z,8.9nm,1.3s,mb4.6								
BVAR	Borovoye Array	83.08	350	P	P	17 30 58.3	+0.6	
comp=Z,1.0nm,0.8s,mb3.9,baz=28,slow=3.5,SNR=6.0								
BVAR				LR	LR	18 08 44.9		
comp=Z,74nm,21.6s,MS4.0,slow=36								
KURK	Kurchatov	83.98	344	P	P	17 31 01.9	-0.3	
comp=Z,1.6nm,0.8s,mb4.2,baz=15,slow=4.8,SNR=7.3								
AKASG	Malin Array Be	84.11	15	P	P	17 31 03.6	+0.6	
comp=Z,0.4nm,0.5s,mb3.8,baz=356,slow=5.4,SNR=2.4								
AKASG				LR	LR	18 08 01.1		
comp=Z,58nm,21.5s,MS3.9,baz=340,slow=35								
NJ2	Nanjing	84.26	309	eP	P	17 31 04.1	0.0	
NJ2				pmax	pmax			
comp=Z,20nm,0.5s,mb5.5								
MKAR	Makanchi Array	86.87	341	P	P	17 31 16.4	-0.3	
comp=Z,0.2nm,0.6s,mb3.6,baz=8.9,slow=3.4,SNR=3.2								
MKAR				LR	LR	18 10 54.6		
comp=Z,40nm,20.6s,MS3.8,baz=1.9,slow=36								
ABKAR	Akbulak array	87.78	356	eP	P	17 31 21.6	+0.5	
comp=Z,3.6nm,0.9s,mb4.6								
WHN	Wuhan	87.92	311	P	P	17 31 26.0	+3.8	
XAN	Xi'an	88.04	317	P	P	17 31 21.0	-1.7	
XAN				pP	pP	17 31 24.3	-7.5	
XAN				sP	sP	17 31 25.6	-10	
XAN				PP	PP	17 34 46.3	-2.4	
XAN				S	S	17 42 03.7	-0.8	
XAN				SS	SS	17 47 51.2	-0.3	
XAN				pmax	pmax			
comp=Z,1.0nm,0.6s,mb4.2								
XAN				pmax	pmax			
comp=Z,19nm,4.8s								
WMQ	Urumqi	88.17	336	eP	P	17 31 13.5	-10	
LZH	Lanzhou	88.81	321	eP	P	17 31 27.2	+1.0	
LZH				pP	pP	17 31 30.9	-4.5	
LZH				sP	sP	17 31 32.5	-6.2	
LZH				pmax	pmax			
comp=Z,15nm,1.0s,mb5.3								
KEST	Kesra	91.70	35	LR	LR	18 11 48.0		
comp=Z,39nm,20.4s,MS3.8,baz=238,slow=35								
CD2	Chengdu	93.12	319	P	P	17 31 47.0	+0.6	
CD2				pP	pP	17 31 51.8	-3.8	
CD2				sP	sP	17 31 54.0	-4.9	
CD2				PP	PP	17 35 31.9	+3.0	
CD2				SKS		17 42 18.6		
CD2				S	S	17 42 49.6	-1.6	
CD2				sS	sS	17 42 57.1	-9.4	
CD2				SS	SS	17 49 06.1	+1.2	
CD2				pmax	pmax			
comp=Z,10.0nm,0.5s,mb5.5								
CD2				pmax	pmax			
comp=Z,110nm,9.5s								
CD2				LR	LR			
comp=N,310nm,15.1s								
CD2				LR	LR			
comp=Z,270nm,16.4s,MS4.8								
GYA	Guiyang	95.28	314	P	P	17 31 55.8	-0.6	
GYA				pmax	pmax			
comp=Z,10.0nm,1.0s,mb5.2								
BRTR	Keskin Array B	95.51	15	LR	LR	18 17 46.2		
comp=Z,41nm,19.4s,MS3.9,baz=225,slow=37								
KMI	Kunming	98.40	316	P	P	17 32 09.2	-1.3	
KMI				pP	pP	17 32 13.4	-6.3	
KMI				sP	sP	17 32 14.6	-8.4	
KMI				PP	PP	17 36 06.8	-3.1	
KMI				S	S	17 43 33.6	-3.4	
KMI				SS	SS	17 50 18.6	-1.3	
KMI				pmax	pmax			
comp=Z,4.0nm,0.9s,mb5.0								
KMI				pmax	pmax			
comp=Z,55nm,5.3s								
KMI				LR	LR			
comp=N,66nm,14.7s,MS4.5								
KMI				LR	LR			
comp=E,89nm,13.8s,MS4.5								
KMI				LR	LR			
comp=Z,77nm,18.4s,MS4.2								
LSZ	Lusaka	144.69	46	ePKPdf	PKPdf	17 38 07.9	-1.3	

SKHL 06 17:23:09.5±0.7, 47°.77N×130°.83E, h10km, mb3.5/1,
Priamurye-Northeastern China border region

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

ISC 06 17:29:07.3±1.3, 24°28S±0°08×179°93W±0°09, h487km±17km, n49, σ0°91/36, mb4.1/15, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.87**	**38**	P	**P**	**17 31 55.0**	**-0.4**
	3.2nm,0.3s,baz=40,slow=23,SNR=5.2						
AFI	**Afiamalu**	**12.87**	**38**	P	**P**	**17 31 55.0**	**-0.4**
URZ	**Urewera**	**14.16**	**190**	P	**P**	**17 32 09.1**	**+0.3**
	3.5nm,0.3s,baz=305,slow=2.9,SNR=18						
URZ				S	**S**	**17 34 36.9**	**-1.5**
	1.7nm,0.3s,baz=47,slow=21,SNR=18						
RPZ	**Rata Peaks**	**20.75**	**199**	P	**P**	**17 33 12.7**	**-0.5**
	9.0nm,0.6s,baz=294,slow=1.9,SNR=12						
ARMA	**Armidale**	**25.95**	**250**	*eP*	**P**	**17 34 01.6**	**+1.6**
CNB	**Canberra Magne**	**28.72**	**240**	*eP*	**P**	**17 34 25.9**	**+1.7**
CTA	**Charters Tower**	**31.54**	**271**	*eP*	**P**	**17 34 50.0**	**+1.1**
	23nm,0.4s,mb5.0						
CTA	**Charters Tower**	**31.54**	**271**	P	**P**	**17 34 50.0**	**+1.1**
	27nm,0.4s,mb5.1,baz=94,slow=11,SNR=85						
CTAO	**Charters Tower**	**31.54**	**271**	*eP*	**P**	**17 34 49.9**	**+1.0**
TOO	**Toolangi**	**32.30**	**238**	*eP*	**P**	**17 34 55.7**	**+0.6**
STKA	**Stephens Creek**	**34.64**	**249**	*eP*	**P**	**17 35 15.7**	**+0.6**
	4.0nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**34.64**	**249**	P	**P**	**17 35 15.8**	**+0.7**
	4.2nm,0.5s,mb4.1,baz=92,slow=10,SNR=27						
ASAR	**Alice Springs**	**42.03**	**261**	P	**P**	**17 36 15.6**	**+0.1**
	4.0nm,0.5s,mb4.1,baz=93,slow=6.5,SNR=102						
ASAR				ScP	ScP	17 41 03.5	+0.2
	0.4nm,0.6s,baz=110,slow=4.4,SNR=4.6						
ASAR				S	**S**	**17 41 57.8**	**-1.1**
	0.2nm,0.7s,baz=103,slow=15,SNR=4.3						
WB2	**Warramunga Arr**	**42.43**	**267**	*eP*	**P**	**17 36 18.1**	**-0.6**
WRAB	**Tennant Creek**	**42.44**	**267**	*eP*	**P**	**17 36 17.9**	**-0.7**
	11nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**42.44**	**267**	P	**P**	**17 36 18.3**	**-0.4**
	9.1nm,0.3s,mb4.6,baz=98,slow=8.3,SNR=495						
WRA				ScP	ScP	17 41 05.5	+0.5
	1.6nm,0.9s,baz=99,slow=4.1,SNR=5.5						
FORT	**Forrest**	**46.24**	**250**	*eP*	**P**	**17 36 47.1**	**-0.9**
	22nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.41**	**275**	*eP*	**P**	**17 36 47.6**	**-1.9**
	7.9nm,0.3s,mb4.6						
KAKA	**Kakadu**	**46.41**	**275**	*eP*	**P**	**17 36 47.4**	**-2.1**
FITZ	**Fitzroy Crossi**	**50.86**	**266**	*eP*	**P**	**17 37 22.7**	**0.0**
	14nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.86**	**266**	P	**P**	**17 37 23.0**	**+0.3**
	8.5nm,0.6s,mb4.3,baz=121,slow=8.1,SNR=33						
SBA	**Scott Base**	**54.01**	**183**	*eP*	**P**	**17 37 46.3**	**+1.9**
MBWA	**Marble Bar**	**55.37**	**260**	*eP*	**P**	**17 37 54.2**	**-0.7**
MJAR	**Matsushiro Arr**	**72.24**	**326**	P	**P**	**17 39 42.3**	**-0.2**
	0.8nm,0.8s,mb3.3,baz=174,slow=3.7,SNR=4.4						
KSRS	**Korea Array**	**78.57**	**320**	P	**P**	**17 40 18.2**	**+0.4**
	1.3nm,0.6s,mb3.6,baz=132,slow=6.2,SNR=6.1						
PETK	**Petropavlovsk-**	**79.48**	**347**	P	**P**	**17 40 21.9**	**-0.3**
	2.7nm,0.6s,mb3.9,baz=115,slow=8.0,SNR=4.4						
PETK	**Petropavlovsk-**	**79.48**	**347**	P	**P**	**17 40 21.9**	**-0.3**
PFO	**Pinyon Flat Ob**	**83.41**	**49**	*eP*	**P**	**17 40 42.1**	**-0.9**
	4.4nm,0.6s,mb4.2						
VNA3	**Neumayer Olymp**	**84.50**	**177**	*e*	**P**	**17 40 47.8**	**0.0**
VNA2	**Neumayer--Watz**	**84.92**	**178**	*e*	**P**	**17 40 49.7**	**-0.1**
NVAR	**Mina Array Bea**	**84.98**	**44**	P	**P**	**17 40 50.8**	**+0.2**
	0.2nm,0.3s,mb3.2,baz=226,slow=7.3,SNR=3.3						
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P	**P**	**17 41 14.6**	**+1.2**
	1.3nm,0.8s,mb3.8,baz=140,slow=3.7,SNR=8.4						
TRF	**Thorofare Moun**	**90.51**	**13**	*eP*	**P**	**17 41 15.2**	**-0.8**
TXAR	**Lajitas Array**	**90.58**	**58**	P	**P**	**17 41 18.1**	**+1.0**
	0.5nm,0.7s,mb3.5,baz=224,slow=7.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**112.28**	**320**	PKiKP	PKiKP	17 46 44.9	-1.9
	0.4nm,0.4s,baz=119,slow=1.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**112.28**	**320**	PKPdf	PKiKP	17 46 44.9	-1.9
MKAR	**Makanchi Array**	**112.45**	**313**	PKiKP	PKiKP	17 46 45.8	-1.6
	0.2nm,0.4s,baz=74,slow=1.2,SNR=5.5						
BVAR	**Borovoye Array**	**120.76**	**319**	PKP	PKPdf	17 47 02.2	-1.0
	1.0nm,0.4s,baz=70,slow=1.5,SNR=8.1						
SPITS	**Spitsbergen Ar**	**125.50**	**356**	PKP	PKPdf	17 47 10.9	-0.7
	7.1nm,0.9s,baz=60,slow=4.9,SNR=6.3						
SPITS	**Spitsbergen Ar**	**125.50**	**356**	PKP	PKPdf	17 47 10.9	-0.7
ARCES	**ARCESS Array B**	**132.27**	**348**	PKP	PKPdf	17 47 23.3	-1.3
	1.7nm,0.9s,baz=65,slow=2.0,SNR=13						
FINES	**FINESS Array B**	**138.82**	**341**	PKP	PKPdf	17 47 37.0	0.0
	0.8nm,0.4s,baz=89,slow=3.4,SNR=5.4						
FINES				SKPbc	SKPbc	17 50 24.3	-1.4
	0.9nm,0.5s,baz=22,slow=4.5,SNR=3.7						
NOA	**NORSAR Array B**	**142.46**	**351**	PKhKP		17 47 39.3	
	0.4nm,0.5s,baz=16,slow=4.7,SNR=3.7						
AKASG	**Malin Array Be**	**145.32**	**327**	PKPbc	PKPbc	17 47 48.6	-1.2
	2.0nm,0.4s,baz=47,slow=4.1,SNR=13						
BRTR	**Keskin Array B**	**147.85**	**307**	PKPbc	PKPbc	17 47 56.5	-0.6
	1.7nm,0.7s,baz=130,slow=4.0,SNR=7.9						
BRTR				PKPab	PKPab	17 48 01.3	-0.1
	2.2nm,0.6s,baz=109,slow=3.5,SNR=8.9						
CLL	**Collm**	**151.23**	**343**	*i P*	PKPbc	17 48 04.3	-0.5
CLL	**Collm**	**151.23**	**343**	*i* PKPbc	PKPbc	17 48 04.3	-0.5
	comp=Z,7.0nm,0.7s						
BRG	**Berggiesshubel**	**151.36**	**342**	*i* PKP	PKPbc	17 48 05.1	-0.1
	comp=Z,5.3nm,0.5s						
GERES	**GERESS Array B**	**153.23**	**340**	PKPbc	PKPbc	17 48 08.2	-1.1
	comp=Z,0.5nm,0.7s,baz=156,slow=3.9,SNR=4.4						
GERES				PKPab	PKPab	17 48 23.0	-0.5
	comp=Z,0.1nm,0.3s,baz=72,slow=3.2,SNR=3.4						

*NEIC **06** 17:38:16.9±2.1, 51°44N×174°26W, h30km±13km, mb4.4/21, ML3.7(AEIC), Error ellipse: s-maj=13.8km s-min=5.6km az=176.0*
*ISCJB **06** 17:38:17.1±1.2, 51°4N±0°1×174°27W±0°06, h43km±7km, mb4.2/44, MS3.1/4, Error ellipse: s-maj=18.6km s-min=6.4km az=172.8*
*IDC **06** 17:38:18.7±0.8, 51°57N×174°21W, h44km±5km, mb3.6/20, mb1 3.8/22, mb1mx3.7/32, mbtmp3.7/22, ML3.8/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/35, Error ellipse: s-maj=23.2km s-min=11.2km az=2.0*

ISC 06 17:38:18.3±1.1, 51°5N±0°1×174°27W±0°06, h38km±7km, h46km±2.0km: pP-P, n88, σ0°88/86, mb4.2/44, MS3.1/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.28**	**300**	*e*Pn	**Pn**	**17 38 39.4**	**-0.2**
ADK	**Adak**	**1.56**	**286**	P	**Pn**	**17 38 42.2**	**-1.3**
ADK				S	**Sn**	**17 39 03.0**	**+0.5**
NIKO	**Nikolski**	**3.66**	**63**	*e*Pn	**Pn**	**17 39 12.9**	**+0.6**
UNV	**Unalaska Valle**	**5.29**	**60**	*e*Pn	**Pn**	**17 39 37.9**	**+3.2**
KDAK	**Kodiak Island**	**14.03**	**55**	P	**Pn**	**17 41 31.8**	**-2.4**
	0.4nm,0.3s,baz=252,slow=6.4,SNR=4.5						
SVW2	**Sparrevohn**	**14.12**	**40**	*e*Pn	**Pn**	**17 41 37.3**	**+1.9**
PETK	**Petropavlovsk-**	**17.19**	**286**	P	**Pn**	**17 42 14.9**	**-0.3**
	0.3nm,0.3s,baz=83,slow=15,SNR=6.8						
KTH	**Kantishna Hill**	**17.30**	**37**	*e*Pn	**Pn**	**17 42 17.6**	**+1.1**
	8.4nm,1.0s						
BPAW	**Bear Paw Mtn.**	**17.59**	**35**	*e*Pn	**Pn**	**17 42 21.0**	**+0.9**
	9.8nm,1.0s						
BILL	**Bilibino**	**19.14**	**338**	*e*Pn	**Pn**	**17 42 38.5**	**-0.4**
	12nm,1.1s						
COLD	**Coldfoot**	**19.78**	**28**	*e*Pn	**Pn**	**17 42 45.1**	**-1.4**
	4.7nm,0.9s						
INK	**Inuvik**	**25.78**	**34**	P	**P**	**17 43 44.5**	**-0.6**
	1.3nm,0.6s,mb3.7,baz=264,slow=8.4,SNR=5.6						
DLBC	**Dease Lake**	**25.94**	**57**	P	**P**	**17 43 47.3**	**+0.7**
	1.8nm,0.3s,mb4.0,baz=303,slow=14,SNR=5.7						
BBB	**Bella Bella**	**28.17**	**70**	LR	LR	17 54 32.6	
	comp=Z,76nm,19.0s,MS3.3,baz=119,slow=35						
YKA	**Yellowknife Ar**	**33.10**	**47**	P	**P**	**17 44 47.1**	**-3.0**
	0.2nm,0.6s,mb3.2,baz=275,slow=7.9,SNR=3.8						
YKA				PcP	PcP	17 47 32.9	+0.5
	0.4nm,0.7s,baz=291,slow=2.9,SNR=6.2						
YKA				LR	LR	18 00 07.5	
	comp=Z,7.1nm,19.4s,MS2.4,baz=20,slow=40						
EDM	**Edmonton**	**36.27**	**63**	*eP*	**P**	**17 45 16.3**	**-1.2**
MJAR	**Matsushiro Arr**	**36.61**	**265**	LR	LR	17 58 50.4	
	comp=Z,81nm,21.2s,MS3.5,baz=140,slow=34						
RES	**Resolute Bay**	**38.48**	**25**	P	**P**	**17 45 32.8**	**-3.2**
	0.4nm,0.5s,mb3.4,baz=301,slow=19,SNR=4.4						
MCMT	**McKenzie Canyo**	**40.44**	**74**	*e*Pn	**P**	**17 45 52.5**	**-0.1**
	0.9nm,0.6s,mb3.7						
NVAR	**Mina Array Bea**	**40.72**	**86**	P	**P**	**17 45 54.8**	**-0.2**
	0.3nm,0.6s,baz=283,slow=12,SNR=2.4						
NVAR				pP	pP	17 46 06.0	0.0
	0.6nm,0.8s,baz=286,slow=7.8,SNR=2.2						
KSRS	**Korea Array**	**42.47**	**274**	P	**P**	**17 46 08.8**	**-0.5**
	1.1nm,0.6s,mb3.7,baz=54,slow=8.1,SNR=5.8						
PDAR	**Pinedale Array**	**43.56**	**75**	P	**P**	**17 46 18.4**	**+0.2**
	0.7nm,0.7s,mb3.5,baz=327,slow=5.2,SNR=7.7						
PDAR				pP	pP	17 46 31.0	+1.9
	0.8nm,0.5s,baz=309,slow=3.9,SNR=5.9						
ULM	**Lac du Bonnet**	**47.24**	**59**	P	**P**	**17 46 46.1**	**-1.0**
	1.1nm,0.4s,mb4.2,baz=243,slow=4.7,SNR=3.8						
SONM	**Songino Array**	**49.12**	**299**	P	**P**	**17 47 01.8**	**+0.1**
	1.1nm,0.7s,mb4.0,baz=50,slow=8.1,SNR=11						
TXAR	**Lajitas Array**	**55.83**	**85**	P	**P**	**17 47 51.0**	**-0.6**
	0.4nm,0.8s,mb3.5,baz=302,slow=7.1,SNR=3.3						
TXAR				pP	pP	17 48 02.4	-0.5
	0.7nm,0.8s,baz=300,slow=3.6,SNR=5.7						
TXAR				LR	LR	18 10 08.8	
	comp=Z,31nm,20.7s,MS3.4,baz=0.0,slow=34						
GTA	**Gaotai**	**58.14**	**295**	*eP*	**P**	**17 48 07.8**	**0.0**
GTA				pP	pP	17 48 11.6	-7.5
GTA				sP	sP	17 48 15.1	-8.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ARCES	**ARCESS Array B**	**58.45**	**352**	P	**P**	**17 48 08.7**	**-0.9**
	comp=Z,1.6nm,0.7s,mb4.2,baz=21,slow=7.9,SNR=8.9						
ARCES				PcP	PcP	17 48 59.0	-0.8
	comp=Z,3.7nm,0.7s,baz=22,slow=4.3,SNR=6.6						
MK31	**Makanchi Array**	**62.16**	**311**	*eP*	**P**	**17 48 33.8**	**-1.4**
MKAR	**Makanchi Array**	**62.16**	**311**	P	**P**	**17 48 34.3**	**-0.9**
	comp=Z,0.6nm,0.3s,mb4.2,baz=42,slow=5.2,SNR=30						
MKAR				pP	pP	17 48 47.9	+1.2
	comp=Z,0.4nm,0.3s,baz=54,slow=5.1,SNR=6.4						
BVAR	**Borovoye Array**	**62.61**	**322**	P	**P**	**17 48 37.7**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.5,baz=55,slow=6.3,SNR=15						
BVAR				pP	pP	17 48 51.1	+1.6
	comp=Z,0.9nm,0.5s,baz=53,slow=5.3,SNR=5.2						
BVAR				PcP	PcP	17 49 17.2	+0.4
	comp=Z,2.4nm,0.7s,baz=62,slow=3.5,SNR=9.1						
GYA	**Guiyang**	**63.12**	**279**	*eP*	**P**	**17 48 44.0**	**+2.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
FINES	**FINESS Array B**	**66.27**	**349**	P	**P**	**17 49 00.4**	**-1.5**
	comp=Z,0.8nm,0.5s,mb4.0,baz=353,slow=10,SNR=2.9						
NB2	**NORSAR Subarra**	**67.76**	**357**	P	**P**	**17 49 10.5**	**-0.9**
	comp=Z,1.1nm,0.6s,mb4.1,baz=4.0,slow=6.5						
NOA	**NORSAR Array B**	**67.76**	**357**	P	**P**	**17 49 10.5**	**-0.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=3.0,slow=6.2,SNR=4.5						
AAK	**Ala-Archa**	**68.94**	**313**	P	**P**	**17 49 19.0**	**-0.1**
	comp=Z,0.8nm,0.4s,mb4.0,baz=133,slow=6.1,SNR=4.7						
EKS2	**Erkin-Say**	**69.25**	**313**	*eP*	**P**	**17 49 20.8**	**-0.2**
	comp=Z,2.0nm,0.6s,mb4.2						
LSA	**Lhasa**	**70.06**	**293**	*eP*	**P**	**17 49 27.6**	**+1.4**
	comp=Z,8.6nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**73.81**	**279**	P	**P**	**17 49 48.2**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=31,slow=6.4,SNR=6.7						
GUN	**Gumba**	**74.42**	**295**	*eP*	**P**	**17 49 53.1**	**+0.8**
	comp=Z,27nm,0.6s,mb5.4						
KKN	**Kakani**	**74.85**	**295**	*eP*	**P**	**17 49 55.3**	**+0.5**
	comp=Z,12nm,0.8s,mb4.9						
PKI	**Pulchoki**	**74.95**	**295**	*eP*	**P**	**17 49 56.0**	**+0.7**
PKIN	**Phulchoki**	**74.95**	**295**	*eP*	**P**	**17 49 56.1**	**+0.8**
	comp=Z,16nm,0.9s,mb5.0						
GKN	**Gorkha**	**75.05**	**296**	*eP*	**P**	**17 49 56.2**	**+0.3**
DMN	**Daman**	**75.09**	**296**	*eP*	**P**	**17 49 57.2**	**+1.1**
	comp=Z,8.5nm,0.7s,mb4.8						
KOLN	**Koldanda**	**75.81**	**297**	*eP*	**P**	**17 50 00.5**	**+0.2**
	comp=Z,9.4nm,0.6s,mb4.9						
AKASG	**Malin Array Be**	**76.27**	**345**	P	**P**	**17 50 00.7**	**-1.8**
	comp=Z,0.6nm,0.4s,mb3.9,baz=14,slow=5.2,SNR=3.0						
CLL	**Collm**	**77.42**	**355**	*eP*	**P**	**17 50 09.0**	**0.0**
CLL				LmV		17 08 00.0	
	comp=Z,100nm,18.0s						
KBL	**Kabul**	**77.97**	**311**	*eP*	**P**	**17 50 11.5**	**-0.8**
	comp=Z,4.5nm,1.0s,mb4.3						
GIVF	**Givet**	**78.81**	**1**	*eP*	**P**	**17 50 17.0**	**+0.3**
BAIF	**Baives**	**78.85**	**1**	*eP*	**P**	**17 50 17.3**	**+0.4**
	comp=Z,6.8nm,0.8s,mb4.3						
BAIF	**Baives**	**78.85**	**1**	*eP*	**P**	**17 50 17.3**	**+0.4**
	comp=Z,3.4nm,0.8s,mb4.3						
GERES	**GERESS Array B**	**79.84**	**355**	P	**P**	**17 50 22.5**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=20,slow=4.7,SNR=7.6						
FLN	**La Foliniere**	**80.01**	**4**	*eP*	**P**	**17 50 23.8**	**+0.6**
LDF	**La Druitiere**	**80.19**	**4**	*eP*	**P**	**17 50 23.9**	**-0.3**
GRR	**Gorron**	**80.37**	**4**	*eP*	**P**	**17 50 25.2**	**0.0**
CDF	**Champ du Feu**	**80.49**	**359**	*eP*	**P**	**17 50 26.0**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.4						
CDF	**Champ du Feu**	**80.49**	**359**	*eP*	**P**	**17 50 26.0**	**+0.1**
	comp=Z,3.0nm,0.6s,mb4.4						
QUIF	**Quistinic**	**80.70**	**6**	*eP*	**P**	**17 50 26.8**	**-0.2**
HAU	**Haudompre**	**80.91**	**360**	*eP*	**P**	**17 50 28.2**	**+0.1**
HINF	**Hinteralfeld**	**81.09**	**359**	*eP*	**P**	**17 50 29.0**	**-0.1**
	comp=Z,4.4nm,0.7s,mb4.2						
HINF	**Hinteralfeld**	**81.09**	**359**	*eP*	**P**	**17 50 29.0**	**-0.1**
	comp=Z,2.2nm,0.7s,mb4.2						
LOR	**Lormes**	**81.63**	**1**	*eP*	**P**	**17 50 32.2**	**+0.3**
	comp=Z,7.5nm,0.7s,mb4.4						
LOR	**Lormes**	**81.63**	**1**	*eP*	**P**	**17 50 32.2**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.4						
SSF	**Saint Saulge**	**81.83**	**2**	*eP*	**P**	**17 50 33.3**	**+0.3**
	comp=Z,8.0nm,0.7s,mb4.5						
SSF	**Saint Saulge**	**81.83**	**2**	*eP*	**P**	**17 50 33.3**	**+0.3**
	comp=Z,4.0nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**82.10**	**2**	*eP*	**P**	**17 50 34.5**	**+0.1**
	comp=Z,8.0nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**82.10**	**2**	*eP*	**P**	**17 50 34.5**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.4						
MFF	**Saint Martin d**	**82.18**	**4**	*eP*	**P**	**17 50 35.1**	**+0.3**
	comp=Z,14nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**82.18**	**4**	*eP*	**P**	**17 50 35.1**	**+0.3**
	comp=Z,6.8nm,0.9s,mb4.6						
SMF	**Signal de Mont**	**82.26**	**1**	*eP*	**P**	**17 50 35.5**	**+0.3**
	comp=Z,9.6nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**82.26**	**1**	*eP*	**P**	**17 50 35.5**	**+0.3**
	comp=Z,4.8nm,0.7s,mb4.5						
CABF	**La Chapelle**	**82.30**	**360**	*eP*	**P**	**17 50 36.2**	**+0.7**
	comp=Z,6.9nm,0.8s,mb4.4						
CABF	**La Chapelle**	**82.30**	**360**	*eP*	**P**	**17 50 36.2**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.3						
TCF	**Toulx Ste Croi**	**82.58**	**2**	*eP*	**P**	**17 50 37.0**	**+0.1**
	comp=Z,2.9nm,0.7s,mb4.1						
TCF	**Toulx Ste Croi**	**82.58**	**2**	*eP*	**P**	**17 50 37.0**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.1						
LPL	**La Plagne**	**83.40**	**359**	*eP*	**P**	**17 50 41.6**	**+0.4**
CAF	**Calviac**	**83.94**	**3**	*eP*	**P**	**17 50 44.4**	**+0.5**
	comp=Z,9.4nm,0.9s,mb4.6						
CAF	**Calviac**	**83.94**	**3**	*eP*	**P**	**17 50 44.4**	**+0.5**
	comp=Z,4.7nm,0.9s,mb4.6						
ORIF	**Oris-en-Rattie**	**84.00**	**360**	*eP*	**P**	**17 50 45.4**	**+1.2**
MBDF	**Montbardon**	**84.19**	**359**	*eP*	**P**	**17 50 45.3**	**+0.1**
LASF	**Ste Croix**	**84.83**	**1**	*eP*	**P**	**17 50 48.4**	**-0.1**
	comp=Z,6.3nm,1.0s,mb4.4						
SMRF	**Simiane la Rot**	**84.94**	**0**	*eP*	**P**	**17 50 50.2**	**+1.2**
	comp=Z,9.1nm,1.0s,mb4.6						
SMRF	**Simiane la Rot**	**84.94**	**0**	*eP*	**P**	**17 50 50.2**	**+1.2**
	comp=Z,9.1nm,1.0s,mb4.9						
FRF	**La Foret Royal**	**85.35**	**359**	*eP*	**P**	**17 50 51.3**	**+0.2**
MTLF	**Montolieu**	**85.53**	**3**	*eP*	**P**	**17 50 52.6**	**+0.6**
	comp=Z,5.3nm,0.9s,mb4.5						
MTLF	**Montolieu**	**85.53**	**3**	*eP*	**P**	**17 50 52.6**	**+0.6**
	comp=Z,2.7nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**87.53**	**226**	P	**P**	**17 51 01.1**	**-0.8**
	comp=Z,0.6nm,0.8s,mb3.9,baz=24,slow=5.8,SNR=7.5						
BOSA	**Boshof**	**152.88**	**320**	PKPbc	PKPbc	17 58 11.3	+0.4
	comp=Z,2.4nm,0.6s,baz=59,slow=5.9,SNR=6.6						

*ISCJB **06** 17:44:14.8±4.9, 11°66N±0°09×143°0E±0°1, h30km±35km, mb4.1/17, Error ellipse: s-maj=20.0km s-min=10.8km az=37.6*
*NEIC **06** 17:44:17.1±0.4, 11°68N×143°09E, h35km, mb4.3/4, Error ellipse: s-maj=11.7km s-min=8.2km az=114.0*
*IDC **06** 17:44:17.7±3.5, 11°67N×143°13E, h40km±32km, mb3.8/13, mb1 4.0/14, mb1mx3.9/25, mbtmp3.8/14, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/29, Error ellipse: s-maj=24.6km s-min=17.7km az=113.0*

ISC 06 17:44:16.7±5.3, 11°67N±0°09×143°1E±0°1, h31km±38km, n22, σ0°63/22, mb4.1/17, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.60**	**43**	Pn	**Pn**	**17 44 56.1**	**-0.5**
	26nm,0.3s,baz=193,slow=7.1,SNR=21						
GUMO				Sn	**Sn**	**17 45 27.8**	**+0.6**
	37nm,0.3s,baz=41,slow=22,SNR=8.4						
WRAB	**Tennant Creek**	**32.55**	**195**	*eP*	**P**	**17 50 45.4**	**+0.1**
WRA	**Warramunga Arr**	**32.57**	**195**	P	**P**	**17 50 45.0**	**-0.4**
	1.3nm,0.6s,mb4.0,baz=18,slow=9.6,SNR=8.7						
ENH	**Enshi**	**36.20**	**306**	*eP*	**P**	**17 51 16.6**	**-0.2**
ASAR	**Alice Springs**	**36.24**	**194**	P	**P**	**17 51 17.5**	**+0.4**
	0.6nm,0.6s,mb3.7,baz=18,slow=12,SNR=4.4						
PETK	**Petropavlovsk-**	**42.97**	**13**	LR	LR	18 10 30.3	
	comp=Z,31nm,19.2s,baz=72,slow=37						
CMAR	**Chiang Mai Arr**	**43.04**	**285**	P	**P**	**17 52 15.6**	**+1.6**
	2.2nm,0.8s,mb4.0,baz=84,slow=6.2,SNR=18						
SONM	**Songino Array**	**47.31**	**327**	P	**P**	**17 52 48.3**	**+0.9**
	0.4nm,0.6s,mb3.5,baz=146,slow=8.6,SNR=5.4						
MKAR	**Makanchi Array**	**61.66**	**317**	P	**P**	**17 54 32.1**	**+0.5**
	0.4nm,0.6s,mb3.7,baz=104,slow=7.3,SNR=6.4						
ZALV	**Zalesovo Beam**	**62.16**	**325**	P	**P**	**17 54 34.6**	**-0.3**
	0.3nm,0.4s,mb3.8,baz=64,slow=13,SNR=2.7						
KURK	**Kurchatov**	**64.92**	**321**	*eP*	**P**	**17 54 52.4**	**-0.7**
	9.5nm,0.8s,mb4.9						
BPAW	**Bear Paw Mtn.**	**69.16**	**25**	*eP*	**P**	**17 55 19.5**	**-0.4**
	2.6nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**70.34**	**322**	P	**P**	**17 55 27.1**	**-0.2**
	1.3nm,0.6s,mb4.0,baz=101,slow=7.7,SNR=11						
COLD	**Coldfoot**	**70.38**	**22**	*eP*	**P**	**17 55 27.6**	**+0.3**
	3.5nm,1.0s,mb4.2						
ABKAR	**Akbulak array**	**76.77**	**318**	*eP*	**P**	**17 56 04.9**	**-0.4**
	0.5nm,0.5s,mb3.7						
INK	**Inuvik**	**76.80**	**22**	P	**P**	**17 56 04.5**	**-0.5**
	1.2nm,0.8s,mb3.9,baz=277,slow=9.4,SNR=5.3						
YKA	**Yellowknife Ar**	**85.36**	**27**	P	**P**	**17 56 50.9**	**+0.2**
	1.3nm,0.6s,mb4.3,baz=287,slow=4.9,SNR=24						
YKA	**Yellowknife Ar**	**85.36**	**27**	P	**P**	**17 56 50.9**	**+0.2**
RES	**Resolute Bay**	**86.81**	**13**	P	**P**	**17 56 57.9**	**+0.2**
	2.2nm,0.8s,mb4.4,baz=292,slow=2.6,SNR=11						
ARCES	**ARCESS Array B**	**88.35**	**342**	P	**P**	**17 57 04.8**	**-0.3**
	1.2nm,0.5s,mb4.4,baz=60,slow=7.3,SNR=15						
NVAR	**Mina Array Bea**	**89.50**	**51**	P	**P**	**17 57 11.8**	**+0.6**
	1.1nm,0.6s,mb4.3,baz=262,slow=5.8,SNR=8.3						
FINES	**FINESS Array B**	**92.13**	**335**	P	**P**	**17 57 21.5**	**-1.4**
	2.0nm,0.8s,mb4.5,baz=100,slow=7.9,SNR=5.5						

*TAP **06** 17:57:44.7, 24°53N×122°22E, h75km, ML3.2, C*
*ISCJB **06** 17:57:45.2±0.5, 24°49N±0°03×122°27E±0°02, h67km±6km, Error ellipse: s-maj=5.0km s-min=2.9km az=161.5*
*JMA **06** 17:57:45.1±0.2, 24°75N×122°30E, h71km, M2.2*

**ISC 06 17:57:45.7±0.5, 24°50N±0°03×122°27E±0°02, h65km

JIJ			*e*S	**Sn**	**17 58 34.2**	**-0.1**
ELDTW	**Lidau**	**1.74 222**	P	**Pn**	**17 58 13.0**	**-0.7**
	baz=214					
ELDTW			*e*S	**Sn**	**17 58 33.7**	**-1.1**
	baz=214					
WGK	**Gukeng**	**1.76 243**	*e*P	**Pn**	**17 58 14.8**	**+0.8**
	baz=253					
WGK			*e*S	**Sn**	**17 58 35.8**	**+0.5**
	baz=253					
CHN4	**Tsaushan**	**1.91 234**	*e*P	**Pn**	**17 58 16.8**	**+0.8**
	baz=232					
CHN4			*e*S	**Sn**	**17 58 41.0**	**+1.9**
	baz=232					
STYT	**Tauyuan**	**1.92 226**	P	**Pn**	**17 58 16.4**	**+0.2**
	baz=224					
STYT			*e*S	**Sn**	**17 58 39.2**	**0.0**
	baz=224					
WTP	**Ta-pu**	**1.96 231**	*e*P	**Pn**	**17 58 17.3**	**+0.6**
	baz=229					
WTP			*e*S	**Sn**	**17 58 40.7**	**+0.4**
	baz=229					
TWG	**Pinlang**	**2.00 213**	*e*P	**Pn**	**17 58 16.2**	**-1.0**
	baz=211					
TWG			*e*S	**Sn**	**17 58 39.4**	**-1.8**
	baz=211					
CHN1	**Nanshi**	**2.06 231**	*e*P	**Pn**	**17 58 17.9**	**-0.1**
	baz=229					
CHN1			*e*S	**Sn**	**17 58 43.7**	**+1.0**
	baz=229					
SGST	**Jiashian**	**2.09 228**	*e*P	**Pn**	**17 58 19.2**	**+0.7**
	baz=226					
SGST			*e*S	**Sn**	**17 58 44.4**	**+1.0**
	baz=226					
JTJ	**Tarama**	**2.22 86**	P	**Pn**	**17 58 20.8**	**+0.6**
JTJ			*e*S	**Sn**	**17 58 47.2**	**+0.6**
ECL	**Taimali**	**2.25 213**	*e*P	**Pn**	**17 58 19.3**	**-1.3**
	baz=211					
ECL			*e*S	**Sn**	**17 58 44.7**	**-2.5**
	baz=211					
SSD	**Sandimen**	**2.30 221**	*e*P	**Pn**	**17 58 22.0**	**+0.7**
	baz=209					
SSD			*e*S	**Sn**	**17 58 49.2**	**+0.7**
	baz=209					
EAST	**Anshuo**	**2.48 212**	*e*P	**Pn**	**17 58 23.0**	**-0.7**
	baz=205					
EAST			*e*S	**Sn**	**17 58 51.0**	**-1.9**
	baz=205					

*NEIC **06** 18:20:18.7±1.0, 19°.87S×176°.16W, h35km, mb4.5/1, Error ellipse: s-maj=31.5km s-min=20.6km az=147.0*

IDC 06 18:20:14.0±1.2, 19°.50S×176°.32W, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.9/17, mbtmp4.0/5, ML4.4/1, Error ellipse: s-maj=52.1km s-min=26.2km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.55**	**196**	P	Pn	18 24 42.5	-2.0
	1.2nm,0.3s,baz=18,slow=19,SNR=9.4						
URZ	**Urewera**	**19.55**	**196**	*e*P	Pn	18 24 39.5	-5.0
URZ				P		18 24 42.5	
CTAO	**Charters Tower**	**35.17**	**263**	P	P	18 27 12.2	+2.3
STKA	**Stephens Creek**	**39.64**	**243**	P	P	18 27 48.5	+0.7
	1.3nm,0.8s,baz=97,slow=16,SNR=2.4						
STKA	**Stephens Creek**	**39.64**	**243**	P	P	18 27 48.5	+0.7
ASAR	**Alice Springs**	**46.29**	**256**	P	P	18 28 41.9	+0.1
	0.7nm,0.5s,baz=92,slow=8.1,SNR=16						
WB2	**Warramunga Arr**	**46.30**	**261**	*e*P	P	18 28 41.9	0.0
WRAB	**Tennant Creek**	**46.30**	**261**	*e*P	P	18 28 41.7	-0.2
	2.2nm,0.3s						
WRA	**Warramunga Arr**	**46.31**	**261**	P	P	18 28 41.9	-0.1
	1.7nm,0.3s,baz=95,slow=7.5,SNR=150						
MBWA	**Marble Bar**	**59.62**	**256**	*e*P	P	18 30 19.0	-1.2
TXAR	**Lajitas Array**	**85.19**	**57**	P	P	18 32 54.3	+1.7
	0.5nm,0.7s,baz=166,slow=5.8,SNR=4.8						
ARCES	**ARCESS Array B**	**128.22**	**350**	PKP	PKPdf	18 39 19.8	-1.9
	1.2nm,0.9s,baz=10,slow=5.5,SNR=4.3						
GERES	**GERESS Array B**	**149.63**	**347**	PKPbc	PKPbc	18 40 04.5	-1.0
	0.4nm,0.6s,baz=26,slow=3.4,SNR=5.4						

*NEIC **06** 18:57:24.5, 51°.46N×174°.50W, h7km, ML3.0(AEIC), After AEIC.*

*IDC **06** 18:57:25.0±6.3, 52°.45N×174°.58W, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/27, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=163.5km s-min=24.8km az=171.0*

ISC 06 18:57:22.5±5.8, 51°.5N±0°.5×174°.2W±0°.1, h20km±33km, n8, σ0°88/9, mb3.6/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.33**	**299**	*e*Pg	**Pn**	**18 57 46.7**	**+0.7**
ADK	**Adak**	**1.62**	**286**	P	**Pn**	**18 57 49.4**	**-0.5**
ADK				S	**Sn**	**18 58 10.3**	**+0.1**
KDAK	**Kodiak Island**	**13.97**	**55**	Pn	**Pn**	**19 00 38.5**	**-0.6**
	0.2nm,0.3s,baz=228,slow=14,SNR=4.8						
YKA	**Yellowknife Ar**	**33.06**	**47**	P	**P**	**19 03 58.8**	**+2.7**
	0.1nm,0.5s,mb3.0,baz=282,slow=9.6,SNR=2.8						
SONM	**Songino Array**	**49.17**	**299**	P	**P**	**19 06 08.7**	**+0.1**
	0.2nm,0.7s,mb3.2,baz=38,slow=8.4,SNR=3.7						
ARCES	**ARCESS Array B**	**58.45**	**352**	P	**P**	**19 07 15.1**	**-1.1**
	1.8nm,1.0s,mb4.1,baz=23,slow=6.6,SNR=5.2						
MKAR	**Makanchi Array**	**62.21**	**311**	P	**P**	**19 07 41.9**	**-0.4**
	0.2nm,0.3s,mb3.8,baz=50,slow=5.1,SNR=12						
BVAR	**Borovoye Array**	**62.65**	**322**	P	**P**	**19 07 45.0**	**0.0**
	0.6nm,0.5s,mb4.0,baz=51,slow=10,SNR=7.4						

*NEIC **06** 19:00:12.2, 16°.86N×99°.26W, h48km, MD3.6(MEX), After MEX.*

MEX 06 19:00:12.2±0.9, 16°.86N×99°.26W, h48km±25km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.63**	**271**	*i*P	Pn	19 00 23.2	-1.7
ACX				*i*S	Sn	19 00 31.9	-2.2
ACX	**Acapulco**	**0.63**	**271**	*i*P	Pn	19 00 23.2	-1.7
ACX				*i*S	Sn	19 00 31.9	-2.2
CAIG	**El Cayaco**	**0.98**	**281**	*i*P	Pn	19 00 27.9	-1.7
CAIG				*i*S	Sn	19 00 41.2	-1.3
CAIG	**El Cayaco**	**0.98**	**281**	*i*P	Pn	19 00 27.9	-1.7
CAIG				*i*S	Sn	19 00 41.2	-1.3
PNIG	**Pinotepa**	**1.18**	**113**	*i*P	Pn	19 00 31.2	-1.1
PNIG				*i*S	Sn	19 00 45.4	-1.9
PNIG	**Pinotepa**	**1.18**	**113**	*i*P	Pn	19 00 31.2	-1.1
PNIG				*i*S	Sn	19 00 45.4	-1.9
UTMO	**Huajuapan**	**1.70**	**55**	*i*P	Pn	19 00 36.9	-2.5
UTMO				*i*S	Sn	19 00 57.7	-2.2
ZIIG	**Zihuatanejo**	**2.23**	**290**	*e*P	Pn	19 00 48.7	+2.0
ZIIG				*i*S	Sn	19 01 09.8	-3.3
ZIIG	**Zihuatanejo**	**2.23**	**290**	*e*P	Pn	19 00 48.7	+2.0
ZIIG				*i*S	Sn	19 01 09.8	-3.3
PPM	**Popocatepetl**	**2.28**	**15**	*e*P	Pn	19 00 46.4	-1.0
PPM				*i*S	Sn	19 01 15.2	+1.0
PPM	**Popocatepetl**	**2.28**	**15**	*e*P	Pn	19 00 46.4	-1.0
PPM				*i*S	Sn	19 01 15.2	+1.0
IIO	**Organos**	**2.77**	**11**	*e*P	Pn	19 00 51.6	-2.4
IIO				*i*S	Sn	19 01 25.5	-0.8
IIO	**Organos**	**2.77**	**11**	*e*P	Pn	19 00 51.6	-2.4
IIO				*i*S	Sn	19 01 25.5	-0.8

IDC 06 19:04:22.9±7.8, 2°.41S×102°.11E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.1/21, mbtmp3.3/3, Error ellipse: s-maj=425.9km s-min=29.8km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.97**	**121**	P	P	19 11 26.0	+0.2
	0.1nm,0.3s,baz=296,slow=7.8,SNR=4.7						
ASAR	**Alice Springs**	**37.32**	**127**	P	P	19 11 37.0	-0.2
	0.1nm,0.5s,baz=299,slow=7.7,SNR=4.1						
MKAR	**Makanchi Array**	**52.02**	**343**	P	P	19 13 34.1	0.0
	0.3nm,0.6s,baz=150,slow=7.9,SNR=3.9						

*ISCJB **06** 19:12:24.5±0.8, 37°.44N±0°.03×20°.54E±0°.05, h10km, Error ellipse: s-maj=6.7km s-min=3.8km az=147.2*

*THE **06** 19:12:25.8, 37°.48N×20°.65E, h2km±1km, ML3.8/5, Error ellipse: s-maj=2.6km s-min=1.0km az=242.0*

*NEIC **06** 19:12:25.6, 37°.51N×20°.70E, h13km, ML3.0(ATH), After ATH.*

*ATH **06** 19:12:26.1, 37°.52N×20°.74E, h14km±1km*

*CSEM **06** 19:12:27.2±0.5, 37°.56N×20°.82E, h2km, ML3.8/5, Error ellipse: s-maj=9.6km s-min=4.8km az=64.0*

ISC 06 19:12:25.3±0.9, 37°.47N±0°.03×20°.61E±0°.05, h3km±4km, n70, σ1°06/94, 2C, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.65**	**12**	P	**Pg**	**19 12 37.6**	**-0.2**
KFL				S	**Sg**	**19 12 46.6**	**+0.4**
VLS	**Valsamata**	**0.70**	**359**	*e*PB	**Pg**	**19 12 38.8**	**0.0**
VLS				*e*SB	**Sg**	**19 12 49.1**	**+1.2**
VLS	**Valsamata**	**0.70**	**359**	P	**Pg**	**19 12 38.9**	**+0.1**
VLS				S	**Sg**	**19 12 49.1**	**+1.2**
VLS	**Valsamata**	**0.70**	**359**	P	**Pg**	**19 12 38.9**	**+0.1**
VLS				S	**Sg**	**19 12 49.1**	**+1.2**
RLS	**Riolos of Patr**	**0.90**	**49**	*e*PB	**Pg**	**19 12 41.4**	**-1.0**
RLS				*e*SB	**Sg**	**19 12 51.8**	**-2.3**
RLS	**Riolos of Patr**	**0.90**	**49**	*e*Pb	**Pg**	**19 12 41.4**	**-1.0**
PYL	**PYLOS**	**1.07**	**122**	*e*PG	**Pg**	**19 12 45.0**	**-0.8**
PYL	**PYLOS**	**1.07**	**122**	P	**Pg**	**19 12 45.2**	**-0.6**
PYL				S	**Sg**	**19 13 00.3**	**+0.6**
PYL	**PYLOS**	**1.07**	**122**	P	**Pg**	**19 12 45.2**	**-0.6**
PYL				S	**Sg**	**19 13 00.3**	**+0.6**
ITM	**Ithomi**	**1.09**	**105**	*e*PB	**Pg**	**19 12 45.2**	**-0.9**
ITM				*e*SB	**Sg**	**19 12 59.2**	**-1.1**
ITM	**Ithomi**	**1.09**	**105**	P	**Pg**	**19 12 45.3**	**-0.8**
ITM				S	**Sg**	**19 13 01.8**	**+1.5**
ITM	**Ithomi**	**1.09**	**105**	*e*Pb	**Pg**	**19 12 45.2**	**-0.9**
ITM				S	**Sg**	**19 13 01.8**	**+1.5**
UPR	**University Cam**	**1.23**	**49**	*e*PG	**Pn**	**19 12 46.8**	**-2.6**
UPR	**University Cam**	**1.23**	**49**	*e*Pg	**Pn**	**19 12 46.8**	**-2.6**
LAKA	**Lakka**	**1.33**	**54**	P	**Pn**	**19 12 49.4**	**-1.3**
LAKA				S	**Sg**	**19 13 09.3**	**+1.4**
LAKA	**Lakka**	**1.33**	**54**	P	**Pn**	**19 12 49.4**	**-1.3**
LAKA				S	**Sg**	**19 13 09.3**	**+1.4**
EFP	**Efpalio**	**1.40**	**47**	*e*PB	**Pn**	**19 12 50.5**	**-1.2**
EFP	**Efpalio**	**1.40**	**47**	P	**Pn**	**19 12 51.4**	**-0.3**
EFP				S	**Sb**	**19 13 10.3**	**0.0**
EFP	**Efpalio**	**1.40**	**47**	*e*Pb	**Pn**	**19 12 50.5**	**-1.2**
EFP	**Efpalio**	**1.40**	**47**	P	**Pn**	**19 12 51.4**	**-0.3**
EFP				S	**Sb**	**19 13 10.3**	**0.0**
VLX	**Vlachokerasia**	**1.41**	**94**	*e*PB	**Pn**	**19 12 50.9**	**-1.0**
VLX	**Vlachokerasia**	**1.41**	**94**	P	**Pn**	**19 12 50.9**	**-1.0**
VLX				S	**Sb**	**19 13 10.8**	**+0.1**
VLX	**Vlachokerasia**	**1.41**	**94**	P	**Pn**	**19 12 50.9**	**-1.0**
VLX				S	**Sb**	**19 13 10.8**	**+0.1**
GUR	**Goura**	**1.45**	**71**	*e*PB	**Pn**	**19 12 51.3**	**-1.1**
GUR	**Goura**	**1.45**	**71**	P	**Pn**	**19 12 51.3**	**-1.1**
GUR	**Goura**	**1.45**	**71**	P	**Pn**	**19 12 51.3**	**-1.1**
TRIZ	**Trizonia**	**1.46**	**52**	P	**Pn**	**19 12 51.6**	**-1.0**
TRIZ	**Trizonia**	**1.46**	**52**	P	**Pn**	**19 12 51.6**	**-1.0**
KALE	**Kalithea**	**1.52**	**52**	P	**Pn**	**19 12 52.2**	**-1.1**
KALE				S	**Sn**	**19 13 14.6**	**+1.0**
KALE	**Kalithea**	**1.52**	**52**	P	**Pn**	**19 12 52.2**	**-1.1**
KALE				S	**Sn**	**19 13 14.6**	**+1.0**
EVR	**Evrytania**	**1.72**	**33**	*e*PG	**Pn**	**19 12 56.0**	**-0.2**
EVR	**Evrytania**	**1.72**	**33**	*e*Pg	**Pn**	**19 12 56.0**	**-0.2**
LTK	**Loutraki**	**1.95**	**73**	*e*PG	**Pn**	**19 12 59.7**	**+0.5**
LTK	**Loutraki**	**1.95**	**73**	P	**Pn**	**19 12 59.6**	**+0.4**
LTK	**Loutraki**	**1.95**	**73**	P	**Pn**	**19 12 59.6**	**+0.4**
VLI	**Veliai**	**2.01**	**111**	*e*PN	**Pn**	**19 13 01.3**	**+1.2**
VLI	**Veliai**	**2.01**	**111**	*e*Pn	**Pn**	**19 13 01.3**	**+1.2**
AGG	**Agios Georgios**	**2.06**	**41**	*e*PG	**Pn**	**19 13 02.2**	**+1.5**
AGG	**Agios Georgios**	**2.06**	**41**	P	**Pn**	**19 13 02.4**	**+1.7**
AGG				S	**Sn**	**19 13 26.9**	**0.0**
AGG	**Agios Georgios**	**2.06**	**41**	*e*Pg	**Pn**	**19 13 02.2**	**+1.5**
AGG				S	**Sn**	**19 13 26.9**	**0.0**
DID	**Didima**	**2.09**	**88**	*e*PN	**Pn**	**19 13 00.9**	**-0.3**
DID	**Didima**	**2.09**	**88**	P	**Pn**	**19 13 00.9**	**-0.3**
DID				S	**Sn**	**19 13 27.4**	**-0.3**
DID	**Didima**	**2.09**	**88**	P	**Pn**	**19 13 00.9**	**-0.3**
DID				S	**Sn**	**19 13 27.4**	**-0.3**
LKR	**Lokris**	**2.22**	**57**	*e*PN	**Pn**	**19 13 02.8**	**-0.2**
LKR	**Lokris**	**2.22**	**57**	*e*Pn	**Pn**	**19 13 02.8**	**-0.2**
KYTH	**Kithira**	**2.28**	**121**	*e*PN	**Pn**	**19 13 05.6**	**+1.8**
KYTH	**Kithira**	**2.28**	**121**	*e*Pn	**Pn**	**19 13 05.6**	**+1.8**
NAIG	**Nisos Aigina**	**2.30**	**82**	*e*PN	**Pn**	**19 13 05.2**	**+1.1**
NAIG	**Nisos Aigina**	**2.30**	**82**	*e*Pn	**Pn**	**19 13 05.2**	**+1.1**
KEK	**Kerkira**	**2.33**	**344**	*e*PB	**Pn**	**19 13 04.6**	**+0.1**
THL	**Klokotos Trika**	**2.36**	**27**	*e*PN	**Pn**	**19 13 06.2**	**+1.3**
THL	**Klokotos Trika**	**2.36**	**27**	P	**Pn**	**19 13 06.6**	**+1.7**
THL	**Klokotos Trika**	**2.36**	**27**	*e*Pn	**Pn**	**19 13 06.2**	**+1.3**
THL	**Klokotos Trika**	**2.36**	**27**	P	**Pn**	**19 13 06.6**	**+1.7**
VLY	**Voula,Athens**	**2.56**	**81**	*e*PB	**Pn**	**19 13 07.4**	**-0.2**
PTL	**Penteli**	**2.64**	**76**	*e*PN	**Pn**	**19 13 08.4**	**-0.4**
PTL	**Penteli**	**2.64**	**76**	*e*Pn	**Pn**	**19 13 08.4**	**-0.4**
NEO	**Neokhori**	**2.75**	**47**	*e*PB	**Pn**	**19 13 10.5**	**+0.2**
KZN	**Kozani**	**2.97**	**17**	*e*PB	**Pn**	**19 13 14.9**	**+1.6**
LIT	**Litokhoron**	**3.01**	**29**	*e*PN	**Pn**	**19 13 14.5**	**+0.7**
LIT	**Litokhoron**	**3.01**	**29**	*e*Pn	**Pn**	**19 13 14.5**	**+0.7**
VAM	**Vamos**	**3.55**	**124**	*e*PN	**Pn**	**19 13 21.6**	**+0.3**
VAM	**Vamos**	**3.55**	**124**	*e*Pn	**Pn**	**19 13 21.6**	**+0.3**
PLG	**Polygyros**	**3.64**	**36**	*e*PN	**Pn**	**19 13 21.9**	**-0.7**
PLG	**Polygyros**	**3.64**	**36**	*e*Pn	**Pn**	**19 13 21.9**	**-0.7**
SOH	**Sokhos**	**3.97**	**32**	*e*PN	**Pn**	**19 13 27.8**	**+0.8**
SOH	**Sokhos**	**3.97**	**32**	*e*Pn	**Pn**	**19 13 27.8**	**+0.8**
STON	**Ston**	**5.83**	**338**	*e*Pn	**Pn**	**19 13 50.1**	**-2.5**
STON				Sn	**Sn**	**19 14 48.1**	**-12**
NVLJ	**Novalja**	**8.30**	**330**	⇑*i*Pn	**Pn**	**19 14 28.2**	**+1.6**
NVLJ				Sn	**Sn**	**19 15 57.2**	**-3.6**
NVLJ	**Novalja**	**8.30**	**330**	⇑*i*Pn	**Pn**	**19 14 28.2**	**+1.6**

IDC 06 19:13:14.2±37.0, 37°.32N×29°.70E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/21, mbtmp3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/27, Error ellipse: s-maj=707.0km s-min=56.1km az=31.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**24.25**	**356**	P	P	19 18 32.6	+0.1
	1.5nm,0.9s,baz=183,slow=9.0,SNR=3.9						
KURK	**Kurchatov**	**36.96**	**53**	LR	LR	19 38 57.0	
	comp=Z,14nm,20.3s,baz=240,slow=42						
MKAR	**Makanchi Array**	**39.52**	**59**	P	P	19 20 46.5	0.0
	0.2nm,0.4s,baz=285,slow=7.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**40.85**	**48**	P	P	19 20 57.2	-0.2
	0.5nm,0.5s,baz=280,slow=8.5,SNR=3.0						

*CSEM **06** 19:13:17.6±0.6, 37°.47N×20°.49E, h19km, MD3.6, Error ellipse: s-maj=12.5km s-min=5.1km az=55.0*

*NEIC **06** 19:13:18.9, 37°.56N×20°.71E, h16km, MD3.6(ATH), After ATH.*

*ATH **06** 19:13:18.9, 37°.56N×20°.71E, h16km±2km, MD3.6/10*

*THE **06** 19:13:20.0, 37°.53N×20°.73E, h8km±1km, ML3.7/3, Error ellipse: s-maj=3.4km s-min=0.8km az=240.0*

ISC 06 19:13:18.6±1.2, 37°.52N±0°.04×20°.57E±0°.06, h18km±5km, n37, σ0°96/60, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.62**	**16**	P	**Pg**	**19 13 30.8**	**0.0**
KFL				S	**Sg**	**19 13 39.9**	**+0.8**
VLS	**Valsamata**	**0.66**	**2**	*e*PN	**Pg**	**19 13 31.2**	**-0.4**
VLS				*e*SN	**Sg**	**19 13 40.5**	**+0.1**
VLS	**Valsamata**	**0.66**	**2**	P	**Pg**	**19 13 31.9**	**+0.3**
VLS				S	**Sg**	**19 13 42.4**	**+2.0**
VLS	**Valsamata**	**0.66**	**2**	*e*Pn	**Pg**	**19 13 31.2**	**-0.4**
VLS	**Valsamata**	**0.66**	**2**	P	**Pg**	**19 13 31.9**	**+0.3**
VLS				*e*Sn	**Sg**	**19 13 40.5**	**+0.1**
VLS				S	**Sg**	**19 13 42.4**	**+2.0**
RLS	**Riolos of Patr**	**0.90**	**53**	*e*PN	**Pg**	**19 13 34.4**	**-1.6**
RLS				*e*SN	**Sg**	**19 13 44.7**	**-3.1**
RLS	**Riolos of Patr**	**0.90**	**53**	*e*Pn	**Pg**	**19 13 34.4**	**-1.6**
PYL	**PYLOS**	**1.12**	**123**	*e*PB	**Pn**	**19 13 38.2**	**-1.2**
PYL				*e*SN	**Sn**	**19 13 53.8**	**-0.6**
PYL	**PYLOS**	**1.12**	**123**	P	**Pn**	**19 13 38.5**	**-0.9**
PYL				S	**Sb**	**19 13 54.4**	**+0.6**
PYL	**PYLOS**	**1.12**	**123**	*e*Pb	**Pn**	**19 13 38.2**	**-1.2**
PYL	**PYLOS**	**1.12**	**123**	P	**Pn**	**19 13 38.5**	**-0.9**
PYL				*e*Sn	**Sn**	**19 13 53.8**	**-0.6**
PYL				S	**Sb**	**19 13 54.4**	**+0.6**
ITM	**Ithomi**	**1.14**	**107**	*e*PB	**Pn**	**19 13 38.0**	**-1.6**
ITM				*e*SN	**Sn**	**19 13 53.6**	**-1.1**
ITM	**Ithomi**	**1.14**	**107**	P	**Pn**	**19 13 39.2**	**-0.4**
ITM				S	**Sb**	**19 13 54.0**	**-0.1**
ITM	**Ithomi**	**1.14**	**107**	P	**Pn**	**19 13 39.2**	**-0.4**
ITM				*e*Sn	**Sn**	**19 13 53.6**	**-1.1**
ITM				S	**Sb**	**19 13 54.0**	**-0.1**
LAKA	**Lakka**	**1.33**	**57**	P	**Pn**	**19 13 42.2**	**-0.1**
LAKA				S	**Sn**	**19 13 59.8**	**+0.3**
LAKA	**Lakka**	**1.33**	**57**	P	**Pn**	**19 13 42.2**	**-0.1**
LAKA				S	**Sn**	**19 13 59.8**	**+0.3**
EFP	**Efpalio**	**1.40**	**49**	*e*PN	**Pn**	**19 13 43.3**	**+0.1**
EFP	**Efpalio**	**1.40**	**49**	*e*Pn	**Pn**	**19 13 43.3**	**+0.1**
VLX	**Vlachokerasia**	**1.45**	**95**	*e*PN	**Pn**	**19 13 43.9**	**0.0**
VLX	**Vlachokerasia**	**1.45**	**95**	P	**Pn**	**19 13 44.6**	**+0.7**
VLX	**Vlachokerasia**	**1.45**	**95**	*e*Pn	**Pn**	**19 13 43.9**	**0.0**
VLX	**Vlachokerasia**	**1.45**	**95**	P	**Pn**	**19 13 44.6**	**+0.7**
VLX				S	**Sn**	**19 14 03.5**	**+1.0**
TRIZ	**Trizonia**	**1.46**	**54**	P	**Pn**	**19 13 44.9**	**+0.8**
TRIZ				S	**Sn**	**19 14 02.8**	**0.0**
TRIZ	**Trizonia**	**1.46**	**54**	P	**Pn**	**19 13 44.9**	**+0.8**
TRIZ				S	**Sn**	**19 14 02.8**	**0.0**
GUR	**Goura**	**1.47**	**73**	*e*PN	**Pn**	**19 13 44.5**	**+0.3**
GUR	**Goura**	**1.47**	**73**	P	**Pn**	**19 13 44.4**	**+0.2**
GUR				S	**Sn**	**19 14 02.4**	**-0.6**
GUR	**Goura**	**1.47**	**73**	*e*Pn	**Pn**	**19 13 44.5**	**+0.3**
GUR				S	**Sn**	**19 14 02.4**	**-0.6**
LTK	**Loutraki**	**1.97**	**74**	*e*PN	**Pn**	**19 13 51.9**	**+0.9**
LTK	**Loutraki**	**1.97**	**74**	*e*Pn	**Pn**	**19 13 51.9**	**+0.9**
DID	**Didima**	**2.12**	**89**	*e*PN	**Pn**	**19 13 54.3**	**+1.1**
DID	**Didima**	**2.12**	**89**	*e*Pn	**Pn**	**19 13 54.3**	**+1.1**
KYTH	**Kithira**	**2.33**	**121**	*e*PN	**Pn**	**19 13 58.6**	**+2.6**
CEL	**Celeste**	**3.77**	**283**	*e*Pn	**Pn**	**19 14 11.9**	**-3.9**
CEL	**Celeste**	**3.77**	**283**	*e*Pn	**Pn**	**19 14 11.9**	**-3.9**
STON	**Ston**	**5.78**	**339**	*e*Pn	**Pb**	**19 15 05.0**	**+6.2**
STON				Sn	**Sn**	**19 15 48.4**	**-0.9**
NVLJ	**Novalja**	**8.25**	**330**	Sn	**Sn**	**19 16 49.8**	**-0.3**
NVLJ	**Novalja**	**8.25**	**330**	Sn	**Sn**	**19 16 49.7**	**-0.3**

*IDC **06** 19:36:33.8±1.2, 3°.01N×127°.56E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.7/6, Error ellipse: s-maj=71.5km s-min=18.5km az=71.0*

*ISCJB **06** 19:36:36.8±1.0, 3°.0N±0°.2×127°.6E±0°.4, h33km, mb3.6/7, Error ellipse: s-maj=58.5km s-min=14.8km az=160.3*

*NEIC **06** 19:36:38.8±0.7, 3°.02N×127°.67E, h35km, mb4.0/1, Error ellipse: s-maj=40.5km s-min=10.9km az=71.0*

ISC 06 19:36:38.9±0.9, 3°.0N±0°.2×127°.7E±0°.4, h35km, n8, σ0°37/8, mb3.6/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.07**	**185**	P	**P**	**19 41 20.3**	**0.0**
	4.3nm,1.0s,mb3.7,baz=11,slow=10,SNR=5.2						
WRAB	**Tennant Creek**	**23.73**	**164**	*e*P	**P**	**19 41 48.3**	**+0.3**
	3.1nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**23.73**	**164**	P	**P**	**19 41 48.2**	**+0.1**
	1.5nm,0.5s,mb3.7,baz=343,slow=10.0,SNR=22						
WB2	**Warramunga Arr**	**23.74**	**164**	*e*P	**P**	**19 41 48.2**	**+0.1**
ASAR	**Alice Springs**	**27.20**	**167**	P	**P**	**19 42 19.4**	**-0.1**
	0.2nm,0.3s,mb3.1,baz=341,slow=10.0,SNR=11						
CTA	**Charters Tower**	**29.33**	**142**	P	**P**	**19 42 38.1**	**-0.4**
	6.5nm,1.0s,mb4.3,baz=348,slow=9.3,SNR=3.2						
SONM	**Songino Array**	**48.27**	**341**	P	**P**	**19 45 17.2**	**+0.6**
	0.3nm,0.6s,mb3.5,baz=163,slow=8.6,SNR=2.4						
MKAR	**Makanchi Array**	**58.67**	**325**	P	**P**	**19 46 32.2**	**-0.7**
	0.1nm,0.5s,mb3.1,baz=114,slow=6.5,SNR=5.1						

*NOU **06** 19:50:34.4±0.6, 20°.00S×168°.45E, h30km, MD3.0, ML3.2*

*IDC **06** 19:50:52.5±10.0, 19°.59S×166°.06E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=278.9km s-min=53.2km az=135.0*

ISC 06 19:50:35.8±2.3, 20°.5S±0°.2×168°.5E±0°.3, h10km, n10, σ0°75/14, mb3.7/4, 1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.26**	**221**	*e*S	**Sn**	**19 51 42.3**	**+1.1**
DZM	**Mont Dzumac**	**2.50**	**229**	*e*P	**Pn**	**19 51 15.7**	**-0.8**
DZM				*e*S	**Sn**	**19 51 46.7**	**-0.3**
DZM				AMP		19 51 51.9	
	comp=Z,784nm,2.6s						
NORM	**Noumea**	**2.57**	**226**	*e*P	**Pn**	**19 51 17.6**	**0.0**
NORM				*

comp=Z,1µm,0.5s
JNW Jan Mayen West 1.43 107 *e*P **Pn 19 51 32.6 -4.8**
JNW *e*S **Sn 19 51 49.8 -6.4**
JNW Jan Mayen West 1.43 107 *e*P **Pn 19 51 32.6 -4.8**
SNR=53
JNW *e*S **Sn 19 51 49.8 -6.4**
comp=Z,1µm,0.5s,SNR=53
JNE Jan Mayen East 1.48 108 *e*P **Pn 19 51 33.1 -5.0**
JNE *e*S **Sn 19 51 52.6 -4.9**
JNE AML AML 19 51 55.1
comp=Z,772nm,0.4s
JNE Jan Mayen East 1.48 108 *e*P **Pn 19 51 33.1 -5.0**
JNE *e*S **Sn 19 51 52.6 -4.9**
JNE Jan Mayen East 1.48 108 *e*P **Pn 19 51 33.1 -5.0**
SNR=53
JNE *e*S **Sn 19 51 52.6 -4.9**
comp=Z,772nm,0.4s,SNR=53
SCO Scoresbysund 3.22 256 *i* P **Pn 19 51 57.2 -4.8**
SCO *i* S **Sn 19 52 34.2 -6.2**
SCO Scoresbysund 3.22 256 *i* P **Pn 19 51 57.3 -4.7**
SNR=49
SCO *i* S **Sn 19 52 34.3 -6.1**
SNR=49
IGRI Grimsey 5.34 204 P **Pn 19 52 28.5 -2.6**
IGRI S **Sn 19 53 30.0 -2.5**
DAG Danmarks Havn 5.55 345⇑ *e*P **Pn 19 52 31.5 -2.5**
DAG pmax pmax
comp=Z,41nm,0.8s
DAG Danmarks Havn 5.55 345⇑ *i*P **Pn 19 52 31.5 -2.5**
comp=Z,41nm,0.8s
DAG Danmarks Havn 5.55 345⇑ *e*P **Pn 19 52 31.5 -2.5**
comp=Z,41nm,0.8s,SNR=4.0
IFLA Flatey 5.69 202 S **Sn 19 53 40.3 -0.7**
ISIG Siglufjorour 5.85 206 S **Sn 19 53 44.9 -0.2**
IGRA Granastaoir 5.89 200 S **Sn 19 53 43.3 -2.7**
IHRN Hraun 6.05 210 P **Pn 19 52 40.0 -0.8**
IHRN S **Sn 19 53 50.1 0.0**
BORG Borgarnes 7.51 210 *e*P **Pn 19 53 02.2 +1.4**
BORG pmax pmax
comp=Z,232nm,1.4s
BORG Borgarnes 7.51 210 Pn **Pn 19 53 01.5 +0.7**
comp=Z,2.8nm,0.3s,baz=18,slow=8.2,SNR=7.5
BORG LR LR 19 55 16.7
comp=Z,3µm,19.0s,baz=32,slow=33
BORG Borgarnes 7.51 210 *e*Pn **Pn 19 53 02.2 +1.4**
comp=Z,232nm,1.4s
SUMG Summit 8.03 290 *e*Pn **Pn 19 53 07.0 -0.9**
comp=Z,103nm,1.0s
SUMG Summit 8.03 290 *i* P **Pn 19 53 08.1 +0.2**
SNR=47
HSP Hornsund 9.33 41 *e*P **Pn 19 53 24.1 -1.6**
KBS Kingsbay 9.62 29 Pn **Pn 19 53 26.9 -2.9**
KBS Sn **Sn 19 55 08.7 -8.9**
KBS Kingsbay 9.62 29 *e*P **Pn 19 53 27.6 -2.1**
KBS Kingsbay 9.62 29 *e*P **Pn 19 53 28.1 -1.6**
KBS pmax pmax
comp=Z,51nm,0.9s
KBS Kingsbay 9.62 29 *e*Pn **Pn 19 53 28.1 -1.6**
comp=Z,51nm,0.9s
KBS Kingsbay 9.62 29 Pn **Pn 19 53 26.9 -2.8**
KBS Kingsbay 9.62 29 *i* P **Pn 19 53 27.9 -1.8**
SNR=47
KBS Sn **Sn 19 55 08.7 -9.0**
SPB4 Spitsbergen Ar 9.97 35 *e*Pn **Pn 19 53 34.0 -0.5**
SPB4 Spitsbergen Ar 9.97 35 *e*Pn **Pn 19 53 34.0 -0.4**
SPA0 Spitsbergen Ar 9.97 35 Pn **Pn 19 53 32.9 -1.6**
baz=239,slow=14
SPA0 Sn **Sn 19 55 22.6 -3.6**
baz=249,slow=28
SPA0 Spitsbergen Ar 9.97 35 Pn **Pn 19 53 32.8 -1.7**
SNR=7.6
SPA0 Sn **Sn 19 55 22.6 -3.6**
SNR=3.0
SPITS Spitsbergen Ar 9.97 35 Pn **Pn 19 53 33.1 -1.4**
baz=227,slow=15,SNR=49
SPITS LR LR 19 56 29.0
comp=Z,1µm,19.8s,baz=245,slow=32
SPITS Spitsbergen Ar 9.97 35 Pn **Pn 19 53 33.1 -1.4**
ARCES ARCESS Array B 12.72 80 Pn **Pn 19 54 10.7 -1.3**
comp=Z,0.3nm,0.3s,baz=290,slow=11,SNR=13
ARCES LR LR 19 58 15.6
comp=Z,2µm,19.3s,baz=292,slow=34
ARCES ARCESS Array B 12.72 80 Pn **Pn 19 54 10.7 -1.3**
ARE0 ARCESS Array S 12.72 80 *e*Pn **Pn 19 54 11.2 -0.8**
ARA0 ARCESS Array S 12.72 80 Pn **Pn 19 54 09.8 -2.2**
baz=299,slow=12
ARA0 ARCESS Array S 12.72 80 Pn **Pn 19 54 09.8 -2.2**
SNR=2.1
KEV Kevo 13.09 78 *e*P **Pn 19 54 16.6 -0.5**
KEV pmax pmax
comp=Z,24nm,1.3s
KEV Kevo 13.09 78 *e*Pn **Pn 19 54 16.6 -0.5**
comp=Z,24nm,1.3s
KEV Kevo 13.09 78 *e*p **Pn 19 54 15.7 -1.4**
comp=Z,2.8nm,0.6s
KEV Kevo 13.09 78 *e*P **Pn 19 54 15.7 -1.4**
comp=Z,2.8nm,0.6s
SFJD Kangerlussuaq 14.01 270 P **Pn 19 54 24.7 -4.9**
SFJD pmax pmax
comp=Z,1.0nm,0.3s
SFJD Kangerlussuaq 14.01 270 Pn **Pn 19 54 24.7 -4.9**
comp=Z,0.8nm,0.3s,baz=36,slow=10,SNR=5.8
SFJD Kangerlussuaq 14.01 270 *e*Pn **Pn 19 54 24.1 -5.5**
comp=Z,28nm,1.0s
NB2 NORSAR Subarra 14.07 126 P **Pn 19 54 28.7 -1.7**
comp=Z,6.1nm,1.2s,baz=329,slow=11
NB2 NORSAR Subarra 14.07 126 Pn **Pn 19 54 28.6 -1.8**
NB2 NORSAR Subarra 14.07 126 Pn **Pn 19 54 28.6 -1.8**
NOA NORSAR Array B 14.07 126 Pn **Pn 19 54 28.6 -1.8**
comp=Z,0.2nm,0.3s,baz=326,slow=13,SNR=3.1
NOA LR LR 19 59 18.5
comp=Z,852nm,20.1s,baz=320,slow=35
NOA NORSAR Array B 14.07 126 Pn **Pn 19 54 28.6 -1.8**
NAO01 NORSAR Array S 14.15 127 Pn **Pn 19 54 31.8 +0.2**
KONO Kongsberg 14.88 132 P **Pn 19 54 39.1 -2.3**
KONO pmax pmax
comp=Z,5.0nm,0.7s
KONO Kongsberg 14.88 132 Pn **Pn 19 54 39.0 -2.4**
comp=Z,5.2nm,0.7s
HFS Hagfors 15.49 124 P **Pn 19 54 47.7 -1.9**
baz=304,slow=7.4
HFS Hagfors 15.49 124 Pn **Pn 19 54 49.8 +0.2**
comp=Z,0.1nm,0.3s,baz=316,slow=8.3,SNR=5.8
HFS LR LR 20 00 14.2
comp=Z,1µm,20.7s,baz=328,slow=35
HFS Hagfors 15.49 124 P **Pn 19 54 47.7 -1.9**
SNR=5.4
APA Apatity 16.22 81⇑ *i*P **Pn 19 54 55.0 -4.0**
APA *e*S **Sn 19 57 48.0 -11**
APA pmax pmax
comp=Z,400nm,4.4s
APA MLR MLR
comp=Z,700nm,11.0s
EKA Eskdalemuir Ar 16.73 161 Pn **Pn 19 55 03.9 -1.6**
baz=357,slow=10,SNR=3.4
EKA Eskdalemuir Ar 16.73 161 Pn **Pn 19 55 03.9 -1.6**
ESK Eskdalemuir 16.74 161 *e*P **Pn 19 55 07.2 +1.6**
ESK pmax pmax
comp=Z,15nm,1.1s
ESK Eskdalemuir 16.74 161 *e*Pn **Pn 19 55 07.2 +1.6**
comp=Z,15nm,1.1s
KAF Kangasniemi 17.60 102 *e*P **Pn 19 55 12.0 -4.4**
KAF pmax pmax
comp=Z,6.0nm,0.6s
KAF Kangasniemi 17.60 102 *e*p **Pn 19 55 12.0 -4.4**
comp=Z,5.6nm,0.6s
FIA0 FINESS Array S 18.04 104 P **Pn 19 55 19.9 -1.9**
baz=324,slow=12
FIA0 FINESS Array S 18.04 104 P **Pn 19 55 19.9 -1.9**
FINES FINESS Array B 18.04 104 P **Pn 19 55 19.5 -2.3**
comp=Z,0.7nm,0.3s,baz=328,slow=9.3,SNR=20
FINES LR LR 20 01 22.5
comp=Z,2µm,20.6s,baz=320,slow=34
JOF Joensuu 18.59 95 *e*P **Pn 19 55 25.0 -3.5**
JOF pmax pmax
comp=Z,6.0nm,0.8s
JOF Joensuu 18.59 95 *e*p **Pn 19 55 25.0 -3.5**
comp=Z,5.6nm,0.8s
BSEG Bad Segeberg 20.26 138 *e*P **P 19 55 46.9 +0.3**
comp=Z,137nm,2.5s
BSEG Bad Segeberg 20.26 138 *e*P **P 19 55 46.9 +0.3**
BSEG pmax pmax
comp=Z,137nm,2.5s
VSU Vasula 20.61 109 *i* P **P 19 55 50.5 +0.1**
VSU pmax pmax
comp=Z,97nm,1.8s

IBBN Ibbenburen 21.29 144 *e*P **P 19 55 57.9 +0.2**
comp=Z,39nm,1.2s,mb4.6
WTSB Winterswijk 21.43 146 *e*P **P 19 55 59.3 0.0**
comp=Z,62nm,2.3s,mb4.5
NRDL Niedersach Rie 21.57 140 *e*P **P 19 56 00.2 -0.5**
comp=Z,122nm,1.9s,mb5.0
FRB Frobisher Bay 21.83 278 P **P 19 56 03.3 -0.1**
comp=Z,3.8nm,0.8s,mb3.9,baz=27,slow=9.6,SNR=7.6
FRB LR LR 20 04 17.5
comp=Z,2µm,18.9s,MS4.5,baz=39,slow=36
FRB Frobisher Bay 21.83 278 P **P 19 56 03.3 -0.1**
BUG Bochum--Univer 22.02 145 *e*P **P 19 56 05.8 +0.2**
comp=Z,84nm,1.6s,mb4.9
CLZ Clausthal 22.24 140 *e*P **P 19 56 08.2 +0.3**
comp=Z,43nm,1.8s,mb4.6
CLZ Clausthal 22.24 140 *e*P **P 19 56 08.2 +0.3**
CLZ pmax pmax
comp=Z,43nm,1.8s,mb4.6
RES Resolute Bay 22.34 316 *e*P **P 19 56 10.3 +1.5**
RES pmax pmax
comp=Z,22nm,1.4s,mb4.4
RES Resolute Bay 22.34 316 P **P 19 56 08.8 +0.1**
comp=Z,2.2nm,0.7s,mb3.7,baz=58,slow=18,SNR=5.8
RES LR LR 20 04 29.1
comp=Z,778nm,20.9s,MS4.1,baz=189,slow=36
RES Resolute Bay 22.34 316 *e*P **P 19 56 10.2 +1.5**
comp=Z,22nm,1.4s,mb4.4
RES Resolute Bay 22.34 316 *e*P **P 19 56 10.2 +1.4**
comp=Z,22nm,1.4s,mb4.4
BEBN Eben Emael 22.37 148 P **P 19 56 09.0 -0.3**
comp=Z,25nm,1.9s,mb4.3
RUE Ruedersdorf 22.38 134 *e*P **P 19 56 09.5 +0.2**
SNF Seneffe 22.42 151 P **P 19 56 09.9 +0.1**
comp=Z,20nm,2.2s,mb4.2
HGN Heimansgroeve 22.44 148 *e*P **P 19 56 09.7 -0.3**
comp=Z,78nm,1.4s,mb4.9
HGN Heimansgroeve 22.44 148 *e*S **S 20 00 17.3 +1.1**
GKP Gorka Klasztor 22.48 129 *e*P **P 19 56 10.8 +0.4**
GKP *e*S **S 20 00 26.1 +9.1**
MEM Membach 22.60 148 P **P 19 56 11.7 -0.1**
comp=Z,28nm,2.2s,mb4.3
BCLA Clavier 22.67 149 P **P 19 56 12.4 0.0**
comp=Z,19nm,1.7s,mb4.2
KLMR Klimovskoe 22.73 91 *e*P **P 19 56 12.7 -0.4**
KLMR *e*S **S 20 00 18.0 -3.6**
KLMR pmax pmax
comp=Z,41nm,1.2s,mb4.7
IZAR Zarasai 22.75 113 *e*P **P 19 56 13.0 -0.2**
BAIF Baives 22.85 151 *e*P **P 19 56 13.2 -1.1**
comp=Z,30nm,0.9s,mb4.4
BAIF Baives 22.85 151 *e*P **P 19 56 13.2 -1.1**
BAIF pmax pmax
comp=Z,15nm,0.9s,mb4.4
BAIF Baives 22.85 151 *e*P **P 19 56 13.2 -1.1**
comp=Z,15nm,0.9s,mb4.4
BAIF Baives 22.85 151 *e*P **P 19 56 13.2 -1.1**
comp=Z,15nm,0.9s,mb4.4
ISAL Salakas 22.86 114 *e*P **P 19 56 13.1 -1.4**
ISAL Salakas 22.86 114 *e*P **P 19 56 13.1 -1.4**
DOU Dourbes 22.87 151 P **P 19 56 14.9 +0.3**
GIVF Givet 22.90 150 *e*P **P 19 56 13.7 -1.2**
GIVF Givet 22.90 150 *e*P **P 19 56 13.7 -1.2**
UBBA Unterbreizbach 23.14 142 *e*P **P 19 56 18.4 +1.0**
comp=Z,221nm,2.5s,mb5.2
CLL Collm 23.30 137 *e*P **P 19 56 18.7 -0.4**
comp=Z,143nm,2.2s,mb5.0
CLL Collm 23.30 137⇑ *i*P **P 19 56 18.9 -0.2**
CLL *i* 19 56 25.3
CLL *e*S **S 20 00 32.0 +1.0**
CLL pmax pmax
comp=Z,143nm,2.2s,mb5.0
CLL MLR MLR
comp=Z,700nm,17.4s,MS4.2
CLL Collm 23.30 137⇑ *i*P **P 19 56 18.9 -0.2**
comp=Z,143nm,2.2s,mb5.0
CLL *i* 19 56 25.3
CLL *i* 19 56 28.5
CLL *e*S **S 20 00 32.0 +1.0**
CLL LR LR
comp=Z,700nm,17.4s,MS4.2
CLL Collm 23.30 137⇑ *i*P **P 19 56 18.9 -0.2**
comp=Z,143nm,2.2s,mb5.0
CLL *i* pP 19 56 25.3
CLL *i* sP sP 19 56 28.5 +5.2
CLL *e*PP 19 56 46.0
CLL *e*S **S 20 00 32.0 +1.0**
SUW Suwalki 23.38 120 *e*P **P 19 56 18.2 -1.7**
SUW *e*S **S 20 00 37.1 +4.8**
SUW LMZ 20 04 22.5
comp=Z,2µm,23.0s
SUW Suwalki 23.38 120 *e*P **P 19 56 20.8 +0.9**
SUW pmax pmax
comp=Z,19nm,0.8s,mb4.6
SUW Suwalki 23.38 120 *e*P **P 19 56 20.8 +0.8**
comp=Z,19nm,0.8s,mb4.6
SUW Suwalki 23.38 120 *e*P **P 19 56 18.2 -1.7**
TNS Taunus Mts 23.41 144 *e*P **P 19 56 20.7 +0.5**
comp=Z,364nm,2.7s,mb5.3
TNS Taunus Mts 23.41 144 *e*P **P 19 56 20.7 +0.5**
TNS pmax pmax
comp=Z,364nm,2.7s,mb5.3
FLN La Foliniere 23.50 160 *e*P **P 19 56 19.4 -1.8**
FLN *e*MLR MLR
comp=Z,427nm,21.5s,MS3.6
FLN La Foliniere 23.50 160 *e*P **P 19 56 19.4 -1.8**
FLN LR LR
comp=Z,430nm,21.5s,MS3.9
FLN La Foliniere 23.50 160 *e*P **P 19 56 19.4 -1.8**
WLF Walferdange 23.54 148 P **P 19 56 22.9 +1.3**
comp=Z,37nm,2.6s,mb4.3
WLF Walferdange 23.54 148 *e*P **P 19 56 22.1 +0.5**
comp=Z,200nm,2.5s,mb5.1
ABH Alteburg 23.57 146 *e*P **P 19 56 22.7 +0.8**
MOX Moxa 23.63 139 *e*P **P 19 56 22.7 +0.3**
comp=Z,190nm,2.4s,mb5.1
MOX Moxa 23.63 139 *e*P **P 19 56 23.0 +0.6**
MOX pmax pmax
comp=Z,142nm,2.4s,mb5.0
MOX MLR MLR
comp=Z,300nm,18.0s,MS3.8
MOX Moxa 23.63 139 *e*P **P 19 56 23.0 +0.6**
comp=Z,142nm,2.4s,mb5.0
MOX LR LR
comp=Z,300nm,18.0s,MS3.8
NACGM Naroch 23.63 114 *e* **P 19 56 20.0 -2.4**
ROSF Rostrenen 23.64 164 *e*P **P 19 56 22.0 -0.6**
comp=Z,166nm,1.8s,mb4.9
ROSF Rostrenen 23.64 164 *e*P **P 19 56 22.0 -0.6**
ROSF pmax pmax
comp=Z,83nm,1.8s,mb4.9
ROSF Rostrenen 23.64 164 *e*P **P 19 56 22.0 -0.6**
comp=Z,83nm,1.8s,mb4.9
LDF La Druitiere 23.70 159 *e*P **P 19 56 21.1 -2.0**
comp=Z,31nm,1.0s,mb4.4
LDF La Druitiere 23.70 159 *e*P **P 19 56 21.1 -2.0**
LDF pmax pmax
comp=Z,15nm,1.0s,mb4.4
LDF La Druitiere 23.70 159 *e*P **P 19 56 21.1 -2.0**
comp=Z,15nm,1.0s,mb4.4
LDF La Druitiere 23.70 159 *e*P **P 19 56 21.1 -2.0**
comp=Z,15nm,1.0s,mb4.4
SGMF Saint Gilles 23.79 163 *e*P **P 19 56 22.2 -1.7**
comp=Z,51nm,1.3s,mb4.5
SGMF Saint Gilles 23.79 163 *e*P **P 19 56 22.2 -1.7**
SGMF pmax pmax
comp=Z,26nm,1.3s,mb4.5
SGMF Saint Gilles 23.79 163 *e*P **P 19 56 22.2 -1.7**
comp=Z,26nm,1.3s,mb4.5
SGMF Saint Gilles 23.79 163 *e*P **P 19 56 22.2 -1.7**
comp=Z,26nm,1.3s,mb4.5
GRR Gorron 23.82 160 *e*P **P 19 56 22.5 -1.7**
GRR Gorron 23.82 160 *e*P **P 19 56 22.5 -1.7**
BRG Berggiesshubel 23.92 136 *e*P **P 19 56 24.3 -0.8**
comp=Z,91nm,2.1s,mb4.8
BRG Berggiesshubel 23.92 136 *e*P **P 19 56 25.0 -0.1**
comp=Z,34nm,1.7s,mb4.5
BRG S **S 20 00 46.0 +5.0**
BRG
comp=N,546nm,17.1s
BRG
comp=E,180nm,15.4s
BRG
comp=Z,792nm,17.0s
BRG Berggiesshubel 23.92 136 *e*P **P 19 56 25.0 -0.1**
BRG S **S 20 00 46.0 +5.0**
BRG pmax pmax

comp=Z,20nm,1.7s,mb4.3
BRG MLR MLR
comp=N,327nm,17.1s,MS3.9
BRG MLR MLR
comp=E,108nm,15.4s,MS3.9
BRG MLR MLR
comp=Z,474nm,17.0s,MS4.0
TANN Tannenbergstha 24.02 138 *e*P **P 19 56 26.7 +0.7**
comp=Z,271nm,2.6s,mb5.2
TOD Tromm 24.07 144 *e*P **P 19 56 27.2 +0.8**
QUIF Quistinic 24.07 164 *e*P **P 19 56 25.2 -1.2**
QUIF Quistinic 24.07 164 *e*P **P 19 56 25.2 -1.2**
NKC Novy Kostel 24.19 138 *e*P **P 19 56 27.6 0.0**
NKC MLR MLR
comp=Z,400nm,14.7s,MS4.0
NKC Novy Kostel 24.19 138 *e*P **P 19 56 27.6 0.0**
NKC *e*S **S 20 00 54.1 +8.7**
NKC AMS AMS 20 06 20.0
comp=Z,400nm,14.7s
KTD Kalmit 24.21 146 *e*P **P 19 56 29.0 +1.3**
PVCC Panska Ves 24.38 135 *e*P **P 19 56 29.7 +0.4**
PVCC MLR MLR
comp=Z,600nm,18.4s,MS4.1
PVCC Panska Ves 24.38 135 *e*P **P 19 56 29.7 +0.4**
PVCC *e*S **S 20 00 55.7 +7.3**
PVCC AMS AMS 20 05 30.0
comp=Z,600nm,18.4s
WAR Warsaw 24.38 124 *e*P **P 19 56 31.0 +1.7**
GRA1 Grafenberg Arr 24.45 141 *e*P **P 19 56 30.6 +0.7**
comp=Z,396nm,2.6s,mb5.4
GRA1 *e*S **S 20 00 49.6 0.0**
GRA1 LR LR
comp=Z,400nm,22.0s,MS3.9
GRF Grafenberg Arr 24.45 141 *e*P **P 19 56 30.6 +0.7**
comp=Z,396nm,2.6s,mb5.4
GRF *e*S **S 20 00 49.7 +0.1**
GRF *e*L 20 05 13.5
comp=Z,391nm,22.0s
GRF Grafenberg Arr 24.45 141 *e*P **P 19 56 30.6 +0.7**
GRF *e*S **S 20 00 49.7 +0.1**
GRF pmax pmax
comp=Z,396nm,2.6s,mb5.4
GRF MLR MLR
comp=Z,400nm,22.0s,MS3.9
GRF Grafenberg Arr 24.45 141 *e*P **P 19 56 30.6 +0.7**
GRF *e*S **S 20 00 49.6 0.0**
GRF pmax pmax
comp=Z,396nm,2.6s,mb5.4
GRF MLR MLR
comp=Z,400nm,22.0s,MS3.9
KSP Ksiaz 24.48 132 *e*P **P 19 56 31.0 +0.7**
KSP *e*S **S 20 01 01.3 +11**
KSP LMZ 20 03 52.3
comp=Z,600nm,25.0s
KSP Ksiaz 24.48 132⇓ *e*P **P 19 56 30.9 +0.7**
KSP *e*S **S 20 00 54.0 +3.9**
KSP MLR MLR
comp=Z,1µm,13.4s,MS4.5
LANF Langenberg 24.48 146 *e*P **P 19 56 30.8 +0.5**
MEZF Maizieres J'vi 24.49 151 *e*P **P 19 56 30.3 0.0**
ROTZ Rotzenmuhle 24.58 139 *e*P **P 19 56 32.0 +0.9**
comp=Z,110nm,2.5s,mb4.9
PRA Prague 24.78 136 P **P 19 56 34.0 +1.1**
PRU Pruhonice 24.88 136 *e*P **P 19 56 34.7 +0.9**
PRU *e* 19 56 37.3
PRU MLR MLR
comp=Z,600nm,18.4s,MS4.1
PRU Pruhonice 24.88 136 *e*P **P 19 56 34.7 +0.9**
PRU *e*pP 19 56 37.3
PRU *e*S **S 20 01 09.8 +13**
PRU AMS AMS 20 05 50.0
comp=Z,600nm,18.4s
THEF They Montfort 24.91 150 *e*P **P 19 56 35.1 +1.0**
CDF Champ du Feu 24.94 148 *e*P **P 19 56 34.1 -0.3**
comp=Z,39nm,1.2s,mb4.5
CDF Champ du Feu 24.94 148 *e*P **P 19 56 34.1 -0.3**
CDF pmax pmax
comp=Z,19nm,1.2s,mb4.5
CDF Champ du Feu 24.94 148 *e*P **P 19 56 34.1 -0.3**
comp=Z,19nm,1.2s,mb4.5
DPC Dobruska-Polom 24.95 133 *e*P **P 19 56 34.3 -0.2**
DPC *e*S **S 20 01 02.3 +4.7**
DPC MLR MLR
comp=Z,400nm,16.6s,MS4.0
DPC Dobruska-Polom 24.95 133 *e*P **P 19 56 34.3 -0.2**
DPC *e*S **S 20 01 02.3 +4.7**
DPC AMS AMS 20 06 50.0
comp=Z,400nm,16.6s
ECH Echery 25.11 148 *e*P **P 19 56 36.0 0.0**
ECH Echery 25.11 148 *e*P **P 19 56 35.6 -0.4**
ECH pmax pmax
comp=Z,19nm,1.1s,mb4.5
ECH Echery 25.11 148 *e*P **P 19 56 35.6 -0.4**
comp=Z,18nm,1.1s,mb4.5
HAU Haudompre 25.18 149 *e*P **P 19 56 36.3 -0.3**
HAU *e*MLR MLR
comp=Z,445nm,21.0s,MS3.6
HAU Haudompre 25.18 149 *e*P **P 19 56 36.3 -0.3**
HAU LR LR
comp=Z,450nm,21.0s,MS4.0
BFO Black Forest 25.21 146 *e*P **P 19 56 36.3 -0.5**
comp=Z,29nm,1.4s,mb4.6
BFO Black Forest 25.21 146 *e*P **P 19 56 36.3 -0.5**
BFO pmax pmax
comp=Z,29nm,1.4s,mb4.6
WET Wettzell 25.32 139 *e*P **P 19 56 39.0 +1.2**
comp=Z,32nm,1.9s,mb4.5
WET Wettzell 25.32 139 *e*P **P 19 56 39.0 +1.2**
WET pmax pmax
comp=Z,32nm,1.9s,mb4.5
HINF Hinteralfeld 25.45 148 *e*P **P 19 56 38.7 -0.3**
MOF Molkenrain 25.46 148 *e*P **P 19 56 40.0 +0.9**
KHC Kasperske Hory 25.48 138 *e*P **P 19 56 38.8 -0.5**
KHC pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
KHC Kasperske Hory 25.48 138 *e*P **P 19 56 38.8 -0.5**
comp=Z,7.9nm,1.0s,mb4.2
KHC Kasperske Hory 25.48 138 *e*P **P 19 56 39.4 +0.1**
KHC *e*pP pP 19 56 45.6 +3.3
KHC *e*S **S 20 01 21.6 +16**
KHC AMS AMS 20 07 00.0
comp=Z,600nm,14.9s
SPAK Spaichingen-Ko 25.51 145 *e*P **P 19 56 40.6 +1.1**
LOR Lormes 25.52 153 *e*P **P 19 56 38.5 -1.1**
comp=Z,59nm,1.3s,mb4.7
LOR *e*MLR MLR
comp=Z,375nm,19.8s,MS3.6
LOR Lormes 25.52 153 *e*P **P 19 56 38.5 -1.1**
LOR pmax pmax
comp=Z,30nm,1.3s,mb4.7
LOR MLR MLR
comp=Z,380nm,19.8s,MS3.9
LOR Lormes 25.52 153 *e*P **P 19 56 38.5 -1.1**
comp=Z,30nm,1.3s,mb4.7
LOR LR LR
comp=Z,380nm,19.8s,MS3.9
LOR Lormes 25.52 153 *e*P **P 19 56 38.5 -1.1**
comp=Z,30nm,1.3s,mb4.7
FELD Feldberg im Sc 25.59 147 *e*P **P 19 56 41.0 +0.7**
MFF Saint Martin d 25.66 160 *e*P **P 19 56 40.3 -0.7**
comp=Z,87nm,1.3s,mb4.8
MFF Saint Martin d 25.66 160 *e*P **P 19 56 40.3 -0.7**
MFF pmax pmax
comp=Z,43nm,1.3s,mb4.8
MFF Saint Martin d 25.66 160 *e*P **P 19 56 40.3 -0.7**
comp=Z,43nm,1.3s,mb4.8
SSF Saint Saulge 25.67 154 *e*P **P 19 56 41.3 +0.3**
comp=Z,28nm,1.0s,mb4.4
SSF Saint Saulge 25.67 154 *e*P **P 19 56 41.3 +0.3**
SSF pmax pmax
comp=Z,14nm,1.0s,mb4.5
SSF Saint Saulge 25.67 154 *e*P **P 19 56 41.3 +0.3**
comp=Z,14nm,1.0s,mb4.5
TREC Trest 25.74 135 *e*P **P 19 56 42.6 +0.9**
TREC MLR MLR
comp=Z,600nm,19.1s,MS4.1
TREC Trest 25.74 135 *e*P **P 19 56 42.6 +0.9**
TREC AMS AMS 20 06 30.0
comp=Z,600nm,19.1s
MORC Moravsky Berou 25.77 132 *e*P **P 19 56 41.1 -0.8**
MORC pmax pmax
comp=Z,16nm,1.5s,mb4.3
MORC Moravsky Berou 25.77 132 *e*P **P 19 56 41.1 -0.8**
comp=Z,16nm,1.5s,mb4.3
MORC Moravsky Berou 25.77 132⇓ *i*P **P 19 56 42.4 +0.5**

GEC2 GERESS Array S 25.77 138 *e*P **P 19 56 42.4 +0.4**
comp=Z,12nm,1.1s,mb4.3
GEC2 GERESS Array S 25.77 138 *e*P **P 19 56 42.4 +0.4**
GEC2 pmax pmax
comp=Z,12nm,1.1s,mb4.3
GERES GERESS Array B 25.77 138 P **P 19 56 42.7 +0.8**
comp=Z,1.6nm,0.8s,mb3.6,baz=352,slow=8.1,SNR=18
GERES LR LR 20 07 03.2
comp=Z,408nm,18.6s,MS4.0,baz=341,slow=37
OKC Ostrava-Krasne 25.86 131 *e*P **P 19 56 43.3 +0.6**
OKC *e* 19 56 48.2
OKC MLR MLR
comp=Z,800nm,12.7s,MS4.4
OKC Ostrava-Krasne 25.86 131 *e*P **P 19 56 43.3 +0.6**
OKC *e*pP pP 19 56 48.2 +2.4
OKC *e*S **S 20 01 25.1 +13**
OKC AMS AMS 20 08 50.0
comp=Z,800nm,12.7s
LOMF Lomont 25.89 149 *e*P **P 19 56 44.0 +0.9**
BBS Basel-Blauen 25.90 148 *e*P **P 19 56 43.9 +0.8**
AVF Avril sur Loir 25.91 154 *e*P **P 19 56 42.0 -1.2**
comp=Z,21nm,1.2s,mb4.2
AVF Avril sur Loir 25.91 154 *e*P **P 19 56 42.0 -1.2**
AVF pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
AVF Avril sur Loir 25.91 154 *e*P **P 19 56 42.0 -1.2**
comp=Z,10nm,1.2s,mb4.2
AVF Avril sur Loir 25.91 154 *e*P **P 19 56 42.0 -1.2**
comp=Z,10nm,1.2s,mb4.2
OJC Ojcow 25.92 128 *e*P **P 19 56 43.9 +0.7**
OJC *e*pP pP 19 56 53.0 +6.7
OJC *e*S **S 20 01 10.0 -2.9**
OJC L 20 08 19.3
comp=Z,1.2nm,14.8s
VRAC Vranov 25.99 133 P **P 19 56 43.9 0.0**
comp=Z,3.7nm,0.8s,mb4.0,baz=330,slow=12,SNR=9.6
VRAC LR LR 20 07 46.8
comp=Z,415nm,18.4s,MS4.0,baz=347,slow=38
BGF Bois d'Agland 26.07 155 *e*P **P 19 56 43.8 -0.9**
comp=Z,30nm,0.9s,mb4.5
BGF Bois d'Agland 26.07 155 *e*P **P 19 56 43.8 -0.9**
BGF pmax pmax
comp=Z,15nm,0.9s,mb4.5
BGF Bois d'Agland 26.07 155 *e*P **P 19 56 43.8 -0.9**
comp=Z,15nm,0.9s,mb4.5
BGF Bois d'Agland 26.07 155 *e*P **P 19 56 43.8 -0.9**
comp=Z,15nm,0.9s,mb4.5
SMF Signal de Mont 26.12 154 *e*P **P 19 56 44.2 -0.9**
comp=Z,88nm,1.4s,mb4.8
SMF Signal de Mont 26.12 154 *e*P **P 19 56 44.2 -0.9**
SMF pmax pmax
comp=Z,44nm,1.4s,mb4.8
SMF Signal de Mont 26.12 154 *e*P **P 19 56 44.2 -0.9**
comp=Z,44nm,1.4s,mb4.8
SMF Signal de Mont 26.12 154 *e*P **P 19 56 44.2 -0.9**
comp=Z,44nm,1.4s,mb4.8
MOS Moscow 26.23 100 *e*P **P 19 56 46.0 0.0**
MOS *e* 19 57 26.7
MOS *e* 20 00 06.3
MOS MLR MLR
comp=Z,1μm,15.0s,MS4.6
TCF Toulx Ste Croi 26.25 156 *e*P **P 19 56 45.0 -1.3**
comp=Z,23nm,0.9s,mb4.4
TCF Toulx Ste Croi 26.25 156 *e*P **P 19 56 45.0 -1.3**
TCF pmax pmax
comp=Z,11nm,0.9s,mb4.4
TCF Toulx Ste Croi 26.25 156 *e*P **P 19 56 45.0 -1.3**
comp=Z,11nm,0.9s,mb4.4
TCF Toulx Ste Croi 26.25 156 *e*P **P 19 56 45.0 -1.3**
comp=Z,11nm,0.9s,mb4.4
OBN Obninsk 26.42 102 *oe*P **P 19 56 47.8 +0.1**
OBN *e* 19 56 55.1
OBN 19 57 27.0
OBN pmax pmax
comp=Z,59nm,2.5s,mb4.7
OBN MLR MLR
comp=Z,200nm,14.0s,MS3.8
OBN Obninsk 26.42 102 *e*P **P 19 56 47.3 -0.4**
comp=Z,50nm,1.3s,mb4.9
RETA Reutte 26.47 143⇑ *i*P **P 19 56 49.4 +1.1**
comp=Z,13nm,1.6s,mb4.2
CABF La Chapelle 26.49 150 *e*P **P 19 56 48.0 -0.5**
DAVA Damuels 26.49 144⇑ *i*P **P 19 56 50.0 +1.5**
comp=Z,17nm,1.7s,mb4.3
AGO Saint Agoulin 26.61 155 *e*P **P 19 56 49.1 -0.4**
MOTA Moosalm 26.67 142⇑ *i*P **P 19 56 50.3 +0.3**
comp=Z,8.4nm,1.2s,mb4.2
PLDF La Plantade 26.75 154 *e*P **P 19 56 54.5 +3.7**
WTTA Wattenberg 26.85 142⇑ *i*P **P 19 56 52.5 +0.8**
comp=Z,15nm,1.2s,mb4.4
PYM Petit Puy Mans 26.89 155 *e*P **P 19 56 52.2 +0.2**
FETA Feichten 26.91 143⇑ *i*P **P 19 56 52.6 +0.3**
comp=Z,12nm,2.2s,mb4.0
DAVOX Davos/Dischmat 26.98 145 LR LR 20 06 55.4
comp=Z,362nm,21.1s,MS3.9,baz=294,slow=35
STHS Stebnicka Huta 27.02 127 *e*P **P 19 56 54.3 +1.1**
STHS *e* 19 57 00.6
STHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.2
STHS Stebnicka Huta 27.02 127 *e*P **P 19 56 54.3 +1.1**
comp=Z,7.9nm,1.1s,mb4.2
STHS *e* 19 57 00.6
STHS *e* 19 57 06.3
STHS Stebnicka Huta 27.02 127 *e*P **P 19 56 54.3 +1.1**
STHS *e* 19 57 00.6
STHS *e* 19 57 06.3
CONA Conrad Observa 27.11 135⇑ *i*P **P 19 56 55.1 +1.1**
comp=Z,3.6nm,1.0s,mb3.9
RJF Les Rejaudoux 27.14 158 *e*P **P 19 56 53.3 -1.0**
RJF *e*MLR MLR
comp=Z,463nm,20.8s,MS3.7
RJF Les Rejaudoux 27.14 158 *e*P **P 19 56 53.3 -1.0**
RJF LR LR
comp=Z,460nm,20.8s,MS4.0
RJF Les Rejaudoux 27.14 158 *e*P **P 19 56 53.3 -1.0**
KWP Kalwaria Pacla 27.20 125 *e*P **P 19 56 56.1 +1.2**
KWP LMZ 20 06 15.0
comp=Z,700nm,26.2s
KWP Kalwaria Pacla 27.20 125 *e*P **P 19 56 56.4 +1.5**
KWP pmax pmax
comp=Z,26nm,1.3s,mb4.6
KWP Kalwaria Pacla 27.20 125 *e*P **P 19 56 56.4 +1.5**
comp=Z,26nm,1.3s,mb4.6
KWP Kalwaria Pacla 27.20 125⇓ *i*P **P 19 56 55.9 +1.0**
VYHS Vyhne 27.28 131 *e*P **P 19 56 55.9 +0.4**
comp=Z,22nm,1.9s,mb4.4
VYHS *e* 20 01 45.4
VYHS *e*ScS 20 06 25.7
VYHS LR LR
comp=Z,400nm,39.3s,MS3.7
VYHS Vyhne 27.28 131 *e*P **P 19 56 55.9 +0.4**
VYHS *e*S **S 20 01 45.3 +11**
VYHS *e* 20 06 25.7
KBA Koelnbreinsper 27.38 139⇓ *i*P **P 19 56 58.4 +1.9**
comp=Z,12nm,1.9s,mb4.1
LVV L'vov 27.38 123 *e*P **P 19 57 02.1 +5.6**
LVV MLR MLR
comp=Z,1μm,15.0s,MS4.6
LVV MLR MLR
comp=E,200nm,14.0s,MS4.6
LVV MLR MLR
comp=N,1μm,15.0s,MS4.6
LFF La Frestale 27.41 159 *e*P **P 19 56 56.2 -0.5**
comp=N,24nm,1.1s,mb4.4
LFF La Frestale 27.41 159 *e*P **P 19 56 56.2 -0.5**
LFF pmax pmax
comp=Z,12nm,1.1s,mb4.3
LFF La Frestale 27.41 159 *e*P **P 19 56 56.2 -0.5**
comp=Z,12nm,1.1s,mb4.3
SSB Saint Sauveur 27.56 153 *e*P **P 19 56 57.1 -1.0**
SSB pmax pmax
comp=Z,69nm,2.1s,mb4.9
SSB Saint Sauveur 27.56 153 *e*P **P 19 56 57.1 -1.0**
comp=Z,69nm,2.1s,mb4.9
SSB Saint Sauveur 27.56 153 *e*P **P 19 56 57.1 -1.0**
comp=Z,69nm,2.1s,mb4.9
CAF Calviac 27.58 157 *e*P **P 19 56 57.3 -0.9**
CAF Calviac 27.58 157 *e*P **P 19 56 57.3 -0.9**
LPL La Plagne 27.66 150 *e*P **P 19 56 59.5 +0.5**
LPG La Plagne 27.68 150 *e*P **P 19 56 59.7 +0.5**
comp=Z,59nm,1.5s,mb4.7
LPG La Plagne 27.68 150 *e*P **P 19 56 59.7 +0.5**
LPG pmax pmax
comp=Z,30nm,1.5s,mb4.7
LPG La Plagne 27.68 150 *e*P **P 19 56 59.7 +0.5**
comp=Z,30nm,1.5s,mb4.7

KECS Kecovo 27.69 129 *e*P **P 19 56 58.3 -0.9**
KECS pmax pmax
comp=Z,8.0nm,1.7s,mb4.1
KECS Kecovo 27.69 129 *e*P **P 19 56 58.3 -0.9**
comp=Z,8.2nm,1.7s,mb4.1
KECS Kecovo 27.69 129 *e*P **P 19 56 58.3 -0.9**
KOLS Kolonicke sedl 27.73 126 *e*P **P 19 57 00.8 +1.2**
KOLS *e* pP 19 57 05.3 +2.7
KOLS *e* 20 01 49.6
KOLS pmax pmax
comp=Z,14nm,1.4s,mb4.4
KOLS MLR MLR
comp=Z,300nm,26.4s,MS3.8
KOLS Kolonicke sedl 27.73 126 *e*P **P 19 57 00.8 +1.2**
comp=Z,14nm,1.4s,mb4.4
KOLS *e* pP 19 57 05.3 +2.7
KOLS *e* 20 01 49.6
KOLS *e*ScS 20 06 28.9
KOLS LR LR
comp=Z,300nm,26.4s,MS3.8
KOLS Kolonicke sedl 27.73 126 *e*P **P 19 57 00.8 +1.2**
KOLS *e*pP pP 19 57 05.3 +2.7
KOLS *e*S **S 20 01 49.5 +7.9**
KOLS *e* 20 06 28.8
VIVF Saint-Julien-l 27.99 153 *e*P **P 19 57 01.8 -0.2**
comp=Z,38nm,1.4s,mb4.5
VIVF Saint-Julien-l 27.99 153 *e*P **P 19 57 01.8 -0.2**
VIVF pmax pmax
comp=Z,19nm,1.4s,mb4.5
VIVF Saint-Julien-l 27.99 153 *e*P **P 19 57 01.8 -0.2**
comp=Z,19nm,1.4s,mb4.5
UZH Uzhgorod 28.02 126 *e*P **P 19 57 02.0 -0.1**
UZH *e* 19 57 07.0
UZH *e*S **S 20 01 43.0 -3.0**
UZH MLR MLR
comp=N,620nm,15.0s,MS4.5
UZH MLR MLR
comp=E,550nm,15.0s,MS4.5
UZH MLR MLR
comp=Z,600nm,15.0s,MS4.3
AKASG Malin Array Be 28.04 116 P **P 19 57 00.6 -1.7**
comp=Z,0.6nm,0.4s,mb3.6,baz=328,slow=9.5,SNR=13
AKASG LR LR 20 07 46.4
comp=Z,891nm,19.2s,MS4.4,baz=330,slow=36
AKASG Malin Array Be 28.04 116 P **P 19 57 00.6 -1.7**
AKBB Malin Array Si 28.04 116 *e*P **P 19 57 01.2 -1.1**
AKBB Malin Array Si 28.04 116 *e*P **P 19 57 01.1 -1.2**
PSZ Piszkesteto 28.07 130 *e*P **P 19 57 00.2 -2.4**
PSZ pmax pmax
comp=Z,26nm,1.5s,mb4.6
PSZ Piszkesteto 28.07 130 *e*P **P 19 57 00.2 -2.4**
comp=Z,26nm,1.5s,mb4.6
PSZ Piszkesteto 28.07 130⇑ *i*P **P 19 57 03.3 +0.7**
PSZ Piszkesteto 28.07 130 *e*P **P 19 57 00.2 -2.4**
comp=Z,26nm,1.5s,mb4.6
BNI Bardonecchia 28.11 150 *e*P **P 19 57 03.2 +0.2**
BNI pmax pmax
comp=Z,52nm,1.9s,mb4.8
BNI Bardonecchia 28.11 150 *e*P **P 19 57 03.2 +0.3**
comp=Z,52nm,1.9s,mb4.8
ORIF Oris-en-Rattie 28.11 151 *e*P **P 19 57 02.8 -0.2**
ORIF *e*MLR MLR
comp=Z,227nm,19.5s,MS3.5
SCHQ Schefferville 28.25 263 P **P 19 57 03.1 -1.0**
comp=Z,3.6nm,0.8s,mb4.0,baz=21,slow=6.9,SNR=5.9
SCHQ LR LR 20 07 38.9
comp=Z,2μm,19.3s,MS4.6,baz=68,slow=35
SCHQ Schefferville 28.25 263 *e*P **P 19 57 02.7 -1.4**
comp=Z,8.3nm,1.0s,mb4.3
SCHQ Schefferville 28.25 263 *e*P **P 19 57 02.7 -1.4**
comp=Z,8.3nm,1.0s,mb4.3
MBDF Montbardon 28.44 150 *e*P **P 19 57 06.5 +0.6**
TRPA Tarpa 28.54 126⇓ *i*P **P 19 57 07.7 +0.9**
LASF Ste Croix 28.64 155 *e*P **P 19 57 07.9 +0.1**
SJPF Ste Jean 29.01 163 *e*P **P 19 57 10.0 -1.0**
comp=Z,23nm,1.2s,mb4.5
SJPF Ste Jean 29.01 163 *e*P **P 19 57 10.0 -1.0**
SJPF pmax pmax
comp=Z,11nm,1.2s,mb4.5
SJPF Ste Jean 29.01 163 *e*P **P 19 57 10.0 -1.0**
comp=Z,11nm,1.2s,mb4.5
SJPF Ste Jean 29.01 163 *e*P **P 19 57 10.0 -1.0**
comp=Z,11nm,1.2s,mb4.5
MTLF Montolieu 29.16 157 *e*P **P 19 57 12.0 -0.3**
SOKR Solikamsk 29.20 78 *e*P **P 19 57 11.8 -0.8**
SOKR pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
SOKR MLR MLR
comp=Z,530nm,13.0s,MS4.3
SOKR Solikamsk 29.20 78 *e*P **P 19 57 11.8 -0.8**
comp=Z,530nm,13.0s
BMR Baia Mare 29.21 125⇑ *i*P **P 19 57 11.6 -1.2**
BMR Baia Mare 29.21 125⇑ *i*P **P 19 57 11.6 -1.2**
EPF Esparros 29.25 160 *e*P **P 19 57 12.2 -0.9**
comp=Z,24nm,1.1s,mb4.5
EPF Esparros 29.25 160 *e*P **P 19 57 12.2 -0.9**
EPF pmax pmax
comp=Z,12nm,1.1s,mb4.5
EPF Esparros 29.25 160 *e*P **P 19 57 12.2 -0.9**
comp=Z,12nm,1.1s,mb4.5
EPF Esparros 29.25 160 *e*P **P 19 57 12.2 -0.9**
comp=Z,12nm,1.1s,mb4.5
ETSF Etsaut 29.29 162 *e*P **P 19 57 13.9 +0.5**
comp=Z,26nm,1.2s,mb4.5
ETSF Etsaut 29.29 162 *e*P **P 19 57 13.9 +0.5**
ETSF pmax pmax
comp=Z,13nm,1.2s,mb4.5
ETSF Etsaut 29.29 162 *e*P **P 19 57 13.9 +0.5**
comp=Z,13nm,1.2s,mb4.5
PKSM Moragy 29.37 133⇑ *i*P **P 19 57 15.8 +1.6**
SBF Sospel 29.39 150 *e*P **P 19 57 14.8 +0.5**
comp=Z,56nm,1.1s,mb4.9
SBF Sospel 29.39 150 *e*P **P 19 57 14.8 +0.5**
SBF pmax pmax
comp=Z,28nm,1.1s,mb4.9
SBF Sospel 29.39 150 *e*P **P 19 57 14.8 +0.5**
comp=Z,28nm,1.1s,mb4.9
FRF La Foret Royal 29.56 151 *e*P **P 19 57 15.9 +0.1**
VLC Villacollemand 29.61 145 *e*P **P 19 57 17.5 +1.3**
comp=Z,43nm,1.3s,mb5.0
BUR08 Bucovina Ar. S 29.69 123 *e*P **P 19 57 17.4 +0.5**
BURAR Bucovina Array 29.72 123⇓ *i*P **P 19 57 17.3 0.0**
LMR La Mourre 29.76 151 *e*P **P 19 57 17.8 +0.2**
comp=Z,42nm,1.6s,mb4.6
LMR La Mourre 29.76 151 *e*P **P 19 57 17.8 +0.2**
LMR pmax pmax
comp=Z,21nm,1.6s,mb4.6
LMR La Mourre 29.76 151 *e*P **P 19 57 17.8 +0.2**
comp=Z,21nm,1.6s,mb4.6
MVO Moncorvo 30.54 172 *e*P **P 19 57 24.9 +0.4**
comp=Z,12nm,1.4s,mb4.5
MVO *e*LR LR 20 06 52.7
comp=Z,123nm,20.0s
VSR Storozhevoye 30.57 104 *e*P **P 19 57 24.7 0.0**
VSR *e**PP pP 19 57 29.3 +1.5
VSR *e*S **S 20 02 25.7 -0.4**
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
VSR smax
comp=E,60nm,8.2s
VSR smax
comp=Z,60nm,7.3s
VSR smax
comp=N,20nm,11.8s
VSR MLR MLR
comp=Z,1μm,16.0s,MS4.6
VSR MLR MLR
comp=N,520nm,15.0s,MS4.4
VSR MLR MLR
comp=E,320nm,15.0s,MS4.4
BZS Buzias 30.65 129⇑ *i*P **P 19 57 26.4 +0.9**
VORD Divnogorie 30.83 104 *e*P **P 19 57 25.9 -1.1**
VORD *e**PP pP 19 57 31.1 +1.0
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD MLR MLR
comp=Z,940nm,16.0s,MS4.5
VORD MLR MLR
comp=N,670nm,17.0s,MS4.5
VORD MLR MLR
comp=E,230nm,12.0s,MS4.5
VORD Divnogorie 30.83 104 *e*P **P 19 57 25.9 -1.1**
GZR Gura Zlata 31.14 128⇑ *i*P **P 19 57 31.9 +2.0**
KIS Kishinev 31.27 119 *e*P **P 19 57 28.0 -2.9**
KIS *e* 20 02 28.0
KIS MLR MLR
comp=Z,2μm,20.0s,MS4.7
KIS MLR MLR
comp=N,1μm,19.0s,MS4.6
KIS MLR MLR
comp=E,400nm,17.0s,MS4.6
KIS MLR MLR
comp=Z,2μm,20.0s
MTE Manteigas 31.28 173 *e*S PP 19 58 56.6 +15
MTE *e*LQ 20 06 53.8
MTE *e*LR LR 20 09 06.3
comp=Z,200nm,16.0s
VRHR Novokhopersk 31.44 101 *e*P **P 19 57 31.9 -0.5**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VRHR pmax pmax
comp=N,30nm,1.3s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR MLR MLR
comp=Z,1μm,17.0s,MS4.6
VRHR MLR MLR
comp=N,530nm,14.0s,MS4.4
VRHR MLR MLR
comp=E,240nm,14.0s,MS4.4
VOIR 31.69 125⇑ *i*P **P 19 57 38.4 +3.8**
PLOR Plostina 31.73 123⇓ *i*P **P 19 57 35.2 +0.2**
VRI Vrincioaia 31.73 123⇑ *i*P **P 19 57 36.2 +1.2**
MLR Muntele Rosu 31.87 124⇓ *i*P **P 19 57 37.3 +1.0**
PTOM Tomar 32.02 174 *e*P **P 19 57 40.7 +3.1**
ESDC Sonseca Array 32.20 167 P **P 19 57 38.9 -0.3**
comp=E,2.2nm,0.9s,mb4.0,baz=358,slow=8.9,SNR=8.1
ESDC LR LR 20 10 54.6
comp=E,139nm,19.1s,MS3.7,baz=10.0,slow=37
ESLA Sonseca Array 32.20 167 *e*P **P 19 57 39.1 -0.1**
comp=E,2.9nm,1.2s,mb4.0
PMRV Marv??o 32.25 172 *e*P **P 19 57 39.9 +0.3**
comp=E,24nm,1.7s,mb4.7
PMRV *e*LQ 20 05 32.8
PMRV *e*LR LR 20 07 12.0
comp=E,165nm,18.0s
PAB San Pablo 32.30 168 *e*P **P 19 57 40.8 +0.7**
PAB pmax pmax
comp=Z,22nm,1.5s,mb4.8
PAB San Pablo 32.30 168 *e*P **P 19 57 40.8 +0.8**
comp=Z,22nm,1.5s,mb4.8
ARU Arti 32.30 80 *c i*P **P 19 57 41.1 +1.2**
ARU *e* 19 58 45.4
ARU S **S 20 02 55.7 +2.6**
ARU SS SS 20 04 44.0 -27
ARU pmax pmax
comp=Z,11nm,2.5s,mb4.2
ARU MLR MLR
comp=Z,966nm,20.0s,MS4.5
ARU Arti 32.30 80 *e*P **P 19 57 40.5 +0.6**
comp=Z,6.3nm,1.0s,mb4.4
PMAFR Mafra 32.66 175 *e*LQ 20 07 37.4
PMAFR *e*LR LR 20 09 18.6
comp=Z,107nm,18.0s
HARR Harsova 33.15 122⇓ *i*P **P 19 57 47.8 +0.4**
TIRR Tirgusor 33.49 122⇑ *i*P **P 19 57 50.0 -0.4**
PBAR Barrancos 33.52 172 *e*LQ 20 06 17.4
PBAR *e*LR LR 20 10 29.5
comp=Z,169nm,18.0s
FCC Fort Churchill 33.55 291 *e*P **P 19 57 52.8 +2.0**
comp=Z,0.5nm,1.7s
PBEJ Beja 33.63 173 *e*P **P 19 57 53.7 +2.0**
comp=Z,28nm,2.0s,mb4.8
VTS Vitosha 33.88 129 *i*P **P 19 57 53.2 -0.6**
PVAQ Vaqueiros 34.26 173 *e*LQ 20 06 34.6
PVAQ *e*LR LR 20 10 12.0
comp=Z,145nm,18.0s
MORF Marmelete 34.32 174 *e*P **P 19 58 00.0 +2.3**
comp=Z,40nm,2.3s,mb4.9
MORF *e*LR LR 20 10 29.7
comp=Z,232nm,18.6s
PBDV Barranco-do-Ve 34.41 173 *e*LR LR 20 07 55.7
comp=Z,145nm,16.0s
PFVI Vila Bisbo 34.49 175 *e*LR LR 20 08 01.8
comp=Z,154nm,16.0s
KKB Krupnik 34.53 130 *i*P **P 19 57 59.3 -0.2**
TIXI Tiksi 34.94 20 *e*P **P 19 58 05.9 +3.2**
TIXI pmax pmax
comp=Z,10.0nm,1.8s,mb4.4
TIXI Tiksi 34.94 20 *e*P **P 19 58 05.9 +3.1**
comp=Z,9.7nm,1.8s,mb4.4
MMB Musomiste 34.95 129 *i*P **P 19 58 03.0 -0.1**
INK Inuvik 35.04 326 *e*P **P 19 58 04.2 +0.6**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 35.04 326 LR LR 20 12 33.1
comp=Z,300nm,21.1s,MS4.0,baz=152,slow=37
INK Inuvik 35.04 326 *e*P **P 19 58 04.2 +0.5**
comp=Z,5.2nm,1.1s,mb4.4
INK Inuvik 35.04 326 *e*P **P 19 58 04.2 +0.6**
comp=Z,5.0nm,1.1s,mb4.4
RZN Rozhen 35.11 128 *i*P **P 19 57 57.6 -6.9**
SFS San Fernando 35.26 171 P **P 19 58 06.6 +0.8**
ANN Anapa 35.76 111 *e*P **P 19 58 08.4 -1.6**
ANN *e*S **S 20 03 43.7 -3.0**
ANN pmax pmax
comp=Z,49nm,1.6s,mb5.2
ANN MLR MLR
comp=N,583nm,13.0s,MS4.6
ANN MLR MLR
comp=E,395nm,13.0s,MS4.6
ANN MLR MLR
comp=Z,986nm,13.0s,MS4.8
ANN Anapa 35.76 111 *e*P **P 19 58 08.4 -1.6**
comp=Z,49nm,1.6s,mb5.2
YKA Yellowknife Ar 36.05 309 P **P 19 58 12.2 -0.1**
YKA 20 00 38.5
YKA Yellowknife Ar 36.05 309 P **P 19 58 12.2 -0.1**
comp=Z,5.4nm,0.9s,mb4.5,baz=30,slow=8.5,SNR=15
YKA PcP PcP 20 00 38.5 +0.4
comp=Z,0.5nm,0.7s,baz=27,slow=2.9,SNR=7.2
YKA LR LR 20 12 51.4
comp=Z,66nm,20.4s,MS3.4,baz=295,slow=36
YKA Yellowknife Ar 36.05 309 P **P 19 58 12.2 -0.1**
YKA PcP PcP 20 00 38.5 +0.4
YKA LR LR 20 12 51.4
YKA Yellowknife Ar 36.05 309 P **P 19 58 12.2 -0.1**
YKA Yellowknife Ar 36.05 309 PcP PcP 20 00 38.5 +0.4
GOF Gofitskoye 37.23 105 *e*P **P 19 58 22.8 +0.3**
GOF pmax pmax
comp=Z,52nm,1.0s,mb5.3
PKME Peaks-Kenny Pk 37.37 257 *e*P **P 19 58 24.0 +0.3**
comp=Z,12nm,1.0s,mb4.7
PKME Peaks-Kenny Pk 37.37 257 *e*P **P 19 58 24.0 +0.3**
comp=Z,12nm,1.0s,mb4.7
KEST Kesra 37.63 150 LR LR 20 13 30.5
comp=Z,69nm,20.9s,MS3.4,baz=206,slow=36
KIV Kislovodsk 38.12 106 *e*P **P 19 58 28.1 -2.0**
KIV *e* 20 00 45.5
KIV *e*S **S 20 04 20.3 -2.3**
KIV *e*SS SS 20 07 04.8 -4.9
KIV pmax pmax
comp=Z,19nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,540nm,16.0s,MS4.5
KIV Kislovodsk 38.12 106 P **P 19 58 31.5 +1.4**
comp=Z,15nm,1.0s,mb4.7
KIV Kislovodsk 38.12 106 *e*P **P 19 58 28.1 -2.0**
comp=Z,19nm,1.2s,mb4.7
BRVK Borovoye 38.79 73 *e*P **P 19 58 36.6 +0.9**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BRVK Borovoye 38.79 73 *e*P **P 19 58 36.6 +0.9**
comp=Z,4.4nm,0.9s,mb4.2
BVAR Borovoye Array 38.85 73 P **P 19 58 37.2 +1.0**
comp=Z,1.4nm,0.8s,mb3.8,baz=344,slow=4.8,SNR=6.4
BVAR LR LR 20 16 50.0
comp=Z,120nm,18.1s,MS3.8,slow=40
ABKAR Akbulak array 38.86 85 *e*P **P 19 58 36.5 +0.3**
comp=Z,9.7nm,1.3s,mb4.4
FFC Flin Flon 39.29 294 *i*P **P 19 58 42.2 +2.4**
FFC Flin Flon 39.29 294 *e*P **P 19 58 39.3 -0.5**
comp=Z,31nm,1.4s,mb4.8
FFC Flin Flon 39.29 294 *e*P **P 19 58 39.3 -0.5**

comp=Z,31nm,1.4s,mb4.8
BR131 Keskin Array S 39.33 118 *e*P **P 19 58 42.7 +2.5**
comp=Z,2.4nm,0.8s,mb4.0
BRTR Keskin Array B 39.33 118 *ce*P **P 19 58 43.0 +2.7**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 39.33 118 P **P 19 58 41.8 +1.5**
comp=Z,1.5nm,0.8s,mb3.8,baz=352,slow=7.5,SNR=5.3
BRTR LR LR 20 16 31.7
comp=Z,340nm,18.5s,MS4.2,baz=323,slow=39
ZEI Tsey 39.56 105 *e*P **P 19 58 38.3 -3.9**
ZEI *e* 20 00 17.0
ZEI *e*S **S 20 04 33.9 -10**
ZEI pmax pmax
comp=Z,18nm,1.6s,mb4.5
ZEI MLR MLR
comp=Z,255nm,16.0s,MS4.2
DAWY Dawson 39.91 327 P **P 19 58 45.5 +0.6**
DAWY Dawson 39.91 327 P **P 19 58 45.5 +0.6**
MAK Makhachkala 40.51 102 *e*P **P 19 58 51.0 +0.9**
MAK *e* 20 00 20.2
MAK *e*S **S 20 04 58.3 -0.3**
MAK pmax pmax
comp=Z,168nm,1.6s,mb5.4
MAK MLR MLR
comp=Z,679nm,14.0s,MS4.7
BILL Biiibino 40.71 1⇑*e*P **P 19 58 56.8 +5.3**
BILL *e**PP pP 19 59 00.8 +6.2
BILL pmax pmax
comp=Z,11nm,1.8s,mb4.2
BILL Biiibino 40.71 1 *e*P **P 19 58 53.9 +2.4**
comp=Z,36nm,1.8s,mb4.7
SADO Sadowa 40.91 266 LR LR 20 15 23.3
comp=Z,675nm,18.0s,MS4.5,baz=69,slow=36
NVS Novosibirsk 41.04 61 *i*P **P 19 58 54.3 0.0**
ULM Lac du Bonnet 41.36 285 P **P 19 58 57.5 +0.5**
comp=Z,4.1nm,0.9s,mb4.1,baz=357,slow=17,SNR=4.1
ULM LR LR 20 16 40.1
comp=Z,389nm,20.7s,MS4.3,baz=178,slow=37
ULM Lac du Bonnet 41.36 285 *e*P **P 19 58 56.5 -0.4**
comp=Z,6.5nm,1.0s,mb4.2
ULM Lac du Bonnet 41.36 285 *e*P **P 19 58 56.5 -0.5**
comp=Z,6.5nm,1.0s,mb4.2
MCK McKinley 41.76 333 *e*P **P 19 59 01.1 +1.0**
MCK pmax pmax
comp=Z,31nm,1.5s,mb4.7
MCK McKinley 41.76 333 *e*P **P 19 59 01.1 +1.0**
comp=Z,31nm,1.5s,mb4.7
MCK McKinley 41.76 333 *e*P **P 19 59 01.1 +1.0**
comp=Z,31nm,1.5s,mb4.7
MALT Malatya 42.01 114 *e*P **P 19 59 03.4 +1.0**
MALT pmax pmax
comp=Z,29nm,1.4s,mb4.7
MALT Malatya 42.01 114 *e*P **P 19 59 03.4 +1.0**
comp=Z,29nm,1.4s,mb4.7
MALT Malatya 42.01 114⇓*i*P **P 19 59 04.3 +1.9**
EYMN Ely 42.02 280 P **P 19 58 57.7 -4.7**
comp=Z,6.7nm,1.0s,mb4.2
ZALV Zalesovo Beam 42.27 61 LR LR 20 18 15.2
comp=Z,256nm,21.8s,MS4.1,baz=313,slow=38
AGMN Agassiz Refuge 43.08 284 P **P 19 59 11.1 +0.1**
comp=Z,14nm,1.1s,mb4.6
AGMN Agassiz Refuge 43.08 284 P **P 19 59 11.1 +0.1**
comp=Z,14nm,1.1s,mb4.6
DLBC Dease Lake 43.23 317 LR LR 20 16 00.5
comp=Z,332nm,19.8s,MS4.2,baz=213,slow=34
KURK Kurchatov 43.35 68 *de*P **P 19 59 15.3 +2.1**
KURK pmax pmax
comp=Z,10.0nm,2.5s,mb4.1
KURK Kurchatov 43.35 68 P **P 19 59 13.6 +0.4**
comp=Z,1.5nm,0.7s,mb3.9,baz=330,slow=7.2,SNR=9.5
KURK Kurchatov 43.35 68 *e*P **P 19 59 13.2 0.0**
comp=Z,5.2nm,1.0s,mb4.2
EDM Edmonton 43.83 301 P **P 19 59 10.9 -6.1**
SSPA Standing Stone 44.24 262 *e*P **P 19 59 19.7 -0.8**
comp=Z,14nm,1.3s,mb4.5
SSPA Standing Stone 44.24 262 *e*P **P 19 59 19.7 -0.8**
comp=Z,14nm,1.3s,mb4.5
ECSD EROS Data Cent 47.39 282 *e*P **P 19 59 44.7 -0.6**
comp=Z,8.1nm,1.1s,mb4.6
ECSD EROS Data Cent 47.39 282 *e*P **P 19 59 44.7 -0.6**
comp=Z,8.1nm,1.1s,mb4.6
A15A Johnson Ranch, 47.48 298 ⇓P **P 19 59 45.3 -0.5**
baz=47
EGMT Eagleton 47.49 295 ⇓P **P 19 59 46.0 0.0**
baz=47
EGMT Eagleton 47.49 295 *e*P **P 19 59 47.4 +1.4**
comp=Z,57nm,1.6s,mb5.2
EGMT Eagleton 47.49 295 *e*P **P 19 59 47.4 +1.4**
comp=Z,57nm,1.6s,mb5.2
B17A L&G Farms, Che 47.55 296 ⇓P **P 19 59 47.2 +0.7**
baz=47
A14A Double T Ranch 47.67 299 ⇓P **P 19 59 47.0 -0.4**
baz=47,SNR=6.5
WALA Waterton Lakes 47.73 299 *e*P **P 19 59 45.6 -2.2**
comp=Z,1.0nm,1.6s,mb3.6
MK31 Makanchi Array 47.95 67 *e*P **P 19 59 51.0 +1.5**
MKAR Makanchi Array 47.95 67 *ce*P **P 19 59 50.0 +0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 47.95 67 P **P 19 59 49.1 -0.4**
comp=Z,1.3nm,0.9s,mb4.0,baz=325,slow=6.1,SNR=9.8
MKAR LR LR 20 23 23.7
comp=Z,246nm,18.6s,MS4.2,baz=337,slow=40
A13A Flathead Natio 47.99 300 ⇑P **P 19 59 49.3 -0.5**
baz=48
KDAK Kodiak Island 47.99 332 LR LR 20 19 57.5
comp=Z,160nm,20.1s,MS4.0,baz=46,slow=36
B15A Bradely Ranch, 48.03 298 ⇓P **P 19 59 49.4 -0.8**
baz=48
A11A Hall Mountain, 48.50 301 ⇑P **P 19 59 52.6 -1.2**
baz=48
C15A Salmond Ranch, 48.53 298 ⇑P **P 19 59 53.5 -0.5**
baz=48
BBB Bella Bella 48.54 312 LR LR 20 20 19.3
comp=Z,384nm,19.6s,MS4.4,baz=141,slow=36
D17A Six Diamond Ra 48.55 296 ⇑P **P 19 59 53.4 -0.8**
baz=48
E18A Harlowton 48.86 295 ⇑P **P 19 59 55.8 -0.8**
baz=49
JTMT Jette 49.03 299 *e*P **P 19 59 59.6 +1.7**
comp=Z,17nm,1.8s,mb4.8
BSMT Bassoo Peak 49.08 299 *e*P **P 20 00 01.0 +2.8**
comp=Z,7.1nm,1.1s,mb4.6
EKS2 Erkin-Say 49.10 77 *e*P **P 19 59 59.3 +0.8**
comp=Z,3.2nm,0.9s,mb4.3
SWMT Swartz Lake 49.17 299 *e*P **P 19 59 59.9 +1.0**
comp=Z,16nm,1.5s,mb4.8
SWMT Swartz Lake 49.17 299 *e*P **P 19 59 59.9 +1.0**
comp=Z,16nm,1.5s,mb4.8
C13A Hot Springs 49.17 299 ⇓P **P 19 59 58.3 -0.7**
baz=49,SNR=6.3
E17A Martinsdale 49.23 295 ⇑P **P 19 59 59.7 +0.3**
baz=49
SLMT Seeley Lake 49.27 298 *e*P **P 20 00 00.3 +0.6**
comp=Z,11nm,1.1s,mb4.8
SLMT Seeley Lake 49.27 298 *e*P **P 20 00 00.3 +0.6**
comp=Z,11nm,1.1s,mb4.8
A08A Turner Farm, O 49.29 304 ⇓P **P 19 59 59.8 -0.1**
baz=49
RSSD Black Hills 49.33 288 *e*P **P 20 00 01.8 +1.6**
RSSD pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
RSSD Black Hills 49.33 288 *e*P **P 20 00 01.8 +1.5**
comp=Z,5.2nm,1.1s,mb4.5
RSSD Black Hills 49.33 288 *e*P **P 20 00 01.8 +1.6**
comp=Z,5.0nm,1.1s,mb4.5
NEW Newport 49.34 301 P **P 20 00 03.7 +3.5**
NEW pmax pmax
comp=Z,6.0nm,1.1s
NEW Newport 49.34 301 P **P 20 00 03.7 +3.5**
comp=Z,6.4nm,1.1s,mb4.6
AAK Ala-Archa 49.35 76 *e*P **P 20 00 01.9 +1.5**
AAK pmax pmax
comp=Z,17nm,1.8s,mb4.8
AAK Ala-Archa 49.35 76 *e*P **P 20 00 01.9 +1.5**
comp=Z,17nm,1.8s,mb4.8
C12B Naegeli Ranch, 49.40 300 ⇓P **P 20 00 00.1 -0.5**
baz=49
F18A Big Timber 49.40 294 ⇑P **P 20 00 00.8 +0.1**
baz=49
D14A Greenough 49.42 298 ⇑P **P 20 00 00.3 -0.5**
baz=49,SNR=7.0
TKM2 Tokmak 2 49.43 75 P **P 20 00 01.4 +0.4**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
TKM2 Tokmak 2 49.43 75 P **P 20 00 01.4 +0.4**
comp=Z,2.2nm,0.8s,mb4.2
B09A Rice 49.47 302 ⇓P **P 20 00 00.8 -0.4**
baz=49
A07A Ashnola River, 49.50 305 ⇓P **P 20 00 00.6 -0.8**
baz=49
CHMT Chamberlain Mo 49.50 298 *e*P **P 20 00 01.6 +0.2**
comp=Z,12nm,1.4s,mb4.7
CHMT Chamberlain Mo 49.50 298 *e*P **P 20 00 01.6 +0.1**
comp=Z,12nm,1.4s,mb4.7
AML Almayashu 49.56 77 *e*P **P 20 00 03.5 +1.5**
comp=Z,4.6nm,1.0s,mb4.5
D13A Huson 49.67 299 ⇓P **P 20 00 01.5 -1.3**
baz=49
F17A Fitzpatrick Pl 49.67 295 ⇑P **P 20 00 02.4 -0.4**
baz=49
UCH Uchtor 49.73 76 *e*P **P 20 00 03.8 +0.6**
comp=Z,6.9nm,1.2s,mb4.6
MSO Missoula 49.77 298 *e*P **P 20 00 04.3 +0.8**
comp=Z,9.6nm,1.2s,mb4.7
MSO Missoula 49.77 298 *e*P **P 20 00 04.3 +0.8**
comp=Z,9.6nm,1.2s,mb4.7
TZTN Tazewell 49.78 266 P **P 20 00 03.2 -0.5**
comp=Z,31nm,0.7s,mb5.5
TZTN Tazewell 49.78 266 P **P 20 00 03.2 -0.5**
comp=Z,31nm,0.7s,mb5.5
B08A Colville Reser 49.85 303 ⇓P **P 20 00 03.2 -0.9**
baz=50
D12A Red Ives Fores 49.96 299 ⇓P **P 20 00 04.6 -0.4**
baz=50
B07A Winthrop 49.97 304 ⇑P **P 20 00 03.8 -1.2**
baz=50
RLMT Red Lodge 49.98 293 P **P 20 00 08.5 +3.4**
comp=Z,7.5nm,1.2s,mb4.6
E14A Clinton 50.02 298 ⇓P **P 20 00 04.7 -0.8**
baz=50
D11A Klaveano Farm, 50.24 300 ⇓P **P 20 00 06.5 -0.5**
baz=50
F15A Butte 50.26 296 ⇑P **P 20 00 06.6 -0.6**
baz=50
E12A Beaver Dam Sad 50.60 299 ⇑P **P 20 00 09.6 -0.3**
baz=50
TKL Tuckaleechee C 50.66 265 LR LR 20 21 09.0
comp=Z,843nm,18.2s,MS4.8,baz=189,slow=36
D09A Jones Farm, Ri 50.77 302 ⇑P **P 20 00 10.6 -0.4**
baz=50
F13A Darby 50.83 298 ⇑P **P 20 00 11.1 -0.5**
baz=51
E11A Bogner Ranch, 50.84 300 ⇓P **P 20 00 11.3 -0.3**
baz=51
CCM Cathedral Cave 50.85 274 *e*P **P 20 00 11.1 -0.7**
CCM pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CCM Cathedral Cave 50.85 274 *e*P **P 20 00 11.1 -0.7**
comp=Z,9.2nm,0.8s,mb4.8
CCM Cathedral Cave 50.85 274 *e*P **P 20 00 11.1 -0.7**
comp=Z,9.0nm,0.8s,mb4.8
H16A Russell Place, 50.94 295 ⇑P **P 20 00 12.2 -0.2**
baz=51
CPCT Cooper Cave 51.09 266 *e*P **P 20 00 12.2 -1.5**
CPCT Cooper Cave 51.09 266 *e*P **P 20 00 12.2 -1.5**
F12A Elk City 51.12 299 ⇓P **P 20 00 13.7 0.0**
baz=51
MCMT McKenzie Canyo 51.29 296 *e*P **P 20 00 16.2 +1.2**
comp=Z,2.4nm,1.2s,mb4.0
MCMT McKenzie Canyo 51.29 296 *e*P **P 20 00 16.2 +1.2**
comp=Z,2.4nm,1.2s,mb4.0
H15A Lima 51.42 296 ⇑P **P 20 00 16.0 0.0**
baz=51
G13A Cobalt 51.44 297 ⇑P **P 20 00 16.2 0.0**
baz=51,SNR=7.3
G12A Big Creek, Yel 51.72 298 ⇓P **P 20 00 18.0 -0.3**
baz=52,SNR=10
SWET Sewanee 51.76 267 P **P 20 00 17.4 -1.2**
SWET Sewanee 51.76 267 P **P 20 00 17.4 -1.2**
H13A Challis 51.93 297 ⇑P **P 20 00 20.3 +0.5**
baz=52
J18A Kendall Valley 51.95 293 ⇑P **P 20 00 19.9 -0.1**
baz=52
E06A Yakima 51.96 304 ⇑P **P 20 00 20.0 0.0**
baz=52
BW06 Boulder Array 52.22 292 ⇓P **P 20 00 21.8 -0.2**
baz=52
PDAR Pinedale Array 52.22 292 P **P 20 00 22.0 0.0**
comp=Z,2.1nm,1.1s,mb4.0,baz=46,slow=6.4,SNR=11
PDAR LR LR 20 22 42.6
comp=Z,945nm,19.0s,MS4.8,baz=28,slow=36
PDAR Pinedale Array 52.22 292 P **P 20 00 22.0 0.0**
WMQ Urumqi 52.23 64 *e*P **P 20 00 21.2 -0.8**
WMQ PcP PcP 20 01 33.6 +0.2
WMQ PP PP 20 02 19.5 -0.6
WMQ S **S 20 07 44.4 -2.0**
WMQ sS sS 20 07 52.0 +0.4
WMQ ScS ScS 20 10 08.4 -3.0
WMQ SS SS 20 11 18.1 -5.0
WMQ pmax pmax
comp=Z,130nm,6.0s
WMQ LR LR
comp=N,450nm,14.0s,MS4.7
WMQ LR LR
comp=E,290nm,14.0s,MS4.7
WMQ LR LR
comp=Z,370nm,23.0s
WMQ Urumqi 52.23 64 *e*P **P 20 00 21.9 -0.1**
G09A Cove 52.26 300 ⇑P **P 20 00 22.1 -0.1**
baz=52,SNR=5.9
H11A Donnelly 52.30 299 ⇑P **P 20 00 22.1 -0.5**
baz=52
I13A Wildhorse Cree 52.49 297 ⇑P **P 20 00 23.6 -0.4**
baz=52,SNR=6.7
BMO Blue Mountains 52.52 300 *e*P **P 20 00 25.0 +0.8**
comp=Z,11nm,1.2s,mb4.7
BMO Blue Mountains 52.52 300 *e*P **P 20 00 25.0 +0.8**
comp=Z,11nm,1.2s,mb4.7
G08A Pilot Rock 52.57 301 ⇑P **P 20 00 24.3 -0.3**
baz=52,SNR=8.0
G07A Ruggs Ranch, H 52.79 302 ⇓P **P 20 00 26.3 +0.1**
baz=52
H09A Durkee 52.79 300 ⇓P **P 20 00 25.8 -0.4**
baz=53
I12A Atlanta 52.89 298 ⇑P **P 20 00 27.2 +0.3**
baz=53
HLID Hailey 52.90 297 ⇓P **P 20 00 27.2 +0.2**
baz=53
HLID Hailey 52.90 297 *e*P **P 20 00 26.8 -0.2**
comp=Z,8.9nm,1.4s,mb4.5
HLID Hailey 52.90 297 *e*P **P 20 00 26.8 -0.2**
comp=Z,8.9nm,1.4s,mb4.5
J13A Cove Ranch, Pi 52.98 297 ⇓P **P 20 00 27.9 +0.3**
baz=53
G06A Carlson Farm, 53.08 303 ⇓P **P 20 00 28.2 -0.1**
baz=53
J12A Stokes Ranch, 53.38 297 ⇓P **P 20 00 29.8 -0.7**
baz=53
SONM Songino Array 53.42 47 P **P 20 00 32.6 +1.8**
comp=Z,0.5nm,0.9s,mb3.4,baz=270,slow=1.5,SNR=3.7
SONM LR LR 20 26 53.4
comp=Z,234nm,18.1s,MS4.3,baz=358,slow=40
I09A Lost Marbles R 53.45 300 ⇑P **P 20 00 31.1 0.0**
baz=53
ULN Ulaanbaatar 53.54 47 *e*P **P 20 00 32.4 +0.7**
ULN pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
ULN Ulaanbaatar 53.54 47 *e*P **P 20 00 32.4 +0.7**
comp=Z,3.3nm,1.0s,mb4.2
N20A Spence Gulch, 53.60 290 ⇑P **P 20 00 32.0 -0.3**
baz=53
L15A Malad City 53.75 294 ⇓P **P 20 00 33.9 +0.7**
baz=54
I07A Izee 53.84 301 ⇓P **P 20 00 33.3 -0.6**
baz=54
H04A Detroit Lake 54.00 304 ⇑P **P 20 00 34.6 -0.5**
baz=54
J09A Fry Pan Ranch, 54.03 300 ⇑P **P 20 00 35.6 +0.2**
baz=54,SNR=7.7
N17A Moffit Pass 54.27 293 ⇑P **P 20 00 37.2 +0.1**
baz=54
K10A MacKenzie Ranc 54.31 299 ⇑P **P 20 00 36.7 -0.7**
baz=54
M14A Sheep Mountain 54.49 295 ⇑P **P 20 00 38.1 -0.6**
baz=54
MIAR Mount Ida 54.81 274 P **P 20 00 36.5 -4.6**
MIAR pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
MIAR Mount Ida 54.81 274 P **P 20 00 36.5 -4.7**
comp=Z,8.6nm,1.0s,mb4.7
L10A Juniper Basin 54.85 298 ⇓P **P 20 00 41.3 0.0**
baz=55,SNR=6.6
M13A Montello 54.85 296 ⇑P **P 20 00 40.9 -0.4**
baz=55
M13A Montello 54.85 296 P **P 20 00 39.0 -2.4**
comp=Z,8.7nm,1.4s,mb4.6
P19A Cripple Cowboy 54.92 290 ⇑P **P 20 00 41.2 -0.6**
baz=55
BGU Big Grassy Mou 54.93 294 *e*P **P 20 00 43.5 +1.7**
comp=Z,21nm,1.8s,mb4.9
Q22A Crested Butte, 55.01 288 ⇓P **P 20 00 41.9 -0.6**
baz=55
M11A Holland Ranch, 55.26 297 ⇑P **P 20 00 44.4 +0.2**
baz=55
P18A Preston Nutter 55.30 291 ⇓P **P 20 00 44.6 0.0**
baz=55
M10A I.L. Ranch, Tu 55.38 298 ⇑P **P 20 00 45.5 +0.3**
baz=55
K05A Summer Lake 55.47 302 ⇓P **P 20 00 46.2 +0.4**
baz=55,SNR=5.6
PETK Petropavlovsk- 55.51 7 LR LR 20 25 05.4
comp=Z,41nm,19.5s,MS3.5,baz=28,slow=37
DUG Dugway 55.54 294 ⇑P **P 20 00 47.2 +0.9**
baz=55
DUG Dugway 55.54 294 *e*P **P 20 00 47.7 +1.4**
DUG pmax pmax
comp=Z,23nm,1.4s,mb5.0
DUG Dugway 55.54 294 *e*P **P 20 00 47.7 +1.4**
comp=Z,23nm,1.4s,mb5.0
DUG Dugway 55.54 294 *e*P **P 20 00 47.7 +1.4**
comp=Z,23nm,1.4s,mb5.0
R22A Saguache, Gunn 55.54 288 ⇓P **P 20 00 47.1 +0.8**
baz=55
R21A Cimarron 55.66 288 ⇑P **P 20 00 47.1 -0.1**
baz=55
ELK Elko 55.73 296 LR LR 20 24 59.7
comp=Z,353nm,20.4s,MS4.4,baz=20,slow=36
Q18A Rafter H Ranch 55.76 291 ⇓P **P 20 00 48.3 +0.4**
baz=56
SRU San Rafael 55.87 291 ⇓P **P 20 00 48.7 +0.1**
baz=56
SRU San Rafael 55.87 291 *e*P **P 20 00 48.3 -0.3**
SRU pmax pmax
comp=Z,12nm,1.3s,mb4.8
SRU San Rafael 55.87 291 *e*P **P 20 00 48.3 -0.3**
comp=Z,12nm,1.3s,mb4.8
SRU San Rafael 55.87 291 *e*P **P 20 00 48.3 -0.3**
comp=Z,12nm,1.3s,mb4.8
P14A Drum Mountains 56.17 294 ⇑P **P 20 00 50.6 -0.3**
baz=56
WMOK Wichita Mounta 56.28 279 *e*P **P 20 00 52.2 +0.5**
WMOK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
WMOK Wichita Mounta 56.28 279 *e*P **P 20 00 52.1 +0.4**
comp=Z,8.7nm,1.2s,mb4.7
WMOK Wichita Mounta 56.28 279 *e*P **P 20 00 52.2 +0.5**
comp=Z,9.0nm,1.2s,mb4.7
R18A Canyonlands Na 56.35 291 ⇑P **P 20 00 52.0 -0.1**
baz=56
R17A Hanksville Air 56.56 291 ⇑P **P 20 00 53.5 -0.1**
baz=56
T22A Edith 56.71 287 ⇑P **P 20 00 55.4 +0.7**
baz=56
Q14A Sevier Lake (B 56.79 294 ⇓P **P 20 00 54.7 -0.5**
baz=57
P12A McGill 56.81 295 ⇓P **P 20 00 55.1 -0.3**
baz=57
YBH Yreka Blue Hor 56.89 303 LR LR 20 25 03.5
comp=Z,405nm,20.8s,MS4.5,baz=9.8,slow=36
MSU Marysvale 56.91 293 *e*P **P 20 00 52.9 -3.2**
MSU pmax pmax
comp=Z,16nm,1.6s,mb4.8
MSU Marysvale 56.91 293 *e*P **P 20 00 52.9 -3.2**
comp=Z,16nm,1.6s,mb4.8
R16A Teasdale 56.91 292 ⇓P **P 20 00 55.4 -0.7**
baz=57
MVCO Mesa Verde 57.01 289 ⇓P **P 20 00 56.8 -0.1**
baz=57
MVCO Mesa Verde 57.01 289 *e*P **P 20 00 57.5 +0.7**
comp=Z,31nm,1.4s,mb5.2
MVCO Mesa Verde 57.01 289 *e*P **P 20 00 57.5 +0.7**
comp=Z,31nm,1.4s,mb5.2
S18A Hurst Farm, Bl 57.02 290 ⇓P **P 20 00 56.9 0.0**
baz=57
S17A Black Ridge (B 57.31 291 ⇑P **P 20 00 59.8 +0.8**
baz=57
T18A Mexican Hat 57.49 290 ⇑P **P 20 01 00.7 +0.4**
baz=57
T19A Beclabito 57.52 289 ⇑P **P 20 01 00.8 +0.3**
baz=57
Q11A Duckwater 57.61 296 ⇓P **P 20 01 01.3 +0.2**
baz=57,SNR=5.5
R13A O'Grain Ranch, 57.74 294 ⇓P **P 20 01 02.5 +0.5**
baz=58
R12A Pony Springs, 57.79 295 ⇓P **P 20 01 02.8 +0.5**
baz=58
Q10A Clear Creek Ra 57.84 296 ⇑P **P 20 01 03.1 +0.4**
baz=58,SNR=5.1
R11A Troy Canyon, C 58.05 295 ⇓P **P 20 01 04.2 0.0**
baz=58
U18A Rough Rock, Ch 58.16 290 ⇑P **P 20 01 05.7 +0.8**
baz=58
R10A Warm Springs 58.31 296 ⇑P **P 20 01 06.4 +0.4**
baz=58
ANMO Albuquerque 58.48 286 LR LR 20 26 44.9
comp=Z,293nm,18.9s,MS4.4,baz=37,slow=36
T14A Hurricane 58.52 293 ⇑P **P 20 01 07.6 +0.2**
baz=58
S10A Tonopah Range, 58.74 296 ⇑P **P 20 01 09.1 +0.1**
baz=58
NVAR Mina Array Bea 58.75 298 P **P 20 01 10.2 +1.1**
comp=Z,1.1nm,0.9s,mb3.9,baz=27,slow=4.7,SNR=4.3
NVAR Mina Array Bea 58.75 298 P **P 20 01 10.1 +1.1**
U15A North Rim 58.87 292 ⇑P **P 20 01 10.1 +0.2**
baz=59
TORD Torodi Ar. Bea 58.96 164 P **P 20 01 09.9 -0.8**
comp=Z,2.9nm,1.0s,mb4.3,baz=342,slow=7.8,SNR=1.4
T11A Corn Creek, Al 58.98 295 ⇑P **P 20 01 10.8 +0.2**
baz=59
U14A Mt Trumbull 59.15 293 ⇑P **P 20 01 11.6 -0.2**
baz=59
Z26A Caprock 59.27 283 ⇑P **P 20 01 12.4 -0.3**
baz=59
U13A Pakoon Wash 59.38 293 ⇓P **P 20 01 13.1 -0.3**
baz=59
V15A Kaibab Nationa 59.40 291 ⇓P **P 20 01 13.5 0.0**
baz=59
GTA Gaotai 59.68 56 *e*P **P 20 01 16.2 +0.8**
GTA pP pP 20 01 20.8 +2.2
GTA sP sP 20 01 24.0 +4.2
GTA PP PP 20 03 28.6 +2.0
GTA S **S 20 09 22.8 -2.7**
GTA sS sS 20 09 31.2 +0.4
GTA SS SS 20 13 19.1 -1.3
GTA pmax pmax
comp=Z,4.0nm,2.4s,mb4.0
GTA pmax pmax
comp=Z,140nm,6.0s
GTA LR LR
comp=N,210nm,15.0s,MS4.5
GTA LR LR
comp=E,170nm,16.5s,MS4.5
GTA LR LR
comp=Z,210nm,14.1s,MS4.4
V14A Boquillas Ranc 59.85 292 ⇑P **P 20 01 17.3 +0.6**
baz=60
125A Gardner Draw, 60.05 283 ⇑P **P 20 01 18.2 +0.2**
baz=60
226A Malaga, Loving 60.43 283 ⇑P **P 20 01 20.8 +0.1**
baz=60
JCT Junction City 60.54 278 P **P 20 01 21.0 -0.5**
JCT pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
JCT Junction City 60.54 278 P **P 20 01 21.0 -0.5**
comp=Z,4.7nm,0.4s,mb5.0
JCT Junction City 60.54 278 P **P 20 01 21.0 -0.5**
comp=Z,5.0nm,0.4s,mb5.0
225A Deer Hill, Car 60.61 283 ⇓P **P 20 01 22.9 +1.1**
baz=60
MPMC Manual Prospec 60.73 296 ⇑P **P 20 01 23.3 +0.6**
baz=60
MDJ Mudanjiang 61.11 30 P **P 20 01 22.5 -2.6**
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
MNTX Cornudas Mount 61.16 284 *e*P **P 20 01 25.2 -0.5**
comp=Z,3.6nm,1.2s,mb4.4
MNTX Cornudas Mount 61.16 284 *e*P **P 20 01 25.2 -0.5**
comp=Z,3.6nm,1.2s,mb4.4
CN2 Changchun 61.21 34 *e*P **P 20 01 26.6 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0

HHC	**Hu-ho-hao-te**	**61.22**	**46**	*eP*	**P**	**20 01 26.0 0.0**
HHC				pP	pP	20 01 31.0 +1.8
HHC				sP	sP	20 01 33.3 +2.9
HHC				PP	PP	20 03 42.6 +2.4
HHC				ScP	ScP	20 06 08.8 -0.8
HHC				S	**S**	**20 09 43.3 -2.0**
HHC				sS	sS	20 09 50.7 +0.1
HHC				ScS	ScS	20 11 13.0 -3.8
HHC				SS	SS	20 13 44.2 -0.3
HHC				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.9					
HHC				pmax	pmax	
	comp=Z,110nm,6.3s					
HHC				LR	LR	
	comp=N,190nm,16.7s,MS4.5					
HHC				LR	LR	
	comp=E,260nm,16.6s,MS4.5					
HHC				LR	LR	
	comp=Z,210nm,16.5s,MS4.4					
427A	**Hayter Ranch,**	**61.33**	**281**	⇑P	**P**	**20 01 26.7 -0.1**
	baz=61					
SJG	**San Juan**	**61.76**	**240**	LR	LR	20 24 49.2
	comp=Z,279nm,20.8s,MS4.4,baz=271,slow=33					
425A	**Indio Mountain**	**61.89**	**283**	⇑P	**P**	**20 01 31.2 +0.6**
	baz=62					
627A	**Terlingua Ranc**	**62.63**	**281**	⇓P	**P**	**20 01 36.2 +0.6**
	baz=62					
626A	**Big Bend Ranch**	**62.77**	**282**	⇓P	**P**	**20 01 37.7 +1.2**
	baz=63					
TXAR	**Lajitas Array**	**62.83**	**281**	P	**P**	**20 01 37.3 +0.4**
	comp=Z,1.1nm,0.9s,mb4.0,baz=52,slow=4.9,SNR=7.2					
TXAR				LR	LR	20 29 05.4
	comp=Z,698nm,19.2s,MS4.8,baz=10.0,slow=36					
TXAR	**Lajitas Array**	**62.83**	**281**	P	**P**	**20 01 37.3 +0.4**
LZH	**Lanzhou**	**63.86**	**54**	*eP*	**P**	**20 01 43.6 -0.1**
LZH				pP	pP	20 01 46.5 -0.4
LZH				sP	sP	20 01 48.5 +0.4
LZH				pmax	pmax	
	comp=Z,13nm,1.0s,mb4.9					
DBIC	**Dimbokro**	**64.94**	**171**	LR	LR	20 31 33.7
	comp=Z,90nm,18.1s,MS4.0,baz=159,slow=37					
LSA	**Lhasa**	**66.35**	**67**	*eP*	**P**	**20 02 02.0 +2.1**
LSA				pmax	pmax	
	comp=Z,47nm,2.1s,mb5.2					
LSA	**Lhasa**	**66.35**	**67**	P	**P**	**20 02 02.0 +2.1**
	comp=Z,47nm,2.1s,mb5.2					
XAN	**Xi'an**	**67.08**	**50**	P	**P**	**20 02 03.1 -1.4**
XAN				pP	pP	20 02 06.4 -1.4
XAN				PP	PP	20 04 30.2 -1.6
XAN				S	S	20 10 56.6 -1.5
XAN				ScS	ScS	20 12 00.5 -1.3
XAN				SS	SS	20 15 15.8 -0.3
XAN				pmax	pmax	
	comp=Z,1.0nm,0.7s,mb4.0					
XAN				pmax	pmax	
	comp=Z,8.0nm,3.2s					
XAN				LR	LR	
	comp=N,170nm,22.6s,MS4.3					
XAN				LR	LR	
	comp=E,70nm,20.3s,MS4.3					
XAN				LR	LR	
	comp=Z,96nm,20.8s,MS4.0					
KSRS	**Korea Array**	**67.81**	**33**	LR	LR	20 36 21.1
	comp=Z,85nm,19.1s,MS4.0,baz=201,slow=40					
CD2	**Chengdu**	**68.75**	**56**	P	**P**	**20 02 15.6 +0.6**
CD2				pP	pP	20 02 20.3 +2.0
CD2				sP	sP	20 02 22.5 +3.0
CD2				PP	PP	20 04 49.0 +2.7
CD2				S	S	20 11 16.1 -1.9
CD2				sS	sS	20 11 23.6 +0.2
CD2				SS	SS	20 15 41.1 -0.7
CD2				pmax	pmax	
	comp=Z,10.0nm,0.5s,mb5.0					
CD2				pmax	pmax	
	comp=Z,100nm,4.7s					
CD2				LR	LR	
	comp=N,200nm,14.3s					
CD2				LR	LR	
	comp=Z,270nm,14.9s,MS4.6					
NJ2	**Nanjing**	**71.28**	**42**	*eP*	**P**	**20 02 33.7 +3.1**
NJ2				pmax	pmax	
	comp=Z,20nm,0.7s,mb5.2					
CMIG	**Matias Romero**	**71.47**	**268**	LR	LR	20 37 48.3
	comp=Z,129nm,19.1s,MS4.2,baz=194,slow=39					
GYA	**Guiyang**	**73.74**	**55**	P	**P**	**20 02 45.3 0.0**
GYA				PP	PP	20 05 31.8 +2.6
GYA				S	S	20 12 14.6 -1.3
GYA				SKS		20 12 48.0
GYA				SS	SS	20 17 00.4 +1.8
GYA				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.7					
GYA				pmax	pmax	
	comp=Z,70nm,5.3s					
GYA				LR	LR	
	comp=N,380nm,22.0s,MS4.7					
GYA				LR	LR	
	comp=E,270nm,21.8s,MS4.7					
GYA				LR	LR	
	comp=Z,390nm,20.7s,MS4.7					
KMI	**Kunming**	**73.97**	**58**	P	**P**	**20 02 48.1 +1.5**
KMI				pP	pP	20 02 53.3 +3.4
KMI				PP	PP	20 05 33.7 +2.5
KMI				S	S	20 12 17.5 -1.0
KMI				SKS		20 12 49.0
KMI				SS	SS	20 17 02.3 +0.2
KMI				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.5					
KMI				LR	LR	
	comp=N,190nm,20.4s,MS4.4					
KMI				LR	LR	
	comp=E,130nm,22.3s,MS4.4					
KMI				LR	LR	
	comp=Z,220nm,20.4s,MS4.4					
ROSC	**El Rosal**	**76.68**	**244**	LR	LR	20 33 13.7
	comp=Z,95nm,21.7s,MS4.1,baz=6.4,slow=33					
CHTO	**Chiang Mai**	**78.89**	**64**	*eP*	**P**	**20 03 14.1 -0.5**
CHTO				pmax	pmax	
	comp=Z,10.0nm,1.4s,mb4.5					
CHTO	**Chiang Mai**	**78.89**	**64**	*eP*	**P**	**20 03 14.1 -0.5**
	comp=Z,10nm,1.4s,mb4.6					
CHTO	**Chiang Mai**	**78.89**	**64**	*eP*	**P**	**20 03 14.1 -0.5**
	comp=Z,10.0nm,1.4s,mb4.5					
CMAR	**Chiang Mai Arr**	**79.23**	**64**	P	**P**	**20 03 16.5 0.0**
	comp=Z,2.7nm,1.1s,mb4.1,baz=321,slow=6.0,SNR=10					
CMAR				LR	LR	20 44 23.3
	comp=Z,96nm,19.7s,MS4.1,baz=285,slow=40					
CMAR	**Chiang Mai Arr**	**79.23**	**64**	P	**P**	**20 03 16.5 0.0**
CMAR				LR	LR	20 44 23.3
PALK	**Pallekele**	**84.21**	**85**	*i P*	**P**	**20 03 36.7 -6.1**
LPAZ	**La Paz**	**95.20**	**233**	LR	LR	20 45 33.8
	comp=Z,66nm,18.9s,MS4.1,baz=216,slow=34					
MAW	**Mawson**	**147.63**	**136**	PKP2	PKPab	20 10 53.7 -2.6
MAW				pmax	pmax	
	comp=Z,2.0nm,0.6s					
MAW	**Mawson**	**147.63**	**136**	PKPbc	PKPbc	20 10 53.7 -0.3
	comp=Z,1.8nm,0.6s,baz=324,slow=7.7,SNR=3.7					

CASC 06 19:59:50.6±2.9, 14°.13N×91°.76W, h55km±36km, MD3.6, ML3.1, 3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.22**	**32**	⇓*i P*	Pn	20 00 00.1	+0.5
FUG	**Fuego 3**	**0.94**	**70**	*eP*	Pn	20 00 07.8	0.0
FG6		**0.95**	**63**	⇓*eP*	Pn	20 00 08.2	+0.4
FG6				*eS*	Sn	20 00 22.1	+1.7
TP2	**Tecpan 2**	**0.96**	**48**	⇓*eP*	Pn	20 00 08.8	+0.8
TP2				*eS*	Sn	20 00 23.5	+2.7
PCG	**Pacaya**	**1.15**	**77**	*eP*	Pn	20 00 11.1	+0.7
PCG				*eS*	Sn	20 00 27.0	+1.8
IXG	**Ixpaco**	**1.27**	**88**	*eP*	Pn	20 00 12.7	+0.7
IXG				*eS*	Sn	20 00 29.1	+1.1
RBDL	**Robledal**	**2.01**	**90**	*eP*	Pn	20 00 22.4	+0.3
RTR	**El Retiro**	**2.06**	**96**	*eP*	Pn	20 00 23.4	+0.6
RTR				*eS*	Sn	20 00 46.5	-1.0
SBLS	**San Blas**	**2.09**	**98**	*eP*	Pn	20 00 23.6	+0.4
SBLS				*eS*	Sn	20 00 52.3	+4.1
SBLS				AML	AML	20 00 55.8	
	comp=Z,167nm,0.3s						
SNJE	**San Jose**	**2.10**	**97**	*eP*	Pn	20 00 23.3	-0.2
SNJE				*eS*	Sn	20 00 48.0	-0.5
BOQS	**Boqueron**	**2.44**	**99**	*eP*	Pn	20 00 29.0	+1.0
BOQS				*eS*	Sn	20 01 00.6	+4.0
LFRS	**El Faro**	**2.67**	**101**	*eP*	Pn	20 00 31.3	+0.1
LFRS				*eS*	Sn	20 00 59.7	-2.5
SNVI	**San Vicente**	**2.88**	**100**	*eP*	Pn	20 00 35.4	+1.3
CAHU	**Cacacuatique**	**3.46**	**96**	*eP*	Pn	20 00 44.3	+2.3
CNCH	**Conchagua**	**3.91**	**102**	*eP*	Pn	20 00 49.6	+1.5
CNCH				*eS*	Sn	20 01 33.6	+0.8

*ISCJB **06** 20:02:19.9±0.3, 24°.32N±0°.02×121°.82E±0°.02, h44km±4km, Error ellipse: s-maj=3.2km s-min=2.2km az=41.6*
*TAP **06** 20:02:19.5, 24°.34N×121°.74E, h44km, ML3.5, C*
*JMA **06** 20:02:20.3±0.2, 24°.47N×121°.87E, h75km, M2.2*
ISC 06 20:02:20.4±0.2, 24°.33N±0°.02×121°.81E±0°.02, h41km±4km, n61, σ0s85/115, 6C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**249**	*eP*	**Pn**	**20 02 26.9**	**0.0**
	baz=189						
EHP				*eS*	**Sn**	**20 02 32.0**	**+0.4**
	baz=189						
ENA	**Nanau**	**0.11**	**327**	*i P*	**Pn**	**20 02 26.9**	**-0.3**
	baz=357						
ENA				*eS*	**Sn**	**20 02 32.3**	**+0.4**
	baz=357						
TWC	**Suao**	**0.28**	**8**	⇑*i P*	**Pn**	**20 02 28.4**	**-0.1**
	baz=14						
TWC				*i S*	**Sn**	**20 02 35.0**	**+0.8**
	baz=14						
TWD	**Chiawan**	**0.32**	**217**	*i P*	**Pn**	**20 02 28.2**	**-0.8**
	baz=219						
TWD				*i S*	**Sn**	**20 02 34.5**	**-0.3**
	baz=219						
HWA	**Hwalien**	**0.40**	**208**	P	**Pn**	**20 02 29.3**	**-0.6**
	baz=212						
HWA				S	**Sn**	**20 02 36.7**	**+0.2**
	baz=212						
TWE	**Neicheng**	**0.41**	**342**	⇑*i P*	**Pn**	**20 02 29.6**	**-0.4**
	baz=344						
TWE				*eS*	**Sn**	**20 02 36.9**	**+0.2**
	baz=344						
NNS	**Nan Shan**	**0.41**	**285**	⇑*i P*	**Pn**	**20 02 29.3**	**-0.7**
	baz=283						
NNS				*eS*	**Sn**	**20 02 36.1**	**-0.7**
	baz=283						
ILA	**Ilan**	**0.43**	**353**	P	**Pn**	**20 02 30.2**	**-0.1**
	baz=353						
ILA				*eS*	**Sn**	**20 02 38.0**	**+0.7**
	baz=353						
WHF	**Hehuan Shan**	**0.53**	**249**	⇑*i P*	**Pn**	**20 02 31.0**	**-0.5**
	baz=250						
WHF				*i S*	**Sn**	**20 02 38.9**	**-0.6**
	baz=250						
NSK	**Sanguang**	**0.53**	**310**	⇑*i P*	**Pn**	**20 02 30.9**	**-0.7**
	baz=305						
NSK				S	**Sn**	**20 02 38.4**	**-1.1**
	baz=305						
TWT	**Tachien**	**0.58**	**262**	P	**Pn**	**20 02 31.9**	**-0.3**
	baz=261						
TWT				*eS*	**Sn**	**20 02 40.5**	**-0.2**
	baz=261						
ESL	**Shilin**	**0.62**	**214**	*eP*	**Pn**	**20 02 30.9**	**-1.9**
	baz=216						
TWA	**Mucha**	**0.68**	**343**	P	**Pn**	**20 02 33.2**	**-0.4**
	baz=338						
TWA				*i S*	**Sn**	**20 02 43.2**	**+0.3**
	baz=338						
TWB1	**Santiao Chiao**	**0.69**	**14**	P	**Pn**	**20 02 33.9**	**+0.1**
	baz=25						
TWB1				S	**Sn**	**20 02 44.5**	**+1.1**
	baz=25						
NWF	**Wu-fen Shan**	**0.73**	**358**	*i P*	**Pn**	**20 02 34.6**	**+0.2**
	baz=352						
NWF				S	**Sn**	**20 02 45.4**	**+1.0**
	baz=352						
TAP1	**Taipei**	**0.75**	**340**	*eP*	**Pn**	**20 02 34.5**	**0.0**
	baz=332						
TAP1				*eS*	**Sn**	**20 02 44.7**	**0.0**
	baz=332						
NSTT	**Nanjuang**	**0.79**	**292**	*i P*	**Pn**	**20 02 34.9**	**-0.3**
	baz=293						
NSTT				S	**Sn**	**20 02 45.6**	**-0.1**
	baz=293						
TWS1	**Kuangyinshan**	**0.84**	**335**	⇓*i P*	**Pn**	**20 02 35.3**	**-0.5**
	baz=337						
TWS1				*eS*	**Sn**	**20 02 47.1**	**+0.1**
	baz=337						
NCU	**National Centr**	**0.85**	**318**	*eP*	**Pn**	**20 02 35.2**	**-0.7**
	baz=320						
NCU				S	**Sn**	**20 02 47.3**	**+0.1**
	baz=320						
HSN	**Hsinchu**	**0.89**	**302**	*eP*	**Pn**	**20 02 35.7**	**-0.8**
	baz=305						
HSN				*eS*	**Sn**	**20 02 47.7**	**-0.5**
	baz=305						
EHY	**Hungye**	**0.94**	**208**	*eP*	**Pn**	**20 02 34.9**	**-2.2**
	baz=213						
EHY				*eS*	**Sn**	**20 02 47.0**	**-2.2**
	baz=213						
SMLT	**Sun Moon Lake**	**0.94**	**242**	P	**Pn**	**20 02 36.7**	**-0.5**
	baz=241						
SMLT				*eS*	**Sn**	**20 02 49.6**	**+0.2**
	baz=241						
TWQ1	**Liyutan**	**0.94**	**271**	P	**Pn**	**20 02 37.0**	**-0.2**
	baz=271						
TWQ1				*eS*	**Sn**	**20 02 49.4**	**-0.1**
	baz=271						
TWY	**Chenhua**	**0.96**	**349**	*eP*	**Pn**	**20 02 36.9**	**-0.5**
	baz=337						
TWY				*eS*	**Sn**	**20 02 49.7**	**-0.1**
	baz=337						
NSY	**Sanyi**	**0.96**	**275**	*eP*	**Pn**	**20 02 37.0**	**-0.4**
	baz=275						
NSY				*eS*	**Sn**	**20 02 50.2**	**+0.4**
	baz=275						
TYC	**Yuchr**	**0.97**	**244**	*eP*	**Pn**	**20 02 37.0**	**-0.5**
	baz=243						
TYC				*eS*	**Sn**	**20 02 50.4**	**+0.4**
	baz=243						
TCU	**Taichung**	**1.05**	**260**	*eP*	**Pn**	**20 02 38.6**	**0.0**
	baz=260						
TCU				*eS*	**Sn**	**20 02 52.0**	**0.0**
	baz=260						
TWF1	**Yuli**	**1.08**	**206**	*eP*	**Pn**	**20 02 37.1**	**-2.0**
	baz=213						
TWF1				*eS*	**Sn**	**20 02 51.5**	**-1.4**
	baz=213						
YOJ	**Yonaguni jima**	**1.10**	**83**	P	**Pn**	**20 02 39.7**	**+0.3**
YOJ				*eS*	**Sn**	**20 02 54.1**	**+0.7**
WNT	**Mingjian**	**1.12**	**246**	*eP*	**Pn**	**20 02 40.0**	**+0.3**
	baz=236						
WNT				*eS*	**Sn**	**20 02 54.6**	**+0.7**
	baz=236						
YUS	**Yu-Shan**	**1.15**	**223**	⇑*i P*	**Pn**	**20 02 39.8**	**-0.2**
	baz=216						
YUS				*eS*	**Sn**	**20 02 54.5**	**-0.1**
	baz=216						
ALS	**Alishan**	**1.23**	**228**	P	**Pn**	**20 02 41.3**	**+0.2**
	baz=219						
ALS				*eS*	**Sn**	**20 02 57.9**	**+1.4**
	baz=219						
CHN5	**Tsauling**	**1.27**	**235**	*eP*	**Pn**	**20 02 41.9**	**+0.3**
	baz=235						
CHN5				*eS*	**Sn**	**20 02 58.5**	**+1.0**
	baz=235						
CHKT	**Chengkung**	**1.29**	**198**	*eP*	**Pn**	**20 02 41.3**	**-0.7**
	baz=206						
CHKT				*eS*	**Sn**	**20 02 56.9**	**-1.2**
	baz=206						
WGK	**Gukeng**	**1.31**	**241**	*eP*	**Pn**	**20 02 41.4**	**-0.8**
	baz=241						
WGK				*eS*	**Sn**	**20 03 00.7**	**+2.2**
	baz=241						
PCYT	**Pengchaiyu**	**1.31**	**10**	*eP*	**Pn**	**20 02 41.7**	**-0.6**
	baz=10.0						
PCYT				*eS*	**Sn**	**20 02 59.8**	**+1.2**
	baz=10.0						
ELDTW	**Lidau**	**1.35**	**213**	*eP*	**Pn**	**20 02 41.6**	**-1.1**
	baz=206						
ELDTW				*eS*	**Sn**	**20 02 59.7**	**+0.2**
	baz=206						
CHN2	**Minshiung**	**1.46**	**237**	*eP*	**Pn**	**20 02 44.9**	**+0.6**
	baz=229						
CHN2				*eS*	**Sn**	**20 03 04.7**	**+2.5**
	baz=229						
CHN4	**Tsaushan**	**1.48**	**229**	*eP*	**Pn**	**20 02 45.5**	**+0.9**
	baz=230						
CHN4				*eS*	**Sn**	**20 03 04.8**	**+2.1**
	baz=230						
STYT	**Tauyuan**	**1.51**	**220**	*eP*	**Pn**	**20 02 45.1**	**+0.1**
	baz=221						
STYT				*eS*	**Sn**	**20 03 04.8**	**+1.4**
	baz=221						
CHY	**Chiayi**	**1.52**	**237**	*eP*	**Pn**	**20 02 45.2**	**+0.2**
	baz=229						
CHY				*eS*	**Sn**	**20 03 03.7**	**+0.2**
	baz=229						
WTP	**Ta-pu**	**1.54**	**226**	*eP*	**Pn**	**20 02 45.4**	**+0.1**
	baz=217						
WTP				*eS*	**Sn**	**20 03 05.6**	**+1.4**
	baz=217						
TWK	**Hsinying**	**1.61**	**229**	*eP*	**Pn**	**20 02 46.5**	**+0.2**
	baz=230						
TWK				*eS*	**Sn**	**20 03 06.8**	**+1.0**
	baz=230						
CHN1	**Nanshi**	**1.64**	**226**	*eP*	**Pn**	**20 02 47.1**	**+0.3**
	baz=227						
CHN1				*eS*	**Sn**	**20 03 07.5**	**+1.0**
	baz=227						
TWG	**Pinlang**	**1.65**	**204**	*eP*	**Pn**	**20 02 45.5**	**-1.3**
	baz=195						
SGST	**Jiashian**	**1.68**	**222**	P	**Pn**	**20 02 47.7**	**+0.5**
	baz=224						
SGST				*eS*	**Sn**	**20 03 09.5**	**+1.9**
	baz=224						
IRIF	**Iriomote-Funau**	**1.75**	**90**	P	**Pn**	**20 02 48.3**	**0.0**
IRIF				*eS*	**Sn**	**20 03 09.3**	**-0.1**
CHN8	**Yiju**	**1.76**	**236**	*eP*	**Pn**	**20 02 48.3**	**-0.1**
	baz=249						
CHN3	**Shinhua**	**1.82**	**227**	*eP*	**Pn**	**20 02 49.4**	**+0.2**
	baz=229						
CHN3				*eS*	**Sn**	**20 03 13.7**	**+2.6**
	baz=229						
HATJ	**Hateruma jima**	**1.84**	**98**	*eS*	**Sn**	**20 03 12.4**	**+0.7**
ECL	**Taimali**	**1.90**	**205**	*eP*	**Pn**	**20 02 49.5**	**-0.8**
	baz=198						
ECL				*eS*	**Sn**	**20 03 12.7**	**-0.3**
	baz=198						
SSD	**Sandimen**	**1.91**	**215**	*eP*	**Pn**	**20 02 51.1**	**+0.6**
	baz=206						
SSD				*eS*	**Sn**	**20 03 13.9**	**+0.5**
	baz=206						
JKRS	**Kuro-shima**	**2.01**	**92**	P	**Pn**	**20 02 52.3**	**+0.5**
JKRS				*eS*	**Sn**	**20 03 16.8**	**+1.0**
JIJ	**Ishigaki jima**	**2.13**	**89**	P	**Pn**	**20 02 53.4**	**-0.1**
JIJ				*eS*	**Sn**	**20 03 18.5**	**-0.2**
EAST	**Anshuo**	**2.13**	**205**	*eP*	**Pn**	**20 02 53.8**	**+0.2**
	baz=201						
EAST				*eS*	**Sn**	**20 03 18.2**	**-0.6**
	baz=201						
PNG	**Penghu**	**2.20**	**250**	*eP*	**Pn**	**20 02 52.7**	**-1.7**
	baz=251						
PNG				*eS*	**Sn**	**20 03 17.5**	**-2.9**
	baz=251						
SCZT	**Fangliau**	**2.24**	**209**	*eP*	**Pn**	**20 02 55.1**	**+0.1**
	baz=223						
SCZT				*eS*	**Sn**	**20 03 22.3**	**+1.0**
	baz=223						
WDGT	**Dungji**	**2.24**	**242**	*eP*	**Pn**	**20 02 53.6**	**-1.3**
	baz=242						
LAY	**Lan-yu**	**2.30**	**186**	*eP*	**Pn**	**20 02 54.6**	**-1.2**
	baz=186						
JTJ	**Tarama**	**2.66**	**83**	P	**Pn**	**20 03 01.3**	**+0.6**
JTJ				*eS*	**Sn**	**20 03 31.5**	**-0.2**
KNM	**Kinmen**	**3.08**	**272**	*eP*	**Pn**	**20 03 07.0**	**+0.4**
	baz=271						

*ISCJB **06** 20:09:41.6±0.6, 31°.56S±0°.08×179°.6E±0°.2, h413km±9km, mb3.6/7, Error ellipse: s-maj=21.1km s-min=11.6km az=15.1*
*NEIC **06** 20:09:42.7±0.8, 31°.43S×179°.71E, h424km±10km, mb3.6/1, Error ellipse: s-maj=19.3km s-min=13.9km az=109.0*
*IDC **06** 20:09:42.3±0.8, 31°.47S×179°.73E, h416km±9km, mb3.4/6, mb1 3.5/7, mb1mx3.3/18, mbtmp3.4/7, Error ellipse: s-maj=18.7km s-min=13.3km az=127.0*
ISC 06 20:09:42.6±0.7, 31°.4S±0°.1×179.7E±0°.2, h416km±13km, n17, σ0s72/17, mb3.6/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.02**	**44**	P	**P**	**20 10 47.9**	**+0.6**
	82nm,0.3s,baz=90,slow=20,SNR=3.4						
RAO				S	**S**	**20 11 39.0**	**-0.5**
	90nm,0.3s,baz=252,slow=19,SNR=3.7						
URZ	**Urewera**	**7.12**	**196**	P	**P**	**20 11 29.0**	**+1.2**
	54nm,0.3s,baz=302,slow=2.9,SNR=160						
URZ				S	**S**	**20 12 48.2**	**-5.7**
	32nm,0.3s,baz=64,slow=23,SNR=20						
URZ	**Urewera**	**7.12**	**196**	*eP*	**P**	**20 11 28.6**	**+0.9**
URZ				S	**S**	**20 12 48.2**	**-5.7**
KHZ	**Kahutara**	**12.00**	**202**	*eP*	**P**	**20 12 20.4**	**-1.3**
	35nm,0.5s						
CTA	**Charters Tower**	**32.02**	**283**	P	**P**	**20 15 33.0**	**+0.2**
	4.0nm,0.9s,mb3.7,baz=96,slow=18,SNR=3.3						
STKA	**Stephens Creek**	**32.30**	**259**	P	**P**	**20 15 36.6**	**+1.5**
	1.3nm,0.4s,mb3.7,baz=96,slow=12,SNR=16						
STKA	**Stephens Creek**	**32.30**	**259**	*eP*	**P**	**20 15 36.1**	**+1.0**
ASAR	**Alice Springs**	**41.06**	**269**	P	**P**	**20 16 47.8**	**-0.3**
	1.0nm,0.4s,mb3.5,baz=109,slow=7.6,SNR=27						
ASAR				PcP	PcP	20 18 37.6	-0.9
	0.3nm,0.4s,baz=119,slow=3.5,SNR=7.2						
ASAR				ScP	ScP	20 21 46.2	-1.7
	0.5nm,0.5s,baz=115,slow=3.6,SNR=11						
WRAB	**Tennant Creek**	**42.15**	**275**	*eP*	**P**	**20 16 56.0**	**-0.7**
	1.5nm,0.5s,mb3.6						
WRA	**Warramunga Arr**	**42.15**	**275**	P	**P**	**20 16 56.5**	**-0.3**
	1.8nm,0.4s,mb3.8,baz=111,slow=8.0,SNR=100						
FITZ	**Fitzroy Crossi**	**50.37**	**272**	P	**P**	**20 17 59.8**	**0.0**
	1.2nm,0.4s,mb3.6,baz=112,slow=6.7,SNR=10						
QSPA	**South Pole Qui**	**58.67**	**180**	P	**P**	**20 18 58.6**	**+0.9**
	1.6nm,0.5s,mb3.6,baz=44,slow=1.1,SNR=7.6						
VNA3	**Neumayer Olymp**	**77.39**	**177**	*e*	**P**	**20 20 52.1**	**-0.5**
VNA2	**Neumayer--Watz**	**77.80**	**178**	*e*	**P**	**20 20 54.7**	**-0.2**
	baz=186,slow=5.1						
KAF	**Kangasniemi**	**144.81**	**339**	*e*pkp	PKPdf	20 28 28.9	-1.2
FINES	**FINESS Array B**	**145.39**	**338**	PKPbc	PKPbc	20 28 31.2	-0.8
	2.3nm,0.5s,baz=45,slow=5.0,SNR=16						
HFS	**Hagfors**	**149.81**	**346**	PKPbc	PKPbc	20 28 42.1	-1.5
	1.0nm,0.7s,baz=5.7,slow=7.2,SNR=3.3						
HFS				PKPab	PKPab	20 28 49.3	-1.5
	0.4nm,0.4s,baz=37,slow=3.6,SNR=5.6						

CSEM 06 20:12:04.8, 71°.18N×12°.21W, h18km, ML1.5, After DNK, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**3.29**	**262**	*i P*	Pn	20 12 54.7	-0.6
SCO				*i S*	Sn	20 13 29.5	-4.4
SCO	**Scoresbysund**	**3.29**	**262**	*i P*	Pn	20 12 54.7	-0.6
	SNR=49						
SCO				*i S*	Sn	20 13 29.5	-4.4
	3.1nm,0.5s,SNR=49						
DAG	**Danmarks Havn**	**5.89**	**345**	*i P*	Pn	20 13 28.0	-3.0
DAG	**Danmarks Havn**	**5.89**	**345**	*eP*	Pn	20 13 28.0	-3.0
	SNR=4.0						
SUMG	**Summit**	**8.26**	**292**	*i S*	Sn	20 15 32.3	-3.9
	SNR=47						
KBS	**Kingsbay**	**9.85**	**28**	*i P*	Pn	20 14 23.9	-1.2
	SNR=47						
KBS				*eS*	Sn	20 16 02.9	-12
	SNR=47						

IDC 06 20:16:52.2±1.8, 0°.43N×125°.04E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.2/3, Error ellipse: s-maj=185.0km s-min=24.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.20**	**156**	P	P	20 21 50.4	+0.2
	0.5nm,0.5s,baz=

Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.23**	**164**	P	P	20 53 55.4	+0.4
	0.6nm,0.7s,baz=344,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**26.70**	**168**	P	P	20 54 26.7	-0.4
	0.6nm,0.4s,baz=352,slow=7.6,SNR=18						
MKAR	**Makanchi Array**	**59.15**	**325**	P	P	20 58 48.9	+0.3
	0.2nm,0.4s,baz=122,slow=8.7,SNR=7.1						

BJI ***06*** *20:55:42.4, 71°.60N×12°.20W, h10km, mB5.0/7, mb4.6/12, Ms4.5/6, Ms7 4.2/6*

ISCJB ***06*** *20:55:43.2±0.2, 71°.43N±0°.03×12°.85W±0°.08, h10km, mb4.2/85, MS3.6/30, Error ellipse: s-maj=4.1km s-min=3.6km az=30.6*

CSEM ***06*** *20:55:43.1±0.1, 71°.40N×12°.69W, h2km, mb4.3/46, Ms2.6, Error ellipse: s-maj=4.7km s-min=4.4km az=7.0*

MOS ***06*** *20:55:43.2±1.1, 71°.48N×12°.73W, h10km, mb4.5/49, Error ellipse: s-maj=16.6km s-min=4.4km az=99.7*

NEIC ***06*** *20:55:44.5±0.3, 71°.56N×12°.16W, h10km, mb4.3/50, Error ellipse: s-maj=8.6km s-min=4.6km az=35.0*

BER ***06*** *20:55:44.1±1.4, 71°.87N×12°.01W, h10km, MD4.1, ML3.4*

IDC ***06*** *20:55:44.4±0.6, 71°.53N×12°.59W, h0km, mb3.9/16, mb1 4.1/21, mb1mx3.9/32, mbtmp3.9/21, ML3.3/4, MS3.6/29, Ms1 3.6/29, ms1mx3.5/42, Error ellipse: s-maj=19.8km s-min=11.0km az=16.0*

SZGRF ***06*** *20:55:46.7, 71°.81N×12°.89W, h33km, mb4.3, MS3.2, Jan Mayen Island region*

REY ***06*** *20:55:46.9, 70°.50N×9°.96W, h10km, ML2.8, ML3.5*

ISC 06 20:55:45.1±0.2, 71°.40N±0°.02×12°.81W±0°.08, h10km, (h13km±1.7km:pP-P), n356, σ1§13/358, mb4.2/85, MS3.6/30, 3C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	**Jan Mayen**	**1.41**	**108**	*eP*	**Pn**	**20 56 06.6**	**-4.1**
JMI				*eS*	**Sn**	**20 56 22.5**	**-6.7**
JMI	**Jan Mayen**	**1.41**	**108**	*eP*	**Pn**	**20 56 06.6**	**-4.1**
	SNR=53						
JMI				*eS*	**Sn**	**20 56 22.5**	**-6.8**
	SNR=53						
JMIC	**Jan Mayen**	**1.45**	**105**	*eP*	**Pn**	**20 56 07.0**	**-4.3**
JMIC				*eS*	**Sn**	**20 56 23.1**	**-7.3**
JMIC				AML	AML	20 56 25.3	
	comp=Z,504nm,0.7s						
JMIC	**Jan Mayen**	**1.45**	**105**	Pn	**Pn**	**20 56 07.0**	**-4.4**
	comp=Z,51nm,0.3s,baz=286,slow=2.5,SNR=23						
JMIC				Sn	**Sn**	**20 56 23.2**	**-7.2**
	comp=Z,85nm,0.3s,baz=35,slow=23,SNR=42						
JMIC				LR	LR	20 56 48.0	
	comp=Z,3μm,18.2s,baz=355,slow=44						
JMIC	**Jan Mayen**	**1.45**	**105**	*eP*	**Pn**	**20 56 07.1**	**-4.2**
	SNR=53						
JNW	**Jan Mayen West**	**1.47**	**103**	*eP*	**Pn**	**20 56 07.1**	**-4.5**
JNW				*eS*	**Sn**	**20 56 23.1**	**-7.6**
JNW				AML	AML	20 56 28.5	
	comp=Z,763nm,0.5s						
JNW	**Jan Mayen West**	**1.47**	**103**	*eP*	**Pn**	**20 56 07.0**	**-4.5**
JNW				*eS*	**Sn**	**20 56 23.1**	**-7.6**
JNW	**Jan Mayen West**	**1.47**	**103**	*eP*	**Pn**	**20 56 07.1**	**-4.4**
	SNR=53						
JNE	**Jan Mayen East**	**1.52**	**104**	*eP*	**Pn**	**20 56 06.1**	**-6.2**
JNE	**Jan Mayen East**	**1.52**	**104**	*eP*	**Pn**	**20 56 06.1**	**-6.2**
	SNR=53						
SCO	**Scoresbysund**	**3.14**	**257**	*i* P	**Pn**	**20 56 31.9**	**-2.6**
SCO				*i* S	**Sn**	**20 57 05.9**	**-6.0**
SCO							
	comp=Z,80nm,14.0s						
SCO	**Scoresbysund**	**3.14**	**257**	*i* P	**Pn**	**20 56 32.0**	**-2.5**
	SNR=49						
ILEI	**Leirhofn**	**5.19**	**197**	P	**Pn**	**20 56 59.9**	**-2.8**
IGRI	**Grimsey**	**5.23**	**203**	P	**Pn**	**20 57 02.4**	**-0.8**
IGRI				S	**Sn**	**20 58 03.0**	**-0.4**
IGIL	**Gilhagi**	**5.50**	**195**	P	**Pn**	**20 57 03.5**	**-3.5**
IHED	**Heoinshofoi**	**5.59**	**199**	P	**Pn**	**20 57 06.0**	**-2.2**
IBRE	**Brettingsstaoi**	**5.62**	**202**	P	**Pn**	**20 57 07.2**	**-1.3**
ISIG	**Siglufjorour**	**5.74**	**206**	P	**Pn**	**20 57 09.7**	**-0.5**
IGRA	**Granastaoir**	**5.78**	**200**	P	**Pn**	**20 57 09.1**	**-1.6**
IHLA	**Hella**	**5.85**	**203**	P	**Pn**	**20 57 10.8**	**-0.9**
IHLA				S	**Sn**	**20 58 16.8**	**-1.8**
IGRS	**Grimsstaoir**	**5.92**	**193**	P	**Pn**	**20 57 09.2**	**-3.4**
IREN	**Reynihlio**	**5.97**	**197**	P	**Pn**	**20 57 11.3**	**-2.1**
BORG	**Borgarnes**	**7.40**	**210**	*eP*	**Pn**	**20 57 36.4**	**+3.5**
BORG	**Borgarnes**	**7.40**	**210**	LR	LR	20 59 40.8	
	comp=Z,327nm,20.6s,baz=34,slow=31						
SUMG	**Summit**	**8.00**	**290**	*e*Pn	**Pn**	**20 57 41.9**	**+0.8**
	comp=Z,18nm,0.6s						
SUMG	**Summit**	**8.00**	**290**	*e*Pn	**Pn**	**20 57 41.9**	**+0.7**
	comp=Z,18nm,0.6s						
SUMG	**Summit**	**8.00**	**290**	*i* P	**Pn**	**20 57 43.0**	**+1.8**
	SNR=47						
SUMG				*i* S	**Sn**	**20 59 11.9**	**+0.4**
	SNR=47						
HSP	**Hornsund**	**9.44**	**41**	*e*P	**Pn**	**20 57 58.9**	**-2.0**
KBS	**Kingsbay**	**9.74**	**29**	*e*P	**Pn**	**20 58 02.3**	**-2.6**
KBS	**Kingsbay**	**9.74**	**29**	*e*Pn	**Pn**	**20 58 02.4**	**-2.5**
KBS	**Kingsbay**	**9.74**	**29**	*e*Pn	**Pn**	**20 58 02.4**	**-2.5**
KBS	**Kingsbay**	**9.74**	**29**	*i* P	**Pn**	**20 58 02.7**	**-2.2**
	SNR=47						
SPB4	**Spitsbergen Ar**	**10.08**	**35**	*e*Pn	**Pn**	**20 58 07.8**	**-1.8**
SPB4	**Spitsbergen Ar**	**10.08**	**35**	*e*Pn	**Pn**	**20 58 07.8**	**-1.8**
SPITS	**Spitsbergen Ar**	**10.09**	**35**	Pn	**Pn**	**20 58 07.8**	**-1.9**
	baz=220,slow=13,SNR=52						
SPITS				LR	LR	21 01 03.3	
	comp=Z,296nm,19.6s,baz=260,slow=32						
SPITS	**Spitsbergen Ar**	**10.09**	**35**	Pn	**Pn**	**20 58 07.8**	**-1.9**
ARCES	**ARCESS Array B**	**12.80**	**80**	Pn	**Pn**	**20 58 46.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=303,slow=12,SNR=9.7						
ARCES				LR	LR	21 02 49.8	
	comp=Z,327nm,19.1s,baz=259,slow=34						
ARCES	**ARCESS Array B**	**12.80**	**80**	Pn	**Pn**	**20 58 46.1**	**-0.6**
KEV	**Kevo**	**13.17**	**78**	*e*P	**Pn**	**20 58 50.2**	**-1.6**
KEV	**Kevo**	**13.17**	**78**	*e*Pn	**Pn**	**20 58 48.8**	**-3.0**
KEV	**Kevo**	**13.17**	**78**	*e*p	**Pn**	**20 58 50.2**	**-1.6**
	comp=Z,0.4nm,0.3s						
KEV	**Kevo**	**13.17**	**78**	*e*Pn	**Pn**	**20 58 48.8**	**-3.0**
KEV	**Kevo**	**13.17**	**78**	*e*P	**Pn**	**20 58 50.2**	**-1.6**
SFJD	**Kangerlussuaq**	**13.94**	**270**	*e*P	**Pn**	**20 59 00.2**	**-2.2**
SFJD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SFJD	**Kangerlussuaq**	**13.94**	**270**	Pn	**Pn**	**20 58 60.0**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=28,slow=20,SNR=3.7						
SFJD	**Kangerlussuaq**	**13.94**	**270**	*e*Pn	**Pn**	**20 59 00.2**	**-2.2**
	comp=Z,7.4nm,0.9s						
SFJD	**Kangerlussuaq**	**13.94**	**270**	*i* P	**Pn**	**20 59 00.2**	**-2.2**
SFJD	**Kangerlussuaq**	**13.94**	**270**	*e*P	**Pn**	**20 59 00.2**	**-2.2**
	SNR=80						
NOA	**NORSAR Array B**	**14.07**	**125**	LR	LR	21 03 52.5	
	comp=Z,149nm,20.4s,baz=325,slow=35						
KONO	**Kongsberg**	**14.86**	**131**	P	**Pn**	**20 59 14.2**	**-0.7**
KONO	**Kongsberg**	**14.86**	**131**	Pn	**Pn**	**20 59 14.2**	**-0.7**
HFS	**Hagfors**	**15.49**	**123**	Pn	**Pn**	**20 59 23.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=352,slow=9.0,SNR=5.5						
HFS				LR	LR	21 04 47.8	
	comp=Z,208nm,20.2s,baz=314,slow=35						
EKA	**Eskdalemuir Ar**	**16.66**	**160**	Pn	**Pn**	**20 59 40.9**	**+2.6**
	baz=348,slow=10,SNR=4.2						
EKA	**Eskdalemuir Ar**	**16.66**	**160**	P	**Pn**	**20 59 40.9**	**+2.6**
KAF	**Kangasniemi**	**17.64**	**102**	*e*P	**Pn**	**20 59 49.7**	**-0.9**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KAF	**Kangasniemi**	**17.64**	**102**	*e*p	**Pn**	**20 59 49.7**	**-0.9**
	comp=Z,7.0nm,0.7s						
KAF	**Kangasniemi**	**17.64**	**102**	*e*P	**Pn**	**20 59 49.7**	**-0.9**
	comp=Z,7.0nm,0.7s						
FINES	**FINESS Array B**	**18.08**	**104**	P	**Pn**	**20 59 55.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=331,slow=12,SNR=34						
FINES				LR	LR	21 06 05.8	
	comp=Z,347nm,18.5s,baz=308,slow=34						
FINES	**FINESS Array B**	**18.08**	**104**	P	**Pn**	**20 59 55.9**	**0.0**
JOF	**Joensuu**	**18.64**	**95**	*e*P	**Pn**	**20 59 58.6**	**-4.2**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
JOF	**Joensuu**	**18.64**	**95**	*e*p	**Pn**	**20 59 58.6**	**-4.2**
	comp=Z,5.2nm,0.7s						
VSU	**Vasula**	**20.64**	**108**	*i* P	**P**	**21 00 25.2**	**+0.9**
VSU	**Vasula**	**20.64**	**108**	*i* P	**P**	**21 00 25.2**	**+0.9**
WTSB	**Winterswijk**	**21.39**	**145**	*e*P	**P**	**21 00 33.0**	**+0.5**
	comp=Z,19nm,1.5s,mb4.2						
WTSB	**Winterswijk**	**21.39**	**145**	*e*P	**P**	**21 00 33.0**	**+0.5**
	comp=Z,19nm,1.5s,mb4.2						
NRDL	**Niedersach Rie**	**21.54**	**140**	*e*P	**P**	**21 00 34.9**	**+0.9**
	comp=Z,21nm,1.2s,mb4.4						
FRB	**Frobisher Bay**	**21.78**	**278**	P	**P**	**21 00 36.8**	**+0.3**
	comp=Z,4.8nm,0.9s,mb3.9,baz=40,slow=9.4,SNR=5.2						
FRB				LR	LR	21 08 51.3	
	comp=Z,315nm,19.5s,MS3.7,baz=219,slow=36						
FRB	**Frobisher Bay**	**21.78**	**278**	P	**P**	**21 00 36.8**	**+0.3**
FRB				LR	LR	21 08 51.3	
FRB	**Frobisher Bay**	**21.78**	**278**	P	**P**	**21 00 36.8**	**+0.3**
BUG	**Bochum-Univer**	**21.98**	**145**	*e*P	**P**	**21 00 39.8**	**+1.0**
	comp=Z,14nm,1.0s,mb4.3						
BEBN	**Eben Emael**	**22.32**	**148**	P	**P**	**21 00 43.5**	**+1.1**
	comp=Z,8.0nm,1.5s,mb3.9						
RES	**Resolute Bay**	**22.36**	**316**	*e*P	**P**	**21 00 42.9**	**+0.2**
RES				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb3.9						
RES	**Resolute Bay**	**22.36**	**316**	P	**P**	**21 00 42.9**	**+0.2**
	comp=Z,1.9nm,0.9s,mb3.5,baz=56,slow=7.6,SNR=8.2						
RES				LR	LR	21 09 03.6	
	comp=Z,156nm,21.4s,MS3.4,baz=84,slow=36						
RES	**Resolute Bay**	**22.36**	**316**	*e*P	**P**	**21 00 42.9**	**+0.3**
	comp=Z,5.1nm,1.1s,mb3.9						
RES	**Resolute Bay**	**22.36**	**316**	*e*P	**P**	**21 00 42.9**	**+0.2**
	comp=Z,5.0nm,1.1s,mb3.9						
MEM	**Membach**	**22.56**	**148**	P	**P**	**21 00 45.6**	**+0.7**
	comp=Z,10nm,1.5s,mb4.0						
BCLA	**Clavier**	**22.62**	**149**	P	**P**	**21 00 47.1**	**+1.5**
BAIF	**Baives**	**22.80**	**151**	*e*P	**P**	**21 00 46.6**	**-0.8**
	comp=Z,9.3nm,0.8s,mb4.0						
BAIF	**Baives**	**22.80**	**151**	*e*P	**P**	**21 00 46.6**	**-0.8**
BAIF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
BAIF	**Baives**	**22.80**	**151**	*e*P	**P**	**21 00 46.6**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.0						
BAIF	**Baives**	**22.80**	**151**	*e*P	**P**	**21 00 46.6**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.0						
KLMR	**Klimovskoe**	**22.80**	**91**	*e*P	**P**	**21 00 46.9**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,44nm,1.2s,mb4.8						
KLMR	**Klimovskoe**	**22.80**	**91**	*e*P	**P**	**21 00 46.9**	**-0.5**
	comp=Z,44nm,1.2s,mb4.8						
GIVF	**Givet**	**22.85**	**150**	*e*P	**P**	**21 00 47.0**	**-1.0**
GIVF	**Givet**	**22.85**	**150**	*e*P	**P**	**21 00 47.0**	**-1.0**
UBBA	**Unterbreizbach**	**23.10**	**141**	*e*P	**P**	**21 00 51.8**	**+1.1**
	comp=Z,26nm,2.0s,mb4.3						
CLL	**Collm**	**23.28**	**136**	*e*P	**P**	**21 00 52.4**	**-0.1**
	comp=Z,15nm,1.4s,mb4.2						
CLL	**Collm**	**23.28**	**136**	*e*P	**P**	**21 00 52.0**	**-0.5**
CLL				*i*		21 00 56.5	
CLL				*i*		21 00 58.0	
CLL				*e*S	**S**	**21 05 05.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,18nm,2.0s,mb4.2						
CLL	**Collm**	**23.28**	**136**	*e*P	**P**	**21 00 52.0**	**-0.5**
	comp=Z,18nm,2.0s,mb4.2						
CLL				*i*		21 00 56.5	
CLL				*i*		21 00 58.0	
CLL				*e*S	**S**	**21 05 05.0**	**+0.8**
CLL	**Collm**	**23.28**	**136**	*e*P	**P**	**21 00 52.0**	**-0.5**
	comp=Z,18nm,2.0s,mb4.2						
CLL				*i* pP		21 00 56.5	
CLL				*i* sP	sP	21 00 58.0	+1.3
	comp=Z,15nm,1.4s						
CLL				*i*		21 01 04.2	
CLL				*e*S	**S**	**21 05 05.0**	**+0.8**
CLL				Lm		21 10 00.0	
	comp=N,100nm,18.3s						
CLL				Lm		21 10 00.0	
	comp=E,100nm,18.8s						
CLL	**Collm**	**23.28**	**136**	*e*P	**P**	**21 00 52.0**	**-0.5**
	comp=E,18nm,2.0s,mb4.2						
CLL				*e*S	**S**	**21 05 05.0**	**+0.8**
TNS	**Taunus Mts**	**23.37**	**144**	*e*P	**P**	**21 00 54.2**	**+0.7**
	comp=Z,14nm,1.3s,mb4.2						
TNS	**Taunus Mts**	**23.37**	**144**	*e*P	**P**	**21 00 54.2**	**+0.7**
TNS				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.2						
TNS	**Taunus Mts**	**23.37**	**144**	*e*P	**P**	**21 00 54.2**	**+0.7**
	comp=Z,14nm,1.3s,mb4.2						
FLN	**La Foliniere**	**23.43**	**159**	*e*P	**P**	**21 00 53.0**	**-1.1**
FLN	**La Foliniere**	**23.43**	**159**	*e*P	**P**	**21 00 53.0**	**-1.1**
ROSF	**Rostrenen**	**23.57**	**164**	*e*P	**P**	**21 00 55.6**	**+0.1**
	comp=Z,21nm,1.1s,mb4.2						
ROSF	**Rostrenen**	**23.57**	**164**	*e*P	**P**	**21 00 55.6**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
ROSF	**Rostrenen**	**23.57**	**164**	*e*P	**P**	**21 00 55.6**	**+0.1**
	comp=Z,11nm,1.1s,mb4.2						
ROSF	**Rostrenen**	**23.57**	**164**	*e*P	**P**	**21 00 55.6**	**+0.1**
	comp=Z,11nm,1.1s,mb4.2						
MOX	**Moxa**	**23.60**	**139**	*e*P	**P**	**21 00 55.4**	**-0.4**
	comp=Z,9.0nm,1.4s,mb4.0						
MOX	**Moxa**	**23.60**	**139**	*e*P	**P**	**21 00 53.1**	**-2.7**
MOX				pmax	pmax		
	comp=Z,17nm,1.8s,mb4.2						
MOX	**Moxa**	**23.60**	**139**	*e*P	**P**	**21 00 53.1**	**-2.7**
	comp=Z,17nm,1.8s,mb4.2						
MOX	**Moxa**	**23.60**	**139**	*e*P	**P**	**21 00 53.1**	**-2.7**
	comp=Z,17nm,1.8s,mb4.2						
LDF	**La Druitiere**	**23.64**	**159**	*e*P	**P**	**21 00 55.1**	**-1.1**
LDF	**La Druitiere**	**23.64**	**159**	*e*P	**P**	**21 00 55.1**	**-1.1**
NACGM	**Naroch**	**23.66**	**113**	*e*	**P**	**21 00 53.0**	**-3.3**
SGMF	**Saint Gilles**	**23.72**	**163**	*e*P	**P**	**21 00 56.3**	**-0.6**
SGMF	**Saint Gilles**	**23.72**	**163**	*e*P	**P**	**21 00 56.3**	**-0.6**
BRG	**Berggiesshubel**	**23.89**	**135**	*e*P	**P**	**21 00 58.3**	**-0.2**
	comp=Z,11nm,1.5s,mb4.1						
BRG	**Berggiesshubel**	**23.89**	**135**	*e*P	**P**	**21 00 58.6**	**+0.1**
	comp=Z,5.8nm,1.2s,mb3.9						
BRG	**Berggiesshubel**	**23.89**	**135**	*e*P	**P**	**21 00 58.6**	**+0.1**
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
WERD	**Werda**	**23.93**	**138**	*e*P	**P**	**21 00 59.5**	**+0.6**
	comp=Z,13nm,1.5s,mb4.1						
QUIF	**Quistinic**	**24.00**	**164**	*e*P	**P**	**21 00 59.1**	**-0.3**
QUIF	**Quistinic**	**24.00**	**164**	*e*P	**P**	**21 00 59.1**	**-0.3**
TANN	**Tannenbergstha**	**24.00**	**138**	*e*P	**P**	**21 00 59.9**	**+0.4**
	comp=Z,16nm,1.6s,mb4.2						
WERN	**Wernitzgruen**	**24.10**	**138**	*e*P	**P**	**21 01 01.3**	**+0.9**
	comp=Z,14nm,1.6s,mb4.1						
MNK	**Minsk**	**24.31**	**113**	*e*P	**P**	**21 01 03.0**	**+0.7**
MICGM	**Minsk**	**24.32**	**113**	*e*	**P**	**21 01 03.0**	**+0.6**
GRA1	**Grafenberg Arr**	**24.42**	**140**	*e*P	**P**	**21 01 04.8**	**+1.5**
	comp=Z,58nm,2.1s,mb4.6						
GRA1				LR	LR		
	comp=Z,100nm,18.7s,MS3.3						
GRF	**Grafenberg Arr**	**24.42**	**140**	*e*P	**P**	**21 01 04.8**	**+1.5**
	comp=Z,58nm,2.1s,mb4.6						
GRF				*e*L		21 11 06.3	
	comp=Z,87nm,18.7s						
GRF	**Grafenberg Arr**	**24.42**	**140**	*e*P	**P**	**21 01 04.8**	**+1.5**
GRF				pmax	pmax		
	comp=Z,58nm,2.1s,mb4.6						
GRF				MLR	MLR		
	comp=Z,100nm,18.7s,MS3.3						
GRF	**Grafenberg Arr**	**24.42**	**140**	*e*P	**P**	**21 01 04.8**	**+1.5**
GRF				pmax	pmax		
	comp=Z,58nm,2.1s,mb4.6						
GRF				MLR	MLR		
	comp=Z,100nm,18.7s,MS3.3						
MEZF	**Maizieres J'vi**	**24.44**	**150**	*e*P	**P**	**21 01 03.6**	**+0.1**
	comp=Z,18nm,0.9s,mb4.2						
MEZF	**Maizieres J'vi**	**24.44**	**150**	*e*P	**P**	**21 01 03.6**	**+0.1**
	comp=Z,18nm,0.9s,mb4.5						
MEZF	**Maizieres J'vi**	**24.44**	**150**	*e*P	**P**	**21 01 03.6**	**+0.1**
	comp=Z,8.9nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**24.90**	**147**	*e*P	**P**	**21 01 07.7**	**0.0**
	comp=Z,24nm,1.3s,mb4.3						
CDF	**Champ du Feu**	**24.90**	**147**	*e*P	**P**	**21 01 07.7**	**0.0**
CDF				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.3						
CDF	**Champ du Feu**	**24.90**	**147**	*e*P	**P**	**21 01 07.7**	**0.0**
	comp=Z,12nm,1.3s,mb4.3						
CDF	**Champ du Feu**	**24.90**	**147**	*e*P	**P**	**21 01 07.7**	**0.0**
	comp=Z,12nm,1.3s,mb4.3						
ECH	**Echery**	**25.07**	**147**	*e*P	**P**	**21 01 09.4**	**+0.2**
ECH				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
ECH	**Echery**	**25.07**	**147**	*e*P	**P**	**21 01 09.4**	**+0.2**
	comp=Z,18nm,1.1s,mb4.5						
ECH	**Echery**	**25.07**	**147**	*e*P	**P**	**21 01 09.4**	**+0.2**
	comp=Z,18nm,1.1s,mb4.5						
HAU	**Haudompre**	**25.13**	**149**	*e*P	**P**	**21 01 09.8**	**0.0**
	comp=Z,23nm,1.1s,mb4.3						
HAU	**Haudompre**	**25.13**	**149**	*e*P	**P**	**21 01 09.8**	**0.0**
HAU				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3						
HAU	**Haudompre**	**25.13**	**149**	*e*P	**P**	**21 01 09.8**	**0.0**
	comp=Z,11nm,1.1s,mb4.3						
HAU	**Haudompre**	**25.13**	**149**	*e*P	**P**	**21 01 09.8**	**0.0**
	comp=Z,11nm,1.1s,mb4.3						
HAU	**Haudompre**	**25.13**	**149**	*e*P	**P**	**21 01 09.8**	**0.0**
	comp=Z,11nm,1.1s,mb4.3						
BFO	**Black Forest**	**25.16**	**146**	*e*P	**P**	**21 01 11.2**	**+1.1**
	comp=Z,14nm,1.3s,mb4.3						
BFO	**Black Forest**	**25.16**	**146**	*e*P	**P**	**21 01 11.2**	**+1.1**
BFO				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.3						
BFO	**Black Forest**	**25.16**	**146**	*e*P	**P**	**21 01 11.2**	**+1.1**
	comp=Z,14nm,1.3s,mb4.3						
HINF	**Hinteralfeld**	**25.40**	**148**	*e*P	**P**	**21 01 12.2**	**0.0**
HINF	**Hinteralfeld**	**25.40**	**148**	*e*P	**P**	**21 01 12.2**	**0.0**
KHC	**Kasperske Hory**	**25.45**	**137**	*e*P	**P**	**21 01 13.2**	**+0.5**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
KHC	**Kasperske Hory**	**25.45**	**137**	*e*P	**P**	**21 01 13.2**	**+0.5**
	comp=Z,3.3nm,0.9s,mb3.9						
KHC	**Kasperske Hory**	**25.45**	**137**	*e*P	**P**	**21 01 13.2**	**+0.5**
	comp=Z,3.3nm,0.9s,mb3.9						
LOR	**Lormes**	**25.46**	**153**	*e*P	**P**	**21 01 12.0**	**-0.8**
	comp=Z,18nm,1.0s,mb4.3						
LOR	**Lormes**	**25.46**	**153**	*e*P	**P**	**21 01 12.0**	**-0.8**
LOR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
LOR	**Lormes**	**25.46**	**153**	*e*P	**P**	**21 01 12.0**	**-0.8**
	comp=Z,9.2nm,1.0s,mb4.3						
LOR	**Lormes**	**25.46**	**153**	*e*P	**P**	**21 01 12.0**	**-0.8**
	comp=Z,9.2nm,1.0s,mb4.3						
MFF	**Saint Martin d**	**25.60**	**160**	*e*P	**P**	**21 01 14.0**	**0.0**
	comp=Z,28nm,1.2s,mb4.4						
MFF	**Saint Martin d**	**25.60**	**160**	*e*P	**P**	**21 01 14.0**	**0.0**
MFF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.4						
MFF	**Saint Martin d**	**25.60**	**160**	*e*P	**P**	**21 01 14.0**	**0.0**
	comp=Z,14nm,1.2s,mb4.4						
MFF	**Saint Martin d**	**25.60**	**160**	*e*P	**P**	**21 01 14.0**	**0.0**
	comp=Z,14nm,1.2s,mb4.4						
SSF	**Saint Saulge**	**25.61**	**154**	*e*P	**P**	**21 01 14.5**	**+0.3**
	comp=Z,13nm,1.2s,mb4.1						
SSF	**Saint Saulge**	**25.61**	**154**	*e*P	**P**	**21 01 14.5**	**+0.3**
SSF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
SSF	**Saint Saulge**	**25.61**	**154**	*e*P	**P**	**21 01 14.5**	**+0.3**
	comp=Z,6.6nm,1.2s,mb4.0						
SSF	**Saint Saulge**	**25.61**	**154**	*e*P	**P**	**21 01 14.5**	**+0.3**
	comp=Z,6.6nm,1.2s,mb4.1						
GEC2	**GERESS Array S**	**25.75**	**137**	*e*P	**P**	**21 01 17.1**	**+1.7**
	comp=Z,3.0nm,1.1s,mb3.7						
GEC2	**GERESS Array S**	**25.75**	**137**	*e*P	**P**	**21 01 17.1**	**+1.7**
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
GERES	**GERESS Array B**	**25.75**	**137**	P	**P**	**21 01 16.9**	**+1.6**
	comp=Z,1.2nm,0.8s,mb3.5,baz=330,slow=7.8,SNR=11						
GERES				LR	LR	21 11 36.9	
	comp=Z,85nm,18.5s,MS3.3,baz=173,slow=37						
MORC	**Moravsky Berou**	**25.76**	**131**	*e*P	**P**	**21 01 15.8**	**+0.3**
MORC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
MORC	**Moravsky Berou**	**25.76**	**131**	*e*P	**P**	**21 01 15.8**	**+0.4**
	comp=Z,3.1nm,1.0s,mb3.8						
MORC	**Moravsky Berou**	**25.76**	**131**	*e*P	**P**	**21 01 15.8**	**+0.3**
	comp=Z,3.1nm,1.0s,mb3.8						
AVF	**Avril sur Loir**	**25.86**	**154**	*e*P	**P**	**21 01 15.4**	**-1.0**
	comp=Z,11nm,1.1s,mb4.0						
AVF	**Avril sur Loir**	**25.86**	**154**	*e*P	**P**	**21 01 15.4**	**-1.0**
AVF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
AVF	**Avril sur Loir**	**25.86**	**154**	*e*P	**P**	**21 01 15.4**	**-1.0**
	comp=Z,5.4nm,1.1s,mb4.0					

LPG La Plagne 27.64 149 *e*P **P 21 01 33.2 +0.8**
comp=Z,5.1nm,0.9s,mb3.9
LPG La Plagne 27.64 149 *e*P **P 21 01 33.2 +0.8**
LPG pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
LPG La Plagne 27.64 149 *e*P **P 21 01 33.2 +0.8**
comp=Z,2.5nm,0.9s,mb3.8
LPG La Plagne 27.64 149 *e*P **P 21 01 33.2 +0.8**
comp=Z,2.5nm,0.9s,mb3.9
KECS Kecovo 27.69 128 *e*P **P 21 01 33.0 +0.2**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
KECS Kecovo 27.69 128 *e*P **P 21 01 33.0 +0.2**
comp=Z,2.4nm,1.0s,mb3.8
KECS Kecovo 27.69 128 *e*P **P 21 01 33.0 +0.2**
KOLS Kolonicke sedl 27.73 125 *e*P **P 21 01 35.0 +1.8**
comp=Z,5.5nm,1.2s,mb4.1
KOLS LR LR
comp=Z,100nm,26.2s,MS3.3
KOLS Kolonicke sedl 27.73 125 *e*P **P 21 01 35.0 +1.8**
VIVF Saint-Julien-l 27.94 153 *e*P **P 21 01 35.0 -0.1**
VIVF Saint-Julien-l 27.94 153 *e*P **P 21 01 35.0 -0.1**
AKASG Malin Array Be 28.05 115 P **P 21 01 35.2 -0.9**
comp=Z,2.0nm,0.8s,mb3.8,baz=329,slow=9.6,SNR=4.6
AKASG Malin Array Be 28.05 115 P **P 21 01 35.2 -0.9**
AKASG Malin Array Be 28.05 115 P **P 21 01 35.2 -0.9**
AKBB Malin Array Si 28.05 115 P **P 21 01 35.5 -0.6**
AKBB Malin Array Si 28.05 115 P **P 21 01 35.5 -0.6**
ORIF Oris-en-Rattie 28.06 151 *e*P **P 21 01 36.2 0.0**
ORIF Oris-en-Rattie 28.06 151 *e*P **P 21 01 36.2 0.0**
PSZ Piszkesteto 28.06 129 P **P 21 01 36.9 +0.7**
PSZ Piszkesteto 28.06 129 P **P 21 01 36.9 +0.7**
SCHQ Schefferville 28.17 263 P **P 21 01 39.6 +2.6**
comp=Z,2.4nm,0.8s,mb3.9,baz=45,slow=7.7,SNR=5.6
SCHQ LR LR 21 12 12.8
comp=Z,333nm,20.1s,MS3.9,baz=102,slow=35
SCHQ Schefferville 28.17 263 *e*P **P 21 01 38.8 +1.7**
comp=Z,2.7nm,0.8s,mb3.9
SCHQ Schefferville 28.17 263 *e*P **P 21 01 38.8 +1.7**
comp=Z,2.7nm,0.8s,mb3.9
MBDF Montbardon 28.39 150 *e*P **P 21 01 40.2 +1.1**
comp=Z,6.9nm,0.9s,mb4.0
MBDF Montbardon 28.39 150 *e*P **P 21 01 40.2 +1.1**
MBDF pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
MBDF Montbardon 28.39 150 *e*P **P 21 01 40.2 +1.1**
comp=Z,3.5nm,0.9s,mb4.0
MBDF Montbardon 28.39 150 *e*P **P 21 01 40.2 +1.1**
comp=Z,3.5nm,0.9s,mb4.0
LASF Ste Croix 28.59 154 *e*P **P 21 01 41.5 +0.6**
LASF Ste Croix 28.59 154 *e*P **P 21 01 41.5 +0.6**
SJPF Ste Jean 28.94 162 *e*P **P 21 01 43.4 -0.6**
SJPF Ste Jean 28.94 162 *e*P **P 21 01 43.4 -0.6**
MTLF Montolieu 29.10 157 *e*P **P 21 01 45.4 0.0**
MTLF Montolieu 29.10 157 *e*P **P 21 01 45.4 0.0**
EPF Esparros 29.18 160 *e*P **P 21 01 45.6 -0.6**
comp=Z,8.7nm,1.0s,mb4.1
EPF Esparros 29.18 160 *e*P **P 21 01 45.6 -0.6**
EPF pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
EPF Esparros 29.18 160 *e*P **P 21 01 45.6 -0.6**
comp=Z,4.3nm,1.0s,mb4.1
EPF Esparros 29.18 160 *e*P **P 21 01 45.6 -0.6**
comp=Z,4.3nm,1.0s,mb4.1
ETSF Etsaut 29.22 161 *e*P **P 21 01 47.3 +0.8**
ETSF Etsaut 29.22 161 *e*P **P 21 01 47.3 +0.8**
SBF Sospel 29.34 149 *e*P **P 21 01 48.4 +0.8**
comp=Z,30nm,1.0s,mb4.7
SBF Sospel 29.34 149 *e*P **P 21 01 48.4 +0.8**
SBF pmax pmax
comp=Z,15nm,1.0s,mb4.7
SBF Sospel 29.34 149 *e*P **P 21 01 48.4 +0.8**
comp=Z,15nm,1.0s,mb4.7
SBF Sospel 29.34 149 *e*P **P 21 01 48.4 +0.8**
comp=Z,15nm,1.0s,mb4.7
FRF La Foret Royal 29.51 151 *e*P **P 21 01 49.2 +0.1**
FRF La Foret Royal 29.51 151 *e*P **P 21 01 49.2 +0.1**
LMR La Mourre 29.71 151 *e*P **P 21 01 51.5 +0.7**
comp=Z,19nm,1.3s,mb4.4
LMR La Mourre 29.71 151 *e*P **P 21 01 51.5 +0.7**
LMR pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
LMR La Mourre 29.71 151 *e*P **P 21 01 51.5 +0.7**
comp=Z,9.7nm,1.3s,mb4.4
LMR La Mourre 29.71 151 *e*P **P 21 01 51.5 +0.7**
comp=Z,9.7nm,1.3s,mb4.4
VSR Storozhevoye 30.61 103 *e*P **P 21 01 58.8 +0.1**
VSR pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VRHR Novokhopersk 31.49 101 *e*P **P 21 02 05.8 -0.7**
VRHR pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
VRHR pmax pmax
comp=N,8.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,0.8s
MLR Muntele Rosu 31.88 124 LR LR 21 15 45.0
comp=E,349nm,18.5s,MS4.1,baz=170,slow=38
ESDC Sonseca Array 32.12 167 P **P 21 02 13.3 +1.2**
comp=E,0.8nm,0.7s,mb3.7,baz=2.4,slow=9.4,SNR=5.9
ESDC Sonseca Array 32.12 167 P **P 21 02 13.3 +1.2**
ESDC Sonseca Array 32.12 167 P **P 21 02 13.3 +1.2**
ESLA Sonseca Array 32.12 167 P **P 21 02 12.7 +0.6**
comp=E,4.2nm,1.4s,mb4.1
ESLA Sonseca Array 32.12 167 P **P 21 02 12.7 +0.6**
comp=E,4.2nm,1.4s,mb4.1
INK Inuvik 35.08 326 P **P 21 02 36.5 -1.1**
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 35.08 326 P **P 21 02 36.5 -1.1**
comp=Z,5.3nm,1.2s,mb4.3
INK Inuvik 35.08 326 P **P 21 02 36.5 -1.1**
comp=Z,5.3nm,1.2s,mb4.3
ANN Anapa 35.79 111 *e*P **P 21 02 44.9 +1.0**
ANN pmax pmax
comp=Z,31nm,1.3s,mb5.1
ANN MLR MLR
comp=Z,219nm,13.0s,MS4.1
YKA Yellowknife Ar 36.06 309 P **P 21 02 46.8 +0.7**
YKA 21 05 12.4
YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA MLR MLR
comp=Z,13nm,20.5s
YKA Yellowknife Ar 36.06 309 P **P 21 02 46.8 +0.8**
comp=Z,5.1nm,0.8s,mb4.5,baz=32,slow=8.8,SNR=31
YKA PcP PcP 21 05 12.4 +0.7
comp=Z,0.9nm,0.7s,baz=30,slow=2.8,SNR=11
YKA LR LR 21 17 24.8
comp=Z,13nm,20.5s,MS2.7,baz=195,slow=36
YKA Yellowknife Ar 36.06 309 P **P 21 02 46.9 +0.8**
YKA PcP PcP 21 05 12.4 +0.7
YKA LR LR 21 17 24.8
YKA Yellowknife Ar 36.06 309 P **P 21 02 46.8 +0.7**
YKA Yellowknife Ar 36.06 309 PcP PcP 21 05 12.4 +0.6
comp=Z,13nm,20.5s
GOF Gofitskoye 37.27 104 ⇑*i*P **P 21 03 00.0 +3.5**
GOF pmax pmax
comp=Z,27nm,1.3s,mb4.9
AKTK Aktyubinsk 37.29 85 P **P 21 02 57.1 +0.4**
AKTK LR LR 21 17 33.7
AKTK Aktyubinsk 37.29 85 P **P 21 02 57.1 +0.4**
AKTO Aktyubinsk 37.29 85 P **P 21 02 57.1 +0.4**
comp=Z,6.0nm,0.9s,mb4.1,baz=332,slow=10,SNR=6.3
AKTO LR LR 21 17 33.7
comp=Z,166nm,18.9s,MS3.9,baz=340,slow=35
KEST Kesra 37.59 150 LR LR 21 18 59.5
comp=Z,25nm,18.8s,MS3.0,baz=227,slow=37
KIV Kislovodsk 38.15 106 *e*P **P 21 03 05.6 +1.6**
KIV *e*S **S 21 08 54.4 -2.4**
KIV *e*SS SS 21 11 42.1 -1.9
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.5
KIV MLR MLR
comp=Z,81nm,14.0s,MS3.7
KIV Kislovodsk 38.15 106 P **P 21 03 00.3 -3.7**
ABKAR Akbulak array 38.94 85 *e*P **P 21 03 10.6 +0.1**
comp=Z,3.4nm,0.9s,mb4.1
ABKAR Akbulak array 38.94 85 *e*P **P 21 03 10.6 +0.1**
comp=Z,3.3nm,0.9s,mb4.1
BVAR Borovoye Array 38.94 73 P **P 21 03 10.6 +0.1**
comp=Z,0.4nm,0.4s,mb3.5,baz=325,slow=12,SNR=3.6
BVAR LR LR 21 19 49.2
comp=Z,38nm,18.3s,MS3.3,slow=37
BVAR Borovoye Array 38.94 73 P **P 21 03 10.6 0.0**
FFC Flin Flon 39.27 294 *i*P **P 21 03 15.4 +2.1**
FFC Flin Flon 39.27 294 *e*P **P 21 03 14.2 +0.9**
comp=Z,8.7nm,1.1s,mb4.4
FFC Flin Flon 39.27 294 *e*P **P 21 03 14.2 +0.9**
comp=Z,8.7nm,1.1s,mb4.4
BRTR Keskin Array B 39.34 118 P **P 21 03 15.8 +1.7**
comp=Z,0.9nm,0.8s,mb3.5,baz=359,slow=7.2,SNR=3.7
BRTR LR LR 21 21 14.5
comp=Z,62nm,18.4s,MS3.5,baz=292,slow=39
BRTR Keskin Array B 39.34 118 P **P 21 03 15.8 +1.8**
DAWY Dawson 39.95 327 P **P 21 03 21.4 +2.6**
BILL Biiibino 40.81 1 P **P 21 03 28.0 +2.1**
IDI Anoyia 41.20 131 LR LR 21 20 15.4
comp=Z,35nm,21.8s,MS3.2,baz=31,slow=36
ULM Lac du Bonnet 41.32 285 P **P 21 03 32.8 +2.5**
comp=Z,1.1nm,0.5s,mb3.8,baz=63,slow=9.0,SNR=3.4
ULM LR LR 21 21 22.0
comp=Z,90nm,20.1s,MS3.6,baz=18,slow=37
ULM Lac du Bonnet 41.32 285 *e*P **P 21 03 31.3 +1.0**
comp=Z,3.1nm,1.0s,mb3.9
ULM Lac du Bonnet 41.32 285 *e*P **P 21 03 31.3 +1.0**
comp=Z,3.1nm,1.0s,mb3.9
MCK McKinley 41.82 332 *e*P **P 21 03 35.4 +1.2**
MCK pmax pmax
comp=Z,12nm,1.3s,mb4.4
MCK McKinley 41.82 332 *e*P **P 21 03 35.4 +1.2**
comp=Z,12nm,1.3s,mb4.4
EYMN Ely 41.98 280 *e*P **P 21 03 37.1 +1.4**
comp=Z,6.8nm,1.1s,mb4.2
EYMN Ely 41.98 280 *e*P **P 21 03 37.1 +1.4**
comp=Z,6.8nm,1.1s,mb4.2
MALT Malatya 42.03 114 P **P 21 03 36.7 +0.4**
MALT pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
MALT Malatya 42.03 114 P **P 21 03 36.7 +0.4**
comp=Z,5.9nm,1.1s,mb4.1
ZALV Zalesovo Beam 42.37 60 LR LR 21 22 50.4
comp=Z,55nm,21.9s,MS3.4,baz=62,slow=38
KURK Kurchatov 43.45 68 *c*e**P P 21 03 46.8 -0.8**
KURK pmax pmax
comp=Z,7.0nm,2.5s,mb4.0
WALA Waterton Lakes 47.72 299 P **P 21 04 22.7 +1.3**
comp=Z,0.1nm,0.9s
WALA Waterton Lakes 47.72 299 P **P 21 04 22.7 +1.3**
comp=Z,0.1nm,0.9s
MK31 Makanchi Array 48.04 67 *e*P **P 21 04 24.0 +0.1**
MK31 Makanchi Array 48.04 67 *e*P **P 21 04 24.0 +0.1**
MKAR Makanchi Array 48.04 67 *i*P **P 21 04 24.3 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 48.04 67 P **P 21 04 24.4 +0.5**
comp=Z,0.9nm,0.9s,mb3.8,baz=335,slow=5.4,SNR=5.8
MKAR PP PP 21 06 19.6 +4.0
comp=Z,1.1nm,1.1s,baz=340,slow=6.4,SNR=4.0
MKAR LR LR 21 24 54.7
comp=Z,46nm,19.0s,MS3.5,baz=336,slow=36
MKAR Makanchi Array 48.04 67 P **P 21 04 24.4 +0.5**
MKAR PP PP 21 06 19.6 +4.0
MKAR LR LR 21 24 54.7
BSMT Bassoo Peak 49.06 299 P **P 21 04 28.4 -3.4**
NEW Newport 49.33 301 P **P 21 04 39.0 +5.2**
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 49.33 301 P **P 21 04 39.0 +5.2**
comp=Z,6.0nm,1.0s,mb4.6
TKM2 Tokmak 2 49.52 75 P **P 21 04 36.2 +0.9**
TKM2 Tokmak 2 49.52 75 P **P 21 04 36.2 +0.9**
UCH Uchtor 49.81 76 P **P 21 04 36.0 -1.6**
comp=Z,2.2nm,1.0s,mb4.1
UCH Uchtor 49.81 76 P **P 21 04 36.0 -1.5**
comp=Z,2.2nm,1.0s,mb4.1
PDAR Pinedale Array 52.19 292 P **P 21 04 56.1 +0.7**
comp=Z,1.0nm,0.9s,mb3.7,baz=46,slow=8.5,SNR=6.4
PDAR LR LR 21 26 56.4
comp=Z,186nm,19.6s,MS4.1,baz=49,slow=36
PDAR Pinedale Array 52.19 292 P **P 21 04 56.1 +0.7**
WMQ Urumqi 52.33 64 *e*P **P 21 04 56.4 0.0**
WMQ LR LR
comp=N,74nm,26.0s,MS3.8
WMQ LR LR
comp=E,76nm,22.0s,MS3.8
WMQ LR LR
comp=Z,74nm,23.6s,MS3.6
SONM Songino Array 53.53 47 P **P 21 05 05.8 +0.6**
comp=Z,0.4nm,0.9s,mb3.4,baz=297,slow=6.5,SNR=3.7
SONM LR LR 21 30 45.8
comp=Z,41nm,19.6s,MS3.5,baz=178,slow=39
MIAR Mount Ida 54.75 274 *e*P **P 21 05 14.4 +0.1**
MIAR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MIAR Mount Ida 54.75 274 *e*P **P 21 05 14.4 +0.1**
comp=Z,5.8nm,0.9s,mb4.6
MIAR Mount Ida 54.75 274 *e*P **P 21 05 14.4 +0.1**
comp=Z,6.0nm,0.9s,mb4.6
WMOK Wichita Mounta 56.23 279 *e*P **P 21 05 25.9 +0.9**
WMOK pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
WMOK Wichita Mounta 56.23 279 *e*P **P 21 05 25.9 +0.9**
comp=Z,3.6nm,1.0s,mb4.4
WMOK Wichita Mounta 56.23 279 *e*P **P 21 05 25.9 +0.9**
comp=Z,4.0nm,1.0s,mb4.4
MDJ Mudanjiang 61.22 30 P **P 21 05 57.2 -2.3**
MDJ pmax pmax
comp=Z,11nm,2.3s,mb4.6
MDJ pmax pmax
comp=Z,84nm,3.5s
CN2 Changchun 61.32 33 *e*P **P 21 05 58.9 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
HHC Hu-ho-hao-te 61.33 46 *e*P **P 21 05 59.2 -1.2**
HHC pP pP 21 06 03.8 +0.2
HHC sP sP 21 06 06.4 +1.6
HHC PP PP 21 08 16.1 +1.2
HHC ScP ScP 21 10 41.7 -2.0
HHC S **S 21 14 17.1 -3.3**
HHC sS sS 21 14 23.2 -2.5
HHC ScS ScS 21 15 45.9 -5.4
HHC SS SS 21 18 16.2 -3.7
HHC pmax pmax
comp=Z,14nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,110nm,15.5s,MS4.3
HHC LR LR
comp=E,120nm,15.1s,MS4.3
HHC LR LR
comp=Z,110nm,15.1s,MS4.1
TXAR Lajitas Array 62.78 281 P **P 21 06 10.5 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,140nm,19.4s
TXAR Lajitas Array 62.78 281 P **P 21 06 10.5 +0.3**
comp=Z,1.2nm,0.8s,mb4.1,baz=58,slow=4.3,SNR=12
TXAR LR LR 21 33 28.7
comp=Z,140nm,19.4s,MS4.1,baz=10,0,slow=36
TXAR Lajitas Array 62.78 281 P **P 21 06 10.5 +0.3**
comp=Z,140nm,19.4s
LZH Lanzhou 63.97 54 *e*P **P 21 06 15.5 -2.5**
LZH pP pP 21 06 18.7 -2.5
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
KSRS Korea Array 67.92 33 LR LR 21 41 05.2
comp=Z,22nm,18.0s,MS3.4,baz=264,slow=40
CD2 Chengdu 68.85 56 P **P 21 06 49.6 +0.3**
CD2 pP pP 21 06 54.3 +1.7
CD2 sP sP 21 06 56.6 +2.8
CD2 PP PP 21 09 23.1 +2.3
CD2 S S 21 15 50.1 -2.8
CD2 sS sS 21 15 57.6 -0.7
CD2 SS SS 21 20 15.1 -2.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,120nm,5.1s
CD2 LR LR
comp=N,210nm,8.9s
CD2 LR LR
comp=Z,100nm,5.9s
NJ2 Nanjing 71.39 42 *e*P **P 21 07 07.6 +2.7**
SDV Santo Domingo 71.69 242 LR LR 21 32 50.6
comp=Z,67nm,20.6s,MS3.9,baz=234,slow=31
GYA Guiyang 73.85 54 *e*P **P 21 07 19.0 -0.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CHTO Chiang Mai 78.99 64 *e*P **P 21 07 47.6 -1.2**
CHTO pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
CHTO Chiang Mai 78.99 64 *e*P **P 21 07 47.6 -1.2**
comp=Z,4.0nm,1.1s,mb4.3
CHTO Chiang Mai 78.99 64 *e*P **P 21 07 47.6 -1.2**
comp=Z,4.0nm,1.1s,mb4.3
CM31 Chiang Mai Arr 79.33 64 P **P 21 07 48.7 -2.0**
CM31 Chiang Mai Arr 79.33 64 P **P 21 07 48.7 -1.9**
CMAR Chiang Mai Arr 79.33 64 P **P 21 07 50.6 0.0**
CMAR pmax pmax
comp=Z,2.0nm,1.0s
CMAR MLR MLR
comp=Z,39nm,18.0s
CMAR Chiang Mai Arr 79.33 64 P **P 21 07 50.5 -0.1**
comp=Z,2.3nm,1.0s,mb4.1,baz=318,slow=6.6,SNR=11
CMAR LR LR 21 48 12.1
comp=Z,39nm,18.0s,MS3.8,baz=83,slow=40
CMAR Chiang Mai Arr 79.33 64 P **P 21 07 50.6 0.0**
comp=Z,39nm,18.0s
LPAZ La Paz 95.09 232 LR LR 21 48 58.6
comp=Z,60nm,20.1s,MS4.1,baz=335,slow=34
MAW Mawson 147.61 136 PKP2 PKPbc 21 15 29.6 +2.0
MAW pmax pmax
comp=Z,1.0nm,0.7s
MAW Mawson 147.61 136 PKPbc PKPbc 21 15 29.6 +2.0
comp=Z,1.2nm,0.7s,baz=10,slow=14,SNR=3.7

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*ISCJB **06** 21:10:55.9±0.4, 71°.35N±0°.04×12°.4W±0°.1, h10km, mb3.9/3, Error ellipse: s-maj=6.6km s-min=5.0km az=142.7*
*REY **06** 21:10:57.2, 70°.56N×8°.89W, h10km, ML2.7, ML3.3*
*IDC **06** 21:10:57.4±2.0, 71°.37N×12°.18W, h0km, mb3.7/1, mb1 3.7/5, mb1mx3.3/28, mbtmp3.7/5, ML2.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/36, Error ellipse: s-maj=51.3km s-min=20.6km az=25.0*
*NEIC **06** 21:10:58.5±0.4, 71°.37N×12°.25W, h10km, mb4.0/2, Error ellipse: s-maj=8.8km s-min=5.7km az=202.0*
*CSEM **06** 21:10:59.3±0.2, 71°.35N×12°.26W, h20km, mb4.0/2, Error ellipse: s-maj=6.1km s-min=4.9km az=142.0*
ISC 06 21:10:59.7±2.3, 71°.33N±0°.04×12°.2W±0°.1, h20km±21km, n38, σ0s87/43, mb3.9/3, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.25**	**104**	Pn	**Pn**	**21 11 21.0**	**-0.9**
	17nm,0.3s,baz=322,slow=16,SNR=3.8						
JMIC				Sn	**Sn**	**21 11 36.6**	**-1.5**
	32nm,0.3s,baz=46,slow=3.6,SNR=5.3						
JMIC	**Jan Mayen**	**1.25**	**104**	Pn	**Pn**	**21 11 21.0**	**-0.9**
JMIC				Sn	**Sn**	**21 11 36.6**	**-1.5**
SCO	**Scoresbysund**	**3.31**	**260**	*i* P	**Pn**	**21 11 46.3**	**-4.0**
SCO				*i* S	**Sn**	**21 12 21.4**	**-7.6**
SCO	**Scoresbysund**	**3.31**	**260**	*i* P	**Pn**	**21 11 46.3**	**-4.0**
	SNR=49						
ILEI	**Leirhofn**	**5.19**	**199**	P	**Pn**	**21 12 14.1**	**-1.9**
ILEI				S	**Sn**	**21 13 14.1**	**-1.0**
IGRI	**Grimsey**	**5.25**	**206**	P	**Pn**	**21 12 17.3**	**+0.5**
ISIG	**Siglufjorour**	**5.76**	**208**	P	**Pn**	**21 12 24.8**	**+0.9**
IHLA	**Hella**	**5.86**	**206**	P	**Pn**	**21 12 24.4**	**-0.9**
IHLA				S	**Sn**	**21 13 33.0**	**+1.2**
SUMG	**Summit**	**8.21**	**291**	*e*Pn	**Pn**	**21 12 57.0**	**-0.4**
	6.8nm,0.6s						
SUMG	**Summit**	**8.21**	**291**	*e*Pn	**Pn**	**21 12 57.0**	**-0.4**
	6.8nm,0.6s						
KBS	**Kingsbay**	**9.71**	**28**	*e*Pn	**Pn**	**21 13 17.1**	**-0.8**
KBS	**Kingsbay**	**9.71**	**28**	*i* P	**Pn**	**21 13 17.1**	**-0.8**
	SNR=47						
SPB4	**Spitsbergen Ar**	**10.03**	**34**	*e*Pn	**Pn**	**21 13 22.4**	**0.0**
SPB4	**Spitsbergen Ar**	**10.03**	**34**	*e*Pn	**Pn**	**21 13 22.4**	**+0.1**
SPITS	**Spitsbergen Ar**	**10.03**	**34**	Pn	**Pn**	**21 13 22.3**	**-0.1**
	baz=227,slow=13,SNR=15						
SPITS	**Spitsbergen Ar**	**10.03**	**34**	Pn	**Pn**	**21 13 22.3**	**-0.1**
ARCES	**ARCESS Array B**	**12.62**	**80**	Pn	**Pn**	**21 13 59.1**	**+1.4**
	0.1nm,0.3s,baz=303,slow=11,SNR=3.2						
ARCES				LR	LR	21 17 41.6	
	comp=Z,51nm,18.2s,baz=60,slow=32						
ARCES	**ARCESS Array B**	**12.62**	**80**	Pn	**Pn**	**21 13 59.1**	**+1.4**
SFJD	**Kangerlussuaq**	**14.14**	**271**	Pn	**Pn**	**21 14 18.6**	**+0.2**
SFJD	**Kangerlussuaq**	**14.14**	**271**	Pn	**Pn**	**21 14 18.6**	**+0.2**
KONO	**Kongsberg**	**14.67**	**132**	*e*Pn	**Pn**	**21 14 26.6**	**+0.9**
KONO	**Kongsberg**	**14.67**	**132**	*e*Pn	**Pn**	**21 14 26.6**	**+0.9**
HFS	**Hagfors**	**15.29**	**124**	Pn	**Pn**	**21 14 34.2**	**+0.3**
	0.0nm,0.3s,baz=321,slow=11,SNR=2.7						
HFS				LR	LR	21 19 12.3	
	comp=Z,40nm,19.7s,baz=52,slow=32						
HFS	**Hagfors**	**15.29**	**124**	Pn	**Pn**	**21 14 34.2**	**+0.2**
FINES	**FINESS Array B**	**17.87**	**104**	P	**Pn**	**21 15 08.1**	**+1.4**
	0.1nm,0.3s,baz=327,slow=9.4,SNR=5.5						
FINES	**FINESS Array B**	**17.87**	**104**	P	**Pn**	**21 15 08.1**	**+1.4**
OBN	**Obninsk**	**26.26**	**102**	P	**P**	**21 16 33.2**	**+0.2**
OBN	**Obninsk**	**26.26**	**102**	P	**P**	**21 16 33.2**	**+0.2**
KWP	**Kalwaria Pacla**	**27.00**	**125**	*e*P	**P**	**21 16 40.4**	**+0.6**
KWP	**Kalwaria Pacla**	**27.00**	**125**	*e*P	**P**	**21 16 40.4**	**+0.6**
ARU	**Arti**	**32.21**	**80**	*e*P	**P**	**21 17 25.3**	**-0.5**
	8.7nm,1.5s,mb4.4						
ARU	**Arti**	**32.21**	**80**	*e*P	**P**	**21 17 25.3**	**-0.5**
	8.7nm,1.5s,mb4.4						
INK	**Inuvik**	**35.25**	**327**	P	**P**	**21 17 52.0**	**-0.1**
INK	**Inuvik**	**35.25**	**327**	P	**P**	**21 17 52.0**	**-0.1**
YKA	**Yellowknife Ar**	**36.26**	**310**	P	**P**	**21 18 01.2**	**+0.4**
	0.9nm,0.8s,mb3.7,baz=30,slow=8.4,SNR=9.1						
YKA	**Yellowknife Ar**	**36.26**	**310**	P	**P**	**21 18 01.2**	**+0.4**
KURK	**Kurchatov**	**43.29**	**68**	*e*P	**P**	**21 18 59.4**	**0.0**
	0.9nm,0.8s,mb3.5						
KURK	**Kurchatov**	**43.29**	**68**	*e*P	**P**	**21 18 59.4**	**0.0**
	0.9nm,0.8s,mb3.5						

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*GUC **06** 21:12:56.0±0.7, 24°.96S×63°.61W, h586km, mb4.5(NEIC)*
*ISCJB **06** 21:13:02.0±0.4, 25°.74S±0°.04×63°.16W±0°.05, h584km±4km, mb4.4/48, Error ellipse: s-maj=7.8km s-min=5.2km az=149.8*
*NEIC **06** 21:13:02.8±0.4, 25°.76S×63°.24W, h586km±4km, mb4.5/38, Error ellipse: s-maj=7.0km s-min=5.1km az=59.0*
*IDC **06** 21:13:02.8±0.7, 25°.75S×63°.32W, h587km±7km, mb3.9/18, mb1 4.0/25, mb1mx3.9/29, mbtmp3.9/25, Error ellipse: s-maj=12.2km s-min=8.0km az=57.0*
ISC 06 21:13:02.4±0.4, 25°.73S±0°.04×63°.19W±0°.05, h573km±3km, n404, σ0s69/403, mb4.4/48, 129C-136D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**5.30**	**98**	P	**P**	**21 14 39.5**	**+3.4**
	19nm,0.3s,baz=255,slow=7.9,SNR=125						
CPUP				S	**S**	**21 15 57.7**	**+5.1**
	2.5nm,0.3s,baz=22,slow=19,SNR=2.0						
CPUP	**Villa Florida**	**5.30**	**98**	*e*P	**P**	**21 14 39.8**	**+3.6**
	200nm,0.4s						
LVC	**Limon Verde**	**6.08**	**299**	P	**P**	**21 14 44.6**	**+1.7**
	63nm,0.3s,baz=114,slow=4.3,SNR=92						
LVC				S	**S**	**21 16 03.6**	**-1.5**
	32nm,0.3s,baz=250,slow=20,SNR=25						
LVC	**Limon Verde**	**6.08**	**299**	*e*P	**P**	**21 14 44.3**	**+1.4**
	246nm,0.5s						
LVC				S	**S**	**21 16 04.7**	**-0.4**
LVC	**Limon Verde**	**6.08**	**299**	*e*P	**P**	**21 14 42.1**	**-0.8**
LVC				*i* S	**S**	**21 16 03.3**	**-1.8**
PECH	**Pedro de Valdi**	**6.70**	**296**	*e*P	**P**	**21 14 48.9**	**+0.4**
PECH				*e*S	**S**	**21 16 14.3**	**-1.0**
PB04	**Plate Boundary**	**6.71**	**300**	*e*P	**P**	**21 14 54.1**	**+5.4**
ANCH	**Antofagasta**	**6.88**	**286**	⇓*i*P	**P**	**21 14 50.8**	**+0.6**
ANCH				*i* S	**S**	**21 16 18.5**	**+0.1**
CFAA	**Coronel Fontan**	**7.34**	**216**	P	**P**	**21 14 55.2**	**+0.8**
	4.0nm,0.3s,baz=38,slow=10,SNR=343						
CFAA				S	**S**	**21 16 24.9**	**-1.4**
	1.2nm,0.3s,baz=279,slow=18,SNR=57						
PB01	**Plate Boundary**	**7.43**	**308**	*e*P	**P**	**21 14 56.1**	**+0.6**
PB01				*e*S	**S**	**21 16 26.1**	**-1.9**
LCO	**Las Campanas**	**7.44**	**242**	*e*P	**P**	**21 14 56.1**	**+0.7**
LCO				*e*S	**S**	**21 16 28.8**	**+0.9**
HMBC	**Humberston**	**8.22**	**310**	⇓*i*P	**P**	**21 15 03.7**	**+0.6**
HMBC				*e*S	**S**	**21 16 40.5**	**-1.3**
MNMC	**Miæe Miæ**	**8.85**	**317**	⇑*i*P	**P**	**21 15 10.4**	**+1.2**
MNMC				*i* S	**S**	**21 16 53.2**	**0.0**
SIV	**San Ignacio**	**9.89**	**12**	P	**P**	**21 15 21.4**	**+1.7**
	3.2nm,0.3s,baz=203,slow=9.4,SNR=110						
SIV				S	**S**	**21 17 13.8**	**+1.5**
	0.1nm,0.3s,baz=227,slow=22,SNR=4.1						

LPAZ	La Paz	10.46 333	P	P	21 15 26.8 +1.3
	15nm,0.3s,baz=138,slow=4.4,SNR=366				
LPAZ			S	S	21 17 21.5 -1.5
	2.0nm,0.3s,baz=346,slow=2.9,SNR=10				
LPAZ	La Paz	10.46 333	eP	P	21 15 26.7 +1.2
LPAZ			eS	S	21 17 23.1 +0.1
TRQA	Tornquist	12.33 176	eP	P	21 15 42.4 -1.8
SPB	Sao Paulo	14.48 85	eP	P	21 16 07.0 +0.6
	55nm,0.8s				
PLCA	Paso Flores	16.17 200	P	P	21 16 20.5 -1.7
	1.2nm,0.3s,baz=21,slow=11,SNR=27				
PLCA	Paso Flores	16.17 200	eP	P	21 16 20.9 -1.3
	5.0nm,0.5s				
NNA	Nana	18.79 314	P	P	21 16 45.6 -0.9
	3.6nm,0.3s,baz=161,slow=7.4,SNR=15				
ATAH	Atahualpa	23.61 319	P	P	21 17 30.7 +0.8
	12nm,0.5s,mb4.7,baz=189,slow=6.8,SNR=9.0				
USHA	Ushuaia	29.33 186	P	P	21 18 18.7 -0.7
	5.6nm,0.4s,mb4.6,baz=338,slow=8.3,SNR=10				
OTAV	Otavalo	29.73 328	eP	P	21 18 25.1 +1.7
	15nm,0.5s,mb4.9				
ROSC	El Rosal	32.27 339	P	P	21 18 45.4 +0.3
	30nm,0.4s,mb5.2,baz=100,slow=19,SNR=12				
ROSC	El Rosal	32.27 339	eP	P	21 18 45.5 +0.4
RCBR	Riachuelo	32.74 57	eP	P	21 18 50.7 +1.6
	14nm,1.0s,mb4.5				
SDV	Santo Domingo	35.16 347	P	P	21 19 07.7 -1.6
	16nm,0.4s,mb5.0,baz=171,slow=3.8,SNR=17				
SDV	Santo Domingo	35.16 347	eP	P	21 19 07.7 -1.6
	25nm,1.0s,mb4.8				
PCRV	Puerto La Cruz	35.72 358	P	P	21 19 12.7 -1.2
	13nm,0.7s,mb4.5,baz=321,slow=6.5,SNR=3.8				
PMSA	Palmer Station	39.05 181	P	P	21 19 39.9 -0.4
CRPR	Cabo Rojo, PR	43.64 355	eP	P	21 20 15.7 -1.5
	16nm,0.8s,mb4.6				
SJG	San Juan	43.67 356	P	P	21 20 15.2 -2.3
	23nm,0.3s,mb5.2,baz=317,slow=20,SNR=4.0				
CBYP	Canovanas	43.81 356	eP	P	21 20 17.3 -1.2
	12nm,0.4s,mb4.8				
SDDR	Presa de Saban	45.13 349	eP	P	21 20 26.3 -2.4
	137nm,2.3s,mb5.1				
CMIG	Matias Romero	52.56 321	P	P	21 21 22.1 -1.5
	5.3nm,0.6s,mb4.1,baz=107,slow=6.0,SNR=11				
VNA3	Neumayer Olymp	54.41 161	eP	P	21 21 36.1 +0.3
VNA1	Neumayer--Stat	54.56 160	eP	P	21 21 37.4 +0.5
VNA2	Neumayer--Watz	54.94 161	eP	P	21 21 39.3 -0.2
DWPF	Disney	56.33 341	eP	P	21 21 49.7 -0.1
	18nm,0.8s,mb4.4				
BBSR	BB Station	57.79 358	eP	P	21 21 59.0 -0.6
LRAL	Lakeview Retre	62.68 338	eP	P	21 22 30.6 -1.2
	73nm,2.2s,mb4.6				
SWET	Sewanee	64.33 339	eP	P	21 22 41.2 -1.1
SWET			ePcP	PcP	21 23 09.4 -1.5
LIC	Lamto	64.75 69	eP	P	21 22 44.9 -0.6
	36nm,0.9s,mb4.8				
PLAL	Pickwick Lake	64.82 338	eP	P	21 22 43.3 -2.1
	24nm,1.2s,mb4.5				
OXF	Oxford	64.87 336	eP	P	21 22 44.0 -1.7
TIC	Toumodi	64.98 69	eP	P	21 22 46.4 -0.5
	14nm,0.7s,mb4.5				
KIC	Kosan Boka	65.06 69	eP	P	21 22 47.1 -0.3
	37nm,0.6s,mb5.0				
DBIC	Dimbokro	65.13 69	P	P	21 22 47.6 -0.2
	8.5nm,0.4s,mb4.5,baz=215,slow=7.2,SNR=26				
DBIC	Dimbokro	65.13 69	eP	P	21 22 47.7 -0.1
	13nm,0.8s,mb4.4				
WVT	Waverly	65.78 338	eP	P	21 22 49.7 -1.7
	17nm,0.6s,mb4.7				
JCT	Junction City	65.98 326	eP	P	21 22 52.5 -0.3
	23nm,0.8s,mb4.7				
MIAR	Mount Ida	66.51 333	eP	P	21 22 55.2 -0.8
	7.1nm,0.7s,mb4.2				
627A	Terlingua Ranc	67.07 322	⇓P	P	21 22 58.9 -0.6
	baz=67,SNR=14				
TXAR	Lajitas Array	67.13 322	P	P	21 22 59.3 -0.6
	3.6nm,0.6s,mb4.0,baz=150,slow=7.3,SNR=32				
WCI	Wyandotte Cave	67.21 340	eP	P	21 22 58.8 -1.4
	17nm,0.9s,mb4.5				
528A	Cox Ranch, San	67.29 323	⇑P	P	21 22 59.9 -0.9
	baz=68				
SSPA	Standing Stone	67.42 348	eP	P	21 23 01.4 0.0
626A	Big Bend Ranch	67.56 322	⇑P	P	21 23 02.7 +0.2
	baz=68				
428A	Kincaid Ranch,	67.67 324	⇓P	P	21 23 03.0 -0.2
	baz=68,SNR=6.4				
SIUC	Southern Illin	67.68 338	eP	P	21 23 01.4 -1.7
527A	Woodward Ranch	67.72 323	⇑P	P	21 23 02.7 -0.8
	baz=68,SNR=7.3				
526A	Mary Lane Ranc	67.92 322	⇑P	P	21 23 04.7 -0.1
	baz=68				
427A	Hayter Ranch,	68.16 323	⇑P	P	21 23 05.7 -0.5
	baz=68,SNR=12				
ACSO	Alum Creek Sta	68.16 344	eP	P	21 23 04.9 -1.0
328A	Wristen Ranch,	68.25 324	⇑P	P	21 23 06.0 -0.8
	baz=68,SNR=8.2				
FVM	French Village	68.34 337	eP	P	21 23 05.8 -1.3
	17nm,0.7s,mb4.6				
426A	McDonald Obser	68.36 323	⇑P	P	21 23 07.1 -0.3
	baz=69,SNR=8.8				
BINY	Binghamton	68.61 350	eP	P	21 23 09.2 +0.6
	11nm,0.7s,mb4.4				
CCM	Cathedral Cave	68.69 337	eP	P	21 23 07.9 -1.3
326A	Caldwell Ranch	68.83 323	⇓P	P	21 23 09.7 -0.5
	baz=69				
WMOK	Wichita Mounta	68.95 329	eP	P	21 23 09.6 -1.3
	1.9nm,0.4s,mb3.9				
WMOK			ePcP	PcP	21 23 29.6 -0.7
425A	Indio Mountain	68.97 322	⇓P	P	21 23 10.4 -0.6
	baz=69,SNR=14				
227A	Bennet, Jal	69.00 324	⇓P	P	21 23 11.1 -0.1
	baz=69				
ERPA	Erie	69.27 347	eP	P	21 23 12.5 0.0
	45nm,0.6s,mb5.1				
325A	Bean Ranch, Si	69.41 322	⇑P	P	21 23 13.1 -0.5
	baz=70,SNR=17				
226A	Malaga, Loving	69.47 324	⇑P	P	21 23 13.7 -0.3
	baz=70				
127A	Arkansas Junct	69.56 325	⇓P	P	21 23 14.4 -0.1
	baz=70				
GDL2	Guadalupe Moun	69.72 323	eP	P	21 23 15.4 0.0
324A	Moseley Ranch,	69.75 322	⇓P	P	21 23 14.4 -1.3
	baz=70,SNR=17				
MNTX	Cornudas Mount	69.89 322	eP	P	21 23 14.7 -1.8
	2.8nm,0.6s,mb3.9				
225A	Deer Hill, Car	69.90 323	⇓P	P	21 23 16.1 -0.4
	baz=70,SNR=11				
Z27A	Tatum	69.98 325	⇓P	P	21 23 15.7 -1.3
	baz=70,SNR=8.3				
LBNH	Lisbon	70.08 353	eP	P	21 23 17.4 0.0
	2.6nm,0.6s,mb3.8				
125A	Gardner Draw,	70.23 324	⇓P	P	21 23 17.1 -1.4
	baz=70,SNR=6.1				
224A	Corundas Mount	70.25 323	⇓P	P	21 23 17.6 -1.1
	baz=70,SNR=28				
MSTX	Muleshoe	70.27 326	⇓P	P	21 23 18.3 -0.4
	baz=70,SNR=20				
Z26A	Caprock	70.35 324	⇑P	P	21 23 18.5 -0.7
	baz=71,SNR=11				
Y27A	Causey	70.40 325	⇓P	P	21 23 18.7 -0.8
	baz=71				
124A	Stringfield Ra	70.69 323	⇓P	P	21 23 20.1 -1.1
	baz=71				
Z25A	Roswell	70.74 324	⇑P	P	21 23 20.6 -0.9
	baz=71				
Y26A	Elida	70.77 325	⇑P	P	21 23 21.6 -0.1
	baz=71				
PKME	Peaks-Kenny Pk	70.87 355	eP	P	21 23 22.4 +0.5
X27A	F and S Farms,	70.97 326	⇓P	P	21 23 22.1 -0.7
	baz=71				
222A	Williams Famil	71.15 322	⇑P	P	21 23 24.3 +0.4
	baz=71				
Y25A	Mesa, Roswell	71.22 324	⇓P	P	21 23 23.4 -0.9
	baz=72,SNR=6.3				
X26A	CR and CF Fran	71.26 325	⇓P	P	21 23 24.1 -0.4
	baz=72,SNR=12				
320A	Kipp Ranch, An	71.39 320	⇓P	P	21 23 25.5 +0.2
	baz=72				
Y24A	Capitan	71.62 324	⇑P	P	21 23 26.8 +0.2
	baz=72				
220A	Playas Peak, P	71.81 320	⇓P	P	21 23 27.3 -0.4
	baz=72				
121A	Cookes Peak, D	71.85 321	⇑P	P	21 23 28.8 +0.8
	baz=72				
319A	Douglas	71.86 320	⇑P	P	21 23 28.5 +0.4
	baz=72				
Z22A	Elephant Butte	71.94 322	⇓P	P	21 23 29.2 +0.7
	baz=72				
SUR	Sutherland	71.95 118	P	P	21 23 29.1 +0.3
	4.8nm,0.9s,mb4.0,baz=220,slow=7.9,SNR=4.9				
Y23A	Lovelace Mesa,	71.95 323	⇓P	P	21 23 28.7 +0.1
	baz=72,SNR=5.7				
W25A	X Bar L Ranch,	72.11 325	⇑P	P	21 23 29.0 -0.5
	baz=72,SNR=5.6				
X24A	Lazy VL Ranch,	72.11 324	⇑P	P	21 23 29.8 +0.3
	baz=72				
219A	White Tail Can	72.30 320	⇓P	P	21 23 31.1 +0.5
	baz=72				
318A	Bisbee	72.32 319	⇓P	P	21 23 30.8 +0.1
	baz=72,SNR=6.0				
JFWS	Jewell Farm	72.71 340	eP	P	21 23 32.0 -0.7
	16nm,0.6s,mb4.7				
Z20A	Nine Sixteen R	72.74 321	⇓P	P	21 23 33.1 0.0
	baz=73				
Y21A	Point of Rocks	72.89 322	⇓P	P	21 23 34.4 +0.4
	baz=73				
W23A	Werner Place,	72.94 324	⇑P	P	21 23 34.6 +0.4
	baz=73				
ANMO	Albuquerque	72.95 324	P	P	21 23 33.9 -0.4
	4.0nm,0.6s,mb4.1,baz=139,slow=6.5,SNR=10.0				
ANMO	Albuquerque	72.95 324	eP	P	21 23 34.6 +0.3
	4.4nm,0.7s,mb4.1				
Y20A	Horse Springs,	73.21 322	⇓P	P	21 23 36.5 +0.7
	baz=73,SNR=5.8				
W22A	Albuquerque	73.26 324	⇑P	P	21 23 36.3 +0.3
	baz=74				
X21A	Alamocita Cree	73.28 323	⇓P	P	21 23 36.7 +0.6
	baz=74,SNR=6.3				
Y19A	Nutrioso	73.73 321	⇓P	P	21 23 39.7 +1.0
	baz=74,SNR=5.1				
X20A	Quemado	73.74 322	⇑P	P	21 23 39.5 +0.7
	baz=74				
TSUM	Tsumeb	73.87 104	P	P	21 23 39.9 -0.1
	9.0nm,0.7s,mb4.4,baz=236,slow=6.7,SNR=21				
TSUM	Tsneb	73.87 104	eP	P	21 23 39.7 -0.2
	7.6nm,0.8s,mb4.3				
Y18A	Canyon Day Jun	74.04 321	⇑P	P	21 23 40.8 +0.3
	baz=74				
V21A	Milan	74.22 324	⇑P	P	21 23 42.4 +0.9
	baz=74				
214A	Organ Pipe Nat	74.38 318	⇓P	P	21 23 42.9 +0.5
	baz=75				
Y17A	Roosevelt	74.45 320	⇑P	P	21 23 43.2 +0.4
	baz=75,SNR=5.4				
X18A	Snowflake	74.54 321	⇑P	P	21 23 44.2 +0.9
	baz=75				
SDCO	Great Sand Dun	74.60 326	eP	P	21 23 44.1 +0.5
W19A	Sanders	74.66 322	⇓P	P	21 23 44.5 +0.6
	baz=75				
V20A	Brimhall	74.66 323	⇓P	P	21 23 44.2 +0.3
	baz=75				
T22A	Edith	74.75 325	⇓P	P	21 23 45.2 +0.8
	baz=75				
W18A	Petrified Fore	74.85 322	⇓P	P	21 23 45.8 +0.8
	baz=75				
V19A	Window Rock	74.91 323	⇑P	P	21 23 45.6 +0.3
	baz=75				
Y16A	Circle Bar Ran	74.95 320	⇑P	P	21 23 46.0 +0.4
	baz=75				
114A	Black Gap (USA	74.98 318	⇓P	P	21 23 46.3 +0.6
	baz=75				
U20A	Newcomb	75.12 324	⇑P	P	21 23 46.9 +0.4
	baz=75				
COWI	Conover	75.27 342	eP	P	21 23 46.5 -0.6
	2.7nm,0.5s,mb4.0				
COWI			ePcP	PcP	21 23 55.9 -1.3
X16A	Lo Mia Camp, P	75.31 320	⇓P	P	21 23 48.2 +0.6
	baz=76,SNR=7.1				
V18A	Ganado	75.40 322	⇑P	P	21 23 48.3 +0.3
	baz=76				
Y15A	Casa Rosa Ranc	75.50 320	⇑P	P	21 23 49.0 +0.4
	baz=76				
113A	Mohawk Valley,	75.52 318	⇑P	P	21 23 49.0 +0.2
	baz=76				
R22A	Saguache, Gunn	75.60 326	⇓P	P	21 23 50.2 +1.1
	baz=76				
ECSD	EROS Data Cent	75.62 336	eP	P	21 23 48.1 -1.0
	10nm,0.7s,mb4.4				
S21A	Coal Bank Pass	75.70 325	⇑P	P	21 23 50.2 +0.5
	baz=76				
T19A	Beclabito	75.73 324	⇑P	P	21 23 50.4 +0.6
	baz=76,SNR=10.0				
MVCO	Mesa Verde	75.73 324	⇓P	P	21 23 50.1 +0.2
	baz=76,SNR=5.4				
MVCO	Mesa Verde	75.73 324	eP	P	21 23 50.4 +0.6
Z13A	Yuma Proving G	75.76 318	⇓P	P	21 23 50.4 +0.3
	baz=76				
V17A	Tonalea, Kykot	75.81 322	⇑P	P	21 23 50.7 +0.4
	baz=76,SNR=8.4				
X15A	Humboldt	75.82 320	⇓P	P	21 23 51.4 +1.0
	baz=76				
W16A	Flagstaff	75.85 321	⇑P	P	21 23 51.4 +0.9
	baz=76,SNR=7.1				
Y14A	Wickenburg	75.88 319	⇑P	P	21 23 51.0 +0.2
	baz=76				
U18A	Rough Rock, Ch	75.88 323	⇑P	P	21 23 51.2 +0.5
	baz=76				
WUAZ	Wupatki	76.06 321	⇑P	P	21 23 52.2 +0.5
	baz=76				
R21A	Cimarron	76.11 326	⇑P	P	21 23 52.3 +0.4
	baz=76				
Q22A	Crested Butte,	76.17 326	⇓P	P	21 23 53.3 +1.1
	baz=76				
X14A	Yava	76.19 320	⇑P	P	21 23 53.1 +0.6
	baz=76,SNR=6.3				
ISCO	Idaho Springs	76.25 328	eP	P	21 23 53.6 +1.0
Y13A	Salome	76.28 318	⇑P	P	21 23 53.2 +0.3
	baz=76				
W15A	Williams	76.33 320	⇑P	P	21 23 53.9 +0.7
	baz=77				
GLA	Glamis	76.36 317	⇑P	P	21 23 53.5 0.0
	baz=77				
U16A	Tuba City	76.38 322	⇑P	P	21 23 54.0 +0.5
	baz=77				
R20A	Redvale	76.40 325	⇑P	P	21 23 54.6 +1.1
	baz=77,SNR=5.3				
T18A	Mexican Hat	76.41 323	⇓P	P	21 23 53.8 +0.2
	baz=77,SNR=13				
SMCO	Snowmass	76.44 326	eP	P	21 23 54.2 +0.6
	4.8nm,0.6s,mb4.1				
U17A	Shonto	76.45 322	⇓P	P	21 23 54.8 +0.9
	baz=77				
S19A	Harvey Farm, M	76.47 324	⇑P	P	21 23 54.5 +0.6
	baz=77,SNR=7.1				
Y12C	Blythe	76.66 318	⇑P	P	21 23 55.5 +0.4
	baz=77				
V15A	Kaibab Nationa	76.73 321	⇓P	P	21 23 56.3 +0.9
	baz=77,SNR=9.2				
PDMCI	Parker Dam,Lak	76.81 319	⇓P	P	21 23 56.0 +0.2
	baz=77				
T17A	Navajo Res., N	76.82 323	⇓P	P	21 23 56.9 +1.1
	baz=77				
W14A	Seligman	76.82 320	⇑P	P	21 23 56.5 +0.6
	baz=77,SNR=7.1				
X13A	Yucca	76.83 319	⇑P	P	21 23 56.3 +0.3
	baz=77				
BOSA	Bosnof	76.86 116	P	P	21 23 55.6 -0.8
	5.6nm,0.5s,mb4.2,baz=225,slow=3.9,SNR=22				
S18A	Hurst Farm, Bl	76.89 324	⇓P	P	21 23 56.8 +0.7
	baz=77,SNR=26				
R19A	Curley Farm, L	76.94 324	⇓P	P	21 23 56.7 +0.2
	baz=77				
V14A	Boquillas Ranc	77.13 320	⇑P	P	21 23 58.5 +1.0
	baz=77,SNR=7.6				
BC3	Big Chuckw Mtn	77.16 317	⇑P	P	21 23 58.1 +0.3
	baz=77				
W13A	Hualapai Mount	77.21 319	⇓P	P	21 23 58.7 +0.7
	baz=77				
U15A	North Rim	77.23 321	⇑P	P	21 23 58.5 +0.5
	baz=78,SNR=9.6				
MONP	Monument Peak	77.24 316	⇑P	P	21 23 58.9 +0.7
	baz=78				
S17A	Black Ridge (B	77.28 323	⇑P	P	21 23 58.8 +0.5
	baz=78				
IRM	Iron Mountain	77.32 318	⇓P	P	21 23 58.8 +0.2
	baz=78				
R18A	Canyonlands Na	77.34 324	⇓P	P	21 23 58.8 +0.1
	baz=78				
PHWY	Pilot Hill	77.35 329	eP	P	21 23 59.1 +0.5
P20A	De Beque	77.40 326	⇓P	P	21 23 59.3 +0.4
	baz=78,SNR=5.3				
N22A	Wattenberg Ran	77.43 328	⇓P	P	21 23 59.7 +0.6
	baz=78,SNR=6.5				
EYMN	Ely	77.63 341	eP	P	21 23 58.9 -1.0
T15A	Red Dirt Ranch	77.70 322	⇑P	P	21 24 01.6 +0.9
	baz=78,SNR=8.0				
BELC	Belle Mtn.	77.72 317	⇓P	P	21 24 01.0 +0.2
	baz=78				
U14A	Mt Trumbull	77.73 321	⇓P	P	21 24 01.5 +0.7
	baz=78,SNR=12				
PFO	Pinyon Flat Ob	77.74 317	⇓P	P	21 24 01.2 +0.3
	baz=78				
V13A	Grand Canyon W	77.80 320	⇑P	P	21 24 01.2 +0.1
	baz=78,SNR=5.9				
P19A	Cripple Cowboy	77.80 326	⇑P	P	21 24 01.5 +0.5
	baz=78,SNR=13				
O20A	White River Ci	77.80 326	⇑P	P	21 24 01.8 +0.7
	baz=78				
R17A	Hanksville Air	77.80 324	⇑P	P	21 24 01.6 +0.5
	baz=78,SNR=12				
M22A	Cedar Creek Ra	77.97 328	⇓P	P	21 24 02.8 +0.8
	baz=78				
Q18A	Rafter H Ranch	78.00 324	⇑P	P	21 24 02.2 0.0
	baz=78				
GMRC	Granite Mounta	78.05 318	⇑P	P	21 24 02.8 +0.3
	baz=78,SNR=9.8				
R16A	Teasdale	78.12 323	⇓P	P	21 24 03.2 +0.4
	baz=78				
T14A	Hurricane	78.13 321	⇑P	P	21 24 03.4 +0.5
	baz=78				
S15A	Panguitch	78.16 322	⇑P	P	21 24 03.4 +0.3
	baz=78				
U13A	Pakoon Wash	78.18 320	⇑P	P	21 24 03.8 +0.6
	baz=78				
SRU	San Rafael	78.21 324	⇓P	P	21 24 03.4 +0.1
	baz=78				
SRU	San Rafael	78.21 324	eP	P	21 24 03.5 +0.2
V12A	Nelson	78.22 319	⇑P	P	21 24 03.6 +0.2
	baz=78				
N20A	Spence Gulch,	78.34 327	⇑P	P	21 24 04.0 +0.1
	baz=79,SNR=5.2				
O19A	Miners Draw (B	78.37 326	⇑P	P	21 24 04.1 0.0
	baz=79,SNR=7.4				
P18A	Preston Nutter	78.44 325	⇓P	P	21 24 04.9 +0.4
	baz=79,SNR=12				
RWWY	Rawlins	78.48 328	eP	P	21 24 05.1 +0.4
HEC	Hector,Ludlow	78.49 318	⇓P	P	21 24 05.4 +0.6
	baz=79				
M21A	Separation Pea	78.49 328	⇓P	P	21 24 05.4 +0.7
	baz=79,SNR=8.4				
LBTB	Lobatse	78.53 112	eP	P	21 24 04.9 -0.6
	5.7nm,0.4s,mb4.2				
T13A	Saint George	78.57 321	⇓P	P	21 24 05.8 +0.6
	baz=79				
P17A	Butcher Ranch,	78.59 324	⇑P	P	21 24 05.6 +0.3
	baz=79				
CCUT	Cedar City	78.63 321	eP	P	21 24 06.7 +1.1
V11A	Goodsprings	78.63 319	⇓P	P	21 24 05.8 +0.2
	baz=79				
TUQ	Turquoise Moun	78.65 318	⇑P	P	21 24 05.9 +0.1
	baz=79				
MSU	Marysvale	78.66 323	eP	P	21 24 06.3 +0.6
TMUT	Trail Mountain	78.71 324	eP	P	21 24 06.0 +0.1
	6.0nm,0.6s,mb4.1				
MAW	Mawson	78.74 162	P	P	21 24 04.9 -0.8
	4.4nm,0.7s,mb3.9,baz=230,slow=5.7,SNR=10				
MAW	Mawson	78.74 162	eP	P	21 24 05.0 -0.7
L21A	Rawlins	78.77 328	⇑P	P	21 24 06.5 +0.3
	baz=79,SNR=12				
O18A	Roosevelt	78.79 325	⇑P	P	21 24 07.1 +0.8
	baz=79				
M20A	Sweetwater, Wa	78.80 327	⇓P	P	21 24 06.9 +0.5
	baz=79				
N19A	John Jarvie Ra	78.84 326	⇓P	P	21 24 06.8 +0.2
	baz=79,SNR=9.9				
S13A	Holt Ranch, En	78.93 321	⇓P	P	21 24 08.1 +0.9
	baz=79,SNR=7.1				
RSSD	Black Hills	78.94 331	eP	P	21 24 06.5 -0.6
GSC	Goldstone	79.09 318	⇑P	P	21 24 08.7 +0.7
	baz=79				
GSC	Goldstone	79.09 318	eP	P	21 24 08.6 +0.5
O17A	Robinson Place	79.12 325	⇓P	P	21 24 08.7 +0.6
	baz=79,SNR=19				
L20A	Wamsutter	79.27 327	⇓P	P	21 24 08.4 -0.4
	baz=80				
AGMN	Agassiz Refuge	79.30 338	eP	P	21 24 08.3 -0.5
R13A	O'Grain Ranch,	79.42 322	⇓P	P	21 24 10.7 +1.0
	baz=80				
T11A	Corn Creek, Al	79.47 320	⇑P	P	21 24 10.6 +0.5
	baz=80,SNR=13				
P15A	Leamington	79.48 324	⇓P	P	21 24 10.3 +0.3
	baz=80				
S12A	Delamar Landin	79.52 321	⇑P	P	21 24 10.9 +0.7
	baz=80,SNR=5.5				
EDW2	Edwards Air Fo	79.53 317	⇓P	P	21 24 10.4 0.0
	baz=80				
DAU	Daniels Canyon	79.55 325	eP	P	21 24 11.2 +0.9
Q14A	Sevier Lake (B	79.60 323	⇓P	P	21 24 11.0 +0.3
	baz=80,SNR=6.9				
M18A	Lyman	79.69 326	⇑P	P	21 24 10.9 -0.1
	baz=80				
N17A	Moffit Pass	79.72 325	⇑P	P	21 24 11.7 +0.5
	baz=80,SNR=9.7				
JLU	Jordanelle	79.79 325	eP	P	21 24 12.1 +0.5
L19A	Farson	79.84 327	⇑P	P	21 24 12.0 +0.2
	baz=80,SNR=6.7				
R12A	Pony Springs,	79.88 321	⇓P	P	21 24 12.9 +0.8
	baz=80,SNR=6.8				
P14A	Drum Mountains	79.92 323	⇓P	P	21 24 12.7 +0.4
	baz=80,SNR=8.7				
Q13A	Wheeler Ranch,	79.99 322	⇓P	P	21 24 13.2 +0.5
	baz=80,SNR=5.2				
MPMC	Manual Prospec	80.01 318	⇓P	P	21 24 12.7 -0.2
	baz=80				
M17A	Scullys Gap (B	80.02 326	⇓P	P	21 24 12.5 -0.3
	baz=80				
L18A	Fontenelle, Gr	80.04 326	⇓P	P	21 24 13.3 +0.4
	baz=80				
K19A	Absolon Red Bu	80.13 328	⇑P	P	21 24 12.9 -0.4
	baz=80,SNR=5.6				
DUG	Dugway	80.21 324	eP	P	21 24 14.0 +0.2
	6.5nm,0.3s,mb4.4				
SCHQ	Schefferville	80.29 358	P	P	21 24 13.2 -0.6
	4.7nm,0.6s,mb4.0,baz=163,slow=5.4,SNR=12				
SCHQ	Schefferville	80.29 358	eP	P	21 24 13.3 -0.6
	4.4nm,0.6s,mb4.0				
P13A	Bates Ranch, G	80.34 322	⇓P	P	21 24 15.2 +0.7
	baz=81				
ISA	Isabella	80.35 317	⇓P	P	21 24 15.2 +0.6
	baz=81				
ISA	Isabella	80.35 317	eP	P	21 24 14.8 +0.2
M16A	Huntsville	80.40 325	⇓P	P	21 24 14.8 0.0
	baz=81,SNR=5.8				
PDAR	Pinedale Array	80.43 327	P	P	21 24 14.4 -0.4
	2.9nm,0.8s,mb3.7,baz=137,slow=6.5,SNR=20				
BW06	Boulder Array	80.43 327	eP	P	21 24 10.9 -4.0
R11A	Troy Canyon, C	80.45 321	⇓P	P	21 24 15.2 +0.1
	baz=81,SNR=7.0				
Q12A	Willow Creek R	80.50 322	⇓P	P	21 24 15.8 +0.4
	baz=81				
N15A	Stansbury Isla	80.56 324	⇑P	P	21 24 15.6 0.0
	baz=81,SNR=8.0				
K18A	Toltan Ranch,	80.57 327	⇑P	P	21 24 16.0 +0.4
	baz=81				
HWUT	Hardware Ranch	80.58 325	eP	P	21 24 16.0 +0.3
	10nm,0.8s,mb4.3				
L17A	Cokeville	80.59 326	⇑P	P	21 24 15.6 -0.1
	baz=81,SNR=11				
PKM	Peak Mountain	80.68 316	⇑P	P	21 24 16.9 +0.5
	baz=81				
S10A	Tonopah Range,	80.74 320	⇓P	P	21 24 16.6 0.0
	baz=81,SNR=11				
L16A	Fish Haven	80.81 326	⇑P	P	21 24 16.8 0.0
	baz=81				
SPUT	South Promonto	80.82 325	eP	P	21 24 17.3 +0.4
Q11A	Duckwater	80.83 321	⇑P	P	21 24 17.1 +0.1
	baz=81,SNR=8.0				
VES	Vestal, Richgr	80.84 317	⇑P	P	21 24 17.1 -0.1
	baz=81			

L15A	Malad City	81.29	325	⇑P	P	21 24 18.6	-0.7
	baz=82,SNR=9.4						
M14A	Sheep Mountain	81.43	324	⇑P	P	21 24 19.9	-0.2
	baz=82						
K16A	Soda Springs	81.48	326	⇑P	P	21 24 20.3	0.0
	baz=82,SNR=5.7						
REDW	Red Top Meadow	81.51	327	eP	P	21 24 21.1	+0.7
LOHW	Long Hollow	81.57	327	eP	P	21 24 21.0	+0.3
O11A	Cowboy Ranch,	81.72	322	⇓P	P	21 24 22.0	+0.4
	baz=82						
RRI2	Red Ridge	81.73	327	eP	P	21 24 21.6	+0.1
M13A	Montello	81.76	324	⇓P	P	21 24 21.7	-0.1
	baz=82,SNR=9.2						
M13A	Montello	81.76	324	eP	P	21 24 21.8	+0.1
I17A	Pilgrim Ck.	81.79	327	⇓P	P	21 24 21.9	+0.1
	baz=82						
P10A	Eureka	81.82	321	⇓P	P	21 24 22.2	+0.1
	baz=82						
J16A	Bone	81.82	326	⇑P	P	21 24 21.9	-0.1
	baz=82						
K15A	Arbon	81.86	326	⇓P	P	21 24 22.0	-0.2
	baz=82,SNR=6.3						
N12A	Clover Valley,	81.88	323	⇑P	P	21 24 21.7	-0.6
	baz=82						
IMW	Indian Meadow	81.95	327	eP	P	21 24 22.8	+0.1
RLMT	Red Lodge	82.06	329	⇓P	P	21 24 23.0	-0.2
	baz=82,SNR=5.4						
RLMT	Red Lodge	82.06	329	eP	P	21 24 23.1	-0.1
NVAR	Mina Array Bea	82.07	319	P	P	21 24 23.1	-0.4
	3.3nm,0.8s,mb3.9,baz=145,slow=5.5,SNR=13						
K14A	Jones Ranch, D	82.08	325	⇑P	P	21 24 23.0	-0.4
	baz=82						
L13A	Double Diamond	82.16	324	⇑P	P	21 24 23.6	-0.2
	baz=82,SNR=6.7						
M12A	Wells	82.20	323	⇓P	P	21 24 24.0	0.0
	baz=82,SNR=9.2						
G18A	Lazy EL Ranch,	82.35	329	⇓P	P	21 24 24.1	-0.6
	baz=83,SNR=5.6						
DGMT	Dagmar	82.49	334	⇓P	P	21 24 25.3	+0.1
	baz=83						
K13A	Stover Farm, H	82.63	325	⇓P	P	21 24 26.1	0.0
	baz=83						
M11A	Holland Ranch,	82.69	323	⇑P	P	21 24 26.6	+0.2
	baz=83,SNR=5.7						
J14A	Carey	82.82	326	⇑P	P	21 24 27.6	+0.5
	baz=83						
F18A	Big Timber	82.86	329	⇑P	P	21 24 27.1	-0.1
	baz=83,SNR=8.3						
K12A	Draper Farm, C	83.05	324	⇓P	P	21 24 29.0	+0.8
	baz=83						
CMB	Columbia Colle	83.05	318	P	P	21 24 28.2	-0.1
M10A	I.L. Ranch, Tu	83.16	323	⇑P	P	21 24 29.1	+0.3
	baz=83						
L11A	Cat Creek Ranc	83.17	324	⇑P	P	21 24 28.8	-0.1
	baz=83,SNR=11						
J13A	Cove Ranch, Pi	83.21	325	⇑P	P	21 24 29.2	+0.3
	baz=84						
I14A	Mackay	83.22	326	⇑P	P	21 24 29.5	+0.5
	baz=84						
F17A	Fitzpatrick Pl	83.30	329	⇑P	P	21 24 29.4	+0.1
	baz=84,SNR=5.1						
H15A	Lima	83.31	327	⇓P	P	21 24 30.2	+0.8
	baz=84						
HLID	Hailey	83.45	325	⇓P	P	21 24 30.9	+0.8
	baz=84,SNR=16						
HLID	Hailey	83.45	325	eP	P	21 24 30.8	+0.6
E18A	Harlowton	83.45	330	⇑P	P	21 24 29.5	-0.6
	baz=84						
L10A	Juniper Basin	83.50	323	⇑P	P	21 24 30.7	+0.3
	baz=84,SNR=8.2						
I13A	Wildhorse Cree	83.54	326	⇓P	P	21 24 31.6	+1.0
	baz=84,SNR=9.1						
PAHR	Pah Rah Range	83.55	320	eP	P	21 24 31.0	+0.3
J12A	Stokes Ranch,	83.58	325	⇓P	P	21 24 31.0	+0.1
	baz=84,SNR=9.3						
K11A	Parker Ranch,	83.74	324	⇓P	P	21 24 31.5	-0.1
	baz=84,SNR=8.6						
E17A	Martinsdale	83.81	329	⇑P	P	21 24 31.7	-0.2
	baz=84						
DLMT	Dillon	83.83	327	eP	P	21 24 32.3	+0.3
I12A	Atlanta	83.98	325	⇑P	P	21 24 32.9	+0.1
	baz=84,SNR=8.9						
H13A	Challis	84.07	326	⇓P	P	21 24 33.5	+0.3
	baz=84,SNR=5.1						
MFID	Camas Ranch	84.08	324	⇓P	P	21 24 33.5	+0.2
	baz=84						
F15A	Butte	84.12	328	⇑P	P	21 24 33.5	+0.1
	baz=84						
G14A	Jackson	84.16	327	⇓P	P	21 24 33.9	+0.2
	baz=84						
BEKR	Beckwourth	84.22	319	⇓P	P	21 24 34.2	+0.1
	baz=84						
D17A	Six Diamond Ra	84.24	330	⇓P	P	21 24 34.0	0.0
	baz=84						
H12A	Diamond D Ranc	84.37	326	⇓P	P	21 24 34.6	0.0
	baz=85						
G13A	Cobalt	84.44	326	⇓P	P	21 24 35.3	+0.3
	baz=85,SNR=12						
I11A	Placerville	84.49	325	⇓P	P	21 24 34.9	-0.3
	baz=85						
OHCM	Honcut	84.55	318	eP	P	21 24 35.5	-0.2
LSZ	Lusaka	84.71	104	eP	P	21 24 37.8	+0.6
F13A	Darby	84.98	327	⇑P	P	21 24 37.4	-0.2
	baz=85,SNR=5.2						
I10A	Payette	85.05	324	⇑P	P	21 24 37.9	-0.1
	baz=85						
H11A	Donnelly	85.07	325	⇓P	P	21 24 37.8	-0.2
	baz=85,SNR=8.5						
C16A	Fuhringer Ranc	85.20	330	⇓P	P	21 24 38.1	-0.5
	baz=86						
E13A	Victor	85.37	327	⇓P	P	21 24 39.4	-0.1
	baz=86,SNR=5.4						
F12A	Elk City	85.42	326	⇓P	P	21 24 39.2	-0.5
	baz=86						
J08A	Circle Bar Ran	85.45	323	⇓P	P	21 24 40.2	+0.2
	baz=86,SNR=5.5						
A17A	Triple J Farms	85.58	331	⇓P	P	21 24 39.7	-0.7
	baz=86						
C15A	Salmond Ranch,	85.58	329	⇓P	P	21 24 40.0	-0.4
	baz=86,SNR=6.8						
G11A	Walters Elk Ra	85.68	326	⇓P	P	21 24 40.9	-0.1
	baz=86,SNR=6.9						
B15A	Bradely Ranch,	85.95	329	⇑P	P	21 24 41.1	-1.1
	baz=86						
F11A	Grangeville	85.96	326	⇑P	P	21 24 41.3	-1.0
	baz=86						
D13A	Huson	85.97	328	⇓P	P	21 24 41.9	-0.4
	baz=86						
A16A	West Butte Ran	85.98	330	⇑P	P	21 24 42.0	-0.3
	baz=86,SNR=6.3						
E12A	Beaver Dam Sad	86.03	327	⇓P	P	21 24 42.4	-0.3
	baz=86						
C14A	Swan Lake	86.11	329	⇑P	P	21 24 43.0	0.0
	baz=86						
YBMT	Yellow Bay	86.30	328	eP	P	21 24 44.0	+0.1
E11A	Bogner Ranch,	86.31	326	⇑P	P	21 24 44.1	+0.1
	baz=87						
H08A	Prairie City	86.33	324	⇑P	P	21 24 44.1	-0.1
	baz=87						
JTMT	Jette	86.35	328	eP	P	21 24 43.9	-0.2
D12A	Red Ives Fores	86.37	327	⇓P	P	21 24 44.1	-0.1
	baz=87						
G09A	Cove	86.38	325	⇑P	P	21 24 44.1	-0.2
	baz=87,SNR=9.8						
K05A	Summer Lake	86.38	321	⇓P	P	21 24 44.7	+0.3
	baz=87						
C13A	Hot Springs	86.44	328	⇑P	P	21 24 44.4	-0.1
	baz=87						
I07A	Izee	86.49	323	⇓P	P	21 24 44.8	0.0
	baz=87						
A15A	Johnson Ranch,	86.51	330	⇑P	P	21 24 43.8	-1.0
	baz=87						
F10A	Beach Ranch, E	86.56	326	⇑P	P	21 24 45.3	+0.2
	baz=87						
BSMT	Bassoo Peak	86.66	328	eP	P	21 24 45.6	+0.1
FFC	Flin Flon	86.78	339	eP	P	21 24 45.5	-0.4
YBH	Yreka Blue Hor	86.78	320	P	P	21 24 44.7	-1.6
	baz=162,slow=3.2,SNR=1.8						
A14A	Double T Ranch	86.82	330	⇑P	P	21 24 45.4	-0.9
	baz=87						
E10A	Myers Farm, Un	86.85	326	⇑P	P	21 24 45.9	-0.6
	baz=87						
B13A	Whitefish	86.88	329	⇓P	P	21 24 45.9	-0.7
	baz=87						
G08A	Pilot Rock	87.00	324	⇑P	P	21 24 46.4	-0.8
	baz=87						
WALA	Waterton Lakes	87.11	329	eP	P	21 24 46.8	-0.8
A13A	Flathead Natio	87.25	329	⇓P	P	21 24 48.2	-0.1
	baz=88						
H06A	Lindquist Farm	87.37	323	⇓P	P	21 24 48.8	-0.1
	baz=88						
B12A	Libby	87.48	328	⇓P	P	21 24 49.5	+0.1
	baz=88						
B11A	Sandpoint	87.83	328	⇑P	P	21 24 50.2	-0.9
	baz=88						
D09A	Jones Farm, Ri	87.85	326	⇑P	P	21 24 50.6	-0.6
	baz=88						
G06A	Carlson Farm,	87.86	323	⇓P	P	21 24 51.4	+0.2
	baz=88						
FCC	Fort Churchill	88.00	344	eP	P	21 24 50.8	-0.8
A11A	Hall Mountain,	88.19	328	⇓P	P	21 24 52.1	-0.6
	baz=88						
C09A	Chrisman Ranch	88.33	326	⇓P	P	21 24 52.9	-0.5
	baz=89						
H04A	Detroit Lake	88.35	322	⇓P	P	21 24 53.6	0.0
	baz=89						
B09A	Rice	88.69	327	⇓P	P	21 24 54.0	-1.0
	baz=89						
ETW	Entiat	89.24	325	eP	P	21 24 57.3	-0.3
A09A	Danville	89.27	327	⇑P	P	21 24 56.8	-0.9
	baz=90						
A08A	Turner Farm, O	89.59	327	⇑P	P	21 24 58.9	-0.3
	baz=90						
B07A	Winthrop	89.69	326	⇑P	P	21 24 58.7	-1.0
	baz=90						
A07A	Ashnola River,	90.21	326	⇓P	P	21 25 01.5	-0.6
	baz=90						
YKA	Yellowknife Ar	96.96	339	P	P	21 25 30.9	-1.6
	0.8nm,0.6s,mb4.1,baz=127,slow=4.3,SNR=18						
ASAR	Alice Springs	128.18	200	PKP	PKPdf	21 31 03.2	-1.5
	0.9nm,0.7s,baz=139,slow=2.0,SNR=12						
WRA	Warramunga Arr	131.51	202	PKP	PKPdf	21 31 09.8	-1.4
	0.6nm,0.5s,baz=159,slow=1.9,SNR=22						
WRA				SKPbc	SKPbc	21 33 40.0	-3.6
	3.5nm,0.6s,baz=161,slow=3.2,SNR=31						
WRAB	Tennant Creek	131.52	202	ePKPdf	PKPdf	21 31 10.3	-0.8
ZAA0	Zalesovo Array	143.17	32	ePKPdf	PKPdf	21 31 29.2	-2.1
ZALV	Zalesovo Beam	143.17	32	PKP	PKPdf	21 31 29.6	-1.7
	2.1nm,0.4s,baz=307,slow=4.3,SNR=13						
ZALV				SKPbc	SKPbc	21 34 14.1	-1.9
	2.5nm,0.7s,baz=299,slow=2.9,SNR=11						
MK31	Makanchi Array	145.52	43	ePKPbc	PKPbc	21 31 36.9	-0.2
MKAR	Makanchi Array	145.52	43	PKPbc	PKPbc	21 31 36.8	-0.3
	1.7nm,0.4s,baz=302,slow=2.2,SNR=35						
MKAR				SKPbc	SKPbc	21 34 19.8	-1.9
	1.7nm,0.7s,baz=285,slow=2.4,SNR=12						
MKAR	Makanchi Array	145.52	43	PKPbc	PKPbc	21 31 36.8	-0.3
MKAR				SKPbc	SKPbc	21 34 19.8	-1.9
WMQ	Urumqi	150.26	45	ePKPbc	PKPbc	21 31 42.9	-6.4
MDJ	Mudanjiang	158.50	334	PKP	PKPdf	21 31 52.9	-1.8
MDJ				AMB	AMB		
	comp=Z,46nm,3.7s						
CMAR	Chiang Mai Arr	161.94	110	PKPab	PKPab	21 32 48.2	-1.1
	comp=Z,0.7nm,0.8s,baz=240,slow=5.9,SNR=5.7						
HHC	Hu-ho-hao-te	164.30	15	ePKP	PKPdf	21 31 56.6	-4.1
HHC				pPKP	pPKPdf	21 34 17.9	+2.7
HHC				sPKP		21 35 13.9	
HHC				PKS		21 35 28.4	
HHC				PP	PP	21 36 46.1	+0.2
HHC				SKS	SKSdf	21 38 02.9	-8.5
HHC				SKKS	SKKSac	21 42 33.4	-4.3
HHC				SS	SS	21 56 28.1	-1.4
HHC				AMB	AMB		
	comp=Z,54nm,5.0s						
CD2	Chengdu	167.40	63	PKP	PKPdf	21 32 01.1	-2.4
GYA	Guiyang	170.85	83	ePKP	PKPdf	21 32 02.7	-3.0
GYA				PKPab	PKPab	21 33 28.9	+0.3
GYA				pPKP	pPKPdf	21 34 20.4	-0.1
GYA				PKS		21 35 33.8	
GYA				PP	PP	21 37 21.0	+0.3
GYA				AMB	AMB		
	comp=Z,60nm,8.0s						
NJ2	Nanjing	173.45	345	ePKP	PKPdf	21 32 03.3	-3.4

IDC 06 21:27:24.2±2.8, 30°.15S×177°.49W, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.4/15, mbtmp3.2/2, Error ellipse: s-maj=58.8km s-min=25.4km az=91.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.97	338	Pn	Pn	21 27 45.6	+0.5
	105nm,0.3s,baz=36,slow=19,SNR=5.6						
RAO				Sn	Sn	21 27 59.6	+0.1
	133nm,0.3s,baz=17,slow=19,SNR=4.4						
ASAR	Alice Springs	43.56	266	P	P	21 35 30.1	+0.1
	0.1nm,0.3s,baz=104,slow=7.7,SNR=3.3						
WRA	Warramunga Arr	44.53	272	P	P	21 35 37.6	-0.2
	0.3nm,0.5s,baz=111,slow=8.1,SNR=8.9						
FINES	FINESS Array B	145.06	340	PKPbc	PKPbc	21 47 01.1	-1.0
	0.6nm,0.7s,baz=33,slow=3.3,SNR=2.6						

*ISCJB **06** 22:28:17.1±0.4, 24°.33N±0°.03×122°.34E±0°.02, h55km±8km, Error ellipse: s-maj=4.8km s-min=2.7km az=164.6*
*TAP **06** 22:28:17.1, 24°.36N×122°.26E, h65km, MLJ.4, C*
*JMA **06** 22:28:17.4±0.2, 24°.67N×122°.41E, h66km, M2.3*

ISC 06 22:28:17.6±0.4, 24°.34N±0°.03×122°.34E±0°.02, h52km±10km, n44, σ0s84/83, 5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.52	301	*i* P	Pn	22 28 29.1	-0.1
	baz=303						
TWC				S	Sn	22 28 37.9	+0.4
	baz=303						
ENA	Nanau	0.55	279	P	Pn	22 28 29.5	-0.1
	baz=278						
ENA				eS	Sn	22 28 39.0	+0.8
	baz=278						
YOJ	Yonaguni jima	0.63	79	P	Pn	22 28 30.8	+0.3
YOJ				eS	Sn	22 28 40.7	+0.9
TWE	Neicheng	0.72	302	⇓*i* P	Pn	22 28 31.7	0.0
	baz=308						
TWE				eS	Sn	22 28 42.6	+0.7
	baz=308						
TWD	Chiawan	0.72	249	*i* P	Pn	22 28 31.3	-0.4
	baz=239						
TWD				S	Sn	22 28 41.7	-0.3
	baz=239						
TWB1	Santiao Chiao	0.74	335	⇓*i* P	Pn	22 28 31.4	-0.6
	baz=330						
TWB1				*i* S	Sn	22 28 41.5	-0.9
	baz=330						
HWA	Hwalien	0.76	242	eP	Pn	22 28 32.0	-0.2
	baz=232						
HWA				eS	Sn	22 28 43.4	+0.6
	baz=232						
NNS	Nan Shan	0.89	277	⇓*i* P	Pn	22 28 33.6	-0.2
	baz=276						
NNS				S	Sn	22 28 45.7	-0.1
	baz=276						
NWF	Wu-fen Shan	0.89	325	⇓*i* P	Pn	22 28 33.5	-0.4
	baz=329						
NWF				eS	Sn	22 28 44.9	-0.9
	baz=329						
TWA	Mucha	0.94	313	*i* P	Pn	22 28 34.2	-0.3
	baz=324						
TWA				eS	Sn	22 28 46.1	-0.9
	baz=324						
NSK	Sanguang	0.95	291	P	Pn	22 28 34.8	0.0
	baz=284						
NSK				S	Sn	22 28 47.0	-0.4
	baz=284						
ESL	Shilin	0.98	238	eP	Pn	22 28 35.7	+0.6
	baz=228						
ESL				eS	Sn	22 28 47.0	-1.0
	baz=228						
WHF	Hehuan Shan	1.00	259	P	Pn	22 28 35.2	-0.2
	baz=257						
WHF				S	Sn	22 28 48.3	-0.1
	baz=257						
TWT	Tachien	1.06	266	eP	Pn	22 28 36.7	+0.5
	baz=257						
TWT				S	Sn	22 28 50.2	+0.2
	baz=257						
TWS1	Kuangyinshan	1.13	312	P	Pn	22 28 36.7	-0.4
	baz=324						
TWS1				eS	Sn	22 28 51.2	-0.4
	baz=324						
TWY	Chenhua	1.15	324	eP	Pn	22 28 36.0	-1.3
	baz=327						
EHY	Hungye	1.25	228	eP	Pn	22 28 37.7	-1.0
	baz=234						
NSTT	Nanjuang	1.25	284	P	Pn	22 28 39.0	+0.2
	baz=284						
NSTT				S	Sn	22 28 54.9	+0.4
	baz=284						
IRIF	Iriomote-Funau	1.27	90	P	Pn	22 28 38.9	-0.1
IRIF				eS	Sn	22 28 55.1	+0.1
PCYT	Pengchaiyu	1.31	349	eP	Pn	22 28 38.9	-0.6
	baz=344						
TWF1	Yuli	1.37	224	P	Pn	22 28 39.6	-0.7
	baz=231						
TWF1				eS	Sn	22 28 55.9	-1.4
	baz=231						
HATJ	Hateruma jima	1.37	102	P	Pn	22 28 41.7	+1.3
HATJ				eS	Sn	22 28 58.9	+1.5
SMLT	Sun Moon Lake	1.39	251	eP	Pn	22 28 41.1	+0.5
	baz=244						
SMLT				eS	Sn	22 28 57.6	-0.3
	baz=244						
TYC	Yuchr	1.42	253	eP	Pn	22 28 41.7	+0.6
	baz=245						
TYC				eS	Sn	22 28 58.3	-0.4
	baz=245						
TWQ1	Liyutan	1.43	271	eP	Pn	22 28 42.0	+0.9
	baz=270						
TWQ1				eS	Sn	22 28 59.3	+0.5
	baz=270						
NSY	Sanyi	1.44	273	eP	Pn	22 28 41.7	+0.4
	baz=273						
CHKT	Chengkung	1.52	216	eP	Pn	22 28 41.9	-0.6
	baz=205						
CHKT				eS	Sn	22 28 58.8	-2.3
	baz=205						
YUS	Yu-Shan	1.52	237	eP	Pn	22 28 42.9	+0.4
	baz=228						
YUS				eS	Sn	22 29 00.7	-0.4
	baz=228						
JKRS	Kuro-shima	1.53	93	P	Pn	22 28 42.9	+0.4
JKRS				eS	Sn	22 29 01.7	+0.4
ALS	Alishan	1.63	240	eP	Pn	22 28 44.9	+1.0
	baz=230						
ALS				eS	Sn	22 29 04.3	+0.6
	baz=230						
JIJ	Ishigaki jima	1.65	89	P	Pn	22 28 43.8	-0.4
JIJ				eS	Sn	22 29 03.3	-0.9
ELDTW	Lidau	1.67	227	⇓*i* P	Pn	22 28 43.6	-0.8
	baz=220						
ELDTW				eS	Sn	22 29 03.1	-1.5
	baz=220						
CHN5	Tsauling	1.69	244	P	Pn	22 28 45.3	+0.6
	baz=234						
CHN5				eS	Sn	22 29 06.8	+1.6
	baz=234						
STYT	Tauyuan	1.86	231	eP	Pn	22 28 47.4	+0.2
	baz=222						
CHN4	Tsaushan	1.88	239	eP	Pn	22 28 48.2	+1.0
	baz=229						
CHN4				eS	Sn	22 29 10.6	+0.8
	baz=229						
TWG	Pinlang	1.91	218	eP	Pn	22 28 46.0	-1.7
	baz=222						
TWG				eS	Sn	22 29 08.4	-2.2
	baz=222						
WTP	Ta-pu	1.92	236	eP	Pn	22 28 48.4	+0.6
	baz=226						
WTP				eS	Sn	22 29 12.0	+1.2
	baz=226						
CHY	Chiayi	1.94	245	eP	Pn	22 28 48.4	+0.2
	baz=235						
CHY				eS	Sn	22 29 12.6	+1.2
	baz=235						
TWK	Hsinying	2.00	238	eP	Pn	22 28 49.9	+0.9
	baz=237						
TWK				eS	Sn	22 29 13.6	+0.7
	baz=237						
CHN1	Nanshi	2.02	236	eP	Pn	22 28 49.9	+0.7
	baz=234						
CHN1				eS	Sn	22 29 14.1	+0.8
	baz=234						
SGST	Jiashian	2.04	232	eP	Pn	22 28 49.8	+0.3
	baz=231						
SGST				eS	Sn	22 29 15.1	+1.3
	baz=231						
JTJ	Tarama	2.17	82	P	Pn	22 28 51.9	+0.5
JTJ				eS	Sn	22 29 16.6	-0.5
SSD	Sandimen	2.23	225	eP	Pn	22 28 52.9	+0.8
	baz=215						
SSD				eS	Sn	22 29 18.1	-0.4
	baz=215						
LAY	Lan-yu	2.40	198	eP	Pn	22 28 52.5	-2.0
	baz=200						
LAY				eS	Sn	22 29 20.1	-2.6
	baz=200						

IDC 06 22:28:52.9±2.3, 6°.45S×130°.41E, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.4/15, mbtmp3.6/3, MLJ3.5/2, Error ellipse: s-maj=147.8km s-min=30.8km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.94	164	Pn	Pn	22 32 12.1	+0.2
	0.2nm,0.3s,baz=348,slow=13,SNR=4.6						
WRA				Sn	Sn	22 34 33.9	-14
	0.4nm,0.3s,baz=338,slow=22,SNR=7.6						
ASAR	Alice Springs	17.44	169	P	Pn	22 32 57.8	0.0
	0.2nm,0.3s,baz=345,slow=9.9,SNR=9.6						
MKAR	Makanchi Array	67.99	327	P	P	22 39 54.0	+0.1
	0.4nm,0.3s,baz=127,slow=7.4,SNR=18						

*ISCJB **06** 22:31:39.9±0.3, 71°.40N±0°.04×12°.61W±0°.09, h10km, mb3.8/19, MS3.5/16, Error ellipse: s-maj=5.5km s-min=4.3km az=0.2*
*CSEM **06** 22:31:40.3±0.1, 71°.40N×12°.46W, h2km, mb4.0/10, Ms2.8, Error ellipse: s-maj=5.3km s-min=4.6km az=172.0*
*IDC **06** 22:31:41.0±1.0, 71°.44N×12°.50W, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.6/29, mbtmp3.7/12, ML2.8/2, MS3.6/20, Ms1 3.6/20, ms1mx3.5/30, Error ellipse: s-maj=31.1km s-min=15.2km az=16.0*
*NEIC **06** 22:31:42.2±0.3, 71°.44N×12°.42W, h10km, mb4.1/10, Error ellipse: s-maj=5.8km s-min=4.5km az=201.0*
*REY **06** 22:31:43.4, 70°.71N×10°.46W, h10km, ML2.6, ML3.5*

ISC 06 22:31:41.8±0.3, 71°.37N±0°.03×12°.55W±0°.09, h10km, n114, σ1s16/111, mb3.8/19, MS3.5/16, 3C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.32	108	eP	Pn	22 32 04.5	-1.6
JMI				eS	Sb	22 32 21.9	-1.5
JMI	Jan Mayen	1.32	108	eP	Pn	22 32 04.5	-1.7
JMI				eS	Sb	22 32 21.9	-1.5
JMIC	Jan Mayen	1.36	104	Pn	Pn	22 32 04.1	-2.7
	20nm,0.3s,baz=177,slow=1.6,SNR=6.0						
JMIC				Sn	Sn	22 32 19.9	-4.9
	33nm,0.3s,baz=267,slow=22,SNR=25						
JMIC	Jan Mayen	1.36	104	Pn	Pn	22 32 04.1	-2.7
JNW	Jan Mayen West	1.38	102	eP	Pn	22 32 04.3	-2.7
JNW	Jan Mayen West	1.38	102	eP	Pn	22 32 04.3	-2.7
SCO	Scoresbysund	3.21	258	*i* P	Pn	22 32 29.2	-3.0
SCO				*i* S	Sn	22 33 04.6	-5.9
SCO							
	comp=Z,760nm,18.0s						
SCO	Scoresbysund	3.21	258	*i* P	Pn	22 32 29.2	-3.0
	SNR=49						
ILEI	Leirhofn	5.19	198	P	Pn	22 32 57.2	-2.1
ILEI				S	Sn	22 33 57.2	-1.8
IGRI	Grimsey	5.23	205	P	Pn	22 33 00.4	+0.5
IBRE	Brettingsstaoi	5.62	203	P	Pn	22 33 04.6	-0.6
DAG	Danmarks Havn	5.68	346	⇓*i* P	Pn	22 33 02.0	-4.0
	comp=Z,7.5nm,0.7s						
ISIG	Siglufjorour	5.75	207	P	Pn	22 33 06.6	-0.4
IHLA	Helia	5.85	204	P	Pn	22 33 08.0	-0.4
IGRS	Gr

SUMG Summit 8.09 291 *e*Pn **Pn 22 33 39.1 +0.1**
comp=Z,8.0nm,0.6s
SUMG *e*Sn **Sn 22 35 07.9 -2.5**
SUMG Summit 8.09 291 *e*Pn **Pn 22 33 39.2 +0.1**
comp=Z,8.0nm,0.6s
SUMG Summit 8.09 291 *i* P **Pn 22 33 40.4 +1.3**
SNR=47
KBS Kingsbay 9.73 28 *e*Pn **Pn 22 33 59.6 -1.8**
KBS *e*Sn **Sn 22 35 41.0 -9.5**
KBS Kingsbay 9.73 28 *i* P **Pn 22 33 59.2 -2.2**
SNR=47
KBS Kingsbay 9.73 28 *e*Pn **Pn 22 33 59.6 -1.8**
SPB4 Spitsbergen Ar 10.06 35 *e*Pn **Pn 22 34 06.1 0.0**
SPB4 Spitsbergen Ar 10.06 35 *e*Pn **Pn 22 34 06.1 +0.1**
SPITS Spitsbergen Ar 10.07 35 Pn **Pn 22 34 05.0 -1.1**
baz=229,slow=13,SNR=51
SPITS LR LR 22 37 00.7
comp=Z,216nm,20.1s,baz=255,slow=32
SPITS Spitsbergen Ar 10.07 35 Pn **Pn 22 34 05.0 -1.1**
ARCES ARCESS Array B 12.72 80 Pn **Pn 22 34 42.3 -0.1**
comp=Z,0.1nm,0.3s,baz=313,slow=12,SNR=3.9
ARCES ARCESS Array B 12.72 80 Pn **Pn 22 34 42.3 -0.1**
KEV Kevo 13.10 78 Pn **Pn 22 34 47.7 +0.2**
KEV Kevo 13.10 78 Pn **Pn 22 34 47.7 +0.2**
NOA NORSAR Array B 13.98 126 LR LR 22 39 49.5
comp=Z,168nm,19.9s,baz=325,slow=35
SFJD Kangerlussuaq 14.03 271 Pn **Pn 22 35 00.4 +0.2**
SFJD Kangerlussuaq 14.03 271 Pn **Pn 22 35 00.4 +0.2**
NAO01 NORSAR Array S 14.06 127 *e*Pn **Pn 22 35 00.4 -0.2**
NAO01 NORSAR Array S 14.06 127 *e*Pn **Pn 22 35 00.4 -0.3**
HFS Hagfors 15.40 124 LR LR 22 40 45.0
comp=Z,208nm,20.3s,baz=326,slow=35
EKA Eskdalemuir Ar 16.60 161 Pn **Pn 22 35 39.0 +4.8**
baz=353,slow=12,SNR=3.4
ESK Eskdalemuir 16.61 161 Pn **Pn 22 35 35.0 +0.7**
ESK Eskdalemuir 16.61 161 Pn **Pn 22 35 35.0 +0.6**
KAF Kangasniemi 17.56 102 *e*p **Pn 22 35 48.2 +2.1**
comp=Z,1.9nm,0.5s
KAF Kangasniemi 17.56 102 *e*P **Pn 22 35 48.2 +2.1**
comp=Z,1.9nm,0.5s
FINES FINESS Array B 17.99 104 P **Pn 22 35 52.6 +1.1**
comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=11
FINES LR LR 22 42 03.1
comp=Z,325nm,18.4s,baz=95,slow=35
FINES FINESS Array B 17.99 104 P **Pn 22 35 52.6 +1.1**
JOF Joensuu 18.56 95 *e*p **Pn 22 35 57.3 -1.1**
comp=Z,1.2nm,0.6s
JOF Joensuu 18.56 95 *e*P **Pn 22 35 57.3 -1.1**
comp=Z,1.2nm,0.6s
FRB Frobisher Bay 21.86 278 P **P 22 36 35.2 +1.1**
comp=Z,2.7nm,1.0s,mb3.6,baz=46,slow=13,SNR=3.2
FRB LR LR 22 44 48.1
comp=Z,298nm,19.3s,MS3.7,baz=38,slow=36
FRB Frobisher Bay 21.86 278 P **P 22 36 35.2 +1.1**
FRB LR LR 22 44 48.1
FRB Frobisher Bay 21.86 278 P **P 22 36 35.2 +1.1**
RUE Ruedersdorf 22.28 134 P **P 22 36 38.6 +0.1**
RUE Ruedersdorf 22.28 134 P **P 22 36 38.7 +0.1**
RES Resolute Bay 22.44 316 P **P 22 36 40.4 +0.2**
comp=Z,0.8nm,0.8s,mb3.2,baz=70,slow=12,SNR=2.4
RES LR LR 22 45 00.7
comp=Z,171nm,20.9s,MS3.5,baz=48,slow=36
RES Resolute Bay 22.44 316 *e*P **P 22 36 40.5 +0.3**
comp=Z,0.8nm,0.6s,mb3.3
RES LR LR 22 45 00.7
RES Resolute Bay 22.44 316 *e*P **P 22 36 40.5 +0.3**
comp=Z,0.8nm,0.6s,mb3.3
ISAL Salakas 22.80 114 *e*P **P 22 36 44.5 +0.4**
ISAL Salakas 22.80 114 *e*P **P 22 36 44.5 +0.4**
CLL Collm 23.20 137⇑ *i*P **P 22 36 49.9 +1.6**
comp=Z,31nm,2.0s,mb4.4
CLL LR LR
comp=Z,200nm,17.4s,MS3.6
CLL Collm 23.20 137⇑ *i*P **P 22 36 49.9 +1.6**
comp=Z,31nm,2.0s,mb4.4
CLL Collm 23.20 137⇑ *i*P **P 22 36 49.9 +1.6**
comp=Z,31nm,2.0s,mb4.4
MOX Moxa 23.52 139 *e*P **P 22 36 53.5 +1.8**
comp=Z,37nm,2.2s,mb4.4
MOX Moxa 23.52 139 *e*P **P 22 36 53.5 +1.8**
comp=Z,37nm,2.2s,mb4.4
BRG Berggiesshubel 23.81 136 *e*P **P 22 36 55.8 +1.4**
comp=Z,7.0nm,1.4s,mb3.9
GERES GERESS Array B 25.67 138 P **P 22 37 13.6 +2.3**
comp=Z,0.4nm,0.7s,mb3.0,baz=342,slow=8.4,SNR=4.8
GERES LR LR 22 47 14.7
comp=Z,84nm,18.8s,MS3.3,baz=291,slow=36
GERES GERESS Array B 25.67 138 P **P 22 37 13.6 +2.3**
MORC Moravsky Berou 25.67 131 *e*P **P 22 37 12.1 +0.7**
comp=Z,7.6nm,1.6s,mb4.0
MORC Moravsky Berou 25.67 131 *e*P **P 22 37 12.1 +0.7**
comp=Z,7.6nm,1.6s,mb4.0
VRAC Vranov 25.89 133 LR LR 22 48 08.2
comp=Z,86nm,18.7s,MS3.3,baz=0,slow=38
DAVOX Davos/Dischmat 26.87 145 LR LR 22 47 15.1
comp=Z,86nm,19.5s,MS3.3,baz=169,slow=35
AKASG Malin Array Be 27.96 115 P **P 22 37 31.1 -0.9**
comp=Z,0.2nm,0.3s,mb3.2,baz=333,slow=9.8,SNR=4.4
AKASG Malin Array Be 27.96 115 P **P 22 37 31.1 -0.9**
PSZ Piszkesteto 27.98 130 P **P 22 37 32.8 +0.7**
PSZ Piszkesteto 27.98 130 P **P 22 37 32.8 +0.7**
SCHQ Schefferville 28.25 263 LR LR 22 48 17.9
comp=Z,232nm,18.9s,MS3.8,baz=44,slow=35
ESLA Sonseca Array 32.07 167 *e*P **P 22 38 08.6 +0.3**
comp=Z,0.3nm,0.7s,mb3.2
ESLA Sonseca Array 32.07 167 *e*P **P 22 38 08.6 +0.2**
comp=Z,0.3nm,0.7s,mb3.2
ARU Arti 32.31 80 P **P 22 38 10.7 +0.4**
ARU Arti 32.31 80 P **P 22 38 10.7 +0.4**
FCC Fort Churchill 33.61 291 P **P 22 38 22.4 +0.7**
FCC Fort Churchill 33.61 291 P **P 22 38 22.4 +0.7**
YKA Yellowknife Ar 36.15 310 P **P 22 38 44.0 +0.5**
comp=Z,1.5nm,0.9s,mb3.9,baz=31,slow=8.6,SNR=9.9
YKA LR LR 22 53 21.1
comp=Z,16nm,19.2s,MS2.8,baz=155,slow=36
YKA Yellowknife Ar 36.15 310 P **P 22 38 44.0 +0.5**
KIV Kislovodsk 38.06 106 P **P 22 39 00.1 +0.2**
KIV Kislovodsk 38.06 106 P **P 22 39 00.1 +0.2**
BRVK Borovoye 38.81 73 *e*P **P 22 39 06.3 +0.2**
comp=Z,2.8nm,0.7s,mb4.1
BRVK Borovoye 38.81 73 *e*P **P 22 39 06.3 +0.2**
comp=Z,2.8nm,0.7s,mb4.1
BVAR Borovoye Array 38.87 73 P **P 22 39 07.2 +0.5**
comp=Z,0.7nm,0.8s,mb3.5,baz=349,slow=9.5,SNR=3.6
BVAR LR LR 22 55 11.9
comp=Z,88nm,21.1s,MS3.6,slow=36
BVAR Borovoye Array 38.87 73 P **P 22 39 07.2 +0.5**
BRTR Keskin Array B 39.25 118 LR LR 22 57 03.2
comp=Z,64nm,19.2s,MS3.5,baz=293,slow=39
FFC Flin Flon 39.36 294 *e*P **P 22 39 11.2 +0.5**
comp=Z,4.3nm,1.1s,mb4.1
FFC Flin Flon 39.36 294 *e*P **P 22 39 11.2 +0.5**
comp=Z,4.3nm,1.1s,mb4.1
ULM Lac du Bonnet 41.41 285 LR LR 22 56 53.3
comp=Z,124nm,18.3s,MS3.8,baz=19,slow=36
MCK McKinley 41.88 333 P **P 22 39 32.2 +0.7**
MCK McKinley 41.88 333 P **P 22 39 32.2 +0.8**
MALT Malatya 41.94 114 P **P 22 39 33.1 +0.9**
MALT Malatya 41.94 114 P **P 22 39 33.1 +0.9**
ZALV Zalesovo Beam 42.32 61 LR LR 22 58 57.4
comp=Z,31nm,20.4s,MS3.2,baz=64,slow=39
KURK Kurchatov 43.38 68 *e*P **P 22 39 43.8 0.0**
comp=Z,1.0nm,0.6s,mb3.7
KURK Kurchatov 43.38 68 *e*P **P 22 39 43.8 +0.1**
comp=Z,1.0nm,0.6s,mb3.7
YAK Yakutsk 44.33 24 P **P 22 39 50.5 -0.7**
YAK Yakutsk 44.33 24 P **P 22 39 50.5 -0.7**
MKAR Makanchi Array 47.98 67 P **P 22 40 21.5 +1.4**
comp=Z,0.4nm,0.7s,mb3.6,baz=173,slow=11,SNR=5.7
MKAR LR LR 23 00 52.0
comp=Z,50nm,18.9s,MS3.5,baz=335,slow=36
AAK Ala-Archa 49.36 76 *e*P **P 22 40 29.6 -1.2**
comp=Z,1.4nm,0.4s,mb4.3
AAK Ala-Archa 49.36 76 *e*P **P 22 40 29.6 -1.2**
comp=Z,1.4nm,0.4s,mb4.3
PDAR Pinedale Array 52.28 292 LR LR 23 03 03.2
comp=Z,183nm,20.4s,MS4.1,baz=46,slow=36
SONM Songino Array 53.49 47 LR LR 23 06 52.2
comp=Z,52nm,19.7s,MS3.6,baz=74,slow=40
ULN Ulaanbaatar 53.62 47 *e*P **P 22 41 02.6 +0.1**
comp=Z,11nm,2.1s,mb4.4
ULN Ulaanbaatar 53.62 47 *e*P **P 22 41 02.7 +0.1**
comp=Z,11nm,2.1s,mb4.4
YSS Yuzh-Sakhalins 60.67 19 P **P 22 41 51.3 -1.1**
YSS Yuzh-Sakhalins 60.67 19 P **P 22 41 51.3 -1.1**
TXAR Lajitas Array 62.87 281 P **P 22 42 08.0 +0.5**
comp=Z,0.2nm,0.7s,mb3.4,baz=52,slow=6.5,SNR=3.5
TXAR LR LR 23 09 13.8
comp=Z,113nm,20.4s,MS4.0,baz=190,slow=36
TXAR Lajitas Array 62.87 281 P **P 22 42 07.9 +0.4**
CMAR Chiang Mai Arr 79.27 64 P **P 22 43 47.9 +0.9**
comp=Z,0.4nm,0.4s,mb3.8,baz=328,slow=4.6,SNR=5.4
CMAR Chiang Mai Arr 79.27 64 P **P 22 43 47.9 +0.9**

BJI ***06*** *22:41:14.7, 6.°48S×130.°11E, h124km, mB4.9/4, mb4.5/14*
NEIC ***06*** *22:41:16.4±1.0, 6.°21S×130.°24E, h113km±10km, mb4.6/24, Error ellipse: s-maj=10.1km s-min=5.3km az=57.0*
IDC ***06*** *22:41:16.1±3.5, 6.°20S×130.°21E, h108km±33km, mb4.3/13, mb1 4.3/16, mb1mx4.2/20, mbtmp4.3/16, MS3.1/2, Ms1 3.1/2, ms1mx2.5/28, Error ellipse: s-maj=23.2km s-min=12.2km az=71.0*
ISCJB ***06*** *22:41:19.1±0.4, 6.°37S±0.°03×130.°40E±0.°04, h168km±4km, mb4.7/41, Error ellipse: s-maj=6.7km s-min=5.1km az=154.0*
DJA ***06*** *22:41:20, 6.°29S×130.°41E, h158km, mb4.9/30*
ISC 06 22:41:19.7±0.5, 6.°32S±0.°03×130.°35E±0.°04, h150km±5km, n130, σ1°21/144, mb4.7/41, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.47**	**74**	P	**Pn**	**22 42 02.1**	**+1.7**
TLE				S	**Sn**	**22 42 33.1**	**+1.3**
AAI	**Ambon**	**3.39**	**321**	P	**Pn**	**22 42 12.4**	**+0.4**
NLAI	**Namlea**	**4.46**	**313**	P	**Pn**	**22 42 30.0**	**+4.0**
SWI	**Sorong**	**5.50**	**10**	P	**Pn**	**22 42 37.5**	**-2.3**
212nm,0.6s,8.6nm							
SWI				S	**Sn**	**22 43 34.8**	**-7.5**
212nm,0.6s,8.6nm							
LBMI	**Labuha**	**6.32**	**333**	P	**Pn**	**22 42 50.1**	**-0.6**
244nm,0.9s,5μm2.0nm							
LBMI				S	**Sn**	**22 43 56.1**	**-5.9**
244nm,0.9s,5μm2.0nm							
KAKA	**Kakadu**	**6.67**	**162**	*e*P	**Pn**	**22 42 53.8**	**-1.6**
198nm,0.5s							
KAKA				*e*S	**Sn**	**22 43 59.9**	**-11**
KAKA	**Kakadu**	**6.67**	**162**	*e*Pn	**Pn**	**22 42 53.4**	**-2.0**
336nm,0.5s							
KAKA				*e*Sn	**Sn**	**22 44 04.8**	**-5.6**
KAKA	**Kakadu**	**6.67**	**162**	P	**Pn**	**22 42 54.6**	**-0.8**
250nm,0.6s,7.7nm							
KDI	**Kendari**	**8.05**	**287**	P	**Pn**	**22 43 16.8**	**+3.0**
114nm,1.2s,958nm							
LUWI	**Luwuk**	**9.20**	**304**	P	**Pn**	**22 43 31.5**	**+2.3**
116nm,1.1s,1μm							
SMPI	**Sarmi**	**9.38**	**63**	P	**Pn**	**22 43 31.6**	**+0.1**
98nm,1.1s,4μm							
KNA	**Kununurra**	**9.50**	**189**	*e*P	**Pn**	**22 43 31.8**	**-1.2**
206nm,0.5s							
KNA				*e*S	**Sn**	**22 45 10.5**	**-7.9**
APSI	**Ampana**	**10.21**	**301**	P	**Pn**	**22 43 44.6**	**+2.0**
229nm,1.1s,2μm							
KAPI	**Kappang**	**10.63**	**276**	*e*Pn	**Pn**	**22 43 45.9**	**-2.2**
30nm,0.8s							
KAPI	**Kappang**	**10.63**	**276**	P	**Pn**	**22 43 57.7**	**+10**
MRSI	**Marisa**	**10.78**	**309**	P	**Pn**	**22 43 50.7**	**+0.7**
105nm,1.1s,751nm							
TTSI	**Tana Toraja**	**10.99**	**287**	P	**Pn**	**22 43 59.3**	**+6.5**
FITZ	**Fitzroy Crossi**	**12.58**	**201**	*e*P	**Pn**	**22 44 10.1**	**-3.4**
35nm,0.3s							
FITZ				*e*S	**Sn**	**22 46 17.0**	**-16**
FITZ	**Fitzroy Crossi**	**12.58**	**201**	P	**Pn**	**22 44 11.2**	**-2.3**
5.6nm,0.3s,baz=37,slow=12,SNR=97							
FITZ				S	**Sn**	**22 46 21.5**	**-11**
11nm,0.3s,baz=118,slow=17,SNR=8.9							
FITZ				LR	LR	22 49 17.0	
comp=Z,48nm,19.9s,baz=22,slow=38							
FITZ	**Fitzroy Crossi**	**12.58**	**201**	*e*Pn	**Pn**	**22 44 10.9**	**-2.6**
FITZ				*e*Sn	**Sn**	**22 46 21.1**	**-12**
FITZ				S	**Sn**	**22 46 21.5**	**-11**
FITZ	**Fitzroy Crossi**	**12.58**	**201**	P	**Pn**	**22 44 11.1**	**-2.4**
71nm,0.5s,1μm							
WRAB	**Tennant Creek**	**14.08**	**164**	*e*Pn	**Pn**	**22 44 31.0**	**-1.6**
16nm,0.6s							
WRAB				*e*Sn	**Sn**	**22 46 59.9**	**-8.7**
WRAB	**Tennant Creek**	**14.08**	**164**	P	**Pn**	**22 44 31.6**	**-1.0**
32nm,0.7s							
WRA	**Warramunga Arr**	**14.08**	**164**	P	**Pn**	**22 44 31.2**	**-1.5**
2.7nm,0.3s,baz=340,slow=13,SNR=31							
WRA				S	**Sn**	**22 46 54.8**	**-14**
7.6nm,0.3s,baz=353,slow=23,SNR=6.2							
WB2	**Warramunga Arr**	**14.09**	**164**	*e*Pn	**Pn**	**22 44 30.8**	**-2.0**
WB2				*e*Sn	**Sn**	**22 46 55.9**	**-13**
KBKI	**Kotabaru**	**14.45**	**281**	P	**Pn**	**22 44 39.1**	**+1.7**
74nm,1.1s,919nm							
COEN	**Coen**	**14.72**	**122**	*e*Pn	**Pn**	**22 44 42.8**	**+2.1**
577nm,0.8s							
COEN				*e*Sn	**Sn**	**22 47 11.9**	**-12**
COEN	**Coen**	**14.72**	**122**	P	**Pn**	**22 44 44.2**	**+3.5**
355nm,0.8s							
KHKI	**Kahang-Kahang**	**14.76**	**261**	P	**Pn**	**22 44 40.8**	**-0.5**
52nm,0.8s							
SRBI	**Singaraja**	**15.12**	**262**	P	**Pn**	**22 44 46.1**	**+0.4**
79nm,0.9s							
BBKI	**Banjar Baru**	**15.71**	**280**	P	**Pn**	**22 44 55.6**	**+2.6**
564nm,1.2s,5μm							
MYLDM	**Lahad Datu**	**16.45**	**314**	P	**Pn**	**22 45 03.8**	**+1.8**
MYLDM	**Lahad Datu**	**16.45**	**314**	P	**Pn**	**22 45 03.5**	**+1.5**
57nm,1.1s,673nm							
ASAR	**Alice Springs**	**17.58**	**169**	P	**Pn**	**22 45 16.8**	**+1.3**
1.8nm,0.3s,baz=348,slow=10,SNR=65							
ASAR				S	**S**	**22 48 18.7**	**-11**
1.8nm,0.3s,baz=348,slow=26,SNR=11							
SDKM	**Sandakan**	**17.71**	**312**	P	**Pn**	**22 45 18.8**	**+1.6**
GRJI	**Gresik**	**17.76**	**267**	P	**Pn**	**22 45 18.4**	**+0.6**
257nm,0.9s							
MBWA	**Marble Bar**	**17.98**	**214**	*e*P	**Pn**	**22 45 19.9**	**-0.4**
MBWA				*e*S	**S**	**22 48 26.5**	**-11**
MBWA	**Marble Bar**	**17.98**	**214**	*e*P	**Pn**	**22 45 19.9**	**-0.4**
12nm,0.6s							
MBWA				*e*S	**S**	**22 48 24.0**	**-13**
MBWA	**Marble Bar**	**17.98**	**214**	P	**Pn**	**22 45 20.4**	**+0.1**
26nm,0.9s							
PWJI	**Pagerwojo**	**18.48**	**264**	P	**P**	**22 45 24.0**	**-0.4**
41nm,1.3s							
SJI	**Sawahan**	**18.50**	**265**	P	**P**	**22 45 25.2**	**+0.6**
55nm,0.8s							
KKM	**Kota Kinabalu**	**18.71**	**311**	*e*P	**P**	**22 45 24.4**	**-2.4**
64nm,0.8s							
KKM	**Kota Kinabalu**	**18.71**	**311**	P	**P**	**22 45 27.3**	**+0.5**
93nm,0.9s,854nm							
KDM	**Kudat**	**18.84**	**314**	P	**P**	**22 45 29.3**	**+1.1**
BTM	**Bintulu**	**19.67**	**298**	P	**P**	**22 45 38.2**	**+1.0**
STKI	**Sintang**	**19.88**	**288**	P	**P**	**22 45 40.2**	**+0.7**
SBUM	**Sibu**	**20.09**	**295**	P	**P**	**22 45 42.4**	**+0.6**
82nm,0.9s,764nm							
CTA	**Charters Tower**	**20.63**	**133**	*e*P	**P**	**22 45 50.3**	**+2.8**
6.4nm,0.6s							
CTA	**Charters Tower**	**20.63**	**133**	P	**P**	**22 45 50.5**	**+3.0**
8.0nm,0.7s,baz=310,slow=11,SNR=6.3							
CTAO	**Charters Tower**	**20.63**	**133**	P	**P**	**22 45 49.8**	**+2.2**
16nm,1.0s							
KSM	**Kuching**	**21.46**	**291**	*e*P	**P**	**22 45 54.2**	**-2.2**
20nm,0.8s,mb4.5							
KSM	**Kuching**	**21.46**	**291**	P	**P**	**22 45 56.3**	**-0.1**
29nm,1.2s,mb4.5							
TGY	**Tagaytay City**	**22.34**	**335**	P	**P**	**22 46 04.5**	**-1.1**
89nm,0.3s,mb5.6,baz=60,slow=15,SNR=3.6							
LEM	**Lembang**	**22.59**	**267**	P	**P**	**22 46 07.9**	**0.0**
98nm,1.0s,mb5.2							
TPI	**Tanjungpandan**	**22.90**	**278**	P	**P**	**22 46 10.8**	**0.0**
27nm,0.9s,mb4.7							
FORT	**Forrest**	**24.42**	**185**	*e*P	**P**	**22 46 25.6**	**+1.2**
15nm,0.5s,mb4.8							
FORT				*e*S	S	22 51 00.1	+27
FORT	**Forrest**	**24.42**	**185**	*e*P	**P**	**22 46 25.6**	**+1.2**
27nm,0.6s,mb5.0							
FORT				*e*S	S	22 51 01.2	+28
CGJI	**Cibinong**	**24.50**	**268**	P	**P**	**22 46 25.6**	**+0.2**
147nm,1.1s,mb5.5							
MORW	**Morawa**	**26.36**	**209**	*e*P	**P**	**22 46 42.3**	**+0.4**
STKA	**Stephens Creek**	**27.51**	**159**	*e*P	**P**	**22 46 53.6**	**+1.4**
2.7nm,1.0s,mb3.9							
STKA	**Stephens Creek**	**27.51**	**159**	P	**P**	**22 46 53.4**	**+1.2**
1.7nm,0.6s,mb3.9,baz=10,slow=7.9,SNR=4.2							
STKA				LR	LR	22 58 54.0	
comp=Z,80nm,19.2s,baz=200,slow=38							
STKA	**Stephens Creek**	**27.51**	**159**	*e*P	**P**	**22 46 53.7**	**+1.5**
1.9nm,0.8s,mb3.9							
STKA				LR	LR	22 58 54.0	
MYKOM	**Kota Tinggi**	**27.66**	**286**	P	**P**	**22 46 53.5**	**-0.3**
KGM	**Kluang**	**28.23**	**286**	P	**P**	**22 46 58.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**29.15**	**203**	P	**P**	**22 47 08.0**	**+1.2**
5.4nm,0.6s,mb4.5,baz=71,slow=6.0,SNR=4.6							
NWAO	**Narrogin (SRO)**	**29.15**	**203**	*e*P	**P**	**22 47 08.2**	**+1.4**
10nm,0.9s,mb4.5							
KTGM	**Kuala Trenggan**	**29.53**	**292**	P	**P**	**22 47 09.3**	**-1.1**
PPI	**Padang Panjang**	**30.45**	**280**	P	**P**	**22 47 16.0**	**-2.5**
36nm,1.1s,mb5.0							
IPM	**Ipoh**	**31.18**	**289**	P	**P**	**22 47 23.7**	**-1.3**
NACB	**Ninganchiao**	**31.49**	**345**	P	**P**	**22 47 25.8**	**-1.6**
MNSI	**Mandailing Nat**	**31.52**	**282**	P	**P**	**22 47 27.8**	**-0.1**
KULM	**Kulim**	**31.81**	**291**	P	**P**	**22 47 29.6**	**-0.9**
KULM	**Kulim**	**31.81**	**291**	*e*P	**P**	**22 47 29.2**	**-1.3**
14nm,0.7s,mb4.8							
YHNB	**Yeheng**	**32.02**	**344**	P	**P**	**22 47 30.3**	**-1.8**
QIZ	**Qiongzhong**	**32.30**	**322**	P	**P**	**22 47 33.0**	**-1.6**
PSI	**Prapat**	**32.66**	**285**	P	**P**	**22 47 35.4**	**-2.5**
20nm,0.7s,mb4.9,baz=58,slow=5.6,SNR=9.4							
GSI	**Gunungsitoli**	**33.59**	**282**	P	**P**	**22 47 42.7**	**-3.2**
25nm,0.6s,mb5.1							
CM31	**Chiang Mai Arr**	**39.57**	**309**	*e*P	**P**	**22 48 36.6**	**+0.1**
5.3nm,0.6s,mb4.3							
CMAR	**Chiang Mai Arr**	**39.57**	**309**	P	**P**	**22 48 36.6**	**+0.1**
11nm,0.6s,mb4.7,baz=137,slow=7.4,SNR=74							
CHTO	**Chiang Mai**	**39.78**	**310**	*e*P	**P**	**22 48 38.1**	**-0.2**
34nm,0.9s,mb5.0							
CHTO	**Chiang Mai**	**39.78**	**310**	P	**P**	**22 48 38.5**	**+0.3**
MJAR	**Matsushiro Arr**	**43.27**	**9**	P	**P**	**22 49 04.3**	**-2.1**
2.1nm,0.6s,mb3.9,baz=183,slow=9.5,SNR=8.2							
LZH	**Lanzhou**	**48.98**	**331**	*e*P	**P**	**22 49 50.7**	**-0.3**
LZH				pmax	pmax		
comp=Z,18nm,1.4s,mb4.5							
PALK	**Pallekele**	**51.34**	**284**	*e*P	**P**	**22 50 08.4**	**-0.8**
LSA	**Lhasa**	**51.96**	**316**	P	**P**	**22 50 13.2**	**-0.3**
LSA	**Lhasa**	**51.96**	**316**	*e*P	**P**	**22 50 12.6**	**-0.9**
comp=Z,5.4nm,0.6s,mb4.3							
GTA	**Gaotai**	**53.55**	**331**	*e*P	**P**	**22 50 23.6**	**-1.5**
GTA				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.3							
GUN	**Gumba**	**54.77**	**311**	*e*P	**P**	**22 50 34.2**	**+0.1**
comp=Z,96nm,0.8s,mb5.6							
PKI	**Pulchoki**	**54.96**	**310**	*e*P	**P**	**22 50 35.2**	**-0.3**
comp=Z,23nm,0.6s,mb5.1							
PKIN	**Phulchoki**	**54.97**	**310**	*e*P	**P**	**22 50 35.1**	**-0.4**
comp=Z,33nm,0.7s,mb5.2							
KKN	**Kakani**	**55.17**	**310**	*e*P	**P**	**22 50 36.8**	**-0.2**
DMN	**Daman**	**55.21**	**310**	*e*P	**P**	**22 50 37.2**	**-0.1**
comp=Z,68nm,1.0s,mb5.3							
GKN	**Gorkha**	**55.76**	**310**	*e*P	**P**	**22 50 41.1**	**-0.1**
comp=Z,49nm,0.6s,mb5.5							
HYB	**Hyderabad**	**56.33**	**296**	*i* P	**P**	**22 50 43.0**	**-2.5**
KOLN	**Koldanda**	**56.44**	**309**	*e*P	**P**	**22 50 46.1**	**+0.1**
ULN	**Ulaanbaatar**	**57.73**	**342**	*e*P	**P**	**22 50 54.9**	**+0.2**
comp=Z,5.1nm,0.8s,mb4.4							
SONM	**Songino Array**	**57.91**	**341**	P	**P**	**22 50 56.7**	**+0.7**
comp=Z,2.4nm,0.7s,mb4.1,baz=162,slow=6.5,SNR=19							
CASY	**Casey**	**61.42**	**189**	*e*P	**P**	**22 51 20.9**	**+1.2**
TLY	**Talaya**	**62.14**	**342**	*e*P	**P**	**22 51 24.6**	**-0.1**
PETK	**Petropavlovsk-**	**63.58**	**18**	P	**P**	**22 51 35.1**	**+1.0**
comp=Z,3.9nm,0.7s,mb4.3,baz=203,slow=9.6,SNR=3.6							
MK31	**Makanchi Array**	**67.85**	**327**	*e*P	**P**	**22 52 01.8**	**0.0**
MKAR	**Makanchi Array**	**67.85**	**327**	P	**P**	**22 52 02.3**	**+0.5**
comp=Z,12nm,0.5s,mb4.9,baz=117,slow=8.5,SNR=219							
ULHL	**Ulahol**	**68.94**	**320**	P	**P**	**22 52 09.5**	**+1.0**
SNR=5.1							
KZA	**Kyzart**	**69.49**	**319**	P	**P**	**22 52 13.8**	**+1.8**
SNR=17							
TKM2	**Tokmak 2**	**69.69**	**320**	P	**P**	**22 52 14.2**	**+1.0**
SNR=8.5							
TKM2	**Tokmak 2**	**69.69**	**320**	*e*P	**P**	**22 52 13.8**	**+0.6**
comp=Z,7.1nm,0.8s,mb4.5							
KBK	**Karagaybulak**	**69.97**	**320**	P	**P**	**22 52 16.2**	**+1.3**
SNR=5.2							
UCH	**Uchtor**	**70.04**	**319**	P	**P**	**22 52 17.1**	**+1.7**
SNR=14							
UCH	**Uchtor**	**70.04**	**319**	*e*P	**P**	**22 52 16.4**	**+1.1**
comp=Z,10nm,0.9s,mb4.6							
AAK	**Ala-Archa**	**70.25**	**320**	P	**P**	**22 52 17.9**	**+1.3**
SNR=11							
AAK	**Ala-Archa**	**70.25**	**320**	*e*P	**P**	**22 52 17.1**	**+0.5**
comp=Z,13nm,1.1s,mb4.6							
AML	**Almayashu**	**70.53**	**319**	P	**P**	**22 52 20.0**	**+1.6**
SNR=20							
AML	**Almayashu**	**70.53**	**319**	*e*P	**P**	**22 52 19.7**	**+1.4**
comp=Z,15nm,0.8s,mb4.8							
USP	**Ospenovka**	**70.56**	**320**	P	**P**	**22 52 19.3**	**+0.8**
SNR=18							
KBL	**Kabul**	**70.60**	**310**	*e*P	**P**	**22 52 18.9**	**0.0**
comp=Z,10nm,1.2s,mb4.4							
EKS2	**Erkin-Say**	**70.73**	**319**	P	**P**	**22 52 20.9**	**+1.3**
SNR=16							
EKS2	**Erkin-Say**	**70.73**	**319**	*e*P	**P**	**22 52 19.9**	**+0.4**
comp=Z,9.3nm,0.9s,mb4.5							
ZAA0	**Zalesovo Array**	**71.13**	**334**	*e*P	**P**	**22 52 20.9**	**-0.8**
ZALV	**Zalesovo Beam**	**71.13**	**334**	P	**P**	**22 52 20.9**	**-0.8**
comp=Z,4.6nm,0.6s,mb4.4,baz=122,slow=5.0,SNR=28							
KURK	**Kurchatov**	**72.12**	**328**	*e*P	**P**	**22 52 27.5**	**-0.2**
comp=Z,11nm,1.1s,mb4.5							
SBA	**Scott Base**	**73.96**	**172**	*e*P	**P**	**22 52 40.2**	**+2.1**
SBA				PcP	PcP	22 52 53.4	+0.7
MAW	**Mawson**	**75.70**	**201**	P	**P**	**22 52 49.9**	**+1.7**
comp=Z,3.0nm,0.6s,mb4.1,baz=73,

ETRT Tiaret 1.17 165 P Pn 23 07 55.0 +1.0
EMHD Djebel Mahouad 1.66 100 P Pn 23 08 01.0 +0.2
EMHD Djebel Mahouad 1.66 100 P Pn 23 08 01.0 +0.2
EMHD Djebel Mahouad 1.66 100 P Pn 23 08 01.0 +0.2
EMHD Djebel Mahouad 1.66 100 P Pn 23 08 01.0 +0.2
EMUR La Murta 2.18 308 P Pn 23 08 08.9 +0.9
EMUR S Sn 23 08 32.3 -1.8
EMUR La Murta 2.18 308 P Pn 23 08 08.9 +0.9
2.6nm,0.2s,SNR=8.4
EMUR S Sn 23 08 32.3 -1.8
2.9nm,0.2s,SNR=7.9
EMUR La Murta 2.18 308 P Pn 23 08 08.9 +0.9
2.6nm,0.2s,SNR=8.4
EMUR S Sn 23 08 32.3 -1.8
2.9nm,0.2s,SNR=7.9
EMUR La Murta 2.18 308 P Pn 23 08 08.9 +0.9
2.6nm,0.2s,SNR=8.4
EBEN Beniarda 2.37 337 P Pn 23 08 11.4 +0.8
EBEN S Sn 23 08 37.5 -1.2
EBEN Beniarda 2.37 337 P Pn 23 08 11.4 +0.8
1.5nm,0.1s,SNR=22
EBEN S Sn 23 08 37.5 -1.2
2.5nm,0.3s
EBEN Beniarda 2.37 337 P Pn 23 08 11.4 +0.8
1.5nm,0.1s,SNR=22
EBEN S Sn 23 08 37.5 -1.2
2.5nm,0.3s
EBEN Beniarda 2.37 337 P Pn 23 08 11.4 +0.9
1.5nm,0.1s,SNR=22
EBEN S Sn 23 08 37.5 -1.2
2.5nm,0.3s
EIBI Ibiza 2.52 7 P Pn 23 08 13.6 +0.9
EIBI S Sn 23 08 41.1 -1.4
EIBI Ibiza 2.52 7 P Pn 23 08 13.6 +0.9
5.0nm,0.1s,SNR=31
EIBI S Sn 23 08 41.1 -1.4
13nm,0.2s,SNR=7.9
EIBI Ibiza 2.52 7 P Pn 23 08 13.6 +0.9
5.0nm,0.1s,SNR=31
EIBI S Sn 23 08 41.1 -1.4
13nm,0.2s,SNR=7.9
EIBI Ibiza 2.52 7 P Pn 23 08 13.6 +0.9
5.0nm,0.1s,SNR=31
EIBI S Sn 23 08 41.1 -1.5
13nm,0.2s,SNR=7.9
ENIJ Nijar 2.56 281 P Pn 23 08 14.2 +0.9
1.0nm,0.1s,SNR=7.9
ENIJ S Sn 23 08 40.7 -2.8
1.3nm,0.1s,SNR=7.9
ENIJ Nijar 2.56 281 P Pn 23 08 14.2 +0.9
1.0nm,0.1s,SNR=7.9
ENIJ S Sn 23 08 40.7 -2.8
1.3nm,0.1s,SNR=7.9
ETOB Tobarra 2.90 318 P Pn 23 08 19.1 +1.3
ETOB S Sn 23 08 50.5 -1.2
ETOB Tobarra 2.90 318 P Pn 23 08 19.1 +1.3
3.4nm,0.1s,SNR=33
ETOB S Sn 23 08 51.1 -0.6
3.2nm,0.2s
ETOB Tobarra 2.90 318 P Pn 23 08 19.1 +1.3
3.4nm,0.1s,SNR=33
ETOB S Sn 23 08 51.1 -0.6
3.2nm,0.2s
ETOB Tobarra 2.90 318 P Pn 23 08 19.1 +1.3
3.4nm,0.1s,SNR=33
ETOB S Sn 23 08 50.5 -1.2
3.2nm,0.2s
EBER Berja 3.10 278 P Pn 23 08 21.0 +0.5
EBER S Sn 23 08 55.4 -1.3
EBER Berja 3.10 278 P Pn 23 08 21.0 +0.5
0.5nm,0.1s,SNR=9.1
EBER S Sn 23 08 55.4 -1.3
2.7nm,0.2s
EBER Berja 3.10 278 P Pn 23 08 21.0 +0.5
0.5nm,0.1s,SNR=9.1
EBER S Sn 23 08 55.4 -1.3
2.7nm,0.2s
EBER Berja 3.10 278 P Pn 23 08 21.0 +0.4
0.5nm,0.1s,SNR=9.1
EBER S Sn 23 08 55.4 -1.3
2.7nm,0.2s
ECHE Chera 3.41 334 P Pn 23 08 26.2 +1.2
ECHE S Sn 23 09 04.7 +0.2
ECHE Chera 3.41 334 P Pn 23 08 26.2 +1.2
1.4nm,0.2s,SNR=6.1
ECHE S Sn 23 09 04.7 +0.2
1.5nm,0.3s
ECHE Chera 3.41 334 P Pn 23 08 26.2 +1.2
1.4nm,0.2s,SNR=6.1
ECHE S Sn 23 09 04.7 +0.2
1.5nm,0.3s
ECHE Chera 3.41 334 P Pn 23 08 26.2 +1.3
1.4nm,0.2s,SNR=6.1
ECHE S Sn 23 09 04.7 +0.2
1.5nm,0.3s
EQES Quesada 3.45 293 P Pn 23 08 27.4 +2.0
EQES S Sn 23 09 06.1 +0.8
EQES Quesada 3.45 293 P Pn 23 08 27.4 +2.0
3.3nm,0.1s,SNR=32
EQES S Sn 23 09 06.1 +0.8
3.1nm,0.1s
EQES Quesada 3.45 293 P Pn 23 08 27.4 +2.0
3.3nm,0.1s,SNR=32
EQES S Sn 23 09 06.1 +0.8
3.1nm,0.1s
EQES Quesada 3.45 293 P Pn 23 08 27.4 +2.0
3.3nm,0.1s,SNR=32
EQES S Sn 23 09 06.1 +0.8
3.1nm,0.1s
EVIA Vianos 3.45 309 P Pn 23 08 26.7 +1.2
EVIA S Sn 23 09 06.7 +1.2
EVIA Vianos 3.45 309 P Pn 23 08 26.7 +1.2
1.4nm,0.2s,SNR=7.9
EVIA S Sn 23 09 06.7 +1.2
2.8nm,0.2s,SNR=7.2
EVIA Vianos 3.45 309 P Pn 23 08 26.7 +1.2
1.4nm,0.2s,SNR=7.9
EVIA S Sn 23 09 06.7 +1.2
2.8nm,0.2s,SNR=7.2
EVIA Vianos 3.45 309 P Pn 23 08 26.7 +1.2
1.4nm,0.2s,SNR=7.9
EVIA S Sn 23 09 06.7 +1.2
2.8nm,0.2s,SNR=7.2
ETOS Mallorca 3.56 24 P Pn 23 08 27.3 +0.3
ETOS S Sn 23 09 07.4 -0.8
ETOS Mallorca 3.56 24 P Pn 23 08 27.3 +0.3
0.4nm,0.1s,SNR=5.6
ETOS S Sn 23 09 07.4 -0.8
1.5nm,0.1s,SNR=6.1
ETOS Mallorca 3.56 24 P Pn 23 08 27.3 +0.3
0.4nm,0.1s,SNR=5.6
ETOS S Sn 23 09 07.4 -0.8
1.5nm,0.1s,SNR=6.1
ETOS Mallorca 3.56 24 P Pn 23 08 27.3 +0.3
0.4nm,0.1s,SNR=5.6
ETOS S Sn 23 09 07.4 -0.8
1.5nm,0.1s,SNR=6.1
EQUE Quentar 3.57 282 P Pn 23 08 28.4 +1.2
0.7nm,0.2s,SNR=5.1
EQUE S Sn 23 09 08.8 +0.4
0.6nm,0.2s,SNR=7.9
EQUE Quentar 3.57 282 P Pn 23 08 28.4 +1.2
0.7nm,0.2s,SNR=5.1
EQUE S Sn 23 09 08.8 +0.4
0.6nm,0.2s,SNR=7.9
EQUE Quentar 3.57 282 P Pn 23 08 28.4 +1.3
0.7nm,0.2s,SNR=5.1
EQUE S Sn 23 09 08.8 +0.3
0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 3.99 344 P Pn 23 08 35.2 +2.3
EMOS S Sn 23 09 18.7 -0.1
EMOS Mosqueruela 3.99 344 P Pn 23 08 35.2 +2.3
1.1nm,0.1s,SNR=21
EMOS S Sn 23 09 18.7 -0.1
2.7nm,0.3s
EMOS Mosqueruela 3.99 344 P Pn 23 08 35.2 +2.3
1.1nm,0.1s,SNR=21
EMOS S Sn 23 09 18.7 -0.1
2.7nm,0.3s
EMOS Mosqueruela 3.99 344 P Pn 23 08 35.2 +2.3
1.1nm,0.1s,SNR=21
EMOS S Sn 23 09 18.7 -0.1
2.7nm,0.3s
ERTA Horta de San J 4.46 354 P Pn 23 08 40.9 +1.6
ERTA S Sn 23 09 29.0 -1.2
ERTA Horta de San J 4.46 354 P Pn 23 08 40.9 +1.6
0.4nm,0.1s,SNR=6.8
ERTA S Sn 23 09 29.0 -1.2
1.3nm,0.1s
ERTA Horta de San J 4.46 354 P Pn 23 08 40.9 +1.6
0.4nm,0.1s,SNR=6.8
ERTA S Sn 23 09 29.0 -1.2
1.3nm,0.1s
ERTA Horta de San J 4.46 354 P Pn 23 08 40.9 +1.7
0.4nm,0.1s,SNR=6.8
ERTA S Sn 23 09 29.0 -1.2
12nm,1.2s
EMIJ Mijas 4.59 272 P Pn 23 08 39.9 -1.3
EMIJ S Sn 23 09 30.3 -3.4
EMIJ Mijas 4.59 272 P Pn 23 08 39.9 -1.3
0.3nm,0.1s,SNR=7.9
EMIJ S Sn 23 09 30.3 -3.4
1.2nm,0.2s,SNR=7.9
EMIJ Mijas 4.59 272 P Pn 23 08 39.9 -1.3
0.3nm,0.1s,SNR=7.9
EMIJ S Sn 23 09 30.3 -3.4
1.2nm,0.2s,SNR=7.9
EMIJ Mijas 4.59 272 P Pn 23 08 39.9 -1.3
0.3nm,0.1s,SNR=7.9
EADA Adamuz 4.69 292 P Pn 23 08 42.8 +0.3
EADA S Sn 23 09 35.2 -0.8
EADA Adamuz 4.69 292 P Pn 23 08 42.8 +0.3
0.6nm,0.2s,SNR=7.9
EADA S Sn 23 09 35.2 -0.8
1.0nm,0.2s,SNR=7.9
EADA Adamuz 4.69 292 P Pn 23 08 42.8 +0.3
0.6nm,0.2s,SNR=7.9
EADA S Sn 23 09 35.2 -0.8
1.0nm,0.2s,SNR=7.9
EADA Adamuz 4.69 292 P Pn 23 08 42.8 +0.3
0.6nm,0.2s,SNR=7.9
EADA S Sn 23 09 35.2 -0.8
1.0nm,0.2s,SNR=7.9
EPOB Poblet 4.83 1 P Pn 23 08 45.3 +0.9
EPOB S Sn 23 09 36.8 -2.6
EPOB Poblet 4.83 1 P Pn 23 08 45.3 +0.9
0.4nm,0.1s,SNR=7.9
EPOB S Sn 23 09 36.8 -2.6
0.7nm,0.2s,SNR=7.9
EPOB Poblet 4.83 1 P Pn 23 08 45.3 +0.9
0.4nm,0.1s,SNR=7.9
EPOB S Sn 23 09 36.8 -2.6
0.7nm,0.2s,SNR=7.9
EPOB Poblet 4.83 1 P Pn 23 08 45.3 +0.9
0.4nm,0.1s,SNR=7.9
ESDC Sonseca Array 4.98 311 P Pn 23 08 47.4 +0.9
ESDC S Sn 23 09 41.9 -1.3
ESDC Sonseca Array 4.98 311 P Pn 23 08 47.4 +0.9
0.5nm,0.1s,baz=120,slow=14,SNR=6.3
ESDC S Sn 23 09 41.9 -1.3
0.5nm,0.3s,baz=121,slow=24,SNR=7.0
ESDC Sonseca Array 4.98 311 P Pn 23 08 47.4 +0.9
0.5nm,0.1s,baz=120,slow=14,SNR=6.3
ESDC S Sn 23 09 41.9 -1.3
0.5nm,0.3s,baz=121,slow=24,SNR=7.0
ESDC Sonseca Array 4.98 311 P Pn 23 08 47.4 +0.9
0.5nm,0.1s,SNR=6.3
ESDC S Sn 23 09 41.9 -1.3
0.5nm,0.3s,SNR=7.0
EMIR Miracle 5.41 5 P Pn 23 08 54.4 +2.1
EMIR S Sn 23 09 52.4 -1.2
EMIR Miracle 5.41 5 P Pn 23 08 54.4 +2.1
0.7nm,0.1s,SNR=7.9
EMIR S Sn 23 09 52.4 -1.2
1.8nm,0.2s,SNR=7.9
EMIR Miracle 5.41 5 P Pn 23 08 54.4 +2.1
0.7nm,0.1s,SNR=7.9
EMIR S Sn 23 09 52.4 -1.2
1.8nm,0.2s,SNR=7.9
EMIR Miracle 5.41 5 P Pn 23 08 54.4 +2.1
0.7nm,0.1s,SNR=7.9
EMIR S Sn 23 09 52.4 -1.2
1.8nm,0.2s,SNR=7.9
EMIN Mina Concepcio 6.20 284 P Pn 23 09 03.7 +0.4
EMIN S Sn 23 10 09.7 -3.6
EMIN Mina Concepcio 6.20 284 P Pn 23 09 03.7 +0.4
0.4nm,0.1s,SNR=7.9
EMIN S Sn 23 10 09.6 -3.6
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 6.20 284 P Pn 23 09 03.7 +0.4
0.4nm,0.1s,SNR=7.9
EMIN S Sn 23 10 09.6 -3.6
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 6.20 284 P Pn 23 09 03.7 +0.4
0.4nm,0.1s,SNR=7.9
EBAD Badajoz 6.69 292 S Sn 23 10 22.1 -3.1
0.3nm,0.2s,SNR=7.9
EBAD Badajoz 6.69 292 S Sn 23 10 22.1 -3.1
0.3nm,0.2s,SNR=7.9
ELAN Lanestosa 7.50 335 P Pn 23 09 23.9 +2.9
ELAN Lanestosa 7.50 335 P Pn 23 09 23.9 +2.9
1.3nm,0.2s,SNR=16
ELAN Lanestosa 7.50 335 P Pn 23 09 23.9 +2.9
1.3nm,0.2s,SNR=16
ELAN Lanestosa 7.50 335 P Pn 23 09 23.9 +2.9
1.3nm,0.2s,SNR=16

BJI **06** *23:27:28.4, 8.°78S×123.°59E, h212km, mB5.1/44, mb5.3/66*
MOS **06** *23:27:34.3±1.0, 7.°77S×123.°07E, h189km, mb5.5/44, Error ellipse: s-maj=9.8km s-min=5.4km az=114.5*
ISCJB **06** *23:27:36.6±0.1, 7.°92S±0.°02×123.°16E±0.°02, h214km, mb5.3/151, Error ellipse: s-maj=2.9km s-min=2.5km az=44.8*
NEIC **06** *23:27:37.6±0.1, 7.°86S×123.°15E, mb5.4/71, MW5.3, MW5.4, Error ellipse: s-maj=5.3km s-min=3.3km az=59.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}0.63; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-0.25; $M_{r\theta}$1.12; $M_{\theta\phi}$0.07; $M_{\phi r}$0.51; Best double couple: $M_0$1.30000×10^{17} NP1: ϕ_s271.00000°, δ11.00000°, λ112.00000°. NP2: ϕ_s68.00000°, δ80.00000°, λ86.00000°. Principal axes: T 1.4800, Plg55.0000°, Azm332.0000°; N -0.3200, Plg4.0000°, Azm68.0000°; P -1.1600, Plg34.0000°, Azm161.0000°;*
NEIC Felt [III] at Waingapu, Indonesia.
GCMT **06** *23:27:37.7±0.1, 7.°91S×123.°26E, h219km±1km, MW5.4/97, Moment Tensor Solution. s84,c140; s97,c189; Duration: 1.s2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.33±.02; $M_{\theta\theta}$-1.02±.02; $M_{\phi\phi}$0.69±.03; $M_{r\theta}$1.20±.02; $M_{\theta\phi}$0.28±.02; $M_{\phi r}$0.47±.02; Best double couple: $M_0$1.58000×10^{17} NP1: ϕ_s322.00000°, δ32.00000°, λ165.00000°. NP2: ϕ_s65.00000°, δ82.00000°, λ59.00000°. Principal axes: T 1.4370, Plg44.0000°, Azm304.0000°; N 0.2870, Plg31.0000°, Azm69.0000°; P -1.7220, Plg30.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC **06** *23:27:39.2±0.6, 7.°84S×123.°09E, h221km±5km, mb4.9/29, mb1 4.9/33, mb1mx4.9/34, mbtmp4.9/33 Error ellipse: s-maj=11.1km s-min=6.3km az=59.0*
DJA **06** *23:27:39, 8.°05S×123.°09E, h224km, Mw5.5/51*
ISC 06 23:27:38.4±0.1, **7.°94S**±0.°02×**123.°12E**±0.°02, **h216**km, **h216**km±1.6km**:pP-P, n829,** σ**1.s15**/698, **mb5.3**/150, **67C-34D, Banda Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WSI Waingapu 3.27 238 P Pn 23 28 32.6 +0.5
WSI S S 23 29 13.8 -0.4
KDI Kendari 3.99 353 P Pn 23 28 41.0 +0.3
KAPI Kappang 4.43 311 Pn Pn 23 28 46.0 -0.1
8µm,1.1s
KAPI Kappang 4.43 311 P Pn 23 28 46.9 +0.7
37nm,0.3s,baz=136,slow=8.8,SNR=302
KAPI S S 23 29 39.4 -0.3
baz=68,slow=19,SNR=2.0
KAPI Kappang 4.43 311 ⇓iPn Pn 23 28 46.4 +0.3
KAPI eSn S 23 29 39.2 -0.4
KAPI Kappang 4.43 311 P Pn 23 28 47.2 +1.1
SNR=200
KAPI P 23 28 47.2
SNR=200
KAPI Kappang 4.43 311 P Pn 23 28 47.2 +1.1
SNR=200
KAPI P 23 28 47.2
SNR=200
KAPI Kappang 4.43 311 P Pn 23 28 47.2 +1.1
SNR=200
KAPI P 23 28 47.2
SNR=200
KAPI Kappang 4.43 311 P Pn 23 28 47.0 +0.9
TTSI Tana Toraja 5.87 326 P Pn 23 29 06.0 +1.7
NLAI Namlea 6.13 41 P Pn 23 29 09.7 +2.1
521nm,1.1s,6µm1.8nm
AAI Ambon 6.59 50 P Pn 23 29 16.1 +2.6
354nm,1.2s,4µm1.1nm
LUWI Luwuk 6.86 357 P Pn 23 29 17.5 +0.4
750nm,1.1s,9µm3.5nm
KHKI Kahang-Kahang 7.44 266 P Pn 23 29 23.6 -0.9
691nm,1.0s,7µm6.4nm
KHKI S S 23 30 47.6 -1.6
691nm,1.0s,7µm6.4nm
SRBI Singaraja 7.83 268 P Pn 23 29 29.6 +0.1
865nm,1.4s,8µm3.7nm
DNP Denpasar 7.86 264 S S 23 31 00.0 +1.0
IGBI Denpasar 7.93 263 P Pn 23 29 31.6 +0.8
1µm,0.6s,17nm
KBKI Kotabaru 8.31 303 P Pn 23 29 36.7 +1.0
231nm,1.2s
MRSI Marisa 8.45 352 P Pn 23 29 38.2 +0.7
LBMI Labuha 8.47 31 P Pn 23 29 40.2 +2.4
586nm,1.2s,6µm
KMMI Kalianget 9.11 275 P Pn 23 29 47.5 +1.4
BBKI Banjar Baru 9.36 298 P Pn 23 29 52.0 +2.8
978nm,1.2s
GMJI Gumukmas 9.58 267 P Pn 23 29 51.3 -0.8
289nm,1.0s,5µm
TLE Tual 9.83 77 P Pn 23 29 54.8 -0.5
728nm,0.9s,8µm
TLE S S 23 31 40.1 -5.5
728nm,0.9s,8µm
KAKA Kakadu 10.32 118 eP Pn 23 29 58.6 -3.0
356nm,0.4s
KAKA Kakadu 10.32 118 ePn Pn 23 29 59.0 -2.7
1µm,0.6s
KAKA eSn S 23 31 51.9 -5.5
FITZ Fitzroy Crossi 10.39 167 ⇓iP Pn 23 30 00.8 -1.7
789nm,0.7s
FITZ eS S 23 31 50.2 -8.7
FITZ Fitzroy Crossi 10.39 167 P Pn 23 30 01.5 -1.0
18nm,0.3s,baz=358,slow=9.3,SNR=378
FITZ S S 23 31 54.5 -4.4
64nm,0.3s,baz=148,slow=7.4,SNR=9.2
FITZ Fitzroy Crossi 10.39 167 ⇓iPn Pn 23 30 00.6 -1.9
124nm,0.8s
FITZ eSn S 23 31 52.1 -6.8
FITZ Fitzroy Crossi 10.39 167 P Pn 23 30 00.8 -1.7
1µm,1.0s,9µm
GRJI Gresik 10.60 275 P Pn 23 30 06.5 +1.4
1µm,1.0s
SWI Sorong 10.74 49 P Pn 23 30 06.4 -0.6
184nm,1.3s,2µm
PWJI Pagerwojo 11.20 269 P Pn 23 30 13.4 +0.5
1µm,0.8s
SJI Sawahan 11.24 270 P Pn 23 30 14.0 +0.6
2µm,0.9s
NGJI Ngawi 11.56 272 P Pn 23 30 20.3 +2.9
2µm,1.1s
SGSI Sangihe 11.80 12 P Pn 23 30 21.7 +1.3
PCJI Pacitan 11.82 268 P Pn 23 30 19.6 -1.1
UGM Wanagama 12.47 269 P Pn 23 30 27.9 -1.0
1µm,0.8s
PBKI Pangkalan Bun 12.52 294 P Pn 23 30 31.5 +2.0
669nm,0.9s,5µm
SMRI Semarang 12.60 273 P Pn 23 30 31.4 +0.9
2µm,0.8s
MBWA Marble Bar 13.54 194 ⇓iPn Pn 23 30 41.5 -0.6
5.3nm,0.5s
MBWA eS S 23 33 06.5 -6.3
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 Pn Pn 23 30 41.2 -0.9
SNR=160
MBWA Pn Pn 23 30 41.2 -0.9
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.2 -0.9
SNR=160
MBWA P 23 30 41.2
SNR=160
MBWA Marble Bar 13.54 194 P Pn 23 30 41.6 -0.5
2µm,1.1s
MYLDM Lahad Datu 13.82 340 P Pn 23 30 49.6 +3.9
MYLDM Lahad Datu 13.82 340 P Pn 23 30 49.7 +4.0
433nm,1.4s,6µm
STKI Sintang 14.07 304 P Pn 23 30 50.4 +1.7
672nm,1.1s,9µm
SDKM Sandakan 14.73 336 P Pn 23 30 59.2 +2.5
JCJI Jatiwangi 14.80 275 P Pn 23 30 57.5 -0.1
742nm,0.9s,8µm
BTM Bintulu 14.92 318 P Pn 23 31 01.6 +2.5
SBUM Sibu 14.99 313 P Pn 23 31 02.3 +2.4
SBUM Sibu 14.99 313 P Pn 23 31 02.1 +2.2
725nm,0.8s,7µm
DAV Davao City (W) 15.11 9 P Pn 23 31 01.3 -0.2
29nm,0.3s,baz=280,slow=2.5,SNR=5.7
DAV Davao City (W) 15.11 9 ePn Pn 23 31 00.5 -0.9
302nm,1.3s
DAV eS S 23 33 46.7 -2.3
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7

DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 Pn Pn 23 31 03.2 +1.8
SNR=7.7
DAV Pn Pn 23 31 03.2 +1.8
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.2 +1.8
SNR=7.7
DAV P 23 31 03.2
SNR=7.7
DAV Davao City (W) 15.11 9 P Pn 23 31 03.5 +2.1
312nm,1.2s
LEM Lembang 15.41 273 P Pn 23 31 05.1 +0.1
1μm,1.1s,8μm
KKM Kota Kinabalu 15.51 333 P Pn 23 31 08.0 +1.8
KKM Kota Kinabalu 15.51 333⇑iPn Pn 23 31 07.5 +1.3
346nm,1.0s
KKM eS S 23 33 56.5 -1.3
KKM Kota Kinabalu 15.51 333 P Pn 23 31 07.8 +1.6
448nm,1.3s,6μm
PAGZ Pagadian 15.69 1 eP Pn 23 31 12.3 +3.9
KSM Kuching 15.83 306 P Pn 23 31 11.8 +1.7
KSM Kuching 15.83 306⇑iPn Pn 23 31 11.5 +1.4
901nm,1.0s
KSM Kuching 15.83 306 P Pn 23 31 11.5 +1.4
1μm,1.0s
BUKP Musuan 15.84 7 eP Pn 23 31 11.7 +1.6
KDM Kudat 16.03 337 P P 23 31 14.0 +2.3
WRA Warramunga Arr 16.14 139 P P 23 31 13.2 +0.3
6.5nm,0.3s,baz=318,slow=12,SNR=225
WRA S S 23 34 07.7 -3.4
12nm,0.3s,baz=317,slow=22,SNR=15
WRAB Tennant Creek 16.14 139 P P 23 31 13.0 +0.1
4μm,0.7s
WRAB Tennant Creek 16.14 139⇓iP P 23 31 12.9 0.0
WRAB eS S 23 33 59.3 -12
WRAB pmax pmax
comp=Z,2μm,1.5s
WRAB Tennant Creek 16.14 139⇓iPn Pn 23 31 12.9 -0.9
comp=Z,2μm,1.5s
WRAB eS S 23 33 59.3 -12
WRAB Tennant Creek 16.14 139 P P 23 31 13.3 +0.4
comp=Z,712nm,1.2s,comp=Z,8μm
WB2 Warramunga Arr 16.15 139⇓iPn Pn 23 31 12.9 -0.9
WB2 eS S 23 34 02.1 -9.3
TPI Tanjungpandan 16.23 288 P P 23 31 15.6 +1.6
comp=Z,618nm,1.4s,comp=Z,9μm
TNG Tangerang 16.44 275 P P 23 31 16.6 +0.3
comp=Z,2μm,1.4s
TNG Tangerang 16.44 275 P 23 31 18.6
SMPI Sarmi 16.62 70 P P 23 31 19.3 +1.1
comp=Z,93nm,1.2s
GIRL Giralia 16.93 209 eP P 23 31 23.4 +1.9
comp=Z,5μm,1.4s
CGJI Cibinong 17.33 273 P P 23 31 24.4 -1.6
RBSI Rajabasa 17.37 276 P P 23 31 25.0 -1.5
comp=Z,419nm,0.8s,comp=Z,3μm
XMIS Christmas Isla 17.42 260 eP P 23 31 27.1 +0.1
XMIS eS S 23 34 23.6 -13
XMIS Christmas Isla 17.42 260⇑iP P 23 31 27.4 +0.4
comp=Z,1μm,0.9s
XMIS eS S 23 34 36.9 -0.1
XMIS Christmas Isla 17.42 260 P P 23 31 27.4 +0.4
comp=Z,3μm,0.9s
BATP Bataraza 17.45 342 eP P 23 31 30.2 +2.9
TBP Tagbilaran 17.53 2 eP P 23 31 30.1 +1.9
PPR Puerto Princes 18.14 346⇓iP P 23 31 37.1 +2.3
LLP Lapu-Lapu 18.16 3 eP P 23 31 36.4 +1.4
JAY Jayapura 18.32 74 P P 23 31 38.5 +1.7
KASI Kota Agung 18.64 276 P P 23 31 37.9 -2.4
comp=Z,292nm,0.8s
ASAR Alice Springs 18.75 148 P P 23 31 42.5 +1.3
comp=Z,14nm,0.3s,baz=314,slow=9.0,SNR=908
ASAR S S 23 34 59.4 -3.8
baz=319,slow=18,SNR=5.7
CUYO Cuyo Island 18.79 354 eP P 23 31 44.0 +2.2
PMBI Palembang 18.92 284 P P 23 31 43.8 +0.5
comp=Z,1μm,1.1s
MDSI Maura Dua 19.13 279 P P 23 31 43.8 -1.8
comp=Z,82nm,1.1s
ENPP El Nido 19.37 349 eP P 23 31 49.7 +1.6
OTRP Odiongan 20.20 357 eP P 23 31 59.6 +2.7
SJMP San Jose 20.37 354 eP P 23 32 00.0 +1.3
COEN Coen 20.57 109⇓iP P 23 32 00.3 -0.6
comp=Z,172nm,1.1s
COEN eS S 23 35 36.7 -2.2
COEN Coen 20.57 109 P P 23 31 59.8 -1.1
comp=Z,442nm,1.4s,comp=Z,6μm
KSI Kapahiang 20.85 281 P P 23 32 01.6 -2.3
comp=Z,248nm,1.1s,comp=Z,4μm
MYKOM Kota Tinggi 21.51 296 P P 23 32 12.4 +1.6
MYKOM Kota Tinggi 21.51 296 P P 23 32 12.6 +1.8
comp=Z,933nm,1.1s,comp=Z,10μm,mb6.2
LUBP Lubang 21.72 352 eP P 23 32 15.8 +3.1
TGY Tagaytay City 22.01 354 P P 23 32 16.1 +0.7
comp=Z,472nm,0.5s,mb6.2,baz=185,slow=4.3,SNR=42
KGM Kluang 22.08 296 P P 23 32 18.3 +2.1
POLP Polillo Island 22.55 357 eP P 23 32 21.1 +0.7
FORT Forrest 23.18 169⇓iP P 23 32 26.2 +0.2
comp=Z,467nm,0.5s,mb6.3
FORT Forrest 23.18 169⇓iP P 23 32 26.2 +0.2
comp=Z,2μm,1.3s,mb6.6
FORT S S 23 36 27.2 +5.9
BKNI Bangkinang 23.49 289 P P 23 32 29.4 +0.4
comp=Z,752nm,1.1s,comp=Z,6μm,mb6.1
BALP Baler 23.58 356 eP P 23 32 30.0 +0.3
PDSI Padang 23.63 286 P P 23 32 27.0 -3.3
comp=Z,235nm,0.9s,mb5.8
PPI Padang Panjang 23.83 287 P P 23 32 30.2 -1.9
comp=Z,111nm,1.1s,comp=Z,2μm,mb5.4
KTGM Kuala Trenggan 23.90 303 P P 23 32 34.1 +1.4
FRIM Kepong 24.14 297 P P 23 32 35.7 +0.8
BOLP Bolinao 24.37 353 eP P 23 32 36.8 -0.2
MNSI Mandailing Nat 25.02 289 P P 23 32 42.3 -0.6
comp=Z,273nm,0.8s,comp=Z,2μm,mb5.9
IPM Ipoh 25.26 299 P P 23 32 46.0 +1.0
IPM Ipoh 25.26 299 P P 23 32 45.8 +0.8
comp=Z,149nm,1.0s,comp=Z,1μm,mb5.6
CTA Charters Tower 25.45 121 eP P 23 32 47.4 +0.7
comp=Z,39nm,1.2s,mb4.9
CTA Charters Tower 25.45 121 P P 23 32 47.5 +0.8
comp=Z,53nm,1.1s,mb5.1,baz=292,slow=11,SNR=13
CTA pP pP 23 33 32.0 +2.6
comp=Z,73nm,1.1s,baz=300,slow=13,SNR=4.9
CTAO Charters Tower 25.45 121⇓eP P 23 32 47.3 +0.6
CTAO e pP 23 33 32.5 +3.1
CTAO pmax pmax
comp=Z,228nm,1.3s,mb5.6
CTAO Charters Tower 25.45 121⇓eP P 23 32 47.3 +0.7
comp=Z,228nm,1.3s,mb5.6
CTAO e pP 23 33 32.5 +3.1
CTAO Charters Tower 25.45 121 P P 23 32 47.4 +0.7
comp=Z,71nm,1.4s,comp=Z,2μm,mb5.1
NWAO Narrogin (SRO) 25.45 192⇓iP P 23 32 46.5 0.0
NWAO S S 23 36 54.8 -2.4
NWAO pmax pmax
comp=Z,302nm,1.4s
NWAO Narrogin (SRO) 25.45 192 eP P 23 32 46.7 +0.2
comp=Z,2μm,1.5s,mb6.5
NWAO eS S 23 36 53.0 -4.2
NWAO Narrogin (SRO) 25.45 192 P P 23 32 46.9 +0.3
comp=Z,65nm,0.5s,mb5.5,baz=18,slow=8.8,SNR=75
NWAO Narrogin (SRO) 25.45 192⇓iP P 23 32 46.5 0.0
comp=Z,302nm,1.4s,mb5.7
NWAO S S 23 36 54.8 -2.5
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3

SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
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NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
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NWAO P 23 32 47.3
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NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
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NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
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NWAO P 23 32 47.3
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
NWAO Narrogin (SRO) 25.45 192 P P 23 32 47.3 +0.8
SNR=11
NWAO P 23 32 47.3
SNR=11
KULM Kulim 25.98 300 P P 23 32 52.1 +0.6
KULM Kulim 25.98 300⇓eP P 23 32 52.3 +0.8
comp=Z,103nm,1.0s,mb5.4
KULM S S 23 37 03.1 -2.9
PSI Prapat 26.39 293 P P 23 32 54.1 -1.1
comp=Z,65nm,0.9s,mb5.2,baz=134,slow=7.0,SNR=50
TSI Tuntungan 27.00 294 P P 23 33 01.1 +0.4
comp=Z,690nm,1.1s,comp=Z,6μm,mb6.2
GSI Gunungsitoli 27.07 289 P P 23 32 59.7 -1.6
comp=Z,279nm,1.2s,comp=Z,3μm,mb5.8
STKA Stephens Creek 29.38 147⇓iP P 23 33 22.5 +1.0
comp=Z,90nm,0.8s,mb5.5
STKA eS sS 23 39 19.3 +2.2
STKA Stephens Creek 29.38 147 P P 23 33 22.5 +1.0
comp=Z,145nm,0.9s,mb5.6,baz=316,slow=9.0,SNR=163
STKA Stephens Creek 29.38 147⇓iP P 23 33 22.4 +1.0
comp=Z,47nm,1.1s,mb5.0
STKA e pP 23 34 03.8 -1.3
QIZ Qiongzhong 29.82 334 P P 23 33 25.5 0.0
QIZ sP sP 23 34 31.8 -2.4
QIZ S S 23 38 07.3 +1.1
QIZ pmax pmax
comp=Z,100nm,1.4s,mb5.2
QIZ pmax pmax
comp=Z,260nm,9.9s
QIZ Qiongzhong 29.82 334⇑eP P 23 33 25.5 -0.1
comp=Z,183nm,1.4s,mb5.5
GUMO Guam 30.40 45 P P 23 33 31.5 +0.8
comp=Z,35nm,0.4s,mb5.3,baz=195,slow=10,SNR=3.6
TWG Pinlang 30.64 356 eP P 23 33 31.0 -1.7
comp=Z,46nm,0.7s,mb5.2
BSI Banda Aceh 30.79 295 P P 23 33 32.6 -1.6
comp=Z,190nm,0.9s,mb5.7
TPUB Ta-pu 31.14 356⇑eP P 23 33 36.5 -0.5
comp=Z,347nm,1.5s,mb5.8
YULB Yu-li 31.19 357⇑eP P 23 33 35.2 -2.3
comp=Z,62nm,0.6s,mb5.4
KKTK Khon Kaen 31.39 320 ⇑P P 23 33 39.0 -0.3
comp=Z,556nm,0.9s,mb6.2
SSLB Suanglung 31.61 356⇑eP P 23 33 39.6 -1.6
comp=Z,56nm,0.8s,mb5.2
NACB Ninganchiao 31.95 357⇑eP P 23 33 42.0 -2.1
comp=Z,81nm,0.9s,mb5.3
YHNB Yeheng 32.46 357⇑eP P 23 33 46.9 -1.6
comp=Z,225nm,1.1s,mb5.6
NST Nakhon Sawan 32.69 316 P P 23 33 51.8 +1.1
TATO Taipei 32.76 357 eP P 23 33 49.2 -1.9
comp=Z,48nm,0.5s,mb5.3
QZH Quanzhou 32.98 352⇑iP P 23 33 53.7 +0.6
QZH S S 23 38 57.0 +1.8
QZH sS sS 23 40 19.0 +5.2
QZH pmax pmax
comp=Z,220nm,1.1s,mb5.6
BDT Bhumibol Dam 34.56 317 P P 23 34 06.0 -0.8
comp=Z,42nm,0.9s,mb5.0
ARMA Armidale 34.81 134 eP P 23 34 11.0 +2.2
ARMA ePP PP 23 35 32.8 +0.2
ARMA eS S 23 39 24.8 +1.4
ARMA eSCP ScP 23 40 00.8 -1.2
ARMA Armidale 34.81 134⇓eP P 23 34 11.3 +2.4
comp=Z,242nm,1.7s,mb5.5
ARMA ePP PP 23 35 33.2 +0.5
CM31 Chiang Mai Arr 35.45 318 eP P 23 34 14.8 +0.3
comp=Z,52nm,0.9s,mb5.1
CM31 ePcP PcP 23 36 39.4 +0.3
CMAR Chiang Mai Arr 35.45 318 P P 23 34 14.7 +0.3
CMAR PcP 23 36 40.5
CMAR Chiang Mai Arr 35.45 318 P P 23 34 14.7 +0.2
comp=Z,31nm,0.8s,mb4.9,baz=140,slow=6.2,SNR=79
CMAR PcP PcP 23 36 40.5 +1.4
comp=Z,26nm,1.0s,baz=174,slow=3.3,SNR=9.3
CMAR ScP ScP 23 40 03.6 -0.8
comp=Z,4.2nm,0.9s,baz=168,slow=3.1,SNR=6.1
CHG Chiang Mai 35.71 318 ⇑P P 23 34 16.7 +0.1
comp=Z,60nm,1.1s,mb5.0
CHTO Chiang Mai 35.71 318⇑iP P 23 34 16.6 +0.1
CHTO PP PP 23 35 48.7 +6.0
CHTO ePcP PcP 23 36 40.8 +1.0
CHTO Chiang Mai 35.71 318 P P 23 34 17.0 +0.4
SNR=39
CHTO P 23 34 17.0
SNR=39
CHTO Chiang Mai 35.71 318 P P 23 34 17.0 +0.4
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CHTO Chiang Mai 35.71 318 P P 23 34 17.0 +0.4
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CHTO Chiang Mai 35.71 318 P P 23 34 17.0 +0.4
SNR=39
CHTO P 23 34 17.0
SNR=39
CHTO Chiang Mai 35.71 318 P P 23 34 16.8 +0.2
comp=Z,72nm,1.4s,comp=Z,1μm,mb5.0
TOO Toolangi 35.79 149 eP P 23 34 19.3 +2.2
TOO ePP PP 23 35 43.0 -0.3
TOO eS S 23 39 39.0 +0.9
CHRT Chiangrai 35.94 321 ⇑P P 23 34 19.0 +0.5
comp=Z,540nm,0.8s,mb6.1
CAN Canberra 36.12 143⇓eP P 23 34 21.9 +2.0
CAN e 23 35 46.5
CAN pmax pmax
comp=Z,288nm,1.4s,mb5.6
CAN Canberra 36.12 143⇓eP P 23 34 21.9 +2.0
comp=Z,288nm,1.4s,mb5.6
CAN ePP PP 23 35 46.5 -0.4
CNB Canberra Magne 36.34 142 eP P 23 34 23.5 +1.8
CNB eS S 23 39 48.9 +2.4
RIV Riverview 36.51 139 eP P 23 34 25.8 +2.6
GYA Guiyang 37.74 335⇓iP P 23 34 34.8 +1.2
GYA pP pP 23 35 20.3 +1.7
GYA sP sP 23 35 44.0 +0.8
GYA PP PP 23 36 10.8 +6.0
GYA S S 23 40 11.5 +3.7
GYA ScS ScS 23 44 22.0 -0.3
GYA pmax pmax
comp=Z,30nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,160nm,4.7s
GYA LR LR
comp=N,580nm,15.0s
GYA LR LR
comp=E,470nm,14.8s
GYA LR LR
comp=Z,590nm,15.7s
KMI Kunming 38.39 329 ⇑P P 23 34 40.6 +1.5
KMI pP pP 23 35 26.8 +2.7
KMI sP sP 23 35 51.8 +3.0
KMI PP PP 23 36 17.5 +5.6
KMI PcP PcP 23 36 48.3 +0.3
KMI ScP ScP 23 40 15.0 -0.3
KMI S S 23 40 20.6 +3.0
KMI PcS PcS 23 40 37.1 -0.5
KMI sS sS 23 41 41.9 +4.4
KMI SS SS 23 43 14.8 -1.7
KMI pmax pmax
comp=Z,110nm,1.6s,mb5.1
KMI pmax pmax
comp=Z,560nm,3.5s
KMI LR LR
comp=N,280nm,22.9s
KMI LR LR
comp=E,310nm,20.6s
KMI LR LR
comp=Z,320nm,27.5s
SSE Sheshan 38.86 357 eP P 23 34 42.9 +0.1
SSE pmax pmax
comp=Z,68nm,1.3s,mb5.0
SSE pmax pmax
comp=Z,170nm,5.8s
SSE LR LR
comp=N,120nm,28.5s
SSE LR LR
comp=E,91nm,28.4s
SSE LR LR
comp=Z,130nm,21.6s
WHN Wuhan 39.18 348 ⇑P P 23 34 46.2 +0.7
WHN pP pP 23 35 31.3 +0.6
WHN sP sP 23 35 54.4 -0.9
WHN S S 23 40 28.3 -0.9
WHN pmax pmax
comp=Z,380nm,1.2s,mb5.8
WHN pmax pmax
comp=Z,780nm,8.4s
NJ2 Nanjing 39.98 354 eP P 23 34 52.3 +0.3
NJ2 pP pP 23 35 35.8 -1.6
NJ2 sP sP 23 35 59.1 -2.9
NJ2 PP PP 23 36 31.3 +2.4
NJ2 S S 23 40 41.0 0.0
NJ2 pmax pmax
comp=Z,280nm,1.0s,mb5.7
NJ2 pmax pmax
comp=Z,300nm,7.6s
NJ2 LR LR
comp=N,280nm,13.6s
NJ2 LR LR
comp=E,410nm,17.7s
NJ2 LR LR
comp=Z,350nm,25.4s
ENH Enshi 40.19 342⇑iP P 23 34 53.6 -0.2
comp=Z,170nm,1.2s,mb5.3
ENH epP pP 23 35 38.1 -1.1
TAU Tasmania Unive 40.81 153 eP P 23 35 00.0 +1.2
TAU e 23 36 38.6
CD2 Chengdu 42.86 335 P P 23 35 15.1 -0.3
CD2 pP pP 23 36 01.1 -0.3
CD2 sP sP 23 36 25.0 -0.8
CD2 PP PP 23 37 00.6 +0.8
CD2 S S 23 41 23.5 0.0
CD2 pmax pmax
comp=Z,170nm,1.0s,mb5.4
CD2 pmax pmax
comp=Z,490nm,5.3s
XAN Xi'an 43.87 343 P P 23 35 22.6 -0.9
XAN pP pP 23 36 07.3 -2.4
XAN sP sP 23 36 29.8 -4.2
XAN PP PP 23 37 11.7 +1.2
XAN S S 23 41 38.9 +0.8
XAN sS sS 23 43 00.9 +1.4
XAN ScS ScS 23 45 00.2 +1.1
XAN SS SS 23 45 06.6 +4.5
XAN pmax pmax
comp=Z,35nm,1.2s,mb4.6
XAN pmax pmax
comp=Z,72nm,6.3s
DZM Mont Dzumac 43.97 114 eP P 23 35 25.3 +0.7
comp=Z,42nm,1.2s,mb4.7
PALK Pallekele 44.91 289 P P 23 35 31.0 -1.1
comp=Z,611nm,1.0s,mb5.9,SNR=6.1
PALK Pallekele 44.91 289 iP P 23 35 31.6 -0.5
PALK Pallekele 44.91 289⇑eP P 23 35 30.6 -1.5
comp=Z,196nm,1.4s,mb5.2
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
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PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
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PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
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PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
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PALK P 23 35 31.6
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PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
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PALK P 23 35 31.6
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PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4

SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
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PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.6 -0.4
SNR=5.5
PALK P 23 35 31.6
SNR=5.5
PALK Pallekele 44.91 289 P P 23 35 31.1 -1.0
comp=Z,71nm,1.4s,comp=Z,777nm,mb4.8
SHL Shillong 45.08 319⇑ *i*P P 23 35 33.0 -0.2
SHL *i* S **S 23 41 58.0 +2.2**
KSRS Korea Array 45.38 5 P P 23 35 34.7 -0.7
comp=Z,9.2nm,0.6s,mb4.3,baz=179,slow=8.5,SNR=35
KSRS PcP PcP 23 37 11.5 +0.6
comp=Z,5.1nm,0.8s,baz=188,slow=4.2,SNR=5.6
MJAR Matsushiro Arr 46.46 17 P P 23 35 42.9 -1.0
comp=Z,13nm,0.4s,mb4.6,baz=192,slow=9.1,SNR=36
MJAR pP pP 23 36 30.2 -0.3
comp=Z,8.3nm,0.9s,baz=196,slow=7.9,SNR=2.2
MAJO Matsushiro 46.46 17⇑ *e*P P 23 35 42.5 -1.3
MAJO *e**PP pP 23 36 28.6 -1.9
MAJO pmax pmax
comp=Z,119nm,1.4s,mb5.0
MAJO Matsushiro 46.46 17⇑ *e*P P 23 35 42.5 -1.4
comp=Z,119nm,1.4s,mb5.0
MAJO *e*pP pP 23 36 28.6 -1.9
MAT Matsushiro 46.46 17 P P 23 35 42.6 -1.2
MAT S **S 23 42 08.0 -7.2**
TIY Taiyuan 46.50 348 *e*P P 23 35 43.7 -0.4
TIY pP pP 23 36 31.2 +0.4
TIY sP sP 23 36 53.9 -1.1
TIY S **S 23 42 12.0 -3.7**
TIY sS sS 23 43 40.2 +2.3
TIY ScS ScS 23 45 12.4 -3.5
TIY pmax pmax
comp=Z,230nm,3.6s
DL2 Dalian 46.63 358 P P 23 35 43.7 -1.3
DL2 pP pP 23 36 30.6 -1.2
DL2 S **S 23 42 13.7 -3.7**
DL2 ScS ScS 23 45 12.7 -4.0
DL2 pmax pmax
comp=Z,50nm,1.2s,mb4.7
DL2 pmax pmax
comp=Z,140nm,5.8s
LZH Lanzhou 47.40 339 ⇓P P 23 35 51.7 +0.6
LZH pP pP 23 36 37.0 -0.9
LZH sP sP 23 37 05.2 +3.1
LZH PP PP 23 37 45.8 +1.2
LZH ScP ScP 23 40 51.7 +0.2
LZH *e*S **S 23 42 29.0 +0.5**
LZH sS sS 23 43 53.0 +2.1
LZH ScS ScS 23 45 21.6 -0.3
LZH pmax pmax
comp=Z,150nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,640nm,4.0s
BJT Baijiatuau 48.15 353 *e*P P 23 35 55.8 -0.9
BJT pmax pmax
comp=Z,102nm,0.7s
BJT Baijiatuau 48.15 353 *e*P P 23 35 55.8 -1.0
comp=Z,102nm,0.7s,mb5.3
BJI Beijing 48.17 353 P P 23 35 55.8 -1.1
BJI pP pP 23 36 43.4 -0.5
BJI sP sP 23 37 07.5 -0.5
BJI PcP PcP 23 37 21.2 +0.5
BJI S **S 23 42 32.9 -6.2**
BJI pmax pmax
comp=Z,99nm,0.8s,mb5.2
LSA Lhasa 48.43 322 P P 23 35 55.7 -3.4
LSA PP PP 23 37 57.8 +3.7
LSA S **S 23 42 38.6 -4.6**
LSA Lhasa 48.43 322⇑ *i*P P 23 35 59.9 +0.8
LSA *e**PP pP 23 36 46.0 -0.2
LSA *e* 23 37 53.6
LSA pmax pmax
comp=Z,100nm,0.7s,mb5.2
LSA Lhasa 48.43 322⇑ *i*P P 23 35 59.9 +0.8
comp=Z,100nm,0.7s,mb5.2
LSA *e*pP pP 23 36 46.0 -0.2
LSA *e*PP PP 23 37 53.6 -0.5
SNY Shenyang 49.53 0 ⇑P P 23 36 05.6 -1.6
SNY pmax pmax
comp=Z,40nm,1.2s,mb4.6
SNY pmax pmax
comp=Z,340nm,4.0s
SNY LR LR
comp=N,160nm,19.5s
SNY LR LR
comp=E,200nm,12.7s
SNY LR LR
comp=Z,190nm,16.2s
HHC Hu-ho-hao-te 49.70 349 ⇑P P 23 36 08.3 -0.2
HHC pP pP 23 36 53.6 -2.2
HHC sP sP 23 37 17.2 -2.7
HHC PcP PcP 23 37 26.6 +0.3
HHC PP PP 23 38 06.5 +1.1
HHC ScP ScP 23 41 01.1 -0.1
HHC PcS PcS 23 41 22.0 -1.3
HHC S **S 23 43 00.2 -0.3**
HHC ScS ScS 23 45 35.0 -2.2
HHC pmax pmax
comp=Z,57nm,1.2s,mb4.8
HHC pmax pmax
comp=Z,160nm,5.8s
HHC LR LR
comp=N,200nm,12.0s
HHC LR LR
comp=E,410nm,17.7s
HHC LR LR
comp=Z,200nm,14.8s
BTO Baotou 49.79 347 *e*P P 23 36 07.3 -1.9
DGAR Diego Garcia 50.19 267*c* *i*P P 23 36 11.4 -1.3
DGAR Diego Garcia 50.19 267 *e*P P 23 36 11.3 -1.4
comp=Z,133nm,0.9s,mb5.3
DGAR *e*pP pP 23 36 57.2 -2.9
GUN Gumba 50.66 316 *e*P P 23 36 15.8 -0.1
comp=Z,326nm,0.5s,mb6.0
HYB Hyderabad 50.73 300 *i* P P 23 36 16.0 -0.6
comp=Z,140nm,1.0s,mb5.3
HYB *e* pP 23 37 05.0 +0.9
HYB *e*S **S 23 43 10.0 -5.4**
HYB *e* 23 45 44.0
PKI Pulchoki 50.77 315 *e*P P 23 36 16.4 -0.4
PKIN Phulchoki 50.78 315 *e*P P 23 36 16.8 0.0
comp=Z,326nm,0.5s,mb6.0
PKIN Phulchoki 50.78 315 *e*P P 23 36 17.0 +0.2
KKN Kakani 50.99 316 *e*Pn P 23 36 18.1 -0.3
DMN Daman 51.00 315 *e*P P 23 36 18.2 -0.3
comp=Z,422nm,0.8s,mb5.9
VLA Vladivostok 51.44 8*d* *i*P P 23 36 21.4 -0.1
VLA pmax pmax
comp=Z,152nm,1.2s,mb5.3
CN2 Changchun 51.54 2 *e*P P 23 36 20.6 -1.6
CN2 *e*pP pP 23 37 13.0 +3.2
CN2 *e*S **S 23 43 29.4 +3.7**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.5
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 Changchun 51.54 2 ⇑P P 23 36 26.0 +3.8
CN2 *e*pP pP 23 37 13.0 +3.2
CN2 *e*S **S 23 43 29.4 +3.7**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
CN2 pmax pmax
comp=Z,200nm,5.0s
GKN Gorkha 51.57 315 *e*P P 23 36 22.3 -0.4
comp=Z,99nm,0.3s,mb5.8
GTA Gaotai 51.83 337⇑ *i*P P 23 36 24.6 +0.2
GTA S **S 23 43 30.0 +0.2**
GTA ScS ScS 23 45 51.4 -0.6
GTA pmax pmax
comp=Z,66nm,1.2s,mb4.9
GTA pmax pmax
comp=Z,450nm,6.9s
GTA LR LR
comp=N,170nm,18.3s
GTA LR LR
comp=E,180nm,18.3s
GTA LR LR
comp=Z,230nm,18.6s
HMDM Hanimaadhoo 51.89 285 P P 23 36 24.9 -0.5
comp=Z,154nm,1.8s,mb5.1
NGP Nagpur 52.04 305 *ex* P 23 36 21.8 -4.5
NGP AMb AMB 23 36 24.2
comp=Z,125nm,1.7s,mb5.1
ALBI Allahabad 52.04 311 *ex* pP 23 37 14.7 +0.7
KOLN Koldanda 52.16 314 *e*P P 23 36 26.5 -0.5
MDJ Mudanjiang 52.64 6 P P 23 36 29.8 -0.4
MDJ pP pP 23 37 16.1 -2.0
MDJ sP sP 23 37 39.7 -2.3
MDJ PP PP 23 38 30.9 -1.0
MDJ ScP ScP 23 41 13.7 -0.1
MDJ S **S 23 43 41.4 +0.8**
MDJ pmax pmax
comp=Z,130nm,1.3s,mb5.2
MDJ pmax pmax
comp=Z,230nm,5.2s
MDJ LR LR
comp=N,89nm,26.2s
MDJ LR LR
comp=E,57nm,27.3s
MDJ LR LR
comp=Z,89nm,34.2s
MDJ Mudanjiang 52.64 6⇑ *i*P P 23 36 29.9 -0.3
comp=Z,193nm,1.3s,mb5.4
MDJ *e*pP pP 23 37 17.0 -1.1
PYUN Piuthan 52.78 314 *e*P P 23 36 32.0 +0.3
comp=Z,364nm,0.6s,mb6.0
OUZ Omahuta 53.50 128 *e*P P 23 36 38.9 +2.1
comp=Z,134nm,1.8s,mb5.1
BHPL Bhopal 54.37 306 *e*P P 23 36 42.6 -0.6
KAD Karad 54.48 298 *e*P P 23 36 43.1 -1.0
KAD AMb AMB 23 36 46.5
comp=Z,112nm,0.9s,mb5.4
RPZ Rata Peaks 54.85 139 P P 23 36 47.3 +0.9
comp=Z,227nm,1.0s,mb5.7,baz=267,slow=2.0,SNR=40
RPZ Rata Peaks 54.85 139⇓ *e*P P 23 36 47.1 +0.7
comp=Z,266nm,1.0s,mb5.7
POO Poona 55.26 299 *e*P P 23 36 48.9 -0.7
POO AMb AMB 23 36 51.8
comp=Z,86nm,1.4s,mb5.1
PTH Pithoragarh 55.60 314 *e*P P 23 36 51.0 -1.0
KHZ Kahutara 55.98 136⇑ *e*P P 23 36 54.9 +0.5
comp=Z,169nm,1.2s,mb5.5
HIA Hailar 57.04 357⇑ *i*P P 23 37 01.0 -0.7
HIA *e**PP pP 23 37 48.1 -2.2
HIA *e* pP 23 37 53.2 +2.9
HIA pmax pmax
comp=Z,88nm,1.2s
HIA Hailar 57.04 357⇑ *i*P P 23 37 01.0 -0.7
comp=Z,88nm,1.2s,mb5.3
HIA *e*pP pP 23 37 48.1 -2.2
HIA *e*PcP PcP 23 37 53.1 -0.9
URZ Urewera 57.11 131 P P 23 37 02.6 +0.1
comp=Z,41nm,0.7s,mb5.2,baz=302,slow=3.0,SNR=19
URZ Urewera 57.11 131 *e*P P 23 37 02.4 -0.1
comp=Z,52nm,0.9s,mb5.2
HABR Khabarovsk 57.15 9 *e*P P 23 37 01.7 -0.7
HABR *e* 23 39 08.7
HABR S **S 23 44 39.3 -1.1**
HABR *e* 23 46 28.2
HABR SS SS 23 48 31.1 -2.2
HABR pmax pmax
comp=E,28nm,1.4s
HABR pmax pmax
comp=Z,85nm,1.5s,mb5.2
HABR pmax pmax
comp=N,21nm,1.0s
ULN Ulaanbaatar 57.35 347⇑ *i*P P 23 37 03.5 -0.4
ULN *e* pP 23 37 55.4 +2.8
ULN pmax pmax
comp=Z,65nm,1.2s,mb5.1
ULN Ulaanbaatar 57.35 347⇑ *i*P P 23 37 03.5 -0.4
comp=Z,65nm,1.2s,mb5.1
ULN *e*PcP PcP 23 37 55.4 0.0
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.7 -0.2
SNR=26
ULN P 23 37 03.7
SNR=26
ULN Ulaanbaatar 57.35 347 P P 23 37 03.9 0.0
comp=Z,48nm,1.4s,comp=Z,702nm,mb4.9
YSS Yuzh-Sakhalins 57.38 16 *e*P P 23 37 03.5 -0.6
YSS *e* pP 23 37 52.0 -0.8
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 57.38 16 *e*P P 23 37 04.0 -0.1
comp=Z,12nm,0.4s,mb4.9
KLR Kul'dur 57.43 7 *e*P P 23 37 00.0 -4.4
KLR pmax pmax
comp=Z,33nm,1.4s,mb4.8
SONM Songino Array 57.47 347 P P 23 37 04.6 -0.1
comp=Z,42nm,1.2s,mb5.0,baz=167,slow=7.1,SNR=98
SONM pP pP 23 37 54.1 +0.7
comp=Z,7.3nm,1.0s,baz=160,slow=8.2,SNR=1.9
DDI Dehra Dun 57.59 314 *ex* x 23 36 58.0
AJM Ajmer 58.15 308 *e*P P 23 37 08.0 -1.9
SMLA Simla 58.67 314 *i* P P 23 37 11.8 -1.6
SMLA *ex* x 23 37 13.5
comp=Z,1μm,0.5s
SMLA *i* x x 23 44 56.7
CASY Casey 58.89 186 *e*P P 23 37 14.9 +0.6
CASY Casey 58.89 186⇓ *e*P P 23 37 14.9 +0.6
comp=Z,64nm,1.0s,mb5.2
CASY *e*pP pP 23 38 03.1 -0.1
SDNR Sundarnagar 59.01 314 *e*P P 23 37 16.0 +0.3
SDNR *e*S **S 23 45 04.1 -1.1**
DRV Dumont d'Urvil 59.77 172 S S 23 45 25.0 +11
DRV R 23 56 00.0
THN Thein Dam 60.41 314 *e*P P 23 37 23.2 -2.1
ZAK Zakamensk 60.59 346⇑ *i*P P 23 37 25.2 -0.8
ZAK *e* 23 38 04.8
ZAK pmax pmax
comp=Z,16nm,1.3s,mb4.5
WMQ Urumqi 60.69 331 P P 23 37 27.1 +0.2
WMQ sP sP 23 38 38.8 -0.9
WMQ S **S 23 45 25.0 -1.1**
WMQ sS sS 23 46 51.2 -1.1
WMQ ScS ScS 23 46 53.3 -2.8
WMQ pmax pmax
comp=Z,45nm,1.4s,mb4.9
WMQ pmax pmax
comp=Z,320nm,4.0s
WMQ LR LR
comp=N,320nm,26.0s
WMQ LR LR
comp=E,140nm,24.0s
WMQ LR LR
comp=Z,120nm,27.0s
TLY Talaya 61.70 346 P P 23 37 33.7 +0.2
comp=Z,92nm,1.0s,mb5.4,SNR=7.3
TLY Talaya 61.70 346 *e*P P 23 37 31.8 -1.7
TLY *e*SS sS 23 47 08.3 +3.2
TLY pmax pmax
comp=Z,16nm,1.0s,mb4.6
TLY MLR MLR
comp=Z,128nm,18.0s
TLY Talaya 61.70 346⇑ *e*P P 23 37 32.7 -0.8
comp=Z,20nm,1.0s,mb4.7
TLY *e*pP pP 23 38 21.0 -1.9
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
TLY Talaya 61.70 346 P P 23 37 33.4 -0.1
SNR=12
TLY P 23 37 33.4
SNR=12
MIR Mirnyy 62.05 193 *e*P P 23 37 37.0 +1.4
MIR pmax pmax
comp=Z,125nm,1.4s,mb5.3
IRK Irkutsk 62.08 347⇓ *i*P P 23 37 35.2 -0.8
IRK pmax pmax
comp=Z,54nm,1.9s,mb4.8
MOY Mondy 62.35 345 *e*P P 23 37 37.6 -0.2
MOY pmax pmax
comp=Z,68nm,2.3s,mb4.9
KSH Kashi 64.27 321⇑ *i*P P 23 37 50.3 -0.4
KSH *e*PcP PcP 23 38 24.2 +0.7
KSH *e*pP pP 23 38 37.4 -3.1
KSH *e*sP sP 23 38 59.4 -4.5
KSH *e*PP PP 23 40 14.5 -0.5
KSH *e*ScP 23 42 05.4
KSH *e*PcS 23 42 26.1
KSH *e*ScS ScS 23 47 19.3 -4.2
KSH pmax pmax
comp=Z,300nm,1.2s,mb5.8
KSH LR LR
comp=N,81nm,5.1s
KSH LR LR
comp=E,45nm,5.5s
CLNS Chul'man 64.57 1 *e*P P 23 37 51.9 -0.3
CLNS pmax pmax
comp=Z,40nm,1.2s,mb4.9
CLNS pmax pmax
comp=E,12nm,1.1s
CLNS pmax pmax
comp=N,27nm,1.1s
MK31 Makanchi Array 65.46 330⇑ *e*P P 23 37 57.6 -0.6
MK31 *e* 23 38 29.2
MK31 Makanchi Array 65.46 330⇑ *e*P P 23 37 57.6 -0.6
MK31 *e*PcP PcP 23 38 29.2 +0.9
MK31 *e*pP pP 23 38 48.7 +0.5
MKAR Makanchi Array 65.46 330 P P 23 37 57.5 -0.7
comp=N,19nm,0.6s,mb5.0,baz=135,slow=7.6,SNR=134
ULHL Ulahol 65.74 324 P P 23 38 00.7 +0.6
SNR=13
BOD Bodaibo 65.95 355 *e*P P 23 38 00.3 -0.8
BOD pmax pmax
comp=Z,33nm,1.2s,mb4.8
RER Riviere de l'E 66.11 250 *e*P P 23 38 03.7 +0.8
comp=Z,142nm,1.0s,mb5.5
RER *e*PcP PcP 23 38 32.4 +0.9
KZA Kyzart 66.23 323 P P 23 38 03.7 +0.5
SNR=92
KBL Kabul 66.28 313⇑ *e*P P 23 38 02.9 -0.8
KBL pmax pmax
comp=Z,494nm,0.8s,mb6.2
KBL Kabul 66.28 313⇑ *e*P P 23 38 02.9 -0.7
comp=Z,494nm,0.8s,mb6.2
TKM2 Tokmak 2 66.53 324 P P 23 38 04.9 -0.2
SNR=18
TKM2 Tokmak 2 66.53 324⇑ *i*P P 23 38 04.6 -0.5
TKM2 *e* 23 38 32.6
TKM2 *e**PP pP 23 38 53.8 -1.4
TKM2 pmax pmax
comp=Z,19nm,0.8s,mb4.8
TKM2 Tokmak 2 66.53 324⇑ *i*P P 23 38 04.6 -0.4
comp=Z,19nm,0.8s,mb4.8
TKM2 *e*PcP PcP 23 38 32.6 -0.2
TKM2 *e*pP pP 23 38 53.8 -1.4
KBK Karagaybulak 66.75 323 P P 23 38 07.2 +0.7
SNR=26
UCH Uchtor 66.76 323 P P 23 38 07.5 +1.0
SNR=35
AAK Ala-Archa 67.01 323 P P 23 38 08.1 0.0
comp=Z,270nm,0.6s,mb6.0,SNR=27
AAK Ala-Archa 67.01 323 P P 23 38 08.2 +0.1
SNR=59
AAK Ala-Archa 67.01 323⇑ *e*P P 23 38 08.2 +0.1
AAK *e* 23 38 34.1
AAK pmax pmax
comp=Z,76nm,1.1s,mb5.2
AAK Ala-Archa 67.01 323 P P 23 38 08.2 +0.1
comp=Z,11nm,0.4s,mb4.8,baz=131,slow=6.0,SNR=63

AAK Ala-Archa 67.01 323⇑eP P 23 38 08.2 +0.1
comp=Z,76nm,1.1s,mb5.2
AAK ePcP PcP 23 38 34.1 -0.7
AAK epP pP 23 39 01.5 +3.2
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK P 23 38 08.5
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.5 +0.4
SNR=46
AAK P 23 38 08.5
SNR=46
AAK Ala-Archa 67.01 323 P P 23 38 08.6 +0.5
FRU Bishkek 67.06 323 eP P 23 38 08.0 -0.4
FRU e 23 38 34.0
FRU e 23 47 44.0
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.2
CHMS Chumysh 67.07 323 P P 23 38 08.2 -0.3
SNR=11
AML Almayashu 67.20 322 P P 23 38 09.3 0.0
SNR=110
AML Almayashu 67.20 322⇑eP P 23 38 09.4 +0.1
comp=Z,126nm,1.1s,mb5.5
AML ePcP PcP 23 38 37.2 +1.7
AML epP pP 23 39 06.5 +7.0
USP Ospenovka 67.38 324 P P 23 38 09.8 -0.6
SNR=48
EKS2 Erkin-Say 67.45 323 P P 23 38 10.8 -0.1
SNR=74
EKS2 Erkin-Say 67.45 323⇑eP P 23 38 10.7 -0.2
comp=Z,88nm,1.3s,mb5.2
EKS2 ePcP PcP 23 38 38.1 +1.5
EKS2 epP pP 23 39 02.1 +0.9
EKS2 ePP PP 23 40 42.6 -0.2
PETK Petropavlovsk- 67.53 22 P P 23 38 12.1 +1.0
comp=Z,20nm,0.7s,mb4.8,baz=224,slow=2.2,SNR=27
PET Petropavlovsk 67.82 22⇓iP P 23 38 13.6 +0.6
PET e 23 38 36.2
PET eS S 23 46 55.7 +2.5
PET pmax pmax
comp=Z,70nm,1.2s,mb5.2
PET pmax pmax
comp=Z,100nm,13.1s
PET Petropavlovsk 67.82 22 eP P 23 38 12.5 -0.4
comp=Z,19nm,0.7s,mb4.8
PET ePcP PcP 23 38 36.3 -1.6
ZAA0 Zalesovo Array 69.59 337⇑eP P 23 38 21.6 -2.2
ZAA0 PcP PcP 23 38 45.8 +0.4
ZAA0 epP pP 23 39 14.1 -0.3
ZAA0 ePP PP 23 40 58.2 -2.7
ZALV Zalesovo Beam 69.59 337 P P 23 38 21.8 -2.0
ZALV S S 23 47 10.0 -4.0
ZALV Zalesovo Beam 69.59 337 P P 23 38 21.8 -2.0
comp=Z,30nm,0.6s,mb5.1,baz=131,slow=4.7,SNR=98
ZALV S S 23 47 09.9 -4.0
comp=Z,3.4nm,0.9s,baz=128,slow=11,SNR=8.2
ZALV PKP2bc 00 06 30.1
comp=Z,0.5nm,0.6s,baz=268,slow=3.9,SNR=5.0
ZALV Zalesovo Beam 69.59 337 P P 23 38 21.8 -2.0
ZALV S S 23 47 09.9 -4.0
ZALV ⇑e 00 06 30.1
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK P 23 38 25.8
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
WBK Wadi Bani Khal 69.72 298 P P 23 38 25.8 +0.5
SNR=9.7
KURK Kurchatov 69.93 332 P P 23 38 25.6 -0.4
comp=Z,277nm,1.0s,mb5.8,SNR=7.1
KURK Kurchatov 69.93 332c iP P 23 38 25.2 -0.8
KURK pmax pmax
comp=Z,58nm,1.3s,mb5.0
KURK Kurchatov 69.93 332 P P 23 38 24.8 -1.2
comp=Z,11nm,0.5s,mb4.8,baz=142,slow=5.3,SNR=47
KURK pP pP 23 39 17.1 +0.4
comp=Z,1.9nm,0.3s,baz=17,slow=22,SNR=3.2
KURK Kurchatov 69.93 332⇑eP P 23 38 24.7 -1.3
comp=Z,56nm,1.0s,mb5.2
KURK ePcP PcP 23 38 47.4 +0.6
KURK epP pP 23 39 14.5 -2.1
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK P 23 38 24.7
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
KURK Kurchatov 69.93 332 P P 23 38 24.7 -1.2
SNR=30
KURK P 23 38 24.7
SNR=30
YAK Yakutsk 69.95 3c iP P 23 38 25.0 -0.9
YAK e 23 38 46.1
YAK ePPP 23 42 49.0
YAK eS S 23 47 17.9 0.0
YAK e 23 48 01.8
YAK eSSS 23 55 04.4
YAK pmax pmax
comp=Z,67nm,1.4s,mb5.1
YAK pmax pmax
comp=N,38nm,1.4s
YAK smax
comp=E,74nm,2.5s
YAK smax
comp=N,108nm,3.2s
YAK Yakutsk 69.95 3 eP P 23 38 24.9 -1.0
comp=N,83nm,0.9s,mb5.4
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
JMDO Jabal Madar 70.40 297 P P 23 38 29.8 +0.3
SNR=15
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
SMDO Samad 70.66 298 P P 23 38 31.5 +0.5
SNR=20
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
BIDO Bidbid 70.73 298 P P 23 38 31.9 +0.4
SNR=36
NVS Novosibirsk 70.87 337 i P P 23 38 29.4 -2.2
NVS i S S 23 47 23.6 -5.2
NVS i *SS SKSac 23 48 08.8 -4.0
NVS pmax pmax
comp=N,23nm,1.5s
NVS pmax pmax
comp=E,17nm,1.5s
NVS pmax pmax
comp=Z,34nm,1.5s,mb4.8
NVS smax
comp=N,25nm,1.6s
NVS smax
comp=E,34nm,1.6s
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
BSY Bisya 71.31 297 P P 23 38 35.1 +0.1
SNR=12
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
HOQ Hoqain 71.47 298 P P 23 38 36.4 +0.6
SNR=34
MAW Mawson 71.63 201⇓eP P 23 38 37.2 +1.2
MAW pmax pmax
comp=Z,13nm,1.1s
MAW Mawson 71.63 201⇓iP P 23 38 37.3 +1.3
comp=Z,27nm,1.0s,mb4.8
MAW eS S 23 47 38.8 +1.6
MAW Mawson 71.63 201 P P 23 38 37.4 +1.4
comp=Z,33nm,0.9s,mb5.0,baz=69,slow=6.8,SNR=40
MAW Mawson 71.63 201⇓eP P 23 38 37.2 +1.2
comp=Z,13nm,1.1s,mb4.5
MAW epP pP 23 39 28.2 +1.4
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
ARQ Araqi 72.08 298 P P 23 38 39.8 +0.3
SNR=14
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
RBK Rabkut 72.60 291 P P 23 38 42.6 -0.1
SNR=8.3
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD P 23 38 44.4
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
HATD Hatta, Dubai 72.86 299 P P 23 38 44.4 +0.3
SNR=43
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO P 23 38 44.4
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
ASHO Ashiyiah 72.89 299 P P 23 38 44.4 +0.1
SNR=52
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM P 23 38 46.9
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
BANOM Banah 73.05 300 P P 23 38 46.9 +1.7
SNR=14
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO P 23 38 44.8
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
WHFO Wadi Hawf 73.10 291 P P 23 38 44.8 -0.9
SNR=23
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ P 23 38 46.9
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
FAQ Al Faqa, Dubai 73.31 299 P P 23 38 46.9 +0.2
SNR=50
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ P 23 38 47.2
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
NAZ Nazwa, Dubai 73.32 299 P P 23 38 47.2 +0.4
SNR=36
SBA Scott Base 73.38 171 eP P 23 38 46.7 +0.5
SBA pmax pmax
comp=Z,27nm,1.3s,mb4.7
SBA Scott Base 73.38 171 eP P 23 38 46.7 +0.5
comp=Z,27nm,1.3s,mb4.7
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ABTO Aybut 73.40 291 P P 23 38 47.3 -0.1
SNR=16
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
ASUD P 23 38 48.6
SNR=26
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
ASUD Al Ashush, Dub 73.50 299 P P 23 38 48.6 +0.7
SNR=26
SEY Seymchan 74.14 13d iP P 23 38 51.3 +0.6
ABPO Ambohimpanom 74.16 253 eP P 23 38 51.9 +0.1
ABPO e*PP pP 23 39 41.2 -1.8
ABPO pmax pmax
comp=Z,100nm,1.5s,mb5.2
ABPO Ambohimpanom 74.16 253 eP P 23 38 51.9 +0.1
comp=Z,100nm,1.5s,mb5.2
ABPO epP pP 23 39 41.2 -1.8
BVAR Borovoye Array 75.35 330 P P 23 38 56.6 -1.2
comp=Z,6.7nm,0.7s,mb4.4,baz=120,slow=5.3,SNR=43
BVAR S S 23 48 16.8 -2.5
comp=Z,1.8nm,1.0s,baz=131,slow=18,SNR=4.6
BRVK Borovoye 75.42 330 P P 23 38 57.0 -1.2
comp=Z,89nm,1.1s,mb5.3,SNR=11
BRVK Borovoye 75.42 330c iP P 23 38 56.9 -1.3
BRVK pmax pmax
comp=Z,34nm,1.4s,mb4.8
BRVK Borovoye 75.42 330⇑eP P 23 38 56.8 -1.4
comp=Z,33nm,1.1s,mb4.9
BRVK epP pP 23 39 50.0 +0.4
BRVK ePP PP 23 41 49.9 -0.6
BRVK Borovoye 75.42 330 P P 23 38 57.3 -0.9
SNR=18

BRVK P 23 38 57.3
SNR=18
BRVK Borovoye 75.42 330 P **P 23 38 57.3 -0.9**
SNR=18
BRVK P 23 38 57.3
SNR=18
BRVK P 23 38 57.3
SNR=18
BRVK P 23 38 57.3
SNR=18
BRVK Borovoye 75.42 330 P **P 23 38 57.3 -0.9**
SNR=18
BRVK P 23 38 57.3
SNR=18
BRVK Borovoye 75.42 330 P **P 23 38 57.3 -0.9**
SNR=18
BRVK P 23 38 57.3
SNR=18
BRVK Borovoye 75.42 330 P **P 23 38 57.3 -0.9**
SNR=18
BRVK P 23 38 57.3
SNR=18
ABKT Ailbek 75.70 312 P **P 23 39 01.1 +0.9**
comp=Z,496nm,1.1s,mb6.0,SNR=31
ABKAR Akbulak array 79.09 323 *e*P **P 23 39 17.6 -1.2**
comp=Z,15nm,0.8s,mb4.7
ABKAR *e*PcP PcP 23 39 26.5 +0.1
TIXI Tiksi 79.52 2*ce*P **P 23 39 18.9 -1.7**
TIXI *e*S S 23 48 57.2 -6.2
TIXI pmax pmax
comp=Z,53nm,1.2s,mb5.0
TIXI Tiksi 79.52 2⇑*i*P **P 23 39 18.9 -1.7**
comp=Z,31nm,0.6s,mb5.1
SYO Syowa Base 80.31 201⇑*e*P **P 23 39 24.4 -0.6**
SYO Syowa Base 80.31 201 *e*SH S 23 49 10.6 -1.3
AKTK Aktyubinsk 80.72 324 P **P 23 39 26.7 -0.7**
AKTO Aktyubinsk 80.72 324 P **P 23 39 26.7 -0.7**
comp=Z,26nm,0.9s,mb4.9,baz=106,slow=6.3,SNR=55
QRN Al-Qurain 80.99 301 *e*P **P 23 39 29.3 0.0**
QRN AMb AMB 23 39 31.4
comp=Z,686nm,1.1s,mb6.2
DHBB Dhamar BB 81.19 286 *e*P **P 23 39 32.1 +1.4**
KBD Kabd 81.29 301 *e*P **P 23 39 30.9 -0.1**
KBD AMb AMB 23 39 33.0
comp=Z,264nm,1.2s,mb5.7
RDF Al-Radifah 81.35 301 *e*P **P 23 39 31.0 -0.2**
RDF AMb AMB 23 39 33.3
comp=Z,714nm,1.2s,mb6.2
UMR Umm Al-Rimmam 81.36 301 *e*P **P 23 39 31.2 -0.1**
UMR AMb AMB 23 39 33.4
comp=Z,458nm,1.1s,mb6.0
BILL Bilibino 81.69 15*ce*P **P 23 39 31.2 -0.9**
BILL *e* 23 42 47.6
BILL *e* 23 50 42.5
BILL pmax pmax
comp=Z,20nm,1.4s,mb4.5
BILL Bilibino 81.69 15 *e*P **P 23 39 31.7 -0.4**
comp=Z,10.0nm,0.8s,mb4.5
BILL PcP PcP 23 39 36.0 -1.3
BILL *e*PP PP 23 42 46.0 +3.7
MIB Mutribah 81.74 302 *e*P **P 23 39 33.2 -0.1**
MIB AMb AMB 23 39 35.3
comp=Z,571nm,1.1s,mb6.1
SVE Sverdlovsk 82.13 331⇓*e*P **P 23 39 34.5 -0.2**
SVE *e*S S 23 49 33.8 +2.9
SVE pmax pmax
comp=Z,66nm,1.1s,mb5.2
ATD Arta Tunnel 82.14 283 P **P 23 39 36.8 +1.2**
comp=Z,52nm,1.0s,mb5.1
ARU Arti 82.97 330 P **P 23 39 38.1 -0.9**
comp=Z,204nm,1.1s,mb5.8,SNR=14
ARU Arti 82.97 330*d i*P **P 23 39 38.0 -1.0**
ARU *PP pP 23 40 26.5 -4.9
ARU *e* 23 42 52.7
ARU PPP 23 44 44.8
ARU *e*S S 23 49 39.8 +0.3
ARU SS SS 23 55 09.3 +0.9
ARU SSS 23 58 37.0
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.1
ARU Arti 82.97 330 *e*P **P 23 39 38.2 -0.8**
comp=Z,32nm,0.9s,mb5.0
ARU *e*PcP PcP 23 39 44.6 +1.4
ARU *e*pP pP 23 40 29.8 -1.6
ARU *e*PP PP 23 42 52.7 -0.3
NIKO Nikolski 83.41 34 P **P 23 39 40.2 -1.1**
MAK Makhachkala 84.98 314 *e*P **P 23 39 47.4 -2.1**
MAK *e* 23 43 09.5
MAK *e*PPP 23 45 00.7
MAK *e*S S 23 49 49.0 -11
MAK *e**SS sS 23 51 22.4 -10
MAK *e*SS SS 23 55 36.6 -1.9
MAK pmax pmax
comp=Z,220nm,1.5s,mb5.7
PPT Papeete 85.09 107 *e*S S 23 49 58.3 -3.9
comp=Z,79nm,24.8s
PPT *e*LR LR 00 06 59.7
comp=Z,95nm,24.5s
SOKR Solikamsk 85.16 332*c i*P **P 23 39 48.9 -1.1**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb4.9
AKUT Akutan 85.54 34 P **P 23 39 51.3 -0.7**
KMBO Kilima Mbogo 85.75 269 *e*P **P 23 39 54.2 +0.2**
KMBO pmax pmax
comp=Z,83nm,1.4s
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.1 +0.2**
comp=Z,30nm,1.0s,mb5.0,baz=66,slow=5.5,SNR=33
KMBO Kilima Mbogo 85.75 269 *e*P **P 23 39 54.1 +0.2**
comp=Z,83nm,1.4s,mb5.3
KMBO *e*PcP PcP 23 39 56.8 +0.3
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.3 +0.3**
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.3 +0.3**
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.3 +0.3**
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.3 +0.3**
SNR=21
KMBO P 23 39 54.3
SNR=21
KMBO Kilima Mbogo 85.75 269 P **P 23 39 54.3 +0.3**
SNR=21
KMBO P 23 39 54.3
SNR=21
MTA Mtatsminda 86.61 313 P **P 23 39 58.4 +0.9**
TBLG Delisi 86.66 313 *i*P **P 23 39 58.6 +0.9**
TBLG Delisi 86.66 313 P **P 23 39 58.6 +0.8**
GOR Gori 87.17 313 P **P 23 40 01.5 +1.3**
KEH Kehvi 87.37 313 P **P 23 40 01.0 -0.1**
ZEI Tsey 87.50 314 *e*P **P 23 40 03.3 +1.5**
ZEI pmax pmax
comp=Z,127nm,1.3s,mb5.6
KIV Kislovodsk 88.62 315 P **P 23 40 07.9 +0.9**
comp=Z,237nm,1.0s,mb6.0,SNR=7.1
KIV Kislovodsk 88.62 315 *e*P **P 23 40 07.0 0.0**
KIV *e**PP pP 23 40 56.9 -3.1
KIV *e**SP sP 23 41 17.5 -5.2
KIV *e* 23 43 35.9
KIV *e* 23 50 15.1
KIV pmax pmax
comp=Z,47nm,1.1s,mb5.2
KIV Kislovodsk 88.62 315 *e*P **P 23 40 07.2 +0.1**
comp=Z,38nm,0.9s,mb5.2
KIV Kislovodsk 88.62 315 P **P 23 40 07.8 +0.8**
SNR=5.5
KIV P 23 40 07.8
SNR=5.5
KIV Kislovodsk 88.62 315 P **P 23 40 07.8 +0.8**
SNR=5.5
KIV P 23 40 07.8
SNR=5.5
KIV P 23 40 07.8
SNR=5.5
KIV Kislovodsk 88.62 315 P **P 23 40 07.8 +0.8**
SNR=5.5
KIV P 23 40 07.8
SNR=5.5
KIV Kislovodsk 88.62 315 P **P 23 40 07.8 +0.8**
SNR=5.5
KIV P 23 40 07.8
SNR=5.5
NVL N'lazarevskaya 89.41 198 *e*P **P 23 40 08.9 -1.3**
NVL pmax pmax
comp=Z,15nm,0.9s,mb4.8
MALT Malatya 90.72 308⇑*e*P **P 23 40 17.0 0.0**
MALT pmax pmax
comp=Z,65nm,1.1s,mb5.5
MALT Malatya 90.72 308⇑*e*P **P 23 40 17.0 0.0**
comp=Z,65nm,1.1s,mb5.5
VRHR Novokhopersk 90.81 321 *e*P **P 23 40 16.7 -0.3**
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.5
VRHR pmax pmax
comp=E,10.0nm,0.7s
ASF Jabal al Asfar 90.99 302 P **P 23 40 18.9 +0.5**
comp=E,29nm,1.2s,mb5.1,baz=339,slow=1.5,SNR=26
VORD Divnogorie 92.23 321 *e*P **P 23 40 22.8 -0.8**
VORD pmax pmax
comp=Z,30nm,0.7s,mb5.3
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,90nm,0.6s
EIL Elat 92.29 299 P **P 23 40 25.3 +0.9**
comp=E,20nm,1.1s,mb5.0,baz=42,slow=3.2,SNR=13
VSR Storozhevoye 92.35 321 *e*P **P 23 40 23.2 -1.0**
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.7s
MMAI Mount Meron Ar 92.36 303 P **P 23 40 25.1 +0.5**
comp=E,21nm,1.0s,mb5.0,baz=80,slow=11,SNR=13
ANN Anapa 92.48 315 *e*P **P 23 40 21.9 -3.0**
ANN *e**PP pP 23 41 12.3 -5.8
ANN *e*S SKSac 23 50 34.3 -3.3
ANN pmax pmax
comp=Z,44nm,0.9s,mb5.4
LSZ Lusaka 92.65 254 *e*P **P 23 40 25.9 -0.4**
LSZ pmax pmax
comp=Z,32nm,0.9s,mb5.3
LSZ Lusaka 92.65 254 *e*P **P 23 40 25.9 -0.4**
comp=Z,32nm,0.9s,mb5.3
LSZ Lusaka 92.65 254 P **P 23 40 26.5 +0.1**
SNR=10
LSZ P 23 40 26.5
SNR=10
LSZ P 23 40 26.5
SNR=10
LSZ P 23 40 26.5
SNR=10
LSZ Lusaka 92.65 254 P **P 23 40 26.5 +0.1**
SNR=10
LSZ P 23 40 26.5
SNR=10
LSZ Lusaka 92.65 254 P **P 23 40 26.5 +0.1**
SNR=10
LSZ P 23 40 26.5
SNR=10
LSZ Lusaka 92.65 254 P **P 23 40 26.5 +0.1**
SNR=10
LSZ P 23 40 26.5
SNR=10
SVW2 Sparrevohn 92.71 29 P **P 23 40 25.2 -0.3**
TTA Tatalina 92.88 27 *e*P **P 23 40 25.5 -0.8**
TTA pmax pmax
comp=Z,23nm,1.2s,mb5.1
TTA Tatalina 92.88 27 *e*P **P 23 40 25.5 -0.8**
comp=Z,23nm,1.2s,mb5.1
BOSA Boshof 93.08 241 *e*P **P 23 40 28.2 +0.1**
BOSA pmax pmax
comp=Z,25nm,1.1s,mb5.2
BOSA Boshof 93.08 241 P **P 23 40 28.1 0.0**
comp=Z,4.7nm,0.5s,mb4.8,baz=104,slow=3.6,SNR=20
BOSA Boshof 93.08 241 *e*P **P 23 40 28.2 +0.1**
comp=Z,25nm,1.1s,mb5.2
LBTB Lobatse 93.43 244 *e*P **P 23 40 29.9 +0.1**
KLMR Klimovskoe 93.76 331 *e*P **P 23 40 20.9 -10**
KLMR pmax pmax
comp=Z,30nm,1.4s,mb5.1
MOS Moscow 93.97 326 *e*P **P 23 40 30.0 -1.5**
MOS pmax pmax
comp=Z,81nm,1.5s,mb5.5
CSS Prodhromos 94.31 305 *e*P **P 23 40 32.8 -0.8**
comp=Z,34nm,1.1s,mb5.3
OBN Obninsk 94.48 325 P **P 23 40 33.1 -0.7**
comp=Z,231nm,0.7s,mb6.3,SNR=6.5
OBN Obninsk 94.48 325*ce*P **P 23 40 33.4 -0.4**
OBN 23 44 33.0
OBN *e* 23 50 47.6
OBN pmax pmax
comp=Z,63nm,1.3s,mb5.5
OBN Obninsk 94.48 325 *e*P **P 23 40 33.2 -0.7**
comp=Z,69nm,1.2s,mb5.6
BR131 Keskin Array S 94.61 309 *e*P **P 23 40 34.0 -0.9**
comp=Z,21nm,1.1s,mb5.2
BRTR Keskin Array B 94.61 309*ce*P **P 23 40 34.2 -0.6**
BRTR pmax pmax
comp=Z,18nm,1.0s
BRTR Keskin Array B 94.61 309 P **P 23 40 34.3 -0.5**
comp=Z,18nm,1.1s,mb5.1,baz=116,slow=4.3,SNR=40
SIM Simferopol' 94.84 315 *e*P **P 23 40 35.6 -0.1**
SIM *e* 23 44 26.0
SIM S SKSac 23 50 51.8 +1.4
SIM *e*PS PS 23 53 20.0 +3.9
SIM pmax pmax
comp=Z,12nm,0.8s,mb5.1
KTH Kantishna Hill 95.25 27 P **P 23 40 35.9 -1.3**
comp=Z,9.7nm,1.1s,mb4.8
BPAW Bear Paw Mtn. 95.29 26 *e*P **P 23 40 35.2 -2.1**
comp=Z,3.6nm,0.8s,mb4.5
TAOE Nuku Hiva Isla 95.39 100 *e*S S 23 51 32.1 -4.5
comp=Z,1μm,29.4s
TAOE *e*LR LR 00 11 45.3
comp=Z,190nm,24.4s
RC01 Rabbit Creek A 95.51 29 *e*P **P 23 40 37.8 -0.6**
COLD Coldfoot 95.98 23 *e*P **P 23 40 40.2 -0.2**
comp=Z,22nm,1.2s,mb5.3
MCK McKinley 96.15 27 *e*P **P 23 40 38.5 -2.8**
MCK pmax pmax
comp=Z,30nm,1.2s,mb5.4
MCK McKinley 96.15 27 *e*P **P 23 40 38.5 -2.7**
comp=Z,30nm,1.2s,mb5.4
AKASG Malin Array Be 98.55 320*ce*P **P 23 40 51.2 -1.2**
AKASG pmax pmax
comp=Z,12nm,0.9s
AKASG Malin Array Be 98.55 320 P **P 23 40 51.3 -1.0**
comp=Z,12nm,0.9s,mb5.2,baz=79,slow=4.2,SNR=42
AKBB Malin Array Si 98.55 320 *e*P **P 23 40 51.1 -1.3**
TIRR Tirgusor 98.86 314 *e*P **P 23 40 52.1 -1.8**
TIRR pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
TIRR Tirgusor 98.86 314 *e*P **P 23 40 52.1 -1.8**
comp=Z,8.1nm,0.9s,mb5.0
EGAK Eagle 99.58 26 *e*Pdif Pdif 23 40 55.3 -1.7
comp=Z,7.8nm,1.1s
ARCES ARCESS Array B 100.06 339 P Pdif 23 40 57.8 -1.2
comp=Z,3.0nm,0.9s,baz=85,slow=5.8,SNR=16
ARCES PKKPbc PKKPbc 23 57 18.8 -0.8
comp=Z,0.7nm,0.7s,baz=268,slow=3.6,SNR=5.0
ARCES ARCESS Array B 100.06 339 P Pdif 23 40 57.8 -1.2
ARCES PKKPbc PKKPbc 23 57 18.8 -0.8
NACGM Naroch 100.09 324 *e* Pdif 23 40 57.0 -2.2
FINES FINESS Array B 100.29 331 P Pdif 23 41 00.0 -0.1
comp=Z,1.0nm,0.8s,baz=90,slow=5.7,SNR=4.2
FINES PKiKP PKiKP 23 45 26.8 +1.0
comp=Z,2.5nm,0.8s,baz=88,slow=4.6,SNR=5.8
DAWY Dawson 100.38 26 *e*Pdif Pdif 23 40 59.7 -0.7
IZAR Zarasai 100.38 325 *e*P Pdif 23 41 00.8 +0.3
ISAL Salakas 100.45 325 *e*P Pdif 23 41 00.5 -0.4
SPITS Spitsbergen Ar 101.14 348 P Pdif 23 41 02.7 -1.2
comp=Z,2.0nm,0.5s,baz=92,slow=10.0,SNR=6.7
BUR08 Bucovina Ar. S 101.15 317 *e*Pdif Pdif 23 41 04.2 +0.3
IDI Anoyia 101.24 304 P Pdif 23 41 05.2 +0.9
comp=Z,5.1nm,0.9s,baz=260,slow=23,SNR=3.8
SUW Suwalki 102.22 323 *e*P Pdif 23 41 08.7 0.0
SUW *e* 23 41 13.0
SUW Suwalki 102.22 323 *e*Pdif Pdif 23 41 07.5 -1.2
comp=Z,40nm,1.2s
INK Inuvik 102.27 22 *e*P Pdif 23 41 07.7 -1.2
KWP Kalwaria Pacla 102.75 319 *e*P Pdif 23 41 11.9 +0.9
KWP Kalwaria Pacla 102.75 319 *e*Pdif Pdif 23 41 10.4 -0.6
comp=Z,16nm,1.1s
SIT Sitka 102.91 33 P Pdif 23 41 10.8 -0.9
UZH Uzhgorod 103.07 318 *i* PP 23 45 32.5 +2.5
OKC Ostrava-Krasne 105.68 319 *e*PP PP 23 45 46.5 -2.7
HFS Hagfors 106.48 331 Pdiff Pdif 23 41 27.7 +0.1
comp=Z,1.4nm,0.8s,baz=79,slow=9.2,SNR=4.1
DPC Dobruska-Polom 106.78 320 *e*PP PP 23 45 55.8 -1.5
UPC Upice 106.96 320 *e*PP PP 23 45 54.9 -3.6
CSNA Conrad Observa 107.41 318⇑*i*PP PP 23 45 58.0 -4.0
comp=Z,9.0nm,1.1s
NB2 NORSAR Subarra107.44 332 PP PP 23 45 56.7 -5.0
comp=Z,7.6nm,1.4s,baz=74,slow=7.4
NB2 NORSAR Subarra107.44 332 PP PP 23 45 56.7 -5.0
baz=74,slow=7.4
NB2 NORSAR Subarra107.44 332 PP PP 23 45 56.7 -5.0
NOA NORSAR Array B 107.44 332 Pdiff Pdif 23 41 31.7 -0.2
comp=Z,0.5nm,0.8s,baz=80,slow=5.4,SNR=2.2
PRU Pruhonice 107.97 320 *e*PP PP 23 46 02.6 -3.3
SOKA Soboth 108.13 316⇓*i*PP PP 23 46 04.2 -3.1
comp=Z,7.8nm,1.1s
BRG Berggiesshubel 108.20 321 *e*(P) Pdif 23 41 37.1 +1.8
comp=Z,4.3nm,1.1s
BRG Berggiesshubel 108.20 321 *e*P Pdif 23 41 37.1 +1.9
BRG pmax pmax
comp=Z,3.0nm,1.1s
GERES GERESS Array B 108.70 319 Pdiff Pdif 23 41 36.7 -0.8
comp=Z,0.4nm,0.7s,baz=130,slow=5.6,SNR=5.3
GERES PKiKP PKiKP 23 45 41.1 -0.5
comp=Z,1.5nm,1.0s,baz=98,slow=2.7,SNR=5.6
GERES PP PP 23 46 08.2 -3.1
comp=Z,1.6nm,0.9s,baz=95,slow=7.4,SNR=7.0
CLL Collm 108.70 322 *e*P Pdif 23 41 50.0 +13
CLL *e* 23 46 09.0
CLL pmax pmax
comp=Z,11nm,1.4s
CLL Collm 108.70 322 *e*Pdif Pdif 23 41 50.0 +13
CLL *e*PP PP 23 46 09.0 -2.2
CLL *e* 23 46 23.0
CLL Collm 108.70 322 *e*pPdif 23 42 31.0
CLL *e*PP PP 23 46 09.0 -2.2
comp=Z,11nm,1.4s
CLL *e* 23 46 23.0
CLL *e* 23 47 04.0
CLL *es*PP 23 47 20.0
CLL *es*SS 00 02 32.0
CLL *e*SKKSacre 00 04 22.0
CLL *e* 00 11 24.0
KHC Kasperske Hory 108.73 319 *e*PP PP 23 45 59.6 -12
RES Resolute Bay 109.86 10 Pdiff Pdif 23 41 43.0 +0.4
comp=Z,0.6nm,0.7s,baz=297,slow=4.6,SNR=3.9
RES PKiKP PKiKP 23 45 42.1 -1.1
comp=Z,0.6nm,0.6s,baz=328,slow=2.1,SNR=4.4
RES Resolute Bay 109.86 10 Pdif Pdif 23 41 43.0 +0.4
RES *e*PKiKP PKiKP 23 45 42.9 -0.2
RES *e*PP PP 23 46 17.4 -1.4
YKA Yellowknife Ar 111.54 25 P Pdif 23 41 50.7 +0.6
YKA 23 45 45.4
YKA Yellowknife Ar 111.54 25 Pdiff Pdif 23 41 50.7 +0.6
comp=Z,0.1nm,0.4s,baz=132,slow=50,SNR=3.1
YKA PKiKP PKiKP 23 45 45.4 -1.1
comp=Z,1.2nm,0.6s,baz=304,slow=1.9,SNR=17
YKA PKKPbc PKKPbc 23 56 41.5 -2.6
comp=Z,0.4nm,0.7s,baz=106,slow=3.4,SNR=5.5
YKA Yellowknife Ar 111.54 25 Pdif Pdif 23 41 50.7 +0.6
YKA PKPdf PKiKP 23 45 45.4 -1.2
YKA PKKPbc PKKPbc 23 56 41.5 -2.6
HUMO Hull Mountain 112.91 47 *e*PKiKP PKiKP 23 45 49.9 +0.1
CDF Champ du Feu 112.95 319 *e*PKiKP PKiKP 23 45 50.0 +0.3
HAU Haudompre 113.66 319 *e*PKiKP PKiKP 23 45 50.5 -0.6
HAU *e*MLR MLR
comp=Z,85nm,22.5s
HAU Haudompre 113.66 319 *e*PKPdf PKiKP 23 45 50.5 -0.6
HAU LR LR
comp=Z,80nm,22.5s
KEST Kesra 113.87 305 PKiKP PKiKP 23 45 52.2 +0.4
comp=Z,1.7nm,0.9s,baz=253,slow=8.5,SNR=5.2
KEST PP PP 23 46 46.1 -2.6
comp=Z,4.9nm,1.0s,baz=357,slow=3.3,SNR=8.5
CABF La Chapelle 114.19 318 *e*PKiKP PKiKP 23 45 52.6 +0.5
BAIF Baives 114.43 322 *e*PKiKP PKiKP 23 45 52.2 -0.3
LOR Lormes 115.48 319 *e*PKiKP PKPdf 23 45 54.0 -0.6
LOR *e*MLR MLR
comp=Z,70nm,20.8s
LOR Lormes 115.48 319 *e*PKPdf PKPdf 23 45 54.0 -0.6
LOR LR LR
comp=Z,70nm,20.8s
NEW Newport 115.51 40 PKiKP PKPdf 23 45 54.8 +0.2
SMF Signal de Mont 115.67 318 *e*PKiKP PKPdf 23 45 55.1 +0.1
SSF Saint Saulge 115.77 319 *e*PKiKP PKPdf 23 45 54.5 -0.7
comp=Z,15nm,1.1s
AVF Avril sur Loir 115.95 318 *e*PKiKP PKPdf 23 45 55.5 0.0
BGF Bois d'Agland 116.35 318 *e*PKiKP PKPdf 23 45 56.1 -0.2
comp=Z,12nm,0.8s
BMO Blue Mountains 116.38 44 *e*PKiKP PKPdf 23 45 55.6 -0.8
EKA Eskdalemuir Ar 116.58 329 PKP PKPdf 23 45 57.1 +0.6
comp=Z,0.9nm,0.9s,baz=217,slow=6.2,SNR=3.9
EKA PP PP 23 47 09.2 +2.4
comp=Z,6.3nm,0.9s,baz=72,slow=9.0,SNR=12
ESK Eskdalemuir 116.62 329 PKIKP PKPdf 23 45 56.9 +0.4
TCF Toulx Ste Croi 116.85 318 *e*PKiKP PKPdf 23 45 56.8 -0.5
comp=Z,6.6nm,0.9s
BSMT Bassoo Peak 117.13 40 *e*PKPdf PKPdf 23 45 57.0 -0.7
NVAR Mina Array Bea 117.20 51 PKP PKPdf 23 45 59.0 +0.8
comp=Z,2.6nm,0.8s,baz=255,slow=2.5,SNR=9.1
WALA Waterton Lakes 117.26 38 *e*PKPdf PKPdf 23 45 57.4 -0.6
CAF Calviac 117.36 317 *e*PKIKP PKPdf 23 45 59.0 +0.7
LDF La Druitiere 117.59 321 *e*PKIKP PKPdf 23 45 58.9 +0.3
RJF Les Rejaudoux 117.61 317 *e*PKIKP PKPdf 23 45 58.8 0.0
RJF *e*MLR MLR
comp=Z,112nm,21.8s
RJF Les Rejaudoux 117.61 317 *e*PKPdf PKPdf 23 45 58.8 0.0
RJF LR LR
comp=Z,110nm,21.8s
SWMT Swartz Lake 117.75 40 *e*PKPdf PKPdf 23 45 58.0 -1.0
MSO Missoula 118.01 41 *e*PKPdf PKPdf 23 45 58.5 -1.0
GRR Gorron 118.12 321 *e*PKIKP PKPdf 23 45 59.4 -0.2
SLMT Seeley Lake 118.16 40 PKPdf PKPdf 23 45 59.2 -0.5
LFF La Frestale 118.25 317 *e*PKIKP PKPdf 23 46 00.0 0.0
comp=Z,11nm,0.9s
MFF Saint Martin d 118.29 319 *e*PKIKP PKPdf 23 45 59.6 -0.4
comp=Z,4.3nm,0.6s
CHMT Chamberlain Mo 118.43 40 *e*PKPdf PKPdf 23 45 59.5 -0.8
HLID Hailey 118.74 44 *e*PKPdf PKPdf 23 46 01.5 +0.5
ELK Elko 118.95 48 PKP PKPdf 23 46 01.7 +0.2
comp=Z,5.1nm,1.0s,baz=260,slow=4.4,SNR=14
ELK Elko 118.95 48 *e*PKPdf PKPdf 23 46 01.5 0.0
GSC Goldstone 119.02 54 *e*PKIKP PKPdf 23 46 02.0 +0.2
N12A Clover Valley, 119.07 48 *e*PKPdf PKPdf 23 46 02.2 +0.5
SGMF Saint Gilles 119.22 322 *e*PKIKP PKPdf 23 46 01.8 0.0
LRM Limekiln Ridge 119.33 41 *e*PKPdf PKPdf 23 46 02.0 0.0
MCMT McKenzie Canyo 119.40 43 *e*P PKPdf 23 46 02.5 +0.3
M13A Montello 119.56 47 *e*PKPdf PKPdf 23 46 01.8 -0.8
PFO Pinyon Flat Ob 119.62 56 *e*PKIKP PKPdf 23 46 03.5 +0.5
SJPF Ste Jean 120.18 316 *e*PKIKP PKPdf 23 46 03.9 +0.1
HVU Hansel Valley 120.44 46 *e*PKIKP PKPdf 23 46 04.4 +0.1
BGU Big Grassy Mou 120.51 47 *e*PKPdf PKPdf 23 46 04.4 0.0
DUG Dugway 120.89 48 *e*PKIKP PKPdf 23 46 05.3 +0.1
IMW Indian Meadow 121.01 43 *e*PKPdf PKPdf 23 46 05.8 +0.5
TPAW Teton Pass 121.14 44 *e*PKPdf PKPdf 23 46 05.6 0.0
GCMT Greycliff 121.15 41 *e*PKPdf PKPdf 23 46 05.4 -0.2
FFC Flin Flon 121.16 29 *i*PKIKP PKPdf 23 46 05.3 0.0
FFC Flin Flon 121.16 29 *e*PKPdf PKPdf 23 46 04.1 -1.2
CCUT Cedar City 121.20 51 *e*PKPdf PKPdf 23 46 06.2 +0.2
REDW Red Top Meadow 121.26 44 *e*PKPdf PKPdf 23 46 06.2 +0.4
LOHW Long Hollow 121.34 43 *e*PKPdf PKPdf 23 46 06.0 0.0
RLMT Red Lodge 121.67 41 *e*PKPdf PKPdf 23 46 06.6 0.0
MSU Marysvale 121.84 49 *e*PKIKP PKPdf 23 46 07.5 +0.4
FCC Fort Churchill 121.89 22 *e*PKIKP PKPdf 23 46 04.6 -2.0
TORD Torodi Ar. Bea 122.28 281 PKP PKPdf 23 46 07.7 -0.9
comp=Z,5.9nm,0.7s,baz=84,slow=1.9,SNR=11
PDAR Pinedale Array 122.36 44 PKP PKPdf 23 46 07.7 -0.3

comp=Z,2.2nm,0.8s,baz=262,slow=1.0,SNR=11
PDAR PKKPbc PKKPbc 23 56 04.8 -0.5
comp=Z,1.8nm,0.8s,baz=108,slow=5.4,SNR=10
SRU San Rafael 122.90 48 *e*PKIKP PKPdf 23 46 08.8 -0.3
ESDC Sonseca Array 123.24 313 PKP PKPdf 23 46 09.6 -0.1
comp=Z,1.3nm,0.7s,baz=34,slow=2.4,SNR=7.7
ESDC PP PP 23 47 50.8 -2.1
comp=Z,5.3nm,0.9s,baz=65,slow=6.8,SNR=8.4
ESLA Sonseca Array 123.24 313 *e*PKPdf PKPdf 23 46 09.2 -0.6
PAB San Pablo 123.57 313 *e*PKIKP PKPdf 23 46 10.3 -0.1
FRB Frobisher Bay 123.67 6 PKP PKPdf 23 46 07.8 -2.1
comp=Z,1.6nm,0.7s,baz=359,slow=6.6,SNR=6.3
RWWY Rawlins 124.38 44 *e*PKPdf PKPdf 23 46 12.5 +0.6
MVO Moncorvo 124.90 315 *e*PKPdf PKPdf 23 46 14.8 +1.9
PVRL Vila Real 125.34 316 *e*PKPdf PKPdf 23 46 16.1 +2.4
PCAB Cabril 125.38 316 *e*PKPdf PKPdf 23 46 14.7 +0.9
PCAB Cabril 125.38 316 *e*PP PP 23 48 07.3 +0.3
SMCO Snowmass 125.47 47 *e*PKPdf PKPdf 23 46 14.6 +0.5
RSSD Black Hills 125.48 40 *e*PKIKP PKPdf 23 46 12.6 -1.3
MTE Manteigas 125.56 315 *e*PKPdf PKPdf 23 46 14.9 +0.7
PCBR Castelo Branco 125.72 314 *e*PKPdf PKPdf 23 46 15.5 +1.0
PCBR Castelo Branco 125.72 314 *e*PP PP 23 48 09.8 +0.4
PHWY Pilot Hill 125.74 44 *e*PKPdf PKPdf 23 46 14.4 -0.1
PMRV Marv??o 125.81 313 *e*PKPdf PKPdf 23 46 15.2 +0.5
PMRV Marv??o 125.81 313 *e*PP PP 23 48 09.1 -0.9
PBAR Barrancos 126.01 312 *e*PKPdf PKPdf 23 46 16.0 +0.9
PESTR Estremoz 126.16 313 *e*PKPdf PKPdf 23 46 17.4 +2.0
PTOM Tomar 126.47 314 *e*PKPdf PKPdf 23 46 16.5 +0.5
ULM Lac du Bonnet 126.83 30 PKP PKPdf 23 46 14.6 -1.7
comp=Z,2.9nm,0.7s,baz=332,slow=3.8,SNR=8.2
ULM Lac du Bonnet 126.83 30 *e*PKPdf PKPdf 23 46 15.0 -1.3
LAZ Ladron 126.93 53 *e*PKPdf PKPdf 23 46 18.6 +1.6
SDCO Great Sand Dun 127.07 48 *e*PKPdf PKPdf 23 46 17.4 +0.3
ANMO Albuquerque 127.30 52 PKP PKPdf 23 46 18.7 +1.0
comp=Z,6.8nm,1.0s,baz=215,slow=2.6,SNR=11
ANMO Albuquerque 127.30 52 *e*PKPdf PKPdf 23 46 18.1 +0.4
PMAFR Mafra 127.35 314 *e*PKPdf PKPdf 23 46 17.8 +0.1
MORF Marmelete 127.51 311 *e*PKPdf PKPdf 23 46 19.0 +1.0
MORF Marmelete 127.51 311 *e*PP PP 23 48 22.2 +0.9
KIC Kosan Boka 128.26 272 *e*P PKPdf 23 46 18.3 -1.8
comp=Z,44nm,1.5s
DBIC Dimbokro 128.40 272 PKP PKPdf 23 46 19.7 -0.7
comp=Z,2.3nm,0.4s,baz=125,slow=1.5,SNR=10
DBIC Dimbokro 128.40 272 *e*PKPdf PKPdf 23 46 19.8 -0.6
LIC Lamto 128.54 272 *e*PKIKP PKPdf 23 46 19.9 -0.7
comp=Z,5.4nm,0.3s
LIC Lamto 128.54 272 *e*P PKPdf 23 46 19.9 -0.7
comp=Z,38nm,1.2s
TIC Toumodi 128.56 272 *e*P PKPdf 23 46 20.2 -0.5
comp=Z,4.5nm,0.2s
MNTX Cornudas Mount 129.15 55 *e*PKPdf PKPdf 23 46 22.0 +0.7
PLCA Paso Flores 129.96 166 SKPbc SKPbc 23 49 23.4 -1.4
comp=Z,3.9nm,0.8s,baz=241,slow=2.3,SNR=4.0
ECSD EROS Data Cent 130.30 37 *e*PKPdf PKPdf 23 46 21.9 -1.2
TXAR Lajitas Array 131.24 58 PKP PKPdf 23 46 24.9 -0.4
comp=Z,2.6nm,0.9s,baz=237,slow=2.7,SNR=14
TXAR SKPbc SKPbc 23 49 27.8 -2.2
comp=Z,1.6nm,0.7s,baz=273,slow=3.2,SNR=7.6
TXAR Lajitas Array 131.24 58 PKP PKPdf 23 46 24.9 -0.4
TXAR SKPbc SKPbc 23 49 27.8 -2.2
SCHQ Schefferville 132.57 8 PKP PKPdf 23 46 26.7 -0.4
comp=Z,3.8nm,0.9s,baz=46,slow=4.6,SNR=7.8
SCHQ SKPbc SKPbc 23 49 33.7 -0.1
comp=Z,5.6nm,0.9s,baz=324,slow=3.3,SNR=6.7
SCHQ Schefferville 132.57 8 *e*PKPdf PKPdf 23 46 26.6 -0.4
WMOK Wichita Mounta 133.24 49 *e*PKIKP PKPdf 23 46 28.8 -0.2
TRQA Tornquist 133.99 174 *e*PKPdf PKPdf 23 46 31.6 +1.3
JCT Junction City 134.07 55 *e*PKIKP PKPdf 23 46 31.5 +0.8
CCM Cathedral Cave 136.87 41 *e*PKIKP PKPdf 23 46 34.6 -1.0
MIAR Mount Ida 137.15 46 *e*PKIKP PKPdf 23 46 35.9 -0.4
FVM French Village 137.44 40 *e*PKIKP PKPdf 23 46 35.5 -1.2
OLL Olney 138.43 38 PKPdf PKPdf 23 46 38.0 -0.5
SADO Sadowa 138.53 24 PKP PKPdf 23 46 39.1 +0.7
comp=Z,2.7nm,0.5s,baz=316,slow=4.1,SNR=5.7
SADO SKPbc SKPbc 23 49 50.1 -2.5
comp=Z,5.6nm,0.9s,baz=275,slow=4.2,SNR=3.7
WCI Wyandotte Cave 139.83 37 *e*PKIKP PKPdf 23 46 40.7 -0.4
OXF Oxford 140.09 44 *e*PKIKP PKPdf 23 46 42.0 +0.3
WVT Waverly 140.21 41 *e*PKHKP 23 46 33.2
WVT *e* PKPdf 23 46 41.9 +0.1
ACSO Alum Creek Sta 140.29 32 *e*PKPdf PKPdf 23 46 41.3 -0.6
PLAL Pickwick Lake 140.73 42 *e*PKPdf PKPdf 23 46 41.9 -0.9
LCO Las Campanas 140.92 161 *e*PKPdf PKPdf 23 46 40.1 -3.2
NCB Newcomb 141.05 20 *e*PKPpre 23 46 34.8
NCB *e*PKPdf PKPdf 23 46 42.4 -0.7
CMIG Matias Romero 141.87 72 PKP PKPdf 23 46 45.5 +0.3
comp=Z,4.8nm,0.8s,baz=224,slow=3.6,SNR=4.6
SWET Sewanee 141.99 40 *e*PKPdf PKPdf 23 46 43.2 -1.8
SSPA Standing Stone 142.45 27 *e*PKPdf PKPdf 23 46 40.9 -4.8
LRAL Lakeview Retre 142.58 44 *e*PKPdf PKPdf 23 46 41.7 -4.5
TZTN Tazewell 142.58 36 *e*PKPdf PKPdf 23 46 41.4 -4.7
CPCT Cooper Cave 142.72 39 *e*PKPdf PKPdf 23 46 42.7 -3.6
TKL Tuckaleechee C 143.04 38 PKhKP 23 46 42.6
comp=Z,9.0nm,0.9s,baz=188,slow=2.3,SNR=8.3
TKL Tuckaleechee C 143.04 38 *e*PKPdf 23 46 42.5
BRAL Brewton 143.67 47 *e*PKPdf PKPdf 23 46 45.6 -2.6
ELN Prospectdale 143.68 33 *e*PKPdf PKPdf 23 46 44.4 -3.6
BLA Blacksburg 143.87 33 *e*PKIKP PKPdf 23 46 45.1 -3.2
CBN Corbin 144.64 28 *e*PKPab PKPdf 23 46 47.9 -1.7
GOGA Godfrey 144.70 40 *e*PKIKP PKPdf 23 46 48.4 -1.5
JSC Jenkinsville 145.49 37 *e*PKP2 PKPab 23 46 51.1 -1.1
CPUP Villa Florida 145.93 179 PKPbc PKPbc 23 46 54.2 +0.9
comp=Z,7.8nm,0.6s,baz=177,slow=2.3,SNR=18
CPUP Villa Florida 145.93 179 *e*PKPdf PKPdf 23 46 52.8 +0.6
CPUP *e*PKPab PKPab 23 46 54.6 +0.6
COW Cow Castle Cre 146.45 38 *e*PKPdf PKPdf 23 46 52.9 +0.1
CNNC Cliffs of the 146.70 32 *e*PKP PKPdf 23 46 54.6 +1.4
LVC Limon Verde 147.43 159 *e*PKPdf PKPdf 23 46 54.8 -0.1
LVC *e*PKPab PKPab 23 47 00.5 +0.5
LPAZ La Paz 153.48 155 PKP PKPdf 23 47 05.7 +1.4
comp=Z,6.2nm,1.1s,baz=166,slow=0.6,SNR=12
LPAZ PKPbc PKPbc 23 47 14.9 +2.8
comp=Z,1.6nm,0.4s,baz=40,slow=7.3,SNR=7.6
LPAZ PKPab PKPab 23 47 27.3 +2.2
comp=Z,5.7nm,0.5s,baz=124,slow=3.5,SNR=18
LPAZ La Paz 153.48 155 PKP PKPdf 23 47 05.7 +1.4
LPAZ PKPbc PKPbc 23 47 14.9 +2.8
LPAZ PKPab PKPab 23 47 27.3 +2.2
RCBR Riachuelo 155.00 237 *e*PKPdf PKPdf 23 47 05.7 -0.8

*THE **06** 23:34:39.7, 38°.01N×21°.57E, h0km±2km, ML3.5/3, Error ellipse: s-maj=2.7km s-min=0.7km az=210.0*
*NEIC **06** 23:34:39.3, 38°.02N×21°.57E, h23km, MD3.5(ATH), ML3.5(THE), After ATH.*
*ATH **06** 23:34:39.2, 38°.02N×21°.57E, h23km±1km, MD3.5/22*
*ISCJB **06** 23:34:40.1±0.4, 38°.03N±0°.03×21°.56E±0°.03, h21km±4km, Error ellipse: s-maj=4.7km s-min=4.5km az=135.0*
*CSEM **06** 23:34:40.0±0.2, 38°.03N×21°.57E, h20km, MD3.5, Error ellipse: s-maj=5.8km s-min=4.9km az=80.0*
ISC 06 23:34:39.9±0.4**, 38°.01N**±0°.02×**21°.57E**±0°.03**, h14**km±3km**, n61,** σ0**95**/82**, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.09**	**303**	*e*PB	**Pg**	**23 34 43.7**	**+0.7**
RLS	**Riolos of Patr**	**0.09**	**303**	*e*Pb	**Pg**	**23 34 43.7**	**+0.7**
UPR	**University Cam**	**0.33**	**32**	*e*PB	**Pg**	**23 34 46.6**	**-0.1**
UPR				*e*SB	**Sg**	**23 34 52.2**	**+1.0**
UPR	**University Cam**	**0.33**	**32**	P	**Pg**	**23 34 46.5**	**-0.2**
UPR	**University Cam**	**0.33**	**32**	P	**Pg**	**23 34 46.5**	**-0.2**
UPR				*e*Sb	**Sg**	**23 34 52.2**	**+1.0**
LAKA	**Lakka**	**0.40**	**54**	P	**Pg**	**23 34 47.7**	**-0.3**
LAKA				S	**Sg**	**23 34 53.6**	**+0.2**
LAKA	**Lakka**	**0.40**	**54**	P	**Pg**	**23 34 47.7**	**-0.3**
LAKA				S	**Sg**	**23 34 53.6**	**+0.2**
EFP	**Efpalio**	**0.50**	**32**	*e*PB	**Pg**	**23 34 49.0**	**-0.8**
EFP				*e*SB	**Sg**	**23 34 57.0**	**+0.6**
EFP	**Efpalio**	**0.50**	**32**	P	**Pg**	**23 34 49.0**	**-0.8**
EFP				S	**Sg**	**23 34 57.0**	**+0.6**
EFP	**Efpalio**	**0.50**	**32**	P	**Pg**	**23 34 49.0**	**-0.8**
EFP				S	**Sg**	**23 34 57.0**	**+0.6**
TRIZ	**Trizonia**	**0.54**	**48**	P	**Pg**	**23 34 49.7**	**-0.8**
TRIZ				S	**Sg**	**23 34 58.1**	**+0.4**
TRIZ	**Trizonia**	**0.54**	**48**	P	**Pg**	**23 34 49.7**	**-0.8**
TRIZ				S	**Sg**	**23 34 58.1**	**+0.4**
KALE	**Kalithea**	**0.59**	**50**	P	**Pg**	**23 34 50.8**	**-0.8**
KALE				S	**Sg**	**23 35 00.3**	**+0.9**
KALE	**Kalithea**	**0.59**	**50**	P	**Pg**	**23 34 50.8**	**-0.8**
KALE				S	**Sg**	**23 35 00.3**	**+0.9**
GUR	**Goura**	**0.62**	**96**	*e*PB	**Pg**	**23 34 51.1**	**-0.9**
GUR				*e*SN	**Sg**	**23 35 00.7**	**+0.5**
GUR	**Goura**	**0.62**	**96**	P	**Pg**	**23 34 51.1**	**-0.9**
GUR	**Goura**	**0.62**	**96**	P	**Pg**	**23 34 51.1**	**-0.9**
KFL	**Anninata**	**0.62**	**280**	P	**Pg**	**23 34 51.9**	**-0.2**
VLS	**Valsamata**	**0.79**	**283**	*e*PB	**Pg**	**23 34 53.9**	**-1.4**
VLS				*e*SN	**Sg**	**23 35 06.8**	**+1.2**
VLS	**Valsamata**	**0.79**	**283**	P	**Pg**	**23 34 53.9**	**-1.4**
VLS				S	**Sg**	**23 35 06.9**	**+1.3**
VLS	**Valsamata**	**0.79**	**283**	P	**Pg**	**23 34 53.9**	**-1.4**
VLS				S	**Sg**	**23 35 06.9**	**+1.3**
ITM	**Ithomi**	**0.88**	**161**	*e*PN	**Pg**	**23 34 56.2**	**-0.7**
ITM				*e*SN	**Sg**	**23 35 09.4**	**+1.1**
ITM	**Ithomi**	**0.88**	**161**	P	**Pg**	**23 34 56.3**	**-0.6**
ITM	**Ithomi**	**0.88**	**161**	P	**Pg**	**23 34 56.3**	**-0.6**
ITM				*e*Sn	**Sg**	**23 35 09.4**	**+1.1**
VLX	**Vlachokerasia**	**0.91**	**134**	*e*PN	**Pg**	**23 34 57.0**	**-0.5**
VLX	**Vlachokerasia**	**0.91**	**134**	P	**Pg**	**23 34 57.1**	**-0.4**
VLX				S	**Sg**	**23 35 10.8**	**+1.5**
VLX	**Vlachokerasia**	**0.91**	**134**	P	**Pg**	**23 34 57.1**	**-0.4**
VLX				*e*Sn	**Sg**	**23 35 10.6**	**+1.3**
EVR	**Evrytania**	**0.93**	**12**	*e*PN	**Pg**	**23 34 56.7**	**-1.2**
EVR	**Evrytania**	**0.93**	**12**	*e*Pn	**Pg**	**23 34 56.7**	**-1.2**
LTK	**Loutraki**	**1.11**	**89**	*e*PN	**Pg**	**23 34 59.9**	**-1.4**
LTK	**Loutraki**	**1.11**	**89**	P	**Pg**	**23 34 59.9**	**-1.4**
LTK	**Loutraki**	**1.11**	**89**	P	**Pg**	**23 34 59.9**	**-1.4**
PYL	**PYLOS**	**1.12**	**173**	*e*PN	**Pg**	**23 35 00.3**	**-1.2**
PYL	**PYLOS**	**1.12**	**173**	P	**Pg**	**23 35 00.5**	**-1.0**
PYL	**PYLOS**	**1.12**	**173**	P	**Pg**	**23 35 00.5**	**-1.0**
AGG	**Agios Georgios**	**1.18**	**30**	*e*PN	**Pn**	**23 35 00.7**	**-1.2**
AGG	**Agios Georgios**	**1.18**	**30**	P	**Pn**	**23 35 01.0**	**-0.9**
AGG	**Agios Georgios**	**1.18**	**30**	*e*Pn	**Pn**	**23 35 00.7**	**-1.2**
AGG	**Agios Georgios**	**1.18**	**30**	P	**Pn**	**23 35 01.0**	**-0.9**
LKR	**Lokris**	**1.30**	**60**	*e*PN	**Pn**	**23 35 03.2**	**-0.4**
LKR	**Lokris**	**1.30**	**60**	*e*Pn	**Pn**	**23 35 03.2**	**-0.4**
DID	**Didima**	**1.42**	**110**	*e*PN	**Pn**	**23 35 05.3**	**+0.1**
DID	**Didima**	**1.42**	**110**	P	**Pn**	**23 35 05.5**	**+0.3**
DID	**Didima**	**1.42**	**110**	*e*Pn	**Pn**	**23 35 05.3**	**+0.1**
NAIG	**Nisos Aigina**	**1.54**	**99**	*e*PB	**Pn**	**23 35 06.3**	**-0.6**
THL	**Klokotos Trika**	**1.59**	**13**	*e*PN	**Pn**	**23 35 08.9**	**+1.2**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**23 35 08.8**	**+1.1**
THL	**Klokotos Trika**	**1.59**	**13**	P	**Pn**	**23 35 08.8**	**+1.1**
VLI	**Veliai**	**1.69**	**139**	*e*PN	**Pn**	**23 35 10.8**	**+1.9**
VLI	**Veliai**	**1.69**	**139**	*e*Pn	**Pn**	**23 35 10.8**	**+1.9**
JAN	**Janina**	**1.74**	**341**	*e*PN	**Pn**	**23 35 10.6**	**+1.0**
JAN	**Janina**	**1.74**	**341**	*e*Pn	**Pn**	**23 35 10.6**	**+1.0**
VLY	**Voula,Athens**	**1.77**	**94**	*e*PB	**Pn**	**23 35 09.5**	**-0.5**
PTL	**Penteli**	**1.82**	**88**	*e*PB	**Pn**	**23 35 10.4**	**-0.3**
NEO	**Neokhori**	**1.83**	**44**	*e*PB	**Pn**	**23 35 10.7**	**-0.3**
KEK	**Kerkira**	**2.19**	**322**	*e*PB	**Pn**	**23 35 17.4**	**+1.5**
LIT	**Litokhoron**	**2.21**	**19**	*e*PB	**Pn**	**23 35 18.4**	**+2.3**
STON	**Ston**	**5.68**	**330**	*e*Pn	**Pn**	**23 36 02.4**	**-1.5**
STON				Sn	**Sn**	**23 37 04.2**	**-4.6**
STON	**Ston**	**5.68**	**330**	*e*Pn	**Pn**	**23 36 02.4**	**-1.4**
NVLJ	**Novalja**	**8.26**	**325**	*e*Pn	**Pn**	**23 36 38.9**	**-0.3**
NVLJ				Sn	**Sn**	**23 38 06.8**	**-5.5**
NVLJ	**Novalja**	**8.26**	**325**	*e*Pn	**Pn**	**23 36 38.9**	**-0.3**

*ISCJB **06** 23:38:03.8±0.5, 71°.37N±0°.05×12°.47W±0°.09, h10km, mb3.8/5, Error ellipse: s-maj=6.6km s-min=4.1km az=175.3*
*BER **06** 23:38:04.4±1.2, 70°.22N×12°.13W, h0km±999km, MD3.4, ML3.0*
*CSEM **06** 23:38:04.7±0.3, 71°.35N×12°.28W, h2km, mb4.5/2, Error ellipse: s-maj=8.7km s-min=6.2km az=175.0*
*IDC **06** 23:38:06.2±1.3, 71°.54N×11°.78W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.4/28, mbtmp3.7/5, ML3.3/2, MS2.7/3, Ms1 2.7/3, ms1mx2.6/36, Error ellipse: s-maj=41.2km s-min=18.5km az=28.0*
*REY **06** 23:38:06.7, 70°.87N×10°.67W, h10km, ML2.6, ML3.2*
*NEIC **06** 23:38:07.1±0.6, 71°.84N×11°.49W, h10km, mb4.5/2, Error ellipse: s-maj=14.5km s-min=8.6km az=206.0*
ISC 06 23:38:06.0±0.5**, 71°.34N**±0°.05×**12°.17W**±0°.09**, h10**km**, n43,** σ1**34**/49**, mb3.8/5, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**1.20**	**109**	*e*P	**Pb**	**23 38 26.1**	**-2.5**
JMI	**Jan Mayen**	**1.20**	**109**	*e*P	**Pb**	**23 38 26.1**	**-2.6**
SNR=53							
JMIC	**Jan Mayen**	**1.24**	**105**	Pn	**Pn**	**23 38 28.7**	**-0.6**
19nm,0.3s,baz=331,slow=2.6,SNR=7.6							
JMIC				Sn	**Sn**	**23 38 44.3**	**-1.7**
29nm,0.3s,baz=213,slow=21,SNR=30							
JMIC	**Jan Mayen**	**1.24**	**105**	Pn	**Pn**	**23 38 28.7**	**-0.6**
JNW	**Jan Mayen West**	**1.26**	**103**	*e*P	**Pn**	**23 38 29.2**	**-0.4**
JNW				*e*S	**Sb**	**23 38 46.1**	**+0.2**
JNW				AML	AML	23 38 50.2	
comp=Z,241nm,0.4s							
JNW	**Jan Mayen West**	**1.26**	**103**	*e*P	**Pn**	**23 38 29.2**	**-0.3**
SNR=53							
JNW				*e*S	**Sb**	**23 38 46.1**	**+0.2**
comp=Z,241nm,0.4s,SNR=53							
JNE	**Jan Mayen East**	**1.31**	**104**	*e*S	**Sb**	**23 38 46.9**	**-0.5**
JNE				AML	AML	23 38 48.5	
comp=Z,167nm,0.5s							
JNE	**Jan Mayen East**	**1.31**	**104**	*e*S	**Sb**	**23 38 46.9**	**-0.5**
comp=Z,167nm,0.5s,SNR=53							
SCO	**Scoresbysund**	**3.33**	**260**	*i* P	**Pn**	**23 38 53.8**	**-4.2**
SCO				*i* S	**Sn**	**23 39 29.0**	**-8.5**
SCO	**Scoresbysund**	**3.33**	**260**	*i* P	**Pn**	**23 38 53.8**	**-4.2**
SNR=49							
ILEI	**Leirhofn**	**5.20**	**200**	P	**Pn**	**23 39 22.0**	**-1.7**
ILEI				S	**Sn**	**23 40 23.3**	**-0.3**
IGRI	**Grimsey**	**5.26**	**206**	P	**Pn**	**23 39 24.3**	**-0.2**
IGRI				S	**Sn**	**23 40 25.7**	**+0.6**
IBRE	**Brettingsstaoi**	**5.64**	**204**	P	**Pn**	**23 39 29.2**	**-0.6**
ISIG	**Siglufjorour**	**5.78**	**208**	P	**Pn**	**23 39 31.6**	**0.0**
IHLA	**Hella**	**5.88**	**206**	P	**Pn**	**23 39 32.8**	**-0.2**
IGRS	**Grimsstaoir**	**5.91**	**196**	P	**Pn**	**23 39 32.9**	**-0.6**
BORG	**Borgarnes**	**7.45**	**212**	LR	LR	23 41 41.0	
comp=Z,92nm,20.9s,baz=132,slow=28							
SUMG	**Summit**	**8.21**	**291**	*e*Pn	**Pn**	**23 40 04.4**	**-0.5**
comp=Z,7.5nm,0.7s							
SUMG				*e*Sn	**Sn**	**23 41 37.4**	**-0.2**
SUMG	**Summit**	**8.21**	**291**	*e*Pn	**Pn**	**23 40 04.4**	**-0.6**
comp=Z,7.5nm,0.7s							
SUMG	**Summit**	**8.21**	**291**	*i* P	**Pn**	**23 40 05.1**	**+0.1**
SNR=47							
SUMG				*e*Sn	**Sn**	**23 41 37.4**	**-0.2**
SPB4	**Spitsbergen Ar**	**10.02**	**34**	*e*Pn	**Pn**	**23 40 24.7**	**-4.9**
SPITS	**Spitsbergen Ar**	**10.02**	**34**	Pn	**Pn**	**23 40 30.1**	**+0.4**
baz=223,slow=13,SNR=12							
SPITS	**Spitsbergen Ar**	**10.02**	**34**	Pn	**Pn**	**23 40 30.1**	**+0.4**
NOA	**NORSAR Array B**	**13.87**	**126**	LR	LR	23 46 23.1	
comp=Z,32nm,18.6s,baz=90,slow=36							
NAO01	**NORSAR Array S**	**13.95**	**127**	Pn	**Pn**	**23 41 26.7**	**+3.3**
SFJD	**Kangerlussuaq**	**14.15**	**271**	Pn	**Pn**	**23 41 30.6**	**+4.6**
ESK	**Eskdalemuir**	**16.55**	**162**	Pn	**Pn**	**23 42 04.7**	**+6.9**
FINES	**FINESS Array B**	**17.87**	**104**	P	**Pn**	**23 42 16.8**	**+2.6**
comp=Z,0.1nm,0.3s,baz=330,slow=11,SNR=7.5							
FINES	**FINESS Array B**	**17.87**	**104**	P	**Pn**	**23 42 16.8**	**+2.6**
FRB	**Frobisher Bay**	**21.99**	**278**	P	**P**	**23 43 04.1**	**+4.5**
comp=Z,1.5nm,0.8s,mb3.5,baz=56,slow=9.0,SNR=3.4							
CLL	**Collm**	**23.09**	**137**	*e*P	**P**	**23 43 14.0**	**+2.5**
GERES	**GERESS Array B**	**25.57**	**138**	P	**P**	**23 43 37.7**	**+3.0**
comp=Z,0.4nm,0.8s,mb3.0,baz=0.9,slow=8.5,SNR=4.0							
GERES	**GERESS Array B**	**25.57**	**138**	P	**P**	**23 43 37.7**	**+3.1**
OBN	**Obninsk**	**26.25**	**102**	*e*P	**P**	**23 43 40.2**	**-0.5**
comp=Z,5.0nm,0.3s,mb4.5							
OBN	**Obninsk**	**26.25**	**102**	*e*P	**P**	**23 43 40.2**	**-0.6**
comp=Z,5.0nm,0.3s,mb4.5							
KWP	**Kalwaria Pacla**	**27.00**	**125**	P	**P**	**23 43 49.5**	**+1.9**
KWP	**Kalwaria Pacla**	**27.00**	**125**	P	**P**	**23 43 49.5**	**+1.9**
PSZ	**Piszkesteto**	**27.87**	**130**	P	**P**	**23 43 57.7**	**+2.3**
PSZ	**Piszkesteto**	**27.87**	**130**	P	**P**	**23 43 57.7**	**+2.3**
TIP	**Timpagrande**	**35.45**	**140**	P	**P**	**23 45 05.5**	**+3.5**
comp=Z,6.3nm,1.4s,mb4.3							
YKA	**Yellowknife Ar**	**36.26**	**310**	P	**P**	**23 45 08.7**	**0.0**
comp=Z,1.0nm,0.8s,mb3.8,baz=32,slow=8.5,SNR=8.8							
YKA				LR	LR	23 58 45.2	
comp=Z,7.0nm,19.6s,baz=150,slow=34							
YKA	**Yellowknife Ar**	**36.26**	**310**	P	**P**	**23 45 08.7**	**+0.1**
AAK	**Ala-Archa**	**49.25**	**77**	P	**P**	**23 46 52.0**	**-2.2**

IDC 06 23:48:07.9±15.0**, 2°.89N×128°.45E, h343**km±176km**, mb2.8**/5**, mb1 3.0**/5**, mb1mx2.9**/19**, mbtmp2.8**/5**, Error ellipse: s-maj=74.6km s-min=23.2km az=58.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.42**	**166**	P	P	23 52 47.5	-0.1
0.6nm,0.4s,baz=345,slow=10,SNR=2.5							
ASAR	**Alice Springs**	**26.93**	**169**	P	P	23 53 19.1	+0.2
0.4nm,0.4s,baz=356,slow=7.6,SNR=7.4							
CMAR	**Chiang Mai Arr**	**32.77**	**300**	P	P	23 54 10.3	+0.1
0.7nm,0.4s,baz=112,slow=6.6,SNR=4.5							
SONM	**Songino Array**	**48.65**	**340**	P	P	23 56 18.1	-0.1
0.2nm,0.6s,baz=153,slow=9.7,SNR=2.1							
MKAR	**Makanchi Array**	**59.22**	**325**	P	P	23 57 34.4	+0.4
0.4nm,0.5s,baz=115,slow=8.6,SNR=6.5							
KURK	**Kurchatov**	**63.37**	**327**	P	P	23 58 01.3	-0.2
baz=123,slow=5.4							

*ISCJB **06** 23:48:25.4±0.8, 77°.02N±0°.03×18°.5E±0°.2, h0km±7km, mb3.6/2, Error ellipse: s-maj=9.7km s-min=4.1km az=157.5*
*NAO **06** 23:48:27.4±1.5, 77°.07N×18°.79E, h14km±14km, ML3.4*
*IDC **06** 23:48:27.8±0.9, 77°.17N×18°.68E, h0km, mb3.4/1, mb1 3.3/4, mb1mx3.1/26, mbtmp3.4/4, ML2.9/3, Error ellipse: s-maj=29.3km s-min=8.6km az=68.0*
*CSEM **06** 23:48:27.4±0.2, 77°.02N×17°.63E, h5km, mb3.9/2, Error ellipse: s-maj=16.2km s-min=4.0km az=72.0*
*NEIC **06** 23:48:28.4±0.6, 77°.06N×17°.98E, h10km, mb3.9/2, Error ellipse: s-maj=18.3km s-min=6.5km az=73.0*
*BER **06** 23:48:30.5±2.9, 77°.14N×18°.94E, h12km±17km, ML3.2, ML3.4(NAO)*
ISC 06 23:48:26.8±0.7**, 77°.08N**±0°.03×**18°.6E**±0°.3**, h1**km±6km**, n45,** σ1**18**/67**, mb3.7/2, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**0.70**	**265**	*e*P	**Pg**	**23 48 41.3**	**+1.2**
HSP				*e*S	**Sg**	**23 48 54.5**	**+5.4**
SPA0	**Spitsbergen Ar**	**1.21**	**337**	Pg	**Pg**	**23 48 50.4**	**+0.6**
baz=151,slow=18							
SPA0				Lg		23 49 06.3	
baz=151,slow=37							
SPA0	**Spitsbergen Ar**	**1.21**	**337**	Pg	**Pn**	**23 48 50.4**	**-0.3**
SPA0				Lg		23 49 06.3	
baz=151,slow=34,SNR=53							
SPITS	**Spitsbergen Ar**	**1.21**	**337**	Pn	**Pn**	**23 48 50.4**	**-0.3**
baz=150,slow=18,SNR=337							
SPITS				Sn	**Sn**	**23 49 05.7**	**-1.9**
baz=143,slow=49,SNR=30							
SPITS	**Spitsbergen Ar**	**1.21**	**337**	Pn	**Pn**	**23 48 50.4**	**-0.3**
SPITS				Sn	**Sn**	**23 49 05.7**	**-1.9**
SPB4	**Spitsbergen Ar**	**1.21**	**337**	*e*P	**Pg**	**23 48 50.6**	**+0.7**
SPB4				*e*S	**Sg**	**23 49 06.1**	**+0.6**
SPB4	**Spitsbergen Ar**	**1.21**	**337**	*e*P	**Pg**	**23 48 50.6**	**+0.7**
SPB4				*e*S	**Sg**	**23 49 06.1**	**+0.6**
HOPEN	**Hopen**	**1.58**	**108**	*e*P	**Pn**	**23 48 55.1**	**-0.7**
HOPEN				*e*S	**Sn**	**23 49 15.7**	**-1.0**
HOPEN				AML	AML	23 49 24.6	
comp=Z,268nm,0.7s							
HOPEN	**Hopen**	**1.58**	**108**	*e*P	**Pn**	**23 48 55.1**	**-0.7**
SNR=55							
HOPEN				*e*S	**Sn**	**23 49 15.7**	**-1.0**
comp=Z,268nm,0.7s,SNR=55							
KBS	**Kingsbay**	**2.32**	**326**	Pn	**Pn**	**23 49 05.6**	**-0.4**
KBS				Pg	**Pg**	**23 49 10.7**	**-0.5**
KBS				Lg		23 49 39.6	
KBS	**Kingsbay**	**2.32**	**326**	*e*P	**Pn**	**23 49 05.9**	**-0.1**
KBS				*e*Pg	**Pg**	**23 49 11.0**	**-0.2**
KBS				*e*Sg	**Sg**	**23 49 40.0**	**-1.2**
KBS				AML	AML	23 49 49.5	
comp=Z,605nm,0.8s							
KBS	**Kingsbay**	**2.32**	**326**	*e*Pn	**Pn

EIBI Ibiza 2.37 10 P Pn 23 54 29.1 -0.3
0.6nm,0.1s,SNR=6.8
EIBI S Sn 23 54 56.7 -1.9
2.3nm,0.3s,SNR=7.9
EIBI Ibiza 2.37 10 P Pn 23 54 29.1 -0.3
0.6nm,0.1s,SNR=6.8
EIBI S Sn 23 54 56.7 -1.9
2.3nm,0.3s,SNR=7.9
EIBI Ibiza 2.37 10 P Pn 23 54 29.1 -0.3
0.6nm,0.1s,SNR=6.8
EIBI S Sn 23 54 56.7 -1.9
2.3nm,0.3s,SNR=7.9
ETOB Tobarra 2.71 317 P Pn 23 54 34.7 +0.6
0.3nm,0.2s,SNR=5.7
ETOB S Sn 23 55 08.4 +1.5
3.5nm,0.6s,SNR=7.9
ETOB Tobarra 2.71 317 P Pn 23 54 34.7 +0.6
0.3nm,0.2s,SNR=5.7
ETOB S Sn 23 55 08.4 +1.5
3.5nm,0.6s,SNR=7.9
ETOB Tobarra 2.71 317 P Pn 23 54 34.7 +0.7
0.3nm,0.2s,SNR=5.7
ETOB S Sn 23 55 08.4 +1.5
3.5nm,0.6s,SNR=7.9
EQES Quesada 3.30 291 P Pn 23 54 42.6 +0.5
0.5nm,0.2s,SNR=7.9
EQES S Sn 23 55 21.9 +0.6
0.2nm,0.1s,SNR=7.9
EQES Quesada 3.30 291 P Pn 23 54 42.6 +0.5
0.5nm,0.2s,SNR=7.9
EQES S Sn 23 55 21.9 +0.6
0.2nm,0.1s,SNR=7.9
EQES Quesada 3.30 291 P Pn 23 54 42.6 +0.5
0.5nm,0.2s,SNR=7.9
EQES S Sn 23 55 21.9 +0.5
0.2nm,0.1s,SNR=7.9
EMLI Melilla 3.35 247 S Sn 23 55 21.8 -1.0
45nm,0.1s,SNR=4.0
EMEL Melilla 3.36 247 S Sn 23 55 21.8 -1.1
45nm,0.1s,SNR=4.0
EMEL Melilla 3.36 247 S Sn 23 55 21.8 -1.1
45nm,0.1s,SNR=4.0

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*IDC **07** 00:16:03.5±0.8, 12°.61N×123°.71E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.8/23, mbtmp3.8/11, ML4.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/34, Error ellipse: s-maj=38.6km s-min=15.4km az=65.0*
*NEIC **07** 00:16:04.7±0.3, 12°.64N×123°.68E, h10km, mb4.2/7, Error ellipse: s-maj=11.1km s-min=6.2km az=67.0*
*ISCJB **07** 00:16:05.4±0.5, 12°.72N±0°.03×123°.61E±0°.03, h24km±4km, mb3.9/16, MS3.1/4, Error ellipse: s-maj=5.2km s-min=4.5km az=177.4*
*MAN **07** 00:16:06, 12°.76N×123°.58E, h29km, mb4.8, ML3.7, MS3.7*
ISC 07 00:16:06.1±0.8, 12°.70N±0°.03×123°.62E±0°.03, h18km±5km, n48, σ1°07/51, mb3.9/16, MS3.1/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.34**	**179**	*eP*	**Pg**	**00 16 12.4**	**-0.9**
MMPH				*eS*	**Sg**	**00 16 18.9**	**+0.8**
PVCP	**Virac**	**1.03**	**30**	*eP*	**Pb**	**00 16 23.1**	**-2.5**
PVCP				*eS*	**Sb**	**00 16 38.0**	**-0.7**
CNP	**Catarman**	**1.04**	**100**	*eP*	**Pb**	**00 16 26.1**	**+0.6**
CNP				*eS*	**Sb**	**00 16 37.8**	**-1.0**
AUQP	**San Andres**	**1.11**	**304**	*eP*	**Pn**	**00 16 26.2**	**-0.5**
AUQP				*eS*	**Sb**	**00 16 37.6**	**-3.3**
RCP	**Roxas**	**1.42**	**217⇓**	*eP*	**Pn**	**00 16 30.1**	**-0.8**
RCP				*eS*	**Sn**	**00 16 48.9**	**-0.3**
KALP	**Kalibo**	**1.61**	**231⇑**	*eP*	**Sn**	**00 16 53.1**	**-0.8**
BOAC	**Boac**	**1.89**	**294**	*eP*	**Pn**	**00 16 36.0**	**-1.5**
BOAC				*eS*	**Sn**	**00 16 59.1**	**-1.7**
OCLP	**Ormoc**	**1.90**	**149**	*eP*	**Pn**	**00 16 39.0**	**+1.4**
GUIM	**Jordan**	**2.29**	**206**	*eP*	**Pn**	**00 16 44.9**	**+1.9**
LLP	**Lapu-Lapu**	**2.39**	**172**	*eP*	**Pn**	**00 16 44.2**	**-0.2**
LLP				*eS*	**Sn**	**00 17 16.9**	**+3.6**
SJMP	**San Jose**	**2.45**	**265**	*eP*	**Pn**	**00 16 45.6**	**+0.4**
POLP	**Polilio Island**	**2.59**	**321**	*eP*	**Pn**	**00 16 50.1**	**+2.9**
TGY	**Tagaytay City**	**2.96**	**298**	Pn	**Pn**	**00 16 52.8**	**+0.6**
	125nm,0.3s,baz=178,slow=4.7,SNR=8.5						
TBP	**Tagbilaran**	**3.00**	**175**	*eP*	**Pn**	**00 16 53.4**	**+0.7**
CUYO	**Cuyo Island**	**3.14**	**234**	*eP*	**Pn**	**00 16 54.6**	**-0.1**
LUBP	**Lubang**	**3.44**	**288**	*eP*	**Pn**	**00 16 58.1**	**-0.7**
YULB	**Yu-li**	**10.86**	**349**	Pn	**Pn**	**00 18 41.3**	**+0.5**
YHNB	**Yeheng**	**12.10**	**350**	Pn	**Pn**	**00 18 57.5**	**-0.1**
GUMO	**Guam**	**20.71**	**85**	P	**P**	**00 20 44.4**	**-1.3**
CBIJ	**Chichi jima**	**22.54**	**48**	LR	LR	00 28 06.3	
	comp=Z,37nm,21.7s,MS2.8,baz=247,slow=32						
KULM	**Kulim**	**23.83**	**254**	*eP*	**P**	**00 21 18.1**	**-0.4**
	4.1nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**24.43**	**287**	P	**P**	**00 21 25.1**	**+1.2**
	0.5nm,0.4s,mb3.3,baz=99,slow=5.8,SNR=3.0						
INCN	**Inchon**	**24.83**	**6**	P	**P**	**00 21 28.2**	**+0.9**
KSRS	**Korea Array**	**24.95**	**8**	P	**P**	**00 21 29.8**	**+1.3**
	0.9nm,0.6s,mb3.5,baz=190,slow=10.0,SNR=3.3						
JHJ	**Hachijo jima 2**	**25.13**	**33**	LR	LR	00 28 59.9	
	comp=Z,100nm,21.1s,MS3.3,baz=340,slow=31						
PSI	**Prapat**	**26.34**	**250**	LR	LR	00 32 27.4	
	comp=Z,110nm,18.4s,MS3.4,baz=48,slow=37						
MJAR	**Matsushiro Arr**	**27.12**	**26**	LR	LR	00 31 57.9	
	comp=Z,32nm,18.5s,MS2.9,baz=185,slow=35						
BJT	**Baijiatuan**	**28.00**	**348**	P	**P**	**00 21 57.5**	**+1.6**
WRAB	**Tennant Creek**	**34.10**	**162**	*eP*	**P**	**00 22 49.1**	**-0.8**
	5.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**34.11**	**162**	P	**P**	**00 22 49.1**	**-0.9**
	1.6nm,0.6s,mb4.2,baz=340,slow=9.5,SNR=6.4						
WB2	**Warramunga Arr**	**34.11**	**162**	*eP*	**P**	**00 22 49.0**	**-0.9**
ASAR	**Alice Springs**	**37.51**	**164**	P	**P**	**00 23 18.8**	**-0.3**
	1.1nm,0.5s,mb3.9,baz=338,slow=6.2,SNR=18						
SONM	**Songino Array**	**37.87**	**341**	P	**P**	**00 23 22.8**	**+0.9**
	0.7nm,0.9s,mb3.4,baz=160,slow=7.7,SNR=5.2						
NWAO	**Narrogin (SRO)**	**45.77**	**187**	*eP*	**P**	**00 24 26.7**	**+0.1**
	6.2nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**47.55**	**159**	P	**P**	**00 24 39.4**	**-1.3**
	1.9nm,0.6s,mb4.3,baz=322,slow=9.4,SNR=4.5						
STKA	**Stephens Creek**	**47.55**	**159**	*eP*	**P**	**00 24 39.3**	**-1.3**
	0.7nm,0.9s,mb3.7						
MK31	**Makanchi Array**	**48.53**	**323**	*eP*	**P**	**00 24 47.3**	**-0.8**
MKAR	**Makanchi Array**	**48.53**	**323**	P	**P**	**00 24 48.9**	**+0.8**
	1.7nm,0.8s,mb4.1,baz=122,slow=8.7,SNR=9.0						
YAK	**Yakutsk**	**49.45**	**4**	P	**P**	**00 24 55.8**	**+0.9**
ZALV	**Zalesovo Beam**	**51.27**	**332**	P	**P**	**00 25 08.4**	**-0.4**
	0.3nm,0.3s,mb3.7,baz=125,slow=7.2,SNR=3.4						
UCH	**Uchtor**	**51.63**	**314**	*eP*	**P**	**00 25 12.8**	**+1.2**
	1.2nm,0.6s,mb4.0						
AML	**Almayashu**	**52.17**	**314**	*eP*	**P**	**00 25 17.1**	**+1.4**
	1.1nm,0.7s,mb3.9						
KURK	**Kurchatov**	**52.61**	**326**	*eP*	**P**	**00 25 18.9**	**+0.1**
	6.3nm,1.1s,mb4.5						
BVAR	**Borovoye Array**	**58.20**	**325**	P	**P**	**00 26 02.2**	**+3.2**
	0.4nm,0.5s,mb3.8,baz=107,slow=9.2,SNR=4.5						
BVAR	**Borovoye Array**	**58.20**	**325**	P	**P**	**00 26 02.2**	**+3.2**
BRVK	**Borovoye**	**58.27**	**325**	P	**P**	**00 25 58.4**	**-1.2**
KIV	**Kislovodsk**	**74.80**	**312**	P	**P**	**00 27 46.0**	**+0.6**
YKA	**Yellowknife Ar**	**92.59**	**23**	P	**P**	**00 29 16.1**	**-0.2**
	0.2nm,0.8s,mb3.6,baz=290,slow=4.3,SNR=2.7						

MAN 07 00:37:02, 17°.59N×122°.47E, h16km, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**185**	*eP*	Pg	00 37 13.8	+1.3
PALP				*eS*	Sg	00 37 21.4	+1.8
SGCP	**Mt. Cagua**	**0.76**	**328**	*eP*	Pg	00 37 16.5	-0.4
CAUP	**Cauayan**	**0.89**	**224**	*eP*	Pb	00 37 20.6	+1.5
CAUP				*eS*	Sb	00 37 33.2	+2.4
APYP	**Conner**	**1.20**	**283**	*eP*	Pn	00 37 24.6	+0.4
APYP				*eS*	Sb	00 37 38.4	-1.2
BALP	**Baler**	**2.03**	**205**	*eP*	Pn	00 37 36.8	+1.2
BOLP	**Bolinao**	**2.73**	**244**	*eP*	Pn	00 37 48.0	+2.8

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*ISCJB **07** 00:43:57.2±0.4, 71°.54N±0°.05×12°.7W±0°.2, h10km, mb3.6/12, MS3.3/11, Error ellipse: s-maj=8.2km s-min=6.0km az=37.1*
*CSEM **07** 00:43:57.9±0.2, 71°.52N×12°.53W, h2km, mb3.9/4, Error ellipse: s-maj=7.7km s-min=6.2km az=69.0*
*NEIC **07** 00:43:59.7±0.4, 71°.50N×12°.49W, h10km, mb3.7/3, Error ellipse: s-maj=8.2km s-min=7.1km az=81.0*
*IDC **07** 00:43:59.1±1.3, 71°.53N×12°.26W, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.7/10, ML2.7/1, MS3.3/15, Ms1 3.3/15, ms1mx3.1/36, Error ellipse: s-maj=35.9km s-min=18.8km az=31.0*
*SZGRF **07** 00:44:05.1, 71°.65N×12°.98W, h65km, mb4.1, Jan Mayen Island region*
ISC 07 00:43:59.5±0.4, 71°.51N±0°.05×12°.5W±0°.2, h10km, n66, σ1°06/61, mb3.6/12, MS3.3/11, 4C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	**Jan Mayen**	**1.36**	**114**	*e*	**Pn**	**00 44 21.4**	**-3.0**
JMIC	**Jan Mayen**	**1.40**	**110**	Pn	**Pn**	**00 44 20.1**	**-4.9**
	10nm,0.3s,baz=353,slow=1.1,SNR=6.5						
JMIC				Sn	**Sn**	**00 44 34.4**	**-9.1**
	18nm,0.3s,baz=300,slow=18,SNR=9.3						
JMIC	**Jan Mayen**	**1.40**	**110**	Pn	**Pn**	**00 44 20.1**	**-4.9**
JMIC				Sn	**Sn**	**00 44 34.4**	**-9.0**
JNW	**Jan Mayen West**	**1.41**	**108**	*e*	**Pn**	**00 44 21.5**	**-3.6**
SCO	**Scoresbysund**	**3.25**	**256**	*i* P	**Pn**	**00 44 43.7**	**-6.6**
SCO				*i* S	**Sn**	**00 45 20.0**	**-9.0**
DAG	**Danmarks Havn**	**5.55**	**345⇑**	*i* P	**Pn**	**00 45 20.1**	**-1.8**
	5.5nm,0.7s						
DAG	**Danmarks Havn**	**5.55**	**345⇑**	*i* P	**Pn**	**00 45 20.1**	**-1.8**
	5.4nm,0.7s,SNR=2.0						
BORG	**Borgarnes**	**7.53**	**210**	LR	LR	00 48 04.4	
	comp=Z,182nm,21.5s,baz=357,slow=32						
BORG	**Borgarnes**	**7.53**	**210**	Pn	**Pn**	**00 45 49.2**	**+0.1**
BORG	**Borgarnes**	**7.53**	**210**	Pn	**Pn**	**00 45 49.2**	**+0.1**
SUMG	**Summit**	**8.05**	**290**	*e*Pn	**Pn**	**00 45 56.8**	**+0.7**
	16nm,0.8s						
SUMG				S	**Sn**	**00 47 25.8**	**-1.3**
SUMG	**Summit**	**8.05**	**290**	*e*Pn	**Pn**	**00 45 56.8**	**+0.7**
	16nm,0.8s						
SUMG				S	**Sn**	**00 47 25.8**	**-1.2**
KBS	**Kingsbay**	**9.60**	**29**	Pn	**Pn**	**00 46 17.4**	**0.0**
KBS	**Kingsbay**	**9.60**	**29**	*i* P	**Pn**	**00 46 16.6**	**-0.8**
	SNR=47						
KBS	**Kingsbay**	**9.60**	**29**	Pn	**Pn**	**00 46 17.4**	**0.0**
SPB4	**Spitsbergen Ar**	**9.95**	**35**	*e*Pn	**Pn**	**00 46 23.1**	**+1.0**
SPB4	**Spitsbergen Ar**	**9.95**	**35**	*e*Pn	**Pn**	**00 46 23.1**	**+1.0**
SPITS	**Spitsbergen Ar**	**9.95**	**35**	Pn	**Pn**	**00 46 20.1**	**-2.1**
	baz=249,slow=14,SNR=34						
SPITS	**Spitsbergen Ar**	**9.95**	**35**	Pn	**Pn**	**00 46 20.1**	**-2.1**
NOA	**NORSAR Array B**	**14.06**	**126**	LR	LR	00 52 06.4	
	comp=Z,67nm,19.5s,baz=310,slow=35						
HFS	**Hagfors**	**15.48**	**124**	LR	LR	00 52 50.9	
	comp=Z,108nm,20.6s,baz=297,slow=34						
ESK	**Eskdalemuir**	**16.74**	**161**	*e*Pn	**Pn**	**00 47 53.5**	**-0.2**
ESK	**Eskdalemuir**	**16.74**	**161**	*e*Pn	**Pn**	**00 47 53.5**	**-0.2**
FINES	**FINESS Array B**	**18.02**	**104**	P	**Pn**	**00 48 08.9**	**-0.6**
	0.1nm,0.3s,baz=330,slow=11,SNR=6.6						
FINES				LR	LR	00 54 11.1	
	comp=Z,133nm,18.8s,baz=340,slow=34						
FINES	**FINESS Array B**	**18.02**	**104**	P	**Pn**	**00 48 08.9**	**-0.6**
RGN	**Rugen**	**20.36**	**133**	P	**P**	**00 48 34.4**	**-1.2**
RGN	**Rugen**	**20.36**	**133**	P	**P**	**00 48 34.4**	**-1.2**
WTSB	**Winterswijk**	**21.43**	**146**	*eP*	**P**	**00 48 46.1**	**-1.1**
	6.9nm,0.6s,mb4.2						
FRB	**Frobisher Bay**	**21.85**	**278**	LR	LR	00 57 04.5	
	comp=Z,118nm,19.0s,MS3.3,baz=38,slow=36						
RES	**Resolute Bay**	**22.35**	**316**	P	**P**	**00 48 58.8**	**+1.9**
	1.6nm,1.1s,mb3.4,baz=19,slow=13,SNR=4.7						
RES				LR	LR	00 57 29.9	
	comp=Z,79nm,21.3s,MS3.1,baz=182,slow=36						
RES	**Resolute Bay**	**22.35**	**316**	*eP*	**P**	**00 48 56.6**	**-0.3**
	1.6nm,0.9s,mb3.5						
RES				LR	LR	00 57 29.9	
RES	**Resolute Bay**	**22.35**	**316**	*eP*	**P**	**00 48 56.6**	**-0.2**
	1.6nm,0.9s,mb3.5						
HGN	**Heimansgroeve**	**22.44**	**148⇑**	*i* P	**P**	**00 48 58.2**	**+0.2**
	17nm,1.1s,mb4.4						
HGN	**Heimansgroeve**	**22.44**	**148⇑**	*i* P	**P**	**00 48 58.2**	**+0.2**
	17nm,1.1s,mb4.4						
ISAL	**Salakas**	**22.85**	**114**	*eP*	**P**	**00 49 02.0**	**-0.2**
ISAL	**Salakas**	**22.85**	**114**	*eP*	**P**	**00 49 02.0**	**-0.3**
CLL	**Collm**	**23.29**	**137**	*eP*	**P**	**00 49 07.0**	**0.0**
CLL	**Collm**	**23.29**	**137**	*eP*	**P**	**00 49 07.0**	**0.0**
CLL				Lm		00 58 00.0	
	comp=Z,100nm,18.3s						
CLL	**Collm**	**23.29**	**137**	*eP*	**P**	**00 49 07.0**	**0.0**
GRF	**Grafenberg Arr**	**24.45**	**141**	*eP*	**P**	**00 49 18.7**	**+0.8**
	comp=Z,5.0nm,1.3s,mb3.8						
GRF				*e*pP		00 49 34.2	
GRF	**Grafenberg Arr**	**24.45**	**141**	*eP*	**P**	**00 49 18.7**	**+0.8**
	comp=Z,5.0nm,1.3s,mb3.8						
GERES	**GERESS Array B**	**25.77**	**138**	P	**P**	**00 49 31.0**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.1,baz=348,slow=9.0,SNR=5.5						
GERES				LR	LR	01 00 33.6	
	comp=Z,36nm,18.7s,MS2.9,baz=271,slow=39						
GERES	**GERESS Array B**	**25.77**	**138**	P	**P**	**00 49 31.0**	**+1.1**
GERES				LR	LR	01 00 33.6	
GERES	**GERESS Array B**	**25.77**	**138**	P	**P**	**00 49 31.0**	**+1.1**
VRAC	**Vranov**	**25.98**	**133**	LR	LR	01 00 43.0	
	comp=Z,42nm,18.4s,MS3.0,baz=215,slow=39						
AKASG	**Malin Array Be**	**28.02**	**116**	P	**P**	**00 49 49.8**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.4,baz=329,slow=9.9,SNR=4.9						
AKASG	**Malin Array Be**	**28.02**	**116**	P	**P**	**00 49 49.8**	**-0.3**
SCHQ	**Schefferville**	**28.27**	**263**	LR	LR	01 00 15.1	
	comp=Z,154nm,18.5s,MS3.6,baz=129,slow=34						
ESLA	**Sonseca Array**	**32.20**	**168**	P	**P**	**00 50 27.2**	**-0.1**
ESLA	**Sonseca Array**	**32.20**	**168**	P	**P**	**00 50 27.2**	**0.0**
YKA	**Yellowknife Ar**	**36.06**	**310**	P	**P**	**00 51 01.7**	**+1.3**
	comp=Z,1.5nm,1.0s,mb3.9,baz=32,slow=9.0,SNR=11						
YKA				LR	LR	01 06 11.3	
	comp=Z,9.1nm,18.3s,MS2.6,baz=350,slow=37						
YKA	**Yellowknife Ar**	**36.06**	**310**	P	**P**	**00 51 01.7**	**+1.3**
BVAR	**Borovoye Array**	**38.83**	**73**	P	**P**	**00 51 24.7**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.2,baz=328,slow=5.1,SNR=3.2						
BVAR				LR	LR	01 07 17.7	
	comp=Z,30nm,21.1s,MS3.1,slow=36						
BVAR	**Borovoye Array**	**38.83**	**73**	P	**P**	**00 51 24.7**	**+0.8**
ABKAR	**Abkulak array**	**38.84**	**85**	*eP*	**P**	**00 51 24.6**	**+0.5**
	comp=Z,1.7nm,0.9s,mb3.8						
ABKAR	**Abkulak array**	**38.84**	**85**	*eP*	**P**	**00 51 24.6**	**+0.5**
	comp=Z,1.7nm,0.9s,mb3.8						
ULM	**Lac du Bonnet**	**41.38**	**285**	LR	LR	01 09 16.8	
	comp=Z,67nm,18.3s,MS3.5,baz=41,slow=37						
KURK	**Kurchatov**	**43.33**	**68**	P	**P**	**00 52 02.5**	**+1.6**
	comp=Z,0.2nm,0.6s,mb3.0,baz=333,slow=7.2,SNR=3.7						
KURK	**Kurchatov**	**43.33**	**68**	P	**P**	**00 52 02.5**	**+1.5**
MKAR	**Makanchi Array**	**47.92**	**67**	P	**P**	**00 52 38.5**	**+1.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=350,slow=7.3,SNR=3.0						
MKAR	**Makanchi Array**	**47.92**	**67**	P	**P**	**00 52 38.5**	**+1.2**
AAK	**Ala-Archa**	**49.33**	**76**	LR	LR	01 12 39.3	
	comp=Z,44nm,20.8s,MS3.4,baz=46,slow=35						
PDAR	**Pinedale Array**	**52.23**	**292**	LR	LR	01 15 20.8	
	comp=Z,78nm,19.0s,MS3.8,baz=198,slow=36						
TXAR	**Lajitas Array**	**62.84**	**281**	LR	LR	01 21 51.5	
	comp=Z,43nm,19.5s,MS3.6,baz=0.0,slow=36						
CMAR	**Chiang Mai Arr**	**79.20**	**64**	P	**P**	**00 56 05.2**	**+0.8**
	comp=Z,0.5nm,0.3s,mb3.9,baz=345,slow=6.6,SNR=2.7						
CMAR	**Chiang Mai Arr**	**79.20**	**64**	P	**P**	**00 56 05.2**	**+0.9**

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*ISCJB **07** 00:52:48.5±0.8, 24°.56N±0°.05×122°.66E±0°.02, h87km±8km, Error ellipse: s-maj=7.8km s-min=3.4km az=179.1*
*JMA **07** 00:52:48.0±0.2, 24°.74N×122°.69E, h91km, M1.8*
*TAP **07** 00:52:48.8, 24°.52N×122°.69E, h75km±1km, ML3.1, D*
ISC 07 00:52:49.0±0.8, 24°.55N±0°.05×122°.66E±0°.02, h86km±8km, n26, σ0°65/50, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.33**	**106**	P	**Pn**	**00 53 02.1**	**0.0**
YOJ				S	**Sn**	**00 53 12.8**	**+1.0**
TWC	**Suao**	**0.74**	**275⇑**	*i* P	**Pn**	**00 53 05.3**	**-0.2**
	baz=276						
TWC				S	**Sn**	**00 53 17.3**	**-0.5**
	baz=276						
TWB1	**Santiao Chiao**	**0.76**	**307**	P	**Pn**	**00 53 05.7**	**0.0**
	baz=307						
TWB1				*e*S	**Sn**	**00 53 17.9**	**-0.3**
	baz=307						
ENA	**Nanau**	**0.85**	**262**	*eP*	**Pn**	**00 53 06.8**	**+0.1**
	baz=263						
TWE	**Neicheng**	**0.92**	**281**	P	**Pn**	**00 53 07.4**	**-0.1**
	baz=282						
TWE				*e*S	**Sn**	**00 53 20.1**	**-1.2**
	baz=282						
NWF	**Wu-fen Shan**	**0.95**	**303**	P	**Pn**	**00 53 08.1**	**+0.3**
	baz=303						
NWF				*e*S	**Sn**	**00 53 22.4**	**+0.4**
	baz=303						
IRIF	**Iriomote-Funau**	**1.00**	**102**	P	**Pn**	**00 53 08.0**	**-0.4**
IRIF				S	**Sn**	**00 53 23.4**	**+0.5**
TWA	**Mucha**	**1.07**	**294**	*eP*	**Pn**	**00 53 08.9**	**-0.3**
	baz=294						
TWA				*e*S	**Sn**	**00 53 24.0**	**-0.4**
	baz=294						
TWD	**Chiawan**	**1.08**	**244**	*eP*	**Pn**	**00 53 08.7**	**-0.6**
	baz=246						
TWD				*e*S	**Sn**	**00 53 24.1**	**-0.5**
	baz=246						
HATJ	**Hateruma jima**	**1.15**	**115**	*e*S	**Sn**	**00 53 28.1**	**+1.9**
NSK	**Sanguang**	**1.19**	**276**	P	**Pn**	**00 53 10.8**	**+0.2**
	baz=277						
NSK				S	**Sn**	**00 53 27.2**	**+0.2**
	baz=277						
JKRS	**Kuro-shima**	**1.27**	**104**	P	**Pn**	**00 53 11.6**	**0.0**
JKRS				S	**Sn**	**00 53 28.8**	**+0.1**
WHF	**Hehuan Shan**	**1.34**	**253**	P	**Pn**	**00 53 12.5**	**+0.1**
	baz=253						
WHF				*e*S	**Sn**	**00 53 30.2**	**+0.1**
	baz=253						
JIJ	**Ishigaki jima**	**1.36**	**98**	P	**Pn**	**00 53 12.4**	**-0.4**
JIJ				S	**Sn**	**00 53 29.8**	**-1.0**
TWT	**Tachien**	**1.39**	**258**	P	**Pn**	**00 53 13.8**	**+0.7**
	baz=258						
TWT				*e*S	**Sn**	**00 53 31.7**	**+0.4**
	baz=258						
NSTT	**Nanjuang**	**1.51**	**273**	*eP*	**Pn**	**00 53 14.9**	**+0.2**
	baz=274						
NSTT				*e*S	**Sn**	**00 53 34.4**	**+0.2**
	baz=274						
TWF1	**Yuli**	**1.73**	**227**	*eP*	**Pn**	**00 53 16.5**	**-1.0**
	baz=227						
TWF1				*e*S	**Sn**	**00 53 37.7**	**-1.4**
	baz=227						
SMLT	**Sun Moon Lake**	**1.74**	**248**	*eP*	**Pn**	**00 53 18.1**	**+0.4**
	baz=248						
SMLT				*e*S	**Sn**	**00 53 39.8**	**+0.4**
	baz=248						
TYC	**Yuchr**	**1.77**	**249**	*eP*	**Pn**	**00 53 18.4**	**+0.4**
	baz=249						
TYC				*e*S	**Sn**	**00 53 40.7**	**+0.6**
	baz=249						
JTJ	**Tarama**	**1.86**	**87**	P	**Pn**	**00 53 19.1**	**-0.1**
JTJ				*e*S	**Sn**	**00 53 41.2**	**-1.0**
CHKT	**Chengkung**	**1.87**	**220**	*eP*	**Pn**	**00 53 18.8**	**-0.6**
	baz=220						
CHKT				*e*S	**Sn**	**00 53 40.4**	**-2.0**
	baz=220						
YUS	**Yu-Shan**	**1.89**	**236**	P	**Pn**	**00 53 20.1**	**+0.6**
	baz=236						
YUS				*e*S	**Sn**	**00 53 42.6**	**-0.2**
	baz=236						
ALS	**Alishan**	**1.99**	**239**	P	**Pn**	**00 53 21.5**	**+0.6**
	baz=239						
ALS				*e*S	**Sn**	**00 53 45.6**	**+0.4**
	baz=239						
CHN5	**Tsauling**	**2.05**	**243**	*eP*	**Pn**	**00 53 22.1**	**+0.4**
	baz=243						
CHN5				*e*S	**Sn**	**00 53 47.2**	**+0.6**
	baz=243						
WTP	**Ta-pu**	**2.28**	**236**	*eP*	**Pn**	**00 53 25.6**	**+0.8**
	baz=236						
WTP				*e*S	**Sn**	**00 53 52.2**	**0.0**
	baz=236						
CHN1	**Nanshi**	**2.38**	**236**	*eP*	**Pn**	**00 53 25.7**	**-0.4**
	baz=236						
CHN1				*e*S	**Sn**	**00 53 55.2**	**+0.7**
	baz=236						

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*IDC **07** 00:57:06.1±1.1, 12°.70N×123°.87E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML4.5/1, MS3.9/1, Ms1 3.9/1, ms1mx3.2/17, Error ellipse: s-maj=73.6km s-min=16.0km az=63.0*
*NEIC **07** 00:57:07.3±0.5, 12°.74N×123°.93E, h10km, mb4.2/2, Error ellipse: s-maj=15.6km s-min=8.8km az=70.0*
*ISCJB **07** 00:57:08.0±0.6, 12°.78N±0°.03×123°.68E±0°.03, h23km±5km, mb3.8/9, Error ellipse: s-maj=5.7km s-min=4.7km az=0.1*
*MAN **07** 00:57:09, 12°.79N×123°.67E, h33km, mb4.3, ML3.1, MS2.9*
ISC 07 00:57:07.6±0.6, 12°.78N±0°.03×123°.66E±0°.03, h9km±4km, n29, σ1°11/38, mb3.8/9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.42**	**185**	*eP*	**Pg**	**00 57 15.7**	**-0.1**
MMPH				*eS*	**Sg**	**00 57 21.9**	**+0.5**
PVCP	**Virac**	**0.94**	**30**	*eP*	**Pg**	**00 57 26.3**	**+0.5**
PVCP				*eS*	**Sg**	**00 57 36.5**	**-1.6**
CNP	**Catarman**	**1.01**	**105**	*eP*	**Pg**	**00 57 27.8**	**+0.6**
CNP				*eS*	**Sg**	**00 57 40.1**	**-0.3**
AUQP	**San Andres**	**1.10**	**300**	*eP*	**Pg**	**00 57 29.6**	**+0.7**
AUQP				*eS*	**Sg**	**00 57 42.5**	**-0.7**
RCP	**Roxas**	**1.51**	**217**	*eP*	**Pn**	**00 57 33.2**	**-1.6**
RCP				*eS*	**Sn**	**00 57 53.0**	**-1.5**
KALP	**Kalibo**	**1.69**	**230⇑**	*eP*	**Sn**	**00 57 58.7**

MMPH				*i* S	**Sg**	**00 59 15.9 +0.6**
CNP	**Catarman**	**0.97**	**101**	*e*P	**Pb**	**00 59 22.6 +1.1**
CNP				*e*S	**Sb**	**00 59 38.7 +4.8**
PVCP	**Virac**	**1.01**	**27**	*e*P	**Pb**	**00 59 20.5 -1.5**
PVCP				*e*S	**Sb**	**00 59 33.0 -2.0**
AUQP	**San Andres**	**1.16**	**303**	*e*P	**Pn**	**00 59 24.1 -0.4**
RCP	**Roxas**	**1.45**	**219⇓**	*e*P	**Pn**	**00 59 27.1 -1.3**
RCP				*e*S	**Sn**	**00 59 47.4 +0.5**
KALP	**Kalibo**	**1.66**	**233**	*e*P	**Pn**	**00 59 21.3 -10**
KALP				*e*S	**Sn**	**00 59 50.6 -1.4**
OCLP	**Ormoc**	**1.87**	**151**	*e*P	**Pn**	**00 59 36.2 +2.1**
BOAC	**Boac**	**1.95**	**293**	*e*P	**Pn**	**00 59 33.8 -1.5**
GUIM	**Jordan**	**2.32**	**208**	*e*P	**Pn**	**00 59 42.2 +1.9**
GUIM				*e*S	**Sn**	**01 00 08.8 +0.5**
LLP	**Lapu-Lapu**	**2.38**	**173⇑**	*e*P	**Pn**	**00 59 42.1 +1.0**
LLP				*e*S	**Sn**	**01 00 13.9 +4.1**
SJMP	**San Jose**	**2.51**	**265**	*e*P	**Pn**	**00 59 43.1 0.0**
SJMP				*e*S	**Sn**	**01 00 09.4 -3.8**
POLP	**Polilio Island**	**2.64**	**320**	*e*P	**Pn**	**00 59 46.9 +2.1**
TGY	**Tagaytay City**	**3.02**	**298**	Pn	**Pn**	**00 59 49.7 -0.3**
	96nm,0.3s,baz=221,slow=9.3,SNR=4.2					
CUYO	**Cuyo Island**	**3.19**	**235**	*e*P	**Pn**	**00 59 52.1 -0.3**
BUSP	**Coron**	**3.47**	**259**	*e*P	**Pn**	**00 59 55.5 -0.7**
LUBP	**Lubang**	**3.50**	**288**	*e*P	**Pn**	**00 59 55.8 -0.9**
BALP	**Baler**	**3.65**	**326**	*e*P	**Pn**	**00 59 55.1 -3.7**
ENPP	**El Nido**	**4.42**	**251**	*e*P	**Pn**	**01 00 08.9 -0.4**
CAUP	**Cauayan**	**4.59**	**337**	*e*P	**Pn**	**01 00 11.3 -0.3**
PAGZ	**Pagadian**	**4.82**	**184**	*e*P	**Pn**	**01 00 17.6 +2.8**
BUKP	**Musuan**	**4.97**	**164**	*e*P	**Pn**	**01 00 21.2 +4.3**
BOLP	**Bolinao**	**5.17**	**316**	*e*P	**Pn**	**01 00 22.2 +2.6**
APYP	**Conner**	**5.65**	**336**	*e*P	**Pn**	**01 00 27.3 +1.1**
PPR	**Puerto Princes**	**5.66**	**240**	*e*P	**Pn**	**01 00 26.5 +0.2**
DAV	**Davao City (W)**	**5.89**	**161**	Pn	**Pn**	**01 00 28.9 -0.6**
YULB	**Yu-li**	**10.88**	**348**	*e*Pn	**Pn**	**01 01 37.8 -0.2**
SSLB	**Suanglung**	**11.34**	**347**	*e*Pn	**Pn**	**01 01 45.5 +1.3**
NACB	**Ninganchiao**	**11.59**	**350**	Pn	**Pn**	**01 01 48.9 +1.2**
YHNB	**Yeheng**	**12.11**	**350**	*e*Pn	**Pn**	**01 01 55.9 +1.1**
TATO	**Taipei**	**12.39**	**351**	*e*Pn	**Pn**	**01 02 00.1 +1.5**
QZH	**Quanzhou**	**13.10**	**339**	P	**Pn**	**01 02 12.5 +4.2**
QZH				S	**Sn**	**01 04 39.0 +5.4**
QZH				LR	LR	
	comp=N,610nm,12.7s					
QZH				LR	LR	
	comp=E,350nm,11.4s					
QZH				LR	LR	
	comp=Z,840nm,13.0s					
JOW	**Kunigami**	**14.71**	**16**	Pn	**Pn**	**01 02 30.5 +0.2**
	comp=Z,0.8nm,0.3s,baz=186,slow=14,SNR=3.2					
JOW				LR	LR	01 07 48.8
	comp=Z,747nm,18.6s,baz=126,slow=36					
QIZ	**Qiongzhong**	**14.72**	**297**	P	**Pn**	**01 02 35.6 +5.1**
QIZ				S	**Sn**	**01 05 21.6 +8.3**
QIZ				pmax	pmax	
	comp=Z,20nm,1.6s					
QIZ				pmax	pmax	
	comp=Z,100nm,8.9s					
QIZ				LR	LR	
	comp=N,250nm,13.2s					
QIZ				LR	LR	
	comp=Z,370nm,14.0s					
KSM	**Kuching**	**17.32**	**231**	*e*Pn	**Pn**	**01 03 05.4 +1.4**
	comp=Z,28nm,1.0s					
KAPI	**Kappang**	**18.02**	**193**	P	**Pn**	**01 03 12.5 -0.2**
	comp=Z,0.6nm,0.3s,baz=42,slow=5.6,SNR=7.3					
KAPI	**Kappang**	**18.02**	**193**	*e*Pn	**Pn**	**01 03 12.9 +0.1**
	comp=Z,56nm,1.3s					
WHN	**Wuhan**	**19.75**	**336**	P	**Pn**	**01 03 38.7 +5.1**
WHN				S	**Sn**	**01 07 15.7 +0.7**
WHN				LR	LR	
	comp=N,2μm,24.6s					
WHN				LR	LR	
	comp=E,1μm,16.2s					
WHN				LR	LR	
	comp=Z,730nm,13.7s					
NJ2	**Nanjing**	**19.77**	**348**	*e*P	**Pn**	**01 03 31.9 -1.9**
NJ2				pP	pP	01 03 40.4 +2.8
NJ2				sP	sP	01 03 44.8 +4.7
NJ2				PP		01 03 51.7
NJ2				S	**Sn**	**01 07 08.0 -7.5**
NJ2				pmax	pmax	
	comp=Z,20nm,0.7s					
NJ2				pmax	pmax	
	comp=Z,50nm,3.8s					
NJ2				LR	LR	
	comp=N,340nm,10.8s					
NJ2				LR	LR	
	comp=E,370nm,10.9s					
NJ2				LR	LR	
	comp=Z,400nm,10.9s					
GUMO	**Guam**	**20.65**	**85**	P	**P**	**01 03 41.4 -0.6**
	comp=Z,16nm,0.3s,baz=198,slow=20,SNR=2.0					
GUMO				LR	LR	01 10 24.7
	comp=Z,184nm,19.0s,MS3.5,baz=270,slow=33					
GUMO	**Guam**	**20.65**	**85**	*e*P	**P**	**01 03 40.9 -1.1**
GUMO				*e*Pn	**P**	**01 03 41.6 -0.4**
GYA	**Guiyang**	**21.05**	**313**	P	**P**	**01 03 48.6 +2.4**
GYA				pP		01 03 59.0
GYA				PP		01 04 13.5
GYA				S	**S**	**01 07 37.0 -2.9**
GYA				sS	sS	01 07 53.3 +4.8
GYA				SS		01 08 12.9
GYA				ScP	ScP	01 11 27.5 -1.3
GYA				pmax	pmax	
	comp=Z,20nm,0.8s,mb4.5					
GYA				pmax	pmax	
	comp=Z,130nm,4.2s					
GYA				LR	LR	
	comp=N,680nm,13.0s,MS4.3					
GYA				LR	LR	
	comp=E,570nm,12.8s,MS4.3					
GYA				LR	LR	
	comp=Z,690nm,13.7s,MS4.2					
ENH	**Enshi**	**21.88**	**325**	*e*P	**P**	**01 03 54.3 -0.7**
	comp=Z,21nm,0.7s,mb4.7					
CBIJ	**Chichi jima**	**22.49**	**48**	LR	LR	01 11 13.3
	comp=Z,314nm,18.7s,MS3.8,baz=245,slow=33					
KMI	**Kunming**	**23.31**	**305**	P	**P**	**01 04 11.7 +1.4**
KMI				pP		01 04 21.4
KMI				sP	sP	01 04 25.7 +7.5
KMI				PP		01 04 44.3
KMI				S	**S**	**01 08 22.2 +0.3**
KMI				sS	sS	01 08 36.6 +5.3
KMI				SS		01 09 07.6
KMI				pmax	pmax	
	comp=Z,11nm,0.9s,mb4.3					
KMI				pmax	pmax	
	comp=Z,240nm,3.6s					
KMI				LR	LR	
	comp=N,230nm,13.7s,MS3.9					
KMI				LR	LR	
	comp=E,190nm,14.9s,MS3.9					
KMI				LR	LR	
	comp=Z,230nm,12.8s,MS3.8					
KULM	**Kulim**	**23.89**	**254**	*e*P	**P**	**01 04 14.1 -1.9**
CMAR	**Chiang Mai Arr**	**24.50**	**287**	P	**P**	**01 04 21.8 +0.3**
CMAR						01 08 01.2
CMAR	**Chiang Mai Arr**	**24.50**	**287**	P	**P**	**01 04 21.8 +0.3**
	comp=Z,3.1nm,0.3s,mb4.2,baz=99,slow=7.8,SNR=15					
CMAR				PcP	PcP	01 08 01.1 +1.2
	comp=Z,1.7nm,0.5s,baz=101,slow=0.9,SNR=5.7					
CMAR				LR	LR	01 13 51.8
	comp=Z,146nm,20.1s,MS3.5,baz=354,slow=36					
CHTO	**Chiang Mai**	**24.56**	**288**	*e*P	**P**	**01 04 21.1 -0.9**
CHTO				pmax	pmax	
	comp=Z,5.0nm,0.9s,mb4.0					
CHTO	**Chiang Mai**	**24.56**	**288**	*e*P	**P**	**01 04 21.1 -0.9**
	comp=Z,5.4nm,0.9s,mb4.1					
KSRS	**Korea Array**	**24.95**	**8**	P	**P**	**01 04 24.2 -1.1**
	comp=Z,8.3nm,0.8s,mb4.3,baz=188,slow=10,SNR=14					
KSRS				LR	LR	01 13 10.5
	comp=Z,231nm,20.4s,MS3.7,baz=87,slow=34					
JHJ	**Hachijo jima 2**	**25.10**	**33**	LR	LR	01 13 41.5
	comp=Z,369nm,19.4s,MS3.9,baz=234,slow=35					
XAN	**Xi'an**	**25.14**	**330**	P	**P**	**01 04 26.3 -0.9**
XAN				pP	pP	01 04 35.3 +2.4
XAN				sP	sP	01 04 38.8 +3.5
XAN				S	**S**	**01 08 53.3 +2.1**
XAN				sS	sS	01 09 08.3 +7.6
XAN				pmax	pmax	
	comp=Z,3.0nm,0.8s,mb3.9					
XAN				pmax	pmax	
	comp=Z,15nm,4.3s					
XAN				LR	LR	
	comp=N,240nm,19.5s,MS3.8					
XAN				LR	LR	
	comp=E,150nm,19.9s,MS3.8					
XAN				LR	LR	
	comp=Z,110nm,13.3s					
CD2	**Chengdu**	**25.82**	**318**	P	**P**	**01 04 36.6 +3.2**
CD2				pP	pP	01 04 45.9 +6.7
CD2				sP	sP	01 04 50.0 +8.5
CD2				PP		01 05 18.0
CD2				S	**S**	**01 09 02.8 +0.7**
CD2				sS	sS	01 09 18.4 +6.8
CD2				SS		01 10 10.0
CD2				pmax	pmax	
	comp=Z,20nm,0.5s,mb4.9					
CD2				pmax	pmax	
	comp=Z,70nm,6.9s					
CD2				LR	LR	
	comp=N,380nm,13.4s					
CD2				LR	LR	
	comp=Z,390nm,16.1s,MS4.0					
PSI	**Prapat**	**26.40**	**250**	P	**P**	**01 04 39.2 +0.4**
	comp=Z,4.8nm,0.5s,mb4.3,baz=164,slow=14,SNR=3.8					
PSI				LR	LR	01 15 26.4
	comp=Z,617nm,19.2s,MS4.2,baz=90,slow=37					
KAKA	**Kakadu**	**26.69**	**161**	*e*P	**P**	**01 04 39.6 -1.7**
	comp=Z,102nm,1.5s,mb5.1					
KAKA	**Kakadu**	**26.69**	**161**	*e*P	**P**	**01 04 40.0 -1.4**
	comp=Z,290nm,1.4s,mb5.6					
MJAR	**Matsushiro Arr**	**27.10**	**26**	LR	LR	01 13 49.8
	comp=Z,263nm,19.7s,MS3.8,baz=200,slow=33					
BJT	**Baijiatuau**	**28.01**	**348**	P	**P**	**01 04 53.2 +0.2**
BJI	**Beijing**	**28.03**	**348**	P	**P**	**01 04 56.3 +3.1**
BJI				S	**S**	**01 09 38.8 +2.0**
BJI				pmax	pmax	
	comp=Z,20nm,1.0s,mb4.7					
BJI				LR	LR	
	comp=N,97nm,19.5s,MS3.7					
BJI				LR	LR	
	comp=E,170nm,18.2s,MS3.7					
BJI				LR	LR	
	comp=Z,140nm,20.3s,MS3.5					
SNY	**Shenyang**	**29.03**	**360**	⇑P	**P**	**01 05 02.2 +0.2**
SNY				S	**S**	**01 09 45.9 -6.5**
SNY				pmax	pmax	
	comp=Z,13nm,1.1s,mb4.6					
SNY				pmax	pmax	
	comp=Z,57nm,3.5s					
SNY				LR	LR	
	comp=N,220nm,12.2s					
SNY				LR	LR	
	comp=E,170nm,9.4s					
SNY				LR	LR	
	comp=Z,290nm,19.6s					
LZH	**Lanzhou**	**29.36**	**326**	*e*P	**P**	**01 05 05.5 +0.5**
LZH				pP	pP	01 05 15.5 +4.7
LZH				sP	sP	01 05 20.5 +7.3
LZH				PP	PP	01 06 02.0 -9.4
LZH				*e*S	**S**	**01 09 53.2 -4.5**
LZH				pmax	pmax	
	comp=Z,21nm,1.5s,mb4.7					
LZH				pmax	pmax	
	comp=Z,86nm,5.2s					
LZH				LR	LR	
	comp=N,530nm,14.5s					
LZH				LR	LR	
	comp=Z,640nm,15.1s,MS4.4					
HHC	**Hu-ho-hao-te**	**30.00**	**341**	*e*P	**P**	**01 05 13.5 +2.9**
HHC				pP	pP	01 05 23.1 +6.7
HHC				sP	sP	01 05 27.0 +8.2
HHC				PP	PP	01 06 12.6 -5.9
HHC				PcP	PcP	01 08 13.8 +1.1
HHC				S	**S**	**01 10 10.4 +2.8**
HHC				sS	sS	01 10 24.5 +7.3
HHC				SS	SS	01 11 49.0 -27
HHC				PcS	PcS	01 11 57.8 +1.8
HHC				ScS	ScS	01 15 47.3 -2.0
HHC				pmax	pmax	
	comp=Z,18nm,1.0s,mb4.8					
HHC				pmax	pmax	
	comp=Z,87nm,6.1s					
HHC				LR	LR	
	comp=N,230nm,13.5s,MS4.1					
HHC				LR	LR	
	comp=E,190nm,12.8s,MS4.1					
HHC				LR	LR	
	comp=Z,220nm,14.7s,MS3.9					
FITZ	**Fitzroy Crossi**	**30.66**	**176**	*e*P	**P**	**01 05 16.1 -0.5**
CN2	**Changchun**	**31.04**	**2**	*e*P	**P**	**01 05 24.0 +4.3**
CN2				*e*pP	pP	01 05 35.0 +9.5
CN2				*e*S	**S**	**01 10 26.7 +2.9**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.8					
CN2				pmax	pmax	
	comp=Z,200nm,3.0s					
CN2				LR	LR	
	comp=N,300nm,14.0s,MS4.2					
CN2				LR	LR	
	comp=E,200nm,14.0s,MS4.2					
CN2				LR	LR	
	comp=Z,200nm,18.0s,MS3.8					
MDJ	**Mudanjiang**	**32.21**	**8**	P	**P**	**01 05 31.3 +1.2**
MDJ				pP	pP	01 05 40.0 +4.1
MDJ				sP	sP	01 05 43.9 +5.6
MDJ				PP	PP	01 06 43.0 0.0
MDJ				S	**S**	**01 10 43.9 +1.7**
MDJ				pmax	pmax	
	comp=Z,16nm,1.1s,mb4.8					
MDJ				pmax	pmax	
	comp=Z,75nm,5.2s					
MDJ				LR	LR	
	comp=N,140nm,15.7s,MS4.1					
MDJ				LR	LR	
	comp=E,210nm,12.4s,MS4.1					
MDJ				LR	LR	
	comp=Z,240nm,18.1s					
MDJ	**Mudanjiang**	**32.21**	**8**	*e*P	**P**	**01 05 29.8 -0.3**
	comp=Z,21nm,1.0s,mb4.9					
MBWA	**Marble Bar**	**33.86**	**187**	*e*P	**P**	**01 05 43.6 -1.1**
	comp=Z,9.4nm,0.8s,mb4.8					
GTA	**Gaotai**	**33.96**	**326**	*e*P	**P**	**01 05 45.7 +0.2**
GTA				pP	pP	01 05 54.8 +3.5
GTA				sP	sP	01 05 59.2 +5.5
GTA				PP	PP	01 07 00.4 -2.1
GTA				S	**S**	**01 11 06.2 -3.3**
GTA				pmax	pmax	
	comp=Z,8.0nm,1.2s,mb4.5					
GTA				pmax	pmax	
	comp=Z,80nm,5.7s					
GTA				LR	LR	
	comp=N,330nm,19.5s,MS4.2					
GTA				LR	LR	
	comp=E,260nm,18.0s,MS4.2					
GTA				LR	LR	
	comp=Z,240nm,16.8s,MS4.0					
WRAB	**Tennant Creek**	**34.08**	**162**	*e*P	**P**	**01 05 45.9 -0.7**
WRAB				pmax	pmax	
	comp=Z,99nm,1.5s,mb5.5					
WRAB	**Tennant Creek**	**34.08**	**162**	*e*P	**P**	**01 05 45.9 -0.7**
	comp=Z,99nm,1.5s,mb5.5					
WRA	**Warramunga Arr**	**34.08**	**162**	P	**P**	**01 05 45.9 -0.8**
	comp=Z,22nm,1.0s,mb5.0,baz=338,slow=9.7,SNR=31					
WRA				PcP	PcP	01 08 23.7 -0.4
	comp=Z,1.2nm,0.6s,baz=336,slow=3.0,SNR=4.8					
WB2	**Warramunga Arr**	**34.09**	**162**	*e*P	**P**	**01 05 46.5 -0.2**
LSA	**Lhasa**	**34.57**	**304**	P	**P**	**01 05 52.1 +1.2**
LSA	**Lhasa**	**34.57**	**304**	*e*P	**P**	**01 05 49.1 -1.8**
LSA				pmax	pmax	
	comp=Z,11nm,1.2s,mb4.7					
LSA	**Lhasa**	**34.57**	**304**	*e*P	**P**	**01 05 49.0 -1.8**
	comp=Z,11nm,1.2s,mb4.7					
GIRL	**Giralia**	**36.32**	**195**	*e*P	**P**	**01 06 07.1 +1.2**
	comp=Z,365nm,1.0s					
HIA	**Hailar**	**36.61**	**356**	P	**P**	**01 06 08.6 +0.5**
KLR	**Kul'dur**	**37.04**	**9**	*e*P	**P**	**01 06 10.2 -1.5**
ASAR	**Alice Springs**	**37.49**	**164**	P	**P**	**01 06 15.8 0.0**
	comp=Z,9.9nm,0.8s,mb4.7,baz=339,slow=6.3,SNR=56					
ASAR				PcP	PcP	01 08 33.5 -0.7
	comp=Z,1.2nm,0.5s,baz=338,slow=3.0,SNR=4.4					
ULN	**Ulaanbaatar**	**37.72**	**342**	*e*P	**P**	**01 06 18.1 +0.6**
ULN				pmax	pmax	
	comp=Z,12nm,1.2s,mb4.5					
ULN	**Ulaanbaatar**	**37.72**	**342**	*e*P	**P**	**01 06 18.1 +0.5**
	comp=Z,12nm,1.2s,mb4.5					
SONM	**Songino Array**	**37.90**	**341**	P	**P**	**01 06 19.2 +0.2**
SONM						01 08 34.8
SONM	**Songino Array**	**37.90**	**341**	P	**P**	**01 06 19.2 +0.2**
	comp=Z,4.8nm,1.1s,mb4.1,baz=165,slow=7.8,SNR=15					
SONM				PcP	PcP	01 08 34.8 -0.2
	comp=Z,0.5nm,0.6s,baz=160,slow=4.6,SNR=2.7					
SONM				LR	LR	01 22 22.1
	comp=Z,96nm,20.1s,MS3.6,baz=135,slow=37					
MEEK	**Meekatharra**	**39.40**	**187**	*e*P	**P**	**01 06 31.3 -0.6**
	comp=Z,21nm,1.0s,mb4.8					
ZAK	**Zakamensk**	**41.12**	**340**	*e*P	**P**	**01 06 45.6 -0.3**
ZAK				*e*		01 08 28.5
ZAK				pmax	pmax	
	comp=Z,2.0nm,1.2s					
MORW	**Morawa**	**42.16**	**190**	*e*P	**P**	**01 06 54.5 -0.2**
PALK	**Pallekele**	**42.63**	**267**	P	**P**	**01 06 59.6 +0.8**
FORT	**Forrest**	**43.42**	**175**	*e*P	**P**	**01 07 04.5 -0.4**
	comp=Z,27nm,0.6s,mb5.2					
FORT	**Forrest**	**43.42**	**175**	*e*P	**P**	**01 07 04.7 -0.2**
	comp=Z,36nm,0.7s,mb5.2					
WMQ	**Urumqi**	**43.76**	**322**	P	**P**	**01 07 09.0 +1.5**
WMQ				sP	sP	01 07 19.2 +3.4
WMQ				PP	PP	01 08 53.3 +3.8
WMQ				S	**S**	**01 13 37.2 +0.1**
WMQ				sS	sS	01 13 54.1 +7.2
WMQ				SS	SS	01 16 46.0 -7.1
WMQ				ScS	ScS	01 17 02.8 -3.2
WMQ				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.5					
WMQ				pmax	pmax	
	comp=Z,120nm,3.0s					
WMQ				LR	LR	
	comp=N,530nm,15.0s,MS4.7					
WMQ				LR	LR	
	comp=E,310nm,13.0s,MS4.7					
WMQ				LR	LR	
	comp=Z,200nm,18.0s,MS4.1					
KMBL	**Kambalda**	**43.84**	**182**	*e*P	**P**	**01 07 07.4 -0.8**
	comp=Z,101nm,0.9s,mb5.5					
BOD	**Bodaibo**	**45.63**	**353**	*e*P	**P**	**01 07 17.9 -4.3**
NWAO	**Narrogin (SRO)**	**45.78**	**188**	*e*P	**P**	**01 07 23.6 0.0**
NWAO				pmax	pmax	
	comp=Z,54nm,1.6s					
NWAO	**Narrogin (SRO)**	**45.78**	**188**	*e*P	**P**	**01 07 23.9 +0.3**
	comp=Z,74nm,1.5s,mb5.4					
NWAO	**Narrogin (SRO)**	**45.78**	**188**	*e*P	**P**	**01 07 23.6 0.0**
	comp=Z,54nm,1.6s,mb5.2					
EIDS	**Eidsvold**	**46.31**	**145**	*e*P	**P**	**01 07 27.9 0.0**
EIDS	**Eidsvold**	**46.31**	**145**	*e*P	**P**	**01 07 28.0 0.0**
	comp=Z,18nm,1.4s,mb4.8					
BBOO	**Buckleboo**	**46.77**	**166**	*e*P	**P**	**01 07 31.3 -0.1**
	comp=Z,23nm,0.6s,mb5.3					
STKA	**Stephens Creek**	**47.52**	**159**	*e*P	**P**	**01 07 37.9 +0.6**
STKA				pmax	pmax	
	comp=Z,5.0nm,0.9s					
STKA	**Stephens Creek**	**47.52**	**159**	*e*P	**P**	**01 07 37.7 +0.4**
	comp=Z,17nm,0.9s,mb5.1					
STKA	**Stephens Creek**	**47.52**	**159**	P	**P**	**01 07 37.6 +0.3**
	comp=Z,21nm,0.9s,mb5.2,baz=340,slow=7.7,SNR=30					
STKA				LR	LR	01 29 31.8
	comp=Z,69nm,18.3s,MS3.7,baz=206,slow=38					
STKA	**Stephens Creek**	**47.52**	**159**	*e*P	**P**	**01 07 37.9 +0.6**
	comp=Z,5.5nm,0.9s,mb4.6					
PETK	**Petropavlovsk-**	**48.56**	**27**	P	**P**	**01 07 44.2 -1.0**
	comp=Z,3.0nm,0.7s,mb4.4,baz=202,slow=6.5,SNR=3.5					
PETK				LR	LR	01 29 30.0
	comp=Z,56nm,18.3s,MS3.6,baz=226,slow=38					
MK31	**Makanchi Array**	**48.58**	**323**	*e*P	**P**	**01 07 46.1 +0.7**
MKAR	**Makanchi Array**	**48.58**	**323**	*i* P	**P**	**01 07 45.7 +0.3**
MKAR				pmax	pmax	
	comp=Z,10.0nm,0.8s					
MKAR	**Makanchi Array**	**48.58**	**323**	P	**P**	**01 07 45.8 +0.5**
	comp=Z,9.8nm,0.8s,mb4.9,baz=123,slow=8.8,SNR=48					
CMSA	**Cobar Meteorol**	**48.78**	**155**	*e*P	**P**	**01 07 48.3 +1.2**
YAK	**Yakutsk**	**49.45**	**4**	P	**P**	**01 07 51.0 -0.8**
KSH	**Kashi**	**49.74**	**311**	*e*P	**P**	**01 07 56.6 +2.2**
KSH				*e*pP	pP	01 08 05.5 +5.1
KSH				*e*sP	sP	01 08 09.9 +7.2
KSH				*e*PcP	PcP	01 09 16.6 +1.3
KSH				*e*PP	PP	01 09 51.6 +2.6
KSH				*e*ScP	ScP	01 13 08.6 -1.5
KSH				*e*PcS	PcS	01 13 12.5 +0.5
KSH				*e*S	**S**	**01 15 01.9 -0.8**
KSH				*e*ScS	ScS	01 17 41.6 -3.7
KSH				*e*SS	SS	01 18 31.5 -3.7
KSH				pmax	pmax	
	comp=Z,95nm,3.9s					
KSH				LR	LR	
	comp=N,89nm,4.6s					
KSH				LR	LR	
	comp=E,91nm,4.4s					
TKM2	**Tokmak 2**	**51.17**	**315**	*e*P	**P**	**01 08 04.5 -0.7**
TKM2				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.4					
TKM2	**Tokmak 2**	**51.17**	**315**	*e*P	**P**	**01 08 04.5 -0.7**
	comp=Z,3.5nm,0.8s,mb4.3					
ZAA0	**Zalesovo Array**	**51.30**	**332**	*e*P	**P**	**01 08 04.8 -1.1**
ZALV	**Zalesovo Beam**	**51.30**	**332**	P	**P**	**01 08 05.4 -0.5**
	comp=Z,4.1nm,0.6s,mb4.5,baz=116,slow=7.7,SNR=17					
UCH	**Uchtor**	**51.68**	**314**	*e*P	**P**	**01 08 10.2 +1.2**
	comp=Z,524nm,0.6s					
AAK	**Ala-Archa**	**51.83**	**315**	*e*P	**P**	**01 08 10.7 +0.6**
AAK				pmax	pmax	
	comp=Z,5.0nm,1.3s,mb4.3					
AAK	**Ala-Archa**	**51.83**	**315**	P	**P**	**01 08 10.5 +0.4**
	comp=Z,0.6nm,0.4s,mb3.9,baz=125,slow=8.9,SNR=3.7					
AAK	**Ala-Archa**	**51.83**	**315**	*e*P	**P**	**01 08 10.7 +0.6**
	comp=Z,5.3nm,1.3s,mb4.3					
AML	**Almayashu**	**52.22**	**314**	*e*P	**P**	**01 08 13.6 +0.6**
AML				pmax	pmax	
	comp=Z,11nm,1.1s,mb4.7					
AML	**Almayashu**	**52.22**	**314**	*e*P	**P**	**01 08 13.6 +0.5**
	comp=Z,11nm,1.1s,mb4.7					
YNG	**Young**	**52.30**	**154**	*e*P	**P**	**01 08 14.6 +0.9**
	comp=Z,7.4nm,0.7s,mb4.7					
EKS2	**Erkin-Say**	**52.34**	**315**	*e*P	**P**	**01 08 14.0 +0.1**
EKS2				pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.4					
EKS2	**Erkin-Say**	**52.34**	**315**	*e*P	**P**	**01 08 14.0 +0.1**
	comp=Z,4.1nm,0.8s,mb4.4					
NVS	**Novosibirsk**	**52.58**	**332**	*e*P	**P**	**01 08 15.2 -0.3**
KURK	**Kurchatov**	**52.65**	**326***d*	*i*P	**P**	**01 08 16.1 +0.1**
KURK				pmax	pmax	
	comp=Z,35nm,1.2s,mb5.2					
KURK	**Kurchatov**	**52.65**	**326**	P	**P**	**01 08 16.0 0.0**
	comp=Z,9.9nm,0.9s,mb4.7,baz=119,slow=8.2,SNR=11					
KURK	**Kurchatov**	**52.65**	**326**	*e*P	**P**	**01 08 16.3 +0.3**
	comp=Z,32nm,1.1s,mb5.2					
CAN	**Canberra**	**53.44**	**154**	*e*P	**P**	**01 08 22.5 +0.5**
CAN				pmax	pmax	
	comp=Z,41nm,1.2s,mb5.2					
CAN	**Canberra**	**53.44**	**154**	*e*P	**P**	**01 08 22.5 +0.5**
	comp=Z,41nm,1.2s,mb5.2					
CNB	**Canberra Magne**	**53.59**	**154**	*e*P	**P**	**01 08 24.0 +0.9**
KBL	**Kabul**	**53.88**	**304**	*e*P	**P**	**01 08 25.6 +0.2**
DZM	**Mont Dzumac**	**54.34**	**129**	*e*LR	LR	01 24 09.3
	comp=Z,67nm,23.1s					
BVAR	**Borovoye Array**	**58.24**	**325**	P	**P**	**01 08 56.4 +0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=115,slow=7.0,SNR=12					
BRVK	**Borovoye**	**58.31**	**325***c*	*i*P	**P**	**01 08 56.2 -0.6**
BRVK				pmax	pmax	
	comp=Z,10.0nm,1.2s,mb4.7					
BRVK	**Borovoye**	**58.31**	**325**	*e*P	**P**	**01 08 56.5 -0.2**

RPZ	Rata Peaks	70.80	146	P	P	01 10 18.5	+0.1
	comp=Z,4.7nm,0.6s,mb4.6,baz=291,slow=3.5,SNR=5.6						
UMR	Umm Al-Rimmam	71.74	297	eP	P	01 10 23.8	-0.8
UMR				AMb	AMB	01 10 25.1	
	comp=Z,17nm,0.8s,mb5.0						
RDF	Al-Radifah	71.94	296	eP	P	01 10 25.1	-0.6
RDF				AMb	AMB	01 10 25.8	
	comp=Z,31nm,0.9s,mb5.3						
MIB	Mutribah	72.05	297	eP	P	01 10 25.6	-0.8
MIB				AMb	AMB	01 10 26.4	
	comp=Z,34nm,0.7s,mb5.4						
ZEI	Tsey	74.03	311	eP	P	01 10 35.7	-2.2
ZEI				e		01 10 48.4	
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
KIV	Kislovodsk	74.85	312	eP	P	01 10 43.5	+0.8
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=Z,53nm,18.0s,MS3.9						
KIV	Kislovodsk	74.85	312	eP	P	01 10 42.6	-0.1
	comp=Z,7.3nm,0.7s,mb4.7						
KLMR	Klimovskoe	76.18	330	eP	P	01 10 48.1	-1.8
KLMR				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
COLD	Coldfoot	76.89	24	eP	P	01 10 55.0	+1.2
	comp=Z,9.2nm,1.1s,mb4.6						
TRF	Thorofare Moun	76.97	27	eP	P	01 10 55.3	+0.9
	comp=Z,30nm,1.7s,mb5.0						
MCK	McKinley	77.56	27	eP	P	01 10 57.8	+0.1
MCK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
MCK	McKinley	77.56	27	eP	P	01 10 57.8	+0.2
	comp=Z,19nm,1.1s,mb4.9						
COLA	College	77.96	26	eP	P	01 10 58.1	-1.8
OBN	Obninsk	78.06	324	eP	P	01 11 01.0	+0.4
OBN				i		01 11 11.9	
OBN				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.9						
OBN	Obninsk	78.06	324	P	P	01 10 58.7	-1.9
MALT	Malatya	78.56	307	eP	P	01 11 04.2	+0.5
MALT				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
MALT	Malatya	78.56	307	eP	P	01 11 04.2	+0.5
	comp=Z,4.5nm,1.1s,mb4.3						
CASY	Casey	79.35	185	P	P	01 11 06.3	-1.0
	comp=Z,4.5nm,0.9s,mb4.4						
ARCES	ARCESS Array B	81.05	339	P	P	01 11 17.3	+0.7
	comp=Z,1.2nm,0.6s,mb4.0,baz=61,slow=6.0,SNR=6.7						
ARCES	ARCESS Array B	81.05	339	P	P	01 11 17.3	+0.7
BRTR	Keskin Array B	82.05	309	P	P	01 11 21.7	-0.8
	comp=Z,1.2nm,0.8s,mb3.9,baz=106,slow=4.0,SNR=5.2						
FINES	FINESS Array B	82.56	331	P	P	01 11 23.7	-1.0
	comp=Z,4.7nm,1.1s,mb4.4,baz=64,slow=8.7,SNR=5.1						
FINES	FINESS Array B	82.56	331	P	P	01 11 23.7	-1.0
INK	Inuvik	82.98	21	eP	P	01 11 27.1	+0.4
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	82.98	21	eP	P	01 11 27.1	+0.4
	comp=Z,7.1nm,1.0s,mb4.7						
AKASG	Malin Array Be	83.09	320	P	P	01 11 26.2	-1.4
	comp=Z,0.4nm,0.4s,mb3.8,baz=64,slow=5.2,SNR=5.2						
SIT	Sitka	85.34	33	eP	P	01 11 37.8	-1.2
SUW	Suwalki	85.91	324	P	P	01 11 41.5	-0.4
BUR08	Bucovina Ar. S	86.36	318	eP	P	01 11 44.4	+0.1
KMBO	Kilima Mbogo	86.76	268	i P	P	01 11 48.7	+1.8
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMBO	Kilima Mbogo	86.76	268	P	P	01 11 47.5	+0.6
	comp=Z,8.0nm,1.0s,mb4.9,baz=53,slow=7.5,SNR=17						
KMBO	Kilima Mbogo	86.76	268	eP	P	01 11 48.1	+1.2
	comp=Z,15nm,1.2s,mb5.1						
KWP	Kalwaria Pacla	87.42	320	eP	P	01 11 49.0	-0.4
KWP				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
KWP	Kalwaria Pacla	87.42	320	eP	P	01 11 49.0	-0.4
	comp=Z,20nm,1.4s,mb5.2						
UZH	Uzhgorod	87.97	319	⇑i P	P	01 11 52.0	0.0
UZH				e		01 12 04.0	
NOA	NORSAR Array B	89.47	333	P	P	01 11 58.4	-0.4
	comp=Z,0.6nm,0.7s,mb4.0,baz=78,slow=4.2,SNR=2.7						
RES	Resolute Bay	89.56	10	eP	P	01 11 59.0	0.0
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
RES	Resolute Bay	89.56	10	eP	P	01 11 59.0	-0.1
	comp=Z,5.2nm,0.9s,mb4.9						
PSZ	Piszkesteto	89.71	319	P	P	01 12 00.3	+0.1
PPT	Papeete	90.72	108	eLR	LR	01 41 03.0	
	comp=Z,181nm,33.2s						
YKA	Yellowknife Ar	92.57	23	P	P	01 12 12.7	-0.4
	comp=Z,0.6nm,0.7s,mb4.1,baz=302,slow=4.3,SNR=9.7						
YKA				PKKPbc	PKKPbc	01 29 23.7	-4.2
	comp=Z,0.8nm,0.7s,baz=125,slow=2.4,SNR=16						
YKA	Yellowknife Ar	92.57	23	P	P	01 12 12.7	-0.4
YKA				PKKPbc	PKKPbc	01 29 23.8	-4.2
GERES	GERESS Array B	93.23	322	P	P	01 12 16.6	+0.1
	comp=Z,0.6nm,0.8s,mb4.1,baz=64,slow=8.9,SNR=4.3						
GERES				LR	LR	01 55 57.4	
	comp=Z,50nm,18.2s,MS4.0,baz=266,slow=37						
STU	Stuttgart	95.96	323	P	P	01 12 29.2	+0.1
DAVOX	Davos/Dischmat	96.44	321	P	P	01 12 31.4	+0.2
	comp=Z,2.8nm,0.8s,mb4.7,baz=166,slow=1.6,SNR=3.6						
DAVOS	Davos	96.46	321	P	P	01 12 31.4	0.0
NVAR	Mina Array Bea	103.00	45	P	Pdif	01 13 01.6	+1.2
	comp=Z,0.9nm,0.7s,baz=275,slow=3.9,SNR=3.6						
VNA3	Neumayer Olymp	115.04	195	ePdiff	Pdif	01 13 54.7	+0.8
VNA3				e		01 17 42.7	
TXAR	Lajitas Array	118.10	47	PKP	PKPdf	01 17 49.0	-0.6
	comp=Z,0.4nm,0.8s,baz=221,slow=1.2,SNR=4.4						
TXAR	Lajitas Array	118.10	47	PKP	PKPdf	01 17 49.0	-0.6
SIUC	Southern Illin	121.12	30	ePKPdf	PKPdf	01 17 53.0	-2.2
PLCA	Paso Flores	149.40	158	PKPbc	PKPbc	01 18 50.8	-0.5
	comp=Z,6.7nm,1.1s,baz=206,slow=3.1,SNR=6.7						
CPUP	Villa Florida	166.40	176	PKPab	PKPab	01 20 08.7	-0.5
	comp=Z,2.2nm,0.7s,baz=157,slow=5.8,SNR=6.2						
LPAZ	La Paz	168.02	109	PKP	PKPdf	01 19 09.6	+0.2
	comp=Z,2.0nm,0.9s,baz=207,slow=9.0,SNR=7.1						
LPAZ				PKPab	PKPab	01 20 16.3	-0.7
	comp=Z,2.2nm,1.0s,baz=333,slow=4.7,SNR=5.3						

*IDC **07** 01:24:08.3±100.0, 15°.81S×174°.37E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, Error ellipse: s-maj=1741.0km s-min=157.0km az=71.0*
*NOU **07** 01:25:57.1±32.0, 20°.11S×168°.17E, h30km, MD2.9, ML2.4*
ISC 07 01:25:10.7±4.8, **18°.02S**±0°.09×**167°.8E**±0°.6, **h35**km, **n7**, σ0°**92**/8, **mb3.8**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.19	191	eS	Sn	01 26 58.9	-1.0
NOUC	Port Laguerre	4.28	199	eP	Pn	01 26 13.5	+0.2
NOUC				eP	Sn	01 27 00.6	-1.5
NOUC				AMP		01 27 08.5	
	comp=Z,36nm,0.6s						
LASL	Noumea	4.34	195	eS	Sn	01 27 04.5	+1.0
NORM	Noumea	4.35	196	eS	Sn	01 27 05.4	+1.5
STKA	Stephens Creek	27.36	235	P	P	01 30 52.0	-0.5
	comp=Z,2.0nm,0.8s,mb3.7,baz=56,slow=7.3,SNR=4.1						
WRA	Warramunga Arr	31.64	261	P	P	01 31 30.9	+0.2
	comp=Z,0.6nm,0.6s,mb3.6,baz=79,slow=6.8,SNR=3.4						
ASAR	Alice Springs	32.09	254	P	P	01 31 34.8	+0.2
	comp=Z,1.8nm,0.5s,mb4.2,baz=79,slow=9.0,SNR=19						

*ISCJB **07** 01:32:45.9±0.5, 26°.08N±0°.04×140°.69E±0°.09, h407km±4km, mb3.8/41, Error ellipse: s-maj=12.3km s-min=6.2km az=168.2*
*IDC **07** 01:32:46.2±0.6, 26°.07N×140°.74E, h395km±6km, mb3.5/17, mb1 3.7/19, mb1mx3.6/26, mbtmp3.6/19, Error ellipse: s-maj=15.4km s-min=9.8km az=87.0*
*JMA **07** 01:32:48.7±0.2, 26°.29N×141°.30E, h412km, M4.6*
*NEIC **07** 01:32:49.3±0.7, 26°.04N×140°.68E, h432km±8km, mb3.9/22, Error ellipse: s-maj=6.3km s-min=4.5km az=80.0*
ISC 07 01:32:47.2±0.5, **26°.07N**±0°.05×**140°.75E**±0°.09, **h404**km±4km, **n66**, σ0°**90**/74, **mb3.8**/41, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.40	66	P	Pn	01 33 41.0	+0.8
JHHJ				S	S	01 34 22.1	-0.9
CBIJ	Chichi jima	1.65	51	P	Pn	01 33 41.6	+0.2
CBIJ				S	S	01 34 23.4	-1.8
CBIJ	Chichi jima	1.65	51	P	Pn	01 33 41.2	-0.2
	58nm,0.3s,baz=287,slow=22,SNR=71						
CBIJ				S	S	01 34 22.3	-2.9
	74nm,0.3s,baz=233,slow=20,SNR=7.5						
JHJ2	Mitsune	7.07	354	P	Pn	01 34 33.7	+2.1
JHJ	Hachijo jima 2	7.08	353	P	Pn	01 34 31.3	-0.4
	123nm,0.3s,baz=221,slow=19,SNR=27						
JHJ				S	S	01 35 50.6	-6.6
	13nm,0.3s,baz=127,slow=20,SNR=2.4						
TK01	Tokai 1	8.15	341	P	P	01 34 46.7	+2.8
BSO1	Boso 1	8.56	1	P	P	01 34 48.6	+0.1
BSO1				S	S	01 36 23.6	-4.5
JWZ	Kozaga	8.63	331	P	P	01 34 51.8	+2.5
BSO3	Boso 3	8.71	359	P	P	01 34 50.6	+0.4
BSO3				S	S	01 36 27.0	-4.2
BSO4	Boso 4	8.90	358	P	P	01 34 53.3	+1.0
BSO4				eS	S	01 36 29.8	-5.4
JIE	Ise	9.01	338	P	P	01 34 56.1	+2.7
JOD2	Odawara 2	9.28	352	P	P	01 34 59.2	+2.7
JOD2				S	S	01 36 40.2	-2.7
JHU	Hanno	9.84	353	P	P	01 35 02.3	-0.4
JHU				S	S	01 36 46.4	-7.9
JRY	Ryogami san	10.05	351	P	P	01 35 05.5	+0.5
JAG	Ashikaga	10.39	354	P	P	01 35 08.3	-0.4
JHO	Hitachi	10.52	359	P	P	01 35 10.1	-0.1
MJAR	Matsushiro Arr	10.67	349	S	S	01 37 05.7	-5.5
	0.9nm,0.3s,baz=180,slow=15,SNR=4.0						
MAJO	Matsushiro	10.67	349	ePn	Pn	01 35 13.7	+0.9
GUMO	Guam	13.00	162	P	P	01 35 39.0	+1.1
	15nm,0.3s,baz=333,slow=11,SNR=4.2						
KSRS	Korea Array	15.73	319	P	P	01 36 12.1	+4.9
	0.9nm,0.3s,baz=145,slow=8.9,SNR=17						
SONM	Songino Array	34.59	318	P	P	01 38 59.5	-0.3
	0.8nm,0.5s,mb3.3,baz=120,slow=6.5,SNR=7.0						
COEN	Coen	39.85	176	eP	P	01 39 44.1	+0.4
	41nm,0.6s,mb4.9						
BILL	Bilibino	44.75	13	eP	P	01 40 22.8	+0.8
	1.5nm,0.3s,mb3.8						
WRAB	Tennant Creek	46.14	188	eP	P	01 40 33.1	-0.3
	9.4nm,0.8s,mb4.2						
WRA	Warramunga Arr	46.15	188	P	P	01 40 33.5	0.0
	5.6nm,0.3s,mb4.4,baz=6.6,slow=7.7,SNR=29						
ZALV	Zalesovo Beam	49.43	320	P	P	01 40 57.6	-0.3
	0.6nm,0.3s,mb3.4,baz=108,slow=4.7,SNR=2.9						
ASAR	Alice Springs	49.88	188	P	P	01 41 01.4	-0.2
	0.6nm,0.3s,mb3.4,baz=3.2,slow=5.5,SNR=14						
MK31	Makanchi Array	50.15	310	eP	P	01 41 03.6	+0.2
MKAR	Makanchi Array	50.15	310	P	P	01 41 03.6	+0.3
	1.4nm,0.6s,mb3.5,baz=101,slow=8.0,SNR=17						
KURK	Kurchatov	52.80	315	eP	P	01 41 22.2	-0.4
	2.2nm,0.6s,mb3.6						
AAK	Ala-Archa	55.79	305	eP	P	01 41 43.6	-0.5
	1.2nm,0.6s,mb3.4						
UCH	Uchtor	55.82	305	eP	P	01 41 45.4	+1.1
	2.0nm,0.6s,mb3.6						
KDAK	Kodiak Island	55.95	36	P	P	01 41 45.5	+0.6
	6.0nm,0.5s,mb4.2,baz=284,slow=3.4,SNR=17						
AML	Almayashu	56.44	305	eP	P	01 41 48.8	+0.2
	1.3nm,0.4s,mb3.6						
STKA	Stephens Creek	57.62	179	P	P	01 41 56.4	-0.4
	1.8nm,0.4s,mb3.7,baz=354,slow=7.8,SNR=8.9						
TRF	Thorofare Moun	57.62	30	eP	P	01 41 57.2	+0.8
	4.9nm,0.8s,mb3.9						
FORT	Forrest	57.81	193	eP	P	01 41 57.9	-0.2
	9.4nm,0.5s,mb4.4						
BVAR	Borovoye Array	57.94	318	P	P	01 41 58.9	+0.2
	7.2nm,0.4s,mb4.4,baz=87,slow=7.0,SNR=43						
BRVK	Borovoye	58.00	318	eP	P	01 41 59.0	-0.2
	5.0nm,0.5s,mb4.1						
MCK	McKinley	58.25	30	eP	P	01 42 01.1	+0.4
	4.0nm,0.6s,mb3.9						
COLA	College	58.83	28	eP	P	01 42 05.5	+1.0
	4.1nm,0.6s,mb3.9						
ARU	Arti	64.45	322	eP	P	01 42 41.2	-0.7
	3.5nm,0.5s,mb4.2						
INK	Inuvik	64.50	24	P	P	01 42 41.6	-0.2
	1.6nm,0.5s,mb3.8,baz=306,slow=7.0,SNR=19						
INK	Inuvik	64.50	24	eP	P	01 42 41.7	-0.2
	1.7nm,0.5s,mb3.8						
ABKAR	Akbulak array	64.89	314	eP	P	01 42 44.5	-0.3
	1.5nm,0.5s,mb3.9						
RES	Resolute Bay	73.36	13	eP	P	01 43 35.5	-0.1
	2.0nm,0.8s,mb3.7						
KEV	Kevo	73.53	341	ep	P	01 43 36.4	-0.3
YKW3	Yellowknife Ar	73.62	28	eP	P	01 43 37.1	-0.2
YKA	Yellowknife Ar	73.65	28	P	P	01 43 37.6	0.0
	1.4nm,0.6s,mb3.8,baz=295,slow=5.8,SNR=27						
ARCES	ARCESS Array B	74.09	341	P	P	01 43 40.0	+0.1
	3.4nm,0.8s,mb4.0,baz=80,slow=8.4,SNR=17						
JOF	Joensuu	75.43	334	ep	P	01 43 46.8	-0.8
	1.4nm,0.3s,mb4.1						
KAF	Kangasniemi	77.84	334	ep	P	01 44 00.0	-1.0
	0.7nm,0.4s,mb3.6						
FINES	FINESS Array B	78.30	334	P	P	01 44 02.8	-0.7
	1.6nm,0.4s,mb4.0,baz=69,slow=4.8,SNR=35						
NEW	Newport	78.53	42	eP	P	01 44 04.7	-0.3
	2.0nm,0.7s,mb3.9						
NVAR	Mina Array Bea	82.16	51	P	P	01 44 24.1	-0.2
	0.7nm,0.6s,mb3.6,baz=274,slow=5.7,SNR=3.9						
HLID	Hailey	82.38	45	eP	P	01 44 26.3	+1.0
	1.3nm,0.9s,mb3.7						
AKASG	Malin Array Be	82.68	323	P	P	01 44 25.7	-1.0
	1.3nm,0.5s,mb3.9,baz=53,slow=5.4,SNR=5.6						
FFC	Flin Flon	83.29	31	eP	P	01 44 30.0	+0.3
	1.3nm,0.8s,mb3.7						
NOA	NORSAR Array B	84.08	338	P	P	01 44 31.9	-1.7
	0.5nm,0.5s,mb3.5,baz=44,slow=4.9,SNR=3.7						
NAO01	NORSAR Array S	84.34	338	eP	P	01 44 33.9	-0.9
	3.0nm,0.9s,mb4.0						
TPAW	Teton Pass	84.60	44	eP	P	01 44 36.1	-0.3
	1.2nm,0.8s,mb3.7						
DUG	Dugway	85.07	48	eP	P	01 44 38.1	-0.7
	1.4nm,0.6s,mb3.9						
HWUT	Hardware Ranch	85.17	46	eP	P	01 44 39.7	+0.4
	1.7nm,0.9s,mb3.8						
BRTR	Keskin Array B	85.75	312	P	P	01 44 41.6	-0.6
	0.6nm,0.6s,mb3.5,baz=72,slow=5.8,SNR=3.4						
PDAR	Pinedale Array	85.84	44	P	P	01 44 42.9	+0.3
	0.5nm,0.8s,mb3.3,baz=316,slow=4.1,SNR=4.9						
TORD	Torodi Ar. Bea	124.27	309	PKP	PKPdf	01 50 59.0	-0.5
	0.2nm,0.7s,baz=53,slow=1.4,SNR=4.9						

*DDA **07** 01:43:22.8, 38°.02N×29°.12E, h14km±1km, Md2.7*
*ISK **07** 01:43:22.6, 38°.03N×29°.11E, h6km, MD2.7*
*ISCJB **07** 01:43:23.2±0.5, 38°.02N±0°.03×29°.12E±0°.06, h7km±7km, Error ellipse: s-maj=9.6km s-min=3.8km az=29.7*
*CSEM **07** 01:43:23.1±0.1, 38°.02N×29°.10E, h10km, MD2.7, Error ellipse: s-maj=4.2km s-min=2.5km az=112.0*
ISC 07 01:43:23.4±0.5, **38°.03N**±0°.03×**29°.11E**±0°.06, **h10**km±6km, **n24**, σ0°**59**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.28	192	ePG	Pg	01 43 28.8	-0.2
DENT				eSG	Sg	01 43 33.1	+0.3
DENT	Denizli	0.28	192	ePg	Pg	01 43 28.8	-0.2
DENT				eSg	Sg	01 43 33.1	+0.3
DNZL	Cakiroluk	0.34	188	i P	Pg	01 43 29.9	-0.3
DNZL				i S	Sg	01 43 35.2	+0.5
DNZL	Cakiroluk	0.34	188	i P	Pg	01 43 29.9	-0.3
DNZL				i S	Sg	01 43 35.2	+0.5
KHL	Karahalli	0.44	48	ePG	Pg	01 43 31.9	-0.1
KHL				eSG	Sg	01 43 37.7	-0.2
KHL	Karahalli	0.44	48	ePg	Pg	01 43 31.9	-0.2
KHL				eSg	Sg	01 43 37.7	-0.2
KHAL	Karahalli	0.46	41	i P	Pg	01 43 32.5	+0.1
KHAL				i S	Sg	01 43 39.0	+0.6
KHAL	Karahalli	0.46	41	i P	Pg	01 43 32.5	+0.1
KHAL				i S	Sg	01 43 39.0	+0.6
KULA	Kula-Manisa	0.60	324	ePG	Pg	01 43 34.6	-0.5
KULA	Kula-Manisa	0.60	324	ePg	Pg	01 43 34.6	-0.5
GLHS	Glhisar (BURDU	0.92	160	ePG	Pg	01 43 41.0	-0.2
GLHS	Glhisar (BURDU	0.92	160	ePg	Pg	01 43 41.0	-0.2
AYDN	Tasoluk	1.04	250	i P	Pb	01 43 42.3	-1.1
AYDN				i S	Sb	01 43 57.9	+0.8
AYDN	Tasoluk	1.04	250	i P	Pb	01 43 42.3	-1.1
AYDN				i S	Sb	01 43 57.9	+0.8
DEMI	Demirci	1.06	343	i P	Pb	01 43 44.6	+0.8
DEMI				i S	Sb	01 43 58.5	+0.8
DEMI	Demirci	1.06	343	i P	Pb	01 43 44.6	+0.8
DEMI				i S	Sb	01 43 58.5	+0.8
GDZ	Gediz	1.10	15	i P	Pb	01 43 43.8	-0.7
GDZ				i S	Sb	01 43 58.0	-0.9
GDZ	Gediz	1.10	15	i P	Pb	01 43 43.8	-0.7
GDZ				i S	Sb	01 43 58.0	-0.9
YER	Yerkesik	1.11	217	ePN	Pn	01 43 44.2	-0.7
YER	Yerkesik	1.11	217	ePn	Pn	01 43 44.2	-0.7
SHUT	Suhut-Afyon	1.25	65	ePN	Pn	01 43 47.5	+0.6
SHUT	Suhut-Afyon	1.25	65	ePn	Pn	01 43 47.5	+0.6
ALT	Altintas	1.29	37	ePN	Pn	01 43 47.9	+0.4
ALT	Altintas	1.29	37	ePn	Pn	01 43 47.9	+0.4

BJI 07 01:56:36.6, 33°.21N×117°.46E, h16km, **ML3.8**/12, **Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	Nanjing	1.65	134	ePn	Pn	01 57 04.8	-0.1
NJ2				Pg	Pg	01 57 06.8	-1.5
NJ2				Sn	Sn	01 57 24.5	-1.2
NJ2				Sg	Sg	01 57 28.1	-1.6
NJ2				smax			
	comp=N,2μm,0.6s						
NJ2				smax			
	comp=E,1μm,0.2s						
TIA	Tai'an	3.01	355	Pg	Pg	01 57 30.7	-3.5
TIA				Sg	Sg	01 58 09.6	-3.6
TIA				smax			
	comp=N,280nm,0.3s						
TIA				smax			
	comp=E,150nm,0.4s						
WHN	Wuhan	3.75	226	Pg	Pg	01 57 44.8	-3.7
WHN				Sn	Sn	01 58 16.5	-1.1
WHN				Sg	Sg	01 58 31.6	-5.5
WHN				smax			
	comp=N,760nm,0.3s						
WHN				smax			
	comp=E,830nm,0.8s						
XAN	Xi'an	7.17	279	Pn	Pn	01 58 35.6	+15
XAN				Pg	Pn	01 58 52.9	+32
XAN				Sn	Sn	02 00 03.0	+21
XAN				Sg	Sn	02 00 23.0	+41
XAN				smax			
	comp=N,16nm,0.7s						
XAN				smax			
	comp=E,9.0nm,0.7s						
LZH	Lanzhou	11.58	288	eP	Pn	01 59 21.5	+0.4
LZH				pP		01 59 24.5	

*SZGRF **07** 02:17:11.9, 16°.64N×120°.23E, h33km, mb5.1, Luzon, Philippine Islands*
*BJI **07** 02:17:13.5, 14°.88N×120°.77E, h135km, mB4.8/25, mb4.8/49*
*ISCJB **07** 02:17:18.6±0.2, 15°.24N±0°.02×120°.58E±0°.03, h153km±2km, mb4.8/149, Error ellipse: s-maj=4.8km s-min=3.1km az=176.6*
*MAN **07** 02:17:18, 15°.30N×120°.30E, h122km, mb5.3, ML4.3, MS4.5*
MAN INTENSITY II - BAGUIO CITY; INTENSITY I - LA TRINIDAD.
*MOS **07** 02:17:18.6±0.9, 15°.26N×120°.55E, h151km, mb5.2/61, Error ellipse: s-maj=11.3km s-min=4.7km az=122.5*
*IDC **07** 02:17:19.2±0.5, 15°.24N×120°.57E, h146km±4km, mb4.3/23, mb1 4.4/24, mb1mx4.3/28, mbtmp4.3/24, MS3.4/6, Ms1 3.4/6, ms1mx3.1/29, Error ellipse: s-maj=13.0km s-min=7.0km az=83.0*
*GCMT **07** 02:17:19.1±0.5, 15°.42N×120°.53E, h146km±3km, MW4.9/65, Moment Tensor Solution. s19,c19; s65,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.49±.10; $M_{\theta\theta}$2.28±.11; $M_{\phi\phi}$-0.79±.14; $M_{r\theta}$-0.07±.10; $M_{\theta\phi}$-0.84±.14; $M_{\phi r}$-1.25±.10; Best double couple: $M_0$2.51100×10^{16} NP1:ϕ_s72.00000°, δ54.00000°, λ-142.00000°. NP2: ϕ_s317.00000°, δ60.00000°, λ-43.00000°. Principal axes: T 2.5120, Plg4.0000°, Azm16.0000°; N -0.0080, Plg39.0000°, Azm109.0000°; P -2.5100, Plg51.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 02:17:19.1±0.4, 15°.23N×120°.56E, h145km±3km, mb4.9/78 Error ellipse: s-maj=5.2km s-min=3.4km az=81.0*
NEIC Felt [II PIVS] at Baguio and [I PIVS] at La Trinidad. Also felt at Mabalacat.
*DJA **07** 02:17:22, 15°.33N×120°.55E, h171km, Mw5.1/9*
ISC 07 02:17:19.7±0.2, **15°.26N**±0°.02×**120°.57E**±0°.03, **h148**km±2km, **h145**km±4.5km: **pP-P, n394**, σ1**00**/406, **mb4.8**/149, **10C-15D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.82	309	eP	Pn	02 17 40.0	-2.8
SCZP				eS	Sn	02 17 54.1	-6.4
BALP	Baler	1.08	64	eP	Pn	02 17 45.7	+0.7
TGY	Tagaytay City	1.20	163	P	Pn	02 17 46.3	+0.2
	971nm,0.3s,baz=272,slow=2.7,SNR=83						
TGY				S	Sn	02 18 05.4	-1.0
	1μm,0.3s,baz=335,slow=17,SNR=12						
TGY	Tagaytay City	1.20	163	⇓eP	Pn	02 17 46.8	+0.7
TGY				i S	Sn	02 18 09.1	+2.7
BOLP	Bolinao	1.28	330	eP	Pn	02 17 44.5	-2.4
BOLP				eS	Sn	02 17 55.8	-12
POLP	Polilio Island	1.42	112	eP	Pn	02 17 49.3	+1.0
LUBP	Lubang	1.55	192	eP	Pn	02 17 48.9	-0.7
LUBP				eS	Sn	02 18 09.2	-3.4
PGP	Puerto Galera	1.79	168	⇑iP	Pn	02 17 51.8	-0.4
CAUP	Cauayan	2.06	35	eP	Pn	02 17 56.0	+0.5
BOAC	Boac	2.17	145	eP

WHN			S	S	02 23 54.8	-5.7
WHN			pmax	pmax		
	comp=Z,36nm,1.1s					
WHN			LR	LR		
	comp=N,150nm,5.9s					
WHN			LR	LR		
	comp=E,280nm,11.9s					
WHN			LR	LR		
	comp=Z,330nm,12.0s					
NJ2	**Nanjing**	**16.79 355**	*e*P	**Pn**	**02 21 07.1**	**+1.0**
NJ2			sP	sP	02 21 50.5	+0.4
NJ2			S	**S**	**02 24 11.0**	**-1.8**
NJ2			pmax	pmax		
	comp=Z,60nm,1.1s					
NJ2			pmax	pmax		
	comp=Z,150nm,4.8s					
KSM	**Kuching**	**17.04 217**	P	**Pn**	**02 21 11.6**	**+2.4**
GYA	**Guiyang**	**17.10 313**	⇓*i*P	**Pn**	**02 21 10.2**	**+0.3**
GYA			PP		02 21 30.0	
GYA			sP	sP	02 21 50.6	-3.0
GYA			S	**S**	**02 24 15.4**	**-4.4**
GYA			SS		02 24 45.8	
GYA			pmax	pmax		
	comp=Z,20nm,0.8s					
GYA			pmax	pmax		
	comp=Z,120nm,4.2s					
GYA			LR	LR		
	comp=N,3μm,10.0s					
GYA			LR	LR		
	comp=E,2μm,9.8s					
GYA			LR	LR		
	comp=Z,3μm,11.7s					
ENH	**Enshi**	**18.08 328**	*e*P	**P**	**02 21 21.6**	**+1.7**
	comp=Z,33nm,0.9s					
KMI	**Kunming**	**19.38 303**	⇓P	**P**	**02 21 36.7**	**+2.6**
KMI			PP		02 22 01.8	
KMI			sP	sP	02 22 18.6	-0.2
KMI			S	**S**	**02 25 04.5**	**-1.0**
KMI			SS		02 25 40.4	
KMI			pmax	pmax		
	comp=Z,50nm,1.0s					
KMI			pmax	pmax		
	comp=Z,130nm,3.1s					
KMI			LR	LR		
	comp=N,280nm,14.7s					
KMI			LR	LR		
	comp=E,180nm,14.2s					
KMI			LR	LR		
	comp=Z,130nm,12.6s					
NST	**Nakhon Sawan**	**19.70 274**	P	**P**	**02 21 38.2**	**+0.5**
	comp=Z,81nm,0.8s					
KTGM	**Kuala Trenggan**	**19.77 242**	P	**P**	**02 21 39.8**	**+1.3**
KAPI	**Kappang**	**20.16 182**	P	**P**	**02 21 42.8**	**+0.2**
	comp=Z,10nm,0.5s,baz=7.1,slow=6.1,SNR=13					
KAPI			S	**S**	**02 25 21.1**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=47,slow=18,SNR=2.9					
KAPI	**Kappang**	**20.16 182**	P	**P**	**02 21 42.8**	**+0.2**
KAPI			S	**S**	**02 25 21.1**	**+0.2**
CHRT	**Chiangrai**	**20.34 286**	P	**P**	**02 21 45.0**	**+0.5**
	comp=Z,395nm,0.7s					
CMAR	**Chiang Mai Arr**	**20.94 282**	P	**P**	**02 21 51.7**	**+0.8**
CMAR					02 25 53.5	
CMAR	**Chiang Mai Arr**	**20.94 282**	P	**P**	**02 21 51.7**	**+0.8**
	comp=Z,86nm,0.8s,baz=97,slow=7.8,SNR=203					
CMAR			PcP	PcP	02 25 53.5	+0.7
	comp=Z,1.6nm,0.5s,baz=66,slow=0.6,SNR=6.1					
CMAR			ScP	ScP	02 29 16.8	+1.0
	comp=Z,0.9nm,0.3s,baz=337,slow=0.4,SNR=5.9					
CMAR			LR	LR	02 30 18.5	
	comp=Z,81nm,18.5s,baz=127,slow=37					
CMAR	**Chiang Mai Arr**	**20.94 282**	P	**P**	**02 21 51.7**	**+0.8**
CMAR			PcP	PcP	02 25 53.5	+0.7
CMAR			ScP	ScP	02 29 16.8	+1.0
CMAR			LR	LR	02 30 18.5	
CHG	**Chiang Mai**	**20.98 283**	⇓P	**P**	**02 21 51.3**	**0.0**
	comp=Z,44nm,0.7s					
CHTO	**Chiang Mai**	**20.98 283**	*e*P	**P**	**02 21 51.2**	**-0.1**
CHTO			pmax	pmax		
	comp=Z,32nm,0.8s					
CHTO	**Chiang Mai**	**20.98 283**	*e*P	**P**	**02 21 51.2**	**-0.1**
	comp=Z,32nm,0.8s					
MYKOM	**Kota Tinggi**	**21.24 233**	P	**P**	**02 21 55.5**	**+1.3**
XAN	**Xi'an**	**21.46 333**	P	**P**	**02 21 56.0**	**-0.2**
XAN			pP		02 22 22.3	
XAN			sP	sP	02 22 38.5	-2.9
XAN			S	**S**	**02 25 46.8**	**+1.3**
XAN			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9					
KGM	**Kluang**	**21.51 234**	P	**P**	**02 21 57.6**	**+0.6**
CD2	**Chengdu**	**21.91 318**	⇓*i*P	**P**	**02 22 01.4**	**+0.4**
CD2			pP		02 22 29.2	
CD2			PP		02 22 34.6	
CD2			sP	sP	02 22 46.3	0.0
CD2			S	**S**	**02 25 50.1**	**-2.9**
CD2			PcP	PcP	02 25 56.1	+1.7
CD2			SS		02 26 42.4	
CD2			pmax	pmax		
	comp=Z,150nm,1.0s,mb5.4					
CD2			pmax	pmax		
	comp=Z,290nm,3.6s					
CD2			LR	LR		
	comp=N,500nm,14.9s					
CD2			LR	LR		
	comp=Z,200nm,15.5s					
KULM	**Kulim**	**21.94 245**	P	**P**	**02 22 01.0**	**-0.5**
KULM	**Kulim**	**21.94 245**	*e*P	**P**	**02 21 59.5**	**-2.0**
	comp=Z,13nm,0.6s,mb4.5					
FRIM	**Kepong**	**22.16 239**	P	**P**	**02 22 03.2**	**-0.6**
KSRS	**Korea Array**	**23.05 15**	P	**P**	**02 22 11.4**	**-0.5**
	comp=Z,13nm,0.9s,mb4.4,baz=194,slow=11,SNR=31					
CBIJ	**Chichi jima**	**23.30 56**	P	**P**	**02 22 12.8**	**-1.5**
	comp=Z,24nm,0.7s,mb4.8,baz=282,slow=20,SNR=4.6					
CBIJ			LR	LR	02 29 18.9	
	comp=Z,70nm,21.5s,baz=116,slow=31					
PSI	**Prapat**	**24.67 242**	P	**P**	**02 22 27.1**	**+0.2**
PSI					02 26 01.4	
PSI	**Prapat**	**24.67 242**	P	**P**	**02 22 27.1**	**+0.2**
	comp=Z,32nm,0.7s,mb5.0,baz=53,slow=5.6,SNR=28					
PSI			PcP	PcP	02 26 01.4	+0.9
	comp=Z,6.7nm,0.8s,baz=333,slow=2.3,SNR=5.4					
PSI			ScP	ScP	02 29 25.8	+0.2
	comp=Z,13nm,1.0s,baz=32,slow=13,SNR=5.8					
BJI	**Beijing**	**24.99 352**	P	**P**	**02 22 30.7**	**+1.2**
BJI			pP		02 22 57.9	
BJI			sP	sP	02 23 13.3	-4.5
BJI			PcP	PcP	02 26 00.6	-0.1
BJI			S	**S**	**02 26 46.2**	**+3.9**
BJI			sS	sS	02 27 35.0	-2.0
BJI			ScP	ScP	02 29 28.0	+2.0
BJI			ScS	ScS	02 33 16.8	+2.3
LZH	**Lanzhou**	**25.57 327**	*e*P	**P**	**02 22 36.0**	**+1.2**
LZH			pP	pP	02 23 04.7	-1.1
LZH			sP	sP	02 23 19.0	-4.1
LZH			PP		02 23 22.1	
LZH			PcP	PcP	02 26 04.0	+1.9
LZH			S	**S**	**02 26 53.0**	**+1.4**
LZH			sS	sS	02 27 43.1	-3.3
LZH			SS		02 28 12.0	
LZH			pmax	pmax		
	comp=Z,27nm,1.1s,mb4.8					
LZH			pmax	pmax		
	comp=Z,99nm,5.6s					
LZH			LR	LR		
	comp=E,470nm,13.4s					
LZH			LR	LR		
	comp=Z,550nm,14.6s					
MJAR	**Matsushiro Arr**	**26.39 33**	P	**P**	**02 22 42.5**	**+0.3**
	comp=Z,1.0nm,0.4s,mb3.8,baz=206,slow=8.1,SNR=4.2					
MJAR			LR	LR	02 33 08.8	
	comp=Z,44nm,21.1s,baz=155,slow=36					
HHC	**Hu-ho-hao-te**	**26.67 345**	*e*P	**P**	**02 22 46.2**	**+1.5**
HHC			pP	pP	02 23 15.8	0.0
HHC			sP	sP	02 23 32.3	-0.8
HHC			PP	PP	02 23 37.6	-10
HHC			PcP	PcP	02 26 06.2	+1.6
HHC			S	**S**	**02 27 11.6**	**+2.7**
HHC			sS	sS	02 28 02.0	-2.1
HHC			SS		02 28 34.4	
HHC			ScS	ScS	02 33 20.7	-0.9
HHC			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4					
HHC			pmax	pmax		
	comp=Z,55nm,5.6s					
HHC			LR	LR		
	comp=N,140nm,10.4s					
HHC			LR	LR		
	comp=E,190nm,12.7s					
HHC			LR	LR		
	comp=Z,150nm,13.5s					
SHL	**Shillong**	**28.72 296**	⇓*i*P	**P**	**02 23 03.0**	**-0.1**
CN2	**Changchun**	**28.75 7**	*e*P	**P**	**02 23 05.8**	**+2.7**
CN2			*es*P	sP	02 23 52.0	+0.3
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
GTA	**Gaotai**	**30.16 327**	*e*P	**P**	**02 23 16.0**	**+0.3**
GTA			pP	pP	02 23 45.2	-2.0
GTA			sP	sP	02 24 02.3	-2.1
GTA			PP	PP	02 24 19.6	-7.2
GTA			PcP	PcP	02 26 14.7	+1.4
GTA			S	**S**	**02 28 05.0**	**+1.1**
GTA			sS	sS	02 28 56.3	-2.9
GTA			ScP	ScP	02 29 43.0	+1.1
GTA			pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2					
GTA			pmax	pmax		
	comp=Z,40nm,6.9s					
GTA			LR	LR		
	comp=N,190nm,18.0s					
GTA			LR	LR		
	comp=E,270nm,16.5s					
GTA			LR	LR		
	comp=Z,210nm,16.2s					
KAKA	**Kakadu**	**30.17 156**	*e*P	**P**	**02 23 14.1**	**-1.9**
	comp=Z,16nm,0.6s,mb4.9					
KAKA	**Kakadu**	**30.17 156**	*e*P	**P**	**02 23 14.0**	**-2.0**
	comp=Z,50nm,0.6s,mb5.4					
MDJ	**Mudanjiang**	**30.25 13**	P	**P**	**02 23 17.6**	**+1.2**
MDJ			pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5					
MDJ			pmax	pmax		
	comp=Z,66nm,5.9s					
MDJ	**Mudanjiang**	**30.25 13**	*e*P	**P**	**02 23 17.7**	**+1.3**
	comp=Z,14nm,0.9s,mb4.7					
LSA	**Lhasa**	**30.64 303**	P	**P**	**02 23 20.2**	**+0.2**
LSA	**Lhasa**	**30.64 303**	*e*P	**P**	**02 23 20.3**	**+0.3**
LSA			pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6					
LSA	**Lhasa**	**30.64 303**	*e*P	**P**	**02 23 20.3**	**+0.3**
	comp=Z,7.5nm,0.6s,mb4.6					
TAPN	**Taplejung**	**32.79 297**	*e*P	**P**	**02 23 39.1**	**+0.2**
	comp=Z,41nm,0.5s,mb5.4					
FITZ	**Fitzroy Crossi**	**33.52 171**	*e*P	**P**	**02 23 44.3**	**-1.0**
	comp=Z,8.4nm,0.6s,mb4.7					
FITZ	**Fitzroy Crossi**	**33.52 171**	P	**P**	**02 23 44.0**	**-1.2**
	comp=Z,6.0nm,0.8s,mb4.4,baz=347,slow=5.6,SNR=41					
RAMN	**Ramite**	**33.65 296**	*e*P	**P**	**02 23 46.8**	**+0.4**
	comp=Z,104nm,0.7s,mb5.7					
JIRN	**Jiri**	**34.17 297**	*e*P	**P**	**02 23 51.4**	**+0.5**
	comp=Z,84nm,0.3s,mb6.0					
ASAJ	**Asahikawa**	**34.32 29**	P	**P**	**02 23 52.0**	**+0.1**
	comp=Z,12nm,0.5s,mb4.9,baz=242,slow=9.6,SNR=8.8					
ULN	**Ulaanbaatar**	**34.38 344**	*e*P	**P**	**02 23 52.8**	**+0.4**
ULN			pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0					
ULN	**Ulaanbaatar**	**34.38 344**	*e*P	**P**	**02 23 52.8**	**+0.4**
	comp=Z,2.0nm,0.7s,mb4.0					
GUN	**Gumba**	**34.50 297**	*e*P	**P**	**02 23 53.9**	**+0.2**
	comp=Z,173nm,0.8s,mb5.8					
SONM	**Songino Array**	**34.54 343**	P	**P**	**02 23 53.4**	**-0.4**
	comp=Z,1.6nm,0.5s,mb3.9,baz=159,slow=10,SNR=7.0					
SONM			PcP	PcP	02 26 25.7	+0.5
	comp=Z,1.5nm,0.6s,baz=170,slow=3.4,SNR=4.0					
PKI	**Pulchoki**	**34.83 296**	*e*P	**P**	**02 23 56.2**	**-0.3**
	comp=Z,84nm,0.7s,mb5.5					
PKIN	**Phulchoki**	**34.84 296**	*e*Pn	**P**	**02 23 56.2**	**-0.4**
	comp=Z,52nm,0.7s,mb5.3					
PKIN	**Phulchoki**	**34.84 296**	*e*P	**P**	**02 23 56.7**	**+0.1**
	comp=Z,59nm,0.6s,mb5.4					
KKN	**Kakani**	**34.99 297**	*e*P	**P**	**02 23 57.6**	**-0.3**
	comp=Z,100nm,0.9s,mb5.4					
KLR	**Kul'dur**	**35.09 13**	*e*P	**P**	**02 23 55.0**	**-3.5**
KLR			pmax	pmax		
	comp=Z,50nm,1.6s,mb4.9					
DMN	**Daman**	**35.10 296**	*e*P	**P**	**02 23 58.6**	**-0.3**
	comp=Z,74nm,0.8s,mb5.3					
GKN	**Gorkha**	**35.59 297**	*e*P	**P**	**02 24 02.4**	**-0.7**
	comp=Z,137nm,0.9s,mb5.6					
MBWA	**Marble Bar**	**36.20 181**	*e*P	**P**	**02 24 07.2**	**-1.0**
	comp=Z,5.3nm,0.6s,mb4.3					
KOLN	**Koldanda**	**36.44 296**	*e*P	**P**	**02 24 10.1**	**-0.2**
	comp=Z,54nm,0.7s,mb5.3					
COEN	**Coen**	**36.64 141**	*e*P	**P**	**02 24 11.4**	**-0.7**
	comp=Z,62nm,0.8s,mb5.3					
PYUN	**Piuthan**	**37.03 297**	*e*P	**P**	**02 24 14.9**	**-0.4**
	comp=Z,116nm,0.9s,mb5.5					
WRAB	**Tennant Creek**	**37.50 158**	*e*P	**P**	**02 24 18.2**	**-1.1**
WRAB			*e**PP	pP	02 24 54.4	+2.9
WRAB			pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5					
WRAB	**Tennant Creek**	**37.50 158**	*e*P	**P**	**02 24 18.2**	**-1.0**
	comp=Z,12nm,0.9s,mb4.5					
WRAB			*ep*P	pP	02 24 54.4	+2.8
WRA	**Warramunga Arr**	**37.51 158**	P	**P**	**02 24 18.4**	**-0.9**
	comp=Z,6.6nm,0.6s,mb4.5,baz=338,slow=9.3,SNR=24					
WRA			pP	pP	02 24 51.0	-0.6
	comp=Z,9.6nm,1.0s,baz=336,slow=9.3,SNR=3.7					
WRA			S	**S**	**02 29 51.7**	**-5.5**
	comp=Z,5.9nm,0.8s,baz=342,slow=15,SNR=10					
WB2	**Warramunga Arr**	**37.51 158**	*e*P	**P**	**02 24 18.2**	**-1.1**
ZAK	**Zakamensk**	**37.73 342**	*e*P	**P**	**02 24 20.9**	**+0.1**
ZAK			*e*		02 26 34.9	
ZAK			pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.8					
MOY	**Mondy**	**39.56 341**	*e*P	**P**	**02 24 36.9**	**+0.9**
NGP	**Nagpur**	**39.79 285**	*ex*	x	02 24 34.4	
WMQ	**Urumqi**	**39.90 322**	P	**P**	**02 24 40.2**	**+1.2**
WMQ			PcP	PcP	02 26 44.7	+3.0
WMQ			S	**S**	**02 30 34.0**	**+1.3**
WMQ			sS	sS	02 31 28.2	-1.3
WMQ			SS	SS	02 33 28.9	-6.5
WMQ			ScS	ScS	02 34 29.1	-1.1
WMQ			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3					
WMQ			pmax	pmax		
	comp=Z,96nm,4.0s					
WMQ			LR	LR		
	comp=N,250nm,13.0s					
WMQ			LR	LR		
	comp=E,170nm,14.0s					
WMQ			LR	LR		
	comp=Z,95nm,19.0s					
HYB	**Hyderabad**	**40.32 279**	*i* P	**P**	**02 24 43.5**	**+0.6**
HYB			*e*PcP	PcP	02 26 44.0	+0.4
JOSI	**Joshimath**	**40.49 299**	*e*P	**P**	**02 24 44.4**	**+0.3**
JOSI			*ex*	x	02 31 36.8	
ASAR	**Alice Springs**	**40.82 161**	P	**P**	**02 24 46.4**	**-0.4**
ASAR			*PP	pP	02 25 20.1	+0.6
ASAR			S	**S**	**02 30 42.1**	**-4.7**
ASAR	**Alice Springs**	**40.82 161**	P	**P**	**02 24 46.4**	**-0.4**
	comp=Z,6.3nm,0.5s,mb4.5,baz=339,slow=6.8,SNR=84					
ASAR			pP	pP	02 25 20.1	+0.6
	comp=Z,1.6nm,0.6s,baz=339,slow=8.3,SNR=1.7					
ASAR			ScP	ScP	02 30 20.0	-0.8
	comp=Z,1.2nm,0.6s,baz=346,slow=4.8,SNR=7.2					
ASAR			S	**S**	**02 30 42.1**	**-4.7**
	comp=Z,2.6nm,0.8s,baz=348,slow=18,SNR=11					
AGRA	**Agra**	**41.29 294**	*e*P	**P**	**02 24 49.6**	**-1.1**
BHPL	**Bhopal**	**41.38 288**	*e*P	**P**	**02 24 51.4**	**0.0**
BHPL			AMb	AMB	02 24 52.4	
	comp=Z,61nm,0.8s,mb5.3					
DDI	**Dehra Dun**	**41.71 299**	*ex*	x	02 24 53.0	
BISR	**Bishrakh**	**41.93 296**	*e*P	**P**	**02 24 54.4**	**-1.4**
AYAN	**Aya Nagar**	**42.19 296**	*e*P	**P**	**02 24 56.3**	**-1.7**
AYAN			AMb	AMB	02 24 56.8	
	comp=Z,18nm,0.5s,mb4.9					
SONA	**Sohna**	**42.19 295**	*e*P	**P**	**02 24 56.3**	**-1.7**
SONA			AMb	AMB	02 24 57.6	
	comp=Z,91nm,0.7s,mb5.5					
SMLA	**Simla**	**42.62 300**	*e*P	**P**	**02 24 59.7**	**-1.7**
SMLA			AMb	AMB	02 25 01.6	
	comp=Z,82nm,1.2s,mb5.2					
BOD	**Bodaibo**	**42.77 355**	*e*P	**P**	**02 24 59.3**	**-2.9**
CTAO	**Charters Tower**	**43.26 144**	*e*P	**P**	**02 25 06.9**	**+0.3**
CTAO			pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4					
CTAO	**Charters Tower**	**43.26 144**	*e*P	**P**	**02 25 06.9**	**+0.4**
	comp=Z,12nm,1.1s,mb4.4					
KHET	**Khetri**	**43.28 295**	*e*P	**P**	**02 25 05.6**	**-1.2**
KHET			AMb	AMB	02 25 07.2	
	comp=Z,22nm,0.8s,mb4.9					
AJM	**Ajmer**	**44.13 292**	*e*P	**P**	**02 25 13.3**	**-0.3**
MORW	**Morawa**	**44.28 186**	*e*P	**P**	**02 25 14.3**	**-0.3**
MK31	**Makanchi Array**	**44.72 323**	*e*P	**P**	**02 25 18.6**	**+0.7**
MK31			*e*		02 26 57.9	
MKAR	**Makanchi Array**	**44.72 323**	P	**P**	**02 25 18.5**	**+0.6**
	comp=Z,14nm,0.7s,mb4.7,baz=132,slow=8.8,SNR=130					
MKAR			PcP	PcP	02 26 57.7	0.0
	comp=Z,6.3nm,0.6s,baz=123,slow=3.8,SNR=13					
KSH	**Kashi**	**45.78 311**	*e*P	**P**	**02 25 28.6**	**+2.1**
KSH			*ep*P	pP	02 26 00.4	+0.6
KSH			*es*P	sP	02 26 16.0	-0.4
KSH			*e*PcP	PcP	02 27 02.9	+1.3
KSH			*e*PP	PP	02 27 18.6	+1.9
KSH			*e*ScP	ScP	02 30 41.5	+0.7
KSH			*e*PcS	PcS	02 30 56.1	+0.1
KSH			*e*S	**S**	**02 32 00.8**	**+1.9**
KSH			pmax	pmax		
	comp=Z,56nm,1.6s,mb4.9					
KSH			LR	LR		
	comp=N,71nm,5.5s					
KSH			LR	LR		
	comp=E,73nm,5.0s					
FORT	**Forrest**	**46.33 171**	*e*P	**P**	**02 25 29.9**	**-0.9**
	comp=E,11nm,0.7s,mb4.6					
FORT	**Forrest**	**46.33 171**	*e*P	**P**	**02 25 29.6**	**-1.1**
	comp=E,7.1nm,0.6s,mb4.5					
KMBL	**Kambalda**	**46.37 178**	*e*P	**P**	**02 25 29.8**	**-1.3**
	comp=E,45nm,0.5s,mb5.4					
ULHL	**Ulahol**	**46.54 314**	P	**P**	**02 25 34.3**	**+1.9**
	SNR=6.5					
YAK	**Yakutsk**	**47.16 6**	*e*P	**P**	**02 25 36.7**	**-0.1**
YAK			pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7					
KZA	**Kyzart**	**47.17 314**	P	**P**	**02 25 39.1**	**+1.9**
	SNR=78					
TKM2	**Tokmak 2**	**47.23 315**	P	**P**	**02 25 39.0**	**+1.3**
	SNR=6.2					
TKM2	**Tokmak 2**	**47.23 315**	*e*P	**P**	**02 25 38.8**	**+1.1**
TKM2			pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8					
TKM2	**Tokmak 2**	**47.23 315**	*e*P	**P**	**02 25 38.8**	**+1.1**
	comp=Z,19nm,0.8s,mb4.8					
KBK	**Karagaybulak**	**47.58 314**	P	**P**	**02 25 42.1**	**+1.7**
	SNR=14					
ZAA0	**Zalesovo Array**	**47.63 332**	*e*P	**P**	**02 25 40.5**	**0.0**
ZALV	**Zalesovo Beam**	**47.63 332**	P	**P**	**02 25 40.5**	**0.0**
	comp=Z,17nm,0.3s,mb5.1,baz=128,slow=6.4,SNR=40					
PETK	**Petropavlovsk-**	**47.73 29**	P	**P**	**02 25 42.4**	**+1.1**
	comp=Z,3.9nm,0.7s,mb4.1,baz=201,slow=5.9,SNR=5.3					
UCH	**Uchtor**	**47.73 314**	P	**P**	**02 25 43.4**	**+1.9**
	SNR=106					
UCH	**Uchtor**	**47.73 314**	*e*P	**P**	**02 25 43.5**	**+1.9**
UCH			*e*		02 27 08.9	
UCH			pmax	pmax		
	comp=Z,66nm,0.9s,mb5.3					
UCH	**Uchtor**	**47.73 314**	*e*P	**P**	**02 25 43.5**	**+1.9**
	comp=Z,66nm,0.9s,mb5.3					
UCH			*e*PcP	PcP	02 27 08.9	+0.4
CHMS	**Chumysh**	**47.84 315**	P	**P**	**02 25 43.0**	**+0.6**
	SNR=16					
FRU	**Bishkek**	**47.87 315**	*e*P	**P**	**02 25 43.0**	**+0.4**
FRU			pmax	pmax		
	comp=Z,42nm,1.2s,mb4.9					
AAK	**Ala-Archa**	**47.89 314**	P	**P**	**02 25 43.9**	**+1.1**
	SNR=12					
AAK	**Ala-Archa**	**47.89 314**	*e*P	**P**	**02 25 44.0**	**+1.3**
AAK			*e*		02 27 09.6	
AAK			pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7					
AAK	**Ala-Archa**	**47.89 314**	*e*P	**P**	**02 25 44.0**	**+1.2**
	comp=Z,20nm,1.0s,mb4.7					
AAK			*e*PcP	PcP	02 27 09.6	+0.6
USP	**Ospenovka**	**48.11 315**	P	**P**	**02 25 45.3**	**+0.8**
	SNR=26					
AML	**Almayashu**	**48.27 313**	P	**P**	**02 25 47.4**	**+1.7**
	SNR=68					
AML	**Almayashu**	**48.27 313**	*e*P	**P**	**02 25 47.2**	**+1.5**
AML			*e*		02 27 11.2	
AML			pmax	pmax		
	comp=Z,51nm,0.8s,mb5.2					
AML	**Almayashu**	**48.27 313**	*e*P	**P**	**02 25 47.2**	**+1.5**
	comp=Z,51nm,0.8s,mb5.2					
AML			*e*PcP	PcP	02 27 11.2	+0.9
EKS2	**Erkin-Say**	**48.39 314**	P	**P**	**02 25 48.0**	**+1.4**
	SNR=30					
EKS2	**Erkin-Say**	**48.39 314**	*e*P	**P**	**02 25 47.6**	**+1.0**
EKS2			*e*		02 27 11.6	
EKS2			pmax	pmax		
	comp=Z,28nm,0.8s,mb4.9					
EKS2	**Erkin-Say**	**48.39 314**	*e*P	**P**	**02 25 47.6**	**+1.0**
	comp=Z,28nm,0.8s,mb4.9					
EKS2			*e*PcP	PcP	02 27 11.6	+0.8
KURK	**Kurchatov**	**48.84 326**	*d* *i*P	**P**	**02 25 50.2**	**+0.3**
KURK			pmax	pmax		
	comp=Z,133nm,0.7s,mb5.7					
KURK	**Kurchatov**	**48.84 326**	*e*P	**P**	**02 25 50.5**	**+0.6**
	comp=Z,124nm,0.7s,mb5.7					
NVS	**Novosibirsk**	**48.91 332**	*i* P	**P**	**02 25 50.0**	**-0.4**
NVS			*i*		02 27 11.8	
NVS			*i* S	**S**	**02 32 42.0**	**-0.7**
NVS			pmax	pmax		
	comp=N,17nm,1.1s					
NVS			pmax	pmax		
	comp=Z,34nm,1.1s,mb4.9					
NVS			pmax	pmax		
	comp=E,22nm,1.4s					
NVS			smax			
	comp=N,26nm,2.1s					
NVS			smax			
	comp=E,39nm,2.1s					
KBL	**Kabul**	**49.96 302**	*e*P	**P**	**02 25 59.3**	**+0.6**
KBL			pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8					
KBL	**Kabul**	**49.96 302**	*e*P	**P**	**02 25 59.2**	**+0.6**
	comp=Z,19nm,0.8s,mb4.8					
BBOO	**Buckleboo**	**50.04 163**	*e*P	**P**	**02 25 58.1**	**-1.1**
	comp=Z,7.3nm,0.5s,mb4.6					
EIDS	**Eidsvold**	**50.14 143**	*e*P	**P**	**02 25 59.6**	**-0.5**
STKA	**Stephens Creek**	**51.02 157**	*e*P	**P**	**02 26 06.2**	**-0.3**
	comp=Z,3.9nm,0.4s,mb4.4					
STKA	**Stephens Creek**	**51.02 157**	P	**P**	**02 26 06.3**	**-0.3**
	comp=Z,6.2nm,0.6s,mb4.4,baz=336,slow=7.2,SNR=18					
STKA	**Stephens Creek**	**51.02 157**	*e*P	**P**	**02 26 06.3**	**-0.2**
	comp=Z,1.2nm,0.8s,mb3.6					
CMSA	**Cobar Meteorol**	**52.41 153**	*e*P	**P**	**02 26 17.3**	**+0.5**
BVAR	**Borovoye Array**	**54.43 325**	P	**P**	**02 26 31.7**	**+0.4**
	comp=Z,7.9nm,0.6s,mb4.6,baz=116,slow=9.4,SNR=55					
BVAR			PcP	PcP	02 27 32.8	-0.3
	comp=Z,3.8nm,0.7s,baz=126,slow=4.0,SNR=7.1					
BRVK	**Borovoye**	**54.50 325**	*d* *i*P	**P**	**02 26 31.4**	**-0.4**
BRVK			pmax	pmax		
	comp=Z,40nm,1.1s,mb5.1					
BRVK	**Borovoye**	**54.50 325**	*e*P	**P**	**02 26 32.3**	**+0.4**
	comp=Z,27nm,0.8s,mb5.0					
YNG	**Young**	**55.95 152**	*e*P	**P**	**02 26 42.3**	**-0.1**
	comp=Z,5.7nm,0.9s,mb4.4					
TIXI	**Tiksi**	**56.59 3**

RDF AMb AMB 02 28 04.4
comp=Z,110nm,1.0s,mb5.5
MIB Mutribah 68.20 296 *eP* **P 02 28 04.0 -0.4**
MIB AMb AMB 02 28 04.5
comp=Z,80nm,0.6s,mb5.6
ZEI Tsey 70.08 310 *eP* **P 02 28 15.5 -0.2**
ZEI pmax pmax
comp=Z,21nm,0.9s,mb4.9
KIV Kislovodsk 70.90 312 *eP* **P 02 28 21.2 +0.5**
KIV pmax pmax
comp=Z,36nm,0.8s,mb5.2
KIV Kislovodsk 70.90 312 *eP* **P 02 28 21.1 +0.4**
comp=Z,36nm,0.8s,mb5.2
VRHR Novokhopersk 71.36 319 *eP* **P 02 28 21.9 -1.4**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
VRHR pmax pmax
comp=E,10.0nm,0.6s
KLMR Klimovskoe 72.45 330 *eP* **P 02 28 25.9 -3.7**
KLMR pmax pmax
comp=Z,14nm,1.3s,mb4.5
VSR Storozhevoye 72.90 319 *eP* **P 02 28 31.9 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,7.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.7s
OBN Obninsk 74.22 324⇑ *iP* **P 02 28 39.7 -0.4**
OBN *e* 02 28 58.8
OBN pmax pmax
comp=Z,44nm,1.9s,mb4.9
ANN Anapa 74.59 313 *eP* **P 02 28 41.7 -0.8**
ANN pmax pmax
comp=Z,50nm,1.3s,mb5.0
MALT Malatya 74.62 306 *eP* **P 02 28 43.7 +0.9**
MALT pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
MALT Malatya 74.62 306 *eP* **P 02 28 43.7 +0.9**
comp=Z,7.9nm,0.7s,mb4.5
RSO Redoubt South 75.23 31 *eP* **P 02 28 46.5 +0.7**
KDAK Kodiak Island 75.56 34 *i P* **P 02 28 48.9 +1.1**
BPAW Bear Paw Mtn. 75.73 27 *eP* **P 02 28 49.8 +1.2**
comp=Z,13nm,0.9s,mb4.6
JOF Joensuu 76.22 332 *eP* **P 02 28 50.2 -1.2**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.5
JOF Joensuu 76.22 332 *ep* **P 02 28 50.2 -1.2**
comp=Z,5.2nm,0.4s,mb4.5
MCK McKinley 76.67 27 *eP* **P 02 28 54.8 +0.9**
MCK pmax pmax
comp=Z,17nm,0.9s,mb4.7
MCK McKinley 76.67 27 *eP* **P 02 28 54.8 +0.9**
comp=Z,18nm,0.9s,mb4.7
PMR Palmer 76.86 29 *eP* **P 02 28 55.4 +0.4**
SIM Simferopol' 76.91 313 *deP* **P 02 28 56.2 +0.6**
SIM pmax pmax
comp=Z,35nm,0.9s,mb5.0
COLA College 76.99 26 *eP* **P 02 28 55.9 +0.2**
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
COLA College 76.99 26 *eP* **P 02 28 55.9 +0.3**
comp=Z,3.4nm,0.7s,mb4.1
KEV Kevo 77.04 339 *eP* **P 02 28 55.0 -0.9**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
KEV Kevo 77.04 339 *ep* **P 02 28 55.0 -0.9**
comp=Z,3.0nm,0.4s,mb4.3
ARCES ARCESS Array B 77.59 339 P **P 02 28 59.2 +0.3**
comp=Z,6.5nm,0.5s,mb4.5,baz=78,slow=7.1,SNR=144
BR131 Keskin Array S 78.09 308 *eP* **P 02 29 02.2 -0.1**
comp=Z,4.2nm,0.8s,mb4.1
BRTR Keskin Array B 78.09 308 *ceP* **P 02 29 02.4 +0.1**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 78.09 308 P **P 02 29 01.8 -0.6**
comp=Z,4.5nm,0.8s,mb4.2,baz=117,slow=4.3,SNR=22
BRTR PP PP 02 32 01.6 +1.1
comp=Z,1.4nm,0.9s,baz=90,slow=8.8,SNR=3.6
KAF Kangasniemi 78.64 331 *eP* **P 02 29 03.2 -1.6**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
KAF Kangasniemi 78.64 331 *ep* **P 02 29 03.2 -1.6**
comp=Z,6.3nm,0.6s,mb4.4
FINES FINESS Array B 78.87 331 P **P 02 29 05.5 -0.7**
comp=Z,3.6nm,0.4s,mb4.4,baz=48,slow=7.2,SNR=47
AKASG Malin Array Be 79.20 320 *ceP* **P 02 29 07.6 -0.5**
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKASG Malin Array Be 79.20 320 P **P 02 29 06.9 -1.2**
comp=Z,8.0nm,0.8s,mb4.4,baz=65,slow=5.1,SNR=29
AKBB Malin Array Si 79.20 320 *eP* **P 02 29 07.2 -0.9**
CSS Prodhromos 79.20 303 *eP* **P 02 29 08.6 +0.1**
comp=Z,40nm,0.9s,mb5.0
EGAK Eagle 79.82 26 *eP* **P 02 29 12.3 +1.1**
comp=Z,8.3nm,0.7s,mb4.5
NACGM Naroch 79.83 324 *e* **P 02 29 09.0 -2.4**
IZAR Zarasai 79.95 325 *eP* **P 02 29 12.2 +0.2**
ISAL Salakas 80.05 325 *eP* **P 02 29 12.6 -0.1**
DAWY Dawson 80.74 26 *eP* **P 02 29 17.6 +1.5**
INK Inuvik 81.70 21 *eP* **P 02 29 21.2 +0.1**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 81.70 21 *eP* **P 02 29 21.2 +0.1**
comp=Z,6.9nm,0.8s,mb4.3
SUW Suwalki 82.08 324 *eP* **P 02 29 22.9 -0.5**
SUW Suwalki 82.08 324 *eP* **P 02 29 23.0 -0.4**
SUW pmax pmax
comp=Z,72nm,0.8s,mb5.3
SUW Suwalki 82.08 324 *eP* **P 02 29 23.0 -0.4**
comp=Z,72nm,0.8s,mb5.4
BURAR Bucovina Array 82.44 317 P **P 02 29 26.6 +1.2**
BUR08 Bucovina Ar. S 82.44 317 *eP* **P 02 29 25.7 +0.3**
LVV L'vov 82.64 320 *eP* **P 02 29 26.3 -0.1**
KWP Kalwaria Pacla 83.52 320 *eP* **P 02 29 31.2 +0.3**
KWP pmax pmax
comp=Z,57nm,0.9s,mb5.3
KWP Kalwaria Pacla 83.52 320 *eP* **P 02 29 31.2 +0.2**
comp=Z,56nm,0.9s,mb5.3
BMR Baia Mare 83.55 318 P **P 02 29 32.3 +1.2**
KMBO Kilima Mbogo 83.85 267 *eP* **P 02 29 34.1 +0.8**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 83.85 267 P **P 02 29 33.8 +0.5**
comp=Z,5.5nm,0.9s,mb4.3,baz=47,slow=8.2,SNR=15
KMBO Kilima Mbogo 83.85 267 *eP* **P 02 29 34.1 +0.8**
comp=Z,3.1nm,0.8s,mb4.1
KOLS Kolonicke sedl 83.99 319 *eP* **P 02 29 33.4 +0.1**
KOLS pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KOLS Kolonicke sedl 83.99 319 *eP* **P 02 29 33.4 +0.1**
comp=Z,10nm,1.0s,mb4.5
KOLS *e*PcP PcP 02 29 35.6 -1.4
KOLS Kolonicke sedl 83.99 319 *eP* **P 02 29 33.4 +0.1**
KOLS *e*PCP PcP 02 29 35.6 -1.4
UZH Uzhgorod 84.06 319 *eP* **P 02 29 34.3 +0.6**
STHS Stebnicka Huta 84.50 320 *eP* **P 02 29 36.5 +0.6**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
STHS Stebnicka Huta 84.50 320 *eP* **P 02 29 36.5 +0.6**
comp=Z,7.1nm,0.9s,mb4.4
STHS *e*PcP PcP 02 29 38.8 -0.4
STHS Stebnicka Huta 84.50 320 *eP* **P 02 29 36.5 +0.6**
STHS *e*PCP PcP 02 29 38.8 -0.4
MMB Musomiste 85.03 312 *eP* **P 02 29 37.4 -1.3**
VTS Vitosha 85.12 313 *eP* **P 02 29 37.8 -1.4**
OJC Ojcow 85.15 321 *eP* **P 02 29 39.2 +0.1**
KECS Kecovo 85.25 319 *eP* **P 02 29 39.8 +0.1**
KECS pmax pmax
comp=Z,16nm,0.9s,mb4.8
KECS Kecovo 85.25 319 *eP* **P 02 29 39.8 +0.1**
comp=Z,16nm,0.9s,mb4.7
KECS *e*PcP PcP 02 29 42.0 -0.5
KECS Kecovo 85.25 319 *eP* **P 02 29 39.8 +0.1**
KECS *e*PCP PcP 02 29 41.9 -0.6
KKB Krupnik 85.42 312 *eP* **P 02 29 39.6 -1.0**
GKP Gorka Klasztor 85.68 324 *eP* **P 02 29 41.3 -0.4**
PSZ Piszkesteto 85.80 318 P **P 02 29 42.9 +0.5**
PSZ Piszkesteto 85.80 318 *eP* **P 02 29 42.4 -0.1**
comp=Z,16nm,1.0s,mb4.7
NB2 NORSAR Subarra 85.83 333 P **P 02 29 41.6 -0.7**
comp=Z,46nm,0.7s,mb5.3,baz=67,slow=4.8
NOA NORSAR Array B 85.83 333 P **P 02 29 41.5 -0.8**
comp=Z,34nm,0.7s,mb5.2,baz=68,slow=5.1,SNR=142
NOA LR LR 03 11 49.6
comp=Z,20nm,18.1s,baz=225,slow=38
VAY Valandovo 85.94 312 *eP* **P 02 29 41.7 -1.5**
LIKS Likavka 85.94 320 *eP* **P 02 29 43.5 +0.4**
LIKS Likavka 85.94 320 *eP* **P 02 29 43.5 +0.4**
NAO01 NORSAR Array S 86.05 332 *eP* **P 02 29 42.5 -0.9**
comp=Z,30nm,0.7s,mb5.1
VYHS Vyhne 86.29 319 *eP* **P 02 29 44.7 -0.1**
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
VYHS Vyhne 86.29 319 *eP* **P 02 29 44.7 -0.1**
comp=Z,7.9nm,1.1s,mb4.4
VYHS *e*PcP PcP 02 29 47.3 +0.2
VYHS *e* 02 29 57.3
VYHS Vyhne 86.29 319 *eP* **P 02 29 44.7 -0.1**
VYHS *e*PCP PcP 02 29 47.3 +0.2
VYHS *e* 02 29 57.3
KOLL Kolacno 86.54 319 *eP* **P 02 29 46.4 +0.4**
KOLL *e* 02 29 50.4
KOLL *e* 02 29 54.7
KOLL Kolacno 86.54 319 *eP* **P 02 29 46.4 +0.4**
KOLL *e*PCP PcP 02 29 50.4 +2.2
KOLL *e* 02 29 54.7
SKO Skopje 86.56 312 *eP* **P 02 29 46.5 +0.3**
MORC Moravsky Berou 86.67 321 P **P 02 29 47.3 +0.7**
MORC Moravsky Berou 86.67 321 *eP* **P 02 29 46.6 0.0**
comp=Z,21nm,1.3s,mb4.8
KRUS Krusevo 86.88 312 *eP* **P 02 29 45.8 -2.0**
KSP Ksiaz 87.06 322 *eP* **P 02 29 48.9 +0.4**
KSP Ksiaz 87.06 322 *eP* **P 02 29 48.6 +0.1**
KONO Kongsberg 87.14 332 *eP* **P 02 29 47.7 -1.0**
KONO pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
KONO Kongsberg 87.14 332 *eP* **P 02 29 47.7 -0.9**
comp=Z,5.6nm,0.7s,mb4.5
PKSM Moragy 87.16 317 P **P 02 29 49.6 +0.6**
VRAC Vranov 87.41 321 P **P 02 29 51.0 +0.8**
RES Resolute Bay 87.52 9 *eP* **P 02 29 50.7 +0.4**
RES pmax pmax
comp=Z,12nm,0.8s,mb4.8
RES Resolute Bay 87.52 9 *eP* **P 02 29 50.6 +0.4**
comp=Z,12nm,0.8s,mb4.8
BRG Berggiesshubel 88.43 323 *eP* **P 02 29 55.4 +0.4**
comp=Z,14nm,0.9s,mb4.8
BRG Berggiesshubel 88.43 323 *i P* **P 02 29 54.9 -0.1**
comp=Z,14nm,0.9s,mb4.8
BRG Berggiesshubel 88.43 323 *i P* **P 02 29 54.9 -0.1**
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
CLL Collm 88.81 323 *eP* **P 02 29 56.8 0.0**
comp=Z,12nm,1.0s,mb4.8
CLL Collm 88.81 323 *i P* **P 02 29 56.4 -0.4**
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.7
CLL Collm 88.81 323 *i P* **P 02 29 56.4 -0.4**
comp=Z,11nm,1.0s,mb4.7
CLL *e* 02 30 18.0
CLL Collm 88.81 323 *i P* **P 02 29 56.4 -0.4**
comp=Z,11nm,1.0s,mb4.7
CLL *e*PP PP 02 33 25.0 -2.5
BSEG Bad Segeberg 89.24 326 *eP* **P 02 29 59.0 +0.3**
comp=Z,15nm,0.9s,mb4.9
KHC Kasperske Hory 89.32 321 *eP* **P 02 29 59.3 +0.1**
comp=Z,1.7nm,0.6s,mb4.2
SOKA Soboth 89.33 318⇓ *iP* **P 02 29 59.0 -0.3**
comp=Z,4.9nm,0.9s,mb4.4
GEC2 GERESS Array S 89.35 321 *eP* **P 02 29 59.9 +0.5**
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 89.35 321 *eP* **P 02 29 59.9 +0.5**
GEC2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GERES GERESS Array B 89.35 321 P **P 02 29 58.6 -0.7**
comp=Z,4.6nm,0.7s,mb4.5,baz=70,slow=4.4,SNR=51
GERES LR LR 03 11 46.9
comp=Z,32nm,18.5s,baz=270,slow=37
MOA Molln 89.38 320⇑ *iP* **P 02 29 59.8 +0.3**
comp=Z,17nm,0.9s,mb5.0
TANN Tannenbergstha 89.48 323 *eP* **P 02 30 00.2 +0.3**
comp=Z,9.0nm,1.2s,mb4.6
WET Wettzell 89.74 321 *eP* **P 02 30 01.7 +0.6**
comp=Z,11nm,1.3s,mb4.6
WET Wettzell 89.74 321 *eP* **P 02 30 01.7 +0.6**
WET pmax pmax
comp=Z,11nm,1.3s,mb4.6
MOX Moxa 89.88 323 *eP* **P 02 30 02.1 +0.3**
comp=Z,7.0nm,1.0s,mb4.5
MOX Moxa 89.88 323 *eP* **P 02 30 02.1 +0.3**
MOX pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ROTZ Rotzenmuhle 89.89 322 *eP* **P 02 30 02.7 +0.9**
comp=Z,14nm,1.1s,mb4.8
NRDL Niedersach Rie 89.97 325 *eP* **P 02 30 02.5 +0.4**
comp=Z,9.0nm,1.1s,mb4.6
CRNS Crni Vrh 90.05 318 *i P* **P 02 30 02.3 -0.4**
CEY Cerknica 90.07 318 *i P* **P 02 30 02.7 -0.1**
CLZ Clausthal 90.09 324 *eP* **P 02 30 03.3 +0.5**
comp=Z,34nm,1.7s,mb5.0
CLZ Clausthal 90.09 324 *eP* **P 02 30 03.3 +0.5**
CLZ pmax pmax
comp=Z,34nm,1.7s,mb5.0
ROBS Robic 90.47 318 *i P* **P 02 30 03.7 -0.9**
GRA1 Grafenberg Arr 90.51 322 *eP* **P 02 30 05.2 +0.5**
comp=Z,12nm,1.1s,mb4.8
GRF Grafenberg Arr 90.51 322 *eP* **P 02 30 05.2 +0.5**
comp=Z,12nm,1.1s,mb4.8
GRF Grafenberg Arr 90.51 322 *eP* **P 02 30 05.2 +0.5**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.8
GRF Grafenberg Arr 90.51 322 *eP* **P 02 30 05.2 +0.5**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.8
UBBA Unterbreizbach 90.74 324 *eP* **P 02 30 07.2 +1.4**
comp=Z,23nm,1.8s,mb4.9
TIP Timpagrande 90.83 311 *eP* **P 02 30 06.1 -0.4**
comp=Z,6.3nm,0.9s,mb4.7
FUR Furstenfeldbru 91.10 321 *eP* **P 02 30 08.2 +0.7**
comp=Z,20nm,1.0s,mb5.1
FUR Furstenfeldbru 91.10 321 *eP* **P 02 30 08.2 +0.7**
FUR pmax pmax
comp=Z,20nm,1.0s,mb5.1
WTTA Wattenberg 91.25 320⇓ *iP* **P 02 30 08.0 -0.2**
comp=Z,22nm,0.8s,mb5.2
SUMG Summit 91.27 354 *eP* **P 02 30 08.6 +0.8**
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 91.27 354 *eP* **P 02 30 08.6 +0.8**
comp=Z,6.3nm,0.8s,mb4.7
IBBN Ibbenburen 91.34 326 *eP* **P 02 30 08.8 +0.3**
comp=Z,14nm,1.1s,mb4.9
YKA Yellowknife Ar 91.39 22 P **P 02 30 09.2 +0.7**
comp=Z,1.7nm,0.5s,mb4.3,baz=307,slow=4.4,SNR=53
YKA pP pP 02 30 44.2 -1.9
comp=Z,1.0nm,0.8s,baz=309,slow=4.2,SNR=4.3
YKA Yellowknife Ar 91.39 22 P **P 02 30 09.2 +0.6**
YKA pP pP 02 30 44.2 -1.9
MOTA Moosalm 91.55 320⇑ *iP* **P 02 30 09.4 -0.2**
comp=Z,18nm,0.9s,mb5.1
TNS Taunus Mts 91.89 323 *eP* **P 02 30 11.5 +0.4**
comp=Z,18nm,1.4s,mb4.9
TNS Taunus Mts 91.89 323 *eP* **P 02 30 11.5 +0.4**
TNS pmax pmax
comp=Z,18nm,1.4s,mb4.9
FETA Feichten 91.92 320⇑ *iP* **P 02 30 11.6 +0.3**
comp=Z,19nm,1.0s,mb5.1
BUG Bochum--Univer 92.01 325 *eP* **P 02 30 11.9 +0.3**
comp=Z,11nm,1.0s,mb4.8
STU Stuttgart 92.10 322 *eP* **P 02 30 12.4 +0.3**
comp=Z,15nm,1.0s,mb5.0
BFO Black Forest 92.81 322 *eP* **P 02 30 15.3 -0.1**
comp=Z,7.0nm,1.0s,mb4.8
BFO Black Forest 92.81 322 *eP* **P 02 30 15.3 -0.1**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
CDF Champ du Feu 93.40 322 *eP* **P 02 30 17.2 -0.9**
comp=Z,20nm,0.9s,mb5.0
CDF Champ du Feu 93.40 322 *eP* **P 02 30 17.2 -0.9**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
CDF Champ du Feu 93.40 322 *eP* **P 02 30 17.2 -0.9**
comp=Z,10nm,0.9s,mb5.0
WLF Walferdange 93.47 324 *eP* **P 02 30 19.1 +0.7**
comp=Z,15nm,1.1s,mb5.0
HINF Hinteralfeld 93.93 322 *eP* **P 02 30 19.1 -1.4**
comp=Z,11nm,0.9s,mb4.7
HINF Hinteralfeld 93.93 322 *eP* **P 02 30 19.1 -1.4**
HINF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
HINF Hinteralfeld 93.93 322 *eP* **P 02 30 19.1 -1.4**
comp=Z,5.6nm,0.9s,mb4.7
GIVF Givet 94.01 324 *eP* **P 02 30 21.0 +0.1**
HAU Haudompre 94.14 322 *eP* **P 02 30 20.2 -1.3**
BAIF Baives 94.38 325 *eP* **P 02 30 21.7 -0.9**
comp=Z,6.1nm,0.7s,mb4.5
BAIF Baives 94.38 325 *eP* **P 02 30 21.7 -0.9**
BAIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
BAIF Baives 94.38 325 *eP* **P 02 30 21.7 -0.9**
comp=Z,3.0nm,0.7s,mb4.5
MEZF Maizieres J'vi 94.66 323 *eP* **P 02 30 23.1 -0.8**
PGF Pioggiola 94.94 316 *eP* **P 02 30 24.1 -1.2**
comp=Z,12nm,0.9s,mb4.8
PGF Pioggiola 94.94 316 *eP* **P 02 30 24.1 -1.2**
PGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
PGF Pioggiola 94.94 316 *eP* **P 02 30 24.1 -1.2**
comp=Z,5.8nm,0.9s,mb4.8
LPG La Plagne 95.06 320 *eP* **P 02 30 25.3 -0.5**
comp=Z,14nm,0.9s,mb4.9
LPG La Plagne 95.06 320 *eP* **P 02 30 25.3 -0.5**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
LPG La Plagne 95.06 320 *eP* **P 02 30 25.3 -0.5**
comp=Z,7.3nm,0.9s,mb4.9
LPL La Plagne 95.07 320 *eP* **P 02 30 25.2 -0.6**
comp=Z,15nm,0.9s,mb4.9
LPL La Plagne 95.07 320 *eP* **P 02 30 25.2 -0.6**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LPL La Plagne 95.07 320 *eP* **P 02 30 25.2 -0.6**
comp=Z,7.7nm,0.9s,mb4.9
ESK Eskdalemuir 95.29 331 *eP* **P 02 30 26.8 +0.2**
ESK pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
ESK Eskdalemuir 95.29 331 *eP* **P 02 30 26.8 +0.2**
comp=Z,4.5nm,0.7s,mb4.8
BNI Bardonecchia 95.32 319 *eP* **P 02 30 25.8 -1.2**
BNI pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
BNI Bardonecchia 95.32 319 *eP* **P 02 30 25.8 -1.2**
comp=Z,2.9nm,0.9s,mb4.5
SBF Sospel 95.38 318 *eP* **P 02 30 25.7 -1.6**
MBDF Montbardon 95.41 319 *eP* **P 02 30 26.8 -0.6**
ORIF Oris-en-Rattie 95.88 320 *eP* **P 02 30 28.5 -1.0**
comp=Z,8.7nm,0.9s,mb4.8
ORIF Oris-en-Rattie 95.88 320 *eP* **P 02 30 28.5 -1.0**
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 95.88 320 *eP* **P 02 30 28.5 -1.0**
comp=Z,4.3nm,0.9s,mb4.8
LOR Lormes 95.97 322 *eP* **P 02 30 28.4 -1.5**
comp=Z,8.3nm,0.9s,mb4.8
LOR Lormes 95.97 322 *eP* **P 02 30 28.4 -1.5**
LOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LOR Lormes 95.97 322 *eP* **P 02 30 28.4 -1.5**
comp=Z,4.2nm,0.9s,mb4.8
FRF La Foret Royal 96.03 318 *eP* **P 02 30 28.7 -1.5**
AVF Avril sur Loir 96.51 322 *eP* **P 02 30 31.0 -1.3**
comp=Z,18nm,1.2s,mb5.0
AVF Avril sur Loir 96.51 322 *eP* **P 02 30 31.0 -1.3**
AVF pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
AVF Avril sur Loir 96.51 322 *eP* **P 02 30 31.0 -1.3**
comp=Z,8.8nm,1.2s,mb5.0
VIVF Saint-Julien-l 96.66 320 *eP* **P 02 30 31.9 -1.2**
comp=Z,6.7nm,0.9s,mb4.7
VIVF Saint-Julien-l 96.66 320 *eP* **P 02 30 31.9 -1.2**
VIVF pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
VIVF Saint-Julien-l 96.66 320 *eP* **P 02 30 31.9 -1.2**
comp=Z,3.3nm,0.9s,mb4.7
TCF Toulx Ste Croi 97.44 322 *eP* **P 02 30 35.5 -1.1**
comp=Z,6.3nm,1.0s,mb4.6
TCF Toulx Ste Croi 97.44 322 *eP* **P 02 30 35.5 -1.1**
TCF pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 97.44 322 *eP* **P 02 30 35.5 -1.1**
comp=Z,3.2nm,1.0s,mb4.6
MFF Saint Martin d 98.66 323 *eP* **P 02 30 42.0 0.0**
WMOK Wichita Mounta 117.80 36 *e*PKIKP PKPdf 02 35 48.8 -0.1
TXAR Lajitas Array 118.45 44 PKP PKPdf 02 35 51.1 +0.9
comp=Z,0.7nm,0.5s,baz=220,slow=0.8,SNR=18
JCT Junction City 120.19 40 *e*PKIKP PKPdf 02 35 54.0 +0.4
DBIC Dimbokro 121.71 288 PKP PKPdf 02 35 56.1 -0.8
comp=Z,1.9nm,0.8s,baz=63,slow=4.5,SNR=6.4
KIC Kosan Boka 121.72 288 *e*PKIKP PKPdf 02 35 56.7 -0.3
comp=Z,34nm,1.2s
TIC Toumodi 121.87 288 *e*PKIKP PKPdf 02 35 56.6 -0.6
comp=Z,20nm,1.1s
LIC Lamto 122.03 288 *e*PKIKP PKPdf 02 35 57.0 -0.6
comp=Z,9.0nm,0.5s
WVT Waverly 122.26 27 *e*PKIKP PKPdf 02 35 57.4 0.0
MTP Monte Pirata 146.31 11 *e*PKPdf PKPdf 02 36 43.9 +1.5
BCIP Isla Barro Col 148.41 41 *e*PKPdf PKPdf 02 36 46.7 +0.7
PLCA Paso Flores 152.84 161 PKPbc PKPbc 02 36 59.6 +0.3
comp=Z,1.9nm,0.7s,baz=189,slow=3.0,SNR=3.3
SDV Santo Domingo 153.57 26 *e*PKPbc PKPbc 02 37 01.9 +0.2
SDV *e*PKPab PKPab 02 37 15.5 +1.0
LPAZ La Paz 171.56 98 PKP PKPdf 02 37 13.1 +1.8
comp=Z,0.8nm,0.8s,baz=333,slow=6.1,SNR=4.1
LPAZ La Paz 171.56 98 *e*PKPdf PKPdf 02 37 12.8 +1.4

ISCJB ***07*** *02:59:57.4±0.4, 10°.60N±0°.07×84°.95W±0°.07, h148km±3km, mb3.7/11, Error ellipse: s-maj=15.9km s-min=3.7km az=41.7*
CASC ***07*** *02:59:58.0±2.4, 10°.66N×84°.87W, h143km±5km, MD3.8, ML3.6, mb3.9(NEIC)*
NEIC ***07*** *02:59:59.0±2.1, 10°.55N×85°.00W, h167km±16km, mb3.9/6, Error ellipse: s-maj=43.9km s-min=13.1km az=204.0*
IDC ***07*** *03:00:01.0±2.9, 11°.19N×84°.73W, h152km±35km, mb3.2/6, mb1 3.5/10, mb1mx3.4/23, mbtmp3.3/10, Error ellipse: s-maj=83.3km s-min=18.1km az=20.0*
ISC 07 02:59:58.0±0.4, 10°.59N±0°.07×84°.94W±0°.07, h148km±3km, n60, σ0°.94/82, mb3.7/11, 18C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEN	**Parque Tenorio**	**0.13**	**340**	⇑ *iP*	**Pn**	**03 00 17.9**	**-0.1**
PTEN				*i* S	**Sn**	**03 00 33.1**	**-0.1**
CHPA	**Chiripa**	**0.15**	**167**	*i P*	**Pn**	**03 00 18.0**	**0.0**
CUI	**Cuipilapa**	**0.23**	**286**	⇑ *iP*	**Pn**	**03 00 17.6**	**-0.5**
CASO	**Castillo**	**0.26**	**128**	⇑ *iP*	**Pn**	**03 00 18.3**	**+0.1**
CASO				*i* S	**Sn**	**03 00 34.1**	**+0.5**
COLC	**Colonia**	**0.27**	**286**	⇑ *iP*	**Pn**	**03 00 17.8**	**-0.4**
MESS	**Mesas**	**0.29**	**301**	⇑ *iP*	**Pn**	**03 00 18.0**	**-0.3**
MESS				*i* S	**Sn**	**03 00 34.4**	**+0.7**
FORC	**Fortuna**	**0.30**	**115**	⇑ *iP*	**Pn**	**03 00 18.4**	**+0.1**
GUAB	**Guayabo de Bag**	**0.30**	**292**	⇑ *iP*	**Pn**	**03 00 18.1**	**-0.2**
GUAB				*i* S	**Sn**	**03 00 34.0**	**+0.2**
LIM1	**Limonal**	**0.32**	**289**	*i P*	**Pn**	**03 00 17.7**	**-0.7**
LIM1				*i* S	**Sn**	**03 00 33.7**	**-0.2**
GPS2	**Hotel Rinc^‡n**	**0.43**	**292**	⇑ *iP*	**Pn**	**03 00 18.5**	**-0.3**
GPS2				*i* S	**Sn**	**03 00 34.9**	**+0.2**
GPS1	**Guardaparques**	**0.44**	**294**	⇑ *iP*	**Pn**	**03 00 18.7**	**-0.1**
GPS1				*i* S	**Sn**	**03 00 34.7**	**0.0**
GPS3	**Bodega del ICE**	**0.45**	**291**	⇑ *iP*	**Pn**	**03 00 18.7**	**-0.2**
GPS3				*i* S	**Sn**	**03 00 34.8**	**0.0**
A494	**Palo Verde**	**0.47**	**239**	*i P*	**Pn**	**03 00 19.3**	**+0.3**
A494				*i* S	**Sn**	**03 00 35.5**	**+0.6**
BUEV	**Buena Vista**	**0.50**	**294**	⇑ *iP*	**Pn**	**03 00 19.1**	**-0.1**
BUEV				*i* S	**Sn**	**03 00 35.5**	**+0.3**
GB1A	**Borinquen Arri**	**0.50**	**297**	⇑ *iP*	**Pn**	**03 00 19.1**	**-0.1**
GBS3	**Finca Las lm^¡**	**0.54**	**290**	⇑ *iP*	**Pn**	**03 00 18.5**	**-0.8**
GBS3				*i* S	**Sn**	**03 00 35.0**	**-0.5**
NY14	**Universidad de**	**0.58**	**275**	*i P*	**Pn**	**03 00 19.4**	**-0.2**
CGA2	**Cerro Gallo 2**	**0.74**	**141**	⇑ *iP*	**Pn**	**03 00 20.6**	**0.0**
CGA2				*e*S	**Sn**	**03 00 37.6**	**-0.2**
A492	**Arado**	**0.74**	**240**	*i P*	**Pn**	**03 00 20.2**	**-0.4**
JCR	**Jicaral**	**0.76**	**193**	⇑ *iP*	**Pn**	**03 00 20.5**	**-0.3**
PRS1	**Puriscal**	**0.87**	**134**	⇑ *iP*	**Pn**	**03 00 21.9**	**+0.3**
LAJ	**Bijagual**	**1.09**	**132**	⇓ *eP*	**Pn**	**03 00 22.4**	**-1.0**
SJS	**Escuela Geolog**	**1.09**	**127**	*eP*	**Pn**	**03 00 23.7**	**+0.3**
SJS				*e*S	**Sn**	**03 00 42.9**	**+0.2**
URSC	**Urasca**	**1.37**	**123**	⇑ *iP*	**Pn**	**03 00 26.4**	**+0.3**
QCR	**Quepos**	**1.39**	**147**	⇑ *iP*	**Pn**	**03 00 27.0**	**+0.7**
QCR				*e*S	**Sn**	**03 00 46.0**	**-2.0**
BUS	**Buena Vista**	**1.56**	**131**	⇓ *eP*	**Pn**	**03 00 29.0**	**+1.0**

APON	Apoyo	1.72	320	eP	Pn	03 00 31.9	+2.1
APON				eS	Sn	03 00 52.4	-1.8
TICN	Ticuantepe	1.91	319	eP	Pn	03 00 33.3	+1.3
BOAB	BOACO BROADBAN	.98	339	eP	Pn	03 00 32.4	-0.3
MGAN	Managua	2.00	320	eP	Pn	03 00 33.6	+0.5
TISN	Laguna Tiscapa	2.02	320	eP	Pn	03 00 34.0	+0.8
TISN				eS	Sn	03 00 57.4	-2.9
BAR1		2.09	130⇓	eP	Pn	03 00 34.6	+0.4
BAR1				eS	Sn	03 01 02.3	+0.4
CSAN		2.15	318	eP	Pn	03 00 35.9	+1.1
CSAN				eS	Sn	03 01 02.0	-1.0
COPN	Copaltepe	2.26	314	eP	Pn	03 00 36.6	+0.5
COPN				eS	Sn	03 01 04.5	-0.9
COPN				AML	AML	03 01 07.4	
	comp=Z,448nm,0.2s						
MOMN	Momotombo	2.39	319	eP	Pn	03 00 36.7	-1.0
MIRN	Miramar	2.52	317	eP	Pn	03 00 40.4	+1.0
MIRN				eS	Sn	03 01 11.6	+0.3
BRU2	Volcan	2.85	129	eP	Pn	03 00 44.3	+0.8
BRU2				eS	Sn	03 01 16.4	-2.1
CRIN	San Cristobal	2.94	316	eP	Pn	03 00 45.4	+0.8
TGUH	Tegucigalpa,Un	4.13	327	ePn	Pn	03 01 01.2	+1.3
LFRS	El Faro	5.03	307	eP	Pn	03 01 13.7	+1.9
LFRS				eS	Sn	03 02 08.7	-0.7
APG	El Apazote	6.94	310	P	Pn	03 01 38.7	+1.4
	comp=Z,0.4nm,0.3s,baz=109,slow=8.4,SNR=5.9						
CMIG	Matias Romero	11.61	305	P	Pn	03 02 39.2	-0.1
	comp=Z,0.8nm,0.3s,baz=124,slow=11,SNR=10						
SDV	Santo Domingo	14.21	96	P	Pn	03 03 13.3	+0.6
	comp=Z,0.2nm,0.3s,baz=235,slow=12,SNR=3.2						
SDV	Santo Domingo	14.21	96	P	Pn	03 03 13.3	+0.6
PCRV	Puerto La Cruz	19.98	89	P	P	03 04 20.3	+1.2
	comp=Z,1.4nm,0.3s,baz=275,slow=2.8,SNR=5.7						
LRAL	Lakeview Retre	22.41	355	eP	P	03 04 45.5	+0.9
	comp=Z,12nm,0.7s,mb4.4						
JSC	Jenkinsville	23.82	8	eP	P	03 04 57.8	+0.5
JCT	Junction City	24.14	327	eP	P	03 05 00.5	+0.2
	comp=Z,2.2nm,0.6s,mb3.9						
CPCT	Cooper Cave	24.75	1	eP	P	03 05 08.0	+2.3
TXAR	Lajitas Array	25.57	319	P	P	03 05 13.2	-0.1
	comp=Z,0.2nm,0.5s,mb3.0,baz=147,slow=9.3,SNR=4.2						
TXAR				pP	pP	03 05 44.2	-0.1
	comp=Z,0.6nm,0.6s,baz=143,slow=11,SNR=6.0						
CCM	Cathedral Cave	27.92	349	eP	P	03 05 33.4	-0.8
	comp=Z,4.7nm,1.0s,mb4.2						
PDAR	Pinedale Array	38.58	331	P	P	03 07 06.0	-0.4
	comp=Z,0.2nm,0.5s,mb3.0,baz=141,slow=10,SNR=2.4						
AGMN	Agassiz Refuge	38.69	348	eP	P	03 07 05.6	-1.6
	comp=Z,1.9nm,0.7s,mb3.8						
ULM	Lac du Bonnet	40.56	349	P	P	03 07 20.2	-2.5
	comp=Z,2.3nm,0.6s,mb4.0,baz=166,slow=6.7,SNR=4.9						
ULM	Lac du Bonnet	40.56	349	eP	P	03 07 19.8	-2.8
	comp=Z,1.9nm,0.6s,mb3.9						
NVAR	Mina Array Bea	40.71	319	P	P	03 07 25.6	+1.5
	comp=Z,0.4nm,0.2s,mb3.6,baz=130,slow=6.0,SNR=3.5						
SCHQ	Schefferville	46.40	14	P	P	03 08 07.8	-1.6
	comp=Z,2.5nm,0.5s,mb4.1,baz=216,slow=7.4,SNR=6.9						
YKA	Yellowknife Ar	56.05	344	P	P	03 09 19.2	-2.0
	comp=Z,0.2nm,0.5s,mb3.2,baz=139,slow=6.8,SNR=6.3						
YKA	Yellowknife Ar	56.05	344	P	P	03 09 19.2	-2.0
RES	Resolute Bay	64.31	357	eP	P	03 10 15.0	-2.2
	comp=Z,0.8nm,0.6s,mb3.7						

NIED ***07*** *03:24:00,23.°70N×145.°10E,h11km,Mw4.2 Best double couple: M₀2.09000×10¹⁵ NP1:φs332.00000°,δ80.00000°, λ86.00000°. NP2:φs177.00000°,δ11.00000°,λ114.00000°.*
IDC ***07*** *03:24:09.5±0.6,22.°90N×144.°25E,h0km,mb3.9/15, mb1 4.1/17,mb1mx4.0/27,mbtmp3.9/17,ML4.2/2,Error ellipse: s-maj=25.1km s-min=13.7km az=78.0*
ISCJB ***07*** *03:24:10.4±3.8,22.°85N±0.°06×144.°2E±0.°1,h16km±26km, mb4.1/25,Error ellipse: s-maj=20.5km s-min=8.8km az=169.8*
NEIC ***07*** *03:24:13.2±2.5,22.°86N×144.°26E,h24km±17km,mb4.4/10, Error ellipse: s-maj=10.4km s-min=5.4km az=86.0*

ISC 07 03:24:12.9±3.6,22.°87N±0.°06×144.°2E±0.°1,h21km±25km, n39,σ0°67/36,mb4.1/25,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.60	336	Pn	Pn	03 25 20.9	-0.3
	30nm,0.3s,baz=204,slow=4.0,SNR=19						
CBIJ				Sn	Sn	03 26 14.2	+0.2
	24nm,0.3s,baz=282,slow=22,SNR=6.2						
MJAR	Matsushiro Arr	14.59	340	Pn	Pn	03 27 37.8	-0.3
	0.6nm,0.3s,baz=157,slow=13,SNR=5.6						
MAJO	Matsushiro	14.59	340	ePn	Pn	03 27 39.0	+0.9
KSRS	Korea Array	20.21	320	P	P	03 28 45.1	-1.3
	0.6nm,0.5s,baz=136,slow=11,SNR=3.3						
COEN	Coen	36.61	182	eP	P	03 31 17.7	-0.1
	166nm,1.3s						
SONM	Songino Array	39.08	319	P	P	03 31 38.6	+0.2
	0.7nm,0.6s,mb3.6,baz=132,slow=8.5,SNR=3.1						
CTA	Charters Tower	42.74	177	P	P	03 32 09.2	+0.4
	2.0nm,0.5s,mb4.1,baz=0.0,slow=5.1,SNR=3.0						
WRAB	Tennant Creek	43.62	194	eP	P	03 32 15.8	0.0
	3.7nm,0.4s,mb4.5						
WRA	Warramunga Arr	43.64	194	P	P	03 32 16.3	+0.3
	1.7nm,0.4s,mb4.2,baz=16,slow=9.0,SNR=9.9						
ASAR	Alice Springs	47.34	193	P	P	03 32 45.1	-0.1
	0.6nm,0.4s,mb3.9,baz=20,slow=7.2,SNR=7.8						
STKA	Stephens Creek	54.49	183	P	P	03 33 38.5	-0.5
	1.3nm,0.4s,mb4.2,baz=346,slow=8.2,SNR=5.9						
STKA	Stephens Creek	54.49	183	P	P	03 33 38.5	-0.5
MKAR	Makanchi Array	54.64	312	P	P	03 33 39.5	-0.5
	0.6nm,0.6s,mb3.8,baz=99,slow=8.9,SNR=5.5						
FORT	Forrest	55.56	197	eP	P	03 33 46.5	-0.3
	4.2nm,0.6s,mb4.7						
KURK	Kurchatov	57.30	317	eP	P	03 33 59.2	+0.3
	1.2nm,0.4s,mb4.3						
UCH	Uchtor	60.26	307	eP	P	03 34 21.3	+1.5
	1.2nm,0.6s,mb4.1						
BVAR	Borovoye Array	62.43	319	P	P	03 34 35.1	+0.9
	4.6nm,0.5s,mb4.9,baz=89,slow=7.6,SNR=22						
BRVK	Borovoye	62.49	319	eP	P	03 34 35.0	+0.4
	4.1nm,0.6s,mb4.7						
KBL	Kabul	65.63	299	eP	P	03 34 56.5	+0.8
	5.6nm,0.8s,mb4.7						
INK	Inuvik	66.11	24	P	P	03 34 58.2	+0.2
	0.3nm,0.4s,mb3.6,baz=324,slow=3.8,SNR=5.2						
ABKAR	Akbulak array	69.39	316	eP	P	03 35 19.1	0.0
	2.1nm,0.5s,mb4.3						
YKA	Yellowknife Ar	74.97	28	P	P	03 35 51.4	-0.7
	0.2nm,0.5s,baz=293,slow=5.9,SNR=6.4						
YKA	Yellowknife Ar	74.97	28	P	P	03 35 51.4	-0.8
RES	Resolute Bay	75.71	14	eP	P	03 35 56.4	0.0
	0.3nm,0.4s,mb3.6						
KEV	Kevo	77.56	342	ep	P	03 36 10.9	+4.1
	0.3nm,0.4s,mb3.6						
JOF	Joensuu	79.68	335	ep	P	03 36 16.9	-1.7
	3.4nm,0.6s,mb4.5						
NVAR	Mina Array Bea	81.65	52	P	P	03 36 31.0	+1.3
	1.3nm,0.8s,mb3.9,baz=271,slow=5.8,SNR=4.6						
KAF	Kangasniemi	82.08	335	ep	P	03 36 30.5	-0.9
	1.0nm,0.4s,mb4.1						
FINES	FINESS Array B	82.55	335	P	P	03 36 33.7	-0.2
	1.4nm,0.4s,mb4.3,baz=61,slow=3.7,SNR=17						
FINES	FINESS Array B	82.55	335	P	P	03 36 33.7	-0.2
FFC	Flin Flon	84.32	32	eP	P	03 36 43.3	+0.1
	0.7nm,0.5s,mb4.0						
BW06	Boulder Array	85.87	45	eP	P	03 36 51.5	+0.3
	2.8nm,1.4s,mb4.3						
PDAR	Pinedale Array	85.87	45	P	P	03 36 50.8	-0.5
	0.2nm,0.8s,baz=352,slow=1.8,SNR=3.0						
NOA	NORSAR Array B	88.21	339	P	P	03 37 01.7	-0.4
	0.3nm,0.5s,mb3.8,baz=45,slow=4.4,SNR=3.0						
BRTR	Keskin Array B	90.28	314	P	P	03 37 11.9	-0.2
	0.2nm,0.3s,mb3.9,baz=35,slow=5.3,SNR=4.2						
PLCA	Paso Flores	145.77	130	PKPbc	PKPbc	03 43 49.9	-0.5
	0.9nm,0.3s,baz=228,slow=2.5,SNR=4.8						
PLCA	Paso Flores	145.77	130	PKPbc	PKPbc	03 43 49.9	-0.5
LCO	Las Campanas	148.07	108	ePKPbc	PKPbc	03 43 58.1	+0.8
LPAZ	La Paz	148.85	84	PKPbc	PKPbc	03 44 01.1	+1.4
	1.0nm,0.7s,baz=357,slow=3.0,SNR=4.0						

KRSC ***07*** *03:37:20.0±2.3,49.°54N×155.°75E,h149km±58km,ML4.2*
MOS ***07*** *03:37:20.6±1.3,49.°86N×154.°65E,h151km,mb4.3/2,Error ellipse: s-maj=17.7km s-min=9.4km az=79.9*
ISCJB ***07*** *03:37:21.1±0.9,49.°82N±0.°09×154.°7E±0.°1,h157km±8km, mb3.4/13,Error ellipse: s-maj=18.0km s-min=11.3km az=138.9*
NEIC ***07*** *03:37:22.3±1.5,49.°81N×154.°55E,h152km±13km,mb3.7/2, Error ellipse: s-maj=17.3km s-min=14.8km az=179.0*
IDC ***07*** *03:37:22.8±2.3,49.°82N×154.°61E,h158km±21km, mb3.1/11,mb1 3.3/13,mb1mx3.2/26,mbtmp3.2/13,Error ellipse: s-maj=19.1km s-min=15.8km az=128.0*

ISC 07 03:37:22.0±0.9,49.80N±0.°09×154.7E±0.°1,h150km±7km, n39,σ1°16/42,mb3.4/13,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.19	26	P	Pn	03 37 47.6	-0.9
SKR	Severo-Kuril's	1.26	45	ePN	Pn	03 37 46.0	-3.1
SKR				eS	Sn	03 38 05.5	-4.3
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=E,670nm,1.0s						
SKR				smax			
	comp=Z,90nm,0.5s						
MIPR	Malaya Ipel'ka	2.79	27	eP	Pn	03 38 07.1	+0.4
RUS	Russkaya	3.56	41	eP	Pn	03 38 15.4	-1.0
RUS				i S	Sn	03 38 55.7	-2.9
PEA0B	Petropavlovsk-	3.80	28	ePn	Pn	03 38 20.5	+1.0
PETK	Petropavlovsk-	3.80	28	ePN	Pn	03 38 20.4	+0.9
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK	Petropavlovsk-	3.80	28	P	Pn	03 38 20.4	+0.9
	comp=Z,3.7nm,0.3s,baz=208,slow=13,SNR=74						
PET	Petropavlovsk	4.06	36	P	Pn	03 38 24.1	+1.2
SDLR	Sedlovina	4.34	35	i P	Pn	03 38 27.2	+0.6
GNL	Ganaly	4.38	26	i P	Pn	03 38 28.6	+1.4
KMNR	Kamenistaya	6.84	27	P	Pn	03 39 00.9	+1.2
BZGR	Bezymyannyi-Gr	7.13	28	P	Pn	03 39 04.8	+1.2
SRDR	Sredinnyy	7.19	23	P	Pn	03 39 06.0	+1.6
ZLN	Zelenaya	7.23	28	P	Pn	03 39 06.2	+1.3
SRKR	Sorokina	7.88	27	P	Pn	03 39 13.3	-0.3
KBTR	Krutoberegovo	8.06	34	eP	Pn	03 39 14.3	-1.7
BKI	Bering	8.73	47	eP	Pn	03 39 22.8	-2.2
BKI				i S	Sn	03 40 50.4	-11
ASAJ	Asahikawa	10.05	240	PN	Pn	03 39 43.8	+1.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.05	240	P	Pn	03 39 43.8	+1.2
	comp=Z,0.6nm,0.3s,baz=59,slow=12,SNR=4.2						
SEY	Seymchan	13.23	355⇑	ePN	Pn	03 40 22.3	-1.5
YAK	Yakutsk	18.47	321	eP	P	03 41 26.0	0.0
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
SONM	Songino Array	31.45	285	P	P	03 43 27.4	-1.5
	comp=Z,0.7nm,0.5s,mb3.6,baz=73,slow=9.8,SNR=2.8						
MK31	Makanchi Array	46.54	296	eP	P	03 45 33.9	-0.3
MKAR	Makanchi Array	46.54	296	P	P	03 45 34.2	0.0
	comp=Z,0.8nm,0.6s,mb3.5,baz=68,slow=6.7,SNR=6.9						
KURK	Kurchatov	46.62	302	eP	P	03 45 34.1	-0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
KURK	Kurchatov	46.62	302	eP	P	03 45 34.1	-0.5
	comp=Z,1.2nm,0.4s,mb3.9						
YKA	Yellowknife Ar	47.85	39	P	P	03 45 45.8	+1.7
	comp=Z,0.4nm,0.7s,mb3.2,baz=298,slow=7.2,SNR=5.1						
BVAR	Borovoye Array	49.78	308	P	P	03 45 58.9	0.0
	comp=Z,0.6nm,0.6s,mb3.4,baz=60,slow=8.5,SNR=2.9						
ARU	Arti	53.51	317	P	P	03 46 26.9	+0.4
ARCES	ARCESS Array B	55.33	341	P	P	03 46 37.5	-1.9
	comp=Z,0.5nm,0.7s,mb3.3,baz=39,slow=8.2,SNR=5.7						
ABKAR	Akbulak array	57.31	309	eP	P	03 46 53.0	-0.7
	comp=Z,0.4nm,0.4s,mb3.6						
FINES	FINESS Array B	61.74	335	P	P	03 47 22.7	-1.2
	comp=Z,1.1nm,0.8s,mb3.7,baz=32,slow=11,SNR=3.4						
FINES	FINESS Array B	61.74	335	P	P	03 47 22.7	-1.2
AKASG	Malin Array Be	69.60	326	i P	P	03 48 15.8	+1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	71.75	200	P	P	03 48 27.9	+0.2
	comp=Z,0.2nm,0.4s,mb3.2,baz=12,slow=5.9,SNR=2.7						
TXAR	Lajitas Array	75.09	62	P	P	03 48 47.3	0.0
	comp=Z,0.1nm,0.5s,mb2.7,baz=324,slow=4.5,SNR=2.8						
ASAR	Alice Springs	75.44	200	P	P	03 48 48.5	-0.6
	comp=Z,0.3nm,0.6s,mb3.1,baz=13,slow=7.1,SNR=2.9						
GERES	GERESS Array B	76.17	335	P	P	03 48 53.5	+0.4
	comp=Z,0.3nm,0.5s,mb3.2,baz=32,slow=5.8,SNR=3.3						
BRTR	Keskin Array B	76.89	317	P	P	03 48 58.0	+0.7
	comp=Z,0.6nm,0.8s,mb3.3,baz=32,slow=8.5,SNR=3.4						

NEIC ***07*** *03:48:24.2,12.°05N×58.°90W,h56km,MD4.0(TRN),After TRN.*

TRN 07 03:48:24.1,12.°09N×58.°92W,h72km,MD4.0,M4.3(FDF), 6C-5D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSP	Saint Philip	1.14	332	eP	Pn	03 48 45.4	+0.9
BBSP				eS	Sn	03 49 01.1	+1.5
BBSP	Saint Philip	1.14	332	eP	Pn	03 48 45.4	+0.9
BBSP				eS	Sn	03 49 01.1	+1.5
TOSP	Speyside	1.77	244	eP	Pn	03 48 54.6	+1.9
TOSP				eS	Sn	03 49 16.3	+1.9
BOT	Bacolet	1.99	243	eP	Pn	03 48 56.8	+1.1
BOT	Bacolet	1.99	243	eP	Pn	03 48 56.8	+1.1
TPR	Prospect	2.03	244	eP	Pn	03 48 57.2	+1.0
TPR				eS	Sn	03 49 21.2	+0.5
TPR	Prospect	2.03	244	eP	Pn	03 48 57.2	+1.0
TPR				eS	Sn	03 49 21.2	+0.5
BHS	Barnard House	2.47	299	eP	Pn	03 49 04.0	+1.9
BHS				eS	Sn	03 49 35.4	+4.2
BHS	Barnard House	2.47	299	eP	Pn	03 49 04.0	+1.9
FCV	Fort Charlotte	2.51	295	eP	Pn	03 49 04.1	+1.5
FCV				eS	Sn	03 49 34.3	+2.1
FCV	Fort Charlotte	2.51	295	eP	Pn	03 49 04.1	+1.5
FCV				eS	Sn	03 49 34.3	+2.1
SSV	Crater Summit	2.54	299	eP	Pn	03 49 05.0	+2.0
SSV				eS	Sn	03 49 35.5	+2.6
SSV	Crater Summit	2.54	299	eP	Pn	03 49 05.0	+2.0
SSV				eS	Sn	03 49 34.7	+1.8
MCLT	Moule a Chique	2.55	309⇓	i P	Pn	03 49 02.3	-0.9
MCLT				eS	Sn	03 49 35.2	+2.1
SVV	Soufriere Volc	2.55	299	eP	Pn	03 49 04.7	+1.4
SVV				eS	Sn	03 49 36.9	+3.6
SVV	Soufriere Volc	2.55	299	eP	Pn	03 49 04.7	+1.4
SVV				eS	Sn	03 49 35.0	+1.6
SVB	Belmont	2.56	298	eP	Pn	03 49 02.6	-0.8
SVB				eS	Sn	03 49 36.7	+3.2
SVB	Belmont	2.56	298	eS	Sn	03 49 39.5	+6.0
GRIC	Isle de Caille	2.62	275	eP	Pn	03 49 05.5	+1.4
GRIC				eS	Sn	03 49 36.0	+1.1
GRSS	Sisters	2.64	275	eP	Pn	03 49 05.7	+1.3
GRSS				eS	Sn	03 49 36.4	+0.9
GRSS	Sisters	2.64	275	eP	Pn	03 49 05.7	+1.3
GRSS				eS	Sn	03 49 36.4	+0.9
TBH	Brigand Hill	2.64	233	eP	Pn	03 49 05.9	+1.4
TBH				eS	Sn	03 49 32.7	-2.9
TBH	Brigand Hill	2.64	233	eP	Pn	03 49 05.9	+1.4
TBH	Brigand Hill	2.64	233	e	Pn	03 49 13.8	+9.3
TBH				eS	Sn	03 49 37.3	+1.8
GRHS	Sauteurs	2.67	273	eP	Pn	03 49 06.5	+1.8
GRHS				eS	Sn	03 49 36.9	+0.8
GRHS	Sauteurs	2.67	273	eP	Pn	03 49 06.5	+1.8
GRHS				eS	Sn	03 49 36.9	+0.8
GRW	Mount Saint Ca	2.69	272	eP	Pn	03 49 05.8	+0.8
GRW				eS	Sn	03 49 37.3	+0.8
GRW	Mount Saint Ca	2.69	272	eP	Pn	03 49 05.8	+0.8
GRW	Mount Saint Ca	2.69	272	e	Pn	03 49 11.7	+6.7
GRW				eS	Sn	03 49 37.3	+0.8
SLB	Belfond	2.70	310⇑	i P	Pn	03 49 06.3	+1.1
SLB				eS	Sn	03 49 38.4	+1.6
SLB	Belfond	2.70	310⇑	i P	Pn	03 49 06.3	+1.1
SLB				eS	Sn	03 49 38.4	+1.6
TRN	Trinidad (W)	2.83	240⇓	eP	Pn	03 49 09.1	+2.1
TRN				eS	Sn	03 49 39.7	-0.3
TRN	Trinidad (W)	2.83	240⇓	eP	Pn	03 49 09.1	+2.1
TRN				eS	Sn	03 49 39.7	-0.3
TPP	Pointe-a-Pierr	3.05	235	eP	Pn	03 49 11.4	+1.5
TPP				eS	Sn	03 49 45.1	-0.2
TPP	Pointe-a-Pierr	3.05	235	eP	Pn	03 49 11.4	+1.5
TPP				eS	Sn	03 49 45.1	-0.2
TCE	Chacachacare	3.11	244⇓	i P	Pn	03 49 13.0	+2.2
TCE				eS	Sn	03 49 47.5	+0.7
TCE	Chacachacare	3.11	244⇓	i P	Pn	03 49 13.0	+2.2
TCE				eS	Sn	03 49 47.5	+0.7
MVM	Montagne Vaucl	3.12	322⇑	eP	Pn	03 49 09.8	-1.1
MVM			⇑	eS	Sn	03 49 45.0	-2.0
BIM	Bigot	3.20	319	eP	Pn	03 49 11.2	-0.8
BIM				eS	Sn	03 49 47.2	-1.8
FDF	Fort de France	3.41	321	ePn	Pn	03 49 13.7	-1.2
FDF				eSn	Sn	03 49 51.0	-3.2
FDF	Fort de France	3.41	321⇑	i P	Pn	03 49 14.0	-0.9
FDF			⇑	eS	Sn	03 49 51.8	-2.4

IDC ***07*** *03:50:39.7±63.0,15.°00S×175.°73E,h0km,mb3.8/3, mb1 3.9/3,mb1mx3.7/15,mbtmp3.8/3,Error ellipse: s-maj=1109.0km s-min=148.2km az=72.0*

ISC 07 03:51:54.5±5.5,19.1S±0.°2×168.4E±0.°8,h35km,n4, σ1°27/5,mb3.6/3,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.43	211	eP	Pn	03 52 44.9	-0.6
DZM				eS	Sn	03 53 25.0	+0.1
STKA	Stephens Creek	27.20	237	P	P	03 57 36.5	+1.5
	0.5nm,0.3s,mb3.5,baz=70,slow=12,SNR=3.9						
WRA	Warramunga Arr	32.03	263	P	P	03 58 13.2	-4.8
	0.6nm,1.0s,mb3.4,baz=89,slow=9.0,SNR=3.7						
ASAR	Alice Springs	32.34	256	P	P	03 58 19.9	-0.8
	0.9nm,0.5s,mb3.9,baz=84,slow=8.6,SNR=14						

ISCJB ***07*** *03:57:10.5±2.0,15.°7S±0.°4×173.°9W±0.°3,h97km±15km, mb3.9/13,Error ellipse: s-maj=76.3km s-min=12.7km az=149.3*
NEIC ***07*** *03:57:12.8±1.1,15.°67S×173.°89W,h106km±9km,mb4.0/6, Error ellipse: s-maj=39.0km s-min=7.3km az=150.0*
IDC ***07*** *03:57:12.4±3.0,15.°77S×173.°83W,h100km±23km,mb3.6/7, mb1 4.0/8,mb1mx3.8/17,mbtmp3.7/8,Error ellipse: s-maj=98.5km s-min=15.6km az=148.0*

ISC 07 03:57:12.0±1.8,15.°6S±0.°4×173.°9W±0.°3,h94km±14km,n21, σ0°67/17,mb3.9/13,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.66	52	P	Pn	03 57 54.5	+1.4
	170nm,0.3s,baz=175,slow=2.2,SNR=95						
AFI				S	Sn	03 58 23.5	-1.2
	176nm,0.3s,baz=222,slow=21,SNR=17						
COEN	Coen	41.47	266	eP	P	04 04 50.9	+1.0
	36nm,0.7s						
STKA	Stephens Creek	43.51	240	P	P	04 05 06.0	-0.3
	0.9nm,0.4s,mb3.8,baz=96,slow=9.6,SNR=6.6						
WRAB	Tennant Creek	49.30	257	eP	P	04 05 51.3	-0.5
	3.1nm,0.7s,mb4.3						
WRA	Warramunga Arr	49.31	257	P	P	04 05 51.8	0.0
	2.2nm,0.4s,mb4.4,baz=91,slow=6.9,SNR=12						
ASAR	Alice Springs	49.58	252	P	P	04 05 53.9	+0.1
	5.3nm,0.6s,mb4.7,baz=85,slow=7.5,SNR=58						
FORT	Forrest	54.88	243	eP	P	04 06 32.0	-1.1
	7.7nm,0.5s,mb5.0						
NVAR	Mina Array Bea	74.80	42	P	P	04 08 42.5	+0.5
	0.5nm,0.5s,mb3.5,baz=220,slow=8.3,SNR=2.9						
TUC	Tucson	76.90	51	eP	P	04 08 54.5	+0.4
	0.8nm,0.6s,mb3.6						
TXAR	Lajitas Array	81.13	56	P	P	04 09 17.8	+0.5
	0.2nm,0.6s,mb3.1,baz=210,slow=5.2,SNR=3.0						
ANMO	Albuquerque	81.31	50	eP	P	04 09 18.0	-0.1
	0.5nm,0.5s,mb3.6						
COLA	College	82.64	11	eP	P	04 09 23.7	-0.6
	1.6nm,0.6s,mb4.0						
BW06	Boulder Array	82.74	42	eP	P	04 09 25.0	-0.5
	0.9nm,0.8s,mb3.6						
PDAR	Pinedale Array	82.74	42	P	P	04 09 25.4	-0.1
	0.6nm,0.8s,mb3.5,baz=217,slow=2.3,SNR=5.8						
YKA	Yellowknife Ar	90.47	24	P	P	04 10 03.1	+0.5
	0.2nm,0.8s,mb3.3,baz=246,slow=4.9,SNR=3.5						
YKA	Yellowknife Ar	90.47	24	P	P	04 10 03.1	+0.5
BRVK	Borovoye	117.77	322	ePKPdf	PKPdf	04 15 46.4	-0.7
ARCES	ARCESS Array B	124.72	352	PKP	PKPdf	04 15 59.4	-0.6
	2.0nm,1.0s,baz=11,slow=1.8,SNR=4.1						
BR131	Keskin Array S	145.98	320	ePKPbc	PKPbc	04 16 40.5	-0.6
BRTR	Keskin Array B	145.98	320	PKPbc	PKPbc	04 16 41.3	+0.3
	3.6nm,0.8s,baz=52,slow=3.4,SNR=16						
GERES	GERESS Array B	146.25	351	PKPbc	PKPbc	04 16 41.0	-0.5
	0.4nm,0.7s,baz=27,slow=2.4,SNR=3.8						

DDA ***07*** *04:06:58.2,40.°43N×25.°35E,h7km±1km,Md2.9*
ISCJB ***07*** *04:06:59.5±0.5,40.°23N±0.°03×25.°28E±0.°03,h10km,Error ellipse: s-maj=4.0km s-min=3.6km az

1.9nm,0.4s,mb4.0
WRA Warramunga Arr 45.10 260 P **P 04 15 53.5 +0.2**
3.4nm,0.6s,mb4.1,baz=96,slow=7.8,SNR=21
WRA PcP PcP 04 17 21.8 -0.6
0.6nm,0.3s,baz=90,slow=3.5,SNR=3.8
ASAR Alice Springs 45.18 255 P **P 04 15 54.6 +0.8**
5.0nm,0.7s,mb4.2,baz=84,slow=8.7,SNR=46
ASAR PcP PcP 04 17 22.3 -0.3
0.9nm,0.4s,baz=99,slow=3.6,SNR=9.0
ASAR S **S 04 21 52.3 -1.9**
0.3nm,0.7s,baz=91,slow=11,SNR=5.5
FORT Forrest 50.25 245 *e*P **P 04 16 30.4 -1.2**
4.1nm,0.6s,mb4.0
PETK Petropavlovsk- 74.56 345 P **P 04 19 08.4 +0.2**
1.5nm,0.5s,mb3.7,baz=100,slow=6.0,SNR=4.0
TXAR Lajitas Array 85.88 57 P **P 04 20 08.6 +0.8**
0.3nm,0.7s,mb3.0,baz=208,slow=4.3,SNR=4.4
BILL Bilibino 87.24 354 *e*P **P 04 20 12.8 -0.5**
1.1nm,0.3s,mb4.0
MKAR Makanchi Array 110.09 314 PKiKP PKiKP 04 25 53.4 -1.6
0.2nm,0.4s,baz=1.9,slow=0.5,SNR=2.8
ARCES ARCESS Array B 127.16 350 PKP PKPdf 04 26 26.1 -1.0
1.8nm,0.9s,baz=27,slow=1.2,SNR=12
AKASG Malin Array Be 141.51 332 PKhKP 04 26 48.0
0.4nm,0.4s,baz=45,slow=4.8,SNR=4.3
AKASG Malin Array Be 141.51 332 PKP 04 26 48.0
BR131 Keskin Array S 145.74 314 *e*PKPbc PKPbc 04 27 02.6 -1.1
BRTR Keskin Array B 145.74 314 PKPbc PKPbc 04 27 02.9 -0.8
1.5nm,0.8s,baz=152,slow=6.0,SNR=6.8
CLL Collm 146.32 348 ‖ *i* PKPbc PKPbc 04 27 04.3 -0.6
comp=Z,6.0nm,1.0s
GERES GERESS Array B 148.49 345 PKPbc PKPbc 04 27 10.2 -0.4
comp=Z,0.9nm,0.7s,baz=11,slow=2.9,SNR=8.8
ESDC Sonseca Array 158.38 13 PKP PKPdf 04 27 22.3 +1.8
comp=Z,0.4nm,0.3s,baz=107,slow=19,SNR=4.1

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*ISCJB **07** 04:49:47.5±1.4,21°.2S±0°.1×178°.5W±0°.1, h494^{km}±18^{km}, mb3.7/8, Error ellipse: s-maj=25.6km s-min=12.4km az=140.2*
*NEIC **07** 04:49:49.4±1.4,21°.31S×178°.39W, h520^{km}±16^{km}, mb3.8/1, Error ellipse: s-maj=30.0km s-min=13.3km az=147.0*
*IDC **07** 04:49:49.6±2.1,21°.33S×178°.40W, h517^{km}±24^{km}, mb3.3/8, mb1 3.7/10, mb1mx3.5/18, mbtmp3.4/10, Error ellipse: s-maj=31.7km s-min=14.2km az=151.0*

ISC 07 04:49:47.5±1.2, 21°.3S±0°.1×178°.4W±0°.1, h485^{km}±16^{km}, n32, σ0°83/16, mb3.7/8, 2C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.70**	**42**	P	**P**	**04 52 03.0**	**+1.4**
	18nm,0.3s,baz=343,slow=0.7,SNR=18						
AFI				S	**S**	**04 53 50.6**	**-1.3**
	1.0nm,0.3s,baz=217,slow=23,SNR=2.3						
URZ	**Urewera**	**17.34**	**192**	P	**P**	**04 53 21.8**	**-0.4**
	3.8nm,0.3s,baz=298,slow=3.9,SNR=15						
CTA	**Charters Tower**	**33.04**	**266**	P	**P**	**04 55 42.5**	**+0.5**
	3.5nm,0.5s,mb4.0,baz=86,slow=13,SNR=6.2						
CTAO	**Charters Tower**	**33.04**	**266**	*e*P	**P**	**04 55 42.0**	**0.0**
	0.9nm,0.3s,mb3.7						
STKA	**Stephens Creek**	**37.10**	**245**	P	**P**	**04 56 16.9**	**+1.0**
	2.1nm,0.5s,mb3.8,baz=91,slow=8.8,SNR=6.1						
ASAR	**Alice Springs**	**43.97**	**258**	P	**P**	**04 57 10.9**	**0.0**
	1.9nm,0.5s,mb3.8,baz=98,slow=8.3,SNR=18						
ASAR				PcP	PcP	04 58 45.4	-1.0
	1.0nm,0.6s,baz=103,slow=4.1,SNR=10						
ASAR				S	**S**	**05 03 00.1**	**-6.8**
	1.1nm,0.8s,baz=94,slow=15,SNR=8.8						
WRA	**Warramunga Arr**	**44.12**	**263**	P	**P**	**04 57 11.7**	**-0.5**
	0.7nm,0.3s,mb3.5,baz=96,slow=9.8,SNR=7.5						
WRA				PcP	PcP	04 58 45.3	-1.7
	0.6nm,0.7s,baz=94,slow=5.8,SNR=3.0						
WRA				S	**S**	**05 03 00.4**	**-8.7**
	0.4nm,0.4s,baz=103,slow=18,SNR=3.2						
NVAR	**Mina Array Bea**	**81.87**	**43**	P	**P**	**05 01 16.4**	**+1.0**
	0.5nm,0.3s,mb3.5,baz=224,slow=8.5,SNR=2.6						
VNA3	**Neumayer Olymp**	**87.37**	**176**	*e*	**P**	**05 01 41.6**	**-0.3**
VNA2	**Neumayer--Watz**	**87.81**	**177**	*e*	**P**	**05 01 43.5**	**-0.4**
TXAR	**Lajitas Array**	**87.81**	**57**	P	**P**	**05 01 45.5**	**+0.8**
	0.6nm,0.8s,mb3.4,baz=201,slow=6.7,SNR=7.8						
PDAR	**Pinedale Array**	**89.81**	**43**	P	**P**	**05 01 53.5**	**-0.1**
	1.1nm,0.7s,mb3.8,baz=207,slow=2.1,SNR=12						
CMAR	**Chiang Mai Arr**	**90.02**	**290**	P	**P**	**05 01 53.8**	**-1.4**
	1.3nm,0.5s,mb4.0,baz=131,slow=3.5,SNR=10						
BVAR	**Borovoye Array**	**119.44**	**320**	PKP	PKPdf	05 07 38.7	-2.3
	0.4nm,0.4s,baz=58,slow=3.6,SNR=4.5						
ARCES	**ARCESS Array B**	**129.63**	**349**	PKP	PKPdf	05 07 57.9	-2.2
	1.3nm,0.6s,baz=48,slow=1.8,SNR=8.9						
AKASG	**Malin Array Be**	**143.52**	**330**	PKP	PKPdf	05 08 22.2	-4.0
	6.2nm,0.4s,baz=44,slow=4.3,SNR=30						
AKASG	**Malin Array Be**	**143.52**	**330**	PKP	PKPdf	05 08 22.2	-4.0
AKBB	**Malin Array Si**	**143.52**	**330**	*e*PKPdf	PKPdf	05 08 22.4	-3.8
MALT	**Malatya**	**144.10**	**306**	*e*PKPdf	PKPdf	05 08 26.1	-1.4
MALT	**Malatya**	**144.10**	**306** ‖ *i*P		PKPdf	05 08 26.2	-1.4
BR131	**Keskin Array S**	**147.08**	**311**	*e*PKPbc	PKPbc	05 08 33.9	-1.6
BRTR	**Keskin Array B**	**147.08**	**311**	PKPbc	PKPbc	05 08 34.1	-1.4
	1.8nm,0.6s,baz=131,slow=4.3,SNR=9.4						
KWP	**Kalwaria Pacla**	**147.14**	**334** ‖ *i*P		PKPdf	05 08 33.9	+1.6
BUR08	**Bucovina Ar. S**	**147.55**	**330**	*e*PKPbc	PKPbc	05 08 35.7	-0.8
BURAR	**Bucovina Array**	**147.56**	**330** ‖‖ *i*P		PKPbc	05 08 35.9	-0.6
MLR	**Muntele Rosu**	**148.68**	**326** ‖ *i*P		PKPbc	05 08 38.4	-1.0
CLL	**Collm**	**148.75**	**346**	*i* PKiKP	PKPbc	05 08 38.3	-1.1
	comp=Z,6.0nm,1.2s						
CLL				*i* PKPab	PKPab	05 08 43.5	-1.5
	comp=Z,4.0nm,0.7s						
CLL				LmV		05 41 00.0	
	comp=Z,100nm,18.6s						
VOIR		**149.18**	**327** ‖ *i*P		PKPbc	05 08 40.1	-0.5
GZR	**Gura Zlata**	**150.33**	**329** ‖ *i*P		PKPbc	05 08 41.9	-1.5
KHC	**Kasperske Hory**	**150.63**	**344**	*e*PKPbc	PKPbc	05 08 42.9	-1.0
BZS	**Buzias**	**150.71**	**331** ‖‖ *i*P		PKPbc	05 08 42.6	-1.6
GERES	**GERESS Array B**	**150.86**	**343**	PKPbc	PKPbc	05 08 42.8	-1.6
	comp=Z,0.3nm,0.2s,baz=29,slow=2.2,SNR=3.5						

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*ISCJB **07** 05:03:12.4±1.1, 15°.8S±0°.2×177°.4W±0°.2, h406^{km}±13^{km}, mb3.9/13, Error ellipse: s-maj=37.5km s-min=11.2km az=146.2*
*NEIC **07** 05:03:12.4±1.2, 15°.13S×177°.57W, h380^{km}±15^{km}, mb4.3/3, Error ellipse: s-maj=49.3km s-min=8.2km az=152.0*
*IDC **07** 05:03:12.5±1.9, 15°.29S×177°.53W, h386^{km}±27^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.6/19, mbtmp3.5/10, Error ellipse: s-maj=80.9km s-min=12.4km az=152.0*

ISC 07 05:03:13.1±1.1, 15°.8S±0°.2×177°.3W±0°.2, h399^{km}±12^{km}, n51, σ0°76/32, mb3.9/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.67**	**72**	P	**Pn**	**05 04 41.5**	**-0.7**
	5.0nm,0.3s,baz=46,slow=5.0,SNR=11						
AFI				S	**S**	**05 05 55.1**	**+0.5**
	1.5nm,0.3s,baz=76,slow=15,SNR=2.8						
AFI	**Afiamalu**	**5.67**	**72**	*e*Pn	**Pn**	**05 04 41.3**	**-0.8**
URZ	**Urewera**	**22.94**	**191**	P	**P**	**05 07 42.9**	**-1.3**
	3.4nm,0.7s,mb3.9,baz=359,slow=7.0,SNR=4.6						
EIDS	**Eidsvold**	**31.02**	**247**	*e*P	**P**	**05 08 59.5**	**+3.6**
	534nm,1.0s						
STKA	**Stephens Creek**	**40.59**	**239**	P	**P**	**05 10 16.9**	**+0.8**
	1.3nm,0.3s,mb3.7,baz=70,slow=5.2,SNR=4.6						
WRAB	**Tennant Creek**	**46.07**	**257**	*e*P	**P**	**05 10 59.9**	**+0.5**
WRA	**Warramunga Arr**	**46.08**	**257**	P	**P**	**05 10 59.0**	**-0.5**
	2.0nm,0.7s,mb3.5,baz=88,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**46.40**	**252**	P	**P**	**05 11 02.3**	**+0.4**
	25nm,0.6s,mb4.7,baz=84,slow=7.9,SNR=369						
NVAR	**Mina Array Bea**	**77.17**	**44**	P	**P**	**05 14 24.0**	**-0.1**
	2.0nm,0.7s,mb3.9,baz=226,slow=8.8,SNR=8.9						
TUC	**Tucson**	**79.57**	**52**	*e*P	**P**	**05 14 37.7**	**+0.4**
M13A	**Montello**	**81.40**	**43**	*e*P	**P**	**05 14 46.9**	**+0.2**
HLID	**Hailey**	**82.34**	**41**	*e*P	**P**	**05 14 51.7**	**+0.3**
TMUT	**Trail Mountain**	**82.40**	**46**	*e*P	**P**	**05 14 53.3**	**+1.4**
	8.2nm,0.7s,mb4.6						
SRU	**San Rafael**	**82.79**	**46**	*e*P	**P**	**05 14 53.9**	**+0.1**
	5.5nm,0.8s,mb4.3						
DLBC	**Dease Lake**	**83.46**	**23**	P	**P**	**05 14 56.5**	**-0.3**
	1.4nm,0.7s,mb3.8,baz=243,slow=9.0						
MCMT	**McKenzie Canyo**	**83.94**	**40**	*e*P	**P**	**05 14 59.9**	**+0.3**
	1.5nm,1.1s,mb3.6						
ANMO	**Albuquerque**	**83.95**	**51**	*e*P	**P**	**05 14 59.7**	**-0.1**
TXAR	**Lajitas Array**	**83.97**	**57**	P	**P**	**05 15 01.2**	**+1.1**
	2.0nm,0.8s,mb3.9,baz=220,slow=6.6,SNR=25						
RRI2	**Red Ridge**	**84.20**	**42**	*e*P	**P**	**05 15 01.5**	**+0.6**
DLMT	**Dillon**	**84.36**	**40**	*e*P	**P**	**05 15 01.9**	**+0.4**
GDL2	**Guadalupe Moun**	**84.49**	**55**	*e*P	**P**	**05 14 56.9**	**-5.6**
TPAW	**Teton Pass**	**84.51**	**42**	*e*P	**P**	**05 15 02.2**	**-0.2**
REDW	**Red Top Meadow**	**84.51**	**42**	*e*P	**P**	**05 15 02.3**	**-0.1**
IMW	**Indian Meadow**	**84.70**	**42**	*e*P	**P**	**05 15 03.5**	**+0.1**
DAWY	**Dawson**	**84.75**	**16**	*e*P	**P**	**05 15 02.0**	**-1.0**
PDAR	**Pinedale Array**	**85.09**	**43**	P	**P**	**05 15 04.8**	**-0.5**
	0.7nm,0.7s,mb3.5,baz=236,slow=2.7,SNR=6.9						
HRY	**Holter Researc**	**85.47**	**39**	*e*P	**P**	**05 15 07.0**	**0.0**
INK	**Inuvik**	**89.56**	**15**	P	**P**	**05 15 24.0**	**-1.8**
	0.3nm,0.5s,mb3.4,baz=225,slow=1.3,SNR=4.5						
INK	**Inuvik**	**89.56**	**15**	P	**P**	**05 15 24.0**	**-1.8**
YKA	**Yellowknife Ar**	**91.96**	**24**	P	**P**	**05 15 35.8**	**-1.3**
	0.6nm,0.8s,mb3.6,baz=251,slow=4.5,SNR=8.1						
YKA	**Yellowknife Ar**	**91.96**	**24**	P	**P**	**05 15 35.8**	**-1.3**
ARCES	**ARCESS Array B**	**124.40**	**350**	PKP	PKPdf	05 21 23.7	-1.1
	2.9nm,1.0s,baz=15,slow=3.8,SNR=6.3						
BRTR	**Keskin Array B**	**143.97**	**318**	PKP	PKPdf	05 22 00.9	-1.1
	2.6nm,0.7s,baz=64,slow=2.9,SNR=11						
MLR	**Muntele Rosu**	**144.51**	**331**	PKP	PKPdf	05 22 02.5	-0.2
	1.8nm,0.6s,baz=45,slow=1.4,SNR=4.1						
GERES	**GERESS Array B**	**145.80**	**347**	PKPbc	PKPbc	05 22 05.7	-0.5
	0.6nm,0.6s,baz=35,slow=4.9,SNR=6.5						
FLN	**La Foliniere**	**147.00**	**4**	*e*PKP1	PKPdf	05 22 07.1	+0.2
LDF	**La Druitiere**	**147.19**	**3**	*e*PKP1	PKPdf	05 22 07.4	+0.2
CDF	**Champ du Feu**	**147.23**	**354**	*e*PKP1	PKPbc	05 22 09.1	-1.1
SGMF	**Saint Gilles**	**147.32**	**6**	*e*PKP1	PKPbc	05 22 09.0	-1.4
	8.6nm,0.6s						
GRR	**Gorron**	**147.34**	**4**	*e*PKP1	PKPbc	05 22 09.2	-1.3
	6.2nm,0.4s						
LOR	**Lormes**	**148.58**	**358**	*e*PKP1	PKPbc	05 22 13.5	-0.2
SSF	**Saint Saulge**	**148.79**	**359**	*e*PKP1	PKPbc	05 22 14.1	-0.1
CABF	**La Chapelle**	**149.12**	**355**	*e*PKP1	PKPbc	05 22 14.7	-0.3
	4.6nm,0.6s						
BGF	**Bois d'Agland**	**149.30**	**360**	*e*PKP1	PKPbc	05 22 14.5	-1.0
	6.1nm,0.6s						
TCF	**Toulx Ste Croi**	**149.57**	**1**	*e*PKP1	PKPbc	05 22 15.3	-0.8
LPL	**La Plagne**	**150.15**	**354**	*e*PKP1	PKPbc	05 22 17.6	0.0
	13nm,1.0s						
LPG	**La Plagne**	**150.17**	**354**	*e*PKP1	PKPbc	05 22 17.8	+0.2
	4.8nm,0.7s						
ORIF	**Oris-en-Rattie**	**150.82**	**355**	*e*PKP1	PKPbc	05 22 18.6	-0.5
MBDF	**Montbardon**	**150.93**	**354**	*e*PKP1	PKPbc	05 22 18.9	-0.5
	7.5nm,0.7s						
LASF	**Ste Croix**	**151.77**	**358**	*e*PKP1	PKPbc	05 22 20.7	-0.6
	5.4nm,0.8s						
SMRF	**Simiane la Rot**	**151.78**	**356**	*e*PKP1	PKPbc	05 22 21.1	-0.2
	3.2nm,0.6s						

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*NIED **07** 05:10:00,36°.30N×141°.80E, h17^{km}, Mw4.2 Best double couple: M₀2.18000×10^{15} NP1:φ₀30.00000°, δ67.00000°, λ115.00000°. NP2:φ₀159.00000°, δ34.00000°, λ44.00000°.*
*MOS **07** 05:10:27.7±1.0, 36°.18N×141°.88E, h33^{km}, mb4.4/10, Error ellipse: s-maj=15.2km s-min=8.7km az=133.6*
*JMA **07** 05:10:28.2±0.2, 36°.26N×141°.84E, h61^{km}±5^{km}, M3.6*
*ISCJB **07** 05:10:29.3±0.8, 36°.23N±0°.04×141°.77E±0°.07, h41^{km}±6^{km}, mb4.1/33, MS3.7/6, Error ellipse: s-maj=9.5km s-min=5.9km az=1.8*
*NEIC **07** 05:10:30.3±0.3, 36°.15N×141°.80E, h35^{km}, mb4.4/5, Error ellipse: s-maj=9.3km s-min=5.7km az=174.0*
*IDC **07** 05:10:30.8±3.0, 36°.14N×141°.78E, h39^{km}±27^{km}, mb3.8/20, mb1 4.0/24, mb1mx3.9/32, mbtmp3.8/24, ML3.8/3, MS3.6/8, Ms1 3.6/8, ms1mx3.2/31, Error ellipse: s-maj=18.3km s-min=15.1km az=55.0*

ISC 07 05:10:29.0±1.7, 36°.21N±0°.03×141°.79E±0°.06, h24^{km}±11^{km}, n70, σ0°82/76, mb4.1/33, MS3.7/6, 2C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.91**	**236**	P	**Pn**	**05 10 46.1**	**-0.2**
CHOJ				S	**Sn**	**05 10 59.4**	**+0.8**
JHO	**Hitachi**	**1.06**	**292**	P	**Pn**	**05 10 47.2**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.20**	**318**	P	**Pn**	**05 10 48.9**	**-1.3**
JFK	**Kawauchi**	**1.37**	**328**	P	**Pn**	**05 10 51.7**	**-0.8**
BSO1	**Boso 1**	**1.69**	**203**	P	**Pn**	**05 10 56.9**	**-0.1**
BSO1				S	**Sn**	**05 11 18.4**	**+0.5**
BSO3	**Boso 3**	**1.75**	**217**	P	**Pn**	**05 10 58.3**	**+0.5**
BSO3				S	**Sn**	**05 11 19.2**	**-0.2**
JMM	**Marumori**	**1.83**	**334**	P	**Pn**	**05 10 57.9**	**-1.0**
JAG	**Ashikaga**	**1.90**	**277**	P	**Pn**	**05 10 59.7**	**-0.2**
JFY	**Yanaizu**	**2.06**	**306**	P	**Pn**	**05 11 01.4**	**-0.6**
JKT	**Katashina**	**2.12**	**286**	P	**Pn**	**05 11 03.1**	**+0.2**
MJAR	**Matsushiro Arr**	**2.91**	**278**	Pn	**Pn**	**05 11 15.2**	**+1.5**
MJAR	baz=105,slow=8.5,SNR=23			Sn	**Sn**	**05 11 54.1**	**+6.2**
	5.2nm,0.3s,baz=261,slow=9.6,SNR=5.8						
MAJO	**Matsushiro**	**2.91**	**278**	*e*P	**Pn**	**05 11 15.2**	**+1.4**
MAT	**Matsushiro**	**2.91**	**278**	P	**Pn**	**05 11 15.0**	**+1.2**
MAT				S	**Sn**	**05 11 47.1**	**-0.9**
JHJ	**Hachijo jima 2**	**3.50**	**209**	Pn	**Pn**	**05 11 21.8**	**-0.1**
	31nm,0.3s,baz=65,slow=23,SNR=14						
JHJ				Sn	**Sn**	**05 12 01.4**	**-1.1**
	68nm,0.3s,baz=253,slow=23,SNR=8.0						
CBIJ	**Chichi jima**	**9.10**	**178**	Pn	**Pn**	**05 12 36.6**	**-2.1**
	7.0nm,0.3s,baz=84,slow=22,SNR=6.4						
CBIJ				Sn	**Sn**	**05 14 11.2**	**-9.2**
	15nm,0.3s,baz=297,slow=23,SNR=6.0						
CBIJ				LR	LR	05 16 13.5	
	comp=Z,149nm,19.4s,baz=112,slow=38						
KSRS	**Korea Array**	**11.19**	**280**	P	**Pn**	**05 13 08.9**	**+1.6**
KSRS				MLR	MLR		
	comp=Z,179nm,18.4s						
KSRS	**Korea Array**	**11.19**	**280**	Pn	**Pn**	**05 13 08.9**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=94,slow=13,SNR=6.4						
KSRS				LR	LR	05 17 32.1	
	comp=Z,179nm,18.4s,baz=344,slow=38						
YAK	**Yakutsk**	**26.94**	**347**	*e*P	**P**	**05 16 06.9**	**-1.2**
YAK				pmax	pmax		
	comp=E,11nm,1.8s						
YAK				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.6						
YAK				pmax	pmax		
	comp=N,14nm,1.5s						
ENH	**Enshi**	**27.58**	**267**	*e*P	**P**	**05 16 13.9**	**-0.3**
ULN	**Ulaanbaatar**	**28.07**	**305**	*e*P	**P**	**05 16 19.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**28.07**	**305**	*e*P	**P**	**05 16 19.1**	**+0.7**
	comp=Z,2.5nm,0.6s,mb4.0						
BOD	**Bodaibo**	**28.39**	**328**	*e*P	**P**	**05 16 20.6**	**-0.5**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
SONM	**Songino Array**	**28.50**	**305**	P	**P**	**05 16 22.3**	**+0.1**
	comp=Z,4.6nm,0.9s,mb4.2,baz=116,slow=10,SNR=6.0						
ZAK	**Zakamensk**	**31.02**	**309**	*e*P	**P**	**05 16 44.1**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
GTA	**Gaotai**	**33.10**	**288**	*e*P	**P**	**05 17 04.1**	**+1.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
CMAR	**Chiang Mai Arr**	**41.59**	**257**	P	**P**	**05 18 15.1**	**0.0**
	comp=Z,0.5nm,0.3s,mb3.7,baz=51,slow=4.3,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.70**	**313**	P	**P**	**05 18 24.1**	**+0.5**
	comp=Z,1.7nm,0.4s,mb4.1,baz=97,slow=6.0,SNR=3.9						
ZALV				LR	LR	05 36 49.8	
	comp=Z,46nm,19.7s,MS3.4,baz=166,slow=37						
MK31	**Makanchi Array**	**44.82**	**303**	*e*P	**P**	**05 18 41.2**	**+0.4**
MKAR	**Makanchi Array**	**44.82**	**303**	*ce*P	**P**	**05 18 41.4**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**44.82**	**303**	P	**P**	**05 18 40.7**	**-0.1**
	comp=Z,3.2nm,0.7s,mb4.1,baz=95,slow=9.1,SNR=15						
MKAR				LR	LR	05 37 53.5	
	comp=Z,64nm,20.1s,MS3.5,baz=14,slow=37						
MKAR	**Makanchi Array**	**44.82**	**303**	P	**P**	**05 18 40.7**	**-0.1**
MKAR				LR	LR	05 37 53.5	
KURK	**Kurchatov**	**46.68**	**309**	*de*P	**P**	**05 18 55.7**	**+0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**46.68**	**309**	LR	LR	05 39 20.1	
	comp=Z,65nm,18.2s,MS3.6,baz=90,slow=37						
KURK	**Kurchatov**	**46.68**	**309**	*e*P	**P**	**05 18 55.1**	**-0.4**
	comp=Z,6.7nm,0.9s,mb4.6						
AAK	**Ala-Archa**	**51.15**	**299**	P	**P**	**05 19 30.1**	**+0.3**
	comp=Z,0.5nm,0.3s,mb3.9,baz=212,slow=20,SNR=3.2						
AAK				LR	LR	05 42 35.3	
	comp=Z,171nm,19.0s,MS4.1,baz=207,slow=38						
BVAR	**Borovoye Array**	**51.35**	**313**	P	**P**	**05 19 31.3**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=64,slow=7.1,SNR=8.7						
BVAR				LR	LR	05 42 17.6	
	comp=Z,80nm,19.4s,MS3.8,slow=37						
BRVK	**Borovoye**	**51.41**	**313**	*ce*P	**P**	**05 19 32.0**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.1						
MENT	**Mentasta**	**51.54**	**34**	P	**P**	**05 19 33.5**	**+1.1**
AML	**Almayashu**	**51.87**	**299**	*e*P	**P**	**05 19 36.3**	**+1.1**
	comp=Z,6.7nm,1.0s,mb4.5						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**05 19 57.9**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=315,slow=5.2,SNR=17						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**05 19 57.9**	**+0.2**
WRA	**Warramunga Arr**	**56.29**	**188**	P	**P**	**05 20 06.4**	**-1.2**
	comp=Z,1.7nm,0.9s,mb4.1,baz=4.2,slow=7.4,SNR=5.7						
ARU	**Arti**	**57.18**	**319**	*d* / P	**P**	**05 20 13.7**	**+0.1**
ARU				*e*		05 22 17.1	
ARU				S	**S**	**05 28 06.3**	**-1.0**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
AKTK	**Aktyubinsk**	**59.45**	**312**	P	**P**	**05 20 28.5**	**-1.1**
AKTO	**Aktyubinsk**	**59.45**	**312**	P	**P**	**05 20 28.5**	**-1.1**
	comp=Z,1.6nm,0.8s,mb4.1,baz=92,slow=9.1,SNR=4.4						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**05 20 33.3**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=9.7,slow=6.6,SNR=4.0						
YKA	**Yellowknife Ar**	**64.36**	**30**	P	**P**	**05 21 02.6**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.8,baz=300,slow=6.8,SNR=11						
YKA	**Yellowknife Ar**	**64.36**	**30**	P	**P**	**05 21 02.6**	**+0.3**
ARCES	**ARCESS Array B**	**64.87**	**340**	P	**P**	**05 21 05.2**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.3,baz=42,slow=13,SNR=5.6						
JOF	**Joensuu**	**66.83**	**332**	*e*P	**P**	**05 21 17.4**	**-0.9**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
JOF	**Joensuu**	**66.83**	**332**	*ep*	**P**	**05 21 17.4**	**-0.9**
	comp=Z,1.5nm,0.8s,mb4.1						
KAF	**Kangasniemi**	**69.18**	**333**	*e*P	**P**	**05 21 30.9**	**-2.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
KAF	**Kangasniemi**	**69.18**	**333**	*ep*	**P**	**05 21 30.9**	**-2.1**
	comp=Z,1.4nm,0.7s,mb4.0						
FINES	**FINESS Array B**	**69.68**	**333**	P	**P**	**05 21 36.4**	**+0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**69.68**	**333**	P	**P**	**05 21 36.4**	**+0.2**
	comp=Z,3.3nm,0.9s,mb4.3,baz=61,slow=9.0,SNR=7.4						
FINES	**FINESS Array B**	**69.68**	**333**	P	**P**	**05 21 36.4**	**+0.2**
FFC	**Flin Flon**	**74.23**	**33**	*i* P	**P**	**05 22 04.4**	**+0.8**
HRY	**Holter Researc**	**74.34**	**43**	*e*P	**P**	**05 22 05.0**	**+0.7**
	comp=Z,1.1nm,0.6s,mb4.0						
LRM	**Limekiln Ridge**	**74.52**	**44**	*e*P	**P**	**05 22 06.1**	**+0.7**
	comp=Z,15nm,0.9s,mb4.9						
NB2	**NORSAR Subarra**	**75.06**	**338**	P	**P**	**05 22 08.3**	**0.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=37,slow=5.6						
NOA	**NORSAR Array B**	**75.06**	**338**	P	**P**	**05 22 08.7**	**+0.5**
	comp=Z,3.1nm,0.9s,mb4.2,baz=39,slow=5.7,SNR=7.5						
NOA				LR	LR	05 57 32.1	
	comp=Z,43nm,19.6s,MS3.8,baz=145,slow=38						
AKASG	**Malin Array Be**	**75.13**	**323**	P	**P**	**05 22 08.5**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.2,baz=48,slow=5.7,SNR=10						
AKASG	**Malin Array Be**	**75.13**	**323**	P	**P**	**05 22 08.5**	**-0.4**
NVAR	**Mina Array Bea**	**75.24**	**53**	P	**P**	**05 22 10.5**	**+0.8**
	comp=Z,0.3nm,0.3s,mb3.7,ba

MKAR Makanchi Array 28.81 42 P **P** **05 24 57.9 -0.1**
comp=Z,0.6nm,0.5s,mb3.6,baz=231,slow=10,SNR=5.6
MKAR Makanchi Array 28.81 42 P **P** **05 24 57.9 -0.1**
MKAR Makanchi Array 28.81 42 P **P** **05 24 57.9 -0.1**
KURK Kurchatov 29.14 33 P **P** **05 25 00.0 -0.9**
comp=Z,0.4nm,0.7s,mb3.3,baz=234,slow=8.4,SNR=2.7
KURK Kurchatov 29.14 33 P **P** **05 25 00.0 -0.9**
FINES FINESS Array B 38.18 339 P **P** **05 26 17.6 -1.7**
comp=Z,1.7nm,0.7s,mb3.9,baz=98,slow=5.8,SNR=4.6
NOA NORSAR Array B 43.55 331 P **P** **05 27 03.3 -0.3**
comp=Z,0.9nm,0.7s,mb3.6,baz=119,slow=8.1,SNR=3.6
NOA NORSAR Array B 43.55 331 P **P** **05 27 03.3 -0.3**
ARCES ARCESS Array B 44.60 346 P **P** **05 27 11.1 -0.7**
comp=Z,0.8nm,0.8s,mb3.6,baz=142,slow=9.1,SNR=3.7
ARCES ARCESS Array B 44.60 346 P **P** **05 27 11.1 -0.7**
TORD Torodi Ar. Bea 50.95 264 P **P** **05 28 01.0 -0.9**
comp=Z,2.3nm,0.7s,mb4.2,baz=61,slow=7.4
BOSA Boshof 62.89 209 PKIKP **P** **05 29 27.0 +0.8**
BOSA Boshof 62.89 209 P **P** **05 29 27.0 +0.8**
comp=Z,2.4nm,0.8s,mb4.4,baz=296,slow=22,SNR=5.0
BOSA Boshof 62.89 209 P **P** **05 29 27.0 +0.8**
YKA Yellowknife Ar 89.21 355 P **P** **05 31 55.1 -0.5**
comp=Z,0.4nm,0.8s,mb3.8,baz=3.4,slow=4.2,SNR=7.0
WRA Warramunga Arr 91.00 112 P **P** **05 32 04.8 +0.1**
comp=Z,0.2nm,0.3s,mb4.0,baz=314,slow=4.3,SNR=2.4
ASAR Alice Springs 92.47 115 P **P** **05 32 11.3 -0.1**
comp=Z,0.2nm,0.6s,mb3.6,baz=307,slow=4.3,SNR=4.6

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*NEIC **07** 05:31:36.0±1.2, 19°.25S×177°.51W, h560km±16km, mb4.6/2, Error ellipse: s-maj=30.4km s-min=12.7km az=146.0*
*IDC **07** 05:31:36.8±1.8, 19°.54S×177°.27W, h573km±24km, mb3.3/7, mb1 3.7/9, mb1mx3.5/18, mbtmp3.4/9, Error ellipse: s-maj=21.9km s-min=12.0km az=131.0*
ISC 07 05:31:35.8±1.0, **19°.2S**±0°.2×**177°.5W**±0°.2, **h553**km±14km, **n18**, σ0**91**/20, **mb4.0**/11, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.58**	**47**	P	**P**	**05 33 30.7**	**+1.2**
	12nm,0.3s,baz=151,slow=1.5,SNR=17						
AFI				S	**S**	**05 35 01.7**	**-0.9**
	2.3nm,0.3s,baz=237,slow=24,SNR=3.8						
URZ	**Urewera**	**19.58**	**193**	P	**P**	**05 35 26.2**	**-1.5**
	1.4nm,0.3s,baz=297,slow=3.2,SNR=7.9						
URZ				S	**S**	**05 38 29.0**	**-6.9**
	0.2nm,0.3s,baz=43,slow=21,SNR=5.1						
ARMA	**Armidale**	**30.10**	**242**	*e*P	**P**	**05 37 02.1**	**+1.2**
TOO	**Toolangi**	**37.08**	**233**	*e*P	**P**	**05 38 00.3**	**+0.9**
STKA	**Stephens Creek**	**38.81**	**243**	*e*P	**P**	**05 38 14.7**	**+1.0**
	9.4nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**38.81**	**243**	P	**P**	**05 38 14.7**	**+1.0**
	8.7nm,0.5s,mb4.6,baz=92,slow=9.7,SNR=25						
STKA	**Stephens Creek**	**38.81**	**243**	*e*P	**P**	**05 38 14.2**	**+0.6**
WRAB	**Tennant Creek**	**45.28**	**261**	*e*P	**P**	**05 39 04.0**	**-0.6**
	4.5nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**45.29**	**261**	P	**P**	**05 39 04.6**	**-0.2**
	7.4nm,0.5s,mb4.4,baz=97,slow=8.1,SNR=53						
ASAR	**Alice Springs**	**45.31**	**255**	P	**P**	**05 39 05.0**	**+0.2**
	10.0nm,0.4s,mb4.7,baz=88,slow=8.0,SNR=159						
KAKA	**Kakadu**	**48.46**	**270**	*e*P	**P**	**05 39 27.4**	**-1.3**
	12nm,0.4s,mb4.8						
KAKA	**Kakadu**	**48.46**	**270**	*e*P	**P**	**05 39 27.0**	**-1.7**
	19nm,0.5s,mb4.9						
FORT	**Forrest**	**50.28**	**246**	*e*P	**P**	**05 39 41.4**	**-0.4**
	14nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.70**	**261**	*e*P	**P**	**05 40 06.8**	**+0.2**
	8.0nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**79.73**	**43**	P	**P**	**05 42 46.5**	**-0.1**
	0.2nm,0.3s,mb3.0,baz=225,slow=7.5,SNR=2.2						
TXAR	**Lajitas Array**	**85.93**	**57**	P	**P**	**05 43 19.1**	**+1.2**
	0.6nm,0.8s,mb3.3,baz=224,slow=3.5,SNR=7.7						
PDAR	**Pinedale Array**	**87.67**	**43**	P	**P**	**05 43 26.2**	**+0.5**
	0.4nm,0.8s,mb3.2,baz=203,slow=1.1,SNR=3.8						
YKA	**Yellowknife Ar**	**95.12**	**25**	P	**P**	**05 43 58.4**	**-1.2**
	0.1nm,0.3s,mb3.4,baz=236,slow=4.4,SNR=3.1						

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*ISCJB **07** 05:34:24.3±0.6, 29°.10S±0°.03×67°.52W±0°.06, h115km±7km, mb3.9/8, Error ellipse: s-maj=9.0km s-min=5.1km az=0.9*
*GUC **07** 05:34:25.5±0.8, 29°.11S×67°.66W, h145km±76km, ML5.2*
*NEIC **07** 05:34:25.4±0.5, 29°.09S×67°.45W, h112km±5km, mb4.7/2, Error ellipse: s-maj=8.2km s-min=5.5km az=97.0*
NEIC Felt [III] at Chilecito.
*IDC **07** 05:34:27.3±0.7, 29°.14S×67°.57W, h127km±5km, mb3.7/7, mb1 3.8/9, mb1mx3.7/15, mbtmp3.7/9, Error ellipse: s-maj=26.5km s-min=16.7km az=75.0*
ISC 07 05:34:25.3±0.5, **29°.09S**±0°.03×**67°.49W**±0°.06, **h107**km±7km, **n43**, σ0**95**/47, **mb3.9**/8, **1C-8D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.59**	**194**	P	**Pn**	**05 35 07.5**	**+1.6**
	baz=217,slow=10						
CFAA				S	**Sn**	**05 35 37.3**	**+0.3**
	52nm,0.3s,baz=272,slow=19,SNR=28						
LCO	**Las Campanas**	**2.81**	**271**	*e*Pn	**Pn**	**05 35 10.2**	**+1.5**
LCO				*e*Sn	**Sn**	**05 35 42.9**	**+0.8**
CPCH	**Copiapo**	**3.06**	**304**	⇓*i*P	**Pn**	**05 35 13.0**	**+1.0**
CPCH				*i* S	**Sn**	**05 35 47.8**	**-0.1**
CPCH	**Copiapo**	**3.06**	**304**	⇓*i*P	**Pn**	**05 35 13.0**	**+1.0**
CPCH				*i* S	**Sn**	**05 35 47.8**	**-0.1**
CPCH				AML	AML	05 35 49.9	
	comp=N,4μm,0.1s						
OVCH	**Ovalle**	**3.56**	**244**	⇓*i*P	**Pn**	**05 35 18.9**	**+0.2**
OVCH				*e*S	**Sn**	**05 35 58.9**	**-1.0**
OVCH	**Ovalle**	**3.56**	**244**	⇓*i*P	**Pn**	**05 35 18.9**	**+0.2**
OVCH				*e*S	**Sn**	**05 35 58.9**	**-1.0**
OVCH				AML	AML	05 36 01.7	
	comp=N,2μm,0.6s						
CMCH	**Combarbala**	**3.68**	**235**	⇓*i*P	**Pn**	**05 35 20.1**	**-0.2**
CMCH				*i* S	**Sn**	**05 36 02.5**	**-0.4**
CMCH	**Combarbala**	**3.68**	**235**	⇓*i*P	**Pn**	**05 35 20.1**	**-0.2**
CMCH				*i* S	**Sn**	**05 36 02.5**	**-0.4**
CMCH				AML	AML	05 36 05.1	
	comp=N,6μm,0.8s						
PEL	**Peldehue**	**4.88**	**213**	⇓*i*P	**Pn**	**05 35 35.9**	**-0.5**
PEL				*e*S	**Sn**	**05 36 29.8**	**-2.1**
CLCH	**Cerro Calan**	**5.03**	**210**	⇑*i*P	**Pn**	**05 35 38.6**	**+0.2**
CLCH				*i* S	**Sn**	**05 36 35.1**	**-0.1**
SJCH	**San Jose de Ma**	**5.16**	**208**	*e*P	**Pn**	**05 35 41.3**	**+1.1**
ANTU	**Antumapu**	**5.21**	**210**	*e*P	**Pn**	**05 35 41.1**	**+0.2**
ANTU				*i* S	**Sn**	**05 36 39.3**	**-0.5**
LMEL	**Las Melosas**	**5.28**	**205**	*e*P	**Pn**	**05 35 43.0**	**+1.2**
CHCH	**Chadas Angostu**	**5.53**	**208**	*e*P	**Pn**	**05 35 45.2**	**-0.1**
CHCH				*i* S	**Sn**	**05 36 46.9**	**-0.7**
LVC	**Limon Verde**	**6.57**	**348**	P	**Pn**	**05 36 00.7**	**+1.3**
	comp=N,19nm,0.3s,baz=188,slow=9.2,SNR=100						
LVC				S	**Sn**	**05 37 11.2**	**-1.7**
	comp=N,4.6nm,0.3s,baz=211,slow=14,SNR=5.6						
CPUP	**Villa Florida**	**9.42**	**75**	P	**Pn**	**05 36 37.5**	**-0.5**
	comp=N,1.1nm,0.3s,baz=244,slow=11,SNR=15						
TRQA	**Tornquist**	**10.06**	**154**	*e*Pn	**Pn**	**05 36 46.5**	**-0.1**
	comp=N,9.2nm,0.6s						
PLCA	**Paso Flores**	**11.89**	**191**	P	**Pn**	**05 37 09.1**	**-2.1**
	comp=N,0.2nm,0.3s,baz=331,slow=11,SNR=7.9						
LPAZ	**La Paz**	**12.75**	**357**	P	**Pn**	**05 37 21.9**	**-0.9**
	comp=N,0.6nm,0.3s,baz=175,slow=5.2,SNR=24						
SIV	**San Ignacio**	**14.31**	**26**	P	**Pn**	**05 37 41.6**	**-1.4**
	comp=N,0.5nm,0.3s,baz=219,slow=14,SNR=37						
ROSC	**El Rosal**	**34.38**	**348**	P	**P**	**05 41 03.6**	**+1.4**
	comp=N,2.5nm,0.6s,mb4.2,baz=113,slow=24,SNR=3.9						
VNA3	**Neumayer Olymp**	**52.53**	**160**	*e*	**P**	**05 43 27.9**	**+0.9**
VNA3				*e*		05 43 36.5	
VNA2	**Neumayer--Watz**	**53.12**	**159**	*e*	**P**	**05 43 32.1**	**+0.8**
QSPA	**South Pole Qui**	**61.14**	**180**	*e*P	**P**	**05 44 28.4**	**+0.7**
	comp=N,4.1nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**67.59**	**326**	P	**P**	**05 45 11.0**	**+0.7**
	comp=N,0.2nm,0.7s,mb3.0,baz=139,slow=7.0,SNR=2.9						
TXAR				pP	pP	05 45 42.2	+5.1
	comp=N,0.2nm,0.5s,baz=170,slow=11,SNR=2.6						
SYO	**Syowa Base**	**68.99**	**158**	⇓*e*P	**P**	**05 45 15.0**	**-3.6**
DBIC	**Dimbokro**	**69.89**	**70**	P	**P**	**05 45 24.8**	**-0.2**
	comp=N,0.9nm,0.5s,mb3.9,baz=218,slow=6.8,SNR=3.0						
MAW	**Mawson**	**76.73**	**163**	P	**P**	**05 46 04.4**	**+0.1**
	comp=N,1.2nm,0.6s,mb3.8,baz=202,slow=5.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**78.83**	**68**	P	**P**	**05 46 17.1**	**+0.3**
	baz=271,slow=5.7						
BOSA	**Boshof**	**78.84**	**116**	P	**P**	**05 46 17.0**	**+0.3**
	comp=N,7.5nm,1.1s,mb4.5,baz=268,slow=4.8,SNR=8.0						
BOSA	**Boshof**	**78.84**	**116**	P	**P**	**05 46 17.0**	**+0.2**
PDAR	**Pinedale Array**	**81.30**	**330**	P	**P**	**05 46 29.2**	**-0.2**
	comp=N,0.9nm,0.8s,mb3.7,baz=125,slow=7.8,SNR=7.8						
PDAR				pP	pP	05 47 01.9	+4.9
	comp=N,0.8nm,0.7s,baz=127,slow=4.0,SNR=4.2						
FCC	**Fort Churchill**	**90.28**	**347**	*e*P	**P**	**05 47 13.1**	**-0.2**
YKA	**Yellowknife Ar**	**98.73**	**340**	P	**P**	**05 47 50.1**	**-1.8**
	comp=N,0.1nm,0.7s,mb3.5,baz=142,slow=4.8,SNR=3.7						
ASAR	**Alice Springs**	**123.66**	**204**	PKP	PKPdf	05 53 09.4	-1.4
	comp=N,1.0nm,0.4s,baz=140,slow=1.7,SNR=19						
WRA	**Warramunga Arr**	**126.90**	**206**	PKP	PKPdf	05 53 16.0	-1.1
	comp=N,2.7nm,0.5s,baz=163,slow=1.6,SNR=40						
KAPI	**Kappang**	**145.39**	**193**	PKPbc	PKPbc	05 53 50.2	-1.2
	comp=N,5.3nm,0.6s,baz=184,slow=6.1,SNR=4.4						
KAPI	**Kappang**	**145.39**	**193**	PKPbc	PKPbc	05 53 50.2	-1.2
UCH	**Uchtor**	**146.74**	**56**	*e*PKPbc	PKPbc	05 53 54.7	+0.1
ZALV	**Zalesovo Beam**	**148.02**	**31**	PKPbc	PKPbc	05 53 57.7	0.0
	comp=N,2.5nm,0.3s,baz=306,slow=5.3,SNR=7.5						
ZALV				pPKPbc	pPKPbc	05 54 30.6	+3.9
	comp=N,1.9nm,0.5s,baz=298,slow=3.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**148.02**	**31**	PKPbc	PKPbc	05 53 57.7	0.0
ZALV				pPKPbc	pPKPbc	05 54 30.6	+3.9
MK31	**Makanchi Array**	**150.58**	**45**	*e*PKPbc	PKPbc	05 54 04.5	+0.1
MKAR	**Makanchi Array**	**150.58**	**45**	PKPbc	PKPbc	05 54 04.5	+0.1
	comp=N,2.5nm,0.7s,baz=272,slow=2.9,SNR=19						
MKAR				pPKPbc	pPKPbc	05 54 37.6	+4.1
	comp=N,0.7nm,0.7s,baz=280,slow=3.0,SNR=2.9						

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*BJI **07** 05:35:34.1, 12°.51N×124°.00E, h30km, mB4.9/27, mb4.9/49, Ms4.5/48, Ms7 4.3/44*
*ISCJB **07** 05:35:35.7±0.7, 12°.72N±0°.02×123°.64E±0°.03, h30km±5km, mb4.8/89, MS4.1/29, Error ellipse: s-maj=4.5km s-min=3.9km az=166.7*
*MOS **07** 05:35:35.8±0.9, 12°.71N×123°.63E, h33km, mb5.1/29, MS4.0/5, Error ellipse: s-maj=11.0km s-min=6.4km az=120.5*
*MAN **07** 05:35:35, 12°.76N×123°.58E, h22km, mb5.4, ML4.4, MS4.6*
MAN INTENSITY III - IROSIN SORSOGON; LEGASPI CITY; INTENSITY II - LIGNON HILL; MASBATE CITY.
*IDC **07** 05:35:38.1±3.0, 12°.71N×123°.59E, h38km±25km, mb4.4/26, mb1 4.5/29, mb1mx4.5/31, mbtmp4.4/29, ML3.8/3, MS4.1/14, Ms1 4.1/14, ms1mx3.8/25, Error ellipse: s-maj=16.3km s-min=10.8km az=68.0*
*GCMT **07** 05:35:39.1±0.3, 12°.85N×123°.61E, h18km±1km, MW4.9/72, Moment Tensor Solution. s19,c20; s72,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.26±.22; $M_{\theta\theta}$2.00±.14; $M_{\phi\phi}$-0.74±.18; $M_{r\theta}$0.05±.27; $M_{\theta\phi}$-2.37±.09; $M_{\phi r}$-0.99±.41; Best double couple: $M_0$3.03200×10^{16} NP1:ϕ_s79.00000°, δ63.00000°, λ-161.00000°. NP2: ϕ_s340.00000°, δ73.00000°, λ-29.00000°. Principal axes: T 3.4300, Plg7.0000°, Azm31.0000°; N -0.8000, Plg57.0000°, Azm131.0000°; P -2.6330, Plg32.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 05:35:39.1±0.7, 12°.75N×123°.65E, h45km±6km, mb4.9/35 Error ellipse: s-maj=6.7km s-min=4.9km az=87.0*
NEIC Felt [II PIVS] at Masbate. Felt [III PIVS] at Irosin, Legaspi and Sorsogon, Luzon.
*DJA **07** 05:35:50, 12°.76N×123°.70E, h151km, Mw4.9/5*
ISC 07 05:35:36.5±0.6, **12°.71N**±0°.02×**123°.64E**±0°.03, **h24**km±4km, **h31**km±1.2km:**pP-P, n209**, σ1**9**/**16**/223, **mb4.8**/89, **MS4.1**/29, **10C-6D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.35**	**182**	*i* S	**Sb**	**05 35 48.4**	**-1.0**
PVCP	**Virac**	**1.02**	**30**	*e*P	**Pn**	**05 35 52.9**	**-2.5**
PVCP				*e*S	**Sb**	**05 36 07.8**	**-0.6**
CNP	**Catarman**	**1.02**	**101**	*e*P	**Pn**	**05 35 54.7**	**-0.7**
CNP				*e*S	**Sb**	**05 36 07.3**	**-1.3**
AUQP	**San Andres**	**1.12**	**303**	*e*P	**Pn**	**05 35 55.8**	**-0.9**
AUQP				*e*S	**Sn**	**05 36 15.1**	**+3.7**
RCP	**Roxas**	**1.44**	**217**	⇓*e*P	**Pn**	**05 35 59.4**	**-1.7**
RCP				*e*S	**Sn**	**05 36 18.9**	**-0.3**
OTRP	**Odiongan**	**1.61**	**258**	*e*P	**Pn**	**05 36 02.4**	**-1.2**
KALP	**Kalibo**	**1.63**	**231**	⇑*e*P	**Pn**	**05 36 06.7**	**+2.9**
BOAC	**Boac**	**1.90**	**293**	*e*P	**Pn**	**05 36 05.6**	**-1.9**
BOAC				*e*S	**Sn**	**05 36 28.4**	**-2.3**
OCLP	**Ormoc**	**1.90**	**150**	*e*P	**Pn**	**05 36 08.4**	**+0.8**
GUIM	**Jordan**	**2.31**	**206**	*e*P	**Pn**	**05 36 14.9**	**+1.7**
GUIM				*e*S	**Sn**	**05 36 44.8**	**+3.9**
LLP	**Lapu-Lapu**	**2.40**	**172**	*e*P	**Pn**	**05 36 14.3**	**0.0**
LLP				*e*S	**Sn**	**05 36 45.8**	**+2.8**
SJMP	**San Jose**	**2.47**	**265**	*e*P	**Pn**	**05 36 15.8**	**+0.4**
POLP	**Polilio Island**	**2.60**	**321**	*e*P	**Pn**	**05 36 17.6**	**+0.5**
TGY	**Tagaytay City**	**2.97**	**298**	Pn	**Pn**	**05 36 22.0**	**-0.2**
	23nm,0.3s,baz=147,slow=6.3,SNR=13						
TGY	**Tagaytay City**	**2.97**	**298**	⇓*e*P	**Pn**	**05 36 28.2**	**+6.0**
TBP	**Tagbilaran**	**3.01**	**176**	*e*P	**Pn**	**05 36 23.0**	**+0.3**
CUYO	**Cuyo Island**	**3.16**	**234**	*e*P	**Pn**	**05 36 24.3**	**-0.5**
SNPH	**Sibulan**	**3.37**	**187**	*e*P	**Pn**	**05 36 29.1**	**+1.4**
SNPH				*e*S	**Sn**	**05 37 18.2**	**+11**
BUSP	**Coron**	**3.43**	**259**	*e*P	**Pn**	**05 36 27.6**	**-0.9**
LUBP	**Lubang**	**3.45**	**288**	*e*P	**Pn**	**05 36 27.5**	**-1.3**
BALP	**Baler**	**3.62**	**327**	*e*P	**Pn**	**05 36 31.1**	**0.0**
PALP	**Palanan**	**4.48**	**345**	*e*P	**Pn**	**05 36 44.2**	**+1.2**
CAUP	**Cauayan**	**4.56**	**338**	*e*P	**Pn**	**05 36 43.8**	**-0.3**
SCZP	**Santa Cruz**	**4.73**	**311**	*e*P	**Pn**	**05 36 53.2**	**+6.9**
BUKP	**Musuan**	**5.00**	**164**	*e*P	**Pn**	**05 36 54.3**	**+4.1**
BOLP	**Bolinao**	**5.13**	**316**	*e*P	**Pn**	**05 36 58.0**	**+6.1**
DAV	**Davao City (W)**	**5.92**	**161**	Pn	**Pn**	**05 37 10.2**	**+7.3**
	70nm,0.3s,baz=87,slow=8.3,SNR=2.3						
BATP	**Bataraza**	**6.93**	**236**	*e*P	**Pn**	**05 37 17.6**	**+0.9**
BBP	**Basco**	**7.85**	**348**	*e*P	**Pn**	**05 37 27.6**	**-1.8**
KKM	**Kota Kinabalu**	**9.87**	**229**	Pn	**Pn**	**05 38 01.0**	**+4.0**
	22nm,1.0s						
YULB	**Yu-li**	**10.86**	**349**	*e*Pn	**Pn**	**05 38 09.2**	**-1.3**
	18nm,0.7s						
SSLB	**Suanglung**	**11.31**	**347**	*e*Pn	**Pn**	**05 38 18.0**	**+1.3**
	21nm,0.8s						
YHNB	**Yeheng**	**12.09**	**350**	*e*Pn	**Pn**	**05 38 28.6**	**+1.3**
	26nm,0.8s						
QZH	**Quanzhou**	**13.07**	**339**	*e*P	**Pn**	**05 38 45.0**	**+4.2**
QZH				S	**Sn**	**05 41 15.0**	**+10**
QZH				LR	LR		
	comp=N,970nm,13.4s						
QZH				LR	LR		
	comp=E,920nm,14.4s						
QZH				LR	LR		
	comp=Z,2μm,17.0s						
QIZ	**Qiongzhong**	**14.68**	**297**	P	**Pn**	**05 39 11.3**	**+8.5**
QIZ				S	**Sn**	**05 41 54.3**	**+10**
QIZ				pmax	pmax		
	comp=Z,24nm,1.6s						
QIZ				LR	LR		
	comp=N,420nm,13.7s						
QIZ				LR	LR		
	comp=E,280nm,14.5s						
QIZ				LR	LR		
	comp=Z,550nm,15.1s						
JOW	**Kunigami**	**14.71**	**17**	Pn	**Pn**	**05 39 03.6**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=251,slow=8.7,SNR=2.9						
JOW				Sn	**Sn**	**05 41 57.1**	**+12**
	comp=Z,0.4nm,0.3s,baz=165,slow=29,SNR=1.7						
JOW				LR	LR	05 44 21.3	
	comp=Z,1μm,19.7s,baz=174,slow=36						
KSM	**Kuching**	**17.29**	**231**	*e*Pn	**Pn**	**05 39 39.8**	**+3.2**
	comp=Z,185nm,2.0s						
KAPI	**Kappang**	**18.02**	**193**	P	**Pn**	**05 39 46.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=38,slow=6.5,SNR=12						
KAPI				S	**Sn**	**05 43 18.5**	**+12**
	baz=63,slow=17,SNR=1.5						
KAPI	**Kappang**	**18.02**	**193**	*e*Pn	**Pn**	**05 39 47.9**	**+2.2**
	comp=Z,43nm,1.2s						
SSE	**Sheshan**	**18.44**	**353**	P	**Pn**	**05 39 51.6**	**+1.1**
SSE				pP	pP	05 39 59.5	+2.6
SSE				S	**Sn**	**05 43 17.7**	**+1.8**
SSE				pmax	pmax		
	comp=Z,43nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,3.8s						
SSE				LR	LR		
	comp=N,180nm,22.4s						
SSE				LR	LR		
	comp=E,410nm,22.4s						
SSE				LR	LR		
	comp=Z,440nm,16.9s						
WHN	**Wuhan**	**19.72**	**336**	⇑P	**Pn**	**05 40 08.0**	**+2.1**
WHN				S	**Sn**	**05 43 46.0**	**-0.8**
WHN				pmax	pmax		
	comp=Z,1μm,3.3s						
WHN				LR	LR		
	comp=N,2μm,24.9s						
WHN				LR	LR		
	comp=E,1μm,14.4s						
WHN				LR	LR		
	comp=Z,1μm,14.0s						
NJ2	**Nanjing**	**19.75**	**348**	*e*P	**Pn**	**05 40 07.0**	**+0.7**
NJ2				pP	pP	05 40 13.7	+2.4
NJ2				sP	sP	05 40 21.5	+7.1
NJ2				PP		05 40 24.9	
NJ2				sS	sS	05 43 54.0	-2.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,200nm,3.7s						
NJ2				LR	LR		
	comp=N,430nm,10.8s						
NJ2				LR	LR		
	comp=Z,470nm,12.7s						
GUMO	**Guam**	**20.70**	**85**	P	**P**	**05 40 16.9**	**+1.7**
	comp=Z,71nm,0.7s,baz=347,slow=23,SNR=2.2						
GUMO				LR	LR	05 47 13.1	
	comp=Z,176nm,19.5s,MS3.4,baz=267,slow=34						
GUMO	**Guam**	**20.70**	**85**	P	**P**	**05 40 16.9**	**+1.7**
GUMO				LR	LR	05 47 13.1	
GYA	**Guiyang**	**21.01**	**313**	⇑*i*P	**P**	**05 40 21.0**	**+2.5**
GYA				pP		05 40 30.4	
GYA				sP	sP	05 40 36.7	+8.6
GYA				PP		05 40 44.3	
GYA				S	**S**	**05 44 09.0**	**-2.4**
GYA				sS	sS	05 44 23.8	+1.8
GYA				SS		05 44 44.0	
GYA				ScP	ScP	05 48 01.2	+0.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=N,3μm,15.0s,MS4.8						
GYA				LR	LR		
	comp=E,2μm,14.8s,MS4.8						
GYA				LR	LR		
	comp=Z,2μm,13.7s,MS4.8						
ENH	**Enshi**	**21.84**	**325**	*e*P	**P**	**05 40 28.9**	**+1.5**
	comp=Z,69nm,1.3s,mb4.9						
CBIJ	**Chichi jima**	**22.52**	**48**	LR	LR	05 47 24.8	
	comp=Z,523nm,21.5s,MS3.9,baz=239,slow=31						
KMI	**Kunming**	**23.27**	**305**	P	**P**	**05 40 45.5**	**+2.9**
KMI				pP		05 40 53.4	
KMI				sP	sP	05 40 57.1	+4.8
KMI				PP		05 41 16.5	
KMI				S	**S**	**05 44 51.7**	**-1.7**
KMI				sS	sS	05 45 06.8	+1.8
KMI				SS		05 45 40.6	
KMI				pmax	pmax		
	comp=Z,21nm,1.8s,mb4.3						
KMI				pmax	pmax		
	comp=Z,210nm,3.1s						
KMI				LR	LR		
	comp=N,290nm,14.6s,MS4.0						
KMI				LR	LR		
	comp=E,370nm,17.9s,MS4.0						
KMI				LR	LR		
	comp=Z,390nm,17.1s,MS3.9						
KULM	**Kulim**	**23.85**	**254**	*e*P	**P**	**05 40 49.8**	**+1.4**
	comp=Z,134nm,1.8s,mb5.1						
CMAR	**Chiang Mai Arr**	**24.45**	**287**	P	**P**	**05 40 53.1**	**-0.6**
	comp=Z,5.1nm,0.7s,mb4.1,baz=100,slow=8.1,SNR=21						
CMAR				PcP	PcP	05 44 31.7	-0.8
	comp=Z,0.9nm,0.3s,baz=85,slow=1.1,SNR=5.9						
CHTO	**Chiang Mai**	**24.51**	**287**	*e*P	**P**	**05 40 53.4**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
CHTO	**Chiang Mai**	**24.51**	**287**	*e*P	**P**	**05 40 53.4**	**-0.9**
	comp=Z,11nm,1.0s,mb4.3						
KSRS	**Korea Array**	**24.94**	**8**	P	**P**	**05 40 58.0**	**0.0**
	comp=Z,1.1nm,0.4s,mb3.7,baz=282,slow=26,SNR=5.2						
KSRS				LR	LR	05 50 43.3	
	comp=Z,426nm,18.0s,MS4.0,baz=188,slow=36						
XAN	**Xi'an**	**25.10**	**330**	P	**P**	**05 40 58.7**	**-0.8**
XAN				pP	pP	05 41 07.3	+0.7
XAN				sP	sP	05 41 12.9	+3.3
XAN				S	**S**	**05 45 25.2**	**+2.3**
XAN				sS	sS	05 45 40.0	+5.4
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
XAN				pmax	pmax		
	comp=Z,21nm,5.0s						
XAN				LR	LR		
	comp=N,380nm,14.6s,MS4.1						
XAN				LR	LR		
	comp=E,140nm,14.2s,MS4.1						
XAN				LR	LR		
	comp=Z,200nm,14.1s,MS3.8						
CD2	**Chengdu**	**25.78**	**318**	P	**P**	**05 41 09.6**	**+3.9**
CD2				pP	pP	05 41 18.

HHC pmax pmax
comp=Z,24nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,85nm,5.0s
HHC LR LR
comp=N,370nm,14.5s,MS4.4
HHC LR LR
comp=E,550nm,14.7s,MS4.4
HHC LR LR
comp=Z,400nm,14.7s,MS4.2
CN2 Changchun 31.02 3 *e*P **P 05 41 54.6 +2.3**
CN2 *es*P sP 05 42 07.6 +5.2
CN2 *e*S **S 05 46 55.8 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,18.0s,MS4.4
CN2 LR LR
comp=E,400nm,18.0s,MS4.4
CN2 LR LR
comp=Z,300nm,19.0s,MS4.0
MDJ Mudanjiang 32.20 8 P **P 05 42 03.7 +1.0**
MDJ pP pP 05 42 12.5 +2.7
MDJ sP sP 05 42 16.4 +3.6
MDJ S **S 05 47 14.7 +0.4**
MDJ ScP ScP 05 48 33.8 +0.4
MDJ pmax pmax
comp=Z,24nm,1.0s,mb5.0
MDJ pmax pmax
comp=Z,54nm,3.3s
MDJ LR LR
comp=N,240nm,18.2s,MS4.2
MDJ LR LR
comp=E,350nm,19.5s,MS4.2
MDJ LR LR
comp=Z,460nm,20.8s,MS4.2
MDJ Mudanjiang 32.20 8 *e*P **P 05 42 03.8 +1.1**
comp=Z,41nm,1.1s,mb5.2
SHL Shillong 32.51 298⇓*e*P **P 05 42 05.5 -0.2**
WRAB Tennant Creek 34.11 162 P **P 05 42 19.0 -0.6**
comp=Z,198nm,0.7s,SNR=9.6
WRAB Tennant Creek 34.11 162 *e*P **P 05 42 18.9 -0.7**
WRAB pmax pmax
comp=Z,94nm,1.5s,mb5.5
WRAB Tennant Creek 34.11 162 *e*P **P 05 42 18.9 -0.7**
comp=Z,94nm,1.5s,mb5.5
WRA Warramunga Arr 34.11 162 P **P 05 42 18.8 -0.8**
comp=Z,14nm,0.6s,mb5.0,baz=340,slow=9.4,SNR=6.9
WRA PcP PcP 05 44 56.0 -0.8
comp=Z,1.9nm,0.6s,baz=340,slow=3.0,SNR=8.9
WRA Warramunga Arr 34.11 162 P **P 05 42 18.8 -0.8**
WRA PcP PcP 05 44 56.0 -0.8
LSA Lhasa 34.52 304 P **P 05 42 24.1 +1.0**
LSA Lhasa 34.52 304 *e*P **P 05 42 24.3 +1.2**
LSA pmax pmax
comp=Z,16nm,1.0s,mb4.9
LSA Lhasa 34.52 304 *e*P **P 05 42 24.2 +1.1**
comp=Z,16nm,1.0s,mb4.9
KLR Kul'dur 37.03 9 *e*P **P 05 42 39.7 -4.6**
ASAR Alice Springs 37.52 164 P **P 05 42 48.2 -0.6**
comp=Z,10nm,0.7s,mb4.7,baz=339,slow=6.2,SNR=66
ASAR PcP PcP 05 45 05.8 -1.1
comp=Z,1.7nm,0.5s,baz=340,slow=3.2,SNR=5.1
ULN Ulaanbaatar 37.69 342 *e*P **P 05 42 50.0 0.0**
ULN pmax pmax
comp=Z,19nm,1.1s,mb4.7
ULN Ulaanbaatar 37.69 342 *e*P **P 05 42 50.0 +0.1**
comp=Z,18nm,1.1s,mb4.7
SONM Songino Array 37.87 341 P **P 05 42 51.5 +0.1**
comp=Z,13nm,1.1s,mb4.5,baz=168,slow=10,SNR=12
SONM LR LR 05 58 54.1
comp=Z,247nm,20.1s,MS4.0,baz=126,slow=37
GUN Gumba 38.32 299 *e*P **P 05 42 55.7 +0.1**
comp=Z,81nm,0.9s,mb5.4
PKI Pulchoki 38.63 298 *e*P **P 05 42 57.8 -0.5**
comp=Z,18nm,0.7s,mb4.9
PKIN Phulchoki 38.65 298 *e*P **P 05 42 57.5 -0.9**
comp=Z,26nm,0.9s,mb5.0
PKIN Phulchoki 38.65 298 *e*P **P 05 42 57.7 -0.7**
comp=Z,31nm,0.7s,mb5.1
KKN Kakani 38.80 299 *e*P **P 05 42 58.8 -0.9**
comp=Z,41nm,1.1s,mb5.1
DMN Daman 38.91 298 *e*P **P 05 43 00.0 -0.5**
comp=Z,51nm,1.0s,mb5.2
GKN Gorkha 39.41 299 *e*P **P 05 43 03.6 -1.1**
comp=Z,30nm,0.9s,mb5.0
KOLN Koldanda 40.24 298 *e*P **P 05 43 11.0 -0.7**
comp=Z,27nm,1.0s,mb5.0
PYUN Piuthan 40.84 298 *e*P **P 05 43 15.7 -0.9**
comp=Z,55nm,1.0s,mb5.1
TLY Talaya 42.10 341 *e*P **P 05 43 26.7 +0.1**
TLY pmax pmax
comp=Z,11nm,1.3s,mb4.3
TLY MLR MLR
comp=Z,190nm,21.0s,MS4.0
TLY Talaya 42.10 341 *e*P **P 05 43 26.8 +0.2**
comp=Z,14nm,1.4s,mb4.4
MOY Mondy 42.95 339 *e*P **P 05 43 36.1 +2.6**
FORT Forrest 43.45 174 *e*P **P 05 43 37.1 -0.6**
comp=Z,16nm,0.6s,mb4.9
FORT Forrest 43.45 174 *e*P **P 05 43 37.0 -0.7**
comp=Z,22nm,0.7s,mb5.0
WMQ Urumqi 43.72 322 *e*P **P 05 43 42.6 +2.7**
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,51nm,3.0s
WMQ LR LR
comp=N,400nm,25.0s,MS4.3
WMQ LR LR
comp=E,270nm,25.0s,MS4.3
WMQ LR LR
comp=Z,290nm,20.0s,MS4.2
CLNS Chul'man 44.04 1 *e*P **P 05 43 45.3 +3.1**
CLNS *e* 05 45 26.4
CLNS *e*S **S 05 50 11.2 -1.8**
CLNS pmax pmax
comp=Z,19nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,16nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=N,5.0nm,1.0s
CLNS smax
comp=E,5.0nm,0.9s
CLNS smax
comp=N,12nm,0.9s
DDI Dehra Dun 45.54 300 *ex* **P 05 43 54.0 -0.6**
BOD Bodaibo 45.61 353 *e*P **P 05 43 54.5 -0.2**
BOD pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
EIDS Eidsvold 46.35 145 *e*P **P 05 44 00.7 -0.2**
comp=Z,72nm,1.9s,mb5.3
STKA Stephens Creek 47.56 159 *e*P **P 05 44 10.2 -0.1**
STKA *e* 05 46 02.0
STKA pmax pmax
comp=Z,6.0nm,1.1s
STKA Stephens Creek 47.56 159 *e*P **P 05 44 10.1 -0.2**
comp=Z,13nm,1.0s,mb4.9
STKA Stephens Creek 47.56 159 P **P 05 44 10.3 +0.1**
comp=Z,14nm,0.9s,mb5.0,baz=337,slow=7.3,SNR=19
STKA Stephens Creek 47.56 159 *e*P **P 05 44 10.2 -0.1**
comp=Z,5.6nm,1.1s,mb4.5
STKA *e*PP PP 05 46 02.0 0.0
MK31 Makanchi Array 48.53 323 *e*P **P 05 44 17.9 +0.2**
MKAR Makanchi Array 48.53 323*ce*P **P 05 44 18.0 +0.3**
MKAR pmax pmax
comp=Z,17nm,0.8s
MKAR Makanchi Array 48.53 323 P **P 05 44 17.7 0.0**
comp=Z,17nm,0.8s,mb5.1,baz=122,slow=8.7,SNR=38
PETK Petropavlovsk- 48.56 27 P **P 05 44 17.8 -0.1**
comp=Z,2.3nm,0.7s,mb4.3,baz=256,slow=38,SNR=3.2
PETK LR LR 06 04 47.7
comp=Z,122nm,18.3s,MS3.9,baz=228,slow=36
YAK Yakutsk 49.44 4 *e*P **P 05 44 25.8 +1.4**
YAK pmax pmax
comp=Z,24nm,1.3s,mb5.1
YAK pmax pmax
comp=N,19nm,1.6s
KSH Kashi 49.69 311 P **P 05 44 28.6 +1.9**

KSH *e*pP pP 05 44 38.0 +3.9
KSH *es*P sP 05 44 42.2 +5.2
KSH *e*PcP PcP 05 45 50.2 +2.5
KSH *e*PP PP 05 46 23.7 +2.4
KSH *e*ScP ScP 05 49 41.7 -0.3
KSH *e*PcS PcS 05 49 45.1 +0.7
KSH *e*S **S 05 51 32.8 -1.4**
KSH *e*ScS ScS 05 54 14.5 -2.6
KSH pmax pmax
comp=Z,32nm,2.9s,mb4.8
KSH LR LR
comp=N,240nm,10.6s
KSH LR LR
comp=E,140nm,7.4s
ULHL Ulahol 50.44 315 P **P 05 44 33.4 +1.1**
SNR=13
ARMA Armidale 50.64 148 *e*P **P 05 44 34.1 +0.2**
ARMA Armidale 50.64 148 *e*P **P 05 44 34.7 +0.8**
comp=E,15nm,1.0s,mb4.9
KZA Kyzart 51.07 314 P **P 05 44 38.9 +1.8**
SNR=15
ZALV Zalesovo Beam 51.26 332 P **P 05 44 38.0 -0.3**
comp=E,5.7nm,0.3s,mb5.0,baz=111,slow=7.9,SNR=2.0
ZALV LR LR 06 06 32.7
comp=E,99nm,20.8s,MS3.8,baz=190,slow=36
UCH Uchtor 51.63 314 P **P 05 44 42.6 +1.3**
SNR=25
UCH Uchtor 51.63 314 *e*P **P 05 44 42.6 +1.3**
UCH pmax pmax
comp=Z,15nm,0.8s,mb5.0
UCH Uchtor 51.63 314 *e*P **P 05 44 42.6 +1.3**
UCH pmax pmax
comp=Z,15nm,0.8s,mb5.0
UCH Uchtor 51.63 314 *e*P **P 05 44 42.6 +1.3**
comp=Z,15nm,0.8s,mb5.0
AAK Ala-Archa 51.78 315 *e*P **P 05 44 43.1 +0.7**
AAK Ala-Archa 51.78 315 *e*P **P 05 44 43.1 +0.7**
AML Almayashu 52.17 314 P **P 05 44 46.8 +1.5**
SNR=20
AML Almayashu 52.17 314 *e*P **P 05 44 46.5 +1.1**
AML pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
AML Almayashu 52.17 314 *e*P **P 05 44 46.5 +1.1**
AML pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
AML Almayashu 52.17 314 *e*P **P 05 44 46.5 +1.1**
comp=Z,8.3nm,0.6s,mb4.8
EKS2 Erkin-Say 52.29 315 P **P 05 44 47.2 +1.0**
SNR=6.9
EKS2 Erkin-Say 52.29 315 *e*P **P 05 44 46.8 +0.6**
EKS2 pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
EKS2 Erkin-Say 52.29 315 *e*P **P 05 44 46.8 +0.6**
EKS2 pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
EKS2 Erkin-Say 52.29 315 *e*P **P 05 44 46.8 +0.6**
comp=Z,7.9nm,1.0s,mb4.6
KURK Kurchatov 52.61 326 P **P 05 44 48.7 +0.3**
comp=Z,332nm,1.1s,SNR=14
KURK Kurchatov 52.61 326*d i*P **P 05 44 48.5 +0.1**
KURK pmax pmax
comp=Z,75nm,1.2s,mb5.5
KURK MLR MLR
comp=Z,64nm,14.0s,MS3.8
KURK Kurchatov 52.61 326 P **P 05 44 48.6 +0.2**
comp=Z,30nm,1.0s,mb5.2,baz=120,slow=8.4,SNR=46
CAN Canberra 53.47 154 *e*P **P 05 44 55.6 +0.7**
CAN pmax pmax
comp=Z,49nm,1.3s,mb5.3
CAN Canberra 53.47 154 *e*P **P 05 44 55.6 +0.7**
comp=Z,49nm,1.3s,mb5.3
CNB Canberra Magne 53.62 154 *e*P **P 05 44 56.6 +0.6**
SEY Seymchan 54.14 16⇑*e*P **P 05 45 00.7 +1.2**
BVAR Borovoye Array 58.20 325 P **P 05 45 28.3 -0.3**
BVAR 05 46 19.8
BVAR Borovoye Array 58.20 325 P **P 05 45 28.3 -0.4**
comp=Z,4.8nm,0.9s,mb4.5,baz=101,slow=7.9,SNR=8.2
BVAR PcP PcP 05 46 19.8 -0.1
comp=Z,2.0nm,0.8s,baz=116,slow=5.6,SNR=2.5
BVAR LR LR 06 12 16.4
comp=Z,128nm,18.3s,MS4.1,slow=38
BRVK Borovoye 58.27 325 *e*P **P 05 45 29.5 +0.4**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BRVK Borovoye 58.27 325 *e*P **P 05 45 29.5 +0.4**
comp=Z,9.8nm,0.8s,mb4.9
TIXI Tiksi 58.99 2 *e*P **P 05 45 32.9 -0.9**
TIXI *e*S **S 05 53 36.7 -1.9**
TIXI pmax pmax
comp=Z,34nm,1.2s,mb5.2
TIXI MLR MLR
comp=Z,246nm,17.0s,MS4.4
TIXI Tiksi 58.99 2 *e*P **P 05 45 33.0 -0.9**
comp=Z,26nm,0.9s,mb5.3
BILL Biilibino 61.80 17*d i*P **P 05 45 52.8 -0.3**
BILL *i* 05 46 32.4
BILL *e* 05 48 05.9
BILL pmax pmax
comp=Z,18nm,1.2s,mb5.1
BILL Biilibino 61.80 17 *e*P **P 05 45 53.4 +0.3**
comp=Z,20nm,1.3s,mb5.1
ABKAR Akbulak array 63.35 319 *e*P **P 05 46 03.3 -0.5**
comp=Z,7.4nm,0.9s,mb4.8
SVE Sverdlovsk 64.78 327 *e*P **P 05 46 12.9 -0.1**
ARU Arti 65.78 326*c i*P **P 05 46 18.8 -0.7**
ARU *e* 05 48 41.3
ARU S S 05 55 04.8 +0.3
ARU SS SS 05 59 14.7 -4.3
ARU pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
RPZ Rata Peaks 70.84 146 P **P 05 46 50.5 -0.8**
comp=Z,23nm,1.1s,mb5.0,baz=1.6,slow=9.9,SNR=4.1
QRN Al-Qurain 71.58 296 *e*P **P 05 46 55.7 -0.6**
QRN AMb AMB 05 46 57.6
comp=Z,36nm,0.9s,mb5.3
RDF Al-Radifah 71.89 296 *e*P **P 05 46 57.3 -0.8**
RDF AMb AMB 05 46 59.9
comp=Z,50nm,0.9s,mb5.4
MIB Mutribah 72.00 297 *e*P **P 05 46 58.0 -0.7**
MIB AMb AMB 05 47 00.6
comp=Z,49nm,0.7s,mb5.5
ZEI Tsey 73.98 311 *e*P **P 05 47 09.8 -0.4**
ZEI pmax pmax
comp=Z,18nm,1.3s,mb4.8
TTA Tatalina 74.38 28 *e*P **P 05 47 12.9 +0.7**
TTA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TTA Tatalina 74.38 28 *e*P **P 05 47 12.9 +0.7**
comp=Z,7.8nm,1.0s,mb4.6
KIV Kislovodsk 74.81 312 *e*P **P 05 47 15.3 +0.3**
KIV pmax pmax
comp=Z,22nm,0.8s,mb5.1
KIV MLR MLR
comp=Z,83nm,19.0s,MS4.0
KDAK Kodiak Island 76.04 33 P **P 05 47 20.9 -0.9**
comp=Z,4.8nm,0.6s,mb4.6,baz=287,slow=8.3,SNR=4.8
CHUM Lake Minchumin 76.07 27 *e*P **P 05 47 22.5 +0.7**
comp=Z,8.8nm,1.0s,mb4.6
KLMR Klimovskoe 76.14 330 *e*P **P 05 47 20.3 -2.0**
KLMR pmax pmax
comp=Z,19nm,1.3s,mb4.9
BPAW Bear Paw Mtn. 76.65 27 *e*P **P 05 47 25.3 +0.2**
comp=Z,46nm,1.2s,mb5.3
KTH Kantishna Hill 76.69 27 *e*P **P 05 47 26.0 +0.6**
comp=Z,38nm,1.9s,mb5.0
VORD Divnogorie 76.69 320 *e*P **P 05 47 24.6 -1.0**
VORD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 76.76 320 *e*P **P 05 47 25.0 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,7.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.4s
COLD Coldfoot 76.89 24 *e*P **P 05 47 27.1 +0.7**
comp=E,11nm,1.2s,mb4.7
TRF Thorofare Moun 76.98 27 *e*P **P 05 47 27.1 +0.1**
comp=E,21nm,1.4s,mb4.9
MCK McKinley 77.57 27 *e*P **P 05 47 29.9 -0.4**
MCK pmax pmax
comp=Z,46nm,1.2s,mb5.3

MCK McKinley 77.57 27 *e*P **P 05 47 29.9 -0.4**
comp=Z,46nm,1.2s,mb5.3
PMR Palmer 77.61 29 *e*P **P 05 47 29.3 -1.3**
COLA College 77.97 26 *e*P **P 05 47 31.5 -1.0**
COLA pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
COLA College 77.97 26 *e*P **P 05 47 31.4 -1.1**
comp=Z,6.9nm,1.0s,mb4.5
OBN Obninsk 78.02 324 *e*P **P 05 47 32.0 -1.0**
OBN *e* pP 05 47 39.0 -1.7
OBN pmax pmax
comp=Z,12nm,0.8s,mb4.9
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.2
ANN Anapa 78.49 314 *e*P **P 05 47 33.1 -2.7**
ANN pmax pmax
comp=Z,19nm,0.9s,mb5.0
MALT Malatya 78.52 307 *e*P **P 05 47 36.9 +0.8**
comp=Z,12nm,1.3s,mb4.7
ARCES ARCESS Array B 81.02 339 P **P 05 47 48.4 -0.7**
comp=Z,3.1nm,0.8s,mb4.3,baz=76,slow=10,SNR=6.1
DAWY Dawson 81.71 26 *e*P **P 05 47 53.5 +0.7**
BRTR Keskin Array B 82.00 309*ce*P **P 05 47 54.4 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 82.00 309 P **P 05 47 54.0 -0.8**
comp=Z,1.6nm,0.8s,mb4.0,baz=90,slow=4.3,SNR=5.0
FINES FINESS Array B 82.53 331 P **P 05 47 55.9 -1.2**
comp=Z,2.3nm,0.9s,mb4.2,baz=142,slow=6.5,SNR=4.3
INK Inuvik 82.98 21 *e*P **P 05 47 58.9 -0.5**
INK pmax pmax
comp=Z,15nm,1.0s
INK Inuvik 82.98 21 P **P 05 47 58.6 -0.7**
comp=Z,12nm,1.0s,mb4.9,baz=285,slow=4.7,SNR=27
INK Inuvik 82.98 21 *e*P **P 05 47 58.9 -0.5**
comp=Z,15nm,1.0s,mb5.0
AKASG Malin Array Be 83.05 320*ce*P **P 05 47 58.9 -1.2**
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 83.05 320 P **P 05 47 58.4 -1.7**
comp=Z,3.3nm,0.9s,mb4.4,baz=70,slow=4.1,SNR=7.4
BURAR Bucovina Array 86.31 318⇓*i*P **P 05 48 16.4 -0.2**
BUR08 Bucovina Ar. S 86.32 318 *e*P **P 05 48 16.3 -0.3**
MLR Muntele Rosu 86.36 316 P **P 05 48 16.5 -0.4**
comp=Z,3.0nm,0.8s,mb4.6,baz=83,slow=9.1,SNR=4.9
LVV L'vov 86.50 320 *e*P **P 05 48 16.1 -1.4**
KMBO Kilima Mbogo 86.72 268 P **P 05 48 19.7 +0.4**
comp=Z,8.6nm,1.0s,mb4.9,baz=37,slow=6.7,SNR=14
KMBO Kilima Mbogo 86.72 268 P **P 05 48 19.7 +0.4**
KOLS Kolonicke sedl 87.85 320 *e*P **P 05 48 26.5 +2.5**
KOLS pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
KOLS Kolonicke sedl 87.85 320 *e*P **P 05 48 26.5 +2.5**
comp=Z,4.7nm,1.1s,mb4.6
KOLS Kolonicke sedl 87.85 320 *e*P **P 05 48 26.5 +2.5**
NOA NORSAR Array B 89.44 333 P **P 05 48 29.2 -2.1**
comp=Z,0.7nm,0.6s,mb4.1,baz=68,slow=4.7,SNR=2.1
NOA LR LR 06 28 47.2
comp=Z,107nm,20.6s,MS4.3,baz=225,slow=36
RES Resolute Bay 89.55 10 *e*P **P 05 48 31.1 -0.5**
RES pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
RES Resolute Bay 89.55 10 *e*P **P 05 48 31.1 -0.5**
comp=Z,7.5nm,0.9s,mb5.0
PPT Papeete 90.77 108 LR LR 06 23 29.4
comp=Z,50nm,18.6s,MS4.0,baz=353,slow=32
MAW Mawson 91.10 200 LR LR 06 26 26.3
comp=Z,85nm,20.1s,MS4.2,baz=205,slow=34
YKA Yellowknife Ar 92.57 23 P **P 05 48 45.2 -0.6**
comp=Z,3.1nm,1.0s,mb4.7,baz=304,slow=4.6,SNR=17
YKA Yellowknife Ar 92.57 23 P **P 05 48 45.2 -0.6**
GERES GERESS Array B 93.19 322 P **P 05 48 48.8 -0.2**
comp=Z,0.2nm,0.3s,mb4.0,baz=51,slow=9.3,SNR=4.2
GERES LR LR 06 33 39.5
comp=Z,79nm,19.9s,MS4.2,baz=267,slow=37
GERES GERESS Array B 93.19 322 P **P 05 48 48.8 -0.2**
GERES LR LR 06 33 39.5
MOA Molln 93.23 320⇑*i*P **P 05 48 48.1 -1.1**
comp=Z,7.8nm,1.2s,mb5.0
NVAR Mina Array Bea 103.02 45 Pdiff Pdif 05 49 34.3 +1.3
comp=Z,1.2nm,0.7s,baz=260,slow=7.0,SNR=5.4
VNA2 Neumayer–Watz 114.65 196 *e*PKPdf PKiKP 05 54 14.0 -0.2
baz=298,slow=1.2
VNA3 Neumayer Olymp 115.05 195 *e*PKPdf PKiKP 05 54 14.5 -0.5
TORD Torodi Ar. Bea 116.97 292 PKP PKPdf 05 54 19.4 -0.9
comp=Z,0.8nm,0.8s,baz=38,slow=1.9,SNR=3.5
TXAR Lajitas Array 118.12 47 PKP PKPdf 05 54 22.3 0.0
comp=Z,0.8nm,0.8s,baz=214,slow=0.7,SNR=9.7
DBIC Dimbokro 125.31 288 PKP PKPdf 05 54 35.5 -0.9
comp=Z,3.3nm,0.9s,baz=147,slow=4.5,SNR=3.2
SDDR Presa de Saban 145.24 25 *e*PKPbc PKPbc 05 55 13.2 +0.4
PLCA Paso Flores 149.43 159 PKPbc PKPbc 05 55 24.1 +0.2
comp=Z,3.2nm,0.5s,baz=236,slow=3.7,SNR=9.2
CPUP Villa Florida 166.42 176 PKPab PKPab 05 56 41.6 -0.3
comp=Z,2.4nm,0.7s,baz=172,slow=6.8,SNR=5.6
LPAZ La Paz 168.06 109 PKP PKPdf 05 55 42.0 -0.1
comp=Z,4.1nm,1.1s,baz=31,slow=6.6,SNR=7.1
LPAZ PKPab PKPab 05 56 51.2 +1.4
comp=Z,3.0nm,1.0s,baz=291,slow=3.8,SNR=4.3

NIED ***07*** *05:35:00,36°.30N×141°.90E,h17km,Mw4.1 Best double couple: M0 1.43000×10^15 NP1:φ=30.00000°,δ=66.00000°, λ=112.00000°. NP2:φ=165.00000°,δ=32.00000°,λ=49.00000°.*
BJI ***07*** *05:35:32.7,35°.77N×142°.27E,h25km,mB4.7/2,mb4.6/4, Ms4.5/3,Ms7 4.2/3*
ISCJB ***07*** *05:35:36.5±1.2,36°.22N±0°.03×141°.98E±0°.05,h25km±8km, mb4.2/27,Error ellipse: s-maj=6.6km s-min=5.5km az=17.2*
MOS ***07*** *05:35:37.4±1.3,36°.19N×141°.98E,h33km,mb4.6/16,Error ellipse: s-maj=13.3km s-min=8.3km az=127.5*
JMA ***07*** *05:35:37.8±0.2,36°.25N×141°.91E,h47km,M4.3*
JMA Felt I J1.
NEIC ***07*** *05:35:39.9±2.3,36°.14N×141°.89E,h37km±16km,mb4.2/1, Error ellipse: s-maj=36.5km s-min=16.0km az=163.0*
NEIC Recorded [1 JMA] in Tochigi.
IDC ***07*** *05:35:39.6±0.7,36°.10N×141°.86E,h34km±5km,mb4.0/20, mb1 4.1/24,mb1mx4.0/31,mbtmp4.0/24,ML4.0/3,Error ellipse: s-maj=15.0km s-min=13.6km az=166.0*
ISC 07 05:35:36.9±1.5,36°.23N±0°.03×141°.93E±0°.04,h15km±9km, h33km±.7km:pP-P,n68,c0°±91°/77,mb4.2/27,2C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.02**	**239**	⇓P	**Pb**	**05 35 55.9**	**-0.3**
CHOJ				S	**Sb**	**05 36 09.8**	**+0.4**
JHO	**Hitachi**	**1.16**	**289**	⇓P	**Pn**	**05 35 57.3**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.26**	**314**	⇓P	**Pn**	**05 35 58.7**	**-1.3**
JFK	**Kawauchi**	**1.41**	**324**	P	**Pn**	**05 36 01.3**	**-0.8**
BSO1	**Boso 1**	**1.76**	**207**	P	**Pn**	**05 36 06.6**	**-0.2**
BSO1				S	**Sn**	**05 36 28.2**	**-0.7**
JFT	**Otama**	**1.81**	**316**	⇓P	**Pn**	**05 36 07.9**	**+0.3**
BSO3	**Boso 3**	**1.84**	**219**	P	**Pn**	**05 36 08.0**	**+0.1**
JMM	**Marumori**	**1.87**	**331**	P	**Pn**	**05 36 08.0**	**-0.4**
JAG	**Ashikaga**	**2.01**	**276**	P	**Pn**	**05 36 09.7**	**-0.6**
JAG				S	**Sn**	**05 36 33.7**	**-1.5**
JFY	**Yanaizu**	**2.14**	**304**	⇑P	**Pn**	**05 36 12.4**	**+0.4**
JKT	**Katashina**	**2.23**	**285**	P	**Pn**	**05 36 13.4**	**+0.1**
JKT				S	**Sn**	**05 36 40.0**	**-0.5**
JIO	**Ouri**	**2.27**	**348**	⇑P	**Pn**	**05 36 13.3**	**-0.5**
JIO				S	**Sn**	**05 36 40.2**	**-1.3**
JOU	**Okura**	**2.36**	**335**	P	**Pn**	**05 36 15.6**	**+0.5**
MJAR	**Matsushiro Arr**	**3.02**	**277**	Pn	**Pn**	**05 36 24.8**	**+0.6**
	40nm,0.3s,baz=113,slow=8.8,SNR=140						
MJAR				Sn	**Sn**	**05 37 00.4**	**+0.3**
	13nm,0.3s,baz=28,slow=30,SNR=4.9						
MAJO	**Matsushiro**	**3.02**	**277**	*e*P	**Pn**	**05 36 25.1**	**+0.9**
MAT	**Matsushiro**	**3.02**	**277**	P	**Pn**	**05 36 25.0**	**+0.8**
MAT				*e*S	**Sn**	**05 37 02.3**	**+2.2**
JHJ	**Hachijo jima 2**	**3.57**	**210**	Pn	**Pn**	**05 36 32.0**	**+0.2**
	21nm,0.3s,baz=92,slow=13,SNR=4.8						
JHJ				Sn	**Sn**	**05 37 10.4**	**-3.4**
	75nm,0.3s,baz=50,slow=23,SNR=6.7						
ASAJ	**Asahikawa**	**7.89**	**4**	P	**Pn**	**05 37 30.2**	**-0.9**
ASAJ						05 38 58.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.89**	**4**	Pn	**Pn**	**05 37 30.2**	**-0.9**
	comp=N,2.4nm,0.3s,baz=199,slow=11,SNR=5.2						
ASAJ				Sn	**Sn**	**05 38 58.1**	**-2.0**

comp=N,0.7nm,0.3s,baz=58,slow=31,SNR=2.4
CBIJ Chichi jima 9.11 179 Pn **Pn 05 37 47.1 -0.8**
comp=N,4.7nm,0.3s,baz=267,slow=20,SNR=3.0
CBIJ Sn **Sn 05 39 21.2 -9.0**
comp=N,4.5nm,0.3s,baz=109,slow=20,SNR=2.6
KSRS Korea Array 11.29 280 Pn **Pn 05 38 19.8 +2.1**
baz=91,slow=14,SNR=8.2
YAK Yakutsk 26.94 347 *e*P **P 05 41 17.4 0.0**
YAK pmax pmax
comp=Z,33nm,1.3s,mb4.7
ULN Ulaanbaatar 28.15 305 *e*P **P 05 41 28.8 +0.4**
ULN pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
ULN Ulaanbaatar 28.15 305 *e*P **P 05 41 28.8 +0.4**
comp=Z,3.3nm,0.6s,mb4.1
BOD Bodaibo 28.43 328 *e*P **P 05 41 29.8 -1.0**
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
SONM Songino Array 28.58 305 **P 05 41 32.9 +0.6**
comp=Z,4.5nm,0.8s,mb4.3,baz=103,slow=9.8,SNR=7.7
ZAK Zakamensk 31.09 309 *e*P **P 05 41 54.5 0.0**
ZAK *e* 05 43 19.5
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
GTA Gaotai 33.20 288 *e*P **P 05 42 13.3 +0.2**
GTA pP pP 05 42 22.1 +4.5
GTA sP sP 05 42 25.6 +6.1
GTA PP PP 05 43 26.7 -1.4
GTA PcP PcP 05 44 56.5 +0.9
GTA S **S 05 47 32.9 +0.6**
GTA sS sS 05 47 48.6 +8.8
GTA SS SS 05 49 38.6 -17
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,70nm,6.3s
GTA LR LR
comp=N,350nm,20.7s
GTA LR LR
comp=E,310nm,17.7s
GTA LR LR
comp=Z,360nm,18.0s
CMAR Chiang Mai Arr 41.70 257 P **P 05 43 24.9 -0.4**
comp=Z,0.7nm,0.3s,mb3.7,baz=48,slow=7.4,SNR=2.9
ZALV Zalesovo Beam 42.76 313 P **P 05 43 32.9 -0.6**
comp=Z,5.9nm,0.3s,mb4.8,baz=75,slow=7.6,SNR=3.0
NVS Novosibirsk 43.70 314 *e*P **P 05 43 41.5 +0.5**
MKAR Makanchi Array 44.90 303 P **P 05 43 51.0 +0.2**
comp=Z,3.9nm,0.7s,mb4.3,baz=90,slow=9.7,SNR=26
KURK Kurchatov 46.76 309 P **P 05 44 05.8 +0.4**
comp=Z,5.8nm,0.7s,mb4.6,baz=83,slow=7.8,SNR=27
KURK Kurchatov 46.76 309 P **P 05 44 05.8 +0.4**
KDAK Kodiak Island 47.42 41 P **P 05 44 10.3 -0.2**
comp=Z,4.6nm,0.8s,mb4.5,baz=262,slow=7.1,SNR=3.4
BVAR Borovoye Array 51.42 313 P **P 05 44 41.6 +0.6**
comp=Z,1.2nm,0.6s,mb4.0,baz=76,slow=7.8,SNR=6.4
BVAR pP pP 05 44 51.3 +5.5
comp=Z,1.1nm,0.5s,baz=77,slow=7.8,SNR=3.9
INK Inuvik 54.91 27 P **P 05 45 08.2 +1.6**
comp=Z,1.3nm,0.5s,mb4.2,baz=270,slow=6.1,SNR=4.5
WRA Warramunga Arr 56.33 189 P **P 05 45 15.1 -2.1**
comp=Z,1.8nm,0.8s,mb4.0,baz=5.6,slow=7.3,SNR=2.9
ASAR Alice Springs 60.05 188 P **P 05 45 41.6 -1.6**
comp=Z,0.4nm,0.3s,mb3.9,baz=5.4,slow=4.9,SNR=7.0
YKA Yellowknife Ar 64.29 30 P **P 05 46 11.9 +0.6**
YKA *PP pP 05 46 22.1 +6.0
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 64.29 30 P **P 05 46 11.9 +0.6**
comp=Z,1.0nm,0.8s,mb3.9,baz=300,slow=6.5,SNR=9.5
YKA pP pP 05 46 22.1 +6.0
comp=Z,0.3nm,0.5s,baz=298,slow=5.4,SNR=3.0
KEV Kevo 64.34 339 *e*P **P 05 46 11.5 0.0**
KEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KEV Kevo 64.34 339 *e*p **P 05 46 11.5 0.0**
comp=Z,3.4nm,0.8s,mb4.4
ARCES ARCESS Array B 64.89 340 P **P 05 46 15.6 +0.5**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 64.89 340 P **P 05 46 15.6 +0.5**
comp=Z,1.8nm,0.8s,mb4.2,baz=50,slow=8.2,SNR=8.7
ARCES ARCESS Array B 64.89 340 P **P 05 46 15.7 +0.5**
JOF Joensuu 66.86 332 *e*P **P 05 46 27.2 -0.7**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
JOF Joensuu 66.86 332 *e*p **P 05 46 27.2 -0.7**
comp=Z,1.8nm,0.5s,mb4.4
KAF Kangasniemi 69.21 333 *e*P **P 05 46 42.4 -0.2**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KAF Kangasniemi 69.21 333 *e*p **P 05 46 42.4 -0.2**
comp=Z,1.7nm,0.5s,mb4.2
FINES FINESS Array B 69.72 333 P **P 05 46 45.9 +0.1**
FINES pmax pmax
comp=Z,6.0nm,1.0s
FINES FINESS Array B 69.72 333 P **P 05 46 45.9 +0.1**
comp=Z,5.6nm,1.0s,mb4.4,baz=62,slow=8.9,SNR=9.0
NB2 NORSAR Subarra 75.09 338 P **P 05 47 18.3 +0.5**
comp=Z,0.3nm,0.7s,mb3.3,baz=46,slow=5.9
NOA NORSAR Array B 75.09 338 P **P 05 47 18.1 +0.3**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 75.09 338 P **P 05 47 18.1 +0.3**
comp=Z,2.9nm,0.8s,mb4.3,baz=39,slow=5.7,SNR=9.4
NOA NORSAR Array B 75.09 338 P **P 05 47 18.1 +0.3**
NVAR Mina Array Bea 75.14 53 P **P 05 47 20.0 +1.5**
comp=Z,0.2nm,0.3s,mb3.5,baz=272,slow=5.9,SNR=3.6
AKASG Malin Array Be 75.19 323 P **P 05 47 18.6 0.0**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 75.19 323 P **P 05 47 18.6 0.0**
comp=Z,2.5nm,0.5s,mb4.4,baz=46,slow=6.0,SNR=12
PDAR Pinedale Array 77.93 46 P **P 05 47 35.4 +1.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=281,slow=3.3,SNR=4.5
BRTR Keskin Array B 79.69 312 P **P 05 47 44.6 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 79.69 312 P **P 05 47 44.5 +0.5**
comp=Z,1.4nm,0.9s,mb3.9,baz=115,slow=5.9,SNR=4.6
BRTR Keskin Array B 79.69 312 P **P 05 47 44.5 +0.5**
GERES GERESS Array B 83.61 329 P **P 05 48 05.2 +0.7**
comp=Z,0.4nm,0.4s,mb3.9,baz=46,slow=5.8,SNR=5.3
TXAR Lajitas Array 90.28 53 P **P 05 48 39.2 +1.8**
TXAR *PP pP 05 48 49.1 +6.8
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 90.28 53 P **P 05 48 39.2 +1.8**
comp=Z,0.5nm,0.8s,mb3.9,baz=272,slow=3.5,SNR=5.4
TXAR pP pP 05 48 49.1 +6.7
comp=Z,0.4nm,0.8s,baz=266,slow=3.6,SNR=3.7
LPAZ La Paz 146.73 61 PKPbc PKPbc 05 55 20.1 +1.4
comp=Z,1.2nm,0.5s,baz=332,slow=2.3,SNR=16
LPAZ pPKPbc pPKPbc 05 55 29.7 +6.0
comp=Z,1.4nm,0.7s,baz=255,slow=1.8,SNR=4.2
SIV San Ignacio 151.27 51 PKPbc PKPbc 05 55 29.9 -0.4
baz=256,slow=1.9

*NEIC **07** 06:31:23.0,32°.13N×115°.78W,h7km,ML3.0(PAS), ML3.4(ECX), After ECX.*
ECX 07 06:31:23.0±0.7,32°.13N×115°.78W,h7km±3km,MD3.2, ML3.4,5C-5D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dawling**	**0.24 213**	⇑	*i*P	Pg	06 31 27.4	-0.5
RDX				*e*S	Sg	06 31 30.8	-0.4
EMX	**El Mayor**	**0.48 107**	⇑	*e*P	Pg	06 31 31.9	-0.5
EMX				*e*S	Sg	06 31 38.4	-0.3
EMX				*e*		06 31 38.7	
	comp=N,1μm,0.3s						
RMX	**La Rumorosa**	**0.53 332**	⇓	*i*P	Pg	06 31 32.6	-0.6
RMX				*e*S	Sg	06 31 39.7	-0.4
CBX	**Cerro Bola**	**0.77 284**	⇑	*e*P	Pg	06 31 36.6	-1.1
CBX				*e*S	Sg	06 31 46.7	-1.0
ECNX	**Esteban Cantu**	**0.84 236**	⇓	*e*P	Pg	06 31 38.1	-1.0
ECNX			⇑	*e*P		06 31 37.2	
ECNX				*e*S	Sg	06 31 47.6	-2.4
ECNX				*e*S	Sg	06 31 49.1	-0.9
PBX	**Punta Banda**	**0.89 244**	⇑	*e*P	Pg	06 31 38.8	-1.3
PBX				*e*S	Sg	06 31 50.7	-1.0
ECBX	**El Chinero**	**0.91 136**	⇓	*e*P	Pg	06 31 38.6	-1.9
ECBX				*e*S	Sg	06 31 50.6	-1.7
BAR	**Barrett**	**0.93 306**	⇓	*i*Pg	Pg	06 31 39.2	-1.6
BAR				*e*Sg	Sg	06 31 51.0	-1.9
SPX	**San Pedro Mart**	**1.12 166**	⇓	*e*P	Pg	06 31 43.1	-1.3
SPX				*e*S	Sg	06 31 58.0	-1.1
GLA	**Glamis**	**1.22 41**		*e*P	Pb	06 31 43.5	-2.9
PFO	**Pinyon Flat Ob**	**1.58 339**		*e*Pn	Pn	06 31 48.6	-2.7
MWC	**Mount Wilson**	**2.83 318**		*e*Pn	Pn	06 32 11.0	+2.5
GSC	**Goldstone**	**3.27 345**		*e*Pg	Pg	06 32 22.3	-3.4
GSC				*e*Sg	Sg	06 33 07.0	-1.1
TUC	**Tucson**	**4.24 86**		*e*Pg	Pg	06 32 46.7	+2.5
TUC				*e*Sg	Sg	06 33 38.2	-1.0

IDC 07 06:42:11.7±5.4,19°.98S×175°.46W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.8/17,mbtmp4.1/3,Error ellipse: s-maj=291.3km s-min=51.9km az=152.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.91 263**		P	P	06 49 14.9	+0.9
	2.4nm,0.3s,baz=71,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**46.95 256**		P	P	06 50 44.5	-0.1
	1.6nm,0.6s,baz=92,slow=7.6,SNR=8.7						
WRA	**Warramunga Arr**	**47.03 261**		P	P	06 50 44.4	-0.9
	0.4nm,0.3s,baz=96,slow=7.4,SNR=5.8						
AKASG	**Malin Array Be**	**143.67 333**		PKP	PKPdf	07 01 45.8	-2.7
	0.3nm,0.3s,baz=48,slow=3.7,SNR=5.6						
BRTR	**Keskin Array B**	**148.22 315**		PKPbc	PKPbc	07 02 00.2	+0.3
	0.4nm,0.5s,baz=64,slow=6.6,SNR=2.9						

*IDC **07** 06:44:14.7±3.6,3°.51S×146°.67E,h0km,mb3.8/6, mb1 4.0/6,mb1mx3.9/14,mbtmp3.9/6,MS3.4/8,Ms1 3.4/8, ms1mx3.1/27,Error ellipse: s-maj=113.2km s-min=22.8km az=102.0*
*NEIC **07** 06:44:18.9±1.3,3°.31S×146°.01E,h10km,mb4.4/3,Error ellipse: s-maj=22.3km s-min=13.6km az=74.0*
*ISCJB **07** 06:44:22.4±5.8,3°.4S±0°.2×146°.0E±0°.2,h47km±54km, mb3.8/5,MS3.4/6,Error ellipse: s-maj=40.2km s-min=26.1km az=3.6*
ISC 07 06:44:24.2±5.5,3°.5S±0°.2×145°.9E±0°.2,h48km±54km,n17, σ0°.74/12,mb3.8/5,MS3.4/6,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**16.18 235**		*e*Pn	**Pn**	**06 48 09.2**	**+0.8**
	55nm,0.6s						
CTA	**Charters Tower**	**16.50 179**		Pn	**Pn**	**06 48 13.1**	**+0.6**
	0.3nm,0.3s,baz=354,slow=4.7,SNR=3.4						
CTA	**Charters Tower**	**16.50 179**		Pn	**Pn**	**06 48 13.1**	**+0.6**
CTAO	**Charters Tower**	**16.50 179**		*e*Pn	**Pn**	**06 48 12.9**	**+0.5**
	27nm,1.5s						
GUMO	**Guam**	**17.00 356**		LR	LR	06 54 09.2	
	comp=Z,80nm,20.2s,baz=110,slow=35						
WRAB	**Tennant Creek**	**19.86 214**		*e*P	**Pn**	**06 48 52.3**	**-1.1**
	12nm,0.6s						
WB2	**Warramunga Arr**	**19.87 214**		*e*P	**Pn**	**06 48 52.5**	**-1.0**
WRA	**Warramunga Arr**	**19.88 214**		P	**Pn**	**06 48 52.9**	**-0.7**
	3.3nm,0.9s,baz=42,slow=11,SNR=8.4						
WRA				LR	LR	06 57 28.0	
	comp=Z,170nm,18.2s,baz=40,slow=39						
ASAR	**Alice Springs**	**23.18 209**		P	**P**	**06 49 27.6**	**+0.6**
	2.3nm,0.9s,mb3.6,baz=39,slow=8.9,SNR=14						
FITZ	**Fitzroy Crossi**	**24.61 232**		P	**P**	**06 49 41.4**	**+1.2**
	2.2nm,0.5s,mb3.9,baz=51,slow=10,SNR=12						
FITZ				LR	LR	07 00 22.2	
	comp=Z,101nm,19.1s,MS3.3,baz=40,slow=38						
STKA	**Stephens Creek**	**28.53 188**		LR	LR	07 02 56.2	
	comp=Z,67nm,18.6s,MS3.3,baz=23,slow=39						
JOW	**Kunigami**	**34.63 332**		LR	LR	07 02 05.4	
	comp=Z,88nm,21.5s,MS3.5,baz=125,slow=31						
KSRS	**Korea Array**	**44.04 339**		P	**P**	**06 52 27.4**	**+0.2**
	1.2nm,0.6s,mb3.8,baz=146,slow=8.8,SNR=3.8						
KSRS				LR	LR	07 06 47.8	
	comp=Z,52nm,21.7s,MS3.4,baz=282,slow=30						
CMAR	**Chiang Mai Arr**	**51.14 297**		LR	LR	07 13 44.5	
	comp=Z,21nm,18.2s,MS3.2,baz=290,slow=34						
MKAR	**Makanchi Array**	**74.89 320**		P	**P**	**06 55 59.5**	**-0.4**
	0.9nm,0.8s,mb3.8,baz=109,slow=6.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**76.33 328**		LR	LR	07 27 59.4	
	comp=Z,30nm,18.4s,MS3.6,baz=224,slow=34						
BVAR	**Borovoye Array**	**84.12 324**		P	**P**	**06 56 49.9**	**-0.1**
	0.4nm,0.6s,mb3.7,baz=91,slow=10,SNR=3.7						

*CSEM **07** 06:48:21.1,37°.41N×24°.63W,h10km,ML2.9,After PDA*
PDA 07 06:48:21.1±1.2,37°.41N×24°.63W,h10km,MD3.5,ML2.9, Error ellipse: s-maj=9.9km s-min=3.2km az=81.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.53 221**		*e*P	Pg	06 48 29.9	-1.5
PSMN				*e*S	Sg	06 48 37.1	-1.3
PSMN	**Pico do Norte,**	**0.53 221**		*e*P	Pg	06 48 29.9	-1.5
PSMN				*e*S	Sg	06 48 37.1	-1.3
PSMA	**Santa Maria**	**0.57 224**		*i* P	Pg	06 48 30.3	-1.9
PSMA				*e*S	Sg	06 48 37.3	-2.4
PSMA				A		06 48 42.0	
	224nm,0.1s						
CMLA	**Cha da Macela**	**0.80 297**		*e*P	Pg	06 48 33.8	-2.7
CMLA				*e*S	Sg	06 48 43.3	-3.6
CMLA				A		06 48 46.9	
	263nm,0.3s						
CMLA	**Cha da Macela**	**0.80 297**		*e*P	Pg	06 48 33.8	-2.7
CMLA				*e*S	Sg	06 48 43.3	-3.6
GRON	**Grota Negra**	**0.81 297**		*e*P	Pg	06 48 32.3	-4.3
GRON				*e*S	Sg	06 48 40.5	-6.6
GRON				A		06 48 41.6	
	119nm,0.2s						
PDA	**Ponta Delgada**	**0.89 293**		*e*P	Pg	06 48 35.0	-3.2
PDA	**Ponta Delgada**	**0.89 293**		*e*P	Pg	06 48 35.0	-3.2
PSET	**Sete Cidades**	**0.96 296**		*e*P	Pg	06 48 35.3	-4.3
PSET				*e*S	Sg	06 48 47.3	-4.9
PSET				A		06 48 53.3	
	94nm,0.3s						
PSET	**Sete Cidades**	**0.96 296**		*e*P	Pg	06 48 35.3	-4.3
PSET				*e*S	Sg	06 48 47.3	-4.9
ADH	**Angra Heroismo**	**2.41 302**		*e*P	Pn	06 48 56.7	-3.8
ADH				*e*S	Sn	06 49 22.1	-7.9
ADH				A		06 49 28.2	
	60nm,0.3s						
ADH	**Angra Heroismo**	**2.41 302**		*e*P	Pn	06 48 56.7	-3.8
ADH				*e*S	Sn	06 49 22.1	-7.9
PID	**Ribeirinha**	**2.95 292**		*e*P	Pn	06 49 04.7	-3.3
PMAN	**Manadas**	**3.00 295**		*e*P	Pn	06 49 06.7	-1.9
ROSA	**Rosais**	**3.14 296**		*e*P	Pn	06 49 06.5	-4.1
ROSA	**Rosais**	**3.14 296**		*e*P	Pn	06 49 06.5	-4.1
PICO	**Pico**	**3.19 291**		*e*P	Pn	06 49 06.8	-4.5
PICO				*e*S	Sn	06 49 41.5	-8.0
PICO	**Pico**	**3.19 291**		*e*P	Pn	06 49 06.8	-4.5
PICO				*e*S	Sn	06 49 41.5	-8.0
CALA	**Caldeira**	**3.43 291**		*e*P	Pn	06 49 10.6	-3.9
CALA	**Caldeira**	**3.43 291**		*e*P	Pn	06 49 10.6	-3.9

*ISCJB **07** 07:02:40.6±3.0,5°.5S±0°.1×146°.3E±0°.2,h53km±29km, mb3.9/5,MS3.2/2,Error ellipse: s-maj=33.9km s-min=20.1km az=9.6*
*NEIC **07** 07:02:42.9±4.6,5°.52S×146°.45E,h75km±39km,Error ellipse: s-maj=38.1km s-min=25.9km az=210.0*
*IDC **07** 07:02:48.0±3.5,5°.74S×146°.69E,h133km±29km,mb3.6/5, mb1 3.7/7,mb1mx3.5/18,mbtmp3.6/7,MS3.2/2,Ms1 3.2/2, ms1mx2.8/16,Error ellipse: s-maj=41.6km s-min=15.4km az=106.0*
ISC 07 07:02:45.0±2.2,5°.7S±0°.1×146°.3E±0°.2,h81km±23km,n13, σ0°.81/13,mb3.8/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**8.82 200**		*e*Pn	**Pn**	**07 04 49.5**	**-0.3**
	67nm,0.4s						
CTA	**Charters Tower**	**14.36 180**		P	**Pn**	**07 06 05.7**	**+1.3**
	0.3nm,0.3s,baz=12,slow=14,SNR=2.5						
CTAO	**Charters Tower**	**14.36 180**		Pn	**Pn**	**07 06 03.4**	**-0.9**
KAKA	**Kakadu**	**15.39 242**		*e*Pn	**Pn**	**07 06 16.9**	**-0.8**
	38nm,0.5s						
WRAB	**Tennant Creek**	**18.36 218**		*e*Pn	**Pn**	**07 06 54.7**	**+0.4**
WRA	**Warramunga Arr**	**18.37 218**		P	**Pn**	**07 06 54.4**	**-0.1**
	0.4nm,0.3s,baz=38,slow=11,SNR=11						
WRA				S	**S**	**07 10 10.6**	**-8.7**
	0.1nm,0.3s,baz=31,slow=26,SNR=3.5						
WRA				PcP	PcP	07 11 17.2	-4.5
	0.0nm,0.3s,baz=22,slow=1.6,SNR=2.6						
ASAR	**Alice Springs**	**21.54 212**		P	**P**	**07 07 28.6**	**+0.8**
	0.7nm,0.3s,mb3.4,baz=49,slow=9.0,SNR=16						
ASAR				S	**S**	**07 11 21.3**	**-0.6**
	0.4nm,0.9s,baz=31,slow=24,SNR=3.2						
FITZ	**Fitzroy Crossi**	**23.68 237**		P	**P**	**07 07 48.8**	**-0.7**
	6.4nm,0.6s,mb4.1,baz=62,slow=9.0,SNR=24						
KAPI	**Kappang**	**26.46 270**		P	**P**	**07 08 16.5**	**+1.7**
	4.0nm,0.6s,mb4.0,baz=153,slow=14,SNR=3.5						
STKA	**Stephens Creek**	**26.47 189**		LR	LR	07 18 50.7	
	comp=Z,76nm,18.9s,baz=24,slow=36						
KSRS	**Korea Array**	**46.18 340**		P	**P**	**07 11 01.7**	**0.0**
	1.6nm,0.8s,mb3.8,baz=158,slow=9.5,SNR=4.9						
KSRS				LR	LR	07 26 23.8	
	comp=Z,22nm,21.7s,baz=153,slow=30						
MKAR	**Makanchi Array**	**76.79 321**		P	**P**	**07 14 27.1**	**-0.8**
	0.6nm,0.6s,mb3.5,baz=98,slow=7.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**144.34 285**		PKP	PKPdf	07 22 10.2	-2.7
	0.3nm,0.7s,baz=72,slow=2.4,SNR=5.4						

AUST 07 07:27:30.6,31°.15S×117°.35E,h6km,ML3.5,Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**1.78 183**		*e*P	Pn	07 27 59.5	-2.3
NWAO				*e*S	Sn	07 28 23.0	-1.7
	566nm,0.4s						
MORW	**Morawa**	**2.37 331**		*e*P	Pn	07 28 08.3	-1.6
MORW				*e*S	Sn	07 28 37.2	-2.0
RKGY	**Rocky Gully**	**3.46 185**		*e*P	Pn	07 28 23.1	-1.9
RKGY				*e*S	Sn	07 29 11.7	+5.3
	43nm,0.5s						
KMBL	**Kambalda**	**3.88 94**		*e*P	Pn	07 28 28.6	-2.2
KMBL				*e*S	Sn	07 29 13.1	-3.6
	32nm,0.5s						
MEEK	**Meekatharra**	**4.63 14**		*e*P	Pn	07 28 40.1	-0.9
MEEK				*e*S	Sn	07 29 27.6	-7.5

*IDC **07** 07:35:34.6±2.0,53°.57N×87°.82E,h0km,mb1 3.4/3, mb1mx3.2/28,mbtmp3.4/3,ML3.4/3,Error ellipse: s-maj=18.1km s-min=11.2km az=81.0*
*NNC **07** 07:35:37.2±3.5,53°.47N×87°.55E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=28.6km s-min=22.8km az=10.0*
ISC 07 07:35:38.4±2.1,53°.59N±0°.08×87°.5E±0°.2,h10km,n7, σ0°.76/13,5C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.60 284**		Pn	**Pn**	**07 36 06.1**	**-0.6**
	3.7nm,0.3s,baz=104,slow=18,SNR=8.9						
ZALV				Lg		07 36 30.6	
	5.5nm,0.3s,baz=104,slow=30,SNR=5.4						
KURK	**Kurchatov**	**6.15 246**		⇓Pn	**Pn**	**07 37 09.5**	**+0.4**
	3.0nm,0.8s						
KURK				⇑Sn	**Sn**	**07 38 22.8**	**+3.4**
	2.4nm,0.6s						
KURK				⇑Lg		07 38 55.8	
	6.9nm,0.8s						
KURK	**Kurchatov**	**6.15 246**		Pn	**Pn**	**07 37 10.9**	**+1.8**
	0.3nm,0.3s,baz=62,slow=14,SNR=29						
KURK				Sn	**Sn**	**07 38 24.3**	**+4.8**
	0.0nm,0.3s,baz=118,slow=12,SNR=2.8						
KURK				Lg		07 38 58.9	
	0.1nm,0.3s,baz=58,slow=33,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.25 245**		⇑Pn	**Pn**	**07 37 10.4**	**-0.1**
	0.4nm,0.3s						
KURBB				⇑Sn	**Sn**	**07 38 21.9**	**0.0**
	1.1nm,0.7s						
KURBB				⇓Lg		07 38 57.6	
	1.2nm,0.6s						
MK31	**Makanchi Array**	**7.56 208**		⇓Pn	**Pn**	**07 37 27.9**	**-0.6**
	0.2nm,0.3s,baz=27,slow=12,SNR=21						
MK31				⇑Sn	**Sn**	**07 38 54.5**	**+0.3**
	0.8nm,0.6s,baz=12,slow=18,SNR=5.4						
MK31				⇓Lg		07 39 34.0	
	2.5nm,0.7s,baz=32,slow=28,SNR=4.6						
MKAR	**Makanchi Array**	**7.56 208**		Pn	**Pn**	**07 37 28.3**	**-0.2**
	0.5nm,0.3s,baz=27,slow=12,SNR=24						
MKAR				Sn	**Sn**	**07 38 53.7**	**-0.5**
	0.2nm,0.3s,baz=27,slow=23,SNR=6.5						
MKAR				Lg		07 39 34.3	
	0.1nm,0.3s,baz=30,slow=27,SNR=6.7						
BVAR	**Borovoye Array**	**10.23 274**		Pn	**Pn**	**07 38 06.1**	**+1.1**
	0.2nm,0.3s,baz=84,slow=13,SNR=5.0						
BVAR				Sn	**Sn**	**07 39 58.8**	**-0.9**
	0.3nm,0.3s,baz=70,slow=22,SNR=3.7						

IDC 07 07:47:57.5±1.0,63°.24S×169°.14E,h0km,mb3.8/3, mb1 4.2/4,mb1mx3.9/12,mbtmp4.1/4,ML4.9/1,MS3.9/8, Ms1 3.8/8,ms1mx3.6/19,Error ellipse: s-maj=51.2km s-min=26.1km az=76.0,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**19.59 4**		P	Pn	07 52 28.8	+0.7
	3.3nm,0.3s,baz=198,slow=20,SNR=17						
RPZ				LR	LR	07 58 26.9	
	comp=Z,531nm,21.8s,baz=174,slow=32						
URZ	**Urewera**	**25.48 15**		LR	LR	08 01 59.2	
	comp=Z,325nm,18.9s,baz=337,slow=33						
QSPA	**South Pole Qui**	**26.85 180**		P	P	07 53 39.5	+0.5
	3.0nm,1.0s,baz=11,slow=2.2,SNR=6.1						
QSPA				LR	LR	08 02 27.1	
	comp=Z,232nm,20.0s,baz=32,slow=32						
STKA	**Stephens Creek**	**35.90 318**		LR	LR	08 08 06.9	
	comp=Z,78nm,19.8s,baz=191,slow=34						
MAW	**Mawson**	**39.19 216**		LR	LR	08 12 01.6	
	comp=Z,150nm,19.0s,baz=109,slow=37						
DZM	**Mont Dzumac**	**41.19 356**		*e*LR	LR	08 06 57.3	
	230nm,24.4s						
NWAO	**Narrogin (SRO)**	**44.17 288**		LR	LR	08 09 53.7	
	comp=Z,137nm,18.6s,baz=197,slow=30						
CTA	**Charters Tower**	**45.86 329**		LR	LR	08 12 59.6	
	comp=Z,95nm,20.3s,baz=170,slow=33						
ASAR	**Alice Springs**	**45.98 313**		P	P	07 56 21.9	-0.2
	0.8nm,0.8s,baz=151,slow=7.1,SNR=6.3						
PAE	**Paea**	**53.61 51**		*e*T		08 54 35.4	
	2.7nm,0.4s						
PPT	**Papeete**	**53.70 51**		*e*S	S	08 04 49.8	-5.9
	176nm,27.8s						
PPT				*e*LR	LR	08 12 33.3	
	146nm,27.8s						
PPT				*e*T		08 54 42.0	
	6.7nm,0.4s						
PPT	**Papeete**	**53.70 51**		LR	LR	08 16 04.3	
	comp=Z,96nm,18.8s,baz=188,slow=31						
MEH	**Mehetia**	**53.96 53**		*e*T		08 55 01.8	
	34nm,0.2s						
RKT	**Rikitea**	**54.42 70**		*e*T		08 55 38.9	
	6.1nm,0.3s						
LPAZ	**La Paz**	**89.22 126**		P	P	08 00 57.6	+2.6
	0.9nm,0.8s,baz=188,slow=7.3,SNR=4.0						
DIB	**Dawson Inlet,**	**124.72 39**		T		10 23 36.3	
YKA	**Yellowknife Ar**	**

ellipse: s-maj=14.1km s-min=6.8km az=94.0
IPEC ***07*** *08:00:18.9±0.1, 45°.46N×31°.09E, h0km, Error ellipse: s-maj=2.5km s-min=1.0km az=66.0*
IDC ***07*** *08:00:19.5±0.4, 45°.36N×30°.90E, h0km, mb4.7/29, mb1 4.8/43, mb1mx4.7/44, mbtmp4.7/43, ML4.1/14, MS4.2/30, Ms1 4.2/30, ms1mx4.1/40, Error ellipse: s-maj=7.9km s-min=6.8km az=25.0*
PDG ***07*** *08:00:19.5±0.6, 45°.32N×30°.82E, h2km±11km, ML4.8/9, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*
TEH ***07*** *08:00:19.5, 45°.33N×30°.89E, h10km*
BJI ***07*** *08:00:19.7, 45°.73N×30°.91E, h9km, mB5.0/23, mb4.9/40, Ms4.7/27, Ms7 4.6/25*
ISCJB ***07*** *08:00:20.4±0.1, 45°.24N±0°.01×30°.84E±0°.01, h14km, mb4.9/206, MS4.5/53, Error ellipse: s-maj=1.7km s-min=1.2km az=5.9*
MOS ***07*** *08:00:20.2±1.1, 45°.37N×30°.89E, h15km, mb5.0/61, MS4.4/23, Error ellipse: s-maj=3.6km s-min=2.6km az=17.5*
MOS Felt (III-IV) at Odessa, Kherson, Izmail.
GCMT ***07*** *08:00:21.4±0.4, 45°.51N×30°.96E, h17km±1km, MW4.9/60, Moment Tensor Solution. s22,c28; s60,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.20±.16; Mθθ-2.02±.11; Mφφ-0.18±.09; Mrθ-0.84±.25; Mrφ-1.12±.06; Mθφ0.55±.26; Best double couple: M0=2.59500×10^16 NP1:φs45.00000°, δ42.00000°, λ59.00000°. NP2: φs264.00000°, δ55.00000°, λ115.00000°. Principal axes: T 2.5800, Plg68.0000°, Azm230.0000°; N 0.0270, Plg20.0000°, Azm69.0000°; P -2.6110, Plg7.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***07*** *08:00:21.4±0.1, 45°.36N×30°.92E, h10km, mb4.9/163 Error ellipse: s-maj=2.9km s-min=2.1km az=166.0*
NEIC Felt [III] at Kherson and Odesa. Also felt at Illichivs'k, Izmayil and Mykolayiv. Felt [II] at Chisinau, Moldova. Also felt at Ribnita and Tiraspol. Felt at Dobrich and Silistra, Bulgaria; Galati, Iasi, Navodari and Tulcea, Romania.
CSEM ***07*** *08:00:21.1±0.1, 45°.36N×30°.92E, h10km, mb5.0/99, Ms4.4, Mw4.9, Error ellipse: s-maj=2.1km s-min=1.6km az=10.0*
DJA ***07*** *08:00:33, 45°.21N×31°.20E, h85km, mb5.1/15*
BGS ***07*** *08:00:37.6±1.6, 46°.44N×28°.96E, h10km, mb4.8, MS4.3*
ISC 07 08:00:22.1±0.5,**45°.32N**±0°.01×**30°.89E**±0°.01,**h14**km±3km, **h15**km±.6km:**pP-P,n1674,**σ1§**05**/1766,**mb4.9**/207,**MS4.5**/53, **184C-154D,Ukraine - Moldova - Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
TLCR		**1.47**	**265**	⇑P	**Pn**	**08 00 49.0**		**+0.9**
TLCR				S	**Sn**	**08 01 09.2**		**+2.0**
TLCR		**1.47**	**265**	⇑P	**Pn**	**08 00 48.9**		**+0.8**
TLCR				*i* S	**Sn**	**08 01 09.6**		**+2.4**
TLCR		**1.47**	**265**	⇑P	**Pn**	**08 00 48.9**		**+0.8**
TLCR		**1.47**	**265**	⇑P	**Pn**	**08 00 48.9**		**+0.8**
TLCR				S	**Sn**	**08 01 09.2**		**+2.0**
TIRR	**Tirgusor**	**1.96**	**245**	⇑P	**Pn**	**08 00 55.5**		**+0.6**
TIRR				S	**Sn**	**08 01 21.4**		**+2.2**
TIRR	**Tirgusor**	**1.96**	**245**	*e*Pn	**Pn**	**08 00 55.4**		**+0.5**
TIRR				*e*Sn	**Sn**	**08 01 20.6**		**+1.4**
TIRR	**Tirgusor**	**1.96**	**245**	⇑P	**Pn**	**08 00 55.5**		**+0.6**
TIRR				*i* S	**Sn**	**08 01 23.1**		**+3.9**
TIRR	**Tirgusor**	**1.96**	**245**	⇑P	**Pn**	**08 00 55.5**		**+0.6**
TIRR	**Tirgusor**	**1.96**	**245**	*e*Pn	**Pn**	**08 00 55.4**		**+0.5**
TIRR				*e*Sn	**Sn**	**08 01 20.6**		**+1.4**
TIRR				S	**Sn**	**08 01 21.4**		**+2.2**
SEV	**Sevastopol'**	**2.12**	**111**	⇑P	**Pn**	**08 00 57.1**		**0.0**
SEV				*e*S	**Sn**	**08 01 24.7**		**+1.5**
SEV	**Sevastopol'**	**2.12**	**111**	*i* P	**Pn**	**08 00 57.1**		**0.0**
SEV				*e*S	**Sn**	**08 01 24.7**		**+1.5**
LEOM	**Leova**	**2.17**	**303**	⇑P	**Pn**	**08 00 59.6**		**+1.8**
LEOM	**Leova**	**2.17**	**303**	⇓*i*P	**Pn**	**08 00 58.7**		**+0.9**
LEOM				*i* S	**Sn**	**08 01 28.6**		**+4.1**
LEOM	**Leova**	**2.17**	**303**	⇓*i*P	**Pn**	**08 00 58.7**		**+0.9**
LEOM	**Leova**	**2.17**	**303**	⇓*i*P	**Pn**	**08 00 58.7**		**+0.9**
LEOM				*i* S	**Sn**	**08 01 28.6**		**+4.1**
HARR	**Harsova**	**2.19**	**254**	⇑*i*P	**Pn**	**08 00 58.9**		**+0.9**
HARR	**Harsova**	**2.19**	**254**	⇑*i*P	**Pn**	**08 00 58.9**		**+0.9**
HARR	**Harsova**	**2.19**	**254**	⇑*i*P	**Pn**	**08 00 58.9**		**+0.9**
KIS	**Kishinev**	**2.21**	**320**	⇓*i*P	**Pn**	**08 00 56.0**		**-2.3**
KIS	2μm,1.0s			*i* S	**Sn**	**08 01 28.0**		**+2.6**
KIS	**Kishinev**	**2.21**	**320**	*k i*P	**Pn**	**08 00 56.0**		**-2.3**
KIS	120μm,0.5s			*i* S	**Sn**	**08 01 28.0**		**+2.6**
KIS	comp=E,1μm,1.0s			pmax	pmax			
KIS	comp=Z,2μm,1.0s			pmax	pmax			
KIS	comp=N,1μm,1.2s			pmax	pmax			
KIS	comp=E,12μm,0.5s			smax				
KIS	**Kishinev**	**2.21**	**320**	P	**Pn**	**08 00 58.8**		**+0.5**
KIS	**Kishinev**	**2.21**	**320**	⇓*i*P	**Pn**	**08 00 58.5**		**+0.2**
KIS				*i* S	**Sn**	**08 01 28.0**		**+2.6**
KIS	**Kishinev**	**2.21**	**320**	⇓*i*P	**Pn**	**08 00 58.5**		**+0.2**
KIS	**Kishinev**	**2.21**	**320**	⇓*i*P	**Pn**	**08 00 56.0**		**-2.3**
KIS	comp=E,2μm,1.0s			*i* S	**Sn**	**08 01 28.0**		**+2.6**
KIS	comp=E,120μm,0.5s							
CVD	**Cernavoda**	**2.27**	**245**	⇓*i*P	**Pn**	**08 01 00.4**		**+1.3**
CVD				*i* S	**Sn**	**08 01 29.8**		**+3.0**
CVD	**Cernavoda**	**2.27**	**245**	⇓*i*P	**Pn**	**08 01 00.4**		**+1.3**
CVD				*i* S	**Sn**	**08 01 29.8**		**+3.0**
SIM	**Simferopol'**	**2.31**	**98**	*ce*P	**Pn**	**08 00 59.8**		**+0.1**
SIM				*e*S	**Sn**	**08 01 35.4**		**+7.4**
SIM	comp=Z,3μm,0.3s			pmax	pmax			
SIM	**Simferopol'**	**2.31**	**98**	*e*P	**Pn**	**08 00 59.8**		**+0.1**
	comp=Z,3μm,0.3s							
YAL	**Yalta**	**2.47**	**109**	*e*P	**Pn**	**08 01 01.7**		**-0.1**
YAL				*e*S	**Sn**	**08 01 32.8**		**+1.1**
YAL	**Yalta**	**2.47**	**109**	*e*P	**Pn**	**08 01 01.7**		**-0.1**
YAL				*e*S	**Sn**	**08 01 32.8**		**+1.1**
PSN	**Preselentsi**	**2.54**	**231**	P	**Pn**	**08 01 02.4**		**-0.4**
ALU	**Alushta**	**2.57**	**103**	*e*P	**Pn**	**08 01 03.0**		**-0.3**
ALU				*e*S	**Sn**	**08 01 34.6**		**+0.2**
ALU	**Alushta**	**2.57**	**103**	*e*P	**Pn**	**08 01 03.0**		**-0.3**
ALU				*e*S	**Sn**	**08 01 34.6**		**+0.2**
BRD	**Bordesti**	**2.73**	**276**	⇓P	**Pn**	**08 01 08.3**		**+2.9**
BRD	**Bordesti**	**2.73**	**276**	⇑*i*P	**Pn**	**08 01 08.3**		**+2.9**
BRD	**Bordesti**	**2.73**	**276**	⇑*i*P	**Pn**	**08 01 08.3**		**+2.9**
BRD	**Bordesti**	**2.73**	**276**	⇑*i*P	**Pn**	**08 01 08.3**		**+2.9**
SUDU	**Sudak**	**2.94**	**97**	⇓*i*P	**Pn**	**08 01 07.0**		**-1.4**
SUDU				*e*S	**Sn**	**08 01 42.4**		**-1.1**
SUDU	**Sudak**	**2.94**	**97**	*i* P	**Pn**	**08 01 07.0**		**-1.4**
SUDU				*e*S	**Sn**	**08 01 42.4**		**-1.1**
IAS	**Iasi**	**2.97**	**310**	⇑*i*P	**Pn**	**08 01 09.7**		**+0.9**
IAS	**Iasi**	**2.97**	**310**	⇑*i*P	**Pn**	**08 01 09.7**		**+0.9**
IAS	**Iasi**	**2.97**	**310**	⇑*i*P	**Pn**	**08 01 09.7**		**+0.9**
VRI	**Vrincioaia**	**2.97**	**282**	⇑P	**Pn**	**08 01 10.2**		**+1.4**
VRI	**Vrincioaia**	**2.97**	**282**	P	**Pn**	**08 01 09.9**		**+1.2**
VRI	**Vrincioaia**	**2.97**	**282**	⇑*i*P	**Pn**	**08 01 10.0**		**+1.2**
VRI				*i* S	**Sn**	**08 01 48.3**		**+4.1**
VRI	**Vrincioaia**	**2.97**	**282**	⇑*i*P	**Pn**	**08 01 10.0**		**+1.2**
VRI	**Vrincioaia**	**2.97**	**282**	P	**Pn**	**08 01 09.9**		**+1.1**
VRI				*i* S	**Sn**	**08 01 48.3**		**+4.1**
PLOR	**Plostina**	**3.02**	**282**	⇑*i*P	**Pn**	**08 01 11.0**		**+1.5**
PLOR	**Plostina**	**3.02**	**282**	⇑*i*P	**Pn**	**08 01 11.0**		**+1.5**
PLOR	**Plostina**	**3.02**	**282**	⇑*i*P	**Pn**	**08 01 11.0**		**+1.5**
ISR	**Istrita**	**3.08**	**268**	⇓P	**Pn**	**08 01 12.9**		**+2.7**
ISR	**Istrita**	**3.08**	**268**	⇓*i*P	**Pn**	**08 01 12.8**		**+2.6**
ISR	**Istrita**	**3.08**	**268**	⇓*i*P	**Pn**	**08 01 12.8**		**+2.6**
ISR	**Istrita**	**3.08**	**268**	⇓*i*P	**Pn**	**08 01 12.8**		**+2.6**
FEO	**Feodosiya**	**3.20**	**94**	⇓*i*P	**Pn**	**08 01 12.1**		**+0.2**
FEO				*e*S	**Sn**	**08 01 50.6**		**+0.8**
FEO	**Feodosiya**	**3.20**	**94**	*i* P	**Pn**	**08 01 12.1**		**+0.2**
FEO				*e*S	**Sn**	**08 01 50.6**		**+0.8**
NEF	**NEVSHA**	**3.31**	**233**	P	**Pn**	**08 01 13.8**		**+0.4**
NEF	**NEVSHA**	**3.31**	**233**	P	**Pn**	**08 01 13.8**		**+0.4**
MLR	**Muntele Rosu**	**3.49**	**275**	Pn	**Pn**	**08 01 17.7**		**+1.9**
MLR	comp=Z,27nm,0.3s,baz=102,slow=5.4,SNR=158			Sn	**Sn**	**08 01 58.8**		**+1.9**
MLR	comp=Z,186nm,0.3s,baz=301,slow=22,SNR=9.4			Lg		08 02 16.2		
MLR	comp=Z,314nm,0.3s,baz=172,slow=20,SNR=8.8			LR	LR	08 02 49.5		
	comp=Z,1μm,20.9s,baz=82,slow=43							
MLR	**Muntele Rosu**	**3.49**	**275**	P	**Pn**	**08 01 18.0**		**+2.2**
MLR	**Muntele Rosu**	**3.49**	**275**	⇑*i*P	**Pn**	**08 01 17.9**		**+2.1**
MLR				*i* S	**Sn**	**08 02 01.5**		**+4.6**
MLR	**Muntele Rosu**	**3.49**	**275**	⇑*i*P	**Pn**	**08 01 17.9**		**+2.1**
MLR	**Muntele Rosu**	**3.49**	**275**	S	**Sn**	**08 02 01.5**		**+4.6**
MLR	**Muntele Rosu**	**3.49**	**275**	*e*Pn	**Pn**	**08 01 17.8**		**+2.0**
MLR	baz=89			S	**Sn**	**08 01 58.8**		**+1.9**
	comp=Z,186nm,0.3s							
BUC1	**Bucharest**	**3.59**	**256**	P	**Pn**	**08 01 19.4**		**+2.1**
BUC1	**Bucharest**	**3.59**	**256**	⇓*i*P	**Pn**	**08 01 19.1**		**+1.8**
BUC1	**Bucharest**	**3.59**	**256**	⇓*i*P	**Pn**	**08 01 19.1**		**+1.8**
BUC1	**Bucharest**	**3.59**	**256**	⇓*i*P	**Pn**	**08 01 19.1**		**+1.8**
KERU	**Kerch**	**3.93**	**88**	*e*P	**Pn**	**08 01 23.4**		**+1.5**
KERU				*e*S	**Sn**	**08 02 10.6**		**+2.8**
KERU	**Kerch**	**3.93**	**88**	*e*P	**Pn**	**08 01 23.4**		**+1.5**
KERU				*e*S	**Sn**	**08 02 10.6**		**+2.8**
VOIR		**4.12**	**274**	⇑P	**Pn**	**08 01 26.0**		**+1.5**
VOIR				S	**Sn**	**08 02 16.1**		**+3.7**
VOIR		**4.12**	**274**	P	**Pn**	**08 01 25.9**		**+1.5**
VOIR		**4.12**	**274**	⇓*i*P	**Pn**	**08 01 26.0**		**+1.5**
VOIR				*i* S	**Sn**	**08 02 16.1**		**+3.7**
VOIR		**4.12**	**274**	⇓*i*P	**Pn**	**08 01 26.0**		**+1.5**
VOIR		**4.12**	**274**	⇓*i*P	**Pn**	**08 01 26.0**		**+1.5**
VOIR				*i* S	**Sn**	**08 02 16.1**		**+3.7**
BALT	**Daday**	**4.20**	**153**	*i* P	**Pn**	**08 01 25.7**		**0.0**
BALT	**Daday**	**4.20**	**153**	*i* P	**Pn**	**08 01 25.7**		**0.0**
JMB	**Yambol**	**4.22**	**229**	P	**Pn**	**08 01 27.2**		**+1.2**
JMB	**Yambol**	**4.22**	**229**	P	**Pn**	**08 01 27.1**		**+1.1**
JMB	**Yambol**	**4.22**	**229**	P	**Pn**	**08 01 27.2**		**+1.2**
HENT	**Hendek**	**4.50**	**180**	*i* P	**Pn**	**08 01 29.5**		**-0.2**
HENT	**Hendek**	**4.50**	**180**	*i* P	**Pn**	**08 01 29.5**		**-0.2**
BURAR	**Bucovina Array**	**4.54**	**302**	P	**Pn**	**08 01 31.2**		**+0.9**
BURAR	**Bucovina Array**	**4.54**	**302**	⇑*i*P	**Pn**	**08 01 31.4**		**+1.1**
BURAR	**Bucovina Array**	**4.54**	**302**	⇑*i*P	**Pn**	**08 01 31.4**		**+1.1**
BURAR	**Bucovina Array**	**4.54**	**302**	P	**Pn**	**08 01 31.1**		**+0.8**
BUR08	**Bucovina Ar. S**	**4.56**	**303**	*e*Pn	**Pn**	**08 01 31.3**		**+0.6**
BUR08				*e*Sg	**Sg**	**08 02 42.8**		**-5.7**
BUR08	**Bucovina Ar. S**	**4.56**	**303**	*e*Pn	**Pn**	**08 01 31.3**		**+0.7**
BUR08				*e*Sg	**Sg**	**08 02 42.8**		**-5.7**
MDB	**Medias**	**4.63**	**283**	⇑P	**Pn**	**08 01 33.1**		**+1.6**
MDB	**Medias**	**4.63**	**283**	P	**Pn**	**08 01 33.1**		**+1.6**
ANN	**Anapa**	**4.67**	**94**	*c i*P	**Pn**	**08 01 30.8**		**-1.2**
ANN				*i*		08 02 23.2		
ANN	comp=Z,104nm,0.8s			pmax	pmax			
ANN	comp=E,573nm,0.8s			smax				
ANN	**Anapa**	**4.67**	**94**	*i* P	**Pn**	**08 01 30.8**		**-1.2**
ANN	comp=E,104nm,0.8s			*i* S	**Sn**	**08 02 23.2**		**-2.8**
SGKT	**Sivrigoynuk**	**4.82**	**169**	*i* P	**Pn**	**08 01 34.7**		**+0.5**
SGKT	**Sivrigoynuk**	**4.82**	**169**	*i* P	**Pn**	**08 01 34.7**		**+0.5**
BOYT	**Boyabat**	**4.88**	**142**	*i* P	**Pn**	**08 01 35.0**		**+0.1**
BOYT	**Boyabat**	**4.88**	**142**	*i* P	**Pn**	**08 01 35.0**		**+0.1**
ELDT	**Eldivan**	**5.18**	**158**	*i* P	**Pn**	**08 01 39.5**		**+0.4**
ELDT	**Eldivan**	**5.18**	**158**	*i* P	**Pn**	**08 01 39.5**		**+0.4**
ELDT				*e*S	**Sn**	**08 02 34.8**		**-3.8**
ULDT	**Uludag**	**5.33**	**195**	*i* P	**Pn**	**08 01 41.1**		**-0.2**
ULDT	**Uludag**	**5.33**	**195**	*i* P	**Pn**	**08 01 41.1**		**-0.1**
SART	**Tekirdag**	**5.37**	**212**	*i* P	**Pn**	**08 01 39.9**		**-1.9**
SART	**Tekirdag**	**5.37**	**212**	*i* P	**Pn**	**08 01 39.9**		**-1.8**
AKASG	**Malin Array Be**	**5.50**	**349**	P	**Pn**	**08 01 41.4**		**-2.0**
AKASG						08 02 42.0		
AKASG	**Malin Array Be**	**5.50**	**349**	Pn	**Pn**	**08 01 41.4**		**-2.0**
	comp=E,30nm,0.3s,baz=166,slow=13,SNR=72							
AKASG				Sn	**Sn**	**08 02 42.0**		**-4.4**
	comp=E,196nm,0.3s,baz=190,slow=30,SNR=4.7							
AKASG				Lg		08 03 03.9		
	comp=E,350nm,0.3s,baz=161,slow=30,SNR=9.4							
AKASG				LR	LR	08 04 07.2		
	comp=E,3μm,21.0s,baz=165,slow=42							
AKASG	**Malin Array Be**	**5.50**	**349**	Pn	**Pn**	**08 01 41.4**		**-2.0**
AKASG				Sn	**Sn**	**08 02 42.0**		**-4.4**
AKASG				Lg		08 03 03.9		
AKASG				LR	LR	08 04 07.2		
AKASG	**Malin Array Be**	**5.50**	**349**	P	**Pn**	**08 01 41.4**		**-2.0**
AKBB	**Malin Array Si**	**5.50**	**349**	*e*P	**Pn**	**08 01 41.5**		**-1.9**
AKBB	**Malin Array Si**	**5.50**	**349**	*e*P	**Pn**	**08 01 41.5**		**-1.9**
CTKT	**Corum**	**5.50**	**147**	*i* P	**Pn**	**08 01 43.4**		**-0.1**
CTKT	**Corum**	**5.50**	**147**	*i* P	**Pn**	**08 01 43.4**		**-0.1**
PLD	**Plovdiv**	**5.52**	**237**	P	**Pn**	**08 01 43.8**		**+0.1**
PLD	**Plovdiv**	**5.52**	**237**	P	**Pn**	**08 01 43.4**		**-0.3**
PLD	**Plovdiv**	**5.52**	**237**	P	**Pn**	**08 01 43.8**		**+0.1**
BMR	**Baia Mare**	**5.62**	**297**	P	**Pn**	**08 01 46.0**		**+0.9**
BMR	**Baia Mare**	**5.62**	**297**	P	**Pn**	**08 01 46.0**		**+0.9**
DEV	**Deva**	**5.63**	**279**	⇓P	**Pn**	**08 01 47.1**		**+1.8**
DEV	**Deva**	**5.63**	**279**	P	**Pn**	**08 01 47.1**		**+1.8**
ALN	**Alexandroupoli**	**5.67**	**220**	P	**Pn**	**08 01 45.3**		**-0.5**
ALN	**Alexandroupoli**	**5.67**	**220**	P	**Pn**	**08 01 45.1**		**-0.7**
ALN	**Alexandroupoli**	**5.67**	**220**	P	**Pn**	**08 01 45.3**		**-0.5**
RDO	**Rodhopi**	**5.72**	**225**	*e*P	**Pn**	**08 01 46.0**		**-0.5**
RDO	**Rodhopi**	**5.72**	**225**	P	**Pn**	**08 01 45.9**		**-0.6**
RDO	**Rodhopi**	**5.72**	**225**	P	**Pn**	**08 01 46.3**		**-0.2**
RDO	**Rodhopi**	**5.72**	**225**	P	**Pn**	**08 01 45.9**		**-0.6**
RDO	**Rodhopi**	**5.72**	**225**	*e*Pn	**Pn**	**08 01 46.2**		**-0.3**
GZR	**Gura Zlata**	**5.72**	**274**	P	**Pn**	**08 01 47.2**		**+0.7**
GZR	**Gura Zlata**	**5.72**	**274**	P	**Pn**	**08 01 47.2**		**+0.7**
ESKT	**Eskisehir**	**5.80**	**180**	*i* P	**Pn**	**08 01 47.2**		**-0.4**
SEYT	**Eskypehyr**	**5.80**	**180**	*i* P	**Pn**	**08 01 47.2**		**-0.4**
DRGR		**5.88**	**287**	⇑*i*P	**Pn**	**08 01 49.2**		**+0.5**
DRGR		**5.88**	**287**	⇑*i*P	**Pn**	**08 01 49.2**		**+0.5**
DRGR		**5.88**	**287**	P	**Pn**	**08 01 49.2**		**+0.5**
BR131	**Keskin Array S**	**5.95**	**159**	*e*Pn	**Pn**	**08 01 49.8**		**+0.1**
BR131	**Keskin Array S**	**5.95**	**159**	*e*Pn	**Pn**	**08 01 49.8**		**+0.1**
BRTR	**Keskin Array B**	**5.95**	**159**	Pn	**Pn**	**08 01 49.7**		**0.0**
	comp=E,6.9nm,0.3s,baz=6.0,slow=25,SNR=116							
BRTR				Sn	**Sn**	**08 02 54.2**		**-3.5**
	comp=E,6.6nm,0.3s,baz=307,slow=12,SNR=4.3							
BRTR	**Keskin Array B**	**5.95**	**159**	P	**Pn**	**08 01 49.7**		**0.0**
DJES	**Djerdap**	**5.97**	**267**	P	**Pn**	**08 01 48.8**		**-1.2**
DJES	**Djerdap**	**5.97**	**267**	⇓*i*Pn	**Pn**	**08 01 49.0**		**-1.0**
DURS	**Dursunbey**	**5.99**	**198**	*i* P	**Pn**	**08 01 49.6**		**-0.6**
DURS	**Dursunbey**	**5.99**	**198**	*i* P	**Pn**	**08 01 49.6**		**-0.6**
BBAL	**Bala**	**6.01**	**163**	*i* P	**Pn**	**08 01 50.9**		**+0.4**
BBAL	**Bala**	**6.01**	**163**	*i* P	**Pn**	**08 01 50.9**		**+0.4**
BALY	**Balya**	**6.08**	**205**	*i* P	**Pn**	**08 01 49.6**		**-1.8**
BALY	**Balya**	**6.08**	**205**	*i* P	**Pn**	**08 01 49.6**		**-1.9**
VTS	**Vitosha**	**6.18**	**246**	P	**Pn**	**08 01 53.6**		**+0.8**
VTS	**Vitosha**	**6.18**	**246**	P	**Pn**	**08 01 53.6**		**+0.8**
CDAG	**Cicekdag**	**6.25**	**154**	*i* P	**Pn**	**08 01 53.9**		**+0.1**
CDAG	**Cicekdag**	**6.25**	**154**	*i* P	**Pn**	**08 01 53.9**		**+0.1**
GDZ	**Gediz**	**6.32**	**190**	*i* P	**Pn**	**08 01 54.5**		**-0.3**
GDZ	**Gediz**	**6.32**	**190**	*i* P	**Pn**	**08 01 54.5**		**-0.2**
ERBA	**Erbaa**	**6.32**	**135**	*e*P	**Pn**	**08 01 54.1**		**-0.8**
ERBA	**Erbaa**	**6.32**	**135**	*e*P	**Pn**	**08 01 54.1**		**-0.7**
LVV	**L'vov**	**6.46**	**317**	*e*P	**Pn**	**08 01 56.4**		**-0.3**
LVV				*e*S	**Sn**	**08 03 09.0**		**-1.1**
LVV	comp=N,6μm,14.0s			MLR	MLR			
LVV	comp=E,6μm,14.0s			MLR	MLR			
LVV	comp=Z,8μm,14.0s			MLR	MLR			
LVV	**L'vov**	**6.46**	**317**	*e*P	**Pn**	**08 01 56.0**		**-0.7**
LVV	**L'vov**	**6.46**	**317**	*e*P	**Pn**	**08 01 56.0**		**-0.7**
LVV				*e*S	**Sn**	**08 03 09.0**		**-1.1**
TOKA	**Tokat**	**6.47**	**139**	*i* P	**Pn**	**08 01 55.9**		**-0.9**
TOKA	**Tokat**	**6.47**	**139**	*i* P	**Pn**	**08 01 55.9**		**-0.9**
BOZC	**Bozcaada**	**6.54**	**215**	*i* P	**Pn**	**08 01 56.3**		**-1.4**
SOC	**Sochi**	**6.55**	**102**	*e*P	**Pn**	**08 01 57.3**		**-0.7**
SOC				pmax	pmax			
	comp=Z,63nm,1.3s							
SOC	**Sochi**	**6.55**	**102**	*e*P	**Pn**	**08 01 57.3**		**-0.7**
	comp=Z,63nm,1.3s							
BOLS	**Boljevac**	**6.55**	**260**	P	**Pn**	**08 01 58.7**		**+0.7**
BOLS	**Boljevac**	**6.55**	**260**	⇓*i*Pn	**Pn**	**08 01 58.2**		**+0.2**
BOLS	**Boljevac**	**6.55**	**260**	P	**Pn**	**08 01 58.7**		**+0.7**
NISS		**6.69**	**256**	⇑*i*Pn	**Pn**	**08 02 00.7**		**+0.9**
UZH	**Uzhgorod**	**6.75**	**302**	⇓*i*P	**Pn**	**08 02 00.5**		**-0.1**
UZH				*e*S	**Sn**	**08 03 13.3**		**-3.9**
UZH	comp=N,1μm,1.0s			smax				
UZH	comp=E,2μm,1.0s			smax				
UZH	comp=Z,1μm,1.0s			smax				
UZH	**Uzhgorod**	**6.75**	**302**	*e*P	**Pn**	**08 02 00.0**		**-0.6**
UZH	**Uzhgorod**	**6.75**	**302**	*e*P	**Pn**	**08 02 00.0**		**-0.6**
AYVA	**Ayvalik**	**6.77**	**209**	*i* P	**Pn**	**08 01 56.1**		**-4.8**
SRS	**Serrai**	**6.79**	**234**	P	**Pn**	**08 02 01.1**		**-0.1**
SRS	**Serrai**	**6.79**	**234**	P	**Pn**	**08 02 01.5**		**+0.3**
SRS	**Serrai**	**6.79**	**234**	P	**Pn**	**08 02 01.1**		**-0.1**
AKHS	**Akhisar**	**6.83**	**201**	*i* P	**Pn**	**08 01 59.3**		**-2.5**
KDHN	**Kadinhani**	**6.86**	**172**	*i* P	**Pn**	**08 02 02.5**		**+0.3**
KDHN	**Kadinhani**	**6.86**	**172**	*i* P	**Pn**	**08 02 02.5**		**+0.3**
LIA	**Limnos Island**	**6.86**	**220**	P	**Pn**	**08 02 00.0**		**-2.2**
LIA	**Limnos Island**	**6.86**	**220**	P	**Pn**	**08 02 00.0**		**-2.2**
LOS	**Limnos**	**6.88**	**221**	P	**Pn**	**08 02 01.0**		**-1.4**
LOS	**Limnos**	**6.88**	**221**	P	**Pn**	**08 02 01.0**		**-1.4**
KOLS	**Kolonicke sedl**	**6.90**	**305**	*e*P	**Pn**	**08 02 03.2**		**+0.5**
KOLS				MLR	MLR			
	comp=Z,7μm,2.7s							
KOLS	**Kolonicke sedl**	**6.90**	**305**	*e*Pn	**Pn**	**08 02 03.2**		**+0.5**
KOLS				*e*Pg	**Pg**	**08 02 37.1**		**+3.1**
KOLS				*e*Sg	**Sg**	**08 04 06.2**		**+2.9**
KOLS	**Kolonicke sedl**	**6.90**	**305**	*e*PN	**Pn**	**08 02 03.2**		**+0.5**
KOLS				*e*PG	**Pg**	**08 02 37.1**		**+3.1**
KOLS				*e*SG	**Sg**	**08 04 06.2**		**+2.9**
KOLS	**Kolonicke sedl**	**6.90**	**305**	*e*P	**Pn**	**08 02 03.2**		**+0.5**
	comp=Z,7μm,2.7s							
GRSN	**GIRESUNGRSN**	**6.96**	**127**	*i* P	**Pn**	**08 02 02.2**		**-1.3**
GRSN	**GIRESUNGRSN**	**6.96**	**127**	*i* P	**Pn**	**08 02 02.2**		**-1.4**
SVIS	**Svilajnac**	**6.96**	**265**	P	**Pn**	**08 02 03.4**		**-0.2**
SVIS	**Svilajnac**	**6.96**	**265**	⇑*i*Pn	**Pn**	**08 02 02.7**		**-0.9**
SVIS	**Svilajnac**	**6.96**	**265**	P	**Pn**	**08 02 03.4**		**-0.2**
PRK	**Paraskevi**	**6.97**	**211**	*e*P	**Pn**	**08 02 03.0**		**-0.7**
PRK	**Paraskevi**	**6.97**	**211**	P	**Pn**	**08 02 03.4**		**-0.3**
PRK	**Paraskevi**	**6.97**	**211**	P	**Pn**	**08 02 03.4**		**-0.3**
BARS	**Barje**	**7.00**	**252**	P	**Pn**	**08 02 05.1**		**+1.0**
BARS	**Barje**	**7.00**	**252**	⇑*i*Pn	**Pn**	**08 02 04.6**		**+0.5**
BARS	**Barje**	**7.00**	**252**	P	**Pn**	**08 02 05.1**		**+1.0**
KWP	**Kalwaria Pacla**	**7.02**	**311**	*e*Pn	**Pn**	**08 02 04.1**		**-0.2**
KWP				*e*PP		08 02 09.8		
KWP				*e*Pg	**Pg**	**08 02 33.6**		**-2.8**
KWP				*e*Sg	**Sg**	**08 04 01.8**		**-5.4**
KWP	**Kalwaria Pacla**	**7.02**	**311**	⇓P	**Pn**	**08 02 04.9**		**+0.5**
KWP	**Kalwaria Pacla**	**7.02**	**311**	*e*Pn	**Pn**	**08 02 04.6**		**+0.2**
KWP	comp=Z,446nm,0.6s			*e*

LIT	Litokhoron	8.09 233	P	Pn	08 02 18.3	-0.7
GOLH	Golhisar	8.14 188	*i* P	Pn	08 02 19.8	+0.1
GOLH	Golhisar	8.14 188	*i* P	Pn	08 02 19.8	+0.1
SMG	Samos	8.19 203	*e*P	Pn	08 02 24.0	+3.6
BIA	Bitola	8.21 242	P	Pn	08 02 22.2	+1.6
BIA	Bitola	8.21 242	*i* Pn	Pn	08 02 22.1	+1.5
BIA			*e*Sn	Sn	08 03 49.1	-4.0
BIA	Bitola	8.21 242	P	Pn	08 02 21.0	+0.4
BIA	Bitola	8.21 242	*i* Pn	Pn	08 02 22.1	+1.5
NIE	Niedzica	8.26 304	P	Pn	08 02 21.9	+0.5
NIE	Niedzica	8.26 304	*e*P	Pn	08 02 21.8	+0.4
NEO	Neokhori	8.27 226	*e*P	Pn	08 02 20.5	-1.0
BEY	Berane	8.28 257⇑	*i*Pn	Pn	08 02 22.3	+0.6
IVA	Berane	8.28 257⇑	*i*Pn	Pn	08 02 22.3	+0.6
IVA			*e*Sn	Sn	08 03 53.5	-1.5
IVA	Berane	8.28 257⇑	*i*Pn	Pn	08 02 22.3	+0.6
FNA	Florina	8.31 240	P	Pn	08 02 23.3	+1.2
FNA	Florina	8.31 240	P	Pn	08 02 22.9	+0.8
FNA	Florina	8.31 240	P	Pn	08 02 23.3	+1.2
BBLS	Lazići	8.32 264	P	Pn	08 02 22.3	0.0
BBLS	Lazići	8.32 264⇑	*i*Pn	Pn	08 02 21.9	-0.4
BBLS	Lazići	8.32 264	P	Pn	08 02 22.3	0.0
PVY	Plav	8.33 255⇑	*i*Pn	Pn	08 02 23.0	+0.6
PVY			*e*Sn	Sn	08 03 54.8	-1.4
PVY	Plav	8.33 255⇑	*i*Pn	Pn	08 02 23.0	+0.6
BCI	Bajram Curri	8.36 253	*e*PN	Pn	08 02 24.6	+1.8
BCI	Bajram Curri	8.36 253	*e*Pn	Pn	08 02 24.6	+1.8
KZN	Kozani	8.37 236	*e*P	Pn	08 02 24.0	+1.2
KZN	Kozani	8.37 236	P	Pn	08 02 21.4	-1.4
KZN	Kozani	8.37 236	P	Pn	08 02 21.4	-1.4
PENC	Penc	8.37 291	*e*P	Pn	08 02 21.9	-1.0
VOR	Voronezh	8.46 38	*e*P	Pn	08 02 22.0	-2.0
VOR			pmax	pmax		
	comp=Z,240nm,1.0s					
VOR	Voronezh	8.46 38	*e*P	Pn	08 02 22.0	-2.0
	comp=Z,240nm,1.0s					
PLE	Pljevlja	8.48 260⇑	*i*Pn	Pn	08 02 24.6	+0.2
PLE			*e*Sn	Sn	08 03 58.5	-1.3
PLE	Pljevlja	8.48 260⇑	*i*Pn	Pn	08 02 24.6	+0.2
PLE			*e*Sn	Sn	08 03 58.5	-1.3
BUD	Budapest	8.48 289⇓	*e*Pn	Pn	08 02 24.7	+0.3
BUD	Budapest	8.48 289⇓	*e*P	Pn	08 02 24.7	+0.3
OHR	Ohrid	8.48 244	P	Pn	08 02 26.0	+1.6
OHR	Ohrid	8.48 244	*e*Pn	Pn	08 02 25.2	+0.8
OHR			*e*Sn	Sn	08 03 55.9	-4.0
OHR	Ohrid	8.48 244	P	Pn	08 02 26.3	+1.9
OHR	Ohrid	8.48 244	*e*Pn	Pn	08 02 25.2	+0.8
OHR	Ohrid	8.48 244	P	Pn	08 02 26.0	+1.6
KIV	Kislovodsk	8.53 95	*e*P	Pn	08 02 26.6	+1.6
KIV			*e*S	Sn	08 04 03.6	+2.7
KIV			pmax	pmax		
	comp=Z,49nm,0.9s					
KIV			MLR	MLR		
	comp=Z,521nm,9.0s					
KIV	Kislovodsk	8.53 95	*e*Pn	Pn	08 02 25.8	+0.8
KIV	Kislovodsk	8.53 95	*e*Pn	Pn	08 02 25.8	+0.8
KIV	Kislovodsk	8.53 95	*e*P	Pn	08 02 26.6	+1.6
	comp=Z,49nm,0.9s					
GULE	Gulek	8.55 159	*i* P	Pn	08 02 21.9	-3.4
PKSM	Moragy	8.61 280	P	Pn	08 02 26.8	+0.6
PKSM	Moragy	8.61 280	*e*P	Pn	08 02 25.5	-0.7
TURN	Turunc	8.62 192	*i* P	Pn	08 02 24.4	-1.9
TURN	Turunc	8.62 192	*i* P	Pn	08 02 24.4	-1.9
PUK	Puka	8.62 252	*e*PN	Pn	08 02 28.4	+2.1
PUK	Puka	8.62 252	*e*Pn	Pn	08 02 28.4	+2.1
BDRM	Kayabasi	8.65 199	*i* P	Pn	08 02 25.4	-1.3
BDRM	Kayabasi	8.65 199	*i* P	Pn	08 02 25.4	-1.3
THL	Klokotos Trika	8.72 232	P	Pn	08 02 27.4	-0.3
THL	Klokotos Trika	8.72 232	P	Pn	08 02 27.4	-0.3
KBN	Korca	8.77 241	*e*PN	Pn	08 02 30.8	+2.5
KBN	Korca	8.77 241	*e*Pn	Pn	08 02 30.8	+2.5
DBOC	Borcka	8.80 113	*i* P	Pn	08 02 25.1	-3.7
KOPT	Kop Dagi	8.84 123	*i* P	Pn	08 02 29.4	+0.1
KOPT	Kop Dagi	8.84 123	*i* P	Pn	08 02 29.4	+0.1
VYHS	Vyhne	8.84 295	*e*Pn	Pn	08 02 28.9	-0.4
VYHS			*e*Sn	Sn	08 04 11.3	+2.7
VYHS	Vyhne	8.84 295	*e*PN	Pn	08 02 28.9	-0.4
VYHS			*e*SN	Sn	08 04 11.3	+2.7
VYHS	Vyhne	8.84 295	*e*P	Pn	08 02 28.9	-0.4
VYHS			*e*S	Sn	08 04 11.3	+2.7
LIKS	Likavka	8.85 299	*e*Pn	Pn	08 02 33.3	+3.9
LIKS			*e*Sn	Sn	08 04 02.7	-6.1
LIKS	Likavka	8.85 299	*e*PN	Pn	08 02 33.3	+3.9
LIKS			*e*SN	Sn	08 04 02.7	-6.1
UPM	Unac-Piva	8.85 260⇓	*i*Pn	Pn	08 02 29.8	+0.3
UPM			*e*Sn	Sn	08 04 07.3	-1.7
UPM	Unac-Piva	8.85 260⇓	*i*Pn	Pn	08 02 29.8	+0.3
RHK3	Tenkes	8.88 278	*e*P	Pn	08 02 31.0	+1.1
LKR	Lokris	8.88 224	P	Pn	08 02 27.6	-2.3
LKR	Lokris	8.88 224	P	Pn	08 02 27.6	-2.3
PDG	Podgorica	8.88 255⇑	*i*Pn	Pn	08 02 30.8	+0.9
TTG	Podgorica	8.88 255⇑	*i*Pn	Pn	08 02 30.8	+0.9
TTG			*e*Sn	Sn	08 04 07.9	-1.8
TTG	Podgorica	8.88 255	*i* P	Pn	08 02 30.8	+0.9
PKSG		8.89 288	*e*P	Pn	08 02 30.3	+0.3
OJC	Ojcow	8.93 307	*e*P	Pn	08 02 29.4	-1.1
OJC			*e*PP		08 02 36.0	
OJC			*e*S	Sn	08 04 09.8	-1.0
OJC			L		08 06 43.4	
	comp=Z,4.9nm,13.5s					
OJC	Ojcow	8.93 307	*e*P	Pn	08 02 29.4	-1.1
OJC			*e*S	Sn	08 04 09.8	-1.0
AGG	Agios Georgios	8.94 228	P	Pn	08 02 30.4	-0.3
AGG	Agios Georgios	8.94 228	P	Pn	08 02 30.4	-0.3
TIR	Tirane	8.96 248	*e*P	Pn	08 02 34.1	+3.1
TIR			pmax	pmax		
	comp=Z,83nm,0.6s					
TIR	Tirane	8.96 248	*e*Pn	Pn	08 02 34.0	+3.1
	comp=Z,83nm,0.6s					
MALT	Malatya	8.98 139	*e*P	Pn	08 02 32.0	+0.7
MALT			pmax	pmax		
	comp=Z,24nm,1.0s					
MALT	Malatya	8.98 139	*e*Pn	Pn	08 02 32.0	+0.7
	comp=Z,24nm,1.0s					
MALT	Malatya	8.98 139	*e*Pn	Pn	08 02 31.8	+0.5
	baz=325					
DBAD	Bademkaya	8.99 115	*i* P	Pn	08 02 29.0	-2.4
DBAD	Bademkaya	8.99 115	*i* P	Pn	08 02 29.0	-2.4
ARTV	Artvin	9.05 113	*i* P	Pn	08 02 29.5	-2.8
ARTV	Artvin	9.05 113	*i* P	Pn	08 02 29.5	-2.8
ULC	Ulcinj	9.08 252⇑	*i*Pn	Pn	08 02 33.6	+1.0
ULC			*e*Sn	Sn	08 04 12.7	-1.9
ULC	Ulcinj	9.08 252⇑	*i*Pn	Pn	08 02 33.6	+1.0
ATH	Athens Observa	9.09 219	*e*P	Pn	08 02 34.0	+1.2
DDEM	Demirkent	9.09 115	*i* P	Pn	08 02 31.7	-1.1
DDEM	Demirkent	9.09 115	*i* P	Pn	08 02 31.7	-1.1
DAGI	Agillar	9.10 114	*i* P	Pn	08 02 30.7	-2.2
AKAS	Kas	9.13 187	*i* P	Pn	08 02 31.4	-2.0
AKAS	Kas	9.13 187	*i* P	Pn	08 02 31.4	-1.9
KOLL	Kolacno	9.14 295	*e*Pn	Pn	08 02 33.5	+0.1
KOLL			*e*Sn	Sn	08 04 16.4	+0.4
KOLL	Kolacno	9.14 295	*e*PN	Pn	08 02 33.5	+0.1
KOLL			*e*SN	Sn	08 04 16.4	+0.4
KOLL	Kolacno	9.14 295	*e*P	Pn	08 02 33.5	+0.1
KOLL			*e*S	Sn	08 04 16.4	+0.4
APE	Apeiranthos	9.18 208	*e*P	Pn	08 02 33.4	-1.0
APE	Apeiranthos	9.18 208	P	Pn	08 02 33.4	-0.6
APE	Apeiranthos	9.18 208	P	Pn	08 02 33.4	-0.6
BUM	Brajici-Budva	9.18 255⇓	*i*Pn	Pn	08 02 35.0	+1.0
BUM			*e*Sn	Sn	08 04 15.8	-1.2
BUM	Brajici-Budva	9.18 255⇓	*i*Pn	Pn	08 02 35.0	+1.0
BUM			*e*Sn	Sn	08 04 15.8	-1.2
BRY	Bratogost	9.21 259⇑	*i*Pn	Pn	08 02 34.6	+0.3
BRY			*e*Sn	Sn	08 04 15.9	-1.8
BRY	Bratogost	9.21 259⇑	*i*Pn	Pn	08 02 34.6	+0.3
KSL	Kastellorizon	9.22 187	*e*P	Pn	08 02 37.5	+3.0
EVR	Evrytania	9.29 230	*e*P	Pn	08 02 36.0	+0.4
JAN	Janina	9.32 236	*e*P	Pn	08 02 40.5	+4.5
ARG	Arkhangelos	9.33 194	*e*P	Pn	08 02 38.0	+1.9
ARG	Arkhangelos	9.33 194	P	Pn	08 02 37.1	+1.0
ARG	Arkhangelos	9.33 194	P	Pn	08 02 37.1	+1.0
ARG	Arkhangelos	9.33 194	*e*Pn	Pn	08 02 37.4	+1.3
	baz=13					
LTK	Loutraki	9.39 222	P	Pn	08 02 36.9	0.0
LTK	Loutraki	9.39 222	P	Pn	08 02 36.9	0.0
MNK	Minsk	9.40 349⇑	*e*P	Pn	08 02 30.0	-6.9
MNK			pmax	pmax		
	comp=Z,270nm,0.8s					
MNK			MLR	MLR		
	comp=N,25µm,10.0s					
MNK			MLR	MLR		
	comp=E,25µm,10.0s					
MNK			MLR	MLR		
	comp=Z,15µm,6.0s					
HCY	Herceg Novi	9.40 257⇑	*i*Pn	Pn	08 02 38.2	+1.2
HCY			*e*Sn	Sn	08 04 20.9	-1.5
HCY	Herceg Novi	9.40 257⇑	*i*Pn	Pn	08 02 38.2	+1.2
GZT	Gaziantep	9.41 145	*i* P	Pn	08 02 36.2	-0.9
EZM	Erzurum	9.43 121	*e*P	Pn	08 02 37.4	+0.1
ERZM	Erzurum	9.43 121	*i* P	Pn	08 02 39.8	+2.4
ONI	Oni	9.46 102	P	Pn	08 02 39.1	+1.2
WAR	Warsaw	9.50 320	*e*P	Pn	08 02 37.7	-0.6
WAR			*e*		08 02 41.8	
WAR			*e*		08 02 47.9	
WAR			*e*Sn	Sn	08 04 21.1	-3.7
WAR			*e*		08 04 28.2	
WAR			*e*		08 04 35.5	
WAR	Warsaw	9.50 320	*e*P	Pn	08 02 37.7	-0.6
WAR			*e*		08 04 28.2	
WAR	Warsaw	9.50 320	*e*P	Pn	08 02 37.7	-0.6
KALE	Kalithea	9.51 226	P	Pn	08 02 37.8	-0.8
KALE	Kalithea	9.51 226	P	Pn	08 02 37.8	-0.8
TRIZ	Trizonia	9.56 226	P	Pn	08 02 38.8	-0.5
TRIZ	Trizonia	9.56 226	P	Pn	08 02 38.8	-0.5
EFP	Efpalio	9.61 227	P	Pn	08 02 40.3	+0.5
EFP	Efpalio	9.61 227	P	Pn	08 02 40.3	+0.5
HOMI	Horasan	9.67 119	*i* P	Pn	08 02 39.9	-0.8
JAVC	Velka Javorina	9.68 296	*e*Pn	Pn	08 02 41.3	+0.4
	baz=105					
SRN	Sarande	9.69 240	*e*PN	Pn	08 02 43.9	+2.9
LAKA	Lakka	9.71 226	P	Pn	08 02 41.3	+0.1
LAKA	Lakka	9.71 226	P	Pn	08 02 41.3	+0.1
ZEI	Tsey	9.71 101	*e*P	Pn	08 02 40.6	-0.6
ZEI			*e*S	Sn	08 04 30.9	+0.9
ZEI			pmax	pmax		
	comp=Z,11nm,0.7s					
ZEI	Tsey	9.71 101	*e*P	Pn	08 02 40.6	-0.6
	comp=Z,11nm,0.7s					
ZEI			*e*S	Sn	08 04 30.9	+0.9
OKC	Ostrava-Krasne	9.72 302	*e*Pn	Pn	08 02 40.1	-1.3
	baz=112					
OKC	Ostrava-Krasne	9.72 302	*e*P	Pn	08 02 40.4	-1.0
SMOL	Smolenice	9.75 294	*e*P	Pn	08 02 43.3	+1.6
SMOL	Smolenice	9.75 294	*e*PN	Pn	08 02 43.3	+1.6
SMOL	Smolenice	9.75 294	*e*P	Pn	08 02 43.3	+1.6
GUR	Goura	9.76 224	P	Pn	08 02 41.1	-0.9
GUR	Goura	9.76 224	P	Pn	08 02 41.1	-0.9
STON	Ston	9.80 260	*i* Pn	Pn	08 02 44.2	+1.7
STON			Sn	Sn	08 04 30.2	-2.1
STON	Ston	9.80 260	*i* Pn	Pn	08 02 44.2	+1.7
KEH	Kehvi	9.90 103	P	Pn	08 02 43.6	-0.2
KEK	Kerkira	9.92 239	*e*P	Pn	08 02 45.0	+0.9
NACGM	Naroch	9.94 346	*e*P	Pn	08 02 38.0	-6.4
SUW	Suwalki	10.03 333	*e*P	Pn	08 02 42.5	-3.0
SUW			*e*PP		08 02 49.6	
SUW			*e*PPP		08 02 53.8	
SUW			*e*		08 04 28.2	
SUW			*e*SS		08 04 45.3	
SUW			*e*Sg	Sx	08 05 31.8	
	comp=Z,5µm,0.9s					
SUW	Suwalki	10.03 333	*e*P	Pn	08 02 42.5	-3.0
SUW			*e*SS		08 04 45.3	
SUW	Suwalki	10.03 333	*e*Pn	Pn	08 02 42.6	-2.9
SUW			*e*Sn	Sn	08 04 36.1	-1.6
SUW	Suwalki	10.03 333	*e*P	Pn	08 02 42.5	-3.0
SUW	Suwalki	10.03 333	*e*Pn	Pn	08 02 43.4	-2.1
	baz=146					
SUW			*e*Sn	Sn	08 04 36.1	-1.6
MORC	Moravsky Berou	10.06 301	P	Pn	08 02 45.6	-0.4
MORC	Moravsky Berou	10.06 301	*e*Pn	Pn	08 02 44.4	-1.7
MORC	Moravsky Berou	10.06 301	*e*Pn	Pn	08 02 44.3	-1.7
MORC	Moravsky Berou	10.06 301	P	Pn	08 02 45.6	-0.4
KARS	Kars	10.09 113	*e*P	Pn	08 02 46.7	+0.3
GOR	Gori	10.14 105	P	Pn	08 02 50.9	+3.7
SOP	Sopron	10.16 289	*e*P	Pn	08 02 47.8	+0.4
KARP	Karpathos	10.17 197	*e*P	Pn	08 02 48.5	+1.0
VLX	Vlachokerasia	10.19 222	P	Pn	08 02 47.8	-0.1
VLX	Vlachokerasia	10.19 222	P	Pn	08 02 47.8	-0.1
OBN	Obninsk	10.45 18	Pn	Pn	08 02 47.2	-4.1
	comp=Z,1µm,0.5s,SNR=9.6					
OBN	Obninsk	10.45 18	*d i* P	Pn	08 02 47.6	-3.7
OBN			*i* S	Sn	08 04 44.5	-3.6
OBN			pmax	pmax		
	comp=Z,165nm,1.0s					
OBN			MLR	MLR		
	comp=Z,4µm,15.0s					
OBN	Obninsk	10.45 18	*e*Pn	Pn	08 02 47.9	-3.4
VLI	Veliai	10.48 218	*e*P	Pn	08 02 51.5	-0.3
VLS	Valsamata	10.49 231	*e*P	Pn	08 02 53.5	+1.6
VRAC	Vranov	10.49 297	Pn	Pn	08 02 51.4	-0.5
	comp=Z,0.5nm,0.3s,baz=110,slow=12,SNR=13					
VRAC			Lg		08 05 29.7	
	comp=Z,1.0nm,0.3s,baz=7.5,slow=5.5,SNR=3.4					
VRAC			LR	LR	08 06 54.7	
	comp=Z,532nm,18.8s,baz=100,slow=38					
VRAC	Vranov	10.49 297	P	Pn	08 02 51.6	-0.3
VRAC	Vranov	10.49 297	*e*Pn	Pn	08 02 51.3	-0.6
VRAC	Vranov	10.49 297	P	Pn	08 02 51.6	-0.3
CSS	Prodhromos	10.52 169	*e*Pn	Pn	08 02 51.8	-0.5
	comp=Z,114nm,1.4s					
CSS	Prodhromos	10.52 169	*e*Pn	Pn	08 02 51.2	-1.1
	baz=351					
KRUC	Moravsky	10.55 296	*e*Pn	Pn	08 02 52.1	-0.6
	baz=104					
ITM	Ithomi	10.56 223	P	Pn	08 02 53.5	+0.6
ITM	Ithomi	10.56 223	P	Pn	08 02 53.5	+0.6
CONA	Conrad Observa	10.66 290⇑	*i*Pn	Pn	08 02 54.3	0.0
	comp=Z,23nm,1.2s					
CONA	Conrad Observa	10.66 290	P	Pn	08 02 54.3	+0.1
	comp=Z,23nm,1.2s					
TBLG	Delisi	10.68 105	*e*P	Pn	08 02 57.3	+2.8
TBLG	Delisi	10.68 105	P	Pn	08 02 57.3	+2.8
MTA	Mtatsminda	10.73 105	P	Pn	08 02 58.1	+2.9
ARSA	Arzberg	10.81 286⇑	*i*Pn	Pn	08 02 57.9	+1.6
	comp=Z,20nm,0.8s,SNR=7.9					
ARSA	Arzberg	10.81 286	P	Pn	08 02 57.9	+1.6
	comp=Z,20nm,0.8s,SNR=7.9					
KYTH	Kithira	10.81 216	*e*P	Pn	08 02 55.5	-0.8
NPS	Neapolis	10.82 204	*e*P	Pn	08 02 54.0	-2.5
DPC	Dobruska-Polom	11.00 302	*e*P	Pn	08 02 57.5	-1.4
DPC	Dobruska-Polom	11.00 302	*e*Pn	Pn	08 02 57.8	-1.1
	baz=111					
IDI	Anoyia	11.02 207	Pn	Pn	08 02 58.8	-0.4
	comp=Z,1.7nm,0.3s,baz=11,slow=7.4,SNR=7.3					
IDI			LR	LR	08 08 01.9	
	comp=Z,568nm,18.4s,baz=322,slow=42					
IDI	Anoyia	11.02 207	Pn	Pn	08 02 58.8	-0.3
SOKA	Soboth	11.12 283⇓	*i*Pn	Pn	08 03 02.0	+1.5
	comp=Z,41nm,1.1s					
SOKA	Soboth	11.12 283	P	Pn	08 03 02.0	+1.5
	comp=Z,41nm,1.1s					
XRY	Khrisi	11.16 203	*e*P	Pn	08 03 05.0	+3.8
TREC	Trest	11.19 296	*e*P	Pn	08 03 02.5	+1.1
KSP	Ksiaz	11.21 305	*e*P	Pn	08 02 59.2	-2.5
KSP			*e*S	Sn	08 05 12.1	+5.3
KSP	Ksiaz	11.21 305	*e*P	Pn	08 03 00.5	-1.2
KSP			*e*S	Sn	08 05 08.0	+1.3
KSP	Ksiaz	11.21 305	*e*P	Pn	08 03 00.5	-1.2
KSP			*e*S	Sn	08 05 08.0	+1.3
UPC	Upice	11.24 303	*e*P	Pn	08 03 00.8	-1.4
MOS	Moscow	11.27 20	*e*P	Pn	08 02 57.4	-5.1
MOS			*e*SS		08 05 08.2	
MOS			pmax	pmax		
	comp=Z,180nm,1.1s					
MOS			MLR	MLR		
	comp=Z,5µm,11.0s					
MOS			MLR	MLR		
	comp=N,5µm,12.0s					
MOS			MLR	MLR		
	comp=E,3µm,10.0s					
MOS	Moscow	11.27 20	*e*S	Sn	08 05 08.2	+0.1
	comp=E,5µm,12.0s					
SARR	Saratov	11.33 52	*e*P	Pn	08 03 00.8	-2.6
LTRZ	Laterza	11.33 250	P	Pn	08 03 05.0	+1.5
LTRZ	Laterza	11.33 250	P	Pn	08 03 05.0	+1.5
MOA	Molln	11.72 288⇑	*i*Pn	Pn	08 03 09.8	+1.1
	comp=E,26nm,1.1s,SNR=8.8					
MOA	Molln	11.72 288	P	Pn	08 03 09.8	+1.1
	comp=E,26nm,1.1s,SNR=8.8					
ORI	Oriolo Calabro	11.85 249	P	Pn	08 03 12.9	+2.4
VOY	Vojsko	11.91 279	*e*Pn	Pn	08 03 12.6	+1.2
VOY			*e*		08 03 22.7	
VOY			*e*		08 03 26.7	
VOY	Vojsko	11.91 279	*e*Pn	Pn	08 03 12.6	+1.2
GKP	Gorka Klasztor	11.93 317	*e*P	Pn	08 03 08.2	-3.3
	comp=E,300nm,1.0s					
GKP			*e*PP		08 03 17.7	
GKP			*e*S	Sn	08 05 17.4	-7.0
GKP			*e*SS		08 05 27.7	
GKP	Gorka Klasztor	11.93 317	*e*P	Pn	08 03 08.2	-3.4
GKP			*e*S	Sn	08 05 17.4	-6.9
PRU	Pruhonice	11.97 299	*e*P	Pn	08 03 11.2	-0.9
PRA	Prague	12.06 299	P	Pn	08 03 14.0	+0.7
PRA			AMS	AMS	08 07 24.0	
FG5	Orsara di Pugl	12.07 256	P	Pn	08 03 15.2	+1.6
FG5	Orsara di Pugl	12.07 256	P	Pn	08 03 15.2	+1.6
PVCC	Panska Ves	12.12 301	*e*P	Pn	08 03 11.8	-2.3
TIP	Timpagrande	12.13 245	*e*Pn	Pn	08 03 15.7	+1.3
TIP	Timpagrande	12.13 245	*e*Pn	Pn	08 03 15.7	+1.3
MAK	Makhachkala	12.17 95	*e*P	Pn	08 03 16.4	+1.5
MAK			MLR	MLR		
	comp=Z,2µm,15.0s					
MAK	Makhachkala	12.17 95	*e*P	Pn	08 03 16.4	+1.5
	comp=Z,2µm,15.0s					
GEC2	GERESS Array S	12.23 293	*e*P	Pn	08 03 16.4	+0.7
	comp=Z,70nm,1.6s					
GEC2	GERESS Array S	12.23 293	*e*P	Pn	08 03 16.4	+0.7
GEC2			pmax	pmax		
	comp=Z,70nm,1.6s					
GEC2	GERESS Array S	12.23 293	*e*P	Pn	08 03 16.4	+0.7
	comp=Z,70nm,1.6s					
GERES	GERESS Array B	12.23 293	Pn	Pn	08 03 16.5	+0.7
	comp=Z,0.5nm,0.3s,baz=101,slow=14,SNR=30					
GERES	GERESS Array B	12.23 293	P	Pn	08 03 16.5	+0.8
PTCC	Patocco-Chiusa	12.28 281	P	Pn	08 03 17.9	+1.6
PTCC	Patocco-Chiusa	12.28 281	P	Pn	08 03 17.9	+1.6
KBA	Koelnbreinsper	12.29 284⇓	*i*Pn	Pn	08 03 18.7	+2.2
	comp=Z,36nm,1.3s,SNR=13					
KBA	Koelnbreinsper	12.29 284	P	Pn	08 03 18.7	+2.3
	comp=Z,36nm,1.3s,SNR=13					
KHC	Kasperske Hory	12.37 294	*e*Pn	Pn	08 03 18.0	+0.5
	comp=Z,36nm,1.1s					
KHC	Kasperske Hory	12.37 294	*e*P	Pn	08 03 17.9	+0.4
KHC			*e*S	Sn	08 05 17.2	-18
KHC	Kasperske Hory	12.37 294	*e*P	Pn	08 03 17.9	+0.4
MGR	Morigerati	12.40 251	P	Pn	08 03 19.0	+0.9
MGR	Morigerati	12.40 251	P	Pn	08 03 19.0	+0.9
CSSN	Cassano Irpino	12.42 255	P	Pn	08 03 19.1	+0.7
CSSN	Cassano Irpino	12.42 255	P	Pn	08 03 19.1	+0.7
GRI	Girifalco	12.55 244	P	Pn	08 03 21.8	+1.7
BRG	Berggiesshubel	12.61 302	*e*P	Pn	08 03 19.2	-1.6
	comp=Z,26nm,0.9s					
BRG	Berggiesshubel	12.61 302	*e*P	Pn	08 03 20.5	-0.3
	comp=Z,10.0nm,1.5s					
BRG			*i*		08 03 34.2	
	comp=Z,26nm,0.9s					
BRG	Berggiesshubel	12.61 302	*e*P	Pn	08 03 20.5	-0.3
	comp=Z,6.0nm,1.5s					
MIDA	Miranda	12.63 259	P	Pn	08 03 22.2	+1.0
MIDA	Miranda	12.63 259	P	Pn	08 03 22.2	+1.0
SGG	Gregorio Mates	12.64 258	P	Pn	08 03 22.5	+1.1
SGG	Gregorio Mates	12.64 258	P	Pn	08 03 22.5	+1.1
FVI	Forni Avoltri	12.67 282	P	Pn	08 03 24.1	+2.4
INTR	Introdacqua	12.73 261	P	Pn	08 03 22.7	+0.1
INTR	Introdacqua	12.73 261	P	Pn	08 03 22.7	+0.1
TERO	Teramo	12.74 264	P	Pn	08 03 24.0	+1.3
TERO	Teramo	12.74 264	P	Pn	08 03 24.0	+1.3
MMAI	Mount Meron Ar	12.78 163	Pn	Pn	08 03 23.3	0.0
	comp=Z,1.7nm,0.3s,baz=358,slow=14,SNR=5.9					
MMAI			Lg		08 07 05.1	
	comp=Z,2.2nm,0.3s,baz=277,slow=36,SNR=3.3					
MMAI			LR	LR	08 09 24.7	
	comp=Z,680nm,20.9s,baz=350,slow=43					
WET	Wettzell	12.82 294	*e*P	Pn	08 03 25.5	+1.8
	comp=Z,37nm,1.4s					
WET	Wettzell	12.82 294	*e*P	Pn	08 03 25.5	+1.8
WET			pmax	pmax		
	comp=Z,37nm,1.4s					
WET	Wettzell	12.82 294	*e*P	Pn	08 03 25.5	+1.8
	comp=Z,37nm,1.4s					
MSL	Mosul	12.83 130	*e*P	Pn	08 03 22.0	-2.0
MSL			*e*S	Sn	08 05 47.0	+0.4
IMRD	Marand	12.83 116	*e*P	Pn	08 03 24.0	0.0
IMRD	Marand	12.83 116	*e*P	Pn	08 03 24.0	0.0
SDI	San Donato	12.91 260	P	Pn	08 03 26.5	+1.5
RFI	Roccamonfina	12.95 258	P	Pn	08 03 28.2	+2.7
AQU	L'Aquila	12.97 263	*e*P	Pn	08 03 25.8	0.0
AQU	L'Aquila	12.97 263	*e*P	Pn	08 03 25.8	0.0
VVLD	Villa Vallelon	12.98 261	P	Pn	08 03 26.8	+0.8
VVLD	Villa Vallelon	12.98 261	P	Pn	08 03 26.8	+0.8
NRCA	Norcia	13.02 265	P	Pn	08 03 26.3	-0.2
NRCA	Norcia	13.02 265	P	Pn	08 03 26.

GRF *e*L 08 09 02.5
comp=Z,360nm,20.1s
GRF Grafenberg Arr 13.98 295 *e*P **Pn 08 03 40.7 +1.1**
GRF pmax pmax
comp=Z,59nm,1.1s
GRF MLR MLR
comp=Z,400nm,20.1s
GRF Grafenberg Arr 13.98 295 *e*P **Pn 08 03 40.7 +1.1**
comp=Z,59nm,1.1s
FETA Feichten 14.07 284⇑ *i*Pn **Pn 08 03 42.0 +1.1**
comp=Z,71nm,1.1s,SNR=14
FETA Feichten 14.07 284 P **Pn 08 03 42.0 +1.2**
comp=Z,71nm,1.1s,SNR=14
BSD Bornholm Skovb 14.13 320⇑ *i*P **Pn 08 03 35.4 -6.2**
BSD pmax pmax
comp=Z,53nm,0.8s
BSD MLR MLR
comp=Z,1µm,16.0s
BSD Bornholm Skovb 14.13 320⇑ *i*P **Pn 08 03 35.4 -6.2**
comp=Z,53nm,0.8s
BSD *i* S **Sn 08 06 04.9 -13**
BSD
comp=Z,1µm,16.0s
MABI Malga Bissina 14.26 280 P **Pn 08 03 44.6 +1.2**
PUL Pulkovo 14.47 359⇑ *e*P **Pn 08 03 42.3 -3.9**
PUL pmax pmax
comp=Z,106nm,0.8s
PUL MLR MLR
comp=Z,2µm,15.0s
RGN Rugen 14.56 316 *e*Pn **Pn 08 03 42.1 -5.4**
comp=Z,596nm,0.8s
VLC Villacollemand 14.62 273 *e*P **Pn 08 03 54.8 +6.5**
VLC Villacollemand 14.62 273 *e*P **Pn 08 03 54.8 +6.5**
VAE Valguarnera 14.62 243 Pn **Pn 08 03 53.5 +5.1**
comp=Z,4.2nm,0.3s,baz=56,slow=1.0,SNR=2.6
VAE Valguarnera 14.62 243 Pn **Pn 08 03 53.5 +5.1**
DAVA Damuels 14.65 285⇑ *i*Pn **Pn 08 03 50.5 +1.8**
comp=Z,21nm,0.5s,SNR=7.7
DAVA Damuels 14.65 285 Pn **Pn 08 03 50.5 +1.8**
comp=Z,21nm,0.5s,SNR=7.7
DAVOX Davos/Dischmat 14.66 283 Pn **Pn 08 03 52.4 +3.6**
comp=Z,2.5nm,0.3s,baz=93,slow=7.7,SNR=42
DAVOX Sn **Sn 08 06 28.0 -3.0**
comp=Z,0.2nm,0.3s,baz=110,slow=15,SNR=1.7
DAVOX LR LR 08 10 25.8
comp=Z,1µm,18.5s,baz=84,slow=41
DAVOS Davos 14.72 283 P **Pn 08 03 52.4 +2.8**
DAVOS 08 06 28.0
ALJA Alia 14.88 245 P **Pn 08 03 54.5 +2.6**
SIND Sindeldorf 14.97 293 P **Pn 08 03 55.1 +2.0**
CLZ Clausthal 15.04 303 *e*P **Pn 08 03 50.7 -3.2**
comp=Z,59nm,1.0s
CLZ Clausthal 15.04 303 *e*P **Pn 08 03 50.7 -3.2**
CLZ pmax pmax
comp=Z,59nm,1.0s
NRDL Niedersach Rie 15.40 305 *e*P **Pn 08 03 55.1 -3.6**
comp=Z,120nm,1.0s
COP Copenhagen 15.61 318 *i* P **Pn 08 03 55.8 -5.7**
COP pmax pmax
comp=Z,81nm,0.9s
COP MLR MLR
comp=Z,550nm,15.0s
COP Copenhagen 15.61 318 *i* P **Pn 08 03 55.8 -5.7**
comp=Z,81nm,0.9s
COP *i* S **Sn 08 06 42.1 -12**
COP
comp=Z,540nm,15.0s
BFO Black Forest 15.72 289 *e*P **Pn 08 04 05.2 +2.3**
comp=Z,25nm,1.2s
BFO Black Forest 15.72 289 *e*P **Pn 08 04 05.2 +2.3**
BFO pmax pmax
comp=Z,25nm,1.2s
BFO Black Forest 15.72 289 *e*P **Pn 08 04 05.2 +2.3**
comp=Z,25nm,1.2s
BSEG Bad Segeberg 15.83 310 *e*P **Pn 08 03 58.6 -5.6**
comp=Z,84nm,0.9s
BSEG Bad Segeberg 15.83 310 *e*P **Pn 08 03 58.6 -5.6**
BSEG pmax pmax
comp=Z,84nm,0.9s
TNS Taunus Mts 15.84 296 *e*P **Pn 08 04 04.5 0.0**
comp=Z,46nm,1.3s
TNS Taunus Mts 15.84 296 *e*P **Pn 08 04 04.5 0.0**
TNS pmax pmax
comp=Z,46nm,1.3s
BHD Baghdad 15.91 135 *e*P **Pn 08 04 05.0 -0.4**
BHD *e*S **Sn 08 07 10.0 +8.5**
FELD Feldberg im Sc 15.93 287 *e*P **Pn 08 04 07.6 +2.0**
FELD Feldberg im Sc 15.93 287 *e*P **Pn 08 04 07.6 +2.0**
EIL Elat 15.95 167 Pn **Pn 08 04 06.7 +0.7**
comp=Z,0.4nm,0.3s,baz=339,slow=10,SNR=7.2
EIL LR LR 08 11 54.5
comp=Z,584nm,19.3s,baz=304,slow=44
EIL Elat 15.95 167 Pn **Pn 08 04 06.7 +0.7**
PGF Pioggiola 16.00 268 *e*P **Pn 08 04 04.8 -1.8**
comp=Z,98nm,0.8s
PGF Pioggiola 16.00 268 *e*P **Pn 08 04 04.8 -1.8**
PGF pmax pmax
comp=Z,49nm,0.8s
PGF Pioggiola 16.00 268 *e*P **Pn 08 04 04.8 -1.8**
comp=Z,49nm,0.8s
BBS Basel-Blauen 16.26 286 P **Pn 08 04 12.4 +2.5**
BBS Basel-Blauen 16.26 286 P **Pn 08 04 12.4 +2.5**
KLMR Klimovskoe 16.38 15⇑ *i*P **Pn 08 04 03.1 -8.1**
FINES FINESS Array B 16.40 352 Pn **Pn 08 04 04.4 -7.1**
comp=Z,0.9nm,0.3s,baz=161,slow=12,SNR=32
FINES Sn **Sn 08 06 55.7 -17**
comp=Z,3.2nm,0.3s,baz=173,slow=21,SNR=3.7
FINES Lg 08 08 50.3
comp=Z,3.5nm,0.3s,baz=166,slow=25,SNR=3.0
FINES LR LR 08 10 40.6
comp=Z,2µm,21.1s,baz=163,slow=38
CDF Champ du Feu 16.43 289 *e*P **Pn 08 04 14.4 +2.4**
comp=Z,29nm,0.9s
CDF Champ du Feu 16.43 289 *e*P **Pn 08 04 14.4 +2.4**
CDF pmax pmax
comp=Z,14nm,0.9s
CDF Champ du Feu 16.43 289 *e*P **Pn 08 04 14.4 +2.4**
comp=Z,14nm,0.9s
CDF Champ du Feu 16.43 289 *e*P **Pn 08 04 14.4 +2.4**
comp=Z,14nm,0.9s
ECH Echery 16.50 289 *e*P **Pn 08 04 12.7 -0.2**
ECH Echery 16.50 289 *e*P **Pn 08 04 11.4 -1.5**
ECH pmax pmax
comp=Z,35nm,1.3s
ECH Echery 16.50 289 *e*Pn **Pn 08 04 11.4 -1.5**
comp=Z,35nm,1.3s
ECH Echery 16.50 289 *e*Pn **Pn 08 04 11.4 -1.5**
comp=Z,35nm,1.3s
MOF Molkenrain 16.51 287 *e*P **Pn 08 04 14.9 +1.8**
MOF Molkenrain 16.51 287 *e*P **Pn 08 04 14.9 +1.8**
SAOF Saorge 16.65 274 *e*P **Pn 08 04 13.7 -1.1**
HINF Hinteralfeld 16.70 287 *e*P **Pn 08 04 18.2 +2.7**
comp=Z,26nm,0.8s
HINF Hinteralfeld 16.70 287 *e*P **Pn 08 04 18.2 +2.7**
HINF pmax pmax
comp=Z,13nm,0.8s
HINF Hinteralfeld 16.70 287 *e*P **Pn 08 04 18.2 +2.7**
comp=Z,13nm,0.8s
HINF Hinteralfeld 16.70 287 *e*P **Pn 08 04 18.2 +2.7**
comp=Z,13nm,0.8s
IBBN Ibbenburen 16.72 303 *e*P **Pn 08 04 16.3 +0.7**
comp=Z,72nm,0.8s
AUTN L'Aution 16.74 274 *e*P **Pn 08 04 16.7 +0.7**
AUTN L'Aution 16.74 274 *e*P **Pn 08 04 16.7 +0.7**
SBF Sospel 16.76 273 *e*P **Pn 08 04 15.3 -1.0**
comp=Z,108nm,0.7s
SBF Sospel 16.76 273 *e*P **Pn 08 04 15.3 -1.0**
SBF pmax pmax
comp=Z,54nm,0.7s
SBF Sospel 16.76 273 *e*P **Pn 08 04 15.3 -1.0**
comp=Z,54nm,0.7s
BUG Bochum--Univer 16.80 300 *e*P **Pn 08 04 16.9 +0.2**
comp=Z,32nm,0.9s
LUCF Luceram 16.82 274 *e*P **Pn 08 04 16.2 -0.8**
TOUF Mont Tournerai 16.86 274 *e*P **Pn 08 04 17.7 +0.2**
TOUF Mont Tournerai 16.86 274 *e*P **Pn 08 04 17.7 +0.2**
OG01 Vacheresse 16.89 282 *e*P **Pn 08 04 17.6 -0.3**
OG01 Vacheresse 16.89 282 *e*P **Pn 08 04 17.6 -0.3**
VSL Villasalto 16.90 257 *e*Pn **Pn 08 04 18.9 +0.9**
comp=Z,104nm,1.2s
VSL Villasalto 16.90 257 *e*Pn **Pn 08 04 18.9 +0.9**
comp=Z,104nm,1.2s
LPG La Plagne 16.94 279 *e*P **Pn 08 04 18.7 +0.2**
comp=Z,114nm,0.8s
LPG La Plagne 16.94 279 *e*P **Pn 08 04 18.7 +0.2**
LPG pmax pmax
comp=Z,57nm,0.8s
LPG La Plagne 16.94 279 *e*P **Pn 08 04 18.7 +0.2**
comp=Z,57nm,0.8s
LPG La Plagne 16.94 279 *e*P **Pn 08 04 18.7 +0.2**
comp=Z,57nm,0.8s
LPL La Plagne 16.95 279 *e*P **Pn 08 04 18.6 0.0**
comp=Z,85nm,0.6s
LPL La Plagne 16.95 279 *e*P **Pn 08 04 18.6 0.0**
LPL pmax pmax
comp=Z,43nm,0.6s
LPL La Plagne 16.95 279 *e*P **Pn 08 04 18.6 0.0**
comp=Z,42nm,0.6s
LPL La Plagne 16.95 279 *e*P **Pn 08 04 18.6 0.0**
comp=Z,42nm,0.6s
MVIF Mont Vial 16.95 274 *e*P **Pn 08 04 18.4 -0.3**
MVIF Mont Vial 16.95 274 *e*P **Pn 08 04 18.4 -0.3**
KAF Kangasniemi 17.03 353 *e*P **Pn 08 04 12.2 -7.3**
KAF pmax pmax
comp=Z,93nm,0.7s
KAF Kangasniemi 17.03 353 *e*p **Pn 08 04 12.2 -7.3**
comp=Z,93nm,0.7s
HAU Haudompre 17.04 288 *e*P **Pn 08 04 21.8 +2.1**
comp=Z,53nm,1.0s
HAU *e*MLR MLR
comp=Z,458nm,17.0s
HAU Haudompre 17.04 288 *e*P **Pn 08 04 21.8 +2.1**
HAU pmax pmax
comp=Z,27nm,1.0s
HAU Haudompre 17.04 288 *e*P **Pn 08 04 21.8 +2.1**
comp=Z,27nm,1.0s
HAU Haudompre 17.04 288 *e*P **Pn 08 04 21.8 +2.1**
comp=Z,27nm,1.0s
MBDF Montbardon 17.05 277 *e*P **Pn 08 04 19.3 -0.6**
comp=Z,97nm,0.6s
MBDF Montbardon 17.05 277 *e*P **Pn 08 04 19.3 -0.6**
MBDF pmax pmax
comp=Z,48nm,0.6s
MBDF Montbardon 17.05 277 *e*P **Pn 08 04 19.3 -0.6**
comp=Z,48nm,0.6s
BNI Bardonecchia 17.06 278 *e*P **Pn 08 04 20.0 0.0**
BNI pmax pmax
comp=Z,34nm,0.8s
BNI Bardonecchia 17.06 278 *e*Pn **Pn 08 04 20.0 0.0**
comp=Z,34nm,0.8s
BNI Bardonecchia 17.06 278 *e*P **Pn 08 04 20.0 0.0**
comp=Z,34nm,0.8s
SURF Saint Ours 17.07 276 *e*P **Pn 08 04 22.5 +2.4**
SURF Saint Ours 17.07 276 *e*P **Pn 08 04 22.5 +2.4**
CALN Calern 17.17 273 *e*P **Pn 08 04 21.0 -0.4**
CALN Calern 17.17 273 *e*P **Pn 08 04 21.0 -0.4**
WLF Walferdange 17.24 293 P **Pn 08 04 24.2 +1.9**
comp=Z,24nm,1.6s
WLF Walferdange 17.24 293 *e*P **Pn 08 04 22.9 +0.6**
WLF pmax pmax
comp=Z,29nm,1.0s
WLF Walferdange 17.24 293 *e*Pn **Pn 08 04 22.9 +0.7**
comp=Z,29nm,1.0s
WLF Walferdange 17.24 293 *e*Pn **Pn 08 04 22.9 +0.6**
comp=Z,29nm,1.0s
WLF Walferdange 17.24 293 P **Pn 08 04 24.1 +1.8**
comp=Z,24nm,1.6s
CABF La Chapelle 17.28 283 *e*P **Pn 08 04 22.0 -0.7**
comp=Z,52nm,0.6s
CABF La Chapelle 17.28 283 *e*P **Pn 08 04 22.0 -0.7**
CABF pmax pmax
comp=Z,26nm,0.6s
CABF La Chapelle 17.28 283 *e*P **Pn 08 04 22.0 -0.7**
comp=Z,26nm,0.6s
CABF La Chapelle 17.28 283 *e*P **Pn 08 04 22.0 -0.7**
comp=Z,26nm,0.6s
FRF La Foret Royal 17.39 273 *e*P **Pn 08 04 23.1 -1.0**
comp=Z,36nm,0.7s
FRF La Foret Royal 17.39 273 *e*P **Pn 08 04 23.1 -1.0**
FRF pmax pmax
comp=Z,18nm,0.6s
FRF La Foret Royal 17.39 273 *e*P **Pn 08 04 23.1 -1.0**
comp=Z,18nm,0.6s
FRF La Foret Royal 17.39 273 *e*P **Pn 08 04 23.1 -1.0**
comp=Z,18nm,0.7s
GDM Grand'Maison 17.43 278 *e*P **Pn 08 04 24.0 -0.6**
GDM Grand'Maison 17.43 278 *e*P **Pn 08 04 24.0 -0.6**
MEM Membach 17.44 297 P **Pn 08 04 24.6 -0.2**
comp=Z,12nm,1.2s
MEM Membach 17.44 297 P **Pn 08 04 24.5 -0.3**
comp=Z,12nm,1.2s
LMR La Mourre 17.54 272 *e*P **Pn 08 04 25.1 -0.9**
comp=Z,51nm,0.9s
LMR La Mourre 17.54 272 *e*P **Pn 08 04 25.1 -0.9**
LMR pmax pmax
comp=Z,26nm,0.9s
LMR La Mourre 17.54 272 *e*P **Pn 08 04 25.1 -0.9**
comp=Z,26nm,0.9s
LMR La Mourre 17.54 272 *e*P **Pn 08 04 25.1 -0.9**
comp=Z,26nm,0.9s
MUD Monsted U'grnd 17.57 317 *i* P **Pn 08 04 22.2 -4.1**
MUD pmax pmax
comp=Z,82nm,0.9s
MUD MLR MLR
comp=Z,1µm,15.0s
MUD Monsted U'grnd 17.57 317 *i* P **Pn 08 04 22.2 -4.1**
comp=Z,82nm,0.9s
MUD
comp=Z,1µm,15.0s
JOF Joensuu 17.63 1 *e*P **Pn 08 04 18.8 -8.2**
JOF pmax pmax
comp=Z,60nm,0.6s
JOF Joensuu 17.63 1 *e*p **Pn 08 04 18.8 -8.2**
comp=Z,60nm,0.6s
ORIF Oris-en-Rattie 17.64 278 *e*P **Pn 08 04 26.7 -0.5**
comp=Z,63nm,0.6s
ORIF *e*MLR MLR
comp=Z,964nm,20.2s
ORIF Oris-en-Rattie 17.64 278 *e*P **Pn 08 04 26.7 -0.5**
ORIF pmax pmax
comp=Z,31nm,0.6s
ORIF Oris-en-Rattie 17.64 278 *e*P **Pn 08 04 26.7 -0.5**
comp=Z,31nm,0.6s
ORIF Oris-en-Rattie 17.64 278 *e*P **Pn 08 04 26.7 -0.5**
comp=Z,31nm,0.6s
GRN Grenoble 17.68 279 *e*P **Pn 08 04 26.6 -1.1**
GRN Grenoble 17.68 279 *e*P **Pn 08 04 26.6 -1.1**
LUJL Ujela 17.86 208 *i* P **Pn 08 04 28.3 -1.8**
SNR=90
BCLA Clavier 17.86 296 P **Pn 08 04 33.6 +3.6**
comp=Z,19nm,1.5s
MEZF Maizieres J'vi 17.91 289 *e*P **Pn 08 04 31.2 +0.7**
comp=Z,39nm,0.5s
MEZF Maizieres J'vi 17.91 289 *e*P **Pn 08 04 31.2 +0.7**
comp=Z,39nm,0.5s
MEZF Maizieres J'vi 17.91 289 *e*P **Pn 08 04 31.2 +0.7**
comp=Z,19nm,0.5s
HFS Hagfors 18.03 331 Pn **Pn 08 04 25.7 -6.2**
comp=Z,2.4nm,0.3s,baz=129,slow=12,SNR=220
HFS Sn **Sn 08 07 36.5 -16**
comp=Z,4.2nm,0.3s,baz=136,slow=27,SNR=4.6
HFS Lg 08 09 42.7
comp=Z,2.1nm,0.3s,baz=135,slow=25,SNR=2.7
HFS LR LR 08 11 31.7
comp=Z,2µm,18.6s,baz=135,slow=37
SMRF Simiane la Rot 18.05 275 *e*P **Pn 08 04 31.8 -0.4**
comp=Z,65nm,0.9s
SMRF Simiane la Rot 18.05 275 *e*P **Pn 08 04 31.8 -0.4**
comp=Z,65nm,0.9s
SMRF Simiane la Rot 18.05 275 *e*P **Pn 08 04 31.8 -0.4**
comp=Z,33nm,0.9s
GIVF Givet 18.14 295 *e*P **Pn 08 04 34.1 +0.8**
comp=Z,90nm,1.1s
GIVF Givet 18.14 295 *e*P **Pn 08 04 34.1 +0.8**
GIVF pmax pmax
comp=Z,45nm,1.1s
GIVF Givet 18.14 295 *e*P **Pn 08 04 34.1 +0.8**
comp=Z,45nm,1.1s
GIVF Givet 18.14 295 *e*P **Pn 08 04 34.1 +0.8**
comp=Z,45nm,1.1s
IR3 Iran Long-Peri 18.18 116 *e*P **Pn 08 04 34.2 +0.3**
DOU Dourbes 18.28 295 P **Pn 08 04 35.8 +0.7**
comp=Z,19nm,1.5s
DOU Dourbes 18.28 295 P **Pn 08 04 35.8 +0.7**
comp=Z,19nm,1.5s
VIVF Saint-Julien-l 18.50 278 *e*P **Pn 08 04 35.8 -1.9**
comp=Z,32nm,0.6s
VIVF Saint-Julien-l 18.50 278 *e*P **Pn 08 04 35.8 -1.9**
VIVF pmax pmax
comp=Z,16nm,0.6s
VIVF Saint-Julien-l 18.50 278 *e*P **Pn 08 04 35.8 -1.9**
comp=Z,16nm,0.6s
VIVF Saint-Julien-l 18.50 278 *e*P **Pn 08 04 35.8 -1.9**
comp=Z,16nm,0.6s
UCC Uccle 18.51 297 P **Pn 08 04 40.5 +2.6**
SSB Saint Sauveur 18.51 279 *e*P **Pn 08 04 35.0 -2.9**
SSB Saint Sauveur 18.51 279 *e*P **Pn 08 04 35.9 -2.0**
SSB pmax pmax
comp=Z,30nm,0.8s
SSB Saint Sauveur 18.51 279 *e*P **Pn 08 04 35.9 -2.1**
comp=Z,30nm,0.8s
SSB Saint Sauveur 18.51 279 *e*P **Pn 08 04 35.8 -2.1**
comp=Z,30nm,0.8s
SNF Seneffe 18.52 296 E **Pn 08 04 45.3 +7.3**
BAIF Baives 18.53 294 *e*P **Pn 08 04 39.4 +1.3**
comp=Z,126nm,1.1s
BAIF Baives 18.53 294 *e*P **Pn 08 04 39.4 +1.3**
BAIF pmax pmax
comp=Z,63nm,1.1s
BAIF Baives 18.53 294 *e*P **Pn 08 04 39.4 +1.3**
comp=Z,63nm,1.1s
BAIF Baives 18.53 294 *e*P **Pn 08 04 39.4 +1.3**
comp=Z,63nm,1.1s
LOR Lormes 18.75 286 *e*P **Pn 08 04 38.6 -2.2**
comp=Z,60nm,0.8s
LOR *e*MLR MLR
comp=Z,632nm,22.2s
LOR Lormes 18.75 286 *e*P **Pn 08 04 38.6 -2.2**
LOR pmax pmax
comp=Z,30nm,0.8s
LOR Lormes 18.75 286 *e*P **Pn 08 04 38.6 -2.2**
comp=Z,30nm,0.8s
LOR Lormes 18.75 286 *e*P **Pn 08 04 38.6 -2.2**
comp=Z,30nm,0.8s
SMF Signal de Mont 18.81 284 *e*P **Pn 08 04 39.6 -2.0**
comp=Z,72nm,0.6s
SMF Signal de Mont 18.81 284 *e*P **Pn 08 04 39.6 -2.0**
SMF pmax pmax
comp=Z,36nm,0.6s
SMF Signal de Mont 18.81 284 *e*P **Pn 08 04 39.6 -2.0**
comp=Z,36nm,0.6s
SMF Signal de Mont 18.81 284 *e*P **Pn 08 04 39.6 -2.0**
comp=Z,36nm,0.6s
AKTK Aktyubinsk 18.85 65 Pn **Pn 08 04 38.1 -3.8**
AKTK LR LR 08 14 59.3
AKTO Aktyubinsk 18.85 65 Pn **Pn 08 04 38.1 -3.8**
comp=Z,1.3nm,0.3s,baz=268,slow=12,SNR=27
AKTO LR LR 08 14 59.3
comp=Z,456nm,18.0s,baz=26,slow=47
KEST Kesra 18.92 247 Pn **Pn 08 04 41.6 -1.3**
comp=Z,0.1nm,0.3s,baz=196,slow=1.6,SNR=8.6
KEST LR LR 08 13 38.8
comp=Z,203nm,18.3s,baz=360,slow=42
IVRN Varamin 18.92 116 *e*P **Pn 08 04 43.0 0.0**
IVRN Varamin 18.92 116 *e*P **Pn 08 04 43.0 0.0**
OSL Oslo 18.96 328 *e*P **Pn 08 04 37.0 -6.3**
OSL AMB AMB 08 04 38.1
comp=Z,100nm,1.3s
OSL Oslo 18.96 328 *e*P **Pn 08 04 36.7 -6.5**
SSF Saint Saulge 19.00 285 *e*P **Pn 08 04 41.9 -2.0**
comp=Z,40nm,0.6s
SSF Saint Saulge 19.00 285 *e*P **Pn 08 04 41.9 -2.0**
SSF pmax pmax
comp=Z,20nm,0.6s
SSF Saint Saulge 19.00 285 *e*P **Pn 08 04 41.9 -2.0**
comp=Z,20nm,0.6s
SSF Saint Saulge 19.00 285 *e*P **Pn 08 04 41.9 -2.0**
comp=Z,20nm,0.6s
PLDF La Plantade 19.05 282 *e*P **Pn 08 04 42.9 -1.5**
PLDF La Plantade 19.05 282 *e*P **Pn 08 04 42.9 -1.5**
GHAR Gharyan 19.09 232 *i* P **Pn 08 04 45.6 +0.5**
comp=Z,86nm,1.2s,SNR=90
AVF Avril sur Loir 19.13 284 *e*P **Pn 08 04 42.9 -2.6**
comp=Z,63nm,0.8s
AVF Avril sur Loir 19.13 284 *e*P **Pn 08 04 42.9 -2.6**
AVF pmax pmax
comp=Z,31nm,0.8s
AVF Avril sur Loir 19.13 284 *e*P **Pn 08 04 42.9 -2.6**
comp=Z,31nm,0.8s
AVF Avril sur Loir 19.13 284 *e*P **Pn 08 04 42.9 -2.6**
comp=Z,31nm,0.8s
KONO Kongsberg 19.21 326 AMS AMS 08 12 11.3
comp=Z,5µm,10.5s
KONO Kongsberg 19.21 326 *e*P **Pn 08 04 39.6 -6.6**
KONO pmax pmax
comp=Z,1.0nm,0.6s
KONO Kongsberg 19.21 326 *e*P **Pn 08 04 39.6 -6.6**
comp=Z,0.9nm,0.6s
LASF Ste Croix 19.23 276 *e*P **Pn 08 04 45.1 -1.5**
comp=Z,71nm,0.8s
LASF Ste Croix 19.23 276 *e*P **Pn 08 04 45.1 -1.5**
comp=Z,35nm,0.8s
AGO Saint Agoulin 19.37 282 *e*P **Pn 08 04 46.4 -1.9**
AGO Saint Agoulin 19.37 282 *e*P **Pn 08 04 46.4 -1.9**
IGLO Ghaloghah 19.40 109 *e*P **Pn 08 04 48.3 -0.4**
IGLO Ghaloghah 19.40 109 *e*P **Pn 08 04 48.3 -0.4**
ALAS Alassa 19.41 237 *i* P **Pn 08 04 48.7 -0.2**
SNR=90
LBL Lubilhac 19.42 280 *e*P **Pn 08 04 47.6 -1.3**
LBL Lubilhac 19.42 280 *e*P **Pn 08 04 47.6 -1.3**
SNART Snartemo 19.46 321 *e*P **Pn 08 04 47.8 -1.4**
IKIA Kiasar 19.47 110 *e*P **Pn 08 04 49.2 -0.3**
IKIA Kiasar 19.47 110 *e*P **Pn 08 04 49.2 -0.3**
PYM Petit Puy Mans 19.50 281 *e*P **Pn 08 04 48.2 -1.7**
PYM Petit Puy Mans 19.50 281 *e*P **Pn 08 04 48.2 -1.7**
BGF Bois d'Agland 19.50 284 *e*P **Pn 08 04 47.5 -2.4**
comp=Z,204nm,0.7s
BGF Bois d'Agland 19.50 284 *e*P **Pn 08 04 47.5 -2.4**
BGF pmax pmax
comp=Z,102nm,0.7s
BGF Bois d'Agland 19.50 284 *e*P **Pn 08 04 47.5 -2.4**
comp=Z,102nm,0.7s
BGF Bois d'Agland 19.50 284 *e*P **Pn 08 04 47.5 -2.4**
comp=Z,102nm,0.7s
NAO01 NORSAR Array S 19.52 330 *e*P **Pn 08 04 44.0 -5.9**
comp=Z,143nm,0.9s
NB2 NORSAR Subarra 19.54 331 P **Pn 08 04 43.7 -6.5**
comp=Z,49nm,0.9s,baz=135,slow=11
NOA NORSAR Array B 19.54 331 P **Pn 08 04 43.9 -6.3**
NOA 08 08 13.9
NOA NORSAR Array B 19.54 331 Pn **Pn 08 04 43.9 -6.2**
comp=Z,2.0nm,0.3s,baz=134,slow=12,SNR=126
NOA Sn **Sn 08 08 13.9 -15**
comp=Z,2.0nm,0.3s,baz=141,slow=20,SNR=4.2
NOA Lg 08 10 40.8
comp=Z,1.6nm,0.3s,baz=135,slow=27,SNR=4.6
NOA LR LR 08 12 28.2
comp=Z,2µm,18.7s,baz=135,slow=37
NOA NORSAR Array B 19.54 331 Pn **Pn 08 04 43.9 -6.2**
NOA Sn **Sn 08 08 13.9 -15**
NOA Lg 08 10 40.8
NOA LR LR 08 12 28.2
CMAH Djebel Manchou 19.68 252 P **Pn 08 04 51.7 -0.4**
CMAH Djebel Manchou 19.68 252 P **Pn 08 04 51.7 -0.4**
LZLA Zalla 19.79 217 *i* P **Pn 08 04 53.1 -0.4**
SNR=90
ABSA Djebel Ababsia 19.84 251 P **Pn 08 04 53.8 -0.2**
ABSA Djebel Ababsia 19.84 251 P **Pn 08 04 53.8 -0.2**
MENF Mencas 19.88 296 *e*P **Pn 08 04 54.3 0.0**
MENF Mencas 19.88 296 *e*P **Pn 08 04 54.3 0.0**
IPIR Pirpir 19.96 122 *e*P 08 05 07.7
IPIR Pirpir 19.96 122 *e*P 08 05 07.7
TCF Toulx Ste Croi 19.98 283 *e*P **Pn 08 04 53.1 -2.4**
comp=Z,209nm,0.8s
TCF Toulx Ste Croi 19.98 283 *e*P **Pn 08 04 53.1 -2.4**
TCF pmax pmax
comp=Z,104nm,0.8s
TCF Toulx Ste Croi 19.98 283 *e*P **Pn 08 04 53.1 -2.4**
comp=Z,104nm,0.8s
TCF Toulx Ste Croi 19.98 283 *e*P **Pn 08 04 53.1 -2.4**
comp=Z,104nm,0.8s
ABKAR Akbulak array 20.04 68 *e*P **P 08 04 53.3 -1.2**
comp=Z,36nm,0.6s
ABKAR Akbulak array 20.04 68 *e*P **P 08 04 53.3 -1.1**
comp=Z,36nm,0.6s
LJFR Jufra 20.10 221 *i* P **P 08 04 56.0 +0.7**
comp=Z,98nm,1.0s,SNR=90
LSHF Shwairf 20.14 226 *i* P **P 08 04 55.9 +0.3**
comp=Z,145nm,1.2s,SNR=90
MIB Mutribah 20.19 135 *e*P **P 08 04 55.0 -1.2**
MIB AMb AMB 08 05 02.8
comp=Z,243nm,1.2s
MIB Mutribah 20.19 135 *e*P **P 08 04 55.0 -1.2**
comp=Z,243nm,1.2s
CKFL Kef-Lekhel 20.28 252 P **P 08 04 58.8 +1.7**
CKFL Kef-Lekhel 20.28 252 P **P 08 04 58.8 +1.7**
CAF Calviac 20.30 279 *e*P **P 08 04 57.3 0.0**
comp=Z,140nm,0.8s
CAF Calviac 20.30 279 *e*P **P 08 04 57.3 0.0**

CAF pmax pmax
comp=Z,70nm,0.8s
CAF Calviac 20.30 279 *eP* **P 08 04 57.3 0.0**
comp=Z,70nm,0.8s
CAF Calviac 20.30 279 *eP* **P 08 04 57.3 0.0**
comp=Z,70nm,0.8s
EJON La Jonquera 20.34 272 P **P 08 04 57.1 -0.8**
comp=Z,41nm,0.8s
EJON La Jonquera 20.34 272 P **P 08 04 57.1 -0.7**
comp=Z,41nm,0.8s
LRDF Laroque-de-Fa 20.45 273 *eP* **P 08 04 58.1 -0.8**
LRDF Laroque-de-Fa 20.45 273 *eP* **P 08 04 58.1 -0.8**
CASM Ain Smara 20.51 252 P **P 08 05 01.0 +1.3**
CASM Ain Smara 20.51 252 P **P 08 05 01.0 +1.3**
FILF Fillols 20.54 272 *eP* **P 08 04 59.9 -0.1**
FILF Fillols 20.54 272 *eP* **P 08 04 59.9 -0.1**
ARU Arti 20.55 47 P **P 08 04 58.7 -1.2**
comp=Z,700nm,0.7s,SNR=11
ARU Arti 20.55 47 *c i P* **P 08 04 58.1 -1.8**
ARU PPP 08 05 24.6
ARU S **S 08 08 49.6 +0.4**
ARU SS 08 09 11.1
ARU pmax pmax
comp=Z,50nm,1.2s
ARU MLR MLR
comp=Z,2μm,15.0s,MS4.6
ARU Arti 20.55 47 *eP* **P 08 04 58.2 -1.7**
comp=Z,82nm,0.7s
ARU Arti 20.55 47 *eP* **P 08 04 58.2 -1.7**
comp=Z,82nm,0.7s
ARU S **S 08 08 49.6 +0.4**
comp=Z,2μm,15.0s
ARU Arti 20.55 47 PcP PcP 08 09 11.1 +0.6
MTLF Montolieu 20.56 275 *eP* **P 08 04 59.7 -0.5**
comp=Z,52nm,1.0s
MTLF Montolieu 20.56 275 *eP* **P 08 04 59.7 -0.5**
MTLF pmax pmax
comp=Z,26nm,1.0s
MTLF Montolieu 20.56 275 *eP* **P 08 04 59.7 -0.5**
comp=Z,26nm,1.0s
MTLF Montolieu 20.56 275 *eP* **P 08 04 59.7 -0.5**
comp=Z,26nm,1.0s
UMR Umm Al-Rimmam 20.58 134 *eP* **P 08 04 59.5 -1.0**
UMR AMb AMB 08 05 08.9
comp=Z,191nm,1.1s
UMR Umm Al-Rimmam 20.58 134 *eP* **P 08 04 59.5 -1.0**
comp=Z,191nm,1.1s
RJF Les Rejaudoux 20.61 280 *eP* **P 08 05 00.6 -0.1**
comp=Z,302nm,1.0s
RJF *e*MLR MLR
comp=Z,1μm,17.0s,MS4.1
RJF Les Rejaudoux 20.61 280 *eP* **P 08 05 00.6 -0.1**
RJF pmax pmax
comp=Z,151nm,1.0s
RJF MLR MLR
comp=Z,1μm,17.0s,MS4.4
RJF Les Rejaudoux 20.61 280 *eP* **P 08 05 00.6 -0.1**
RJF LR LR
comp=Z,1μm,17.0s,MS4.4
RJF Les Rejaudoux 20.61 280 *eP* **P 08 05 00.6 -0.1**
comp=Z,151nm,1.0s
CTEI Djebel Teioual 20.68 252 P **P 08 05 03.1 +1.6**
CTEI Djebel Teioual 20.68 252 P **P 08 05 03.1 +1.6**
IZEF Zefreh 20.68 119 *eP* **P 08 05 02.7 +1.2**
IZEF Zefreh 20.68 119 *eP* **P 08 05 02.7 +1.2**
DFRA Djebel Bou Aff 20.77 254 P **P 08 05 03.7 +1.3**
DFRA Djebel Bou Aff 20.77 254 P **P 08 05 03.7 +1.3**
KMY Karmoy 20.79 321 *eP* **P 08 05 02.9 +0.4**
KMY AMB AMB 08 05 29.5
comp=Z,29nm,0.8s
KMY Karmoy 20.79 321 *eP* **P 08 05 02.8 +0.4**
comp=Z,29nm,0.8s,SNR=34
CARF Carcanieres 20.82 273 *eP* **P 08 05 01.7 -1.2**
CARF Carcanieres 20.82 273 *eP* **P 08 05 01.7 -1.2**
DOMB Dombas 20.98 331 *eP* **P 08 05 03.5 -1.0**
DOMB Dombas 20.98 331 *eP* **P 08 05 03.5 -1.0**
SNR=34
RDF Al-Radifah 21.01 135 *eP* **P 08 05 04.3 -0.8**
RDF AMb AMB 08 05 11.7
comp=Z,133nm,0.7s,mb5.3
RDF Al-Radifah 21.01 135 *eP* **P 08 05 04.3 -0.8**
comp=Z,133nm,0.7s,mb5.4
SOKR Solikamsk 21.08 38 *c i P* **P 08 05 04.2 -1.5**
SOKR S **S 08 08 55.4 -4.3**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb4.8
SOKR MLR MLR
comp=Z,2μm,11.0s,MS4.7
SOKR Solikamsk 21.08 38 *i P* **P 08 05 04.2 -1.5**
comp=Z,60nm,1.2s,mb4.8
LFF La Frestale 21.22 280 *eP* **P 08 05 06.9 -0.4**
comp=Z,294nm,1.1s,mb5.2
LFF La Frestale 21.22 280 *eP* **P 08 05 06.9 -0.4**
LFF pmax pmax
comp=Z,147nm,1.1s,mb5.2
LFF La Frestale 21.22 280 *eP* **P 08 05 06.9 -0.4**
comp=Z,147nm,1.1s,mb5.2
LFF La Frestale 21.22 280 *eP* **P 08 05 06.9 -0.4**
comp=Z,147nm,1.1s,mb5.2
SET Setif 21.28 254 P **P 08 05 10.0 +2.0**
SET Setif 21.28 254 P **P 08 05 10.0 +2.0**
QRN Al-Qurain 21.34 135 *eP* **P 08 05 07.9 -0.8**
QRN AMb AMB 08 05 15.3
comp=Z,342nm,0.9s,mb5.7
LDF La Druitiere 21.34 290 *eP* **P 08 05 05.8 -2.8**
comp=Z,35nm,0.5s,mb4.7
LDF La Druitiere 21.34 290 *eP* **P 08 05 05.8 -2.8**
LDF pmax pmax
comp=Z,18nm,0.5s,mb4.7
LDF La Druitiere 21.34 290 *eP* **P 08 05 05.8 -2.8**
comp=Z,18nm,0.5s,mb4.7
ETOS Mallorca 21.36 265 P **P 08 05 09.3 +0.5**
comp=Z,27nm,1.3s,mb4.4
ETOS Mallorca 21.36 265 P **P 08 05 09.3 +0.5**
comp=Z,27nm,1.3s,mb4.4
BER Bergen 21.37 324 *eS* **S 08 09 07.1 +1.8**
BER AMS AMS 08 13 35.0
comp=Z,3μm,10.5s,MS5.0
BER Bergen 21.37 324 *eS* **S 08 09 07.1 +1.8**
SNR=36
EMIR Miracle 21.47 271 P **P 08 05 08.6 -1.4**
comp=Z,16nm,1.4s,mb4.2
EMIR Miracle 21.47 271 P **P 08 05 08.6 -1.4**
comp=Z,16nm,1.4s,mb4.2
HYA Hoyanger 21.48 326 *eP* **P 08 05 10.2 +0.3**
HYA Hoyanger 21.48 326 *eP* **P 08 05 10.2 +0.3**
SNR=34
ISHV Shirvan 21.49 102 *eP* **P 08 05 10.6 +0.4**
ISHV Shirvan 21.49 102 *eP* **P 08 05 10.6 +0.4**
MFF Saint Martin d 21.55 285 *eP* **P 08 05 08.1 -2.7**
comp=Z,74nm,1.0s,mb4.8
MFF Saint Martin d 21.55 285 *eP* **P 08 05 08.1 -2.7**
MFF pmax pmax
comp=Z,37nm,1.0s,mb4.8
MFF Saint Martin d 21.55 285 *eP* **P 08 05 08.1 -2.7**
comp=Z,37nm,1.0s,mb4.8
FLN La Foliniere 21.57 290 *eP* **P 08 05 09.1 -1.9**
FLN *e*MLR MLR
comp=Z,544nm,19.0s,MS3.7
FLN La Foliniere 21.57 290 *eP* **P 08 05 09.1 -1.9**
FLN LR LR
comp=Z,540nm,19.0s,MS4.0
FLN La Foliniere 21.57 290 *eP* **P 08 05 09.1 -1.9**
AKF Akfadou 21.61 256 P **P 08 05 12.6 +1.1**
AKF Akfadou 21.61 256 P **P 08 05 12.6 +1.1**
SVE Sverdlovsk 21.76 47 *eP* **P 08 05 11.3 -1.7**
SVE *e* 08 05 35.9
SVE *eS* **S 08 09 17.1 +4.1**
SVE pmax pmax
comp=Z,80nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,2μm,13.0s,MS4.8
SVE Sverdlovsk 21.76 47 *eP* **P 08 05 11.3 -1.7**
comp=Z,80nm,1.1s,mb5.1
GRR Gorron 21.84 289 *eP* **P 08 05 12.9 -1.0**
comp=Z,48nm,0.7s,mb4.8
GRR Gorron 21.84 289 *eP* **P 08 05 12.9 -1.0**
GRR pmax pmax
comp=Z,24nm,0.7s,mb4.7
GRR Gorron 21.84 289 *eP* **P 08 05 12.9 -1.0**
comp=Z,24nm,0.7s,mb4.7
GRR Gorron 21.84 289 *eP* **P 08 05 12.9 -1.0**
comp=Z,24nm,0.7s,mb4.8
NSS Namsos 21.94 338 *eS* **S 08 09 20.8 +4.5**
NSS AMS AMS 08 13 30.4
comp=Z,3μm,11.4s,MS4.9
EPF Esparros 21.97 275 *eP* **P 08 05 12.2 -3.1**
comp=Z,33nm,0.6s,mb4.6
EPF Esparros 21.97 275 *eP* **P 08 05 12.2 -3.1**
EPF pmax pmax
comp=Z,16nm,0.6s,mb4.6
EPF Esparros 21.97 275 *eP* **P 08 05 12.2 -3.1**
comp=Z,16nm,0.6s,mb4.6
EPOB Poblet 21.98 270 P **P 08 05 14.6 -0.9**
comp=Z,63nm,1.6s,mb4.8
EPOB Poblet 21.98 270 P **P 08 05 14.6 -0.8**
comp=Z,63nm,1.6s,mb4.8
LKFR Kufra 22.01 199 *i* P **P 08 05 17.1 +1.2**
comp=Z,134nm,1.9s,mb5.1,SNR=125
RESF Ens 22.03 274 *eP* **P 08 05 15.1 -0.9**
RESF Ens 22.03 274 *eP* **P 08 05 15.1 -0.9**
WOL Wolverton 22.06 297 *eP* **P 08 05 13.9 -2.3**
WOL AMb AMB 08 05 22.7
comp=Z,146nm,0.9s,mb5.4
WOL Wolverton 22.06 297 *eP* **P 08 05 13.9 -2.3**
FOO Floro 22.18 326 *eS* **S 08 09 22.0 +0.9**
FOO AMS AMS 08 13 48.5
comp=Z,5μm,9.8s
FOO Floro 22.18 326 *eS* **S 08 09 22.0 +1.0**
SNR=36
EBIE Bielsa 22.21 274 P **P 08 05 16.5 -1.3**
comp=Z,50nm,0.6s,mb5.1
EBIE Bielsa 22.21 274 P **P 08 05 16.5 -1.4**
comp=Z,50nm,0.6s,mb5.1
ATAF Djebel Tarf 22.22 254 P **P 08 05 19.8 +1.8**
ATAF Djebel Tarf 22.22 254 P **P 08 05 19.8 +1.8**
CWF Charnwood Fore 22.23 301 *eP* **P 08 05 15.8 -2.3**
CWF AMb AMB 08 05 33.5
comp=Z,68nm,1.2s,mb4.9
CWF *e* 08 09 24.5
CWF AMS AMS 08 15 06.4
comp=Z,596nm,14.5s,MS4.2
CWF Charnwood Fore 22.23 301 *eP* **P 08 05 15.8 -2.2**
VIEF Viey 22.23 275 *eP* **P 08 05 15.7 -2.4**
APA Apatity 22.34 3 *i P* **P 08 05 17.0 -2.1**
APA *i* 08 05 40.0
APA *i S* **S 08 09 14.0 -10**
APA pmax pmax
comp=Z,88nm,0.9s,mb5.2
APA pmax pmax
comp=Z,200nm,2.9s,mb5.0
APA MLR MLR
comp=Z,3μm,11.0s,MS5.0
APA Apatity 22.34 3 *i P* **P 08 05 17.0 -2.1**
comp=Z,200nm,2.9s,mb5.0
AKET Djebel Ketaf 22.39 255 P **P 08 05 21.3 +1.4**
AKET Djebel Ketaf 22.39 255 P **P 08 05 21.3 +1.4**
IKRD Kardeh 22.43 103 *eP* **P 08 05 27.0 +6.7**
ABA Alger-Bouzarea 22.57 258 P **P 08 05 14.8 -7.0**
ADJB Djebel Djouab 22.64 256 P **P 08 05 22.3 -0.2**
ADJB Djebel Djouab 22.64 256 P **P 08 05 22.3 -0.2**
ETSF Etsaut 22.64 275 *eP* **P 08 05 20.6 -1.9**
comp=Z,95nm,0.9s,mb4.9
ETSF Etsaut 22.64 275 *eP* **P 08 05 20.6 -1.9**
ETSF pmax pmax
comp=Z,48nm,0.9s,mb4.9
ETSF Etsaut 22.64 275 *eP* **P 08 05 20.6 -1.9**
comp=Z,48nm,0.9s,mb4.9
ETSF Etsaut 22.64 275 *eP* **P 08 05 20.6 -1.9**
comp=Z,48nm,0.9s,mb4.9
ERTA Horta de San J 22.65 270 P **P 08 05 23.2 +0.6**
comp=Z,76nm,2.6s,mb4.7
ERTA Horta de San J 22.65 270 P **P 08 05 23.2 +0.6**
comp=Z,76nm,2.6s,mb4.7
LHO Holmfirth 22.66 303 *eP* **P 08 05 21.1 -1.5**
LHO Holmfirth 22.66 303 *eP* **P 08 05 21.1 -1.5**
JSA Saint Aubin 22.66 292 *eP* **P 08 05 20.9 -1.8**
JSA AMb AMB 08 05 21.4
comp=Z,37nm,2.7s,mb4.3
JSA Saint Aubin 22.66 292 *eP* **P 08 05 20.9 -1.8**
IAKL Akhelmad 22.69 103 *eP* **P 08 05 23.1 +0.1**
MOR8 Moi Rana 22.71 343⇑ *i P* **P 08 05 22.4 -0.5**
MOR8 AMB AMB 08 05 28.3
comp=Z,78nm,0.9s,mb5.1
MOR8 Moi Rana 22.71 343⇑ *i P* **P 08 05 22.4 -0.6**
comp=Z,78nm,0.9s,mb5.1,SNR=33
LVZ Lovozero 22.72 4 P **P 08 05 21.5 -1.6**
comp=Z,940nm,0.7s,mb6.3,SNR=12
LVZ Lovozero 22.72 4⇑ *eP* **P 08 05 21.7 -1.4**
LVZ pmax pmax
comp=Z,97nm,0.8s,mb5.3
LVZ Lovozero 22.72 4 *eP* **P 08 05 21.7 -1.4**
comp=Z,97nm,0.8s,mb5.3
LGHD Ghdames 22.74 235 *i P* **P 08 05 23.9 +0.3**
comp=Z,139nm,1.8s,mb5.1,SNR=126
IPAY Payeh 22.93 103 *eP* **P 08 05 25.1 -0.5**
IPAY Payeh 22.93 103 *eP* **P 08 05 25.1 -0.5**
ESAC San Caprasio 22.95 272 P **P 08 05 24.6 -1.2**
comp=Z,79nm,0.9s,mb5.1
ESAC San Caprasio 22.95 272 P **P 08 05 24.5 -1.2**
comp=Z,79nm,0.9s,mb5.1
SGMF Saint Gilles 22.98 289 *eP* **P 08 05 22.1 -4.0**
comp=Z,41nm,0.8s,mb4.6
SGMF Saint Gilles 22.98 289 *eP* **P 08 05 22.1 -4.0**
SGMF pmax pmax
comp=Z,20nm,0.8s,mb4.6
SGMF Saint Gilles 22.98 289 *eP* **P 08 05 22.1 -4.0**
comp=Z,20nm,0.8s,mb4.6
SJPF Ste Jean 23.04 276 *eP* **P 08 05 25.0 -1.7**
comp=Z,37nm,0.8s,mb4.6
SJPF Ste Jean 23.04 276 *eP* **P 08 05 25.0 -1.7**
SJPF pmax pmax
comp=Z,19nm,0.8s,mb4.6
SJPF Ste Jean 23.04 276 *eP* **P 08 05 25.0 -1.7**
comp=Z,18nm,0.8s,mb4.6
SJPF Ste Jean 23.04 276 *eP* **P 08 05 25.0 -1.7**
comp=Z,18nm,0.8s,mb4.6
HGH Gray Hill 23.07 298 *eP* **P 08 05 24.9 -2.0**
HGH Gray Hill 23.07 298 *eP* **P 08 05 24.9 -2.0**
FLOS Flostrand 23.08 342 *eP* **P 08 05 26.0 -0.9**
LUMB Murzuk 23.12 220 *i P* **P 08 05 27.6 0.0**
SNR=110
HLM1 Long Mynd 23.17 300 *eP* **P 08 05 26.3 -1.7**
HLM1 Long Mynd 23.17 300 *eP* **P 08 05 26.3 -1.6**
MCH1 Michaelchurch 23.20 299 *eP* **P 08 05 26.4 -1.9**
MCH1 AMb AMB 08 05 32.5
comp=Z,52nm,1.0s,mb4.9
MCH1 *e* 08 09 38.2
MCH1 AMS AMS 08 18 53.9
comp=Z,560nm,12.6s,MS4.2
MCH1 Michaelchurch 23.20 299 *eP* **P 08 05 26.4 -1.9**
EALK Alkurruntz 23.21 276 P **P 08 05 28.6 +0.1**
comp=Z,6.8nm,0.8s,mb4.1
EALK Alkurruntz 23.21 276 P **P 08 05 28.6 +0.1**
comp=Z,6.8nm,0.8s,mb4.1
ELIZ Elizondo 23.24 276 P **P 08 05 29.4 +0.6**
ELIZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
ELIZ Elizondo 23.24 276 P **P 08 05 29.4 +0.6**
comp=Z,5.5nm,0.6s,mb4.2
ELIZ Elizondo 23.24 276 P **P 08 05 29.4 +0.6**
comp=Z,5.5nm,0.6s,mb4.2
KONS Konsvik 23.27 342 *eP* **P 08 05 28.4 -0.5**
ISRO Mashad 23.33 103 *eP* **P 08 05 27.5 -2.3**
ISRO Mashad 23.33 103 *eP* **P 08 05 27.5 -2.3**
IMOG Moghan 23.35 103 *eP* **P 08 05 28.9 -1.1**
IMOG Moghan 23.35 103 *eP* **P 08 05 28.9 -1.1**
QUIF Quistinic 23.43 289 *eP* **P 08 05 29.1 -1.6**
comp=Z,86nm,0.8s,mb5.0
QUIF Quistinic 23.43 289 *eP* **P 08 05 29.1 -1.6**
QUIF pmax pmax
comp=Z,43nm,0.8s,mb4.9
QUIF Quistinic 23.43 289 *eP* **P 08 05 29.1 -1.6**
comp=Z,43nm,0.8s,mb4.9
QUIF Quistinic 23.43 289 *eP* **P 08 05 29.1 -1.6**
comp=Z,43nm,0.8s,mb5.0
EMOS Mosqueruela 23.44 269 P **P 08 05 30.6 -0.3**
comp=Z,185nm,1.6s,mb5.3
EMOS Mosqueruela 23.44 269 P **P 08 05 30.5 -0.4**
comp=Z,185nm,1.6s,mb5.3
ROSF Rostrenen 23.45 290 *eP* **P 08 05 27.3 -3.7**
comp=Z,55nm,0.9s,mb4.7
ROSF Rostrenen 23.45 290 *eP* **P 08 05 27.3 -3.7**
ROSF pmax pmax
comp=Z,27nm,0.9s,mb4.7
ROSF Rostrenen 23.45 290 *eP* **P 08 05 27.3 -3.7**
comp=Z,27nm,0.9s,mb4.7
ESY Stoneypath 23.52 309 *eP* **P 08 05 30.0 -1.6**
ESY Stoneypath 23.52 309 *eP* **P 08 05 30.0 -1.6**
IBAF Bafgh 23.58 117 *eP* **P 08 05 33.3 +0.9**
IBAF Bafgh 23.58 117 *eP* **P 08 05 33.3 +0.9**
ECK Cauldkaine Hil 23.66 307 *eP* **P 08 05 30.7 -2.2**
ECK Cauldkaine Hil 23.66 307 *eP* **P 08 05 30.7 -2.2**
ISRV Sarvestan 23.66 125 *eP* **P 08 05 33.6 +0.5**
ISRV Sarvestan 23.66 125 *eP* **P 08 05 33.6 +0.5**
IMOK Mouk 23.68 126 *eP* **P 08 05 33.2 -0.1**
IMOK Mouk 23.68 126 *eP* **P 08 05 33.2 -0.1**
EKA Eskdalemuir Ar 23.70 307 P **P 08 05 31.1 -2.2**
comp=Z,3.0nm,0.5s,mb4.0,baz=103,slow=9.9,SNR=19
EKA Eskdalemuir Ar 23.70 307 P **P 08 05 31.1 -2.2**
EBL Broad Law 23.73 308 *eP* **P 08 05 31.6 -1.9**
EBL Broad Law 23.73 308 *eP* **P 08 05 31.6 -1.9**
ESK Eskdalemuir 23.73 307 *eP* **P 08 05 31.6 -2.0**
ESK AMb AMB 08 05 49.0
comp=Z,40nm,1.2s,mb4.7
ESK *e* 08 09 29.8
ESK AMS AMS 08 17 53.6
comp=Z,815nm,14.1s,MS4.3
ESK Eskdalemuir 23.73 307 *eP* **P 08 05 33.1 -0.4**
ESK pmax pmax
comp=Z,54nm,1.0s,mb4.9
ESK Eskdalemuir 23.73 307 *eP* **P 08 05 33.1 -0.4**
comp=Z,54nm,1.0s,mb4.9
ESK Eskdalemuir 23.73 307 *eP* **P 08 05 33.1 -0.4**
comp=Z,54nm,1.0s,mb4.9
IMYA Miami 23.75 102 *eP* **P 08 05 34.3 +0.4**
IMYA Miami 23.75 102 *eP* **P 08 05 34.3 +0.4**
DYA Yadsworthy 23.76 295 *eP* **P 08 05 32.2 -1.6**
DYA AMb AMB 08 05 33.1
comp=Z,42nm,2.8s,mb4.4
DYA *e* 08 09 53.3
DYA AMS AMS 08 16 59.4
comp=Z,792nm,12.0s,MS4.4
DYA Yadsworthy 23.76 295 *eP* **P 08 05 32.2 -1.7**
EDI Edinburgh 23.84 309 *eP* **P 08 05 32.5 -2.0**
EDI AMb AMB 08 05 40.4
comp=Z,96nm,1.0s,mb5.2
EDI *e* 08 09 50.0
EDI AMS AMS 08 17 59.2
comp=Z,1μm,14.7s,MS4.5
EDI Edinburgh 23.84 309 *eP* **P 08 05 32.5 -2.0**
EAU Auchinoon 23.96 308 *eP* **P 08 05 33.8 -1.9**
EAU Auchinoon 23.96 308 *eP* **P 08 05 33.8 -1.9**
BST Brest 23.98 290 *eP* **P 08 05 32.5 -3.4**
MME1 Meikle Cairn 24.05 312 *eP* **P 08 05 35.0 -1.4**
MME1 Meikle Cairn 24.05 312 *eP* **P 08 05 35.0 -1.4**
EBH Black Hill 24.08 309 *eP* **P 08 05 35.5 -1.2**
EBH Black Hill 24.08 309 *eP* **P 08 05 35.5 -1.2**
STEI Steigen 24.09 346 *eP* **P 08 05 36.3 -0.4**
ECRI Cripan 24.10 275 P **P 08 05 35.3 -1.7**
ECRI pmax pmax
comp=Z,11nm,0.7s,mb4.4
ECRI Cripan 24.10 275 P **P 08 05 35.3 -1.7**
comp=Z,11nm,0.7s,mb4.4
ECRI Cripan 24.10 275 P **P 08 05 35.3 -1.7**
comp=Z,11nm,0.7s,mb4.4
HTL Hartland 24.11 296 AMS AMS 08 16 19.0
comp=Z,864nm,14.9s,MS4.4
LRW Lerwick 24.11 319 AMS AMS 08 16 57.9
comp=Z,1μm,8.2s
MCD Coleburn Disti 24.27 313 *eP* **P 08 05 36.5 -1.9**
MCD Coleburn Disti 24.27 313 *eP* **P 08 05 36.5 -1.9**
ETOR Torete 24.38 271 P **P 08 05 38.3 -1.3**
ETOR pmax pmax
comp=Z,17nm,0.6s,mb4.7
ETOR Torete 24.38 271 P **P 08 05 38.3 -1.3**
comp=Z,17nm,0.6s,mb4.7
ETOR Torete 24.38 271 P **P 08 05 38.3 -1.3**
comp=Z,17nm,0.6s,mb4.7
ARCES ARCESS Array B 24.43 355 P **P 08 05 39.0 -0.8**
ARCES S **S 08 10 02.9 +3.9**
ARCES ARCESS Array B 24.43 355 P **P 08 05 39.0 -0.8**
comp=Z,29nm,0.6s,mb4.9,baz=170,slow=8.3,SNR=197
ARCES S **S 08 10 02.9 +3.9**
comp=Z,11nm,0.8s,baz=189,slow=22,SNR=4.3
ARCES Lg 08 12 56.4
comp=Z,53nm,0.9s,baz=168,slow=25,SNR=4.3
ARCES ARCESS Array B 24.43 355 P **P 08 05 39.0 -0.8**
ARCES S **S 08 10 02.9 +3.9**
ARCES Lg 08 12 56.4
ARCES ARCESS Array B 24.43 355 P **P 08 05 39.0 -0.8**
GAL1 Galloway 24.51 306 *eP* **P 08 05 39.6 -1.1**
GAL1 AMb AMB 08 06 00.7
comp=Z,44nm,1.0s,mb4.9
GAL1 *e* 08 10 04.3
GAL1 AMS AMS 08 18 58.2
comp=Z,773nm,13.0s,MS4.4
GAL1 Galloway 24.51 306 *eP* **P 08 05 39.6 -1.1**
EAB Aberfoyle 24.52 309 *eP* **P 08 05 39.1 -1.7**
EAB Aberfoyle 24.52 309 *eP* **P 08 05 39.1 -1.7**
PGBU Glenifferbraes 24.53 308 *eP* **P 08 05 40.8 0.0**
PGBU AMb AMB 08 05 46.7
comp=Z,94nm,1.0s,mb5.3
PGBU *e* 08 10 07.0
PGBU AMS AMS 08 18 05.6
comp=Z,1μm,14.7s,MS4.5
ELAN Lanestosa 24.56 277 P **P 08 05 40.2 -1.0**
comp=Z,44nm,1.0s,mb4.9
ELAN Lanestosa 24.56 277 P **P 08 05 40.2 -1.0**
comp=Z,44nm,1.0s,mb4.9
KEV Kevo 24.58 357 *eP* **P 08 05 40.2 -0.9**
KEV pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
KEV Kevo 24.58 357 *eP* **P 08 05 40.2 -0.9**
comp=Z,4.0nm,0.4s,mb4.3
KEV Kevo 24.58 357 *eP* **P 08 05 40.2 -0.9**
comp=Z,4.0nm,0.4s,mb4.3
LOF Lofoten 24.58 344 *eP* **P 08 05 42.5 +1.3**
LOF Lofoten 24.58 344 *eP* **P 08 05 42.5 +1.3**
SNR=28
ORE Reay 24.80 315 *eP* **P 08 05 42.7 -0.6**
ORE Reay 24.80 315 *eP* **P 08 05 42.7 -0.6**
ETOB Tobarra 24.90 266 P **P 08 05 44.4 0.0**
comp=Z,112nm,1.5s,mb5.2
ETOB Tobarra 24.90 266 P **P 08 05 44.3 -0.1**
comp=Z,112nm,1.5s,mb5.2
EMUR La Murta 25.05 264 P **P 08 05 46.7 +0.9**
comp=Z,162nm,2.5s,mb5.1
EMUR La Murta 25.05 264 P **P 08 05 46.7 +1.0**
comp=Z,162nm,2.5s,mb5.1
TRO Tromso 25.11 350 *eS* **S 08 10 12.6 +2.7**
TRO AMS AMS 08 15 20.5
comp=Z,6μm,10.4s,MS5.4
TRO Tromso 25.11 350 *eS* **S 08 10 12.6 +2.7**
SNR=29
KAC Achnashellach 25.32 312 *eP* **P 08 05 48.1 +0.2**
KAC Achnashellach 25.32 312 *eP* **P 08 05 48.1 +0.1**
DSB Dublin 25.33 302 *eP* **P 08 05 47.2 -0.9**
comp=Z,82nm,1.7s,mb5.0
DSB Dublin 25.33 302 *eP* **P 08 05 47.2 -0.9**
comp=Z,82nm,1.7s,mb5.0
RSC Scourie 25.46 314 *eP* **P 08 05 48.9 -0.3**
RSC Scourie 25.46 314 *eP* **P 08 05 48.9 -0.3**
KPL Plockton 25.47 311 *eP* **P 08 05 49.8 +0.4**
KPL AMb AMB 08 05 53.0
comp=Z,45nm,3.2s
KPL *e* 08 10 28.1
KPL AMS AMS 08 18 51.4
comp=Z,1μm,14.0s,MS4.5
KPL Plockton 25.47 311 *eP* **P 08 05 49.8 +0.4**
KAR1 Arisaig 25.48 310 *eP* **P 08 05 50.1 +0.7**
KAR1 Arisaig 25.48 310 *eP* **P 08 05 50.1 +0.7**
EVIA Vianos 25.58 267 P **P 08 05 50.1 -0.4**
EVIA pmax pmax
comp=Z,14nm,1.2s,mb4.4
EVIA Vianos 25.58 267 P **P 08 05 50.1 -0.4**
comp=Z,14nm,1.2s,mb4.4
EVIA Vianos 25.58 267 P **P 08 05 50.1 -0.4**
comp=Z,14nm,1.2s,mb4.4
IDAH Dahanechah 25.63 109 *eP* **P 08 05 51.9 +0.8**
IDAH Dahanechah 25.63 109 *eP* **P 08 05 51.9 +0.8**
RRR Rubha Reidh 25.66 312 *eP* **P 08 05 51.6 +0.5**
RRR Rubha Reidh 25.66 312 *eP* **P 08 05 51.6 +0.5**
EARI Arriondas 25.78 278 P **P 08 05 50.9 -1.5**
comp=Z,39nm,0.9s,mb4.9
EARI Arriondas 25.78 278 P **P 08 05 50.8 -1.5**
comp=Z,39nm,0.9s,mb4.9
GUD Guadarrama 25.93 272 P **P 08 05 51.3 -2.4**
GUD pmax pmax
comp=Z,25nm,0.8s,mb4.8
GUD Guadarrama 25.93 272 P **P 08 05 51.3 -2.4**
comp=Z,25nm,0.8s,mb4.8
RRH Rhenigidale 26.14 312 *eP* **P 08 05 56.0 +0.6**
RRH Rhenigidale 26.14 312 *eP* **P 08 05 56.0 +0.6**

ESDC	**Sonseca Array**	**26.17**	**270**	P	**P**	**08 05 54.5**	**-1.4**
	comp=Z,6.5nm,0.9s,mb4.2,baz=61,slow=9.1,SNR=13						
ESDC	**Sonseca Array**	**26.17**	**270**	P	**P**	**08 05 54.5**	**-1.4**
	comp=Z,7.8nm,1.0s,mb4.2						
ESDC	**Sonseca Array**	**26.17**	**270**	P	**P**	**08 05 54.5**	**-1.4**
	comp=Z,7.8nm,1.0s,mb4.2						
ESLA	**Sonseca Array**	**26.17**	**270**	*e*P	**P**	**08 05 53.9**	**-2.0**
	comp=Z,4.8nm,1.1s,mb3.9						
ESLA	**Sonseca Array**	**26.17**	**270**	*e*P	**P**	**08 05 53.9**	**-2.0**
	comp=Z,4.8nm,1.1s,mb3.9						
EQES	**Quesada**	**26.35**	**265**	P	**P**	**08 05 57.1**	**-0.5**
	comp=Z,112nm,2.8s,mb4.9						
EQES	**Quesada**	**26.35**	**265**	P	**P**	**08 05 57.1**	**-0.4**
	comp=Z,112nm,2.8s,mb4.9						
BRVK	**Borovoye**	**26.60**	**59***c*	*i*P	**P**	**08 05 59.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
BRVK	**Borovoye**	**26.60**	**59**	*e*P	**P**	**08 06 00.1**	**+0.5**
	comp=Z,31nm,1.0s,mb4.8						
BRVK	**Borovoye**	**26.60**	**59**	*e*P	**P**	**08 06 00.1**	**+0.4**
	comp=Z,31nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**26.67**	**59**	P	**P**	**08 05 59.5**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.0,baz=268,slow=8.5,SNR=20						
BVAR				LR	LR	08 16 12.7	
	comp=Z,254nm,20.3s,MS3.8,slow=36						
BVAR	**Borovoye Array**	**26.67**	**59**	P	**P**	**08 05 59.5**	**-0.7**
BVAR				LR	LR	08 16 12.7	
BVAR	**Borovoye Array**	**26.67**	**59**	P	**P**	**08 05 59.5**	**-0.7**
ECOG	**Cogollos-Vega**	**26.94**	**265**	P	**P**	**08 06 02.0**	**-0.9**
ECOG				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.5						
ECOG	**Cogollos-Vega**	**26.94**	**265**	P	**P**	**08 06 02.0**	**-0.9**
	comp=Z,6.2nm,0.4s,mb4.5						
ECOG	**Cogollos-Vega**	**26.94**	**265**	P	**P**	**08 06 02.0**	**-0.9**
	comp=Z,6.2nm,0.4s,mb4.5						
ECAL	**Calabor**	**27.28**	**276**	P	**P**	**08 06 04.2**	**-1.7**
	comp=Z,7.0nm,0.8s,mb4.2						
ECAL	**Calabor**	**27.28**	**276**	P	**P**	**08 06 04.2**	**-1.7**
	comp=Z,7.0nm,0.8s,mb4.2						
PBRG	**Braganca**	**27.33**	**276**	*e*P	**P**	**08 06 04.9**	**-1.4**
	comp=Z,13nm,1.4s,mb4.3						
PBRG	**Braganca**	**27.33**	**276**	*e*P	**P**	**08 06 04.9**	**-1.4**
	comp=Z,13nm,1.4s,mb4.3						
MVO	**Moncorvo**	**27.76**	**275**	*e*P	**P**	**08 06 08.5**	**-1.7**
	comp=Z,27nm,1.4s,mb4.7						
MVO				*e*LQ		08 13 01.6	
MVO				*e*LR	LR	08 16 54.3	
	comp=Z,496nm,14.0s						
MVO	**Moncorvo**	**27.76**	**275**	*e*P	**P**	**08 06 08.5**	**-1.7**
	comp=Z,27nm,1.4s,mb4.7						
PVRL	**Vila Real**	**28.20**	**276**	*e*P	**P**	**08 06 12.6**	**-1.5**
	comp=Z,27nm,1.7s,mb4.6						
PVRL	**Vila Real**	**28.20**	**276**	*e*P	**P**	**08 06 12.6**	**-1.5**
	comp=Z,27nm,1.7s,mb4.6						
PCAB	**Cabril**	**28.26**	**277**	*e*P	**P**	**08 06 13.6**	**-1.1**
	comp=Z,25nm,1.5s,mb4.6						
PCAB	**Cabril**	**28.26**	**277**	*e*P	**P**	**08 06 13.6**	**-1.1**
	comp=Z,25nm,1.5s,mb4.6						
MTE	**Manteigas**	**28.41**	**274**	*e*P	**P**	**08 06 14.9**	**-1.1**
	comp=Z,40nm,1.1s,mb5.0						
MTE				*e*LQ		08 14 33.1	
MTE				*e*LR	LR	08 17 10.6	
	comp=Z,746nm,16.0s						
MTE	**Manteigas**	**28.41**	**274**	*e*P	**P**	**08 06 14.5**	**-1.5**
	comp=Z,22nm,0.9s,mb4.8						
MTE	**Manteigas**	**28.41**	**274**	*e*P	**P**	**08 06 14.5**	**-1.5**
	comp=Z,22nm,0.9s,mb4.8						
PVIS	**Viseu**	**28.53**	**275**	*e*P	**P**	**08 06 15.7**	**-1.4**
	comp=Z,30nm,1.1s,mb4.9						
PVIS	**Viseu**	**28.53**	**275**	*e*P	**P**	**08 06 15.7**	**-1.4**
	comp=Z,30nm,1.1s,mb4.9						
PCBR	**Castelo Branco**	**28.58**	**273**	*e*P	**P**	**08 06 16.2**	**-1.3**
	comp=Z,26nm,1.4s,mb4.8						
PCBR	**Castelo Branco**	**28.58**	**273**	*e*P	**P**	**08 06 16.2**	**-1.3**
	comp=Z,26nm,1.4s,mb4.8						
PMRV	**Marv??o**	**28.69**	**272**	*e*P	**P**	**08 06 16.7**	**-1.8**
	comp=Z,30nm,1.6s,mb4.8						
PMRV				*e*LQ		08 11 37.0	
PMRV				*e*LR	LR	08 16 15.8	
	comp=Z,478nm,18.0s						
PMRV	**Marv??o**	**28.69**	**272**	*e*P	**P**	**08 06 16.7**	**-1.8**
	comp=Z,30nm,1.6s,mb4.8						
PBAR	**Barrancos**	**28.98**	**269**	*e*P	**P**	**08 06 19.3**	**-1.8**
	comp=Z,15nm,1.5s,mb4.5						
PBAR				*e*LR	LR	08 17 13.0	
	comp=Z,457nm,16.0s						
PBAR	**Barrancos**	**28.98**	**269**	*e*P	**P**	**08 06 19.3**	**-1.8**
	comp=Z,15nm,1.5s,mb4.5						
TZK	**Tazeka**	**29.00**	**260**	*i*P	**P**	**08 06 20.0**	**-1.3**
PESTR	**Estremoz**	**29.07**	**271**	*e*LQ		08 15 58.6	
PESTR				*e*LR	LR	08 18 34.8	
	comp=Z,649nm,18.0s						
BJO	**Bjornoya**	**29.73**	**354**	AMS	AMS	08 18 33.3	
	comp=Z,2μm,10.5s,MS5.0						
PVAQ	**Vaqueiros**	**29.81**	**268**	*e*LQ		08 14 56.9	
PVAQ				*e*LR	LR	08 17 21.2	
	comp=Z,282nm,18.0s						
MDT	**Midelt**	**30.02**	**258**	P	**P**	**08 06 30.3**	**0.0**
	comp=Z,9.6nm,0.9s,mb4.5,baz=70,slow=9.0,SNR=14						
MDT				LR	LR	08 18 27.6	
	comp=Z,172nm,20.1s,MS3.7,baz=42,slow=36						
MDT	**Midelt**	**30.02**	**258**	P	**P**	**08 06 30.3**	**0.0**
PBDV	**Barranco-do-Ve**	**30.03**	**268**	*e*LQ		08 15 05.1	
PBDV				*e*LR	LR	08 17 32.8	
	comp=Z,296nm,18.0s						
PMAFR	**Mafra**	**30.22**	**272**	*e*LQ		08 16 52.8	
PMAFR				*e*LR	LR	08 19 40.3	
	comp=Z,307nm,16.0s						
ZFT	**Errachidia**	**30.29**	**256**	*i*P	**P**	**08 06 33.0**	**+0.3**
MORF	**Marmelete**	**30.51**	**269**	*e*LR	LR	08 17 39.5	
	comp=Z,321nm,16.0s						
EKS2	**Erkin-Say**	**30.70**	**79**	P	**P**	**08 06 37.2**	**+0.9**
	SNR=11						
EKS2	**Erkin-Say**	**30.70**	**79**	*e*P	**P**	**08 06 37.0**	**+0.6**
	comp=Z,8.5nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**30.70**	**79**	*e*P	**P**	**08 06 37.0**	**+0.7**
	comp=Z,8.5nm,0.8s,mb4.6						
PFVI	**Vila Bisbo**	**30.72**	**269**	*e*LR	LR	08 17 31.3	
	comp=Z,367nm,18.0s						
AML	**Almayashu**	**30.83**	**80**	P	**P**	**08 06 38.8**	**+1.3**
	SNR=8.2						
AML	**Almayashu**	**30.83**	**80**	*e*P	**P**	**08 06 38.4**	**+1.0**
	comp=Z,8.5nm,0.8s,mb4.6						
AML	**Almayashu**	**30.83**	**80**	*e*P	**P**	**08 06 38.4**	**+1.0**
	comp=Z,8.5nm,0.8s,mb4.6						
KBL	**Kabul**	**30.91**	**97**	*e*P	**P**	**08 06 39.6**	**+1.4**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
KBL	**Kabul**	**30.91**	**97**	*e*P	**P**	**08 06 39.5**	**+1.3**
	comp=Z,3.8nm,0.7s,mb4.3						
KBL	**Kabul**	**30.91**	**97**	*e*P	**P**	**08 06 39.5**	**+1.3**
	comp=Z,3.8nm,0.7s,mb4.3						
USP	**Ospenovka**	**31.00**	**78**	P	**P**	**08 06 39.1**	**+0.2**
	SNR=7.5						
KIB	**El Ksiba**	**31.14**	**259**	*i*P	**P**	**08 06 41.0**	**+0.8**
AAK	**Ala-Archa**	**31.21**	**79**	P	**P**	**08 06 41.9**	**+1.1**
	SNR=28						
AAK	**Ala-Archa**	**31.21**	**79**	*e*P	**P**	**08 06 41.8**	**+1.0**
AAK				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.2						
AAK	**Ala-Archa**	**31.21**	**79**	P	**P**	**08 06 41.1**	**+0.3**
	comp=Z,17nm,0.8s,mb4.9,baz=251,slow=5.3,SNR=54						
AAK	**Ala-Archa**	**31.21**	**79**	*e*P	**P**	**08 06 41.8**	**+1.0**
	comp=Z,35nm,0.9s,mb5.2						
AAK	**Ala-Archa**	**31.21**	**79**	*e*P	**P**	**08 06 41.8**	**+1.0**
	comp=Z,35nm,0.9s,mb5.2						
FRU	**Bishkek**	**31.23**	**79**	⇓*i*P	**P**	**08 06 41.0**	**+0.1**
FRU				*i*	pP	08 06 45.0	-0.2
FRU				pmax	pmax		
	comp=Z,45nm,1.8s,mb5.0						
FRU	**Bishkek**	**31.23**	**79**	*i*P	**P**	**08 06 41.0**	**+0.1**
	comp=Z,45nm,1.8s,mb5.0						
UCH	**Uchtor**	**31.37**	**80**	P	**P**	**08 06 44.1**	**+1.9**
	SNR=9.9						
UCH	**Uchtor**	**31.37**	**80**	*e*P	**P**	**08 06 43.6**	**+1.4**
	comp=Z,12nm,1.1s,mb4.6						
UCH	**Uchtor**	**31.37**	**80**	*e*P	**P**	**08 06 43.6**	**+1.5**
	comp=Z,12nm,1.1s,mb4.6						
TKM2	**Tokmak 2**	**31.88**	**78**	P	**P**	**08 06 47.5**	**+0.9**
	SNR=13						
TKM2	**Tokmak 2**	**31.88**	**78**	*e*P	**P**	**08 06 47.2**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
TKM2	**Tokmak 2**	**31.88**	**78**	*e*P	**P**	**08 06 47.2**	**+0.6**
	comp=Z,28nm,1.4s,mb4.9						
TKM2	**Tokmak 2**	**31.88**	**78**	*e*P	**P**	**08 06 47.2**	**+0.6**
	comp=Z,28nm,1.4s,mb4.9						
KURK	**Kurchatov**	**31.93**	**63**	*e*P	**P**	**08 06 47.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.9						
KURK	**Kurchatov**	**31.93**	**63**	P	**P**	**08 06 46.5**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.4,baz=284,slow=9.7,SNR=17						
KURK	**Kurchatov**	**31.93**	**63**	*e*P	**P**	**08 06 47.0**	**0.0**
	comp=Z,40nm,2.0s,mb4.9						
KURK	**Kurchatov**	**31.93**	**63**	*e*P	**P**	**08 06 47.0**	**0.0**
	comp=Z,40nm,2.0s,mb4.9						
KZA	**Kyzart**	**31.93**	**80**	P	**P**	**08 06 49.5**	**+2.4**
	SNR=30						
ULHL	**Ulahol**	**32.56**	**79**	P	**P**	**08 06 54.1**	**+1.5**
	SNR=5.1						
KSH	**Kashi**	**33.44**	**84**	*e*P	**P**	**08 06 58.0**	**-2.3**
KSH				*e*pP	pP	08 07 02.0	-2.6
KSH				*e*sP	sP	08 07 05.1	-1.2
KSH				*e*PP	PP	08 08 08.6	-7.3
KSH				*e*PcP	PcP	08 09 41.6	+0.3
KSH				*e*S	**S**	**08 12 14.1**	**-7.1**
KSH				*e*ScP	ScP	08 13 24.3	-0.9
KSH				*e*PcS	PcS	08 13 26.0	-1.0
KSH				*e*ScS	ScS	08 17 23.1	-3.0
KSH				pmax	pmax		
	comp=Z,87nm,4.2s						
KSH				LR	LR		
	comp=N,460nm,11.1s,MS4.6						
KSH				LR	LR		
	comp=E,570nm,13.1s,MS4.6						
SPITS	**Spitsbergen Ar**	**33.46**	**355**	P	**P**	**08 07 00.1**	**0.0**
	comp=E,14nm,0.5s,mb5.1,baz=144,slow=11,SNR=64						
SPITS	**Spitsbergen Ar**	**33.46**	**355**	P	**P**	**08 07 00.1**	**0.0**
SPB4	**Spitsbergen Ar**	**33.46**	**355**	*e*P	**P**	**08 06 59.9**	**-0.2**
SPB4	**Spitsbergen Ar**	**33.46**	**355**	*e*P	**P**	**08 06 59.9**	**-0.2**
KBS	**Kingsbay**	**34.48**	**354**	*e*S	**S**	**08 12 36.7**	**+0.2**
KBS				AMS	AMS	08 21 22.8	
	comp=Z,1μm,13.6s,MS4.8						
KBS	**Kingsbay**	**34.48**	**354**	*e*P	**P**	**08 07 08.8**	**-0.1**
KBS				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3						
KBS	**Kingsbay**	**34.48**	**354**	*e*P	**P**	**08 07 08.8**	**-0.2**
	comp=Z,34nm,0.8s,mb5.3						
KBS	**Kingsbay**	**34.48**	**354**	*e*P	**P**	**08 07 08.8**	**-0.1**
	comp=Z,34nm,0.8s,mb5.3						
KBS				*e*S	**S**	**08 12 36.7**	**+0.2**
	SNR=28						
MK31	**Makanchi Array**	**35.18**	**69**	*e*P	**P**	**08 07 15.1**	**-0.2**
MK31				*e*		08 09 46.3	
MK31	**Makanchi Array**	**35.18**	**69**	*e*P	**P**	**08 07 15.1**	**-0.2**
MK31	**Makanchi Array**	**35.18**	**69**	*e*PcP	PcP	08 09 46.2	0.0
MKAR	**Makanchi Array**	**35.18**	**69**	P	**P**	**08 07 15.3**	**0.0**
MKAR						08 09 45.3	
MKAR	**Makanchi Array**	**35.18**	**69**	P	**P**	**08 07 15.3**	**0.0**
	comp=Z,5.9nm,0.4s,mb4.8,baz=275,slow=8.5,SNR=48						
MKAR				PcP	PcP	08 09 45.3	-0.9
	comp=Z,4.5nm,0.9s,baz=292,slow=6.4,SNR=4.4						
MKAR				LR	LR	08 23 50.9	
	comp=Z,408nm,18.7s,MS4.2,baz=285,slow=40						
ATD	**Arta Tunnel**	**35.20**	**159**	P	**P**	**08 07 17.1**	**+1.4**
	comp=Z,3.1nm,0.3s,mb4.7,baz=230,slow=22,SNR=4.0						
ATD	**Arta Tunnel**	**35.20**	**159**	P	**P**	**08 07 17.1**	**+1.4**
ZAA0	**Zalesovo Array**	**35.20**	**56**	*e*P	**P**	**08 07 14.8**	**-0.6**
ZAA0	**Zalesovo Array**	**35.20**	**56**	*e*P	**P**	**08 07 14.8**	**-0.6**
ZALV	**Zalesovo Beam**	**35.20**	**56**	P	**P**	**08 07 15.0**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.1						
ZALV				MLR	MLR		
	comp=Z,295nm,20.1s,MS4.0						
ZALV	**Zalesovo Beam**	**35.20**	**56**	P	**P**	**08 07 15.0**	**-0.4**
	comp=Z,12nm,0.5s,mb5.1,baz=277,slow=9.3,SNR=15						
ZALV				LR	LR	08 23 10.3	
	comp=Z,295nm,20.1s,MS4.0,baz=50,slow=39						
ZALV	**Zalesovo Beam**	**35.20**	**56**	P	**P**	**08 07 15.0**	**-0.4**
	comp=Z,295nm,20.1s						
KHET	**Khetri**	**39.35**	**100**	*e*P	**P**	**08 07 49.4**	**-1.5**
KHET				AMb	AMB	08 07 57.0	
	comp=Z,17nm,0.5s,mb5.0						
AJM	**Ajmer**	**39.55**	**103**	*e*P	**P**	**08 07 53.4**	**+0.8**
AJM				AMb	AMB	08 07 59.4	
	comp=Z,15nm,0.6s,mb4.9						
DDI	**Dehra Dun**	**39.58**	**96**	*ex*	**P**	**08 07 51.3**	**-1.5**
WMQ	**Urumqi**	**39.77**	**71**	*e*P	**P**	**08 07 56.5**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,100nm,5.0s						
WMQ				LR	LR		
	comp=N,310nm,18.0s,MS4.3						
WMQ				LR	LR		
	comp=E,220nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,390nm,16.0s,MS4.3						
AYAN	**Aya Nagar**	**40.02**	**99**	*e*P	**P**	**08 07 55.9**	**-0.6**
SONA	**Sohna**	**40.13**	**99**	*e*P	**P**	**08 07 57.4**	**-0.1**
SONA				AMb	AMB	08 08 04.1	
	comp=Z,17nm,0.5s,mb5.0						
TORD	**Torodi Ar. Bea**	**40.52**	**227**	P	**P**	**08 08 00.6**	**-0.2**
	comp=Z,38nm,0.8s,mb5.1,baz=30,slow=9.0,SNR=214						
TORD				PcP	PcP	08 10 01.7	-1.4
	comp=Z,1.6nm,0.6s,baz=41,slow=4.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**40.52**	**227**	P	**P**	**08 08 00.6**	**-0.2**
TORD				PcP	PcP	08 10 01.7	-1.4
SUMG	**Summit**	**41.34**	**335**	*e*P	**P**	**08 08 10.3**	**+3.4**
	comp=Z,6.7nm,0.9s,mb4.3						
SUMG	**Summit**	**41.34**	**335**	*i*P	**P**	**08 08 09.5**	**+2.6**
	comp=Z,5.9nm,0.9s,mb4.2,SNR=26						
BHPL	**Bhopal**	**43.58**	**104**	*e*P	**P**	**08 08 26.1**	**+0.5**
KOLN	**Koldanda**	**44.99**	**94**	*e*P	**P**	**08 08 37.1**	**+0.2**
	comp=Z,25nm,0.6s,mb5.2						
MOY	**Mondy**	**45.25**	**56**	*e*P	**P**	**08 08 40.3**	**+1.6**
MOY				pmax	pmax		
	comp=Z,25nm,2.1s,mb4.7						
MOY	**Mondy**	**45.25**	**56**	*e*P	**P**	**08 08 40.3**	**+1.6**
	comp=Z,25nm,2.1s,mb4.7						
KAD	**Karad**	**45.57**	**113**	*e*P	**P**	**08 08 41.8**	**+0.3**
KAD				AMb	AMB	08 08 44.0	
	comp=Z,14nm,0.9s,mb4.9						
GKN	**Gorkha**	**45.58**	**93**	*e*P	**P**	**08 08 41.5**	**-0.1**
	comp=Z,67nm,0.9s,mb5.6						
DMN	**Daman**	**46.15**	**93**	*e*P	**P**	**08 08 46.2**	**+0.1**
	comp=Z,134nm,1.1s,mb5.8						
KKN	**Kakani**	**46.16**	**93**	*e*P	**P**	**08 08 46.0**	**-0.2**
	comp=Z,73nm,0.7s,mb5.7						
PKI	**Pulchoki**	**46.39**	**93**	*e*P	**P**	**08 08 47.9**	**-0.1**
	comp=Z,30nm,0.6s,mb5.4						
GUN	**Gumba**	**46.51**	**92**	*e*P	**P**	**08 08 49.0**	**+0.1**
	comp=Z,101nm,0.9s,mb5.7						
KMBO	**Kilima Mbogo**	**46.59**	**171**	*i*P	**P**	**08 08 51.2**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO	**Kilima Mbogo**	**46.59**	**171**	P	**P**	**08 08 49.8**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.4,baz=0.8,slow=7.3,SNR=9.7						
KMBO				PcP	PcP	08 10 24.0	+0.4
	comp=Z,4.3nm,1.0s,baz=16,slow=6.5,SNR=5.0						
KMBO	**Kilima Mbogo**	**46.59**	**171**	P	**P**	**08 08 49.8**	**+0.2**
KMBO	**Kilima Mbogo**	**46.59**	**171**	PcP	PcP	08 10 24.0	+0.4
TLY	**Talaya**	**46.78**	**55**	*e*P	**P**	**08 08 51.8**	**+1.1**
TLY				*e*S	**S**	**08 15 48.0**	**+7.9**
TLY				*e*SS	SS	08 18 49.0	-17
TLY				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
TLY				MLR	MLR		
	comp=Z,685nm,16.0s,MS4.7						
TLY	**Talaya**	**46.78**	**55**	*e*P	**P**	**08 08 51.8**	**+1.1**
	comp=Z,24nm,0.9s,mb5.1						
ZAK	**Zakamensk**	**47.07**	**56**⇑	*i*P	**P**	**08 08 53.9**	**+0.9**
ZAK				*e*		08 10 25.1	
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
ZAK	**Zakamensk**	**47.07**	**56**	*i*P	**P**	**08 08 53.9**	**+0.9**
	comp=Z,13nm,1.1s,mb4.8						
ZAK	**Zakamensk**	**47.07**	**56**	*e*PcP	PcP	08 10 25.1	+0.3
RAMN	**Ramite**	**47.60**	**93**	*e*P	**P**	**08 08 57.2**	**-0.3**
TAPN	**Taplejung**	**48.14**	**92**	*e*P	**P**	**08 09 01.8**	**+0.2**
ODAN	**Odare**	**48.22**	**92**	*e*P	**P**	**08 09 02.3**	**+0.1**
HYB	**Hyderabad**	**48.36**	**109**	*i*P	**P**	**08 09 03.0**	**-0.4**
LSA	**Lhasa**	**49.17**	**87**	*e*P	**P**	**08 09 10.9**	**+1.4**
LSA				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
LSA	**Lhasa**	**49.17**	**87**	*e*P	**P**	**08 09 10.9**	**+1.3**
	comp=Z,26nm,0.8s,mb5.3						
LSA	**Lhasa**	**49.17**	**87**	*e*P	**P**	**08 09 10.9**	**+1.4**
	comp=Z,26nm,0.8s,mb5.3						
DBIC	**Dimbokro**	**49.42**	**230**	P	**P**	**08 09 10.7**	**-0.9**
	comp=Z,36nm,0.8s,mb5.5,baz=12,slow=9.8,SNR=37						
DBIC	**Dimbokro**	**49.42**	**230**	P	**P**	**08 09 10.6**	**-0.9**
TIC	**Toumodi**	**49.53**	**230**	*e*P	**P**	**08 09 11.4**	**-1.0**
	comp=Z,119nm,1.2s,mb5.8						
TIC	**Toumodi**	**49.53**	**230**	*e*P	**P**	**08 09 11.4**	**-1.0**
TIC				pmax	pmax		
	comp=Z,119nm,1.2s,mb5.8						
TIC	**Toumodi**	**49.53**	**230**	*e*P	**P**	**08 09 11.4**	**-1.0**
	comp=Z,119nm,1.2s,mb5.8						
KIC	**Kosan Boka**	**49.61**	**229**	*e*P	**P**	**08 09 12.1**	**-0.9**
	comp=Z,155nm,1.1s,mb6.0						
KIC	**Kosan Boka**	**49.61**	**229**	*e*P	**P**	**08 09 12.1**	**-0.9**
	comp=Z,155nm,1.1s,mb6.0						
GTA	**Gaotai**	**49.86**	**71**	P	**P**	**08 09 15.3**	**+0.6**
GTA				pP	pP	08 09 19.5	+0.4
GTA				sP	sP	08 09 22.7	+1.9
GTA				PP	PP	08 11 13.3	+4.1
GTA				S	**S**	**08 16 28.3**	**+4.3**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
GTA				pmax	pmax		
	comp=Z,77nm,6.9s						
GTA				LR	LR		
	comp=N,300nm,13.5s						
GTA				LR	LR		
	comp=E,380nm,18.9s						
GTA				LR	LR		
	comp=Z,460nm,15.0s,MS4.6						
LIC	**Lamto**	**49.88**	**230**⇑	*i*P	**P**	**08 09 14.2**	**-0.9**
	comp=Z,179nm,1.1s,mb5.7						
LIC				*e*MLR	MLR		
	comp=Z,103nm,18.0s,MS3.6						
LIC	**Lamto**	**49.88**	**230**	*e*P	**P**	**08 09 14.2**	**-0.9**
	comp=Z,290nm,1.4s,mb6.1						
LIC	**Lamto**	**49.88**	**230**⇑	*i*P	**P**	**08 09 14.2**	**-0.9**
	comp=Z,89nm,1.1s,mb5.7						
LIC				LR	LR		
	comp=Z,50nm,18.0s,MS3.6						
LIC	**Lamto**	**49.88**	**230**⇑	*i*P	**P**	**08 09 14.2**	**-0.9**
	comp=Z,89nm,1.1s,mb5.7						
BOD	**Bodaibo**	**49.91**	**44**	*e*P	**P**	**08 09 13.7**	**-1.1**
BOD				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
BOD	**Bodaibo**	**49.91**	**44**	*e*P	**P**	**08 09 13.7**	**-1.1**
	comp=Z,13nm,1.2s,mb4.8						
SONM	**Songino Array**	**50.01**	**58**	P	**P**	**08 09 15.9**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.7,baz=279,slow=8.4,SNR=22						
SONM				LR	LR	08 33 49.4	
	comp=Z,416nm,18.3s,MS4.5,baz=89,slow=40						
SONM	**Songino Array**	**50.01**	**58**	P	**P**	**08 09 15.9**	**+0.2**
TIXI	**Tiksi**	**50.12**	**24**	*e*P	**P**	**08 09 15.7**	**-0.5**
TIXI				*e*		08 11 12.9	
TIXI				*e*S	**S**	**08 16 28.5**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,667nm,12.0s,MS4.9						
TIXI	**Tiksi**	**50.12**	**24**	*e*P	**P**	**08 09 16.4**	**+0.3**
	comp=Z,13nm,0.9s,mb5.0						
TIXI	**Tiksi**	**50.12**	**24**	*e*P	**P**	**08 09 16.4**	**+0.2**
	comp=Z,13nm,0.9s,mb5.0						
TIXI				*e*S	**S**	**08 16 28.5**	**+1.7**
	comp=Z,667nm,12.0s						
BBTS	**Babate**	**50.19**	**248**	P	**P**	**08 09 17.9**	**+0.5**
	comp=Z,53nm,1.0s,mb5.5,baz=20,slow=2.5,SNR=5.1						
BBTS	**Babate**	**50.19**	**248**	P	**P**	**08 09 18.0**	**+0.6**
ULN	**Ulaanbaatar**	**50.39**	**58**	*e*P	**P**	**08 09 18.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**50.39**	**58**	*e*P	**P**	**08 09 18.7**	**+0.2**
	comp=Z,9.4nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**50.39**	**58**	*e*P	**P**	**08 09 18.7**	**+0.1**
	comp=Z,9.4nm,0.9s,mb4.8						
SHL	**Shillong**	**52.18**	**91**	*e*P	**P**	**08 09 32.0**	**-0.3**
LZH	**Lanzhou**	**54.33**	**72**	*e*P	**P**	**08 09 49.0**	**+1.0**
LZH				pP	pP	08 09 53.0	+0.6
LZH				sP	sP	08 09 54.1	0.0
LZH				PP	PP	08 11 53.1	+3.4
LZH				*e*S	**S**	**08 17 24.3**	**-1.1**
LZH				sS	sS	08 17 31.0	-1.7
LZH				SS	SS	08 21 05.0	-2.1
LZH	

comp=E,460nm,17.2s,MS4.7
BJI LR LR
comp=Z,440nm,21.1s,MS4.6
KMI Kunming 60.10 84 P **P** **08 10 29.5 +0.6**
KMI S **S** **08 18 41.4 -0.3**
KMI pmax pmax
comp=Z,11nm,1.0s,mb4.8
KMI LR LR
comp=N,200nm,16.0s,MS4.5
KMI LR LR
comp=E,180nm,16.7s,MS4.5
KMI LR LR
comp=Z,230nm,18.0s,MS4.4
LSZ Lusaka 60.36 183 *e*P **P** **08 10 30.9 +0.3**
LSZ pmax pmax
comp=Z,60nm,1.6s,mb5.4
LSZ Lusaka 60.36 183 *e*P **P** **08 10 30.9 +0.3**
comp=Z,60nm,1.6s,mb5.4
LSZ Lusaka 60.36 183 *e*P **P** **08 10 30.9 +0.3**
comp=Z,60nm,1.6s,mb5.4
CHTO Chiang Mai 61.52 92 *e*P **P** **08 10 38.1 -0.5**
CHTO pmax pmax
comp=Z,19nm,0.8s,mb5.3
CHTO Chiang Mai 61.52 92 *e*P **P** **08 10 38.1 -0.5**
comp=Z,19nm,0.8s,mb5.3
CHTO Chiang Mai 61.52 92 *e*P **P** **08 10 38.1 -0.5**
comp=Z,19nm,0.8s,mb5.3
ENH Enshi 61.57 75 *e*P **P** **08 10 38.7 -0.2**
comp=Z,19nm,0.8s,mb5.3
ENH Enshi 61.57 75 *e*P **P** **08 10 38.7 -0.1**
comp=Z,19nm,0.8s,mb5.3
CM31 Chiang Mai Arr 61.75 92 *e*P **P** **08 10 40.1 -0.1**
CM31 Chiang Mai Arr 61.75 92 *e*P **P** **08 10 40.1 -0.1**
CMAR Chiang Mai Arr 61.75 92 P **P** **08 10 39.4 -0.8**
comp=Z,8.1nm,0.7s,mb4.9,baz=305,slow=7.8,SNR=33
CMAR Chiang Mai Arr 61.75 92 P **P** **08 10 39.4 -0.8**
GYA Guiyang 62.00 80 P **P** **08 10 42.7 +0.9**
GYA PP PP 08 13 01.2 +3.2
GYA ScP ScP 08 15 24.3 +0.7
GYA S **S** **08 19 04.8 -1.0**
GYA SS SS 08 23 09.0 +1.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=N,780nm,19.0s,MS5.0
GYA LR LR
comp=E,570nm,18.8s,MS5.0
GYA LR LR
comp=Z,690nm,19.7s,MS4.8
BILL Bilibino 62.11 17 *d*P **P** **08 10 42.0 +0.1**
BILL *e* 08 11 20.1
BILL *i* 08 12 59.4
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,700nm,18.0s,MS4.9
BILL Bilibino 62.11 17 *e*P **P** **08 10 41.8 -0.1**
comp=Z,30nm,1.4s,mb5.2
BILL Bilibino 62.11 17 *e*P **P** **08 10 41.8 -0.1**
comp=Z,30nm,1.4s,mb5.2
BILL Bilibino 62.11 17 *e*PcP PcP 08 11 20.1 -1.9
comp=Z,700nm,18.0s
SEY Seymchan 62.51 26⇑*e*P **P** **08 10 45.4 +0.8**
SEY Seymchan 62.51 26 *e*P **P** **08 10 45.4 +0.8**
CN2 Changchun 63.37 54 *e*P **P** **08 10 50.4 -0.3**
CN2 *es*P sP 08 10 57.4 +0.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KLR Kul'dur 63.38 46 *e*P **P** **08 10 45.5 -5.2**
MDJ Mudanjiang 65.18 51 P **P** **08 11 01.5 -1.0**
MDJ pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
MDJ pmax pmax
comp=Z,51nm,4.2s
PKME Peaks-Kenny Pk 65.56 310 *e*P **P** **08 11 05.3 +0.3**
comp=Z,11nm,0.8s,mb4.9
PKME Peaks-Kenny Pk 65.56 310 *e*P **P** **08 11 05.3 +0.3**
comp=Z,11nm,0.8s,mb4.9
INK Inuvik 66.09 354 *e*P **P** **08 11 07.2 -0.8**
INK pmax pmax
comp=Z,7.0nm,1.2s
INK Inuvik 66.09 354 *e*P **P** **08 11 07.2 -0.8**
comp=Z,7.1nm,1.2s,mb4.6
INK Inuvik 66.09 354 *e*P **P** **08 11 07.2 -0.8**
comp=Z,7.1nm,1.2s,mb4.6
NJ2 Nanjing 66.70 68 *e*P **P** **08 11 12.3 -0.2**
NJ2 pP pP 08 11 16.8 -0.2
NJ2 sP sP 08 11 19.6 +0.9
NJ2 PP PP 08 13 42.4 +3.3
NJ2 S S 08 20 05.5 +1.7
NJ2 sS sS 08 20 14.0 +2.7
NJ2 pmax pmax
comp=Z,60nm,1.3s,mb5.5
NJ2 LR LR
comp=N,170nm,14.5s,MS4.5
NJ2 LR LR
comp=E,150nm,19.2s,MS4.5
FCC Fort Churchill 66.79 332 *e*P **P** **08 11 12.3 -0.4**
comp=E,0.6nm,0.8s,mb3.7
FCC Fort Churchill 66.79 332 *e*P **P** **08 11 12.3 -0.3**
comp=E,0.6nm,0.8s,mb3.7
COLD Coldfoot 67.78 0 *e*P **P** **08 11 20.0 +1.2**
comp=E,6.7nm,0.9s,mb4.7
COLD Coldfoot 67.78 0 *e*P **P** **08 11 20.0 +1.2**
comp=E,6.7nm,0.9s,mb4.7
LONY Lake Ozonia 68.80 312 *e*P **P** **08 11 25.9 +0.4**
comp=E,9.6nm,0.9s,mb4.7
LONY Lake Ozonia 68.80 312 *e*P **P** **08 11 26.0 +0.5**
comp=E,9.6nm,0.9s,mb4.7
KSRS Korea Array 68.88 58 P **P** **08 11 25.2 -0.9**
KSRS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KSRS MLR MLR
comp=Z,264nm,19.7s,MS4.5
KSRS Korea Array 68.88 58 P **P** **08 11 25.2 -0.9**
comp=Z,5.4nm,0.9s,mb4.5,baz=312,slow=5.2,SNR=15
KSRS LR LR 08 45 49.6
comp=Z,264nm,19.7s,MS4.5,baz=52,slow=40
KSRS Korea Array 68.88 58 P **P** **08 11 25.2 -0.9**
comp=Z,264nm,19.7s
YKA Yellowknife Ar 69.04 344 P **P** **08 11 26.4 -0.3**
comp=Z,3.8nm,0.8s,mb4.4,baz=22,slow=6.3,SNR=48
YKA Yellowknife Ar 69.04 344 P **P** **08 11 26.4 -0.3**
EGAK Eagle 70.07 356 *e*P **P** **08 11 35.2 +2.2**
comp=Z,3.2nm,0.8s,mb4.3
EGAK Eagle 70.07 356 *e*P **P** **08 11 35.2 +2.2**
comp=Z,3.2nm,0.8s,mb4.3
COLA College 70.14 359 *e*P **P** **08 11 34.5 +1.0**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
COLA College 70.14 359 *e*P **P** **08 11 34.5 +1.0**
comp=Z,6.9nm,0.8s,mb4.6
COLA College 70.14 359 *e*P **P** **08 11 34.5 +1.0**
comp=Z,6.9nm,0.8s,mb4.6
YSS Yuzh-Sakhalins 70.35 42⇓*e*P **P** **08 11 35.3 +0.2**
YSS *e* pP 08 11 38.7 -0.9
YSS *e* pP 08 11 40.6 +1.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,1μm,15.0s,MS5.2
YSS MLR MLR
comp=N,800nm,14.0s,MS5.3
YSS MLR MLR
comp=E,1μm,14.0s,MS5.3
YSS Yuzh-Sakhalins 70.35 42 *e*P **P** **08 11 35.5 +0.5**
comp=E,49nm,0.9s,mb5.4
YSS Yuzh-Sakhalins 70.35 42 *e*P **P** **08 11 35.5 +0.4**
comp=E,49nm,0.9s,mb5.4
DAWY Dawson 70.69 355 *e*P **P** **08 11 37.4 +0.6**
DAWY Dawson 70.69 355 *e*P **P** **08 11 37.4 +0.6**
BPAW Bear Paw Mtn. 70.91 1 *e*P **P** **08 11 38.7 +0.5**
comp=E,8.2nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 70.91 1 *e*P **P** **08 11 38.7 +0.5**
comp=E,8.2nm,0.9s,mb4.7
CHUM Lake Minchumin 71.11 1 *e*P **P** **08 11 40.0 +0.6**
comp=E,50μm,1.2s
CHUM Lake Minchumin 71.11 1 *e*P **P** **08 11 40.0 +0.6**
comp=E,10μm,1.2s
BINY Binghamton 71.21 311 *e*P **P** **08 11 41.0 +0.6**
comp=E,14nm,0.9s,mb4.9
BINY Binghamton 71.21 311 *e*P **P** **08 11 41.0 +0.6**
comp=E,14nm,0.9s,mb4.9
MCK McKinley 71.29 360 *e*P **P** **08 11 40.6 +0.1**
MCK pmax pmax
comp=Z,18nm,1.1s,mb4.9
MCK McKinley 71.29 360 *e*P **P** **08 11 40.6 +0.1**
comp=Z,18nm,1.1s,mb4.9
MCK McKinley 71.29 360 *e*P **P** **08 11 40.6 +0.1**
comp=Z,18nm,1.1s,mb4.9
PETK Petropavlovsk- 71.91 31 P **P** **08 11 43.6 -0.7**
comp=Z,4.8nm,0.9s,mb4.4,baz=297,slow=9.8,SNR=4.5
PETK LR LR 08 47 35.1
comp=Z,249nm,18.0s,MS4.5,baz=313,slow=40
PETK Petropavlovsk- 71.91 31 P **P** **08 11 43.7 -0.7**
TTA Tatalina 71.96 3 *e*P **P** **08 11 44.3 -0.2**
TTA pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
TTA Tatalina 71.96 3 *e*P **P** **08 11 44.3 -0.2**
comp=Z,1.5nm,0.6s,mb4.1
TTA Tatalina 71.96 3 *e*P **P** **08 11 44.3 -0.2**
comp=Z,1.5nm,0.6s,mb4.1
MENT Mentasta 72.00 357 *e*P **P** **08 11 44.7 -0.1**
MENT Mentasta 72.00 357 *e*P **P** **08 11 44.7 -0.1**
PPLA Purkeypile 72.10 1 *e*P **P** **08 11 45.8 +0.4**
comp=Z,5.3nm,0.7s,mb4.6
PPLA Purkeypile 72.10 1 *e*P **P** **08 11 45.8 +0.4**
comp=Z,5.3nm,0.7s,mb4.6
ASAJ Asahikawa 72.32 45 LR LR 08 46 46.3
comp=Z,517nm,19.2s,MS4.8,baz=193,slow=38
FFC Flin Flon 72.61 334 *i* P **P** **08 11 48.5 -0.1**
FFC Flin Flon 72.61 334 *e*P **P** **08 11 47.7 -0.9**
comp=Z,12nm,0.7s,mb4.9
FFC Flin Flon 72.61 334 *e*P **P** **08 11 47.7 -0.9**
comp=Z,12nm,0.7s,mb4.9
PSI Prapat 72.66 104 P **P** **08 11 48.9 -0.6**
comp=Z,22nm,0.6s,mb5.2,baz=325,slow=6.1,SNR=30
PSI Prapat 72.66 104 P **P** **08 11 48.9 -0.6**
SSPA Standing Stone 73.33 311 *e*P **P** **08 11 53.2 +0.2**
comp=Z,29nm,1.3s,mb5.0
SSPA Standing Stone 73.33 311 *e*P **P** **08 11 53.2 +0.1**
comp=Z,29nm,1.3s,mb5.0
BOSA Boshof 73.76 185 P **P** **08 11 55.4 -0.1**
comp=Z,13nm,0.7s,mb5.0,baz=15,slow=7.0,SNR=22
BOSA Boshof 73.76 185 P **P** **08 11 55.4 -0.1**
ULM Lac du Bonnet 74.20 328 P **P** **08 11 56.6 -1.4**
comp=Z,9.3nm,1.0s,mb4.7,baz=33,slow=6.2,SNR=15
ULM LR LR 08 44 57.2
comp=Z,101nm,19.0s,MS4.1,baz=36,slow=36
ULM Lac du Bonnet 74.20 328 P **P** **08 11 56.6 -1.4**
SKAG Skagway 74.97 353 *e*P **P** **08 12 02.6 +0.3**
comp=Z,16nm,1.4s,mb4.7
SKAG Skagway 74.97 353 *e*P **P** **08 12 02.6 +0.3**
comp=Z,16nm,1.4s,mb4.7
MJAR Matsushiro Arr 75.47 53 P **P** **08 12 04.6 -1.0**
comp=Z,4.2nm,1.1s,mb4.3,baz=311,slow=7.2,SNR=6.9
MJAR Matsushiro Arr 75.47 53 P **P** **08 12 04.6 -1.0**
AGMN Agassiz Refuge 75.78 326 *e*P **P** **08 12 06.2 -1.0**
comp=Z,10nm,1.0s,mb4.7
AGMN Agassiz Refuge 75.78 326 *e*P **P** **08 12 06.2 -1.0**
comp=Z,10nm,1.0s,mb4.7
JOW Kunigami 76.28 66 LR LR 08 50 56.3
comp=Z,141nm,18.5s,MS4.3,baz=50,slow=40
EDM Edmonton 77.17 339 *e*P **P** **08 12 15.0 0.0**
EDM Edmonton 77.17 339 *e*P **P** **08 12 15.0 0.0**
ELN Prospectdale 77.33 310 *e*P **P** **08 12 15.8 -0.4**
ELN Prospectdale 77.33 310 *e*P **P** **08 12 15.8 -0.4**
JFWS Jewell Farm 77.71 320 *e*P **P** **08 12 17.6 -0.6**
JFWS pmax pmax
comp=Z,20nm,1.1s,mb5.0
JFWS Jewell Farm 77.71 320 *e*P **P** **08 12 17.6 -0.6**
comp=Z,20nm,1.1s,mb5.0
JFWS Jewell Farm 77.71 320 *e*P **P** **08 12 17.6 -0.6**
comp=Z,20nm,1.1s,mb5.0
RCBR Riachuelo 78.16 249 *e*P **P** **08 12 20.3 -0.7**
comp=Z,22nm,1.3s,mb4.9
RCBR Riachuelo 78.16 249 *e*P **P** **08 12 20.3 -0.7**
comp=Z,22nm,1.3s,mb4.9
DGMT Dagmar 78.67 331 ⇓P **P** **08 12 23.3 -0.1**
baz=78
JHJ Hachijo jima 2 78.83 54 LR LR 08 50 12.4
comp=Z,143nm,18.8s,MS4.3,baz=49,slow=38
HDIL Hopedale 79.12 318 *e*P **P** **08 12 25.7 -0.3**
HDIL Hopedale 79.12 318 *e*P **P** **08 12 25.7 -0.3**
ECSD EROS Data Cent 79.81 324 *e*P **P** **08 12 29.2 -0.5**
comp=Z,21nm,1.1s,mb5.0
ECSD EROS Data Cent 79.81 324 *e*P **P** **08 12 29.2 -0.5**
comp=Z,21nm,1.1s,mb5.0
OLIL Olney 79.97 316 *e*P **P** **08 12 28.6 -2.1**
comp=Z,12nm,0.9s,mb4.8
OLIL Olney 79.97 316 *e*P **P** **08 12 28.6 -2.1**
comp=Z,12nm,0.9s,mb4.8
A18A Metzger Ranch, 80.08 335 ⇓P **P** **08 12 31.1 0.0**
baz=80
A17A Triple J Farms 80.31 335 ⇓P **P** **08 12 32.9 +0.6**
baz=80
B18A Beardsley Farm 80.52 335 ⇓P **P** **08 12 33.4 -0.1**
baz=80
A16A West Butte Ran 80.56 336 ⇓P **P** **08 12 33.4 -0.3**
baz=80,SNR=26
CPCT Cooper Cave 80.68 312 *e*P **P** **08 12 34.2 -0.4**
CPCT Cooper Cave 80.68 312 *e*P **P** **08 12 34.2 -0.3**
EGMT Eagleton 80.85 334 ⇓P **P** **08 12 35.4 +0.2**
baz=80
EGMT Eagleton 80.85 334 *e*P **P** **08 12 35.9 +0.6**
comp=Z,44nm,1.2s,mb5.3
EGMT Eagleton 80.85 334 *e*P **P** **08 12 35.8 +0.6**
comp=Z,44nm,1.2s,mb5.3
A15A Johnson Ranch, 80.86 337 ⇑P **P** **08 12 34.8 -0.4**
baz=80,SNR=28
LAO LASA Array 80.90 332 *e*P **P** **08 12 36.4 +0.9**
comp=Z,38nm,1.1s,mb5.2
LAO *e*PcP PcP 08 12 41.8 -0.3
LAO LASA Array 80.90 332 *e*P **P** **08 12 36.4 +0.9**
comp=Z,38nm,1.1s,mb5.2
B17A L&G Farms, Che 80.92 335 ⇓P **P** **08 12 35.4 -0.1**
baz=80
A14A Double T Ranch 81.05 337 ⇑P **P** **08 12 36.3 0.0**
baz=81,SNR=26
B16A M & M Farms, S 81.08 336 ⇑P **P** **08 12 36.1 -0.3**
baz=81
WALA Waterton Lakes 81.11 337 *e*P **P** **08 12 36.3 -0.3**
comp=Z,0.8nm,1.3s,mb3.5
WALA Waterton Lakes 81.11 337 *e*P **P** **08 12 36.3 -0.3**
comp=Z,0.8nm,1.3s,mb3.5
A13A Flathead Natio 81.36 338 ⇑P **P** **08 12 37.5 -0.5**
baz=81
B15A Bradely Ranch, 81.41 336 ⇑P **P** **08 12 37.6 -0.6**
baz=81,SNR=23
C17A Wharram Farm, 81.50 335 ⇑P **P** **08 12 38.2 -0.4**
baz=81
KSM Kuching 81.51 97 *e*P **P** **08 12 40.0 +0.7**
KSM Kuching 81.51 97 *e*P **P** **08 12 40.0 +0.7**
C16A Fuhringer Ranc 81.64 336 ⇑P **P** **08 12 38.9 -0.5**
baz=81,SNR=20
A12A Yaak River Ran 81.69 338 ⇓P **P** **08 12 39.5 -0.2**
baz=81
A11A Hall Mountain, 81.84 339 ⇑P **P** **08 12 40.6 +0.1**
baz=81,SNR=27
WVT Waverly 81.86 314 *e*P **P** **08 12 39.7 -1.1**
WVT pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WVT Waverly 81.86 314 *e*P **P** **08 12 39.7 -1.1**
comp=Z,5.5nm,0.8s,mb4.5
WVT Waverly 81.86 314 *e*P **P** **08 12 39.7 -1.1**
comp=Z,5.5nm,0.8s,mb4.5
B13A Whitefish 81.89 337 ⇑P **P** **08 12 40.9 +0.2**
baz=82,SNR=26
C15A Salmond Ranch, 81.91 336 ⇑P **P** **08 12 40.4 -0.4**
baz=82,SNR=27
B12A Libby 82.10 338 ⇑P **P** **08 12 42.0 +0.1**
baz=82
A10A Northport 82.12 340 ⇓P **P** **08 12 41.8 -0.2**
baz=82
E18A Harlowton 82.20 334 ⇑P **P** **08 12 42.8 +0.4**
baz=82,SNR=9.6
YBMT Yellow Bay 82.23 337 *e*P **P** **08 12 43.3 +0.8**
comp=Z,17nm,0.7s,mb5.1
YBMT *e*PcP PcP 08 12 47.9 +0.1
YBMT Yellow Bay 82.23 337 *e*P **P** **08 12 43.3 +0.8**
comp=Z,17nm,0.7s,mb5.1
C14A Swan Lake 82.24 337 ⇓P **P** **08 12 42.8 +0.2**
baz=82
D16A Dana Ranch, Ca 82.28 335 ⇓P **P** **08 12 42.6 -0.2**
baz=82,SNR=12
B11A Sandpoint 82.33 339 ⇓P **P** **08 12 43.0 0.0**
baz=82
RSSD Black Hills 82.37 329 *e*P **P** **08 12 44.1 +0.8**
RSSD *e* pP 08 12 49.0 +1.1
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
RSSD Black Hills 82.37 329 *e*P **P** **08 12 44.1 +0.8**
comp=Z,9.8nm,1.1s,mb4.7
RSSD *e*PcP PcP 08 12 49.0 +0.5
RSSD Black Hills 82.37 329 *e*P **P** **08 12 44.1 +0.8**
comp=Z,9.8nm,1.1s,mb4.7
RSSD Black Hills 82.37 329 *e*PcP PcP 08 12 49.0 +0.5
A09A Danville 82.38 340 ⇓P **P** **08 12 43.7 +0.4**
baz=82,SNR=19
JTMT Jette 82.41 337 *e*P **P** **08 12 44.1 +0.6**
comp=Z,14nm,0.8s,mb4.9
JTMT *e*PcP PcP 08 12 49.5 +0.9
JTMT Jette 82.41 337 *e*P **P** **08 12 44.1 +0.6**
comp=Z,14nm,0.8s,mb4.9
BSMT Bassoo Peak 82.45 337 *e*P **P** **08 12 44.3 +0.6**
comp=Z,10nm,0.7s,mb4.9
BSMT *e*PcP PcP 08 12 49.6 +0.8
BSMT Bassoo Peak 82.45 337 *e*P **P** **08 12 44.3 +0.6**
comp=Z,10nm,0.7s,mb4.9
SWMT Swartz Lake 82.55 337 *e*P **P** **08 12 44.8 +0.6**
comp=Z,30nm,1.0s,mb5.3
SWMT Swartz Lake 82.55 337 *e*P **P** **08 12 44.8 +0.6**
comp=Z,30nm,1.0s,mb5.3
C13A Hot Springs 82.55 337 ⇓P **P** **08 12 44.3 +0.1**
baz=82,SNR=18
D15A Lincoln 82.55 336 ⇑P **P** **08 12 43.9 -0.3**
baz=82
A08A Turner Farm, O 82.56 341 ⇑P **P** **08 12 44.6 +0.4**
baz=82
E17A Martinsdale 82.58 334 ⇑P **P** **08 12 44.5 +0.1**
baz=82,SNR=9.4
HRY Holter Researc 82.65 335 *e*P **P** **08 12 44.9 +0.2**
comp=Z,14nm,0.9s,mb5.0
HRY *e*PcP PcP 08 12 50.4 +0.7
HRY Holter Researc 82.65 335 *e*P **P** **08 12 44.9 +0.2**
comp=Z,14nm,0.9s,mb5.0
NEW Newport 82.68 339 *e*P **P** **08 12 45.0 +0.1**
NEW *e* pP 08 12 49.8 +0.3
NEW pmax pmax
comp=Z,26nm,1.4s
NEW Newport 82.68 339 *e*P **P** **08 12 45.0 +0.1**
comp=Z,26nm,1.4s,mb5.1
NEW *e*PcP PcP 08 12 49.8 0.0
NEW Newport 82.68 339 *e*P **P** **08 12 45.0 +0.1**
comp=Z,26nm,1.4s,mb5.1
A07A Ashnola River, 82.72 341 ⇓P **P** **08 12 45.4 +0.4**
baz=82
F18A Big Timber 82.73 333 ⇓P **P** **08 12 45.5 +0.4**
baz=82,SNR=12
E16A East Helena 82.76 335 ⇑P **P** **08 12 45.4 +0.1**
baz=82
C12B Naegeli Ranch, 82.77 338 ⇓P **P** **08 12 45.2 -0.1**
baz=82
B09A Rice 82.79 340 ⇓P **P** **08 12 45.2 -0.2**
baz=82
D14A Greenough 82.80 336 ⇓P **P** **08 12 45.5 0.0**
baz=82,SNR=11
GCMT Greycliff 82.81 333 *e*P **P** **08 12 46.5 +0.9**
comp=Z,8.1nm,0.8s,mb4.8
GCMT Greycliff 82.81 333 *e*P **P** **08 12 46.5 +0.9**
comp=Z,8.1nm,0.8s,mb4.8
CHMT Chamberlain Mo 82.88 336 *e*P **P** **08 12 46.0 +0.1**
comp=Z,4.8nm,0.8s,mb4.6
CHMT *e*PcP PcP 08 12 51.0 +0.3
CHMT Chamberlain Mo 82.88 336 *e*P **P** **08 12 46.0 +0.1**
comp=Z,4.8nm,0.8s,mb4.6
PLAL Pickwick Lake 82.88 314 *e*P **P** **08 12 44.8 -1.4**
comp=Z,17nm,1.2s,mb5.0
PLAL Pickwick Lake 82.88 314 *e*P **P** **08 12 44.8 -1.4**
comp=Z,17nm,1.2s,mb5.0
F17A Fitzpatrick Pl 83.02 334 ⇓P **P** **08 12 47.2 +0.5**
baz=83,SNR=16
D13A Huson 83.05 337 ⇓P **P** **08 12 46.9 +0.1**
baz=83,SNR=16
E15A Deer Lodge 83.15 336 ⇓P **P** **08 12 47.8 +0.5**
baz=83,SNR=13
MSO Missoula 83.15 337 *e*P **P** **08 12 47.6 +0.2**
comp=Z,19nm,1.3s,mb5.0
MSO Missoula 83.15 337 *e*P **P** **08 12 47.6 +0.3**
comp=Z,19nm,1.3s,mb5.0
G18A Lazy EL Ranch, 83.20 333 ⇓P **P** **08 12 47.6 -0.1**
baz=83
B07A Winthrop 83.22 341 ⇓P **P** **08 12 47.6 0.0**
baz=83
RLMT Red Lodge 83.28 333 ⇑P **P** **08 12 48.7 +0.6**
baz=83,SNR=9.5
RLMT Red Lodge 83.28 333 *e*P **P** **08 12 48.8 +0.8**
comp=Z,13nm,1.3s,mb4.8
RLMT Red Lodge 83.28 333 *e*P **P** **08 12 48.8 +0.8**
comp=Z,13nm,1.3s,mb4.8
D12A Red Ives Fores 83.34 338 ⇓P **P** **08 12 48.3 0.0**
baz=83
C09A Chrisman Ranch 83.40 340 ⇑P **P** **08 12 48.8 +0.2**
baz=83
E14A Clinton 83.40 336 ⇑P **P** **08 12 49.0 +0.4**
baz=83
F16A Kennard Place, 83.42 335 ⇑P **P** **08 12 48.9 +0.1**
baz=83
BOZ Bozeman (W) 83.55 335 ⇑P **P** **08 12 50.1 +0.7**
baz=83
BOZ Bozeman (W) 83.55 335 *e*P **P** **08 12 49.6 +0.2**
BOZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
BOZ Bozeman (W) 83.55 335 *e*P **P** **08 12 49.6 +0.2**
comp=Z,3.8nm,1.1s,mb4.4
BOZ Bozeman (W) 83.55 335 *e*P **P** **08 12 49.6 +0.2**
comp=Z,3.8nm,1.1s,mb4.4
G17A Pierce Place, 83.57 334 ⇓P **P** **08 12 50.1 +0.6**
baz=83
E13A Victor 83.58 337 ⇑P **P** **08 12 49.6 +0.1**
baz=83,SNR=8.8
C08A Higginbotham F 83.60 340 ⇓P **P** **08 12 50.0 +0.4**
baz=83
D11A Klaveano Farm, 83.60 338 ⇓P **P** **08 12 49.6 -0.1**
baz=83
F15A Butte 83.63 335 ⇑P **P** **08 12 50.0 +0.2**
baz=83,SNR=8.4
LRM Limekiln Ridge 83.64 335 *e*P **P** **08 12 50.5 +0.6**
comp=Z,56nm,1.1s,mb5.6
LRM *e*PcP PcP 08 12 54.7 +0.6
LRM Limekiln Ridge 83.64 335 *e*P **P** **08 12 50.5 +0.6**
comp=Z,56nm,1.1s,mb5.6
LRAL Lakeview Retre 83.84 312 *e*P **P** **08 12 50.8 -0.4**
comp=Z,22nm,1.3s,mb5.1
LRAL Lakeview Retre 83.84 312 *e*P **P** **08 12 50.8 -0.3**
comp=Z,22nm,1.3s,mb5.1
JCW Jim Creek 83.87 342 *e*P **P** **08 12 50.6 -0.4**
JCW *e*PcP PcP 08 12 55.9 +0.8
JCW Jim Creek 83.87 342 *e*P **P** **08 12 50.6 -0.4**
OD2 Odessa Site #2 83.89 340 *e*P **P** **08 12 51.3 +0.2**
comp=Z,21nm,1.3s,mb5.1
OD2 Odessa Site #2 83.89 340 *e*P **P** **08 12 51.3 +0.2**
comp=Z,21nm,1.3s,mb5.1
F14A Wisdom 83.92 336 ⇑P **P** **08 12 51.1 -0.1**
baz=84
C07A Waterville 83.93 341 ⇓P **P** **08 12 51.5 +0.2**
baz=84
G16A Moss Hill, Enn 83.98 334 ⇓P **P** **08 12 51.9 +0.3**
baz=84,SNR=19
E12A Beaver Dam Sad 83.98 337 ⇑P **P** **08 12 51.2 -0.4**
baz=84
D09A Jones Farm, Ri 84.09 339 ⇑P **P** **08 12 52.4 +0.2**
baz=84
DLMT Dillon 84.10 335 *e*P **P** **08 12 52.8 +0.6**
comp=Z,18nm,1.0s,mb5.2
DLMT Dillon 84.10 335 *e*P **P** **08 12 52.8 +0.6**
comp=Z,18nm,1.0s,mb5.2
LKWY Lake 84.14 333 *e*P **P** **08 12 54.0 +1.5**
LKWY pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
LKWY Lake 84.14 333 *e*P **P** **08 12 54.0 +1.5**
comp=Z,9.8nm,1.2s,mb4.8
LKWY Lake 84.14 333 *e*P **P** **08 12 54.0 +1.5**
comp=Z,9.8nm,1.2s,mb4.8
E11A Bogner Ranch, 84.21 338 ⇓P **P** **08 12 52.4 -0.4**
baz=84
F13A Darby 84.21 336 ⇑P **P** **08 12 53.1 +0.3**
baz=84,SNR=31
QLMT Earthquake Lak 84.22 334 *e*P **P** **08 12 54.2 +1.3**
comp=Z,3.9nm,0.9s,mb4.5
QLMT Earthquake Lak 84.22 334 *e*P **P** **08 12 54.2 +1.3**
comp=Z,3.9nm,0.9s,mb4.5
G15A Dillon 84.24 335 ⇓P **P** **08 12 53.4 +0.5**
baz=84,SNR=14
D08A Wollman Farm, 84.25 340 ⇓P **P** **08 12 53.3 +0.4**
baz=84
H16A Russell Place, 84.28 334 ⇓P **P** **08 12 54.2 +1.0**
baz=84,SNR=6.5
OGNE Ogallala 84.34 326 *e*P **P** **08 12 53.1 -0.4**

comp=Z,17nm,1.1s,mb5.1
OGNE **Ogallala** 84.34 326 *e*P P 08 12 53.1 -0.4
comp=Z,17nm,1.1s,mb5.1
H17A **Grant Village** 84.35 333 ⇓P P 08 12 55.5 +2.0
baz=84,SNR=7.9
F12A **Elk City** 84.50 337 ⇑P P 08 12 54.1 -0.1
baz=84,SNR=22
E09A **Wood Farm, Sta** 84.56 339 ⇑P P 08 12 55.1 +0.5
baz=84
F11A **Grangeville** 84.62 338 ⇑P P 08 12 54.2 -0.7
baz=84,SNR=10
MCMT **McKenzie Canyo** 84.66 335 *e*P P 08 12 55.6 +0.5
comp=Z,4.1nm,1.1s,mb4.5
MCMT **McKenzie Canyo** 84.66 335 *e*P P 08 12 55.6 +0.5
comp=Z,4.1nm,1.1s,mb4.5
GNW **Green Mountain** 84.66 342 *e*P P 08 12 55.9 +0.9
comp=Z,13nm,0.9s,mb5.1
GNW **Green Mountain** 84.66 342 *e*P P 08 12 55.9 +0.9
comp=Z,13nm,0.9s,mb5.1
I18A **Diamond G Ranc** 84.73 333 ⇑P P 08 12 56.6 +1.2
baz=84,SNR=10
I17A **Pilgrim Ck.** 84.78 333 ⇑P P 08 12 57.5 +1.8
baz=84,SNR=9.4
H15A **Lima** 84.79 335 ⇓P P 08 12 56.1 +0.4
baz=84
F10A **Beach Ranch, E** 84.83 338 ⇓P P 08 12 55.5 -0.5
baz=84,SNR=11
IMW **Indian Meadow** 84.91 333 *e*P P 08 12 57.9 +1.5
comp=Z,15nm,0.8s,mb5.2
IMW **Indian Meadow** 84.91 333 *e*P P 08 12 57.9 +1.5
comp=Z,15nm,0.8s,mb5.2
SDDR **Presa de Saban** 84.93 292 *e*P P 08 12 57.9 +1.0
comp=Z,15nm,0.9s,mb5.1
SDDR **Presa de Saban** 84.93 292 *e*P P 08 12 57.8 +0.9
comp=Z,15nm,0.9s,mb5.1
H14A **Leadore** 85.00 335 ⇑P P 08 12 57.4 +0.5
baz=85,SNR=13
LOHW **Long Hollow** 85.06 333 *e*P P 08 12 57.9 +0.8
comp=Z,16nm,1.2s,mb5.0
LOHW **Long Hollow** 85.06 333 *e*P P 08 12 57.9 +0.8
comp=Z,16nm,1.2s,mb5.0
I16A **Newdale** 85.10 334 ⇑P P 08 12 58.9 +1.6
baz=85,SNR=17
K20A **Yellowstone Ra** 85.16 331 ⇑P P 08 12 57.5 -0.2
baz=85,SNR=12
K19A **Absolon Red Bu** 85.19 331 ⇓P P 08 12 57.6 -0.2
baz=85,SNR=27
CBKS **Cedar Bluff** 85.21 323 *e*P P 08 12 58.4 +0.4
CBKS **Cedar Bluff** 85.21 323 *e*P P 08 12 58.4 +0.4
LON **Longmire** 85.21 342 P P 08 12 58.6 +0.8
LON pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
LON **Longmire** 85.21 342 P P 08 12 58.6 +0.8
comp=Z,6.8nm,1.1s,mb4.7
LON **Longmire** 85.21 342 P P 08 12 58.6 +0.8
comp=Z,6.8nm,1.1s,mb4.7
E06A **Yakima** 85.22 341 ⇑P P 08 12 58.1 +0.3
baz=85
J18A **Kendall Valley** 85.23 332 ⇑P P 08 12 58.8 +0.8
baz=85,SNR=36
SNOW **Snow King Moun** 85.24 333 *e*P P 08 12 59.2 +1.2
comp=Z,12nm,0.9s,mb5.0
SNOW **Snow King Moun** 85.24 333 *e*P P 08 12 59.2 +1.2
comp=Z,12nm,0.9s,mb5.0
DCID1 **Drake Creek** 85.26 333 *e*P P 08 12 59.6 +1.5
comp=Z,25nm,1.0s,mb5.3
DCID1 **Drake Creek** 85.26 333 *e*P P 08 12 59.6 +1.5
comp=Z,25nm,1.0s,mb5.3
TPAW **Teton Pass** 85.28 333 *e*P P 08 12 59.6 +1.4
comp=Z,23nm,0.9s,mb5.3
TPAW **Teton Pass** 85.28 333 *e*P P 08 12 59.6 +1.4
comp=Z,23nm,0.9s,mb5.3
I15A **Monteview** 85.30 334 ⇓P P 08 12 59.5 +1.2
baz=85,SNR=12
H13A **Challis** 85.31 336 ⇓P P 08 12 58.7 +0.3
baz=85,SNR=18
PHWY **Pilot Hill** 85.33 329 *e*P P 08 12 56.8 -1.7
comp=Z,5.6nm,0.8s,mb4.8
PHWY **Pilot Hill** 85.33 329 *e*P P 08 12 56.8 -1.7
comp=Z,5.6nm,0.8s,mb4.8
REDW **Red Top Meadow** 85.36 333 *e*P P 08 12 59.9 +1.2
comp=Z,14nm,0.9s,mb5.1
REDW **Red Top Meadow** 85.36 333 *e*P P 08 12 59.9 +1.3
comp=Z,14nm,0.9s,mb5.1
F08A **Pendleton** 85.39 339 ⇓P P 08 12 59.0 +0.3
baz=85
L21A **Rawlins** 85.44 330 ⇓P P 08 12 58.9 -0.2
baz=85,SNR=14
BW06 **Boulder Array** 85.48 332 ⇓P P 08 12 59.3 +0.1
baz=85,SNR=22
PDAR **Pinedale Array** 85.48 332 P P 08 12 59.5 +0.3
comp=Z,4.4nm,0.9s,mb4.6,baz=50,slow=3.6,SNR=33
PDAR LR LR 08 52 14.4
comp=Z,154nm,18.6s,MS4.4,baz=51,slow=36
PDAR **Pinedale Array** 85.48 332 P P 08 12 59.5 +0.3
H12A **Diamond D Ranc** 85.50 336 ⇑P P 08 12 59.6 +0.3
baz=85
RRI2 **Red Ridge** 85.53 333 *e*P P 08 13 00.7 +1.2
comp=Z,13nm,0.7s,mb5.3
G09A **Cove** 85.62 338 ⇑P P 08 12 59.3 -0.6
baz=85,SNR=11
RWWY **Rawlins** 85.63 330 *e*P P 08 13 00.6 +0.6
comp=Z,8.3nm,0.9s,mb5.0
RWWY **Rawlins** 85.63 330 *e*P P 08 13 00.6 +0.6
comp=Z,8.3nm,0.9s,mb5.0
I14A **Mackay** 85.66 335 ⇑P P 08 13 00.8 +0.7
baz=85,SNR=31
M22A **Cedar Creek Ra** 85.66 329 ⇓P P 08 13 00.6 +0.4
baz=85
H11A **Donnelly** 85.68 337 ⇓P P 08 13 00.1 -0.1
baz=85
J16A **Bone** 85.69 334 ⇓P P 08 13 01.1 +0.9
baz=85,SNR=8.2
L20A **Wamsutter** 85.74 331 ⇓P P 08 13 00.9 +0.3
baz=85,SNR=14
K18A **Toltan Ranch,** 85.75 332 ⇑P P 08 13 01.2 +0.6
baz=85,SNR=17
M21A **Separation Pea** 85.75 330 ⇓P P 08 13 00.6 0.0
baz=85,SNR=6.9
E03A **Lebam** 85.79 343 ⇑P P 08 13 00.7 0.0
baz=85
J15A **Blackfoot** 85.83 334 ⇓P P 08 13 02.0 +1.1
baz=85,SNR=13
I13A **Wildhorse Cree** 85.86 335 ⇓P P 08 13 01.8 +0.7
baz=86,SNR=35
BMO **Blue Mountains** 85.89 338 *e*P P 08 13 00.4 -0.9
comp=Z,14nm,0.9s,mb5.2
BMO **Blue Mountains** 85.89 338 *e*P P 08 13 00.4 -0.8
comp=Z,14nm,0.9s,mb5.2
G08A **Pilot Rock** 85.91 339 ⇑P P 08 13 01.4 +0.1
baz=86,SNR=6.4
K17A **Gardner Place,** 85.94 333 ⇓P P 08 13 02.0 +0.5
baz=86
MIAR **Mount Ida** 85.96 317 *e*P P 08 13 01.8 0.0
MIAR pmax pmax
comp=Z,17nm,1.4s,mb5.1
MIAR **Mount Ida** 85.96 317 *e*P P 08 13 01.8 +0.1
comp=Z,16nm,1.4s,mb5.1
MIAR **Mount Ida** 85.96 317 *e*P P 08 13 01.8 0.0
comp=Z,16nm,1.4s,mb5.1
L19A **Farson** 86.00 332 ⇓P P 08 13 02.1 +0.3
baz=86,SNR=11
K16A **Soda Springs** 86.08 333 ⇑P P 08 13 03.0 +0.9
baz=86,SNR=6.5
F04A **Amboy** 86.12 342 ⇓P P 08 13 02.4 +0.1
baz=86
N22A **Wattenberg Ran** 86.13 329 ⇓P P 08 13 03.0 +0.5
baz=86,SNR=9.1
M20A **Sweetwater, Wa** 86.14 330 ⇓P P 08 13 03.4 +0.8
baz=86,SNR=9.1
J14A **Carey** 86.23 335 ⇓P P 08 13 03.6 +0.7
baz=86
I12A **Atlanta** 86.27 336 ⇓P P 08 13 03.3 +0.2
baz=86
HLID **Hailey** 86.27 336 ⇓P P 08 13 03.6 +0.5
baz=86
HLID **Hailey** 86.27 336 *e*P P 08 13 03.0 -0.2
comp=Z,3.3nm,1.1s,mb4.5
HLID **Hailey** 86.27 336 *e*P P 08 13 03.0 -0.1
comp=Z,3.3nm,1.1s,mb4.5
J13A **Cove Ranch, Pi** 86.35 335 ⇓P P 08 13 04.2 +0.7
baz=86
G06A **Carlson Farm,** 86.37 340 ⇑P P 08 13 04.3 +0.7
baz=86
F03A **Seaside** 86.37 342 ⇑P P 08 13 04.0 +0.4
baz=86
I11A **Placerville** 86.39 337 ⇓P P 08 13 03.8 +0.1
baz=86
I10A **Payette** 86.47 337 ⇑P P 08 13 04.2 +0.2
baz=86
M19A **Rock Springs** 86.47 331 ⇓P P 08 13 04.3 +0.2
baz=86
K15A **Arbon** 86.50 334 ⇑P P 08 13 04.8 +0.5
baz=86,SNR=9.4
L17A **Cokeville** 86.50 333 ⇓P P 08 13 04.3 0.0
baz=86,SNR=6.8
N21A **Black Mountain** 86.56 330 ⇑P P 08 13 04.9 +0.3
baz=86
H08A **Prairie City** 86.56 339 ⇓P P 08 13 04.5 0.0
baz=86
N20A **Spence Gulch,** 86.75 330 ⇑P P 08 13 06.1 +0.5
baz=86,SNR=9.7
J12A **Stokes Ranch,** 86.76 336 ⇑P P 08 13 05.6 +0.1
baz=86,SNR=9.9
L16A **Fish Haven** 86.76 333 ⇓P P 08 13 05.8 +0.3
baz=86
H06A **Lindquist Farm** 86.77 340 ⇑P P 08 13 05.6 +0.1
baz=86
MFID **Camas Ranch** 86.81 336 ⇓P P 08 13 06.1 +0.3
baz=86,SNR=7.1
I09A **Lost Marbles R** 86.82 338 ⇓P P 08 13 05.6 -0.2
baz=86
M17A **Scullys Gap (B** 87.00 332 ⇑P P 08 13 06.9 +0.1
baz=87
N19A **John Jarvie Ra** 87.02 331 ⇑P P 08 13 07.0 +0.2
baz=87
L15A **Malad City** 87.08 333 ⇓P P 08 13 07.2 +0.1
baz=87
N18A **Larsen Ranch,** 87.11 331 ⇓P P 08 13 07.5 +0.2
baz=87
HWUT **Hardware Ranch** 87.17 333 *e*P P 08 13 08.0 +0.4
comp=Z,16nm,1.3s,mb5.1
HWUT **Hardware Ranch** 87.17 333 *e*P P 08 13 08.0 +0.4
comp=Z,16nm,1.3s,mb5.1
I07A **Izee** 87.18 339 ⇑P P 08 13 08.0 +0.5
baz=87
O20A **White River Ci** 87.36 330 ⇓P P 08 13 08.5 0.0
baz=87
J09A **Fry Pan Ranch,** 87.41 338 ⇑P P 08 13 09.1 +0.4
baz=87
M16A **Huntsville** 87.46 333 ⇓P P 08 13 08.8 -0.2
baz=87
O19A **Miners Draw (B** 87.53 331 ⇑P P 08 13 09.2 -0.2
baz=87
M15A **Larsen Ranch,** 87.59 333 ⇓P P 08 13 09.8 +0.3
baz=87,SNR=8.4
J08A **Circle Bar Ran** 87.59 338 ⇑P P 08 13 09.1 -0.4
baz=87
L12A **House Creek Ra** 87.75 335 ⇑P P 08 13 10.2 -0.1
baz=87
M14A **Sheep Mountain** 87.83 334 ⇑P P 08 13 10.7 0.0
baz=87
O18A **Roosevelt** 87.86 331 ⇓P P 08 13 11.1 +0.1
baz=88
Q22A **Crested Butte,** 88.00 328 ⇑P P 08 13 11.8 +0.2
baz=88
P19A **Cripple Cowboy** 88.07 330 ⇓P P 08 13 11.8 -0.2
baz=88
N15A **Stansbury Isla** 88.13 333 ⇑P P 08 13 12.5 +0.3
baz=88,SNR=8.7
DAU **Daniels Canyon** 88.15 332 *e*P P 08 13 13.4 +1.1
DAU pmax pmax
comp=Z,13nm,1.3s,mb5.0
DAU **Daniels Canyon** 88.15 332 *e*P P 08 13 13.3 +1.1
comp=Z,13nm,1.3s,mb5.0
DAU **Daniels Canyon** 88.15 332 *e*P P 08 13 13.4 +1.1
comp=Z,13nm,1.3s,mb5.0
O17A **Robinson Place** 88.17 332 ⇓P P 08 13 12.5 +0.1
baz=88
M13A **Montello** 88.21 334 ⇓P P 08 13 12.7 +0.1
baz=88
L10A **Juniper Basin** 88.23 336 ⇓P P 08 13 12.9 +0.3
baz=88
Q21A **Lamborn Mesa,** 88.27 329 ⇑P P 08 13 13.1 +0.2
baz=88
DAV **Davao City (W)** 88.32 82 LR LR 08 57 09.6
comp=Z,104nm,21.4s,MS4.2,baz=254,slow=39
N14A **Grayback Hills** 88.37 334 ⇑P P 08 13 13.5 +0.2
baz=88
M12A **Wells** 88.39 335 ⇑P P 08 13 13.3 -0.1
baz=88
O16A **Springville** 88.42 332 ⇑P P 08 13 13.9 +0.4
baz=88
Q20A **Ridgley Place,** 88.43 329 ⇓P P 08 13 13.4 -0.2
baz=88
WVOR **Wild Horse Val** 88.49 338 *e*P P 08 13 14.7 +0.8
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
WVOR **Wild Horse Val** 88.49 338 *e*P P 08 13 14.7 +0.8
comp=Z,7.3nm,1.0s,mb4.9
WVOR **Wild Horse Val** 88.49 338 *e*P P 08 13 14.7 +0.8
comp=Z,7.3nm,1.0s,mb4.9
R22A **Saguache, Gunn** 88.50 328 ⇑P P 08 13 14.5 +0.5
baz=88
M11A **Holland Ranch,** 88.63 336 ⇑P P 08 13 15.1 +0.6
baz=88
R21A **Cimarron** 88.68 329 ⇑P P 08 13 15.0 +0.2
baz=88
M10A **I.L. Ranch, Tu** 88.76 336 ⇑P P 08 13 15.5 +0.3
baz=88
K05A **Summer Lake** 88.80 340 ⇓P P 08 13 15.2 -0.1
baz=88
DUG **Dugway** 88.85 333 ⇓P P 08 13 16.0 +0.3
baz=88,SNR=10
DUG **Dugway** 88.85 333 *e*P P 08 13 16.4 +0.8
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
DUG **Dugway** 88.85 333 *e*P P 08 13 16.4 +0.8
comp=Z,6.5nm,0.8s,mb5.0
DUG **Dugway** 88.85 333 *e*P P 08 13 16.4 +0.8
comp=Z,6.5nm,0.8s,mb5.0
N12A **Clover Valley,** 88.94 335 ⇑P P 08 13 16.0 0.0
baz=88
Q18A **Rafter H Ranch** 88.94 331 ⇑P P 08 13 15.8 -0.3
baz=89
P16A **Fountain Green** 89.01 332 ⇑P P 08 13 16.2 -0.1
baz=89
SRU **San Rafael** 89.07 331 ⇓P P 08 13 16.3 -0.4
baz=89,SNR=8.5
SRU **San Rafael** 89.07 331 *e*P P 08 13 16.5 -0.2
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
SRU **San Rafael** 89.07 331 *e*P P 08 13 16.5 -0.1
comp=Z,7.1nm,0.9s,mb5.0
SRU **San Rafael** 89.07 331 *e*P P 08 13 16.5 -0.2
comp=Z,7.1nm,0.9s,mb5.0
R19A **Curley Farm, L** 89.36 330 ⇑P P 08 13 18.2 +0.1
baz=89
O12A **Currie** 89.39 334 ⇑P P 08 13 18.1 0.0
baz=89
S21A **Coal Bank Pass** 89.39 328 ⇓P P 08 13 18.6 +0.4
baz=89
Q16A **Castle Valley** 89.47 331 ⇓P P 08 13 18.5 0.0
baz=89
P14A **Drum Mountains** 89.48 333 ⇑P P 08 13 19.2 +0.6
baz=89,SNR=6.2
R18A **Canyonlands Na** 89.50 330 ⇓P P 08 13 18.4 -0.3
baz=89,SNR=9.4
T22A **Edith** 89.63 327 ⇑P P 08 13 19.0 -0.3
baz=89
R17A **Hanksville Air** 89.76 331 ⇓P P 08 13 19.6 -0.3
baz=89
O11A **Cowboy Ranch,** 89.79 335 ⇓P P 08 13 20.0 0.0
baz=89
Q15A **Fillmore** 89.80 332 ⇑P P 08 13 20.1 0.0
baz=89
S19A **Harvey Farm, M** 89.80 329 ⇑P P 08 13 20.2 +0.1
baz=89,SNR=12
P13A **Bates Ranch, G** 89.91 334 ⇓P P 08 13 20.9 +0.3
baz=90,SNR=8.7
Q14A **Sevier Lake (B** 90.10 333 ⇑P P 08 13 21.9 +0.4
baz=90,SNR=7.8
R16A **Teasdale** 90.14 331 ⇑P P 08 13 21.3 -0.4
baz=90
X27A **F and S Farms,** 90.17 324 ⇑P P 08 13 21.6 -0.3
baz=90
P12A **McGill** 90.17 334 ⇑P P 08 13 22.0 +0.2
baz=90
MSU **Marysvale** 90.17 332 *e*P P 08 13 22.8 +1.0
MSU pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
MSU **Marysvale** 90.17 332 *e*P P 08 13 22.8 +1.0
comp=Z,8.5nm,1.1s,mb5.0
MSU **Marysvale** 90.17 332 *e*P P 08 13 22.8 +1.0
comp=Z,8.5nm,1.1s,mb5.0
W25A **X Bar L Ranch,** 90.23 325 ⇓P P 08 13 22.0 -0.2
baz=90
Q13A **Wheeler Ranch,** 90.36 333 ⇓P P 08 13 22.9 +0.2
baz=90
S17A **Black Ridge (B** 90.49 331 ⇑P P 08 13 23.5 +0.1
baz=90
P10A **Eureka** 90.50 335 ⇓P P 08 13 23.6 +0.3
baz=90
T19A **Beclabito** 90.58 329 ⇓P P 08 13 23.7 -0.1
baz=90
T18A **Mexican Hat** 90.61 330 ⇑P P 08 13 23.9 0.0
baz=90,SNR=10
Y27A **Causey** 90.85 323 ⇑P P 08 13 24.4 -0.6
baz=90,SNR=6.8
Q11A **Duckwater** 90.97 334 ⇓P P 08 13 25.7 +0.2
baz=91
R13A **O'Grain Ranch,** 91.06 333 ⇓P P 08 13 26.3 +0.4
baz=91
U19A **Dine' College,** 91.12 329 ⇓P P 08 13 26.5 +0.2
baz=91
Q10A **Clear Creek Ra** 91.22 335 ⇓P P 08 13 27.0 +0.3
baz=91
ARUT **Antelope Range** 91.24 332 *e*P P 08 13 28.2 +1.4
ARUT **Antelope Range** 91.24 332 *e*P P 08 13 28.1 +1.3
U18A **Rough Rock, Ch** 91.25 329 ⇓P P 08 13 27.2 +0.3
baz=91
V20A **Brimhall** 91.29 328 ⇑P P 08 13 27.4 +0.3
baz=91
BEKR **Beckwourth** 91.35 338 ⇓P P 08 13 27.2 -0.1
baz=91
Z27A **Tatum** 91.36 323 ⇑P P 08 13 27.5 0.0
baz=91
R11A **Troy Canyon, C** 91.41 334 ⇓P P 08 13 27.7 +0.2
baz=91
Y25A **Mesa, Roswell** 91.45 324 ⇑P P 08 13 28.1 +0.2
baz=91
T15A **Red Dirt Ranch** 91.59 331 ⇓P P 08 13 28.3 -0.1
baz=91
WCN **Washoe City** 91.72 338 ⇑P P 08 13 28.8 -0.2
baz=91
Y24A **Capitan** 91.75 325 ⇑P P 08 13 29.0 -0.3
baz=91
CPRX **Cap Rock** 91.88 323 *e*P P 08 13 29.8 -0.1
comp=Z,1.7nm,0.7s,mb4.5
CPRX **Cap Rock** 91.88 323 *e*P P 08 13 29.8 -0.1
comp=Z,1.7nm,0.7s,mb4.5
U16A **Tuba City** 91.95 330 ⇑P P 08 13 30.2 0.0
baz=92
127A **Arkansas Junct** 91.97 323 ⇓P P 08 13 30.5 +0.2
baz=92
LAZ **Ladron** 92.01 326 *e*P P 08 13 30.5 +0.1
comp=Z,5.3nm,1.5s,mb4.7
LAZ **Ladron** 92.01 326 *e*P P 08 13 30.5 0.0
comp=Z,5.3nm,1.5s,mb4.7
Z25A **Roswell** 92.02 324 ⇑P P 08 13 30.6 +0.1
baz=92
BNM **Barren Site** 92.03 326 *e*P P 08 13 30.9 +0.4
comp=Z,3.3nm,1.0s,mb4.6
BNM **Barren Site** 92.03 326 *e*P P 08 13 30.9 +0.3
comp=Z,3.3nm,1.0s,mb4.6
U15A **North Rim** 92.09 331 ⇓P P 08 13 31.0 +0.2
baz=92
T13A **Saint George** 92.09 333 ⇓P P 08 13 30.7 -0.1
baz=92
S10A **Tonopah Range,** 92.11 335 ⇓P P 08 13 30.9 +0.1
baz=92
NVAR **Mina Array Bea** 92.14 336 P P 08 13 31.4 +0.4
comp=Z,0.4nm,0.6s,mb4.0,baz=62,slow=3.5,SNR=4.5
NVAR **Mina Array Bea** 92.14 336 P P 08 13 31.4 +0.5
X21A **Alamocita Cree** 92.23 327 ⇓P P 08 13 31.5 +0.1
baz=92,SNR=5.4
T11A **Corn Creek, Al** 92.31 334 ⇓P P 08 13 32.2 +0.4
baz=92
X20A **Quemado** 92.41 327 ⇑P P 08 13 32.7 +0.4
baz=92
125A **Gardner Draw,** 92.53 324 ⇓P P 08 13 32.9 0.0
baz=92
WUAZ **Wupatki** 92.60 330 ⇓P P 08 13 33.2 +0.1
baz=92
V15A **Kaibab Nationa** 92.60 331 ⇓P P 08 13 33.4 +0.2
baz=92
Y19A **Nutrioso** 93.22 328 ⇑P P 08 13 36.8 +0.8
baz=93,SNR=6.5
MNTX **Cornudas Mount** 93.67 324 *e*P P 08 13 37.4 -0.8
comp=Z,9.8nm,1.7s,mb5.0
MNTX **Cornudas Mount** 93.67 324 *e*P P 08 13 37.4 -0.7
comp=Z,9.8nm,1.7s,mb5.0
Y18A **Canyon Day Jun** 93.67 328 ⇑P P 08 13 38.4 +0.3
baz=93
Z20A **Nine Sixteen R** 93.72 327 ⇑P P 08 13 38.4 +0.1
baz=93
X15A **Humboldt** 93.83 330 ⇑P P 08 13 39.4 +0.6
baz=93
120A **U Bar Ranch, L** 94.23 327 ⇓P P 08 13 41.2 +0.5
baz=94
Z18A **Geronimo** 94.29 328 ⇑P P 08 13 41.3 +0.3
baz=94
119A **Ashpeak Ranch,** 94.30 327 ⇑P P 08 13 41.6 +0.6
baz=94
219A **White Tail Can** 94.96 327 ⇓P P 08 13 44.2 +0.1
baz=95
TXAR **Lajitas Array** 94.98 321 P P 08 13 44.0 -0.2
TXAR 08 17 35.0
TXAR **Lajitas Array** 94.98 321 P P 08 13 44.0 -0.2
comp=Z,1.0nm,0.9s,mb4.2,baz=64,slow=5.7,SNR=7.2
TXAR PP PP 08 17 35.0 +2.5
comp=Z,1.2nm,1.0s,baz=32,slow=7.4,SNR=4.4
TXAR LR LR 08 57 57.1
comp=Z,118nm,19.0s,MS4.4,baz=355,slow=36
TXAR **Lajitas Array** 94.98 321 P P 08 13 44.0 -0.2
TXAR **Lajitas Array** 94.98 321 PP PP 08 17 35.0 +2.5
320A **Kipp Ranch, An** 95.26 326 ⇑P P 08 13 45.9 +0.5
baz=95
217A **Green Valley** 95.75 328 ⇓P P 08 13 48.3 +0.7
baz=95
GUMO **Guam** 96.51 63 LR LR 09 02 47.8
comp=Z,77nm,21.9s,MS4.1,baz=66,slow=39
ROSC **El Rosal** 97.18 284 LR LR 08 56 37.0
comp=Z,69nm,19.0s,MS4.2,baz=22,slow=35
CPUP **Villa Florida** 107.03 250 PKKPbc PKKPbc 08 30 02.0 -1.3
comp=Z,1.4nm,0.8s,baz=161,slow=5.8,SNR=3.0
ASAR **Alice Springs** 115.38 99 PKP PKPdf 08 19 02.2 -1.0
comp=Z,1.6nm,0.7s,baz=314,slow=1.6,SNR=20
ASAR PP PP 08 20 08.0 +3.1
comp=Z,0.5nm,0.9s,baz=297,slow=5.5,SNR=5.0
CTA **Charters Tower** 121.74 87 PKP PKPdf 08 19 15.3 -0.3
comp=Z,4.1nm,0.8s,baz=349,slow=5.2,SNR=3.2
PLCA **Paso Flores** 124.54 245 PKP PKPdf 08 19 20.9 +0.5
comp=Z,1.7nm,0.7s,baz=90,slow=3.8,SNR=2.9
STKA **Stephens Creek** 125.78 101 PKP PKPdf 08 19 22.8 -0.2
comp=Z,3.3nm,0.5s,baz=18,slow=3.1,SNR=8.1
QSPA **South Pole Qui** 135.16 180 *e*PKPdf PKPdf 08 19 39.5 +0.1
DZM **Mont Dzumac** 137.05 72 *e*LR LR 09 03 55.8
comp=Z,107nm,23.4s
TAOE **Nuku Hiva Isla** 142.85 345 *e*LR LR 08 17 43.7
comp=Z,90nm,28.4s
TAOE **Nuku Hiva Isla** 142.85 345 *e*LR LR 09 06 48.0
comp=Z,81nm,23.6s
RPZ **Rata Peaks** 151.75 101 *e*PKPbc PKPbc 08 20 15.2 -0.3
PPT **Papeete** 152.33 1 *e*LR LR 09 11 06.7
comp=Z,68nm,21.0s

SKO ***07*** *08:10:07.7, 40°.07N±21°.39E, h31km*
ISCJB ***07*** *08:10:12.2±0.7, 40°.44N±0°.03×21°.85E±0°.06, h4km±8km,*
Error ellipse: s-maj=8.6km s-min=5.0km az=154.4
CSEM ***07*** *08:10:12.0±0.2, 40°.45N×21°.84E, h2km, ML2.5/5, Error*
ellipse: s-maj=7.8km s-min=4.1km az=54.0
THE ***07*** *08:10:12.3, 40°.43N×21°.83E, h0km±2km, ML2.5/5, Error*
ellipse: s-maj=2.3km s-min=0.7km az=31.0
ISC 07 08:10:12.4±0.7, 40°.45N±0°.04×21°.84E±0°.06, h1km±11km,
n14, σ0°76/26, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.15**	**201**	P	**Pg**	**08 10 14.4**	**-0.9**
KZN				S	**Sg**	**08 10 17.7**	**+0.4**
KZN	**Kozani**	**0.15**	**201**	P	**Pg**	**08 10 14.4**	**-0.9**
KZN				S	**Sg**	**08 10 17.7**	**+0.4**
FNA	**Florina**	**0.49**	**314**	P	**Pg**	**08 10 22.1**	**+0.3**
FNA				S	**Sg**	**08 10 29.1**	**+1.0**
FNA	**Florina**	**0.49**	**314**	P	**Pg**	**08 10 22.1**	**+0.3**
FNA				S	**Sg**	**08 10 29.1**	**+1.0**
LIT	**Litokhoron**	**0.61**	**125**	P	**Pg**	**08 10 23.7**	**-0.3**
LIT				S	**Sg**	**08 10 33.1**	**+1.2**
LIT	**Litokhoron**	**0.61**	**125**	P	**Pg**	**08 10 23.7**	**-0.3**
LIT				S	**Sg**	**08 10 33.1**	**+1.2**

THL	**Klokotos Trika**	**0.89**	**171**	P		**Pg**	**08 10 28.6**	**-0.9**
THL				S		**Sg**	**08 10 41.3**	**+0.2**
THL	**Klokotos Trika**	**0.89**	**171**	P		**Pg**	**08 10 28.6**	**-0.9**
THL				S		**Sg**	**08 10 41.3**	**+0.2**
HORT	**Hortiatis**	**0.97**	**81**	P		**Pg**	**08 10 30.7**	**-0.3**
HORT	**Hortiatis**	**0.97**	**81**	P		**Pg**	**08 10 30.7**	**-0.3**
KRUS	**Krusevo**	**1.02**	**334**	*e*Pg		**Pg**	**08 10 31.1**	**-0.9**
KRUS				*e*Sg		**Sg**	**08 10 49.4**	**+4.1**
KRUS	**Krusevo**	**1.02**	**334**	*e*Pg		**Pg**	**08 10 31.1**	**-0.9**
KRUS				*e*Sg		**Sg**	**08 10 49.4**	**+4.1**
AGG	**Agios Georgios**	**1.47**	**165**	P		**Pn**	**08 10 39.4**	**-0.6**
AGG				S		**Sb**	**08 11 00.4**	**+0.7**
AGG	**Agios Georgios**	**1.47**	**165**	P		**Pn**	**08 10 39.4**	**-0.6**
AGG				S		**Sb**	**08 11 00.4**	**+0.7**

GUC 07 08:17:21.3±0.3, 21°.18S×68°.83W, h125km±5km, ML3.7, 1C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB01	**Plate Boundary**	**0.63**	**283**	⇑*i*P		Pn	08 17 41.0	+0.3
PB01				*e*S		Sn	08 17 55.9	+0.7
PB01				AML		AML	08 17 59.5	
	comp=E,1μm,0.2s							
MACH	**Maria Elena**	**1.33**	**220**	⇓*i*P		Pn	08 17 48.2	+1.1
MACH				*i* S		Sn	08 18 08.6	+1.8
PECH	**Pedro de Valdi**	**1.61**	**209**	⇓*i*P		Pn	08 17 51.5	+1.2
PECH				*i* S		Sn	08 18 14.1	+1.5
PECH				AML		AML	08 18 16.7	
	comp=E,1μm,0.4s							
PSGC	**Pisagua**	**1.99**	**322**	*e*P		Pn	08 17 55.6	+0.7
PSGC				*i* S		Sn	08 18 21.7	+1.0
PSGC				AML		AML	08 18 22.9	
	comp=E,474nm,0.2s							
MNMC	**Miæe Miæ**	**2.17**	**340**	*e*P		Pn	08 17 58.1	+1.0
MNMC				*i* S		Sn	08 18 26.6	+2.1
MNMC				AML		AML	08 18 33.0	
	comp=N,661nm,0.3s							

MAN 07 08:29:07, 12°.69N×123°.60E, h7km, mb4.4, ML3.3, MS3.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMPH	**Masbate**	**0.33**	**176**	*e*P		Pg	08 29 15.1	+1.6
MMPH				*i* S		Sg	08 29 21.7	+3.8
PVCP	**Virac**	**1.05**	**31**	*e*P		Pg	08 29 25.7	-1.5
PVCP				*e*S		Sg	08 29 44.3	+3.5
CNP	**Cataraman**	**1.05**	**100**	*e*P		Pg	08 29 27.9	+0.7
CNP				*e*S		Sg	08 29 40.7	-0.2
AUQP	**San Andres**	**1.10**	**305**	*e*P		Pg	08 29 28.7	+0.6
AUQP				*e*S		Sg	08 29 45.5	+3.1
RCP	**Roxas**	**1.40**	**217**	⇓*e*P		Pn	08 29 33.0	0.0
RCP				*e*S		Sb	08 29 52.7	+1.1
OTRP	**Odiongan**	**1.58**	**258**	*e*P		Pn	08 29 35.5	+0.1
KALP	**Kalibo**	**1.59**	**231**	*e*P		Sn	08 29 57.7	+1.2
BOAC	**Boac**	**1.88**	**294**	*e*P		Pn	08 29 38.8	-0.7
BOAC				*e*S		Sn	08 30 00.8	-2.6

*ISCJB **07** 08:33:50.2±2.2, 8°.13S±0°.06×118°.5E±0°.2, h38km±24km, mb3.9/3, Error ellipse: s-maj=28.0km s-min=9.9km az=170.7*
*NEIC **07** 08:33:52.1±1.2, 8°.12S×118°.44E, h36km±13km, Error ellipse: s-maj=20.6km s-min=8.6km az=78.0*
*IDC **07** 08:33:53.0±5.2, 8°.06S×118°.54E, h41km±48km, mb3.6/3, mb1 3.9/6, mb1mx3.6/21, mbtmp3.8/6, ML4.0/3, Error ellipse: s-maj=55.4km s-min=13.7km az=78.0*
ISC 07 08:33:52.4±1.8, 8°.10S±0°.06×118°.5E±0°.2, h40km±19km, n9, σ0°64/11, mb3.9/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**3.30**	**22**	P		**Pn**	**08 34 42.1**	**+0.5**
	10nm,0.3s,baz=186,slow=6.5,SNR=45							
KAPI				S		**Sn**	**08 35 19.5**	**-0.1**
	22nm,0.3s,baz=171,slow=21,SNR=12							
FITZ	**Fitzroy Crossi**	**12.12**	**146**	P		**Pn**	**08 36 42.8**	**+0.2**
	0.7nm,0.3s,baz=327,slow=11,SNR=18							
FITZ				S		**Sn**	**08 38 57.2**	**+0.8**
	0.3nm,0.3s,baz=193,slow=14,SNR=4.4							
MBWA	**Marble Bar**	**13.04**	**175**	*e*P		**Pn**	**08 36 54.7**	**-0.4**
WRA	**Warramunga Arr**	**19.32**	**129**	P		**Pn**	**08 38 14.9**	**-0.8**
	0.4nm,0.3s,baz=306,slow=13,SNR=22							
WRAB	**Tennant Creek**	**19.32**	**129**	*e*P		**Pn**	**08 38 14.6**	**-1.1**
WB2	**Warramunga Arr**	**19.33**	**129**	*e*P		**Pn**	**08 38 15.1**	**-0.7**
ASAR	**Alice Springs**	**21.38**	**138**	P		**P**	**08 38 37.5**	**+0.8**
	2.3nm,0.7s,mb3.6,baz=317,slow=9.2,SNR=23							
STKA	**Stephens Creek**	**31.95**	**141**	P		**P**	**08 40 15.4**	**+0.8**
	2.0nm,0.5s,mb4.2,baz=330,slow=12,SNR=7.1							
MKAR	**Makanchi Array**	**63.44**	**333**	P		**P**	**08 44 18.1**	**0.0**
	0.5nm,0.8s,mb3.7,baz=134,slow=6.9,SNR=4.2							

*SZGRF **07** 08:52:54.7, 19°.37S×179°.11W, h33km, Fiji Islands region*
*BJI **07** 08:54:00.7, 18°.00S×179°.40W, h605km, mB4.5/4, mb4.8/5*
*ISCJB **07** 08:54:01.3±1.0, 17°.94S±0°.10×179°.47W±0°.07, h610km±13km, mb4.2/34, Error ellipse: s-maj=16.9km s-min=7.1km az=151.2*
*NEIC **07** 08:54:01.7±0.9, 17°.98S×179°.41W, h606km±10km, mb4.3/21, Error ellipse: s-maj=17.8km s-min=6.6km az=153.0*
*IDC **07** 08:54:04.5±1.9, 18°.08S×179°.39W, h640km±22km, mb3.6/13, mb1 3.9/13, mb1mx3.8/17, mbtmp3.6/13, Error ellipse: s-maj=19.3km s-min=10.5km az=153.0*
ISC 07 08:54:01.9±1.0, 17°.96S±0°.10×179°.42W±0°.07, h602km±12km, n165, σ0°75/79, mb4.2/34, 9C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**8.38**	**62**	P		**P**	**08 56 04.4**	**-0.6**
	5.0nm,0.3s,baz=53,slow=8.8,SNR=8.6							
DZM	**Mont Dzumac**	**13.90**	**251**	*e*P		**P**	**08 56 58.9**	**-0.8**
URZ	**Urewera**	**20.45**	**188**	P		**P**	**08 57 57.7**	**-1.6**
	3.5nm,0.4s,baz=326,slow=5.9,SNR=5.6							
URZ	**Urewera**	**20.45**	**188**	*e*P		**P**	**08 57 57.3**	**-2.0**
EIDS	**Eidsvold**	**28.34**	**250**	*e*P		**P**	**08 59 09.8**	**+0.5**
	9.7nm,0.8s,mb4.5							
ARMA	**Armidale**	**29.08**	**239**	⇓*i*P		**P**	**08 59 17.1**	**+1.5**
CTA	**Charters Tower**	**32.49**	**261**	⇓*i*P		**P**	**08 59 45.6**	**+0.8**
	6.3nm,0.6s,mb4.4							
CTA	**Charters Tower**	**32.49**	**261**	P		**P**	**08 59 45.8**	**+1.0**
	6.0nm,0.4s,mb4.5,baz=98,slow=10,SNR=11							
CNB	**Canberra Magne**	**32.63**	**232**	⇓*i*P		**P**	**08 59 47.1**	**+1.3**
TOO	**Toolangi**	**36.39**	**230**	*e*P		**P**	**09 00 17.7**	**+0.7**
TOO	**Toolangi**	**36.39**	**230**	*e*P		**P**	**09 00 17.7**	**+0.7**
STKA	**Stephens Creek**	**37.76**	**241**	*e*P		**P**	**09 00 29.5**	**+1.2**
	1.0nm,0.9s,mb3.4							
STKA	**Stephens Creek**	**37.76**	**241**	⇓*i*P		**P**	**09 00 29.5**	**+1.2**
	13nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**37.76**	**241**	P		**P**	**09 00 29.6**	**+1.3**
	14nm,0.5s,mb4.8,baz=89,slow=9.4,SNR=61							
STKA	**Stephens Creek**	**37.76**	**241**	*e*P		**P**	**09 00 29.6**	**+1.3**
	6.7nm,1.1s,mb4.1							
WB2	**Warramunga Arr**	**43.66**	**260**	*e*P		**P**	**09 01 14.9**	**-0.2**
WRAB	**Tennant Creek**	**43.67**	**260**	*e*P		**P**	**09 01 14.6**	**-0.6**
	12nm,0.6s,mb4.6							
WRA	**Warramunga Arr**	**43.68**	**260**	P		**P**	**09 01 15.2**	**0.0**
	9.4nm,0.5s,mb4.6,baz=92,slow=6.8,SNR=63							
WRA				PcP		PcP	09 02 48.3	-0.4
	2.5nm,0.7s,baz=92,slow=3.3,SNR=6.9							
WRA				S		**S**	**09 07 00.9**	**-2.0**
	0.9nm,0.9s,baz=44,slow=20,SNR=3.5							
ASAR	**Alice Springs**	**43.85**	**254**	P		**P**	**09 01 17.1**	**+0.6**
	97nm,0.6s,mb5.5,baz=89,slow=8.2,SNR=1776							
ASAR				PcP		PcP	09 02 48.7	-0.5
	3.5nm,0.6s,baz=97,slow=3.8,SNR=5.8							
ASAR				S		**S**	**09 07 03.5**	**-1.7**
	1.2nm,0.7s,baz=88,slow=15,SNR=10							
KAKA	**Kakadu**	**46.62**	**269**	*e*P		**P**	**09 01 36.8**	**-0.9**
	9.1nm,0.9s,mb4.3							
KAKA	**Kakadu**	**46.62**	**269**	*e*P		**P**	**09 01 37.0**	**-0.7**
	15nm,0.4s,mb4.9							
KAKA	**Kakadu**	**46.62**	**269**	*e*P		**P**	**09 01 36.6**	**-1.1**
	36nm,0.5s,mb5.2							
FORT	**Forrest**	**49.12**	**245**	*e*P		**P**	**09 01 55.6**	**-0.4**
	4.7nm,0.9s,mb3.9							
FORT	**Forrest**	**49.12**	**245**	*e*P		**P**	**09 01 55.7**	**-0.3**
	41nm,0.6s,mb5.0							
FORT	**Forrest**	**49.12**	**245**	*e*P		**P**	**09 01 55.4**	**-0.6**
	48nm,0.6s,mb5.1							
FORT				*e*PcP		PcP	09 03 07.3	-0.7
FITZ	**Fitzroy Crossi**	**52.07**	**261**	*e*P		**P**	**09 02 17.7**	**+0.1**
	2.0nm,0.8s,mb3.5							
FITZ	**Fitzroy Crossi**	**52.07**	**261**	*e*P		**P**	**09 02 18.0**	**+0.4**
	6.5nm,0.6s,mb4.1							
FITZ	**Fitzroy Crossi**	**52.07**	**261**	*e*P		**P**	**09 02 17.5**	**-0.1**
	4.2nm,0.6s,mb4.0							
MBWA	**Marble Bar**	**57.13**	**256**	*e*P		**P**	**09 02 52.6**	**-0.2**
MORW	**Morawa**	**59.58**	**246**	*e*P		**P**	**09 03 08.8**	**-0.4**
MJAR	**Matsushiro Arr**	**67.38**	**324**	P		**P**	**09 03 58.1**	**-0.5**
	4.2nm,0.5s,mb4.1,baz=155,slow=5.8,SNR=14							
MAT	**Matsushiro**	**67.38**	**324**	P		**P**	**09 03 58.5**	**0.0**
KSM	**Kuching**	**71.74**	**278**	*e*P		**P**	**09 04 25.1**	**+0.1**
	30nm,0.8s,mb4.9							
PEA0B	**Petropavlovsk-**	**73.49**	**346**	*e*P		**P**	**09 04 34.0**	**-0.1**
PETK	**Petropavlovsk-**	**73.49**	**346**	P		**P**	**09 04 34.0**	**-0.1**
	5.5nm,0.7s,mb4.2,baz=108,slow=8.4,SNR=9.9							
KSRS	**Korea Array**	**74.11**	**319**	P		**P**	**09 04 38.5**	**+0.6**
	1.7nm,0.7s,mb3.7,baz=131,slow=6.4,SNR=7.0							
CMB	**Columbia Colle**	**78.54**	**44**	*e*P		**P**	**09 05 01.9**	**-0.3**
	4.8nm,0.7s,mb3.9							
ISA	**Isabella**	**78.55**	**47**	*e*P		**P**	**09 05 02.4**	**+0.1**
	4.8nm,0.9s,mb3.8							
NVAR	**Mina Array Bea**	**80.13**	**44**	P		**P**	**09 05 11.0**	**+0.5**
	3.6nm,0.7s,mb3.8,baz=225,slow=9.0,SNR=34							
NVAR	**Mina Array Bea**	**80.13**	**44**	P		**P**	**09 05 11.0**	**+0.5**
TTA	**Tatalina**	**82.70**	**11**	*e*P		**P**	**09 05 22.7**	**-0.4**
	3.6nm,0.6s,mb4.1							
PMR	**Palmer**	**82.88**	**14**	*e*P		**P**	**09 05 22.3**	**-1.6**
CCUT	**Cedar City**	**83.05**	**47**	*e*P		**P**	**09 05 25.4**	**0.0**
	1.9nm,0.9s,mb3.6							
MAW	**Mawson**	**83.48**	**200**	P		**P**	**09 05 26.7**	**-0.4**
	2.9nm,0.5s,mb4.0,baz=144,slow=6.0,SNR=5.3							
ENH	**Enshi**	**83.51**	**305**	*e*P		**P**	**09 05 28.1**	**+0.2**
	22nm,0.9s,mb4.7							
HAWA	**Hanford**	**83.72**	**37**	*e*P		**P**	**09 05 28.9**	**+0.4**
TRF	**Thorofare Moun**	**84.27**	**13**	*e*P		**P**	**09 05 29.3**	**-1.5**
	9.6nm,0.7s,mb4.4							
MSU	**Marysvale**	**84.33**	**47**	*e*P		**P**	**09 05 32.1**	**+0.4**
M13A	**Montello**	**84.37**	**43**	*e*P		**P**	**09 05 32.4**	**+0.5**
OD2	**Odessa Site #2**	**84.75**	**37**	*e*P		**P**	**09 05 33.3**	**-0.3**
HLID	**Hailey**	**85.30**	**41**	*e*P		**P**	**09 05 37.0**	**+0.7**
	3.3nm,0.7s,mb4.1							
XAN	**Xi'an**	**85.53**	**308**	P		**P**	**09 05 38.5**	**+0.9**
XAN				pmax		pmax		
	comp=Z,3.0nm,1.1s,mb3.8							
XAN				pmax		pmax		
	comp=Z,11nm,5.7s							
SRU	**San Rafael**	**85.75**	**47**	*e*P		**P**	**09 05 38.8**	**+0.3**
TXAR	**Lajitas Array**	**86.84**	**58**	P		**P**	**09 05 44.9**	**+1.0**
	comp=Z,3.0nm,0.8s,mb4.1,baz=224,slow=5.0,SNR=16							
ANMO	**Albuquerque**	**86.89**	**52**	*e*P		**P**	**09 05 43.7**	**-0.3**
MCMT	**McKenzie Canyo**	**86.91**	**41**	*e*P		**P**	**09 05 43.9**	**0.0**
	comp=Z,1.1nm,0.6s,mb3.8							
RRI2	**Red Ridge**	**87.17**	**43**	*e*P		**P**	**09 05 45.6**	**+0.5**
BSMT	**Bassoo Peak**	**87.24**	**38**	*e*P		**P**	**09 05 45.0**	**-0.3**
DLMT	**Dillon**	**87.32**	**40**	*e*P		**P**	**09 05 46.3**	**+0.5**
TPAW	**Teton Pass**	**87.47**	**43**	*e*P		**P**	**09 05 47.0**	**+0.4**
REDW	**Red Top Meadow**	**87.48**	**43**	*e*P		**P**	**09 05 46.7**	**+0.2**
	comp=Z,4.7nm,1.0s,mb4.2							
REDW				*e*pP		pP	09 08 05.3	+9.5
EGAK	**Eagle**	**87.52**	**15**	*e*P		**P**	**09 05 45.5**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.1							
SNOW	**Snow King Moun**	**87.59**	**43**	*e*P		**P**	**09 05 47.8**	**+0.7**
	comp=Z,4.8nm,0.9s,mb4.2							
IMW	**Indian Meadow**	**87.67**	**42**	*e*P		**P**	**09 05 48.2**	**+0.8**
	comp=Z,7.5nm,1.1s,mb4.3							
CHMT	**Chamberlain Mo**	**87.68**	**39**	*e*P		**P**	**09 05 47.0**	**-0.3**
LOHW	**Long Hollow**	**87.75**	**43**	*e*P		**P**	**09 05 48.4**	**+0.5**
QLMT	**Earthquake Lak**	**87.80**	**41**	*e*P		**P**	**09 05 48.9**	**+0.9**
	comp=Z,0.8nm,0.2s,mb4.1							
CMAR	**Chiang Mai Arr**	**88.00**	**290**	P		**P**	**09 05 51.0**	**+1.5**
	comp=Z,2.9nm,0.9s,mb4.0,baz=115,slow=2.5,SNR=12							
BW06	**Boulder Array**	**88.05**	**44**	*e*P		**P**	**09 05 48.5**	**-0.8**
PDAR	**Pinedale Array**	**88.05**	**44**	P		**P**	**09 05 49.1**	**-0.2**
	comp=Z,1.8nm,0.8s,mb3.9,baz=221,slow=2.5,SNR=19							
SMCO	**Snowmass**	**88.26**	**48**	*e*P		**P**	**09 05 50.8**	**+0.5**
WALA	**Waterton Lakes**	**88.35**	**37**	*e*P		**P**	**09 05 50.0**	**-0.5**
RLMT	**Red Lodge**	**89.29**	**42**	*e*P		**P**	**09 05 55.2**	**+0.3**
VNA3	**Neumayer Olymp**	**90.74**	**177**	*e*		**P**	**09 06 00.5**	**-0.8**
VNA2	**Neumayer--Watz**	**91.17**	**177**	*e*		**P**	**09 06 02.9**	**-0.3**
	baz=198,slow=3.9							
VNA2				*e*			09 06 07.4	
INK	**Inuvik**	**92.19**	**15**	*e*P		**P**	**09 06 06.7**	**-1.1**
	comp=Z,2.3nm,0.8s,mb4.3							
INK				*e*pP		pP	09 08 22.6	+4.5
YKA	**Yellowknife Ar**	**94.78**	**25**	P		**P**	**09 06 17.8**	**-1.9**
	comp=Z,0.4nm,0.5s,mb3.8,baz=239,slow=4.7,SNR=4.4							
MKAR	**Makanchi Array**	**108.48**	**314**	PKiKP		PKiKP	09 11 21.4	-1.6
	comp=Z,1.2nm,0.5s,baz=244,slow=1.5,SNR=10							
KURK	**Kurchatov**	**111.22**	**318**	PKiKP		PKiKP	09 11 26.1	-1.9
	comp=Z,1.4nm,0.7s,baz=100,slow=1.8,SNR=5.7							
BVAR	**Borovoye Array**	**116.28**	**321**	PKP		PKPdf	09 11 36.1	-1.5
	comp=Z,2.3nm,0.3s,baz=80,slow=1.8,SNR=17							
SPITS	**Spitsbergen Ar**	**119.26**	**356**	PKP		PKPdf	09 11 40.8	-2.0
	comp=Z,4.4nm,0.7s,baz=112,slow=6.4,SNR=8.6							
ARU	**Arti**	**122.36**	**326**	*e*PKPdf		PKPdf	09 11 47.8	-1.4
ABKAR	**Akbulak array**	**123.33**	**318**	*e*PKPdf		PKPdf	09 11 49.4	-1.9
AKTK	**Aktyubinsk**	**124.28**	**319**	PKP		PKPdf	09 11 51.2	-1.9
AKTO	**Aktyubinsk**	**124.28**	**319**	PKP		PKPdf	09 11 51.2	-1.9
	comp=Z,2.1nm,0.7s,baz=86,slow=2.9,SNR=11							
ARCES	**ARCESS Array B**	**126.19**	**349**	PKP		PKPdf	09 11 54.5	-1.7
	comp=Z,2.5nm,0.4s,baz=18,slow=1.5,SNR=36							
FINES	**FINESS Array B**	**132.97**	**344**	PKP		PKPdf	09 12 06.3	-2.9
	comp=Z,2.4nm,0.6s,baz=60,slow=4.6,SNR=6.9							
NOA	**NORSAR Array B**	**136.31**	**353**	PKP		PKPdf	09 12 14.0	-1.5
	comp=Z,0.7nm,0.6s,baz=18,slow=4.2,SNR=4.6							
HFS	**Hagfors**	**136.83**	**350**	PKhKP			09 12 04.8	
	comp=Z,0.8nm,0.4s,baz=56,slow=3.7,SNR=5.7							
AKASG	**Malin Array Be**	**140.16**	**332**	PKhKP			09 12 15.3	
	comp=Z,1.7nm,0.4s,baz=41,slow=3.8,SNR=8.2							
AKASG	**Malin Array Be**	**140.16**	**332**	PKP			09 12 15.3	
EKA	**Eskdalemuir Ar**	**142.59**	**4**	PKP		PKPdf	09 12 23.5	-3.6
	comp=Z,3.7nm,0.6s,baz=348,slow=3.0,SNR=12							
BSEG	**Bad Segeberg**	**143.31**	**350**	*e*PKPdf		PKPdf	09 12 26.1	-2.3
BSEG	**Bad Segeberg**	**143.31**	**350**	*e*PKPdf		PKPdf	09 12 26.1	-2.3
KWP	**Kalwaria Pacla**	**143.73**	**336**	⇑*i*P		PKPdf	09 12 27.8	-1.4
TLCR		**144.07**	**325**	⇑*i*P		PKPdf	09 12 29.3	-0.7
BR131	**Keskin Array S**	**144.13**	**314**	*e*PKPbc		PKPdf	09 12 29.3	-0.9
BRTR	**Keskin Array B**	**144.13**	**314**	PKP		PKPdf	09 12 29.5	-0.8
	comp=Z,7.7nm,0.8s,baz=88,slow=2.6,SNR=30							
BUR08	**Bucovina Ar. S**	**144.19**	**331**	*e*PKPbc		PKPdf	09 12 30.0	-0.1
BURAR	**Bucovina Array**	**144.21**	**331**	⇓*i*P		PKPdf	09 12 30.0	-0.1
OJC	**Ojcow**	**144.32**	**339**	*e*PX		PKPdf	09 12 29.7	-0.5
ASF	**Jabal al Asfar**	**144.38**	**300**	PKP		PKPdf	09 12 31.1	+0.2
	comp=Z,6.3nm,0.8s,baz=43,slow=2.0,SNR=6.3							
KOLS	**Kolonicke sedl**	**144.46**	**335**	*e*PKP		PKPdf	09 12 30.8	+0.3
KOLS	**Kolonicke sedl**	**144.46**	**335**	*e*PKP		PKPdf	09 12 30.8	+0.3
STHS	**Stebnicka Huta**	**144.47**	**337**	*e*PKP		PKPdf	09 12 31.0	+0.5
STHS	**Stebnicka Huta**	**144.47**	**337**	*e*PKP		PKPdf	09 12 31.0	+0.5
VRI	**Vrincioaia**	**144.72**	**328**	⇑*i*P		PKPdf	09 12 31.3	+0.2
NRDL	**Niedersach Rie**	**144.74**	**350**	*e*PKPbc		PKPdf	09 12 30.4	-0.5
TIRR	**Tirgusor**	**144.76**	**325**	⇑*i*P		PKPdf	09 12 31.1	-0.1
UPC	**Upice**	**145.26**	**343**	*e*PKP		PKPdf	09 12 33.0	+1.2
IBBN	**Ibbenburen**	**145.27**	**352**	*e*PKPbc		PKPbc	09 12 32.9	-0.1
CLL	**Collm**	**145.30**	**346**	*e*PKPbc		PKPbc	09 12 32.6	-0.5
CLL	**Collm**	**145.30**	**346**	⇓*i*PKP		PKPdf	09 12 32.5	+0.6
CLL				*i*		PKPab	09 12 34.1	-0.4
CLL	**Collm**	**145.30**	**346**	⇓*i*PKPbc		PKPbc	09 12 32.5	-0.6
	comp=Z,35nm,1.0s							
CLL				*i* PKPab		PKPab	09 12 34.1	-0.4
CLL				*i*			09 13 04.5	
OPC	**Dobruska-Polom**	**145.31**	**342**	*e*PKP		PKPbc	09 12 33.4	+0.2
CLZ	**Clausthal**	**145.32**	**349**	*e*PKPbc		PKPbc	09 12 32.9	-0.3
CLZ	**Clausthal**	**145.32**	**349**	*e*PKPbc		PKPbc	09 12 32.9	-0.3
MMAI	**Mount Meron Ar**	**145.36**	**302**	PKPbc		PKPbc	09 12 33.8	-0.1
	comp=Z,11nm,0.5s,baz=72,slow=5.4,SNR=13							
MLR	**Muntele Rosu**	**145.38**	**328**	PKPbc		PKPbc	09 12 32.6	-1.0
	comp=Z,6.5nm,0.6s,baz=182,slow=5.4,SNR=8.5							
MLR	**Muntele Rosu**	**145.38**	**328**	⇑*i*P		PKPdf	09 12 32.7	+0.5
BRG	**Berggiesshubel**	**145.48**	**345**	*e*PKPbc		PKPbc	09 12 33.3	-0.4
BRG	**Berggiesshubel**	**145.48**	**345**	*i* PKP		PKPdf	09 12 33.2	+1.0
	comp=Z,13nm,0.7s							
BRG				*e*			09 12 40.3	
	comp=Z,6.2nm,1.0s							
KECS	**Kecovo**	**145.52**	**336**	*e*PKP		PKPdf	09 12 33.2	+0.9
KECS	**Kecovo**	**145.52**	**336**	*e*PKP		PKPdf	09 12 33.2	+0.9
VOIR		**145.86**	**329**	⇑*i*P		PKPbc	09 12 34.2	-0.7
DRGR		**145.95**	**332**	⇑*i*P		PKPbc	09 12 34.6	-0.5
VYHS	**Vyhne**	**146.12**	**338**	*e*PKP		PKPbc	09 12 35.6	+0.1
VYHS	**Vyhne**	**146.12**	**338**	*e*PKP		PKPbc	09 12 35.6	+0.1
PRU	**Pruhonice**	**146.14**	**344**	*e*PKP		PKPbc	09 12 35.8	+0.3
VRAC	**Vranov**	**146.16**	**341**	PKPbc		PKPbc	09 12 35.7	+0.1
	comp=Z,4.4nm,0.7s,baz=120,slow=6.8,SNR=5.7							
KOLL	**Kolacno**	**146.20**	**339**	*e*PKP		PKPbc	09 12 36.0	+0.2
KOLL	**Kolacno**	**146.20**	**339**	*e*PKP		PKPbc	09 12 36.0	+0.2
MOX	**Moxa**	**146.22**	**347**	*e*PKPbc		PKPbc	09 12 35.2	-0.6
MOX				*e*PKPab		PKPab	09 12 37.6	-0.6
MOX	**Moxa**	**146.22**	**347**	*e*PKP		PKPbc	09 12 35.4	-0.4
TANN	**Tannenbergstha**	**146.25**	**346**	*e*PKPbc		PKPbc	09 12 35.5	-0.4
TANN				*e*PKPab		PKPab	09 12 38.0	-0.3
NKC	**Novy Kostel**	**146.43**	**346**	*e*PKP		PKPbc	09 12 36.3	0.0
TREC	**Trest**	**146.50**	**342**	*e*PKP		PKPbc	09 12 37.8	+1.2
ROTZ	**Rotzenmuhle**	**146.92**	**346**	*e*PKPbc		PKPbc	09 12 37.5	-0.2
ROTZ				*e*PKPab		PKPab	09 12 40.9	-0.1
GZR	**Gura Zlata**	**146.98**	**331**	⇓*i*P		PKPbc	09 12 37.3	-0.7
KHC	**Kasperske Hory**	**147.18**	**344**	*e*PKPbc		PKPbc	09 12 38.1	-0.3
TNS	**Taunus Mts**	**147.20**	**351**	*e*PKPbc		PKPbc	09 12 38.0	-0.4
TNS				*e*PKPab		PKPab	09 12 41.5	-0.7
TNS	**Taunus Mts**	**147.20**	**351**	*e*PKPbc		PKPbc	09 12 38.0	-0.4
TNS				*e*PKPab		PKPab	09 12 41.5	-0.7
GRA1	**Grafenberg Arr**	**147.21**	**347**	*e*PKPbc		PKPbc	09 12 37.8	-0.6
GRA1				*e*PKPab		PKPab	09 12 42.0	-0.2
GRF	**Grafenberg Arr**	**147.21**	**347**	*e*PKPbc		PKPbc	09 12 37.8	-0.6
GRF				*e*PKPab		PKPab	09 12 42.0	-0.2
GRF	**Grafenberg Arr**	**147.21**	**347**	*e*PKP		PKPbc	09 12 37.8	-0.6
GRF				*e*PKP		PKPab	09 12 42.0	-0.2
WET	**Wettzell**	**147.34**	**345**	*e*PKPbc		PKPbc	09 12 39.0	+0.2
WET				*e*PKPab		PKPab	09 12 42.7	-0.1
WET	**Wettzell**	**147.34**	**345**	*e*PKPbc		PKPbc	09 12 39.0	+0.2
WET				*e*PKPab		PKPab	09 12 42.7	-0.1
GEC2	**GERESS Array S**	**147.41**	**344**	*e*PKPbc		PKPbc	09 12 38.1	-0.9
**G

couple: Mo1.61000×10^15 NP1:ϕ0=24.00000°, δ66.00000°, λ89.00000°. NP2:ϕ0=206.00000°, δ24.00000°, λ92.00000°.
*IDC **07** 09:36:52.3±1.9, 36.″22N×142.″20E, h0km, mb3.8/6, mb1 3.9/10, mb1mx3.7/29, mbtmp3.9/10, ML3.6/4, MS3.1/5, Ms1 3.1/5, ms1mx2.9/33, Error ellipse: s-maj=48.9km s-min=18.4km az=66.0*
*ISCJB **07** 09:36:56.7±0.9, 36.″20N±0.″03×141.″96E±0.″06, h35km±8km, mb3.9/7, Error ellipse: s-maj=8.8km s-min=4.9km az=174.5*
*NEIC **07** 09:36:57.2, 36.″26N×141.″88E, h36km, MG3.8(JMA), After JMA.*
*JMA **07** 09:36:57.1±0.2, 36.″26N×141.″88E, h36km±5km, M3.8*
ISC 07 09:36:57.0±1.2, 36.″20N±0.″03×141.″92E±0.″06, h22km±9km, n31, σ1§01/47, mb3.9/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.99**	**240**	P	**Pb**	**09 37 15.2**	**-0.3**
CHOJ				*e*S	**Sb**	**09 37 28.2**	**+0.1**
JHO	**Hitachi**	**1.16**	**291**	P	**Pn**	**09 37 16.5**	**-1.3**
JHO				S	**Sn**	**09 37 31.8**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.27**	**315**	P	**Pn**	**09 37 17.9**	**-1.4**
ONAJ				*e*S	**Sn**	**09 37 33.0**	**-2.7**
JFK	**Kawauchi**	**1.43**	**325**	P	**Pn**	**09 37 20.7**	**-0.9**
JFK				*e*S	**Sn**	**09 37 37.1**	**-2.6**
BSO1	**Boso 1**	**1.73**	**207**	P	**Pn**	**09 37 26.7**	**+1.1**
BSO1				*e*S	**Sn**	**09 37 47.6**	**+0.6**
BSO3	**Boso 3**	**1.81**	**220**	P	**Pn**	**09 37 27.1**	**+0.3**
BSO3				*e*S	**Sn**	**09 37 50.1**	**+1.1**
JFT	**Otama**	**1.82**	**316**	P	**Pn**	**09 37 27.4**	**+0.4**
JFT				*e*S	**Sn**	**09 37 49.8**	**+0.4**
JMM	**Marumori**	**1.89**	**332**	P	**Pn**	**09 37 28.0**	**+0.2**
JMM				S	**Sn**	**09 37 51.4**	**+0.5**
JAG	**Ashikaga**	**2.00**	**277**	P	**Pn**	**09 37 28.8**	**-0.6**
JAG				S	**Sn**	**09 37 52.7**	**-1.1**
JFY	**Yanaizu**	**2.14**	**305**	P	**Pn**	**09 37 32.2**	**+0.8**
JFY				*e*S	**Sn**	**09 37 58.8**	**+1.5**
JKT	**Katashina**	**2.22**	**285**	P	**Pn**	**09 37 32.5**	**+0.1**
JKT				S	**Sn**	**09 37 59.1**	**-0.1**
JRY	**Ryogami san**	**2.45**	**267**	P	**Pn**	**09 37 35.1**	**-0.5**
JRY				S	**Sn**	**09 38 03.9**	**-0.9**
JOD2	**Odawara 2**	**2.48**	**249**	P	**Pn**	**09 37 36.6**	**+0.5**
JOD2				*e*S	**Sn**	**09 38 05.4**	**-0.3**
MJAR	**Matsushiro Arr**	**3.01**	**278**	Pn	**Pn**	**09 37 43.7**	**+0.4**
	11nm,0.3s,baz=103,slow=8.8,SNR=80						
MJAR				Sn	**Sn**	**09 38 20.1**	**+1.4**
	7.1nm,0.3s,baz=118,slow=9.8,SNR=5.4						
MJAR				LR	LR	09 38 57.7	
	comp=Z,398nm,20.2s,baz=110,slow=39						
MJAR	**Matsushiro Arr**	**3.01**	**278**	Pn	**Pn**	**09 37 43.7**	**+0.4**
MJAR				Sn	**Sn**	**09 38 20.1**	**+1.5**
MJAR				LR	LR	09 38 57.7	
MAJO	**Matsushiro**	**3.01**	**278**	*e*Pn	**Pn**	**09 37 43.8**	**+0.5**
MAT	**Matsushiro**	**3.01**	**278**	P	**Pn**	**09 37 44.1**	**+0.8**
MAT				S	**Sn**	**09 38 22.5**	**+3.8**
JHJ	**Hachijo jima 2**	**3.54**	**210**	Pn	**Pn**	**09 37 50.2**	**-0.5**
	11nm,0.3s,baz=225,slow=23,SNR=14						
JHJ				Sn	**Sn**	**09 38 29.9**	**-2.0**
	27nm,0.3s,baz=86,slow=23,SNR=7.1						
JHJ				LR	LR	09 39 03.6	
	comp=Z,125nm,21.4s,baz=134,slow=36						
ASAJ	**Asahikawa**	**7.92**	**4**	LR	LR	09 42 47.1	
	comp=Z,163nm,19.4s,baz=39,slow=45						
CBIJ	**Chichi jima**	**9.08**	**178**	Pn	**Pn**	**09 39 05.5**	**-1.2**
	3.7nm,0.3s,baz=105,slow=23,SNR=5.0						
CBIJ				Sn	**Sn**	**09 40 41.6**	**-6.7**
	6.2nm,0.3s,baz=4.2,slow=24,SNR=3.5						
KSRS	**Korea Array**	**11.29**	**280**	Pn	**Pn**	**09 39 39.0**	**+2.1**
	0.1nm,0.3s,baz=96,slow=14,SNR=6.6						
KSRS				LR	LR	09 44 00.7	
	comp=Z,125nm,18.6s,baz=160,slow=37						
JOW	**Kunigami**	**14.91**	**235**	LR	LR	09 46 03.0	
	comp=Z,74nm,20.7s,baz=14,slow=36						
SONM	**Songino Array**	**28.59**	**305**	P	**P**	**09 42 52.1**	**+0.9**
	2.7nm,0.9s,mb4.0,baz=106,slow=9.6,SNR=5.3						
CM31	**Chiang Mai Arr**	**41.69**	**257**	*e*P	**P**	**09 44 44.2**	**+0.1**
MK31	**Makanchi Array**	**44.91**	**303**	*e*P	**P**	**09 45 10.3**	**+0.6**
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**09 45 09.6**	**-0.1**
	1.8nm,0.8s,mb4.0,baz=94,slow=7.5,SNR=11						
KURK	**Kurchatov**	**46.77**	**309**	P	**P**	**09 45 25.1**	**+0.7**
	2.8nm,0.8s,mb4.3,baz=83,slow=7.9,SNR=12						
BVAR	**Borovoye Array**	**51.43**	**313**	P	**P**	**09 46 00.2**	**+0.1**
	1.1nm,0.8s,mb3.6,baz=112,slow=1.6,SNR=4.2						
AML	**Almayashu**	**51.96**	**299**	*e*P	**P**	**09 46 05.8**	**+1.6**
	3.4nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**56.30**	**189**	P	**P**	**09 46 35.5**	**-0.4**
	0.6nm,0.8s,mb3.6,baz=6.4,slow=7.7,SNR=4.1						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**09 47 00.7**	**-1.3**
	0.5nm,1.0s,mb3.5,baz=52,slow=31,SNR=3.0						

*ISCJB **07** 09:37:24.5±0.3, 44.″23N±0.″04×142.″33E±0.″07, h238km±2km, mb3.5/12, Error ellipse: s-maj=7.6km s-min=6.8km az=0.0*
*JMA **07** 09:37:25.2±0.2, 44.″26N×142.″29E, h237km±2km, M3.4*
*IDC **07** 09:37:25.2±0.5, 44.″23N×142.″36E, h230km±3km, mb3.3/12, mb1 3.5/14, mb1mx3.3/27, mbtmp3.4/14, Error ellipse: s-maj=19.9km s-min=13.2km az=168.0*
ISC 07 09:37:25.5±0.3, 44.″21N±0.″04×142.″33E±0.″07, h234km±2km, n34, σ0§80/49, mb3.5/12, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**0.21**	**116**	P	**Pn**	**09 37 56.3**	**+0.4**
ASAJ				*e*S	**S**	**09 38 19.9**	**+0.4**
ASAJ	**Asahikawa**	**0.21**	**116**	P	**Pn**	**09 37 56.4**	**+0.5**
	39nm,0.3s,baz=317,slow=1.8,SNR=294						
ASAJ				S	**S**	**09 38 19.2**	**-0.3**
	11nm,0.3s,baz=15,slow=30,SNR=26						
JSS	**Shosan**	**0.39**	**299**	P	**Pn**	**09 37 56.3**	**+0.1**
JSS				*e*S	**S**	**09 38 20.3**	**+0.1**
JKK2	**Kamakawa 2**	**0.45**	**138**	P	**Pn**	**09 37 57.1**	**+0.7**
JKK2				*e*S	**S**	**09 38 20.8**	**+0.3**
JYG	**Yagishiri**	**0.69**	**289**	*e*S	**S**	**09 38 21.5**	**-0.5**
JSE	**Soyaes**	**0.77**	**13**	P	**Pn**	**09 37 57.5**	**0.0**
JSE				*e*S	**S**	**09 38 21.8**	**-0.9**
JFR	**Furan**	**1.06**	**170**	P	**Pn**	**09 37 59.6**	**+0.4**
JFR				*e*S	**S**	**09 38 27.1**	**+1.5**
JWK2	**Keihoku**	**1.15**	**345**	P	**Pn**	**09 37 59.3**	**-0.4**
JWK2				*e*S	**S**	**09 38 25.5**	**-1.1**
JTKR	**Abashiri--Toko**	**1.16**	**101**	P	**Pn**	**09 38 00.7**	**+0.9**
JTKR				*e*S	**S**	**09 38 27.7**	**+1.1**
JAR	**Ashorobuto**	**1.38**	**131**	P	**Pn**	**09 38 02.4**	**+1.0**
JAR				*e*S	**S**	**09 38 30.7**	**+1.2**
JEW	**Eniwo**	**1.51**	**205**	P	**Pn**	**09 38 03.2**	**+0.8**
JSK	**Shakotan**	**1.59**	**238**	P	**Pn**	**09 38 03.2**	**+0.1**
JCH	**Churui**	**1.76**	**154**	P	**Pn**	**09 38 04.1**	**-0.4**
JCH				*e*S	**S**	**09 38 33.5**	**-1.6**
JNBK	**Urakawa-nobuka**	**1.95**	**171**	P	**Pn**	**09 38 07.3**	**+1.1**
JNBK				*e*S	**S**	**09 38 39.5**	**+1.3**
JRA	**Rausu**	**2.03**	**97**	P	**Pn**	**09 38 08.1**	**+1.2**
JAK	**Akkeshi**	**2.10**	**124**	P	**Pn**	**09 38 07.0**	**-0.6**
JAK				*e*S	**S**	**09 38 39.5**	**-1.1**
JKB	**Kayabe**	**2.51**	**203**	P	**Pn**	**09 38 11.5**	**-0.2**
JKB				*e*S	**S**	**09 38 46.8**	**-1.2**
NEM2	**Nemuro 2**	**2.61**	**108**	P	**Pn**	**09 38 12.0**	**-0.8**
NEM2				*e*S	**S**	**09 38 47.6**	**-2.3**
JOT	**Ohata**	**2.98**	**199**	P	**Pn**	**09 38 16.5**	**-0.3**
JOT				*e*S	**S**	**09 38 55.9**	**-1.3**
JOSM	**Okushiri--Mats**	**2.98**	**226**	P	**Pn**	**09 38 16.7**	**-0.1**
JHJ	**Hachijo jima 2**	**11.25**	**191**	P	**Pn**	**09 39 59.8**	**-0.3**
	3.3nm,0.3s,baz=12,slow=14,SNR=1.9						
PETK	**Petropavlovsk-**	**13.48**	**43**	P	**Pn**	**09 40 27.7**	**+0.1**
	0.2nm,0.3s,baz=223,slow=8.1,SNR=4.4						
SONM	**Songino Array**	**25.07**	**291**	P	**P**	**09 42 28.4**	**-0.1**
	6.3nm,0.8s,mb4.3,baz=89,slow=8.9,SNR=9.1						
ZALV	**Zalesovo Beam**	**37.93**	**306**	P	**P**	**09 44 20.5**	**+0.4**
	2.0nm,0.3s,mb4.1,baz=245,slow=28,SNR=3.6						
MKAR	**Makanchi Array**	**41.27**	**296**	P	**P**	**09 44 47.6**	**-0.2**
	0.8nm,0.6s,mb3.4,baz=87,slow=7.4,SNR=9.1						
KURK	**Kurchatov**	**42.37**	**302**	P	**P**	**09 44 57.3**	**+0.8**
	1.5nm,0.6s,mb3.6,baz=73,slow=9.4,SNR=11						
BVAR	**Borovoye Array**	**46.50**	**308**	P	**P**	**09 45 29.3**	**+0.2**
	0.8nm,0.4s,mb3.4,baz=76,slow=9.1,SNR=3.5						
INK	**Inuvik**	**47.76**	**30**	P	**P**	**09 45 38.4**	**-0.2**
	1.6nm,0.5s,mb3.6,baz=309,slow=7.2,SNR=20						
YKA	**Yellowknife Ar**	**57.32**	**33**	P	**P**	**09 46 49.0**	**+0.4**
	0.8nm,0.5s,mb3.6,baz=307,slow=7.0,SNR=14						
ARCES	**ARCESS Array B**	**57.57**	**338**	P	**P**	**09 46 49.7**	**-0.6**
	1.6nm,0.8s,mb3.7,baz=45,slow=9.0,SNR=2.8						
WRA	**Warramunga Arr**	**64.25**	**188**	P	**P**	**09 47 36.3**	**+0.7**
	0.4nm,0.5s,mb3.3,baz=4.5,slow=7.0,SNR=2.7						
AKASG	**Malin Array Be**	**69.10**	**321**	P	**P**	**09 48 05.8**	**-0.2**
	0.2nm,0.3s,mb3.2,baz=40,slow=6.9,SNR=3.8						
NVAR	**Mina Array Bea**	**70.23**	**55**	P	**P**	**09 48 12.3**	**-0.8**
	0.3nm,0.6s,mb3.1,baz=5.7,slow=6.0,SNR=3.6						
PDAR	**Pinedale Array**	**72.21**	**47**	P	**P**	**09 48 24.6**	**-0.3**
	0.7nm,0.6s,mb3.5,baz=285,slow=3.3,SNR=9.1						

*ISCJB **07** 09:53:04.6±2.6, 7.″49N±0.″04×76.″48W±0.″06, h33km±21km, mb3.9/11, Error ellipse: s-maj=9.8km s-min=6.9km az=10.2*
*NEIC **07** 09:53:06.7±0.8, 7.″37N×76.″55W, h36km±10km, mb4.3/2, Error ellipse: s-maj=12.4km s-min=8.4km az=70.0*
*IDC **07** 09:53:13.1±2.0, 7.″50N×76.″23W, h90km±21km, mb3.4/9, mb1 3.7/12, mb1mx3.5/24, mbtmp3.5/12, MS3.1/1, Ms1 3.1/1, ms1mx2.6/17, Error ellipse: s-maj=19.8km s-min=14.3km az=69.0*
ISC 07 09:53:07.0±2.7, 7.″47N±0.″04×76.″49W±0.″06, h33km±21km, n23, σ1§22/28, mb3.9/11, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.37**	**140**	P	**Pn**	**09 54 00.6**	**+3.2**
	22nm,0.3s,baz=305,slow=7.0,SNR=18						
ROSC				S	**Sn**	**09 54 42.2**	**+5.9**
	22nm,0.3s,baz=299,slow=18,SNR=6.9						
ROSC	**El Rosal**	**3.37**	**140**	Pn	**Pn**	**09 53 57.2**	**-0.3**
ROSC				S	**Sn**	**09 54 42.2**	**+5.9**
BCIP	**Isla Barro Col**	**3.71**	**297**	*e*Pn	**Pn**	**09 54 01.3**	**-0.7**
SDV	**Santo Domingo**	**5.97**	**76**	P	**Pn**	**09 54 33.6**	**+0.5**
	3.7nm,0.3s,baz=335,slow=12,SNR=31						
SDV				S	**Sn**	**09 55 40.5**	**+0.1**
	16nm,0.3s,baz=31,slow=18,SNR=9.6						
OTAV	**Otavalo**	**7.45**	**195**	Pn	**Pn**	**09 54 51.6**	**-1.9**
	10nm,0.9s						
OTAV				*e*Sn	**Sn**	**09 56 18.1**	**+1.3**
MTDJ	**Mount Denham**	**10.74**	**355**	*e*Pn	**Pn**	**09 55 37.9**	**-0.7**
MTDJ				*e*Sn	**Sn**	**09 57 37.2**	**-0.4**
SDDR	**Presa de Saban**	**12.51**	**23**	*e*Pn	**Pn**	**09 56 05.4**	**+2.6**
SDDR				*e*Sn	**Sn**	**09 58 20.7**	**-0.4**
MTP	**Monte Pirata**	**15.00**	**44**	Pn	**Pn**	**09 56 31.9**	**-4.8**
APG	**El Apazote**	**15.61**	**300**	P	**Pn**	**09 56 50.9**	**+6.3**
	0.1nm,0.3s,baz=101,slow=10,SNR=3.9						
CMIG	**Matias Romero**	**20.33**	**300**	LR	LR	10 05 30.8	
	comp=Z,60nm,21.4s,baz=145,slow=36						
LPAZ	**La Paz**	**25.02**	**161**	P	**P**	**09 58 28.3**	**+0.1**
	0.8nm,0.8s,mb3.3,baz=328,slow=12,SNR=3.0						
LPAZ	**La Paz**	**25.02**	**161**	P	**P**	**09 58 28.3**	**+0.1**
SIV	**San Ignacio**	**27.87**	**147**	P	**P**	**09 58 51.5**	**-2.4**
	0.8nm,0.5s,mb3.6,baz=335,slow=13,SNR=6.7						
CCM	**Cathedral Cave**	**33.25**	**338**	*e*P	**P**	**09 59 45.4**	**+4.2**
	4.4nm,0.6s,mb4.6						
ULM	**Lac du Bonnet**	**45.61**	**343**	P	**P**	**10 01 24.4**	**+0.4**
	2.1nm,0.8s,mb4.1,baz=146,slow=6.7,SNR=4.9						
PDAR	**Pinedale Array**	**45.62**	**326**	P	**P**	**10 01 25.9**	**+1.7**
	0.8nm,0.6s,mb3.8,baz=124,slow=8.5,SNR=12						
REDW	**Red Top Meadow**	**46.73**	**326**	*e*P	**P**	**10 01 38.4**	**+5.4**
	1.5nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**48.66**	**316**	P	**P**	**10 01 51.0**	**+2.9**
	0.6nm,0.8s,mb3.7,baz=138,slow=9.8,SNR=4.0						
YKA	**Yellowknife Ar**	**61.53**	**341**	P	**P**	**10 03 19.8**	**-0.7**
	0.9nm,0.8s,mb4.0,baz=130,slow=7.1,SNR=8.2						
INK	**Inuvik**	**71.30**	**341**	P	**P**	**10 04 22.2**	**-0.7**
	0.4nm,0.7s,mb3.5,baz=89,slow=3.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**76.88**	**78**	P	**P**	**10 04 55.5**	**-1.1**
	0.9nm,0.6s,mb3.9,baz=289,slow=6.1,SNR=6.4						
TORD	**Torodi Ar. Bea**	**76.88**	**78**	P	**P**	**10 04 55.5**	**-1.1**
ARCES	**ARCESS Array B**	**87.22**	**20**	P	**P**	**10 05 49.8**	**0.0**
	0.5nm,0.6s,mb4.0,baz=293,slow=4.7,SNR=5.6						

*ISCJB **07** 09:57:47.6±0.6, 59.″42N±0.″04×16.″12E±0.″06, h0km, Error ellipse: s-maj=5.5km s-min=4.2km az=2.5*
*UPP **07** 09:57:47.4, 59.″15N×15.″96E, h0km, ML2.3, Mining explosion.*
*CSEM **07** 09:57:47.4±0.3, 59.″18N×16.″00E, h1km, ML2.2, Error ellipse: s-maj=7.5km s-min=5.5km az=166.0, Mining explosion.*
*HEL **07** 09:57:48.2±0.2, 59.″17N×15.″99E, h0km, ML2.2, ML2.3(UPP), Explosion*
*IDC **07** 09:57:49.0±1.8, 59.″20N×15.″94E, h0km, mb1 3.4/2, mb1mx3.0/25, mbtmp3.3/2, ML2.5/3, Error ellipse: s-maj=19.2km s-min=7.0km az=8.0*
ISC 07 09:57:47.8±0.6, 59.″27N±0.″05×16.″00E±0.″05, h0km, n46, σ1§20/63, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKU	**Eskilstuna**	**0.20**	**99**	*i* P	**Pg**	**09 57 52.1**	**+0.4**
ESKU				*i* S	**Sg**	**09 57 55.4**	**+1.1**
ESKU	**Eskilstuna**	**0.20**	**99**	P	**Pg**	**09 57 52.0**	**+0.3**
ESKU				S	**Sg**	**09 57 55.4**	**+1.1**
NRAU	**Nora**	**0.58**	**302**	*i* P	**Pg**	**09 57 59.3**	**+0.4**
NRAU	**Nora**	**0.58**	**302**	P	**Pg**	**09 57 59.3**	**+0.4**
BACU	**Backbrunna**	**0.82**	**43**	*e*P	**Pg**	**09 58 04.6**	**+1.2**
BACU	**Backbrunna**	**0.82**	**43**	P	**Pg**	**09 58 04.6**	**+1.2**
NYNU	**Nynaeshamn**	**1.06**	**103**	*e*P	**Pg**	**09 58 07.2**	**-0.9**
NYNU	**Nynaeshamn**	**1.06**	**103**	P	**Pg**	**09 58 07.1**	**-1.0**
OSTU	**Oestervaala**	**1.12**	**30**	*e*P	**Pg**	**09 58 10.2**	**+0.9**
OSTU	**Oestervaala**	**1.12**	**30**	P	**Pg**	**09 58 10.2**	**+0.9**
FALU	**Falun**	**1.24**	**356**	*e*P	**Pg**	**09 58 12.3**	**+0.9**
FALU	**Falun**	**1.24**	**356**	P	**Pg**	**09 58 12.4**	**+1.0**
FLYU	**Flymyra**	**1.29**	**47**	*e*P	**Pg**	**09 58 13.0**	**+0.6**
FLYU	**Flymyra**	**1.29**	**47**	P	**Pg**	**09 58 13.0**	**+0.6**
NRTU	**Norrtaelje**	**1.40**	**72**	*e*P	**Pg**	**09 58 14.4**	**-0.2**
NRTU	**Norrtaelje**	**1.40**	**72**	P	**Pg**	**09 58 14.4**	**-0.2**
HFS	**Hagfors**	**1.46**	**308**	Pg	**Pg**	**09 58 15.4**	**-0.4**
	2.1nm,0.3s,baz=128,slow=17,SNR=38						
HFS				Lg		09 58 35.3	
	2.3nm,0.3s,baz=131,slow=34,SNR=10						
NASU	**Vaermlandsnaes**	**1.49**	**258**	*e*P	**Pn**	**09 58 14.2**	**-1.6**
NASU	**Vaermlandsnaes**	**1.49**	**258**	P	**Pn**	**09 58 14.2**	**-1.6**
FORU	**Forsmark**	**1.57**	**43**	*e*P	**Pn**	**09 58 18.3**	**+1.4**
FORU	**Forsmark**	**1.57**	**43**	P	**Pn**	**09 58 18.3**	**+1.4**
VSTU	**Vaestervik**	**1.63**	**170**	*e*P	**Pn**	**09 58 15.6**	**-2.1**
VSTU	**Vaestervik**	**1.63**	**170**	P	**Pn**	**09 58 15.6**	**-2.1**
GRAU	**Graesoe**	**1.67**	**49**	*e*P	**Pn**	**09 58 19.7**	**+1.4**
GRAU	**Graesoe**	**1.67**	**49**	P	**Pn**	**09 58 19.7**	**+1.5**
AAL	**Aland**	**2.22**	**64**	*e*P	**Pn**	**09 58 27.3**	**+1.6**
AAL				*e*S	**Sn**	**09 58 54.3**	**+0.5**
AAL				*e*SB	**Sb**	**09 58 57.1**	**+0.4**
AAL	**Aland**	**2.22**	**64**	P	**Pn**	**09 58 27.3**	**+1.5**
AAL				S	**Sn**	**09 58 54.3**	**+0.5**
AAL				Sb	**Sb**	**09 58 57.0**	**+0.3**
NOA	**NORSAR Array B**	**2.98**	**309**	Pn	**Pn**	**09 58 36.8**	**+0.5**
	0.2nm,0.3s,baz=129,slow=18,SNR=2.9						
NOA				Pg	**Pg**	**09 58 42.2**	**-2.7**
	0.4nm,0.3s,baz=125,slow=17,SNR=4.3						
NOA				Sn	**Sn**	**09 59 13.2**	**+0.5**
	1.1nm,0.3s,baz=52,slow=23,SNR=5.9						
NOA				Lg		09 59 20.2	
	1.2nm,0.3s,baz=94,slow=18,SNR=6.3						
RAF	**Rauma**	**3.38**	**56**	*e*P	**Pn**	**09 58 42.6**	**+0.9**
RAF				*e*S	**Sn**	**09 59 22.8**	**+0.4**
RAF				*e*SG	**Sg**	**09 59 34.1**	**-2.0**
RAF				MSG		09 59 39.5	
	comp=Z,3.4nm,0.3s						
RAF	**Rauma**	**3.38**	**56**	P	**Pn**	**09 58 42.5**	**+0.8**
RAF				S	**Sn**	**09 59 22.7**	**+0.3**
RAF				Sg	**Sg**	**09 59 34.1**	**-2.1**
	comp=Z,3.4nm,0.3s						
MEF	**Metsahovi**	**4.35**	**74**	*e*SG	**Sg**	**10 00 02.0**	**-5.4**
MEF				MSG		10 00 06.2	
	comp=Z,3.6nm,0.3s						
VAF	**Ylistaro**	**4.98**	**38**	*e*SG	**Sg**	**10 00 23.0**	**-4.5**
VAF	**Ylistaro**	**4.98**	**38**	Sg	**Sg**	**10 00 23.0**	**-4.5**
PVF	**Pernaja**	**5.13**	**71**	*e*SG	**Sg**	**10 00 25.8**	**-6.4**
PVF				MSG		10 00 29.0	
	comp=Z,2.7nm,0.3s						
PVF	**Pernaja**	**5.13**	**71**	Sg	**Sg**	**10 00 25.8**	**-6.5**
	comp=Z,2.7nm,0.3s						
KEF	**Keuruu**	**5.24**	**52**	*e*S	**Sn**	**10 00 06.2**	**-1.9**
KEF				*e*SG	**Sg**	**10 00 29.9**	**-5.9**
KEF				MSG		10 00 32.2	
	comp=Z,2.2nm,0.4s						
KEF	**Keuruu**	**5.24**	**52**	S	**Sn**	**10 00 06.2**	**-1.9**
FIA0	**FINESS Array S**	**5.46**	**62**	*e*S	**Sn**	**10 00 12.1**	**-1.5**
FIA0				*e*SG	**Sg**	**10 00 37.0**	**-5.9**
FIA0				MSG		10 00 41.0	
	comp=Z,2.1nm,0.3s						
FIA0	**FINESS Array S**	**5.46**	**62**	S	**Sn**	**10 00 12.1**	**-1.5**
FINES	**FINESS Array B**	**5.46**	**62**	Pn	**Pn**	**09 59 11.2**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=256,slow=11,SNR=4.7						
FINES				Sn	**Sn**	**10 00 14.7**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=248,slow=20,SNR=7.8						
FINES				Lg		10 00 39.3	
	comp=Z,0.7nm,0.3s,baz=258,slow=25,SNR=5.3						
KAF	**Kangasniemi**	**5.81**	**56**	*e*S	**Sn**	**10 00 20.3**	**-2.0**
KAF				*e*SG	**Sg**	**10 00 47.1**	**-7.1**
KAF				MSG		10 00 53.2	
	comp=Z,2.0nm,0.3s						
KAF	**Kangasniemi**	**5.81**	**56**	S	**Sn**	**10 00 20.3**	**-2.0**
VJF	**Virojoki**	**5.95**	**73**	*e*SG	**Sg**	**10 00 50.5**	**-8.3**
SUF	**Sumiainen**	**6.03**	**51**	*e*S	**Sn**	**10 00 26.6**	**-1.1**
SUF				*e*SG	**Sg**	**10 00 54.5**	**-6.7**
SUF				MSG		10 00 58.6	
	comp=Z,1.8nm,0.3s						
SUF	**Sumiainen**	**6.03**	**51**	S	**Sn**	**10 00 26.6**	**-1.1**
ARCES	**ARCESS Array B**	**11.08**	**18**	Pn	**Pn**	**10 00 26.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=204,slow=13,SNR=3.8						

*BJI **07** 09:58:11.7, 36.″36N×142.″32E, h31km, mB4.7/7, mb4.7/19, Ms4.8/10, Ms7 4.6/9*
*IDC **07** 09:58:12.1±0.5, 36.″17N×141.″81E, h0km, mb4.3/25, mb1 4.4/29, mb1mx4.3/36, mbtmp4.4/29, ML4.1/4, Error ellipse: s-maj=14.9km s-min=12.3km az=97.0*
*JMA **07** 09:58:14.4±0.2, 36.″25N×141.″89E, h65km±4km, M4.4*
*ISCJB **07** 09:58:14.2±1.3, 36.″24N±0.″03×141.″90E±0.″04, h25km±9km, mb4.4/40, Error ellipse: s-maj=5.6km s-min=4.8km az=20.5*
*MOS **07** 09:58:16.1±1.0, 36.″36N×141.″78E, h33km, mb4.9/10, Error ellipse: s-maj=12.3km s-min=7.8km az=124.1*
*NEIC **07** 09:58:17.6±1.2, 36.″17N×141.″78E, h36km±10km, mb4.8/9, Error ellipse: s-maj=7.7km s-min=6.7km az=106.0*
ISC 07 09:58:14.2±1.1, 36.″24N±0.″03×141.″87E±0.″04, h14km±6km, n92, σ0§93/103, mb4.4/40, 3C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**237**	P	**Pg**	**09 58 32.9**	**-0.2**
CHOJ				*e*S	**Sg**	**09 58 47.1**	**+1.3**
JHO	**Hitachi**	**1.11**	**290**	⇓P	**Pb**	**09 58 34.1**	**-1.1**
JHO				*e*S	**Sb**	**09 58 49.5**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.22**	**316**	⇓P	**Pn**	**09 58 35.7**	**-1.1**
JFK	**Kawauchi**	**1.38**	**325**	⇓P	**Pn**	**09 58 38.2**	**-0.9**
BSO1	**Boso 1**	**1.74**	**205**	P	**Pn**	**09 58 43.7**	**-0.3**
BSO1				*e*S	**Sn**	**09 59 05.1**	**-0.8**
JFT	**Otama**	**1.77**	**317**	P	**Pn**	**09 58 44.8**	**+0.3**
JFT				*e*S	**Sn**	**09 59 06.7**	**-0.1**
BSO3	**Boso 3**	**1.81**	**218**	P	**Pn**	**09 58 44.8**	**-0.2**
BSO3				*e*S	**Sn**	**09 59 07.7**	**0.0**
JMM	**Marumori**	**1.84**	**333**	⇑P	**Pn**	**09 58 44.9**	**-0.5**
JAG	**Ashikaga**	**1.96**	**276**	P	**Pn**	**09 58 46.2**	**-0.8**
JAG				*e*S	**Sn**	**09 59 10.5**	**-0.9**
JFY	**Yanaizu**	**2.09**	**305**	P	**Pn**	**09 58 49.3**	**+0.5**
JFY				*e*S	**Sn**	**09 59 14.3**	**-0.4**
JKT	**Katashina**	**2.17**	**285**	P	**Pn**	**09 58 50.2**	**+0.2**
JIO	**Ouri**	**2.25**	**350**	⇑P	**Pn**	**09 58 50.4**	**-0.7**
JIO				*e*S	**Sn**	**09 59 17.3**	**-1.4**
MJAR	**Matsushiro Arr**	**2.97**	**277**	Pn	**Pn**	**09 59 01.3**	**+0.4**
	40nm,0.3s,baz=111,slow=8.8,SNR=176						

comp=Z,16nm,1.1s,mb4.6
CHTO Chiang Mai 41.46 257 *e*P **P 10 06 00.8 +0.1**
comp=Z,16nm,1.1s,mb4.6
CMAR Chiang Mai Arr 41.66 257 P **P 10 06 01.4 -0.9**
comp=Z,1.2nm,0.4s,mb3.9,baz=52,slow=5.3,SNR=6.6
ZAA0 Zalesovo Array 42.72 313 *e*P **P 10 06 10.8 +0.1**
ZALV Zalesovo Beam 42.72 313 P **P 10 06 10.8 +0.2**
comp=Z,7.1nm,0.8s,mb4.5,baz=90,slow=6.5,SNR=15
ZALV Zalesovo Beam 42.72 313 P **P 10 06 10.8 +0.2**
NVS Novosibirsk 43.66 314 *e*P **P 10 06 18.1 -0.1**
MK31 Makanchi Array 44.85 303 *e*P **P 10 06 28.3 +0.4**
MKAR Makanchi Array 44.85 303 P **P 10 06 28.2 +0.3**
comp=Z,5.1nm,0.7s,mb4.5,baz=96,slow=8.7,SNR=22
MKAR Makanchi Array 44.85 303 P **P 10 06 28.2 +0.3**
KAPI Kappang 45.97 211 P **P 10 06 36.6 -0.4**
comp=Z,5.9nm,0.8s,mb4.6,baz=12,slow=9.3,SNR=3.5
KURK Kurchatov 46.71 309 *e*P **P 10 06 42.2 -0.3**
KURK pmax pmax
comp=Z,35nm,0.8s,mb5.3
KURK Kurchatov 46.71 309 P **P 10 06 42.3 -0.2**
comp=Z,9.6nm,0.7s,mb4.8,baz=84,slow=7.8,SNR=34
KURK Kurchatov 46.71 309 *e*P **P 10 06 42.2 -0.3**
comp=Z,35nm,0.8s,mb5.3
UCH Uchtor 51.30 299 *e*P **P 10 07 19.2 +1.4**
comp=Z,2.3nm,0.8s,mb4.2
BVAR Borovoye Array 51.38 313 P **P 10 07 18.5 +0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=79,slow=7.7,SNR=12
INK Inuvik 54.93 27 P **P 10 07 45.0 +0.8**
comp=Z,3.0nm,0.6s,mb4.5,baz=300,slow=6.0,SNR=28
WRA Warramunga Arr 56.32 189 P **P 10 07 53.8 -0.9**
comp=Z,1.4nm,0.7s,mb4.1,baz=7.3,slow=7.4,SNR=11
ASAR Alice Springs 60.05 188 P **P 10 08 20.7 0.0**
comp=Z,0.8nm,0.8s,mb3.8,baz=12,slow=7.7,SNR=9.4
SPITS Spitsbergen Ar 61.38 349 P **P 10 08 30.2 +1.0**
comp=Z,3.1nm,0.8s,mb4.5,baz=97,slow=14,SNR=3.1
YKA Yellowknife Ar 64.31 30 P **P 10 08 49.5 +0.6**
comp=Z,1.1nm,0.8s,mb4.0,baz=300,slow=6.6,SNR=13
YKA Yellowknife Ar 64.31 30 P **P 10 08 49.5 +0.6**
ARCES ARCESS Array B 64.87 340 P **P 10 08 53.0 +0.6**
comp=Z,2.6nm,0.7s,mb4.3,baz=52,slow=7.9,SNR=8.7
JOF Joensuu 66.84 332 *e*P **P 10 09 04.1 -1.1**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 66.84 332 *e*p **P 10 09 04.1 -1.1**
comp=Z,2.5nm,0.6s,mb4.4
STKA Stephens Creek 67.76 180 P **P 10 09 10.3 -1.0**
comp=Z,1.9nm,0.8s,mb4.2,baz=34,slow=11,SNR=3.7
KAF Kangasniemi 69.18 333 *e*P **P 10 09 18.7 -1.2**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KAF Kangasniemi 69.18 333 *e*p **P 10 09 18.7 -1.2**
comp=Z,2.4nm,0.6s,mb4.3
FINES FINESS Array B 69.69 333 P **P 10 09 23.1 0.0**
comp=Z,5.3nm,0.8s,mb4.5,baz=64,slow=8.7,SNR=13
JTMT Jette 72.32 43 *e*P **P 10 09 38.8 -0.5**
FCC Fort Churchill 74.55 27 *e*P **P 10 09 52.3 0.0**
comp=Z,0.4nm,1.3s
NB2 NORSAR Subarra 75.06 338 P **P 10 09 55.3 +0.2**
comp=Z,7.4nm,0.9s,mb4.6,baz=39,slow=5.9
NOA NORSAR Array B 75.06 338 P **P 10 09 55.4 +0.2**
comp=Z,4.5nm,0.8s,mb4.5,baz=39,slow=5.7,SNR=15
AKASG Malin Array Be 75.15 323 P **P 10 09 55.6 -0.3**
comp=Z,4.5nm,0.6s,mb4.6,baz=47,slow=5.7,SNR=23
NVAR Mina Array Bea 75.18 53 P **P 10 09 57.4 +1.2**
comp=Z,1.0nm,0.7s,mb3.8,baz=287,slow=7.0,SNR=8.4
PDAR Pinedale Array 77.97 46 P **P 10 10 13.0 +1.0**
comp=Z,0.8nm,0.7s,mb3.8,baz=301,slow=3.7,SNR=8.5
BORG Borgarnes 78.48 353 P **P 10 10 16.1 +1.7**
comp=Z,2.8nm,0.3s,mb4.6,baz=27,slow=3.6,SNR=3.5
MSU Marysvale 79.01 50 *e*P **P 10 10 20.0 +2.2**
BRTR Keskin Array B 79.65 312 P **P 10 10 21.6 +0.3**
comp=Z,2.2nm,0.9s,mb4.1,baz=86,slow=4.1,SNR=8.6
SRU San Rafael 79.66 49 *e*P **P 10 10 23.0 +1.6**
SRU pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
SRU San Rafael 79.66 49 *e*P **P 10 10 23.0 +1.7**
comp=Z,7.7nm,1.1s,mb4.5
ULM Lac du Bonnet 79.97 33 P **P 10 10 23.0 +0.2**
comp=Z,0.6nm,0.5s,mb3.8,baz=252,slow=8.5,SNR=3.4
ULM Lac du Bonnet 79.97 33 P **P 10 10 23.0 +0.2**
CLL Collm 81.97 330 *i* P **P 10 10 33.5 +0.1**
comp=Z,5.0nm,0.7s,mb4.5
GERES GERESS Array B 83.58 328 P **P 10 10 41.9 +0.1**
comp=Z,1.2nm,0.6s,mb4.2,baz=48,slow=6.1,SNR=8.4
EKA Eskdalemuir Ar 84.00 341 P **P 10 10 44.4 +0.5**
comp=Z,1.3nm,0.8s,mb4.1,baz=32,slow=4.9,SNR=4.7
BNM Barren Site 85.24 51 *e*P **P 10 10 55.0 +4.5**
DAVOS Davos 86.79 329 P **P 10 10 59.3 +1.3**
DAVOX Davos/Dischmat 86.80 329 P **P 10 10 59.2 +1.2**
comp=Z,2.9nm,0.9s,mb4.5,baz=110,slow=7.6,SNR=3.7
MCWV Mont Chateau 95.27 31 *e*P **P 10 11 35.0 -2.6**
LHS Liberty Hill 99.18 35 *e*P **P 10 12 04.0 +8.6**
LPAZ La Paz 146.77 61 PKPbc PKPbc 10 17 57.1 +0.8
comp=Z,1.5nm,0.6s,baz=346,slow=3.7,SNR=10
LPAZ La Paz 146.77 61 *e*PKPbc PKPbc 10 17 57.4 +1.1
SIV San Ignacio 151.31 51 PKPbc PKPbc 10 18 08.1 +0.2
comp=Z,2.4nm,0.7s,baz=273,slow=2.7,SNR=18

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*IDC **07** 09:58:58.9±0.5, 36.°14N×141.°81E, h0km, mb4.6/29, mb1 4.6/32, mb1mx4.6/37, mbtmp4.6/32, ML4.5/3, MS4.0/5, Ms1 4.0/5, ms1mx3.6/14, Error ellipse: s-maj=13.8km s-min=12.5km az=106.0*
*NIED **07** 09:59:00, 36.°20N×141.°80E, h23km, Mw4.9 Best double couple: $M_0$2.12000×10^16 NP1:ϕ_s16.00000°, δ64.00000°, λ91.00000°. NP2:ϕ_s193.00000°, δ26.00000°, λ88.00000°.*
*JMA **07** 09:59:01.5±0.2, 36.°25N×141.°88E, h24km, M5.0*
JMA Felt II J1.
*ISCJB **07** 09:59:02.5±0.2, 36.°18N±0.°02×141.°82E±0.°03, h35km, mb4.8/104, MS4.5/34, Error ellipse: s-maj=3.6km s-min=3.1km az=158.1*
*MOS **07** 09:59:02.7±1.0, 36.°22N×141.°72E, h33km, mb5.0/44, MS4.6/16, Error ellipse: s-maj=9.6km s-min=5.6km az=117.4*
*BJI **07** 09:59:02.0, 36.°20N×141.°50E, h18km, mB4.8/23, mb4.9/47, Ms4.6/48, Ms7 4.5/43*
*NEIC **07** 09:59:04.3±0.2, 36.°14N×141.°70E, mb4.7/38, MW4.8(NIED), Error ellipse: s-maj=5.7km s-min=4.8km az=148.0*
NEIC Recorded [2 JMA] in Chiba, Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma, Miyagi and Saitama.
*GCMT **07** 09:59:04.3±0.5, 36.°12N×141.°91E, h30km±1km, MW4.9/56, Moment Tensor Solution. s29,c33; s56,c73; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}2.06±.15; $M_{\theta\theta}$-0.24±.09; $M_{\phi\phi}$-1.81±.10; $M_{r\theta}$0.73±.14; $M_{\theta\phi}$-0.61±.06; $M_{\phi r}$1.74±.12; Best double couple: $M_0$2.77800×10^16 NP1:ϕ_s196.00000°, δ24.00000°, λ85.00000°. NP2: ϕ_s21.00000°, δ66.00000°, λ92.00000°. Principal axes: T 2.8010, Plg69.0000°, Azm295.0000°; N -0.0390, Plg2.0000°, Azm201.0000°; P -2.7550, Plg21.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **07** 09:59:07.7, 36.°83N×142.°03E, h33km, mb4.7, Off east coast of Honshu, Japan*
*DJA **07** 09:59:08, 36.°17N×140.°59E, h10km, mb5.1/13*
ISC 07 09:59:04.8±0.2, **36.°22N**±0.°02×**141.°74E**±0.°03, **h37**km, **h37**km±1.1km**:pP-P, n217,** σ1.°06/247, **mb4.8**/104, **MS4.5**/34, **12C-3D, Near east coast of eastern Honshu**

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

CHOJ Chosi 0.89 234 P **Pn 09 59 19.9 -0.8**
CHOJ *e*S **Sn 09 59 33.0 +0.7**
JHO Hitachi 1.02 293 P **Pn 09 59 21.0 -1.6**
JHO *e*S **Sn 09 59 36.4 +0.6**
ONAJ Iwakimizuishiy 1.16 319 P **Pn 09 59 23.3 -1.2**
JFK Kawauchi 1.34 329 P **Pn 09 59 25.4 -1.6**
JFK *e*S **Sn 09 59 43.3 -0.2**
BSO1 Boso 1 1.69 202 *e*S **Sn 09 59 53.2 +1.1**
JFT Otama 1.72 319 P **Pn 09 59 32.0 -0.2**
JFT *e*S **Sn 09 59 54.7 +1.8**
BSO3 Boso 3 1.74 216 P **Pn 09 59 32.1 -0.3**
BSO3 *e*S **Sn 09 59 55.0 +1.6**
JMM Marumori 1.81 335 P **Pn 09 59 33.3 -0.1**
JMM *e*S **Sn 09 59 55.9 +0.8**
JAG Ashikaga 1.86 277 P **Pn 09 59 33.7 -0.4**
JAG *e*S **Sn 09 59 57.5 +1.1**
JFY Yanaizu 2.02 306 P **Pn 09 59 36.4 +0.1**
JKT Katashina 2.08 286 P **Pn 09 59 37.7 +0.5**
JKT *e*S **Sn 10 00 03.6 +1.7**
JIO Ouri 2.25 352 *e*S **Sn 10 00 03.9 -2.1**
MJAR Matsushiro Arr 2.87 277 Pn **Pn 09 59 46.8 -1.2**
72nm,0.3s,baz=153,slow=31,SNR=12
MJAR Sn **Sn 10 00 24.8 +3.5**
81nm,0.3s,baz=146,slow=15,SNR=6.1
MJAR Matsushiro Arr 2.87 277 Pn **Pn 09 59 46.8 -1.2**
MJAR Sn **Sn 10 00 24.8 +3.5**
MAJO Matsushiro 2.87 277 *e*P **Pn 09 59 47.4 -0.6**
MAT Matsushiro 2.87 277 P **Pn 09 59 49.1 +1.1**
MAT S **Sn 10 00 23.2 +1.9**
JHJ Hachijo jima 2 3.49 208 Pn **Pn 09 59 49.1 -7.5**
106nm,0.3s,baz=29,slow=24,SNR=11
JHJ Sn **Sn 10 00 34.4 -2.2**
220nm,0.3s,baz=287,slow=23,SNR=7.6
JHJ LR LR 10 01 09.9
comp=Z,1μm,19.1s,baz=280,slow=38
ERM Erimo 5.89 10 Pn **Pn 10 00 30.3 +0.8**
ERM *e*Sn **Sn 10 01 33.5 -2.2**
ASAJ Asahikawa 7.91 4 P **Pn 10 00 55.5 -1.7**
ASAJ pmax pmax
comp=Z,7.0nm,0.3s
ASAJ Asahikawa 7.91 4 Pn **Pn 10 00 55.5 -1.7**
comp=Z,7.4nm,0.3s,baz=232,slow=13,SNR=10.0
YUK Yuzh-Kuril'sk 8.42 21 *e*P **Pn 10 01 00.5 -3.6**
CBIJ Chichi jima 9.11 178 Pn **Pn 10 01 08.4 -5.3**
comp=Z,21nm,0.3s,baz=273,slow=23,SNR=4.5
CBIJ Sn **Sn 10 02 45.6 -9.3**
comp=Z,53nm,0.3s,baz=119,slow=23,SNR=4.6
YSS Yuzh-Sakhalins 10.75 4 *e*P **Pn 10 01 33.5 -2.6**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,900nm,16.0s
YSS MLR MLR
comp=E,2μm,15.0s
YSS Yuzh-Sakhalins 10.75 4 *e*Pn **Pn 10 01 33.7 -2.4**
comp=E,26nm,0.8s
KSRS Korea Array 11.14 280 P **Pn 10 01 44.9 +3.3**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,2μm,18.9s
KSRS Korea Array 11.14 280 Pn **Pn 10 01 44.9 +3.3**
comp=Z,0.5nm,0.3s,baz=95,slow=13,SNR=15
KSRS LR LR 10 05 56.2
comp=Z,2μm,18.9s,baz=82,slow=37
MDJ Mudanjiang 12.48 316 P **Pn 10 01 59.5 -0.3**
MDJ S **Sn 10 04 15.8 -1.6**
MDJ pmax pmax
comp=Z,5.0nm,0.5s
MDJ pmax pmax
comp=Z,150nm,7.4s
MDJ LR LR
comp=N,1μm,17.3s
MDJ LR LR
comp=E,1μm,18.8s
MDJ LR LR
comp=Z,3μm,16.7s
MDJ Mudanjiang 12.48 316 *e*Pn **Pn 10 02 01.9 +2.1**
comp=Z,68nm,1.3s
HABR Khabarovsk 13.20 340 P **Pn 10 02 04.7 -4.8**
HABR MLR MLR
comp=Z,1μm,16.0s
CN2 Changchun 14.59 306 *e*P **Pn 10 02 30.0 +1.5**
CN2 *e*S **Sn 10 05 11.5 +2.7**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,15.0s
CN2 LR LR
comp=E,2μm,15.0s
CN2 LR LR
comp=Z,2μm,17.0s
JOW Kunigami 14.80 235 Pn **Pn 10 02 36.5 +5.0**
comp=Z,0.9nm,0.3s,baz=46,slow=8.1,SNR=7.3
JOW LR LR 10 08 07.7
comp=Z,800nm,20.9s,baz=65,slow=37
SNY Shenyang 15.18 297 ⇑P **Pn 10 02 34.9 -1.4**
SNY pmax pmax
comp=Z,19nm,1.1s
SNY pmax pmax
comp=Z,230nm,12.0s
SNY LR LR
comp=N,1μm,14.2s
SNY LR LR
comp=E,2μm,16.8s
SNY LR LR
comp=Z,2μm,17.7s
DL2 Dalian 16.17 286 P **Pn 10 02 49.2 0.0**
DL2 *e*S **S 10 05 45.4 -14**
DL2 pmax pmax
comp=Z,20nm,1.4s
DL2 pmax pmax
comp=Z,110nm,9.4s
DL2 LR LR
comp=N,650nm,11.7s
DL2 LR LR
comp=E,1μm,13.8s
DL2 LR LR
comp=Z,2μm,16.2s
SSE Sheshan 17.85 259 P **Pn 10 03 09.4 -0.8**
SSE S **S 10 06 27.4 -6.4**
SSE pmax pmax
comp=Z,33nm,0.7s
SSE pmax pmax
comp=Z,190nm,10.5s
SSE LR LR
comp=N,720nm,15.6s
SSE LR LR
comp=E,650nm,15.6s
SSE LR LR
comp=Z,830nm,13.9s
NJ2 Nanjing 19.39 264 *e*P **Pn 10 03 33.2 +4.4**
NJ2 pP pP 10 03 40.4 +3.4
NJ2 sP sP 10 03 45.1 +3.4
NJ2 PP 10 03 53.1
NJ2 S **S 10 07 03.0 -1.8**
NJ2 sS sS 10 07 15.0 -4.9
NJ2 pmax pmax
comp=Z,30nm,1.3s
NJ2 pmax pmax
comp=Z,180nm,3.6s
NJ2 LR LR
comp=N,1μm,12.3s
NJ2 LR LR
comp=E,370nm,12.5s
NJ2 LR LR
comp=Z,23μm,11.9s
TIA Tai'an 19.86 277 *e*P **Pn 10 03 29.8 -4.6**
PETK Petropavlovsk- 20.26 29 LR LR 10 11 17.6
comp=Z,266nm,20.8s,MS3.6,baz=219,slow=36
BJI Beijing 20.45 288 P **P 10 03 37.4 -1.6**
BJI pmax pmax
comp=Z,22nm,1.4s
BJI pmax pmax
comp=Z,120nm,3.4s
BJI LR LR
comp=N,680nm,14.1s,MS4.4
BJI LR LR
comp=E,890nm,14.5s,MS4.4
BJI LR LR
comp=Z,580nm,16.1s,MS4.0
BJT Baijiatuau 20.45 288 *e*P **P 10 03 37.3 -1.7**
BJT pmax pmax
comp=Z,25nm,0.5s
BJT Baijiatuau 20.45 288 *e*P **P 10 03 37.3 -1.7**
comp=Z,25nm,0.5s
PET Petropavlovsk 20.58 30 *e*P **P 10 03 49.6 +9.4**
PET *e*S **S 10 07 33.6 +5.4**
PET pmax pmax
comp=Z,100nm,16.5s
PET MLR MLR
comp=Z,400nm,19.0s,MS3.8
SSLB Suanglung 21.80 241 *e*P **P 10 03 50.9 -2.8**
comp=Z,21nm,0.8s,mb4.6
TPUB Ta-pu 22.34 241 *e*P **P 10 03 55.9 -3.5**
comp=Z,22nm,0.6s,mb4.8
QZH Quanzhou 22.82 247⇑*i*P **P 10 04 03.2 -1.3**
QZH S **S 10 08 05.5 -6.0**
QZH pmax pmax
comp=Z,60nm,0.9s,mb5.0
QZH LR LR
comp=N,1μm,16.4s,MS4.6
QZH LR LR
comp=E,920nm,11.7s,MS4.6
QZH LR LR
comp=Z,2μm,18.2s
NRGR Nerungri 23.44 336 *e*P **P 10 04 10.0 -0.6**
NRGR S **S 10 08 20.3 -0.6**
NRGR smax
comp=N,16nm,0.6s
WHN Wuhan 23.52 264 P **P 10 04 09.8 -1.8**
WHN S **S 10 08 19.2 -3.6**
WHN LR LR
comp=N,1μm,14.8s,MS4.9
WHN LR LR
comp=E,3μm,15.4s,MS4.9
WHN LR LR
comp=Z,3μm,15.7s,MS4.9
CLNS Chul'man 23.53 336 *e*P **P 10 04 09.5 -1.9**
CLNS *e**PP 10 04 20.2
CLNS *e* 10 07 57.0
CLNS *e*S **S 10 08 18.9 -3.5**
CLNS *e*SS 10 09 30.8
CLNS pmax pmax
comp=E,14nm,1.2s
CLNS pmax pmax
comp=Z,44nm,1.2s,mb4.8
CLNS pmax pmax
comp=N,40nm,1.3s
CLNS smax
comp=E,212nm,16.0s
CLNS smax
comp=N,214nm,14.3s
CLNS MLR MLR
comp=Z,833nm,12.0s,MS4.4
CLNS MLR MLR
comp=N,863nm,12.0s,MS4.5
CLNS MLR MLR
comp=E,736nm,14.0s,MS4.5
HHC Hu-ho-hao-te 23.99 290 *e*P **P 10 04 15.6 -0.2**
HHC pP 10 04 25.2
HHC sP sP 10 04 29.3 -1.3
HHC S **S 10 08 28.4 -1.8**
HHC sS sS 10 08 42.8 -4.5
HHC SS 10 09 19.5
HHC ScP ScP 10 11 33.3 +0.7
HHC PcS PcS 10 11 38.0 +1.4
HHC pmax pmax
comp=Z,15nm,1.1s,mb4.3
HHC pmax pmax
comp=Z,180nm,5.6s
HHC LR LR
comp=N,700nm,12.2s,MS4.6
HHC LR LR
comp=E,970nm,13.6s,MS4.6
HHC LR LR
comp=Z,1μm,15.3s,MS4.4
XAN Xi'an 26.86 275 P **P 10 04 41.3 -0.7**
XAN pP pP 10 04 50.0 -2.3
XAN sP sP 10 04 53.9 -2.9
XAN PcP PcP 10 08 03.4 -0.3
XAN S **S 10 09 16.3 +0.3**
XAN sS sS 10 09 31.3 -2.0
XAN pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
XAN pmax pmax
comp=Z,15nm,3.3s
XAN LR LR
comp=N,510nm,17.5s,MS4.2
XAN LR LR
comp=E,250nm,14.0s,MS4.2
XAN LR LR
comp=Z,240nm,14.7s,MS3.9
YAK Yakutsk 26.92 347 *e*P **P 10 04 41.1 -1.0**
YAK *e**PP pP 10 04 52.0 -0.5
YAK *e* 10 05 21.2
YAK *e*S **S 10 09 15.5 -0.8**
YAK *e**SS sS 10 09 27.5 -6.0
YAK pmax pmax
comp=Z,87nm,1.3s,mb5.1
YAK pmax pmax
comp=N,57nm,1.4s
YAK pmax pmax
comp=E,17nm,1.6s
YAK pmax pmax
comp=Z,27nm,0.8s,mb4.8
YAK smax
comp=E,73nm,1.9s
YAK MLR MLR
comp=Z,598nm,11.0s,MS4.4
YAK MLR MLR
comp=N,509nm,10.0s
YAK Yakutsk 26.92 347 *e*P **P 10 04 41.7 -0.4**
comp=N,43nm,0.6s,mb5.2
SEY Seymchan 27.54 11 *i* P **P 10 04 49.7 +2.0**
ENH Enshi 27.54 267 *e*P **P 10 04 47.3 -0.8**
comp=N,38nm,0.6s,mb5.2
ENH *e*pP pP 10 04 56.8 -1.7
ULN Ulaanbaatar 28.04 305 *e*P **P 10 04 52.1 -0.2**
ULN *e**PP pP 10 05 02.6 -0.1
ULN pmax pmax
comp=Z,37nm,1.2s,mb4.9
ULN Ulaanbaatar 28.04 305 *e*P **P 10 04 52.0 -0.2**
comp=Z,37nm,1.2s,mb4.9
ULN *e*pP pP 10 05 02.6 -0.1
SONM Songino Array 28.46 305 P **P 10 04 57.1 +1.0**
comp=Z,19nm,0.8s,mb4.8,baz=101,slow=9.1,SNR=20
LZH Lanzhou 30.48 281 *e*P **P 10 05 14.0 -0.1**
LZH pP pP 10 05 24.5 0.0
LZH sP sP 10 05 29.0 0.0
LZH PP PP 10 06 13.0 -10
LZH S **S 10 10 11.2 -1.6**
LZH sS sS 10 10 27.1 -3.0
LZH SS SS 10 11 52.4 -31
LZH pmax pmax
comp=Z,43nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,140nm,4.0s
LZH LR LR
comp=E,1μm,14.2s
LZH LR LR
comp=Z,2μm,17.3s,MS4.8
IRK Irkutsk 30.84 313 *e*P **P 10 05 16.8 -0.3**
IRK pmax pmax
comp=Z,26nm,1.5s,mb4.8
ZAK Zakamensk 30.98 309⇑*i*P **P 10 05 18.6 +0.2**
ZAK pmax pmax
comp=Z,22nm,1.2s,mb4.9
TLY Talaya 31.07 312 *e*P **P 10 05 19.5 +0.4**
TLY *e* 10 06 23.5
TLY *e*S **S 10 10 13.6 -8.1**
TLY pmax pmax
comp=Z,30nm,1.1s,mb5.0
TLY MLR MLR
comp=Z,1μm,16.0s,MS4.7
TLY Talaya 31.07 312 *e*P **P 10 05 19.3 +0.2**
comp=Z,48nm,1.4s,mb5.1
GYA Guiyang 31.36 262 P **P 10 05 21.7 -0.2**
GYA pP pP 10 05 31.8 -0.6
GYA sP sP 10 05 38.5 +1.7
GYA PP PP 10 06 26.4 -6.7
GYA S **S 10 10 25.0 -1.7**
GYA sS sS 10 10 43.6 -0.5
GYA ScP ScP 10 11 55.4 +0.1
GYA SS SS 10 12 13.9 -28
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,680nm,16.0s,MS4.5
GYA LR LR
comp=E,470nm,17.8s,MS4.5
GYA LR LR
comp=Z,590nm,15.7s,MS4.4
CD2 Chengdu 31.95 272 P **P 10 05 26.8 -0.3**
CD2 pP pP 10 05 36.3 -1.3
CD2 sP sP 10 05 40.4 -1.6
CD2 PP PP 10 06 32.6 -7.0
CD2 S **S 10 10 33.7 -2.2**
CD2 sS sS 10 10 49.6 -3.7
CD2 SS SS 10 12 25.4 -28
CD2 pmax pmax
comp=Z,40nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,130nm,3.8s
CD2 LR LR
comp=N,1μm,14.3s

CD2 LR LR
comp=Z,910nm,15.5s,MS4.6
QIZ Qiongzhong 32.85 247 P **P 10 05 38.1 +3.0**
QIZ pmax pmax
comp=Z,17nm,2.0s,mb4.6
QIZ LR LR
comp=N,460nm,16.4s
QIZ LR LR
comp=Z,480nm,17.8s,MS4.2
GTA Gaotai 33.06 288 *e*P **P 10 05 36.7 -0.1**
GTA pP pP 10 05 45.8 -1.4
GTA sP sP 10 05 50.4 -1.3
GTA PP PP 10 06 48.9 -2.9
GTA PcP PcP 10 08 20.9 +1.3
GTA S **S 10 10 53.7 +0.6**
GTA pmax pmax
comp=Z,20nm,1.1s,mb5.0
GTA pmax pmax
comp=Z,170nm,7.8s
GTA LR LR
comp=N,370nm,17.1s,MS4.5
GTA LR LR
comp=E,840nm,17.4s,MS4.5
GTA LR LR
comp=Z,1μm,17.7s,MS4.6
BILL Bilibino 34.73 16⇑ *e*P **P 10 05 53.6 +2.7**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BILL MLR MLR
comp=Z,400nm,19.0s,MS4.2
KMI Kunming 35.11 263 P **P 10 05 54.5 -0.2**
KMI pP pP 10 06 04.2 -1.0
KMI sP sP 10 06 09.1 -0.5
KMI PP PP 10 07 14.3 -0.4
KMI S **S 10 11 23.7 -1.3**
KMI sS sS 10 11 41.1 -1.3
KMI ScP ScP 10 12 08.5 +0.1
KMI PcS PcS 10 12 12.6 -0.1
KMI SS SS 10 13 40.3 -18
KMI ScS ScS 10 16 11.0 -1.5
KMI pmax pmax
comp=Z,19nm,1.1s,mb4.9
KMI pmax pmax
comp=Z,100nm,3.7s
KMI LR LR
comp=N,530nm,16.1s,MS4.7
KMI LR LR
comp=E,810nm,15.5s,MS4.7
KMI LR LR
comp=Z,880nm,13.4s,MS4.7
TIXI Tiksi 36.13 353*c i*P **P 10 06 01.8 -1.0**
TIXI *e*S **S 10 11 37.7 -1.9**
TIXI pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
TIXI MLR MLR
comp=Z,616nm,14.0s,MS4.5
TIXI Tiksi 36.13 353 *e*P **P 10 06 02.1 -0.8**
comp=Z,2.8nm,0.6s,mb4.4
CHTO Chiang Mai 41.36 257 *e*P **P 10 06 46.9 -0.4**
CHTO *e**PP pP 10 06 57.2 -0.8
CHTO pmax pmax
comp=Z,17nm,1.3s,mb4.5
CHTO Chiang Mai 41.36 257 *e*P **P 10 06 46.9 -0.4**
comp=Z,17nm,1.3s,mb4.5
CHTO *ep*P pP 10 06 57.2 -0.8
WMQ Urumqi 41.45 298 *e*P **P 10 06 49.0 +1.2**
WMQ S **S 10 13 01.2 +0.9**
WMQ ScS ScS 10 16 48.9 +0.6
WMQ pmax pmax
comp=Z,29nm,1.8s,mb4.6
WMQ pmax pmax
comp=Z,460nm,3.0s
WMQ LR LR
comp=N,380nm,21.0s,MS4.2
WMQ LR LR
comp=E,160nm,24.0s,MS4.2
WMQ LR LR
comp=Z,430nm,18.0s
CMAR Chiang Mai Arr 41.56 256 P **P 10 06 49.3 +0.4**
comp=Z,4.4nm,0.7s,mb4.2,baz=48,slow=5.1,SNR=13
LSA Lhasa 42.55 276 P **P 10 06 58.5 +1.5**
LSA pP pP 10 07 09.6 +1.9
LSA LR LR
comp=E,580nm,14.7s
LSA LR LR
comp=Z,810nm,13.7s,MS4.8
LSA Lhasa 42.55 276 *e*P **P 10 06 58.8 +1.8**
LSA pmax pmax
comp=Z,33nm,1.0s,mb5.0
LSA Lhasa 42.55 276 *e*P **P 10 06 58.8 +1.8**
comp=Z,33nm,1.0s,mb5.0
ZAA0 Zalesovo Array 42.66 313 *e*P **P 10 06 57.7 +0.2**
ZAA0 *ep*P pP 10 07 07.0 -1.2
ZALV Zalesovo Beam 42.66 313 P **P 10 06 57.6 +0.1**
comp=Z,19nm,0.8s,mb4.9,baz=91,slow=7.4,SNR=16
NVS Novosibirsk 43.59 314⇑ *i*P **P 10 07 04.4 -0.6**
NVS *i* pP 10 07 16.5 +0.7
NVS pmax pmax
comp=Z,34nm,1.2s,mb5.0
NVS pmax pmax
comp=E,32nm,1.1s
MK31 Makanchi Array 44.78 303 *e*P **P 10 07 14.6 0.0**
MK31 *e**PP pP 10 07 26.7 +1.3
MKAR Makanchi Array 44.78 303 P **P 10 07 15.1 +0.5**
comp=E,18nm,1.0s,mb4.9,baz=91,slow=9.7,SNR=15
KAPI Kappang 45.90 211 P **P 10 07 23.6 -0.2**
comp=E,25nm,0.8s,mb5.2,baz=7.6,slow=4.1,SNR=10
KURK Kurchatov 46.64 309*c i*P **P 10 07 28.9 -0.4**
KURK pmax pmax
comp=Z,62nm,1.7s,mb5.3
KURK MLR MLR
comp=Z,821nm,18.0s,MS4.7
KURK Kurchatov 46.64 309 P **P 10 07 30.2 +0.9**
comp=Z,20nm,0.7s,mb5.2,baz=84,slow=7.9,SNR=12
KURK Kurchatov 46.64 309 *e*P **P 10 07 29.1 -0.2**
GUN Gumba 47.51 277 *e*P **P 10 07 37.2 +0.8**
comp=Z,117nm,0.9s,mb5.9
PKI Pulchoki 48.03 276 *e*P **P 10 07 41.1 +0.7**
comp=Z,63nm,1.0s,mb5.6
PKIN Phulchoki 48.03 276 *e*P **P 10 07 41.3 +0.8**
comp=Z,41nm,0.8s,mb5.5
KKN Kakani 48.04 277 *e*P **P 10 07 41.2 +0.7**
comp=Z,83nm,1.0s,mb5.7
DMN Daman 48.25 277 *e*P **P 10 07 42.7 +0.5**
comp=Z,40nm,0.9s,mb5.4
GKN Gorkha 48.46 277 *e*P **P 10 07 44.2 +0.4**
comp=Z,238nm,1.0s
KOLN Koldanda 49.39 278 *e*P **P 10 07 51.2 +0.3**
comp=Z,81nm,1.0s,mb5.7
PYUN Piuthan 49.74 278 *e*P **P 10 07 54.7 +1.1**
comp=Z,128nm,1.1s,mb5.9
TKM2 Tokmak 2 50.25 299 *e*P **P 10 07 58.4 +1.2**
TKM2 pmax pmax
comp=Z,16nm,0.8s,mb5.1
TKM2 Tokmak 2 50.25 299 *e*P **P 10 07 58.4 +1.2**
comp=Z,16nm,0.8s,mb5.1
FRU Bishkek 50.97 299 *e*P **P 10 08 03.0 +0.4**
FRU *i* pP 10 08 14.0 +0.5
FRU pmax pmax
comp=Z,37nm,1.4s,mb5.1
KSH Kashi 50.98 295 *e*P **P 10 08 07.3 +4.5**
KSH *ep*P pP 10 08 17.1 +3.4
KSH *es*P sP 10 08 20.5 +2.5
KSH *e*PcP PcP 10 09 21.6 +3.0
KSH *e*PP PP 10 10 04.4 +5.1
KSH *e*ScP ScP 10 13 14.1 +2.1
KSH *e*PcS PcS 10 13 17.4 +1.3
KSH *e*S **S 10 15 22.1 +4.9**
KSH *es*S sS 10 15 39.6 +4.4
KSH *e*ScS ScS 10 17 51.4 +1.0
KSH *e*SS SS 10 18 56.3 +4.2
KSH pmax pmax
comp=Z,67nm,2.3s,mb5.2
KSH LR LR
comp=N,580nm,13.1s,MS5.0
KSH LR LR
comp=E,670nm,14.1s,MS5.0
AAK Ala-Archa 51.11 299 *e*P **P 10 08 04.6 +0.9**
AAK pmax pmax
comp=Z,12nm,0.8s,mb4.9
AAK Ala-Archa 51.11 299 *e*P **P 10 08 04.5 +0.8**
comp=Z,12nm,0.8s,mb4.9
UCH Uchtor 51.22 299 *e*P **P 10 08 03.8 -0.7**
comp=Z,9.0nm,0.9s,mb4.7
BVAR Borovoye Array 51.32 313 P **P 10 08 05.5 +0.4**
comp=Z,10.0nm,1.0s,mb4.7,baz=79,slow=7.7,SNR=11
BRVK Borovoye 51.37 313*c i*P **P 10 08 05.6 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BRVK MLR MLR
comp=Z,944nm,18.0s,MS4.9
BRVK Borovoye 51.37 313 *e*P **P 10 08 04.8 -0.7**
comp=Z,23nm,1.2s,mb5.0
EKS2 Erkin-Say 51.61 299 *e*P **P 10 08 07.7 +0.2**
comp=Z,8.3nm,1.0s,mb4.6
EKS2 *ep*P pP 10 08 17.7 -0.6
EKS2 *es*P sP 10 08 21.5 -1.2
AML Almayashu 51.83 299 *e*P **P 10 08 10.8 +1.8**
comp=Z,19nm,0.7s,mb5.1
INK Inuvik 54.99 27 P **P 10 08 32.8 +0.9**
INK pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 54.99 27 P **P 10 08 32.8 +0.9**
comp=Z,3.8nm,0.7s,mb4.5,baz=276,slow=6.2,SNR=12
INK Inuvik 54.99 27 *e*P **P 10 08 32.5 +0.6**
comp=Z,4.4nm,0.8s,mb4.5
SVE Sverdlovsk 55.93 319⇑ *e*P **P 10 08 39.6 +0.8**
SVE *e*S **S 10 16 27.6 +3.8**
SVE pmax pmax
comp=Z,37nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,964nm,16.0s,MS5.0
WRAB Tennant Creek 56.28 188 P **P 10 08 41.1 -0.5**
WRAB pmax pmax
comp=Z,21nm,1.0s,mb5.1
WRAB Tennant Creek 56.28 188 P **P 10 08 41.1 -0.6**
comp=Z,21nm,1.0s,mb5.1
WB2 Warramunga Arr 56.29 188 *e*P **P 10 08 41.0 -0.7**
WRA Warramunga Arr 56.29 188 P **P 10 08 40.8 -0.9**
comp=Z,6.2nm,0.8s,mb4.7,baz=7.2,slow=7.4,SNR=6.6
SOKR Solikamsk 57.14 323 *e*P **P 10 08 40.6 -6.7**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,390nm,16.0s,MS4.6
ARU Arti 57.15 319*d i*P **P 10 08 47.0 -0.4**
ARU 10 09 40.9
ARU S **S 10 16 37.9 -2.0**
ARU pmax pmax
comp=Z,53nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,717nm,17.0s,MS4.8
ARU Arti 57.15 319 *e*P **P 10 08 47.5 0.0**
KBL Kabul 57.96 292 *e*P **P 10 08 53.7 +0.2**
KBL pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KBL Kabul 57.96 292 *e*P **P 10 08 53.7 +0.2**
comp=Z,3.4nm,0.6s,mb4.5
DLBC Dease Lake 59.10 38 P **P 10 09 01.7 +0.6**
comp=Z,1.4nm,0.7s,mb4.1,baz=233,slow=2.1,SNR=3.9
AKTK Aktyubinsk 59.42 312 P **P 10 09 03.6 +0.2**
AKTO Aktyubinsk 59.42 312 P **P 10 09 03.6 +0.2**
comp=Z,9.3nm,0.9s,mb4.8,baz=74,slow=11,SNR=9.0
ASAR Alice Springs 60.02 188 P **P 10 09 07.3 -0.4**
comp=Z,2.0nm,0.7s,mb4.2,baz=11,slow=7.9,SNR=5.9
MBWA Marble Bar 60.75 204 P **P 10 09 10.4 -2.3**
comp=Z,16nm,1.1s,mb5.1
SPITS Spitsbergen Ar 61.37 349 P **P 10 09 17.7 +1.4**
comp=Z,1.9nm,0.7s,mb4.3,baz=76,slow=7.0,SNR=4.7
DZM Mont Dzumac 62.51 154 *e*S **S 10 17 45.8 -3.6**
comp=Z,90nm,23.8s
DZM *e*LQ 10 25 14.7
comp=Z,2μm,36.7s
DZM *e*LR LR 10 27 56.3
comp=Z,378nm,21.1s
RES Resolute Bay 63.32 14 *e*P **P 10 09 29.2 -0.2**
RES pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
RES Resolute Bay 63.32 14 *e*P **P 10 09 29.2 -0.2**
comp=Z,5.9nm,0.9s,mb4.7
KEV Kevo 64.30 339 *e*P **P 10 09 34.3 -1.6**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KEV Kevo 64.30 339 *ep* **P 10 09 34.3 -1.6**
comp=Z,3.3nm,0.6s,mb4.5
YKA Yellowknife Ar 64.38 30 P **P 10 09 36.7 +0.2**
comp=Z,1.5nm,0.8s,mb4.1,baz=300,slow=6.7,SNR=9.0
YKA Yellowknife Ar 64.38 30 P **P 10 09 36.7 +0.2**
KLMR Klimovskoe 64.58 328 *e*P **P 10 09 35.3 -2.6**
KLMR pmax pmax
comp=Z,26nm,1.5s,mb5.0
ARCES ARCESS Array B 64.85 340 P **P 10 09 39.2 -0.3**
comp=Z,4.0nm,0.8s,mb4.5,baz=53,slow=8.1,SNR=11
ARCES ARCESS Array B 64.85 340 P **P 10 09 39.2 -0.3**
JOF Joensuu 66.80 332 *e*P **P 10 09 51.1 -1.1**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JOF Joensuu 66.80 332 *ep* **P 10 09 51.1 -1.1**
comp=Z,5.0nm,0.6s,mb4.7
STKA Stephens Creek 67.74 180 P **P 10 09 57.1 -1.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=321,slow=9.1,SNR=5.8
STKA Stephens Creek 67.74 180 *e*P **P 10 09 57.6 -0.7**
comp=Z,0.7nm,0.8s,mb3.7
STKA *ep*P pP 10 10 08.5 -1.1
FORT Forrest 67.87 193 *e*P **P 10 09 59.2 0.0**
comp=Z,19nm,0.7s,mb5.2
FORT *ep*P pP 10 10 09.1 -1.4
MOS Moscow 68.06 324 *e*P **P 10 09 59.1 -1.1**
MOS *e* 10 12 26.5
MOS pmax pmax
comp=Z,30nm,0.8s,mb5.4
OBN Obninsk 68.91 324 *e*P **P 10 10 05.9 +0.4**
OBN *e* 10 10 32.4
OBN pmax pmax
comp=Z,32nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,500nm,15.0s,MS4.9
ETW Entiat 69.04 46 *e*P **P 10 10 06.7 +0.2**
KAF Kangasniemi 69.15 333 *e*P **P 10 10 06.0 -0.9**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KAF Kangasniemi 69.15 333 *ep* **P 10 10 06.0 -0.9**
comp=Z,4.2nm,0.5s,mb4.6
FINES FINESS Array B 69.66 332 P **P 10 10 09.7 -0.4**
comp=Z,7.2nm,0.8s,mb4.7,baz=54,slow=9.7,SNR=10
VSR Storozhevoye 69.72 319 *e*P **P 10 10 10.5 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,4.0nm,0.3s
VSR MLR MLR
comp=Z,1μm,16.0s,MS5.2
VSR MLR MLR
comp=N,150nm,12.0s,MS5.0
VSR MLR MLR
comp=E,650nm,15.0s,MS5.0
VORD Divnogorie 69.79 319 *e*P **P 10 10 10.6 -0.5**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VORD pmax pmax
comp=E,7.0nm,1.2s
VORD MLR MLR
comp=Z,630nm,15.0s,MS5.0
VORD MLR MLR
comp=N,290nm,16.0s,MS5.0
VORD MLR MLR
comp=E,560nm,16.0s,MS5.0
NEW Newport 70.53 44 *e*P **P 10 10 15.9 +0.3**
NEW *e**PP pP 10 10 26.7 -0.2
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 70.53 44 *e*P **P 10 10 15.9 +0.2**
comp=Z,2.9nm,0.8s,mb4.3
NEW *ep*P pP 10 10 26.6 -0.3
VSU Vasula 71.29 330⇓ *e*P **P 10 10 20.4 +0.3**
VSU pmax pmax
comp=Z,53nm,1.9s,mb5.2
VSU MLR MLR
comp=Z,205nm,15.0s,MS4.5
ZEI Tsey 71.53 310 P pP 10 10 33.7 +0.6
ZEI pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
KIV Kislovodsk 71.64 311 *e*P **P 10 10 23.4 +0.9**
KIV *es* S 10 19 36.8 -2.5
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,272nm,18.0s,MS4.6
KIV Kislovodsk 71.64 311 P **P 10 10 22.1 -0.4**
GNI Garni 72.41 307⇑ *e*P **P 10 10 28.2 +1.1**
GNI pmax pmax
comp=Z,15nm,1.2s
GNI MLR MLR
comp=Z,191nm,16.0s
SWMT Swartz Lake 72.69 43 *e*P **P 10 10 25.4 -3.3**
SLMT Seeley Lake 73.13 44 *e*P **P 10 10 31.8 +0.5**
comp=Z,1.2nm,0.6s,mb4.0
SLMT *ep*P pP 10 10 42.5 -0.1
IZAR Zarasai 73.24 328 *e*P **P 10 10 32.1 +0.3**
IDID Didziasalis 73.30 327 *e*P **P 10 10 32.9 +0.7**
ISAL Salakas 73.40 328 *e*P **P 10 10 33.6 +0.8**
FFC Flin Flon 74.25 33 *i*P **P 10 10 38.5 +0.8**
FFC Flin Flon 74.25 33 *e*P **P 10 10 37.6 -0.1**
comp=Z,2.7nm,0.7s,mb4.3
ANN Anapa 74.29 314 *e*P **P 10 10 30.8 -7.3**
ANN *e**PP pP 10 10 40.1 -9.4
ANN *e* 10 10 47.4
ANN pmax pmax
comp=Z,28nm,1.5s,mb5.0
HRY Holter Researc 74.36 43 *e*P **P 10 10 39.6 +1.1**
LRM Limekiln Ridge 74.54 44 *e*P **P 10 10 40.3 +0.7**
LRM *ep*P pP 10 10 50.7 -0.2
DLMT Dillon 74.73 45 *e*P **P 10 10 41.5 +0.8**
comp=Z,11nm,1.3s,mb4.6
NB2 NORSAR Subarra 75.04 337 P **P 10 10 42.1 -0.1**
comp=Z,22nm,1.1s,mb5.0,baz=40,slow=5.9
NOA NORSAR Array B 75.04 337 P **P 10 10 42.2 0.0**
comp=Z,7.5nm,0.8s,mb4.7,baz=39,slow=5.7,SNR=9.6
NOA NORSAR Array B 75.04 337 P **P 10 10 42.2 0.0**
AKASG Malin Array Be 75.10 323 P **P 10 10 42.4 -0.3**
comp=Z,6.1nm,0.5s,mb4.8,baz=46,slow=6.1,SNR=16
AKBB Malin Array Si 75.10 323 *e*P **P 10 10 42.3 -0.4**
BOZ Bozeman (W) 75.11 44 *e*P **P 10 10 43.4 +0.5**
BOZ *e**PP pP 10 10 54.0 -0.2
BOZ pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BOZ Bozeman (W) 75.11 44 *e*P **P 10 10 43.4 +0.5**
comp=Z,5.7nm,1.2s,mb4.4
BOZ *ep*P pP 10 10 54.0 -0.2
NVAR Mina Array Bea 75.26 53 P **P 10 10 44.2 +0.3**
comp=Z,1.8nm,0.8s,mb4.0,baz=286,slow=6.3,SNR=6.2
NVAR Mina Array Bea 75.26 53 P **P 10 10 44.2 +0.3**
IMW Indian Meadow 76.56 45 *e*P **P 10 10 52.7 +1.6**
comp=Z,6.1nm,1.1s,mb4.4
DUG Dugway 77.69 49 *e*P **P 10 10 58.4 +0.8**
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
DUG Dugway 77.69 49 *e*P **P 10 10 58.4 +0.9**
comp=Z,6.9nm,1.0s,mb4.5
PDAR Pinedale Array 78.05 45 P **P 10 10 59.7 +0.2**
comp=Z,1.1nm,0.6s,mb4.0,baz=307,slow=2.8,SNR=8.4
BORG Borgarnes 78.49 353 P **P 10 11 03.4 +1.9**
comp=Z,22nm,0.9s,mb5.1,baz=32,slow=2.6,SNR=4.9
MSU Marysvale 79.10 50 *e*P **P 10 11 06.3 +0.9**
MSU pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
MSU Marysvale 79.10 50 *e*P **P 10 11 06.3 +0.9**
comp=Z,1.6nm,0.9s,mb4.0
BUR08 Bucovina Ar. S 79.10 322 *e*P **P 10 11 05.9 +0.6**
BRTR Keskin Array B 79.59 312*ce*P **P 10 11 08.8 +0.7**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 79.59 312 P **P 10 11 08.8 +0.8**
comp=Z,4.3nm,0.9s,mb4.4,baz=95,slow=4.1,SNR=12
KOLS Kolonicke sedl 79.64 324 *e*P **P 10 11 09.1 +1.0**
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KOLS Kolonicke sedl 79.64 324 *e*P **P 10 11 09.1 +1.0**
comp=Z,3.8nm,1.0s,mb4.3
KOLS Kolonicke sedl 79.64 324 *e*P **P 10 11 09.1 +1.0**
OJC Ojcow 79.86 326 *e*P **P 10 11 09.2 -0.1**
ULM Lac du Bonnet 80.03 33 P **P 10 11 09.1 -1.2**
comp=Z,1.5nm,0.8s,mb4.0,baz=275,slow=8.1,SNR=4.9
KECS Kecovo 80.79 325 *e*P **P 10 11 14.4 0.0**
KECS pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
KECS Kecovo 80.79 325 *e*P **P 10 11 14.4 0.0**
comp=Z,3.9nm,1.5s,mb4.1
KECS Kecovo 80.79 325 *e*P **P 10 11 14.4 0.0**
VYHS Vyhne 81.55 326 *e*P **P 10 11 19.3 +0.9**
VYHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
VYHS Vyhne 81.55 326 *e*P **P 10 11 19.3 +0.9**
comp=Z,5.1nm,1.4s,mb4.3
VYHS Vyhne 81.55 326 *e*P **P 10 11 19.3 +0.9**
CLL Collm 81.93 330 *i*P **P 10 11 20.0 -0.4**
CLL *i **PP pP 10 11 36.3 +4.5
CLL pmax pmax
comp=Z,14nm,1.4s,mb4.7
CLL MLR MLR
comp=Z,300nm,17.2s,MS4.7
CLL Collm 81.93 330 *i*P **P 10 11 20.0 -0.4**
comp=Z,14nm,1.4s,mb4.7
CLL *i* pP pP 10 11 36.3 +4.5
CLL LR LR
comp=Z,300nm,17.2s,MS4.7
CLL Collm 81.93 330 *i*P **P 10 11 20.0 -0.4**
comp=Z,14nm,1.4s,mb4.7
CLL *i* sP sP 10 11 36.3 +0.2
CLL *e* 10 11 43.0
VRAC Vranov 81.95 327 P **P 10 11 20.0 -0.4**
comp=Z,3.1nm,0.4s,mb4.6,baz=6.9,slow=20,SNR=4.8
CONA Conrad Observa 83.30 327⇓ *i*P **P 10 11 28.2 +0.7**
comp=Z,7.7nm,1.2s,mb4.6
KHC Kasperske Hory 83.37 329 *e*P **P 10 11 27.8 -0.1**
KHC *e**PP pP 10 11 38.4 -1.0
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KHC Kasperske Hory 83.37 329 *e*P **P 10 11 27.8 -0.1**
comp=Z,2.5nm,0.8s,mb4.3
KHC *ep*P pP 10 11 38.4 -1.0
GERES GERESS Array B 83.54 328 P **P 10 11 28.6 -0.2**
comp=Z,1.8nm,0.6s,mb4.4,baz=52,slow=5.2,SNR=10
GRA1 Grafenberg Arr 83.91 330 *e*P **P 10 11 31.0 +0.4**
comp=Z,14nm,1.4s,mb4.9
GRA1 LR LR
comp=Z,300nm,18.6s,MS4.7
GRF Grafenberg Arr 83.91 330 *e*P **P 10 11 31.0 +0.4**
comp=Z,14nm,1.4s,mb4.9
GRF *e*L 10 54 07.6
comp=Z,304nm,18.6s
GRF Grafenberg Arr 83.91 330 *e*P **P 10 11 31.0 +0.4**
GRF pmax pmax
comp=Z,14nm,1.4s,mb4.9
GRF MLR MLR
comp=Z,300nm,18.6s,MS4.7
EKA Eskdalemuir Ar 83.99 341 P **P 10 11 31.7 +0.8**
comp=Z,1.3nm,0.6s,mb4.2,baz=31,slow=4.8,SNR=7.5
PPT Papeete 84.03 117 *e*LR LR 10 37 47.9
comp=Z,256nm,22.0s,baz=304
SOKA Soboth 84.62 326⇑ *i*P **P 10 11 34.2 -0.1**
comp=Z,8.1nm,1.2s,mb4.7
TAOE Nuku Hiva Isla 85.72 104 *e*LR LR 10 38 41.8
comp=Z,281nm,24.7s
SCHQ Schefferville 86.04 16 P **P 10 11 42.2 +1.0**
comp=Z,1.5nm,0.7s,mb4.3,baz=223,slow=15,SNR=3.6
IDI Anoyia 87.73 313 LR LR 10 59 55.1
comp=Z,92nm,18.0s,MS4.2,baz=67,slow=42
TXAR Lajitas Array 90.41 53 P **P 10 12 02.9 +0.4**
comp=Z,1.1nm,0.8s,mb4.2,baz=270,slow=2.3,SNR=4.7
TXAR Lajitas Array 90.41 53 P **P 10 12 02.9 +0.4**
LPAZ La Paz 146.86 61 PKPbc PKPbc 10 18 43.4 -0.1
comp=Z,2.8nm,0.7s,baz=9.5,slow=11,SNR=8.7
LPAZ La Paz 146.86 61 *e*PKPbc PKPbc 10 18 44.4 +0.9
SIV San Ignacio 151.40 51 PKPbc PKPbc 10 18 55.1 +0.1
comp=Z,4.4nm,0.8s,baz=274,slow=1.1,SNR=11
SIV PKPab PKPab 10 19 03.7 +0.4
comp=Z,4.4nm,0.8s,baz=322,slow=0.3,SNR=7.5

IDC ***07*** *10:14:41.2±2.2,0,36°.27N×142°.14E,h0km,mb3.6/2, mb1 3.6/5,mb1mx3.4/28,mbtmp3.6/5,ML3.3/3,Error ellipse: s-maj=37.7km s-min=27.4km az=81.0*
ISCJB ***07*** *10:14:46.1±1.0,36°.23N±0°.04×142°.01E±0°.08, h57km±12km,mb3.6/2, Error ellipse: s-maj=11.4km s-min=6.9km az=10.8*
JMA ***07*** *10:14:47.5±0.2,36°.26N×141°.85E,h56km±5km,M3.3*
ISC 07 10:14:47.0±1.0**,36°.23N**±0°.04×**142°.03E**±0°.09**,h43**km±14km**, n18,**σ0**.82/25,mb3.6/2,Off east coast of Honshu**

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

CHOJ	**Chosi**	**1.08 241**	P		**Pn**	**10 15 05.5**	**-0.2**
CHOJ			*e*S		**Sn**	**10 15 19.0**	**-0.5**
JHO	**Hitachi**	**1.24 289**	P		**Pn**	**10 15 06.6**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.32 312**	P		**Pn**	**10 15 08.2**	**-0.7**
JFK	**Kawauchi**	**1.47 321**	P		**Pn**	**10 15 10.8**	**-0.2**
BSO1	**Boso 1**	**1.79 209**	*e*S		**Sn**	**10 15 37.7**	**+0.9**
JFT	**Otama**	**1.87 314**	P		**Pn**	**10 15 17.2**	**+0.7**
BSO3	**Boso 3**	**1.88 221**	P		**Pn**	**10 15 16.9**	**+0.2**
BSO3			*e*S		**Sn**	**10 15 40.1**	**+0.9**
JMM	**Marumori**	**1.91 329**	P		**Pn**	**10 15 17.2**	**+0.1**
JAG	**Ashikaga**	**2.09 276**	P		**Pn**	**10 15 19.1**	**-0.4**
JFY	**Yanaizu**	**2.20 303**	P		**Pn**	**10 15 21.9**	**+0.8**
JRY	**Ryogami san**	**2.54 266**	P		**Pn**	**10 15 25.4**	**-0.3**
JRY			*e*S		**Sn**	**10 15 54.0**	**-1.3**
JOD2	**Odawara 2**	**2.58 249**	P		**Pn**	**10 15 26.8**	**+0.6**
JOD2			*e*S		**Sn**	**10 15 55.3**	**-1.0**
MJAR	**Matsushiro Arr**	**3.10 277**	Pn		**Pn**	**10 15 33.1**	**-0.3**
	6.4nm,0.3s,baz=102,slow=12,SNR=50						
MJAR			Sn		**Sn**	**10 16 10.5**	**+1.4**
	2.6nm,0.3s,baz=108,slow=8.3,SNR=5.3						
MAT	**Matsushiro**	**3.10 277**	P		**Pn**	**10 15 34.2**	**+0.9**
MAT			S		**Sn**	**10 16 10.1**	**+1.0**
JHJ	**Hachijo jima 2**	**3.61 211**	Pn		**Pn**	**10 15 41.3**	**+0.9**
	5.5nm,0.3s,baz=201,slow=22,SNR=6.5						
JHJ			Sn		**Sn**	**10 16 19.8**	**-2.0**
	20nm,0.3s,baz=78,slow=23,SNR=8.3						
ASAJ	**Asahikawa**	**7.89 3**	Pn		**Pn**	**10 16 38.5**	**-0.6**
	0.4nm,0.3s,baz=208,slow=14,SNR=3.4						
MKAR	**Makanchi Array**	**44.97 303**	P		**P**	**10 22 57.3**	**-0.4**
	0.5nm,0.7s,mb3.4,baz=96,slow=6.5,SNR=5.7						
WRA	**Warramunga Arr**	**56.33 189**	P		**P**	**10 24 23.8**	**+0.3**
	0.7nm,0.9s,mb3.7,baz=9.4,slow=7.6,SNR=4.0						

*ISCJB **07** 10:18:46.6±1.3, 36°.25N±0°.04×142°.05E±0°.07, h15km±9km, mb3.6/5, Error ellipse: s-maj=10.2km s-min=6.0km az=4.9*
*IDC **07** 10:18:46.8±1.6, 36°.27N×141°.95E, h0km, mb3.6/5, mb1 3.7/9, mb1mx3.5/27, mbtmp3.7/9, ML3.4/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/39, Error ellipse: s-maj=36.3km s-min=19.4km az=72.0*
*JMA **07** 10:18:49.9±0.2, 36°.26N×141°.80E, h64km±4km, M3.2*
ISC 07 10:18:46.4±1.3, 36°.25N±0°.04×141°.97E±0°.07, h1km±7km, n23, σ0°89/30, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.05 239**		P	**Pg**	**10 19 07.7**	**+1.1**
CHOJ				*e*S	**Sg**	**10 19 21.4**	**+1.2**
JHO	**Hitachi**	**1.19 288**		P	**Pg**	**10 19 08.6**	**-0.5**
ONAJ	**Iwakimizuishiy**	**1.27 312**		P	**Pg**	**10 19 10.2**	**-0.5**
JFK	**Kawauchi**	**1.42 322**		P	**Pn**	**10 19 13.1**	**-0.2**
JFK				*e*S	**Sg**	**10 19 30.5**	**-1.5**
BSO1	**Boso 1**	**1.79 207**		P	**Pn**	**10 19 18.7**	**+0.3**
BSO1				*e*S	**Sn**	**10 19 39.5**	**-2.2**
JFT	**Otama**	**1.82 315**		P	**Pn**	**10 19 18.9**	**0.0**
JMM	**Marumori**	**1.87 330**		P	**Pn**	**10 19 19.6**	**+0.1**
BSO3	**Boso 3**	**1.87 220**		P	**Pn**	**10 19 19.5**	**-0.1**
BSO3				*e*S	**Sn**	**10 19 41.9**	**-1.9**
JAG	**Ashikaga**	**2.04 276**		P	**Pn**	**10 19 20.9**	**-1.0**
JFY	**Yanaizu**	**2.15 303**		P	**Pn**	**10 19 23.9**	**+0.5**
JKT	**Katashina**	**2.25 284**		P	**Pn**	**10 19 24.8**	**0.0**
JRY	**Ryogami san**	**2.49 266**		P	**Pn**	**10 19 27.3**	**-0.8**
JOD2	**Odawara 2**	**2.54 248**		P	**Pn**	**10 19 28.8**	**0.0**
MJAR	**Matsushiro Arr**	**3.05 277**		Pn	**Pn**	**10 19 36.3**	**+0.5**
	5.9nm,0.3s,baz=110,slow=8.6,SNR=38						
MJAR				Sn	**Sn**	**10 20 13.1**	**+0.2**
	2.6nm,0.3s,baz=88,slow=10,SNR=5.7						
MAT	**Matsushiro**	**3.05 277**		P	**Pn**	**10 19 36.5**	**+0.7**
MAT				S	**Sn**	**10 20 14.1**	**+1.2**
JHJ	**Hachijo jima 2**	**3.61 211**		Pn	**Pn**	**10 19 44.1**	**+0.7**
	14nm,0.3s,baz=58,slow=20,SNR=11						
JHJ				Sn	**Sn**	**10 20 22.4**	**-4.3**
	37nm,0.3s,baz=75,slow=22,SNR=8.5						
ASAJ	**Asahikawa**	**7.87 3**		Pn	**Pn**	**10 20 42.2**	**+0.2**
	0.3nm,0.3s,baz=133,slow=34,SNR=4.5						
CBIJ	**Chichi jima**	**9.13 179**		Pn	**Pn**	**10 20 57.9**	**-1.4**
	1.9nm,0.3s,baz=300,slow=20,SNR=5.1						
CBIJ				LR	LR	10 24 36.5	
	comp=Z,210nm,18.4s,baz=107,slow=38						
SONM	**Songino Array**	**28.60 305**		P	**P**	**10 24 43.8**	**-0.1**
	1.8nm,0.7s,mb4.0,baz=98,slow=8.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**42.77 313**		P	**P**	**10 26 45.8**	**+0.5**
	0.5nm,0.4s,mb3.6,baz=65,slow=6.8,SNR=2.6						
MKAR	**Makanchi Array**	**44.92 303**		P	**P**	**10 27 02.7**	**+0.1**
	0.5nm,0.5s,mb3.7,baz=96,slow=9.9,SNR=5.1						
WRA	**Warramunga Arr**	**56.35 189**		P	**P**	**10 28 30.2**	**+1.1**
	0.6nm,1.0s,mb3.6,baz=6.3,slow=7.4,SNR=3.2						
ASAR	**Alice Springs**	**60.08 189**		P	**P**	**10 28 56.4**	**+1.2**
	0.2nm,0.8s,mb3.2,baz=322,slow=39,SNR=2.5						

*CSEM **07** 10:19:30.3, 60°.71N×28°.76E, h0km, ML1.1, Mining explosion. After HEL*
HEL 07 10:19:30.3±0.3, 60°.71N×28°.76E, h0km, ML1.1, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.62 254**		SG	Sg	10 19 55.5	+5.4
VJF				MSG		10 19 55.5	
	comp=Z,2.5nm,0.4s						
VJF	**Virojoki**	**0.62 254**		*e*P	Pg	10 19 41.6	-0.5
VJF				*e*S	Sg	10 19 49.7	-0.4
VJF				*e*RG		10 19 55.5	
VJF	**Virojoki**	**0.62 254**		Sg	Sg	10 19 55.5	+5.4
VJF	**Virojoki**	**0.62 254**		P	Pg	10 19 41.6	-0.5
VJF				S	Sg	10 19 49.6	-0.5
VJF				Rg		10 19 55.5	
PVF	**Pernaja**	**1.44 264**		*e*P	Pn	10 19 55.5	-2.1
PVF				*e*S	Sg	10 20 14.3	-2.2
PVF	**Pernaja**	**1.44 264**		P	Pn	10 19 55.4	-2.2
PVF				S	Sg	10 20 14.2	-2.2
FIA0	**FINESS Array S**	**1.50 300**		*e*P	Pn	10 19 57.3	-1.0
FIA0				*e*S	Sg	10 20 16.9	-1.4
FIA0				*e*SN	Sn	10 20 19.5	+1.0
FIA0	**FINESS Array S**	**1.50 300**		P	Pn	10 19 57.3	-1.0
FIA0				S	Sg	10 20 16.8	-1.5
FIA0				Sn	Sn	10 20 19.5	+1.0
KAF	**Kangasniemi**	**1.83 321**		*e*P	Pn	10 20 02.2	-0.8
KAF				*e*S	Sn	10 20 25.6	-1.3
KAF	**Kangasniemi**	**1.83 321**		P	Pn	10 20 02.2	-0.8
KAF				S	Sn	10 20 25.5	-1.4
SUF	**Sumiainen**	**2.37 329**		*e*P	Pn	10 20 09.8	-0.5
SUF				*e*SG	Sg	10 20 43.0	-3.2
SUF				MSG		10 20 43.6	
	comp=Z,0.5nm,0.3s						
SUF	**Sumiainen**	**2.37 329**		P	Pn	10 20 09.7	-0.6
SUF				Sg	Sg	10 20 43.0	-3.2
	comp=Z,0.5nm,0.3s						
JOF	**Joensuu**	**2.52 28**		*e*P	Pn	10 20 12.8	+0.3
JOF				*e*S	Sn	10 20 43.6	-0.2
JOF	**Joensuu**	**2.52 28**		P	Pn	10 20 12.7	+0.3
JOF				S	Sn	10 20 43.6	-0.2

*ATH **07** 10:30:46.5, 36°.23N×21°.68E, h10km±3km, MD3.5/3*
*CSEM **07** 10:30:48.0±0.7, 36°.28N×21°.79E, h2km, ML3.4/1, Error ellipse: s-maj=14.4km s-min=6.7km az=60.0*
*THE **07** 10:30:49.6, 36°.34N×21°.87E, h0km±3km, ML3.4/1, Error ellipse: s-maj=5.9km s-min=1.7km az=247.0*
ISC 07 10:30:44.6±1.6, 36°.17N±0°.05×21°.64E±0°.09, h8km±6km, n28, σ0°67/48, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.73**	**7**	*e*PB	**Pg**	**10 30 59.1**	**+0.5**
PYL				*e*SB	**Sg**	**10 31 09.3**	**+1.2**
PYL	**PYLOS**	**0.73**	**7**	P	**Pg**	**10 30 59.5**	**+0.9**
PYL				S	**Sg**	**10 31 09.2**	**+1.1**
PYL	**PYLOS**	**0.73**	**7**	*e*Pb	**Pg**	**10 30 59.1**	**+0.5**
PYL	**PYLOS**	**0.73**	**7**	P	**Pg**	**10 30 59.5**	**+0.9**
PYL				S	**Sg**	**10 31 09.2**	**+1.1**
ITM	**Ithomi**	**1.03**	**13**	*e*PG	**Pg**	**10 31 04.5**	**0.0**
ITM				*e*SB	**Sg**	**10 31 17.8**	**-0.1**
ITM	**Ithomi**	**1.03**	**13**	P	**Pg**	**10 31 04.5**	**0.0**
ITM				S	**Sg**	**10 31 17.7**	**-0.2**
ITM	**Ithomi**	**1.03**	**13**	P	**Pg**	**10 31 04.5**	**0.0**
ITM				S	**Sg**	**10 31 17.7**	**-0.2**
KYTH	**Kithira**	**1.14**	**84**	*e*PN	**Pg**	**10 31 07.3**	**+0.9**
KYTH	**Kithira**	**1.14**	**84**	*e*Pn	**Pg**	**10 31 07.3**	**+0.9**
VLI	**Veliai**	**1.18**	**62**	*e*PG	**Pg**	**10 31 07.6**	**+0.3**
VLI				*e*SB	**Sg**	**10 31 23.5**	**+0.8**
VLI	**Veliai**	**1.18**	**62**	*e*Pg	**Pg**	**10 31 07.6**	**+0.3**
VLI				*e*Sb	**Sg**	**10 31 23.5**	**+0.8**
VLX	**Vlachokerasia**	**1.34**	**26**	*e*PB	**Pn**	**10 31 10.4**	**+0.8**
VLX				*e*SB	**Sn**	**10 31 27.4**	**-0.2**
VLX	**Vlachokerasia**	**1.34**	**26**	P	**Pn**	**10 31 10.0**	**+0.4**
VLX				S	**Sb**	**10 31 27.0**	**-0.2**
VLX	**Vlachokerasia**	**1.34**	**26**	P	**Pn**	**10 31 10.0**	**+0.4**
VLX	**Vlachokerasia**	**1.34**	**26**	*e*Pb	**Pn**	**10 31 10.4**	**+0.8**
VLX				S	**Sb**	**10 31 27.0**	**-0.2**
VLX				*e*Sb	**Sn**	**10 31 27.4**	**-0.2**
DID	**Didima**	**1.85**	**43**	*e*PN	**Pg**	**10 31 19.3**	**-0.8**
DID	**Didima**	**1.85**	**43**	P	**Pg**	**10 31 19.2**	**-0.9**
DID				S	**Sn**	**10 31 40.8**	**+0.6**
DID	**Didima**	**1.85**	**43**	P	**Pg**	**10 31 19.2**	**-0.9**
DID				S	**Sn**	**10 31 40.8**	**+0.6**
GUR	**Goura**	**1.85**	**18**	*e*PG	**Pg**	**10 31 20.5**	**+0.4**
GUR	**Goura**	**1.85**	**18**	P	**Pg**	**10 31 19.8**	**-0.3**
GUR				S	**Sg**	**10 31 42.5**	**-1.6**
GUR	**Goura**	**1.85**	**18**	P	**Pg**	**10 31 19.8**	**-0.3**
GUR	**Goura**	**1.85**	**18**	*e*Pg	**Pg**	**10 31 20.5**	**+0.4**
GUR				S	**Sg**	**10 31 42.5**	**-1.6**
KARN	**Karanos**	**2.01**	**112**	P	**Pg**	**10 31 22.6**	**-0.5**
KARN				S	**Sg**	**10 31 48.4**	**-0.7**
KARN	**Karanos**	**2.01**	**112**	P	**Pg**	**10 31 22.6**	**-0.5**
KARN				S	**Sg**	**10 31 48.4**	**-0.7**
LAKA	**Lakka**	**2.08**	**7**	P	**Pg**	**10 31 24.2**	**-0.3**
LAKA				S	**Sb**	**10 31 48.0**	**-0.7**
LAKA	**Lakka**	**2.08**	**7**	P	**Pg**	**10 31 24.2**	**-0.3**
LAKA				S	**Sb**	**10 31 48.0**	**-0.7**
LTK	**Loutraki**	**2.13**	**30**	P	**Pb**	**10 31 23.5**	**0.0**
LTK	**Loutraki**	**2.13**	**30**	P	**Pb**	**10 31 23.5**	**0.0**

*NNC **07** 10:38:39.3±4.0, 54°.09N×87°.34E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=27.6km s-min=25.9km az=22.0*
*IDC **07** 10:38:40.4±2.2, 54°.08N×87°.41E, h0km, mb1 3.3/3, mb1mx3.1/28, mbtmp3.3/3, ML3.3/3, Error ellipse: s-maj=19.8km s-min=3.1km az=86.0*
ISC 07 10:38:43.0±2.5, 54°.2N±0°.1×87°.0E±0°.2, h7km±13km, n7, σ1°16/13, 4C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.31 261**		P	**Pg**	**10 39 07.9**	**-0.2**
	9.3nm,0.3s,baz=84,slow=17,SNR=15						
ZALV				Lg		10 39 29.3	
	3.5nm,0.3s,baz=86,slow=28,SNR=8.0						
KURK	**Kurchatov**	**6.19 239**		⇑Pn	**Pn**	**10 40 12.0**	**-2.6**
	3.1nm,0.7s						
KURK				⇓Sn	**Sn**	**10 41 28.8**	**+3.3**
	1.7nm,0.6s						
KURK				⇓Lg		10 42 01.8	
	13nm,0.8s						
KURK	**Kurchatov**	**6.19 239**		Pn	**Pn**	**10 40 16.8**	**+2.2**
	0.2nm,0.3s,baz=55,slow=14,SNR=13						
KURK				Sn	**Sn**	**10 41 29.9**	**+4.3**
	0.0nm,0.3s,baz=51,slow=25,SNR=2.4						
KURK				Lg		10 42 06.2	
	0.1nm,0.3s,baz=60,slow=30,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.29 239**		⇓Pn	**Pn**	**10 40 15.0**	**-1.1**
	0.7nm,0.8s						
KURBB				⇑Sn	**Sn**	**10 41 29.2**	**+1.2**
	0.9nm,0.6s						
KURBB				⇓Lg		10 42 02.3	
	2.7nm,0.8s						
MK31	**Makanchi Array**	**7.97 204**		Pn	**Pn**	**10 40 40.4**	**+1.3**
	1.1nm,0.7s,baz=23,slow=12,SNR=3.3						
MK31				⇑Sn	**Sn**	**10 42 08.3**	**-1.2**
	0.7nm,0.5s,baz=30,slow=24,SNR=3.7						
MK31				⇑Lg		10 42 52.1	
	8.4nm,0.9s,baz=26,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**7.97 204**		Pn	**Pn**	**10 40 38.8**	**-0.4**
	0.3nm,0.3s,baz=25,slow=12,SNR=4.8						
MKAR				Sn	**Sn**	**10 42 09.6**	**+0.1**
	0.3nm,0.3s,baz=26,slow=28,SNR=5.1						
MKAR				Lg		10 42 53.7	
	0.1nm,0.3s,baz=28,slow=28,SNR=6.1						
BVAR	**Borovoye Array**	**9.95 270**		Pn	**Pn**	**10 41 07.0**	**+0.8**
	0.4nm,0.3s,baz=80,slow=11,SNR=4.1						
BVAR				Sn	**Sn**	**10 42 56.9**	**-1.1**
	0.2nm,0.3s,baz=87,slow=31,SNR=2.7						

*NNC **07** 10:42:40.9±9.5, 36°.90N×70°.04E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=86.1km s-min=56.6km az=165.0*
*ISCJB **07** 10:42:42.0±0.5, 36°.51N±0°.03×70°.43E±0°.06, h198km±7km, mb3.5/3, Error ellipse: s-maj=8.0km s-min=5.2km az=168.8*
*NEIC **07** 10:42:44.3±0.7, 36°.69N×70°.14E, h185km±15km, mb4.0/1, Error ellipse: s-maj=18.6km s-min=12.2km az=123.0*
*IDC **07** 10:42:45.5±8.9, 36°.79N×70°.29E, h191km±59km, mb3.4/3, mb1 3.4/9, mb1mx3.1/29, mbtmp3.3/9, Error ellipse: s-maj=86.1km s-min=45.8km az=172.0*
ISC 07 10:42:42.9±0.5, 36°.52N±0°.03×70°.45E±0°.06, h190km±7km, n41, σ1°10/52, mb3.7/3, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.29 211**		*e*Pn	**Pn**	**10 43 24.3**	**+0.4**
KBL				*e*Sn	**Sn**	**10 43 55.1**	**-0.5**
NIL	**Nilore**	**3.67 140**		*e*Pn	**Pn**	**10 43 46.5**	**+6.3**
KSH	**Kashi**	**5.29**	**54**	Pn	**Pn**	**10 43 58.4**	**-2.3**
KSH				Sn	**Sn**	**10 44 50.2**	**-12**
KSH				smax			
	comp=N,42nm,0.4s						
KSH				smax			
	comp=E,37nm,0.3s						
THN	**Thein Dam**	**5.96 132**		*e*P	**Pn**	**10 44 10.6**	**+1.1**
THN				*e*S	**Sn**	**10 45 16.6**	**-1.2**
AML	**Almayashu**	**6.14**	**23**	P	**Pn**	**10 44 13.3**	**+1.6**
	SNR=69						
AML	**Almayashu**	**6.14**	**23**	*e*Pn	**Pn**	**10 44 13.2**	**+1.5**
AML				*e*Sn	**Sn**	**10 45 20.9**	**-1.0**
UCH	**Uchtor**	**6.51**	**28**	P	**Pn**	**10 44 18.2**	**+1.7**
	SNR=14						
KK31	**Karatay Array**	**6.57**	**0**	Pn	**Pn**	**10 44 18.0**	**+0.6**
	comp=E,5.5nm,0.5s,baz=182,slow=13,SNR=40						
KK31				⇑Sn	**Sn**	**10 45 27.9**	**-4.2**
	comp=E,5.5nm,0.4s,baz=189,slow=23,SNR=8.5						
EKS2	**Erkin-Say**	**6.65**	**22**	P	**Pn**	**10 44 19.9**	**+1.6**
	SNR=5.7						
AAK	**Ala-Archa**	**6.86**	**26**	P	**Pn**	**10 44 23.0**	**+2.0**
	SNR=6.2						
AAK	**Ala-Archa**	**6.86**	**26**	P	**Pn**	**10 44 22.1**	**+1.0**
	comp=E,0.0nm,0.3s,baz=181,slow=6.2,SNR=9.0						
AAK				S	**Sn**	**10 45 37.8**	**-0.9**
	comp=E,0.1nm,0.3s,baz=345,slow=21,SNR=24						
TKM2	**Tokmak 2**	**7.52**	**30**	⇓Pn	**Pn**	**10 44 30.9**	**+1.1**
	comp=E,3.2nm,0.4s						
TKM2				⇓Sn	**Sn**	**10 45 53.3**	**-1.2**
	comp=E,9.1nm,0.8s						
TKM2	**Tokmak 2**	**7.52**	**30**	P	**Pn**	**10 44 31.2**	**+1.5**
	SNR=9.2						
TKM2	**Tokmak 2**	**7.52**	**30**	*e*Pn	**Pn**	**10 44 31.3**	**+1.6**
TKM2				*e*Sn	**Sn**	**10 45 53.9**	**-0.6**
SMLA	**Simla**	**7.75 132**		*i* P	**Pn**	**10 44 29.2**	**-3.7**
SMLA				*i* S	**Sn**	**10 45 55.0**	**-5.2**
SMLA				*i* S	**Sn**	**10 45 56.0**	**-4.3**
SMLA				*ex*	x	10 45 58.2	
	comp=E,329nm,0.5s						
SMLA				*ex*	x	10 46 01.5	
	comp=N,442nm,0.2s						
DDI	**Dehra Dun**	**8.86 132**		*ex*	x	10 46 01.0	
KHET	**Khetri**	**9.56 150**		*e*S	**Sn**	**10 46 35.7**	**-7.7**
JOSI	**Joshimath**	**9.65 125**		*e*P	**Pn**	**10 44 57.7**	**0.0**
JOSI				*e*S	**Sn**	**10 46 39.0**	**-6.4**
JOSI				AML	AML	10 46 44.4	
	comp=E,57nm,0.3s						
JOSI				AML	AML	10 46 45.0	
	comp=N,29nm,0.3s						
SONA	**Sohna**	**9.97 144**		*e*S	**Sn**	**10 46 44.2**	**-8.9**
SONA				AML	AML	10 46 47.0	
	comp=N,26nm,0.5s						
SONA				AML	AML	10 46 50.5	
	comp=E,34nm,0.2s						
MK31	**Makanchi Array**	**13.54**	**37**	⇑P	**Pn**	**10 45 48.4**	**+1.2**
	comp=E,0.8nm,0.5s,baz=213,slow=8.4,SNR=7.7						
MKAR	**Makanchi Array**	**13.54**	**37**	P	**Pn**	**10 45 47.9**	**+0.7**
	comp=E,0.3nm,0.3s,baz=217,slow=7.4,SNR=6.8						
MKAR	**Makanchi Array**	**13.54**	**37**	P	**Pn**	**10 45 47.9**	**+0.7**
KOLN	**Koldanda**	**14.14 124**		*e*P	**Pn**	**10 45 55.1**	**+0.2**
	comp=E,7.8nm,0.4s						

GKN	**Gorkha**	**14.69 121**		*e*P	**Pn**	**10 46 01.7**	**0.0**
	comp=E,20nm,0.3s						
AB31	**Akbulak array**	**14.86 332**		P	**Pn**	**10 46 05.0**	**+1.5**
	comp=E,1.0nm,0.3s,baz=150,slow=12,SNR=66						
ABKAR	**Akbulak array**	**14.86 332**		Pn	**Pn**	**10 46 02.6**	**-1.0**
	comp=E,2.4nm,0.3s						
ABKAR				*e*S	**Sn**	**10 48 38.2**	**-11**
DMN	**Daman**	**15.26 121**		*e*P	**Pn**	**10 46 08.1**	**-0.6**
	comp=E,9.7nm,0.3s						
KKN	**Kakani**	**15.27 121**		*e*P	**Pn**	**10 46 08.7**	**-0.1**
	comp=E,15nm,0.3s						
KURK	**Kurchatov**	**15.36 20**		P	**Pn**	**10 46 07.3**	**-2.3**
	comp=E,0.1nm,0.3s,baz=212,slow=9.3,SNR=4.3						
KURK	**Kurchatov**	**15.36 20**		P	**Pn**	**10 46 07.3**	**-2.3**
PKIN	**Phulchoki**	**15.48 121**		*e*P	**Pn**	**10 46 11.3**	**-0.1**
	comp=E,30nm,0.5s						
PKI	**Pulchoki**	**15.49 121**		*e*P	**Pn**	**10 46 11.6**	**+0.1**
	comp=E,42nm,0.5s						
GUN	**Gumba**	**15.61 119**		*e*P	**Pn**	**10 46 13.8**	**+0.8**
	comp=E,27nm,0.5s						
BVAR	**Borovoye Array**	**16.50 360**		P	**Pn**	**10 46 21.4**	**-2.0**
	comp=E,0.3nm,0.3s,baz=181,slow=13,SNR=5.7						
AKTK	**Aktyubinsk**	**16.55 331**		P	**Pn**	**10 46 23.1**	**-0.9**
AKTO	**Aktyubinsk**	**16.55 331**		⇑P	**Pn**	**10 46 23.4**	**-0.6**
	comp=E,1.3nm,0.8s						
AKTO	**Aktyubinsk**	**16.55 331**		P	**Pn**	**10 46 23.1**	**-0.9**
	comp=E,0.4nm,0.3s,baz=143,slow=10,SNR=22						
ZALV	**Zalesovo Beam**	**20.08 25**		P	**P**	**10 47 02.3**	**+0.8**
	comp=E,1.2nm,0.3s,baz=219,slow=12,SNR=6.2						
FINES	**FINESS Array B**	**37.22 326**		P	**P**	**10 49 35.7**	**+0.2**
	comp=E,0.8nm,0.4s,mb3.7,baz=134,slow=7.9,SNR=3.0						
ARCES	**ARCESS Array B**	**40.96 338**		P	**P**	**10 50 07.0**	**+0.5**
	comp=E,2.2nm,0.6s,mb4.0,baz=105,slow=7.6,SNR=17						
NOA	**NORSAR Array B**	**44.10 323**		P	**P**	**10 50 30.8**	**-1.1**
	comp=E,0.5nm,0.5s,mb3.4,baz=97,slow=7.7,SNR=3.4						

JSN 07 10:42:57.4±1.0, 19°.80N×75°.49W, h32km±33km, MD3.7, 3C-3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**1.85 207**		⇑*i*P	Pn	10 43 26.9	-0.1
CMJ				*i* S	Sn	10 43 47.6	-1.7
GWJ	**Greenwich**	**2.08 214**		⇓*i*P	Pn	10 43 29.5	-0.6
STH	**Stony Hill**	**2.12 216**		⇓*i*P	Pn	10 43 30.0	-0.6
STH				*i* S	Sn	10 43 54.9	-1.0
HOJ	**Hope**	**2.15 214**		⇓*i*P	Pn	10 43 30.1	-1.0
PCJ	**Portland Cotta**	**2.58 218**		⇑*e*P	Pn	10 43 37.3	+0.2
MCJ	**Malvern**	**2.79 228**		⇑*e*P	Pn	10 43 38.9	-1.0
MCJ				*e*S	Sn	10 44 11.4	-1.1

*NIED **07** 10:49:00, 36°.30N×141°.90E, h23km, Mw4.6 Best double couple: M0 9.44000×10^15 NP1:ϕ0=31.00000°, δ65.00000°, λ113.00000°. NP2:ϕ0=166.00000°, δ34.00000°, λ50.00000°.*
*IDC **07** 10:49:52.7±0.5, 36°.22N×141°.80E, h0km, mb4.1/27, mb1 4.3/31, mb1mx4.2/45, mbtmp4.2/31, ML4.2/4, Error ellipse: s-maj=14.3km s-min=11.8km az=107.0*
*JMA **07** 10:49:54.9±0.2, 36°.26N×141°.90E, h34km, M4.7*
JMA Felt I J1.
*BJI **07** 10:49:55.4, 36°.75N×142°.14E, h32km, mB4.8/20, mb4.5/32, Ms4.4/31, Ms7 4.3/26*
*ISCJB **07** 10:49:57.3±0.1, 36°.27N±0°.03×141°.78E±0°.02, h34km, mb4.3/65, MS4.2/18, Error ellipse: s-maj=3.7km s-min=2.3km az=176.4*
*NEIC **07** 10:49:58.7±0.3, 36°.26N×141°.72E, mb4.5/29, MW4.6(NIED), Error ellipse: s-maj=8.1km s-min=4.8km az=170.0*
NEIC Recorded [1 JMA] in Tochigi.
*MOS **07** 10:49:59.2±0.9, 36°.79N×141°.63E, h33km, mb4.5/25, MS4.3/8, Error ellipse: s-maj=10.1km s-min=6.3km az=104.7*
ISC 07 10:49:59.0±0.1, 36°.26N±0°.02×141°.72E±0°.02, h36km, h36km±2.1km: pP-P, n344, σ0°76/370, mb4.3/65, MS4.2/18, 91C-112D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.89 232**		⇓P	**Pn**	**10 50 13.3**	**-1.7**
CHOJ				S	**Sn**	**10 50 27.7**	**+1.0**
JHO	**Hitachi**	**0.99 291**		⇓P	**Pn**	**10 50 14.4**	**-1.9**
JHO				S	**Sn**	**10 50 30.3**	**+1.2**
ONAJ	**Iwakimizuishiy**	**1.12 319**		⇓P	**Pn**	**10 50 16.5**	**-1.6**
ONAJ				*e*S	**Sn**	**10 50 33.7**	**+1.5**
JFK	**Kawauchi**	**1.29 329**		P	**Pn**	**10 50 18.7**	**-1.8**

comp=N,31nm,2.5s
HABR MLR MLR
comp=Z,605nm,15.0s
CN2 Changchun 14.55 306 *e*P Pn 10 53 22.7 +0.6
CN2 *e*S **Sn 10 56 00.7 -1.3**
CN2 LR LR
comp=N,700nm,15.0s
CN2 LR LR
comp=E,700nm,15.0s
CN2 LR LR
comp=Z,700nm,14.0s
KLR Kul'dur 14.87 334 *e*P Pn 10 53 31.2 +4.8
KLR MLR MLR
comp=Z,2µm,12.5s
SSE Sheshan 17.84 259 P **Pn 10 54 06.6 +2.3**
SSE sP sP 10 54 22.1 +3.5
SSE S **S 10 57 26.1 -1.8**
SSE pmax pmax
comp=Z,43nm,0.7s
SSE pmax pmax
comp=Z,82nm,8.5s
SSE LR LR
comp=N,260nm,16.9s
SSE LR LR
comp=E,260nm,16.9s
SSE LR LR
comp=Z,330nm,13.4s
NJ2 Nanjing 19.37 264 *e*P Pn 10 54 26.8 +3.9
NJ2 pP pP 10 54 35.0 +4.1
NJ2 sP sP 10 54 39.5 +4.1
NJ2 PP 10 54 44.6
NJ2 S **S 10 57 58.0 -0.8**
NJ2 sS sS 10 58 11.0 -2.6
NJ2 pmax pmax
comp=Z,30nm,1.2s
NJ2 pmax pmax
comp=Z,360nm,3.5s
NJ2 LR LR
comp=N,1µm,12.8s
NJ2 LR LR
comp=E,3µm,12.1s
PETK Petropavlovsk- 20.24 29 P **P 10 54 30.7 -0.1**
comp=E,2.9nm,0.8s,baz=179,slow=13,SNR=3.1
PETK Petropavlovsk- 20.24 29 P **P 10 54 30.7 -0.1**
BJI Beijing 20.42 288 P **P 10 54 33.3 +0.4**
BJI pmax pmax
comp=Z,15nm,0.6s
BJI LR LR
comp=N,460nm,13.6s,MS4.0
BJI LR LR
comp=E,210nm,14.6s,MS4.0
BJI LR LR
comp=Z,220nm,18.4s,MS3.5
QZH Quanzhou 22.82 247 *e*P P 10 55 03.8 +5.0
QZH *e*S **S 10 59 08.2 +2.4**
QZH LR LR
comp=N,460nm,13.1s
QZH LR LR
comp=E,370nm,7.7s
QZH LR LR
comp=Z,660nm,17.2s,MS4.1
HHC Hu-ho-hao-te 23.96 290 *e*P P 10 55 09.6 -0.2
HHC pP 10 55 19.1
HHC sP sP 10 55 22.7 -1.6
HHC PP 10 55 43.3
HHC PcP PcP 10 58 54.3 +3.0
HHC S **S 10 59 21.6 -2.4**
HHC sS sS 10 59 35.1 -5.6
HHC SS 11 00 10.0
HHC ScP ScP 11 02 27.7 +0.8
HHC PcS PcS 11 02 32.5 +1.6
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.4
HHC pmax pmax
comp=Z,100nm,5.3s
HHC LR LR
comp=N,310nm,12.1s,MS4.2
HHC LR LR
comp=E,500nm,13.7s,MS4.2
HHC LR LR
comp=Z,480nm,12.9s,MS4.2
XAN Xi'an 26.84 275 P **P 10 55 35.6 -0.4**
XAN pP pP 10 55 45.0 -1.2
XAN sP sP 10 55 50.0 -0.5
XAN S **S 11 00 12.4 +2.4**
XAN sS sS 11 00 27.3 +0.4
XAN pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
XAN pmax pmax
comp=Z,16nm,4.2s
XAN LR LR
comp=N,160nm,15.1s,MS3.8
XAN LR LR
comp=E,95nm,15.1s,MS3.8
XAN LR LR
comp=Z,100nm,15.1s,MS3.5
YAK Yakutsk 26.87 347 *e*P P 10 55 34.1 -1.9
YAK pmax pmax
comp=Z,25nm,1.4s,mb4.5
YAK pmax pmax
comp=N,25nm,1.8s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK MLR MLR
comp=N,373nm,14.0s
YAK MLR MLR
comp=Z,424nm,13.0s,MS4.2
YAK Yakutsk 26.87 347 *e*P P 10 55 35.1 -0.9
comp=Z,14nm,0.4s,mb4.8
SEY Seymchan 27.50 11⇑*e*P P 10 55 41.7 +0.1
ENH Enshi 27.52 267 *e*P P 10 55 40.8 -1.4
comp=Z,12nm,0.3s,mb5.0
ULN Ulaanbaatar 28.00 305 *e*P P 10 55 46.2 0.0
ULN *e**PP pP 10 55 57.2 +0.8
ULN pmax pmax
comp=Z,25nm,1.6s,mb4.6
ULN Ulaanbaatar 28.00 305 *e*P P 10 55 46.2 0.0
comp=Z,25nm,1.6s,mb4.6
ULN *e*pP pP 10 55 57.2 +0.8
BOD Bodaibo 28.31 328 *e*P P 10 55 47.1 -1.8
BOD pmax pmax
comp=Z,6.0nm,1.4s,mb4.0
SONM Songino Array 28.42 305 P **P 10 55 50.3 +0.3**
comp=Z,2.7nm,0.6s,mb4.0,baz=104,slow=8.7,SNR=16
SONM LR LR 11 07 24.1
baz=82,slow=37
LZH Lanzhou 30.45 281 *e*P P 10 56 18.5 +10
LZH pP pP 10 56 24.5 +6.2
LZH sP sP 10 56 27.0 +4.4
LZH PP PP 10 57 16.0 -1.1
LZH *e*S **S 11 01 15.3 +8.6**
LZH sS sS 11 01 30.5 +6.9
LZH SS SS 11 02 52.5 -25
LZH pmax pmax
comp=Z,25nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,100nm,7.2s
LZH LR LR
comp=E,640nm,14.3s
LZH LR LR
comp=Z,950nm,15.3s,MS4.6
ZAK Zakamensk 30.94 309 *e*P P 10 56 11.7 -0.6
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
GYA Guiyang 31.34 262 P **P 10 56 20.0 +3.9**
GYA pP pP 10 56 30.6 +4.3
GYA sP sP 10 56 35.8 +5.2
GYA PP PP 10 57 23.4 -3.8
GYA S **S 11 01 23.4 +2.5**
GYA sS sS 11 01 42.4 +4.6
GYA ScP ScP 11 02 52.8 +3.1
GYA SS SS 11 03 11.2 -25
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,70nm,4.8s
GYA LR LR
comp=N,480nm,16.2s,MS4.3
GYA LR LR
comp=E,370nm,17.6s,MS4.3
GYA LR LR
comp=Z,490nm,15.4s,MS4.3
CD2 Chengdu 31.93 272 P **P 10 56 23.6 +2.4**
CD2 pP pP 10 56 33.1 +1.7
CD2 PP PP 10 57 29.4 -4.2
CD2 S **S 11 01 30.4 +0.4**
CD2 sS sS 11 01 46.4 -0.5
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,90nm,3.5s
CD2 LR LR
comp=N,580nm,12.9s
CD2 LR LR
comp=Z,930nm,16.2s,MS4.6
GTA Gaotai 33.03 288 *e*P P 10 56 31.6 +0.8
GTA pP pP 10 56 40.7 -0.3
GTA sP sP 10 56 45.0 -0.3
GTA PP PP 10 57 41.7 -4.0
GTA S **S 11 01 48.1 +1.1**
GTA sS sS 11 02 04.0 +0.1
GTA SS SS 11 03 50.0 -20
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
GTA pmax pmax
comp=Z,71nm,7.8s
GTA LR LR
comp=N,210nm,15.0s,MS4.3
GTA LR LR
comp=E,430nm,17.7s,MS4.3
GTA LR LR
comp=Z,450nm,17.7s,MS4.2
BILL Bilibino 34.70 16 *e*P P 10 56 43.9 -1.0
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.6
BILL Bilibino 34.70 16 *e*P P 10 56 42.6 -2.3
comp=Z,1.4nm,0.4s,mb4.2
KMI Kunming 35.10 263 P **P 10 56 55.5 +6.7**
KMI S **S 11 02 24.6 +5.4**
KMI LR LR
comp=N,230nm,18.7s,MS4.2
KMI LR LR
comp=E,300nm,15.5s,MS4.2
KMI LR LR
comp=Z,380nm,14.2s,MS4.3
TIXI Tiksi 36.08 353 *e*P P 10 56 54.5 -2.3
TIXI pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
TIXI MLR MLR
comp=Z,337nm,15.0s,MS4.2
WMQ Urumqi 41.41 298 *e*P P 10 57 43.1 +1.4
WMQ pmax pmax
comp=Z,15nm,1.8s,mb4.3
WMQ pmax pmax
comp=Z,140nm,3.0s
WMQ LR LR
comp=N,170nm,19.0s,MS3.9
WMQ LR LR
comp=E,35nm,22.0s,MS3.9
WMQ LR LR
comp=Z,170nm,18.0s,MS4.0
CMAR Chiang Mai Arr 41.55 256 P **P 10 57 43.0 -0.1**
comp=Z,0.8nm,0.6s,mb3.5,baz=51,slow=5.2,SNR=5.2
ZALV Zalesovo Beam 42.62 313 P **P 10 57 50.9 -0.5**
comp=Z,1.5nm,0.4s,mb4.1,baz=86,slow=7.6,SNR=4.4
ZALV LR LR 11 16 25.5
baz=99,slow=37
NVS Novosibirsk 43.55 314 *e*P P 10 57 57.3 -1.7
MK31 Makanchi Array 44.74 303 *e*P P 10 58 08.3 -0.3
MK31 *e**PP pP 10 58 19.5 +0.4
MKAR Makanchi Array 44.74 303 P **P 10 58 08.3 -0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=92,slow=9.3,SNR=15
MKAR LR LR 11 17 40.5
baz=266,slow=37
KAPI Kappang 45.93 211 P **P 10 58 18.4 +0.1**
comp=Z,5.7nm,0.8s,mb4.5,baz=11,slow=5.2,SNR=2.8
KURK Kurchatov 46.60 309*c* *i*P P 10 58 22.4 -0.9
KURK pmax pmax
comp=Z,15nm,1.7s,mb4.7
KURK MLR MLR
comp=Z,418nm,19.0s,MS4.4
KURK Kurchatov 46.60 309 P **P 10 58 23.1 -0.1**
comp=Z,5.5nm,0.7s,mb4.6,baz=84,slow=7.7,SNR=27
KURK LR LR 11 19 29.1
baz=90,slow=38
KURK Kurchatov 46.60 309 *e*P P 10 58 22.5 -0.7
comp=Z,9.8nm,0.9s,mb4.7
KAKA Kakadu 49.49 192 *e*P P 10 58 51.0 +5.1
comp=Z,69nm,0.9s
TKM2 Tokmak 2 50.22 299 *e*P P 10 58 51.8 +0.6
TKM2 *e**PP pP 10 59 03.5 +1.7
TKM2 pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
TKM2 Tokmak 2 50.22 299 *e*P P 10 58 51.8 +0.6
comp=Z,3.6nm,0.5s,mb4.7
TKM2 *e*pP pP 10 59 03.5 +1.6
KSH Kashi 50.95 295 *e*P P 10 59 03.1 +6.3
KSH pP pP 10 59 12.1 +4.7
KSH *e*sP sP 10 59 16.1 +4.4
KSH *e*PcP PcP 11 00 18.1 +5.3
KSH *e*PP PP 11 01 00.2 +7.0
KSH *e*ScP ScP 11 04 10.1 +3.9
KSH *e*PcS PcS 11 04 14.1 +3.8
KSH *e*S **S 11 06 16.8 +5.7**
KSH *e*sS sS 11 06 34.0 +5.4
KSH *e*ScS ScS 11 08 47.0 +2.4
KSH *e*SS SS 11 09 51.1 +5.2
KSH pmax pmax
comp=Z,21nm,3.5s
KSH LR LR
comp=N,130nm,7.1s
KSH LR LR
comp=E,250nm,11.6s
AAK Ala-Archa 51.08 299 P **P 10 58 59.1 +1.4**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
AAK Ala-Archa 51.08 299 P **P 10 58 59.1 +1.4**
comp=Z,1.0nm,0.4s,mb4.1,baz=73,slow=14,SNR=3.2
AAK Ala-Archa 51.08 299 *e*P P 10 58 57.9 +0.2
comp=Z,4.7nm,1.1s,mb4.3
UCH Uchtor 51.18 298 P **P 10 59 00.9 +2.5**
comp=Z,1.3nm,0.8s,mb3.9
BVAR Borovoye Array 51.27 313 P **P 10 58 59.2 +0.1**
comp=Z,0.5nm,0.4s,mb3.8,baz=99,slow=15,SNR=4.6
BVAR LR LR 11 21 53.8
slow=37
BRVK Borovoye 51.33 313 *i*P P 10 59 00.1 +0.6
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BRVK MLR MLR
comp=Z,361nm,17.0s,MS4.5
BRVK Borovoye 51.33 313 *e*P P 10 58 59.0 -0.4
comp=Z,2.0nm,0.6s,mb4.2
MENT Mentasta 51.53 34 *e*P P 10 59 01.4 +0.6
EKS2 Erkin-Say 51.57 299 *e*P P 10 59 01.4 -0.1
comp=Z,0.8nm,0.4s,mb4.0
AML Almayashu 51.79 299 *e*P P 10 59 03.9 +0.9
comp=Z,8.7nm,1.0s,mb4.6
HYT Haines Junctio 54.77 36 *e*P P 10 59 23.0 -1.7
INK Inuvik 54.96 27 P **P 10 59 25.0 -1.0**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 54.96 27 P **P 10 59 25.0 -1.0**
comp=Z,4.9nm,1.0s,mb4.5,baz=299,slow=7.2,SNR=22
INK Inuvik 54.96 27 *e*P P 10 59 24.8 -1.2
comp=Z,4.3nm,0.8s,mb4.5
WRAB Tennant Creek 56.32 188 *e*P P 10 59 42.3 +6.1
WRAB pmax pmax
comp=Z,17nm,1.1s,mb5.0
WRAB Tennant Creek 56.32 188 *e*P P 10 59 42.3 +6.1
comp=Z,17nm,1.1s,mb5.0
WB2 Warramunga Arr 56.33 188 *e*P P 10 59 35.1 -1.1
WB2 *e*pP pP 10 59 44.4 -2.6
WRA Warramunga Arr 56.33 188 P **P 10 59 33.9 -2.4**
comp=Z,2.8nm,0.8s,mb4.3,baz=7.2,slow=7.7,SNR=20
ARU Arti 57.10 319*c* *i*P P 10 59 41.0 -0.4
ARU *e* 11 00 34.2
ARU *e* 11 01 45.5
ARU PPP 11 03 00.9
ARU S **S 11 07 33.0 -0.7**
ARU SS SS 11 11 15.3 -6.9
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,314nm,17.0s,MS4.5
ARU Arti 57.10 319 *e*P P 10 59 41.3 -0.1
comp=Z,8.3nm,1.1s,mb4.7
ABKAR Akbulak array 58.62 311 *e*P P 10 59 51.4 -0.8
comp=Z,1.4nm,0.5s,mb4.2
ABKAR *e*pP pP 11 00 02.4 -0.6
AKTK Aktyubinsk 59.37 312 P **P 10 59 56.0 -1.4**
AKTK LR LR 11 26 43.9
AKTO Aktyubinsk 59.37 312 P **P 10 59 56.0 -1.4**
comp=Z,0.4nm,0.4s,mb3.8,baz=75,slow=7.1,SNR=3.2
AKTO LR LR 11 26 43.9
baz=217,slow=37
ASAR Alice Springs 60.06 188 P **P 11 00 00.5 -1.8**
comp=Z,0.7nm,0.7s,mb3.8,baz=3.0,slow=7.1,SNR=9.8
SPITS Spitsbergen Ar 61.33 349 P **P 11 00 08.8 -1.6**
comp=Z,12nm,1.3s,mb4.9,baz=276,slow=7.4,SNR=2.9
YKA Yellowknife Ar 64.35 30 P **P 11 00 30.5 -0.1**
comp=Z,2.1nm,0.9s,mb4.2,baz=298,slow=6.5,SNR=15
ARCES ARCESS Array B 64.80 340 P **P 11 00 32.8 -0.7**
comp=Z,2.2nm,0.8s,mb4.2,baz=56,slow=8.9,SNR=4.8
STKA Stephens Creek 67.78 180 P **P 11 00 52.6 -0.3**
comp=Z,2.7nm,1.1s,mb4.2,baz=5.3,slow=12,SNR=3.3
F04A Amboy 68.65 48 ⇓P **P 11 00 58.4 +0.1**
baz=68
B07A Winthrop 68.71 45 ⇓P **P 11 00 59.2 +0.4**
baz=68
OBN Obninsk 68.86 324 *e*P P 11 00 57.7 -1.8
OBN *e* 11 01 22.9
OBN pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
C07A Waterville 69.14 46 ⇑P **P 11 01 00.9 -0.5**
baz=69
B08A Colville Reser 69.21 45 ⇑P **P 11 01 01.7 -0.2**
baz=69
FINES FINESS Array B 69.61 332 P **P 11 01 03.7 -0.4**
comp=Z,2.7nm,0.8s,mb4.2,baz=112,slow=2.1,SNR=5.7
FINES LR LR 11 33 58.3
baz=2.5,slow=38
EDM Edmonton 69.80 38 *e*P P 11 01 04.4 -1.0
B09A Rice 69.85 44 ⇓P **P 11 01 06.0 +0.2**
baz=69
G06A Carlson Farm, 70.08 48 ⇓P **P 11 01 07.1 -0.2**
baz=70
C09A Chrisman Ranch 70.11 45 ⇓P **P 11 01 07.5 +0.1**
baz=70
D08A Wollman Farm, 70.13 46 ⇓P **P 11 01 07.9 +0.4**
baz=70
F07A Phinny Hill Vi 70.16 47 ⇑P **P 11 01 08.1 +0.4**
baz=70
E08A Dider Farm, El 70.35 46 ⇓P **P 11 01 09.1 +0.1**
baz=70
D09A Jones Farm, Ri 70.48 46 ⇑P **P 11 01 09.4 -0.3**
baz=70
A11A Hall Mountain, 70.56 43 ⇑P **P 11 01 10.3 +0.1**
baz=70
B11A Sandpoint 70.84 44 ⇑P **P 11 01 10.9 -0.9**
baz=70
G08A Pilot Rock 71.05 47 ⇓P **P 11 01 12.7 -0.5**
baz=70
VSU Vasula 71.24 330 *i* P **P 11 01 14.1 0.0**
K05A Summer Lake 71.25 51 ⇓P **P 11 01 14.4 0.0**
baz=71
D11A Klaveano Farm, 71.62 45 ⇑P **P 11 01 16.0 -0.6**
baz=71
H08A Prairie City 71.64 48 ⇓P **P 11 01 16.8 0.0**
baz=71
F10A Beach Ranch, E 71.70 46 ⇑P **P 11 01 17.3 +0.2**
baz=71
B13A Whitefish 71.93 43 ⇑P **P 11 01 18.8 +0.4**
baz=71,SNR=5.8
E11A Bogner Ranch, 72.08 45 ⇓P **P 11 01 19.1 -0.2**
baz=72
A14A Double T Ranch 72.16 42 ⇑P **P 11 01 19.5 -0.2**
baz=72
C13A Hot Springs 72.26 44 ⇑P **P 11 01 20.2 -0.2**
baz=72
BMO Blue Mountains 72.27 47 *e*P P 11 01 20.9 +0.4
comp=Z,7.5nm,1.4s,mb4.4
F11A Grangeville 72.37 46 ⇑P **P 11 01 20.8 -0.3**
baz=72
JTMT Jette 72.39 43 *e*P P 11 01 22.1 +0.9
J08A Circle Bar Ran 72.39 49 ⇑P **P 11 01 21.5 +0.2**
baz=72
E12A Beaver Dam Sad 72.41 45 ⇓P **P 11 01 21.1 -0.2**
baz=72
I09A Lost Marbles R 72.50 48 ⇓P **P 11 01 21.7 -0.2**
baz=72
A15A Johnson Ranch, 72.53 42 ⇓P **P 11 01 21.7 -0.2**
baz=72
D13A Huson 72.66 44 ⇓P **P 11 01 22.5 -0.3**
baz=72
C14A Swan Lake 72.67 43 ⇓P **P 11 01 22.5 -0.3**
baz=72
SWMT Swartz Lake 72.68 43 *e*P P 11 01 23.1 +0.2
J09A Fry Pan Ranch, 72.84 49 ⇑P **P 11 01 23.9 -0.1**
baz=72
F12A Elk City 72.97 46 ⇓P **P 11 01 24.2 -0.5**
baz=72,SNR=5.9
B15A Bradely Ranch, 73.00 42 ⇓P **P 11 01 24.4 -0.5**
baz=72,SNR=5.5
SLMT Seeley Lake 73.11 44 *e*P P 11 01 25.4 -0.1
SLMT *e*pP pP 11 01 36.2 -0.3
H11A Donnelly 73.12 47 ⇓P **P 11 01 25.1 -0.5**
baz=73
BEKR Beckwourth 73.13 53 ⇑P **P 11 01 25.7 0.0**
baz=73
A16A West Butte Ran 73.15 41 ⇓P **P 11 01 25.4 -0.2**
baz=73
E13A Victor 73.18 44 ⇑P **P 11 01 25.4 -0.5**
baz=73
D14A Greenough 73.20 44 ⇓P **P 11 01 25.5 -0.5**
baz=73
C15A Salmond Ranch, 73.29 43 ⇓P **P 11 01 26.4 -0.2**
baz=73,SNR=6.2
B16A M & M Farms, S 73.41 42 ⇑P **P 11 01 27.2 0.0**
baz=73
F13A Darby 73.48 45 ⇓P **P 11 01 27.4 -0.2**
baz=73
A17A Triple J Farms 73.63 41 ⇑P **P 11 01 28.1 -0.4**
baz=73
C16A Fuhringer Ranc 73.75 42 ⇓P **P 11 01 29.3 +0.1**
baz=73,SNR=6.2
H12A Diamond D Ranc 73.89 46 ⇓P **P 11 01 29.9 -0.2**
baz=73
MFID Camas Ranch 73.96 48 ⇓P **P 11 01 30.3 -0.2**
baz=73
B17A L&G Farms, Che 73.97 42 ⇑P **P 11 01 30.0 -0.5**
baz=73
E15A Deer Lodge 74.07 44 ⇓P **P 11 01 31.0 -0.1**
baz=74
A18A Metzger Ranch, 74.10 41 ⇑P **P 11 01 30.7 -0.5**
baz=74
I12A Atlanta 74.16 47 ⇑P **P 11 01 31.2 -0.5**
baz=74
K11A Parker Ranch, 74.21 48 ⇑P **P 11 01 31.8 -0.2**
baz=74
FFC Flin Flon 74.22 33 *i* P **P 11 01 32.0 +0.2**
H13A Challis 74.23 46 ⇓P **P 11 01 32.1 0.0**
baz=74,SNR=8.3
D16A Dana Ranch, Ca 74.31 43 ⇓P **P 11 01 32.5 0.0**
baz=74
L10A Juniper Basin 74.33 49 ⇑P **P 11 01 32.9 +0.1**
baz=74
HRY Holter Researc 74.35 43 *e*P P 11 01 32.9 +0.2
C17A Wharram Farm, 74.38 42 ⇓P **P 11 01 32.6 -0.3**
baz=74
B18A Beardsley Farm 74.45 41 ⇓P **P 11 01 33.0 -0.3**
baz=74
F15A Butte 74.49 44 ⇓P **P 11 01 33.6 0.0**
baz=74,SNR=9.4
LRM Limekiln Ridge 74.53 44 *e*P P 11 01 34.2 +0.4
E16A East Helena 74.54 43 ⇓P **P 11 01 33.7 -0.1**
baz=74
FCC Fort Churchill 74.58 27 *e*P P 11 01 32.5 -1.4
comp=Z,0.3nm,1.3s
M10A I.L. Ranch, Tu 74.61 50 ⇑P **P 11 01 34.9 +0.5**
baz=74
I13A Wildhorse Cree 74.69 47 ⇑P **P 11 01 35.1 +0.4**
baz=74
H14A Leadore 74.71 46 ⇑P **P 11 01 34.7 -0.2**
baz=74
DLMT Dillon 74.72 45 *e*P P 11 01 35.0 +0.1
comp=Z,5.6nm,1.1s,mb4.4
HLID Hailey 74.72 47 ⇑P **P 11 01 35.1 +0.1**
baz=74
L11A Cat Creek Ranc 74.72 49 ⇓P **P 11 01 35.2 +0.2**
baz=74
HFS Hagfors 74.89 336 P **P 11 01 35.6 0.0**
comp=Z,1.9nm,0.8s,mb4.0,baz=8.8,slow=11,SNR=3.7
G15A Dillon 74.89 45 ⇑P **P 11 01 36.0 +0.1**
baz=74,SNR=5.7

K12A	Draper Farm, C	74.96	48	⇑P		P	11 01 36.6 +0.2
	baz=74						
NB2	NORSAR Subarra	74.99	337	P		P	11 01 35.7 -0.5
	comp=Z,6.9nm,1.1s,mb4.5,baz=42,slow=5.9						
NOA	NORSAR Array B	74.99	337	P		P	11 01 35.8 -0.4
	comp=Z,2.1nm,0.8s,mb4.1,baz=40,slow=5.7,SNR=4.9						
NOA				LR	LR		11 38 02.9
	baz=25,slow=38						
F16A	Kennard Place,	75.01	44	⇓P		P	11 01 36.9 +0.3
	baz=74,SNR=6.0						
E17A	Martinsdale	75.03	43	⇓P		P	11 01 37.0 +0.2
	baz=74,SNR=6.0						
AKASG	Malin Array Be	75.06	323	*ce*P		P	11 01 36.0 -0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	75.06	323	P		P	11 01 35.3 -1.5
	comp=Z,1.6nm,0.5s,mb4.2,baz=47,slow=5.5,SNR=9.0						
AKASG				LR	LR		11 37 37.6
	baz=60,slow=38						
I14A	Mackay	75.07	46	⇓P		P	11 01 37.5 +0.5
	baz=74,SNR=8.5						
BOZ	Bozeman (W)	75.09	44	⇓P		P	11 01 37.0 -0.1
	baz=74,SNR=5.1						
BOZ	Bozeman (W)	75.09	44	*e*P		P	11 01 37.4 +0.3
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BOZ	Bozeman (W)	75.09	44	*e*P		P	11 01 37.4 +0.3
	comp=Z,4.4nm,1.1s,mb4.3						
M11A	Holland Ranch,	75.12	49	⇓P		P	11 01 38.1 +0.8
	baz=75						
L12A	House Creek Ra	75.18	48	⇑P		P	11 01 37.9 +0.2
	baz=75						
G16A	Moss Hill, Enn	75.25	44	⇓P		P	11 01 37.9 -0.1
	baz=75						
NVAR	Mina Array Bea	75.25	53	P		P	11 01 38.5 +0.4
	comp=Z,2.6nm,0.9s,mb4.1,baz=287,slow=6.2,SNR=12						
O10A	Cortez Mining,	75.34	51	⇓P		P	11 01 39.2 +0.6
	baz=75						
J14A	Carey	75.39	47	⇑P		P	11 01 39.5 +0.6
	baz=75						
K13A	Stover Farm, H	75.45	48	⇑P		P	11 01 39.5 +0.3
	baz=75						
F17A	Fitzpatrick Pl	75.48	43	⇓P		P	11 01 39.6 +0.3
	baz=75,SNR=5.7						
E18A	Harlowton	75.49	43	⇓P		P	11 01 39.4 +0.1
	baz=75						
N11A	Elko Archery C	75.51	50	⇓P		P	11 01 39.9 +0.3
	baz=75						
M12A	Wells	75.67	49	⇓P		P	11 01 41.1 +0.6
	baz=75,SNR=5.6						
P10A	Eureka	75.75	51	⇓P		P	11 01 41.1 +0.1
	baz=75						
G17A	Pierce Place,	75.79	44	⇓P		P	11 01 41.4 +0.3
	baz=75						
L13A	Double Diamond	75.86	48	⇓P		P	11 01 41.9 +0.3
	baz=75						
H16A	Russell Place,	75.88	45	⇓P		P	11 01 41.5 -0.1
	baz=75						
O11A	Cowboy Ranch,	75.96	50	⇓P		P	11 01 42.3 +0.2
	baz=75						
J15A	Blackfoot	75.98	46	⇓P		P	11 01 42.3 +0.1
	baz=75						
F18A	Big Timber	76.00	43	⇓P		P	11 01 42.7 +0.4
	baz=75,SNR=6.3						
K14A	Jones Ranch, D	76.05	47	⇑P		P	11 01 42.9 +0.3
	baz=76						
M13A	Montello	76.16	49	⇑P		P	11 01 43.4 +0.1
	baz=76						
VES	Vestal, Richgr	76.21	56	⇓P		P	11 01 43.1 -0.5
	baz=76						
I16A	Newdale	76.24	45	⇑P		P	11 01 44.2 +0.5
	baz=76,SNR=9.6						
Q10A	Clear Creek Ra	76.25	52	⇓P		P	11 01 44.2 +0.4
	baz=76						
O12A	Currie	76.44	50	⇓P		P	11 01 45.6 +0.7
	baz=76,SNR=6.9						
H17A	Grant Village	76.45	45	⇑P		P	11 01 46.4 +1.6
	baz=76,SNR=7.6						
IMW	Indian Meadow	76.54	45	*e*P		P	11 01 45.8 +0.5
	comp=Z,2.9nm,0.9s,mb4.2						
M14A	Sheep Mountain	76.57	48	⇑P		P	11 01 45.8 +0.2
	baz=76						
SBC	Santa Barbara	76.58	57	⇓P		P	11 01 45.3 -0.5
	baz=76						
R10A	Warm Springs	76.62	52	⇑P		P	11 01 46.2 +0.3
	baz=76						
S10A	Tonopah Range,	76.65	53	⇓P		P	11 01 45.8 -0.3
	baz=76						
Q11A	Duckwater	76.71	52	⇑P		P	11 01 46.9 +0.5
	baz=76						
RLMT	Red Lodge	76.73	43	⇑P		P	11 01 45.6 -0.8
	baz=76						
RLMT	Red Lodge	76.73	43	*e*P		P	11 01 46.3 -0.2
	comp=Z,23nm,2.3s,mb4.7						
I17A	Pilgrim Ck.	76.74	45	⇓P		P	11 01 47.5 +1.0
	baz=76						
P12A	McGill	76.81	51	⇓P		P	11 01 47.5 +0.5
	baz=76						
K16A	Soda Springs	76.81	46	⇓P		P	11 01 47.8 +0.9
	baz=76,SNR=5.6						
J17A	Brown Place, J	77.00	46	⇓P		P	11 01 48.3 +0.4
	baz=76						
R11A	Troy Canyon, C	77.04	52	⇑P		P	11 01 48.4 0.0
	baz=76,SNR=5.4						
N14A	Grayback Hills	77.05	49	⇑P		P	11 01 49.0 +0.6
	baz=76						
M15A	Larsen Ranch,	77.13	48	⇑P		P	11 01 48.6 -0.1
	baz=77						
MPMC	Manual Prospec	77.14	55	⇑P		P	11 01 49.4 +0.4
	baz=77						
FURC	Furnace Creek,	77.32	54	⇓P		P	11 01 50.8 +0.9
	baz=77						
S11A	Rachel	77.36	53	⇑P		P	11 01 49.9 -0.2
	baz=77						
L16A	Fish Haven	77.40	47	⇑P		P	11 01 50.3 +0.1
	baz=77						
N15A	Stansbury Isla	77.43	48	⇓P		P	11 01 50.7 +0.3
	baz=77						
J18A	Kendall Valley	77.49	45	⇑P		P	11 01 50.9 +0.1
	baz=77						
HWUT	Hardware Ranch	77.57	47	*e*P		P	11 01 51.4 +0.2
	comp=Z,8.7nm,1.4s,mb4.5						
Q13A	Wheeler Ranch,	77.67	51	⇑P		P	11 01 51.9 +0.1
	baz=77						
DUG	Dugway	77.67	49	⇓P		P	11 01 52.5 +0.7
	baz=77,SNR=6.3						
DUG	Dugway	77.67	49	*e*P		P	11 01 51.8 0.0
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
DUG	Dugway	77.67	49	*e*P		P	11 01 51.8 -0.1
	comp=Z,4.3nm,0.9s,mb4.4						
R12A	Pony Springs,	77.68	51	⇑P		P	11 01 52.3 +0.4
	baz=77						
K18A	Toltan Ranch,	77.83	46	⇑P		P	11 01 53.1 +0.4
	baz=77						
P14A	Drum Mountains	77.88	50	⇑P		P	11 01 53.1 +0.1
	baz=77,SNR=5.5						
T11A	Corn Creek, Al	77.93	53	⇑P		P	11 01 53.6 +0.3
	baz=77						
PDAR	Pinedale Array	78.03	45	P		P	11 01 53.2 -0.5
	comp=Z,0.8nm,0.7s,mb3.8,baz=302,slow=2.8,SNR=8.0						
Q14A	Sevier Lake (B	78.12	50	⇑P		P	11 01 54.5 +0.2
	baz=78,SNR=6.4						
R13A	O'Grain Ranch,	78.17	51	⇑P		P	11 01 55.1 +0.5
	baz=78						
P15A	Leamington	78.38	49	⇑P		P	11 01 56.2 +0.4
	baz=78						
N17A	Moffit Pass	78.41	48	⇓P		P	11 01 56.0 +0.1
	baz=78						
O16A	Springville	78.47	48	⇓P		P	11 01 56.7 +0.5
	baz=78						
S13A	Holt Ranch, En	78.60	52	⇑P		P	11 01 57.4 +0.4
	baz=78						
Q15A	Fillmore	78.67	50	⇓P		P	11 01 57.4 +0.1
	baz=78						
T13A	Saint George	78.90	52	⇓P		P	11 01 59.0 +0.3
	baz=78						
CCUT	Cedar City	78.93	51	*e*P		P	11 01 59.2 +0.4
	comp=Z,4.2nm,1.3s,mb4.2						
O17A	Robinson Place	78.93	48	⇑P		P	11 01 59.2 +0.4
	baz=78						
N18A	Larsen Ranch,	79.08	47	⇓P		P	11 01 59.8 +0.2
	baz=78						
L20A	Wamsutter	79.21	45	⇑P		P	11 02 00.6 +0.3
	baz=79						
U13A	Pakoon Wash	79.23	53	⇓P		P	11 02 00.8 +0.4
	baz=79						
O18A	Roosevelt	79.33	48	⇓P		P	11 02 01.1 +0.1
	baz=79						
P17A	Butcher Ranch,	79.38	49	⇑P		P	11 02 01.3 +0.1
	baz=79						
N19A	John Jarvie Ra	79.43	47	⇓P		P	11 02 01.4 0.0
	baz=79						
BRTR	Keskin Array B	79.55	312	*ce*P		P	11 02 03.5 +1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	79.55	312	P		P	11 02 00.2 -1.9
	comp=Z,0.6nm,0.6s,mb3.7,baz=117,slow=9.8,SNR=3.8						
BRTR				LR	LR		11 43 54.9
	baz=201,slow=41						
BRTR	Keskin Array B	79.55	312	P		P	11 02 00.2 -1.9
BRTR				LR	LR		11 43 54.9
KOLS	Kolonicke sedl	79.59	324	*e*P		P	11 02 03.2 +1.0
KOLS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KOLS	Kolonicke sedl	79.59	324	*e*P		P	11 02 03.2 +1.0
	comp=Z,2.6nm,1.0s,mb4.1						
KOLS	Kolonicke sedl	79.59	324	*e*P		P	11 02 03.2 +1.0
R16A	Teasdale	79.66	50	⇑P		P	11 02 02.9 +0.1
	baz=79,SNR=7.2						
STHS	Stebnicka Huta	79.73	325	*e*P		P	11 02 04.4 +1.5
STHS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
STHS	Stebnicka Huta	79.73	325	*e*P		P	11 02 04.4 +1.5
	comp=Z,1.6nm,0.7s,mb4.1						
STHS	Stebnicka Huta	79.73	325	*e*P		P	11 02 04.4 +1.5
U14A	Mt Trumbull	79.73	52	⇓P		P	11 02 03.4 +0.2
	baz=79						
SRU	San Rafael	79.73	49	⇑P		P	11 02 03.1 -0.1
	baz=79						
SRU	San Rafael	79.73	49	*e*P		P	11 02 03.1 -0.1
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
SRU	San Rafael	79.73	49	*e*P		P	11 02 03.1 -0.1
	comp=Z,4.4nm,0.8s,mb4.4						
L21A	Rawlins	79.80	45	⇑P		P	11 02 03.2 -0.2
	baz=79						
O19A	Miners Draw (B	79.83	47	⇓P		P	11 02 03.6 -0.1
	baz=79						
T15A	Red Dirt Ranch	79.87	51	⇓P		P	11 02 04.1 +0.2
	baz=79						
N20A	Spence Gulch,	80.00	46	⇑P		P	11 02 04.5 0.0
	baz=79						
ULM	Lac du Bonnet	80.01	33	P		P	11 02 03.0 -1.4
	comp=Z,0.6nm,0.5s,mb3.8,baz=353,slow=9.0,SNR=3.2						
M21A	Separation Pea	80.03	45	⇑P		P	11 02 04.3 -0.4
	baz=80						
R17A	Hanksville Air	80.05	49	⇓P		P	11 02 04.6 -0.3
	baz=80						
DVTC	Desert V Tower	80.07	57	⇑P		P	11 02 05.6 +0.5
	baz=80						
W13A	Hualapai Mount	80.08	54	⇑P		P	11 02 05.4 +0.3
	baz=80						
SWSC	Sam W. Stewart	80.11	56	⇓P		P	11 02 05.9 +0.6
	baz=80						
V14A	Boquillas Ranc	80.26	53	⇓P		P	11 02 06.5 +0.4
	baz=80						
U15A	North Rim	80.29	52	⇓P		P	11 02 06.2 0.0
	baz=80						
P19A	Cripple Cowboy	80.34	48	⇓P		P	11 02 05.8 -0.6
	baz=80						
O20A	White River Ci	80.46	47	⇓P		P	11 02 06.9 -0.1
	baz=80						
S17A	Black Ridge (B	80.48	50	⇓P		P	11 02 07.4 +0.1
	baz=80						
W14A	Seligman	80.53	53	⇓P		P	11 02 07.7 +0.2
	baz=80						
R18A	Canyonlands Na	80.57	49	⇓P		P	11 02 07.7 0.0
	baz=80						
V15A	Kaibab Nationa	80.74	52	⇓P		P	11 02 09.4 +0.7
	baz=80						
KECS	Kecovo	80.75	325	*e*P		P	11 02 10.6 +2.2
KECS	Kecovo	80.75	325	*e*P		P	11 02 10.5 +2.1
T17A	Navajo Res., N	80.88	51	⇓P		P	11 02 09.0 -0.3
	baz=80						
S18A	Hurst Farm, Bl	80.95	50	⇑P		P	11 02 09.3 -0.4
	baz=80						
R19A	Curley Farm, L	81.02	49	⇓P		P	11 02 10.5 +0.5
	baz=80						
N22A	Wattenberg Ran	81.07	46	⇓P		P	11 02 10.4 +0.1
	baz=80						
Q20A	Ridgley Place,	81.18	48	⇑P		P	11 02 10.7 -0.2
	baz=81						
U17A	Shonto	81.22	51	⇑P		P	11 02 11.2 +0.1
	baz=81						
T18A	Mexican Hat	81.37	50	⇓P		P	11 02 11.8 -0.2
	baz=81						
S19A	Harvey Farm, M	81.44	49	⇓P		P	11 02 11.9 -0.4
	baz=81						
WUAZ	Wupatki	81.44	52	⇑P		P	11 02 12.5 +0.1
	baz=81						
VYHS	Vyhne	81.50	326	*e*P		P	11 02 12.5 +0.1
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
VYHS	Vyhne	81.50	326	*e*P		P	11 02 12.5 +0.1
X15A	Humboldt	81.52	53	⇓P		P	11 02 13.0 +0.2
	baz=81						
R20A	Redvale	81.62	48	⇓P		P	11 02 13.0 -0.3
	baz=81						
Q21A	Lamborn Mesa,	81.69	48	⇓P		P	11 02 13.7 +0.1
	baz=81						
V17A	Tonalea, Kykot	81.74	52	⇓P		P	11 02 14.2 +0.2
	baz=81						
Y15A	Casa Rosa Ranc	81.79	54	⇑P		P	11 02 14.5 +0.2
	baz=81						
SMCO	Snowmass	81.82	47	*e*P		P	11 02 15.4 +1.1
	comp=Z,3.7nm,1.1s,mb4.2						
U18A	Rough Rock, Ch	81.83	51	⇑P		P	11 02 14.6 +0.2
	baz=81						
CLL	Collm	81.89	330	*e*P		P	11 02 14.0 -0.4
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CLL				MLR	MLR		
	comp=Z,200nm,16.8s,MS4.5						
CLL	Collm	81.89	330	*e*P		P	11 02 14.0 -0.4
	comp=Z,3.0nm,0.8s,mb4.3						
CLL				LmH			11 40 00.0
	comp=N,100nm,19.0s						
CLL				LmH			11 40 00.0
	comp=E,200nm,19.4s						
R21A	Cimarron	82.00	48	⇓P		P	11 02 15.1 -0.2
	baz=82						
Q22A	Crested Butte,	82.06	47	⇑P		P	11 02 15.2 -0.5
	baz=82						
X16A	Lo Mia Camp, P	82.08	53	⇑P		P	11 02 15.7 -0.1
	baz=82						
T19A	Beclabito	82.09	50	⇑P		P	11 02 15.7 -0.1
	baz=82						
MVCO	Mesa Verde	82.17	49	⇓P		P	11 02 16.3 +0.1
	baz=82						
U19A	Dine' College,	82.32	50	⇓P		P	11 02 17.3 +0.3
	baz=82						
T22A	Edith	83.27	49	⇓P		P	11 02 21.4 -0.5
	baz=83						
Y18A	Canyon Day Jun	83.39	53	⇓P		P	11 02 23.2 +0.6
	baz=83						
X19A	St. Johns	83.45	52	⇓P		P	11 02 23.8 +0.9
	baz=83						
GERES	GERESS Array B	83.50	328	P		P	11 02 22.3 -0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	83.50	328	P		P	11 02 22.3 -0.5
	comp=Z,0.5nm,0.4s,mb3.9,baz=46,slow=5.8,SNR=5.0						
GERES				LR	LR		11 43 06.1
	baz=266,slow=38						
W20A	Ramah	83.51	51	⇑P		P	11 02 23.6 +0.5
	baz=83						
SDCO	Great Sand Dun	83.63	47	*e*P		P	11 02 23.7 -0.1
	comp=Z,22nm,2.8s,mb4.8						
X20A	Quemado	83.88	51	⇑P		P	11 02 25.5 +0.4
	baz=83						
217A	Green Valley	84.15	55	⇑P		P	11 02 26.9 +0.4
	baz=84						
118A	Homack Ranch,	84.15	54	⇓P		P	11 02 26.8 +0.2
	baz=84						
Y20A	Horse Springs,	84.37	52	⇑P		P	11 02 27.7 +0.2
	baz=84						
X21A	Alamocita Cree	84.39	51	⇓P		P	11 02 27.7 0.0
	baz=84						
119A	Ashpeak Ranch,	84.51	53	⇓P		P	11 02 28.8 +0.5
	baz=84						
Z20A	Nine Sixteen R	84.74	53	⇓P		P	11 02 30.2 +0.7
	baz=84						
Y21A	Point of Rocks	84.75	51	⇑P		P	11 02 30.1 +0.6
	baz=84						
ANMO	Albuquerque	84.89	50	*e*P		P	11 02 30.9 +0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	Albuquerque	84.89	50	*e*P		P	11 02 30.9 +0.7
	comp=Z,2.2nm,1.0s,mb4.2						
318A	Bisbee	84.90	55	⇑P		P	11 02 30.5 +0.2
	baz=84						
219A	White Tail Can	85.03	54	⇓P		P	11 02 31.4 +0.5
	baz=84						
121A	Cookes Peak, D	85.63	53	⇓P		P	11 02 34.4 +0.5
	baz=85						
Y23A	Lovelace Mesa,	85.81	51	⇑P		P	11 02 34.7 -0.1
	baz=85						
W25A	X Bar L Ranch,	85.94	49	⇑P		P	11 02 35.5 +0.1
	baz=85						
SCHQ	Schefferville	86.01	16	LR	LR		11 41 45.6
	baz=25,slow=36						
Y25A	Mesa, Roswell	86.66	50	⇓P		P	11 02 39.1 +0.1
	baz=86						
X26A	CR and CF Fran	86.78	49	⇓P		P	11 02 40.0 +0.4
	baz=86						
Z25A	Roswell	87.08	50	⇑P		P	11 02 41.1 0.0
	baz=87						
125A	Gardner Draw,	87.53	51	⇓P		P	11 02 43.2 -0.1
	baz=87						
TXAR	Lajitas Array	90.40	53	P		P	11 02 57.1 +0.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	90.40	53	P		P	11 02 57.1 +0.3
	comp=Z,1.1nm,0.9s,mb4.2,baz=308,slow=6.2,SNR=5.1						
KEST	Kesra	95.78	323	LR	LR		11 50 11.8
	baz=263,slow=38						
LPAZ	La Paz	146.86	61	PKPbc	PKPbc		11 09 38.0 +0.2
	comp=Z,2.5nm,0.5s,baz=349,slow=4.1,SNR=17						
LPAZ	La Paz	146.86	61	*e*PKPbc	PKPbc		11 09 38.4 +0.6

*TAP **07** 10:52:59.8, 22°.86N×120°.68E, h19km, ML3.8, B*
*ISCJB **07** 10:53:00.9±0.2, 22°.83N±0°.01×120°.68E±0°.02, h22km±2km,*
Error ellipse: s-maj=2.8km s-min=2.1km az=162.7
*JMA **07** 10:53:01.4±0.5, 22°.70N×120°.72E, h90km, M3.3*
*NEIC **07** 10:53:02.2±2.0, 22°.96N×120°.77E, h8km±9km,*
MG3.3(JMA), Error ellipse: s-maj=23.7km s-min=9.5km
az=51.0

ISC 07 10:53:01.1±0.2, 22°.84N±0°.01×120°.68E±0°.02, h17km±1km,
n73, σ1°00/133, 6C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SSD	Sandimen	0.11	204	⇓*i*	P	Pg	10 53 04.0	-0.6
	baz=201							
SSD				*e*	S	Sg	10 53 06.7	-0.3
	baz=201							
SGLT	Jiouru	0.21	236	*i*	P	Pg	10 53 06.2	+0.2
	baz=226							
SGLT				*i*	S	Sg	10 53 11.3	+2.0
	baz=226							
TWM1	Shoushan	0.24	265	⇑*i*	P	Pg	10 53 06.6	+0.2
	baz=268							
TWM1				*e*	S	Sg	10 53 12.4	+2.3
	baz=268							
SGST	Jiashian	0.25	340	⇑*i*	P	Pg	10 53 06.5	-0.2
	baz=344							
SGST				*i*	S	Sg	10 53 11.6	+1.0
	baz=344							
STYT	Tauyuan	0.33	13	⇓*i*	P	Pg	10 53 07.5	-0.5
	baz=18							
STYT				*i*	S	Sg	10 53 12.7	+0.1
	baz=18							
ECL	Taimali	0.35	134	⇑*i*	P	Pg	10 53 08.0	-0.4
	baz=140							
ECL				*e*	S	Sg	10 53 13.2	-0.2
	baz=140							
TWG	Pinlang	0.36	93	*e*	Pg	Pg	10 53 08.3	-0.4
TWG				*e*	Sg	Sg	10 53 14.6	+0.9
TWG	Pinlang	0.36	93	⇑*i*	P	Pg	10 53 08.5	-0.1
	baz=96							
TWG					S	Sg	10 53 13.8	+0.1
	baz=96							
CHN1	Nanshi	0.37	338	⇑*i*	P	Pg	10 53 08.5	-0.2
	baz=337							
CHN1					S	Sg	10 53 14.7	+0.9
	baz=337							
CHN3	Shinhua	0.37	309	*e*	P	Pg	10 53 09.1	+0.3
	baz=307							
CHN3				*e*	S	Sg	10 53 17.4	+3.5
	baz=307							
WTP	Ta-pu	0.41	352	⇓*i*	P	Pg	10 53 09.0	-0.4
	baz=351							
WTP				*i*	S	Sg	10 53 15.9	+0.9
	baz=351							
KAU	Kaohsiung	0.44	231	*e*	P	Pg	10 53 10.7	+0.7
	baz=244							
TTN	Taitung	0.44	102	⇑*i*	P	Pg	10 53 10.5	+0.4
	baz=92							
TTN				*e*	S	Sg	10 53 18.2	+2.1
	baz=92							
TWK	Hsinying	0.46	337	*e*	P	Pg	10 53 09.9	-0.4
	baz=337							
TWK				*e*	S	Sg	10 53 17.1	+0.6
	baz=337							
TPUB	Ta-pu	0.46	354	*e*	Pg	Pg	10 53 09.4	-1.0
TPUB					Sg	Sg	10 53 15.5	-1.1
TAI1	Yung-k'ang	0.46	295	*e*	P	Pg	10 53 09.9	-0.4
	baz=295							
ELDTW	Lidau	0.47	42	P		Pg	10 53 09.9	-0.6
	baz=43							
ELDTW					S	Sg	10 53 16.7	0.0
	baz=43							
SCZT	Fangliau	0.47	187	⇓*i*	P	Pg	10 53 09.8	-0.8
	baz=186							
SCZT				*e*	S	Sg	10 53 16.3	-0.7
	baz=186							
EAST	Anshuo	0.48	161	⇓*i*	P	Pg	10 53 10.4	-0.4
	baz=159							
EAST					S	Sg	10 53 17.5	+0.1
	baz=159							
CHN4	Tsaushan	0.51	351	P		Pg	10 53 10.7	-0.7
	baz=351							
CHN4					S	Sg	10 53 18.3	+0.1
	baz=351							
TAW	Tawu	0.52	157	*e*	P	Pg	10 53 10.8	-0.7
	baz=156							
TAW					S	Sg	10 53 18.6	0.0
	baz=156							
SCLT	Jiali	0.56	307	*e*	P	Pg	10 53 11.9	-0.2
	baz=307							
SCLT				*e*	S	Sg	10 53 21.6	+2.0
	baz=307							
TWP	Hsiaoliuchiu	0.57	211	*e*	P	Pg	10 53 14.0	+1.5
	baz=210							
TWP				*e*	S	Sg	10 53 25.1	+4.9
	baz=210							
CHN8	Yiju	0.66	319	*e*	P	Pg	10 53 13.6	-0.5
	baz=319							
CHN8				*e*	S	Sg	10 53 24.3	+1.4
	baz=319							
ALS	Alishan	0.67	10	⇓*i*	P	Pg	10 53 13.6	-0.8
	baz=10.0							
ALS				*e*	S	Sg	10 53 23.9	+0.5
	baz=10.0							
CHKT	Chengkung	0.68	68	P		Pg	10 53 13.6	-0.9
	baz=83							
CHKT					S	Sg	10 53 24.5	+0.9
	baz=83							
YUS	Yu-Shan	0.69	21	⇓*i*	P	Pg	10 53 14.2	-0.5
	baz=22							
YUS				*i*	S	Sg	10 53 24.4	+0.5
	baz=22							
CHY	Chiayi	0.69	340	P		Pg	10 53 14.2	-0.5
	baz=340							
CHY					S	Sg	10 53 24.5	+0.6
	baz=340							
CHN2	Minshiung	0.71

	baz=167							
HEN				*e*S	**Sb**	**10 53 29.4**	**+1.3**
	baz=167							
WGK	**Gukeng**	**0.84**	**353**	*e*P	**Pb**	**10 53 16.6**	**-0.8**
	baz=353							
WGK				*e*S	**Sb**	**10 53 29.2**	**+0.7**
	baz=353							
EHY	**Hungye**	**0.89**	**42**	⇓*i*P	**Pb**	**10 53 17.0**	**-1.0**
	baz=49							
EHY				*i* S	**Sb**	**10 53 28.8**	**-0.9**
	baz=49							
TSEB	**Hengchuen, Pin**	**0.96**	**168**	*e*P	**Pb**	**10 53 19.5**	**+0.2**
	baz=170							
TSEB				S	**Sb**	**10 53 33.8**	**+2.0**
	baz=170							
SSLB	**Suanglung**	**0.97**	**15**	*e*Pg	**Pg**	**10 53 18.1**	**-2.0**
SSLB				*e*Sg	**Sg**	**10 53 32.6**	**-0.2**
WDGT	**Dungji**	**1.02**	**294**	*e*P	**Pb**	**10 53 18.1**	**-2.4**
	baz=294							
WDGT				*e*S	**Sb**	**10 53 31.8**	**-1.8**
	baz=294							
WNT	**Mingjian**	**1.03**	**0**	*e*P	**Pb**	**10 53 19.5**	**-1.0**
WNT				*e*S	**Sb**	**10 53 34.2**	**+0.5**
SMLT	**Sun Moon Lake**	**1.05**	**11**	P	**Pb**	**10 53 20.4**	**-0.6**
	baz=11							
SMLT				S	**Sb**	**10 53 35.3**	**+0.8**
	baz=11							
TYC	**Yuchr**	**1.07**	**9**	⇓P	**Pb**	**10 53 19.9**	**-1.3**
	baz=8.0							
TYC				S	**Sb**	**10 53 36.3**	**+1.4**
	baz=8.0							
WTCT	**Ta-ch'eng**	**1.08**	**340**	*e*P	**Pb**	**10 53 20.0**	**-1.4**
	baz=340							
WTCT				*e*S	**Sb**	**10 53 34.9**	**-0.3**
	baz=340							
LAY	**Lan-yu**	**1.14**	**135**	*e*P	**Pn**	**10 53 20.2**	**-2.1**
	baz=125							
ESL	**Shilin**	**1.19**	**36**	P	**Pn**	**10 53 22.3**	**-0.7**
	baz=28							
ESL				*e*S	**Sb**	**10 53 38.0**	**-0.4**
	baz=28							
PNG	**Penghu**	**1.26**	**305**	*e*P	**Pn**	**10 53 21.2**	**-2.7**
	baz=306							
PNG				*e*S	**Sb**	**10 53 37.1**	**-3.3**
	baz=306							
TCU	**Taichung**	**1.30**	**360**	*e*P	**Pn**	**10 53 23.3**	**-1.2**
	baz=345							
TCU				*e*S	**Sb**	**10 53 41.9**	**+0.4**
	baz=345							
WHF	**Hehuan Shan**	**1.40**	**22**	*e*P	**Pn**	**10 53 26.1**	**+0.1**
	baz=31							
WHF				*e*S	**Sn**	**10 53 45.8**	**+1.7**
	baz=31							
TWT	**Tachien**	**1.48**	**18**	*e*P	**Pn**	**10 53 26.4**	**-0.6**
	baz=14							
TWD	**Chiawan**	**1.49**	**34**	*e*P	**Pn**	**10 53 26.9**	**-0.2**
	baz=18							
TWD				*e*S	**Sn**	**10 53 47.0**	**+0.7**
	baz=18							
TWQ1	**Liyutan**	**1.50**	**3**	*e*P	**Pn**	**10 53 26.6**	**-0.7**
	baz=348							
TWQ1				*e*S	**Sn**	**10 53 47.1**	**+0.6**
	baz=348							
NSY	**Sanyi**	**1.57**	**3**	*e*P	**Pn**	**10 53 27.2**	**-1.0**
	baz=348							
NSY				*e*S	**Sn**	**10 53 49.3**	**+1.2**
	baz=348							
NACB	**Ninganchiao**	**1.57**	**32**	*e*Pn	**Pn**	**10 53 27.7**	**-0.5**
NACB				*e*Sn	**Sn**	**10 53 47.2**	**-1.0**
NNS	**Nan Shan**	**1.71**	**22**	*e*P	**Pn**	**10 53 30.4**	**+0.2**
	baz=17							
NSTT	**Nanjuang**	**1.80**	**9**	*e*P	**Pn**	**10 53 30.6**	**-0.8**
	baz=9.0							
NSTT				*e*S	**Sn**	**10 53 54.9**	**+0.9**
	baz=9.0							
ENA	**Nanau**	**1.85**	**32**	*e*P	**Pn**	**10 53 32.9**	**+0.7**
	baz=27							
YHNB	**Yeheng**	**1.93**	**19**	*e*Pn	**Pn**	**10 53 33.1**	**-0.1**
YHNB				*e*Sg	**Sg**	**10 54 03.1**	**-0.1**
NSK	**Sanguang**	**1.93**	**19**	*e*P	**Pn**	**10 53 33.1**	**0.0**
	baz=18							
NSK				*e*S	**Sn**	**10 53 59.3**	**+2.2**
	baz=18							
TWC	**Suao**	**2.06**	**31**	*e*P	**Pn**	**10 53 35.3**	**+0.3**
	baz=30							
TWC				*e*S	**Sn**	**10 54 02.3**	**+2.0**
	baz=30							
TWE	**Neicheng**	**2.08**	**26**	*e*P	**Pn**	**10 53 35.8**	**+0.5**
	baz=24							
TWE				*e*S	**Sn**	**10 54 05.2**	**+4.4**
	baz=24							
TATO	**Taipei**	**2.25**	**19**	*e*Pn	**Pn**	**10 53 38.9**	**+1.3**
TATO				*e*Sg	**Sg**	**10 54 11.9**	**-1.5**
TWA	**Mucha**	**2.28**	**21**	*e*P	**Pn**	**10 53 39.3**	**+1.2**
NWF	**Wu-fen Shan**	**2.44**	**24**	*e*P	**Pn**	**10 53 42.2**	**+2.0**
	baz=3.0							
TWB1	**Santiao Chiao**	**2.47**	**29**	*e*P	**Pn**	**10 53 41.8**	**+1.2**
	baz=23							
KNM	**Kinmen**	**2.59**	**308**	*e*P	**Pn**	**10 53 41.5**	**-0.8**
	baz=309							
YOJ	**Yonaguni jima**	**2.68**	**53**	P	**Pn**	**10 53 44.0**	**+0.5**
YOJ				*e*S	**Sn**	**10 54 17.0**	**+1.4**
YOJ	**Yonaguni jima**	**2.68**	**53**	*e*P	**Pn**	**10 53 43.0**	**-0.5**
	baz=54							
QZH	**Quanzhou**	**2.83**	**318**	*e*Pn	**Pn**	**10 53 44.8**	**-0.8**
QZH				Sn	**Sn**	**10 54 16.1**	**-3.2**
QZH				smax			
	comp=N,130nm,0.8s						
QZH				smax			
	comp=E,110nm,0.6s						
HATJ	**Hateruma jima**	**3.12**	**67**	P	**Pn**	**10 53 49.6**	**+0.1**
HATJ				*e*S	**Sn**	**10 54 25.5**	**-0.9**
IRIF	**Iriomote-Funau**	**3.17**	**61**	P	**Pn**	**10 53 51.0**	**+0.8**
IRIF				*e*S	**Sn**	**10 54 29.4**	**+1.7**
JKRS	**Kuro-shima**	**3.36**	**65**	P	**Pn**	**10 53 53.4**	**+0.6**
JKRS				*e*S	**Sn**	**10 54 32.6**	**+0.3**
JIJ	**Ishigaki jima**	**3.52**	**64**	P	**Pn**	**10 53 55.0**	**-0.1**
JIJ				*e*S	**Sn**	**10 54 35.4**	**-0.9**
JTJ	**Tarama**	**4.10**	**63**	*e*S	**Sn**	**10 54 50.9**	**+0.3**
JMJ	**Miyako jima 2**	**4.66**	**64**	P	**Pn**	**10 54 10.9**	**+0.2**

NIED ***07*** *11:00:00, 36°.20N×141°.80E, h26km, Mw3.8 Best double couple: M0 6.49000×10^14 NP1:φs=29.00000°, δ63.00000°, λ95.00000°. NP2:φs=198.00000°, δ28.00000°, λ80.00000°.*
ISCJB ***07*** *11:00:37.1±1.3, 36°.25N±0°.03×141°.91E±0°.07, h23km±8km, mb3.8/8, Error ellipse: s-maj=9.6km s-min=5.2km az=0.3*
JMA ***07*** *11:00:38.3±0.2, 36°.25N×141°.82E, h65km±4km, MS2.9/2, Ms1 2.9/2, ms1mx2.4/32, Error ellipse: s-maj=24.2km s-min=19.4km az=75.0*
ISC 07 11:00:37.3±1.3, 36°.25N±0°.03×141°.85E±0°.06, h12km±7km, n26, σ0s78/37, mb3.8/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**236**	P	**Pg**	**11 00 56.0**	**0.0**
CHOJ				S	**Sg**	**11 01 09.6**	**+0.9**
JHO	**Hitachi**	**1.10**	**290**	P	**Pb**	**11 00 57.3**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.20**	**316**	P	**Pn**	**11 00 59.0**	**-1.0**
ONAJ				*e*S	**Sb**	**11 01 14.8**	**-0.7**
JFK	**Kawauchi**	**1.37**	**325**	P	**Pn**	**11 01 01.5**	**-0.7**
JFK				S	**Sb**	**11 01 19.7**	**-0.5**
BSO1	**Boso 1**	**1.74**	**204**	P	**Pn**	**11 01 06.7**	**-0.6**
BSO1				S	**Sn**	**11 01 29.6**	**+0.2**
JFT	**Otama**	**1.76**	**317**	P	**Pn**	**11 01 08.1**	**+0.5**
JFT				*e*S	**Sn**	**11 01 31.1**	**+1.2**
BSO3	**Boso 3**	**1.81**	**218**	P	**Pn**	**11 01 08.1**	**-0.2**
BSO3				*e*S	**Sn**	**11 01 30.6**	**-0.5**
JMM	**Marumori**	**1.83**	**333**	P	**Pn**	**11 01 08.2**	**-0.3**
JMM				*e*S	**Sn**	**11 01 31.3**	**-0.3**
JAG	**Ashikaga**	**1.94**	**276**	P	**Pn**	**11 01 09.5**	**-0.6**
JRY	**Ryogami san**	**2.40**	**265**	P	**Pn**	**11 01 15.9**	**-0.5**
JOD2	**Odawara 2**	**2.45**	**247**	P	**Pn**	**11 01 17.3**	**+0.2**
JNS	**Sasagawa**	**2.56**	**309**	P	**Pn**	**11 01 19.7**	**+1.0**
MJAR	**Matsushiro Arr**	**2.95**	**277**	Pn	**Pn**	**11 01 24.2**	**+0.2**
	13nm,0.3s,baz=114,slow=9.0,SNR=122						
MJAR				Sn	**Sn**	**11 02 00.1**	**+0.8**
	7.6nm,0.3s,baz=7.9,slow=30,SNR=6.0						
MAT	**Matsushiro**	**2.96**	**277**	P	**Pn**	**11 01 25.1**	**+1.1**
MAT				S	**Sn**	**11 01 58.3**	**-1.1**
JHJ	**Hachijo jima 2**	**3.55**	**209**	Pn	**Pn**	**11 01 33.4**	**+1.1**
	17nm,0.3s,baz=254,slow=23,SNR=22						
JHJ				Sn	**Sn**	**11 02 10.7**	**-3.5**
	60nm,0.3s,baz=66,slow=24,SNR=10						
JHJ				LR	LR	11 02 41.7	
	comp=Z,116nm,19.4s,baz=165,slow=33						
ASAJ	**Asahikawa**	**7.88**	**4**	Pn	**Pn**	**11 02 31.1**	**-0.6**
	0.9nm,0.3s,baz=153,slow=26,SNR=12						
CBIJ	**Chichi jima**	**9.13**	**178**	Pn	**Pn**	**11 02 47.3**	**-1.5**
	3.3nm,0.3s,baz=153,slow=23,SNR=8.1						
CBIJ				Sn	**Sn**	**11 04 19.6**	**-12**
	5.5nm,0.3s,baz=308,slow=18,SNR=3.7						
KSRS	**Korea Array**	**11.23**	**280**	Pn	**Pn**	**11 03 17.8**	**+0.2**
	0.1nm,0.3s,baz=94,slow=13,SNR=4.9						
KSRS				LR	LR	11 07 23.6	
	comp=Z,78nm,19.1s,baz=359,slow=37						
SONM	**Songino Array**	**28.52**	**305**	P	**P**	**11 06 33.2**	**+0.6**
	1.4nm,0.6s,mb3.9,baz=99,slow=9.5,SNR=6.8						
ZALV	**Zalesovo Beam**	**42.71**	**313**	P	**P**	**11 08 34.0**	**+0.1**
	1.1nm,0.6s,mb3.8,baz=87,slow=6.5,SNR=4.4						
MKAR	**Makanchi Array**	**44.84**	**303**	P	**P**	**11 08 51.1**	**0.0**
	1.0nm,0.7s,mb3.8,baz=92,slow=7.6,SNR=8.8						
KURK	**Kurchatov**	**46.70**	**309**	P	**P**	**11 09 06.0**	**+0.3**
	1.7nm,0.5s,mb4.3,baz=83,slow=7.7,SNR=14						
INK	**Inuvik**	**54.93**	**27**	P	**P**	**11 10 08.7**	**+1.2**
	0.3nm,0.5s,mb3.6,baz=220,slow=3.4,SNR=5.0						
WRA	**Warramunga Arr**	**56.33**	**188**	P	**P**	**11 10 22.6**	**+4.5**
	1.2nm,0.7s,mb4.0,baz=3.0,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**60.06**	**188**	P	**P**	**11 10 50.2**	**+6.2**
	0.3nm,0.6s,mb3.5,baz=13,slow=7.8,SNR=6.0						
ARCES	**ARCESS Array B**	**64.86**	**340**	P	**P**	**11 11 16.5**	**+0.8**
	0.8nm,0.8s,mb3.8,baz=16,slow=9.1,SNR=3.7						

IDC ***07*** *11:08:59.0±0.5, 36°.18N×141°.82E, h0km, mb4.6/28, mb1 4.8/32, mb1mx4.7/35, mbtmp4.7/32, ML4.4/4, MS3.9/15, Ms1 4.0/15, ms1mx3.7/34, Error ellipse: s-maj=13.8km s-min=11.9km az=104.0*
NIED ***07*** *11:09:00, 36°.30N×141°.80E, h17km, Mw4.5 Best double couple: M0 6.44000×10^15 NP1:φs=25.00000°, δ64.00000°, λ98.00000°. NP2:φs=186.00000°, δ27.00000°, λ73.00000°.*
BJI ***07*** *11:09:02.2, 36°.33N×141°.63E, h19km, mB4.8/23, mb4.9/42, Ms4.3/33, Ms7 4.2/29*
JMA ***07*** *11:09:02.2±0.2, 36°.27N×141°.83E, h60km±4km, M4.7*
ISCJB ***07*** *11:09:03.4±0.1, 36°.27N±0°.03×141°.72E±0°.02, h33km, mb4.7/139, MS4.1/33, Error ellipse: s-maj=3.9km s-min=2.2km az=166.9*
NEIC ***07*** *11:09:04.7±0.1, 36°.23N×141°.74E, mb4.6/82, MW4.5(NIED), Error ellipse: s-maj=4.2km s-min=2.9km az=158.0*
NEIC Felt at Kashiwa, Kawaguchi, Narita, Takahata and Tokyo.
MOS ***07*** *11:09:04.6±0.8, 36°.58N×141°.67E, h33km, mb5.0/54, MS4.2/11, Error ellipse: s-maj=8.0km s-min=5.1km az=109.3*
DJA ***07*** *11:09:31, 36°.11N×140°.83E, h254km, mb4.7/14*
ISC 07 11:09:05.2±0.1, 36°.27N±0°.02×141°.70E±0°.02, h34km, h34km±.7km: pP-P, n556, σ0s68/572, mb4.7/139, MS4.1/33, 137C-131D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.89**	**230**	⇓P	**Pn**	**11 09 20.1**	**-1.1**
CHOJ				S	**Sn**	**11 09 33.4**	**+0.6**
JHO	**Hitachi**	**0.97**	**291**	⇓P	**Pn**	**11 09 21.1**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.10**	**319**	⇓P	**Pn**	**11 09 22.6**	**-1.5**
JFK	**Kawauchi**	**1.28**	**329**	P	**Pn**	**11 09 25.1**	**-1.4**
JFT	**Otama**	**1.65**	**319**	⇓P	**Pn**	**11 09 31.6**	**-0.1**
BSO1	**Boso 1**	**1.72**	**200**	P	**Pn**	**11 09 31.0**	**-1.6**
BSO1				S	**Sn**	**11 09 53.8**	**+0.5**
JMM	**Marumori**	**1.75**	**336**	⇑P	**Pn**	**11 09 31.8**	**-1.2**
JMM				*e*S	**Sn**	**11 09 55.8**	**+1.7**
BSO3	**Boso 3**	**1.76**	**214**	P	**Pn**	**11 09 32.2**	**-1.0**
JAG	**Ashikaga**	**1.82**	**275**	⇓P	**Pn**	**11 09 33.2**	**-0.8**
JFY	**Yanaizu**	**1.96**	**306**	⇑P	**Pn**	**11 09 36.3**	**+0.4**
JKT	**Katashina**	**2.03**	**285**	P	**Pn**	**11 09 37.3**	**+0.4**
JRY	**Ryogami san**	**2.28**	**264**	P	**Pn**	**11 09 40.0**	**-0.3**
JRY				*e*S	**Sn**	**11 10 09.1**	**+2.0**
MJAR	**Matsushiro Arr**	**2.83**	**276**	Pn	**Pn**	**11 09 48.0**	**+0.2**
	48nm,0.3s,baz=317,slow=24,SNR=337						
MJAR				Sn	**Sn**	**11 10 26.4**	**+5.7**
	12nm,0.3s,baz=56,slow=36,SNR=5.7						
MAJO	**Matsushiro**	**2.83**	**277**	*e*P	**Pn**	**11 09 49.0**	**+1.1**
MAT	**Matsushiro**	**2.83**	**277**	P	**Pn**	**11 09 49.2**	**+1.3**
MAT				S	**Sn**	**11 10 25.3**	**+4.6**
JHJ	**Hachijo jima 2**	**3.52**	**207**	Pn	**Pn**	**11 09 54.7**	**-2.6**
	100nm,0.3s,baz=268,slow=2.3,SNR=40						
JHJ				Sn	**Sn**	**11 10 36.2**	**-1.6**
	258nm,0.3s,baz=288,slow=23,SNR=9.9						
ERM	**Erimo**	**5.85**	**11**	*e*P	**Pn**	**11 10 25.7**	**-3.6**
ERM	**Erimo**	**5.85**	**11**	*e*Pn	**Pn**	**11 10 26.7**	**-2.6**
ASAJ	**Asahikawa**	**7.87**	**5**	Pn	**Pn**	**11 10 54.7**	**-2.3**
	3.9nm,0.3s,baz=210,slow=12,SNR=27						
ASAJ				Sn	**Sn**	**11 12 21.9**	**-2.8**
	0.1nm,0.3s,baz=50,slow=32,SNR=3.6						
ASAJ				Lg		11 13 01.0	
	1.0nm,0.3s,baz=54,slow=19,SNR=5.0						
ASAJ				LR	LR	11 14 52.2	
	comp=Z,840nm,20.3s,baz=191,slow=44						
YUK	**Yuzh-Kuril'sk**	**8.38**	**21**	P	**Pn**	**11 10 58.5**	**-5.6**
YUK				*e*S	**Sn**	**11 12 27.4**	**-10**
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,380nm,0.5s						
CBIJ	**Chichi jima**	**9.16**	**177**	Pn	**Pn**	**11 11 09.6**	**-5.3**
	comp=E,21nm,0.3s,baz=266,slow=22,SNR=20						
CBIJ				Sn	**Sn**	**11 12 45.1**	**-12**
	comp=E,27nm,0.3s,baz=109,slow=22,SNR=5.2						
KUR	**Kuril'sk**	**10.10**	**26**	P	**Pn**	**11 11 23.0**	**-4.6**
KUR				S	**Sn**	**11 13 08.0**	**-12**
KUR				smax			
	comp=N,50nm,0.5s						
KUR				smax			
	comp=E,70nm,0.5s						
YSS	**Yuzh-Sakhalins**	**10.70**	**4**	⇓*e*P	**Pn**	**11 11 34.0**	**-1.9**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,1μm,15.0s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**10.70**	**4**	*e*Pn	**Pn**	**11 11 34.6**	**-1.2**
KSRS	**Korea Array**	**11.10**	**280**	Pn	**Pn**	**11 11 43.9**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=95,slow=13,SNR=35						
KSRS				LR	LR	11 15 55.9	
	comp=Z,436nm,19.9s,baz=91,slow=37						
MDJ	**Mudanjiang**	**12.42**	**316**	Pn	**Pn**	**11 12 03.1**	**+3.7**
	comp=Z,7.6nm,0.6s						
CN2	**Changchun**	**14.53**	**306**	*e*P	**Pn**	**11 12 27.0**	**-1.1**
CN2				*es*P	sP	11 12 39.2	-8.5
CN2				*e*S	**Sn**	**11 15 06.4**	**-1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,15.0s						
CN2				LR	LR		
	comp=E,700nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
JOW	**Kunigami**	**14.80**	**234**	Pn	**Pn**	**11 12 33.3**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=4.4,slow=13,SNR=2.7						
JOW				LR	LR	11 18 17.9	
	comp=Z,253nm,19.5s,baz=96,slow=38						
KLR	**Kul'dur**	**14.85**	**334**	*e*P	**Pn**	**11 12 26.3**	**-6.2**
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
DL2	**Dalian**	**16.12**	**285**	P	**Pn**	**11 12 49.4**	**+0.3**
DL2				*e*S	**Sn**	**11 15 47.1**	**+0.3**
DL2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DL2				pmax	pmax		
	comp=Z,220nm,13.6s						
DL2				LR	LR		
	comp=N,220nm,12.6s						
DL2				LR	LR		
	comp=E,520nm,14.7s						
DL2				LR	LR		
	comp=Z,580nm,15.4s						
NJ2	**Nanjing**	**19.36**	**264**	*e*P	**Pn**	**11 13 31.7**	**+2.7**
NJ2				pP	pP	11 13 38.8	+2.0
NJ2				sP	sP	11 13 43.0	+1.8
NJ2				S	**Sn**	**11 17 01.0**	**-4.1**
NJ2				sS	sS	11 17 14.0	-5.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,90nm,3.8s						
PETK	**Petropavlovsk-**	**20.24**	**29**	P	**P**	**11 13 37.4**	**+0.3**
	comp=Z,7.3nm,0.8s,baz=190,slow=8.3,SNR=7.0						
PETK				LR	LR	11 20 56.5	
	comp=Z,117nm,19.3s,MS3.2,baz=218,slow=35						
BJI	**Beijing**	**20.40**	**288**	P	**P**	**11 13 37.6**	**-1.4**
BJI				S	**S**	**11 17 26.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,21nm,0.7s						
BJI				pmax	pmax		
	comp=Z,79nm,3.2s						
BJI				LR	LR		
	comp=N,370nm,16.2s,MS3.9						
BJI				LR	LR		
	comp=E,150nm,14.2s,MS3.9						
BJI				LR	LR		
	comp=Z,180nm,18.2s,MS3.5						
BJT	**Baijiatuau**	**20.40**	**288**	*e*P	**P**	**11 13 37.7**	**-1.3**
QZH	**Quanzhou**	**22.81**	**247**	*e*P	**P**	**11 14 04.5**	**-0.5**
QZH				S	**S**	**11 18 05.9**	**-6.2**
QZH				LR	LR		
	comp=N,530nm,14.5s,MS4.2						
QZH				LR	LR		
	comp=E,430nm,14.6s,MS4.2						
QZH				LR	LR		
	comp=Z,630nm,16.1s,MS4.2						
CLNS	**Chul'man**	**23.47**	**336**	*e*P	**P**	**11 14 11.0**	**-0.5**
CLNS				*e**PP		11 14 19.1	
CLNS				*e*		11 14 39.9	
CLNS				*e*		11 17 53.0	
CLNS				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.6						
CLNS				pmax	pmax		
	comp=N,20nm,1.3s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,15nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				MLR	MLR		
	comp=N,292nm,12.0s,MS3.9						
CLNS				MLR	MLR		
	comp=Z,360nm,14.0s,MS4.0						
CLNS				MLR	MLR		
	comp=E,152nm,17.0s,MS3.9						
HHC	**Hu-ho-hao-te**	**23.94**	**290**	*e*P	**P**	**11 14 15.7**	**-0.3**
HHC				pP		11 14 24.9	
HHC				sP	sP	11 14 29.0	-1.0
HHC				PP		11 14 50.1	
HHC				S	**S**	**11 18 27.7**	**-2.5**
HHC				sS	sS	11 18 43.2	-3.2
HHC				SS		11 19 19.2	
HHC				ScP	ScP	11 21 33.4	0.0
HHC				PcS	PcS	11 21 36.8	-0.4
HHC				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.6						
HHC				pmax	pmax		
	comp=Z,95nm,5.5s						
HHC				LR	LR		
	comp=N,240nm,10.8s,MS4.2						
HHC				LR	LR		
	comp=E,380nm,12.9s,MS4.2						
HHC				LR	LR		
	comp=Z,430nm,13.3s,MS4.1						
BTO	**Baotou**	**25.11**	**290**	*e*P	**P**	**11 14 19.9**	**-6.7**
XAN	**Xi'an**	**26.82**	**275**	P	**P**	**11 14 41.5**	**-0.7**
XAN				pP	pP	11 14 50.8	-1.3
XAN				sP	sP	11 14 54.9	-1.4
XAN				S	**S**	**11 19 17.3**	**+1.1**
XAN				sS	sS	11 19 32.3	-0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
XAN				pmax	pmax		
	comp=Z,19nm,6.6s						
XAN				LR	LR		
	comp=N,150nm,14.3s,MS3.8						
XAN				LR	LR		
	comp=E,96nm,13.5s,MS3.8						
XAN				LR	LR		
	comp=Z,85nm,15.2s,MS3.4						
YAK	**Yakutsk**	**26.86**	**347**	*c i*P	**P**	**11 14 41.3**	**-0.9**
YAK				*e**PP	pP	11 14 52.3	+0.2
YAK				*e*PPP		11 15 29.4	
YAK				*e*		11 18 04.2	
YAK				*e*S	**S**	**11 19 14.1**	**-2.1**
YAK				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				pmax	pmax		
	comp=N,42nm,1.4s						
YAK				smax			
	comp=N,98nm,5.0s						
YAK				MLR	MLR		
	comp=N,333nm,15.0s						
YAK				MLR	MLR		
	comp=Z,365nm,15.0s,MS4.1						
YAK	**Yakutsk**	**26.86**	**347**	*e*P	**P**	**11 14 41.6**	**-0.7**
	comp=Z,59nm,0.7s,mb5.2						
SEY	**Seymchan**	**27.49**	**11**	⇑*e*P	**P**	**11 14 49.1**	**+1.2**
ENH	**Enshi**	**27.51**	**267**	*e*P	**P**	**11 14 47.8**	**-0.6**
	comp=Z,54nm,0.6s,mb5.3						
ENH				*e*pP	pP	11 14 57.6	-0.7
ULN	**Ulaanbaatar**	**27.98**	**305**	*e*P	**P**	**11 14 52.7**	**+0.3**
ULN				*e**PP	pP	11 15 03.4	+1.1
ULN				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**27.98**	**305**	*e*P	**P**	**11 14 52.7**	**+0.3**
	comp=Z,12nm,0.7s,mb4.6						
ULN				*e*pP	pP	11 15 03.4	+1.1
BOD	**Bodaibo**	**28.30**	**328**	*e*P	**P**	**11 14 54.3**	**-0.8**
BOD				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.6						
SONM	**Songino Array**	**28.41**	**305**	P	**P**	**11 14 56.8**	**+0.6**
	comp=Z,16nm,0.7s,mb4.7,baz=102,slow=8.4,SNR=68						
SONM				LR	LR	11 26 39.8	
	comp=Z,206nm,19.5s,MS3.7,baz=89,slow=37						
LZH	**Lanzhou**	**30.43**	**281**	*e*P	**P**	**11 15 18.5**	**+4.2**
LZH				pP	pP	11 15 26.8	+2.6
LZH				sP	sP	11 15 29.4	+1.0
LZH				PP	PP	11 16 18.2	-5.0
LZH				S	**S**	**11 20 15.5**	**+2.6**
LZH				sS	sS	11 20 31.2	+1.9
LZH				SS	SS	11 21 56.0	-27
LZH				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,80nm,4.1s						
LZH				LR	LR		
	comp=E,560nm,15.

GYA LR LR
comp=N,470nm,16.0s,MS4.3
GYA LR LR
comp=E,390nm,17.4s,MS4.3
GYA LR LR
comp=Z,450nm,15.8s,MS4.2
CD2 Chengdu 31.91 271 P **P** **11 15 27.6 +0.2**
CD2 pP pP 11 15 37.1 -0.2
CD2 sP sP 11 15 41.1 -0.4
CD2 PP PP 11 16 33.4 -6.4
CD2 S **S** **11 20 34.4 -1.8**
CD2 sS sS 11 20 50.4 -2.2
CD2 SS SS 11 22 26.2 -27
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.3
CD2 pmax pmax
comp=Z,180nm,10.7s
CD2 LR LR
comp=N,360nm,13.7s
CD2 LR LR
comp=Z,330nm,15.5s,MS4.1
MOY Mondy 32.61 311 *e*P **P** **11 15 33.8 +0.5**
MOY pmax pmax
comp=Z,25nm,1.4s,mb5.0
GTA Gaotai 33.01 288 P **P** **11 15 37.4 +0.4**
GTA pP pP 11 15 46.8 -0.1
GTA sP sP 11 15 51.2 +0.1
GTA PcP PcP 11 18 20.7 +0.5
GTA S **S** **11 20 53.2 +0.1**
GTA sS sS 11 21 08.5 -1.1
GTA SS SS 11 22 53.4 -23
GTA pmax pmax
comp=Z,14nm,0.8s,mb4.9
GTA pmax pmax
comp=Z,120nm,5.1s
GTA LR LR
comp=N,120nm,13.2s,MS4.1
GTA LR LR
comp=E,280nm,17.7s,MS4.1
GTA LR LR
comp=Z,290nm,16.8s,MS4.1
BILL Bilibino 34.69 16*d i*P **P** **11 15 50.6 -0.6**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
BILL MLR MLR
comp=Z,100nm,18.0s,MS3.6
BILL Bilibino 34.69 16 *e*P **P** **11 15 50.0 -1.2**
comp=Z,3.1nm,0.9s,mb4.2
KMI Kunming 35.08 263 P **P** **11 15 57.2 +2.1**
KMI S **S** **11 21 26.8 +1.4**
KMI pmax pmax
comp=Z,13nm,0.5s,mb5.1
KMI LR LR
comp=N,250nm,13.6s,MS4.3
KMI LR LR
comp=E,330nm,14.2s,MS4.3
KMI LR LR
comp=Z,270nm,13.3s,MS4.2
TIXI Tiksi 36.07 353 *e*P **P** **11 16 00.9 -2.1**
TIXI pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TIXI MLR MLR
comp=Z,212nm,13.0s,MS4.1
CHTO Chiang Mai 41.33 257 *e*P **P** **11 16 47.5 -0.2**
CHTO *e**PP pP 11 16 57.4 -0.5
CHTO pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
CHTO Chiang Mai 41.33 257 *e*P **P** **11 16 47.5 -0.2**
comp=Z,8.6nm,1.0s,mb4.3
CHTO *e*pP pP 11 16 57.4 -0.4
WMQ Urumqi 41.39 298 P **P** **11 16 49.2 +1.3**
WMQ pmax pmax
comp=Z,35nm,1.0s,mb4.9
WMQ LR LR
comp=N,120nm,21.0s
WMQ LR LR
comp=E,110nm,30.0s
WMQ LR LR
comp=Z,140nm,20.0s,MS3.8
CM31 Chiang Mai Arr 41.53 256 P **P** **11 16 49.5 +0.2**
comp=Z,4.5nm,0.6s,mb4.3
CM31 *e*pP pP 11 17 00.1 +0.6
CMAR Chiang Mai Arr 41.53 256 P **P** **11 16 49.6 +0.2**
comp=Z,3.4nm,0.7s,mb4.1,baz=45,slow=5.9,SNR=22
CMAR LR LR 11 34 58.5
comp=Z,60nm,18.9s,MS3.5,baz=90,slow=38
LSA Lhasa 42.51 276 P **P** **11 16 58.7 +1.4**
LSA Lhasa 42.51 276 P **P** **11 16 58.3 +1.0**
LSA pmax pmax
comp=Z,11nm,0.8s,mb4.6
LSA Lhasa 42.51 276 P **P** **11 16 58.3 +1.0**
comp=Z,11nm,0.8s,mb4.6
ZAA0 Zalesovo Array 42.60 313 *e*P **P** **11 16 57.8 +0.1**
ZAA0 *e*PcP PcP 11 18 49.0 -0.3
ZALV Zalesovo Beam 42.60 313 P **P** **11 16 57.8 +0.2**
ZALV LR LR 11 18 49.0
ZALV Zalesovo Beam 42.60 313 P **P** **11 16 57.8 +0.1**
comp=Z,15nm,0.8s,mb4.8,baz=89,slow=6.8,SNR=58
ZALV PcP PcP 11 18 49.0 -0.4
comp=Z,4.6nm,0.6s,baz=83,slow=2.7,SNR=5.5
ZALV LR LR 11 35 31.8
comp=Z,198nm,18.4s,MS4.0,baz=67,slow=37
ZALV Zalesovo Beam 42.60 313 P **P** **11 16 57.8 +0.1**
ZALV PcP PcP 11 18 49.0 -0.4
ZALV LR LR 11 35 31.8
NVS Novosibirsk 43.53 314⇑ *i*P **P** **11 17 05.0 -0.2**
NVS pmax pmax
comp=E,16nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s,mb4.8
MK31 Makanchi Array 44.72 303 *e*P **P** **11 17 15.0 +0.2**
MKAR Makanchi Array 44.72 303 P **P** **11 17 15.0 +0.2**
comp=Z,13nm,0.7s,mb4.9,baz=94,slow=9.0,SNR=69
MKAR LR LR 11 36 37.7
comp=Z,150nm,19.9s,MS3.9,baz=260,slow=37
KAPI Kappang 45.93 211 *e*P **P** **11 17 23.5 -1.1**
comp=Z,76nm,1.2s,mb5.5
SVW2 Sparrevohn 45.99 37 *e*P **P** **11 17 25.3 +0.6**
KURK Kurchatov 46.58 309*c i*P **P** **11 17 29.0 -0.5**
KURK pmax pmax
comp=Z,25nm,0.6s,mb5.3
KURK MLR MLR
comp=Z,317nm,17.0s,MS4.3
KURK Kurchatov 46.58 309 P **P** **11 17 29.6 +0.1**
comp=Z,21nm,0.7s,mb5.2,baz=84,slow=7.7,SNR=97
KURK LR LR 11 37 52.4
comp=Z,201nm,18.7s,MS4.1,baz=85,slow=37
KURK Kurchatov 46.58 309 *e*P **P** **11 17 29.3 -0.2**
comp=Z,29nm,0.8s,mb5.3
KURK *e*pP pP 11 17 40.5 +0.7
RSO Redoubt South 47.36 38 *e*P **P** **11 17 35.8 +0.4**
GUN Gumba 47.46 277 *e*P **P** **11 17 37.4 +0.7**
comp=Z,50nm,0.9s,mb5.4
KDAK Kodiak Island 47.52 41 P **P** **11 17 35.4 -1.2**
comp=Z,12nm,0.6s,mb5.1,baz=218,slow=4.5,SNR=12
PKI Pulchoki 47.98 276 *e*P **P** **11 17 41.0 +0.3**
PKIN Phulchoki 47.99 276 *e*P **P** **11 17 40.8 0.0**
PKIN Phulchoki 47.99 276 *e*P **P** **11 17 41.1 +0.3**
comp=Z,28nm,0.7s,mb5.4
KKN Kakani 48.00 277 *e*P **P** **11 17 41.5 +0.7**
comp=Z,49nm,1.1s,mb5.4
DMN Daman 48.21 277 *e*P **P** **11 17 42.7 +0.2**
comp=Z,21nm,0.9s,mb5.2
BPAW Bear Paw Mtn. 48.24 33 *e*P **P** **11 17 42.0 -0.1**
comp=Z,2.8nm,0.7s,mb4.4
GKN Gorkha 48.42 277 *e*P **P** **11 17 44.4 +0.3**
comp=Z,88nm,1.0s,mb5.8
PMR Palmer 49.10 36 *e*P **P** **11 17 47.6 -1.2**
PMR pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
PMR Palmer 49.10 36 *e*P **P** **11 17 47.6 -1.2**
comp=Z,3.4nm,0.7s,mb4.5
MCK McKinley 49.14 33 *e*P **P** **11 17 48.7 -0.4**
MCK pmax pmax
comp=Z,53nm,2.3s,mb5.2
MCK McKinley 49.14 33 *e*P **P** **11 17 48.7 -0.4**
comp=Z,53nm,2.3s,mb5.2
KOLN Koldanda 49.35 277 *e*P **P** **11 17 51.4 +0.2**
comp=Z,27nm,0.7s,mb5.4
KAKA Kakadu 49.50 192 *e*P **P** **11 17 50.0 -2.3**
comp=Z,18nm,0.7s,mb5.2
KAKA *e* pP 11 17 59.9 -2.7
KAKA Kakadu 49.50 192 *e*P **P** **11 17 49.5 -2.8**
comp=Z,135nm,0.8s,mb6.0
KAKA *e*pP pP 11 18 00.4 -2.2
COLA College 49.60 32 *e*P **P** **11 17 52.6 0.0**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
COLA College 49.60 32 *e*P **P** **11 17 52.5 0.0**
comp=Z,5.6nm,0.8s,mb4.7
PYUN Piuthan 49.70 278 *e*P **P** **11 17 54.7 +0.8**
comp=Z,51nm,1.1s,mb5.5
TKM2 Tokmak 2 50.20 299 P **P** **11 17 58.7 +1.3**
SNR=23
TKM2 Tokmak 2 50.20 299 *e*P **P** **11 17 58.5 +1.1**
TKM2 pmax pmax
comp=Z,11nm,0.6s,mb5.1
TKM2 Tokmak 2 50.20 299 *e*P **P** **11 17 58.5 +1.0**
comp=Z,11nm,0.6s,mb5.1
KZA Kyzart 50.68 298 P **P** **11 18 03.2 +2.1**
SNR=9.6
USP Ospenovka 50.87 300 P **P** **11 18 02.5 -0.1**
SNR=6.7
KSH Kashi 50.93 295 *e*P **P** **11 18 07.2 +4.2**
KSH *e*pP pP 11 18 16.0 +2.7
KSH *e*sP sP 11 18 20.2 +2.8
KSH *e*PcP PcP 11 19 22.1 +3.0
KSH *e*PP PP 11 20 04.0 +4.6
KSH *e*ScP ScP 11 23 14.2 +1.5
KSH *e*PcS PcS 11 23 18.1 +1.6
KSH *e*S **S** **11 25 21.1 +3.8**
KSH *e*sS sS 11 25 38.1 +3.8
KSH *e*ScS ScS 11 27 51.1 +0.1
KSH *e*SS SS 11 28 55.2 +3.1
KSH pmax pmax
comp=Z,47nm,4.2s
KSH LR LR
comp=N,170nm,6.9s
KSH LR LR
comp=E,170nm,10.5s
AAK Ala-Archa 51.06 299 P **P** **11 18 04.7 +0.7**
SNR=5.5
AAK Ala-Archa 51.06 299 *e*P **P** **11 18 04.5 +0.6**
AAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AAK Ala-Archa 51.06 299 LR LR 11 41 07.9
comp=Z,551nm,18.6s,MS4.6,baz=51,slow=38
AAK Ala-Archa 51.06 299 *e*P **P** **11 18 04.5 +0.6**
comp=Z,6.3nm,0.7s,mb4.7
UCH Uchtor 51.16 298 *e*P **P** **11 18 05.9 +1.2**
comp=Z,7.7nm,1.0s,mb4.6
BVAR Borovoye Array 51.26 313 P **P** **11 18 05.3 +0.1**
BVAR 11 19 20.0
BVAR Borovoye Array 51.26 313 P **P** **11 18 05.3 0.0**
comp=Z,8.8nm,0.9s,mb4.7,baz=79,slow=7.7,SNR=24
BVAR PcP PcP 11 19 20.0 0.0
comp=Z,4.1nm,0.6s,baz=90,slow=4.9,SNR=6.0
BVAR LR LR 11 40 59.7
comp=Z,309nm,18.2s,MS4.4,slow=37
BRVK Borovoye 51.31 313*c i*P **P** **11 18 05.6 -0.1**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BRVK MLR MLR
comp=Z,276nm,16.0s,MS4.4
BRVK Borovoye 51.31 313 *e*P **P** **11 18 05.8 +0.1**
comp=Z,14nm,1.0s,mb4.8
MENT Mentasta 51.53 34 *e*P **P** **11 18 07.9 +0.8**
EKS2 Erkin-Say 51.55 299 *e*P **P** **11 18 08.1 +0.5**
comp=Z,3.4nm,0.6s,mb4.5
PSI Prapat 51.60 240 LR LR 11 40 21.0
comp=Z,94nm,19.0s,MS3.8,baz=92,slow=36
AML Almayashu 51.77 299 P **P** **11 18 10.9 +1.6**
SNR=32
AML Almayashu 51.77 299 *e*P **P** **11 18 10.7 +1.5**
comp=Z,16nm,0.7s,mb5.0
EGAK Eagle 52.46 32 *e*P **P** **11 18 13.3 -0.8**
comp=Z,3.5nm,0.6s,mb4.5
DAWY Dawson 53.32 33 *e*P **P** **11 18 19.6 -0.8**
HYT Haines Junctio 54.77 36 *e*P **P** **11 18 32.4 +1.3**
INK Inuvik 54.96 27 *e*P **P** **11 18 32.4 +0.1**
INK pmax pmax
comp=Z,10.0nm,0.8s
INK Inuvik 54.96 27 *e*P **P** **11 18 32.4 +0.1**
comp=Z,9.7nm,0.8s,mb4.9
SVE Sverdlovsk 55.87 319 *e*P **P** **11 18 38.9 -0.1**
SVE pmax pmax
comp=Z,26nm,1.2s,mb5.1
FITZ Fitzroy Crossi 56.17 198 *e*P **P** **11 18 40.8 -0.7**
comp=Z,3.8nm,0.6s,mb4.6
FITZ *e* pP 11 18 51.0 -1.0
FITZ Fitzroy Crossi 56.17 198 *e*P **P** **11 18 40.7 -0.8**
comp=Z,17nm,1.3s,mb4.9
FITZ *e*pP pP 11 18 51.1 -0.9
FITZ *e*sP sP 11 18 55.5 -0.5
CTAO Charters Tower 56.22 175 *e*P **P** **11 18 41.7 -0.1**
WRAB Tennant Creek 56.33 188 *e*P **P** **11 18 40.7 -1.9**
WRAB pmax pmax
comp=Z,24nm,1.2s,mb5.1
WRAB Tennant Creek 56.33 188 *e*P **P** **11 18 40.7 -1.9**
comp=Z,24nm,1.2s,mb5.1
WRA Warramunga Arr 56.34 188 P **P** **11 18 40.9 -1.7**
comp=Z,5.6nm,0.7s,mb4.7,baz=7.2,slow=7.6,SNR=75
ARU Arti 57.08 319*d i*P **P** **11 18 47.1 -0.5**
ARU *e* 11 20 50.6
ARU S **S** **11 26 39.1 -0.8**
ARU SS SS 11 30 20.1 -8.3
ARU pmax pmax
comp=Z,34nm,1.7s,mb5.1
ARU MLR MLR
comp=Z,275nm,17.0s,MS4.4
ARU Arti 57.08 319 *e*P **P** **11 18 47.5 -0.1**
comp=Z,17nm,0.9s,mb5.1
KBL Kabul 57.91 292 *e*P **P** **11 18 53.4 -0.4**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KBL Kabul 57.91 292 *e*P **P** **11 18 53.4 -0.4**
comp=Z,4.7nm,0.7s,mb4.6
ABKAR Akbulak array 58.61 311 *e*P **P** **11 18 58.2 -0.2**
comp=Z,8.4nm,0.6s,mb5.0
AKTK Aktyubinsk 59.35 312 P **P** **11 19 03.2 -0.4**
AKTK LR LR 11 45 50.2
AKTO Aktyubinsk 59.35 312 P **P** **11 19 03.2 -0.4**
comp=Z,7.5nm,0.8s,mb4.8,baz=76,slow=12,SNR=22
AKTO LR LR 11 45 50.2
comp=Z,136nm,20.8s,MS4.1,baz=192,slow=37
ASAR Alice Springs 60.07 188 P **P** **11 19 07.3 -1.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=12,slow=8.2,SNR=35
MBWA Marble Bar 60.78 204 *e*P **P** **11 19 12.4 -1.2**
comp=Z,5.1nm,0.7s,mb4.8
DZM Mont Dzumac 62.57 154 *e*LR LR 11 37 52.5
comp=Z,139nm,21.3s
DZM Mont Dzumac 62.57 154 *e*LR LR 11 18 25.5
comp=Z,186nm,21.3s
KEV Kevo 64.23 339 *e*P **P** **11 19 35.7 -0.4**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 64.23 339 *e*p **P** **11 19 35.7 -0.4**
comp=Z,6.4nm,0.7s,mb4.8
YKA Yellowknife Ar 64.35 30 P **P** **11 19 36.3 -0.7**
comp=Z,3.4nm,0.7s,mb4.5,baz=302,slow=6.7,SNR=42
KLMR Klimovskoe 64.52 328 *e*P **P** **11 19 37.8 -0.4**
KLMR pmax pmax
comp=Z,25nm,1.6s,mb5.0
ARCES ARCESS Array B 64.79 340 P **P** **11 19 39.9 +0.1**
comp=Z,6.2nm,0.7s,mb4.7,baz=60,slow=7.2,SNR=15
JOF Joensuu 66.74 332 *e*P **P** **11 19 50.6 -1.8**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
JOF Joensuu 66.74 332 *e*p **P** **11 19 50.6 -1.8**
comp=Z,6.4nm,0.6s,mb4.8
STKA Stephens Creek 67.79 180 *e*P **P** **11 19 58.0 -1.3**
comp=Z,3.6nm,0.8s,mb4.5
STKA *e* pP 11 20 05.3 -4.7
STKA Stephens Creek 67.79 180 P **P** **11 19 58.1 -1.3**
comp=Z,4.9nm,0.8s,mb4.6,baz=323,slow=9.0,SNR=9.4
STKA Stephens Creek 67.79 180 *e*P **P** **11 19 58.5 -0.8**
comp=Z,8.7nm,0.9s,mb4.8
FORT Forrest 67.92 193 *e*P **P** **11 19 59.1 -1.0**
comp=Z,15nm,0.7s,mb5.1
FORT Forrest 67.92 193 *e*P **P** **11 19 59.5 -0.6**
comp=Z,17nm,0.7s,mb5.2
A07A Ashnola River, 68.26 45 ⇓P **P** **11 20 02.0 -0.2**
baz=68
F04A Amboy 68.65 48 ⇓P **P** **11 20 04.9 +0.1**
baz=68
B07A Winthrop 68.71 45 ⇑P **P** **11 20 04.9 -0.3**
baz=68
OBN Obninsk 68.84 324 *e*P **P** **11 20 05.9 +0.1**
OBN pmax pmax
comp=Z,12nm,0.9s,mb4.8
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
A08A Turner Farm, O 68.94 44 ⇑P **P** **11 20 06.9 +0.4**
baz=69
D06A Cle Elum 68.94 46 ⇑P **P** **11 20 06.7 +0.1**
baz=69
ETW Entiat 69.03 46 *e*P **P** **11 20 06.8 -0.3**
ETW *e*pP pP 11 20 16.8 -0.9
KAF Kangasniemi 69.09 333 *e*P **P** **11 20 05.8 -1.4**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KAF Kangasniemi 69.09 333 *e*p **P** **11 20 05.8 -1.4**
comp=Z,6.9nm,0.6s,mb4.8
C07A Waterville 69.14 46 ⇓P **P** **11 20 07.7 -0.1**
baz=69
B08A Colville Reser 69.22 45 ⇑P **P** **11 20 07.7 -0.5**
baz=69
A09A Danville 69.32 44 ⇓P **P** **11 20 08.6 -0.3**
baz=69
H04A Detroit Lake 69.43 49 ⇓P **P** **11 20 09.8 +0.2**
baz=69
D07A Quincy 69.45 46 ⇓P **P** **11 20 09.2 -0.5**
baz=69
FINES FINESS Array B 69.59 332 P **P** **11 20 09.7 -0.7**
comp=Z,14nm,0.8s,mb4.9,baz=53,slow=7.4,SNR=31
VSR Storozhevoye 69.66 319 *e*P **P** **11 20 11.0 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,7.0nm,0.4s
VSR MLR MLR
comp=Z,380nm,17.0s,MS4.7
VSR MLR MLR
comp=N,130nm,12.0s,MS4.6
VSR MLR MLR
comp=E,160nm,12.0s,MS4.6
VORD Divnogorie 69.72 319 *e*P **P** **11 20 11.2 -0.1**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,7.0nm,0.7s
VORD MLR MLR
comp=Z,260nm,16.0s,MS4.6
VORD MLR MLR
comp=N,360nm,22.0s
VORD MLR MLR
comp=E,310nm,17.0s
EDM Edmonton 69.80 38 *e*P **P** **11 20 11.5 -0.3**
EDM *e**PP pP 11 20 21.2 -1.2
B09A Rice 69.85 44 ⇓P **P** **11 20 11.9 -0.3**
baz=70
A10A Northport 69.89 44 ⇓P **P** **11 20 12.2 -0.1**
baz=70
OD2 Odessa Site #2 70.08 45 *e*P **P** **11 20 13.2 -0.4**
G06A Carlson Farm, 70.08 48 ⇑P **P** **11 20 14.1 +0.5**
baz=70
C09A Chrisman Ranch 70.11 45 ⇑P **P** **11 20 13.8 0.0**
baz=70
D08A Wollman Farm, 70.14 46 ⇑P **P** **11 20 13.8 -0.2**
baz=70
F07A Phinny Hill Vi 70.16 47 ⇓P **P** **11 20 14.2 +0.1**
baz=70
E08A Dider Farm, El 70.36 46 ⇓P **P** **11 20 15.1 -0.2**
baz=70
NEW Newport 70.52 44 *e*P **P** **11 20 15.3 -0.9**
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW Newport 70.52 44 *e*P **P** **11 20 15.3 -0.9**
comp=Z,4.7nm,0.8s,mb4.5
H06A Lindquist Farm 70.53 48 ⇓P **P** **11 20 16.0 -0.4**
baz=70
A11A Hall Mountain, 70.56 43 ⇓P **P** **11 20 16.2 -0.3**
baz=70,SNR=6.6
C10A Spilker Farm, 70.65 45 ⇑P **P** **11 20 17.3 +0.2**
baz=70
B11A Sandpoint 70.84 44 ⇓P **P** **11 20 18.2 0.0**
baz=71
E09A Wood Farm, Sta 70.88 46 ⇑P **P** **11 20 18.4 0.0**
baz=71
F08A Pendleton 70.89 47 ⇓P **P** **11 20 18.8 +0.2**
baz=71
G08A Pilot Rock 71.06 47 ⇓P **P** **11 20 19.7 +0.1**
baz=71
VSU Vasula 71.23 330⇓ *e*P **P** **11 20 20.7 +0.3**
VSU pmax pmax
comp=Z,9.0nm,0.3s,mb5.2
VSU MLR MLR
comp=Z,95nm,16.0s,MS4.2
K05A Summer Lake 71.25 51 ⇓P **P** **11 20 20.7 -0.1**
baz=71
I07A Izee 71.38 49 ⇑P **P** **11 20 21.8 +0.2**
baz=71
E10A Myers Farm, Un 71.49 46 ⇑P **P** **11 20 22.0 -0.2**
baz=71
KIV Kislovodsk 71.58 311 *e*P **P** **11 20 23.5 +0.7**
KIV pmax pmax
comp=Z,19nm,1.1s,mb4.9
KIV Kislovodsk 71.58 311 *e*P **P** **11 20 24.0 +1.3**
comp=Z,32nm,1.1s,mb5.2
D11A Klaveano Farm, 71.63 45 ⇓P **P** **11 20 22.2 -0.8**
baz=71,SNR=9.6
A13A Flathead Natio 71.65 42 ⇑P **P** **11 20 22.9 -0.1**
baz=71
H08A Prairie City 71.65 48 ⇓P **P** **11 20 23.4 +0.2**
baz=71
F10A Beach Ranch, E 71.71 46 ⇓P **P** **11 20 23.6 +0.1**
baz=72
G09A Cove 71.76 47 ⇑P **P** **11 20 23.8 0.0**
baz=72
WALA Waterton Lakes 71.85 42 *e*P **P** **11 20 24.2 -0.1**
comp=Z,0.1nm,0.7s
B13A Whitefish 71.93 43 ⇓P **P** **11 20 24.4 -0.4**
baz=72,SNR=7.8
MOD Modoc 72.06 51 *e*P **P** **11 20 26.1 +0.4**
E11A Bogner Ranch, 72.08 45 ⇑P **P** **11 20 25.2 -0.5**
baz=72,SNR=6.0
A14A Double T Ranch 72.16 42 ⇓P **P** **11 20 26.1 0.0**
baz=72
C13A Hot Springs 72.27 44 ⇑P **P** **11 20 26.3 -0.5**
baz=72,SNR=5.1
BMO Blue Mountains 72.28 47 *e*P **P** **11 20 26.9 0.0**
comp=Z,3.4nm,0.8s,mb4.3
F11A Grangeville 72.38 46 ⇓P **P** **11 20 26.8 -0.7**
baz=72,SNR=9.9
JTMT Jette 72.39 43 *e*P **P** **11 20 27.5 0.0**
JTMT *e*pP pP 11 20 38.0 -0.2
J08A Circle Bar Ran 72.40 49 ⇓P **P** **11 20 27.8 +0.1**
baz=72
E12A Beaver Dam Sad 72.42 45 ⇑P **P** **11 20 27.7 0.0**
baz=72
I09A Lost Marbles R 72.51 48 ⇓P **P** **11 20 28.1 -0.2**
baz=72
A15A Johnson Ranch, 72.53 42 ⇑P **P** **11 20 28.1 -0.3**
baz=72
D13A Huson 72.66 44 ⇑P **P** **11 20 28.9 -0.3**
baz=72
C14A Swan Lake 72.67 43 ⇓P **P** **11 20 28.8 -0.4**
baz=72
SWMT Swartz Lake 72.68 43 *e*P **P** **11 20 29.3 0.0**
SWMT *e*pP pP 11 20 39.1 -1.0
J09A Fry Pan Ranch, 72.84 49 ⇑P **P** **11 20 30.6 +0.3**
baz=73
F12A Elk City 72.97 46 ⇓P **P** **11 20 30.6 -0.4**
baz=73,SNR=6.5
B15A Bradely Ranch, 73.01 42 ⇓P **P** **11 20 30.8 -0.4**
baz=73,SNR=7.0
MSO Missoula 73.11 44 *e*P **P** **11 20 31.7 -0.1**
comp=Z,2.7nm,1.0s,mb4.1
SLMT Seeley Lake 73.12 44 *e*P **P** **11 20 31.6 -0.2**
SLMT *e*pP pP 11 20 41.9 -0.7
H11A Donnelly 73.13 47 ⇑P **P** **11 20 31.4 -0.6**
baz=73
BEKR Beckwourth 73.14 53 ⇑P **P** **11 20 31.7 -0.5**
baz=73
A16A West Butte Ran 73.16 41 ⇓P **P** **11 20 31.7 -0.4**
baz=73
D14A Greenough 73.20 44 ⇓P **P** **11 20 32.0 -0.4**
baz=73,SNR=7.7
C15A Salmond Ranch, 73.30 43 ⇑P **P** **11 20 32.8 -0.2**
baz=73,SNR=9.3
CHMT Chamberlain Mo 73.44 44 *e*P **P** **11 20 32.9 -0.9**
F13A Darby 73.48 45 ⇑P **P** **11 20 33.5 -0.5**
baz=73,SNR=5.7
A17A Triple J Farms 73.64 41 ⇑P **P** **11 20 34.6 -0.3**
baz=73

K10A **MacKenzie Ranc** 73.70 49 ⇓P P 11 20 35.4 +0.1
baz=74
D15A **Lincoln** 73.78 43 ⇓P P 11 20 34.8 -0.9
baz=74
H12A **Diamond D Ranc** 73.89 46 ⇑P P 11 20 35.9 -0.6
baz=74,SNR=7.0
MFID **Camas Ranch** 73.97 48 ⇑P P 11 20 36.8 -0.2
baz=74
B17A **L&G Farms, Che** 73.97 42 ⇑P P 11 20 36.8 0.0
baz=74
E15A **Deer Lodge** 74.07 44 ⇓P P 11 20 36.9 -0.5
baz=74,SNR=12
A18A **Metzger Ranch,** 74.10 41 ⇑P P 11 20 37.1 -0.5
baz=74
I12A **Atlanta** 74.16 47 ⇓P P 11 20 37.8 -0.3
baz=74,SNR=5.8
K11A **Parker Ranch,** 74.21 48 ⇓P P 11 20 38.4 +0.1
baz=74
FFC **Flin Flon** 74.22 33 *i* P P 11 20 37.8 -0.4
FFC **Flin Flon** 74.22 33 *e*P P 11 20 37.6 -0.6
comp=Z,5.2nm,0.7s,mb4.6
ANN **Anapa** 74.22 314 P P 11 20 35.3 -3.1
ANN *e*S S 11 30 04.3 -5.2
ANN pmax pmax
comp=Z,17nm,1.0s,mb4.9
H13A **Challis** 74.23 46 ⇑P P 11 20 38.2 -0.3
baz=74,SNR=12
D16A **Dana Ranch, Ca** 74.32 43 ⇑P P 11 20 38.7 -0.2
baz=74,SNR=8.2
L10A **Juniper Basin** 74.34 49 ⇓P P 11 20 39.2 0.0
baz=74
HRY **Holter Researc** 74.35 43 *e*P P 11 20 39.2 +0.1
HRY *e*pP pP 11 20 49.1 -0.8
C17A **Wharram Farm,** 74.39 42 ⇓P P 11 20 38.9 -0.4
baz=74
B18A **Beardsley Farm** 74.45 41 ⇓P P 11 20 39.3 -0.4
baz=74
F15A **Butte** 74.50 44 ⇓P P 11 20 39.9 -0.1
baz=74,SNR=17
J12A **Stokes Ranch,** 74.50 48 ⇑P P 11 20 40.2 +0.2
baz=74
LRM **Limekiln Ridge** 74.53 44 *e*P P 11 20 40.4 +0.2
E16A **East Helena** 74.54 43 ⇑P P 11 20 39.6 -0.7
baz=74,SNR=6.1
FCC **Fort Churchill** 74.58 27 *e*P P 11 20 39.4 -0.8
comp=Z,0.3nm,1.3s
FCC *e*pP pP 11 20 49.2 -1.8
M10A **I.L. Ranch, Tu** 74.62 50 ⇓P P 11 20 40.3 -0.5
baz=74,SNR=5.3
EGMT **Eagleton** 74.69 41 ⇓P P 11 20 40.7 -0.4
baz=74
EGMT **Eagleton** 74.69 41 *e*P P 11 20 41.1 0.0
comp=Z,6.2nm,0.9s,mb4.5
I13A **Wildhorse Cree** 74.69 47 ⇓P P 11 20 41.3 +0.2
baz=74
H14A **Leadore** 74.72 46 ⇓P P 11 20 41.1 -0.2
baz=74
DLMT **Dillon** 74.72 45 *e*P P 11 20 41.2 -0.1
comp=Z,6.7nm,0.8s,mb4.6
DLMT *e*pP pP 11 20 51.9 -0.2
HLID **Hailey** 74.72 47 ⇑P P 11 20 41.6 +0.3
baz=74
L11A **Cat Creek Ranc** 74.73 49 ⇓P P 11 20 41.3 -0.1
baz=74,SNR=7.0
G15A **Dillon** 74.90 45 ⇓P P 11 20 41.9 -0.4
baz=75,SNR=7.9
K12A **Draper Farm, C** 74.97 48 ⇑P P 11 20 43.0 +0.2
baz=75
NB2 **NORSAR Subarra** 74.98 337 P P 11 20 42.1 -0.4
comp=Z,14nm,0.8s,mb5.0,baz=38,slow=5.9
NOA **NORSAR Array B** 74.98 337 P P 11 20 42.5 0.0
comp=Z,10nm,0.8s,mb4.8,baz=39,slow=5.8,SNR=33
NOA LR LR 11 57 08.5
comp=Z,113nm,18.6s,MS4.2,baz=35,slow=38
NOA **NORSAR Array B** 74.98 337 P P 11 20 42.5 0.0
NOA LR LR 11 57 08.5
F16A **Kennard Place,** 75.02 44 ⇓P P 11 20 42.8 -0.2
baz=75,SNR=11
E17A **Martinsdale** 75.04 43 ⇓P P 11 20 43.4 +0.3
baz=75,SNR=7.8
AKASG **Malin Array Be** 75.04 323 *ce*P P 11 20 42.5 -0.5
AKASG pmax pmax
comp=Z,10.0nm,0.6s
AKASG **Malin Array Be** 75.04 323 P P 11 20 42.6 -0.4
comp=Z,9.6nm,0.6s,mb4.9,baz=47,slow=5.9,SNR=41
I14A **Mackay** 75.07 46 ⇓P P 11 20 43.5 +0.2
baz=75,SNR=15
BOZ **Bozeman (W)** 75.10 44 ⇑P P 11 20 43.2 -0.3
baz=75,SNR=11
BOZ **Bozeman (W)** 75.10 44 *e*P P 11 20 43.7 +0.2
BOZ *e**PP pP 11 20 53.7 -0.5
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BOZ **Bozeman (W)** 75.10 44 *e*P P 11 20 43.6 +0.2
comp=Z,5.0nm,0.8s,mb4.5
BOZ *e*pP pP 11 20 53.7 -0.5
M11A **Holland Ranch,** 75.13 49 ⇑P P 11 20 44.5 +0.8
baz=75,SNR=7.0
L12A **House Creek Ra** 75.19 48 ⇓P P 11 20 44.5 +0.4
baz=75
NAO01 **NORSAR Array S** 75.23 337 *e*P P 11 20 43.6 -0.4
comp=Z,2.2nm,0.6s,mb4.3
G16A **Moss Hill, Enn** 75.25 44 ⇓P P 11 20 44.0 -0.3
baz=75,SNR=5.2
NVAR **Mina Array Bea** 75.26 53 P P 11 20 44.3 -0.2
comp=Z,3.4nm,0.7s,mb4.4,baz=288,slow=6.0,SNR=28
O10A **Cortez Mining,** 75.34 51 ⇑P P 11 20 45.7 +0.7
baz=75
J14A **Carey** 75.39 47 ⇑P P 11 20 45.9 +0.7
baz=75,SNR=6.4
K13A **Stover Farm, H** 75.45 48 ⇓P P 11 20 46.4 +0.8
baz=75
F17A **Fitzpatrick Pl** 75.48 43 ⇑P P 11 20 45.8 +0.1
baz=75,SNR=6.6
E18A **Harlowton** 75.49 43 ⇓P P 11 20 46.3 +0.6
baz=75
N11A **Elko Archery C** 75.52 50 ⇓P P 11 20 46.5 +0.5
baz=75
I15A **Monteview** 75.59 46 ⇓P P 11 20 46.9 +0.6
baz=75
M12A **Wells** 75.67 49 ⇑P P 11 20 47.1 +0.3
baz=75,SNR=7.6
P10A **Eureka** 75.75 51 ⇑P P 11 20 47.8 +0.4
baz=76
G17A **Pierce Place,** 75.79 44 ⇑P P 11 20 48.0 +0.6
baz=76
L13A **Double Diamond** 75.87 48 ⇑P P 11 20 48.9 +0.9
baz=76
H16A **Russell Place,** 75.88 45 ⇑P P 11 20 47.9 -0.1
baz=76,SNR=6.2
N12A **Clover Valley,** 75.93 50 *e*P P 11 20 48.9 +0.6
comp=Z,3.7nm,0.7s,mb4.4
O11A **Cowboy Ranch,** 75.96 50 ⇑P P 11 20 48.5 -0.1
baz=76,SNR=5.1
J15A **Blackfoot** 75.98 46 ⇓P P 11 20 48.8 +0.2
baz=76,SNR=5.7
F18A **Big Timber** 76.01 43 ⇑P P 11 20 48.1 -0.6
baz=76,SNR=8.5
K14A **Jones Ranch, D** 76.06 47 ⇑P P 11 20 49.3 +0.3
baz=76
M13A **Montello** 76.16 49 ⇑P P 11 20 49.6 -0.1
baz=76,SNR=5.2
M13A **Montello** 76.16 49 *e*P P 11 20 49.9 +0.2
comp=Z,5.1nm,0.8s,mb4.5
VES **Vestal, Richgr** 76.22 56 ⇓P P 11 20 50.1 0.0
baz=76
P11A **Circle Ranch,** 76.24 51 ⇑P P 11 20 50.8 +0.7
baz=76
I16A **Newdale** 76.25 45 ⇓P P 11 20 50.6 +0.6
baz=76,SNR=15
Q10A **Clear Creek Ra** 76.26 52 ⇓P P 11 20 50.8 +0.5
baz=76
K15A **Arbon** 76.35 47 ⇓P P 11 20 51.4 +0.7
baz=76
N13A **Wendover, West** 76.44 49 *e*P P 11 20 52.4 +1.2
comp=Z,7.7nm,0.8s,mb4.7
O12A **Currie** 76.45 50 ⇓P P 11 20 51.6 +0.3
baz=76,SNR=14
H17A **Grant Village** 76.45 45 ⇑P P 11 20 53.3 +2.0
baz=76,SNR=9.1
J16A **Bone** 76.54 46 ⇓P P 11 20 52.2 +0.4
baz=76
IMW **Indian Meadow** 76.55 45 *e*P P 11 20 52.9 +1.1
comp=Z,5.2nm,0.8s,mb4.5
M14A **Sheep Mountain** 76.57 48 ⇓P P 11 20 52.5 +0.5
baz=76,SNR=5.1
R10A **Warm Springs** 76.63 52 ⇓P P 11 20 53.3 +0.9
baz=76
S10A **Tonopah Range,** 76.66 53 ⇓P P 11 20 52.9 +0.4
baz=76,SNR=6.7
GRAC **Grapevine Rang** 76.69 54 ⇑P P 11 20 52.9 +0.2
baz=76
Q11A **Duckwater** 76.72 52 ⇑P P 11 20 53.0 +0.2
baz=76
RLMT **Red Lodge** 76.74 43 ⇓P P 11 20 53.3 +0.4
baz=76
RLMT **Red Lodge** 76.74 43 *e*P P 11 20 53.5 +0.7
comp=Z,10.0nm,1.5s,mb4.5
I17A **Pilgrim Ck.** 76.74 45 ⇑P P 11 20 54.2 +1.3
baz=76,SNR=5.7
TPAW **Teton Pass** 76.79 46 *e*P P 11 20 54.3 +1.1
comp=Z,3.2nm,0.8s,mb4.3
K16A **Soda Springs** 76.82 46 ⇑P P 11 20 54.1 +0.8
baz=77,SNR=6.8
P12A **McGill** 76.82 51 ⇑P P 11 20 53.7 +0.3
baz=77,SNR=6.8
L15A **Malad City** 76.85 47 ⇑P P 11 20 53.9 +0.4
baz=77
LOHW **Long Hollow** 76.91 45 *e*P P 11 20 54.1 +0.3
comp=Z,1.7nm,0.8s,mb4.0
SNOW **Snow King Moun** 76.92 45 *e*P P 11 20 53.7 -0.1
comp=Z,3.2nm,0.9s,mb4.2
REDW **Red Top Meadow** 76.92 46 *e*P P 11 20 54.6 +0.7
comp=Z,4.9nm,1.1s,mb4.3
O13A **Hicks Ranch, I** 77.00 50 ⇓P P 11 20 55.2 +0.8
baz=77
J17A **Brown Place, J** 77.00 46 ⇓P P 11 20 55.0 +0.7
baz=77
R11A **Troy Canyon, C** 77.05 52 ⇑P P 11 20 54.8 0.0
baz=77,SNR=5.2
N14A **Grayback Hills** 77.06 49 ⇓P P 11 20 54.9 +0.2
baz=77,SNR=6.0
Q12A **Willow Creek R** 77.12 51 ⇑P P 11 20 55.5 +0.4
baz=77
M15A **Larsen Ranch,** 77.14 48 ⇓P P 11 20 55.2 0.0
baz=77
MPMC **Manual Prospec** 77.15 55 ⇓P P 11 20 55.5 +0.2
baz=77
K17A **Gardner Place,** 77.26 46 ⇑P P 11 20 56.2 +0.4
baz=77
I18A **Diamond G Ranc** 77.31 45 ⇓P P 11 20 56.6 +0.5
baz=77
FURC **Furnace Creek,** 77.33 54 ⇓P P 11 20 56.3 0.0
baz=77
S11A **Rachel** 77.36 53 ⇓P P 11 20 56.3 -0.2
baz=77
P13A **Bates Ranch, G** 77.38 50 ⇑P P 11 20 56.9 +0.3
baz=77
LAO **LASA Array** 77.40 41 *e*P P 11 20 56.4 -0.2
comp=Z,7.2nm,1.0s,mb4.6
SNCC **San Nicolas Is** 77.40 58 ⇑P P 11 20 57.6 +0.8
baz=77
L16A **Fish Haven** 77.41 47 ⇑P P 11 20 57.1 +0.4
baz=77
N15A **Stansbury Isla** 77.44 48 ⇑P P 11 20 57.4 +0.5
baz=77
J18A **Kendall Valley** 77.50 45 ⇓P P 11 20 57.3 +0.2
baz=77
EDW2 **Edwards Air Fo** 77.50 56 ⇓P P 11 20 57.5 +0.1
baz=77
HWUT **Hardware Ranch** 77.58 47 *e*P P 11 20 57.9 +0.3
comp=Z,5.1nm,0.9s,mb4.5
Q13A **Wheeler Ranch,** 77.68 51 ⇑P P 11 20 58.5 +0.3
baz=78,SNR=7.8
DUG **Dugway** 77.68 49 ⇓P P 11 20 58.4 +0.2
baz=78,SNR=11
DUG **Dugway** 77.68 49 *e*P P 11 20 57.8 -0.4
DUG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
DUG **Dugway** 77.68 49 *e*P P 11 20 57.8 -0.4
comp=Z,6.7nm,0.8s,mb4.6
R12A **Pony Springs,** 77.68 51 ⇑P P 11 20 58.3 0.0
baz=78,SNR=7.0
L17A **Cokeville** 77.69 47 ⇓P P 11 20 58.6 +0.4
baz=77
M16A **Huntsville** 77.72 48 ⇓P P 11 20 58.6 +0.2
baz=78
K18A **Toltan Ranch,** 77.84 46 ⇑P P 11 20 59.6 +0.5
baz=78
P14A **Drum Mountains** 77.89 50 ⇓P P 11 20 59.5 +0.2
baz=78,SNR=8.1
T11A **Corn Creek, Al** 77.94 53 ⇑P P 11 20 59.7 0.0
baz=78
S12A **Delamar Landin** 77.96 52 ⇓P P 11 21 00.1 +0.3
baz=78
BW06 **Boulder Array** 78.04 45 ⇑P P 11 20 59.6 -0.6
baz=78,SNR=5.4
BW06 **Boulder Array** 78.04 45 *e*P P 11 20 59.8 -0.3
PDAR **Pinedale Array** 78.04 45 P P 11 21 00.0 -0.1
comp=Z,2.2nm,0.6s,mb4.3,baz=299,slow=2.0,SNR=25
GSC **Goldstone** 78.05 55 ⇓P P 11 21 00.4 0.0
baz=78
N16A **Rees Ranch, Co** 78.09 48 ⇑P P 11 21 00.6 +0.2
baz=78
Q14A **Sevier Lake (B** 78.12 50 ⇓P P 11 21 01.0 +0.3
baz=78,SNR=9.9
R13A **O'Grain Ranch,** 78.17 51 ⇓P P 11 21 01.3 +0.3
baz=78
JLU **Jordanelle** 78.26 48 *e*P P 11 21 02.0 +0.6
comp=Z,4.4nm,1.0s,mb4.3
NLU **North Lily Min** 78.28 49 *e*P P 11 21 01.6 0.0
comp=Z,5.7nm,0.9s,mb4.5
L18A **Fontenelle, Gr** 78.28 46 ⇑P P 11 21 01.7 +0.2
baz=78
K19A **Absolon Red Bu** 78.41 45 ⇓P P 11 21 02.0 -0.2
baz=78
N17A **Moffit Pass** 78.42 48 ⇓P P 11 21 02.2 -0.1
baz=78
BORG **Borgarnes** 78.43 353 P P 11 21 03.2 +1.3
comp=Z,18nm,0.8s,mb5.0,baz=347,slow=3.1,SNR=6.7
BORG **Borgarnes** 78.43 353 P P 11 21 03.2 +1.3
O16A **Springville** 78.47 48 ⇓P P 11 21 02.9 +0.3
baz=78,SNR=6.8
DAU **Daniels Canyon** 78.49 48 *e*P P 11 21 03.3 +0.6
MPU **Maple Canyon** 78.51 49 *e*P P 11 21 02.3 -0.5
comp=Z,7.3nm,1.0s,mb4.6
L19A **Farson** 78.57 46 ⇓P P 11 21 03.0 -0.1
baz=78
S13A **Holt Ranch, En** 78.60 52 ⇑P P 11 21 03.5 +0.1
baz=78
Q15A **Fillmore** 78.67 50 ⇓P P 11 21 04.1 +0.4
baz=78
KWP **Kalwaria Pacla** 78.88 325 ⇓*i*P P 11 21 05.2 +0.5
T13A **Saint George** 78.91 52 ⇓P P 11 21 05.6 +0.5
baz=79
CCUT **Cedar City** 78.94 51 *e*P P 11 21 05.6 +0.4
comp=Z,4.7nm,1.1s,mb4.3
O17A **Robinson Place** 78.94 48 ⇑P P 11 21 05.3 +0.1
baz=79,SNR=5.0
BURAR **Bucovina Array** 79.05 322 ⇑*i*P P 11 21 05.9 +0.3
V12A **Nelson** 79.08 54 ⇓P P 11 21 06.7 +0.6
baz=79
N18A **Larsen Ranch,** 79.09 47 ⇑P P 11 21 06.5 +0.5
baz=79
MSU **Marysvale** 79.09 50 *e*P P 11 21 06.9 +0.8
L20A **Wamsutter** 79.22 45 ⇓P P 11 21 06.8 +0.2
baz=79
R15A **Junction** 79.22 50 ⇑P P 11 21 07.1 +0.4
baz=79
U13A **Pakoon Wash** 79.24 53 ⇑P P 11 21 07.0 +0.1
baz=79
O18A **Roosevelt** 79.33 48 ⇑P P 11 21 07.8 +0.5
baz=79
P17A **Butcher Ranch,** 79.39 49 ⇑P P 11 21 07.6 0.0
baz=79,SNR=5.2
N19A **John Jarvie Ra** 79.43 47 ⇓P P 11 21 07.7 -0.1
baz=79
Q16A **Castle Valley** 79.47 49 ⇓P P 11 21 08.2 +0.1
baz=79
S15A **Panguitch** 79.49 51 ⇓P P 11 21 08.4 +0.1
baz=79
BR131 **Keskin Array S** 79.53 312 *e*P P 11 21 09.0 +0.6
comp=Z,2.9nm,0.7s,mb4.3
BRTR **Keskin Array B** 79.53 312 *ce*P P 11 21 08.8 +0.4
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR **Keskin Array B** 79.53 312 P P 11 21 08.8 +0.5
comp=Z,3.7nm,0.7s,mb4.4,baz=95,slow=4.0,SNR=16
KOLS **Kolonicke sedl** 79.57 324 *e*P P 11 21 08.2 -0.3
KOLS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KOLS **Kolonicke sedl** 79.57 324 *e*P P 11 21 08.2 -0.3
comp=Z,4.3nm,1.0s,mb4.3
KOLS **Kolonicke sedl** 79.57 324 *e*P P 11 21 08.2 -0.3
R16A **Teasdale** 79.67 50 ⇑P P 11 21 09.3 +0.1
baz=79,SNR=8.0
STHS **Stebnicka Huta** 79.71 325 *e*P P 11 21 10.6 +1.4
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS **Stebnicka Huta** 79.71 325 *e*P P 11 21 10.6 +1.4
comp=Z,3.7nm,0.9s,mb4.3
STHS **Stebnicka Huta** 79.71 325 *e*P P 11 21 10.6 +1.4
MONP **Monument Peak** 79.73 57 ⇑P P 11 21 09.7 +0.1
baz=80
U14A **Mt Trumbull** 79.74 52 ⇓P P 11 21 09.9 +0.3
baz=80
SRU **San Rafael** 79.74 49 ⇑P P 11 21 09.3 -0.2
baz=80,SNR=10
SRU **San Rafael** 79.74 49 *e*P P 11 21 09.3 -0.3
SRU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SRU **San Rafael** 79.74 49 *e*P P 11 21 09.3 -0.2
comp=Z,8.8nm,0.8s,mb4.7
OJC **Ojcow** 79.80 326 *e*P P 11 21 09.9 +0.2
O19A **Miners Draw (B** 79.84 47 ⇓P P 11 21 10.0 -0.1
baz=80
T15A **Red Dirt Ranch** 79.88 51 ⇓P P 11 21 10.6 +0.3
baz=80
Q18A **Rafter H Ranch** 79.98 49 ⇑P P 11 21 10.9 0.0
baz=80
N20A **Spence Gulch,** 80.01 46 ⇓P P 11 21 11.1 +0.1
baz=80,SNR=8.8
ULM **Lac du Bonnet** 80.01 33 P P 11 21 09.9 -0.9
comp=Z,3.0nm,0.8s,mb4.3,baz=301,slow=6.0,SNR=8.2
M21A **Separation Pea** 80.03 45 ⇑P P 11 21 10.9 -0.2
baz=80
R17A **Hanksville Air** 80.06 49 ⇓P P 11 21 11.2 -0.1
baz=80,SNR=8.0
RWWY **Rawlins** 80.07 45 *e*P P 11 21 11.0 -0.3
comp=Z,4.9nm,0.8s,mb4.5
MLR **Muntele Rosu** 80.11 320 P P 11 21 11.3 -0.2
comp=Z,1.6nm,0.4s,mb4.3,baz=121,slow=6.0,SNR=3.0
MLR **Muntele Rosu** 80.11 320 ⇑*i*P P 11 21 09.9 -1.6
NIE **Niedzica** 80.14 326 *e*P P 11 21 10.9 -0.6
RSSD **Black Hills** 80.24 42 *e*P P 11 21 11.4 -0.8
V14A **Boquillas Ranc** 80.27 53 ⇓P P 11 21 12.6 +0.1
baz=80,SNR=6.6
U15A **North Rim** 80.30 52 ⇑P P 11 21 13.1 +0.5
baz=80
P19A **Cripple Cowboy** 80.34 48 ⇑P P 11 21 12.7 -0.1
baz=80,SNR=11
X13A **Yucca** 80.43 54 ⇓P P 11 21 12.9 -0.5
baz=80
T16A **Glen Canyon Da** 80.45 51 ⇑P P 11 21 12.8 -0.6
baz=80
O20A **White River Ci** 80.46 47 ⇑P P 11 21 13.5 0.0
baz=80
N21A **Black Mountain** 80.49 46 ⇑P P 11 21 13.4 -0.1
baz=80
S17A **Black Ridge (B** 80.49 50 ⇓P P 11 21 13.1 -0.5
baz=80,SNR=5.7
W14A **Seligman** 80.54 53 ⇑P P 11 21 13.7 -0.2
baz=80
R18A **Canyonlands Na** 80.58 49 ⇑P P 11 21 13.5 -0.6
baz=80,SNR=7.5
KECS **Kecovo** 80.73 325 *e*P P 11 21 15.5 +0.8
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS **Kecovo** 80.73 325 *e*P P 11 21 15.5 +0.8
comp=Z,1.8nm,0.9s,mb4.0
KECS **Kecovo** 80.73 325 *e*P P 11 21 15.5 +0.8
V15A **Kaibab Nationa** 80.75 52 ⇓P P 11 21 15.4 +0.4
baz=80
T17A **Navajo Res., N** 80.89 51 ⇑P P 11 21 15.3 -0.5
baz=81
Y13A **Salome** 80.90 55 ⇑P P 11 21 16.0 +0.1
baz=81
S18A **Hurst Farm, Bl** 80.95 50 ⇑P P 11 21 15.9 -0.2
baz=81
N22A **Wattenberg Ran** 81.08 46 ⇑P P 11 21 17.0 +0.3
baz=81
W15A **Williams** 81.08 53 ⇓P P 11 21 17.7 +0.9
baz=81
X14A **Yava** 81.12 54 ⇓P P 11 21 17.2 +0.1
baz=81
MORC **Moravsky Berou** 81.12 327 ⇑*i*P P 11 21 17.2 +0.4
Q20A **Ridgley Place,** 81.19 48 ⇑P P 11 21 17.0 -0.4
baz=81,SNR=5.1
U16A **Tuba City** 81.21 51 ⇑P P 11 21 17.6 +0.1
baz=81,SNR=5.6
U17A **Shonto** 81.22 51 ⇑P P 11 21 17.8 +0.2
baz=81
Y14A **Wickenburg** 81.37 54 ⇑P P 11 21 18.6 +0.3
baz=81
T18A **Mexican Hat** 81.38 50 ⇓P P 11 21 17.9 -0.5
baz=81,SNR=5.3
S19A **Harvey Farm, M** 81.45 49 ⇑P P 11 21 18.5 -0.2
baz=81,SNR=7.3
WUAZ **Wupatki** 81.45 52 ⇑P P 11 21 19.2 +0.4
baz=81
VYHS **Vyhne** 81.48 326 *e*P P 11 21 19.3 +0.6
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS **Vyhne** 81.48 326 *e*P P 11 21 19.3 +0.6
comp=Z,2.4nm,0.9s,mb4.1
VYHS **Vyhne** 81.48 326 *e*P P 11 21 19.3 +0.6
X15A **Humboldt** 81.53 53 ⇑P P 11 21 19.7 +0.5
baz=81
R20A **Redvale** 81.62 48 ⇑P P 11 21 19.5 -0.1
baz=81,SNR=7.7
Q21A **Lamborn Mesa,** 81.69 48 ⇑P P 11 21 20.6 +0.6
baz=82
V17A **Tonalea, Kykot** 81.75 52 ⇓P P 11 21 20.6 +0.2
baz=82,SNR=9.0
Y15A **Casa Rosa Ranc** 81.80 54 ⇑P P 11 21 20.9 +0.2
baz=82
BRG **Berggiesshubel** 81.82 330 *e*P P 11 21 19.1 -1.4
comp=Z,3.0nm,0.9s,mb4.2
BRG **Berggiesshubel** 81.82 330 *e*P P 11 21 19.1 -1.4
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
SMCO **Snowmass** 81.83 47 *e*P P 11 21 21.1 +0.4
comp=Z,3.4nm,1.0s,mb4.2
U18A **Rough Rock, Ch** 81.83 51 ⇑P P 11 21 20.8 0.0
baz=82
CLL **Collm** 81.87 330 ⇑*i*P P 11 21 20.4 -0.3
CLL pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CLL **Collm** 81.87 330 ⇑*i*P P 11 21 20.4 -0.3
comp=Z,10.0nm,0.8s,mb4.8
CLL **Collm** 81.87 330 ⇑*i*P P 11 21 20.4 -0.3
comp=Z,10.0nm,0.8s,mb4.8
VRAC **Vranov** 81.89 327 P P 11 21 20.9 +0.1
comp=Z,2.7nm,0.5s,mb4.5,baz=334,slow=8.9,SNR=3.3
R21A **Cimarron** 82.01 48 ⇓P P 11 21 21.9 +0.2
baz=82
Q22A **Crested Butte,** 82.07 47 ⇑P P 11 21 22.5 +0.5
baz=82,SNR=9.4
X16A **Lo Mia Camp, P** 82.09 53 ⇓P P 11 21 22.8 +0.6
baz=82
T19A **Beclabito** 82.10 50 ⇓P P 11 21 22.3 +0.1
baz=82
MVCO **Mesa Verde** 82.18 49 ⇑P P 11 21 23.0 +0.4
baz=82
MVCO **Mesa Verde** 82.18 49 *e*P P 11 21 23.1 +0.5
comp=Z,3.5nm,0.7s,mb4.4
ISCO **Idaho Springs** 82.22 46 *e*P P 11 21 23.5 +0.7
ISCO pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
ISCO **Idaho Springs** 82.22 46 *e*P P 11 21 23.5 +0.8
comp=Z,1.9nm,0.8s,mb4.1
S21A **Coal Bank Pass** 82.32 49 ⇑P P 11 21 24.2 +0.9
baz=82
U19A **Dine' College,** 82.33 50 ⇓P P 11 21 23.4 0.0
baz=82,SNR=6.7
R22A **Saguache, Gunn** 82.57 48 ⇑P P 11 21 25.1 +0.5
baz=82
Y17A **Roosevelt** 82.93 53 ⇑P P 11 21 26.6 0.0
baz=83
V20A **Brimhall** 83.10 50 ⇓P P 11 21 27.8 +0.4
baz=83
Y18A **Canyon Day Jun** 83.40 53 ⇑P P 11 21 29.1 +0.1
baz=83
X19A **St. Johns** 83.46 52 ⇑P P 11 21 29.4 +0.1
baz=83
GERES **GERESS Array B** 83.48 328 P P 11 21 28.5 -0.6
comp=Z,2.7nm,0.6s,mb4.4,baz=37,slow=5.2,SNR=22
W20A **Ramah** 83.51 51 ⇓P P 11 21 29.2 -0.4
baz=83
V21A **Milan** 83.61 50 ⇓P P 11 21 29.9 -0.1
baz=83
SDCO **Great Sand Dun** 83.64 47 *e*P P 11 21 30.7 +0.6
comp=Z,3.0nm,1.1s,mb4.3
PMOR **Pomariorio Ree** 83.67 114 *e*T 12 53 19.0

comp=Z,2.7nm,0.2s
Y19A Nutrioso 83.78 52 ⇑P **P 11 21 31.3 +0.4**
baz=84
X20A Quemado 83.89 51 ⇑P **P 11 21 31.6 +0.1**
baz=84
EKA Eskdalemuir Ar 83.93 341 P **P 11 21 30.6 -0.6**
comp=Z,1.5nm,0.5s,mb4.3,baz=29,slow=4.4,SNR=13
PPT Papeete 84.09 117 eLR LR 11 47 58.3
comp=Z,87nm,21.5s
118A Homack Ranch, 84.16 54 ⇓P **P 11 21 33.0 +0.1**
baz=84
ECSD EROS Data Cent 84.37 38 eP **P 11 21 33.1 -0.7**
comp=Z,5.2nm,0.9s,mb4.7
Y20A Horse Springs, 84.37 52 ⇓P **P 11 21 34.3 +0.3**
baz=84
X21A Alamocita Cree 84.40 51 ⇓P **P 11 21 34.1 0.0**
baz=84
218A Dragoon 84.53 54 ⇓P **P 11 21 35.0 +0.2**
baz=84
Z20A Nine Sixteen R 84.75 53 ⇓P **P 11 21 36.1 +0.2**
baz=84
Y21A Point of Rocks 84.75 51 ⇑P **P 11 21 35.9 0.0**
baz=84
ANMO Albuquerque 84.90 50 eP **P 11 21 37.7 +1.1**
ANMO e*PP pP 11 21 47.6 +0.1
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 84.90 50 eP **P 11 21 37.7 +1.1**
comp=Z,2.7nm,1.0s,mb4.3
ANMO epP pP 11 21 47.6 +0.1
318A Bisbee 84.91 55 ⇑P **P 11 21 36.6 -0.1**
baz=85
W23A Werner Place, 84.95 50 ⇓P **P 11 21 37.3 +0.5**
baz=85
219A White Tail Can 85.03 54 ⇑P **P 11 21 37.4 +0.1**
baz=85
120A U Bar Ranch, L 85.09 53 ⇓P **P 11 21 37.8 +0.2**
baz=85
Y22A Socorro 85.25 51 ⇑P **P 11 21 38.6 +0.2**
baz=85
220A Playas Peak, P 85.57 53 ⇑P **P 11 21 39.9 -0.2**
baz=85
Y23A Lovelace Mesa, 85.82 50 ⇑P **P 11 21 41.2 0.0**
baz=86
SCHQ Schefferville 86.00 16 P **P 11 21 40.4 -1.3**
comp=Z,2.8nm,0.7s,mb4.6,baz=335,slow=4.9,SNR=6.5
SCHQ Schefferville 86.00 16 P **P 11 21 40.4 -1.3**
CDF Champ du Feu 86.42 332 eP **P 11 21 43.6 -0.3**
comp=Z,11nm,0.7s,mb4.9
CDF Champ du Feu 86.42 332 eP **P 11 21 43.6 -0.3**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
CDF Champ du Feu 86.42 332 eP **P 11 21 43.6 -0.3**
comp=Z,5.3nm,0.7s,mb4.9
X26A CR and CF Fran 86.79 49 ⇓P **P 11 21 45.9 -0.1**
baz=87
124A Stringfield Ra 87.01 51 ⇑P **P 11 21 46.9 -0.2**
baz=87
Z25A Roswell 87.09 50 ⇑P **P 11 21 47.4 -0.1**
baz=87
Z27A Tatum 87.99 49 ⇑P **P 11 21 51.5 -0.3**
baz=88
FLN La Foliniere 88.90 336 eP **P 11 21 55.3 -0.5**
comp=Z,6.0nm,0.7s,mb4.8
FLN La Foliniere 88.90 336 eP **P 11 21 55.3 -0.5**
FLN pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
FLN La Foliniere 88.90 336 eP **P 11 21 55.3 -0.5**
comp=Z,3.0nm,0.7s,mb4.7
LDF La Druitiere 88.93 336 eP **P 11 21 56.0 +0.1**
comp=Z,3.3nm,0.6s,mb4.6
LDF La Druitiere 88.93 336 eP **P 11 21 56.0 +0.1**
LDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
LDF La Druitiere 88.93 336 eP **P 11 21 56.0 +0.1**
comp=Z,1.6nm,0.6s,mb4.5
LPL La Plagne 89.01 330 eP **P 11 21 56.1 -0.2**
comp=Z,5.7nm,0.5s,mb4.8
LPL La Plagne 89.01 330 eP **P 11 21 56.1 -0.2**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.9
LPL La Plagne 89.01 330 eP **P 11 21 56.1 -0.2**
comp=Z,2.8nm,0.5s,mb4.8
LPG La Plagne 89.02 330 eP **P 11 21 56.1 -0.3**
comp=Z,6.0nm,0.6s,mb4.8
LPG La Plagne 89.02 330 eP **P 11 21 56.1 -0.3**
LPG pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
LPG La Plagne 89.02 330 eP **P 11 21 56.1 -0.3**
comp=Z,3.0nm,0.6s,mb4.8
AVF Avril sur Loir 89.25 333 eP **P 11 21 57.2 -0.3**
comp=Z,7.0nm,0.8s,mb4.7
AVF Avril sur Loir 89.25 333 eP **P 11 21 57.2 -0.3**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
AVF Avril sur Loir 89.25 333 eP **P 11 21 57.2 -0.3**
comp=Z,3.5nm,0.8s,mb4.7
GRR Gorron 89.35 336 eP **P 11 21 57.6 -0.3**
comp=Z,19nm,1.0s,mb5.1
GRR Gorron 89.35 336 eP **P 11 21 57.6 -0.3**
GRR pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GRR Gorron 89.35 336 eP **P 11 21 57.6 -0.3**
comp=Z,9.6nm,1.0s,mb5.1
MBDF Montbardon 89.64 330 eP **P 11 21 59.0 -0.3**
comp=Z,5.5nm,0.7s,mb4.7
MBDF Montbardon 89.64 330 eP **P 11 21 59.0 -0.3**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
MBDF Montbardon 89.64 330 eP **P 11 21 59.0 -0.3**
comp=Z,2.8nm,0.6s,mb4.8
SGMF Saint Gilles 90.01 337 eP **P 11 22 00.6 -0.4**
comp=Z,21nm,1.0s,mb5.1
SGMF Saint Gilles 90.01 337 eP **P 11 22 00.6 -0.4**
SGMF pmax pmax
comp=Z,11nm,1.0s,mb5.1
SGMF Saint Gilles 90.01 337 eP **P 11 22 00.6 -0.4**
comp=Z,11nm,1.0s,mb5.1
TCF Toulx Ste Croi 90.09 333 eP **P 11 22 01.1 -0.3**
ROSF Rostrenen 90.16 337 eP **P 11 22 01.5 -0.2**
VIVF Saint-Julien-I 90.37 331 eP **P 11 22 02.3 -0.4**
comp=Z,7.1nm,0.8s,mb4.7
VIVF Saint-Julien-I 90.37 331 eP **P 11 22 02.3 -0.4**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
VIVF Saint-Julien-I 90.37 331 eP **P 11 22 02.3 -0.4**
comp=Z,3.5nm,0.8s,mb4.7
TXAR Lajitas Array 90.40 53 P **P 11 22 02.7 -0.5**
comp=Z,2.0nm,0.8s,mb4.5,baz=308,slow=3.6,SNR=11
TXAR LR LR 12 05 01.4
comp=Z,50nm,18.3s,MS4.0,baz=180,slow=37
TXAR Lajitas Array 90.40 53 P **P 11 22 02.7 -0.5**
TXAR LR LR 12 05 01.4
QUIF Quistinic 90.50 337 eP **P 11 22 02.6 -0.7**
MFF Saint Martin d 90.66 335 eP **P 11 22 04.0 0.0**
comp=Z,12nm,0.9s,mb4.9
MFF Saint Martin d 90.66 335 eP **P 11 22 04.0 0.0**
MFF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
MFF Saint Martin d 90.66 335 eP **P 11 22 04.0 0.0**
comp=Z,5.8nm,0.9s,mb4.9
RJF Les Rejaudoux 91.19 333 eP **P 11 22 06.4 -0.1**
comp=Z,9.8nm,0.9s,mb4.8
RJF Les Rejaudoux 91.19 333 eP **P 11 22 06.4 -0.1**
RJF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
RJF Les Rejaudoux 91.19 333 eP **P 11 22 06.4 -0.1**
comp=Z,4.9nm,0.9s,mb4.8
CAF Calviac 91.31 333 eP **P 11 22 07.3 +0.2**
comp=Z,8.1nm,0.8s,mb4.8
CAF Calviac 91.31 333 eP **P 11 22 07.3 +0.2**
CAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
CAF Calviac 91.31 333 eP **P 11 22 07.3 +0.2**
comp=Z,4.1nm,0.8s,mb4.8
LFF La Frestale 91.78 333 eP **P 11 22 09.5 +0.2**
TORD Torodi Ar. Bea 118.03 315 PKP PKPdf 11 27 47.3 -1.5
comp=Z,0.2nm,0.4s,baz=43,slow=1.8,SNR=4.6
VNA2 Neumayer--Watz 141.65 196 e PKPdf 11 28 34.1 +2.5
VNA2 e 11 28 45.0
VNA3 Neumayer Olymp 141.89 195 e PKPdf 11 28 34.4 +2.3
VNA3 e 11 28 44.7
LPAZ La Paz 146.87 61 PKPbc PKPbc 11 28 44.1 -0.1
comp=Z,7.0nm,0.5s,baz=337,slow=2.4,SNR=34
LPAZ La Paz 146.87 61 ePKPbc PKPbc 11 28 44.2 0.0

*JMA **07** 11:29:49.6±0.14, 24°.07N×122°.63E, h8km, M2.2*
TAP 07 11:29:53.2, 25°.06N×122°.67E, h35km±1km, ML2.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.62**	**266**	*e*P	Pn	11 30 05.6	+0.1
	baz=265						
TWB1				*e*S	Sn	11 30 14.3	+0.1
	baz=265						
YOJ	**Yonaguni jima**	**0.67**	**152**	P	Pn	11 29 59.9	-6.3
YOJ				*e*S	Sn	11 30 07.2	-8.3
PCYT	**Pengchaiyu**	**0.78**	**317**	*e*P	Pn	11 30 08.3	+0.5
	baz=326						
PCYT				*e*S	Sn	11 30 17.8	-0.5
	baz=326						
NWF	**Wu-fen Shan**	**0.80**	**271**	*e*P	Pn	11 30 06.8	-1.2
	baz=282						
TWC	**Suao**	**0.87**	**239**	*e*P	Pn	11 30 08.8	-0.2
	baz=239						
TWC				*e*S	Sn	11 30 20.7	+0.4
	baz=239						
TWE	**Neicheng**	**0.97**	**250**	*e*P	Pn	11 30 11.2	+0.9
	baz=250						
ENA	**Nanau**	**1.05**	**233**	*e*P	Pn	11 30 10.7	-0.7
	baz=233						
IRIF	**Iriomote-Funau**	**1.21**	**126**	P	Pn	11 30 09.3	-4.3
NSK	**Sanguang**	**1.25**	**253**	*e*P	Pn	11 30 15.6	+1.4
	baz=267						
NNS	**Nan Shan**	**1.33**	**243**	*e*P	Pn	11 30 17.0	+1.8
	baz=234						
JKRS	**Kuro-shima**	**1.47**	**123**	P	Pn	11 30 13.2	-4.0
JKRS				*e*S	Sn	11 30 29.3	-5.9
JIJ	**Ishigaki jima**	**1.51**	**117**	P	Pn	11 30 15.3	-2.5
JIJ				*e*S	Sn	11 30 34.6	-1.6
WHF	**Hehuan Shan**	**1.57**	**235**	*e*P	Pn	11 30 19.3	+0.8
	baz=242						
TWT	**Tachien**	**1.57**	**240**	*e*P	Pn	11 30 21.7	+3.0
	baz=240						
JTJ	**Tarama**	**1.90**	**102**	P	Pn	11 30 24.5	+1.4
EHY	**Hungye**	**1.97**	**219**	*e*P	Pn	11 30 26.3	+2.2
	baz=217						
SMLT	**Sun Moon Lake**	**1.99**	**234**	*e*P	Pn	11 30 26.9	+2.5
	baz=220						
TYC	**Yuchr**	**2.01**	**235**	*e*P	Pn	11 30 26.0	+1.3
	baz=222						
TWF1	**Yuli**	**2.11**	**217**	*e*P	Pn	11 30 29.1	+3.1
	baz=215						
ALS	**Alishan**	**2.29**	**228**	*e*P	Pn	11 30 31.9	+3.3
	baz=215						
CHN5	**Tsauling**	**2.33**	**232**	*e*P	Pn	11 30 30.8	+1.8
	baz=231						
STYT	**Tauyuan**	**2.57**	**223**	*e*P	Pn	11 30 34.5	+2.1
	baz=211						
WTP	**Ta-pu**	**2.60**	**227**	*e*P	Pn	11 30 36.4	+3.6
	baz=215						
CHN1	**Nanshi**	**2.70**	**227**	*e*P	Pn	11 30 38.1	+4.0
	baz=214						
SGST	**Jiashian**	**2.74**	**224**	*e*P	Pn	11 30 38.1	+3.5
	baz=211						
SSD	**Sandimen**	**2.96**	**219**	*e*P	Pn	11 30 41.9	+4.1
	baz=217						

*ISCJB **07** 11:47:54.5±1.5, 13°.53N±0°.03×125°.54E±0°.04, h8km±10km, mb4.2/19, MS3.3/6, Error ellipse: s-maj=7.1km s-min=5.3km az=22.3*
*IDC **07** 11:47:54.0±0.8, 13°.31N×125°.56E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, ML4.6/2, MS3.3/9, Ms1 3.4/9, ms1mx3.1/26, Error ellipse: s-maj=28.6km s-min=14.5km az=67.0*
*NEIC **07** 11:47:55.4±0.6, 13°.38N×125°.61E, h10km, mb4.4/6, Error ellipse: s-maj=17.1km s-min=8.9km az=73.0*
*MAN **07** 11:47:56, 13°.59N×125°.58E, h44km, mb5.1, ML4.1, MS4.2*
ISC 07 11:47:55.1±1.9, 13°.48N±0°.03×125°.53E±0°.05, h1km±13km, n50, σ1s 09/54, mb4.2/19, MS3.3/6, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataraman**	**1.29**	**221**	*e*P	**Pn**	**11 48 20.2**	**-0.1**
CNP				*e*S	**Sb**	**11 48 35.0**	**-2.2**
PVCP	**Virac**	**1.35**	**275**	*e*P	**Pn**	**11 48 19.7**	**-1.3**
PVCP				*e*S	**Sb**	**11 48 34.2**	**-4.7**
MMPH	**Masbate**	**2.17**	**239**	*e*P	**Pn**	**11 48 33.1**	**+0.7**
MMPH				*e*S	**Sn**	**11 48 59.8**	**-0.2**
OCLP	**Ormoc**	**2.58**	**201**	*e*P	**Pn**	**11 48 39.5**	**+1.5**
AUQP	**San Andres**	**2.79**	**267**	*e*P	**Pn**	**11 48 42.5**	**+1.6**
RCP	**Roxas**	**3.33**	**235**	⇓*e*P	**Pn**	**11 48 49.2**	**+0.9**
RCP				*e*S	**Sn**	**11 49 29.4**	**+0.8**
BOAC	**Boac**	**3.59**	**270**	*e*P	**Pn**	**11 48 52.4**	**+0.5**
BOAC				*e*S	**Sn**	**11 49 21.8**	**-13**
KALP	**Kalibo**	**3.60**	**240**	⇑*e*P	**Sn**	**11 49 35.8**	**+0.5**
POLP	**Polillo Island**	**3.70**	**290**	*e*P	**Pn**	**11 48 53.5**	**0.0**
POLP				*e*S	**Sn**	**11 49 31.4**	**-6.3**
GUIM	**Jordan**	**4.04**	**226**	*e*P	**Pn**	**11 48 59.2**	**+1.0**
GUIM				*e*S	**Sn**	**11 49 42.8**	**-3.5**
TBP	**Tagbilaran**	**4.11**	**204**	*e*P	**Pn**	**11 49 00.2**	**+1.1**
SJMP	**San Jose**	**4.42**	**257**	*e*P	**Pn**	**11 49 05.2**	**+1.8**
BALP	**Baler**	**4.44**	**301**	*e*P	**Pn**	**11 49 00.5**	**-3.1**
BALP				*e*S	**Sn**	**11 49 40.3**	**-16**
TGY	**Tagaytay City**	**4.51**	**278**	Pn	**Pn**	**11 49 04.1**	**-0.5**
	86nm,0.3s,baz=33,slow=0.3,SNR=11						
TGY				Sn	**Sn**	**11 49 59.0**	**+1.3**
	12nm,0.3s,baz=26,slow=24,SNR=3.0						
PALP	**Palanan**	**4.65**	**320**	*e*P	**Pn**	**11 49 05.1**	**-1.5**
CAUP	**Cauayan**	**4.97**	**314**	*e*P	**Pn**	**11 49 10.4**	**-0.5**
LUBP	**Lubang**	**5.15**	**273**	*e*P	**Pn**	**11 49 12.9**	**-0.4**
SCZP	**Santa Cruz**	**5.90**	**293**	*e*P	**Pn**	**11 49 22.1**	**-1.6**
PAGZ	**Pagadian**	**5.99**	**201**	*e*P	**Pn**	**11 49 26.2**	**+1.3**
APYP	**Conner**	**6.00**	**317**	*e*P	**Pn**	**11 49 25.4**	**+0.3**
BOLP	**Bolinao**	**6.15**	**299**	*e*P	**Pn**	**11 49 25.4**	**-1.7**
ABRA	**Dolores**	**6.22**	**312**	*e*P	**Pn**	**11 49 28.3**	**+0.2**
JOW	**Kunigami**	**13.53**	**11**	Pn	**Pn**	**11 51 08.2**	**0.0**
	4.1nm,0.3s,baz=147,slow=16,SNR=67						
JOW				LR	LR	11 55 54.9	
	comp=Z,76nm,19.2s,baz=125,slow=35						
GUMO	**Guam**	**18.80**	**87**	LR	LR	11 58 56.8	
	comp=Z,60nm,20.2s,baz=276,slow=35						
KAPI	**Kappang**	**19.25**	**198**	P	**Pn**	**11 52 21.9**	**-0.1**
	0.7nm,0.3s,baz=35,slow=12,SNR=8.1						
KAPI				LR	LR	12 00 02.9	
	comp=Z,98nm,18.4s,baz=72,slow=38						
KSRS	**Korea Array**	**23.97**	**5**	P	**P**	**11 53 11.1**	**+0.1**
	5.8nm,0.9s,mb4.1,baz=183,slow=11,SNR=24						
KSRS				LR	LR	12 01 27.0	
	comp=Z,51nm,19.3s,MS3.0,baz=344,slow=34						
XAN	**Xi'an**	**25.42**	**326**	P	**P**	**11 53 25.6**	**+1.2**
XAN				pP		11 53 33.5	
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
XAN				pmax	pmax		
	comp=Z,13nm,5.0s						
MJAR	**Matsushiro Arr**	**25.62**	**24**	LR	LR	12 01 13.3	
	comp=Z,68nm,21.8s,MS3.1,baz=225,slow=31						
CM31	**Chiang Mai Arr**	**26.02**	**284**	*e*P	**P**	**11 53 29.3**	**-0.7**
	comp=Z,4.5nm,0.5s,mb4.3						
CMAR	**Chiang Mai Arr**	**26.02**	**284**	P	**P**	**11 53 29.4**	**-0.6**
	comp=Z,5.0nm,0.6s,mb4.3,baz=96,slow=7.7,SNR=36						
CMAR				LR	LR	12 03 55.9	
	comp=Z,82nm,18.9s,MS3.3,baz=136,slow=37						
KAKA	**Kakadu**	**26.91**	**165**	*e*P	**P**	**11 53 39.3**	**+1.3**
	comp=Z,10.0nm,0.6s,mb4.7						
PSI	**Prapat**	**28.36**	**250**	LR	LR	12 04 48.6	
	comp=Z,142nm,20.8s,MS3.5,baz=91,slow=36						
FITZ	**Fitzroy Crossi**	**31.39**	**180**	*e*P	**P**	**11 54 16.0**	**-1.7**
	comp=Z,6.8nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**31.39**	**180**	*e*P	**P**	**11 54 16.0**	**-1.7**
	comp=Z,5.6nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**34.32**	**165**	*e*P	**P**	**11 54 39.9**	**-3.6**
	comp=Z,25nm,1.8s,mb4.8						
WRA	**Warramunga Arr**	**34.33**	**165**	P	**P**	**11 54 39.3**	**-4.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=341,slow=8.1,SNR=11						
ULN	**Ulaanbaatar**	**37.58**	**340**	*e*P	**P**	**11 55 12.0**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.2						
SONM	**Songino Array**	**37.78**	**339**	P	**P**	**11 55 13.2**	**+0.5**
	comp=Z,3.1nm,0.9s,mb4.0,baz=159,slow=8.9,SNR=14						
ASAR	**Alice Springs**	**37.82**	**167**	P	**P**	**11 55 11.1**	**-2.3**
	comp=Z,1.2nm,0.4s,mb4.0,baz=345,slow=6.9,SNR=19						
FORT	**Forrest**	**44.07**	**177**	*e*P	**P**	**11 56 04.1**	**-0.7**
	comp=Z,11nm,0.6s,mb4.8						
PETK	**Petropavlovsk-**	**47.05**	**26**	LR	LR	12 13 26.5	
	comp=Z,30nm,21.4s,MS3.2,baz=31,slow=32						
STKA	**Stephens Creek**	**47.66**	**161**	*e*P	**P**	**11 56 32.4**	**-0.7**
	comp=Z,4.7nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**47.66**	**161**	P	**P**	**11 56 32.4**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.4,baz=337,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**49.06**	**321**	P	**P**	**11 56 44.1**	**+0.3**
	comp=Z,1.4nm,0.5s,mb4.2,baz=114,slow=8.8,SNR=16						
ZALV	**Zalesovo Beam**	**51.48**	**330**	P	**P**	**11 57 03.0**	**+0.9**
	comp=Z,0.6nm,0.3s,mb4.0,baz=117,slow=8.3,SNR=2.7						
KURK	**Kurchatov**	**53.04**	**324**	*e*P	**P**	**11 57 13.7**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**58.64**	**325**	P	**P**	**11 57 54.3**	**+0.5**
	comp=Z,1.0nm,0.5s,mb4.1,baz=124,slow=7.9,SNR=7.4						
ABKAR	**Akbulak array**	**64.00**	**318**	P	**P**	**11 58 29.7**	**-0.5**
	comp=Z,0.6nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**80.95**	**339**	P	**P**	**12 00 11.7**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=80,slow=8.7,SNR=4.1						
NOA	**NORSAR Array B**	**89.58**	**334**	LR	LR	12 44 16.4	
	comp=Z,26nm,19.2s,MS3.7,baz=40,slow=38						

*ISCJB **07** 11:48:45.4±0.4, 38°.52N±0°.02×21°.54E±0°.03, h8km±3km, Error ellipse: s-maj=3.5km s-min=2.7km az=155.8*
*THE **07** 11:48:45.8, 38°.51N×21°.55E, h12km, ML3.8/8, Error ellipse: s-maj=1.0km s-min=0.7km az=144.0*
*NEIC **07** 11:48:45.7, 38°.49N×21°.56E, h22km, ML3.2(ATH), After ATH.*
*ATH **07** 11:48:45.7, 38°.49N×21°.56E, h22km±2km, MD3.5/8, ML3.2*
*CSEM **07** 11:48:46.5±0.2, 38°.48N×21°.56E, h20km, ML3.2, Error ellipse: s-maj=5.1km s-min=3.8km az=65.0*
ISC 07 11:48:46.2±0.4, 38°.50N±0°.02×21°.56E±0°.03, h10km±3km, n81, σ0s 93/127, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.28**	**140**	*e*PB	**Pg**	**11 48 52.1**	**+0.3**
UPR	**University Cam**	**0.28**	**140**	P	**Pg**	**11 48 52.1**	**+0.3**
UPR				S	**Sg**	**11 48 56.8**	**+1.2**
UPR	**University Cam**	**0.28**	**140**	P	**Pg**	**11 48 52.1**	**+0.3**
UPR				S	**Sg**	**11 48 56.8**	**+1.2**
EFP	**Efpalio**	**0.28**	**104**	*e*PB	**Pg**	**11 48 51.9**	**0.0**
EFP				*e*SB	**Sg**	**11 48 57.2**	**+1.5**
EFP	**Efpalio**	**0.28**	**104**	P	**Pg**	**11 48 51.9**	**0.0**
EFP				S	**Sg**	**11 48 56.5**	**+0.8**
EFP	**Efpalio**	**0.28**	**104**	P	**Pg**	**11 48 51.9**	**0.0**
EFP				S	**Sg**	**11 48 56.5**	**+0.8**
EFP				*e*Sb	**Sg**	**11 48 57.2**	**+1.5**
LAKA	**Lakka**	**0.42**	**128**	P	**Pg**	**11 48 54.1**	**-0.3**
LAKA				S	**Sg**	**11 49 00.3**	**+0.3**
LAKA	**Lakka**	**0.42**	**128**	P	**Pg**	**11 48 54.1**	**-0.3**
LAKA				S	**Sg**	**11 49 00.3**	**+0.3**
TRIZ	**Trizonia**	**0.43**	**108**	P	**Pg**	**11 48 54.2**	**-0.3**
TRIZ				S	**Sg**	**11 49 01.2**	**+1.0**
TRIZ	**Trizonia**	**0.43**	**108**	P	**Pg**	**11 48 54.2**	**-0.3**
TRIZ				S	**Sg**	**11 49 01.2**	**+1.0**
RLS	**Riolos of Patr**	**0.44**	**189**	*e*PB	**Pg**	**11 48 54.8**	**0.0**
RLS				*e*SB	**Sg**	**11 49 02.4**	**+1.7**
RLS	**Riolos of Patr**	**0.44**	**189**	*e*Pb	**Pg**	**11 48 54.8**	**0.0**
RLS				*e*Sb	**Sg**	**11 49 02.4**	**+1.7**
EVR	**Evrytania**	**0.46**	**25**	*e*PB	**Pg**	**11 48 54.9**	**-0.3**
EVR				*e*SB	**Sg**	**11 49 02.3**	**+0.9**
EVR	**Evrytania**	**0.46**	**25**	*e*Pb	**Pg**	**11 48 54.9**	**-0.3**
EVR				*e*Sb	**Sg**	**11 49 02.3**	**+0.9**
KALE	**Kalithea**	**0.47**	**103**	P	**Pg**	**11 48 54.8**	**-0.6**
KALE				S	**Sg**	**11 49 02.2**	**+0.6**
KALE	**Kalithea**	**0.47**	**103**	P	**Pg**	**11 48 54.8**	**-0.6**
KALE				S	**Sg**	**11 49 02.2**	**+0.6**
AGG	**Agios Georgios**	**0.80**	**49**	*e*PB	**Pg**	**11 49 00.6**	**-1.0**
AGG				*e*SN	**Sg**	**11 49 12.9**	**+0.8**
AGG	**Agios Georgios**	**0.80**	**49**	P	**Pg**	**11 49 00.7**	**-0.9**
AGG				S	**Sg**	**11 49 12.0**	**-0.1**
AGG	**Agios Georgios**	**0.80**	**49**	P	**Pg**	**11 49 00.7**	**-0.9**
AGG				S	**Sg**	**11 49 12.0**	**-0.1**
AGG				*e*Sn	**Sg**	**11 49 12.9**	**+0.8**
VLS	**Valsamata**	**0.82**	**248**	*e*PN	**Pg**	**11 49 00.8**	**-1.2**
VLS	**Valsamata**	**0.82**	**248**	P	**Pg**	**11 49 00.7**	**-1.3**
VLS				S	**Sg**	**11 49 13.2**	**+0.4**
VLS	**Valsamata**	**0.82**	**248**	P	**Pg**	**11 49 00.7**	**-1.3**
VLS				S	**Sg**	**11 49 13.2**	**+0.4**
GUR	**Goura**	**0.83**	**132**	*e*PB	**Pg**	**11 49 00.9**	**-1.4**
GUR	**Goura**	**0.83**	**132**	P	**Pg**	**11 49 00.8**	**-1.4**
GUR				S	**Sg**	**11 49 13.3**	**+0.2**
GUR	**Goura**	**0.83**	**132**	*e*Pb	**Pg**	**11 49 00.9**	**-1.4**
GUR				S	**Sg**	**11 49 13.3**	**+0.2**
THL	**Klokotos Trika**	**1.12**	**18**	*e*PB	**Pg**	**11 49 06.4**	**-1.4**
THL	**Klokotos Trika**	**1.12**	**18**	P	**Pg**	**11 49 06.4**	**-1.4**
THL				S	**Sg**	**11 49 22.1**	**-0.3**
THL	**Klokotos Trika**	**1.12**	**18**	P	**Pg**	**11 49 06.4**	**-1.4**
THL				S	**Sg**	**11 49 22.1**	**-0.3**
LKR	**Lokris**	**1.14**	**82**	*e*PB	**Pg**	**11 49 06.3**	**-1.8**
LKR	**Lokris**	**1.14**	**82**	P	**Pg**	**11 49 06.3**	**-1.8**
LKR				S	**Sg**	**11 49 22.4**	**-0.6**
LKR	**Lokris**	**1.14**	**82**	P	**Pg**	**11 49 06.3**	**-1.8**
LKR				S	**Sg**	**11 49 22.4**	**-0.6**
ATAL	**Atalanti**	**1.17**	**80**	P	**Pb**	**11 49 07.4**	**-0.9**
ATAL				S	**Sb**	**11 49 22.9**	**-0.6**
ATAL	**Atalanti**	**1.17**	**80**	P	**Pb**	**11 49 07.4**	**-0.9**
ATAL				S	**Sb**	**11 49 22.9**	**-0.6**
JAN	**Janina**	**1.28**	**335**	*e*PN	**Pn**	**11 49 11.3**	**+1.3**
JAN	**Janina**	**1.28**	**335**	*e*Pn	**Pn**	**11 49 11.3**	**+1.3**
VLX	**Vlachokerasia**	**1.30**	**150**	*e*PN	**Pn**	**11 49 10.1**	**-0.2**
VLX	**Vlachokerasia**	**1.30**	**150**	P	**Pn**	**11 49 08.7**	**-1.6**
VLX				S	**Sb**	**11 49 27.5**	**+0.2**
VLX	**Vlachokerasia**	**1.30**	**150**	P	**Pn**	**11 49 08.7**	**-1.6**
VLX	**Vlachokerasia**	**1.30**	**150**	*e*Pn	**Pn**	**11 49 10.1**	**-0.2**
VLX				S	**Sb**	**11 49 27.5**	**+0.2**
ITM	**Ithomi**	**1.35**	**167**	*e*PB	**Pb**	**11 49 10.1**	**-1.3**
ITM	**Ithomi**	**1.35**	**167**	P	**Pn**	**11 49 09.9**	**-1.0**
ITM				S	**Sb**	**11 49 28.7**	**0.0**
ITM	**Ithomi**	**1.35**	**167**	P	**Pn**	**11 49 09.9**	**-1.0**
ITM				S	**Sb**	**11 49 28.7**	**0.0**
NEO	**Neokhori**	**1.53**	**58**	*e*PN	**Pn**	**11 49 13.9**	**+0.4**
NEO	**Neokhori**	**1.53**	**58**	*e*Pn	**Pn**	**11 49 13.9**	**+0.4**
PYL	**PYLOS**	**1.61**	**175**	*e*PN	**Pn**	**11 49 15.1**	**+0.6**
PYL	**PYLOS**	**1.61**	**175**	P	**Pn**	**11 49 14.2**	**-0.3**
PYL	**PYLOS**	**1.61**	**175**	P	**Pn**	**11 49 14.2**	**-0.3**
PYL	**PYLOS**	**1.61**	**175**	*e*Pn	**Pn**	**11 49 15.1**	**+0.6**
DID	**Didima**	**1.66**	**126**	*e*PN	**Pn**	**11 49 15.4**	**+0.2**
DID	**Didima**	**1.66**	**126**	P	**Pn**	**11 49 14.6**	**-0.6**
DID				S	**Sn**	**11 49 36.5**	**0.0**
DID	**Didima**	**1.66**	**126**	P	**Pn**	**11 49 14.6**	**-0.6**
DID

DJA 07 11:49:10.7±01.01S×105.32E, h17km, MLv3.8/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.54**	**43**	P	Pg	11 49 20.9	+0.1
CGJI				S	Sg	11 49 29.2	+1.1
SBJI	**Serang**	**1.20**	**42**	P	Pn	11 49 31.9	-0.1
SBJI				S	Sb	11 49 48.2	+0.8
RBSI	**Rajabasa**	**1.23**	**20**	P	Pn	11 49 31.6	-0.9
RBSI				S	Sb	11 49 47.4	-1.0
DBJI	**Dramaga**	**1.49**	**72**	P	Pn	11 49 34.5	-1.5
DBJI				S	Sn	11 49 55.0	-0.1
CBJI	**Citeko**	**1.63**	**69**	P	Pn	11 49 37.0	-0.9
BLSI	**Bandar Lampung**	**1.63**	**357**	S	Sn	11 49 58.2	-0.4
KASI	**Kota Agung**	**1.69**	**331**	P	Pn	11 49 39.0	+0.3
KASI				S	Sn	11 49 59.8	-0.2
MDSI	**Maura Dua**	**2.75**	**336**	P	Pn	11 49 53.3	-0.1

*IDC **07** 12:07:26.4±2.6, 26.92N×54.08E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.5/28, mbtmp3.7/8, Error ellipse: s-maj=57.5km s-min=27.0km az=151.0*
*CSEM **07** 12:07:28.3±0.2, 27.01N×54.08E, h2km, ML3.6, Error ellipse: s-maj=6.9km s-min=6.0km az=35.0*
*THR **07** 12:07:28.0±1.1, 26.80N×54.09E, h34km±10km, ML3.7*
*TEH **07** 12:07:28.9, 26.77N×54.11E, h16km*
*NEIC **07** 12:07:29.5, 26.95N×54.11E, h32km, mb3.6/2, ML3.6(THR), After THR.*
*KISR **07** 12:07:30.1±0.7, 27.75N×53.73E, h1km±999km, ML3.2*
*OMAN **07** 12:08:07.4±4.5, 24.46N×55.61E, h16km, Error ellipse: s-maj=54.4km s-min=15.6km az=2.0*

ISC 07 12:07:31.2±1.0, 27.03N±0.03×53.99E±0.03, h23km±9km, n63, σ1°02/78, mb3.6/10, 2C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**1.53**	**325**	*e*Pg	**Pn**	**12 07 59.0**	**+1.9**
GHIR				*e*Sg	**Sn**	**12 08 21.0**	**+4.7**
GHIR	**Ghir-Karzin**	**1.53**	**325**	*e*Pg	**Pn**	**12 07 59.6**	**+2.5**
GHIR				*e*Sg	**Sn**	**12 08 23.6**	**+7.3**
GHIR				AML	AML	12 08 28.1	
	comp=N,884nm,0.4s						
GHIR				AML	AML	12 08 28.5	
	comp=E,926nm,0.5s						
GHIR	**Ghir-Karzin**	**1.53**	**325**	*e*Pg	**Pn**	**12 07 59.6**	**+2.5**
GHIR				*e*Sg	**Sn**	**12 08 21.0**	**+4.7**
BNDS	**Bandar-Abbas**	**1.98**	**79**	*e*Pg	**Pn**	**12 08 03.0**	**-0.2**
BNDS				*e*Sg	**Sn**	**12 08 28.0**	**+0.7**
BNDS	**Bandar-Abbas**	**1.98**	**79**	*e*Pg	**Pn**	**12 08 03.5**	**+0.2**
BNDS				*e*Sg	**Sn**	**12 08 28.4**	**+1.0**
BNDS				AML	AML	12 08 48.8	
	comp=N,490nm,1.6s						
BNDS	**Bandar-Abbas**	**1.98**	**79**	*e*Pg	**Pn**	**12 08 03.5**	**+0.3**
BNDS				*e*Sg	**Sn**	**12 08 28.4**	**+1.1**
IMOK	**Mouk**	**2.30**	**331**	*e*Pn	**Pb**	**12 08 10.3**	**-1.7**
IMOK				*e*Sn	**Sb**	**12 08 40.8**	**+0.8**
IMOK				*e*		12 08 58.3	
	comp=Z,5μm,0.3s						
IMOK	**Mouk**	**2.30**	**331**	*e*Pn	**Pb**	**12 08 10.3**	**-1.7**
IMOK				*e*Sn	**Sb**	**12 08 40.8**	**+0.8**
IBND	**Bandar-abas**	**2.31**	**79**	*e*Pn	**Pn**	**12 08 05.6**	**-2.2**
IBND				*e*Pn	**Pb**	**12 08 05.8**	**-2.0**
IBND	**Bandar-abas**	**2.31**	**79**	*e*Pn	**Pn**	**12 08 05.6**	**-2.2**
ISRV	**Sarvestan**	**2.46**	**342**	*e*Pn	**Pb**	**12 08 12.4**	**-2.4**
ISRV				*e*		12 09 01.5	
	comp=Z,3μm,0.2s						
ISRV	**Sarvestan**	**2.46**	**342**	*e*Pn	**Pb**	**12 08 12.4**	**-2.4**
NAZ	**Nazwa, Dubai**	**2.53**	**143**	P	**Pn**	**12 08 11.1**	**+0.2**
	SNR=7.0						
NAZ				S	**Sn**	**12 08 40.2**	**-0.8**
ASUD	**Al Ashush, Dub**	**2.68**	**153**	P	**Pn**	**12 08 13.9**	**+1.0**
	SNR=12						
ASUD	**Al Ashush, Dub**	**2.68**	**153**	P	**Pn**	**12 08 13.9**	**+1.0**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**2.70**	**147**	P	**Pn**	**12 08 13.6**	**+0.5**
	SNR=9.4						
FAQ				P		12 08 13.6	
	SNR=9.4						
FAQ	**Al Faqa, Dubai**	**2.70**	**147**	P	**Pn**	**12 08 13.6**	**+0.5**
	SNR=9.4						
FAQ				S	**Sn**	**12 08 45.4**	**+0.3**
ASHO	**Ashiyiah**	**2.99**	**141**	⇑P	**Pn**	**12 08 16.8**	**-0.4**
	SNR=11						
ASHO				⇑P		12 08 16.8	
	SNR=11						
ASHO	**Ashiyiah**	**2.99**	**141**	P	**Pn**	**12 08 16.9**	**-0.3**
	SNR=11						
SLWS		**3.74**	**234**	P	**Pn**	**12 08 28.3**	**+0.8**
SLWS		**3.74**	**234**	P	**Pn**	**12 08 28.3**	**+0.8**
KRBR	**Kerman**	**3.82**	**39**	*e*Pn	**Pn**	**12 08 28.0**	**-0.6**
KRBR	**Kerman**	**3.82**	**39**	*e*Pn	**Pn**	**12 08 29.0**	**+0.4**
KRBR				AML	AML	12 09 19.9	
	comp=N,50nm,0.4s						
KRBR				AML	AML	12 09 48.8	
	comp=E,96nm,1.4s						
KRBR	**Kerman**	**3.82**	**39**	*e*Pn	**Pn**	**12 08 28.0**	**-0.6**
BTHS		**4.11**	**224**	P	**Pn**	**12 08 32.5**	**-0.1**
BTHS		**4.11**	**224**	P	**Pn**	**12 08 32.5**	**-0.1**
BTHS				S	**Sn**	**12 09 19.0**	**-0.9**
BOQSS		**4.29**	**255**	S	**Sn**	**12 09 25.9**	**+1.5**
BOQSS		**4.29**	**255**	P	**Pn**	**12 08 36.6**	**+1.6**
IMEH	**Mehriz**	**4.38**	**7**	*e*Pn	**Pn**	**12 08 37.9**	**+1.7**
IMEH				*e*		12 09 35.4	
	comp=Z,376nm,0.1s						
IMEH	**Mehriz**	**4.38**	**7**	*e*Pn	**Pn**	**12 08 37.9**	**+1.7**
IBAF	**Bafgh**	**4.75**	**17**	*e*Pn	**Pn**	**12 08 42.5**	**+1.2**
IBAF				*e*		12 08 44.0	
	comp=Z,427nm,0.1s						
IBAF	**Bafgh**	**4.75**	**17**	*e*Pn	**Pn**	**12 08 42.5**	**+1.2**
QRN	**Al-Qurain**	**5.64**	**289**	*e*P	**Pn**	**12 08 54.4**	**+0.9**
QRN				*e*S	**Sn**	**12 09 57.0**	**-0.5**
QRN				AML	AML	12 09 57.6	
	comp=Z,8.9nm,0.3s						
NASN	**Na'in**	**5.84**	**350**	*e*Pn	**Pn**	**12 08 57.0**	**+0.7**
NASN	**Na'in**	**5.84**	**350**	*e*Pn	**Pn**	**12 08 57.9**	**+1.6**
NASN	**Na'in**	**5.84**	**350**	*e*Pn	**Pn**	**12 08 57.0**	**+0.7**
RDF	**Al-Radifah**	**6.00**	**290**	*e*P	**Pn**	**12 08 58.8**	**+0.3**
RDF				*e*S	**Sn**	**12 10 06.1**	**-0.3**
RDF				AML	AML	12 10 07.2	
	comp=Z,15nm,0.4s						
RDF	**Al-Radifah**	**6.00**	**290**	*e*P	**Pn**	**12 08 58.8**	**+0.3**
IZEF	**Zefreh**	**6.02**	**347**	*e*Pn	**Pn**	**12 08 59.5**	**+0.7**
IZEF				*e*		12 09 54.2	
	comp=Z,247nm,0.1s						
IZEF	**Zefreh**	**6.02**	**347**	*e*Pn	**Pn**	**12 08 59.5**	**+0.7**
MIB	**Mutribah**	**6.47**	**297**	*e*P	**Pn**	**12 09 04.8**	**-0.2**
MIB				*e*S	**Sn**	**12 10 15.7**	**-2.4**
MIB	**Mutribah**	**6.47**	**297**	*e*P	**Pn**	**12 09 04.8**	**-0.2**
LYLS		**7.90**	**232**	P	**Pn**	**12 09 23.4**	**-1.2**
LYLS		**7.90**	**232**	P	**Pn**	**12 09 23.4**	**-1.2**
ASYS		**8.60**	**275**	P	**Pn**	**12 09 34.2**	**0.0**
BRTR	**Keskin Array B**	**21.13**	**312**	P	**P**	**12 12 15.5**	**+1.2**
	comp=Z,1.7nm,0.8s,mb3.4,baz=122,slow=11,SNR=6.9						
BRTR	**Keskin Array B**	**21.13**	**312**	P	**P**	**12 12 15.5**	**+1.2**
AML	**Almayashu**	**22.06**	**42**	*e*P	**P**	**12 12 23.9**	**-0.4**
	comp=Z,2.0nm,0.6s,mb3.7						
AML	**Almayashu**	**22.06**	**42**	*e*P	**P**	**12 12 23.9**	**-0.4**
	comp=Z,2.0nm,0.6s,mb3.7						
ABKAR	**Akbulak array**	**22.66**	**10**	*e*P	**P**	**12 12 30.5**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.4						
ABKAR	**Akbulak array**	**22.66**	**10**	*e*P	**P**	**12 12 30.5**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.4						
AAK	**Ala-Archa**	**22.84**	**42**	P	**P**	**12 12 31.8**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.4,baz=202,slow=10,SNR=3.1						
AAK	**Ala-Archa**	**22.84**	**42**	P	**P**	**12 12 31.8**	**-0.7**
AKTK	**Aktyubinsk**	**23.57**	**6**	P	**P**	**12 12 40.1**	**+0.1**
AKTK	**Aktyubinsk**	**23.57**	**6**	P	**P**	**12 12 40.1**	**+0.1**
AKTO	**Aktyubinsk**	**23.57**	**6**	P	**P**	**12 12 40.1**	**+0.1**
	comp=Z,0.7nm,0.5s,mb3.4,baz=185,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	**35.18**	**32**	P	**P**	**12 14 22.3**	**-0.8**
	comp=Z,1.1nm,0.3s,mb4.2,baz=237,slow=9.5,SNR=3.5						
FINES	**FINESS Array B**	**39.18**	**339**	P	**P**	**12 14 55.6**	**-1.3**
	comp=Z,0.8nm,0.4s,mb3.8,baz=142,slow=9.6,SNR=4.5						
FINES	**FINESS Array B**	**39.18**	**339**	P	**P**	**12 14 55.6**	**-1.3**
ARCES	**ARCESS Array B**	**45.66**	**346**	P	**P**	**12 15 49.1**	**-0.4**
	comp=Z,1.1nm,0.9s,mb3.8,baz=149,slow=9.0,SNR=4.0						
ARCES	**ARCESS Array B**	**45.66**	**346**	P	**P**	**12 15 49.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**50.68**	**265**	P	**P**	**12 16 28.4**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=68,slow=7.2,SNR=6.9						
YKA	**Yellowknife Ar**	**90.32**	**355**	P	**P**	**12 20 29.6**	**-0.3**
	comp=Z,0.2nm,0.6s,mb3.6,baz=7.5,slow=5.2,SNR=4.5						

*ISCJB **07** 12:56:07.7±1.6, 24.25S×0.1×179.9W±0.1, h493km±22km, mb3.9/8, Error ellipse: s-maj=21.0km s-min=10.5km az=135.0*
*NEIC **07** 12:56:09.2±1.0, 24.20S×179.94W, h500km±13km, mb4.1/1, Error ellipse: s-maj=16.5km s-min=10.6km az=142.0*
*IDC **07** 12:56:09.2±2.8, 24.19S×179.99E, h496km±35km, mb3.5/7, mb1 3.7/9, mb1mx3.4/17, mbtmp3.5/9, Error ellipse: s-maj=40.3km s-min=18.1km az=155.0*

ISC 07 12:56:08.4±1.2, 24.15±0.1×179.9W±0.1, h486km±17km, n16, σ0°96/16, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.73**	**277**	*e*P	**P**	**12 58 56.1**	**+1.3**
DZM				*e*S		12 58 59.0	
DZM	**Mont Dzumac**	**12.73**	**277**	*e*Pn	**P**	**12 58 56.3**	**+1.5**
AFI	**Afiamalu**	**12.74**	**38**	P	**P**	**12 58 55.7**	**+0.7**
	3.0nm,0.3s,baz=255,slow=19,SNR=8.0						
AFI				S	**S**	**13 01 10.5**	**-1.9**
	1.2nm,0.3s,baz=54,slow=18,SNR=3.1						
URZ	**Urewera**	**14.31**	**190**	P	**P**	**12 59 11.2**	**-0.1**
	0.9nm,0.3s,baz=4.8,slow=6.6,SNR=10						
URZ				S	**S**	**13 01 34.2**	**-8.0**
	0.5nm,0.3s,baz=270,slow=19,SNR=4.3						
CTA	**Charters Tower**	**31.57**	**271**	P	**P**	**13 01 50.5**	**+0.4**
	9.7nm,0.4s,mb4.6,baz=98,slow=10,SNR=18						
STKA	**Stephens Creek**	**34.72**	**248**	P	**P**	**13 02 16.1**	**-0.6**
	1.2nm,0.4s,mb3.7,baz=90,slow=9.9,SNR=6.9						
ASAR	**Alice Springs**	**42.08**	**261**	P	**P**	**13 03 15.9**	**-1.0**
	1.6nm,0.5s,mb3.7,baz=94,slow=7.1,SNR=64						
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**13 03 18.7**	**-1.4**
	3.7nm,0.4s,mb4.2,baz=98,slow=8.3,SNR=127						
KIP	**Kipapa**	**50.05**	**27**	*e*P	**P**	**13 04 17.9**	**+0.2**
QSPA	**South Pole Qui**	**65.95**	**180**	*e*P	**P**	**13 06 04.7**	**-0.3**
	5.6nm,1.2s,mb4.1						
QSPA				*e*PcP	PcP	13 06 30.4	-0.8
PETK	**Petropavlovsk-**	**79.35**	**346**	P	**P**	**13 07 23.0**	**+0.4**
	2.2nm,0.9s,mb3.7,baz=104,slow=8.8,SNR=5.0						
PETK	**Petropavlovsk-**	**79.35**	**346**	P	**P**	**13 07 23.0**	**+0.4**
TXAR	**Lajitas Array**	**90.48**	**58**	P	**P**	**13 08 19.3**	**+1.5**
	1.2nm,0.7s,mb3.8,baz=211,slow=7.0,SNR=3.9						
PDAR	**Pinedale Array**	**92.80**	**44**	P	**P**	**13 08 28.6**	**+0.5**
	0.2nm,0.3s,mb3.6,baz=259,slow=3.0,SNR=3.7						
ARCES	**ARCESS Array B**	**132.14**	**348**	PKP	PKPdf	13 14 24.7	-0.8
	0.8nm,0.8s,baz=87,slow=2.6,SNR=5.2						
BRTR	**Keskin Array B**	**147.79**	**307**	PKPbc	PKPbc	13 14 56.8	-1.3
	0.6nm,0.6s,baz=42,slow=6.6,SNR=3.2						

*ISCJB **07** 12:56:25.5±1.5, 36.27N±0.04×142.14E±0.07, h17km±1km, mb3.6/5, Error ellipse: s-maj=10.0km s-min=6.8km az=8.6*
*IDC **07** 12:56:25.3±1.7, 36.24N×142.11E, h0km, mb3.6/5, mb1 3.7/10, mb1mx3.5/29, mbtmp3.7/10, ML3.4/5, MS2.6/1, Ms1 2.6/1, ms1mx2.0/31, Error ellipse: s-maj=37.8km s-min=21.3km az=83.0*
*JMA **07** 12:56:29.2±0.2, 36.28N×141.84E, h62km, M3.4*

ISC 07 12:56:25.5±1.4, 36.27N±0.04×142.05E±0.07, h1km±8km, n24, σ0°73/30, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.12**	**240**	P	**Pg**	**12 56 47.2**	**+0.3**
CHOJ				S	**Sg**	**12 57 01.6**	**+0.2**
JHO	**Hitachi**	**1.24**	**286**	P	**Pg**	**12 56 48.2**	**-1.1**
JFK	**Kawauchi**	**1.45**	**320**	P	**Pn**	**12 56 52.1**	**-0.6**
BSO1	**Boso 1**	**1.83**	**209**	P	**Pn**	**12 56 58.1**	**+0.1**
BSO1				S	**Sn**	**12 57 21.3**	**-0.5**
JFT	**Otama**	**1.86**	**313**	P	**Pn**	**12 56 58.7**	**+0.3**
JMM	**Marumori**	**1.89**	**328**	P	**Pn**	**12 56 59.0**	**+0.2**
BSO3	**Boso 3**	**1.93**	**221**	P	**Pn**	**12 56 59.0**	**-0.3**
JAG	**Ashikaga**	**2.10**	**275**	P	**Pn**	**12 57 00.7**	**-1.1**
JFY	**Yanaizu**	**2.20**	**302**	P	**Pn**	**12 57 03.6**	**+0.5**
JKT	**Katashina**	**2.31**	**283**	P	**Pn**	**12 57 04.3**	**-0.3**
JRY	**Ryogami san**	**2.56**	**265**	P	**Pn**	**12 57 07.2**	**-0.9**
JOD2	**Odawara 2**	**2.61**	**248**	P	**Pn**	**12 57 08.7**	**0.0**
MJAR	**Matsushiro Arr**	**3.11**	**276**	**Pn**	**Pn**	**12 57 15.6**	**0.0**
	6.3nm,0.3s,baz=115,slow=8.6,SNR=54						
MJAR				Sn	**Sn**	**12 57 54.0**	**+0.6**
	3.7nm,0.3s,baz=83,slow=21,SNR=6.5						
MAT	**Matsushiro**	**3.11**	**276**	P	**Pn**	**12 57 16.2**	**+0.6**
MAT				S	**Sn**	**12 57 53.3**	**-0.1**
JHJ	**Hachijo jima 2**	**3.65**	**211**	Pn	**Pn**	**12 57 23.9**	**+0.8**
	14nm,0.3s,baz=84,slow=21,SNR=8.8						
JHJ				Sn	**Sn**	**12 58 01.9**	**-4.9**
	28nm,0.3s,baz=301,slow=22,SNR=9.1						
ASAJ	**Asahikawa**	**7.85**	**3**	Pn	**Pn**	**12 58 22.1**	**+1.4**
	0.3nm,0.3s,baz=212,slow=11,SNR=4.2						
ASAJ				Sn	**Sn**	**12 59 48.7**	**-1.5**
	0.3nm,0.3s,baz=53,slow=20,SNR=2.5						
CBIJ	**Chichi jima**	**9.14**	**179**	Pn	**Pn**	**12 58 38.0**	**-0.5**
	1.8nm,0.3s,baz=311,slow=20,SNR=5.3						
CBIJ				Sn	**Sn**	**13 00 13.7**	**-8.4**
	4.0nm,0.3s,baz=285,slow=20,SNR=4.7						
KSRS	**Korea Array**	**11.38**	**280**	Pn	**Pn**	**12 59 12.3**	**+3.2**
	0.2nm,0.3s,baz=98,slow=16,SNR=3.0						
JOW	**Kunigami**	**15.03**	**235**	LR	LR	13 05 01.6	
	comp=Z,23nm,21.4s,baz=296,slow=34						
SONM	**Songino Array**	**28.64**	**305**	P	**P**	**13 02 23.7**	**+0.3**
	0.9nm,0.8s,mb3.6,baz=99,slow=9.2,SNR=5.4						
MKAR	**Makanchi Array**	**44.96**	**303**	P	**P**	**13 04 42.1**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=99,slow=7.5,SNR=5.0						
BVAR	**Borovoye Array**	**51.47**	**313**	P	**P**	**13 05 31.9**	**-0.2**
	0.3nm,0.4s,mb3.5,baz=73,slow=4.8,SNR=3.4						
WRA	**Warramunga Arr**	**56.38**	**189**	P	**P**	**13 06 07.9**	**-0.4**
	0.3nm,0.7s,mb3.4,baz=5.5,slow=7.4,SNR=2.4						
ARCES	**ARCESS Array B**	**64.89**	**340**	P	**P**	**13 07 06.8**	**+0.9**
	2.0nm,1.0s,mb4.3,baz=57,slow=12,SNR=3.7						

*NIED **07** 13:26:00, 36.30N×141.80E, h23km, Mw3.7 Best double couple: Ms3.74000×10^14 NP1:φs=27.00000°, δ65.00000°, λ97.00000°. NP2:φs191.00000°, δ26.00000°, λ76.00000°.*
*IDC **07** 13:26:14.0±1.6, 36.29N×142.07E, h0km, mb3.5/5, mb1 3.6/10, mb1mx3.5/29, mbtmp3.7/10, ML3.5/5, MS2.9/3, Ms1 2.9/3, ms1mx2.5/33, Error ellipse: s-maj=34.0km s-min=19.6km az=70.0*
*ISCJB **07** 13:26:16.9±0.8, 36.27N±0.04×142.06E±0.07, h39km±10km, mb3.5/5, Error ellipse: s-maj=9.4km s-min=6.0km az=5.7*
*JMA **07** 13:26:18.5±0.2, 36.26N×141.83E, h59km±5km, M3.6*

ISC 07 13:26:17.1±1.8, 36.26N±0.04×142.00E±0.06, h20km±13km, n24, σ0°96/31, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.08**	**240**	P	**Pb**	**13 26 36.4**	**-0.6**
CHOJ				S	**Sb**	**13 26 50.4**	**-0.3**
JHO	**Hitachi**	**1.21**	**288**	P	**Pn**	**13 26 37.3**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.28**	**312**	P	**Pn**	**13 26 39.1**	**-0.8**
JFK	**Kawauchi**	**1.43**	**321**	P	**Pn**	**13 26 39.5**	**-2.4**
BSO1	**Boso 1**	**1.80**	**208**	P	**Pn**	**13 26 47.0**	**0.0**
BSO1				S	**Sn**	**13 27 09.9**	**+0.6**
JFT	**Otama**	**1.84**	**314**	P	**Pn**	**13 26 48.1**	**+0.6**
JFT				S	**Sn**	**13 27 10.9**	**+0.8**
JMM	**Marumori**	**1.88**	**329**	P	**Pn**	**13 26 48.4**	**+0.4**
BSO3	**Boso 3**	**1.89**	**220**	P	**Pn**	**13 26 48.3**	**+0.1**
JAG	**Ashikaga**	**2.06**	**275**	P	**Pn**	**13 26 49.8**	**-0.8**
JAG				S	**Sn**	**13 27 14.2**	**-1.6**
JFY	**Yanaizu**	**2.17**	**303**	P	**Pn**	**13 26 52.7**	**+0.6**
JIO	**Ouri**	**2.26**	**347**	P	**Pn**	**13 26 54.2**	**+0.9**
JKT	**Katashina**	**2.27**	**284**	P	**Pn**	**13 26 53.9**	**+0.4**
MJAR	**Matsushiro Arr**	**3.07**	**276**	Pn	**Pn**	**13 27 05.1**	**+0.6**
	8.4nm,0.3s,baz=114,slow=9.0,SNR=79						
MJAR				Sn	**Sn**	**13 27 42.3**	**+1.6**
	4.4nm,0.3s,baz=96,slow=20,SNR=6.7						
MJAR				LR	LR	13 28 27.0	
	comp=Z,192nm,18.3s,baz=130,slow=43						
MAT	**Matsushiro**	**3.07**	**276**	P	**Pn**	**13 27 05.2**	**+0.7**
MAT				eS	**Sn**	**13 27 40.3**	**-0.4**
JHJ	**Hachijo jima 2**	**3.62**	**211**	Pn	**Pn**	**13 27 12.3**	**+0.3**
	9.4nm,0.3s,baz=62,slow=21,SNR=14						
JHJ				Sn	**Sn**	**13 27 50.4**	**-3.8**
	44nm,0.3s,baz=75,slow=24,SNR=10						
ASAJ	**Asahikawa**	**7.87**	**3**	Pn	**Pn**	**13 28 11.2**	**+0.8**
	0.8nm,0.3s,baz=250,slow=25,SNR=7.9						
ASAJ				Sn	**Sn**	**13 29 37.7**	**-1.0**
	0.4nm,0.3s,baz=87,slow=18,SNR=2.2						
CBIJ	**Chichi jima**	**9.13**	**179**	Pn	**Pn**	**13 28 26.8**	**-0.9**
	2.1nm,0.3s,baz=284,slow=20,SNR=6.2						
CBIJ				Sn	Sx	13 30 02.1	
	3.4nm,0.3s,baz=162,slow=20,SNR=4.0						
KSRS	**Korea Array**	**11.34**	**280**	Pn	**Pn**	**13 29 00.1**	**+2.2**
	0.2nm,0.3s,baz=94,slow=14,SNR=3.6						
KSRS				LR	LR	13 33 11.7	
	comp=Z,33nm,20.1s,baz=70,slow=37						
SONM	**Songino Array**	**28.61**	**305**	P	**P**	**13 32 11.4**	**-0.6**
	0.8nm,0.7s,mb3.6,baz=103,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**44.94**	**303**	P	**P**	**13 34 30.8**	**+0.4**
	0.5nm,0.6s,mb3.5,baz=99,slow=7.6,SNR=7.2						
AAK	**Ala-Archa**	**51.28**	**299**	LR	LR	13 57 53.5	
	comp=Z,26nm,20.1s,baz=21,slow=37						
BVAR	**Borovoye Array**	**51.45**	**313**	P	**P**	**13 35 19.5**	**-1.2**
	0.3nm,0.4s,mb3.6,baz=134,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**56.36**	**189**	P	**P**	**13 35 57.0**	**+0.2**
	0.5nm,1.0s,mb3.5,baz=6.2,slow=8.5,SNR=2.9						
ASAR	**Alice Springs**	**60.09**	**189**	P	**P**	**13 36 23.8**	**+1.0**
	0.2nm,0.8s,mb3.2,baz=0.5,slow=5.7,SNR=3.4						

*ISCJB **07** 13:41:44.3±0.5, 43.75N±0.04×105.26W±0.06, h0km, Error ellipse: s-maj=5.9km s-min=5.5km az=36.9*
*IDC **07** 13:41:44.3±1.6, 43.55N×105.33W, h0km, mb1 3.3/5, mb1mx3.2/29, mbtmp3.0/5, ML2.8/5, Error ellipse: s-maj=38.3km s-min=9.7km az=149.0*
*NEIC **07** 13:41:46.0±0.3, 43.74N×105.25W, h0km, ML3.0, Error ellipse: s-maj=4.7km s-min=4.2km az=171.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 07 13:41:45.8±0.4, 43.72N±0.04×105.23W±0.04, h0km, n30, σ0°88/34, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.95**	**65**	*e*Pg	**Pg**	**13 42 04.6**	**+0.6**
PHWY	**Pilot Hill**	**2.43**	**184**	*e*Pn	**Pn**	**13 42 27.2**	**+0.5**
RWWY	**Rawlins**	**2.50**	**216**	*e*Pn	**Pn**	**13 42 28.6**	**+0.9**
RWWY				*e*Sn	**Sn**	**13 42 57.6**	**-1.3**
LAO	**LASA Array**	**3.05**	**347**	*e*Pn	**Pn**	**13 42 34.8**	**-0.3**
RLMT	**Red Lodge**	**3.21**	**297**	*e*Pn	**Pn**	**13 42 37.3**	**-0.1**
PDAR	**Pinedale Array**	**3.31**	**255**	Pn	**Pn**	**13 42 38.7**	**0.0**
	1.3nm,0.3s,baz=82,slow=15,SNR=27						
PDAR				Lg		13 43 23.6	
	2.5nm,0.3s,baz=81,slow=33,SNR=10						
OGNE	**Ogallala**	**3.65**	**138**	Pn	**Pn**	**13 42 44.8**	**+1.4**
GCMT	**Greycliff**	**3.78**	**305**	*e*Pn	**Pn**	**13 42 45.2**	**0.0**
LOHW	**Long Hollow**	**3.90**	**270**	*e*Pn	**Pn**	**13 42 47.5**	**+0.6**
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**13 42 46.0**	**-1.4**
REDW	**Red Top Meadow**	**4.11**	**267**	*e*Pn	**Pn**	**13 42 50.8**	**+1.1**
IMW	**Indian Meadow**	**4.14**	**274**	*e*Pn	**Pn**	**13 42 51.4**	**+1.3**
TPAW	**Teton Pass**	**4.16**	**269**	*e*Pn	**Pn**	**13 42 50.6**	**+0.1**
RRI2	**Red Ridge**	**4.45**	**267**	*e*Pn	**Pn**	**13 42 54.4**	**0.0**
BOZ	**Bozeman (W)**	**4.95**	**295**	*e*Pn	**Pn**	**13 43 00.0**	**-1.3**
HWUT	**Hardware Ranch**	**5.13**	**248**	*e*Pn	**Pn**	**13 43 03.6**	**-0.2**
	10nm,0.8s						
EGMT	**Eagleton**	**5.34**	**325**	*e*Pn	**Pn**	**13 43 06.2**	**-0.4**
	13nm,0.7s						
HRY	**Holter Researc**	**5.54**	**305**	*e*Pn	**Pn**	**13 43 09.3**	**-0.1**
	8.7nm,0.8s						
DAU	**Daniels Canyon**	**5.57**	**236**	*e*Pn	**Pn**	**13 43 11.2**	**+1.3**
	11nm,0.8s						
SDCO	**Great Sand Dun**	**5.98**	**182**	*e*Pn	**Pn**	**13 43 16.1**	**+0.7**
	2.5nm,0.8s						
SDCO				*e*Pg	**Pg**	**13 43 38.2**	**-2.0**
SDCO				*e*Sg	**Sg**	**13 44 50.7**	**-7.0**
SRU	**San Rafael**	**6.09**	**223**	Pn	**Pn**	**13 43 16.2**	**-0.8**
	11nm,0.8s						
ECSD	**EROS Data Cent**	**6.24**	**87**	*e*Pn	**Pn**

SCO	**Scoresbysund**	**3.31**	**261**	*i* P		**Pn**	**14 26 47.3**	**-4.5**
SCO				*i* S		**Sn**	**14 27 23.2**	**-7.8**
SCO	**Scoresbysund**	**3.31**	**261**	*i* P		**Pn**	**14 26 47.3**	**-4.5**
	SNR=49							
ILEI	**Leirhofn**	**5.09**	**200**	P		**Pn**	**14 27 15.0**	**-1.3**
IGRI	**Grimsey**	**5.16**	**207**	P		**Pn**	**14 27 17.0**	**-0.2**
IGRI				S		**Sn**	**14 28 16.5**	**-0.2**
IGIL	**Gilhagi**	**5.40**	**198**	P		**Pn**	**14 27 20.0**	**-0.5**
IBRE	**Brettingsstaoi**	**5.54**	**205**	P		**Pn**	**14 27 21.5**	**-0.9**
IHLA	**Hella**	**5.78**	**206**	P		**Pn**	**14 27 25.8**	**+0.1**
IGRS	**Grimsstaoir**	**5.81**	**196**	P		**Pn**	**14 27 25.0**	**-1.1**
IGLU	**Glumsstadir**	**6.38**	**191**	P		**Pn**	**14 27 34.3**	**+0.4**
BORG	**Borgarnes**	**7.36**	**212**	Pn		**Pn**	**14 27 52.2**	**+4.9**
	comp=Z,0.6nm,0.3s,baz=17,slow=9.5,SNR=2.4							
BORG				LR		LR	14 30 05.0	
	comp=Z,116nm,20.1s,baz=148,slow=33							
BORG	**Borgarnes**	**7.36**	**212**	Pn		**Pn**	**14 27 52.2**	**+4.9**
BORG				LR		LR	14 30 05.0	
SUMG	**Summit**	**8.25**	**292**	*e*P		**Pn**	**14 27 58.8**	**-0.8**
	comp=Z,11nm,0.8s							
KBS	**Kingsbay**	**9.79**	**28**	*e*P		**Pn**	**14 28 18.0**	**-2.6**
	comp=Z,11nm,0.8s							
KBS	**Kingsbay**	**9.79**	**28**	*e*P		**Pn**	**14 28 18.0**	**-2.6**
	comp=Z,11nm,0.8s							
SPB4	**Spitsbergen Ar**	**10.11**	**34**	*e*P		**Pn**	**14 28 23.8**	**-1.1**
SPB4	**Spitsbergen Ar**	**10.11**	**34**	*e*P		**Pn**	**14 28 23.8**	**-1.1**
SPITS	**Spitsbergen Ar**	**10.11**	**34**	Pn		**Pn**	**14 28 23.6**	**-1.4**
	baz=228,slow=12,SNR=81							
SPITS				Sn		**Sn**	**14 30 14.0**	**-4.2**
	baz=246,slow=23,SNR=2.6							
SPITS	**Spitsbergen Ar**	**10.11**	**34**	Pn		**Pn**	**14 28 23.6**	**-1.4**
ARCES	**ARCESS Array B**	**12.63**	**80**	Pn		**Pn**	**14 29 01.2**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=300,slow=11,SNR=2.8							
ARCES	**ARCESS Array B**	**12.63**	**80**	Pn		**Pn**	**14 29 01.2**	**+1.8**
NOA	**NORSAR Array B**	**13.80**	**126**	LR		LR	14 34 26.5	
	comp=Z,34nm,18.3s,baz=260,slow=37							
HFS	**Hagfors**	**15.23**	**124**	Pn		**Pn**	**14 29 37.1**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=55,slow=29,SNR=2.5							
HFS				LR		LR	14 34 40.0	
	comp=Z,63nm,20.3s,baz=327,slow=34							
HFS	**Hagfors**	**15.23**	**124**	Pn		**Pn**	**14 29 37.1**	**+2.4**
KAF	**Kangasniemi**	**17.41**	**102**	*e*p		**Pn**	**14 30 06.3**	**+3.7**
	comp=Z,1.9nm,0.7s							
KAF	**Kangasniemi**	**17.41**	**102**	*e*P		**Pn**	**14 30 06.3**	**+3.7**
	comp=Z,1.9nm,0.7s							
FINES	**FINESS Array B**	**17.84**	**104**	P		**Pn**	**14 30 10.1**	**+2.1**
	baz=341,slow=11,SNR=8.0							
FINES	**FINESS Array B**	**17.84**	**104**	P		**Pn**	**14 30 10.1**	**+2.2**
JOF	**Joensuu**	**18.43**	**95**	*e*p		**Pn**	**14 30 13.9**	**-1.2**
JOF	**Joensuu**	**18.43**	**95**	*e*P		**Pn**	**14 30 13.9**	**-1.2**
FRB	**Frobisher Bay**	**22.00**	**279**	P		**P**	**14 30 57.8**	**+3.9**
	comp=Z,1.9nm,0.8s,mb3.6,baz=59,slow=11,SNR=3.8							
RES	**Resolute Bay**	**22.62**	**317**	P		**P**	**14 31 02.5**	**+2.1**
	comp=Z,3.6nm,1.3s,mb3.7,baz=69,slow=10,SNR=3.0							
GERES	**GERESS Array B**	**25.49**	**138**	LR		LR	14 41 21.9	
	comp=Z,31nm,18.3s,MS2.9,baz=235,slow=36							
VRAC	**Vranov**	**25.70**	**133**	LR		LR	14 40 25.9	
	comp=Z,27nm,19.7s,MS2.8,baz=254,slow=34							
AKASG	**Malin Array Be**	**27.80**	**116**	P		**P**	**14 31 50.3**	**+1.6**
	comp=Z,0.3nm,0.4s,mb3.3,baz=340,slow=10.0,SNR=2.7							
AKASG	**Malin Array Be**	**27.80**	**116**	P		**P**	**14 31 50.3**	**+1.5**
SCHQ	**Schefferville**	**28.35**	**264**	LR		LR	14 42 36.1	
	comp=Z,60nm,18.7s,MS3.2,baz=23,slow=35							
YKA	**Yellowknife Ar**	**36.33**	**310**	P		**P**	**14 33 02.8**	**-0.5**
	comp=Z,1.5nm,0.9s,mb3.9,baz=31,slow=8.7,SNR=15							
YKA				PcP		PcP	14 35 27.1	-0.4
	comp=Z,0.3nm,0.7s,baz=29,slow=3.0,SNR=4.0							
YKA				LR		LR	14 47 29.3	
	comp=Z,5.1nm,18.5s,MS2.3,baz=0.0,slow=36							
YKA	**Yellowknife Ar**	**36.33**	**310**	P		**P**	**14 33 02.8**	**-0.5**
YKA	**Yellowknife Ar**	**36.33**	**310**	PcP		PcP	14 35 27.1	-0.4
ABKAR	**Akbulak array**	**38.75**	**85**	*e*P		**P**	**14 33 26.1**	**+2.2**
	comp=Z,1.7nm,0.9s,mb3.8							
ABKAR	**Akbulak array**	**38.75**	**85**	*e*P		**P**	**14 33 26.1**	**+2.2**
	comp=Z,1.7nm,0.9s,mb3.8							
BVAR	**Borovoye Array**	**38.80**	**73**	P		**P**	**14 33 25.4**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=310,slow=9.3,SNR=4.9							
BVAR	**Borovoye Array**	**38.80**	**73**	P		**P**	**14 33 25.4**	**+1.1**
BRTR	**Keskin Array B**	**39.08**	**119**	P		**P**	**14 33 30.1**	**+3.3**
	comp=Z,0.5nm,0.7s,mb3.4,baz=323,slow=11,SNR=2.8							
ZALV	**Zalesovo Beam**	**42.28**	**61**	LR		LR	14 55 57.7	
	comp=Z,12nm,18.4s,MS2.8,baz=232,slow=42							
MKAR	**Makanchi Array**	**47.92**	**67**	P		**P**	**14 34 39.6**	**+1.7**
	comp=Z,0.5nm,0.8s,mb3.6,baz=264,slow=3.7,SNR=3.9							
TORD	**Torodi Ar. Bea**	**58.67**	**164**	P		**P**	**14 35 58.2**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=343,slow=4.5,SNR=3.3							
CMAR	**Chiang Mai Arr**	**79.22**	**64**	P		**P**	**14 38 05.8**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.6,baz=331,slow=5.4,SNR=4.5							
CMAR	**Chiang Mai Arr**	**79.22**	**64**	P		**P**	**14 38 05.8**	**+0.8**

*NEIC **07** 14:27:30.4, 16°.02N×99°.22W, h16km, MD4.4(MEX), After MEX.*

MEX 07 14:27:29.1±0.7, 15°.96N×99°.14W, h16km±12km, MD4.3, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.06**	**66**	*e*P	Pb	14 27 45.1	-3.9
PNIG				*i* S	Sb	14 27 58.0	-4.7
ACX	**Acapulco**	**1.17**	**320**	*i* P	Pn	14 27 46.7	-4.1
ACX				*i* S	Sb	14 28 00.3	-5.6
CAIG	**El Cayaco**	**1.53**	**315**	*i* P	Pn	14 27 52.4	-3.4
CAIG				*i* S	Sn	14 28 08.3	-7.1
CAIG	**El Cayaco**	**1.53**	**315**	*i* P	Pn	14 27 52.4	-3.4
CAIG				*i* S	Sn	14 28 10.2	-5.2
PLIG	**Platanillo**	**2.44**	**352**	*i* P	Pn	14 28 05.5	-2.8
PLIG				*i* S	Sn	14 28 33.3	-4.6
PLIG	**Platanillo**	**2.44**	**352**	*i* P	Pn	14 28 05.5	-2.8
PLIG				*i* S	Sn	14 28 33.3	-4.6
VHO	**Vista Hermosa**	**2.56**	**64**	*i* P	Pn	14 28 08.9	-0.9
VHO				*e*S	Sn	14 28 38.6	-2.1
VHO	**Vista Hermosa**	**2.56**	**64**	*e*P	Pn	14 28 07.3	-2.6
VHO				*i* S	Sn	14 28 37.5	-3.1
YAIG	**Yautepec**	**2.89**	**1**	*i* P	Pn	14 28 12.1	-2.3
YAIG				*i* S	Sn	14 28 44.8	-4.1
HUIG	**Huatulco**	**2.92**	**93**	*i* P	Pn	14 28 10.3	-4.5
HUIG				*i* S	Sn	14 28 46.5	-3.1
PPM	**Popocatepetl**	**3.13**	**9**	*i* P	Pn	14 28 16.4	-1.4
PPM				*e*S	Sn	14 28 52.0	-2.8
PPM	**Popocatepetl**	**3.13**	**9**	*i* P	Pn	14 28 16.4	-1.4
PPM				*e*S	Sn	14 28 52.0	-2.8

IDC 07 14:31:16.4±56.0, 20°.35S×175°.28W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=1054.0km s-min=176.8km az=84.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.15**	**244**	P	P	14 38 53.8	-0.6
	0.6nm,0.4s,baz=90,slow=9.1,SNR=3.6						
ASAR	**Alice Springs**	**47.03**	**256**	P	P	14 39 49.9	0.0
	1.1nm,0.6s,baz=98,slow=8.1,SNR=20						
WRA	**Warramunga Arr**	**47.14**	**261**	P	P	14 39 51.1	+0.3
	0.5nm,0.3s,baz=96,slow=8.0,SNR=47						

IDC 07 14:37:26.1±11.0, 6°.52S×128°.71E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.4/16, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=162.6km s-min=111.0km az=146.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.42**	**158**	Pn	Pn	14 40 50.7	-0.9
	0.2nm,0.3s,baz=337,slow=12,SNR=9.2						
WRA				Sn	Sn	14 43 15.3	-17
	0.6nm,0.3s,baz=331,slow=22,SNR=9.0						
ASAR	**Alice Springs**	**17.77**	**164**	P	Pn	14 41 35.1	+0.1
	0.2nm,0.3s,baz=346,slow=11,SNR=23						
ASAR				S	Sn	14 44 35.8	-18
	0.1nm,0.3s,baz=353,slow=27,SNR=3.9						
STKA	**Stephens Creek**	**27.95**	**156**	P	P	14 43 18.7	+0.3
	0.9nm,0.7s,baz=324,slow=8.7,SNR=3.1						

*ZUR **07** 14:52:19.0, 46°.38N×6°.89E, h-0km±2km, ML1.5/4, Suspected Mining explosion.*
*CSEM **07** 14:52:19.0, 46°.38N×6°.89E, h-0km, ML1.5, Suspected Mining explosion. After ZUR*

ISC 07 14:52:19.5±3.4, 46°.4N±0°.2×7°.0E±0°.1, h0km, n12, σ0§96/14, 8C, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.09**	**184**	⇑*i*Pg	**Pg**	**14 52 20.5**	**-0.7**
	3μm,0.8s						
AIGLE	**Aigle**	**0.09**	**184**	⇑*i*Pg	**Pg**	**14 52 20.5**	**-0.7**
	3μm,0.8s						
GRYON	**Gryon**	**0.21**	**150**	⇑*i*Pg	**Pg**	**14 52 23.1**	**-0.4**
	67nm,1.0s						
GRYON				*e*Sg	**Sg**	**14 52 26.2**	**+0.1**
	67nm,1.0s						
GRYON	**Gryon**	**0.21**	**150**	⇑*i*Pg	**Pg**	**14 52 23.1**	**-0.4**
	67nm,1.0s						
GRYON				*e*Sg	**Sg**	**14 52 26.2**	**+0.1**
	67nm,1.0s						
SENIN	**Lac Senin/Sane**	**0.24**	**106**	*e*Sg	**Sg**	**14 52 25.7**	**-1.6**
	89nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.24**	**106**	⇑*i*Pg	**Sg**	**14 52 29.5**	**+2.2**
	89nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.24**	**106**	*e*Sg	**Sg**	**14 52 25.7**	**-1.6**
	89nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.24**	**106**	⇑*i*Pg	**Sg**	**14 52 29.5**	**+2.2**
	89nm,0.5s						
SALAN	**Lac Salanfe**	**0.29**	**178**	*e*Sg	**Pg**	**14 52 24.6**	**-0.4**
	143nm,1.0s						
SALAN	**Lac Salanfe**	**0.29**	**178**	*e*Sg	**Pg**	**14 52 24.6**	**-0.4**
	143nm,1.0s						
EMV	**Vieux Emosson**	**0.37**	**187**	⇑*i*Pg	**Pg**	**14 52 27.8**	**+1.2**
	272nm,0.8s						
EMV	**Vieux Emosson**	**0.37**	**187**	⇑*i*Pg	**Pg**	**14 52 27.8**	**+1.2**
	272nm,0.8s						

*ISCJB **07** 14:53:04.2±1.0, 37°.43N±0°.04×20°.45E±0°.07, h6km±7km, Error ellipse: s-maj=10.0km s-min=6.0km az=173.6*
*CSEM **07** 14:53:04.7±0.5, 37°.42N×20°.51E, h5km, MD3.4, Error ellipse: s-maj=9.5km s-min=4.9km az=55.0*
*THE **07** 14:53:06.1, 37°.45N×20°.61E, h0km±3km, ML3.6/6, Error ellipse: s-maj=5.9km s-min=0.7km az=240.0*
*NEIC **07** 14:53:06.6, 37°.51N×20°.69E, h5km, MD3.4(ATH), After ATH.*
*ATH **07** 14:53:06.6, 37°.51N×20°.69E, h5km±3km, MD3.4/4*

ISC 07 14:53:04.4±1.0, 37°.41N±0°.04×20°.46E±0°.06, h5km±4km, n43, σ0§82/71, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.75**	**20**	P	**Pg**	**14 53 18.7**	**-0.1**
KFL				S	**Sg**	**14 53 28.4**	**-0.1**
VLS	**Valsamata**	**0.77**	**8**	*e*PB	**Pg**	**14 53 19.8**	**+0.5**
VLS				*e*SB	**Sg**	**14 53 29.8**	**+0.4**
VLS	**Valsamata**	**0.77**	**8**	P	**Pg**	**14 53 20.1**	**+0.8**
VLS				S	**Sg**	**14 53 30.8**	**+1.4**
VLS	**Valsamata**	**0.77**	**8**	*e*Pb	**Pg**	**14 53 19.8**	**+0.5**
VLS	**Valsamata**	**0.77**	**8**	P	**Pg**	**14 53 20.1**	**+0.8**
VLS				*e*Sb	**Sg**	**14 53 29.8**	**+0.4**
VLS				S	**Sg**	**14 53 30.8**	**+1.4**
RLS	**Riolos of Patr**	**1.03**	**51**	*e*PB	**Pg**	**14 53 22.4**	**-1.8**
RLS	**Riolos of Patr**	**1.03**	**51**	*e*Pb	**Pg**	**14 53 22.4**	**-1.8**
PYL	**PYLOS**	**1.15**	**116**	*e*PN	**Pn**	**14 53 26.8**	**-0.2**
PYL	**PYLOS**	**1.15**	**116**	P	**Pg**	**14 53 26.5**	**+0.1**
PYL				S	**Sg**	**14 53 41.8**	**+0.6**
PYL	**PYLOS**	**1.15**	**116**	P	**Sg**	**14 53 26.5**	**+0.1**
PYL	**PYLOS**	**1.15**	**116**	*e*Pn	**Pn**	**14 53 26.8**	**-0.2**
PYL				S	**Sg**	**14 53 41.8**	**+0.6**
ITM	**Ithomi**	**1.19**	**101**	*e*PB	**Pg**	**14 53 26.5**	**-0.8**
ITM	**Ithomi**	**1.19**	**101**	P	**Pg**	**14 53 26.5**	**-0.8**
ITM				S	**Sg**	**14 53 42.4**	**-0.3**
ITM	**Ithomi**	**1.19**	**101**	P	**Pg**	**14 53 26.5**	**-0.8**
ITM				S	**Sg**	**14 53 42.4**	**-0.3**
LAKA	**Lakka**	**1.46**	**55**	P	**Pn**	**14 53 30.4**	**-1.0**
LAKA				S	**Sn**	**14 53 51.1**	**+0.2**
LAKA	**Lakka**	**1.46**	**55**	P	**Pn**	**14 53 30.4**	**-1.0**
LAKA				S	**Sn**	**14 53 51.1**	**+0.2**
EFP	**Efpalio**	**1.53**	**48**	*e*PB	**Pn**	**14 53 31.9**	**-0.4**
EFP	**Efpalio**	**1.53**	**48**	P	**Pn**	**14 53 31.6**	**-0.7**
EFP				S	**Sn**	**14 53 52.6**	**0.0**
EFP	**Efpalio**	**1.53**	**48**	P	**Pn**	**14 53 31.6**	**-0.7**
EFP	**Efpalio**	**1.53**	**48**	*e*Pb	**Pn**	**14 53 31.9**	**-0.4**
EFP				S	**Sn**	**14 53 52.6**	**0.0**
GUR	**Goura**	**1.58**	**70**	*e*PB	**Pn**	**14 53 33.1**	**0.0**
GUR	**Goura**	**1.58**	**70**	P	**Pn**	**14 53 33.0**	**-0.1**
GUR				S	**Sn**	**14 53 53.7**	**-0.2**
GUR	**Goura**	**1.58**	**70**	P	**Pn**	**14 53 33.0**	**-0.1**
GUR				S	**Sn**	**14 53 53.7**	**-0.2**
TRIZ	**Trizonia**	**1.59**	**53**	P	**Pn**	**14 53 32.3**	**-0.9**
TRIZ				S	**Sn**	**14 53 54.4**	**+0.3**
TRIZ	**Trizonia**	**1.59**	**53**	P	**Pn**	**14 53 32.3**	**-0.9**
TRIZ				S	**Sn**	**14 53 54.4**	**+0.3**
KALE	**Kalithea**	**1.65**	**53**	P	**Pn**	**14 53 33.7**	**-0.3**
KALE				S	**Sn**	**14 53 55.2**	**-0.4**
KALE	**Kalithea**	**1.65**	**53**	P	**Pn**	**14 53 33.7**	**-0.3**
KALE				S	**Sn**	**14 53 55.2**	**-0.4**
EVR	**Evrytania**	**1.84**	**35**	*e*PB	**Pb**	**14 53 38.9**	**+0.3**
EVR	**Evrytania**	**1.84**	**35**	*e*Pb	**Pb**	**14 53 38.9**	**+0.3**
VLI	**Velíai**	**2.10**	**108**	*e*PN	**Pn**	**14 53 43.6**	**+3.5**
AGG	**Agios Georgios**	**2.18**	**42**	*e*PN	**Pn**	**14 53 43.6**	**+2.3**
AGG	**Agios Georgios**	**2.18**	**42**	P	**Pn**	**14 53 41.6**	**+0.3**
AGG				S	**Sn**	**14 54 09.3**	**+0.6**
AGG	**Agios Georgios**	**2.18**	**42**	P	**Pn**	**14 53 41.6**	**+0.3**
AGG	**Agios Georgios**	**2.18**	**42**	*e*Pn	**Pn**	**14 53 43.6**	**+2.3**
AGG				S	**Sn**	**14 54 09.3**	**+0.6**
DID	**Didima**	**2.21**	**87**	P	**Pn**	**14 53 42.2**	**+0.5**
DID				S	**Sn**	**14 54 09.1**	**-0.3**
DID	**Didima**	**2.21**	**87**	P	**Pn**	**14 53 42.2**	**+0.5**
DID				S	**Sn**	**14 54 09.1**	**-0.3**
KYTH	**Kithira**	**2.35**	**118**	*e*PN	**Pn**	**14 53 47.3**	**+3.6**
LKR	**Lokris**	**2.36**	**58**	P	**Pn**	**14 53 44.1**	**+0.4**
LKR				S	**Sn**	**14 54 13.7**	**+0.7**
LKR	**Lokris**	**2.36**	**58**	P	**Pn**	**14 53 44.1**	**+0.4**
LKR				S	**Sn**	**14 54 13.7**	**+0.7**
ATAL	**Atalanti**	**2.39**	**57**	P	**Pn**	**14 53 44.2**	**0.0**
ATAL				S	**Sn**	**14 54 13.7**	**-0.2**
ATAL	**Atalanti**	**2.39**	**57**	P	**Pn**	**14 53 44.2**	**0.0**
ATAL				S	**Sn**	**14 54 13.7**	**-0.2**
STON	**Ston**	**5.85**	**340**	*e*Pn	**Pn**	**14 54 32.8**	**+1.0**
STON				Sn	**Sn**	**14 55 36.5**	**-2.6**
STON	**Ston**	**5.85**	**340**	*e*Pn	**Pn**	**14 54 32.7**	**+1.0**

*ISK **07** 15:02:33.6, 37°.25N×28°.22E, h5km, MD2.7*
*ISCJB **07** 15:02:34.4±0.6, 37°.20N±0°.05×28°.18E±0°.05, h8km±7km, Error ellipse: s-maj=10.2km s-min=5.3km az=32.3*
*CSEM **07** 15:02:34.4±0.1, 37°.22N×28°.20E, h10km, MD2.7, Error ellipse: s-maj=3.0km s-min=2.3km az=33.0*
*DDA **07** 15:02:35.1, 37°.26N×28°.22E, h7km±5km, Md2.8*

ISC 07 15:02:34.7±0.7, 37°.19N±0°.05×28°.18E±0°.04, h11km±6km, n16, σ0§66/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**125**	*e*PG	**Pg**	**15 02 36.8**	**-0.6**
YER				*e*SG	**Sg**	**15 02 39.1**	**-0.1**
YER	**Yerkesik**	**0.10**	**125**	*e*Pg	**Pg**	**15 02 36.8**	**-0.6**
YER				*e*Sg	**Sg**	**15 02 39.2**	**-0.1**
MLSB	**Milas**	**0.34**	**288**	*e*PG	**Pg**	**15 02 41.1**	**-0.3**
MLSB				*e*SG	**Sg**	**15 02 46.7**	**+0.7**
MLSB	**Milas**	**0.34**	**288**	*e*Pg	**Pg**	**15 02 41.1**	**-0.3**
MLSB				*e*Sg	**Sg**	**15 02 46.7**	**+0.8**
AYDN	**Tasoluk**	**0.53**	**333**	*i* P	**Pg**	**15 02 44.3**	**-0.6**
AYDN				*i* S	**Sg**	**15 02 51.7**	**-0.1**
AYDN	**Tasoluk**	**0.53**	**333**	*i* P	**Pg**	**15 02 44.3**	**-0.6**
AYDN				*i* S	**Sg**	**15 02 51.7**	**-0.2**
DAT	**Datca**	**0.67**	**226**	*e*PG	**Pg**	**15 02 48.3**	**+0.7**
DAT	**Datca**	**0.67**	**226**	*e*Pg	**Pg**	**15 02 48.3**	**+0.7**
DNZL	**Cakiroluk**	**0.85**	**54**	*i* P	**Pg**	**15 02 50.5**	**-0.6**
DNZL				*i* S	**Sg**	**15 03 03.7**	**+1.5**
DNZL	**Cakiroluk**	**0.85**	**54**	*i* P	**Pg**	**15 02 50.5**	**-0.6**
DNZL				*i* S	**Sg**	**15 03 03.7**	**+1.5**
FETY	**Fethiye**	**0.91**	**127**	*e*PG	**Pg**	**15 02 52.0**	**-0.2**
FETY	**Fethiye**	**0.91**	**127**	*e*Pg	**Pg**	**15 02 52.0**	**-0.3**
KULA	**Kula-Manisa**	**1.37**	**16**	*e*PN	**Pn**	**15 02 59.0**	**-0.7**
KULA	**Kula-Manisa**	**1.37**	**16**	*e*Pn	**Pn**	**15 02 59.1**	**-0.7**
ELL	**Elmali**	**1.45**	**107**	*e*PN	**Pn**	**15 03 01.3**	**+0.5**
ELL	**Elmali**	**1.45**	**107**	*e*Pn	**Pn**	**15 03 01.3**	**+0.4**

*ISCJB **07** 15:12:35.9±0.4, 36°.23N±0°.02×10°.47W±0°.03, h10km, mb3.2/2, Error ellipse: s-maj=3.7km s-min=2.8km az=177.4*

*IDC **07** 15:12:35.8±2.3, 36°.07N×10°.69W, h0km, mb3.2/2, mb1 3.7/3, mb1mx3.3/29, mbtmp3.5/3, ML4.8/2, MS2.8/1, Ms1 2.8/1, ms1mx2.0/21, Error ellipse: s-maj=56.0km s-min=31.3km az=98.0*
*INMG **07** 15:12:36.5±2.1, 36°.22N×10°.78W, h10km, MD3.4, ML3.5, Error ellipse: s-maj=5.6km s-min=4.8km az=120.0*
*CSEM **07** 15:12:38.3±0.3, 36°.28N×10°.53W, h10km, ML4.5/14, Error ellipse: s-maj=6.8km s-min=4.2km az=72.0*
*NEIC **07** 15:12:40.8, 36°.59N×10°.57W, h0km, MN3.5(MDD), After MDD.*
*IGIL **07** 15:12:40.8, 36°.23N×10°.70W, h31km, ML3.7*
*SFS **07** 15:12:40.0, 36°.57N×10°.50W, h0km, ML3.5*
*CNRM **07** 15:12:40.5, 36°.07N×10°.71W, h30km, MD4.0*
*MDD **07** 15:12:40.6±1.1, 36°.53N×10°.59W, h0km, mbLg3.5/42, Error ellipse: s-maj=10.5km s-min=6.5km az=54.0, PRIMO*
*LDG **07** 15:12:41.1±0.2, 36°.33N×10°.69W, h20km, Ml3.9/3, Error ellipse: s-maj=4.2km s-min=2.8km az=35.0*

ISC 07 15:12:38.5±0.4, 36°.24N±0°.02×10°.44W±0°.03, h10km, n332, σ1§29/568, mb3.2/2, 19C-5D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.57**	**55**	*i* Pn	**Pn**	**15 13 07.7**	**+1.3**
PFVI				*e*Sn	**Sn**	**15 13 27.6**	**+0.8**
PFVI				A		15 13 30.0	
	208nm,0.1s						
MORF	**Marmelete**	**1.79**	**53**	*i* Pn	**Pn**	**15 13 10.7**	**+1.4**
MORF				*e*Sn	**Sn**	**15 13 32.8**	**+0.7**
MORF				A		15 13 35.1	
	382nm,0.3s						
MORF	**Marmelete**	**1.79**	**53**	⇑P	**Pn**	**15 13 10.7**	**+1.4**
MORF				S	**Sn**	**15 13 32.8**	**+0.7**
	382nm,0.3s						
MORF	**Marmelete**	**1.79**	**53**	⇑P	**Pn**	**15 13 10.7**	**+1.4**
MORF				S	**Sn**	**15 13 32.8**	**+0.7**
	382nm,0.3s						
PTEO	**Sao Teotonio**	**1.89**	**46**	*e*Pn	**Pn**	**15 13 11.9**	**+1.1**
PTEO				*e*Sn	**Sn**	**15 13 34.9**	**+0.2**
PTEO				A		15 13 37.7	
	338nm,0.3s						
PTEO	**Sao Teotonio**	**1.89**	**46**	P	**Pn**	**15 13 11.9**	**+1.1**
PTEO				S	**Sn**	**15 13 34.9**	**+0.2**
	169nm,0.3s						
PTEO	**Sao Teotonio**	**1.89**	**46**	P	**Pn**	**15 13 11.9**	**+1.1**
PTEO				S	**Sn**	**15 13 34.9**	**+0.2**
	169nm,0.3s						
PTEO	**Sao Teotonio**	**1.89**	**46**	*e*Pn	**Pn**	**15 13 11.9**	**+1.1**
PTEO				*e*Sn	**Sn**	**15 13 34.9**	**+0.2**
	338nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.25**	**63**	*i* Pn	**Pn**	**15 13 17.5**	**+1.8**
PBDV				*e*Sn	**Sn**	**15 13 44.2**	**+0.7**
PBDV				A		15 13 48.6	
	75nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.25**	**63**	⇑P	**Pn**	**15 13 17.5**	**+1.8**
PBDV				S	**Sn**	**15 13 44.2**	**+0.7**
	75nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.25**	**63**	⇑P	**Pn**	**15 13 17.5**	**+1.8**
PBDV				S	**Sn**	**15 13 44.2**	**+0.7**
	75nm,0.1s						
PCVE	**Castro Verde**	**2.37**	**53**	*i* Pn	**Pn**	**15 13 19.1**	**+1.7**
PCVE				*e*Sn	**Sn**	**15 13 46.9**	**+0.4**
PCVE				A		15 13 50.0	
	93nm,0.4s						
PCVE	**Castro Verde**	**2.37**	**53**	⇑P	**Pn**	**15 13 19.1**	**+1.7**
PCVE				S	**Sn**	**15 13 46.9**	**+0.4**
	93nm,0.4s						
PCVE	**Castro Verde**	**2.37**	**53**	⇑P	**Pn**	**15 13 19.1**	**+1.7**
PCVE				S	**Sn**	**15 13 46.9**	**+0.4**
	93nm,0.4s						
PVAQ	**Vaqueiros**	**2.47**	**61**	*i* Pn	**Pn**	**15 13 20.4**	**+1.6**
PVAQ				*e*Sn	**Sn**	**15 13 49.4**	**+0.4**
PVAQ				A		15 13 53.1	
	126nm,0.1s						
PVAQ	**Vaqueiros**	**2.47**	**61**	⇑P	**Pn**	**15 13 20.4**	**+1.6**
PVAQ				S	**Sn**	**15 13 49.4**	**+0.4**
	126nm,0.1s						
PVAQ

comp=E,10nm,0.1s,SNR=7.6
EMIN Mina Concepcio 3.38 62 ⇑P Pn 15 13 32.3 +1.1
comp=E,12nm,0.1s,SNR=18
EMIN S Sn 15 14 11.0 -0.3
comp=E,10nm,0.1s,SNR=7.6
EMIN Mina Concepcio 3.38 62 P Pn 15 13 32.3 +1.1
comp=E,12nm,0.1s,SNR=18
EMIN S Sn 15 14 11.0 -0.4
comp=E,10nm,0.1s,SNR=7.6
PESTR Estremoz 3.46 40 *e*Pn Pn 15 13 32.8 +0.4
PESTR *e*Sn Sn 15 14 12.3 -1.2
PESTR A 15 14 26.4
comp=E,51nm,0.7s
PESTR Estremoz 3.46 40 P Pn 15 13 32.8 +0.4
PESTR S Sn 15 14 12.3 -1.2
comp=E,51nm,0.7s
PESTR Estremoz 3.46 40 P Pn 15 13 32.8 +0.4
PESTR S Sn 15 14 12.3 -1.2
comp=E,51nm,0.7s
PESTR Estremoz 3.46 40 *e*Pn Pn 15 13 32.8 +0.4
PESTR *e*Sn Sn 15 14 12.3 -1.2
comp=E,51nm,0.7s
CNIL Conil 3.54 87 P Pn 15 13 37.0 +3.5
CNIL S Sn 15 14 15.7 +0.2
CNIL Conil 3.54 87 P Pn 15 13 37.0 +3.5
CNIL S Sn 15 14 15.7 +0.2
CNIL Conil 3.54 87 *e*P Pn 15 13 37.0 +3.5
CNIL *e*S Sn 15 14 15.7 +0.3
GIBL Gibalbin 3.65 79 P Pn 15 13 40.0 +5.1
GIBL S Sn 15 14 17.6 -0.5
GIBL Gibalbin 3.65 79 P Pn 15 13 40.0 +5.1
GIBL S Sn 15 14 17.6 -0.5
GIBL Gibalbin 3.65 79 *e*P Pn 15 13 40.0 +5.1
GIBL *e*S Sn 15 14 17.6 -0.4
RTC Rabat Centre 3.70 126 P Pn 15 13 36.0 +0.4
RTC S Sn 15 14 17.0 -2.2
RTC Rabat Centre 3.70 126 P Pn 15 13 36.0 +0.4
RTC S Sn 15 14 17.0 -2.2
RTC Rabat Centre 3.70 126 *i*P Pn 15 13 36.0 +0.4
RTC *i*S Sn 15 14 17.0 -2.2
EBAD Badajoz 3.70 46 ⇑P Pn 15 13 36.1 +0.4
EBAD S Sn 15 14 18.9 -0.5
EBAD Badajoz 3.70 46 ⇑P Pn 15 13 36.1 +0.4
comp=E,13nm,0.1s,SNR=18
EBAD S Sn 15 14 18.9 -0.5
comp=E,86nm,0.1s,SNR=12
EBAD Badajoz 3.70 46 ⇑P Pn 15 13 36.1 +0.4
comp=E,13nm,0.1s,SNR=18
EBAD S Sn 15 14 18.9 -0.5
comp=E,86nm,0.1s,SNR=12
EBAD Badajoz 3.70 46 P Pn 15 13 36.1 +0.4
comp=E,13nm,0.1s,SNR=18
EBAD S Sn 15 14 18.9 -0.5
comp=E,86nm,0.1s,SNR=12
PTOM Tomar 3.73 25 *e*Pn Pn 15 13 36.2 +0.1
PTOM *e*Sn Sn 15 14 17.6 -2.5
PTOM A 15 14 22.5
comp=E,178nm,0.4s
PTOM Tomar 3.73 25 P Pn 15 13 36.2 +0.1
PTOM S Sn 15 14 17.6 -2.5
comp=E,89nm,0.4s
PTOM Tomar 3.73 25 P Pn 15 13 36.2 +0.1
PTOM S Sn 15 14 17.6 -2.5
comp=E,89nm,0.4s
PTOM Tomar 3.73 25 *e*Pn Pn 15 13 36.2 +0.1
PTOM *e*Sn Sn 15 14 17.6 -2.5
comp=E,178nm,0.4s
ESPR Espera 3.74 79 ⇓P Pn 15 13 38.2 +2.0
ESPR S Sn 15 14 19.9 -0.5
ESPR Espera 3.74 79 ⇓P Pn 15 13 38.2 +2.0
comp=E,16nm,0.2s,SNR=18
ESPR S Sn 15 14 19.9 -0.5
comp=E,252nm,0.3s,SNR=5.8
ESPR Espera 3.74 79 ⇓P Pn 15 13 38.2 +2.0
comp=E,16nm,0.2s,SNR=18
ESPR S Sn 15 14 19.9 -0.5
comp=E,252nm,0.3s,SNR=5.8
ESPR Espera 3.74 79 P Pn 15 13 38.2 +2.0
comp=E,16nm,0.2s,SNR=18
ESPR S Sn 15 14 19.9 -0.4
comp=E,252nm,0.3s,SNR=5.8
MOMI Momias 3.81 87 S Sn 15 14 26.1 +4.0
MOMI Momias 3.81 87 S Sn 15 14 26.1 +4.0
MOMI Momias 3.81 87 *e*S Sn 15 14 26.1 +4.0
PMRV Marv??o 3.99 36 *i*Pn Pn 15 13 40.1 +0.4
PMRV *e*Sn Sn 15 14 24.7 -1.8
PMRV A 15 14 27.6
comp=E,91nm,0.2s
PMRV Marv??o 3.99 36 ⇓P Pn 15 13 40.1 +0.4
PMRV S Sn 15 14 24.7 -1.8
comp=E,46nm,0.2s
PMRV Marv??o 3.99 36 ⇓P Pn 15 13 40.1 +0.4
PMRV S Sn 15 14 24.7 -1.8
comp=E,46nm,0.2s
RSA Sarsar 4.00 109 P Pn 15 13 41.0 +1.2
RSA S Sn 15 14 26.0 -0.7
RSA Sarsar 4.00 109 P Pn 15 13 41.0 +1.2
RSA S Sn 15 14 26.0 -0.7
RSA Sarsar 4.00 109 *i*P Pn 15 13 41.0 +1.2
RSA *i*S Sn 15 14 26.0 -0.7
LIJA Lijar 4.11 79 P Pn 15 13 46.0 +4.8
LIJA S Sn 15 14 28.6 -0.7
LIJA Lijar 4.11 79 P Pn 15 13 46.0 +4.8
LIJA S Sn 15 14 28.6 -0.7
LIJA Lijar 4.11 79 *e*P Pn 15 13 46.0 +4.8
LIJA *e*S Sn 15 14 28.6 -0.7
DKH Dar Kharkhour 4.19 99 P Pn 15 13 45.0 +2.6
DKH S Sn 15 14 32.0 +0.6
DKH Dar Kharkhour 4.19 99 P Pn 15 13 45.0 +2.6
DKH S Sn 15 14 32.0 +0.6
DKH Dar Kharkhour 4.19 99 *i*P Pn 15 13 45.0 +2.6
DKH *i*S Sn 15 14 32.0 +0.6
PCBR Castelo Branco 4.29 32 *e*Pn Pn 15 13 44.2 +0.5
PCBR *e*Sn Sn 15 14 30.6 -3.2
PCBR A 15 14 34.5
comp=E,48nm,0.3s
PCBR Castelo Branco 4.29 32 P Pn 15 13 44.2 +0.5
PCBR S Sn 15 14 30.6 -3.2
comp=E,24nm,0.3s
PCBR Castelo Branco 4.29 32 P Pn 15 13 44.2 +0.5
PCBR S Sn 15 14 30.6 -3.2
comp=E,24nm,0.3s
PCBR Castelo Branco 4.29 32 *e*Pn Pn 15 13 44.2 +0.5
PCBR *e*Sn Sn 15 14 30.6 -3.2
comp=E,48nm,0.3s
JHA Jbel Lahdid 4.57 169 P Pn 15 13 46.0 -1.6
JHA S Sn 15 14 33.0 -7.7
JHA Jbel Lahdid 4.57 169 P Pn 15 13 46.0 -1.6
JHA S Sn 15 14 33.0 -7.7
JHA Jbel Lahdid 4.57 169 *i*P Pn 15 13 46.0 -1.6
EMIJ Mijas 4.58 84 P Pn 15 13 49.7 +1.9
EMIJ S Sn 15 14 39.1 -2.0
EMIJ Mijas 4.58 84 P Pn 15 13 49.7 +1.9
comp=E,1.3nm,0.1s,SNR=6.9
EMIJ S Sn 15 14 39.1 -2.0
comp=E,7.4nm,0.2s,SNR=5.9
EMIJ Mijas 4.58 84 P Pn 15 13 49.7 +1.9
comp=E,1.3nm,0.1s,SNR=6.9
EMIJ S Sn 15 14 39.1 -2.0
comp=E,7.4nm,0.2s,SNR=5.9
EMIJ Mijas 4.58 84 P Pn 15 13 49.7 +1.9
comp=E,1.3nm,0.1s,SNR=6.9
EMIJ S Sn 15 14 39.1 -2.0
comp=E,7.4nm,0.2s,SNR=5.9
MTE Manteigas 4.74 28 *e*Pn Pn 15 13 49.8 -0.1
MTE *e*Sn Sn 15 14 41.6 -3.2
MTE A 15 14 46.1
comp=E,87nm,0.2s
MTE Manteigas 4.74 28 *e*Pn Pn 15 13 49.8 -0.1
MTE *e*Sn Sn 15 14 40.3 -4.5
MTE Manteigas 4.74 28 *e*Pn Pn 15 13 49.8 -0.1
MTE *e*Sn Sn 15 14 41.6 -3.2
comp=E,87nm,0.2s
CIA Chichaoua 4.87 163 P Pn 15 13 50.0 -1.7
CIA S Sn 15 14 41.0 -7.1
CIA Chichaoua 4.87 163 P Pn 15 13 50.0 -1.7
CIA S Sn 15 14 41.0 -7.1
CIA Chichaoua 4.87 163 *i*P Pn 15 13 50.0 -1.7
PVIS Viseu 4.89 23 *e*Pn Pn 15 13 52.0 0.0
PVIS *e*Sn Sn 15 14 45.6 -3.1
PVIS A 15 14 47.9
comp=E,87nm,0.2s
PVIS Viseu 4.89 23 P Pn 15 13 52.0 0.0
PVIS S Sn 15 14 45.6 -3.1
comp=E,44nm,0.2s
PVIS Viseu 4.89 23 P Pn 15 13 52.0 0.0
PVIS S Sn 15 14 45.6 -3.1
comp=E,44nm,0.2s
PVIS Viseu 4.89 23 *e*Pn Pn 15 13 52.0 0.0
PVIS *e*Sn Sn 15 14 45.6 -3.1
comp=E,87nm,0.2s
EADA Adamuz 5.06 66 P Pn 15 13 55.6 +1.3
EADA S Sn 15 14 50.8 -2.0
EADA Adamuz 5.06 66 P Pn 15 13 55.6 +1.3
comp=E,18nm,0.2s,SNR=80
EADA S Sn 15 14 50.8 -2.0
comp=E,7.9nm,0.1s,SNR=4.6
EADA Adamuz 5.06 66 P Pn 15 13 55.6 +1.3
comp=E,18nm,0.2s,SNR=80
EADA S Sn 15 14 50.8 -2.0
comp=E,7.9nm,0.1s,SNR=4.6
EADA Adamuz 5.06 66 P Pn 15 13 55.6 +1.3
comp=E,18nm,0.2s,SNR=80
EADA S Sn 15 14 50.8 -2.0
comp=E,7.9nm,0.1s,SNR=4.6
ELUQ Luque 5.12 73 P Pn 15 13 57.0 +1.9
ELUQ S Sn 15 14 53.7 -0.5
ELUQ Luque 5.12 73 P Pn 15 13 57.1 +1.9
comp=E,2.0nm,0.1s,SNR=7.9
ELUQ S Sn 15 14 53.7 -0.5
comp=E,5.2nm,0.1s,SNR=7.9
ELUQ Luque 5.12 73 P Pn 15 13 57.1 +1.9
comp=E,2.0nm,0.1s,SNR=7.9
ELUQ S Sn 15 14 53.7 -0.5
comp=E,5.2nm,0.1s,SNR=7.9
ELUQ Luque 5.12 73 P Pn 15 13 57.0 +1.8
ELUQ S Sn 15 14 53.7 -0.6
comp=E,5.2nm,0.1s,SNR=7.9
ELOJ Sierra Loja 5.13 78 P Pn 15 13 57.7 +2.4
ELOJ S Sn 15 14 54.5 -0.1
ELOJ Sierra Loja 5.13 78 P Pn 15 13 57.7 +2.4
comp=E,1.4nm,0.1s,SNR=4.0
ELOJ S Sn 15 14 54.5 -0.1
comp=E,2.3nm,0.1s,SNR=7.9
ELOJ Sierra Loja 5.13 78 P Pn 15 13 57.7 +2.4
comp=E,1.4nm,0.1s,SNR=4.0
ELOJ S Sn 15 14 54.5 -0.1
comp=E,2.3nm,0.1s,SNR=7.9
ELOJ Sierra Loja 5.13 78 P Pn 15 13 57.7 +2.4
comp=E,1.4nm,0.1s,SNR=4.0
ELOJ S Sn 15 14 54.5 -0.1
comp=E,2.3nm,0.1s,SNR=7.9
MIF Mishlifen 5.13 122 P Pn 15 13 57.0 +1.7
MIF S Sn 15 14 53.0 -1.6
MIF Mishlifen 5.13 122 P Pn 15 13 57.0 +1.7
MIF S Sn 15 14 53.0 -1.6
MIF Mishlifen 5.13 122 *i*P Pn 15 13 57.0 +1.7
MIF *i*S Sn 15 14 53.0 -1.6
KIB El Ksiba 5.16 134 P Pn 15 13 55.0 -0.7
KIB S Sn 15 14 52.0 -3.2
KIB El Ksiba 5.16 134 P Pn 15 13 55.0 -0.7
KIB S Sn 15 14 52.0 -3.2
KIB El Ksiba 5.16 134 *i*P Pn 15 13 55.0 -0.7
KIB *i*S Sn 15 14 52.0 -3.2
TZC Tazercounte 5.23 140 P Pn 15 13 57.0 +0.3
TZC S Sn 15 14 53.0 -4.1
TZC Tazercounte 5.23 140 P Pn 15 13 57.0 +0.3
TZC S Sn 15 14 53.0 -4.1
TZC Tazercounte 5.23 140 *i*P Pn 15 13 57.0 +0.3
ERON Agron 5.39 80 S Sn 15 15 01.1 +0.1
comp=E,1.8nm,0.1s,SNR=7.9
ERON Agron 5.39 80 S Sn 15 15 01.1 +0.1
comp=E,1.8nm,0.1s,SNR=7.9
ERON Agron 5.39 80 S Sn 15 15 01.1 +0.1
comp=E,1.8nm,0.1s,SNR=7.9
OUK Oukaimeden 5.46 156 P Pn 15 13 58.5 -1.3
OUK S Sn 15 14 56.0 -6.6
OUK Oukaimeden 5.46 156 P Pn 15 13 58.5 -1.3
OUK S Sn 15 14 56.0 -6.6
PVRL Vila Real 5.46 22 *e*Pn Pn 15 13 59.3 -0.5
PVRL *e*Sn Sn 15 14 57.7 -4.9
PVRL A 15 15 02.4
comp=E,106nm,0.2s
PVRL Vila Real 5.46 22 P Pn 15 13 59.3 -0.5
PVRL S Sn 15 14 57.7 -4.9
comp=E,53nm,0.2s
PVRL Vila Real 5.46 22 P Pn 15 13 59.3 -0.5
PVRL S Sn 15 14 57.7 -4.9
comp=E,53nm,0.2s
PVRL Vila Real 5.46 22 *e*Pn Pn 15 13 59.3 -0.5
CZD Col de Zad 5.48 124 P Pn 15 14 00.5 +0.4
CZD S Sn 15 15 00.0 -3.2
CZD Col de Zad 5.48 124 P Pn 15 14 00.5 +0.4
CZD S Sn 15 15 00.0 -3.2
CZD Col de Zad 5.48 124 *i*P Pn 15 14 00.5 +0.4
TZK Tazeka 5.55 111 P Pn 15 14 01.0 -0.2
TZK S Sn 15 15 02.0 -3.0
TZK Tazeka 5.55 111 P Pn 15 14 01.0 -0.2
TZK S Sn 15 15 02.0 -3.0
TZK Tazeka 5.55 111 *i*P Pn 15 14 01.0 -0.2
EGUA Guajares 5.57 82 P Pn 15 14 04.2 +2.9
EGUA S Sn 15 15 03.6 -1.7
EGUA Guajares 5.57 82 P Pn 15 14 04.2 +2.9
comp=E,5.8nm,0.2s,SNR=7.9
EGUA S Sn 15 15 03.6 -1.7
comp=E,12nm,0.2s,SNR=7.9
EGUA Guajares 5.57 82 P Pn 15 14 04.2 +2.9
comp=E,5.8nm,0.2s,SNR=7.9
EGUA S Sn 15 15 03.6 -1.7
comp=E,12nm,0.2s,SNR=7.9
EGUA Guajares 5.57 82 P Pn 15 14 04.2 +2.9
comp=E,5.8nm,0.2s,SNR=7.9
EGUA S Sn 15 15 03.6 -1.7
comp=E,12nm,0.2s,SNR=7.9
MVO Moncorvo 5.59 27 *e*Pn Pn 15 14 01.4 -0.2
MVO *e*Sn Sn 15 15 01.8 -4.1
MVO A 15 15 06.8
comp=E,99nm,0.4s
MVO Moncorvo 5.59 27 *e*Pn Pn 15 14 01.4 -0.2
ECOG Cogollos-Vega 5.61 77 P Pn 15 14 04.1 +2.1
ECOG S Sn 15 15 06.6 +0.1
ECOG Cogollos-Vega 5.61 77 S Sn 15 15 06.6 +0.1
comp=E,3.7nm,0.1s,SNR=7.9
ECOG Cogollos-Vega 5.61 77 S Sn 15 15 06.6 +0.1
comp=E,3.7nm,0.1s,SNR=7.9
ECOG Cogollos-Vega 5.61 77 P Pn 15 14 04.1 +2.1
ECOG S Sn 15 15 06.6 +0.1
comp=E,3.7nm,0.1s,SNR=7.9
EBAN Banos Encina 5.65 68 P Pn 15 14 03.5 +1.1
EBAN S Sn 15 15 03.4 -3.9
EBAN Banos Encina 5.65 68 P Pn 15 14 03.5 +1.1
comp=E,6.5nm,0.1s,SNR=15
EBAN S Sn 15 15 03.4 -3.9
comp=E,7.6nm,0.1s,SNR=7.0
EBAN Banos Encina 5.65 68 P Pn 15 14 03.5 +1.1
comp=E,6.5nm,0.1s,SNR=15
EBAN S Sn 15 15 03.4 -3.9
comp=E,7.6nm,0.1s,SNR=7.0
EBAN Banos Encina 5.65 68 P Pn 15 14 03.5 +1.1
comp=E,6.5nm,0.1s,SNR=15
EQUE Quentar 5.70 78 P Pn 15 14 05.6 +2.4
comp=E,3.0nm,0.3s,SNR=7.5
EQUE S Sn 15 15 08.6 -0.1
comp=E,2.4nm,0.1s,SNR=7.9
EQUE Quentar 5.70 78 P Pn 15 14 05.6 +2.4
comp=E,3.0nm,0.3s,SNR=7.5
EQUE S Sn 15 15 08.6 -0.1
comp=E,2.4nm,0.1s,SNR=7.9
EQUE Quentar 5.70 78 P Pn 15 14 05.6 +2.4
comp=E,3.0nm,0.3s,SNR=7.5
EQUE S Sn 15 15 08.6 -0.1
comp=E,2.4nm,0.1s,SNR=7.9
PCAB Cabril 5.78 18 *e*Pn Pn 15 14 03.5 -0.7
PCAB *e*Sn Sn 15 15 05.5 -4.9
PCAB A 15 15 10.5
comp=E,26nm,0.3s
PCAB Cabril 5.78 18 P Pn 15 14 03.5 -0.7
PCAB S Sn 15 15 05.5 -4.9
comp=E,13nm,0.3s
PCAB Cabril 5.78 18 P Pn 15 14 03.5 -0.7
PCAB S Sn 15 15 05.5 -4.9
comp=E,13nm,0.3s
PCAB Cabril 5.78 18 *e*Pn Pn 15 14 03.5 -0.7
PMPS Porto Santo 5.80 239 *e*P Pn 15 13 58.4 -6.2
PMPS *e*S Sn 15 14 55.2 -16
PMPS Porto Santo 5.80 239 P Pn 15 13 58.4 -6.2
PMPS S Sn 15 14 55.2 -16
PMPS Porto Santo 5.80 239 P Pn 15 13 58.4 -6.2
PMPS S Sn 15 14 55.2 -16
PAB San Pablo 5.84 54 *e*Pn Pn 15 14 05.9 +0.9
comp=E,5.4nm,0.3s
PAB San Pablo 5.84 54 *e*Pn Pn 15 14 05.9 +0.9
comp=E,5.4nm,0.3s
MDT Midelt 5.90 124 Pn Pn 15 14 05.8 -0.1
comp=E,46nm,0.3s,baz=306,slow=16,SNR=1176
MDT Sn Sn 15 15 08.0 -5.5
comp=E,63nm,0.3s,baz=205,slow=23,SNR=19
MDT Midelt 5.90 124 Pn Pn 15 14 05.8 -0.1
ELOB Lobios 5.92 17 P Pn 15 14 05.3 -0.8
ELOB S Sn 15 15 07.6 -6.3
ELOB Lobios 5.92 17 P Pn 15 14 05.3 -0.8
comp=E,5.8nm,0.1s,SNR=11
ELOB S Sn 15 15 07.6 -6.3
comp=E,8.7nm,0.2s
ELOB Lobios 5.92 17 P Pn 15 14 05.3 -0.8
comp=E,5.8nm,0.1s,SNR=11
ELOB S Sn 15 15 07.6 -6.3
comp=E,8.7nm,0.2s
ELOB Lobios 5.92 17 P Pn 15 14 05.3 -0.8
comp=E,5.8nm,0.1s,SNR=11
EZAM Zamans 6.05 12 P Pn 15 14 07.4 -0.6
EZAM S Sn 15 15 09.5 -7.7
EZAM Zamans 6.05 12 P Pn 15 14 07.4 -0.6
comp=E,14nm,0.1s,SNR=7.9
EZAM S Sn 15 15 09.5 -7.7
comp=E,5.4nm,0.1s,SNR=7.9
EZAM Zamans 6.05 12 P Pn 15 14 07.4 -0.6
comp=E,14nm,0.1s,SNR=7.9
EZAM S Sn 15 15 09.5 -7.7
comp=E,5.4nm,0.1s,SNR=7.9
EZAM Zamans 6.05 12 P Pn 15 14 07.4 -0.6
comp=E,14nm,0.1s,SNR=7.9
EQES Quesada 6.10 73 P Pn 15 14 09.8 +1.2
EQES S Sn 15 15 17.9 -0.5
EQES Quesada 6.10 73 P Pn 15 14 09.8 +1.2
comp=E,1.5nm,0.1s,SNR=7.9
EQES S Sn 15 15 17.9 -0.5
comp=E,2.4nm,0.1s,SNR=5.5
EQES Quesada 6.10 73 P Pn 15 14 09.8 +1.2
comp=E,1.5nm,0.1s,SNR=7.9
EQES S Sn 15 15 17.9 -0.5
comp=E,2.4nm,0.1s,SNR=5.5
EQES Quesada 6.10 73 P Pn 15 14 09.8 +1.2
comp=E,1.5nm,0.1s,SNR=7.9
EQES S Sn 15 15 17.9 -0.5
comp=E,2.4nm,0.1s,SNR=5.5
EBER Berja 6.11 82 P Pn 15 14 11.2 +2.4
EBER S Sn 15 15 19.3 +0.5
EBER Berja 6.11 82 P Pn 15 14 11.2 +2.4
comp=E,2.5nm,0.3s,SNR=6.7
EBER S Sn 15 15 19.3 +0.5
comp=E,6.1nm,0.2s,SNR=7.9
EBER Berja 6.11 82 P Pn 15 14 11.2 +2.4
comp=E,2.5nm,0.3s,SNR=6.7
EBER S Sn 15 15 19.3 +0.5
comp=E,6.1nm,0.2s,SNR=7.9
EBER Berja 6.11 82 P Pn 15 14 11.2 +2.4
comp=E,2.5nm,0.3s,SNR=6.7
EBER S Sn 15 15 19.3 +0.6
comp=E,6.1nm,0.2s,SNR=7.9
ESDC Sonseca Array 6.16 54 Pn Pn 15 14 10.1 +0.7
comp=E,6.4nm,0.3s,baz=242,slow=13,SNR=13
ESDC Sn Sn 15 15 18.2 -1.7
comp=E,13nm,0.3s,baz=240,slow=24,SNR=14
ESDC Sonseca Array 6.16 54 P Pn 15 14 10.4 +0.9
ESDC S Sn 15 15 14.6 -5.3
ESDC Sonseca Array 6.16 54 P Pn 15 14 10.4 +0.9
comp=E,3.7nm,0.2s,baz=243,slow=13,SNR=32
ESDC S Sn 15 15 14.6 -5.3
comp=E,7.8nm,0.3s,baz=243,slow=23,SNR=17
ESDC Sonseca Array 6.16 54 P Pn 15 14 10.4 +0.9
comp=E,3.7nm,0.2s,baz=243,slow=13,SNR=32
ESDC S Sn 15 15 14.6 -5.3
comp=E,7.8nm,0.3s,baz=243,slow=23,SNR=17
ESDC Sonseca Array 6.16 54 P Pn 15 14 10.4 +1.0
comp=E,3.7nm,0.2s,baz=243,slow=13,SNR=32
ESLA Sonseca Array 6.16 54 *e*Pn Pn 15 14 10.4 +1.0
comp=E,1.1nm,0.5s
ESLA Sonseca Array 6.16 54 *e*Pn Pn 15 14 10.4 +1.0
comp=E,1.0nm,0.5s
PBRG Braganca 6.26 26 *e*Pn Pn 15 14 10.4 -0.4
PBRG *e*Sn Sn 15 15 17.9 -4.4
PBRG A 15 15 21.0
comp=E,26nm,0.2s
PBRG Braganca 6.26 26 P Pn 15 14 10.4 -0.4
PBRG S Sn 15 15 17.9 -4.4
comp=E,13nm,0.2s
PBRG Braganca 6.26 26 P Pn 15 14 10.4 -0.4
PBRG S Sn 15 15 17.9 -4.4
comp=E,13nm,0.2s
PBRG Braganca 6.26 26 *e*Pn Pn 15 14 10.4 -0.4
ECAL Calabor 6.38 26 P Pn 15 14 11.9 -0.6
ECAL S Sn 15 15 20.8 -4.4
ECAL Calabor 6.38 26 P Pn 15 14 11.9 -0.6
comp=E,11nm,0.2s,SNR=27
ECAL S Sn 15 15 20.8 -4.4
comp=E,9.5nm,0.2s,SNR=9.4
ECAL Calabor 6.38 26 P Pn 15 14 11.9 -0.6
comp=E,11nm,0.2s,SNR=27
ECAL S Sn 15 15 20.8 -4.4
comp=E,9.5nm,0.2s,SNR=9.4
ECAL Calabor 6.38 26 P Pn 15 14 11.9 -0.5
comp=E,11nm,0.2s,SNR=27
PMAR Madeira 6.39 239 *e*P Pn 15 14 08.0 -4.7
PMAR *e*S Sn 15 15 11.0 -15
PMAR A 15 15 14.8
comp=E,56nm,0.2s
PMAR Madeira 6.39 239 P Pn 15 14 08.0 -4.7
PMAR S Sn 15 15 11.0 -15
comp=E,28nm,0.2s
PMAR Madeira 6.39 239 P Pn 15 14 08.0 -4.7
PMAR S Sn 15 15 11.0 -15
comp=E,28nm,0.2s
YBT Youssef Ben Ta 6.43 173 P Pn 15 14 11.0 -2.1
YBT S Sn 15 15 16.0 -11
YBT Youssef Ben Ta 6.43 173 P Pn 15 14 11.0 -2.1
YBT S Sn 15 15 16.0 -11
ZFT Errachidia 6.56 128 P Pn 15 14 16.0 +1.0
ZFT Errachidia 6.56 128 P Pn 15 14 16.0 +1.0
ZFT Errachidia 6.56 128 *i*P Pn 15 14 16.0 +1.0
GUD Guadarrama 6.61 46 P Pn 15 14 16.2 +0.7
GUD S Sn 15 15 28.4 -2.5
GUD Guadarrama 6.61 46 P Pn 15 14 16.2 +0.7
comp=E,2.8nm,0.2s,SNR=7.9
GUD S Sn 15 15 28.4 -2.5
comp=E,4.4nm,0.2s,SNR=7.9
GUD Guadarrama 6.61 46 P Pn 15 14 16.2 +0.7
comp=E,2.8nm,0.2s,SNR=7.9
GUD S Sn 15 15 28.4 -2.5
comp=E,4.4nm,0.2s,SNR=7.9
GUD Guadarrama 6.61 46 P Pn 15 14 16.2 +0.6
comp=E,2.8nm,0.2s,SNR=7.9
GUD S Sn 15 15 28.4 -2.5
comp=E,4.4nm,0.2s,SNR=7.9
ERUA La Rua 6.65 22 S Sn 15 15 24.4 -7.7
comp=E,13nm,0.1s,SNR=7.9
ERUA La Rua 6.65 22 S Sn 15 15 24.4 -7.7
comp=E,13nm,0.1s,SNR=7.9
EVIA Vianos 6.75 67 P Pn 15 14 18.8 +1.2
EVIA S Sn 15 15 33.0 -1.5
EVIA Vianos 6.75 67 P Pn 15 14 18.7 +1.2
comp=E,3.5nm,0.1s,SNR=7.8
EVIA S Sn 15 15 33.0 -1.5
comp=E,3.8nm,0.1s,SNR=7.9
EVIA Vianos 6.75 67 P Pn 15 14 18.7 +1.2
comp=E,3.5nm,0.1s,SNR=7.8
EVIA S Sn 15 15 33.0 -1.5
comp=E,3.8nm,0.1s,SNR=7.9
EVIA Vianos 6.75 67 P Pn 15 14 18.7 +1.1
comp=E,3.5nm,0.1s,SNR=7.8
EVIA S Sn 15 15 33.0 -1.5
comp=E,3.8nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.79 9 P Pn 15 14 16.4 -1.7
EMAZ S Sn 15 15 26.7 -8.8
EMAZ Mazaricos 6.79 9 P Pn 15 14 16.4 -1.7
comp=E,14nm,0.2s,SNR=23
EMAZ S Sn 15 15 26.7 -8.8
comp=E,5.2nm,0.1s,SNR=9.3
EMAZ Mazaricos 6.79 9 P Pn 15 14 16.4 -1.7
comp=E,14nm,0.2s,SNR=23
EMAZ S Sn 15 15 26.7 -8.8
comp=E,5.2nm,0.1s,SNR=9.3
EMAZ Mazaricos 6.79 9 P Pn 15 14 16.4 -1.7
comp=E,14nm,0.2s,SNR=23
STS Santiago 6.79 12 P Pn 15 14 17.1 -1.1

STS S Sn 15 15 26.1 -9.5
STS Santiago 6.79 12 P **Pn 15 14 17.1 -1.1**
comp=E,11nm,0.2s,SNR=7.9
STS S Sn 15 15 26.1 -9.5
comp=E,10nm,0.1s,SNR=7.9
STS Santiago 6.79 12 P **Pn 15 14 17.1 -1.1**
comp=E,11nm,0.2s,SNR=7.9
STS S Sn 15 15 26.1 -9.5
comp=E,10nm,0.1s,SNR=7.9
STS Santiago 6.79 12 P **Pn 15 14 17.1 -1.0**
comp=E,11nm,0.2s,SNR=7.9
ETOB Tobarra 7.47 69 P **Pn 15 14 28.5 +1.1**
ETOB S Sn 15 15 48.9 -3.2
ETOB Tobarra 7.47 69 P **Pn 15 14 28.5 +1.1**
comp=E,1.9nm,0.1s,SNR=11
ETOB S Sn 15 15 48.9 -3.2
comp=E,0.6nm,0.1s,SNR=6.2
ETOB Tobarra 7.47 69 P **Pn 15 14 28.5 +1.1**
comp=E,1.9nm,0.1s,SNR=11
ETOB S Sn 15 15 48.9 -3.2
comp=E,0.6nm,0.1s,SNR=6.2
ETOB Tobarra 7.47 69 P **Pn 15 14 28.5 +1.1**
comp=E,1.9nm,0.1s,SNR=11
EPON Pontenova 7.52 19 P **Pn 15 14 27.2 -0.8**
EPON S Sn 15 15 44.6 -8.7
EPON Pontenova 7.52 19 P **Pn 15 14 27.2 -0.8**
comp=E,4.8nm,0.1s,SNR=7.9
EPON S Sn 15 15 44.6 -8.7
comp=E,20nm,0.4s,SNR=7.9
EPON Pontenova 7.52 19 P **Pn 15 14 27.2 -0.8**
comp=E,4.8nm,0.1s,SNR=7.9
EPON S Sn 15 15 44.6 -8.7
comp=E,20nm,0.4s,SNR=7.9
EPON Pontenova 7.52 19 P **Pn 15 14 27.2 -0.8**
comp=E,4.8nm,0.1s,SNR=7.9
EFAM Famara 7.56 201 P **Pn 15 14 25.4 -3.3**
comp=E,1.7nm,0.3s,SNR=7.9
EFAM S Sn 15 15 40.2 -14
comp=E,18nm,0.4s,SNR=7.9
EFAM Famara 7.56 201 P **Pn 15 14 25.4 -3.3**
comp=E,1.7nm,0.3s,SNR=7.9
EFAM S Sn 15 15 40.2 -14
comp=E,18nm,0.4s,SNR=7.9
ETOR Torete 8.00 53 P **Pn 15 14 36.0 +1.3**
ETOR S Sn 15 16 00.0 -5.3
ETOR Torete 8.00 53 P **Pn 15 14 36.0 +1.3**
comp=E,16nm,0.2s,SNR=28
ETOR S Sn 15 16 00.0 -5.3
comp=E,8.3nm,0.1s,SNR=5.3
ETOR Torete 8.00 53 P **Pn 15 14 36.0 +1.3**
comp=E,16nm,0.2s,SNR=28
ETOR S Sn 15 16 00.0 -5.3
comp=E,8.3nm,0.1s,SNR=5.3
ETOR Torete 8.00 53 P **Pn 15 14 36.0 +1.3**
comp=E,16nm,0.2s,SNR=28
EARI Arriondas 8.12 28 P **Pn 15 14 36.5 +0.2**
EARI S Sn 15 16 01.1 -6.9
EARI Arriondas 8.12 28 P **Pn 15 14 36.5 +0.2**
comp=E,1.4nm,0.2s,SNR=11
EARI S Sn 15 16 01.1 -6.9
comp=E,0.4nm,0.2s,SNR=4.6
EARI Arriondas 8.12 28 P **Pn 15 14 36.5 +0.2**
comp=E,1.4nm,0.2s,SNR=11
EARI S Sn 15 16 01.1 -6.9
comp=E,0.4nm,0.2s,SNR=4.6
EARI Arriondas 8.12 28 P **Pn 15 14 36.5 +0.2**
comp=E,1.4nm,0.2s,SNR=11
ECHE Chera 8.20 63 P **Pn 15 14 39.6 +2.1**
ECHE Chera 8.20 63 P **Pn 15 14 39.6 +2.1**
comp=E,1.3nm,0.3s,SNR=7.9
ECHE Chera 8.20 63 P **Pn 15 14 39.6 +2.1**
comp=E,1.3nm,0.3s,SNR=7.9
ECHE Chera 8.20 63 P **Pn 15 14 39.6 +2.2**
comp=E,1.3nm,0.3s,SNR=7.9
CFTV Fuerteventura 8.39 203 P **Pn 15 14 35.7 -4.4**
comp=E,0.7nm,0.2s,SNR=7.9
CFTV S Sn 15 16 01.0 -14
comp=E,2.1nm,0.2s,SNR=7.9
CFTV Fuerteventura 8.39 203 P **Pn 15 14 35.7 -4.4**
comp=E,0.7nm,0.2s,SNR=7.9
CFTV S Sn 15 16 01.0 -14
comp=E,2.1nm,0.2s,SNR=7.9
EBEN Beniarda 8.48 70 P **Pn 15 14 40.8 -0.5**
EBEN S Sn 15 16 13.4 -3.7
EBEN Beniarda 8.48 70 P **Pn 15 14 40.8 -0.6**
comp=E,0.5nm,0.1s,SNR=7.9
EBEN S Sn 15 16 13.5 -3.7
comp=E,0.6nm,0.1s,SNR=7.9
EBEN Beniarda 8.48 70 P **Pn 15 14 40.8 -0.6**
comp=E,0.5nm,0.1s,SNR=7.9
EBEN S Sn 15 16 13.5 -3.7
comp=E,0.6nm,0.1s,SNR=7.9
EBEN Beniarda 8.48 70 P **Pn 15 14 40.8 -0.6**
comp=E,0.5nm,0.1s,SNR=7.9
ELAN Lanestosa 8.82 36 P **Pn 15 14 47.0 +1.1**
ELAN S Sn 15 16 17.2 -8.2
ELAN Lanestosa 8.82 36 P **Pn 15 14 47.0 +1.1**
comp=E,1.0nm,0.1s,SNR=5.9
ELAN S Sn 15 16 17.2 -8.2
comp=E,1.1nm,0.2s,SNR=6.0
ELAN Lanestosa 8.82 36 P **Pn 15 14 47.0 +1.1**
comp=E,1.0nm,0.1s,SNR=5.9
ELAN S Sn 15 16 17.2 -8.2
comp=E,1.1nm,0.2s,SNR=6.0
ELAN Lanestosa 8.82 36 P **Pn 15 14 47.0 +1.1**
comp=E,1.0nm,0.1s,SNR=5.9
ECRI Cripan 8.83 42 P **Pn 15 14 47.5 +1.3**
ECRI S Sn 15 16 20.4 -5.2
ECRI Cripan 8.83 42 P **Pn 15 14 47.5 +1.3**
comp=E,0.9nm,0.1s,SNR=4.0
ECRI S Sn 15 16 20.4 -5.2
comp=E,0.8nm,0.1s,SNR=7.9
ECRI Cripan 8.83 42 P **Pn 15 14 47.5 +1.3**
comp=E,0.9nm,0.1s,SNR=4.0
ECRI S Sn 15 16 20.4 -5.2
comp=E,0.8nm,0.1s,SNR=7.9
ECRI Cripan 8.83 42 P **Pn 15 14 47.5 +1.4**
comp=E,0.9nm,0.1s,SNR=4.0
EMOS Mosqueruela 8.85 59 P **Pn 15 14 49.5 +3.1**
EMOS S Sn 15 16 22.6 -3.4
EMOS Mosqueruela 8.85 59 P **Pn 15 14 49.5 +3.1**
comp=E,1.1nm,0.1s,SNR=9.9
EMOS S Sn 15 16 22.6 -3.5
comp=E,0.3nm,0.1s,SNR=5.6
EMOS Mosqueruela 8.85 59 P **Pn 15 14 49.5 +3.1**
comp=E,1.1nm,0.1s,SNR=9.9
EMOS S Sn 15 16 22.6 -3.5
comp=E,0.3nm,0.1s,SNR=5.6
EMOS Mosqueruela 8.85 59 P **Pn 15 14 49.5 +3.2**
comp=E,1.1nm,0.1s,SNR=9.9
EBAJ Bajamar 9.16 215 S **Sn 15 16 16.1 -18**
comp=E,3.7nm,0.2s,SNR=7.9
EBAJ Bajamar 9.16 215 S **Sn 15 16 16.1 -18**
comp=E,3.7nm,0.2s,SNR=7.9
ESAC San Caprasio 9.49 52 S **Sn 15 16 36.5 -5.4**
comp=E,1.8nm,0.1s,SNR=7.9
ESAC San Caprasio 9.49 52 S **Sn 15 16 36.5 -5.4**
comp=E,1.8nm,0.1s,SNR=7.9
EORO Oroz-Betelu 9.68 44 P **Pn 15 14 58.2 +0.4**
comp=E,1.1nm,0.1s,SNR=7.9
EORO S Sn 15 16 39.4 -7.1
comp=E,4.1nm,0.2s,SNR=7.9
EORO Oroz-Betelu 9.68 44 P **Pn 15 14 58.2 +0.4**
comp=E,1.1nm,0.1s,SNR=7.9
EORO S Sn 15 16 39.4 -7.1
comp=E,4.1nm,0.2s,SNR=7.9
EORO Oroz-Betelu 9.68 44 P **Pn 15 14 58.2 +0.5**
comp=E,1.1nm,0.1s,SNR=7.9
ELIZ Elizondo 9.74 42 P **Pn 15 15 00.0 +1.5**
ELIZ S Sn 15 16 37.9 -10
ELIZ Elizondo 9.74 42 P **Pn 15 15 00.0 +1.5**
comp=E,1.6nm,0.2s,SNR=7.9
ELIZ S Sn 15 16 37.9 -10
comp=E,0.6nm,0.2s,SNR=7.9
ELIZ Elizondo 9.74 42 P **Pn 15 15 00.0 +1.5**
comp=E,1.6nm,0.2s,SNR=7.9
ELIZ S Sn 15 16 37.9 -10
comp=E,0.6nm,0.2s,SNR=7.9
ELIZ Elizondo 9.74 42 P **Pn 15 15 00.0 +1.5**
comp=E,1.6nm,0.2s,SNR=7.9
EALK Alkurruntz 9.79 42 P **Pn 15 15 00.1 +0.9**
EALK S Sn 15 16 38.2 -11
EALK Alkurruntz 9.79 42 P **Pn 15 15 00.1 +0.9**
comp=E,1.3nm,0.2s,SNR=7.9
EALK S Sn 15 16 38.2 -11
SNR=7.9
EALK Alkurruntz 9.79 42 P **Pn 15 15 00.1 +0.9**
comp=E,1.3nm,0.2s,SNR=7.9
EALK S Sn 15 16 38.2 -11
SNR=7.9
EALK Alkurruntz 9.79 42 P **Pn 15 15 00.1 +0.9**
comp=E,1.3nm,0.2s,SNR=7.9
SJPF Ste Jean 9.87 43 *e*Pn **Pn 15 15 01.4 +1.1**
SJPF *e*Sn **Sn 15 16 44.8 -6.4**
comp=E,4.5nm,0.3s
SJPF Ste Jean 9.87 43 P **Pn 15 15 01.4 +1.1**
SJPF S **Sn 15 16 44.8 -6.4**
comp=E,2.2nm,0.3s
SJPF Ste Jean 9.87 43 P **Pn 15 15 01.4 +1.1**
SJPF S **Sn 15 16 44.8 -6.4**
comp=E,2.2nm,0.3s
SJPF Ste Jean 9.87 43 *e*Pn **Pn 15 15 01.4 +1.1**
ETSF Etsaut 10.11 46 *e*Pn **Pn 15 15 04.7 +1.0**
ETSF *e*Sn **Sn 15 16 51.1 -6.0**
comp=E,3.7nm,0.4s
ETSF Etsaut 10.11 46 P **Pn 15 15 04.7 +1.0**
ETSF S **Sn 15 16 51.1 -6.0**
comp=E,1.9nm,0.4s
ETSF Etsaut 10.11 46 P **Pn 15 15 04.7 +1.0**
ETSF S **Sn 15 16 51.1 -6.0**
comp=E,1.9nm,0.4s
ETSF Etsaut 10.11 46 *e*Pn **Pn 15 15 04.7 +1.0**
EBIE Bielsa 10.40 49 P **Pn 15 15 07.5 -0.2**
comp=E,0.8nm,0.2s
EBIE S **Sn 15 16 57.9 -6.3**
EBIE Bielsa 10.40 49 P **Pn 15 15 07.5 -0.2**
comp=E,0.8nm,0.2s,SNR=7.0
EBIE S **Sn 15 16 57.9 -6.3**
comp=E,0.1nm,0.1s
EBIE Bielsa 10.40 49 P **Pn 15 15 07.5 -0.2**
comp=E,0.8nm,0.2s,SNR=7.0
EBIE S **Sn 15 16 57.9 -6.3**
comp=E,0.1nm,0.1s
EBIE Bielsa 10.40 49 P **Pn 15 15 07.5 -0.1**
comp=E,0.8nm,0.2s,SNR=7.0
EPF Esparros 10.72 47 *e*Pn **Pn 15 15 12.4 +0.4**
EPF *e*Sn **Sn 15 17 05.7 -6.3**
comp=E,6.9nm,0.3s
EPF Esparros 10.72 47 P **Pn 15 15 12.4 +0.4**
EPF S **Sn 15 17 05.7 -6.3**
comp=E,3.5nm,0.3s
EPF Esparros 10.72 47 P **Pn 15 15 12.4 +0.4**
EPF S **Sn 15 17 05.7 -6.3**
comp=E,3.5nm,0.3s
EPF Esparros 10.72 47 *e*Pn **Pn 15 15 12.4 +0.4**
LFF La Frestale 12.14 41 *e*Pn **Pn 15 15 31.6 +0.2**
LFF La Frestale 12.14 41 P **Pn 15 15 31.6 +0.2**
LFF La Frestale 12.14 41 P **Pn 15 15 31.6 +0.2**
LFF La Frestale 12.14 41 *e*Pn **Pn 15 15 31.6 +0.2**
RJF Les Rejaudoux 12.80 41 *e*Pn **Pn 15 15 39.8 -0.5**
RJF Les Rejaudoux 12.80 41 P **Pn 15 15 39.8 -0.5**
RJF Les Rejaudoux 12.80 41 P **Pn 15 15 39.8 -0.5**
RJF Les Rejaudoux 12.80 41 *e*Pn **Pn 15 15 39.8 -0.5**
QUIF Quistinic 12.85 23 *e*Pn **Pn 15 15 39.7 -1.3**
QUIF Quistinic 12.85 23 P **Pn 15 15 39.7 -1.3**
QUIF Quistinic 12.85 23 P **Pn 15 15 39.7 -1.3**
QUIF Quistinic 12.85 23 *e*Pn **Pn 15 15 39.7 -1.3**
CAF Calviac 12.86 44 *e*Pn **Pn 15 15 40.6 -0.5**
CAF Calviac 12.86 44 P **Pn 15 15 40.6 -0.5**
CAF Calviac 12.86 44 P **Pn 15 15 40.6 -0.5**
CAF Calviac 12.86 44 *e*Pn **Pn 15 15 40.6 -0.5**
MFF Saint Martin d 12.90 33 *e*Pn **Pn 15 15 41.0 -0.8**
MFF Saint Martin d 12.90 33 P **Pn 15 15 41.0 -0.8**
MFF Saint Martin d 12.90 33 P **Pn 15 15 41.0 -0.8**
MFF Saint Martin d 12.90 33 *e*Pn **Pn 15 15 41.0 -0.8**
ROSF Rostrenen 13.19 21 *e*Pn **Pn 15 15 44.5 -1.2**
ROSF Rostrenen 13.19 21 P **Pn 15 15 44.5 -1.2**
ROSF Rostrenen 13.19 21 P **Pn 15 15 44.5 -1.2**
ROSF Rostrenen 13.19 21 *e*Pn **Pn 15 15 44.5 -1.2**
GERES GERESS Array B 21.69 47 P **P 15 17 32.0 +2.8**
comp=E,0.2nm,0.3s,mb3.1,baz=218,slow=6.2,SNR=2.4
GERES LR LR 15 27 18.2
comp=E,22nm,18.4s,baz=91,slow=40
TORD Torodi Ar. Bea 25.45 152 P **P 15 18 04.9 -1.7**
comp=E,0.8nm,0.8s,mb3.3,baz=337,slow=9.7,SNR=4.4
WRA Warramunga Arr 145.17 72 PKPbc PKPbc 15 32 15.0 -1.2
comp=E,0.9nm,0.7s,baz=314,slow=2.7,SNR=14
WRA Warramunga Arr 145.17 72 PKPbc PKPbc 15 32 15.0 -1.2
ASAR Alice Springs 146.85 78 PKPbc PKPbc 15 32 20.2 -1.0
comp=E,0.6nm,0.8s,baz=307,slow=3.1,SNR=9.1
ASAR Alice Springs 146.85 78 PKPbc PKPbc 15 32 20.2 -1.0

NIED ***07*** *15:25:00, 36°.30N×141°.90E, h23km, Mw4.5 Best double couple: M0=5.99000×10^15 NP1:φ=20.00000°, δ=65.00000°, λ=91.00000°. NP2:φ=197.00000°, δ=25.00000°, λ=87.00000°.*
IDC ***07*** *15:25:09.9±0.6, 36°.14N×141°.83E, h0km, mb4.5/22, mb1 4.6/26, mb1mx4.5/34, mbtmp4.5/26, ML4.3/4, MS3.8/7, Ms1 3.8/7, ms1mx3.3/36, Error ellipse: s-maj=16.6km s-min=12.3km az=93.0*
ISCJB ***07*** *15:25:12.5±0.8, 36°.21N±0°.03×141°.89E±0°.04, h26km±5km, mb4.6/79, MS4.0/22, Error ellipse: s-maj=5.3km s-min=4.5km az=135.5*
JMA ***07*** *15:25:13.0±0.2, 36°.23N×141°.87E, h64km±5km, M4.6*
JMA Felt I J1.
MOS ***07*** *15:25:15.9±0.8, 36°.57N×141°.73E, h33km, mb4.9/35, MS4.2/10, Error ellipse: s-maj=10.7km s-min=5.6km az=115.7*
BJI ***07*** *15:25:15.3, 36°.35N×141°.51E, h37km, mB4.6/27, mb4.7/46, Ms4.2/38, Ms7 4.1/31*
NEIC ***07*** *15:25:15.4±0.2, 36°.16N×141°.83E, h35km, mb4.6/35, MW4.5(NIED), Error ellipse: s-maj=6.1km s-min=5.2km az=147.0*
NEIC Recorded [1 JMA] in Fukushima, Ibaraki, Miyagi and Tochigi.
DJA ***07*** *15:25:37, 35°.97N×139°.19E, h108km, mb4.8/12*
ISC 07 15:25:13.3±1.1, 36°.20N±0°.03×141°.85E±0°.03, h19km±6km, h35km±1.6km: pP-P, n194, σ0892/220, mb4.6/79, MS4.0/22, 7C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.94**	**239**	⇓P		**Pb**		**15 25 31.1**	**0.0**
CHOJ				S		**Sb**		**15 25 43.9**	**+0.7**
JHO	**Hitachi**	**1.11**	**292**	⇓P		**Pn**		**15 25 32.5**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.24**	**317**	S		**Sb**		**15 25 51.3**	**-0.3**
JFK	**Kawauchi**	**1.40**	**326**	⇓P		**Pn**		**15 25 36.6**	**-1.3**
BSO1	**Boso 1**	**1.70**	**205**	P		**Pn**		**15 25 41.8**	**-0.1**
BSO1				S		**Sn**		**15 26 04.9**	**+1.8**
BSO3	**Boso 3**	**1.77**	**218**	P		**Pn**		**15 25 43.0**	**+0.1**
JFT	**Otama**	**1.79**	**318**	⇓P		**Pn**		**15 25 43.3**	**+0.1**
JMM	**Marumori**	**1.87**	**333**	⇑P		**Pn**		**15 25 43.2**	**-1.1**
JAG	**Ashikaga**	**1.95**	**277**	P		**Pn**		**15 25 44.5**	**-0.9**
JFY	**Yanaizu**	**2.10**	**306**	⇑P		**Pn**		**15 25 47.7**	**+0.2**
JKT	**Katashina**	**2.17**	**286**	P		**Pn**		**15 25 48.7**	**+0.3**
JKT				S		**Sn**		**15 26 14.3**	**-0.5**
JRY	**Ryogami san**	**2.39**	**267**	P		**Pn**		**15 25 51.1**	**-0.4**
JRY				S		**Sn**		**15 26 20.2**	**-0.1**
JOD2	**Odawara 2**	**2.43**	**248**	P		**Pn**		**15 25 52.4**	**+0.4**
JNS	**Sasagawa**	**2.59**	**309**	P		**Pn**		**15 25 55.5**	**+1.3**
MJAR	**Matsushiro Arr**	**2.96**	**278**	Pn		**Pn**		**15 25 59.7**	**+0.5**
	58nm,0.3s,baz=318,slow=23,SNR=635								
MJAR				Sn		**Sn**		**15 26 40.2**	**+6.0**
	31nm,0.3s,baz=131,slow=20,SNR=5.8								
MAJO	**Matsushiro**	**2.96**	**278**	*e*P		**Pn**		**15 26 00.5**	**+1.2**
MAT	**Matsushiro**	**2.96**	**278**	P		**Pn**		**15 26 00.3**	**+1.0**
MAT				S		**Sn**		**15 26 38.8**	**+4.5**
JHJ	**Hachijo jima 2**	**3.51**	**210**	Pn		**Pn**		**15 26 06.9**	**0.0**
	60nm,0.3s,baz=107,slow=21,SNR=24								
JHJ				Sn		**Sn**		**15 26 45.5**	**-2.4**
	150nm,0.3s,baz=56,slow=23,SNR=12								
JHJ				LR		LR		15 27 20.4	
	comp=Z,163nm,18.4s,baz=318,slow=38								
ASAJ	**Asahikawa**	**7.93**	**4**	P		**Pn**		**15 27 06.0**	**-1.5**
ASAJ								15 28 33.8	
ASAJ				pmax		pmax			
	comp=Z,3.0nm,0.3s								
ASAJ				smax					
	comp=N,2.0nm,0.3s								
ASAJ	**Asahikawa**	**7.93**	**4**	Pn		**Pn**		**15 27 06.0**	**-1.5**
	comp=N,2.9nm,0.3s,baz=218,slow=8.7,SNR=16								
ASAJ				Sn		**Sn**		**15 28 33.8**	**-2.9**
	comp=N,2.4nm,0.3s,baz=270,slow=19,SNR=3.0								
YUK	**Yuzh-Kuril'sk**	**8.41**	**20**	*e*P		**Pn**		**15 27 10.5**	**-3.6**
YUK				*e*S		**Sn**		**15 28 39.0**	**-9.4**
YUK				smax					
	comp=N,380nm,0.5s								
YUK				smax					
	comp=E,380nm,0.5s								
CBIJ	**Chichi jima**	**9.08**	**178**	Pn		**Pn**		**15 27 20.1**	**-3.3**
	comp=E,14nm,0.3s,baz=265,slow=23,SNR=12								
CBIJ				Sn		**Sn**		**15 28 54.7**	**-10**
	comp=E,9.4nm,0.3s,baz=270,slow=20,SNR=3.5								
YSS	**Yuzh-Sakhalins**	**10.77**	**3**	*e*P		**Pn**		**15 27 45.9**	**-0.5**
YSS				pmax		pmax			
	comp=Z,30nm,0.9s								
YSS	**Yuzh-Sakhalins**	**10.77**	**3**	*e*P		**Pn**		**15 27 44.9**	**-1.5**
	comp=Z,25nm,0.8s								
KSRS	**Korea Array**	**11.23**	**281**	Pn		**Pn**		**15 27 56.5**	**+3.6**
	comp=Z,0.4nm,0.3s,baz=94,slow=13,SNR=40								
KSRS				LR		LR		15 32 16.9	
	comp=Z,452nm,18.2s,baz=155,slow=38								
MDJ	**Mudanjiang**	**12.56**	**316**	P		**Pn**		**15 28 12.7**	**+1.8**
MDJ				S		**Sn**		**15 30 32.6**	**+2.5**
MDJ				PcP		PcP		15 33 47.7	-1.4
MDJ				ScP		ScP		15 37 22.4	+1.3
MDJ				ScS		ScS		15 40 55.9	-1.2
MDJ				pmax		pmax			
	comp=Z,7.0nm,1.2s								
MDJ				pmax		pmax			
	comp=Z,49nm,5.0s								
MDJ				LR		LR			
	comp=N,440nm,17.8s								
MDJ				LR		LR			
	comp=E,430nm,15.7s								
MDJ				LR		LR			
	comp=Z,710nm,17.2s								
MDJ	**Mudanjiang**	**12.56**	**316**	*e*P		**Pn**		**15 28 14.9**	**+4.0**
	comp=Z,15nm,0.8s								
HABR	**Khabarovsk**	**13.25**	**340**	*e*P		**Pn**		**15 28 15.9**	**-4.4**
HABR				*e*				15 30 37.5	
HABR				pmax		pmax			
	comp=Z,31nm,2.0s								
HABR				pmax		pmax			
	comp=E,38nm,2.7s								
HABR				pmax		pmax			
	comp=N,16nm,2.4s								
HABR				MLR		MLR			
	comp=Z,383nm,16.0s								
CN2	**Changchun**	**14.67**	**306**	*e*P		**Pn**		**15 28 39.1**	**-0.6**
CN2				*es*P		sP		15 28 51.3	-2.3
CN2				*e*S		**Sn**		**15 31 18.4**	**-3.3**
CN2				pmax		pmax			
	comp=Z,20nm,0.7s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,500nm,16.0s								
CN2				LR		LR			
	comp=E,600nm,16.0s								
CN2				LR		LR			
	comp=Z,500nm,17.0s								
JOW	**Kunigami**	**14.86**	**235**	Pn		**Pn**		**15 28 48.2**	**+5.9**
	comp=Z,1.3nm,0.3s,baz=36,slow=8.3,SNR=8.0								
JOW				LR		LR		15 34 18.8	
	comp=Z,225nm,20.6s,baz=291,slow=37								
KLR	**Kul'dur**	**14.97**	**334**	*e*P		**Pn**		**15 28 37.8**	**-6.0**
KLR				MLR		MLR			
	comp=Z,2μm,13.0s								
SNY	**Shenyang**	**15.27**	**297**	⇑P		**Pn**		**15 28 46.4**	**-1.3**
SNY				S		**Sn**		**15 31 24.4**	**-12**
SNY				pmax		pmax			
	comp=Z,10.0nm,0.9s								
SNY				pmax		pmax			
	comp=Z,90nm,5.7s								
SNY				LR		LR			
	comp=N,310nm,15.0s								
SNY				LR		LR			
	comp=E,630nm,16.8s								
SNY				LR		LR			
	comp=Z,630nm,18.0s								
SSE	**Sheshan**	**17.93**	**259**	P		**Pn**		**15 29 20.9**	**-0.7**
SSE				pP		pP		15 29 30.9	+3.5
SSE				S		**Sn**		**15 32 40.1**	**-1.0**
SSE				pmax		pmax			
	comp=Z,28nm,0.7s								
SSE				pmax		pmax			
	comp=Z,65nm,8.6s								
SSE				LR		LR			
	comp=N,220nm,14.0s								
SSE				LR		LR			
	comp=E,170nm,14.0s								
SSE				LR		LR			
	comp=Z,260nm,13.0s								
NJ2	**Nanjing**	**19.47**	**264**	*e*P		**Pn**		**15 29 41.4**	**+1.1**
NJ2				pP		pP		15 29 50.2	+5.9
NJ2				sP		sP		15 29 54.8	+8.0
NJ2				PP				15 30 01.4	
NJ2				S		**Sn**		**15 33 13.2**	**-5.0**
NJ2				sS		sS		15 33 24.7	-2.0
NJ2				pmax		pmax			
	comp=Z,20nm,0.6s								
NJ2				pmax		pmax			
	comp=Z,1μm,4.5s								
NJ2				LR		LR			
	comp=N,380nm,15.3s								
NJ2				LR		LR			
	comp=E,230nm,14.9s								
PETK	**Petropavlovsk-**	**20.24**	**28**	P		**P**		**15 29 47.5**	**+0.3**
	comp=E,6.9nm,1.0s,baz=219,slow=12,SNR=4.4								
BJI	**Beijing**	**20.54**	**289**	P		**P**		**15 29 51.7**	**+1.2**
BJI				S		**S**		**15 33 39.4**	**0.0**
BJI				pmax		pmax			
	comp=Z,18nm,0.6s								
BJI				pmax		pmax			
	comp=Z,130nm,6.3s								
BJI				LR		LR			
	comp=N,260nm,13.6s,MS4.0								
BJI				LR		LR			
	comp=E,300nm,12.7s,MS4.0								
BJI				LR		LR			
	comp=Z,150nm,18.1s								
HIA	**Hailar**	**20.74**	**316**	*e*P		**P**		**15 29 52.7**	**0.0**
HIA				pmax		pmax			
	comp=Z,8.0nm,0.6s								
HIA	**Hailar**	**20.74**	**316**	*e*P		**P**		**15 29 52.7**	**0.0**
	comp=Z,8.3nm,0.6s								
TPUB	**Ta-pu**	**22.40**	**241**	*e*P		**P**		**15 30 07.5**	**-3.2**
	comp=Z,13nm,0.7s,mb4.5								
QZH	**Quanzhou**	**22.89**	**247**	*e*P		**P**		**15 30 16.3**	**+0.4**
QZH				S		**S**		**15 34 19.0**	**-5.9**
QZH				LR		LR			
	comp=N,380nm,9.6s								
QZH				LR		LR			
	comp=E,360nm,10.2s								
QZH				LR		LR			
	comp=Z,660nm,16.9s								
CLNS	**Chul'man**	**23.59**	**336**	*e*P		**P**		**15 30 22.4**	**-0.4**
CLNS				*e*PP				15 30 27.3	
CLNS				*e*				15 30 48.5	
CLNS				*e*				15 34 11.1	
CLNS				*e*S		**S**		**15 34 30.8**	**-4.9**
CLNS				*e*SS				15 35 34.4	
CLNS				pmax		pmax			
	comp=N,16nm,1.0s								
CLNS				pmax		pmax			
	comp=E,6.0nm,1.0s								
CLNS				pmax		pmax			
	comp=Z,22nm,1.0s,mb4.5								
CLNS				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb4.2								
CLNS				pmax		pmax			
	comp=N,8.0nm,1.3s								
CLNS				pmax		pmax			
	comp=E,10.0nm,1.1s								
CLNS				smax					
	comp=N,89nm,14.4s								
CLNS				smax					
	comp=E,146nm,13.9s								
CLNS				MLR		MLR			
	comp=E,229nm,14.0s,MS4.0								
CLNS				MLR		MLR			
	comp=Z,281nm,13.0s,MS3.9								
CLNS				MLR		MLR			
	comp=N,321nm,15.0s,MS4.0								
WHN	**Wuhan**	**23.61**	**264**	P		**P**		**15 30 13.8**	**-9.4**
WHN				S		**S**		**15 34 45.2**	**+8.7**
WHN				LR		LR			
	comp=N,310nm,5.2s								
WHN				LR		LR			
	comp=E,1μm,16.9s								
WHN				LR		LR			
	comp=Z,880nm,15.6s,MS4.3								
HHC	**Hu-ho-hao-te**	**24.08**	**290**	*e*P		**P**		**15 30 28.3**	**+0.8**

HHC pP 15 30 35.3
HHC sP sP 15 30 39.1 +3.5
HHC PP 15 31 03.3
HHC PcP PcP 15 34 09.1 +0.6
HHC S **S** **15 34 43.1 -0.9**
HHC sS sS 15 34 53.7 +0.3
HHC ScP ScP 15 37 46.1 +0.1
HHC PcS PcS 15 37 48.8 +0.7
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.3
HHC pmax pmax
comp=Z,35nm,6.0s
HHC LR LR
comp=N,230nm,13.5s,MS4.1
HHC LR LR
comp=E,300nm,12.2s,MS4.1
HHC LR LR
comp=Z,360nm,13.7s,MS4.0
XAN Xi'an 26.95 275 P **P** **15 30 52.3 -1.3**
XAN pP pP 15 31 00.8 +1.5
XAN sP sP 15 31 05.0 +3.3
XAN S **S** **15 35 29.4 -0.4**
XAN sS sS 15 35 44.4 +5.1
XAN pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
XAN pmax pmax
comp=Z,11nm,5.7s
XAN LR LR
comp=N,110nm,15.4s,MS3.6
XAN LR LR
comp=E,62nm,15.9s,MS3.6
XAN LR LR
comp=Z,65nm,15.0s,MS3.3
YAK Yakutsk 26.96 347 *i* P **P** **15 30 52.5 -0.9**
YAK pmax pmax
comp=Z,79nm,1.5s,mb5.0
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=N,30nm,1.3s
YAK Yakutsk 26.96 347 *e*P **P** **15 30 52.7 -0.6**
comp=N,51nm,0.8s,mb5.1
SEY Seymchan 27.55 10|| *e*P **P** **15 30 59.5 +0.9**
ENH Enshi 27.62 267 *e*P **P** **15 30 58.7 -1.0**
comp=N,50nm,0.6s,mb5.3
BOD Bodaibo 28.42 328 *e*P **P** **15 31 05.6 -0.9**
BOD pmax pmax
comp=Z,12nm,1.0s,mb4.5
SONM Songino Array 28.55 305 P **P** **15 31 07.6 -0.1**
comp=Z,15nm,0.8s,mb4.8,baz=101,slow=8.6,SNR=41
SONM LR LR 15 43 01.7
comp=Z,192nm,18.3s,MS3.7,baz=70,slow=38
LZH Lanzhou 30.56 281 *e*P **P** **15 31 25.5 -0.2**
LZH pP pP 15 31 37.0 +5.5
LZH sP sP 15 31 40.5 +6.7
LZH PP PP 15 32 26.0 -8.7
LZH *e*S **S** **15 36 23.1 -3.5**
LZH sS sS 15 36 39.2 +3.1
LZH SS SS 15 38 03.0 -34
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,91nm,5.5s
LZH LR LR
comp=E,710nm,15.8s
LZH LR LR
comp=Z,480nm,16.6s,MS4.2
IRK Irkutsk 30.92 313 *e*P **P** **15 31 29.1 +0.4**
IRK pmax pmax
comp=Z,18nm,2.0s,mb4.5
ZAK Zakamensk 31.07 309 *e*P **P** **15 31 29.6 -0.4**
ZAK pmax pmax
comp=Z,11nm,1.2s,mb4.6
TLY Talaya 31.14 312 *e*P **P** **15 31 31.1 +0.4**
TLY *e* 15 32 26.8
TLY pmax pmax
comp=Z,21nm,1.2s,mb4.8
TLY MLR MLR
comp=Z,375nm,16.0s,MS4.2
GYA Guiyang 31.44 262 P **P** **15 31 33.8 +0.3**
GYA pP pP 15 31 44.0 +4.7
GYA sP sP 15 31 49.5 +7.8
GYA PP PP 15 32 39.4 -5.2
GYA S **S** **15 36 38.4 -2.0**
GYA sS sS 15 36 55.9 +5.9
GYA ScP ScP 15 38 06.7 -2.0
GYA SS SS 15 38 25.6 -30
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,490nm,16.9s,MS4.4
GYA LR LR
comp=E,440nm,17.2s,MS4.4
GYA LR LR
comp=Z,480nm,15.9s,MS4.3
MOY Mondy 32.75 311 *e*P **P** **15 31 45.3 +0.6**
MOY pmax pmax
comp=Z,13nm,1.3s,mb4.7
QIZ Qiongzhong 32.92 247 P **P** **15 31 48.8 +2.3**
QIZ LR LR
comp=Z,140nm,16.1s,MS3.8
GTA Gaotai 33.15 288 *e*P **P** **15 31 48.7 +0.3**
GTA pP pP 15 31 58.0 +3.8
GTA sP sP 15 32 01.9 +5.3
GTA PP PP 15 33 01.6 -1.8
GTA PcP PcP 15 34 32.6 +1.5
GTA S **S** **15 37 09.6 +2.7**
GTA pmax pmax
comp=Z,14nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,38nm,6.3s
GTA LR LR
comp=N,140nm,18.0s,MS4.0
GTA LR LR
comp=E,240nm,15.9s,MS4.0
GTA LR LR
comp=Z,290nm,17.1s,MS4.0
BILL Bilibino 34.73 16 *e*P **P** **15 32 01.7 -0.1**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BILL MLR MLR
comp=Z,100nm,18.0s,MS3.6
BILL Bilibino 34.73 16 *e*P **P** **15 32 01.3 -0.5**
comp=Z,3.2nm,0.9s,mb4.2
KMI Kunming 35.19 263 P **P** **15 32 06.0 -0.3**
KMI pmax pmax
comp=Z,79nm,1.7s,mb5.4
TIXI Tiksi 36.16 353 *e*P **P** **15 32 13.9 -0.1**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TIXI MLR MLR
comp=Z,225nm,15.0s,MS4.1
TIXI Tiksi 36.16 353 *e*P **P** **15 32 13.0 -1.0**
comp=Z,4.0nm,0.8s,mb4.4
WMQ Urumqi 41.53 298 *e*P **P** **15 33 00.9 +1.5**
WMQ pmax pmax
comp=Z,27nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,150nm,3.4s
WMQ LR LR
comp=N,96nm,20.0s,MS3.7
WMQ LR LR
comp=E,60nm,24.0s,MS3.7
WMQ LR LR
comp=Z,130nm,18.0s
LSA Lhasa 42.64 276 P **P** **15 33 09.5 +0.9**
LSA Lhasa 42.64 276 *e*P **P** **15 33 09.4 +0.8**
LSA pmax pmax
comp=Z,14nm,0.8s,mb4.7
LSA Lhasa 42.64 276 *e*P **P** **15 33 09.4 +0.8**
comp=Z,14nm,0.8s,mb4.8
ZAA0 Zalesovo Array 42.74 313 *e*P **P** **15 33 08.9 -0.2**
ZALV Zalesovo Beam 42.74 313 P **P** **15 33 08.9 -0.2**
ZALV 15 35 00.0
ZALV Zalesovo Beam 42.74 313 P **P** **15 33 08.9 -0.2**
comp=Z,12nm,0.8s,mb4.7,baz=91,slow=6.8,SNR=51
ZALV PcP PcP 15 35 00.0 -0.4
comp=Z,2.9nm,0.6s,baz=105,slow=3.7,SNR=4.3
ZALV LR LR 15 51 44.0
comp=Z,161nm,18.5s,MS4.0,baz=220,slow=37
NVS Novosibirsk 43.67 314 *e*P **P** **15 33 15.7 -0.9**
NVS pmax pmax
comp=E,16nm,1.1s
NVS pmax pmax
comp=Z,18nm,1.1s,mb4.7
MK31 Makanchi Array 44.86 303 *e*P **P** **15 33 25.5 -0.8**
MKAR Makanchi Array 44.86 303 P **P** **15 33 26.3 +0.1**
comp=Z,11nm,0.7s,mb4.8,baz=96,slow=8.6,SNR=42
MKAR LR LR 15 52 49.9
comp=Z,124nm,20.3s,MS3.8,baz=262,slow=37
MKAR Makanchi Array 44.86 303 P **P** **15 33 26.3 +0.1**
MKAR LR LR 15 52 49.9
KURK Kurchatov 46.73 309 P **P** **15 33 41.0 +0.1**
KURK pmax pmax
comp=Z,15nm,0.7s,mb5.0
KURK Kurchatov 46.73 309 P **P** **15 33 41.0 0.0**
comp=Z,15nm,0.7s,mb5.0,baz=84,slow=7.8,SNR=24
KURK Kurchatov 46.73 309 *e*P **P** **15 33 40.4 -0.5**
comp=Z,19nm,0.7s,mb5.1
KAKA Kakadu 49.45 192 *e*P **P** **15 34 01.3 -1.0**
comp=Z,14nm,0.8s,mb5.0
TKM2 Tokmak 2 50.34 299 P **P** **15 34 10.1 +1.3**
SNR=8.3
TKM2 Tokmak 2 50.34 299 *e*P **P** **15 34 09.1 +0.2**
TKM2 pmax pmax
comp=Z,11nm,0.6s,mb5.1
TKM2 Tokmak 2 50.34 299 *e*P **P** **15 34 09.1 +0.2**
comp=Z,11nm,0.6s,mb5.1
KZA Kyzart 50.82 298 P **P** **15 34 14.3 +1.8**
SNR=8.5
USP Ospenovka 51.02 300 P **P** **15 34 14.3 +0.4**
SNR=7.9
KSH Kashi 51.07 295 *e*P **P** **15 34 18.5 +4.1**
KSH *e*pP pP 15 34 28.5 +8.1
KSH *e*sP sP 15 34 32.1 +9.4
KSH *e*PcP PcP 15 35 33.1 +3.0
KSH *e*PP PP 15 36 16.1 +5.2
KSH *e*ScP ScP 15 39 25.6 +0.1
KSH *e*PcS PcS 15 39 29.1 +1.4
KSH *e*S **S** **15 41 33.6 +2.6**
KSH *e*sS sS 15 41 51.0 +10
KSH *e*ScS ScS 15 44 03.1 -1.0
KSH *e*SS SS 15 45 08.1 +2.2
KSH pmax pmax
comp=Z,93nm,4.7s
KSH LR LR
comp=N,84nm,6.2s
KSH LR LR
comp=E,140nm,8.8s
AAK Ala-Archa 51.20 299 P **P** **15 34 15.7 +0.4**
AAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AAK MLR MLR
comp=Z,498nm,18.7s,MS4.6
AAK Ala-Archa 51.20 299 P **P** **15 34 15.7 +0.4**
comp=Z,2.6nm,0.6s,mb4.3,baz=131,slow=7.0,SNR=11
AAK LR LR 15 57 20.1
comp=Z,498nm,18.7s,MS4.6,baz=38,slow=38
AAK Ala-Archa 51.20 299 *e*P **P** **15 34 15.5 +0.2**
comp=Z,7.4nm,0.9s,mb4.6
UCH Uchtor 51.30 299 *e*P **P** **15 34 17.2 +1.1**
comp=Z,3.8nm,0.8s,mb4.4
BVAR Borovoye Array 51.40 313 P **P** **15 34 16.4 -0.3**
comp=Z,3.9nm,0.7s,mb4.5,baz=79,slow=7.7,SNR=31
BVAR PcP PcP 15 35 31.0 0.0
comp=Z,2.8nm,0.7s,baz=95,slow=3.3,SNR=5.3
BRVK Borovoye 51.45 313*c i*P **P** **15 34 17.1 0.0**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
BRVK MLR MLR
comp=Z,244nm,16.0s,MS4.3
BRVK Borovoye 51.45 313 *e*P **P** **15 34 17.2 +0.1**
comp=Z,9.9nm,0.8s,mb4.8
MENT Mentasta 51.53 34 *e*P **P** **15 34 18.1 +0.7**
PSI Prapat 51.67 240 P **P** **15 34 18.9 -0.3**
comp=Z,3.2nm,0.5s,mb4.5,baz=16,slow=8.4,SNR=5.8
EKS2 Erkin-Say 51.70 299 P **P** **15 34 19.6 +0.5**
SNR=7.0
EKS2 Erkin-Say 51.70 299 *e*P **P** **15 34 19.3 +0.2**
comp=Z,2.8nm,0.6s,mb4.4
AML Almayashu 51.91 299 P **P** **15 34 22.2 +1.5**
SNR=26
AML Almayashu 51.91 299 *e*P **P** **15 34 21.9 +1.2**
comp=Z,13nm,0.7s,mb5.0
INK Inuvik 54.97 27 P **P** **15 34 43.6 +0.9**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 54.97 27 P **P** **15 34 43.6 +0.9**
comp=Z,3.2nm,0.6s,mb4.6,baz=296,slow=6.6,SNR=18
INK Inuvik 54.97 27 *e*P **P** **15 34 43.5 +0.7**
comp=Z,4.8nm,1.0s,mb4.5
SVE Sverdlovsk 56.01 319|| *e*P **P** **15 34 51.1 +0.8**
SVE pmax pmax
comp=Z,21nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,362nm,17.0s,MS4.5
FITZ Fitzroy Crossi 56.14 199 *e*P **P** **15 34 56.0 +4.3**
comp=Z,5.7nm,0.6s,mb4.8
WRAB Tennant Creek 56.27 188 *e*P **P** **15 34 51.7 -0.9**
WRAB pmax pmax
comp=Z,12nm,1.1s,mb4.8
WRAB Tennant Creek 56.27 188 *e*P **P** **15 34 51.7 -0.9**
comp=Z,12nm,1.1s,mb4.8
WB2 Warramunga Arr 56.28 188 *e*P **P** **15 34 50.1 -2.5**
WRA Warramunga Arr 56.28 188 P **P** **15 34 51.8 -0.8**
comp=Z,3.3nm,0.8s,mb4.4,baz=6.3,slow=7.4,SNR=38
ARU Arti 57.22 319*c i*P **P** **15 34 58.7 -0.3**
ARU 15 37 03.1
ARU S **S** **15 42 51.5 -2.0**
ARU 15 46 32.2
ARU pmax pmax
comp=Z,22nm,1.2s,mb5.1
ARU MLR MLR
comp=Z,221nm,16.0s,MS4.4
ARU Arti 57.22 319 *e*P **P** **15 34 58.6 -0.4**
comp=Z,25nm,1.3s,mb5.1
HYB Hyderabad 58.54 269 *i* P **P** **15 35 09.0 +0.2**
ABKAR Akbulak array 58.75 311 *e*P **P** **15 35 09.1 -0.7**
comp=Z,4.5nm,0.6s,mb4.7
AKTK Aktyubinsk 59.49 312 P **P** **15 35 14.4 -0.5**
AKTO Aktyubinsk 59.49 312 P **P** **15 35 14.4 -0.5**
comp=Z,5.9nm,0.8s,mb4.7,baz=80,slow=12,SNR=19
ASAR Alice Springs 60.01 188 P **P** **15 35 17.9 -0.8**
comp=Z,0.8nm,0.7s,mb3.9,baz=1.8,slow=6.4,SNR=20
KBS Kingsbay 61.54 350|| *e*P **P** **15 35 30.2 +1.7**
KBS pmax pmax
comp=Z,22nm,2.5s,mb4.8
RES Resolute Bay 63.32 14 *e*P **P** **15 35 40.4 -0.1**
RES pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
RES Resolute Bay 63.32 14 *e*P **P** **15 35 40.4 -0.1**
comp=Z,7.5nm,1.1s,mb4.7
KEV Kevo 64.35 339 *e*P **P** **15 35 46.6 -0.7**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KEV Kevo 64.35 339 *e*p **P** **15 35 46.6 -0.7**
comp=Z,4.1nm,0.7s,mb4.6
YKA Yellowknife Ar 64.36 30 P **P** **15 35 47.4 0.0**
comp=Z,2.0nm,0.8s,mb4.2,baz=300,slow=6.5,SNR=21
YKA Yellowknife Ar 64.36 30 P **P** **15 35 47.4 0.0**
KLMR Klimovskoe 64.65 328 *e*P **P** **15 35 49.0 -0.4**
KLMR pmax pmax
comp=Z,14nm,1.3s,mb4.8
ARCES ARCESS Array B 64.90 340 P **P** **15 35 51.0 0.0**
comp=Z,4.5nm,0.8s,mb4.6,baz=51,slow=8.3,SNR=17
JOF Joensuu 66.86 332 *e*P **P** **15 36 01.3 -2.3**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
JOF Joensuu 66.86 332 *e*p **P** **15 36 01.3 -2.3**
comp=Z,4.4nm,0.6s,mb4.7
STKA Stephens Creek 67.72 180 *e*P **P** **15 36 08.4 -0.9**
comp=Z,2.2nm,0.9s,mb4.2
STKA Stephens Creek 67.72 180 P **P** **15 36 08.5 -0.8**
comp=Z,3.3nm,1.0s,mb4.3,baz=34,slow=2.5,SNR=4.9
FORT Forrest 67.87 193 *e*P **P** **15 36 10.3 0.0**
comp=Z,9.6nm,0.8s,mb4.9
OBN Obninsk 68.97 324 *e*P **P** **15 36 17.2 +0.2**
OBN pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.5
KAF Kangasniemi 69.21 333 *e*P **P** **15 36 17.3 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KAF Kangasniemi 69.21 333 *e*p **P** **15 36 17.3 -1.1**
comp=Z,3.9nm,0.5s,mb4.6
FINES FINESS Array B 69.72 333 P **P** **15 36 21.3 -0.2**
comp=Z,8.4nm,0.8s,mb4.7,baz=44,slow=6.3,SNR=22
FINES FINESS Array B 69.72 333 P **P** **15 36 21.3 -0.2**
VSR Storozhevoye 69.79 319 *e*P **P** **15 36 22.0 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,8.0nm,0.7s
VSU Vasula 71.35 330 *i* P **P** **15 36 31.5 0.0**
VSU pmax pmax
comp=Z,11nm,0.6s,mb5.0
SUMG Summit 71.52 0 *e*P **P** **15 36 33.8 +1.4**
comp=Z,5.6nm,1.1s,mb4.4
KIV Kislovodsk 71.72 311 *e*P **P** **15 36 33.6 -0.4**
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,45nm,19.0s,MS3.8
FFC Flin Flon 74.22 33 *i* P **P** **15 36 49.5 +0.9**
FFC Flin Flon 74.22 33 *e*P **P** **15 36 48.0 -0.6**
comp=Z,2.8nm,1.0s,mb4.2
LRM Limekiln Ridge 74.50 44 *e*P **P** **15 36 51.5 +1.0**
comp=Z,42nm,1.0s,mb5.3
FCC Fort Churchill 74.59 27 *e*P **P** **15 36 50.4 -0.3**
comp=Z,0.1nm,1.0s
NB2 NORSAR Subarra 75.09 338 P **P** **15 36 53.4 -0.2**
comp=Z,15nm,1.0s,mb4.9,baz=42,slow=5.9
NOA NORSAR Array B 75.09 338 P **P** **15 36 53.5 -0.1**
comp=Z,7.3nm,0.8s,mb4.6,baz=39,slow=5.7,SNR=20
AKASG Malin Array Be 75.17 323 P **P** **15 36 53.7 -0.5**
comp=Z,5.8nm,0.5s,mb4.7,baz=46,slow=6.0,SNR=24
AKBB Malin Array Si 75.17 323 *e*P **P** **15 36 53.7 -0.5**
KIEV Kiev 75.19 323 *e*P **P** **15 36 53.7 -0.6**
KIEV pmax pmax
comp=Z,11nm,0.9s,mb4.8
KIEV Kiev 75.19 323 *e*P **P** **15 36 53.7 -0.6**
comp=Z,11nm,0.9s,mb4.8
NVAR Mina Array Bea 75.21 53 P **P** **15 36 55.8 +1.1**
comp=Z,2.2nm,1.0s,mb4.0,baz=280,slow=7.3,SNR=4.7
HWUT Hardware Ranch 77.54 47 *e*P **P** **15 37 08.7 +0.8**
comp=Z,4.3nm,0.8s,mb4.4
BUR08 Bucovina Ar. S 79.17 322 *e*P **P** **15 37 16.9 +0.1**
BR131 Keskin Array S 79.67 312 *e*P **P** **15 37 20.1 +0.5**
comp=Z,3.4nm,0.9s,mb4.3
BRTR Keskin Array B 79.67 312 P **P** **15 37 19.8 +0.1**
comp=Z,2.9nm,0.8s,mb4.3,baz=108,slow=4.0,SNR=14
KOLS Kolonicke sedl 79.70 324 *e*P **P** **15 37 20.2 +0.6**
KOLS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KOLS Kolonicke sedl 79.70 324 *e*P **P** **15 37 20.2 +0.6**
comp=Z,3.4nm,1.1s,mb4.2
KOLS Kolonicke sedl 79.70 324 *e*P **P** **15 37 20.2 +0.6**
STHS Stebnicka Huta 79.84 325 *e*P **P** **15 37 22.0 +1.6**
STHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
STHS Stebnicka Huta 79.84 325 *e*P **P** **15 37 22.0 +1.6**
comp=Z,4.3nm,1.3s,mb4.2
STHS Stebnicka Huta 79.84 325 *e*P **P** **15 37 22.0 +1.6**
KECS Kecovo 80.86 325 *e*P **P** **15 37 21.6 -4.3**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 80.86 325 *e*P **P** **15 37 21.6 -4.3**
comp=Z,1.5nm,0.8s,mb4.0
KECS Kecovo 80.86 325 *e*P **P** **15 37 21.6 -4.3**
VYHS Vyhne 81.61 326 *e*P **P** **15 37 30.5 +0.6**
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
VYHS Vyhne 81.61 326 *e*P **P** **15 37 30.5 +0.6**
comp=Z,1.9nm,0.8s,mb4.1
VYHS Vyhne 81.61 326 *e*P **P** **15 37 30.5 +0.6**
BRG Berggiesshubel 81.95 330 *e*P **P** **15 37 31.7 +0.1**
comp=Z,3.3nm,0.8s,mb4.3
BRG Berggiesshubel 81.95 330 *e*P **P** **15 37 31.7 +0.1**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
CLL Collm 82.00 330 *i* P **P** **15 37 31.0 -0.8**
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 82.00 330 *i* P **P** **15 37 31.0 -0.8**
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 82.00 330 *i* P **P** **15 37 31.0 -0.8**
comp=Z,6.0nm,0.9s,mb4.5
KHC Kasperske Hory 83.44 329 *e*P **P** **15 37 39.2 -0.1**
comp=Z,3.9nm,0.8s,mb4.5
GERES GERESS Array B 83.61 328 P **P** **15 37 40.0 -0.3**
comp=Z,1.6nm,0.6s,mb4.3,baz=20,slow=4.3,SNR=11
CDF Champ du Feu 86.55 332 *e*P **P** **15 37 55.1 +0.1**
comp=Z,9.4nm,0.9s,mb4.7
CDF Champ du Feu 86.55 332 *e*P **P** **15 37 55.1 +0.1**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
CDF Champ du Feu 86.55 332 *e*P **P** **15 37 55.1 +0.1**
comp=Z,4.7nm,0.9s,mb4.7
LOR Lormes 88.78 333 *e*P **P** **15 38 06.0 +0.2**
FLN La Foliniere 89.02 336 *e*P **P** **15 38 07.5 +0.7**
LPG La Plagne 89.14 330 *e*P **P** **15 38 07.8 +0.3**
SMF Signal de Mont 89.31 333 *e*P **P** **15 38 08.6 +0.3**
AVF Avril sur Loir 89.37 333 *e*P **P** **15 38 08.7 +0.2**
comp=Z,16nm,1.1s,mb5.0
AVF Avril sur Loir 89.37 333 *e*P **P** **15 38 08.7 +0.2**
AVF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
AVF Avril sur Loir 89.37 333 *e*P **P** **15 38 08.7 +0.2**
comp=Z,8.1nm,1.1s,mb5.0
GRR Gorron 89.46 336 *e*P **P** **15 38 09.2 +0.3**
MBDF Montbardon 89.77 330 *e*P **P** **15 38 09.8 -0.6**
ORIF Oris-en-Rattie 89.97 330 *e*P **P** **15 38 12.0 +0.7**
comp=Z,4.9nm,0.6s,mb4.7
ORIF Oris-en-Rattie 89.97 330 *e*P **P** **15 38 12.0 +0.7**
ORIF pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
ORIF Oris-en-Rattie 89.97 330 *e*P **P** **15 38 12.0 +0.7**
comp=Z,2.5nm,0.6s,mb4.7
TCF Toulx Ste Croi 90.22 333 *e*P **P** **15 38 12.9 +0.4**
TXAR Lajitas Array 90.35 53 P **P** **15 38 13.6 +0.2**
comp=Z,0.4nm,0.5s,mb4.0,baz=283,slow=6.1,SNR=2.8
MFF Saint Martin d 90.78 335 *e*P **P** **15 38 15.5 +0.4**
RJF Les Rejaudoux 91.31 333 *e*P **P** **15 38 18.0 +0.4**
CAF Calviac 91.43 333 *e*P **P** **15 38 18.9 +0.7**
comp=Z,9.8nm,0.9s,mb4.8
CAF Calviac 91.43 333 *e*P **P** **15 38 18.9 +0.7**
CAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
CAF Calviac 91.43 333 *e*P **P** **15 38 18.9 +0.7**
comp=Z,4.9nm,0.9s,mb4.8
LASF Ste Croix 91.47 331 *e*P **P** **15 38 18.8 +0.5**
ETSF Etsaut 94.14 333 *e*P **P** **15 38 31.5 +0.8**

ISCJB ***07*** *15:29:12.7±2.3,21°.9N±0°.1×143°.2E±0°.3,h204km±21km, mb3.4/6, Error ellipse: s-maj=44.6km s-min=21.1km az=1.2*
IDC ***07*** *15:29:13.0±2.3,21°.88N×143°.37E,h193km±21km,mb3.3/6, mb1 3.5/7,mb1mx3.2/25,mbtmp3.3/7,Error ellipse: s-maj=31.2km s-min=15.1km az=95.0*
ISC 07 15:29:13.3±2.3,21°.9N±0°.1×143°.3E±0°.3,h194km±21km,n7, σ0=54/8,mb3.4/6,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.31**	**349**	P	**Pn**	**15 30 32.2**	**+0.7**
	14nm,0.3s,baz=249,slow=20,SNR=6.8						
CBIJ				S	**Sn**	**15 31 32.7**	**-0.6**
	12nm,0.3s,baz=287,slow=19,SNR=5.2						
WRA	**Warramunga Arr**	**42.47**	**193**	P	**P**	**15 36 49.0**	**-0.4**
	0.2nm,0.3s,mb3.0,baz=11,slow=9.3,SNR=4.8						
ASAR	**Alice Springs**	**46.18**	**192**	P	**P**	**15 37 18.7**	**0.0**
	0.5nm,0.8s,mb2.9,baz=15,slow=6.3,SNR=2.4						
KURK	**Kurchatov**	**57.45**	**317**	P	**P**	**15 38 42.0**	**+0.3**
	0.8nm,0.6s,mb3.5,baz=92,slow=7.8,SNR=4.6						
BVAR	**Borovoye Array**	**62.64**	**319**	P	**P**	**15 39 17.0**	**0.0**
	0.6nm,0.5s,mb3.5,baz=95,slow=7.3,SNR=4.9						
YKA	**Yellowknife Ar**	**76.24**	**28**	P	**P**	**15 40 39.7**	**-0.3**
	1.5nm,0.5s,mb3.9,baz=292,slow=5.8,SNR=24						
NVAR	**Mina Array Bea**	**82.92**	**52**	P	**P**	**15 41 16.8**	**+0.2**
	1.0nm,0.8s,mb3.6,baz=275,slow=7.3,SNR=3.8						

IDC ***07*** *15:29:55.6±0.8,23°.07N×101°.02E,h0km,mb3.8/9, mb1 3.9/10,mb1mx3.7/26,mbtmp3.8/10,ML3.7/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/32,Error ellipse: s-maj=31.5km s-min=15.2km az=75.0*
BJI ***07*** *15:29:58.8,23°.20N×100°.84E,h22km,ML4.1/7,Ms3.7/1, Ms7 3.8/2*
NEIC ***07*** *15:30:00.8±0.4,23°.02N×100°.94E,h35km,mb4.2/1,Error*

ellipse: s-maj=14.1km s-min=6.3km az=85.0

ISC 07 15:29:56.5±0.8,23°.04N±0°.04×101°.03E±0°.08,h4km±6km, n27,σ1§00/35,mb3.9/10,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.60**	**37**	Pn	**Pn**	**15 30 40.9**	**+1.6**
KMI				Pg	**Pg**	**15 30 46.3**	**0.0**
KMI				Sg	**Sg**	**15 31 20.1**	**+0.1**
KMI	comp=N,230nm,1.1s			smax			
KMI	comp=E,370nm,1.1s			smax			
CHG	**Chiang Mai**	**4.63**	**205**	PG	**Pg**	**15 31 25.9**	**+0.6**
CHG				SG	**Sg**	**15 32 30.9**	**+5.5**
CHTO	**Chiang Mai**	**4.63**	**205**	*e*Pn	**Pn**	**15 31 08.0**	**+0.7**
CHTO				*e*Pg	**Pg**	**15 31 24.4**	**-0.9**
CHTO				*e*Sg	**Sg**	**15 32 25.2**	**-0.1**
CM31	**Chiang Mai Arr**	**4.96**	**204**	*e*Pn	**Pn**	**15 31 11.8**	**+0.1**
CM31				*e*Pg	**Pg**	**15 31 30.2**	**-1.3**
CM31				*e*Sg	**Sg**	**15 32 37.6**	**+1.8**
CMAR	**Chiang Mai Arr**	**4.96**	**204**	Pn	**Pn**	**15 31 12.4**	**+0.6**
CMAR	comp=E,0.8nm,0.3s,baz=16,slow=12,SNR=14			Pg	**Pg**	**15 31 29.8**	**-1.8**
CMAR	comp=E,1.8nm,0.3s,baz=18,slow=13,SNR=48			Lg		15 32 34.6	
CD2	**Chengdu**	**8.21**	**17**	P	**Pn**	**15 32 01.3**	**+4.9**
CD2				S	**Sn**	**15 33 36.0**	**+6.4**
CD2	comp=N,460nm,9.5s			LR	LR		
CD2	comp=Z,410nm,10.7s			LR	LR		
GUN	**Gumba**	**14.51**	**293**	*e*P	**Pn**	**15 33 27.3**	**+4.6**
PKI	**Pulchoki**	**14.83**	**291**	*e*P	**Pn**	**15 33 34.2**	**+7.2**
PKIN	**Phulchoki**	**14.84**	**291**	*e*P	**Pn**	**15 33 33.2**	**+6.0**
PKIN	**Phulchoki**	**14.84**	**291**	*e*P	**Pn**	**15 33 34.1**	**+6.9**
KKN	**Kakani**	**14.99**	**292**	*e*P	**Pn**	**15 33 34.5**	**+5.3**
DMN	**Daman**	**15.10**	**291**	*e*P	**Pn**	**15 33 36.1**	**+5.4**
GKN	**Gorkha**	**15.60**	**292**	*e*P	**Pn**	**15 33 39.0**	**+1.8**
PYUN	**Piuthan**	**17.03**	**291**	*e*P	**Pn**	**15 33 53.8**	**-1.8**
PSI	**Prapat**	**20.22**	**186**	LR	LR	15 42 35.1	
MK31	**Makanchi Array**	**28.10**	**332**	*e*P	**P**	**15 35 49.7**	**+0.5**
MKAR	**Makanchi Array**	**28.10**	**332**	P	**P**	**15 35 49.5**	**+0.2**
KURK	**Kurchatov**	**32.67**	**333**	P	**P**	**15 36 29.0**	**-0.6**
ZALV	**Zalesovo Beam**	**33.20**	**342**	P	**P**	**15 36 35.2**	**+1.0**
BVAR	**Borovoye Array**	**37.92**	**330**	P	**P**	**15 37 13.8**	**-1.0**
BRVK	**Borovoye**	**37.99**	**330**	*e*P	**P**	**15 37 15.2**	**-0.1**
WRA	**Warramunga Arr**	**53.68**	**140**	P	**P**	**15 39 19.5**	**-0.1**
WB2	**Warramunga Arr**	**53.69**	**140**	P	**P**	**15 39 19.8**	**+0.1**
ASAR	**Alice Springs**	**56.36**	**143**	P	**P**	**15 39 38.9**	**0.0**
AKASG	**Malin Array Be**	**61.10**	**316**	P	**P**	**15 40 10.2**	**-1.5**
ARCES	**ARCESS Array B**	**63.56**	**339**	P	**P**	**15 40 26.6**	**-1.3**
YKA	**Yellowknife Ar**	**90.17**	**16**	P	**P**	**15 42 57.2**	**-0.6**

*IDC **07** 15:37:18.1±1.9,36°.23N×142°.15E,h0km,mb3.5/6, mb1 3.7/9,mb1mx3.5/28,mbtmp3.7/9,ML3.6/2,MS3.4/1, Ms1 3.4/1,ms1mx2.3/34,Error ellipse: s-maj=44.2km s-min=22.3km az=70.0*

*ISCJB **07** 15:37:21.3±0.9,36°.17N±0°.04×142°.07E±0°.07,h33km±9km, mb3.5/6,Error ellipse: s-maj=10.0km s-min=6.6km az=1.7*

*JMA **07** 15:37:23.3±0.2,36°.24N×141°.85E,h52km,M3.3*

*NEIC **07** 15:37:24.1±1.4,36°.19N×141°.96E,h35km,mb4.3/1,Error ellipse: s-maj=28.4km s-min=20.7km az=224.0*

ISC 07 15:37:21.5±1.6,36°.19N±0°.04×142°.03E±0°.07,h21km±12km, n27,σ1§05/35,mb3.5/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.07**	**243**	P	**Pn**	**15 37 41.2**	**0.0**
CHOJ				S	**Sb**	**15 37 54.7**	**-0.1**
JHO	**Hitachi**	**1.25**	**290**	P	**Pn**	**15 37 42.2**	**-1.5**
JHO				*e*S	**Sn**	**15 37 57.1**	**-2.9**
ONAJ	**Iwakimizuishiy**	**1.34**	**313**	P	**Pn**	**15 37 44.0**	**-1.0**
JFK	**Kawauchi**	**1.50**	**322**	P	**Pn**	**15 37 46.6**	**-0.5**
BSO1	**Boso 1**	**1.76**	**210**	P	**Pn**	**15 37 51.4**	**+0.7**
BSO3	**Boso 3**	**1.86**	**222**	P	**Pn**	**15 37 52.7**	**+0.6**
JFT	**Otama**	**1.90**	**315**	P	**Pn**	**15 37 53.0**	**+0.4**
JFT				*e*S	**Sn**	**15 38 15.4**	**-0.5**
JMM	**Marumori**	**1.94**	**330**	P	**Pn**	**15 37 53.0**	**-0.3**
JAG	**Ashikaga**	**2.10**	**277**	P	**Pn**	**15 37 54.8**	**-0.5**
JFY	**Yanaizu**	**2.23**	**304**	P	**Pn**	**15 37 57.5**	**+0.3**
JKT	**Katashina**	**2.31**	**285**	P	**Pn**	**15 37 58.6**	**+0.2**
JIO	**Ouri**	**2.32**	**347**	P	**Pn**	**15 37 58.7**	**+0.2**
JRY	**Ryogami san**	**2.54**	**267**	P	**Pn**	**15 38 00.9**	**-0.6**
MJAR	**Matsushiro Arr**	**3.10**	**278**	Pn	**Pn**	**15 38 09.7**	**+0.4**
MJAR	3.2nm,0.3s,baz=147,slow=14,SNR=40			Sn	**Sn**	**15 38 47.6**	**+1.9**
MAJO	**Matsushiro**	**3.11**	**278**	*e*P	**Pn**	**15 38 09.8**	**+0.5**
MAT	**Matsushiro**	**3.11**	**278**	P	**Pn**	**15 38 09.2**	**-0.1**
MAT				*e*S	**Sn**	**15 38 46.6**	**+0.9**
JHJ	**Hachijo jima 2**	**3.58**	**212**	Pn	**Pn**	**15 38 16.2**	**+0.4**
JHJ	13nm,0.3s,baz=323,slow=20,SNR=6.6			Sn	**Sn**	**15 38 55.5**	**-1.9**
ASAJ	**Asahikawa**	**7.93**	**3**	Pn	**Pn**	**15 39 17.6**	**+2.2**
ASAJ	0.9nm,0.3s,baz=146,slow=10,SNR=7.3			Sn	**Sn**	**15 40 42.5**	**-1.9**
CBIJ	**Chichi jima**	**9.07**	**179**	Pn	**Pn**	**15 39 30.0**	**-1.2**
CBIJ	3.3nm,0.3s,baz=270,slow=19,SNR=4.9			Sn	**Sn**	**15 41 04.7**	**-8.0**
KSRS	**Korea Array**	**11.38**	**281**	Pn	**Pn**	**15 40 06.4**	**+3.6**
SONM	**Songino Array**	**28.67**	**305**	P	**P**	**15 43 18.4**	**+1.7**
SONM	1.2nm,0.9s,mb3.6,baz=108,slow=7.7,SNR=3.1			LR	LR	15 54 33.0	
ZALV	**Zalesovo Beam**	**42.85**	**313**	P	**P**	**15 45 16.6**	**-1.2**
MKAR	**Makanchi Array**	**44.99**	**303**	P	**P**	**15 45 34.9**	**-0.3**
KURK	**Kurchatov**	**46.84**	**309**	P	**P**	**15 45 50.4**	**+0.7**
KURK	**Kurchatov**	**46.84**	**309**	P	**P**	**15 45 50.4**	**+0.7**
BVAR	**Borovoye Array**	**51.51**	**313**	P	**P**	**15 46 26.6**	**+1.2**
WRA	**Warramunga Arr**	**56.30**	**189**	P	**P**	**15 47 01.2**	**+0.6**

*ISCJB **07** 15:42:38.3±0.7,21°.82S±0°.05×68°.4W±0°.1,h141km±10km, mb4.0/2,Error ellipse: s-maj=18.1km s-min=8.7km az=2.7*

*NEIC **07** 15:42:38.7±0.8,22°.14S×67°.92W,h112km±13km, MG3.9(GUC),Error ellipse: s-maj=30.0km s-min=12.0km az=119.0*

*GUC **07** 15:42:39.3±0.9,21°.81S×68°.49W,h134km±11km,ML3.9*

*IDC **07** 15:42:39.3±1.0,22°.02S×67°.83W,h106km±17km,mb4.0/2, mb1 3.8/4,mb1mx3.5/16,mbtmp3.8/4,Error ellipse: s-maj=51.5km s-min=16.6km az=132.0*

ISC 07 15:42:39.3±0.7,21°.81S±0°.05×68°.4W±0°.1,h136km±10km, n17,σ0§93/23,mb4.0/2,4C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.92**	**210**	P	**Pn**	**15 43 02.6**	**+0.7**
LVC	180nm,0.3s,baz=54,slow=8.7,SNR=1486			S	**Sn**	**15 43 19.6**	**+0.3**
LVC	**Limon Verde**	**0.92**	**210**	P	**Pn**	**15 43 02.6**	**+0.6**
LVC	152nm,0.3s,baz=240,slow=20,SNR=49			S	**Sn**	**15 43 19.6**	**+0.4**
LVC	**Limon Verde**	**0.92**	**210**	*e*P	**Pn**	**15 43 02.4**	**+0.4**
LVC				*i* S	**Sn**	**15 43 20.3**	**+1.0**
LVC	comp=E,2μm,0.5s			AML	AML	15 43 21.1	
PB01	**Plate Boundary**	**1.26**	**307**	⇑*i*P	**Pn**	**15 43 05.4**	**+0.2**
PB01				*i* S	**Sn**	**15 43 24.8**	**-0.2**
PB01	comp=N,1μm,0.3s			AML	AML	15 43 25.4	
MACH	**Maria Elena**	**1.31**	**253**	⇑*i*P	**Pn**	**15 43 06.2**	**+0.5**
MACH				*i* S	**Sn**	**15 43 26.3**	**+0.5**
PECH	**Pedro de Valdi**	**1.41**	**236**	⇑*i*P	**Pn**	**15 43 07.2**	**+0.5**
PECH				*i* S	**Sn**	**15 43 27.6**	**-0.1**
PECH	comp=E,2μm,0.5s			AML	AML	15 43 28.5	
HMBC	**Humberston**	**2.06**	**318**	⇑*i*P	**Pn**	**15 43 13.8**	**-0.4**
HMBC				*i* S	**Sn**	**15 43 40.3**	**-0.8**
HMBC	comp=N,2μm,0.6s			AML	AML	15 43 41.8	
ANCH	**Antofagasta**	**2.62**	**224**	*e*P	**Pn**	**15 43 20.7**	**-0.5**
ANCH				*i* S	**Sn**	**15 43 52.2**	**-1.3**
PSGC	**Pisagua**	**2.73**	**324**	AML	AML	15 43 55.4	
MNMC	**Miæe Miæe**	**2.89**	**337**	⇓*i*P	**Pn**	**15 43 25.5**	**+0.8**
MNMC	comp=N,602nm,0.3s			AML	AML	15 44 02.7	
LPAZ	**La Paz**	**5.50**	**3**	P	**Pn**	**15 44 02.4**	**+3.2**
LCO	**Las Campanas**	**7.46**	**196**	*e*Pn	**Pn**	**15 44 21.7**	**-3.8**
SIV	**San Ignacio**	**9.04**	**51**	P	**Pn**	**15 44 44.4**	**-2.3**
SIV	comp=N,3.0nm,0.3s,baz=244,slow=11,SNR=46			S	**Sn**	**15 46 19.1**	**-7.8**
DBIC	**Dimbokro**	**68.38**	**73**	P	**P**	**15 53 27.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P	**P**	**15 54 18.3**	**+0.6**
MKAR	**Makanchi Array**	**145.61**	**37**	PKPbc	PKPbc	16 02 04.6	+2.7
MKAR	**Makanchi Array**	**145.61**	**37**	PKPbc	PKPbc	16 02 04.6	+2.7

*IDC **07** 16:01:59.2±0.4,36°.19N×141°.66E,h0km,mb5.6/32, mb1 5.7/36,mb1mx5.6/37,mbtmp5.6/36,ML4.7/3,MS6.1/13, Ms1 6.1/13,ms1mx5.9/32,Error ellipse: s-maj=12.7km s-min=9.8km az=113.0*

*JMA **07** 16:02:00.3±0.2,36°.23N×141°.95E,h60km,M6.4*

JMA Felt III J1.

*NIED **07** 16:02:00,36°.20N×141°.90E,h26km,Mw6.2 Best double couple: M0 2.12000×10^18 NP1:φs 16.00000°,δ64.00000°, λ87.00000°. NP2:φs 203.00000°,δ26.00000°,λ96.00000°.*

*BJI **07** 16:02:01.3,36°.27N×141°.38E,h18km,mB6.4/49,mb5.9/60, Ms6.6/78,Ms7 6.5/63*

*BGS **07** 16:02:01.3±1.3,35°.25N×140°.89E,h33km,mb5.6*

*ISCJB **07** 16:02:02.6±0.6,36°.19N±0°.02×141°.61E±0°.01,h28km±3km, mb5.8/412,MS6.6/67,Error ellipse: s-maj=3.1km s-min=1.9km az=168.1*

*GCMT **07** 16:02:02.6±0.1,36°.12N×141°.89E,h24km,MW6.2/110, Moment Tensor Solution. s103,c239; s110,c392; Duration: 3§0 Moment tensor: Scale 10^18Nm; Mrr 1.61±.02; Mθθ -0.10±.01; Mφφ -1.51±.01; Mrθ 0.63±.02; Mθφ -0.54±.01; Mφr 1.64±.03; Best double couple: M0 2.41100×10^18 NP1:φs 197.00000°,δ22.00000°, λ87.00000°. NP2:φs 20.00000°,δ68.00000°,λ91.00000°. Principal axes: T 2.3690, Plg67.0000°, Azm293.0000°; N 0.0810, Plg1.0000°, Azm200.0000°; P -2.4540, Plg23.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **07** 16:02:02.6±0.1,36°.18N×141°.55E,h19km,mb5.7/277, ME6.1,MW6.2,MW6.2,MW6.1(NIED) Error ellipse: s-maj=3.5km s-min=2.8km az=160.0,Moment Tensor Solution. s158 Moment tensor: Scale 10^18Nm; Mrr 1.12; Mθθ -0.49; Mφφ -0.63; Mrθ 0.83; Mθφ -0.40; Mφr 1.84; Best double couple: M0 2.30000×10^18 NP1:φs 227.00000°, δ14.00000°,λ110.00000°. NP2:φs 26.00000°,δ77.00000°, λ85.00000°. Principal axes: T 2.3700, Plg58.0000°, Azm289.0000°; N -0.2000, Plg4.0000°, Azm27.0000°; P -2.1700, Plg31.0000°, Azm120.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Tokyo and [III] at Yokosuka. Felt in much of east-central and northern Honshu. Recorded [3 JMA] in Chiba, Fukushima, Ibaraki, Miyagi, Saitama, Tochigi and Yamagata; [2 JMA] throughout northern Honshu. Recorded [1 JMA] in southwestern Hokkaido and in the Obihiro area.

*MOS **07** 16:02:05.2±0.9,36°.62N×141°.57E,h33km,mb6.0/109, MS6.6/35 Error ellipse: s-maj=6.4km s-min=3.7km az=105.4*

*SZGRF **07** 16:02:07.3,36°.40N×141°.04E,h33km,mb5.9,MS7.4,Near east coast of eastern Honshu, Japan*

*DJA **07** 16:02:17,36°.05N×140°.94E,h103km,Mw6.3/73*

ISC 07 16:02:04.9±0.6,36°.23N±0°.02×141°.60E±0°.02,h33km±4km, h34km±1.3km:pP-P,n1623,σ0§89/1580,mb5.8/411, MS6.6/67,436C-211D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.79**	**229**	⇓P	**Pn**	**16 02 19.0**	**-0.8**
CHOJ				S	**Sb**	**16 02 33.3**	**+2.6**
JHO	**Hitachi**	**0.91**	**295**	⇓P	**Pn**	**16 02 20.3**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.08**	**324**	⇓P	**Pn**	**16 02 22.0**	**-1.8**
JFK	**Kawauchi**	**1.28**	**333**	⇓P	**Pn**	**16 02 24.5**	**-2.0**
JSB	**Shiboa**	**1.54**	**299**	P	**Pn**	**16 02 30.5**	**+0.4**
JFT	**Otama**	**1.64**	**322**	⇓P	**Pn**	**16 02 31.2**	**-0.2**
BSO1	**Boso 1**	**1.65**	**198**	P	**Pn**	**16 02 29.4**	**-2.1**
BSO3	**Boso 3**	**1.67**	**212**	P	**Pn**	**16 02 30.6**	**-1.3**
JAG	**Ashikaga**	**1.74**	**277**	P	**Pn**	**16 02 32.7**	**-0.1**
JMM	**Marumori**	**1.76**	**339**	P	**Pn**	**16 02 31.2**	**-1.9**
JFY	**Yanaizu**	**1.92**	**308**	P	**Pn**	**16 02 35.6**	**+0.3**
JRY	**Ryogami san**	**2.19**	**265**	P	**Pn**	**16 02 39.1**	**+0.1**
JRY				*e*S	**Sn**	**16 03 09.6**	**+4.6**
JIO	**Ouri**	**2.23**	**355**	P	**Pn**	**16 02 36.6**	**-3.0**
JOD2	**Odawara 2**	**2.25**	**246**	⇑P	**Pn**	**16 02 40.3**	**+0.4**
JHK	**Hiroka**	**2.31**	**297**	⇑P	**Pn**	**16 02 41.6**	**+0.9**
MJAR	**Matsushiro Arr**	**2.75**	**278**	Pn	**Pn**	**16 02 47.1**	**+0.4**
MJAR	505nm,0.3s,baz=95,slow=8.9,SNR=2500			Sn	**Sn**	**16 03 19.0**	**+0.2**
MAJO	**Matsushiro**	**2.75**	**278**	*e*P	**Pn**	**16 02 48.7**	**+2.0**
MAJO	**Matsushiro**	**2.75**	**278**	*e*Pn	**Pn**	**16 02 48.1**	**+1.3**
MAT	**Matsushiro**	**2.75**	**278**	P	**Pn**	**16 02 48.3**	**+1.6**
MAT				S	**Sn**	**16 03 23.8**	**+4.9**
MAT	**Matsushiro**	**2.75**	**278**	P	**Pn**	**16 02 48.2**	**+1.5**
JNG	**Nsakai**	**2.83**	**275**	P	**Pn**	**16 02 49.2**	**+1.4**
JHJ	**Hachijo jima 2**	**3.44**	**206**	Pn	**Pn**	**16 02 54.9**	**-1.3**
JHJ	597nm,0.3s,baz=240,slow=19,SNR=89			Sn	**Sn**	**16 03 31.4**	**-4.5**
JHJ	2μm,0.3s,baz=234,slow=21,SNR=5.3			LR	LR	16 04 12.9	
JTT	**Ttatey**	**3.46**	**278**	P	**Pn**	**16 02 59.6**	**+3.1**
JYW	**Yuwa**	**3.49**	**342**	P	**Pn**	**16 02 57.0**	**+0.2**
JJH	**Hakui**	**3.94**	**282**	P	**Pn**	**16 03 05.6**	**+2.6**
JKY	**Yasaka**	**5.30**	**265**	P	**Pn**	**16 03 24.1**	**+2.3**
ERM	**Erimo**	**5.91**	**11**	Pn	**Pn**	**16 03 28.2**	**-1.9**
ERM	**Erimo**	**5.91**	**11**	*e*P	**Pn**	**16 03 25.1**	**-5.0**
ERM				pmax	pmax		
ERM	**Erimo**	**5.91**	**11**	*e*P	**Pn**	**16 03 25.1**	**-5.0**
ASAJ	**Asahikawa**	**7.92**	**5**	P	**Pn**	**16 03 54.5**	**-3.2**
ASAJ						16 05 23.0	
ASAJ	comp=Z,19nm,0.3s			pmax	pmax		
ASAJ	comp=N,45nm,0.3s			smax			
ASAJ	comp=Z,207μm,20.0s			MLR	MLR		
ASAJ	**Asahikawa**	**7.92**	**5**	Pn	**Pn**	**16 03 54.5**	**-3.2**
ASAJ	comp=Z,19nm,0.3s,baz=216,slow=12,SNR=106			Sn	**Sn**	**16 05 22.9**	**-3.2**
ASAJ	comp=Z,45nm,0.3s,baz=83,slow=30,SNR=4.6			LR	LR	16 07 54.7	
JHIK	**Hikimi**	**8.07**	**261**	P	**Pn**	**16 04 02.6**	**+2.7**
JKD	**Kudamatsu**	**8.25**	**258**	P	**Pn**	**16 04 05.0**	**+2.7**
YUK	**Yuzh-Kuril'sk**	**8.46**	**21**	P	**Pn**	**16 04 00.4**	**-4.6**
YUK				*e*S	**Sn**	**16 05 26.5**	**-13**
YUK	comp=Z,2μm,1.0s			pmax	pmax		
YUK	comp=Z,550nm,0.5s			pmax	pmax		
YUK	comp=N,5μm,0.5s			smax			
YUK	comp=E,5μm,0.5s			smax			
YUK	comp=N,124μm,17.0s			MLR	MLR		
YUK	comp=E,98μm,17.0s			MLR	MLR		
YUK	comp=Z,152μm,17.0s			MLR	MLR		
JKIT	**Kitakata**	**9.11**	**250**	P	**Pn**	**16 04 17.1**	**+3.0**
CBIJ	**Chichi jima**	**9.12**	**177**	Pn	**Pn**	**16 04 08.6**	**-5.6**
CBIJ	comp=Z,68nm,0.3s,baz=18,slow=5.0,SNR=49			Sn	**Sn**	**16 05 44.9**	**-11**
CBIJ	comp=Z,349nm,0.3s,baz=241,slow=21,SNR=6.8			LR	LR	16 07 59.9	
JTSN	**Tsuno**	**9.25**	**247**	P	**Pn**	**16 04 18.1**	**+2.1**
JZO	**Okuchi**	**9.98**	**249**	P	**Pn**	**16 04 28.8**	**+2.8**
KUR	**Kuril'sk**	**10.18**	**26**	*e*P	**Pn**	**16 04 24.0**	**-4.6**
KUR				*e*S	**Sn**	**16 06 12.0**	**-10**
KUR	comp=N,220nm,0.7s			pmax	pmax		
KUR	comp=E,260nm,0.7s			pmax	pmax		
KUR	comp=Z,830nm,0.7s			pmax	pmax		
KUR	comp=N,2μm,0.9s			smax			
KUR	comp=E,470nm,0.9s			smax			
KUR	comp=N,68μm,20.0s			smax			
KUR	comp=E,162μm,20.0s			smax			
KUR	comp=N,38μm,13.0s			MLR	MLR		
KUR	comp=E,62μm,13.0s			MLR	MLR		
KUR	comp=Z,54μm,13.0s			MLR	MLR		
JTN	**Tanegashima 3**	**10.46**	**241**	P	**Pn**	**16 04 35.2**	**+2.6**
YSS	**Yuzh-Sakhalins**	**10.76**	**4**	*o*eP	**Pn**	**16 04 33.0**	**-3.5**
YSS				*i* S	**Sn**	**16 06 31.0**	**-4.7**
YSS	comp=N,590nm,1.0s			pmax	pmax		
YSS	comp=E,220nm,1.0s			pmax	pmax		
YSS	comp=Z,590nm,1.0s			pmax	pmax		
YSS	comp=N,85μm,15.0s			MLR	MLR		
YSS	comp=E,147μm,15.0s			MLR	MLR		
YSS	comp=Z,100μm,15.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**10.76**	**4**	*e*P	**Pn**	**16 04 34.0**	**-2.5**
KSRS	**Korea Array**	**11.03**	**280**	P	**Pn**	**16 04 44.0**	**+3.7**
KSRS	comp=Z,627nm,1.0s			pmax	pmax		
KSRS	comp=Z,5.0nm,0.3s			MLR	MLR		
KSRS	comp=Z,145μm,18.3s			LR	LR		
KSRS	**Korea Array**	**11.03**	**280**	Pn	**Pn**	**16 04 44.0**	**+3.6**
KSRS	comp=Z,5.3nm,0.3s,baz=94,slow=13,SNR=259			LR	LR	16 09 06.6	
INCN	**Inchon**	**12.05**	**280**	*e*P	**Pn**	**16 04 56.4**	**+2.0**
MDJ	**Mudanjiang**	**12.39**	**316**	P	**Pn**	**16 04 59.2**	**+0.2**
MDJ				S	**Sn**	**16 07 17.8**	**+2.0**
MDJ				PcP	PcP	16 10 39.3	+1.0
MDJ				ScP	ScP	16 14 12.7	+3.8
MDJ				ScS	ScS	16 17 46.0	+1.2
MDJ	comp=Z,84nm,1.5s			pmax	pmax		
MDJ	comp=Z,11μm,12.1s			pmax	pmax		
MDJ	comp=N,151μm,19.3s			LR	LR		
MDJ	comp=E,142μm,17.7s			LR	LR		
MDJ	comp=Z,235μm,17.0s			LR	LR		
MDJ	**Mudanjiang**	**12.39**	**316**	*e*P	**Pn**	**16 04 59.4**	**+0.4**
UGL	**Uglegorsk**	**12.85**	**1**	*e*P	**Pn**	**16 05 03.5**	**-1.7**
UGL				S	**Sn**	**16 07 23.0**	**-3.9**
UGL	comp=Z,202nm,1.0s			pmax	pmax		
UGL	comp=N,5μm,10.0s			pmax	pmax		
UGL	comp=E,2μm,10.0s			pmax	pmax		
UGL	comp=E,10μm,13.0s			smax			
UGL	comp=N,6μm,17.0s			smax			
HABR	**Khabarovsk**	**13.15**	**341**	*i* P	**Pn**	**16 05 04.8**	**-4.5**
HABR				*e*		16 07 30.7	
HABR	comp=E,41nm,1.2s			pmax	pmax		
HABR	comp=Z,130nm,1.3s			pmax	pmax		
HABR	comp=N,61nm,1.2s			MLR	MLR		
HABR	comp=E,122μm,16.0s			MLR	MLR		
HABR	comp=Z,135μm,15.0s			MLR	MLR		
HABR	comp=N,97μm,14.0s			MLR	MLR		
JTK	**Tokunoshima**	**13.62**	**235**	P	**Pn**	**16 05 15.5**	**-0.3**
CN2	**Changchun**	**14.49**	**306**	⇑P	**Pn**	**16 05 27.0**	**-0.6**
CN2				*e*pP	pP	16 05 30.4	-12
CN2				*e*S	**Sn**	**16 08 08.4**	**+1.4**
JOW	**Kunigami**	**14.71**	**234**	Pn	**Pn**	**16 05 28.8**	**-1.8**
JOW	comp=N,2.1nm,0.3s,baz=63,slow=12,SNR=23			LR	LR	16 11 19.5	
JOW	comp=N,69μm,19.7s,baz=59,slow=38			LR	LR	16 11 19.5	
JOW	**Kunigami**	**14.71**	**234**	Pn	**Pn**	**16 05 28.8**	**-1.8**
KLR	**Kul'dur**	**14.86**	**334**	*e*P	**Pn**	**16 05 23.4**	**-9.1**
KLR				*e*S	**Sn**	**16 08 12.5**	**-3.3**
KLR	comp=E,3μm,13.0s			pmax	pmax		
KLR	comp=Z,10μm,13.0s			pmax	pmax		
SNY	**Shenyang**	**15.07**	**297**	⇑P	**Pn**	**16 05 35.7**	**+0.3**
SNY				S	**Sn**	**16 08 17.6**	**-3.5**
SNY	comp=Z,270nm,1.3s			pmax	pmax		
SNY	comp=Z,17μm,12.0s			pmax	pmax		
SNY	comp=N,91μm,16.2s			LR	LR		
SNY	comp=E,182μm,18.0s			LR	LR		
SNY	comp=Z,203μm,18.6s			LR	LR		
DL2	**Dalian**	**16.06**	**286**	P	**Pn**	**16 05 48.4**	**+0.2**
DL2	comp=Z,150nm,1.2s			pmax	pmax		
DL2	comp=Z,8μm,10.2s			pmax	pmax		
DL2	comp=N,45μm,11.7s			LR	LR		
DL2	comp=E,125μm,14.1s			LR	LR		
DL2	comp=Z,142μm,15.4s			LR	LR		
SSE	**Sheshan**	**17.73**	**259**	P	**Pn**	**16 06 07.5**	**-1.8**
SSE				pP	pP	16 06 18.2	-0.3
SSE				S	**Sn**	**16 09 23.5**	**-2.4**
SSE	comp=Z,100nm,0.9s			pmax	pmax		
SSE	comp=Z,16μm,12.0s			pmax	pmax		
SSE				LR	LR		

comp=N,57μm,15.8s
SSE LR LR
comp=E,53μm,15.8s
SSE LR LR
comp=Z,72μm,14.5s
SKR Severo-Kuril's 17.84 31 eP Pn 16 06 10.0 -0.4
SKR eS **Sn 16 09 23.0 -5.2**
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,360nm,1.0s
SKR pmax pmax
comp=N,6μm,14.0s
SKR pmax pmax
comp=E,6μm,14.0s
SKR pmax pmax
comp=Z,6μm,14.0s
SKR smax
comp=N,15μm,18.0s
SKR smax
comp=E,24μm,18.0s
SKR MLR MLR
comp=N,31μm,16.0s
SKR MLR MLR
comp=E,34μm,16.0s
SKR MLR MLR
comp=Z,82μm,16.0s
NJ2 Nanjing 19.27 264 eP Pn 16 06 25.6 -2.3
NJ2 pP pP 16 06 29.9 -5.5
NJ2 sP sP 16 06 33.9 -5.6
NJ2 PP 16 06 43.4
NJ2 S **Sn 16 09 57.2 -5.8**
NJ2 sS sS 16 10 03.2 -14
NJ2 pmax pmax
comp=Z,140nm,0.9s
NJ2 pmax pmax
comp=Z,6μm,4.8s
NJ2 LR LR
comp=N,105μm,13.4s
NJ2 LR LR
comp=E,70μm,13.8s
NJ2 LR LR
comp=Z,47μm,13.8s
TIA Tai'an 19.74 277 P Pn 16 06 30.2 -3.3
TIA pP pP 16 06 39.3 -1.2
TIA pmax pmax
comp=Z,130nm,1.0s
TIA pmax pmax
comp=Z,3μm,4.0s
TIA LR LR
comp=N,46μm,12.0s
TIA LR LR
comp=E,85μm,14.0s
PEA0B Petropavlovsk- 20.32 29 eP P 16 06 36.4 -1.6
PETK Petropavlovsk- 20.32 29 P P 16 06 36.5 -1.5
comp=E,162nm,1.1s,baz=205,slow=6.6,SNR=47
PETK LR LR 16 14 20.4
comp=E,26μm,20.9s,MS5.6,baz=218,slow=36
BJI Beijing 20.33 288 P P 16 06 36.1 -2.2
BJI pP 16 06 45.8
BJI sP sP 16 06 50.2 -0.9
BJI pmax pmax
comp=Z,360nm,1.6s
BJI pmax pmax
comp=Z,14μm,5.2s
BJI LR LR
comp=N,90μm,13.1s,MS6.4
BJI LR LR
comp=E,76μm,12.1s,MS6.4
BJI LR LR
comp=Z,51μm,17.7s
BJT Baijiatuau 20.34 288 eP P 16 06 35.1 -3.2
BJT pmax pmax
comp=Z,416nm,0.8s
BJT Baijiatuau 20.34 288 eP P 16 06 35.1 -3.3
comp=Z,416nm,0.8s
TATO Taipei 20.58 243 eP P 16 06 37.4 -3.7
comp=Z,148nm,0.9s
HIA Hailar 20.58 316 eP P 16 06 36.9 -4.0
HIA pmax pmax
comp=Z,404nm,1.2s
HIA Hailar 20.58 316 eP P 16 06 36.9 -4.0
comp=Z,404nm,1.2s
PET Petropavlovsk 20.64 30c *i* P **P 16 06 40.4 -1.0**
PET *i* S **S 16 10 23.0 -7.1**
PET pmax pmax
comp=Z,378nm,1.2s
PET pmax pmax
comp=Z,8μm,12.8s
PET pmax pmax
comp=Z,8μm,18.1s
PET MLR MLR
comp=Z,28μm,20.0s,MS5.6
PET MLR MLR
comp=Z,23μm,20.0s
PET Petropavlovsk 20.64 30 eP P 16 06 41.7 +0.3
comp=Z,528nm,1.2s
YHNB Yeheng 20.85 242 eP P 16 06 39.6 -4.4
comp=Z,116nm,0.7s
NACB Ninganchiao 21.00 241 eP P 16 06 39.6 -6.0
comp=Z,200nm,0.7s,mb5.6
SSLB Suanglung 21.70 241 eP P 16 06 47.5 -5.6
comp=Z,286nm,0.8s,mb5.8
YULB Yu-li 21.71 239 eP P 16 06 47.3 -6.0
comp=Z,192nm,0.8s,mb5.6
TPUB Ta-pu 22.24 240 eP P 16 06 54.2 -4.7
comp=Z,374nm,0.8s,mb5.9
TWG Pinlang 22.24 239 eP P 16 06 54.1 -4.9
comp=Z,465nm,0.9s,mb5.9
QZH Quanzhou 22.71 247⇑ *i* P **P 16 07 00.5 -3.5**
QZH S **S 16 11 04.1 -6.6**
QZH pmax pmax
comp=Z,550nm,0.9s,mb6.0
QZH pmax pmax
comp=Z,2μm,3.1s
QZH LR LR
comp=N,38μm,15.0s,MS6.6
QZH LR LR
comp=E,182μm,17.7s,MS6.6
QZH LR LR
comp=Z,180μm,18.4s,MS6.5
GUMO Guam 22.73 172 P P 16 07 01.5 -2.6
GUMO pmax pmax
comp=Z,90nm,0.9s,mb5.2
GUMO Guam 22.73 172 P P 16 07 01.5 -2.6
comp=Z,90nm,0.9s,mb5.2,baz=31,slow=12,SNR=3.6
GUMO Guam 22.73 172 *e*P **P 16 07 03.4 -0.7**
comp=Z,853nm,1.0s,mb6.1
BBP Basco 23.29 233 *e*P **P 16 07 08.7 -1.4**
NRGR Nerungri 23.39 336 *i* P **P 16 07 09.0 -1.8**
NRGR S **S 16 11 20.9 -0.2**
NRGR smax
comp=N,740nm,1.2s
WHN Wuhan 23.41 264⇑ *i* P **P 16 07 08.0 -3.2**
WHN S **S 16 11 16.8 -5.0**
WHN LR LR
comp=N,107μm,12.2s,MS6.9
WHN LR LR
comp=E,243μm,14.8s,MS6.9
WHN LR LR
comp=Z,296μm,15.1s,MS6.9
CLNS Chul'man 23.48 337 *e*P **P 16 07 09.2 -2.4**
CLNS *e**PP 16 07 17.6
CLNS *e*PPP 16 07 43.6
CLNS *e* 16 10 54.1
CLNS *e*S **S 16 11 20.6 -2.0**
CLNS *e*SS 16 12 21.9
CLNS pmax pmax
comp=Z,637nm,1.0s,mb6.0
CLNS pmax pmax
comp=E,254nm,1.3s
CLNS pmax pmax
comp=N,626nm,1.1s
CLNS smax
comp=E,16μm,15.4s
CLNS smax
comp=N,18μm,13.9s
CLNS MLR MLR
comp=Z,98μm,16.0s,MS6.4
CLNS MLR MLR
comp=N,74μm,12.0s,MS6.4
CLNS MLR MLR
comp=E,53μm,13.0s,MS6.4
HHC Hu-ho-hao-te 23.88 290⇑P P 16 07 12.2 -3.2
HHC pP 16 07 16.6
HHC sP sP 16 07 20.7 -8.0
HHC PP 16 07 46.2
HHC PcP PcP 16 10 58.0 +0.4
HHC S **S 16 11 24.5 -4.8**
HHC sS sS 16 11 31.1 -14
HHC SS 16 12 14.6
HHC ScP ScP 16 14 34.3 +0.8
HHC pmax pmax
comp=Z,63nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,9μm,7.3s
HHC LR LR
comp=N,23μm,13.1s,MS6.4
HHC LR LR
comp=E,84μm,12.7s,MS6.4
HHC LR LR
comp=Z,103μm,12.7s,MS6.5
SGCP Mt. Cagua 24.88 229 *e*P **P 16 07 24.1 -0.5**
BTO Baotou 25.05 290 *e*P **P 16 07 23.6 -2.5**
BTO S **S 16 11 52.3 +4.1**
BTO LR LR
comp=N,22μm,13.7s,MS6.0
BTO LR LR
comp=E,27μm,15.1s,MS6.0
CIT Chita 25.37 317 *e*P **P 16 07 27.0 -1.8**
CIT *e* 16 07 39.0
CIT *e* 16 08 04.8
CIT *e* 16 08 18.6
CIT pmax pmax
comp=Z,2μm,2.4s,mb6.2
PALP Palanan 25.56 227 *e*P **P 16 07 28.7 -2.2**
APYP Conner 25.66 230 *e*P **P 16 07 28.9 -2.9**
CAUP Cauayan 26.01 228 *e*P **P 16 07 36.2 +1.2**
ABRA Dolores 26.15 230 *e*P **P 16 07 34.9 -1.4**
XAN Xi'an 26.74 275 P **P 16 07 41.8 +0.3**
XAN pP pP 16 07 44.8 -6.1
XAN sP sP 16 07 46.2 -8.6
XAN PcP PcP 16 11 05.3 +1.1
XAN S **S 16 12 17.9 +2.8**
XAN sS sS 16 12 23.1 -7.5
XAN pmax pmax
comp=Z,93nm,0.9s,mb5.3
XAN pmax pmax
comp=Z,2μm,8.3s
XAN LR LR
comp=N,33μm,15.5s,MS6.1
XAN LR LR
comp=E,18μm,14.4s,MS6.1
XAN LR LR
comp=Z,23μm,14.7s,MS5.9
YAK Yakutsk 26.89 348c *i* P **P 16 07 41.7 -0.8**
YAK *e**PP pP 16 07 52.4 +0.5
YAK *e*PPP 16 08 28.3
YAK *e* 16 11 05.8
YAK *e*S **S 16 12 16.6 -0.2**
YAK *e**SS sS 16 12 33.9 +1.5
YAK *e*SSS 16 13 39.5
YAK pmax pmax
comp=E,603nm,1.4s
YAK pmax pmax
comp=Z,2μm,1.2s,mb6.6
YAK pmax pmax
comp=N,1μm,1.1s
YAK smax
comp=E,21μm,9.8s
YAK smax
comp=N,15μm,7.6s
YAK MLR MLR
comp=E,14μm,13.0s,MS6.4
YAK MLR MLR
comp=Z,86μm,16.0s,MS6.4
YAK MLR MLR
comp=N,75μm,15.0s,MS6.4
YAK Yakutsk 26.89 348 *e*P **P 16 07 40.4 -2.1**
comp=N,2μm,1.0s,mb6.6
BALP Baler 27.10 226 *e*P **P 16 07 43.7 -1.1**
ENH Enshi 27.42 267 *e*P **P 16 07 46.1 -1.5**
comp=N,979nm,0.8s,mb6.4
PVCP Virac 27.44 219 *e*P **P 16 07 46.3 -1.5**
HKC Hong Kong Obse 27.54 247⇑ *i* P **P 16 07 50.0 +1.3**
HKC *i* S **S 16 12 28.0 +0.2**
SEY Seymchan 27.56 11⇓ *e*P **P 16 07 47.9 -0.6**
BOLP Bolinao 27.60 230 *e*P **P 16 07 48.9 -0.4**
POLP Polilio Island 27.70 224 *e*P sP 16 08 05.9 +2.4
GZH Guangzhou 27.71 250 P **P 16 07 44.6 -5.7**
GZH S **S 16 12 24.0 -6.5**
GZH LR LR
comp=N,50μm,20.9s,MS6.2
GZH LR LR
comp=E,38μm,20.5s,MS6.2
GZH LR LR
comp=Z,77μm,18.0s,MS6.3
ULN Ulaanbaatar 27.94 305 P **P 16 07 52.2 +0.2**
ULN pmax pmax
comp=Z,870nm,1.2s,mb6.3
ULN Ulaanbaatar 27.94 305 *e*P **P 16 07 51.4 -0.7**
comp=Z,870nm,1.2s,mb6.3
SCZP Santa Cruz 28.07 229 *e*P **P 16 07 55.4 +1.9**
CNP Catarman 28.11 217 *e*P **P 16 07 54.5 +0.6**
BOD Bodaibo 28.29 328 *e*P **P 16 07 54.4 -0.7**
BOD pmax pmax
comp=Z,433nm,1.0s,mb6.0
SONM Songino Array 28.36 305 P **P 16 07 55.9 +0.1**
comp=Z,234nm,1.0s,mb5.8,baz=104,slow=7.6,SNR=208
SONM LR LR 16 19 51.4
comp=Z,70μm,18.4s,MS6.3,baz=92,slow=38
SONM P3KPbc 16 40 26.4
comp=Z,1.0nm,0.9s,baz=298,slow=3.2,SNR=4.0
SONM Songino Array 28.36 305 P **P 16 07 55.9 +0.1**
SONM LR LR 16 19 51.4
SONM *e* 16 40 26.4
AUQP San Andres 28.44 222 *e*P **P 16 07 58.1 +1.3**
TGY Tagaytay City 28.77 225 P **P 16 07 58.1 -1.7**
comp=Z,145nm,0.4s,mb6.1,baz=41,slow=5.0,SNR=6.2
TGY LR LR 16 18 40.7
comp=Z,42nm,20.3s,baz=8.1,slow=35
BOAC Boac 28.78 223 *e*P **P 16 07 58.2 -1.6**
LUBP Lubang 29.46 226 *e*P **P 16 08 04.4 -1.5**
OTRP Odiongan 29.59 222 *e*P **P 16 08 07.5 +0.5**
SJMP San Jose 30.00 223 *e*P **P 16 08 10.9 +0.3**
MSLP Maasin 30.09 214 *e*P **P 16 08 11.1 -0.3**
LZH Lanzhou 30.36 281⇑ P **P 16 08 13.6 -0.1**
LZH pP pP 16 08 20.0 -3.1
LZH sP sP 16 08 22.1 -4.9
LZH PP PP 16 09 12.5 -10
LZH S **S 16 13 10.6 -1.3**
LZH sS sS 16 13 21.5 -6.0
LZH SS SS 16 14 49.6 -32
LZH pmax pmax
comp=Z,520nm,1.0s,mb6.2
LZH pmax pmax
comp=Z,4μm,4.2s
LZH LR LR
comp=E,114μm,15.3s
LZH LR LR
comp=Z,155μm,16.4s,MS6.7
GUIM Jordan 30.75 219 *e*P **P 16 08 18.6 +1.3**
IRK Irkutsk 30.75 313⇑ *i* P **P 16 08 17.4 +0.4**
IRK pmax pmax
comp=Z,525nm,1.4s,mb6.2
BUSP Coron 30.89 224 *e*P **P 16 08 16.8 -1.7**
ZAK Zakamensk 30.89 309 *e*P **P 16 08 18.7 +0.5**
TLY Talaya 30.98 312 P **P 16 08 20.1 +1.2**
comp=Z,3μm,1.2s,mb6.9,SNR=74
TLY Talaya 30.98 312c *i* P **P 16 08 19.2 +0.3**
TLY *e* pP 16 08 29.5 +1.1
TLY *e* 16 09 19.1
TLY *e*SS SS 16 15 20.6 -13
TLY pmax pmax
comp=Z,744nm,1.2s,mb6.4
TLY MLR MLR
comp=Z,121μm,16.0s,MS6.7
TLY Talaya 30.98 312 *e*P **P 16 08 18.8 -0.1**
comp=Z,650nm,1.1s,mb6.4
BIPH Bislig 31.18 210⇑ *e*P **P 16 08 14.7 -6.4**
GYA Guiyang 31.24 262⇑ *i* P **P 16 08 20.3 -1.2**
GYA pP pP 16 08 31.8 +0.8
GYA sP sP 16 08 36.6 +1.7
GYA PP PP 16 09 25.4 -6.9
GYA PcP PcP 16 11 17.6 +2.0
GYA S **S 16 13 23.4 -2.5**
GYA sS sS 16 13 40.2 -1.3
GYA ScP ScP 16 14 54.8 -1.3
GYA SS SS 16 15 10.0 -30
GYA pmax pmax
comp=Z,90nm,0.8s,mb5.7
GYA pmax pmax
comp=Z,11μm,5.2s
GYA LR LR
comp=N,46μm,14.8s,MS6.4
GYA LR LR
comp=E,50μm,15.3s,MS6.4
GYA LR LR
comp=Z,50μm,16.0s,MS6.3
CUYO Cuyo Island 31.39 222 *e*P **P 16 08 22.6 -0.3**
CD2 Chengdu 31.83 272 P **P 16 08 26.3 -0.4**
CD2 pP pP 16 08 35.9 -0.2
CD2 sP sP 16 08 39.8 -0.3
CD2 PP PP 16 09 32.2 -6.6
CD2 S **S 16 13 33.1 -2.0**
CD2 sS sS 16 13 49.0 -1.7
CD2 SS SS 16 15 24.9 -27
CD2 pmax pmax
comp=Z,420nm,0.9s,mb6.3
CD2 pmax pmax
comp=Z,8μm,11.3s
CD2 LR LR
comp=N,78μm,14.3s
CD2 LR LR
comp=Z,82μm,16.6s,MS6.5
ENPP El Nido 31.97 224 *e*P **P 16 08 26.5 -1.5**
MATI Mati 32.35 209 *e*P **P 16 08 29.4 -1.9**
DAV Davao City (W) 32.51 211 P **P 16 08 32.0 -0.7**
comp=Z,112nm,0.3s,mb6.3,baz=235,slow=19,SNR=3.6
DAV Davao City (W) 32.51 211 P **P 16 08 30.4 -2.3**
comp=Z,139nm,0.4s,mb6.2
DAV Davao City (W) 32.51 211⇑ *e*P **P 16 08 29.8 -2.9**
MOY Mondy 32.58 311 *e*P **P 16 08 34.0 +1.0**
MOY pmax pmax
comp=Z,677nm,2.1s,mb6.2
QIZ Qiongzhong 32.74 247 P **P 16 08 34.9 +0.2**
QIZ S **S 16 13 54.5 +5.1**
QIZ sS sS 16 14 04.1 -0.9
QIZ pmax pmax
comp=Z,44nm,0.8s,mb5.4
QIZ LR LR
comp=N,44μm,15.8s
QIZ LR LR
comp=Z,48μm,17.7s,MS6.2
QIZ Qiongzhong 32.74 247 *e*P **P 16 08 34.0 -0.7**
comp=Z,148nm,1.4s,mb5.7
GTA Gaotai 32.95 288 ⇑P **P 16 08 36.6 +0.2**
GTA pP pP 16 08 46.1 +0.2
GTA sP sP 16 08 50.3 +0.5
GTA PP PP 16 09 48.8 -2.3
GTA PcP PcP 16 11 22.7 +2.7
GTA S **S 16 13 51.1 -1.2**
GTA pmax pmax
comp=Z,160nm,1.3s,mb5.8
GTA pmax pmax
comp=Z,5μm,9.6s
GTA LR LR
comp=N,36μm,19.5s,MS6.5
GTA LR LR
comp=E,76μm,17.4s,MS6.5
GTA LR LR
comp=Z,87μm,18.3s,MS6.5
PPR Puerto Princes 33.53 224 ⇓ *i* P **P 16 08 41.4 -0.2**
BILL Bilibino 34.76 16c *i* P **P 16 08 50.5 -1.3**
BILL *i* pP 16 09 01.1 -0.2
BILL *i* 16 11 25.6
BILL *i* S **S 16 14 21.8 +2.1**
BILL pmax pmax
comp=Z,124nm,1.2s,mb5.7
BILL MLR MLR
comp=Z,30μm,13.0s,MS6.2
BILL Bilibino 34.76 16 *e*P **P 16 08 50.3 -1.5**
comp=Z,190nm,1.3s,mb5.9
BATP Bataraza 34.85 224 *e*P **P 16 08 53.4 +0.3**
KMI Kunming 34.99 263 ⇑P **P 16 08 54.4 +0.1**
KMI pP pP 16 09 04.9 +1.1
KMI sP sP 16 09 09.1 +1.4
KMI PP PP 16 10 13.7 -0.2
KMI PcP PcP 16 11 28.4 +2.3
KMI S **S 16 14 23.2 -1.0**
KMI sS sS 16 14 39.5 -0.3
KMI ScP ScP 16 15 09.7 +0.5
KMI PcS PcS 16 15 14.3 +1.3
KMI SS SS 16 16 36.2 -21
KMI ScS ScS 16 19 11.8 -1.2
KMI pmax pmax
comp=Z,170nm,1.1s,mb5.9
KMI pmax pmax
comp=Z,4μm,7.1s
KMI LR LR
comp=N,53μm,15.5s,MS6.6
KMI LR LR
comp=E,65μm,14.9s,MS6.6
KMI LR LR
comp=Z,73μm,12.9s,MS6.6
TIXI Tiksi 36.11 353c *i* P **P 16 09 02.7 -0.6**
TIXI *e* 16 10 22.9
TIXI *e*S **S 16 14 40.1 -0.2**
TIXI pmax pmax
comp=Z,198nm,1.2s,mb5.9
TIXI pmax pmax
comp=N,60nm,0.8s
TIXI pmax pmax
comp=E,60nm,0.9s
TIXI pmax pmax
comp=Z,2μm,9.4s
TIXI smax
comp=E,6μm,19.0s
TIXI smax
comp=N,6μm,17.8s
TIXI MLR MLR
comp=E,49μm,15.0s,MS6.5
TIXI MLR MLR
comp=Z,57μm,14.0s,MS6.5
TIXI MLR MLR
comp=N,26μm,11.0s,MS6.5
TIXI Tiksi 36.11 353 *e*P **P 16 09 02.5 -0.8**
comp=N,21nm,1.3s,mb4.9
MYLDM Lahad Datu 37.48 220 P **P 16 09 16.7 +1.1**
SDKM Sandakan 37.79 222 P **P 16 09 18.8 +0.6**
KKM Kota Kinabalu 37.99 224 P **P 16 09 21.6 +1.7**
KKM Kota Kinabalu 37.99 224 *e*P **P 16 09 19.0 -0.9**
comp=N,57nm,0.8s,mb5.3
UBT Ubonrachathani 38.69 247 P pP 16 09 35.5 +0.1
CHG Chiang Mai 41.24 257 ⇑P **P 16 09 46.8 -0.2**
comp=N,152nm,0.9s,mb5.6
CHTO Chiang Mai 41.24 257 *e*P **P 16 09 46.1 -0.9**
CHTO pmax pmax
comp=Z,105nm,0.8s,mb5.5
CHTO Chiang Mai 41.24 257 *e*P **P 16 09 46.1 -0.9**
comp=Z,105nm,0.8s,mb5.5
WMQ Urumqi 41.34 298 P **P 16 09 48.4 +0.9**
WMQ pP pP 16 09 52.3 -4.8
WMQ PP PP 16 11 26.5 +3.3
WMQ PcP PcP 16 11 46.8 +1.3
WMQ S **S 16 16 01.5 +1.7**
WMQ sS sS 16 16 08.4 -7.2
WMQ SS SS 16 18 59.2 -4.7
WMQ ScS ScS 16 19 48.4 -0.4
WMQ pmax pmax
comp=Z,1μm,1.4s,mb6.3
WMQ pmax pmax
comp=Z,14μm,4.0s
WMQ LR LR
comp=N,23μm,13.0s,MS6.6
WMQ LR LR
comp=E,57μm,16.0s,MS6.6
WMQ LR LR
comp=Z,45μm,19.0s,MS6.3
CM31 Chiang Mai Arr 41.44 256 *e*P **P 16 09 48.2 -0.4**
comp=Z,72nm,0.8s,mb5.3
CMAR Chiang Mai Arr 41.44 256 P **P 16 09 49.0 +0.3**
comp=Z,90nm,0.8s,mb5.4,baz=48,slow=6.3,SNR=148
CMAR LR LR 16 28 11.3
comp=Z,20μm,19.8s,MS6.0,baz=57,slow=38
CMAR Chiang Mai Arr 41.44 256 P **P 16 09 49.0 +0.3**
CMAR LR LR 16 28 11.3
TNA Tin City 41.49 29 *e*P **P 16 09 48.9 +0.5**
comp=Z,59nm,0.9s,mb5.2
BTM Bintulu 42.09 225 P **P 16 09 55.9 +1.9**
BTM Bintulu 42.09 225 P **P 16 09 55.9 +1.9**
NST Nakhon Sawan 42.13 252 P **P 16 09 53.2 -1.1**
comp=Z,100nm,1.2s,mb5.3
LSA Lhasa 42.43 276 P **P 16 09 59.1 +2.4**

LSA S **S** **16 16 22.9 +6.6**
LSA pmax pmax
comp=Z,6μm,10.8s
LSA LR LR
comp=N,19μm,13.9s,MS6.5
LSA LR LR
comp=E,48μm,15.6s,MS6.5
LSA LR LR
comp=Z,68μm,16.4s,MS6.6
LSA Lhasa 42.43 276 *e*P **P** **16 09 58.0 +1.3**
LSA pmax pmax
comp=Z,394nm,1.0s,mb6.0
LSA Lhasa 42.43 276 *e*P **P** **16 09 58.0 +1.3**
comp=Z,394nm,1.0s,mb6.0
ZAA0 Zalesovo Array 42.57 313 *e*P **P** **16 09 56.6 -0.8**
ZALV Zalesovo Beam 42.57 313 P **P** **16 09 57.8 +0.3**
comp=Z,320nm,1.0s,mb6.0,baz=93,slow=5.9,SNR=315
ZALV LR LR 16 28 33.9
comp=Z,51μm,18.6s,MS6.4,baz=88,slow=37
SBUM Sibu 43.20 226 P **P** **16 10 03.9 +1.0**
SBUM Sibu 43.20 226 P **P** **16 10 03.9 +1.0**
NVS Novosibirsk 43.51 314⇑ *i*P **P** **16 10 05.4 +0.4**
NVS *e*S **S** **16 16 31.5 +0.1**
NVS *e* 16 20 01.5
NVS pmax pmax
comp=E,658nm,1.2s
NVS pmax pmax
comp=Z,665nm,1.2s,mb6.2
NVS pmax pmax
comp=N,100nm,1.5s
NVS smax
comp=N,160nm,2.7s
NVS smax
comp=E,3μm,3.9s
SHL Shillong 43.55 270⇑ *i*P **P** **16 10 06.0 +0.3**
SHL *e*x x 16 16 52.5
NNT Nongplab 44.33 249 P **P** **16 10 13.3 +1.2**
MK31 Makanchi Array 44.68 303 P **P** **16 10 14.5 0.0**
MK31 Makanchi Array 44.68 303 *e*P **P** **16 10 14.0 -0.4**
MKAR Makanchi Array 44.68 303 P **P** **16 10 14.1 -0.4**
comp=E,409nm,1.1s,mb6.2,baz=91,slow=7.8,SNR=207
KSM Kuching 45.10 227 P **P** **16 10 19.9 +1.6**
KSM Kuching 45.10 227 P **P** **16 10 19.9 +1.6**
KSM Kuching 45.10 227 *e*P **P** **16 10 17.9 -0.3**
comp=E,107nm,0.7s,mb5.8
KSM *e*PcP PcP 16 11 55.3 -3.3
TARA Tarawa 45.22 133 *e*P **P** **16 10 18.7 -0.5**
comp=E,385nm,1.3s,mb6.1
KAPI Kappang 45.84 211 P **P** **16 10 23.7 -0.3**
comp=E,3μm,1.2s,mb7.0,SNR=55
KAPI Kappang 45.84 211 P **P** **16 10 23.6 -0.4**
comp=E,343nm,1.0s,mb6.2,baz=13,slow=7.7,SNR=47
KAPI Kappang 45.84 211 *e*P **P** **16 10 21.9 -2.1**
comp=E,494nm,1.0s,mb6.4
SLGI Shiliguri 45.86 274 *e*P **P** **16 10 24.0 -0.1**
TTA Tatalina 46.00 34 *e*P **P** **16 10 25.9 +1.1**
SVW2 Sparrevohn 46.08 37 *e*P **P** **16 10 27.2 +1.8**
TAPN Taplejung 46.15 275 *e*P **P** **16 10 27.4 +1.0**
comp=E,605nm,0.8s,mb6.6
KURK Kurchatov 46.55 309 P **P** **16 10 28.5 -0.7**
comp=E,3μm,0.8s,mb7.3
KURK Kurchatov 46.55 309*c* *i*P **P** **16 10 28.9 -0.3**
KURK pmax pmax
comp=Z,572nm,1.0s,mb6.5
KURK MLR MLR
comp=Z,91μm,19.0s,MS6.8
KURK Kurchatov 46.55 309 P **P** **16 10 29.0 -0.2**
comp=Z,346nm,0.8s,mb6.3,baz=82,slow=7.3,SNR=426
KURK Kurchatov 46.55 309 *e*P **P** **16 10 28.6 -0.6**
comp=Z,91nm,1.2s,mb5.6
KTGM Kuala Trenggan 46.79 238 P **P** **16 10 32.8 +1.3**
KTGM Kuala Trenggan 46.79 238 P **P** **16 10 32.8 +1.3**
RAMN Ramite 47.21 275 *e*P **P** **16 10 35.7 +0.9**
comp=Z,2μm,0.8s,mb7.0
OHAK Old Harbor 47.25 42 *e*P **P** **16 10 32.1 -2.5**
comp=Z,96nm,1.1s,mb5.6
SNG Songkhla 47.25 242 P **P** **16 10 37.0 +1.8**
comp=Z,700nm,1.0s,mb6.5
GUN Gumba 47.39 276 *e*P **P** **16 10 37.3 +1.2**
comp=Z,2μm,1.0s,mb7.0
RSO Redoubt South 47.45 38 *e*P **P** **16 10 35.2 -0.9**
KDAK Kodiak Island 47.61 41 P **P** **16 10 36.5 -0.9**
KDAK pmax pmax
comp=Z,91nm,0.9s,mb5.8
KDAK Kodiak Island 47.61 41 P **P** **16 10 37.0 -0.3**
comp=Z,64nm,0.8s,mb5.7,baz=297,slow=2.0,SNR=22
KDAK Kodiak Island 47.61 41 *e*P **P** **16 10 35.1 -2.3**
comp=Z,92nm,0.9s,mb5.8
CHUM Lake Minchumin 47.73 33 *e*P **P** **16 10 39.7 +1.5**
comp=Z,88nm,1.2s,mb5.7
PPLA Purkeypile 47.75 34 *e*P **P** **16 10 38.8 +0.4**
comp=Z,115nm,1.2s,mb5.8
CAL Calcutta 47.83 269 *e*P **P** **16 10 38.4 -1.1**
CAL *e*x x 16 16 32.1
PKI Pulchoki 47.91 276 *e*P **P** **16 10 40.9 +0.8**
comp=Z,575nm,0.8s,mb6.7
PKIN Phulchoki 47.91 276 *e*P **P** **16 10 40.8 +0.6**
PKIN Phulchoki 47.91 276 *e*P **P** **16 10 41.1 +0.9**
comp=Z,901nm,0.8s,mb6.8
KKN Kakani 47.92 277 *e*P **P** **16 10 41.0 +0.8**
comp=Z,708nm,0.8s,mb6.8
DMN Daman 48.13 277 *e*P **P** **16 10 42.6 +0.7**
comp=Z,724nm,1.0s,mb6.7
BPAW Bear Paw Mtn. 48.32 33 *e*P **P** **16 10 42.7 -0.1**
comp=Z,57nm,1.2s,mb5.5
KTH Kantishna Hill 48.34 34 *e*P **P** **16 10 42.3 -0.7**
comp=Z,132nm,1.2s,mb5.8
GKN Gorkha 48.34 277 *e*P **P** **16 10 44.3 +0.8**
comp=Z,2μm,1.0s,mb7.2
KULM Kulim 48.54 241 P **P** **16 10 46.2 +1.1**
KULM Kulim 48.54 241 P **P** **16 10 46.2 +1.1**
KULM Kulim 48.54 241 *e*P **P** **16 10 44.6 -0.5**
comp=Z,60nm,0.8s,mb5.7
TRF Thorofare Moun 48.62 34 *e*P **P** **16 10 44.8 -0.3**
comp=Z,35nm,0.9s,mb5.4
COLD Coldfoot 48.79 29 *e*P **P** **16 10 46.3 -0.1**
comp=Z,50nm,1.1s,mb5.5
IPM Ipoh 48.85 239 P **P** **16 10 47.8 +0.2**
IPM Ipoh 48.85 239 P **P** **16 10 47.8 +0.2**
MYKOM Kota Tinggi 48.90 234 P **P** **16 10 48.6 +0.7**
MYKOM Kota Tinggi 48.90 234 P **P** **16 10 48.6 +0.7**
KGM Kluang 49.08 235 P **P** **16 10 50.5 +1.2**
KGM Kluang 49.08 235 P **P** **16 10 50.5 +1.2**
AAA Alma-Ata 49.10 299 *e*P **P** **16 10 50.3 +1.2**
AAA *e*S **S** **16 18 02.4 +11**
AAA pmax pmax
comp=Z,8μm,8.3s
AAA MLR MLR
comp=Z,172μm,18.0s,MS7.1
SEW Seward 49.11 38 *e*P **P** **16 10 48.3 -0.6**
comp=Z,146nm,1.3s,mb5.8
PMR Palmer 49.19 36 *e*P **P** **16 10 49.8 +0.3**
PMR pmax pmax
comp=Z,64nm,0.9s,mb5.7
PMR Palmer 49.19 36 *e*P **P** **16 10 49.8 +0.3**
comp=Z,64nm,0.9s,mb5.7
MCK McKinley 49.23 33 *e*P **P** **16 10 48.5 -1.2**
MCK pmax pmax
comp=Z,53nm,0.9s,mb5.6
MCK McKinley 49.23 33 *e*P **P** **16 10 48.5 -1.2**
comp=Z,53nm,0.9s,mb5.6
KOLN Koldanda 49.27 277 *e*P **P** **16 10 51.8 +1.1**
comp=Z,520nm,0.9s,mb6.6
FRIM Kepong 49.33 238 P **P** **16 10 52.0 +0.8**
FRIM Kepong 49.33 238 P **P** **16 10 52.0 +0.8**
KAKA Kakadu 49.43 192 *e*P **P** **16 10 50.4 -1.4**
comp=Z,64nm,0.7s,mb5.8
KAKA *e* pP 16 10 58.8 -2.8
KAKA Kakadu 49.43 192 *e*P **P** **16 10 49.3 -2.5**
comp=Z,1μm,0.9s,mb7.0
PYUN Piuthan 49.62 278 *e*P **P** **16 10 54.5 +1.2**
comp=Z,1μm,1.0s,mb6.8
COLA College 49.69 32 *e*P **P** **16 10 52.8 -0.4**
COLA pmax pmax
comp=Z,43nm,0.8s,mb5.5
COLA College 49.69 32 *e*P **P** **16 10 52.8 -0.4**
comp=Z,42nm,0.8s,mb5.5
ULHL Ulahol 49.87 298 P **P** **16 10 56.1 +1.1**
SNR=142
COEN Coen 49.93 178 *e*P **P** **16 10 54.9 -0.7**
comp=Z,2μm,1.1s,mb7.0
TKM2 Tokmak 2 50.15 299 P **P** **16 10 58.6 +1.6**
SNR=120
TKM2 Tokmak 2 50.15 299 *e*P **P** **16 10 57.6 +0.5**
TKM2 pmax pmax
comp=Z,538nm,1.0s,mb6.5
TKM2 Tokmak 2 50.15 299 *e*P **P** **16 10 57.6 +0.5**
comp=Z,538nm,1.0s,mb6.5
KZA Kyzart 50.63 298 P **P** **16 11 02.3 +1.6**
SNR=147
KBK Karagaybulak 50.68 299 P **P** **16 11 02.4 +1.3**
SNR=166
CHMS Chumysh 50.72 299 P **P** **16 11 02.6 +1.2**
SNR=76
PAX Paxson 50.82 34 P **P** **16 11 03.0 +1.2**
PAX pmax pmax
comp=Z,12nm,0.8s,mb4.9
PAX Paxson 50.82 34 P **P** **16 11 03.0 +1.2**
comp=Z,12nm,0.8s,mb4.9
USP Ospenovka 50.82 300 P **P** **16 11 02.7 +0.5**
SNR=290
FRU Bishkek 50.86 299 *e*P **P** **16 11 03.6 +1.1**
FRU *i* 16 11 17.0
FRU *e* 16 18 26.0
FRU pmax pmax
comp=Z,980nm,2.2s,mb6.3
KSH Kashi 50.87 295⇑ *i*P **P** **16 11 07.1 +4.5**
KSH pP pP 16 11 16.2 +3.8
KSH sP sP 16 11 20.1 +3.8
KSH PcP PcP 16 12 23.1 +4.2
KSH PP PP 16 13 04.1 +5.2
KSH ScP ScP 16 16 15.1 +2.4
KSH PcS PcS 16 16 19.1 +2.8
KSH S **S** **16 18 20.1 +3.4**
KSH sS sS 16 18 37.1 +4.2
KSH ScS ScS 16 20 51.0 +0.2
KSH SS SS 16 21 53.3 +1.9
KSH pmax pmax
comp=Z,4μm,4.3s
KSH LR LR
comp=N,81μm,16.4s,MS6.9
KSH LR LR
comp=E,55μm,13.9s,MS6.9
AAK Ala-Archa 51.01 299 P **P** **16 11 04.9 +1.3**
comp=E,824nm,1.1s,mb6.6,SNR=61
AAK Ala-Archa 51.01 299 P **P** **16 11 04.4 +0.8**
SNR=98
AAK Ala-Archa 51.01 299 *e*P **P** **16 11 03.7 +0.1**
AAK pmax pmax
comp=Z,114nm,0.8s,mb5.8
AAK Ala-Archa 51.01 299 *e*P **P** **16 11 03.7 +0.2**
comp=Z,114nm,0.8s,mb5.8
UCH Uchtor 51.11 298 P **P** **16 11 06.0 +1.7**
SNR=74
UCH Uchtor 51.11 298 *e*P **P** **16 11 05.7 +1.3**
comp=Z,55nm,1.1s,mb5.4
BVAR Borovoye Array 51.23 313 P **P** **16 11 05.2 +0.1**
comp=Z,99nm,0.8s,mb5.8,baz=76,slow=6.3,SNR=178
BVAR P4KPbc 16 48 36.3
comp=Z,0.5nm,0.6s,baz=64,slow=6.8,SNR=4.8
PTH Pithoragarh 51.23 281 *e*P **P** **16 11 06.0 +0.6**
PTH *e*x x 16 14 08.9
BRVK Borovoye 51.28 313 P **P** **16 11 06.1 +0.6**
comp=Z,1μm,1.1s,mb6.7,SNR=76
BRVK Borovoye 51.28 313*c* *i*P **P** **16 11 05.9 +0.4**
BRVK pmax pmax
comp=Z,296nm,1.2s,mb6.1
BRVK MLR MLR
comp=Z,86μm,18.0s,MS6.8
BRVK Borovoye 51.28 313 *e*P **P** **16 11 05.0 -0.5**
comp=Z,235nm,1.0s,mb6.1
EKS2 Erkin-Say 51.51 299 P **P** **16 11 08.1 +0.7**
SNR=113
EKS2 Erkin-Say 51.51 299 *e*P **P** **16 11 07.6 +0.3**
comp=Z,99nm,0.5s,mb6.0
MENT Mentasta 51.62 34 *e*P **P** **16 11 09.2 +1.3**
AML Almayashu 51.72 299 P **P** **16 11 10.1 +1.2**
SNR=516
AML Almayashu 51.72 299 *e*P **P** **16 11 09.8 +0.8**
comp=Z,14nm,0.4s,mb5.3
ALBI Allahabad 51.80 276 *e*x x 16 11 20.8
EGAK Eagle 52.55 32 *e*P **P** **16 11 12.7 -2.0**
comp=Z,45nm,0.9s,mb5.4
DDI Dehra Dun 52.62 283⇓ *i*P **P** **16 11 16.3 +0.5**
SMLA Simla 52.99 284 *i*P **P** **16 11 17.8 -0.7**
SMLA *i*x x 16 18 46.2
DAWY Dawson 53.40 33 *e*P **P** **16 11 20.8 -0.2**
THN Thein Dam 53.60 286 *e*P **P** **16 11 21.9 -1.0**
PNL Peninsula 54.18 38 *e*P **P** **16 11 27.0 +0.2**
comp=Z,93nm,1.1s,mb5.6
JBP Jabalpur 54.27 274⇑ *e*P **P** **16 11 27.8 -0.2**
JBP *e*x x 16 19 08.8
INK Inuvik 55.04 27 P **P** **16 11 32.1 -0.8**
INK pmax pmax
comp=Z,145nm,1.1s
INK Inuvik 55.04 27 P **P** **16 11 32.1 -0.8**
comp=Z,145nm,1.1s,mb5.9,baz=293,slow=6.4,SNR=65
INK Inuvik 55.04 27 *e*P **P** **16 11 31.1 -1.8**
comp=Z,133nm,1.1s,mb5.9
SVE Sverdlovsk 55.85 319⇓ *e*P **P** **16 11 39.6 +0.7**
SVE *e* 16 13 52.1
SVE *e*PPP 16 15 05.8
SVE *e*S **S** **16 19 23.2 -0.6**
SVE *e* 16 21 18.2
SVE pmax pmax
comp=Z,572nm,1.2s,mb6.5
SVE pmax pmax
comp=Z,4μm,16.5s
SVE MLR MLR
comp=Z,91μm,16.0s,MS7.0
NGP Nagpur 56.01 273 *e*x x 16 11 36.9
FITZ Fitzroy Crossi 56.10 198 *e*P **P** **16 11 40.2 -0.8**
comp=Z,33nm,0.6s,mb5.5
FITZ *e* pP 16 11 48.2 -2.7
FITZ *e* 16 13 22.8
FITZ *e*S **S** **16 19 27.3 -0.5**
FITZ *e* 16 19 58.3
FITZ Fitzroy Crossi 56.10 198 *e*P **P** **16 11 40.2 -0.9**
comp=Z,80nm,0.9s,mb5.8
CTA Charters Tower 56.18 175 *e*P **P** **16 11 40.5 -1.1**
comp=Z,8.8nm,0.7s,mb4.9
CTA *e*pP pP 16 11 51.5 0.0
CTA *e*S **S** **16 19 27.9 -0.8**
CTAO Charters Tower 56.18 175 *e*P **P** **16 11 41.6 0.0**
CTAO pmax pmax
comp=Z,135nm,1.4s,mb5.8
CTAO Charters Tower 56.18 175 *e*P **P** **16 11 41.6 +0.1**
comp=Z,135nm,1.4s,mb5.8
SKAG Skagway 56.25 38 *e*P **P** **16 11 43.8 +2.1**
comp=Z,77nm,1.4s,mb5.5
WRAB Tennant Creek 56.27 188 P **P** **16 11 41.0 -1.2**
comp=Z,1μm,1.2s,mb6.8,SNR=16
WRAB Tennant Creek 56.27 188 P **P** **16 11 40.3 -1.9**
WRAB pmax pmax
comp=Z,250nm,1.1s,mb6.2
WRAB Tennant Creek 56.27 188 *e*P **P** **16 11 40.4 -1.8**
comp=Z,255nm,1.1s,mb6.2
WB2 Warramunga Arr 56.28 188 *e*P **P** **16 11 40.5 -1.8**
WRA Warramunga Arr 56.28 188 P **P** **16 11 40.1 -2.2**
comp=Z,38nm,0.8s,mb5.5,baz=7.5,slow=7.4,SNR=101
WRA PKP2bc 16 41 51.4
comp=Z,1.7nm,1.0s,baz=197,slow=2.8,SNR=4.6
WRA Warramunga Arr 56.28 188 P **P** **16 11 40.1 -2.2**
WRA ⇑*e* 16 41 51.4
BHPL Bhopal 56.30 276 *e*P **P** **16 11 42.2 -0.4**
BHPL AMb AMB 16 11 46.1
comp=Z,195nm,1.9s,mb5.8
AJM Ajmer 57.00 280 *i*P **P** **16 11 47.0 -0.5**
ARU Arti 57.06 319 P **P** **16 11 47.0 -0.5**
comp=Z,3μm,1.3s,mb7.1
ARU Arti 57.06 319*d* *i*P **P** **16 11 47.5 0.0**
ARU *e* 16 12 40.3
ARU *e* 16 13 51.1
ARU *e*PPP 16 15 08.4
ARU S **S** **16 19 43.6 +3.7**
ARU 16 21 33.2
ARU SS SS 16 23 31.1 +2.9
ARU pmax pmax
comp=Z,750nm,1.2s,mb6.6
ARU pmax pmax
comp=Z,935nm,5.7s
ARU MLR MLR
comp=Z,70μm,17.0s,MS6.8
ARU Arti 57.06 319 *e*P **P** **16 11 47.3 -0.3**
comp=Z,706nm,1.2s,mb6.6
SOKR Solikamsk 57.06 323*c* *i*P **P** **16 11 47.9 +0.4**
SOKR 16 13 53.9
SOKR S **S** **16 19 42.6 +2.8**
SOKR SS SS 16 23 22.4 -5.7
SOKR pmax pmax
comp=Z,290nm,1.0s,mb6.3
SOKR MLR MLR
comp=Z,27μm,11.0s,MS6.6
XMIS Christmas Isla 57.48 223 *e*P **P** **16 11 48.0 -3.0**
comp=Z,100nm,1.0s,mb5.8
KBL Kabul 57.84 292 P **P** **16 11 53.8 +0.4**
KBL pmax pmax
comp=Z,230nm,1.2s,mb6.1
KBL Kabul 57.84 292 *e*P **P** **16 11 52.8 -0.6**
comp=Z,233nm,1.2s,mb6.1
HYB Hyderabad 58.33 269 *i*P **P** **16 11 57.0 0.0**
comp=Z,110nm,1.0s,mb5.8
HYB *e*PP PP 16 14 06.0 -0.3
HYB *e*S **S** **16 19 57.0 -0.5**
ABKAR Akbulak array 58.57 311 *e*P **P** **16 11 57.1 -1.1**
comp=Z,2.3nm,0.6s,mb4.4
DLBC Dease Lake 59.17 38 *e*P **P** **16 12 02.6 +0.3**
LATR Latur 59.42 271 *e*P **P** **16 12 04.2 -0.3**
ASAR Alice Springs 60.01 188 P **P** **16 12 06.2 -2.1**
comp=Z,14nm,0.7s,mb5.1,baz=8.0,slow=6.1,SNR=70
ASAR P4KP2bc 16 41 42.2
comp=Z,2.6nm,0.8s,baz=176,slow=3.3,SNR=5.3
ASAR P4KPbc 16 49 15.1
comp=Z,0.3nm,0.9s,baz=357,slow=3.9,SNR=3.1
ASAR Alice Springs 60.01 188 P **P** **16 12 06.2 -2.1**
ASAR ⇑*e* 16 41 42.2
MBWA Marble Bar 60.70 203 *e*P **P** **16 12 11.6 -1.5**
comp=Z,75nm,0.8s,mb5.9
ALE Alert 60.91 3 P **P** **16 12 13.0 -0.9**
comp=Z,1μm,1.2s,mb6.8
BHV Bhavnagar 61.27 277 *e*P **P** **16 12 17.0 -0.2**
SPB4 Spitsbergen Ar 61.35 349 *e*P **P** **16 12 17.0 +0.2**
KBS Kingsbay 61.48 350⇑ *i*P **P** **16 12 18.4 +0.7**
KBS *e*S **S** **16 20 37.1 +0.7**
KBS Kingsbay 61.48 350 *e*P **P** **16 12 18.2 +0.5**
KBS pmax pmax
comp=Z,289nm,1.0s,mb6.4
KBS Kingsbay 61.48 350 *e*P **P** **16 12 18.1 +0.4**
comp=Z,289nm,1.0s,mb6.4
POO Poona 61.55 273 *e*P **P** **16 12 19.1 0.0**
POO AMb AMB 16 12 21.6
comp=Z,173nm,1.4s,mb6.0
EIDS Eidsvold 61.91 170 *e*P **P** **16 12 21.5 +0.3**
comp=Z,86nm,0.9s,mb5.9
KAD Karad 61.92 272 *e*P **P** **16 12 21.0 -0.6**
KAD AMb AMB 16 12 23.9
comp=Z,172nm,1.2s,mb6.1
HSP Hornsund 62.26 348 *e*P **P** **16 12 23.5 +0.5**
PALK Pallekele 62.34 258 P **P** **16 12 26.2 +1.7**
comp=Z,1μm,0.8s,mb7.0,SNR=7.8
PALK Pallekele 62.34 258 *i*P **P** **16 12 26.1 +1.6**
PALK Pallekele 62.34 258 *e*P **P** **16 12 24.7 +0.2**
comp=Z,196nm,0.9s,mb6.2
BHJ Bhuj 62.52 280 *e*P **P** **16 12 25.8 +0.3**
BHJ AMb AMB 16 12 30.0
comp=Z,237nm,1.5s,mb6.1
NOUC Port Laguerre 62.54 154 *e*P **P** **16 12 27.4 +1.9**
BBB Bella Bella 62.54 44 LR LR 16 38 54.8
comp=Z,5μm,18.6s,MS5.7,baz=292,slow=35
DZM Mont Dzumac 62.56 154 *e*P **P** **16 12 27.1 +1.5**
comp=Z,772nm,1.1s,mb6.7
DZM *e*S **S** **16 20 48.8 -2.4**
comp=Z,28μm,28.1s
DZM *e*SS SS 16 24 49.4 -6.9
comp=Z,5μm,24.6s
DZM *e*LR LR 16 30 59.5
comp=Z,31μm,21.1s
DZM Mont Dzumac 62.56 154 *e*P **P** **16 12 26.0 +0.4**
DZM Mont Dzumac 62.56 154 *e*P **P** **16 12 24.4 -1.2**
comp=Z,348nm,1.1s,mb6.4
LVZ Lovozero 62.91 336 P **P** **16 12 27.5 +0.1**
comp=Z,853nm,1.1s,mb6.8,SNR=26
LVZ Lovozero 62.91 336*c* *i*P **P** **16 12 27.2 -0.2**
LVZ MLR MLR
comp=Z,51μm,20.0s,MS6.7
GOA Goa 63.19 270⇓ *i*P **P** **16 12 30.0 -0.1**
BJO Bjornoya 63.24 345 *e*P **P** **16 12 30.8 +1.2**
BJO *e*S **S** **16 21 01.3 +2.6**
BJO1 Bjornoya 63.28 345 *e*P **P** **16 12 30.8 +1.0**
RES Resolute Bay 63.35 14 *e*P **P** **16 12 28.3 -2.0**
RES pmax pmax
comp=Z,239nm,1.1s,mb6.2
RES Resolute Bay 63.35 14 P **P** **16 12 28.9 -1.4**
comp=Z,170nm,1.1s,mb6.1,baz=304,slow=6.6,SNR=125
RES Resolute Bay 63.35 14 *e*P **P** **16 12 28.3 -2.0**
comp=Z,239nm,1.1s,mb6.2
APA Apatity 63.48 336*b* *i*P **P** **16 12 30.8 -0.5**
APA *i* 16 13 05.8
APA *i* 16 14 50.0
APA *i* 16 16 23.0
APA *i*S **S** **16 20 57.0 -4.8**
APA *e*SS SS 16 25 14.0 +5.7
APA pmax pmax
comp=Z,310nm,1.2s,mb6.3
APA pmax pmax
comp=Z,4μm,19.0s
APA MLR MLR
comp=Z,52μm,18.0s,MS6.8
COCO West Island 64.03 230 *i*P **P** **16 12 37.7 +2.2**
KEV Kevo 64.25 339 *e*P **P** **16 12 36.4 +0.1**
KEV pmax pmax
comp=Z,280nm,1.1s,mb6.2
KEV Kevo 64.25 339 *e*P **P** **16 12 36.4 +0.1**
comp=Z,280nm,1.1s,mb6.2
KEV Kevo 64.25 339 *e*p **P** **16 12 35.4 -0.9**
comp=Z,61nm,0.8s,mb5.7
ABKT Ailbek 64.36 299 P **P** **16 12 38.8 +1.3**
comp=Z,620nm,1.3s,mb6.5,SNR=39
YKA Yellowknife Ar 64.44 30 P **P** **16 12 36.0 -1.5**
comp=Z,38nm,0.9s,mb5.4,baz=296,slow=6.1,SNR=137
YKA PKP2bc 16 41 24.4
comp=Z,0.7nm,0.9s,baz=94,slow=3.2,SNR=4.5
YKA Yellowknife Ar 64.44 30 P **P** **16 12 36.0 -1.5**
YKA ⇑*e* 16 41 24.4
KLMR Klimovskoe 64.52 328⇓ *i*P **P** **16 12 37.7 -0.5**
KLMR *e* 16 14 59.9
KLMR *e*S **S** **16 21 16.0 +1.2**
KLMR *e*SS SS 16 25 21.4 -3.3
KLMR pmax pmax
comp=Z,450nm,1.3s,mb6.3
TRD Trivandrum 64.59 262⇓ *e*x x 16 12 47.0
TRD *e*x x 16 17 19.0
ARCES ARCESS Array B 64.81 340 P **P** **16 12 39.2 -0.7**
comp=Z,100nm,0.9s,mb5.8,baz=51,slow=6.4,SNR=105
ARCES PKP2bc 16 41 38.7
comp=Z,1.8nm,0.9s,baz=257,slow=2.1,SNR=5.2
ARCES ARCESS Array B 64.81 340 P **P** **16 12 39.2 -0.7**
ARCES ⇑*e* 16 41 38.7
ARE0 ARCESS Array S 64.81 340 *e*P **P** **16 12 40.1 +0.2**
KTK1 Kautokeino 65.77 340 *e*P **P** **16 12 46.8 +0.6**
KTK1 *e*S S 16 21 33.4 +3.5
KTK1 *e*SS SS 16 25 46.6 +2.9
TRO Tromso 66.53 341⇑ *i*P **P** **16 12 50.9 -0.1**
TRO *e*S S 16 21 40.6 +1.4
TRO *e*SS SS 16 25 59.5 +4.0
TRO *e* 16 56 02.0
JOF Joensuu 66.75 332 *e*P **P** **16 12 51.0 -1.5**
JOF pmax pmax
comp=Z,80nm,0.9s,mb5.8
JOF Joensuu 66.75 332 *e*p **P** **16 12 51.0 -1.5**
comp=Z,80nm,0.9s,mb5.8
ARMA Armidale 66.96 171 *e*P **P** **16 12 54.7 +0.6**
ARMA *e*pP pP 16 13 05.7 +1.5
ARMA *e*S S 16 21 45.0 -0.1
ARMA Armidale 66.96 171 *e*P **P** **16 12 54.7 +0.6**
comp=Z,213nm,1.1s,mb6.1
NLWA Neilton Lookou 67.16 47⇓ P **P** **16 12 56.5 +1.2**
baz=67,SNR=14
NLWA ⇓S S 16 21 49.3 +1.9
baz=67
NLWA Neilton Lookou 67.16 47 *e*P **P** **16 12 54.3 -1.1**
comp=Z,113nm,1.0s,mb5.8
A05A Maple Falls 67.41 45⇑ P **P** **16 12 57.5 +0.5**
baz=67
A05A ⇓S S 16 21 49.9 -0.5
baz=67
MBW Mount Baker 67.62 45 P **P** **16 12 59.7 +1.4**
GNW Green Mountain 67.69 47 *e*P **P** **16 13 00.8 +2.1**
comp=Z,43nm,1.2s,mb5.3
STKA Stephens Creek 67.74 180 *e*P **P** **16 12 58.7 -0.4**
comp=Z,21nm,0.9s,mb5.2
STKA *e* pP 16 13 10.1 +0.9
STKA *e*S S 16 21 49.7 -4.8
STKA Stephens Creek 67.74 180 P **P** **16 12 59.0 -0.1**
comp=Z,22nm,0.8s,mb5.2,baz=349,slow=7.4,SNR=39
STKA LR LR 16 41 42.7

comp=Z,8μm,20.3s,MS6.0,baz=355,slow=35
STKA Stephens Creek 67.74 180 *e*P **P 16 12 57.9 -1.2**
comp=Z,9.7nm,0.9s,mb4.8
E03A Lebam 67.75 48 ⇑P **P 16 12 59.8 +0.6**
baz=68
E03A ⇑S S 16 21 56.4 +1.9
baz=68
FORT Forrest 67.85 193 *e*P **P 16 12 59.5 -0.3**
comp=Z,152nm,0.7s,mb6.1
FORT *e*S S 16 21 49.2 -6.6
FORT Forrest 67.85 193 *e*P **P 16 12 59.0 -0.7**
comp=Z,160nm,0.6s,mb6.2
MNCY Minicoy 67.88 264 *i* x **P 16 12 57.0 -3.4**
MNCY *i* x x 16 13 08.0
JCW Jim Creek 67.90 46 *e*P **P 16 13 00.4 +0.4**
MOS Moscow 67.99 324α *i*P **P 16 13 00.8 +0.3**
MOS *e* 16 13 25.1
MOS *e* 16 15 28.5
MOS *e*PPP 16 17 12.6
MOS *e*S S 16 21 54.6 -2.5
MOS *e*SS SS 16 26 10.9 -7.7
MOS pmax pmax
comp=Z,2μm,2.3s,mb6.7
MOS pmax pmax
comp=Z,629nm,1.5s,mb6.4
MOS pmax pmax
comp=N,261nm,1.4s
MOS pmax pmax
comp=E,235nm,1.4s
MOS MLR MLR
comp=Z,43μm,14.0s,MS6.8
MOS MLR MLR
comp=N,27μm,16.0s
B06A Marblemount 68.00 45 ⇓P **P 16 13 00.9 +0.2**
baz=68
B06A ⇓S S 16 21 58.0 +0.6
baz=68
RPW Rockport 68.01 45 *e*P **P 16 13 01.2 +0.5**
comp=N,7.7nm,0.9s,mb4.7
F03A Seaside 68.06 49 ⇑P **P 16 13 01.2 +0.1**
baz=68
F03A ⇑S S 16 22 00.9 +2.6
baz=68
A07A Ashnola River, 68.36 45 ⇑P **P 16 13 02.9 0.0**
baz=68,SNR=16
A07A ⇓S S 16 22 01.7 0.0
baz=68
D05A Enumclaw 68.37 47 ⇓P **P 16 13 03.0 -0.1**
baz=68,SNR=7.1
D05A ⇓S S 16 22 04.3 +2.3
baz=68
C06A Tall Timber Ra 68.64 46 ⇓P **P 16 13 04.9 +0.2**
baz=68
TDL Tradedollar La 68.66 48 P **P 16 13 06.8 +1.9**
STEI Steigen 68.68 341 *e*P **P 16 13 05.0 +0.4**
STEI AMb AMB 16 13 07.4
comp=Z,128nm,1.2s,mb5.7
LON Longmire 68.70 47 *e*P **P 16 13 06.1 +1.0**
LON pmax pmax
comp=Z,45nm,1.1s,mb5.3
LON Longmire 68.70 47 *e*P **P 16 13 06.1 +1.0**
comp=Z,44nm,1.1s,mb5.3
F04A Amboy 68.75 48 ⇑P **P 16 13 05.4 0.0**
baz=69,SNR=12
B07A Winthrop 68.81 45 ⇑P **P 16 13 06.1 +0.4**
baz=69,SNR=21
OBN Obninsk 68.83 323 P **P 16 13 05.5 -0.3**
comp=Z,2μm,1.2s,mb6.8,SNR=24
OBN Obninsk 68.83 323*c i*P **P 16 13 05.6 -0.2**
OBN *i* 16 13 18.1
OBN *i* 16 13 32.7
OBN *i* 16 15 36.4
OBN *i*S S 16 22 08.5 +1.3
OBN pmax pmax
comp=Z,546nm,1.6s,mb6.2
OBN MLR MLR
comp=Z,56μm,15.0s,MS6.9
OBN Obninsk 68.83 323 *e*P **P 16 13 05.7 -0.1**
comp=Z,473nm,1.3s,mb6.3
WPW White Pass 68.88 47 P **P 16 13 07.9 +1.7**
COR Corvallis 68.89 50 *e*P **P 16 13 08.2 +1.9**
COR pmax pmax
comp=Z,148nm,1.3s,mb5.8
COR Corvallis 68.89 50 *e*P **P 16 13 08.2 +1.8**
comp=Z,148nm,1.3s,mb5.8
PUL Pulkovo 68.96 330⇑*e*P **P 16 13 08.1 +1.6**
PUL pmax pmax
comp=Z,339nm,1.1s,mb6.2
PUL MLR MLR
comp=Z,42μm,18.0s,MS6.7
LOF Lofoten 68.97 342 *e*P **P 16 13 08.1 +1.6**
A08A Turner Farm, O 69.03 44 ⇑P **P 16 13 06.7 -0.5**
baz=69,SNR=19
D06A Cle Elum 69.04 46 ⇓P **P 16 13 07.4 +0.2**
baz=69,SNR=11
MAK Makhachkala 69.07 308*c i*P **P 16 13 07.3 -0.2**
MAK *e* 16 13 26.4
MAK *e* 16 15 39.9
MAK *e*PPP 16 17 19.6
MAK *i*S S 16 22 15.2 +4.8
MAK *i* 16 23 03.6
MAK pmax pmax
comp=Z,149nm,1.3s,mb5.8
MAK pmax pmax
comp=N,96nm,0.6s
MAK pmax pmax
comp=E,338nm,1.9s
MAK pmax pmax
comp=Z,2μm,3.5s
MAK smax
comp=E,3μm,8.4s
MAK smax
comp=N,3μm,9.4s
MAK MLR MLR
comp=E,82μm,17.0s,MS7.1
MAK MLR MLR
comp=Z,55μm,15.0s,MS6.9
MAK MLR MLR
comp=N,28μm,16.0s,MS7.1
G04A Mulino 69.08 49 ⇑P **P 16 13 07.0 -0.5**
baz=69
KAF Kangasniemi 69.09 333 *e*P **P 16 13 05.4 -1.9**
KAF pmax pmax
comp=Z,60nm,0.7s,mb5.6
KAF Kangasniemi 69.09 333 *e*p **P 16 13 05.4 -1.9**
comp=Z,60nm,0.7s,mb5.6
ETW Entiat 69.13 46 *e*P **P 16 13 07.6 -0.1**
comp=Z,53nm,0.8s,mb5.5
C07A Waterville 69.24 46 ⇑P **P 16 13 08.2 -0.3**
baz=69,SNR=15
NAC Naches 69.28 47 P **P 16 13 10.2 +1.5**
E06A Yakima 69.29 47 ⇑P **P 16 13 09.2 +0.4**
baz=69,SNR=17
WTV Waterville 69.30 46 P **P 16 13 09.8 +1.0**
B08A Colville Reser 69.31 45 ⇓P **P 16 13 09.0 +0.1**
baz=69,SNR=37
VOR Voronezh 69.34 320 *e*P **P 16 13 08.0 -1.0**
VOR pmax pmax
comp=Z,500nm,2.0s,mb6.1
A09A Danville 69.41 44 ⇑P **P 16 13 09.8 +0.3**
baz=69,SNR=20
HOOD Mount Hood Mea 69.52 48 *e*P **P 16 13 11.8 +1.6**
comp=Z,142nm,1.0s,mb5.8
H04A Detroit Lake 69.52 49 ⇓P **P 16 13 10.6 +0.4**
baz=69,SNR=19
D07A Quincy 69.55 46 ⇓P **P 16 13 10.2 -0.1**
baz=69,SNR=9.4
FINES FINESS Array B 69.60 332 P **P 16 13 10.3 0.0**
comp=Z,197nm,1.0s,mb6.0,baz=57,slow=7.0,SNR=119
VSR Storozhevoye 69.64 319*c i*P **P 16 13 10.7 -0.1**
VSR *e* 16 15 41.5
VSR *e*S S 16 22 15.1 -1.7
VSR pmax pmax
comp=Z,210nm,0.8s,mb6.1
VSR pmax pmax
comp=N,140nm,1.5s
VSR pmax pmax
comp=E,100nm,0.7s
VSR pmax pmax
comp=Z,600nm,3.0s
VSR pmax pmax
comp=N,340nm,2.7s
VSR pmax pmax
comp=E,190nm,1.1s
VSR smax
comp=E,1μm,5.8s
VSR smax
comp=Z,300nm,5.6s
VSR smax
comp=N,470nm,2.4s
VSR MLR MLR
comp=Z,71μm,14.0s,MS7.1
VSR MLR MLR
comp=N,24μm,16.0s,MS7.0
VSR MLR MLR
comp=E,59μm,16.0s,MS7.0
VORD Divnogorie 69.70 319 *e*P **P 16 13 11.1 -0.1**
VORD *e* 16 15 43.7
VORD *e*S S 16 22 17.2 -0.4
VORD *e*SS SS 16 26 51.1 +5.8
VORD pmax pmax
comp=Z,40nm,0.5s,mb5.6
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,100nm,0.9s
VORD pmax pmax
comp=Z,540nm,2.7s,mb6.0
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=E,560nm,2.5s
VORD smax
comp=E,420nm,6.4s
VORD smax
comp=Z,90nm,6.8s
VORD smax
comp=N,390nm,7.2s
VORD MLR MLR
comp=E,53μm,16.0s,MS6.9
VORD MLR MLR
comp=Z,55μm,16.0s,MS6.9
VORD MLR MLR
comp=N,9μm,14.0s,MS6.9
C08A Higginbotham F 69.77 45 ⇓P **P 16 13 11.2 -0.5**
baz=70,SNR=12
EDM Edmonton 69.89 38 *e*P **P 16 13 11.3 -1.0**
B09A Rice 69.95 44 ⇑P **P 16 13 12.6 -0.2**
baz=70,SNR=31
E07A Sunnyside 69.95 47 ⇑P **P 16 13 13.0 +0.2**
baz=70,SNR=5.6
A10A Northport 69.98 44 ⇓P **P 16 13 12.9 -0.1**
baz=70,SNR=7.4
HUMO Hull Mountain 70.11 51 *e*P **P 16 13 15.7 +1.7**
comp=N,40nm,1.2s,mb5.2
MOR8 Moi Rana 70.17 340 *e*P **P 16 13 11.6 -2.3**
OD2 Odessa Site #2 70.17 45 *e*P **P 16 13 14.6 +0.4**
comp=N,41nm,1.0s,mb5.3
G06A Carlson Farm, 70.18 48 ⇑P **P 16 13 14.5 +0.3**
baz=70,SNR=18
RSW Rattlesnake Hi 70.19 47 *e*P **P 16 13 15.7 +1.4**
comp=N,61nm,1.4s,mb5.3
C09A Chrisman Ranch 70.21 45 ⇑P **P 16 13 14.4 0.0**
baz=70,SNR=16
HAWA Hanford 70.22 47 *e*P **P 16 13 15.6 +1.1**
comp=N,94nm,1.4s,mb5.5
D08A Wollman Farm, 70.23 46 ⇓P **P 16 13 14.3 -0.3**
baz=70,SNR=21
WRD Warden 70.23 46 P **P 16 13 15.1 +0.5**
F07A Phinny Hill Vi 70.25 47 ⇑P **P 16 13 15.5 +0.8**
baz=70,SNR=12
RIV Riverview 70.26 172 *e*P **P 16 13 17.2 +2.5**
STOK Stokkvaagen 70.44 340 *e*P **P 16 13 15.7 +0.2**
STOK *e*S S 16 22 28.7 +2.9
E08A Dider Farm, El 70.45 46 ⇑P **P 16 13 15.9 0.0**
baz=70,SNR=9.6
B10A Chitwood Farm, 70.53 44 ⇑P **P 16 13 16.2 -0.2**
baz=70
D09A Jones Farm, Ri 70.58 46 ⇓P **P 16 13 16.4 -0.2**
baz=70,SNR=11
NEW Newport 70.61 44 *e*P **P 16 13 17.6 +0.8**
NEW pmax pmax
comp=Z,58nm,1.0s
NEW Newport 70.61 44 *e*P **P 16 13 17.6 +0.8**
comp=Z,58nm,1.0s,mb5.5
H06A Lindquist Farm 70.62 48 ⇑P **P 16 13 17.1 +0.1**
baz=70,SNR=24
A11A Hall Mountain, 70.65 43 ⇑P **P 16 13 17.7 +0.6**
baz=70,SNR=26
YBH Yreka Blue Hor 70.72 52 P **P 16 13 17.9 +0.2**
YBH pmax pmax
comp=Z,22nm,1.0s
YBH Yreka Blue Hor 70.72 52 P **P 16 13 17.9 +0.2**
comp=Z,22nm,1.0s,mb5.0,baz=321,slow=2.6,SNR=16
YBH Yreka Blue Hor 70.72 52 *e*P **P 16 13 18.1 +0.4**
comp=Z,51nm,1.1s,mb5.4
C10A Spilker Farm, 70.75 44 ⇑P **P 16 13 17.6 0.0**
baz=71
GOF Gofitskoye 70.75 312⇑*i*P **P 16 13 09.8 -7.9**
B11A Sandpoint 70.94 44 ⇑P **P 16 13 18.9 +0.1**
baz=71,SNR=15
JMIC Jan Mayen 70.97 350 *e*P **P 16 13 19.7 +1.0**
JMIC *e*S S 16 22 32.9 +1.1
E09A Wood Farm, Sta 70.97 46 ⇓P **P 16 13 18.8 -0.3**
baz=71,SNR=15
F08A Pendleton 70.99 47 ⇓P **P 16 13 19.0 -0.2**
baz=71,SNR=13
A12A Yaak River Ran 71.06 43 ⇓P **P 16 13 19.8 +0.2**
baz=71,SNR=5.9
G08A Pilot Rock 71.15 47 ⇓P **P 16 13 20.5 +0.3**
baz=71,SNR=20
D10A Wagner Farm, O 71.18 45 ⇓P **P 16 13 20.5 +0.1**
baz=71,SNR=11
VSU Vasula 71.23 330*c i*P **P 16 13 20.6 +0.2**
VSU pmax pmax
comp=Z,450nm,1.4s,mb6.2
VSU MLR MLR
comp=Z,26μm,18.0s,MS6.5
LNOR Lincton Mounta 71.24 47 *e*P **P 16 13 21.4 +0.7**
LNOR pmax pmax
comp=Z,15nm,0.9s,mb4.9
LNOR Lincton Mounta 71.24 47 *e*P **P 16 13 21.4 +0.7**
comp=Z,15nm,0.9s,mb4.9
K05A Summer Lake 71.35 50 ⇑P **P 16 13 21.6 +0.2**
baz=71,SNR=42
B12A Libby 71.35 43 ⇑P **P 16 13 22.2 +0.8**
baz=71
ZEI Tsey 71.44 310 *e*P **P 16 13 21.9 -0.1**
ZEI pmax pmax
comp=Z,85nm,1.2s,mb5.5
WDC Whiskeytown Da 71.44 53 *e*P **P 16 13 23.9 +1.9**
WDC pmax pmax
comp=Z,70nm,1.1s,mb5.5
WDC Whiskeytown Da 71.44 53 *e*P **P 16 13 22.9 +0.9**
comp=Z,70nm,1.2s,mb5.5
MTA Mtatsminda 71.45 308 P **P 16 13 22.2 +0.1**
MTA S sS 16 22 57.8 +2.8
TBLG Delisi 71.46 308 P **P 16 13 23.0 +0.8**
I07A Izee 71.47 49 ⇑P **P 16 13 22.1 -0.1**
baz=71,SNR=20
SUMG Summit 71.49 0 *e*P **P 16 13 22.7 +0.9**
comp=Z,185nm,1.1s,mb5.9
CAN Canberra 71.51 174 *e*P **P 16 13 21.9 -0.3**
CAN pmax pmax
comp=Z,137nm,1.1s,mb5.8
CAN Canberra 71.51 174 *e*P **P 16 13 21.9 -0.3**
comp=Z,137nm,1.1s,mb5.8
CNB Canberra Magne 71.54 173 *e*P **P 16 13 24.4 +2.0**
CNB *e* pP 16 13 32.6 0.0
CNB *e*S S 16 22 38.9 -0.1
F09A S2 Ranch, Elgi 71.55 47 ⇓P **P 16 13 22.3 -0.3**
baz=71
KIV Kislovodsk 71.55 311 P **P 16 13 23.2 +0.6**
comp=Z,3μm,0.9s,mb7.2,SNR=32
KIV Kislovodsk 71.55 311 *e*P **P 16 13 22.9 +0.3**
KIV *e* 16 13 42.1
KIV *e* 16 16 00.0
KIV *e*S S 16 22 42.6 +3.3
KIV *e*SS SS 16 27 16.0 +2.0
KIV pmax pmax
comp=Z,1μm,4.2s
KIV pmax pmax
comp=Z,437nm,1.2s,mb6.3
KIV MLR MLR
comp=Z,25μm,17.0s,MS6.5
KIV Kislovodsk 71.55 311 *e*P **P 16 13 22.5 -0.1**
comp=Z,432nm,0.9s,mb6.4
E10A Myers Farm, Un 71.59 46 ⇓P **P 16 13 22.8 0.0**
baz=71,SNR=20
KEH Kehvi 71.66 309 P **P 16 13 23.1 -0.2**
D11A Klaveano Farm, 71.72 45 ⇓P **P 16 13 23.4 -0.2**
baz=72,SNR=18
GOR Gori 71.73 309 P **P 16 13 25.6 +1.9**
H08A Prairie City 71.74 48 ⇓P **P 16 13 23.8 0.0**
baz=72,SNR=21
F10A Beach Ranch, E 71.80 46 ⇑P **P 16 13 24.2 +0.1**
baz=72,SNR=13
ONI Oni 71.81 310 P **P 16 13 25.5 +1.2**
ONI S S 16 22 45.6 +3.2
C12B Naegeli Ranch, 71.84 44 ⇑P **P 16 13 24.0 -0.3**
baz=72,SNR=7.2
G09A Cove 71.86 47 ⇑P **P 16 13 24.3 -0.2**
baz=72,SNR=23
WALA Waterton Lakes 71.94 42 *e*P **P 16 13 24.2 -0.6**
comp=Z,3.3nm,1.4s
B13A Whitefish 72.02 43 ⇑P **P 16 13 25.1 -0.3**
baz=72,SNR=49
BSMT Bassoo Peak 72.14 43 *e*P **P 16 13 27.2 +1.1**
comp=Z,34nm,1.2s,mb5.2
MOD Modoc 72.16 51 *e*P **P 16 13 27.3 +1.0**
comp=Z,24nm,0.9s,mb5.1
E11A Bogner Ranch, 72.18 45 ⇑P **P 16 13 26.1 -0.2**
baz=72,SNR=29
A14A Double T Ranch 72.25 42 ⇓P **P 16 13 26.9 +0.1**
baz=72,SNR=30
H09A Durkee 72.26 47 ⇓P **P 16 13 27.1 +0.2**
baz=72,SNR=9.1
GNI Garni 72.31 307*c i*P **P 16 13 28.6 +1.4**
GNI MLR MLR
comp=Z,17μm,17.0s
GNI Garni 72.31 307 *e*P **P 16 13 27.9 +0.7**
C13A Hot Springs 72.36 44 ⇑P **P 16 13 27.1 -0.3**
baz=72,SNR=26
BMO Blue Mountains 72.37 47 *e*P **P 16 13 28.4 +0.9**
comp=Z,42nm,1.0s,mb5.3
NWAO Narrogin (SRO) 72.47 201 P **P 16 13 27.9 -0.1**
NWAO pmax pmax
comp=Z,61nm,1.0s
NWAO Narrogin (SRO) 72.47 201 *e*P **P 16 13 26.3 -1.7**
comp=Z,61nm,0.9s,mb5.5
F11A Grangeville 72.47 46 ⇑P **P 16 13 27.7 -0.4**
baz=72,SNR=75
JTMT Jette 72.48 43 *e*P **P 16 13 27.1 -1.0**
comp=Z,51nm,1.1s,mb5.4
J08A Circle Bar Ran 72.50 49 ⇑P **P 16 13 28.1 -0.2**
baz=72,SNR=24
E12A Beaver Dam Sad 72.51 45 ⇑P **P 16 13 28.0 -0.3**
baz=72,SNR=106
YBMT Yellow Bay 72.57 43 *e*P **P 16 13 29.8 +1.2**
comp=Z,41nm,1.1s,mb5.3
I09A Lost Marbles R 72.60 48 ⇑P **P 16 13 28.8 -0.1**
baz=72,SNR=22
A15A Johnson Ranch, 72.62 42 ⇑P **P 16 13 28.6 -0.4**
baz=72,SNR=23
D13A Huson 72.75 44 ⇑P **P 16 13 30.0 +0.2**
baz=73,SNR=34
SWMT Swartz Lake 72.78 43 *e*P **P 16 13 30.8 +1.0**
comp=Z,67nm,1.1s,mb5.5
WVOR Wild Horse Val 72.91 50 P **P 16 13 31.1 +0.4**
WVOR pmax pmax
comp=Z,146nm,1.6s,mb5.7
WVOR Wild Horse Val 72.91 50 P **P 16 13 31.1 +0.3**
comp=Z,146nm,1.6s,mb5.7
SCO Scoresbysund 72.93 354⇑*i*P **P 16 13 31.0 +0.6**
SCO pmax pmax
comp=Z,70nm,1.0s,mb5.5
SCO Scoresbysund 72.93 354*i*P **P 16 13 31.0 +0.6**
comp=Z,70nm,1.0s,mb5.5
J09A Fry Pan Ranch, 72.94 49 ⇓P **P 16 13 30.3 -0.6**
baz=73,SNR=31
DIGO Kars 73.04 308 *i*P **P 16 13 33.0 +1.4**
F12A Elk City 73.06 45 ⇓P **P 16 13 31.6 0.0**
baz=73,SNR=80
I10A Payette 73.10 48 ⇑P **P 16 13 32.1 +0.2**
baz=73,SNR=6.9
B15A Bradely Ranch, 73.10 42 ⇓P **P 16 13 31.8 0.0**
baz=73,SNR=71
IZAR Zarasai 73.17 328 *e*P **P 16 13 32.5 +0.5**
MSO Missoula 73.20 44 *e*P **P 16 13 31.8 -0.6**
comp=Z,32nm,1.1s,mb5.2
SLMT Seeley Lake 73.21 43 *e*P **P 16 13 33.1 +0.6**
comp=Z,98nm,1.1s,mb5.7
H11A Donnelly 73.22 47 ⇓P **P 16 13 32.4 -0.1**
baz=73,SNR=41
BEKR Beckwourth 73.23 53 ⇑P **P 16 13 32.6 -0.1**
baz=73,SNR=28
IDID Didziasalis 73.23 327 *e*P **P 16 13 32.8 +0.3**
A16A West Butte Ran 73.25 41 ⇑P **P 16 13 32.2 -0.5**
baz=73,SNR=19
MICGM Minsk 73.25 326⇓*i*P **P 16 13 31.0 -1.5**
MNK Minsk 73.27 326⇓*i*P **P 16 13 31.0 -1.7**
MNK *e*PPP 16 18 00.0
MNK *e*S S 16 22 58.0 -0.6
MNK *e*PS 16 23 45.0
MNK *e*SS SS 16 27 40.0 +0.3
MNK pmax pmax
comp=N,680nm,1.5s
MNK pmax pmax
comp=E,560nm,1.6s
MNK MLR MLR
comp=Z,128μm,14.0s,MS7.4
MNK MLR MLR
comp=N,33μm,13.0s,MS7.1
MNK MLR MLR
comp=E,57μm,14.0s,MS7.1
E13A Victor 73.28 44 ⇑P **P 16 13 32.2 -0.7**
baz=73,SNR=11
D14A Greenough 73.30 44 ⇑P **P 16 13 32.7 -0.3**
baz=73
DYDN Diyadin 73.32 307 *i*P **P 16 13 34.9 +1.7**
ISAL Salakas 73.34 328 *e*P **P 16 13 33.6 +0.6**
C15A Salmond Ranch, 73.39 43 ⇑P **P 16 13 33.2 -0.3**
baz=73,SNR=102
NACGM Naroch 73.48 327 *e*P **P 16 13 31.0 -2.9**
J10A Berg Farm, Mel 73.49 48 ⇑P **P 16 13 33.7 -0.4**
baz=73
B16A M & M Farms, S 73.50 42 ⇑P **P 16 13 33.7 -0.5**
baz=73
TOO Toolangi 73.51 177 *e*P **P 16 13 35.8 +1.7**
TOO *e*pP pP 16 13 45.4 +1.1
TOO *e*S S 16 23 01.0 -0.4
CHMT Chamberlain Mo 73.53 44 *e*P **P 16 13 34.8 +0.4**
comp=E,22nm,1.2s,mb5.0
SOC Sochi 73.55 312 *e*P **P 16 13 33.1 -1.4**
SOC *e* 16 13 47.8
SOC *e* 16 16 19.4
SOC *e*PPP 16 18 03.2
SOC *e*S S 16 23 02.7 +0.6
SOC *e* 16 23 38.4
SOC *e* 16 23 54.2
SOC pmax pmax
comp=Z,261nm,1.4s,mb6.0
SOC pmax pmax
comp=Z,1μm,4.8s
SOC MLR MLR
comp=Z,34μm,18.0s,MS6.7
F13A Darby 73.58 45 ⇓P **P 16 13 33.5 -1.1**
baz=73,SNR=44
I11A Placerville 73.70 47 ⇑P **P 16 13 34.9 -0.5**
baz=74,SNR=6.0
A17A Triple J Farms 73.73 41 ⇓P **P 16 13 34.9 -0.6**
baz=74,SNR=32
K10A MacKenzie Ranc 73.79 49 ⇑P **P 16 13 36.4 +0.4**
baz=74,SNR=25
C16A Fuhringer Ranc 73.84 42 ⇑P **P 16 13 35.8 -0.4**
baz=74,SNR=67
D15A Lincoln 73.87 43 ⇓P **P 16 13 35.9 -0.4**
baz=74,SNR=15
WCN Washoe City 73.93 53 ⇑P **P 16 13 36.4 -0.5**
baz=74
H12A Diamond D Ranc 73.99 46 ⇓P **P 16 13 36.9 -0.1**
baz=74,SNR=47
MFID Camas Ranch 74.06 48 ⇓P **P 16 13 37.6 +0.1**
baz=74,SNR=20
B17A L&G Farms, Che 74.06 41 ⇓P **P 16 13 37.1 -0.3**
baz=74,SNR=74
E15A Deer Lodge 74.16 44 ⇓P **P 16 13 37.8 -0.3**
baz=74,SNR=40
A18A Metzger Ranch, 74.19 41 ⇓P **P 16 13 37.6 -0.6**
baz=74,SNR=14
ANN Anapa 74.20 314*d i*P **P 16 13 38.5 +0.2**
ANN *i* 16 13 54.2
ANN *i* 16 16 28.9
ANN *i* PPP 16 18 15.4
ANN *i*S S 16 23 08.8 -0.6
ANN *e*SS SS 16 27 57.9 +3.6
ANN *e*SSS 16 31 04.5
ANN pmax pmax
comp=Z,489nm,1.8s,mb6.1

ANN pmax pmax
comp=N,165nm,1.9s
ANN pmax pmax
comp=E,132nm,1.9s
ANN MLR MLR
comp=N,25µm,20.0s,MS6.8
ANN MLR MLR
comp=E,40µm,20.0s,MS6.8
ANN MLR MLR
comp=Z,33µm,20.0s,MS6.6
CMB Columbia Colle 74.22 54 *e*P **P 16 13 39.7 +1.1**
CMB pmax pmax
comp=Z,72nm,1.1s,mb5.5
CMB Columbia Colle 74.22 54 *e*P **P 16 13 39.7 +1.1**
comp=Z,72nm,1.1s,mb5.5
I12A Atlanta 74.26 47 ⇓P **P 16 13 38.6 0.0**
baz=74,SNR=57
K11A Parker Ranch, 74.31 48 ⇓P **P 16 13 39.3 +0.3**
baz=74,SNR=25
FFC Flin Flon 74.31 33 P **P 16 13 39.1 +0.4**
comp=Z,494nm,0.9s,mb6.4,SNR=32
FFC Flin Flon 74.31 33 P **P 16 13 37.5 -1.2**
FFC pmax pmax
comp=Z,89nm,1.0s,mb5.7
FFC Flin Flon 74.31 33 *e*P **P 16 13 36.9 -1.8**
comp=Z,89nm,1.0s,mb5.7
H13A Challis 74.33 46 ⇑P **P 16 13 38.9 -0.1**
baz=74,SNR=73
G14A Jackson 74.39 45 ⇑P **P 16 13 39.0 -0.5**
baz=74
D16A Dana Ranch, Ca 74.41 43 ⇓P **P 16 13 39.3 -0.1**
baz=74,SNR=83
L10A Juniper Basin 74.44 49 ⇑P **P 16 13 40.0 +0.3**
baz=74,SNR=21
HRY Holter Researc 74.44 43 *e*P **P 16 13 40.3 +0.6**
comp=Z,48nm,0.8s,mb5.5
C17A Wharram Farm, 74.48 42 ⇑P **P 16 13 38.9 -1.0**
baz=74,SNR=20
B18A Beardsley Farm 74.55 41 ⇓P **P 16 13 39.8 -0.4**
baz=74,SNR=45
F15A Butte 74.59 44 ⇑P **P 16 13 40.5 -0.1**
baz=74,SNR=150
J12A Stokes Ranch, 74.59 48 ⇓P **P 16 13 41.0 +0.3**
baz=74,SNR=16
ERZM Erzurum 74.60 308 *i* P **P 16 13 42.6 +1.9**
LRM Limekiln Ridge 74.62 44 *e*P **P 16 13 39.3 -1.4**
comp=Z,686nm,1.0s,mb6.5
E16A East Helena 74.64 43 ⇑P **P 16 13 41.0 +0.2**
baz=74,SNR=40
FCC Fort Churchill 74.66 27 P **P 16 13 39.2 -1.5**
FCC Fort Churchill 74.66 27 *e*P **P 16 13 38.9 -1.8**
comp=Z,4.5nm,1.1s,mb4.3
M10A I.L. Ranch, Tu 74.71 50 ⇑P **P 16 13 41.6 +0.3**
baz=74,SNR=34
EGMT Eagleton 74.78 41 ⇑P **P 16 13 41.1 -0.6**
baz=75,SNR=43
EGMT Eagleton 74.78 41 *e*P **P 16 13 40.8 -0.8**
comp=Z,97nm,1.1s,mb5.6
I13A Wildhorse Cree 74.79 47 ⇑P **P 16 13 42.1 +0.4**
baz=75,SNR=28
H14A Leadore 74.81 46 ⇓P **P 16 13 41.5 -0.4**
baz=75,SNR=14
DLMT Dillon 74.81 45 *e*P **P 16 13 41.5 -0.3**
comp=Z,86nm,1.0s,mb5.6
HLID Hailey 74.82 47 ⇑P **P 16 13 42.0 +0.1**
baz=75,SNR=29
HLID Hailey 74.82 47 *e*P **P 16 13 41.7 -0.2**
comp=Z,40nm,1.2s,mb5.2
L11A Cat Creek Ranc 74.82 49 ⇑P **P 16 13 42.8 +0.8**
baz=75,SNR=50
DOMB Dombas 74.85 339 *e*P **P 16 13 42.0 +0.2**
DOMB AMb AMB 16 13 45.0
comp=Z,222nm,1.3s,mb5.9
DOMB Dombas 74.85 339 *e*P **P 16 13 42.0 +0.2**
comp=Z,222nm,1.3s,mb5.9
MOL Molde 74.86 340 *e*P **P 16 13 42.2 +0.3**
MOL *e*S S 16 23 18.2 +1.9
MCMT McKenzie Canyo 74.99 45 *e*P **P 16 13 43.5 +0.7**
comp=Z,6.3nm,0.7s,mb4.7
NB2 NORSAR Subarra 74.99 337 P **P 16 13 41.8 -0.8**
comp=Z,210nm,0.9s,mb6.1,baz=40,slow=5.9
NOA NORSAR Array B 74.99 337 P **P 16 13 42.2 -0.3**
comp=Z,136nm,0.9s,mb5.9,baz=39,slow=5.7,SNR=102
NOA LR LR 16 50 11.2
comp=Z,34µm,18.9s,MS6.7,baz=30,slow=38
NOA NORSAR Array B 74.99 337 P **P 16 13 42.2 -0.3**
NOA LR LR 16 50 11.2
MACK Trabzon 75.02 310 *i* P **P 16 13 43.4 +0.2**
AKASG Malin Array Be 75.03 323 *i* P **P 16 13 41.7 -1.3**
AKASG pmax pmax
comp=Z,21nm,0.4s
AKASG Malin Array Be 75.03 323 P **P 16 13 41.8 -1.2**
comp=Z,21nm,0.4s,mb5.5,baz=46,slow=6.0,SNR=151
AKBB Malin Array Si 75.03 323 *e*P **P 16 13 41.6 -1.4**
KIEV Kiev 75.04 323 P **P 16 13 41.8 -1.3**
KIEV pmax pmax
comp=Z,170nm,0.9s,mb6.0
KIEV Kiev 75.04 323 *e*P **P 16 13 41.6 -1.4**
comp=Z,168nm,0.9s,mb6.0
K12A Draper Farm, C 75.06 48 ⇑P **P 16 13 43.7 +0.3**
baz=75,SNR=16
KOPT Kop Dagi 75.09 309 *i* P **P 16 13 45.5 +1.9**
F16A Kennard Place, 75.11 44 ⇓P **P 16 13 43.5 0.0**
baz=75,SNR=31
E17A Martinsdale 75.13 43 ⇑P **P 16 13 44.3 +0.6**
baz=75,SNR=73
N10A Dunphy 75.19 50 ⇓P **P 16 13 44.4 +0.3**
baz=75
BOZ Bozeman (W) 75.19 44 ⇑P **P 16 13 44.1 +0.1**
baz=75,SNR=78
BOZ Bozeman (W) 75.19 44 P **P 16 13 43.0 -1.0**
BOZ pmax pmax
comp=Z,46nm,1.0s,mb5.4
BOZ Bozeman (W) 75.19 44 *e*P **P 16 13 43.5 -0.5**
comp=Z,46nm,1.0s,mb5.4
M11A Holland Ranch, 75.22 49 ⇑P **P 16 13 44.6 +0.3**
baz=75,SNR=28
NAO01 NORSAR Array S 75.24 337 *e*P **P 16 13 43.6 -0.4**
D18A Linhart Farms, 75.26 42 ⇑P **P 16 13 44.6 +0.1**
baz=75,SNR=13
L12A House Creek Ra 75.28 48 ⇓P **P 16 13 44.9 +0.3**
baz=75,SNR=22
G16A Moss Hill, Enn 75.34 44 ⇓P **P 16 13 45.2 +0.3**
baz=75,SNR=42
NVAR Mina Array Bea 75.36 53 P **P 16 13 45.2 +0.1**
comp=Z,27nm,1.0s,mb5.1,baz=286,slow=6.1,SNR=40
O10A Cortez Mining, 75.44 51 ⇑P **P 16 13 46.3 +0.7**
baz=75,SNR=14
MSL Mosul 75.44 304 *e*P **P 16 13 47.0 +1.3**
MSL *e*S S 16 23 23.0 -0.6
MLAC Mammoth Lakes 75.46 54 ⇓P **P 16 13 46.9 +1.2**
baz=75
J14A Carey 75.48 47 ⇓P **P 16 13 46.4 +0.6**
baz=75,SNR=33
K13A Stover Farm, H 75.55 48 ⇓P **P 16 13 46.7 +0.6**
baz=75
F17A Fitzpatrick Pl 75.58 43 ⇑P **P 16 13 46.2 0.0**
baz=75,SNR=54
E18A Harlowton 75.58 43 ⇓P **P 16 13 46.3 0.0**
baz=75,SNR=58
N11A Elko Archery C 75.61 50 ⇑P **P 16 13 46.7 +0.2**
baz=75
SUW Suwalki 75.65 328 *i* P **P 16 13 46.3 -0.2**
SUW *e* 16 15 21.5
SUW *e*S S 16 23 25.7 +0.4
SUW LMZ 16 49 55.0
comp=Z,43µm,18.1s
SUW Suwalki 75.65 328 ⇑*i*P **P 16 13 46.3 -0.2**
SUW *e*S S 16 23 25.7 +0.4
SUW Suwalki 75.65 328 *e*P **P 16 13 46.1 -0.3**
comp=Z,241nm,0.9s,mb6.1
I15A Monteview 75.69 46 ⇓P **P 16 13 47.1 +0.1**
baz=76
M12A Wells 75.77 49 ⇑P **P 16 13 48.3 +0.9**
baz=76,SNR=67
QLMT Earthquake Lak 75.79 45 *e*P **P 16 13 49.1 +1.6**
comp=Z,68nm,1.5s,mb5.4
BEST Besiri 75.81 307 *i* P **P 16 13 48.9 +1.2**
P10A Eureka 75.85 51 ⇑P **P 16 13 48.3 +0.4**
baz=76,SNR=15
G17A Pierce Place, 75.89 44 ⇓P **P 16 13 48.5 +0.5**
baz=76,SNR=29
RCTC Rector, Farmer 75.95 55 ⇓P **P 16 13 48.8 +0.3**
baz=76
GRSN GIRESUNGRSN 75.95 311 *i* P **P 16 13 48.2 -0.3**
L13A Double Diamond 75.96 48 ⇑P **P 16 13 49.5 +1.0**
baz=76,SNR=21

ELK Elko 75.96 50 *e*P **P 16 13 50.2 +1.7**
ELK pmax pmax
comp=Z,25nm,0.9s
ELK Elko 75.96 50 *e*P **P 16 13 50.2 +1.7**
comp=Z,25nm,0.9s,mb5.1
H16A Russell Place, 75.97 45 ⇓P **P 16 13 49.2 +0.7**
baz=76,SNR=42
OSL Oslo 76.00 337 *e*P **P 16 13 48.0 -0.4**
comp=Z,11µm,1.3s
SMMC Simmler 76.00 56 ⇑P **P 16 13 49.1 +0.2**
baz=76
SIM Simferopol' 76.01 316 *i* P **P 16 13 49.4 +0.7**
SIM *i* 16 14 02.0
SIM pmax pmax
comp=Z,122nm,1.1s,mb5.7
SIM MLR MLR
comp=Z,31µm,17.6s,MS6.7
N12A Clover Valley, 76.02 50 *e*P **P 16 13 49.2 +0.3**
comp=Z,40nm,0.8s,mb5.4
UMR Umm Al-Rimmam 76.05 296 *e*P **P 16 13 49.0 -0.3**
O11A Cowboy Ranch, 76.06 50 ⇓P **P 16 13 49.5 +0.4**
baz=76,SNR=8.2
J15A Blackfoot 76.08 46 ⇓P **P 16 13 50.2 +1.0**
baz=76,SNR=13
F18A Big Timber 76.10 43 ⇑P **P 16 13 49.6 +0.4**
baz=76,SNR=88
K14A Jones Ranch, D 76.15 47 ⇓P **P 16 13 49.9 +0.4**
baz=76,SNR=18
YMR Madison River 76.16 45 *e*P **P 16 13 51.4 +1.8**
comp=Z,82nm,1.1s,mb5.6
MIB Mutribah 76.19 297 *e*P **P 16 13 49.8 -0.2**
MIB AMb AMB 16 14 03.2
comp=Z,233nm,0.9s,mb6.1
TIN Tinemaha 76.19 54 ⇓P **P 16 13 50.5 +0.5**
baz=76
GCMT Greycliff 76.20 43 *e*P **P 16 13 50.3 +0.5**
comp=Z,45nm,1.1s,mb5.3
M13A Montello 76.26 49 ⇑P **P 16 13 50.9 +0.7**
baz=76,SNR=27
M13A Montello 76.26 49 *e*P **P 16 13 51.2 +0.9**
comp=Z,27nm,0.7s,mb5.3
YNR Norris Junctio 76.29 44 *e*P **P 16 13 51.1 +0.7**
comp=Z,85nm,1.3s,mb5.5
VES Vestal, Richgr 76.32 56 ⇑P **P 16 13 50.3 -0.4**
baz=76,SNR=9.3
P11A Circle Ranch, 76.34 51 ⇑P **P 16 13 51.1 +0.4**
baz=76,SNR=16
I16A Newdale 76.34 45 ⇑P **P 16 13 51.4 +0.8**
baz=76,SNR=15
BHD Baghdad 76.34 301 *e*P **P 16 13 47.0 -3.8**
BHD *e*S S 16 23 23.0 -11
FOO Floro 76.35 340 *e*P **P 16 13 49.9 -0.4**
FOO *e*S S 16 23 35.4 +2.7
Q10A Clear Creek Ra 76.35 52 ⇑P **P 16 13 50.9 +0.1**
baz=76,SNR=26
QRN Al-Qurain 76.35 296 *e*P **P 16 13 51.0 0.0**
QRN AMb AMB 16 13 55.0
comp=Z,326nm,1.0s,mb6.2
PKM Peak Mountain 76.36 57 ⇑P **P 16 13 51.6 +0.7**
baz=76,SNR=13
YFT Old Faithful 76.36 45 *e*P **P 16 13 52.7 +1.9**
comp=Z,98nm,1.1s,mb5.7
HYA Hoyanger 76.38 340 *e*P **P 16 13 52.4 +1.8**
L14A Malta 76.42 48 ⇑P **P 16 13 51.8 +0.7**
baz=76,SNR=8.1
K15A Arbon 76.45 47 ⇓P **P 16 13 51.8 +0.5**
baz=76,SNR=19
RDF Al-Radifah 76.52 296 *e*P **P 16 13 52.4 +0.4**
RDF AMb AMB 16 13 55.1
comp=Z,433nm,1.2s,mb6.2
N13A Wendover, West 76.53 49 ⇑P **P 16 13 52.5 +0.7**
baz=76,SNR=8.8
N13A Wendover, West 76.53 49 *e*P **P 16 13 53.4 +1.6**
comp=Z,129nm,1.1s,mb5.8
DIYA Diyarbakir 76.53 307 *i* P **P 16 13 53.0 +1.2**
H17A Grant Village 76.54 45 ⇑P **P 16 13 53.3 +1.6**
baz=76,SNR=108
O12A Currie 76.55 50 ⇑P **P 16 13 52.3 +0.4**
baz=76,SNR=80
G18A Lazy EL Ranch, 76.55 43 ⇓P **P 16 13 51.5 -0.3**
baz=76,SNR=11
KONO Kongsberg 76.58 337 ⇑*i*P **P 16 13 52.0 +0.3**
KONO *e*S S 16 23 37.1 +1.8
KONO Kongsberg 76.58 337 *e*P **P 16 13 51.5 -0.2**
KONO pmax pmax
comp=Z,138nm,1.2s,mb5.8
KONO Kongsberg 76.58 337 *e*P **P 16 13 51.5 -0.1**
comp=Z,138nm,1.2s,mb5.8
J16A Bone 76.63 46 ⇑P **P 16 13 52.9 +0.6**
baz=76,SNR=23
CWC Cottonwood Cre 76.64 55 ⇓P **P 16 13 52.0 -0.4**
baz=76
IMW Indian Meadow 76.64 45 *e*P **P 16 13 52.7 +0.4**
comp=Z,70nm,1.0s,mb5.5
M14A Sheep Mountain 76.67 48 ⇑P **P 16 13 53.1 +0.6**
baz=76
SFJD Kangerlussuaq 76.68 5 ⇑*i*P **P 16 13 51.9 -0.2**
comp=Z,80nm,0.9s,mb5.7
SFJD *i* 16 16 42.7
SFJD *i* S S 16 23 34.9 -1.3
DCID1 Drake Creek 76.68 45 *e*P **P 16 13 54.3 +1.7**
comp=Z,102nm,1.1s,mb5.7
SBC Santa Barbara 76.69 57 ⇓P **P 16 13 53.4 +0.6**
baz=76
R10A Warm Springs 76.72 52 ⇓P **P 16 13 53.5 +0.6**
baz=77,SNR=18
S10A Tonopah Range, 76.75 53 ⇓P **P 16 13 53.3 +0.2**
baz=77,SNR=62
RRI2 Red Ridge 76.75 46 *e*P **P 16 13 53.7 +0.7**
comp=Z,84nm,1.1s,mb5.6
GRAC Grapevine Rang 76.78 54 ⇑P **P 16 13 53.2 0.0**
baz=77,SNR=16
Q11A Duckwater 76.81 51 ⇓P **P 16 13 53.5 +0.1**
baz=77,SNR=36
ISA Isabella 76.83 55 ⇓P **P 16 13 53.8 +0.3**
baz=77
ISA Isabella 76.83 55 P **P 16 13 53.9 +0.4**
ISA pmax pmax
comp=Z,29nm,1.1s,mb5.1
ISA Isabella 76.83 55 *e*P **P 16 13 54.0 +0.4**
comp=Z,29nm,1.2s,mb5.1
RLMT Red Lodge 76.83 43 ⇓P **P 16 13 53.6 +0.2**
baz=77,SNR=36
RLMT Red Lodge 76.83 43 *e*P **P 16 13 53.4 0.0**
comp=Z,148nm,1.0s,mb5.9
I17A Pilgrim Ck. 76.83 45 ⇓P **P 16 13 54.4 +0.9**
baz=77,SNR=41
HVU Hansel Valley 76.84 48 *e*P **P 16 13 54.1 +0.6**
HVU pmax pmax
comp=Z,26nm,0.7s,mb5.3
HVU Hansel Valley 76.84 48 *e*P **P 16 13 54.1 +0.6**
comp=Z,26nm,0.7s,mb5.3
SUE Sulen 76.87 340 *e*P **P 16 13 53.1 -0.1**
TPAW Teton Pass 76.88 45 *e*P **P 16 13 54.3 +0.6**
comp=Z,72nm,1.2s,mb5.5
ARVC Arvin 76.89 56 ⇓P **P 16 13 54.1 +0.1**
baz=77
K16A Soda Springs 76.91 46 ⇓P **P 16 13 54.4 +0.5**
baz=77,SNR=49
P12A McGill 76.91 51 ⇓P **P 16 13 54.0 0.0**
baz=77,SNR=59
ELZG Elazig 76.93 308 *i* P **P 16 13 55.4 +1.4**
L15A Malad City 76.94 47 ⇓P **P 16 13 54.2 +0.1**
baz=77,SNR=32
LOHW Long Hollow 77.01 45 *e*P **P 16 13 55.9 +1.5**
comp=Z,80nm,1.4s,mb5.5
SNOW Snow King Moun 77.01 45 *e*P **P 16 13 56.3 +1.9**
comp=Z,58nm,1.0s,mb5.5
REDW Red Top Meadow 77.02 46 *e*P **P 16 13 55.4 +0.9**
comp=Z,50nm,1.0s,mb5.4
ERBA Erbaa 77.03 311 *i* P **P 16 13 55.7 +1.1**
J17A Brown Place, J 77.10 45 ⇓P **P 16 13 54.8 -0.1**
baz=77,SNR=10.0
O13A Hicks Ranch, I 77.10 50 ⇓P **P 16 13 55.6 +0.6**
baz=77
R11A Troy Canyon, C 77.15 52 ⇑P **P 16 13 55.0 -0.3**
baz=77,SNR=71
N14A Grayback Hills 77.15 49 ⇑P **P 16 13 55.4 +0.1**
baz=77,SNR=19
BGU Big Grassy Mou 77.20 49 *e*P **P 16 13 56.9 +1.3**
comp=Z,35nm,0.9s,mb5.3
Q12A Willow Creek R 77.22 51 ⇑P **P 16 13 55.9 +0.3**
baz=77,SNR=27
RUND Rundenannen 77.23 339 *e*P **P 16 13 58.2 +2.8**
RUND AMb AMB 16 14 01.0
comp=Z,169nm,1.2s,mb5.8
RUND Rundenannen 77.23 339 *e*P **P 16 13 58.2 +2.8**
comp=Z,169nm,1.2s,mb5.8
M15A Larsen Ranch, 77.23 48 ⇑P **P 16 13 56.1 +0.3**
baz=77,SNR=13
AHID Auburn Hatcher 77.24 46 P **P 16 13 56.5 +0.8**
comp=Z,22nm,0.8s,mb5.2
MPMC Manual Prospec 77.25 55 ⇓P **P 16 13 55.6 -0.3**
baz=77,SNR=29
OSI Osito Adit 77.26 56 ⇓P **P 16 13 56.4 +0.4**
baz=77
BER Bergen 77.26 339 *e*P **P 16 13 55.5 0.0**
BER *e*S S 16 23 43.7 +1.0
SPUT South Promonto 77.32 48 *e*P **P 16 13 56.9 +0.7**
comp=Z,33nm,1.1s,mb5.2
K17A Gardner Place, 77.35 46 ⇓P **P 16 13 56.1 -0.2**
baz=77
DGMT Dagmar 77.38 38 ⇓P **P 16 13 55.7 -0.7**
baz=77,SNR=5.7
DGMT Dagmar 77.38 38 *e*P **P 16 13 57.0 +0.6**
comp=Z,83nm,1.0s,mb5.6
MALT Malatya 77.39 308 *e*P **P 16 13 57.3 +0.6**
MALT pmax pmax
comp=Z,160nm,1.3s,mb5.8
MALT Malatya 77.39 308 *e*P **P 16 13 57.2 +0.6**
comp=Z,160nm,1.3s,mb5.8
MALT Malatya 77.39 308 ⇑*i*P **P 16 13 58.1 +1.4**
I18A Diamond G Ranc 77.40 45 ⇑P **P 16 13 56.6 -0.1**
baz=77
TOKA Tokat 77.41 311 *i* P **P 16 13 57.7 +1.0**
FURC Furnace Creek, 77.42 54 ⇑P **P 16 13 56.7 -0.2**
baz=77,SNR=9.6
LRMC Laurel Mountai 77.45 55 ⇑P **P 16 13 57.6 +0.6**
baz=77
S11A Rachel 77.46 53 ⇑P **P 16 13 57.2 +0.1**
baz=77,SNR=7.5
P13A Bates Ranch, G 77.48 50 ⇑P **P 16 13 57.3 +0.2**
baz=77,SNR=24
LAO LASA Array 77.49 41 *e*P **P 16 13 57.6 +0.6**
comp=Z,145nm,1.1s,mb5.8
SNCC San Nicolas Is 77.50 58 ⇓P **P 16 13 55.6 -1.8**
baz=77
L16A Fish Haven 77.50 47 ⇑P **P 16 13 57.3 +0.1**
baz=77,SNR=5.5
N15A Stansbury Isla 77.53 48 ⇑P **P 16 13 57.9 +0.5**
baz=77,SNR=5.0
J18A Kendall Valley 77.59 45 ⇑P **P 16 13 58.0 +0.3**
baz=77,SNR=65
EDW2 Edwards Air Fo 77.60 56 ⇓P **P 16 13 58.6 +0.8**
baz=77,SNR=12
KIS Kishinev 77.61 320 ⇑*i*P **P 16 13 55.0 -2.7**
comp=Z,500nm,2.0s,mb6.1
KIS Kishinev 77.61 320 *i* PcP PcP 16 14 12.0 +4.2
KIS Kishinev 77.61 320 *e*PP PP 16 16 50.0 -2.3
KIS Kishinev 77.61 320 *e*PPP 16 18 57.0
KIS *e*S S 16 23 43.0 -3.9
KIS Kishinev 77.61 320 *e*PS SKSac 16 24 06.0 -2.6
KIS LRM 16 51 08.0
comp=Z,86µm,16.0s
KIS Kishinev 77.61 320 *e*P SKSac 16 24 03.0 -5.6
KIS Kishinev 77.61 320 α *i*P **P 16 13 55.0 -2.7**
KIS *i* 16 14 12.0
KIS *e* 16 16 50.0
KIS *e*S S 16 23 43.0 -3.9
KIS *e*PS 16 24 06.0
KIS pmax pmax
comp=Z,3µm,10.0s
KIS MLR MLR
comp=Z,94µm,17.0s,MS7.2
KIS MLR MLR
comp=N,45µm,16.0s,MS7.1
KIS MLR MLR
comp=E,49µm,16.0s,MS7.1
KIS MLR MLR
comp=Z,86µm,16.0s
KIS Kishinev 77.61 320 *e*P SKSac 16 24 03.0 -5.6
HWUT Hardware Ranch 77.67 47 *e*P **P 16 13 57.5 -0.6**
comp=Z,118nm,1.3s,mb5.7
BOYT Boyabat 77.70 312 *i* P **P 16 13 59.9 +1.6**
AKCD Akcadag 77.72 309 *i* P **P 16 13 59.3 +0.8**
BLS5 Blasjo 77.72 338 *e*P **P 16 13 59.1 +1.0**
BLS5 Blasjo 77.72 338 *i* P **P 16 14 03.0 +4.9**
DECC Green Verdugo 77.73 57 ⇑P **P 16 13 58.0 -0.7**
baz=78
Q13A Wheeler Ranch, 77.77 51 ⇓P **P 16 13 59.2 +0.4**
baz=78,SNR=31
DUG Dugway 77.78 49 ⇓P **P 16 13 59.0 +0.2**
baz=78,SNR=45
DUG Dugway 77.78 49 *e*P **P 16 13 59.4 +0.6**
DUG pmax pmax
comp=Z,80nm,1.0s,mb5.6
DUG Dugway 77.78 49 *e*P **P 16 13 59.4 +0.6**
comp=Z,80nm,1.0s,mb5.6
L17A Coleville 77.78 47 ⇑P **P 16 13 58.8 0.0**
baz=78,SNR=17
R12A Pony Springs, 77.78 51 ⇓P **P 16 13 59.0 +0.1**
baz=78,SNR=33
U10A Ash Meadows, A 77.80 54 ⇑P **P 16 13 57.9 -1.0**
baz=78
M16A Huntsville 77.81 48 ⇑P **P 16 13 58.9 0.0**
baz=78,SNR=14
WAR Warsaw 77.81 327 *e*P **P 16 13 59.5 +0.7**
NOQ North Oquirrh 77.92 48 *e*P **P 16 14 01.1 +1.5**
comp=Z,299nm,1.3s,mb6.1
K18A Toltan Ranch, 77.93 46 ⇓P **P 16 13 59.5 -0.1**
baz=78,SNR=15
O15A The Old Anders 77.93 49 ⇓P **P 16 13 59.5 -0.2**
baz=78,SNR=5.6
MWC Mount Wilson 77.93 56 P **P 16 14 00.4 +0.6**
MWC pmax pmax
comp=Z,49nm,1.3s,mb5.3
MWC Mount Wilson 77.93 56 P **P 16 14 00.4 +0.6**
comp=Z,49nm,1.3s,mb5.3
ATAB Bozova 77.97 308 *i* P **P 16 14 01.6 +1.7**
P14A Drum Mountains 77.98 50 ⇑P **P 16 13 59.8 -0.2**
baz=78,SNR=62
S12A Delamar Landin 78.05 52 ⇑P **P 16 13 59.8 -0.6**
baz=78
FMP Fort Macarthur 78.07 57 ⇓P **P 16 13 59.0 -1.5**
baz=78
LVV L'vov 78.12 324 *d* *i*P **P 16 14 00.0 -0.5**
LVV *e* 16 16 57.1
LVV *e*PP 16 18 47.1
LVV *i* S S 16 23 51.5 -0.8
LVV *e*PS 16 24 11.3
LVV *e*SS SS 16 28 58.5 +5.2
LVV pmax pmax
comp=Z,1µm,7.0s
LVV MLR MLR
comp=Z,46µm,17.0s,MS6.9
LVV MLR MLR
comp=N,25µm,16.0s,MS6.9
LVV MLR MLR
comp=E,42µm,16.0s,MS6.9
BW06 Boulder Array 78.13 45 ⇑P **P 16 14 00.2 -0.4**
baz=78,SNR=37
PDAR Pinedale Array 78.13 45 P **P 16 14 00.8 +0.1**
comp=E,13nm,0.7s,mb4.9,baz=278,slow=2.7,SNR=76
SHOC Shoshone 78.14 54 ⇓P **P 16 14 01.2 +0.3**
baz=78
GSC Goldstone 78.14 55 ⇑P **P 16 14 00.6 -0.3**
baz=78,SNR=8.7
GSC Goldstone 78.14 55 *e*P **P 16 14 01.8 +0.9**
GSC pmax pmax
comp=Z,59nm,1.3s,mb5.4
GSC Goldstone 78.14 55 *e*P **P 16 14 01.8 +0.9**
comp=Z,59nm,1.3s,mb5.4
CIS Catalina Islan 78.17 57 ⇓P **P 16 14 01.3 +0.2**
baz=78
N16A Rees Ranch, Co 78.19 48 ⇓P **P 16 14 01.4 +0.4**
baz=78,SNR=9.2
BFSC Mount Baldy St 78.19 56 ⇓P **P 16 14 00.5 -0.7**
baz=78,SNR=5.4
Q14A Sevier Lake (B 78.22 50 ⇓P **P 16 14 01.3 0.0**
baz=78,SNR=88
BSD Bornholm Skovb 78.23 332 ⇑*i*P **P 16 14 00.7 -0.3**
BSD pmax pmax
comp=Z,96nm,1.0s,mb5.7
BSD Bornholm Skovb 78.23 332 ⇑*i*P **P 16 14 00.7 -0.3**
comp=Z,96nm,1.0s,mb5.7
LEOM Leova 78.24 320 ⇑*i*P **P 16 14 01.7 +0.4**
CTKT Corum 78.25 312 *i* P **P 16 14 02.4 +1.0**
KMY Karmoy 78.25 339 ⇑*i*P **P 16 14 01.5 +0.5**
KMY AMb AMB 16 14 04.5
comp=Z,108nm,1.3s,mb5.6
KMY Karmoy 78.25 339 ⇑*i*P **P 16 14 01.5 +0.5**
comp=Z,108nm,1.3s,mb5.6
RRX Edison Barstow 78.26 55 ⇓P **P 16 14 01.5 0.0**

	baz=78						
R13A	O'Grain Ranch,	78.27	51	⇊P	P	16 14 01.8	+0.3
	baz=78,SNR=20						
M17A	Scullys Gap (B	78.28	47	⇊P	P	16 14 01.3	-0.2
	baz=78,SNR=22						
SCI	San Clemente I	78.32	58	⇑P	P	16 14 01.3	-0.6
	baz=78						
JLU	Jordanelle	78.35	48	eP	P	16 14 03.4	+1.4
	comp=Z,64nm,1.1s,mb5.5						
NLU	North Lily Min	78.37	49	eP	P	16 14 03.5	+1.4
	comp=Z,46nm,1.0s,mb5.4						
L18A	Fontenelle, Gr	78.38	46	⇊P	P	16 14 01.6	-0.5
	baz=78,SNR=13						
U11A	Corn Creek	78.41	53	⇑P	P	16 14 02.5	+0.1
	baz=78						
PINB	Pinarbasi	78.44	310	iP	P	16 14 04.1	+1.6
MOO	Moorlands	78.46	176	eP	P	16 14 05.4	+3.3
BORG	Borgarnes	78.47	353	P	P	16 14 04.0	+1.9
	comp=Z,2μm,0.9s,mb7.0,SNR=25						
BORG	Borgarnes	78.47	353	eP	P	16 14 03.6	+1.5
	comp=Z,393nm,1.0s,mb6.3						
P15A	Leamington	78.48	49	⇑P	P	16 14 02.4	-0.3
	baz=78,SNR=18						
K19A	Absolon Red Bu	78.50	45	⇑P	P	16 14 01.8	-0.9
	baz=78,SNR=11						
GZT	Gaziantep	78.51	308	iP	P	16 14 04.1	+1.2
N17A	Moffit Pass	78.51	47	⇑P	P	16 14 02.7	-0.1
	baz=78,SNR=36						
BALT	Daday	78.53	313	iP	P	16 14 04.1	+1.2
O16A	Springville	78.56	48	⇑P	P	16 14 03.1	0.0
	baz=78,SNR=21						
DAU	Daniels Canyon	78.59	48	eP	P	16 14 05.1	+1.8
DAU				pmax	pmax		
	comp=Z,96nm,1.1s,mb5.6						
DAU	Daniels Canyon	78.59	48	eP	P	16 14 05.1	+1.8
	comp=Z,96nm,1.1s,mb5.6						
MPU	Maple Canyon	78.60	49	eP	P	16 14 03.8	+0.5
	comp=Z,113nm,1.2s,mb5.7						
TUQ	Turquoise Moun	78.64	54	⇑P	P	16 14 04.6	+0.9
	baz=78,SNR=7.7						
L19A	Farson	78.66	46	⇊P	P	16 14 03.9	+0.3
	baz=78,SNR=13						
T12A	Moapa	78.67	53	⇊P	P	16 14 03.9	+0.1
	baz=78						
M18A	Lyman	78.67	47	⇊P	P	16 14 03.7	0.0
	baz=78,SNR=12						
BBRC	Big Bear Sol-O	78.67	56	⇑P	P	16 14 03.8	-0.1
	baz=78						
GKP	Gorka Klasztor	78.68	330	eP	P	16 14 03.8	+0.3
GKP				e		16 17 00.2	
GKP				eS	S	16 24 01.9	+3.7
GKP				LMZ		16 51 41.5	
	comp=Z,35μm,17.7s						
GKP	Gorka Klasztor	78.68	330⇑	eP	P	16 14 03.8	+0.3
GKP				e		16 17 00.2	
GKP				eS	S	16 24 01.9	+3.7
S13A	Holt Ranch, En	78.70	52	⇑P	P	16 14 04.4	+0.5
	baz=78,SNR=19						
COP	Copenhagen	78.71	333⇑	iP	P	16 14 03.3	-0.4
COP				iS	S	16 23 58.4	-0.1
COP				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
COP	Copenhagen	78.71	333⇑	iP	P	16 14 03.3	-0.4
	comp=Z,57nm,0.9s,mb5.5						
COP				iS	S	16 23 58.4	-0.1
V11A	Goodsprings	78.73	54	⇑P	P	16 14 04.0	-0.2
	baz=79,SNR=9.8						
HEC	Hector,Ludlow	78.73	55	⇊P	P	16 14 04.0	-0.2
	baz=79,SNR=6.5						
Q15A	Fillmore	78.77	50	⇊P	P	16 14 04.3	+0.1
	baz=79,SNR=15						
TLCR		78.78	318	⇑P	P	16 14 05.1	+0.9
TLCR		78.78	318⇑	iP	P	16 14 05.1	+0.9
R14A	James Farms, M	78.79	51	⇑P	P	16 14 04.7	+0.2
	baz=79						
P16A	Fountain Green	78.84	49	⇑P	P	16 14 04.6	0.0
	baz=79						
ARUT	Antelope Range	78.84	51	P	P	16 14 05.8	+1.1
ARUT				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.5						
ARUT	Antelope Range	78.84	51	P	P	16 14 05.8	+1.1
	comp=Z,64nm,1.1s,mb5.5						
KWP	Kalwaria Pacla	78.87	325	iP	P	16 14 05.5	+0.9
KWP				e		16 17 05.5	
KWP				eS	S	16 24 01.7	+1.3
KWP				LMZ		16 52 28.7	
	comp=Z,74μm,16.9s						
KWP	Kalwaria Pacla	78.87	325	eP	P	16 14 05.1	+0.4
	comp=Z,477nm,1.1s,mb6.3						
KWP	Kalwaria Pacla	78.87	325⇊	iP	P	16 14 05.6	+0.9
MURC	Murrieta	78.88	57	⇊P	P	16 14 04.7	-0.3
	baz=79						
K20A	Yellowstone Ra	78.90	45	⇑P	P	16 14 04.1	-0.8
	baz=79,SNR=12						
TAU	Tasmania Unive	78.93	176	eP	P	16 14 07.1	+2.4
TAU				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.5						
TAU	Tasmania Unive	78.93	176	eP	P	16 14 07.0	+2.3
	comp=Z,58nm,0.9s,mb5.5						
U12A	Valley of Fire	78.95	53	⇑P	P	16 14 05.3	0.0
	baz=79,SNR=5.9						
T13A	Saint George	79.01	52	⇊P	P	16 14 05.6	0.0
	baz=79,SNR=17						
BUR08	Bucovina Ar. S	79.03	322	eP	P	16 14 05.4	-0.1
S14A	Cedar City	79.03	51	⇑P	P	16 14 06.0	+0.3
	baz=79						
CCUT	Cedar City	79.03	51	eP	P	16 14 05.8	0.0
	comp=Z,65nm,1.2s,mb5.4						
O17A	Robinson Place	79.03	48	⇊P	P	16 14 06.3	+0.6
	baz=79,SNR=34						
BUR01	Bucovina Ar. S	79.04	322	P	P	16 14 06.7	+1.1
BURAR	Bucovina Array	79.04	322	P	P	16 14 06.2	+0.6
BURAR	Bucovina Array	79.04	322⇑	iP	P	16 14 06.1	+0.5
CDAG	Cicekdag	79.12	311	iP	P	16 14 06.3	+0.1
ELDT	Eldivan	79.15	312	iP	P	16 14 07.3	+0.9
M19A	Rock Springs	79.15	46	⇊P	P	16 14 05.9	-0.5
	baz=79						
KUZU	Kuzuini	79.17	308	iP	P	16 14 07.9	+1.4
V12A	Nelson	79.17	54	⇑P	P	16 14 06.5	0.0
	baz=79,SNR=9.1						
N18A	Larsen Ranch,	79.18	47	⇑P	P	16 14 06.3	-0.2
	baz=79,SNR=31						
MSU	Marysvale	79.19	50	eP	P	16 14 08.1	+1.4
	comp=Z,85nm,1.3s,mb5.5						
GMRC	Granite Mounta	79.21	55	⇊P	P	16 14 07.0	+0.2
	baz=79,SNR=13						
LRW	Lerwick	79.21	342⇑	iP	P	16 14 06.6	+0.3
LRW				AMb	AMB	16 14 09.0	
	comp=Z,116nm,1.4s,mb5.6						
MUD	Monsted U'grnd	79.25	335⇑	iP	P	16 14 06.7	+0.1
MUD				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
MUD	Monsted U'grnd	79.25	335⇑	iP	P	16 14 06.7	+0.1
	comp=Z,50nm,1.1s,mb5.4						
RGN	Rugen	79.26	332	eP	P	16 14 06.0	-0.7
	comp=Z,230nm,1.2s,mb6.0						
TMUT	Trail Mountain	79.30	49	eP	P	16 14 08.8	+1.6
	comp=Z,80nm,1.3s,mb5.5						
L20A	Wamsutter	79.31	45	⇑P	P	16 14 08.0	+0.8
	baz=79,SNR=8.9						
R15A	Junction	79.31	50	⇑P	P	16 14 07.6	+0.3
	baz=79,SNR=14						
U13A	Pakoon Wash	79.33	53	⇑P	P	16 14 07.7	+0.2
	baz=79,SNR=33						
109C	Camp Elliot, M	79.36	57	⇊P	P	16 14 07.8	+0.2
	baz=79						
PFO	Pinyon Flat Ob	79.37	56	P	P	16 14 09.9	+2.2
	comp=Z,152nm,0.9s,mb5.9,SNR=11						
PFO	Pinyon Flat Ob	79.37	56	⇊P	P	16 14 08.1	+0.4
	baz=79,SNR=10						
PFO	Pinyon Flat Ob	79.37	56	eP	P	16 14 08.7	+1.0
PFO				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.6						
PFO	Pinyon Flat Ob	79.37	56	eP	P	16 14 08.7	+1.0
	comp=Z,104nm,1.3s,mb5.6						
LDFC	Landfair	79.39	54	eP	P	16 14 08.6	+0.8
	comp=Z,109nm,1.1s,mb5.7						
W12A	Cal Nev Ari	79.42	54	⇑P	P	16 14 07.7	-0.2
	baz=79						
O18A	Roosevelt	79.43	48	⇑P	P	16 14 08.2	+0.4
	baz=79,SNR=20						
VRI	Vrincioaia	79.44	320	P	P	16 14 08.6	+0.8
VRI	Vrincioaia	79.44	320⇊	iP	P	16 14 09.0	+1.2
BELC	Belle Mtn.	79.45	56	⇊P	P	16 14 07.9	-0.2
	baz=79,SNR=9.1						
TIRR	Tirgusor	79.47	318	eP	P	16 14 07.9	-0.1
TIRR				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.5						
TIRR	Tirgusor	79.47	318	eP	P	16 14 07.9	-0.1
	comp=Z,75nm,1.2s,mb5.5						
P17A	Butcher Ranch,	79.48	49	⇊P	P	16 14 08.1	0.0
	baz=79,SNR=30						
PLOR	Plostina	79.49	320	P	P	16 14 08.9	+0.8
BR131	Keskin Array S	79.50	312	eP	P	16 14 08.2	-0.1
	comp=Z,42nm,0.8s,mb5.4						
BRTR	Keskin Array B	79.50	312	P	P	16 14 08.9	+0.6
	comp=Z,46nm,0.9s,mb5.4,baz=72,slow=4.0,SNR=100						
BRTR				PP	PP	16 17 17.2	+8.8
	comp=Z,52nm,1.2s,baz=50,slow=6.6,SNR=4.9						
T14A	Hurricane	79.50	52	⇑P	P	16 14 09.0	+0.6
	baz=79,SNR=11						
N19A	John Jarvie Ra	79.53	47	⇑P	P	16 14 07.7	-0.7
	baz=79,SNR=38						
Q16A	Castle Valley	79.56	49	⇑P	P	16 14 09.1	+0.4
	baz=79,SNR=22						
KOLS	Kolonicke sedl	79.56	324	eP	P	16 14 09.1	+0.7
	comp=Z,87nm,1.3s,mb5.5						
KOLS				e		16 14 23.4	
KOLS				ePP	PP	16 17 10.3	+1.7
KOLS				eS	S	16 24 07.1	-0.7
KOLS				eSS	SS	16 29 27.4	+12
KOLS				LR	LR		
	comp=Z,50μm,16.6s,MS6.9						
KOLS	Kolonicke sedl	79.56	324	eP	P	16 14 09.1	+0.7
KOLS				e		16 14 23.3	
KOLS				ePP	PP	16 17 10.3	+1.7
KOLS				eS	S	16 24 07.1	-0.7
KOLS				eSS	SS	16 29 27.4	+12
HARR	Harsova	79.58	318	⇑P	P	16 14 09.4	+0.8
HARR	Harsova	79.58	318⇑	iP	P	16 14 09.4	+0.8
S15A	Panguitch	79.58	51	⇊P	P	16 14 08.7	-0.1
	baz=79						
V13A	Grand Canyon W	79.66	53	⇊P	P	16 14 09.5	+0.2
	baz=80,SNR=17						
P18A	Preston Nutter	79.68	48	⇊P	P	16 14 09.7	+0.5
	baz=80,SNR=45						
STHS	Stebnicka Huta	79.70	325	eP	P	16 14 10.0	+0.8
STHS				e		16 14 25.1	
STHS				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.5						
STHS	Stebnicka Huta	79.70	325	eP	P	16 14 10.0	+0.8
	comp=Z,56nm,1.0s,mb5.5						
STHS				e		16 14 25.1	
STHS	Stebnicka Huta	79.70	325	eP	P	16 14 10.0	+0.8
STHS				e		16 14 25.1	
M20A	Sweetwater, Wa	79.73	46	⇑P	P	16 14 09.5	0.0
	baz=80,SNR=17						
R16A	Teasdale	79.76	50	⇊P	P	16 14 10.4	+0.7
	baz=80,SNR=48						
UZH	Uzhgorod	79.76	324⇊	iP	P	16 14 09.7	+0.2
UZH				e	pP	16 14 18.5	-1.3
UZH				i		16 17 09.0	
UZH				e		16 19 05.0	
UZH				iS	S	16 24 07.9	-2.0
UZH				i		16 24 25.0	
UZH				i		16 24 53.0	
UZH				i		16 25 02.0	
UZH				i		16 29 25.0	
UZH				MLR	MLR		
	comp=N,19μm,16.0s,MS6.8						
UZH				MLR	MLR		
	comp=E,27μm,16.0s,MS6.8						
UZH				MLR	MLR		
	comp=Z,20μm,16.0s,MS6.5						
BAR	Barrett	79.78	57	eP	P	16 14 09.5	-0.4
	comp=Z,81nm,1.4s,mb5.5						
OJC	Ojcow	79.79	326	eP	P	16 14 10.3	+0.6
OJC				ePcP	PcP	16 14 18.8	+1.5
OJC				ePP	PP	16 17 12.1	+1.7
OJC				eS	S	16 24 11.2	+1.0
OJC				L		16 51 28.0	
	comp=Z,15nm,19.9s						
MONP	Monument Peak	79.82	57	⇊P	P	16 14 10.1	-0.1
	baz=80,SNR=7.0						
SRU	San Rafael	79.83	49	⇊P	P	16 14 10.1	0.0
	baz=80,SNR=65						
SRU	San Rafael	79.83	49	eP	P	16 14 09.4	-0.7
	comp=Z,56nm,0.7s,mb5.6						
U14A	Mt Trumbull	79.83	52	⇑P	P	16 14 10.2	0.0
	baz=80,SNR=27						
BMR	Baia Mare	79.85	323	P	P	16 14 11.3	+1.3
L21A	Rawlins	79.89	45	⇑P	P	16 14 10.1	-0.3
	baz=80,SNR=49						
NEE2	Needles Airpor	79.90	54	⇑P	P	16 14 09.5	-1.0
	baz=80						
SGKT	Sivrigoynuk	79.91	313	iP	P	16 14 10.8	+0.4
IRM	Iron Mountain	79.92	55	⇑P	P	16 14 10.5	-0.2
	baz=80,SNR=10						
BBAL	Bala	79.92	312	iP	P	16 14 11.1	+0.5
O19A	Miners Draw (B	79.93	47	⇊P	P	16 14 10.0	-0.6
	baz=80,SNR=44						
T15A	Red Dirt Ranch	79.97	51	⇑P	P	16 14 11.2	+0.3
	baz=80,SNR=15						
BC3	Big Chuckw Mtn	80.02	56	⇑P	P	16 14 10.9	-0.3
	baz=80,SNR=6.7						
YURE	YUREGIR	80.06	308	iP	P	16 14 12.9	+1.6
Q18A	Rafter H Ranch	80.08	49	⇑P	P	16 14 10.8	-0.7
	baz=80,SNR=23						
MLR	Muntele Rosu	80.10	320	P	P	16 14 12.1	+0.7
MLR	Muntele Rosu	80.10	320⇑	iP	P	16 14 13.0	+1.6
N20A	Spence Gulch,	80.10	46	⇑P	P	16 14 11.7	+0.2
	baz=80,SNR=89						
ULM	Lac du Bonnet	80.10	33	P	P	16 14 10.8	-0.5
	comp=Z,33nm,1.0s,mb5.2,baz=314,slow=6.7,SNR=32						
M21A	Separation Pea	80.13	45	⇑P	P	16 14 11.0	-0.7
	baz=80,SNR=34						
NIE	Niedzica	80.13	325	eP	P	16 14 11.8	+0.3
R17A	Hanksville Air	80.15	49	⇊P	P	16 14 11.2	-0.7
	baz=80,SNR=34						
RWWY	Rawlins	80.16	45	eP	P	16 14 11.1	-0.7
	comp=Z,55nm,1.0s,mb5.4						
DVTC	Desert V Tower	80.18	57	⇊P	P	16 14 11.9	-0.2
	baz=80,SNR=8.3						
W13A	Hualapai Mount	80.18	54	⇊P	P	16 14 12.0	0.0
	baz=80,SNR=10						
SWSC	Sam W. Stewart	80.21	56	⇊P	P	16 14 11.2	-1.1
	baz=80						
YAYL	Yayladag	80.24	308	iP	P	16 14 13.5	+1.2
GULE	Gulek	80.31	309	iP	P	16 14 14.1	+1.4
RSSD	Black Hills	80.33	42	eP	P	16 14 11.8	-0.9
	comp=Z,12nm,0.6s,mb5.0						
V14A	Boquillas Ranc	80.36	53	⇊P	P	16 14 12.5	-0.5
	baz=80,SNR=32						
U15A	North Rim	80.39	52	⇑P	P	16 14 12.6	-0.6
	baz=80,SNR=42						
HENT	Hendek	80.43	314	iP	P	16 14 13.1	-0.2
P19A	Cripple Cowboy	80.44	48	⇊P	P	16 14 13.1	-0.3
	baz=80,SNR=79						
PDMCI	Parker Dam,Lak	80.50	54	⇑P	P	16 14 13.4	-0.4
	baz=80,SNR=7.8						
X13A	Yucca	80.52	54	⇑P	P	16 14 13.3	-0.6
	baz=80,SNR=28						
T16A	Glen Canyon Da	80.55	51	⇑P	P	16 14 13.3	-0.7
	baz=80,SNR=6.4						
O20A	White River Ci	80.56	47	⇊P	P	16 14 13.4	-0.6
	baz=80,SNR=10.0						
Y12C	Blythe	80.58	55	⇊P	P	16 14 13.5	-0.7
	baz=80,SNR=9.2						
N21A	Black Mountain	80.58	46	⇑P	P	16 14 13.6	-0.5
	baz=80,SNR=29						
S17A	Black Ridge (B	80.58	50	⇊P	P	16 14 13.7	-0.4
	baz=80,SNR=30						
VOIR		80.60	320	P	P	16 14 14.9	+0.8
RAC	Raciborz	80.61	327	eP	P	16 14 14.4	+0.4
RAC				eS	S	16 24 20.0	+1.3
RAC				MLR	MLR		
	comp=Z,26μm,17.0s,MS6.7						
W14A	Seligman	80.63	53	⇑P	P	16 14 14.6	+0.1
	baz=80,SNR=30						
RUE	Ruedersdorf	80.66	331	eP	P	16 14 14.3	0.0
	comp=Z,202nm,1.2s,mb5.9						
R18A	Canyonlands Na	80.67	49	⇊P	P	16 14 14.2	-0.4
	baz=80,SNR=47						
M22A	Cedar Creek Ra	80.70	45	⇑P	P	16 14 14.8	+0.1
	baz=80,SNR=22						
KECS	Kecovo	80.72	325	eP	P	16 14 15.3	+0.6
KECS				e		16 14 29.6	
KECS				e		16 17 21.7	
KECS				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
KECS	Kecovo	80.72	325	eP	P	16 14 15.3	+0.6
	comp=Z,28nm,1.2s,mb5.1						
KECS				e		16 14 29.6	
KECS				ePP	PP	16 17 21.7	+3.5
KECS	Kecovo	80.72	325	eP	P	16 14 15.3	+0.6
KECS				e		16 14 29.6	
KECS				ePP	PP	16 17 21.7	+3.5
GLA	Glamis	80.80	56	⇊P	P	16 14 16.1	+0.7
	baz=81,SNR=8.0						
GLA	Glamis	80.80	56	eP	P	16 14 16.5	+1.1
GLA				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.4						
GLA	Glamis	80.80	56	eP	P	16 14 16.5	+1.1
	comp=Z,55nm,1.0s,mb5.4						
OKC	Ostrava-Krasne	80.81	327	eP	P	16 14 15.7	+0.6
OKC				e		16 14 29.6	
OKC				e		16 17 20.7	
OKC				eS	S	16 24 23.1	+2.3
OKC	Ostrava-Krasne	80.81	327	eP	P	16 14 15.7	+0.6
OKC				ex	x	16 14 29.6	
OKC				ePP	PP	16 17 20.7	+1.9
OKC				eS	S	16 24 23.1	+2.3
OKC				AMS	AMS	16 52 50.0	
	comp=Z,30μm,16.7s						
DRGR		80.84	322	P	P	16 14 15.8	+0.4
DRGR		80.84	322⇑	iP	P	16 14 15.9	+0.5
V15A	Kaibab Nationa	80.85	52	⇑P	P	16 14 15.8	+0.1
	baz=81,SNR=40						
BSEG	Bad Segeberg	80.85	333	eP	P	16 14 14.4	-0.9
	comp=Z,187nm,1.2s,mb5.9						
BSEG				ePP	PP	16 17 19.5	+0.5
BSEG				eS	S	16 24 21.1	0.0
KSP	Ksiaz	80.87	328	iP	P	16 14 15.9	+0.5
KSP				e		16 15 51.6	
KSP				e		16 17 21.1	
KSP				eS	S	16 24 23.1	+1.7
KSP				LMZ		16 54 03.1	
	comp=Z,59μm,18.4s						
KSP	Ksiaz	80.87	328⇑	eP	P	16 14 15.7	+0.3
KSP				ePP	pP	16 14 28.6	+2.9
KSP				e		16 17 18.0	
KSP				ePPP		16 19 14.0	
KSP				eS	S	16 24 19.5	-1.9
KSP				MLR	MLR		
	comp=Z,68μm,18.4s,MS7.0						
P20A	De Beque	80.87	47	⇊P	P	16 14 15.6	-0.1
	baz=81						
LIKS	Likavka	80.95	326	eP	P	16 14 17.7	+1.8
LIKS				e		16 14 31.6	
LIKS				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.6						
LIKS	Likavka	80.95	326	eP	P	16 14 17.7	+1.8
	comp=Z,87nm,1.1s,mb5.6						
LIKS				e		16 14 31.6	
LIKS	Likavka	80.95	326	eP	P	16 14 17.7	+1.8
LIKS				e		16 14 31.6	
O21A	Pagoda	80.96	46	⇑P	P	16 14 16.4	+0.3
	baz=81,SNR=8.5						
T17A	Navajo Res., N	80.98	51	⇊P	P	16 14 15.7	-0.6
	baz=81,SNR=8.8						
Y13A	Salome	81.00	55	⇊P	P	16 14 16.4	0.0
	baz=81,SNR=9.4						
S18A	Hurst Farm, Bl	81.05	50	⇑P	P	16 14 16.2	-0.4
	baz=81,SNR=56						
URZ	Urewera	81.06	152	eP	P	16 14 16.7	+0.3
	comp=Z,26nm,0.9s,mb5.2						
MORC	Moravsky Berou	81.12	327	P	P	16 14 17.4	+0.6
MORC	Moravsky Berou	81.12	327⇑	iP	P	16 14 17.4	+0.6
R19A	Curley Farm, L	81.12	49	⇊P	P	16 14 17.1	+0.1
	baz=81,SNR=18						
MEST	Erdemli	81.14	309	iP	P	16 14 17.4	+0.2
N22A	Wattenberg Ran	81.17	45	⇑P	P	16 14 17.0	-0.2
	baz=81,SNR=12						
KDHN	Kadinhani	81.17	312	iP	P	16 14 17.6	+0.3
W15A	Williams	81.18	53	⇊P	P	16 14 17.4	0.0
	baz=81,SNR=13						
X14A	Yava	81.21	54	⇑P	P	16 14 17.3	-0.3
	baz=81,SNR=28						
DPC	Dobruska-Polom	81.22	328	eP	P	16 14 18.2	+0.9
DPC				e		16 14 35.3	
DPC				e		16 17 25.3	
DPC				eS	S	16 24 27.7	+2.6
DPC	Dobruska-Polom	81.22	328	eP	P	16 14 18.2	+0.9
DPC				ex	x	16 14 35.3	
DPC				ePP	PP	16 17 25.3	+3.1
DPC				eS	S	16 24 27.7	+2.6
DPC				AMS	AMS	16 53 10.0	
	comp=Z,32μm,17.3s						
ORE	Reay	81.25	342⇑	eP	P	16 14 17.7	+0.4
112A	Yuma	81.27	56	⇑P	P	16 14 16.9	-1.1
	baz=81						
Q20A	Ridgley Place,	81.28	48	⇑P	P	16 14 17.9	0.0
	baz=81,SNR=27						
ESKT	Eskisehir	81.30	313	iP	P	16 14 17.3	-0.6
BORA	Eskisehir	81.30	313	iP	P	16 14 18.3	+0.4
U16A	Tuba City	81.31	51	⇊P	P	16 14 18.0	-0.1
	baz=81,SNR=31						
U17A	Shonto	81.32	51	⇑P	P	16 14 18.2	0.0
	baz=81,SNR=26						
PSZ	Piszkesteto	81.40	325	eP	P	16 14 18.3	0.0
PSZ				pmax	pmax		
	comp=Z,178nm,1.2s,mb5.9						
PSZ	Piszkesteto	81.40	325	eP	P	16 14 18.3	0.0
	comp=Z,178nm,1.2s,mb5.9						
PSZ	Piszkesteto	81.40	325⇑	eP	P	16 14 19.2	+0.9
PSZ	Piszkesteto	81.40	325⇑	iP	P	16 14 19.3	+1.0
PHWY	Pilot Hill	81.41	45	eP	P	16 14 18.3	-0.3
	comp=Z,29nm,0.8s,mb5.2						
HWQ	Hawqa	81.42	306	eP	P	16 14 18.9	+0.2
Y14A	Wickenburg	81.46	54	⇑P	P	16 14 18.2	-0.8
	baz=81,SNR=18						
T18A	Mexican Hat	81.47	50	⇑P	P	16 14 18.5	-0.4
	baz=81,SNR=37						
VYHS	Vyhne	81.47	326	eP	P	16 14 18.9	+0.2
VYHS				e		16 14 33.4	
VYHS				e		16 17 25.6	
VYHS				eS	S	16 24 29.5	+1.7
VYHS				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.4						
VYHS				MLR	MLR		
	comp=Z,55μm,16.1s,MS7.0						
VYHS	Vyhne	81.47	326	eP	P	16 14 18.9	+0.2
	comp=Z,57nm,1.2s,mb5.4						
VYHS				e		16 14 33.4	
VYHS				ePP	PP	16 17 25.6	+1.2
VYHS				eS	S	16 24 29.5	+1.7
VYHS				eSS	SS	16 30 20.5	+37
VYHS				LR	LR		
	comp=Z,55μm,16.1s,MS7.0						
VYHS	Vyhne	81.47	326	eP	P	16 14 18.9	+0.2
VYHS				e		16 14 33.4	
VYHS				ePP	PP	16 17 25.6	+1.2

BRG *e*PP PP 16 17 26.0 -1.2
BRG *e*S S 16 24 30.6 -0.7
BRG Berggiesshubel 81.82 330 *i* P **P 16 14 20.8 +0.3**
comp=Z,88nm,1.2s,mb5.6
BRG *i* pP 16 14 31.9 +1.1
comp=Z,58nm,1.1s
BRG *i* 16 14 42.9
comp=Z,84nm,1.1s
BRG PP PP 16 17 26.0 -1.2
BRG S S 16 24 33.0 +1.7
BRG
comp=N,32µm,18.6s
BRG
comp=E,19µm,17.8s
BRG
comp=Z,35µm,15.0s
BRG Berggiesshubel 81.82 330 *i* P **P 16 14 20.8 +0.3**
BRG *i* pP 16 14 31.9 +1.1
BRG 16 17 26.0
BRG S S 16 24 33.0 +1.7
BRG pmax pmax
comp=Z,53nm,1.2s,mb5.3
BRG MLR MLR
comp=N,19µm,18.6s,MS6.6
BRG MLR MLR
comp=E,11µm,17.8s,MS6.6
BRG MLR MLR
comp=Z,21µm,15.0s,MS6.6
PVCC Panska Ves 81.83 329 *e*P **P 16 14 21.1 +0.6**
PVCC *e*PP PP 16 17 30.0 +2.8
PVCC *e*S S 16 24 34.1 +2.7
PVCC AMS AMS 16 55 20.0
comp=Z,43µm,14.6s
BHL Bhannes 81.84 306 *e*P **P 16 14 20.5 -0.4**
V17A Tonalea, Kykot 81.85 52 ⇑P **P 16 14 20.8 -0.1**
baz=82,SNR=75
Z14A Wintersburg 81.86 55 ⇓P **P 16 14 20.7 -0.3**
baz=82
CLL Collm 81.87 330 *e*P **P 16 14 19.8 -0.9**
comp=Z,151nm,1.1s,mb5.8
CLL *e*PP PP 16 17 25.3 -2.2
CLL *e*S S 16 24 30.3 -1.5
CLL Collm 81.87 330 *i* P **P 16 14 20.4 -0.3**
CLL *i* 16 14 34.4
CLL *i* 16 17 25.7
CLL *e*S S 16 24 34.0 +2.2
CLL pmax pmax
comp=Z,151nm,1.1s,mb5.8
CLL pmax pmax
comp=Z,56nm,1.3s,mb5.3
CLL MLR MLR
comp=Z,30µm,17.8s,MS6.7
CLL Collm 81.87 330 *i* P **P 16 14 20.4 -0.3**
comp=Z,151nm,1.1s,mb5.8
CLL *i* 16 14 34.4
CLL *i* PP PP 16 17 25.7 -1.8
CLL *e*S S 16 24 34.0 +2.2
CLL LR LR
comp=Z,30µm,17.8s,MS6.7
CLL Collm 81.87 330 *i* P **P 16 14 20.4 -0.3**
comp=Z,151nm,1.1s,mb5.8
CLL *i* Pmax 16 14 22.0
CLL *e*Plp 16 14 25.0
comp=N,1µm,20.6s
CLL *e*Plp 16 14 25.0
comp=E,800nm,20.6s
CLL *e*Plp 16 14 25.0
comp=Z,3µm,19.8s
CLL *i* 16 14 34.4
CLL *i* PP PP 16 17 25.7 -1.8
comp=Z,56nm,1.3s
CLL *e*PPlp 16 17 31.0
comp=N,1µm,21.4s
CLL *e*PPlp 16 17 31.0
comp=E,900nm,20.5s
CLL *e*PPlp 16 17 31.0
comp=Z,2µm,20.3s
CLL *i* 16 17 40.5
CLL *e*PPP 16 19 24.0
CLL *e*PPPP 16 20 42.0
CLL *e*S S 16 24 34.0 +2.2
comp=N,2µm,20.1s
CLL *e*S S 16 24 34.0 +2.2
comp=E,4µm,27.6s
CLL *e*PS 16 25 18.0
CLL *e*SS SS 16 29 50.0 +0.8
CLL *e* 16 30 35.0
CLL *e*(SSS) 16 34 06.0
VRAC Vranov 81.88 327 P **P 16 14 21.3 +0.5**
VRAC Vranov 81.88 327⇑*i*P **P 16 14 21.5 +0.7**
ULDT Uludag 81.89 314 *i* P **P 16 14 20.8 -0.3**
Y15A Casa Rosa Ranc 81.89 54 ⇓P **P 16 14 21.3 +0.1**
baz=82,SNR=21
MVH1 Achvaich 81.90 342⇑*e*P **P 16 14 20.7 -0.1**
SMCO Snowmass 81.92 47 *e*P **P 16 14 23.0 +1.8**
comp=E,33nm,0.8s,mb5.3
U18A Rough Rock, Ch 81.93 51 ⇑P **P 16 14 21.4 +0.1**
baz=82,SNR=21
MCD Coleburn Disti 81.98 342⇑*e*P **P 16 14 21.1 -0.1**
NRDL Niedersach Rie 82.06 332 *e*P **P 16 14 20.7 -1.0**
comp=Z,80nm,1.3s,mb5.5
NRDL *e*PP PP 16 17 30.0 +0.9
NRDL *e*S S 16 24 30.7 -3.0
SMOL Smolenice 82.10 326 *e*P **P 16 14 24.4 +2.4**
SMOL *e* 16 14 36.4
SMOL Smolenice 82.10 326 *e*P **P 16 14 24.4 +2.4**
SMOL *e* 16 14 36.3
R21A Cimarron 82.10 48 ⇓P **P 16 14 22.5 +0.2**
baz=82,SNR=31
BUD Budapest 82.12 325⇑*e*P **P 16 14 22.9 +0.8**
MME1 Meikle Cairn 82.14 341⇑*e*P **P 16 14 22.0 0.0**
Q22A Crested Butte, 82.16 47 ⇓P **P 16 14 22.7 +0.1**
baz=82,SNR=44
X16A Lo Mia Camp, P 82.18 53 ⇑P **P 16 14 23.1 +0.4**
baz=82,SNR=19
T19A Beclabito 82.19 50 ⇑P **P 16 14 22.7 0.0**
baz=82,SNR=28
BZS Buzias 82.21 322 P **P 16 14 22.8 +0.1**
BZS Buzias 82.21 322⇓*i*P **P 16 14 23.0 +0.4**
PRA Prague 82.23 329 ⇑P **P 16 14 23.0 +0.3**
PRA S S 16 24 38.0 +2.5
PRA AMS AMS 16 53 45.0
W17A Winslow 82.24 52 ⇑P **P 16 14 23.4 +0.4**
baz=82
PRU Pruhonice 82.25 329 *e*P **P 16 14 23.1 +0.4**
PRU *e* 16 14 37.5
PRU *e* 16 17 33.8
PRU *e*S S 16 24 38.5 +2.8
PRU Pruhonice 82.25 329 *e*P **P 16 14 23.1 +0.4**
PRU *e*x x 16 14 37.5
PRU *e*PP PP 16 17 33.8 +3.1
PRU *e*S S 16 24 38.5 +2.8
PRU AMS AMS 16 53 40.0
comp=Z,35µm,16.9s
MVCO Mesa Verde 82.27 49 ⇓P **P 16 14 22.6 -0.5**
baz=82,SNR=15
MVCO Mesa Verde 82.27 49 *e*P **P 16 14 23.8 +0.6**
comp=Z,51nm,1.0s,mb5.4
114A Black Gap (USA 82.27 55 ⇑P **P 16 14 22.7 -0.5**
baz=82
ISCO Idaho Springs 82.31 46 *e*P **P 16 14 23.3 0.0**
ISCO pmax pmax
comp=Z,24nm,0.9s,mb5.1
ISCO Idaho Springs 82.31 46 *e*P **P 16 14 23.3 0.0**
comp=Z,24nm,0.9s,mb5.1
RRR Rubha Reidh 82.35 343⇑*e*P **P 16 14 23.4 +0.3**
TREC Trest 82.37 328 *e*P **P 16 14 23.2 -0.2**
TREC *e*x x 16 14 38.1
TREC *e*PP PP 16 17 34.6 +2.9
TREC AMS AMS 16 55 50.0
MDO Dochfour 82.38 342⇑*e*P **P 16 14 23.2 0.0**
GDZ Gediz 82.38 313 *i* P **P 16 14 24.1 +0.5**
S21A Coal Bank Pass 82.41 49 ⇑P **P 16 14 23.8 0.0**
baz=82,SNR=20
U19A Dine' College, 82.42 50 ⇓P **P 16 14 23.9 -0.1**
baz=82,SNR=36
Z15A Gila River Ind 82.42 54 ⇓P **P 16 14 24.5 +0.5**
baz=82
CLZ Clausthal 82.48 332 *e*P **P 16 14 23.1 -0.8**
comp=Z,190nm,1.3s,mb5.9
CLZ *e*PP PP 16 17 33.1 +0.6
CLZ *e*S S 16 24 36.4 -1.6
CLZ Clausthal 82.48 332 *e*P **P 16 14 23.1 -0.8**
CLZ *e* 16 17 33.1
CLZ *e*S S 16 24 36.4 -1.6
CLZ pmax pmax
comp=Z,190nm,1.3s,mb5.9
Y16A Circle Bar Ran 82.50 53 ⇑P **P 16 14 24.7 +0.4**
baz=82,SNR=8.1
RRH Rhenigidale 82.50 344⇑*e*P **P 16 14 24.6 +0.7**
KAC Achnashellach 82.56 343⇑*e*P **P 16 14 24.3 +0.1**
ISP Isparta 82.59 312 *e*P **P 16 14 24.2 -0.6**
ISP pmax pmax
comp=Z,111nm,1.3s,mb5.7
ISP Isparta 82.59 312 *e*P **P 16 14 24.2 -0.5**
comp=Z,111nm,1.3s,mb5.7
ISP Isparta 82.59 312 P **P 16 14 24.2 -0.6**
DURS Dursunbey 82.63 314 *i* P **P 16 14 25.1 +0.2**
SART Tekirdag 82.65 316 *i* P **P 16 14 25.1 +0.1**
R22A Saguache, Gunn 82.67 48 ⇑P **P 16 14 26.4 +1.3**
baz=82,SNR=34
CSS Prodhromos 82.68 308 *e*P **P 16 14 24.8 -0.4**
comp=Z,47nm,0.7s,mb5.6
115A Sonoran Desert 82.74 55 ⇑P **P 16 14 25.9 +0.2**
baz=83
TANN Tannenbergstha 82.78 330 *e*P **P 16 14 24.5 -1.0**
comp=Z,59nm,1.4s,mb5.4
TANN *e*S S 16 24 40.4 -0.7
KPL Plockton 82.78 343⇑*e*P **P 16 14 25.9 +0.6**
KPL AMb AMB 16 14 29.6
comp=Z,212nm,2.5s,mb5.7
U20A Newcomb 82.79 50 ⇓P **P 16 14 25.7 -0.2**
baz=83,SNR=5.6
214A Organ Pipe Nat 82.81 56 ⇓P **P 16 14 26.3 +0.2**
baz=83
W18A Petrified Fore 82.83 52 ⇓P **P 16 14 26.3 +0.2**
baz=83
KHAL Karahalli 82.85 313 *i* P **P 16 14 26.6 +0.5**
KSB Sheil Bridge 82.85 343⇑*e*P **P 16 14 25.8 +0.1**
DEMI Demirci 82.86 314 *i* P **P 16 14 26.6 +0.4**
Z16A Peralta Trail, 82.87 54 ⇓P **P 16 14 26.5 +0.2**
baz=83
V19A Window Rock 82.89 51 ⇑P **P 16 14 26.8 +0.4**
baz=83,SNR=10.0
NKC Novy Kostel 82.93 330 *e*P **P 16 14 26.4 +0.1**
NKC *e* 16 14 40.7
NKC *e* 16 17 38.8
NKC *e*S S 16 24 44.3 +1.7
NKC Novy Kostel 82.93 330 *e*P **P 16 14 26.4 +0.1**
NKC *e*x x 16 14 40.7
NKC *e*PP PP 16 17 38.8 +2.6
NKC *e*S S 16 24 44.3 +1.7
NKC AMS AMS 16 54 40.0
comp=Z,33µm,15.3s
MOX Moxa 82.94 331 *e*P **P 16 14 25.3 -1.0**
comp=Z,92nm,1.4s,mb5.6
MOX *e*PP PP 16 17 35.7 -0.6
MOX *e*S S 16 24 41.6 -1.2
MOX Moxa 82.94 331 *e*P **P 16 14 26.2 -0.1**
MOX *e* 16 17 41.0
MOX *e*S S 16 24 47.0 +4.2
MOX pmax pmax
comp=Z,77nm,1.4s,mb5.5
MOX MLR MLR
comp=Z,16µm,17.0s,MS6.5
MOX Moxa 82.94 331 *e*Pu 16 14 26.2
comp=Z,77nm,1.4s
MOX *e*PP PP 16 17 41.0 +4.7
MOX *e*S S 16 24 47.0 +4.2
MOX LR LR
comp=Z,16µm,17.0s,MS6.5
Y17A Roosevelt 83.02 53 ⇑P **P 16 14 26.7 -0.4**
baz=83,SNR=10
BALY Balya 83.03 315 *i* P **P 16 14 27.4 +0.3**
WIT Witteveen 83.05 334⇑*e*P **P 16 14 27.7 +0.8**
comp=Z,578nm,1.2s,mb6.5
W19A Sanders 83.06 51 ⇑P **P 16 14 27.3 +0.1**
baz=83
PLD Plovdiv 83.06 318 P **P 16 14 31.4 +4.3**
X18A Snowflake 83.07 52 ⇓P **P 16 14 26.4 -1.0**
baz=83
IBBN Ibbenburen 83.08 334 *e*P **P 16 14 26.4 -0.6**
comp=Z,105nm,0.9s,mb5.9
IBBN *e*S S 16 24 42.9 -1.2
ALN Alexandroupoli 83.15 316 P **P 16 14 27.0 -0.6**
V20A Brimhall 83.20 50 ⇓P **P 16 14 27.8 -0.2**
baz=83,SNR=14
KAR1 Arisaig 83.21 343⇑*e*P **P 16 14 28.1 +0.5**
KORT Korkueli 83.22 311 *i* P **P 16 14 27.0 -1.0**
EBH Black Hill 83.22 341 *e*P **P 16 14 27.7 0.0**
PKSM Moragy 83.23 324 P **P 16 14 27.9 0.0**
PKSM Moragy 83.23 324⇑*i*P **P 16 14 27.9 0.0**
CONA Conrad Observa 83.23 327⇑*i*P **P 16 14 28.8 +0.9**
comp=Z,153nm,1.3s,mb5.9,SNR=90
RDO Rodhopi 83.26 317 *e*P **P 16 14 29.5 +1.3**
RDO Rodhopi 83.26 317 P **P 16 14 28.8 +0.6**
ESY Stoneypath 83.28 341⇑*e*P **P 16 14 28.0 +0.1**
KHC Kasperske Hory 83.31 329 *e*P **P 16 14 28.2 -0.1**
KHC *e* 16 14 40.3
KHC *e* 16 17 42.5
KHC *e* 16 19 35.0
KHC *e*S S 16 24 49.8 +3.2
KHC Kasperske Hory 83.31 329 *e*P **P 16 14 28.3 +0.1**
comp=Z,125nm,1.1s,mb5.9
KHC Kasperske Hory 83.31 329 *e*P **P 16 14 28.2 -0.1**
KHC *e*x x 16 14 40.3
KHC *e*PP PP 16 17 42.5 +3.1
KHC *e*PKKP PKiKP 16 19 35.0 -11
KHC *e*S S 16 24 49.8 +3.2
KHC AMS AMS 16 56 00.0
comp=Z,42µm,15.5s
T22A Edith 83.37 49 ⇑P **P 16 14 28.6 -0.3**
baz=83
ROTZ Rotzenmuhle 83.39 330 *e*P **P 16 14 28.2 -0.5**
comp=Z,150nm,1.3s,mb5.9
ROTZ *e*S S 16 24 46.4 -0.9
EDI Edinburgh 83.43 341⇑*i*P **P 16 14 28.6 -0.1**
EDI AMb AMB 16 14 32.4
comp=Z,113nm,3.7s
UBBA Unterbreizbach 83.44 331 *e*P **P 16 14 27.8 -1.1**
comp=Z,57nm,1.4s,mb5.4
UBBA *e*S S 16 24 44.6 -3.2
GEC2 GERESS Array S 83.48 328 *e*P **P 16 14 28.3 -0.8**
comp=Z,72nm,1.2s,mb5.6
GEC2 *e*S S 16 24 49.0 +0.7
GEC2 GERESS Array S 83.48 328 *e*P **P 16 14 28.3 -0.8**
GEC2 *e*S S 16 24 49.0 +0.7
GEC2 pmax pmax
comp=Z,72nm,1.2s,mb5.6
GERES GERESS Array B 83.48 328 P **P 16 14 28.6 -0.5**
comp=Z,21nm,0.8s,mb5.2,baz=46,slow=5.8,SNR=73
EAB Aberfoyle 83.49 342⇑*e*P **P 16 14 29.1 +0.1**
Y18A Canyon Day Jun 83.49 53 ⇑P **P 16 14 29.8 +0.3**
baz=83,SNR=23
AKHS Akhisar 83.50 314 *i* P **P 16 14 29.6 +0.2**
Z17A San Carlos Hig 83.51 53 ⇑P **P 16 14 29.7 0.0**
baz=83
VTS Vitosha 83.52 319 P **P 16 14 29.5 0.0**
EBL Broad Law 83.52 341⇑*e*P **P 16 14 29.4 +0.2**
GOLH Golhisar 83.55 312 *i* P **P 16 14 29.7 -0.1**
X19A St. Johns 83.56 52 ⇑P **P 16 14 30.0 +0.2**
baz=83,SNR=30
DNZL Cakiroluk 83.56 312 *i* P **P 16 14 29.6 -0.1**
EAU Auchinoon 83.57 341 *e*P **P 16 14 28.6 -0.8**
OGNE Ogallala 83.57 43 P **P 16 14 28.6 -1.1**
comp=Z,203nm,1.6s,mb6.0
WET Wettzell 83.59 329 *e*P **P 16 14 29.0 -0.7**
comp=Z,98nm,1.3s,mb5.8
WET *e*S S 16 24 50.5 +1.1
WET Wettzell 83.59 329 *e*P **P 16 14 29.0 -0.7**
WET *e*S S 16 24 50.5 +1.1
WET pmax pmax
comp=Z,98nm,1.3s,mb5.8
W20A Ramah 83.61 51 ⇑P **P 16 14 29.9 -0.2**
baz=83,SNR=21
216A Three Points, 83.68 55 ⇑P **P 16 14 30.5 0.0**
baz=84,SNR=9.1
WTSB Winterswijk 83.70 334⇑*i*P **P 16 14 30.1 -0.1**
comp=Z,82nm,2.0s,mb5.5
V21A Milan 83.71 50 ⇓P **P 16 14 30.7 +0.1**
baz=84,SNR=9.4
SDCO Great Sand Dun 83.73 47 *e*P **P 16 14 30.8 +0.1**
comp=Z,46nm,1.4s,mb5.4
EYMN Ely 83.74 33 *e*P **P 16 14 29.1 -1.4**
comp=Z,75nm,1.1s,mb5.7
117A Oracle 83.80 54 ⇓P **P 16 14 31.2 +0.1**
baz=84,SNR=19
GRA1 Grafenberg Arr 83.84 330 *e*P **P 16 14 30.4 -0.6**
comp=Z,359nm,1.3s,mb6.3
GRA1 *e*PP PP 16 17 48.5 +4.8
GRA1 *e*PPP 16 19 42.7
GRA1 *e*S S 16 24 52.2 +0.3
GRA1 *e*SS SS 16 30 09.1 -9.3
GRA1 LR LR
comp=Z,151µm,18.8s,MS7.4
GRF Grafenberg Arr 83.84 330 *e*P **P 16 14 30.4 -0.6**
comp=Z,359nm,1.3s,mb6.3
GRF *e*PP PP 16 17 48.5 +4.8
GRF *e*PPP 16 19 42.7
GRF *e*S S 16 24 52.2 +0.3
GRF *e*SS SS 16 30 09.1 -9.3
GRF Grafenberg Arr 83.84 330 *e*P **P 16 14 30.4 -0.6**
GRF *e* 16 17 48.5
GRF *e*PPP 16 19 42.7
GRF *e*S S 16 24 52.2 +0.3
GRF pmax pmax
comp=Z,359nm,1.3s,mb6.3
GRF MLR MLR
comp=Z,151µm,18.8s,MS7.4
AYVA Ayvalik 83.86 315 *i* P **P 16 14 31.2 -0.1**
BOZC Bozcaada 83.86 316 *i* P **P 16 14 30.9 -0.4**
PGBU Glenifferbraes 83.86 342⇑*e*P **P 16 14 31.4 +0.4**
PGBU AMb AMB 16 14 34.5
comp=Z,244nm,3.3s
Y19A Nutrioso 83.88 52 ⇑P **P 16 14 31.9 +0.4**
baz=84,SNR=11
ARSA Arzberg 83.89 326⇑*i*P **P 16 14 31.6 +0.2**
comp=Z,66nm,1.2s,mb5.6,SNR=32
Z18A Geronimo 83.93 53 ⇓P **P 16 14 30.9 -0.9**
baz=84
TUC Tucson 83.93 54 *e*P **P 16 14 31.6 -0.3**
comp=Z,44nm,1.3s,mb5.4
BUG Bochum-Univer 83.96 333 *e*P **P 16 14 30.5 -1.1**
comp=Z,108nm,1.4s,mb5.8
BUG *e*S S 16 24 51.5 -1.5
ESK Eskdalemuir 83.97 341 P **P 16 14 31.4 -0.1**
comp=Z,180nm,0.9s,mb6.2,SNR=7.2
ESK Eskdalemuir 83.97 341⇑*e*P **P 16 14 30.8 -0.7**
ESK AMb AMB 16 14 35.1
comp=Z,82nm,4.0s
ESK Eskdalemuir 83.97 341 *e*P **P 16 14 31.4 -0.1**
ESK pmax pmax
comp=Z,94nm,1.4s,mb5.7
ESK Eskdalemuir 83.97 341 *e*P **P 16 14 31.4 -0.1**
comp=Z,94nm,1.4s,mb5.7
X20A Quemado 83.98 51 ⇑P **P 16 14 32.6 +0.6**
baz=84,SNR=21
MOA Molln 84.00 327 *i* P **P 16 14 32.1 +0.3**
comp=Z,75nm,1.2s,mb5.7,SNR=18
ECK Cauldkaine Hil 84.07 341⇑*e*P **P 16 14 31.9 -0.1**
DIVS Divibare 84.11 322 P **P 16 14 32.5 +0.1**
PRK Paraskevi 84.14 315 P **P 16 14 32.7 0.0**
PPT Papeete 84.14 117 *e*PP PP 16 17 39.3 -8.4
comp=Z,761nm,25.5s
PPT *e*S S 16 24 50.9 -4.8
comp=Z,15µm,30.8s
PPT *e*SS SS 16 30 20.9 -4.7
comp=Z,3µm,23.8s
PPT *e*LR LR 16 40 53.0
comp=Z,21µm,21.5s,baz=311
PPT Papeete 84.14 117 LR LR 16 45 25.7
comp=Z,13µm,21.2s,MS6.3,baz=223,slow=31
W21A San Fidel 84.15 50 ⇑P **P 16 14 32.5 -0.3**
baz=84
KOGS Kog 84.17 325 *i* P **P 16 14 32.4 -0.3**
KOGS *e* 16 16 20.2
KOGS *e*PP PP 16 17 49.2 +2.7
KOGS *e*SKSac SKSac 16 24 54.3 +0.6
KOGS *e*S S 16 25 12.1 +17
AKAS Kas 84.18 311 *i* P **P 16 14 32.5 -0.5**
KSL Kastellorizon 84.25 311 *e*P **P 16 14 34.0 +0.7**
217A Green Valley 84.25 55 ⇓P **P 16 14 33.8 +0.4**
baz=84,SNR=31
118A Homack Ranch, 84.26 54 ⇑P **P 16 14 33.5 0.0**
baz=84,SNR=30
AYDN Tasoluk 84.27 313 *i* P **P 16 14 34.5 +1.1**
BLCB Balcova 84.27 314 P **P 16 14 33.6 +0.2**
Z19A T-Link Ranch, 84.30 53 ⇑P **P 16 14 33.8 +0.2**
baz=84
LIA Limnos Island 84.31 316 P **P 16 14 32.2 -1.4**
LOS Limnos 84.34 316 P **P 16 14 33.8 +0.1**
SRS Serrai 84.34 318 P **P 16 14 33.8 +0.1**
TURN Turunc 84.36 312 *i* P **P 16 14 35.2 +1.3**
SIGR SIGRI 84.40 315 P **P 16 14 34.2 +0.2**
ECSD EROS Data Cent 84.46 38 *e*P **P 16 14 32.8 -1.5**
comp=Z,58nm,1.0s,mb5.7
Y20A Horse Springs, 84.47 52 ⇓P **P 16 14 35.3 +0.8**
baz=84,SNR=44
X21A Alamocita Cree 84.50 51 ⇑P **P 16 14 35.4 +0.8**
baz=84,SNR=6.3
TNS Taunus Mts 84.51 332 *e*P **P 16 14 33.4 -1.0**
comp=Z,145nm,1.3s,mb6.0
TNS *e*S S 16 24 56.7 -1.9
PERS Pernice 84.54 326 *i* P **P 16 14 34.6 0.0**
PERS *e*PP PP 16 17 52.5 +3.0
PERS *e* 16 24 56.8
PERS *e*S S 16 25 15.9 +17
PERS *e* 16 26 09.9
SOKA Soboth 84.55 326⇑*i*P **P 16 14 34.9 +0.2**
comp=Z,164nm,1.3s,mb6.0
URLA Izmir 84.55 314 *i* P **P 16 14 34.5 -0.3**
119A Ashpeak Ranch, 84.61 53 ⇓P **P 16 14 35.3 0.0**
baz=84,SNR=16
GCAM G?zelcaml? 84.62 313 *i* P **P 16 14 34.8 -0.4**
218A Dragoon 84.63 54 ⇑P **P 16 14 35.7 +0.4**
baz=84,SNR=48
W22A Albuquerque 84.66 50 ⇑P **P 16 14 35.5 +0.1**
baz=84
OUR Ouranopolis 84.67 317 P **P 16 14 34.5 -0.9**
SOH Sokhos 84.68 318 P **P 16 14 35.2 -0.2**
STIP Stip 84.69 319 *e*P **P 16 14 35.1 -0.4**
STIP Stip 84.69 319 P **P 16 14 35.1 -0.4**
VAY Valandovo 84.75 319 *e*P **P 16 14 35.4 -0.4**
VAY Valandovo 84.75 319 P **P 16 14 35.3 -0.5**
GAL1 Galloway 84.77 341⇑*e*P **P 16 14 35.7 +0.1**
GAL1 AMb AMB 16 14 38.0
comp=Z,216nm,1.3s,mb6.1
Z20A Nine Sixteen R 84.84 52 ⇓P **P 16 14 36.9 +0.5**
baz=85,SNR=60
SMG Samos 84.85 314 *e*P **P 16 14 38.5 +2.2**
Y21A Point of Rocks 84.85 51 ⇓P **P 16 14 37.1 +0.7**
baz=85,SNR=16
TOD Tromm 84.87 331 *e*P **P 16 14 35.9 -0.3**
SKO Skopje 84.89 320 *e*P **P 16 14 36.8 +0.4**
SKO Skopje 84.89 320 P **P 16 14 37.9 +1.4**
OBKA Obir 84.89 326 *i* P **P 16 14 36.2 -0.2**
comp=Z,21nm,0.8s,mb5.3,SNR=12
LAZ Ladron 84.93 51 *e*P **P 16 14 38.2 +1.4**
comp=Z,25nm,1.4s,mb5.1
PLG Polygyros 84.94 317 *e*P **P 16 14 37.5 +0.8**
PLG Polygyros 84.94 317 P **P 16 14 35.7 -1.1**
X22A Bernardo 84.94 51 ⇓P **P 16 14 37.7 +0.8**
baz=85
PLE Pljevlja 84.96 322⇑*i*P **P 16 14 37.5 +0.7**
PLE Pljevlja 84.96 322⇑*i*P **P 16 14 37.6 +0.8**
LEGS Legarje 84.97 326 *e*P **P 16 14 36.4 -0.4**
HORT Hortiatis 84.97 318 P **P 16 14 36.6 -0.3**
KBA Koelnbreinsper 84.99 327 *i* P **P 16 14 36.8 0.0**
comp=Z,51nm,1.4s,mb5.5,SNR=22
ANMO Albuquerque 84.99 50 *e*P **P 16 14 36.9 -0.3**
comp=Z,44nm,1.1s,mb5.5
HGN Heimansgroeve 85.00 334⇑*i*P **P 16 14 36.5 -0.4**
comp=Z,131nm,1.3s,mb5.9
HGN Heimansgroeve 85.00 334 *e*PP PP 16 17 58.3 +5.2
HGN Heimansgroeve 85.00 334 *e*S S 16 24 56.4 -7.0
318A Bisbee 85.01 54 ⇓P **P 16 14 37.4 +0.1**
baz=85,SNR=47
FUR Furstenfeldbru 85.02 329 *e*P **P 16 14 36.1 -0.9**
comp=Z,156nm,1.2s,mb6.0
FUR *e*S S 16 24 59.3 -4.4
THE Thessaloniki 85.02 318 P **P 16 14 37.2 0.0**
AEU East Anglia Un 85.03 337 *e*P **P 16 14 36.7 -0.2**
IVA Berane 85.04 321⇑*i*P **P 16 14 37.8 +0.6**
W23A Werner Place, 85.05 50 ⇑P **P 16 14 37.9 +0.5**
baz=85,SNR=9.5
BEBN Eben Emael 85.06 334 P **P 16 14 37.0 -0.2**
comp=Z,42nm,1.5s,mb5.3
ARG Arkhangelos 85.08 312 *e*P **P 16 14 39.0 +1.4**
ARG Arkhangelos 85.08 312 P **P 16 14 35.2 -2.4**
MEM Membach 85.10 333 P **P 16 14 37.1 -0.3**
comp=Z,54nm,1.3s,mb5.5
PAIG Paliouri 85.12 317 P **P 16 14 36.8 -0.9**
ABH Alteburg 85.12 332 *e*P **P 16 14 36.9 -0.6**

219A White Tail Can 85.13 54 ⇑P P 16 14 38.0 +0.1
baz=85,SNR=49
LHO Holmfirth 85.16 339⇑iP P 16 14 37.5 0.0
120A U Bar Ranch, L 85.18 53 ⇑P P 16 14 38.0 -0.1
baz=85,SNR=18
PVY Plav 85.20 321⇑iP P 16 14 38.3 +0.3
PVY Plav 85.20 321⇑iP P 16 14 38.4 +0.4
MYKA Terra Mystica 85.20 327⇓iP P 16 14 37.3 -0.6
comp=Z,52nm,1.3s,mb5.5
LJU Ljubljana 85.26 326 iP P 16 14 37.7 -0.5
LJU ePP PP 16 17 57.5 +2.2
LJU e 16 19 33.0
LJU e 16 20 06.5
Y22D IRIS PASSCAL I 85.28 51 ⇑P P 16 14 38.6 +0.1
baz=85
UPM Unac-Piva 85.29 322⇑iP P 16 14 37.9 -0.6
UPM Unac-Piva 85.29 322⇑iP P 16 14 38.0 -0.5
Z21A St. Cloud Mine 85.31 52 ⇓P P 16 14 38.9 +0.2
baz=85,SNR=12
BCI Bajram Curri 85.32 321 ePN P 16 14 39.9 +1.3
Y22A Socorro 85.34 51 ⇑P P 16 14 39.0 +0.1
baz=85,SNR=13
KTD Kalmit 85.38 332 eP P 16 14 38.7 0.0
STU Stuttgart 85.38 331 eP P 16 14 37.9 -0.9
comp=Z,193nm,1.2s,mb6.1
STU eS S 16 25 03.1 -4.2
STU Stuttgart 85.38 331 eP P 16 14 38.7 -0.1
comp=Z,178nm,1.1s,mb6.1
BNM Barren Site 85.41 51 eP P 16 14 40.4 +1.1
comp=Z,14nm,0.8s,mb5.1
KRUS Krusevo 85.42 319 iP P 16 14 38.3 -0.8
RUP Ruppelstein 85.45 332 eP P 16 14 38.8 -0.3
CADS Cadrg 85.47 327 iP P 16 14 38.0 -1.3
BCLA Clavier 85.51 334 P P 16 14 39.1 -0.3
comp=Z,68nm,1.3s,mb5.7
319A Douglas 85.51 54 ⇑P P 16 14 40.2 +0.4
baz=85,SNR=8.2
UCC Uccle 85.53 334 P P 16 14 39.1 -0.4
WATA Walderalm 85.55 329⇓iP P 16 14 39.6 0.0
comp=Z,15nm,0.8s,mb5.3
VOY Vojsko 85.55 326 eP P 16 14 39.1 -0.6
VOY e 16 14 52.0
VOY e 16 14 55.8
WTTA Wattenberg 85.58 328 iP P 16 14 39.9 +0.1
comp=Z,35nm,1.2s,mb5.5,SNR=11
ABTA Abfaltersbach 85.61 328 iP P 16 14 39.0 -0.9
comp=Z,29nm,1.0s,mb5.5,SNR=22
BIA Bitola 85.63 319 eP P 16 14 39.0 -1.2
PUK Puka 85.64 321 ePN P 16 14 40.0 -0.2
LIT Litokhoron 85.65 318 P P 16 14 39.8 -0.5
220A Playas Peak, P 85.67 53 ⇑P P 16 14 40.3 -0.2
baz=86,SNR=21
TTG Podgorica 85.68 321⇑iP P 16 14 39.7 -0.7
BRY Bratogost 85.70 322⇑iP P 16 14 39.7 -0.8
BRY Bratogost 85.70 322⇑iP P 16 14 39.8 -0.7
CWF Charnwood Fore 85.70 338⇑iP P 16 14 40.1 -0.2
CWF AMb AMB 16 14 42.4
comp=Z,179nm,1.3s,mb6.1
KNDS Knezji Dol 85.72 326 eP P 16 14 39.5 -1.0
KNDS ePP PP 16 18 01.6 +2.5
KNDS e 16 19 36.8
KNDS e 16 20 10.7
KNDS eSKSac SKSac 16 25 02.5 -1.0
KNDS eS S 16 25 22.5 +12
121A Cookes Peak, D 85.74 52 ⇓P P 16 14 40.7 -0.2
baz=86,SNR=17
MOTA Moosalm 85.74 329⇑iP P 16 14 40.5 -0.1
comp=Z,37nm,0.9s,mb5.6,SNR=17
LANF Langenberg 85.76 332 eP P 16 14 40.4 -0.3
FNA Florina 85.77 319 P P 16 14 39.5 -1.4
RETA Reutte 85.77 329⇑iP P 16 14 40.7 0.0
comp=Z,114nm,1.2s,mb6.0,SNR=56
Z22A Elephant Butte 85.79 51 ⇑P P 16 14 40.8 -0.3
baz=86,SNR=24
SNF Seneffe 85.80 334 P P 16 14 40.7 -0.1
comp=Z,79nm,1.4s,mb5.8
WLF Walferdange 85.82 333 P P 16 14 41.2 +0.3
comp=Z,92nm,1.7s,mb5.7
WLF Walferdange 85.82 333 eP P 16 14 40.3 -0.7
comp=Z,167nm,1.4s,mb6.1
WLF eS S 16 25 07.3 -4.3
WLF Walferdange 85.82 333 eP P 16 14 40.7 -0.2
comp=Z,154nm,1.4s,mb6.0
TAOE Nuku Hiva Isla 85.83 104 ePP PP 16 17 55.0 -6.5
comp=Z,664nm,25.1s
TAOE eS S 16 25 09.2 -3.5
comp=Z,10µm,24.4s
TAOE eSS SS 16 30 48.1 -2.4
comp=Z,2µm,23.6s
TAOE eLR LR 16 41 44.1
comp=Z,23µm,22.7s,baz=315
OHR Ohrid 85.84 319 eP P 16 14 39.4 -1.9
OHR Ohrid 85.84 319 P P 16 14 40.4 -0.8
TRI Trieste 85.86 326 eP P 16 14 39.6 -1.6
comp=Z,34nm,1.0s,mb5.5
X24A Lazy VL Ranch, 85.88 50 ⇓P P 16 14 41.4 -0.1
baz=86
KZN Kozani 85.90 318 eP P 16 14 42.0 +0.5
KZN Kozani 85.90 318 P P 16 14 40.6 -0.9
Y23A Lovelace Mesa, 85.92 50 ⇓P P 16 14 41.4 -0.3
baz=86,SNR=26
GIVF Givet 85.94 334⇑iP P 16 14 41.1 -0.5
comp=Z,286nm,1.4s,mb6.0
GIVF Givet 85.94 334⇑iP P 16 14 41.1 -0.5
comp=Z,143nm,1.4s,mb6.0
BUM Brajici-Budva 85.96 321⇑iP P 16 14 41.5 -0.3
BUM Brajici-Budva 85.96 321⇑iP P 16 14 41.6 -0.2
ULC Ulcinj 86.03 321⇑iP P 16 14 40.7 -1.4
ULC Ulcinj 86.03 321⇑iP P 16 14 40.7 -1.4
320A Kipp Ranch, An 86.03 54 ⇑P P 16 14 42.4 0.0
baz=86
DOU Dourbes 86.03 334 P P 16 14 41.6 -0.4
comp=Z,64nm,1.2s,mb5.7
W25A X Bar L Ranch, 86.04 49 ⇑P P 16 14 42.1 -0.2
baz=86,SNR=26
APE Apeiranthos 86.05 314 eP P 16 14 42.0 -0.3
APE Apeiranthos 86.05 314⇓iP P 16 14 38.0 -4.3
APE Apeiranthos 86.05 314 P P 16 14 40.3 -2.0
HCY Herceg Novi 86.05 322⇑iP P 16 14 41.4 -0.8
HCY Herceg Novi 86.05 322⇑iP P 16 14 41.5 -0.8
SCHQ Schefferville 86.07 16 P P 16 14 41.1 -1.0
comp=Z,38nm,1.0s,mb5.6,baz=355,slow=5.7,SNR=40
BFO Black Forest 86.08 331 P P 16 14 42.9 +0.6
comp=Z,731nm,1.3s,mb6.8,SNR=50
BFO Black Forest 86.08 331 eP P 16 14 41.5 -0.8
comp=Z,150nm,1.1s,mb6.1
BFO ePP PP 16 18 01.9 0.0
BFO eS S 16 25 12.1 -2.1
SPAK Spaichingen-Ko 86.08 330 eP P 16 14 42.0 -0.3
WLF1 Llynfaes 86.09 340⇑eP P 16 14 42.0 -0.2
WLF1 AMb AMB 16 14 44.5
comp=Z,574nm,1.4s,mb6.6
KARP Karpathos 86.11 312 eP P 16 14 45.0 +2.3
122A Conniff Cattle 86.13 52 ⇑P P 16 14 42.3 -0.6
baz=86
STON Ston 86.14 322 P P 16 14 41.8 -0.9
STON Ston 86.14 322 iP P 16 14 41.8 -0.9
FETA Feichten 86.15 329 iP P 16 14 42.5 -0.1
comp=Z,50nm,1.2s,mb5.6,SNR=14
TIR Tirane 86.16 320 eP P 16 14 42.7 -0.1
comp=Z,120nm,1.2s,mb6.0
TIR Tirane 86.16 320 P P 16 14 42.6 -0.2
COWI Conover 86.19 33 eP P 16 14 41.7 -1.1
comp=Z,31nm,1.0s,mb5.5
KBN Korca 86.19 319 ePN P 16 14 43.2 +0.2
BAIF Baives 86.20 334⇑iP P 16 14 42.4 -0.4
comp=Z,162nm,1.3s,mb5.8
BAIF Baives 86.20 334⇑iP P 16 14 42.4 -0.4
comp=Z,81nm,1.3s,mb5.8
DMUB Kingscourt 86.20 342 eP P 16 14 41.6 -1.1
NVLJ Novalja 86.23 325 P P 16 14 41.9 -1.1
NVLJ Novalja 86.23 325 iP P 16 14 41.9 -1.1
THL Klokotos Trika 86.29 318 P P 16 14 41.3 -2.2
DAVA Damuels 86.29 329 iP P 16 14 43.4 +0.1
comp=Z,97nm,1.1s,mb5.9,SNR=42
Y24A Capitan 86.30 50 ⇑P P 16 14 43.4 -0.3
baz=86,SNR=9.4
TFO1 Folkestone 86.35 336⇑eP P 16 14 43.2 -0.3
TFO1 AMb AMB 16 14 45.5
comp=Z,300nm,1.3s,mb6.4
ATAL Atalanti 86.35 316 P P 16 14 42.0 -1.8
X25A Clemmons Ranch 86.38 49 ⇑P P 16 14 43.6 -0.4
baz=86,SNR=5.2
LKR Lokris 86.39 316 P P 16 14 41.0 -3.0
CDF Champ du Feu 86.42 331⇑iP P 16 14 43.7 -0.3
comp=Z,276nm,1.3s,mb6.0
CDF Champ du Feu 86.42 331⇑iP P 16 14 43.7 -0.3
comp=Z,138nm,1.3s,mb6.0
ATHU Athens Univers 86.43 316 P P 16 14 42.6 -1.6
222A Williams Famil 86.45 52 ⇑P P 16 14 44.4 -0.1
baz=86
MENF Mencas 86.49 335 eP P 16 14 44.0 -0.2
AGG Agios Georgios 86.50 317 P P 16 14 42.1 -2.4
LIBD Limburg 86.51 331 eP P 16 14 44.1 -0.3
FELD Feldberg im Sc 86.58 331 eP P 16 14 43.7 -1.0
ECH Echery 86.63 331 eP P 16 14 44.5 -0.5
ECH Echery 86.63 331 eP P 16 14 44.3 -0.7
comp=Z,87nm,1.2s,mb5.9
Y25A Mesa, Roswell 86.77 50 ⇑P P 16 14 45.2 -0.8
baz=87,SNR=12
DCN Croghan 86.80 342 eP P 16 14 44.9 -0.8
MCH1 Michaelchurch 86.85 339⇑eP P 16 14 45.9 -0.1
MCH1 AMb AMB 16 14 48.2
comp=Z,126nm,2.5s,mb5.7
LTK Loutraki 86.85 316 P P 16 14 43.5 -2.8
JAN Janina 86.86 318 eP P 16 14 51.0 +4.8
HTR Trewern Hill 86.86 339⇑eP P 16 14 45.2 -0.7
EVR Evrytania 86.86 317 eP P 16 14 45.0 -1.3
X26A CR and CF Fran 86.88 49 ⇓P P 16 14 45.9 -0.6
baz=87,SNR=8.3
WOL Wolverton 86.92 338⇑iP P 16 14 45.7 -0.6
WOL AMb AMB 16 14 48.3
comp=Z,217nm,1.2s,mb6.3
MOF Molkenrain 86.94 331 eP P 16 14 45.9 -0.6
223A Chaparral, Ant 86.95 52 ⇑P P 16 14 46.0 -0.8
baz=87
ZKR Zakros 86.97 312 P P 16 14 46.2 -0.7
KALE Kalithea 87.05 317 P P 16 14 47.6 +0.4
DID Didima 87.06 316 P P 16 14 44.8 -2.5
THEF They Montfort 87.07 332 eP P 16 14 46.7 -0.4
HINF Hinteralfeld 87.08 331⇑iP P 16 14 46.5 -0.6
comp=Z,66nm,1.2s,mb5.4
HINF Hinteralfeld 87.08 331⇑iP P 16 14 46.5 -0.6
comp=Z,33nm,1.2s,mb5.4
124A Stringfield Ra 87.11 51 ⇓P P 16 14 47.3 -0.3
baz=87,SNR=14
BBS Basel-Blauen 87.11 331 eP P 16 14 46.7 -0.6
TRIZ Trizonia 87.11 317 P P 16 14 45.4 -2.1
HGH Gray Hill 87.11 339⇑eP P 16 14 46.8 -0.5
HAU Haudompre 87.11 332⇑iP P 16 14 46.6 -0.7
comp=Z,115nm,1.3s,mb5.7
HAU eMLR MLR
comp=Z,27µm,18.8s,MS6.4
HAU Haudompre 87.11 332⇑iP P 16 14 46.6 -0.7
comp=Z,58nm,1.3s,mb5.7
HAU LR LR
comp=Z,27µm,18.8s,MS6.7
SRN Sarande 87.15 319 ePN P 16 14 46.9 -0.8
EFP Efpalio 87.16 317 P P 16 14 45.4 -2.3
Z25A Roswell 87.18 50 ⇑P P 16 14 47.4 -0.5
baz=87,SNR=16
MEZF Maizieres J'vi 87.19 333⇑iP P 16 14 47.6 -0.1
comp=Z,288nm,1.3s,mb6.0
MEZF Maizieres J'vi 87.19 333⇑iP P 16 14 47.6 -0.1
comp=Z,288nm,1.3s,mb6.3
IGT Igoumenitsa 87.22 319 P P 16 14 47.4 -0.6
NPS Neapolis 87.23 313 eP P 16 14 53.5 +5.3
LAKA Lakka 87.25 317 P P 16 14 46.8 -1.4
X27A F and S Farms, 87.25 48 ⇓P P 16 14 47.9 -0.4
baz=87,SNR=7.7
GUR Goura 87.26 316 P P 16 14 45.9 -2.4
Y26A Elida 87.30 49 ⇓P P 16 14 48.8 +0.2
baz=87
KEK Kerkira 87.38 319 eP P 16 14 50.5 +1.7
KEK Kerkira 87.38 319 P P 16 14 46.9 -1.9
LAST Lasithi 87.38 313 P P 16 14 47.3 -1.6
XRY Khrisi 87.45 312 eP P 16 14 50.5 +1.3
LOMF Lomont 87.47 331 eP P 16 14 47.6 -1.5
224A Corundas Mount 87.48 52 ⇓P P 16 14 49.6 +0.2
baz=87
SCIA State Center 87.50 38 P P 16 14 48.5 -0.9
comp=Z,132nm,1.0s,mb6.1
125A Gardner Draw, 87.63 51 ⇓P P 16 14 50.1 0.0
baz=88
VLX Vlachokerasia 87.64 316 P P 16 14 48.4 -1.7
Z26A Caprock 87.64 50 ⇓P P 16 14 50.3 +0.1
baz=88,SNR=5.6
Y27A Causey 87.73 49 ⇓P P 16 14 50.1 -0.5
baz=88
MNTX Cornudas Mount 87.82 52 eP P 16 14 51.5 +0.4
comp=Z,24nm,1.4s,mb5.2
KSU1 Kansas State U 87.82 41 eP P 16 14 51.0 +0.1
comp=Z,82nm,0.9s,mb6.0
225A Deer Hill, Car 87.90 51 ⇑P P 16 14 51.0 -0.4
baz=88
MSTX Muleshoe 87.91 49 ⇓P P 16 14 51.1 -0.3
baz=88
324A Moseley Ranch, 87.92 52 ⇑P P 16 14 50.6 -0.9
baz=88
AMTX Amarillo 87.94 47 eP P 16 14 51.2 -0.4
VAM Vamos 87.97 313 eP P 16 14 53.0 +1.3
ITM Ithomi 88.03 316 eP P 16 14 51.5 -0.5
ITM Ithomi 88.03 316 P P 16 14 50.4 -1.6
VLS Valsamata 88.06 317 eP P 16 14 51.5 -0.6
VLS Valsamata 88.06 317 P P 16 14 50.5 -1.6
Z27A Tatum 88.08 49 ⇑P P 16 14 51.5 -0.7
baz=88,SNR=16
JFWS Jewell Farm 88.16 35 eP P 16 14 50.9 -1.5
comp=Z,38nm,0.8s,mb5.7
HTL Hartland 88.17 339⇑eP P 16 14 51.5 -0.8
HTL AMb AMB 16 14 55.3
comp=Z,76nm,4.8s
325A Bean Ranch, Si 88.30 52 ⇓P P 16 14 51.9 -1.4
baz=88
PYL PYLOS 88.34 316 P P 16 14 50.7 -2.7
CABF La Chapelle 88.36 331 eP P 16 14 53.1 -0.2
comp=Z,58nm,1.4s,mb5.3
CABF La Chapelle 88.36 331 eP P 16 14 53.1 -0.2
comp=Z,29nm,1.4s,mb5.3
226A Malaga, Loving 88.38 51 ⇓P P 16 14 52.1 -1.6
baz=88
127A Arkansas Junct 88.43 50 ⇓P P 16 14 52.7 -1.2
baz=88
GVD Gavdhos 88.43 313 P P 16 14 53.2 -0.7
DYA Yadsworthy 88.51 339 eP P 16 14 54.0 +0.1
DYA AMb AMB 16 14 55.8
comp=Z,101nm,1.6s,mb5.9
AQU L'Aquila 88.61 324 P P 16 14 55.1 +0.5
AQU L'Aquila 88.61 324⇑iP P 16 14 55.2 +0.6
LOR Lormes 88.67 333⇑iP P 16 14 54.4 -0.3
comp=Z,224nm,1.4s,mb6.0
LOR eMLR MLR
comp=Z,35µm,18.0s,MS6.5
LOR Lormes 88.67 333⇑iP P 16 14 54.4 -0.3
comp=Z,112nm,1.4s,mb6.0
LOR LR LR
comp=Z,35µm,18.0s,MS6.8
425A Indio Mountain 88.68 52 ⇓P P 16 14 53.6 -1.5
baz=88
FLN La Foliniere 88.91 336⇑iP P 16 14 55.5 -0.3
comp=Z,248nm,1.4s,mb6.0
FLN eMLR MLR
comp=Z,39µm,21.0s,MS6.5
FLN La Foliniere 88.91 336⇑iP P 16 14 55.5 -0.3
comp=Z,124nm,1.4s,mb6.0
FLN LR LR
comp=Z,39µm,21.0s,MS6.8
227A Bennet, Jal 88.92 50 ⇑P P 16 14 55.5 -0.8
baz=89
LDF La Druitiere 88.94 336⇑iP P 16 14 55.7 -0.3
comp=Z,252nm,1.5s,mb6.0
LDF La Druitiere 88.94 336⇑iP P 16 14 55.7 -0.3
comp=Z,126nm,1.5s,mb6.0
326A Caldwell Ranch 88.96 51 ⇑P P 16 14 55.1 -1.4
baz=89
SSF Saint Saulge 88.97 333⇑iP P 16 14 55.9 -0.3
comp=Z,120nm,1.3s,mb5.8
SSF Saint Saulge 88.97 333⇑iP P 16 14 55.9 -0.3
comp=Z,60nm,1.3s,mb5.8
LPL La Plagne 89.01 330⇑iP P 16 14 56.2 -0.2
comp=Z,38nm,0.7s,mb5.6
LPL La Plagne 89.01 330⇑iP P 16 14 56.2 -0.2
comp=Z,19nm,0.7s,mb5.5
LPG La Plagne 89.02 330⇑iP P 16 14 56.4 0.0
comp=Z,42nm,0.8s,mb5.5
LPG La Plagne 89.02 330⇑iP P 16 14 56.4 0.0
comp=Z,21nm,0.8s,mb5.5
JSA Saint Aubin 89.08 337⇑eP P 16 14 56.0 -0.6
JSA AMb AMB 16 14 58.7
comp=Z,89nm,2.2s,mb5.7
CCA1 Carnmenellis 89.11 339⇑eP P 16 14 55.7 -1.0
CCA1 AMb AMB 16 14 59.4
comp=Z,52nm,1.3s,mb5.7
CCA1 Carnmenellis 89.11 339 P P 16 14 55.7 -1.0
CCA1 AMb AMB 16 14 59.4
comp=Z,52nm,1.3s,mb5.7
GLMI Grayling 89.13 31 eP P 16 14 58.4 +1.4
comp=Z,257nm,0.8s,mb6.6
SMF Signal de Mont 89.19 332⇑iP P 16 14 56.9 -0.3
comp=Z,130nm,1.2s,mb5.8
SMF Signal de Mont 89.19 332⇑iP P 16 14 56.9 -0.3
comp=Z,65nm,1.2s,mb5.8
327A Balmorhea Ranc 89.23 51 ⇑P P 16 14 56.6 -1.1
baz=89
AVF Avril sur Loir 89.25 333⇑iP P 16 14 57.2 -0.3
comp=Z,259nm,1.3s,mb6.1
AVF Avril sur Loir 89.25 333⇑iP P 16 14 57.2 -0.3
comp=Z,129nm,1.3s,mb6.1
GRR Gorron 89.36 336⇑iP P 16 14 57.8 -0.2
comp=Z,249nm,1.2s,mb6.1
GRR Gorron 89.36 336⇑iP P 16 14 57.8 -0.2
comp=Z,125nm,1.2s,mb6.1
TIP Timpagrande 89.36 320 eP P 16 14 57.7 -0.5
comp=Z,50nm,1.0s,mb5.8
426A McDonald Obser 89.37 52 ⇑P P 16 14 56.7 -1.6
baz=89
BNI Bardonecchia 89.41 330 eP P 16 14 57.9 -0.3
comp=Z,21nm,0.9s,mb5.5
MSEY Mahe Island 89.60 264 eP P 16 15 00.1 +0.4
MSEY pmax pmax
comp=Z,65nm,1.3s,mb5.8
MSEY Mahe Island 89.60 264 eP P 16 15 00.1 +0.4
comp=Z,65nm,1.3s,mb5.8
BGF Bois d'Agland 89.64 333 eP P 16 14 59.1 -0.2
comp=Z,127nm,1.4s,mb5.8
BGF Bois d'Agland 89.64 333 eP P 16 14 59.1 -0.2
comp=Z,64nm,1.4s,mb5.8
MBDF Montbardon 89.64 330⇑iP P 16 14 58.4 -1.0
comp=Z,41nm,0.8s,mb5.5
MBDF Montbardon 89.64 330⇑iP P 16 14 58.4 -1.0
comp=Z,20nm,0.8s,mb5.5
427A Hayter Ranch, 89.65 51 ⇓P P 16 14 58.5 -1.1
baz=90
328A Wristen Ranch, 89.65 50 ⇓P P 16 14 59.0 -0.6
baz=90
526A Mary Lane Ranc 89.74 52 ⇓P P 16 14 59.3 -0.8
baz=90,SNR=9.3
WMOK Wichita Mounta 89.74 46 eP P 16 14 59.0 -1.0
comp=Z,29nm,1.3s,mb5.5
ORIF Oris-en-Rattie 89.84 330⇑iP P 16 15 00.1 -0.2
comp=Z,37nm,1.0s,mb5.4
ORIF eMLR MLR
comp=Z,29µm,17.2s,MS6.5
ORIF Oris-en-Rattie 89.84 330⇑iP P 16 15 00.1 -0.2
ORIF pmax pmax
comp=Z,19nm,1.0s,mb5.4
ORIF Oris-en-Rattie 89.84 330⇑iP P 16 15 00.1 -0.2
comp=Z,19nm,1.0s,mb5.4
PLDF La Plantade 89.84 332 eP P 16 15 00.4 +0.1
SAOF Saorge 89.92 329 eP P 16 14 59.6 -1.1
AGO Saint Agoulin 89.96 332 eP P 16 15 01.0 +0.2
AUTN L'Aution 89.96 329 eP P 16 15 00.1 -0.8
527A Woodward Ranch 89.98 52 ⇓P P 16 15 00.5 -0.8
baz=90
SGMF Saint Gilles 90.02 337⇑iP P 16 15 00.9 -0.2
comp=Z,153nm,1.3s,mb5.9
SGMF Saint Gilles 90.02 337⇑iP P 16 15 00.9 -0.2
comp=Z,76nm,1.3s,mb5.9
TOUF Mont Tournerai 90.02 329 eP P 16 15 00.3 -0.9
626A Big Bend Ranch 90.05 53 ⇑P P 16 15 00.5 -1.0
baz=90,SNR=14
SBF Sospel 90.07 329⇑iP P 16 15 00.3 -1.1
comp=Z,139nm,1.1s,mb5.9
SBF Sospel 90.07 329⇑iP P 16 15 00.3 -1.1
SBF pmax pmax
comp=Z,69nm,1.1s,mb5.9
SBF Sospel 90.07 329⇑iP P 16 15 00.3 -1.1
comp=Z,69nm,1.1s,mb5.9
SSB Saint Sauveur 90.07 331 eP P 16 15 00.8 -0.6
SSB Saint Sauveur 90.07 331 P P 16 15 00.7 -0.7
SSB pmax pmax
comp=Z,40nm,1.3s,mb5.6
SSB Saint Sauveur 90.07 331 eP P 16 15 01.0 -0.3
LUCF Luceram 90.08 329 eP P 16 15 00.8 -0.7
TCF Toulx Ste Croi 90.10 333 eP P 16 15 01.4 -0.1
comp=Z,128nm,1.3s,mb5.8
TCF Toulx Ste Croi 90.10 333 eP P 16 15 01.4 -0.1
TCF pmax pmax
comp=Z,64nm,1.3s,mb5.8
TCF Toulx Ste Croi 90.10 333 eP P 16 15 01.4 -0.1
comp=Z,64nm,1.3s,mb5.8
MVIF Mont Vial 90.16 329 eP P 16 15 01.0 -0.8
ROSF Rostrenen 90.17 337⇑iP P 16 15 01.7 -0.1
comp=Z,155nm,1.2s,mb5.9
ROSF Rostrenen 90.17 337⇑iP P 16 15 01.7 -0.1
ROSF pmax pmax
comp=Z,78nm,1.2s,mb5.9
ROSF Rostrenen 90.17 337⇑iP P 16 15 01.7 -0.1
comp=Z,78nm,1.2s,mb5.9
428A Kincaid Ranch, 90.18 51 ⇑P P 16 15 01.6 -0.5
baz=90
PYM Petit Puy Mans 90.26 332 eP P 16 15 02.1 -0.1
VIVF Saint-Julien-l 90.37 331⇑iP P 16 15 02.4 -0.4
comp=Z,107nm,1.2s,mb5.8
VIVF Saint-Julien-l 90.37 331⇑iP P 16 15 02.4 -0.4
VIVF pmax pmax
comp=Z,53nm,1.2s,mb5.8
VIVF Saint-Julien-l 90.37 331⇑iP P 16 15 02.4 -0.4
comp=Z,53nm,1.2s,mb5.8
CALN Calern 90.39 329 eP P 16 15 01.9 -1.0
HDIL Hopedale 90.44 36 eP P 16 15 02.0 -1.1
comp=Z,64nm,0.9s,mb6.0
PGF Pioggiola 90.46 327⇑iP P 16 15 02.2 -1.0
comp=Z,152nm,1.3s,mb5.8
PGF Pioggiola 90.46 327⇑iP P 16 15 02.2 -1.0
PGF pmax pmax
comp=Z,76nm,1.3s,mb5.9
PGF Pioggiola 90.46 327⇑iP P 16 15 02.2 -1.0
comp=Z,76nm,1.3s,mb5.9
528A Cox Ranch, San 90.50 51 ⇓P P 16 15 02.6 -1.0
baz=90
TXAR Lajitas Array 90.50 52 P P 16 15 03.8 +0.1
comp=Z,16nm,0.9s,mb5.4,baz=298,slow=2.7,SNR=67
QUIF Quistinic 90.51 337⇑iP P 16 15 03.0 -0.4
comp=Z,110nm,1.3s,mb5.7
QUIF Quistinic 90.51 337⇑iP P 16 15 03.0 -0.4
QUIF pmax pmax
comp=Z,55nm,1.3s,mb5.7
QUIF Quistinic 90.51 337⇑iP P 16 15 03.0 -0.4
comp=Z,55nm,1.3s,mb5.7
STOF St-Etienne Org 90.59 330 eP P 16 15 03.7 -0.1
627A Terlingua Ranc 90.60 52 ⇓P P 16 15 03.7 -0.4
baz=90
LBL Lubilhac 90.61 332 eP P 16 15 04.2 +0.3
FRF La Foret Royal 90.64 329⇑iP P 16 15 03.0 -1.1
comp=Z,151nm,1.3s,mb5.9
FRF La Foret Royal 90.64 329⇑iP P 16 15 03.0 -1.1
FRF pmax pmax
comp=Z,76nm,1.3s,mb5.9
FRF La Foret Royal 90.64 329⇑iP P 16 15 03.0 -1.1
comp=Z,76nm,1.3s,mb5.9
MFF Saint Martin d 90.67 335⇑iP P 16 15 04.1 0.0
comp=Z,224nm,1.1s,mb6.1
MFF Saint Martin d 90.67 335⇑iP P 16 15 04.1 0.0
MFF pmax pmax
comp=Z,112nm,1.1s,mb6.1
MFF Saint Martin d 90.67 335⇑iP P 16 15 04.1 0.0
comp=Z,112nm,1.1s,mb6.1
SMRF Simiane la Rot 90.74 330⇑iP P 16 15 04.2 -0.3
comp=Z,129nm,1.4s,mb5.8
SMRF Simiane la Rot 90.74 330⇑iP P 16 15 04.2 -0.3
comp=Z,129nm,1.4s,mb6.1
VILF Villemus 90.79 330 eP P 16 15 04.7 0.0
TAVF Tavernes 90.84 329 eP P 16 15 04.7 -0.3
LMR La Mourre 90.89 329⇑iP P 16 15 04.3 -0.9
comp=Z,223nm,1.2s,mb6.1
LMR La Mourre 90.89 329⇑iP P 16 15 04.3 -0.9
LMR pmax pmax
comp=Z,111nm,1.2s,mb6.1
LMR La Mourre 90.89 329⇑iP P 16 15 04.3 -0.9
comp=Z,111nm,1.2s,mb6.1
PRAF Pradon 91.05 330 eP P 16 15 05.6 -0.4
TREF Trevaresse 91.11 330 eP P 16 15 06.5 +0.2
RJF Les Rejaudoux 91.19 333⇑iP P 16 15 06.5 -0.1
comp=Z,200nm,1.3s,mb6.0
RJF eMLR MLR
comp=Z,28µm,20.8s,MS6.4
RJF Les Rejaudoux 91.19 333⇑iP P 16 15 06.5 -0.1

RJF pmax pmax
comp=Z,100nm,1.3s,mb6.0
RJF MLR MLR
comp=Z,28μm,20.8s,MS6.7
RJF Les Rejaudoux 91.19 333⇑ *i*P P 16 15 06.5 -0.1
comp=Z,100nm,1.3s,mb6.0
RJF LR LR
comp=Z,28μm,20.8s,MS6.7
GELF Grande-Etoile 91.29 330 *e*P P 16 15 06.7 -0.4
CAF Calviac 91.31 333⇑ *i*P P 16 15 07.4 +0.2
comp=Z,205nm,1.2s,mb6.0
CAF Calviac 91.31 333⇑ *i*P P 16 15 07.4 +0.2
CAF pmax pmax
comp=Z,103nm,1.2s,mb6.0
CAF Calviac 91.31 333⇑ *i*P P 16 15 07.4 +0.2
comp=Z,103nm,1.2s,mb6.0
LASF Ste Croix 91.34 331⇑ *i*P P 16 15 07.2 -0.1
comp=Z,147nm,1.3s,mb5.9
CCM Cathedral Cave 91.40 39 P P 16 15 08.0 +0.3
CCM pmax pmax
comp=Z,48nm,1.0s,mb5.8
SLM Saint Louis 91.46 38 P P 16 15 06.7 -1.3
LFF La Frestale 91.79 333⇑ *i*P P 16 15 09.5 +0.1
comp=Z,182nm,1.1s,mb6.0
LFF La Frestale 91.79 333⇑ *i*P P 16 15 09.5 +0.1
LFF pmax pmax
comp=Z,91nm,1.1s,mb6.0
LFF La Frestale 91.79 333⇑ *i*P P 16 15 09.5 +0.1
comp=Z,91nm,1.1s,mb6.0
FVM French Village 91.87 39 P P 16 15 10.4 +0.5
FVM pmax pmax
comp=Z,29nm,1.0s,mb5.6
JCT Junction City 92.14 49 *e*P P 16 15 11.5 +0.3
JCT pmax pmax
comp=Z,18nm,0.8s,mb5.5
JCT Junction City 92.14 49 *e*P P 16 15 11.5 +0.2
comp=Z,18nm,0.8s,mb5.5
OLIL Olney 92.43 37 *e*P P 16 15 12.4 -0.1
comp=Z,40nm,0.2s,mb6.4
MTLF Montolieu 92.60 332⇑ *i*P P 16 15 13.1 -0.1
comp=Z,124nm,1.3s,mb5.9
MTLF Montolieu 92.60 332⇑ *i*P P 16 15 13.1 -0.1
MTLF pmax pmax
comp=Z,62nm,1.3s,mb5.9
MTLF Montolieu 92.60 332⇑ *i*P P 16 15 13.1 -0.1
comp=Z,62nm,1.3s,mb5.9
SIUC Southern Illin 92.68 38 *e*P P 16 15 14.1 +0.5
comp=Z,56nm,0.9s,mb6.0
MIAR Mount Ida 92.82 43 *e*P P 16 15 14.1 -0.2
MIAR pmax pmax
comp=Z,70nm,1.0s,mb6.0
MIAR Mount Ida 92.82 43 *e*P P 16 15 14.1 -0.2
comp=Z,70nm,1.0s,mb6.0
LRDF Laroque-de-Fa 92.82 331 *e*P P 16 15 13.8 -0.4
DESE Dese 92.97 286 *e*P P 16 15 17.0 +1.7
DESE S PP 16 19 01.4 +3.4
WDD Wield Dalam 93.02 320 *e*P P 16 15 14.0 -1.2
EJON La Jonquera 93.10 331 P P 16 15 15.8 +0.3
comp=Z,65nm,1.0s,mb6.0
FILF Fillols 93.13 331 *e*P P 16 15 14.6 -1.0
CARF Carcanieres 93.18 331 *e*P P 16 15 14.7 -1.1
ERPA Erie 93.26 30 *e*P P 16 15 16.6 +0.4
comp=Z,15nm,0.7s,mb5.5
VALF Valcebollere 93.48 331 *e*P P 16 15 16.8 -0.4
VALF Valcebollere 93.48 331 *e*P P 16 15 16.9 -0.3
EPF Esparros 93.58 333 *e*P P 16 15 17.1 -0.6
comp=Z,54nm,1.3s,mb5.5
EPF Esparros 93.58 333 *e*P P 16 15 17.1 -0.6
EPF pmax pmax
comp=Z,27nm,1.3s,mb5.5
EPF Esparros 93.58 333 *e*P P 16 15 17.1 -0.6
comp=Z,27nm,1.3s,mb5.5
ACSO Alum Creek Sta 93.58 33 *e*P P 16 15 16.2 -1.5
comp=Z,40nm,0.8s,mb5.9
WCI Wyandotte Cave 93.70 36 *e*P P 16 15 19.1 +0.8
WCI pmax pmax
comp=Z,27nm,1.0s,mb5.6
RESF Ens 93.77 333 *e*P P 16 15 17.0 -1.5
REYF Montagne du Re 93.81 333 *e*P P 16 15 18.7 0.0
VIEF Viey 93.82 333 *e*P P 16 15 17.8 -1.0
EBIE Bielsa 93.95 333 P P 16 15 20.8 +1.4
comp=Z,103nm,1.4s,mb6.1
ETSF Etsaut 94.02 333⇑ *i*P P 16 15 20.2 +0.5
comp=Z,37nm,0.9s,mb5.5
ETSF Etsaut 94.02 333⇑ *i*P P 16 15 20.2 +0.5
ETSF pmax pmax
comp=Z,19nm,0.9s,mb5.5
ETSF Etsaut 94.02 333⇑ *i*P P 16 15 20.2 +0.5
comp=Z,18nm,0.9s,mb5.5
SJPF Ste Jean 94.08 334 *e*P P 16 15 21.4 +1.5
comp=Z,28nm,1.2s,mb5.3
SJPF Ste Jean 94.08 334 *e*P P 16 15 21.4 +1.5
SJPF pmax pmax
comp=Z,14nm,1.2s,mb5.3
SJPF Ste Jean 94.08 334 *e*P P 16 15 21.4 +1.5
comp=Z,14nm,1.2s,mb5.3
EALK Alkurruntz 94.09 334 P P 16 15 20.6 +0.6
comp=Z,235nm,2.7s,mb6.1
ELIZ Elizondo 94.14 334 P P 16 15 21.5 +1.3
ELIZ pmax pmax
comp=Z,18nm,1.4s,mb5.3
ELIZ Elizondo 94.14 334 P P 16 15 21.5 +1.2
comp=Z,18nm,1.4s,mb5.3
PKME Peaks-Kenny Pk 94.22 21 *e*P P 16 15 21.1 +0.6
comp=Z,33nm,1.1s,mb5.7
WVT Waverly 94.61 38 *e*P P 16 15 22.6 +0.1
WVT pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
EPOB Poblet 94.74 331 P P 16 15 23.3 +0.2
comp=Z,48nm,1.1s,mb5.8
ELAN Lanestosa 94.75 335 P P 16 15 24.4 +1.4
comp=Z,143nm,2.0s,mb6.0
ESAC San Caprasio 95.01 332 P P 16 15 25.5 +1.2
comp=Z,235nm,1.7s,mb6.3
EARI Arriondas 95.27 336 P P 16 15 24.8 -0.6
comp=Z,143nm,2.4s,mb6.0
ERTA Horta de San J 95.37 332 P P 16 15 27.4 +1.5
comp=Z,29nm,1.0s,mb5.7
KEST Kesra 95.75 323 P P 16 15 26.9 -0.8
comp=Z,9.1nm,1.1s,mb5.1,baz=20,slow=0.9,SNR=8.3
KEST PP PP 16 19 09.2 -10
comp=Z,3.0nm,1.0s,baz=23,slow=8.0,SNR=3.9
EPON Pontenova 95.86 338 P P 16 15 29.4 +1.3
comp=Z,84nm,2.1s,mb5.8
TZTN Tazewell 96.34 35 *e*P P 16 15 30.4 0.0
ETOR Torete 96.38 333 P P 16 15 29.6 -0.9
ETOR pmax pmax
comp=Z,17nm,1.7s,mb5.2
ETOR Torete 96.38 333 P P 16 15 29.6 -0.9
comp=Z,17nm,1.7s,mb5.2
CPCT Cooper Cave 96.77 36 *e*P P 16 15 32.3 -0.1
TKL Tuckaleechee C 96.96 36 *e*P P 16 15 33.2 0.0
ECAL Calabor 96.99 337 P P 16 15 33.4 +0.1
comp=Z,62nm,1.9s,mb5.7
PBRG Braganca 97.11 337 *e*P P 16 15 33.8 0.0
comp=Z,51nm,1.9s,mb5.6
PBRG Braganca 97.11 337 *e*PP PP 16 19 36.3 +7.3
GUD Guadarrama 97.29 334 P P 16 15 34.0 -0.6
GUD pmax pmax
comp=Z,35nm,1.7s,mb5.5
GUD Guadarrama 97.29 334 P P 16 15 34.0 -0.6
comp=Z,35nm,1.7s,mb5.5
PCAB Cabril 97.60 338 *e*P P 16 15 39.8 +3.8
comp=Z,19nm,2.0s,mb5.3
PCAB Cabril 97.60 338 *e*PP PP 16 19 40.0 +7.3
MVO Moncorvo 97.78 337 *e*P P 16 15 37.7 +0.9
comp=Z,24nm,1.2s,mb5.6
MVO Moncorvo 97.78 337 *e*PP PP 16 19 37.2 +3.1
MVO *e*SKS 16 26 31.7
MVO *e*LR LR 16 55 41.1
PVRL Vila Real 97.90 337 *e*P P 16 15 39.3 +1.9
comp=Z,30nm,1.5s,mb5.6
PVRL Vila Real 97.90 337 *e*PP PP 16 19 41.9 +6.9
ESDC Sonseca Array 98.08 334 P P 16 15 37.4 -0.8
comp=Z,4.5nm,0.8s,mb5.0,baz=21,slow=4.1,SNR=11
ESDC PP PP 16 19 16.1 -20
comp=Z,8.8nm,1.0s,baz=26,slow=5.5,SNR=5.7
ESDC Sonseca Array 98.08 334 P P 16 15 37.2 -1.0
comp=Z,4.2nm,0.8s,mb5.0
EVIA Vianos 98.46 332 P P 16 15 40.8 +0.9
EVIA pmax pmax
comp=Z,21nm,1.0s,mb5.6
EVIA Vianos 98.46 332 P P 16 15 40.8 +0.9
comp=Z,21nm,1.0s,mb5.6
PVIS Viseu 98.47 337 *e*P P 16 15 39.3 -0.6
comp=Z,21nm,1.9s,mb5.3

PVIS Viseu 98.47 337 *e*PP PP 16 19 34.9 -4.4
MTE Manteigas 98.64 337 *e*P P 16 15 41.3 +0.6
comp=Z,28nm,1.4s,mb5.6
MTE Manteigas 98.64 337 *e*PP PP 16 19 44.2 +3.5
MTE *e*SKS 16 26 22.9
MTE *e*LR LR 16 55 33.4
GOGA Godfrey 98.93 37 P P 16 15 43.0 +0.8
GOGA pmax pmax
comp=Z,21nm,0.8s,mb5.7
GOGA Godfrey 98.93 37 P P 16 15 43.0 +0.8
comp=Z,21nm,0.8s,mb5.7
PCBR Castelo Branco 99.13 336 *e*P pP 16 15 54.5 +1.2
PCBR Castelo Branco 99.13 336 *e*PP PP 16 19 43.5 -0.9
EQES Quesada 99.41 332 P P 16 15 43.6 -0.5
comp=Z,82nm,2.5s,mb5.8
PMRV Marv??o 99.47 336 *e*P P 16 15 46.0 +1.6
comp=Z,30nm,1.6s,mb5.6
PMRV Marv??o 99.47 336 *e*PP PP 16 19 50.8 +3.8
PMRV *e*SKS 16 26 24.6
PMRV *e*LR LR 16 56 53.2
PTOM Tomar 99.63 337 *e*P Pdif 16 15 46.9 +1.8
comp=Z,25nm,1.6s
PTOM Tomar 99.63 337 *e*PP PP 16 19 55.0 +6.8
EADA Adamuz 99.64 334 P Pdif 16 15 47.0 +1.8
comp=Z,78nm,2.9s
PESTR Estremoz 100.05 336 *e*P Pdif 16 15 48.3 +1.4
PESTR Estremoz 100.05 336 *e*PP PP 16 19 55.0 +3.6
PESTR *e*SKS 16 26 29.2
PESTR *e*LR LR 16 57 05.7
EVO Evora 100.49 336 *e*P Pdif 16 15 50.7 +1.8
comp=Z,12nm,1.3s
EVO Evora 100.49 336 *e*PP PP 16 19 58.3 +3.5
PBAR Barrancos 100.49 335 *e*P Pdif 16 15 51.1 +2.2
comp=Z,17nm,1.3s
PBAR Barrancos 100.49 335 *e*PP PP 16 19 58.8 +4.0
PBAR *e*SKS 16 26 48.4
PBAR *e*LR LR 16 58 28.3
PMAFR Mafra 100.51 337 *e*P Pdif 16 15 50.2 +1.2
comp=Z,50nm,1.6s
PMAFR Mafra 100.51 337 *e*PP PP 16 19 55.0 +0.1
PMAFR *e*SKS 16 26 27.7
PMAFR *e*LR LR 16 57 27.7
LIS Lisbon 100.68 337 *e*P Pdif 16 15 49.1 -0.7
PBEJ Beja 100.90 336 *e*P Pdif 16 15 55.2 +4.5
comp=Z,32nm,2.0s
PBEJ Beja 100.90 336 *e*PP PP 16 20 04.1 +6.2
PCVE Castro Verde 101.31 336 *e*P Pdif 16 15 55.8 +3.2
PCVE Castro Verde 101.31 336 *e*PP PP 16 20 04.9 +3.9
PCVE *e*SKS 16 27 38.4
PCVE *e*LR LR 16 57 29.7
PVAQ Vaqueiros 101.41 336 *e*P Pdif 16 15 54.9 +1.9
comp=Z,72nm,2.1s
PVAQ Vaqueiros 101.41 336 *e*PP PP 16 20 05.8 +4.0
PVAQ *e*SKS 16 27 39.6
PVAQ *e*LR LR 16 58 16.5
PTEO Sao Teotonio 101.62 336 *e*P Pdif 16 15 56.5 +2.6
comp=Z,58nm,1.7s
PTEO Sao Teotonio 101.62 336 *e*PP PP 16 20 10.1 +6.8
PBDV Barranco-do-Ve 101.63 336 *e*P Pdif 16 15 56.3 +2.3
comp=Z,65nm,1.8s
PBDV Barranco-do-Ve 101.63 336 *e*PP PP 16 20 07.2 +3.8
PBDV *e*SKS 16 26 54.3
PBDV *e*LR LR 16 58 21.4
MORF Marmelete 101.81 336 *e*P Pdif 16 15 57.7 +2.9
comp=Z,53nm,1.7s
MORF Marmelete 101.81 336 *e*PP PP 16 20 08.6 +3.8
MORF *e*SKS 16 26 36.6
MORF *e*LR LR 16 58 02.5
PFVI Vila Bisbo 102.03 336 *e*P Pdif 16 15 57.7 +1.9
comp=Z,109nm,2.0s
PFVI Vila Bisbo 102.03 336 *e*PP PP 16 20 11.0 +4.6
PFVI *e*SKS 16 26 54.0
PFVI *e*LR LR 16 58 08.8
KMBO Kilima Mbogo 102.23 278 P Pdif 16 15 57.0 +0.4
KMBO pmax pmax
comp=Z,10.0nm,1.4s
KMBO Kilima Mbogo 102.23 278 P Pdif 16 15 56.2 -0.5
comp=Z,1.1nm,0.7s,baz=51,slow=13,SNR=3.6
KMBO PP PP 16 20 05.3 -4.1
comp=Z,5.5nm,1.1s,baz=42,slow=8.3,SNR=3.8
KMBO Kilima Mbogo 102.23 278 P Pdif 16 15 56.2 -0.5
KMBO PP PP 16 20 05.3 -4.1
DRV Dumont d'Urvil 102.57 181 Pdif Pdif 16 16 10.0 +12
DRV Dumont d'Urvil 102.57 181 PP PP 16 20 25.0 +14
DRV SKS 16 26 39.0
DRV SP SP 16 29 25.0 +12
DRV SS SS 16 35 07.0 +19
PMPS Porto Santo 108.05 341 *e*PP PP 16 20 57.4 +6.4
FUL Funchal 108.60 341 *e*PP PP 16 21 01.2 +6.2
LSZ Lusaka 117.65 271 *e*PKIKP PKPdf 16 20 48.3 +0.3
TOA0 Torodi Ar. Sit 118.00 315 PKPdf PKPdf 16 20 48.0 -0.8
TORD Torodi Ar. Bea 118.00 315 PKP PKPdf 16 20 47.1 -1.7
comp=Z,2.4nm,0.6s,baz=8.0,slow=1.6,SNR=12
TORD PP PP 16 21 50.5 -12
comp=Z,16nm,1.1s,baz=26,slow=3.5,SNR=9.5
TORD PKKPbc PKKPbc 16 31 09.1 +1.7
comp=Z,1.4nm,0.8s,baz=226,slow=3.0,SNR=4.9
MAW Mawson 118.87 205 PKP PKPdf 16 20 48.7 -0.1
comp=Z,4.0nm,0.8s,baz=52,slow=3.6,SNR=3.8
LBTB Lobatse 124.68 263 *e*PKIKP PKPdf 16 21 01.9 +0.6
SDV Santo Domingo 125.85 41 *e*PKPdf PKPdf 16 21 03.6 -0.3
BOSA Boshof 126.56 259 PKP PKPdf 16 21 04.5 -0.3
comp=Z,9.9nm,0.9s,baz=115,slow=3.3,SNR=12
BOSA PP PP 16 23 03.7 +2.0
comp=Z,13nm,0.9s,baz=80,slow=6.5,SNR=4.9
BOSA Boshof 126.56 259 PKPdf PKPdf 16 21 03.5 -1.3
DBIC Dimbokro 126.98 317 PKIKP PKPdf 16 21 05.2 -0.9
DBIC 16 22 59.3
DBIC pmax pmax
comp=Z,6.0nm,0.7s
DBIC pmax pmax
comp=Z,17nm,0.9s
DBIC Dimbokro 126.98 317 PKP PKPdf 16 21 05.2 -1.0
comp=Z,6.3nm,0.7s,baz=24,slow=0.4,SNR=6.1
DBIC PP PP 16 22 59.3 -4.1
comp=Z,17nm,0.9s,baz=8.2,slow=7.3,SNR=5.1
DBIC Dimbokro 126.98 317 *e*PKPdf PKPdf 16 21 05.7 -0.4
ROSC El Rosal 127.08 47 PKP PKPdf 16 21 06.8 +0.5
comp=Z,6.9nm,0.3s,baz=103,slow=22,SNR=5.8
TIC Toumodi 127.09 317 *e*PKP1 PKPdf 16 21 06.6 +0.3
comp=Z,11nm,0.2s
KIC Kosan Boka 127.17 316 *e*PKP1 PKPdf 16 21 06.9 +0.4
comp=Z,72nm,1.1s
LIC Lamto 127.44 316 *e*PKIKP PKPdf 16 21 06.3 -0.7
comp=Z,63nm,1.2s
LIC *e*MLR MLR
comp=Z,17μm,21.8s,MS6.4
LIC Lamto 127.44 316 *e*PKP1 PKPdf 16 21 06.1 -0.9
comp=Z,69nm,1.2s
LIC Lamto 127.44 316 *e*PKPdf PKPdf 16 21 06.3 -0.7
LIC LR LR
comp=Z,9μm,21.8s,MS6.4
OTAV Otavalo 128.07 55 *e*PKPdf PKPdf 16 21 08.8 +0.6
TSUM Tsumeb 128.30 273 *e*PKPdf PKPdf 16 21 07.7 -0.7
NVL N'lazarevskaya 136.59 202 *e*PKIKP PKPdf 16 21 25.6 +3.1
NVL pmax pmax
comp=Z,6.0nm,0.6s
MAIT Maitri 136.62 202 *e*PKPdif 16 21 14.8
MAIT *e*E PKPdf 16 21 24.6 +2.1
VNA2 Neumayer--Watz 141.58 196 *e*PKPdf PKPdf 16 21 26.6 -5.0
baz=124,slow=2.7
VNA3 Neumayer Olymp 141.82 195 *e*PKPdf PKPdf 16 21 27.2 -4.8
VNA1 Neumayer--Stat 141.98 196 *e*PKPdf PKPdf 16 21 28.6 -3.7
LPAZ La Paz 146.97 61 PKIKP PKPdf 16 21 42.4 -0.2
LPAZ 16 21 45.2
LPAZ pmax pmax
comp=Z,22nm,0.7s
LPAZ pmax pmax
comp=Z,36nm,0.7s
LPAZ La Paz 146.97 61 PKP PKPdf 16 21 42.4 -0.1
comp=Z,22nm,0.7s,baz=352,slow=5.1,SNR=34
LPAZ PKPbc PKPbc 16 21 45.2 +0.6
comp=Z,36nm,0.7s,baz=2.2,slow=4.1,SNR=41
LPAZ La Paz 146.97 61 *e*PKPdf PKPdf 16 21 42.7 +0.1
LPAZ *e*PKPbc PKPbc 16 21 45.4 +0.8
PMSA Palmer Station 147.56 160 PKPbc PKPbc 16 21 43.8 -1.0
comp=Z,27nm,0.9s,baz=187,slow=20,SNR=3.4
RCBR Riachuelo 149.66 355 *e*PKPdf PKPdf 16 21 45.8 -1.3
RCBR *e*PKPbc PKPbc 16 21 51.7 -0.1
LVC Limon Verde 150.31 71 *e*PKPdf PKPdf 16 21 49.1 +1.3
LVC *e*PKPbc PKPbc 16 21 54.0 +1.0
LCO Las Campanas 151.95 84 *e*PKPbc PKPbc 16 21 57.2 +0.5
PLCA Paso Flores 154.52 110 PKIKP PKPbc 16 22 02.5 +0.5
PLCA pmax pmax

comp=Z,6.0nm,1.0s
PLCA Paso Flores 154.52 110 PKPbc PKPbc 16 22 02.5 +0.5
comp=Z,6.1nm,1.0s,baz=219,slow=3.9,SNR=6.7
PLCA Paso Flores 154.52 110 *e*PKPbc PKPbc 16 22 02.8 +0.8
CPUP Villa Florida 161.08 64 PKP PKPdf 16 22 02.7 +0.6
comp=Z,1.4nm,0.6s,baz=160,slow=1.3,SNR=4.8
CPUP PKPab PKPab 16 22 44.8 -0.6
comp=Z,4.0nm,0.8s,baz=337,slow=4.1,SNR=3.7
CPUP Villa Florida 161.08 64 PKP PKPdf 16 22 02.7 +0.6
CPUP PKPab PKPab 16 22 44.8 -0.6

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*IDC **07** 16:03:35.7±0.7, 36°.32N×141°.71E, h0km, mb5.3/20, mb1 5.4/20, mb1mx5.3/27, mbtmp5.3/20, MS5.8/2, Ms1 5.8/2, ms1mx5.0/30, Error ellipse: s-maj=20.9km s-min=18.7km az=122.0*
*JMA **07** 16:03:37.4±0.3, 36°.30N×141°.92E, h22km, M5.8*
JMA Felt III J1.
*ISCJB **07** 16:03:38.7±1.2, 36°.22N±0°.04×141°.86E±0°.08, h34km±9km, mb5.4/56, MS5.9/2, Error ellipse: s-maj=10.3km s-min=6.7km az=11.2*
*MOS **07** 16:03:40.7±0.7, 36°.58N×141°.63E, h33km, mb5.6/33, Error ellipse: s-maj=15.2km s-min=7.4km az=117.8*
*NEIC **07** 16:03:40.4±0.3, 36°.23N×141°.77E, h35km, mb5.4/34, Error ellipse: s-maj=8.1km s-min=6.8km az=94.0*
*BJI **07** 16:03:41.4, 36°.20N×141°.15E, h30km, mb5.7/5*
ISC 07 16:03:40.6±1.1, 36°.23N±0°.04×141°.80E±0°.08, h37km±8km, n153, g079/153, mb5.4/56, MS5.9/2, 1C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.92**	**236**	P	**Pn**	**16 03 56.7**	**-0.3**
CHOJ				S	**Sn**	**16 04 09.6**	**+0.5**
JHO	**Hitachi**	**1.06**	**292**	P	**Pn**	**16 03 57.0**	**-2.0**
JHO				*e*S	**Sn**	**16 04 12.2**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.19**	**318**	*e*S	**Sn**	**16 04 14.1**	**-1.5**
JFK	**Kawauchi**	**1.36**	**327**	P	**Pn**	**16 04 01.4**	**-1.6**
JFK				*e*S	**Sn**	**16 04 19.6**	**-0.2**
JFT	**Otama**	**1.74**	**318**	*e*S	**Sn**	**16 04 30.1**	**+0.8**
JMM	**Marumori**	**1.82**	**334**	*e*S	**Sn**	**16 04 31.7**	**+0.4**
JAG	**Ashikaga**	**1.90**	**277**	*e*S	**Sn**	**16 04 34.6**	**+1.3**
JFY	**Yanaizu**	**2.05**	**306**	*e*S	**Sn**	**16 04 37.8**	**+0.9**
MAJO	**Matsushiro**	**2.91**	**277**	*e*P	**Pn**	**16 04 25.4**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**8.40**	**20**	P	**Pn**	**16 05 40.5**	**+0.8**
KSRS	**Korea Array**	**11.19**	**280**	Pn	**Pn**	**16 06 20.2**	**+2.2**
	2.1nm,0.3s,baz=96,slow=12,SNR=3.2						
JOW	**Kunigami**	**14.84**	**235**	Pn	**Pn**	**16 07 12.2**	**+4.4**
	6.6nm,0.3s,baz=32,slow=8.4,SNR=5.6						
HIA	**Hailar**	**20.69**	**316**	*e*P	**P**	**16 08 16.6**	**-0.8**
QZH	**Quanzhou**	**22.87**	**247⇑**	*i*P	**P**	**16 08 38.8**	**-2.0**
QZH				pmax	pmax		
	comp=Z,260nm,1.0s,mb5.6						
YAK	**Yakutsk**	**26.92**	**347**	*e*P	**P**	**16 09 16.1**	**-1.9**
ULN	**Ulaanbaatar**	**28.07**	**305**	*e*P	**P**	**16 09 28.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,155nm,0.9s,mb5.6						
ULN	**Ulaanbaatar**	**28.07**	**305**	*e*P	**P**	**16 09 28.7**	**+0.3**
	comp=Z,155nm,0.9s,mb5.6						
SONM	**Songino Array**	**28.50**	**305**	P	**P**	**16 09 32.8**	**+0.5**
	comp=Z,58nm,0.7s,mb5.3,baz=107,slow=8.1,SNR=5.7						
ZAK	**Zakamensk**	**31.02**	**309**	*e*P	**P**	**16 09 53.3**	**-1.2**
CMAR	**Chiang Mai Arr**	**41.60**	**257**	P	**P**	**16 11 25.1**	**0.0**
	comp=Z,38nm,0.8s,mb5.1,baz=67,slow=4.9,SNR=7.2						
ZALV	**Zalesovo Beam**	**42.69**	**313**	P	**P**	**16 11 32.5**	**-1.1**
	comp=Z,69nm,0.8s,mb5.5,baz=103,slow=7.4,SNR=3.1						
NVS	**Novosibirsk**	**43.62**	**314**	*i*P	**P**	**16 11 40.7**	**-0.4**
MK31	**Makanchi Array**	**44.81**	**303**	P	**P**	**16 11 51.1**	**+0.3**
MKAR	**Makanchi Array**	**44.81**	**303**	P	**P**	**16 11 50.8**	**0.0**
	comp=Z,65nm,0.9s,mb5.5,baz=107,slow=6.7,SNR=5.4						
KAPI	**Kappang**	**45.93**	**211**	P	**P**	**16 12 00.6**	**+0.7**
	comp=Z,169nm,0.9s,mb6.0,baz=11,slow=3.6,SNR=5.5						
KAPI	**Kappang**	**45.93**	**211**	*e*PcP	**P**	**16 12 00.8**	**+0.9**
KURK	**Kurchatov**	**46.67**	**309**	P	**P**	**16 12 04.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,64nm,0.5s,mb5.8						
KURK	**Kurchatov**	**46.67**	**309**	P	**P**	**16 12 04.8**	**-0.5**
	comp=Z,64nm,0.5s,mb5.8,baz=82,slow=7.8,SNR=4.3						
KURK	**Kurchatov**	**46.67**	**309**	*e*P	**P**	**16 12 04.7**	**-0.7**
KAKA	**Kakadu**	**49.47**	**192**	*e*P	**P**	**16 12 26.3**	**-0.9**
BVAR	**Borovoye Array**	**51.34**	**313**	P	**P**	**16 12 41.6**	**+0.4**
	comp=Z,29nm,0.5s,mb5.4,baz=82,slow=7.2,SNR=4.7						
BRVK	**Borovoye**	**51.40**	**313**	P	**P**	**16 12 41.4**	**-0.1**
INK	**Inuvik**	**54.97**	**27**	P	**P**	**16 13 06.6**	**-1.0**
	comp=Z,26nm,0.8s,mb5.3,baz=296,slow=7.7,SNR=2.5						
INK	**Inuvik**	**54.97**	**27**	P	**P**	**16 13 06.6**	**-1.0**
WB2	**Warramunga Arr**	**56.30**	**188**	P	**P**	**16 13 15.7**	**-1.9**
XMIS	**Christmas Isla**	**57.60**	**223**	*e*P	**P**	**16 13 26.0**	**-0.9**
	comp=Z,154nm,1.1s,mb6.0						
HYB	**Hyderabad**	**58.49**	**269**	*i*P	**P**	**16 13 34.0**	**+0.7**
DLBC	**Dease Lake**	**59.07**	**38**	LR	LR	16 36 01.0	
	comp=Z,8μm,21.6s,MS5.8,baz=300,slow=33						
YKA	**Yellowknife Ar**	**64.35**	**30**	P	**P**	**16 14 13.0**	**+0.8**
	comp=Z,9.6nm,0.7s,mb4.9,baz=303,slow=6.9,SNR=2.9						
ARCES	**ARCESS Array B**	**64.86**	**340**	P	**P**	**16 14 15.0**	**-0.4**
	comp=Z,32nm,0.8s,mb5.4,baz=57,slow=8.8,SNR=4.5						
STKA	**Stephens Creek**	**67.75**	**180**	P	**P**	**16 14 35.1**	**+0.9**
	comp=Z,17nm,0.8s,mb5.1,baz=351,slow=6.8,SNR=1.8						
FINES	**FINESS Array B**	**69.67**	**333**	P	**P**	**16 14 45.9**	**-0.1**
	comp=Z,62nm,0.9s,mb5.5,baz=45,slow=6.5,SNR=3.6						
NOA	**NORSAR Array B**	**75.05**	**338**	P	**P**	**16 15 18.7**	**+0.7**
	comp=Z,43nm,0.8s,mb5.4,baz=39,slow=5.7,SNR=5.0						
AKASG	**Malin Array Be**	**75.12**	**323**	P	**P**	**16 15 18.3**	**-0.4**
	comp=Z,43nm,0.6s,mb5.5,baz=47,slow=5.8,SNR=5.8						
BORG	**Borgarnes**	**78.49**	**353**	LR	LR	16 54 13.5	
	comp=Z,6μm,19.0s,MS5.9,baz=247,slow=39						
BRTR	**Keskin Array B**	**79.62**	**312**	P	**P**	**16 15 44.6**	**+0.6**
	comp=Z,19nm,0.8s,mb5.1,baz=98,slow=3.3,SNR=4.3						
ULM	**Lac du Bonnet**	**80.01**	**33**	P	**P**	**16 15 46.9**	**+0.9**
	comp=Z,10nm,0.8s,mb4.8,baz=315,slow=10.0,SNR=2.3						
CLL	**Collm**	**81.95**	**330**	*i*P	**P**	**16 15 56.7**	**+0.4**
CLL				*i*	pP	16 16 08.0	+0.3
CLL				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
CLL	**Collm**	**81.95**	**330**	*i*P	**P**	**16 15 56.7**	**+0.4**
	comp=Z,39nm,0.8s,mb5.4						
CLL				*i*	pP	16 16 08.0	+0.3
CLL	**Collm**	**81.95**	**330**	*i*P	**P**	**16 15 56.7**	**+0.4**
	comp=Z,39nm,0.8s,mb5.4						
CLL				*i*	pP	16 16 08.0	+0.3
GERES	**GERESS Array B**	**83.56**	**328**	P	**P**	**16 16 04.8**	**+0.1**
	comp=Z,14nm,0.7s,mb5.2,baz=35,slow=6.3,SNR=4.2						
GIVF	**Givet**	**86.02**	**334**	*e*P	**P**	**16 16 16.9**	**-0.1**
SCHQ	**Schefferville**	**86.03**	**16**	P	**P**	**16 16 17.6**	**+0.7**
	comp=Z,15nm,0.9s,mb5.2,baz=345,slow=12,SNR=2.3						
BAIF	**Baives**	**86.27**	**334**	*e*P	**P**	**16 16 18.2**	**-0.1**
	comp=Z,26nm,0.9s,mb5.2						
BAIF	**Baives**	**86.27**	**334**	*e*P	**P**	**16 16 18.2**	**-0.1**
BAIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
BAIF	**Baives**	**86.27**	**334**	*e*P	**P**	**16 16 18.2**	**-0.1**
	comp=Z,13nm,0.9s,mb5.2						
CDF	**Champ du Feu**	**86.50**	**332**	*e*P	**P**	**16 16 19.5**	**0.0**
	comp=Z,39nm,0.8s,mb5.4						
CDF	**Champ du Feu**	**86.50**	**332**	*e*P	**P**	**16 16 19.5**	**0.0**
CDF				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.4						
CDF	**Champ du Feu**	**86.50**	**332**	*e*P	**P**	**16 16 19.5**	**0.0**
	comp=Z,20nm,0.8s,mb5.4						
HINF	**Hinteralfeld**	**87.15**	**331**	*e*P	**P**	**16 16 22.3**	**-0.4**
	comp=Z,15nm,0.8s,mb5.0						
HINF	**Hinteralfeld**	**87.15**	**331**	*e*P	**P**	**16 16 22.3**	**-0.4**
HINF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
HINF	**Hinteralfeld**	**87.15**	**331**	*e*P	**P**	**16 16 22.3**	**-0.4**
	comp=Z,7.5nm,0.8s,mb5.0						
HAU	**Haudompre**	**87.19**	**332**	*e*P	**P**	**16 16 22.5**	**-0.3**
	comp=Z,21nm,0.7s,mb5.2						
HAU	**Haudompre**	**87.19**	**332**	*e*P	**P**	**16 16 22.5**	**-0.3**
HAU				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.2						
HAU	**Haudompre**	**87.19**	**332**	*e*P	**P**	**16 16 22.5**	**-0.3**
	comp=Z,11nm

FLN pmax pmax
comp=Z,21nm,1.0s,mb5.4
FLN La Foliniere 88.97 336 *eP* **P 16 16 31.1 -0.2**
comp=Z,21nm,1.0s,mb5.4
LDF La Druitiere 89.00 336 *eP* **P 16 16 31.4 0.0**
comp=Z,22nm,0.7s,mb5.3
LDF La Druitiere 89.00 336 *eP* **P 16 16 31.4 0.0**
LDF pmax pmax
comp=Z,11nm,0.7s,mb5.3
LDF La Druitiere 89.00 336 *eP* **P 16 16 31.4 0.0**
comp=Z,11nm,0.7s,mb5.3
SSF Saint Saulge 89.04 333 *eP* **P 16 16 31.8 +0.1**
comp=Z,29nm,1.1s,mb5.2
SSF Saint Saulge 89.04 333 *eP* **P 16 16 31.8 +0.1**
SSF pmax pmax
comp=Z,15nm,1.1s,mb5.2
SSF Saint Saulge 89.04 333 *eP* **P 16 16 31.8 +0.1**
comp=Z,15nm,1.1s,mb5.2
LPL La Plagne 89.09 330 *eP* **P 16 16 32.0 +0.1**
comp=Z,32nm,0.8s,mb5.4
LPL La Plagne 89.09 330 *eP* **P 16 16 32.0 +0.1**
LPL pmax pmax
comp=Z,16nm,0.8s,mb5.4
LPL La Plagne 89.09 330 *eP* **P 16 16 32.0 +0.1**
comp=Z,16nm,0.8s,mb5.4
LPG La Plagne 89.09 330 *eP* **P 16 16 32.1 +0.2**
comp=Z,38nm,0.8s,mb5.5
LPG La Plagne 89.09 330 *eP* **P 16 16 32.1 +0.2**
LPG pmax pmax
comp=Z,19nm,0.8s,mb5.5
LPG La Plagne 89.09 330 *eP* **P 16 16 32.1 +0.2**
comp=Z,19nm,0.8s,mb5.5
SMF Signal de Mont 89.27 333 *eP* **P 16 16 32.7 0.0**
comp=Z,19nm,0.8s,mb5.2
SMF Signal de Mont 89.27 333 *eP* **P 16 16 32.7 0.0**
SMF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
SMF Signal de Mont 89.27 333 *eP* **P 16 16 32.7 0.0**
comp=Z,9.4nm,0.8s,mb5.2
AVF Avril sur Loir 89.33 333 *eP* **P 16 16 33.1 +0.1**
comp=Z,34nm,0.9s,mb5.4
AVF Avril sur Loir 89.33 333 *eP* **P 16 16 33.1 +0.1**
AVF pmax pmax
comp=Z,17nm,0.9s,mb5.4
AVF Avril sur Loir 89.33 333 *eP* **P 16 16 33.1 +0.1**
comp=Z,17nm,0.9s,mb5.4
GRR Gorron 89.42 336 *eP* **P 16 16 33.6 +0.2**
comp=Z,51nm,1.0s,mb5.5
GRR Gorron 89.42 336 *eP* **P 16 16 33.6 +0.2**
GRR pmax pmax
comp=Z,26nm,1.0s,mb5.5
GRR Gorron 89.42 336 *eP* **P 16 16 33.6 +0.2**
comp=Z,26nm,1.0s,mb5.5
BGF Bois d'Agland 89.71 333 *eP* **P 16 16 34.9 +0.1**
MBDF Montbardon 89.72 330 *eP* **P 16 16 34.3 -0.6**
comp=Z,21nm,0.7s,mb5.3
MBDF Montbardon 89.72 330 *eP* **P 16 16 34.3 -0.6**
MBDF pmax pmax
comp=Z,11nm,0.7s,mb5.3
MBDF Montbardon 89.72 330 *eP* **P 16 16 34.3 -0.6**
comp=Z,10nm,0.7s,mb5.3
ORIF Oris-en-Rattie 89.92 330 *eP* **P 16 16 35.8 0.0**
comp=Z,18nm,0.8s,mb5.1
ORIF Oris-en-Rattie 89.92 330 *eP* **P 16 16 35.8 0.0**
ORIF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
ORIF Oris-en-Rattie 89.92 330 *eP* **P 16 16 35.8 0.0**
comp=Z,9.1nm,0.8s,mb5.2
SGMF Saint Gilles 90.08 337 *eP* **P 16 16 36.7 +0.2**
comp=Z,35nm,0.8s,mb5.5
SGMF Saint Gilles 90.08 337 *eP* **P 16 16 36.7 +0.2**
SGMF pmax pmax
comp=Z,17nm,0.8s,mb5.4
SGMF Saint Gilles 90.08 337 *eP* **P 16 16 36.7 +0.2**
comp=Z,18nm,0.8s,mb5.4
SBF Sospel 90.15 329 *eP* **P 16 16 36.0 -0.9**
comp=Z,44nm,0.9s,mb5.5
SBF Sospel 90.15 329 *eP* **P 16 16 36.0 -0.9**
SBF pmax pmax
comp=Z,22nm,0.9s,mb5.5
SBF Sospel 90.15 329 *eP* **P 16 16 36.0 -0.9**
comp=Z,22nm,0.9s,mb5.5
TCF Toulx Ste Croi 90.17 333 *eP* **P 16 16 37.1 +0.1**
comp=Z,30nm,1.0s,mb5.3
TCF Toulx Ste Croi 90.17 333 *eP* **P 16 16 37.1 +0.1**
TCF pmax pmax
comp=Z,15nm,1.0s,mb5.3
TCF Toulx Ste Croi 90.17 333 *eP* **P 16 16 37.1 +0.1**
comp=Z,15nm,1.0s,mb5.3
ROSF Rostrenen 90.23 338 *eP* **P 16 16 37.5 +0.3**
comp=Z,51nm,1.0s,mb5.5
ROSF Rostrenen 90.23 338 *eP* **P 16 16 37.5 +0.3**
ROSF pmax pmax
comp=Z,26nm,1.0s,mb5.5
ROSF Rostrenen 90.23 338 *eP* **P 16 16 37.5 +0.3**
comp=Z,26nm,1.0s,mb5.5
TXAR Lajitas Array 90.37 53 P **P 16 16 40.6 +2.3**
comp=Z,3.4nm,0.7s,mb4.8,baz=278,slow=3.5,SNR=2.9
VIVF Saint-Julien-l 90.45 331 *eP* **P 16 16 38.3 0.0**
comp=Z,23nm,0.8s,mb5.2
VIVF Saint-Julien-l 90.45 331 *eP* **P 16 16 38.3 0.0**
VIVF pmax pmax
comp=Z,12nm,0.8s,mb5.3
VIVF Saint-Julien-l 90.45 331 *eP* **P 16 16 38.3 0.0**
comp=Z,12nm,0.8s,mb5.3
PGF Pioggiola 90.55 327 *eP* **P 16 16 38.2 -0.6**
comp=Z,42nm,1.0s,mb5.4
PGF Pioggiola 90.55 327 *eP* **P 16 16 38.2 -0.6**
PGF pmax pmax
comp=Z,21nm,1.0s,mb5.4
PGF Pioggiola 90.55 327 *eP* **P 16 16 38.2 -0.6**
comp=Z,21nm,1.0s,mb5.4
QUIF Quistinic 90.57 337 *eP* **P 16 16 38.8 0.0**
comp=Z,21nm,0.7s,mb5.3
QUIF Quistinic 90.57 337 *eP* **P 16 16 38.8 0.0**
QUIF pmax pmax
comp=Z,11nm,0.7s,mb5.3
QUIF Quistinic 90.57 337 *eP* **P 16 16 38.8 0.0**
comp=Z,11nm,0.7s,mb5.3
FRF La Foret Royal 90.73 329 *eP* **P 16 16 38.9 -0.7**
comp=Z,58nm,1.2s,mb5.5
FRF La Foret Royal 90.73 329 *eP* **P 16 16 38.9 -0.7**
FRF pmax pmax
comp=Z,29nm,1.2s,mb5.5
FRF La Foret Royal 90.73 329 *eP* **P 16 16 38.9 -0.7**
comp=Z,29nm,1.2s,mb5.5
MFF Saint Martin d 90.73 335 *eP* **P 16 16 39.9 +0.3**
comp=Z,66nm,1.0s,mb5.6
MFF Saint Martin d 90.73 335 *eP* **P 16 16 39.9 +0.3**
MFF pmax pmax
comp=Z,33nm,1.0s,mb5.6
MFF Saint Martin d 90.73 335 *eP* **P 16 16 39.9 +0.3**
comp=Z,33nm,1.0s,mb5.6
SMRF Simiane la Rot 90.82 330 *eP* **P 16 16 40.1 +0.1**
comp=Z,23nm,1.1s,mb5.1
SMRF Simiane la Rot 90.82 330 *eP* **P 16 16 40.1 +0.1**
comp=Z,23nm,1.1s,mb5.4
LMR La Mourre 90.97 329 *eP* **P 16 16 40.2 -0.5**
comp=Z,57nm,1.1s,mb5.5
LMR La Mourre 90.97 329 *eP* **P 16 16 40.2 -0.5**
LMR pmax pmax
comp=Z,28nm,1.1s,mb5.5
LMR La Mourre 90.97 329 *eP* **P 16 16 40.2 -0.5**
comp=Z,28nm,1.1s,mb5.5
RJF Les Rejaudoux 91.27 333 *eP* **P 16 16 42.4 +0.3**
comp=Z,60nm,1.0s,mb5.6
RJF Les Rejaudoux 91.27 333 *eP* **P 16 16 42.4 +0.3**
RJF pmax pmax
comp=Z,30nm,1.0s,mb5.6
RJF Les Rejaudoux 91.27 333 *eP* **P 16 16 42.4 +0.3**
comp=Z,30nm,1.0s,mb5.6
CAF Calviac 91.39 333 *eP* **P 16 16 43.3 +0.7**
comp=Z,71nm,1.0s,mb5.6
CAF Calviac 91.39 333 *eP* **P 16 16 43.3 +0.7**
CAF pmax pmax
comp=Z,36nm,1.0s,mb5.7
CAF Calviac 91.39 333 *eP* **P 16 16 43.3 +0.7**
comp=Z,36nm,1.0s,mb5.7
LASF Ste Croix 91.42 331 *eP* **P 16 16 43.1 +0.3**
comp=Z,31nm,0.9s,mb5.3
LFF La Frestale 91.86 333 *eP* **P 16 16 45.3 +0.5**
comp=Z,74nm,1.0s,mb5.7
LFF La Frestale 91.86 333 *eP* **P 16 16 45.3 +0.5**
LFF pmax pmax
comp=Z,37nm,1.0s,mb5.7
LFF La Frestale 91.86 333 *eP* **P 16 16 45.3 +0.5**
comp=Z,37nm,1.0s,mb5.7

MTLF Montolieu 92.68 332 *eP* **P 16 16 49.0 +0.4**
comp=Z,38nm,1.0s,mb5.5
MTLF Montolieu 92.68 332 *eP* **P 16 16 49.0 +0.4**
MTLF pmax pmax
comp=Z,19nm,1.0s,mb5.5
MTLF Montolieu 92.68 332 *eP* **P 16 16 49.0 +0.4**
comp=Z,19nm,1.0s,mb5.5
ETSF Etsaut 94.10 333 *eP* **P 16 16 55.8 +0.6**
comp=Z,21nm,0.9s,mb5.3
ETSF Etsaut 94.10 333 *eP* **P 16 16 55.8 +0.6**
ETSF pmax pmax
comp=Z,11nm,0.9s,mb5.3
ETSF Etsaut 94.10 333 *eP* **P 16 16 55.8 +0.6**
comp=Z,11nm,0.9s,mb5.3
SJPF Ste Jean 94.15 334 *eP* **P 16 16 56.9 +1.5**
ESDC Sonseca Array 98.15 334 P **P 16 17 13.0 -0.7**
comp=Z,1.9nm,0.8s,mb4.7,baz=20,slow=3.9,SNR=2.7
ESDC Sonseca Array 98.15 334 P **P 16 17 13.0 -0.7**
BOSA Boshof 126.73 259 PKP PKPdf 16 22 41.0 +0.8
comp=Z,6.5nm,0.8s,baz=77,slow=1.8,SNR=3.5

JMA 07 16:06:54.6±0.2, 36°.19N×141°.83E, h61km, M4.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.93**	**239**	P	Pn	16 07 11.9	+0.2
CHOJ				*eS*	Sn	16 07 25.1	+0.8
JHO	**Hitachi**	**1.10**	**293**	P	Pn	16 07 13.9	-0.1
ONAJ	**Iwakimizuishiy**	**1.23**	**318**	P	Pn	16 07 16.1	+0.4
JFK	**Kawauchi**	**1.40**	**327**	P	Pn	16 07 18.3	+0.3
JFT	**Otama**	**1.79**	**318**	P	Pn	16 07 24.7	+1.6
JAG	**Ashikaga**	**1.93**	**278**	P	Pn	16 07 26.1	+1.0
JKT	**Katashina**	**2.16**	**286**	P	Pn	16 07 29.6	+1.4
JKT				*eS*	Sn	16 07 55.6	+1.8
MAT	**Matsushiro**	**2.94**	**278**	P	Pn	16 07 41.2	+2.3
MAT				S	Sn	16 08 15.9	+2.8

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*IDC **07** 16:09:03.3±0.8, 36°.24N×141°.90E, h0km, mb4.6/16, mb1 4.7/20, mb1mx4.5/30, mbtmp4.6/20, ML3.4/3, Error ellipse: s-maj=20.2km s-min=17.1km az=122.0*
*NEIC **07** 16:09:04.1±3.3, 36°.23N×141°.91E, h6km±19km, mb5.3/4, Error ellipse: s-maj=10.5km s-min=6.7km az=108.0*
NEIC Recorded [2 JMA] in Chiba, Fukushima, Ibaraki, Miyagi, Saitama and Tochigi; [1 JMA] in Gumma and Tokyo.
*JMA **07** 16:09:06.1±0.3, 36°.27N×141°.83E, h22km, M4.9*
JMA Felt II J1.
*ISCJB **07** 16:09:06.7±1.0, 36°.19N±0°.04×141°.85E±0°.07, h35km±7km, mb4.7/21, Error ellipse: s-maj=9.6km s-min=6.4km az=10.0*
*MOS **07** 16:09:06.1±0.6, 36°.18N×141°.90E, h33km, mb5.3/4, Error ellipse: s-maj=18.0km s-min=10.1km az=41.8*
*BJI **07** 16:09:07.8, 36°.26N×141°.04E, h10km, mb5.1/5*
ISC 07 16:09:06.9±1.3, 36°.23N±0°.04×141°.82E±0°.06, h22km±8km, n51, σ0s73/59, mb4.7/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.94**	**236**	P	**Pb**	**16 09 24.1**	**-0.4**
CHOJ				*eS*	**Sb**	**16 09 37.0**	**+0.5**
JHO	**Hitachi**	**1.08**	**291**	P	**Pn**	**16 09 25.2**	**-1.5**
JHO				*eS*	**Sb**	**16 09 40.4**	**-0.1**
JFK	**Kawauchi**	**1.37**	**327**	P	**Pn**	**16 09 30.2**	**-0.4**
JFK				*eS*	**Sn**	**16 09 47.1**	**-1.0**
JFT	**Otama**	**1.75**	**318**	P	**Pn**	**16 09 36.3**	**+0.3**
JMM	**Marumori**	**1.83**	**334**	P	**Pn**	**16 09 36.4**	**-0.6**
JAG	**Ashikaga**	**1.92**	**277**	P	**Pn**	**16 09 38.3**	**0.0**
JAG				*eS*	**Sn**	**16 10 01.9**	**+0.2**
JFY	**Yanaizu**	**2.07**	**305**	P	**Pn**	**16 09 40.8**	**+0.6**
JKT	**Katashina**	**2.14**	**285**	P	**Pn**	**16 09 41.4**	**+0.1**
JKT				*eS*	**Sn**	**16 10 07.3**	**+0.1**
JIO	**Ouri**	**2.25**	**351**	P	**Pn**	**16 09 42.9**	**+0.1**
MJAR	**Matsushiro Arr**	**2.93**	**277**	Pn	**Pn**	**16 09 52.5**	**+0.4**
	50nm,0.3s,baz=316,slow=24,SNR=6.7						
MJAR				Sn	**Sn**	**16 10 30.6**	**+3.9**
	80nm,0.3s,baz=211,slow=11,SNR=5.7						
MAJO	**Matsushiro**	**2.93**	**277**	*eP*	**Pn**	**16 09 53.1**	**+0.9**
MAT	**Matsushiro**	**2.93**	**277**	P	**Pn**	**16 09 52.2**	**0.0**
MAT				*eS*	**Sn**	**16 10 25.8**	**-0.9**
JHJ	**Hachijo jima 2**	**3.53**	**209**	Pn	**Pn**	**16 10 00.9**	**+0.6**
	182nm,0.3s,baz=84,slow=13,SNR=7.7						
JHJ				Sn	**Sn**	**16 10 39.1**	**-2.2**
	241nm,0.3s,baz=261,slow=23,SNR=6.2						
YSS	**Yuzh-Sakhalins**	**10.74**	**3**	P	**Pn**	**16 11 37.1**	**-2.2**
KSRS	**Korea Array**	**11.21**	**280**	Pn	**Pn**	**16 11 47.8**	**+2.1**
	0.4nm,0.3s,baz=93,slow=14,SNR=9.8						
JOW	**Kunigami**	**14.86**	**235**	Pn	**Pn**	**16 12 35.6**	**0.0**
	0.1nm,0.3s,baz=30,slow=17,SNR=2.1						
YAK	**Yakutsk**	**26.93**	**347**	*eP*	**P**	**16 14 45.7**	**-0.5**
YAK	**Yakutsk**	**26.93**	**347**	*eP*	**P**	**16 14 45.9**	**-0.3**
	99nm,1.0s,mb5.3						
ENH	**Enshi**	**27.60**	**267**	*eP*	**P**	**16 14 51.5**	**-1.2**
ULN	**Ulaanbaatar**	**28.08**	**305**	*eP*	**P**	**16 14 57.4**	**+0.7**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
ULN	**Ulaanbaatar**	**28.08**	**305**	*eP*	**P**	**16 14 57.4**	**+0.7**
	comp=Z,9.8nm,0.7s,mb4.5						
SONM	**Songino Array**	**28.51**	**305**	P	**P**	**16 15 00.2**	**-0.3**
	comp=Z,12nm,0.7s,mb4.8,baz=104,slow=9.0,SNR=6.7						
CMAR	**Chiang Mai Arr**	**41.62**	**257**	P	**P**	**16 16 53.3**	**-0.2**
	comp=Z,4.2nm,0.8s,mb4.1,baz=49,slow=5.8,SNR=6.5						
ZAA0	**Zalesovo Array**	**42.70**	**313**	*eP*	**P**	**16 17 01.9**	**0.0**
ZALV	**Zalesovo Beam**	**42.70**	**313**	P	**P**	**16 17 02.2**	**+0.3**
	comp=Z,17nm,0.8s,mb4.9,baz=96,slow=7.0,SNR=6.9						
NVS	**Novosibirsk**	**43.63**	**314**	*eP*	**P**	**16 17 02.1**	**-7.3**
MK31	**Makanchi Array**	**44.83**	**303**	*eP*	**P**	**16 17 19.5**	**+0.4**
MKAR	**Makanchi Array**	**44.83**	**303**	P	**P**	**16 17 19.6**	**+0.5**
	comp=Z,14nm,0.8s,mb4.8,baz=87,slow=9.2,SNR=5.5						
KAPI	**Kappang**	**45.34**	**211**	P	**P**	**16 17 28.0**	**-0.2**
	comp=Z,26nm,1.0s,mb5.1,baz=38,slow=6.0,SNR=4.4						
KURK	**Kurchatov**	**46.69**	**309**	P	**P**	**16 17 34.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
KURK	**Kurchatov**	**46.69**	**309**	P	**P**	**16 17 34.2**	**+0.5**
	comp=Z,20nm,0.7s,mb5.2,baz=85,slow=8.0,SNR=6.8						
KURK	**Kurchatov**	**46.69**	**309**	*eP*	**P**	**16 17 33.5**	**-0.2**
	comp=Z,48nm,0.9s,mb5.4						
BVAR	**Borovoye Array**	**51.36**	**313**	P	**P**	**16 18 09.7**	**+0.2**
	comp=Z,9.5nm,0.9s,mb4.7,baz=96,slow=6.0,SNR=4.6						
BRVK	**Borovoye**	**51.41**	**313**	*eP*	**P**	**16 18 10.7**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
BRVK	**Borovoye**	**51.41**	**313**	*eP*	**P**	**16 18 10.7**	**+0.8**
	comp=Z,18nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**56.30**	**188**	P	**P**	**16 18 45.7**	**-0.2**
WRA	**Warramunga Arr**	**56.31**	**188**	P	**P**	**16 18 45.7**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=6,4,slow=7.3,SNR=3.4						
YKA	**Yellowknife Ar**	**64.34**	**30**	P	**P**	**16 19 40.7**	**+0.2**
	comp=Z,1.5nm,0.9s,mb4.0,baz=303,slow=6.3,SNR=3.5						
ARCES	**ARCESS Array B**	**64.87**	**340**	P	**P**	**16 19 43.9**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.4,baz=64,slow=5.5,SNR=3.9						
ARCES	**ARCESS Array B**	**64.87**	**340**	P	**P**	**16 19 43.9**	**+0.1**
FINES	**FINESS Array B**	**69.68**	**333**	P	**P**	**16 20 14.4**	**0.0**
	comp=Z,9.2nm,0.8s,mb4.7,baz=73,slow=6.6,SNR=4.4						
KIV	**Kislovodsk**	**71.68**	**311**	*eP*	**P**	**16 20 27.8**	**+0.9**
KIV				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
NB2	**NORSAR Subarra**	**75.06**	**338**	P	**P**	**16 20 46.9**	**+0.4**
	comp=Z,11nm,0.9s,mb4.8,baz=39,slow=5.9						
NOA	**NORSAR Array B**	**75.06**	**338**	P	**P**	**16 20 46.9**	**+0.4**
	comp=Z,7.5nm,0.8s,mb4.7,baz=39,slow=5.7,SNR=6.3						
AKASG	**Malin Array Be**	**75.14**	**323**	P	**P**	**16 20 46.8**	**-0.3**
	comp=Z,8.7nm,0.7s,mb4.8,baz=47,slow=5.8,SNR=9.0						
PDAR	**Pinedale Array**	**78.00**	**46**	P	**P**	**16 21 04.1**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.8,baz=300,slow=3.6,SNR=2.8						
BR131	**Keskin Array S**	**79.63**	**312**	*eP*	**P**	**16 21 12.5**	**0.0**
BRTR	**Keskin Array B**	**79.63**	**312**	P	**P**	**16 21 12.8**	**+0.3**
	comp=Z,3.2nm,0.9s,mb4.3,baz=96,slow=5.0,SNR=3.6						
CLL	**Collm**	**81.96**	**330**	*i P*	**P**	**16 21 25.5**	**+0.8**
	comp=Z,9.0nm,0.9s,mb4.7						
KHC	**Kasperske Hory**	**83.40**	**329**	*eP*	**P**	**16 21 32.5**	**+0.2**
GERES	**GERESS Array B**	**83.57**	**328**	P	**P**	**16 21 31.9**	**-1.2**
	comp=Z,2.9nm,0.8s,mb4.4,baz=45,slow=5.8,SNR=3.5						

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*THE **07** 16:09:58.7, 39°.47N×21°.52E, h0km±2km, ML3.3/7, Error ellipse: s-maj=2.0km s-min=0.4km az=268.0*
*CSEM **07** 16:09:59.3±0.2, 39°.47N×21°.62E, h8km, MD3.2, Error ellipse: s-maj=4.9km s-min=3.1km az=74.0*
*ATH **07** 16:09:59.2, 39°.49N×21°.66E, h23km±3km, MD3.2/5*
*NEIC **07** 16:09:59.2, 39°.49N×21°.66E, h23km, MD3.2(ATH), After ATH.*
ISC 07 16:09:59.7±0.5, 39°.48N±0°.02×21°.59E±0°.04, h12km±4km, n62, σ1s12/90, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THL	**Klokotos Trika**	**0.34**	**75**	*e*PB	**Pg**	**16 10 06.3**	**-0.2**
THL				*e*SB	**Sg**	**16 10 11.5**	**+0.5**
THL	**Klokotos Trika**	**0.34**	**75**	P	**Pg**	**16 10 06.3**	**-0.2**
THL				S	**Sg**	**16 10 12.4**	**+1.4**
THL	**Klokotos Trika**	**0.34**	**75**	P	**Pg**	**16 10 06.3**	**-0.2**
THL				*e*Sb	**Sg**	**16 10 11.5**	**+0.5**
THL				S	**Sg**	**16 10 12.4**	**+1.4**
EVR	**Evrytania**	**0.59**	**163**	*e*PN	**Pg**	**16 10 10.3**	**-0.8**
EVR				*e*SN	**Sg**	**16 10 19.4**	**+0.6**
EVR	**Evrytania**	**0.59**	**163**	*e*Pn	**Pg**	**16 10 10.3**	**-0.8**
JAN	**Janina**	**0.60**	**287**	*e*PN	**Pg**	**16 10 12.0**	**+0.6**
JAN	**Janina**	**0.60**	**287**	*e*Pn	**Pg**	**16 10 12.0**	**+0.6**
AGG	**Agios Georgios**	**0.73**	**128**	*e*PN	**Pg**	**16 10 13.5**	**-0.4**
AGG	**Agios Georgios**	**0.73**	**128**	P	**Pg**	**16 10 13.5**	**-0.4**
AGG				S	**Sg**	**16 10 24.8**	**+1.3**
AGG	**Agios Georgios**	**0.73**	**128**	P	**Pg**	**16 10 13.5**	**-0.4**
AGG				S	**Sg**	**16 10 24.8**	**+1.3**
KZN	**Kozani**	**0.84**	**9**	*e*PN	**Pg**	**16 10 14.7**	**-1.2**
KZN	**Kozani**	**0.84**	**9**	P	**Pg**	**16 10 14.7**	**-1.2**
KZN				S	**Sg**	**16 10 27.6**	**+0.7**
KZN	**Kozani**	**0.84**	**9**	P	**Pg**	**16 10 14.7**	**-1.2**
KZN				S	**Sg**	**16 10 27.6**	**+0.7**
LIT	**Litokhoron**	**0.93**	**48**	P	**Pg**	**16 10 16.4**	**-1.2**
LIT				S	**Sg**	**16 10 32.0**	**+2.2**
LIT	**Litokhoron**	**0.93**	**48**	P	**Pg**	**16 10 16.4**	**-1.2**
LIT				S	**Sg**	**16 10 32.0**	**+2.2**
EFP	**Efpalio**	**1.08**	**167**	*e*PB	**Pb**	**16 10 19.1**	**-1.2**
EFP	**Efpalio**	**1.08**	**167**	P	**Pb**	**16 10 19.0**	**-1.3**
EFP				S	**Sb**	**16 10 35.2**	**+0.9**
EFP	**Efpalio**	**1.08**	**167**	*e*Pb	**Pb**	**16 10 19.1**	**-1.2**
EFP				S	**Sb**	**16 10 35.2**	**+0.9**
KALE	**Kalithea**	**1.17**	**158**	P	**Pb**	**16 10 20.5**	**-1.3**
KALE				S	**Sb**	**16 10 38.3**	**+1.5**
KALE	**Kalithea**	**1.17**	**158**	P	**Pb**	**16 10 20.5**	**-1.3**
KALE				S	**Sb**	**16 10 38.3**	**+1.5**
TRIZ	**Trizonia**	**1.17**	**161**	P	**Pn**	**16 10 20.7**	**-1.2**
TRIZ				S	**Sb**	**16 10 38.1**	**+1.1**
TRIZ	**Trizonia**	**1.17**	**161**	P	**Pn**	**16 10 20.7**	**-1.2**
TRIZ				S	**Sb**	**16 10 38.1**	**+1.1**
LAKA	**Lakka**	**1.27**	**166**	P	**Pn**	**16 10 23.0**	**-0.3**
LAKA	**Lakka**	**1.27**	**166**	P	**Pn**	**16 10 23.0**	**-0.3**
NEO	**Neokhori**	**1.27**	**97**	*e*PN	**Pn**	**16 10 23.1**	**-0.2**
NEO	**Neokhori**	**1.27**	**97**	*e*Pn	**Pn**	**16 10 23.1**	**-0.2**
FNA	**Florina**	**1.31**	**353**	P	**Pn**	**16 10 23.2**	**-0.7**
FNA				S	**Sb**	**16 10 42.8**	**+1.7**
FNA	**Florina**	**1.31**	**353**	P	**Pn**	**16 10 23.2**	**-0.7**
FNA				S	**Sb**	**16 10 42.8**	**+1.7**
LKR	**Lokris**	**1.37**	**127**	*e*PN	**Pn**	**16 10 23.9**	**-0.7**
LKR	**Lokris**	**1.37**	**127**	*e*Pn	**Pn**	**16 10 23.9**	**-0.7**
KEK	**Kerkira**	**1.41**	**280**	*e*PN	**Pn**	**16 10 26.9**	**+1.8**
KEK	**Kerkira**	**1.41**	**280**	P	**Pn**	**16 10 26.2**	**+1.1**
KEK	**Kerkira**	**1.41**	**280**	P	**Pn**	**16 10 26.2**	**+1.1**
KEK	**Kerkira**	**1.41**	**280**	*e*Pn	**Pn**	**16 10 26.9**	**+1.8**
RLS	**Riolos of Patr**	**1.42**	**184**	*e*PN	**Pn**	**16 10 26.5**	**+1.2**
RLS	**Riolos of Patr**	**1.42**	**184**	*e*Pn	**Pn**	**16 10 26.5**	**+1.2**
VLS	**Valsamata**	**1.52**	**211**	*e*PB	**Pb**	**16 10 26.6**	**-1.2**
VLS	**Valsamata**	**1.52**	**211**	P	**Pn**	**16 10 26.2**	**-0.4**
VLS	**Valsamata**	**1.52**	**211**	P	**Pn**	**16 10 26.2**	**-0.4**
VLS	**Valsamata**	**1.52**	**211**	*e*Pb	**Pb**	**16 10 26.6**	**-1.2**
BIA	**Bitola**	**1.55**	**352**	*e*Pn	**Pn**	**16 10 28.0**	**+0.9**
BIA				*e*Sg	**Sg**	**16 10 49.0**	**-0.7**
BIA	**Bitola**	**1.55**	**352**	*e*Pn	**Pn**	**16 10 28.0**	**+0.9**
BIA				*e*Sg	**Sg**	**16 10 48.9**	**-0.8**
GUR	**Goura**	**1.65**	**159**	P	**Pn**	**16 10 28.5**	**+0.1**
GUR	**Goura**	**1.65**	**159**	P	**Pn**	**16 10 28.5**	**+0.1**
PAIG	**Paliouri**	**1.67**	**74**	P	**Pn**	**16 10 27.5**	**-1.3**
PAIG	**Paliouri**	**1.67**	**74**	P	**Pn**	**16 10 27.5**	**-1.3**
PLG	**Polygyros**	**1.68**	**57**	P	**Pn**	**16 10 28.9**	**0.0**
PLG	**Polygyros**	**1.68**	**57**	P	**Pn**	**16 10 28.9**	**0.0**
OHR	**Ohrid**	**1.74**	**340**	*e*Pn	**Pn**	**16 10 31.7**	**+2.0**
OHR				*e*Sg	**Sg**	**16 10 54.9**	**-0.8**
OHR	**Ohrid**	**1.74**	**340**	*e*Pn	**Pn**	**16 10 31.6**	**+1.9**
OHR				*e*Sg	**Sg**	**16 10 54.8**	**-0.9**
KRUS	**Krusevo**	**1.91**	**352**	*e*Pn	**Pn**	**16 10 33.5**	**+1.5**
KRUS				*e*Sg	**Sg**	**16 10 57.4**	**-3.6**
KRUS	**Krusevo**	**1.91**	**352**	*e*Pn	**Pn**	**16 10 33.5**	**+1.5**
KRUS				*e*Sg	**Sg**	**16 10 57.4**	**-3.6**
VAY	**Valandovo**	**1.99**	**22**	*e*Pn	**Pn**	**16 10 35.9**	**+2.8**
VAY				*e*Sg	**Sg**	**16 10 57.4**	**-6.2**
VAY	**Valandovo**	**1.99**	**22**	*e*Pn	**Pn**	**16 10 35.9**	**+2.8**
STON	**Ston**	**4.49**	**320**	*e*Pn	**Pn**	**16 11 07.9**	**+0.5**
STON				Sn	**Sn**	**16 11 58.8**	**-0.7**
STON	**Ston**	**4.49**	**320**	*e*Pn	**Pn**	**16 11 07.9**	**+0.5**
STON				Sn	**Sn**	**16 11 58.8**	**-0.7**
DBOC	**Borcka**	**15.41**	**77**	*i* P	**Pn**	**16 13 35.6**	**-1.2**
DBAD	**Bademkaya**	**15.43**	**78**	*i* P	**Pn**	**16 13 36.5**	**-0.5**
DDEM	**Demirkent**	**15.47**	**78**	*i* P	**Pn**	**16 13 36.4**	**-1.3**
DAGI	**Agilar**	**15.59**	**78**	*i* P	**Pn**	**16 13 35.8**	**-3.5**
ARTV	**Artvin**	**15.60**	**77**	*i* P	**Pn**	**16 13 35.5**	**-3.8**
HOMI	**Horasan**	**15.63**	**81**	*i* P	**Pn**	**16 13 39.7**	**0.0**

JMA 07 16:11:14.3±0.2, 36°.21N×141°.87E, h66km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.96**	**239**	P	Pn	16 11 32.3	+0.2
CHOJ				*eS*	Sn	16 11 45.9	+0.6
JHO	**Hitachi**	**1.12**	**291**	P	Pn	16 11 33.9	-0.2
ONAJ	**Iwakimizuishiy**	**1.24**	**316**	P	Pn	16 11 35.7	0.0

19nm,0.5s,mb4.9
ENH Enshi 27.68 267 *e*P **P 16 17 22.6 -1.4**
24nm,0.6s,mb5.0
ULN Ulaanbaatar 28.16 305 *e*P **P 16 17 28.5 +0.4**
SONM Songino Array 28.59 305 P **P 16 17 31.8 -0.1**
8.6nm,0.8s,mb4.5,baz=100,slow=8.7,SNR=5.5
CMAR Chiang Mai Arr 41.69 257 P **P 16 19 23.9 -0.9**
1.5nm,0.7s,mb3.8,baz=25,slow=3.3,SNR=6.1
ZALV Zalesovo Beam 42.77 313 P **P 16 19 32.4 -0.8**
4.6nm,0.6s,mb4.4,baz=90,slow=7.5,SNR=4.2
MKAR Makanchi Array 44.91 303 P **P 16 19 50.2 -0.3**
5.3nm,0.6s,mb4.5,baz=91,slow=7.5,SNR=6.8
MKAR Makanchi Array 44.91 303 P **P 16 19 50.2 -0.3**
KURK Kurchatov 46.76 309 P **P 16 20 05.4 +0.3**
KURK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KURK Kurchatov 46.76 309 P **P 16 20 05.3 +0.3**
comp=Z,8.3nm,0.6s,mb4.9,baz=78,slow=6.9,SNR=7.3
KURK Kurchatov 46.76 309 *e*P **P 16 20 04.6 -0.5**
TKM2 Tokmak 2 50.38 299 P **P 16 20 32.6 -0.5**
TKM2 pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
TKM2 Tokmak 2 50.38 299 P **P 16 20 32.6 -0.5**
comp=Z,7.4nm,0.6s,mb4.9
BVAR Borovoye Array 51.43 313 P **P 16 20 40.3 -0.5**
comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=6.2,SNR=3.1
AML Almayashu 51.96 299 *e*P **P 16 20 46.4 +1.5**
INK Inuvik 54.94 27 P **P 16 21 07.7 +1.3**
comp=Z,2.4nm,0.6s,mb4.4,baz=297,slow=6.1,SNR=5.4
WRAB Tennant Creek 56.29 189 P **P 16 21 15.9 -0.7**
WRA Warramunga Arr 56.30 189 P **P 16 21 15.9 -0.8**
comp=Z,2.0nm,0.8s,mb4.2,baz=7.6,slow=7.3,SNR=5.6
ABKAR Akbulak array 58.78 311 *e*P **P 16 21 33.3 -0.6**
comp=Z,2.3nm,0.5s,mb4.5
ASAR Alice Springs 60.03 188 P **P 16 21 42.0 -0.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=14,slow=9.5,SNR=4.2
YKA Yellowknife Ar 64.32 30 P **P 16 22 11.6 +0.5**
YKA pmax pmax
comp=Z,10.0nm,0.8s
YKA Yellowknife Ar 64.32 30 P **P 16 22 11.6 +0.6**
comp=Z,0.8nm,0.8s,mb3.8,baz=305,slow=7.3,SNR=2.9
KEV Kevo 64.36 340 *e*P **P 16 22 09.2 -2.0**
KEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KEV Kevo 64.36 340 *e*p **P 16 22 09.2 -2.0**
comp=Z,1.9nm,0.6s,mb4.3
ARCES ARCESS Array B 64.91 340 P **P 16 22 15.3 +0.5**
comp=Z,4.9nm,0.9s,mb4.5,baz=55,slow=7.9,SNR=6.9
ARCES ARCESS Array B 64.91 340 P **P 16 22 15.3 +0.5**
JOF Joensuu 66.88 332 *e*P **P 16 22 27.1 -0.5**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
JOF Joensuu 66.88 332 *e*p **P 16 22 27.1 -0.5**
comp=Z,0.7nm,0.3s,mb4.2
KAF Kangasniemi 69.23 333 *e*P **P 16 22 41.4 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KAF Kangasniemi 69.23 333 *e*p **P 16 22 41.4 -1.0**
comp=Z,2.6nm,0.5s,mb4.4
FINES FINESS Array B 69.73 333 P **P 16 22 45.7 +0.2**
comp=Z,5.6nm,0.8s,mb4.5,baz=56,slow=7.1,SNR=5.3
FINES FINESS Array B 69.73 333 P **P 16 22 45.7 +0.2**
LRM Limekiln Ridge 74.45 44 *e*P **P 16 23 15.2 +1.1**
comp=Z,16nm,0.8s,mb5.0
NB2 NORSAR Subarra 75.11 338 P **P 16 23 17.7 +0.1**
comp=Z,8.4nm,1.0s,mb4.6,baz=38,slow=5.9
NOA NORSAR Array B 75.11 338 P **P 16 23 18.1 +0.5**
comp=Z,3.5nm,0.8s,mb4.3,baz=39,slow=5.7,SNR=5.6
AKASG Malin Array Be 75.20 323 P **P 16 23 17.7 -0.6**
comp=Z,3.7nm,0.5s,mb4.6,baz=47,slow=5.8,SNR=9.6
PDAR Pinedale Array 77.95 46 P **P 16 23 35.4 +1.3**
comp=Z,0.6nm,0.6s,mb3.7,baz=353,slow=1.0,SNR=4.4
BRTR Keskin Array B 79.70 312 P **P 16 23 43.7 0.0**
comp=Z,1.3nm,0.8s,mb3.9,baz=77,slow=3.6,SNR=3.4
CLL Collm 82.02 330 *e*P **P 16 23 56.0 +0.2**
comp=Z,5.0nm,0.9s,mb4.4
KHC Kasperske Hory 83.46 329 *e*P **P 16 23 55.0 -8.4**
GERES GERESS Array B 83.63 329 P **P 16 24 04.2 -0.1**
comp=Z,0.8nm,0.6s,mb4.0,baz=32,slow=5.8,SNR=4.1
LPAZ La Paz 146.75 61 PKPbc PKPbc 16 31 19.3 +0.9
comp=Z,2.6nm,0.6s,baz=24,slow=4.3,SNR=4.9

*IDC **07** 16:12:22.1±0.5,36°.24N×141°.78E,h0km,mb4.9/29, mb1 5.0/31,mb1mx5.0/34,mbtmp4.9/31,ML4.6/1,Error ellipse: s-maj=14.4km s-min=12.4km az=135.0*
*BJI **07** 16:12:24.7,36°.28N×141°.58E,h21km,mB5.9/12,mb5.3/44, Ms5.9/19,Ms7 5.7/20*
*JMA **07** 16:12:26.2±0.2,36°.28N×141°.71E,h70km±5km,M5.2*
JMA Felt II J1.
*NEIC **07** 16:12:27.6±0.7,36°.23N×141°.70E,h38km±6km,mb5.1/87, Error ellipse: s-maj=5.2km s-min=3.7km az=146.0*
NEIC Felt at Misawa, Tokyo and Zushi.
*MOS **07** 16:12:27.7±0.9,36°.68N×141°.63E,h33km,mb5.4/74,Error ellipse: s-maj=7.7km s-min=4.2km az=109.3*
*ISCJB **07** 16:12:27.5±0.5,36°.31N±0°.03×141°.67E±0°.02,h45km±3km, mb5.2/169,MS6.0/6,Error ellipse: s-maj=4.9km s-min=3.0km az=171.2*
ISC 07 16:12:28.1±0.4,36°.31N±0°.03×141°.69E±0°.02,h37km±3km, h37km±1.7km:pP-P,n709,σ0°.73/729,mb5.2/169,MS6.0/6, 169C-123D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.91**	**228**	P	**Pn**	**16 12 43.6**	**-0.8**
CHOJ				S	**Sn**	**16 12 57.4**	**+1.1**
JHO	**Hitachi**	**0.95**	**288**	P	**Pn**	**16 12 43.5**	**-1.5**
JHO				*e*S	**Sn**	**16 12 57.9**	**+0.5**
ONAJ	**Iwakimizuishiy**	**1.07**	**318**	P	**Pn**	**16 12 45.9**	**-0.6**
JFK	**Kawauchi**	**1.24**	**328**	P	**Pn**	**16 12 48.2**	**-0.7**
JFT	**Otama**	**1.62**	**318**	P	**Pn**	**16 12 54.9**	**+0.7**
JFT				*e*S	**Sn**	**16 13 15.4**	**+1.6**
JMM	**Marumori**	**1.71**	**335**	P	**Pn**	**16 12 55.2**	**-0.2**
JMM				*e*S	**Sn**	**16 13 17.4**	**+1.4**
JAG	**Ashikaga**	**1.81**	**274**	P	**Pn**	**16 12 56.8**	**0.0**
JAG				*e*S	**Sn**	**16 13 19.7**	**+1.2**
JFY	**Yanaizu**	**1.93**	**305**	P	**Pn**	**16 12 58.4**	**0.0**
JFY				*e*S	**Sn**	**16 13 22.4**	**+0.9**
JKT	**Katashina**	**2.02**	**284**	P	**Pn**	**16 13 00.1**	**+0.5**
JKT				*e*S	**Sn**	**16 13 25.9**	**+2.2**
JIO	**Ouri**	**2.15**	**353**	P	**Pn**	**16 13 01.9**	**+0.4**
MJAR	**Matsushiro Arr**	**2.82**	**276**	Pn	**Pn**	**16 13 11.1**	**+0.4**
99nm,0.3s,baz=97,slow=7.0,SNR=14							
MJAR				Sn	**Sn**	**16 13 49.2**	**+5.8**
136nm,0.3s,baz=170,slow=15,SNR=5.8							
MJAR	**Matsushiro Arr**	**2.82**	**276**	Pn	**Pn**	**16 13 11.1**	**+0.4**
MJAR				Sn	**Sn**	**16 13 49.2**	**+5.8**
MAJO	**Matsushiro**	**2.82**	**276**	*e*P	**Pn**	**16 13 09.2**	**-1.5**
MAT	**Matsushiro**	**2.82**	**276**	P	**Pn**	**16 13 11.9**	**+1.2**
MAT				S	**Sn**	**16 13 49.5**	**+6.1**
JHJ	**Hachijo jima 2**	**3.55**	**207**	Pn	**Pn**	**16 13 20.7**	**-0.1**
586nm,0.3s,baz=66,slow=22,SNR=10.0							
JHJ				Sn	**Sn**	**16 13 58.3**	**-3.2**
576nm,0.3s,baz=80,slow=23,SNR=5.3							
ERM	**Erimo**	**5.81**	**11**	*e*P	**Pn**	**16 13 47.8**	**-3.9**
ASAJ	**Asahikawa**	**7.82**	**5**	P	**Pn**	**16 14 17.6**	**-1.7**
ASAJ						16 15 45.3	
ASAJ				pmax	pmax		
comp=Z,15nm,0.3s							
ASAJ				smax			
comp=N,4.0nm,0.3s							
ASAJ	**Asahikawa**	**7.82**	**5**	Pn	**Pn**	**16 14 17.6**	**-1.7**
comp=N,15nm,0.3s,baz=210,slow=12,SNR=11							
ASAJ				Sn	**Sn**	**16 15 45.2**	**-1.4**
comp=N,3.7nm,0.3s,baz=326,slow=30,SNR=4.1							
YUK	**Yuzh-Kuril'sk**	**8.34**	**21**	*e*P	**Pn**	**16 14 22.5**	**-4.0**
YUK				*e*S	**Sn**	**16 15 48.5**	**-11**
YUK				smax			
comp=N,760nm,0.5s							
YUK				smax			
comp=E,1μm,0.5s							
JKI	**Kunimi**	**8.73**	**255**	P	**Pn**	**16 14 34.2**	**+2.4**
YSS	**Yuzh-Sakhalins**	**10.66**	**4**	⇓*e*P	**Pn**	**16 14 55.0**	**-3.2**
YSS				*e*S	**Sn**	**16 16 52.0**	**-4.2**
YSS				pmax	pmax		
comp=N,130nm,1.0s							
YSS				pmax	pmax		
comp=Z,120nm,1.0s							
YSS	**Yuzh-Sakhalins**	**10.66**	**4**	*e*P	**Pn**	**16 14 55.5**	**-2.7**
KSRS	**Korea Array**	**11.09**	**280**	P	**Pn**	**16 15 07.5**	**+3.4**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
KSRS	**Korea Array**	**11.09**	**280**	Pn	**Pn**	**16 15 07.5**	**+3.4**
comp=Z,1.0nm,0.3s,baz=93,slow=13,SNR=28							
INCN	**Inchon**	**12.12**	**280**	P	**Pn**	**16 15 20.1**	**+1.9**
MDJ	**Mudanjiang**	**12.39**	**316**	P	**Pn**	**16 15 22.2**	**+0.4**
MDJ				pmax	pmax		
comp=Z,14nm,0.9s							
MDJ				pmax	pmax		
comp=Z,28μm,12.5s							
MDJ	**Mudanjiang**	**12.39**	**316**	*e*P	**Pn**	**16 15 23.2**	**+1.4**
HABR	**Khabarovsk**	**13.10**	**340**	*e*P	**Pn**	**16 15 29.5**	**-2.0**
HABR				*e*		16 17 56.0	
CN2	**Changchun**	**14.50**	**306**	*e*P	**Pn**	**16 15 49.5**	**-1.2**
CN2				*es*P	sP	16 16 02.0	-8.8
CN2				*e*S	**Sn**	**16 18 31.0**	**+1.0**
CN2				pmax	pmax		
comp=Z,40nm,1.2s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,14μm,14.0s							
CN2				LR	LR		
comp=E,19μm,14.0s							
CN2				LR	LR		
comp=Z,14μm,19.0s							
KLR	**Kul'dur**	**14.81**	**334**	*e*P	**Pn**	**16 15 48.0**	**-6.8**
JOW	**Kunigami**	**14.82**	**234**	Pn	**Pn**	**16 15 58.3**	**+3.2**
comp=Z,3.1nm,0.3s,baz=38,slow=9.0,SNR=9.9							
SNY	**Shenyang**	**15.10**	**297**	⇑P	**Pn**	**16 15 57.4**	**-1.3**
SNY				pmax	pmax		
comp=Z,110nm,1.1s							
DL2	**Dalian**	**16.11**	**285**	P	**Pn**	**16 16 11.4**	**-0.3**
DL2				pmax	pmax		
comp=Z,20nm,1.1s							
NJ2	**Nanjing**	**19.36**	**264**	*e*P	**Pn**	**16 16 50.9**	**-0.9**
NJ2				pP	pP	16 16 58.9	-1.0
NJ2				sP	sP	16 17 00.3	-4.3
NJ2				PP		16 17 08.9	
NJ2				S	**S**	**16 20 21.0**	**-6.5**
NJ2				sS	sS	16 20 32.0	-11
NJ2				pmax	pmax		
comp=Z,30nm,1.2s							
NJ2				pmax	pmax		
comp=Z,1μm,3.9s							
NJ2				LR	LR		
comp=Z,17μm,12.3s							
PEA0B	**Petropavlovsk-**	**20.20**	**29**	*e*P	**P**	**16 16 58.6**	**-0.9**
PETK	**Petropavlovsk-**	**20.20**	**29**	P	**P**	**16 16 59.0**	**-0.6**
comp=Z,8.8nm,0.7s,baz=223,slow=7.4,SNR=7.2							
BJI	**Beijing**	**20.38**	**288**	P	**P**	**16 17 00.1**	**-1.5**
BJI				pmax	pmax		
comp=Z,55nm,0.9s							
BJT	**Baijiatuau**	**20.39**	**288**	*e*P	**P**	**16 17 00.3**	**-1.3**
PET	**Petropavlovsk**	**20.52**	**30**	*e*P	**P**	**16 17 02.2**	**-0.7**
YHNB	**Yeheng**	**20.96**	**242**	*e*P	**P**	**16 17 05.1**	**-2.9**
comp=Z,45nm,1.1s							
SSLB	**Suanglung**	**21.81**	**241**	*e*P	**P**	**16 17 13.8**	**-3.3**
YULB	**Yu-li**	**21.82**	**239**	*e*P	**P**	**16 17 16.0**	**-1.3**
TPUB	**Ta-pu**	**22.35**	**240**	*e*P	**P**	**16 17 19.5**	**-3.4**
comp=Z,96nm,1.0s,mb5.2							
TWG	**Pinlang**	**22.36**	**239**	*e*P	**P**	**16 17 23.4**	**+0.5**
comp=Z,69nm,0.9s,mb5.1							
QZH	**Quanzhou**	**22.82**	**247**	⇑*i*P	**P**	**16 17 32.9**	**+5.0**
CLNS	**Chul'man**	**23.43**	**336**	*e*P	**P**	**16 17 32.7**	**-1.2**
CLNS				pmax	pmax		
comp=E,14nm,0.9s							
CLNS				pmax	pmax		
comp=N,96nm,1.2s							
CLNS				pmax	pmax		
comp=Z,111nm,1.0s,mb5.2							
HHC	**Hu-ho-hao-te**	**23.92**	**290**	*e*P	**P**	**16 17 39.7**	**+1.2**
HHC				pP		16 17 49.6	
HHC				sP	sP	16 17 53.0	-0.3
HHC				PP		16 18 14.5	
HHC				PcP	PcP	16 21 23.1	+2.8
HHC				S	**S**	**16 21 52.6**	**+0.2**
HHC				sS	sS	16 22 07.6	-1.8
HHC				SS		16 22 43.3	
HHC				ScP	ScP	16 24 56.8	+1.0
HHC				PcS	PcS	16 25 01.5	+1.7
HHC				LR	LR		
comp=N,13μm,13.9s							
HHC				LR	LR		
comp=Z,8μm,12.3s,MS5.4							
XAN	**Xi'an**	**26.82**	**275**	P	**P**	**16 18 04.0**	**-0.9**
XAN				pP	pP	16 18 12.4	-2.8
XAN				sP	sP	16 18 17.9	-1.7
XAN				S	**S**	**16 22 40.3**	**+1.7**
XAN				sS	sS	16 22 55.3	-0.5
XAN				pmax	pmax		
comp=Z,17nm,1.5s,mb4.3							
XAN				LR	LR		
comp=N,25μm,14.4s,MS6.0							
XAN				LR	LR		
comp=E,13μm,14.1s,MS6.0							
XAN				LR	LR		
comp=Z,15μm,14.7s,MS5.7							
YAK	**Yakutsk**	**26.82**	**347**	*e*P	**P**	**16 18 02.9**	**-1.7**
YAK				pmax	pmax		
comp=E,75nm,1.4s							
YAK				pmax	pmax		
comp=Z,292nm,0.9s,mb5.8							
YAK				pmax	pmax		
comp=N,188nm,1.3s							
YAK	**Yakutsk**	**26.82**	**347**	*e*P	**P**	**16 18 03.6**	**-1.0**
comp=N,307nm,0.9s,mb5.8							
SEY	**Seymchan**	**27.45**	**11**	⇓*e*P	**P**	**16 18 10.8**	**+0.5**
ULN	**Ulaanbaatar**	**27.95**	**305**	*e*P	**P**	**16 18 14.9**	**0.0**
ULN				pmax	pmax		
comp=Z,75nm,1.0s,mb5.3							
ULN	**Ulaanbaatar**	**27.95**	**305**	*e*P	**P**	**16 18 14.9**	**0.0**
comp=Z,75nm,1.0s,mb5.3							
BOD	**Bodaibo**	**28.26**	**328**	*e*P	**P**	**16 18 10.1**	**-7.4**
BOD				*e*		16 18 16.9	
BOD				pmax	pmax		
comp=Z,61nm,1.0s,mb5.2							
SONM	**Songino Array**	**28.38**	**305**	P	**P**	**16 18 18.9**	**+0.2**
comp=Z,76nm,0.9s,mb5.3,baz=100,slow=6.6,SNR=36							
LZH	**Lanzhou**	**30.42**	**281**	P	**P**	**16 18 37.0**	**+0.1**
LZH				pP	pP	16 18 47.6	+0.3
LZH				sP	sP	16 18 51.4	-0.3
LZH				PP	PP	16 19 36.0	-10
LZH				S	**S**	**16 23 35.1**	**-0.1**
LZH				sS	sS	16 23 50.0	-2.4
LZH				SS	SS	16 25 15.0	-31
ZAK	**Zakamensk**	**30.89**	**309**	*e*P	**P**	**16 18 40.9**	**-0.1**
ZAK				pmax	pmax		
comp=Z,59nm,1.2s,mb5.3							
TLY	**Talaya**	**30.98**	**312**	P	**P**	**16 18 42.6**	**+1.0**
comp=Z,470nm,0.9s,mb6.3,SNR=15							
TLY	**Talaya**	**30.98**	**312**	*e*P	**P**	**16 18 42.4**	**+0.8**
TLY				pmax	pmax		
comp=Z,115nm,1.2s,mb5.6							
TLY	**Talaya**	**30.98**	**312**	*e*P	**P**	**16 18 41.9**	**+0.2**
comp=Z,95nm,1.0s,mb5.6							
GYA	**Guiyang**	**31.33**	**262**	⇑*i*P	**P**	**16 18 45.6**	**+0.5**
GYA				pP	pP	16 18 56.4	+1.0
GYA				sP	sP	16 19 01.0	+1.1
GYA				PP	PP	16 19 50.2	-5.9
GYA				PcP	PcP	16 21 39.0	+0.5
GYA				S	**S**	**16 23 50.8**	**+1.1**
GYA				sS	sS	16 24 06.4	-0.5
GYA				ScP	ScP	16 25 19.0	+0.4
GYA				SS	SS	16 25 38.9	-26
GYA				pmax	pmax		
comp=Z,40nm,0.8s,mb5.3							
GYA				pmax	pmax		
comp=Z,1μm,5.0s							
GYA				LR	LR		
comp=N,8μm,15.8s,MS5.6							
GYA				LR	LR		
comp=E,6μm,16.3s,MS5.6							
GYA				LR	LR		
comp=Z,9μm,15.0s,MS5.6							
CD2	**Chengdu**	**31.91**	**271**	P	**P**	**16 18 49.1**	**-1.0**
CD2				pP	pP	16 18 58.6	-1.9
CD2				sP	sP	16 19 02.7	-2.2
CD2				PP	PP	16 19 55.0	-7.5
CD2				S	**S**	**16 23 56.0**	**-2.7**
CD2				sS	sS	16 24 11.9	-4.0
CD2				SS	SS	16 25 48.0	-28
CD2				pmax	pmax		
comp=Z,80nm,0.7s,mb5.7							
CD2				pmax	pmax		
comp=Z,3μm,10.2s							
CD2				LR	LR		
comp=N,52μm,13.0s							
CD2				LR	LR		
comp=Z,55μm,14.1s,MS6.4							
MOY	**Mondy**	**32.58**	**311**	*e*P	**P**	**16 18 55.2**	**-0.5**
QIZ	**Qiongzhong**	**32.85**	**247**	P	**P**	**16 19 02.6**	**+4.2**
QIZ				pmax	pmax		
comp=Z,13nm,1.5s,mb4.6							
GTA	**Gaotai**	**33.00**	**288**	P	**P**	**16 18 59.9**	**+0.4**
GTA				pP	pP	16 19 09.4	-0.6
GTA				sP	sP	16 19 13.5	-0.9
GTA				PcP	PcP	16 21 44.0	+1.2
GTA				S	**S**	**16 24 20.0**	**+4.6**
GTA				pmax	pmax		
comp=Z,56nm,1.1s,mb5.4							
GTA				pmax	pmax		
comp=Z,2μm,7.2s							
GTA				LR	LR		
comp=N,24μm,19.8s,MS6.3							
GTA				LR	LR		
comp=E,52μm,18.0s,MS6.3							
GTA				LR	LR		
comp=Z,58μm,18.3s,MS6.3							
BILL	**Bilibino**	**34.65**	**16**	⇓*e*P	**P**	**16 19 12.9**	**-0.7**
BILL				*i*	pP	16 19 21.9	-2.1
BILL				*e*		16 20 23.6	
BILL				pmax	pmax		
comp=Z,33nm,1.7s,mb5.0							
BILL	**Bilibino**	**34.65**	**16**	*e*P	**P**	**16 19 11.9**	**-1.7**
KMI	**Kunming**	**35.08**	**263**	⇑P	**P**	**16 19 17.1**	**-0.7**
KMI				pP	pP	16 19 27.2	-1.1
KMI				sP	sP	16 19 31.4	-1.3
KMI				PP	PP	16 20 38.5	+0.8
KMI				S	**S**	**16 24 47.7**	**-0.2**
KMI				SS	SS	16 27 04.8	-16
KMI				pmax	pmax		
comp=Z,60nm,1.1s,mb5.4							
TIXI	**Tiksi**	**36.03**	**353**	*e*P	**P**	**16 19 23.9**	**-1.5**
TIXI				pmax	pmax		
comp=Z,36nm,1.0s,mb5.3							
TIXI	**Tiksi**	**36.03**	**353**	*e*P	**P**	**16 19 24.0**	**-1.4**
CHTO	**Chiang Mai**	**41.34**	**257**	*e*P	**P**	**16 20 09.6**	**-0.9**
CHTO				pmax	pmax		
comp=Z,40nm,1.2s,mb4.9							
CHTO	**Chiang Mai**	**41.34**	**257**	*e*P	**P**	**16 20 09.6**	**-0.9**
comp=Z,40nm,1.2s,mb4.9							
WMQ	**Urumqi**	**41.37**	**298**	P	**P**	**16 20 11.3**	**+0.8**
WMQ				pmax	pmax		
comp=Z,180nm,1.0s,mb5.7							
CM31	**Chiang Mai Arr**	**41.54**	**256**	*e*P	**P**	**16 20 12.2**	**0.0**
comp=Z,30nm,1.0s,mb4.9							
CMAR	**Chiang Mai Arr**	**41.54**	**256**	P	**P**	**16 20 12.4**	**+0.3**
comp=Z,14nm,0.8s,mb4.6,baz=49,slow=5.5,SNR=30							
LSA	**Lhasa**	**42.50**	**276**	*e*P	**P**	**16 20 21.3**	**+1.4**
LSA				pmax	pmax		
comp=Z,59nm,1.0s,mb5.3							
LSA	**Lhasa**	**42.50**	**276**	*e*P	**P**	**16 20 21.3**	**+1.3**
comp=Z,59nm,1.0s,mb5.3							
ZAA0	**Zalesovo Array**	**42.57**	**313**	*e*P	**P**	**16 20 19.7**	**-0.4**
ZALV	**Zalesovo Beam**	**42.57**	**313**	P	**P**	**16 20 20.1**	**0.0**
comp=Z,72nm,0.9s,mb5.4,baz=92,slow=7.4,SNR=31							
NVS	**Novosibirsk**	**43.50**	**314**	⇑*i*P	**P**	**16 20 27.0**	**-0.6**
NVS				pmax	pmax		
comp=E,90nm,1.1s							
NVS				pmax	pmax		
comp=Z,107nm,1.1s,mb5.5							
NVS				pmax	pmax		
comp=N,34nm,1.4s							
MK31	**Makanchi Array**	**44.69**	**303**	*e*P	**P**	**16 20 37.3**	**0.0**
MKAR	**Makanchi Array**	**44.69**	**303**	P	**P**	**16 20 37.8**	**+0.5**
comp=N,51nm,0.8s,mb5.4,baz=93,slow=8.7,SNR=23							
KSM	**Kuching**	**45.22**	**227**	*e*P	**P**	**16 20 42.5**	**+0.6**
comp=N,13nm,0.8s,mb4.8							
TTA	**Tatalina**	**45.89**	**34**	*e*P	**P**	**16 20 46.1**	**-0.4**
SVW2	**Sparrevohn**	**45.96**	**37**	*e*P	**P**	**16 20 48.3**	**+1.2**
KAPI	**Kappang**	**45.96**	**211**	P	**P**	**16 20 47.3**	**-0.3**
comp=N,32nm,0.9s,mb5.3,baz=22,slow=4.1,SNR=11							
KAPI	**Kappang**	**45.96**	**211**	*e*P	**P**	**16 20 46.3**	**-1.4**
comp=N,179nm,1.4s,mb5.8							
TAPN	**Taplejung**	**46.22**	**275**	*e*P	**P**	**16 20 50.3**	**+0.6**
KURK	**Kurchatov**	**46.55**	**309**	P	**P**	**16 20 52.7**	**+0.7**
comp=N,707nm,0.8s,SNR=11							
KURK	**Kurchatov**	**46.55**	**309**	⇑*e*P	**P**	**16 20 51.6**	**-0.4**
KURK				pmax	pmax		
comp=Z,126nm,0.9s,mb5.8							
KURK	**Kurchatov**	**46.55**	**309**	P	**P**	**16 20 52.1**	**+0.1**
comp=Z,66nm,0.8s,mb5.6,baz=84,slow=8.2,SNR=21							
KURK	**Kurchatov**	**46.55**	**309**	*e*P	**P**	**16 20 51.5**	**-0.5**
RAMN	**Ramite**	**47.28**	**275**	*e*P	**P**	**16 20 58.4**	**+0.4**
comp=Z,432nm,0.9s,mb6.4							
RSO	**Redoubt South**	**47.33**	**38**	*e*P	**P**	**16 20 58.0**	**+0.1**
GUN	**Gumba**	**47.45**	**276**	*e*P	**P**	**16 21 00.0**	**+0.7**
comp=Z,335nm,0.9s,mb6.3							
KDAK	**Kodiak Island**	**47.49**	**41**	*i* P	**P**	**16 21 01.5**	**+2.4**
KDAK	**Kodiak Island**	**47.49**	**41**	P	**P**	**16 20 58.1**	**-1.0**
comp=Z,13nm,0.8s,mb4.9,baz=280,slow=2.3,SNR=6.2							
PKI	**Pulchoki**	**47.98**	**276**	*e*P	**P**	**16 21 03.5**	**+0.1**
comp=Z,151nm,0.9s,mb6.0							
PKIN	**Phulchoki**	**47.98**	**276**	*e*P	**P**	**16 21 03.2**	**-0.2**
PKIN	**Phulchoki**	**47.98**	**276**	*e*P	**P**	**16 21 03.4**	**0.0**
comp=Z,182nm,1.0s,mb6.1							
KKN	**Kakani**	**47.99**	**277**	*e*P	**P**	**16 21 03.7**	**+0.3**
comp=Z,272nm,1.0s,mb6.2							
DMN	**Daman**	**48.20**	**276**	*e*P	**P**	**16 21 05.3**	**+0.2**
comp=Z,122nm,1.1s,mb5.8							
GKN	**Gorkha**	**48.41**	**277**	*e*P	**P**	**16 21 06.6**	**-0.1**
comp=Z,446nm,1.0s,mb6.4							
KULM	**Kulim**	**48.65**	**241**	*e*P	**P**	**16 21 08.2**	**-0.5**
KOLN	**Koldanda**	**49.34**	**277**	*e*P	**P**	**16 21 14.3**	**+0.4**
comp=Z,122nm,0.9s,mb5.9							
KAKA	**Kakadu**	**49.53**	**192**	*e*P	**P**	**16 21 13.3**	**-2.0**
comp=Z,42nm,0.9s,mb5.5							
KAKA	**Kakadu**	**49.53**	**192**	*e*P	**P**	**16 21 13.4**	**-1.9**
comp=Z,153nm,1.0s,mb6.0							
COLA	**College**	**49.57**	**32**	*e*P	**P**	**16 21 15.4**	**+0.4**
PYUN	**Piuthan**	**49.69**	**278**	*e*P	**P**	**16 21 16.6**	**+0.1**
comp=Z,297nm,1.0s,mb6.3							
TKM2	**Tokmak 2**	**50.17**	**299**	P	**P**	**16 21 21.6**	**+1.7**
SNR=11							
TKM2	**Tokmak 2**	**50.17**	**299**	*e*P	**P**	**16 21 20.5**	**+0.5**
TKM2				pmax	pmax		
comp=Z,62nm,0.9s,mb5.6							
TKM2	**Tokmak 2**	**50.17**	**299**	*e*P	**P**	**16 21 20.5**	**+0.5**
comp=Z,62nm,0.9s,mb5.6							
KZA	**Kyzart**	**50.66**	**298**	P	**P**	**16 21 25.5**	**+1.9**
SNR=7.2							
KBK	**

INK Inuvik 54.93 27 P P 16 21 54.6 -0.1
INK pmax pmax
comp=Z,14nm,0.9s
INK Inuvik 54.93 27 P P 16 21 54.6 -0.2
comp=Z,14nm,0.9s,mb5.0,baz=284,slow=6.6,SNR=13
INK Inuvik 54.93 27 *eP* **P 16 21 54.3 -0.4**
comp=Z,20nm,1.0s,mb5.1
SVE Sverdlovsk 55.84 319 *eP* **P 16 22 02.2 +0.7**
SVE pmax pmax
comp=Z,108nm,1.1s,mb5.8
FITZ Fitzroy Crossi 56.21 198 *eP* **P 16 22 07.0 +2.5**
comp=Z,22nm,0.9s,mb5.2
WB2 Warramunga Arr 56.38 188 *eP* **P 16 22 04.1 -1.5**
WRA Warramunga Arr 56.38 188 P **P 16 22 03.7 -1.9**
comp=Z,6.2nm,0.6s,mb4.8,baz=5.0,slow=7.4,SNR=5.9
ARU Arti 57.05 319 P **P 16 22 10.2 +0.1**
comp=Z,470nm,0.9s,mb6.5,SNR=8.0
ARU Arti 57.05 319*c i*P **P 16 22 09.7 -0.4**
ARU *e* 16 24 15.3
ARU S **S 16 30 04.6 +2.6**
ARU SS SS 16 33 45.6 -4.8
ARU pmax pmax
comp=Z,172nm,1.7s,mb5.8
ARU Arti 57.05 319 *eP* **P 16 22 09.3 -0.8**
KBL Kabul 57.89 292 *eP* **P 16 22 15.9 -0.5**
KBL pmax pmax
comp=Z,29nm,1.0s,mb5.3
KBL Kabul 57.89 292 *eP* **P 16 22 15.9 -0.5**
comp=Z,29nm,1.0s,mb5.3
HYB Hyderabad 58.41 269 *i* P **P 16 22 20.0 -0.2**
ABKAR Akbulak array 58.58 311 *eP* **P 16 22 20.5 -0.4**
comp=Z,23nm,0.7s,mb5.3
DLBC Dease Lake 59.05 38 P **P 16 22 24.4 +0.3**
comp=Z,5.2nm,0.9s,mb4.6,baz=301,slow=7.5,SNR=6.8
ASAR Alice Springs 60.11 188 P **P 16 22 30.6 -1.1**
comp=Z,2.3nm,0.8s,mb4.2,baz=0.4,slow=5.7,SNR=4.2
ALE Alert 60.81 4 P **P 16 22 35.9 0.0**
comp=Z,170nm,0.9s,mb6.2,SNR=10
SPITS Spitsbergen Ar 61.27 349 P **P 16 22 39.4 +0.4**
comp=Z,14nm,0.9s,mb5.1,baz=132,slow=25,SNR=7.6
KBS Kingsbay 61.40 350 *eP* **P 16 22 40.2 +0.3**
KBS Kingsbay 61.40 350*c i*P **P 16 22 40.5 +0.6**
KBS Kingsbay 61.40 350 *eP* **P 16 22 40.2 +0.3**
comp=Z,38nm,0.9s,mb5.5
PALK Pallekele 62.44 258 *i* P **P 16 22 49.7 +1.9**
LVZ Lovozero 62.86 336*d i*P **P 16 22 49.7 -0.1**
LVZ pmax pmax
comp=Z,39nm,1.1s,mb5.5
RES Resolute Bay 63.24 14 P **P 16 22 51.8 -0.4**
RES pmax pmax
comp=Z,26nm,0.9s,mb5.4
RES Resolute Bay 63.24 14 P **P 16 22 51.8 -0.5**
comp=Z,26nm,0.9s,mb5.3,baz=311,slow=6.9,SNR=22
RES Resolute Bay 63.24 14 *eP* **P 16 22 51.6 -0.6**
APA Apatity 63.44 336⇑*i*P **P 16 22 52.8 -0.8**
APA *i* pP 16 23 04.4 -0.3
APA *i* S **S 16 31 19.0 -4.5**
APA pmax pmax
comp=Z,39nm,1.0s,mb5.5
APA MLR MLR
comp=Z,15μm,15.0s,MS6.3
KEV Kevo 64.19 339 *eP* **P 16 22 57.0 -1.6**
KEV pmax pmax
comp=Z,13nm,0.8s,mb5.0
KEV Kevo 64.19 339 *ep* **P 16 22 57.0 -1.6**
comp=Z,13nm,0.8s,mb5.0
YKA Yellowknife Ar 64.32 30 P **P 16 22 59.1 -0.4**
YKA pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 64.32 30 P **P 16 22 59.1 -0.3**
comp=Z,6.9nm,0.8s,mb4.7,baz=298,slow=6.7,SNR=18
ABKT Ailbek 64.38 299 P **P 16 23 00.3 0.0**
comp=Z,132nm,0.9s,mb6.0,SNR=5.0
KLMR Klimovskoe 64.48 328 *eP* **P 16 22 59.8 -0.8**
KLMR pmax pmax
comp=Z,71nm,1.2s,mb5.6
ARCES ARCESS Array B 64.75 340 P **P 16 23 02.2 0.0**
comp=Z,18nm,0.8s,mb5.1,baz=57,slow=7.6,SNR=20
ARCES ARCESS Array B 64.75 340 P **P 16 23 02.2 0.0**
TRO Tromso 66.47 341 *eP* **P 16 23 13.1 -0.1**
JOF Joensuu 66.70 332 *eP* **P 16 23 14.2 -0.7**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 66.70 332 *ep* **P 16 23 14.2 -0.7**
comp=Z,2.0nm,0.4s,mb4.5
NLWA Neilton Lookou 67.04 47 ⇑P **P 16 23 17.2 -0.1**
baz=67
JCW Jim Creek 67.78 46 *eP* **P 16 23 22.5 +0.5**
STKA Stephens Creek 67.83 180 *eP* **P 16 23 22.3 0.0**
comp=Z,5.7nm,0.8s,mb4.7
STKA Stephens Creek 67.83 180 P **P 16 23 21.2 -1.0**
comp=Z,4.6nm,0.8s,mb4.5,baz=354,slow=16,SNR=5.8
FORT Forrest 67.95 193 *eP* **P 16 23 22.8 -0.3**
comp=Z,25nm,0.6s,mb5.4
FORT Forrest 67.95 193 *eP* **P 16 23 22.7 -0.4**
comp=Z,30nm,0.7s,mb5.4
MOS Moscow 67.96 324 *eP* **P 16 23 21.7 -1.3**
MOS pmax pmax
comp=Z,114nm,1.5s,mb5.7
A07A Ashnola River, 68.24 45 ⇓P **P 16 23 24.0 -0.8**
baz=68
B07A Winthrop 68.69 45 ⇑P **P 16 23 27.8 +0.2**
baz=68
OBN Obninsk 68.81 323*c i*P **P 16 23 27.9 -0.4**
OBN *i* 16 23 49.9
OBN *e* 16 26 00.8
OBN pmax pmax
comp=Z,103nm,1.2s,mb5.6
OBN Obninsk 68.81 323 *eP* **P 16 23 27.7 -0.6**
comp=Z,24nm,0.8s,mb5.2
A08A Turner Farm, O 68.91 44 ⇑P **P 16 23 28.8 -0.2**
baz=69
G04A Mulino 68.96 49 ⇑P **P 16 23 27.8 -1.6**
baz=69
ETW Entiat 69.01 46 *eP* **P 16 23 30.0 +0.4**
comp=Z,5.2nm,0.7s,mb4.6
KAF Kangasniemi 69.05 333 *eP* **P 16 23 27.5 -2.2**
KAF pmax pmax
comp=Z,15nm,0.8s,mb5.0
KAF Kangasniemi 69.05 333 *ep* **P 16 23 27.5 -2.2**
comp=Z,15nm,0.8s,mb5.0
C07A Waterville 69.12 46 ⇑P **P 16 23 29.4 -0.9**
baz=69
E06A Yakima 69.17 47 ⇓P **P 16 23 30.5 -0.2**
baz=69
B08A Colville Reser 69.19 45 ⇓P **P 16 23 30.5 -0.3**
baz=69
A09A Danville 69.29 44 ⇓P **P 16 23 31.7 +0.3**
baz=69
H04A Detroit Lake 69.41 49 ⇑P **P 16 23 32.0 -0.2**
baz=69
D07A Quincy 69.43 46 ⇑P **P 16 23 31.7 -0.6**
baz=69
FINES FINESS Array B 69.56 332 P **P 16 23 32.9 +0.1**
comp=Z,40nm,0.9s,mb5.4,baz=56,slow=7.1,SNR=28
VSR Storozhevoye 69.62 319 *eP* **P 16 23 33.0 -0.4**
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VSR pmax pmax
comp=N,40nm,1.3s
VSR pmax pmax
comp=E,50nm,1.1s
C08A Higginbotham F 69.65 45 ⇓P **P 16 23 34.0 +0.4**
baz=70
VORD Divnogorie 69.69 319 *eP* **P 16 23 33.5 -0.3**
VORD pmax pmax
comp=Z,20nm,0.4s,mb5.4
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,70nm,0.8s
B09A Rice 69.83 44 ⇓P **P 16 23 34.5 -0.2**
baz=70
G06A Carlson Farm, 70.06 48 ⇓P **P 16 23 36.2 +0.1**
baz=70
C09A Chrisman Ranch 70.09 45 ⇓P **P 16 23 36.1 -0.2**
baz=70
D08A Wollman Farm, 70.11 46 ⇓P **P 16 23 36.7 +0.2**
baz=70
D09A Jones Farm, Ri 70.46 46 ⇑P **P 16 23 38.7 +0.1**
baz=70
H06A Lindquist Farm 70.50 48 ⇓P **P 16 23 37.8 -1.1**
baz=70
A11A Hall Mountain, 70.53 43 ⇑P **P 16 23 39.7 +0.7**
baz=70
YBH Yreka Blue Hor 70.61 52 P **P 16 23 40.4 +0.8**
comp=E,3.0nm,0.8s,mb4.2,baz=47,slow=2.7,SNR=4.4
GOF Gofitskoye 70.75 312⇓*i*P **P 16 23 32.4 -8.0**
B11A Sandpoint 70.82 44 ⇑P **P 16 23 41.1 +0.3**
baz=71
E09A Wood Farm, Sta 70.85 46 ⇓P **P 16 23 41.4 +0.4**
baz=71
F08A Pendleton 70.87 47 ⇓P **P 16 23 41.3 +0.2**
baz=71
G08A Pilot Rock 71.03 47 ⇑P **P 16 23 42.4 +0.2**
baz=71
D10A Wagner Farm, O 71.06 45 ⇑P **P 16 23 42.4 +0.1**
baz=71
VSU Vasula 71.19 330*c i*P **P 16 23 42.8 0.0**
VSU pmax pmax
comp=Z,114nm,1.4s,mb5.6
K05A Summer Lake 71.23 51 ⇑P **P 16 23 43.1 -0.3**
baz=71
I07A Izee 71.36 49 ⇑P **P 16 23 44.0 -0.1**
baz=71
SUMG Summit 71.41 0 *eP* **P 16 23 44.7 +0.8**
comp=Z,22nm,1.0s,mb5.0
ZEI Tsey 71.44 310 *eP* **P 16 23 42.8 -1.9**
ZEI pmax pmax
comp=Z,18nm,1.2s,mb4.9
E10A Myers Farm, Un 71.47 46 ⇓P **P 16 23 44.9 +0.2**
baz=71
KIV Kislovodsk 71.55 311 P **P 16 23 46.1 +0.8**
comp=Z,395nm,1.0s,mb6.3,SNR=6.1
KIV Kislovodsk 71.55 311 *eP* **P 16 23 45.2 -0.1**
KIV pmax pmax
comp=Z,61nm,1.0s,mb5.5
KIV Kislovodsk 71.55 311 *eP* **P 16 23 45.2 -0.1**
comp=Z,61nm,1.0s,mb5.5
D11A Klaveano Farm, 71.60 45 ⇑P **P 16 23 45.7 +0.2**
baz=71
H08A Prairie City 71.62 48 ⇑P **P 16 23 46.0 +0.3**
baz=71
F10A Beach Ranch, E 71.68 46 ⇑P **P 16 23 46.7 +0.6**
baz=72
G09A Cove 71.74 47 ⇑P **P 16 23 46.8 +0.4**
baz=72
B13A Whitefish 71.91 43 ⇑P **P 16 23 47.9 +0.6**
baz=72,SNR=5.6
E11A Bogner Ranch, 72.06 45 ⇓P **P 16 23 48.4 +0.1**
baz=72
A14A Double T Ranch 72.13 42 ⇓P **P 16 23 48.9 +0.2**
baz=72
D12A Red Ives Fores 72.16 44 ⇑P **P 16 23 48.8 -0.1**
baz=72
C13A Hot Springs 72.24 44 ⇓P **P 16 23 49.7 +0.3**
baz=72
GNI Garni 72.32 307⇓*eP* **P 16 23 51.3 +1.3**
GNI pmax pmax
comp=Z,43nm,1.4s
GNI Garni 72.32 307 *eP* **P 16 23 50.6 +0.6**
F11A Grangeville 72.35 46 ⇑P **P 16 23 49.9 -0.2**
baz=72,SNR=6.1
JTMT Jette 72.36 43 *eP* **P 16 23 50.5 +0.4**
comp=Z,9.6nm,1.1s,mb4.6
J08A Circle Bar Ran 72.38 49 ⇓P **P 16 23 50.8 +0.6**
baz=72
E12A Beaver Dam Sad 72.39 45 ⇑P **P 16 23 50.5 +0.3**
baz=72,SNR=8.6
YBMT Yellow Bay 72.45 43 *eP* **P 16 23 50.8 +0.3**
comp=Z,5.1nm,1.0s,mb4.4
I09A Lost Marbles R 72.48 48 ⇓P **P 16 23 51.0 +0.2**
baz=72
A15A Johnson Ranch, 72.50 42 ⇑P **P 16 23 50.7 -0.2**
baz=72
G11A Walters Elk Ra 72.56 46 ⇑P **P 16 23 51.1 -0.2**
baz=72
D13A Huson 72.64 44 ⇓P **P 16 23 51.4 -0.3**
baz=72
C14A Swan Lake 72.65 43 ⇓P **P 16 23 51.5 -0.3**
baz=72
SWMT Swartz Lake 72.66 43 *eP* **P 16 23 52.2 +0.4**
comp=Z,23nm,1.6s,mb4.8
H10A Noah's Angus R 72.73 47 ⇑P **P 16 23 52.1 -0.2**
baz=72
J09A Fry Pan Ranch, 72.82 49 ⇑P **P 16 23 52.9 0.0**
baz=73
SCO Scoresbysund 72.85 354 *i* P **P 16 23 53.7 +1.1**
SCO pmax pmax
comp=Z,12nm,1.1s,mb4.7
SCO Scoresbysund 72.85 354 *i* P **P 16 23 53.7 +1.1**
comp=Z,12nm,1.1s,mb4.7
F12A Elk City 72.94 46 ⇓P **P 16 23 53.8 +0.2**
baz=73,SNR=6.3
B15A Bradely Ranch, 72.98 42 ⇓P **P 16 23 54.3 +0.5**
baz=73,SNR=6.1
SLMT Seeley Lake 73.09 44 *eP* **P 16 23 54.1 -0.3**
comp=Z,24nm,1.3s,mb5.0
H11A Donnelly 73.10 47 ⇑P **P 16 23 54.2 -0.3**
baz=73
BEKR Beckwourth 73.11 53 ⇑P **P 16 23 54.6 -0.1**
baz=73
A16A West Butte Ran 73.13 41 ⇑P **P 16 23 54.6 0.0**
baz=73
IZAR Zarasai 73.14 328 *eP* **P 16 23 54.4 -0.1**
D14A Greenough 73.18 44 ⇑P **P 16 23 55.1 +0.2**
baz=73
IDID Didziasalis 73.20 327 *eP* **P 16 23 54.9 0.0**
MICGM Minsk 73.22 326 *eP* **P 16 23 54.0 -1.0**
MNK Minsk 73.24 326 *eP* **P 16 23 54.0 -1.2**
G12A Big Creek, Yel 73.26 46 ⇓P **P 16 23 54.6 -0.8**
baz=73
C15A Salmond Ranch, 73.27 43 ⇑P **P 16 23 55.8 +0.3**
baz=73
ISAL Salakas 73.30 328 *eP* **P 16 23 55.7 +0.2**
B16A M & M Farms, S 73.38 42 ⇓P **P 16 23 55.9 -0.2**
baz=73
NACGM Naroch 73.45 327 *e* **P 16 23 54.0 -2.4**
F13A Darby 73.46 45 ⇓P **P 16 23 56.5 -0.1**
baz=73
SOC Sochi 73.55 312 *i* P **P 16 23 57.9 +0.7**
E14A Clinton 73.57 44 ⇑P **P 16 23 56.8 -0.4**
baz=73
A17A Triple J Farms 73.61 41 ⇓P **P 16 23 57.5 +0.1**
baz=73
K10A MacKenzie Ranc 73.68 49 ⇑P **P 16 23 57.9 0.0**
baz=74
C16A Fuhringer Ranc 73.72 42 ⇓P **P 16 23 58.9 +0.7**
baz=74,SNR=6.7
WCN Washoe City 73.81 53 ⇓P **P 16 23 58.7 -0.1**
baz=74
H12A Diamond D Ranc 73.87 46 ⇓P **P 16 23 59.0 0.0**
baz=74
G13A Cobalt 73.92 46 ⇑P **P 16 23 59.1 -0.2**
baz=74
MFID Camas Ranch 73.94 48 ⇓P **P 16 23 59.3 -0.1**
baz=74
B17A L&G Farms, Che 73.94 42 ⇓P **P 16 24 00.1 +0.7**
baz=74,SNR=6.2
E15A Deer Lodge 74.04 44 ⇑P **P 16 23 59.6 -0.4**
baz=74
A18A Metzger Ranch, 74.07 41 ⇓P **P 16 23 59.9 -0.2**
baz=74
I12A Atlanta 74.14 47 ⇓P **P 16 24 01.0 +0.4**
baz=74,SNR=5.4
K11A Parker Ranch, 74.19 48 ⇑P **P 16 24 01.0 0.0**
baz=74
FFC Flin Flon 74.19 33 *i* P **P 16 24 00.9 +0.2**
FFC Flin Flon 74.19 33 *eP* **P 16 23 59.9 -0.8**
ANN Anapa 74.19 314 *eP* **P 16 23 58.8 -2.1**
ANN *e**PP pP 16 24 08.0 -4.2
ANN *e* 16 24 14.1
ANN *e*S S 16 33 26.8 -4.9
ANN pmax pmax
comp=Z,111nm,1.7s,mb5.5
H13A Challis 74.21 46 ⇑P **P 16 24 01.3 +0.3**
baz=74,SNR=5.9
D16A Dana Ranch, Ca 74.29 43 ⇑P **P 16 24 01.5 +0.1**
baz=74
L10A Juniper Basin 74.32 49 ⇑P **P 16 24 01.8 +0.1**
baz=74
C17A Wharram Farm, 74.36 42 ⇓P **P 16 24 02.1 +0.3**
baz=74
B18A Beardsley Farm 74.43 41 ⇑P **P 16 24 02.8 +0.6**
baz=74
F15A Butte 74.47 44 ⇓P **P 16 24 02.9 +0.4**
baz=74,SNR=7.1
J12A Stokes Ranch, 74.47 48 ⇓P **P 16 24 02.7 +0.1**
baz=74
E16A East Helena 74.52 43 ⇑P **P 16 24 02.9 +0.1**
baz=74
FCC Fort Churchill 74.54 27 *eP* **P 16 24 01.6 -1.1**
FCC pmax pmax
comp=Z,1.0nm,1.2s
FCC Fort Churchill 74.54 27 *eP* **P 16 24 01.6 -1.1**
comp=Z,0.7nm,1.2s
M10A I.L. Ranch, Tu 74.59 50 ⇓P **P 16 24 03.7 +0.4**
baz=74
EGMT Eagleton 74.66 41 ⇑P **P 16 24 03.7 +0.1**
baz=74
EGMT Eagleton 74.66 41 *eP* **P 16 24 03.0 -0.6**
comp=Z,12nm,0.9s,mb4.8
I13A Wildhorse Cree 74.67 47 ⇑P **P 16 24 04.1 +0.4**
baz=74
D17A Six Diamond Ra 74.69 42 ⇓P **P 16 24 03.6 -0.2**
baz=74
DLMT Dillon 74.69 45 *eP* **P 16 24 04.4 +0.6**
HLID Hailey 74.70 47 ⇑P **P 16 24 04.1 +0.2**
baz=74
L11A Cat Creek Ranc 74.70 49 ⇑P **P 16 24 04.3 +0.4**
baz=74
MOL Molde 74.81 340 *eP* **P 16 24 05.1 +0.9**
G15A Dillon 74.87 45 ⇓P **P 16 24 04.9 0.0**
baz=75
J13A Cove Ranch, Pi 74.94 47 ⇓P **P 16 24 05.2 -0.1**
baz=75
NB2 NORSAR Subarra 74.94 337 P **P 16 24 04.9 0.0**
comp=Z,61nm,0.9s,mb5.5,baz=39,slow=5.9
NOA NORSAR Array B 74.94 337 P **P 16 24 05.0 +0.1**
comp=Z,38nm,0.9s,mb5.3,baz=39,slow=5.8,SNR=33
K12A Draper Farm, C 74.94 48 ⇓P **P 16 24 05.1 -0.3**
baz=75
F16A Kennard Place, 74.99 44 ⇓P **P 16 24 06.2 +0.7**
baz=75
AKASG Malin Array Be 75.00 323 P **P 16 24 05.5 -0.1**
comp=Z,19nm,0.6s,mb5.2,baz=47,slow=5.9,SNR=31
AKBB Malin Array Si 75.00 323 *eP* **P 16 24 05.3 -0.2**
E17A Martinsdale 75.01 43 ⇓P **P 16 24 05.9 +0.3**
baz=75
KIEV Kiev 75.02 323 *eP* **P 16 24 05.1 -0.5**
KIEV pmax pmax
comp=Z,42nm,0.9s,mb5.4
KIEV Kiev 75.02 323 *eP* **P 16 24 05.1 -0.5**
comp=Z,42nm,0.9s,mb5.4
I14A Mackay 75.05 46 ⇑P **P 16 24 05.9 0.0**
baz=75
BOZ Bozeman (W) 75.07 44 ⇑P **P 16 24 06.3 +0.3**
baz=75
M11A Holland Ranch, 75.10 49 ⇓P **P 16 24 06.9 +0.6**
baz=75
L12A House Creek Ra 75.16 48 ⇓P **P 16 24 06.7 +0.1**
baz=75
NAO01 NORSAR Array S 75.19 337 *eP* **P 16 24 06.0 -0.3**
comp=Z,22nm,0.9s,mb5.1
G16A Moss Hill, Enn 75.22 44 ⇓P **P 16 24 06.9 0.0**
baz=75
NVAR Mina Array Bea 75.24 53 P **P 16 24 07.9 +0.8**
comp=Z,4.4nm,0.7s,mb4.5,baz=284,slow=6.7,SNR=8.1
J14A Carey 75.37 47 ⇓P **P 16 24 08.1 +0.3**
baz=75
F17A Fitzpatrick Pl 75.46 43 ⇓P **P 16 24 08.6 +0.4**
baz=75
E18A Harlowton 75.47 43 ⇓P **P 16 24 09.0 +0.7**
baz=75
SUW Suwalki 75.62 328 *eP* **P 16 24 08.6 -0.4**
SUW Suwalki 75.62 328 *eP* **P 16 24 08.5 -0.5**
SUW Suwalki 75.62 328 *eP* **P 16 24 08.2 -0.8**
comp=Z,52nm,0.9s,mb5.5
M12A Wells 75.65 49 ⇑P **P 16 24 09.7 +0.3**
baz=76,SNR=6.3
QLMT Earthquake Lak 75.67 45 *eP* **P 16 24 10.3 +0.8**
comp=Z,3.7nm,0.8s,mb4.4
G17A Pierce Place, 75.77 44 ⇓P **P 16 24 10.6 +0.6**
baz=76
L13A Double Diamond 75.84 48 ⇓P **P 16 24 10.7 +0.2**
baz=76
H16A Russell Place, 75.86 45 ⇑P **P 16 24 11.2 +0.7**
baz=76
N12A Clover Valley, 75.90 50 ⇓P **P 16 24 10.8 -0.1**
baz=76
F18A Big Timber 75.98 43 ⇑P **P 16 24 11.5 +0.3**
baz=76,SNR=5.6
GCMT Greycliff 76.08 43 *eP* **P 16 24 12.3 +0.6**
comp=Z,9.2nm,1.4s,mb4.5
MIB Mutribah 76.22 297 *eP* **P 16 24 07.1 -5.7**
MIB AMb AMB 16 24 14.2
comp=Z,58nm,1.5s,mb5.3
P11A Circle Ranch, 76.22 51 ⇑P **P 16 24 12.9 +0.3**
baz=76
I16A Newdale 76.22 45 ⇑P **P 16 24 13.6 +1.0**
baz=76
Q10A Clear Creek Ra 76.23 52 ⇓P **P 16 24 13.2 +0.4**
baz=76
PKM Peak Mountain 76.24 57 ⇓P **P 16 24 12.4 -0.5**
baz=76
FOO Floro 76.29 340 *eP* **P 16 24 12.0 -0.6**
L14A Malta 76.30 48 ⇑P **P 16 24 13.6 +0.5**
baz=76
KBD Kabd 76.31 296 *eP* **P 16 24 07.5 -5.9**
K15A Arbon 76.33 47 ⇓P **P 16 24 13.7 +0.5**
baz=76
N13A Wendover, West 76.41 49 ⇓P **P 16 24 14.0 +0.3**
baz=76
H17A Grant Village 76.42 45 ⇑P **P 16 24 15.2 +1.5**
baz=76,SNR=7.6
O12A Currie 76.43 50 ⇑P **P 16 24 14.2 +0.3**
baz=76,SNR=6.9
J16A Bone 76.51 46 ⇓P **P 16 24 14.7 +0.4**
baz=76
IMW Indian Meadow 76.52 45 *eP* **P 16 24 15.0 +0.7**
KONO Kongsberg 76.53 337 *eP* **P 16 24 14.2 +0.1**
KONO Kongsberg 76.53 337 *eP* **P 16 24 13.5 -0.6**
KONO pmax pmax
comp=Z,23nm,1.1s,mb5.0
KONO Kongsberg 76.53 337 *eP* **P 16 24 13.5 -0.5**
comp=Z,23nm,1.1s,mb5.0
M14A Sheep Mountain 76.55 48 ⇓P **P 16 24 14.6 +0.1**
baz=76,SNR=5.5
RDF Al-Radifah 76.55 296 *eP* **P 16 24 09.0 -5.8**
RDF AMb AMB 16 24 27.9
comp=Z,93nm,0.9s,mb5.7
SFJD Kangerlussuaq 76.58 5 *i* P **P 16 24 14.4 +0.2**
SFJD pmax pmax
comp=Z,14nm,0.9s,mb4.9
SFJD Kangerlussuaq 76.58 5 *i* P **P 16 24 14.4 +0.2**
comp=Z,14nm,0.9s,mb4.9
S10A Tonopah Range, 76.63 53 ⇓P **P 16 24 15.1 0.0**
baz=76,SNR=5.1
RRI2 Red Ridge 76.64 46 *eP* **P 16 24 15.8 +0.8**
comp=Z,19nm,1.4s,mb4.8
Q11A Duckwater 76.69 52 ⇓P **P 16 24 15.7 +0.3**
baz=76
RLMT Red Lodge 76.71 43 ⇑P **P 16 24 16.4 +1.0**
baz=76
I17A Pilgrim Ck. 76.72 45 ⇓P **P 16 24 16.5 +1.1**
baz=76
HVU Hansel Valley 76.73 48 *eP* **P 16 24 15.8 +0.3**
HVU pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HVU Hansel Valley 76.73 48 *eP* **P 16 24 15.8 +0.3**
comp=Z,3.8nm,0.8s,mb4.4
TPAW Teton Pass 76.76 46 *eP* **P 16 24 16.7 +1.0**
K16A Soda Springs 76.79 46 ⇓P **P 16 24 16.8 +0.9**
baz=77
P12A McGill 76.79 51 ⇓P **P 16 24 16.3 +0.4**
baz=77,SNR=5.1
L15A Malad City 76.82 47 ⇑P **P 16 24 15.9 -0.2**
baz=77
R11A Troy Canyon, C 77.03 52 ⇓P **P 16 24 17.5 +0.2**
baz=77
N14A Grayback Hills 77.03 49 ⇑P **P 16 24 17.7 +0.4**
baz=77
M15A Larsen Ranch, 77.11 48 ⇑P **P 16 24 17.8 +0.1**
baz=77
MPMC Manual Prospec 77.13 55 ⇓P **P 16 24 17.8 -0.1**
baz=77
FURC Furnace Creek, 77.31 54 ⇓P **P 16 24 19.0 +0.1**
baz=77
P13A Bates Ranch, G 77.36 50 ⇑P **P 16 24 19.6 +0.4**
baz=77
MALT Malatya 77.40 308 *eP* **P 16 24 20.4 +1.0**
comp=Z,21nm,1.1s,mb5.0
MALT Malatya 77.40 308⇑*i*P **P 16 24 20.8 +1.5**
J18A Kendall Valley 77.47 45 ⇑P **P 16 24 20.2 +0.5**
baz=77,SNR=5.9
EDW2 Edwards Air Fo 77.48 56 ⇓P **P 16 24 19.9 0.0**
baz=77
Q13A Wheeler Ranch, 77.66 51 ⇑P **P 16 24 21.5 +0.7**
baz=78
DUG Dugway 77.66 49 ⇑P **P 16 24 21.6 +0.8**
baz=78

DUG **Dugway** 77.66 49 eP P 16 24 21.5 +0.7
DUG pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
DUG **Dugway** 77.66 49 eP P 16 24 21.5 +0.8
comp=Z,4.9nm,0.6s,mb4.6
R12A **Pony Springs,** 77.66 51 ⇑P P 16 24 20.9 +0.1
baz=78
M16A **Huntsville** 77.69 48 ⇓P P 16 24 20.8 -0.1
baz=78
K18A **Toltan Ranch,** 77.81 46 ⇓P P 16 24 22.5 +0.9
baz=78
P14A **Drum Mountains** 77.86 50 ⇑P P 16 24 22.4 +0.5
baz=78,SNR=5.0
T11A **Corn Creek, Al** 77.92 53 ⇑P P 16 24 22.3 0.0
baz=78
BW06 **Boulder Array** 78.01 45 ⇑P P 16 24 22.7 0.0
baz=78
PDAR **Pinedale Array** 78.01 45 P P 16 24 22.6 0.0
comp=Z,3.1nm,0.8s,mb4.3,baz=306,slow=2.5,SNR=11
BFSC **Mount Baldy St** 78.08 56 ⇑P P 16 24 22.9 -0.4
baz=78
Q14A **Sevier Lake (B** 78.10 50 ⇑P P 16 24 23.7 +0.5
baz=78
M17A **Scullys Gap (B** 78.17 47 ⇑P P 16 24 23.7 +0.1
baz=78
BSD **Bornholm Skovb** 78.19 332 i P P 16 24 22.8 -0.6
BSD pmax pmax
comp=Z,27nm,0.9s,mb5.2
BSD **Bornholm Skovb** 78.19 332 i P P 16 24 22.8 -0.6
comp=Z,27nm,0.9s,mb5.2
NLU **North Lily Min** 78.25 49 eP P 16 24 24.6 +0.5
comp=Z,4.9nm,0.8s,mb4.5
L18A **Fontenelle, Gr** 78.26 46 ⇑P P 16 24 24.6 +0.6
baz=78
K19A **Absolon Red Bu** 78.38 45 ⇑P P 16 24 24.5 -0.3
baz=78
BORG **Borgarnes** 78.39 353 eP P 16 24 26.1 +1.7
BORG pmax pmax
comp=Z,51nm,1.0s
BORG **Borgarnes** 78.39 353 eP P 16 24 26.1 +1.7
comp=Z,51nm,1.0s,mb5.4
N17A **Moffit Pass** 78.39 48 ⇓P P 16 24 24.4 -0.4
baz=78
O16A **Springville** 78.45 48 ⇑P P 16 24 24.7 -0.5
baz=78
DAU **Daniels Canyon** 78.47 48 eP P 16 24 25.1 -0.2
DAU pmax pmax
comp=Z,25nm,1.4s,mb5.0
DAU **Daniels Canyon** 78.47 48 eP P 16 24 25.1 -0.1
comp=Z,25nm,1.4s,mb5.0
L19A **Farson** 78.54 46 ⇓P P 16 24 26.1 +0.5
baz=78
M18A **Lyman** 78.55 47 ⇑P P 16 24 26.0 +0.3
baz=78
S13A **Holt Ranch, En** 78.58 52 ⇑P P 16 24 25.6 -0.4
baz=78
COP **Copenhagen** 78.67 333 eP P 16 24 26.4 +0.3
COP pmax pmax
comp=Z,21nm,0.8s,mb5.1
COP **Copenhagen** 78.67 333 i P P 16 24 26.4 +0.3
comp=Z,21nm,0.8s,mb5.1
KWP **Kalwaria Pacla** 78.85 325 eP P 16 24 27.6 +0.4
KWP **Kalwaria Pacla** 78.85 325 eP P 16 24 27.3 +0.1
KWP **Kalwaria Pacla** 78.85 325 ⇑iP P 16 24 27.6 +0.4
T13A **Saint George** 78.89 52 ⇓P P 16 24 27.6 0.0
baz=79
CCUT **Cedar City** 78.91 51 P P 16 24 28.6 +0.8
comp=Z,11nm,1.3s,mb4.6
O17A **Robinson Place** 78.91 48 ⇑P P 16 24 27.9 +0.2
baz=79
BUR08 **Bucovina Ar. S** 79.00 322 eP P 16 24 28.6 +0.6
BURAR **Bucovina Array** 79.02 322 ⇑P P 16 24 28.1 0.0
BURAR **Bucovina Array** 79.02 322 ⇑iP P 16 24 28.1 0.0
M19A **Rock Springs** 79.03 46 ⇑P P 16 24 28.4 +0.1
baz=79
V12A **Nelson** 79.06 54 ⇑P P 16 24 28.5 -0.1
baz=79
N18A **Larsen Ranch,** 79.06 47 ⇓P P 16 24 28.6 0.0
baz=79
GMRC **Granite Mounta** 79.09 55 ⇑P P 16 24 28.4 -0.4
baz=79
L20A **Wamsutter** 79.19 45 ⇓P P 16 24 29.5 +0.3
baz=79
MUD **Monsted U'grnd** 79.20 335 i P P 16 24 27.6 -1.4
MUD pmax pmax
comp=Z,12nm,0.7s,mb4.9
MUD **Monsted U'grnd** 79.20 335 i P P 16 24 27.6 -1.4
comp=Z,12nm,0.7s,mb4.9
U13A **Pakoon Wash** 79.22 53 ⇑P P 16 24 29.2 -0.3
baz=79
PFO **Pinyon Flat Ob** 79.26 56 ⇓P P 16 24 29.3 -0.5
baz=79
O18A **Roosevelt** 79.31 48 ⇓P P 16 24 30.1 +0.2
baz=79
P17A **Butcher Ranch,** 79.36 49 ⇓P P 16 24 30.2 0.0
baz=79
N19A **John Jarvie Ra** 79.41 47 ⇑P P 16 24 30.5 +0.1
baz=79
VRI **Vrincioaia** 79.42 320 ⇑P P 16 24 31.7 +1.3
VRI **Vrincioaia** 79.42 320 ⇑iP P 16 24 31.7 +1.3
Q16A **Castle Valley** 79.44 49 ⇑P P 16 24 30.1 -0.5
baz=79
BR131 **Keskin Array S** 79.50 312 eP P 16 24 31.3 +0.4
comp=Z,13nm,0.9s,mb4.9
BRTR **Keskin Array B** 79.50 312 i P P 16 24 31.3 +0.4
BRTR pmax pmax
comp=Z,17nm,1.0s
BRTR **Keskin Array B** 79.50 312 P P 16 24 30.9 0.0
comp=Z,16nm,1.0s,mb4.9,baz=100,slow=4.0,SNR=21
BRTR PP PP 16 27 34.8 +3.7
comp=Z,4.2nm,1.1s,baz=40,slow=6.5,SNR=4.6
KOLS **Kolonicke sedl** 79.54 324 eP P 16 24 31.3 +0.4
KOLS e pP 16 24 43.0 +0.7
KOLS pmax pmax
comp=Z,12nm,1.1s,mb4.7
KOLS **Kolonicke sedl** 79.54 324 eP P 16 24 31.3 +0.4
comp=Z,12nm,1.1s,mb4.8
KOLS e pP 16 24 43.0 +0.7
KOLS **Kolonicke sedl** 79.54 324 eP P 16 24 31.3 +0.4
KOLS epP pP 16 24 42.9 +0.6
V13A **Grand Canyon W** 79.54 53 ⇑P P 16 24 30.1 -1.2
baz=79
P18A **Preston Nutter** 79.56 48 ⇑P P 16 24 31.6 +0.3
baz=79
M20A **Sweetwater, Wa** 79.61 46 ⇓P P 16 24 32.0 +0.5
baz=79
R16A **Teasdale** 79.64 50 ⇑P P 16 24 32.3 +0.5
baz=79
STHS **Stebnicka Huta** 79.68 325 eP P 16 24 33.2 +1.5
STHS e pP 16 24 44.2 +1.1
STHS pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
STHS **Stebnicka Huta** 79.68 325 eP P 16 24 33.2 +1.5
comp=Z,10nm,1.1s,mb4.7
STHS e pP 16 24 44.2 +1.1
STHS **Stebnicka Huta** 79.68 325 eP P 16 24 33.2 +1.5
STHS epP pP 16 24 44.2 +1.1
MONP **Monument Peak** 79.71 57 ⇑P P 16 24 32.0 -0.2
baz=80
SRU **San Rafael** 79.72 49 ⇓P P 16 24 32.1 0.0
baz=80
UZH **Uzhgorod** 79.74 324 eP P 16 24 32.5 +0.5
OJC **Ojcow** 79.76 326 eP P 16 24 32.0 -0.1
L21A **Rawlins** 79.77 45 ⇓P P 16 24 32.6 +0.2
baz=80,SNR=5.2
IRM **Iron Mountain** 79.80 55 ⇑P P 16 24 32.7 0.0
baz=80
O19A **Miners Draw (B** 79.81 47 ⇑P P 16 24 32.7 0.0
baz=80
T15A **Red Dirt Ranch** 79.86 51 ⇑P P 16 24 32.6 -0.3
baz=80
BC3 **Big Chuckw Mtn** 79.90 56 ⇑P P 16 24 32.9 -0.3
baz=80
Q18A **Rafter H Ranch** 79.96 49 ⇑P P 16 24 33.5 0.0
baz=80
N20A **Spence Gulch,** 79.98 46 ⇓P P 16 24 34.0 +0.5
baz=80,SNR=6.2
ULM **Lac du Bonnet** 79.98 33 P P 16 24 32.4 -0.9
comp=Z,4.1nm,0.8s,mb4.4,baz=333,slow=4.6,SNR=4.4
ULM **Lac du Bonnet** 79.98 33 P P 16 24 32.4 -0.9
M21A **Separation Pea** 80.01 45 ⇑P P 16 24 34.0 +0.3
baz=80
R17A **Hanksville Air** 80.03 49 ⇑P P 16 24 33.8 0.0
baz=80
W13A **Hualapai Mount** 80.06 54 ⇓P P 16 24 33.8 -0.3
baz=80
MLR **Muntele Rosu** 80.08 320 ⇑P P 16 24 34.8 +0.8
MLR **Muntele Rosu** 80.08 320 ⇑iP P 16 24 34.8 +0.8
V14A **Boquillas Ranc** 80.24 53 ⇓P P 16 24 34.9 -0.1
baz=80,SNR=5.4
U15A **North Rim** 80.28 52 ⇓P P 16 24 35.3 +0.1
baz=80
P19A **Cripple Cowboy** 80.32 48 ⇑P P 16 24 35.9 +0.5
baz=80
PDMCI **Parker Dam,Lak** 80.38 55 ⇑P P 16 24 35.3 -0.5
baz=80
X13A **Yucca** 80.41 54 ⇑P P 16 24 36.0 +0.1
baz=80,SNR=9.4
T16A **Glen Canyon Da** 80.43 51 ⇓P P 16 24 36.5 +0.5
baz=80
O20A **White River Ci** 80.44 47 ⇓P P 16 24 36.7 +0.7
baz=80
N21A **Black Mountain** 80.46 46 ⇑P P 16 24 36.6 +0.5
baz=80
S17A **Black Ridge (B** 80.47 50 ⇑P P 16 24 36.6 +0.4
baz=80
W14A **Seligman** 80.52 53 ⇓P P 16 24 36.5 0.0
baz=80
R18A **Canyonlands Na** 80.55 49 ⇓P P 16 24 36.8 +0.1
baz=80
M22A **Cedar Creek Ra** 80.58 45 ⇓P P 16 24 37.5 +0.8
baz=80
VOIR 80.58 320 ⇑P P 16 24 37.7 +1.1
VOIR 80.58 320 ⇑iP P 16 24 37.7 +1.1
GLA **Glamis** 80.68 56 ⇑P P 16 24 37.4 0.0
baz=80
KECS **Kecovo** 80.69 325 eP P 16 24 38.1 +0.9
KECS e pP 16 24 49.5 +0.9
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS **Kecovo** 80.69 325 eP P 16 24 38.1 +0.9
comp=Z,3.4nm,0.9s,mb4.3
KECS e pP 16 24 49.5 +0.9
KECS **Kecovo** 80.69 325 eP P 16 24 38.1 +0.9
KECS epP pP 16 24 49.5 +0.9
V15A **Kaibab Nationa** 80.73 52 ⇑P P 16 24 37.7 +0.1
baz=80
KSP **Ksiaz** 80.83 328 eP P 16 24 37.7 -0.2
KSP e*PP pP 16 24 48.9 -0.4
LIKS **Likavka** 80.92 326 eP P 16 24 40.1 +1.7
LIKS pmax pmax
comp=Z,38nm,1.1s,mb5.2
LIKS **Likavka** 80.92 326 eP P 16 24 40.1 +1.7
comp=Z,38nm,1.1s,mb5.2
LIKS **Likavka** 80.92 326 eP P 16 24 40.1 +1.7
S18A **Hurst Farm, Bl** 80.93 50 ⇓P P 16 24 39.0 +0.4
baz=81
R19A **Curley Farm, L** 81.00 49 ⇑P P 16 24 39.5 +0.4
baz=81
W15A **Williams** 81.06 53 ⇑P P 16 24 39.7 +0.3
baz=81
MORC **Moravsky Berou** 81.08 327 eP P 16 24 39.2 -0.1
MORC **Moravsky Berou** 81.08 327 ⇑iP P 16 24 39.4 +0.1
Q20A **Ridgley Place,** 81.16 48 ⇓P P 16 24 40.5 +0.6
baz=81
U16A **Tuba City** 81.19 51 ⇓P P 16 24 40.2 +0.1
baz=81
U17A **Shonto** 81.20 51 ⇑P P 16 24 40.2 0.0
baz=81
Y14A **Wickenburg** 81.35 54 ⇑P P 16 24 41.1 +0.1
baz=81
T18A **Mexican Hat** 81.35 50 ⇑P P 16 24 41.0 +0.1
baz=81
Z13A **Yuma Proving G** 81.37 55 ⇓P P 16 24 41.0 -0.1
baz=81
PSZ **Piszkesteto** 81.37 325 ⇑P P 16 24 41.3 +0.5
PSZ **Piszkesteto** 81.37 325 ⇑iP P 16 24 41.3 +0.5
S19A **Harvey Farm, M** 81.42 49 ⇓P P 16 24 41.0 -0.3
baz=81
WUAZ **Wupatki** 81.42 52 ⇓P P 16 24 41.4 +0.1
baz=81
VYHS **Vyhne** 81.45 326 eP P 16 24 41.9 +0.7
VYHS e pP 16 24 53.7 +1.1
VYHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
VYHS **Vyhne** 81.45 326 eP P 16 24 41.9 +0.7
comp=Z,8.3nm,1.0s,mb4.6
VYHS e pP 16 24 53.7 +1.1
VYHS **Vyhne** 81.45 326 eP P 16 24 41.8 +0.6
VYHS epP pP 16 24 53.7 +1.1
X15A **Humboldt** 81.51 53 ⇓P P 16 24 41.8 0.0
baz=81
113A **Mohawk Valley,** 81.56 56 ⇑P P 16 24 41.3 -0.8
baz=81
KOLL **Kolacno** 81.58 326 eP P 16 24 43.1 +1.2
KOLL **Kolacno** 81.58 326 eP P 16 24 43.1 +1.2
R20A **Redvale** 81.60 48 ⇑P P 16 24 42.8 +0.6
baz=81
V17A **Tonalea, Kykot** 81.73 52 ⇓P P 16 24 43.2 +0.3
baz=82,SNR=8.0
Y15A **Casa Rosa Ranc** 81.78 54 ⇑P P 16 24 43.1 -0.1
baz=82
BRG **Berggiesshubel** 81.79 330 eP P 16 24 42.8 -0.2
comp=Z,19nm,1.1s,mb5.0
BRG i pP 16 24 54.6 +0.3
comp=Z,22nm,1.1s
BRG **Berggiesshubel** 81.79 330 eP P 16 24 42.8 -0.1
BRG i pP 16 24 54.6 +0.3
BRG pmax pmax
comp=Z,11nm,1.1s,mb4.7
U18A **Rough Rock, Ch** 81.81 51 ⇓P P 16 24 43.4 +0.1
baz=82,SNR=5.8
CLL **Collm** 81.83 330 ⇑iP P 16 24 42.6 -0.6
CLL e pP 16 24 51.0 -3.6
CLL e pP 16 24 55.0 +0.4
CLL pmax pmax
comp=Z,32nm,1.0s,mb5.2
CLL **Collm** 81.83 330 ⇑iP P 16 24 42.6 -0.6
comp=Z,32nm,1.0s,mb5.2
CLL e pP 16 24 51.0 -3.6
CLL e pP 16 24 55.0 +0.4
CLL **Collm** 81.83 330 ⇑iP P 16 24 42.6 -0.6
comp=Z,32nm,1.0s,mb5.2
CLL e pP 16 24 51.0 -3.6
CLL epP pP 16 24 55.0 +0.4
VRAC **Vranov** 81.85 327 ⇑P P 16 24 43.8 +0.5
VRAC **Vranov** 81.85 327 ⇑iP P 16 24 43.8 +0.5
R21A **Cimarron** 81.98 48 ⇑P P 16 24 44.8 +0.5
baz=82,SNR=5.5
Q22A **Crested Butte,** 82.05 47 ⇑P P 16 24 45.5 +1.0
baz=82,SNR=6.3
X16A **Lo Mia Camp, P** 82.07 53 ⇓P P 16 24 45.2 +0.4
baz=82
SMOL **Smolenice** 82.07 326 eP P 16 24 45.9 +1.4
SMOL **Smolenice** 82.07 326 eP P 16 24 45.9 +1.4
T19A **Beclabito** 82.07 50 ⇓P P 16 24 45.1 +0.4
baz=82
MVCO **Mesa Verde** 82.15 49 ⇑P P 16 24 45.5 +0.3
baz=82
MVCO **Mesa Verde** 82.15 49 eP P 16 24 44.5 -0.7
114A **Black Gap (USA** 82.16 55 ⇑P P 16 24 45.6 +0.4
baz=82
ISCO **Idaho Springs** 82.19 46 eP P 16 24 45.6 +0.3
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ISCO **Idaho Springs** 82.19 46 eP P 16 24 45.6 +0.3
comp=Z,3.8nm,0.8s,mb4.4
S21A **Coal Bank Pass** 82.29 49 ⇓P P 16 24 46.7 +0.9
baz=82
U19A **Dine' College,** 82.30 50 ⇑P P 16 24 46.3 +0.4
baz=82
R22A **Saguache, Gunn** 82.55 48 ⇑P P 16 24 48.3 +1.1
baz=82
214A **Organ Pipe Nat** 82.70 56 ⇑P P 16 24 48.2 +0.1
baz=82
V19A **Window Rock** 82.77 51 ⇑P P 16 24 48.0 -0.4
baz=83
MOX **Moxa** 82.90 331 eP P 16 24 48.5 -0.3
MOX e pP 16 25 01.3 +1.1
MOX pmax pmax
comp=Z,30nm,1.8s,mb5.0
MOX **Moxa** 82.90 331 eP P 16 24 48.5 -0.3
comp=Z,30nm,1.8s,mb5.0
MOX e pP 16 25 01.3 +1.1
Y17A **Roosevelt** 82.91 53 ⇑P P 16 24 48.7 -0.4
baz=83
PKSM **Moragy** 83.20 324 ⇑P P 16 24 50.1 -0.3
PKSM **Moragy** 83.20 324 ⇑iP P 16 24 50.1 -0.3
CONA **Conrad Observa** 83.20 327 ⇑iP P 16 24 51.1 +0.7
comp=Z,22nm,1.1s,mb5.1
T22A **Edith** 83.25 49 ⇑P P 16 24 50.7 -0.2
baz=83
KHC **Kasperske Hory** 83.28 329 eP P 16 24 50.5 -0.2
Y18A **Canyon Day Jun** 83.38 53 ⇑P P 16 24 51.0 -0.6
baz=83
X19A **St. Johns** 83.44 52 ⇓P P 16 24 52.0 +0.1
baz=83
GERES **GERESS Array B** 83.44 328 P P 16 24 51.7 +0.1
comp=Z,6.8nm,0.8s,mb4.7,baz=36,slow=5.0,SNR=20
GERES PP PP 16 28 03.9 +0.7
comp=Z,1.8nm,1.0s,baz=38,slow=7.1,SNR=3.6
W20A **Ramah** 83.49 51 ⇑P P 16 24 51.9 -0.2
baz=83
V21A **Milan** 83.59 50 ⇑P P 16 24 53.0 +0.3
baz=83
WTSB **Winterswijk** 83.66 334 eP P 16 24 51.5 -1.2
117A **Oracle** 83.68 54 ⇑P P 16 24 52.6 -0.5
baz=84
ARSA **Arzberg** 83.86 326 ⇑iP P 16 24 53.9 +0.1
comp=Z,13nm,1.4s,mb4.9
X20A **Quemado** 83.87 51 ⇓P P 16 24 54.2 +0.1
baz=84
217A **Green Valley** 84.13 55 ⇓P P 16 24 55.3 -0.1
baz=84
118A **Homack Ranch,** 84.14 54 ⇑P P 16 24 55.5 0.0
baz=84
ECSD **EROS Data Cent** 84.34 38 eP P 16 24 55.3 -1.0
Y20A **Horse Springs,** 84.35 52 ⇓P P 16 24 56.3 -0.2
baz=84
119A **Ashpeak Ranch,** 84.49 53 ⇓P P 16 24 56.6 -0.7
baz=84
218A **Dragoon** 84.51 54 ⇑P P 16 24 57.3 -0.1
baz=84,SNR=5.7
SOKA **Soboth** 84.52 326 ⇑iP P 16 24 57.1 -0.1
comp=Z,31nm,1.5s,mb5.2
STIP **Stip** 84.68 319 eP P 16 24 57.0 -1.1
Z20A **Nine Sixteen R** 84.73 53 ⇓P P 16 24 58.5 0.0
baz=84,SNR=7.5
Y21A **Point of Rocks** 84.73 51 ⇑P P 16 24 58.8 +0.3
baz=84
VAY **Valandovo** 84.74 319 eP P 16 24 57.8 -0.6
TOD **Tromm** 84.83 331 eP P 16 24 58.3 -0.3
SKO **Skopje** 84.87 320 eP P 16 24 59.9 +0.9
ANMO **Albuquerque** 84.87 50 eP P 16 24 59.4 +0.2
ANMO pmax pmax
comp=Z,5.0nm,1.1s
ANMO **Albuquerque** 84.87 50 eP P 16 24 59.4 +0.2
comp=Z,5.3nm,1.1s,mb4.6
318A **Bisbee** 84.89 55 ⇑P P 16 24 59.2 -0.1
baz=85,SNR=6.0
HGN **Heimansgroeve** 84.95 334 eP P 16 24 58.4 -0.9
comp=Z,27nm,1.6s,mb5.1
219A **White Tail Can** 85.01 54 ⇓P P 16 25 00.1 +0.2
baz=85,SNR=6.3
MEM **Membach** 85.06 333 P P 16 24 59.2 -0.5
comp=Z,11nm,1.3s,mb4.8
120A **U Bar Ranch, L** 85.06 53 ⇑P P 16 25 00.4 +0.2
baz=85
ABH **Alteburg** 85.08 332 eP P 16 24 59.6 -0.3
Z21A **St. Cloud Mine** 85.19 52 ⇓P P 16 25 01.2 +0.4
baz=85
Y22A **Socorro** 85.22 51 ⇓P P 16 25 01.0 +0.1
baz=85
STU **Stuttgart** 85.34 331 eP P 16 25 01.3 +0.1
STU pmax pmax
comp=Z,16nm,0.8s,mb5.2
STU **Stuttgart** 85.34 331 eP P 16 25 01.3 +0.1
comp=Z,16nm,0.8s,mb5.2
W24A **Lazy 6 Ranch,** 85.35 49 ⇑P P 16 25 01.6 +0.1
baz=85
319A **Douglas** 85.40 54 ⇓P P 16 25 02.2 +0.3
baz=85
KRUS **Krusevo** 85.40 319 eP P 16 25 00.8 -0.9
RUP **Ruppelstein** 85.41 332 eP P 16 25 01.2 -0.4
BCLA **Clavier** 85.47 334 P P 16 25 01.3 -0.5
comp=Z,18nm,1.5s,mb5.0
220A **Playas Peak, P** 85.55 53 ⇓P P 16 25 02.6 0.0
baz=85
121A **Cookes Peak, D** 85.62 53 ⇑P P 16 25 03.2 +0.3
baz=85
Z22A **Elephant Butte** 85.67 52 ⇑P P 16 25 03.2 0.0
baz=86
LANF **Langenberg** 85.72 332 eP P 16 25 02.9 -0.2
SNF **Seneffe** 85.75 334 P P 16 25 03.4 +0.2
comp=Z,27nm,1.5s,mb5.2
WLF **Walferdange** 85.78 333 P P 16 25 03.7 +0.3
comp=Z,20nm,1.9s,mb5.0
Y23A **Lovelace Mesa,** 85.80 50 ⇓P P 16 25 03.8 0.0
baz=86
OHR **Ohrid** 85.82 319 eP P 16 25 02.5 -1.3
GIVF **Givet** 85.90 334 eP P 16 25 03.0 -1.0
comp=Z,38nm,1.2s,mb5.2
GIVF **Givet** 85.90 334 eP P 16 25 03.0 -1.0
GIVF pmax pmax
comp=Z,19nm,1.2s,mb5.2
GIVF **Givet** 85.90 334 eP P 16 25 03.0 -1.0
comp=Z,19nm,1.2s,mb5.2
320A **Kipp Ranch, An** 85.91 54 ⇑P P 16 25 04.4 0.0
baz=86
W25A **X Bar L Ranch,** 85.92 49 ⇓P P 16 25 05.1 +0.7
baz=86
SCHQ **Schefferville** 85.97 16 P P 16 25 04.2 0.0
comp=Z,8.2nm,1.0s,mb4.9,baz=0.0,slow=5.6,SNR=5.7
DOU **Dourbes** 85.99 334 P P 16 25 03.9 -0.5
comp=Z,8.6nm,1.6s,mb4.7
BFO **Black Forest** 86.04 331 P P 16 25 04.4 -0.3
comp=Z,146nm,0.8s,mb6.3,SNR=6.8
BFO **Black Forest** 86.04 331 eP P 16 25 04.1 -0.6
BFO pmax pmax
comp=Z,26nm,1.1s,mb5.4
BFO **Black Forest** 86.04 331 eP P 16 25 04.1 -0.6
comp=Z,26nm,1.1s,mb5.4
SPAK **Spaichingen-Ko** 86.05 331 eP P 16 25 04.2 -0.5
BAIF **Baives** 86.15 334 eP P 16 25 04.4 -0.8
comp=Z,32nm,1.1s,mb5.2
BAIF **Baives** 86.15 334 eP P 16 25 04.4 -0.8
BAIF pmax pmax
comp=Z,16nm,1.1s,mb5.2
BAIF **Baives** 86.15 334 eP P 16 25 04.4 -0.8
comp=Z,16nm,1.1s,mb5.2
Y24A **Capitan** 86.19 50 ⇑P P 16 25 05.7 0.0
baz=86
CDF **Champ du Feu** 86.39 332 eP P 16 25 05.6 -0.8
comp=Z,40nm,1.0s,mb5.3
CDF **Champ du Feu** 86.39 332 eP P 16 25 05.6 -0.8
CDF pmax pmax
comp=Z,20nm,1.0s,mb5.3
CDF **Champ du Feu** 86.39 332 eP P 16 25 05.6 -0.8
comp=Z,20nm,1.0s,mb5.3
LIBD **Limburg** 86.47 331 eP P 16 25 06.3 -0.5
FELD **Feldberg im Sc** 86.54 331 eP P 16 25 06.6 -0.6
ECH **Echery** 86.59 331 eP P 16 25 06.8 -0.6
Y25A **Mesa, Roswell** 86.65 50 ⇑P P 16 25 07.6 -0.4
baz=86
MOF **Molkenrain** 86.90 331 eP P 16 25 08.3 -0.6
THEF **They Montfort** 87.03 332 eP P 16 25 08.9 -0.7
HINF **Hinteralfeld** 87.04 331 eP P 16 25 08.3 -1.3
comp=Z,11nm,1.0s,mb4.8
HINF **Hinteralfeld** 87.04 331 eP P 16 25 08.3 -1.3
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
HINF **Hinteralfeld** 87.04 331 eP P 16 25 08.3 -1.3
comp=Z,5.7nm,1.0s,mb4.8
Z25A **Roswell** 87.06 50 ⇑P P 16 25 09.9 -0.1
baz=87
HAU **Haudompre** 87.07 332 eP P 16 25 08.7 -1.1
comp=Z,20nm,1.0s,mb5.0
HAU **Haudompre** 87.07 332 eP P 16 25 08.7 -1.1
HAU pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
HAU **Haudompre** 87.07 332 eP P 16 25 08.7 -1.1
comp=Z,9.8nm,1.0s,mb5.0
MEZF **Maizieres J'vi** 87.15 333 eP P 16 25 09.8 -0.3
125A **Gardner Draw,** 87.52 51 ⇓P P 16 25 12.1 -0.1
baz=87
324A **Moseley Ranch,** 87.81 52 ⇓P P 16 25 14.1 +0.5
baz=88,SNR=5.4
Z27A **Tatum** 87.97 49 ⇑P P 16 25 14.5 +0.2
baz=88
LOR **Lormes** 88.62 333 eP P 16 25 16.4 -0.8
comp=Z,17nm,1.0s,mb5.0
LOR **Lormes** 88.62 333 eP P 16 25 16.4 -0.8
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
LOR **Lormes** 88.62 333 eP P 16 25 16.4 -0.8
comp=Z,8.4nm,1.0s,mb5.0
FLN **La Foliniere** 88.86 336 eP P 16 25 17.4 -0.9
comp=Z,50nm,1.2s,mb5.4
FLN **La Foliniere** 88.86 336 eP P 16 25 17.4 -0.9
FLN pmax pmax

comp=Z,25nm,1.2s,mb5.4
FLN La Foliniere 88.86 336 *eP* **P 16 25 17.4 -0.9**
comp=Z,25nm,1.2s,mb5.4
LDF La Druitiere 88.89 336 *eP* **P 16 25 17.5 -0.9**
comp=Z,37nm,1.4s,mb5.2
LDF La Druitiere 88.89 336 *eP* **P 16 25 17.5 -0.9**
LDF pmax pmax
comp=Z,19nm,1.4s,mb5.2
LDF La Druitiere 88.89 336 *eP* **P 16 25 17.5 -0.9**
comp=Z,18nm,1.4s,mb5.2
SSF Saint Saulge 88.93 333 *eP* **P 16 25 17.8 -0.8**
comp=Z,11nm,1.1s,mb4.8
SSF Saint Saulge 88.93 333 *eP* **P 16 25 17.8 -0.8**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
SSF Saint Saulge 88.93 333 *eP* **P 16 25 17.8 -0.8**
comp=Z,5.6nm,1.1s,mb4.8
LPL La Plagne 88.97 330 *eP* **P 16 25 18.1 -0.8**
LPG La Plagne 88.98 330 *eP* **P 16 25 18.3 -0.6**
comp=Z,9.9nm,0.7s,mb4.9
LPG La Plagne 88.98 330 *eP* **P 16 25 18.3 -0.6**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPG La Plagne 88.98 330 *eP* **P 16 25 18.3 -0.6**
comp=Z,4.9nm,0.7s,mb5.0
SMF Signal de Mont 89.15 332 *eP* **P 16 25 19.0 -0.7**
comp=Z,36nm,1.3s,mb5.2
SMF Signal de Mont 89.15 332 *eP* **P 16 25 19.0 -0.7**
SMF pmax pmax
comp=Z,18nm,1.3s,mb5.2
SMF Signal de Mont 89.15 332 *eP* **P 16 25 19.0 -0.7**
comp=Z,18nm,1.3s,mb5.2
AVF Avril sur Loir 89.21 333 *eP* **P 16 25 19.3 -0.7**
comp=Z,44nm,1.1s,mb5.4
AVF Avril sur Loir 89.21 333 *eP* **P 16 25 19.3 -0.7**
AVF pmax pmax
comp=Z,22nm,1.1s,mb5.4
AVF Avril sur Loir 89.21 333 *eP* **P 16 25 19.3 -0.7**
comp=Z,22nm,1.1s,mb5.4
GRR Gorron 89.31 336 *eP* **P 16 25 19.8 -0.6**
comp=Z,45nm,1.1s,mb5.4
GRR Gorron 89.31 336 *eP* **P 16 25 19.8 -0.6**
GRR pmax pmax
comp=Z,22nm,1.1s,mb5.4
GRR Gorron 89.31 336 *eP* **P 16 25 19.8 -0.6**
comp=Z,22nm,1.1s,mb5.4
MBDF Montbardon 89.60 330 *eP* **P 16 25 20.3 -1.5**
comp=Z,5.8nm,0.7s,mb4.7
MBDF Montbardon 89.60 330 *eP* **P 16 25 20.3 -1.5**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
MBDF Montbardon 89.60 330 *eP* **P 16 25 20.3 -1.5**
comp=Z,2.9nm,0.7s,mb4.7
ORIF Oris-en-Rattie 89.80 330 *eP* **P 16 25 22.0 -0.8**
PLDF La Plantade 89.80 332 *eP* **P 16 25 23.6 +0.8**
AGO Saint Agoulin 89.92 333 *eP* **P 16 25 24.3 +1.0**
SGMF Saint Gilles 89.97 337 *eP* **P 16 25 22.9 -0.6**
comp=Z,23nm,0.8s,mb5.2
SGMF Saint Gilles 89.97 337 *eP* **P 16 25 22.9 -0.6**
SGMF pmax pmax
comp=Z,11nm,0.8s,mb5.2
SGMF Saint Gilles 89.97 337 *eP* **P 16 25 22.9 -0.6**
comp=Z,11nm,0.8s,mb5.2
SBF Sospel 90.03 329 *eP* **P 16 25 22.1 -1.8**
comp=Z,30nm,0.9s,mb5.3
SBF Sospel 90.03 329 *eP* **P 16 25 22.1 -1.8**
SBF pmax pmax
comp=Z,15nm,0.9s,mb5.3
SBF Sospel 90.03 329 *eP* **P 16 25 22.1 -1.8**
comp=Z,15nm,0.9s,mb5.3
TCF Toulx Ste Croi 90.06 333 *eP* **P 16 25 23.3 -0.6**
comp=Z,20nm,1.2s,mb5.0
TCF Toulx Ste Croi 90.06 333 *eP* **P 16 25 23.3 -0.6**
TCF pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
TCF Toulx Ste Croi 90.06 333 *eP* **P 16 25 23.3 -0.6**
comp=Z,10nm,1.2s,mb5.0
ROSF Rostrenen 90.12 337 *eP* **P 16 25 23.6 -0.6**
comp=Z,39nm,1.0s,mb5.4
ROSF Rostrenen 90.12 337 *eP* **P 16 25 23.6 -0.6**
ROSF pmax pmax
comp=Z,20nm,1.0s,mb5.4
ROSF Rostrenen 90.12 337 *eP* **P 16 25 23.6 -0.6**
comp=Z,20nm,1.0s,mb5.4
PYM Petit Puy Mans 90.22 332 *eP* **P 16 25 25.7 +1.0**
VIVF Saint-Julien-l 90.33 331 *eP* **P 16 25 24.5 -0.7**
comp=Z,11nm,0.9s,mb4.9
VIVF Saint-Julien-l 90.33 331 *eP* **P 16 25 24.5 -0.7**
VIVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
VIVF Saint-Julien-l 90.33 331 *eP* **P 16 25 24.5 -0.7**
comp=Z,5.4nm,0.9s,mb4.9
TXAR Lajitas Array 90.38 53 P **P 16 25 25.6 -0.2**
comp=Z,2.4nm,0.9s,mb4.5,baz=292,slow=2.0,SNR=7.6
PGF Pioggiola 90.43 327 *eP* **P 16 25 24.4 -1.3**
comp=Z,36nm,1.2s,mb5.3
PGF Pioggiola 90.43 327 *eP* **P 16 25 24.4 -1.3**
PGF pmax pmax
comp=Z,18nm,1.2s,mb5.3
PGF Pioggiola 90.43 327 *eP* **P 16 25 24.4 -1.3**
comp=Z,18nm,1.2s,mb5.3
QUIF Quistinic 90.46 337 *eP* **P 16 25 24.9 -0.9**
comp=Z,22nm,1.1s,mb5.1
QUIF Quistinic 90.46 337 *eP* **P 16 25 24.9 -0.9**
QUIF pmax pmax
comp=Z,11nm,1.1s,mb5.1
QUIF Quistinic 90.46 337 *eP* **P 16 25 24.9 -0.9**
comp=Z,11nm,1.1s,mb5.1
CEL Celeste 90.48 320 *eP* **P 16 25 25.7 -0.3**
LBL Lubilhac 90.57 332 *eP* **P 16 25 26.6 +0.3**
FRF La Foret Royal 90.61 329 *eP* **P 16 25 25.1 -1.5**
comp=Z,22nm,1.1s,mb5.1
FRF La Foret Royal 90.61 329 *eP* **P 16 25 25.1 -1.5**
FRF pmax pmax
comp=Z,11nm,1.1s,mb5.1
FRF La Foret Royal 90.61 329 *eP* **P 16 25 25.1 -1.5**
comp=Z,11nm,1.1s,mb5.1
MFF Saint Martin d 90.62 335 *eP* **P 16 25 26.1 -0.4**
comp=Z,50nm,1.1s,mb5.5
MFF Saint Martin d 90.62 335 *eP* **P 16 25 26.1 -0.4**
MFF pmax pmax
comp=Z,25nm,1.1s,mb5.5
MFF Saint Martin d 90.62 335 *eP* **P 16 25 26.1 -0.4**
comp=Z,25nm,1.1s,mb5.5
SMRF Simiane la Rot 90.71 330 *eP* **P 16 25 26.2 -0.8**
VILF Villemus 90.75 330 *eP* **P 16 25 26.9 -0.3**
TAVF Tavernes 90.81 329 *eP* **P 16 25 26.5 -1.0**
LMR La Mourre 90.85 329 *eP* **P 16 25 26.3 -1.4**
comp=Z,33nm,1.0s,mb5.3
LMR La Mourre 90.85 329 *eP* **P 16 25 26.3 -1.4**
LMR pmax pmax
comp=Z,16nm,1.0s,mb5.3
LMR La Mourre 90.85 329 *eP* **P 16 25 26.3 -1.4**
comp=Z,16nm,1.0s,mb5.3
RJF Les Rejaudoux 91.15 333 *eP* **P 16 25 28.6 -0.4**
comp=Z,29nm,1.0s,mb5.3
RJF Les Rejaudoux 91.15 333 *eP* **P 16 25 28.6 -0.4**
comp=Z,15nm,1.0s,mb5.3
CAF Calviac 91.27 333 *eP* **P 16 25 29.5 -0.1**
comp=Z,30nm,1.0s,mb5.3
CAF Calviac 91.27 333 *eP* **P 16 25 29.5 -0.1**
comp=Z,15nm,1.0s,mb5.3
LASF Ste Croix 91.31 331 *eP* **P 16 25 29.3 -0.5**
comp=Z,21nm,1.0s,mb5.1
LFF La Frestale 91.74 333 *eP* **P 16 25 31.5 -0.3**
comp=Z,25nm,0.8s,mb5.3
LFF La Frestale 91.74 333 *eP* **P 16 25 31.5 -0.3**
comp=Z,13nm,0.8s,mb5.3
MTLF Montolieu 92.56 332 *eP* **P 16 25 35.2 -0.4**
comp=Z,19nm,1.0s,mb5.2
MTLF Montolieu 92.56 332 *eP* **P 16 25 35.2 -0.4**
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
MTLF Montolieu 92.56 332 *eP* **P 16 25 35.2 -0.4**
comp=Z,9.5nm,1.0s,mb5.2
MIAR Mount Ida 92.70 43 *eP* **P 16 25 35.9 -0.5**
MIAR *e* pP 16 25 46.4 -1.5
MIAR pmax pmax
comp=Z,13nm,1.2s,mb5.2
MIAR Mount Ida 92.70 43 *eP* **P 16 25 35.9 -0.5**
comp=Z,13nm,1.2s,mb5.2
MIAR *e* pP 16 25 46.4 -1.6
EPF Esparros 93.53 333 *eP* **P 16 25 39.1 -1.0**
comp=Z,8.7nm,0.9s,mb4.9
EPF Esparros 93.53 333 *eP* **P 16 25 39.1 -1.0**
EPF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
EPF Esparros 93.53 333 *eP* **P 16 25 39.1 -1.0**
comp=Z,4.3nm,0.9s,mb4.9
ETSF Etsaut 93.98 333 *eP* **P 16 25 41.9 -0.2**
comp=Z,10nm,0.9s,mb5.0
ETSF Etsaut 93.98 333 *eP* **P 16 25 41.9 -0.2**
ETSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
ETSF Etsaut 93.98 333 *eP* **P 16 25 41.9 -0.2**
comp=Z,5.3nm,0.9s,mb5.0
SJPF Ste Jean 94.03 334 *eP* **P 16 25 43.2 +0.8**
KMBO Kilima Mbogo 102.29 278 *i* P Pdif 16 26 20.0 +0.4
KMBO pmax pmax
comp=Z,1.0nm,0.3s
QSPA South Pole Qui 126.06 180 PKP PKPdf 16 31 23.8 -1.1
comp=Z,2.0nm,0.7s,baz=37,slow=5.1,SNR=5.1
QSPA South Pole Qui 126.06 180 PKP PKPdf 16 31 23.8 -1.1
VNA2 Neumayer--Watz 141.69 196 *e*PKPdf PKPdf 16 31 50.3 -4.1
baz=96,slow=2.2
VNA3 Neumayer Olymp 141.93 195 *e*PKPdf PKPdf 16 31 51.0 -3.8
LPAZ La Paz 146.85 61 PKPbc PKPbc 16 32 07.3 +0.4
comp=Z,4.2nm,0.6s,baz=356,slow=6.1,SNR=7.5

JMA 07 16:13:49.1±0.4, 36°.26N×141°.97E, h63km, M4.2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.06**	**239**	P	Pn	16 14 08.3	+0.3
CHOJ				*e*S	Sn	16 14 23.4	+1.4
JHO	**Hitachi**	**1.18**	**288**	P	Pn	16 14 10.1	+0.5
JHO				*e*S	Sn	16 14 24.3	-0.6
JAG	**Ashikaga**	**2.04**	**275**	P	Pn	16 14 22.5	+1.4
JAG				*e*S	Sn	16 14 45.7	+0.2

JMA 07 16:15:01.4±0.3, 36°.22N×141°.66E, h66km, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.83**	**232**	P	Pn	16 15 17.5	-0.1
CHOJ				*e*S	Sn	16 15 30.3	+0.8
JHO	**Hitachi**	**0.96**	**294**	P	Pn	16 15 18.9	-0.3
ONAJ	**Iwakimizuishiy**	**1.12**	**322**	P	Pn	16 15 21.5	+0.3
JFK	**Kawauchi**	**1.31**	**331**	P	Pn	16 15 23.9	+0.2

NIED ***07*** *16:16:00, 36°.30N×141°.90E, h20km, Mw6.0 Best double couple: M₀1.24000×10¹⁸ NP1:φ₀=28.00000°, δ=68.00000°, λ=102.00000°. NP2:φ₀=178.00000°, δ=25.00000°, λ=62.00000°.*
BJI ***07*** *16:16:16.5, 36°.13N×142°.53E, h29km, mb5.1/10*
IDC ***07*** *16:16:18.7±0.9, 36°.16N×141°.85E, h0km, mb4.6/19, mb1 4.7/20, mb1mx4.6/29, mbtmp4.6/20, ML4.3/1, MS5.9/1, Ms1 5.9/1, ms1mx5.1/42, Error ellipse: s-maj=24.5km s-min=16.8km az=162.0*
NEIC ***07*** *16:16:20.6±2.8, 36°.14N×141°.85E, h14km±17km, mb4.7/70, Error ellipse: s-maj=6.2km s-min=4.3km az=135.0*
MOS ***07*** *16:16:22.4±0.9, 36°.28N×141°.82E, h33km, mb4.9/30, Error ellipse: s-maj=9.4km s-min=6.9km az=119.2*
JMA ***07*** *16:16:22.5±0.4, 36°.24N×141°.84E, h54km, M4.2*
ISCJB ***07*** *16:16:22.9±0.6, 36°.19N±0°.03×141°.84E±0°.05, h42km±5km, mb4.6/91, Error ellipse: s-maj=7.0km s-min=4.9km az=27.7*

ISC 07 16:16:23.4±1.4, 36°.21N±0°.03×141°.85E±0°.04, h30km±9km, n199, σ0°.93/197, mb4.6/91, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.95**	**238**	P	**Pn**	**16 16 39.9**	**-0.8**
JHO	**Hitachi**	**1.11**	**292**	P	**Pn**	**16 16 41.7**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.23**	**317**	P	**Pn**	**16 16 43.5**	**-1.1**
JYT	**Yasato**	**1.34**	**271**	P	**Pn**	**16 16 45.1**	**-1.0**
JFK	**Kawauchi**	**1.40**	**326**	P	**Pn**	**16 16 45.2**	**-1.7**
JCN	**Nagara**	**1.56**	**240**	*e*S	**Sn**	**16 17 08.7**	**+0.6**
JSB	**Shiboa**	**1.73**	**297**	P	**Pn**	**16 16 51.4**	**0.0**
JFT	**Otama**	**1.79**	**318**	P	**Pn**	**16 16 51.5**	**-0.7**
JMM	**Marumori**	**1.86**	**333**	P	**Pn**	**16 16 52.7**	**-0.5**
JAG	**Ashikaga**	**1.95**	**277**	P	**Pn**	**16 16 53.4**	**-1.0**
JYO	**Yokosk**	**2.03**	**242**	P	**Pn**	**16 16 57.5**	**+2.0**
JFY	**Yanaizu**	**2.10**	**305**	P	**Pn**	**16 16 56.7**	**+0.2**
JKT	**Katashina**	**2.17**	**286**	P	**Pn**	**16 16 57.5**	**0.0**
JRY	**Ryogami san**	**2.40**	**266**	P	**Pn**	**16 17 00.2**	**-0.4**
JIM2	**Oshima 3**	**2.47**	**234**	P	**Pn**	**16 17 00.7**	**-0.9**
JHK	**Hiroka**	**2.50**	**295**	⇓P	**Pn**	**16 17 02.7**	**+0.7**
JNS	**Sasagawa**	**2.59**	**309**	P	**Pn**	**16 17 04.2**	**+1.0**
JGK	**Kuni**	**2.62**	**279**	P	**Pn**	**16 17 03.9**	**+0.3**
JYN	**Shimob**	**2.78**	**256**	P	**Pn**	**16 17 06.5**	**+0.7**
JMK	**Ichinoseki**	**2.79**	**350**	P	**Pn**	**16 17 05.2**	**-0.7**
JIZS	**Izushimoda**	**2.85**	**239**	P	**Pn**	**16 17 06.3**	**-0.4**
MJAR	**Matsushiro Arr**	**2.96**	**278**	Pn	**Pn**	**16 17 08.5**	**+0.2**
39nm,0.3s,baz=99,slow=8.9,SNR=13							
MAJO	**Matsushiro**	**2.96**	**278**	*e*P	**Pn**	**16 17 08.7**	**+0.4**
MAT	**Matsushiro**	**2.96**	**278**	P	**Pn**	**16 17 09.0**	**+0.7**
JKO	**Kozu shima**	**3.00**	**229**	P	**Pn**	**16 17 08.5**	**-0.4**
JNT	**Takato**	**3.03**	**265**	P	**Pn**	**16 17 10.6**	**+1.3**
JNG	**Nsakai**	**3.04**	**275**	P	**Pn**	**16 17 10.3**	**+0.9**
JNY	**Yasuok**	**3.35**	**257**	P	**Pn**	**16 17 16.2**	**+2.5**
JSD	**Sado**	**3.40**	**304**	P	**Pn**	**16 17 14.9**	**+0.5**
JHJ2	**Mitsune**	**3.51**	**209**	P	**Pn**	**16 17 15.3**	**-0.6**
JHJ	**Hachijo jima 2**	**3.52**	**210**	Pn	**Pn**	**16 17 16.9**	**+0.9**
150nm,0.3s,baz=59,slow=7.5,SNR=7.3							
JGN	**Niukaw**	**3.67**	**272**	P	**Pn**	**16 17 19.9**	**+1.8**
YSS	**Yuzh-Sakhalins**	**10.76**	**3**	*e*P	**Pn**	**16 18 54.4**	**-0.9**
KSRS	**Korea Array**	**11.24**	**281**	P	**Pn**	**16 19 04.5**	**+2.6**
KSRS	**Korea Array**	**11.24**	**281**	Pn	**Pn**	**16 19 04.5**	**+2.7**
0.2nm,0.3s,baz=94,slow=13,SNR=9.7							
INCN	**Inchon**	**12.26**	**280**	*e*P	**Pn**	**16 19 17.1**	**+1.2**
MDJ	**Mudanjiang**	**12.55**	**316**	*e*P	**Pn**	**16 19 18.8**	**-1.0**
JOW	**Kunigami**	**14.87**	**235**	Pn	**Pn**	**16 19 55.8**	**+4.3**
1.0nm,0.3s,baz=66,slow=12,SNR=6.1							
NJ2	**Nanjing**	**19.47**	**264**	*e*P	**Pn**	**16 20 53.3**	**+4.2**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s							
PEA0B	**Petropavlovsk-**	**20.24**	**28**	*e*P	**P**	**16 20 56.1**	**+0.2**
PETK	**Petropavlovsk-**	**20.24**	**28**	P	**P**	**16 20 56.4**	**+0.5**
comp=Z,6.1nm,0.8s,baz=214,slow=10,SNR=3.8							
HIA	**Hailar**	**20.74**	**316**	P	**P**	**16 21 01.4**	**0.0**
HIA				pmax	pmax		
comp=Z,9.0nm,0.6s							
HIA	**Hailar**	**20.74**	**316**	P	**P**	**16 21 01.4**	**0.0**
comp=Z,8.6nm,0.6s							
YHNB	**Yeheng**	**21.02**	**243**	P	**P**	**16 21 04.4**	**-0.3**
comp=Z,5.3nm,0.5s,mb4.1							
NACB	**Ninganchiao**	**21.18**	**241**	*e*P	**P**	**16 21 04.3**	**-2.0**
comp=Z,11nm,0.6s,mb4.4							
SSLB	**Suanglung**	**21.87**	**241**	*e*P	**P**	**16 21 09.3**	**-4.5**
YULB	**Yu-li**	**21.88**	**240**	*e*P	**P**	**16 21 10.4**	**-3.5**
comp=Z,8.8nm,0.8s,mb4.2							
TPUB	**Ta-pu**	**22.41**	**241**	*e*P	**P**	**16 21 16.0**	**-3.5**
comp=Z,21nm,0.9s,mb4.6							
TWG	**Pinlang**	**22.41**	**239**	P	**P**	**16 21 16.5**	**-3.0**
comp=Z,233nm,1.0s,mb5.6							
HHC	**Hu-ho-hao-te**	**24.08**	**290**	*e*P	**P**	**16 21 35.7**	**-0.4**
HHC				pP		16 21 40.0	
HHC				PP		16 22 10.0	
HHC				S	**S**	**16 25 51.5**	**-0.2**
HHC				ScP	ScP	16 28 54.4	+1.2
HHC				PcS	PcS	16 28 57.0	+0.5
HHC				pmax	pmax		
comp=Z,32nm,1.0s,mb4.7							
YAK	**Yakutsk**	**26.95**	**347**	*e*P	**P**	**16 22 01.0**	**-0.9**
comp=Z,52nm,0.8s,mb5.1							
ENH	**Enshi**	**27.63**	**267**	*e*P	**P**	**16 22 07.4**	**-0.9**
comp=Z,43nm,0.6s,mb5.2							
ULN	**Ulaanbaatar**	**28.12**	**305**	*e*P	**P**	**16 22 13.2**	**+0.7**
ULN				pmax	pmax		
comp=Z,23nm,1.0s,mb4.8							
ULN	**Ulaanbaatar**	**28.12**	**305**	*e*P	**P**	**16 22 13.2**	**+0.8**
comp=Z,23nm,1.0s,mb4.8							
BOD	**Bodaibo**	**28.42**	**328**	*e*P	**P**	**16 22 14.1**	**-0.9**
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**16 22 17.7**	**+1.5**
comp=Z,22nm,0.9s,mb4.9,baz=103,slow=8.7,SNR=16							
ZAK	**Zakamensk**	**31.06**	**309**	*e*P	**P**	**16 22 38.7**	**+0.2**
ZAK				pmax	pmax		
comp=Z,20nm,1.2s,mb4.8							
TLY	**Talaya**	**31.14**	**312**	*e*P	**P**	**16 22 39.7**	**+0.5**
TLY				pmax	pmax		
comp=Z,26nm,1.0s,mb5.0							
TLY	**Talaya**	**31.14**	**312**	*e*P	**P**	**16 22 39.7**	**+0.5**
comp=Z,26nm,1.0s,mb5.0							
KMI	**Kunming**	**35.20**	**263**	P	**P**	**16 23 13.9**	**-1.0**
KMI				pP	pP	16 23 20.5	-3.1
KMI				sP	sP	16 23 23.5	-3.7
KMI				pmax	pmax		
comp=Z,17nm,1.2s,mb4.8							
CHTO	**Chiang Mai**	**41.44**	**257**	*e*P	**P**	**16 24 06.9**	**-0.6**
CHTO				pmax	pmax		
comp=Z,16nm,1.1s,mb4.6							
CHTO	**Chiang Mai**	**41.44**	**257**	*e*P	**P**	**16 24 06.9**	**-0.6**
comp=Z,16nm,1.1s,mb4.6							
CMAR	**Chiang Mai Arr**	**41.64**	**257**	P	**P**	**16 24 09.0**	**-0.1**
comp=Z,3.8nm,0.8s,mb4.0,baz=48,slow=5.6,SNR=9.3							
NST	**Nakhon Sawan**	**42.32**	**252**	P	**P**	**16 24 09.0**	**-5.7**
comp=Z,150nm,1.8s,mb5.3							
LSA	**Lhasa**	**42.64**	**276**	P	**P**	**16 24 19.3**	**+2.1**
LSA	**Lhasa**	**42.64**	**276**	*e*P	**P**	**16 24 18.1**	**+0.9**
LSA				pmax	pmax		
comp=Z,14nm,1.0s,mb4.7							
LSA	**Lhasa**	**42.64**	**276**	*e*P	**P**	**16 24 18.1**	**+0.9**
comp=Z,14nm,1.0s,mb4.7							
ZAA0	**Zalesovo Array**	**42.74**	**313**	*e*P	**P**	**16 24 17.4**	**-0.2**
ZALV	**Zalesovo Beam**	**42.74**	**313**	P	**P**	**16 24 17.2**	**-0.4**
comp=Z,15nm,0.8s,mb4.8,baz=90,slow=7.4,SNR=9.3							
MK31	**Makanchi Array**	**44.86**	**303**	*e*P	**P**	**16 24 34.7**	**-0.1**
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**16 24 34.4**	**-0.4**
comp=Z,14nm,0.7s,mb4.9,baz=92,slow=8.6,SNR=11							
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**16 24 34.4**	**-0.4**
KSM	**Kuching**	**45.24**	**227**	*e*P	**P**	**16 24 38.7**	**+0.5**
comp=Z,9.5nm,0.7s,mb4.7							
KAPI	**Kappang**	**45.93**	**211**	*e*P	**P**	**16 24 43.5**	**-0.1**
comp=Z,36nm,1.0s,mb5.3							
KURK	**Kurchatov**	**46.72**	**309**	P	**P**	**16 24 48.1**	**-1.3**
KURK				pmax	pmax		
comp=Z,18nm,0.7s,mb5.1							
KURK	**Kurchatov**	**46.72**	**309**	P	**P**	**16 24 48.1**	**-1.4**
comp=Z,18nm,0.7s,mb5.1,baz=83,slow=7.8,SNR=9.3							
KURK	**Kurchatov**	**46.72**	**309**	*e*P	**P**	**16 24 49.0**	**-0.5**
comp=Z,24nm,0.8s,mb5.2							
RSO	**Redoubt South**	**47.34**	**38**	P	**P**	**16 24 54.3**	**+0.3**
KDAK	**Kodiak Island**	**47.48**	**41**	P	**P**	**16 24 55.3**	**+0.1**
KDAK				pmax	pmax		
comp=Z,12nm,0.8s,mb4.9							
KDAK	**Kodiak Island**	**47.48**	**41**	P	**P**	**16 24 55.3**	**+0.1**
comp=Z,12nm,0.8s,mb4.9,baz=14,slow=3.8,SNR=4.2							
KDAK	**Kodiak Island**	**47.48**	**41**	*e*P	**P**	**16 24 55.6**	**+0.4**
comp=Z,15nm,0.9s,mb4.9							
CHUM	**Lake Minchumin**	**47.63**	**33**	*e*P	**P**	**16 24 57.4**	**+1.1**
comp=Z,3.5nm,0.8s,mb4.4							
PPLA	**Purkeypile**	**47.65**	**34**	P	**P**	**16 24 56.2**	**-0.2**
comp=Z,11nm,1.2s,mb4.8							
BPAW	**Bear Paw Mtn.**	**48.23**	**33**	P	**P**	**16 25 00.9**	**0.0**
KTH	**Kantishna Hill**	**48.24**	**34**	P	**P**	**16 24 59.8**	**-1.2**
comp=Z,6.2nm,1.0s,mb4.6							
TRF	**Thorofare Moun**	**48.52**	**34**	P	**P**	**16 25 02.3**	**-0.9**
comp=Z,1.5nm,0.7s,mb4.1							
MCK	**McKinley**	**49.13**	**33**	*e*P	**P**	**16 25 07.7**	**-0.1**
MCK				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4							
MCK	**McKinley**	**49.13**	**33**	*e*P	**P**	**16 25 07.7**	**-0.1**
comp=Z,3.1nm,0.8s,mb4.4							
KAKA	**Kakadu**	**49.46**	**192**	*e*P	**P**	**16 25 09.3**	**-1.6**
comp=Z,37nm,0.9s,mb5.4							
TKM2	**Tokmak 2**	**50.34**	**299**	P	**P**	**16 25 18.9**	**+1.6**
SNR=7.8							
TKM2	**Tokmak 2**	**50.34**	**299**	*e*P	**P**	**16 25 18.3**	**+0.9**
TKM2				pmax	pmax		
comp=Z,27nm,1.2s,mb5.2							
TKM2	**Tokmak 2**	**50.34**	**299**	*e*P	**P**	**16 25 18.3**	**+0.9**
comp=Z,27nm,1.2s,mb5.2							
KBK	**Karagaybulak**	**50.87**	**299**	P	**P**	**16 25 22.3**	**+0.9**
SNR=5.7							
AAK	**Ala-Archa**	**51.20**	**299**	*e*P	**P**	**16 25 23.6**	**-0.2**
AAK				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.6							
AAK	**Ala-Archa**	**51.20**	**299**	*e*P	**P**	**16 25 23.6**	**-0.3**
comp=Z,5.6nm,0.8s,mb4.5							
BVAR	**Borovoye Array**	**51.39**	**313**	P	**P**	**16 25 25.4**	**+0.3**
comp=Z,6.6nm,0.9s,mb4.6,baz=92,slow=7.9,SNR=5.0							
BRVK	**Borovoye**	**51.45**	**313**	*e*P	**P**	**16 25 25.8**	**+0.2**
BRVK				pmax	pmax		
comp=Z,11nm,0.9s,mb4.8							
BRVK	**Borovoye**	**51.45**	**313**	*e*P	**P**	**16 25 25.8**	**+0.2**
comp=Z,11nm,0.9s,mb4.8							
AML	**Almayashu**	**51.91**	**299**	P	**P**	**16 25 30.8**	**+1.6**
SNR=7.3							
AML	**Almayashu**	**51.91**	**299**	*e*P	**P**	**16 25 30.5**	**+1.3**
comp=Z,23nm,1.1s,mb5.0							
EGAK	**Eagle**	**52.45**	**32**	*e*P	**P**	**16 25 32.5**	**-0.4**
comp=Z,1.3nm,0.6s,mb4.0							
DAWY	**Dawson**	**53.31**	**33**	P	**P**	**16 25 38.1**	**-1.1**
INK	**Inuvik**	**54.97**	**27**	P	**P**	**16 25 51.8**	**+0.6**
INK				pmax	pmax		
comp=Z,4.0nm,0.7s							
INK	**Inuvik**	**54.97**	**27**	P	**P**	**16 25 51.8**	**+0.6**
comp=Z,3.9nm,0.7s,mb4.5,baz=293,slow=7.2,SNR=6.8							
INK	**Inuvik**	**54.97**	**27**	*e*P	**P**	**16 25 52.1**	**+0.9**
CTAO	**Charters Tower**	**56.14**	**175**	*e*P	**P**	**16 25 58.5**	**-1.6**
CTAO				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.5							
CTAO	**Charters Tower**	**56.14**	**175**	*e*P	**P**	**16 25 58.5**	**-1.6**
comp=Z,4.6nm,0.9s,mb4.5							
FITZ	**Fitzroy Crossi**	**56.15**	**199**	P	**P**	**16 26 00.5**	**+0.3**
WRAB	**Tennant Creek**	**56.28**	**188**	P	**P**	**16 26 01.3**	**+0.2**
WRAB				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.8							
WRAB	**Tennant Creek**	**56.28**	**188**	P	**P**	**16 26 01.3**	**+0.2**
comp=Z,9.4nm,1.0s,mb4.8							
WB2	**Warramunga Arr**	**56.29**	**188**	P	**P**	**16 26 00.3**	**-0.9**
WRA	**Warramunga Arr**	**56.29**	**189**	P	**P**	**16 26 00.6**	**-0.6**
comp=Z,1.4nm,0.5s,mb4.2,baz=24,slow=7.3,SNR=4.9							
ARU	**Arti**	**57.22**	**319**	*e*P	**P**	**16 26 07.1**	**-0.3**
ARU				pmax	pmax		
comp=Z,25nm,1.1s,mb5.2							
ARU	**Arti**	**57.22**	**319**	*e*P	**P**	**16 26 07.1**	**-0.4**
comp=Z,25nm,1.1s,mb5.2							
HYB	**Hyderabad**	**58.54**	**269**	*i* P	**P**	**16 26 17.0**	**-0.3**
ABKAR	**Akbulak array**	**58.74**	**311**	*e*P	**P**	**16 26 17.7**	**-0.6**
comp=Z,6.4nm,0.7s,mb4.8							
MBWA	**Marble Bar**	**60.77**	**204**	*e*P	**P**	**16 26 34.1**	**+1.7**
comp=Z,17nm,1.1s,mb5.1							
KBS	**Kingsbay**	**61.53**	**350**	P	**P**

YBH	**Yreka Blue Hor**	**70.57**	**52**	P	**P**	**16 27 37.7 +2.1**
YBH				pmax	pmax	
comp=Z,1.0nm,0.7s						
YBH	**Yreka Blue Hor**	**70.57**	**52**	P	**P**	**16 27 37.7 +2.1**
comp=Z,1.3nm,0.7s,mb4.0						
WDC	**Whiskeytown Da**	**71.28**	**53**	P	**P**	**16 27 41.5 +1.6**
WDC				pmax	pmax	
comp=Z,3.0nm,0.8s,mb4.3						
WDC	**Whiskeytown Da**	**71.28**	**53**	P	**P**	**16 27 41.5 +1.5**
comp=Z,2.6nm,0.8s,mb4.2						
SUMG	**Summit**	**71.51**	**0**	*e*P	**P**	**16 27 42.1 +1.3**
comp=Z,7.2nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**71.72**	**311**	*e*P	**P**	**16 27 42.6 +0.1**
KIV				pmax	pmax	
comp=Z,36nm,1.2s,mb5.2						
KIV	**Kislovodsk**	**71.72**	**311**	*e*P	**P**	**16 27 42.6 +0.1**
comp=Z,36nm,1.2s,mb5.2						
MOD	**Modoc**	**72.01**	**51**	P	**P**	**16 27 43.7 -0.6**
comp=Z,3.3nm,0.7s,mb4.4						
BSMT	**Bassoo Peak**	**72.01**	**44**	*e*P	**P**	**16 27 43.3 -0.9**
comp=Z,1.4nm,1.0s,mb3.9						
BMO	**Blue Mountains**	**72.23**	**47**	*e*P	**P**	**16 27 46.0 +0.4**
comp=Z,1.6nm,0.8s,mb4.0						
JTMT	**Jette**	**72.35**	**43**	*e*P	**P**	**16 27 46.4 +0.2**
GNI	**Garni**	**72.49**	**307**	*e*P	**P**	**16 27 47.5 +0.3**
GNI				pmax	pmax	
comp=Z,19nm,1.3s						
GNI	**Garni**	**72.49**	**307**	*e*P	**P**	**16 27 47.5 +0.4**
comp=Z,20nm,1.3s,mb4.9						
SWMT	**Swartz Lake**	**72.65**	**44**	*e*P	**P**	**16 27 48.6 +0.7**
comp=Z,2.8nm,0.9s,mb4.2						
FFC	**Flin Flon**	**74.21**	**33**	P	**P**	**16 27 57.3 +0.3**
FFC				pmax	pmax	
comp=Z,4.0nm,0.9s,mb4.3						
FFC	**Flin Flon**	**74.21**	**33**	P	**P**	**16 27 57.3 +0.2**
comp=Z,3.7nm,0.9s,mb4.3						
LRM	**Limekiln Ridge**	**74.49**	**44**	*e*P	**P**	**16 27 59.8 +1.0**
comp=Z,29nm,0.7s,mb5.3						
FCC	**Fort Churchill**	**74.58**	**27**	*e*P	**P**	**16 27 58.6 -0.5**
EGMT	**Eagleton**	**74.66**	**41**	*e*P	**P**	**16 28 00.2 +0.4**
comp=Z,3.8nm,0.9s,mb4.3						
DLMT	**Dillon**	**74.68**	**45**	*e*P	**P**	**16 28 00.9 +0.9**
comp=Z,3.4nm,0.8s,mb4.3						
BOZ	**Bozeman (W)**	**75.06**	**44**	P	**P**	**16 28 02.3 +0.2**
BOZ				pmax	pmax	
comp=Z,2.0nm,0.8s,mb4.1						
BOZ	**Bozeman (W)**	**75.06**	**44**	P	**P**	**16 28 02.3 +0.1**
comp=Z,1.8nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**75.09**	**338**	P	**P**	**16 28 02.1 +0.1**
comp=Z,18nm,1.0s,mb5.0,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**75.09**	**338**	P	**P**	**16 28 01.8 -0.2**
comp=Z,11nm,0.9s,mb4.8,baz=39,slow=5.7,SNR=10						
AKASG	**Malin Array Be**	**75.17**	**323**	P	**P**	**16 28 02.3 -0.3**
comp=Z,2.9nm,0.4s,mb4.5,baz=46,slow=6.0,SNR=11						
AKBB	**Malin Array Si**	**75.17**	**323**	*e*P	**P**	**16 28 02.4 -0.3**
KIEV	**Kiev**	**75.18**	**323**	*e*P	**P**	**16 28 02.3 -0.4**
KIEV				pmax	pmax	
comp=Z,12nm,0.8s,mb4.9						
KIEV	**Kiev**	**75.18**	**323**	*e*P	**P**	**16 28 02.3 -0.4**
comp=Z,12nm,0.8s,mb4.9						
NAO01	**NORSAR Array S**	**75.34**	**338**	*e*P	**P**	**16 28 03.3 -0.1**
comp=Z,5.5nm,0.8s,mb4.5						
SUW	**Suwalki**	**75.78**	**328**	P	**P**	**16 28 05.5 -0.6**
SUW				pmax	pmax	
comp=Z,17nm,0.8s,mb5.0						
SUW	**Suwalki**	**75.78**	**328**	P	**P**	**16 28 05.5 -0.6**
comp=Z,17nm,0.8s,mb5.0						
N12A	**Clover Valley,**	**75.88**	**50**	*e*P	**P**	**16 28 08.3 +1.4**
comp=Z,2.4nm,0.7s,mb4.2						
M13A	**Montello**	**76.11**	**49**	*e*P	**P**	**16 28 09.9 +1.6**
comp=Z,2.4nm,0.6s,mb4.3						
N13A	**Wendover, West**	**76.39**	**49**	*e*P	**P**	**16 28 10.8 +0.9**
comp=Z,5.3nm,0.8s,mb4.5						
LAO	**LASA Array**	**77.37**	**41**	*e*P	**P**	**16 28 15.1 -0.2**
comp=Z,6.3nm,0.7s,mb4.7						
MALT	**Malatya**	**77.56**	**308**	*e*P	**P**	**16 28 17.8 +1.3**
MALT				pmax	pmax	
comp=Z,9.0nm,1.0s,mb4.7						
MALT	**Malatya**	**77.56**	**308**	*e*P	**P**	**16 28 17.8 +1.3**
comp=Z,8.8nm,1.0s,mb4.6						
DUG	**Dugway**	**77.63**	**49**	*e*P	**P**	**16 28 18.1 +1.3**
DUG				pmax	pmax	
comp=Z,9.0nm,1.3s,mb4.5						
DUG	**Dugway**	**77.63**	**49**	*e*P	**P**	**16 28 18.1 +1.2**
comp=Z,8.8nm,1.3s,mb4.5						
BW06	**Boulder Array**	**78.00**	**46**	*e*P	**P**	**16 28 18.3 -0.5**
comp=Z,1.8nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**78.00**	**46**	P	**P**	**16 28 19.4 +0.6**
comp=Z,0.9nm,0.6s,mb3.9,baz=314,slow=3.0,SNR=3.9						
BR131	**Keskin Array S**	**79.67**	**312**	*e*P	**P**	**16 28 28.7 +0.6**
comp=Z,4.7nm,0.9s,mb4.4						
BRTR	**Keskin Array B**	**79.67**	**312**	P	**P**	**16 28 28.6 +0.6**
comp=Z,4.1nm,0.9s,mb4.4,baz=94,slow=3.8,SNR=6.0						
SRU	**San Rafael**	**79.69**	**49**	*e*P	**P**	**16 28 29.1 +0.9**
SRU				pmax	pmax	
comp=Z,6.0nm,1.2s,mb4.4						
SRU	**San Rafael**	**79.69**	**49**	*e*P	**P**	**16 28 29.1 +0.9**
comp=Z,6.2nm,1.2s,mb4.4						
CLL	**Collm**	**81.99**	**330**	*i* P	**P**	**16 28 40.1 -0.1**
comp=Z,9.0nm,1.0s,mb4.7						
CLL	**Collm**	**81.99**	**330**	*i* P	**P**	**16 28 40.1 -0.1**
comp=Z,9.0nm,1.0s,mb4.7						
KHC	**Kasperske Hory**	**83.43**	**329**	*e*P	**P**	**16 28 47.2 -0.6**
KHC				pmax	pmax	
comp=Z,5.0nm,0.8s,mb4.6						
KHC	**Kasperske Hory**	**83.43**	**329**	*e*P	**P**	**16 28 47.2 -0.6**
comp=Z,5.4nm,0.8s,mb4.6						
SDCO	**Great Sand Dun**	**83.59**	**47**	*e*P	**P**	**16 28 49.7 +0.9**
comp=Z,3.1nm,1.3s,mb4.3						
GEC2	**GERESS Array S**	**83.60**	**328**	*e*P	**P**	**16 28 48.7 +0.1**
GERES	**GERESS Array B**	**83.60**	**328**	P	**P**	**16 28 48.6 -0.1**
comp=Z,1.9nm,0.7s,mb4.3,baz=42,slow=4.2,SNR=5.7						
EYMN	**Ely**	**83.64**	**33**	*e*P	**P**	**16 28 48.8 -0.1**
comp=Z,10.0nm,1.0s,mb4.9						
ANMO	**Albuquerque**	**84.84**	**50**	*e*P	**P**	**16 28 56.7 +1.5**
ANMO				pmax	pmax	
comp=Z,5.0nm,1.2s						
ANMO	**Albuquerque**	**84.84**	**50**	*e*P	**P**	**16 28 56.7 +1.5**
comp=Z,4.6nm,1.2s,mb4.5						
SCHQ	**Schefferville**	**86.03**	**16**	*e*P	**P**	**16 29 00.3 -0.4**
comp=Z,4.8nm,1.0s,mb4.7						
CCM	**Cathedral Cave**	**91.28**	**39**	*e*P	**P**	**16 29 25.3 -0.7**
comp=Z,5.3nm,0.8s,mb4.9						
MORF	**Marmelete**	**101.91**	**336**	*e*PP	PP	16 34 12.6 -12
LPAZ	**La Paz**	**146.79**	**61**	PKPbc	PKPbc	16 36 03.3 +0.4
comp=Z,2.7nm,0.7s,baz=359,slow=0.9,SNR=6.6						
LPAZ	**La Paz**	**146.79**	**61**	*e*PKPdf	PKPdf	16 36 03.2 +2.1

IDC ***07*** *16:16:32.7±0.4, 36°.21N×141°.81E, h0km, mb5.4/34, mb1 5.5/38, mb1mx5.5/39, mbtmp5.4/38, ML5.1/4, MS5.8/3, Ms1 5.8/3, ms1mx5.1/44, Error ellipse: s-maj=12.2km s-min=10.0km az=108.0*

BJI ***07*** *16:16:34.3, 36°.23N×141°.47E, h13km, mB6.7/26, mb5.6/54, Ms6.4/60, Ms7 6.3/48*

JMA ***07*** *16:16:34.0±0.3, 36°.27N×141°.98E, h18km, M6.3*

JMA Felt II J1.

ISCJB ***07*** *16:16:35.1±0.7, 36°.16N±0°.02×141°.76E±0°.02, h25km±4km, mb5.9/394, MS6.5/48, Error ellipse: s-maj=3.2km s-min=2.0km az=170.3*

NEIC ***07*** *16:16:36.2±1.4, 36°.16N×141°.76E, h23km±9km, mb5.9/265, MW6.0, MW6.0(NIED), Error ellipse: s-maj=3.1km s-min=2.6km az=169.0*

NEIC Felt [III] at Tokyo. Felt at Kamakura, Kofu, Misawa, Mizuho, Narashino, Narita, Ome and Sendai. Recorded [2 JMA] in Chiba, Fukushima, Gumma, Ibaraki, Kanagawa, Miyagi, Saitama, Tochigi and Tokyo; [1 JMA] in Aomori, Iwate, Nagano, Niigata, Shizuoka and Yamagata.

GCMT ***07*** *16:16:36.2±0.1, 36°.11N×141°.98E, h23km, MW6.1/107, Moment Tensor Solution. s75,c137; s107,c349; Duration: ≥6 Moment tensor: Scale 10^18 Nm; Mrr 1.14±.03; Mθθ -0.05±.01; Mφφ -1.09±.02; Mrθ 0.45±.03; Mrφ -0.27±.01; Mθφ 1.00±.03; Best double couple: M0 1.58700×10^18 NP1.φs187.00000°, δ24.00000°, λ77.00000°. NP2.φs21.00000°, δ67.00000°, λ96.00000°. Principal axes: T 1.5880, Plg68.0000°, Azm302.0000°; N -0.0030, Plg5.0000°, Azm199.0000°; P -1.5850, Plg22.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***07*** *16:16:37.5±0.9, 36°.45N×141°.79E, h33km, mb6.1/141, MS6.5/28 Error ellipse: s-maj=6.3km s-min=3.5km az=108.5*

BGS ***07*** *16:16:37.9±1.4, 35°.69N×140°.01E, h33km, mb5.7*

DJA ***07*** *16:16:38, 36°.18N×141°.61E, h22km, Mw6.7/56*

SZGRF ***07*** *16:16:40.7, 36°.15N×140°.22E, h33km, mb6.2, MS7.4, Near east coast of eastern Honshu, Japan*

ISC 07 16:16:37.5±0.8, 36°.21N±0°.02×141°.74E±0°.01, h30km±5km, h34km±1.6km: pP-P, n1605, σ0°.80/1578, mb5.9/394, MS6.5/48, 433C-224D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.87**	**235**	P	**Pn**	**16 16 53.6**	**-0.2**
CHOJ				S	**Sb**	**16 17 08.8**	**+3.4**
JHO	**Hitachi**	**1.03**	**294**	P	**Pn**	**16 16 54.8**	**-1.1**
JHO				*e*S	**Sn**	**16 17 11.7**	**+2.4**
ONAJ	**Iwakimizuishiy**	**1.17**	**320**	P	**Pn**	**16 16 56.3**	**-1.6**
JFK	**Kawauchi**	**1.35**	**329**	P	**Pn**	**16 16 59.3**	**-1.1**
JFT	**Otama**	**1.73**	**320**	P	**Pn**	**16 17 06.4**	**+0.9**
JMM	**Marumori**	**1.82**	**336**	P	**Pn**	**16 17 06.5**	**-0.3**
JAG	**Ashikaga**	**1.86**	**277**	P	**Pn**	**16 17 07.6**	**+0.3**
JFY	**Yanaizu**	**2.02**	**307**	P	**Pn**	**16 17 10.5**	**+0.9**
JIO	**Ouri**	**2.27**	**352**	P	**Pn**	**16 17 12.4**	**-0.6**
JIO				S	**Sn**	**16 17 40.4**	**+0.5**
MJAR	**Matsushiro Arr**	**2.87**	**278**	Pn	**Pn**	**16 17 22.1**	**+0.9**
439nm,0.3s,baz=54,slow=34,SNR=77							
MAJO	**Matsushiro**	**2.87**	**278**	*e*Pn	**Pn**	**16 17 22.8**	**+1.5**
MAJO				*e*Sn	**Sn**	**16 17 52.2**	**-2.5**
MAT	**Matsushiro**	**2.87**	**278**	P	**Pn**	**16 17 23.4**	**+2.2**
MAT				S	**Sn**	**16 18 01.3**	**+6.5**
JHJ	**Hachijo jima 2**	**3.48**	**208**	Pn	**Pn**	**16 17 29.8**	**+0.3**
727nm,0.3s,baz=186,slow=2.9,SNR=34							
JHJ				Sn	**Sn**	**16 18 08.2**	**-1.5**
2μm,0.3s,baz=228,slow=15,SNR=7.6							
JHJ				LR	LR	16 18 43.9	
comp=Z,53μm,18.8s,baz=235,slow=38							
ERM	**Erimo**	**5.91**	**10**	Pn	**Pn**	**16 18 00.3**	**-2.6**
3μm,1.0s,SNR=7.9							
ERM	**Erimo**	**5.91**	**10**	*e*P	**Pn**	**16 17 58.3**	**-4.6**
ASAJ	**Asahikawa**	**7.93**	**4**	P	**Pn**	**16 18 28.9**	**-1.8**
ASAJ						16 19 58.0	
ASAJ				pmax	pmax		
comp=Z,14nm,0.3s							
ASAJ				smax			
comp=N,15nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,158μm,18.6s							
ASAJ	**Asahikawa**	**7.93**	**4**	Pn	**Pn**	**16 18 28.9**	**-1.9**
comp=Z,14nm,0.3s,baz=210,slow=12,SNR=9.3							
ASAJ				Sn	**Sn**	**16 19 58.0**	**-1.4**
comp=Z,15nm,0.3s,baz=288,slow=20,SNR=3.2							
ASAJ				LR	LR	16 22 36.5	
comp=Z,158μm,18.6s,baz=181,slow=46							
JKD	**Kudamatsu**	**8.36**	**258**	P	**Pn**	**16 18 40.8**	**+4.1**
JTY	**Toyota**	**8.95**	**261**	P	**Pn**	**16 18 48.4**	**+3.7**
CBIJ	**Chichi jima**	**9.09**	**177**	Pn	**Pn**	**16 18 43.4**	**-3.4**
comp=Z,89nm,0.3s,baz=6.9,slow=7.5,SNR=14							
CBIJ				Sn	**Sn**	**16 20 19.6**	**-8.4**
comp=Z,386nm,0.3s,baz=260,slow=21,SNR=9.7							
CBIJ				LR	LR	16 22 21.5	
comp=Z,72μm,18.5s,baz=359,slow=38							
JIU2	**Izumi 2**	**9.74**	**251**	P	**Pn**	**16 18 58.9**	**+3.3**
JZO	**Okuchi**	**10.08**	**249**	P	**Pn**	**16 19 03.5**	**+3.3**
KUR	**Kuril'sk**	**10.14**	**25**	P	**Pn**	**16 18 57.0**	**-4.0**
KUR				*e*S	**Sn**	**16 20 43.5**	**-10**
KUR				pmax	pmax		
comp=N,430nm,0.9s							
KUR				pmax	pmax		
comp=E,170nm,0.9s							
KUR				pmax	pmax		
comp=Z,550nm,0.9s							
KUR				smax			
comp=N,990nm,0.9s							
KUR				smax			
comp=E,880nm,0.9s							
JSU	**Suzuyama**	**10.48**	**247**	P	**Pn**	**16 19 07.6**	**+1.8**
YSS	**Yuzh-Sakhalins**	**10.77**	**4**	*e*P	**Pn**	**16 19 06.7**	**-2.9**
YSS				pmax	pmax		
comp=Z,420nm,1.1s							
YSS	**Yuzh-Sakhalins**	**10.77**	**4**	*e*P	**Pn**	**16 19 06.7**	**-2.8**
KSRS	**Korea Array**	**11.14**	**281**	P	**Pn**	**16 19 18.8**	**+4.0**
KSRS				pmax	pmax		
comp=Z,3.0nm,0.3s							
KSRS	**Korea Array**	**11.14**	**281**	Pn	**Pn**	**16 19 18.8**	**+4.0**
comp=Z,2.9nm,0.3s,baz=95,slow=14,SNR=15							
JKC	**Kuchinoerabu**	**11.22**	**243**	P	**Pn**	**16 19 17.9**	**+2.0**
INCN	**Inchon**	**12.17**	**280**	*e*P	**Pn**	**16 19 32.6**	**+3.8**
INCN	**Inchon**	**12.17**	**280**	Pn	**Pn**	**16 19 33.5**	**+4.7**
SNR=40							
INCN				Pn	**Pn**	**16 19 33.5**	**+4.7**
SNR=40							
MDJ	**Mudanjiang**	**12.49**	**316**	P	**Pn**	**16 19 33.6**	**+0.5**
MDJ				S	**Sn**	**16 21 50.3**	**-0.9**
MDJ				PcP	PcP	16 25 10.5	-1.0
MDJ				ScP	ScP	16 28 44.0	+1.6
MDJ				ScS	ScS	16 32 17.5	-0.9
MDJ				pmax	pmax		
comp=Z,53nm,1.1s							
MDJ				pmax	pmax		
comp=Z,20μm,11.6s							
MDJ				LR	LR		
comp=N,74μm,17.7s							
MDJ				LR	LR		
comp=E,94μm,15.9s							
MDJ				LR	LR		
comp=Z,150μm,17.1s							
MDJ	**Mudanjiang**	**12.49**	**316**	*e*P	**Pn**	**16 19 34.4**	**+1.3**
HABR	**Khabarovsk**	**13.21**	**340**	*e*P	**Pn**	**16 19 41.9**	**-1.1**
HABR				MLR	MLR		
comp=Z,84μm,15.0s							
CN2	**Changchun**	**14.59**	**306**	*e*P	**Pn**	**16 20 01.9**	**0.0**
CN2				*es*P	sP	16 20 14.0	-5.6
CN2				*e*S	**Sn**	**16 22 44.0**	**+1.5**
CN2				pmax	pmax		
comp=Z,20nm,1.4s							
JOW	**Kunigami**	**14.79**	**235**	Pn	**Pn**	**16 20 10.0**	**+5.4**
comp=Z,8.2nm,0.3s,baz=32,slow=21,SNR=28							
KLR	**Kul'dur**	**14.93**	**334**	*e*P	**Pn**	**16 20 00.0**	**-6.3**
SNY	**Shenyang**	**15.18**	**297**	||P	**Pn**	**16 20 10.4**	**+0.7**
SNY				pmax	pmax		
comp=Z,320nm,1.4s							
DL2	**Dalian**	**16.17**	**286**	P	**Pn**	**16 20 24.0**	**+1.4**
DL2				S	**Sn**	**16 23 21.1**	**+0.1**
DL2				pmax	pmax		
comp=Z,190nm,1.1s							
DL2				pmax	pmax		
comp=Z,12μm,11.9s							
DL2				LR	LR		
comp=N,41μm,12.6s							
DL2				LR	LR		
comp=E,86μm,14.0s							
DL2				LR	LR		
comp=Z,95μm,14.7s							
SKR	**Severo-Kuril's**	**17.80**	**31**	*e*P	**Pn**	**16 20 41.0**	**-1.8**
SKR				*e*		16 23 51.0	
SKR				pmax	pmax		
comp=E,220nm,1.0s							
SKR				pmax	pmax		
comp=Z,270nm,1.0s							
SSE	**Sheshan**	**17.84**	**259**	P	**Pn**	**16 20 42.2**	**-1.4**
SSE				pP	pP	16 20 52.4	+0.4
SSE				S	**Sn**	**16 24 01.7**	**+0.1**
SSE				pmax	pmax		
comp=Z,160nm,1.0s							
SSE				pmax	pmax		
comp=Z,22μm,12.0s							
SSE				LR	LR		
comp=N,49μm,17.1s							
SSE				LR	LR		
comp=E,33μm,17.1s							
SSE				LR	LR		
comp=Z,66μm,13.6s							
NJ2	**Nanjing**	**19.38**	**264**	*e*P	**Pn**	**16 21 00.0**	**-2.2**
NJ2				pP	pP	16 21 04.1	-4.8
NJ2				sP	sP	16 21 08.2	-4.5
NJ2				PP		16 21 16.8	
NJ2				S	**Sn**	**16 24 30.5**	**-8.2**
NJ2				sS	sS	16 24 35.8	-15
NJ2				pmax	pmax		
comp=Z,30nm,0.6s							
NJ2				pmax	pmax		
comp=Z,3μm,3.9s							
NJ2				LR	LR		
comp=N,65μm,13.6s							
NJ2				LR	LR		
comp=E,44μm,16.5s							
NJ2				LR	LR		
comp=Z,38μm,12.4s							
TIA	**Tai'an**	**19.85**	**277**	P	**Pn**	**16 21 04.5**	**-3.3**
TIA				pmax	pmax		
comp=Z,200nm,1.3s							
PEA0B	**Petropavlovsk-**	**20.28**	**29**	*e*P	**P**	**16 21 09.7**	**-0.8**
PETK	**Petropavlovsk-**	**20.28**	**29**	P	**P**	**16 21 10.1**	**-0.4**
comp=Z,74nm,0.9s,baz=208,slow=4.8,SNR=28							
BJI	**Beijing**	**20.45**	**289**	P	**P**	**16 21 09.7**	**-2.8**
BJI				pP		16 21 20.4	
BJI				sP	sP	16 21 25.0	+0.7
BJI				S	**S**	**16 24 59.1**	**-0.8**
BJI				pmax	pmax		
comp=Z,220nm,2.0s							
BJI				LR	LR		
comp=N,59μm,14.3s,MS6.2							
BJI				LR	LR		
comp=E,25μm,12.6s,MS6.2							
BJI				LR	LR		
comp=Z,35μm,18.1s							
BJT	**Baijiatuau**	**20.45**	**288**	*e*P	**P**	**16 21 10.9**	**-1.7**
PET	**Petropavlovsk**	**20.59**	**30**	*e*P	**P**	**16 21 13.4**	**-0.5**
PET				*e*S	**S**	**16 25 03.1**	**+0.6**
PET				pmax	pmax		
comp=Z,407nm,1.3s							
PET				MLR	MLR		
comp=Z,33μm,16.0s,MS5.8							
PET	**Petropavlovsk**	**20.59**	**30**	*e*P	**P**	**16 21 11.1**	**-2.9**
comp=Z,574nm,1.3s							
TATO	**Taipei**	**20.67**	**243**	*e*P	**P**	**16 21 10.4**	**-4.6**
TATO	**Taipei**	**20.67**	**243**	P	**P**	**16 21 12.6**	**-2.4**
SNR=7.5							
TATO				P		16 21 12.6	
SNR=7.5							
HIA	**Hailar**	**20.68**	**316**	*e*P	**P**	**16 21 12.2**	**-2.7**
HIA				pmax	pmax		
comp=Z,142nm,0.8s							
HIA	**Hailar**	**20.68**	**316**	*e*P	**P**	**16 21 12.2**	**-2.7**
comp=Z,142nm,0.8s							
YHNB	**Yeheng**	**20.94**	**242**	*e*P	**P**	**16 21 14.9**	**-3.1**
comp=Z,54nm,0.7s							
NACB	**Ninganchiao**	**21.09**	**241**	*e*P	**P**	**16 21 16.9**	**-2.7**
comp=Z,51nm,0.6s,mb5.0							
SSLB	**Suanglung**	**21.79**	**241**	*e*P	**P**	**16 21 23.9**	**-3.1**
YULB	**Yu-li**	**21.80**	**240**	*e*P	**P**	**16 21 23.5**	**-3.7**
comp=Z,131nm,1.0s,mb5.3							
TPUB	**Ta-pu**	**22.33**	**241**	*e*P	**P**	**16 21 29.3**	**-3.5**
TWG	**Pinlang**	**22.33**	**239**	*e*P	**P**	**16 21 29.6**	**-3.3**
GUMO	**Guam**	**22.70**	**172**	P	**P**	**16 21 36.3**	**-0.4**
GUMO				pmax	pmax		
comp=Z,2μm,1.1s,mb6.5							
GUMO	**Guam**	**22.70**	**172**	P	**P**	**16 21 36.3**	**-0.4**
comp=Z,178nm,1.1s,mb5.4,baz=33,slow=1.6,SNR=3.7							
GUMO	**Guam**	**22.70**	**172**	*e*P	**P**	**16 21 35.8**	**-1.0**
comp=Z,3μm,1.3s,mb6.6							
QZH	**Quanzhou**	**22.81**	**247**	*i*P	**P**	**16 21 34.6**	**-3.4**
QZH				S	**S**	**16 25 37.1**	**-8.4**
QZH				pmax	pmax		
comp=Z,280nm,1.0s,mb5.7							
QZH				LR	LR		
comp=N,41μm,12.0s,MS6.3							
QZH				LR	LR		
comp=E,50μm,12.7s,MS6.3							
QZH				LR	LR		
comp=Z,118μm,18.1s							
BBP	**Basco**	**23.37**	**233**	*e*P	**P**	**16 21 43.2**	**-0.6**
TIY	**Taiyuan**	**23.43**	**282**	*e*P	**P**	**16 21 42.2**	**-2.1**
TIY				LR	LR		
comp=N,81μm,14.2s,MS6.6							
TIY				LR	LR		
comp=E,142μm,14.3s,MS6.6							
TIY				LR	LR		
comp=Z,170μm,14.6s,MS6.6							
NRGR	**Nerungri**	**23.45**	**336**	*i* P	**P**	**16 21 42.8**	**-1.6**
NRGR				S	**S**	**16 25 52.5**	**-2.9**
NRGR				smax			
comp=E,414nm,1.2s							
CLNS	**Chul'man**	**23.55**	**337**	*e*P	**P**	**16 21 43.3**	**-1.9**
CLNS				*e*PP		16 21 51.6	
CLNS				*e*		16 22 10.6	
CLNS				*e*		16 25 24.9	
CLNS				*e*S	**S**	**16 25 55.7**	**-1.1**
CLNS				pmax	pmax		
comp=Z,434nm,1.1s,mb5.8							
CLNS				pmax	pmax		
comp=E,137nm,1.4s							
CLNS				pmax	pmax		
comp=N,478nm,1.4s							
CLNS				pmax	pmax		
comp=E,112nm,1.0s							
CLNS				pmax	pmax		
comp=Z,157nm,1.0s,mb5.4							
CLNS				pmax	pmax		
comp=N,94nm,0.8s							
CLNS				smax			
comp=E,14μm,14.3s							
CLNS				smax			
comp=N,14μm,12.8s							
CLNS				MLR	MLR		
comp=N,58μm,15.0s,MS6.3							
CLNS				MLR	MLR		
comp=Z,55μm,13.0s,MS6.2							
CLNS				MLR	MLR		
comp=E,37μm,13.0s,MS6.3							
HHC	**Hu-ho-hao-te**	**23.99**	**290**	*e*P	**P**	**16 21 47.2**	**-2.3**
HHC				pP		16 21 56.6	
HHC				sP	sP	16 22 00.9	-0.8
HHC				PP		16 22 21.8	
HHC				PcP	PcP	16 25 31.9	+1.0
HHC				S	**S**	**16 25 59.3**	**-5.2**
HHC				sS	sS	16 26 14.2	-4.4
HHC				SS		16 26 50.2	
HHC				ScP	ScP	16 29 04.7	-2.4
HHC				PcS	PcS	16 29 09.1	-1.4
HHC				pmax	pmax		
comp=Z,190nm,1.6s,mb5.3							
HHC				LR	LR		
comp=N,22μm,13.9s,MS6.3							
HHC				LR	LR		
comp=E,61μm,13.3s,MS6.3							
HHC				LR	LR		
comp=Z,67μm,12.5s,MS6.3							
BTO	**Baotou**	**25.16**	**290**	*e*P	**P**	**16 21 58.6**	**-1.5**
BTO				LR	LR		
comp=N,15μm,13.7s,MS5.9							
BTO				LR	LR		
comp=E,22μm,14.3s,MS5.9							
CIT	**Chita**	**25.46**	**317**	*e*P	**P**	**16 22 02.2**	**-0.5**
CIT				*e*		16 22 14.2	
CIT				pmax	pmax		
comp=Z,3μm,2.3s,mb6.4							
PALP	**Palanan**	**25.63**	**227**	*e*P	**P**	**16 22 02.6**	**-1.9**
APYP	**Conner**	**25.73**	**230**	*e*P	**P**	**16 22 03.3**	**-2.2**
CAUP	**Cauayan**	**26.08**	**228**	*e*P	**P**	**16 22 08.1**	**-0.6**
ABRA

YAK smax
comp=N,8μm,4.7s
YAK smax
comp=E,9μm,6.4s
YAK MLR MLR
comp=E,21μm,14.0s,MS6.3
YAK MLR MLR
comp=Z,50μm,12.0s,MS6.3
YAK MLR MLR
comp=N,53μm,15.0s,MS6.3
YAK Yakutsk 26.93 347 *e*P **P 16 22 14.9 -1.0**
comp=N,767nm,1.1s,mb6.1
BALP Baler 27.17 227 *e*P **P 16 22 17.8 -0.6**
PVCP Virac 27.50 220 *e*P **P 16 22 20.7 -0.7**
ENH Enshi 27.54 267 *e*P **P 16 22 20.8 -0.9**
comp=N,387nm,0.6s,mb6.2
SEY Seymchan 27.55 11⇓*e*P **P 16 22 22.4 +1.0**
WAKE Wake Island 27.64 121 P **P 16 22 21.1 -1.5**
comp=N,1μm,1.6s,mb6.3
BOLP Bolinao 27.68 230 *e*P **P 16 22 21.8 -1.3**
ULN Ulaanbaatar 28.04 305 *e*P **P 16 22 26.8 +0.8**
ULN pmax pmax
comp=Z,287nm,1.1s,mb5.8
ULN Ulaanbaatar 28.04 305 *e*P **P 16 22 26.8 +0.8**
comp=Z,287nm,1.1s,mb5.8
ULN Ulaanbaatar 28.04 305 P **P 16 22 27.6 +1.7**
SNR=37
ULN P 16 22 27.6
SNR=37
BOD Bodaibo 28.37 328 *e*P **P 16 22 29.2 +0.4**
BOD Bodaibo 28.37 328 *e* **P 16 22 29.2 +0.4**
SONM Songino Array 28.47 305 P **P 16 22 31.0 +1.2**
comp=Z,153nm,0.8s,mb5.7,baz=102,slow=8.3,SNR=60
AUQP San Andres 28.50 222 *e*P **P 16 22 31.3 +0.9**
TGY Tagaytay City 28.84 226 P **P 16 22 32.8 -0.6**
comp=Z,164nm,0.4s,mb6.2,baz=130,slow=19,SNR=4.7
BOAC Boac 28.85 223 *e*P **P 16 22 32.6 -0.8**
LUBP Lubang 29.54 226 *e*P **P 16 22 37.1 -2.4**
SJMP San Jose 30.06 223 *e*P **P 16 22 42.7 -1.5**
MSLP Maasin 30.14 215 *e*P **P 16 22 44.0 -0.9**
LZH Lanzhou 30.47 281 P **P 16 22 48.9 +1.2**
LZH pP pP 16 22 59.1 +2.7
LZH PP PP 16 23 47.5 -9.2
LZH S **S 16 27 45.6 -1.4**
LZH sS sS 16 28 02.1 +0.8
LZH SS SS 16 29 26.0 -31
LZH pmax pmax
comp=Z,990nm,1.6s,mb6.3
LZH pmax pmax
comp=Z,4μm,7.8s
LZH LR LR
comp=E,92μm,15.1s
LZH LR LR
comp=Z,110μm,16.4s,MS6.6
GUIM Jordan 30.81 219 *e*P **P 16 22 49.6 -1.2**
IRK Irkutsk 30.85 313⇓*i*P **P 16 22 51.3 +0.5**
IRK *e* 16 29 33.3
IRK pmax pmax
comp=Z,587nm,2.0s,mb6.1
BUSP Coron 30.95 224 *e*P **P 16 22 50.8 -1.2**
ZAK Zakamensk 30.99 309 *e*P **P 16 22 52.5 +0.4**
ZAK Zakamensk 30.99 309 *e* **P 16 22 52.5 +0.4**
TLY Talaya 31.07 312 P **P 16 22 54.9 +2.1**
comp=Z,1μm,1.7s,mb6.5,SNR=11
TLY Talaya 31.07 312 *e*P **P 16 22 53.6 +0.8**
TLY pmax pmax
comp=Z,398nm,1.3s,mb6.1
TLY MLR MLR
comp=Z,82μm,16.0s,MS6.5
TLY Talaya 31.07 312 *e*P **P 16 22 53.2 +0.5**
comp=Z,180nm,1.0s,mb5.8
TLY Talaya 31.07 312 P **P 16 22 54.0 +1.2**
SNR=32
TLY P 16 22 54.0
SNR=32
GYA Guiyang 31.35 262⇑*i*P **P 16 22 54.8 -0.7**
GYA pP pP 16 23 04.8 +0.6
GYA PP PP 16 24 00.3 -6.2
GYA PcP PcP 16 25 49.6 +0.6
GYA S **S 16 28 01.2 +0.3**
GYA sS sS 16 28 14.9 -0.3
GYA ScP ScP 16 29 29.0 -0.8
GYA SS SS 16 29 47.5 -28
GYA pmax pmax
comp=Z,60nm,0.8s,mb5.5
GYA pmax pmax
comp=Z,9μm,5.2s
GYA LR LR
comp=N,33μm,15.5s,MS6.4
GYA LR LR
comp=E,53μm,16.9s,MS6.4
GYA LR LR
comp=Z,59μm,15.7s,MS6.4
CUYO Cuyo Island 31.45 222 *e*P **P 16 22 57.8 +1.4**
CD2 Chengdu 31.95 272 P **P 16 23 00.6 -0.1**
CD2 pP pP 16 23 10.1 +0.7
CD2 sP sP 16 23 14.2 +1.2
CD2 PP PP 16 24 06.4 -6.7
CD2 S **S 16 28 07.4 -2.7**
CD2 sS sS 16 28 23.4 -1.1
CD2 SS SS 16 29 59.2 -28
CD2 pmax pmax
comp=Z,280nm,1.0s,mb6.0
CD2 pmax pmax
comp=Z,28μm,11.6s
CD2 LR LR
comp=N,69μm,14.9s
CD2 LR LR
comp=Z,67μm,16.7s,MS6.4
ENPP El Nido 32.04 225 *e*P **P 16 23 00.6 -1.0**
MATI Mati 32.39 210 *e*P **P 16 23 03.5 -1.2**
DMPH Davao City--Mi 32.57 211 *e*P **P 16 23 04.8 -1.4**
MOY Mondy 32.68 311 *e*P **P 16 23 07.3 +0.4**
MOY pmax pmax
comp=Z,758nm,2.0s,mb6.3
QIZ Qiongzhong 32.84 247 P **P 16 23 10.5 +1.9**
QIZ pmax pmax
comp=Z,41nm,1.7s,mb5.1
QIZ LR LR
comp=N,25μm,14.7s
QIZ LR LR
comp=Z,27μm,18.2s,MS6.0
QIZ Qiongzhong 32.84 247 P **P 16 23 08.0 -0.6**
comp=Z,52nm,1.2s,mb5.3
GTA Gaotai 33.06 288 P **P 16 23 10.8 +0.4**
GTA pP pP 16 23 20.2 +1.1
GTA sP sP 16 23 24.5 +1.8
GTA PcP PcP 16 25 55.5 +2.1
GTA S **S 16 28 27.2 -0.2**
GTA SS SS 16 30 29.4 -21
GTA ScS ScS 16 33 35.7 -0.1
GTA pmax pmax
comp=Z,110nm,1.1s,mb5.7
GTA pmax pmax
comp=Z,76μm,6.9s
GTA LR LR
comp=N,25μm,18.3s,MS6.3
GTA LR LR
comp=E,52μm,17.4s,MS6.3
GTA LR LR
comp=Z,58μm,18.3s,MS6.3
BILL Bilibino 34.75 16 *e*P **P 16 23 22.7 -2.0**
BILL Bilibino 34.75 16 *e*P **P 16 23 25.0 +0.3**
BILL *e* pP 16 23 34.3 +0.9
BILL *e* 16 24 41.0
BILL *e* 16 25 59.8
BILL pmax pmax
comp=Z,109nm,1.2s,mb5.7
BILL MLR MLR
comp=Z,16μm,16.0s,MS5.9
BILL Bilibino 34.75 16 *e*P **P 16 23 23.6 -1.1**
comp=Z,82nm,1.1s,mb5.6
BATP Bataraza 34.91 224 *e*P **P 16 23 25.9 -0.8**
KMI Kunming 35.10 263 P **P 16 23 28.0 -0.3**
KMI pP pP 16 23 38.6 +1.6
KMI PP PP 16 24 46.7 -1.4
KMI S **S 16 28 57.5 -1.7**
KMI SS SS 16 31 14.9 -17
KMI pmax pmax
comp=Z,270nm,1.7s,mb5.9
KMI LR LR
comp=N,44μm,14.5s,MS6.5
KMI LR LR
comp=E,41μm,14.0s,MS6.5
KMI LR LR
comp=Z,51μm,12.5s,MS6.5
TIXI Tiksi 36.14 353 *e*P **P 16 23 36.6 0.0**
TIXI pmax pmax
comp=Z,74nm,1.0s,mb5.6
TIXI Tiksi 36.14 353 *e*P **P 16 23 35.8 -0.8**
TIXI pmax pmax
comp=Z,140nm,1.4s,mb5.7
TIXI MLR MLR
comp=N,29μm,15.0s,MS6.3
TIXI MLR MLR
comp=Z,45μm,15.0s,MS6.4
TIXI MLR MLR
comp=E,30μm,16.0s,MS6.3
TIXI Tiksi 36.14 353 *e*P **P 16 23 36.6 0.0**
comp=E,74nm,1.0s,mb5.6
KDM Kudat 37.00 224 P **P 16 23 45.2 +0.6**
MYLDM Lahad Datu 37.54 220 P **P 16 23 51.2 +2.1**
MYLDM Lahad Datu 37.54 220 P **P 16 23 51.3 +2.2**
MYLDM Lahad Datu 37.54 220 P **P 16 23 51.2 +2.1**
SDKM Sandakan 37.85 222 P **P 16 23 53.2 +1.5**
SDKM Sandakan 37.85 222 P **P 16 23 53.2 +1.5**
KKM Kota Kinabalu 38.06 224 P **P 16 23 54.1 +0.5**
KKM Kota Kinabalu 38.06 224 P **P 16 23 54.1 +0.5**
KKM Kota Kinabalu 38.06 224 *e*P **P 16 23 53.0 -0.5**
comp=E,174nm,1.3s,mb5.6
KKTK Khon Kaen 39.77 251 P **P 16 24 09.0 +1.1**
comp=E,679nm,0.7s,mb6.5
CHTO Chiang Mai 41.35 257 *e*P **P 16 24 20.6 -0.3**
CHTO pmax pmax
comp=Z,422nm,1.6s,mb5.8
CHTO Chiang Mai 41.35 257 *e*P **P 16 24 20.6 -0.3**
comp=Z,422nm,1.6s,mb5.8
CHTO Chiang Mai 41.35 257 P **P 16 24 21.6 +0.7**
SNR=45
CHTO P 16 24 21.6
SNR=45
TNA Tin City 41.45 29 *e*P **P 16 24 21.2 +0.1**
comp=Z,217nm,1.6s,mb5.5
WMQ Urumqi 41.45 298 P **P 16 24 23.2 +1.7**
WMQ PP PP 16 26 03.0 +5.7
WMQ PcP PcP 16 26 23.6 +4.7
WMQ S **S 16 30 37.5 +2.8**
WMQ sS sS 16 30 44.6 -4.6
WMQ SS SS 16 33 36.1 -3.2
WMQ pmax pmax
comp=Z,430nm,2.0s,mb5.7
WMQ pmax pmax
comp=Z,10μm,3.2s
WMQ LR LR
comp=N,13μm,12.0s,MS6.5
WMQ LR LR
comp=E,37μm,15.0s,MS6.5
WMQ LR LR
comp=Z,25μm,18.0s,MS6.1
CMAR Chiang Mai Arr 41.55 256 P **P 16 24 22.9 +0.3**
comp=Z,30nm,0.9s,mb4.9,baz=46,slow=6.2,SNR=43
BTM Bintulu 42.16 226 P **P 16 24 28.6 +1.1**
BTM Bintulu 42.16 226 P **P 16 24 28.6 +1.1**
LSA Lhasa 42.55 276 *e*P **P 16 24 32.6 +2.0**
LSA pmax pmax
comp=Z,241nm,1.2s,mb5.8
LSA Lhasa 42.55 276 *e*P **P 16 24 32.5 +1.9**
comp=Z,241nm,1.2s,mb5.8
ZAA0 Zalesovo Array 42.67 313 *e*P **P 16 24 31.7 +0.5**
ZALV Zalesovo Beam 42.67 313 P **P 16 24 31.2 0.0**
comp=Z,118nm,0.8s,mb5.7,baz=91,slow=7.4,SNR=44
SBUM Sibu 43.27 226 P **P 16 24 36.3 -0.3**
SBUM Sibu 43.27 226 P **P 16 24 37.1 +0.6**
NVS Novosibirsk 43.60 314 *e*P **P 16 24 38.7 -0.1**
NVS *e*S **S 16 31 03.7 -2.4**
NVS *e* 16 34 32.5
NVS pmax pmax
comp=E,400nm,1.3s
NVS pmax pmax
comp=Z,410nm,1.3s,mb6.0
NVS pmax pmax
comp=N,100nm,1.6s
NVS smax
comp=N,1μm,3.6s
NVS smax
comp=E,1μm,3.5s
SHL Shillong 43.66 270 *e*P **P 16 24 40.0 +0.3**
SHL *e*x x 16 31 16.0
NNT Nongplab 44.43 249 P **P 16 24 46.8 +0.9**
MK31 Makanchi Array 44.78 303 *e*P **P 16 24 48.6 +0.2**
MKAR Makanchi Array 44.78 303 P **P 16 24 48.0 -0.4**
comp=E,82nm,0.7s,mb5.7,baz=91,slow=9.7,SNR=33
TARA Tarawa 45.13 133 *e*P **P 16 24 50.8 -0.6**
comp=E,2μm,1.9s,mb6.5
KSM Kuching 45.18 227 P **P 16 24 53.2 +1.4**
KSM Kuching 45.18 227 P **P 16 24 53.2 +1.4**
KSM Kuching 45.18 227⇑*e*P **P 16 24 52.4 +0.6**
comp=E,1μm,1.8s,mb6.4
KAPI Kappang 45.89 211 P **P 16 24 57.6 +0.2**
comp=E,4μm,1.5s,mb7.1,SNR=34
KAPI Kappang 45.89 211 *e*P **P 16 24 56.6 -0.8**
comp=E,2μm,1.8s,mb6.8
KAPI Kappang 45.89 211 P **P 16 24 58.2 +0.8**
SNR=55
KAPI P 16 24 58.2
SNR=55
TTA Tatalina 45.95 34 *e*P **P 16 24 58.3 +0.9**
SVW2 Sparrevohn 46.02 37 *e*P **P 16 24 58.5 +0.5**
TAPN Taplejung 46.27 275 *e*P **P 16 25 00.8 +0.5**
KURK Kurchatov 46.65 309 P **P 16 25 03.7 +0.7**
comp=E,2μm,0.9s,mb7.0,SNR=20
KURK Kurchatov 46.65 309*c i*P **P 16 25 03.0 0.0**
KURK pmax pmax
comp=Z,778nm,1.9s,mb6.3
KURK Kurchatov 46.65 309 P **P 16 25 03.5 +0.4**
comp=Z,153nm,0.7s,mb6.0,baz=85,slow=8.2,SNR=45
KURK Kurchatov 46.65 309 *e*P **P 16 25 03.2 +0.1**
comp=Z,214nm,0.8s,mb6.1
KURK Kurchatov 46.65 309 P **P 16 25 03.3 +0.3**
SNR=34
KURK P 16 25 03.3
SNR=34
KTGM Kuala Trenggan 46.87 238 P **P 16 25 06.4 +1.2**
KTGM Kuala Trenggan 46.87 238 P **P 16 25 06.4 +1.2**
RAMN Ramite 47.33 275 *e*P **P 16 25 09.1 +0.4**
comp=Z,2μm,1.1s,mb6.8
SNG Songkhla 47.35 243 P **P 16 25 09.0 +0.1**
comp=Z,280nm,1.0s,mb6.2
JIRN Jiri 47.36 276 *e*P **P 16 25 10.0 +1.1**
RSO Redoubt South 47.39 38 *e*P **P 16 25 08.8 +0.1**
GUN Gumba 47.50 277 *e*P **P 16 25 10.8 +0.8**
comp=Z,4μm,1.9s,mb7.1
KDAK Kodiak Island 47.54 41 P **P 16 25 09.0 -0.9**
comp=Z,558nm,1.4s,mb6.4,SNR=6.7
KDAK Kodiak Island 47.54 41 *i*P **P 16 25 09.0 -0.9**
KDAK Kodiak Island 47.54 41 P **P 16 25 08.8 -1.1**
comp=Z,59nm,0.9s,mb5.6,baz=307,slow=3.7,SNR=14
KDAK Kodiak Island 47.54 41 *e*P **P 16 25 08.5 -1.4**
comp=Z,282nm,1.4s,mb6.1
CHUM Lake Minchumin 47.68 33 *e*P **P 16 25 11.3 +0.4**
comp=Z,128nm,1.4s,mb5.8
PPLA Purkeypile 47.70 34 *e*P **P 16 25 11.9 +0.9**
comp=Z,261nm,1.5s,mb6.0
PKI Pulchoki 48.02 276 *e*P **P 16 25 14.7 +0.6**
comp=Z,1μm,1.7s,mb6.7
PKIN Phulchoki 48.03 276 *e*P **P 16 25 14.2 +0.1**
PKIN Phulchoki 48.03 276 *e*P **P 16 25 15.1 +1.0**
comp=Z,270nm,0.7s,mb6.4
KKN Kakani 48.04 277 *e*P **P 16 25 14.6 +0.5**
comp=Z,2μm,1.8s,mb6.9
DMN Daman 48.25 277 *e*P **P 16 25 16.2 +0.4**
comp=Z,2μm,2.0s,mb6.8
BPAW Bear Paw Mtn. 48.28 33 *e*P **P 16 25 15.3 -0.2**
comp=Z,255nm,1.9s,mb5.9
KTH Kantishna Hill 48.29 34 *e*P **P 16 25 15.7 +0.1**
comp=Z,306nm,1.5s,mb6.1
GKN Gorkha 48.46 277 *e*P **P 16 25 17.8 +0.4**
comp=Z,4μm,1.6s,mb7.1
TRF Thorofare Moun 48.57 34 *e*P **P 16 25 17.6 -0.2**
comp=Z,65nm,1.2s,mb5.5
KULM Kulim 48.63 241 P **P 16 25 20.0 +1.2**
KULM Kulim 48.63 241 P **P 16 25 20.0 +1.2**
COLD Coldfoot 48.75 29 *e*P **P 16 25 19.0 -0.1**
comp=Z,60nm,1.3s,mb5.5
RC01 Rabbit Creek A 48.86 37 *e*P **P 16 25 19.3 -0.7**
comp=Z,197nm,1.3s,mb6.0
IPM Ipoh 48.94 240 P **P 16 25 21.1 -0.1**
IPM Ipoh 48.94 240 P **P 16 25 21.1 -0.1**
MYKOM Kota Tinggi 48.98 234 P **P 16 25 22.1 +0.5**
MYKOM Kota Tinggi 48.98 234 P **P 16 25 22.1 +0.5**
SEW Seward 49.05 38 *e*P **P 16 25 20.9 -0.6**
comp=Z,217nm,1.3s,mb6.0
PMR Palmer 49.14 36 *e*P **P 16 25 22.4 +0.3**
PMR pmax pmax
comp=Z,351nm,2.2s,mb6.0
PMR Palmer 49.14 36 *e*P **P 16 25 22.4 +0.3**
comp=Z,351nm,2.2s,mb6.0
KGM Kluang 49.17 235 P **P 16 25 23.9 +0.9**
KGM Kluang 49.17 235 P **P 16 25 23.9 +0.9**
MCK McKinley 49.18 33 P **P 16 25 22.0 -0.4**
MCK pmax pmax
comp=Z,330nm,1.7s,mb6.1
MCK McKinley 49.18 33 *e*P **P 16 25 21.7 -0.7**
comp=Z,96nm,1.2s,mb5.7
KOLN Koldanda 49.39 278 *e*P **P 16 25 24.8 +0.2**
comp=Z,218nm,0.8s,mb6.2
FRIM Kepong 49.42 238 P **P 16 25 25.2 +0.3**
FRIM Kepong 49.42 238 P **P 16 25 25.8 +0.9**
KAKA Kakadu 49.44 192 *e*P **P 16 25 24.0 -0.9**
comp=Z,352nm,0.9s,mb6.4
COLA College 49.64 32 *e*P **P 16 25 25.8 -0.1**
COLA pmax pmax
comp=Z,288nm,1.8s,mb6.0
COLA College 49.64 32 *e*P **P 16 25 25.8 -0.1**
comp=Z,288nm,1.8s,mb6.0
PYUN Piuthan 49.74 278 *e*P **P 16 25 27.9 +0.7**
comp=Z,1μm,1.3s,mb6.7
COEN Coen 49.91 178 *e*P **P 16 25 28.6 +0.2**
comp=Z,2μm,1.2s,mb6.9
ULHL Ulahol 49.98 298 P **P 16 25 31.2 +2.3**
SNR=17
TKM2 Tokmak 2 50.26 299 *e*P **P 16 25 32.3 +1.4**
TKM2 pmax pmax
comp=Z,378nm,1.1s,mb6.3
TKM2 Tokmak 2 50.26 299 *e*P **P 16 25 32.3 +1.4**
comp=Z,378nm,1.1s,mb6.3
KZA Kyzart 50.74 298 P **P 16 25 36.2 +1.6**
SNR=23
CHMS Chumysh 50.83 299 P **P 16 25 37.1 +1.9**
SNR=16
USP Ospenovka 50.94 300 P **P 16 25 38.0 +2.0**
SNR=15
FRU Bishkek 50.97 299 *e*P **P 16 25 37.0 +0.7**
FRU pmax pmax
comp=Z,350nm,1.8s,mb6.0
KSH Kashi 50.99 295⇑*i*P **P 16 25 41.0 +4.5**
KSH *e*pP pP 16 25 50.0 +4.5
KSH *e*sP sP 16 25 54.1 +5.1
KSH *e*PcP PcP 16 26 56.2 +3.8
KSH *e*PP PP 16 27 38.1 +5.2
KSH *e*ScP ScP 16 30 48.1 +1.6
KSH *e*PcS PcS 16 30 55.1 +5.2
KSH *e*S **S 16 32 54.8 +3.2**
KSH sS sS 16 33 12.2 +5.8
KSH *e*ScS ScS 16 35 25.1 +0.1
KSH *e*SS SS 16 36 29.1 +2.7
KSH pmax pmax
comp=Z,3μm,3.6s
KSH LR LR
comp=N,12μm,14.4s,MS6.3
KSH LR LR
comp=E,16μm,14.0s,MS6.3
AAK Ala-Archa 51.12 299 P **P 16 25 38.0 +0.6**
SNR=13
AAK Ala-Archa 51.12 299 *e*P **P 16 25 37.6 +0.2**
AAK pmax pmax
comp=Z,84nm,1.0s,mb5.6
AAK Ala-Archa 51.12 299 *e*P **P 16 25 37.6 +0.2**
comp=Z,84nm,1.0s,mb5.6
AAK Ala-Archa 51.12 299 P **P 16 25 39.7 +2.2**
SNR=24
AAK P 16 25 39.7
SNR=24
UCH Uchtor 51.22 299 P **P 16 25 41.2 +3.0**
SNR=19
UCH Uchtor 51.22 299 *e*P **P 16 25 39.7 +1.5**
BVAR Borovoye Array 51.33 313 P **P 16 25 39.4 +0.6**
comp=Z,68nm,0.9s,mb5.6,baz=79,slow=7.7,SNR=39
BRVK Borovoye 51.38 313*c i*P **P 16 25 39.5 +0.3**
BRVK pmax pmax
comp=Z,509nm,2.0s,mb6.1
BRVK Borovoye 51.38 313⇑*i*P **P 16 25 39.4 +0.1**
comp=Z,481nm,1.5s,mb6.2
BRVK Borovoye 51.38 313 P **P 16 25 39.5 +0.3**
SNR=42
BRVK P 16 25 39.5
SNR=42
MENT Mentasta 51.57 34 *e*P **P 16 25 40.8 +0.3**
EKS2 Erkin-Say 51.62 299 P **P 16 25 41.8 +0.6**
SNR=14
AML Almayashu 51.83 299⇑*e*P **P 16 25 44.2 +1.4**
comp=Z,298nm,1.1s,mb6.1
ALBI Allahabad 51.91 276 *e*x pP 16 25 54.0 +1.4
EGAK Eagle 52.50 32 *e*P **P 16 25 46.6 -0.8**
comp=Z,389nm,2.0s,mb6.0
DDI Dehra Dun 52.74 283⇓*i*P **P 16 25 49.0 -0.7**
SMLA Simla 53.11 284 *i* P **P 16 25 51.4 -1.0**
SMLA *e*x x 16 25 52.3
comp=Z,640nm,0.6s
SMLA *i* S **S 16 33 23.9 +3.0**
SMLA *i* S **S 16 33 25.3 +4.4**
DAWY Dawson 53.36 33 *e*P **P 16 25 53.7 0.0**
DLH Dalhousie 53.48 287 *e*P **P 16 25 56.0 +0.9**
PNL Peninsula 54.13 38 *e*P **P 16 25 59.2 -0.2**
comp=Z,75nm,1.1s,mb5.5
INK Inuvik 55.01 27 P **P 16 26 05.7 0.0**
INK pmax pmax
comp=Z,53nm,0.9s
INK Inuvik 55.01 27 P **P 16 26 05.7 +0.1**
comp=Z,52nm,0.9s,mb5.6,baz=299,slow=6.6,SNR=35
INK Inuvik 55.01 27 *e*P **P 16 26 05.6 -0.1**
SVE Sverdlovsk 55.94 319⇓*e*P **P 16 26 12.9 +0.3**
SVE pmax pmax
comp=Z,480nm,1.5s,mb6.3
SVE pmax pmax
comp=Z,4μm,15.9s
SVE MLR MLR
comp=Z,60μm,16.0s,MS6.8
FITZ Fitzroy Crossi 56.12 199 *e*P **P 16 26 14.1 -0.1**
comp=Z,109nm,0.8s,mb5.9
FITZ *e*S **S 16 34 00.5 -0.8**
FITZ Fitzroy Crossi 56.12 199 *e*P **P 16 26 14.3 +0.2**
comp=Z,275nm,1.9s,mb6.0
CTA Charters Tower 56.15 175 *e*P **P 16 26 14.0 -0.4**
comp=Z,25nm,1.7s,mb5.0
CTA *e* pP 16 26 21.1 -2.4
CTAO Charters Tower 56.15 175 P **P 16 26 15.4 +1.0**
CTAO pmax pmax
comp=Z,630nm,2.0s,mb6.3
CTAO Charters Tower 56.15 175 *e*P **P 16 26 13.9 -0.4**
comp=Z,626nm,2.0s,mb6.3
SKAG Skagway 56.19 38 *e*P **P 16 26 15.7 +1.4**
comp=Z,177nm,1.8s,mb5.8
WRAB Tennant Creek 56.27 188 P **P 16 26 15.0 -0.2**
comp=Z,1μm,1.3s,mb6.8,SNR=10
WRAB Tennant Creek 56.27 188 *e*P **P 16 26 15.3 +0.1**
WRAB pmax pmax
comp=Z,521nm,1.3s,mb6.4
WRAB Tennant Creek 56.27 188 *e*P **P 16 26 15.3 +0.1**
comp=Z,521nm,1.3s,mb6.4
WB2 Warramunga Arr 56.28 188 *e*P **P 16 26 14.1 -1.2**
WRA Warramunga Arr 56.28 188 P **P 16 26 14.7 -0.6**
comp=Z,50nm,0.9s,mb5.6,baz=6.6,slow=7.1,SNR=44
BHPL Bhopal 56.41 276 *e*P **P 16 26 15.2 -1.3**
BHPL AMb AMB 16 26 20.7
comp=Z,254nm,2.1s,mb5.9
FUNA Funafuti 56.74 134 *e*P **P 16 26 19.0 +0.2**
comp=Z,2μm,2.1s,mb6.9
POHA Pohakuloa 56.86 89 P **P 16 26 20.3 +0.6**
comp=Z,534nm,1.4s,mb6.4
KHU Kahuku 57.05 89 *e*P **P 16 26 21.8 +0.8**
AJM Ajmer 57.12 281 *e*P **P 16 26 22.0 +0.6**
SOKR Solikamsk 57.15 323*c i*P **P 16 26 20.9 -0.2**
SOKR pmax pmax
comp=Z,240nm,1.1s,mb6.1
SOKR MLR MLR
comp=Z,22μm,14.0s,MS6.4
ARU Arti 57.16 319 P **P 16 26 21.7 +0.5**
comp=Z,2μm,1.5s,mb6.8,SNR=25
ARU Arti 57.16 319*c i*P **P 16 26 20.8 -0.4**
ARU *e* 16 27 13.8
ARU *e* 16 28 25.2
ARU PPP 16 29 43.5
ARU S **S 16 34 14.4 +0.1**
ARU SS SS 16 38 01.9 -1.0
ARU pmax pmax
comp=Z,673nm,1.7s,mb6.4

ARU pmax pmax
comp=Z,1μm,5.9s
ARU MLR MLR
comp=Z,46μm,16.0s,MS6.7
ARU Arti 57.16 319 *e*P **P 16 26 20.9 -0.2**
comp=Z,554nm,1.4s,mb6.4
HYB Hyderabad 58.45 269 *i* P **P 16 26 31.0 +0.2**
ABKAR Akbulak array 58.67 311⇑ *e*P **P 16 26 31.6 -0.4**
comp=Z,48nm,0.7s,mb5.6
DLBC Dease Lake 59.12 38 P **P 16 26 35.6 +0.7**
comp=Z,16nm,0.9s,mb5.0,baz=284,slow=10.0,SNR=19
DLBC Dease Lake 59.12 38 *e*P **P 16 26 35.9 +1.0**
LATR Latur 59.53 271 *e*P **P 16 26 38.0 -0.4**
ASAR Alice Springs 60.01 188 P **P 16 26 40.5 -0.9**
comp=Z,15nm,0.8s,mb5.1,baz=12,slow=7.6,SNR=12
MBWA Marble Bar 60.73 204 *e*P **P 16 26 45.9 -0.5**
comp=Z,92nm,1.0s,mb5.9
MBWA Marble Bar 60.73 204 P **P 16 26 47.0 +0.6**
SNR=12
MBWA P 16 26 47.0
SNR=12
ALE Alert 60.92 4 P **P 16 26 46.0 -1.0**
comp=Z,714nm,1.1s,mb6.7,SNR=22
SPITS Spitsbergen Ar 61.39 349 P **P 16 26 50.4 +0.2**
comp=Z,39nm,0.9s,mb5.5,baz=121,slow=13,SNR=17
SPB4 Spitsbergen Ar 61.39 349 *e*P **P 16 26 51.0 +0.8**
KBS Kingsbay 61.52 350⇑ *i*P **P 16 26 51.3 +0.2**
KBS AMb AMB 16 26 54.4
comp=Z,217nm,1.4s,mb6.1
KBS Kingsbay 61.52 350 *e*P **P 16 26 51.6 +0.6**
KBS pmax pmax
comp=Z,180nm,1.1s,mb6.1
KBS Kingsbay 61.52 350 *e*P **P 16 26 51.4 +0.4**
comp=Z,181nm,1.1s,mb6.1
POO Poona 61.67 273 *e*P **P 16 26 52.0 -0.9**
POO AMb AMB 16 26 55.8
comp=Z,262nm,1.7s,mb6.1
EIDS Eidsvold 61.87 170 *e*P **P 16 26 53.4 -0.6**
comp=Z,771nm,2.1s,mb6.5
KAD Karad 62.04 272 *e*P **P 16 26 55.0 -0.5**
KAD AMb AMB 16 26 58.0
comp=Z,284nm,2.3s,mb6.0
PALK Pallekele 62.45 258 P **P 16 26 59.4 +1.2**
comp=Z,397nm,1.7s,mb6.3,SNR=5.6
PALK Pallekele 62.45 258 *i* P **P 16 27 00.6 +2.4**
PALK Pallekele 62.45 258 P **P 16 27 00.4 +2.1**
SNR=7.3
PALK P 16 27 00.4
SNR=7.3
NOUC Port Laguerre 62.47 154 *e*P **P 16 26 57.9 -0.2**
BBB Bella Bella 62.48 44 P **P 16 26 56.1 -1.8**
comp=Z,13nm,0.8s,mb5.1,baz=69,slow=10,SNR=3.6
DZM Mont Dzumac 62.49 154 *e*P **P 16 26 56.1 -2.1**
comp=Z,734nm,1.4s,mb6.6
DZM *e*LR LR 16 45 31.8
comp=Z,27μm,20.9s
DZM Mont Dzumac 62.49 154 *e*P **P 16 26 59.3 +1.1**
DZM Mont Dzumac 62.49 154 *e*P **P 16 26 59.2 +1.0**
comp=Z,630nm,1.5s,mb6.5
BHJ Bhuj 62.63 280 *e*P **P 16 26 59.0 -0.4**
BHJ AMb AMB 16 27 02.7
comp=Z,282nm,1.9s,mb6.1
LVZ Lovozero 62.97 336 P **P 16 27 01.2 +0.3**
comp=Z,604nm,1.3s,mb6.6,SNR=11
LVZ Lovozero 62.97 336*c i*P **P 16 27 00.8 -0.1**
LVZ pmax pmax
comp=Z,359nm,2.2s,mb6.1
RES Resolute Bay 63.34 14 P **P 16 27 02.9 -0.3**
RES pmax pmax
comp=Z,97nm,1.1s,mb5.8
RES Resolute Bay 63.34 14 P **P 16 27 02.9 -0.4**
comp=Z,97nm,1.1s,mb5.9,baz=310,slow=7.5,SNR=52
RES Resolute Bay 63.34 14 *e*P **P 16 27 02.5 -0.7**
APA Apatity 63.55 336⇑ *i*P **P 16 27 04.8 +0.1**
APA *e*S **S 16 35 38.0 +2.1**
APA pmax pmax
comp=Z,290nm,1.3s,mb6.2
APA MLR MLR
comp=Z,35μm,18.0s,MS6.6
COCO West Island 64.10 230 *i* P **P 16 27 10.5 +1.4**
COCO West Island 64.10 230 P **P 16 27 10.9 +1.8**
SNR=8.1
COCO P 16 27 10.9
SNR=8.1
KEV Kevo 64.31 339 *e*P **P 16 27 08.0 -1.7**
KEV pmax pmax
comp=Z,35nm,0.8s,mb5.4
KEV Kevo 64.31 339 *e*p **P 16 27 08.0 -1.7**
comp=Z,35nm,0.8s,mb5.4
YKA Yellowknife Ar 64.39 30 P **P 16 27 09.7 -0.6**
comp=Z,26nm,0.9s,mb5.3,baz=296,slow=6.6,SNR=43
YKA Yellowknife Ar 64.39 30 P **P 16 27 09.7 -0.7**
ABKT Ailbek 64.47 299 P **P 16 27 12.0 +0.7**
comp=Z,356nm,1.2s,mb6.3,SNR=13
KLMR Klimovskoe 64.60 328⇑ *i*P **P 16 27 11.4 -0.3**
KLMR *i* 16 29 33.5
KLMR *e*S **S 16 35 49.6 +0.5**
KLMR *e*SS SS 16 40 00.9 +1.8
KLMR pmax pmax
comp=Z,472nm,1.7s,mb6.2
ARCES ARCESS Array B 64.86 340 P **P 16 27 13.1 -0.2**
comp=Z,60nm,0.9s,mb5.6,baz=52,slow=7.9,SNR=40
ARE0 ARCESS Array S 64.86 340 *e*P **P 16 27 13.3 0.0**
KTK1 Kautokeino 65.82 340 *e*P **P 16 27 17.3 -2.3**
AFI Afiamalu 66.40 130 P **P 16 27 25.0 +1.1**
AFI pmax pmax
comp=Z,570nm,1.7s,mb6.3
AFI Afiamalu 66.40 130 *e*P **P 16 27 23.2 -0.7**
comp=Z,568nm,1.8s,mb6.3
TRO Tromso 66.58 341 *e*P **P 16 27 24.0 -0.4**
TRO AMb AMB 16 27 26.6
comp=Z,180nm,1.2s,mb6.0
TRO Tromso 66.58 341 *e*P **P 16 27 24.0 -0.4**
comp=Z,180nm,1.2s,mb6.0
PGC Sidney 66.72 46 *e*P **P 16 27 25.4 -0.2**
comp=Z,4.6nm,1.1s
JOF Joensuu 66.82 332 *e*P **P 16 27 24.6 -1.4**
JOF pmax pmax
comp=Z,40nm,0.7s,mb5.6
JOF Joensuu 66.82 332 *e*p **P 16 27 24.6 -1.4**
comp=Z,40nm,0.7s,mb5.5
ARMA Armidale 66.92 171 *e*P **P 16 27 26.5 -0.4**
ARMA *e*pP pP 16 27 38.4 +2.2
ARMA Armidale 66.92 171 *e*P **P 16 27 27.3 +0.4**
comp=Z,261nm,1.4s,mb6.1
NLWA Neilton Lookou 67.08 47 ⇑P **P 16 27 28.0 +0.1**
baz=67,SNR=8.9
NLWA ⇓S S 16 36 23.7 +3.9
baz=67
NLWA Neilton Lookou 67.08 47 *e*P **P 16 27 28.7 +0.8**
comp=Z,259nm,1.2s,mb6.1
A05A Maple Falls 67.34 45 ⇓P **P 16 27 29.5 -0.1**
baz=67
A05A ⇓S S 16 36 24.0 +1.1
baz=67
MBW Mount Baker 67.56 45 P **P 16 27 31.4 +0.5**
CMW Cultus Mountai 67.61 46 P **P 16 27 32.1 +0.9**
GNW Green Mountain 67.62 47 *e*P **P 16 27 31.4 +0.1**
comp=Z,159nm,1.6s,mb5.8
E03A Lebam 67.68 48 ⇑P **P 16 27 32.6 +0.8**
baz=68
E03A ⇑S S 16 36 30.6 +3.6
baz=68
STKA Stephens Creek 67.72 180 *e*P **P 16 27 31.2 -0.8**
comp=Z,29nm,0.9s,mb5.3
STKA Stephens Creek 67.72 180 P **P 16 27 32.6 +0.6**
comp=Z,12nm,0.7s,mb5.1,baz=344,slow=7.8,SNR=22
STKA Stephens Creek 67.72 180 *e*P **P 16 27 31.0 -1.0**
comp=Z,49nm,1.7s,mb5.3
JCW Jim Creek 67.83 46 *e*P **P 16 27 32.5 -0.2**
FORT Forrest 67.86 193 *e*P **P 16 27 32.9 +0.1**
comp=Z,125nm,0.7s,mb6.0
FORT *e*S S 16 36 29.2 0.0
FORT Forrest 67.86 193 *e*P **P 16 27 32.3 -0.5**
comp=Z,288nm,1.0s,mb6.3
B06A Marblemount 67.93 45 ⇑P **P 16 27 33.6 +0.3**
baz=68
B06A ⇓S S 16 36 31.3 +1.4
baz=68
RPW Rockport 67.94 46 P **P 16 27 33.3 -0.1**
F03A Seaside 67.98 49 ⇑P **P 16 27 34.0 +0.3**
baz=68
F03A ⇓S S 16 36 33.5 +2.8
baz=68
MOS Moscow 68.07 324*α i*P **P 16 27 33.8 -0.2**
MOS *e* 16 30 02.1
MOS *e*S S 16 36 32.3 +0.9
MOS pmax pmax
comp=Z,3μm,2.9s,mb6.8
MOS pmax pmax
comp=Z,723nm,1.7s,mb6.4
MOS MLR MLR
comp=Z,26μm,15.0s,MS6.6
A07A Ashnola River, 68.29 45 ⇓P **P 16 27 35.7 +0.2**
baz=68
D05A Enumclaw 68.30 47 ⇑P **P 16 27 35.9 +0.3**
baz=68
C06A Tall Timber Ra 68.57 46 ⇑P **P 16 27 38.0 +0.7**
baz=68
TDL Tradedollar La 68.58 48 P **P 16 27 37.9 +0.5**
LON Longmire 68.62 47 P **P 16 27 38.2 +0.5**
LON pmax pmax
comp=Z,71nm,1.1s,mb5.5
LON Longmire 68.62 47 *e*P **P 16 27 37.7 0.0**
comp=Z,71nm,1.2s,mb5.5
F04A Amboy 68.67 48 ⇓P **P 16 27 38.3 +0.3**
baz=68,SNR=9.3
B07A Winthrop 68.74 45 ⇑P **P 16 27 38.4 +0.1**
baz=68,SNR=11
NLW Nelson Butte 68.81 45 P **P 16 27 38.9 +0.1**
COR Corvallis 68.81 50 P **P 16 27 42.2 +3.3**
COR pmax pmax
comp=Z,610nm,1.8s,mb6.2
COR Corvallis 68.81 50 *e*P **P 16 27 38.0 -0.8**
comp=Z,614nm,1.8s,mb6.2
OBN Obninsk 68.92 324 P **P 16 27 40.6 +1.3**
comp=Z,1μm,1.4s,mb6.7,SNR=16
OBN Obninsk 68.92 324*c i*P **P 16 27 39.1 -0.2**
OBN *i* 16 28 03.9
OBN *e* 16 30 17.1
OBN pmax pmax
comp=Z,679nm,2.1s,mb6.2
OBN MLR MLR
comp=Z,28μm,15.0s,MS6.6
OBN Obninsk 68.92 324 *e*P **P 16 27 38.6 -0.7**
comp=Z,302nm,1.1s,mb6.1
A08A Turner Farm, O 68.97 44 ⇓P **P 16 27 39.4 -0.3**
baz=69,SNR=9.1
D06A Cle Elum 68.97 46 ⇓P **P 16 27 39.6 -0.2**
baz=69
G04A Mulino 69.00 49 ⇑P **P 16 27 39.8 -0.3**
baz=69
ETW Entiat 69.06 46 P **P 16 27 40.5 +0.1**
KAF Kangasniemi 69.16 333 *e*P **P 16 27 38.4 -2.3**
KAF pmax pmax
comp=Z,29nm,0.6s,mb5.4
KAF Kangasniemi 69.16 333 *e*p **P 16 27 38.4 -2.3**
comp=Z,29nm,0.6s,mb5.4
C07A Waterville 69.17 46 ⇓P **P 16 27 40.7 -0.3**
baz=69,SNR=8.8
MAK Makhachkala 69.18 308*c i*P **P 16 27 41.4 +0.2**
MAK *e* 16 28 13.3
MAK *i* 16 30 16.7
MAK *e*PPP 16 31 52.4
MAK *i* S S 16 36 46.5 +1.5
MAK *i* 16 37 39.3
MAK pmax pmax
comp=Z,2μm,3.7s
MAK pmax pmax
comp=E,88nm,1.0s
MAK pmax pmax
comp=Z,253nm,1.9s,mb5.8
MAK pmax pmax
comp=N,191nm,1.1s
MAK smax
comp=N,6μm,16.4s
MAK smax
comp=E,5μm,9.0s
MAK MLR MLR
comp=E,59μm,18.0s,MS7.0
MAK MLR MLR
comp=Z,43μm,15.0s,MS6.8
MAK MLR MLR
comp=N,36μm,17.0s,MS7.0
E06A Yakima 69.22 47 ⇓P **P 16 27 41.7 +0.3**
baz=69
WTV Waterville 69.23 46 P **P 16 27 42.0 +0.7**
B08A Colville Reser 69.24 45 ⇓P **P 16 27 41.2 -0.3**
baz=69,SNR=13
A09A Danville 69.34 44 ⇑P **P 16 27 42.1 +0.1**
baz=69,SNR=12
VOR Voronezh 69.43 320 *e*P **P 16 27 42.0 -0.6**
VOR pmax pmax
comp=Z,600nm,2.0s,mb6.2
HOOD Mount Hood Mea 69.45 48 *e*P **P 16 27 43.7 +0.9**
comp=Z,337nm,1.2s,mb6.2
H04A Detroit Lake 69.45 49 ⇓P **P 16 27 42.4 -0.4**
baz=69,SNR=8.5
D07A Quincy 69.48 46 ⇑P **P 16 27 42.5 -0.4**
baz=69,SNR=6.9
FINES FINESS Array B 69.67 332 P **P 16 27 43.8 -0.1**
comp=Z,111nm,0.9s,mb5.8,baz=57,slow=7.0,SNR=49
C08A Higginbotham F 69.70 45 ⇑P **P 16 27 43.7 -0.7**
baz=70,SNR=6.6
VSR Storozhevoye 69.73 319 *e*P **P 16 27 44.3 -0.1**
VSR *e* 16 30 15.4
VSR *e*S S 16 36 46.0 -5.2
VSR pmax pmax
comp=Z,350nm,1.5s,mb6.1
VSR pmax pmax
comp=N,100nm,0.9s
VSR pmax pmax
comp=E,110nm,1.0s
VSR pmax pmax
comp=Z,690nm,3.3s
VSR pmax pmax
comp=N,530nm,3.0s
VSR pmax pmax
comp=E,320nm,2.6s
VSR smax
comp=E,740nm,3.7s
VSR smax
comp=Z,300nm,3.9s
VSR smax
comp=N,560nm,2.8s
VORD Divnogorie 69.80 319 *e*P **P 16 27 44.4 -0.4**
VORD *e* 16 30 16.3
VORD *e*S S 16 36 50.2 -1.8
VORD pmax pmax
comp=Z,270nm,1.5s,mb6.0
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,70nm,0.8s
VORD pmax pmax
comp=Z,1μm,4.1s
VORD pmax pmax
comp=N,470nm,2.8s
VORD pmax pmax
comp=E,720nm,3.5s
VORD smax
comp=N,880nm,3.5s
VORD smax
comp=Z,340nm,3.0s
VORD smax
comp=E,410nm,2.5s
EDM Edmonton 69.83 38 P **P 16 27 45.1 +0.1**
EDM Edmonton 69.83 38 *e*P **P 16 27 44.5 -0.6**
E07A Sunnyside 69.88 47 ⇓P **P 16 27 45.9 +0.5**
baz=70
B09A Rice 69.88 44 ⇑P **P 16 27 45.2 -0.2**
baz=70,SNR=14
A10A Northport 69.91 44 ⇑P **P 16 27 45.7 +0.1**
baz=70
HUMO Hull Mountain 70.03 51 P **P 16 27 46.2 -0.3**
comp=E,172nm,1.9s,mb5.7
G06A Carlson Farm, 70.11 48 ⇑P **P 16 27 46.4 -0.4**
baz=70,SNR=10
OD2 Odessa Site #2 70.11 45 *e*P **P 16 27 46.2 -0.6**
comp=E,98nm,1.2s,mb5.6
RSW Rattlesnake Hi 70.12 47 *e*P **P 16 27 46.9 0.0**
comp=E,173nm,1.6s,mb5.7
C09A Chrisman Ranch 70.14 45 ⇑P **P 16 27 46.9 -0.1**
baz=70,SNR=10
HAWA Hanford 70.15 47 *e*P **P 16 27 47.2 +0.1**
comp=E,202nm,1.5s,mb5.8
D08A Wollman Farm, 70.16 46 ⇓P **P 16 27 46.6 -0.5**
baz=70,SNR=15
F07A Phinny Hill Vi 70.18 47 ⇓P **P 16 27 47.3 0.0**
baz=70,SNR=7.5
RIV Riverview 70.23 172 *e*P **P 16 27 51.4 +3.9**
MOR8 Moi Rana 70.23 340 *e*P **P 16 27 45.9 -1.4**
E08A Dider Farm, El 70.38 46 ⇑P **P 16 27 47.8 -0.7**
baz=70,SNR=8.1
B10A Chitwood Farm, 70.47 44 ⇑P **P 16 27 48.9 -0.1**
baz=70
D09A Jones Farm, Ri 70.51 46 ⇑P **P 16 27 48.6 -0.7**
baz=70,SNR=6.8
NEW Newport 70.54 44 *e*P **P 16 27 49.3 -0.2**
NEW pmax pmax
comp=Z,171nm,1.4s
NEW Newport 70.54 44 *e*P **P 16 27 49.2 -0.2**
comp=Z,171nm,1.4s,mb5.8
H06A Lindquist Farm 70.55 48 ⇓P **P 16 27 48.7 -0.9**
baz=70,SNR=10
A11A Hall Mountain, 70.59 43 ⇑P **P 16 27 49.8 +0.1**
baz=70,SNR=16
YBH Yreka Blue Hor 70.64 52 P **P 16 27 50.1 -0.1**
YBH pmax pmax
comp=Z,17nm,1.0s
YBH Yreka Blue Hor 70.64 52 P **P 16 27 50.1 -0.1**
comp=Z,17nm,1.0s,mb4.9,baz=298,slow=6.5,SNR=14
YBH Yreka Blue Hor 70.64 52 *e*P **P 16 27 50.6 +0.4**
comp=Z,67nm,1.2s,mb5.4
C10A Spilker Farm, 70.68 45 ⇑P **P 16 27 50.2 -0.1**
baz=70
GOF Gofitskoye 70.85 312 *i* P **P 16 27 44.3 -7.1**
B11A Sandpoint 70.87 44 ⇑P **P 16 27 51.4 -0.1**
baz=71,SNR=13
E09A Wood Farm, Sta 70.90 46 ⇓P **P 16 27 51.4 -0.3**
baz=71,SNR=9.6
F08A Pendleton 70.92 47 ⇓P **P 16 27 51.4 -0.4**
baz=71,SNR=9.4
A12A Yaak River Ran 70.99 43 ⇓P **P 16 27 52.6 +0.4**
baz=71
JMIC Jan Mayen 71.01 350 P **P 16 27 52.8 +0.9**
comp=Z,23nm,0.4s,mb5.5,baz=169,slow=3.1,SNR=6.8
G08A Pilot Rock 71.08 47 ⇑P **P 16 27 52.4 -0.4**
baz=71,SNR=8.5
D10A Wagner Farm, O 71.11 45 ⇓P **P 16 27 51.9 -1.0**
baz=71,SNR=8.1
LNOR Lincton Mounta 71.17 47 P **P 16 27 54.0 +0.7**
LNOR pmax pmax
comp=Z,100nm,1.6s,mb5.5
LNOR Lincton Mounta 71.17 47 *e*P **P 16 27 53.6 +0.3**
comp=Z,101nm,1.7s,mb5.5
K05A Summer Lake 71.27 51 ⇓P **P 16 27 54.0 0.0**
baz=71,SNR=17
B12A Libby 71.29 43 ⇑P **P 16 27 54.3 +0.3**
baz=71
VSU Vasula 71.30 330*c i*P **P 16 27 53.8 -0.1**
VSU pmax pmax
comp=Z,401nm,1.4s,mb6.2
WDC Whiskeytown Da 71.36 53 *e*P **P 16 27 54.9 +0.3**
WDC pmax pmax
comp=Z,86nm,1.1s,mb5.6
WDC Whiskeytown Da 71.36 53 *e*P **P 16 27 54.9 +0.3**
comp=Z,86nm,1.1s,mb5.6
I07A Izee 71.40 49 ⇑P **P 16 27 54.6 -0.1**
baz=71,SNR=12
WBK Wadi Bani Khal 71.41 285 P **P 16 27 56.7 +1.6**
SNR=8.9
F09A S2 Ranch, Elgi 71.47 47 ⇑P **P 16 27 55.5 +0.3**
baz=71
CAN Canberra 71.48 174 *e*P **P 16 27 56.8 +1.7**
CAN pmax pmax
comp=Z,245nm,1.4s,mb5.9
CAN Canberra 71.48 174 *e*P **P 16 27 56.8 +1.7**
comp=Z,245nm,1.4s,mb5.9
CNB Canberra Magne 71.51 173 *e*P **P 16 28 00.6 +5.4**
SUMG Summit 71.51 0⇑ *i*P **P 16 27 55.9 +1.0**
comp=Z,176nm,1.2s,mb5.9
E10A Myers Farm, Un 71.52 46 ⇓P **P 16 27 55.2 -0.2**
baz=71,SNR=12
ZEI Tsey 71.54 310 *e*P **P 16 27 54.9 -0.7**
ZEI pmax pmax
comp=Z,125nm,1.7s,mb5.6
MTA Mtatsminda 71.55 308 P **P 16 27 56.8 +1.1**
TBLG Delisi 71.57 308 P **P 16 27 57.2 +1.4**
BIDO Bidbid 71.58 286 P **P 16 27 57.5 +1.4**
SNR=12
KIV Kislovodsk 71.65 311 P **P 16 27 57.3 +1.1**
comp=Z,1μm,1.4s,mb6.7,SNR=28
KIV Kislovodsk 71.65 311*c i*P **P 16 27 56.8 +0.6**
KIV *e* 16 28 14.8
KIV *e* 16 30 36.0
KIV *e*S S 16 37 14.7 +0.9
KIV pmax pmax
comp=Z,2μm,5.7s
KIV pmax pmax
comp=Z,288nm,1.2s,mb6.1
KIV MLR MLR
comp=Z,19μm,18.0s,MS6.4
KIV Kislovodsk 71.65 311⇑ *e*P **P 16 27 56.6 +0.4**
comp=Z,346nm,1.1s,mb6.2
D11A Klaveano Farm, 71.65 45 ⇑P **P 16 27 55.8 -0.4**
baz=72,SNR=12
H08A Prairie City 71.67 48 ⇓P **P 16 27 56.5 +0.1**
baz=72,SNR=15
BANOM Banah 71.72 289 P **P 16 27 59.1 +2.1**
SNR=11
F10A Beach Ranch, E 71.73 46 ⇓P **P 16 27 56.7 0.0**
baz=72,SNR=11
KEH Kehvi 71.77 309 P **P 16 27 57.4 +0.4**
C12B Naegeli Ranch, 71.77 44 ⇓P **P 16 27 57.5 +0.6**
baz=72
G09A Cove 71.79 47 ⇑P **P 16 27 57.1 +0.1**
baz=72,SNR=14
GOR Gori 71.83 309 P **P 16 27 59.0 +1.6**
WALA Waterton Lakes 71.88 42 *e*P **P 16 27 57.3 -0.2**
SMDO Samad 71.89 286 P **P 16 27 58.8 +0.8**
SNR=17
ONI Oni 71.91 310 P **P 16 27 59.6 +1.7**
B13A Whitefish 71.96 43 ⇑P **P 16 27 58.0 -0.1**
baz=72,SNR=22
BSMT Bassoo Peak 72.08 44 *e*P **P 16 27 58.7 0.0**
comp=Z,292nm,2.2s,mb5.8
MOD Modoc 72.08 51 *e*P **P 16 27 59.3 +0.4**
comp=Z,114nm,1.4s,mb5.6
E11A Bogner Ranch, 72.11 45 ⇑P **P 16 27 59.2 +0.2**
baz=72,SNR=16
HOQ Hoqain 72.18 286 P **P 16 28 00.2 +0.4**
SNR=20
A14A Double T Ranch 72.19 42 ⇑P **P 16 27 59.6 +0.2**
baz=72,SNR=15
H09A Durkee 72.19 47 ⇓P **P 16 27 59.5 0.0**
baz=72
JMDO Jabal Madar 72.21 285 P **P 16 28 00.6 +0.6**
SNR=12
C13A Hot Springs 72.29 44 ⇓P **P 16 27 59.6 -0.4**
baz=72,SNR=11
BMO Blue Mountains 72.30 47 P **P 16 27 57.7 -2.4**
BMO Blue Mountains 72.30 47 *e*P **P 16 28 00.2 +0.1**
comp=Z,270nm,1.8s,mb5.9
F11A Grangeville 72.40 46 ⇓P **P 16 28 00.7 0.0**
baz=72,SNR=19
GNI Garni 72.41 307*c i*P **P 16 28 02.2 +1.3**
GNI pmax pmax
comp=Z,238nm,1.5s
GNI Garni 72.41 307 *e*P **P 16 28 01.9 +1.0**
comp=Z,316nm,1.6s,mb6.0
GNI Garni 72.41 307 P **P 16 28 03.5 +2.7**
SNR=20
GNI P 16 28 03.5
SNR=20
JTMT Jette 72.42 43 *e*P **P 16 28 00.4 -0.4**
comp=Z,146nm,1.4s,mb5.7
J08A Circle Bar Ran 72.42 49 ⇓P **P 16 28 01.0 +0.1**
baz=72,SNR=15
HATD Hatta, Dubai 72.43 288 P **P 16 28 02.0 +0.8**
SNR=18
E12A Beaver Dam Sad 72.44 45 ⇓P **P 16 28 01.0 +0.1**
baz=72
NWAO Narrogin (SRO) 72.49 201 P **P 16 28 00.9 -0.3**
NWAO pmax pmax
comp=Z,81nm,1.0s
NWAO Narrogin (SRO) 72.49 201 *e*P **P 16 28 00.3 -0.9**
comp=Z,81nm,1.0s,mb5.6
YBMT Yellow Bay 72.50 43 *e*P **P 16 28 01.0 -0.3**
comp=Z,114nm,1.5s,mb5.6
I09A Lost Marbles R 72.53 48 ⇑P **P 16 28 01.6 +0.1**
baz=72,SNR=10
A15A Johnson Ranch, 72.56 42 ⇑P **P 16 28 01.3 -0.3**
baz=72,SNR=9.8
ASHO Ashiyiah 72.56 288 P **P 16 28 03.8 +1.8**
SNR=16
D13A Huson 72.69 44 ⇑P **P 16 28 02.5 +0.1**
baz=72,SNR=9.2
NAZ Nazwa, Dubai 72.71 289 P **P 16 28 04.1 +1.2**
SNR=9.5

SWMT Swartz Lake 72.71 43 eP P 16 28 02.2 -0.3
comp=Z,141nm,1.3s,mb5.7
BSY Bisya 72.72 286 P P 16 28 03.7 +0.7
SNR=15
WVOR Wild Horse Val 72.83 50 eP P 16 28 03.7 +0.4
WVOR pmax pmax
comp=Z,254nm,1.7s,mb5.9
WVOR Wild Horse Val 72.83 50 eP P 16 28 03.7 +0.4
comp=Z,254nm,1.7s,mb5.9
J09A Fry Pan Ranch, 72.86 49 ⇓P P 16 28 03.6 +0.1
baz=73,SNR=16
FAQ Al Faqa, Dubai 72.89 288 P P 16 28 05.5 +1.5
SNR=8.9
ARQ Araqi 72.92 287 P P 16 28 04.8 +0.6
SNR=18
SCO Scoresbysund 72.96 354⇑ iP P 16 28 04.2 +0.6
SCO iS S 16 37 29.5 +1.5
SCO pmax pmax
comp=Z,40nm,1.1s,mb5.3
SCO Scoresbysund 72.96 354⇑ iP P 16 28 04.2 +0.6
comp=Z,40nm,1.1s,mb5.3
SCO iS S 16 37 29.5 +1.5
F12A Elk City 73.00 46 ⇓P P 16 28 04.0 -0.3
baz=73,SNR=15
I10A Payette 73.03 48 ⇑P P 16 28 04.3 -0.2
baz=73
B15A Bradely Ranch, 73.04 42 ⇓P P 16 28 04.1 -0.3
baz=73,SNR=13
MSO Missoula 73.13 44 eP P 16 28 04.5 -0.5
comp=Z,101nm,1.5s,mb5.5
DIGO Kars 73.15 308 iP P 16 28 06.0 +0.8
H11A Donnelly 73.15 47 ⇑P P 16 28 05.1 0.0
baz=73,SNR=14
BEKR Beckwourth 73.15 53 ⇑P P 16 28 04.8 -0.5
baz=73,SNR=18
ASUD Al Ashush, Dub 73.16 288 P P 16 28 06.4 +0.8
SNR=7.1
A16A West Butte Ran 73.19 41 ⇑P P 16 28 05.0 -0.3
baz=73,SNR=10
E13A Victor 73.21 44 ⇓P P 16 28 05.0 -0.6
baz=73
D14A Greenough 73.23 44 ⇓P P 16 28 05.2 -0.4
baz=73,SNR=15
IZAR Zarasai 73.25 328 eP P 16 28 05.8 +0.2
IDID Didziasalis 73.31 327 eP P 16 28 06.2 +0.3
C15A Salmond Ranch, 73.33 43 ⇑P P 16 28 06.0 -0.2
baz=73
MICGM Minsk 73.33 326 eP P 16 28 05.0 -1.1
MNK Minsk 73.35 326⇑ eP P 16 28 05.0 -1.2
MNK e 16 28 16.0
MNK eS S 16 37 30.0 -2.9
MNK pmax pmax
comp=Z,780nm,1.5s,mb6.4
MNK pmax pmax
comp=N,790nm,1.8s
MNK pmax pmax
comp=E,700nm,1.8s
MNK MLR MLR
comp=Z,93µm,15.0s,MS7.2
MNK MLR MLR
comp=N,24µm,15.0s,MS7.0
MNK MLR MLR
comp=E,48µm,15.0s,MS7.0
ISAL Salakas 73.42 328 eP P 16 28 07.0 +0.5
J10A Berg Farm, Mel 73.42 48 ⇓P P 16 28 06.9 +0.1
baz=73
DYDN Diyadin 73.42 307 iP P 16 28 08.2 +1.3
B16A M & M Farms, S 73.44 42 ⇓P P 16 28 06.6 -0.2
baz=73,SNR=13
CHMT Chamberlain Mo 73.47 44 eP P 16 28 06.3 -0.7
comp=E,67nm,1.6s,mb5.3
TOO Toolangi 73.49 177 eP P 16 28 08.4 +1.4
F13A Darby 73.51 45 ⇑P P 16 28 07.0 -0.3
baz=73,SNR=12
NACGM Naroch 73.56 327 eP P 16 28 05.0 -2.4
I11A Placerville 73.63 47 ⇓P P 16 28 07.9 -0.2
baz=73
ARTV Artvin 73.64 309 iP P 16 28 08.8 +0.7
SOC Sochi 73.65 312c iP P 16 28 08.1 0.0
SOC e 16 30 49.6
SOC ePPP 16 32 42.8
SOC eS S 16 37 35.0 -1.6
SOC pmax pmax
comp=Z,130nm,1.1s,mb5.8
SOC pmax pmax
comp=Z,1µm,4.9s
SOC MLR MLR
comp=Z,24µm,21.0s,MS6.5
A17A Triple J Farms 73.66 41 ⇓P P 16 28 07.9 -0.2
baz=74
DAGI Agillar 73.70 309 iP P 16 28 07.3 -1.3
DBOC Boroka 73.71 309 iP P 16 28 08.3 -0.2
K10A MacKenzie Ranc 73.72 49 ⇓P P 16 28 08.7 +0.1
baz=74,SNR=15
C16A Fuhringer Ranc 73.78 42 ⇑P P 16 28 08.9 +0.1
baz=74,SNR=14
D15A Lincoln 73.80 43 ⇑P P 16 28 09.0 +0.1
baz=74
WCN Washoe City 73.85 53 ⇓P P 16 28 09.4 0.0
baz=74
DDEM Demirkent 73.91 309 iP P 16 28 09.8 +0.1
H12A Diamond D Ranc 73.92 46 ⇑P P 16 28 09.7 0.0
baz=74,SNR=22
MFID Camas Ranch 73.99 48 ⇑P P 16 28 10.2 +0.1
baz=74,SNR=14
B17A L&G Farms, Che 74.00 42 ⇑P P 16 28 10.2 +0.1
baz=74,SNR=14
E15A Deer Lodge 74.10 44 ⇑P P 16 28 10.8 +0.1
baz=74,SNR=14
A18A Metzger Ranch, 74.13 41 ⇓P P 16 28 10.5 -0.3
baz=74,SNR=12
SAO San Andreas Ge 74.13 56 P P 16 28 09.9 -1.2
SAO pmax pmax
comp=Z,128nm,1.7s,mb5.6
SAO San Andreas Ge 74.13 56 P P 16 28 09.9 -1.2
comp=Z,128nm,1.7s,mb5.6
CMB Columbia Colle 74.14 54 eP P 16 28 10.9 -0.2
CMB pmax pmax
comp=Z,229nm,1.5s,mb5.9
CMB Columbia Colle 74.14 54 eP P 16 28 10.9 -0.2
comp=Z,229nm,1.5s,mb5.9
TVAN Van 74.16 306 iP P 16 28 13.3 +2.1
I12A Atlanta 74.19 47 ⇓P P 16 28 11.3 0.0
baz=74,SNR=13
K11A Parker Ranch, 74.23 48 ⇓P P 16 28 11.4 -0.1
baz=74,SNR=11
H13A Challis 74.26 46 ⇓P P 16 28 11.4 -0.3
baz=74,SNR=15
FFC Flin Flon 74.26 33 iP P 16 28 11.5 0.0
FFC Flin Flon 74.26 33 eP P 16 28 10.9 -0.6
comp=Z,80nm,1.0s,mb5.6
HOMI Horasan 74.29 308 iP P 16 28 13.0 +1.1
ANN Anapa 74.29 314c iP P 16 28 12.3 +0.4
ANN i 16 28 26.4
ANN i 16 30 59.7
ANN iPPP 16 32 46.3
ANN eS S 16 37 44.0 +0.2
ANN pmax pmax
comp=Z,451nm,2.0s,mb6.0
ANN MLR MLR
comp=N,21µm,19.0s,MS6.7
ANN MLR MLR
comp=E,27µm,19.0s,MS6.7
ANN MLR MLR
comp=Z,19µm,19.0s,MS6.4
G14A Jackson 74.32 45 ⇓P P 16 28 11.6 -0.4
baz=74
D16A Dana Ranch, Ca 74.34 43 ⇑P P 16 28 12.1 -0.1
baz=74,SNR=15
L10A Juniper Basin 74.36 49 ⇓P P 16 28 12.7 +0.4
baz=74,SNR=11
HRY Holter Researc 74.38 43 eP P 16 28 12.2 -0.2
comp=Z,5.1nm,0.7s,mb4.6
C17A Wharram Farm, 74.41 42 ⇑P P 16 28 12.5 -0.1
baz=74,SNR=11
B18A Beardsley Farm 74.48 41 ⇑P P 16 28 13.0 +0.1
baz=74,SNR=14
J12A Stokes Ranch, 74.52 48 ⇑P P 16 28 13.6 +0.3
baz=74
F15A Butte 74.52 44 ⇓P P 16 28 13.3 +0.1
baz=74,SNR=15
LRM Limekiln Ridge 74.56 44 eP P 16 28 13.3 -0.1
comp=Z,1µm,1.2s,mb6.8
E16A East Helena 74.57 43 ⇓P P 16 28 13.2 -0.3
baz=74,SNR=14
FCC Fort Churchill 74.62 27 eP P 16 28 12.6 -1.0

M10A I.L. Ranch, Tu 74.63 50 ⇓P P 16 28 14.2 +0.2
baz=74,SNR=13
ERZM Erzurum 74.71 308 iP P 16 28 16.8 +2.4
I13A Wildhorse Cree 74.72 47 ⇑P P 16 28 14.7 +0.3
baz=74,SNR=13
EGMT Eagleton 74.72 41 ⇓P P 16 28 14.4 +0.1
baz=74,SNR=12
EGMT Eagleton 74.72 41 eP P 16 28 14.0 -0.3
comp=Z,42nm,1.0s,mb5.3
H14A Leadore 74.74 46 ⇑P P 16 28 14.5 0.0
baz=74
HLID Hailey 74.75 47 ⇑P P 16 28 14.9 +0.3
baz=74,SNR=12
HLID Hailey 74.75 47 eP P 16 28 14.9 +0.4
comp=Z,236nm,1.9s,mb5.8
DLMT Dillon 74.75 45 eP P 16 28 14.5 0.0
comp=Z,191nm,1.3s,mb5.9
L11A Cat Creek Ranc 74.75 49 ⇓P P 16 28 14.6 0.0
baz=75,SNR=22
MCMT McKenzie Canyo 74.92 45 eP P 16 28 15.4 -0.1
comp=Z,101nm,2.1s,mb5.4
MOL Molde 74.92 340 eP P 16 28 15.6 +0.4
MOL AMb AMB 16 28 18.4
comp=Z,182nm,3.4s
MOL Molde 74.92 340 eP P 16 28 15.6 +0.4
comp=Z,182nm,3.3s
K12A Draper Farm, C 74.99 48 ⇓P P 16 28 16.2 +0.2
baz=75
F16A Kennard Place, 75.04 44 ⇑P P 16 28 15.9 -0.3
baz=75,SNR=12
NB2 NORSAR Subarra 75.05 337 P P 16 28 15.6 -0.4
comp=Z,253nm,1.1s,mb6.1,baz=40,slow=5.9
NOA NORSAR Array B 75.05 337 P P 16 28 15.7 -0.3
comp=Z,88nm,0.9s,mb5.7,baz=39,slow=5.7,SNR=47
E17A Martinsdale 75.07 43 ⇑P P 16 28 16.5 +0.2
baz=75,SNR=13
AKASG Malin Array Be 75.11 323 P P 16 28 15.9 -0.6
comp=Z,44nm,0.6s,mb5.6,baz=46,slow=5.9,SNR=66
AKBB Malin Array Si 75.11 323 eP P 16 28 15.5 -1.0
AKBB Malin Array Si 75.11 323⇑ eP P 16 28 15.4 -1.1
N10A Dunphy 75.11 50 ⇑P P 16 28 16.4 -0.4
baz=75
MACK Trabzon 75.12 310 iP P 16 28 17.1 +0.4
BOZ Bozeman (W) 75.12 44 ⇓P P 16 28 16.5 -0.2
baz=75,SNR=15
BOZ Bozeman (W) 75.12 44 eP P 16 28 16.2 -0.5
BOZ pmax pmax
comp=Z,243nm,1.7s,mb5.9
BOZ Bozeman (W) 75.12 44 eP P 16 28 16.2 -0.5
comp=Z,243nm,1.7s,mb5.9
KIEV Kiev 75.12 323 eP P 16 28 15.5 -1.1
KIEV pmax pmax
comp=Z,105nm,0.8s,mb5.8
KIEV Kiev 75.12 323 eP P 16 28 15.4 -1.1
comp=Z,105nm,0.8s,mb5.8
M11A Holland Ranch, 75.15 49 ⇓P P 16 28 16.9 0.0
baz=75,SNR=14
KOPT Kop Dagi 75.19 309 iP P 16 28 18.7 +1.5
D18A Linhart Farms, 75.20 42 ⇓P P 16 28 16.5 -0.6
baz=75,SNR=9.5
L12A House Creek Ra 75.21 48 ⇓P P 16 28 17.3 +0.1
baz=75,SNR=8.5
G16A Moss Hill, Enn 75.28 44 ⇓P P 16 28 17.4 -0.2
baz=75,SNR=14
NVAR Mina Array Bea 75.28 53 P P 16 28 18.1 +0.4
comp=Z,17nm,0.8s,mb5.0,baz=285,slow=6.7,SNR=20
NAO01 NORSAR Array S 75.31 337⇑ iP P 16 28 16.9 -0.6
comp=Z,96nm,1.1s,mb5.6
O10A Cortez Mining, 75.36 51 ⇑P P 16 28 18.3 +0.1
baz=75,SNR=8.7
MLAC Mammoth Lakes 75.38 54 ⇑P P 16 28 18.2 -0.1
baz=75
J14A Carey 75.41 47 ⇓P P 16 28 19.4 +1.0
baz=75,SNR=12
K13A Stover Farm, H 75.47 48 ⇓P P 16 28 18.7 0.0
baz=75
F17A Fitzpatrick Pl 75.51 43 ⇓P P 16 28 18.7 -0.2
baz=75,SNR=14
E18A Harlowton 75.52 43 ⇓P P 16 28 18.9 -0.1
baz=75,SNR=15
N11A Elko Archery C 75.54 50 ⇓P P 16 28 19.5 +0.4
baz=75
I15A Monteview 75.62 46 ⇑P P 16 28 19.9 +0.3
baz=75
M12A Wells 75.69 49 ⇑P P 16 28 20.4 +0.4
baz=76,SNR=16
QLMT Earthquake Lak 75.73 45 eP P 16 28 20.6 +0.5
comp=Z,118nm,1.5s,mb5.6
SUW Suwalki 75.73 328 eP P 16 28 19.5 -0.5
SUW Suwalki 75.73 328⇑ eP P 16 28 19.5 -0.5
SUW MLR MLR
comp=Z,43µm,18.1s,MS6.8
SUW Suwalki 75.73 328 eP P 16 28 19.2 -0.7
comp=Z,273nm,1.1s,mb6.1
P10A Eureka 75.77 51 ⇓P P 16 28 20.5 0.0
baz=76
G17A Pierce Place, 75.82 44 ⇑P P 16 28 21.3 +0.6
baz=76,SNR=15
RCTC Rector, Farmer 75.86 55 ⇓P P 16 28 21.9 +0.8
baz=76
ELK Elko 75.89 50 eP P 16 28 21.8 +0.7
ELK pmax pmax
comp=Z,402nm,1.9s
ELK Elko 75.89 50 eP P 16 28 21.8 +0.7
comp=Z,402nm,1.9s,mb6.0
L13A Double Diamond 75.89 48 ⇑P P 16 28 21.9 +0.7
baz=76,SNR=13
H16A Russell Place, 75.91 45 ⇓P P 16 28 22.0 +0.8
baz=76,SNR=13
BEST Besiri 75.91 307 iP P 16 28 23.3 +1.9
SMMC Simmler 75.92 57 ⇓P P 16 28 21.9 +0.5
baz=76
N12A Clover Valley, 75.95 50 eP P 16 28 22.2 +0.7
comp=Z,95nm,1.1s,mb5.6
O11A Cowboy Ranch, 75.98 50 ⇑P P 16 28 22.2 +0.5
baz=76,SNR=10
J15A Blackfoot 76.01 46 ⇑P P 16 28 22.5 +0.7
baz=76
F18A Big Timber 76.03 43 ⇑P P 16 28 22.5 +0.6
baz=76,SNR=19
GRSN GIRESUNGRSN 76.06 311 iP P 16 28 20.8 -1.3
K14A Jones Ranch, D 76.08 47 ⇓P P 16 28 22.9 +0.7
baz=76
YMR Madison River 76.09 45 eP P 16 28 22.8 +0.5
comp=Z,135nm,1.4s,mb5.7
SIM Simferopol' 76.10 316ceP P 16 28 22.8 +0.5
SIM e 16 28 35.0
SIM ePPP 16 33 05.0
SIM iS S 16 38 05.0 +1.1
SIM i 16 38 21.0
SIM ePS 16 38 39.0
SIM pmax pmax
comp=Z,147nm,0.7s,mb6.0
SIM MLR MLR
comp=Z,18µm,17.3s,MS6.4
TIN Tinemaha 76.11 54 ⇓P P 16 28 22.3 -0.2
baz=76
GCMT Greycliff 76.13 43 eP P 16 28 21.9 -0.5
comp=Z,160nm,1.5s,mb5.7
UMR Umm Al-Rimmam 76.16 296 eP P 16 28 21.6 -1.4
UMR AMb AMB 16 28 25.6
comp=Z,285nm,1.8s,mb5.9
M13A Montello 76.18 49 ⇑P P 16 28 23.4 +0.6
baz=76,SNR=10
M13A Montello 76.18 49 eP P 16 28 22.4 -0.5
comp=Z,327nm,1.8s,mb6.0
YNR Norris Junctio 76.22 44 P P 16 28 23.9 +1.0
comp=Z,142nm,1.4s,mb5.7
VES Vestal, Richgr 76.23 56 ⇑P P 16 28 24.2 +0.9
baz=76
P11A Circle Ranch, 76.26 51 ⇓P P 16 28 23.9 +0.6
baz=76
I16A Newdale 76.27 45 ⇑P P 16 28 24.0 +0.7
baz=76,SNR=6.7
Q10A Clear Creek Ra 76.27 52 ⇑P P 16 28 23.4 0.0
baz=76,SNR=17
PKM Peak Mountain 76.27 57 ⇑P P 16 28 24.1 +0.6
baz=76
YFT Old Faithful 76.29 45 eP P 16 28 25.3 +1.9
comp=Z,195nm,1.4s,mb5.8
MIB Mutribah 76.30 297 eP P 16 28 22.8 -0.9
MIB AMb AMB 16 28 26.1
comp=Z,234nm,1.8s,mb5.8
L14A Malta 76.34 48 ⇓P P 16 28 24.3 +0.6
baz=76,SNR=9.0
K15A Arbon 76.38 47 ⇑P P 16 28 24.6 +0.7
baz=76,SNR=14

KBD Kabd 76.39 296 eP P 16 28 22.6 -1.6
KBD AMb AMB 16 28 27.0
comp=Z,231nm,1.7s,mb5.8
FOO Floro 76.40 340⇑ iP P 16 28 22.9 -0.8
FOO AMb AMB 16 28 25.8
comp=Z,152nm,1.6s,mb5.7
FOO Floro 76.40 340⇑ iP P 16 28 22.9 -0.8
comp=Z,152nm,1.6s,mb5.7
N13A Wendover, West 76.46 49 ⇑P P 16 28 24.3 -0.1
baz=76,SNR=11
N13A Wendover, West 76.46 49 eP P 16 28 25.0 +0.6
comp=Z,366nm,1.6s,mb6.1
O12A Currie 76.47 50 ⇑P P 16 28 24.6 +0.1
baz=76,SNR=16
H17A Grant Village 76.47 45 ⇓P P 16 28 25.0 +0.6
baz=76,SNR=21
G18A Lazy EL Ranch, 76.48 43 ⇑P P 16 28 25.0 +0.6
baz=76
CWC Cottonwood Cre 76.56 55 ⇑P P 16 28 24.7 -0.3
baz=76
J16A Bone 76.56 46 ⇑P P 16 28 25.6 +0.7
baz=76,SNR=10.0
M14A Sheep Mountain 76.59 48 ⇓P P 16 28 25.1 0.0
baz=76,SNR=11
SBC Santa Barbara 76.60 57 ⇓P P 16 28 26.3 +1.0
baz=76
DCID1 Drake Creek 76.61 46 P P 16 28 26.1 +0.8
comp=Z,107nm,1.1s,mb5.7
DIYA Diyarbakir 76.64 307 iP P 16 28 26.4 +0.9
KONO Kongsberg 76.64 337⇑ iP P 16 28 24.3 -0.8
KONO AMb AMB 16 28 27.6
comp=Z,147nm,1.3s,mb5.8
KONO Kongsberg 76.64 337⇑ iP P 16 28 25.0 -0.1
KONO pmax pmax
comp=Z,78nm,2.1s,mb5.3
KONO Kongsberg 76.64 337⇑ iP P 16 28 25.0 -0.1
comp=Z,78nm,2.1s,mb5.3
R10A Warm Springs 76.64 52 ⇓P P 16 28 25.4 -0.1
baz=76,SNR=7.4
S10A Tonopah Range, 76.67 53 ⇓P P 16 28 25.4 -0.2
baz=76,SNR=16
RRI2 Red Ridge 76.69 46 eP P 16 28 26.4 +0.8
comp=Z,415nm,1.8s,mb6.1
SFJD Kangerlussuaq 76.69 5⇑ iP P 16 28 24.5 -0.7
SFJD pmax pmax
comp=Z,42nm,0.9s,mb5.4
SFJD MLR MLR
comp=Z,9µm,17.0s,MS6.2
SFJD Kangerlussuaq 76.69 5⇑ eP P 16 28 24.3 -0.9
comp=Z,80nm,1.1s,mb5.6
SFJD Kangerlussuaq 76.69 5⇑ iP P 16 28 24.5 -0.7
comp=Z,42nm,0.9s,mb5.4
SFJD
comp=Z,9µm,17.0s
GRAC Grapevine Rang 76.70 54 ⇑P P 16 28 25.9 +0.1
baz=76,SNR=11
Q11A Duckwater 76.73 52 ⇓P P 16 28 25.8 -0.2
baz=76,SNR=16
ISA Isabella 76.74 56 ⇓P P 16 28 25.8 -0.3
baz=77
ISA Isabella 76.74 56 eP P 16 28 25.9 -0.2
ISA pmax pmax
comp=Z,68nm,1.4s,mb5.4
ISA Isabella 76.74 56 eP P 16 28 25.9 -0.2
comp=Z,68nm,1.4s,mb5.4
RLMT Red Lodge 76.77 43 ⇓P P 16 28 26.4 +0.3
baz=77,SNR=12
RLMT Red Lodge 76.77 43 eP P 16 28 26.2 +0.1
comp=Z,498nm,2.0s,mb6.1
I17A Pilgrim Ck. 76.77 45 ⇑P P 16 28 26.7 +0.6
baz=77,SNR=13
HVU Hansel Valley 76.77 48 eP P 16 28 26.7 +0.5
HVU pmax pmax
comp=Z,373nm,1.8s,mb6.0
HVU Hansel Valley 76.77 48 eP P 16 28 26.6 +0.5
comp=Z,373nm,1.8s,mb6.0
ARVC Arvin 76.81 56 ⇑P P 16 28 27.1 +0.6
baz=77
TPAW Teton Pass 76.81 46 eP P 16 28 26.9 +0.6
comp=Z,35nm,1.0s,mb5.2
P12A McGill 76.83 51 ⇓P P 16 28 26.8 +0.3
baz=77,SNR=14
K16A Soda Springs 76.84 46 ⇑P P 16 28 26.6 +0.1
baz=77,SNR=12
L15A Malad City 76.87 47 ⇑P P 16 28 26.9 +0.2
baz=77,SNR=12
BSC Santa Cruz Isl 76.91 57 ⇓P P 16 28 26.4 -0.7
baz=77
LOHW Long Hollow 76.94 45 eP P 16 28 27.4 +0.4
comp=Z,435nm,2.3s,mb6.0
SNOW Snow King Moun 76.94 45 eP P 16 28 27.8 +0.7
comp=Z,68nm,1.1s,mb5.5
REDW Red Top Meadow 76.95 46 eP P 16 28 27.3 +0.2
comp=Z,132nm,1.4s,mb5.7
OUZ Omahuta 77.01 154 P P 16 28 27.6 +0.2
comp=Z,890nm,2.3s,mb6.3
O13A Hicks Ranch, I 77.02 50 ⇑P P 16 28 27.7 +0.1
baz=77
J17A Brown Place, J 77.03 46 ⇓P P 16 28 27.9 +0.3
baz=77,SNR=9.9
ELZG Elazig 77.03 308 iP P 16 28 28.7 +1.0
R11A Troy Canyon, C 77.07 52 ⇑P P 16 28 28.0 +0.2
baz=77,SNR=16
N14A Grayback Hills 77.08 49 ⇑P P 16 28 28.5 +0.6
baz=77,SNR=18
ERBA Erbaa 77.12 311 iP P 16 28 28.9 +0.8
BGU Big Grassy Mou 77.13 49 eP P 16 28 28.4 +0.2
comp=Z,104nm,1.3s,mb5.6
Q12A Willow Creek R 77.14 51 ⇑P P 16 28 28.8 +0.5
baz=77,SNR=12
M15A Larsen Ranch, 77.16 48 ⇑P P 16 28 28.8 +0.5
baz=77,SNR=5.9
MPMC Manual Prospec 77.16 55 ⇓P P 16 28 28.8 +0.3
baz=77
AHID Auburn Hatcher 77.17 46 P P 16 28 28.3 -0.1
comp=Z,105nm,1.4s,mb5.6
OSI Osito Adit 77.17 57 ⇑P P 16 28 28.4 -0.2
baz=77
BLG Laguna Peak 77.23 57 ⇓P P 16 28 28.5 -0.4
baz=77
K17A Gardner Place, 77.28 46 ⇓P P 16 28 29.1 +0.1
baz=77
DGMT Dagmar 77.32 39 ⇓P P 16 28 28.6 -0.5
baz=77
DGMT Dagmar 77.32 39 eP P 16 28 28.4 -0.8
comp=Z,408nm,1.7s,mb6.1
I18A Diamond G Ranc 77.33 45 ⇑P P 16 28 30.2 +1.0
baz=77
FURC Furnace Creek, 77.34 54 ⇓P P 16 28 29.3 -0.2
baz=77,SNR=11
LRMC Laurel Mountai 77.37 55 ⇑P P 16 28 29.7 +0.1
baz=77
S11A Rachel 77.38 53 ⇑P P 16 28 30.2 +0.5
baz=77,SNR=12
P13A Bates Ranch, G 77.40 50 ⇓P P 16 28 29.9 +0.1
baz=77,SNR=16
SNCC San Nicolas Is 77.41 58 ⇓P P 16 28 30.3 +0.4
baz=77
L16A Fish Haven 77.43 47 ⇓P P 16 28 30.2 +0.3
baz=77,SNR=8.4
LAO LASA Array 77.43 41 eP P 16 28 29.8 0.0
comp=Z,235nm,1.4s,mb5.9
N15A Stansbury Isla 77.46 48 ⇓P P 16 28 30.5 +0.5
baz=77
MALT Malatya 77.49 308⇑ eP P 16 28 31.4 +1.1
MALT pmax pmax
comp=Z,118nm,1.3s,mb5.7
MALT Malatya 77.49 308⇑ eP P 16 28 31.4 +1.1
comp=Z,118nm,1.3s,mb5.7
MALT Malatya 77.49 308⇑ iP P 16 28 31.7 +1.4
TOKA Tokat 77.51 311 iP P 16 28 30.7 +0.4
EDW2 Edwards Air Fo 77.51 56 ⇓P P 16 28 30.3 -0.2
baz=77,SNR=12
J18A Kendall Valley 77.52 45 ⇑P P 16 28 30.8 +0.5
baz=77,SNR=17
HWUT Hardware Ranch 77.60 47 eP P 16 28 31.4 +0.5
comp=Z,306nm,1.6s,mb6.0
DECC Green Verdugo 77.65 57 ⇓P P 16 28 31.0 -0.2
baz=78
KIS Kishinev 77.69 320⇑ iP P 16 28 28.0 -3.2
comp=Z,1µm,2.0s,mb6.5
KIS LRM 17 05 40.0
comp=Z,59µm,16.0s
KIS Kishinev 77.69 320⇑ iP P 16 28 28.0 -3.2
KIS e 16 28 40.0
KIS pmax pmax
comp=Z,1µm,2.0s,mb6.5
Q13A Wheeler Ranch, 77.70 51 ⇓P P 16 28 31.4 0.0

baz=78,SNR=14
R12A Pony Springs, 77.70 51 ⇑P P 16 28 31.6 +0.1
baz=78
DUG Dugway 77.70 49 ⇓P P 16 28 31.4 0.0
baz=78,SNR=16
DUG Dugway 77.70 49 eP P 16 28 31.9 +0.5
DUG pmax pmax
comp=Z,99nm,1.0s,mb5.7
DUG Dugway 77.70 49 eP P 16 28 31.9 +0.5
comp=Z,99nm,1.0s,mb5.7
L17A Cokeville 77.71 47 ⇑P P 16 28 31.4 0.0
baz=78,SNR=8.1
U10A Ash Meadows, A 77.72 54 ⇓P P 16 28 32.5 +0.9
baz=78
M16A Huntsville 77.74 48 ⇑P P 16 28 31.6 0.0
baz=78,SNR=8.6
PASC Pasadena Art C 77.79 57 P P 16 28 32.8 +0.8
comp=Z,642nm,1.5s,mb6.3
AKCD Akcadag 77.82 309 i P P 16 28 33.2 +1.1
NOQ North Oquirrh 77.84 48 eP P 16 28 32.6 +0.4
comp=Z,592nm,1.6s,mb6.3
MWC Mount Wilson 77.85 57 P P 16 28 34.2 +1.9
MWC pmax pmax
comp=Z,194nm,1.6s,mb5.8
MWC Mount Wilson 77.85 57 P P 16 28 34.2 +1.9
comp=Z,194nm,1.6s,mb5.8
O15A The Old Anders 77.86 49 ⇑P P 16 28 33.1 +0.9
baz=78
K18A Toltan Ranch, 77.86 46 ⇓P P 16 28 32.6 +0.3
baz=78,SNR=8.1
WAR Warsaw 77.89 327 eP P 16 28 34.3 +2.0
WAR Warsaw 77.89 327 eP P 16 28 34.3 +2.1
P14A Drum Mountains 77.91 50 ⇑P P 16 28 32.4 -0.1
baz=78,SNR=19
RBK Rabkut 77.94 283 P P 16 28 33.3 +0.3
SNR=7.7
S12A Delamar Landin 77.97 52 ⇑P P 16 28 33.5 +0.5
baz=78
FMP Fort Macarthur 77.98 57 ⇓P P 16 28 33.0 -0.1
baz=78
WHFO Wadi Hawf 78.05 283 P P 16 28 33.2 -0.5
SNR=9.5
SHOC Shoshone 78.05 54 ⇑P P 16 28 33.4 0.0
baz=78
GSC Goldstone 78.06 55 ⇑P P 16 28 34.2 +0.7
baz=78
GSC Goldstone 78.06 55 eP P 16 28 33.3 -0.2
GSC pmax pmax
comp=Z,188nm,1.7s,mb5.7
GSC Goldstone 78.06 55 eP P 16 28 33.3 -0.2
comp=Z,188nm,1.7s,mb5.7
BW06 Boulder Array 78.06 45 ⇑P P 16 28 33.7 +0.3
baz=78,SNR=13
BW06 Boulder Array 78.06 45 eP P 16 28 32.9 -0.5
comp=Z,191nm,1.7s,mb5.8
PDAR Pinedale Array 78.06 45 P P 16 28 33.0 -0.3
comp=Z,9.4nm,0.9s,mb4.7,baz=292,slow=2.4,SNR=20
ATAB Bozova 78.08 308 i P P 16 28 35.0 +1.5
CIS Catalina Islan 78.09 57 ⇓P P 16 28 33.5 -0.2
baz=78
BFSC Mount Baldy St 78.11 56 ⇑P P 16 28 33.9 +0.1
baz=78
N16A Rees Ranch, Co 78.11 48 ⇑P P 16 28 33.9 +0.2
baz=78
Q14A Sevier Lake (B 78.14 50 ⇓P P 16 28 34.1 +0.3
baz=78,SNR=16
RRX Edison Barstow 78.17 55 ⇓P P 16 28 34.0 -0.1
baz=78
R13A O'Grain Ranch, 78.19 51 ⇑P P 16 28 34.4 +0.3
baz=78,SNR=13
LVV L'vov 78.20 324 d iP P 16 28 33.3 -0.7
LVV e 16 31 31.5
LVV ePPP 16 33 17.7
LVV eS S 16 38 26.3 -0.3
LVV ePS 16 38 44.3
LVV pmax pmax
comp=Z,1µm,6.2s
LVV MLR MLR
comp=Z,31µm,16.0s,MS6.7
LVV MLR MLR
comp=N,17µm,16.2s,MS6.7
LVV MLR MLR
comp=E,28µm,16.5s,MS6.7
M17A Scullys Gap (B 78.21 47 ⇓P P 16 28 34.6 +0.4
baz=78,SNR=10
SCI San Clemente I 78.24 58 ⇑P P 16 28 34.9 +0.4
baz=78
JLU Jordanelle 78.28 48 eP P 16 28 34.9 +0.3
comp=E,332nm,1.8s,mb6.0
NLU North Lily Min 78.30 49 eP P 16 28 34.6 -0.1
comp=E,369nm,1.8s,mb6.0
BSD Bornholm Skovb 78.30 332 ⇑ iP P 16 28 33.9 -0.5
BSD pmax pmax
comp=Z,55nm,1.0s,mb5.4
BSD MLR MLR
comp=Z,20µm,18.0s,MS6.5
BSD Bornholm Skovb 78.30 332 ⇑ iP P 16 28 33.9 -0.5
comp=Z,55nm,1.0s,mb5.4
BSD
comp=Z,20µm,18.0s
L18A Fontenelle, Gr 78.31 46 ⇓P P 16 28 34.6 -0.2
baz=78,SNR=14
U11A Corn Creek 78.33 53 ⇓P P 16 28 35.4 +0.4
baz=78
CTKT Corum 78.35 312 i P P 16 28 35.3 +0.3
P15A Leamington 78.41 49 ⇑P P 16 28 35.5 +0.1
baz=78,SNR=10
MOO Moorlands 78.43 176 eP pP 16 28 44.6 +0.1
K19A Absolon Red Bu 78.43 45 ⇓P P 16 28 35.0 -0.4
baz=78,SNR=9.8
N17A Moffit Pass 78.44 48 ⇓P P 16 28 36.1 +0.6
baz=78,SNR=16
O16A Springville 78.49 48 ⇑P P 16 28 36.0 +0.2
baz=78,SNR=11
BORG Borgarnes 78.50 353 P P 16 28 38.6 +3.2
comp=Z,1µm,1.1s,mb6.7,SNR=8.5
BORG Borgarnes 78.50 353 eP P 16 28 37.1 +1.7
BORG pmax pmax
comp=Z,282nm,1.1s
BORG Borgarnes 78.50 353 eP P 16 28 37.1 +1.7
comp=Z,282nm,1.1s,mb6.1
DAU Daniels Canyon 78.51 48 eP P 16 28 36.0 +0.1
DAU pmax pmax
comp=Z,59nm,1.2s,mb5.4
DAU Daniels Canyon 78.51 48 eP P 16 28 36.0 +0.1
comp=Z,59nm,1.2s,mb5.4
MPU Maple Canyon 78.53 49 eP P 16 28 36.5 +0.5
comp=Z,372nm,1.6s,mb6.1
PINB Pinarbasi 78.55 310 i P P 16 28 37.4 +1.2
TUQ Turquoise Moun 78.56 54 ⇓P P 16 28 36.6 +0.3
baz=78
T12A Moapa 78.58 53 ⇓P P 16 28 36.3 -0.1
baz=78
BBRC Big Bear Sol-O 78.59 56 ⇑P P 16 28 36.5 +0.1
baz=78
L19A Farson 78.59 46 ⇑P P 16 28 36.3 0.0
baz=78,SNR=8.5
M18A Lyman 78.60 47 ⇑P P 16 28 37.1 +0.7
baz=78
S13A Holt Ranch, En 78.62 52 ⇓P P 16 28 36.8 +0.3
baz=78,SNR=10
BALT Daday 78.62 313 i P P 16 28 37.5 +1.1
V11A Goodsprings 78.65 54 ⇑P P 16 28 36.8 +0.1
baz=78
HEC Hector,Ludlow 78.65 55 ⇓P P 16 28 37.1 +0.3
baz=78
Q15A Fillmore 78.69 50 ⇓P P 16 28 37.0 +0.1
baz=78,SNR=11
R14A James Farms, M 78.72 51 ⇓P P 16 28 37.3 +0.3
baz=78
ABTO Aybut 78.73 283 P P 16 28 37.8 +0.3
SNR=12
GKP Gorka Klasztor 78.75 330 ⇑ eP P 16 28 37.1 +0.1
GKP MLR MLR
comp=Z,35µm,17.7s,MS6.7
ARUT Antelope Range 78.76 51 eP P 16 28 37.6 +0.3
ARUT pmax pmax
comp=Z,214nm,1.5s,mb5.8
ARUT Antelope Range 78.76 51 eP P 16 28 37.6 +0.3
comp=Z,214nm,1.5s,mb5.8
P16A Fountain Green 78.76 49 ⇑P P 16 28 37.5 +0.2
baz=79
COP Copenhagen 78.78 333 ⇑ iP P 16 28 36.9 -0.2
COP pmax pmax
comp=Z,45nm,0.9s,mb5.4
COP MLR MLR
comp=Z,13µm,17.0s,MS6.3
COP Copenhagen 78.78 333 ⇑ iP P 16 28 36.9 -0.2
comp=Z,45nm,0.9s,mb5.4
COP
comp=Z,13µm,17.0s
MURC Murrieta 78.79 57 ⇑P P 16 28 37.4 -0.1
baz=79
K20A Yellowstone Ra 78.83 45 ⇓P P 16 28 37.4 -0.2
baz=79
SOFL Sornfelli, Far 78.85 346 ⇑ eP P 16 28 37.9 +0.5
SOFL AMb AMB 16 28 40.7
comp=Z,348nm,1.9s,mb6.0
U12A Valley of Fire 78.87 53 ⇑P P 16 28 38.5 +0.5
baz=79
TAU Tasmania Unive 78.90 176 P P 16 28 38.7 +1.1
TAU pmax pmax
comp=Z,71nm,1.3s,mb5.4
TAU Tasmania Unive 78.90 176 P P 16 28 38.6 +1.0
comp=Z,71nm,1.3s,mb5.4
T13A Saint George 78.93 52 ⇓P P 16 28 38.6 +0.4
baz=79,SNR=10.0
S14A Cedar City 78.95 51 ⇑P P 16 28 38.7 +0.4
baz=79
CCUT Cedar City 78.95 51 eP P 16 28 38.8 +0.5
comp=Z,36nm,0.5s,mb5.6
KWP Kalwaria Pacla 78.95 325 eP P 16 28 38.9 +0.8
KWP Kalwaria Pacla 78.95 325 ⇑ eP P 16 28 38.6 +0.5
KWP pmax pmax
comp=Z,370nm,1.2s,mb6.2
KWP Kalwaria Pacla 78.95 325 ⇑ eP P 16 28 38.6 +0.4
comp=Z,370nm,1.2s,mb6.2
KWP Kalwaria Pacla 78.95 325 ⇑ iP P 16 28 38.8 +0.7
O17A Robinson Place 78.96 48 ⇑P P 16 28 38.6 +0.2
baz=79,SNR=14
M19A Rock Springs 79.08 46 ⇓P P 16 28 38.9 -0.2
baz=79
V12A Nelson 79.09 54 ⇓P P 16 28 39.1 -0.1
baz=79
N18A Larsen Ranch, 79.11 47 ⇑P P 16 28 38.9 -0.3
baz=79,SNR=12
MSU Marysvale 79.11 50 eP P 16 28 39.9 +0.7
MSU pmax pmax
comp=Z,99nm,1.3s,mb5.6
MSU Marysvale 79.11 50 eP P 16 28 39.9 +0.7
comp=Z,99nm,1.3s,mb5.6
BUR01 Bucovina Ar. S 79.12 322 P P 16 28 40.3 +1.2
BURAR Bucovina Array 79.12 322 P P 16 28 39.9 +0.8
BURAR Bucovina Array 79.12 322 ⇑ iP P 16 28 39.6 +0.5
GMRC Granite Mounta 79.12 55 ⇑P P 16 28 39.0 -0.3
baz=79,SNR=20
CDAG Cicekdag 79.22 311 i P P 16 28 39.9 +0.1
TMUT Trail Mountain 79.23 49 eP P 16 28 40.5 +0.6
comp=Z,194nm,1.7s,mb5.8
R15A Junction 79.23 50 ⇑P P 16 28 40.2 +0.3
baz=79
L20A Wamsutter 79.24 45 ⇓P P 16 28 39.8 0.0
baz=79
ELDT Eldivan 79.25 313 i P P 16 28 40.3 +0.4
U13A Pakoon Wash 79.25 53 ⇑P P 16 28 40.2 +0.2
baz=79,SNR=18
LRW Lerwick 79.27 342 ⇑ iP P 16 28 39.7 +0.1
LRW AMb AMB 16 28 41.4
comp=Z,158nm,2.0s,mb5.6
109C Camp Elliot, M 79.27 57 ⇓P P 16 28 39.7 -0.5
baz=79
KUZU Kuzuini 79.27 308 i P P 16 28 41.2 +1.1
PFO Pinyon Flat Ob 79.29 56 P P 16 28 40.1 -0.2
comp=Z,329nm,1.4s,mb6.1,SNR=6.5
PFO Pinyon Flat Ob 79.29 56 ⇑P P 16 28 40.0 -0.3
baz=79
PFO Pinyon Flat Ob 79.29 56 P P 16 28 39.6 -0.7
PFO pmax pmax
comp=Z,260nm,1.5s,mb5.9
PFO Pinyon Flat Ob 79.29 56 eP P 16 28 40.0 -0.3
comp=Z,261nm,1.5s,mb5.9
MUD Monsted U'grnd 79.32 335 ⇑ iP P 16 28 39.7 -0.3
MUD pmax pmax
comp=Z,29nm,1.0s,mb5.2
MUD MLR MLR
comp=Z,35µm,19.0s,MS6.7
MUD Monsted U'grnd 79.32 335 ⇑ iP P 16 28 39.7 -0.3
comp=Z,29nm,1.0s,mb5.2
MUD i 16 31 33.3
MUD
comp=Z,35µm,19.0s
RGN Rugen 79.33 332 eP P 16 28 39.9 -0.2
comp=Z,426nm,1.6s,mb6.1
W12A Cal Nev Ari 79.33 54 ⇑P P 16 28 40.6 +0.1
baz=79
O18A Roosevelt 79.35 48 ⇑P P 16 28 41.0 +0.5
baz=79,SNR=11
BELC Belle Mtn. 79.36 56 ⇑P P 16 28 40.0 -0.7
baz=79
P17A Butcher Ranch, 79.41 49 ⇑P P 16 28 41.1 +0.2
baz=79,SNR=9.5
T14A Hurricane 79.43 52 ⇓P P 16 28 41.2 +0.3
baz=79
N19A John Jarvie Ra 79.45 47 ⇑P P 16 28 41.1 +0.1
baz=79,SNR=14
Q16A Castle Valley 79.48 49 ⇓P P 16 28 41.5 +0.2
baz=79
S15A Panguitch 79.51 51 ⇑P P 16 28 42.2 +0.8
baz=79
VRI Vrincioaia 79.53 320 P P 16 28 43.1 +1.7
VRI Vrincioaia 79.53 320 ⇓ iP P 16 28 43.0 +1.6
TIRR Tirgusor 79.56 318 ⇑ eP P 16 28 41.3 -0.3
TIRR pmax pmax
comp=Z,105nm,1.5s,mb5.5
TIRR Tirgusor 79.56 318 ⇑ eP P 16 28 41.3 -0.3
comp=Z,105nm,1.5s,mb5.5
PLOR Plostina 79.58 320 P P 16 28 43.6 +2.0
V13A Grand Canyon W 79.58 53 ⇓P P 16 28 42.1 +0.3
baz=79,SNR=9.5
BR131 Keskin Array S 79.60 312 eP P 16 28 41.9 +0.1
comp=Z,72nm,1.1s,mb5.5
BRTR Keskin Array B 79.60 312 P P 16 28 41.8 -0.1
comp=Z,52nm,1.0s,mb5.4,baz=84,slow=3.8,SNR=41
P18A Preston Nutter 79.61 48 ⇓P P 16 28 42.4 +0.5
baz=79,SNR=14
KOLS Kolonicke sedl 79.65 324 eP P 16 28 42.3 +0.4
comp=Z,84nm,1.4s,mb5.5
KOLS ePP PP 16 31 42.7 +0.4
KOLS eS S 16 38 43.8 +1.8
KOLS LR LR
comp=Z,34µm,16.7s,MS6.8
KOLS Kolonicke sedl 79.65 324 eP P 16 28 42.3 +0.4
KOLS ePP PP 16 31 42.7 +0.4
KOLS eS S 16 38 43.8 +1.8
M20A Sweetwater, Wa 79.66 46 ⇓P P 16 28 42.2 +0.1
baz=79,SNR=7.6
HARR Harsova 79.67 318 ⇓P P 16 28 43.2 +1.0
HARR Harsova 79.67 318 ⇓ iP P 16 28 43.2 +1.0
R16A Teasdale 79.68 50 ⇑P P 16 28 43.0 +0.6
baz=80,SNR=18
BAR Barrett 79.69 57 eP P 16 28 41.8 -0.7
comp=Z,243nm,1.8s,mb5.8
MONP Monument Peak 79.74 57 ⇑P P 16 28 42.3 -0.4
baz=80,SNR=12
U14A Mt Trumbull 79.75 52 ⇑P P 16 28 42.6 -0.2
baz=80,SNR=12
SRU San Rafael 79.76 49 ⇓P P 16 28 42.9 +0.1
baz=80,SNR=15
SRU San Rafael 79.76 49 eP P 16 28 42.5 -0.3
SRU pmax pmax
comp=Z,82nm,0.9s,mb5.7
SRU San Rafael 79.76 49 eP P 16 28 42.5 -0.3
comp=Z,82nm,0.9s,mb5.7
STHS Stebnicka Huta 79.79 325 eP P 16 28 44.4 +1.7
STHS pmax pmax
comp=Z,70nm,1.4s,mb5.4
STHS Stebnicka Huta 79.79 325 eP P 16 28 44.4 +1.7
comp=Z,70nm,1.4s,mb5.4
STHS e 16 29 04.0
STHS Stebnicka Huta 79.79 325 eP P 16 28 44.4 +1.7
STHS e 16 29 04.0
NEE2 Needles Airpor 79.82 54 ⇑P P 16 28 42.8 -0.3
baz=80
L21A Rawlins 79.83 45 ⇑P P 16 28 42.8 -0.3
baz=80,SNR=14
IRM Iron Mountain 79.83 55 ⇓P P 16 28 43.2 0.0
baz=80
UZH Uzhgorod 79.85 324 ⇓ iP P 16 28 43.5 +0.5
UZH i pP 16 28 51.5 -1.0
O19A Miners Draw (B 79.86 47 ⇓P P 16 28 43.4 +0.1
baz=80,SNR=12
OJC Ojcow 79.87 326 eP P 16 28 43.5 +0.4
OJC eS S 16 38 42.8 -1.5
OJC L 17 08 39.0
comp=Z,27nm,18.2s
OJC Ojcow 79.87 326 eP P 16 28 43.5 +0.4
OJC eS S 16 38 42.8 -1.5
OJC MLR MLR
comp=Z,27µm,18.2s,MS6.6
T15A Red Dirt Ranch 79.90 51 ⇑P P 16 28 43.2 -0.3
baz=80,SNR=11
BC3 Big Chuckw Mtn 79.93 56 ⇑P P 16 28 43.7 0.0
baz=80
BMR Baia Mare 79.93 323 P P 16 28 45.1 +1.6
Q18A Rafter H Ranch 80.00 49 ⇓P P 16 28 43.4 -0.6
baz=80,SNR=9.5
SGKT Sivrigoynuk 80.01 313 i P P 16 28 44.2 +0.2
BBAL Bala 80.02 312 i P P 16 28 43.2 -0.9
N20A Spence Gulch, 80.03 46 ⇑P P 16 28 43.9 -0.3
baz=80,SNR=17
ULM Lac du Bonnet 80.05 33 P P 16 28 43.0 -1.0
comp=Z,22nm,0.9s,mb5.1,baz=310,slow=5.7,SNR=17
ULM Lac du Bonnet 80.05 33 eP P 16 28 42.9 -1.2
comp=Z,530nm,2.3s,mb6.1
M21A Separation Pea 80.06 45 ⇑P P 16 28 44.3 0.0
baz=80,SNR=12
R17A Hanksville Air 80.08 49 ⇑P P 16 28 44.6 +0.1
baz=80,SNR=14
DVTC Desert V Tower 80.09 57 ⇑P P 16 28 44.6 0.0
baz=80,SNR=6.9
RWWY Rawlins 80.09 45 eP P 16 28 44.2 -0.2
comp=Z,254nm,1.6s,mb5.9
W13A Hualapai Mount 80.10 54 ⇑P P 16 28 44.5 -0.2
baz=80,SNR=9.5
SWSC Sam W. Stewart 80.13 56 ⇑P P 16 28 44.9 +0.1
baz=80
YURE YUREGIR 80.16 309 i P P 16 28 45.8 +0.9
MLR Muntele Rosu 80.19 320 P P 16 28 46.3 +1.4
MLR Muntele Rosu 80.19 320 ⇓ iP P 16 28 46.4 +1.5
NIE Niedzica 80.21 326 eP P 16 28 45.6 +0.6
RSSD Black Hills 80.27 42 eP P 16 28 44.9 -0.5
RSSD pmax pmax
comp=Z,50nm,1.3s,mb5.3
RSSD Black Hills 80.27 42 eP P 16 28 44.9 -0.6
comp=Z,50nm,1.3s,mb5.3
V14A Boquillas Ranc 80.28 53 ⇑P P 16 28 45.4 -0.2
baz=80,SNR=13
U15A North Rim 80.32 52 ⇓P P 16 28 45.7 -0.1
baz=80,SNR=16
YAYL Yayladag 80.34 308 i P P 16 28 46.6 +0.6
P19A Cripple Cowboy 80.36 48 ⇑P P 16 28 46.4 +0.4
baz=80,SNR=17
GULE Gulek 80.42 309 i P P 16 28 47.2 +0.8
PDMCI Parker Dam,Lak 80.42 55 ⇑P P 16 28 46.3 -0.1
baz=80
X13A Yucca 80.44 54 ⇑P P 16 28 46.6 +0.1
baz=80,SNR=11
T16A Glen Canyon Da 80.47 51 ⇑P P 16 28 46.4 -0.2
baz=80
O20A White River Ci 80.49 47 ⇓P P 16 28 46.7 +0.1
baz=80,SNR=8.5
Y12C Blythe 80.49 55 ⇓P P 16 28 46.1 -0.7
baz=80
S17A Black Ridge (B 80.51 50 ⇑P P 16 28 46.4 -0.4
baz=80,SNR=13
N21A Black Mountain 80.51 46 ⇑P P 16 28 47.2 +0.5
baz=80,SNR=16
W14A Seligman 80.55 53 ⇓P P 16 28 47.1 0.0
baz=80,SNR=12
R18A Canyonlands Na 80.60 49 ⇑P P 16 28 47.5 +0.2
baz=80,SNR=16
M22A Cedar Creek Ra 80.63 45 ⇑P P 16 28 47.5 +0.1
baz=80,SNR=9.2
RAC Raciborz 80.68 327 eP P 16 28 48.2 +0.7
RAC eS S 16 38 54.4 +1.6
RAC MLR MLR
comp=Z,24µm,17.0s,MS6.6
VOIR 80.69 320 P P 16 28 49.1 +1.5
VOIR 80.69 320 ⇑ iP P 16 28 48.2 +0.6
GLA Glamis 80.71 56 ⇓P P 16 28 48.1 +0.1
baz=80
GLA Glamis 80.71 56 eP P 16 28 48.2 +0.2
GLA pmax pmax
comp=Z,234nm,1.5s,mb5.9
GLA Glamis 80.71 56 eP P 16 28 48.2 +0.2
comp=Z,234nm,1.5s,mb5.9
RUE Ruedersdorf 80.74 331 ⇑ eP P 16 28 47.6 -0.1
comp=Z,82nm,1.1s,mb5.6
V15A Kaibab Nationa 80.77 52 ⇓P P 16 28 48.5 +0.3
baz=81,SNR=12
P20A De Beque 80.80 47 ⇓P P 16 28 48.3 0.0
baz=81
KECS Kecovo 80.80 325 eP P 16 28 48.9 +0.7
KECS pmax pmax
comp=Z,38nm,1.5s,mb5.1
KECS Kecovo 80.80 325 eP P 16 28 48.9 +0.7
comp=Z,38nm,1.5s,mb5.1
KECS ePP PP 16 31 53.0 +1.1
KECS Kecovo 80.80 325 eP P 16 28 48.9 +0.7
KECS ePP PP 16 31 52.9 +1.0
OKC Ostrava-Krasne 80.89 327 eP P 16 28 50.3 +1.7
OKC Ostrava-Krasne 80.89 327 eP P 16 28 50.3 +1.7
O21A Pagoda 80.89 46 ⇓P P 16 28 49.0 +0.2
baz=81
T17A Navajo Res., N 80.90 51 ⇓P P 16 28 49.0 0.0
baz=81
Y13A Salome 80.92 55 ⇓P P 16 28 49.4 +0.3
baz=81
BSEG Bad Segeberg 80.92 333 eP P 16 28 49.1 +0.4
comp=Z,208nm,1.3s,mb5.9
BSEG ePP PP 16 31 53.0 +0.4
BSEG Bad Segeberg 80.92 333 eP P 16 28 49.1 +0.4
BSEG e 16 31 53.0
BSEG pmax pmax
comp=Z,208nm,1.3s,mb5.9
DRGR 80.93 323 P P 16 28 50.5 +1.6
DRGR 80.93 323 ⇑ iP P 16 28 50.0 +1.1
KSP Ksiaz 80.94 328 eP P 16 28 49.3 +0.4
KSP Ksiaz 80.94 328 ⇑ eP P 16 28 49.2 +0.3
KSP e*PP pP 16 29 03.3 +5.0
KSP e 16 31 50.7
KSP MLR MLR
comp=Z,52µm,19.8s,MS6.9
S18A Hurst Farm, Bl 80.97 50 ⇓P P 16 28 49.5 +0.3
baz=81,SNR=21
URZ Urewera 80.99 153 eP P 16 28 47.8 -1.3
comp=Z,417nm,2.1s,mb6.0
LIKS Likavka 81.03 326 eP P 16 28 51.3 +1.9
LIKS pmax pmax
comp=Z,65nm,1.2s,mb5.4
LIKS Likavka 81.03 326 eP P 16 28 51.3 +1.9
comp=Z,65nm,1.2s,mb5.4
LIKS Likavka 81.03 326 eP P 16 28 51.3 +1.9
R19A Curley Farm, L 81.04 49 ⇑P P 16 28 49.9 +0.2
baz=81,SNR=8.8
N22A Wattenberg Ran 81.10 46 ⇑P P 16 28 50.6 +0.7
baz=81
W15A Williams 81.10 53 ⇓P P 16 28 50.3 +0.3
baz=81
X14A Yava 81.13 54 ⇓P P 16 28 50.5 +0.3
baz=81
112A Yuma 81.19 56 ⇓P P 16 28 50.8 +0.2
baz=81
MORC Moravsky Berou 81.20 327 P P 16 28 49.8 -0.4
MORC pmax pmax
comp=Z,110nm,1.2s,mb5.7
MORC Moravsky Berou 81.20 327 ⇑ iP P 16 28 50.4 +0.2
comp=Z,108nm,1.3s,mb5.6
MORC Moravsky Berou 81.20 327 ⇑ iP P 16 28 50.8 +0.6
Q20A Ridgley Place, 81.21 48 ⇓P P 16 28 50.9 +0.4
baz=81,SNR=8.7
U16A Tuba City 81.23 52 ⇓P P 16 28 50.8 +0.1
baz=81,SNR=14
U17A Shonto 81.24 51 ⇑P P 16 28 50.8 0.0
baz=81,SNR=10.0
MEST Erdemli 81.24 309 i P P 16 28 50.7 -0.1
KDHN Kadinhani 81.28 312 i P P 16 28 50.9 0.0
DPC Dobruska-Polom 81.30 328 eP P 16 28 52.8 +2.0
DPC Dobruska-Polom 81.30 328 eP P 16 28 52.8 +2.0
ORE Reay 81.30 343 ⇑ eP P 16 28 51.1 +0.5
UPC Upice 81.31 328 eP P 16 28 52.5 +1.6
UPC Upice 81.31 328 eP P 16 28 52.5 +1.6
PHWY Pilot Hill 81.34 45 eP P 16 28 50.9 -0.3
comp=Z,161nm,1.6s,mb5.7
Y14A Wickenburg 81.38 54 ⇓P P 16 28 51.6 +0.1
baz=81,SNR=10
ESKT Eskisehir 81.39 313 i P P 16 28 51.4 -0.1
BORA Eskisehir 81.39 314 i P P 16 28 51.3 -0.2
T18A Mexican Hat 81.39 50 ⇑P P 16 28 51.6 0.0

baz=81,SNR=12
Z13A Yuma Proving G 81.40 55 ⇑P P 16 28 51.7 +0.1
baz=81,SNR=14
WUAZ Wupatki 81.46 52 ⇓P P 16 28 52.2 +0.3
baz=81,SNR=8.3
WUAZ Wupatki 81.46 52 eP P 16 28 52.3 +0.3
comp=Z,124nm,1.2s,mb5.7
S19A Harvey Farm, M 81.47 49 ⇑P P 16 28 52.2 +0.2
baz=81,SNR=20
AGMN Agassiz Refuge 81.47 35 eP P 16 28 50.2 -1.5
comp=Z,158nm,1.7s,mb5.7
PSZ Piszkesteto 81.48 325 P P 16 28 52.8 +1.0
PSZ Piszkesteto 81.48 325⇑iP P 16 28 52.5 +0.7
HWQ Hawqa 81.52 306 eP P 16 28 52.5 +0.2
X15A Humboldt 81.55 53 ⇑P P 16 28 52.7 +0.3
baz=81,SNR=12
VYHS Vyhne 81.56 326 eP P 16 28 52.7 +0.5
comp=Z,853nm,3.2s
VYHS ePP PP 16 31 58.6 +0.5
VYHS eS S 16 39 03.2 +1.2
VYHS LR LR
comp=Z,37µm,16.6s,MS6.8
VYHS Vyhne 81.56 326 eP P 16 28 52.7 +0.5
VYHS ePP PP 16 31 58.6 +0.5
VYHS eS S 16 39 03.2 +1.2
113A Mohawk Valley, 81.59 56 ⇑P P 16 28 52.1 -0.5
baz=81
W16A Flagstaff 81.62 53 ⇑P P 16 28 52.6 -0.2
baz=81
R20A Redvale 81.64 49 ⇓P P 16 28 53.2 +0.4
baz=81,SNR=14
KOLL Kolacno 81.69 326 eP P 16 28 54.2 +1.3
KOLL Kolacno 81.69 326 eP P 16 28 54.2 +1.3
Q21A Lamborn Mesa, 81.72 48 ⇓P P 16 28 53.4 +0.2
baz=82,SNR=7.5
ELBA Catalca 81.73 316 iP P 16 28 52.7 -0.5
V17A Tonalea, Kykot 81.77 52 ⇑P P 16 28 54.1 +0.5
baz=82,SNR=14
Z14A Wintersburg 81.77 55 ⇓P P 16 28 54.2 +0.6
baz=82
Y15A Casa Rosa Ranc 81.81 54 ⇓P P 16 28 54.0 +0.2
baz=82,SNR=12
U18A Rough Rock, Ch 81.85 51 ⇓P P 16 28 54.7 +0.8
baz=82,SNR=14
BOLV Bolvadin 81.85 312 iP P 16 28 54.2 +0.2
SMCO Snowmass 81.85 47 eP P 16 28 54.1 +0.2
comp=Z,147nm,1.4s,mb5.7
GZR Gura Zlata 81.88 321 P P 16 28 54.4 +0.5
GZR Gura Zlata 81.88 321⇓iP P 16 28 54.1 +0.2
JMB Yambol 81.88 317 P P 16 28 55.6 +1.6
BRG Berggiesshubel 81.90 330 eP P 16 28 53.9 0.0
comp=Z,556nm,2.4s,mb6.1
BRG Berggiesshubel 81.90 330 iP P 16 28 54.0 +0.1
comp=Z,121nm,1.3s,mb5.7
BRG iPP PP 16 31 51.5 -9.3
comp=Z,131nm,2.5s
BRG S S 16 39 08.0 +2.6
BRG
comp=N,12µm,19.5s
BRG
comp=E,29µm,16.9s
BRG
comp=Z,28µm,14.9s
BRG Berggiesshubel 81.90 330 iP P 16 28 54.0 +0.1
BRG S S 16 39 08.0 +2.6
BRG pmax pmax
comp=Z,73nm,1.3s,mb5.5
BRG MLR MLR
comp=N,7µm,19.5s,MS6.5
BRG MLR MLR
comp=E,17µm,16.9s,MS6.5
BRG MLR MLR
comp=Z,17µm,14.9s,MS6.5
PVCC Panska Ves 81.90 329 eP P 16 28 55.7 +1.7
PVCC Panska Ves 81.90 329 eP P 16 28 55.7 +1.7
BHL Bhannes 81.94 306 eP P 16 28 54.8 +0.3
CLL Collm 81.94 330 eP P 16 28 53.9 -0.3
comp=Z,187nm,1.5s,mb5.8
CLL ePP PP 16 32 00.2 -1.0
CLL Collm 81.94 330 iP P 16 28 53.7 -0.5
CLL i 16 29 08.8
CLL pmax pmax
comp=Z,187nm,1.5s,mb5.8
CLL MLR MLR
comp=Z,25µm,17.4s,MS6.6
CLL Collm 81.94 330 iP P 16 28 53.7 -0.5
comp=Z,187nm,1.5s,mb5.8
CLL i 16 29 08.8
CLL e 16 29 38.0
CLL LR LR
comp=Z,25µm,17.4s,MS6.6
CLL Collm 81.94 330 iP P 16 28 53.7 -0.5
comp=Z,187nm,1.5s,mb5.8
CLL iPmax 16 28 54.0
CLL i 16 29 08.8
CLL e 16 29 38.0
CLL ePP PP 16 32 01.0 -0.2
MVH1 Achvaich 81.96 342⇑iP P 16 28 54.1 0.0
VRAC Vranov 81.96 327 P P 16 28 55.3 +1.0
VRAC Vranov 81.96 327⇑iP P 16 28 55.5 +1.2
ULDT Uludag 81.99 314 iP P 16 28 55.2 +0.5
R21A Cimarron 82.03 48 ⇓P P 16 28 55.4 +0.5
baz=82,SNR=16
MCD Coleburn Disti 82.03 342 eP P 16 28 54.2 -0.3
Q22A Crested Butte, 82.09 47 ⇓P P 16 28 55.5 +0.3
baz=82,SNR=20
X16A Lo Mia Camp, P 82.10 53 ⇓P P 16 28 55.4 0.0
baz=82
T19A Beclabito 82.11 50 ⇑P P 16 28 55.4 0.0
baz=82,SNR=10
NRDL Niedersach Rie 82.14 333 eP P 16 28 55.2 +0.1
comp=Z,302nm,2.1s,mb5.9
NRDL ePP PP 16 32 02.9 +0.2
W17A Winslow 82.16 52 ⇑P P 16 28 56.0 +0.4
baz=82
SMOL Smolenice 82.18 326 eP P 16 28 57.3 +1.9
SMOL Smolenice 82.18 326 eP P 16 28 57.3 +1.9
114A Black Gap (USA 82.19 55 ⇑P P 16 28 55.7 -0.2
baz=82
MME1 Meikle Cairn 82.19 342⇑eP P 16 28 55.1 -0.2
MVCO Mesa Verde 82.20 49 ⇑P P 16 28 56.0 +0.2
baz=82,SNR=21
MVCO Mesa Verde 82.20 49 eP P 16 28 56.0 +0.2
comp=Z,294nm,1.7s,mb5.9
ISCO Idaho Springs 82.24 46 eP P 16 28 56.4 +0.4
ISCO pmax pmax
comp=Z,265nm,1.9s,mb5.8
ISCO Idaho Springs 82.24 46 eP P 16 28 56.4 +0.4
comp=Z,265nm,1.9s,mb5.8
BZS Buzias 82.30 322 P P 16 28 57.3 +1.1
BZS Buzias 82.30 322⇑iP P 16 28 56.6 +0.5
PRA Prague 82.31 329 ⇑P P 16 28 56.0 -0.1
PRU Pruhonice 82.33 329 eP P 16 28 58.1 +1.9
PRU Pruhonice 82.33 329 eP P 16 28 58.1 +1.9
Z15A Gila River Ind 82.34 54 ⇑P P 16 28 56.6 +0.1
baz=82
S21A Coal Bank Pass 82.34 49 ⇑P P 16 28 57.2 +0.7
baz=82,SNR=13
U19A Dine' College, 82.34 50 ⇑P P 16 28 57.1 +0.5
baz=82,SNR=16
Y16A Circle Bar Ran 82.41 53 ⇓P P 16 28 57.2 +0.2
baz=82
MDO Dochfour 82.43 342 eP P 16 28 56.5 -0.2
TREC Trest 82.45 328 eP P 16 28 58.4 +1.6
TREC Trest 82.45 328 eP P 16 28 58.4 +1.6
GDZ Gediz 82.48 313 iP P 16 28 56.8 -0.5
CLZ Clausthal 82.55 332 eP P 16 28 57.6 +0.3
comp=Z,216nm,1.4s,mb6.0
CLZ ePP PP 16 32 05.4 -0.7
CLZ Clausthal 82.55 332 eP P 16 28 57.6 +0.3
CLZ e 16 32 05.4
CLZ pmax pmax
comp=Z,216nm,1.4s,mb6.0
R22A Saguache, Gunn 82.59 48 ⇓P P 16 28 58.2 +0.3
baz=82,SNR=12
KAC Achnashellach 82.61 343⇑iP P 16 28 57.8 +0.3
GAZI Gazipasa 82.61 310 iP P 16 28 56.3 -1.6
115A Sonoran Desert 82.66 55 ⇓P P 16 28 58.0 -0.3
baz=82,SNR=9.3
ISP Isparta 82.68 312⇑eP P 16 28 57.9 -0.4
ISP pmax pmax
comp=Z,81nm,1.2s,mb5.6
ISP Isparta 82.68 312⇑eP P 16 28 57.9 -0.4
comp=Z,81nm,1.2s,mb5.6
ISP Isparta 82.68 312 P P 16 28 59.2 +0.9

U20A Newcomb 82.72 50 ⇑P P 16 28 58.6 +0.1
baz=82
MAMC Mammari 82.72 308 P P 16 28 59.0 +0.5
MAMC Mammari 82.72 308 P P 16 28 59.0 +0.5
214A Organ Pipe Nat 82.73 56 ⇑P P 16 28 58.7 +0.1
baz=83,SNR=10.0
DURS Dursunbey 82.73 314 iP P 16 28 58.0 -0.5
SART Tekirdag 82.75 316 iP P 16 28 58.3 -0.3
W18A Petrified Fore 82.75 52 ⇑P P 16 28 58.8 0.0
baz=83
CSS Prodhromos 82.78 308 P P 16 29 00.0 +1.1
comp=Z,3.0nm,1.9s
CSS Prodhromos 82.78 308 P P 16 29 00.0 +1.1
Z16A Peralta Trail, 82.78 54 ⇑P P 16 28 59.1 +0.2
baz=83
V19A Window Rock 82.81 51 ⇑P P 16 28 59.3 +0.3
baz=83,SNR=8.6
KPL Plockton 82.84 343⇑iP P 16 28 59.1 +0.4
KPL AMb AMB 16 29 00.7
comp=Z,236nm,1.5s,mb6.0
TANN Tannenbergstha 82.85 330 eP P 16 28 58.9 0.0
comp=Z,644nm,2.8s,mb6.2
KSB Sheil Bridge 82.90 343⇑iP P 16 28 60.0 +0.9
Y17A Roosevelt 82.94 53 ⇑P P 16 28 59.9 +0.2
baz=83,SNR=12
KHAL Karahalli 82.94 313 iP P 16 28 59.8 +0.1
DEMI Demirci 82.96 314 iP P 16 28 59.6 -0.1
W19A Sanders 82.98 51 ⇓P P 16 29 00.2 +0.3
baz=83
X18A Snowflake 82.99 52 ⇓P P 16 28 60.0 0.0
baz=83
NKC Novy Kostel 83.00 330 eP P 16 29 01.1 +1.4
NKC Novy Kostel 83.00 330 eP P 16 29 01.1 +1.4
MOX Moxa 83.01 331 eP P 16 28 59.9 +0.1
comp=Z,350nm,2.1s,mb6.0
MOX Moxa 83.01 331 eP P 16 28 59.3 -0.5
MOX e 16 29 13.7
MOX pmax pmax
comp=Z,191nm,1.9s,mb5.8
MOX MLR MLR
comp=Z,9µm,20.0s,MS6.2
MOX Moxa 83.01 331 eP P 16 28 59.3 -0.5
comp=Z,191nm,1.9s,mb5.8
MOX e 16 29 13.7
MOX eS S 16 39 26.0 +9.2
MOX LR LR
comp=Z,9µm,20.0s,MS6.2
ALFC Alevga 83.12 309 P P 16 29 00.8 +0.2
comp=Z,1.2nm,0.9s
ALFC Alevga 83.12 309 P P 16 29 00.8 +0.2
V20A Brimhall 83.12 50 ⇑P P 16 29 00.4 -0.2
baz=83,SNR=9.5
WIT Witteveen 83.12 334 eP P 16 29 01.0 +0.8
comp=Z,740nm,1.6s,mb6.5
BALY Balya 83.13 315 iP P 16 29 00.4 -0.2
IBBN Ibbenburen 83.15 334 eP P 16 29 00.6 +0.2
comp=Z,202nm,1.5s,mb5.9
PLD Plovdiv 83.15 318 P P 16 29 01.0 +0.4
ALN Alexandroupoli 83.24 317 P P 16 29 00.1 -1.0
KAR1 Arisaig 83.26 343⇑eP P 16 29 01.0 +0.1
EBH Black Hill 83.28 341⇑eP P 16 29 00.9 -0.1
T22A Edith 83.30 49 ⇑P P 16 29 01.7 +0.2
baz=83,SNR=18
PKSM Moragy 83.31 324 P P 16 29 02.3 +0.9
PKSM Moragy 83.31 324⇑iP P 16 29 01.0 -0.4
CONA Conrad Observa 83.31 327 iP P 16 29 02.0 +0.7
comp=Z,128nm,1.5s,mb5.7,SNR=19
KORT Korkueli 83.32 311 iP P 16 29 00.7 -0.9
ESY Stoneypath 83.34 341⇑eP P 16 29 01.1 -0.3
RDO Rodhopi 83.35 317 eP P 16 29 03.0 +1.3
RDO Rodhopi 83.35 317 P P 16 29 01.6 -0.1
KHC Kasperske Hory 83.39 329 eP P 16 29 01.1 -0.6
KHC pmax pmax
comp=Z,96nm,1.2s,mb5.7
KHC Kasperske Hory 83.39 329 eP P 16 29 00.7 -1.1
comp=Z,74nm,1.1s,mb5.6
KHC Kasperske Hory 83.39 329 eP P 16 29 03.1 +1.4
Y18A Canyon Day Jun 83.41 53 ⇑P P 16 29 02.2 0.0
baz=83
Z17A San Carlos Hig 83.43 53 ⇓P P 16 29 02.4 +0.2
baz=83
PPCY Paphos 83.45 309 P P 16 29 02.0 -0.3
PPCY Paphos 83.45 309 P P 16 29 02.0 -0.3
ROTZ Rotzenmuhle 83.46 330 eP P 16 29 02.6 +0.5
comp=Z,424nm,1.8s,mb6.2
X19A St. Johns 83.48 52 ⇑P P 16 29 02.5 0.0
baz=83,SNR=13
EDI Edinburgh 83.48 341⇑iP P 16 29 02.1 0.0
EDI AMb AMB 16 29 03.4
comp=Z,142nm,3.0s
UBBA Unterbreizbach 83.51 332 eP P 16 29 01.9 -0.4
comp=Z,329nm,2.2s,mb6.1
W20A Ramah 83.53 51 ⇑P P 16 29 02.6 -0.1
baz=83,SNR=12
EAB Aberfoyle 83.55 342⇑eP P 16 29 02.5 +0.1
GEC2 GERESS Array S 83.55 328 eP P 16 29 02.6 0.0
comp=Z,274nm,2.2s,mb6.0
GEC2 GERESS Array S 83.55 328 P P 16 29 02.5 -0.1
GERES GERESS Array B 83.55 328 P P 16 29 02.0 -0.6
comp=Z,25nm,0.9s,mb5.3,baz=38,slow=4.5,SNR=35
GERES PKKPbc PKKPbc 16 47 25.8 +5.9
comp=Z,1.0nm,0.9s,baz=235,slow=4.7,SNR=3.9
EBL Broad Law 83.58 341⇑eP P 16 29 01.7 -0.9
AKHS Akhisar 83.59 314 iP P 16 29 02.8 -0.2
216A Three Points, 83.60 55 ⇓P P 16 29 03.2 +0.1
baz=83
PMOR Pomariorio Ree 83.61 114 eP P 16 29 00.2 -3.1
comp=Z,56nm,1.1s,mb5.6
VTS Vitosha 83.61 319 P P 16 29 03.9 +0.9
EAU Auchinoon 83.62 341⇑eP P 16 29 02.8 +0.1
V21A Milan 83.63 50 ⇓P P 16 29 03.4 +0.1
baz=83
GOLH Golhisar 83.65 312 iP P 16 29 02.9 -0.4
DNZL Cakiroluk 83.66 313 iP P 16 29 03.0 -0.4
SDCO Great Sand Dun 83.66 47 eP P 16 29 03.8 +0.4
comp=Z,533nm,2.3s,mb6.3
WET Wettzell 83.67 329 eP P 16 29 03.3 +0.1
comp=Z,372nm,2.2s,mb6.1
WET ePP PP 16 32 12.3 -3.0
WET Wettzell 83.67 329 eP P 16 29 03.3 +0.1
WET e 16 32 12.3
WET pmax pmax
comp=Z,372nm,2.2s,mb6.1
EYMN Ely 83.69 33 eP P 16 29 02.3 -1.0
comp=Z,167nm,1.6s,mb5.9
117A Oracle 83.72 54 ⇓P P 16 29 04.2 +0.4
baz=84,SNR=11
WTSB Winterswijk 83.77 334⇑iP P 16 29 03.0 -0.6
comp=Z,162nm,2.4s,mb5.7
Y19A Nutrioso 83.80 52 ⇓P P 16 29 04.5 +0.4
baz=84
TUC Tucson 83.85 54 P P 16 29 04.2 -0.2
TUC pmax pmax
comp=Z,11nm,0.5s,mb5.2
TUC Tucson 83.85 54 eP P 16 29 04.3 -0.1
comp=Z,113nm,1.4s,mb5.8
Z18A Geronimo 83.85 53 ⇑P P 16 29 04.2 -0.2
baz=84
X20A Quemado 83.91 51 ⇑P P 16 29 04.9 +0.3
baz=84,SNR=15
GRA1 Grafenberg Arr 83.92 330 eP P 16 29 04.7 +0.3
comp=Z,673nm,1.7s,mb6.5
GRA1 ePP PP 16 32 15.1 -2.3
GRA1 LR LR
comp=Z,151µm,18.8s,MS7.4
GRF Grafenberg Arr 83.92 330 eP P 16 29 04.7 +0.3
comp=Z,673nm,1.7s,mb6.5
GRF ePP PP 16 32 15.1 -2.3
GRF eL 17 38 11.2
comp=Z,151µm,18.8s
GRF Grafenberg Arr 83.92 330 eP P 16 29 04.7 +0.3
GRF e 16 32 15.1
GRF pmax pmax
comp=Z,673nm,1.7s,mb6.5
GRF MLR MLR
comp=Z,151µm,18.8s,MS7.4
GRF Grafenberg Arr 83.92 330 eP P 16 29 04.7 +0.3
GRF e 16 32 15.1
GRF pmax pmax
comp=Z,673nm,1.7s,mb6.5
GRF MLR MLR
comp=Z,151µm,18.8s,MS7.4
PGBU Glenifferbraes 83.92 342⇑iP P 16 29 04.7 +0.4
PGBU AMb AMB 16 29 07.1
comp=Z,284nm,3.1s

AYVA Ayvalik 83.95 315 iP P 16 29 04.7 -0.1
BOZC Bozcaada 83.95 316 iP P 16 29 04.5 -0.3
ARSA Arzberg 83.97 326⇑iP P 16 29 05.0 +0.2
comp=Z,74nm,1.6s,mb5.6,SNR=22
ESK Eskdalemuir 84.03 341 P P 16 29 06.3 +1.4
comp=Z,177nm,1.1s,mb6.1,SNR=7.3
ESK Eskdalemuir 84.03 341⇑iP P 16 29 04.6 -0.3
ESK AMb AMB 16 29 06.4
comp=Z,136nm,2.2s,mb5.7
ESK Eskdalemuir 84.03 341 iP P 16 29 06.3 +1.4
ESK Eskdalemuir 84.03 341 eP P 16 29 05.0 +0.1
comp=Z,512nm,2.2s,mb6.3
BUG Bochum--Univer 84.03 333 eP P 16 29 04.8 -0.2
comp=Z,315nm,1.9s,mb6.1
PPT Papeete 84.03 117 eP P 16 29 02.5 -2.9
comp=Z,38nm,1.4s,mb5.3
PPT eLR LR 16 55 23.2
comp=Z,15µm,21.8s,baz=313
W21A San Fidel 84.07 50 ⇑P P 16 29 05.9 +0.4
baz=84,SNR=11
MOA Molln 84.07 327⇑iP P 16 29 05.4 +0.2
comp=Z,77nm,1.4s,mb5.6,SNR=16
PAE Paea 84.09 117 eP P 16 29 02.8 -2.9
comp=Z,16nm,1.5s,mb4.9
PAE Paea 84.09 117 eP P 16 29 02.8 -2.9
PAE pmax pmax
comp=Z,16nm,1.5s,mb4.9
ECK Cauldkaine Hil 84.13 341 eP P 16 29 05.3 -0.1
XAL Allendale 84.16 340 eP P 16 29 05.0 -0.5
217A Green Valley 84.17 55 ⇓P P 16 29 06.2 +0.2
baz=84,SNR=18
118A Homack Ranch, 84.17 54 ⇑P P 16 29 06.4 +0.3
baz=84,SNR=16
TIAR Tiarei 84.19 117 eP P 16 29 03.2 -3.0
comp=Z,88nm,1.3s,mb5.7
DIVS Divibare 84.19 322 P P 16 29 05.7 -0.2
Z19A T-Link Ranch, 84.22 53 ⇓P P 16 29 06.2 -0.1
baz=84
PRK Paraskevi 84.23 315 eP P 16 29 07.5 +1.3
PRK Paraskevi 84.23 315 P P 16 29 05.2 -1.0
KOGS Kog 84.25 326 eP P 16 29 05.8 -0.4
KOGS ePP PP 16 32 22.9 +2.7
AKAS Kas 84.28 311 iP P 16 29 05.8 -0.7
KSL Kastellorizon 84.35 311 eP P 16 29 07.0 +0.1
AYDN Tasoluk 84.37 313 iP P 16 29 07.9 +1.0
BLCB Balcova 84.37 314 P P 16 29 08.1 +1.1
Y20A Horse Springs, 84.39 52 ⇓P P 16 29 07.5 +0.4
baz=84,SNR=19
LIA Limnos Island 84.40 316 P P 16 29 04.9 -2.2
ECSD EROS Data Cent 84.41 38 eP P 16 29 06.0 -1.1
comp=Z,144nm,1.6s,mb5.8
X21A Alamocita Cree 84.42 51 ⇓P P 16 29 07.8 +0.5
baz=84
SRS Serrai 84.44 318 P P 16 29 05.7 -1.5
TURN Turunc 84.46 312 iP P 16 29 09.2 +1.8
SIGR SIGRI 84.49 315 P P 16 29 05.4 -2.2
119A Ashpeak Ranch, 84.53 53 ⇓P P 16 29 07.9 0.0
baz=84
218A Dragoon 84.55 54 ⇑P P 16 29 08.3 +0.3
baz=84,SNR=22
TNS Taunus Mts 84.58 332 eP P 16 29 07.8 0.0
comp=Z,691nm,2.3s,mb6.4
TNS Taunus Mts 84.58 332 eP P 16 29 07.8 0.0
TNS pmax pmax
comp=Z,691nm,2.3s,mb6.4
W22A Albuquerque 84.58 50 ⇑P P 16 29 08.6 +0.5
baz=84
PERS Pernice 84.62 326 eP P 16 29 07.8 -0.2
PERS e 16 39 28.5
SOKA Soboth 84.63 326⇑iP P 16 29 07.9 -0.2
comp=Z,136nm,1.6s,mb5.8
URLA Izmir 84.65 314 iP P 16 29 08.4 0.0
GCAM G?zelcaml? 84.72 314 iP P 16 29 08.1 -0.7
Z20A Nine Sixteen R 84.76 53 ⇑P P 16 29 09.2 +0.2
baz=85,SNR=18
OUR Ouranopolis 84.77 317 P P 16 29 07.3 -1.6
SOH Sokhos 84.77 318 P P 16 29 06.5 -2.4
Y21A Point of Rocks 84.77 51 ⇑P P 16 29 09.5 +0.4
baz=85,SNR=9.0
STIP Stip 84.78 319 eP P 16 29 08.4 -0.6
STIP Stip 84.78 319 P P 16 29 08.5 -0.5
GAL1 Galloway 84.83 341⇑eP P 16 29 08.9 0.0
GAL1 AMb AMB 16 29 10.5
comp=Z,192nm,1.5s,mb6.0
DOBS Dobrina 84.83 326 eP P 16 29 08.6 -0.6
DOBS ePP PP 16 32 27.5 +2.6
DOBS e 16 34 21.4
VAY Valandovo 84.84 319 eP P 16 29 09.2 -0.1
VAY Valandovo 84.84 319 P P 16 29 08.2 -1.1
LAZ Ladron 84.85 51 eP P 16 29 09.7 +0.2
comp=Z,111nm,1.8s,mb5.7
X22A Bernardo 84.86 51 ⇓P P 16 29 09.4 -0.1
baz=85
ANMO Albuquerque 84.92 50 eP P 16 29 09.8 0.0
ANMO pmax pmax
comp=Z,309nm,1.8s
ANMO Albuquerque 84.92 50 eP P 16 29 09.8 0.0
comp=Z,309nm,1.8s,mb6.1
318A Bisbee 84.92 55 ⇓P P 16 29 09.7 -0.2
baz=85,SNR=19
TOD Tromm 84.94 331 eP P 16 29 09.0 -0.6
SMG Samos 84.95 314 eP P 16 29 10.5 +0.6
OBKA Obir 84.97 326⇑iP P 16 29 08.8 -1.0
comp=Z,22nm,1.1s,mb5.2,SNR=7.9
SKO Skopje 84.98 320 iP P 16 29 11.2 +1.2
SKO Skopje 84.98 320 P P 16 29 11.3 +1.4
ODZ Otahua Downs 85.00 160 P P 16 29 06.4 -3.2
comp=Z,319nm,1.9s,mb6.1
PLG Polygyros 85.03 318 eP P 16 29 10.5 +0.2
PLG Polygyros 85.03 318 P P 16 29 08.8 -1.5
219A White Tail Can 85.05 54 ⇓P P 16 29 10.5 +0.1
baz=85,SNR=14
PLE Pljevlja 85.05 322⇓iP P 16 29 10.6 +0.3
PLE Pljevlja 85.05 322⇓iP P 16 29 10.7 +0.4
LEGS Legarje 85.05 326 eP P 16 29 09.7 -0.6
HORT Hortiatis 85.06 318 P P 16 29 09.1 -1.3
HGN Heimansgroeve 85.07 334⇑iP P 16 29 09.6 -0.6
comp=Z,167nm,2.1s,mb5.8
KBA Koelnbreinsper 85.07 327⇑iP P 16 29 09.8 -0.5
comp=Z,50nm,1.3s,mb5.5,SNR=17
FUR Furstenfeldbru 85.10 329 eP P 16 29 10.9 +0.5
comp=Z,1µm,2.5s,mb6.5
FUR Furstenfeldbru 85.10 329 eP P 16 29 10.9 +0.5
FUR pmax pmax
comp=Z,1µm,2.5s,mb6.5
120A U Bar Ranch, L 85.10 53 ⇑P P 16 29 10.8 0.0
baz=85,SNR=11
LENM Lemitar 85.11 51 P P 16 29 11.5 +0.7
comp=Z,38nm,1.2s,mb5.4
THE Thessaloniki 85.11 318 P P 16 29 09.0 -1.7
IVA Berane 85.12 321⇓iP P 16 29 10.9 +0.2
BEBN Eben Emael 85.13 334 P P 16 29 10.1 -0.5
MEM Membach 85.17 333 P P 16 29 10.4 -0.3
ARG Arkhangelos 85.18 312 eP P 16 29 05.0 -6.1
ARG Arkhangelos 85.18 312 P P 16 29 11.8 +0.7
ABH Alteburg 85.20 332 eP P 16 29 10.4 -0.5
Y22D IRIS PASSCAL I 85.20 51 ⇑P P 16 29 11.7 +0.5
baz=85
LHO Holmfirth 85.22 339⇑iP P 16 29 10.8 0.0
PAIG Paliouri 85.22 317 P P 16 29 09.4 -1.8
Z21A St. Cloud Mine 85.23 52 ⇑P P 16 29 11.4 0.0
baz=85,SNR=12
Y22A Socorro 85.26 51 ⇑P P 16 29 11.8 +0.3
baz=85,SNR=8.0
MYKA Terra Mystica 85.28 327⇑iP P 16 29 10.3 -1.1
comp=Z,50nm,1.5s,mb5.4
PVY Plav 85.29 321⇓iP P 16 29 11.5 0.0
PVY Plav 85.29 321⇓iP P 16 29 11.6 +0.1
MEH Mehetia 85.32 116 eP P 16 29 09.1 -2.8
comp=Z,112nm,1.2s,mb5.9
BNM Barren Site 85.34 51 eP P 16 29 11.8 -0.1
comp=Z,63nm,1.4s,mb5.5
LJU Ljubljana 85.34 326 eP P 16 29 10.9 -0.7
LJU ePP PP 16 32 31.7 +2.6
LJU e 16 39 34.1
UPM Unac-Piva 85.38 322⇓iP P 16 29 10.9 -1.0
UPM Unac-Piva 85.38 322⇓iP P 16 29 11.0 -1.0
319A Douglas 85.43 54 ⇓P P 16 29 12.5 +0.1
baz=85
KTD Kalmit 85.45 332 eP P 16 29 12.5 +0.3
STU Stuttgart 85.46 331 eP P 16 29 12.2 0.0
comp=Z,203nm,1.3s,mb6.1
STU Stuttgart 85.46 331⇑eP P 16 29 12.1 -0.1
STU pmax pmax
comp=Z,104nm,1.0s,mb5.9

STU **Stuttgart** 85.46 331⇑eP P 16 29 12.1 -0.2
comp=Z,104nm,1.0s,mb5.9
KRUS **Krusevo** 85.51 319 eP P 16 29 12.0 -0.6
RUP **Ruppelstein** 85.53 332 eP P 16 29 12.5 0.0
CADS **Cadrg** 85.55 327 eP P 16 29 11.1 -1.6
BCLA **Clavier** 85.58 334 P P 16 29 12.2 -0.5
220A **Playas Peak, P** 85.58 53 ⇑P P 16 29 13.3 +0.2
baz=85
UCC **Uccle** 85.59 334 P P 16 29 12.1 -0.8
VOY **Vojsko** 85.63 327 eP P 16 29 10.9 -2.2
VOY e 16 29 33.8
WTTA **Wattenberg** 85.66 329⇑iP P 16 29 13.1 -0.1
comp=Z,59nm,1.8s,mb5.5
121A **Cookes Peak, D** 85.66 53 ⇓P P 16 29 13.6 0.0
baz=86,SNR=11
ABTA **Abfaltersbach** 85.69 328⇑iP P 16 29 12.4 -1.0
comp=Z,29nm,1.1s,mb5.4,SNR=10.0
Z22A **Elephant Butte** 85.71 52 ⇑P P 16 29 13.8 0.0
baz=86,SNR=14
STNC **Stoke** 85.72 339⇑eP P 16 29 13.6 +0.1
STNC AMb AMB 16 29 14.4
comp=Z,196nm,3.1s
TAOE **Nuku Hiva Isla** 85.72 104 eLR LR 16 56 10.3
comp=Z,14µm,22.8s,baz=318
BIA **Bitola** 85.72 319 eP P 16 29 13.2 -0.5
BIA **Bitola** 85.72 319 P P 16 29 14.1 +0.4
LIT **Litokhoron** 85.75 318 P P 16 29 10.2 -3.6
CWF **Charnwood Fore** 85.76 338⇑iP P 16 29 13.4 -0.3
CWF AMb AMB 16 29 14.9
comp=Z,163nm,1.5s,mb6.0
TTG **Podgorica** 85.77 321⇓iP P 16 29 13.1 -0.8
TTG **Podgorica** 85.77 321⇓iP P 16 29 13.1 -0.8
BRY **Bratogost** 85.78 322⇓iP P 16 29 13.2 -0.8
BRY **Bratogost** 85.78 322⇓iP P 16 29 13.3 -0.7
KNDS **Knezji Dol** 85.80 326 eP P 16 29 12.9 -1.1
X24A **Lazy VL Ranch,** 85.80 50 ⇑P P 16 29 14.7 +0.5
baz=86
MOTA **Moosalm** 85.82 329⇓iP P 16 29 14.9 +0.9
comp=Z,36nm,1.0s,mb5.5,SNR=10
LANF **Langenberg** 85.83 332 eP P 16 29 14.4 +0.3
Y23A **Lovelace Mesa,** 85.84 51 ⇑P P 16 29 14.2 -0.2
baz=86,SNR=9.6
RETA **Reutte** 85.85 329⇑iP P 16 29 14.2 0.0
comp=Z,114nm,1.7s,mb5.8,SNR=21
FNA **Florina** 85.86 319 P P 16 29 15.4 +1.0
SNF **Seneffe** 85.86 334 P P 16 29 15.1 +0.9
TCR **Colchester** 85.86 337 eP P 16 29 14.3 +0.1
WLF **Walferdange** 85.89 333 P P 16 29 15.3 +0.9
comp=Z,136nm,2.0s,mb5.8
WLF **Walferdange** 85.89 333 eP P 16 29 14.3 -0.1
comp=Z,367nm,1.7s,mb6.3
WLF **Walferdange** 85.89 333 eP P 16 29 14.2 -0.2
WLF pmax pmax
comp=Z,264nm,1.8s,mb6.2
WLF **Walferdange** 85.89 333 eP P 16 29 14.2 -0.2
comp=Z,264nm,1.8s,mb6.2
OHR **Ohrid** 85.93 319 iP P 16 29 13.7 -1.0
OHR **Ohrid** 85.93 319 P P 16 29 14.3 -0.4
320A **Kipp Ranch, An** 85.95 54 ⇓P P 16 29 15.7 +0.7
baz=86
W25A **X Bar L Ranch,** 85.97 49 ⇑P P 16 29 15.4 +0.4
baz=86,SNR=10.0
KZN **Kozani** 85.99 318 P P 16 29 14.0 -1.0
GIVF **Givet** 86.01 334⇑iP P 16 29 14.5 -0.4
comp=Z,443nm,1.7s,mb6.1
GIVF **Givet** 86.01 334⇑iP P 16 29 14.5 -0.4
GIVF pmax pmax
comp=Z,222nm,1.7s,mb6.1
GIVF **Givet** 86.01 334⇑iP P 16 29 14.5 -0.4
comp=Z,222nm,1.7s,mb6.1
BUM **Brajici-Budva** 86.05 321⇓iP P 16 29 15.4 +0.1
BUM **Brajici-Budva** 86.05 321⇓iP P 16 29 15.4 +0.2
122A **Conniff Cattle** 86.05 52 ⇑P P 16 29 15.9 +0.4
baz=86
SCHQ **Schefferville** 86.06 16 P P 16 29 14.6 -0.5
comp=Z,24nm,1.0s,mb5.4,baz=346,slow=5.2,SNR=18
SCHQ **Schefferville** 86.06 16⇑eP P 16 29 14.6 -0.5
comp=Z,44nm,1.1s,mb5.6
DOU **Dourbes** 86.10 334 P P 16 29 14.9 -0.5
ULC **Ulcinj** 86.11 321⇓iP P 16 29 13.4 -2.2
ULC **Ulcinj** 86.11 321⇓iP P 16 29 13.4 -2.2
HCY **Herceg Novi** 86.14 322⇓iP P 16 29 15.1 -0.6
HCY **Herceg Novi** 86.14 322⇓iP P 16 29 15.1 -0.6
APE **Apeiranthos** 86.14 314 eP P 16 29 15.0 -0.8
COWI **Conover** 86.14 33 eP P 16 29 15.4 -0.2
comp=Z,138nm,1.6s,mb5.9
WLF1 **Llynfaes** 86.15 340⇑iP P 16 29 14.6 -1.0
BFO **Black Forest** 86.15 331 eP P 16 29 15.3 -0.4
comp=Z,212nm,1.5s,mb6.2
BFO **Black Forest** 86.15 331 eP P 16 29 15.3 -0.4
BFO pmax pmax
comp=Z,212nm,1.5s,mb6.2
SPAK **Spaichingen-Ko** 86.16 331 eP P 16 29 15.3 -0.4
KARP **Karpathos** 86.21 312 eP P 16 29 18.0 +1.8
STON **Ston** 86.23 322 P P 16 29 15.6 -0.6
STON **Ston** 86.23 322 iP P 16 29 15.6 -0.6
Y24A **Capitan** 86.23 50 ⇑P P 16 29 16.6 +0.3
baz=86
FETA **Feichten** 86.23 329⇑iP P 16 29 15.8 -0.3
comp=Z,40nm,1.2s,mb5.5,SNR=12
TIR **Tirane** 86.25 320⇑eP P 16 29 15.4 -0.9
TIR pmax pmax
comp=Z,111nm,1.1s,mb6.0
TIR **Tirane** 86.25 320⇑eP P 16 29 15.4 -0.9
comp=Z,111nm,1.1s,mb6.0
TIR **Tirane** 86.25 320 P P 16 29 16.8 +0.5
CBKS **Cedar Bluff** 86.25 43 P P 16 29 15.8 -0.6
CBKS pmax pmax
comp=Z,120nm,1.3s,mb6.0
CBKS **Cedar Bluff** 86.25 43 eP P 16 29 15.2 -1.2
comp=Z,115nm,1.3s,mb6.0
DMUB **Kingscourt** 86.26 342 eP P 16 29 14.6 -1.5
BAIF **Baives** 86.27 334⇑iP P 16 29 15.7 -0.5
comp=Z,116nm,1.2s,mb5.7
BAIF **Baives** 86.27 334⇑iP P 16 29 15.7 -0.5
BAIF pmax pmax
comp=Z,58nm,1.2s,mb5.7
BAIF **Baives** 86.27 334⇑iP P 16 29 15.7 -0.5
comp=Z,58nm,1.2s,mb5.7
X25A **Clemmons Ranch** 86.30 49 ⇑P P 16 29 17.1 +0.4
baz=86
NVLJ **Novalja** 86.31 325 P P 16 29 14.8 -1.7
NVLJ **Novalja** 86.31 325 iP P 16 29 14.8 -1.7
DAVA **Damuels** 86.37 329⇑iP P 16 29 16.7 -0.1
comp=Z,82nm,1.2s,mb5.8,SNR=16
222A **Williams Famil** 86.37 52 ⇑P P 16 29 16.7 -0.3
baz=86
THL **Klokotos Trika** 86.38 318 P P 16 29 15.0 -2.0
TFO1 **Folkestone** 86.41 336⇑eP P 16 29 16.2 -0.6
TFO1 AMb AMB 16 29 18.2
comp=Z,276nm,1.1s,mb6.4
ATAL **Atalanti** 86.44 317 P P 16 29 15.4 -1.9
LKR **Lokris** 86.49 317 P P 16 29 13.7 -3.8
CDF **Champ du Feu** 86.50 332⇑iP P 16 29 17.0 -0.4
comp=Z,396nm,1.6s,mb6.1
CDF **Champ du Feu** 86.50 332⇑iP P 16 29 17.0 -0.4
CDF pmax pmax
comp=Z,198nm,1.6s,mb6.1
CDF **Champ du Feu** 86.50 332⇑iP P 16 29 17.0 -0.4
comp=Z,198nm,1.6s,mb6.1
LIENZ **Kamor/St.Gall** 86.52 330⇑iP P 16 29 16.9 -0.6
comp=Z,975nm,3.3s
SLE **Schleitheim** 86.55 331⇑iP P 16 29 17.1 -0.5
comp=Z,831nm,3.1s
MENF **Mencas** 86.55 336 eP P 16 29 18.1 +0.5
LIBD **Limburg** 86.58 331 eP P 16 29 17.7 -0.1
AGG **Agios Georgios** 86.59 317 P P 16 29 15.7 -2.3
FELD **Feldberg im Sc** 86.65 331 eP P 16 29 17.5 -0.6
WILA **Wila** 86.66 330⇑iP P 16 29 17.6 -0.6
comp=Z,783nm,3.1s
Y25A **Mesa, Roswell** 86.69 50 ⇓P P 16 29 18.5 -0.1
baz=86
ECH **Echery** 86.70 331 eP P 16 29 17.7 -0.7
DSB **Dublin** 86.72 341 eP P 16 29 18.1 -0.2
comp=Z,500nm,2.3s,mb6.3
FUORN **Ofenpass-Fuorn** 86.74 329⇑iP P 16 29 18.2 -0.4
comp=Z,1µm,2.6s,mb6.6
PLONS **Plons/SG** 86.76 330⇑iP P 16 29 18.3 -0.4
comp=Z,946nm,3.3s
DAVOX **Davos/Dischmat** 86.77 329⇑iP P 16 29 18.6 -0.1
comp=Z,655nm,3.1s
X26A **CR and CF Fran** 86.81 49 ⇓P P 16 29 19.1 0.0
baz=87
ZUR **Degenried** 86.83 330⇑iP P 16 29 18.7 -0.3
comp=Z,904nm,3.2s

DCN **Croghan** 86.85 342 eP P 16 29 17.4 -1.6
223A **Chaparral, Ant** 86.87 52 ⇓P P 16 29 19.9 +0.4
baz=87
SULZ **Cheisacher** 86.89 331⇑iP P 16 29 18.8 -0.5
comp=Z,1µm,3.3s
MCH1 **Michaelchurch** 86.91 339⇑iP P 16 29 18.6 -0.7
MCH1 AMb AMB 16 29 20.7
comp=Z,165nm,1.3s,mb6.1
HTR **Trewern Hill** 86.92 339⇑iP P 16 29 19.0 -0.3
JAN **Janina** 86.95 318 eP P 16 29 20.5 +0.8
EVR **Evrytania** 86.96 317 eP P 16 29 20.0 +0.2
WOL **Wolverton** 86.98 338⇑eP P 16 29 18.2 -1.5
WOL AMb AMB 16 29 20.1
comp=Z,201nm,2.6s,mb5.9
BERNI **Berninapass** 87.01 329⇑iP P 16 29 19.8 -0.1
comp=Z,881nm,3.1s
MOF **Molkenrain** 87.01 331 eP P 16 29 19.1 -0.8
124A **Stringfield Ra** 87.03 51 ⇑P P 16 29 20.3 0.0
baz=87
LLS **Linth-Limmern** 87.08 330⇑iP P 16 29 19.9 -0.3
comp=Z,793nm,3.4s
Z25A **Rowell** 87.10 50 ⇑P P 16 29 20.9 +0.3
baz=87
MUO **Muotathal** 87.13 330⇑iP P 16 29 20.1 -0.4
comp=Z,911nm,3.0s,mb6.5
THEF **They Montfort** 87.14 332 eP P 16 29 20.6 +0.1
KALE **Kalithea** 87.15 317 P P 16 29 20.4 -0.3
HINF **Hinteralfeld** 87.15 331 eP P 16 29 19.8 -0.7
comp=Z,206nm,1.8s,mb5.8
HINF **Hinteralfeld** 87.15 331 eP P 16 29 19.8 -0.7
HINF pmax pmax
comp=Z,103nm,1.8s,mb5.8
HINF **Hinteralfeld** 87.15 331 eP P 16 29 19.8 -0.7
comp=Z,103nm,1.8s,mb5.8
HGH **Gray Hill** 87.17 339⇑iP P 16 29 20.1 -0.5
X27A **F and S Farms,** 87.18 48 ⇑P P 16 29 21.3 +0.3
baz=87
BBS **Basel-Blauen** 87.18 331 eP P 16 29 20.7 0.0
BBS **Basel-Blauen** 87.18 331 eP P 16 29 20.7 0.0
HAU **Haudompre** 87.19 332 eP P 16 29 20.0 -0.7
comp=Z,76nm,1.1s,mb5.6
HAU **Haudompre** 87.19 332 eP P 16 29 20.0 -0.7
HAU pmax pmax
comp=Z,38nm,1.1s,mb5.5
HAU **Haudompre** 87.19 332 eP P 16 29 20.0 -0.7
comp=Z,38nm,1.1s,mb5.5
VDL **Val di Lei** 87.19 329⇑iP P 16 29 20.2 -0.6
comp=Z,693nm,2.9s,mb6.4
TRIZ **Trizonia** 87.20 317 P P 16 29 17.6 -3.4
BALST **Balsthal** 87.21 331⇑iP P 16 29 20.6 -0.3
comp=Z,988nm,3.5s
Y26A **Elida** 87.22 49 ⇑P P 16 29 21.6 +0.4
baz=87
EFP **Efpalio** 87.25 317 P P 16 29 18.8 -2.4
MEZF **Maizieres J'vi** 87.26 333⇑iP P 16 29 21.0 -0.1
comp=Z,572nm,1.7s,mb6.2
MEZF **Maizieres J'vi** 87.26 333⇑iP P 16 29 21.0 -0.1
comp=Z,572nm,1.7s,mb6.5
BNALP **Bannalp** 87.30 330⇑iP P 16 29 20.8 -0.5
comp=Z,701nm,3.0s,mb6.4
IGT **Igoumenitsa** 87.31 319 P P 16 29 18.7 -2.8
NPS **Neapolis** 87.33 313 eP P 16 29 21.5 -0.2
LAKA **Lakka** 87.34 317 P P 16 29 19.6 -2.1
BOURR **Bourrignon** 87.35 331⇑iP P 16 29 21.1 -0.4
comp=Z,784nm,2.8s,mb6.4
GUR **Goura** 87.36 316 P P 16 29 21.3 -0.5
224A **Corundas Mount** 87.40 52 ⇓P P 16 29 22.5 +0.4
baz=87
SCIA **State Center** 87.44 38 eP P 16 29 21.8 -0.3
comp=Z,217nm,1.2s,mb6.3
KEK **Kerkira** 87.47 319 eP P 16 29 23.0 +0.7
LAST **Lasithi** 87.48 313 P P 16 29 22.5 +0.1
HASLI **Hasliberg/Brie** 87.50 330⇑iP P 16 29 21.7 -0.6
comp=Z,826nm,2.7s,mb6.5
FUSIO **Fusio** 87.53 330⇑iP P 16 29 22.1 -0.3
comp=Z,754nm,3.6s
LOMF **Lomont** 87.54 331 eP P 16 29 22.6 +0.1
XRY **Khrisi** 87.55 312 eP P 16 29 24.0 +1.2
125A **Gardner Draw,** 87.56 51 ⇓P P 16 29 22.8 0.0
baz=87,SNR=9.5
Z26A **Caprock** 87.57 50 ⇓P P 16 29 22.5 -0.4
baz=87,SNR=8.9
Y27A **Causey** 87.65 49 ⇓P P 16 29 23.5 +0.2
baz=87
VLX **Vlachokerasia** 87.74 316 P P 16 29 23.4 -0.2
MNTX **Cornudas Mount** 87.74 52 P P 16 29 23.6 -0.1
comp=Z,126nm,1.8s,mb5.8
KSU1 **Kansas State U** 87.76 42 eP P 16 29 22.6 -1.0
comp=Z,45nm,0.6s,mb5.9
WIMIS **Wimmis** 87.78 330⇑iP P 16 29 22.9 -0.7
comp=Z,528nm,3.0s,mb6.2
225A **Deer Hill, Car** 87.82 51 ⇑P P 16 29 24.4 +0.3
baz=88
MSTX **Muleshoe** 87.83 49 ⇑P P 16 29 24.1 0.0
baz=88
324A **Moseley Ranch,** 87.84 52 ⇑P P 16 29 24.1 -0.1
baz=88
AMTX **Amarillo** 87.86 47 eP P 16 29 24.1 -0.1
comp=Z,59nm,1.0s,mb5.8
TORNY **Torny/Romont** 87.96 331⇑iP P 16 29 24.0 -0.5
comp=Z,734nm,3.3s
Z27A **Tatum** 88.01 49 ⇓P P 16 29 24.5 -0.5
baz=88,SNR=9.9
LKBD **Leukerbad** 88.01 330⇑iP P 16 29 24.1 -0.6
comp=Z,285nm,2.6s,mb6.0
BRANT **Les Verrieres** 88.02 331⇑iP P 16 29 24.5 -0.2
comp=Z,842nm,3.4s
VAM **Vamos** 88.07 314 eP P 16 29 25.0 -0.2
JFWS **Jewell Farm** 88.11 35 P P 16 29 24.5 -0.7
JFWS pmax pmax
comp=Z,120nm,1.5s,mb5.9
JFWS **Jewell Farm** 88.11 35 eP P 16 29 23.6 -1.7
comp=Z,123nm,1.5s,mb5.9
ITM **Ithomi** 88.12 316 eP P 16 29 25.0 -0.4
ITM **Ithomi** 88.12 316 P P 16 29 25.2 -0.2
VLS **Valsamata** 88.15 318 eP P 16 29 25.0 -0.6
VLS **Valsamata** 88.15 318 P P 16 29 25.6 0.0
SENIN **Lac Senin/Sane** 88.16 330⇑iP P 16 29 25.0 -0.4
comp=Z,595nm,3.0s,mb6.3
325A **Bean Ranch, Si** 88.22 52 ⇑P P 16 29 26.1 +0.2
baz=88
HTL **Hartland** 88.23 339⇑iP P 16 29 25.5 -0.1
HTL AMb AMB 16 29 27.0
comp=Z,115nm,1.9s,mb5.8
KARN **Karanos** 88.24 314 P P 16 29 25.4 -0.6
226A **Malaga, Loving** 88.30 51 ⇓P P 16 29 26.7 +0.3
baz=88
AIGLE **Aigle** 88.32 331⇑iP P 16 29 25.5 -0.7
comp=Z,712nm,3.0s
DIX **Grande Dixence** 88.35 330⇑iP P 16 29 26.3 0.0
comp=Z,827nm,4.4s
127A **Arkansas Junct** 88.35 50 ⇑P P 16 29 26.1 -0.5
baz=88
GIMEL **St. Georges /** 88.43 331⇑iP P 16 29 26.4 -0.3
comp=Z,618nm,3.6s
PYL **PYLOS** 88.43 316 P P 16 29 24.8 -2.1
OG01 **Vacheresse** 88.43 331 eP P 16 29 26.8 +0.1
CABF **La Chapelle** 88.44 331 eP P 16 29 26.3 -0.4
comp=Z,222nm,1.8s,mb5.8
CABF **La Chapelle** 88.44 331 eP P 16 29 26.3 -0.4
CABF pmax pmax
comp=Z,111nm,1.8s,mb5.8
CABF **La Chapelle** 88.44 331 eP P 16 29 26.3 -0.4
comp=Z,111nm,1.8s,mb5.8
EMV **Vieux Emosson** 88.57 330⇑iP P 16 29 27.0 -0.4
comp=Z,603nm,3.0s
425A **Indio Mountain** 88.60 52 ⇑P P 16 29 27.8 0.0
baz=88
AQU **L'Aquila** 88.69 324 eP P 16 29 28.0 0.0
AQU pmax pmax
comp=Z,55nm,0.8s,mb5.9
AQU **L'Aquila** 88.69 324 eP P 16 29 28.0 -0.1
comp=Z,55nm,0.8s,mb5.9
AQU **L'Aquila** 88.69 324⇓iP P 16 29 29.2 +1.2
LOR **Lormes** 88.74 333⇑iP P 16 29 27.7 -0.4
comp=Z,449nm,1.8s,mb6.2
LOR **Lormes** 88.74 333⇑iP P 16 29 27.7 -0.4
LOR pmax pmax
comp=Z,225nm,1.8s,mb6.2
LOR **Lormes** 88.74 333⇑iP P 16 29 27.7 -0.4
comp=Z,225nm,1.8s,mb6.2
227A **Bennet, Jal** 88.84 50 ⇑P P 16 29 28.9 0.0
baz=89
326A **Caldwell Ranch** 88.88 51 ⇓P P 16 29 29.2 0.0
baz=89
FLN **La Foliniere** 88.97 336⇑iP P 16 29 28.7 -0.5

comp=Z,407nm,1.7s,mb6.2
FLN **La Foliniere** 88.97 336⇑iP P 16 29 28.7 -0.5
FLN pmax pmax
comp=Z,204nm,1.7s,mb6.2
FLN **La Foliniere** 88.97 336⇑iP P 16 29 28.7 -0.5
comp=Z,204nm,1.7s,mb6.2
LDF **La Druitiere** 89.00 336⇑iP P 16 29 28.9 -0.4
comp=Z,432nm,1.8s,mb6.2
LDF **La Druitiere** 89.00 336⇑iP P 16 29 28.9 -0.4
LDF pmax pmax
comp=Z,216nm,1.8s,mb6.2
LDF **La Druitiere** 89.00 336⇑iP P 16 29 28.9 -0.4
comp=Z,216nm,1.8s,mb6.2
SSF **Saint Saulge** 89.04 333 eP P 16 29 29.2 -0.4
comp=Z,104nm,1.3s,mb5.7
SSF **Saint Saulge** 89.04 333 eP P 16 29 29.2 -0.4
SSF pmax pmax
comp=Z,52nm,1.3s,mb5.7
SSF **Saint Saulge** 89.04 333 eP P 16 29 29.2 -0.4
comp=Z,52nm,1.3s,mb5.7
LPL **La Plagne** 89.08 330⇑iP P 16 29 29.4 -0.4
comp=Z,58nm,1.1s,mb5.5
LPL **La Plagne** 89.08 330⇑iP P 16 29 29.4 -0.4
LPL pmax pmax
comp=Z,29nm,1.1s,mb5.5
LPL **La Plagne** 89.08 330⇑iP P 16 29 29.4 -0.4
comp=Z,29nm,1.1s,mb5.5
GLMI **Grayling** 89.09 31 eP P 16 29 29.8 -0.1
comp=Z,159nm,0.8s,mb6.4
JSA **Saint Aubin** 89.14 337⇑iP P 16 29 29.3 -0.6
JSA AMb AMB 16 29 31.1
comp=Z,120nm,1.9s,mb5.9
327A **Balmorhea Ranc** 89.15 51 ⇓P P 16 29 30.0 -0.4
baz=89
CCA1 **Carnmenellis** 89.16 339 AMb AMB 16 29 31.0
comp=Z,96nm,1.9s,mb5.8
SMF **Signal de Mont** 89.27 332⇑iP P 16 29 30.3 -0.3
comp=Z,432nm,1.7s,mb6.2
SMF **Signal de Mont** 89.27 332⇑iP P 16 29 30.3 -0.3
SMF pmax pmax
comp=Z,216nm,1.7s,mb6.2
SMF **Signal de Mont** 89.27 332⇑iP P 16 29 30.3 -0.3
comp=Z,216nm,1.7s,mb6.2
426A **McDonald Obser** 89.29 52 ⇑P P 16 29 30.7 -0.4
baz=89
AVF **Avril sur Loir** 89.33 333⇑iP P 16 29 30.6 -0.3
comp=Z,316nm,1.4s,mb6.2
AVF **Avril sur Loir** 89.33 333⇑iP P 16 29 30.6 -0.3
AVF pmax pmax
comp=Z,158nm,1.4s,mb6.2
AVF **Avril sur Loir** 89.33 333⇑iP P 16 29 30.6 -0.3
comp=Z,158nm,1.4s,mb6.2
GRR **Gorron** 89.42 336⇑iP P 16 29 31.0 -0.3
comp=Z,347nm,1.5s,mb6.2
GRR **Gorron** 89.42 336⇑iP P 16 29 31.0 -0.3
GRR pmax pmax
comp=Z,173nm,1.5s,mb6.2
GRR **Gorron** 89.42 336⇑iP P 16 29 31.0 -0.3
comp=Z,173nm,1.5s,mb6.2
TIP **Timpagrande** 89.45 320 eP P 16 29 31.3 -0.3
comp=Z,294nm,2.0s,mb6.3
BNI **Bardonecchia** 89.48 330 eP P 16 29 31.8 +0.1
BNI pmax pmax
comp=Z,64nm,1.5s,mb5.7
BNI **Bardonecchia** 89.48 330 eP P 16 29 31.8 +0.1
comp=Z,64nm,1.5s,mb5.7
427A **Hayter Ranch,** 89.56 51 ⇓P P 16 29 32.6 +0.3
baz=89
328A **Wristen Ranch,** 89.57 51 ⇑P P 16 29 32.6 +0.2
baz=89
GDM **Grand'Maison** 89.59 330 eP P 16 29 32.7 +0.5
526A **Mary Lane Ranc** 89.66 52 ⇓P P 16 29 32.9 +0.1
baz=90
WMOK **Wichita Mounta** 89.67 46 eP P 16 29 32.4 -0.4
WMOK pmax pmax
comp=Z,115nm,1.6s,mb6.0
WMOK **Wichita Mounta** 89.67 46 eP P 16 29 32.4 -0.3
comp=Z,115nm,1.6s,mb6.0
GRN **Grenoble** 89.70 331 eP P 16 29 33.0 +0.3
BGF **Bois d'Agland** 89.71 333 eP P 16 29 32.4 -0.3
comp=Z,97nm,1.3s,mb5.7
BGF **Bois d'Agland** 89.71 333 eP P 16 29 32.4 -0.3
BGF pmax pmax
comp=Z,49nm,1.3s,mb5.7
BGF **Bois d'Agland** 89.71 333 eP P 16 29 32.4 -0.3
comp=Z,48nm,1.3s,mb5.7
MBDF **Montbardon** 89.71 330 eP P 16 29 31.7 -1.1
comp=Z,49nm,1.1s,mb5.4
MBDF **Montbardon** 89.71 330 eP P 16 29 31.7 -1.1
MBDF pmax pmax
comp=Z,24nm,1.1s,mb5.4
MBDF **Montbardon** 89.71 330 eP P 16 29 31.7 -1.1
comp=Z,24nm,1.1s,mb5.4
SURF **Saint Ours** 89.90 330 eP P 16 29 33.4 -0.2
527A **Woodward Ranch** 89.91 52 ⇓P P 16 29 34.1 +0.1
baz=90
ORIF **Oris-en-Rattie** 89.92 330 eP P 16 29 33.3 -0.4
comp=Z,37nm,1.0s,mb5.4
ORIF **Oris-en-Rattie** 89.92 330 eP P 16 29 33.3 -0.4
ORIF pmax pmax
comp=Z,18nm,1.0s,mb5.4
ORIF **Oris-en-Rattie** 89.92 330 eP P 16 29 33.3 -0.4
comp=Z,18nm,1.0s,mb5.4
PLDF **La Plantade** 89.92 332 eP P 16 29 33.6 -0.1
626A **Big Bend Ranch** 89.97 53 ⇑P P 16 29 34.4 +0.2
baz=90,SNR=7.6
SAOF **Saorge** 90.00 329 eP P 16 29 33.5 -0.6
AGO **Saint Agoulin** 90.03 333 eP P 16 29 34.4 +0.2
AUTN **L'Aution** 90.04 329 eP P 16 29 33.7 -0.6
SGMF **Saint Gilles** 90.08 337⇑iP P 16 29 34.2 -0.2
comp=Z,141nm,1.2s,mb5.9
SGMF **Saint Gilles** 90.08 337⇑iP P 16 29 34.2 -0.2
SGMF pmax pmax
comp=Z,70nm,1.2s,mb5.9
SGMF **Saint Gilles** 90.08 337⇑iP P 16 29 34.2 -0.2
comp=Z,70nm,1.2s,mb5.9
428A **Kincaid Ranch,** 90.10 51 ⇑P P 16 29 35.3 +0.5
baz=90
TOUF **Mont Tournerai** 90.10 329 eP P 16 29 33.7 -0.9
SSB **Saint Sauveur** 90.14 331 eP P 16 29 33.8 -1.0
SSB **Saint Sauveur** 90.14 331 eP P 16 29 34.3 -0.5
SSB pmax pmax
comp=Z,44nm,1.4s,mb5.6
SSB **Saint Sauveur** 90.14 331 eP P 16 29 34.3 -0.5
comp=Z,44nm,1.4s,mb5.6
SBF **Sospel** 90.15 329⇑iP P 16 29 33.5 -1.3
comp=Z,248nm,1.5s,mb6.0
SBF **Sospel** 90.15 329⇑iP P 16 29 33.5 -1.3
SBF pmax pmax
comp=Z,124nm,1.5s,mb6.0
SBF **Sospel** 90.15 329⇑iP P 16 29 33.5 -1.3
comp=Z,124nm,1.5s,mb6.0
LUCF **Luceram** 90.16 329 eP P 16 29 33.7 -1.2
TCF **Toulx Ste Croi** 90.17 333⇑iP P 16 29 34.7 -0.2
comp=Z,172nm,1.5s,mb5.9
TCF **Toulx Ste Croi** 90.17 333⇑iP P 16 29 34.7 -0.2
TCF pmax pmax
comp=Z,86nm,1.5s,mb5.9
TCF **Toulx Ste Croi** 90.17 333⇑iP P 16 29 34.7 -0.2
comp=Z,86nm,1.5s,mb5.9
ROSF **Rostrenen** 90.24 338⇑iP P 16 29 34.9 -0.2
comp=Z,107nm,1.1s,mb5.8
ROSF **Rostrenen** 90.24 338⇑iP P 16 29 34.9 -0.2
ROSF pmax pmax
comp=Z,54nm,1.1s,mb5.8
ROSF **Rostrenen** 90.24 338⇑iP P 16 29 34.9 -0.2
comp=Z,54nm,1.1s,mb5.8
MVIF **Mont Vial** 90.24 329 eP P 16 29 33.7 -1.5
PYM **Petit Puy Mans** 90.33 332 eP P 16 29 36.0 +0.4
HDIL **Hopedale** 90.38 36 P P 16 29 34.9 -1.0
comp=Z,200nm,1.5s,mb6.2
528A **Cox Ranch, San** 90.42 51 ⇓P P 16 29 36.8 +0.5
baz=90
TXAR **Lajitas Array** 90.42 53 P P 16 29 35.8 -0.5
comp=Z,9.3nm,0.9s,mb5.1,baz=288,slow=2.5,SNR=18
VIVF **Saint-Julien-I** 90.45 331⇑iP P 16 29 35.8 -0.4
comp=Z,77nm,1.1s,mb5.7
VIVF **Saint-Julien-I** 90.45 331⇑iP P 16 29 35.8 -0.4
VIVF pmax pmax
comp=Z,39nm,1.1s,mb5.7
VIVF **Saint-Julien-I** 90.45 331⇑iP P 16 29 35.8 -0.4
comp=Z,39nm,1.1s,mb5.7
CALN **Calern** 90.46 329 eP P 16 29 35.3 -1.0
BST **Brest** 90.51 338 eP P 16 29 38.2 +1.8
627A **Terlingua Ranc** 90.52 52 ⇓P P 16 29 37.0 +0.1
baz=90
PGF **Pioggiola** 90.54 327⇑iP P 16 29 35.7 -1.0

comp=Z,126nm,1.2s,mb5.8
PGF Pioggiola 90.54 327⇑ iP P 16 29 35.7 -1.0
PGF pmax pmax
comp=Z,63nm,1.2s,mb5.8
PGF Pioggiola 90.54 327⇑ iP P 16 29 35.7 -1.0
comp=Z,63nm,1.2s,mb5.8
QUIF Quistinic 90.57 337⇑ iP P 16 29 36.2 -0.5
comp=Z,216nm,1.6s,mb5.9
QUIF Quistinic 90.57 337⇑ iP P 16 29 36.2 -0.5
QUIF pmax pmax
comp=Z,108nm,1.6s,mb5.9
QUIF Quistinic 90.57 337⇑ iP P 16 29 36.2 -0.5
comp=Z,108nm,1.6s,mb5.9
CEL Celeste 90.58 320 eP P 16 29 36.1 -0.9
comp=Z,69nm,1.0s,mb5.9
STOF St-Etienne Org 90.67 330 eP P 16 29 37.5 +0.3
LBL Lubilhac 90.68 332 eP P 16 29 37.4 +0.1
FRF La Foret Royal 90.72 329 eP P 16 29 36.4 -1.1
comp=Z,155nm,1.4s,mb5.9
FRF La Foret Royal 90.72 329 eP P 16 29 36.4 -1.1
FRF pmax pmax
comp=Z,78nm,1.4s,mb5.8
FRF La Foret Royal 90.72 329 eP P 16 29 36.4 -1.1
comp=Z,78nm,1.4s,mb5.8
MFF Saint Martin d 90.73 335⇑ iP P 16 29 37.5 0.0
comp=Z,279nm,1.3s,mb6.1
MFF Saint Martin d 90.73 335⇑ iP P 16 29 37.5 0.0
MFF pmax pmax
comp=Z,140nm,1.3s,mb6.1
MFF Saint Martin d 90.73 335⇑ iP P 16 29 37.5 0.0
comp=Z,140nm,1.3s,mb6.1
SMRF Simiane la Rot 90.82 330 eP P 16 29 37.6 -0.3
comp=Z,129nm,1.5s,mb5.7
SMRF Simiane la Rot 90.82 330 eP P 16 29 37.6 -0.3
comp=Z,129nm,1.5s,mb6.0
VILF Villemus 90.86 330 eP P 16 29 38.7 +0.6
TAVF Tavernes 90.92 330 eP P 16 29 37.7 -0.7
LMR La Mourre 90.97 329⇑ iP P 16 29 37.7 -0.9
comp=Z,290nm,1.4s,mb6.1
LMR La Mourre 90.97 329⇑ iP P 16 29 37.7 -0.9
LMR pmax pmax
comp=Z,145nm,1.4s,mb6.1
LMR La Mourre 90.97 329⇑ iP P 16 29 37.7 -0.9
comp=Z,145nm,1.4s,mb6.1
PRAF Pradon 91.12 330 eP P 16 29 39.2 -0.2
TREF Trevaresse 91.19 330 eP P 16 29 38.9 -0.7
RJF Les Rejaudoux 91.26 333⇑ iP P 16 29 39.8 -0.2
comp=Z,175nm,1.2s,mb6.0
RJF Les Rejaudoux 91.26 333⇑ iP P 16 29 39.8 -0.2
comp=Z,87nm,1.2s,mb6.0
BERF Bertagne 91.32 330 eP P 16 29 39.9 -0.4
CCM Cathedral Cave 91.34 39 eP P 16 29 39.6 -0.9
CCM pmax pmax
comp=Z,104nm,1.4s,mb6.0
CCM Cathedral Cave 91.34 39 eP P 16 29 39.6 -0.8
comp=Z,104nm,1.4s,mb6.0
CAF Calviac 91.38 333⇑ iP P 16 29 40.8 +0.3
comp=Z,192nm,1.3s,mb6.0
CAF Calviac 91.38 333⇑ iP P 16 29 40.8 +0.3
CAF pmax pmax
comp=Z,96nm,1.3s,mb6.0
CAF Calviac 91.38 333⇑ iP P 16 29 40.8 +0.3
comp=Z,96nm,1.3s,mb6.0
LASF Ste Croix 91.42 331⇑ iP P 16 29 40.6 -0.1
comp=Z,202nm,1.5s,mb5.9
LASF Ste Croix 91.42 331⇑ iP P 16 29 40.6 -0.1
LFF La Frestale 91.86 333⇑ iP P 16 29 42.9 +0.2
comp=Z,201nm,1.2s,mb6.0
LFF La Frestale 91.86 333⇑ iP P 16 29 42.9 +0.2
LFF pmax pmax
comp=Z,101nm,1.2s,mb6.0
LFF La Frestale 91.86 333⇑ iP P 16 29 42.9 +0.2
comp=Z,100nm,1.2s,mb6.0
JCT Junction City 92.06 49 eP P 16 29 43.1 -0.8
JCT pmax pmax
comp=Z,158nm,1.8s,mb6.0
JCT Junction City 92.06 49 eP P 16 29 43.1 -0.8
comp=Z,158nm,1.8s,mb6.0
OLIL Olney 92.38 37 eP P 16 29 46.1 +0.8
comp=Z,131nm,1.2s,mb6.1
SIUC Southern Illin 92.63 38 eP P 16 29 46.2 -0.3
comp=Z,77nm,1.2s,mb6.0
MTLF Montolieu 92.67 332⇑ iP P 16 29 46.5 0.0
comp=Z,171nm,1.5s,mb6.0
MTLF Montolieu 92.67 332⇑ iP P 16 29 46.5 0.0
comp=Z,86nm,1.5s,mb6.0
MIAR Mount Ida 92.75 43 eP P 16 29 46.6 -0.5
MIAR pmax pmax
comp=Z,145nm,1.3s,mb6.2
MIAR Mount Ida 92.75 43 eP P 16 29 46.6 -0.5
comp=Z,145nm,1.3s,mb6.2
LRDF Laroque-de-Fa 92.89 331 eP P 16 29 47.5 0.0
LONY Lake Ozonia 93.08 25 eP P 16 29 47.0 -1.4
comp=Z,9.9nm,1.5s,mb5.0
FILF Fillols 93.20 331 eP P 16 29 48.5 -0.5
ACSO Alum Creek Sta 93.53 33 eP P 16 29 50.6 +0.1
comp=Z,36nm,0.9s,mb5.8
VALF Valcebollere 93.55 331 eP P 16 29 50.8 +0.2
WCI Wyandotte Cave 93.64 36 eP P 16 29 51.2 +0.1
WCI pmax pmax
comp=Z,32nm,1.1s,mb5.7
WCI Wyandotte Cave 93.64 36 eP P 16 29 51.2 +0.1
comp=Z,32nm,1.1s,mb5.7
EPF Esparros 93.65 333⇑ iP P 16 29 50.4 -0.6
comp=Z,44nm,1.2s,mb5.5
EPF Esparros 93.65 333⇑ iP P 16 29 50.4 -0.6
comp=Z,22nm,1.2s,mb5.5
NCB Newcomb 93.77 25 eP P 16 29 52.5 +0.9
comp=Z,56nm,1.7s,mb5.7
RESF Ens 93.84 333 eP P 16 29 53.1 +1.2
VIEF Viey 93.89 333 eP P 16 29 52.6 +0.4
ETSF Etsaut 94.09 333⇑ iP P 16 29 53.4 +0.3
comp=Z,66nm,1.2s,mb5.6
ETSF Etsaut 94.09 333⇑ iP P 16 29 53.4 +0.3
comp=Z,33nm,1.3s,mb5.6
SJPF Ste Jean 94.15 334 eP P 16 29 53.3 0.0
comp=Z,43nm,1.3s,mb5.4
SJPF Ste Jean 94.15 334 eP P 16 29 53.3 0.0
comp=Z,21nm,1.3s,mb5.4
PKME Peaks-Kenny Pk 94.19 21 eP P 16 29 53.0 -0.5
comp=Z,57nm,1.3s,mb5.8
NATX Nacogdoches 94.20 45 P P 16 29 54.9 +1.1
WVT Waverly 94.56 38 eP P 16 29 55.5 +0.2
WVT pmax pmax
comp=Z,26nm,1.1s,mb5.6
WVT Waverly 94.56 38 eP P 16 29 55.5 +0.1
comp=Z,26nm,1.1s,mb5.6
OXF Oxford 95.01 40 P P 16 29 57.0 -0.4
OXF e 16 30 08.1
OXF pmax pmax
comp=Z,42nm,0.9s,mb5.9
OXF Oxford 95.01 40 P P 16 29 57.0 -0.5
comp=Z,42nm,0.9s,mb5.9
OXF e 16 30 08.1
SSPA Standing Stone 95.31 29 eP P 16 29 56.8 -1.9
comp=Z,37nm,1.4s,mb5.6
MCWV Mont Chateau 95.35 31 eP P 16 29 58.0 -0.9
comp=Z,39nm,1.0s,mb5.8
KEST Kesra 95.84 323 P P 16 30 00.7 -0.5
comp=Z,3.2nm,0.9s,mb4.8,baz=352,slow=2.8,SNR=6.6
BLA Blacksburg 97.15 33 P P 16 30 08.6 +1.5
BLA pmax pmax
comp=Z,57nm,1.4s,mb5.8
BLA Blacksburg 97.15 33 eP P 16 30 06.8 -0.4
comp=Z,56nm,1.5s,mb5.8
PBRG Braganca 97.18 337 ePP PP 16 34 04.1 +1.6
PCAB Cabril 97.67 338 ePP PP 16 34 04.6 -1.6
MVO Moncorvo 97.85 337 ePP PP 16 34 08.3 +0.7
PVRL Vila Real 97.96 337 ePP PP 16 34 10.3 +1.8
ESDC Sonseca Array 98.15 334 P P 16 30 10.6 -1.0
comp=Z,2.9nm,0.8s,mb4.8,baz=22,slow=5.2,SNR=6.4
ESDC Sonseca Array 98.15 334 P P 16 30 10.6 -1.0
MTE Manteigas 98.71 337 eP P 16 30 13.3 -0.7
comp=Z,17nm,2.2s,mb5.2
MTE Manteigas 98.71 337 ePP PP 16 34 16.4 +2.2
PCBR Castelo Branco 99.19 336 eP P 16 30 19.6 +3.4
comp=Z,15nm,1.7s,mb5.2
PCBR Castelo Branco 99.19 336 ePP PP 16 34 22.1 +4.2
PMRV Marv??o 99.54 336 eP P 16 30 16.1 -1.7
comp=Z,33nm,2.0s,mb5.4
PMRV Marv??o 99.54 336 ePP PP 16 34 22.5 +1.9
PTOM Tomar 99.69 337 ePP PP 16 34 25.9 +4.2
PESTR Estremoz 100.11 336 ePP PP 16 34 27.9 +3.0
PBAR Barrancos 100.55 335 ePP PP 16 34 30.8 +2.5
PMAFR Mafra 100.57 337 ePP PP 16 34 24.6 -3.8
PBEJ Beja 100.96 336 eP Pdif 16 30 25.8 +1.7
comp=Z,29nm,1.9s
PCVE Castro Verde 101.38 336 ePP PP 16 34 37.5 +3.0
PVAQ Vaqueiros 101.48 336 ePP PP 16 34 38.8 +3.5
PTEO Sao Teotonio 101.68 336 ePP PP 16 34 43.1 +6.3
PBDV Barranco-de-Ve 101.70 336 ePP PP 16 34 40.3 +3.4
PFVI Vila Bisbo 102.09 336 ePP PP 16 34 40.0 +0.1
KMBO Kilima Mbogo 102.34 278 P Pdif 16 30 30.5 +0.3
KMBO pmax pmax
comp=Z,3.0nm,1.0s
KMBO Kilima Mbogo 102.34 278 P Pdif 16 30 30.4 +0.2
comp=Z,3.0nm,1.0s,baz=52,slow=8.8,SNR=7.4
KMBO Kilima Mbogo 102.34 278 ePdif Pdif 16 30 31.4 +1.2
comp=Z,97nm,2.8s
PMPS Porto Santo 108.11 341 ePP PP 16 35 25.7 +1.3
PMAR Madeira 108.58 341 ePP PP 16 35 31.6 +3.8
FUL Funchal 108.66 341 ePP PP 16 35 34.5 +6.1
TOA0 Torodi Ar. Sit 118.10 315 ePKPdf PKPdf 16 35 21.8 -0.3
TORD Torodi Ar. Bea 118.10 315 PKP PKPdf 16 35 21.1 -1.0
comp=Z,1.1nm,0.4s,baz=12,slow=2.2,SNR=9.5
TORD PKKPbc PKKPbc 16 45 46.2 +6.2
comp=Z,2.9nm,1.0s,baz=263,slow=1.3,SNR=7.3
MAW Mawson 118.90 205 PKP PKPdf 16 35 22.1 +0.2
comp=Z,2.9nm,0.7s,baz=12,slow=3.1,SNR=3.8
LBTB Lobatse 124.79 263 ePKIKP PKPdf 16 35 34.6 0.0
SDV Santo Domingo 125.79 41 ePKPdf PKPdf 16 35 36.0 -0.9
QSPA South Pole Qui 125.95 180 PKP PKPdf 16 35 35.3 +0.1
comp=Z,5.8nm,0.7s,baz=254,slow=0.8,SNR=18
BOSA Boshof 126.67 259 PKP PKPdf 16 35 37.3 -0.8
comp=Z,12nm,0.9s,baz=43,slow=1.2,SNR=12
ROSC El Rosal 127.01 47 PKP PKPdf 16 35 40.8 +1.6
comp=Z,12nm,0.7s,baz=115,slow=21,SNR=4.9
ROSC El Rosal 127.01 47 ePKPdf PKPdf 16 35 41.2 +2.0
DBIC Dimbokro 127.07 317 PKP PKPdf 16 35 38.9 -0.5
comp=Z,3.7nm,0.6s,baz=68,slow=3.3,SNR=5.0
TIC Toumodi 127.18 317 ePKP1 PKPdf 16 35 39.3 -0.3
comp=Z,15nm,0.2s
KIC Kosan Boka 127.26 316 ePKP1 PKPdf 16 35 40.4 +0.7
comp=Z,64nm,1.3s
KIC Kosan Boka 127.26 316 eP PKPdf 16 35 40.4 +0.7
LIC Lamto 127.53 317 ePKIKP PKPdf 16 35 40.1 -0.2
comp=Z,86nm,1.5s
LIC Lamto 127.53 317 ePKP1 PKPdf 16 35 40.1 -0.2
comp=Z,108nm,1.8s
LIC Lamto 127.53 317 ePKPdf PKPdf 16 35 40.1 -0.2
SYO Syowa Base 127.58 206‖ ePKPdf PKPdf 16 35 38.9 +0.3
SYO Syowa Base 127.58 206‖ ePKiKP PKiKP 16 35 43.0 +3.9
OTAV Otavalo 127.98 55 PKPdf PKPdf 16 35 39.2 -1.9
TSUM Tsumeb 128.42 273 ePKPdf PKPdf 16 35 43.3 +1.6
MAIT Maitri 136.64 202 ePKPdif PKPdf 16 35 49.7 -5.9
VNA2 Neumayer--Watz 141.59 196 ePKPdf PKPdf 16 35 59.2 -5.5
baz=86,slow=0.7
VNA2 e 16 39 07.4
VNA2 e 16 43 36.0
VNA2 e 16 45 46.5
VNA3 Neumayer Olymp 141.83 195 ePKPdf PKPdf 16 36 00.8 -4.3
VNA3 e 16 39 12.8
VNA3 e 16 43 34.6
VNA1 Neumayer--Stat 141.99 196 ePKPdf PKPdf 16 36 01.5 -3.9
SHEL Horse Pasture 144.76 296 ePKIKP PKPdf 16 36 11.2 -0.7
LPAZ La Paz 146.88 61 PKP2 PKPab 16 36 17.9 -0.8
LPAZ pmax pmax
comp=Z,24nm,0.6s
LPAZ La Paz 146.88 61 PKPbc PKPbc 16 36 17.9 +0.5
comp=Z,24nm,0.6s,baz=321,slow=1.6,SNR=39
LPAZ La Paz 146.88 61 ePKPdf PKPdf 16 36 17.6 +2.1
LVC Limon Verde 150.20 71 ePKPdf PKPdf 16 36 21.8 +1.1
LVC ePKPbc PKPbc 16 36 26.0 +0.1
LCO Las Campanas 151.84 85 ePKPbc PKPbc 16 36 29.1 -0.5
USHA Ushuaia 152.15 141 PKPbc PKPbc 16 36 28.8 -0.6
comp=Z,23nm,1.0s,baz=281,slow=4.3,SNR=4.7
USHA PKPab PKPab 16 36 39.7 +0.6
comp=Z,61nm,1.1s,baz=213,slow=2.0,SNR=5.3
COYC Coyhaique 152.94 121 eP PKPbc 16 36 31.2 -0.3
FCH Farellones 153.59 93 eP PKPdf 16 36 29.0 +3.4
PLCA Paso Flores 154.40 110 PKP PKPdf 16 36 27.3 +0.9
comp=Z,2.2nm,1.0s,baz=236,slow=2.3,SNR=3.3
PLCA PKPbc PKPbc 16 36 38.7 +3.9
comp=Z,11nm,1.3s,baz=255,slow=5.6,SNR=5.6
PLCA Paso Flores 154.40 110 PKP PKPdf 16 36 27.3 +0.8
PLCA PKPbc PKPbc 16 36 38.7 +3.9
CPUP Villa Florida 160.99 64 PKP PKPdf 16 36 36.0 +1.0
comp=Z,0.2nm,0.3s,baz=117,slow=2.3,SNR=2.3
CPUP PKPab PKPab 16 37 17.2 -0.8
comp=Z,0.4nm,0.3s,baz=294,slow=2.3,SNR=3.3
CPUP Villa Florida 160.99 64 PKP PKPdf 16 36 36.0 +1.0
CPUP PKPab PKPab 16 37 17.2 -0.8

JMA 07 16:20:32.5±0.4, 36°.20N×141°.83E, h60km, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.93**	**238**	P	Pn	16 20 50.0	+0.4
CHOJ				eS	Sn	16 21 02.9	+0.6
JHO	**Hitachi**	**1.10**	**292**	P	Pn	16 20 51.0	-0.8
JHO				eS	Sn	16 21 06.7	+0.6
ONAJ	**Iwakimizuishiy**	**1.22**	**318**	P	Pn	16 20 53.6	+0.1
JFK	**Kawauchi**	**1.39**	**327**	P	Pn	16 20 56.2	+0.5
JFK				S	Sn	16 21 15.0	+1.8
JFT	**Otama**	**1.78**	**318**	P	Pn	16 21 02.9	+2.0
JFT				eS	Sn	16 21 24.9	+2.4
JMM	**Marumori**	**1.86**	**334**	P	Pn	16 21 03.7	+1.7
JMM				eS	Sn	16 21 25.5	+1.1
JAG	**Ashikaga**	**1.93**	**277**	P	Pn	16 21 03.7	+0.7

*IDC **07** 16:24:05.8±0.5, 36°.14N×141°.89E, h0km, mb4.7/28, mb1 4.8/32, mb1mx4.7/35, mbtmp4.7/32, ML4.5/4, Error ellipse: s-maj=14.4km s-min=11.6km az=108.0*
*BJI **07** 16:24:08.5, 36°.08N×141°.87E, h34km, mB5.8/7, mb5.1/32, Ms5.6/15, Ms7 5.6/17*
*JMA **07** 16:24:09.1±0.2, 36°.21N×141°.92E, h59km, M4.5*
*ISCJB **07** 16:24:10.5±0.5, 36°.12N±0°.03×141°.78E±0°.03, h39km±4km, mb4.9/119, MS5.7/8, Error ellipse: s-maj=5.9km s-min=3.6km az=170.7*
*NEIC **07** 16:24:10.2±1.8, 36°.13N×141°.84E, h29km±12km, mb5.0/67, Error ellipse: s-maj=5.4km s-min=4.3km az=146.0*
NEIC Felt [V] at Tokyo. Felt at Misawa, Mizuho, Sendai, Yokosuka and Zama.
*MOS **07** 16:24:11.2±0.8, 36°.51N×141°.79E, h33km, mb5.2/56, Error ellipse: s-maj=9.4km s-min=5.3km az=115.6*
*DJA **07** 16:24:14, 36°.01N×140°.94E, h10km, mb5.4/15*
*SZGRF **07** 16:24:16.0, 36°.74N×140°.54E, h33km, mb5.1, Near east coast of eastern Honshu, Japan*
ISC 07 16:24:11.9±0.5, 36°.18N±0°.03×141°.75E±0°.03, h36km±4km, h34km±.8km: pP-P, n535, σ0=67/545, mb4.9/119, MS5.7/8, 120C-125D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.86**	**237**	P	**Pn**	**16 24 27.2**	**-0.3**
CHOJ				S	**Sn**	**16 24 41.5**	**+2.6**
JHO	**Hitachi**	**1.05**	**295**	P	**Pn**	**16 24 28.9**	**-1.1**
JHO				eS	**Sn**	**16 24 45.2**	**+1.8**
ONAJ	**Iwakimizuishiy**	**1.20**	**321**	⇑P	**Pn**	**16 24 30.9**	**-1.2**
JYT	**Yasato**	**1.26**	**273**	P	**Pn**	**16 24 32.5**	**-0.5**
JYT				eS	**Sn**	**16 24 49.1**	**+0.4**
JFK	**Kawauchi**	**1.38**	**330**	⇑P	**Pn**	**16 24 33.4**	**-1.2**
JFT	**Otama**	**1.76**	**320**	P	**Pn**	**16 24 39.7**	**-0.1**
JMM	**Marumori**	**1.85**	**336**	P	**Pn**	**16 24 40.4**	**-0.7**
JAG	**Ashikaga**	**1.87**	**278**	P	**Pn**	**16 24 41.7**	**+0.3**
JFY	**Yanaizu**	**2.05**	**307**	P	**Pn**	**16 24 44.3**	**+0.5**
JKT	**Katashina**	**2.10**	**287**	P	**Pn**	**16 24 45.3**	**+0.8**
MJAR	**Matsushiro Arr**	**2.88**	**278**	Pn	**Pn**	**16 24 56.0**	**+0.7**
MJAR				Sn	**Sn**	**16 25 32.3**	**+3.6**
MAJO	**Matsushiro**	**2.88**	**278**	eP	**Pn**	**16 24 56.6**	**+1.3**
MAT	**Matsushiro**	**2.88**	**278**	P	**Pn**	**16 24 55.6**	**+0.3**
MAT				S	**Sn**	**16 25 36.7**	**+8.0**
JHJ	**Hachijo jima 2**	**3.45**	**209**	Pn	**Pn**	**16 25 02.2**	**-0.9**
JHJ				Sn	**Sn**	**16 25 41.6**	**-1.2**
ASAJ	**Asahikawa**	**7.96**	**4**	P	**Pn**	**16 26 00.9**	**-4.0**
ASAJ						16 27 31.0	
ASAJ				pmax	pmax		
ASAJ				smax			

comp=Z,3.0nm,0.3s
comp=N,2.0nm,0.3s
comp=N,2.7nm,0.3s,baz=208,slow=12,SNR=14
ASAJ Asahikawa 7.96 4 Pn Pn 16 26 00.9 -4.0
ASAJ Sn **Sn 16 27 31.0 -2.6**
comp=N,2.0nm,0.3s,baz=72,slow=20,SNR=2.7
YUK Yuzh-Kuril'sk 8.46 21 eP Pn 16 26 05.4 -6.4
YUK eS **Sn 16 27 34.5 -11**
YUK smax
comp=N,220nm,0.5s
YUK smax
comp=E,260nm,0.5s
CBIJ Chichi jima 9.06 178 Pn Pn 16 26 15.4 -4.7
comp=E,41nm,0.3s,baz=262,slow=14,SNR=12
CBIJ Sn **Sn 16 27 50.8 -10**
comp=E,41nm,0.3s,baz=280,slow=23,SNR=6.5
YSS Yuzh-Sakhalins 10.79 4⇑ eP Pn 16 26 42.0 -1.8
YSS pmax pmax
comp=N,50nm,1.0s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS Yuzh-Sakhalins 10.79 4 eP Pn 16 26 40.7 -3.0
KSRS Korea Array 11.16 281 P Pn 16 26 52.6 +3.8
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS Korea Array 11.16 281 Pn Pn 16 26 52.5 +3.7
comp=Z,0.5nm,0.3s,baz=92,slow=13,SNR=26
CN2 Changchun 14.62 306 eP Pn 16 27 38.4 +2.4
CN2 esP sP 16 27 50.5 -5.2
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,27μm,14.0s
CN2 LR LR
comp=E,16μm,14.0s
CN2 LR LR
comp=Z,22μm,12.0s
JOW Kunigami 14.78 235 Pn Pn 16 27 42.8 +4.4
comp=Z,3.0nm,0.3s,baz=21,slow=7.7,SNR=17
NJ2 Nanjing 19.39 264 eP Pn 16 28 37.6 +1.6
NJ2 pmax pmax
comp=Z,20nm,0.7s
PETK Petropavlovsk- 20.30 29 P P 16 28 44.0 -0.4
comp=Z,6.7nm,0.9s,baz=217,slow=11,SNR=5.1
BJI Beijing 20.47 289 P P 16 28 45.4 -0.9
NACB Ninganchiao 21.09 241 P P 16 28 50.7 -2.4
SSLB Suanglung 21.79 241 P P 16 28 56.9 -3.8
comp=Z,15nm,0.6s,mb4.6
TPUB Ta-pu 22.32 241 eP P 16 29 01.7 -4.7
comp=Z,27nm,0.6s,mb4.8
WHN Wuhan 23.53 264 eP P 16 29 18.0 -0.8
HHC Hu-ho-hao-te 24.02 290 eP P 16 29 23.6 +0.4
HHC pP 16 29 32.8
HHC sP sP 16 29 36.9 -0.8
HHC PP 16 29 58.9
HHC PcP PcP 16 33 07.5 +3.2
HHC S **S 16 33 35.8 -2.0**
HHC sS sS 16 33 51.2 -3.4
HHC SS 16 34 26.8
HHC ScP ScP 16 36 40.9 +1.0
HHC PcS PcS 16 36 46.7 +2.8
HHC pmax pmax
comp=Z,43nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,6μm,7.8s
HHC LR LR
comp=N,6μm,12.7s,MS5.3
HHC LR LR
comp=E,5μm,12.7s,MS5.3
HHC LR LR
comp=Z,5μm,14.7s,MS5.1
XAN Xi'an 26.88 275 P P 16 29 49.2 0.0
XAN pP pP 16 29 57.9 -1.5
XAN sP sP 16 30 01.8 -2.0
XAN S **S 16 34 24.9 +1.5**
XAN sS sS 16 34 39.9 -0.5
XAN pmax pmax
comp=Z,14nm,1.4s,mb4.3
XAN pmax pmax
comp=Z,970nm,12.3s
XAN LR LR
comp=N,7μm,14.1s,MS5.5
XAN LR LR
comp=E,4μm,11.4s,MS5.5
XAN LR LR
comp=Z,5μm,12.3s,MS5.3
YAK Yakutsk 26.96 347 eP P 16 29 48.4 -1.3
YAK pmax pmax
comp=Z,86nm,0.9s,mb5.3
YAK pmax pmax
comp=E,23nm,1.4s
YAK pmax pmax
comp=N,62nm,1.2s
YAK Yakutsk 26.96 347 eP P 16 29 48.6 -1.1
comp=N,112nm,1.0s,mb5.3
ENH Enshi 27.55 267 eP P 16 29 54.6 -0.6
comp=N,97nm,0.7s,mb5.5
ULN Ulaanbaatar 28.07 305 eP P 16 30 00.4 +0.7
BOD Bodaibo 28.40 328 eP P 16 30 02.3 -0.3
SONM Songino Array 28.50 305 P P 16 30 04.4 +0.9
comp=N,28nm,0.9s,mb4.9,baz=100,slow=6.8,SNR=23
LZH Lanzhou 30.49 281 P P 16 30 21.8 +0.4
LZH pP pP 16 30 34.2 +2.6
LZH sP sP 16 30 39.0 +3.0
LZH PP PP 16 31 22.0 -8.5
LZH S **S 16 35 20.1 -0.1**
LZH sS sS 16 35 35.9 -1.3
LZH SS SS 16 36 59.0 -32
LZH pmax pmax
comp=Z,50nm,1.2s,mb5.1
LZH LR LR
comp=N,4μm,11.9s
LZH LR LR
comp=Z,7μm,14.4s,MS5.5
ZAK Zakamensk 31.02 309 eP P 16 30 24.3 -1.5
ZAK pmax pmax
comp=Z,34nm,1.3s,mb5.0
TLY Talaya 31.10 312 eP P 16 30 28.2 +1.6
TLY pmax pmax
comp=Z,34nm,1.0s,mb5.1
TLY Talaya 31.10 312 eP P 16 30 27.2 +0.7
comp=Z,54nm,1.4s,mb5.2
GYA Guiyang 31.36 262 P P 16 30 28.9 -0.2
GYA sP sP 16 30 44.3 +0.6
GYA PP PP 16 31 32.8 -7.4
GYA PcP PcP 16 33 22.1 -0.2
GYA S **S 16 35 31.8 -2.2**
GYA sS sS 16 35 50.0 -1.0
GYA ScP ScP 16 37 01.4 -1.2
GYA SS SS 16 37 20.0 -29
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,5μm,16.2s,MS5.3
GYA LR LR
comp=E,2μm,17.5s,MS5.3
GYA LR LR
comp=Z,4μm,15.5s,MS5.2
CD2 Chengdu 31.96 272 P P 16 30 36.4 +2.1
CD2 pP pP 16 30 45.9 +1.3
CD2 sP sP 16 30 49.8 +0.8
CD2 PP PP 16 31 43.0 -3.8
CD2 S **S 16 35 44.6 +1.3**
CD2 sS sS 16 36 00.6 +0.3
CD2 SS SS 16 37 38.0 -23
CD2 pmax pmax
comp=Z,60nm,0.7s,mb5.5
CD2 LR LR
comp=N,30μm,12.1s
CD2 LR LR
comp=Z,30μm,10.8s,MS6.2
GTA Gaotai 33.09 288 P P 16 30 44.8 +0.7
GTA pP pP 16 30 53.9 -0.5
GTA sP sP 16 30 58.6 -0.2
GTA PcP PcP 16 33 26.4 -0.5
GTA S **S 16 36 05.0 +4.4**
GTA sS sS 16 36 21.1 +3.4
GTA pmax pmax
comp=Z,29nm,1.1s,mb5.1
GTA LR LR
comp=Z,12μm,13.7s,MS5.8
KMI Kunming 35.11 263 P P 16 31 02.1 +0.3
KMI pP pP 16 31 13.3 +1.1

KMI sP sP 16 31 17.7 +1.2
KMI PP PP 16 32 22.0 +0.2
KMI S **S** **16 36 31.4 -0.8**
KMI sS sS 16 36 50.1 +0.7
KMI SS SS 16 38 48.6 -17
KMI pmax pmax
comp=Z,23nm,1.7s,mb4.8
CHTO Chiang Mai 41.35 257 *e*P **P 16 31 54.7 +0.3**
CHTO pmax pmax
comp=Z,23nm,1.3s,mb4.7
CHTO Chiang Mai 41.35 257 *e*P **P 16 31 54.7 +0.3**
comp=Z,23nm,1.3s,mb4.7
WMQ Urumqi 41.48 298 P **P 16 31 56.8 +1.7**
WMQ pmax pmax
comp=Z,51nm,2.2s,mb4.8
WMQ LR LR
comp=N,4µm,17.0s
WMQ LR LR
comp=E,13µm,26.0s
WMQ LR LR
comp=Z,18µm,21.0s,MS5.9
CM31 Chiang Mai Arr 41.55 257 *e*P **P 16 31 56.3 +0.2**
comp=Z,6.2nm,0.8s,mb4.3
CMAR Chiang Mai Arr 41.55 257 P **P 16 31 56.1 +0.1**
comp=Z,5.3nm,0.8s,mb4.2,baz=47,slow=5.5,SNR=22
LSA Lhasa 42.57 276 P **P 16 32 05.3 +1.1**
LSA Lhasa 42.57 276 *e*P **P 16 32 05.2 +1.0**
LSA pmax pmax
comp=Z,17nm,0.8s,mb4.8
LSA Lhasa 42.57 276 *e*P **P 16 32 05.2 +1.0**
comp=Z,17nm,0.8s,mb4.8
ZAA0 Zalesovo Array 42.70 313 *e*P **P 16 32 04.5 -0.4**
ZALV Zalesovo Beam 42.70 313 P **P 16 32 05.0 +0.1**
comp=Z,26nm,0.9s,mb5.0,baz=88,slow=7.0,SNR=18
ZALV PcP PcP 16 33 55.9 -0.3
comp=Z,6.0nm,0.7s,baz=76,slow=3.3,SNR=4.3
NVS Novosibirsk 43.63 314 *e*P **P 16 32 08.2 -4.3**
MK31 Makanchi Array 44.81 303 *e*P **P 16 32 22.4 +0.4**
MKAR Makanchi Array 44.81 303 P **P 16 32 22.5 +0.5**
comp=Z,17nm,0.7s,mb5.0,baz=92,slow=8.6,SNR=19
MKAR Makanchi Array 44.81 303 P **P 16 32 22.5 +0.5**
KSM Kuching 45.16 227 *e*P **P 16 32 25.5 +0.3**
KAPI Kappang 45.87 211 P **P 16 32 30.7 0.0**
comp=Z,12nm,0.7s,mb4.9,baz=45,slow=9.6,SNR=6.5
KAPI Kappang 45.87 211 *e*P **P 16 32 30.0 -0.7**
comp=Z,115nm,1.6s,mb5.6
KURK Kurchatov 46.68 309 P **P 16 32 36.9 +0.2**
comp=Z,292nm,0.9s,mb6.2,SNR=9.5
KURK Kurchatov 46.68 309 P **P 16 32 37.2 +0.5**
KURK pmax pmax
comp=Z,30nm,0.9s,mb5.2
KURK Kurchatov 46.68 309 P **P 16 32 37.2 +0.5**
comp=Z,30nm,0.9s,mb5.2,baz=82,slow=7.9,SNR=22
KURK Kurchatov 46.68 309 *e*P **P 16 32 36.7 -0.1**
comp=Z,45nm,0.9s,mb5.4
KDAK Kodiak Island 47.56 41 P **P 16 32 42.2 -1.3**
KDAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KDAK Kodiak Island 47.56 41 P **P 16 32 42.2 -1.3**
comp=Z,5.3nm,0.6s,mb4.8,baz=276,slow=9.2,SNR=3.7
KDAK Kodiak Island 47.56 41 *e*P **P 16 32 41.9 -1.6**
comp=Z,35nm,1.0s,mb5.3
KAKA Kakadu 49.41 192 *e*P **P 16 32 55.8 -2.4**
comp=Z,118nm,0.8s,mb6.0
TKM2 Tokmak 2 50.28 299 *e*P **P 16 33 05.5 +0.9**
comp=Z,214nm,2.0s,mb5.8
KSH Kashi 51.01 295 *e*P **P 16 33 14.5 +4.4**
KSH *e*pP pP 16 33 24.6 +3.8
KSH *e*sP sP 16 33 28.1 +3.0
KSH *e*PcP PcP 16 34 29.5 +3.7
KSH *e*PP PP 16 35 12.1 +5.5
KSH *e*ScP ScP 16 38 21.5 +2.2
KSH *e*PcS PcS 16 38 25.1 +1.7
KSH *e*S **S** **16 40 29.5 +4.7**
KSH *e*sS sS 16 40 47.0 +4.6
KSH *e*ScS ScS 16 42 59.1 +1.2
KSH *e*SS SS 16 44 04.1 +4.4
AAK Ala-Archa 51.14 299 P **P 16 33 11.6 +0.5**
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AAK Ala-Archa 51.14 299 P **P 16 33 11.6 +0.5**
comp=Z,3.9nm,0.7s,mb4.5,baz=91,slow=7.5,SNR=4.9
AAK Ala-Archa 51.14 299 *e*P **P 16 33 11.5 +0.4**
BVAR Borovoye Array 51.35 313 P **P 16 33 12.6 +0.2**
comp=Z,10nm,0.9s,mb4.8,baz=76,slow=6.3,SNR=11
BVAR PcP PcP 16 34 26.4 -0.4
comp=Z,2.7nm,0.6s,baz=122,slow=1.9,SNR=3.6
BRVK Borovoye 51.41 313 *e*P **P 16 33 13.1 +0.2**
AML Almayashu 51.85 299 *e*P **P 16 33 17.7 +1.3**
comp=Z,859nm,0.7s
EGAK Eagle 52.52 32 *e*P **P 16 33 20.2 -0.8**
comp=Z,3.7nm,0.7s,mb4.4
INK Inuvik 55.03 27 *e*P **P 16 33 39.0 -0.3**
INK *e* pP 16 33 48.9 -1.2
INK pmax pmax
comp=Z,12nm,0.7s
INK Inuvik 55.03 27 P **P 16 33 39.0 -0.3**
comp=Z,8.8nm,0.9s,mb4.8,baz=305,slow=5.8,SNR=18
INK Inuvik 55.03 27 *e*P **P 16 33 39.0 -0.3**
comp=Z,12nm,0.7s,mb5.0
INK *e* pP 16 33 48.9 -1.2
FITZ Fitzroy Crossi 56.09 199 *e*P **P 16 33 47.6 +0.1**
comp=Z,11nm,0.9s,mb4.9
WRAB Tennant Creek 56.24 188 *e*P **P 16 33 47.1 -1.4**
WB2 Warramunga Arr 56.25 188 *e*P **P 16 33 47.0 -1.5**
WRA Warramunga Arr 56.25 188 P **P 16 33 47.4 -1.2**
comp=Z,10nm,1.0s,mb4.8,baz=6.2,slow=7.4,SNR=19
ARU Arti 57.18 319 P **P 16 33 54.7 -0.2**
ARU Arti 57.18 319 *e*P **P 16 33 54.5 -0.4**
comp=Z,46nm,1.3s,mb5.3
KBL Kabul 57.98 292 *e*P **P 16 34 00.9 +0.1**
HYB Hyderabad 58.46 269 *i*P **P 16 34 05.0 +0.6**
ABKAR Akbulak array 58.70 311 *e*P **P 16 34 05.3 -0.3**
comp=Z,9.2nm,0.6s,mb5.0
DLBC Dease Lake 59.13 38 P **P 16 34 03.2 -5.3**
comp=Z,3.5nm,0.8s,mb4.5,baz=14,slow=3.8,SNR=5.9
DLBC Dease Lake 59.13 38 P **P 16 34 03.2 -5.3**
AKTK Aktyubinsk 59.45 312 P **P 16 34 08.4 -2.4**
AKTO Aktyubinsk 59.45 312 P **P 16 34 08.4 -2.4**
comp=Z,12nm,0.8s,mb5.0,baz=74,slow=11,SNR=12
ASAR Alice Springs 59.98 188 P **P 16 34 13.5 -1.1**
comp=Z,1.1nm,0.5s,mb4.1,baz=11,slow=9.2,SNR=13
ALE Alert 60.95 4 P **P 16 34 19.5 -1.1**
comp=Z,102nm,0.9s,mb6.0,SNR=5.7
SPITS Spitsbergen Ar 61.42 349 P **P 16 34 23.7 -0.2**
comp=Z,14nm,1.2s,mb5.0,baz=104,slow=10,SNR=4.6
RES Resolute Bay 63.36 14 *e*P **P 16 34 36.4 -0.5**
RES pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
RES Resolute Bay 63.36 14 P **P 16 34 36.4 -0.5**
comp=Z,11nm,1.0s,mb4.9,baz=302,slow=7.3,SNR=9.2
RES Resolute Bay 63.36 14 *e*P **P 16 34 36.4 -0.5**
comp=Z,8.9nm,0.7s,mb5.0
APA Apatity 63.58 336 ⇑ *i*P **P 16 34 37.6 -0.8**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.0
APA MLR MLR
comp=Z,12µm,16.0s,MS6.2
KEV Kevo 64.34 339 *e*P **P 16 34 43.2 -0.1**
KEV pmax pmax
comp=Z,31nm,1.4s,mb5.2
KEV Kevo 64.34 339 *e*P **P 16 34 43.2 -0.2**
comp=Z,31nm,1.4s,mb5.1
KEV Kevo 64.34 339 *e*p **P 16 34 42.3 -1.0**
comp=Z,6.9nm,0.8s,mb4.7
YKA Yellowknife Ar 64.41 30 P **P 16 34 43.1 -0.8**
YKA pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 64.41 30 P **P 16 34 43.1 -0.8**
comp=Z,4.7nm,0.9s,mb4.5,baz=299,slow=6.8,SNR=14
ARCES ARCESS Array B 64.89 340 P **P 16 34 47.1 +0.2**
comp=Z,8.8nm,0.8s,mb4.8,baz=42,slow=8.2,SNR=13
JOF Joensuu 66.85 332 *e*P **P 16 34 58.1 -1.5**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
JOF Joensuu 66.85 332 *e*p **P 16 34 58.1 -1.5**
comp=Z,7.9nm,0.7s,mb4.8
NLWA Neilton Lookou 67.09 47 ⇓P **P 16 35 02.6 +1.1**
baz=67
E03A Lebam 67.69 48 ⇓P **P 16 35 05.8 +0.5**
baz=68
STKA Stephens Creek 67.70 180 *e*P **P 16 35 04.8 -0.4**
comp=Z,3.7nm,0.7s,mb4.5
STKA Stephens Creek 67.70 180 P **P 16 35 05.5 +0.2**
comp=Z,4.6nm,0.8s,mb4.6,baz=332,slow=7.1,SNR=5.4
STKA Stephens Creek 67.70 180 P **P 16 35 05.5 +0.2**

FORT Forrest 67.83 193 *e*P **P 16 35 05.5 -0.6**
comp=Z,28nm,0.7s,mb5.4
B06A Marblemount 67.94 45 ⇓P **P 16 35 06.7 -0.1**
baz=68
F03A Seaside 67.99 49 ⇓P **P 16 35 06.8 -0.3**
baz=68
F04A Amboy 68.68 48 ⇓P **P 16 35 11.0 -0.5**
baz=68
B07A Winthrop 68.75 45 ⇓P **P 16 35 11.9 0.0**
baz=68
OBN Obninsk 68.95 324 *e*P **P 16 35 13.0 +0.1**
OBN pmax pmax
comp=Z,21nm,1.0s,mb5.0
G04A Mulino 69.01 49 ⇑P **P 16 35 13.7 +0.2**
baz=69
ETW Entiat 69.07 46 *e*P **P 16 35 13.8 0.0**
comp=Z,15nm,0.7s,mb5.0
ETW *e* pP 16 35 23.6 -1.3
C07A Waterville 69.18 46 ⇑P **P 16 35 14.2 -0.3**
baz=69
KAF Kangasniemi 69.19 333 *e*P **P 16 35 12.7 -1.7**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KAF Kangasniemi 69.19 333 *e*p **P 16 35 12.7 -1.7**
comp=Z,7.0nm,0.6s,mb4.8
E06A Yakima 69.23 47 ⇑P **P 16 35 15.0 +0.2**
baz=69
B08A Colville Reser 69.25 45 ⇑P **P 16 35 14.9 -0.1**
baz=69
A09A Danville 69.36 44 ⇑P **P 16 35 15.4 -0.2**
baz=69
H04A Detroit Lake 69.46 49 ⇑P **P 16 35 16.1 -0.2**
baz=69
D07A Quincy 69.49 46 ⇓P **P 16 35 16.0 -0.5**
baz=69
FINES FINESS Array B 69.70 332 P **P 16 35 17.4 -0.1**
comp=Z,19nm,0.9s,mb5.0,baz=46,slow=8.2,SNR=18
FINES FINESS Array B 69.70 332 P **P 16 35 17.4 -0.1**
C08A Higginbotham F 69.72 45 ⇓P **P 16 35 17.3 -0.6**
baz=70
VSR Storozhevoye 69.76 319 *e*P **P 16 35 17.6 -0.4**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.7s
VORD Divnogorie 69.83 319 *e*P **P 16 35 18.0 -0.5**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
B09A Rice 69.89 44 ⇑P **P 16 35 18.7 -0.2**
baz=70
A10A Northport 69.93 44 ⇑P **P 16 35 19.0 -0.1**
baz=70
G06A Carlson Farm, 70.12 48 ⇑P **P 16 35 20.0 -0.3**
baz=70
OD2 Odessa Site #2 70.12 45 *e*P **P 16 35 20.0 -0.3**
comp=Z,9.0nm,0.8s,mb4.8
C09A Chrisman Ranch 70.15 45 ⇑P **P 16 35 20.4 -0.1**
baz=70
D08A Wollman Farm, 70.17 46 ⇑P **P 16 35 20.6 -0.1**
baz=70
F07A Phinny Hill Vi 70.19 47 ⇑P **P 16 35 20.7 -0.1**
baz=70
D09A Jones Farm, Ri 70.53 46 ⇓P **P 16 35 22.9 0.0**
baz=70
H06A Lindquist Farm 70.56 48 ⇓P **P 16 35 22.9 -0.2**
baz=70
A11A Hall Mountain, 70.60 43 ⇓P **P 16 35 23.3 0.0**
baz=70
B11A Sandpoint 70.89 44 ⇑P **P 16 35 24.9 -0.1**
baz=71
E09A Wood Farm, Sta 70.91 46 ⇑P **P 16 35 24.9 -0.3**
baz=71
F08A Pendleton 70.93 47 ⇑P **P 16 35 25.2 -0.1**
baz=71
G08A Pilot Rock 71.09 47 ⇑P **P 16 35 26.1 -0.2**
baz=71
D10A Wagner Farm, O 71.12 45 ⇑P **P 16 35 26.4 -0.1**
baz=71
K05A Summer Lake 71.28 51 ⇑P **P 16 35 28.4 +0.9**
baz=71
I07A Izee 71.41 49 ⇓P **P 16 35 29.0 +0.8**
baz=71
D11A Klaveano Farm, 71.67 45 ⇓P **P 16 35 29.9 +0.2**
baz=71
KIV Kislovodsk 71.68 311 *e*P **P 16 35 30.9 +1.1**
KIV pmax pmax
comp=Z,34nm,1.0s,mb5.2
H08A Prairie City 71.68 48 ⇑P **P 16 35 29.9 +0.1**
baz=72
F10A Beach Ranch, E 71.74 46 ⇓P **P 16 35 30.2 +0.1**
baz=72
G09A Cove 71.80 47 ⇓P **P 16 35 30.7 +0.2**
baz=72
B13A Whitefish 71.97 43 ⇑P **P 16 35 31.6 +0.1**
baz=72,SNR=5.2
E11A Bogner Ranch, 72.12 45 ⇑P **P 16 35 32.4 -0.1**
baz=72
H09A Durkee 72.20 47 ⇓P **P 16 35 33.0 +0.1**
baz=72
A14A Double T Ranch 72.20 42 ⇓P **P 16 35 33.0 +0.1**
baz=72
C13A Hot Springs 72.31 44 ⇓P **P 16 35 33.7 +0.2**
baz=72
F11A Grangeville 72.41 46 ⇑P **P 16 35 34.3 +0.1**
baz=72,SNR=5.8
JTMT Jette 72.43 43 *e*P **P 16 35 34.4 +0.1**
comp=Z,3.6nm,1.0s,mb4.3
JTMT *e* pP 16 35 44.2 -1.2
J08A Circle Bar Ran 72.43 49 ⇓P **P 16 35 34.4 +0.1**
baz=72
E12A Beaver Dam Sad 72.45 45 ⇑P **P 16 35 34.5 +0.1**
baz=72,SNR=11
YBMT Yellow Bay 72.51 43 *e*P **P 16 35 34.4 -0.4**
YBMT *e* pP 16 35 44.0 -1.9
I09A Lost Marbles R 72.54 48 ⇑P **P 16 35 34.9 -0.1**
baz=72
A15A Johnson Ranch, 72.57 42 ⇓P **P 16 35 34.7 -0.4**
baz=72
D13A Huson 72.70 44 ⇑P **P 16 35 35.8 -0.1**
baz=72
SWMT Swartz Lake 72.72 43 *e*P **P 16 35 36.0 0.0**
comp=Z,13nm,1.0s,mb4.8
SWMT *e* pP 16 35 45.3 -1.8
J09A Fry Pan Ranch, 72.88 49 ⇑P **P 16 35 36.7 -0.3**
baz=73
F12A Elk City 73.01 46 ⇑P **P 16 35 37.6 -0.2**
baz=73,SNR=7.1
B15A Bradely Ranch, 73.05 42 ⇓P **P 16 35 37.8 -0.2**
baz=73,SNR=8.5
SLMT Seeley Lake 73.16 44 *e*P **P 16 35 38.3 -0.3**
comp=Z,21nm,0.7s,mb5.2
SLMT *e* pP 16 35 48.3 -1.4
BEKR Beckwourth 73.16 53 ⇑P **P 16 35 38.7 0.0**
baz=73,SNR=6.8
H11A Donnelly 73.16 47 ⇑P **P 16 35 37.9 -0.8**
baz=73
A16A West Butte Ran 73.20 41 ⇑P **P 16 35 38.4 -0.4**
baz=73
D14A Greenough 73.24 44 ⇑P **P 16 35 38.8 -0.3**
baz=73
IZAR Zarasai 73.28 328 *e*P **P 16 35 40.0 +0.8**
IDID Didziasalis 73.34 327 *e*P **P 16 35 40.1 +0.5**
ISAL Salakas 73.45 328 *e*P **P 16 35 40.9 +0.7**
B16A M & M Farms, S 73.45 42 ⇓P **P 16 35 40.2 -0.2**
baz=73
F13A Darby 73.52 45 ⇑P **P 16 35 40.3 -0.4**
baz=73
K10A MacKenzie Ranc 73.73 49 ⇓P **P 16 35 42.1 +0.1**
baz=74
C16A Fuhringer Ranc 73.80 42 ⇓P **P 16 35 42.0 -0.3**
baz=74
D15A Lincoln 73.81 43 ⇓P **P 16 35 42.2 -0.3**
baz=74
H12A Diamond D Ranc 73.93 46 ⇓P **P 16 35 42.8 -0.4**
baz=74
MFID Camas Ranch 74.00 48 ⇓P **P 16 35 43.2 -0.4**
baz=74
B17A L&G Farms, Che 74.02 42 ⇓P **P 16 35 43.2 -0.4**
baz=74,SNR=5.6
E15A Deer Lodge 74.11 44 ⇑P **P 16 35 44.1 -0.1**
baz=74
I12A Atlanta 74.20 47 ⇓P **P 16 35 44.6 -0.2**
baz=74

K11A Parker Ranch, 74.24 48 ⇓P **P 16 35 45.1 +0.1**
baz=74
H13A Challis 74.27 46 ⇓P **P 16 35 45.0 -0.2**
baz=74,SNR=6.4
FFC Flin Flon 74.28 33 *e*P **P 16 35 44.2 -0.8**
FFC *e* pP 16 35 54.3 -1.9
D16A Dana Ranch, Ca 74.36 43 ⇓P **P 16 35 45.7 +0.1**
baz=74
L10A Juniper Basin 74.37 49 ⇓P **P 16 35 45.6 -0.2**
baz=74
HRY Holter Researc 74.39 43 *e*P **P 16 35 45.8 -0.1**
comp=Z,22nm,0.7s,mb5.2
HRY *e* pP 16 35 55.9 -1.1
C17A Wharram Farm, 74.43 42 ⇓P **P 16 35 45.7 -0.3**
baz=74
B18A Beardsley Farm 74.50 41 ⇓P **P 16 35 46.3 -0.2**
baz=74
F15A Butte 74.54 44 ⇓P **P 16 35 46.4 -0.3**
baz=74,SNR=12
LRM Limekiln Ridge 74.57 44 *e*P **P 16 35 46.9 -0.1**
comp=Z,145nm,0.7s,mb6.0
LRM *e* pP 16 35 56.8 -1.3
E16A East Helena 74.58 43 ⇑P **P 16 35 46.8 -0.2**
baz=74
M10A I.L. Ranch, Tu 74.64 50 ⇑P **P 16 35 47.1 -0.3**
baz=74
FCC Fort Churchill 74.65 27 *e*P **P 16 35 46.1 -1.0**
comp=Z,0.4nm,1.2s
FCC *e* pP 16 35 56.3 -2.0
I13A Wildhorse Cree 74.73 47 ⇑P **P 16 35 47.6 -0.3**
baz=74
EGMT Eagleton 74.73 41 ⇑P **P 16 35 47.8 -0.1**
baz=74
EGMT Eagleton 74.73 41 *e*P **P 16 35 47.3 -0.5**
comp=Z,14nm,0.8s,mb4.9
HLID Hailey 74.76 47 ⇓P **P 16 35 47.9 -0.2**
baz=74
L11A Cat Creek Ranc 74.76 49 ⇓P **P 16 35 47.8 -0.3**
baz=74,SNR=5.1
F16A Kennard Place, 75.06 44 ⇓P **P 16 35 49.4 -0.3**
baz=75
E17A Martinsdale 75.08 43 ⇑P **P 16 35 49.9 +0.1**
baz=75,SNR=5.2
NB2 NORSAR Subarra 75.08 337 P **P 16 35 49.3 -0.3**
comp=Z,40nm,1.2s,mb5.2,baz=40,slow=5.9
NOA NORSAR Array B 75.08 337 P **P 16 35 49.6 +0.1**
comp=Z,16nm,0.9s,mb4.9,baz=39,slow=5.7,SNR=21
BOZ Bozeman (W) 75.14 44 ⇓P **P 16 35 49.9 -0.3**
baz=75,SNR=6.4
BOZ Bozeman (W) 75.14 44 *e*P **P 16 35 49.9 -0.3**
BOZ *e* pP 16 36 00.4 -1.0
BOZ pmax pmax
comp=Z,12nm,0.8s,mb4.9
BOZ Bozeman (W) 75.14 44 *e*P **P 16 35 49.9 -0.3**
comp=Z,12nm,0.8s,mb4.9
BOZ *e* pP 16 36 00.4 -1.0
AKASG Malin Array Be 75.14 323 P **P 16 35 49.9 -0.2**
comp=Z,9.9nm,0.6s,mb4.9,baz=47,slow=6.0,SNR=33
KIEV Kiev 75.16 323 *e*P **P 16 35 49.4 -0.8**
KIEV pmax pmax
comp=Z,39nm,1.3s,mb5.2
KIEV Kiev 75.16 323 *e*P **P 16 35 49.4 -0.8**
comp=Z,39nm,1.3s,mb5.2
M11A Holland Ranch, 75.16 49 ⇑P **P 16 35 50.1 -0.3**
baz=75
NVAR Mina Array Bea 75.28 53 P **P 16 35 51.8 +0.6**
comp=Z,1.4nm,0.5s,mb4.1,baz=280,slow=6.3,SNR=4.3
G16A Moss Hill, Enn 75.29 44 ⇓P **P 16 35 50.8 -0.3**
baz=75
J14A Carey 75.43 47 ⇑P **P 16 35 52.2 +0.3**
baz=75,SNR=6.0
F17A Fitzpatrick Pl 75.53 43 ⇑P **P 16 35 52.2 -0.2**
baz=75
E18A Harlowton 75.53 43 ⇑P **P 16 35 52.4 -0.1**
baz=75
M12A Wells 75.70 49 ⇓P **P 16 35 54.1 +0.6**
baz=76,SNR=7.1
G17A Pierce Place, 75.83 44 ⇑P **P 16 35 54.9 +0.7**
baz=76
L13A Double Diamond 75.90 48 ⇑P **P 16 35 55.2 +0.6**
baz=76
H16A Russell Place, 75.92 45 ⇑P **P 16 35 55.1 +0.5**
baz=76
O11A Cowboy Ranch, 75.99 50 ⇓P **P 16 35 55.8 +0.6**
baz=76
F18A Big Timber 76.05 43 ⇑P **P 16 35 55.7 +0.3**
baz=76,SNR=7.5
K14A Jones Ranch, D 76.09 47 ⇓P **P 16 35 56.3 +0.6**
baz=76
GCMT Greycliff 76.14 43 *e*P **P 16 35 55.8 -0.1**
GCMT *e* pP 16 36 05.4 -1.7
M13A Montello 76.19 49 ⇑P **P 16 35 56.8 +0.5**
baz=76
P11A Circle Ranch, 76.27 51 ⇑P **P 16 35 57.5 +0.7**
baz=76
Q10A Clear Creek Ra 76.28 52 ⇓P **P 16 35 57.3 +0.5**
baz=76
MIB Mutribah 76.32 297 *e*P **P 16 35 55.5 -1.8**
MIB AMb AMB 16 35 58.1
comp=Z,26nm,1.3s,mb5.0
L14A Malta 76.35 48 ⇑P **P 16 35 57.9 +0.7**
baz=76,SNR=5.5
K15A Arbon 76.39 47 ⇑P **P 16 35 58.1 +0.7**
baz=76
KBD Kabd 76.41 296 *e*P **P 16 35 56.1 -1.7**
KBD AMb AMB 16 36 17.6
comp=Z,14nm,1.5s,mb4.7
N13A Wendover, West 76.47 49 ⇓P **P 16 35 58.6 +0.7**
baz=76
H17A Grant Village 76.49 45 ⇑P **P 16 35 59.4 +1.4**
baz=76,SNR=7.5
J16A Bone 76.57 46 ⇓P **P 16 35 58.9 +0.5**
baz=76
IMW Indian Meadow 76.58 45 *e*P **P 16 35 59.4 +0.9**
comp=Z,13nm,0.8s,mb4.9
IMW *e* pP 16 36 09.1 -0.6
M14A Sheep Mountain 76.61 48 ⇑P **P 16 35 59.1 +0.5**
baz=76
R10A Warm Springs 76.65 52 ⇑P **P 16 35 59.2 +0.2**
baz=76
RDF Al-Radifah 76.66 296 *e*P **P 16 35 57.5 -1.6**
RDF AMb AMB 16 36 01.2
comp=Z,52nm,0.9s,mb5.4
S10A Tonopah Range, 76.68 53 ⇑P **P 16 35 59.4 +0.2**
baz=76
GRAC Grapevine Rang 76.71 54 ⇑P **P 16 35 59.6 +0.3**
baz=76
Q11A Duckwater 76.74 52 ⇓P **P 16 35 59.5 0.0**
baz=76
I17A Pilgrim Ck. 76.78 45 ⇑P **P 16 36 00.0 +0.5**
baz=76
RLMT Red Lodge 76.78 43 ⇓P **P 16 36 00.0 +0.5**
baz=76
P12A McGill 76.84 51 ⇑P **P 16 36 00.4 +0.4**
baz=77
K16A Soda Springs 76.85 46 ⇑P **P 16 36 00.9 +0.8**
baz=77,SNR=5.4
L15A Malad City 76.88 47 ⇑P **P 16 36 00.2 0.0**
baz=77
R11A Troy Canyon, C 77.08 52 ⇓P **P 16 36 02.0 +0.6**
baz=77
N14A Grayback Hills 77.09 49 ⇑P **P 16 36 01.6 +0.2**
baz=77
Q12A Willow Creek R 77.15 51 ⇑P **P 16 36 02.2 +0.5**
baz=77
M15A Larsen Ranch, 77.17 48 ⇑P **P 16 36 02.2 +0.3**
baz=77,SNR=5.6
MPMC Manual Prospec 77.17 55 ⇓P **P 16 36 02.2 +0.3**
baz=77
I18A Diamond G Ranc 77.35 45 ⇑P **P 16 36 02.7 0.0**
baz=77
P13A Bates Ranch, G 77.41 50 ⇓P **P 16 36 03.5 +0.2**
baz=77
EDW2 Edwards Air Fo 77.52 56 ⇑P **P 16 36 03.8 -0.1**
baz=77
J18A Kendall Valley 77.53 45 ⇑P **P 16 36 04.5 +0.7**
baz=77
Q13A Wheeler Ranch, 77.71 51 ⇓P **P 16 36 05.6 +0.7**
baz=78
R12A Pony Springs, 77.71 51 ⇓P **P 16 36 05.6 +0.7**
baz=78
DUG Dugway 77.71 49 ⇑P **P 16 36 05.5 +0.6**
baz=78
DUG Dugway 77.71 49 *e*P **P 16 36 03.9 -1.0**
DUG *e* pP 16 36 15.5 -0.6
L17A Cokeville 77.72 47 ⇑P **P 16 36 05.6 +0.7**
baz=78,SNR=5.2

U10A **Ash Meadows, A** 77.73 54 ⇓P P 16 36 05.9 +0.9
baz=78
M16A **Huntsville** 77.75 48 ⇓P P 16 36 05.5 +0.5
baz=78
K18A **Toltan Ranch,** 77.87 46 ⇓P P 16 36 06.2 +0.5
baz=78
P14A **Drum Mountains** 77.92 50 ⇓P P 16 36 06.5 +0.5
baz=78
SHOC **Shoshone** 78.06 54 ⇓P P 16 36 07.6 +0.7
baz=78
GSC **Goldstone** 78.07 55 ⇓P P 16 36 07.5 +0.5
baz=78
BW06 **Boulder Array** 78.07 45 ⇑P P 16 36 06.8 0.0
baz=78,SNR=5.3
PDAR **Pinedale Array** 78.07 45 P P 16 36 06.8 -0.1
comp=Z,1.6nm,0.7s,mb4.0,baz=300,slow=3.0,SNR=6.7
CIS **Catalina Islan** 78.09 57 ⇓P P 16 36 07.5 +0.4
baz=78
BFSC **Mount Baldy St** 78.11 56 ⇓P P 16 36 07.1 -0.1
baz=78
N16A **Rees Ranch, Co** 78.13 48 ⇑P P 16 36 06.5 -0.6
baz=78
Q14A **Sevier Lake (B** 78.15 50 ⇓P P 16 36 08.0 +0.6
baz=78
M17A **Scullys Gap (B** 78.23 47 ⇑P P 16 36 07.8 +0.1
baz=78
L18A **Fontenelle, Gr** 78.32 46 ⇑P P 16 36 08.8 +0.6
baz=78
P15A **Leamington** 78.42 49 ⇓P P 16 36 09.0 +0.2
baz=78
K19A **Absolon Red Bu** 78.45 45 ⇑P P 16 36 08.7 -0.2
baz=78
N17A **Moffit Pass** 78.45 48 ⇓P P 16 36 09.4 +0.5
baz=78
O16A **Springville** 78.50 48 ⇓P P 16 36 09.7 +0.5
baz=78
L19A **Farson** 78.60 46 ⇓P P 16 36 09.5 -0.3
baz=78
M18A **Lyman** 78.61 47 ⇑P P 16 36 09.9 +0.1
baz=78
S13A **Holt Ranch, En** 78.63 52 ⇓P P 16 36 10.6 +0.6
baz=78
T13A **Saint George** 78.94 52 ⇑P P 16 36 11.6 -0.1
baz=79
O17A **Robinson Place** 78.97 48 ⇓P P 16 36 12.4 +0.6
baz=79
KWP **Kalwaria Pacla** 78.99 325 eP P 16 36 11.8 +0.1
KWP pmax pmax
comp=Z,38nm,1.1s,mb5.2
KWP **Kalwaria Pacla** 78.99 325 eP P 16 36 11.8 +0.1
comp=Z,38nm,1.1s,mb5.2
KWP **Kalwaria Pacla** 78.99 325 ⇓iP P 16 36 12.9 +1.2
N18A **Larsen Ranch,** 79.12 47 ⇑P P 16 36 12.4 -0.3
baz=79
GMRC **Granite Mounta** 79.13 55 ⇑P P 16 36 12.8 0.0
baz=79
BURAR **Bucovina Array** 79.15 322 ⇓iP P 16 36 13.7 +1.0
R15A **Junction** 79.25 50 ⇓P P 16 36 13.2 -0.1
baz=79
L20A **Wamsutter** 79.25 46 ⇓P P 16 36 13.3 0.0
baz=79
U13A **Pakoon Wash** 79.26 53 ⇑P P 16 36 13.8 +0.3
baz=79
O18A **Roosevelt** 79.36 48 ⇑P P 16 36 13.1 -0.9
baz=79
BELC **Belle Mtn.** 79.37 56 ⇑P P 16 36 13.9 -0.2
baz=79
P17A **Butcher Ranch,** 79.42 49 ⇑P P 16 36 14.6 +0.4
baz=79
T14A **Hurricane** 79.44 52 ⇓P P 16 36 14.9 +0.5
baz=79
N19A **John Jarvie Ra** 79.47 47 ⇑P P 16 36 15.0 +0.5
baz=79
Q16A **Castle Valley** 79.50 49 ⇑P P 16 36 15.0 +0.2
baz=79
V13A **Grand Canyon W** 79.59 53 ⇓P P 16 36 15.7 +0.4
baz=79
BR131 **Keskin Array S** 79.62 312 eP P 16 36 15.7 +0.3
comp=Z,8.6nm,0.8s,mb4.7
BRTR **Keskin Array B** 79.63 312 P P 16 36 15.6 +0.2
comp=Z,7.2nm,0.8s,mb4.6,baz=88,slow=3.8,SNR=14
M20A **Sweetwater, Wa** 79.67 46 ⇓P P 16 36 15.8 +0.2
baz=79
KOLS **Kolonicke sedl** 79.68 324 eP P 16 36 16.9 +1.4
KOLS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KOLS **Kolonicke sedl** 79.68 324 eP P 16 36 16.9 +1.4
comp=Z,8.5nm,1.1s,mb4.6
KOLS **Kolonicke sedl** 79.68 324 eP P 16 36 16.9 +1.4
R16A **Teasdale** 79.69 50 ⇓P P 16 36 16.7 +0.9
baz=80
U14A **Mt Trumbull** 79.76 52 ⇑P P 16 36 16.2 0.0
baz=80
SRU **San Rafael** 79.77 49 ⇓P P 16 36 16.6 +0.4
baz=80
SRU **San Rafael** 79.77 49 eP P 16 36 15.6 -0.6
SRU e pP 16 36 26.3 -1.2
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SRU **San Rafael** 79.77 49 eP P 16 36 15.6 -0.7
comp=Z,4.2nm,0.8s,mb4.4
SRU e pP 16 36 26.3 -1.2
STHS **Stebnicka Huta** 79.82 325 eP P 16 36 17.8 +1.5
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
STHS **Stebnicka Huta** 79.82 325 eP P 16 36 17.8 +1.5
comp=Z,7.2nm,1.1s,mb4.5
STHS **Stebnicka Huta** 79.82 325 eP P 16 36 17.8 +1.5
L21A **Rawlins** 79.84 45 ⇑P P 16 36 17.0 +0.5
baz=80
IRM **Iron Mountain** 79.84 55 ⇑P P 16 36 16.7 +0.1
baz=80
O19A **Miners Draw (B** 79.87 47 ⇓P P 16 36 17.1 +0.4
baz=80
BC3 **Big Chuckw Mtn** 79.94 56 ⇑P P 16 36 17.0 -0.2
baz=80
N20A **Spence Gulch,** 80.04 46 ⇓P P 16 36 17.9 +0.2
baz=80
M21A **Separation Pea** 80.07 45 ⇓P P 16 36 17.5 -0.3
baz=80
ULM **Lac du Bonnet** 80.07 33 P P 16 36 16.5 -1.1
comp=Z,0.8nm,0.4s,mb4.0,baz=302,slow=7.2,SNR=4.6
R17A **Hanksville Air** 80.09 49 ⇑P P 16 36 18.3 +0.4
baz=80
RWWY **Rawlins** 80.11 45 eP P 16 36 16.6 -1.3
W13A **Hualapai Mount** 80.11 54 ⇓P P 16 36 17.9 -0.2
baz=80
MLR **Muntele Rosu** 80.22 320 ⇑iP pP 16 36 19.8 +1.3
V14A **Boquillas Ranc** 80.29 53 ⇑P P 16 36 19.5 +0.4
baz=80
U15A **North Rim** 80.33 52 ⇑P P 16 36 18.9 -0.4
baz=80
P19A **Cripple Cowboy** 80.38 48 ⇓P P 16 36 19.5 0.0
baz=80
X13A **Yucca** 80.45 54 ⇓P P 16 36 20.0 0.0
baz=80
T16A **Glen Canyon Da** 80.48 51 ⇑P P 16 36 20.1 0.0
baz=80
O20A **White River Ci** 80.50 47 ⇓P P 16 36 19.9 -0.3
baz=80
S17A **Black Ridge (B** 80.52 50 ⇓P P 16 36 19.9 -0.4
baz=80
N21A **Black Mountain** 80.52 46 ⇑P P 16 36 20.2 0.0
baz=80
W14A **Seligman** 80.56 53 ⇑P P 16 36 20.3 -0.2
baz=80
R18A **Canyonlands Na** 80.61 49 ⇓P P 16 36 20.5 -0.3
baz=80
M22A **Cedar Creek Ra** 80.64 45 ⇑P P 16 36 21.2 +0.3
baz=80
VOIR 80.72 320 ⇑iP pP 16 36 31.2 -1.2
V15A **Kaibab Nationa** 80.78 52 ⇑P P 16 36 22.1 +0.4
baz=81
KECS **Kecovo** 80.83 325 eP P 16 36 22.4 +0.7
KECS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
KECS **Kecovo** 80.83 325 eP P 16 36 22.4 +0.7
comp=Z,4.2nm,1.2s,mb4.2
KECS **Kecovo** 80.83 325 eP P 16 36 22.4 +0.7
BSEG **Bad Segeberg** 80.95 333 eP P 16 36 22.7 +0.4
comp=Z,11nm,0.9s,mb4.8
BSEG **Bad Segeberg** 80.95 333 eP P 16 36 22.7 +0.4
BSEG pmax pmax
comp=Z,11nm,0.9s,mb4.8
KSP **Ksiaz** 80.97 328 eP P 16 36 21.7 -0.8
S18A **Hurst Farm, Bl** 80.98 50 ⇓P P 16 36 22.8 0.0
baz=81

R19A **Curley Farm, L** 81.05 49 ⇑P P 16 36 23.2 +0.1
baz=81
W15A **Williams** 81.11 53 ⇑P P 16 36 23.5 0.0
baz=81
X14A **Yava** 81.14 54 ⇑P P 16 36 23.8 +0.1
baz=81
Q20A **Ridgley Place,** 81.22 48 ⇓P P 16 36 24.1 +0.1
baz=81
MORC **Moravsky Berou** 81.23 327 eP P 16 36 23.9 +0.1
MORC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MORC **Moravsky Berou** 81.23 327 eP P 16 36 23.9 +0.1
comp=Z,5.5nm,1.0s,mb4.4
MORC **Moravsky Berou** 81.23 327 ⇓iP P 16 36 24.1 +0.3
U16A **Tuba City** 81.24 52 ⇑P P 16 36 24.5 +0.4
baz=81
U17A **Shonto** 81.25 51 ⇓P P 16 36 24.2 0.0
baz=81
Y14A **Wickenburg** 81.39 54 ⇑P P 16 36 24.8 -0.2
baz=81
T18A **Mexican Hat** 81.41 50 ⇓P P 16 36 24.8 -0.2
baz=81
Z13A **Yuma Proving G** 81.41 55 ⇑P P 16 36 25.2 0.0
baz=81
WUAZ **Wupatki** 81.47 52 ⇓P P 16 36 25.3 -0.1
baz=81
S19A **Harvey Farm, M** 81.47 49 ⇓P P 16 36 25.4 0.0
baz=81
X15A **Humboldt** 81.55 53 ⇓P P 16 36 26.4 +0.5
baz=81
VYHS **Vyhne** 81.59 326 eP P 16 36 26.4 +0.7
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS **Vyhne** 81.59 326 eP P 16 36 26.4 +0.7
comp=Z,4.1nm,1.0s,mb4.3
VYHS **Vyhne** 81.59 326 eP P 16 36 26.4 +0.7
113A **Mohawk Valley,** 81.60 56 ⇓P P 16 36 26.9 +0.8
baz=81
R20A **Redvale** 81.66 49 ⇓P P 16 36 26.4 +0.1
baz=81
KOLL **Kolacno** 81.72 326 eP P 16 36 27.8 +1.3
KOLL **Kolacno** 81.72 326 eP P 16 36 27.8 +1.3
Q21A **Lamborn Mesa,** 81.73 48 ⇓P P 16 36 26.9 +0.2
baz=82
V17A **Tonalea, Kykot** 81.78 52 ⇓P P 16 36 27.4 +0.4
baz=82
Y15A **Casa Rosa Ranc** 81.82 54 ⇓P P 16 36 27.2 -0.1
baz=82
U18A **Rough Rock, Ch** 81.86 51 ⇑P P 16 36 27.3 -0.1
baz=82
BRG **Berggiesshubel** 81.93 330 eP P 16 36 27.3 -0.2
comp=Z,7.0nm,1.0s,mb4.5
CLL **Collm** 81.98 330 eP P 16 36 27.6 -0.1
comp=Z,18nm,1.0s,mb5.0
CLL **Collm** 81.98 330 iP P 16 36 27.6 -0.1
CLL pmax pmax
comp=Z,19nm,1.1s,mb4.9
CLL **Collm** 81.98 330 iP P 16 36 27.6 -0.1
comp=Z,19nm,1.1s,mb4.9
CLL **Collm** 81.98 330 iP P 16 36 27.6 -0.1
comp=Z,19nm,1.1s,mb4.9
R21A **Cimarron** 82.04 48 ⇓P P 16 36 28.7 +0.4
baz=82
Q22A **Crested Butte,** 82.10 47 ⇑P P 16 36 29.3 +0.6
baz=82
X16A **Lo Mia Camp, P** 82.11 53 ⇑P P 16 36 28.7 -0.1
baz=82
T19A **Beclabito** 82.12 50 ⇓P P 16 36 29.3 +0.5
baz=82
MVCO **Mesa Verde** 82.21 49 ⇓P P 16 36 29.6 +0.4
baz=82
ISCO **Idaho Springs** 82.25 46 eP P 16 36 29.7 +0.3
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ISCO **Idaho Springs** 82.25 46 eP P 16 36 29.6 +0.2
comp=Z,3.6nm,0.8s,mb4.3
S21A **Coal Bank Pass** 82.35 49 ⇓P P 16 36 30.6 +0.6
baz=82
U19A **Dine' College,** 82.35 50 ⇑P P 16 36 30.0 0.0
baz=82
Y16A **Circle Bar Ran** 82.42 53 ⇓P P 16 36 30.6 +0.2
baz=82
CLZ **Clausthal** 82.58 332 eP P 16 36 31.1 +0.2
comp=Z,16nm,1.2s,mb4.9
CLZ **Clausthal** 82.58 332 eP P 16 36 31.2 +0.3
CLZ pmax pmax
comp=Z,16nm,1.2s,mb4.9
CLZ **Clausthal** 82.58 332 eP P 16 36 31.2 +0.3
comp=Z,16nm,1.2s,mb4.9
R22A **Saguache, Gunn** 82.61 48 ⇑P P 16 36 32.2 +0.9
baz=82
Y17A **Roosevelt** 82.95 53 ⇑P P 16 36 33.1 -0.1
baz=83
V20A **Brimhall** 83.13 50 ⇓P P 16 36 34.1 0.0
baz=83
IBBN **Ibbenburen** 83.18 334 eP P 16 36 33.9 -0.1
comp=Z,17nm,0.9s,mb5.1
T22A **Edith** 83.31 49 ⇑P P 16 36 35.3 +0.4
baz=83
KHC **Kasperske Hory** 83.42 329 eP P 16 36 35.3 0.0
KHC pmax pmax
comp=Z,17nm,1.3s,mb4.9
KHC **Kasperske Hory** 83.42 329 eP P 16 36 35.3 0.0
comp=Z,17nm,1.3s,mb4.9
Y18A **Canyon Day Jun** 83.42 53 ⇓P P 16 36 35.6 0.0
baz=83
Z17A **San Carlos Hig** 83.44 53 ⇓P P 16 36 35.8 0.0
baz=83
X19A **St. Johns** 83.49 52 ⇓P P 16 36 36.1 +0.1
baz=83
ROTZ **Rotzenmuhle** 83.49 330 eP P 16 36 36.2 +0.5
comp=Z,34nm,1.8s,mb5.1
W20A **Ramah** 83.54 51 ⇓P P 16 36 36.8 +0.6
baz=83
GEC2 **GERESS Array S** 83.58 328 eP P 16 36 36.1 0.0
comp=Z,4.0nm,0.7s,mb4.7
GEC2 **GERESS Array S** 83.58 328 eP P 16 36 36.1 0.0
GEC2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
GERES **GERESS Array B** 83.58 328 P P 16 36 36.1 -0.1
comp=Z,3.4nm,0.8s,mb4.5,baz=34,slow=5.0,SNR=12
216A **Three Points,** 83.61 55 ⇑P P 16 36 36.5 -0.1
baz=83
V21A **Milan** 83.64 50 ⇓P P 16 36 37.1 +0.4
baz=83
117A **Oracle** 83.72 54 ⇓P P 16 36 37.5 +0.3
baz=84
TUC **Tucson** 83.86 54 P P 16 36 37.9 0.0
X20A **Quemado** 83.92 51 ⇑P P 16 36 38.4 +0.3
baz=84
GRA1 **Grafenberg Arr** 83.95 330 eP P 16 36 38.4 +0.4
comp=Z,41nm,1.3s,mb5.4
GRF **Grafenberg Arr** 83.95 330 eP P 16 36 38.4 +0.4
comp=Z,41nm,1.3s,mb5.4
GRF **Grafenberg Arr** 83.95 330 eP P 16 36 38.4 +0.4
GRF pmax pmax
comp=Z,41nm,1.3s,mb5.4
GRF **Grafenberg Arr** 83.95 330 eP P 16 36 38.4 +0.4
GRF pmax pmax
comp=Z,41nm,1.3s,mb5.4
W21A **San Fidel** 84.08 50 ⇓P P 16 36 39.2 +0.3
baz=84
217A **Green Valley** 84.17 55 ⇓P P 16 36 39.8 +0.3
baz=84
118A **Homack Ranch,** 84.18 54 ⇓P P 16 36 39.9 +0.4
baz=84
Y20A **Horse Springs,** 84.40 52 ⇑P P 16 36 40.9 +0.3
baz=84
119A **Ashpeak Ranch,** 84.54 53 ⇓P P 16 36 41.6 +0.3
baz=84
218A **Dragoon** 84.56 54 ⇓P P 16 36 41.6 +0.2
baz=84
TNS **Taunus Mts** 84.61 332 eP P 16 36 41.1 -0.2
comp=Z,13nm,1.1s,mb5.0
TNS **Taunus Mts** 84.61 332 eP P 16 36 41.1 -0.2
TNS pmax pmax
comp=Z,13nm,1.1s,mb5.0
Z20A **Nine Sixteen R** 84.77 53 ⇓P P 16 36 42.5 0.0
baz=84
Y21A **Point of Rocks** 84.78 51 ⇑P P 16 36 42.5 0.0
baz=85
VAY **Valandovo** 84.87 319 eP P 16 36 42.8 0.0
ANMO **Albuquerque** 84.93 50 eP P 16 36 44.1 +0.9
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO **Albuquerque** 84.93 50 eP P 16 36 44.1 +0.9
comp=Z,5.2nm,1.0s,mb4.6

318A **Bisbee** 84.93 55 ⇓P P 16 36 43.2 -0.1
baz=85
SKO **Skopje** 85.01 320 eP P 16 36 45.0 +1.5
219A **White Tail Can** 85.05 54 ⇓P P 16 36 44.0 0.0
baz=85
120A **U Bar Ranch, L** 85.11 53 ⇓P P 16 36 44.6 +0.4
baz=85
MEM **Membach** 85.20 334 P P 16 36 44.6 +0.3
comp=Z,7.2nm,1.2s,mb4.7
Z21A **St. Cloud Mine** 85.23 52 ⇑P P 16 36 45.3 +0.5
baz=85
STU **Stuttgart** 85.49 331 eP P 16 36 46.2 +0.4
comp=Z,28nm,1.2s,mb5.3
KRUS **Krusevo** 85.54 319 eP P 16 36 45.6 -0.6
220A **Playas Peak, P** 85.59 53 ⇑P P 16 36 46.9 +0.3
baz=85
121A **Cookes Peak, D** 85.67 53 ⇓P P 16 36 47.3 +0.3
baz=85
Z22A **Elephant Butte** 85.72 52 ⇓P P 16 36 47.5 +0.3
baz=86
Y23A **Lovelace Mesa,** 85.85 51 ⇓P P 16 36 48.2 +0.4
baz=86
WLF **Walferdange** 85.92 333 eP P 16 36 49.0 +1.1
comp=Z,12nm,0.9s,mb5.1
OHR **Ohrid** 85.96 319 eP P 16 36 44.1 -4.2
W25A **X Bar L Ranch,** 85.98 49 ⇑P P 16 36 48.2 -0.2
baz=86
SCHQ **Schefferville** 86.09 16 P P 16 36 48.2 -0.4
comp=Z,3.9nm,1.0s,mb4.6,baz=30,slow=14,SNR=3.1
SCHQ **Schefferville** 86.09 16 P P 16 36 48.2 -0.4
BFO **Black Forest** 86.19 331 eP P 16 36 48.9 -0.3
comp=Z,18nm,1.1s,mb5.2
BFO **Black Forest** 86.19 331 eP P 16 36 48.9 -0.3
BFO pmax pmax
comp=Z,18nm,1.1s,mb5.2
BAIF **Baives** 86.30 334 eP P 16 36 49.1 -0.7
CDF **Champ du Feu** 86.53 332 eP P 16 36 50.4 -0.5
comp=Z,45nm,1.3s,mb5.2
CDF **Champ du Feu** 86.53 332 eP P 16 36 50.4 -0.5
CDF pmax pmax
comp=Z,23nm,1.3s,mb5.2
CDF **Champ du Feu** 86.53 332 eP P 16 36 50.4 -0.5
comp=Z,23nm,1.3s,mb5.2
HINF **Hinteralfeld** 87.18 331 eP P 16 36 53.0 -1.1
X27A **F and S Farms,** 87.19 48 ⇓P P 16 36 54.0 -0.4
baz=87
HAU **Haudompre** 87.22 332 eP P 16 36 53.4 -0.9
MEZF **Maizieres J'vi** 87.30 333 eP P 16 36 54.5 -0.1
CABF **La Chapelle** 88.47 331 eP P 16 36 59.6 -0.7
LOR **Lormes** 88.77 333 eP P 16 37 01.1 -0.6
comp=Z,14nm,1.0s,mb5.0
LOR **Lormes** 88.77 333 eP P 16 37 01.1 -0.6
LOR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
LOR **Lormes** 88.77 333 eP P 16 37 01.1 -0.6
comp=Z,7.2nm,1.0s,mb5.0
FLN **La Foliniere** 89.00 336 eP P 16 37 02.0 -0.7
comp=Z,9.0nm,0.8s,mb4.8
FLN **La Foliniere** 89.00 336 eP P 16 37 02.0 -0.7
FLN pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
FLN **La Foliniere** 89.00 336 eP P 16 37 02.0 -0.7
comp=Z,4.5nm,0.8s,mb4.8
LDF **La Druitiere** 89.03 336 eP P 16 37 02.5 -0.4
comp=Z,8.0nm,0.9s,mb4.8
LDF **La Druitiere** 89.03 336 eP P 16 37 02.5 -0.4
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LDF **La Druitiere** 89.03 336 eP P 16 37 02.5 -0.4
comp=Z,4.0nm,0.9s,mb4.8
SSF **Saint Saulge** 89.07 333 eP P 16 37 02.6 -0.5
comp=Z,8.2nm,0.9s,mb4.8
SSF **Saint Saulge** 89.07 333 eP P 16 37 02.6 -0.5
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
SSF **Saint Saulge** 89.07 333 eP P 16 37 02.6 -0.5
comp=Z,4.1nm,0.9s,mb4.8
LPL **La Plagne** 89.11 330 eP P 16 37 02.8 -0.5
LPG **La Plagne** 89.12 330 eP P 16 37 03.0 -0.4
comp=Z,7.5nm,0.9s,mb4.7
LPG **La Plagne** 89.12 330 eP P 16 37 03.0 -0.4
LPG pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LPG **La Plagne** 89.12 330 eP P 16 37 03.0 -0.4
comp=Z,3.8nm,0.9s,mb4.7
SMF **Signal de Mont** 89.30 332 eP P 16 37 03.6 -0.6
comp=Z,20nm,1.1s,mb5.1
SMF **Signal de Mont** 89.30 332 eP P 16 37 03.6 -0.6
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
SMF **Signal de Mont** 89.30 332 eP P 16 37 03.6 -0.6
comp=Z,10.0nm,1.1s,mb5.1
AVF **Avril sur Loir** 89.36 333 eP P 16 37 04.0 -0.4
comp=Z,24nm,1.1s,mb5.1
AVF **Avril sur Loir** 89.36 333 eP P 16 37 04.0 -0.4
AVF pmax pmax
comp=Z,12nm,1.1s,mb5.1
AVF **Avril sur Loir** 89.36 333 eP P 16 37 04.0 -0.4
comp=Z,12nm,1.1s,mb5.2
GRR **Gorron** 89.45 336 eP P 16 37 04.3 -0.6
comp=Z,18nm,0.9s,mb5.1
GRR **Gorron** 89.45 336 eP P 16 37 04.3 -0.6
GRR pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
GRR **Gorron** 89.45 336 eP P 16 37 04.3 -0.6
comp=Z,8.9nm,0.9s,mb5.1
SGMF **Saint Gilles** 90.12 337 eP P 16 37 07.5 -0.5
comp=Z,15nm,0.9s,mb5.0
SGMF **Saint Gilles** 90.12 337 eP P 16 37 07.5 -0.5
SGMF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
SGMF **Saint Gilles** 90.12 337 eP P 16 37 07.5 -0.5
comp=Z,7.7nm,0.9s,mb5.0
SBF **Sospel** 90.18 329 eP P 16 37 07.0 -1.3
TCF **Toulx Ste Croi** 90.20 333 eP P 16 37 08.0 -0.4
comp=Z,27nm,1.3s,mb5.1
TCF **Toulx Ste Croi** 90.20 333 eP P 16 37 08.0 -0.4
TCF pmax pmax
comp=Z,14nm,1.3s,mb5.1
TCF **Toulx Ste Croi** 90.20 333 eP P 16 37 08.0 -0.4
comp=Z,14nm,1.3s,mb5.1
ROSF **Rostrenen** 90.27 338 eP P 16 37 07.5 -1.2
comp=Z,17nm,1.0s,mb5.0
ROSF **Rostrenen** 90.27 338 eP P 16 37 07.5 -1.2
ROSF pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
ROSF **Rostrenen** 90.27 338 eP P 16 37 07.5 -1.2
comp=Z,8.4nm,1.0s,mb5.0
TXAR **Lajitas Array** 90.43 53 P P 16 37 10.0 +0.2
comp=Z,1.3nm,0.8s,mb4.3,baz=336,slow=2.7,SNR=3.8
VIVF **Saint-Julien-l** 90.48 331 eP P 16 37 09.1 -0.6
comp=Z,12nm,0.9s,mb4.9
VIVF **Saint-Julien-l** 90.48 331 eP P 16 37 09.1 -0.6
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
VIVF **Saint-Julien-l** 90.48 331 eP P 16 37 09.1 -0.6
comp=Z,6.3nm,0.9s,mb5.0
PGF **Pioggiola** 90.57 327 eP P 16 37 09.0 -1.2
comp=Z,34nm,1.1s,mb5.3
PGF **Pioggiola** 90.57 327 eP P 16 37 09.0 -1.2
PGF pmax pmax
comp=Z,17nm,1.1s,mb5.3
PGF **Pioggiola** 90.57 327 eP P 16 37 09.0 -1.2
comp=Z,17nm,1.1s,mb5.3
FRF **La Foret Royal** 90.75 329 eP P 16 37 09.8 -1.2
MFF **Saint Martin d** 90.77 335 eP P 16 37 10.8 -0.2
comp=Z,28nm,1.1s,mb5.2
MFF **Saint Martin d** 90.77 335 eP P 16 37 10.8 -0.2
MFF pmax pmax
comp=Z,14nm,1.1s,mb5.2
MFF **Saint Martin d** 90.77 335 eP P 16 37 10.8 -0.2
comp=Z,14nm,1.1s,mb5.2
SMRF **Simiane la Rot** 90.85 330 eP P 16 37 10.9 -0.6
comp=Z,24nm,1.3s,mb5.1
SMRF **Simiane la Rot** 90.85 330 eP P 16 37 10.9 -0.6
comp=Z,24nm,1.3s,mb5.4
LMR **La Mourre** 91.00 329 eP P 16 37 11.1 -1.1
comp=Z,22nm,1.2s,mb5.1
LMR **La Mourre** 91.00 329 eP P 16 37 11.1 -1.1
LMR pmax pmax
comp=Z,11nm,1.2s,mb5.1
LMR **La Mourre** 91.00 329 eP P 16 37 11.1 -1.1
comp=Z,11nm,1.2s,mb5.1
RJF **Les Rejaudoux** 91.29 333 eP P 16 37 13.3 -0.2
comp=Z,20nm,1.0s,mb5.1
RJF **Les Rejaudoux** 91.29 333 eP P 16 37 13.3 -0.2
RJF pmax pmax

comp=Z,10.0nm,1.0s,mb5.1
RJF Les Rejaudoux 91.29 333 eP P 16 37 13.3 -0.2
comp=Z,9.8nm,1.0s,mb5.1
CAF Calviac 91.42 333 eP P 16 37 14.2 +0.1
comp=Z,17nm,1.0s,mb5.0
CAF Calviac 91.42 333 eP P 16 37 14.2 +0.1
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
CAF Calviac 91.42 333 eP P 16 37 14.2 +0.1
comp=Z,8.6nm,1.0s,mb5.0
LASF Ste Croix 91.45 331 eP P 16 37 14.0 -0.3
comp=Z,38nm,1.3s,mb5.3
LFF La Frestale 91.89 333 eP P 16 37 16.2 -0.1
MTLF Montolieu 92.71 332 eP P 16 37 19.8 -0.3
comp=Z,14nm,1.1s,mb5.0
MTLF Montolieu 92.71 332 eP P 16 37 19.8 -0.3
MTLF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
MTLF Montolieu 92.71 332 eP P 16 37 19.8 -0.3
comp=Z,7.3nm,1.1s,mb5.0
MIAR Mount Ida 92.77 43 P P 16 37 20.5 0.0
MIAR e pP 16 37 29.9 -2.0
TORD Torodi Ar. Bea 118.13 315 PKP PKPdf 16 42 53.2 -2.3
comp=Z,1.5nm,1.2s,baz=74,slow=0.4,SNR=3.2
DBIC Dimbokro 127.10 317 PKP PKPdf 16 43 10.3 -2.5
comp=Z,4.2nm,0.9s,baz=143,slow=5.6,SNR=3.1
DBIC Dimbokro 127.10 317 PKP PKPdf 16 43 10.3 -2.5
LPAZ La Paz 146.88 61 PKP2 PKPbc 16 43 50.9 +0.2
LPAZ pmax pmax
comp=Z,6.0nm,0.6s
LPAZ La Paz 146.88 61 PKPbc PKPbc 16 43 50.9 +0.2
comp=Z,5.9nm,0.6s,baz=338,slow=2.2,SNR=26
LPAZ La Paz 146.88 61 ePKPbc PKPbc 16 43 50.5 -0.3

*IDC **07** 16:26:18.8±0.7,36°.23N×141°.85E,h0km,mb4.4/18, mb1 4.5/22,mb1mx4.4/31,mbtmp4.5/22,ML3.9/4,Error ellipse: s-maj=18.0km s-min=16.1km az=109.0*
*ISCJB **07** 16:26:19.4±1.4,36°.28N±0°.04×141°.98E±0°.07,h18km±8km, mb4.5/27,Error ellipse: s-maj=10.2km s-min=7.2km az=13.4*
*BJI **07** 16:26:19.8,35°.62N×141°.97E,h41km,mb4.9/6*
*MOS **07** 16:26:21.4±0.9,36°.29N×141°.91E,h33km,mb4.9/8,Error ellipse: s-maj=13.3km s-min=8.5km az=120.0*
*JMA **07** 16:26:21.7±0.2,36°.27N×141°.87E,h51km,M4.3*
*NEIC **07** 16:26:24.5±1.3,36°.32N×141°.80E,h37km±10km,mb4.8/7, Error ellipse: s-maj=11.8km s-min=8.6km az=115.0*

ISC 07 16:26:19.7±1.3,36°.29N±0°.04×141°.91E±0°.06,h6km±7km, n62,σ0=85/66,mb4.5/27,1C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.03	236	P	Pg	16 26 39.5	0.0
CHOJ				S	Sg	16 26 53.2	+0.3
JHO	Hitachi	1.13	287	P	Pg	16 26 40.6	-0.6
JHO				S	Sg	16 26 55.8	-0.1
ONAJ	Iwakimizuishiy	1.20	312	P	Pg	16 26 42.5	-0.2
JFK	Kawauchi	1.35	323	P	Pn	16 26 45.0	-0.1
JFK				S	Sb	16 27 02.2	-0.9
MJAR	Matsushiro Arr	2.99	276	Pn	Pn	16 27 08.1	+0.5
	40nm,0.3s,baz=111,slow=13,SNR=7.1						
MAJO	Matsushiro	3.00	276	eP	Pn	16 27 08.3	+0.6
MAT	Matsushiro	3.00	276	P	Pn	16 27 08.9	+1.2
MAT				eS	Sn	16 27 45.2	+1.3
JHJ	Hachijo jima 2	3.62	210	Pn	Pn	16 27 16.1	-0.2
	22nm,0.3s,baz=72,slow=20,SNR=6.0						
JHJ				Sn	Sn	16 27 54.0	-5.3
	206nm,0.3s,baz=73,slow=19,SNR=7.1						
ASAJ	Asahikawa	7.83	4	P	Pn	16 28 15.3	+1.2
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	7.83	4	Pn	Pn	16 28 15.3	+1.2
	comp=Z,1.5nm,0.3s,baz=16,slow=30,SNR=5.0						
YSS	Yuzh-Sakhalins	10.67	3	P	Pn	16 28 53.6	+0.6
KSRS	Korea Array	11.26	280	P	Pn	16 29 03.1	+1.9
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	11.26	280	Pn	Pn	16 29 03.1	+1.9
	comp=Z,0.5nm,0.3s,baz=94,slow=13,SNR=6.1						
JOW	Kunigami	14.95	235	Pn	Pn	16 29 55.4	+3.8
	comp=Z,0.8nm,0.3s,baz=33,slow=8.3,SNR=4.6						
JOW	Kunigami	14.95	235	Pn	Pn	16 29 55.4	+3.8
BJT	Baijiatuan	20.56	288	eP	P	16 30 56.6	-2.4
BJT				pmax	pmax		
	comp=Z,19nm,0.4s						
BJT	Baijiatuan	20.56	288	eP	P	16 30 56.6	-2.4
	comp=Z,19nm,0.4s						
YAK	Yakutsk	26.88	347	eP	P	16 32 00.7	-0.2
YAK				pmax	pmax		
	comp=Z,28nm,0.8s,mb4.8						
YAK	Yakutsk	26.88	347	eP	P	16 32 00.7	-0.2
	comp=Z,28nm,0.8s,mb4.8						
ENH	Enshi	27.68	267	eP	P	16 32 07.0	-1.5
	comp=Z,17nm,0.6s,mb4.9						
ENH				e		16 32 16.4	
ULN	Ulaanbaatar	28.10	305	eP	P	16 32 12.3	+0.2
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ULN	Ulaanbaatar	28.10	305	eP	P	16 32 12.3	+0.2
	comp=Z,9.1nm,0.8s,mb4.5						
SONM	Songino Array	28.53	305	P	P	16 32 15.7	-0.2
	comp=Z,15nm,0.9s,mb4.7,baz=104,slow=9.3,SNR=8.7						
ZAK	Zakamensk	31.04	309	eP	P	16 32 36.3	-1.8
ZAK				e		16 33 51.9	
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.5						
CMAR	Chiang Mai Arr	41.70	257	P	P	16 34 09.1	-0.3
	comp=Z,2.9nm,0.7s,mb4.0,baz=53,slow=5.1,SNR=6.0						
ZALV	Zalesovo Beam	42.71	313	P	P	16 34 16.5	-0.7
	comp=Z,14nm,0.8s,mb4.7,baz=90,slow=7.4,SNR=6.3						
MK31	Makanchi Array	44.85	303	eP	P	16 34 34.3	-0.3
MKAR	Makanchi Array	44.85	303	P	P	16 34 34.7	+0.1
	comp=Z,7.8nm,0.7s,mb4.7,baz=92,slow=7.3,SNR=5.9						
MKAR	Makanchi Array	44.85	303	P	P	16 34 34.7	+0.1
KURK	Kurchatov	46.70	309	P	P	16 34 49.1	0.0
	comp=Z,13nm,0.7s,mb5.0,baz=78,slow=7.2,SNR=7.4						
AAK	Ala-Archa	51.20	299	P	P	16 35 24.7	+1.0
	comp=Z,3.0nm,0.4s,mb4.5,baz=74,slow=6.2,SNR=6.2						
BVAR	Borovoye Array	51.37	313	P	P	16 35 25.1	+0.2
	comp=Z,3.9nm,0.8s,mb4.4,baz=81,slow=8.9,SNR=3.7						
AML	Almayashu	51.91	299	eP	P	16 35 30.2	+1.1
	comp=Z,7.4nm,0.4s,mb5.0						
INK	Inuvik	54.87	27	P	P	16 35 51.6	+1.2
	comp=Z,3.4nm,0.9s,mb4.3,baz=325,slow=4.3,SNR=4.6						
WB2	Warramunga Arr	56.38	189	eP	P	16 36 01.9	+0.1
WRA	Warramunga Arr	56.38	189	P	P	16 36 00.3	-1.5
	comp=Z,1.8nm,0.6s,mb4.2,baz=6.8,slow=7.5,SNR=3.4						
ABKAR	Akbulak array	58.72	311	eP	P	16 36 17.3	-0.7
ASAR	Alice Springs	60.11	188	P	P	16 36 27.5	-0.3
	comp=Z,1.0nm,0.9s,mb3.9,baz=2.8,slow=6.0,SNR=2.1						
YKA	Yellowknife Ar	64.25	30	P	P	16 36 56.0	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	64.25	30	P	P	16 36 56.0	+0.8
	comp=Z,1.1nm,0.8s,mb3.9,baz=300,slow=6.9,SNR=4.5						
KEV	Kevo	64.28	339	eP	P	16 36 54.8	-0.5
KEV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KEV	Kevo	64.28	339	ep	P	16 36 54.8	-0.5
	comp=Z,3.3nm,0.7s,mb4.5						
ARCES	ARCESS Array B	64.83	340	P	P	16 36 59.1	+0.2
	comp=Z,4.2nm,0.8s,mb4.5,baz=52,slow=7.9,SNR=5.6						
JOF	Joensuu	66.80	332	eP	P	16 37 10.4	-1.3
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
JOF	Joensuu	66.80	332	ep	P	16 37 10.4	-1.3
	comp=Z,3.9nm,0.7s,mb4.5						
KAF	Kangasniemi	69.15	333	eP	P	16 37 25.1	-1.4
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	Kangasniemi	69.15	333	ep	P	16 37 25.1	-1.4
	comp=Z,2.6nm,0.5s,mb4.4						
FINES	FINESS Array B	69.66	333	P	P	16 37 29.1	-0.6
	comp=Z,6.6nm,0.8s,mb4.6,baz=72,slow=6.2,SNR=5.4						
NB2	NORSAR Subarra	75.02	338	P	P	16 38 01.6	-0.1
	comp=Z,3.2nm,0.8s,mb4.3,baz=39,slow=5.9						
NOA	NORSAR Array B	75.02	338	P	P	16 38 02.1	+0.4
	comp=Z,5.4nm,0.8s,mb4.5,baz=39,slow=5.7,SNR=5.9						
AKASG	Malin Array Be	75.13	323	P	P	16 38 02.1	-0.4
	comp=Z,6.5nm,0.6s,mb4.7,baz=46,slow=5.7,SNR=8.5						
PDAR	Pinedale Array	77.90	46	P	P	16 38 19.6	+1.3
	comp=Z,0.9nm,0.8s,mb3.7,baz=316,slow=2.5,SNR=3.8						
KWP	Kalwaria Pacla	78.96	325	⇑iP	P	16 38 24.8	+0.7
BURAR	Bucovina Array	79.14	322	⇓iP	P	16 38 25.5	+0.4
BR131	Keskin Array S	79.64	312	eP	P	16 38 28.4	+0.4
	comp=Z,3.4nm,0.9s,mb4.3						
BRTR	Keskin Array B	79.64	312	P	P	16 38 28.6	+0.6
	comp=Z,2.5nm,0.8s,mb4.2,baz=75,slow=4.5,SNR=4.4						
CLL	Collm	81.94	330	eP	P	16 38 40.0	0.0
CLL				e		16 38 51.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CLL	Collm	81.94	330	eP	P	16 38 40.0	0.0
	comp=Z,6.0nm,1.0s,mb4.5						
CLL				e		16 38 51.0	
CLL	Collm	81.94	330	eP	P	16 38 40.0	0.0
	comp=Z,6.0nm,1.0s,mb4.5						
CLL				epP	pP	16 38 51.0	+9.1
KHC	Kasperske Hory	83.38	329	eP	P	16 38 47.5	-0.1
GERES	GERESS Array B	83.55	329	P	P	16 38 48.3	-0.2
	comp=Z,1.3nm,0.6s,mb4.2,baz=43,slow=5.6,SNR=5.3						
LPAZ	La Paz	146.71	61	PKPbc	PKPbc	16 46 03.7	+0.8
	comp=Z,1.6nm,0.6s,baz=15,slow=6.5,SNR=3.1						

*BJI **07** 16:27:34.6,35°.74N×142°.09E,h36km,mb5.4/4*
*IDC **07** 16:27:34.6±0.8,36°.33N×141°.82E,h0km,mb4.4/17, mb1 4.5/18,mb1mx4.4/27,mbtmp4.4/18,ML3.9/1,Error ellipse: s-maj=20.8km s-min=18.6km az=69.0*
*JMA **07** 16:27:37.9±0.3,36°.24N×141°.86E,h64km,M4.0*
*NEIC **07** 16:27:40.1±0.6,36°.38N×141°.76E,h35km,mb5.0/4,Error ellipse: s-maj=14.0km s-min=11.0km az=142.0*

ISC 07 16:27:37.6±3.2,36°.28N±0°.06×141°.84E±0°.10,h20km±19km, n42,σ0=94/43,mb4.4/23,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.98	234	P	Pb	16 27 56.1	+0.1
CHOJ				eS	Sb	16 28 08.0	-0.5
JHO	Hitachi	1.08	288	P	Pb	16 27 57.3	-0.2
JFK	Kawauchi	1.33	325	P	Pn	16 28 01.2	+0.1
JFK				S	Sn	16 28 18.9	+0.7
MJAR	Matsushiro Arr	2.94	276	Pn	Pn	16 28 21.0	-2.2
	20nm,0.3s,baz=98,slow=9.4,SNR=4.5						
MAJO	Matsushiro	2.94	276	eP	Pn	16 28 24.0	+0.8
ERM	Erimo	5.81	10	eP	Pn	16 28 53.5	-9.1
KSRS	Korea Array	11.21	280	Pn	Pn	16 30 19.9	+3.2
	0.3nm,0.3s,baz=92,slow=13,SNR=5.5						
JOW	Kunigami	14.90	235	Pn	Pn	16 31 10.4	+3.3
	0.7nm,0.3s,baz=32,slow=7.8,SNR=5.1						
YAK	Yakutsk	26.88	347	eP	P	16 33 16.9	+0.1
	36nm,0.8s,mb5.0						
ENH	Enshi	27.62	267	eP	P	16 33 22.9	-0.9
	31nm,0.7s,mb5.0						
SONM	Songino Array	28.49	305	P	P	16 33 32.4	+1.0
	12nm,0.8s,mb4.6,baz=101,slow=9.0,SNR=8.3						
GTA	Gaotai	33.12	288	eP	P	16 34 12.8	+0.5
GTA				pP	pP	16 34 21.6	+3.3
GTA				sP	sP	16 34 26.7	+5.9
GTA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
CMAR	Chiang Mai Arr	41.65	256	P	P	16 35 24.6	-0.2
	comp=Z,3.0nm,0.8s,mb4.0,baz=47,slow=5.8,SNR=7.5						
LSA	Lhasa	42.63	276	eP	P	16 35 34.2	+1.6
	comp=Z,12nm,0.9s,mb4.6						
ZALV	Zalesovo Beam	42.68	313	P	P	16 35 33.0	+0.3
	comp=Z,8.3nm,0.8s,mb4.5,baz=90,slow=7.4,SNR=4.3						
ZALV	Zalesovo Beam	42.68	313	P	P	16 35 33.0	+0.3
MK31	Makanchi Array	44.81	303	eP	P	16 35 49.8	-0.2
MKAR	Makanchi Array	44.81	303	P	P	16 35 49.8	-0.2
	comp=Z,8.9nm,0.7s,mb4.7,baz=95,slow=8.8,SNR=6.7						
KURK	Kurchatov	46.67	309	P	P	16 36 05.2	+0.6
	comp=Z,11nm,0.7s,mb4.9,baz=84,slow=7.8,SNR=4.6						
KURK	Kurchatov	46.67	309	eP	P	16 36 01.8	-2.8
	comp=Z,22nm,0.9s,mb5.1						
BVAR	Borovoye Array	51.33	313	P	P	16 36 38.8	-1.5
	comp=Z,3.8nm,0.8s,mb4.4,baz=96,slow=7.5,SNR=3.8						
WRA	Warramunga Arr	56.37	188	P	P	16 37 19.5	+2.2
	comp=Z,4.6nm,0.9s,mb4.5,baz=4.3,slow=7.5,SNR=3.5						
HYB	Hyderabad	58.53	269	iP	P	16 37 33.0	+0.1
AKTK	Aktyubinsk	59.44	312	P	P	16 37 39.0	+0.4
AKTO	Aktyubinsk	59.44	312	P	P	16 37 39.0	+0.4
	comp=Z,6.1nm,1.0s,mb4.6,baz=71,slow=12,SNR=3.5						
ASAR	Alice Springs	60.09	188	P	P	16 37 42.4	-0.9
	comp=Z,0.6nm,0.8s,mb3.7,baz=7.8,slow=7.5,SNR=2.3						
YKA	Yellowknife Ar	64.28	30	P	P	16 38 11.1	0.0
	comp=Z,0.6nm,0.8s,mb3.7,baz=297,slow=5.5,SNR=2.9						
ARCES	ARCESS Array B	64.82	340	P	P	16 38 15.1	+0.6
	comp=Z,4.6nm,0.8s,mb4.5,baz=52,slow=7.9,SNR=5.5						
JOF	Joensuu	66.79	332	ep	P	16 38 25.9	-1.4
	comp=Z,3.3nm,0.6s,mb4.5						
KAF	Kangasniemi	69.13	333	ep	P	16 38 40.5	-1.5
	comp=Z,4.2nm,0.8s,mb4.4						
FINES	FINESS Array B	69.64	333	P	P	16 38 44.8	-0.4
	comp=Z,7.1nm,0.8s,mb4.7,baz=53,slow=7.4,SNR=6.6						
NB2	NORSAR Subarra	75.01	338	P	P	16 39 17.4	+0.2
	comp=Z,8.0nm,0.9s,mb4.7,baz=39,slow=5.9						
NOA	NORSAR Array B	75.01	338	P	P	16 39 17.2	0.0
	comp=Z,5.4nm,0.8s,mb4.5,baz=39,slow=5.7,SNR=5.9						
AKASG	Malin Array Be	75.10	323	P	P	16 39 17.7	-0.3
	comp=Z,6.9nm,0.7s,mb4.7,baz=46,slow=6.0,SNR=8.5						
AKASG	Malin Array Be	75.10	323	P	P	16 39 17.7	-0.3
PDAR	Pinedale Array	77.95	46	P	P	16 39 34.7	+0.5
	comp=Z,0.5nm,0.9s,mb3.4,baz=317,slow=6.1,SNR=2.0						
BRTR	Keskin Array B	79.61	312	P	P	16 39 43.0	-0.4
	comp=Z,3.9nm,1.0s,mb4.3,baz=94,slow=3.3,SNR=5.0						
CLL	Collm	81.92	330	P	P	16 39 55.6	+0.1
CLL	Collm	81.92	330	iP	P	16 39 55.6	+0.1
KHC	Kasperske Hory	83.36	329	eP	P	16 40 03.0	-0.1
GERES	GERESS Array B	83.53	328	P	P	16 40 03.9	-0.1
	comp=Z,1.1nm,0.9s,mb4.0,baz=40,slow=4.4,SNR=5.2						
LPAZ	La Paz	146.76	61	PKPbc	PKPbc	16 47 19.1	+0.5
	comp=Z,1.0nm,0.5s,baz=312,slow=15,SNR=2.4						

JMA 07 16:29:10.0±0.2,36°.33N×142°.05E,h18km,M3.7,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.15	237	P	Pn	16 29 31.1	-0.1
CHOJ				eS	Sb	16 29 45.6	-0.3

*ISCJB **07** 16:35:23.3±2.5,36°.25N±0°.06×142°.1E±0°.1,h1km±18km, mb3.6/3,Error ellipse: s-maj=16.0km s-min=10.0km az=20.0*
*JMA **07** 16:35:27.8±0.2,36°.25N×141°.91E,h73km,M3.2*
*IDC **07** 16:35:29.8±1.7,36°.60N×141°.52E,h0km,mb3.4/3, mb1 3.5/5,mb1mx3.3/27,mbtmp3.4/5,ML3.1/2,Error ellipse: s-maj=44.6km s-min=25.5km az=75.0*

ISC 07 16:35:27.0±2.6,36°.26N±0°.06×142°.0E±0°.2,h13km±12km, n13,σ0=88/16,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.05	239	P	Pg	16 35 46.8	-0.3
CHOJ				S	Sg	16 36 01.6	+0.9
JHO	Hitachi	1.17	288	P	Pb	16 35 48.0	-1.1
JFK	Kawauchi	1.41	322	P	Pn	16 35 51.9	-0.4
JYT	Yasato	1.42	269	P	Pn	16 35 51.6	-0.9
JSB	Shiboa	1.79	294	P	Pn	16 35 57.5	0.0
BSO1	Boso 1	1.79	207	eS	Sn	16 36 20.6	+0.5
JAG	Ashikaga	2.03	276	P	Pn	16 36 00.7	-0.1
MJAR	Matsushiro Arr	3.04	277	Pn	Pn	16 36 15.2	+0.4
	2.9nm,0.3s,baz=89,slow=9.8,SNR=9.0						
MJAR				Sn	Sn	16 36 54.8	+3.9
	1.2nm,0.3s,baz=271,slow=24,SNR=4.2						
JHJ	Hachijo jima 2	3.60	210	Pn	Pn	16 36 22.5	0.0
JHJ				Sn	Sn	16 37 02.3	-2.7
	21nm,0.3s,baz=92,slow=23,SNR=5.3						
ASAJ	Asahikawa	7.87	3	Pn	Pn	16 37 21.9	+0.8
	0.3nm,0.3s,baz=225,slow=13,SNR=3.7						
KURK	Kurchatov	46.76	309	P	P	16 43 56.4	+0.6
	0.4nm,0.5s,mb3.6,baz=82,slow=7.5,SNR=2.9						
WRA	Warramunga Arr	56.35	189	P	P	16 45 14.7	+6.9
	0.9nm,1.1s,mb3.7,baz=1.1,slow=7.8,SNR=8.3						
ASAR	Alice Springs	60.08	189	P	P	16 45 40.7	+6.9
	0.3nm,0.8s,mb3.4,baz=13,slow=8.6,SNR=3.4						

*ISCJB **07** 16:40:12.3±0.6,36°.63N±0°.03×77°.20E±0°.09,h74km±12km, mb3.4/4,Error ellipse: s-maj=12.4km s-min=4.4km az=166.7*

*NNC **07** 16:40:16.9±5.8,37°.18N×77°.07E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=45.9km s-min=34.4km az=164.0*
*BJI **07** 16:40:17.7,36°.98N×77°.42E,h128km*
*NEIC **07** 16:40:18.7±2.7,36°.86N×77°.24E,h112km±22km,mb4.9/7, Error ellipse: s-maj=29.5km s-min=16.6km az=205.0*
*IDC **07** 16:40:19.1±4.3,36°.92N×77°.14E,h119km±42km,mb3.2/4, mb1 3.3/9,mb1mx3.1/28,mbtmp3.2/9,Error ellipse: s-maj=37.8km s-min=18.8km az=36.0*

ISC 07 16:40:13.9±0.4,36°.67N±0°.03×77°.22E±0°.08,h72km±10km, n31,σ1=37/42,mb3.4/4,1C-3D,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.00	341	P	Pn	16 40 59.6	+0.4
KSH				S	Sn	16 41 31.2	-2.8
KSH				smax			
	comp=N,210nm,0.3s						
KSH				smax			
	comp=E,280nm,0.2s						
THN	Thein Dam	4.41	197	eP	Pn	16 41 21.6	+3.3
THN				eS	Sn	16 42 07.7	-0.7
SDNR	Sundarnagar	5.16	182	ex	x	16 41 18.1	
SDNR				eS	Sn	16 42 26.5	-0.4
SMLA	Simla	5.53	181	iP	Pn	16 41 35.5	+1.8
SMLA				iS	Sn	16 42 32.6	-3.3
SMLA				ex	x	16 42 39.1	
	comp=N,2μm,0.3s						
SMLA				ex	x	16 42 39.8	
	comp=E,2μm,0.3s						
UCH	Uchtor	5.93	340	ePn	Pn	16 41 41.9	+2.8
	comp=E,5.5nm,0.6s						
AML	Almayashu	6.10	334	eP	Pn	16 41 45.2	+3.9
	comp=E,60nm,1.7s						
AAK	Ala-Archa	6.31	341	P	Pn	16 41 47.6	+3.3
	comp=E,0.0nm,0.3s,baz=143,slow=9.8,SNR=9.7						
AAK				S	Sn	16 42 54.8	-0.1
	comp=E,0.0nm,0.3s,baz=9.5,slow=16,SNR=6.5						
TKM2	Tokmak 2	6.36	349	⇓Pn	Pn	16 41 45.0	0.0
	comp=E,1.3nm,0.5s						
TKM2				⇑Sn	Sn	16 42 54.9	-1.2
	comp=E,4.2nm,0.5s						
JOSI	Joshimath	6.40	162	eS	Sn	16 42 55.7	-1.5
KK31	Karatay Array	8.23	323	Pn	Pn	16 42 12.0	+1.5
	comp=E,0.9nm,0.3s,baz=143,slow=14,SNR=62						
KK31				⇓Sn	Sn	16 43 39.8	-2.2
	comp=E,6.6nm,0.7s,baz=139,slow=22,SNR=6.0						
SONA	Sohna	8.40	181	eS	Sn	16 43 39.8	-6.4
KHET	Khetri	8.66	188	eS	Sn	16 43 45.7	-6.7
AGRA	Agra	9.43	176	eS	Sn	16 44 04.0	-7.5
PYUN	Piuthan	9.84	149	eP	Pn	16 42 32.9	+0.4
PYUN				eS	Sn	16 44 15.9	-5.4
GKN	Gorkha	10.67	142	eP	Pn	16 42 44.3	+0.4
GKN				eS	Sn	16 44 35.2	-6.5
MK31	Makanchi Array	10.79	19	Pn	Pn	16 42 47.0	+1.6
	comp=E,0.4nm,0.3s,baz=204,slow=12,SNR=38						
MK31				⇓Sn	Sn	16 44 41.9	-2.6
	comp=E,0.4nm,0.3s,baz=187,slow=28,SNR=10.0						
MK31	Makanchi Array	10.79	19	eP	Pn	16 42 46.5	+1.1
MKAR	Makanchi Array	10.79	19	P	Pn	16 42 46.2	+0.7
	comp=E,0.9nm,0.3s,baz=205,slow=12,SNR=33						
MKAR				S	Sn	16 44 40.9	-3.5
	comp=E,0.9nm,0.3s,baz=187,slow=28,SNR=9.5						
KKN	Kakani	11.17	140	eP	Pn	16 42 51.0	+0.3
KKN				eS	Sn	16 44 46.3	-7.6
DMN	Daman	11.23	141	eP	Pn	16 42 51.2	-0.3
GUN	Gumba	11.39	138	eP	Pn	16 42 53.6	-0.1
PKIN	Phulchoki	11.41	140	eP	Pn	16 42 53.6	-0.3
KURK	Kurchatov	14.07	4	P	Pn	16 43 27.1	-2.5
	comp=E,0.0nm,0.3s,baz=189,slow=12,SNR=2.5						
KURK	Kurchatov	14.07	4	eP	Pn	16 43 35.3	+5.7
BVAR	Borovoye Array	17.04	346	P	Pn	16 44 08.7	+1.5
	comp=E,0.4nm,0.3s,baz=145,slow=8.9,SNR=9.6						
ABKAR	Akbulak array	17.78	320	P	Pn	16 44 17.1	+0.8
ZALV	Zalesovo Beam	18.06	15	P	Pn	16 44 20.1	+0.4
	comp=E,0.5nm,0.3s,baz=216,slow=10,SNR=7.4						
CMAR	Chiang Mai Arr	26.35	128	P	P	16 45 46.8	+3.5
	comp=E,1.0nm,0.6s,mb3.4,baz=308,slow=12,SNR=6.9						
FINES	FINESS Array B	40.19	325	P	P	16 47 42.5	-0.2
	comp=E,0.5nm,0.4s,mb3.7,baz=101,slow=9.9,SNR=6.1						
TORD	Torodi Ar. Bea	70.72	272	P	P	16 51 21.0	-1.5
	comp=E,0.3nm,0.6s,mb3.3,baz=43,slow=5.6,SNR=3.5						
WRA	Warramunga Arr	77.93	126	P	P	16 52 04.7	+0.6
	comp=E,0.4nm,0.9s,mb3.1,baz=330,slow=5.6,SNR=5.7						

*REY **07** 16:43:51.3,71°.04N×10°.86W,h10km,ML3.2,ML3.6*
*CSEM **07** 16:43:51.9±0.1,71°.41N×12°.42W,h2km,mb4.7/17,Error ellipse: s-maj=5.1km s-min=4.6km az=20.0*
*IDC **07** 16:43:52.2±0.5,71°.43N×12°.69W,h0km,mb4.1/24, mb1 4.2/31,mb1mx4.2/39,mbtmp4.1/31,ML3.6/5,Error ellipse: s-maj=14.6km s-min=9.7km az=25.0*
*ISCJB **07** 16:43:52.3±0.2,71°.60N±0°.03×12°.5W±0°.1,h10km, mb4.5/83,Error ellipse: s-maj=5.2km s-min=4.0km az=152.6*
*BER **07** 16:43:53.1±4.6,71°.41N×12°.28W,h0km±25km,ML3.6*
*NEIC **07** 16:43:54.2±0.2,71°.51N×12°.58W,h10km,mb4.8/44,Error ellipse: s-maj=5.

comp=Z,44nm,0.8s
SPB4 **Spitsbergen Ar** 9.93 35 *e*Pn Pn 16 46 17.0 +0.4
SPB4 **Spitsbergen Ar** 9.93 35 *e*Pn Pn 16 46 17.0 +0.4
SPA0 **Spitsbergen Ar** 9.93 35 Pn Pn 16 46 16.4 -0.3
baz=231,slow=12
SPA0 **Spitsbergen Ar** 9.93 35 Pn Pn 16 46 16.4 -0.3
baz=231,slow=12,SNR=167
SPITS **Spitsbergen Ar** 9.93 35 Pn Pn 16 46 16.8 +0.2
baz=227,slow=14,SNR=70
SPITS **Spitsbergen Ar** 9.93 35 Pn Pn 16 46 16.8 +0.1
ARA0 **ARCESS Array S** 12.70 81 Pn Pn 16 46 53.4 -1.0
baz=294,slow=12
ARA0 **ARCESS Array S** 12.70 81 Pn Pn 16 46 53.4 -1.1
baz=294,slow=11,SNR=2.7
ARCES **ARCESS Array B** 12.70 81 Pn Pn 16 46 54.2 -0.3
comp=Z,0.2nm,0.3s,baz=296,slow=11,SNR=9.9
ARE0 **ARCESS Array S** 12.70 81 *e*Pn Pn 16 46 53.4 -1.1
ARE0 **ARCESS Array S** 12.70 81 *e*Pn Pn 16 46 53.4 -1.1
KEV **Kevo** 13.07 79 *e*P Pn 16 47 00.8 +1.2
KEV **Kevo** 13.07 79 *e*p Pn 16 46 59.8 +0.3
comp=Z,4.1nm,0.6s
SFJD **Kangerlussuaq** 14.02 270 Pn Pn 16 47 07.9 -4.6
comp=Z,0.5nm,0.3s,baz=45,slow=14,SNR=3.0
SFJD **Kangerlussuaq** 14.02 270 Pn Pn 16 47 07.9 -4.6
NB2 **NORSAR Subarra** 14.08 126 Pn Pn 16 47 13.4 +0.1
NOA **NORSAR Array B** 14.08 126 Pn Pn 16 47 11.2 -2.2
comp=Z,0.2nm,0.3s,baz=316,slow=11,SNR=3.1
NOA **NORSAR Array B** 14.08 126 Pn Pn 16 47 11.1 -2.2
NAO01 **NORSAR Array S** 14.16 127 P Pn 16 47 18.9 +4.4
comp=Z,14nm,1.1s
HFS **Hagfors** 15.50 124 P Pn 16 47 32.3 -0.1
baz=330,slow=16
HFS **Hagfors** 15.50 124 Pn Pn 16 47 32.9 +0.5
comp=Z,0.1nm,0.3s,baz=340,slow=7.7,SNR=5.6
EKA **Eskdalemuir Ar** 16.76 161 Pn Pn 16 47 48.9 +0.3
baz=354,slow=12,SNR=7.9
KAF **Kangasniemi** 17.60 103 *e*p Pn 16 47 56.9 -2.1
comp=Z,6.9nm,0.6s
FIA0 **FINESS Array S** 18.04 104 P Pn 16 48 04.2 -0.2
baz=324,slow=12
FIA0 **FINESS Array S** 18.04 104 P Pn 16 48 04.2 -0.3
baz=324,slow=12,SNR=2.5
FINES **FINESS Array B** 18.04 104 P Pn 16 48 04.8 +0.4
comp=Z,0.5nm,0.3s,baz=329,slow=9.2,SNR=18
FINES **FINESS Array B** 18.04 104 P Pn 16 48 04.8 +0.4
JOF **Joensuu** 18.58 95 *e*p Pn 16 48 07.8 -3.3
comp=Z,6.2nm,0.8s
BSEG **Bad Segeberg** 20.28 138 *e*P P 16 48 30.1 +0.6
comp=Z,39nm,1.4s
IBBN **Ibbenburen** 21.31 144 *e*P P 16 48 41.3 +0.7
comp=Z,53nm,1.5s,mb4.7
WTSB **Winterswijk** 21.46 146 *e*P P 16 48 42.0 -0.3
comp=Z,67nm,1.9s,mb4.7
NRDL **Niedersach Rie** 21.59 140 *e*P P 16 48 43.4 -0.3
comp=Z,149nm,1.9s,mb5.1
FRB **Frobisher Bay** 21.84 278 P P 16 48 45.4 -0.8
comp=Z,5.5nm,0.8s,mb4.0,baz=31,slow=8.4,SNR=9.2
FRB **Frobisher Bay** 21.84 278 P P 16 48 45.4 -0.8
BUG **Bochum-Univer** 22.05 146 *e*P P 16 48 48.4 -0.2
comp=Z,73nm,1.3s,mb5.0
MENF **Mencas** 22.09 154 *e*P P 16 48 49.1 +0.1
CLZ **Clausthal** 22.26 140 *e*P P 16 48 50.7 -0.1
comp=Z,41nm,1.7s,mb4.6
CLZ **Clausthal** 22.26 140 *e*P P 16 48 50.7 -0.1
comp=Z,41nm,1.7s,mb4.6
RES **Resolute Bay** 22.32 316 P P 16 48 50.8 -0.6
comp=Z,4.9nm,0.9s,mb3.9,baz=72,slow=10,SNR=8.8
RES **Resolute Bay** 22.32 316 P P 16 48 50.8 -0.5
HGN **Heimansgroeve** 22.47 148 *e*P P 16 48 51.9 -1.1
comp=Z,84nm,1.3s,mb5.0
HGN **Heimansgroeve** 22.47 148 *e*P P 16 48 51.9 -1.1
comp=Z,84nm,1.3s,mb5.0
IZAR **Zarasai** 22.75 114 *e*P P 16 48 54.6 -1.4
ISAL **Salakas** 22.87 114 *e*P P 16 48 56.0 -1.2
BAIF **Baives** 22.87 151 *e*P P 16 48 56.5 -0.8
comp=Z,122nm,1.5s,mb4.8
BAIF **Baives** 22.87 151 *e*P P 16 48 56.5 -0.8
comp=Z,61nm,1.5s,mb4.8
GIVF **Givet** 22.93 150 *e*P P 16 48 57.0 -0.9
comp=Z,151nm,1.4s,mb4.9
GIVF **Givet** 22.93 150 *e*P P 16 48 57.0 -0.9
comp=Z,76nm,1.4s,mb4.9
UBBA **Unterbreizbach** 23.16 142 *e*P P 16 49 00.2 -0.1
comp=Z,148nm,2.1s,mb5.0
IDID **Didziasalis** 23.27 114 *e*P P 16 49 00.1 -1.3
CLL **Collm** 23.32 137 *e*P P 16 49 01.8 -0.2
comp=Z,77nm,1.7s,mb4.9
CLL **Collm** 23.32 137 ⇑*i*P P 16 49 01.1 -0.9
comp=Z,77nm,1.7s,mb4.9
CLL **Collm** 23.32 137 ⇑*i*P P 16 49 01.1 -0.9
comp=Z,77nm,1.7s,mb4.9
CLL *e*(pP) 16 49 07.0
TNS **Taunus Mts** 23.43 145 *e*P P 16 49 03.0 -0.2
TNS **Taunus Mts** 23.43 145 *e*P P 16 49 03.0 -0.2
FLN **La Foliniere** 23.53 160 *e*P P 16 49 02.9 -1.3
comp=Z,110nm,1.4s,mb4.8
FLN **La Foliniere** 23.53 160 *e*P P 16 49 02.9 -1.3
comp=Z,55nm,1.4s,mb4.8
FLN **La Foliniere** 23.53 160 *e*P P 16 49 02.9 -1.3
comp=Z,55nm,1.4s,mb4.8
WLF **Walferdange** 23.57 149 *e*P P 16 49 04.3 -0.3
comp=Z,100nm,1.8s,mb4.9
BST **Brest** 23.64 166 *e*P P 16 49 06.6 +1.3
MOX **Moxa** 23.65 139 *e*P P 16 49 05.0 -0.4
comp=Z,230nm,2.5s,mb5.2
MOX **Moxa** 23.65 139 *e*P P 16 49 05.4 0.0
comp=Z,171nm,2.4s,mb5.0
MOX *e* 16 49 28.1
ROSF **Rostrenen** 23.68 164 *e*P P 16 49 05.2 -0.4
comp=Z,232nm,1.9s,mb5.0
ROSF **Rostrenen** 23.68 164 *e*P P 16 49 05.2 -0.4
comp=Z,116nm,1.9s,mb5.0
RUP **Ruppelstein** 23.68 147 *e*P P 16 49 06.1 +0.4
LDF **La Druitiere** 23.73 159 *e*P P 16 49 05.0 -1.1
comp=Z,90nm,1.5s,mb4.7
LDF **La Druitiere** 23.73 159 *e*P P 16 49 05.0 -1.1
comp=Z,45nm,1.5s,mb4.7
LDF **La Druitiere** 23.73 159 *e*P P 16 49 05.0 -1.1
comp=Z,45nm,1.5s,mb4.7
SGMF **Saint Gilles** 23.82 163 *e*P P 16 49 04.3 -2.6
GRR **Gorron** 23.86 160 *e*P P 16 49 06.1 -1.1
GRR **Gorron** 23.86 160 *e*P P 16 49 06.1 -1.1
BRG **Berggiesshubel** 23.93 136 *e*P P 16 49 07.3 -0.6
comp=Z,91nm,2.0s,mb4.9
TANN **Tannenbergstha** 24.05 138 *e*P P 16 49 08.8 -0.2
comp=Z,259nm,2.5s,mb5.2
TOD **Tromm** 24.09 144 *e*P P 16 49 09.6 +0.2
QUIF **Quistinic** 24.10 164 *e*P P 16 49 09.5 0.0
comp=Z,210nm,1.8s,mb5.0
QUIF **Quistinic** 24.10 164 *e*P P 16 49 09.5 0.0
comp=Z,105nm,1.8s,mb5.0
NKC **Novy Kostel** 24.21 139 *e*P P 16 49 12.3 +1.8
PVCC **Panska Ves** 24.40 135 *e*P P 16 49 13.4 +1.2
GRA1 **Grafenberg Arr** 24.48 141 *e*P P 16 49 12.8 -0.1
comp=Z,134nm,2.0s,mb5.0
GRF **Grafenberg Arr** 24.48 141 *e*P P 16 49 12.8 -0.1
comp=Z,134nm,2.0s,mb5.0
LANF **Langenberg** 24.51 146 *e*P P 16 49 13.7 +0.5
MEZF **Maizieres J'vi** 24.52 151 *e*P P 16 49 13.9 +0.6
ROTZ **Rotzenmuhle** 24.61 139 *e*P P 16 49 14.4 +0.3
comp=Z,29nm,1.5s,mb4.6
UPC **Upice** 24.75 133 *e*P P 16 49 16.0 +0.6
PRA **Prague** 24.80 136 ⇑P P 16 49 16.0 +0.2
PRU **Pruhonice** 24.90 136 *e*P P 16 49 17.4 +0.7
THEF **They Montfort** 24.93 150 *e*P P 16 49 17.6 +0.5
THEF **They Montfort** 24.93 150 *e*P P 16 49 17.6 +0.5
DPC **Dobruska-Polom** 24.97 133 *e*P P 16 49 17.1 -0.2
CDF **Champ du Feu** 24.97 148 *e*P P 16 49 17.5 +0.1
comp=Z,57nm,1.3s,mb4.6
CDF **Champ du Feu** 24.97 148 *e*P P 16 49 17.5 +0.1
comp=Z,28nm,1.3s,mb4.6
ECH **Echery** 25.14 148 *e*P P 16 49 19.3 +0.4
HAU **Haudompre** 25.21 149 *e*P P 16 49 19.2 -0.3
comp=Z,60nm,1.3s,mb4.7
HAU **Haudompre** 25.21 149 *e*P P 16 49 19.2 -0.3
comp=Z,30nm,1.3s,mb4.7
BFO **Black Forest** 25.23 146 *e*P P 16 49 19.8 0.0
comp=Z,52nm,1.5s,mb4.8
WET **Wettzell** 25.34 139 *e*P P 16 49 20.9 +0.2
comp=Z,29nm,1.6s,mb4.6
HINF **Hinteralfeld** 25.47 149 *e*P P 16 49 21.9 -0.1
comp=Z,92nm,1.6s,mb4.8
HINF **Hinteralfeld** 25.47 149 *e*P P 16 49 21.9 -0.1
comp=Z,46nm,1.6s,mb4.8
MOF **Molkenrain** 25.49 148 *e*P P 16 49 23.2 +1.1
KHC **Kasperske Hory** 25.50 138 *e*P P 16 49 22.6 +0.4

SPAK **Spaichingen-Ko** 25.53 146 *e*P P 16 49 24.1 +1.6
LOR **Lormes** 25.55 153 *e*P P 16 49 21.2 -1.4
comp=Z,24nm,0.8s,mb4.5
LOR **Lormes** 25.55 153 *e*P P 16 49 21.2 -1.4
comp=Z,12nm,0.8s,mb4.5
LOR **Lormes** 25.55 153 *e*P P 16 49 21.2 -1.4
comp=Z,12nm,0.8s,mb4.5
FELD **Feldberg im Sc** 25.61 147 *e*P P 16 49 24.1 +0.9
MFF **Saint Martin d** 25.70 160 *e*P P 16 49 23.6 -0.4
comp=Z,87nm,1.3s,mb4.8
MFF **Saint Martin d** 25.70 160 *e*P P 16 49 23.6 -0.4
comp=Z,44nm,1.3s,mb4.8
SSF **Saint Saulge** 25.70 154 *e*P P 16 49 24.5 +0.5
comp=Z,12nm,0.8s,mb4.1
SSF **Saint Saulge** 25.70 154 *e*P P 16 49 24.5 +0.5
comp=Z,5.8nm,0.8s,mb4.2
TREC **Trest** 25.76 135 *e*P P 16 49 23.9 -0.7
MORC **Moravsky Berou** 25.79 132 *e*P P 16 49 24.3 -0.5
GEC2 **GERESS Array S** 25.79 138 *e*P P 16 49 25.4 +0.5
comp=Z,22nm,1.5s,mb4.5
GERES **GERESS Array B** 25.79 138 P P 16 49 24.2 -0.7
comp=Z,3.3nm,0.9s,mb3.9,baz=352,slow=8.1,SNR=14
GERES **GERESS Array B** 25.79 138 P P 16 49 24.2 -0.7
OKC **Ostrava-Krasne** 25.88 131 *e*P P 16 49 26.8 +1.2
LOMF **Lomont** 25.92 149 *e*P P 16 49 27.1 +1.1
AVF **Avril sur Loir** 25.94 154 *e*P P 16 49 25.4 -0.8
comp=Z,43nm,1.3s,mb4.5
AVF **Avril sur Loir** 25.94 154 *e*P P 16 49 25.4 -0.8
comp=Z,22nm,1.3s,mb4.5
AVF **Avril sur Loir** 25.94 154 *e*P P 16 49 25.4 -0.8
comp=Z,22nm,1.3s,mb4.5
VRAC **Vranov** 26.00 133 P P 16 49 25.8 -0.9
comp=Z,6.8nm,0.8s,mb4.2,baz=350,slow=9.1,SNR=14
VRAC **Vranov** 26.00 133 P P 16 49 25.8 -0.9
BGF **Bois d'Agland** 26.10 155 *e*P P 16 49 26.8 -0.9
comp=Z,55nm,1.1s,mb4.7
BGF **Bois d'Agland** 26.10 155 *e*P P 16 49 26.8 -0.9
comp=Z,27nm,1.1s,mb4.7
BGF **Bois d'Agland** 26.10 155 *e*P P 16 49 26.8 -0.9
comp=Z,27nm,1.1s,mb4.7
SMF **Signal de Mont** 26.15 154 *e*P P 16 49 27.6 -0.5
comp=Z,129nm,1.4s,mb5.0
SMF **Signal de Mont** 26.15 154 *e*P P 16 49 27.6 -0.5
comp=Z,65nm,1.4s,mb5.0
TCF **Toulx Ste Croi** 26.29 156 *e*P P 16 49 27.3 -2.0
comp=Z,101nm,1.5s,mb4.8
TCF **Toulx Ste Croi** 26.29 156 *e*P P 16 49 27.3 -2.0
comp=Z,51nm,1.5s,mb4.8
TCF **Toulx Ste Croi** 26.29 156 *e*P P 16 49 27.3 -2.0
comp=Z,51nm,1.5s,mb4.8
RETA **Reutte** 26.49 143 ⇑*i*P P 16 49 31.6 +0.4
comp=Z,18nm,1.5s,mb4.4
CABF **La Chapelle** 26.52 150 *e*P P 16 49 31.5 0.0
AGO **Saint Agoulin** 26.64 155 *e*P P 16 49 36.0 +3.5
AGO **Saint Agoulin** 26.64 155 *e*P P 16 49 36.0 +3.5
PLDF **La Plantade** 26.79 154 *e*P P 16 49 37.6 +3.8
PYM **Petit Puy Mans** 26.92 155 *e*P P 16 49 36.9 +1.9
PYM **Petit Puy Mans** 26.92 155 *e*P P 16 49 36.9 +1.9
FETA **Feichten** 26.93 143 ⇓*i*P P 16 49 37.2 +2.1
comp=Z,11nm,1.6s,mb4.1
DAVOX **Davos/Dischmat** 27.00 145 P P 16 49 35.4 -0.5
comp=Z,2.2nm,0.8s,mb3.7,baz=347,slow=21,SNR=3.5
DAVOX **Davos/Dischmat** 27.00 145 P P 16 49 35.4 -0.4
STHS **Stebnicka Huta** 27.04 127 *e*P P 16 49 38.0 +1.9
comp=Z,4.8nm,1.1s,mb3.9
STHS **Stebnicka Huta** 27.04 127 *e*P P 16 49 38.0 +1.9
KOLL **Kolacno** 27.11 131 *e*P P 16 49 39.4 +2.7
KOLL **Kolacno** 27.11 131 *e*P P 16 49 39.4 +2.7
RJF **Les Rejaudoux** 27.17 158 *e*P P 16 49 36.8 -0.5
comp=Z,62nm,1.2s,mb4.7
RJF **Les Rejaudoux** 27.17 158 *e*P P 16 49 36.8 -0.5
comp=Z,31nm,1.2s,mb4.7
KWP **Kalwaria Pacla** 27.22 125 *e*P P 16 49 37.6 0.0
comp=Z,84nm,1.7s,mb5.0
VYHS **Vyhne** 27.29 131 *e*P P 16 49 38.4 0.0
comp=Z,45nm,2.3s,mb4.6
VYHS **Vyhne** 27.29 131 *e*P P 16 49 38.4 0.0
LFF **La Frestale** 27.44 159 *e*P P 16 49 39.6 -0.1
SSB **Saint Sauveur** 27.59 153 *e*P P 16 49 40.4 -0.6
comp=Z,33nm,1.6s,mb4.7
SSB **Saint Sauveur** 27.59 153 *e*P P 16 49 40.4 -0.7
comp=Z,33nm,1.6s,mb4.7
CAF **Calviac** 27.61 157 *e*P P 16 49 40.6 -0.6
CAF **Calviac** 27.61 157 *e*P P 16 49 40.6 -0.6
CAF **Calviac** 27.61 157 *e*P P 16 49 40.6 -0.6
LPL **La Plagne** 27.69 150 *e*P P 16 49 42.8 +0.8
KECS **Kecovo** 27.71 129 *e*P P 16 49 43.0 +0.9
comp=Z,6.0nm,1.1s,mb4.1
KECS **Kecovo** 27.71 129 *e*P P 16 49 43.0 +0.9
LPG **La Plagne** 27.71 150 *e*P P 16 49 42.9 +0.7
KOLS **Kolonicke sedl** 27.74 126 *e*P P 16 49 44.0 +1.6
comp=Z,23nm,1.6s,mb4.6
KOLS **Kolonicke sedl** 27.74 126 *e*P P 16 49 44.0 +1.6
VIVF **Saint-Julien-l** 28.02 153 *e*P P 16 49 45.5 +0.6
comp=Z,24nm,1.1s,mb4.4
VIVF **Saint-Julien-l** 28.02 153 *e*P P 16 49 45.5 +0.6
comp=Z,12nm,1.1s,mb4.4
AKASG **Malin Array Be** 28.04 116 P P 16 49 43.7 -1.4
comp=Z,4.5nm,0.8s,mb4.1,baz=330,slow=9.4,SNR=18
AKASG **Malin Array Be** 28.04 116 P P 16 49 43.7 -1.4
AKBB **Malin Array Si** 28.04 116 *e*P P 16 49 43.7 -1.4
AKBB **Malin Array Si** 28.04 116 *e*P P 16 49 43.7 -1.4
PSZ **Piszkesteto** 28.09 130 *e*P P 16 49 45.3 -0.2
comp=Z,63nm,1.8s,mb5.0
BNI **Bardonecchia** 28.13 150 *e*P P 16 49 46.5 +0.5
comp=Z,44nm,1.7s,mb4.8
ORIF **Oris-en-Rattie** 28.14 152 *e*P P 16 49 46.2 +0.2
comp=Z,30nm,1.2s,mb4.5
ORIF **Oris-en-Rattie** 28.14 152 *e*P P 16 49 46.2 +0.2
comp=Z,15nm,1.2s,mb4.5
PERS **Pernice** 28.19 137 *e*P P 16 49 47.9 +1.4
SCHQ **Schefferville** 28.26 263 P P 16 49 47.2 +0.2
comp=Z,3.0nm,0.8s,mb4.0,baz=66,slow=6.6,SNR=4.8
SCHQ **Schefferville** 28.26 263 P P 16 49 47.2 +0.2
MBDF **Montbardon** 28.46 150 *e*P P 16 49 49.5 +0.6
CRNS **Crni Vrh** 28.54 139 *e*P P 16 49 50.2 +0.7
LASF **Ste Croix** 28.68 155 *e*P P 16 49 50.7 -0.1
comp=Z,44nm,1.6s,mb4.7
SMRF **Simiane la Rot** 29.02 152 *e*P P 16 49 54.0 +0.2
comp=Z,24nm,1.3s,mb4.5
SMRF **Simiane la Rot** 29.02 152 *e*P P 16 49 54.0 +0.2
comp=Z,24nm,1.3s,mb4.8
SJPF **Ste Jean** 29.04 163 *e*P P 16 49 53.4 -0.6
comp=Z,7.8nm,0.9s,mb4.2
SJPF **Ste Jean** 29.04 163 *e*P P 16 49 53.4 -0.6
comp=Z,3.9nm,0.9s,mb4.1
SJPF **Ste Jean** 29.04 163 *e*P P 16 49 53.4 -0.6
comp=Z,3.9nm,0.9s,mb4.2
MTLF **Montolieu** 29.19 158 *e*P P 16 49 55.4 +0.1
TOUF **Mont Tournerai** 29.24 150 *e*P P 16 49 57.4 +1.7
EPF **Esparros** 29.28 160 *e*P P 16 49 55.4 -0.7
comp=Z,31nm,1.3s,mb4.6
EPF **Esparros** 29.28 160 *e*P P 16 49 55.4 -0.7
comp=Z,15nm,1.3s,mb4.6
EPF **Esparros** 29.28 160 *e*P P 16 49 55.4 -0.7
comp=Z,15nm,1.3s,mb4.6
AUTN **L'Aution** 29.28 150 *e*P P 16 49 57.8 +1.7
SAOF **Saorge** 29.31 150 *e*P P 16 49 58.1 +1.7
ETSF **Etsaut** 29.32 162 *e*P P 16 49 57.1 +0.6
comp=Z,34nm,1.3s,mb4.6
ETSF **Etsaut** 29.32 162 *e*P P 16 49 57.1 +0.6
comp=Z,17nm,1.3s,mb4.6
SBF **Sospel** 29.41 150 *e*P P 16 49 58.0 +0.7
comp=Z,75nm,1.3s,mb5.0
SBF **Sospel** 29.41 150 *e*P P 16 49 58.0 +0.7
comp=Z,38nm,1.3s,mb5.0
FRF **La Foret Royal** 29.58 151 *e*P P 16 49 59.5 +0.7
LMR **La Mourre** 29.79 151 *e*P P 16 50 01.3 +0.7
comp=Z,38nm,1.4s,mb4.6
LMR **La Mourre** 29.79 151 *e*P P 16 50 01.3 +0.7
comp=Z,19nm,1.4s,mb4.6
PGF **Pioggiola** 30.95 148 *e*P P 16 50 12.1 +1.2
comp=Z,43nm,1.2s,mb4.9
PGF **Pioggiola** 30.95 148 *e*P P 16 50 12.1 +1.2
comp=Z,22nm,1.2s,mb4.8
ESDC **Soseca Array** 32.23 168 P P 16 50 21.6 -0.6
comp=Z,0.2nm,0.3s,mb3.5,baz=351,slow=9.6,SNR=10.0
ARU **Arti** 32.28 80 *e*P P 16 50 22.8 +0.3
comp=Z,43nm,1.7s,mb5.0
ARU **Arti** 32.28 80 *e*P P 16 50 22.8 +0.3
comp=Z,43nm,1.7s,mb5.0
INK **Inuvik** 35.02 326 P P 16 50 47.4 +1.2
comp=Z,3.8nm,1.0s,mb4.3,baz=29,slow=11,SNR=7.9
INK **Inuvik** 35.02 326 *e*P P 16 50 47.5 +1.4
comp=Z,6.5nm,1.1s,mb4.5
INK **Inuvik** 35.02 326 *e*P P 16 50 47.5 +1.4
comp=Z,6.5nm,1.1s,mb4.5
YKA **Yellowknife Ar** 36.04 309 P P 16 50 54.9 -0.1
comp=Z,12nm,1.1s,mb4.8,baz=32,slow=8.7,SNR=29
YKA **Yellowknife Ar** 36.04 309 P P 16 50 54.9 0.0
AKTK **Aktyubinsk** 37.21 86 P P 16 51 04.8 -0.2
AKTK **Aktyubinsk** 37.21 86 P P 16 51 04.8 -0.2
AKTO **Aktyubinsk** 37.21 86 P P 16 51 04.8 -0.2
comp=Z,4.7nm,0.9s,mb4.3,baz=330,slow=8.6,SNR=13
KEST **Kesra** 37.66 150 P P 16 51 09.7 +0.6
comp=Z,1.7nm,0.9s,mb3.8,baz=315,slow=2.9,SNR=4.0
KIV **Kislovodsk** 38.11 106 P P 16 51 11.8 -1.0
comp=Z,92nm,1.8s,mb5.2
KIV **Kislovodsk** 38.11 106 P P 16 51 11.8 -1.0
comp=Z,92nm,1.8s,mb5.2
BRVK **Borovoye** 38.77 73 P P 16 51 18.6 +0.4
comp=Z,6.0nm,1.0s,mb4.3
BRVK **Borovoye** 38.77 73 P P 16 51 18.6 +0.4
comp=Z,6.0nm,1.0s,mb4.3
BVAR **Borovoye Array** 38.83 73 P P 16 51 18.0 -0.7
comp=Z,3.6nm,0.9s,mb4.1,baz=320,slow=6.7,SNR=12
BVAR **Borovoye Array** 38.83 73 P P 16 51 18.0 -0.7
ABKAR **Akbulak array** 38.85 85 *e*P P 16 51 19.1 +0.2
comp=Z,10.0nm,1.1s,mb4.5
ABKAR **Akbulak array** 38.85 85 *e*P P 16 51 19.1 +0.2
comp=Z,9.9nm,1.1s,mb4.5
FFC **Flin Flon** 39.29 294 *e*P P 16 51 22.1 -0.4
comp=Z,28nm,1.4s,mb4.8
FFC **Flin Flon** 39.29 294 *e*P P 16 51 22.1 -0.4
comp=Z,28nm,1.4s,mb4.8
BR131 **Keskin Array S** 39.33 119 *e*P P 16 51 23.7 +0.6
comp=Z,1.7nm,0.8s,mb3.8
BRTR **Keskin Array B** 39.33 119 P P 16 51 22.1 -1.0
comp=Z,1.2nm,0.8s,mb3.7,baz=338,slow=6.2,SNR=6.5
BRTR **Keskin Array B** 39.33 119 P P 16 51 22.0 -1.1
EGAK **Eagle** 39.53 328 *e*P P 16 51 25.6 +1.2
comp=Z,9.9nm,1.3s,mb4.4
EGAK **Eagle** 39.53 328 *e*P P 16 51 25.6 +1.2
comp=Z,9.9nm,1.3s,mb4.4
DAWY **Dawson** 39.89 327 *e*P P 16 51 29.8 +2.4
DAWY **Dawson** 39.89 327 *e*P P 16 51 29.8 +2.4
BILL **Bilibino** 40.67 1 *e*P P 16 51 34.4 +0.5
comp=Z,17μm,2.5s
BILL **Bilibino** 40.67 1 *e*P P 16 51 34.4 +0.5
comp=Z,10μm,2.5s
ULM **Lac du Bonnet** 41.36 285 P P 16 51 39.4 -0.3
comp=Z,7.9nm,1.0s,mb4.3,baz=8.1,slow=7.1,SNR=2.7
ULM **Lac du Bonnet** 41.36 285 P P 16 51 39.4 -0.3
ZALV **Zalesovo Beam** 42.24 61 P P 16 51 47.6 +0.8
comp=Z,0.4nm,0.4s,baz=317,slow=6.1,SNR=4.3
KURK **Kurchatov** 43.32 68 P P 16 51 56.0 +0.3
comp=Z,2.8nm,0.9s,mb4.0,baz=332,slow=7.4,SNR=14
KURK **Kurchatov** 43.32 68 P P 16 51 56.0 +0.3
MKAR **Makanchi Array** 47.92 67 P P 16 52 32.8 +0.8
comp=Z,3.0nm,1.0s,mb4.3,baz=343,slow=8.0,SNR=4.6
AAK **Ala-Archa** 49.33 76 P P 16 52 44.7 +1.7
comp=Z,1.8nm,0.8s,mb4.2,baz=313,slow=3.3,SNR=5.9
PDAR **Pinedale Array** 52.22 292 P P 16 53 04.0 -0.7
comp=Z,2.1nm,1.0s,mb4.0,baz=35,slow=5.4,SNR=11
PDAR **Pinedale Array** 52.22 292 P P 16 53 04.0 -0.7
YBH **Yreka Blue Hor** 56.88 303 P P 16 53 40.8 +2.2
comp=Z,2.8nm,0.8s,mb4.3,baz=41,slow=3.9,SNR=4.4
YBH **Yreka Blue Hor** 56.88 303 P P 16 53 40.8 +2.2
NVAR **Mina Array Bea** 58.75 298 P P 16 53 50.8 -1.0
comp=Z,0.4nm,0.4s,mb3.8,baz=17,slow=3.3,SNR=2.5
NVAR **Mina Array Bea** 58.75 298 P P 16 53 50.8 -0.9
TORD **Torodi Ar. Bea** 59.00 164 P P 16 53 51.9 -1.8
comp=Z,3.4nm,0.9s,mb4.4,baz=346,slow=6.9,SNR=12
CN2 **Changchun** 61.17 34 *e*P P 16 54 06.3 -2.0
TXAR **Lajitas Array** 62.83 281 P P 16 54 19.0 -0.6
comp=Z,0.4nm,0.8s,mb3.6,baz=276,slow=12,SNR=4.0
TXAR **Lajitas Array** 62.83 281 P P 16 54 19.0 -0.6
DBIC **Dimbokro** 64.97 172 P P 16 54 31.2 -2.6
comp=Z,1.5nm,0.6s,mb4.2,baz=360,slow=1.8,SNR=3.0
DBIC **Dimbokro** 64.97 172 P P 16 54 31.2 -2.6

NIED ***07*** *16:45:00,36°.20N×141°.60E,h35km,Mw6.8 Best double couple: M0 1.97000×10^19 NP1:φs 18.00000°,δ68.00000°, λ83.00000°. NP2:φs 216.00000°,δ24.00000°,λ107.00000°.*

IDC ***07*** *16:45:14.5±0.4,36°.18N×141°.58E,h0km,mb5.7/39, mb1 5.7/43,mb1mx5.7/43,mbtmp5.7/43,ML4.8/4,MS6.9/31, Ms1 6.9/31,ms1mx6.7/38,Error ellipse: s-maj=11.7km s-min=9.9km az=109.0*

BGS ***07*** *16:45:17.7±1.2,35°.55N×140°.92E,h33km,mb5.9,MS7.2*

MOS ***07*** *16:45:18.4±0.9,36°.17N×141°.49E,h33km,mb6.4/130, MS7.1/48,Error ellipse: s-maj=7.8km s-min=5.2km az=104.7*

ISCJB ***07*** *16:45:19.0±0.3,36°.20N±0°.01×141°.52E±0°.01,h36km±2km, mb6.1/431,MS6.9/294,Error ellipse: s-maj=2.5km s-min=1.8km az=158.1*

JMA ***07*** *16:45:18.7±0.2,36°.23N×141°.61E,h51km±4km,M7.0*

NEIC ***07*** *16:45:18.7±0.1,36°.16N×141°.53E,h27km,mb6.1/268, ME6.6,MS6.7/197,MW6.7,MW6.8,MW6.8(NIED),Error ellipse: s-maj=2.8km s-min=2.2km az=159.0,Moment Tensor Solution. s74 Moment tensor: Scale 10^19Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.20000×10^19 NP1:φs 172.00000°, δ21.00000°,λ59.00000°. NP2:φs 24.00000°,δ72.00000°, λ101.00000°. Principal axes: T 1.1800, Plg61.0000°, Azm310.0000°; N -0.0500, Plg10.0000°, Azm200.0000°; P -1.1300, Plg26.0000°, Azm105.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Six people slightly injured in Chiba, Ibaraki, Saitama and Tokyo. Power outages occurred at Tsukuba. Felt [V] at Tsukuba; [IV] at Tokyo and Zushi; [III] at Atsugi, Ayase-shi, Misawa, Narita, Yokohama and Yokosuka. Felt throughout northern and east-central Honshu. Recorded [5L JMA] in Ibaraki and Tochigi; [4 JMA] in Chiba, Fukushima, Miyagi and Saitama; [2 JMA] throughout northern Honshu.

BJI ***07*** *16:45:18.4,36°.24N×141°.26E,h31km,mB7.0/42,mb6.1/59, Ms7.2/76,Ms7 7.3/59*

GCMT ***07*** *16:45:20.3±0.1,36°.18N×141°.61E,h26km,MW6.9/114, Moment Tensor Solution. s109,c287; s114,c526; Duration: 6s5 Moment tensor: Scale 10^19Nm; Mrr1.12±.01; Mθθ-0.11±.01; Mφφ-1.01±.01; Mrθ0.79±.02; Mθφ-0.47±.00; Mφr1.91±.03; Best double couple: M0 2.37100×10^19 NP1:φs 204.00000°,δ15.00000°, λ91.00000°. NP2:φs 22.00000°,δ75.00000°,λ90.00000°. Principal axes: T 2.3260, Plg60.0000°, Azm292.0000°; N 0.0850, Plg0.0000°, Azm23.0000°; P -2.4150, Plg30.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

DJA ***07*** *16:45:20,36°.13N×141°.29E,h24km,Mw7.1/62*

SZGRF ***07*** *16:45:23.5,36°.89N×141°.85E,h33km,mb6.5,Near east coast of eastern Honshu, Japan*

ISC 07 16:45:21.1±0.2,36°.24N±0°.01×141°.51E±0°.01,h40km±2km, h45km±2.0km:pP-P,n1958,o0°.83/1844,mb6.1/429, MS6.9/294,541C-225D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.75**	**225**	⇓P	**Pn**	**16 45 33.8**	**-1.4**
CHOJ				S	**Sn**	**16 45 46.5**	**+1.1**
JHO	**Hitachi**	**0.84**	**296**	⇓P	**Pn**	**16 45 35.4**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.03**	**327**	⇓P	**Pn**	**16 45 37.6**	**-1.5**
ONAJ				*e*S	**Sn**	**16 45 52.7**	**+0.4**
JFK	**Kawauchi**	**1.24**	**336**	⇓P	**Pn**	**16 45 40.3**	**-1.6**
JSB	**Shiboa**	**1.47**	**300**	⇓P	**Pn**	**16 45 45.3**	**+0.2**
JFT	**Otama**	**1.59**	**324**	⇓P	**Pn**	**16 45 46.7**	**0.0**
BSO1	**Boso 1**	**1.64**	**195**	P	**Pn**	**16 45 45.1**	**-2.3**
BSO3	**Boso 3**	**1.65**	**210**	P	**Pn**	**16 45 46.1**	**-1.4**
JAG	**Ashikaga**	**1.67**	**277**	⇓P	**Pn**	**16 45 47.3**	**-0.5**
JMM	**Marumori**	**1.72**	**341**	⇑P	**Pn**	**16 45 47.3**	**-1.2**
JMM				S	**Sn**	**16 46 09.2**	**-0.1**
JFY	**Yanaizu**	**1.86**	**309**	⇓P	**Pn**	**16 45 50.7**	**+0.3**
JFY				S	**Sn**	**16 46 11.6**	**-1.0**
JKT	**Katashina**	**1.90**	**287**	⇓P	**Pn**	**16 45 51.3**	**+0.4**
JOD2	**Odawara 2**	**2.19**	**244**	P	**Pn**	**16 45 55.3**	**+0.3**
JIO	**Ouri**	**2.22**	**357**	⇑P	**Pn**	**16 45 53.2**	**-2.1**
JOU	**Okura**	**2.23**	**343**	P	**Pn**

MJAR	**Matsushiro Arr**	**2.68 277**	Pn	**Pn**	**16 46 01.6**	**-0.1**
	1μm,0.3s,baz=93,slow=9.8,SNR=271					
MAJO	**Matsushiro**	**2.68 277**	*e*P	**Pn**	**16 46 02.6**	**+0.9**
MAJO	**Matsushiro**	**2.68 277**	*e*Pn	**Pn**	**16 46 02.9**	**+1.2**
MAT	**Matsushiro**	**2.68 277**	P	**Pn**	**16 46 02.3**	**+0.6**
MAT			S	**Sn**	**16 46 37.2**	**+4.3**
JMK	**Ichinoseki**	**2.72 355**	⇑P	**Pn**	**16 46 00.5**	**-1.7**
JYA	**Atsumi**	**2.75 329**	⇑P	**Pn**	**16 46 02.9**	**+0.2**
JJN	**Nakama**	**2.82 289**	⇓P	**Pn**	**16 46 05.4**	**+1.7**
JYK	**Kaneyama**	**2.83 342**	⇑P	**Pn**	**16 46 03.2**	**-0.5**
OFUJ	**Ofunato**	**2.84 3**	⇑P	**Pn**	**16 46 01.3**	**-2.6**
JAW	**Awa shima**	**2.85 322**	⇑P	**Pn**	**16 46 04.3**	**+0.2**
JNY	**Yasuok**	**3.09 255**	⇑P	**Pn**	**16 46 09.2**	**+1.9**
JSD	**Sado**	**3.16 306**	⇓P	**Pn**	**16 46 08.6**	**+0.4**
JRG	**Rokugo**	**3.23 348**	⇑P	**Pn**	**16 46 08.6**	**-0.6**
JOM	**Ohasama**	**3.23 357**	⇑P	**Pn**	**16 46 07.4**	**-1.9**
JTB	**Tobi-shima**	**3.33 333**	⇑P	**Pn**	**16 46 10.5**	**-0.2**
MIYJ	**Miyakonagasawa**	**3.34 4**	⇑P	**Pn**	**16 46 07.7**	**-3.1**
HMMJ	**Hamamatsu 2**	**3.38 247**	P	**Pn**	**16 46 11.9**	**+0.6**
JHJ	**Hachijo jima 2**	**3.42 205**	Pn	**Pn**	**16 46 10.1**	**-1.8**
	578nm,0.3s,baz=78,slow=2.7,SNR=49					
JHJ			Sn	**Sn**	**16 46 49.7**	**-1.5**
	3μm,0.3s,baz=80,slow=21,SNR=7.9					
JYW	**Yuwa**	**3.45 343**	⇑P	**Pn**	**16 46 12.4**	**+0.1**
JSZ	**Suzu**	**3.54 291**	⇓P	**Pn**	**16 46 14.3**	**+0.8**
JAO	**Obara**	**3.59 256**	⇑P	**Pn**	**16 46 15.7**	**+1.5**
JTH	**Tanohata**	**3.71 4**	⇑P	**Pn**	**16 46 12.9**	**-2.9**
JOG2	**Oga 2**	**3.91 340**	P	**Pn**	**16 46 18.3**	**-0.3**
JAH	**Hinai**	**4.00 350**	⇑P	**Pn**	**16 46 19.0**	**-0.9**
JHG	**Hegura jima**	**4.01 295**	⇓P	**Pn**	**16 46 21.0**	**+1.1**
JIW	**Iwasaki**	**4.50 345**	⇑P	**Pn**	**16 46 26.0**	**-0.8**
JFM	**Mihama**	**4.54 263**	⇑P	**Pn**	**16 46 28.9**	**+1.6**
JHE	**Heguri**	**5.01 253**	⇑P	**Pn**	**16 46 34.5**	**+0.8**
JWT	**Wachi**	**5.06 261**	⇑P	**Pn**	**16 46 35.6**	**+1.3**
JKY	**Yasaka**	**5.23 265**	⇑P	**Pn**	**16 46 38.2**	**+1.5**
JKS	**Kasai**	**5.57 259**	P	**Pn**	**16 46 42.3**	**+0.9**
JWM	**Minabe**	**5.58 247**	P	**Pn**	**16 46 41.7**	**+0.1**
JAJ2	**Tsuna**	**5.71 253**	P	**Pn**	**16 46 44.0**	**+0.7**
ERM	**Erimo**	**5.91 12**	Pn	**Pn**	**16 46 42.4**	**-3.6**
	14μm,0.5s,SNR=69					
ERM	**Erimo**	**5.91 12**	*i* P	**Pn**	**16 46 41.9**	**-4.1**
ERM	**Erimo**	**5.91 12**	*e*P	**Pn**	**16 46 42.1**	**-4.0**
	3μm,0.9s					
JAD	**Aida**	**6.12 260**	P	**Pn**	**16 46 49.8**	**+0.9**
JHS	**Saijyo**	**6.95 262**	⇑P	**Pn**	**16 47 01.9**	**+1.6**
JKU	**Kubokawa**	**7.54 250**	⇑P	**Pn**	**16 47 08.7**	**+0.3**
ASAJ	**Asahikawa**	**7.91 6**	P	**Pn**	**16 47 09.9**	**-3.6**
ASAJ					16 48 40.7	
ASAJ			pmax	pmax		
	comp=Z,23nm,0.3s					
ASAJ			smax			
	comp=N,90nm,0.3s					
ASAJ			MLR	MLR		
	comp=Z,688μm,19.3s					
ASAJ	**Asahikawa**	**7.91 6**	Pn	**Pn**	**16 47 09.9**	**-3.6**
	comp=Z,23nm,0.3s,baz=218,slow=11,SNR=93					
ASAJ			Sn	**Sn**	**16 48 40.6**	**-1.1**
	comp=Z,90nm,0.3s,baz=270,slow=32,SNR=4.2					
ASAJ			LR	LR	16 51 11.9	
	comp=Z,688μm,19.3s,baz=192,slow=45					
JTO	**Tosashimizu**	**7.93 247**	P	**Pn**	**16 47 14.7**	**+0.9**
JHIK	**Hikimi**	**8.01 261**	P	**Pn**	**16 47 16.5**	**+1.7**
JKD	**Kudamatsu**	**8.19 257**	P	**Pn**	**16 47 18.8**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**8.47 22**	*e*P	**Pn**	**16 47 15.7**	**-5.4**
YUK			*i* S	**Sn**	**16 48 45.4**	**-10**
YUK			pmax	pmax		
	comp=Z,960nm,0.3s					
YUK			smax			
	comp=N,75μm,3.0s					
YUK			smax			
	comp=E,55μm,3.0s					
YUK			smax			
	comp=N,6μm,0.5s					
YUK			smax			
	comp=E,10μm,0.5s					
YUK			MLR	MLR		
	comp=N,471μm,20.0s					
YUK			MLR	MLR		
	comp=E,290μm,20.0s					
YUK			MLR	MLR		
	comp=Z,358μm,20.0s					
OIT2	**Oita 2**	**8.79 253**	P	**Pn**	**16 47 27.9**	**+2.4**
JKIT	**Kitakata**	**9.05 249**	P	**Pn**	**16 47 30.4**	**+1.2**
CBIJ	**Chichi jima**	**9.13 176**	Pn	**Pn**	**16 47 23.6**	**-6.7**
	comp=Z,137nm,0.3s,baz=35,slow=4.8,SNR=74					
CBIJ			Sn	**Sn**	**16 49 06.5**	**-5.3**
	comp=Z,422nm,0.3s,baz=108,slow=23,SNR=5.5					
CBIJ			LR	LR	16 49 45.2	
	comp=Z,39μm,20.8s,baz=354,slow=30					
JFA	**Akaike**	**9.14 257**	P	**Pn**	**16 47 31.6**	**+1.2**
JFI	**Itaya**	**9.56 256**	P	**Pn**	**16 47 37.7**	**+1.6**
JTZ	**Takazaki**	**9.66 246**	P	**Pn**	**16 47 38.3**	**+0.8**
JZO	**Okuchi**	**9.92 249**	P	**Pn**	**16 47 42.3**	**+1.3**
JUR	**Ureshino**	**10.02 255**	P	**Pn**	**16 47 44.0**	**+1.5**
JHD	**Hondo**	**10.12 251**	P	**Pn**	**16 47 45.2**	**+1.3**
JTSR	**Tashiro 2**	**10.16 243**	P	**Pn**	**16 47 45.7**	**+1.3**
KUR	**Kuril'sk**	**10.20 26**	*e*P	**Pn**	**16 47 40.2**	**-4.6**
KUR			*e*S	**Sn**	**16 49 27.5**	**-10**
KUR			pmax	pmax		
	comp=N,600nm,0.7s					
KUR			pmax	pmax		
	comp=E,520nm,0.7s					
KUR			pmax	pmax		
	comp=Z,1μm,0.7s					
KUR			smax			
	comp=N,2μm,0.7s					
KUR			smax			
	comp=E,4μm,0.7s					
KUR			smax			
	comp=N,171μm,23.0s					
KUR			smax			
	comp=E,473μm,23.0s					
KUR			MLR	MLR		
	comp=N,205μm,11.0s					
KUR			MLR	MLR		
	comp=E,124μm,11.0s					
KUR			MLR	MLR		
	comp=Z,233μm,11.0s					
NGSJ	**Nagasakinomoza**	**10.32 253**	P	**Pn**	**16 47 47.1**	**+0.6**
JSU	**Suzuyama**	**10.33 246**	P	**Pn**	**16 47 47.4**	**+0.8**
JTN	**Tanegashima 3**	**10.41 241**	P	**Pn**	**16 47 48.8**	**+1.1**
YSS	**Yuzh-Sakhalins**	**10.75 5**	*αe*P	**Pn**	**16 47 48.7**	**-3.6**
YSS			*e*S	**Sn**	**16 49 44.0**	**-7.2**
YSS			pmax	pmax		
	comp=Z,320nm,1.2s					
YSS			pmax	pmax		
	comp=N,270nm,1.1s					
YSS			pmax	pmax		
	comp=E,90nm,1.0s					
YSS			MLR	MLR		
	comp=Z,283μm,14.0s					
YSS			MLR	MLR		
	comp=E,317μm,16.0s					
YSS	**Yuzh-Sakhalins**	**10.75 5**	*e*P	**Pn**	**16 47 48.8**	**-3.5**
	comp=E,1μm,0.9s					
JSJ	**Shimokoshiki**	**10.79 248**	P	**Pn**	**16 47 53.6**	**+0.6**
KSRS	**Korea Array**	**10.96 280**	Pn	**Pn**	**16 47 59.2**	**+4.0**
	comp=E,6.2nm,0.3s,baz=100,slow=11,SNR=224					
KSRS			LR	LR	16 52 10.6	
	comp=E,1116μm,19.1s,baz=90,slow=38					
JKC	**Kuchinoerabu**	**11.07 242**	P	**Pn**	**16 47 57.3**	**+0.5**
JFU	**Fukue jima 2**	**11.12 255**	P	**Pn**	**16 47 59.1**	**+1.6**
INCN	**Inchon**	**11.98 280**	*e*P	**Pn**	**16 48 11.6**	**+2.4**
	comp=E,951nm,1.0s					
MDJ	**Mudanjiang**	**12.34 316**	P	**Pn**	**16 48 14.2**	**+0.2**
MDJ			S	**Sn**	**16 50 32.3**	**+2.2**
MDJ			PcP	PcP	16 53 50.4	-3.0
MDJ			ScP	ScP	16 57 23.9	+0.7
MDJ			ScS	ScS	17 00 57.5	-1.6
MDJ			pmax	pmax		
	comp=Z,570nm,1.6s					
MDJ			LR	LR		
	comp=N,799μm,18.1s					
MDJ			LR	LR		
	comp=E,754μm,17.1s					
MDJ			LR	LR		
	comp=Z,1427μm,18.1s					
MDJ	**Mudanjiang**	**12.34 316**	*e*P	**Pn**	**16 48 14.2**	**+0.2**
	comp=Z,3μm,1.4s					
HABR	**Khabarovsk**	**13.12 341**	*e*P	**Pn**	**16 48 20.5**	**-4.2**
HABR			*e*		16 50 44.5	
HABR			pmax	pmax		
	comp=N,136nm,1.4s					
HABR			pmax	pmax		
	comp=E,92nm,1.4s					
HABR			MLR	MLR		
	comp=E,283μm,13.0s					
HABR			MLR	MLR		
	comp=E,672μm,14.0s					
HABR			MLR	MLR		
	comp=N,532μm,15.0s					
JTK	**Tokunoshima**	**13.57 235**	P	**Pn**	**16 48 29.6**	**-1.4**
CN2	**Changchun**	**14.43 306**	⇑P	**Pn**	**16 48 41.4**	**-1.1**
CN2			*e*pP	pP	16 48 48.8	-10
CN2			*es*P	sP	16 48 53.6	-10
CN2			*e*S	**Sn**	**16 51 20.6**	**-0.4**
CN2			PcP	PcP	16 53 56.7	+0.6
CN2			ScS	ScS	17 01 02.8	-1.1
JOW	**Kunigami**	**14.66 234**	Pn	**Pn**	**16 48 43.2**	**-2.6**
	comp=N,1.5nm,0.3s,baz=63,slow=11,SNR=18					
JOW			LR	LR	16 54 34.6	
	comp=N,382μm,19.5s,baz=54,slow=38					
KLR	**Kul'dur**	**14.81 334**	*e*P	**Pn**	**16 48 38.0**	**-10**
SNY	**Shenyang**	**15.00 297**	⇑P	**Pn**	**16 48 49.8**	**-0.4**
SNY			pP	pP	16 48 59.5	-5.4
SNY			S	**S**	**16 51 37.1**	**-14**
SNY			pmax	pmax		
	comp=Z,510nm,1.6s					
SNY			pmax	pmax		
	comp=Z,70μm,12.0s					
SNY			LR	LR		
	comp=N,495μm,16.8s					
SNY			LR	LR		
	comp=E,1006μm,18.6s					
SNY			LR	LR		
	comp=Z,1140μm,18.0s					
DL2	**Dalian**	**15.99 286**	P	**Pn**	**16 49 03.6**	**+0.6**
DL2			pmax	pmax		
	comp=Z,310nm,1.4s					
DL2			pmax	pmax		
	comp=Z,35μm,12.2s					
DL2			LR	LR		
	comp=N,218μm,12.0s					
DL2			LR	LR		
	comp=E,655μm,14.7s					
DL2			LR	LR		
	comp=Z,787μm,15.5s					
SSE	**Sheshan**	**17.67 259**	P	**Pn**	**16 49 22.7**	**-1.4**
SSE			sP	sP	16 49 38.6	-1.0
SSE			S	**S**	**16 52 38.1**	**-7.9**
SSE			pmax	pmax		
	comp=Z,270nm,0.9s					
SSE			pmax	pmax		
	comp=Z,65μm,12.0s					
SSE			LR	LR		
	comp=N,388μm,13.4s					
SSE			LR	LR		
	comp=E,414μm,13.4s					
SSE			LR	LR		
	comp=Z,537μm,14.5s					
SKR	**Severo-Kuril's**	**17.86 32**	*e*P	**Pn**	**16 49 23.4**	**-2.9**
SKR			*e*S	**S**	**16 52 33.0**	**-17**
SKR			pmax	pmax		
	comp=E,180nm,1.0s					
SKR			pmax	pmax		
	comp=Z,270nm,1.0s					
SKR			smax			
	comp=N,51μm,18.0s					
SKR			smax			
	comp=E,68μm,18.0s					
SKR			smax			
	comp=N,8μm,3.0s					
SKR			smax			
	comp=E,7μm,3.0s					
SKR			MLR	MLR		
	comp=N,108μm,18.0s					
SKR			MLR	MLR		
	comp=E,108μm,18.0s					
SKR			MLR	MLR		
	comp=Z,112μm,18.0s					
NJ2	**Nanjing**	**19.20 264**	*e*P	**Pn**	**16 49 39.8**	**-2.9**
NJ2			pP	pP	16 49 48.4	-3.0
NJ2			sP	sP	16 49 52.6	-3.9
NJ2			S	**S**	**16 53 11.0**	**-5.9**
NJ2			pmax	pmax		
	comp=Z,24μm,6.0s					
NJ2			LR	LR		
	comp=N,463μm,17.0s					
NJ2			LR	LR		
	comp=E,309μm,15.4s					
NJ2			LR	LR		
	comp=Z,709μm,20.1s					
TIA	**Tai'an**	**19.66 277**	P	**Pn**	**16 49 44.7**	**-3.5**
TIA			pP	pP	16 49 54.9	-1.6
TIA			pmax	pmax		
	comp=Z,420nm,1.5s					
TIA			LR	LR		
	comp=N,221μm,11.0s					
TIA			LR	LR		
	comp=E,416μm,14.0s					
YOJ	**Yonaguni jima**	**19.77 239**	P	**Pn**	**16 49 46.7**	**-2.9**
BJI	**Beijing**	**20.26 288**	P	**P**	**16 49 50.1**	**-2.9**
BJI			pP		16 50 00.2	
BJI			sP	sP	16 50 04.4	-3.7
BJI			S	**S**	**16 53 38.3**	**+0.3**
BJI			pmax	pmax		
	comp=Z,580nm,1.9s					
BJI			pmax	pmax		
	comp=Z,68μm,7.1s					
BJI			LR	LR		
	comp=N,456μm,13.8s,MS7.0					
BJI			LR	LR		
	comp=E,159μm,13.8s,MS7.0					
BJT	**Baijiatuau**	**20.27 288**	*e*P	**P**	**16 49 50.0**	**-3.0**
BJT			pmax	pmax		
	comp=Z,1μm,0.6s					
BJT			MLR	MLR		
	comp=Z,496μm,20.0s					
BJT	**Baijiatuau**	**20.27 288**	*e*P	**P**	**16 49 50.0**	**-3.0**
	comp=Z,1μm,0.6s					
BJT			LR	LR		
	comp=Z,496μm,20.0s,MS6.9					
PEA0B	**Petropavlovsk-**	**20.34 29**	*e*P	**P**	**16 49 52.6**	**-1.2**
PETK	**Petropavlovsk-**	**20.34 29**	P	**P**	**16 49 53.0**	**-0.7**
	comp=Z,12nm,0.6s,baz=95,slow=28,SNR=36					
PETK			LR	LR	16 58 11.9	
	comp=Z,74μm,19.7s,MS6.0,baz=223,slow=38					
TATO	**Taipei**	**20.52 242**	*e*P	**P**	**16 49 52.4**	**-3.5**
	comp=Z,760nm,1.3s					
TATO			LR	LR		
	comp=Z,409μm,19.0s,MS6.8					
TATO	**Taipei**	**20.52 242**	P	**P**	**16 49 53.7**	**-2.2**
	SNR=6.9					
TATO			P		16 49 53.7	
	SNR=6.9					
HIA	**Hailar**	**20.52 316**	*e*P	**P**	**16 49 51.7**	**-4.0**
HIA			pmax	pmax		
	comp=Z,334nm,0.8s					
HIA			MLR	MLR		
	comp=Z,922μm,19.0s					
HIA	**Hailar**	**20.52 316**	*e*P	**P**	**16 49 51.6**	**-4.1**
	comp=Z,334nm,0.8s					
HIA			LR	LR		
	comp=Z,922μm,19.0s,MS7.2					
PET	**Petropavlovsk**	**20.66 30**	⇑*i* P	**P**	**16 49 56.8**	**-0.4**
PET			*i* S	**S**	**16 53 40.2**	**-5.4**
PET			pmax	pmax		
	comp=Z,25μm,13.5s					
PET			pmax	pmax		
	comp=Z,30μm,7.0s					
PET			pmax	pmax		
	comp=Z,1μm,1.6s					
PET			MLR	MLR		
	comp=Z,108μm,17.0s,MS6.3					
PET			MLR	MLR		
	comp=Z,124μm,17.0s					
PET	**Petropavlovsk**	**20.66 30**	*e*P	**P**	**16 49 56.3**	**-0.9**
	comp=Z,3μm,1.5s					
PET			LR	LR		
	comp=Z,79μm,19.0s,MS6.1					
YHNB	**Yeheng**	**20.79 242**	*e*P	**P**	**16 49 55.9**	**-3.0**
	comp=Z,281nm,0.8s					
YHNB			LR	LR		
	comp=Z,357μm,19.0s,MS6.8					
NACB	**Ninganchiao**	**20.95 240**	*e*P	**P**	**16 49 57.2**	**-3.3**
	comp=Z,187nm,0.6s					
SSLB	**Suanglung**	**21.64 241**	*e*P	**P**	**16 50 02.5**	**-5.5**
	comp=Z,398nm,0.8s,mb5.9					
YULB	**Yu-li**	**21.66 239**	*e*P	**P**	**16 50 03.4**	**-4.8**
	comp=Z,385nm,0.8s,mb5.9					
TPUB	**Ta-pu**	**22.18 240**	*e*P	**P**	**16 50 09.5**	**-4.2**
	comp=Z,168nm,2.3s,mb5.1					
TWG	**Pinlang**	**22.19 239**	*e*P	**P**	**16 50 06.7**	**-7.1**
	comp=Z,579nm,0.9s,mb6.0					
QZH	**Quanzhou**	**22.66 247**	⇑*i* P	**P**	**16 50 15.2**	**-3.6**
QZH			S	**S**	**16 54 25.4**	**+0.9**
QZH			pmax	pmax		
	comp=Z,730nm,0.9s,mb6.1					
QZH			LR	LR		
	comp=N,444μm,17.3s,MS7.4					
QZH			LR	LR		
	comp=E,1133μm,18.0s,MS7.4					
QZH			LR	LR		
	comp=Z,1230μm,18.8s,MS7.4					
GUMO	**Guam**	**22.75 172**	P	**P**	**16 50 18.3**	**-1.5**
GUMO			pmax	pmax		
	comp=Z,3μm,1.1s,mb6.6					
GUMO	**Guam**	**22.75 172**	P	**P**	**16 50 17.8**	**-2.1**
	comp=Z,204nm,0.9s,mb5.5,baz=188,slow=15,SNR=7.3					
GUMO	**Guam**	**22.75 172**	*e*P	**P**	**16 50 17.3**	**-2.6**
	comp=Z,3μm,1.1s,mb6.6					
GUMO			LR	LR		
	comp=Z,77μm,20.0s,MS6.1					
TIY	**Taiyuan**	**23.24 282**	*e*P	**P**	**16 50 21.9**	**-2.9**
TIY			sP	sP	16 50 34.2	-5.8
TIY			pmax	pmax		
	comp=Z,210nm,1.3s,mb5.4					
TIY			LR	LR		
	comp=N,512μm,14.4s,MS7.5					
TIY			LR	LR		
	comp=E,1060μm,14.1s,MS7.5					
TIY			LR	LR		
	comp=Z,1305μm,14.8s,MS7.5					
BBP	**Basco**	**23.25 233**	*e*P	**P**	**16 50 24.3**	**-0.7**
WHN	**Wuhan**	**23.34 264**	⇑*i* P	**P**	**16 50 23.2**	**-2.7**
WHN			S	**S**	**16 54 33.5**	**-2.0**
WHN			LR	LR		
	comp=N,520μm,15.6s,MS7.5					
WHN			LR	LR		
	comp=E,1061μm,14.9s,MS7.5					
WHN			LR	LR		
	comp=Z,1298μm,15.4s,MS7.5					
NRGR	**Nerungri**	**23.35 336**	*i* P	**P**	**16 50 23.1**	**-2.7**
NRGR			S	**S**	**16 54 32.0**	**-3.2**
NRGR			smax			
	comp=N,1μm,1.3s					
CLNS	**Chul'man**	**23.44 337**	*e*P	**P**	**16 50 23.8**	**-2.8**
CLNS			*e**PP		16 50 31.7	
CLNS			*e*PPP		16 50 54.8	
CLNS			*e*		16 54 14.5	
CLNS			*e*S	**S**	**16 54 30.2**	**-6.5**
CLNS			*e*SS		16 55 20.8	
CLNS			pmax	pmax		
	comp=Z,1μm,1.5s,mb6.2					
CLNS			pmax	pmax		
	comp=N,1μm,1.4s					
CLNS			pmax	pmax		
	comp=E,560nm,1.6s					
CLNS			smax			
	comp=N,36μm,12.7s					
CLNS			smax			
	comp=E,55μm,15.4s					
CLNS			MLR	MLR		
	comp=Z,277μm,18.0s,MS6.8					
CLNS			MLR	MLR		
	comp=N,229μm,16.0s,MS6.8					
CLNS			MLR	MLR		
	comp=E,145μm,13.0s,MS6.8					
HHC	**Hu-ho-hao-te**	**23.81 290**	⇑P	**P**	**16 50 26.8**	**-3.3**
HHC			pP		16 50 36.2	
HHC			sP	sP	16 50 40.1	-5.8
HHC			PP		16 51 00.2	
HHC			PcP	PcP	16 54 11.0	-1.6
HHC			S	**S**	**16 54 38.3**	**-4.7**
HHC			sS	sS	16 54 52.5	-8.6
HHC			SS		16 55 27.6	
HHC			ScP	ScP	16 57 45.7	-2.0
HHC			PcS	PcS	16 57 49.2	-2.9
HHC			pmax	pmax		
	comp=Z,180nm,1.5s,mb5.3					
HHC			pmax	pmax		
	comp=Z,38μm,9.3s					
HHC			LR	LR		
	comp=N,137μm,15.2s,MS7.1					
HHC			LR	LR		
	comp=E,448μm,14.2s,MS7.1					
HHC			LR	LR		
	comp=Z,550μm,15.7s,MS7.1					
SGCP	**Mt. Cagua**	**24.83 229**	*e*P	**P**	**16 50 39.7**	**+0.1**
BTO	**Baotou**	**24.98 290**	*e*P	**P**	**16 50 37.3**	**-3.5**
BTO			LR	LR		
	comp=N,85μm,14.1s,MS6.7					
BTO			LR	LR		
	comp=E,163μm,14.3s,MS6.7					
CIT	**Chita**	**25.31 317**	*e*P	**P**	**16 50 41.4**	**-2.3**
CIT			*e*	pP	16 50 50.2	-4.4
CIT			pmax	pmax		
	comp=Z,4μm,3.0s					
PALP	**Palanan**	**25.52 227**	*e*P	**P**	**16 50 44.1**	**-1.7**
APYP	**Conner**	**25.61 230**	*e*P	**P**	**16 50 44.6**	**-2.2**
CAUP	**Cauayan**	**25.97 227**	*e*P	**P**	**16 50 51.4**	**+1.4**
ABRA	**Dolores**	**26.10 230**	*e*P	**P**	**16 50 53.1**	**+1.9**
XAN	**Xi'an**	**26.67 275**	P	**P**	**16 50 55.3**	**-0.9**
XAN			pP	pP	16 51 04.4	-2.8
XAN			sP	sP	16 51 08.2	-3.8
XAN			PcP	PcP	16 54 19.1	-0.1
XAN			S	**S**	**16 55 30.1**	**+1.4**
XAN			sS	sS	16 55 45.0	-2.1
XAN			pmax	pmax		
	comp=Z,2μm,1.5s,mb6.3					
XAN			pmax	pmax		
	comp=Z,8μm,11.9s					
XAN			LR	LR		
	comp=N,237μm,17.8s,MS6.9					
XAN			LR	LR		
	comp=E,121μm,16.1s,MS6.9					
XAN			LR	LR		
	comp=Z,131μm,16.1s,MS6.6					
YAK	**Yakutsk**	**26.86 348**	*c i* P	**P**	**16 50 56.9**	**-0.7**
YAK			*e**PP	pP	16 51 06.7	-1.9
YAK			*e*PPP		16 51 43.5	
YAK			*e*		16 54 18.3	
YAK			*e*S	**S**	**16 55 29.7**	**-1.4**
YAK			*e**SS	sS	16 55 44.7	-4.8
YAK			*e*SSS		16 56 49.1	
YAK			pmax	pmax		
	comp=Z,3μm,1.3s,mb6.6					
YAK			pmax	pmax		
	comp=E,959nm,1.4s					
YAK			pmax	pmax		
	comp=N,2μm,1.1s					
YAK			smax			
	comp=E,17μm,7.1s					
YAK			smax			
	comp=N,8μm,3.7s					
YAK			MLR	MLR		
	comp=E,199μm,16.0s,MS7.1					
YAK			MLR	MLR		
	comp=N,341μm,16.0s,MS7.1					
YAK			MLR	MLR		
	comp=Z,406μm,16.0s,MS7.1					
YAK	**Yakutsk**	**26.86 348**	*e*P	**P**	**16 50 56.8**	**-0.8**
	comp=Z,10nm,1.1s					
YAK			LR	LR		
	comp=Z,242μm,19.0s,MS6.8					
BALP	**Baler**	**27.05 226**	*e*P	**P**	**16 50 57.9**	**-1.9**
ENH	**Enshi**	**27.35 267**	*e*P	**P**	**16 51 01.3**	**-1.1**
	comp=Z,0.3nm,0.2s					
ENH			LR	LR		
	comp=Z,398μm,19.0s,MS7.0					
PVCP	**Virac**	**27.40 219**	*e*P	**P**	**16 51 01.4**	**-1.5**
SEY	**Seymchan**	**27.56 11**	*c i*P	**P**	**16 51 03.4**	**-0.4**
BOLP	**Bolinao**	**27.56 230**	*e*P	**P**	**16 51 04.3**	**0.0**
GZH	**Guangzhou**	**27.65 249**	P	**P**	**16 50 59.1**	**-6.0**
GZH			S	**S**	**16 55 43.1**	**-1.2**
GZH			LR	LR		
	comp=N,337μm,21.8s,MS7.0					
GZH			LR	LR		
	comp=E,282μm,21.0s,MS7.0					
GZH			LR	LR		
	comp=Z,366μm,20.1s,MS7.0					
POLP	**Polillo Island**	**27.66 224**	*e*P	**P**	**16 51 04.9**	**-0.3**
WAKE	**Wake Island**	**27.81 121**	*e*P	**P**	**16 51 05.1**	**-1.5**
	comp=Z,2μm,1.4s,mb6.6					
WAKE			LR	LR		
	comp=Z,84μm,20.0s,MS6.3					

ULN Ulaanbaatar 27.87 305 P **P** **16 51 07.7 +0.9**
ULN pmax pmax
comp=Z,2μm,1.4s,mb6.5
ULN Ulaanbaatar 27.87 305 *e*P **P** **16 51 06.6 -0.2**
comp=Z,2μm,1.4s,mb6.5
ULN LR LR
comp=Z,431μm,21.0s,MS7.0
ULN Ulaanbaatar 27.87 305 P **P** **16 51 06.9 +0.1**
SNR=585
ULN P 16 51 06.9
SNR=585
SCZP Santa Cruz 28.02 229 *e*P **P** **16 51 10.0 +1.5**
CNP Catarman 28.08 217 *e*P **P** **16 51 07.7 -1.2**
BOD Bodaibo 28.25 329 *e*P **P** **16 51 09.5 -0.5**
BOD pmax pmax
comp=Z,909nm,1.6s,mb6.2
SONM Songino Array 28.30 305 P **P** **16 51 10.6 0.0**
comp=Z,184nm,0.6s,mb5.9,baz=106,slow=8.9,SNR=198
SONM LR LR 17 02 56.7
comp=Z,454μm,19.6s,MS7.1,baz=101,slow=37
SONM P3KPbc 17 23 34.0
comp=Z,1.7nm,0.9s,baz=272,slow=5.5,SNR=4.6
SONM Songino Array 28.30 305 P **P** **16 51 10.6 0.0**
SONM LR LR 17 02 56.7
SONM *e* 17 23 34.0
AUQP San Andres 28.40 221 *e*P **P** **16 51 13.8 +2.0**
TGY Tagaytay City 28.73 225 P **P** **16 51 12.8 -1.9**
comp=Z,160nm,0.4s,mb6.1,baz=122,slow=22,SNR=10
TGY LR LR 17 02 19.1
comp=Z,276nm,19.3s,baz=358,slow=36
BOAC Boac 28.74 223 *e*P **P** **16 51 13.5 -1.4**
OCLP Ormoc 29.37 216 *e*P **P** **16 51 25.8 +5.4**
LUBP Lubang 29.42 226 *e*P **P** **16 51 19.8 -1.1**
OTRP Odiongan 29.55 221 *e*P **P** **16 51 23.8 +1.8**
RCP Roxas 29.85 219⇑ *e*P **P** **16 51 26.4 +1.8**
SJMP San Jose 29.96 223 *e*P **P** **16 51 28.8 +3.1**
MSLP Maasin 30.06 214 *e*P **P** **16 51 25.8 -0.7**
LZH Lanzhou 30.29 281 ⇑P **P** **16 51 28.4 0.0**
LZH pP pP 16 51 41.0 +1.6
LZH S **S** **16 56 27.0 +1.5**
LZH sS sS 16 56 41.0 -2.9
LZH SS SS 16 58 04.0 -31
LZH pmax pmax
comp=Z,5μm,1.8s,mb7.0
LZH pmax pmax
comp=Z,13μm,6.0s
LZH LR LR
comp=E,723μm,15.5s
LZH LR LR
comp=Z,1009μm,17.5s,MS7.5
IRK Irkutsk 30.69 313 *i*P **P** **16 51 32.0 +0.2**
IRK *e*S **S** **16 56 34.8 +3.2**
IRK pmax pmax
comp=Z,965nm,2.7s,mb6.2
GUIM Jordan 30.72 219 *e*P **P** **16 51 30.5 -1.8**
BUTP Butuan 30.76 212 *e*P **P** **16 51 37.9 +5.2**
ZAK Zakamensk 30.83 309⇓ *i*P **P** **16 51 33.6 +0.6**
ZAK pmax pmax
comp=Z,452nm,1.6s,mb6.0
BUSP Coron 30.85 224 *e*P **P** **16 51 32.1 -1.4**
TBP Tagbilaran 30.91 216 *e*P **P** **16 51 37.5 +3.5**
TLY Talaya 30.91 312 P **P** **16 51 33.2 -0.5**
comp=Z,5μm,0.8s,mb7.4
TLY Talaya 30.91 312 *e*P **P** **16 51 33.6 -0.1**
TLY *e*S **S** **16 56 33.3 -1.7**
TLY *e*SS SS 16 58 20.1 -28
TLY pmax pmax
comp=Z,724nm,0.9s,mb6.5
TLY MLR MLR
comp=Z,782μm,16.0s,MS7.5
TLY Talaya 30.91 312 *e*P **P** **16 51 34.5 +0.8**
comp=Z,713nm,0.9s,mb6.5
TLY LR LR
comp=Z,459μm,21.0s,MS7.1
TLY Talaya 30.91 312 P **P** **16 51 33.9 +0.1**
SNR=451
TLY P 16 51 33.9
SNR=451
GYA Guiyang 31.17 262⇑ *i*P **P** **16 51 35.1 -1.2**
GYA pP pP 16 51 45.6 -1.7
GYA sP sP 16 51 51.8 -0.3
GYA PP PP 16 52 38.9 -8.2
GYA PcP PcP 16 54 31.0 +0.4
GYA S **S** **16 56 36.9 -2.7**
GYA sS sS 16 56 54.3 -3.7
GYA ScP ScP 16 58 09.9 -0.4
GYA SS SS 16 58 23.4 -30
GYA pmax pmax
comp=Z,180nm,0.8s,mb6.0
GYA pmax pmax
comp=Z,18μm,5.8s
GYA LR LR
comp=N,192μm,17.5s,MS7.0
GYA LR LR
comp=E,193μm,18.9s,MS7.0
GYA LR LR
comp=Z,201μm,17.7s,MS6.8
CUYO Cuyo Island 31.35 221 *e*P **P** **16 51 38.7 +0.8**
CD2 Chengdu 31.76 271 P **P** **16 51 40.3 -1.1**
CD2 pP pP 16 51 49.7 -2.8
CD2 sP sP 16 51 53.9 -3.4
CD2 PP PP 16 52 46.0 -7.5
CD2 S **S** **16 56 47.0 -1.7**
CD2 sS sS 16 57 03.1 -4.0
CD2 SS SS 16 58 38.9 -27
CD2 pmax pmax
comp=Z,910nm,0.9s,mb6.6
CD2 pmax pmax
comp=Z,28μm,11.8s
CD2 LR LR
comp=N,430μm,17.2s
CD2 LR LR
comp=Z,487μm,20.2s,MS7.2
ENPP El Nido 31.93 224 *e*P **P** **16 51 41.8 -1.2**
BUKP Musuan 31.97 212 *e*P **P** **16 51 43.8 +0.4**
MATI Mati 32.32 209 *e*P **P** **16 51 47.3 +0.9**
DAV Davao City (W) 32.48 210 PFAKE 16 52 00.0 +12
DAV LR LR
comp=Z,86μm,20.0s,MS6.4
DAV Davao City (W) 32.48 210 P **P** **16 51 52.5 +4.6**
SNR=8.1
DAV P 16 51 52.5
SNR=8.1
DMPH Davao City--Mi 32.50 211⇓ *e*P **P** **16 51 46.2 -1.8**
MOY Mondy 32.51 311 *e*P **P** **16 51 47.5 -0.3**
QIZ Qiongzhong 32.68 247 P **P** **16 51 53.1 +3.5**
QIZ S **S** **16 57 08.6 +5.4**
QIZ LR LR
comp=N,238μm,16.2s
QIZ LR LR
comp=Z,239μm,17.0s,MS7.0
QIZ Qiongzhong 32.68 247 *e*P **P** **16 51 49.3 -0.3**
comp=Z,104nm,1.0s,mb5.7
QIZ LR LR
comp=Z,248μm,21.0s,MS6.9
PAGZ Pagadian 32.75 215 *e*P **P** **16 51 50.6 +0.4**
GTA Gaotai 32.88 288⇑ *i*P **P** **16 51 50.7 -0.4**
GTA pP pP 16 52 00.0 -2.2
GTA sP sP 16 52 04.6 -2.4
GTA PP PP 16 53 02.2 -3.6
GTA PcP PcP 16 54 35.2 +0.2
GTA S **S** **16 57 06.3 +0.3**
GTA sS sS 16 57 23.2 -1.2
GTA ScS ScS 17 02 15.7 -0.2
GTA pmax pmax
comp=Z,340nm,1.6s,mb6.0
GTA pmax pmax
comp=Z,12μm,6.0s
GTA LR LR
comp=N,205μm,18.6s,MS7.3
GTA LR LR
comp=E,502μm,17.7s,MS7.3
GTA LR LR
comp=Z,575μm,17.4s,MS7.3
PPR Puerto Princes 33.49 224⇑ *e*P **P** **16 51 55.0 -1.7**
ZMPH Zamboanga City 34.15 216⇓ *e*P **P** **16 52 01.1 -1.3**
BILL Bilibino 34.77 16 *c i*P **P** **16 52 06.2 -1.0**
BILL *i* pP 16 52 16.8 -1.5
BILL *i* S **S** **16 57 36.7 +2.2**
BILL *i* SS SS 16 59 52.0 -14
BILL pmax pmax
comp=Z,198nm,1.6s,mb5.8
BILL MLR MLR
comp=Z,109μm,18.0s,MS6.6

BILL Bilibino 34.77 16 *e*P **P** **16 52 05.8 -1.4**
BILL LR LR
comp=Z,91μm,20.0s,MS6.5
BATP Bataraza 34.81 224 *e*P **P** **16 52 09.2 +1.0**
KMI Kunming 34.92 263 ⇑P **P** **16 52 08.7 -0.4**
KMI pP pP 16 52 18.8 -1.4
KMI sP sP 16 52 22.9 -2.1
KMI PP PP 16 53 25.2 -3.5
KMI PcP PcP 16 54 40.9 -0.2
KMI S **S** **16 57 34.3 -3.6**
KMI sS sS 16 57 53.8 -2.6
KMI ScP ScP 16 58 23.6 +0.3
KMI PcS PcS 16 58 27.7 -0.3
KMI SS SS 16 59 48.1 -22
KMI ScS ScS 17 02 26.1 -1.0
KMI pmax pmax
comp=Z,260nm,1.6s,mb5.9
KMI pmax pmax
comp=Z,6μm,4.4s
KMI LR LR
comp=N,285μm,17.6s,MS7.4
KMI LR LR
comp=E,410μm,14.3s,MS7.4
KMI LR LR
comp=Z,429μm,14.9s,MS7.3
MIDW Midway 35.49 91 P **P** **16 52 12.0 -1.9**
comp=Z,765nm,1.4s,mb6.4
MIDW LR LR
comp=Z,48μm,19.0s,MS6.3
TIXI Tiksi 36.09 353 *c i*P **P** **16 52 17.7 -0.8**
TIXI *e* 16 53 39.0
TIXI *e*PPP 16 53 55.0
TIXI *e*S **S** **16 57 55.2 +0.5**
TIXI pmax pmax
comp=Z,4μm,7.1s
TIXI pmax pmax
comp=N,166nm,1.5s
TIXI pmax pmax
comp=Z,546nm,1.5s,mb6.3
TIXI pmax pmax
comp=E,268nm,1.7s
TIXI MLR MLR
comp=E,138μm,14.0s,MS7.0
TIXI MLR MLR
comp=Z,237μm,14.0s,MS7.1
TIXI MLR MLR
comp=N,170μm,16.0s,MS7.0
TIXI Tiksi 36.09 353 *e*P **P** **16 52 17.5 -1.0**
comp=N,271nm,1.2s,mb6.0
TIXI LR LR
comp=Z,253μm,19.0s,MS7.0
MYLDM Lahad Datu 37.45 220 P **P** **16 52 30.7 +0.1**
MYLDM Lahad Datu 37.45 220 P **P** **16 52 30.7 +0.1**
SDKM Sandakan 37.75 222 P **P** **16 52 32.1 -1.2**
SDKM Sandakan 37.75 222 P **P** **16 52 32.1 -1.2**
MNI Manado 37.91 208 P **P** **16 52 33.6 -1.0**
KKM Kota Kinabalu 37.95 224 P **P** **16 52 34.1 -0.9**
KKM Kota Kinabalu 37.95 224 P **P** **16 52 34.1 -0.9**
KKM Kota Kinabalu 37.95 224 *e*P **P** **16 52 35.0 0.0**
comp=Z,300nm,1.3s,mb5.9
KKM LR LR
comp=Z,88μm,19.0s,MS6.6
NIKO Nikolski 38.25 48 *e*P **P** **16 52 37.1 +0.1**
comp=Z,199nm,0.8s,mb5.9
UBT Ubonrachathani 38.63 247 ⇓P **P** **16 52 41.3 +0.6**
GAMB Gambell 39.36 31 *e*P **P** **16 52 45.5 -0.7**
comp=Z,88nm,1.1s,mb5.4
KKTK Khon Kaen 39.61 250 P **P** **16 52 47.0 -1.8**
comp=Z,617nm,1.0s,mb6.3
CHG Chiang Mai 41.18 257 ⇑P **P** **16 53 01.9 +0.1**
comp=Z,398nm,1.0s,mb6.0
CHTO Chiang Mai 41.18 257 *e*P **P** **16 53 01.6 -0.2**
CHTO pmax pmax
comp=Z,910nm,2.3s,mb6.0
CHTO Chiang Mai 41.18 257 *e*P **P** **16 53 01.4 -0.3**
comp=Z,912nm,2.3s,mb6.0
CHTO LR LR
comp=Z,148μm,21.0s,MS6.8
CHTO Chiang Mai 41.18 257 P **P** **16 53 02.0 +0.2**
SNR=195
CHTO P 16 53 02.0
SNR=195
WMQ Urumqi 41.27 298⇑ *i*P **P** **16 53 03.6 +1.3**
WMQ sP sP 16 53 18.1 -0.2
WMQ PP PP 16 54 42.6 +4.7
WMQ S **S** **16 59 15.2 +1.7**
WMQ sS sS 16 59 32.8 +0.6
WMQ SS SS 17 02 13.0 -4.6
WMQ ScS ScS 17 02 58.9 -4.0
WMQ pmax pmax
comp=Z,2μm,1.9s,mb6.4
WMQ pmax pmax
comp=Z,41μm,4.8s
WMQ LR LR
comp=N,115μm,14.0s,MS7.3
WMQ LR LR
comp=E,351μm,18.0s,MS7.3
WMQ LR LR
comp=Z,292μm,20.0s,MS7.2
CM31 Chiang Mai Arr 41.38 256 *e*P **P** **16 53 03.3 -0.2**
comp=Z,119nm,0.8s,mb5.6
CM31 LR LR
comp=Z,114μm,21.0s,MS6.7
CMAR Chiang Mai Arr 41.38 256 P **P** **16 53 03.3 -0.1**
comp=Z,109nm,0.8s,mb5.5,baz=46,slow=7.8,SNR=140
CMAR LR LR 17 10 43.1
comp=Z,131μm,21.7s,MS6.8,baz=56,slow=37
TNA Tin City 41.51 29 *e*P **P** **16 53 04.6 +0.7**
comp=Z,184nm,0.9s,mb5.7
BTM Bintulu 42.05 225 P **P** **16 53 09.6 +0.7**
BTM Bintulu 42.05 225 P **P** **16 53 09.6 +0.7**
NST Nakhon Sawan 42.06 252 ⇓P **P** **16 53 09.2 +0.1**
comp=Z,289nm,1.4s,mb5.7
LSA Lhasa 42.36 276 P **P** **16 53 14.2 +2.8**
LSA sP sP 16 53 26.3 -1.2
LSA LR LR
comp=N,102μm,16.5s,MS7.3
LSA LR LR
comp=E,309μm,15.1s,MS7.3
LSA LR LR
comp=Z,458μm,14.7s,MS7.5
LSA Lhasa 42.36 276 *e*P **P** **16 53 12.9 +1.5**
LSA pmax pmax
comp=Z,1μm,1.0s,mb6.5
LSA MLR MLR
comp=Z,203μm,19.0s,MS7.0
LSA Lhasa 42.36 276 *e*P **P** **16 53 12.9 +1.5**
comp=Z,1μm,1.0s,mb6.5
LSA LR LR
comp=Z,203μm,19.0s,MS7.0
ZAA0 Zalesovo Array 42.51 313 *e*P **P** **16 53 12.0 -0.3**
ZALV Zalesovo Beam 42.51 313 P **P** **16 53 12.2 -0.1**
comp=Z,156nm,0.6s,mb5.9,baz=87,slow=5.8,SNR=254
ZALV LR LR 17 11 48.2
comp=Z,305μm,18.5s,MS7.2,baz=88,slow=37
ZALV PKPPKP 17 25 14.5
comp=Z,1.4nm,0.8s,baz=336,slow=3.3,SNR=3.7
SBUM Sibu 43.16 226 P **P** **16 53 17.1 -0.8**
SBUM Sibu 43.16 226 P **P** **16 53 17.1 -0.8**
SBUM Sibu 43.16 226 P **P** **16 53 17.1 -0.8**
SDPT Sand Point 43.31 45 *e*P **P** **16 53 16.7 -2.0**
comp=Z,101nm,0.6s,mb5.7
NVS Novosibirsk 43.45 314⇑ *i*P **P** **16 53 19.9 +0.1**
NVS *e*S **S** **16 59 46.1 +0.9**
NVS *e* 17 03 15.3
NVS pmax pmax
comp=N,400nm,1.3s
NVS pmax pmax
comp=E,2μm,1.3s
NVS pmax pmax
comp=Z,2μm,1.3s,mb6.7
SHL Shillong 43.48 270⇑ *i*P **P** **16 53 21.0 +0.5**
SHL *ex* x 16 59 31.0
NNT Nongplab 44.27 249 P **P** **16 53 26.8 -0.1**
CHGN Chignik 44.49 44 *e*P **P** **16 53 28.2 +0.1**
MK31 Makanchi Array 44.61 303 P **P** **16 53 29.9 +0.6**
MK31 Makanchi Array 44.61 303 *e*P **P** **16 53 29.7 +0.5**
MKAR Makanchi Array 44.61 303 P **P** **16 53 29.4 +0.1**
comp=Z,334nm,0.9s,mb6.2,baz=92,slow=7.7,SNR=156
MKAR LR LR 17 12 53.7
comp=Z,349μm,19.3s,MS7.3,baz=87,slow=37
MKAR Makanchi Array 44.61 303 P **P** **16 53 29.4 +0.1**
MKAR LR LR 17 12 53.7
KSM Kuching 45.06 227 P **P** **16 53 33.4 +0.2**
KSM Kuching 45.06 227 P **P** **16 53 33.4 +0.2**

KSM Kuching 45.06 227 P **P** **16 53 33.4 +0.2**
KSM Kuching 45.06 227 *e*P **P** **16 53 32.8 -0.4**
comp=Z,175nm,0.8s,mb5.9
KSM LR LR
comp=Z,43μm,22.0s,MS6.3
TARA Tarawa 45.28 133 *e*P **P** **16 53 33.6 -1.4**
comp=Z,1μm,1.3s,mb6.5
TARA LR LR
comp=Z,54μm,20.0s,MS6.5
SLGI Shiliguri 45.78 274 *e*P **P** **16 53 38.0 -0.9**
KAPI Kappang 45.82 211 P **P** **16 53 37.5 -1.6**
comp=Z,7μm,1.1s,mb7.5
KAPI Kappang 45.82 211 P **P** **16 53 37.9 -1.2**
KAPI LR LR
comp=Z,51μm,22.0s,MS6.4
KAPI Kappang 45.82 211 P **P** **16 53 38.1 -1.0**
SNR=239
KAPI P 16 53 38.1
SNR=239
TTA Tatalina 46.03 34 *e*P **P** **16 53 41.3 +1.0**
SVW2 Sparrevohn 46.11 37 *e*P **P** **16 53 41.2 +0.3**
KURK Kurchatov 46.49 309 P **P** **16 53 44.2 +0.2**
KURK pmax pmax
comp=Z,481nm,0.9s,mb6.4
KURK MLR MLR
comp=Z,407μm,18.1s,MS7.4
KURK Kurchatov 46.49 309 P **P** **16 53 44.2 +0.2**
comp=Z,481nm,0.9s,mb6.4,baz=84,slow=7.5,SNR=413
KURK LR LR 17 14 08.6
comp=Z,407μm,18.1s,MS7.4,baz=75,slow=37
KURK Kurchatov 46.49 309 *e*P **P** **16 53 44.0 -0.1**
comp=Z,854nm,3.0s
KURK LR LR
comp=Z,416μm,21.0s,MS7.4
KURK Kurchatov 46.49 309 P **P** **16 53 44.3 +0.3**
SNR=463
KURK P 16 53 44.3
SNR=463
KTGM Kuala Trenggan 46.73 238 P **P** **16 53 47.3 +0.9**
KTGM Kuala Trenggan 46.73 238 P **P** **16 53 47.3 +0.9**
RAMN Ramite 47.14 275 *e*P **P** **16 53 49.9 +0.4**
comp=Z,2μm,0.9s,mb7.0
SNG Songkhla 47.20 242 P **P** **16 53 50.0 0.0**
comp=Z,720nm,1.0s,mb6.6
OHAK Old Harbor 47.29 42 *e*P **P** **16 53 49.1 -1.1**
comp=Z,344nm,1.2s,mb6.2
GUN Gumba 47.31 276 *e*P **P** **16 53 50.7 -0.1**
comp=Z,3μm,1.0s,mb7.1
JOHN Johnston Islan 47.39 101 P **P** **16 53 50.7 -0.8**
comp=Z,1μm,1.6s,mb6.6
JOHN LR LR
comp=Z,49μm,20.0s,MS6.5
RSO Redoubt South 47.48 38 *e*P **P** **16 53 51.9 +0.2**
comp=Z,518nm,0.9s,mb6.5
KDAK Kodiak Island 47.64 41 P **P** **16 53 53.0 +0.1**
comp=Z,2μm,0.7s,mb7.1,SNR=22
KDAK Kodiak Island 47.64 41 *i*P **P** **16 53 52.2 -0.7**
KDAK Kodiak Island 47.64 41 P **P** **16 53 52.9 0.0**
comp=Z,84nm,0.6s,mb5.9,baz=283,slow=4.3,SNR=52
KDAK LR LR 17 11 49.2
comp=Z,48μm,21.7s,MS6.4,baz=256,slow=34
KDAK Kodiak Island 47.64 41 *e*P **P** **16 53 51.9 -1.1**
comp=Z,168nm,0.8s,mb6.1
KDAK LR LR
comp=Z,45μm,21.0s,MS6.4
CHUM Lake Minchumin 47.76 33 *e*P **P** **16 53 53.8 +0.1**
comp=Z,245nm,1.1s,mb6.2
PPLA Purkeypile 47.78 34 *e*P **P** **16 53 54.4 +0.5**
comp=Z,650nm,1.5s,mb6.4
PKI Pulchoki 47.84 276 *e*P **P** **16 53 54.7 -0.2**
comp=Z,2μm,1.1s,mb7.1
PKIN Phulchoki 47.84 276 *e*P **P** **16 53 54.7 -0.2**
comp=Z,2μm,0.8s,mb7.2
PKIN Phulchoki 47.84 276 *e*P **P** **16 53 54.7 -0.2**
KKN Kakani 47.85 277 *e*P **P** **16 53 54.7 -0.3**
comp=Z,3μm,1.1s,mb7.2
DMN Daman 48.06 276 *e*P **P** **16 53 56.3 -0.3**
comp=Z,1μm,1.0s,mb7.0
GKN Gorkha 48.27 277 *e*P **P** **16 53 57.9 -0.4**
comp=Z,4μm,1.1s,mb7.3
BPAW Bear Paw Mtn. 48.35 33 *e*P **P** **16 53 57.9 -0.5**
comp=Z,29nm,1.1s,mb5.2
KTH Kantishna Hill 48.37 34 *e*P **P** **16 53 58.2 -0.2**
comp=Z,86nm,1.5s,mb5.6
KULM Kulim 48.49 240 P **P** **16 54 00.2 +0.2**
KULM Kulim 48.49 240 P **P** **16 54 00.2 +0.2**
KULM Kulim 48.49 240 P **P** **16 54 00.2 +0.2**
KULM Kulim 48.49 240 *e*P **P** **16 53 59.6 -0.4**
comp=Z,630nm,1.5s,mb6.4
KULM LR LR
comp=Z,157μm,20.0s,MS7.0
TRF Thorofare Moun 48.65 34 *e*P **P** **16 54 00.9 +0.2**
comp=Z,20nm,1.2s,mb5.0
IPM Ipoh 48.80 239 P **P** **16 54 01.8 -0.6**
IPM Ipoh 48.80 239 P **P** **16 54 01.8 -0.6**
IPM Ipoh 48.80 239 P **P** **16 54 01.8 -0.6**
COLD Coldfoot 48.81 29 *e*P **P** **16 54 01.9 0.0**
comp=Z,331nm,1.5s,mb6.1
MYKOM Kota Tinggi 48.85 234 P **P** **16 54 03.0 +0.1**
MYKOM Kota Tinggi 48.85 234 P **P** **16 54 03.0 +0.1**
MYKOM Kota Tinggi 48.85 234 P **P** **16 54 03.0 +0.1**
RC01 Rabbit Creek A 48.95 37 *e*P **P** **16 54 02.3 -0.7**
AAA Alma-Ata 49.03 299 *i*P **P** **16 54 05.5 +1.6**
AAA *e*S **S** **17 01 21.0 +15**
AAA pmax pmax
comp=Z,37μm,8.6s
AAA MLR MLR
comp=Z,1006μm,17.0s,MS7.9
KGM Kluang 49.03 235 P **P** **16 54 04.5 +0.3**
KGM Kluang 49.03 235 P **P** **16 54 04.5 +0.3**
KGM Kluang 49.03 235 P **P** **16 54 04.5 +0.3**
SEW Seward 49.14 38 *e*P **P** **16 54 03.7 -0.8**
comp=Z,330nm,1.2s,mb6.2
KOLN Koldanda 49.20 277 *e*P **P** **16 54 05.4 0.0**
comp=Z,3μm,1.3s,mb7.1
PMR Palmer 49.22 36 *e*P **P** **16 54 05.8 +0.8**
PMR pmax pmax
comp=Z,210nm,1.2s,mb6.0
PMR Palmer 49.22 36 *e*P **P** **16 54 05.8 +0.8**
comp=Z,210nm,1.2s,mb6.0
MCK McKinley 49.25 33 P **P** **16 54 05.1 -0.2**
MCK pmax pmax
comp=Z,160nm,1.0s,mb6.0
MCK McKinley 49.25 33 *e*P **P** **16 54 04.4 -0.8**
comp=Z,5.1nm,0.5s,mb4.8
FRIM Kepong 49.28 238 P **P** **16 54 05.8 -0.3**
FRIM Kepong 49.28 238 P **P** **16 54 05.8 -0.3**
FRIM Kepong 49.28 238 P **P** **16 54 05.8 -0.3**
KAKA Kakadu 49.43 192 *e*P **P** **16 54 04.6 -2.5**
comp=Z,547nm,0.9s,mb6.6
KAKA Kakadu 49.43 192 *e*P **P** **16 54 04.5 -2.6**
comp=Z,1μm,0.8s,mb7.0
PYUN Piuthan 49.55 278 *e*P **P** **16 54 08.2 +0.1**
comp=Z,2μm,1.2s,mb7.1
COLA College 49.71 32 P **P** **16 54 09.1 +0.4**
COLA pmax pmax
comp=Z,210nm,1.0s,mb6.1
COLA College 49.71 32 *e*P **P** **16 54 08.3 -0.4**
comp=Z,212nm,1.0s,mb6.1
COLA LR LR
comp=Z,47μm,19.0s,MS6.5
ULHL Ulahol 49.80 298 P **P** **16 54 10.9 +1.1**
SNR=155
COEN Coen 49.95 178 *e*P **P** **16 54 09.7 -1.3**
comp=Z,2μm,0.9s,mb7.2
TKM2 Tokmak 2 50.08 299 P **P** **16 54 13.5 +1.6**
SNR=296
TKM2 Tokmak 2 50.08 299 P **P** **16 54 13.4 +1.5**
TKM2 pmax pmax
comp=Z,1μm,1.1s,mb6.9
TKM2 Tokmak 2 50.08 299 *e*P **P** **16 54 13.2 +1.4**
comp=Z,7.5nm,0.4s,mb5.1
TKM2 LR LR
comp=Z,936μm,20.0s,MS7.8
KMMI Kalianget 50.23 217 P **P** **16 54 13.4 +0.2**
KZA Kyzart 50.56 298 P **P** **16 54 17.8 +2.3**
SNR=187
KBK Karagaybulak 50.61 299 P **P** **16 54 17.2 +1.4**
SNR=283
KHKI Kahang-Kahang 50.61 214 P **P** **16 54 16.1 0.0**
CHMS Chumysh 50.65 299 P **P** **16 54 17.1 +0.8**
SNR=51
USP Ospenovka 50.76 300 P **P** **16 54 17.8 +0.8**
SNR=156
FRU Bishkek 50.80 299⇑ *i*P **P** **16 54 17.6 +0.3**
FRU pmax pmax

comp=Z,2μm,2.2s,mb6.6
KSH Kashi 50.80 295⇑*i*P P 16 54 22.1 +4.7
KSH *e*pP pP 16 54 31.0 +2.1
KSH *e*sP sP 16 54 35.1 +1.5
KSH *e*PcP PcP 16 55 37.6 +3.8
KSH *e*PP PP 16 56 18.5 +4.9
KSH *e*ScP ScP 16 59 29.5 +2.7
KSH *e*PcS PcS 16 59 33.6 +2.4
KSH *e*S **S 17 01 36.1 +5.7**
KSH *e*sS sS 17 01 51.5 +2.0
KSH *e*ScS ScS 17 04 06.0 +1.2
KSH *e*SS SS 17 05 07.5 +2.5
KSH pmax pmax
comp=Z,16μm,6.4s
KSH LR LR
comp=N,119μm,13.1s,MS7.3
KSH LR LR
comp=E,133μm,13.2s,MS7.3
PAX Paxson 50.85 34 P P 16 54 18.4 +1.0
PAX Paxson 50.85 34 *e*P P 16 54 16.7 -0.7
comp=E,33nm,0.9s,mb5.3
AAK Ala-Archa 50.94 299 P P 16 54 19.3 +0.9
comp=E,3μm,1.1s,mb7.2
AAK Ala-Archa 50.94 299 P P 16 54 19.3 +0.9
SNR=123
AAK Ala-Archa 50.94 299 *e*P P 16 54 19.2 +0.8
AAK pmax pmax
comp=Z,630nm,1.0s,mb6.5
AAK Ala-Archa 50.94 299 P P 16 54 19.2 +0.9
comp=Z,41nm,0.5s,mb5.6,baz=118,slow=5.0,SNR=100
AAK LR LR 17 17 14.3
comp=Z,982μm,19.4s,MS7.8,baz=51,slow=38
AAK Ala-Archa 50.94 299 *e*P P 16 54 19.1 +0.8
comp=Z,632nm,1.0s,mb6.5
AAK LR LR
comp=Z,924μm,19.0s,MS7.8
AAK Ala-Archa 50.94 299 P P 16 54 19.5 +1.2
SNR=157
AAK P 16 54 19.5
SNR=157
UCH Uchtor 51.04 298 P P 16 54 20.9 +1.7
SNR=102
UCH Uchtor 51.04 298 *e*P P 16 54 20.7 +1.6
comp=Z,20nm,0.4s,mb5.4
UCH LR LR
comp=Z,611μm,20.0s,MS7.6
PTH Pithoragarh 51.16 281 *e*P P 16 54 20.2 0.0
BVAR Borovoye Array 51.17 313 P P 16 54 20.1 +0.2
comp=Z,196nm,0.9s,mb6.0,baz=84,slow=7.6,SNR=119
BVAR LR LR 17 17 16.1
comp=Z,514μm,18.1s,MS7.6,slow=38
BVAR PKP2bc 17 25 29.5
comp=Z,1.3nm,0.8s,baz=277,slow=3.7,SNR=4.4
BVAR Borovoye Array 51.17 313 P P 16 54 20.1 +0.2
BVAR LR LR 17 17 16.1
BVAR ⇑*e* 17 25 29.5
BRVK Borovoye 51.22 313 P P 16 54 20.1 -0.2
comp=Z,3μm,1.0s,mb7.2
BRVK Borovoye 51.22 313 *e*P P 16 54 20.6 +0.3
BRVK pmax pmax
comp=Z,550nm,1.0s,mb6.4
BRVK Borovoye 51.22 313 *e*P P 16 54 20.5 +0.2
comp=Z,554nm,1.0s,mb6.4
BRVK LR LR
comp=Z,418μm,19.0s,MS7.5
BRVK Borovoye 51.22 313 P P 16 54 20.8 +0.5
SNR=195
BRVK P 16 54 20.8
SNR=195
EKS2 Erkin-Say 51.44 299 P P 16 54 22.9 +0.9
SNR=112
EKS2 Erkin-Say 51.44 299 *e*P P 16 54 22.7 +0.6
comp=Z,362nm,0.7s,mb6.4
EKS2 LR LR
comp=Z,749μm,19.0s,MS7.7
PSI Prapat 51.45 240 LR LR 17 18 49.2
comp=Z,97μm,18.4s,MS6.9,baz=27,slow=39
MENT Mentasta 51.65 34 *e*P P 16 54 23.5 +0.2
AML Almayashu 51.65 299 P P 16 54 25.6 +1.9
SNR=23
AML Almayashu 51.65 299 *e*P P 16 54 25.4 +1.7
comp=Z,1μm,0.9s,mb6.9
AML LR LR
comp=Z,711μm,19.0s,MS7.7
DDI Dehra Dun 52.55 283⇓*i*P P 16 54 29.2 -1.3
DDI *e*x x 16 56 33.7
EGAK Eagle 52.57 32 *e*P P 16 54 29.1 -1.1
comp=Z,1μm,1.1s,mb6.8
EGAK LR LR
comp=Z,34μm,21.0s,MS6.4
UGM Wanagama 52.69 220 P P 16 54 31.2 -0.5
PPI Padang Panjang 52.81 236 P P 16 54 32.1 -0.5
SMLA Simla 52.92 284 *i*P P 16 54 31.9 -1.4
SMLA *e*x x 16 54 35.7
SMLA *i*S **S 17 02 00.0 +0.3**
SDNR Sundarnagar 52.92 285 *e*P P 16 54 33.1 -0.2
SDNR *e*x x 17 02 14.1
DLH Dalhousie 53.29 286 *e*P P 16 54 36.0 0.0
DLH *e*x x 17 03 10.0
KLI Kotabumi 53.36 228 P P 16 54 36.2 -0.4
BHK Bhakra 53.39 285 *e*P P 16 54 34.0 -2.7
BHK *e*x x 16 55 02.6
DAWY Dawson 53.43 33 *e*P P 16 54 36.4 -0.1
THN Thein Dam 53.52 286 *e*P P 16 54 35.8 -1.9
THN *e*x x 17 02 17.4
KSI Kapahiang 53.80 231 P P 16 54 39.9 0.0
NDI New Delhi 53.90 282 *e*P P 16 54 42.0 +1.5
NDI *e*S **S 17 02 14.0 +0.9**
JBP Jabalpur 54.20 274⇑*e*P P 16 54 43.0 +0.2
JBP *e*S **S 17 02 17.6 +0.4**
KIP Kipapa 54.20 88 *i*P P 16 54 43.6 +0.8
KIP Kipapa 54.20 88 P P 16 54 42.3 -0.5
comp=Z,303nm,1.2s,mb6.1
KIP LR LR
comp=Z,14μm,19.0s,MS6.1
PNL Peninsula 54.22 38 *e*P P 16 54 43.5 +1.2
comp=Z,276nm,1.2s,mb6.1
INK Inuvik 55.06 27 P P 16 54 48.3 0.0
INK pmax pmax
comp=Z,580nm,1.4s
INK Inuvik 55.06 27 P P 16 54 48.3 -0.1
comp=Z,80nm,0.6s,mb6.0,baz=292,slow=6.5,SNR=92
INK Inuvik 55.06 27 *e*P P 16 54 48.1 -0.2
comp=Z,577nm,1.4s,mb6.4
SVE Sverdlovsk 55.80 319⇓*e*P P 16 54 54.5 +0.7
SVE *e*S **S 17 02 36.5 -1.2**
SVE pmax pmax
comp=Z,1μm,1.3s,mb6.8
SVE MLR MLR
comp=Z,304μm,17.0s,MS7.5
FITZ Fitzroy Crossi 56.09 198 *e*P P 16 54 55.5 -0.7
comp=Z,555nm,1.6s,mb6.3
FITZ *e*S **S 17 02 40.5 -1.8**
FITZ Fitzroy Crossi 56.09 198 *e*P P 16 54 55.4 -0.8
comp=Z,2μm,1.9s,mb6.8
CTA Charters Tower 56.20 175 *e*P P 16 54 55.4 -1.6
comp=Z,56nm,1.5s,mb5.4
CTA *e*S **S 17 02 39.9 -3.7**
CTAO Charters Tower 56.20 175 P P 16 54 56.7 -0.3
CTAO pmax pmax
comp=Z,130nm,1.2s,mb5.8
CTAO Charters Tower 56.20 175 *e*P P 16 54 56.5 -0.5
comp=Z,129nm,1.2s,mb5.8
CTAO LR LR
comp=Z,17μm,20.0s,MS6.1
BHPL Bhopal 56.23 276 *e*P P 16 54 56.9 -0.4
BHPL AMb AMB 16 55 00.1
comp=Z,382nm,1.4s,mb6.2
WRAB Tennant Creek 56.27 188 P P 16 54 56.0 -1.5
comp=Z,2μm,1.0s,mb7.0,SNR=19
WRAB Tennant Creek 56.27 188 *e*P P 16 54 55.5 -2.0
WRAB pmax pmax
comp=Z,100nm,2.2s,mb5.5
WRAB MLR MLR
comp=Z,54μm,22.0s,MS6.6
WRAB Tennant Creek 56.27 188 *e*P P 16 54 55.5 -2.0
comp=Z,60nm,2.2s,mb5.2
WRAB LR LR
comp=Z,128μm,22.0s,MS7.0
SKAG Skagway 56.28 38 *e*P P 16 54 58.6 +1.4
comp=Z,282nm,1.6s,mb6.0
WB2 Warramunga Arr 56.28 188 *e*P P 16 54 55.6 -2.0
WRA Warramunga Arr 56.28 188 P P 16 54 55.7 -1.9
comp=Z,73nm,0.9s,mb5.7,baz=7.8,slow=7.7,SNR=88
WRA LR LR 17 19 30.9
comp=Z,26μm,19.1s,MS6.3,baz=5.0,slow=37
WRA PKP2bc 17 25 03.7
comp=Z,1.6nm,0.8s,baz=162,slow=2.8,SNR=5.7
WRA Warramunga Arr 56.28 188 P P 16 54 55.7 -1.9
WRA LR LR 17 19 30.9
WRA ⇑*e* 17 25 03.7
FUNA Funafuti 56.90 134 PFAKE 16 55 10.0 +7.9
FUNA LR LR
comp=Z,31μm,20.0s,MS6.4
AJM Ajmer 56.93 280 *e*P P 16 55 02.1 -0.3
AJM AMb AMB 16 55 11.2
comp=Z,781nm,2.2s,mb6.4
SIT Sitka 56.94 40 P P 16 55 03.9 +2.0
SIT pmax pmax
comp=Z,130nm,1.1s,mb5.9
SIT Sitka 56.94 40 P P 16 55 03.9 +1.9
comp=Z,130nm,1.1s,mb5.9
ARU Arti 57.01 319 P P 16 55 02.8 +0.4
comp=Z,4μm,1.2s,mb7.3
ARU Arti 57.01 319*c i*P P 16 55 02.4 0.0
ARU *e* 16 55 54.4
ARU *e* 16 57 06.2
ARU S **S 17 02 56.3 +2.5**
ARU 17 04 48.0
ARU SS SS 17 06 46.6 +4.5
ARU pmax pmax
comp=Z,1μm,1.7s,mb6.7
ARU pmax pmax
comp=Z,14μm,9.9s
ARU MLR MLR
comp=Z,386μm,17.0s,MS7.6
ARU Arti 57.01 319 *e*P P 16 55 02.4 0.0
comp=Z,28nm,1.5s,mb5.1
ARU LR LR
comp=Z,350μm,19.0s,MS7.5
SOKR Solikamsk 57.01 323*c i*P P 16 55 02.8 +0.4
SOKR S **S 17 03 12.0 +18**
SOKR SS SS 17 06 40.0 -2.0
SOKR pmax pmax
comp=Z,370nm,1.1s,mb6.3
SOKR MLR MLR
comp=Z,241μm,18.0s,MS7.3
POHA Pohakuloa 57.05 89 P P 16 55 04.3 +1.1
comp=Z,1μm,1.5s,mb6.6
POHA LR LR
comp=Z,26μm,20.0s,MS6.3
KHU Kahuku 57.24 89 *e*P P 16 55 05.7 +1.1
XMIS Christmas Isla 57.45 223 *e*P P 16 55 04.2 -1.7
comp=Z,347nm,1.0s,mb6.3
KBL Kabul 57.77 291 P P 16 55 08.3 +0.1
KBL pmax pmax
comp=Z,630nm,1.1s,mb6.6
KBL Kabul 57.77 291 *e*P P 16 55 07.9 -0.3
comp=Z,20nm,0.9s,mb5.2
HYB Hyderabad 58.26 269 *i*P P 16 55 11.0 -0.8
comp=Z,250nm,1.0s,mb6.2
HYB *e*S **S 17 03 16.0 +4.8**
HYB LR LR 17 23 04.0
comp=Z,101nm,22.0s
ABKAR Akbulak array 58.51 311 *e*P P 16 55 13.0 -0.1
comp=Z,19nm,1.1s,mb5.0
DLBC Dease Lake 59.21 38 *e*P P 16 55 18.2 +0.5
AKTK Aktyubinsk 59.27 312 P P 16 55 17.7 -0.6
AKTK LR LR 17 22 06.4
AKTK P'P' 17 24 47.0
AKTO Aktyubinsk 59.27 312 P P 16 55 17.7 -0.6
comp=Z,163nm,0.7s,mb6.1,baz=76,slow=6.3,SNR=67
AKTO LR LR 17 22 06.4
comp=Z,316μm,19.2s,MS7.5,baz=286,slow=37
AKTO PKPPKP 17 24 47.0
comp=Z,290nm,1.0s,baz=272,slow=0.0,SNR=18
LATR Latur 59.35 271 *e*P P 16 55 18.5 -0.8
ASAR Alice Springs 60.01 188 P P 16 55 22.0 -1.6
comp=Z,22nm,0.8s,mb5.2,baz=360,slow=5.9,SNR=91
ASAR PKPPKP 17 24 49.1
comp=Z,0.5nm,0.8s,baz=158,slow=4.2,SNR=4.2
MBWA Marble Bar 60.69 203 *e*P P 16 55 26.5 -1.8
comp=Z,172nm,0.6s,mb6.4
MBWA LR LR
comp=Z,26μm,21.0s,MS6.3
MBWA Marble Bar 60.69 203 P P 16 55 27.7 -0.6
SNR=34
MBWA P 16 55 27.7
SNR=34
ALE Alert 60.90 3 P P 16 55 29.0 -0.1
comp=Z,1μm,1.3s,mb6.8,SNR=73
BHV Bhavnagar 61.20 277 *e*P P 16 55 31.5 -0.5
QUE Quetta 61.26 288⇑*i*P x 16 55 45.0
QUE *e*S x 17 03 39.0
SPITS Spitsbergen Ar 61.32 349 P P 16 55 30.8 -1.1
comp=Z,18nm,0.8s,mb5.2,baz=225,slow=15,SNR=7.8
SPB4 Spitsbergen Ar 61.32 349 *e*P P 16 55 31.4 -0.5
KBS Kingsbay 61.45 350⇑*i*P P 16 55 32.8 -0.1
KBS AMb AMB 16 55 47.7
comp=Z,396nm,1.4s,mb6.3
KBS *e*S **S 17 03 52.1 +1.5**
KBS Kingsbay 61.45 350*c i*P P 16 55 33.3 +0.5
KBS pmax pmax
comp=Z,331nm,1.2s,mb6.3
KBS Kingsbay 61.45 350 *e*P P 16 55 33.2 +0.4
comp=Z,224nm,0.9s,mb6.3
KBS LR LR
comp=Z,54μm,19.0s,MS6.7
POO Poona 61.48 273 *e*P P 16 55 34.0 +0.1
POO AMb AMB 16 55 43.0
comp=Z,539nm,1.6s,mb6.4
KAD Karad 61.85 271 *e*P P 16 55 36.1 -0.3
KAD AMb AMB 16 55 38.3
comp=Z,321nm,1.1s,mb6.4
EIDS Eidsvold 61.94 170 *e*P P 16 55 35.6 -1.0
comp=Z,169nm,1.2s,mb6.0
HSP Hornsund 62.23 348 *e*P P 16 55 38.4 +0.3
PALK Pallekele 62.27 258 P P 16 55 40.3 +1.0
comp=Z,1μm,1.1s,mb6.9,SNR=12
PALK Pallekele 62.27 258 *i*P P 16 55 40.5 +1.2
PALK Pallekele 62.27 258 *e*P P 16 55 39.7 +0.4
comp=Z,788nm,1.6s,mb6.6
PALK Pallekele 62.27 258 P P 16 55 39.9 +0.6
SNR=14
PALK P 16 55 39.9
SNR=14
BHJ Bhuj 62.44 280 *e*P P 16 55 39.4 -1.0
NOUC Port Laguerre 62.58 154 *e*P P 16 55 41.0 0.0
DZM Mont Dzumac 62.60 154 *e*P P 16 55 41.4 +0.2
comp=Z,744nm,1.2s,mb6.7
DZM *e*S **S 17 04 05.9 -0.5**
comp=Z,130μm,30.5s
DZM *e*LR LR 17 14 18.2
comp=Z,78μm,21.8s
DZM Mont Dzumac 62.60 154 *e*P P 16 55 40.0 -1.2
DZM Mont Dzumac 62.60 154 *e*P P 16 55 40.9 -0.3
LVZ Lovozero 62.87 336 P P 16 55 42.0 -0.4
comp=Z,1μm,1.1s,mb7.0,SNR=26
LVZ Lovozero 62.87 336*c i*P P 16 55 42.0 -0.4
LVZ pmax pmax
comp=Z,349nm,1.2s,mb6.4
LVZ MLR MLR
comp=Z,320μm,18.0s,MS7.5
LVZ Lovozero 62.87 336 PFAKE 16 55 50.0 +7.6
LVZ LR LR
comp=Z,332μm,19.0s,MS7.5
BJO Bjornoya 63.21 345 *e*P P 16 55 44.8 +0.1
BJO1 Bjornoya 63.25 345⇑*i*P P 16 55 44.8 -0.2
RES Resolute Bay 63.35 14 P P 16 55 45.1 -0.5
RES pmax pmax
comp=Z,500nm,1.2s,mb6.5
RES Resolute Bay 63.35 14 P P 16 55 45.1 -0.5
comp=Z,52nm,0.5s,mb6.0,baz=310,slow=6.9,SNR=59
RES Resolute Bay 63.35 14 *e*P P 16 55 44.9 -0.7
comp=Z,500nm,1.3s,mb6.5
APA Apatity 63.44 336⇑*i*P P 16 55 46.0 -0.3
APA *i* pP 16 55 54.7 -3.4
APA *e*S **S 17 04 12.0 -3.9**
APA pmax pmax
comp=Z,560nm,1.4s,mb6.5
APA MLR MLR
comp=Z,350μm,18.0s,MS7.6
COCO West Island 63.98 230 P P 16 55 50.3 -0.2
comp=Z,2μm,1.1s,mb7.1,SNR=9.6
COCO West Island 63.98 230 *i*P P 16 55 52.8 +2.3
COCO West Island 63.98 230 *e*P P 16 55 48.6 -1.9
comp=Z,913nm,1.2s,mb6.7
COCO LR LR
comp=Z,36μm,19.0s,MS6.6
COCO West Island 63.98 230 P P 16 55 51.1 +0.6
SNR=13
COCO P 16 55 51.1
SNR=13
KEV Kevo 64.21 339 *e*P P 16 55 51.3 0.0
KEV pmax pmax
comp=Z,176nm,1.4s,mb5.9
KEV MLR MLR
comp=Z,139μm,21.0s,MS7.1
KEV Kevo 64.21 339 *e*P P 16 55 51.3 0.0
comp=Z,44nm,1.4s,mb5.3
KEV LR LR
comp=Z,139μm,21.0s,MS7.1
KEV Kevo 64.21 339 *e*p P 16 55 49.5 -1.8
comp=Z,126nm,0.8s,mb6.0
ABKT Ailbek 64.29 299 P P 16 55 53.0 +0.7
comp=Z,2μm,1.2s,mb7.1,SNR=55
YKA Yellowknife Ar 64.46 30 P P 16 55 52.1 -0.8
comp=Z,29nm,0.8s,mb5.4,baz=298,slow=5.8,SNR=52
YKA PKKPbc 17 16 42.0
comp=Z,0.3nm,0.7s,baz=70,slow=2.3,SNR=3.7
YKA Yellowknife Ar 64.46 30 P P 16 55 52.1 -0.8
YKA PKKPbc 17 16 42.0
KLMR Klimovskoe 64.47 328⇑*i*P P 16 55 52.9 -0.2
KLMR *e* 16 58 15.2
KLMR *e*S **S 17 04 31.1 +2.3**
KLMR pmax pmax
comp=Z,938nm,1.4s,mb6.6
ARCES ARCESS Array B 64.77 340 P P 16 55 55.0 +0.1
comp=Z,129nm,0.9s,mb6.0,baz=46,slow=7.6,SNR=105
ARCES PKP2bc 17 24 56.4
comp=Z,8.5nm,1.2s,baz=199,slow=2.2,SNR=7.7
ARCES LR LR 17 27 09.2
comp=Z,152μm,21.7s,MS7.2,baz=38,slow=39
ARCES ARCESS Array B 64.77 340 P P 16 55 55.0 +0.1
ARCES ⇑*e* 17 24 56.4
ARCES LR LR 17 27 09.2
ARE0 ARCESS Array S 64.77 340 *e*P P 16 55 54.9 -0.1
XMAS Kiritimati 65.67 106 PFAKE 16 56 10.0 +8.4
XMAS LR LR
comp=Z,36μm,20.0s,MS6.6
KTK1 Kautokeino 65.73 340 *e*P P 16 56 01.8 +0.7
KTK1 AMb AMB 16 56 11.5
comp=N,164nm,0.3s
KTK1 Kautokeino 65.73 340 *e*P P 16 56 01.3 +0.2
TRO Tromso 66.49 341⇑*i*P P 16 56 05.0 -1.0
TRO AMb AMB 16 56 09.8
comp=Z,313nm,0.8s,mb6.4
TRO Tromso 66.49 341⇑*i*P P 16 56 05.3 -0.7
AFI Afiamalu 66.57 130 P P 16 56 10.7 +3.5
AFI pmax pmax
comp=Z,360nm,1.4s,mb6.2
AFI Afiamalu 66.57 130 LR LR 17 22 15.6
comp=Z,31μm,19.8s,MS6.5,baz=317,slow=33
AFI Afiamalu 66.57 130 P P 16 56 05.8 -1.4
comp=Z,358nm,1.4s,mb6.2
AFI LR LR
comp=Z,30μm,20.0s,MS6.5
JOF Joensuu 66.70 332 *e*p P 16 56 05.7 -1.8
comp=Z,243nm,0.9s,mb6.2
PGC Sidney 66.83 46 *e*P P 16 56 08.8 +0.2
comp=Z,3.9nm,0.8s
OOW Octopus West 66.84 47 P P 16 56 11.6 +3.0
ARMA Armidale 66.98 171 *e*P P 16 56 09.7 +0.2
ARMA *e*S S 17 05 02.2 +2.2
ARMA Armidale 66.98 171 *e*P P 16 56 09.4 -0.1
comp=Z,340nm,1.4s,mb6.2
NLWA Neilton Lookou 67.20 47 ⇑P P 16 56 11.8 +0.9
baz=67,SNR=23
NLWA ⇑S S 17 05 07.4 +4.9
baz=67
NLWA Neilton Lookou 67.20 47 *e*P P 16 56 11.6 +0.7
comp=Z,544nm,1.2s,mb6.5
NLWA LR LR
comp=Z,18μm,19.0s,MS6.3
A05A Maple Falls 67.45 45 ⇓P P 16 56 12.3 -0.2
baz=67
A05A ⇑S S 17 05 06.9 +1.4
baz=67
GNW Green Mountain 67.73 47 *e*P P 16 56 15.0 +0.7
comp=Z,84nm,0.8s,mb5.8
STKA Stephens Creek 67.76 180 *e*P P 16 56 14.2 -0.2
comp=Z,63nm,0.8s,mb5.7
STKA *e*S S 17 05 08.0 -1.2
STKA Stephens Creek 67.76 180 P P 16 56 14.2 -0.2
comp=Z,27nm,0.8s,mb5.3,baz=344,slow=6.9,SNR=20
STKA LR LR 17 25 00.6
comp=Z,28μm,21.2s,MS6.5,baz=348,slow=35
STKA Stephens Creek 67.76 180 *e*P P 16 56 12.7 -1.7
comp=Z,2.2nm,1.1s
E03A Lebam 67.80 48 ⇓P P 16 56 15.4 +0.8
baz=68,SNR=7.0
E03A ⇓S S 17 05 13.7 +4.0
baz=68
FORT Forrest 67.85 192 *e*P P 16 56 14.0 -1.0
comp=Z,303nm,0.6s,mb6.5
FORT *e*S S 17 05 10.4 +0.1
FORT Forrest 67.85 192 *e*P P 16 56 13.3 -1.7
comp=Z,575nm,0.6s,mb6.8
MOS Moscow 67.94 324 *e*P P 16 56 13.1 -2.3
MOS *e* 16 56 42.2
MOS *e*S S 17 05 08.6 -2.4
MOS *e* 17 06 05.4
MOS *e*SS SS 17 09 31.7 -0.9
MOS pmax pmax
comp=Z,11μm,4.2s
MOS pmax pmax
comp=Z,1μm,1.5s,mb6.7
MOS MLR MLR
comp=E,175μm,16.0s,MS7.4
MOS MLR MLR
comp=Z,215μm,16.0s,MS7.5
MOS MLR MLR
comp=N,78μm,15.0s,MS7.4
JCW Jim Creek 67.94 46 P P 16 56 16.3 +0.7
B06A Marblemount 68.04 45 ⇓P P 16 56 16.3 +0.1
baz=68
B06A ⇑S S 17 05 14.2 +1.7
baz=68
RPW Rockport 68.05 45 *e*P P 16 56 15.7 -0.6
comp=N,157nm,1.4s,mb5.8
F03A Seaside 68.10 49 ⇓P P 16 56 17.1 +0.5
baz=68
F03A ⇓S S 17 05 17.2 +3.8
baz=68
HEBO Mount Hebo 68.34 49 P P 16 56 17.0 -1.1
comp=N,538nm,1.4s,mb6.4
A07A Ashnola River, 68.40 44 ⇑P P 16 56 18.8 +0.4
baz=68,SNR=12
A07A ⇑S S 17 05 18.4 +1.7
baz=68
D05A Enumclaw 68.41 47 ⇓P P 16 56 19.0 +0.5
baz=68,SNR=14
C06A Tall Timber Ra 68.68 46 ⇑P P 16 56 20.4 +0.3
baz=68
TDL Tradedollar La 68.70 48 P P 16 56 21.4 +1.0
LON Longmire 68.74 47 P P 16 56 21.3 +0.7
LON pmax pmax
comp=Z,43nm,0.8s,mb5.4
LON Longmire 68.74 47 *e*P P 16 56 20.9 +0.3
comp=Z,43nm,0.8s,mb5.4
OBN Obninsk 68.78 323 P P 16 56 20.5 -0.2
comp=Z,3μm,1.1s,mb7.2,SNR=23
OBN Obninsk 68.78 323*c i*P P 16 56 20.5 -0.2
OBN *e* 16 56 39.6
OBN *e* 16 58 53.1
OBN *i*S S 17 05 18.2 -2.9
OBN *i*SS SS 17 09 50.6 +5.0
OBN pmax pmax
comp=Z,1μm,1.6s,mb6.5
OBN MLR MLR
comp=Z,314μm,18.0s,MS7.6
OBN Obninsk 68.78 323 P P 16 56 20.3 -0.4
OBN LR LR
comp=Z,93μm,20.0s,MS7.0
F04A Amboy 68.79 48 ⇑P P 16 56 20.7 -0.2
baz=69,SNR=25
B07A Winthrop 68.85 45 ⇑P P 16 56 21.4 +0.1
baz=69,SNR=26
PUL Pulkovo 68.92 330⇓*e*P P 16 56 22.1 +0.6
PUL pmax pmax
comp=Z,1μm,1.7s,mb6.6
PUL MLR MLR
comp=Z,237μm,18.0s,MS7.5
NLW Nelson Butte 68.92 45 P P 16 56 21.9 +0.2
WPW White Pass 68.92 47 P P 16 56 22.9 +1.2
COR Corvallis 68.93 50 P P 16 56 23.4 +1.6
COR pmax pmax
comp=Z,700nm,1.4s,mb6.4

COR	**Corvallis**	68.93	50	*e*P	P	16 56 22.2	+0.3
	comp=Z,699nm,1.4s,mb6.4						
COR				LR	LR		
	comp=Z,28μm,20.0s,MS6.5						
LOF	**Lofoten**	68.94	342⇑	*i*P	P	16 56 22.7	+1.3
MAK	**Makhachkala**	69.01	308	*d i*P	P	16 56 23.4	+1.1
MAK				*i*		16 56 47.6	
MAK				*e*		16 58 53.6	
MAK				*e*S	S	17 05 34.1	+10
MAK				*e*		17 06 19.1	
MAK				pmax	pmax		
	comp=Z,473nm,1.4s,mb6.2						
MAK				pmax	pmax		
	comp=N,563nm,2.0s						
MAK				pmax	pmax		
	comp=E,372nm,1.8s						
MAK				pmax	pmax		
	comp=Z,9μm,4.9s						
MAK				MLR	MLR		
	comp=Z,240μm,17.0s,MS7.5						
MAK				MLR	MLR		
	comp=E,347μm,20.0s						
MAK				MLR	MLR		
	comp=N,110μm,12.0s						
KAF	**Kangasniemi**	69.05	333	*e*P	P	16 56 20.5	-1.7
KAF				pmax	pmax		
	comp=Z,130nm,0.6s,mb6.0						
KAF	**Kangasniemi**	69.05	333	*e*p	P	16 56 20.5	-1.7
	comp=Z,130nm,0.6s,mb6.0						
A08A	**Turner Farm, O**	69.07	44	⇓P	P	16 56 22.8	+0.1
	baz=69,SNR=9.8						
D06A	**Cle Elum**	69.08	46	⇓P	P	16 56 23.0	+0.3
	baz=69,SNR=14						
G04A	**Mulino**	69.12	49	⇑P	P	16 56 23.1	+0.1
	baz=69,SNR=6.7						
ETW	**Entiat**	69.17	46	*e*P	P	16 56 22.9	-0.4
	comp=Z,190nm,0.8s,mb6.1						
C07A	**Waterville**	69.28	46	⇓P	P	16 56 23.7	-0.2
	baz=69,SNR=24						
VOR	**Voronezh**	69.29	319	*e*P	P	16 56 23.0	-0.9
VOR				pmax	pmax		
	comp=Z,620nm,2.0s,mb6.2						
E06A	**Yakima**	69.34	47	⇑P	P	16 56 24.9	+0.6
	baz=69,SNR=19						
B08A	**Colville Reser**	69.35	45	⇑P	P	16 56 24.6	+0.3
	baz=69,SNR=34						
A09A	**Danville**	69.45	44	⇑P	P	16 56 25.2	+0.3
	baz=69,SNR=21						
FINES	**FINESS Array B**	69.55	332	P	P	16 56 25.2	-0.2
	comp=Z,250nm,0.9s,mb6.2,baz=61,slow=5.5,SNR=82						
FINES				PKP2bc		17 24 34.2	
	comp=Z,3.3nm,1.1s,baz=290,slow=7.9,SNR=4.1						
FINES				LR	LR	17 29 21.7	
	comp=Z,215μm,18.3s,MS7.4,baz=265,slow=38						
FINES	**FINESS Array B**	69.55	332	P	P	16 56 25.2	-0.2
FINES				⇑*e*		17 24 34.2	
FINES				LR	LR	17 29 21.7	
HOOD	**Mount Hood Mea**	69.56	48	*e*P	P	16 56 26.6	+0.8
	comp=Z,884nm,1.2s,mb6.6						
H04A	**Detroit Lake**	69.57	49	⇓P	P	16 56 26.0	+0.2
	baz=69,SNR=26						
VSR	**Storozhevoye**	69.58	319	*e*P	P	16 56 25.4	-0.3
VSR				*i*		16 56 25.6	
VSR				*e*S	S	17 05 39.3	+8.6
VSR				pmax	pmax		
	comp=E,550nm,1.7s						
VSR				pmax	pmax		
	comp=Z,990nm,1.7s,mb6.5						
VSR				pmax	pmax		
	comp=N,520nm,1.9s						
VSR				smax			
	comp=N,7μm,4.2s						
VSR				smax			
	comp=Z,5μm,5.2s						
VSR				smax			
	comp=E,4μm,4.5s						
VSR				MLR	MLR		
	comp=N,174μm,16.0s,MS7.7						
VSR				MLR	MLR		
	comp=E,337μm,16.0s,MS7.7						
VSR				MLR	MLR		
	comp=Z,503μm,16.0s,MS7.9						
D07A	**Quincy**	69.59	46	⇑P	P	16 56 25.7	-0.1
	baz=69,SNR=16						
VORD	**Divnogorie**	69.65	319	*ce*P	P	16 56 25.6	-0.5
VORD				*i*		16 56 25.8	
VORD				*e*S	S	17 05 28.1	-3.4
VORD				pmax	pmax		
	comp=Z,4μm,3.8s						
VORD				pmax	pmax		
	comp=N,640nm,3.2s						
VORD				pmax	pmax		
	comp=E,2μm,3.7s						
VORD				smax			
	comp=N,7μm,3.7s						
VORD				smax			
	comp=Z,4μm,5.5s						
VORD				smax			
	comp=E,4μm,4.5s						
VFP	**Flag Point**	69.68	48	P	P	16 56 27.4	+1.0
C08A	**Higginbotham F**	69.81	45	⇓P	P	16 56 27.1	-0.1
	baz=70,SNR=15						
EDM	**Edmonton**	69.92	38	P	P	16 56 27.4	-0.4
EDM	**Edmonton**	69.92	38	*e*P	P	16 56 26.9	-0.9
B09A	**Rice**	69.99	44	⇑P	P	16 56 28.1	-0.1
	baz=70,SNR=30						
E07A	**Sunnyside**	69.99	47	⇓P	P	16 56 28.8	+0.5
	baz=70						
A10A	**Northport**	70.02	43	⇓P	P	16 56 28.4	0.0
	baz=70,SNR=6.8						
MOR8	**Moi Rana**	70.14	340⇑	*i*P	P	16 56 27.6	-1.3
MOR8				AMB	AMB	16 56 36.8	
	comp=Z,468nm,1.2s,mb6.3						
HUMO	**Hull Mountain**	70.16	51	*e*P	P	16 56 30.4	+0.9
	comp=Z,85nm,1.1s,mb5.6						
HUMO				LR	LR		
	comp=Z,13μm,19.0s,MS6.2						
OD2	**Odessa Site #2**	70.22	45	P	P	16 56 29.8	+0.1
G06A	**Carlson Farm,**	70.22	48	⇑P	P	16 56 29.4	-0.4
	baz=70,SNR=17						
RSW	**Rattlesnake Hi**	70.23	47	*e*P	P	16 56 30.3	+0.5
	comp=Z,158nm,1.0s,mb5.9						
C09A	**Chrisman Ranch**	70.25	45	⇓P	P	16 56 30.0	+0.1
	baz=70,SNR=24						
HAWA	**Hanford**	70.27	47	*e*P	P	16 56 30.1	+0.1
	comp=Z,208nm,1.3s,mb5.9						
HAWA				LR	LR		
	comp=Z,13μm,20.0s,MS6.2						
D08A	**Wollman Farm,**	70.27	46	⇑P	P	16 56 29.5	-0.5
	baz=70,SNR=38						
RIV	**Riverview**	70.28	171	*e*P	P	16 56 33.0	+2.9
F07A	**Phinny Hill Vi**	70.30	47	⇑P	P	16 56 29.7	-0.5
	baz=70,SNR=14						
STOK	**Stokkvaagen**	70.41	340	*e*P	P	16 56 30.1	-0.4
STOK				AMb	AMB	16 56 44.5	
	comp=Z,418nm,2.5s,mb5.9						
STOK	**Stokkvaagen**	70.41	340	*e*P	P	16 56 30.1	-0.4
E08A	**Dider Farm, El**	70.49	46	⇑P	P	16 56 31.5	+0.1
	baz=70,SNR=25						
B10A	**Chitwood Farm,**	70.57	44	⇓P	P	16 56 32.2	+0.4
	baz=70						
VIPM	**Ingram Point**	70.61	49	P	P	16 56 33.0	+0.8
D09A	**Jones Farm, Ri**	70.62	46	⇓P	P	16 56 32.2	0.0
	baz=70,SNR=14						
NEW	**Newport**	70.65	44	P	P	16 56 32.4	+0.1
NEW				pmax	pmax		
	comp=Z,81nm,0.9s						
NEW	**Newport**	70.65	44	*e*P	P	16 56 31.7	-0.7
	comp=Z,81nm,0.9s,mb5.7						
NEW				LR	LR		
	comp=Z,25μm,19.0s,MS6.5						
H06A	**Lindquist Farm**	70.67	48	⇓P	P	16 56 32.2	-0.3
	baz=70,SNR=20						
GOF	**Gofitskoye**	70.69	312	*i* P	P	16 56 24.3	-8.3
A11A	**Hall Mountain,**	70.69	43	⇑P	P	16 56 32.9	+0.4
	baz=70,SNR=47						
YBH	**Yreka Blue Hor**	70.77	52	*e*P	P	16 56 33.9	+0.7
YBH				pmax	pmax		
	comp=Z,194nm,1.2s						
YBH				MLR	MLR		
	comp=Z,12μm,20.0s						
YBH	**Yreka Blue Hor**	70.77	52	P	P	16 56 34.3	+1.1
	comp=Z,22nm,0.7s,mb5.2,baz=353,slow=1.4,SNR=24						
YBH	**Yreka Blue Hor**	70.77	52	*e*P	P	16 56 33.9	+0.7
	comp=Z,194nm,1.2s,mb5.9						
YBH				LR	LR		
	comp=Z,12μm,20.0s,MS6.1						
C10A	**Spilker Farm,**	70.78	44	⇑P	P	16 56 33.5	+0.4
	baz=71						
MEF	**Metsahovi**	70.97	332	P	P	16 56 33.6	-0.5
B11A	**Sandpoint**	70.98	44	⇑P	P	16 56 34.5	+0.2
	baz=71,SNR=30						
E09A	**Wood Farm, Sta**	71.01	46	⇑P	P	16 56 34.5	0.0
	baz=71,SNR=18						
F08A	**Pendleton**	71.03	47	⇓P	P	16 56 34.7	0.0
	baz=71,SNR=14						
A12A	**Yaak River Ran**	71.10	43	⇓P	P	16 56 35.4	+0.4
	baz=71						
VSU	**Vasula**	71.18	330	*c i*P	P	16 56 35.3	0.0
VSU				pmax	pmax		
	comp=Z,1μm,1.7s,mb6.5						
VSU				MLR	MLR		
	comp=Z,171μm,18.0s,MS7.3						
VSU	**Vasula**	71.18	330	P	P	16 56 35.1	-0.2
G08A	**Pilot Rock**	71.19	47	⇑P	P	16 56 36.2	+0.5
	baz=71,SNR=15						
WBK	**Wadi Bani Khal**	71.22	285	P	P	16 56 37.3	+1.1
	SNR=52						
D10A	**Wagner Farm, O**	71.22	45	⇑P	P	16 56 35.2	-0.6
	baz=71,SNR=22						
LNOR	**Lincton Mounta**	71.28	47	P	P	16 56 37.4	+1.2
LNOR				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.4						
LNOR	**Lincton Mounta**	71.28	47	*e*P	P	16 56 36.7	+0.5
	comp=Z,108nm,1.0s,mb5.7						
ZEI	**Tsey**	71.38	310	*e*P	P	16 56 36.5	-0.3
ZEI				pmax	pmax		
	comp=Z,293nm,1.4s,mb6.0						
MTA	**Mtatsminda**	71.39	308	P	P	16 56 37.2	+0.3
B12A	**Libby**	71.39	43	⇑P	P	16 56 36.4	-0.4
	baz=71						
BIDO	**Bidbid**	71.39	286	P	P	16 56 38.6	+1.4
	SNR=64						
K05A	**Summer Lake**	71.39	50	⇓P	P	16 56 37.2	+0.2
	baz=71,SNR=29						
TBLG	**Delisi**	71.40	308	P	P	16 56 36.6	-0.4
SUMG	**Summit**	71.48	360	*e*P	P	16 56 37.7	+0.7
	comp=Z,952nm,1.4s,mb6.5						
KIV	**Kislovodsk**	71.49	311	P	P	16 56 38.4	+0.9
	comp=Z,3μm,1.0s,mb7.2,SNR=43						
KIV	**Kislovodsk**	71.49	311	*e*P	P	16 56 36.0	-1.5
KIV				*e*		16 56 54.6	
KIV				*e*		16 59 18.1	
KIV				*e*S	S	17 05 53.2	0.0
KIV				*e*SS	SS	17 10 30.2	+2.4
KIV				pmax	pmax		
	comp=Z,4μm,5.2s						
KIV				pmax	pmax		
	comp=Z,541nm,1.1s,mb6.4						
KIV				MLR	MLR		
	comp=Z,123μm,19.0s,MS7.2						
KIV	**Kislovodsk**	71.49	311	*e*P	P	16 56 37.8	+0.4
	comp=Z,800nm,1.0s,mb6.6						
KIV				LR	LR		
	comp=Z,151μm,19.0s,MS7.3						
WDC	**Whiskeytown Da**	71.49	53	P	P	16 56 38.5	+1.0
WDC				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.8						
WDC	**Whiskeytown Da**	71.49	53	*e*P	P	16 56 38.0	+0.4
	comp=Z,106nm,0.9s,mb5.8						
WDC				LR	LR		
	comp=Z,13μm,20.0s,MS6.2						
I07A	**Izee**	71.52	49	⇓P	P	16 56 38.0	+0.3
	baz=71,SNR=20						
CAN	**Canberra**	71.53	174	P	P	16 56 38.6	+1.0
CAN				pmax	pmax		
	comp=Z,270nm,1.2s,mb6.0						
CAN	**Canberra**	71.53	174	*e*P	P	16 56 36.6	-1.0
	comp=Z,266nm,1.3s,mb6.0						
CAN				LR	LR		
	comp=Z,23μm,20.0s,MS6.4						
BANOM	**Banah**	71.54	289	P	P	16 56 39.2	+1.1
	SNR=20						
CNB	**Canberra Magne**	71.56	173	*e*P	P	16 56 39.6	+1.8
F09A	**S2 Ranch, Elgi**	71.59	47	⇑P	P	16 56 38.8	+0.7
	baz=71						
KEH	**Kehvi**	71.60	309	P	P	16 56 37.9	-0.3
E10A	**Myers Farm, Un**	71.63	46	⇓P	P	16 56 38.5	+0.2
	baz=71						
GOR	**Gori**	71.66	309	P	P	16 56 37.1	-1.5
SMDO	**Samad**	71.70	285	P	P	16 56 39.9	+0.8
	SNR=61						
ONI	**Oni**	71.75	310	P	P	16 56 39.9	+0.8
D11A	**Klaveano Farm,**	71.76	45	⇓P	P	16 56 38.5	-0.5
	baz=72,SNR=26						
H08A	**Prairie City**	71.78	48	⇓P	P	16 56 39.1	-0.2
	baz=72,SNR=49						
F10A	**Beach Ranch, E**	71.84	46	⇑P	P	16 56 39.5	0.0
	baz=72,SNR=42						
C12B	**Naegeli Ranch,**	71.88	44	⇓P	P	16 56 40.1	+0.4
	baz=72,SNR=9.1						
G09A	**Cove**	71.90	47	⇓P	P	16 56 39.9	0.0
	baz=72,SNR=30						
WALA	**Waterton Lakes**	71.98	42	*e*P	P	16 56 40.0	-0.3
	comp=Z,2.5nm,0.9s						
HOPS	**Hopland**	71.98	55	PFAKE		16 56 50.0	+9.4
HOPS				LR	LR		
	comp=Z,24μm,20.0s,MS6.5						
HOQ	**Hoqain**	71.99	286	P	P	16 56 41.4	+0.6
	SNR=45						
JMDO	**Jabal Madar**	72.02	285	P	P	16 56 41.7	+0.6
	SNR=37						
B13A	**Whitefish**	72.06	43	⇑P	P	16 56 40.8	0.0
	baz=72,SNR=41						
BSMT	**Bassoo Peak**	72.18	43	*e*P	P	16 56 41.4	-0.2
	comp=Z,226nm,1.0s,mb6.0						
MOD	**Moc**	72.20	51	*e*P	P	16 56 41.8	0.0
	comp=Z,185nm,1.6s,mb5.8						
MOD				LR	LR		
	comp=Z,11μm,19.0s,MS6.2						
E11A	**Bogner Ranch,**	72.22	45	⇓P	P	16 56 41.7	-0.2
	baz=72,SNR=51						
GNI	**Garni**	72.24	307	*e*P	P	16 56 43.3	+1.2
GNI				pmax	pmax		
	comp=Z,2μm,1.7s						
GNI	**Garni**	72.24	307	*e*P	P	16 56 43.2	+1.1
	comp=Z,2μm,1.7s,mb6.8						
GNI				LR	LR		
	comp=Z,103μm,19.0s,MS7.1						
GNI	**Garni**	72.24	307	P	P	16 56 43.6	+1.6
	SNR=61						
GNI				P		16 56 43.6	
	SNR=61						
HATD	**Hatta, Dubai**	72.24	288	P	P	16 56 43.0	+0.7
	SNR=36						
A14A	**Double T Ranch**	72.29	42	⇓P	P	16 56 42.3	+0.1
	baz=72,SNR=25						
H09A	**Durkee**	72.31	47	⇑P	P	16 56 42.1	-0.3
	baz=72,SNR=14						
ASHO	**Ashiyiah**	72.38	288	P	P	16 56 43.7	+0.5
	SNR=33						
C13A	**Hot Springs**	72.40	43	⇓P	P	16 56 43.0	+0.1
	baz=72,SNR=36						
BMO	**Blue Mountains**	72.42	47	*e*P	P	16 56 42.8	-0.2
	comp=Z,179nm,1.2s,mb5.9						
BMO				LR	LR		
	comp=Z,13μm,20.0s,MS6.2						
NWAO	**Narrogin (SRO)**	72.46	201	P	P	16 56 41.7	-1.5
NWAO				pmax	pmax		
	comp=Z,160nm,1.0s						
NWAO	**Narrogin (SRO)**	72.46	201	*e*P	P	16 56 41.2	-2.0
	comp=Z,157nm,1.0s,mb5.9						
NWAO				LR	LR		
	comp=Z,10μm,21.0s,MS6.1						
NWAO	**Narrogin (SRO)**	72.46	201	P	P	16 56 48.4	+5.2
	SNR=10						
NWAO				P		16 56 48.4	
	SNR=10						
F11A	**Grangeville**	72.51	46	⇑P	P	16 56 43.5	0.0
	baz=72,SNR=50						
NAZ	**Nazwa, Dubai**	72.52	288	P	P	16 56 44.6	+0.6
	SNR=15						
JTMT	**Jette**	72.52	43	*e*P	P	16 56 43.4	-0.2
	comp=Z,135nm,1.2s,mb5.8						
BSY	**Bisya**	72.53	286	P	P	16 56 44.9	+0.8
	SNR=55						
J08A	**Circle Bar Ran**	72.54	49	⇓P	P	16 56 44.1	+0.3
	baz=72,SNR=32						
E12A	**Beaver Dam Sad**	72.55	45	⇑P	P	16 56 44.0	+0.2
	baz=72,SNR=191						
MCCM	**Marconi Confer**	72.56	55	PFAKE		16 56 50.0	+6.0
MCCM				LR	LR		
	comp=Z,19μm,19.0s,MS6.4						
YBMT	**Yellow Bay**	72.60	43	*e*P	P	16 56 43.6	-0.4
	comp=Z,92nm,1.2s,mb5.6						
I09A	**Lost Marbles R**	72.64	48	⇓P	P	16 56 44.4	0.0
	baz=72,SNR=26						
A15A	**Johnson Ranch,**	72.66	42	⇓P	P	16 56 44.4	0.0
	baz=72,SNR=24						
FAQ	**Al Faqa, Dubai**	72.70	288	P	P	16 56 45.3	+0.2
	SNR=18						
ARQ	**Araqi**	72.74	286	P	P	16 56 45.4	+0.1
	SNR=69						
D13A	**Huson**	72.80	44	⇓P	P	16 56 45.1	-0.2
	baz=73,SNR=40						
SWMT	**Swartz Lake**	72.81	43	*e*P	P	16 56 44.8	-0.5
	comp=Z,73nm,0.4s,mb6.0						
SCO	**Scoresbysund**	72.91	354⇑	*i*P	P	16 56 46.5	+1.0
SCO				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.6						
SCO				MLR	MLR		
	comp=Z,30μm,18.0s,MS6.6						
SCO	**Scoresbysund**	72.91	354⇑	*i*P	P	16 56 46.5	+1.0
	comp=Z,75nm,0.9s,mb5.6						
SCO							
	comp=Z,30μm,18.0s						
WVOR	**Wild Horse Val**	72.95	50	P	P	16 56 47.1	+0.8
WVOR				pmax	pmax		
	comp=Z,410nm,1.6s,mb6.1						
WVOR	**Wild Horse Val**	72.95	50	*e*P	P	16 56 46.8	+0.5
	comp=Z,414nm,1.6s,mb6.1						
WVOR				LR	LR		
	comp=Z,16μm,20.0s,MS6.3						
ASUD	**Al Ashush, Dub**	72.97	288	P	P	16 56 47.6	+0.9
	SNR=19						
DIGO	**Kars**	72.98	308	*i* P	P	16 56 48.0	+1.6
J09A	**Fry Pan Ranch,**	72.98	49	⇓P	P	16 56 46.6	+0.2
	baz=73,SNR=29						
F12A	**Elk City**	73.11	45	⇓P	P	16 56 47.1	0.0
	baz=73,SNR=49						
IZAR	**Zarasai**	73.12	328	*i* P	P	16 56 47.6	+0.6
B15A	**Bradely Ranch,**	73.14	42	⇓P	P	16 56 47.5	+0.2
	baz=73,SNR=71						
I10A	**Payette**	73.14	48	⇓P	P	16 56 47.6	+0.2
	baz=73						
IDID	**Didziasalis**	73.19	327	*i* P	P	16 56 48.0	+0.6
MICGM	**Minsk**	73.20	326⇑	*i*P	P	16 56 46.0	-1.5
MNK	**Minsk**	73.22	326⇑	*i*P	P	16 56 46.0	-1.6
MNK				*e*S	S	17 06 12.0	-0.6
MNK				pmax	pmax		
	comp=N,1μm,1.5s						
MNK				pmax	pmax		
	comp=E,1μm,1.5s						
MNK				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.7						
MNK				MLR	MLR		
	comp=Z,177μm,15.0s,MS7.5						
MSO	**Missoula**	73.24	44	*e*P	P	16 56 47.1	-0.7
	comp=Z,114nm,1.3s,mb5.6						
SLMT	**Seeley Lake**	73.25	43	*e*P	P	16 56 47.2	-0.7
	comp=Z,227nm,1.2s,mb6.0						
DYDN	**Diyadin**	73.25	307	*i* P	P	16 56 48.8	+0.7
H11A	**Donnelly**	73.26	47	⇑P	P	16 56 47.9	-0.2
	baz=73,SNR=46						
BEKR	**Beckwourth**	73.28	53	⇓P	P	16 56 48.4	+0.2
	baz=73,SNR=44						
A16A	**West Butte Ran**	73.28	41	⇓P	P	16 56 47.7	-0.4
	baz=73,SNR=16						
ISAL	**Salakas**	73.29	328	*i* P	P	16 56 48.6	+0.6
E13A	**Victor**	73.32	44	⇑P	P	16 56 48.0	-0.4
	baz=73,SNR=9.1						
D14A	**Greenough**	73.33	44	⇓P	P	16 56 47.6	-0.8
	baz=73,SNR=47						
C15A	**Salmond Ranch,**	73.43	43	⇓P	P	16 56 49.3	+0.3
	baz=73,SNR=85						
NACGM	**Naroch**	73.44	327	*e*P	P	16 56 46.0	-2.9
ARTV	**Artvin**	73.47	309	*i* P	P	16 56 50.4	+1.1
SOC	**Sochi**	73.49	312	*e*P	P	16 56 49.2	-0.2
SOC				*e**PP	pP	16 56 57.8	-3.6
SOC				*e*S	S	17 06 18.4	+2.4
SOC				*e*		17 06 51.7	
SOC				pmax	pmax		
	comp=Z,251nm,1.0s,mb6.1						
SOC				pmax	pmax		
	comp=Z,6μm,4.9s						
SOC				MLR	MLR		
	comp=Z,235μm,18.0s,MS7.5						
TOO	**Toolangi**	73.53	177	*e*P	P	16 56 52.0	+2.6
TOO				*e*S	S	17 06 19.1	+2.9
J10A	**Berg Farm, Mel**	73.53	48	⇓P	P	16 56 49.4	-0.3
	baz=73						
DAGI	**Agillar**	73.54	309	*i* P	P	16 56 50.8	+1.1
B16A	**M & M Farms, S**	73.54	42	⇓P	P	16 56 49.2	-0.4
	baz=73						
DBOC	**Borcka**	73.55	309	*i* P	P	16 56 50.5	+0.7
F13A	**Darby**	73.62	45	⇓P	P	16 56 49.6	-0.5
	baz=73,SNR=35						
DBAD	**Bademkaya**	73.71	309	*i* P	P	16 56 51.9	+1.2
I11A	**Placerville**	73.74	47	⇓P	P	16 56 51.0	+0.1
	baz=74						
DDEM	**Demirkent**	73.74	309	*i* P	P	16 56 52.0	+1.0
A17A	**Triple J Farms**	73.76	41	⇓P	P	16 56 50.5	-0.4
	baz=74,SNR=31						
K10A	**MacKenzie Ranc**	73.84	49	⇑P	P	16 56 51.9	+0.4
	baz=74,SNR=39						
C16A	**Fuhringer Ranc**	73.88	42	⇑P	P	16 56 51.7	+0.1
	baz=74,SNR=45						
D15A	**Lincoln**	73.91	43	⇑P	P	16 56 51.6	-0.2
	baz=74,SNR=14						
WCN	**Washoe City**	73.98	53	⇑P	P	16 56 53.2	+0.8
	baz=74						
TVAN	**Van**	74.00	306	*i* P	P	16 56 53.6	+1.1
H12A	**Diamond D Ranc**	74.03	46	⇓P	P	16 56 52.6	+0.1
	baz=74,SNR=63						
B17A	**L&G Farms, Che**	74.10	41	⇓P	P	16 56 53.0	+0.1
	baz=74,SNR=46						
MFID	**Camas Ranch**	74.10	48	⇑P	P	16 56 53.2	+0.2
	baz=74,SNR=30						
HOMI	**Horasan**	74.12	308	*i* P	P	16 56 54.6	+1.4
ANN	**Anapa**	74.14	314	*c i*P	P	16 56 53.5	+0.3
ANN				*i*	pP	16 57 07.4	+2.2
ANN				*i*		16 59 41.3	
ANN				*i* PPP		17 01 28.2	
ANN				*i* S	S	17 06 25.3	+2.0
ANN				*e*SSS		17 14 31.4	
ANN				pmax	pmax		
	comp=Z,583nm,1.4s,mb6.3						
ANN				MLR	MLR		
	comp=N,151μm,20.0s,MS7.5						
ANN				MLR	MLR		
	comp=E,174μm,20.0s,MS7.5						
ANN				MLR	MLR		
	comp=Z,186μm,20.0s,MS7.4						
E15A	**Deer Lodge**	74.20	44	⇑P	P	16 56 53.6	+0.1
	baz=74,SNR=74						
A18A	**Metzger Ranch,**	74.23	41	⇑P	P	16 56 53.2	-0.4
	baz=74,SNR=31						
SAO	**San Andreas Ge**	74.27	56	*e*P	P	16 56 55.1	+1.0
SAO				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
SAO				MLR	MLR		
	comp=Z,16μm,19.0s,MS6.3						
SAO	**San Andreas Ge**	74.27	56	*e*P	P	16 56 55.1	+1.0
	comp=Z,80nm,1.0s,mb5.6						
SAO				LR	LR		
	comp=Z,16μm,19.0s,MS6.3						
CMB	**Columbia Colle**	74.27	54	*e*P	P	16 56 53.9	-0.2
CMB				pmax	pmax		
	comp=Z,380nm,1.4s,mb6.1						
CMB	**Columbia Colle**	74.27	54	*e*P	P	16 56 53.7	-0.4
	comp=Z,381nm,1.4s,mb6.1						
CMB				LR	LR		
	comp=Z,20μm,20.0s,MS6.4					

C17A Wharram Farm, 74.52 42 ⇓P P 16 56 54.8 -0.5
baz=74,SNR=20
ERZM Erzurum 74.54 308 *i* P **P 16 56 56.7 +1.1**
B18A Beardsley Farm 74.58 41 ⇓P P 16 56 55.4 -0.3
baz=74,SNR=33
F15A Butte 74.63 44 ⇓P P 16 56 56.2 +0.2
baz=74,SNR=176
J12A Stokes Ranch, 74.64 47 ⇑P P 16 56 56.4 +0.3
baz=74,SNR=14
E16A East Helena 74.67 43 ⇑P P 16 56 56.7 +0.4
baz=74,SNR=46
FCC Fort Churchill 74.68 26 P **P 16 56 55.0 -1.1**
FCC Fort Churchill 74.68 26 *eP* **P 16 56 54.9 -1.2**
comp=Z,19nm,1.4s,mb4.8
TATV Tatvan 74.75 307 *i* P **P 16 56 58.3 +1.5**
M10A I.L. Ranch, Tu 74.75 50 ⇑P P 16 56 57.0 +0.2
baz=75,SNR=53
DOMB Dombas 74.81 339⇑ *iP* **P 16 56 56.9 +0.1**
DOMB AMB AMB 16 57 11.3
comp=Z,482nm,1.3s,mb6.3
EGMT Eagleton 74.82 41 ⇓P P 16 56 56.8 -0.3
baz=75,SNR=39
EGMT Eagleton 74.82 41 *eP* **P 16 56 56.1 -1.0**
comp=Z,562nm,1.4s,mb6.3
EGMT LR LR
comp=Z,22µm,19.0s,MS6.5
MOL Molde 74.83 340 *eP* **P 16 56 56.9 0.0**
I13A Wildhorse Cree 74.83 46 ⇑P P 16 56 58.0 +0.8
baz=75,SNR=56
HFS Hagfors 74.84 336 P **P 16 56 56.7 -0.3**
comp=Z,157nm,1.0s,mb5.9,baz=64,slow=3.4,SNR=56
H14A Leadore 74.85 46 ⇑P P 16 56 57.2 -0.2
baz=75,SNR=25
DLMT Dillon 74.85 45 *eP* **P 16 56 57.4 +0.1**
comp=Z,192nm,0.9s,mb6.0
HLID Hailey 74.86 47 ⇑P P 16 56 58.1 +0.7
baz=75,SNR=26
HLID Hailey 74.86 47 *eP* **P 16 56 57.4 0.0**
comp=Z,119nm,1.2s,mb5.7
HLID LR LR
comp=Z,20µm,19.0s,MS6.4
L11A Cat Creek Ranc 74.86 49 ⇑P P 16 56 57.6 +0.2
baz=75,SNR=66
NB2 NORSAR Subarra 74.95 337 P **P 16 56 57.8 +0.2**
comp=Z,417nm,0.9s,mb6.4,baz=39,slow=5.9
NOA NORSAR Array B 74.95 337 P **P 16 56 57.6 0.0**
NOA 16 59 48.0
NOA NORSAR Array B 74.95 337 P **P 16 56 57.6 0.0**
comp=Z,171nm,0.8s,mb6.0,baz=39,slow=5.7,SNR=102
NOA PP PP 16 59 48.0 +3.0
comp=Z,18nm,0.8s,baz=37,slow=7.5,SNR=3.6
NOA LR LR 17 33 17.3
comp=Z,247µm,18.5s,MS7.5,baz=30,slow=38
MACK Trabzon 74.95 310 *i* P **P 16 56 58.9 +0.9**
AKASG Malin Array Be 74.97 322 P **P 16 56 57.7 -0.2**
AKASG 16 59 48.7
AKASG Malin Array Be 74.97 322 P **P 16 56 57.6 -0.3**
comp=Z,187nm,0.8s,mb6.1,baz=47,slow=6.0,SNR=181
AKASG PP PP 16 59 48.7 +3.3
comp=Z,48nm,1.0s,baz=43,slow=7.8,SNR=4.5
AKASG LR LR 17 33 00.5
comp=Z,413µm,18.1s,MS7.8,baz=45,slow=38
AKBB Malin Array Si 74.97 322 *eP* **P 16 56 57.5 -0.4**
KIEV Kiev 74.99 322 *eP* **P 16 56 57.7 -0.3**
KIEV pmax pmax
comp=Z,570nm,1.1s,mb6.4
KIEV Kiev 74.99 322 *eP* **P 16 56 57.5 -0.5**
comp=Z,572nm,1.1s,mb6.4
KIEV LR LR
comp=Z,312µm,20.0s,MS7.6
KOPT Kop Dagi 75.03 309 *i* P **P 16 57 00.2 +1.8**
MCMT McKenzie Canyo 75.03 45 *eP* **P 16 56 58.3 0.0**
comp=Z,26nm,1.1s,mb5.1
K12A Draper Farm, C 75.11 48 ⇑P P 16 56 59.0 +0.2
baz=75,SNR=14
F16A Kennard Place, 75.15 44 ⇑P P 16 56 59.2 +0.2
baz=75,SNR=60
E17A Martinsdale 75.17 43 ⇑P P 16 56 59.3 +0.2
baz=75,SNR=57
NAO01 NORSAR Array S 75.20 337 *eP* **P 16 56 58.6 -0.5**
comp=Z,282nm,1.0s,mb6.2
NAO01 LR LR
comp=Z,144µm,20.0s,MS7.3
BOZ Bozeman (W) 75.23 44 ⇑P P 16 56 59.7 +0.2
baz=75,SNR=89
BOZ Bozeman (W) 75.23 44 P **P 16 56 59.6 +0.1**
BOZ pmax pmax
comp=Z,97nm,0.9s,mb5.7
BOZ Bozeman (W) 75.23 44 *eP* **P 16 56 59.2 -0.2**
comp=Z,97nm,0.9s,mb5.7
BOZ LR LR
comp=Z,18µm,19.0s,MS6.4
N10A Dunphy 75.24 50 ⇓P P 16 56 59.9 +0.3
baz=75
M11A Holland Ranch, 75.27 49 ⇑P P 16 57 01.0 +1.2
baz=75,SNR=36
D18A Linhart Farms, 75.30 42 ⇓P P 16 57 00.0 +0.2
baz=75,SNR=6.1
L12A House Creek Ra 75.33 48 ⇑P P 16 57 00.5 +0.4
baz=75
MSL Mosul 75.38 304 *eP* **P 16 57 01.0 +0.5**
MSL *i* S S 17 06 44.0 +6.6
G16A Moss Hill, Enn 75.38 44 ⇑P P 16 57 00.6 +0.2
baz=75,SNR=13
NVAR Mina Array Bea 75.41 53 P **P 16 57 01.6 +1.0**
comp=Z,38nm,0.7s,mb5.4,baz=284,slow=6.9,SNR=42
O10A Cortez Mining, 75.49 51 ⇓P P 16 57 01.6 +0.6
baz=75,SNR=10
RAO Raoul Island 75.49 144 LR LR 17 28 59.7
comp=Z,20µm,18.3s,MS6.5,baz=152,slow=35
RAO Raoul Island 75.49 144 PFAKE 16 57 10.0 +9.0
RAO LR LR
comp=Z,22µm,19.0s,MS6.5
MLAC Mammoth Lakes 75.51 54 ⇑P P 16 57 01.8 +0.6
baz=75
J14A Carey 75.53 47 ⇓P P 16 57 02.2 +0.9
baz=75,SNR=40
K13A Stover Farm, H 75.59 48 ⇑P P 16 57 02.0 +0.4
baz=75
SUW Suwalki 75.60 328 *i* P **P 16 57 01.3 -0.2**
SUW *e*PcP PcP 16 57 14.9 +0.7
SUW *e*S S 17 06 40.3 +1.0
SUW *e*ScS ScS 17 06 59.3 -12
SUW LMZ 17 33 09.4
comp=Z,213µm,18.0s
SUW Suwalki 75.60 328 *eP* **P 16 57 01.3 -0.1**
SUW pmax pmax
comp=Z,660nm,0.9s,mb6.6
SUW Suwalki 75.60 328 *eP* **P 16 57 00.9 -0.6**
comp=Z,664nm,0.9s,mb6.6
F17A Fitzpatrick Pl 75.62 43 ⇑P P 16 57 01.9 +0.2
baz=75,SNR=39
E18A Harlowton 75.62 42 ⇑P P 16 57 01.8 +0.1
baz=75,SNR=45
N11A Elko Archery C 75.66 50 ⇑P P 16 57 03.0 +0.9
baz=76
I15A Monteview 75.73 46 ⇓P P 16 57 02.8 +0.4
baz=76
BEST Besiri 75.74 307 *i* P **P 16 57 03.7 +1.1**
M12A Wells 75.81 49 ⇓P P 16 57 04.1 +1.2
baz=76,SNR=94
QLMT Earthquake Lak 75.83 45 *eP* **P 16 57 02.6 -0.4**
comp=Z,222nm,1.5s,mb5.9
GRSN GIRESUNGRSN 75.89 310 *i* P **P 16 57 02.7 -0.7**
P10A Eureka 75.90 51 ⇓P P 16 57 04.1 +0.7
baz=76,SNR=15
G17A Pierce Place, 75.93 44 ⇑P P 16 57 04.0 +0.6
baz=76,SNR=20
SIM Simferopol' 75.95 316 *c iP* **P 16 57 04.0 +0.4**
SIM *e*S S 17 06 45.0 +1.6
SIM *i* 17 07 04.0
SIM pmax pmax
comp=Z,466nm,0.8s,mb6.5
SIM MLR MLR
comp=Z,140µm,15.2s,MS7.4
OSL Oslo 75.96 337 *eP* **P 16 57 03.0 -0.4**
UMR Umm Al-Rimmam 75.98 296 *eP* **P 16 57 03.7 -0.4**
UMR AMb AMb 16 57 23.2
comp=Z,675nm,1.3s,mb6.4
RCTC Rector, Farmer 76.00 55 ⇓P P 16 57 04.5 +0.4
baz=76
L13A Double Diamond 76.00 48 ⇓P P 16 57 04.9 +0.9
baz=76,SNR=33
ELK Elko 76.01 50 *eP* **P 16 57 04.9 +0.9**
ELK pmax pmax
comp=Z,96nm,0.9s
ELK MLR MLR
comp=Z,19µm,19.0s
ELK Elko 76.01 50 *eP* **P 16 57 04.9 +0.9**
comp=Z,96nm,0.9s,mb5.7
ELK LR LR
comp=Z,19µm,19.0s,MS6.4
H16A Russell Place, 76.01 45 ⇓P P 16 57 04.6 +0.6
baz=76,SNR=39
SMMC Simmler 76.05 56 ⇓P P 16 57 05.1 +0.7
baz=76
N12A Clover Valley, 76.07 49 *eP* **P 16 57 05.2 +0.8**
comp=Z,148nm,0.9s,mb5.9
O11A Cowboy Ranch, 76.11 50 ⇓P P 16 57 05.4 +0.8
baz=76,SNR=28
MIB Mutribah 76.12 297 *eP* **P 16 57 04.4 -0.5**
MIB AMb AMB 16 57 13.1
comp=Z,788nm,1.0s,mb6.6
J15A Blackfoot 76.12 46 ⇑P P 16 57 05.5 +0.9
baz=76,SNR=5.8
F18A Big Timber 76.14 43 ⇑P P 16 57 04.9 +0.2
baz=76,SNR=91
K14A Jones Ranch, D 76.19 47 ⇓P P 16 57 05.8 +0.8
baz=76,SNR=23
YMR Madison River 76.20 44 *eP* **P 16 57 05.1 +0.1**
comp=Z,188nm,1.1s,mb5.9
GCMT Greycliff 76.23 43 *eP* **P 16 57 05.0 -0.3**
comp=Z,93nm,1.1s,mb5.6
TIN Tinemaha 76.24 54 ⇓P P 16 57 06.0 +0.6
baz=76
BHD Baghdad 76.27 301 *eP* **P 16 57 02.0 -3.7**
BHD *e*S S 17 06 45.0 -2.4
QRN Al-Qurain 76.28 296 *eP* **P 16 57 05.7 -0.2**
QRN AMb AMb 16 57 24.8
comp=Z,1µm,2.0s,mb6.5
M13A Montello 76.30 49 ⇓P P 16 57 06.4 +0.7
baz=76,SNR=12
M13A Montello 76.30 49 *eP* **P 16 57 06.5 +0.8**
comp=Z,68nm,0.8s,mb5.6
FOO Floro 76.31 340⇑ *iP* **P 16 57 04.4 -1.0**
YNR Norris Junctio 76.33 44 *eP* **P 16 57 07.4 +1.7**
comp=Z,213nm,1.3s,mb5.9
VES Vestal, Richgr 76.37 56 ⇑P P 16 57 05.9 -0.3
baz=76
I16A Newdale 76.38 45 ⇓P P 16 57 06.6 +0.6
baz=76,SNR=12
P11A Circle Ranch, 76.38 51 ⇓P P 16 57 06.5 +0.3
baz=76,SNR=10
Q10A Clear Creek Ra 76.40 52 ⇑P P 16 57 06.6 +0.3
baz=76,SNR=24
YFT Old Faithful 76.40 45 *eP* **P 16 57 07.7 +1.5**
comp=Z,556nm,1.5s,mb6.3
PKM Peak Mountain 76.41 57 ⇓P P 16 57 06.9 +0.5
baz=76,SNR=13
L14A Malta 76.46 48 ⇑P P 16 57 07.5 +0.9
baz=76,SNR=45
DIYA Diyarbakir 76.47 307 *i* P **P 16 57 07.4 +0.7**
K15A Arbon 76.49 47 ⇑P P 16 57 07.3 +0.5
baz=76
KONO Kongsberg 76.54 337⇑ *iP* **P 16 57 06.4 -0.3**
KONO Kongsberg 76.54 337 P **P 16 57 06.7 0.0**
KONO pmax pmax
comp=Z,320nm,1.2s,mb6.1
KONO Kongsberg 76.54 337 *eP* **P 16 57 06.4 -0.3**
comp=Z,320nm,1.2s,mb6.1
KONO LR LR
comp=Z,218µm,19.0s,MS7.5
N13A Wendover, West 76.58 49 ⇑P P 16 57 07.4 +0.2
baz=76,SNR=7.5
N13A Wendover, West 76.58 49 *eP* **P 16 57 07.8 +0.5**
comp=Z,294nm,1.1s,mb6.1
LKWY Lake 76.58 44 *eP* **P 16 57 08.6 +1.4**
LKWY pmax pmax
comp=Z,185nm,1.1s,mb5.9
LKWY MLR MLR
comp=Z,50µm,20.0s,MS6.8
LKWY Lake 76.58 44 *eP* **P 16 57 08.6 +1.4**
comp=Z,185nm,1.1s,mb5.9
LKWY LR LR
comp=Z,50µm,20.0s,MS6.8
H17A Grant Village 76.58 45 ⇑P P 16 57 09.3 +2.0
baz=76,SNR=117
G18A Lazy EL Ranch, 76.58 43 ⇓P P 16 57 07.0 -0.2
baz=76
O12A Currie 76.59 50 ⇑P P 16 57 07.8 +0.4
baz=76,SNR=67
J16A Bone 76.67 46 ⇑P P 16 57 08.4 +0.7
baz=76,SNR=26
SFJD Kangerlussuaq 76.67 5⇑ *iP* **P 16 57 07.3 0.0**
SFJD pmax pmax
comp=Z,65nm,0.8s,mb5.6
SFJD MLR MLR
comp=Z,27µm,22.0s,MS6.5
SFJD Kangerlussuaq 76.67 5 P **P 16 57 07.2 -0.1**
comp=Z,57nm,0.8s,mb5.5,baz=325,slow=5.1,SNR=14
SFJD Kangerlussuaq 76.67 5 *eP* **P 16 57 07.1 -0.2**
comp=Z,142nm,1.6s,mb5.7
SFJD LR LR
comp=Z,49µm,21.0s,MS6.8
SFJD Kangerlussuaq 76.67 5⇑ *iP* **P 16 57 07.3 0.0**
comp=Z,65nm,0.8s,mb5.6
SFJD
comp=Z,27µm,22.0s
IMW Indian Meadow 76.68 45 *eP* **P 16 57 08.5 +0.7**
comp=Z,136nm,1.0s,mb5.8
CWC Cottonwood Cre 76.69 55 ⇑P P 16 57 08.3 +0.3
baz=76
M14A Sheep Mountain 76.71 48 ⇓P P 16 57 08.7 +0.7
baz=76,SNR=45
DCID1 Drake Creek 76.72 45 *eP* **P 16 57 07.7 -0.4**
comp=Z,147nm,0.6s,mb6.1
SBC Santa Barbara 76.74 57 ⇑P P 16 57 08.8 +0.4
baz=77
R10A Warm Springs 76.77 52 ⇓P P 16 57 08.7 +0.3
baz=77,SNR=14
S10A Tonopah Range, 76.80 53 ⇑P P 16 57 08.8 +0.2
baz=77,SNR=47
GRAC Grapevine Rang 76.83 54 ⇑P P 16 57 09.1 +0.3
baz=77,SNR=12
SUE Sulen 76.83 340 *eP* **P 16 57 08.7 +0.4**
Q11A Duckwater 76.86 51 ⇑P P 16 57 08.9 +0.1
baz=77,SNR=8.8
ELZG Elazig 76.86 308 *i* P **P 16 57 10.3 +1.4**
RLMT Red Lodge 76.87 43 ⇓P P 16 57 09.5 +0.7
baz=77,SNR=34
RLMT Red Lodge 76.87 43 *eP* **P 16 57 08.7 -0.1**
comp=Z,41nm,2.1s,mb5.0
RLMT LR LR
comp=Z,25µm,19.0s,MS6.5
I17A Pilgrim Ck. 76.87 45 ⇓P P 16 57 10.2 +1.3
baz=77,SNR=38
ISA Isabella 76.88 55 ⇓P P 16 57 08.1 -0.9
baz=77,SNR=8.2
ISA Isabella 76.88 55 P **P 16 57 08.9 -0.1**
ISA pmax pmax
comp=Z,54nm,1.0s,mb5.4
ISA Isabella 76.88 55 *eP* **P 16 57 07.9 -1.2**
comp=Z,54nm,1.0s,mb5.4
HVU Hansel Valley 76.89 48 P **P 16 57 09.8 +0.8**
HVU pmax pmax
comp=Z,1µm,1.6s,mb6.5
HVU Hansel Valley 76.89 48 *eP* **P 16 57 09.1 +0.1**
comp=Z,1µm,1.7s,mb6.5
TPAW Teton Pass 76.92 45 *eP* **P 16 57 09.4 +0.2**
comp=Z,46nm,0.7s,mb5.5
ARVC Arvin 76.95 56 ⇓P P 16 57 09.5 +0.1
baz=77
K16A Soda Springs 76.95 46 ⇓P P 16 57 10.0 +0.7
baz=77,SNR=50
P12A McGill 76.96 51 ⇓P P 16 57 09.7 +0.3
baz=77,SNR=59
ERBA Erbaa 76.96 311 *i* P **P 16 57 10.6 +1.2**
L15A Malad City 76.98 47 ⇓P P 16 57 10.3 +0.8
baz=77,SNR=31
LOHW Long Hollow 77.05 45 *eP* **P 16 57 10.2 +0.4**
comp=Z,148nm,1.0s,mb5.9
BSC Santa Cruz Isl 77.05 57 ⇑P P 16 57 10.1 +0.1
baz=77
J17A Brown Place, J 77.14 45 ⇑P P 16 57 11.2 +0.8
baz=77,SNR=11
O13A Hicks Ranch, I 77.14 50 ⇑P P 16 57 10.5 0.0
baz=77
ASK Askoy 77.19 339 *eP* **P 16 57 09.1 -1.2**
R11A Troy Canyon, C 77.19 52 ⇑P P 16 57 11.0 +0.2
baz=77,SNR=55
N14A Grayback Hills 77.20 49 ⇓P P 16 57 10.9 +0.2
baz=77,SNR=20
BER Bergen 77.23 339⇑ *iP* **P 16 57 09.6 -0.9**
BER ⇑*iP* 16 57 10.4
BER Bergen 77.23 339 P **P 16 57 13.3 +2.8**
BGU Big Grassy Mou 77.25 48 *eP* **P 16 57 10.6 -0.4**
comp=Z,213nm,1.4s,mb5.9
Q12A Willow Creek R 77.26 51 ⇑P P 16 57 11.3 +0.2
baz=77,SNR=39
M15A Larsen Ranch, 77.28 48 ⇓P P 16 57 11.4 +0.2
baz=77,SNR=19
AHID Auburn Hatcher 77.28 46 *eP* **P 16 57 10.9 -0.3**
comp=Z,200nm,1.3s,mb5.9
AHID LR LR
comp=Z,16µm,19.0s,MS6.4
MPMC Manual Prospec 77.30 55 ⇓P P 16 57 11.5 +0.1
baz=77,SNR=42
OSI Osito Adit 77.31 56 ⇑P P 16 57 11.7 +0.2
baz=77
MALT Malatya 77.33 308 *eP* **P 16 57 12.8 +1.2**
comp=Z,276nm,1.1s,mb6.1
MALT LR LR
comp=Z,138µm,21.0s,MS7.2
MALT Malatya 77.33 308⇑ *iP* **P 16 57 13.1 +1.6**
TOKA Tokat 77.35 311 *i* P **P 16 57 12.5 +0.9**
EGD Espegrend 77.35 339 *eP* **P 16 57 10.6 -0.7**
SPUT South Promonto 77.37 48 *eP* **P 16 57 11.7 0.0**
comp=Z,934nm,1.7s,mb6.4
BLG Laguna Peak 77.37 57 ⇑P P 16 57 11.7 -0.2
baz=77
K17A Gardner Place, 77.39 46 ⇓P P 16 57 12.1 +0.3
baz=77
DGMT Dagmar 77.42 38 ⇑P P 16 57 11.2 -0.6
baz=77
DGMT Dagmar 77.42 38 *eP* **P 16 57 11.3 -0.6**
comp=Z,298nm,1.4s,mb6.0
DGMT LR LR
comp=Z,36µm,19.0s,MS6.7
I18A Diamond G Ranc 77.44 45 ⇓P P 16 57 12.6 +0.5
baz=77
FURC Furnace Creek, 77.47 54 ⇑P P 16 57 12.6 +0.2
baz=77,SNR=15
LRMC Laurel Mountai 77.50 55 ⇑P P 16 57 13.0 +0.4
baz=77
S11A Rachel 77.50 52 ⇓P P 16 57 12.8 +0.3
baz=77,SNR=20
P13A Bates Ranch, G 77.53 50 ⇓P P 16 57 13.2 +0.5
baz=77,SNR=39
LAO LASA Array 77.53 41 *eP* **P 16 57 11.2 -1.2**
comp=Z,1µm,2.0s,mb6.5
LAO LR LR
comp=Z,19µm,21.0s,MS6.4
FRB Frobisher Bay 77.53 13 P **P 16 57 11.7 -0.5**
comp=Z,50nm,0.6s,mb5.6,baz=331,slow=6.1,SNR=44
L16A Fish Haven 77.54 47 ⇑P P 16 57 13.5 +0.8
baz=77,SNR=12
KIS Kishinev 77.55 320⇑ *iP* **P 16 57 10.0 -2.6**
comp=Z,4µm,4.0s
KIS LRM 17 34 22.0
comp=Z,298µm,16.0s
KIS Kishinev 77.55 320⇑ *iP* **P 16 57 10.0 -2.6**
KIS MLR MLR
comp=N,298µm,16.0s,MS7.9
KIS MLR MLR
comp=E,338µm,16.0s,MS7.9
KIS MLR MLR
comp=Z,671µm,16.0s,MS8.1
KIS MLR MLR
comp=Z,396µm,16.0s
KIS Kishinev 77.55 320 P **P 16 57 13.7 +1.1**
SNCC San Nicolas Is 77.55 58 ⇑P P 16 57 12.8 -0.1
baz=77
N15A Stansbury Isla 77.58 48 ⇓P P 16 57 13.6 +0.7
baz=77,SNR=6.7
J18A Kendall Valley 77.63 45 ⇓P P 16 57 13.7 +0.5
baz=77,SNR=44
BOYT Boyabat 77.64 312 *i* P **P 16 57 14.8 +1.6**
EDW2 Edwards Air Fo 77.65 56 ⇓P P 16 57 13.4 0.0
baz=78,SNR=24
AKCD Akcadag 77.66 308 *i* P **P 16 57 14.8 +1.4**
BLS5 Blasjo 77.69 338 *eP* **P 16 57 12.8 -0.4**
HWUT Hardware Ranch 77.71 47 *eP* **P 16 57 13.7 +0.1**
comp=Z,154nm,1.1s,mb5.8
HWUT LR LR
comp=Z,19µm,19.0s,MS6.4
RBK Rabkut 77.75 283 P **P 16 57 13.5 -0.7**
SNR=37
WAR Warsaw 77.77 327 *eP* **P 16 57 14.4 +0.7**
WAR *e*S S 17 07 05.4 +2.4
WAR LMZ 17 33 24.8
comp=Z,74µm,23.6s
DECC Green Verdugo 77.79 57 ⇓P P 16 57 13.8 -0.3
baz=78
DGAR Diego Garcia 77.81 251 *c iP* **P 16 57 14.1 -0.4**
DGAR Diego Garcia 77.81 251 PFAKE 16 57 20.0 +5.5
DGAR LR LR
comp=Z,50µm,19.0s,MS6.9
DUG Dugway 77.82 49 ⇑P P 16 57 14.7 +0.4
baz=78,SNR=45
DUG Dugway 77.82 49 P **P 16 57 14.5 +0.2**
DUG pmax pmax
comp=Z,130nm,0.9s,mb5.9
DUG Dugway 77.82 49 *eP* **P 16 57 14.1 -0.2**
comp=Z,130nm,0.9s,mb5.9
DUG LR LR
comp=Z,16µm,20.0s,MS6.3
L17A Cokeville 77.82 47 ⇓P P 16 57 14.4 +0.2
baz=78,SNR=23
Q13A Wheeler Ranch, 77.82 51 ⇑P P 16 57 14.6 +0.3
baz=78,SNR=40
R12A Pony Springs, 77.83 51 ⇑P P 16 57 14.5 +0.2
baz=78
U10A Ash Meadows, A 77.85 54 ⇓P P 16 57 14.8 +0.3
baz=78
M16A Huntsville 77.85 48 ⇓P P 16 57 14.6 +0.2
baz=78,SNR=30
WHFO Wadi Hawf 77.86 283 P **P 16 57 14.4 -0.4**
SNR=32
ATAB Bozova 77.91 308 *i* P **P 16 57 16.1 +1.3**
NOQ North Oquirrh 77.96 48 *eP* **P 16 57 15.5 +0.5**
comp=Z,167nm,0.9s,mb6.0
K18A Toltan Ranch, 77.97 46 ⇑P P 16 57 15.7 +0.7
baz=78,SNR=9.8
O15A The Old Anders 77.98 49 ⇑P P 16 57 15.7 +0.5
baz=78
MWC Mount Wilson 77.98 56 P **P 16 57 16.1 +0.8**
MWC pmax pmax
comp=Z,160nm,0.6s,mb6.1
MWC Mount Wilson 77.98 56 *eP* **P 16 57 15.1 -0.1**
comp=Z,159nm,0.6s,mb6.1
P14A Drum Mountains 78.03 50 ⇓P P 16 57 16.2 +0.8
baz=78,SNR=61
LVV L'vov 78.07 324 *d iP* **P 16 57 15.7 +0.3**
LVV *e* 17 00 13.1
LVV *e*PPP 17 02 04.9
LVV *i* S S 17 07 06.9 +0.6
LVV *e*PS 17 07 50.5
LVV pmax pmax
comp=N,2µm,6.0s
LVV pmax pmax
comp=E,1µm,6.0s
LVV pmax pmax
comp=Z,4µm,6.0s
LVV MLR MLR
comp=E,240µm,16.0s,MS7.7
LVV MLR MLR
comp=Z,270µm,16.0s,MS7.7
LVV MLR MLR
comp=N,138µm,17.0s,MS7.7
IAS Iasi 78.07 320⇓ *iP* **P 16 57 18.1 +2.6**
T11A Corn Creek, Al 78.08 53 ⇑P P 16 57 16.2 +0.4
baz=78
S12A Delamar Landin 78.10 52 ⇑P P 16 57 17.0 +1.2
baz=78
FMP Fort Macarthur 78.12 57 ⇓P P 16 57 16.2 +0.2
baz=78
BW06 Boulder Array 78.17 45 ⇑P P 16 57 16.2 0.0
baz=78,SNR=53
BW06 Boulder Array 78.17 45 *eP* **P 16 57 15.6 -0.6**
comp=N,296nm,1.6s,mb6.0
BW06 LR LR
comp=Z,16µm,19.0s,MS6.4
PDAR Pinedale Array 78.17 45 P **P 16 57 15.7 -0.5**
comp=Z,23nm,0.7s,mb5.2,baz=290,slow=0.9,SNR=45
BSD Bornholm Skovb 78.18 332⇑ *iP* **P 16 57 15.7 -0.3**
BSD pmax pmax
comp=Z,270nm,1.0s,mb6.1
BSD MLR MLR
comp=Z,97µm,19.0s,MS7.2
BSD Bornholm Skovb 78.18 332 P **P 16 57 15.5 -0.5**
BSD Bornholm Skovb 78.18 332⇑ *iP* **P 16 57 15.7 -0.3**

comp=Z,270nm,1.0s,mb6.1
BSD
comp=Z,97μm,19.0s
SHOC Shoshone 78.19 54 ⇑P P 16 57 16.4 +0.1
baz=78
LEOM Leova 78.19 320 ⇓P P 16 57 19.5 +3.3
LEOM Leova 78.19 320 ⇓iP P 16 57 19.5 +3.3
CTKT Corum 78.19 312 iP P 16 57 17.0 +0.7
GSC Goldstone 78.19 55 ⇓P P 16 57 16.3 -0.1
baz=78,SNR=14
CIS Catalina Islan 78.23 57 ⇑P P 16 57 16.3 -0.3
baz=78
N16A Rees Ranch, Co 78.23 48 ⇑P P 16 57 17.0 +0.5
baz=78,SNR=9.7
BFSC Mount Baldy St 78.25 56 ⇓P P 16 57 16.9 +0.2
baz=78
Q14A Sevier Lake (B 78.26 50 ⇑P P 16 57 17.4 +0.7
baz=78,SNR=96
RRX Edison Barstow 78.31 55 ⇑P P 16 57 17.3 +0.2
baz=78
R13A O'Grain Ranch, 78.32 51 ⇓P P 16 57 17.3 +0.3
baz=78,SNR=15
M17A Scullys Gap (B 78.33 47 ⇑P P 16 57 17.0 -0.1
baz=78,SNR=18
SNART Snartemo 78.33 337 ⇑iP P 16 57 17.0 +0.3
SCI San Clemente I 78.38 58 ⇑P P 16 57 17.4 -0.1
baz=78
PINB Pinarbasi 78.38 310 iP P 16 57 19.4 +2.0
NLU North Lily Min 78.42 49 eP P 16 57 17.8 +0.2
comp=Z,150nm,1.1s,mb5.8
L18A Fontenelle, Gr 78.42 46 ⇓P P 16 57 17.9 +0.4
baz=78,SNR=27
GZT Gaziantep 78.44 308 iP P 16 57 19.1 +1.3
BORG Borgarnes 78.45 353 P P 16 57 19.0 +1.8
comp=Z,2μm,1.5s,mb6.8,SNR=16
BORG Borgarnes 78.45 353 P P 16 57 19.3 +2.0
BORG pmax pmax
comp=Z,140nm,0.6s
BORG Borgarnes 78.45 353 eP P 16 57 19.1 +1.8
comp=Z,144nm,0.6s,mb6.1
BORG LR LR
comp=Z,32μm,19.0s,MS6.7
U11A Corn Creek 78.46 53 ⇑P P 16 57 18.0 +0.2
baz=78
BALT Daday 78.47 313 iP P 16 57 18.8 +1.0
MOO Moorlands 78.47 176 eP P 16 57 19.7 +2.2
MOO eS S 17 07 09.5 -0.9
P15A Leamington 78.53 49 ⇓P P 16 57 18.6 +0.4
baz=78,SNR=5.1
K19A Absolon Red Bu 78.54 45 ⇑P P 16 57 17.7 -0.5
baz=78,SNR=16
ABTO Aybut 78.55 283 P P 16 57 18.4 -0.2
SNR=27
N17A Moffit Pass 78.56 47 ⇑P P 16 57 18.5 +0.2
baz=78,SNR=29
O16A Springville 78.61 48 ⇓P P 16 57 18.9 +0.3
baz=78,SNR=19
GKP Gorka Klasztor 78.63 330 eP P 16 57 18.7 +0.2
GKP eS S 17 07 09.8 -2.5
GKP LMZ 17 35 37.0
comp=Z,254μm,17.7s
GKP Gorka Klasztor 78.63 330 P P 16 57 19.3 +0.8
COP Copenhagen 78.67 333 ⇑iP P 16 57 19.0 +0.4
comp=Z,106nm,0.8s,mb5.8
COP
comp=Z,64μm,17.0s
TUQ Turquoise Moun 78.69 54 ⇑P P 16 57 19.3 +0.2
baz=78
L19A Farson 78.70 46 ⇓P P 16 57 19.1 0.0
baz=78,SNR=32
M18A Lyman 78.71 47 ⇑P P 16 57 19.1 -0.1
baz=78,SNR=18
T12A Moapa 78.71 53 ⇓P P 16 57 18.9 -0.3
baz=78
TLCR 78.72 318 ⇓P P 16 57 19.1 -0.1
TLCR 78.72 318 ⇓iP P 16 57 19.0 -0.1
BBRC Big Bear Sol-O 78.73 56 ⇓P P 16 57 18.6 -0.8
baz=78
S13A Holt Ranch, En 78.75 52 ⇓P P 16 57 19.6 +0.2
baz=78,SNR=25
SOFL Sornfelli, Far 78.77 345 ⇑iP P 16 57 20.1 +1.0
SOFL AMb AMB 16 57 21.2
comp=Z,520nm,4.7s
V11A Goodsprings 78.78 54 ⇓P P 16 57 19.8 +0.2
baz=79
HEC Hector,Ludlow 78.78 55 ⇓P P 16 57 19.6 -0.1
baz=79,SNR=14
Q15A Fillmore 78.81 50 ⇑P P 16 57 20.0 +0.3
baz=79,SNR=14
KWP Kalwaria Pacla 78.82 324 iP P 16 57 20.5 +0.9
KWP eS S 17 07 16.7 +2.3
KWP LMZ 17 35 35.3
comp=Z,456μm,16.2s
KWP Kalwaria Pacla 78.82 324 eP P 16 57 19.9 +0.3
KWP LR LR
comp=Z,191μm,19.0s,MS7.5
KWP Kalwaria Pacla 78.82 324 ⇑iP P 16 57 20.4 +0.8
R14A James Farms, M 78.84 51 ⇑P P 16 57 19.7 -0.2
baz=79
P16A Fountain Green 78.88 49 ⇓P P 16 57 20.8 +0.6
baz=79
ARUT Antelope Range 78.89 51 P P 16 57 21.5 +1.3
ARUT pmax pmax
comp=Z,110nm,1.1s,mb5.7
ARUT Antelope Range 78.89 51 eP P 16 57 20.3 +0.1
comp=Z,115nm,1.1s,mb5.7
MURC Murrieta 78.93 57 ⇓P P 16 57 20.4 -0.1
baz=79
K20A Yellowstone Ra 78.94 45 ⇓P P 16 57 19.9 -0.5
baz=79
TAU Tasmania Unive 78.95 176 P P 16 57 21.1 +1.0
comp=Z,436nm,0.8s,mb6.4,SNR=5.6
TAU Tasmania Unive 78.95 176 PFAKE 16 57 30.0 +10
TAU LR LR
comp=Z,29μm,20.0s,MS6.6
BUR08 Bucovina Ar. S 78.97 322 eP P 16 57 20.7 +0.3
BUR01 Bucovina Ar. S 78.98 322 P P 16 57 21.2 +0.7
BURAR Bucovina Array 78.98 322 ⇑P P 16 57 21.1 +0.6
BURAR Bucovina Array 78.98 322 ⇑iP P 16 57 21.0 +0.5
U12A Valley of Fire 79.00 53 ⇓P P 16 57 21.3 +0.4
baz=79
T13A Saint George 79.05 52 ⇑P P 16 57 21.4 +0.3
baz=79,SNR=19
CDAG Cicekdag 79.06 311 iP P 16 57 22.1 +1.0
S14A Cedar City 79.07 51 ⇓P P 16 57 21.7 +0.5
baz=79
O17A Robinson Place 79.08 48 ⇑P P 16 57 21.6 +0.4
baz=79,SNR=19
CCUT Cedar City 79.08 51 eP P 16 57 21.6 +0.3
comp=Z,231nm,1.0s,mb6.1
ELDT Eldivan 79.09 312 iP P 16 57 22.3 +1.0
KUZU Kuzuini 79.11 308 iP P 16 57 23.0 +1.6
LRW Lerwick 79.18 342 ⇑iP P 16 57 21.6 +0.3
LRW AMb AMB 16 57 22.9
comp=Z,508nm,4.4s
LRW AMS AMS 17 42 03.0
comp=Z,66μm,16.6s,MS7.0
M19A Rock Springs 79.19 46 ⇑P P 16 57 21.6 -0.2
baz=79
MUD Monsted U'grnd 79.21 335 iP P 16 57 23.1 +1.5
MUD pmax pmax
comp=Z,110nm,1.0s,mb5.7
MUD MLR MLR
comp=Z,210μm,19.0s,MS7.5
MUD Monsted U'grnd 79.21 335 P P 16 57 21.6 0.0
MUD Monsted U'grnd 79.21 335 ⇑iP P 16 57 21.8 +0.2
MUD Monsted U'grnd 79.21 335 iP P 16 57 23.1 +1.5
comp=Z,112nm,1.0s,mb5.8
MUD
comp=Z,212μm,19.0s
RGN Rugen 79.21 332 eP P 16 57 21.7 +0.1
comp=Z,614nm,1.2s,mb6.4
N18A Larsen Ranch, 79.22 47 ⇑P P 16 57 22.1 +0.1
baz=79,SNR=21
V12A Nelson 79.22 54 ⇑P P 16 57 22.2 +0.2
baz=79,SNR=13
MSU Marysvale 79.23 50 eP P 16 57 23.1 +1.0
MSU pmax pmax
comp=Z,29nm,0.7s,mb5.3
MSU Marysvale 79.23 50 eP P 16 57 23.1 +1.0
comp=Z,29nm,0.7s,mb5.3
GMRC Granite Mounta 79.26 55 ⇓P P 16 57 22.2 -0.1
baz=79,SNR=20
L20A Wamsutter 79.35 45 ⇑P P 16 57 23.2 +0.5
baz=79,SNR=23
R15A Junction 79.36 50 ⇓P P 16 57 23.9 +1.1
baz=79,SNR=9.4

U13A Pakoon Wash 79.38 53 ⇑P P 16 57 23.0 0.0
baz=79,SNR=50
VRI Vrincioaia 79.38 320 ⇓iP P 16 57 23.2 +0.5
109C Camp Elliot, M 79.41 57 ⇑P P 16 57 23.1 -0.1
baz=79
TIRR Tirgusor 79.42 318 eP P 16 57 22.8 -0.1
TIRR pmax pmax
comp=Z,236nm,1.2s,mb6.0
TIRR Tirgusor 79.42 318 eP P 16 57 22.8 -0.2
comp=Z,236nm,1.2s,mb6.0
PFO Pinyon Flat Ob 79.42 56 P P 16 57 23.0 -0.2
comp=Z,580nm,1.1s,mb6.4,SNR=11
PFO Pinyon Flat Ob 79.42 56 ⇓P P 16 57 22.9 -0.4
baz=79,SNR=18
PFO Pinyon Flat Ob 79.42 56 P P 16 57 23.9 +0.7
PFO LR LR
comp=Z,31μm,20.0s,MS6.6
PLOR Plostina 79.43 320 ⇑P P 16 57 25.8 +2.8
PLOR Plostina 79.43 320 ⇑iP P 16 57 25.8 +2.8
BR131 Keskin Array S 79.44 312 eP P 16 57 23.3 +0.1
comp=Z,141nm,0.9s,mb5.9
BR131 LR LR
comp=Z,70μm,19.0s,MS7.0
BRTR Keskin Array B 79.44 312 P P 16 57 23.5 +0.3
BRTR 17 00 27.0
BRTR Keskin Array B 79.44 312 P P 16 57 23.5 +0.3
comp=Z,92nm,0.9s,mb5.7,baz=57,slow=4.0,SNR=85
BRTR PP PP 17 00 26.9 +3.8
comp=Z,23nm,1.0s,baz=103,slow=3.9,SNR=4.2
BRTR PKKPbc PKKPbc 17 16 20.6 +10
comp=Z,1.4nm,0.9s,baz=198,slow=3.2,SNR=4.7
BRTR LR LR 17 37 06.9
comp=Z,83μm,18.9s,MS7.1,baz=180,slow=39
LDFC Landfair 79.44 54 eP P 16 57 23.2 -0.1
comp=Z,67nm,1.0s,mb5.5
W12A Cal Nev Ari 79.47 54 ⇑P P 16 57 23.4 0.0
baz=79
O18A Roosevelt 79.47 48 ⇓P P 16 57 23.6 +0.3
baz=79,SNR=20
BELC Belle Mtn. 79.50 56 ⇑P P 16 57 23.3 -0.3
baz=79,SNR=21
KOLS Kolonicke sedl 79.51 324 eP P 16 57 23.9 +0.5
KOLS e 16 57 31.7
KOLS e 17 00 22.4
KOLS eS S 17 07 25.0 +3.2
KOLS pmax pmax
comp=Z,288nm,1.9s,mb5.9
KOLS MLR MLR
comp=Z,284μm,17.1s,MS7.7
KOLS Kolonicke sedl 79.51 324 eP P 16 57 23.9 +0.5
comp=Z,288nm,1.9s,mb5.9
KOLS e 16 57 31.7
KOLS ePP PP 17 00 22.4 -1.1
KOLS eS S 17 07 25.0 +3.2
KOLS eSS SS 17 12 58.5 +30
KOLS LR LR
comp=Z,284μm,17.1s,MS7.7
KOLS Kolonicke sedl 79.51 324 eP P 16 57 23.9 +0.5
KOLS e 16 57 31.7
KOLS ePP PP 17 00 22.4 -1.1
KOLS eS S 17 07 25.0 +3.2
KOLS eSS SS 17 12 58.5 +30
P17A Butcher Ranch, 79.52 49 ⇑P P 16 57 23.9 +0.3
baz=79,SNR=36
T14A Hurricane 79.55 52 ⇑P P 16 57 24.0 +0.1
baz=79,SNR=8.8
N19A John Jarvie Ra 79.57 47 ⇑P P 16 57 23.9 0.0
baz=79,SNR=39
Q16A Castle Valley 79.61 49 ⇓P P 16 57 24.6 +0.5
baz=79,SNR=26
S15A Panguitch 79.63 51 ⇑P P 16 57 24.4 +0.1
baz=79
RAR Rarotonga 79.63 126 P pP 16 57 35.9 -0.6
RAR Rarotonga 79.63 126 PFAKE 16 57 30.0 +5.7
RAR LR LR
comp=Z,30μm,20.0s,MS6.6
STHS Stebnicka Huta 79.65 325 iP P 16 57 25.0 +0.9
STHS e 16 57 33.1
STHS pmax pmax
comp=Z,65nm,0.9s,mb5.6
STHS Stebnicka Huta 79.65 325 iP P 16 57 25.0 +0.9
comp=Z,65nm,0.9s,mb5.6
STHS e 16 57 33.1
STHS Stebnicka Huta 79.65 325 iP P 16 57 25.0 +0.9
STHS e 16 57 33.1
V13A Grand Canyon W 79.71 53 ⇑P P 16 57 24.9 +0.2
baz=80,SNR=26
UZH Uzhgorod 79.71 324 eP P 16 57 24.0 -0.5
UZH eS S 17 07 23.0 -0.9
UZH MLR MLR
comp=Z,72μm,16.0s,MS7.1
P18A Preston Nutter 79.72 48 ⇑P P 16 57 25.1 +0.4
baz=80,SNR=46
OJC Ojcow 79.74 326 eP P 16 57 25.1 +0.5
OJC ePP PP 17 00 25.8 +0.4
OJC eS S 17 07 23.3 -0.9
OJC L 17 36 19.6
comp=Z,386nm,16.9s
OJC Ojcow 79.74 326 P P 16 57 24.6 0.0
M20A Sweetwater, Wa 79.77 46 ⇑P P 16 57 25.6 +0.6
baz=80,SNR=26
COBT Iskenderun 79.78 308 iP P 16 57 26.1 +1.0
BMR Baia Mare 79.80 323 P P 16 57 26.0 +1.0
BMR Baia Mare 79.80 323 ⇑iP P 16 57 26.9 +2.0
R16A Teasdale 79.81 50 ⇓P P 16 57 26.2 +1.0
baz=80,SNR=57
SGKT Sivrigoynuk 79.85 313 iP P 16 57 26.1 +0.7
BBAL Bala 79.86 312 iP P 16 57 23.9 -1.5
MONP Monument Peak 79.87 57 ⇑P P 16 57 25.4 -0.2
baz=80,SNR=19
SRU San Rafael 79.88 49 ⇑P P 16 57 26.1 +0.5
baz=80,SNR=85
SRU San Rafael 79.88 49 P P 16 57 25.7 +0.1
SRU pmax pmax
comp=Z,190nm,0.7s,mb6.1
SRU San Rafael 79.88 49 eP P 16 57 25.4 -0.2
comp=Z,186nm,0.7s,mb6.1
U14A Mt Trumbull 79.88 52 ⇑P P 16 57 25.9 +0.3
baz=80,SNR=38
L21A Rawlins 79.93 45 ⇑P P 16 57 25.6 -0.2
baz=80,SNR=25
NEE2 Needles Airpor 79.95 54 ⇑P P 16 57 25.8 -0.2
baz=80
IRM Iron Mountain 79.97 55 ⇑P P 16 57 25.9 -0.2
baz=80,SNR=22
O19A Miners Draw (B 79.97 47 ⇑P P 16 57 25.8 -0.2
baz=80,SNR=23
YURE YUREGIR 79.99 308 iP P 16 57 27.6 +1.4
T15A Red Dirt Ranch 80.02 51 ⇑P P 16 57 26.8 +0.4
baz=80,SNR=24
MLR Muntele Rosu 80.04 320 ⇓iP P 16 57 27.1 +0.8
BC3 Big Chuckw Mtn 80.07 56 ⇓P P 16 57 26.6 -0.1
baz=80,SNR=22
NIE Niedzica 80.08 325 eP P 16 57 27.3 +0.8
Q18A Rafter H Ranch 80.12 49 ⇑P P 16 57 27.0 +0.1
baz=80,SNR=15
ULM Lac du Bonnet 80.13 33 P P 16 57 25.3 -1.4
comp=Z,32nm,0.8s,mb5.3,baz=317,slow=6.3,SNR=20
ULM LR LR 17 38 19.2
comp=Z,16μm,18.4s,MS6.4,baz=340,slow=40
ULM Lac du Bonnet 80.13 33 eP P 16 57 24.9 -1.8
comp=Z,340nm,1.6s,mb6.0
ULM LR LR
comp=Z,43μm,19.0s,MS6.8
N20A Spence Gulch, 80.14 46 ⇓P P 16 57 27.3 +0.4
baz=80,SNR=74
M21A Separation Pea 80.17 45 ⇓P P 16 57 27.3 +0.3
baz=80,SNR=35
YAYL Yayladag 80.17 308 iP P 16 57 28.0 +0.8
R17A Hanksville Air 80.20 49 ⇓P P 16 57 27.6 +0.3
baz=80,SNR=58
DVTC Desert V Tower 80.23 57 ⇑P P 16 57 27.7 +0.2
baz=80,SNR=18
W13A Hualapai Mount 80.23 54 ⇓P P 16 57 27.7 +0.1
baz=80,SNR=20
GULE Gulek 80.25 309 iP P 16 57 29.0 +1.4
SWSC Sam W. Stewart 80.27 56 ⇑P P 16 57 27.3 -0.5
baz=80
HENT Hendek 80.37 314 iP P 16 57 28.1 -0.1
RSSD Black Hills 80.37 42 P P 16 57 27.4 -0.7
RSSD pmax pmax
comp=Z,53nm,0.8s,mb5.5
RSSD Black Hills 80.37 42 eP P 16 57 27.1 -1.1
comp=Z,53nm,0.8s,mb5.5
RSSD LR LR
comp=Z,15μm,20.0s,MS6.3

MDB Medias 80.41 321 P P 16 57 30.3 +2.0
V14A Boquillas Ranc 80.41 53 ⇑P P 16 57 29.1 +0.6
baz=80,SNR=62
U15A North Rim 80.44 52 ⇓P P 16 57 29.3 +0.6
baz=80,SNR=58
P19A Cripple Cowboy 80.48 48 ⇓P P 16 57 28.9 +0.1
baz=80,SNR=101
VOIR 80.54 320 P P 16 57 29.9 +0.9
VOIR 80.54 320 ⇓iP P 16 57 29.5 +0.5
PDMCI Parker Dam,Lak 80.55 54 ⇑P P 16 57 29.1 -0.1
baz=80,SNR=10
RAC Raciborz 80.56 327 eP P 16 57 29.8 +0.8
RAC eS S 17 07 32.9 +0.2
RAC MLR MLR
comp=N,115μm,18.0s,MS7.4
RAC MLR MLR
comp=Z,120μm,18.0s,MS7.3
RAC MLR MLR
comp=E,102μm,16.0s,MS7.4
X13A Yucca 80.57 54 ⇑P P 16 57 29.2 -0.2
baz=80,SNR=41
T16A Glen Canyon Da 80.59 51 ⇑P P 16 57 28.9 -0.6
baz=80
O20A White River Ci 80.60 47 ⇑P P 16 57 29.3 -0.1
baz=80,SNR=23
RUE Ruedersdorf 80.62 331 eP P 16 57 29.1 -0.2
comp=E,581nm,1.3s,mb6.3
N21A Black Mountain 80.62 46 ⇑P P 16 57 29.7 +0.1
baz=80,SNR=38
Y12C Blythe 80.63 55 ⇑P P 16 57 29.5 -0.2
baz=80
S17A Black Ridge (B 80.63 50 ⇓P P 16 57 29.6 0.0
baz=80,SNR=48
KECS Kecovo 80.67 325 eP P 16 57 30.0 +0.4
comp=E,38nm,1.2s,mb5.2
KECS e 16 57 37.8
KECS e pP 16 57 44.1 +2.3
KECS ePP PP 17 00 31.1 -2.0
KECS Kecovo 80.67 325 eP P 16 57 30.0 +0.4
KECS e 16 57 37.8
KECS e pP 16 57 44.1 +2.3
KECS ePP PP 17 00 31.1 -2.0
W14A Seligman 80.68 53 ⇑P P 16 57 30.4 +0.4
baz=80,SNR=30
R18A Canyonlands Na 80.72 49 ⇓P P 16 57 30.0 -0.1
baz=80,SNR=61
M22A Cedar Creek Ra 80.74 45 ⇓P P 16 57 30.0 -0.1
baz=80,SNR=20
OKC Ostrava-Krasne 80.76 327 eP P 16 57 30.4 +0.3
OKC e pP 16 57 44.7 +2.5
OKC eS S 17 07 37.8 +3.0
OKC MLR MLR
comp=Z,146μm,17.1s,MS7.4
OKC MLR MLR
comp=E,129μm,16.0s
OKC Ostrava-Krasne 80.76 327 eP P 16 57 30.4 +0.3
OKC epP pP 16 57 44.7 +2.5
OKC eS S 17 07 37.8 +3.0
OKC AMS AMS 17 36 00.0
comp=E,146μm,17.1s
DRGR 80.79 322 ⇑iP P 16 57 30.8 +0.5
BSEG Bad Segeberg 80.80 333 eP P 16 57 30.1 -0.1
comp=Z,451nm,1.2s,mb6.3
BSEG Bad Segeberg 80.80 333 eP P 16 57 30.1 -0.1
BSEG pmax pmax
comp=Z,451nm,1.2s,mb6.3
KSP Ksiaz 80.82 328 eP P 16 57 30.8 +0.4
KSP ePP PP 17 00 35.4 +1.2
KSP eS S 17 07 37.5 +2.1
KSP LMZ 17 36 51.1
comp=Z,371μm,18.8s
KSP Ksiaz 80.82 328 ⇑iP P 16 57 30.8 +0.4
KSP e 16 57 38.1
KSP e*PP pP 16 57 43.5 +0.9
KSP e 17 00 32.5
KSP eS S 17 07 34.0 -1.4
KSP MLR MLR
comp=Z,428μm,18.8s,MS7.8
GLA Glamis 80.85 56 ⇑P P 16 57 31.0 +0.2
baz=81,SNR=15
V15A Kaibab Nationa 80.89 52 ⇑P P 16 57 31.8 +0.8
baz=81,SNR=19
LIKS Likavka 80.90 326 eP P 16 57 31.2 +0.4
LIKS pmax pmax
comp=Z,104nm,1.0s,mb5.7
LIKS Likavka 80.90 326 eP P 16 57 31.2 +0.4
comp=Z,104nm,1.0s,mb5.7
LIKS Likavka 80.90 326 eP P 16 57 31.2 +0.4
P20A De Beque 80.92 47 ⇓P P 16 57 30.9 -0.3
baz=81,SNR=7.9
O21A Pagoda 81.00 46 ⇓P P 16 57 31.6 0.0
baz=81
T17A Navajo Res., N 81.03 51 ⇓P P 16 57 31.7 -0.1
baz=81
Y13A Salome 81.05 55 ⇓P P 16 57 32.1 +0.1
baz=81
MORC Moravsky Berou 81.07 327 eP P 16 57 32.0 +0.2
comp=Z,259nm,0.8s,mb6.2
MORC Moravsky Berou 81.07 327 ⇑iP P 16 57 32.2 +0.5
MEST Erdemli 81.08 309 iP P 16 57 32.5 +0.4
FKH Fakeheh 81.08 306 eP P 16 57 32.9 +0.7
S18A Hurst Farm, Bl 81.09 50 ⇑P P 16 57 32.2 +0.1
baz=81,SNR=54
URZ Urewera 81.11 152 LR LR 17 30 26.9
comp=Z,17μm,21.4s,MS6.4,baz=341,slow=34
KDHN Kadinhani 81.11 312 iP P 16 57 32.5 +0.3
R19A Curley Farm, L 81.16 49 ⇑P P 16 57 32.7 +0.2
baz=81,SNR=18
DPC Dobruska-Polom 81.17 328 P P 16 57 32.6 +0.3
DPC Dobruska-Polom 81.17 328 eP P 16 57 33.0 +0.7
DPC epP pP 16 57 47.4 +2.9
DPC AMS AMS 17 36 20.0
comp=Z,216μm,17.4s
UPC Upice 81.19 328 eP P 16 57 32.8 +0.4
UPC epP pP 16 57 47.0 +2.5
N22A Wattenberg Ran 81.21 45 ⇓P P 16 57 33.0 +0.4
baz=81,SNR=9.7
ORE Reay 81.21 342 ⇑eP P 16 57 32.4 +0.1
W15A Williams 81.23 53 ⇑P P 16 57 33.4 +0.5
baz=81,SNR=22
ESKT Eskisehir 81.23 313 iP P 16 57 32.6 -0.3
X14A Yava 81.26 54 ⇑P P 16 57 33.6 +0.5
baz=81,SNR=45
Q20A Ridgley Place, 81.32 48 ⇑P P 16 57 33.2 -0.1
baz=81,SNR=22
112A Yuma 81.33 56 ⇑P P 16 57 33.2 -0.2
baz=81
DEV Deva 81.33 322 ⇑P P 16 57 37.8 +4.6
DEV Deva 81.33 322 ⇑iP P 16 57 37.8 +4.6
PSZ Piszkesteto 81.35 325 eP P 16 57 33.7 +0.4
comp=Z,356nm,1.1s,mb6.2
PSZ LR LR
comp=Z,230μm,19.0s,MS7.5
PSZ Piszkesteto 81.35 325 ⇑eP P 16 57 34.1 +0.8
PSZ Piszkesteto 81.35 325 ⇑iP P 16 57 34.1 +0.8
HWQ Hawqa 81.35 306 eP P 16 57 33.9 +0.3
U16A Tuba City 81.36 51 ⇑P P 16 57 33.9 +0.4
baz=81,SNR=48
U17A Shonto 81.36 51 ⇑P P 16 57 33.7 +0.1
baz=81,SNR=26
VYHS Vyhne 81.42 326 iP P 16 57 34.2 +0.5
VYHS e pP 16 57 48.6 +2.8
VYHS e 17 00 41.1
VYHS eS S 17 07 49.1 +7.3
VYHS pmax pmax
comp=Z,177nm,1.6s,mb5.7
VYHS MLR MLR
comp=Z,321μm,16.0s,MS7.8
VYHS Vyhne 81.42 326 iP P 16 57 34.2 +0.5
comp=Z,177nm,1.6s,mb5.7
VYHS e pP 16 57 48.6 +2.8
VYHS ePP PP 17 00 41.1 +1.8
VYHS eS S 17 07 49.1 +7.3
VYHS eSS SS 17 12 51.2 -6.2
VYHS LR LR
comp=Z,321μm,16.0s,MS7.8
VYHS Vyhne 81.42 326 iP P 16 57 34.2 +0.5
VYHS e pP 16 57 48.6 +2.8
VYHS ePP PP 17 00 41.1 +1.8
VYHS eS S 17 07 49.1 +7.3
VYHS eSS SS 17 12 51.2 -6.2
PHWY Pilot Hill 81.45 45 eP P 16 57 33.0 -1.0
comp=Z,229nm,0.6s,mb6.3
Y14A Wickenburg 81.51 54 ⇑P P 16 57 34.6 +0.1
baz=81,SNR=19

T18A **Mexican Hat** 81.52 50 ⇓P P 16 57 34.6 +0.2
baz=81,SNR=41
Z13A **Yuma Proving G** 81.54 55 ⇑P P 16 57 34.6 0.0
baz=81,SNR=33
AGMN **Agassiz Refuge** 81.55 35 eP P 16 57 32.4 -1.9
comp=Z,167nm,1.4s,mb5.8
AGMN LR LR
comp=Z,24μm,20.0s,MS6.5
KOLL **Kolacno** 81.56 326 eP P 16 57 35.1 +0.7
KOLL **Kolacno** 81.56 326 eP P 16 57 35.1 +0.7
ELBA **Catalca** 81.58 315 i P P 16 57 35.2 +0.5
S19A **Harvey Farm, M** 81.58 49 ⇓P P 16 57 34.8 +0.1
baz=81,SNR=79
ZIMR 81.59 319 ⇑P P 16 57 36.7 +2.1
ZIMR 81.59 319 ⇑iP P 16 57 36.7 +2.1
WUAZ **Wupatki** 81.59 52 ⇑P P 16 57 34.8 0.0
baz=81,SNR=24
WUAZ **Wupatki** 81.59 52 eP P 16 57 35.1 +0.4
comp=Z,185nm,1.2s,mb5.9
WUAZ LR LR
comp=Z,15μm,20.0s,MS6.4
X15A **Humboldt** 81.68 53 ⇑P P 16 57 35.8 +0.5
baz=82,SNR=35
BOLV **Bolvadin** 81.69 312 i P P 16 57 35.7 +0.5
113A **Mohawk Valley,** 81.73 55 ⇑P P 16 57 35.3 -0.2
baz=82
RSC **Scourie** 81.73 343 ⇑iP P 16 57 35.3 +0.3
JMB **Yambol** 81.73 317 P P 16 57 36.2 +0.8
GZR **Gura Zlata** 81.73 321 ⇑iP P 16 57 35.6 +0.2
W16A **Flagstaff** 81.75 52 ⇓P P 16 57 36.0 +0.4
baz=82,SNR=10
R20A **Redvale** 81.76 48 ⇓P P 16 57 35.8 +0.1
baz=82,SNR=26
BHL **Bhannes** 81.78 306 eP P 16 57 36.2 +0.4
BRG **Berggiesshubel** 81.78 330 eP P 16 57 35.1 -0.4
comp=Z,385nm,1.3s,mb6.2
BRG **Berggiesshubel** 81.78 330 eP P 16 57 35.8 +0.3
comp=Z,312nm,1.9s,mb5.9
BRG i 16 57 43.5
comp=Z,155nm,1.0s
BRG i pP 16 57 49.9 +2.2
comp=Z,382nm,1.3s
BRG i PP PP 17 00 40.3 -1.8
comp=Z,251nm,1.5s
BRG S S 17 07 48.5 +3.1
comp=Z,19nm,1.8s
BRG
comp=N,149μm,15.3s
BRG
comp=E,99μm,16.9s
BRG
comp=Z,232μm,15.8s
BRG **Berggiesshubel** 81.78 330 eP P 16 57 35.8 +0.3
BRG i 16 57 43.5
BRG i pP 16 57 49.9 +2.2
BRG i 17 00 40.3
BRG S S 17 07 48.5 +3.1
BRG pmax pmax
comp=Z,187nm,1.9s,mb5.7
BRG smax
comp=N,11nm,1.8s
BRG MLR MLR
comp=N,89μm,15.3s,MS7.3
BRG MLR MLR
comp=E,59μm,16.9s,MS7.3
BRG MLR MLR
comp=Z,139μm,15.8s,MS7.4
BRG **Berggiesshubel** 81.78 330 P P 16 57 35.3 -0.2
PVCC **Panska Ves** 81.78 329 eP P 16 57 36.0 +0.5
PVCC e pP 16 57 50.3 +2.6
PVCC MLR MLR
comp=N,184μm,16.5s
PVCC **Panska Ves** 81.78 329 P P 16 57 35.6 +0.1
CLL **Collm** 81.83 330 eP P 16 57 35.0 -0.7
comp=Z,607nm,1.3s,mb6.4
CLL **Collm** 81.83 330 ⇑iP P 16 57 35.4 -0.3
CLL i 16 57 43.2
CLL i pP 16 57 49.4 +1.5
CLL e 17 00 40.0
CLL pmax pmax
comp=Z,127nm,0.8s,mb5.9
CLL pmax pmax
comp=Z,133nm,1.2s,mb5.7
CLL MLR MLR
comp=Z,201μm,16.1s,MS7.6
CLL **Collm** 81.83 330 ⇑iP P 16 57 35.4 -0.3
comp=Z,127nm,0.8s,mb5.9
CLL i 16 57 43.2
CLL i pP pP 16 57 43.2 -4.7
CLL i (sP) sP 16 57 49.4 -3.1
comp=Z,606nm,1.3s
CLL ePP PP 17 00 40.0 -2.5
comp=Z,133nm,1.2s
CLL e(sPP) 17 00 56.0
CLL ePPP 17 02 32.0
CLL e 17 02 59.0
CLL eS S 17 07 47.0 +1.2
CLL eScS ScS 17 08 03.0 +0.5
CLL epPS 17 08 46.0
CLL e(SS) 17 13 48.0
CLL e 17 17 40.0
Q21A **Lamborn Mesa,** 81.83 47 ⇓P P 16 57 36.4 +0.4
baz=82,SNR=9.4
VRAC **Vranov** 81.83 327 P P 16 57 35.8 0.0
comp=Z,94nm,1.0s,mb5.7,baz=41,slow=4.6,SNR=79
VRAC **Vranov** 81.83 327 P P 16 57 36.3 +0.5
VRAC **Vranov** 81.83 327 ⇓iP P 16 57 36.3 +0.5
ULDT **Uludag** 81.83 314 i P P 16 57 36.4 +0.4
MVH1 **Achvaich** 81.87 342 ⇑eP P 16 57 35.9 +0.1
V17A **Tonalea, Kykot** 81.89 52 ⇓P P 16 57 37.0 +0.6
baz=82,SNR=108
Z14A **Wintersburg** 81.91 55 ⇑P P 16 57 36.4 -0.1
baz=82
RCY **Rachaya** 81.92 306 eP P 16 57 36.9 +0.3
MCD **Coleburn Disti** 81.94 342 ⇑eP P 16 57 35.6 -0.6
Y15A **Casa Rosa Ranc** 81.94 54 ⇓P P 16 57 36.9 +0.3
baz=82,SNR=29
SMCO **Snowmass** 81.96 47 eP P 16 57 37.7 +1.0
comp=Z,100nm,1.1s,mb5.7
ALT **Altintas** 81.97 313 i P P 16 57 33.9 -2.8
U18A **Rough Rock, Ch** 81.97 51 ⇓P P 16 57 37.3 +0.5
baz=82,SNR=56
NRDL **Niedersach Rie** 82.02 332 eP P 16 57 36.3 -0.4
comp=Z,248nm,1.3s,mb6.0
SMOL **Smolenice** 82.05 326 eP P 16 57 37.9 +1.0
SMOL **Smolenice** 82.05 326 eP P 16 57 37.9 +1.0
BUD **Budapest** 82.07 325 ⇑eP P 16 57 37.7 +0.6
MME1 **Meikle Cairn** 82.11 341 ⇑eP P 16 57 36.7 -0.4
R21A **Cimarron** 82.15 48 ⇑P P 16 57 38.5 +0.8
baz=82,SNR=31
BZS **Buzias** 82.16 322 P P 16 57 37.5 0.0
BZS **Buzias** 82.16 322 ⇑iP P 16 57 37.7 +0.1
PRA **Prague** 82.18 329 P P 16 57 38.0 +0.4
PRA PP PP 17 00 46.0 +0.5
PRA S S 17 07 51.0 +1.4
PRA SKS 17 08 10.0
PRA AMS AMS 17 36 50.0
PRU **Pruhonice** 82.20 329 eP P 16 57 38.3 +0.6
PRU e pP 16 57 52.8 +2.9
PRU MLR MLR
comp=Z,217μm,17.5s,MS7.6
PRU **Pruhonice** 82.20 329 P P 16 57 37.8 +0.1
PRU **Pruhonice** 82.20 329 eP P 16 57 38.3 +0.6
PRU epP pP 16 57 52.8 +2.9
PRU ex x 17 08 04.6
PRU AMS AMS 17 37 00.0
comp=Z,217μm,17.5s
Q22A **Crested Butte,** 82.21 47 ⇓P P 16 57 38.8 +0.8
baz=82,SNR=43
X16A **Lo Mia Camp, P** 82.23 53 ⇑P P 16 57 38.8 +0.6
baz=82,SNR=24
T19A **Beclabito** 82.24 50 ⇓P P 16 57 38.4 +0.2
baz=82,SNR=24
TIM **Timisoara** 82.27 322 P P 16 57 39.2 +1.0
W17A **Winslow** 82.29 52 ⇓P P 16 57 38.7 +0.2
baz=82
MVCO **Mesa Verde** 82.32 49 ⇑P P 16 57 39.1 +0.5
baz=82,SNR=24
MVCO **Mesa Verde** 82.32 49 eP P 16 57 38.3 -0.3
comp=Z,114nm,0.9s,mb5.8
MVCO LR LR
comp=Z,19μm,19.0s,MS6.5
RRR **Rubha Reidh** 82.32 343 ⇑iP P 16 57 38.2 +0.1
GDZ **Gediz** 82.32 313 i P P 16 57 39.1 +0.5
TREC **Trest** 82.32 328 eP P 16 57 38.6 +0.2
TREC epP pP 16 57 53.0 +2.4
TREC AMS AMS 17 38 20.0
comp=Z,197μm,15.4s
114A **Black Gap (USA** 82.33 55 ⇓P P 16 57 38.8 +0.1
baz=82
MDO **Dochfour** 82.35 342 ⇑iP P 16 57 38.1 -0.3
ISCO **Idaho Springs** 82.35 46 P P 16 57 38.9 +0.2
ISCO pmax pmax
comp=Z,50nm,0.9s,mb5.4
ISCO **Idaho Springs** 82.35 46 eP P 16 57 38.2 -0.6
comp=Z,50nm,0.8s,mb5.5
ISCO LR LR
comp=Z,22μm,19.0s,MS6.5
DJES **Djerdap** 82.37 321 P P 16 57 39.4 +0.7
CLZ **Clausthal** 82.44 332 eP P 16 57 38.8 -0.1
comp=Z,609nm,1.4s,mb6.3
CLZ **Clausthal** 82.44 332 eP P 16 57 38.8 -0.1
CLZ pmax pmax
comp=Z,609nm,1.4s,mb6.3
GAZI **Gazipasa** 82.44 310 i P P 16 57 38.4 -0.8
S21A **Coal Bank Pass** 82.46 48 ⇑P P 16 57 39.9 +0.6
baz=82,SNR=37
U19A **Dine' College,** 82.47 50 ⇓P P 16 57 40.0 +0.6
baz=82,SNR=25
Z15A **Gila River Ind** 82.47 54 ⇓P P 16 57 39.8 +0.4
baz=82
RRH **Rhenigidale** 82.47 344 ⇑iP P 16 57 39.0 +0.1
KAC **Achnashellach** 82.52 343 ⇑iP P 16 57 39.5 +0.2
ISP **Isparta** 82.53 312 P P 16 57 39.6 -0.1
ISP **Isparta** 82.53 312 P P 16 57 39.4 -0.3
Y16A **Circle Bar Ran** 82.55 53 ⇑P P 16 57 40.3 +0.5
baz=82,SNR=16
DURS **Dursunbey** 82.57 314 i P P 16 57 40.2 +0.3
SART **Tekirdag** 82.59 316 i P P 16 57 40.6 +0.7
CSS **Prodhromos** 82.61 308 eP P 16 57 39.5 -0.6
comp=Z,221nm,0.9s,mb6.2
CSS LR LR
comp=Z,170μm,21.0s,MS7.4
R22A **Saguache, Gunn** 82.71 48 ⇑P P 16 57 41.5 +0.8
baz=82,SNR=40
TANN **Tannenbergstha** 82.73 330 eP P 16 57 40.3 -0.2
comp=Z,294nm,1.4s,mb6.1
KPL **Plockton** 82.75 343 ⇑iP P 16 57 40.9 +0.4
KPL AMb AMB 16 57 56.4
comp=Z,705nm,4.7s
KPL AMS AMS 17 46 41.8
comp=Z,50μm,15.7s,MS7.0
KPL **Plockton** 82.75 343 P P 16 57 40.7 +0.3
KHAL **Karahalli** 82.78 313 i P P 16 57 41.5 +0.5
115A **Sonoran Desert** 82.79 55 ⇑P P 16 57 41.2 +0.1
baz=83,SNR=7.0
DEMI **Demirci** 82.80 314 i P P 16 57 41.2 +0.2
KSB **Sheil Bridge** 82.81 343 ⇑iP P 16 57 41.0 +0.2
MMLI **Mount Malkishu** 82.83 305 P P 16 57 42.4 +1.0
U20A **Newcomb** 82.84 50 ⇑P P 16 57 41.2 -0.1
baz=83
214A **Organ Pipe Nat** 82.86 56 ⇓P P 16 57 41.4 -0.1
baz=83,SNR=8.1
NKC **Novy Kostel** 82.88 330 eP P 16 57 41.2 0.0
NKC epP pP 16 57 55.8 +2.4
NKC AMS AMS 17 37 50.0
comp=Z,218μm,15.5s
W18A **Petrified Fore** 82.88 51 ⇓P P 16 57 41.8 +0.2
baz=83
KSK **Scoval** 82.89 343 eP P 16 57 41.8 +0.7
MOX **Moxa** 82.89 331 eP P 16 57 41.0 -0.3
comp=Z,366nm,1.5s,mb6.2
MOX **Moxa** 82.89 331 eP P 16 57 41.0 -0.3
MOX pmax pmax
comp=Z,468nm,1.9s,mb6.2
Z16A **Peralta Trail,** 82.92 54 ⇓P P 16 57 41.9 +0.1
baz=83
V19A **Window Rock** 82.94 51 ⇓P P 16 57 42.5 +0.7
baz=83
SNZO **South Karori** 82.96 155 PFAKE 16 57 50.0 +8.5
SNZO LR LR
comp=Z,16μm,21.0s,MS6.4
BALY **Balya** 82.97 315 i P P 16 57 42.4 +0.4
PLD **Plovdiv** 83.00 318 P P 16 57 42.4 +0.4
WIT **Witteveen** 83.01 334 ⇑iP P 16 57 41.9 0.0
WIT **Witteveen** 83.01 334 ⇑eP P 16 57 42.3 +0.4
comp=Z,882nm,2.7s,mb6.3
WIT **Witteveen** 83.01 334 ex x 16 57 57.0
IBBN **Ibbenburen** 83.03 333 eP P 16 57 41.5 -0.5
comp=Z,481nm,1.2s,mb6.4
IBBN **Ibbenburen** 83.03 333 P P 16 57 41.7 -0.3
Y17A **Roosevelt** 83.07 53 ⇑P P 16 57 43.0 +0.5
baz=83,SNR=19
ALN **Alexandroupoli** 83.09 316 P P 16 57 43.4 +0.9
ALN **Alexandroupoli** 83.09 316 P P 16 57 41.6 -0.9
W19A **Sanders** 83.11 51 ⇓P P 16 57 43.2 +0.5
baz=83,SNR=11
X18A **Snowflake** 83.12 52 ⇑P P 16 57 43.0 +0.2
baz=83
KORT **Korkueli** 83.16 311 i P P 16 57 42.6 -0.4
KAR1 **Arisaig** 83.17 343 ⇑iP P 16 57 42.7 +0.1
PKSM **Moragy** 83.18 324 P P 16 57 42.7 -0.2
PKSM **Moragy** 83.18 324 ⇓iP P 16 57 42.7 -0.2
CONA **Conrad Observa** 83.18 327 i P P 16 57 43.6 +0.7
comp=Z,408nm,1.3s,mb6.3,SNR=46
EBH **Black Hill** 83.19 341 ⇑iP P 16 57 42.7 0.0
RDO **Rodhopi** 83.20 317 eP P 16 57 44.5 +1.4
RDO **Rodhopi** 83.20 317 P P 16 57 44.0 +0.9
V20A **Brimhall** 83.24 50 ⇑P P 16 57 43.8 +0.3
baz=83,SNR=17
ESY **Stoneypath** 83.25 341 ⇑iP P 16 57 42.6 -0.4
KHC **Kasperske Hory** 83.26 329 eP P 16 57 43.5 +0.3
KHC e pP 16 57 58.0 +2.5
KHC MLR MLR
comp=Z,245μm,17.6s,MS7.6
KHC **Kasperske Hory** 83.26 329 eP P 16 57 43.0 -0.2
comp=Z,322nm,1.2s,mb6.2
KHC **Kasperske Hory** 83.26 329 eP P 16 57 43.5 +0.3
KHC epP pP 16 57 58.0 +2.5
KHC eS S 17 07 26.3 -34
KHC AMS AMS 17 37 30.0
comp=Z,245μm,17.6s
ROTZ **Rotzenmuhle** 83.34 330 eP P 16 57 43.9 +0.3
comp=Z,498nm,1.3s,mb6.4
UBBA **Unterbreizbach** 83.39 331 eP P 16 57 43.4 -0.5
comp=Z,464nm,1.9s,mb6.2
EDI **Edinburgh** 83.39 341 ⇑eP P 16 57 43.8 0.0
EDI AMb AMB 16 57 47.3
comp=Z,534nm,4.7s
EDI AMS AMS 17 38 37.4
comp=Z,74μm,18.1s,MS7.1
EDI **Edinburgh** 83.39 341 P P 16 57 43.8 0.0
EDI AMb AMB 16 57 47.3
comp=Z,534nm,4.7s
EDI AMS AMS 17 38 37.4
comp=Z,74μm,18.1s
T22A **Edith** 83.42 49 ⇑P P 16 57 45.2 +1.0
baz=83,SNR=32
GEC2 **GERESS Array S** 83.43 328 eP P 16 57 43.6 -0.5
comp=Z,183nm,1.1s,mb6.0
GEC2 **GERESS Array S** 83.43 328 P P 16 57 43.8 -0.3
GERES **GERESS Array B** 83.43 328 P P 16 57 43.9 -0.2
GERES 17 00 59.1
GERES **GERESS Array B** 83.43 328 P P 16 57 43.9 -0.2
comp=Z,30nm,0.7s,mb5.4,baz=38,slow=5.5,SNR=92
GERES PP PP 17 00 59.1 +3.4
comp=Z,27nm,1.0s,baz=40,slow=9.2,SNR=4.0
GERES PKKPbc PKKPbc 17 16 03.1 +0.9
comp=Z,1.2nm,0.8s,baz=199,slow=3.7,SNR=5.1
GERES PKPPKP 17 24 08.7
comp=Z,0.3nm,0.5s,baz=236,slow=2.4,SNR=4.5
GERES LR LR 17 40 25.1
comp=Z,157μm,18.1s,MS7.4,baz=238,slow=40
AKHS **Akhisar** 83.44 314 i P P 16 57 44.5 +0.1
EAB **Aberfoyle** 83.46 342 ⇑iP P 16 57 44.3 +0.2
VTS **Vitosha** 83.47 319 P P 16 57 45.6 +1.2
GOLH **Golhisar** 83.48 312 i P P 16 57 44.8 +0.1
EBL **Broad Law** 83.49 341 ⇑iP P 16 57 44.3 +0.1
DNZL **Cakiroluk** 83.50 312 i P P 16 57 45.5 +0.8
EAU **Auchinoon** 83.53 341 ⇑iP P 16 57 44.1 -0.4
Y18A **Canyon Day Jun** 83.54 53 ⇑P P 16 57 45.3 +0.4
baz=83,SNR=31
MUKL **Al Mukalla** 83.55 283 ⇑eP P 16 57 45.3 0.0
WET **Wettzell** 83.55 329 eP P 16 57 44.7 0.0
comp=Z,293nm,1.2s,mb6.3
WET **Wettzell** 83.55 329 eP P 16 57 44.7 0.0
WET pmax pmax
comp=Z,293nm,1.2s,mb6.3
Z17A **San Carlos Hig** 83.56 53 ⇓P P 16 57 45.6 +0.5
baz=83
X19A **St. Johns** 83.60 52 ⇓P P 16 57 45.9 +0.6
baz=83,SNR=28
OGNE **Ogallala** 83.61 43 eP P 16 57 44.8 -0.4
comp=Z,260nm,1.3s,mb6.2
OGNE LR LR
comp=Z,22μm,20.0s,MS6.5
W20A **Ramah** 83.65 51 ⇓P P 16 57 45.6 +0.1
baz=84,SNR=6.1
WTSB **Winterswijk** 83.66 334 ⇑iP P 16 57 44.6 -0.6
comp=Z,404nm,4.8s
WTSB **Winterswijk** 83.66 334 ex x 16 57 59.3
216A **Three Points,** 83.73 55 ⇓P P 16 57 45.7 -0.3
baz=84,SNR=9.3
V21A **Milan** 83.75 50 ⇑P P 16 57 46.2 +0.2
baz=84,SNR=19
EYMN **Ely** 83.77 33 eP P 16 57 44.0 -1.9
comp=Z,1μm,1.1s,mb7.0
EYMN LR LR
comp=Z,31μm,20.0s,MS6.7
SDCO **Great Sand Dun** 83.78 47 eP P 16 57 45.9 -0.2
comp=Z,101nm,1.1s,mb5.9
SDCO LR LR
comp=Z,20μm,19.0s,MS6.5
PMOR **Pomariorio Ree** 83.79 114 eP P 16 57 46.4 0.0
comp=Z,322nm,1.2s,mb6.3
AYVA **Ayvalik** 83.80 315 i P P 16 57 46.3 +0.1
GRA1 **Grafenberg Arr** 83.80 330 eP P 16 57 46.2 +0.2
comp=Z,1μm,1.4s,mb6.9
GRA1 ePP PP 17 00 55.8 -2.9
GRA1 ePKKPbc PKKPbc 17 16 15.4 +14
GRF **Grafenberg Arr** 83.80 330 eP P 16 57 46.2 +0.2
comp=Z,1μm,1.4s,mb6.9
GRF ePP PP 17 00 55.8 -2.9
GRF ePKKPbc PKKPbc 17 16 15.4 +14
GRF **Grafenberg Arr** 83.80 330 eP P 16 57 46.2 +0.2
GRF e 17 00 55.8
GRF pmax pmax
comp=Z,1μm,1.4s,mb6.9
GRF **Grafenberg Arr** 83.80 330 eP P 16 57 46.2 +0.2
GRF e 17 00 55.8
GRF pmax pmax
comp=Z,1μm,1.4s,mb6.9
BOZC **Bozcaada** 83.80 316 i P P 16 57 46.4 +0.2
PGBU **Glenifferbraes** 83.83 341 ⇑iP P 16 57 46.3 +0.3
PGBU AMb AMB 16 57 47.6
comp=Z,544nm,4.4s
PGBU AMS AMS 17 38 42.6
comp=Z,61μm,19.5s,MS7.0
GRUS **Gruza** 83.84 321 P P 16 57 45.8 -0.5
ARSA **Arzberg** 83.84 326 i P P 16 57 46.4 +0.1
comp=Z,224nm,1.4s,mb6.1,SNR=42
117A **Oracle** 83.85 54 ⇑P P 16 57 46.7 +0.1
baz=84,SNR=13
EKA **Eskdalemuir Ar** 83.91 341 P P 16 57 46.5 +0.1
comp=Z,14nm,0.6s,mb5.3,baz=39,slow=4.4,SNR=48
EKA PP PP 17 01 04.5 +5.1
comp=Z,16nm,0.8s,baz=31,slow=6.1,SNR=4.5
BUG **Bochum--Univer** 83.92 333 eP P 16 57 45.9 -0.6
comp=Z,327nm,1.5s,mb6.2
Y19A **Nutrioso** 83.93 52 ⇑P P 16 57 47.3 +0.3
baz=84,SNR=12
ESK **Eskdalemuir** 83.93 341 P P 16 57 46.8 +0.2
comp=Z,546nm,1.0s,mb6.6,SNR=13
ESK **Eskdalemuir** 83.93 341 ⇑iP P 16 57 46.3 -0.2
ESK AMb AMB 16 57 50.2
comp=Z,519nm,4.9s
ESK AMS AMS 17 38 33.1
comp=Z,107μm,19.3s,MS7.2
ESK **Eskdalemuir** 83.93 341 i P P 16 57 47.5 +0.9
ESK **Eskdalemuir** 83.93 341 eP P 16 57 46.5 -0.1
comp=Z,104nm,1.0s,mb5.9
ESK LR LR
comp=Z,127μm,20.0s,MS7.3
MOA **Molln** 83.95 327 i P P 16 57 47.0 +0.2
comp=Z,274nm,1.2s,mb6.3,SNR=57
Z18A **Geronimo** 83.98 53 ⇑P P 16 57 47.2 0.0
baz=84
TUC **Tucson** 83.98 54 P P 16 57 47.4 +0.1
TUC pmax pmax
comp=Z,580nm,2.2s,mb6.3
TUC **Tucson** 83.98 54 eP P 16 57 47.2 0.0
comp=Z,662nm,2.2s,mb6.4
TUC LR LR
comp=Z,22μm,20.0s,MS6.5
RPZ **Rata Peaks** 83.99 159 LR LR 17 29 05.6
comp=Z,15μm,21.9s,MS6.3,baz=322,slow=31
X20A **Quemado** 84.03 51 ⇑P P 16 57 48.3 +0.8
baz=84,SNR=31
ECK **Cauldkaine Hil** 84.03 341 ⇑iP P 16 57 47.0 0.0
DIVS **Divibare** 84.05 322 P P 16 57 47.3 -0.1
XAL **Allendale** 84.06 340 ⇑eP P 16 57 46.7 -0.5
PRK **Paraskevi** 84.08 315 eP P 16 57 48.5 +0.9
PRK **Paraskevi** 84.08 315 P P 16 57 47.6 0.0
AKAS **Kas** 84.12 311 i P P 16 57 47.3 -0.5
KOGS **Kog** 84.12 325 eP P 16 57 47.4 -0.3
KOGS e 17 08 09.2
KSL **Kastellorizon** 84.18 311 eP P 16 57 49.0 +0.8
W21A **San Fidel** 84.19 50 ⇑P P 16 57 48.5 +0.2
baz=84
AYDN **Tasoluk** 84.21 313 i P P 16 57 49.5 +1.1
PPT **Papeete** 84.21 117 eP P 16 57 48.7 +0.2
comp=Z,165nm,1.3s,mb6.0
PPT eS S 17 08 10.7 -0.2
comp=Z,79μm,35.8s
PPT eLR LR 17 23 57.4
comp=Z,44μm,21.5s,baz=308
PPT **Papeete** 84.21 117 P P 16 57 50.6 +2.1
comp=Z,23nm,0.9s,mb5.3,baz=338,slow=5.6,SNR=3.0
PPT LR LR 17 29 24.0
comp=Z,30μm,20.6s,MS6.7,baz=236,slow=32
BLCB **Balcova** 84.22 314 P P 16 57 48.2 -0.1
LIA **Limnos Island** 84.25 316 P P 16 57 48.7 +0.2
PAE **Paea** 84.27 117 eP P 16 57 49.0 +0.2
comp=Z,56nm,1.2s,mb5.6
PAE **Paea** 84.27 117 eP P 16 57 49.0 +0.2
PAE pmax pmax
comp=Z,56nm,1.2s,mb5.6
LOS **Limnos** 84.28 316 P P 16 57 48.3 -0.3
SRS **Serrai** 84.29 318 P P 16 57 49.8 +1.2
217A **Green Valley** 84.30 55 ⇑P P 16 57 49.1 +0.2
baz=84,SNR=31
TURN **Turunc** 84.30 312 i P P 16 57 49.5 +0.7
118A **Homack Ranch,** 84.31 54 ⇑P P 16 57 48.8 -0.2
baz=84,SNR=33
SIGR **SIGRI** 84.34 315 P P 16 57 49.6 +0.7
Z19A **T-Link Ranch,** 84.34 53 ⇓P P 16 57 49.3 +0.2
baz=84
TIAR **Tiarei** 84.37 116 eP P 16 57 49.4 +0.1
comp=Z,359nm,1.1s,mb6.4
TNS **Taunus Mts** 84.46 332 eP P 16 57 49.0 -0.4
comp=Z,550nm,1.7s,mb6.4
TNS **Taunus Mts** 84.46 332 eP P 16 57 49.0 -0.4
TNS pmax pmax
comp=Z,550nm,1.7s,mb6.4
URLA **Izmir** 84.49 314 i P P 16 57 49.7 -0.1
PERS **Pernice** 84.49 326 eP P 16 57 49.6 0.0
PERS e 17 03 09.4
PERS e 17 08 09.9
PERS e 17 08 33.1
PERS e 17 08 53.9
PERS e 17 09 31.0
ECSD **EROS Data Cent** 84.50 38 eP P 16 57 48.2 -1.4
comp=Z,119nm,1.0s,mb6.0
ECSD LR LR
comp=Z,23μm,19.0s,MS6.6
SOKA **Soboth** 84.50 326 ⇑iP P 16 57 49.7 +0.1
comp=Z,516nm,1.4s,mb6.5
Y20A **Horse Springs,** 84.52 52 ⇑P P 16 57 50.4 +0.5
baz=84,SNR=40
GCD **Castle Douglas** 84.53 341 ⇑iP P 16 57 49.5 -0.1
X21A **Alamocita Cree** 84.54 51 P P 16 57 49.3 -0.8
baz=84
GCAM **G?zelcaml?** 84.56 313 i P P 16 57 50.4 +0.2
OUR **Ouranopolis** 84.62 317 P P 16 57 49.0 -1.3
SOH **Sokhos** 84.62 318 P P 16 57 51.5 +1.2
STIP **Stip** 84.64 319 eP P 16 57 50.0 -0.4
STIP **Stip** 84.64 319 P P 16 57 50.1 -0.3
119A **Ashpeak Ranch,** 84.66 53 ⇓P P 16 57 50.5 -0.2
baz=84,SNR=19

218A Dragoon 84.68 54 ⇑P P 16 57 50.9 +0.1
baz=84,SNR=46
VAY Valandovo 84.69 319 iP P 16 57 50.4 -0.3
VAY Valandovo 84.69 319 P P 16 57 50.3 -0.4
DOBS Dobrina 84.70 326 eP P 16 57 50.2 -0.4
W22A Albuquerque 84.71 50 ⇓P P 16 57 51.3 +0.4
baz=84
GAL1 Galloway 84.73 341⇑iP P 16 57 50.6 0.0
GAL1 AMb AMB 16 58 06.2
comp=Z,511nm,4.3s
GAL1 AMS AMS 17 39 19.8
comp=Z,84µm,18.7s,MS7.2
SMG Samos 84.79 314 eP P 16 57 51.0 -0.3
TOD Tromm 84.82 331 eP P 16 57 50.9 -0.3
SKO Skopje 84.83 320 iP P 16 57 52.8 +1.4
SKO Skopje 84.83 320 P P 16 57 52.6 +1.2
OBKA Obir 84.84 326 iP P 16 57 51.0 -0.3
comp=Z,109nm,1.2s,mb5.8,SNR=16
PLG Polygyros 84.88 317 eP P 16 57 51.5 -0.2
PLG Polygyros 84.88 317 P P 16 57 52.0 +0.3
Z20A Nine Sixteen R 84.89 52 ⇓P P 16 57 52.4 +0.6
baz=85,SNR=96
Y21A Point of Rocks 84.90 51 ⇑P P 16 57 52.8 +0.9
baz=85,SNR=19
PLE Pljevlja 84.91 322⇑iP P 16 57 52.4 +0.7
PLE Pljevlja 84.91 322⇑iP P 16 57 52.5 +0.7
HORT Hortiatis 84.92 318 P P 16 57 52.6 +0.8
LEGS Legarje 84.92 326 eP P 16 57 51.3 -0.5
KBA Koelnbreinsper 84.94 327 iP P 16 57 51.6 -0.2
comp=Z,184nm,1.0s,mb6.2,SNR=33
HGN Heimansgroeve 84.95 333⇑iP P 16 57 51.4 -0.4
comp=Z,393nm,5.0s
HGN Heimansgroeve 84.95 333 ex x 16 58 05.9
HGN Heimansgroeve 84.95 333 P P 16 57 51.2 -0.6
THE Thessaloniki 84.97 318 P P 16 57 50.4 -1.7
FUR Furstenfeldbru 84.97 329 eP P 16 57 51.9 -0.1
comp=Z,469nm,1.1s,mb6.5
FUR Furstenfeldbru 84.97 329 eP P 16 57 51.9 -0.1
FUR pmax pmax
comp=Z,469nm,1.1s,mb6.5
IVA Berane 84.98 321⇑iP P 16 57 52.6 +0.5
IVA Berane 84.98 321⇑iP P 16 57 52.6 +0.5
X22A Bernardo 84.99 50 ⇓P P 16 57 53.1 +0.8
baz=85,SNR=5.6
BEBN Eben Emael 85.02 334 P P 16 57 51.9 -0.3
comp=Z,101nm,2.1s,mb5.6
ARG Arkhangelos 85.02 312 eP P 16 57 54.0 +1.5
ARG Arkhangelos 85.02 312 P P 16 57 53.1 +0.6
ANMO Albuquerque 85.04 50 P P 16 57 53.2 +0.6
ANMO pmax pmax
comp=Z,100nm,1.0s
ANMO Albuquerque 85.04 50 eP P 16 57 52.6 0.0
comp=Z,26nm,1.1s,mb5.3
ANMO LR LR
comp=Z,16µm,20.0s,MS6.4
318A Bisbee 85.06 54 ⇓P P 16 57 52.9 +0.2
baz=85,SNR=44
MEM Membach 85.06 333 P P 16 57 51.9 -0.5
comp=Z,101nm,1.5s,mb5.7
MEM Membach 85.06 333 P P 16 57 51.9 -0.4
PAIG Paliouri 85.07 317 P P 16 57 53.7 +1.1
ABH Alteburg 85.08 332 eP P 16 57 52.3 -0.2
W23A Werner Place, 85.09 50 ⇑P P 16 57 53.5 +0.7
baz=85,SNR=9.8
LHO Holmfirth 85.12 339⇑iP P 16 57 52.4 -0.2
PVY Plav 85.14 321⇑iP P 16 57 52.2 -0.7
PVY Plav 85.14 321⇑iP P 16 57 52.2 -0.7
MYKA Terra Mystica 85.15 327⇑iP P 16 57 52.3 -0.6
comp=Z,203nm,1.5s,mb6.0
219A White Tail Can 85.18 54 ⇑P P 16 57 53.5 +0.2
baz=85,SNR=60
LJU Ljubljana 85.21 326 iP P 16 57 52.6 -0.6
LJU ePP PP 17 01 12.4 +2.1
120A U Bar Ranch, L 85.23 53 ⇑P P 16 57 53.8 +0.2
baz=85,SNR=26
UPM Unac-Piva 85.24 322⇑iP P 16 57 52.9 -0.5
UPM Unac-Piva 85.24 322⇑iP P 16 57 53.0 -0.4
Y22D IRIS PASSCAL I 85.33 51 ⇓P P 16 57 54.6 +0.6
baz=85
KTD Kalmit 85.33 332 eP P 16 57 53.2 -0.5
STU Stuttgart 85.34 331 eP P 16 57 53.4 -0.4
comp=Z,438nm,1.1s,mb6.5
Z21A St. Cloud Mine 85.35 52 ⇓P P 16 57 54.5 +0.3
baz=85,SNR=16
KRUS Krusevo 85.36 319 iP P 16 57 53.4 -0.6
Y22A Socorro 85.39 51 ⇓P P 16 57 54.8 +0.4
baz=85,SNR=12
RUP Ruppelstein 85.41 332 eP P 16 57 53.8 -0.3
CADS Cadrg 85.42 327 eP P 16 57 53.3 -1.0
CADS ePP PP 17 01 14.8 +2.8
CADS e 17 03 09.1
PTCC Patocco-Chiusa 85.45 327 P P 16 57 53.1 -1.3
BCLA Clavier 85.47 334 P P 16 57 54.0 -0.4
comp=Z,175nm,1.8s,mb5.9
UCC Uccle 85.49 334 P P 16 57 53.8 -0.7
WATA Walderalm 85.50 328⇑iP P 16 57 54.3 -0.3
comp=Z,98nm,1.1s,mb5.8
VOY Vojsko 85.50 326 eP P 16 57 53.3 -1.3
VOY e 16 58 01.2
VOY e pP 16 58 07.7 +0.8
VOY e 16 59 11.3
VOY e 17 00 09.6
VOY e 17 01 08.3
VOY e 17 01 22.9
MEH Mehetia 85.50 116 eP P 16 57 55.0 0.0
comp=Z,354nm,1.3s,mb6.4
WTTA Wattenberg 85.53 328 iP P 16 57 54.6 -0.2
comp=Z,165nm,1.3s,mb6.1,SNR=16
ABTA Abfaltersbach 85.56 328⇑iP P 16 57 53.8 -1.1
comp=Z,69nm,1.0s,mb5.8,SNR=9.2
319A Douglas 85.56 54 ⇑P P 16 57 55.2 0.0
baz=85,SNR=16
BIA Bitola 85.57 319 P P 16 57 54.5 -0.6
LIT Litokhoron 85.60 318 P P 16 57 55.9 +0.7
GMM Mts of Mourne 85.62 342⇑iP P 16 57 54.7 -0.3
STNC Stoke 85.62 339⇑iP P 16 57 55.6 +0.6
STNC AMb AMB 16 58 11.1
comp=Z,542nm,4.7s
STNC AMS AMS 17 38 01.3
comp=Z,89µm,22.0s,MS7.1
TTG Podgorica 85.63 321⇑iP P 16 57 54.8 -0.5
TTG Podgorica 85.63 321⇑iP P 16 57 54.8 -0.5
BRY Bratogost 85.64 322⇑iP P 16 57 54.6 -0.8
CWF Charnwood Fore 85.66 338⇑iP P 16 57 55.0 -0.3
CWF AMb AMB 16 58 10.0
comp=Z,473nm,1.5s,mb6.5
CWF AMS AMS 17 37 26.8
comp=Z,145µm,23.5s,MS7.3
KNDS Knezji Dol 85.67 326 iP P 16 57 55.1 -0.4
KNDS e 17 08 17.9
MOTA Moosalm 85.69 329⇑iP P 16 57 55.4 -0.2
comp=Z,190nm,1.2s,mb6.2,SNR=24
FNA Florina 85.71 319 P P 16 57 56.4 +0.6
LANF Langenberg 85.71 331 eP P 16 57 55.3 -0.3
220A Playas Peak, P 85.71 53 ⇓P P 16 57 55.6 -0.4
baz=86,SNR=16
RETA Reutte 85.72 329 iP P 16 57 55.6 -0.2
comp=Z,464nm,1.4s,mb6.5,SNR=28
SNF Seneffe 85.75 334 P P 16 57 55.3 -0.5
comp=Z,214nm,1.9s,mb6.0
TCR Colchester 85.76 337 eP P 16 57 55.4 -0.4
WLF Walferdange 85.78 333 P P 16 57 56.0 +0.1
comp=Z,272nm,2.0s,mb6.1
WLF Walferdange 85.78 333 eP P 16 57 56.1 +0.1
comp=Z,650nm,1.6s,mb6.6
WLF Walferdange 85.78 333 PFAKE 16 58 10.0 +14
WLF LR LR
comp=Z,166µm,20.0s,MS7.4
OHR Ohrid 85.78 319 eP P 16 57 55.2 -0.9
OHR Ohrid 85.78 319 P P 16 57 54.7 -1.5
121A Cookes Peak, D 85.78 52 ⇓P P 16 57 56.5 +0.2
baz=86,SNR=26
TRI Trieste 85.81 326 PFAKE 16 58 10.0 +14
TRI LR LR
comp=Z,150µm,21.0s,MS7.4
Z22A Elephant Butte 85.83 51 ⇑P P 16 57 56.8 +0.2
baz=86,SNR=13
KZN Kozani 85.84 318 eP P 16 57 57.0 +0.6
KZN Kozani 85.84 318 P P 16 57 55.7 -0.7
GIVF Givet 85.90 334⇑iP P 16 57 55.8 -0.7
comp=Z,823nm,1.6s,mb6.4
GIVF Givet 85.90 334⇑iP P 16 57 55.8 -0.7
GIVF pmax pmax
comp=Z,411nm,1.6s,mb6.4
GIVF Givet 85.90 334⇑iP P 16 57 55.8 -0.7
comp=Z,412nm,1.6s,mb6.4
BUM Brajici-Budva 85.91 321⇑iP P 16 57 55.3 -1.4
BUM Brajici-Budva 85.91 321⇑iP P 16 57 55.4 -1.4
TAOE Nuku Hiva Isla 85.91 104 eS S 17 08 26.7 -1.2
comp=Z,34µm,27.8s
TAOE eLR LR 17 24 30.5
comp=Z,68µm,30.9s,baz=315
X24A Lazy VL Ranch, 85.92 50 ⇓P P 16 57 57.8 +0.8
baz=86
Y23A Lovelace Mesa, 85.96 50 ⇓P P 16 57 57.1 -0.1
baz=86,SNR=24
ULC Ulcinj 85.97 321⇑iP P 16 57 55.7 -1.4
ULC Ulcinj 85.97 321⇑iP P 16 57 55.8 -1.3
APE Apeiranthos 85.99 314 eP P 16 57 58.0 +0.8
APE Apeiranthos 85.99 314⇑iP P 16 57 58.8 +1.6
APE Apeiranthos 85.99 314 P P 16 57 58.8 +1.6
DOU Dourbes 85.99 334 P P 16 57 56.6 -0.4
comp=Z,108nm,2.2s,mb5.7
HCY Herceg Novi 86.00 322⇑iP P 16 57 56.4 -0.8
HCY Herceg Novi 86.00 322⇑iP P 16 57 56.5 -0.7
BFO Black Forest 86.03 331 P P 16 57 57.8 +0.6
comp=Z,2µm,1.2s,mb7.2,SNR=37
BFO Black Forest 86.03 331 eP P 16 57 56.7 -0.5
comp=Z,473nm,1.2s,mb6.6
BFO Black Forest 86.03 331 eP P 16 57 56.7 -0.5
BFO pmax pmax
comp=Z,473nm,1.2s,mb6.6
SPAK Spaichingen-Ko 86.04 330 eP P 16 57 56.8 -0.5
KARP Karpathos 86.05 312 eP P 16 57 58.0 +0.4
WLF1 Llynfaes 86.06 340⇑eP P 16 57 57.2 0.0
320A Kipp Ranch, An 86.08 54 ⇑P P 16 57 58.0 +0.2
baz=86
SCHQ Schefferville 86.08 16 P P 16 57 57.0 -0.4
comp=Z,19nm,0.6s,mb5.5,baz=342,slow=5.6,SNR=21
SCHQ PKKPbc PKKPbc 17 15 57.3 +1.0
comp=Z,2.4nm,0.8s,baz=241,slow=4.8,SNR=3.6
SCHQ LR LR 17 37 00.7
comp=Z,40µm,21.2s,MS6.8,baz=344,slow=36
SCHQ Schefferville 86.08 16 eP P 16 57 56.8 -0.5
comp=Z,15nm,1.2s,mb5.1
SCHQ LR LR
comp=Z,18µm,21.0s,MS6.4
W25A X Bar L Ranch, 86.08 49 ⇓P P 16 57 57.6 -0.2
baz=86,SNR=41
TIR Tirane 86.10 320 PFAKE
TIR LR LR 16 58 10.0 +12
comp=Z,534µm,19.0s,MS8.0
TIR Tirane 86.10 320 P P 16 57 57.4 -0.3
FETA Feichten 86.10 329 iP P 16 57 57.3 -0.3
comp=Z,195nm,1.4s,mb6.1,SNR=28
BAIF Baives 86.16 334⇑iP P 16 57 57.2 -0.6
comp=Z,333nm,1.3s,mb6.1
BAIF Baives 86.16 334⇑iP P 16 57 57.2 -0.6
BAIF pmax pmax
comp=Z,166nm,1.3s,mb6.1
BAIF Baives 86.16 334⇑iP P 16 57 57.2 -0.6
comp=Z,166nm,1.3s,mb6.1
DMUB Kingscourt 86.17 342 eP P 16 57 57.3 -0.5
122A Conniff Cattle 86.18 52 ⇓P P 16 57 58.9 +0.7
baz=86
COWI Conover 86.22 33 eP P 16 57 57.0 -1.2
comp=Z,243nm,1.5s,mb6.2
COWI LR LR
comp=Z,19µm,20.0s,MS6.5
THL Klokotos Trika 86.23 318 P P 16 57 59.4 +1.0
DAVA Damuels 86.25 329 iP P 16 57 58.1 -0.2
comp=Z,230nm,1.1s,mb6.3,SNR=25
ATAL Atalanti 86.29 316 P P 16 57 58.6 -0.1
TFO1 Folkestone 86.31 336⇑eP P 16 57 58.2 -0.4
TFO1 AMb AMB 16 58 04.2
comp=Z,324nm,1.3s,mb6.4
TFO1 Folkestone 86.31 336 P P 16 57 58.2 -0.4
TFO1 AMb AMB 16 58 04.2
comp=Z,324nm,1.3s,mb6.4
APPI Appiano 86.32 328 P P 16 57 56.8 -1.9
LKR Lokris 86.33 316 P P 16 57 58.4 -0.5
Y24A Capitan 86.35 50 ⇓P P 16 57 58.9 -0.2
baz=86,SNR=13
STEIN Stein am Rhein 86.35 330⇑iP P 16 57 58.3 -0.5
CBKS Cedar Bluff 86.36 43 P P 16 57 59.5 +0.5
CBKS pmax pmax
comp=Z,120nm,1.0s,mb6.1
CBKS Cedar Bluff 86.36 43 eP P 16 57 58.7 -0.3
comp=Z,121nm,1.0s,mb6.1
CBKS LR LR
comp=Z,20µm,19.0s,MS6.5
ATHU Athens Univers 86.37 315 P P 16 57 59.3 +0.2
CDF Champ du Feu 86.38 331⇑iP P 16 57 58.4 -0.5
comp=Z,904nm,1.3s,mb6.5
CDF Champ du Feu 86.38 331⇑iP P 16 57 58.4 -0.5
CDF pmax pmax
comp=Z,452nm,1.3s,mb6.5
CDF Champ du Feu 86.38 331⇑iP P 16 57 58.4 -0.5
comp=Z,452nm,1.3s,mb6.5
LIENZ Kamor/St.Gall 86.40 330⇑iP P 16 57 58.5 -0.6
comp=Z,368nm,1.3s,mb6.5
ATH Athens Observa 86.41 316 eP P 16 58 06.5 +7.2
WEIN Weingarten 86.42 330⇑iP P 16 57 58.6 -0.5
X25A Clemmons Ranch 86.42 49 ⇑P P 16 57 59.2 -0.2
baz=86,SNR=9.1
SLE Schleitheim 86.43 330⇑iP P 16 57 58.8 -0.4
comp=Z,868nm,3.0s
AGG Agios Georgios 86.44 317 P P 16 57 55.0 -4.5
MENF Mencas 86.44 335 eP P 16 57 58.7 -0.5
LIBD Limburg 86.47 331 eP P 16 57 58.9 -0.5
222A Williams Famil 86.50 52 ⇑P P 16 58 00.1 +0.2
baz=86
FELD Feldberg im Sc 86.53 331 eP P 16 57 58.9 -0.8
WILA Wila 86.54 330⇑iP P 16 57 59.1 -0.7
comp=Z,846nm,3.3s
FLACH Flaach 86.55 330⇑iP P 16 57 59.2 -0.6
ECH Echery 86.59 331 eP P 16 57 59.1 -0.9
ECH Echery 86.59 331 P P 16 57 59.4 -0.6
ECH pmax pmax
comp=Z,250nm,1.1s,mb6.4
ECH Echery 86.59 331 eP P 16 57 59.2 -0.7
comp=Z,245nm,1.1s,mb6.3
ECH LR LR
comp=Z,75µm,21.0s,MS7.1
FUORN Ofenpass-Fuorn 86.62 329⇑iP P 16 57 59.8 -0.3
comp=Z,1µm,2.0s,mb6.8
DSB Dublin 86.62 341 eP P 16 57 59.5 -0.6
comp=Z,297nm,1.4s,mb6.3
DAVOS Davos 86.64 329 P P 16 58 00.2 0.0
PLONS Plons/SG 86.64 329⇑iP P 16 58 00.2 -0.1
comp=Z,518nm,1.2s,mb6.6
DAVOX Davos/Dischmat 86.65 329⇑iP P 16 58 00.0 -0.3
comp=Z,784nm,3.1s
DAVOX Davos/Dischmat 86.65 329 P P 16 58 00.2 -0.1
comp=Z,8.3nm,0.5s,mb5.2,baz=29,slow=3.4,SNR=28
NAIG Nisos Aigina 86.68 316 eP P 16 58 07.0 +6.3
ZUR Degenried 86.71 330⇑iP P 16 58 00.2 -0.4
comp=Z,713nm,2.8s,mb6.4
DCN Croghan 86.77 342⇑iP P 16 57 59.8 -0.9
SULZ Chelsacher 86.77 330⇑iP P 16 58 00.3 -0.6
comp=Z,584nm,1.2s,mb6.7
JAN Janina 86.80 318 eP P 16 58 04.0 +2.8
EVR Evrytania 86.81 317 eP P 16 58 01.5 +0.3
Y25A Mesa, Roswell 86.81 50 ⇓P P 16 58 01.4 0.0
baz=87,SNR=7.2
MCH1 Michaelchurch 86.81 339⇑iP P 16 58 00.9 0.0
MCH1 AMb AMB 16 58 15.8
comp=Z,397nm,1.7s,mb6.4
MCH1 AMS AMS 17 41 22.8
comp=Z,91µm,17.0s,MS7.2
HTR Trewern Hill 86.82 339⇑iP P 16 58 00.9 -0.1
LBOS 86.87 285 eP P 16 58 02.3 +0.4
LBOS AMb AMB 16 58 03.3
comp=Z,173nm,1.5s,mb6.1
BERNI Berninapass 86.88 329⇑iP P 16 58 01.4 0.0
comp=Z,884nm,2.4s,mb6.6
WOL Wolverton 86.88 338 eP P 16 58 00.7 -0.6
WOL AMb AMB 16 58 15.9
comp=Z,520nm,1.2s,mb6.6
MOF Molkenrain 86.89 331 eP P 16 58 00.8 -0.7
ZKR Zakros 86.91 312 P P 16 58 01.8 0.0
X26A CR and CF Fran 86.93 49 ⇑P P 16 58 01.9 0.0
baz=87,SNR=6.8
LLS Linth-Limmern 86.96 330⇑iP P 16 58 01.5 -0.3
comp=Z,361nm,1.3s,mb6.4
KALE Kalithea 87.00 317 P P 16 57 59.3 -2.9
223A Chaparral, Ant 87.00 52 ⇓P P 16 58 02.2 -0.1
baz=87
DID Didima 87.00 315 P P 16 57 56.8 -5.4
MUO Muotathal 87.01 330⇑iP P 16 58 01.7 -0.4
comp=Z,590nm,1.4s,mb6.6
THEF They Montfort 87.03 332 eP P 16 58 01.2 -0.9
HINF Hinteralfeld 87.03 331⇑iP P 16 58 01.1 -1.0
comp=Z,112nm,0.9s,mb5.8
HINF Hinteralfeld 87.03 331⇑iP P 16 58 01.1 -1.0
HINF pmax pmax
comp=Z,56nm,0.9s,mb5.8
HINF Hinteralfeld 87.03 331⇑iP P 16 58 01.1 -1.0
comp=Z,56nm,0.9s,mb5.8
TRIZ Trizonia 87.05 317 P P 16 57 59.6 -2.8
BBS Basel-Blauen 87.06 331 eP P 16 58 01.5 -0.8
VDL Val di Lei 87.07 329⇑iP P 16 58 01.9 -0.4
comp=Z,733nm,2.4s,mb6.5
HAU Haudompre 87.07 332⇑iP P 16 58 01.5 -0.8
comp=Z,423nm,1.2s,mb6.2
HAU eMLR MLR
comp=Z,146µm,18.0s,MS7.1
HAU Haudompre 87.07 332⇑iP P 16 58 01.5 -0.8
HAU pmax pmax
comp=Z,211nm,1.2s,mb6.2
HAU MLR MLR
comp=Z,146µm,18.0s,MS7.4
HAU Haudompre 87.07 332⇑iP P 16 58 01.5 -0.8
comp=Z,211nm,1.2s,mb6.2
HAU LR LR
comp=Z,146µm,18.0s,MS7.4
HGH Gray Hill 87.07 339⇑iP P 16 58 01.9 -0.4
BALST Balsthal 87.09 331⇑iP P 16 58 02.0 -0.4
comp=Z,466nm,1.3s,mb6.5
EFP Efpalio 87.10 317 P P 16 58 00.1 -2.6
DHBB Dhamar BB 87.13 286⇑eP P 16 58 03.6 +0.4
DHBB AMb AMB 16 58 05.4
comp=Z,310nm,1.4s,mb6.3
MEZF Maizieres J'vi 87.15 333⇑iP P 16 58 02.3 -0.4
comp=Z,843nm,1.4s,mb6.5
MEZF Maizieres J'vi 87.15 333⇑iP P 16 58 02.3 -0.4
comp=Z,843nm,1.4s,mb6.8
124A Stringfield Ra 87.15 51 ⇑P P 16 58 03.0 -0.1
baz=87
IGT Igoumenitsa 87.17 319 P P 16 58 05.0 +2.0
NPS Neapolis 87.17 313 eP P 16 58 03.0 -0.1
BNALP Bannalp 87.17 330⇑iP P 16 58 02.4 -0.5
comp=Z,776nm,2.5s,mb6.5
LAKA Lakka 87.19 317 P P 16 58 03.3 +0.2
GUR Goura 87.20 316 P P 16 58 00.6 -2.6
Z25A Roswell 87.23 50 ⇑P P 16 58 03.4 0.0
baz=87,SNR=12
BOURR Bourrignon 87.23 331⇑iP P 16 58 02.6 -0.5
comp=Z,697nm,3.0s
X27A F and S Farms, 87.29 48 ⇑P P 16 58 03.8 +0.2
baz=87,SNR=5.1
KEK Kerkira 87.32 319 eP P 16 58 05.0 +1.3
KEK Kerkira 87.32 319 P P 16 58 03.6 -0.1
Y26A Elida 87.34 49 ⇑P P 16 58 03.8 -0.1
baz=87
HASLI Hasliberg/Brie 87.38 330⇑iP P 16 58 03.3 -0.5
comp=Z,507nm,1.4s,mb6.6
XRY Khrisi 87.39 312 eP P 16 58 07.5 +3.4
FUSIO Fusio 87.41 330⇑iP P 16 58 03.6 -0.4
comp=Z,984nm,3.2s
LOMF Lomont 87.42 331 eP P 16 58 03.1 -0.9
224A Corundas Mount 87.53 51 ⇑P P 16 58 05.1 +0.3
baz=87
SCIA State Center 87.53 38 eP P 16 58 04.2 -0.5
comp=Z,462nm,1.4s,mb6.5
SCIA LR LR
comp=Z,21µm,19.0s,MS6.6
VLX Vlachokerasia 87.58 316 P P 16 58 04.5 -0.5
WIMIS Wimmis 87.67 330⇑iP P 16 58 04.6 -0.6
comp=Z,361nm,2.6s,mb6.2
125A Gardner Draw, 87.68 51 ⇓P P 16 58 05.2 -0.3
baz=88,SNR=9.1
Z26A Caprock 87.69 50 ⇑P P 16 58 05.4 -0.2
baz=88
VLI Veliai 87.73 315 eP P 16 58 10.5 +4.8
Y27A Causey 87.77 49 ⇑P P 16 58 05.5 -0.5
baz=88,SNR=11
TORNY Torny/Romont 87.84 331⇑iP P 16 58 05.5 -0.6
comp=Z,604nm,2.6s,mb6.4
VAI Varese 87.84 329 P P 16 58 05.1 -1.0
KSU1 Kansas State U 87.86 41 eP P 16 58 04.8 -1.5
comp=Z,180nm,1.0s,mb6.3
KSU1 LR LR
comp=Z,23µm,20.0s,MS6.6
CING Cingoli 87.86 325 P P 16 58 06.2 0.0
MNTX Cornudas Mount 87.86 52 PFAKE 16 58 20.0 +14
MNTX LR LR
comp=Z,14µm,20.0s,MS6.4
LKBD Leukerbad 87.89 330⇑iP P 16 58 05.7 -0.6
BRANT Les Verrieres 87.90 331⇑iP P 16 58 06.1 -0.2
comp=Z,780nm,3.3s
VAM Vamos 87.91 313 eP P 16 58 06.5 -0.1
KFL Anninata 87.94 317 P P 16 58 04.4 -2.3
225A Deer Hill, Car 87.94 51 ⇓P P 16 58 07.1 +0.3
baz=88
MSTX Muleshoe 87.95 49 ⇑P P 16 58 06.5 -0.3
baz=88
324A Moseley Ranch, 87.97 52 ⇓P P 16 58 07.0 0.0
baz=88
ITM Ithomi 87.97 316 eP P 16 58 06.0 -0.9
ITM Ithomi 87.97 316 P P 16 58 05.8 -1.1
AMTX Amarillo 87.98 47 eP P 16 58 06.2 -0.7
comp=Z,128nm,1.1s,mb6.1
AMTX LR LR
comp=Z,19µm,19.0s,MS6.5
VLS Valsamata 88.00 317 eP P 16 58 06.5 -0.5
VLS Valsamata 88.00 317 P P 16 58 06.3 -0.7
RGNG Rignano Grg 88.02 323 P P 16 58 06.5 -0.5
MMK Mattmark 88.03 330⇑iP P 16 58 06.7 -0.3
comp=Z,500nm,2.7s,mb6.3
SENIN Lac Senin/Sane 88.04 330⇑iP P 16 58 06.9 -0.1
comp=Z,423nm,2.5s,mb6.2
Z27A Tatum 88.13 49 ⇓P P 16 58 07.0 -0.7
baz=88,SNR=16
HTL Hartland 88.13 339⇑eP P 16 58 07.1 -0.3
HTL AMb AMB 16 58 10.7
comp=Z,402nm,4.9s
HTL AMS AMS 17 42 37.8
comp=Z,118µm,16.9s,MS7.4
HTL Hartland 88.13 339 P P 16 58 07.1 -0.3
HTL AMb AMB 16 58 10.7
comp=Z,402nm,4.9s
HTL AMS AMS 17 42 37.8
VMG Vicchio 88.16 326 P P 16 58 08.3 +0.7
GDL2 Guadalupe Moun 88.17 51 eP P 16 58 05.9 -2.0
comp=Z,21nm,0.9s,mb5.4
FNVD Fontana Vidola 88.18 327 P P 16 58 08.3 +0.6
JFWS Jewell Farm 88.19 35 P P 16 58 06.9 -0.9
JFWS pmax pmax
comp=Z,68nm,0.9s,mb5.9
JFWS Jewell Farm 88.19 35 eP P 16 58 06.1 -1.7
comp=Z,68nm,0.8s,mb5.9
JFWS LR LR
comp=Z,19µm,21.0s,MS6.5
AIGLE Aigle 88.20 330⇑iP P 16 58 07.1 -0.7
comp=Z,432nm,2.7s,mb6.2
GRYON Gryon 88.21 330⇑iP P 16 58 07.3 -0.5
LTRZ Laterza 88.21 321 P P 16 58 07.3 -0.6
DIX Grande Dixence 88.23 330⇑iP P 16 58 07.9 0.0
comp=Z,517nm,3.3s
MURB Monte Urbino 88.26 325 P P 16 58 08.7 +0.6
comp=Z,469nm,1.2s,mb6.6
PYL PYLOS 88.28 316 P P 16 58 05.9 -2.4
ERBM Eremo 88.30 327 P P 16 58 08.6 +0.3
GIMEL St. Georges / 88.31 331⇑iP P 16 58 07.9 -0.4
comp=Z,700nm,4.7s
OG01 Vacheresse 88.31 331 eP P 16 58 07.4 -0.9
CABF La Chapelle 88.32 331⇑iP P 16 58 07.8 -0.5
comp=Z,66nm,0.8s,mb5.6
CABF La Chapelle 88.32 331⇑iP P 16 58 07.8 -0.5
CABF pmax pmax
comp=Z,33nm,0.8s,mb5.6
CABF La Chapelle 88.32 331⇑iP P 16 58 07.8 -0.5
comp=Z,33nm,0.8s,mb5.6
325A Bean Ranch, Si 88.34 52 ⇓P P 16 58 09.0 +0.3
baz=88
SALAN Lac Salanfe 88.35 330⇑iP P 16 58 08.1 -0.4
GVD Gavdhos 88.37 313 eP P 16 58 07.8 -1.0
comp=Z,417nm,0.9s,mb6.7
226A Malaga, Loving 88.43 51 ⇑P P 16 58 09.2 0.0
baz=88
EMV Vieux Emosson 88.45 330⇑iP P 16 58 08.6 -0.3
comp=Z,645nm,3.3s
DYA Yadsworthy 88.47 339⇑eP P 16 58 08.4 -0.6
DYA AMb AMB 16 58 24.3
comp=Z,336nm,4.0s

DYA AMS AMS 17 39 50.8
comp=Z,81µm,22.1s,MS7.1
127A Arkansas Junct 88.47 50 ⇓P P 16 58 09.2 -0.1
baz=88
FG5 Orsara di Pugl 88.47 323 P **P 16 58 09.4 +0.2**
comp=Z,483nm,1.2s,mb6.6
BDI Bagni Di Lucca 88.50 327 P **P 16 58 08.3 -0.9**
VLC Villacollemand 88.52 327 PFAKE 16 58 20.0 +11
VLC LR LR
comp=Z,147µm,19.0s,MS7.4
AQU L'Aquila 88.56 324⇑*i*P P 16 58 10.1 +0.6
LOR Lormes 88.62 333⇑*i*P P 16 58 09.1 -0.6
comp=Z,698nm,1.4s,mb6.5
LOR *e*MLR MLR
comp=Z,168µm,18.0s,MS7.2
LOR Lormes 88.62 333⇑*i*P P 16 58 09.1 -0.6
LOR pmax pmax
comp=Z,349nm,1.4s,mb6.5
LOR MLR MLR
comp=Z,168µm,18.0s,MS7.5
LOR Lormes 88.62 333⇑*i*P P 16 58 09.1 -0.6
comp=Z,349nm,1.4s,mb6.5
LOR LR LR
comp=Z,168µm,18.0s,MS7.5
PTRP Pietrapertosa 88.66 322 P **P 16 58 09.9 -0.1**
comp=Z,528nm,1.0s,mb6.8
MIDA Miranda 88.69 323 P **P 16 58 10.1 -0.1**
425A Indio Mountain 88.73 52 ⇓P P 16 58 10.3 -0.2
baz=88,SNR=7.2
ORI Oriolo Calabro 88.80 321 P **P 16 58 10.8 +0.1**
FLN La Foliniere 88.87 336⇑*i*P P 16 58 10.2 -0.7
comp=Z,672nm,1.4s,mb6.5
FLN *e*MLR MLR
comp=Z,238µm,20.0s,MS7.3
FLN La Foliniere 88.87 336⇑*i*P P 16 58 10.2 -0.7
FLN pmax pmax
comp=Z,336nm,1.4s,mb6.5
FLN MLR MLR
comp=Z,238µm,20.0s,MS7.6
FLN La Foliniere 88.87 336⇑*i*P P 16 58 10.2 -0.7
comp=Z,336nm,1.4s,mb6.5
FLN LR LR
comp=Z,238µm,20.0s,MS7.6
LDF La Druitiere 88.89 336⇑*i*P P 16 58 10.3 -0.7
comp=Z,786nm,1.6s,mb6.5
LDF La Druitiere 88.89 336⇑*i*P P 16 58 10.3 -0.7
LDF pmax pmax
comp=Z,393nm,1.6s,mb6.5
LDF La Druitiere 88.89 336⇑*i*P P 16 58 10.3 -0.7
comp=Z,393nm,1.6s,mb6.5
SSF Saint Saulge 88.93 333⇑*i*P P 16 58 10.6 -0.6
comp=Z,304nm,1.3s,mb6.2
SSF Saint Saulge 88.93 333⇑*i*P P 16 58 10.6 -0.6
SSF pmax pmax
comp=Z,152nm,1.3s,mb6.2
SSF Saint Saulge 88.93 333⇑*i*P P 16 58 10.6 -0.6
comp=Z,152nm,1.3s,mb6.2
LPL La Plagne 88.96 330⇑*i*P P 16 58 11.2 -0.2
comp=Z,79nm,0.7s,mb5.9
LPL La Plagne 88.96 330⇑*i*P P 16 58 11.2 -0.2
LPL pmax pmax
comp=Z,39nm,0.7s,mb5.8
LPL La Plagne 88.96 330⇑*i*P P 16 58 11.2 -0.2
comp=Z,40nm,0.7s,mb5.8
227A Bennet, Jal 88.97 50 ⇑P P 16 58 11.4 -0.2
baz=89
LPG La Plagne 88.97 330⇑*i*P P 16 58 11.3 -0.1
comp=Z,112nm,0.7s,mb6.0
LPG La Plagne 88.97 330⇑*i*P P 16 58 11.3 -0.1
LPG pmax pmax
comp=Z,56nm,0.7s,mb6.0
LPG La Plagne 88.97 330⇑*i*P P 16 58 11.3 -0.1
comp=Z,56nm,0.7s,mb6.0
326A Caldwell Ranch 89.01 51 ⇓P P 16 58 11.8 -0.1
baz=89
JSA Saint Aubin 89.04 337⇑*i*P P 16 58 11.3 -0.4
JSA AMb AMB 16 58 27.1
comp=Z,416nm,4.9s
CERT Cerreto 89.07 324 P **P 16 58 10.9 -1.0**
CCA1 Carnmenellis 89.07 339⇑*i*P P 16 58 11.3 -0.4
CCA1 AMb AMB 16 58 27.3
comp=Z,312nm,6.7s
RFI Roccamonfina 89.09 323 P **P 16 58 12.7 +0.6**
SMF Signal de Mont 89.15 332⇑*i*P P 16 58 11.6 -0.6
comp=Z,493nm,1.4s,mb6.4
SMF Signal de Mont 89.15 332⇑*i*P P 16 58 11.6 -0.6
SMF pmax pmax
comp=Z,246nm,1.4s,mb6.3
SMF Signal de Mont 89.15 332⇑*i*P P 16 58 11.6 -0.6
comp=Z,246nm,1.4s,mb6.3
GLMI Grayling 89.16 31 *e*P P 16 58 11.8 -0.5
comp=Z,285nm,0.8s,mb6.7
GLMI LR LR
comp=Z,19µm,20.0s,MS6.5
AVF Avril sur Loir 89.21 333⇑*i*P P 16 58 12.0 -0.5
comp=Z,629nm,1.3s,mb6.5
AVF Avril sur Loir 89.21 333⇑*i*P P 16 58 12.0 -0.5
AVF pmax pmax
comp=Z,315nm,1.3s,mb6.5
AVF Avril sur Loir 89.21 333⇑*i*P P 16 58 12.0 -0.5
comp=Z,314nm,1.3s,mb6.5
QLNO Quiliano 89.26 328 P **P 16 58 11.0 -1.8**
327A Balmorhea Ranc 89.28 51 ⇓P P 16 58 12.7 -0.5
baz=89
TIP Timpagrande 89.31 320 PFAKE 16 58 20.0 +6.9
TIP LR LR
comp=Z,249µm,21.0s,MS7.6
GRR Gorron 89.32 336⇑*i*P P 16 58 12.5 -0.5
comp=Z,784nm,1.3s,mb6.6
GRR Gorron 89.32 336⇑*i*P P 16 58 12.5 -0.5
GRR pmax pmax
comp=Z,392nm,1.3s,mb6.6
GRR Gorron 89.32 336⇑*i*P P 16 58 12.5 -0.5
comp=Z,392nm,1.3s,mb6.6
BNI Bardonecchia 89.36 330 PFAKE 16 58 20.0 +6.7
BNI LR LR
comp=Z,96µm,20.0s,MS7.2
426A McDonald Obser 89.41 52 ⇑P P 16 58 13.3 -0.5
baz=89
GDM Grand'Maison 89.47 330 *e*P P 16 58 13.4 -0.3
MSEY Mahe Island 89.53 264 P **P 16 58 16.4 +1.9**
comp=Z,544nm,1.4s,mb6.7,SNR=8.5
MSEY Mahe Island 89.53 264 P **P 16 58 16.0 +1.5**
MSEY LR LR
comp=Z,47µm,22.0s,MS6.9
MSEY Mahe Island 89.53 264 P **P 16 58 16.3 +1.8**
SNR=8.0
MSEY P 16 58 16.3
SNR=8.0
MAON Monte Argentar 89.55 326 P **P 16 58 13.5 -0.7**
GRN Grenoble 89.58 330 *e*P P 16 58 14.2 -0.1
MBDF Montbardon 89.59 330⇑*i*P P 16 58 13.2 -1.1
comp=Z,124nm,0.8s,mb6.0
MBDF Montbardon 89.59 330⇑*i*P P 16 58 13.2 -1.1
MBDF pmax pmax
comp=Z,62nm,0.8s,mb6.0
MBDF Montbardon 89.59 330⇑*i*P P 16 58 13.2 -1.1
comp=Z,62nm,0.8s,mb6.0
BGF Bois d'Agland 89.59 333⇑*i*P P 16 58 13.8 -0.5
comp=Z,385nm,1.4s,mb6.2
BGF Bois d'Agland 89.59 333⇑*i*P P 16 58 13.8 -0.5
BGF pmax pmax
comp=Z,193nm,1.4s,mb6.2
BGF Bois d'Agland 89.59 333⇑*i*P P 16 58 13.8 -0.5
comp=Z,193nm,1.4s,mb6.2
427A Hayter Ranch, 89.69 51 ⇓P P 16 58 15.1 0.0
baz=90
328A Wristen Ranch, 89.70 50 ⇓P P 16 58 14.6 -0.5
baz=90,SNR=5.3
SURF Saint Ours 89.78 329 *e*P P 16 58 15.0 -0.2
WMOK Wichita Mounta 89.78 46 P **P 16 58 14.9 -0.5**
WMOK pmax pmax
comp=Z,120nm,1.4s,mb6.0
WMOK Wichita Mounta 89.78 46 *e*P P 16 58 14.3 -1.2
comp=Z,75nm,0.3s,mb6.5
WMOK LR LR
comp=Z,24µm,20.0s,MS6.6
526A Mary Lane Ranc 89.78 52 ⇓P P 16 58 15.2 -0.4
baz=90,SNR=7.4
IMI Imperia 89.79 328 P **P 16 58 14.8 -0.5**
ORIF Oris-en-Rattie 89.80 330⇑*i*P P 16 58 14.9 -0.4
comp=Z,103nm,0.9s,mb5.8
ORIF *e*MLR MLR
comp=Z,149µm,21.0s,MS7.1
ORIF Oris-en-Rattie 89.80 330⇑*i*P P 16 58 14.9 -0.4
ORIF pmax pmax
comp=Z,51nm,0.9s,mb5.8
ORIF Oris-en-Rattie 89.80 330⇑*i*P P 16 58 14.9 -0.4
comp=Z,51nm,0.9s,mb5.9
SAOF Saorge 89.87 329 *e*P P 16 58 13.8 -1.9
AGO Saint Agoulin 89.92 332 *e*P P 16 58 15.9 +0.1
AUTN L'Aution 89.92 329 *e*P P 16 58 14.8 -1.1
TOUF Mont Tournerai 89.98 329 *e*P P 16 58 15.0 -1.2
SGMF Saint Gilles 89.98 337⇑*i*P P 16 58 15.7 -0.4
comp=Z,247nm,1.0s,mb6.2
SGMF Saint Gilles 89.98 337⇑*i*P P 16 58 15.7 -0.4
SGMF pmax pmax
comp=Z,124nm,1.0s,mb6.2
SGMF Saint Gilles 89.98 337⇑*i*P P 16 58 15.7 -0.4
comp=Z,124nm,1.0s,mb6.2
SBF Sospel 90.02 329⇑*i*P P 16 58 14.9 -1.5
comp=Z,379nm,1.2s,mb6.3
SBF Sospel 90.02 329⇑*i*P P 16 58 14.9 -1.5
SBF pmax pmax
comp=Z,190nm,1.2s,mb6.3
SBF Sospel 90.02 329⇑*i*P P 16 58 14.9 -1.5
comp=Z,190nm,1.2s,mb6.3
SSB Saint Sauveur 90.03 331 *e*P P 16 58 15.8 -0.6
SSB Saint Sauveur 90.03 331 P **P 16 58 16.0 -0.4**
SSB pmax pmax
comp=Z,89nm,1.3s,mb5.9
SSB Saint Sauveur 90.03 331 *e*P P 16 58 15.7 -0.7
comp=Z,89nm,1.3s,mb5.9
SSB LR LR
comp=Z,6µm,22.0s,MS6.0
527A Woodward Ranch 90.03 52 ⇓P P 16 58 16.2 -0.5
baz=90
LUCF Luceram 90.03 329 *e*P P 16 58 15.2 -1.2
TCF Toulx Ste Croi 90.06 333⇑*i*P P 16 58 16.1 -0.4
comp=Z,167nm,1.1s,mb6.0
TCF Toulx Ste Croi 90.06 333⇑*i*P P 16 58 16.1 -0.4
TCF pmax pmax
comp=Z,83nm,1.1s,mb6.0
TCF Toulx Ste Croi 90.06 333⇑*i*P P 16 58 16.1 -0.4
comp=Z,83nm,1.1s,mb6.0
626A Big Bend Ranch 90.10 53 ⇑P P 16 58 16.8 -0.2
baz=90
MVIF Mont Vial 90.11 329 *e*P P 16 58 15.8 -1.0
ROSF Rostrenen 90.14 337⇑*i*P P 16 58 16.4 -0.4
comp=Z,470nm,1.3s,mb6.3
ROSF Rostrenen 90.14 337⇑*i*P P 16 58 16.4 -0.4
ROSF pmax pmax
comp=Z,235nm,1.3s,mb6.4
ROSF Rostrenen 90.14 337⇑*i*P P 16 58 16.4 -0.4
comp=Z,235nm,1.3s,mb6.4
428A Kincaid Ranch, 90.22 51 ⇑P P 16 58 17.7 +0.1
baz=90,SNR=6.9
VIVF Saint-Julien-l 90.33 331⇑*i*P P 16 58 17.2 -0.6
comp=Z,161nm,1.0s,mb6.0
VIVF Saint-Julien-l 90.33 331⇑*i*P P 16 58 17.2 -0.6
VIVF pmax pmax
comp=Z,80nm,1.0s,mb6.0
VIVF Saint-Julien-l 90.33 331⇑*i*P P 16 58 17.2 -0.6
comp=Z,80nm,1.0s,mb6.0
CALN Calern 90.34 329 *e*P P 16 58 17.0 -0.9
BST Brest 90.41 338 *e*P P 16 58 16.8 -1.3
PGF Pioggiola 90.41 327⇑*i*P P 16 58 17.0 -1.2
comp=Z,178nm,1.0s,mb6.1
PGF Pioggiola 90.41 327⇑*i*P P 16 58 17.0 -1.2
PGF pmax pmax
comp=Z,89nm,1.0s,mb6.0
PGF Pioggiola 90.41 327⇑*i*P P 16 58 17.0 -1.2
comp=Z,89nm,1.0s,mb6.0
CEL Celeste 90.44 320 PFAKE 16 58 30.0 +12
CEL LR LR
comp=Z,210µm,19.0s,MS7.6
HDIL Hopedale 90.47 36 *e*P P 16 58 17.6 -0.9
comp=Z,105nm,1.0s,mb6.1
HDIL LR LR
comp=Z,21µm,19.0s,MS6.6
QUIF Quistinic 90.47 337⇑*i*P P 16 58 17.8 -0.6
comp=Z,222nm,1.2s,mb6.1
QUIF Quistinic 90.47 337⇑*i*P P 16 58 17.8 -0.6
QUIF pmax pmax
comp=Z,111nm,1.2s,mb6.1
QUIF Quistinic 90.47 337⇑*i*P P 16 58 17.8 -0.6
comp=Z,111nm,1.2s,mb6.1
528A Cox Ranch, San 90.54 51 ⇑P P 16 58 19.0 -0.1
baz=90,SNR=7.3
TXAR Lajitas Array 90.55 52 P **P 16 58 18.9 -0.3**
comp=Z,16nm,0.7s,mb5.4,baz=306,slow=2.9,SNR=33
TXAR PKKPbc PKKPbc 17 15 47.9 +3.0
comp=Z,0.9nm,0.7s,baz=160,slow=6.5,SNR=5.3
TXAR LR LR 17 40 54.4
comp=Z,24µm,18.5s,MS6.7,baz=355,slow=37
FRF La Foret Royal 90.60 329⇑*i*P P 16 58 17.7 -1.4
comp=Z,315nm,1.3s,mb6.2
FRF La Foret Royal 90.60 329⇑*i*P P 16 58 17.7 -1.4
FRF pmax pmax
comp=Z,158nm,1.3s,mb6.2
FRF La Foret Royal 90.60 329⇑*i*P P 16 58 17.7 -1.4
comp=Z,158nm,1.3s,mb6.2
MFF Saint Martin d 90.62 335⇑*i*P P 16 58 18.9 -0.2
comp=Z,434nm,1.2s,mb6.3
MFF Saint Martin d 90.62 335⇑*i*P P 16 58 18.9 -0.2
MFF pmax pmax
comp=Z,217nm,1.2s,mb6.4
MFF Saint Martin d 90.62 335⇑*i*P P 16 58 18.9 -0.2
comp=Z,217nm,1.2s,mb6.4
627A Terlingua Ranc 90.64 52 ⇓P P 16 58 20.1 +0.5
baz=90,SNR=13
SMRF Simiane la Rot 90.70 330⇑*i*P P 16 58 18.9 -0.6
comp=Z,225nm,1.3s,mb6.0
SMRF Simiane la Rot 90.70 330⇑*i*P P 16 58 18.9 -0.6
comp=Z,225nm,1.3s,mb6.3
LMR La Mourre 90.84 329⇑*i*P P 16 58 19.0 -1.2
comp=Z,553nm,1.2s,mb6.5
LMR La Mourre 90.84 329⇑*i*P P 16 58 19.0 -1.2
LMR pmax pmax
comp=Z,277nm,1.2s,mb6.5
LMR La Mourre 90.84 329⇑*i*P P 16 58 19.0 -1.2
comp=Z,276nm,1.2s,mb6.5
PRAF Pradon 91.00 330 *e*P P 16 58 20.3 -0.6
RJF Les Rejaudoux 91.15 333⇑*i*P P 16 58 21.4 -0.2
comp=Z,650nm,1.5s,mb6.4
RJF *e*MLR MLR
comp=Z,167µm,17.0s,MS7.2
RJF Les Rejaudoux 91.15 333⇑*i*P P 16 58 21.4 -0.2
RJF pmax pmax
comp=Z,325nm,1.5s,mb6.4
RJF MLR MLR
comp=Z,167µm,17.0s,MS7.5
RJF Les Rejaudoux 91.15 333⇑*i*P P 16 58 21.4 -0.2
comp=Z,325nm,1.5s,mb6.4
RJF LR LR
comp=Z,167µm,17.0s,MS7.5
CAF Calviac 91.27 332⇑*i*P P 16 58 22.2 0.0
comp=Z,338nm,1.1s,mb6.3
CAF Calviac 91.27 332⇑*i*P P 16 58 22.2 0.0
CAF pmax pmax
comp=Z,169nm,1.1s,mb6.3
CAF Calviac 91.27 332⇑*i*P P 16 58 22.2 0.0
comp=Z,169nm,1.1s,mb6.3
LASF Ste Croix 91.30 331⇑*i*P P 16 58 22.0 -0.3
comp=Z,314nm,1.2s,mb6.2
CCM Cathedral Cave 91.43 39 P **P 16 58 22.0 -1.1**
CCM pmax pmax
comp=Z,79nm,1.0s,mb6.0
CCM Cathedral Cave 91.43 39 *e*P P 16 58 21.6 -1.5
comp=Z,79nm,1.0s,mb6.0
CCM LR LR
comp=Z,21µm,20.0s,MS6.6
AAM Ann Arbor 91.62 32 PFAKE 16 58 30.0 +6.2
AAM LR LR
comp=Z,23µm,21.0s,MS6.6
LFF La Frestale 91.75 333⇑*i*P P 16 58 24.3 -0.1
comp=Z,256nm,0.9s,mb6.2
LFF La Frestale 91.75 333⇑*i*P P 16 58 24.3 -0.1
LFF pmax pmax
comp=Z,128nm,0.9s,mb6.2
LFF La Frestale 91.75 333⇑*i*P P 16 58 24.3 -0.1
comp=Z,128nm,0.9s,mb6.2
HVZN Vizzini 91.87 320 P **P 16 58 25.1 0.0**
JCT Junction City 92.18 49 P **P 16 58 26.5 -0.2**
JCT pmax pmax
comp=Z,39nm,0.8s,mb5.8
JCT Junction City 92.18 49 *e*P P 16 58 25.4 -1.2
comp=Z,40nm,0.8s,mb5.8
JCT LR LR
comp=Z,20µm,19.0s,MS6.6
MTLF Montolieu 92.56 332⇑*i*P P 16 58 27.8 -0.3
comp=Z,330nm,1.4s,mb6.3
MTLF Montolieu 92.56 332⇑*i*P P 16 58 27.8 -0.3
MTLF pmax pmax
comp=Z,165nm,1.4s,mb6.3
MTLF Montolieu 92.56 332⇑*i*P P 16 58 27.8 -0.3
comp=Z,165nm,1.4s,mb6.3
VSL Villasalto 92.68 325 PFAKE 16 58 40.0 +11
VSL LR LR
comp=Z,110µm,19.0s,MS7.3
LRDF Laroque-de-Fa 92.78 331 *e*P P 16 58 29.2 0.0
MIAR Mount Ida 92.85 43 P **P 16 58 29.4 -0.3**
MIAR pmax pmax
comp=Z,170nm,1.2s,mb6.3
MIAR Mount Ida 92.85 43 *e*P P 16 58 28.6 -1.1
comp=Z,168nm,1.2s,mb6.3
MIAR LR LR
comp=Z,20µm,20.0s,MS6.6
DESE Dese 92.89 286 *e*P P 16 58 30.8 +0.6
DESE S PP 17 02 02.8 -10
WDD Wield Dalam 92.97 319 PFAKE 16 58 40.0 +10
WDD LR LR
comp=Z,151µm,19.0s,MS7.5
EJON La Jonquera 93.05 331 P **P 16 58 29.5 -0.9**
comp=Z,1µm,4.3s
FILF Fillols 93.09 331 *e*P P 16 58 30.4 -0.2
LONY Lake Ozonia 93.13 25 *e*P P 16 58 30.0 -0.7
comp=Z,32nm,1.2s,mb5.6
LONY LR LR
comp=Z,22µm,20.0s,MS6.6
CARF Carcanieres 93.13 331 *e*P P 16 58 30.5 -0.3
ERPA Erie 93.28 30 *e*P P 16 58 30.7 -0.8
comp=Z,124nm,1.3s,mb6.2
ERPA LR LR
comp=Z,45µm,19.0s,MS7.0
VALF Valcebollere 93.43 331 *e*P P 16 58 32.2 0.0
SALF Salau 93.45 332 *e*P P 16 58 35.7 +3.4
MELF Melles 93.51 332 *e*P P 16 58 32.9 +0.3
EPF Esparros 93.53 333⇑*i*P P 16 58 31.9 -0.8
comp=Z,120nm,1.1s,mb5.9
EPF Esparros 93.53 333⇑*i*P P 16 58 31.9 -0.8
EPF pmax pmax
comp=Z,60nm,1.1s,mb5.9
EPF Esparros 93.53 333⇑*i*P P 16 58 31.9 -0.8
comp=Z,60nm,1.1s,mb5.9
ACSO Alum Creek Sta 93.61 33 P **P 16 58 31.7 -1.3**
comp=Z,54nm,0.8s,mb6.0
ACSO LR LR
comp=Z,27µm,21.0s,MS6.7
RESF Ens 93.73 332 *e*P P 16 58 34.4 +0.9
WCI Wyandotte Cave 93.73 36 *e*P P 16 58 34.1 +0.5
WCI pmax pmax
comp=Z,41nm,0.8s,mb5.9
WCI Wyandotte Cave 93.73 36 *e*P P 16 58 32.3 -1.3
comp=Z,41nm,0.8s,mb5.9
WCI LR LR
comp=Z,16µm,20.0s,MS6.5
REYF Montagne du Re 93.77 333 *e*P P 16 58 32.8 -0.9
VIEF Viey 93.78 333 *e*P P 16 58 34.2 +0.4
NCB Newcomb 93.82 25 *e*P P 16 58 32.7 -1.3
comp=Z,76nm,1.5s,mb5.9
NCB LR LR
comp=Z,29µm,22.0s,MS6.7
ORDF Ordiarp 93.84 333 *e*P P 16 58 33.3 -0.8
EBIE Bielsa 93.90 333 P **P 16 58 33.7 -0.6**
comp=Z,2µm,4.9s
ETSF Etsaut 93.98 333⇑*i*P P 16 58 34.8 +0.1
comp=Z,100nm,0.8s,mb6.0
ETSF Etsaut 93.98 333⇑*i*P P 16 58 34.8 +0.1
ETSF pmax pmax
comp=Z,50nm,0.8s,mb6.0
ETSF Etsaut 93.98 333⇑*i*P P 16 58 34.8 +0.1
comp=Z,50nm,0.8s,mb6.0
SJPF Ste Jean 94.03 334⇑*i*P P 16 58 34.4 -0.6
comp=Z,75nm,1.1s,mb5.7
SJPF Ste Jean 94.03 334⇑*i*P P 16 58 34.4 -0.6
SJPF pmax pmax
comp=Z,37nm,1.1s,mb5.7
SJPF Ste Jean 94.03 334⇑*i*P P 16 58 34.4 -0.6
comp=Z,37nm,1.1s,mb5.7
EALK Alkurruntz 94.04 334 P **P 16 58 34.3 -0.7**
comp=Z,2µm,4.0s
ELIZ Elizondo 94.10 334 P **P 16 58 34.9 -0.3**
ELIZ pmax pmax
comp=Z,33nm,1.4s,mb5.6
ELIZ Elizondo 94.10 334 P **P 16 58 34.9 -0.3**
comp=Z,33nm,1.4s,mb5.6
PKME Peaks-Kenny Pk 94.23 21 *e*P P 16 58 35.9 +0.1
comp=Z,62nm,0.9s,mb6.0
PKME LR LR
comp=Z,45µm,19.0s,MS7.0
NATX Nacogdoches 94.31 45 PFAKE 16 58 50.0 +14
NATX LR LR
comp=Z,26µm,20.0s,MS6.7
LBNH Lisbon 94.34 23 *e*P P 16 58 35.6 -0.8
LBNH pmax pmax
comp=Z,83nm,1.5s,mb5.9
LBNH MLR MLR
comp=Z,29µm,19.0s,MS6.8
LBNH Lisbon 94.34 23 *e*P P 16 58 35.6 -0.7
comp=Z,83nm,1.5s,mb5.9
LBNH LR LR
comp=Z,29µm,19.0s,MS6.8
WVT Waverly 94.65 38 *e*P P 16 58 40.0 +2.1
WVT pmax pmax
comp=Z,15nm,0.9s,mb5.4
WVT Waverly 94.65 38 *e*P P 16 58 36.4 -1.5
comp=Z,15nm,0.8s,mb5.5
WVT LR LR
comp=Z,25µm,20.0s,MS6.7
EPOB Poblet 94.69 331 P **P 16 58 36.6 -1.4**
comp=Z,2µm,4.5s
ELAN Lanestosa 94.70 335 P **P 16 58 36.7 -1.3**
comp=Z,3µm,5.7s
BINY Binghamton 94.75 27 *e*P P 16 58 37.6 -0.7
comp=Z,41nm,1.2s,mb5.7
BINY LR LR
comp=Z,50µm,19.0s,MS7.0
ECRI Cripan 94.93 334 P **P 16 58 38.9 -0.2**
ECRI pmax pmax
comp=Z,31nm,1.1s,mb5.7
ECRI Cripan 94.93 334 P **P 16 58 38.9 -0.2**
comp=Z,31nm,1.1s,mb5.7
HKT Hockley 94.95 47 P **P 16 58 44.3 +4.9**
HKT pmax pmax
comp=Z,150nm,1.9s,mb6.1
HKT Hockley 94.95 47 PFAKE 16 58 50.0 +11
HKT LR LR
comp=Z,18µm,20.0s,MS6.5
ESAC San Caprasio 94.97 332 P **P 16 58 39.3 +0.1**
comp=Z,1µm,3.4s
OXF Oxford 95.11 40 PFAKE 16 58 50.0 +10
OXF LR LR
comp=Z,19µm,20.0s,MS6.5
EARI Arriondas 95.23 336 P **P 16 58 37.8 -2.6**
comp=Z,767nm,3.4s
ERTA Horta de San J 95.32 332 P **P 16 58 39.7 -1.2**
comp=Z,3µm,5.9s
ETOS Mallorca 95.34 329 P **P 16 58 40.6 -0.5**
comp=Z,1µm,3.8s
SSPA Standing Stone 95.38 29 P **P 16 58 40.4 -0.8**
comp=Z,29nm,1.1s,mb5.6
SSPA LR LR
comp=Z,24µm,19.0s,MS6.7
MCWV Mont Chateau 95.42 31 *e*P P 16 58 40.5 -0.8
comp=Z,66nm,1.1s,mb6.0
MCWV LR LR
comp=Z,48µm,19.0s,MS7.0
PLAL Pickwick Lake 95.42 39 PFAKE 16 58 50.0 +8.5
PLAL LR LR
comp=Z,27µm,21.0s,MS6.7
KEST Kesra 95.70 323 P **P 16 58 42.3 -0.5**
comp=Z,5.7nm,1.1s,mb4.9,baz=331,slow=1.3,SNR=8.6
KEST PP PP 17 02 37.0 +3.3
comp=Z,5.7nm,0.8s,baz=54,slow=15,SNR=3.9
KEST LR LR 17 47 07.1
comp=Z,52µm,18.3s,MS7.0,baz=344,slow=39
EPON Pontenova 95.83 338 P **P 16 58 41.5 -1.6**
comp=Z,2µm,4.6s
WNDE Wendo Genet 96.11 283 *i*P P 16 58 46.3 +1.3
EMOS Mosqueruela 96.14 332 P **P 16 58 44.4 -0.2**
comp=Z,648nm,3.3s
VBMS Vicksburg 96.28 42 PFAKE 16 59 00.0 +15
VBMS LR LR
comp=Z,20µm,19.0s,MS6.6
ETOR Torete 96.34 333 P **P 16 58 44.9 -0.6**
ETOR pmax pmax
comp=Z,22nm,1.8s,mb5.3
ETOR Torete 96.34 333 P **P 16 58 44.9 -0.6**
comp=Z,22nm,1.8s,mb5.3
EMAZ Mazaricos 96.72 339 P **P 16 58 47.8 +0.6**

comp=Z,401nm,3.6s
ECAL Calabor 96.95 337 P **P 16 58 47.5 -0.7**
comp=Z,1μm,4.1s
TKL Tuckaleechee C 96.99 36 P **P 16 58 48.6 0.0**
TKL Tuckaleechee C 96.99 36 *e*P **P 16 58 47.3 -1.3**
PBRG Braganca 97.07 337 *e*P **P 16 58 49.2 +0.4**
comp=Z,61nm,1.4s,mb5.8
PBRG Braganca 97.07 337 *e*PP PP 17 02 46.5 +2.5
BLA Blacksburg 97.23 33 P **P 16 58 51.8 +2.2**
BLA pmax pmax
comp=Z,29nm,1.0s,mb5.7
BLA MLR MLR
comp=Z,42μm,19.0s,MS6.9
BLA Blacksburg 97.23 33 P **P 16 58 51.8 +2.1**
comp=Z,28nm,1.0s,mb5.7
BLA LR LR
comp=Z,42μm,19.0s,MS6.9
GUD Guadarrama 97.25 334 P **P 16 58 48.9 -0.7**
GUD pmax pmax
comp=Z,8.0nm,0.6s,mb5.3
GUD Guadarrama 97.25 334 P **P 16 58 48.9 -0.7**
comp=Z,8.4nm,0.6s,mb5.3
ELOB Lobios 97.43 338 P **P 16 58 50.3 -0.1**
comp=Z,328nm,3.1s
EBEN Beniarda 97.48 331 P **P 16 58 52.9 +2.2**
comp=Z,500nm,3.2s
LRAL Lakeview Retre 97.51 39 PFAKE 16 59 00.0 +9.0
LRAL LR LR
comp=Z,25μm,20.0s,MS6.7
PCAB Cabril 97.56 337 *e*P **P 16 58 52.5 +1.5**
comp=Z,71nm,1.5s,mb6.0
PCAB Cabril 97.56 337 *e*PP PP 17 02 50.0 +2.3
CBN Corbin 97.66 30 PFAKE 16 59 00.0 +8.4
CBN LR LR
comp=Z,24μm,21.0s,MS6.7
MVO Moncorvo 97.74 337 *e*P **P 16 58 51.4 -0.5**
comp=Z,80nm,1.4s,mb6.1
MVO Moncorvo 97.74 337 *e*PP PP 17 02 48.8 -0.3
MVO *e*LR LR 17 38 50.4
comp=Z,120μm,18.0s
PVRL Vila Real 97.86 337 *e*P **P 16 58 53.0 +0.6**
comp=Z,90nm,1.5s,mb6.1
PVRL Vila Real 97.86 337 *e*PP PP 17 02 53.7 +3.7
ESDC Sonseca Array 98.04 334 P **P 16 58 52.4 -0.8**
comp=Z,6.3nm,0.8s,mb5.2,baz=22,slow=3.9,SNR=12
ESDC PP PP 17 02 50.4 -1.0
comp=Z,11nm,0.9s,baz=28,slow=7.4,SNR=5.1
ESDC PKKP PKKPbc 17 15 43.6 +18
comp=Z,0.4nm,0.4s,baz=198,slow=0.9,SNR=4.7
ESDC LR LR 17 47 32.9
comp=Z,132μm,21.3s,MS7.4,baz=25,slow=38
ESDC Sonseca Array 98.04 334 P **P 16 58 52.5 -0.7**
comp=Z,7.0nm,0.8s,mb5.2
ESLA Sonseca Array 98.04 334 PFAKE 16 59 00.0 +6.8
ESLA LR LR
comp=Z,954μm,21.0s,MS8.3
ETOB Tobarra 98.05 332 P **P 16 58 52.7 -0.6**
comp=Z,866nm,4.1s
PAB San Pablo 98.29 334 P **P 16 58 57.5 +3.2**
PAB pmax pmax
comp=Z,26nm,1.1s,mb5.7
PAB San Pablo 98.29 334 *e*P **P 16 58 54.7 +0.3**
comp=Z,26nm,1.1s,mb5.7
PAB LR LR
comp=Z,128μm,20.0s,MS7.4
EVIA Vianos 98.41 332 P **P 16 58 57.9 +3.0**
EVIA pmax pmax
comp=Z,17nm,1.1s,mb5.5
EVIA Vianos 98.41 332 P **P 16 58 57.9 +2.9**
comp=Z,17nm,1.1s,mb5.5
PVIS Viseu 98.43 337 *e*P **P 16 58 54.1 -0.8**
comp=Z,51nm,1.6s,mb5.8
PVIS Viseu 98.43 337 *e*PP PP 17 02 58.0 +3.7
MTE Manteigas 98.60 337 *e*P **P 16 58 55.1 -0.6**
comp=Z,74nm,1.6s,mb6.0
MTE Manteigas 98.60 337 *e*PP PP 17 02 58.8 +3.1
MTE *e*LR LR 17 37 30.6
comp=Z,107μm,18.0s
MTE Manteigas 98.60 337 PFAKE 16 59 10.0 +14
MTE LR LR
comp=Z,96μm,19.0s,MS7.3
RER Riviere de l'E 98.94 250 PFAKE 16 59 10.0 +13
RER LR LR
comp=Z,6μm,19.0s,MS6.1
GOGA Godfrey 98.97 37 PFAKE 16 59 10.0 +13
GOGA LR LR
comp=Z,25μm,19.0s,MS6.7
BRAL Brewton 99.07 41 PFAKE 16 59 10.0 +12
BRAL LR LR
comp=Z,25μm,20.0s,MS6.7
PCBR Castelo Branco 99.09 336 *e*P **P 16 58 59.2 +1.3**
comp=Z,35nm,1.4s,mb5.7
PCBR Castelo Branco 99.09 336 *e*PP PP 17 02 59.2 -0.2
EBAN Banos Encina 99.31 333 P **P 16 58 58.0 -0.9**
EBAN pmax pmax
comp=Z,10.0nm,1.0s,mb5.3
EBAN Banos Encina 99.31 333 P **P 16 58 58.0 -0.9**
comp=Z,10.0nm,1.0s,mb5.3
EQES Quesada 99.36 332 P **P 16 58 58.9 -0.3**
comp=Z,1μm,4.3s
PMRV Marv??o 99.43 336 *e*P **P 16 59 00.0 +0.5**
comp=Z,54nm,1.5s,mb5.9
PMRV Marv??o 99.43 336 *e*PP PP 17 03 04.2 +2.2
PMRV *e*LQ 17 31 51.5
PMRV *e*LR LR 17 39 30.7
comp=Z,141μm,18.0s
PTOM Tomar 99.59 337 *e*P Pdif 16 58 58.7 -1.4
comp=Z,48nm,1.5s
PTOM Tomar 99.59 337 *e*PP PP 17 03 01.5 -1.7
EADA Adamuz 99.59 334 P Pdif 16 58 58.0 -2.2
comp=Z,274nm,3.4s
EBAD Badajoz 99.92 336 P Pdif 16 59 00.1 -1.4
comp=Z,496nm,2.8s
CNNC Cliffs of the 99.98 32 PFAKE 16 59 10.0 +8.1
CNNC LR LR
comp=Z,29μm,19.0s,MS6.8
PESTR Estremoz 100.00 336 *e*P Pdif 16 59 03.8 +1.8
comp=Z,44nm,1.3s
PESTR Estremoz 100.00 336 *e*PP PP 17 03 05.4 -1.0
PESTR *e*LQ 17 32 05.1
PESTR *e*LR LR 17 40 09.5
comp=Z,159μm,18.0s
PBAR Barrancos 100.45 335 *e*P Pdif 16 59 08.8 +4.9
comp=Z,42nm,1.5s
PBAR Barrancos 100.45 335 *e*PP PP 17 03 11.4 +1.6
PBAR *e*LQ 17 32 25.6
PBAR *e*LR LR 17 40 42.9
comp=Z,167μm,18.0s
EVO Evora 100.45 336 *e*P Pdif 16 59 04.5 +0.6
comp=Z,31nm,1.4s
EVO Evora 100.45 336 *e*PP PP 17 03 10.3 +0.5
PMAFR Mafra 100.47 337 *e*P Pdif 16 59 05.7 +1.7
comp=Z,111nm,1.5s
PMAFR Mafra 100.47 337 *e*PP PP 17 03 06.0 -3.9
PMAFR *e*LQ 17 32 15.2
PMAFR *e*LR LR 17 38 51.7
comp=Z,99μm,16.0s
EMIN Mina Concepcio 100.69 335 P Pdif 16 59 03.0 -2.0
comp=Z,629nm,4.0s
NHSC New Hope 100.77 35 PFAKE 16 59 20.0 +15
NHSC LR LR
comp=Z,47μm,19.0s,MS7.0
PBEJ Beja 100.86 336 *e*PP PP 17 03 15.1 +2.2
PCVE Castro Verde 101.27 336 *e*PP PP 17 03 18.9 +2.9
PCVE *e*LQ 17 32 36.8
PCVE *e*LR LR 17 40 42.1
comp=Z,153μm,18.0s
PVAQ Vaqueiros 101.37 335 *e*P Pdif 16 59 09.5 +1.5
comp=Z,54nm,1.9s
PVAQ Vaqueiros 101.37 335 *e*PP PP 17 03 17.4 +0.6
PVAQ *e*LQ 17 32 28.8
PVAQ *e*LR LR 17 41 36.1
comp=Z,163μm,18.0s
PTEO Sao Teotonio 101.58 336 *e*PP PP 17 03 22.7 +4.4
PBDV Barranco-do-Ve 101.59 336 *e*P Pdif 16 59 08.7 -0.3
comp=Z,76nm,2.0s
PBDV Barranco-do-Ve 101.59 336 *e*PP PP 17 03 20.9 +2.5
PBDV *e*LQ 17 32 56.8
PBDV *e*LR LR 17 41 12.5
comp=Z,175μm,18.0s
SFS San Fernando 101.69 334 PFAKE 16 59 20.0 +11
SFS LR LR
comp=Z,188μm,22.0s,MS7.6
MORF Marmelete 101.77 336 *e*PP PP 17 03 22.7 +2.9
MORF *e*LR LR 17 40 48.9
comp=Z,116μm,18.0s

PFVI Vila Bisbo 101.99 336 *e*PP PP 17 03 26.6 +5.2
PFVI *e*LQ 17 32 36.5
PFVI *e*LR LR 17 40 48.0
comp=Z,85μm,20.0s
KMBO Kilima Mbogo 102.15 278 P Pdif 16 59 12.0 +0.5
KMBO 17 03 18.5
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO pmax pmax
comp=Z,12nm,1.0s
KMBO Kilima Mbogo 102.15 278 P Pdif 16 59 12.0 +0.5
comp=Z,4.1nm,0.9s,baz=62,slow=5.7,SNR=9.8
KMBO PP PP 17 03 18.5 -5.6
comp=Z,12nm,1.0s,baz=34,slow=9.7,SNR=4.5
KMBO Kilima Mbogo 102.15 278 *e*Pdif Pdif 16 59 11.5 0.0
comp=Z,17nm,1.3s
KMBO LR LR
comp=Z,53μm,20.0s,MS7.1
RTC Rabat Centre 104.15 333 PFAKE 16 59 30.0 +10
RTC LR LR
comp=Z,87μm,19.0s,MS7.3
DWPF Disney 104.30 38 PFAKE 16 59 30.0 +8.9
DWPF LR LR
comp=Z,23μm,19.0s,MS6.7
CASY Casey 104.94 192 PFAKE 16 59 30.0 +6.1
CASY LR LR
comp=Z,9μm,20.0s,MS6.3
CMLA Cha da Macela 105.40 349 PFAKE 17 03 50.0 +10
CMLA LR LR
comp=Z,21μm,19.0s,MS6.7
BBSR BB Station 107.47 23 PFAKE 17 03 50.0 +6.4
BBSR LR LR
comp=Z,14μm,21.0s,MS6.5
PMPS Porto Santo 108.02 341 *e*PP PP 17 04 07.0 +1.0
PMAR Madeira 108.49 341 *e*PP PP 17 04 11.4 +2.0
FUL Funchal 108.57 341 *e*PP PP 17 04 09.4 -0.6
TGUH Tegucigalpa,Un 112.02 52 PFAKE 17 04 00.0 +7.5
TGUH LR LR
comp=Z,15μm,20.0s,MS6.6
GTBY Guantanamo Bay 114.28 38 PFAKE 17 04 10.0 +13
GTBY LR LR
comp=Z,22μm,20.0s,MS6.8
MTDJ Mount Denham 114.45 41 PFAKE 17 04 10.0 +13
MTDJ LR LR
comp=Z,20μm,21.0s,MS6.7
GRTK Grand Turk 114.80 34 PFAKE 17 04 10.0 +12
GRTK LR LR
comp=Z,28μm,19.0s,MS6.9
SBA Scott Base 114.85 174 PKIKP PKiKP 17 03 56.5 +0.5
SBA MLR MLR
comp=Z,6μm,21.0s,MS6.2
SDDR Presa de Saban 116.92 35 PFAKE 17 04 10.0 +8.1
SDDR LR LR
comp=Z,50μm,19.0s,MS7.2
LSZ Lusaka 117.58 271 *e*PKIKP PKPdf 17 04 02.1 -1.0
LSZ MLR MLR
comp=Z,48μm,22.0s,MS7.1
TOA0 Torodi Ar. Sit 117.94 315 *e*PKPdf PKPdf 17 04 02.4 -1.5
TORD Torodi Ar. Bea 117.94 315 PKP PKPdf 17 04 04.0 +0.2
comp=Z,14nm,0.9s,baz=19,slow=1.6,SNR=36
TORD PP PP 17 05 10.1 -7.4
comp=Z,26nm,0.9s,baz=33,slow=6.8,SNR=9.7
TORD PKKPbc PKKPbc 17 14 25.7 +3.0
comp=Z,3.8nm,0.9s,baz=241,slow=3.3,SNR=5.4
TORD SKKP 17 18 23.2
comp=Z,5.8nm,1.2s,baz=224,slow=3.8,SNR=4.3
MAW Mawson 118.85 205 *e*P PKPdf 17 04 04.7 +0.8
comp=Z,11nm,0.8s
MAW Mawson 118.85 205 PKP PKPdf 17 04 05.2 +1.2
comp=Z,7.6nm,0.8s,baz=83,slow=6.1,SNR=5.1
MAW PKKPbc PKKPbc 17 14 22.2 +1.7
comp=Z,2.9nm,0.7s,baz=287,slow=10,SNR=4.3
MAW Mawson 118.85 205 *e*PKPdf PKPdf 17 04 04.0 +0.1
MAW LR LR
comp=Z,21μm,21.0s,MS6.7
MSNA Messina 119.78 263 *e*P PKPdf 17 04 00.1 -7.0
MSNA AMS AMS 18 06 47.1
comp=Z,38μm,19.5s,MS7.0
SJG San Juan 119.95 31 PFAKE 17 04 20.0 +12
SJG LR LR
comp=Z,43μm,22.0s,MS7.0
RPN Rapa Nui 120.22 103 PFAKE 17 04 20.0 +12
RPN LR LR
comp=Z,23μm,20.0s,MS6.8
BCIP Isla Barro Col 120.41 49 PFAKE 17 04 20.0 +11
BCIP LR LR
comp=Z,16μm,20.0s,MS6.7
POGA Pongola 120.92 257 *e*P PKPdf 17 04 08.8 -0.3
POGA AMS AMS 17 53 37.6
comp=Z,33μm,21.9s,MS6.9
ANWB Willy Bob 122.03 26 PFAKE 17 04 20.0 +8.3
ANWB LR LR
comp=Z,19μm,22.0s,MS6.7
SLR Silverton 122.80 260 *e*P PKPdf 17 04 11.8 -1.1
SLR AMS AMS 18 09 20.3
comp=Z,33μm,19.7s,MS7.0
ERPM east rand prop 123.11 260 *e*P PKPdf 17 04 13.7 +0.3
ERPM AMS AMS 17 59 51.0
comp=Z,37μm,19.4s,MS7.0
KSR Koster 123.96 261 *e*P PKPdf 17 04 17.9 +2.9
KSR AMS AMS 18 10 25.9
comp=Z,13μm,18.0s,MS6.6
KSD Kokstad 124.05 255 *e*P PKPdf 17 04 06.2 -8.9
KSD AMS AMS 17 53 10.5
comp=Z,117μm,23.0s,MS7.5
PRYS Parys 124.08 260 *e*P PKPdf 17 04 12.7 -2.6
PRYS AMS AMS 18 00 29.9
comp=Z,32μm,19.4s,MS7.0
SEK Senekal 124.50 258 *e*P PKPdf 17 04 13.6 -2.4
SEK AMS AMS 18 10 38.4
comp=Z,36μm,19.4s,MS7.0
LBTB Lobatse 124.61 263 PKIKP PKPdf 17 04 16.7 +0.4
LBTB Lobatse 124.61 263 *e*PKPdf PKPdf 17 04 16.3 -0.1
LBTB LR LR
comp=Z,54μm,21.0s,MS7.2
LBTB Lobatse 124.61 263 *e*P PKPdf 17 04 14.2 -2.2
LBTB AMS AMS 17 55 43.9
comp=Z,20μm,21.9s,MS6.7
FDF Fort de France 124.97 27 PFAKE 17 04 30.0 +13
FDF LR LR
comp=Z,13μm,21.0s,MS6.6
SWZ Schweizer 125.81 260 *e*P PKPdf 17 04 18.5 -0.1
SWZ AMS AMS 18 10 03.7
comp=Z,36μm,20.4s,MS7.0
SDV Santo Domingo 125.88 40 *e*PKPdf PKPdf 17 04 17.8 -1.4
SDV LR LR
comp=Z,9μm,21.0s,MS6.4
QSPA South Pole Qui 125.98 180 PKP PKPdf 17 04 17.6 +0.2
comp=Z,10nm,0.7s,baz=330,slow=0.5,SNR=23
QSPA South Pole Qui 125.98 180 PKP PKPdf 17 04 17.6 +0.2
BOSA Boshof 126.50 259 PKIKP PKPdf 17 04 20.0 +0.1
BOSA Boshof 126.50 259 PKP PKPdf 17 04 19.4 -0.5
comp=Z,30nm,0.8s,baz=358,slow=1.1,SNR=12
BOSA Boshof 126.50 259 *e*PKPdf PKPdf 17 04 19.3 -0.6
BOSA LR LR
comp=Z,32μm,22.0s,MS7.0
BOSA Boshof 126.50 259 *e*P PKPdf 17 04 18.9 -1.0
BOSA AMS AMS 18 11 08.7
comp=Z,23μm,20.4s,MS6.8
DBIC Dimbokro 126.92 317 PKP PKPdf 17 04 20.9 -0.3
comp=Z,22nm,0.8s,baz=45,slow=2.2,SNR=13
DBIC PP PP 17 06 11.2 -7.1
comp=Z,23nm,1.0s,baz=357,slow=8.4,SNR=4.4
DBIC Dimbokro 126.92 317 *e*PKPdf PKPdf 17 04 20.0 -1.2
DBIC LR LR
comp=Z,74μm,20.0s,MS7.4
DBIC Dimbokro 126.92 317 *e*P PKPdf 17 04 20.3 -0.9
BBGH Gun Hill 127.01 26 PFAKE 17 04 30.0 +8.7
BBGH LR LR
comp=Z,24μm,21.0s,MS6.9
TIC Toumodi 127.03 317 *e*P PKPdf 17 04 23.9 +2.5
comp=Z,58nm,0.2s
KIC Kosan Boka 127.11 316 *e*P PKPdf 17 04 21.9 +0.4
comp=Z,108nm,1.0s
ROSC El Rosal 127.13 47 PKP PKPdf 17 04 22.8 +1.3
comp=Z,15nm,0.8s,baz=82,slow=18,SNR=6.1
HVD Gariep Dam 127.14 256 *e*P PKPdf 17 04 22.2 +1.1
HVD AMS AMS 17 57 36.3
comp=Z,39μm,21.6s,MS7.0
GRGR Grenville 127.16 29 PFAKE 17 04 30.0 +8.4
GRGR LR LR
comp=Z,13μm,21.0s,MS6.6
LIC Lamto 127.38 316 *e*PKIKP PKPdf 17 04 21.1 -1.0
comp=Z,88nm,1.0s
LIC *e*MLR MLR
comp=Z,98μm,21.0s,MS7.2

LIC Lamto 127.38 316 *e*P PKPdf 17 04 22.3 +0.2
comp=Z,115nm,1.0s
LIC Lamto 127.38 316 *e*PKPdf PKPdf 17 04 21.1 -1.0
LIC LR LR
comp=Z,49μm,21.0s,MS7.2
GRM Grahamstown 127.43 253 *e*P PKPdf 17 04 23.1 +1.6
GRM AMS AMS 18 13 49.7
comp=Z,58μm,19.6s,MS7.3
SYO Syowa Base 127.53 206⇑ *e*P PKPdf 17 04 21.0 +0.4
SYO Syowa Base 127.53 206⇑ *e*P PKPdf 17 04 26.0 +5.4
SOE Somerset East 127.93 254 *e*P PKPdf 17 04 23.6 +1.1
SOE *e* 17 04 26.4
SOE AMS AMS 18 30 51.5
comp=Z,34μm,20.6s,MS7.0
OTAV Otavalo 128.12 55 *e*PKPdf PKPdf 17 04 23.0 -0.5
OTAV LR LR
comp=Z,10μm,20.0s,MS6.5
TSUM Tsumeb 128.23 273 *e*PKPdf PKPdf 17 04 24.2 +0.7
TSUM LR LR
comp=Z,41μm,20.0s,MS7.1
PKA Prieska 128.92 259 *e*P PKPdf 17 04 26.1 +1.6
PKA AMS AMS 17 59 26.9
comp=Z,9μm,21.2s,MS6.4
SUR Sutherland 131.52 256 PFAKE 17 04 40.0 +11
SUR LR LR
comp=Z,39μm,21.0s,MS7.1
CVNA Calvinia 132.01 258 *e*P PKPdf 17 04 42.3 +12
CVNA AMS AMS 18 14 23.1
comp=Z,57μm,19.0s,MS7.3
NVL N'lazarevskaya 136.58 202 *e*PKIKP PKPdf 17 04 38.9 +1.3
NVL *e*PP 17 07 21.7
NVL *e* 17 11 48.1
NVL *e*SS SS 17 25 17.4 -2.2
MAIT Maitri 136.60 202 *e*E PKiKP 17 04 40.9 +1.5
NNA Nana 137.89 65 PFAKE 17 04 50.0 +8.3
NNA LR LR
comp=Z,13μm,21.0s,MS6.7
VNA2 Neumayer--Watz 141.57 196 *e*PKPdf PKPdf 17 04 42.8 -3.9
baz=119,slow=2.1
VNA3 Neumayer Olymp 141.82 195 *e*PKPdf PKPdf 17 04 42.2 -4.9
VNA1 Neumayer--Stat 141.97 196 *e*PKPdf PKPdf 17 04 45.1 -2.3
LPAZ La Paz 147.02 61 PKPbc PKPbc 17 05 00.0 +0.1
comp=Z,57nm,0.7s,baz=332,slow=3.6,SNR=38
LPAZ La Paz 147.02 61 *e*PKPdf PKPdf 17 04 58.3 +0.5
LPAZ LR LR
comp=Z,17μm,22.0s,MS6.8
PMSA Palmer Station 147.60 160 PFAKE 17 05 10.0 +13
PMSA LR LR
comp=Z,13μm,21.0s,MS6.7
RCBR Riachuelo 149.64 355 PFAKE 17 05 10.0 +7.7
RCBR LR LR
comp=Z,28μm,20.0s,MS7.1
LVC Limon Verde 150.37 71 *e*PKPbc PKPbc 17 05 08.0 -0.3
LVC LR LR
comp=Z,12μm,21.0s,MS6.7
LCO Las Campanas 152.02 84 *e*PKPbc PKPbc 17 05 10.4 -1.7
LCO LR LR
comp=Z,17μm,21.0s,MS6.8
USHA Ushuaia 152.30 142 PKP PKPdf 17 05 07.7 +2.7
comp=Z,16nm,0.8s,baz=333,slow=6.8,SNR=3.0
PEL Peldehue 153.41 93 *e*P PKPdf 17 05 01.6 -5.8
CLCH Cerro Calan 153.60 93 *e*P PKPbc 17 05 14.6 -0.9
PLCA Paso Flores 154.59 110 PKPbc PKPbc 17 05 14.7 -2.6
comp=Z,4.3nm,1.0s,baz=215,slow=6.7,SNR=4.3
PLCA PKPab PKPab 17 05 29.3 -2.8
comp=Z,22nm,1.0s,baz=281,slow=3.7,SNR=7.2
PLCA Paso Flores 154.59 110 *e*PKPbc PKPbc 17 05 17.0 -0.2
PLCA LR LR
comp=Z,20μm,20.0s,MS6.9
EFI East Falkland 159.21 144 PFAKE 17 05 20.0 +5.7
EFI LR LR
comp=Z,29μm,19.0s,MS7.1
CPUP Villa Florida 161.14 64 PKP PKPdf 17 05 20.1 +2.8
comp=Z,3.1nm,0.7s,baz=329,slow=2.2,SNR=4.7
CPUP Villa Florida 161.14 64 PKP PKPdf 17 05 20.1 +2.8
CPUP LR LR
comp=Z,3μm,20.0s
TRQA Tornquist 161.19 103 PFAKE 17 05 30.0 +13
TRQA LR LR
comp=Z,28μm,20.0s
SPB Sao Paulo 165.22 34 PFAKE 17 05 30.0 +8.7
SPB LR LR
comp=Z,20μm,19.0s

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*ISCJB **07** 16:45:54.6±0.4, 71°.40N±0°.04×13°.1W±0°.1, h10km, mb4.0/23, Error ellipse: s-maj=6.4km s-min=4.9km az=33.1*
*REY **07** 16:45:54.2, 71°.07N×11°.17W, h10km, ML2.9, ML3.5*
*CSEM **07** 16:45:54.7±0.3, 71°.41N×12°.93W, h2km, mb4.3/11, Error ellipse: s-maj=11.8km s-min=7.3km az=126.0*
*IDC **07** 16:45:55.0±0.8, 71°.39N×12°.91W, h0km, mb3.9/11, mb1 4.0/16, mb1mx3.9/32, mbtmp3.9/16, ML3.0/4, Error ellipse: s-maj=24.8km s-min=13.6km az=31.0*
*NEIC **07** 16:45:57.0±0.5, 71°.50N×12°.41W, h10km, mb4.3/12, Error ellipse: s-maj=9.7km s-min=7.7km az=62.0*

ISC 07 16:45:56.4±0.4, 71°.40N±0°.04×13°.0W±0°.1, h10km, n93, σ1§25/98, mb4.0/23, 33C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.51**	**104**	Pn		**Pn**	**16 46 17.6**	**-5.8**
	26nm,0.3s,baz=315,slow=5.7,SNR=3.7							
JMIC				Sn		**Sn**	**16 46 34.6**	**-8.5**
	95nm,0.3s,baz=32,slow=24,SNR=6.2							
JMIC	**Jan Mayen**	**1.51**	**104**	Pn		**Pn**	**16 46 17.6**	**-5.8**
JMIC				Sn		**Sn**	**16 46 34.6**	**-8.4**
ILEI	**Leirhofn**	**5.17**	**196**	P		**Pn**	**16 47 11.3**	**-2.4**
ILEI				S		**Sn**	**16 48 12.6**	**-0.8**
IGRI	**Grimsey**	**5.21**	**203**	P		**Pn**	**16 47 13.2**	**-0.9**
IGRI				S		**Sn**	**16 48 14.3**	**+0.2**
IGIL	**Gilhagi**	**5.49**	**194**	P		**Pn**	**16 47 15.4**	**-2.6**
IFLA	**Flatey**	**5.55**	**201**	P		**Pn**	**16 47 18.2**	**-0.7**
IHED	**Heoinshofoi**	**5.57**	**198**	P		**Pn**	**16 47 16.8**	**-2.3**
IBRE	**Brettingsstaoi**	**5.59**	**201**	P		**Pn**	**16 47 18.4**	**-1.1**
ISIG	**Siglufjorour**	**5.71**	**205**	P		**Pn**	**16 47 20.4**	**-0.7**
IHLA	**Hella**	**5.82**	**202**	P		**Pn**	**16 47 21.9**	**-0.7**
IHLA				S		**Sn**	**16 48 29.7**	**+0.4**
IGRS	**Grimsstaoir**	**5.90**	**193**	P		**Pn**	**16 47 21.6**	**-2.1**
BORG	**Borgarnes**	**7.37**	**209**	P		**Pn**	**16 47 48.0**	**+4.2**
SUMG	**Summit**	**7.95**	**290**	P		**Pn**	**16 47 54.6**	**+3.0**
SUMG	**Summit**	**7.95**	**290**	P		**Pn**	**16 47 54.7**	**+3.0**
KBS	**Kingsbay**	**9.77**	**29**	*e*Pn		**Pn**	**16 48 15.1**	**-1.5**
KBS	**Kingsbay**	**9.77**	**29**	*e*Pn		**Pn**	**16 48 15.1**	**-1.5**
SPB4	**Spitsbergen Ar**	**10.12**	**35**	*e*Pn		**Pn**	**16 48 19.4**	**-2.0**
SPB4	**Spitsbergen Ar**	**10.12**	**35**	*e*Pn		**Pn**	**16 48 19.4**	**-2.0**
SPITS	**Spitsbergen Ar**	**10.12**	**35**	Pn		**Pn**	**16 48 20.2**	**-1.2**
	baz=227,slow=14,SNR=6.9							
SPITS	**Spitsbergen Ar**	**10.12**	**35**	Pn		**Pn**	**16 48 20.2**	**-1.2**
ARCES	**ARCESS Array B**	**12.86**	**80**	Pn		**Pn**	**16 48 56.8**	**-1.9**
	0.1nm,0.3s,baz=299,slow=11,SNR=2.6							
ARCES	**ARCESS Array B**	**12.86**	**80**	Pn		**Pn**	**16 48 56.8**	**-2.0**
NOA	**NORSAR Array B**	**14.11**	**125**	Pn		**Pn**	**16 49 12.8**	**-3.2**
	0.1nm,0.3s,baz=330,slow=20,SNR=2.5							
NOA	**NORSAR Array B**	**14.11**	**125**	Pn		**Pn**	**16 49 12.8**	**-3.2**
HFS	**Hagfors**	**15.54**	**123**	Pn		**Pn**	**16 49 35.5**	**+0.3**
	0.0nm,0.3s,baz=330,slow=20,SNR=2.5							
HFS	**Hagfors**	**15.54**	**123**	Pn		**Pn**	**16 49 35.5**	**+0.4**
EKA	**Eskdalemuir Ar**	**16.68**	**160**	Pn		**Pn**	**16 49 50.5**	**+0.7**
	baz=343,slow=11,SNR=3.9							
EKA	**Eskdalemuir Ar**	**16.68**	**160**	Pn		**Pn**	**16 49 50.5**	**+0.7**
KAF	**Kangasniemi**	**17.70**	**102**	*e*p		**Pn**	**16 50 02.8**	**+0.3**
	4.4nm,0.6s							
KAF	**Kangasniemi**	**17.70**	**102**	*e*P		**Pn**	**16 50 02.8**	**+0.3**
	4.4nm,0.6s							
FINES	**FINESS Array B**	**18.14**	**103**	Pn		**Pn**	**16 50 06.8**	**-1.1**
	0.2nm,0.3s,baz=254,slow=3.9,SNR=5.3							
FINES	**FINESS Array B**	**18.14**	**103**	Pn		**Pn**	**16 50 06.8**	**-1.1**
JOF	**Joensuu**	**18.70**	**94**	*e*p		**Pn**	**16 50 15.2**	**+0.4**
	4.8nm,0.7s							
JOF	**Joensuu**	**18.70**	**94**	*e*P		**Pn**	**16 50 15.2**	**+0.4**
	4.8nm,0.7s							
FRB	**Frobisher Bay**	**21.72**	**278**	P		**P**	**16 50 47.1**	**0.0**
	3.6nm,0.9s,mb3.8,baz=38,slow=8.9,SNR=3.1							
BAIF	**Baives**	**22.82**	**151⇑**	*i*P		**P**	**16 50 59.2**	**+0.2**
	12nm,0.7s,mb4.1							
BAIF	**Baives**	**22.82**	**151⇑**	*i*P		**P**	**16 50 59.2**	**+0.2**
	5.8nm,0.7s,mb4.1							
BAIF	**Baives**	**22.82**	**151⇑**	*i*P		**P**	**16 50 59.2**	**+0.2**
	5.8nm,0.7s,mb4.1							
ROSF	**Rostrenen**	**23.58**	**164⇑**	*i*P		**P**	**16 51 08.0**	**+1.0**
	36nm,1.3s,mb4.3							
ROSF	**Rostrenen**	**23.58**	**164⇑**	*i*P		**P**	**16 51 08.0**	**+1.0**

18nm,1.3s,mb4.3
ROSF Rostrenen 23.58 164⇑iP P 16 51 08.0 +1.0
18nm,1.3s,mb4.3
LDF La Druitiere 23.66 158⇑iP P 16 51 07.8 +0.2
LDF La Druitiere 23.66 158⇑iP P 16 51 07.8 +0.2
MEZF Maizieres J'vi 24.47 150⇑iP P 16 51 18.1 +3.1
MEZF Maizieres J'vi 24.47 150⇑iP P 16 51 18.1 +3.1
CDF Champ du Feu 24.93 147⇑iP P 16 51 20.3 +1.1
14nm,0.9s,mb4.2
CDF Champ du Feu 24.93 147⇑iP P 16 51 20.3 +1.1
6.8nm,0.9s,mb4.2
CDF Champ du Feu 24.93 147⇑iP P 16 51 20.3 +1.1
6.8nm,0.9s,mb4.2
ECH Echery 25.10 147 P P 16 51 21.6 +0.8
6.4nm,0.9s,mb4.2
ECH Echery 25.10 147 P P 16 51 21.6 +0.9
6.4nm,0.9s,mb4.2
HINF Hinteralfeld 25.43 148⇑iP P 16 51 24.9 +1.1
5.7nm,0.8s,mb3.9
HINF Hinteralfeld 25.43 148⇑iP P 16 51 24.9 +1.1
2.8nm,0.8s,mb3.8
HINF Hinteralfeld 25.43 148⇑iP P 16 51 24.9 +1.1
2.8nm,0.8s,mb3.9
LOR Lormes 25.49 153⇑iP P 16 51 25.5 +1.2
14nm,0.8s,mb4.2
LOR Lormes 25.49 153⇑iP P 16 51 25.5 +1.2
7.2nm,0.8s,mb4.2
LOR Lormes 25.49 153⇑iP P 16 51 25.5 +1.2
7.2nm,0.8s,mb4.2
MFF Saint Martin d 25.62 159⇑iP P 16 51 27.7 +2.2
14nm,0.9s,mb4.2
MFF Saint Martin d 25.62 159⇑iP P 16 51 27.7 +2.2
6.8nm,0.9s,mb4.2
MFF Saint Martin d 25.62 159⇑iP P 16 51 27.7 +2.2
6.8nm,0.9s,mb4.2
SSF Saint Saulge 25.64 153⇑iP P 16 51 26.6 +0.9
8.6nm,0.8s,mb4.0
SSF Saint Saulge 25.64 153⇑iP P 16 51 26.6 +0.9
4.3nm,0.8s,mb4.0
SSF Saint Saulge 25.64 153⇑iP P 16 51 26.6 +0.9
4.3nm,0.8s,mb4.0
GERES GERESS Array B 25.79 137 P P 16 51 27.6 +0.6
1.5nm,0.8s,mb3.6,baz=334,slow=8.9,SNR=4.7
GERES GERESS Array B 25.79 137 P P 16 51 27.6 +0.6
AVF Avril sur Loir 25.88 154⇑iP P 16 51 28.9 +1.0
12nm,1.0s,mb4.1
AVF Avril sur Loir 25.88 154⇑iP P 16 51 28.9 +1.0
5.8nm,1.0s,mb4.1
AVF Avril sur Loir 25.88 154⇑iP P 16 51 28.9 +1.0
5.8nm,1.0s,mb4.1
BGF Bois d'Agland 26.04 155⇑iP P 16 51 30.5 +1.2
14nm,0.9s,mb4.2
BGF Bois d'Agland 26.04 155⇑iP P 16 51 30.5 +1.2
7.2nm,0.9s,mb4.2
BGF Bois d'Agland 26.04 155⇑iP P 16 51 30.5 +1.2
7.2nm,0.9s,mb4.2
SMF Signal de Mont 26.09 153 eP P 16 51 30.5 +0.7
SMF Signal de Mont 26.09 153 eP P 16 51 30.5 +0.7
TCF Toulx Ste Croi 26.22 156 eP P 16 51 30.5 -0.4
14nm,0.9s,mb4.2
TCF Toulx Ste Croi 26.22 156 eP P 16 51 30.5 -0.4
6.8nm,0.9s,mb4.2
TCF Toulx Ste Croi 26.22 156 eP P 16 51 30.5 -0.4
6.8nm,0.9s,mb4.2
RJF Les Rejaudoux 27.10 157⇑iP P 16 51 41.9 +3.1
13nm,0.8s,mb4.2
RJF Les Rejaudoux 27.10 157⇑iP P 16 51 41.9 +3.1
6.3nm,0.8s,mb4.2
AKASG Malin Array Be 28.11 115 P P 16 51 46.6 -1.2
2.6nm,0.8s,mb3.9,baz=331,slow=9.1,SNR=4.3
AKASG Malin Array Be 28.11 115 P P 16 51 46.6 -1.2
SCHQ Schefferville 28.11 262 eP P 16 51 49.0 +1.2
ESDC Sonseca Array 32.13 167 P P 16 52 24.3 +0.8
0.3nm,0.3s,mb3.6,baz=358,slow=8.9,SNR=3.6
ESDC Sonseca Array 32.13 167 P P 16 52 24.3 +0.8
INK Inuvik 35.05 326 P P 16 52 50.3 +1.7
1.6nm,0.9s,mb3.9,baz=24,slow=13,SNR=5.6
YKA Yellowknife Ar 36.02 309 P P 16 52 58.1 +1.2
2.8nm,0.9s,mb4.2,baz=30,slow=8.5,SNR=8.4
AKTK Aktyubinsk 37.35 85 P P 16 53 08.3 -0.1
AKTK Aktyubinsk 37.35 85 P P 16 53 08.3 -0.2
AKTO Aktyubinsk 37.35 85 P P 16 53 08.3 -0.1
3.2nm,0.9s,mb4.2,baz=311,slow=6.9,SNR=4.4
BRTR Keskin Array B 39.39 118 P P 16 53 27.1 +1.4
0.8nm,0.8s,mb3.5,baz=343,slow=6.9,SNR=3.5
BRTR Keskin Array B 39.39 118 P P 16 53 27.1 +1.4
ULM Lac du Bonnet 41.26 285 P P 16 53 39.6 -1.4
1.4nm,0.4s,mb3.9,baz=21,slow=4.7,SNR=3.1
PDAR Pinedale Array 52.14 292 P P 16 55 06.4 +0.1
0.3nm,0.7s,mb3.3,baz=64,slow=9.3,SNR=3.5
PDAR Pinedale Array 52.14 292 P P 16 55 06.4 +0.1
TORD Torodi Ar. Bea 58.91 163 P P 16 55 54.4 -0.9
1.6nm,0.8s,mb4.1,baz=348,slow=6.6,SNR=4.8

*IDC **07** 16:50:53.8±1.2, 36°52N×141°74E, h0km, mb4.7/9, mb1 4.8/10, mb1mx4.5/26, mbtmp4.7/10, ML4.7/1, Error ellipse: s-maj=32.4km s-min=25.3km az=50.0*
*ISCJB **07** 16:50:56.6±1.5, 36°18N±0°05×141°6E±0°2, h42km±10km, mb4.6/9, Error ellipse: s-maj=21.7km s-min=7.2km az=8.1*
*JMA **07** 16:50:56.8±0.2, 36°21N×141°55E, h58km±4km, M4.6*
JMA Felt II J1.
*NEIC **07** 16:50:59.1±0.9, 36°50N×141°59E, h35km, MG4.6(JMA), Error ellipse: s-maj=20.0km s-min=14.9km az=177.0*
NEIC Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba, Fukushima, Gumma, Miyagi, Niigata, Saitama and Tokyo.
ISC 07 16:50:55.4±3.0, 36°20N±0°05×141°7E±0°1, h19km±17km, n23, σ0§73/26, mb4.6/9, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.85	234	⇓P	Pb	16 51 11.6	+0.2
CHOJ				S	Sb	16 51 23.4	+1.0
JHO	Hitachi	1.00	294	P	Pb	16 51 13.2	-0.9
ONAJ	Iwakimizuishiy	1.15	321	P	Pn	16 51 16.3	-0.2
JYT	Yasato	1.22	272	P	Pn	16 51 16.3	-1.1
JFK	Kawauchi	1.34	330	P	Pn	16 51 18.3	-0.7
JFT	Otama	1.71	321	P	Pn	16 51 24.9	+0.8
JMM	Marumori	1.81	337	P	Pn	16 51 25.6	+0.1
JMM				eS	Sn	16 51 48.6	+0.6
JAG	Ashikaga	1.83	278	P	Pn	16 51 25.4	-0.4
MJAR	Matsushiro Arr	2.84	278	Pn	Pn	16 51 39.8	+0.2
126nm,0.3s,baz=68,slow=31,SNR=37							
MAJO	Matsushiro	2.84	278	eP	Pn	16 51 40.6	+0.9
JHJ	Hachijo jima 2	3.46	208	Pn	Pn	16 51 49.1	+0.9
118nm,0.3s,baz=78,slow=21,SNR=7.5							
JHJ				Sn	Sn	16 52 27.4	-1.2
209nm,0.3s,baz=98,slow=22,SNR=5.3							
SONM	Songino Array	28.45	305	P	P	16 56 48.0	-0.9
6.3nm,0.7s,mb4.4,baz=105,slow=9.0,SNR=4.2							
ZALV	Zalesovo Beam	42.65	313	P	P	16 58 50.3	0.0
28nm,1.1s,mb4.9,baz=83,slow=7.6,SNR=5.0							
MK31	Makanchi Array	44.76	303	P	P	16 59 07.7	+0.2
MKAR	Makanchi Array	44.76	303	P	P	16 59 07.5	0.0
14nm,0.9s,mb4.8,baz=85,slow=6.5,SNR=4.6							
KURK	Kurchatov	46.63	309	P	P	16 59 22.4	+0.3
9.8nm,0.6s,mb4.9,baz=96,slow=11,SNR=7.5							
KURK	Kurchatov	46.63	309	P	P	16 59 20.1	-2.1
BVAR	Borovoye Array	51.30	313	P	P	16 59 58.6	+0.6
8.7nm,0.9s,mb4.7,baz=58,slow=11,SNR=4.9							
WRA	Warramunga Arr	56.27	188	P	P	17 00 38.5	+3.9
4.3nm,0.9s,mb4.5,baz=10,slow=5.9,SNR=4.9							
ABKAR	Abkulak array	58.65	311	eP	P	17 00 50.4	-0.8
FINES	FINESS Array B	69.66	332	P	P	17 02 04.0	+0.8
17nm,1.0s,mb4.9,baz=67,slow=11,SNR=2.4							
AKASG	Malin Array Be	75.10	323	P	P	17 02 36.0	+0.1
1.2nm,0.3s,mb4.2,baz=45,slow=5.9,SNR=4.3							
PDAR	Pinedale Array	78.08	45	P	P	17 02 52.9	0.0
1.3nm,0.6s,mb4.0,baz=354,slow=1.4,SNR=4.0							

JMA 07 16:53:23.9±0.2, 36°23N×141°57E, h53km±4km, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.78	228	P	Pn	16 53 38.6	-0.2
CHOJ				S	Sn	16 53 49.9	+0.2
JHO	Hitachi	0.89	296	P	Pn	16 53 40.2	0.0
ONAJ	Iwakimizuishiy	1.07	325	P	Pn	16 53 42.6	0.0
JYT	Yasato	1.11	270	P	Pn	16 53 43.5	+0.3
JYT				eS	Sn	16 53 58.0	+0.5
JFK	Kawauchi	1.26	334	P	Pn	16 53 45.2	0.0
JAG	Ashikaga	1.72	277	P	Pn	16 53 52.3	+0.9
JMM	Marumori	1.75	339	P	Pn	16 53 52.3	+0.5

*IDC **07** 16:55:47.9±0.8, 36°33N×141°45E, h0km, mb4.2/16, mb1 4.3/19, mb1mx4.2/29, mbtmp4.2/19, ML4.1/3, Error ellipse: s-maj=23.4km s-min=16.6km az=90.0*
*ISCJB **07** 16:55:51.0±1.0, 36°30N±0°03×141°54E±0°09, h35km±8km, mb4.1/16, Error ellipse: s-maj=11.8km s-min=5.7km az=5.7*
*JMA **07** 16:55:52.5±0.1, 36°32N×141°35E, h45km±3km, M4.1*
JMA Felt I J1.
*NEIC **07** 16:55:53.2±0.5, 36°31N×141°41E, h35km, MG4.1(JMA), Error ellipse: s-maj=12.4km s-min=11.0km az=178.0*
ISC 07 16:55:51.1±1.1, 36°33N±0°03×141°46E±0°07, h20km±7km, n35, σ0§88/44, mb4.1/16, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.77	291	⇓P	Pb	16 56 05.9	0.0
CHOJ	Chosi	0.80	218	P	Pb	16 56 06.5	+0.2
CHOJ				eS	Sb	16 56 17.2	+0.6
ONAJ	Iwakimizuishiy	0.94	325	P	Pb	16 56 08.6	-0.1
JYT	Yasato	1.03	265	P	Pb	16 56 09.6	-0.7
JYT				eS	Sb	16 56 19.6	-3.8
JFK	Kawauchi	1.14	336	P	Pn	16 56 11.5	-0.4
JFK				eS	Sb	16 56 25.6	-0.8
JFT	Otama	1.49	323	P	Pn	16 56 17.7	+0.9
JFT				eS	Sn	16 56 36.2	+0.6
JMM	Marumori	1.62	341	P	Pn	16 56 18.7	+0.1
JMM				S	Sn	16 56 38.1	-0.8
JAG	Ashikaga	1.63	274	P	Pn	16 56 18.2	-0.4
JAG				eS	Sn	16 56 37.6	-1.4
JFY	Yanaizu	1.77	308	P	Pn	16 56 22.0	+1.3
MJAR	Matsushiro Arr	2.63	276	Pn	Pn	16 56 32.7	+0.2
37nm,0.3s,baz=85,slow=9.8,SNR=15							
MJAR	Matsushiro Arr	2.63	276	Pn	Pn	16 56 32.6	+0.2
MAJO	Matsushiro	2.63	276	eP	Pn	16 56 33.8	+1.3
MAT	Matsushiro	2.63	276	P	Pn	16 56 33.9	+1.4
MAT				eS	Sn	16 57 06.9	+3.0
JHJ	Hachijo jima 2	3.49	204	Pn	Pn	16 56 44.5	+0.2
69nm,0.3s,baz=76,slow=22,SNR=9.1							
JHJ				Sn	Sn	16 57 23.1	-1.8
105nm,0.3s,baz=53,slow=20,SNR=5.9							
ASAJ	Asahikawa	7.83	6	Pn	Pn	16 57 42.9	-0.9
2.0nm,0.3s,baz=1.8,slow=15,SNR=6.6							
ASAJ				Sn	Sn	16 59 07.5	-4.3
0.9nm,0.3s,baz=232,slow=18,SNR=1.9							
KSRS	Korea Array	10.90	280	Pn	Pn	16 58 30.9	+4.9
0.3nm,0.3s,baz=94,slow=14,SNR=11							
SONM	Songino Array	28.22	305	P	P	17 01 42.0	-0.4
2.4nm,0.7s,mb3.9,baz=109,slow=7.5,SNR=3.1							
CMAR	Chiang Mai Arr	41.36	256	P	P	17 03 35.1	-0.8
0.9nm,0.6s,mb3.6,baz=45,slow=7.3,SNR=6.5							
ZALV	Zalesovo Beam	42.42	313	P	P	17 03 43.5	-0.6
2.4nm,0.5s,mb4.1,baz=98,slow=7.0,SNR=4.4							
MKAR	Makanchi Array	44.53	303	P	P	17 04 02.1	+0.8
2.8nm,0.7s,mb4.2,baz=96,slow=7.2,SNR=3.6							
KURK	Kurchatov	46.40	309	P	P	17 04 16.4	+0.4
5.3nm,0.7s,mb4.6,baz=86,slow=8.4,SNR=11							
BVAR	Borovoye Array	51.08	313	P	P	17 04 51.6	-0.3
0.9nm,0.8s,mb3.8,baz=96,slow=38,SNR=3.9							
WRA	Warramunga Arr	56.37	188	P	P	17 05 29.8	-1.1
2.9nm,0.6s,mb4.5,baz=1.0,slow=7.8,SNR=16							
ABKAR	Abkulak array	58.42	310	eP	P	17 05 44.1	-1.1
ASAR	Alice Springs	60.10	188	P	P	17 05 57.7	+0.8
1.5nm,0.9s,mb4.0,baz=2.2,slow=6.1,SNR=3.9							
RES	Resolute Bay	63.27	14	P	P	17 06 18.1	+0.4
3.2nm,1.0s,mb4.4,baz=280,slow=23,SNR=4.7							
ARCES	ARCESS Array B	64.67	340	P	P	17 06 27.0	0.0
3.0nm,0.8s,mb4.4,baz=62,slow=8.4,SNR=6.2							
FINES	FINESS Array B	69.46	332	P	P	17 06 58.2	+0.7
3.1nm,0.8s,mb4.3,baz=39,slow=9.0,SNR=2.6							
NB2	NORSAR Subarra	74.85	337	P	P	17 07 30.1	+0.3
comp=Z,2.6nm,0.9s,mb4.2,baz=43,slow=5.9							
NOA	NORSAR Array B	74.85	337	P	P	17 07 28.8	-1.1
comp=Z,2.7nm,0.8s,mb4.2,baz=39,slow=5.8,SNR=4.4							
AKASG	Malin Array Be	74.88	322	P	P	17 07 30.2	0.0
comp=Z,3.3nm,0.5s,mb4.5,baz=45,slow=6.0,SNR=15							
AKASG	Malin Array Be	74.88	322	P	P	17 07 30.2	0.0
NVAR	Mina Array Bea	75.38	53	P	P	17 07 34.8	+1.5
comp=Z,0.3nm,0.4s,mb3.5,baz=310,slow=7.0,SNR=2.8							
BRTR	Keskin Array B	79.35	312	P	P	17 07 55.7	+0.2
comp=Z,1.8nm,0.8s,mb4.0,baz=111,slow=3.1,SNR=4.1							
GERES	GERESS Array B	83.33	328	P	P	17 08 16.1	-0.4
comp=Z,0.4nm,0.4s,mb3.8,baz=43,slow=6.0,SNR=4.1							

*IDC **07** 16:59:58.7±2.4, 36°19N×142°01E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/27, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=60.2km s-min=27.3km az=63.0*
*ISCJB **07** 17:00:00.8±1.3, 36°24N±0°06×142°1E±0°1, h33km, mb3.8/3, Error ellipse: s-maj=13.8km s-min=8.8km az=170.5*
*JMA **07** 17:00:02.3±0.3, 36°28N×141°85E, h69km, M3.4*
ISC 07 17:00:03.6±1.3, 36°21N±0°06×141°9E±0°1, h35km, n9, σ1§27/11, mb3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.01	240	P	Pn	17 00 20.9	-0.3
CHOJ				S	Sn	17 00 35.2	+1.0
JHO	Hitachi	1.17	290	P	Pn	17 00 21.5	-1.9
BSO1	Boso 1	1.74	207	S	Sn	17 00 54.8	+2.6
JFT	Otama	1.82	316	S	Sn	17 00 54.5	+0.2
MJAR	Matsushiro Arr	3.02	277	Pn	Pn	17 00 49.4	+0.5
5.6nm,0.3s,baz=166,slow=4.0,SNR=4.7							
JHJ	Hachijo jima 2	3.56	210	Pn	Pn	17 00 54.3	-2.0
12nm,0.3s,baz=90,slow=20,SNR=3.9							
JHJ				Sn	Sn	17 01 35.4	-1.8
56nm,0.3s,baz=72,slow=22,SNR=5.9							
KURK	Kurchatov	46.77	309	P	P	17 08 30.2	+0.9
0.9nm,0.6s,mb3.9,baz=83,slow=7.7,SNR=3.3							
WRA	Warramunga Arr	56.31	189	P	P	17 09 41.1	+0.2
1.3nm,0.9s,mb4.0,baz=4.1,slow=7.0,SNR=3.3							
ASAR	Alice Springs	60.04	188	P	P	17 10 07.5	+0.7
0.4nm,0.9s,mb3.4,baz=1.9,slow=6.4,SNR=2.4							

*IDC **07** 17:02:29.2±1.6, 36°25N×141°65E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.5/28, mbtmp3.7/9, ML3.5/3, MS5.0/1, Ms1 5.0/1, ms1mx4.0/46, Error ellipse: s-maj=41.9km s-min=22.1km az=68.0*
*ISCJB **07** 17:02:31.0±1.3, 36°30N±0°04×141°54E±0°08, h24km±7km, mb3.6/6, Error ellipse: s-maj=10.8km s-min=7.0km az=0.1*
*NEIC **07** 17:02:35.0±1.4, 36°20N×141°37E, h35km, mb4.1/1, Error ellipse: s-maj=34.5km s-min=17.8km az=49.0*
*JMA **07** 17:02:34.4±0.1, 36°28N×141°26E, h46km±3km, M3.7*
JMA Felt I J1.
ISC 07 17:02:31.8±1.2, 36°32N±0°04×141°45E±0°07, h12km±6km, n21, σ1§00/27, mb3.6/6, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.77	292	P	Pg	17 02 47.1	+0.5
CHOJ	Chosi	0.78	218	⇓P	Pg	17 02 47.4	+0.5
CHOJ				S	Sg	17 02 56.4	-0.7
ONAJ	Iwakimizuishiy	0.94	326	S	Sg	17 03 01.6	-0.5
JYT	Yasato	1.02	265	P	Pb	17 02 50.4	-0.9
JYT				S	Sb	17 03 01.4	-3.2
JFT	Otama	1.49	324	S	Sn	17 03 16.5	-1.2
JMM	Marumori	1.63	341	P	Pn	17 03 01.1	+0.9
JMM				S	Sn	17 03 20.3	-0.8
MJAR	Matsushiro Arr	2.62	276	Pn	Pn	17 03 14.4	+0.6
16nm,0.3s,baz=92,slow=15,SNR=9.0							
MJAR				Sn	Sn	17 03 46.4	+0.8
10nm,0.3s,baz=30,slow=28,SNR=5.2							
MJAR				LR	LR	17 04 32.5	
comp=Z,24μm,19.3s,baz=10.0,slow=45							
MJAR	Matsushiro Arr	2.62	276	Pn	Pn	17 03 14.4	+0.6
MJAR				Sn	Sn	17 03 46.4	+0.8
MAJO	Matsushiro	2.62	276	eP	Pn	17 03 14.1	+0.2
MAT	Matsushiro	2.62	276	P	Pn	17 03 14.6	+0.7
MAT				S	Sn	17 03 46.0	+0.4
ASAJ	Asahikawa	7.83	6	Pn	Pn	17 04 25.4	-0.1
0.6nm,0.3s,baz=204,slow=12,SNR=2.9							
KSRS	Korea Array	10.89	280	Pn	Pn	17 05 10.7	+3.3
0.2nm,0.3s,baz=93,slow=14,SNR=4.4							
SONM	Songino Array	28.21	305	P	P	17 08 24.9	+0.8
0.8nm,0.5s,mb3.6,baz=95,slow=7.8,SNR=2.2							
SONM	Songino Array	28.21	305	P	P	17 08 24.9	+0.8
ZALV	Zalesovo Beam	42.42	313	P	P	17 10 28.3	+2.3
0.6nm,0.5s,mb3.5,baz=115,slow=6.8,SNR=2.8							
ZALV	Zalesovo Beam	42.42	313	P	P	17 10 28.3	+2.3
MKAR	Makanchi Array	44.52	303	P	P	17 10 42.7	-0.4
0.9nm,1.0s,mb3.6,baz=106,slow=7.7,SNR=2.8							
KURK	Kurchatov	46.40	309	P	P	17 10 57.8	0.0
1.1nm,0.6s,mb3.9,baz=81,slow=7.3,SNR=4.9							
KURK	Kurchatov	46.40	309	eP	P	17 10 55.9	-1.9
1.0nm,0.5s,mb4.0							
WRA	Warramunga Arr	56.36	188	P	P	17 12 11.8	-0.9
0.6nm,0.8s,mb3.7,baz=4.6,slow=7.4,SNR=3.3							
ASAR	Alice Springs	60.09	188	P	P	17 12 37.8	-0.9
0.2nm,0.6s,mb3.4,baz=16,slow=7.0,SNR=4.7							

*IDC **07** 17:04:17.2±1.2, 36°36N×141°89E, h0km, mb3.6/9, mb1 3.7/12, mb1mx3.6/28, mbtmp3.6/12, ML3.6/3, Error ellipse: s-maj=30.2km s-min=21.2km az=69.0*
*ISCJB **07** 17:04:21.2±1.0, 36°22N±0°04×141°64E±0°08, h36km±8km, mb3.5/9, Error ellipse: s-maj=10.9km s-min=5.9km az=4.4*
*JMA **07** 17:04:22.4±0.2, 36°25N×141°44E, h47km±5km, M3.5*
*NEIC **07** 17:04:22.8±0.7, 36°31N×141°66E, h35km, mb3.9/1, Error ellipse: s-maj=15.8km s-min=12.0km az=212.0*
ISC 07 17:04:20.6±1.3, 36°26N±0°04×141°62E±0°07, h17km±7km, n25, σ0§84/33, mb3.5/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.83	228	P	Pg	17 04 36.6	-0.1
CHOJ				S	Sg	17 04 47.4	-0.2
JHO	Hitachi	0.92	293	P	Pb	17 04 37.1	-0.9
JFK	Kawauchi	1.26	332	P	Pn	17 04 42.9	-0.5
JFK				eS	Sb	17 04 58.1	-1.7
JFT	Otama	1.62	321	P	Pn	17 04 48.7	+0.3
JFT				eS	Sn	17 05 08.7	-0.2
JMM	Marumori	1.74	338	P	Pn	17 04 50.3	+0.3
JMM				eS	Sn	17 05 11.3	-0.4
JAG	Ashikaga	1.75	276	P	Pn	17 04 49.0	-1.2
JFY	Yanaizu	1.92	307	P	Pn	17 04 53.1	+0.7
JFY				eS	Sn	17 05 17.4	+1.3
JKT	Katashina	1.98	286	P	Pn	17 04 53.0	-0.2
JIO	Ouri	2.20	355	P	Pn	17 04 57.6	+1.2
MJAR	Matsushiro Arr	2.76	277	Pn	Pn	17 05 04.5	+0.4
12nm,0.3s,baz=69,slow=31,SNR=6.7							
MJAR				Sn	Sn	17 05 36.7	-0.4
4.9nm,0.3s,baz=88,slow=8.2,SNR=4.0							
MAJO	Matsushiro	2.77	277	eP	Pn	17 05 04.6	+0.5
MAT	Matsushiro	2.77	277	P	Pn	17 05 04.7	+0.6
MAT				eS	Sn	17 05 37.7	+0.6
JHJ	Hachijo jima 2	3.48	206	Pn	Pn	17 05 15.1	+1.2
23nm,0.3s,baz=45,slow=19,SNR=2.4							
JHJ				Sn	Sn	17 05 52.6	-2.0
31nm,0.3s,baz=68,slow=23,SNR=6.8							
KSRS	Korea Array	11.04	280	Pn	Pn	17 07 00.9	+3.3
0.1nm,0.3s,baz=94,slow=15,SNR=2.7							
SONM	Songino Array	28.36	305	P	P	17 10 13.6	0.0
0.7nm,0.6s,mb3.5,baz=92,slow=8.1,SNR=3.1							
SONM	Songino Array	28.36	305	P	P	17 10 13.6	0.0
ZALV	Zalesovo Beam	42.56	313	P	P	17 12 15.2	0.0
0.6nm,0.4s,mb3.6,baz=104,slow=6.1,SNR=3.0							
MKAR	Makanchi Array	44.67	303	P	P	17 12 32.9	+0.6
0.5nm,0.7s,mb3.5,baz=104,slow=8.9,SNR=3.9							
KURK	Kurchatov	46.54	309	P	P	17 12 47.8	+0.8
0.6nm,0.4s,mb3.9,baz=82,slow=7.9,SNR=7.4							
KURK	Kurchatov	46.54	309	P	P	17 12 46.7	-0.3
0.6nm,0.4s,mb3.9							
BVAR	Borovoye Array	51.22	313	P	P	17 13 22.3	-0.5
0.4nm,0.6s,mb3.5,baz=97,slow=4.8,SNR=2.3							
WRA	Warramunga Arr	56.31	188	P	P	17 14 00.6	+0.1
0.3nm,0.7s,mb3.4,baz=11,slow=7.7,SNR=3.4							
ASAR	Alice Springs	60.04	188	P	P	17 14 26.9	+0.5
0.3nm,0.9s,mb3.3,baz=15,slow=9.0,SNR=2.8							
AKASG	Malin Array Be	75.01	323	P	P	17 16 01.0	+0.1
0.3nm,0.3s,mb3.7,baz=48,slow=6.0,SNR=5.0							
PDAR	Pinedale Array	78.09	45	P	P	17 16 17.0	-1.5
0.5nm,0.7s,mb3.6,baz=90,slow=0.9,SNR=2.8							

*IDC **07** 17:07:32.9±1.1, 36°15N×141°84E, h0km, mb3.9/8, mb1 3.9/13, mb1mx3.8/30, mbtmp3.9/13, ML3.9/4, MS5.0/1, Ms1 5.0/1, ms1mx4.0/41, Error ellipse: s-maj=30.0km s-min=16.5km az=74.0*
*ISCJB **07** 17:07:35.1±1.8, 36°14N±0°03×141°94E±0°07, h31km±14km, mb3.9/10, Error ellipse: s-maj=9.0km s-min=5.3km az=8.1*
*JMA **07** 17:07:36.8±0.3, 36°16N×141°70E, h71km±5km, M3.4*
*NEIC **07** 17:07:37.3±10.0, 36°11N×141°64E, h25km±68km, mb4.3/3, Error ellipse: s-maj=49.7km s-min=12.1km az=72.0*
ISC 07 17:07:35.4±1.8, 36°15N±0°03×141°90E±0°06, h18km±11km, n30, σ0§83/38, mb3.9/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.95	242	P	Pb	17 07 53.3	-0.1
CHOJ				S	Sb	17 08 06.0	+0.3
JHO	Hitachi	1.17	293	P	Pn	17 07 56.0	-0.8
ONAJ	Iwakimizuishiy	1.29	317	P	Pn	17 07 58.2	-0.3
JFK	Kawauchi	1.46	326	P	Pn	17 08 00.4	-0.5
JFK				eS	Sn	17 08 19.2	-0.3
BSO3	Boso 3	1.76	220	P	Pn	17 08 05.5	+0.6
BSO3				eS	Sn	17 08 27.6	+0.8
JFT	Otama	1.85	318	P	Pn	17 08 06.1	-0.1
JMM	Marumori	1.93	333	P	Pn	17 08 06.5	-0.7
JMM				eS	Sn	17 08 29.8	-1.1
JAG	Ashikaga	1.99	279	P	Pn	17 08 07.6	-0.5
JFY	Yanaizu	2.16	306	P	Pn	17 08 11.2	+0.8
JKT	Katashina	2.22	287	P	Pn	17 08 11.3	0.0
JIO	Ouri	2.34	349	P	Pn	17 08 14.4	+1.5
JIO				eS	Sn	17 08 40.7	-0.4
MJAR	Matsushiro Arr	3.00	279	Pn	Pn	17 08 19.3	-2.7
12nm,0.3s,baz=318,sl

*JMA **07** 17:08:46.1±0.2,36°.20N×141°.57E,h58km±5km,M3.7*
ISC 07 17:08:47.6±0.5,36°.20N±0°.03×141°.61E±0°.06,h35km,n23,σ0s97/32,mb3.6/11,1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.79**	**231**	‖P	**Pn**	**17 09 01.1**	**-1.1**
CHOJ				S	**Sn**	**17 09 12.4**	**-0.3**
JHO	**Hitachi**	**0.93**	**296**	P	**Pn**	**17 09 03.2**	**-1.0**
JHO				S	**Sn**	**17 09 15.8**	**-0.5**
ONAJ	**Iwakimizuishiy**	**1.11**	**324**	P	**Pn**	**17 09 04.9**	**-1.7**
JFK	**Kawauchi**	**1.30**	**333**	P	**Pn**	**17 09 08.6**	**-0.7**
JFT	**Otama**	**1.66**	**323**	P	**Pn**	**17 09 14.1**	**-0.1**
JFT				*e*S	**Sn**	**17 09 34.5**	**+0.2**
JMM	**Marumori**	**1.78**	**339**	P	**Pn**	**17 09 16.3**	**+0.4**
JMM				S	**Sn**	**17 09 37.2**	**-0.1**
MJAR	**Matsushiro Arr**	**2.76**	**278**	Pn	**Pn**	**17 09 29.6**	**+0.3**
MJAR	23nm,0.3s,baz=54,slow=30,SNR=9.3			Sn	**Sn**	**17 10 02.4**	**+1.0**
MAT	7.4nm,0.3s,baz=297,slow=41,SNR=2.9 **Matsushiro**	**2.76**	**278**	P	**Pn**	**17 09 30.0**	**+0.6**
MAT				S	**Sn**	**17 10 06.6**	**+5.1**
JHJ	**Hachijo jima 2**	**3.42**	**207**	Pn	**Pn**	**17 09 37.7**	**-0.8**
JHJ	51nm,0.3s,baz=229,slow=19,SNR=2.3			Sn	**Sn**	**17 10 17.4**	**-0.4**
ASAJ	55nm,0.3s,baz=73,slow=19,SNR=3.4 **Asahikawa**	**7.94**	**5**	Pn	**Pn**	**17 10 39.2**	**-1.2**
ASAJ	0.3nm,0.3s,baz=336,slow=18,SNR=2.5			Sn	**Sn**	**17 12 07.2**	**-1.7**
CBIJ	0.6nm,0.3s,baz=330,slow=20,SNR=2.2 **Chichi jima**	**9.09**	**177**	Pn	**Pn**	**17 10 54.6**	**-1.7**
CBIJ	4.9nm,0.3s,baz=264,slow=18,SNR=2.3			Sn	**Sn**	**17 12 29.0**	**-8.5**
KSRS	5.2nm,0.3s,baz=287,slow=19,SNR=2.5 **Korea Array**	**11.04**	**281**	Pn	**Pn**	**17 11 25.4**	**+2.5**
SONM	0.2nm,0.3s,baz=92,slow=14,SNR=6.2 **Songino Array**	**28.38**	**305**	P	**P**	**17 14 38.3**	**-0.1**
CMAR	0.6nm,0.5s,mb3.5,baz=105,slow=8.5,SNR=4.3 **Chiang Mai Arr**	**41.44**	**256**	P	**P**	**17 16 31.4**	**+0.4**
ZALV	0.5nm,0.6s,mb3.3,baz=51,slow=7.0,SNR=2.6 **Zalesovo Beam**	**42.59**	**313**	P	**P**	**17 16 40.5**	**+0.6**
MKAR	1.1nm,0.5s,mb3.9,baz=82,slow=11,SNR=3.6 **Makanchi Array**	**44.70**	**303**	P	**P**	**17 16 57.6**	**+0.6**
KURK	1.6nm,0.8s,mb3.9,baz=99,slow=7.5,SNR=6.2 **Kurchatov**	**46.57**	**309**	P	**P**	**17 17 12.4**	**+0.7**
WRA	1.0nm,0.5s,mb4.0,baz=80,slow=7.4,SNR=6.6 **Warramunga Arr**	**56.26**	**188**	P	**P**	**17 18 24.5**	**0.0**
ASAR	1.4nm,1.0s,mb4.0,baz=5,slow=7.2,SNR=2.9 **Alice Springs**	**59.99**	**188**	P	**P**	**17 18 51.0**	**+0.4**
YKA	0.4nm,0.8s,mb3.5,baz=17,slow=11,SNR=2.5 **Yellowknife Ar**	**64.45**	**30**	P	**P**	**17 19 20.8**	**+0.8**
AKASG	0.1nm,0.4s,mb3.2,baz=283,slow=5.6,SNR=2.9 **Malin Array Be**	**75.05**	**323**	P	**P**	**17 20 25.4**	**0.0**
NVAR	0.3nm,0.4s,mb3.6,baz=341,slow=36,SNR=3.6 **Mina Array Bea**	**75.36**	**53**	P	**P**	**17 20 29.5**	**+2.0**
PDAR	0.3nm,0.4s,mb3.5,baz=278,slow=6.1,SNR=2.3 **Pinedale Array**	**78.14**	**45**	P	**P**	**17 20 45.0**	**+1.9**
	0.3nm,0.6s,mb3.4,baz=358,slow=2.7,SNR=2.8						

MAN 07 17:10:23,17°.43N×122°.61E,h40km,mb4.3,ML3.2,MS3.0,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.40**	**206**	*e*P	Pn	17 10 34.1	+1.6
PALP				*e*S	Sn	17 10 41.5	+2.4
CAUP	**Cauayan**	**0.89**	**238**	*e*P	Pn	17 10 41.5	+2.5
CAUP				*e*S	Sn	17 10 52.9	+2.1
APYP	**Conner**	**1.37**	**289**	*e*P	Pn	17 10 46.4	+0.7
APYP				*e*S	Sn	17 10 58.8	-3.8
ABRA	**Dolores**	**1.82**	**277**	*e*P	Pn	17 10 53.1	+1.2
ABRA				*e*S	Sn	17 11 10.7	-3.1
BALP	**Baler**	**1.95**	**211**	*e*P	Pn	17 10 58.2	+4.6

JMA 07 17:16:15.9±0.2,36°.28N×141°.65E,h63km,M2.3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.86**	**228**	P	Pn	17 16 32.8	+0.5
CHOJ				S	Sn	17 16 44.8	+0.4
JHO	**Hitachi**	**0.93**	**291**	*e*S	Sn	17 16 46.5	+0.6
JFK	**Kawauchi**	**1.25**	**330**	P	Pn	17 16 37.7	+0.4
JFK				*e*S	Sn	17 16 54.7	+1.4
JFT	**Otama**	**1.62**	**320**	P	Pn	17 16 44.2	+1.9
JFT				*e*S	Sn	17 17 05.2	+3.0
JMM	**Marumori**	**1.73**	**337**	P	Pn	17 16 44.8	+1.1
JAG	**Ashikaga**	**1.78**	**275**	P	Pn	17 16 45.5	+1.1

*IDC **07** 17:17:15.6±1.9,36°.27N×142°.01E,h0km,mb3.7/3,mb1 3.7/6,mb1mx3.4/28,mbtmp3.7/6,ML3.1/3,Error ellipse: s-maj=45.2km s-min=23.1km az=83.0*
*ISCJB **07** 17:17:17.1±1.1,36°.17N±0°.07×142°.2E±0°.1,h33km,mb3.8/3,Error ellipse: s-maj=13.3km s-min=10.0km az=13.6*
*NEIC **07** 17:17:21.6±1.5,36°.18N×141°.81E,h35km,mb4.0/1,Error ellipse: s-maj=34.6km s-min=19.1km az=219.0*
ISC 07 17:17:20.4±1.2,36°.19N±0°.07×142°.0E±0°.2,h35km,n10,σ0s78/12,mb3.8/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**3.04**	**278**	Pn	**Pn**	**17 18 05.5**	**-0.5**
MJAR	4.0nm,0.3s,baz=93,slow=25,SNR=14 **Matsushiro Arr**	**3.04**	**278**	Pn	**Pn**	**17 18 05.5**	**-0.5**
MAJO	**Matsushiro**	**3.04**	**278**	*e*P	**Pn**	**17 18 05.8**	**-0.1**
MAT	**Matsushiro**	**3.04**	**278**	P	**Pn**	**17 18 05.8**	**-0.2**
MAT				*e*S	**Sn**	**17 18 45.3**	**+4.1**
JHJ	**Hachijo jima 2**	**3.55**	**211**	Pn	**Pn**	**17 18 13.4**	**+0.5**
JHJ	11nm,0.3s,baz=46,slow=17,SNR=6.9			Sn	**Sn**	**17 18 52.4**	**-1.2**
ASAJ	20nm,0.3s,baz=273,slow=23,SNR=7.1 **Asahikawa**	**7.93**	**3**	Pn	**Pn**	**17 19 11.9**	**-1.2**
MKAR	0.2nm,0.3s,baz=84,slow=19,SNR=3.3 **Makanchi Array**	**44.94**	**303**	P	**P**	**17 25 32.3**	**+0.6**
KURK	0.9nm,0.8s,mb3.7,baz=91,slow=5.2,SNR=3.2 **Kurchatov**	**46.80**	**309**	P	**P**	**17 25 46.5**	**+0.2**
KURK	0.8nm,0.7s,mb3.8,baz=85,slow=7.8,SNR=3.1 **Kurchatov**	**46.80**	**309**	*e*P	**P**	**17 25 46.8**	**+0.5**
WRA	0.8nm,0.4s,mb4.0 **Warramunga Arr**	**56.29**	**189**	P	**P**	**17 26 58.5**	**+1.1**
	0.9nm,1.1s,mb3.7,baz=11,slow=7.4,SNR=2.5						

*IDC **07** 17:18:52.3±1.1,36°.19N×141°.81E,h0km,mb3.8/8,mb1 3.9/12,mb1mx3.7/30,mbtmp3.9/12,ML3.5/4,MS4.7/1,Ms1 4.7/1,ms1mx3.9/34,Error ellipse: s-maj=27.2km s-min=17.6km az=98.0*
*ISCJB **07** 17:18:55.6±0.9,36°.26N±0°.03×141°.90E±0°.08,h39km±8km,mb3.8/9,Error ellipse: s-maj=10.4km s-min=5.9km az=0.3*
*JMA **07** 17:18:55.5±0.2,36°.29N×141°.82E,h69km±5km,M3.4*
*NEIC **07** 17:18:56.9±5.9,36°.27N×141°.75E,h28km±38km,mb4.3/2,Error ellipse: s-maj=25.0km s-min=16.4km az=106.0*
ISC 07 17:18:55.4±1.5,36°.27N±0°.03×141°.89E±0°.07,h23km±10km,n31,σ0s96/41,mb3.8/9,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.01**	**236**	P	**Pn**	**17 19 13.8**	**-0.3**
CHOJ				S	**Sb**	**17 19 28.0**	**+1.0**
JHO	**Hitachi**	**1.12**	**288**	P	**Pn**	**17 19 14.6**	**-1.0**
JHO				S	**Sb**	**17 19 29.3**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.21**	**314**	P	**Pn**	**17 19 15.8**	**-1.0**
ONAJ				S	**Sn**	**17 19 33.0**	**+0.5**
JFK	**Kawauchi**	**1.36**	**324**	P	**Pn**	**17 19 18.6**	**-0.4**
JFK				S	**Sn**	**17 19 36.1**	**-0.2**
JFT	**Otama**	**1.76**	**315**	P	**Pn**	**17 19 25.7**	**+1.3**
BSO1	**Boso 1**	**1.78**	**205**	P	**Pn**	**17 19 24.9**	**+0.2**
BSO1				S	**Sn**	**17 19 47.0**	**+0.5**
JMM	**Marumori**	**1.82**	**331**	P	**Pn**	**17 19 25.5**	**+0.3**
BSO3	**Boso 3**	**1.85**	**218**	P	**Pn**	**17 19 25.4**	**-0.2**
JAG	**Ashikaga**	**1.97**	**275**	P	**Pn**	**17 19 27.5**	**+0.1**
JRY	**Ryogami san**	**2.43**	**265**	P	**Pn**	**17 19 33.6**	**-0.1**
JRY				*e*S	**Sn**	**17 20 02.0**	**-0.7**
JOD2	**Odawara 2**	**2.49**	**247**	P	**Pn**	**17 19 35.1**	**+0.6**
MJAR	**Matsushiro Arr**	**2.98**	**276**	Pn	**Pn**	**17 19 40.8**	**-0.5**
	8.6nm,0.3s,baz=266,slow=18,SNR=12						
MAJO	**Matsushiro**	**2.98**	**276**	*e*P	**Pn**	**17 19 42.3**	**+1.0**
MAT	**Matsushiro**	**2.98**	**276**	P	**Pn**	**17 19 42.6**	**+1.4**
MAT				S	**Sn**	**17 20 16.3**	**0.0**
JHJ	**Hachijo jima 2**	**3.59**	**209**	Pn	**Pn**	**17 19 48.6**	**-1.1**
JHJ	12nm,0.3s,baz=51,slow=6.5,SNR=3.2			Sn	**Sn**	**17 20 29.0**	**-2.3**
JHJ	91nm,0.3s,baz=246,slow=23,SNR=8.9			LR	LR	17 20 46.4	
ASAJ	comp=Z,12μm,20.4s,baz=37,slow=33 **Asahikawa**	**7.85**	**4**	Pn	**Pn**	**17 20 48.0**	**-0.1**
ASAJ	0.3nm,0.3s,baz=141,slow=13,SNR=4.1			Sn	**Sn**	**17 22 14.2**	**-2.0**
CBIJ	0.4nm,0.3s,baz=96,slow=18,SNR=3.2 **Chichi jima**	**9.15**	**178**	Pn	**Pn**	**17 21 02.5**	**-3.6**
CBIJ	4.6nm,0.3s,baz=273,slow=18,SNR=8.1			Sn	**Sn**	**17 22 39.1**	**-9.2**
KSRS	3.2nm,0.3s,baz=267,slow=17,SNR=3.9 **Korea Array**	**11.25**	**280**	Pn	**Pn**	**17 21 37.5**	**+2.8**
MDJ	0.1nm,0.3s,baz=90,slow=14,SNR=3.9 **Mudanjiang**	**12.53**	**315**	*e*P	**Pn**	**17 21 50.8**	**-1.3**
ENH	2.0nm,0.6s **Enshi**	**27.66**	**267**	*e*P	**P**	**17 24 40.9**	**-0.6**
SONM	3.9nm,0.6s,mb4.2 **Songino Array**	**28.53**	**305**	P	**P**	**17 24 49.2**	**+0.1**
CMAR	2.5nm,0.8s,mb4.0,baz=100,slow=9.1,SNR=7.0 **Chiang Mai Arr**	**41.68**	**257**	P	**P**	**17 26 43.0**	**+0.6**
ZALV	0.4nm,0.9s,mb3.0,baz=221,slow=8.1,SNR=4.2 **Zalesovo Beam**	**42.71**	**313**	P	**P**	**17 26 49.7**	**-0.6**
MKAR	1.2nm,0.7s,mb3.7,baz=104,slow=6.1,SNR=2.9 **Makanchi Array**	**44.85**	**303**	P	**P**	**17 27 08.6**	**+0.9**
MKAR	0.7nm,0.8s,mb3.5,baz=101,slow=6.5,SNR=5.5 **Makanchi Array**	**44.85**	**303**	P	**P**	**17 27 08.6**	**+0.9**
KURK	**Kurchatov**	**46.70**	**309**	P	**P**	**17 27 23.3**	**+1.1**
KURK	1.4nm,0.6s,mb4.1,baz=84,slow=8.0,SNR=4.8 **Kurchatov**	**46.70**	**309**	*e*P	**P**	**17 27 22.6**	**+0.3**
INK	3.0nm,0.8s,mb4.3 **Inuvik**	**54.89**	**27**	P	**P**	**17 28 26.0**	**+2.4**
WRA	0.4nm,0.5s,mb3.7,baz=315,slow=8.6,SNR=3.4 **Warramunga Arr**	**56.36**	**189**	P	**P**	**17 28 34.5**	**-0.2**
ABKAR	1.0nm,1.1s,mb3.8,baz=6.1,slow=7.4,SNR=4.7 **Abkulak array**	**58.72**	**311**	*e*P	**P**	**17 28 51.4**	**+0.3**
NOA	**NORSAR Array B**	**75.04**	**338**	P	**P**	**17 30 35.0**	**+0.3**
	0.8nm,0.7s,mb3.8,baz=40,slow=5.7,SNR=3.3						

*IDC **07** 17:20:59.3±0.5,36°.18N×141°.50E,h0km,mb4.2/23,mb1 4.3/27,mb1mx4.3/32,mbtmp4.2/27,ML4.0/4,Error ellipse: s-maj=14.9km s-min=12.0km az=111.0*
*ISCJB **07** 17:21:02.4±0.8,36°.22N±0°.03×141°.56E±0°.06,h34km±6km,mb4.5/45,Error ellipse: s-maj=7.8km s-min=5.0km az=15.9*
*MOS **07** 17:21:02.1±1.2,36°.21N×141°.57E,h33km,mb4.7/10,Error ellipse: s-maj=10.9km s-min=7.2km az=109.6*
*JMA **07** 17:21:03.5±0.2,36°.25N×141°.41E,h49km±3km,M4.0*
JMA Felt I J1.
*NEIC **07** 17:21:05.2±1.2,36°.19N×141°.47E,h41km±10km,mb4.5/5,Error ellipse: s-maj=9.4km s-min=7.6km az=109.0*
NEIC Recorded [1 JMA] in Fukushima, Ibaraki and Tochigi.
ISC 07 17:21:02.0±1.0,36°.26N±0°.03×141°.51E±0°.04,h16km±5km,n93,σ0s90/101,mb4.5/45,1C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.77**	**224**	P	**Pg**	**17 21 17.0**	**+0.1**
CHOJ				S	**Sg**	**17 21 27.9**	**+1.1**
JHO	**Hitachi**	**0.84**	**295**	P	**Pg**	**17 21 18.0**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.02**	**326**	P	**Pb**	**17 21 20.8**	**-0.5**
JYT	**Yasato**	**1.07**	**269**	P	**Pb**	**17 21 21.2**	**-0.8**
JYT				*e*S	**Sb**	**17 21 33.8**	**-1.9**
JFK	**Kawauchi**	**1.22**	**335**	P	**Pn**	**17 21 24.1**	**-0.3**
JFT	**Otama**	**1.57**	**324**	P	**Pn**	**17 21 29.8**	**+0.6**
JFT				*e*S	**Sn**	**17 21 48.8**	**-0.4**
JAG	**Ashikaga**	**1.67**	**276**	P	**Pn**	**17 21 30.0**	**-0.5**
JMM	**Marumori**	**1.71**	**340**	P	**Pn**	**17 21 31.1**	**+0.1**
JMM				*e*S	**Sn**	**17 21 51.5**	**-1.0**
JKT	**Katashina**	**1.89**	**286**	P	**Pn**	**17 21 33.9**	**+0.3**
MJAR	**Matsushiro Arr**	**2.68**	**277**	Pn	**Pn**	**17 21 45.0**	**+0.5**
MJAR	38nm,0.3s,baz=111,slow=14,SNR=41			Sn	**Sn**	**17 22 18.2**	**+1.7**
MAJO	19nm,0.3s,baz=249,slow=14,SNR=8.5 **Matsushiro**	**2.68**	**277**	*e*P	**Pn**	**17 21 45.4**	**+1.0**
MAT	**Matsushiro**	**2.68**	**277**	P	**Pn**	**17 21 45.4**	**+1.0**
MAT				*e*S	**Sn**	**17 22 18.0**	**+1.4**
JHJ	**Hachijo jima 2**	**3.44**	**205**	Pn	**Pn**	**17 21 54.9**	**0.0**
JHJ	36nm,0.3s,baz=97,slow=18,SNR=8.2			Sn	**Sn**	**17 22 34.4**	**-0.8**
ASAJ	65nm,0.3s,baz=257,slow=23,SNR=6.8 **Asahikawa**	**7.89**	**6**	P	**Pn**	**17 22 55.8**	**-0.2**
ASAJ						17 24 23.0	
ASAJ				pmax	pmax		
ASAJ	comp=Z,2.0nm,0.3s			smax			
ASAJ	comp=N,1.0nm,0.3s **Asahikawa**	**7.89**	**6**	Pn	**Pn**	**17 22 55.8**	**-0.2**
ASAJ	comp=N,2.0nm,0.3s,baz=197,slow=17,SNR=7.5			Sn	**Sn**	**17 24 23.0**	**-1.9**
CBIJ	comp=N,1.4nm,0.3s,baz=14,slow=17,SNR=3.5 **Chichi jima**	**9.15**	**176**	Pn	**Pn**	**17 23 11.6**	**-1.8**
CBIJ	comp=N,5.8nm,0.3s,baz=296,slow=19,SNR=7.1			Sn	**Sn**	**17 24 46.6**	**-9.4**
YSS	comp=N,5.2nm,0.3s,baz=216,slow=19,SNR=4.6 **Yuzh-Sakhalins**	**10.73**	**5**	*e*P	**Pn**	**17 23 34.4**	**-0.4**
KSRS	**Korea Array**	**10.96**	**280**	Pn	**Pn**	**17 23 42.1**	**+4.1**
MDJ	comp=N,0.4nm,0.3s,baz=93,slow=13,SNR=12 **Mudanjiang**	**12.33**	**316**	*e*P	**Pn**	**17 24 01.6**	**+4.9**
CN2	**Changchun**	**14.42**	**306**	*e*P	**Pn**	**17 24 23.6**	**-1.6**
CN2				*e*pP	pP	17 24 31.0	-5.7
CN2				*e*S	**Sn**	**17 27 00.0**	**-4.7**
CN2				pmax	pmax		
CN2	comp=Z,10.0nm,0.6s			pmax	pmax		
CN2	comp=Z,200nm,3.0s			LR	LR		
CN2	comp=N,11μm,15.0s			LR	LR		
CN2	comp=E,14μm,15.0s			LR	LR		
JOW	comp=Z,12μm,12.0s **Kunigami**	**14.67**	**234**	Pn	**Pn**	**17 24 30.1**	**+1.3**
HIA	comp=Z,0.3nm,0.3s,baz=45,slow=13,SNR=2.6 **Hailar**	**20.51**	**316**	*e*P	**P**	**17 25 41.8**	**+2.6**
YAK	**Yakutsk**	**26.84**	**348**	*e*P	**P**	**17 26 40.5**	**-0.9**
YAK				pmax	pmax		
YAK	comp=Z,17nm,0.9s,mb4.6			pmax	pmax		
YAK	comp=E,4.0nm,1.3s			pmax	pmax		
ENH	comp=N,10.0nm,1.0s **Enshi**	**27.36**	**267**	*e*P	**P**	**17 26 45.4**	**-0.9**
SEY	comp=N,8.6nm,0.8s,mb4.3 **Seymchan**	**27.54**	**11**	‖*e*P	**P**	**17 26 49.4**	**+1.8**
SONM	**Songino Array**	**28.29**	**305**	P	**P**	**17 26 54.6**	**+0.1**
SONM	comp=N,3.3nm,0.7s,mb4.1,baz=104,slow=9.1,SNR=13			PcP	PcP	17 30 07.8	+0.6
ZAK	comp=N,0.2nm,0.3s,baz=132,slow=2.1,SNR=2.4 **Zakamensk**	**30.82**	**309**	*e*P	**P**	**17 27 15.8**	**-1.1**
ZAK				pmax	pmax		
GTA	comp=Z,5.0nm,1.2s,mb4.2 **Gaotai**	**32.88**	**288**	*e*P	**P**	**17 27 35.4**	**+0.3**
GTA				pP	pP	17 27 44.7	+4.6
GTA				sP	sP	17 27 48.7	+6.6
GTA				pmax	pmax		
BILL	comp=Z,7.0nm,0.6s,mb4.8 **Bilibino**	**34.75**	**16**	*e*P	**P**	**17 27 51.2**	**+0.2**
BILL				pmax	pmax		
TIXI	comp=Z,4.0nm,1.2s,mb4.2 **Tiksi**	**36.07**	**353**	*e*P	**P**	**17 28 01.2**	**-1.1**
TIXI				pmax	pmax		
TIXI	comp=Z,3.0nm,1.1s,mb4.1 **Tiksi**	**36.07**	**353**	*e*P	**P**	**17 28 01.7**	**-0.6**
CMAR	comp=Z,3.4nm,1.1s,mb4.2 **Chiang Mai Arr**	**41.38**	**256**	P	**P**	**17 28 47.2**	**-0.3**
LSA	comp=Z,0.7nm,0.6s,mb3.5,baz=52,slow=6.5,SNR=7.5 **Lhasa**	**42.37**	**276**	*e*P	**P**	**17 28 57.2**	**+1.8**
ZAA0	**Zalesovo Array**	**42.50**	**313**	*e*P	**P**	**17 28 56.1**	**-0.1**
ZALV	**Zalesovo Beam**	**42.50**	**313**	P	**P**	**17 28 56.4**	**+0.2**
ZALV	comp=Z,5.2nm,0.6s,mb4.4,baz=92,slow=6.8,SNR=21			PcP	PcP	17 30 48.4	-0.2
MKAR	comp=Z,1.0nm,0.6s,baz=90,slow=2.9,SNR=3.6 **Makanchi Array**	**44.60**	**303**	P	**P**	**17 29 13.6**	**+0.3**
MKAR	comp=Z,5.7nm,0.8s,mb4.4,baz=93,slow=7.5,SNR=26			PcP	PcP	17 30 55.8	-0.1
MKAR	comp=Z,1.0nm,0.8s,baz=98,slow=2.9,SNR=3.0 **Makanchi Array**	**44.60**	**303**	P	**P**	**17 29 13.6**	**+0.3**
MKAR				PcP	PcP	17 30 55.8	-0.1
KAPI	**Kappang**	**45.84**	**211**	P	**P**	**17 29 22.7**	**-0.6**
KURK	comp=Z,12nm,1.0s,mb4.8,baz=6.1,slow=7.5,SNR=3.9 **Kurchatov**	**46.48**	**309**‖	*e*P	**P**	**17 29 27.9**	**-0.1**
KURK				pmax	pmax		
KURK	comp=Z,12nm,0.6s,mb5.0 **Kurchatov**	**46.48**	**309**	*e*P	**P**	**17 29 27.6**	**-0.5**
GUN	comp=Z,15nm,0.8s,mb5.0 **Gumba**	**47.32**	**276**	*e*P	**P**	**17 29 35.1**	**+0.2**
KDAK	comp=Z,35nm,1.1s,mb5.2 **Kodiak Island**	**47.62**	**41**	P	**P**	**17 29 37.5**	**+0.7**
PKI	comp=Z,4.7nm,0.7s,mb4.6,baz=255,slow=12,SNR=3.6 **Pulchoki**	**47.84**	**276**	*e*P	**P**	**17 29 38.8**	**-0.2**
PKIN	**Phulchoki**	**47.85**	**276**	*e*P	**P**	**17 29 38.9**	**-0.1**
PKIN	comp=Z,14nm,0.9s,mb5.0 **Phulchoki**	**47.85**	**276**	*e*P	**P**	**17 29 39.1**	**+0.1**
KKN	comp=Z,18nm,0.7s,mb5.2 **Kakani**	**47.85**	**277**	*e*P	**P**	**17 29 39.2**	**+0.1**
DMN	comp=Z,27nm,1.0s,mb5.2 **Daman**	**48.06**	**276**	*e*P	**P**	**17 29 40.9**	**+0.2**
GKN	comp=Z,10nm,0.8s,mb4.9 **Gorkha**	**48.28**	**277**	*e*P	**P**	**17 29 42.5**	**+0.1**
MCK	comp=Z,44nm,0.9s,mb5.5 **McKinley**	**49.23**	**33**	*e*P	**P**	**17 29 50.4**	**+1.2**
PYUN	comp=Z,29nm,0.9s,mb5.3 **Piuthan**	**49.55**	**278**	*e*P	**P**	**17 29 52.2**	**0.0**
BVAR	comp=Z,3.1nm,0.8s,mb4.3,baz=77,slow=6.4,SNR=10.0 **Borovoye Array**	**51.16**	**313**	P	**P**	**17 30 03.0**	**-0.9**
BVAR				ScP	ScP	17 35 15.4	+0.4
BRVK	comp=Z,3.0nm,0.3s,baz=33,slow=3.2,SNR=22 **Borovoye**	**51.21**	**313**‖	*e*P	**P**	**17 30 04.8**	**+0.5**
BRVK				pmax	pmax		
BRVK	comp=Z,5.0nm,0.7s,mb4.5 **Borovoye**	**51.21**	**313**	*e*P	**P**	**17 30 04.5**	**+0.2**
INK	**Inuvik**	**55.04**	**27**	P	**P**	**17 30 33.1**	**+0.8**
INK				pmax	pmax		
INK	comp=Z,1.0nm,0.6s **Inuvik**	**55.04**	**27**	P	**P**	**17 30 33.1**	**+0.7**
INK	comp=Z,1.2nm,0.6s,mb4.1,baz=297,slow=7.5,SNR=5.7 **Inuvik**	**55.04**	**27**	*e*P	**P**	**17 30 30.8**	**-1.6**
SVE	comp=Z,4.1nm,0.6s,mb4.2 **Sverdlovsk**	**55.78**	**319**	*e*P	**P**	**17 30 38.3**	**+0.5**
FITZ	comp=Z,4.1nm,0.6s,mb4.6 **Fitzroy Crossi**	**56.11**	**198**	P	**P**	**17 30 40.4**	**-0.1**
WRA	comp=Z,1.1nm,0.6s,mb4.1,baz=340,slow=12,SNR=5.8 **Warramunga Arr**	**56.30**	**188**	P	**P**	**17 30 40.6**	**-1.2**
ARU	comp=Z,2.3nm,0.6s,mb4.4,baz=3.1,slow=7.5,SNR=9.9 **Arti**	**57.00**	**319**	*d*iP	**P**	**17 30 47.3**	**+0.8**
ARU				SS	SS	17 42 33.3	+5.4
ARU				pmax	pmax		
ARU	comp=Z,14nm,1.0s,mb5.0 **Arti**	**57.00**	**319**	*e*P	**P**	**17 30 46.4**	**-0.1**
ABKAR	comp=Z,1.8nm,0.7s,mb4.2 **Abkulak array**	**58.50**	**311**	*e*P	**P**	**17 30 56.7**	**-0.4**
ASAR	comp=Z,4.1nm,0.6s,mb4.6 **Alice Springs**	**60.03**	**188**	P	**P**	**17 31 06.0**	**-1.8**
RES	comp=Z,0.2nm,0.4s,mb3.5,baz=14,slow=12,SNR=7.8 **Resolute Bay**	**63.33**	**14**	*e*P	**P**	**17 31 30.2**	**+0.6**
COCO	**West Island**	**64.00**	**230**	*i*P	**P**	**17 31 33.4**	**-1.4**
YKA	**Yellowknife Ar**	**64.44**	**30**	P	**P**	**17 31 37.9**	**+0.8**
KLMR	comp=Z,0.9nm,0.8s,mb3.8,baz=300,slow=6.8,SNR=11 **Klimovskoe**	**64.46**	**328**	*e*P	**P**	**17 31 36.7**	**-0.5**
KLMR				pmax	pmax		
ARCES	comp=Z,14nm,1.5s,mb4.8 **ARCESS Array B**	**64.75**	**340**	P	**P**	**17 31 39.8**	**+0.8**
JOF	comp=Z,2.9nm,0.8s,mb4.4,baz=66,slow=9.4,SNR=9.1 **Joensuu**	**66.69**	**332**	*e*P	**P**	**17 31 50.6**	**-1.0**
JOF				pmax	pmax		
JOF	comp=Z,3.0nm,0.6s,mb4.5 **Joensuu**	**66.69**	**332**	*e*p	**P**	**17 31 50.6**	**-1.0**
KAF	comp=Z,2.9nm,0.6s,mb4.5 **Kangasniemi**	**69.03**	**333**	*e*P	**P**	**17 32 05.4**	**-1.0**
KAF				pmax	pmax		
KAF	comp=Z,3.0nm,0.6s,mb4.4 **Kangasniemi**	**69.03**	**333**	*e*p	**P**	**17 32 05.4**	**-1.0**
FINES	comp=Z,2.8nm,0.6s,mb4.4 **FINESS Array B**	**69.54**	**332**	P	**P**	**17 32 09.5**	**0.0**
FINES	comp=Z,5.4nm,0.8s,mb4.5,baz=57,slow=7.0,SNR=18 **FINESS Array B**	**69.54**	**332**	P	**P**	**17 32 09.5**	**0.0**
VSR	**Storozhevoye**	**69.57**	**319**	*e*P	**P**	**17 32 16.7**	**+6.8**
VSR				pmax	pmax		
VSR	comp=Z,20nm,0.7s,mb5.2			pmax	pmax		
VSR	comp=N,10.0nm,1.3s			pmax	pmax		
VSU	comp=E,10.0nm,1.1s **Vasula**	**71.17**	**330**‖	*e*P	**P**	**17 32 19.8**	**+0.3**
VSU				pmax	pmax		
KIV	comp=Z,19nm,0.9s,mb5.0 **Kislovodsk**	**71.48**	**311**	*e*P	**P**	**17 32 21.4**	**-0.3**
KIV				pmax	pmax		
FFC	comp=Z,10.0nm,0.9s,mb4.8 **Flin Flon**	**74.32**	**33**	*i*P	**P**	**17 32 39.9**	**+1.6**
NB2	**NORSAR Subarra**	**74.93**	**337**	P	**P**	**17 32 41.9**	**+0.1**
NOA	comp=Z,2.8nm,0.9s,mb4.2,baz=40,slow=5.9 **NORSAR Array B**	**74.93**	**337**	P	**P**	**17 32 42.2**	**+0.4**
AKASG	comp=Z,3.7nm,0.8s,mb4.4,baz=40,slow=5.7,SNR=11 **Malin Array Be**	**74.96**	**322**	P	**P**	**17 32 42.0**	**-0.1**
AKBB	comp=Z,6.8nm,0.7s,

VLY			eSN	Sn	17 22 02.2	-0.5
VLY	**Voula,Athens**	**1.28 223**	ePn	Pn	17 21 45.2	-0.2
VLY			eSn	Sn	17 22 02.2	-0.5
BOZC	**Bozcaada**	**1.38 40**	i P	Pn	17 21 45.7	-1.1
URLA	**Izmir**	**1.39 107**	i P	Pn	17 21 46.9	0.0
URLA	**Izmir**	**1.39 107**	i P	Pn	17 21 46.9	-0.1
URLA			i S	Sb	17 22 09.0	+3.6
NEO	**Neokhori**	**1.41 292**	ePN	Pn	17 21 47.3	+0.1
NEO			eSN	Sn	17 22 04.9	-1.0
NEO	**Neokhori**	**1.41 292**	ePn	Pn	17 21 47.3	+0.1
NEO			eSn	Sn	17 22 04.9	-1.0
ATAL	**Atalanti**	**1.48 267**	P	Pn	17 21 48.4	+0.3
ATAL	**Atalanti**	**1.48 267**	P	Pn	17 21 48.4	+0.3
PAIG	**Paliouri**	**1.48 321**	P	Pn	17 21 48.0	-0.2
PAIG			S	Sn	17 22 08.6	+0.9
PAIG	**Paliouri**	**1.48 321**	P	Pn	17 21 48.0	-0.2
PAIG			S	Sn	17 22 08.6	+0.9
AYVA	**Ayvalik**	**1.48 69**	i P	Pn	17 21 47.8	-0.4
AYVA	**Ayvalik**	**1.48 69**	i P	Pn	17 21 47.8	-0.4
AYVA			i S	Sn	17 22 09.7	+1.9
LKR	**Lokris**	**1.50 265**	ePN	Pn	17 21 48.6	+0.2
LKR	**Lokris**	**1.50 265**	P	Pn	17 21 48.5	+0.1
LKR	**Lokris**	**1.50 265**	P	Pn	17 21 48.5	+0.1
NAIG	**Nisos Aigina**	**1.52 228**	ePB	Pb	17 21 48.5	-1.1
NAIG	**Nisos Aigina**	**1.52 228**	ePb	Pb	17 21 48.5	-1.1
OUR	**Ouranopolis**	**1.70 335**	P	Pn	17 21 51.0	-0.2
OUR			S	Sn	17 22 11.8	-1.3
OUR	**Ouranopolis**	**1.70 335**	P	Pn	17 21 51.0	-0.2
OUR			S	Sn	17 22 11.8	-1.3
APE	**Apeiranthos**	**1.79 164**	ePN	Pn	17 21 52.5	+0.1
APE	**Apeiranthos**	**1.79 164**	P	Pn	17 21 52.0	-0.4
APE	**Apeiranthos**	**1.79 164**	P	Pn	17 21 52.0	-0.4
APE	**Apeiranthos**	**1.79 164**	ePn	Pn	17 21 52.0	+0.1
DID	**Didima**	**1.83 226**	ePN	Pn	17 21 53.3	+0.3
DID	**Didima**	**1.83 226**	P	Pn	17 21 52.7	-0.3
DID	**Didima**	**1.83 226**	P	Pn	17 21 52.7	-0.3
DID	**Didima**	**1.83 226**	ePn	Pn	17 21 53.3	+0.3
SMG	**Samos**	**1.86 125**	ePB	Pb	17 21 54.0	-1.5
SMG	**Samos**	**1.86 125**	ePb	Pb	17 21 54.0	-1.5
PLG	**Polygyros**	**1.94 325**	ePB	Pn	17 21 54.8	+0.3
PLG	**Polygyros**	**1.94 325**	P	Pn	17 21 54.8	+0.3
PLG	**Polygyros**	**1.94 325**	P	Pn	17 21 54.8	+0.3
AGG	**Agios Georgios**	**2.02 277**	P	Pn	17 21 56.0	+0.4
AGG			S	Sn	17 22 22.4	+1.3
AGG	**Agios Georgios**	**2.02 277**	P	Pn	17 21 56.0	+0.4
AGG			S	Sn	17 22 22.4	+1.3
GUR	**Goura**	**2.19 248**	ePB	Pb	17 21 58.9	-2.1
GUR	**Goura**	**2.19 248**	P	Pn	17 21 58.7	+0.8
GUR	**Goura**	**2.19 248**	P	Pn	17 21 58.7	+0.8
KALE	**Kalithea**	**2.20 260**	P	Pn	17 21 58.6	+0.5
KALE	**Kalithea**	**2.20 260**	P	Pn	17 21 58.6	+0.5
TRIZ	**Trizonia**	**2.26 260**	P	Pn	17 21 59.6	+0.7
TRIZ	**Trizonia**	**2.26 260**	P	Pn	17 21 59.6	+0.7
ALN	**Alexandroupoli**	**2.28 22**	P	Pn	17 21 58.4	-0.8
ALN	**Alexandroupoli**	**2.28 22**	P	Pn	17 21 58.4	-0.8
LIT	**Litokhoron**	**2.28 306**	ePB	Pb	17 22 00.3	-2.4
LIT	**Litokhoron**	**2.28 306**	ePb	Pb	17 22 00.3	-2.4
BALY	**Balya**	**2.31 65**	i P	Pn	17 21 59.6	0.0
BALY	**Balya**	**2.31 65**	i P	Pn	17 21 59.6	0.0
SOH	**Sokhos**	**2.35 330**	ePN	Pn	17 22 01.0	+0.8
SOH	**Sokhos**	**2.35 330**	ePn	Pn	17 22 01.0	+0.8
LAKA	**Lakka**	**2.36 257**	P	Pn	17 22 01.6	+1.3
LAKA	**Lakka**	**2.36 257**	P	Pn	17 22 01.6	+1.3
THL	**Klokotos Trika**	**2.38 290**	ePN	Pn	17 22 01.5	+1.0
THL	**Klokotos Trika**	**2.38 290**	P	Pn	17 22 01.4	+0.9
THL	**Klokotos Trika**	**2.38 290**	P	Pn	17 22 01.4	+0.9
EFP	**Efpalio**	**2.38 262**	ePB	Pb	17 22 01.8	-2.5
EFP	**Efpalio**	**2.38 262**	P	Pn	17 22 01.4	+0.9
EFP	**Efpalio**	**2.38 262**	P	Pn	17 22 01.4	+0.9
EFP	**Efpalio**	**2.38 262**	ePb	Pb	17 22 01.8	-2.5
RDO	**Rodhopi**	**2.40 11**	ePN	Pn	17 22 00.2	-0.7
RDO	**Rodhopi**	**2.40 11**	P	Pn	17 21 59.9	-1.0
RDO	**Rodhopi**	**2.40 11**	P	Pn	17 21 59.9	-1.0
RDO	**Rodhopi**	**2.40 11**	ePn	Pn	17 22 00.2	-0.7
SRS	**Serrai**	**2.53 337**	P	Pn	17 22 02.3	-0.4
SRS	**Serrai**	**2.53 337**	P	Pn	17 22 02.3	-0.4
VLI	**Veliai**	**2.59 218**	ePN	Pn	17 22 03.3	-0.1
VLI	**Veliai**	**2.59 218**	ePn	Pn	17 22 03.3	-0.1
NVR	**Nevrokopi**	**2.68 343**	ePN	Pn	17 22 05.1	+0.4
NVR	**Nevrokopi**	**2.68 343**	ePn	Pn	17 22 05.1	+0.4
KYTH	**Kithira**	**2.91 211**	ePN	Pn	17 22 08.6	+0.8
KYTH	**Kithira**	**2.91 211**	ePn	Pn	17 22 08.6	+0.8
KRUS	**Krusevo**	**3.81 314**	ePn	Pn	17 22 20.5	+0.3
KRUS	**Krusevo**	**3.81 314**	ePn	Pn	17 22 20.5	+0.3
VOIR		**6.64 1**	⇑i P	Pn	17 22 59.0	-0.1
VOIR		**6.64 1**	⇑i P	Pn	17 22 59.0	-0.1
MLR	**Muntele Rosu**	**6.74 6**	⇑i P	Pn	17 23 01.7	+1.3
MLR	**Muntele Rosu**	**6.74 6**	⇑i P	Pn	17 23 01.7	+1.3
GZR	**Gura Zlata**	**6.79 347**	⇑i P	Pn	17 23 01.5	+0.4
GZR	**Gura Zlata**	**6.79 347**	⇑i P	Pn	17 23 01.5	+0.4
VRI	**Vrincioaia**	**7.20 10**	⇓i P	Pn	17 23 08.4	+1.7
VRI	**Vrincioaia**	**7.20 10**	⇓i P	Pn	17 23 08.4	+1.7

IDC 07 17:28:13.0±2.6, 36°.23N×142°.02E, h0km, mb3.5/3, mb1 3.6/7, mb1mx3.4/29, mbtmp3.7/7, ML3.3/3, Error ellipse: s-maj=53.8km s-min=26.2km az=90.0, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**3.09**	**277**	Pn	Pn	17 29 03.2	+0.2
	2.1nm,0.3s,baz=91,slow=15,SNR=5.5						
JHJ	**Hachijo jima 2**	**3.60**	**211**	Pn	Pn	17 29 10.7	+0.6
	baz=53,slow=20,SNR=2.3						
ASAJ	**Asahikawa**	**7.89**	**3**	Pn	Pn	17 30 10.1	+1.1
	0.2nm,0.3s,baz=119,slow=19,SNR=2.5						
CBIJ	**Chichi jima**	**9.10**	**179**	Pn	Pn	17 30 25.2	-0.5
	3.2nm,0.3s,baz=287,slow=19,SNR=3.4						
MKAR	**Makanchi Array**	**44.96**	**303**	P	P	17 36 29.3	-0.4
	0.2nm,0.5s,baz=98,slow=8.9,SNR=2.8						
KURK	**Kurchatov**	**46.81**	**309**	P	P	17 36 44.3	0.0
	0.4nm,0.3s,baz=83,slow=8.0,SNR=3.1						
BVAR	**Borovoye Array**	**51.47**	**313**	P	P	17 37 20.1	+0.2
	0.4nm,0.5s,baz=94,slow=8.7,SNR=2.9						

*IDC **07** 17:28:52.6±0.5, 36°.22N×141°.81E, h0km, mb4.4/23, mb1 4.5/28, mb1mx4.4/35, mbtmp4.4/28, ML4.1/5, MS4.5/1, Ms1 4.5/1, ms1mx3.7/39, Error ellipse: s-maj=15.3km s-min=12.0km az=101.0*

*ISCJB **07** 17:28:53.4±1.0, 36°.23N±0°.03×141°.94E±0°.05, h20km±6km, mb4.6/74, MS5.3/5, Error ellipse: s-maj=6.8km s-min=5.1km az=17.7*

*BJI **07** 17:28:54.5, 36°.24N×141°.64E, h14km, mB5.0/6, mb4.8/45, Ms5.4/14, Ms7 5.3/12*

*JMA **07** 17:28:55.3±0.2, 36°.29N×141°.83E, h72km±4km, M4.7*

JMA Felt I J1.

*MOS **07** 17:28:55.4±0.8, 36°.40N×141°.98E, h33km, mb4.9/30, Error ellipse: s-maj=12.4km s-min=8.3km az=125.9*

*NEIC **07** 17:28:56.1±2.8, 36°.17N×141°.77E, h25km±19km, mb4.6/21, Error ellipse: s-maj=10.6km s-min=6.8km az=102.0*

*DJA **07** 17:29:07, 35°.89N×139°.63E, h10km, mb4.9/9*

ISC 07 17:28:54.2±1.3, 36°.23N±0°.03×141°.87E±0°.05, h12km±7km, h31km±2.0km: pP-P, n170, σ0°.99/181, mb4.6/74, MS5.3/5, 8C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**238**	P	Pb	17 29 13.8	+0.8
CHOJ				eS	Sb	17 29 28.3	+2.5
JHO	**Hitachi**	**1.12**	**290**	P	Pb	17 29 14.6	-0.9
ONAJ	**Iwakimizuishiy**	**1.23**	**316**	⇑P	Pn	17 29 16.1	-1.0
JYT	**Yasato**	**1.36**	**271**	P	Pn	17 29 18.5	-0.4
JFK	**Kawauchi**	**1.39**	**325**	⇑P	Pn	17 29 18.4	-1.0
BSO1	**Boso 1**	**1.73**	**205**	P	Pn	17 29 24.3	+0.2
BSO1				eS	Sn	17 29 47.9	+1.8
JFT	**Otama**	**1.78**	**317**	P	Pn	17 29 24.5	-0.3
BSO3	**Boso 3**	**1.81**	**218**	P	Pn	17 29 25.6	+0.5
JMM	**Marumori**	**1.85**	**332**	P	Pn	17 29 25.2	-0.5
JAG	**Ashikaga**	**1.96**	**276**	P	Pn	17 29 27.4	+0.1
MJAR	**Matsushiro Arr**	**2.97**	**277**	P	Pn	17 29 41.6	+0.5
MJAR						17 30 19.7	
MJAR	**Matsushiro Arr**	**2.97**	**277**	Pn	Pn	17 29 41.6	+0.5
	59nm,0.3s,baz=316,slow=23,SNR=65						
MJAR				Sn	Sn	17 30 19.7	+3.0
	33nm,0.3s,baz=252,slow=2.4,SNR=6.5						
MJAR				LR	LR	17 30 42.6	
	comp=Z,9μm,20.4s,baz=285,slow=38						
MAJO	**Matsushiro**	**2.98**	**277**	eP	Pn	17 29 41.7	+0.5
JHJ	**Hachijo jima 2**	**3.55**	**210**	Pn	Pn	17 29 49.2	+0.2
	102nm,0.3s,baz=260,slow=2.7,SNR=15						
JHJ				Sn	Sn	17 30 28.7	-2.2
	328nm,0.3s,baz=244,slow=23,SNR=14						
ASAJ	**Asahikawa**	**7.90**	**4**	P	Pn	17 30 47.5	-1.3
ASAJ						17 32 13.6	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.90**	**4**	Pn	Pn	17 30 47.5	-1.3
	comp=N,2.6nm,0.3s,baz=219,slow=14,SNR=14						
ASAJ				Sn	Sn	17 32 13.6	-4.5
	comp=N,1.1nm,0.3s,baz=156,slow=20,SNR=3.4						
YUK	**Yuzh-Kuril'sk**	**8.37**	**20**	P	Pn	17 30 55.1	-0.2
YUK				eS	Sn	17 32 20.9	-8.8
YUK				smax			
	comp=N,260nm,0.5s						
YUK				smax			
	comp=E,280nm,0.5s						
CBIJ	**Chichi jima**	**9.11**	**178**	Pn	Pn	17 31 03.1	-2.3
	comp=E,7.2nm,0.3s,baz=142,slow=24,SNR=8.8						
YSS	**Yuzh-Sakhalins**	**10.74**	**3**	eP	Pn	17 31 27.3	-0.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**10.74**	**3**	eP	Pn	17 31 27.3	-0.4
	comp=Z,14nm,0.6s						
KSRS	**Korea Array**	**11.25**	**280**	P	Pn	17 31 39.2	+4.5
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**11.25**	**280**	Pn	Pn	17 31 39.1	+4.5
	comp=Z,0.6nm,0.3s,baz=94,slow=13,SNR=35						
MDJ	**Mudanjiang**	**12.55**	**316**	P	Pn	17 31 53.2	+0.8
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,10μm,14.2s						
MDJ	**Mudanjiang**	**12.55**	**316**	eP	Pn	17 31 55.4	+2.9
	comp=Z,15nm,0.8s						
CN2	**Changchun**	**14.67**	**306**	eP	Pn	17 32 21.2	-0.2
CN2				esP	sP	17 32 33.2	+0.5
CN2				eS	Sn	17 35 06.0	+2.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,21μm,17.0s						
CN2				LR	LR		
	comp=E,14μm,17.0s						
CN2				LR	LR		
	comp=Z,14μm,18.0s						
JOW	**Kunigami**	**14.89**	**235**	Pn	Pn	17 32 24.1	-0.4
	comp=Z,0.7nm,0.3s,baz=45,slow=18,SNR=4.1						
KLR	**Kul'dur**	**14.95**	**333**	eP	Pn	17 32 20.0	-5.2
NJ2	**Nanjing**	**19.49**	**264**	eP	Pn	17 33 23.1	+0.8
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
BJI	**Beijing**	**20.55**	**288**	P	P	17 33 31.7	-0.8
BJI				pmax	pmax		
	comp=Z,16nm,0.7s						
BJT	**Baijiatuau**	**20.55**	**288**	eP	P	17 33 30.7	-1.8
HIA	**Hailar**	**20.74**	**316**	eP	P	17 33 33.2	-1.2
SSLB	**Suanglung**	**21.90**	**241**	eP	P	17 33 44.1	-3.0
	comp=Z,12nm,0.8s,mb4.4						
TPUB	**Ta-pu**	**22.43**	**241**	eP	P	17 33 49.5	-3.4
	comp=Z,16nm,0.6s,mb4.6						
WHN	**Wuhan**	**23.63**	**264**	⇓P	P	17 34 04.6	-0.7
HHC	**Hu-ho-hao-te**	**24.09**	**290**	eP	P	17 34 09.8	+0.4
HHC				pP		17 34 19.4	
HHC				sP	sP	17 34 23.8	+9.1
HHC				PP		17 34 44.6	
HHC				PcP	PcP	17 37 53.4	+2.8
HHC				S	S	17 38 24.7	-1.9
HHC				SS		17 39 15.3	
HHC				ScP	ScP	17 41 27.4	-1.4
HHC				PcS	PcS	17 41 32.5	+2.3
HHC				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
HHC				LR	LR		
	comp=N,3μm,13.2s,MS5.2						
HHC				LR	LR		
	comp=E,3μm,11.8s,MS5.2						
HHC				LR	LR		
	comp=Z,3μm,11.4s,MS5.1						
YAK	**Yakutsk**	**26.94**	**347**	eP	P	17 34 33.1	-1.9
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.1						
YAK				pmax	pmax		
	comp=N,48nm,1.8s						
XAN	**Xi'an**	**26.97**	**275**	P	P	17 34 34.5	-1.1
XAN				pP	pP	17 34 43.2	+3.9
XAN				sP	sP	17 34 47.1	+6.2
XAN				S	S	17 39 10.4	-2.2
XAN				sS	sS	17 39 25.3	+6.5
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
SEY	**Seymchan**	**27.51**	**10**	⇓eP	P	17 34 44.1	+3.9
ENH	**Enshi**	**27.65**	**267**	eP	P	17 34 40.5	-1.2
	comp=Z,64nm,0.7s,mb5.4						
ULN	**Ulaanbaatar**	**28.12**	**305**	eP	P	17 34 46.5	+0.7
ULN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**28.12**	**305**	eP	P	17 34 46.5	+0.7
	comp=Z,14nm,0.8s,mb4.6						
BOD	**Bodaibo**	**28.41**	**328**	eP	P	17 34 47.7	-0.5
BOD				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.6						
SONM	**Songino Array**	**28.55**	**305**	P	P	17 34 50.3	+0.7
	comp=Z,21nm,0.8s,mb4.9,baz=102,slow=7.4,SNR=67						
LZH	**Lanzhou**	**30.58**	**281**	eP	P	17 35 09.4	+1.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,69nm,5.2s						
LZH				LR	LR		
	comp=E,14μm,15.6s						
LZH				LR	LR		
	comp=Z,15μm,16.0s,MS5.7						
ZAK	**Zakamensk**	**31.06**	**309**	eP	P	17 35 12.1	+0.3
ZAK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
TLY	**Talaya**	**31.14**	**312**	eP	P	17 35 13.5	+1.0
TLY				e		17 42 24.1	
TLY				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
TLY				MLR	MLR		
	comp=Z,18μm,17.0s,MS5.8						
TLY	**Talaya**	**31.14**	**312**	eP	P	17 35 12.8	+0.3
	comp=Z,42nm,1.4s,mb5.1						
GYA	**Guiyang**	**31.46**	**262**	P	P	17 35 14.8	-0.8
GYA				pP	pP	17 35 24.3	+4.9
GYA				sP	sP	17 35 30.6	+10
GYA				PP	PP	17 36 19.8	-6.8
GYA				S	S	17 40 19.0	-4.4
GYA				sS	sS	17 40 36.7	+7.1
GYA				ScP	ScP	17 41 47.5	-4.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,16.0s,MS4.4						
GYA				LR	LR		
	comp=E,440nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,480nm,15.0s,MS4.3						
CD2	**Chengdu**	**32.06**	**272**	P	P	17 35 20.1	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
GTA	**Gaotai**	**33.16**	**288**	eP	P	17 35 31.0	+0.6
GTA				pP	pP	17 35 40.3	+6.1
GTA				sP	sP	17 35 44.4	+8.7
GTA				S	S	17 40 47.2	-2.4
GTA				SS	SS	17 42 49.2	-23
GTA				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
GTA				LR	LR		
	comp=N,9μm,14.4s,MS5.9						
GTA				LR	LR		
	comp=E,15μm,15.3s,MS5.9						
GTA				LR	LR		
	comp=Z,8μm,17.1s,MS5.5						
KMI	**Kunming**	**35.22**	**263**	P	P	17 35 47.2	-1.2
KMI				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
TIXI	**Tiksi**	**36.13**	**353**	eP	P	17 35 54.8	-0.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
TIXI	**Tiksi**	**36.13**	**353**	eP	P	17 35 55.6	-0.1
	comp=Z,2.5nm,0.7s,mb4.2						
CHTO	**Chiang Mai**	**41.46**	**257**	eP	P	17 36 41.1	+0.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
CHTO	**Chiang Mai**	**41.46**	**257**	eP	P	17 36 41.1	+0.1
	comp=Z,4.5nm,0.9s,mb4.1						
WMQ	**Urumqi**	**41.54**	**298**	P	P	17 36 42.9	+1.6
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.6						
CM31	**Chiang Mai Arr**	**41.66**	**257**	eP	P	17 36 43.3	+0.7
	comp=Z,2.9nm,0.6s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.66**	**257**	P	P	17 36 42.7	+0.1
	comp=Z,4.6nm,0.8s,mb4.2,baz=49,slow=5.6,SNR=34						
LSA	**Lhasa**	**42.66**	**276**	P	P	17 36 52.0	+1.3
LSA	**Lhasa**	**42.66**	**276**	eP	P	17 36 51.5	+0.8
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
LSA	**Lhasa**	**42.66**	**276**	eP	P	17 36 51.5	+0.9
	comp=Z,11nm,0.7s,mb4.7						
ZAA0	**Zalesovo Array**	**42.73**	**313**	eP	P	17 36 50.5	-0.4
ZALV	**Zalesovo Beam**	**42.73**	**313**	P	P	17 36 51.3	+0.4
	comp=Z,15nm,0.9s,mb4.7,baz=91,slow=7.4,SNR=43						
ZALV				PcP	PcP	17 38 42.8	+0.5
	comp=Z,3.0nm,0.7s,baz=93,slow=3.0,SNR=4.4						
NVS	**Novosibirsk**	**43.66**	**314**	eP	P	17 36 56.9	-1.6
MK31	**Makanchi Array**	**44.86**	**303**	eP	P	17 37 07.9	-0.3
MKAR	**Makanchi Array**	**44.86**	**303**	P	P	17 37 08.5	+0.3
	comp=Z,15nm,0.8s,mb4.9,baz=91,slow=9.7,SNR=44						
MKAR	**Makanchi Array**	**44.86**	**303**	P	P	17 37 08.5	+0.3
KURK	**Kurchatov**	**46.72**	**309**	c i P	P	17 37 22.8	0.0
KURK				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
KURK	**Kurchatov**	**46.72**	**309**	P	P	17 37 23.0	+0.2
	comp=Z,16nm,0.7s,mb5.1,baz=84,slow=7.9,SNR=20						
KURK	**Kurchatov**	**46.72**	**309**	eP	P	17 37 22.0	-0.8
	comp=Z,5.0nm,1.1s,mb4.4						
KAKA	**Kakadu**	**49.48**	**192**	eP	P	17 37 43.0	-1.4
KSH	**Kashi**	**51.08**	**295**	eP	P	17 38 00.8	+4.4
KSH				epP	pP	17 38 10.8	+11
KSH				esP	sP	17 38 13.8	+12
KSH				ePcP	PcP	17 39 13.8	+1.7
KSH				ePP	PP	17 39 58.8	+6.0
KSH				eScP	ScP	17 43 06.8	-1.5
KSH				ePcS	PcS	17 43 10.8	+1.1
KSH				S	S	17 45 16.9	+3.2
KSH				esS	sS	17 45 33.8	+14
KSH				eScS	ScS	17 47 44.8	-2.1
KSH				eSS	SS	17 48 49.8	+1.3
AAK	**Ala-Archa**	**51.20**	**299**	P	P	17 37 57.8	+0.5
	comp=Z,5.5nm,0.6s,mb4.7,baz=114,slow=4.8,SNR=18						
BVAR	**Borovoye Array**	**51.39**	**313**	P	P	17 37 59.0	+0.5
	comp=Z,8.8nm,0.9s,mb4.7,baz=75,slow=6.9,SNR=23						
BRVK	**Borovoye**	**51.45**	**313**	⇓eP	P	17 37 59.9	+1.0
BRVK				pmax	pmax		
	comp=Z,32nm,2.5s,mb4.8						
BRVK	**Borovoye**	**51.45**	**313**	eP	P	17 37 57.9	-1.1
JOSI	**Joshimath**	**51.56**	**283**	eP	P	17 38 00.9	+0.8
SMLA	**Simla**	**53.21**	**284**	i P	P	17 38 10.9	-1.5
SMLA				i x	x	17 40 30.8	
KKR	**Kurukshetra**	**53.96**	**283**	eP	P	17 38 17.8	-0.1
AGRA	**Agra**	**54.25**	**280**	eP	P	17 38 19.9	-0.2
AYAN	**Aya Nagar**	**54.35**	**282**	eP	P	17 38 20.4	-0.4
SONA	**Sohna**	**54.49**	**281**	eP	P	17 38 21.3	-0.5
INK	**Inuvik**	**54.94**	**27**	P	P	17 38 24.9	+0.5
	comp=Z,1.2nm,0.5s,mb4.2,baz=313,slow=5.1,SNR=11						
KHET	**Khetri**	**55.58**	**282**	eP	P	17 38 29.2	-0.4
KHET				AMb	AMB	17 38 31.0	
	comp=Z,8.5nm,0.6s,mb4.9						
SVE	**Sverdlovsk**	**56.00**	**319**	eP	P	17 38 33.2	+1.0
SVE				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**56.17**	**199**	P	P	17 38 34.0	+0.2
	comp=Z,1.6nm,0.6s,mb4.2,baz=268,slow=13,SNR=6.8						
NGP	**Nagpur**	**56.23**	**273**	ex	x	17 38 28.3	
WRAB	**Tennant Creek**	**56.30**	**189**	eP	P	17 38 34.4	-0.3
WRAB				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
WRAB	**Tennant Creek**	**56.30**	**189**	eP	P	17 38 34.4	-0.3
	comp=Z,13nm,1.1s,mb4.9						
WRA	**Warramunga Arr**	**56.32**	**189**	P	P	17 38 34.2	-0.6
	comp=Z,3.0nm,0.8s,mb4.4,baz=6.6,slow=7.5,SNR=14						
ARU	**Arti**	**57.21**	**319**	c i P	P	17 38 41.3	+0.5
ARU				S	S	17 46 34.8	-1.2
ARU				pmax	pmax		
	comp=Z,37nm,1.7s,mb5.1						
ARU	**Arti**	**57.21**	**319**	eP	P	17 38 40.9	+0.1
	comp=Z,1μm,3.4s						
HYB	**Hyderabad**	**58.56**	**269**	i P	P	17 38 51.0	+0.1
DLBC	**Dease Lake**	**59.03**	**38**	P	P	17 38 56.1	+2.5
	comp=Z,0.8nm,0.5s,mb4.0,baz=259,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**60.04**	**188**	P	P	17 39 01.5	+0.7
	comp=Z,0.8nm,0.7s,mb3.9,baz=22,slow=10,SNR=9.8						
KBS	**Kingsbay**	**61.51**	**350**	⇑eP	P	17 39 12.4	+2.1
KBS				pmax	pmax		
	comp=Z,27nm,2.5s,mb4.9	

AKASG Malin Array Be 75.16 323 P **P** **17 40 35.5 -0.6**
comp=Z,5.2nm,0.5s,mb4.7,baz=47,slow=5.7,SNR=23
KIEV Kiev 75.17 323 *e*P **P** **17 40 33.7 -2.5**
KIEV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIEV Kiev 75.17 323 *e*P **P** **17 40 33.6 -2.6**
comp=Z,16nm,1.0s,mb4.9
PDAR Pinedale Array 77.97 46 P **P** **17 40 53.6 +1.4**
comp=Z,0.5nm,0.5s,mb3.7,baz=329,slow=1.7,SNR=6.7
KWP Kalwaria Pacla 79.00 325 *e*P **P** **17 40 58.7 +1.0**
KWP pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KWP Kalwaria Pacla 79.00 325 *e*P **P** **17 40 58.7 +1.0**
comp=Z,4.2nm,0.7s,mb4.5
BR131 Keskin Array S 79.66 312 *e*P **P** **17 40 59.3 -2.2**
comp=Z,2.9nm,0.7s,mb4.3
BRTR Keskin Array B 79.66 312 *ce*P **P** **17 41 02.7 +1.1**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 79.66 312 P **P** **17 41 02.5 +1.0**
comp=Z,3.3nm,0.9s,mb4.3,baz=97,slow=5.1,SNR=16
KOLS Kolonicke sedl 79.69 324 *e*P **P** **17 41 01.4 -0.1**
KOLS Kolonicke sedl 79.69 324 *e*P **P** **17 41 01.4 -0.1**
STHS Stebnicka Huta 79.83 325 *e*P **P** **17 41 04.1 +1.8**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 79.83 325 *e*P **P** **17 41 04.1 +1.8**
comp=Z,2.6nm,0.9s,mb4.2
STHS Stebnicka Huta 79.83 325 *e*P **P** **17 41 04.1 +1.8**
ULM Lac du Bonnet 79.97 33 P **P** **17 41 04.4 +1.3**
comp=Z,0.9nm,0.5s,mb4.0,baz=8.1,slow=7.1,SNR=2.5
KECS Kecovo 80.85 325 *e*P **P** **17 41 09.0 +1.2**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 80.85 325 *e*P **P** **17 41 09.0 +1.2**
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 80.85 325 *e*P **P** **17 41 09.0 +1.2**
VYHS Vyhne 81.60 326 *e*P **P** **17 41 13.1 +1.3**
VYHS Vyhne 81.60 326 *e*P **P** **17 41 13.1 +1.3**
BRG Berggiesshubel 81.94 330 *e*P **P** **17 41 14.2 +0.7**
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
CLL Collm 81.98 330 *e*P **P** **17 41 14.0 +0.3**
CLL *e* 17 41 21.0
CLL Collm 81.98 330 *e*P **P** **17 41 14.0 +0.3**
CLL *e*pP pP 17 41 21.0 +3.2
CLL *e* 17 41 31.0
GERES GERESS Array B 83.59 328 P **P** **17 41 21.6 -0.6**
comp=Z,1.3nm,0.5s,mb4.3,baz=23,slow=4.4,SNR=19
CDF Champ du Feu 86.53 332 *e*P **P** **17 41 37.0 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
FLN La Foliniere 89.00 336 *e*P **P** **17 41 48.6 -0.1**
LPL La Plagne 89.12 330 *e*P **P** **17 41 49.4 +0.1**
comp=Z,4.1nm,0.7s,mb4.5
LPL La Plagne 89.12 330 *e*P **P** **17 41 49.4 +0.1**
LPL pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
LPL La Plagne 89.12 330 *e*P **P** **17 41 49.4 +0.1**
comp=Z,2.0nm,0.7s,mb4.6
LPG La Plagne 89.12 330 *e*P **P** **17 41 49.6 +0.2**
comp=Z,4.1nm,0.6s,mb4.6
LPG La Plagne 89.12 330 *e*P **P** **17 41 49.6 +0.2**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
LPG La Plagne 89.12 330 *e*P **P** **17 41 49.6 +0.2**
comp=Z,2.0nm,0.6s,mb4.6
AVF Avril sur Loir 89.36 333 *e*P **P** **17 41 50.6 +0.2**
comp=Z,8.1nm,0.9s,mb4.7
AVF Avril sur Loir 89.36 333 *e*P **P** **17 41 50.6 +0.2**
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
AVF Avril sur Loir 89.36 333 *e*P **P** **17 41 50.6 +0.2**
comp=Z,4.1nm,0.9s,mb4.8
GRR Gorron 89.44 336 *e*P **P** **17 41 51.0 +0.2**
comp=Z,15nm,0.8s,mb5.1
MBDF Montbardon 89.75 330 *e*P **P** **17 41 51.7 -0.6**
comp=Z,6.8nm,0.8s,mb4.7
MBDF Montbardon 89.75 330 *e*P **P** **17 41 51.7 -0.6**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
MBDF Montbardon 89.75 330 *e*P **P** **17 41 51.7 -0.6**
comp=Z,3.4nm,0.8s,mb4.7
ORIF Oris-en-Rattie 89.95 330 *e*P **P** **17 41 53.2 -0.1**
TCF Toulx Ste Croi 90.20 333 *e*P **P** **17 41 54.6 +0.2**
ROSF Rostrenen 90.26 338 *e*P **P** **17 41 54.9 +0.3**
comp=Z,11nm,0.9s,mb4.9
VIVF Saint-Julien-l 90.48 331 *e*P **P** **17 41 55.6 -0.1**
comp=Z,4.0nm,0.7s,mb4.6
MFF Saint Martin d 90.76 335 *e*P **P** **17 41 57.3 +0.3**
comp=Z,18nm,1.2s,mb5.0
RJF Les Rejaudoux 91.29 333 *e*P **P** **17 41 59.8 +0.3**
comp=Z,11nm,0.9s,mb4.9
RJF Les Rejaudoux 91.29 333 *e*P **P** **17 41 59.8 +0.3**
RJF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
RJF Les Rejaudoux 91.29 333 *e*P **P** **17 41 59.8 +0.3**
comp=Z,5.7nm,0.9s,mb4.9
CAF Calviac 91.41 333 *e*P **P** **17 42 00.6 +0.5**
LASF Ste Croix 91.45 331 *e*P **P** **17 42 00.0 -0.3**
comp=Z,4.0nm,0.8s,mb4.5
LPAZ La Paz 146.77 61 PKPbc PKPbc 17 48 37.8 +1.3
comp=Z,1.4nm,0.5s,baz=304,slow=1.9,SNR=6.9

NIED ***07*** *17:31:00, 36°.30N×141°.80E, h23km, Mw5.4 Best double couple: M0 1.47000×10^17 NP1:φs 32.00000°, δ 65.00000°, λ 102.00000°. NP2:φs 187.00000°, δ 28.00000°, λ 67.00000°.*
SZGRF ***07*** *17:31:12.7, 35°.40N×142°.29E, h33km, Off east coast of Honshu, Japan*
IDC ***07*** *17:31:13.2±0.4, 36°.26N×141°.76E, h0km, mb4.8/28, mb1 4.9/32, mb1mx4.9/35, mbtmp4.8/32, ML4.3/4, MS5.5/3, Ms1 5.5/3, ms1mx4.9/39, Error ellipse: s-maj=13.1km s-min=11.2km az=115.0*
MOS ***07*** *17:31:15.6±1.2, 36°.31N×141°.88E, h33km, mb5.5/70, MS5.0/4, Error ellipse: s-maj=9.7km s-min=6.2km az=111.8*
BJI ***07*** *17:31:16.0, 36°.28N×141°.46E, h18km, mB5.8/12, mb5.0/52, Ms5.5/21, Ms7 5.5/18*
JMA ***07*** *17:31:16.3±0.2, 36°.29N×141°.81E, h58km±4km, M5.4*
JMA Felt II J1.
ISCJB ***07*** *17:31:17.8±0.4, 36°.25N±0°.03×141°.64E±0°.02, h41km±4km, mb5.1/166, MS5.5/9, Error ellipse: s-maj=4.4km s-min=3.2km az=172.8*
NEIC ***07*** *17:31:19.0±0.7, 36°.25N×141°.58E, h38km±6km, mb5.1/94, MW5.4(NIED), Error ellipse: s-maj=4.4km s-min=3.7km az=154.0*
NEIC Felt [IV] at Sendai. Felt at Tokyo and Yokohama. Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba, Fukushima, Miyagi and Saitama.
DJA ***07*** *17:31:39, 36°.16N×140°.98E, h199km, mb5.2/33*
ISC 07 17:31:18.1±0.9, 36°.28N±0°.02×141°.65E±0°.02, h30km±6km, h38km±1.2km: pP-P, n686, σ 0s 79/696, mb5.1/166, MS5.5/9, 143C-109D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.86**	**228**	P	**Pn**	**17 31 34.3**	**+0.1**
CHOJ				*e*S	**Sn**	**17 31 47.2**	**+1.5**
JHO	**Hitachi**	**0.93**	**291**	P	**Pn**	**17 31 34.8**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.07**	**321**	P	**Pn**	**17 31 36.3**	**-0.8**
JYT	**Yasato**	**1.18**	**268**	P	**Pn**	**17 31 38.5**	**0.0**
JYT				*e*S	**Sn**	**17 31 55.8**	**+2.3**
JFK	**Kawauchi**	**1.25**	**330**	P	**Pn**	**17 31 38.9**	**-0.7**
JFT	**Otama**	**1.63**	**320**	P	**Pn**	**17 31 45.2**	**+0.5**
JFT				*e*S	**Sn**	**17 32 06.7**	**+2.1**
BSO1	**Boso 1**	**1.71**	**199**	P	**Pn**	**17 31 45.3**	**-0.5**
JMM	**Marumori**	**1.73**	**337**	P	**Pn**	**17 31 45.4**	**-0.7**
BSO3	**Boso 3**	**1.74**	**213**	P	**Pn**	**17 31 46.1**	**-0.2**
BSO3				*e*S	**Sn**	**17 32 09.2**	**+1.8**
JAG	**Ashikaga**	**1.78**	**275**	P	**Pn**	**17 31 47.3**	**+0.5**
JKT	**Katashina**	**2.00**	**285**	P	**Pn**	**17 31 51.1**	**+1.3**
MJAR	**Matsushiro Arr**	**2.79**	**276**	Pn	**Pn**	**17 32 01.3**	**+0.6**
	99nm,0.3s,baz=292,slow=16,SNR=26						
MJAR	**Matsushiro Arr**	**2.79**	**276**	Pn	**Pn**	**17 32 01.3**	**+0.6**
MAJO	**Matsushiro**	**2.79**	**276**	*e*P	**Pn**	**17 32 02.3**	**+1.6**
MAT	**Matsushiro**	**2.79**	**276**	P	**Pn**	**17 32 02.9**	**+2.2**
MAT				S	**Sn**	**17 32 41.7**	**+8.4**
JHJ	**Hachijo jima 2**	**3.50**	**207**	Pn	**Pn**	**17 32 10.1**	**-0.5**
	192nm,0.3s,baz=181,slow=19,SNR=12						
JHJ				Sn	**Sn**	**17 32 49.8**	**-1.2**
	739nm,0.3s,baz=63,slow=24,SNR=12						
ASAJ	**Asahikawa**	**7.86**	**5**	P	**Pn**	**17 33 08.4**	**-2.0**
ASAJ						17 34 33.6	
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,17μm,18.8s						
ASAJ	**Asahikawa**	**7.86**	**5**	Pn	**Pn**	**17 33 08.3**	**-2.0**
	comp=Z,12nm,0.3s,baz=326,slow=15,SNR=11						
ASAJ				Sn	**Sn**	**17 34 33.5**	**-4.8**
	comp=Z,4.5nm,0.3s,baz=38,slow=28,SNR=5.6						
ASAJ				LR	LR	17 37 06.8	
	comp=Z,17μm,18.8s,baz=188,slow=45						
YUK	**Yuzh-Kuril'sk**	**8.39**	**21**	*e*P	**Pn**	**17 33 13.4**	**-4.2**
CBIJ	**Chichi jima**	**9.16**	**177**	Pn	**Pn**	**17 33 23.8**	**-4.5**
	comp=Z,48nm,0.3s,baz=284,slow=20,SNR=14						
CBIJ				Sn	**Sn**	**17 34 58.9**	**-12**
	comp=Z,68nm,0.3s,baz=234,slow=19,SNR=3.9						
YSS	**Yuzh-Sakhalins**	**10.70**	**4**	*e*P	**Pn**	**17 33 47.2**	**-2.0**
YSS				*e*S	**Sn**	**17 35 44.5**	**-3.4**
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**10.70**	**4**	*e*P	**Pn**	**17 33 47.5**	**-1.7**
	comp=Z,42nm,0.8s						
KSRS	**Korea Array**	**11.06**	**280**	P	**Pn**	**17 33 58.2**	**+4.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,19μm,18.1s						
KSRS	**Korea Array**	**11.06**	**280**	Pn	**Pn**	**17 33 58.2**	**+4.0**
	comp=Z,0.8nm,0.3s,baz=95,slow=13,SNR=31						
KSRS				LR	LR	17 38 12.3	
	comp=Z,19μm,18.1s,baz=178,slow=38						
INCN	**Inchon**	**12.09**	**280**	*e*P	**Pn**	**17 34 07.2**	**-1.0**
	comp=Z,48nm,1.0s						
MDJ	**Mudanjiang**	**12.39**	**316**	P	**Pn**	**17 34 13.2**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,22nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,17μm,14.5s						
MDJ	**Mudanjiang**	**12.39**	**316**	*e*P	**Pn**	**17 34 13.9**	**+1.6**
	comp=Z,39nm,0.9s						
HABR	**Khabarovsk**	**13.12**	**340**	*e*P	**Pn**	**17 34 24.7**	**+2.4**
HABR						17 36 49.7	
HABR				pmax	pmax		
	comp=Z,47nm,1.7s						
HABR				pmax	pmax		
	comp=N,26nm,1.6s						
HABR				pmax	pmax		
	comp=E,39nm,1.7s						
HABR				MLR	MLR		
	comp=Z,10μm,15.0s						
CN2	**Changchun**	**14.49**	**306**	*e*P	**Pn**	**17 34 38.7**	**-2.4**
CN2				*e*pP	pP	17 34 42.1	-13
CN2				*e*sP	sP	17 34 45.7	-13
CN2				*e*S	**Sn**	**17 37 19.3**	**-1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,14μm,14.0s						
CN2				LR	LR		
	comp=E,17μm,14.0s						
CN2				LR	LR		
	comp=Z,20μm,13.0s						
JOW	**Kunigami**	**14.77**	**234**	Pn	**Pn**	**17 34 44.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=40,slow=12,SNR=3.5						
KLR	**Kul'dur**	**14.83**	**334**	*e*P	**Pn**	**17 34 38.8**	**-6.8**
SNY	**Shenyang**	**15.09**	**297**	⇑P	**Pn**	**17 34 48.9**	**-0.1**
SNY				pmax	pmax		
	comp=Z,21nm,1.1s						
DL2	**Dalian**	**16.09**	**285**	P	**Pn**	**17 35 02.3**	**+0.3**
DL2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2	**Nanjing**	**19.32**	**264**	*e*P	**Pn**	**17 35 43.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s						
TIA	**Tai'an**	**19.77**	**277**	*e*P	**Pn**	**17 35 44.3**	**-3.1**
PETK	**Petropavlovsk-**	**20.25**	**29**	P	**P**	**17 35 50.6**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=209,slow=7.4,SNR=7.8						
BJI	**Beijing**	**20.36**	**288**	P	**P**	**17 35 49.8**	**-2.3**
BJI				pmax	pmax		
	comp=Z,37nm,0.9s						
BJT	**Baijiatuau**	**20.36**	**288**	*e*P	**P**	**17 35 51.1**	**-1.0**
BJT				pmax	pmax		
	comp=Z,29nm,0.5s						
BJT	**Baijiatuau**	**20.36**	**288**	*e*P	**P**	**17 35 51.1**	**-1.0**
	comp=Z,28nm,0.5s						
PET	**Petropavlovsk**	**20.57**	**30**	*e*P	**P**	**17 36 00.8**	**+6.6**
PET				pmax	pmax		
	comp=Z,16nm,0.7s						
HIA	**Hailar**	**20.57**	**316**	*e*P	**P**	**17 35 54.1**	**-0.2**
HIA				pmax	pmax		
	comp=Z,19nm,0.8s						
HIA	**Hailar**	**20.57**	**316**	*e*P	**P**	**17 35 54.1**	**-0.2**
	comp=Z,19nm,0.8s						
GUMO	**Guam**	**22.77**	**172**	*e*P	**P**	**17 36 17.7**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,302nm,1.1s,mb5.6						
GUMO	**Guam**	**22.77**	**172**	*e*P	**P**	**17 36 17.7**	**-0.4**
	comp=Z,302nm,1.1s,mb5.6						
QZH	**Quanzhou**	**22.78**	**247**	P	**P**	**17 36 15.9**	**-2.2**
QZH				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
NRGR	**Nerungri**	**23.36**	**336**	*e*P	**P**	**17 36 23.9**	**-0.1**
NRGR				S	**S**	**17 40 35.5**	**+1.1**
NRGR				smax			
	comp=N,18nm,0.5s						
CLNS	**Chul'man**	**23.45**	**337**	*e*P	**P**	**17 36 23.9**	**-1.0**
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.0						
CLNS				pmax	pmax		
	comp=N,34nm,0.8s						
WHN	**Wuhan**	**23.45**	**264**	⇓P	**P**	**17 36 16.5**	**-8.7**
HHC	**Hu-ho-hao-te**	**23.90**	**290**	*e*P	**P**	**17 36 29.4**	**+0.2**
HHC				pP		17 36 38.5	
HHC				sP	sP	17 36 42.8	+1.4
HHC				PP		17 37 03.4	
HHC				PcP	PcP	17 40 12.6	+1.4
HHC				S	**S**	**17 40 41.2**	**-2.3**
HHC				sS	sS	17 40 56.0	-1.7
HHC				SS		17 41 30.9	
HHC				ScP	ScP	17 43 47.9	+0.5
HHC				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,4μm,6.0s						
HHC				LR	LR		
	comp=N,5μm,12.0s,MS5.3						
HHC				LR	LR		
	comp=E,3μm,12.0s,MS5.3						
HHC				LR	LR		
	comp=Z,3μm,11.3s,MS4.9						
CIT	**Chita**	**25.36**	**317**	*e*P	**P**	**17 36 42.6**	**+0.3**
CIT				pmax	pmax		
	comp=Z,299nm,2.4s,mb5.4						
XAN	**Xi'an**	**26.78**	**275**	P	**P**	**17 36 54.6**	**-0.8**
XAN				pP	pP	17 37 04.0	0.0
XAN				sP	sP	17 37 07.9	+0.2
XAN				S	**S**	**17 41 29.6**	**+0.1**
XAN				sS	sS	17 41 44.6	+0.8
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
XAN				pmax	pmax		
	comp=Z,1μm,10.4s						
XAN				LR	LR		
	comp=N,3μm,11.8s,MS5.1						
XAN				LR	LR		
	comp=E,2μm,13.3s,MS5.1						
XAN				LR	LR		
	comp=Z,2μm,16.0s,MS4.7						
YAK	**Yakutsk**	**26.85**	**347**	*e*P	**P**	**17 36 53.6**	**-2.1**
YAK				*e**PP	pP	17 37 03.2	-1.1
YAK				*e*PPP		17 37 54.1	
YAK				*e*		17 40 22.3	
YAK				*e*S	**S**	**17 41 29.6**	**-0.4**
YAK				*e**SS	sS	17 41 48.0	+3.7
YAK				pmax	pmax		
	comp=Z,101nm,0.8s,mb5.4						
YAK				pmax	pmax		
	comp=E,16nm,1.0s						
YAK				pmax	pmax		
	comp=N,56nm,1.5s						
YAK				smax			
	comp=E,315nm,3.7s						
YAK				smax			
	comp=N,1μm,4.9s						
YAK				MLR	MLR		
	comp=Z,8μm,16.0s,MS5.4						
YAK				MLR	MLR		
	comp=N,10μm,15.0s						
ENH	**Enshi**	**27.47**	**267**	*e*P	**P**	**17 37 00.7**	**-0.9**
SEY	**Seymchan**	**27.50**	**11**	⇓*e*P	**P**	**17 37 01.8**	**+0.3**
ULN	**Ulaanbaatar**	**27.94**	**305**	*e*P	**P**	**17 37 05.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**27.94**	**305**	*e*P	**P**	**17 37 05.5**	**-0.1**
	comp=Z,21nm,0.8s,mb4.8						
BOD	**Bodaibo**	**28.27**	**328**	*e*P	**P**	**17 37 06.7**	**-1.7**
BOD				pmax	pmax		
	comp=Z,34nm,1.1s,mb4.9						
SONM	**Songino Array**	**28.37**	**305**	P	**P**	**17 37 10.3**	**+0.9**
	comp=Z,43nm,0.8s,mb5.1,baz=102,slow=7.2,SNR=42						
SONM				LR	LR	17 48 44.7	
	comp=Z,15μm,18.1s,MS5.6,baz=317,slow=37						
LZH	**Lanzhou**	**30.39**	**281**	*e*P	**P**	**17 37 29.4**	**+1.9**
LZH				pP	pP	17 37 39.8	+3.6
LZH				sP	sP	17 37 44.0	+4.2
LZH				PP	PP	17 38 28.0	-8.3
LZH				S	**S**	**17 42 26.1**	**-0.1**
LZH				sS	sS	17 42 43.5	+2.9
LZH				SS	SS	17 44 07.0	-29
LZH				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,160nm,4.0s						
LZH				LR	LR		
	comp=E,7μm,15.6s						
LZH				LR	LR		
	comp=Z,12μm,16.0s,MS5.6						
IRK	**Irkutsk**	**30.75**	**313**	*e*P	**P**	**17 37 30.3**	**-0.2**
IRK				pmax	pmax		
	comp=Z,58nm,2.2s,mb5.0						
ZAK	**Zakamensk**	**30.89**	**309**	*e*P	**P**	**17 37 32.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
TLY	**Talaya**	**30.97**	**312**	P	**P**	**17 37 33.0**	**+0.5**
	comp=Z,169nm,1.0s,mb5.8,SNR=14						
TLY	**Talaya**	**30.97**	**312**	*e*P	**P**	**17 37 33.0**	**+0.5**
GYA	**Guiyang**	**31.29**	**262**	P	**P**	**17 37 35.8**	**+0.3**
GYA				pP	pP	17 37 45.9	+1.7
GYA				sP	sP	17 37 50.0	+2.1
GYA				PP	PP	17 38 39.4	-7.0
GYA				PcP	PcP	17 40 30.0	+0.7
GYA				S	**S**	**17 42 38.9**	**-1.6**
GYA				sS	sS	17 42 55.3	+0.5
GYA				ScP	ScP	17 44 09.6	-0.6
GYA				SS	SS	17 44 25.1	-30
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,140nm,4.7s						
GYA				LR	LR		
	comp=N,9μm,15.2s,MS5.6						
GYA				LR	LR		
	comp=E,6μm,15.5s,MS5.6						
GYA				LR	LR		
	comp=Z,10μm,15.5s,MS5.6						
CD2	**Chengdu**	**31.87**	**271**	P	**P**	**17 37 39.7**	**-0.9**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.4						
MOY	**Mondy**	**32.58**	**311**	*e*P	**P**	**17 37 46.8**	**+0.3**
MOY				pmax	pmax		
	comp=Z,96nm,2.9s,mb5.2						
GTA	**Gaotai**	**32.97**	**288**	*e*P	**P**	**17 37 50.6**	**+0.4**
GTA				pP	pP	17 38 00.6	+1.7
GTA				sP	sP	17 38 05.2	+2.7
GTA				PcP	PcP	17 40 34.3	+0.6
GTA				S	**S**	**17 43 07.6**	**+1.1**
GTA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
GTA				LR	LR		
	comp=N,6μm,16.8s,MS5.6						
GTA				LR	LR		
	comp=E,7μm,16.2s,MS5.6						
GTA				LR	LR		
	comp=Z,8μm,14.7s,MS5.6						
BILL	**Bilibino**	**34.70**	**16**	*e*P	**P**	**17 38 04.0**	**-0.8**
BILL				*e*		17 39 13.2	
BILL				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.8						
BILL	**Bilibino**	**34.70**	**16**	*e*P	**P**	**17 38 03.4**	**-1.4**
	comp=Z,14nm,0.9s,mb4.9						
KMI	**Kunming**	**35.04**	**263**	⇑P	**P**	**17 38 08.0**	**-0.3**
KMI				pP	pP	17 38 19.4	+2.4
KMI				sP	sP	17 38 23.5	+2.8
KMI				PP	PP	17 39 27.9	-0.1
KMI				S	**S**	**17 43 38.1**	**-0.6**
KMI				SS	SS	17 45 51.2	-20
KMI				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
KMI				LR	LR		
	comp=N,9μm,14.3s,MS5.8						
KMI				LR	LR		
	comp=E,8μm,16.5s,MS5.8						
KMI				LR	LR		
	comp=Z,7μm,17.6s,MS5.5						
TIXI	**Tiksi**	**36.06**	**353**	*e*P	**P**	**17 38 14.3**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,28nm,1.8s,mb4.9						
TIXI	**Tiksi**	**36.06**	**353**	*e*P	**P**	**17 38 14.8**	**-1.7**
KKTK	**Khon Kaen**	**39.73**	**250**	P	sP	17 39 07.0	+6.5
	comp=Z,309nm,0.5s						
CHTO	**Chiang Mai**	**41.30**	**257**	*e*P	**P**	**17 39 00.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**41.30**	**257**	*e*P	**P**	**17 39 00.8**	**-0.2**
	comp=Z,20nm,1.0s,mb4.7						
WMQ	**Urumqi**	**41.35**	**298**	P	**P**	**17 39 02.6**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.6						
CM31	**Chiang Mai Arr**	**41.50**	**256**	*e*P	**P**	**17 39 02.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**41.50**	**256**	P	**P**	**17 39 02.9**	**+0.3**
	comp=Z,15nm,0.9s,mb4.6,baz=47,slow=6.1,SNR=43						
NST	**Nakhon Sawan**	**42.19**	**252**	P	**P**	**17 39 07.5**	**-0.8**
LSA	**Lhasa**	**42.47**	**276**	P	**P**	**17 39 12.0**	**+1.5**
LSA	**Lhasa**	**42.47**	**276**	*e*P	**P**	**17 39 11.6**	**+1.1**
LSA				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.0						
LSA	**Lhasa**	**42.47**	**276**	*e*P	**P**	**17 39 11.6**	**+1.1**
	comp=Z,34nm,0.9s,mb5.0						
ZAA0	**Zalesovo Array**	**42.57**	**313**	*e*P	**P**	**17 39 10.9**	**0.0**
ZALV	**Zalesovo Beam**	**42.57**	**313**	P	**P**	**17 39 11.4**	**+0.4**
	comp=Z,15nm,0.5s,mb5.0,baz=92,slow=7.4,SNR=28						
ZALV				PcP	PcP	17 41 03.2	+0.3
	comp=Z,5.2nm,0.6s,baz=92,slow=5.0,SNR=4.2						
NVS	**Novosibirsk**	**43.50**	**314**	*e*P	**P**	**17 39 18.5**	**0.0**
MK31	**Makanchi Array**	**44.69**	**303**	*e*P	**P**	**17 39 28.9**	**+0.8**
MKAR	**Makanchi Array**	**44.69**	**303**	P	**P**	**17 39 28.5**	**+0.4**
	comp=Z,28nm,0.8s,mb5.1,baz=90,slow=8.5,SNR=27						
MKAR	**Makanchi Array**	**44.69**	**303**	P	**P**	**17 39 28.5**	**+0.4**
KAPI	**Kappang**	**45.91**	**211**	P	**P**	**17 39 38.7**	**+0.6**
	comp=Z,704nm,1.2s,SNR=12						
KAPI	**Kappang**	**45.91**	**211**	*e*P	**P**	**17 39 35.8**	**-2.3**
	comp=Z,192nm,1.2s,mb5.9						
SVW2	**Sparrevohn**	**46.01**	**37**	*e*P	**P**	**17 39 39.4**	**+1.0**
KURK	**Kurchatov**	**46.55**	**309**	P	**P**	**17 39 42.0**	**-0.8**
	comp=Z,447nm,0.8s,SNR=28						
KURK	**Kurchatov**	**46.55**	**309**	*c i*P	**P**	**17 39 42.8**	**0.0**
KURK				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
KURK	**Kurchatov**	**46.55**	**309**	P	**P**	**17 39 43.3**	**+0.5**
	comp=Z,32nm,0.7s,mb5.4,baz=85,slow=8.2,SNR=19						
KURK	**Kurchatov**	**46.55**	**309**	*e*P	**P**	**17 39 42.6**	**-0.2**
	comp=Z,63nm,0.

PKI **Pulchoki** 47.95 276 *eP* P 17 39 54.7 +0.7
comp=Z,105nm,1.2s,mb5.8
PKIN **Phulchoki** 47.95 276 *eP* P 17 39 54.5 +0.5
comp=Z,39nm,0.6s,mb5.6
PKIN **Phulchoki** 47.95 276 *eP* P 17 39 54.5 +0.5
comp=Z,37nm,0.9s,mb5.4
KKN **Kakani** 47.96 277 *eP* P 17 39 54.7 +0.6
comp=Z,148nm,1.2s,mb5.9
DMN **Daman** 48.17 276 *eP* P 17 39 56.4 +0.7
GKN **Gorkha** 48.38 277 *eP* P 17 39 58.0 +0.6
comp=Z,209nm,1.0s,mb6.1
PMR **Palmer** 49.12 36 *eP* P 17 40 00.3 -2.2
PMR pmax pmax
comp=Z,29nm,1.2s,mb5.2
PMR **Palmer** 49.12 36 *eP* P 17 40 00.3 -2.2
comp=Z,29nm,1.2s,mb5.2
KOLN **Koldanda** 49.31 277 *eP* P 17 40 05.3 +0.8
comp=Z,55nm,0.9s,mb5.6
KAKA **Kakadu** 49.49 192 *eP* P 17 40 04.7 -1.1
comp=Z,54nm,0.9s,mb5.6
KAKA **Kakadu** 49.49 192 *eP* P 17 40 04.5 -1.3
comp=Z,143nm,0.8s,mb6.0
PYUN **Piuthan** 49.66 278 *eP* P 17 40 08.0 +0.8
comp=Z,47nm,0.5s,mb5.8
TKM2 **Tokmak 2** 50.16 299 P P 17 40 12.4 +1.6
SNR=7.2
KZA **Kyzart** 50.64 298 P P 17 40 16.6 +2.2
SNR=11
KBK **Karagaybulak** 50.69 299 P P 17 40 19.8 +5.0
SNR=11
USP **Ospenovka** 50.84 300 P P 17 40 16.6 +0.8
SNR=16
KSH **Kashi** 50.89 295 *eP* P 17 40 20.7 +4.4
KSH *ep*P pP 17 40 29.7 +4.3
KSH *es*P sP 17 40 33.8 +4.9
KSH *e*PcP PcP 17 41 36.8 +4.2
KSH *e*PP PP 17 42 17.1 +4.5
KSH *e*ScP ScP 17 45 28.7 +2.1
KSH *e*PcS PcS 17 45 32.6 +2.6
KSH *eS* **S** **17 47 34.3 +3.5**
KSH *es*S sS 17 47 50.7 +5.0
KSH *e*ScS ScS 17 50 04.7 -0.1
KSH *e*SS SS 17 51 06.8 +1.4
KSH pmax pmax
comp=Z,10μm,12.5s
KSH LR LR
comp=N,10μm,14.5s,MS6.0
KSH LR LR
comp=E,6μm,14.1s,MS6.0
AAK **Ala-Archa** 51.02 299 P P 17 40 18.6 +1.4
comp=E,124nm,1.1s,mb5.8,SNR=9.7
AAK **Ala-Archa** 51.02 299 P P 17 40 18.1 +0.9
SNR=15
AAK **Ala-Archa** 51.02 299 *eP* P 17 40 18.1 +0.9
AAK pmax pmax
comp=Z,24nm,1.1s,mb5.0
AAK **Ala-Archa** 51.02 299 P P 17 40 18.0 +0.8
comp=Z,7.5nm,0.5s,mb4.9,baz=105,slow=4.3,SNR=14
AAK **Ala-Archa** 51.02 299 *eP* P 17 40 18.1 +0.9
comp=Z,24nm,1.1s,mb5.0
UCH **Uchtor** 51.12 298 P P 17 40 19.8 +1.8
SNR=7.5
BVAR **Borovoye Array** 51.22 313 P P 17 40 18.7 +0.1
comp=Z,18nm,0.8s,mb5.0,baz=82,slow=7.2,SNR=18
BVAR PcP PcP 17 41 34.2 +0.7
comp=Z,5.8nm,0.7s,baz=93,slow=3.2,SNR=2.2
BRVK **Borovoye** 51.28 313 P P 17 40 19.0 0.0
comp=Z,167nm,0.9s,mb6.0,SNR=12
BRVK **Borovoye** 51.28 313⇑ *eP* P 17 40 19.5 +0.5
BRVK pmax pmax
comp=Z,28nm,0.7s,mb5.3
BRVK **Borovoye** 51.28 313 *eP* P 17 40 19.3 +0.3
comp=Z,36nm,1.0s,mb5.3
EKS2 **Erkin-Say** 51.52 299 P P 17 40 21.8 +0.8
SNR=18
EKS2 **Erkin-Say** 51.52 299 *eP* P 17 40 21.6 +0.6
comp=Z,16nm,0.8s,mb5.0
MENT **Mentasta** 51.55 34 *eP* P 17 40 22.0 +1.1
AML **Almayashu** 51.73 299 P P 17 40 24.4 +1.8
SNR=33
EGAK **Eagle** 52.48 32 *eP* P 17 40 28.2 +0.5
comp=Z,37nm,1.8s,mb5.0
DAWY **Dawson** 53.34 33 *eP* P 17 40 35.0 +0.9
HYT **Haines Junctio** 54.79 36 *eP* P 17 40 46.0 +1.2
INK **Inuvik** 54.98 27 P P 17 40 45.9 -0.1
INK pmax pmax
comp=Z,8.0nm,0.5s
INK **Inuvik** 54.98 27 P P 17 40 45.9 -0.1
comp=Z,8.3nm,0.5s,mb5.0,baz=312,slow=5.9,SNR=43
INK **Inuvik** 54.98 27 *eP* P 17 40 45.6 -0.4
comp=Z,9.8nm,0.6s,mb5.0
FITZ **Fitzroy Crossi** 56.16 198 *eP* P 17 40 55.0 0.0
comp=Z,12nm,0.5s,mb5.2
FITZ **Fitzroy Crossi** 56.16 198 P P 17 40 55.1 +0.1
comp=Z,7.2nm,0.8s,mb4.7,baz=19,slow=6.6,SNR=8.5
CTA **Charters Tower** 56.23 175 *eP* P 17 40 55.1 -0.4
WRAB **Tennant Creek** 56.33 188 P P 17 40 55.0 -1.2
comp=Z,246nm,0.7s,mb6.3,SNR=7.7
WRAB **Tennant Creek** 56.33 188 *eP* P 17 40 54.7 -1.5
WRAB pmax pmax
comp=Z,55nm,1.0s,mb5.5
WRAB **Tennant Creek** 56.33 188 *eP* P 17 40 54.7 -1.4
comp=Z,55nm,1.0s,mb5.5
WB2 **Warramunga Arr** 56.34 188 *eP* P 17 40 54.0 -2.3
WRA **Warramunga Arr** 56.34 188 P P 17 40 54.6 -1.6
comp=Z,21nm,0.9s,mb5.1,baz=6.3,slow=7.4,SNR=20
SOKR **Solikamsk** 57.05 323 *eP* P 17 41 00.9 0.0
SOKR pmax pmax
comp=Z,20nm,1.2s,mb5.0
ARU **Arti** 57.05 319 P P 17 41 01.3 +0.3
comp=Z,192nm,1.5s,mb5.9,SNR=13
ARU **Arti** 57.05 319 *d iP* P 17 41 00.7 -0.3
ARU 17 43 03.7
ARU S **S** **17 48 55.6 +2.1**
ARU SS SS 17 52 38.1 -3.8
ARU pmax pmax
comp=Z,67nm,1.7s,mb5.4
ARU **Arti** 57.05 319 *eP* P 17 41 01.0 0.0
comp=Z,40nm,1.1s,mb5.4
KBL **Kabul** 57.87 292 *eP* P 17 41 07.4 +0.3
KBL pmax pmax
comp=Z,21nm,1.0s,mb5.1
KBL **Kabul** 57.87 292 *eP* P 17 41 07.4 +0.3
comp=Z,21nm,1.0s,mb5.1
HYB **Hyderabad** 58.38 269 *i* P P 17 41 11.0 +0.1
DLBC **Dease Lake** 59.11 38 P P 17 41 17.6 +2.2
comp=Z,1.6nm,0.6s,mb4.3,baz=205,slow=24,SNR=5.2
ASAR **Alice Springs** 60.06 188 P P 17 41 21.6 -0.7
comp=Z,6.3nm,0.8s,mb4.7,baz=6.7,slow=6.6,SNR=17
SPB4 **Spitsbergen Ar** 61.30 349 P P 17 41 29.5 -0.7
KBS **Kingsbay** 61.43 350⇓ *eP* P 17 41 31.9 +0.9
EIDS **Eidsvold** 61.96 170 *eP* P 17 41 35.0 0.0
comp=Z,153nm,2.3s,mb5.7
DZM **Mont Dzumac** 62.59 154 *eP* P 17 41 39.0 -0.3
comp=Z,69nm,1.5s,mb5.6
RES **Resolute Bay** 63.29 14 P P 17 41 42.9 -0.5
RES pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
RES **Resolute Bay** 63.29 14 P P 17 41 42.9 -0.6
comp=Z,7.4nm,0.6s,mb5.0,baz=308,slow=6.2,SNR=27
RES **Resolute Bay** 63.29 14 *eP* P 17 41 42.7 -0.7
comp=Z,14nm,0.8s,mb5.2
APA **Apatity** 63.46 336⇑ *iP* P 17 41 44.5 -0.1
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
KEV **Kevo** 64.22 339 *eP* P 17 41 49.5 -0.1
KEV pmax pmax
comp=Z,23nm,1.0s,mb5.2
KEV **Kevo** 64.22 339 *eP* P 17 41 49.5 -0.2
comp=Z,22nm,1.0s,mb5.2
KEV **Kevo** 64.22 339 *ep* P 17 41 48.6 -1.0
comp=Z,9.5nm,0.7s,mb4.9
YKA **Yellowknife Ar** 64.37 30 P P 17 41 49.8 -0.9
comp=Z,4.7nm,0.8s,mb4.6,baz=303,slow=6.6,SNR=20
YKA PKP2bc 18 10 42.1
comp=Z,0.1nm,0.5s,baz=106,slow=2.3,SNR=3.7
KLMR **Klimovskoe** 64.50 328 *eP* P 17 41 51.3 -0.3
KLMR pmax pmax
comp=Z,68nm,2.0s,mb5.3
ARCES **ARCESS Array B** 64.77 340 P P 17 41 53.2 -0.1
comp=Z,8.5nm,0.7s,mb4.9,baz=52,slow=8.3,SNR=24
ARE0 **ARCESS Array S** 64.77 340 *eP* P 17 41 53.4 +0.2
DAG **Danmarks Havn** 66.54 355⇓ *eP* P 17 42 04.1 -0.5
DAG pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
DAG **Danmarks Havn** 66.54 355⇓ *iP* P 17 42 04.1 -0.5
comp=Z,5.3nm,0.6s,mb4.8
JOF **Joensuu** 66.72 332 *eP* P 17 42 04.1 -1.8
JOF pmax pmax
comp=Z,12nm,0.6s,mb5.1
JOF **Joensuu** 66.72 332 *ep* P 17 42 04.1 -1.8
comp=Z,12nm,0.6s,mb5.1
ARMA **Armidale** 67.00 171 *eP* P 17 42 09.0 +1.0
ARMA **Armidale** 67.00 171 *eP* P 17 42 09.5 +1.6
comp=Z,49nm,1.4s,mb5.3
STKA **Stephens Creek** 67.80 180 *eP* P 17 42 12.2 -0.8
comp=Z,3.9nm,0.7s,mb4.5
STKA **Stephens Creek** 67.80 180 P P 17 42 12.5 -0.4
comp=Z,7.7nm,0.8s,mb4.8,baz=343,slow=8.8,SNR=13
STKA **Stephens Creek** 67.80 180 P P 17 42 12.5 -0.5
JCW **Jim Creek** 67.83 46 *eP* P 17 42 13.2 0.0
FORT **Forrest** 67.91 193 *eP* P 17 42 13.0 -0.7
comp=Z,21nm,0.6s,mb5.3
FORT **Forrest** 67.91 193 *eP* P 17 42 13.3 -0.4
comp=Z,46nm,0.8s,mb5.6
MOS **Moscow** 67.97 324 *eP* P 17 42 11.4 -2.5
MOS pmax pmax
comp=Z,126nm,1.7s,mb5.7
A07A **Ashnola River,** 68.29 45 ⇓P P 17 42 16.3 +0.3
baz=68
F04A **Amboy** 68.68 48 ⇑P P 17 42 19.4 +0.9
baz=68
B07A **Winthrop** 68.74 45 ⇑P P 17 42 19.5 +0.6
baz=69
OBN **Obninsk** 68.82 323 *eP* P 17 42 19.0 -0.2
OBN *i* 17 42 40.9
OBN pmax pmax
comp=Z,97nm,2.6s,mb5.3
OBN **Obninsk** 68.82 323 *eP* P 17 42 19.1 -0.1
comp=Z,430nm,2.7s,mb5.9
A08A **Turner Farm, O** 68.97 44 ⇑P P 17 42 20.7 +0.4
baz=69
ETW **Entiat** 69.06 46 *eP* P 17 42 21.7 +0.8
KAF **Kangasniemi** 69.07 333 *eP* P 17 42 18.2 -2.5
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KAF **Kangasniemi** 69.07 333 *ep* P 17 42 18.2 -2.5
comp=Z,9.4nm,0.6s,mb4.9
C07A **Waterville** 69.17 46 ⇑P P 17 42 22.0 +0.4
baz=69
E06A **Yakima** 69.23 47 ⇓P P 17 42 22.4 +0.5
baz=69
B08A **Colville Reser** 69.24 45 ⇑P P 17 42 22.4 +0.4
baz=69
A09A **Danville** 69.34 44 ⇑P P 17 42 23.2 +0.6
baz=69
H04A **Detroit Lake** 69.46 49 ⇑P P 17 42 24.0 +0.6
baz=69
D07A **Quincy** 69.48 46 ⇓P P 17 42 23.9 +0.4
baz=69
FINES **FINESS Array B** 69.57 332 P P 17 42 23.7 -0.1
comp=Z,16nm,0.8s,mb5.0,baz=57,slow=7.0,SNR=28
FINES **FINESS Array B** 69.57 332 P P 17 42 23.7 -0.1
VSR **Storozhevoye** 69.63 319 *eP* P 17 42 24.0 -0.3
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.5s
VORD **Divnogorie** 69.69 319 *eP* P 17 42 24.0 -0.8
VORD pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,20nm,0.7s
C08A **Higginbotham F** 69.70 45 ⇑P P 17 42 25.1 +0.3
baz=70
B09A **Rice** 69.88 44 ⇓P P 17 42 26.4 +0.5
baz=70
G06A **Carlson Farm,** 70.11 48 ⇑P P 17 42 28.0 +0.6
baz=70
C09A **Chrisman Ranch** 70.14 45 ⇓P P 17 42 28.3 +0.7
baz=70
MOR8 **Moi Rana** 70.14 340 *eP* P 17 42 26.1 -1.2
D08A **Wollman Farm,** 70.16 46 ⇑P P 17 42 27.6 -0.1
baz=70
E08A **Dider Farm, El** 70.38 46 ⇓P P 17 42 29.2 +0.1
baz=70
D09A **Jones Farm, Ri** 70.51 46 ⇓P P 17 42 30.1 +0.2
baz=70
NEW **Newport** 70.54 44 *eP* P 17 42 30.6 +0.6
NEW pmax pmax
comp=Z,217nm,2.8s
NEW **Newport** 70.54 44 *eP* P 17 42 30.6 +0.6
comp=Z,217nm,2.8s,mb5.6
H06A **Lindquist Farm** 70.56 48 ⇑P P 17 42 30.3 +0.1
baz=70
A11A **Hall Mountain,** 70.59 43 ⇓P P 17 42 30.6 +0.4
baz=70
YBH **Yreka Blue Hor** 70.66 52 P P 17 42 32.2 +1.4
comp=Z,7.1nm,1.0s,mb4.5,baz=312,slow=6.2,SNR=4.0
GOF **Gotskoye** 70.75 312 *eP* P 17 42 22.7 -8.6
B11A **Sandpoint** 70.87 44 ⇓P P 17 42 31.9 -0.1
baz=71
E09A **Wood Farm, Sta** 70.90 46 ⇑P P 17 42 32.3 +0.1
baz=71
F08A **Pendleton** 70.92 47 ⇑P P 17 42 32.1 -0.3
baz=71
G08A **Pilot Rock** 71.08 47 ⇑P P 17 42 33.7 +0.3
baz=71
LNOR **Lincton Mounta** 71.17 47 *eP* P 17 42 35.2 +1.3
VSU **Vasula** 71.20 330⇓ *eP* P 17 42 34.3 +0.5
VSU pmax pmax
comp=Z,25nm,0.9s,mb5.1
K05A **Summer Lake** 71.28 50 ⇑P P 17 42 34.8 +0.2
baz=71
WDC **Whiskeytown Da** 71.37 53 *eP* P 17 42 36.3 +1.1
WDC pmax pmax
comp=Z,14nm,0.9s,mb4.9
WDC **Whiskeytown Da** 71.37 53 *eP* P 17 42 36.2 +1.1
comp=Z,14nm,0.9s,mb4.9
I07A **Izee** 71.41 49 ⇓P P 17 42 34.9 -0.4
baz=71
ZEI **Tsey** 71.44 310 *i* P P 17 42 34.4 -1.1
ZEI pmax pmax
comp=Z,25nm,1.9s,mb4.8
SUMG **Summit** 71.44 0 *eP* P 17 42 36.0 +1.0
comp=Z,32nm,1.1s,mb5.2
KIV **Kislovodsk** 71.55 311 *eP* P 17 42 37.4 +1.2
KIV pmax pmax
comp=Z,30nm,0.9s,mb5.2
KIV **Kislovodsk** 71.55 311 *eP* P 17 42 36.6 +0.4
comp=Z,30nm,0.8s,mb5.3
D11A **Klaveano Farm,** 71.65 45 ⇑P P 17 42 37.0 +0.2
baz=72
H08A **Prairie City** 71.67 48 ⇓P P 17 42 37.0 +0.1
baz=72
C12B **Naegeli Ranch,** 71.77 44 ⇓P P 17 42 37.3 -0.1
baz=72
G09A **Cove** 71.79 47 ⇑P P 17 42 37.5 -0.2
baz=72
WALA **Waterton Lakes** 71.87 42 *eP* P 17 42 39.4 +1.4
comp=Z,0.9nm,1.4s
B13A **Whitefish** 71.96 43 ⇓P P 17 42 38.7 +0.1
baz=72
BSMT **Bassoo Peak** 72.07 43 *eP* P 17 42 39.7 +0.5
MOD **Modoc** 72.09 51 *eP* P 17 42 41.1 +1.6
E11A **Bogner Ranch,** 72.11 45 ⇑P P 17 42 39.5 0.0
baz=72
A14A **Double T Ranch** 72.19 42 ⇓P P 17 42 39.5 -0.4
baz=72
C13A **Hot Springs** 72.29 44 ⇑P P 17 42 40.7 +0.1
baz=72
BMO **Blue Mountains** 72.31 47 *eP* P 17 42 41.5 +0.8
comp=Z,80nm,2.2s,mb5.3
F11A **Grangeville** 72.40 46 ⇓P P 17 42 41.1 -0.2
baz=72,SNR=7.9
JTMT **Jette** 72.41 43 *eP* P 17 42 41.9 +0.6
J08A **Circle Bar Ran** 72.43 49 ⇑P P 17 42 41.0 -0.4
baz=72
YBMT **Yellow Bay** 72.50 43 *eP* P 17 42 42.2 +0.4
I09A **Lost Marbles R** 72.53 48 ⇓P P 17 42 42.2 +0.1
baz=72
A15A **Johnson Ranch,** 72.55 42 ⇑P P 17 42 41.7 -0.4
baz=72
D13A **Huson** 72.69 44 ⇓P P 17 42 42.5 -0.4
baz=72,SNR=6.0
SWMT **Swartz Lake** 72.71 43 *eP* P 17 42 43.9 +0.9
WVOR **Wild Horse Val** 72.84 50 *eP* P 17 42 42.3 -1.6
WVOR pmax pmax
comp=Z,28nm,1.4s,mb5.0
WVOR **Wild Horse Val** 72.84 50 *eP* P 17 42 42.3 -1.6
comp=Z,28nm,1.4s,mb5.0
J09A **Fry Pan Ranch,** 72.87 49 ⇑P P 17 42 44.3 +0.2
baz=73
F12A **Elk City** 73.00 45 ⇑P P 17 42 44.6 -0.2
baz=73,SNR=10
B15A **Bradely Ranch,** 73.03 42 ⇑P P 17 42 44.2 -0.8
baz=73,SNR=12
MSO **Missoula** 73.13 44 *eP* P 17 42 46.1 +0.5
comp=Z,19nm,1.5s,mb4.8
SLMT **Seeley Lake** 73.14 43 *eP* P 17 42 45.8 +0.1
H11A **Donnelly** 73.15 47 ⇑P P 17 42 44.8 -0.9
baz=73,SNR=7.2
BEKR **Beckwourth** 73.16 53 ⇓P P 17 42 45.8 -0.1
baz=73
A16A **West Butte Ran** 73.18 41 ⇓P P 17 42 45.5 -0.3
baz=73
IDID **Didziasalis** 73.22 327 *eP* P 17 42 46.1 +0.2
D14A **Greenough** 73.23 44 ⇑P P 17 42 45.6 -0.5
baz=73,SNR=6.5
MICGM **Minsk** 73.23 326 *e* P 17 42 44.0 -2.0
MNK **Minsk** 73.25 326 *eP* P 17 42 44.0 -2.1
ISAL **Salakas** 73.32 328 *eP* P 17 42 46.5 0.0
C15A **Salmond Ranch,** 73.32 43 ⇓P P 17 42 46.0 -0.7
baz=73,SNR=9.7
B16A **M & M Farms, S** 73.44 42 ⇑P P 17 42 47.1 -0.3
baz=73
NACGM **Naroch** 73.47 327 *e* P 17 42 45.0 -2.4
CHMT **Chamberlain Mo** 73.47 44 *eP* P 17 42 48.2 +0.6
F13A **Darby** 73.51 45 ⇓P P 17 42 47.1 -0.7
baz=73,SNR=6.4
A17A **Triple J Farms** 73.66 41 ⇑P P 17 42 48.1 -0.5
baz=74
K10A **MacKenzie Ranc** 73.73 49 ⇓P P 17 42 49.0 -0.2
baz=74
C16A **Fuhringer Ranc** 73.78 42 ⇑P P 17 42 49.4 +0.1
baz=74
PAHR **Pah Rah Range** 73.88 52 *eP* P 17 42 52.1 +2.0
comp=Z,24nm,1.2s,mb5.0
H12A **Diamond D Ranc** 73.92 46 ⇑P P 17 42 49.7 -0.6
baz=74
MFID **Camas Ranch** 73.99 48 ⇓P P 17 42 50.0 -0.7
baz=74
B17A **L&G Farms, Che** 74.00 41 ⇑P P 17 42 49.8 -0.8
baz=74,SNR=6.5
E15A **Deer Lodge** 74.09 44 ⇓P P 17 42 50.6 -0.7
baz=74
A18A **Metzger Ranch,** 74.12 41 ⇓P P 17 42 51.1 -0.3
baz=74
CMB **Columbia Colle** 74.16 54 *eP* P 17 42 52.9 +1.1
CMB pmax pmax
comp=Z,78nm,1.8s,mb5.3
CMB **Columbia Colle** 74.16 54 *eP* P 17 42 52.9 +1.2
comp=Z,78nm,1.8s,mb5.3
I12A **Atlanta** 74.19 47 ⇑P P 17 42 51.3 -0.6
baz=74,SNR=9.0
K11A **Parker Ranch,** 74.24 48 ⇑P P 17 42 51.3 -0.8
baz=74
FFC **Flin Flon** 74.24 33 *i* P P 17 42 51.6 -0.3
FFC **Flin Flon** 74.24 33 *eP* P 17 42 51.0 -0.9
comp=Z,15nm,1.0s,mb4.9
H13A **Challis** 74.26 46 ⇓P P 17 42 51.9 -0.3
baz=74,SNR=9.2
D16A **Dana Ranch, Ca** 74.34 43 ⇓P P 17 42 52.0 -0.7
baz=74,SNR=9.8
L10A **Juniper Basin** 74.37 49 ⇑P P 17 42 52.6 -0.3
baz=74
HRY **Holter Researc** 74.38 43 *eP* P 17 42 53.8 +0.9
C17A **Wharram Farm,** 74.41 42 ⇑P P 17 42 52.6 -0.4
baz=74
B18A **Beardsley Farm** 74.48 41 ⇓P P 17 42 52.8 -0.7
baz=74,SNR=5.3
F15A **Butte** 74.52 44 ⇑P P 17 42 53.4 -0.3
baz=74,SNR=13
J12A **Stokes Ranch,** 74.52 48 ⇓P P 17 42 53.7 -0.1
baz=74
LRM **Limekiln Ridge** 74.56 44 *eP* P 17 42 54.3 +0.4
E16A **East Helena** 74.57 43 ⇑P P 17 42 54.2 +0.2
baz=74,SNR=5.9
FCC **Fort Churchill** 74.59 27 *eP* P 17 42 53.3 -0.6
comp=Z,1.4nm,1.4s
M10A **I.L. Ranch, Tu** 74.64 50 ⇑P P 17 42 54.5 -0.1
baz=74,SNR=6.5
EGMT **Eagleton** 74.71 41 *eP* P 17 42 55.7 +0.9
comp=Z,99nm,1.8s,mb5.4
I13A **Wildhorse Cree** 74.72 47 ⇓P P 17 42 54.5 -0.4
baz=75
D17A **Six Diamond Ra** 74.74 42 ⇓P P 17 42 54.4 -0.5
baz=75
H14A **Leadore** 74.74 46 ⇓P P 17 42 54.6 -0.4
baz=75
HLID **Hailey** 74.75 47 *eP* P 17 42 56.4 +1.3
comp=Z,63nm,2.1s,mb5.2
L11A **Cat Creek Ranc** 74.75 49 ⇓P P 17 42 55.1 -0.1
baz=75,SNR=8.6
MCMT **McKenzie Canyo** 74.92 45 P P 17 42 57.7 +1.7
comp=Z,2.2nm,0.9s,mb4.1
NB2 **NORSAR Subarra** 74.96 337 P P 17 42 55.8 -0.2
comp=Z,25nm,0.9s,mb5.1,baz=40,slow=5.9
NOA **NORSAR Array B** 74.96 337 P P 17 42 55.9 -0.1
comp=Z,15nm,0.8s,mb5.0,baz=39,slow=5.7,SNR=32
K12A **Draper Farm, C** 75.00 48 ⇓P P 17 42 56.2 -0.3
baz=75
AKASG **Malin Array Be** 75.01 323 P P 17 42 56.2 -0.3
comp=Z,12nm,0.6s,mb5.0,baz=46,slow=5.9,SNR=30
AKASG **Malin Array Be** 75.01 323 P P 17 42 56.2 -0.3
KIEV **Kiev** 75.03 323 *eP* P 17 42 55.5 -1.1
F16A **Kennard Place,** 75.04 44 ⇑P P 17 42 56.6 -0.2
baz=75
E17A **Martinsdale** 75.06 43 ⇑P P 17 42 56.8 -0.1
baz=75
BOZ **Bozeman (W)** 75.12 44 *eP* P 17 42 57.4 +0.2
BOZ pmax pmax
comp=Z,59nm,1.8s,mb5.2
BOZ **Bozeman (W)** 75.12 44 *eP* P 17 42 57.4 +0.2
comp=Z,58nm,1.8s,mb5.2
M11A **Holland Ranch,** 75.16 49 ⇑P P 17 42 57.9 +0.4
baz=75,SNR=6.0
NAO01 **NORSAR Array S** 75.21 337 *eP* P 17 42 57.6 +0.2
G16A **Moss Hill, Enn** 75.28 44 ⇑P P 17 42 57.4 -0.7
baz=75
NVAR **Mina Array Bea** 75.29 53 P P 17 42 59.3 +1.0
comp=Z,3.1nm,0.6s,mb4.4,baz=292,slow=6.2,SNR=6.4
O10A **Cortez Mining,** 75.37 51 ⇓P P 17 42 58.4 -0.3
baz=75
J14A **Carey** 75.42 47 ⇑P P 17 42 58.8 -0.2
baz=75
F17A **Fitzpatrick Pl** 75.51 43 ⇑P P 17 42 59.1 -0.3
baz=75,SNR=5.5
E18A **Harlowton** 75.52 43 ⇑P P 17 42 59.4 -0.1
baz=75,SNR=8.0
SUW **Suwalki** 75.63 328 *eP* P 17 43 01.3 +1.3
SUW pmax pmax
comp=Z,46nm,1.1s,mb5.3
SUW **Suwalki** 75.63 328 *eP* P 17 43 01.3 +1.3
comp=Z,46nm,1.1s,mb5.3
M12A **Wells** 75.70 49 ⇑P P 17 43 01.2 +0.5
baz=76,SNR=13
QLMT **Earthquake Lak** 75.73 45 *eP* P 17 43 01.4 +0.7
G17A **Pierce Place,** 75.82 44 ⇑P P 17 43 01.4 +0.2
baz=76
ELK **Elko** 75.89 50 P P 17 43 03.4 +1.7
H16A **Russell Place,** 75.91 45 ⇑P P 17 43 02.0 +0.3
baz=76,SNR=7.7
N12A **Clover Valley,** 75.95 50 *eP* P 17 43 03.2 +1.2
comp=Z,108nm,1.9s,mb5.5
O11A **Cowboy Ranch,** 75.99 50 ⇑P P 17 43 02.2 -0.1
baz=76
F18A **Big Timber** 76.03 43 ⇓P P 17 43 02.3 -0.1
baz=76,SNR=7.2
YMR **Madison River** 76.09 45 *eP* P 17 43 04.2 +1.4
comp=Z,13nm,0.4s,mb5.2
GCMT **Greycliff** 76.13 43 *eP* P 17 43 03.3 +0.3
comp=Z,19nm,1.2s,mb4.9
M13A **Montello** 76.19 49 ⇑P P 17 43 03.8 +0.4
baz=76
M13A **Montello** 76.19 49 *eP* P 17 43 04.4 +1.0
comp=Z,7.7nm,0.8s,mb4.7
MIB **Mutribah** 76.20 297 *eP* P 17 43 01.8 -1.9
MIB AMb AMB 17 43 07.5
comp=Z,31nm,1.1s,mb5.1
Q10A **Clear Creek Ra** 76.28 52 ⇑P P 17 43 04.0 0.0
baz=76
YFT **Old Faithful** 76.29 45 *eP* P 17 43 06.3 +2.4
comp=Z,107nm,1.9s,mb5.5
KBD **Kabd** 76.29 296 *eP* P 17 43 02.8 -1.4
KBD AMb AMB 17 43 27.9

comp=Z,28nm,1.1s,mb5.1
PKM Peak Mountain 76.29 57 ⇑P P 17 43 04.3 +0.2
baz=76
L14A Malta 76.35 48 ⇑P P 17 43 04.5 +0.2
baz=76
QRN Al-Qurain 76.37 296 eP P 17 43 03.1 -1.6
QRN AMb AMB 17 43 07.9
comp=Z,72nm,1.7s,mb5.3
H17A Grant Village 76.47 45 ⇑P P 17 43 06.1 +1.2
baz=76,SNR=7.3
G18A Lazy EL Ranch, 76.48 43 ⇑P P 17 43 05.0 0.0
baz=76
O12A Currie 76.48 50 ⇓P P 17 43 05.0 -0.1
baz=76,SNR=12
RDF Al-Radifah 76.54 296 eP P 17 43 04.2 -1.4
RDF AMb AMB 17 43 24.8
comp=Z,67nm,1.1s,mb5.5
IMW Indian Meadow 76.57 45 eP P 17 43 06.8 +1.2
comp=Z,23nm,1.2s,mb5.0
M14A Sheep Mountain 76.60 48 ⇓P P 17 43 06.0 +0.3
baz=76
SFJD Kangerlussuaq 76.62 5 eP P 17 43 05.2 -0.2
SFJD pmax pmax
comp=Z,12nm,1.1s,mb4.7
SFJD Kangerlussuaq 76.62 5 i P P 17 43 05.2 -0.2
comp=Z,12nm,1.1s,mb4.7
S10A Tonopah Range, 76.68 53 ⇓P P 17 43 06.2 -0.1
baz=76,SNR=9.0
RRI2 Red Ridge 76.69 46 eP P 17 43 07.4 +1.2
comp=Z,186nm,2.5s,mb5.6
RLMT Red Lodge 76.76 43 eP P 17 43 06.2 -0.3
comp=Z,107nm,2.1s,mb5.4
I17A Pilgrim Ck. 76.77 45 ⇓P P 17 43 07.0 +0.4
baz=77
HVU Hansel Valley 76.78 48 eP P 17 43 08.0 +1.3
HVU pmax pmax
comp=Z,83nm,2.0s,mb5.3
HVU Hansel Valley 76.78 48 eP P 17 43 08.0 +1.3
comp=Z,83nm,2.0s,mb5.3
TPAW Teton Pass 76.81 46 eP P 17 43 08.3 +1.4
comp=Z,25nm,1.3s,mb5.0
K16A Soda Springs 76.84 46 ⇑P P 17 43 07.1 0.0
baz=77
P12A McGill 76.84 51 ⇑P P 17 43 06.9 -0.2
baz=77,SNR=7.0
REDW Red Top Meadow 76.95 46 eP P 17 43 09.2 +1.6
comp=Z,31nm,1.4s,mb5.0
R11A Troy Canyon, C 77.08 52 ⇓P P 17 43 08.4 -0.1
baz=77,SNR=12
Q12A Willow Creek R 77.15 51 ⇓P P 17 43 08.5 -0.3
baz=77
MPMC Manual Prospec 77.18 55 ⇑P P 17 43 08.9 -0.2
baz=77
FURC Furnace Creek, 77.36 54 ⇑P P 17 43 10.5 +0.4
baz=77
MALT Malatya 77.39 308 ⇑P P 17 43 11.9 +1.7
MALT Malatya 77.39 308 ⇑i P P 17 43 11.9 +1.7
P13A Bates Ranch, G 77.41 50 ⇑P P 17 43 10.1 -0.2
baz=77
J18A Kendall Valley 77.52 45 ⇓P P 17 43 10.9 0.0
baz=77,SNR=7.6
KIS Kishinev 77.59 320 eP P 17 43 08.0 -3.2
HWUT Hardware Ranch 77.60 47 eP P 17 43 12.0 +0.6
comp=Z,34nm,1.3s,mb5.1
Q13A Wheeler Ranch, 77.71 51 ⇓P P 17 43 12.0 0.0
baz=78
DUG Dugway 77.71 49 eP P 17 43 12.0 0.0
R12A Pony Springs, 77.71 51 ⇑P P 17 43 11.7 -0.4
baz=78,SNR=6.1
P14A Drum Mountains 77.92 50 ⇑P P 17 43 12.9 -0.2
baz=78,SNR=8.5
T11A Corn Creek, Al 77.97 53 ⇑P P 17 43 13.1 -0.4
baz=78
BW06 Boulder Array 78.06 45 eP P 17 43 14.4 +0.5
comp=Z,65nm,2.1s,mb5.2
PDAR Pinedale Array 78.06 45 P P 17 43 13.4 -0.5
comp=Z,2.6nm,0.5s,mb4.4,baz=300,slow=0.6,SNR=24
GSC Goldstone 78.08 55 eP P 17 43 13.7 -0.4
GSC pmax pmax
comp=Z,12nm,1.0s,mb4.8
GSC Goldstone 78.08 55 eP P 17 43 13.7 -0.5
comp=Z,12nm,1.0s,mb4.8
LVV L'vov 78.10 324 eP P 17 43 13.3 -0.7
Q14A Sevier Lake (B 78.15 50 ⇑P P 17 43 14.4 -0.1
baz=78,SNR=12
BSD Bornholm Skovb 78.20 332 eP P 17 43 13.2 -1.2
BSD pmax pmax
comp=Z,13nm,0.9s,mb4.9
BSD Bornholm Skovb 78.20 332 i P P 17 43 13.2 -1.2
comp=Z,13nm,0.9s,mb4.9
R13A O'Grain Ranch, 78.20 51 ⇓P P 17 43 14.4 -0.4
baz=78
M17A Scullys Gap (B 78.22 47 ⇓P P 17 43 14.4 -0.4
baz=78
CTKT Corum 78.25 312 i P P 17 43 15.9 +0.9
NLU North Lily Min 78.30 49 eP P 17 43 17.3 +2.0
comp=Z,14nm,0.9s,mb4.9
L18A Fontenelle, Gr 78.31 46 ⇑P P 17 43 15.0 -0.2
baz=78
P15A Leamington 78.41 49 ⇑P P 17 43 15.9 0.0
baz=78
K19A Absolon Red Bu 78.43 45 ⇓P P 17 43 15.6 -0.4
baz=78
N17A Moffit Pass 78.45 48 ⇑P P 17 43 15.9 -0.1
baz=78
O16A Springville 78.50 48 ⇓P P 17 43 16.2 -0.1
baz=78
GZT Gaziantep 78.51 308 i P P 17 43 17.8 +1.3
DAU Daniels Canyon 78.52 48 eP P 17 43 17.1 +0.6
BALT Daday 78.52 313 i P P 17 43 18.1 +1.6
L19A Farson 78.59 46 ⇓P P 17 43 16.9 0.0
baz=78
KWP Kalwaria Pacla 78.86 325 eP P 17 43 18.9 +0.8
KWP Kalwaria Pacla 78.86 325 ⇓i P P 17 43 19.0 +0.9
CCUT Cedar City 78.97 51 eP P 17 43 20.4 +1.4
comp=Z,41nm,1.7s,mb5.1
BURAR Bucovina Array 79.02 322 ⇓P P 17 43 19.8 +0.7
BURAR Bucovina Array 79.02 322 ⇓i P P 17 43 19.8 +0.7
V12A Nelson 79.11 54 ⇑P P 17 43 20.2 +0.4
baz=79
N18A Larsen Ranch, 79.11 47 ⇓P P 17 43 19.7 0.0
baz=79
MSU Marysvale 79.12 50 eP P 17 43 21.7 +1.9
GMRC Granite Mounta 79.14 55 ⇑P P 17 43 20.1 +0.1
baz=79
MUD Monsted U'grnd 79.22 335 eP P 17 43 19.9 -0.1
MUD Monsted U'grnd 79.22 335 i P P 17 43 19.9 -0.1
TMUT Trail Mountain 79.24 49 eP P 17 43 20.4 -0.1
comp=Z,6.6nm,0.6s,mb4.7
U13A Pakoon Wash 79.27 53 ⇑P P 17 43 20.4 -0.2
baz=79
PFO Pinyon Flat Ob 79.31 56 ⇓P P 17 43 21.2 +0.2
baz=79
P17A Butcher Ranch, 79.41 49 ⇑P P 17 43 21.1 -0.3
baz=79
VRI Vrincioaia 79.43 320 ⇑P P 17 43 22.3 +1.0
VRI Vrincioaia 79.43 320 ⇑i P P 17 43 22.3 +1.0
T14A Hurricane 79.44 52 ⇑P P 17 43 21.7 +0.1
baz=79
N19A John Jarvie Ra 79.46 47 ⇑P P 17 43 21.2 -0.4
baz=79
Q16A Castle Valley 79.49 49 ⇓P P 17 43 22.3 +0.5
baz=79
BR131 Keskin Array S 79.50 312 eP P 17 43 22.2 +0.4
BRTR Keskin Array B 79.50 312 P P 17 43 22.1 +0.3
comp=Z,9.1nm,0.9s,mb4.7,baz=106,slow=3.4,SNR=19
S15A Panguitch 79.52 51 ⇓P P 17 43 21.6 -0.4
baz=79
KOLS Kolonicke sedl 79.55 324 eP P 17 43 23.4 +1.5
KOLS Kolonicke sedl 79.55 324 eP P 17 43 23.4 +1.5
V13A Grand Canyon W 79.59 53 ⇑P P 17 43 22.4 0.0
baz=79
M20A Sweetwater, Wa 79.66 46 ⇓P P 17 43 22.7 0.0
baz=80
STHS Stebnicka Huta 79.69 325 eP P 17 43 23.7 +1.0
STHS e 17 43 26.9
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
STHS Stebnicka Huta 79.69 325 eP P 17 43 23.7 +1.0
comp=Z,6.7nm,0.8s,mb4.6
STHS e 17 43 26.9
STHS Stebnicka Huta 79.69 325 eP P 17 43 23.7 +1.0
STHS e 17 43 26.9
R16A Teasdale 79.69 50 ⇓P P 17 43 22.8 -0.1
baz=80,SNR=7.9
UZH Uzhgorod 79.75 324 eP P 17 43 22.7 -0.3
UZH e 17 43 41.3

MONP Monument Peak 79.76 57 ⇑P P 17 43 24.1 +0.7
baz=80
SRU San Rafael 79.77 49 eP P 17 43 24.0 +0.7
SRU pmax pmax
comp=Z,19nm,0.9s,mb5.0
SRU San Rafael 79.77 49 eP P 17 43 24.0 +0.6
comp=Z,19nm,0.9s,mb5.0
U14A Mt Trumbull 79.77 52 ⇑P P 17 43 23.6 +0.2
baz=80
L21A Rawlins 79.83 45 ⇑P P 17 43 23.9 +0.4
baz=80
IRM Iron Mountain 79.85 55 ⇓P P 17 43 23.9 0.0
baz=80
O19A Miners Draw (B 79.86 47 ⇑P P 17 43 24.2 +0.4
baz=80
SGKT Sivrigoynuk 79.91 313 i P P 17 43 24.5 +0.4
T15A Red Dirt Ranch 79.91 51 ⇑P P 17 43 24.5 +0.4
baz=80
Q18A Rafter H Ranch 80.01 49 ⇑P P 17 43 24.5 -0.1
baz=80
ULM Lac du Bonnet 80.03 33 P P 17 43 23.9 -0.6
comp=Z,4.3nm,0.8s,mb4.5,baz=330,slow=7.8,SNR=6.5
N20A Spence Gulch, 80.03 46 ⇓P P 17 43 24.7 0.0
baz=80,SNR=10
M21A Separation Pea 80.06 45 ⇑P P 17 43 24.8 0.0
baz=80
R17A Hanksville Air 80.08 49 ⇓P P 17 43 24.8 -0.3
baz=80,SNR=5.7
MLR Muntele Rosu 80.09 320 ⇑P P 17 43 25.4 +0.5
MLR Muntele Rosu 80.09 320 ⇑i P P 17 43 25.4 +0.5
RWWY Rawlins 80.09 45 P P 17 43 25.1 +0.1
comp=Z,14nm,1.0s,mb4.8
DVTC Desert V Tower 80.11 57 ⇓P P 17 43 25.6 +0.2
baz=80
W13A Hualapai Mount 80.11 54 ⇑P P 17 43 25.4 +0.1
baz=80
RSSD Black Hills 80.27 42 eP P 17 43 25.3 -0.6
RSSD pmax pmax
comp=Z,25nm,1.6s,mb4.9
RSSD Black Hills 80.27 42 eP P 17 43 25.3 -0.6
comp=Z,25nm,1.6s,mb4.9
V14A Boquillas Ranc 80.29 53 ⇓P P 17 43 26.2 0.0
baz=80,SNR=8.0
U15A North Rim 80.33 52 ⇑P P 17 43 26.4 0.0
baz=80
P19A Cripple Cowboy 80.37 48 ⇓P P 17 43 26.2 -0.4
baz=80,SNR=9.8
PDMCI Parker Dam,Lak 80.43 54 ⇓P P 17 43 26.7 -0.3
baz=80
X13A Yucca 80.46 54 ⇑P P 17 43 26.8 -0.4
baz=80
O20A White River Ci 80.49 47 ⇑P P 17 43 27.2 0.0
baz=80
N21A Black Mountain 80.51 46 ⇓P P 17 43 27.4 +0.1
baz=80
S17A Black Ridge (B 80.52 50 ⇑P P 17 43 27.4 0.0
baz=80
W14A Seligman 80.57 53 ⇓P P 17 43 27.6 -0.1
baz=80
VOIR 80.59 320 ⇑P P 17 43 28.9 +1.3
VOIR 80.59 320 ⇑i P P 17 43 28.9 +1.3
R18A Canyonlands Na 80.61 49 ⇓P P 17 43 28.0 +0.1
baz=80
M22A Cedar Creek Ra 80.63 45 ⇓P P 17 43 27.8 -0.1
baz=80
KECS Kecovo 80.70 325 eP P 17 43 28.6 +0.4
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 80.70 325 eP P 17 43 28.6 +0.4
comp=Z,2.5nm,1.0s,mb4.1
KECS Kecovo 80.70 325 eP P 17 43 28.6 +0.4
GLA Glamis 80.73 56 ⇓P P 17 43 28.2 -0.4
baz=81
GLA Glamis 80.73 56 eP P 17 43 28.7 +0.1
GLA pmax pmax
comp=Z,13nm,0.3s,mb5.3
GLA Glamis 80.73 56 eP P 17 43 28.7 +0.1
comp=Z,13nm,0.3s,mb5.3
V15A Kaibab Nationa 80.78 52 ⇑P P 17 43 28.7 -0.1
baz=81
BSEG Bad Segeberg 80.82 333 eP P 17 43 28.9 +0.2
KSP Ksiaz 80.85 328 eP P 17 43 28.3 -0.6
S18A Hurst Farm, Bl 80.98 50 ⇑P P 17 43 29.4 -0.5
baz=81,SNR=7.2
R19A Curley Farm, L 81.05 49 ⇓P P 17 43 29.8 -0.4
baz=81
MORC Moravsky Berou 81.10 327 ⇓P P 17 43 31.1 +0.8
MORC Moravsky Berou 81.10 327 ⇓i P P 17 43 31.1 +0.8
N22A Wattenberg Ran 81.10 45 ⇑P P 17 43 30.3 -0.2
baz=81
W15A Williams 81.11 53 ⇓P P 17 43 30.6 0.0
baz=81
MEST Erdemli 81.14 309 i P P 17 43 31.0 +0.2
X14A Yava 81.15 54 ⇑P P 17 43 30.6 -0.3
baz=81
Q20A Ridgley Place, 81.21 48 ⇑P P 17 43 30.7 -0.4
baz=81
UPC Upice 81.22 328 eP P 17 43 31.2 +0.3
UPC epP pP 17 43 43.7 +3.3
U16A Tuba City 81.24 51 ⇑P P 17 43 31.1 -0.2
baz=81,SNR=6.8
U17A Shonto 81.25 51 ⇓P P 17 43 31.1 -0.3
baz=81
PSZ Piszkesteto 81.38 325 ⇓P P 17 43 31.7 -0.1
PSZ Piszkesteto 81.38 325 ⇓i P P 17 43 31.7 -0.1
Y14A Wickenburg 81.40 54 ⇑P P 17 43 31.9 -0.3
baz=81
T18A Mexican Hat 81.40 50 ⇑P P 17 43 31.6 -0.5
baz=81
Z13A Yuma Proving G 81.42 55 ⇓P P 17 43 32.0 -0.3
baz=81
VYHS Vyhne 81.46 326 eP P 17 43 32.4 +0.2
VYHS e 17 43 45.2
VYHS Vyhne 81.46 326 eP P 17 43 32.4 +0.2
VYHS e 17 43 45.2
VYHS e 17 43 51.0
VYHS Vyhne 81.46 326 eP P 17 43 32.4 +0.2
VYHS epP pP 17 43 45.2 +3.5
VYHS esP sP 17 43 51.0 +5.9
S19A Harvey Farm, M 81.47 49 ⇓P P 17 43 32.2 -0.3
baz=81
X15A Humboldt 81.56 53 ⇑P P 17 43 33.1 +0.1
baz=81
R20A Redvale 81.65 48 ⇑P P 17 43 33.1 -0.3
baz=82,SNR=5.4
Q21A Lamborn Mesa, 81.72 48 ⇓P P 17 43 34.0 +0.2
baz=82
V17A Tonalea, Kykot 81.78 52 ⇓P P 17 43 33.6 -0.5
baz=82,SNR=9.1
BRG Berggiesshubel 81.80 330 eP P 17 43 34.1 +0.1
BRG Berggiesshubel 81.80 330 eP P 17 43 33.9 0.0
comp=Z,14nm,1.3s,mb4.7
BRG Berggiesshubel 81.80 330 eP P 17 43 33.9 -0.1
BRG pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
Y15A Casa Rosa Ranc 81.83 54 ⇓P P 17 43 34.0 -0.4
baz=82
CLL Collm 81.85 330 eP P 17 43 34.0 -0.2
CLL Collm 81.85 330 i P P 17 43 33.9 -0.3
CLL i 17 43 48.9
CLL Collm 81.85 330 i P P 17 43 33.9 -0.3
CLL i 17 43 48.9
CLL i 17 43 54.8
CLL Collm 81.85 330 i P P 17 43 33.9 -0.3
CLL i sP sP 17 43 48.9 +1.7
CLL i (sPcP) 17 43 54.8
U18A Rough Rock, Ch 81.86 51 ⇓P P 17 43 34.3 -0.3
baz=82,SNR=5.4
VRAC Vranov 81.86 327 ⇑P P 17 43 32.6 -1.7
VRAC Vranov 81.86 327 ⇑i P P 17 43 32.6 -1.7
ULDT Uludag 81.89 314 i P P 17 43 34.5 -0.1
R21A Cimarron 82.03 48 ⇑P P 17 43 35.6 +0.2
baz=82,SNR=7.4
Q22A Crested Butte, 82.10 47 ⇓P P 17 43 35.8 +0.1
baz=82
X16A Lo Mia Camp, P 82.12 53 ⇑P P 17 43 35.8 -0.2
baz=82
T19A Beclabito 82.12 50 ⇓P P 17 43 35.6 -0.3
baz=82
PRU Pruhonice 82.23 329 eP P 17 43 36.8 +0.6
PRU epP pP 17 43 49.6 +3.9
ISCO Idaho Springs 82.24 46 eP P 17 43 38.3 +1.8
ISCO pmax pmax
comp=Z,82nm,2.3s,mb5.2
ISCO Idaho Springs 82.24 46 eP P 17 43 38.3 +1.8
comp=Z,82nm,2.3s,mb5.2

S21A Coal Bank Pass 82.34 49 ⇑P P 17 43 37.2 +0.1
baz=82
TREC Trest 82.35 328 eP P 17 43 31.1 -5.8
U19A Dine' College, 82.35 50 ⇓P P 17 43 37.2 +0.1
baz=82,SNR=7.0
CLZ Clausthal 82.46 332 eP P 17 43 36.9 -0.5
R22A Saguache, Gunn 82.60 48 ⇑P P 17 43 38.8 +0.4
baz=82
115A Sonoran Desert 82.67 55 ⇓P P 17 43 38.7 -0.2
baz=82
TANN Tannenbergstha 82.76 330 eP P 17 43 38.1 -0.9
MOX Moxa 82.92 331 eP P 17 43 39.7 -0.1
MOX Moxa 82.92 331 eP P 17 43 39.6 -0.2
Y17A Roosevelt 82.96 53 ⇑P P 17 43 40.0 -0.3
baz=83
W19A Sanders 82.99 51 ⇑P P 17 43 40.7 +0.2
baz=83
V20A Brimhall 83.13 50 ⇓P P 17 43 41.5 +0.3
baz=83
CONA Conrad Observa 83.22 327 ⇑i P P 17 43 42.2 +0.8
comp=Z,11nm,1.2s,mb4.8
KHC Kasperske Hory 83.29 329 eP P 17 43 41.9 +0.2
KHC epP pP 17 43 54.2 +2.9
T22A Edith 83.30 49 ⇑P P 17 43 42.5 +0.4
baz=83
ROTZ Rotzenmuhle 83.36 330 eP P 17 43 42.2 +0.1
Y18A Canyon Day Jun 83.43 53 ⇑P P 17 43 43.1 +0.3
baz=83
GEC2 GERESS Array S 83.45 328 eP P 17 43 42.2 -0.4
GERES GERESS Array B 83.45 328 P P 17 43 42.4 -0.2
comp=Z,3.4nm,0.6s,mb4.5,baz=36,slow=5.5,SNR=25
X19A St. Johns 83.49 52 ⇑P P 17 43 43.3 +0.2
baz=83
WET Wettzell 83.57 329 eP P 17 43 43.1 -0.1
SDCO Great Sand Dun 83.66 47 eP P 17 43 44.6 +0.7
comp=Z,11nm,1.2s,mb4.9
117A Oracle 83.73 54 ⇑P P 17 43 44.2 -0.2
baz=84
GRA1 Grafenberg Arr 83.82 330 eP P 17 43 43.9 -0.6
GRF Grafenberg Arr 83.82 330 eP P 17 43 43.9 -0.6
TUC Tucson 83.87 54 eP P 17 43 44.7 -0.3
TUC pmax pmax
comp=Z,71nm,1.9s,mb5.5
TUC Tucson 83.87 54 eP P 17 43 44.7 -0.3
comp=Z,71nm,1.9s,mb5.5
X20A Quemado 83.92 51 ⇓P P 17 43 45.3 +0.1
baz=84
217A Green Valley 84.18 55 ⇓P P 17 43 46.4 -0.3
baz=84
118A Homack Ranch, 84.19 54 ⇑P P 17 43 46.5 -0.2
baz=84
ECSD EROS Data Cent 84.39 38 eP P 17 43 46.5 -1.0
comp=Z,59nm,2.1s,mb5.3
Y20A Horse Springs, 84.40 52 ⇓P P 17 43 47.9 +0.2
baz=84,SNR=6.4
X21A Alamocita Cree 84.43 51 ⇑P P 17 43 47.8 -0.1
baz=84
SOKA Soboth 84.53 326 ⇓i P P 17 43 48.1 0.0
comp=Z,11nm,1.0s,mb4.9
119A Ashpeak Ranch, 84.54 53 ⇑P P 17 43 48.0 -0.4
baz=84
218A Dragoon 84.56 54 ⇑P P 17 43 48.8 +0.2
baz=84
VAY Valandovo 84.74 319 eP P 17 43 49.1 -0.2
Z20A Nine Sixteen R 84.78 52 ⇑P P 17 43 49.7 0.0
baz=85,SNR=11
Y21A Point of Rocks 84.78 51 ⇑P P 17 43 49.8 +0.2
baz=85
SKO Skopje 84.88 320 eP P 17 43 51.2 +1.2
318A Bisbee 84.94 55 ⇑P P 17 43 49.9 -0.6
baz=85,SNR=6.6
W23A Werner Place, 84.98 50 ⇑P P 17 43 50.3 -0.3
baz=85
219A White Tail Can 85.06 54 ⇑P P 17 43 50.9 -0.2
baz=85,SNR=7.4
120A U Bar Ranch, L 85.12 53 ⇓P P 17 43 51.3 -0.1
baz=85
Z21A St. Cloud Mine 85.24 52 ⇓P P 17 43 51.8 -0.2
baz=85
Y22A Socorro 85.27 51 ⇑P P 17 43 52.0 -0.1
baz=85
BNM Barren Site 85.35 51 eP P 17 43 53.1 +0.6
comp=Z,7.7nm,1.1s,mb4.8
KRUS Krusevo 85.41 319 eP P 17 43 52.0 -0.6
319A Douglas 85.45 54 ⇓P P 17 43 53.1 0.0
baz=85
220A Playas Peak, P 85.60 53 ⇓P P 17 43 53.7 -0.1
baz=85
121A Cookes Peak, D 85.67 52 ⇓P P 17 43 54.3 +0.2
baz=86
Z22A Elephant Butte 85.72 51 ⇑P P 17 43 54.3 -0.1
baz=86
RETA Reutte 85.75 329 ⇑i P P 17 43 54.2 0.0
comp=Z,12nm,1.2s,mb5.0
OHR Ohrid 85.83 319 eP P 17 43 53.6 -1.2
GIVF Givet 85.92 334 eP P 17 43 54.3 -0.7
W25A X Bar L Ranch, 85.97 49 ⇑P P 17 43 55.2 -0.4
baz=86
SCHQ Schefferville 86.01 16 P P 17 43 55.1 -0.3
comp=Z,2.8nm,0.8s,mb4.6,baz=300,slow=4.5,SNR=4.6
BFO Black Forest 86.06 331 P P 17 43 55.0 -0.7
comp=Z,74nm,0.5s,mb6.2,SNR=5.5
BFO Black Forest 86.06 331 eP P 17 43 55.3 -0.4
BAIF Baives 86.17 334 eP P 17 43 56.1 -0.2
Y24A Capitan 86.24 50 ⇑P P 17 43 56.9 0.0
baz=86
DAVA Damuels 86.27 329 ⇑i P P 17 43 56.7 -0.1
comp=Z,7.7nm,0.9s,mb4.9
CDF Champ du Feu 86.40 331 eP P 17 43 56.8 -0.6
comp=Z,28nm,1.1s,mb5.1
CDF Champ du Feu 86.40 331 eP P 17 43 56.8 -0.6
CDF pmax pmax
comp=Z,14nm,1.1s,mb5.1
CDF Champ du Feu 86.40 331 eP P 17 43 56.8 -0.6
comp=Z,14nm,1.1s,mb5.1
HINF Hinteralfeld 87.05 331 eP P 17 43 59.4 -1.2
comp=Z,8.1nm,1.0s,mb4.6
HINF Hinteralfeld 87.05 331 eP P 17 43 59.4 -1.2
HINF pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
HINF Hinteralfeld 87.05 331 eP P 17 43 59.4 -1.2
comp=Z,4.1nm,1.0s,mb4.6
HAU Haudompre 87.09 332 eP P 17 44 00.1 -0.7
comp=Z,7.8nm,0.7s,mb4.8
HAU Haudompre 87.09 332 eP P 17 44 00.1 -0.7
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
HAU Haudompre 87.09 332 eP P 17 44 00.1 -0.7
comp=Z,3.9nm,0.7s,mb4.8
Z25A Roswell 87.11 50 ⇓P P 17 44 01.1 -0.1
baz=87
MEZF Maizieres J'vi 87.17 333 eP P 17 44 00.8 -0.4
224A Corundas Mount 87.41 52 ⇑P P 17 44 02.8 +0.1
baz=87
125A Gardner Draw, 87.57 51 ⇑P P 17 44 03.4 0.0
baz=87
Z26A Caprock 87.58 50 ⇑P P 17 44 03.8 +0.4
baz=87
Z27A Tatum 88.02 49 ⇓P P 17 44 05.4 -0.1
baz=88
226A Malaga, Loving 88.31 51 ⇓P P 17 44 07.0 0.0
baz=88
CABF La Chapelle 88.34 331 eP P 17 44 06.1 -0.7
comp=Z,7.8nm,0.9s,mb4.6
CABF La Chapelle 88.34 331 eP P 17 44 06.1 -0.7
CABF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
CABF La Chapelle 88.34 331 eP P 17 44 06.1 -0.7
comp=Z,3.9nm,0.9s,mb4.6
LOR Lormes 88.64 333 eP P 17 44 07.5 -0.7
FLN La Foliniere 88.88 336 eP P 17 44 09.0 -0.3
comp=Z,8.8nm,0.6s,mb4.9
FLN La Foliniere 88.88 336 eP P 17 44 09.0 -0.3
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
FLN La Foliniere 88.88 336 eP P 17 44 09.0 -0.3
comp=Z,4.4nm,0.6s,mb5.0
LDF La Druitiere 88.91 336 eP P 17 44 09.1 -0.3
comp=Z,26nm,1.1s,mb5.2
LDF La Druitiere 88.91 336 eP P 17 44 09.1 -0.3
LDF pmax pmax
comp=Z,13nm,1.1s,mb5.2
LDF La Druitiere 88.91 336 eP P 17 44 09.1 -0.3
comp=Z,13nm,1.1s,mb5.2
SSF Saint Saulge 88.94 333 eP P 17 44 09.1 -0.5
LPL La Plagne 88.98 330 eP P 17 44 10.0 +0.1
comp=Z,8.9nm,0.7s,mb4.9

IDC ***07*** *17:40:51.4±0.6, 36°.19N×141°.87E, h0km, mb4.4/22, mb1 4.5/26, mb1mx4.4/33, mbtmp4.4/26, ML4.1/4, MS4.7/1, Ms1 4.7/1, ms1mx3.7/41, Error ellipse: s-maj=15.1km s-min=13.0km az=122.0*

ISCJB ***07*** *17:40:52.7±1.0, 36°.23N±0°.03×141°.98E±0°.05, h24km±6km, mb4.4/55, MS4.6/2, Error ellipse: s-maj=6.3km s-min=5.5km az=11.0*

JMA ***07*** *17:40:54.2±0.2, 36°.27N×141°.89E, h68km, M4.1*

BJI ***07*** *17:40:54.4, 36°.27N×141°.58E, h18km, mB5.1/5, mb4.7/38, Ms5.1/12, Ms7 4.9/11*

MOS ***07*** *17:40:55.2±1.0, 36°.40N×141°.89E, h33km, mb4.8/24, Error ellipse: s-maj=10.9km s-min=6.3km az=116.3*

NEIC ***07*** *17:40:56.9±1.0, 36°.20N×141°.83E, h37km±8km, mb4.4/15, Error ellipse: s-maj=6.7km s-min=5.6km az=96.0*

ISC 07 17:40:54.2±1.4, 36°.24N±0°.03×141°.90E±0°.04, h18km±8km, h31km±3.6km:pP-P, n120, σ0°93/131, mb4.4/55, MS4.6/2, 4C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.00**	**238**	⇑P	**Pb**	**17 41 13.1**	**+0.3**
CHOJ				S	**Sb**	**17 41 26.5**	**+0.9**
JHO	**Hitachi**	**1.13**	**290**	P	**Pn**	**17 41 14.0**	**-1.1**
JHO				*e*S	**Sb**	**17 41 29.4**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.23**	**315**	P	**Pn**	**17 41 15.2**	**-1.3**
JFK	**Kawauchi**	**1.40**	**324**	⇑P	**Pn**	**17 41 18.0**	**-0.7**
JFK				S	**Sn**	**17 41 35.6**	**-1.0**
JFT	**Otama**	**1.79**	**316**	P	**Pn**	**17 41 24.7**	**+0.6**
MJAR	**Matsushiro Arr**	**2.99**	**277**	Pn	**Pn**	**17 41 41.4**	**+0.8**
	25nm,0.3s,baz=105,slow=9.0,SNR=33						
MAJO	**Matsushiro**	**2.99**	**277**	*e*P	**Pn**	**17 41 41.4**	**+0.8**
MAT	**Matsushiro**	**2.99**	**277**	P	**Pn**	**17 41 41.8**	**+1.2**
MAT				S	**Sn**	**17 42 19.3**	**+3.3**
JHJ	**Hachijo jima 2**	**3.56**	**210**	Pn	**Pn**	**17 41 47.1**	**-1.4**
	40nm,0.3s,baz=73,slow=20,SNR=4.5						
JHJ				Sn	**Sn**	**17 42 29.1**	**-1.1**
	79nm,0.3s,baz=40,slow=22,SNR=8.6						
JHJ				LR	LR	17 43 29.4	
	comp=Z,10μm,18.3s,baz=16,slow=45						
ASAJ	**Asahikawa**	**7.89**	**4**	P	**Pn**	**17 42 47.1**	**-0.8**
ASAJ						17 44 13.0	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.89**	**4**	Pn	**Pn**	**17 42 47.0**	**-0.8**
	comp=N,3.3nm,0.3s,baz=220,slow=7.8,SNR=18						
ASAJ				Sn	**Sn**	**17 44 13.0**	**-3.6**
	comp=N,1.4nm,0.3s,baz=18,slow=20,SNR=3.7						
CBIJ	**Chichi jima**	**9.12**	**178**	Pn	**Pn**	**17 43 03.3**	**-1.5**
	comp=N,5.7nm,0.3s,baz=279,slow=23,SNR=13						
CBIJ				Sn	**Sn**	**17 44 39.1**	**-7.8**
	comp=N,11nm,0.3s,baz=252,slow=20,SNR=4.0						
YSS	**Yuzh-Sakhalins**	**10.73**	**3**	*e*P	**Pn**	**17 43 26.4**	**-0.4**
KSRS	**Korea Array**	**11.27**	**280**	Pn	**Pn**	**17 43 38.0**	**+3.9**
	comp=N,0.3nm,0.3s,baz=95,slow=13,SNR=22						
MDJ	**Mudanjiang**	**12.56**	**316**	P	**Pn**	**17 43 52.1**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,5μm,13.8s						
CN2	**Changchun**	**14.68**	**306**	*e*P	**Pn**	**17 44 21.7**	**+1.0**
CN2				*es*P	sP	17 44 33.8	-0.7
CN2				*e*S	**Sn**	**17 47 03.2**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
JOW	**Kunigami**	**14.91**	**235**	Pn	**Pn**	**17 44 27.9**	**+3.8**
	comp=Z,0.6nm,0.3s,baz=68,slow=13,SNR=5.3						
KLR	**Kul'dur**	**14.95**	**333**	*e*P	**Pn**	**17 44 23.0**	**-1.4**
BJI	**Beijing**	**20.56**	**288**	P	**P**	**17 45 30.5**	**-1.2**
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**24.10**	**290**	*e*P	**P**	**17 46 08.8**	**+0.2**
HHC				pP		17 46 18.2	
HHC				sP	sP	17 46 22.1	+5.6
HHC				PP		17 46 43.0	
HHC				PcP	PcP	17 49 51.8	+2.3
HHC				S	**S**	**17 50 21.7**	**-3.6**
HHC				sS	sS	17 50 36.7	+2.2
HHC				SS		17 51 12.7	
HHC				ScP	ScP	17 53 26.3	-0.7
HHC				PcS	PcS	17 53 30.4	+1.3
HHC				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.0						
HHC				LR	LR		
	comp=N,2μm,13.1s,MS5.0						
HHC				LR	LR		
	comp=E,2μm,12.8s,MS5.0						
HHC				LR	LR		
	comp=Z,1μm,11.8s,MS4.6						
YAK	**Yakutsk**	**26.93**	**347**	*e*P	**P**	**17 46 31.9**	**-2.1**
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,41nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,30nm,1.5s						
YAK	**Yakutsk**	**26.93**	**347**	*e*P	**P**	**17 46 33.5**	**-0.5**
	comp=N,42nm,0.9s,mb5.0						
XAN	**Xi'an**	**26.99**	**275**	P	**P**	**17 46 33.9**	**-0.9**
XAN				pP	pP	17 46 43.1	+2.7
XAN				sP	sP	17 46 47.0	+4.3
XAN				S	**S**	**17 51 10.2**	**-1.1**
XAN				sS	sS	17 51 25.2	+4.6
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
SEY	**Seymchan**	**27.50**	**10**	*i* P	**P**	**17 46 40.7**	**+1.6**
ENH	**Enshi**	**27.67**	**267**	*e*P	**P**	**17 46 40.2**	**-0.7**
	comp=Z,33nm,0.8s,mb5.0						
ULN	**Ulaanbaatar**	**28.13**	**305**	*e*P	**P**	**17 46 45.4**	**+0.5**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**28.13**	**305**	*e*P	**P**	**17 46 45.4**	**+0.5**
	comp=Z,6.6nm,0.8s,mb4.3						
BOD	**Bodaibo**	**28.41**	**328**	*e*P	**P**	**17 46 46.3**	**-1.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
SONM	**Songino Array**	**28.56**	**305**	P	**P**	**17 46 49.2**	**+0.5**
	comp=Z,15nm,0.8s,mb4.7,baz=106,slow=7.1,SNR=42						
LZH	**Lanzhou**	**30.59**	**281**	*e*P	**P**	**17 47 08.5**	**+1.6**
LZH				pP	pP	17 47 19.0	+6.5
LZH				sP	sP	17 47 23.1	+8.3
LZH				PP	PP	17 48 08.2	-7.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
LZH				pmax	pmax		
	comp=Z,100nm,5.3s						
ZAK	**Zakamensk**	**31.07**	**309**	*e*P	**P**	**17 47 10.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
TLY	**Talaya**	**31.15**	**312**	*e*P	**P**	**17 47 12.1**	**+0.5**
TLY				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7						
TLY	**Talaya**	**31.15**	**312**	*e*P	**P**	**17 47 11.7**	**+0.1**
	comp=Z,12nm,1.0s,mb4.7						
GYA	**Guiyang**	**31.48**	**262**	P	**P**	**17 47 15.4**	**+0.6**
GYA				pP	pP	17 47 25.6	+5.1
GYA				sP	sP	17 47 30.2	+7.4
GYA				PP	PP	17 48 19.0	-7.0
GYA				S	**S**	**17 52 19.2**	**-2.9**
GYA				sS	sS	17 52 36.8	+5.4
GYA				ScP	ScP	17 53 47.4	-2.5
GYA				SS	SS	17 54 08.7	-28
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,16.0s,MS4.4						
GYA				LR	LR		
	comp=E,440nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,480nm,15.0s,MS4.3						
GTA	**Gaotai**	**33.18**	**288**	*e*P	**P**	**17 47 30.0**	**+0.4**
GTA				pP	pP	17 47 34.3	-0.9
GTA				sP	sP	17 47 37.8	+0.3
GTA				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
BILL	**Bilibino**	**34.68**	**16**	⇓*e*P	**P**	**17 47 42.3**	**0.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KMI	**Kunming**	**35.24**	**263**	P	**P**	**17 47 46.9**	**-0.7**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
TIXI	**Tiksi**	**36.13**	**353**	*e*P	**P**	**17 47 53.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CHTO	**Chiang Mai**	**41.48**	**257**	*e*P	**P**	**17 48 39.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
CHTO	**Chiang Mai**	**41.48**	**257**	*e*P	**P**	**17 48 39.7**	**-0.4**
	comp=Z,5.4nm,1.0s,mb4.1						
CM31	**Chiang Mai Arr**	**41.68**	**257**	*e*P	**P**	**17 48 41.8**	**0.0**
	comp=Z,1.9nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**41.68**	**257**	P	**P**	**17 48 42.0**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.0,baz=47,slow=5.5,SNR=24						
LSA	**Lhasa**	**42.68**	**276**	P	**P**	**17 48 51.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
LSA	**Lhasa**	**42.68**	**276**	*e*P	**P**	**17 48 51.5**	**+1.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**42.68**	**276**	*e*P	**P**	**17 48 51.5**	**+1.7**
	comp=Z,6.0nm,0.8s,mb4.4						
ZAA0	**Zalesovo Array**	**42.74**	**313**	*e*P	**P**	**17 48 49.7**	**-0.3**
ZALV	**Zalesovo Beam**	**42.74**	**313**	P	**P**	**17 48 50.2**	**+0.2**
	comp=Z,6.9nm,0.8s,mb4.4,baz=90,slow=7.4,SNR=24						
ZALV				PcP	PcP	17 50 41.0	-0.3
	comp=Z,2.6nm,0.8s,baz=101,slow=3.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**42.74**	**313**	P	**P**	**17 48 50.2**	**+0.2**
ZALV				PcP	PcP	17 50 41.0	-0.3
MK31	**Makanchi Array**	**44.87**	**303**	*e*P	**P**	**17 49 04.2**	**-3.1**
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**17 49 07.5**	**+0.2**
	comp=Z,9.4nm,0.8s,mb4.7,baz=96,slow=7.9,SNR=24						
KURK	**Kurchatov**	**46.73**	**309**	P	**P**	**17 49 22.2**	**+0.3**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
KURK	**Kurchatov**	**46.73**	**309**	P	**P**	**17 49 22.2**	**+0.3**
	comp=Z,10.0nm,0.7s,mb4.8,baz=84,slow=8.0,SNR=21						
KURK	**Kurchatov**	**46.73**	**309**	*e*P	**P**	**17 49 21.5**	**-0.4**
	comp=Z,12nm,0.8s,mb4.9						
KDAK	**Kodiak Island**	**47.44**	**41**	P	**P**	**17 49 27.6**	**+0.3**
	comp=Z,4.8nm,0.7s,mb4.6,baz=302,slow=9.5,SNR=3.7						
KSH	**Kashi**	**51.09**	**295**	*e*P	**P**	**17 49 59.5**	**+4.0**
KSH				*ep*P	pP	17 50 09.6	+8.3
KSH				*es*P	sP	17 50 13.2	+10
KSH				*e*PcP	PcP	17 51 14.1	+3.0
KSH				*e*PP	PP	17 51 57.2	+5.2
KSH				*e*ScP	ScP	17 55 06.5	0.0
KSH				*e*PcS	PcS	17 55 10.1	+1.4
KSH				S	**S**	**17 57 14.5**	**+2.3**
KSH				*es*S	sS	17 57 32.3	+10
KSH				*e*ScS	ScS	17 59 44.3	-0.9
KSH				*e*SS	SS	18 00 49.3	+2.1
KSH				pmax	pmax		
	comp=Z,9μm,15.3s						
AAK	**Ala-Archa**	**51.21**	**299**	P	**P**	**17 49 57.0**	**+0.6**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AAK	**Ala-Archa**	**51.21**	**299**	P	**P**	**17 49 57.0**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.4,baz=126,slow=6.8,SNR=9.7						
AAK	**Ala-Archa**	**51.21**	**299**	*e*P	**P**	**17 49 56.6**	**+0.3**
BVAR	**Borovoye Array**	**51.40**	**313**	P	**P**	**17 49 58.0**	**+0.4**
	comp=Z,4.6nm,0.9s,mb4.4,baz=61,slow=7.0,SNR=9.0						
BVAR				PcP	PcP	17 51 12.0	0.0
	comp=Z,1.2nm,0.6s,baz=96,slow=2.9,SNR=2.3						
BVAR	**Borovoye Array**	**51.40**	**313**	P	**P**	**17 49 58.0**	**+0.4**
BVAR				PcP	PcP	17 51 11.9	0.0
BRVK	**Borovoye**	**51.45**	**313**	*i* P	**P**	**17 49 58.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
BRVK	**Borovoye**	**51.45**	**313**	*e*P	**P**	**17 49 57.7**	**-0.3**
EGAK	**Eagle**	**52.41**	**32**	*e*P	**P**	**17 50 05.1**	**+0.2**
INK	**Inuvik**	**54.92**	**27**	P	**P**	**17 50 24.6**	**+1.3**
	comp=Z,2.6nm,0.6s,mb4.4,baz=314,slow=8.1,SNR=13						
SVE	**Sverdlovsk**	**56.00**	**319**	*e*P	**P**	**17 50 31.9**	**+0.7**
SVE				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
CTAO	**Charters Tower**	**56.17**	**175**	*e*P	**P**	**17 50 33.0**	**+0.3**
WRAB	**Tennant Creek**	**56.32**	**189**	*e*P	**P**	**17 50 33.4**	**-0.4**
WB2	**Warramunga Arr**	**56.33**	**189**	*e*P	**P**	**17 50 33.5**	**-0.3**
WRA	**Warramunga Arr**	**56.33**	**189**	P	**P**	**17 50 33.4**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=7.3,slow=7.4,SNR=12						
ARU	**Arti**	**57.22**	**319**	*d i* P	**P**	**17 50 38.9**	**-1.0**
ARU				S	**S**	**17 58 33.7**	**-0.7**
ARU				SS	SS	18 02 18.5	-4.5
ARU				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
ARU	**Arti**	**57.22**	**319**	*e*P	**P**	**17 50 39.8**	**-0.1**
	comp=Z,26nm,1.3s,mb5.1						
HYB	**Hyderabad**	**58.58**	**269**	*i* P	**P**	**17 50 51.0**	**+1.0**
ASAR	**Alice Springs**	**60.05**	**188**	P	**P**	**17 50 59.9**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=14,slow=8.4,SNR=10						
RES	**Resolute Bay**	**63.27**	**14**	P	**P**	**17 51 21.5**	**+0.4**
	comp=Z,3.6nm,0.8s,mb4.6,baz=317,slow=5.8,SNR=12						
YKA	**Yellowknife Ar**	**64.30**	**30**	P	**P**	**17 51 28.2**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=302,slow=6.7,SNR=18						
YKA	**Yellowknife Ar**	**64.30**	**30**	P	**P**	**17 51 28.2**	**+0.2**
KEV	**Kevo**	**64.32**	**339**	*e*P	**P**	**17 51 26.5**	**-1.6**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KEV	**Kevo**	**64.32**	**339**	*ep*	**P**	**17 51 26.5**	**-1.6**
	comp=Z,2.9nm,0.7s,mb4.4						
KLMR	**Klimovskoe**	**64.64**	**328**	*e*P	**P**	**17 51 30.1**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
ARCES	**ARCESS Array B**	**64.88**	**340**	P	**P**	**17 51 32.0**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.2,baz=46,slow=8.8,SNR=9.9						
JOF	**Joensuu**	**66.85**	**332**	*e*P	**P**	**17 51 42.8**	**-1.7**
JOF	**Joensuu**	**66.85**	**332**	*ep*	**P**	**17 51 42.8**	**-1.7**
OBN	**Obninsk**	**68.97**	**324**	⇓*e*P	**P**	**17 51 58.1**	**+0.2**
OBN				*e*		17 52 21.3	
OBN				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.7						
KAF	**Kangasniemi**	**69.19**	**333**	*e*P	**P**	**17 51 58.3**	**-0.9**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**69.19**	**333**	*ep*	**P**	**17 51 58.3**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**69.70**	**333**	P	**P**	**17 52 02.6**	**+0.3**
	comp=Z,7.1nm,0.8s,mb4.6,baz=46,slow=8.2,SNR=18						
VSR	**Storozhevoye**	**69.79**	**319**	*e*P	**P**	**17 52 02.7**	**-0.4**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
VSR				pmax	pmax		
	comp=N,4.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,9.0nm,1.1s						
VORD	**Divnogorie**	**69.86**	**319**	*e*P	**P**	**17 52 00.6**	**-2.9**
VORD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
VORD				pmax	pmax		
	comp=N,40nm,0.7s						
VORD				pmax	pmax		
	comp=E,80nm,0.7s						
VSU	**Vasula**	**71.34**	**330**	⇓*e*P	**P**	**17 52 13.0**	**+0.6**
VSU				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
KIV	**Kislovodsk**	**71.72**	**311**	*e*P	**P**	**17 52 15.8**	**+0.8**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
GNI	**Garni**	**72.50**	**307**	⇑*e*P	**P**	**17 52 19.1**	**-0.6**
GNI				pmax	pmax		
	comp=Z,20nm,2.8s						
NB2	**NORSAR Subarra**	**75.07**	**338**	P	**P**	**17 52 34.6**	**+0.2**
	comp=Z,8.8nm,0.9s,mb4.7,baz=39,slow=5.9						
NOA	**NORSAR Array B**	**75.07**	**338**	P	**P**	**17 52 34.7**	**+0.3**
	comp=Z,5.4nm,0.8s,mb4.5,baz=39,slow=5.7,SNR=15						
NOA	**NORSAR Array B**	**75.07**	**338**	P	**P**	**17 52 34.7**	**+0.3**
NVAR	**Mina Array Bea**	**75.16**	**53**	P	**P**	**17 52 37.0**	**+1.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=282,slow=6.4,SNR=4.1						
AKASG	**Malin Array Be**	**75.17**	**323**	P	**P**	**17 52 35.0**	**-0.1**
	comp=Z,5.3nm,0.6s,mb4.6,baz=46,slow=5.8,SNR=23						
KIEV	**Kiev**	**75.18**	**323**	*e*P	**P**	**17 52 34.8**	**-0.4**
PDAR	**Pinedale Array**	**77.95**	**46**	P	**P**	**17 52 52.2**	**+1.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=289,slow=0.6,SNR=8.3						
BR131	**Keskin Array S**	**79.67**	**312**	*e*P	**P**	**17 53 00.4**	**-0.2**
	comp=Z,2.9nm,0.9s,mb4.2						
BRTR	**Keskin Array B**	**79.67**	**312**	*ce*P	**P**	**17 53 01.6**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**79.67**	**312**	P	**P**	**17 53 01.3**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.2,baz=91,slow=4.5,SNR=10						
KOLS	**Kolonicke sedl**	**79.69**	**324**	*e*P	**P**	**17 53 01.8**	**+1.3**
KOLS				pmax	pmax		

comp=Z,2.0nm,0.7s,mb4.2
KOLS Kolonicke sedl 79.69 324 *e*P **P 17 53 01.8 +1.3**
comp=Z,2.1nm,0.7s,mb4.2
KOLS Kolonicke sedl 79.69 324 *e*P **P 17 53 01.8 +1.3**
STHS Stebnicka Huta 79.83 325 *e*P **P 17 53 02.8 +1.5**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
STHS Stebnicka Huta 79.83 325 *e*P **P 17 53 02.8 +1.5**
comp=Z,1.8nm,1.0s,mb4.0
STHS Stebnicka Huta 79.83 325 *e*P **P 17 53 02.8 +1.5**
KECS Kecovo 80.85 325 *e*P **P 17 53 05.9 -0.8**
KECS *e* pP 17 53 13.0 +0.2
KECS pmax pmax
comp=Z,1.0nm,1.0s,mb3.7
KECS Kecovo 80.85 325 *e*P **P 17 53 05.9 -0.8**
comp=Z,1.3nm,1.0s,mb3.8
KECS *e* pP 17 53 13.0 +0.2
KECS Kecovo 80.85 325 *e*P **P 17 53 05.9 -0.8**
KECS *e*PCP PcP 17 53 13.0 -0.3
VYHS Vyhne 81.60 326 *e*P **P 17 53 11.4 +0.7**
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
VYHS Vyhne 81.60 326 *e*P **P 17 53 11.4 +0.7**
comp=Z,2.1nm,1.3s,mb3.9
VYHS Vyhne 81.60 326 *e*P **P 17 53 11.4 +0.7**
CLL Collm 81.98 330 *i* P **P 17 53 12.9 +0.2**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CLL Collm 81.98 330 *i* P **P 17 53 12.9 +0.2**
comp=Z,5.0nm,1.0s,mb4.4
CLL Collm 81.98 330 *i* P **P 17 53 12.9 +0.2**
comp=Z,5.0nm,1.0s,mb4.4
GERES GERESS Array B 83.59 329 P **P 17 53 20.6 -0.5**
comp=Z,1.3nm,0.6s,mb4.2,baz=27,slow=4.5,SNR=12
TXAR Lajitas Array 90.30 53 P **P 17 53 54.7 +0.6**
comp=Z,0.5nm,0.7s,mb3.9,baz=330,slow=3.2,SNR=3.5
LPAZ La Paz 146.75 61 PKP2 PKPbc 18 00 35.8 +0.4
LPAZ pmax pmax
comp=Z,3.0nm,0.5s
LPAZ La Paz 146.75 61 PKPbc PKPbc 18 00 35.8 +0.4
comp=Z,2.8nm,0.5s,baz=352,slow=4.6,SNR=2.2

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*ISCJB **07** 17:48:08.7±0.5,27.°05N±0.°05×140.°29E±0.°10, h444km±4km, mb3.8/27, Error ellipse: s-maj=13.4km s-min=7.2km az=172.1*
*IDC **07** 17:48:08.8±0.5,27.°01N×140.°28E, h430km±5km, mb3.5/18, mb1 3.6/21, mb1mx3.5/27, mbtmp3.5/21, Error ellipse: s-maj=13.0km s-min=10.2km az=76.0*
*NEIC **07** 17:48:10.4±1.2,27.°08N×140.°25E, h448km±13km, mb4.0/6, Error ellipse: s-maj=12.6km s-min=9.2km az=99.0*
*JMA **07** 17:48:11.1±0.1,27.°29N×140.°91E, h448km, M4.4*
ISC 07 17:48:09.7±0.5,27.°07N±0.°05×140.°31E±0.°10, h439km±4km, n54,σ1°12/57, mb3.8/27, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.67**	**89**	P	**P**	**17 49 07.7**	**+0.2**
CBIJ				*e*S	**S**	**17 49 52.9**	**-1.4**
CBIJ	**Chichi jima**	**1.67**	**89**	P	**P**	**17 49 07.8**	**+0.3**
	62nm,0.3s,baz=211,slow=8.1,SNR=86						
CBIJ				S	**S**	**17 49 51.8**	**-2.5**
	109nm,0.3s,baz=286,slow=22,SNR=17						
JHHJ	**Haha-jima-NKT**	**1.73**	**104**	P	**P**	**17 49 08.6**	**+0.8**
JHHJ				S	**S**	**17 49 54.2**	**-0.6**
JHJ2	**Mitsune**	**6.04**	**356**	P	**P**	**17 49 45.3**	**+1.4**
JHJ2				*e*S	**S**	**17 50 58.8**	**-2.1**
JHJ	**Hachijo jima 2**	**6.05**	**356**	P	**P**	**17 49 45.0**	**+1.0**
	16nm,0.3s,baz=65,slow=23,SNR=5.1						
JHJ				S	**S**	**17 50 57.8**	**-3.3**
	14nm,0.3s,baz=63,slow=18,SNR=2.6						
BSO1	**Boso 1**	**7.58**	**4**	*e*S	**S**	**17 51 29.7**	**-1.3**
BSO3	**Boso 3**	**7.71**	**1**	*e*S	**S**	**17 51 30.3**	**-3.2**
BSO4	**Boso 4**	**7.90**	**0**	*e*S	**S**	**17 51 37.2**	**0.0**
JIE	**Ise**	**7.93**	**338**	P	**P**	**17 50 07.1**	**+3.0**
JKN2	**Miekihoku**	**7.95**	**335**	P	**P**	**17 50 07.8**	**+3.5**
JEG	**Eigenji**	**8.71**	**338**	P	**P**	**17 50 17.4**	**+4.8**
JAG	**Ashikaga**	**9.36**	**356**	P	**P**	**17 50 20.3**	**+0.7**
JHO	**Hitachi**	**9.52**	**1**	P	**P**	**17 50 22.5**	**+1.1**
MJAR	**Matsushiro Arr**	**9.61**	**350**	P	**P**	**17 50 21.2**	**-1.3**
	1.3nm,0.3s,baz=152,slow=12,SNR=4.5						
MJAR				S	**S**	**17 52 00.7**	**-11**
	3.5nm,0.3s,baz=317,slow=24,SNR=9.5						
JHS	**Saijyo**	**10.02**	**324**	P	**P**	**17 50 31.4**	**+4.4**
JFK	**Kawauchi**	**10.28**	**3**	P	**P**	**17 50 30.9**	**+1.2**
JOW	**Kunigami**	**10.74**	**271**	P	**P**	**17 50 37.0**	**+2.0**
	8.6nm,0.3s,baz=106,slow=11,SNR=59						
JOT	**Ohata**	**14.29**	**2**	P	**P**	**17 51 15.2**	**+1.9**
KSRS	**Korea Array**	**14.72**	**318**	P	**P**	**17 51 18.0**	**+0.1**
	0.1nm,0.3s,baz=133,slow=11,SNR=5.3						
ASAJ	**Asahikawa**	**17.11**	**6**	P	**P**	**17 51 44.9**	**+1.6**
	1.1nm,0.3s,baz=126,slow=7.4,SNR=7.7						
SONM	**Songino Array**	**33.59**	**317**	P	**P**	**17 54 11.7**	**+0.3**
	0.4nm,0.5s,mb3.0,baz=121,slow=6.9,SNR=3.3						
YAK	**Yakutsk**	**35.67**	**351**	*e*P	**P**	**17 54 28.1**	**-0.6**
	10nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**38.95**	**266**	P	**P**	**17 54 56.8**	**+0.3**
	0.6nm,0.5s,mb3.2,baz=71,slow=5.5,SNR=8.0						
BILL	**Bilibino**	**43.87**	**14**	*e*P	**P**	**17 55 36.2**	**+1.2**
	8.0nm,0.8s,mb4.1						
TIXI	**Tiksi**	**45.08**	**355**	*e*P	**P**	**17 55 44.1**	**-0.2**
	3.7nm,0.6s,mb3.9						
WRAB	**Tennant Creek**	**47.08**	**188**	*e*P	**P**	**17 55 59.9**	**-0.5**
	3.5nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**47.09**	**188**	P	**P**	**17 55 59.8**	**-0.7**
	3.0nm,0.4s,mb4.0,baz=2.9,slow=7.6,SNR=59						
WRA				ScP	ScP	18 00 33.1	-2.2
	0.5nm,0.8s,baz=1.6,slow=4.9,SNR=4.9						
ZAA0	**Zalesovo Array**	**48.42**	**319**	*e*P	**P**	**17 56 09.3**	**-0.8**
ZALV	**Zalesovo Beam**	**48.42**	**319**	P	**P**	**17 56 09.9**	**-0.2**
	2.6nm,0.5s,mb3.8,baz=99,slow=7.3,SNR=13						
ZALV				PcP	PcP	17 57 27.9	-0.5
	1.0nm,0.5s,baz=100,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**49.20**	**310**	P	**P**	**17 56 16.4**	**+0.3**
	1.6nm,0.6s,mb3.5,baz=97,slow=9.3,SNR=10						
MKAR				PcP	PcP	17 57 30.7	-0.7
	1.9nm,1.0s,baz=116,slow=5.5,SNR=4.6						
MKAR				ScP	ScP	18 00 43.0	-1.0
	0.5nm,0.6s,baz=93,slow=5.0,SNR=3.8						
ASAR	**Alice Springs**	**50.82**	**188**	P	**P**	**17 56 27.8**	**-0.5**
	0.3nm,0.6s,mb2.7,baz=3.1,slow=5.5,SNR=19						
KURK	**Kurchatov**	**51.81**	**315**	*e*P	**P**	**17 56 34.9**	**-0.3**
	4.5nm,0.6s,mb3.9						
KSH	**Kashi**	**54.16**	**301**	P	**P**	**17 56 56.1**	**+3.9**
KSH				S	S	18 04 23.5	+29
KSH				pmax	pmax		
	comp=Z,3μm,13.8s						
KDAK	**Kodiak Island**	**55.39**	**37**	P	**P**	**17 57 01.1**	**+0.5**
	comp=Z,6.4nm,0.8s,mb3.9,baz=83,slow=20,SNR=6.5						
BVAR	**Borovoye Array**	**56.93**	**317**	P	**P**	**17 57 11.6**	**+0.2**
	comp=Z,4.5nm,0.5s,mb4.1,baz=90,slow=7.4,SNR=30						
INK	**Inuvik**	**63.75**	**24**	P	**P**	**17 57 56.9**	**+0.3**
	comp=Z,1.0nm,0.4s,mb3.7,baz=296,slow=6.3,SNR=8.5						
KEV	**Kevo**	**72.45**	**340**	*ep*	**P**	**17 58 49.2**	**-0.6**
	comp=Z,1.7nm,0.5s,mb3.8						
YKA	**Yellowknife Ar**	**72.95**	**28**	P	**P**	**17 58 53.0**	**+0.1**
	comp=Z,2.4nm,0.6s,mb3.9,baz=296,slow=5.7,SNR=35						
YKA	**Yellowknife Ar**	**72.95**	**28**	P	**P**	**17 58 53.0**	**+0.1**
ARCES	**ARCESS Array B**	**73.01**	**340**	P	**P**	**17 58 53.6**	**+0.6**
	comp=Z,2.6nm,0.5s,mb4.0,baz=69,slow=8.3,SNR=35						
JOF	**Joensuu**	**74.36**	**333**	*ep*	**P**	**17 58 59.3**	**-1.6**
	comp=Z,3.8nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**76.77**	**334**	*ep*	**P**	**17 59 13.0**	**-1.4**
	comp=Z,7.6nm,0.5s,mb4.6						
FINES	**FINESS Array B**	**77.23**	**333**	P	**P**	**17 59 16.6**	**-0.3**
	comp=Z,8.2nm,0.5s,mb4.7,baz=66,slow=5.1,SNR=64						
AKASG	**Malin Array Be**	**81.64**	**323**	P	**P**	**17 59 39.9**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.1,baz=54,slow=5.1,SNR=12						
KIEV	**Kiev**	**81.66**	**323**	*e*P	**P**	**17 59 40.1**	**-0.6**
	comp=Z,4.6nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**81.84**	**51**	P	**P**	**17 59 43.5**	**+1.6**
	comp=Z,1.2nm,0.6s,mb3.8,baz=290,slow=5.7,SNR=6.6						
NOA	**NORSAR Array B**	**83.01**	**338**	P	**P**	**17 59 46.5**	**-0.9**
	comp=Z,5.2nm,0.7s,mb4.4,baz=46,slow=4.8,SNR=18						
NOA	**NORSAR Array B**	**83.01**	**338**	P	**P**	**17 59 46.5**	**-0.9**
BRTR	**Keskin Array B**	**84.79**	**312**	P	**P**	**17 59 55.9**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.3,baz=51,slow=4.9,SNR=3.7						
PDAR	**Pinedale Array**	**85.40**	**44**	P	**P**	**18 00 00.8**	**+1.3**
	comp=Z,0.3nm,0.4s,mb3.4,baz=258,slow=2.9,SNR=4.3						
GERES	**GERESS Array B**	**90.66**	**328**	P	**P**	**18 00 22.5**	**-1.6**
	comp=Z,0.9nm,0.7s,mb3.7,baz=46,slow=4.4,SNR=9.4						
TORD	**Torodi Ar. Bea**	**123.33**	**310**	PKP	PKPdf	18 06 15.9	-0.6
	comp=Z,0.1nm,0.4s,baz=35,slow=1.1,SNR=5.1						
PLCA	**Paso Flores**	**151.15**	**126**	PKPbc	PKPbc	18 07 12.9	+0.7
	comp=Z,1.3nm,0.6s,baz=126,slow=2.8,SNR=4.0						
LPAZ	**La Paz**	**151.54**	**74**	PKPbc	PKPbc	18 07 14.9	+1.2
	comp=Z,2.6nm,0.7s,baz=7.5,slow=3.0,SNR=11						

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*IDC **07** 18:00:28.8±0.4,2.°26N×126.°69E, h0km, mb4.6/24, mb1 4.7/25, mb1mx4.7/27, mbtmp4.6/25, Error ellipse: s-maj=20.6km s-min=10.1km az=71.0*
*BJI **07** 18:00:29.0, 1.°59N×126.°84E, h40km, mB5.3/3, mb4.8/38, Ms5.3/14, Ms7 5.2/13*
*MOS **07** 18:00:32.3±1.2,2.°26N×126.°72E, h33km, mb5.2/22, Error ellipse: s-maj=14.6km s-min=6.7km az=108.0*
*NEIC **07** 18:00:34.8±1.5,2.°22N×126.°72E, h42km±14km, mb4.9/24, Error ellipse: s-maj=10.9km s-min=5.5km az=66.0*
*ISCJB **07** 18:00:35.1±0.7,2.°24N±0.°03×126.°85E±0.°04, h59km±6km, mb4.9/78, MS5.2/7, Error ellipse: s-maj=7.3km s-min=4.7km az=163.0*
*DJA **07** 18:00:37,2.°39N×126.°81E, h48km, mb5.1/23*
ISC 07 18:00:37.3±0.6,2.°22N±0.°03×126.°80E±0.°04, h62km±5km, h34km±.8km; pP-P, n194,σ1°33/202, mb4.9/78, 5C-6D, Northern Moluccca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.94**	**319**	P	**Pn**	**18 01 04.0**	**-4.0**
SGSI				S	**Sn**	**18 01 29.8**	**-1.5**
MNI	**Manado**	**2.11**	**249**	P	**Pn**	**18 01 08.6**	**-1.7**
MNI				S	**Sn**	**18 01 34.8**	**-0.6**
DMPH	**Davao City--Mi**	**5.00**	**345**	*e*P	**Pn**	**18 01 54.1**	**+4.2**
KCP	**Kidapawan**	**5.06**	**340**	*e*P	**Pn**	**18 01 52.9**	**+2.3**
KCP				*i* S	**Sn**	**18 02 54.1**	**+6.3**
MRSI	**Marisa**	**5.16**	**251**	P	**Pn**	**18 01 52.0**	**0.0**
	407nm,0.6s,3μm1.3nm						
LUWI	**Luwuk**	**5.17**	**231**	P	**Pn**	**18 01 54.5**	**+2.3**
	375nm,0.9s,7μm2.5nm						
NLAI	**Namlea**	**5.43**	**177**	P	**Pn**	**18 01 55.3**	**-0.4**
	97nm,0.8s,0.4nm						
BUKP	**Musuan**	**5.89**	**343**	*e*P	**Pn**	**18 02 03.2**	**+1.2**
APSI	**Ampana**	**6.02**	**239**	P	**Pn**	**18 02 06.0**	**+2.2**
	561nm,0.7s,6μm1.8nm						
APSI				S	**Sn**	**18 03 20.7**	**+9.3**
	561nm,0.7s,6μm1.8nm						
AAI	**Ambon**	**6.03**	**167**	P	**Pn**	**18 02 07.7**	**+3.8**
PAGZ	**Pagadian**	**6.55**	**329**	*e*P	**Pn**	**18 02 08.7**	**-2.4**
PAGZ	**Pagadian**	**6.55**	**329**	*e*S	**Pn**	**18 02 17.4**	**+6.3**
ZMPH	**Zamboanga City**	**6.67**	**315**	*e*P	**Pn**	**18 02 09.2**	**-3.5**
ZMPH				*e*S	**Sn**	**18 03 20.5**	**-6.8**
IPIL	**Ipil**	**6.96**	**323**	*e*P	**Pn**	**18 02 15.3**	**-1.4**
IPIL	**Ipil**	**6.96**	**323**	*e*S	**Pn**	**18 02 21.1**	**+4.5**
MPSI	**Mapaga**	**7.15**	**255**	P	**Pn**	**18 02 20.9**	**+1.6**
	935nm,0.9s,5.5nm						
KDI	**Kendari**	**7.42**	**214**	P	**Pn**	**18 02 21.9**	**-1.1**
	68nm,0.9s,0.3nm						
KDI	**Kendari**	**7.42**	**214**	S	**Pn**	**18 02 29.3**	**+6.3**
	0.3nm68nm,0.9s						
TTSI	**Tana Toraja**	**8.72**	**233**	P	**Pn**	**18 02 41.7**	**+0.9**
	84nm,0.8s						
MYLDM	**Lahad Datu**	**8.79**	**290**	P	**Pn**	**18 02 42.8**	**+1.0**
TLE	**Tual**	**9.80**	**143**	P	**Pn**	**18 03 01.4**	**+5.9**
	126nm,1.6s						
KAPI	**Kappang**	**10.06**	**224**	Pn	**Pn**	**18 02 54.5**	**-4.7**
	1.6nm,0.3s,baz=76,slow=8.3,SNR=5.5						
KAPI	**Kappang**	**10.06**	**224**	*e*P	**Pn**	**18 02 57.3**	**-1.8**
	28nm,0.9s						
KAPI	**Kappang**	**10.06**	**224**	P	**Pn**	**18 03 03.1**	**+4.0**
	14nm,1.6s						
KKM	**Kota Kinabalu**	**11.22**	**290**	P	**Pn**	**18 03 15.6**	**+0.5**
SBUM	**Sibu**	**14.57**	**271**	P	**Pn**	**18 04 02.5**	**+2.2**
STKI	**Sintang**	**15.47**	**262**	P	**Pn**	**18 04 15.4**	**+3.5**
	37nm,1.1s						
KMMI	**Kalianget**	**15.78**	**234**	P	**Pn**	**18 04 22.2**	**+6.4**
	114nm,0.9s						
KAKA	**Kakadu**	**15.85**	**159**	*e*P	**Pn**	**18 04 14.8**	**-1.9**
	149nm,0.6s						
KAKA	**Kakadu**	**15.85**	**159**	*e*P	**Pn**	**18 04 14.6**	**-2.1**
	386nm,0.6s						
KAKA	**Kakadu**	**15.85**	**159**	P	**Pn**	**18 04 18.9**	**+2.2**
	343nm,0.6s,3μm						
KSM	**Kuching**	**16.50**	**268**	P	**Pn**	**18 04 28.6**	**+3.7**
TPI	**Tanjungpandan**	**19.77**	**256**	P	**Pn**	**18 05 03.4**	**-1.2**
	34nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.22**	**183**	*e*P	**P**	**18 05 06.3**	**-1.1**
	63nm,0.4s						
FITZ				*e*S	**S**	**18 08 51.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.22**	**183**	P	**P**	**18 05 06.8**	**-0.6**
	16nm,0.6s,baz=25,slow=8.6,SNR=53						
FITZ	**Fitzroy Crossi**	**20.22**	**183**	*e*P	**P**	**18 05 06.4**	**-1.0**
	30nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.22**	**183**	P	**P**	**18 05 07.3**	**-0.1**
	90nm,0.6s						
DBJI	**Dramaga**	**21.83**	**246**	P	**P**	**18 05 28.6**	**+3.8**
	45nm,0.7s,mb5.0						
MYKOM	**Kota Tinggi**	**22.94**	**269**	P	**P**	**18 05 37.8**	**+1.2**
WRAB	**Tennant Creek**	**23.22**	**162**	*e*P	**P**	**18 05 37.8**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**23.22**	**162**	*e*P	**P**	**18 05 37.8**	**-1.5**
	comp=Z,46nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**23.22**	**162**	P	**P**	**18 05 38.7**	**-0.6**
	comp=Z,76nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**23.23**	**162**	P	**P**	**18 05 38.0**	**-1.3**
	comp=Z,44nm,0.5s,mb5.1,baz=340,slow=11,SNR=286						
WRA				S	**S**	**18 09 49.3**	**+2.6**
	comp=Z,3.0nm,0.9s,baz=343,slow=19,SNR=5.3						
WB2	**Warramunga Arr**	**23.23**	**162**	*e*P	**P**	**18 05 38.0**	**-1.4**
MDSI	**Maura Dua**	**23.57**	**254**	P	**P**	**18 05 43.2**	**+0.6**
KASI	**Kota Agung**	**23.57**	**251**	P	**P**	**18 05 44.7**	**+2.1**
	comp=Z,121nm,0.9s,mb5.3						
KTGM	**Kuala Trenggan**	**23.82**	**278**	P	**P**	**18 05 46.2**	**+1.4**
MBWA	**Marble Bar**	**24.24**	**196**	*e*P	**P**	**18 05 47.4**	**-1.2**
	comp=Z,18nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**24.24**	**196**	P	**P**	**18 05 49.4**	**+0.8**
	comp=Z,33nm,0.7s,mb4.8						
IPM	**Ipoh**	**25.83**	**276**	P	**P**	**18 06 05.8**	**+2.6**
ASAR	**Alice Springs**	**26.64**	**165**	P	**P**	**18 06 09.6**	**-0.7**
	comp=Z,6.5nm,0.4s,mb4.5,baz=343,slow=6.8,SNR=105						
ASAR				PcP	PcP	18 09 33.9	+0.8
	comp=Z,2.5nm,0.4s,baz=356,slow=2.2,SNR=6.5						
ASAR				S	**S**	**18 10 44.1**	**+3.0**
	comp=Z,2.5nm,0.9s,baz=354,slow=24,SNR=6.0						
PSI	**Prapat**	**27.86**	**272**	P	**P**	**18 06 19.6**	**-1.8**
	comp=Z,5.0nm,0.7s,mb4.3,baz=310,slow=12,SNR=3.8						
GSI	**Gunungsitoli**	**29.23**	**269**	P	**P**	**18 06 33.6**	**0.0**
	comp=Z,19nm,2.0s,mb4.5						
CTA	**Charters Tower**	**29.25**	**140**	P	**P**	**18 06 34.1**	**+0.4**
	comp=Z,14nm,1.1s,mb4.6,baz=4.4,slow=13,SNR=3.2						
NJ2	**Nanjing**	**30.61**	**347**	*e*P	**P**	**18 06 47.0**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.5						
GYA	**Guiyang**	**30.90**	**323**	P	**P**	**18 06 49.2**	**+1.0**
GYA				pP	pP	18 06 58.7	-4.7
GYA				sP	sP	18 07 05.9	-4.8
GYA				PP	PP	18 07 52.1	-6.9
GYA				S	**S**	**18 11 49.8**	**+1.6**
GYA				sS	sS	18 12 07.6	-6.4
GYA				ScP	ScP	18 13 23.4	+2.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,690nm,16.0s						
GYA				LR	LR		
	comp=E,540nm,17.0s						
GYA				LR	LR		
	comp=Z,880nm,15.0s						
CM31	**Chiang Mai Arr**	**31.72**	**302**	*e*P	**P**	**18 06 54.0**	**-1.5**
	comp=Z,10nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**31.72**	**302**	P	**P**	**18 06 54.7**	**-0.8**
	comp=Z,9.5nm,0.8s,mb4.7,baz=121,slow=7.2,SNR=79						
CMAR				PcP	PcP	18 09 47.4	+1.2
	comp=Z,0.6nm,0.8s,baz=97,slow=3.5,SNR=4.0						
CHTO	**Chiang Mai**	**31.88**	**303**	*e*P	**P**	**18 06 55.0**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
CHTO	**Chiang Mai**	**31.88**	**303**	*e*P	**P**	**18 06 55.0**	**-1.9**
	comp=Z,20nm,0.8s,mb5.0						
CHTO	**Chiang Mai**	**31.88**	**303**	P	**P**	**18 06 56.4**	**-0.6**
	comp=Z,34nm,0.8s,mb5.2						
ENH	**Enshi**	**32.38**	**331**	*e*P	**P**	**18 07 01.0**	**-0.1**
	comp=Z,13nm,0.8s,mb4.8						
KMI	**Kunming**	**32.51**	**317**	P	**P**	**18 07 02.9**	**+0.5**
KMI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
FORT	**Forrest**	**32.83**	**178**	*e*P	**P**	**18 07 05.1**	**0.0**
	comp=Z,149nm,0.7s,mb6.0						
FORT	**Forrest**	**32.83**	**178**	*e*P	**P**	**18 07 05.0**	**-0.1**
	comp=Z,142nm,0.6s,mb6.1						
KSRS	**Korea Array**	**35.08**	**2**	P	**P**	**18 07 24.9**	**+0.4**
	comp=Z,4.6nm,0.6s,mb4.6,baz=180,slow=9.9,SNR=22						
MAT	**Matsushiro**	**35.74**	**16**	P	**P**	**18 07 29.0**	**-1.2**
MJAR	**Matsushiro Arr**	**35.74**	**16**	P	**P**	**18 07 28.4**	**-1.9**
	comp=Z,3.2nm,0.7s,mb4.4,baz=193,slow=8.5,SNR=7.0						
MAJO	**Matsushiro**	**35.75**	**16**	*e*P	**P**	**18 07 29.5**	**-0.7**
XAN	**Xi'an**	**35.80**	**334**	P	**P**	**18 07 30.1**	**-0.6**
XAN				pP	pP	18 07 40.1	-6.0
XAN				sP	sP	18 07 44.0	-9.3
XAN				PP	PP	18 08 53.1	0.0
XAN				S	**S**	**18 13 08.0**	**+4.2**
XAN				sS	sS	18 13 23.2	-6.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
XAN				LR	LR		
	comp=N,1μm,15.0s						
XAN				LR	LR		
	comp=E,660nm,12.2s						
XAN				LR	LR		
	comp=Z,480nm,16.5s						
NWAO	**Narrogin (SRO)**	**36.10**	**194**	*e*P	**P**	**18 07 33.1**	**-0.3**
EIDS	**Eidsvold**	**36.13**	**141**	*e*P	**P**	**18 07 32.6**	**-1.0**
	comp=Z,34nm,1.1s,mb5.2						
STKA	**Stephens Creek**	**36.70**	**159**	*e*P	**P**	**18 07 38.3**	**-0.1**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	**Stephens Creek**	**36.70**	**159**	*e*P	**P**	**18 07 38.4**	**0.0**
	comp=Z,11nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**36.70**	**159**	P	**P**	**18 07 38.5**	**0.0**
	comp=Z,11nm,0.6s,mb4.9,baz=330,slow=9.3,SNR=34						
STKA				PcP	PcP	18 10 00.8	+0.8
	comp=Z,4.6nm,0.8s,baz=336,slow=4.6,SNR=3.0						
STKA	**Stephens Creek**	**36.70**	**159**	*e*P	**P**	**18 07 38.2**	**-0.2**
	comp=Z,4.4nm,1.0s,mb4.2						
DL2	**Dalian**	**36.82**	**353**	P	**P**	**18 07 41.2**	**+1.8**
DL2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
BJI	**Beijing**	**38.87**	**347**	P	**P**	**18 07 57.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.1						
LZH	**Lanzhou**	**39.84**	**330**	*e*P	**P**	**18 08 07.3**	**+2.5**
LZH				pP	pP	18 08 17.2	-3.2
LZH				sP	sP	18 08 21.0	-6.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
LZH				LR	LR		
	comp=E,6μm,14.0s						
LZH				LR	LR		
	comp=Z,8μm,15.3s						
ARMA	**Armidale**	**40.17**	**146**	*e*P	**P**	**18 08 08.9**	**+1.2**
ARMA	**Armidale**	**40.17**	**146**	*e*P	**P**	**18 08 08.3**	**+0.6**
	comp=Z,58nm,1.0s,mb5.3						
HHC	**Hu-ho-hao-te**	**40.85**	**342**	*e*P	**P**	**18 08 15.6**	**+2.5**
HHC				pP	pP	18 08 25.6	-3.1
HHC				sP	sP	18 08 29.5	-6.3
HHC				PP	PP	18 09 53.1	+4.8
HHC				ScP	ScP	18 14 01.6	+4.1
HHC				S	**S**	**18 14 26.4**	**+6.5**
HHC				sS	sS	18 14 43.6	-2.7
HHC				SS	SS	18 17 24.2	+0.8
HHC				ScS	ScS	18 18 14.9	+2.5
HHC				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
HHC				LR	LR		
	comp=N,1μm,14.3s						
HHC				LR	LR		
	comp=E,2μm,15.1s						
HHC				LR	LR		
	comp=Z,2μm,14.9s						
CN2	**Changchun**	**41.42**	**359**	*e*P	**P**	**18 08 20.5**	**+2.8**
MDJ	**Mudanjiang**	**42.29**	**3**	P	**P**	**18 08 26.0**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,8μm,14.0s						
MDJ	**Mudanjiang**	**42.29**	**3**	*e*P	**P**	**18 08 26.4**	**+1.6**
	comp=Z,12nm,0.9s,mb4.5						
LSA	**Lhasa**	**43.50**	**313**	P	**P**	**18 08 35.1**	**+0.3**
ASAJ	**Asahikawa**	**44.01**	**16**	P	**P**	**18 08 38.4**	**-0.3**
	comp=Z,5.7nm,0.9s,mb4.3,baz=189,slow=11,SNR=6.4						
GTA	**Gaotai**	**44.43**	**330**	*e*P	**P**	**18 08 42.7**	**+0.6**
GTA

PETK	Petropavlovsk-	56.80	22	P	P	18 10 15.7	+0.7
	comp=Z,3.3nm,0.8s,mb4.4,baz=193,slow=5.8,SNR=5.8						
MK31	Makanchi Array	58.84	326	eP	P	18 10 27.9	-1.6
MKAR	Makanchi Array	58.84	326	P	P	18 10 28.4	-1.1
	comp=Z,3.9nm,0.4s,mb4.8,baz=128,slow=7.7,SNR=31						
MKAR	Makanchi Array	58.84	326	P	P	18 10 28.4	-1.1
KSH	Kashi	59.16	316	eP	P	18 10 33.1	+1.2
KSH				epP	pP	18 10 43.0	-5.3
KSH				esP	sP	18 10 47.3	-8.0
KSH				ePcP	PcP	18 11 21.2	+1.3
KSH				ePP	PP	18 12 45.1	+1.8
KSH				eScP	ScP	18 15 18.1	+2.6
KSH				ePcS	PcS	18 15 21.4	-0.4
KSH				S	S	18 18 34.9	-0.1
KSH				eScS	ScS	18 20 16.1	-0.6
KSH				eSS	SS	18 22 31.4	+1.1
KSH				LR	LR		
	comp=N,2μm,13.0s						
KSH				LR	LR		
	comp=E,3μm,14.4s						
YAK	Yakutsk	59.71	2	eP	P	18 10 33.8	-1.4
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=N,11nm,1.5s						
YAK	Yakutsk	59.71	2	eP	P	18 10 35.1	-0.1
	comp=N,15nm,0.6s,mb5.2						
ULHL	Ulahol	60.19	319	P	P	18 10 37.6	-1.3
	SNR=5.0						
RPZ	Rata Peaks	60.49	144	P	P	18 10 40.7	-0.2
	comp=N,6.3nm,0.5s,mb4.9,baz=68,slow=16,SNR=8.4						
KZA	Kyzart	60.78	318	P	P	18 10 44.4	+1.4
	SNR=7.7						
UCH	Uchtor	61.34	318	P	P	18 10 48.1	+1.4
	SNR=14						
URZ	Urewera	61.40	136	P	P	18 10 47.8	+0.6
	comp=N,7.3nm,0.6s,mb5.0,baz=75,slow=5.7,SNR=5.0						
AAK	Ala-Archa	61.52	318	eP	P	18 10 49.3	+1.3
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
AAK	Ala-Archa	61.52	318	P	P	18 10 46.9	-1.0
	comp=Z,1.4nm,0.5s,mb4.4,baz=149,slow=6.6,SNR=5.8						
AAK	Ala-Archa	61.52	318	eP	P	18 10 49.3	+1.3
	comp=Z,5.0nm,1.0s,mb4.6						
AAK	Ala-Archa	61.52	318	P	P	18 10 50.1	+2.1
	comp=Z,1.5nm,1.0s,mb4.1						
USP	Ospenovka	61.80	319	P	P	18 10 49.0	-0.8
	SNR=11						
AML	Almayashu	61.84	318	P	P	18 10 51.3	+1.1
	SNR=13						
ZAA0	Zalesovo Array	61.96	333	eP	P	18 10 48.5	-2.2
ZALV	Zalesovo Beam	61.96	333	P	P	18 10 48.8	-1.9
	comp=Z,3.3nm,0.7s,mb4.6,baz=119,slow=5.2,SNR=7.6						
EKS2	Erkin-Say	62.01	318	P	P	18 10 52.1	+0.9
	SNR=11						
KURK	Kurchatov	63.05	328⇓	eP	P	18 10 56.9	-1.1
KURK				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.4						
KURK	Kurchatov	63.05	328	P	P	18 10 56.8	-1.2
	comp=Z,14nm,0.7s,mb5.2,baz=128,slow=6.1,SNR=41						
KURK	Kurchatov	63.05	328	eP	P	18 10 56.4	-1.6
	comp=Z,24nm,0.7s,mb5.4						
SEY	Seymchan	63.48	13⇓	eP	P	18 11 02.2	+1.6
BVAR	Borovoye Array	68.62	327	P	P	18 11 32.5	-1.3
	comp=Z,5.4nm,0.7s,mb4.6,baz=132,slow=8.2,SNR=20						
BRVK	Borovoye	68.69	327⇓	eP	P	18 11 34.5	+0.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
BRVK	Borovoye	68.69	327	eP	P	18 11 31.5	-2.7
	comp=Z,10nm,0.9s,mb4.8						
CASY	Casey	69.33	187	eP	P	18 11 37.1	-0.8
TIXI	Tiksi	69.34	1	eP	P	18 11 36.4	-1.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
TIXI	Tiksi	69.34	1	eP	P	18 11 37.0	-0.9
	comp=Z,2.8nm,0.6s,mb4.4						
BILL	Bilibino	70.99	15	eP	P	18 11 49.7	+1.7
BILL				e	pP	18 12 08.6	+3.7
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.2						
SVE	Sverdlovsk	75.28	329⇑	eP	P	18 12 13.2	-0.4
SVE				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
ARU	Arti	76.25	328c	iP	P	18 12 18.2	-0.9
ARU				e		18 15 07.1	
ARU				S	S	18 22 02.1	+3.4
ARU				SS	SS	18 26 48.9	-4.6
ARU				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
ARU	Arti	76.25	328	eP	P	18 12 17.5	-1.6
	comp=Z,18nm,0.8s,mb5.1						
QRN	Al-Qurain	79.19	299	eP	P	18 12 34.6	-1.5
QRN				AMb	AMB	18 12 37.4	
	comp=Z,26nm,0.7s,mb5.2						
UMR	Umm Al-Rimmam	79.42	299	eP	P	18 12 35.4	-2.0
RDF	Al-Radifah	79.53	299	eP	P	18 12 36.5	-1.4
RDF				AMb	AMB	18 12 39.4	
	comp=Z,9.1nm,0.5s,mb5.0						
MIB	Mutribah	79.76	300	eP	P	18 12 37.1	-2.1
MIB				AMb	AMB	18 12 41.3	
	comp=Z,20nm,0.8s,mb5.1						
TTA	Tatalina	82.21	27	eP	P	18 12 52.8	+1.3
TTA				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
TTA	Tatalina	82.21	27	eP	P	18 12 52.8	+1.3
	comp=Z,18nm,1.2s,mb4.9						
MAW	Mawson	82.37	200	eP	P	18 12 52.9	+0.7
MAW				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MAW	Mawson	82.37	200	eP	P	18 12 53.2	+1.0
	comp=Z,3.7nm,0.6s,mb4.5						
MAW	Mawson	82.37	200	P	P	18 12 52.8	+0.6
	comp=Z,8.0nm,1.0s,mb4.6,baz=54,slow=3.6,SNR=8.4						
MAW	Mawson	82.37	200	eP	P	18 12 52.9	+0.7
	comp=Z,1.9nm,1.1s,mb3.9						
GNI	Garni	82.50	310	iP	P	18 12 55.4	+1.9
GNI				pmax	pmax		
	comp=Z,13nm,1.4s						
SBA	Scott Base	82.83	172	eP	P	18 12 55.8	+1.3
SBA				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
SBA	Scott Base	82.83	172	eP	P	18 12 55.8	+1.3
	comp=Z,9.1nm,1.2s,mb4.7						
ZEI	Tsey	83.29	313	eP	P	18 12 56.4	-1.1
ZEI				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
KIV	Kislovodsk	84.23	314	eP	P	18 13 04.7	+2.4
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
PMR	Palmer	85.23	29	eP	P	18 13 07.5	+0.5
VORD	Divnogorie	86.72	321	eP	P	18 13 14.6	0.0
VORD				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.4						
VORD				pmax	pmax		
	comp=N,7.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.8s						
KLMR	Klimovskoe	86.75	331	eP	P	18 13 15.3	+0.8
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.2						
VSR	Storozhevoye	86.80	321	eP	P	18 13 15.7	+0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.5						
VSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
MALT	Malatya	87.36	308	eP	P	18 13 18.7	+0.7
MALT				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
MALT	Malatya	87.36	308	eP	P	18 13 18.6	+0.7
	comp=Z,9.9nm,0.9s,mb5.0						
MALT	Malatya	87.36	308⇑	iP	P	18 13 19.5	+1.5
ANN	Anapa	88.01	315	eP	P	18 13 22.4	+1.5
ANN				pmax	pmax		
	comp=Z,99nm,1.4s,mb5.8						
OBN	Obninsk	88.33	325⇓	eP	P	18 13 22.1	-0.1
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.8						
JOF	Joensuu	90.55	333	eP	P	18 13 31.0	-1.4
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
JOF	Joensuu	90.55	333	ep	P	18 13 31.0	-1.4
	comp=Z,3.8nm,0.6s,mb4.9						
BR131	Keskin Array S	91.04	310	eP	P	18 13 35.8	+0.6
	comp=Z,1.7nm,0.7s,mb4.5						
BRTR	Keskin Array B	91.04	310	P	P	18 13 34.8	-0.5
	comp=Z,2.1nm,0.8s,mb4.5,baz=116,slow=3.7,SNR=9.6						
ARCES	Array B	91.89	340	P	P	18 13 36.9	-1.6
	comp=Z,4.1nm,1.0s,mb4.7,baz=77,slow=6.4,SNR=5.1						
KAF	Kangasniemi	92.96	332	eP	P	18 13 44.7	+1.1
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.8						
KAF	Kangasniemi	92.96	332	ep	P	18 13 44.7	+1.1
	comp=Z,2.3nm,0.5s,mb4.9						
AKASG	Malin Array Be	93.11	321	P	P	18 13 44.0	-0.5
	comp=Z,1.3nm,0.5s,mb4.6,baz=69,slow=4.8,SNR=6.8						
FINES	FINESS Array B	93.19	332	P	P	18 13 44.0	-0.6
	comp=Z,3.1nm,0.7s,mb4.8,baz=96,slow=3.8,SNR=11						
MLR	Muntele Rosu	96.03	316⇑	iP	P	18 13 57.9	-0.1
BURAR	Bucovina Array	96.17	318⇑	iP	P	18 14 01.0	+2.4
BUR08	Bucovina Ar. S	96.18	318	eP	P	18 13 59.8	+1.1
YKA	Yellowknife Ar	100.84	25	P	Pdif	18 14 19.0	-0.3
	comp=Z,0.5nm,0.8s,baz=299,slow=4.6,SNR=6.6						
SCHQ	Schefferville	122.04	9	PKP	PKPdf	18 19 24.4	-0.4
	comp=Z,1.2nm,0.4s,baz=247,slow=1.6,SNR=6.3						
TORD	Torodi Ar. Bea	123.45	287	PKP	PKPdf	18 19 28.4	-0.3
	comp=Z,1.7nm,1.1s,baz=56,slow=2.1,SNR=5.6						
TORD				PKKPbc	PKKPbc	18 29 18.2	+0.7
	comp=Z,0.5nm,0.7s,baz=278,slow=4.0,SNR=5.8						
PLCA	Paso Flores	138.57	160	PKP	PKPdf	18 19 55.4	-1.1
	comp=Z,1.6nm,0.8s,baz=322,slow=6.1,SNR=3.0						
LCO	Las Campanas	148.57	150	ePKPbc	PKPbc	18 20 19.3	+1.3
CPUP	Villa Florida	155.70	171	PKPab	PKPab	18 20 52.1	+0.9
	comp=Z,1.4nm,0.2s,baz=268,slow=1.0,SNR=5.0						

*IDC **07** 18:00:42.3±1.3, 36°.12N×141°.89E, h0km, mb3.7/9, mb1 3.7/14, mb1mx3.7/31, mbtmp3.8/14, ML3.6/5, MS4.0/1, Ms1 4.0/1, ms1mx3.4/40, Error ellipse: s-maj=26.5km s-min=20.2km az=122.0*
*ISCJB **07** 18:00:44.8±1.9, 36°.18N±0°.04×142°.02E±0°.07, h31km±14km, mb3.7/10, Error ellipse: s-maj=10.4km s-min=5.7km az=20.5*
*JMA **07** 18:00:45.7±0.2, 36°.20N×141°.95E, h62km±5km, M3.5*
*NEIC **07** 18:00:48.2±2.8, 36°.04N×141°.80E, h43km±16km, mb4.1/2, Error ellipse: s-maj=47.8km s-min=17.4km az=163.0*
ISC 07 18:00:45.6±1.8, 36°.19N±0°.04×141°.96E±0°.08, h24km±12km, n34, σ0s91/43, mb3.7/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.01	242	P	Pn	18 01 04.3	0.0
CHOJ				eS	Sb	18 01 17.9	+0.5
JHO	Hitachi	1.20	291	P	Pn	18 01 06.1	-0.8
JFK	Kawauchi	1.47	324	P	Pn	18 01 10.1	-0.5
BSO1	Boso 1	1.73	208	P	Pn	18 01 13.9	-0.2
BSO1				eS	Sn	18 01 36.4	+1.0
BSO3	Boso 3	1.82	221	P	Pn	18 01 15.5	+0.1
BSO3				eS	Sn	18 01 36.6	-1.1
JFT	Otama	1.86	316	P	Pn	18 01 16.6	+0.6
JFT				eS	Sn	18 01 37.2	-1.6
JMM	Marumori	1.92	331	P	Pn	18 01 17.3	+0.5
JAG	Ashikaga	2.04	277	P	Pn	18 01 18.5	+0.1
JFY	Yanaizu	2.18	305	P	Pn	18 01 21.5	+1.1
JKT	Katashina	2.26	286	P	Pn	18 01 21.9	+0.4
JRY	Ryogami san	2.48	267	P	Pn	18 01 24.3	-0.2
JOD2	Odawara 2	2.51	249	P	Pn	18 01 25.5	+0.6
JOD2				eS	Sn	18 01 55.4	+0.6
JYN	Shimob	2.86	257	P	Pn	18 01 30.5	+0.8
MJAR	Matsushiro Arr	3.05	278	Pn	Pn	18 01 31.6	-0.7
	5.3nm,0.3s,baz=320,slow=22,SNR=52						
MAJO	Matsushiro	3.05	278	eP	Pn	18 01 33.4	+1.1
MAT	Matsushiro	3.05	278	P	Pn	18 01 32.5	+0.2
MAT				eS	Sn	18 02 12.4	+4.3
JHJ	Hachijo jima 2	3.55	211	Pn	Pn	18 01 38.8	-0.4
	24nm,0.3s,baz=258,slow=23,SNR=6.8						
JHJ				Sn	Sn	18 02 18.8	-1.5
	56nm,0.3s,baz=97,slow=22,SNR=7.0						
JHJ				LR	LR	18 02 22.0	
	comp=Z,2μm,20.2s,baz=276,slow=29						
ASAJ	Asahikawa	7.94	3	Pn	Pn	18 02 38.5	-0.9
	0.8nm,0.3s,baz=203,slow=9.6,SNR=6.9						
ASAJ				Sn	Sn	18 04 06.3	-2.1
	0.4nm,0.3s,baz=40,slow=28,SNR=2.6						
CBIJ	Chichi jima	9.06	179	Pn	Pn	18 02 51.9	-3.1
	4.8nm,0.3s,baz=239,slow=18,SNR=7.1						
CBIJ				Sn	Sn	18 04 26.8	-9.5
	4.3nm,0.3s,baz=293,slow=22,SNR=3.4						
KSRS	Korea Array	11.32	281	Pn	Pn	18 03 24.6	-1.2
	0.1nm,0.3s,baz=96,slow=14,SNR=3.3						
ENH	Enshi	27.71	267	eP	P	18 06 31.3	-0.8
	3.9nm,0.7s,mb4.2						
SONM	Songino Array	28.63	305	P	P	18 06 40.1	+0.1
	1.9nm,0.9s,mb3.8,baz=99,slow=9.5,SNR=8.8						
ZALV	Zalesovo Beam	42.81	313	P	P	18 08 41.5	+0.2
	1.1nm,0.7s,mb3.7,baz=98,slow=7.6,SNR=4.2						
ZALV	Zalesovo Beam	42.81	313	P	P	18 08 41.5	+0.2
MKAR	Makanchi Array	44.95	303	P	P	18 08 59.1	+0.6
	1.0nm,0.7s,mb3.8,baz=106,slow=4.7,SNR=6.2						
KURK	Kurchatov	46.80	309	P	P	18 09 14.2	+1.1
	0.9nm,0.5s,mb4.0,baz=81,slow=7.4,SNR=10.0						
KURK	Kurchatov	46.80	309	eP	P	18 09 13.6	+0.5
	1.3nm,0.7s,mb4.0						
BVAR	Borovoye Array	51.47	313	P	P	18 09 49.3	+0.5
	0.5nm,0.7s,mb3.6,baz=66,slow=3.5,SNR=3.4						
INK	Inuvik	54.94	27	P	P	18 10 15.8	+1.7
	0.2nm,0.4s,mb3.5,baz=262,slow=5.6,SNR=4.1						
YKA	Yellowknife Ar	64.32	30	P	P	18 11 20.2	+1.4
	0.2nm,0.6s,mb3.3,baz=310,slow=4.8,SNR=3.6						
YKA	Yellowknife Ar	64.32	30	P	P	18 11 20.2	+1.4
NOA	NORSAR Array B	75.14	338	P	P	18 12 25.5	+0.1
	1.1nm,0.9s,mb3.8,baz=38,slow=5.8,SNR=2.3						
NOA	NORSAR Array B	75.14	338	P	P	18 12 25.5	+0.1
AKASG	Malin Array Be	75.24	323	P	P	18 12 26.2	+0.1
	0.6nm,0.5s,mb3.8,baz=49,slow=7.0,SNR=3.7						

*TAP **07** 18:02:29.9, 24°.09N×121°.66E, h47km, ML3.0, C*
*JMA **07** 18:02:29.4±0.3, 24°.26N×121°.71E, h78km, M2.3*
*ISCJB **07** 18:02:30.4±0.3, 24°.07N±0°.02×121°.76E±0°.02, h42km±6km, Error ellipse: s-maj=4.1km s-min=2.6km az=143.0*
ISC 07 18:02:30.9±0.3, 24°.08N±0°.02×121°.74E±0°.02, h39km±5km, n39, σ0s88/73, 3C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.13	269⇓	iP	Pn	18 02 37.3	-0.3
	baz=277						
TWD				S	Sn	18 02 42.4	+0.2
	baz=277						
HWA	Hwalien	0.16	230	P	Pn	18 02 37.8	+0.1
	baz=219						
HWA				S	Sn	18 02 43.8	+1.3
	baz=219						
ENA	Nanau	0.34	360⇓	iP	Pn	18 02 39.1	-0.4
	baz=3.0						
ENA				eS	Sn	18 02 46.7	+1.1
	baz=3.0						
ESL	Shilin	0.39	227⇓	eP	Pn	18 02 38.8	-1.4
	baz=225						
ESL				eS	Sn	18 02 44.6	-2.0
	baz=225						
WHF	Hehuan Shan	0.44	278	iP	Pn	18 02 40.1	-0.7
	baz=275						
WHF				S	Sn	18 02 47.3	-0.4
	baz=275						
NNS	Nan Shan	0.49	317	P	Pn	18 02 40.8	-0.7
	baz=326						
NNS				S	Sn	18 02 48.5	-0.3
	baz=326						
TWC	Suao	0.53	11	P	Pn	18 02 42.1	+0.1
	baz=12						
TWC				S	Sn	18 02 51.0	+1.1
	baz=12						
TWT	Tachien	0.54	288	eP	Pn	18 02 41.7	-0.4
	baz=289						
TWT				eS	Sn	18 02 49.7	-0.5
	baz=289						
TWE	Neicheng	0.64	354	eP	Pn	18 02 43.0	-0.5
	baz=355						
TWE				eS	Sn	18 02 52.3	-0.2
	baz=355						
NSK	Sanguang	0.69	329⇑	iP	Pn	18 02 43.5	-0.6
	baz=334						
NSK				S	Sn	18 02 52.5	-1.1
	baz=334						
EHY	Hungye	0.69	214	eP	Pn	18 02 41.9	-2.3
	baz=208						
SMLT	Sun Moon Lake	0.80	256	iP	Pn	18 02 44.8	-0.8
	baz=250						
SMLT				eS	Sn	18 02 55.7	-0.6
	baz=250						
TYC	Yuchr	0.83	258⇑	iP	Pn	18 02 45.2	-0.9
	baz=252						
TYC				eS	Sn	18 02 55.9	-1.2
	baz=252						
TWF1	Yuli	0.83	209	eP	Pn	18 02 43.8	-2.3
	baz=210						
NSTT	Nanjuang	0.87	309	eP	Pn	18 02 46.4	-0.2
	baz=311						
NSTT				eS	Sn	18 02 58.1	0.0
	baz=311						
TWA	Mucha	0.91	351	eP	Pn	18 02 46.5	-0.6
	baz=345						
TWA				eS	Sn	18 02 58.6	-0.3
	baz=345						
TWQ1	Liyutan	0.92	287	⇑P	Pn	18 02 47.2	-0.2
	baz=287						
TWQ1				eS	Sn	18 02 59.6	+0.3
	baz=287						
YUS	Yu-Shan	0.93	231	P	Pn	18 02 47.2	-0.2
	baz=223						
YUS				eS	Sn	18 02 59.2	-0.5
	baz=223						
TWB1	Santiao Chiao	0.95	14	eP	Pn	18 02 47.7	0.0
	baz=27						
TWB1				eS	Sn	18 03 01.7	+1.7
	baz=27						
NSY	Sanyi	0.95	291	eP	Pn	18 02 47.6	-0.2
	baz=291						
NSY				eS	Sn	18 03 01.4	+1.3
	baz=291						
NWF	Wu-fen Shan	0.98	2	eP	Pn	18 02 48.3	+0.1
	baz=350						
NWF				eS	Sn	18 03 02.3	+1.4
	baz=350						
WNT	Mingjian	0.99	258	eP	Pn	18 02 48.3	+0.1
	baz=257						
WNT				eS	Sn	18 03 01.8	+0.8
	baz=257						
ALS	Alishan	1.03	237	eP	Pn	18 02 48.5	-0.3
	baz=227						
ALS				eS	Sn	18 03 01.8	-0.2
	baz=227						
CHN5	Tsauling	1.09	244	P	Pn	18 02 49.4	-0.2
	baz=232						
CHN5				eS	Sn	18 03 06.3	+2.9
	baz=232						
ELDTW	Lidau	1.11	217	eP	Pn	18 02 48.7	-1.2
	baz=208						
WGK	Gukeng	1.15	250	eP	Pn	18 02 50.1	-0.4
	baz=248						
WGK				eS	Sn	18 03 06.0	+1.0
	baz=248						
YOJ	Yonaguni jima	1.22	72	P	Pn	18 02 51.0	-0.4
YOJ				eS	Sn	18 03 07.3	+0.6
CHN4	Tsaushan	1.28	236	eP	Pn	18 02 52.4	+0.1
	baz=224						
CHN4				eS	Sn	18 03 09.8	+1.6
	baz=224						
STYT	Tauyuan	1.29	225	eP	Pn	18 02 52.6	+0.3
	baz=222						
STYT				eS	Sn	18 03 08.9	+0.6
	baz=222						
WTP	Ta-pu	1.33	231	eP	Pn	18 02 52.7	-0.2
	baz=229						
WTP				eS	Sn	18 03 11.3	+1.9
	baz=229						
TWK	Hsinying	1.41	235	eP	Pn	18 02 53.9	-0.1
	baz=233						
CHN1	Nanshi	1.43	231	eP	Pn	18 02 54.4	+0.1
	baz=229						
CHN1				eS	Sn	18 03 13.2	+1.4
	baz=229						
SGST	Jiashian	1.46	227	eP	Pn	18 02 54.9	+0.2
	baz=216						
SGST				eS	Sn	18 03 14.6	+2.0
	baz=216						
SSD	Sandimen	1.68	218	eP	Pn	18 02 58.1	+0.4
	baz=205						
SSD				eS	Sn	18 03 18.8	+0.8
	baz=205						
IRIF	Iriomote-Funau	1.83	82	P	Pn	18 02 59.4	-0.4
IRIF				eS	Sn	18 03 21.6	-0.2
HATJ	Hateruma jima	1.89	90	P	Pn	18 03 00.6	0.0
JKRS	Kuro-shima	2.08	85	P	Pn	18 03 03.6	+0.4
JKRS				eS	Sn	18 03 29.4	+1.6
JIJ	Ishigaki jima	2.21	82	P	Pn	18 03 04.6	-0.4
JIJ				S	Sn	18 03 30.4	-0.7
JTJ	Tarama	2.76	78	P	Pn	18 03 12.4	-0.1
JTJ				eS	Sn	18 03 44.8	+0.2

*IDC **07** 18:04:44.6±1.0, 20°.07N×120°.43E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.6/24, mbtmp3.7/7, Error ellipse: s-maj=76.5km s-min=18.7km az=64.0*
*ISCJB **07** 18:04:49.1±1.3, 20°.06N±0°.07×120°.4E±0°.1, h43km±14km, mb3.7/8, Error ellipse: s-maj=22.7km s-min=11.1km az=178.0*
*NEIC **07** 18:04:49.8±0.6, 20°.01N×120°.36E, h35km, mb3.6/1, Error ellipse: s-maj=50.2km s-min=11.5km az=64.0*
ISC 07 18:04:50.0±1.4, 20°.07N±0°.07×120°.4E±0°.1, h37km±16km, n16, σ1s12/18, mb3.7/8, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	1.49	75	eP	Pn	18 05 13.0	-1.2
PIP	Pasuquin	1.74	174⇓	iP	Pn	18 05 16.0	-1.7
PIP				eS	Sn	18 05 36.3	-2.4
APYP	Conner	2.32	161	eP	Pn	18 05 26.0	+0.2
APYP				eS	Sn	18 05 53.6	+0.5
SGCP	Mt. Cagua	2.37	140	eP	Pn	18 05 26.1	-0.4
ABRA	Dolores	2.42	174	eP	Pn	18 05 27.3	+0.2
CAUP	Cauayan	3.38	157	eP	Pn	18 05 43.3	+3.0
PALP	Palanan	3.54	147	eP	Pn	18 05 43.7	+1.3
BALP	Baler	4.44	166	eP	Pn	18 05 57.6	+2.7
MKAR	Makanchi Array	40.90	320	P	P	18 12 27.6	-1.1
	0.5nm,0.7s,mb3.3,baz=109,slow=7.6,SNR=2.0						
WRAB	Tennant Creek	42.03	160	eP	P	18 12 37.4	-0.7
	0.8nm,0.6s,mb3.5						
WRA	Warramunga Arr	42.03	160	P	P	18 12 37.6	-0.5
	1.8nm,0.8s,mb3.7,baz=342,slow=9.2,SNR=5.2						
ZALV	Zalesovo Beam	43.38	330	P	P	18 12 49.2	+0.5
	0.4nm,0.3s,mb3.6,baz=111,slow=7.9,SNR=3.3						
KURK	Kurchatov	44.87	323	P	P	18 13 01.0	+0.3
	1.5nm,0.8s,mb3.9,baz=125,slow=7.4,SNR=3.0						
ASAR	Alice Springs	45.41	163	P	P	18 13 05.7	+0.4
	0.6nm,0.4s,mb3.8,baz=343,slow=6.8,SNR=12						
GERES	GERESS Array B	85.57	321	P	P	18 17 25.0	+0.6
	0.5nm,0.6s,mb3.9,baz=58,slow=3.3,SNR=7.2						
YKA	Yellowknife Ar	87.02	22	P	P	18 17 31.5	+0.1
	0.2nm,0.5s,mb3.6,ba

az=3.9
JMA **07** 18:11:34.6±0.2, 36.°30N×141.°85E, h58km, M3.6
IDC **07** 18:11:34.8±1.4, 36.°68N×141.°47E, h0km, mb3.7/9, mb1 3.7/12, mb1mx3.6/28, mbtmp3.6/12, ML3.1/1, Error ellipse: s-maj=35.0km s-min=19.9km az=72.0
NEIC **07** 18:11:39.8±0.9, 36.°70N×141.°51E, h35km, mb4.2/1, Error ellipse: s-maj=19.0km s-min=14.7km az=64.0
ISC 07 18:11:34.9±1.6, 36.°26N±0.°04×141.°88E±0.°08, h27km±12km, n34, σ0s94/40, mb3.7/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.00**	**237**	P	**Pn**	**18 11 52.7**	**-0.5**
CHOJ				S	**Sb**	**18 12 06.7**	**+0.4**
JHO	**Hitachi**	**1.12**	**289**	P	**Pn**	**18 11 53.4**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.21**	**314**	P	**Pn**	**18 11 54.9**	**-1.2**
JFK	**Kawauchi**	**1.37**	**324**	P	**Pn**	**18 11 56.4**	**-1.9**
BSO1	**Boso 1**	**1.76**	**205**	P	**Pn**	**18 12 03.6**	**-0.1**
BSO1				S	**Sn**	**18 12 26.8**	**+1.6**
JFT	**Otama**	**1.77**	**316**	P	**Pn**	**18 12 04.0**	**+0.3**
JFT				S	**Sn**	**18 12 26.4**	**+1.1**
JMM	**Marumori**	**1.83**	**332**	P	**Pn**	**18 12 04.9**	**+0.3**
BSO3	**Boso 3**	**1.83**	**218**	P	**Pn**	**18 12 04.6**	**-0.1**
JAG	**Ashikaga**	**1.97**	**276**	P	**Pn**	**18 12 06.1**	**-0.4**
JAG				S	**Sn**	**18 12 29.8**	**-0.5**
JRY	**Ryogami san**	**2.43**	**265**	P	**Pn**	**18 12 12.5**	**-0.3**
JOD2	**Odawara 2**	**2.48**	**247**	P	**Pn**	**18 12 14.0**	**+0.5**
JNS	**Sasagawa**	**2.58**	**308**	P	**Pn**	**18 12 16.2**	**+1.3**
JYN	**Shimob**	**2.82**	**255**	P	**Pn**	**18 12 19.2**	**+1.0**
JYK	**Kaneyama**	**2.92**	**336**	P	**Pn**	**18 12 22.2**	**+2.6**
MJAR	**Matsushiro Arr**	**2.98**	**277**	Pn	**Pn**	**18 12 19.9**	**-0.5**
	11nm,0.3s,baz=92,slow=25,SNR=58						
MAJO	**Matsushiro**	**2.98**	**277**	*e*P	**Pn**	**18 12 21.0**	**+0.6**
MAT	**Matsushiro**	**2.98**	**277**	P	**Pn**	**18 12 21.4**	**+1.0**
MAT				S	**Sn**	**18 12 55.1**	**-0.2**
JHJ	**Hachijo jima 2**	**3.58**	**210**	Pn	**Pn**	**18 12 28.6**	**-0.1**
	29nm,0.3s,baz=80,slow=18,SNR=15						
JHJ				Sn	**Sn**	**18 13 08.0**	**-2.0**
	73nm,0.3s,baz=277,slow=23,SNR=15						
ASAJ	**Asahikawa**	**7.87**	**4**	Pn	**Pn**	**18 13 27.1**	**-0.5**
	0.3nm,0.3s,baz=284,slow=23,SNR=4.3						
KSRS	**Korea Array**	**11.25**	**280**	Pn	**Pn**	**18 14 10.9**	**-3.0**
	baz=93,slow=23,SNR=3.4						
SONM	**Songino Array**	**28.54**	**305**	P	**P**	**18 17 28.5**	**+0.3**
	2.0nm,0.9s,mb3.9,baz=108,slow=11,SNR=8.2						
CMAR	**Chiang Mai Arr**	**41.67**	**257**	P	**P**	**18 19 22.0**	**+0.7**
	0.4nm,0.7s,mb3.1,baz=37,slow=5.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.72**	**313**	P	**P**	**18 19 29.2**	**-0.2**
	1.1nm,0.7s,mb3.7,baz=90,slow=8.9,SNR=5.0						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**18 19 47.0**	**+0.3**
	1.0nm,0.7s,mb3.7,baz=97,slow=7.6,SNR=5.9						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**18 19 47.0**	**+0.3**
KURK	**Kurchatov**	**46.71**	**309**	P	**P**	**18 20 01.9**	**+0.6**
	1.3nm,0.7s,mb4.0,baz=82,slow=7.7,SNR=7.1						
KURK	**Kurchatov**	**46.71**	**309**	*e*P	**P**	**18 20 01.6**	**+0.3**
BVAR	**Borovoye Array**	**51.38**	**313**	P	**P**	**18 20 36.4**	**-0.5**
	0.8nm,0.8s,mb3.7,baz=64,slow=10,SNR=5.1						
BVAR	**Borovoye Array**	**51.38**	**313**	P	**P**	**18 20 36.4**	**-0.5**
BRVK	**Borovoye**	**51.43**	**313**	*e*P	**P**	**18 20 37.8**	**+0.4**
	3.6nm,1.2s,mb4.2						
WRA	**Warramunga Arr**	**56.35**	**189**	P	**P**	**18 21 21.1**	**+7.6**
	0.5nm,0.5s,mb3.8,baz=2.6,slow=7.6,SNR=8.1						
ASAR	**Alice Springs**	**60.07**	**188**	P	**P**	**18 21 46.0**	**+6.4**
	0.1nm,0.4s,mb3.2,baz=23,slow=11,SNR=5.4						
AKASG	**Malin Array Be**	**75.14**	**323**	P	**P**	**18 23 14.0**	**-0.5**
	0.1nm,0.2s,mb3.3,baz=47,slow=5.0,SNR=4.6						
AKASG	**Malin Array Be**	**75.14**	**323**	P	**P**	**18 23 14.0**	**-0.5**

IDC **07** 18:19:54.0±0.4, 36.°14N×141.°54E, h0km, mb4.7/25, mb1 4.8/30, mb1mx4.8/33, mbtmp4.7/30, ML4.1/5, MS4.1/1, Ms1 4.1/1, ms1mx3.3/43, Error ellipse: s-maj=14.1km s-min=10.4km az=109.0
NEIC **07** 18:19:56.7±1.8, 36.°15N×141.°50E, h16km±10km, mb5.0/88, Error ellipse: s-maj=4.4km s-min=3.3km az=151.0
NEIC Recorded [2 JMA] in Chiba, Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma, Miyagi and Saitama.
BJI **07** 18:19:56.0, 36.°19N×141.°35E, h14km, mB5.6/15, mb4.9/55, Ms5.1/25, Ms7 5.0/22
JMA **07** 18:19:57.9±0.2, 36.°23N×141.°54E, h54km±3km, M5.0
JMA Felt II J1.
ISCJB **07** 18:19:58.4±0.7, 36.°20N±0.°02×141.°41E±0.°02, h33km±5km, mb5.0/171, MS5.2/13, Error ellipse: s-maj=4.2km s-min=2.9km az=176.5
SZGRF **07** 18:19:58.1, 36.°15N×141.°81E, h33km, mb5.0, Near east coast of eastern Honshu, Japan
MOS **07** 18:19:59.7±0.8, 36.°56N×141.°42E, h33km, mb5.2/81, MS4.9/4, Error ellipse: s-maj=7.6km s-min=4.1km az=111.2
DJA **07** 18:20:02, 36.°13N×140.°98E, h29km, mb5.4/29
ISC 07 18:19:59.2±0.6, 36.°22N±0.°02×141.°42E±0.°02, h28km±4km, h36km±.9km: pP-P, n706, σ0s71/725, mb5.0/171, MS5.2/13, 209C-156D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.68**	**222**	⇓P	**Pb**	**18 20 12.7**	**+0.1**
CHOJ				S	**Sb**	**18 20 23.8**	**+2.1**
JHO	**Hitachi**	**0.79**	**300**	⇓P	**Pb**	**18 20 13.9**	**-0.5**
JYT	**Yasato**	**0.99**	**271**	P	**Pn**	**18 20 17.1**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.01**	**331**	⇓P	**Pn**	**18 20 16.4**	**-1.2**
JFK	**Kawauchi**	**1.23**	**339**	⇓P	**Pn**	**18 20 19.2**	**-1.4**
JFT	**Otama**	**1.56**	**327**	⇓P	**Pn**	**18 20 25.4**	**+0.3**
JFT				*e*S	**Sn**	**18 20 45.8**	**+1.4**
BSO3	**Boso 3**	**1.59**	**208**	P	**Pn**	**18 20 25.7**	**+0.1**
BSO1	**Boso 1**	**1.60**	**193**	P	**Pn**	**18 20 24.6**	**-1.0**
JAG	**Ashikaga**	**1.60**	**278**	⇓P	**Pn**	**18 20 25.9**	**+0.3**
JMM	**Marumori**	**1.72**	**343**	⇓P	**Pn**	**18 20 26.3**	**-1.0**
JMM				*e*S	**Sn**	**18 20 49.0**	**+0.6**
JFY	**Yanaizu**	**1.82**	**311**	⇓P	**Pn**	**18 20 29.3**	**+0.7**
JIO	**Ouri**	**2.23**	**359**	⇑P	**Pn**	**18 20 33.0**	**-1.4**
JYS	**Shirataka**	**2.27**	**332**	P	**Pn**	**18 20 35.8**	**+0.9**
MJAR	**Matsushiro Arr**	**2.61**	**278**	Pn	**Pn**	**18 20 39.9**	**+0.4**
	204nm,0.3s,baz=209,slow=16,SNR=650						
MJAR				Sn	**Sn**	**18 21 15.8**	**+5.6**
	74nm,0.3s,baz=83,slow=15,SNR=868						
MJAR	**Matsushiro Arr**	**2.61**	**278**	Pn	**Pn**	**18 20 39.9**	**+0.4**
MJAR				Sn	**Sn**	**18 21 15.8**	**+5.6**
MAJO	**Matsushiro**	**2.61**	**278**	*e*P	**Pn**	**18 20 41.0**	**+1.5**
MAT	**Matsushiro**	**2.61**	**278**	P	**Pn**	**18 20 40.9**	**+1.4**
MAT				S	**Sn**	**18 21 17.0**	**+6.7**
JYK	**Kaneyama**	**2.83**	**343**	⇑P	**Pn**	**18 20 42.7**	**+0.2**
JRG	**Rokugo**	**3.23**	**349**	P	**Pn**	**18 20 48.2**	**+0.1**
JHJ	**Hachijo jima 2**	**3.37**	**204**	Pn	**Pn**	**18 20 48.3**	**-1.7**
	164nm,0.3s,baz=140,slow=2.8,SNR=42						
JHJ				Sn	**Sn**	**18 21 27.8**	**-1.3**
	427nm,0.3s,baz=83,slow=22,SNR=7.3						
JHJ				LR	LR	18 22 14.2	
	comp=Z,3μm,19.3s,baz=22,slow=42						
JHE	**Heguri**	**4.93**	**253**	P	**Pn**	**18 21 13.9**	**+2.4**
JWT	**Wachi**	**4.98**	**261**	P	**Pn**	**18 21 14.6**	**+2.5**
ERM	**Erimo**	**5.95**	**13**	Pn	**Pn**	**18 21 23.1**	**-2.3**
	464nm,0.7s,SNR=6.8						
ERM	**Erimo**	**5.95**	**13**	*e*P	**Pn**	**18 21 22.8**	**-2.6**
ERM				pmax	pmax		
	comp=Z,130nm,0.8s						
ERM	**Erimo**	**5.95**	**13**	*e*P	**Pn**	**18 21 22.8**	**-2.6**
	comp=Z,130nm,0.8s						
JTO	**Tosashimizu**	**7.86**	**247**	P	**Pn**	**18 21 54.5**	**+2.9**
ASAJ	**Asahikawa**	**7.94**	**6**	P	**Pn**	**18 21 50.4**	**-2.4**
ASAJ						18 23 17.6	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.94**	**6**	Pn	**Pn**	**18 21 50.4**	**-2.4**
	comp=N,1.9nm,0.3s,baz=217,slow=16,SNR=27						
ASAJ				Sn	**Sn**	**18 23 17.6**	**-4.1**
	comp=N,1.6nm,0.3s,baz=316,slow=32,SNR=3.2						
YUK	**Yuzh-Kuril'sk**	**8.52**	**22**	P	**Pn**	**18 21 57.0**	**-3.7**
YUK				*e*S	**Sn**	**18 23 24.5**	**-11**
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,750nm,0.8s						
CBIJ	**Chichi jima**	**9.12**	**176**	Pn	**Pn**	**18 22 04.8**	**-4.1**
	comp=E,15nm,0.3s,baz=292,slow=2.1,SNR=28						
CBIJ				Sn	**Sn**	**18 23 40.0**	**-11**
	comp=E,52nm,0.3s,baz=303,slow=23,SNR=6.5						
KUR	**Kuril'sk**	**10.25**	**26**	P	**Pn**	**18 22 25.0**	**+0.7**
KUR				S	**Sn**	**18 24 06.0**	**-12**
KUR				pmax	pmax		
	comp=N,100nm,0.9s						
KUR				pmax	pmax		
	comp=E,90nm,0.9s						
KUR				pmax	pmax		
	comp=Z,130nm,0.9s						
KUR				smax			
	comp=N,160nm,0.7s						
KUR				smax			
	comp=E,80nm,0.7s						
YSS	**Yuzh-Sakhalins**	**10.78**	**5**	*e*P	**Pn**	**18 22 29.0**	**-2.6**
YSS				*e*S	**Sn**	**18 24 22.0**	**-9.2**
YSS	**Yuzh-Sakhalins**	**10.78**	**5**	*e*P	**Pn**	**18 22 29.0**	**-2.6**
	comp=E,57nm,0.8s						
KSRS	**Korea Array**	**10.89**	**281**	P	**Pn**	**18 22 36.3**	**+3.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**10.89**	**281**	Pn	**Pn**	**18 22 36.3**	**+3.2**
	comp=Z,0.8nm,0.3s,baz=97,slow=13,SNR=53						
MDJ	**Mudanjiang**	**12.30**	**317**	P	**Pn**	**18 22 54.3**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,41nm,1.2s						
MDJ	**Mudanjiang**	**12.30**	**317**	*e*P	**Pn**	**18 22 53.5**	**+1.0**
	comp=Z,66nm,1.1s						
HABR	**Khabarovsk**	**13.12**	**341**	*e*P	**Pn**	**18 23 02.3**	**-1.2**
HABR						18 25 27.8	
HABR				pmax	pmax		
	comp=Z,44nm,2.1s						
HABR				pmax	pmax		
	comp=N,38nm,2.2s						
HABR				pmax	pmax		
	comp=E,50nm,2.4s						
HABR				MLR	MLR		
	comp=Z,5μm,16.0s						
CN2	**Changchun**	**14.38**	**307**	*e*P	**Pn**	**18 23 20.3**	**-0.5**
CN2				*es*P	sP	18 23 32.5	-6.0
CN2				*e*S	**Sn**	**18 25 59.6**	**+0.4**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,3μm,16.0s						
CN2				LR	LR		
	comp=E,4μm,16.0s						
CN2				LR	LR		
	comp=Z,7μm,14.0s						
JOW	**Kunigami**	**14.59**	**234**	Pn	**Pn**	**18 23 22.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=38,slow=8.1,SNR=3.9						
JOW	**Kunigami**	**14.59**	**234**	Pn	**Pn**	**18 23 22.7**	**-1.0**
KLR	**Kul'dur**	**14.80**	**334**	*e*P	**Pn**	**18 23 20.8**	**-5.7**
SNY	**Shenyang**	**14.95**	**297**	⇑P	**Pn**	**18 23 28.7**	**+0.2**
SNY				pmax	pmax		
	comp=Z,26nm,1.3s						
DL2	**Dalian**	**15.92**	**286**	P	**Pn**	**18 23 42.3**	**+1.1**
DL2				pmax	pmax		
	comp=Z,20nm,1.2s						
TIA	**Tai'an**	**19.59**	**277**	P	**Pn**	**18 24 23.9**	**-2.7**
BJI	**Beijing**	**20.20**	**289**	P	**P**	**18 24 31.2**	**-0.5**
BJI				pP		18 24 40.7	
BJI				sP	sP	18 24 44.3	+1.5
BJI				pmax	pmax		
	comp=Z,34nm,1.2s						
BJT	**Baijiatuao**	**20.20**	**288**	*e*P	**P**	**18 24 31.1**	**-0.7**
BJT				pmax	pmax		
	comp=Z,32nm,0.4s						
BJT	**Baijiatuao**	**20.20**	**288**	*e*P	**P**	**18 24 31.1**	**-0.7**
	comp=Z,32nm,0.4s						
PETK	**Petropavlovsk-**	**20.40**	**29**	P	**P**	**18 24 31.7**	**-2.0**
	comp=Z,10.0nm,0.8s,baz=210,slow=8.3,SNR=9.7						
HIA	**Hailar**	**20.49**	**316**	*e*P	**P**	**18 24 29.7**	**-5.1**
HIA				pmax	pmax		
	comp=Z,31nm,1.1s						
HIA	**Hailar**	**20.49**	**316**	*e*P	**P**	**18 24 29.7**	**-5.1**
	comp=Z,31nm,1.1s						
QZH	**Quanzhou**	**22.58**	**247**	P	**P**	**18 24 55.3**	**-2.1**
WHN	**Wuhan**	**23.26**	**264**	⇑P	**P**	**18 25 03.1**	**-1.5**
NRGR	**Nerungri**	**23.34**	**336**	*e*P	**P**	**18 25 02.8**	**-2.3**
NRGR				S	**S**	**18 29 04.0**	**-12**
NRGR				smax			
	comp=N,78nm,0.8s						
CLNS	**Chul'man**	**23.43**	**337**	*e*P	**P**	**18 25 03.0**	**-3.1**
CLNS				pmax	pmax		
	comp=E,17nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,44nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,59nm,1.1s						
HHC	**Hu-ho-hao-te**	**23.75**	**290**	⇓P	**P**	**18 25 10.0**	**+0.9**
HHC				pP		18 25 19.6	
HHC				sP	sP	18 25 23.5	+2.8
HHC				PP		18 25 43.7	
HHC				PcP	PcP	18 28 54.2	+1.9
HHC				S	**S**	**18 29 22.2**	**-0.3**
HHC				sS	sS	18 29 35.2	-0.7
HHC				SS		18 30 10.0	
HHC				ScP	ScP	18 32 28.1	-0.5
HHC				PcS	PcS	18 32 35.3	+3.5
HHC				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,2μm,5.6s						
HHC				LR	LR		
	comp=N,3μm,14.7s,MS5.1						
HHC				LR	LR		
	comp=E,3μm,13.7s,MS5.1						
HHC				LR	LR		
	comp=Z,3μm,13.9s,MS4.9						
BTO	**Baotou**	**24.92**	**290**	*e*P	**P**	**18 25 20.3**	**+0.5**
CIT	**Chita**	**25.27**	**317**	*e*P	**P**	**18 25 22.1**	**-0.8**
CIT				*e*	pP	18 25 31.7	+0.6
CIT				*e*		18 25 39.7	
CIT				pmax	pmax		
	comp=Z,152nm,1.8s,mb5.2						
XAN	**Xi'an**	**26.60**	**275**	P	**P**	**18 25 34.5**	**-0.7**
XAN				pP	pP	18 25 43.5	+0.2
XAN				sP	sP	18 25 48.2	+1.5
XAN				S	**S**	**18 30 09.3**	**+1.1**
XAN				sS	sS	18 30 24.2	+2.5
XAN				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.3						
XAN				pmax	pmax		
	comp=Z,700nm,14.8s						
XAN				LR	LR		
	comp=N,2μm,18.2s,MS4.7						
XAN				LR	LR		
	comp=E,980nm,15.4s,MS4.7						
XAN				LR	LR		
	comp=Z,770nm,16.4s,MS4.3						
YAK	**Yakutsk**	**26.87**	**348**	*e*P	**P**	**18 25 34.2**	**-3.0**
YAK				*e**PP	pP	18 25 45.8	+0.4
YAK				*e*		18 26 17.8	
YAK				*e*		18 28 56.7	
YAK				*e*S	**S**	**18 30 09.6**	**-2.2**
YAK				*e**SS	sS	18 30 23.3	-2.0
YAK				pmax	pmax		
	comp=Z,115nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,91nm,1.3s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.0						
YAK				smax			
	comp=N,320nm,4.6s						
YAK				smax			
	comp=E,487nm,7.1s						
YAK				MLR	MLR		
	comp=Z,3μm,15.0s,MS5.0						
ENH	**Enshi**	**27.28**	**267**	*e*P	**P**	**18 25 40.6**	**-0.7**
	comp=Z,99nm,0.9s,mb5.3						
SEY	**Seymchan**	**27.59**	**11**	⇓*e*P	**P**	**18 25 44.1**	**+0.4**
ULN	**Ulaanbaatar**	**27.82**	**305**	*e*P	**P**	**18 25 45.6**	**-0.4**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**27.82**	**305**	*e*P	**P**	**18 25 45.6**	**-0.3**
	comp=Z,10nm,1.0s,mb4.4						
BOD	**Bodaibo**	**28.23**	**329**	*e*P	**P**	**18 25 48.6**	**-0.8**
BOD				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.1						
SONM	**Songino Array**	**28.25**	**305**	P	**P**	**18 25 50.0**	**+0.2**
	comp=Z,13nm,0.7s,mb4.7,baz=105,slow=8.7,SNR=75						
LZH	**Lanzhou**	**30.22**	**281**	*e*P	**P**	**18 26 07.6**	**+0.2**
LZH				pP	pP	18 26 15.2	-0.4
LZH				sP	sP	18 26 22.5	+3.5
LZH				S	**S**	**18 31 04.6**	**-0.5**
LZH				sS	sS	18 31 20.4	+1.8
LZH				SS	SS	18 32 45.0	-29
LZH				pmax	pmax		
	comp=Z,69nm,1.5s,mb5.2						
LZH				pmax	pmax		
	comp=Z,200nm,4.0s						
LZH				LR	LR		
	comp=E,4μm,14.9s						
LZH				LR	LR		
	comp=Z,5μm,15.5s,MS5.3						
IRK	**Irkutsk**	**30.66**	**313**	*e*P	**P**	**18 26 10.7**	**-0.3**
IRK				pmax	pmax		
	comp=Z,58nm,2.1s,mb5.0						
ZAK	**Zakamensk**	**30.78**	**309**	*e*P	**P**	**18 26 12.5**	**+0.3**
ZAK				*e*		18 29 07.1	
ZAK				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.9						
TLY	**Talaya**	**30.87**	**312**	P	**P**	**18 26 13.8**	**+0.8**
	comp=Z,252nm,1.0s,mb6.0,SNR=6.8						
TLY	**Talaya**	**30.87**	**312**	*e*P	**P**	**18 26 13.5**	**+0.5**
TLY				*e*		18 27 25.7	
TLY				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.3						
TLY	**Talaya**	**30.87**	**312**	*e*P	**P**	**18 26 13.4**	**+0.4**
	comp=Z,49nm,1.0s,mb5.3						
GYA	**Guiyang**	**31.09**	**262**	P	**P**	**18 26 16.5**	**+1.3**
GYA				pP	pP	18 26 26.9	+3.5
GYA				PP	PP	18 27 19.4	-6.2
GYA				PcP	PcP	18 29 11.8	+1.6
GYA				S	**S**	**18 31 17.6**	**-1.4**
GYA				ScP	ScP	18 32 49.8	-1.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,890nm,16.0s,MS4.6						
GYA				LR	LR		
	comp=E,640nm,17.0s,MS4.6						
GYA				LR	LR		
	comp=Z,880nm,15.0s,MS4.5						
CD2	**Chengdu**	**31.69**	**271**	P	**P**	**18 26 22.6**	**+2.2**
CD2				pP	pP	18 26 32.1	+3.5
CD2				sP	sP	18 26 36.2	+4.2
CD2				PP	PP	18 27 28.4	-3.7
CD2				S	**S**	**18 31 29.4**	**+1.2**
CD2				sS	sS	18 31 45.4	+3.7
CD2				SS	SS	18 33 21.2	-23
CD2				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.4						
CD2				pmax	pmax		
	comp=Z,1μm,5.2s						
CD2				LR	LR		
	comp=Z,23μm,16.2s,MS5.9						
MOY	**Mondy**	**32.47**	**311**	*e*P	**P**	**18 26 27.7**	**+0.7**
MOY				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.0						
GTA	**Gaotai**	**32.81**	**288**	*e*P	**P**	**18 26 30.4**	**+0.2**
GTA				pP	pP	18 26 39.4	+1.0
GTA				sP	sP	18 26 43.7	+1.9
GTA				PcP	PcP	18 29 15.5	+0.8
GTA				S	**S**	**18 31 45.6**	**0.0**
GTA				sS	sS	18 32 01.5	+2.4
GTA				SS	SS	18 33 45.8	-21
GTA				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.1						
GTA				pmax	pmax		
	comp=Z,2μm,6.6s						
GTA				LR	LR		
	comp=N,2μm,18.0s,MS5.1						
GTA				LR	LR		
	comp=E,3μm,20.7s,MS5.1						
GTA				LR	LR		
	comp=Z,2μm,16.2s,MS4.9						
BILL	**Bilibino**	**34.81**	**16**	*e*P	**P**	**18 26 46.4**	**-0.8**
BILL				*i*		18 27 02.3	
BILL				*e*		18 28 06.3	
BILL				*e*		18 29 20.0	
BILL				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8						
BILL	**Bilibino**	**34.81**	**16**	*e*P	**P**	**18 26 46.0**	**-1.2**
	comp=Z,11nm,1.0s,mb4.7						
KMI	**Kunming**	**34.85**	**262**	⇓P	**P**	**18 26 48.1**	**+0.1**
KMI				pP	pP	18 26 59.5	+3.2
KMI				PP	PP	18 28 07.5	+0.3
KMI				S	**S**	**18 32 17.0**	**-0.3**
KMI				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
KMI				LR	LR		
	comp=N,2μm,18.4s,MS5.2						
KMI				LR	LR		
	comp=E,3μm,15.6s,MS5.2						
KMI				LR	LR		
	comp=Z,3μm,21.3s						
TIXI	**Tiksi**	**36.10**	**353**	*e*P	**P**	**18 26 57.2**	**-1.0**
CHTO	**Chiang Mai**	**41.10**	**257**	*e*P	**P**	**18 27 40.7**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,32nm,1.5s,mb4.7						
CHTO	**Chiang Mai**	**41.10**	**257**	*e*P	**P**	**18 27 40.7**	**-0.1**
	comp=Z,32nm,1.5s,mb4.7						
WMQ	**Urumqi**	**41.22**	**298**	P	**P**	**18 27 42.7**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.2						
CM31	**Chiang Mai Arr**	**41.30**	**256**	*e*P	**P**	**18 27 42.5**	**+0.1**
	comp=Z,2.7nm,0.5s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.30**	**256**	P	**P**	**18 27 42.6**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.1,baz=49,slow=5.6,SNR=42						
LSA	**Lhasa**	**42.29**	**276**	P	**P**	**18 27 52.0**	**+1.5**
LSA				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
LSA	**Lhasa**	**42.29**	**276**	*e*P	**P**	**18 27 51.9**	**+1.4**
LSA				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.9						
LSA	**Lhasa**	**42.29**	**276**	*e*P	**P**	**18 27 51.9**	**+1.4**
	comp=Z,32nm,0.9s,mb4.9						
ZAA0	**Zalesovo Array**	**42.47**	**313**	*e*P	**P**	**18 27 51.2**	**-0.4**
ZAA0				*e*		18 28 02.3	
ZALV	**Zalesovo Beam**	**42.47**	**313**	P	**P**	**18 27 51.9**	**+0.3**
	comp=Z,24nm,0.8s,mb4.9,baz=90,slow=6.9,SNR=105						
ZALV				PcP	PcP	18 29 43.4	-0.6
	comp=Z,6.3nm,0.8s,baz=108,slow=3.2,SNR=4.5						
NVS	**Novosibirsk**	**43.41**	**314**	⇑*i*P	**P**	**18 27 59.0**	**-0.2**
NVS				*e*S	**S**	**18 34 25.2**	**-0.1**
NVS				pmax	pmax		
	comp=Z,129nm,1.9s,mb5.3						
NVS				pmax	pmax		
	comp=N,14nm,1.3s						
NVS				pmax	pmax		
	comp=E,105nm,1.6s						
NVS				smax			
	comp=N,15nm,1.9s						
MK31	**Makanchi Array**	**44.56**	**303**	*e*P

comp=Z,104nm,1.3s,mb5.7
GKN Gorkha 48.20 277 *e*P **P 18 28 38.0 +0.6**
comp=Z,342nm,1.1s
KOLN Koldanda 49.13 277 *e*P **P 18 28 45.2 +0.7**
comp=Z,117nm,1.2s,mb5.8
KAKA Kakadu 49.39 192 *e*P **P 18 28 44.8 -1.7**
comp=Z,42nm,0.8s,mb5.5
KAKA Kakadu 49.39 192 *e*P **P 18 28 44.0 -2.5**
comp=Z,122nm,0.8s,mb6.0
PYUN Piuthan 49.48 278 *e*P **P 18 28 48.0 +0.8**
comp=Z,84nm,0.8s,mb5.8
ULHL Ulahol 49.75 298 P **P 18 28 49.9 +0.8**
SNR=23
COLA College 49.77 32 *e*P **P 18 28 49.1 +0.2**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.9
COLA College 49.77 32 *e*P **P 18 28 49.1 +0.3**
comp=Z,11nm,0.8s,mb4.9
TKM2 Tokmak 2 50.02 299 P **P 18 28 52.3 +1.2**
SNR=20
TKM2 Tokmak 2 50.02 299 *e*P **P 18 28 52.2 +1.1**
TKM2 pmax pmax
comp=Z,46nm,0.9s,mb5.5
TKM2 Tokmak 2 50.02 299 *e*P **P 18 28 52.2 +1.1**
comp=Z,46nm,0.9s,mb5.5
KZA Kyzart 50.51 298 P **P 18 28 57.0 +2.2**
SNR=34
CHMS Chumysh 50.60 299 P **P 18 28 56.3 +0.8**
SNR=11
USP Ospenovka 50.70 300 P **P 18 28 56.9 +0.7**
SNR=18
FRU Bishkek 50.74 299 *e*P **P 18 28 57.0 +0.5**
FRU pmax pmax
comp=Z,90nm,1.8s,mb5.4
KSH Kashi 50.75 295 *e*P **P 18 29 00.7 +4.1**
KSH *e*pP pP 18 29 09.9 +4.8
KSH *e*sP sP 18 29 13.8 +5.3
KSH *e*PcP PcP 18 30 16.8 +3.4
KSH *e*PP PP 18 30 57.7 +5.0
KSH *e*ScP ScP 18 34 08.8 +1.2
KSH *e*PcS PcS 18 34 12.9 +2.1
KSH *e*S **S 18 36 13.4 +3.1**
KSH *e*sS sS 18 36 30.9 +6.5
KSH *e*ScS ScS 18 38 44.9 -0.6
KSH *e*SS SS 18 39 46.8 +2.1
KSH pmax pmax
comp=Z,100nm,2.7s,mb5.3
KSH LR LR
comp=N,1µm,15.3s,MS5.4
KSH LR LR
comp=E,2µm,14.2s,MS5.4
AAK Ala-Archa 50.88 299 P **P 18 28 58.0 +0.4**
comp=E,102nm,1.1s,mb5.7,SNR=16
AAK Ala-Archa 50.88 299 P **P 18 28 58.4 +0.8**
SNR=18
AAK Ala-Archa 50.88 299 *e*P **P 18 28 58.2 +0.6**
AAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
AAK Ala-Archa 50.88 299 *e*P **P 18 28 58.2 +0.6**
comp=Z,3.8nm,0.9s,mb4.3
UCH Uchtor 50.99 298 P **P 18 29 00.1 +1.7**
SNR=13
BVAR Borovoye Array 51.13 313 P **P 18 28 59.3 0.0**
comp=Z,16nm,0.9s,mb5.0,baz=79,slow=7.7,SNR=85
BRVK Borovoye 51.18 313 P **P 18 28 59.9 +0.2**
comp=Z,184nm,0.9s,mb6.0,SNR=21
BRVK Borovoye 51.18 313*c i*P **P 18 28 59.8 +0.1**
BRVK pmax pmax
comp=Z,83nm,2.5s,mb5.2
BRVK Borovoye 51.18 313 *e*P **P 18 28 59.7 0.0**
comp=Z,34nm,1.0s,mb5.2
PSI Prapat 51.38 240 P **P 18 29 00.8 -0.9**
comp=Z,11nm,0.8s,mb4.8,baz=4.1,slow=4.6,SNR=9.9
EKS2 Erkin-Say 51.38 299 P **P 18 29 02.2 +0.8**
SNR=17
AML Almayashu 51.60 299 P **P 18 29 04.6 +1.6**
SNR=66
AML Almayashu 51.60 299 *e*P **P 18 29 04.4 +1.4**
comp=Z,190nm,0.9s,mb6.0
MENT Mentasta 51.71 34 *e*P **P 18 29 04.0 +0.5**
SVE Sverdlovsk 55.76 319⇓*e*P **P 18 29 33.5 +0.3**
SVE pmax pmax
comp=Z,54nm,1.1s,mb5.5
FITZ Fitzroy Crossi 56.05 198 *e*P **P 18 29 35.1 -0.5**
comp=Z,21nm,1.2s,mb5.0
FITZ Fitzroy Crossi 56.05 198 P **P 18 29 34.7 -1.0**
comp=Z,3.6nm,0.8s,mb4.5,baz=21,slow=8.6
FITZ Fitzroy Crossi 56.05 198 *e*P **P 18 29 35.0 -0.7**
comp=Z,26nm,1.3s,mb5.1
WRAB Tennant Creek 56.24 188 *e*P **P 18 29 35.5 -1.5**
WRAB pmax pmax
comp=Z,17nm,0.8s,mb5.1
WRAB Tennant Creek 56.24 188 *e*P **P 18 29 35.5 -1.5**
comp=Z,17nm,0.8s,mb5.1
WB2 Warramunga Arr 56.25 188 *e*P **P 18 29 35.3 -1.7**
WRA Warramunga Arr 56.25 188 P **P 18 29 35.6 -1.5**
comp=Z,7.3nm,0.8s,mb4.7,baz=5.7,slow=7.4,SNR=36
ARU Arti 56.98 319 P **P 18 29 41.6 -0.3**
comp=Z,303nm,1.2s,mb6.2,SNR=20
ARU Arti 56.98 319*c i*P **P 18 29 41.5 -0.4**
ARU S **S 18 37 34.8 +0.7**
ARU SS SS 18 41 15.8 -6.4
ARU pmax pmax
comp=Z,95nm,1.7s,mb5.5
ARU Arti 56.98 319 *e*P **P 18 29 41.7 -0.2**
comp=Z,50nm,0.9s,mb5.5
SOKR Solikamsk 56.98 323*c i*P **P 18 29 41.7 -0.2**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
KBL Kabul 57.71 291 *e*P **P 18 29 47.2 -0.3**
KBL pmax pmax
comp=Z,12nm,0.8s,mb5.0
KBL Kabul 57.71 291 *e*P **P 18 29 47.2 -0.3**
comp=Z,12nm,0.8s,mb5.0
HYB Hyderabad 58.19 269 *i*P **P 18 29 51.0 0.0**
ASAR Alice Springs 59.98 188 P **P 18 30 01.8 -1.3**
comp=Z,2.0nm,0.8s,mb4.2,baz=9.2,slow=7.6,SNR=25
ALE Alert 60.93 3 P **P 18 30 08.5 -0.5**
comp=Z,85nm,0.9s,mb5.9,SNR=5.5
SPB4 Spitsbergen Ar 61.33 349 *e*P **P 18 30 12.4 +0.7**
KBS Kingsbay 61.46 350⇑*i*P **P 18 30 12.5 -0.1**
KBS pmax pmax
comp=Z,21nm,1.2s,mb5.1
LVZ Lovozero 62.86 336*ce*P **P 18 30 20.8 -1.3**
LVZ pmax pmax
comp=Z,23nm,1.7s,mb5.0
APA Apatity 63.43 336⇓*i*P **P 18 30 26.8 +0.9**
APA *i* pP 18 30 36.0 +1.4
APA pmax pmax
comp=Z,23nm,1.0s,mb5.3
APA MLR MLR
comp=Z,2µm,19.0s,MS5.3
KEV Kevo 64.21 339 *e*P **P 18 30 29.4 -1.6**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KEV Kevo 64.21 339 *e*p **P 18 30 29.4 -1.6**
comp=Z,6.8nm,0.8s,mb4.7
ABKT Ailbek 64.23 299 P **P 18 30 32.0 +0.3**
comp=Z,72nm,0.9s,mb5.7,SNR=5.3
KLMR Klimovskoe 64.45 328⇑*i*P **P 18 30 32.3 -0.4**
KLMR pmax pmax
comp=Z,59nm,1.6s,mb5.4
YKA Yellowknife Ar 64.52 30 P **P 18 30 32.2 -0.8**
comp=Z,2.9nm,0.7s,mb4.4,baz=302,slow=6.7,SNR=47
YKA Yellowknife Ar 64.52 30 P **P 18 30 32.2 -0.9**
ARCES ARCESS Array B 64.76 340 P **P 18 30 34.8 +0.2**
comp=Z,11nm,0.8s,mb4.9,baz=52,slow=7.9,SNR=26
DAG Danmarks Havn 66.59 355⇓*i*P **P 18 30 45.9 -0.4**
DAG pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
DAG Danmarks Havn 66.59 355⇓*i*P **P 18 30 45.9 -0.4**
comp=Z,8.9nm,0.7s,mb4.9
JOF Joensuu 66.69 332 *e*P **P 18 30 44.6 -2.5**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JOF Joensuu 66.69 332 *e*p **P 18 30 44.6 -2.5**
comp=Z,7.2nm,0.6s,mb4.9
ARMA Armidale 66.97 170 *e*P **P 18 30 47.0 -2.2**
NLWA Neilton Lookou 67.27 47⇑P **P 18 30 51.7 +0.7**
baz=67
STKA Stephens Creek 67.74 180 *e*P **P 18 30 52.0 -2.0**
comp=Z,2.3nm,0.8s,mb4.3
STKA Stephens Creek 67.74 180 P **P 18 30 51.9 -2.2**
comp=Z,1.2nm,0.6s,mb4.1,baz=321,slow=11,SNR=4.2
FORT Forrest 67.81 192 *e*P **P 18 30 53.7 -0.8**
comp=Z,19nm,0.6s,mb5.3
FORT Forrest 67.81 192 *e*P **P 18 30 53.3 -1.2**
comp=Z,22nm,0.6s,mb5.4
E03A Lebam 67.86 48⇓P **P 18 30 55.4 +0.5**
baz=68
MOS Moscow 67.91 324 *e*P **P 18 30 53.3 -1.7**
MOS pmax pmax
comp=Z,87nm,1.5s,mb5.6
JCW Jim Creek 68.01 46 *e*P **P 18 30 55.8 +0.1**
A07A Ashnola River, 68.46 44⇓P **P 18 30 59.0 +0.4**
baz=68
D05A Enumclaw 68.48 47⇑P **P 18 30 59.2 +0.5**
baz=68
OBN Obninsk 68.75 323*c i*P **P 18 30 59.8 -0.5**
OBN *e* 18 31 30.9
OBN *e* 18 33 31.2
OBN pmax pmax
comp=Z,78nm,1.6s,mb5.4
F04A Amboy 68.86 48⇑P **P 18 31 01.4 +0.3**
baz=69
B07A Winthrop 68.92 45⇓P **P 18 31 01.8 +0.4**
baz=69
NLW Nelson Butte 68.99 45 P **P 18 31 02.1 +0.2**
KAF Kangasniemi 69.04 333 *e*P **P 18 30 59.8 -2.1**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KAF Kangasniemi 69.04 333 *e*p **P 18 30 59.8 -2.1**
comp=Z,6.3nm,0.5s,mb4.8
A08A Turner Farm, O 69.14 44⇓P **P 18 31 02.9 +0.1**
baz=69
D06A Cle Elum 69.15 46⇑P **P 18 31 03.0 +0.1**
baz=69
ETW Entiat 69.24 46 *e*P **P 18 31 03.3 -0.1**
comp=Z,20nm,0.7s,mb5.2
C07A Waterville 69.35 46⇑P **P 18 31 04.0 -0.1**
baz=69
E06A Yakima 69.41 47⇓P **P 18 31 04.3 -0.1**
baz=69
B08A Colville Reser 69.42 45⇓P **P 18 31 03.6 -0.9**
baz=69
A09A Danville 69.52 44⇑P **P 18 31 05.1 0.0**
baz=69
FINES FINESS Array B 69.54 332 P **P 18 31 04.7 -0.3**
comp=Z,20nm,0.9s,mb5.1,baz=55,slow=7.2,SNR=56
VSR Storozhevoye 69.55 319 *e*P **P 18 31 04.8 -0.5**
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,20nm,0.8s
VORD Divnogorie 69.62 319 *e*P **P 18 31 05.1 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,20nm,1.0s
H04A Detroit Lake 69.64 49⇑P **P 18 31 06.0 0.0**
baz=69
D07A Quincy 69.66 46⇑P **P 18 31 06.1 +0.1**
baz=70
C08A Higginbotham F 69.88 45⇑P **P 18 31 07.3 -0.1**
baz=70
FRIS Frissel Point 69.93 50 P **P 18 31 08.3 +0.5**
B09A Rice 70.05 44⇑P **P 18 31 08.4 0.0**
baz=70
A10A Northport 70.08 43⇓P **P 18 31 09.0 +0.4**
baz=70
OD2 Odessa Site #2 70.28 45 P **P 18 31 09.6 -0.3**
G06A Carlson Farm, 70.29 48⇑P **P 18 31 09.9 0.0**
baz=70
C09A Chrisman Ranch 70.31 45⇑P **P 18 31 09.9 -0.1**
baz=70
D08A Wollman Farm, 70.34 46⇓P **P 18 31 10.1 -0.1**
baz=70
F07A Phinny Hill Vi 70.37 47⇓P **P 18 31 10.1 -0.3**
baz=70
E08A Dider Farm, El 70.56 46⇑P **P 18 31 11.3 -0.3**
baz=70
VIPM Ingram Point 70.69 49 P **P 18 31 12.8 +0.4**
D09A Jones Farm, Ri 70.69 45⇑P **P 18 31 12.5 +0.1**
baz=70
H06A Lindquist Farm 70.74 48⇓P **P 18 31 12.7 0.0**
baz=70
A11A Hall Mountain, 70.76 43⇑P **P 18 31 12.8 0.0**
baz=71
B11A Sandpoint 71.04 43⇓P **P 18 31 14.6 +0.1**
baz=71
E09A Wood Farm, Sta 71.08 46⇓P **P 18 31 14.8 +0.1**
baz=71
F08A Pendleton 71.10 47⇑P **P 18 31 15.1 +0.2**
baz=71
VSU Vasula 71.16 330*c i*P **P 18 31 14.9 -0.1**
VSU pmax pmax
comp=Z,51nm,1.1s,mb5.4
G08A Pilot Rock 71.26 47⇓P **P 18 31 16.0 +0.1**
baz=71
D10A Wagner Farm, O 71.29 45⇓P **P 18 31 15.6 -0.4**
baz=71
ZEI Tsey 71.33 310 *e*P **P 18 31 14.3 -2.0**
ZEI pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LNOR Lincton Mounta 71.35 47 *e*P **P 18 31 17.0 +0.6**
LNOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LNOR Lincton Mounta 71.35 47 *e*P **P 18 31 16.9 +0.6**
comp=Z,4.8nm,0.8s,mb4.5
KIV Kislovodsk 71.44 311 P **P 18 31 17.4 +0.4**
comp=Z,264nm,1.0s,mb6.1,SNR=6.7
KIV Kislovodsk 71.44 311 *e*P **P 18 31 12.9 -4.1**
KIV pmax pmax
comp=Z,43nm,1.0s,mb5.3
KIV Kislovodsk 71.44 311 *e*P **P 18 31 17.7 +0.7**
comp=Z,53nm,1.0s,mb5.4
K05A Summer Lake 71.46 50⇑P **P 18 31 17.9 +0.8**
baz=71
SUMG Summit 71.50 360 *e*P **P 18 31 17.2 +0.4**
comp=Z,22nm,1.0s,mb5.0
I07A Izee 71.59 49⇓P **P 18 31 18.2 +0.4**
baz=71
D11A Klaveano Farm, 71.83 45⇓P **P 18 31 19.1 -0.1**
baz=72
A13A Flathead Natio 71.84 42⇓P **P 18 31 18.9 -0.4**
baz=72
H08A Prairie City 71.86 48⇑P **P 18 31 19.5 +0.1**
baz=72
G09A Cove 71.97 47⇓P **P 18 31 20.0 -0.1**
baz=72,SNR=5.4
B13A Whitefish 72.13 43⇓P **P 18 31 21.1 +0.1**
baz=72
GNI Garni 72.20 307*ce*P **P 18 31 22.6 +1.0**
GNI pmax pmax
comp=Z,36nm,1.7s
GNI Garni 72.20 307 *e*P **P 18 31 22.4 +0.9**
comp=Z,56nm,1.4s,mb5.3
BSMT Bassoo Peak 72.25 43 *e*P **P 18 31 21.0 -0.7**
comp=Z,2.0nm,0.8s,mb4.1
E11A Bogner Ranch, 72.29 45⇑P **P 18 31 22.0 0.0**
baz=72
A14A Double T Ranch 72.36 42⇓P **P 18 31 22.3 -0.1**
baz=72
H09A Durkee 72.38 47⇑P **P 18 31 22.9 +0.3**
baz=72
C13A Hot Springs 72.46 43⇓P **P 18 31 23.2 +0.1**
baz=72
BMO Blue Mountains 72.48 47 *e*P **P 18 31 22.9 -0.3**
BMO *e* 18 31 33.8
BMO pmax pmax
comp=Z,13nm,0.8s,mb4.9
BMO Blue Mountains 72.48 47 *e*P **P 18 31 22.9 -0.3**
comp=Z,13nm,0.8s,mb4.9
BMO *e* 18 31 33.8
F11A Grangeville 72.58 46⇓P **P 18 31 23.6 -0.1**
baz=72,SNR=8.6
JTMT Jette 72.59 43 *e*P **P 18 31 23.6 -0.2**
comp=Z,12nm,0.9s,mb4.8
JTMT *e* 18 31 34.9
J08A Circle Bar Ran 72.61 49⇓P **P 18 31 24.1 +0.1**
baz=72
YBMT Yellow Bay 72.67 43 *e*P **P 18 31 23.6 -0.6**
comp=Z,12nm,1.1s,mb4.7
I09A Lost Marbles R 72.71 48⇓P **P 18 31 24.8 +0.2**
baz=72
D13A Huson 72.86 44⇓P **P 18 31 25.3 -0.1**
baz=73
SWMT Swartz Lake 72.88 43 *e*P **P 18 31 25.4 -0.1**
comp=Z,21nm,1.1s,mb5.0
SWMT *e* 18 31 36.4
J09A Fry Pan Ranch, 73.05 49⇑P **P 18 31 26.7 +0.1**
baz=73
IZAR Zarasai 73.10 328 *e*P **P 18 31 26.5 -0.1**
IDID Didziasalis 73.17 327 *e*P **P 18 31 26.9 -0.2**
F12A Elk City 73.17 45⇑P **P 18 31 27.1 -0.1**
baz=73,SNR=12
B15A Bradely Ranch, 73.20 42⇓P **P 18 31 27.4 0.0**
baz=73,SNR=11
I10A Payette 73.21 47⇓P **P 18 31 27.5 0.0**
baz=73
ISAL Salakas 73.27 328 *e*P **P 18 31 27.6 0.0**
SLMT Seeley Lake 73.32 43 *e*P **P 18 31 27.5 -0.6**
comp=Z,37nm,1.1s,mb5.2
H11A Donnelly 73.33 47⇑P **P 18 31 27.8 -0.4**
baz=73,SNR=5.1
A16A West Butte Ran 73.35 41⇓P **P 18 31 27.9 -0.3**
baz=73
BEKR Beckwourth 73.35 53⇑P **P 18 31 28.4 0.0**
baz=73
E13A Victor 73.39 44⇓P **P 18 31 28.4 -0.1**
baz=73
D14A Greenough 73.40 44⇑P **P 18 31 28.1 -0.5**
baz=73
NACGM Naroch 73.41 327 *e* P **P 18 31 25.0 -3.5**
G12A Big Creek, Yel 73.49 46⇑P **P 18 31 28.7 -0.4**
baz=73
C15A Salmond Ranch, 73.49 43⇓P **P 18 31 29.4 +0.3**
baz=73,SNR=13
B16A M & M Farms, S 73.61 42⇑P **P 18 31 29.6 -0.2**
baz=73,SNR=5.9
CHMT Chamberlain Mo 73.64 44 *e*P **P 18 31 28.6 -1.4**
comp=Z,4.6nm,1.1s,mb4.3
CHMT *e* 18 31 40.5
F13A Darby 73.68 45⇓P **P 18 31 30.0 -0.3**
baz=74,SNR=5.9
A17A Triple J Farms 73.83 41⇓P **P 18 31 30.9 -0.2**
baz=74
K10A MacKenzie Ranc 73.91 49⇑P **P 18 31 31.6 0.0**
baz=74
C16A Fuhringer Ranc 73.95 42⇑P **P 18 31 31.6 -0.2**
baz=74
D15A Lincoln 73.97 43⇓P **P 18 31 32.0 0.0**
baz=74
WCN Washoe City 74.05 53⇑P **P 18 31 32.8 +0.3**
baz=74
H12A Diamond D Ranc 74.10 46⇑P **P 18 31 32.1 -0.6**
baz=74,SNR=5.5
B17A L&G Farms, Che 74.17 41⇑P **P 18 31 33.0 -0.1**
baz=74,SNR=9.9
MFID Camas Ranch 74.17 48⇑P **P 18 31 33.4 +0.2**
baz=74
E15A Deer Lodge 74.27 44⇓P **P 18 31 33.6 -0.1**
baz=74
A18A Metzger Ranch, 74.29 40⇑P **P 18 31 33.5 -0.3**
baz=74
I12A Atlanta 74.37 47⇑P **P 18 31 34.4 +0.1**
baz=74,SNR=8.0
FFC Flin Flon 74.39 33 P **P 18 31 33.2 -1.0**
comp=Z,70nm,0.9s,mb5.6,SNR=6.4
FFC Flin Flon 74.39 33 *i*P **P 18 31 33.7 -0.5**
FFC Flin Flon 74.39 33 *e*P **P 18 31 33.3 -0.9**
comp=Z,11nm,0.9s,mb4.8
K11A Parker Ranch, 74.42 48⇑P **P 18 31 34.9 +0.2**
baz=74
H13A Challis 74.44 46⇓P **P 18 31 34.4 -0.3**
baz=74,SNR=8.2
D16A Dana Ranch, Ca 74.51 43⇑P **P 18 31 34.9 -0.2**
baz=74,SNR=7.8
HRY Holter Researc 74.55 43 *e*P **P 18 31 35.1 -0.2**
comp=Z,24nm,0.8s,mb5.2
HRY *e* pP 18 31 44.3 +0.1
L10A Juniper Basin 74.55 49⇓P **P 18 31 35.5 +0.1**
baz=74
C17A Wharram Farm, 74.58 42⇑P **P 18 31 35.2 -0.3**
baz=74
B18A Beardsley Farm 74.65 41⇑P **P 18 31 35.8 0.0**
baz=74,SNR=5.6
F15A Butte 74.70 44⇑P **P 18 31 36.6 +0.4**
baz=74,SNR=20
J12A Stokes Ranch, 74.70 47⇑P **P 18 31 37.0 +0.7**
baz=74
LRM Limekiln Ridge 74.73 44 *e*P **P 18 31 36.1 -0.2**
comp=Z,164nm,0.8s,mb6.0
LRM *e* 18 31 47.0
E16A East Helena 74.74 43⇑P **P 18 31 36.6 +0.1**
baz=74,SNR=7.5
M10A I.L. Ranch, Tu 74.83 50⇓P **P 18 31 37.3 +0.3**
baz=75
EGMT Eagleton 74.88 41⇓P **P 18 31 37.3 +0.1**
baz=75
I13A Wildhorse Cree 74.90 46⇑P **P 18 31 37.5 +0.1**
baz=75
DLMT Dillon 74.92 45 *e*P **P 18 31 37.5 +0.1**
comp=Z,19nm,0.8s,mb5.1
DLMT *e* 18 31 49.0
HLID Hailey 74.93 47⇑P **P 18 31 37.8 +0.2**
baz=75
L11A Cat Creek Ranc 74.94 49⇑P **P 18 31 38.1 +0.5**
baz=75
NB2 NORSAR Subarra 74.94 337 P **P 18 31 36.7 -0.6**
comp=Z,18nm,0.8s,mb5.1,baz=39,slow=5.9
NOA NORSAR Array B 74.94 337 P **P 18 31 37.1 -0.2**
comp=Z,13nm,0.8s,mb4.9,baz=39,slow=5.7,SNR=43
AKASG Malin Array Be 74.95 322 P **P 18 31 37.0 -0.5**
comp=Z,13nm,0.6s,mb5.0,baz=47,slow=6.0,SNR=73
AKBB Malin Array Si 74.95 322 *e*P **P 18 31 36.7 -0.8**
KIEV Kiev 74.96 322 *e*P **P 18 31 36.8 -0.8**
KIEV pmax pmax
comp=Z,26nm,0.9s,mb5.2
KIEV Kiev 74.96 322 *e*P **P 18 31 36.8 -0.8**
comp=Z,26nm,0.9s,mb5.2
LCCM Lewis and Clar 75.04 44 P **P 18 31 38.3 +0.1**
MCMT McKenzie Canyo 75.09 45 *e*P **P 18 31 38.8 +0.3**
comp=Z,1.2nm,0.7s,mb3.9
K12A Draper Farm, C 75.18 48⇑P **P 18 31 39.1 +0.1**
baz=75
NAO01 NORSAR Array S 75.19 337 *e*P **P 18 31 38.3 -0.5**
comp=Z,11nm,0.9s,mb4.8
F16A Kennard Place, 75.22 44⇓P **P 18 31 39.3 +0.1**
baz=75
E17A Martinsdale 75.23 43⇑P **P 18 31 39.2 -0.1**
baz=75,SNR=8.9
BOZ Bozeman (W) 75.30 44⇓P **P 18 31 39.9 +0.3**
baz=75
BOZ Bozeman (W) 75.30 44 *e*P **P 18 31 39.4 -0.2**
BOZ *e* 18 31 50.7
BOZ pmax pmax
comp=Z,12nm,0.8s,mb4.9
BOZ Bozeman (W) 75.30 44 *e*P **P 18 31 39.4 -0.2**
comp=Z,12nm,0.8s,mb4.9
BOZ *e* 18 31 50.7
M11A Holland Ranch, 75.34 49⇑P **P 18 31 40.6 +0.7**
baz=75
G16A Moss Hill, Enn 75.45 44⇓P **P 18 31 40.7 +0.1**
baz=75
NVAR Mina Array Bea 75.48 53 P **P 18 31 41.3 +0.4**
comp=Z,3.1nm,0.7s,mb4.4,baz=287,slow=5.5,SNR=16
O10A Cortez Mining, 75.56 51⇑P **P 18 31 41.9 +0.7**
baz=75
SUW Suwalki 75.58 328 *e*P **P 18 31 40.9 -0.2**
SUW Suwalki 75.58 328 *e*P **P 18 31 41.0 -0.1**
comp=Z,11nm,0.5s,mb5.0
J14A Carey 75.60 47⇑P **P 18 31 42.2 +0.7**
baz=75
K13A Stover Farm, H 75.66 47⇓P **P 18 31 41.8 0.0**
baz=76
F17A Fitzpatrick Pl 75.68 43⇓P **P 18 31 41.9 0.0**
baz=76,SNR=6.7
E18A Harlowton 75.69 42⇑P **P 18 31 42.2 +0.3**
baz=76,SNR=6.1
M12A Wells 75.88 49⇑P **P 18 31 43.7 +0.7**
baz=76,SNR=6.7
QLMT Earthquake Lak 75.90 45 *e*P **P 18 31 43.9 +0.8**
comp=Z,1.0nm,0.4s,mb4.1
SIM Simferopol' 75.91 316⇓*e*P **P 18 31 44.0 +0.8**
SIM pmax pmax
comp=Z,22nm,0.7s,mb5.2
P10A Eureka 75.97 51⇓P **P 18 31 44.4 +0.8**
baz=76
G17A Pierce Place, 75.99 44⇓P **P 18 31 44.3 +0.7**
baz=76
MIB Mutribah 76.06 297 *e*P **P 18 31 43.5 -0.8**
MIB AMb AMB 18 31 44.9
comp=Z,33nm,1.6s,mb5.0
L13A Double Diamond 76.07 48⇑P **P 18 31 44.9 +0.8**
baz=76

H16A **Russell Place,** 76.08 45 ⇓P P 18 31 44.4 +0.3
baz=76,SNR=6.2
O11A **Cowboy Ranch,** 76.18 50 ⇓P P 18 31 45.5 +0.7
baz=76
J15A **Blackfoot** 76.19 46 ⇑P P 18 31 45.7 +0.9
baz=76
F18A **Big Timber** 76.20 43 ⇑P P 18 31 45.1 +0.3
baz=76,SNR=15
QRN **Al-Qurain** 76.23 296 *e*P P 18 31 44.3 -0.9
QRN AMb AMB 18 31 46.0
comp=Z,65nm,1.9s,mb5.2
K14A **Jones Ranch, D** 76.26 47 ⇓P P 18 31 45.9 +0.6
baz=76
YMR **Madison River** 76.26 44 *e*P P 18 31 45.7 +0.5
comp=Z,6.0nm,0.7s,mb4.6
GCMT **Greycliff** 76.30 43 *e*P P 18 31 45.3 -0.1
comp=Z,9.8nm,1.0s,mb4.7
GCMT *e* pP 18 31 55.5 +1.2
M13A **Montello** 76.37 49 ⇓P P 18 31 46.1 +0.3
baz=76,SNR=7.6
M13A **Montello** 76.37 49 *e*P P 18 31 45.4 -0.4
comp=Z,15nm,0.8s,mb5.0
M13A *e* 18 31 57.5
RDF **Al-Radifah** 76.39 296 *e*P P 18 31 45.4 -0.8
RDF AMb AMB 18 31 47.5
comp=Z,65nm,1.0s,mb5.5
VES **Vestal, Richgr** 76.44 56 ⇑P P 18 31 46.4 +0.1
baz=76
I16A **Newdale** 76.45 45 ⇓P P 18 31 47.4 +1.1
baz=76
Q10A **Clear Creek Ra** 76.47 52 ⇓P P 18 31 47.0 +0.5
baz=76
L14A **Malta** 76.53 48 ⇓P P 18 31 47.1 +0.4
baz=76,SNR=5.2
K15A **Arbon** 76.56 47 ⇓P P 18 31 47.5 +0.6
baz=76
N13A **Wendover, West** 76.65 49 ⇓P P 18 31 48.1 +0.7
baz=76
G18A **Lazy EL Ranch,** 76.65 43 ⇓P P 18 31 47.9 +0.5
baz=76
H17A **Grant Village** 76.65 44 ⇑P P 18 31 49.0 +1.6
baz=76,SNR=6.9
O12A **Currie** 76.66 50 ⇓P P 18 31 47.7 +0.2
baz=76,SNR=12
SFJD **Kangerlussuaq** 76.70 5 *i* P P 18 31 47.0 -0.2
SFJD pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SFJD MLR MLR
comp=Z,1μm,21.0s,MS5.2
SFJD **Kangerlussuaq** 76.70 5 *i* P P 18 31 47.0 -0.2
comp=Z,8.4nm,0.8s,mb4.7
SFJD
comp=Z,1μm,21.0s
J16A **Bone** 76.74 46 ⇓P P 18 31 48.6 +0.6
baz=76
M14A **Sheep Mountain** 76.78 48 ⇓P P 18 31 48.5 +0.3
baz=77,SNR=5.9
S10A **Tonopah Range,** 76.87 53 ⇑P P 18 31 48.8 0.0
baz=77,SNR=7.9
Q11A **Duckwater** 76.93 51 ⇓P P 18 31 49.2 +0.1
baz=77
RLMT **Red Lodge** 76.94 43 ⇑P P 18 31 49.0 +0.1
baz=77
RLMT **Red Lodge** 76.94 43 *e*P P 18 31 49.1 +0.1
comp=Z,4.2nm,0.6s,mb4.5
K16A **Soda Springs** 77.02 46 ⇓P P 18 31 49.5 0.0
baz=77,SNR=7.2
P12A **McGill** 77.03 51 ⇓P P 18 31 49.3 -0.3
baz=77,SNR=8.5
L15A **Malad City** 77.05 47 ⇑P P 18 31 49.9 +0.2
baz=77
R11A **Troy Canyon, C** 77.27 52 ⇑P P 18 31 50.7 -0.2
baz=77,SNR=9.6
N14A **Grayback Hills** 77.27 49 ⇓P P 18 31 51.2 +0.3
baz=77
MALT **Malatya** 77.28 308 *e*P P 18 31 52.1 +1.0
MALT pmax pmax
comp=Z,17nm,1.1s,mb4.9
MALT **Malatya** 77.28 308 *e*P P 18 31 52.1 +1.0
comp=Z,17nm,1.1s,mb4.9
MALT **Malatya** 77.28 308 ⇑*i*P P 18 31 53.0 +1.9
Q12A **Willow Creek R** 77.33 51 ⇓P P 18 31 51.9 +0.6
baz=77
M15A **Larsen Ranch,** 77.34 48 ⇑P P 18 31 51.5 +0.2
baz=77
MPMC **Manual Prospec** 77.37 55 ⇑P P 18 31 51.8 +0.2
baz=77
KIS **Kishinev** 77.52 320 *e*P P 18 31 48.0 -4.2
FURC **Furnace Creek,** 77.55 54 ⇑P P 18 31 52.7 +0.1
baz=77
P13A **Bates Ranch, G** 77.59 50 ⇑P P 18 31 53.1 +0.3
baz=77
L16A **Fish Haven** 77.61 47 ⇓P P 18 31 53.6 +0.8
baz=77
N15A **Stansbury Isla** 77.65 48 ⇑P P 18 31 53.2 +0.2
baz=77
J18A **Kendall Valley** 77.70 45 ⇓P P 18 31 53.7 +0.4
baz=78,SNR=7.7
EDW2 **Edwards Air Fo** 77.72 56 ⇓P P 18 31 53.7 +0.1
baz=78
HWUT **Hardware Ranch** 77.78 47 *e*P P 18 31 53.8 0.0
comp=Z,19nm,1.0s,mb5.0
L17A **Cokeville** 77.89 46 ⇑P P 18 31 54.7 +0.3
baz=78
DUG **Dugway** 77.89 49 ⇑P P 18 31 54.9 +0.4
baz=78
DUG **Dugway** 77.89 49 *e*P P 18 31 54.8 +0.4
DUG pmax pmax
comp=Z,24nm,0.8s,mb5.2
DUG **Dugway** 77.89 49 *e*P P 18 31 54.8 +0.3
comp=Z,24nm,0.8s,mb5.2
Q13A **Wheeler Ranch,** 77.89 51 ⇓P P 18 31 54.9 +0.5
baz=78
R12A **Pony Springs,** 77.90 51 ⇑P P 18 31 54.9 +0.4
baz=78
M16A **Huntsville** 77.92 47 ⇓P P 18 31 54.8 +0.2
baz=78
K18A **Toltan Ranch,** 78.04 46 ⇑P P 18 31 55.3 +0.1
baz=78
LVV **L'vov** 78.04 324 *e*P P 18 31 54.3 -0.8
LVV MLR MLR
comp=Z,1μm,21.0s,MS5.2
LVV MLR MLR
comp=N,1μm,20.0s,MS5.3
LVV MLR MLR
comp=E,1μm,21.0s,MS5.3
P14A **Drum Mountains** 78.10 50 ⇓P P 18 31 56.1 +0.5
baz=78,SNR=10
T11A **Corn Creek, Al** 78.15 52 ⇑P P 18 31 55.9 -0.1
baz=78,SNR=6.7
BSD **Bornholm Skovb** 78.17 332 *i* P P 18 31 54.8 -0.9
BSD pmax pmax
comp=Z,14nm,0.9s,mb4.9
BSD **Bornholm Skovb** 78.17 332 *i* P P 18 31 54.8 -0.9
comp=Z,14nm,0.9s,mb4.9
S12A **Delamar Landin** 78.17 52 ⇑P P 18 31 56.3 +0.3
baz=78
BW06 **Boulder Array** 78.24 45 ⇑P P 18 31 56.1 -0.2
baz=78
PDAR **Pinedale Array** 78.24 45 P P 18 31 56.0 -0.3
comp=Z,3.2nm,0.7s,mb4.4,baz=276,slow=2.1,SNR=32
Q14A **Sevier Lake (B** 78.33 50 ⇑P P 18 31 57.3 +0.4
baz=78,SNR=14
R13A **O'Grain Ranch,** 78.39 51 ⇓P P 18 31 57.9 +0.6
baz=78
SCI **San Clemente I** 78.45 58 ⇓P P 18 31 58.8 +1.1
baz=78
P15A **Leamington** 78.60 49 ⇓P P 18 31 58.8 +0.5
baz=78
K19A **Absolon Red Bu** 78.61 45 ⇑P P 18 31 58.0 -0.3
baz=78
N17A **Moffit Pass** 78.63 47 ⇑P P 18 31 58.8 +0.3
baz=78
O16A **Springville** 78.68 48 ⇓P P 18 31 59.2 +0.5
baz=78
DAU **Daniels Canyon** 78.70 48 *e*P P 18 31 58.3 -0.6
DAU *e* 18 32 10.5
DAU pmax pmax
comp=Z,18nm,0.7s,mb5.1
DAU **Daniels Canyon** 78.70 48 *e*P P 18 31 58.3 -0.6
comp=Z,18nm,0.7s,mb5.1
DAU *e* 18 32 10.4
L19A **Farson** 78.77 46 ⇓P P 18 31 59.3 +0.1
baz=79
M18A **Lyman** 78.78 47 ⇑P P 18 31 59.4 +0.1
baz=79
KWP **Kalwaria Pacla** 78.80 324 *e*P P 18 31 59.7 +0.5
KWP **Kalwaria Pacla** 78.80 324 ⇓*i*P P 18 31 59.9 +0.7

S13A **Holt Ranch, En** 78.82 52 ⇑P P 18 32 00.3 +0.7
baz=79
Q15A **Fillmore** 78.88 50 ⇑P P 18 31 59.9 0.0
baz=79
BUR08 **Bucovina Ar. S** 78.94 322 *e*P P 18 32 00.2 +0.2
BUR01 **Bucovina Ar. S** 78.95 322 P P 18 32 00.8 +0.6
BURAR **Bucovina Array** 78.95 322 ⇑P P 18 32 00.5 +0.3
BURAR **Bucovina Array** 78.95 322 ⇑*i*P P 18 32 00.5 +0.3
ARUT **Antelope Range** 78.96 51 *e*P P 18 32 00.9 +0.5
ARUT pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ARUT **Antelope Range** 78.96 51 *e*P P 18 32 00.9 +0.5
comp=Z,7.0nm,1.1s,mb4.5
K20A **Yellowstone Ra** 79.00 45 ⇓P P 18 32 00.1 -0.4
baz=79
T13A **Saint George** 79.13 52 ⇑P P 18 32 01.7 +0.4
baz=79
S14A **Cedar City** 79.14 51 ⇓P P 18 32 01.6 +0.2
baz=79
O17A **Robinson Place** 79.15 48 ⇑P P 18 32 01.6 +0.2
baz=79
MUD **Monsted U'grnd** 79.20 335 *i* P P 18 32 02.1 +0.8
MUD pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MUD **Monsted U'grnd** 79.20 335 *i* P P 18 32 02.1 +0.8
comp=Z,7.8nm,0.7s,mb4.8
N18A **Larsen Ranch,** 79.29 47 ⇑P P 18 32 02.3 +0.2
baz=79
MSU **Marysvale** 79.31 50 *e*P P 18 32 02.6 +0.3
MSU pmax pmax
comp=Z,14nm,1.1s,mb4.8
MSU **Marysvale** 79.31 50 *e*P P 18 32 02.6 +0.4
comp=Z,14nm,1.1s,mb4.8
GMRC **Granite Mounta** 79.33 55 ⇓P P 18 32 02.7 +0.2
baz=79
VRI **Vrincioaia** 79.35 320 P P 18 32 03.1 +0.8
VRI **Vrincioaia** 79.35 320 ⇓*i*P P 18 32 02.5 +0.1
BR131 **Keskin Array S** 79.40 312 *e*P P 18 32 02.8 +0.1
comp=Z,11nm,1.0s,mb4.7
BRTR **Keskin Array B** 79.40 312 P P 18 32 02.9 +0.1
comp=Z,8.1nm,0.9s,mb4.6,baz=100,slow=4.3,SNR=33
L20A **Wamsutter** 79.42 45 ⇑P P 18 32 02.8 0.0
baz=79
R15A **Junction** 79.43 50 ⇑P P 18 32 03.7 +0.8
baz=79
U13A **Pakoon Wash** 79.45 53 ⇓P P 18 32 03.2 +0.1
baz=79,SNR=5.3
KOLS **Kolonicke sedl** 79.48 324 *e*P P 18 32 03.5 +0.5
KOLS *e* 18 32 16.7
KOLS *e* 18 35 03.1
KOLS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KOLS **Kolonicke sedl** 79.48 324 *e*P P 18 32 03.5 +0.5
comp=Z,7.1nm,1.1s,mb4.5
KOLS *e* 18 32 16.7
KOLS *e*PP PP 18 35 03.1 +0.2
KOLS *e* 18 35 14.1
KOLS **Kolonicke sedl** 79.48 324 *e*P P 18 32 03.5 +0.5
KOLS *e* 18 32 16.7
KOLS *e*PP PP 18 35 03.1 +0.2
KOLS *e* 18 35 14.1
HARR **Harsova** 79.49 318 ⇑P P 18 32 03.8 +0.7
HARR **Harsova** 79.49 318 ⇑*i*P P 18 32 03.8 +0.7
PFO **Pinyon Flat Ob** 79.50 56 ⇑P P 18 32 03.3 -0.1
baz=79
PFO **Pinyon Flat Ob** 79.50 56 *e*P P 18 32 01.2 -2.2
O18A **Roosevelt** 79.54 48 ⇑P P 18 32 03.8 +0.3
baz=79
BELC **Belle Mtn.** 79.57 56 ⇑P P 18 32 03.9 +0.1
baz=79
P17A **Butcher Ranch,** 79.59 49 ⇓P P 18 32 03.9 +0.1
baz=79
T14A **Hurricane** 79.62 52 ⇑P P 18 32 04.5 +0.4
baz=79
STHS **Stebnicka Huta** 79.63 325 *e*P P 18 32 04.6 +0.8
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS **Stebnicka Huta** 79.63 325 *e*P P 18 32 04.6 +0.8
comp=Z,6.4nm,1.0s,mb4.5
STHS *e* 18 35 30.0
STHS **Stebnicka Huta** 79.63 325 *e*P P 18 32 04.6 +0.8
STHS *e* 18 35 30.0
N19A **John Jarvie Ra** 79.64 47 ⇓P P 18 32 04.0 0.0
baz=79
Q16A **Castle Valley** 79.67 49 ⇑P P 18 32 04.5 +0.3
baz=80
S15A **Panguitch** 79.70 51 ⇑P P 18 32 05.2 +0.8
baz=80
OJC **Ojcow** 79.72 326 *e*P P 18 32 04.4 +0.1
V13A **Grand Canyon W** 79.78 53 ⇑P P 18 32 04.9 0.0
baz=80
P18A **Preston Nutter** 79.80 48 ⇓P P 18 32 05.4 +0.5
baz=80,SNR=6.6
M20A **Sweetwater, Wa** 79.83 46 ⇑P P 18 32 05.0 0.0
baz=80
R16A **Teasdale** 79.88 50 ⇓P P 18 32 06.2 +0.9
baz=80
MONP **Monument Peak** 79.95 57 ⇑P P 18 32 05.6 -0.3
baz=80
SRU **San Rafael** 79.95 49 ⇓P P 18 32 06.1 +0.4
baz=80
SRU **San Rafael** 79.95 49 *e*P P 18 32 05.6 -0.1
SRU *e* 18 32 17.1
SRU pmax pmax
comp=Z,37nm,0.8s,mb5.4
SRU **San Rafael** 79.95 49 *e*P P 18 32 05.5 -0.2
comp=Z,37nm,0.8s,mb5.4
SRU *e* 18 32 17.1
U14A **Mt Trumbull** 79.95 52 ⇑P P 18 32 06.2 +0.4
baz=80
L21A **Rawlins** 80.00 45 ⇓P P 18 32 05.9 0.0
baz=80
MLR **Muntele Rosu** 80.01 320 ⇑P P 18 32 06.9 +1.0
MLR **Muntele Rosu** 80.01 320 ⇑*i*P P 18 32 06.9 +1.0
IRM **Iron Mountain** 80.04 55 ⇑P P 18 32 07.1 +0.8
baz=80
O19A **Miners Draw (B** 80.04 47 ⇓P P 18 32 06.3 +0.1
baz=80
T15A **Red Dirt Ranch** 80.09 51 ⇓P P 18 32 06.8 +0.2
baz=80
BC3 **Big Chuckw Mtn** 80.14 56 ⇑P P 18 32 07.0 +0.2
baz=80
ULM **Lac du Bonnet** 80.19 33 P P 18 32 05.8 -0.9
comp=Z,4.5nm,0.8s,mb4.5,baz=318,slow=6.1,SNR=7.8
Q18A **Rafter H Ranch** 80.19 49 ⇑P P 18 32 06.8 -0.2
baz=80
N20A **Spence Gulch,** 80.21 46 ⇑P P 18 32 07.6 +0.5
baz=80
M21A **Separation Pea** 80.23 45 ⇓P P 18 32 07.1 -0.1
baz=80
R17A **Hanksville Air** 80.27 49 ⇓P P 18 32 07.2 -0.2
baz=80
DVTC **Desert V Tower** 80.30 57 ⇑P P 18 32 08.1 +0.3
baz=80
W13A **Hualapai Mount** 80.30 54 ⇑P P 18 32 07.9 +0.2
baz=80
SWSC **Sam W. Stewart** 80.34 56 ⇓P P 18 32 07.9 0.0
baz=80
V14A **Boquillas Ranc** 80.48 53 ⇓P P 18 32 08.7 0.0
baz=80,SNR=7.6
VOIR 80.51 320 ⇓P P 18 32 08.8 +0.2
VOIR 80.51 320 ⇓*i*P P 18 32 08.8 +0.2
U15A **North Rim** 80.51 52 ⇓P P 18 32 09.2 +0.4
baz=80,SNR=5.3
P19A **Cripple Cowboy** 80.55 48 ⇓P P 18 32 09.0 0.0
baz=80,SNR=11
PDMCI **Parker Dam,Lak** 80.62 54 ⇑P P 18 32 09.9 +0.5
baz=80
KECS **Kecovo** 80.64 325 *e*P P 18 32 09.9 +0.6
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS **Kecovo** 80.64 325 *e*P P 18 32 09.9 +0.6
comp=Z,3.1nm,1.0s,mb4.2
KECS *e*PP PP 18 35 13.4 +0.9
KECS **Kecovo** 80.64 325 *e*P P 18 32 09.9 +0.6
KECS *e*PP PP 18 35 13.4 +0.9
X13A **Yucca** 80.64 54 ⇑P P 18 32 09.7 +0.1
baz=80,SNR=5.0
O20A **White River Ci** 80.67 47 ⇓P P 18 32 09.7 +0.1
baz=80
N21A **Black Mountain** 80.69 46 ⇓P P 18 32 09.8 +0.1
baz=80
S17A **Black Ridge (B** 80.70 50 ⇑P P 18 32 09.9 +0.1
baz=80
W14A **Seligman** 80.75 53 ⇓P P 18 32 10.6 +0.4
baz=81

R18A **Canyonlands Na** 80.79 49 ⇓P P 18 32 09.8 -0.5
baz=81,SNR=6.7
BSEG **Bad Segeberg** 80.79 333 *e*P P 18 32 09.8 -0.2
comp=Z,16nm,1.1s,mb4.9
BSEG **Bad Segeberg** 80.79 333 *e*P P 18 32 09.8 -0.2
BSEG pmax pmax
comp=Z,16nm,1.1s,mb4.9
KSP **Ksiaz** 80.80 328 *e*P P 18 32 10.3 +0.3
KSP **Ksiaz** 80.80 328 *e*P P 18 32 10.0 -0.1
KSP *e*PP pP 18 32 21.4 +2.4
M22A **Cedar Creek Ra** 80.81 45 ⇑P P 18 32 10.3 0.0
baz=81
GLA **Glamis** 80.92 56 ⇑P P 18 32 11.4 +0.3
baz=81
V15A **Kaibab Nationa** 80.97 52 ⇓P P 18 32 11.8 +0.5
baz=81
P20A **De Beque** 80.99 47 ⇑P P 18 32 11.7 +0.4
baz=81
MORC **Moravsky Berou** 81.05 327 ⇑*i*P P 18 32 11.7 +0.3
T17A **Navajo Res., N** 81.10 51 ⇓P P 18 32 12.4 +0.5
baz=81
DPC **Dobruska-Polom** 81.15 328 *e*P P 18 32 12.4 +0.4
DPC *e*pP pP 18 32 23.7 +2.8
S18A **Hurst Farm, Bl** 81.16 50 ⇓P P 18 32 12.3 +0.1
baz=81,SNR=8.4
UPC **Upice** 81.17 328 *e*P P 18 32 12.2 +0.2
UPC *e*pP pP 18 32 23.9 +2.9
R19A **Curley Farm, L** 81.23 49 ⇑P P 18 32 12.7 0.0
baz=81
N22A **Wattenberg Ran** 81.28 45 ⇑P P 18 32 13.0 +0.1
baz=81
W15A **Williams** 81.30 53 ⇑P P 18 32 13.2 +0.2
baz=81
PSZ **Piszkesteto** 81.32 325 P P 18 32 13.4 +0.5
PSZ **Piszkesteto** 81.32 325 ⇑*e*P P 18 32 13.3 +0.4
PSZ **Piszkesteto** 81.32 325 ⇑*i*P P 18 32 13.3 +0.4
Q20A **Ridgley Place,** 81.39 48 ⇓P P 18 32 13.3 -0.2
baz=81
VYHS **Vyhne** 81.40 325 *e*P P 18 32 13.7 +0.4
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS **Vyhne** 81.40 325 *e*P P 18 32 13.7 +0.4
comp=Z,6.4nm,1.2s,mb4.4
VYHS *e*PP PP 18 35 18.5 -0.2
VYHS **Vyhne** 81.40 325 *e*P P 18 32 13.7 +0.4
VYHS *e*PP PP 18 35 18.5 -0.2
U16A **Tuba City** 81.43 51 ⇓P P 18 32 14.0 +0.2
baz=81,SNR=5.0
U17A **Shonto** 81.44 51 ⇑P P 18 32 13.6 -0.1
baz=81
Y14A **Wickenburg** 81.59 54 ⇑P P 18 32 14.3 -0.2
baz=81
T18A **Mexican Hat** 81.59 50 ⇑P P 18 32 14.1 -0.4
baz=81,SNR=7.5
Z13A **Yuma Proving G** 81.61 55 ⇑P P 18 32 14.3 -0.4
baz=81
S19A **Harvey Farm, M** 81.66 49 ⇓P P 18 32 14.9 +0.1
baz=81,SNR=6.2
WUAZ **Wupatki** 81.66 52 ⇓P P 18 32 15.0 0.0
baz=82
GZR **Gura Zlata** 81.70 321 ⇓P P 18 32 15.5 +0.5
GZR **Gura Zlata** 81.70 321 ⇓*i*P P 18 32 15.5 +0.5
X15A **Humboldt** 81.75 53 ⇓P P 18 32 15.8 +0.3
baz=82
BRG **Berggiesshubel** 81.76 329 *e*P P 18 32 14.9 -0.3
comp=Z,11nm,1.0s,mb4.7
BRG *e* 18 32 26.6
comp=Z,5.5nm,0.8s
BRG *e* 18 35 24.4
comp=Z,5.5nm,1.3s
BRG **Berggiesshubel** 81.76 329 *e*P P 18 32 14.9 -0.3
BRG *e* 18 32 26.6
BRG *e* 18 35 24.4
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRG pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
PVCC **Panska Ves** 81.76 329 *e*P P 18 32 15.4 +0.2
PVCC *e*pP pP 18 32 27.1 +3.0
113A **Mohawk Valley,** 81.80 55 ⇓P P 18 32 15.7 0.0
baz=82
CLL **Collm** 81.81 330 *e*P P 18 32 14.9 -0.5
comp=Z,17nm,1.0s,mb4.9
CLL **Collm** 81.81 330 ⇑*i*P P 18 32 14.8 -0.6
CLL *i* 18 32 26.3
CLL pmax pmax
comp=Z,17nm,1.0s,mb4.9
CLL MLR MLR
comp=Z,2μm,20.1s,MS5.4
CLL **Collm** 81.81 330 ⇑*i*P P 18 32 14.8 -0.6
comp=Z,17nm,1.0s,mb4.9
CLL *i* 18 32 26.3
CLL LR LR
comp=Z,2μm,20.1s,MS5.4
CLL **Collm** 81.81 330 ⇑*i*P P 18 32 14.8 -0.6
comp=Z,17nm,1.0s,mb4.9
CLL *e*sP sP 18 32 23.0 -4.6
CLL *i* pPcP 18 32 26.3
CLL *e*(sPcP) 18 32 29.0
CLL *e* 18 32 34.0
CLL LmV 19 19 00.0
comp=Z,2μm,20.1s
VRAC **Vranov** 81.81 327 P P 18 32 16.1 +0.6
W16A **Flagstaff** 81.82 52 ⇑P P 18 32 16.0 +0.2
baz=82
R20A **Redvale** 81.83 48 ⇓P P 18 32 15.9 +0.1
baz=82
V17A **Tonalea, Kykot** 81.97 52 ⇓P P 18 32 16.9 +0.3
baz=82
Y15A **Casa Rosa Ranc** 82.02 54 ⇓P P 18 32 17.1 +0.2
baz=82,SNR=5.6
SMOL **Smolenice** 82.03 326 *e*P P 18 32 17.7 +1.1
SMOL **Smolenice** 82.03 326 *e*P P 18 32 17.7 +1.1
U18A **Rough Rock, Ch** 82.04 50 ⇓P P 18 32 17.3 +0.4
baz=82,SNR=6.4
BUD **Budapest** 82.05 325 ⇑*e*P P 18 32 13.6 -3.1
PRU **Pruhonice** 82.18 329 *e*P P 18 32 17.7 +0.3
PRU *e*pP pP 18 32 29.2 +2.9
R21A **Cimarron** 82.22 48 ⇑P P 18 32 18.3 +0.4
baz=82
Q22A **Crested Butte,** 82.28 47 ⇓P P 18 32 18.9 +0.8
baz=82
TREC **Trest** 82.30 328 *e*P P 18 32 17.9 -0.1
TREC *e*pP pP 18 32 29.5 +2.5
X16A **Lo Mia Camp, P** 82.31 53 ⇑P P 18 32 18.6 +0.2
baz=82
T19A **Beclabito** 82.31 50 ⇓P P 18 32 18.4 +0.1
baz=82
MVCO **Mesa Verde** 82.39 49 ⇑P P 18 32 18.8 +0.1
baz=82
CLZ **Clausthal** 82.42 332 *e*P P 18 32 18.6 0.0
comp=Z,11nm,0.8s,mb4.8
CLZ **Clausthal** 82.42 332 *e*P P 18 32 18.6 0.0
CLZ pmax pmax
comp=Z,11nm,0.8s,mb4.8
S21A **Coal Bank Pass** 82.53 48 ⇑P P 18 32 19.4 0.0
baz=82,SNR=5.3
U19A **Dine' College,** 82.54 50 ⇓P P 18 32 19.0 -0.5
baz=82
Y16A **Circle Bar Ran** 82.62 53 ⇓P P 18 32 20.2 +0.3
baz=82
TANN **Tannenbergstha** 82.72 330 *e*P P 18 32 19.8 -0.4
comp=Z,4.0nm,1.1s,mb4.4
R22A **Saguache, Gunn** 82.78 47 ⇑P P 18 32 21.3 +0.6
baz=83
115A **Sonoran Desert** 82.86 55 ⇑P P 18 32 21.4 +0.1
baz=83
MOX **Moxa** 82.88 330 *e*P P 18 32 20.6 -0.4
comp=Z,8.0nm,1.2s,mb4.6
MOX **Moxa** 82.88 330 *e*P P 18 32 20.8 -0.2
IBBN **Ibbenburen** 83.02 333 *e*P P 18 32 21.3 -0.4
comp=Z,17nm,0.7s,mb5.2
Y17A **Roosevelt** 83.14 53 ⇓P P 18 32 23.0 +0.3
baz=83
PKSM **Moragy** 83.15 324 P P 18 32 22.3 -0.2
CSNA **Conrad Observa** 83.16 327 ⇑*i*P P 18 32 23.2 +0.7
comp=Z,11nm,1.2s,mb4.8
W19A **Sanders** 83.18 51 ⇑P P 18 32 22.6 -0.3
baz=83
KHC **Kasperske Hory** 83.24 329 *e*P P 18 32 22.9 0.0
KHC *e* 18 32 34.2
KHC **Kasperske Hory** 83.24 329 *e*P P 18 32 22.9 0.0
KHC *e*pP pP 18 32 34.2 +2.3
KHC *e*x x 18 37 40.9
V20A **Brimhall** 83.31 50 ⇑P P 18 32 23.7 +0.2
baz=83

ROTZ	**Rotzenmuhle**	**83.32**	**330**	*eP*	**P**	**18 32 23.4**	**+0.1**
	comp=Z,34nm,1.8s,mb5.1						
UBBA	**Unterbreizbach**	**83.37**	**331**	*eP*	**P**	**18 32 22.8**	**-0.8**
	comp=Z,9.0nm,1.5s,mb4.6						
GEC2	**GERESS Array S**	**83.41**	**328**	*eP*	**P**	**18 32 23.2**	**-0.6**
	comp=Z,6.0nm,1.0s,mb4.6						
GEC2	**GERESS Array S**	**83.41**	**328**	*eP*	**P**	**18 32 23.2**	**-0.6**
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
GERES	**GERESS Array B**	**83.41**	**328**	P	**P**	**18 32 23.4**	**-0.4**
	comp=Z,3.6nm,0.8s,mb4.4,baz=39,slow=5.1,SNR=27						
T22A	**Edith**	**83.48**	**48**	⇑P	**P**	**18 32 24.9**	**+0.5**
	baz=83						
WET	**Wettzell**	**83.53**	**329**	*eP*	**P**	**18 32 24.1**	**-0.3**
	comp=Z,10.0nm,1.2s,mb4.8						
WET	**Wettzell**	**83.53**	**329**	*eP*	**P**	**18 32 24.1**	**-0.3**
WET				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
Y18A	**Canyon Day Jun**	**83.61**	**53**	⇑P	**P**	**18 32 25.4**	**+0.3**
	baz=83						
X19A	**St. Johns**	**83.67**	**52**	⇑P	**P**	**18 32 25.9**	**+0.5**
	baz=84						
W20A	**Ramah**	**83.72**	**51**	⇑P	**P**	**18 32 25.6**	**-0.1**
	baz=84						
GRA1	**Grafenberg Arr**	**83.78**	**330**	*eP*	**P**	**18 32 25.5**	**-0.2**
	comp=Z,72nm,1.8s,mb5.5						
GRF	**Grafenberg Arr**	**83.78**	**330**	*eP*	**P**	**18 32 25.5**	**-0.2**
	comp=Z,72nm,1.8s,mb5.5						
GRF	**Grafenberg Arr**	**83.78**	**330**	*eP*	**P**	**18 32 25.5**	**-0.2**
GRF				pmax	pmax		
	comp=Z,72nm,1.8s,mb5.5						
GRF	**Grafenberg Arr**	**83.78**	**330**	*eP*	**P**	**18 32 25.5**	**-0.2**
GRF				pmax	pmax		
	comp=Z,72nm,1.8s,mb5.5						
V21A	**Milan**	**83.82**	**50**	⇓P	**P**	**18 32 26.0**	**-0.2**
	baz=84						
117A	**Oracle**	**83.92**	**54**	⇓P	**P**	**18 32 26.8**	**+0.1**
	baz=84						
MOA	**Molln**	**83.93**	**327**	⇑*iP*	**P**	**18 32 26.4**	**-0.1**
	comp=Z,8.0nm,1.2s,mb4.7						
ESK	**Eskdalemuir**	**83.93**	**341**	*iP*	**P**	**18 32 27.2**	**+0.9**
217A	**Green Valley**	**84.37**	**55**	⇓P	**P**	**18 32 29.5**	**+0.4**
	baz=84						
118A	**Homack Ranch,**	**84.38**	**53**	⇓P	**P**	**18 32 29.7**	**+0.6**
	baz=84						
Z19A	**T-Link Ranch,**	**84.42**	**53**	⇑P	**P**	**18 32 29.1**	**-0.2**
	baz=84						
PERS	**Pernice**	**84.47**	**326**	*iP*	**P**	**18 32 29.0**	**-0.3**
SOKA	**Soboth**	**84.47**	**326**	⇑*iP*	**P**	**18 32 29.1**	**-0.1**
	comp=Z,19nm,1.7s,mb5.0						
Y20A	**Horse Springs,**	**84.59**	**52**	⇓P	**P**	**18 32 30.5**	**+0.4**
	baz=84						
STIP	**Stip**	**84.60**	**319**	*eP*	**P**	**18 32 29.6**	**-0.4**
X21A	**Alamocita Cree**	**84.61**	**51**	⇓P	**P**	**18 32 30.6**	**+0.4**
	baz=84						
VAY	**Valandovo**	**84.66**	**318**	*eP*	**P**	**18 32 29.8**	**-0.6**
DOBS	**Dobrina**	**84.68**	**326**	*eP*	**P**	**18 32 29.7**	**-0.6**
119A	**Ashpeak Ranch,**	**84.73**	**53**	⇓P	**P**	**18 32 31.7**	**+0.8**
	baz=84						
218A	**Dragoon**	**84.75**	**54**	⇑P	**P**	**18 32 31.4**	**+0.4**
	baz=85						
SKO	**Skopje**	**84.80**	**320**	*eP*	**P**	**18 32 31.9**	**+0.8**
FUR	**Furstenfeldbru**	**84.95**	**329**	*eP*	**P**	**18 32 31.5**	**-0.2**
	comp=Z,20nm,1.0s,mb5.2						
FUR	**Furstenfeldbru**	**84.95**	**329**	*eP*	**P**	**18 32 31.5**	**-0.2**
FUR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
Z20A	**Nine Sixteen R**	**84.96**	**52**	⇓P	**P**	**18 32 32.2**	**+0.2**
	baz=85,SNR=8.6						
Y21A	**Point of Rocks**	**84.97**	**51**	⇓P	**P**	**18 32 32.5**	**+0.5**
	baz=85						
MEM	**Membach**	**85.04**	**333**	P	**P**	**18 32 31.7**	**-0.3**
219A	**White Tail Can**	**85.25**	**54**	⇓P	**P**	**18 32 33.6**	**+0.1**
	baz=85						
BOJS	**Bojanci**	**85.26**	**325**	*eP*	**P**	**18 32 32.4**	**-0.8**
120A	**U Bar Ranch, L**	**85.30**	**53**	⇓P	**P**	**18 32 33.1**	**-0.6**
	baz=85						
KRUS	**Krusevo**	**85.33**	**319**	*eP*	**P**	**18 32 32.9**	**-0.8**
Z21A	**St. Cloud Mine**	**85.42**	**52**	⇓P	**P**	**18 32 34.4**	**+0.1**
	baz=85						
BCLA	**Clavier**	**85.45**	**334**	P	**P**	**18 32 33.4**	**-0.7**
	comp=Z,5.8nm,1.3s,mb4.5						
Y22A	**Socorro**	**85.46**	**51**	⇓P	**P**	**18 32 34.6**	**+0.2**
	baz=85						
BNM	**Barren Site**	**85.53**	**50**	*eP*	**P**	**18 32 34.7**	**-0.1**
	comp=Z,5.8nm,0.8s,mb4.9						
BNM				*e*		18 32 46.0	
RETA	**Reutte**	**85.70**	**329**	⇓*iP*	**P**	**18 32 35.2**	**-0.3**
	comp=Z,12nm,1.2s,mb5.0						
SNF	**Seneffe**	**85.74**	**334**	P	**P**	**18 32 35.3**	**-0.3**
	comp=Z,11nm,1.6s,mb4.8						
OHR	**Ohrid**	**85.75**	**319**	*eP*	**P**	**18 32 34.2**	**-1.6**
WLF	**Walferdange**	**85.77**	**333**	P	**P**	**18 32 35.6**	**-0.1**
	comp=Z,10nm,1.8s,mb4.8						
WLF	**Walferdange**	**85.77**	**333**	*eP*	**P**	**18 32 35.6**	**-0.1**
	comp=Z,14nm,1.4s,mb5.0						
220A	**Playas Peak, P**	**85.79**	**53**	⇓P	**P**	**18 32 36.2**	**0.0**
	baz=86						
121A	**Cookes Peak, D**	**85.86**	**52**	⇓P	**P**	**18 32 36.6**	**+0.1**
	baz=86						
GIVF	**Givet**	**85.89**	**334**	*eP*	**P**	**18 32 35.4**	**-0.9**
Z22A	**Elephant Butte**	**85.91**	**51**	⇑P	**P**	**18 32 36.9**	**+0.2**
	baz=86						
BFO	**Black Forest**	**86.02**	**331**	*eP*	**P**	**18 32 36.3**	**-0.7**
	comp=Z,12nm,1.0s,mb5.1						
BFO	**Black Forest**	**86.02**	**331**	*eP*	**P**	**18 32 36.3**	**-0.7**
BFO				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
Y23A	**Lovelace Mesa,**	**86.03**	**50**	⇓P	**P**	**18 32 37.8**	**+0.4**
	baz=86						
SCHQ	**Schefferville**	**86.12**	**16**	P	**P**	**18 32 36.9**	**-0.4**
	comp=Z,6.3nm,0.9s,mb4.9,baz=355,slow=7.2,SNR=8.7						
SCHQ	**Schefferville**	**86.12**	**16**	P	**P**	**18 32 36.9**	**-0.4**
BAIF	**Baives**	**86.14**	**334**	*eP*	**P**	**18 32 36.8**	**-0.8**
W25A	**X Bar L Ranch,**	**86.15**	**49**	⇑P	**P**	**18 32 38.3**	**+0.4**
	baz=86						
CDF	**Champ du Feu**	**86.36**	**331**	⇑*iP*	**P**	**18 32 38.2**	**-0.5**
	comp=Z,23nm,1.0s,mb5.1						
CDF	**Champ du Feu**	**86.36**	**331**	⇑*iP*	**P**	**18 32 38.2**	**-0.5**
CDF				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
CDF	**Champ du Feu**	**86.36**	**331**	⇑*iP*	**P**	**18 32 38.2**	**-0.5**
	comp=Z,11nm,1.0s,mb5.1						
Y24A	**Capitan**	**86.42**	**50**	⇑P	**P**	**18 32 39.6**	**+0.3**
	baz=86						
Y25A	**Mesa, Roswell**	**86.88**	**50**	⇑P	**P**	**18 32 41.7**	**+0.2**
	baz=87						
HINF	**Hinteralfeld**	**87.01**	**331**	*eP*	**P**	**18 32 40.8**	**-1.1**
HAU	**Haudompre**	**87.06**	**332**	*eP*	**P**	**18 32 41.1**	**-1.0**
MEZF	**Maizieres J'vi**	**87.14**	**333**	*eP*	**P**	**18 32 42.1**	**-0.3**
124A	**Stringfield Ra**	**87.22**	**51**	⇑P	**P**	**18 32 42.8**	**-0.4**
	baz=87						
Z25A	**Roswell**	**87.30**	**50**	⇓P	**P**	**18 32 44.0**	**+0.5**
	baz=87						
Z26A	**Caprock**	**87.76**	**50**	⇑P	**P**	**18 32 45.3**	**-0.5**
	baz=88						
MSTX	**Muleshoe**	**88.02**	**48**	⇓P	**P**	**18 32 47.0**	**0.0**
	baz=88						
LOR	**Lormes**	**88.61**	**333**	*eP*	**P**	**18 32 48.9**	**-0.6**
SSF	**Saint Saulge**	**88.91**	**333**	*eP*	**P**	**18 32 50.4**	**-0.5**
LPL	**La Plagne**	**88.94**	**330**	⇑*iP*	**P**	**18 32 50.6**	**-0.5**
	comp=Z,5.5nm,0.7s,mb4.7						
LPL	**La Plagne**	**88.94**	**330**	⇑*iP*	**P**	**18 32 50.6**	**-0.5**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
LPL	**La Plagne**	**88.94**	**330**	⇑*iP*	**P**	**18 32 50.6**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.7						
LPG	**La Plagne**	**88.95**	**330**	⇑*iP*	**P**	**18 32 50.7**	**-0.4**
	comp=Z,5.5nm,0.8s,mb4.7						
LPG	**La Plagne**	**88.95**	**330**	⇑*iP*	**P**	**18 32 50.7**	**-0.4**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
LPG	**La Plagne**	**88.95**	**330**	⇑*iP*	**P**	**18 32 50.7**	**-0.4**
	comp=Z,2.8nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**89.14**	**332**	*eP*	**P**	**18 32 51.5**	**-0.5**
AVF	**Avril sur Loir**	**89.20**	**333**	⇑*iP*	**P**	**18 32 51.8**	**-0.5**
	comp=Z,16nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**89.20**	**333**	⇑*iP*	**P**	**18 32 51.8**	**-0.5**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**89.20**	**333**	⇑*iP*	**P**	**18 32 51.8**	**-0.5**
	comp=Z,7.8nm,1.0s,mb5.0						
TIP	**Timpagrande**	**89.28**	**320**	*eP*	**P**	**18 32 52.3**	**-0.5**
	comp=Z,7.5nm,1.1s,mb4.9						
MBDF	**Montbardon**	**89.57**	**330**	⇑*iP*	**P**	**18 32 52.9**	**-1.2**
	comp=Z,5.6nm,0.9s,mb4.6						
MBDF	**Montbardon**	**89.57**	**330**	⇑*iP*	**P**	**18 32 52.9**	**-1.2**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
MBDF	**Montbardon**	**89.57**	**330**	⇑*iP*	**P**	**18 32 52.9**	**-1.2**
	comp=Z,2.8nm,0.9s,mb4.6						
ORIF	**Oris-en-Rattie**	**89.78**	**330**	*eP*	**P**	**18 32 55.0**	**0.0**
526A	**Mary Lane Ranc**	**89.86**	**52**	⇓P	**P**	**18 32 55.5**	**-0.1**
	baz=90						
SBF	**Sospel**	**90.00**	**329**	*eP*	**P**	**18 32 54.6**	**-1.5**
	comp=Z,8.0nm,0.7s,mb4.8						
SBF	**Sospel**	**90.00**	**329**	*eP*	**P**	**18 32 54.6**	**-1.5**
SBF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
SBF	**Sospel**	**90.00**	**329**	*eP*	**P**	**18 32 54.6**	**-1.5**
	comp=Z,4.0nm,0.7s,mb4.9						
TCF	**Toulx Ste Croi**	**90.04**	**333**	⇑*iP*	**P**	**18 32 55.9**	**-0.3**
	comp=Z,7.2nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**90.04**	**333**	⇑*iP*	**P**	**18 32 55.9**	**-0.3**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**90.04**	**333**	⇑*iP*	**P**	**18 32 55.9**	**-0.3**
	comp=Z,3.6nm,0.9s,mb4.7						
ROSF	**Rostrenen**	**90.13**	**337**	*eP*	**P**	**18 32 56.2**	**-0.4**
	comp=Z,28nm,1.1s,mb5.2						
ROSF	**Rostrenen**	**90.13**	**337**	*eP*	**P**	**18 32 56.2**	**-0.4**
ROSF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.2						
ROSF	**Rostrenen**	**90.13**	**337**	*eP*	**P**	**18 32 56.2**	**-0.4**
	comp=Z,14nm,1.1s,mb5.2						
VIVF	**Saint-Julien-l**	**90.31**	**331**	⇑*iP*	**P**	**18 32 57.0**	**-0.5**
	comp=Z,7.2nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**90.31**	**331**	⇑*iP*	**P**	**18 32 57.0**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
VIVF	**Saint-Julien-l**	**90.31**	**331**	⇑*iP*	**P**	**18 32 57.0**	**-0.5**
	comp=Z,3.6nm,0.9s,mb4.7						
PGF	**Pioggiola**	**90.39**	**327**	⇑*iP*	**P**	**18 32 56.8**	**-1.1**
	comp=Z,23nm,1.0s,mb5.2						
PGF	**Pioggiola**	**90.39**	**327**	⇑*iP*	**P**	**18 32 56.8**	**-1.1**
PGF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.2						
PGF	**Pioggiola**	**90.39**	**327**	⇑*iP*	**P**	**18 32 56.8**	**-1.1**
	comp=Z,12nm,1.0s,mb5.2						
FRF	**La Foret Royal**	**90.58**	**329**	⇑*iP*	**P**	**18 32 57.5**	**-1.3**
	comp=Z,12nm,1.0s,mb4.9						
FRF	**La Foret Royal**	**90.58**	**329**	⇑*iP*	**P**	**18 32 57.5**	**-1.3**
FRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
FRF	**La Foret Royal**	**90.58**	**329**	⇑*iP*	**P**	**18 32 57.5**	**-1.3**
	comp=Z,5.8nm,1.0s,mb4.9						
MFF	**Saint Martin d**	**90.61**	**335**	⇑*iP*	**P**	**18 32 58.6**	**-0.3**
	comp=Z,17nm,1.0s,mb5.0						
MFF	**Saint Martin d**	**90.61**	**335**	⇑*iP*	**P**	**18 32 58.6**	**-0.3**
MFF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
MFF	**Saint Martin d**	**90.61**	**335**	⇑*iP*	**P**	**18 32 58.6**	**-0.3**
	comp=Z,8.7nm,1.0s,mb5.0						
TXAR	**Lajitas Array**	**90.62**	**52**	P	**P**	**18 32 58.9**	**-0.3**
	comp=Z,19nm,0.7s,mb4.5,baz=303,slow=3.2,SNR=14						
TXAR	**Lajitas Array**	**90.62**	**52**	P	**P**	**18 32 58.9**	**-0.3**
SMRF	**Simiane la Rot**	**90.68**	**330**	*eP*	**P**	**18 32 58.9**	**-0.3**
LMR	**La Mourre**	**90.82**	**329**	⇑*iP*	**P**	**18 32 58.7**	**-1.2**
	comp=Z,17nm,1.1s,mb5.0						
LMR	**La Mourre**	**90.82**	**329**	⇑*iP*	**P**	**18 32 58.7**	**-1.2**
LMR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
LMR	**La Mourre**	**90.82**	**329**	⇑*iP*	**P**	**18 32 58.7**	**-1.2**
	comp=Z,8.3nm,1.1s,mb5.0						
RJF	**Les Rejaudoux**	**91.14**	**333**	⇑*iP*	**P**	**18 33 01.1**	**-0.2**
	comp=Z,12nm,0.9s,mb4.9						
RJF	**Les Rejaudoux**	**91.14**	**333**	⇑*iP*	**P**	**18 33 01.1**	**-0.2**
RJF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
RJF	**Les Rejaudoux**	**91.14**	**333**	⇑*iP*	**P**	**18 33 01.1**	**-0.2**
	comp=Z,6.2nm,0.9s,mb4.9						
CAF	**Calviac**	**91.25**	**332**	⇑*iP*	**P**	**18 33 02.0**	**+0.1**
	comp=Z,12nm,0.9s,mb4.9						
CAF	**Calviac**	**91.25**	**332**	⇑*iP*	**P**	**18 33 02.0**	**+0.1**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
CAF	**Calviac**	**91.25**	**332**	⇑*iP*	**P**	**18 33 02.0**	**+0.1**
	comp=Z,6.2nm,0.9s,mb4.9						
LASF	**Ste Croix**	**91.28**	**331**	*eP*	**P**	**18 33 01.8**	**-0.3**
	comp=Z,7.1nm,0.9s,mb4.7						
CCM	**Cathedral Cave**	**91.50**	**39**	*eP*	**P**	**18 33 00.9**	**-2.3**
CCM				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.2						
CCM	**Cathedral Cave**	**91.50**	**39**	*eP*	**P**	**18 33 00.8**	**-2.3**
	comp=Z,11nm,0.8s,mb5.2						
LFF	**La Frestale**	**91.73**	**333**	⇑*iP*	**P**	**18 33 04.1**	**0.0**
	comp=Z,18nm,0.8s,mb5.2						
LFF	**La Frestale**	**91.73**	**333**	⇑*iP*	**P**	**18 33 04.1**	**0.0**
LFF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
LFF	**La Frestale**	**91.73**	**333**	⇑*iP*	**P**	**18 33 04.1**	**0.0**
	comp=Z,8.8nm,0.8s,mb5.1						
MTLF	**Montolieu**	**92.54**	**331**	*eP*	**P**	**18 33 07.7**	**-0.2**
	comp=Z,4.0nm,0.7s,mb4.6						
MTLF	**Montolieu**	**92.54**	**331**	*eP*	**P**	**18 33 07.7**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.7						
MTLF	**Montolieu**	**92.54**	**331**	*eP*	**P**	**18 33 07.7**	**-0.2**
	comp=Z,2.0nm,0.7s,mb4.7						
EPF	**Esparros**	**93.52**	**333**	*eP*	**P**	**18 33 11.6**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.6						
EPF	**Esparros**	**93.52**	**333**	*eP*	**P**	**18 33 11.6**	**-0.8**
EPF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
EPF	**Esparros**	**93.52**	**333**	*eP*	**P**	**18 33 11.6**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.7						
TORD	**Torodi Ar. Bea**	**117.91**	**315**	PKP	PKPdf	18 38 41.7	-2.0
	comp=Z,0.9nm,0.9s,baz=284,slow=1.4,SNR=5.4						
BOSA	**Boshof**	**126.42**	**259**	PKP	PKPdf	18 38 58.9	-0.7
	comp=Z,3.3nm,0.9s,baz=285,slow=7.8,SNR=4.0						
DBIC	**Dimbokro**	**126.89**	**316**	PKP	PKPdf	18 39 00.2	-0.8
	comp=Z,4.0nm,0.9s,baz=37,slow=2.4,SNR=3.0						
DBIC	**Dimbokro**	**126.89**	**316**	PKP	PKPdf	18 39 00.2	-0.8
LPAZ	**La Paz**	**147.10**	**61**	PKPbc	PKPbc	18 39 39.7	-0.3
	comp=Z,5.6nm,0.6s,baz=310,slow=2.8,SNR=18						
PLCA	**Paso Flores**	**154.65**	**110**	PKPab	PKPab	18 40 11.4	-0.8
	comp=Z,1.4nm,0.8s,baz=170,slow=8.1,SNR=3.0						

JMA 07 18:30:31.6±0.4, 36°.26N×141°.84E, h62km, M2.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.97	235	*e*S	Sn	18 31 03.3	+0.9
JMM	Marumori	1.81	333	P	Pn	18 31 01.8	+1.3
MAT	Matsushiro	2.94	277	P	Pn	18 31 18.2	+2.3
MAT				S	Sn	18 31 55.0	+4.9

*IDC **07** 18:34:00.9±1.6, 0°.81N×97°.14E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/24, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=49.7km s-min=21.0km az=58.0*
*ISCJB **07** 18:34:03.8±1.2, 0°.9N±0°.1×97°.2E±0°.2, h33km, mb3.6/7, Error ellipse: s-maj=26.8km s-min=15.8km az=152.6*
*NEIC **07** 18:34:06.1±1.0, 0°.89N×97°.19E, h35km, mb3.7/1, Error ellipse: s-maj=23.5km s-min=13.5km az=62.0*
ISC 07 18:34:06.4±1.2, 0°.9N±0°.1×97°.3E±0°.2, h35km, n10, σ0°.63/10, mb3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.50	42	Pn	Pn	18 34 44.9	+0.4
	2.5nm,0.3s,baz=316,slow=6.6,SNR=5.9						
PSI	Prapat	2.50	42	Pn	Pn	18 34 44.9	+0.4
CMAR	Chiang Mai Arr	17.50	5	P	Pn	18 38 06.8	-0.9
	0.1nm,0.3s,baz=193,slow=10,SNR=6.0						
WRA	Warramunga Arr	41.84	122	P	P	18 41 53.2	-0.1
	0.3nm,0.6s,mb3.1,baz=301,slow=8.9,SNR=3.4						
ASAR	Alice Springs	43.18	127	P	P	18 42 04.0	-0.2
	0.3nm,0.6s,mb3.2,baz=300,slow=7.7,SNR=6.6						
SONM	Songino Array	47.39	8	P	P	18 42 37.2	+0.1
	0.1nm,0.4s,mb3.1,baz=186,slow=13,SNR=2.9						
MKAR	Makanchi Array	47.52	346	P	P	18 42 38.3	+0.2
	0.8nm,0.5s,mb4.0,baz=158,slow=9.1,SNR=17						
KURK	Kurchatov	52.07	345	*e*P	P	18 43 11.6	-1.0
	0.8nm,0.8s,mb3.7						
ZALV	Zalesovo Beam	53.83	351	P	P	18 43 26.8	+1.2
	1.7nm,0.3s,mb4.4,baz=184,slow=6.4,SNR=12						
BVAR	Borovoye Array	56.52	341	P	P	18 43 45.5	+0.4
	0.2nm,0.4s,mb3.5,baz=140,slow=7.5,SNR=2.7						

*IDC **07** 18:39:32.1±0.6, 36°.11N×141°.87E, h0km, mb4.1/19, mb1 4.2/23, mb1mx4.2/31, mbtmp4.1/23, ML4.1/4, MS4.2/2, Ms1 4.2/2, ms1mx3.5/52, Error ellipse: s-maj=16.7km s-min=13.2km az=101.0*
*ISCJB **07** 18:39:33.8±1.3, 36°.11N±0°.03×142°.03E±0°.06, h26km±9km, mb4.3/39, Error ellipse: s-maj=7.9km s-min=5.6km az=8.0*
*NEIC **07** 18:39:34.5±3.4, 36°.12N×141°.91E, h15km±20km, mb4.6/8, Error ellipse: s-maj=8.3km s-min=6.4km az=130.0*
*JMA **07** 18:39:35.3±0.2, 36°.19N×141°.93E, h64km, M4.0*
*MOS **07** 18:39:35.1±1.1, 36°.19N×141°.98E, h33km, mb4.7/16, Error ellipse: s-maj=11.5km s-min=7.1km az=114.6*
ISC 07 18:39:33.6±1.6, 36°.14N±0°.03×141°.99E±0°.05, h10km±10km, n86, σ0°96/93, mb4.3/39, 9C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.02	245	⇑P	Pb	18 39 53.6	+0.3
CHOJ				S	Sb	18 40 07.4	+0.7
JHO	Hitachi	1.24	293	P	Pn	18 39 55.7	-1.3
ONAJ	Iwakimizuishiy	1.36	315	P	Pn	18 39 57.4	-1.2
JFK	Kawauchi	1.52	324	⇑P	Pn	18 39 59.9	-0.9
BSO1	Boso 1	1.70	209	P	Pn	18 40 03.4	+0.1
BSO1				S	Sn	18 40 25.9	+0.8
BSO3	Boso 3	1.80	223	P	Pn	18 40 05.0	+0.3
JFT	Otama	1.91	316	P	Pn	18 40 06.5	+0.3
JFT				S	Sn	18 40 29.4	-0.9
JMM	Marumori	1.97	331	P	Pn	18 40 06.1	-0.9
JAG	Ashikaga	2.07	279	⇑P	Pn	18 40 07.7	-0.7
JRY	Ryogami san	2.51	268	P	Pn	18 40 14.0	-0.4
JOD2	Odawara 2	2.52	251	P	Pn	18 40 14.7	+0.1
JNS	Sasagawa	2.72	309	P	Pn	18 40 18.5	+1.2
JMK	Ichinoseki	2.87	348	P	Pn	18 40 21.0	+1.6
MJAR	Matsushiro Arr	3.08	279	Pn	Pn	18 40 21.5	-0.8
	25nm,0.3s,baz=322,slow=24,SNR=103						
MAJO	Matsushiro	3.08	279	*e*P	Pn	18 40 23.1	+0.8
MAT	Matsushiro	3.08	279	P	Pn	18 40 22.7	+0.4
MAT				S	Sn	18 41 00.6	+1.4
JHJ	Hachijo jima 2	3.52	212	Pn	Pn	18 40 26.6	-1.7
	40nm,0.3s,baz=165,slow=16,SNR=11						
JHJ				Sn	Sn	18 41 06.9	-3.1
	80nm,0.3s,baz=229,slow=20,SNR=7.3						
JHJ				LR	LR	18 41 52.4	
	comp=Z,2μm,18.8s,baz=301,slow=41						
ASAJ	Asahikawa	7.98	3	P	Pn	18 41 28.2	-1.3
ASAJ						18 42 57.7	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	7.98	3	Pn	Pn	18 41 28.1	-1.4
	comp=N,3.1nm,0.3s,baz=228,slow=13,SNR=21						
ASAJ				Sn	Sn	18 42 57.7	-2.1
	comp=N,0.9nm,0.3s,baz=328,slow=19,SNR=2.7						
CBIJ	Chichi jima	9.02	179	Pn	Pn	18 41 42.2	-1.7
	comp=N,6.8nm,0.3s,baz=265,slow=17,SNR=6.1						
CBIJ				Sn	Sn	18 43 17.4	-8.1
	comp=N,7.2nm,0.3s,baz=196,slow=19,SNR=3.3						
CBIJ				LR	LR	18 44 56.9	
	comp=N,2μm,19.8s,baz=143,slow=36						
YSS	Yuzh-Sakhalins	10.82	3	*e*P	Pn	18 42 08.1	-0.3
KSRS	Korea Array	11.36	281	Pn	Pn	18 42 17.8	+1.9
	comp=N,0.1nm,0.3s,baz=92,slow=14,SNR=14						
CN2	Changchun	14.80	306	*e*P	Pn	18 43 05.1	+2.3
YAK	Yakutsk	27.04	347	*e*P	P	18 45 14.7	-1.0
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
YAK				pmax	pmax		
	comp=N,18nm,1.5s						
YAK	Yakutsk	27.04	347	*e*P	P	18 45 15.1	-0.6
	comp=N,25nm,0.8s,mb4.8						
SEY	Seymchan	27.58	10	⇑*e*P	P	18 45 19.3	-1.2
ENH	Enshi	27.74	267	*e*P	P	18 45 21.4	-0.9
	comp=N,15nm,0.6s,mb4.8						
BOD	Bodaibo	28.53	328	*e*P	P	18 45 28.1	-1.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						

OBN pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KAF Kangasniemi 69.31 333 *eP* **P 18 50 39.9 -0.8**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KAF Kangasniemi 69.31 333 *ep* **P 18 50 39.9 -0.8**
comp=Z,1.8nm,0.5s,mb4.3
FINES FINESS Array B 69.82 333 P **P 18 50 43.6 -0.3**
comp=Z,2.6nm,0.7s,mb4.3,baz=50,slow=6.0,SNR=8.8
GOF Gofitskoye 71.04 312 *eP* **P 18 50 57.7 +6.1**
VSU Vasula 71.46 330⇓*eP* **P 18 50 54.2 +0.3**
VSU pmax pmax
comp=Z,15nm,1.4s,mb4.7
SLMT Seeley Lake 73.05 44 *eP* **P 18 51 05.1 +1.4**
comp=Z,3.1nm,0.9s,mb4.2
FFC Flin Flon 74.20 33 *i P* **P 18 51 12.0 +1.7**
LRM Limekiln Ridge 74.46 44 *eP* **P 18 51 13.8 +1.8**
comp=Z,39nm,1.6s,mb5.1
NVAR Mina Array Bea 75.15 53 P **P 18 51 17.4 +1.3**
comp=Z,1.0nm,0.9s,mb3.7,baz=293,slow=7.9,SNR=4.3
NB2 NORSAR Subarra 75.19 338 P **P 18 51 15.5 -0.4**
comp=Z,6.6nm,1.1s,mb4.5,baz=41,slow=5.9
NOA NORSAR Array B 75.19 338 P **P 18 51 15.8 0.0**
comp=Z,3.2nm,0.9s,mb4.2,baz=39,slow=5.7,SNR=7.7
AKASG Malin Array Be 75.29 323 *ceP* **P 18 51 16.5 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 75.29 323 P **P 18 51 16.2 -0.4**
comp=Z,1.8nm,0.5s,mb4.3,baz=47,slow=6.1,SNR=16
PDAR Pinedale Array 77.96 46 P **P 18 51 32.4 +0.6**
comp=Z,0.5nm,0.6s,mb3.6,baz=310,slow=5.6,SNR=4.9
BRTR Keskin Array B 79.79 312 *ceP* **P 18 51 43.2 +1.2**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 79.79 312 P **P 18 51 41.8 -0.2**
comp=Z,1.9nm,0.9s,mb4.0,baz=35,slow=3.0,SNR=7.1
CLL Collm 82.10 330 *eP* **P 18 51 54.0 -0.1**
CLL Collm 82.10 330 *eP* **P 18 51 54.0 -0.1**
GERES GERESS Array B 83.72 329 P **P 18 52 02.0 -0.5**
comp=Z,0.6nm,0.6s,mb3.9,baz=28,slow=6.2,SNR=6.9
LPAZ La Paz 146.73 61 PKPbc PKPbc 18 59 17.4 +1.2
comp=Z,2.7nm,0.5s,baz=346,slow=2.5,SNR=13

*FUNV **07** 18:42:57.0, 11°.96N×60°.83W, h35km, MW3.7*
*NEIC **07** 18:42:58.8, 11°.82N×61°.07W, h22km, MD3.6(TRN), After TRN.*
*TRN **07** 18:42:58.8, 11°.82N×61°.07W, h21km, MD3.6*
ISC 07 18:42:59.3±0.4, 11°.82N±0°.02×61°.08W±0°.03, h30km±3km, n45, σ1§13/83, 2C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.64 299**		*eP*	**Pb**	**18 43 11.5**	**-0.6**
GRW	**Mount Saint Ca**	**0.66 301**		⇑*iP*	**Pb**	**18 43 12.5**	**+0.1**
GRW				*eS*	**Sb**	**18 43 22.9**	**+1.5**
GRW	**Mount Saint Ca**	**0.66 301**		⇑*iP*	**Pb**	**18 43 12.5**	**+0.1**
GRW				*eS*	**Sb**	**18 43 22.9**	**+1.5**
GRIC	**Isle de Caille**	**0.68 313**		*eP*	**Pb**	**18 43 11.9**	**-0.8**
GRIC				*eS*	**Sb**	**18 43 23.1**	**+1.3**
GRHS	**Sauteurs**	**0.68 306**		*eP*	**Pb**	**18 43 12.1**	**-0.7**
GRHS				*eS*	**Sb**	**18 43 22.7**	**+0.8**
GRHS	**Sauteurs**	**0.68 306**		*eP*	**Pb**	**18 43 12.1**	**-0.7**
GRHS				*eS*	**Sb**	**18 43 22.7**	**+0.8**
TPR	**Prospect**	**0.70 155**		*eP*	**Pb**	**18 43 13.0**	**0.0**
TPR				*eS*	**Sb**	**18 43 22.6**	**+0.3**
TPR	**Prospect**	**0.70 155**		*eP*	**Pb**	**18 43 13.0**	**0.0**
TPR				*eS*	**Sb**	**18 43 22.6**	**+0.3**
GRSS	**Sisters**	**0.71 312**		*eP*	**Pb**	**18 43 12.2**	**-1.0**
GRSS				*eS*	**Sb**	**18 43 23.4**	**+0.8**
GRSS	**Sisters**	**0.71 312**		*eP*	**Pb**	**18 43 12.2**	**-1.0**
GRSS				*eS*	**Sb**	**18 43 23.4**	**+0.8**
BOT	**Bacolet**	**0.74 151**		*eS*	**Sb**	**18 43 24.3**	**+0.8**
GRCU	**Cariacou**	**0.74 330**		⇓*iP*	**Pb**	**18 43 12.4**	**-1.4**
GRCU				*eS*	**Sb**	**18 43 23.6**	**0.0**
GRCU	**Cariacou**	**0.74 330**		⇓*iP*	**Pb**	**18 43 12.4**	**-1.4**
GRCU				*eS*	**Sb**	**18 43 23.6**	**0.0**
TOSP	**Speyside**	**0.74 134**		*eP*	**Pb**	**18 43 12.8**	**-1.0**
TOSP				*eS*	**Sb**	**18 43 23.6**	**0.0**
TRN	**Trinidad (W)**	**1.21 195**		*eP*	**Pn**	**18 43 20.8**	**+0.6**
TRN				*eS*	**Sn**	**18 43 36.3**	**+0.7**
TRN	**Trinidad (W)**	**1.21 195**		*eP*	**Pn**	**18 43 20.8**	**+0.6**
TRN				*eS*	**Sn**	**18 43 36.3**	**+0.7**
TCE	**Chacachacare**	**1.30 211**		*eP*	**Pn**	**18 43 21.3**	**-0.2**
TCE				*eS*	**Sn**	**18 43 38.9**	**+1.0**
TCE	**Chacachacare**	**1.30 211**		*eP*	**Pn**	**18 43 21.3**	**-0.2**
TCE				*eS*	**Sn**	**18 43 38.9**	**+1.0**
TBH	**Brigand Hill**	**1.33 180**		*eP*	**Pn**	**18 43 22.6**	**+0.7**
TBH				*eS*	**Sn**	**18 43 40.4**	**+1.8**
TBH	**Brigand Hill**	**1.33 180**		*eP*	**Pn**	**18 43 22.6**	**+0.7**
TBH				*eS*	**Sn**	**18 43 40.4**	**+1.8**
FCV	**Fort Charlotte**	**1.34 353**		*eP*	**Pn**	**18 43 22.9**	**+0.9**
FCV				*eS*	**Sn**	**18 43 39.7**	**+0.8**
FCV	**Fort Charlotte**	**1.34 353**		*eP*	**Pn**	**18 43 22.9**	**+0.9**
FCV				*eS*	**Sn**	**18 43 39.7**	**+0.8**
SVB	**Belmont**	**1.45 353**		*eP*	**Pn**	**18 43 22.3**	**-1.3**
SVB				*eS*	**Sn**	**18 43 40.3**	**-1.4**
SVB	**Belmont**	**1.45 353**		*eP*	**Pn**	**18 43 22.3**	**-1.3**
SVB				*eS*	**Sn**	**18 43 40.3**	**-1.4**
BHS	**Barnard House**	**1.47 358**		*eP*	**Pn**	**18 43 25.2**	**+1.4**
BHS				*eS*	**Sn**	**18 43 42.8**	**+0.8**
BHS	**Barnard House**	**1.47 358**		*eP*	**Pn**	**18 43 25.2**	**+1.4**
BHS				*eS*	**Sn**	**18 43 42.8**	**+0.8**
SVV	**Soufriere Volc**	**1.49 355**		*eP*	**Pn**	**18 43 24.9**	**+0.8**
SVV				*eS*	**Sn**	**18 43 42.5**	**-0.2**
SVV	**Soufriere Volc**	**1.49 355**		*eP*	**Pn**	**18 43 24.9**	**+0.8**
SVV				*eS*	**Sn**	**18 43 43.6**	**+1.0**
SSV	**Crater Summit**	**1.50 356**		*eS*	**Sn**	**18 43 44.2**	**+1.3**
TPP	**Pointe-a-Pierr**	**1.54 194**		*eP*	**Pn**	**18 43 24.4**	**-0.4**
TPP	**Pointe-a-Pierr**	**1.54 194**		*eP*	**Pn**	**18 43 24.4**	**-0.4**
GUIV	**Guiria**	**1.62 224**		*eP*	**Pn**	**18 43 25.6**	**-0.3**
GUIV				*eS*	**Sn**	**18 43 47.8**	**+2.0**
MCLT	**Moule a Chique**	**1.88**	**4**	*eP*	**Pn**	**18 43 27.6**	**-1.9**
MCLT				*eS*	**Sn**	**18 43 49.5**	**-2.7**
MCLT	**Moule a Chique**	**1.88**	**4**	*eP*	**Pn**	**18 43 27.6**	**-1.9**
MCLT				*eS*	**Sn**	**18 43 49.5**	**-2.7**
SLB	**Belfond**	**2.00**	**1**	*eP*	**Pn**	**18 43 32.5**	**+1.4**
SLB				*eS*	**Sn**	**18 43 55.9**	**+0.9**
SLB	**Belfond**	**2.00**	**1**	*eP*	**Pn**	**18 43 32.5**	**+1.4**
SLB				*eS*	**Sn**	**18 43 55.9**	**+0.9**
ITEV	**Isla Los Testi**	**2.06 257**		*eP*	**Pn**	**18 43 31.7**	**-0.3**
CRUV	**Carupano**	**2.40 242**		*eP*	**Pn**	**18 43 36.4**	**-0.3**
CRUV				*eS*	**Sn**	**18 44 06.0**	**+0.8**
GUNV	**Guanoco**	**2.46 228**		*eP*	**Pn**	**18 43 38.2**	**+0.7**
GUNV				*eS*	**Sn**	**18 44 07.8**	**+1.2**
RIOV	**Rio Grande**	**3.80 191**		*eP*	**Pn**	**18 43 54.5**	**-1.4**
RIOV				*eS*	**Sn**	**18 44 36.6**	**-3.0**
PCRV	**Puerto La Cruz**	**3.86 245**		*eP*	**Pn**	**18 43 56.5**	**-0.2**
PCRV				*eS*	**Sn**	**18 44 39.6**	**-1.4**
LZG	**Guadaloupe-1**	**4.35 351**		*eP*	**Sn**	**18 44 49.8**	**-3.3**
CUPV	**Cœpira**	**4.95 250**		*eP*	**Pn**	**18 44 11.0**	**-0.7**
CUPV				*eS*	**Sn**	**18 45 05.9**	**-2.0**
CAOV	**Caicara del Or**	**6.83 230**		*eP*	**Pn**	**18 44 36.3**	**-1.3**
CAOV				*eS*	**Sn**	**18 45 49.6**	**-4.8**
BAUV	**El Baul**	**7.42 248**		*eP*	**Pn**	**18 44 43.8**	**-2.0**
BAUV				*eS*	**Sn**	**18 46 02.8**	**-6.2**

*IDC **07** 18:51:23.8±0.7, 36°.17N×141°.92E, h0km, mb3.9/16, mb1 4.1/19, mb1mx4.0/29, mbtmp4.0/19, ML4.0/3, Error ellipse: s-maj=21.4km s-min=14.6km az=92.0*
*ISCJB **07** 18:51:25.4±1.7, 36°.14N±0°.04×142°.03E±0°.07, h28km±12km, mb4.0/21, Error ellipse: s-maj=9.4km s-min=6.4km az=13.7*
*BJI **07** 18:51:27.9, 36°.10N×141°.80E, h43km, mB5.0/2, mb4.3/7, Ms4.3/1, Ms7 4.3/1*
*JMA **07** 18:51:27.4±0.3, 36°.22N×141°.84E, h58km, M4.0*
*NEIC **07** 18:51:30.0±1.8, 36°.14N×141°.78E, h44km±14km, mb4.4/4, Error ellipse: s-maj=14.8km s-min=10.8km az=82.0*
ISC 07 18:51:25.2±2.0, 36°.15N±0°.04×141°.99E±0°.06, h13km±12km, n51, σ0§96/54, mb4.0/21, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.02 244**		P	**Pb**	**18 51 44.9**	**+0.1**
CHOJ				S	**Sb**	**18 51 58.8**	**+0.6**
JHO	**Hitachi**	**1.24 292**		⇓P	**Pn**	**18 51 46.5**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.35 315**		⇓P	**Pn**	**18 51 48.3**	**-1.5**
ONAJ				S	**Sn**	**18 52 06.6**	**-1.0**
JFK	**Kawauchi**	**1.51 324**		P	**Pn**	**18 51 51.0**	**-0.9**
BSO1	**Boso 1**	**1.71 209**		P	**Pn**	**18 51 56.5**	**+1.8**
BSO3	**Boso 3**	**1.81 222**		P	**Pn**	**18 51 56.7**	**+0.6**
JFT	**Otama**	**1.91 316**		P	**Pn**	**18 51 57.4**	**0.0**
JMM	**Marumori**	**1.96 331**		P	**Pn**	**18 51 58.6**	**+0.4**
JAG	**Ashikaga**	**2.07 278**		P	**Pn**	**18 51 58.9**	**-0.8**
JFY	**Yanaizu**	**2.22 305**		P	**Pn**	**18 52 02.0**	**+0.2**
JRY	**Ryogami san**	**2.51 268**		P	**Pn**	**18 52 05.1**	**-0.6**
JOD2	**Odawara 2**	**2.53 250**		⇑P	**Pn**	**18 52 06.2**	**+0.3**
JNS	**Sasagawa**	**2.71 309**		P	**Pn**	**18 52 09.5**	**+1.0**
JMK	**Ichinoseki**	**2.86 348**		P	**Pn**	**18 52 10.7**	**+0.2**
MJAR	**Matsushiro Arr**	**3.08 278**		Pn	**Pn**	**18 52 13.5**	**0.0**
	32nm,0.3s,baz=108,slow=8.5,SNR=267						
MAJO	**Matsushiro**	**3.08 278**		*eP*	**Pn**	**18 52 14.2**	**+0.7**
MAT	**Matsushiro**	**3.08 278**		P	**Pn**	**18 52 13.9**	**+0.3**
MAT				S	**Sn**	**18 52 51.7**	**+1.4**
JHJ	**Hachijo jima 2**	**3.53 212**		Pn	**Pn**	**18 52 19.3**	**-0.5**
	75nm,0.3s,baz=110,slow=22,SNR=22						
JHJ				Sn	**Sn**	**18 52 59.1**	**-2.2**
	164nm,0.3s,baz=68,slow=23,SNR=13						
ASAJ	**Asahikawa**	**7.97**	**3**	Pn	**Pn**	**18 53 19.9**	**-0.8**
	1.3nm,0.3s,baz=240,slow=8.6,SNR=13						
CBIJ	**Chichi jima**	**9.03 179**		Pn	**Pn**	**18 53 32.5**	**-2.8**
	5.8nm,0.3s,baz=84,slow=20,SNR=14						
CBIJ				Sn	**Sn**	**18 55 08.3**	**-8.5**
	14nm,0.3s,baz=272,slow=20,SNR=6.6						
KSRS	**Korea Array**	**11.36 281**		Pn	**Pn**	**18 54 09.4**	**+2.3**
	0.2nm,0.3s,baz=91,slow=14,SNR=12						
JOW	**Kunigami**	**14.93 235**		Pn	**Pn**	**18 55 01.1**	**+5.2**
	0.4nm,0.3s,baz=50,slow=14,SNR=4.4						
ENH	**Enshi**	**27.74 267**		*eP*	**P**	**18 57 12.7**	**-0.8**
	12nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**28.24 305**		*eP*	**P**	**18 57 17.5**	**-0.3**
	0.9nm,0.5s,mb3.7						
SONM	**Songino Array**	**28.67 305**		P	**P**	**18 57 22.2**	**+0.6**
	3.6nm,0.8s,mb4.2,baz=104,slow=8.5,SNR=17						
GTA	**Gaotai**	**33.28 289**		*eP*	**P**	**18 58 02.3**	**0.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CMAR	**Chiang Mai Arr**	**41.74 257**		P	**P**	**18 59 12.3**	**-1.9**
	comp=Z,0.5nm,0.8s,mb3.2,baz=50,slow=5.4,SNR=5.8						
LSA	**Lhasa**	**42.76 276**		*eP*	**P**	**18 59 21.4**	**-1.1**
ZALV	**Zalesovo Beam**	**42.86 313**		P	**P**	**18 59 23.1**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.1,baz=95,slow=6.6,SNR=12						
MK31	**Makanchi Array**	**44.99 303**		*eP*	**P**	**18 59 40.3**	**+0.2**
MKAR	**Makanchi Array**	**44.99 303**		P	**P**	**18 59 40.4**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.1,baz=88,slow=8.7,SNR=15						
KURK	**Kurchatov**	**46.85 309**		*eP*	**P**	**18 59 54.5**	**-0.2**
BVAR	**Borovoye Array**	**51.51 313**		P	**P**	**19 00 30.9**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=98,slow=8.9,SNR=8.3						
BVAR				PcP	PcP	19 01 45.2	+0.9
	comp=Z,0.7nm,0.6s,baz=107,slow=4.8,SNR=4.3						
BRVK	**Borovoye**	**51.57 313**		*eP*	**P**	**19 00 31.0**	**+0.2**
AML	**Almayashu**	**52.04 299**		*eP*	**P**	**19 00 32.1**	**-2.3**
	comp=Z,2.8nm,0.5s,mb4.5						
INK	**Inuvik**	**54.96 27**		P	**P**	**19 00 56.9**	**+1.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=301,slow=5.7,SNR=9.8						
INK	**Inuvik**	**54.96 27**		P	**P**	**19 00 56.9**	**+1.4**
FITZ	**Fitzroy Crossi**	**56.13 199**		P	**P**	**19 01 05.5**	**+1.1**
	comp=Z,2.5nm,1.0s,mb4.2,baz=144,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**56.26 189**		P	**P**	**19 01 05.7**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=7.0,slow=7.6,SNR=13						
ABKAR	**Akbulak array**	**58.87 311**		*eP*	**P**	**19 01 23.3**	**-0.2**
	comp=Z,1.6nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**59.98 189**		P	**P**	**19 01 32.2**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=12,slow=7.9,SNR=7.1						
YKA	**Yellowknife Ar**	**64.34 30**		P	**P**	**19 01 59.6**	**-0.5**
	comp=Z,0.1nm,0.4s,mb3.2,baz=303,slow=7.1,SNR=4.5						
ARCES	**ARCESS Array B**	**64.99 340**		P	**P**	**19 02 04.5**	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=52,slow=7.9,SNR=5.6						
FINES	**FINESS Array B**	**69.81 333**		P	**P**	**19 02 35.4**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.8,baz=40,slow=9.9,SNR=5.0						
NB2	**NORSAR Subarra**	**75.18 338**		P	**P**	**19 03 07.5**	**+0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**75.18 338**		P	**P**	**19 03 07.6**	**+0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=38,slow=5.7,SNR=5.4						
AKASG	**Malin Array Be**	**75.28 323**		P	**P**	**19 03 07.6**	**-0.1**
	comp=Z,1.8nm,0.5s,mb4.3,baz=48,slow=5.7,SNR=9.1						
BRTR	**Keskin Array B**	**79.79 312**		P	**P**	**19 03 34.3**	**+1.2**
	comp=Z,1.4nm,1.0s,mb3.9,baz=35,slow=4.5,SNR=5.1						
GERES	**GERESS Array B**	**83.71 329**		P	**P**	**19 03 53.8**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.7,baz=57,slow=4.9,SNR=5.1						
LPAZ	**La Paz**	**146.72 61**		PKPbc	PKPbc	19 11 08.8	+1.5
	comp=Z,1.0nm,0.5s,baz=153,slow=2.3,SNR=3.7						
LPAZ	**La Paz**	**146.72 61**		PKPbc	PKPbc	19 11 08.8	+1.5

*IDC **07** 18:58:43.3±0.7, 36°.23N×141°.63E, h0km, mb3.8/13, mb1 4.0/17, mb1mx3.9/29, mbtmp3.9/17, ML3.8/4, Error ellipse: s-maj=19.1km s-min=14.8km az=106.0*
*BJI **07** 18:58:47.6, 36°.03N×141°.64E, h39km, mb4.2/4*
*JMA **07** 18:58:47.7±0.2, 36°.26N×141°.90E, h67km±4km, M3.9*
*NEIC **07** 18:58:49.4±2.2, 36°.20N×141°.53E, h43km±18km, mb4.3/2, Error ellipse: s-maj=17.5km s-min=16.7km az=65.0*
ISC 07 18:58:46.9±1.9, 36°.28N±0°.04×142°.03E±0°.06, h33km±15km, n35, σ1§33/43, mb3.8/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.11 239**		P	**Pn**	**18 59 06.3**	**+0.2**
CHOJ				S	**Sn**	**18 59 21.1**	**+0.9**
JHO	**Hitachi**	**1.23 286**		P	**Pn**	**18 59 07.6**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.29 310**		P	**Pn**	**18 59 09.4**	**+0.9**
ONAJ				S	**Sn**	**18 59 24.8**	**+0.2**
BSO1	**Boso 1**	**1.83 208**		P	**Pn**	**18 59 16.1**	**+0.1**
BSO1				S	**Sn**	**18 59 39.2**	**+1.2**
BSO3	**Boso 3**	**1.92 221**		P	**Pn**	**18 59 18.1**	**+0.8**
JAG	**Ashikaga**	**2.09 275**		P	**Pn**	**18 59 20.4**	**+0.9**
JRY	**Ryogami san**	**2.55 265**		P	**Pn**	**18 59 26.8**	**+1.0**
JRY				S	**Sn**	**18 59 54.9**	**-0.7**
JOD2	**Odawara 2**	**2.60 248**		P	**Pn**	**18 59 27.7**	**+1.2**
MJAR	**Matsushiro Arr**	**3.09 276**		Pn	**Pn**	**18 59 30.2**	**-3.2**
	13nm,0.3s,baz=55,slow=31,SNR=23						
MJAR				Sn	**Sn**	**19 00 09.2**	**0.0**
	10nm,0.3s,baz=143,slow=16,SNR=5.5						
MAJO	**Matsushiro**	**3.10 276**		*eP*	**Pn**	**18 59 30.5**	**-2.8**
MAT	**Matsushiro**	**3.10 276**		P	**Pn**	**18 59 30.8**	**-2.6**
MAT	**Matsushiro**	**3.10 276**		P	**Pn**	**18 59 35.1**	**+1.7**
MAT				S	**Sn**	**19 00 10.1**	**+0.9**
JHJ	**Hachijo jima 2**	**3.65 211**		Pn	**Pn**	**18 59 40.4**	**-0.7**
	53nm,0.3s,baz=120,slow=11,SNR=15						
JHJ				Sn	**Sn**	**19 00 21.1**	**-1.8**
	103nm,0.3s,baz=258,slow=23,SNR=10						
ASAJ	**Asahikawa**	**7.84**	**3**	Pn	**Pn**	**19 00 38.1**	**-0.4**
	0.6nm,0.3s,baz=110,slow=18,SNR=2.6						
ASAJ				Sn	**Sn**	**19 02 05.5**	**-0.7**
	baz=268,slow=26,SNR=3.4						
CBIJ	**Chichi jima**	**9.15 179**		Pn	**Pn**	**19 00 54.6**	**-1.9**
	5.8nm,0.3s,baz=135,slow=19,SNR=6.3						
CBIJ				Sn	**Sn**	**19 02 27.4**	**-11**
	7.2nm,0.3s,baz=276,slow=21,SNR=4.1						
KSRS	**Korea Array**	**11.37 280**		Pn	**Pn**	**19 01 27.8**	**+1.0**
	0.1nm,0.3s,baz=136,slow=8.7,SNR=3.0						
SONM	**Songino Array**	**28.62 305**		P	**P**	**19 04 38.5**	**-1.5**
	2.5nm,1.0s,mb3.9,baz=97,slow=6.8,SNR=4.6						
CMAR	**Chiang Mai Arr**	**41.80 257**		P	**P**	**19 06 31.7**	**-1.7**
	0.3nm,0.4s,mb3.3,baz=50,slow=3.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**42.79 313**		P	**P**	**19 06 40.8**	**-0.4**
	2.7nm,1.0s,mb3.9,baz=79,slow=7.5,SNR=7.8						
MK31	**Makanchi Array**	**44.95 303**		*eP*	**P**	**19 07 00.3**	**+1.8**
MKAR	**Makanchi Array**	**44.95 303**		P	**P**	**19 06 57.2**	**-1.3**
	0.6nm,0.7s,mb3.5,baz=120,slow=8.5,SNR=4.1						
MKAR	**Makanchi Array**	**44.95 303**		P	**P**	**19 06 57.2**	**-1.3**
BVAR	**Borovoye Array**	**51.45 313**		P	**P**	**19 07 48.5**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=98,slow=6.4,SNR=5.3						
AML	**Almayashu**	**52.01 299**		*eP*	**P**	**19 07 51.5**	**-1.4**
	2.3nm,0.6s,mb4.3						
INK	**Inuvik**	**54.84 27**		P	**P**	**19 08 16.1**	**+2.8**
	1.4nm,0.6s,mb4.2,baz=302,slow=4.2,SNR=6.9						
WRA	**Warramunga Arr**	**56.38 189**		P	**P**	**19 08 26.4**	**+1.5**
	1.7nm,0.8s,mb4.1,baz=8.9,slow=7.4,SNR=9.5						
ABKAR	**Akbulak array**	**58.81 311**		*eP*	**P**	**19 08 39.7**	**-2.1**
	1.1nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**60.11 189**		P	**P**	**19 08 50.7**	**-0.2**
	0.6nm,0.8s,mb3.7,baz=12,slow=7.2,SNR=8.6						
YKA	**Yellowknife Ar**	**64.22 30**		P	**P**	**19 09 20.9**	**+2.9**
	0.6nm,0.7s,mb3.7,baz=302,slow=6.8,SNR=10						
NVAR	**Mina Array Bea**	**75.05 53**		P	**P**	**19 10 29.8**	**+4.6**
	0.3nm,0.3s,mb3.7,baz=281,slow=6.2,SNR=3.0						
NOA	**NORSAR Array B**	**75.08 338**		P	**P**	**19 10 28.0**	**+3.1**
	1.1nm,0.8s,mb3.8,baz=41,slow=5.7,SNR=3.6						
NOA	**NORSAR Array B**	**75.08 338**		P	**P**	**19 10 28.0**	**+3.1**
PDAR	**Pinedale Array**	**77.84 46**		P	**P**	**19 10 44.5**	**+3.5**
	0.6nm,0.6s,mb3.7,baz=298,slow=3.2,SNR=4.7						
BRTR	**Keskin Array B**	**79.73 312**		P	**P**	**19 10 51.0**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=242,slow=3.1,SNR=2.6						
LPAZ	**La Paz**	**146.63 61**		PKPbc	PKPbc	19 18 27.6	+2.2
	2.1nm,0.6s,baz=310,slow=1.9,SNR=9.2						

*IDC **07** 19:10:43.8±1.7, 35°.07N×136°.00E, h345km±19km, mb3.0/7, mb1 3.2/11, mb1mx3.0/31, mbtmp3.2/11, Error ellipse: s-maj=19.1km s-min=13.8km az=73.0*
*ISCJB **07** 19:10:45.5±0.6, 35°.47N±0°.10×135°.9E±0°.1, h352km±5km, mb3.1/7, Error ellipse: s-maj=16.1km s-min=13.9km az=155.8*
*JMA **07** 19:10:46.7±0.2, 35°.46N×135°.86E, h345km±2km, M3.4*
ISC 07 19:10:46.2±0.6, 35°.41N±0°.09×135°.9E±0°.1, h348km±4km, n24, σ0§62/30, mb3.1/7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.12**	**19**	P	**Pn**	**19 11 30.5**	**+0.9**
JFM				*eS*	**S**	**19 12 03.2**	**-1.3**
JWT	**Wachi**	**0.45 254**		P	**Pn**	**19 11 30.2**	**+0.1**
JWT				*eS*	**S**	**19 12 04.5**	**-0.8**
JGM	**Miyama**	**0.70**	**66**	P	**Pn**	**19 11 31.3**	**+0.7**
JKY	**Yasaka**	**0.71 288**		P	**Pn**	**19 11 31.3**	**+0.6**
JKY				S	**S**	**19 12 06.1**	**-0.2**
JKG	**Kaga**	**0.92**	**20**	P	**Pn**	**19 11 31.0**	**-0.3**
JKSM	**Kasumi**	**1.05 280**		P	**Pn**	**19 11 32.0**	**+0.1**
JKSM				S	**S**	**19 12 08.0**	**-0.5**
JIE	**Ise**	**1.20 148**		P	**Pn**	**19 11 33.0**	**+0.3**
JIE				S	**S**	**19 12 10.3**	**+0.5**
JWY	**Kouya**	**1.22 193**		P	**Pn**	**19 11 33.6**	**+0.8**
JWY				S	**S**	**19 12 09.7**	**-0.4**
JWZ	**Kozaga**	**1.89 186**		P	**Pn**	**19 11 37.1**	**+0.5**
JAI	**Aioi**	**2.03 218**		P	**Pn**	**19 11 37.8**	**+0.3**
JSZ	**Suzu**	**2.34**	**29**	P	**Pn**	**19 11 40.2**	**+0.5**
JHS	**Saijyo**	**2.34 261**		P	**Pn**	**19 11 39.3**	**-0.5**
JMN	**Monobe**	**2.39 226**		P	**Pn**	**19 11 40.2**	**0.0**
KSRS	**Korea Array**	**6.77 290**		P	**Pn**	**19 12 26.4**	**+0.7**
	1.6nm,0.3s,baz=106,slow=12,SNR=52						
CBIJ	**Chichi jima**	**9.86 145**		P	**Pn**	**19 12 57.0**	**-5.6**
	7.7nm,0.3s,baz=290,slow=17,SNR=12						
ASAJ	**Asahikawa**	**10.09**	**28**	P	**Pn**	**19 13 04.1**	**-0.9**
	1.9nm,0.3s,baz=226,slow=12,SNR=22						
JOW	**Kunigami**	**10.78 220**		P	**Pn**	**19 13 08.4**	**-5.0**
	0.3nm,0.3s,baz=67,slow=13,SNR=2.0						
SONM	**Songino Array**	**25.16 309**		P	**P**	**19 15 40.5**	**-0.3**
	2.4nm,0.6s,mb3.6,baz=122,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**39.79 314**		P	**P**	**19 17 46.4**	**0.0**
	0.6nm,0.4s,mb3.2,baz=99,slow=9.4,SNR=4.6						
KURK	**Kurchatov**	**43.47 309**		P	**P**	**19 18 16.5**	**+0.6**
	0.8nm,0.5s,mb3.1,baz=88,slow=8.8,SNR=8.3						
WRA	**Warramunga Arr**	**55.07 182**		P	**P**	**19 19 36.7**	**-6.4

DZM	Mont Dzumac	14.82	250	eP	P	19 19 41.9	+0.5
DZM	Mont Dzumac	14.82	250	eP	P	19 19 41.9	+0.5
	38nm,0.5s						
NOUC	Port Laguerre	14.96	250	eP	P	19 19 43.0	+0.1
OUZ	Omahuta	18.95	200	eP	P	19 20 22.5	+2.2
	80nm,0.8s						
URZ	Urewera	20.99	190	P	P	19 20 37.2	-1.5
	8.0nm,0.6s,baz=330,slow=13,SNR=6.3						
URZ				S	S	19 23 50.9	-5.9
	26nm,0.8s,baz=88,slow=12,SNR=7.6						
RPZ	Rata Peaks	27.54	196	P	P	19 21 34.8	-1.9
	12nm,0.6s,mb4.7,baz=18,slow=6.0,SNR=8.1						
PAE	Paea	27.60	95	eP	P	19 21 37.6	-0.1
	11nm,0.9s,mb4.5						
PPT	Papeete	27.61	94	eP	P	19 21 37.8	0.0
	27nm,0.9s,mb4.9						
TIAR	Tiarei	27.84	94	eP	P	19 21 39.7	0.0
	61nm,0.9s,mb5.2						
EIDS	Eidsvold	29.27	249	eP	P	19 21 52.0	-0.2
	60nm,0.8s,mb5.3						
PMOR	Pomariorio Ree	29.52	90	eP	P	19 21 54.3	-0.1
	115nm,1.1s,mb5.3						
ARMA	Armidale	30.01	239	‖iP	P	19 21 59.7	+1.2
ARMA	Armidale	30.01	239	eP	P	19 21 59.4	+0.9
	63nm,0.7s,mb5.2						
RIV	Riverview	31.60	233	eP	P	19 22 12.8	+0.8
CTA	Charters Tower	33.38	260	‖iP	P	19 22 27.6	+0.3
	63nm,0.8s,mb5.2						
CTA				eSCP	ScP	19 27 45.7	0.0
CTA	Charters Tower	33.38	260	P	P	19 22 27.0	-0.3
	62nm,0.6s,mb5.3,baz=89,slow=10,SNR=102						
CTA				PcP	PcP	19 24 52.5	-0.4
	4.9nm,0.6s,baz=90,slow=6.1,SNR=3.3						
CTA				ScP	ScP	19 27 44.3	-1.4
	14nm,0.9s,baz=357,slow=1.5,SNR=6.6						
CTAO	Charters Tower	33.38	260	eP	P	19 22 27.4	+0.1
	66nm,0.7s,mb5.3						
CNB	Canberra Magne	33.54	232	‖iP	P	19 22 29.5	+1.0
CAN	Canberra	33.82	232	eP	P	19 22 30.3	-0.5
	150nm,1.4s,mb5.3						
COEN	Coen	36.97	270	eP	P	19 22 58.3	+1.1
	1μm,0.7s						
TOO	Toolangi	37.30	230	‖iP	P	19 23 00.4	+0.8
MOO	Moorlands	38.27	222	eP	P	19 23 08.2	+0.8
STKA	Stephens Creek	38.69	241	‖iP	P	19 23 12.0	+1.0
	81nm,0.6s,mb5.4						
STKA	Stephens Creek	38.69	241	P	P	19 23 12.1	+1.0
	90nm,0.5s,mb5.6,baz=91,slow=9.5,SNR=494						
STKA				ScP	ScP	19 28 03.4	-1.9
	5.9nm,0.8s,baz=344,slow=2.5,SNR=4.2						
STKA	Stephens Creek	38.69	241	eP	P	19 23 11.7	+0.7
	34nm,0.8s,mb4.9						
WB2	Warramunga Arr	44.55	259	eP	P	19 23 56.4	-1.1
WRAB	Tennant Creek	44.56	259	eP	P	19 23 56.6	-0.9
	74nm,0.5s,mb5.5						
WRA	Warramunga Arr	44.57	259	P	P	19 23 56.8	-0.8
	83nm,0.5s,mb5.5,baz=93,slow=6.9,SNR=664						
WRA				PcP	PcP	19 25 28.1	-0.7
	10.0nm,0.8s,baz=88,slow=3.6,SNR=4.9						
WRA				ScP	ScP	19 28 27.8	-1.3
	8.7nm,1.0s,baz=87,slow=4.2,SNR=9.9						
ASAR	Alice Springs	44.76	254	P	P	19 23 59.2	+0.2
	650nm,0.6s,baz=88,slow=8.2						
ASAR				PcP	PcP	19 25 27.7	-1.7
	12nm,0.7s,baz=102,slow=3.5,SNR=5.4						
ASAR				ScP	ScP	19 28 29.2	-0.6
	2.5nm,0.6s,baz=91,slow=4.0,SNR=6.3						
ASAR				S	S	19 29 53.8	-2.7
	2.3nm,0.9s,baz=91,slow=15,SNR=8.1						
KAKA	Kakadu	47.46	269	‖iP	P	19 24 18.3	-1.3
	149nm,0.4s						
KAKA	Kakadu	47.46	269	eP	P	19 24 17.9	-1.7
	345nm,0.4s						
GUMO	Guam	47.54	308	P	P	19 24 20.5	+0.3
	123nm,0.7s,mb5.6,baz=145,slow=9.6,SNR=9.6						
FORT	Forrest	50.04	244	‖iP	P	19 24 37.9	-0.7
	210nm,0.5s						
FORT	Forrest	50.04	244	eP	P	19 24 37.8	-0.8
	229nm,0.6s						
FITZ	Fitzroy Crossi	52.96	260	eP	P	19 24 59.8	0.0
	23nm,0.3s,mb5.0						
FITZ	Fitzroy Crossi	52.96	260	P	P	19 24 59.9	+0.1
	16nm,0.3s,mb4.8,baz=130,slow=3.7,SNR=183						
FITZ	Fitzroy Crossi	52.96	260	eP	P	19 24 59.6	-0.2
	18nm,0.6s,mb4.6						
MBWA	Marble Bar	58.03	256	eP	P	19 25 34.3	-0.7
	41nm,0.6s,mb4.8						
NWAO	Narrogin (SRO)	59.26	242	eP	P	19 25 42.2	-0.9
	11nm,0.5s,mb4.3						
KAPI	Kappang	61.53	274	P	P	19 25 56.5	-1.9
	17nm,0.6s,mb4.7,baz=134,slow=5.3,SNR=10						
KAPI	Kappang	61.53	274	eP	P	19 25 56.0	-2.4
	47nm,1.2s,mb4.8						
JHJ	Hachijo jima 2	64.20	322	P	P	19 26 14.8	-0.3
	71nm,0.3s,mb5.5,baz=74,slow=19,SNR=4.7						
MYLDM	Lahad Datu	66.09	284	P	P	19 26 29.8	+2.4
CASY	Casey	66.41	205	eP	P	19 26 28.1	-0.3
SDKM	Sandakan	67.47	284	P	P	19 26 35.5	-0.5
TGY	Tagaytay City	67.47	294	P	P	19 26 36.3	+0.4
	31nm,0.3s,mb5.3,baz=157,slow=7.7,SNR=3.6						
MJAR	Matsushiro Arr	67.53	323	P	P	19 26 35.3	-0.5
	10.0nm,0.6s,mb4.5,baz=152,slow=5.7,SNR=5.0						
MAJO	Matsushiro	67.53	323	eP	P	19 26 35.4	-0.5
MAJO				e		19 26 45.0	
JOW	Kunigami	67.88	309	P	P	19 26 37.9	-0.3
	5.9nm,0.5s,mb4.4,baz=118,slow=14,SNR=5.6						
KDM	Kudat	68.27	285	P	P	19 26 41.8	+1.0
KKM	Kota Kinabalu	68.52	284	P	P	19 26 42.7	+0.4
KKM	Kota Kinabalu	68.52	284	eP	P	19 26 42.1	-0.3
	31nm,0.7s,mb4.9						
SBUM	Sibu	71.02	279	P	P	19 26 57.6	+0.4
YULB	Yu-li	71.46	303	eP	P	19 26 57.8	-1.7
	13nm,0.8s,mb4.5						
SSLB	Suanglung	71.92	303	eP	P	19 27 00.6	-1.6
	24nm,0.4s,mb5.0						
TPUB	Ta-pu	71.95	302	eP	P	19 27 01.3	-1.1
	62nm,0.8s,mb5.1						
KSM	Kuching	72.50	277	P	P	19 27 06.7	+0.8
KSM	Kuching	72.50	277	eP	P	19 27 06.1	+0.3
	73nm,0.8s,mb5.2						
PETK	Petropavlovsk-	73.29	345	P	P	19 27 09.1	-0.4
	6.9nm,0.7s,mb4.2,baz=117,slow=6.7,SNR=6.2						
PETK	Petropavlovsk-	73.29	345	P	P	19 27 09.1	-0.4
KSRS	Korea Array	74.34	318	P	P	19 27 16.4	+0.7
	5.1nm,0.7s,mb4.1,baz=128,slow=6.2,SNR=17						
NJ2	Nanjing	77.60	309	eP	P	19 27 33.7	-0.2
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.6						
ISA	Isabella	77.66	46	eP	P	19 27 34.4	+0.3
	comp=Z,15nm,1.0s,mb4.3						
MDJ	Mudanjiang	77.81	325	eP	P	19 27 35.6	+0.9
YBH	Yreka Blue Hor	78.33	39	P	P	19 27 37.9	+0.3
	comp=Z,5.4nm,0.7s,mb4.0,baz=142,slow=2.1,SNR=10						
MYKOM	Kota Tinggi	78.73	275	P	P	19 27 40.6	+0.2
NVAR	Mina Array Bea	79.25	44	P	P	19 27 42.7	+0.1
	comp=Z,6.1nm,0.7s,mb4.0,baz=224,slow=8.5,SNR=29						
NVAR				pP	pP	19 29 43.8	+4.8
	comp=Z,0.6nm,0.6s,baz=224,slow=7.6,SNR=3.4						
KGM	Kluang	79.30	276	P	P	19 27 44.0	+0.6
CN2	Changchun	79.65	322	eP	P	19 27 45.2	+0.7
CN2				eS	S	19 37 09.0	+7.0
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
MOD	Modoc	79.89	40	eP	P	19 27 46.0	+0.2
	comp=Z,6.0nm,0.7s,mb4.0						
KTGM	Kuala Trenggan	80.52	279	P	P	19 27 50.5	+0.7
FRIM	Kepong	81.29	276	P	P	19 27 53.9	+0.2
TUC	Tucson	81.58	52	eP	P	19 27 55.4	+0.6
	comp=Z,17nm,1.1s,mb4.4						
ARUT	Antelope Range	82.22	46	eP	P	19 27 57.9	0.0
	comp=Z,3.9nm,0.8s,mb3.9						
IPM	Ipoh	82.24	277	P	P	19 27 59.1	+0.5
ELK	Elko	82.48	43	P	P	19 27 59.5	+0.3
	comp=Z,6.0nm,0.8s,mb4.1,baz=250,slow=4.8,SNR=26						
WUAZ	Wupatki	82.61	49	eP	P	19 28 00.3	+0.3
	comp=Z,15nm,1.0s,mb4.5						
N12A	Clover Valley,	82.67	43	eP	P	19 28 00.5	+0.4
	comp=Z,5.4nm,0.6s,mb4.2						
KULM	Kulim	82.85	278	P	P	19 28 02.4	+0.7
HAWA	Hanford	82.89	37	eP	P	19 28 01.1	-0.1
	comp=Z,4.9nm,0.6s,mb4.2						
BJI	Beijing	83.43	315	P	P	19 28 03.6	-0.4
BJI				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
MSU	Marysvale	83.44	46	eP	P	19 28 04.9	+0.8
	comp=Z,5.7nm,1.0s,mb4.1						
ENH	Enshi	83.95	304	eP	P	19 28 06.9	+0.1
MAW	Mawson	84.16	200	eP	P	19 28 06.9	-0.2
	comp=Z,6.5nm,0.7s,mb4.3						
MAW	Mawson	84.16	200	P	P	19 28 06.7	-0.4
	comp=Z,7.0nm,0.7s,mb4.3,baz=131,slow=6.3,SNR=17						
DLBC	Dease Lake	85.55	23	P	P	19 28 13.8	-0.1
	comp=Z,1.6nm,0.9s,mb3.6,baz=212,slow=6.9,SNR=3.7						
TXAR	Lajitas Array	85.91	58	P	P	19 28 17.4	+1.1
	comp=Z,10nm,0.8s,mb4.5,baz=219,slow=6.3,SNR=47						
ANMO	Albuquerque	85.97	52	P	P	19 28 15.9	-0.6
	comp=Z,6.9nm,1.1s,mb4.2,baz=230,slow=5.6,SNR=8.6						
MCMT	McKenzie Canyo	86.05	41	eP	P	19 28 17.0	+0.4
	comp=Z,5.0nm,1.1s,mb4.1						
RRI2	Red Ridge	86.30	42	eP	P	19 28 18.1	+0.2
	comp=Z,14nm,0.8s,mb4.6						
BSMT	Bassoo Peak	86.41	37	eP	P	19 28 17.7	-0.5
	comp=Z,2.7nm,0.7s,mb4.0						
REDW	Red Top Meadow	86.61	43	eP	P	19 28 19.2	-0.1
	comp=Z,2.9nm,0.7s,mb4.0						
IMW	Indian Meadow	86.81	42	eP	P	19 28 20.8	+0.6
	comp=Z,18nm,1.2s,mb4.6						
CHMT	Chamberlain Mo	86.83	39	eP	P	19 28 19.7	-0.6
	comp=Z,2.7nm,0.9s,mb3.9						
HHC	Hu-ho-hao-te	86.92	314	eP	P	19 28 21.4	+0.6
HHC				pP	pP	19 30 29.2	+9.0
HHC				PP	PP	19 31 57.9	+3.6
HHC				SKS		19 37 50.4	
HHC				S	S	19 38 08.6	-5.0
HHC				sS	sS	19 41 59.1	+13
HHC				SS	SS	19 44 15.5	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,450nm,7.0s						
QLMT	Earthquake Lak	86.94	41	eP	P	19 28 21.8	+1.1
	comp=Z,1.2nm,0.4s,mb3.9						
PDAR	Pinedale Array	87.18	43	P	P	19 28 21.6	-0.3
	comp=Z,4.0nm,0.7s,mb4.2,baz=215,slow=2.8,SNR=34						
BOZ	Bozeman (W)	87.20	40	eP	P	19 28 21.9	-0.1
	comp=Z,1.3nm,0.6s,mb3.7						
KMI	Kunming	87.54	297	P	P	19 28 25.7	+1.6
KMI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
RLMT	Red Lodge	88.43	41	eP	P	19 28 28.2	+0.5
	comp=Z,2.7nm,1.0s,mb3.9						
GCMT	Greycliff	88.48	41	eP	P	19 28 28.3	+0.3
	comp=Z,0.3nm,0.7s						
CMAR	Chiang Mai Arr	88.63	290	P	P	19 28 29.5	+0.2
	comp=Z,9.7nm,0.9s,mb4.6,baz=105,slow=3.3,SNR=19						
CMAR				pP	pP	19 30 35.1	+5.9
	comp=Z,0.6nm,0.9s,baz=107,slow=1.9,SNR=4.5						
VNA3	Neumayer Olymp	91.11	176	e	P	19 28 39.4	-0.4
RSSD	Black Hills	91.40	44	eP	P	19 28 40.6	-0.9
	comp=Z,5.6nm,1.0s,mb4.5						
VNA2	Neumayer--Watz	91.55	177	e	P	19 28 41.9	+0.1
INK	Inuvik	91.57	15	P	P	19 28 40.4	-1.4
	comp=Z,1.4nm,0.8s,mb4.0,baz=247,slow=4.8,SNR=4.0						
INK	Inuvik	91.57	15	P	P	19 28 40.4	-1.4
ULN	Ulaanbaatar	92.79	320	eP	P	19 28 47.7	-0.1
SONM	Songino Array	93.19	319	P	P	19 28 49.2	-0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=125,slow=4.8,SNR=5.6						
YKA	Yellowknife Ar	94.06	25	P	P	19 28 51.7	-1.5
	comp=Z,1.0nm,0.8s,mb4.0,baz=245,slow=4.5,SNR=15						
YKA	Yellowknife Ar	94.06	25	P	P	19 28 51.7	-1.5
ZALV	Zalesovo Beam	107.86	322	PKiKP	PKiKP	19 33 56.1	-2.8
	comp=Z,1.4nm,0.7s,baz=48,slow=2.1,SNR=4.6						
MKAR	Makanchi Array	108.78	314	PKiKP	PKiKP	19 33 59.1	-1.8
	comp=Z,1.0nm,0.6s,baz=226,slow=1.1,SNR=7.1						
KURK	Kurchatov	111.46	318	PKiKP	PKiKP	19 34 03.7	-2.1
	comp=Z,1.4nm,0.7s,baz=89,slow=1.6,SNR=4.9						
BVAR	Borovoye Array	116.48	321	PKP	PKPdf	19 34 13.6	-1.7
	comp=Z,1.3nm,0.4s,baz=85,slow=1.7,SNR=7.2						
KBL	Kabul	117.99	300	ePKPdf	PKPdf	19 34 18.3	-0.5
AKTK	Aktyubinsk	124.50	320	PKP	PKPdf	19 34 29.5	-1.4
AKTO	Aktyubinsk	124.50	320	PKP	PKPdf	19 34 29.5	-1.4
	comp=Z,2.1nm,0.9s,baz=30,slow=5.6,SNR=3.7						
KEV	Kevo	125.48	349	ep	PKPdf	19 34 30.5	-1.7
	comp=Z,0.4nm,0.4s						
ARCES	ARCESS Array B	125.93	350	PKP	PKPdf	19 34 31.9	-1.1
	comp=Z,1.5nm,0.9s,baz=123,slow=15,SNR=7.0						
BOSA	Boshof	128.66	207	SKPbc		19 37 07.6	
	comp=Z,2.8nm,0.8s,baz=184,slow=3.2,SNR=5.8						
JOF	Joensuu	130.17	343	ep	PKPdf	19 34 39.2	-2.1
	comp=Z,1.2nm,0.5s						
KAF	Kangasniemi	132.18	345	ep	PKPdf	19 34 41.9	-3.2
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	132.80	344	PKP	PKPdf	19 34 44.8	-1.5
	comp=Z,1.4nm,0.6s,baz=80,slow=5.8,SNR=4.4						
FINES				SKPbc	SKPbc	19 37 21.4	-1.4
	comp=Z,6.3nm,0.8s,baz=48,slow=2.8,SNR=16						
FINES	FINESS Array B	132.80	344	PKP	PKPdf	19 34 44.8	-1.5
FINES				SKPbc	SKPbc	19 37 21.4	-1.4
NOA	NORSAR Array B	136.00	353	SKPbc	SKPbc	19 37 31.4	-1.5
	comp=Z,1.0nm,0.8s,baz=14,slow=4.4,SNR=3.4						
KMBO	Kilima Mbogo	140.16	246	SKPbc	SKPbc	19 37 45.4	-0.8
	comp=Z,1.8nm,0.7s,baz=83,slow=4.1,SNR=5.0						
MALT	Malatya	141.68	310	ePKPpre		19 34 59.8	
MALT	Malatya	141.68	310	‖iP		19 34 59.3	
KIS	Kishinev	142.97	328	eP	PKiKP	19 35 12.0	+3.2
BSEG	Bad Segeberg	143.03	351	ePKPbc	PKPdf	19 35 02.2	-3.0
KWP	Kalwaria Pacla	143.68	337	ePKPdf	PKPdf	19 35 04.7	-1.8
KWP	Kalwaria Pacla	143.68	337	‖iP	PKPdf	19 35 05.0	-1.5
TLCR		144.19	326	‖iP	PKPdf	19 35 07.0	-0.5
BUR08	Bucovina Ar. S	144.21	332	ePKPdf	PKPdf	19 35 06.9	-0.6
OJC	Ojcow	144.22	340	ePKP	PKPdf	19 35 06.2	-1.2
BURAR	Bucovina Array	144.23	332	‖iP	PKPdf	19 35 07.3	-0.2
STHS	Stebnicka Huta	144.40	338	ePKP	PKPdf	19 35 07.7	-0.1
KOLS	Kolonicke sedl	144.42	336	ePKP	PKPdf	19 35 06.9	-0.9
BR131	Keskin Array S	144.43	315	ePKPdf	PKPdf	19 35 07.2	-0.9
BRTR	Keskin Array B	144.43	315	PKP	PKPdf	19 35 07.5	-0.6
	comp=Z,14nm,0.8s,baz=120,slow=3.1,SNR=42						
NRDL	Niedersach Rie	144.46	351	ePKPbc	PKPdf	19 35 06.7	-1.1
VRI	Vrincioaia	144.80	329	‖iP	PKPdf	19 35 08.1	-0.5
PLOR	Plostina	144.85	329	‖iP	PKPdf	19 35 08.9	+0.3
IBBN	Ibbenburen	144.96	353	ePKPbc	PKPdf	19 35 08.8	+0.2
HARR	Harsova	144.99	326	‖iP	PKPdf	19 35 09.9	+1.0
CLZ	Clausthal	145.05	350	ePKPbc	PKPbc	19 35 09.4	-0.2
CLL	Collm	145.08	347	ePKPbc	PKPbc	19 35 08.8	-0.9
CLL	Collm	145.08	347	‖iPKPbc	PKPbc	19 35 08.9	-0.8
	comp=Z,12nm,0.6s						
CLL				iPKPab	PKPab	19 35 12.3	+1.6
OKC	Ostrava-Krasne	145.09	341	ePKP	PKPdf	19 35 09.4	+0.5
UPC	Upice	145.10	344	ePKP	PKPdf	19 35 09.5	+0.6
DPC	Dobruska-Polom	145.16	343	ePKP	PKPdf	19 35 10.1	+1.1
BRG	Berggiesshubel	145.28	346	ePKPbc	PKPbc	19 35 09.7	-0.6
BRG	Berggiesshubel	145.28	346	iP	PKPdf	19 35 09.7	+0.5
	comp=Z,9.5nm,0.8s						
MORC	Moravsky Berou	145.32	342	ePKPdf	PKPdf	19 35 07.3	-2.0
MORC	Moravsky Berou	145.32	342	‖iP	PKPdf	19 35 10.7	+1.4
MLR	Muntele Rosu	145.45	329	‖iP	PKPdf	19 35 10.4	+0.7
PVCC	Panska Ves	145.45	345	ePKP	PKPdf	19 35 10.5	+1.0
KECS	Kecovo	145.46	337	ePKP	PKPdf	19 35 10.7	+1.1
VOIR		145.92	330	‖iP	PKPdf	19 35 11.6	+1.1
DRGR		145.95	334	‖iP	PKPbc	19 35 12.1	-0.3
PRU	Pruhonice	145.96	345	ePKP	PKPbc	19 35 12.2	-0.1
MOX	Moxa	145.99	348	ePKPbc	PKPbc	19 35 11.6	-0.7
VYHS	Vyhne	146.03	339	ePKP	PKPbc	19 35 12.5	0.0
TANN	Tannenbergstha	146.04	347	ePKPbc	PKPbc	19 35 11.9	-0.6
PSZ	Piszkesteto	146.15	338	ePKPbc	PKPbc	19 35 11.6	-1.3
PSZ	Piszkesteto	146.15	338	‖iP	PKPdf	19 35 11.6	+0.8
TREC	Trest	146.35	343	ePKP	PKPbc	19 35 13.1	-0.3
ROTZ	Rotzenmuhle	146.70	347	ePKPbc	PKPbc	19 35 13.9	-0.4
CSS	Prodhromos	146.75	308	ePKPbc	PKPbc	19 35 13.6	-1.3
TNS	Taunus Mts	146.92	352	ePKPbc	PKPbc	19 35 14.4	-0.5
GRA1	Grafenberg Arr	146.97	348	ePKPbc	PKPbc	19 35 14.7	-0.3
GRF	Grafenberg Arr	146.97	348	ePKPbc	PKPbc	19 35 14.7	-0.3
GRF	Grafenberg Arr	146.97	348	ePKP	PKPbc	19 35 14.7	-0.3
KHC	Kasperske Hory	146.99	345	ePKPbc	PKPbc	19 35 14.7	-0.4
KHC	Kasperske Hory	146.99	345	ePKP	PKPbc	19 35 14.9	-0.2
KHC				ex	x	19 35 18.2	
GZR	Gura Zlata	147.01	332	‖iP	PKPbc	19 35 14.6	-0.7
SNF	Seneffe	147.03	357	PKPbc	PKPbc	19 35 15.4	+0.2
BCLA	Clavier	147.06	355	PKPbc	PKPbc	19 35 13.9	-1.4
WET	Wettzell	147.14	346	ePKPbc	PKPbc	19 35 15.1	-0.4
GEC2	GERESS Array S	147.22	345	ePKPbc	PKPbc	19 35 15.2	-0.5
GERES	GERESS Array B	147.22	345	PKPbc	PKPbc	19 35 15.0	-0.8
	comp=Z,5.2nm,0.7s,baz=23,slow=3.0,SNR=28						
BZS	Buzias	147.35	333	‖iP	PKPbc	19 35 16.4	+0.2
GIVF	Givet	147.41	356	ePKP1	PKPbc	19 35 15.1	-1.1
DOU	Dourbes	147.43	356	PKPbc	PKPbc	19 35 15.8	-0.4
CSNA	Conrad Observa	147.48	342	‖iPKiKP	PKiKP	19 35 16.3	-1.7
	comp=Z,7.9nm,0.6s						
BAIF	Baives	147.49	357	ePKP1	PKPbc	19 35 15.4	-1.0
	comp=Z,8.3nm,0.7s						
WLF	Walferdange	147.73	354	PKPbc	PKPbc	19 35 17.0	0.0
WLF	Walferdange	147.73	354	ePKPbc	PKPbc	19 35 16.8	-0.2
STU	Stuttgart	148.22	350	ePKPbc	PKPbc	19 35 17.8	-0.5
BFO	Black Forest	148.78	351	ePKPbc	PKPbc	19 35 18.7	-1.0
BFO	Black Forest	148.78	351	ePKPbc	PKPbc	19 35 18.7	-1.0
FLN	La Foliniere	148.82	2	ePKP1	PKPbc	19 35 18.3	-1.5
	comp=Z,14nm,0.8s						
CDF	Champ du Feu	148.84	352	ePKP1	PKPbc	19 35 18.8	-1.0
	comp=Z,6.4nm,0.6s						
SOKA	Soboth	148.85	342	‖iPKPbc	PKPbc	19 35 18.9	-1.0
	comp=Z,6.2nm,1.2s						
KBA	Koelnbreinsper	148.95	344	⇑iPKPbc	PKPbc	19 35 18.8	-1.3
	comp=Z,5.1nm,0.5s						
LDF	La Druitiere	149.00	2	ePKP1	PKPbc	19 35 18.5	-1.7
GRR	Gorron	149.18	3	ePKP1	PKPbc	19 35 19.4	-1.2
WTTA	Wattenberg	149.19	346	‖iPKiKP	PKiKP	19 35 20.3	-1.3
	comp=Z,11nm,0.5s						
HAU	Haudompre	149.35	354	ePKP1	PKPbc	19 35 19.9	-1.2
ABTA	Abfaltersbach	149.47	345	‖iPKPbc	PKPbc	19 35 20.3	-1.1
	comp=Z,8.7nm,0.6s						
HINF	Hinteralfeld	149.48	353	ePKP1	PKPbc	19 35 20.0	-1.4
	comp=Z,4.7nm,0.7s						
FETA	Feichten	149.62	347	‖iPKiKP	PKiKP	19 35 21.3	-1.1
	comp=Z,4.4nm,0.7s						
VAY	Valandovo	150.16	327	ePKP	PKPbc	19 35 21.0	-2.2
SKO	Skopje	150.25	329	ePKP	PKPbc	19 35 23.1	-0.3
LOR	Lormes	150.29	357	ePKP1	PKPbc	19 35 22.2	-1.1
	comp=Z,7.2nm,0.5s						
SSF	Saint Saulge	150.51	357	ePKP1	PKPbc	19 35 22.7	-1.1
	comp=Z,6.0nm,0.5s						
CABF	La Chapelle	150.76	353	ePKP1	PKPbc	19 35 23.8	-0.6
	comp=Z,9.2nm,0.8s						
AVF	Avril sur Loir	150.79	357	ePKP1	PKPbc	19 35 22.9	-1.6
	comp=Z,4.0nm,0.8s						
KRUS	Krusevo	150.80	328	ePKP	PKPbc	19 35 22.9	-1.8
MFF	Saint Martin d	150.99	2	ePKP1	PKPbc	19 35 23.5	-1.4
	comp=Z,8.1nm,0.8s						
OHR	Ohrid	151.21	329	ePKP	PKPbc	19 35 22.8	-2.8
LPL	La Plagne	151.76	352	ePKP1	PKPbc	19 35 26.3	-0.4
	comp=Z,5.8nm,0.8s						
LPG	La Plagne	151.78	352	ePKP1	PKPbc	19 35 26.4	-0.3
	comp=Z,6.1nm,0.8s						
RJF	Les Rejaudoux	152.32	360	ePKP1	PKPbc	19 35 26.5	-1.4
	comp=Z,3.3nm,0.7s						
ORIF	Oris-en-Rattie	152.45	353	ePKP1	PKPbc	19 35 27.2	-1.1
MBDF	Montbardon	152.53	352	ePKP1	PKPbc	19 35 28.0	-0.4
	comp=Z,4.3nm,0.6s						
LFF	La Frestale	152.68	1	ePKP1	PKPbc	19 35 27.2	-1.5
CAF	Calviac	152.69	359	ePKP1	PKPbc	19 35 27.6	-1.2
LASF	Ste Croix	153.47	356	ePKP1	PKPbc	19 35 29.5	-1.0
P

314nm,0.3s,baz=85,slow=23,SNR=8.8
ERM Erimo 5.96 12 *e*P **Pn 19 21 42.7 -6.2**
ERM pmax pmax
comp=Z,58nm,0.5s
ERM Erimo 5.96 12 *e*P **Pn 19 21 42.7 -6.2**
comp=Z,58nm,0.5s
ASAJ Asahikawa 7.96 6 P **Pn 19 22 13.3 -3.1**
ASAJ 19 23 41.2
ASAJ pmax pmax
comp=Z,7.0nm,0.3s
ASAJ smax
comp=N,5.0nm,0.3s
ASAJ Asahikawa 7.96 6 Pn **Pn 19 22 13.2 -3.1**
comp=N,6.7nm,0.3s,baz=229,slow=12,SNR=24
ASAJ Sn **Sn 19 23 41.1 -3.9**
comp=N,5.3nm,0.3s,baz=345,slow=28,SNR=4.5
YUK Yuzh-Kuril'sk 8.52 22 P **Pn 19 22 25.7 +1.7**
YUK *i* S **Sn 19 23 49.1 -10**
YUK smax
comp=N,380nm,0.5s
YUK smax
comp=E,380nm,0.5s
CBIJ Chichi jima 9.09 176 Pn **Pn 19 22 27.3 -4.7**
comp=E,23nm,0.3s,baz=173,slow=19,SNR=19
CBIJ Sn **Sn 19 24 02.8 -10**
comp=E,42nm,0.3s,baz=279,slow=22,SNR=5.2
KUR Kuril'sk 10.24 26 P **Pn 19 22 43.5 -4.1**
YSS Yuzh-Sakhalins 10.79 5 *e*P **Pn 19 22 51.3 -3.9**
YSS *e*S **Sn 19 24 48.8 -5.7**
YSS MLR MLR
comp=Z,1μm,14.0s
YSS Yuzh-Sakhalins 10.79 5 *e*P **Pn 19 22 52.0 -3.2**
comp=Z,48nm,0.8s
KSRS Korea Array 10.95 281 P **Pn 19 22 59.6 +2.2**
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS Korea Array 10.95 281 Pn **Pn 19 22 59.6 +2.2**
comp=Z,1.5nm,0.3s,baz=94,slow=14,SNR=45
MDJ Mudanjiang 12.36 317 P **Pn 19 23 17.0 +0.4**
MDJ pmax pmax
comp=Z,25nm,1.1s
MDJ pmax pmax
comp=Z,490nm,12.6s
MDJ Mudanjiang 12.36 317 *e*P **Pn 19 23 19.1 +2.5**
comp=Z,22nm,0.8s
HABR Khabarovsk 13.15 341 *e*P **Pn 19 23 25.0 -2.4**
HABR *e* 19 25 49.6
HABR MLR MLR
comp=Z,453nm,14.0s
CN2 Changchun 14.44 307 *e*P **Pn 19 23 44.6 -0.4**
CN2 *e*S **Sn 19 26 22.1 -1.5**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=E,1μm,15.0s
CN2 LR LR
comp=Z,1μm,20.0s
JOW Kunigami 14.62 234 Pn **Pn 19 23 50.8 +3.2**
comp=Z,3.5nm,0.3s,baz=36,slow=10,SNR=24
KLR Kul'dur 14.85 334 *e*P **Pn 19 23 42.2 -8.2**
SNY Shenyang 15.01 297 ⇑P **Pn 19 23 52.1 -0.5**
SNY pmax pmax
comp=Z,18nm,1.3s
DL2 Dalian 15.98 286 P **Pn 19 24 05.8 +0.6**
DL2 pmax pmax
comp=Z,10.0nm,1.2s
NJ2 Nanjing 19.18 264 *e*P **Pn 19 24 46.8 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
TIA Tai'an 19.66 277 P **Pn 19 24 46.8 -3.5**
BJI Beijing 20.26 289 P **P 19 24 54.0 -1.2**
BJI pmax pmax
comp=Z,57nm,0.5s
BJT Baijiatuau 20.27 289 *e*P **P 19 24 53.4 -1.9**
BJT pmax pmax
comp=Z,44nm,0.5s
BJT Baijiatuau 20.27 289 *e*P **P 19 24 53.4 -1.9**
comp=Z,44nm,0.5s
PETK Petropavlovsk- 20.39 29 P **P 19 24 56.4 0.0**
comp=Z,3.8nm,0.9s,baz=191,slow=14,SNR=2.7
HIA Hailar 20.55 316 *e*P **P 19 24 53.7 -4.5**
HIA pmax pmax
comp=Z,16nm,0.8s
HIA Hailar 20.55 316 *e*P **P 19 24 53.7 -4.5**
comp=Z,16nm,0.8s
SSLB Suanglung 21.61 241 *e*P **P 19 25 05.5 -4.4**
comp=Z,16nm,0.8s,mb4.5
YULB Yu-li 21.62 239 *e*P **P 19 25 05.2 -4.9**
comp=Z,8.1nm,0.5s,mb4.4
TPUB Ta-pu 22.15 240 *e*P **P 19 25 10.7 -5.0**
comp=Z,16nm,0.6s,mb4.6
TWG Pinlang 22.15 239 *e*P **P 19 25 11.6 -4.2**
comp=Z,17nm,0.5s,mb4.7
QZH Quanzhou 22.63 247 P **P 19 25 18.3 -2.4**
NRGR Nerungri 23.38 336 *e*P **P 19 25 27.4 -0.9**
NRGR S **S 19 29 32.1 -5.9**
NRGR smax
comp=N,55nm,0.7s
CLNS Chul'man 23.48 337 *e*P **P 19 25 26.6 -2.6**
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS pmax pmax
comp=Z,27nm,0.9s,mb4.7
CLNS pmax pmax
comp=N,29nm,1.1s
HHC Hu-ho-hao-te 23.81 290 *e*P **P 19 25 32.5 +0.1**
HHC pP 19 25 42.1
HHC sP sP 19 25 46.4 -1.8
HHC PP 19 26 05.6
HHC PcP PcP 19 29 16.6 +1.8
HHC S **S 19 29 44.6 -0.6**
HHC sS sS 19 29 59.0 -4.4
HHC SS 19 30 33.1
HHC ScP ScP 19 32 51.3 +1.4
HHC PcS PcS 19 32 55.4 +1.1
HHC pmax pmax
comp=Z,22nm,1.0s,mb4.5
HHC pmax pmax
comp=Z,350nm,5.4s
HHC LR LR
comp=N,730nm,15.3s,MS4.5
HHC LR LR
comp=E,930nm,13.1s,MS4.5
HHC LR LR
comp=Z,1μm,14.9s,MS4.6
HHC Hu-ho-hao-te 23.81 290 *e*P **P 19 25 33.9 +1.5**
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.4
HHC pmax pmax
comp=Z,350nm,5.5s
CIT Chita 25.33 317 *e*P **P 19 25 42.6 -3.5**
CIT *e* pP 19 25 55.5 -1.6
CIT pmax pmax
comp=Z,73nm,1.9s,mb4.9
XAN Xi'an 26.66 275 P **P 19 25 57.7 -0.7**
XAN pP pP 19 26 06.4 -3.0
XAN sP sP 19 26 10.0 -4.2
XAN S **S 19 30 32.6 +1.8**
XAN sS sS 19 30 47.5 -1.7
XAN pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
XAN LR LR
comp=N,440nm,14.6s,MS4.2
XAN LR LR
comp=E,300nm,18.1s,MS4.2
XAN LR LR
comp=Z,180nm,17.3s,MS3.7
YAK Yakutsk 26.90 348 *e*P **P 19 25 58.6 -1.6**
YAK *e* 19 26 41.2
YAK *e* 19 29 18.7
YAK *e*S **S 19 30 26.8 -7.2**
YAK *e* 19 36 46.6
YAK pmax pmax
comp=Z,69nm,0.9s,mb5.2
YAK pmax pmax
comp=E,16nm,1.4s
YAK pmax pmax
comp=N,41nm,1.1s
YAK pmax pmax
comp=Z,39nm,1.2s,mb4.8
YAK smax
comp=N,146nm,4.2s
YAK smax
comp=E,68nm,2.7s
YAK Yakutsk 26.90 348 *e*P **P 19 25 59.0 -1.2**
comp=E,76nm,0.9s,mb5.2
ENH Enshi 27.34 267 *e*P **P 19 26 03.4 -1.0**
comp=E,76nm,0.9s,mb5.2
SEY Seymchan 27.60 11⇑*e*P **P 19 26 08.1 +1.6**
ULN Ulaanbaatar 27.88 305 *e*P **P 19 26 08.2 -1.0**
ULN pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
ULN Ulaanbaatar 27.88 305 *e*P **P 19 26 08.2 -1.0**
comp=Z,10nm,0.7s,mb4.6
BOD Bodaibo 28.27 329 *e*P **P 19 26 11.6 -0.9**
BOD pmax pmax
comp=Z,31nm,0.9s,mb4.9
SONM Songino Array 28.31 305 P **P 19 26 11.8 -1.2**
comp=Z,14nm,0.6s,mb4.8,baz=106,slow=8.9,SNR=86
TGY Tagaytay City 28.69 225 P **P 19 26 14.7 -1.9**
comp=Z,19nm,0.3s,mb5.4,baz=256,slow=12,SNR=3.7
LZH Lanzhou 30.28 281 *e*P **P 19 26 30.0 -0.6**
LZH pP pP 19 26 39.5 -2.2
LZH sP sP 19 26 41.0 -5.5
LZH PP PP 19 27 29.0 -10
LZH S **S 19 31 27.8 +0.1**
LZH sS sS 19 31 43.0 -3.1
LZH SS SS 19 33 08.0 -30
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,140nm,8.0s
LZH LR LR
comp=E,1μm,14.6s
LZH LR LR
comp=Z,2μm,15.6s,MS4.8
IRK Irkutsk 30.71 313 *e*P **P 19 26 33.2 -1.0**
IRK pmax pmax
comp=Z,25nm,1.1s,mb5.0
ZAK Zakamensk 30.84 309 *e*P **P 19 26 35.0 -0.4**
ZAK pmax pmax
comp=Z,15nm,1.1s,mb4.7
TLY Talaya 30.93 312 *e*P **P 19 26 36.5 +0.4**
TLY *e* 19 27 43.8
TLY pmax pmax
comp=Z,37nm,1.1s,mb5.1
TLY MLR MLR
comp=Z,1μm,17.0s,MS4.7
TLY Talaya 30.93 312 *e*P **P 19 26 35.5 -0.6**
comp=Z,31nm,1.0s,mb5.1
GYA Guiyang 31.15 262 P **P 19 26 39.8 +1.4**
GYA pP pP 19 26 50.2 +0.8
GYA sP sP 19 26 54.9 +0.6
GYA PP PP 19 27 42.3 -6.8
GYA S **S 19 31 42.8 +1.3**
GYA sS sS 19 31 58.0 -2.0
GYA ScP ScP 19 33 14.6 +2.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,490nm,15.0s,MS4.4
GYA LR LR
comp=E,460nm,16.0s,MS4.4
GYA LR LR
comp=Z,480nm,15.0s,MS4.3
CD2 Chengdu 31.75 272 P **P 19 26 48.9 +5.3**
CD2 pmax pmax
comp=Z,30nm,0.7s,mb5.2
MOY Mondy 32.53 311 *e*P **P 19 26 50.9 +0.7**
GTA Gaotai 32.88 288 P **P 19 26 53.7 +0.3**
GTA pP pP 19 27 02.8 -1.7
GTA sP sP 19 27 07.2 -2.1
GTA PcP PcP 19 29 38.9 +1.6
GTA S **S 19 32 10.1 +1.9**
GTA sS sS 19 32 27.2 +0.5
GTA SS SS 19 34 10.8 -20
GTA pmax pmax
comp=Z,18nm,1.3s,mb4.8
GTA pmax pmax
comp=Z,400nm,6.0s
GTA LR LR
comp=N,900nm,21.3s,MS4.7
GTA LR LR
comp=E,990nm,17.7s,MS4.7
GTA LR LR
comp=Z,980nm,16.8s,MS4.6
BILL Biilibino 34.81 16 *e*P **P 19 27 09.3 -0.5**
BILL pmax pmax
comp=Z,11nm,2.5s,mb4.3
KMI Kunming 34.91 263 P **P 19 27 10.9 -0.2**
KMI pP pP 19 27 22.3 0.0
KMI S **S 19 32 42.1 +2.3**
KMI pmax pmax
comp=Z,20nm,1.2s,mb4.9
KMI LR LR
comp=N,570nm,16.4s,MS4.6
KMI LR LR
comp=E,670nm,17.3s,MS4.6
KMI LR LR
comp=Z,850nm,15.6s,MS4.6
TIXI Tiksi 36.13 353 *e*P **P 19 27 20.2 -0.9**
TIXI pmax pmax
comp=Z,13nm,1.0s,mb4.8
TIXI Tiksi 36.13 353 *e*P **P 19 27 20.3 -0.8**
comp=Z,5.9nm,0.6s,mb4.7
CHTO Chiang Mai 41.15 257 *e*P **P 19 28 03.6 -0.2**
CHTO pmax pmax
comp=Z,11nm,0.8s,mb4.5
CHTO Chiang Mai 41.15 257 *e*P **P 19 28 03.6 -0.2**
comp=Z,11nm,0.8s,mb4.5
WMQ Urumqi 41.28 298 P **P 19 28 05.8 +1.2**
WMQ pmax pmax
comp=Z,45nm,1.1s,mb5.0
CM31 Chiang Mai Arr 41.35 256 *e*P **P 19 28 05.5 +0.1**
comp=Z,11nm,0.8s,mb4.5
CMAR Chiang Mai Arr 41.35 256 P **P 19 28 04.7 -0.8**
comp=Z,3.9nm,0.6s,mb4.2,baz=51,slow=5.9,SNR=30
LSA Lhasa 42.35 276 P **P 19 28 15.0 +1.4**
LSA pmax pmax
comp=Z,20nm,1.1s,mb4.7
LSA Lhasa 42.35 276 *e*P **P 19 28 15.0 +1.4**
LSA pmax pmax
comp=Z,12nm,0.6s,mb4.7
LSA Lhasa 42.35 276 *e*P **P 19 28 14.9 +1.4**
comp=Z,12nm,0.6s,mb4.7
ZAA0 Zalesovo Array 42.53 313 *e*P **P 19 28 14.4 -0.3**
ZAA0 *e* pP 19 28 24.7 -1.3
ZALV Zalesovo Beam 42.53 313 P **P 19 28 14.9 +0.3**
comp=Z,28nm,0.7s,mb5.1,baz=89,slow=7.0,SNR=88
ZALV PcP PcP 19 30 06.5 -0.1
comp=Z,4.8nm,0.7s,baz=106,slow=3.7,SNR=4.3
SHL Shillong 43.47 270 *e*P **P 19 28 24.0 +1.4**
NVS Novosibirsk 43.47 314⇑*i*P **P 19 28 22.0 -0.2**
NVS *e*S **S 19 34 37.1 -11**
NVS pmax pmax
comp=E,49nm,1.2s
NVS pmax pmax
comp=Z,45nm,1.2s,mb5.1
NVS pmax pmax
comp=N,12nm,1.4s
NVS smax
comp=E,9.0nm,1.7s
MK31 Makanchi Array 44.62 303 *e*P **P 19 28 31.2 -0.4**
MKAR Makanchi Array 44.62 303 *ce*P **P 19 28 31.8 +0.2**
MKAR pmax pmax
comp=Z,29nm,0.8s
MKAR Makanchi Array 44.62 303 P **P 19 28 31.9 +0.3**
comp=Z,29nm,0.8s,mb5.1,baz=96,slow=7.0,SNR=65
KAPI Kappang 45.77 211 P **P 19 28 40.1 -0.9**
comp=Z,52nm,1.1s,mb5.4,baz=354,slow=6.0,SNR=11
KAPI Kappang 45.77 211 *e*P **P 19 28 40.5 -0.6**
comp=Z,82nm,1.4s,mb5.5
KURK Kurchatov 46.50 309 P **P 19 28 45.8 -0.6**
KURK pmax pmax
comp=Z,35nm,0.7s,mb5.4
KURK Kurchatov 46.50 309 P **P 19 28 45.8 -0.7**
comp=Z,35nm,0.7s,mb5.4,baz=84,slow=7.8,SNR=91
KURK Kurchatov 46.50 309 *e*P **P 19 28 46.1 -0.3**
comp=Z,35nm,0.6s,mb5.5
GUN Gumba 47.30 276 *e*P **P 19 28 53.9 +0.9**
comp=Z,96nm,0.9s,mb5.7
PKI Pulchoki 47.83 276 *e*P **P 19 28 57.5 +0.4**
comp=Z,73nm,0.9s,mb5.7
PKIN Phulchoki 47.83 276 *e*P **P 19 28 57.5 +0.4**
comp=Z,30nm,0.7s,mb5.5
KKN Kakani 47.84 277 *e*P **P 19 28 57.9 +0.8**
comp=Z,96nm,1.0s,mb5.8
DMN Daman 48.05 276 *e*P **P 19 28 59.4 +0.6**
comp=Z,24nm,0.6s,mb5.4
GKN Gorkha 48.27 277 *e*P **P 19 29 01.0 +0.6**
comp=Z,220nm,1.0s
KOLN Koldanda 49.20 277 *e*P **P 19 29 08.3 +0.7**
comp=Z,26nm,0.6s,mb5.5
PYUN Piuthan 49.54 278 *e*P **P 19 29 11.0 +0.7**
comp=Z,80nm,0.7s,mb5.8
ULHL Ulahol 49.81 298 P **P 19 29 13.1 +1.0**
SNR=19
TKM2 Tokmak 2 50.09 299 P **P 19 29 15.7 +1.5**
SNR=12
TKM2 Tokmak 2 50.09 299 *e*P **P 19 29 15.5 +1.3**
TKM2 pmax pmax
comp=Z,49nm,1.0s,mb5.5
TKM2 Tokmak 2 50.09 299 *e*P **P 19 29 15.4 +1.3**
comp=Z,49nm,1.0s,mb5.5
KZA Kyzart 50.57 298 P **P 19 29 20.1 +2.2**
SNR=28
KBK Karagaybulak 50.62 299 P **P 19 29 19.4 +1.2**
SNR=19
CHMS Chumysh 50.66 299 P **P 19 29 19.1 +0.6**
SNR=8.7
USP Ospenovka 50.77 300 P **P 19 29 20.0 +0.7**
SNR=12
FRU Bishkek 50.80 299 *e*P **P 19 29 20.0 +0.4**
FRU pmax pmax
comp=Z,45nm,1.8s,mb5.1
KSH Kashi 50.81 295 *e*P **P 19 29 22.8 +3.1**
KSH *ep*P pP 19 29 33.0 +1.7
KSH *e*sP sP 19 29 36.9 +0.9
KSH *e*PcP PcP 19 30 39.8 +3.7
KSH *e*PP PP 19 31 21.0 +5.1
KSH *e*ScP ScP 19 34 31.8 +2.8
KSH *e*PcS PcS 19 34 35.8 +2.3
KSH *e*S **S 19 36 34.5 +1.8**
KSH *e*sS sS 19 36 53.8 +1.9
KSH *e*ScS ScS 19 39 07.9 +0.8
KSH *e*SS SS 19 40 09.8 +2.5
KSH pmax pmax
comp=Z,36nm,2.4s,mb4.9
KSH LR LR
comp=N,580nm,8.6s
KSH LR LR
comp=E,600nm,6.8s
AAK Ala-Archa 50.95 299 P **P 19 29 21.5 +0.9**
SNR=18
AAK Ala-Archa 50.95 299 P **P 19 29 20.9 +0.2**
AAK pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
AAK Ala-Archa 50.95 299 P **P 19 29 20.9 +0.2**
comp=Z,9.8nm,0.8s,mb4.8,baz=108,slow=5.1,SNR=18
AAK Ala-Archa 50.95 299 *e*P **P 19 29 20.4 -0.2**
comp=Z,8.3nm,0.7s,mb4.8
UCH Uchtor 51.05 298 P **P 19 29 23.1 +1.7**
SNR=13
UCH Uchtor 51.05 298 *e*P **P 19 29 22.9 +1.4**
comp=Z,8.2nm,0.8s,mb4.7
BVAR Borovoye Array 51.19 313 P **P 19 29 22.3 0.0**
comp=Z,7.9nm,0.6s,mb4.8,baz=77,slow=6.7,SNR=51
BRVK Borovoye 51.24 313 *c i*P **P 19 29 22.6 -0.1**
BRVK pmax pmax
comp=Z,21nm,0.8s,mb5.1
BRVK Borovoye 51.24 313 *e*P **P 19 29 22.8 +0.1**
comp=Z,17nm,0.8s,mb5.0
AML Almayashu 51.66 299 P **P 19 29 27.8 +1.7**
SNR=43
AML Almayashu 51.66 299 *e*P **P 19 29 27.4 +1.4**
DDI Dehra Dun 52.55 283 *ex* x 19 29 32.0
EGAK Eagle 52.62 32 *e*P **P 19 29 23.2 -10**
comp=Z,4.6nm,0.6s,mb4.6
INK Inuvik 55.11 27 P **P 19 29 51.4 +0.5**
INK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 55.11 27 P **P 19 29 51.4 +0.5**
comp=Z,4.1nm,0.8s,mb4.5,baz=294,slow=5.5,SNR=16
INK Inuvik 55.11 27 *e*P **P 19 29 51.0 +0.1**
comp=Z,8.7nm,0.8s,mb4.8
SVE Sverdlovsk 55.82 319⇓*e*P **P 19 29 56.4 +0.2**
SVE pmax pmax
comp=Z,40nm,0.9s,mb5.5
WRAB Tennant Creek 56.23 188 *e*P **P 19 30 01.6 +2.2**
WB2 Warramunga Arr 56.24 188 *e*P **P 19 29 57.7 -1.8**
WRA Warramunga Arr 56.24 188 P **P 19 29 58.5 -1.0**
comp=Z,8.5nm,0.8s,mb4.8,baz=3.1,slow=7.5,SNR=6.7
ARU Arti 57.03 319 *c i*P **P 19 30 04.7 -0.1**
ARU S **S 19 37 59.1 +2.8**
ARU SS SS 19 41 41.5 -3.2
ARU pmax pmax
comp=Z,42nm,1.0s,mb5.4
ARU Arti 57.03 319 *e*P **P 19 30 04.5 -0.3**
comp=Z,58nm,0.9s,mb5.6
ARU *e* pP 19 30 16.0 -0.6
SOKR Solikamsk 57.04 323⇓*i*P **P 19 30 05.1 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KBL Kabul 57.78 292 *e*P **P 19 30 10.3 -0.1**
KBL pmax pmax
comp=Z,14nm,1.1s,mb4.9
KBL Kabul 57.78 292 *e*P **P 19 30 10.3 -0.1**
comp=Z,14nm,1.1s,mb4.9
HYB Hyderabad 58.25 269 *i* P **P 19 30 14.5 +0.6**
AKTK Aktyubinsk 59.28 312 P **P 19 30 20.5 -0.1**
AKTO Aktyubinsk 59.28 312 P **P 19 30 20.5 -0.1**
comp=Z,14nm,0.7s,mb5.1,baz=80,slow=6.5,SNR=34
ASAR Alice Springs 59.97 188 P **P 19 30 24.9 -0.6**
comp=Z,2.4nm,0.8s,mb4.3,baz=359,slow=6.3,SNR=4.5
KBS Kingsbay 61.49 350⇓*e*P **P 19 30 36.5 +1.1**
KBS pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
LVZ Lovozero 62.90 336 *i* P **P 19 30 44.6 -0.3**
LVZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
RES Resolute Bay 63.40 14 P **P 19 30 47.8 -0.3**
comp=Z,5.3nm,0.8s,mb4.7,baz=310,slow=7.2,SNR=22
KEV Kevo 64.25 339 *e*P **P 19 30 53.1 -0.7**
KEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KEV Kevo 64.25 339 *ep* **P 19 30 53.1 -0.7**
comp=Z,4.0nm,0.8s,mb4.5
KLMR Klimovskoe 64.50 328⇑*i*P **P 19 30 55.3 -0.2**
KLMR pmax pmax
comp=Z,30nm,1.4s,mb5.1
YKA Yellowknife Ar 64.50 30 P **P 19 30 55.4 -0.1**
comp=Z,1.4nm,0.8s,mb4.1,baz=301,slow=6.7,SNR=19
ARCES ARCESS Array B 64.80 340 P **P 19 30 57.7 +0.3**
comp=Z,6.9nm,0.8s,mb4.7,baz=54,slow=8.2,SNR=17
ARCES ARCESS Array B 64.80 340 P **P 19 30 57.7 +0.3**
ARE0 ARCESS Array S 64.80 340 *e*P **P 19 30 54.4 -3.0**
JOF Joensuu 66.73 332 *e*P **P 19 31 08.0 -1.9**
JOF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
JOF Joensuu 66.73 332 *ep* **P 19 31 08.0 -1.9**
comp=Z,5.6nm,0.5s,mb4.8
MOS Moscow 67.96 324 *e*P **P 19 31 16.5 -1.3**
JCW Jim Creek 67.98 46 *e*P **P 19 31 19.4 +1.3**
OBN Obninsk 68.81 323⇑*e*P **P 19 31 23.0 -0.1**
OBN *e* 19 31 52.2
OBN pmax pmax
comp=Z,39nm,1.6s,mb5.1
KAF Kangasniemi 69.08 333 *e*P **P 19 31 23.1 -1.6**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KAF Kangasniemi 69.08 333 *ep* **P 19 31 23.1 -1.6**
comp=Z,5.5nm,0.5s,mb4.7
FINES FINESS Array B 69.59 332 P **P 19 31 27.6 -0.2**
comp=Z,13nm,0.8s,mb4.9,baz=67,slow=6.8,SNR=34
VSR Storozhevoye 69.60 319 *e*P **P 19 31 28.2 +0.1**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,6.0nm,0.3s
VORD Divnogorie 69.67 319 *e*P **P 19 31 28.4 -0.1**
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,1.4s
VSU Vasula 71.21 330 *c i*P **P 19 31 37.8 0.0**
VSU pmax pmax
comp=Z,19nm,0.7s,mb5.1
ZEI Tsey 71.39 310 *e*P **P 19 31 38.2 -1.0**

ZEI pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KIV Kislovodsk 71.50 311 *eP* **P 19 31 40.5 +0.7**
KIV pmax pmax
comp=Z,32nm,1.0s,mb5.2
KIV Kislovodsk 71.50 311 *eP* **P 19 31 41.2 +1.4**
comp=Z,26nm,0.9s,mb5.2
SUMG Summit 71.52 360 *eP* **P 19 31 40.5 +1.1**
comp=Z,11nm,1.1s,mb4.7
MOD Modoc 72.24 51 *eP* **P 19 31 44.7 +0.4**
comp=Z,6.0nm,1.1s,mb4.4
GNI Garni 72.26 307⇓*eP* **P 19 31 46.1 +1.7**
GNI pmax pmax
comp=Z,19nm,1.7s
GNI Garni 72.26 307 *eP* **P 19 31 45.5 +1.1**
comp=Z,8.5nm,0.8s,mb4.7
JTMT Jette 72.56 43 *eP* **P 19 31 46.3 +0.2**
comp=Z,4.9nm,0.9s,mb4.4
YBMT Yellow Bay 72.64 43 *eP* **P 19 31 47.6 +1.0**
comp=Z,5.9nm,1.0s,mb4.5
YBMT *e* pP 19 31 58.5 -0.1
SWMT Swartz Lake 72.86 43 *eP* **P 19 31 48.5 +0.7**
comp=Z,7.8nm,1.0s,mb4.6
SCO Scoresbysund 72.95 354 *i P* **P 19 31 48.2 +0.2**
SCO pmax pmax
comp=Z,11nm,0.9s,mb4.8
SCO MLR MLR
comp=Z,740nm,19.0s,MS5.0
SCO Scoresbysund 72.95 354 *i P* **P 19 31 48.2 +0.2**
comp=Z,11nm,0.9s,mb4.8
SCO
comp=Z,730nm,19.0s
IDID Didziasalis 73.22 327 *eP* **P 19 31 50.1 +0.3**
SLMT Seeley Lake 73.29 43 *eP* **P 19 31 50.8 +0.4**
comp=Z,13nm,1.0s,mb4.8
ISAL Salakas 73.32 328 *eP* **P 19 31 50.7 +0.3**
CHMT Chamberlain Mo 73.61 44 P **P 19 31 52.4 +0.1**
comp=Z,3.3nm,1.2s,mb4.1
ANN Anapa 74.16 314 *e**PP **P 19 31 56.1 +0.6**
ANN *e* pP 19 32 02.8 -4.8
ANN pmax pmax
comp=Z,37nm,1.3s,mb5.2
FFC Flin Flon 74.38 33 *i P* **P 19 31 57.2 +0.6**
FFC Flin Flon 74.38 33 *eP* **P 19 31 56.0 -0.7**
comp=Z,4.8nm,0.9s,mb4.4
HRY Holter Researc 74.52 43 *eP* **P 19 31 58.3 +0.6**
comp=Z,5.1nm,0.6s,mb4.6
LRM Limekiln Ridge 74.70 44 *eP* **P 19 31 59.7 +1.0**
comp=Z,73nm,0.9s,mb5.6
DLMT Dillon 74.89 45 *eP* **P 19 31 58.9 -0.9**
comp=Z,11nm,1.0s,mb4.8
NB2 NORSAR Subarra 74.98 337 P **P 19 31 59.8 -0.2**
comp=Z,9.0nm,0.7s,mb4.8,baz=40,slow=5.9
NOA NORSAR Array B 74.98 337 P **P 19 32 00.2 +0.1**
comp=Z,9.2nm,0.8s,mb4.8,baz=39,slow=5.7,SNR=31
NOA NORSAR Array B 74.98 337 P **P 19 32 00.2 +0.1**
AKASG Malin Array Be 75.00 322 P **P 19 32 00.1 -0.2**
comp=Z,10.0nm,0.5s,mb5.0,baz=46,slow=5.7,SNR=38
AKBB Malin Array Si 75.00 322 *eP* **P 19 31 59.6 -0.7**
NVAR Mina Array Bea 75.44 53 P **P 19 32 03.5 +0.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=288,slow=3.8,SNR=4.2
ELK Elko 76.05 50 P **P 19 32 07.3 +0.8**
comp=Z,0.6nm,0.4s,mb3.8,baz=324,slow=13,SNR=3.0
MIB Mutribah 76.12 297 *eP* **P 19 32 06.6 -0.6**
MIB AMb AMB 19 32 07.4
comp=Z,18nm,0.7s,mb5.1
RDF Al-Radifah 76.46 296 *eP* **P 19 32 09.6 +0.6**
RDF AMb AMB 19 32 10.5
comp=Z,46nm,0.8s,mb5.4
IMW Indian Meadow 76.72 45 *eP* **P 19 32 11.8 +1.6**
comp=Z,3.6nm,1.1s,mb4.2
HVU Hansel Valley 76.93 48 *eP* **P 19 32 10.4 -1.1**
HVU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
HVU Hansel Valley 76.93 48 *eP* **P 19 32 10.3 -1.1**
comp=Z,7.3nm,0.8s,mb4.7
BGU Big Grassy Mou 77.29 48 *eP* **P 19 32 14.3 +0.8**
comp=Z,2.1nm,0.8s,mb4.1
MALT Malatya 77.34 308 *eP* **P 19 32 14.9 +1.0**
comp=Z,6.9nm,1.0s,mb4.5
MALT Malatya 77.34 308⇑*iP* **P 19 32 15.9 +2.0**
FRB Frobisher Bay 77.58 13 P **P 19 32 14.1 -0.6**
comp=Z,8.2nm,0.8s,mb4.7,baz=333,slow=6.1,SNR=20
HWUT Hardware Ranch 77.75 47 *eP* **P 19 32 16.0 -0.1**
comp=Z,7.9nm,1.0s,mb4.6
DUG Dugway 77.86 49 *eP* **P 19 32 16.3 -0.4**
DUG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
DUG Dugway 77.86 49 *eP* **P 19 32 16.3 -0.4**
comp=Z,10nm,0.9s,mb4.8
PDAR Pinedale Array 78.21 45 P **P 19 32 18.8 +0.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=282,slow=2.2,SNR=8.5
BSD Bornholm Skovb 78.21 332 *i P* **P 19 32 17.5 -0.9**
BSD pmax pmax
comp=Z,13nm,0.9s,mb4.9
BSD Bornholm Skovb 78.21 332 *i P* **P 19 32 17.5 -0.9**
comp=Z,13nm,0.9s,mb4.8
NLU North Lily Min 78.45 49 P **P 19 32 19.0 -1.0**
comp=Z,4.8nm,0.7s,mb4.5
KWP Kalwaria Pacla 78.85 324 *eP* **P 19 32 22.3 +0.3**
comp=Z,26nm,1.0s,mb5.1
KWP Kalwaria Pacla 78.85 324⇓*iP* **P 19 32 23.0 +1.0**
BUR08 Bucovina Ar. S 79.00 322 *eP* **P 19 32 22.8 0.0**
BURAR Bucovina Array 79.01 322⇑P **P 19 32 23.5 +0.6**
BURAR Bucovina Array 79.01 322⇑*iP* **P 19 32 23.5 +0.6**
MUD Monsted U'grnd 79.24 335 *i P* **P 19 32 24.4 +0.4**
MUD pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MUD Monsted U'grnd 79.24 335 *i P* **P 19 32 24.4 +0.4**
comp=Z,6.4nm,0.9s,mb4.5
VRI Vrincioaia 79.41 320⇓P **P 19 32 26.2 +1.1**
VRI Vrincioaia 79.41 320⇓*iP* **P 19 32 26.2 +1.1**
BR131 Keskin Array S 79.45 312 *eP* **P 19 32 25.8 +0.3**
comp=Z,4.8nm,0.8s,mb4.5
BRTR Keskin Array B 79.45 312 *ce*P **P 19 32 26.2 +0.7**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 79.45 312 P **P 19 32 25.4 -0.2**
comp=Z,4.9nm,0.8s,mb4.5,baz=99,slow=3.9,SNR=25
KOLS Kolonicke sedl 79.54 324 *eP* **P 19 32 26.3 +0.5**
KOLS *e* pP 19 32 39.7 +1.7
KOLS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KOLS Kolonicke sedl 79.54 324 *eP* **P 19 32 26.3 +0.5**
comp=Z,5.6nm,1.2s,mb4.4
KOLS *e*PcP PcP 19 32 32.0 -1.6
KOLS *e* pP 19 32 39.7 +1.7
KOLS Kolonicke sedl 79.54 324 *eP* **P 19 32 26.3 +0.5**
KOLS *e*PCP PcP 19 32 32.0 -1.6
KOLS *ep*P pP 19 32 39.7 +1.7
STHS Stebnicka Huta 79.68 325 *eP* **P 19 32 27.4 +0.9**
STHS *e* pP 19 32 40.9 +2.2
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 79.68 325 *eP* **P 19 32 27.4 +0.9**
comp=Z,3.9nm,0.8s,mb4.4
STHS *e* pP 19 32 40.9 +2.2
STHS Stebnicka Huta 79.68 325 *eP* **P 19 32 27.4 +0.9**
STHS *ep*P pP 19 32 40.9 +2.2
OJC Ojcow 79.77 326 *eP* **P 19 32 27.5 +0.5**
MLR Muntele Rosu 80.07 320⇓P **P 19 32 29.8 +1.1**
MLR Muntele Rosu 80.07 320⇓*iP* **P 19 32 29.8 +1.1**
ULM Lac du Bonnet 80.17 33 P **P 19 32 28.9 -0.2**
comp=Z,1.1nm,0.4s,mb4.2,baz=325,slow=18,SNR=3.5
ULM Lac du Bonnet 80.17 33 P **P 19 32 28.9 -0.2**
VOIR 80.57 320⇑P **P 19 32 32.6 +1.2**
VOIR 80.57 320⇑*iP* **P 19 32 32.5 +1.1**
KECS Kecovo 80.69 325 *eP* **P 19 32 32.9 +0.9**
KECS *e* pP 19 32 46.5 +2.3
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 80.69 325 *eP* **P 19 32 32.9 +0.9**
comp=Z,1.6nm,0.9s,mb4.0
KECS *e* pP 19 32 46.5 +2.3
KECS Kecovo 80.69 325 *eP* **P 19 32 32.9 +0.9**
KECS *ep*P pP 19 32 46.5 +2.3
KSP Ksiaz 80.85 328 *eP* **P 19 32 33.0 +0.2**
KSP *e**PP pP 19 32 46.8 +1.8
MORC Moravsky Berou 81.09 327 *eP* **P 19 32 34.2 +0.1**
comp=Z,5.6nm,0.9s,mb4.5
MORC Moravsky Berou 81.09 327⇑*iP* **P 19 32 34.7 +0.6**
DPC Dobruska-Polom 81.20 328 *eP* **P 19 32 35.5 +0.8**
DPC *ep*P pP 19 32 46.5 -0.4
PSZ Piszkesteto 81.38 325 *eP* **P 19 32 36.3 +0.7**
comp=Z,4.5nm,0.8s,mb4.5
PSZ Piszkesteto 81.38 325⇑*eP* **P 19 32 36.4 +0.7**
PSZ Piszkesteto 81.38 325⇑*iP* **P 19 32 36.4 +0.7**
VYHS Vyhne 81.45 326 *eP* **P 19 32 36.6 +0.6**
VYHS *e* pP 19 32 50.1 +1.8
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 81.45 326 *eP* **P 19 32 36.6 +0.6**
comp=Z,3.1nm,1.0s,mb4.2
VYHS *e* pP 19 32 50.1 +1.8
VYHS Vyhne 81.45 326 *eP* **P 19 32 36.6 +0.6**
VYHS *ep*P pP 19 32 50.1 +1.8
WUAZ Wupatki 81.63 52 P **P 19 32 36.5 -0.7**
comp=Z,8.6nm,0.9s,mb4.7
WUAZ *e* pP 19 32 47.5 -1.9
BRG Berggiesshubel 81.81 330 *eP* **P 19 32 37.9 +0.1**
comp=Z,5.0nm,0.9s,mb4.4
BRG *e* pP 19 32 48.2 -1.9
comp=Z,4.2nm,0.8s
BRG Berggiesshubel 81.81 330 *eP* **P 19 32 37.9 0.0**
BRG *e* pP 19 32 48.2 -1.9
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CLL Collm 81.86 330⇑*iP* **P 19 32 37.9 -0.2**
CLL *e* pP 19 32 48.0 -2.4
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 81.86 330⇑*iP* **P 19 32 37.9 -0.2**
comp=Z,8.0nm,0.8s,mb4.7
CLL *e* pP 19 32 48.0 -2.4
CLL Collm 81.86 330⇑*iP* **P 19 32 37.9 -0.2**
comp=Z,8.0nm,0.8s,mb4.7
CLL *ep*P pP 19 32 48.0 -2.4
CLL *e* pP 19 32 52.0 +1.6
BZS Buzias 82.18 322⇑P **P 19 32 39.8 -0.2**
BZS Buzias 82.18 322⇑*iP* **P 19 32 39.8 -0.2**
PRU Pruhonice 82.23 329 *eP* **P 19 32 40.9 +0.8**
PRU *ep*P pP 19 32 52.5 +0.1
KHC Kasperske Hory 83.29 329 *eP* **P 19 32 45.4 -0.2**
comp=Z,3.7nm,0.7s,mb4.5
KHC Kasperske Hory 83.29 329 *eP* **P 19 32 45.9 +0.3**
KHC *ep*P pP 19 32 57.5 -0.4
GERES GERESS Array B 83.46 328 P **P 19 32 46.4 -0.1**
comp=Z,1.7nm,0.6s,mb4.3,baz=32,slow=5.2,SNR=19
GRA1 Grafenberg Arr 83.83 330 *eP* **P 19 32 48.8 +0.4**
comp=Z,20nm,1.7s,mb5.0
GRF Grafenberg Arr 83.83 330 *eP* **P 19 32 48.8 +0.4**
comp=Z,20nm,1.7s,mb5.0
GRF Grafenberg Arr 83.83 330 *eP* **P 19 32 48.8 +0.4**
GRF pmax pmax
comp=Z,20nm,1.7s,mb5.0
GRF Grafenberg Arr 83.83 330 *eP* **P 19 32 48.8 +0.4**
GRF pmax pmax
comp=Z,20nm,1.7s,mb5.0
TUC Tucson 84.02 54 P **P 19 32 50.7 +1.0**
TUC pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
TUC Tucson 84.02 54 P **P 19 32 50.7 +1.0**
comp=Z,2.4nm,0.8s,mb4.4
ANMO Albuquerque 85.08 50 P **P 19 32 56.9 +1.9**
comp=Z,1.3nm,0.8s,mb4.1,baz=176,slow=2.9,SNR=2.3
GIVF Givet 85.93 334 *eP* **P 19 32 58.4 -0.6**
BFO Black Forest 86.07 331 *eP* **P 19 32 59.3 -0.3**
BFO pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
BFO Black Forest 86.07 331 *eP* **P 19 32 59.3 -0.4**
comp=Z,5.5nm,0.8s,mb4.8
SCHQ Scheferville 86.13 16 P **P 19 32 58.9 -0.9**
comp=Z,3.2nm,0.8s,mb4.6,baz=5.8,slow=5.5,SNR=5.3
BAIF Baives 86.19 334 *eP* **P 19 32 59.7 -0.5**
comp=Z,12nm,1.0s,mb4.8
BAIF Baives 86.19 334 *eP* **P 19 32 59.7 -0.5**
BAIF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
BAIF Baives 86.19 334 *eP* **P 19 32 59.7 -0.5**
comp=Z,5.9nm,1.0s,mb4.8
CDF Champ du Feu 86.41 331 *eP* **P 19 33 00.9 -0.4**
comp=Z,9.7nm,0.8s,mb4.8
CDF Champ du Feu 86.41 331 *eP* **P 19 33 00.9 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
CDF Champ du Feu 86.41 331 *eP* **P 19 33 00.9 -0.4**
comp=Z,4.8nm,0.8s,mb4.8
HINF Hinteralfeld 87.06 331 *eP* **P 19 33 03.5 -1.0**
HAU Haudompre 87.10 332 *eP* **P 19 33 03.8 -0.9**
comp=Z,7.0nm,0.7s,mb4.7
HAU Haudompre 87.10 332 *eP* **P 19 33 03.8 -0.9**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
HAU Haudompre 87.10 332 *eP* **P 19 33 03.8 -0.9**
comp=Z,3.5nm,0.7s,mb4.7
MEZF Maizieres J'vi 87.18 333 *eP* **P 19 33 04.8 -0.3**
comp=Z,4.9nm,0.4s,mb4.8
CABF La Chapelle 88.35 331 *eP* **P 19 33 10.5 -0.2**
LOR Lormes 88.65 333 *eP* **P 19 33 11.7 -0.4**
comp=Z,4.4nm,0.7s,mb4.6
LOR Lormes 88.65 333 *eP* **P 19 33 11.7 -0.4**
LOR pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
LOR Lormes 88.65 333 *eP* **P 19 33 11.7 -0.4**
comp=Z,2.2nm,0.7s,mb4.6
FLN La Foliniere 88.90 336 *eP* **P 19 33 12.6 -0.7**
LDF La Druitiere 88.93 336 *eP* **P 19 33 12.7 -0.7**
SSF Saint Saulge 88.96 333 *eP* **P 19 33 13.1 -0.5**
LPL La Plagne 88.99 330 *eP* **P 19 33 13.3 -0.5**
LPG La Plagne 89.00 330 *eP* **P 19 33 13.4 -0.4**
comp=Z,3.8nm,0.6s,mb4.6
LPG La Plagne 89.00 330 *eP* **P 19 33 13.4 -0.4**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
LPG La Plagne 89.00 330 *eP* **P 19 33 13.4 -0.4**
comp=Z,1.9nm,0.6s,mb4.6
SMF Signal de Mont 89.18 332 *eP* **P 19 33 13.6 -1.0**
comp=Z,6.6nm,0.7s,mb4.8
SMF Signal de Mont 89.18 332 *eP* **P 19 33 13.6 -1.0**
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
SMF Signal de Mont 89.18 332 *eP* **P 19 33 13.6 -1.0**
comp=Z,3.3nm,0.7s,mb4.8
AVF Avril sur Loir 89.24 333 *eP* **P 19 33 14.6 -0.3**
comp=Z,26nm,1.3s,mb5.1
AVF Avril sur Loir 89.24 333 *eP* **P 19 33 14.6 -0.3**
AVF pmax pmax
comp=Z,13nm,1.3s,mb5.1
AVF Avril sur Loir 89.24 333 *eP* **P 19 33 14.6 -0.3**
comp=Z,13nm,1.3s,mb5.1
GRR Gorron 89.35 336 *eP* **P 19 33 15.1 -0.3**
MBDF Montbardon 89.62 330 *eP* **P 19 33 15.6 -1.1**
comp=Z,1.8nm,0.4s,mb4.5
ORIF Oris-en-Rattie 89.83 330 *eP* **P 19 33 17.2 -0.5**
SGMF Saint Gilles 90.02 337 *eP* **P 19 33 18.1 -0.4**
TCF Toulx Ste Croi 90.09 333 *eP* **P 19 33 18.5 -0.4**
ROSF Rostrenen 90.17 337 *eP* **P 19 33 18.9 -0.3**
VIVF Saint-Julien-l 90.36 331 *eP* **P 19 33 19.7 -0.5**
comp=Z,4.1nm,0.8s,mb4.5
VIVF Saint-Julien-l 90.36 331 *eP* **P 19 33 19.7 -0.5**
VIVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 90.36 331 *eP* **P 19 33 19.7 -0.5**
comp=Z,2.0nm,0.8s,mb4.5
PGF Pioggiola 90.44 327 *eP* **P 19 33 19.4 -1.2**
comp=Z,24nm,1.1s,mb5.2
PGF Pioggiola 90.44 327 *eP* **P 19 33 19.4 -1.2**
PGF pmax pmax
comp=Z,12nm,1.0s,mb5.2
PGF Pioggiola 90.44 327 *eP* **P 19 33 19.4 -1.2**
comp=Z,12nm,1.0s,mb5.2
QUIF Quistinic 90.51 337 *eP* **P 19 33 20.1 -0.7**
comp=Z,9.2nm,0.8s,mb4.9
QUIF Quistinic 90.51 337 *eP* **P 19 33 20.1 -0.7**
QUIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
QUIF Quistinic 90.51 337 *eP* **P 19 33 20.1 -0.7**
comp=Z,4.6nm,0.8s,mb4.9
TXAR Lajitas Array 90.58 52 P **P 19 33 22.2 +0.7**
comp=Z,0.7nm,0.8s,mb4.1,baz=291,slow=3.9,SNR=3.7
FRF La Foret Royal 90.63 329 *eP* **P 19 33 20.2 -1.2**
comp=Z,5.3nm,0.8s,mb4.6
FRF La Foret Royal 90.63 329 *eP* **P 19 33 20.2 -1.2**
FRF pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
FRF La Foret Royal 90.63 329 *eP* **P 19 33 20.2 -1.2**
comp=Z,2.7nm,0.8s,mb4.6
MFF Saint Martin d 90.66 335 *eP* **P 19 33 21.5 0.0**
SMRF Simiane la Rot 90.73 330 *eP* **P 19 33 21.7 -0.2**
LMR La Mourre 90.87 329 *eP* **P 19 33 21.7 -0.9**
comp=Z,15nm,1.1s,mb5.0
LMR La Mourre 90.87 329 *eP* **P 19 33 21.7 -0.9**
LMR pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
LMR La Mourre 90.87 329 *eP* **P 19 33 21.7 -0.9**
comp=Z,7.6nm,1.1s,mb4.9
RJF Les Rejaudoux 91.18 333 *eP* **P 19 33 23.9 -0.1**
CAF Calviac 91.30 332 *eP* **P 19 33 24.8 +0.3**
comp=Z,5.5nm,0.8s,mb4.6
CAF Calviac 91.30 332 *eP* **P 19 33 24.8 +0.3**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
CAF Calviac 91.30 332 *eP* **P 19 33 24.8 +0.3**
comp=Z,2.8nm,0.8s,mb4.6
LASF Ste Croix 91.33 331 *eP* **P 19 33 24.5 -0.2**
LFF La Frestale 91.78 333 *eP* **P 19 33 26.8 0.0**
MTLF Montolieu 92.59 332 *eP* **P 19 33 30.5 0.0**
comp=Z,7.8nm,1.1s,mb4.8
MTLF Montolieu 92.59 332 *eP* **P 19 33 30.5 0.0**
MTLF pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
MTLF Montolieu 92.59 332 *eP* **P 19 33 30.5 0.0**
comp=Z,3.9nm,1.1s,mb4.8
MIAR Mount Ida 92.89 43 *eP* **P 19 33 31.5 -0.6**
MIAR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
MIAR Mount Ida 92.89 43 *eP* **P 19 33 31.5 -0.6**
comp=Z,7.2nm,1.0s,mb5.1
ETSF Etsaut 94.01 333 *eP* **P 19 33 37.9 +0.8**
comp=Z,11nm,0.9s,mb5.0
ETSF Etsaut 94.01 333 *eP* **P 19 33 37.9 +0.8**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
ETSF Etsaut 94.01 333 *eP* **P 19 33 37.9 +0.8**
comp=Z,5.6nm,0.9s,mb5.0
SJPF Ste Jean 94.07 334 *eP* **P 19 33 38.2 +0.9**
TORD Torodi Ar. Bea 117.97 315 PKP PKPdf 19 39 04.5 -1.7
comp=Z,0.5nm,0.6s,baz=20,slow=2.1,SNR=3.4
LPAZ La Paz 147.06 61 PKPbc PKPbc 19 40 02.5 +0.2
comp=Z,2.2nm,0.7s,baz=336,slow=4.9,SNR=7.9
LPAZ La Paz 147.06 61 *e*PKPbc PKPbc 19 40 02.9 +0.7

MAN 07 19:35:11, 13°.54N×121°.29E, h27km, mb4.1, ML2.9, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.33**	**264**	⇑*iP*	Pb	19 35 17.2	-1.4
BOAC	**Boac**	**0.54**	**98**	*eP*	Pb	19 35 23.8	+1.9
BOAC				*eS*	Sb	19 35 32.4	+2.9
LUBP	**Lubang**	**1.04**	**281**	*eP*	Pn	19 35 30.2	+0.5
SJMP	**San Jose**	**1.08**	**189**	*eP*	Pn	19 35 31.2	+0.8
SJMP				*eS*	Sn	19 35 45.2	+0.6
BUSP	**Coron**	**1.86**	**215**	*eP*	Pn	19 35 41.6	+0.5

DJA 07 19:35:51, 1°.85N×121°.28E, h12km, MLv3.8/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.52**	**154**	P	Pn	19 36 15.6	-2.4
MRSI				S	Sn	19 36 36.1	-1.5
MPSI	**Mapaga**	**2.04**	**223**	S	Sn	19 36 51.2	+0.6
APSI	**Ampana**	**2.77**	**172**	P	Pn	19 36 35.3	+0.1
APSI				S	Sn	19 37 10.3	+1.7
PCI	**Palu**	**3.09**	**208**	P	Pn	19 36 41.2	+1.5
PCI				S	Sn	19 37 18.0	+1.4
LUWI	**Luwuk**	**3.24**	**153**	P	Pn	19 36 42.4	+0.7
LUWI				S	Sn	19 37 20.7	+0.5
MYLDM	**Lahad Datu**	**4.32**	**320**	P	Pn	19 36 56.1	-0.4
KKM	**Kota Kinabalu**	**6.55**	**310**	P	Pn	19 37 27.2	0.0

IDC 07 19:49:21.5±1.2, 15°.09N×144°.41E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.7/22, mbtmp3.6/6, Error ellipse: s-maj=43.7km s-min=16.2km az=73.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.56**	**163**	Pn	Pn	19 49 51.1	+0.6
	20nm,0.3s,baz=305,slow=5.4,SNR=11						
GUMO				Sn	Sn	19 50 11.7	+0.3
	26nm,0.3s,baz=107,slow=22,SNR=13						
KSRS	**Korea Array**	**26.65**	**330**	P	P	19 55 01.0	-1.0
	2.2nm,0.8s,baz=146,slow=9.6,SNR=12						
WRA	**Warramunga Arr**	**36.20**	**196**	P	P	19 56 26.6	+0.4
	1.0nm,0.9s,baz=19,slow=9.4,SNR=4.9						
ASAR	**Alice Springs**	**39.87**	**195**	P	P	19 56 56.4	-0.7
	0.2nm,0.7s,baz=19,slow=8.9,SNR=3.3						
CMAR	**Chiang Mai Arr**	**43.58**	**281**	P	P	19 57 27.0	-0.7
	1.1nm,1.0s,baz=70,slow=7.0,SNR=5.0						
SONM	**Songino Array**	**45.26**	**324**	P	P	19 57 42.7	+2.0
	0.6nm,0.8s,baz=139,slow=7.3,SNR=2.2						
YKA	**Yellowknife Ar**	**81.74**	**27**	P	P	20 01 41.3	-0.5
	0.1nm,0.3s,baz=288,slow=5.3,SNR=3.0						

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*CSEM **07** 19:50:45.9±0.2, 27°.70N×57°.86E, h36km, mb4.8/99, Ms4.2, Error ellipse: s-maj=6.4km s-min=3.8km az=156.0*
*MOS **07** 19:50:46.6±0.8, 28°.15N×57°.67E, h33km, mb5.0/77, Error ellipse: s-maj=7.2km s-min=3.8km az=127.8*
*ISCJB **07** 19:50:47.3±0.1, 28°.04N±0°.02×57°.66E±0°.02, h37km, mb4.7/175, MS4.5/13, Error ellipse: s-maj=2.7km s-min=2.3km az=11.7*
*BJI **07** 19:50:49.3, 28°.20N×57°.13E, h82km, mB5.2/15, mb4.7/35, Ms4.9/17, Ms7 4.7/15*
*THR **07** 19:50:49.0±1.1, 28°.19N×57°.62E, h16km±7km, ML5.0*
*IDC **07** 19:50:49.4±0.5, 28°.20N×57°.65E, h41km±3km, mb4.3/26, mb1 4.4/29, mb1mx4.3/34, mbtmp4.3/29, ML4.9/3, MS4.4/6, Ms1 4.4/6, ms1mx3.9/46, Error ellipse: s-maj=11.3km s-min=8.8km az=147.0*
*TEH **07** 19:50:50.4, 27°.95N×57°.82E, h32km*
*NEIC **07** 19:50:50.0, 27°.95N×57°.82E, h33km, mb4.8/100, ML5.0(THR), MN5.0(TEH), After TEH.*
*SZGRF **07** 19:50:52.2, 27°.52N×56°.19E, h36km, mb4.5, Southern Iran*
*DJA **07** 19:50:59, 28°.30N×57°.63E, h121km, mb4.8/11*
ISC 07 19:50:49.4±0.1, 28°.03N±0°.02×57°.68E±0°.02, h39km, h39km±1.3km: pP-P, n861, σ1§29/874, mb4.7/175, MS4.5/13, 77C-11D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.17**	**240**	*e*Pg	**Pn**	**19 51 13.1**	**+3.9**
IBND				*e*Sg	**Sn**	**19 51 30.4**	**+6.5**
IBND				*e*Sg	**Sn**	**19 51 31.3**	**+7.4**
IBND				*e*		19 51 41.3	
	comp=Z,1269μm,0.3s						
IBND	**Bandar-abas**	**1.17**	**240**	*e*Pg	**Pn**	**19 51 13.1**	**+3.9**
BNDS	**Bandar-Abbas**	**1.48**	**245**	*e*Pg	**Pn**	**19 51 16.0**	**+2.5**
BNDS	**Bandar-Abbas**	**1.48**	**245**	*e*Pg	**Pn**	**19 51 16.7**	**+3.2**
BNDS				*e*Sg	**Sn**	**19 51 37.3**	**+5.7**
BNDS				AML	AML	19 51 40.5	
	comp=N,41μm,0.7s						
BNDS	**Bandar-Abbas**	**1.48**	**245**	*e*Pg	**Pn**	**19 51 16.0**	**+2.5**
BNDS				*e*Sg	**Sn**	**19 51 37.3**	**+5.7**
KRBR	**Kerman**	**2.10**	**338**	*e*Pg	**Pn**	**19 51 24.0**	**+1.9**
KRBR	**Kerman**	**2.10**	**338**	*e*Pg	**Pn**	**19 51 24.6**	**+2.5**
KRBR				AML	AML	19 51 59.7	
	comp=E,14μm,0.8s						
KRBR				AML	AML	19 52 01.2	
	comp=N,13μm,0.4s						
BANOM	**Banah**	**2.44**	**211**	Pn	**Pn**	**19 51 29.5**	**+2.8**
	SNR=115						
BANOM	**Banah**	**2.44**	**211**	Pn	**Pn**	**19 51 28.5**	**+1.8**
ZHSF	**Zahedan**	**3.14**	**59**	*e*Pn	**Pn**	**19 51 39.0**	**+2.8**
ZHSF	**Zahedan**	**3.14**	**59**	*e*Pn	**Pn**	**19 51 39.8**	**+3.5**
ZHSF	**Zahedan**	**3.14**	**59**	*e*Pn	**Pn**	**19 51 39.0**	**+2.8**
HATD	**Hatta, Dubai**	**3.48**	**204**	Pn	Px	19 51 51.2	
	SNR=24						
HATD	**Hatta, Dubai**	**3.48**	**204**	Pn	**Pn**	**19 51 42.7**	**+1.6**
	SNR=21						
NAZ	**Nazwa, Dubai**	**3.53**	**211**	Pn	**Pn**	**19 51 45.4**	**+3.6**
	SNR=53						
NAZ	**Nazwa, Dubai**	**3.53**	**211**	Pn	**Pn**	**19 51 44.4**	**+2.7**
ASHO	**Ashiyiah**	**3.64**	**204**	Pn	**Pn**	**19 51 46.6**	**+3.4**
	SNR=82						
ASHO	**Ashiyiah**	**3.64**	**204**	Pn	**Pn**	**19 51 44.7**	**+1.5**
	SNR=70						
FAQ	**Al Faqa, Dubai**	**3.77**	**210**	Pn	**Pn**	**19 51 47.2**	**+2.2**
	SNR=49						

IBAF Bafgh 3.99 333 Pn **Pn 19 51 50.6 +2.6**
IBAF Bafgh 3.99 333 *e*Pn **Pn 19 51 50.7 +2.7**
IBAF *e* 19 53 05.1
comp=Z,16µm,0.5s
IBAF Bafgh 3.99 333 *e*Pn **Pn 19 51 50.7 +2.7**
ASUD Al Ashush, Dub 4.00 212 Pn Px 19 52 00.0
SNR=30
ASUD Al Ashush, Dub 4.00 212 Pn **Pn 19 51 51.0 +2.9**
SNR=107
GHIR Ghir-Karzin 4.15 275 *e*Pn **Pn 19 51 52.0 +1.8**
GHIR Ghir-Karzin 4.15 275 *e*Pn **Pn 19 51 52.1 +1.9**
GHIR Sn **Sn 19 52 40.2 +2.7**
GHIR AML AML 19 53 10.8
comp=E,1µm,0.5s
GHIR AML AML 19 53 18.1
comp=N,1µm,0.5s
GHIR Ghir-Karzin 4.15 275 *e*Pn **Pn 19 51 52.0 +1.8**
ISRV Sarvestan 4.23 290 Pn **Pn 19 51 54.1 +2.8**
ISRV Sarvestan 4.23 290 *e*Pn **Pn 19 51 54.1 +2.8**
ISRV *e* 19 53 29.6
comp=Z,35µm,0.6s
ISRV Sarvestan 4.23 290 *e*Pn **Pn 19 51 54.1 +2.8**
IMEH Mehriz 4.28 322 Pn **Pn 19 51 54.6 +2.6**
IMEH Mehriz 4.28 322 *e*Pn **Pn 19 51 54.7 +2.7**
IMEH *e* 19 53 12.3
comp=Z,15µm,0.5s
IMEH Mehriz 4.28 322 *e*Pn **Pn 19 51 54.7 +2.7**
IPAR Pars 4.44 295 Pn **Pn 19 51 57.2 +3.0**
IPAR Pars 4.44 295 *e*Pn **Pn 19 51 57.3 +3.1**
IPAR *e* 19 53 27.6
comp=Z,19µm,0.3s
IPAR Pars 4.44 295 *e*Pn **Pn 19 51 57.3 +3.1**
HOQ Hoqain 4.45 184 Pn **Pn 19 51 54.5 +0.2**
SNR=55
HOQ Hoqain 4.45 184 Pn **Pn 19 51 54.5 +0.2**
SNR=55
IMOK Mouk 4.49 284 Pn **Pn 19 51 57.2 +2.4**
IMOK Mouk 4.49 284 *e*Pn **Pn 19 51 57.2 +2.4**
IMOK *e* 19 53 24.5
comp=Z,24µm,0.4s
IMOK Mouk 4.49 284 *e*Pn **Pn 19 51 57.2 +2.4**
BIDO Bidbid 4.51 175 Pn **Pn 19 51 55.4 +0.2**
SNR=43
BIDO Bidbid 4.51 175 Pn **Pn 19 51 55.3 +0.1**
SNR=43
IKOO Kooshah 4.52 14 *e*Pn **Pn 19 51 56.4 +1.1**
IKOO *e* 19 52 14.1
comp=Z,11µm,0.4s
IKOO Kooshah 4.52 14 *e*Pn **Pn 19 51 56.4 +1.1**
ARQ Araqi 4.79 193 Pn **Pn 19 52 01.7 +2.6**
SNR=67
ARQ Araqi 4.79 193 Pn **Pn 19 52 01.7 +2.6**
SNR=67
ITEG Tejag 4.93 10 *e*Pn **Pn 19 52 02.1 +1.2**
ITEG *e* 19 53 39.1
comp=Z,11µm,0.4s
ITEG Tejag 4.93 10 *e*Pn **Pn 19 52 02.1 +1.2**
SMDO Samad 4.96 176 Pn **Pn 19 52 02.6 +1.2**
SNR=46
SMDO Samad 4.96 176 Pn **Pn 19 52 02.6 +1.2**
SNR=46
IDAH Dahanechah 5.05 21 *e*Pn **Pn 19 52 04.2 +1.6**
IDAH *e* 19 53 45.6
comp=Z,22µm,0.8s
IDAH Dahanechah 5.05 21 *e*Pn **Pn 19 52 04.2 +1.6**
ICHK Chekchek 5.07 327 Pn **Pn 19 52 05.2 +2.4**
ICHK Chekchek 5.07 327 *e*Pn **Pn 19 52 05.3 +2.5**
ISAD Sadrabad 5.19 319 Pn **Pn 19 52 07.1 +2.6**
ISAD Sadrabad 5.19 319 *e*Pn **Pn 19 52 07.2 +2.7**
ISAD *e* 19 53 43.3
comp=Z,9µm,0.5s
ISAD Sadrabad 5.19 319 *e*Pn **Pn 19 52 07.2 +2.7**
BSY Bisya 5.29 185 Pn **Pn 19 52 08.2 +2.4**
SNR=44
BSYO Bisya 5.29 184 Pn **Pn 19 52 08.2 +2.2**
SNR=44
WBK Wadi Bani Khal 5.53 168 Pn **Pn 19 52 10.7 +1.5**
SNR=20
JMDO Jabal Madar 5.65 176 Pn **Pn 19 52 12.8 +1.9**
SNR=24
NASN Na'in 6.34 320 *e*Pn **Pn 19 52 22.0 +1.7**
NASN Na'in 6.34 320 *e*Pn **Pn 19 52 22.7 +2.4**
NASN Na'in 6.34 320 *e*Pn **Pn 19 52 22.0 +1.7**
IGAR Gharneh 6.54 313 *e*Pn **Pn 19 52 25.1 +2.1**
IGAR *e* 19 53 51.7
comp=Z,2µm,0.2s
IZEF Zefreh 6.69 318 Pn **Pn 19 52 26.7 +1.6**
IZEF Zefreh 6.69 318 *e*Pn **Pn 19 52 26.8 +1.7**
IZEF Zefreh 6.69 318 *e*Pn **Pn 19 52 26.8 +1.7**
SLWS 7.08 245 S **Sn 19 53 46.4 -3.4**
SLWS 7.08 245 P **Pn 19 52 31.2 +0.7**
SLWS 7.08 245 S **Sn 19 53 46.4 -3.4**
BTHS 7.32 239 S **Sn 19 53 48.8 -6.8**
BTHS 7.32 239 P **Pn 19 52 33.9 +0.1**
BTHS 7.32 239 S **Sn 19 53 48.8 -6.8**
IKLH Kolahrood 7.44 317 Pn **Pn 19 52 37.2 +1.8**
IKLH Kolahrood 7.44 317 *e*Pn **Pn 19 52 37.2 +1.8**
IKLH *e* 19 54 57.5
comp=Z,2µm,0.6s
IKLH Kolahrood 7.44 317 *e*Pn **Pn 19 52 37.2 +1.8**
ISFB Sefidab 7.83 325 Pn **Pn 19 52 42.8 +2.0**
ISFB Sefidab 7.83 325 *e*Pn **Pn 19 52 42.8 +2.0**
ISFB Sefidab 7.83 325 *e*Pn **Pn 19 52 42.8 +2.0**
IANJ Anjilo 8.07 338 Pn **Pn 19 52 46.0 +1.9**
IANJ Anjilo 8.07 338 *e*Pn **Pn 19 52 46.0 +1.9**
IANJ Anjilo 8.07 338 *e*Pn **Pn 19 52 46.0 +1.9**
IMOG Moghan 8.17 9 Pn **Pn 19 52 46.8 +1.4**
IMOG Moghan 8.17 9 *e*Pn **Pn 19 52 46.9 +1.5**
IMOG Moghan 8.17 9 *e*Pn **Pn 19 52 46.9 +1.5**
ILAS Lasjerd 8.36 332 Pn **Pn 19 52 49.7 +1.8**
ILAS Lasjerd 8.36 332 *e*Pn **Pn 19 52 49.8 +1.9**
ILAS Lasjerd 8.36 332 *e*Pn **Pn 19 52 49.8 +1.9**
ISRO Mashad 8.39 10 *e*Pn **Pn 19 52 49.0 +0.6**
IPAY Payeh 8.46 7 Pn **Pn 19 52 51.0 +1.6**
IPAY Payeh 8.46 7 *e*Pn **Pn 19 52 51.0 +1.6**
IPAY Payeh 8.46 7 *e*Pn **Pn 19 52 51.0 +1.6**
IMYA Miami 8.53 13 Pn **Pn 19 52 51.5 +1.2**
IMYA Miami 8.53 13 *e*Pn **Pn 19 52 51.5 +1.2**
IMYA Miami 8.53 13 *e*Pn **Pn 19 52 51.5 +1.2**
IAKL Akhelmad 8.59 6 Pn **Pn 19 52 52.6 +1.5**
IAKL Akhelmad 8.59 6 *e*Pn **Pn 19 52 52.6 +1.5**
ISHM Shahmirzad 8.60 335 Pn **Pn 19 52 53.3 +2.1**
ISHM Shahmirzad 8.60 335 *e*Pn **Pn 19 52 53.3 +2.1**
ISHM Shahmirzad 8.60 335 *e*Pn **Pn 19 52 53.3 +2.1**
IVRN Varamin 8.60 325 Pn **Pn 19 52 54.0 +2.7**
IVRN Varamin 8.60 325 *e*Pn **Pn 19 52 53.1 +1.8**
IVRN *e*Pn **Pn 19 52 54.0 +2.7**
IVRN Varamin 8.60 325 *e*Pn **Pn 19 52 54.0 +2.7**
KFJS 8.60 273 P **Pn 19 52 50.7 -0.6**
QRN Al-Qurain 8.63 277 *e*P **Pn 19 52 51.6 -0.1**
QRN AML AML 19 54 23.8
comp=Z,405nm,0.3s
IFIR Firoozkooh 8.66 332 Pn **Pn 19 52 54.0 +1.9**
IFIR Firoozkooh 8.66 332 *e*Pn **Pn 19 52 54.1 +2.0**
IFIR Firoozkooh 8.66 332 *e*Pn **Pn 19 52 54.1 +2.0**
SHGR Shooshtar-Gavs 8.70 300 *e*P **Pn 19 52 54.0 +1.4**
SHGR Shooshtar-Gavs 8.70 300 *e*Pn **Pn 19 52 54.5 +1.8**
SHGR Shooshtar-Gavs 8.70 300 *e*P **Pn 19 52 54.0 +1.4**
SHGR Shooshtar-Gavs 8.70 300 *e*Pn **Pn 19 52 54.9 +2.3**
IKRD Kardeh 8.74 4 Pn **Pn 19 52 56.2 +3.0**
IKRD Kardeh 8.74 4 *e*Pn **Pn 19 52 56.3 +3.1**
KBD Kabd 8.85 280 *e*P **Pn 19 52 54.3 -0.5**
KBD AML AML 19 54 29.3
comp=Z,98nm,0.5s
KBD Kabd 8.85 280 *e*P **Pn 19 52 54.3 -0.5**
UMR Umm Al-Rimmam 8.88 282 *e*P **Pn 19 52 54.5 -0.5**
UMR AML AML 19 54 30.4
comp=Z,340nm,0.4s
UMR Umm Al-Rimmam 8.88 282 *e*P **Pn 19 52 54.5 -0.6**
IDMV Damavand 8.92 329 Pn **Pn 19 52 58.0 +2.3**
IDMV Damavand 8.92 329 *e*Pn **Pn 19 52 58.1 +2.4**
IDMV Damavand 8.92 329 *e*Pn **Pn 19 52 58.1 +2.4**
RDF Al-Radifah 8.96 278 *e*P **Pn 19 52 56.4 +0.2**
RDF AML AML 19 54 33.1
comp=Z,495nm,0.5s
RDF Al-Radifah 8.96 278 *e*P **Pn 19 52 56.4 +0.2**
ISFR Sfrayin 9.00 2 Pn **Pn 19 52 58.0 +1.3**
ISFR Sfrayin 9.00 2 *e*Pn **Pn 19 52 58.0 +1.3**
ISFR Sfrayin 9.00 2 *e*Pn **Pn 19 52 58.0 +1.3**
IALA Alasht 9.03 334 Pn **Pn 19 52 59.2 +2.1**
IALA Alasht 9.03 334 *e*Pn **Pn 19 52 59.3 +2.2**
IALA Alasht 9.03 334 *e*Pn **Pn 19 52 59.3 +2.2**
ASAO Ashtian 9.22 317 *e*Pn **Pn 19 53 02.0 +2.2**
ASAO Ashtian 9.22 317 *e*Pn **Pn 19 53 02.2 +2.4**
ASAO Ashtian 9.22 317 *e*Pn **Pn 19 53 02.0 +2.2**
MIB Mutribah 9.23 283 *e*P **Pn 19 52 60.0 0.0**
MIB AML AML 19 54 34.5
comp=Z,226nm,0.7s
MIB Mutribah 9.23 283 *e*P **Pn 19 53 00.0 0.0**
IR3 Iran Long-Peri 9.33 324 *e*Pn **Pn 19 53 03.3 +2.0**
IEMG Emamgholi 9.39 5 Pn **Pn 19 53 04.5 +2.4**
IEMG Emamgholi 9.39 5 *e*Pn **Pn 19 53 04.5 +2.4**
IRAZ Razeghan 9.88 320 Pn **Pn 19 53 10.6 +1.9**
IRAZ Razeghan 9.88 320 *e*Pn **Pn 19 53 10.6 +1.9**
IRAZ Razeghan 9.88 320 *e*Pn **Pn 19 53 10.6 +1.9**
IKOM Komasi 10.65 308 Pn **Pn 19 53 19.4 +0.1**
IKOM Komasi 10.65 308 *e*Pn **Pn 19 53 19.5 +0.2**
IKOM Komasi 10.65 308 *e*Pn **Pn 19 53 19.5 +0.2**
LYLS 11.19 240 P **Pn 19 53 24.4 -2.4**
LYLS 11.19 240 P **Pn 19 53 24.4 -2.3**
ABTO Aybut 11.37 202 Pn **Pn 19 53 28.9 -0.4**
SNR=11
IGHG Ghaleghazi 11.39 306 Pn **Pn 19 53 30.9 +1.4**
IGHG Ghaleghazi 11.39 306 *e*Pn **Pn 19 53 30.9 +1.4**
IGHG Ghaleghazi 11.39 306 *e*Pn **Pn 19 53 30.9 +1.4**
KBL Kabul 11.68 53 *e*P **Pn 19 53 36.1 +2.7**
KBL pmax pmax
comp=Z,8.0nm,0.7s
KBL Kabul 11.68 53 *e*P **Pn 19 53 36.1 +2.7**
comp=Z,7.8nm,0.7s
BHD Baghdad 12.58 298 *e*P **Pn 19 53 42.0 -3.8**
BHD *e*S **Sn 19 55 52.0 -13**
IBST Bostanabad 13.22 320 Pn **Pn 19 53 56.0 +1.5**
IBST Bostanabad 13.22 320 *e*Pn **Pn 19 53 56.0 +1.5**
IBST Bostanabad 13.22 320 *e*Pn **Pn 19 53 56.0 +1.5**
CEP Cherat 13.50 61 P **Pn 19 53 59.8 +1.5**
IHRS Heris 13.57 322 Pn **Pn 19 54 00.8 +1.5**
IHRS Heris 13.57 322 *e*Pn **Pn 19 54 00.8 +1.5**
IAZR Azarshahr 13.74 317 Pn **Pn 19 54 03.2 +1.6**
IAZR Azarshahr 13.74 317 *e*Pn **Pn 19 54 03.3 +1.7**
IAZR Azarshahr 13.74 317 *e*Pn **Pn 19 54 03.3 +1.7**
ISHB Shabestar 14.36 318 Pn **Pn 19 54 11.3 +1.3**
ISHB Shabestar 14.36 318 *e*Pn **Pn 19 54 11.4 +1.4**
CHCP Chirah Chowk 14.51 63 P **Pn 19 54 11.5 -0.5**
IMRD Marand 14.60 320 Pn **Pn 19 54 14.6 +1.3**
IMRD Marand 14.60 320 *e*Pn **Pn 19 54 14.6 +1.3**
IMRD Marand 14.60 320 *e*Pn **Pn 19 54 14.6 +1.3**
MSL Mosul 14.88 308 *e*P **Pn 19 54 15.0 -1.9**
MSL *e*S **Sn 19 56 58.0 -2.5**
AJM Ajmer 15.17 92 *e*P **Pn 19 54 21.3 +0.5**
AJM AMb AMB 19 54 30.2
comp=Z,24nm,0.7s
AJM *e*S **S 19 57 04.7 -19**
AJM AML AML 19 57 36.2
comp=E,11nm,0.5s
MUKL Al Mukalla 15.70 213 *e*P **Pn 19 54 26.1 -1.8**
GNI Garni 16.13 322 *c i*P **Pn 19 54 35.4 +2.2**
GNI pmax pmax
comp=Z,80nm,1.0s
GNI Garni 16.13 322 *e*P **Pn 19 54 35.9 +2.7**
comp=Z,78nm,0.8s
GNI Garni 16.13 322 Pn **Pn 19 54 35.7 +2.6**
SNR=31
GNI Pn **Pn 19 54 35.7 +2.6**
SNR=31
GNI Garni 16.13 322 *i* P **Pn 19 54 35.4 +2.2**
comp=Z,80nm,1.0s
GNI Garni 16.13 322 Pn **Pn 19 54 35.7 +2.5**
SNR=31
THN Thein Dam 16.19 70 *e*P **Pn 19 54 33.9 -0.1**
DYDN Diyadin 16.32 318 *i* P **Pn 19 54 38.1 +2.6**
DYDN Diyadin 16.32 318 *i* P **Pn 19 54 38.1 +2.5**
BEST Besiri 16.90 310 *i* P **Pn 19 54 42.2 -0.7**
MAK Makhachkala 17.02 334 *e*P **Pn 19 54 46.2 +1.8**
MAK *e* 19 57 55.7
MAK Makhachkala 17.02 334 *e*P **Pn 19 54 46.2 +1.8**
MTA Mtatsminda 17.22 326 P **Pn 19 54 47.9 +1.0**
SMLA Simla 17.23 75 *e*P **Pn 19 54 46.9 -0.1**
TBLG Delisi 17.28 326 P **Pn 19 54 49.2 +1.7**
TBLG Delisi 17.28 326 P **Pn 19 54 49.2 +1.7**
POO Poona 17.59 119 *e*P **Pn 19 54 51.5 -0.1**
HOMI Horasan 17.70 317 *i* P **Pn 19 54 54.7 +1.9**
DIYA Diyarbakir 17.70 308 *i* P **Pn 19 54 54.5 +1.7**
DIYA Diyarbakir 17.70 308 *i* P **Pn 19 54 54.5 +1.6**
GOR Gori 17.78 325 P **Pn 19 54 55.7 +2.0**
DDI Dehra Dun 17.94 78 *ex* **Pn 19 54 53.8 -2.0**
BDHA Al Bayda' 17.97 221 *e*P **Pn 19 54 55.1 -1.1**
BDHA AMb AMB 19 54 55.7
comp=Z,31nm,1.2s
KEH Kehvi 18.11 325 P **Pn 19 54 57.8 +0.1**
DHBB Dhamar BB 18.22 225 *e*P **Pn 19 54 58.6 -0.8**
DHBB *i* S **S 19 58 22.3 -3.5**
LBOS 18.24 222 *e*P **Pn 19 54 58.7 -0.8**
LBOS AMb AMB 19 54 59.9
comp=Z,210nm,1.6s
DDEM Demirkent 18.32 319 *i* P **Pn 19 55 01.6 +1.2**
DDEM Demirkent 18.32 319 *i* P **Pn 19 55 01.6 +1.2**
DAGI Agilar 18.35 319 *i* P **Pn 19 55 02.0 +1.3**
ARTV Artvin 18.41 320 *i* P **Pn 19 55 02.6 +1.2**
ARTV Artvin 18.41 320 *i* P **Pn 19 55 02.6 +1.2**
BHPL Bhopal 18.43 101 *e*P **Pn 19 55 01.3 -0.5**
BHPL AMb AMB 19 55 13.6
comp=Z,38nm,1.6s
ASF Jabal al Asfar 18.45 288 P **Pn 19 55 01.1 -0.9**
ASF S **S 19 58 13.1 -17**
ASF Jabal al Asfar 18.45 288 P **Pn 19 55 01.1 -0.9**
comp=Z,1.9nm,0.3s,baz=330,slow=5.8,SNR=73
ASF S **S 19 58 13.1 -17**
comp=Z,1.0nm,0.3s,baz=162,slow=16,SNR=4.7
ASF LR LR 20 03 59.8
comp=Z,1µm,19.5s,baz=239,slow=43
ZEI Tsey 18.47 326 *e*P **Pn 19 55 04.2 +2.1**
ZEI pmax pmax
comp=Z,29nm,0.8s
ZEI Tsey 18.47 326 *e*P **Pn 19 55 04.2 +2.1**
comp=Z,29nm,0.8s
ONI Oni 18.56 325 P **Pn 19 55 05.6 +2.4**
KOPT Kop Dagi 18.56 315 *i* P **Pn 19 55 05.7 +2.5**
KOPT Kop Dagi 18.56 315 *i* P **Pn 19 55 05.7 +2.4**
KAD Karad 18.57 122 *e*P **Pn 19 55 03.3 -0.3**
ELZG Elazig 18.76 309 *i* P **Pn 19 55 07.7 +2.0**
ELZG Elazig 18.76 309 *i* P **Pn 19 55 07.7 +1.9**
MALT Malatya 19.07 307 *e*P **Pn 19 55 09.8 +0.4**
MALT pmax pmax
comp=Z,278nm,1.1s
MALT Malatya 19.07 307 *e*P **Pn 19 55 09.8 +0.4**
comp=Z,278nm,1.1s
MALT Malatya 19.07 307 *e*P **Pn 19 55 09.8 +0.4**
comp=Z,278nm,1.1s
AML Almayashu 19.18 39 P **Pn 19 55 10.5 -0.2**
SNR=35
AML Almayashu 19.18 39 *e*P **Pn 19 55 09.8 -0.9**
comp=Z,20nm,0.7s
AML Almayashu 19.18 39 *e*P **Pn 19 55 09.8 -0.9**
comp=Z,20nm,0.7s
FKH Fakeheh 19.22 294 *e*P **Pn 19 55 12.2 +0.8**
FKH Fakeheh 19.22 294 *e*P **Pn 19 55 12.1 +0.8**
AKCD Akcadag 19.41 307 *i* P **Pn 19 55 13.5 -0.1**
AKCD Akcadag 19.41 307 *i* P **Pn 19 55 13.5 -0.1**
KUZU Kuzuini 19.43 302 *i* P **Pn 19 55 14.5 +0.7**
KUZU Kuzuini 19.43 302 *i* P **Pn 19 55 14.5 +0.7**
RCY Rachaya 19.55 292 *e*P **Pn 19 55 15.5 +0.3**
RCY Rachaya 19.55 292 *e*P **Pn 19 55 15.5 +0.3**
EKS2 Erkin-Say 19.58 38 P **Pn 19 55 14.7 -0.8**
SNR=28
EKS2 Erkin-Say 19.58 38 *e*P **Pn 19 55 14.5 -1.0**
comp=Z,47nm,1.2s
EKS2 Erkin-Say 19.58 38 *e*P **Pn 19 55 14.5 -1.0**
comp=Z,47nm,1.2s
HWQ Hawqa 19.60 294 *e*P **Pn 19 55 16.0 +0.1**
HWQ Hawqa 19.60 294 *e*P **Pn 19 55 16.0 +0.2**
UCH Uchtor 19.70 40 P **Pn 19 55 19.8 +2.9**
SNR=17
UCH Uchtor 19.70 40 *e*P **Pn 19 55 15.4 -1.5**
comp=Z,68nm,1.5s
UCH Uchtor 19.70 40 *e*P **Pn 19 55 15.4 -1.5**
comp=Z,68nm,1.5s
BHL Bhannes 19.76 293 *e*P **Pn 19 55 17.5 -0.2**
BHL Bhannes 19.76 293 *e*P **Pn 19 55 17.5 -0.2**
MMAI Mount Meron Ar 19.81 290 P **Pn 19 55 17.4 -1.0**
comp=Z,4.3nm,0.3s,baz=96,slow=13,SNR=31
MMAI S **S 19 58 52.2 -5.5**
comp=Z,3.1nm,0.3s,baz=115,slow=31,SNR=7.8
MMAI LR LR 20 04 55.4
comp=Z,1µm,20.2s,baz=225,slow=43
YAYL Yayladag 19.93 299 *i* P **Pn 19 55 19.7 0.0**
YAYL Yayladag 19.93 299 *i* P **Pn 19 55 19.7 0.0**
KIV Kislovodsk 19.94 327 *c i*P **Pn 19 55 19.2 -0.5**
KIV pmax pmax
comp=Z,53nm,1.0s
KIV Kislovodsk 19.94 327 *e*P **Pn 19 55 19.4 -0.3**
comp=Z,53nm,0.8s
KIV Kislovodsk 19.94 327 *i* P **Pn 19 55 19.2 -0.5**
comp=Z,53nm,1.0s
AAK Ala-Archa 19.95 39 P **Pn 19 55 19.0 -0.9**
SNR=24
AAK Ala-Archa 19.95 39 *e*P **Pn 19 55 18.6 -1.3**
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 19.95 39 P **Pn 19 55 18.2 -1.7**
comp=Z,0.0nm,0.3s,baz=201,slow=8.0,SNR=21
AAK Ala-Archa 19.95 39 *e*P **Pn 19 55 18.6 -1.3**
comp=Z,21nm,0.8s
AAK Ala-Archa 19.95 39 *e*P **Pn 19 55 18.6 -1.3**
comp=Z,21nm,0.8s
EIL Elat 19.98 280 P **Pn 19 55 19.5 -0.8**
comp=Z,4.2nm,0.3s,baz=66,slow=3.4,SNR=147
EIL LR LR 20 04 46.6
comp=Z,2µm,18.1s,baz=124,slow=42
EIL Elat 19.98 280 P **Pn 19 55 19.5 -0.8**
EIL LR LR 20 04 46.6
EIL Elat 19.98 280 P **Pn 19 55 19.5 -0.8**
KZA Kyzart 20.02 41 P **P 19 55 22.0 +3.2**
SNR=70
FRU Bishkek 20.15 38 *e*P **P 19 55 23.0 +2.8**
FRU pmax pmax
comp=Z,248nm,2.8s
FRU Bishkek 20.15 38 *e*P **P 19 55 23.0 +2.8**
comp=Z,248nm,2.8s
KBK Karagaybulak 20.22 39 P **P 19 55 22.7 +1.8**
SNR=6.3
YURE YUREGIR 20.54 301 *i* P **P 19 55 27.0 +2.6**
NGP Nagpur 20.59 105 *e*P **P 19 55 25.6 +0.5**
PINB Pinarbasi 20.66 306 *i* P **P 19 55 27.6 +1.9**
PINB Pinarbasi 20.66 306 *i* P **P 19 55 27.5 +1.8**
ULHL Ulahol 20.71 42 P **P 19 55 26.7 +0.5**
SNR=37
TKM2 Tokmak 2 20.76 40 *e*P **P 19 55 26.0 -0.7**
TKM2 pmax pmax
comp=Z,18nm,1.0s
TKM2 Tokmak 2 20.76 40 *e*P **P 19 55 26.0 -0.7**
comp=Z,18nm,1.0s
TKM2 Tokmak 2 20.76 40 *e*P **P 19 55 26.0 -0.7**
comp=Z,18nm,1.0s
ABKAR Akbulak array 21.26 4 *e*P **P 19 55 31.7 -0.4**
comp=Z,19nm,0.6s,mb4.6
ABKAR Akbulak array 21.26 4 *e*P **P 19 55 31.7 -0.4**
comp=Z,19nm,0.6s,mb4.6
ERBA Erbaa 21.33 312 *i* P **P 19 55 34.0 +1.1**
ERBA Erbaa 21.33 312 *i* P **P 19 55 34.0 +1.1**
GULE Gulek 21.34 301 *i* P **P 19 55 34.9 +1.9**
GULE Gulek 21.34 301 *i* P **P 19 55 34.9 +1.9**
TOKA Tokat 21.34 311 *i* P **P 19 55 33.5 +0.5**
TOKA Tokat 21.34 311 *i* P **P 19 55 33.5 +0.5**
ATD Arta Tunnel 21.51 223 P **P 19 55 37.3 +2.2**
comp=Z,14nm,0.8s,mb4.5,baz=13,slow=10,SNR=3.7
ATD pP 19 55 45.5
comp=Z,114nm,1.1s,baz=5.3,slow=5.9,SNR=12
ATD sP sP 19 55 50.5 +0.6
comp=Z,111nm,1.1s,baz=20,slow=5.3,SNR=8.2
ATD LR LR 20 04 28.1
comp=Z,762nm,21.9s,MS4.0,baz=200,slow=38
ATD Arta Tunnel 21.51 223 P **P 19 55 37.3 +2.2**
ATD pP 19 55 45.5
ATD sP sP 19 55 50.5 +0.6
ATD LR LR 20 04 28.1
MEST Erdemli 21.60 299 *i* P **P 19 55 37.1 +1.2**
MEST Erdemli 21.60 299 *i* P **P 19 55 37.1 +1.2**
CSS Prodhromos 21.85 295 *e*P **P 19 55 39.0 +0.4**
comp=Z,66nm,0.7s,mb5.2
CSS Prodhromos 21.85 295 *e*P **P 19 55 39.0 +0.4**
comp=Z,66nm,0.7s,mb5.2
HYB Hyderabad 21.93 114 *i* P **P 19 55 41.5 +2.0**
AKTK Aktyubinsk 22.37 1 P **P 19 55 43.5 -0.4**
AKTK ScP ScP 20 03 10.9 -1.5
AKTK LR LR 20 05 42.8
AKTK Aktyubinsk 22.37 1 P **P 19 55 43.5 -0.4**
AKTO Aktyubinsk 22.37 1 P **P 19 55 43.5 -0.4**
comp=Z,8.3nm,0.8s,mb4.2,baz=184,slow=9.6,SNR=21
AKTO ScP ScP 20 03 10.9 -1.5
comp=Z,0.7nm,0.6s,baz=103,slow=19,SNR=3.6
AKTO LR LR 20 05 42.8
comp=Z,1µm,19.8s,MS4.3,baz=83,slow=40
CDAG Cicekdag 22.48 307 *i* P **P 19 55 45.5 +0.3**
CDAG Cicekdag 22.48 307 *i* P **P 19 55 45.5 +0.2**
KOLN Koldanda 22.90 85 *e*P **P 19 55 51.1 +1.4**
comp=Z,21nm,0.7s,mb4.7
GAZI Gazipasa 22.94 297 *i* P **P 19 55 50.8 +0.7**
GAZI Gazipasa 22.94 297 *i* P **P 19 55 50.8 +0.7**
BR131 Keskin Array S 23.04 307 *e*P **P 19 55 51.1 -0.1**
comp=Z,66nm,0.8s,mb5.1
BR131 Keskin Array S 23.04 307 *e*P **P 19 55 51.1 -0.1**
comp=Z,66nm,0.8s,mb5.1
BRTR Keskin Array B 23.04 307 *i* P **P 19 55 51.0 -0.2**
BRTR pmax pmax
comp=Z,86nm,0.9s
BRTR Keskin Array B 23.04 307 P **P 19 55 50.6 -0.6**
comp=Z,86nm,0.9s,mb5.2,baz=124,slow=10,SNR=197
BRTR LR LR 20 06 02.7
comp=Z,480nm,21.8s,MS3.9,baz=285,slow=40
BRTR Keskin Array B 23.04 307 P **P 19 55 50.6 -0.6**
BBAL Bala 23.34 306 *i* P **P 19 55 54.5 +0.1**
BBAL Bala 23.34 306 *i* P **P 19 55 54.5 +0.2**
KDHN Kadinhani 23.72 303 *i* P **P 19 55 58.8 +1.0**
KDHN Kadinhani 23.72 303 *i* P **P 19 55 58.8 +1.0**
GKN Gorkha 23.78 84 *e*P **P 19 56 00.1 +1.6**
comp=Z,28nm,0.8s,mb4.7
DESE Dese 23.87 229 *e*P pP 19 56 15.5 +5.5
DESE S **S 20 00 27.3 +14**
DMN Daman 24.24 85 *e*P **P 19 56 03.8 +1.1**
comp=Z,19nm,0.6s,mb4.7
KKN Kakani 24.37 84 *e*P **P 19 56 04.5 +0.6**
comp=Z,46nm,0.7s,mb5.0
PKIN Phulchoki 24.50 85 *e*P **P 19 56 06.2 +1.2**
comp=Z,26nm,0.6s,mb5.0
PKI Pulchoki 24.51 85 *e*P **P 19 56 06.0 +0.8**
comp=Z,56nm,0.8s,mb5.1
BOLV Bolvadin 24.65 302 *i* P **P 19 56 07.4 +1.1**
BOLV Bolvadin 24.65 302 *i* P **P 19 56 07.4 +1.1**
KORT Korkueli 24.65 298 *i* P **P 19 56 07.8 +1.4**
KORT Korkueli 24.65 298 *i* P **P 19 56 07.8 +1.5**
ISP Isparta 24.74 300 *e*P **P 19 56 08.6 +1.5**
ISP pmax pmax
comp=Z,60nm,0.7s,mb5.2
ISP Isparta 24.74 300 *e*P **P 19 56 08.6 +1.5**
comp=Z,60nm,0.7s,mb5.2
GUN Gumba 24.88 84 *e*P **P 19 56 09.5 +1.0**
comp=Z,165nm,1.0s,mb5.5
AKAS Kas 25.08 296 *i* P **P 19 56 11.1 +0.9**
AKAS Kas 25.08 296 *i* P **P 19 56 11.1 +0.9**
SIM Simferopol' 25.24 318 *e*P **P 19 56 12.2 +0.7**
SIM pmax pmax
comp=Z,22nm,0.8s,mb4.7
SIM Simferopol' 25.24 318 *e*P **P 19 56 12.2 +0.7**
comp=Z,22nm,0.8s,mb4.7
GOLH Golhisar 25.32 298 *i* P **P 19 56 11.8 -0.6**
GOLH Golhisar 25.32 298 *i* P **P 19 56 11.8 -0.6**
BORA Eskisehir 25.39 305 *e*P **P 19 56 13.6 +0.7**
BORA Eskisehir 25.39 305 *e*P **P 19 56 13.6 +0.6**
KHAL Karahalli 25.65 301 *i* P **P 19 56 15.8 +0.4**
KHAL Karahalli 25.65 301 *i* P **P 19 56 15.8 +0.4**
DNZL Cakiroluk 25.82 299 *e*P **P 19 56 18.5 +1.5**
DNZL Cakiroluk 25.82 299 *e*P **P 19 56 18.5 +1.5**
GDZ Gediz 25.86 303 *i* P **P 19 56 18.4 +1.1**
GDZ Gediz 25.86 303 *i* P **P 19 56 18.4 +1.1**
TURN Turunc 25.99 297 *i* P **P 19 56 21.9 +3.4**
FURI Furi 26.14 227 *e*P **P 19 56 19.1 -0.9**
DEMI Demirci 26.42 302 *i* P **P 19 56 22.4 +0.1**
DEMI Demirci 26.42 302 *i* P **P 19 56 22.4 +0.1**
BVAR Borovoye Array 26.68 17 P **P 19 56 23.4 -1.1**
BVAR *PP pP 19 56 34.5 -0.8
BVAR 19 59 46.5
BVAR Borovoye Array 26.68 17 P **P 19 56 23.4 -1.1**
comp=Z,7.4nm,0.6s,mb4.4,baz=195,slow=9.2,SNR=47
BVAR pP pP 19 56 34.5 -0.8
comp=Z,11nm,0.8s,baz=198,slow=9.3,SNR=11
BVAR PcP PcP 19 59 46.5 -0.8
comp=Z,2.7nm,0.4s,baz=203,slow=2.2,SNR=9.6
BVAR ScP ScP 20 03 23.0 -1.3
comp=Z,1.9nm,0.7s,baz=236,slow=1.6,SNR=8.1
BVAR Borovoye Array 26.68 17 P **P 19 56 23.4 -1.1**

BVAR pP pP 19 56 34.5 -0.8
BVAR Borovoye Array 26.68 17 PcP PcP 19 59 46.5 -0.8
BRVK Borovoye 26.69 17 *e*P **P 19 56 24.2 -0.4**
BRVK pmax pmax
comp=Z,12nm,0.9s,mb4.4
BRVK Borovoye 26.69 17 *e*P **P 19 56 24.2 -0.3**
comp=Z,12nm,0.9s,mb4.4
BRVK Borovoye 26.69 17 *e*P **P 19 56 24.2 -0.4**
comp=Z,12nm,0.9s,mb4.4
DURS Dursunbey 26.75 303 *i* P **P 19 56 29.1 +3.7**
VORD Divnogorie 26.80 334 *e*P pP 19 56 37.2 +0.9
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.7s
MK31 Makanchi Array 26.89 39 *e*P **P 19 56 26.5 +0.1**
MK31 Makanchi Array 26.89 39 *e*P **P 19 56 26.5 +0.1**
MKAR Makanchi Array 26.89 39 *i* P **P 19 56 27.3 +0.9**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 26.89 39 P **P 19 56 25.3 -1.1**
comp=Z,3.6nm,0.6s,mb4.1,baz=222,slow=6.4,SNR=15
MKAR Makanchi Array 26.89 39 P **P 19 56 25.3 -1.1**
VSR Storozhevoye 27.04 334 *e*P pP 19 56 36.4 -2.1
VSR pmax pmax
comp=Z,5.0nm,0.4s,mb4.4
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
KURK Kurchatov 27.66 29 *e*P **P 19 56 33.1 -0.2**
KURK pmax pmax
comp=Z,16nm,1.3s,mb4.5
KURK Kurchatov 27.66 29 P **P 19 56 31.7 -1.5**
comp=Z,4.7nm,0.9s,mb4.1,baz=228,slow=8.2,SNR=18
KURK PcP PcP 19 59 49.1 -0.6
comp=Z,2.3nm,0.8s,baz=235,slow=3.2,SNR=4.9
KURK Kurchatov 27.66 29 *e*P **P 19 56 33.1 -0.2**
comp=Z,16nm,1.3s,mb4.5
KURK Kurchatov 27.66 29 *e*P **P 19 56 33.1 -0.2**
comp=Z,16nm,1.3s,mb4.5
ARU Arti 28.39 1 *e*P **P 19 56 41.5 +1.8**
ARU *e* 19 57 36.1
ARU S **S 20 01 22.0 -1.8**
ARU SS SS 20 03 00.0 -25
ARU Arti 28.39 1 *e*P **P 19 56 37.0 -2.7**
ARU Arti 28.39 1 *e*P **P 19 56 41.5 +1.8**
IDI Anoyia 28.74 293 P **P 19 56 42.2 -0.9**
comp=Z,15nm,0.7s,mb4.8,baz=125,slow=9.7,SNR=11
IDI Anoyia 28.74 293 P **P 19 56 42.2 -1.0**
WMQ Urumqi 28.76 49 *e*P **P 19 56 45.4 +2.2**
WMQ pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
LSA Lhasa 29.30 79 P **P 19 56 44.9 -3.3**
LSA Lhasa 29.30 79 *e*P **P 19 56 47.9 -0.3**
LSA pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
LSA Lhasa 29.30 79 *e*P **P 19 56 47.9 -0.3**
comp=Z,5.6nm,0.7s,mb4.4
KIS Kishinev 29.46 318 *e*P **P 19 56 46.0 -3.3**
MLR Muntele Rosu 30.56 313 ⇑*i*P **P 19 57 01.0 +1.9**
MLR Muntele Rosu 30.56 313 ⇑*i*P **P 19 57 01.0 +1.9**
OBN Obninsk 31.08 336 *e*P **P 19 57 03.2 -0.4**
OBN *e* 19 58 12.1
OBN *i* S **S 20 01 59.7 -6.4**
OBN pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
OBN Obninsk 31.08 336 P **P 19 57 03.2 -0.4**
OBN Obninsk 31.08 336 *e*P **P 19 57 03.2 -0.4**
comp=Z,6.0nm,0.6s,mb4.6
VOIR 31.11 313 ⇑*i*P pP 19 57 22.9 +8.0
MOS Moscow 31.22 338 *e*P pP 19 57 15.9 +0.3
MOS *e* 19 58 29.0
AKASG Malin Array Be 31.24 324 *i* P **P 19 57 04.0 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 31.24 324 P **P 19 57 03.7 -1.3**
comp=Z,1.6nm,0.6s,mb4.0,baz=126,slow=7.8,SNR=15
AKASG PcP PcP 19 59 58.0 -0.9
comp=Z,3.2nm,0.7s,baz=88,slow=2.4,SNR=6.9
AKASG Malin Array Be 31.24 324 P **P 19 57 03.7 -1.3**
AKASG PcP PcP 19 59 58.0 -0.9
AKASG Malin Array Be 31.24 324 P **P 19 57 03.7 -1.3**
AKASG Malin Array Be 31.24 324 PcP PcP 19 59 58.0 -0.8
AKBB Malin Array Si 31.24 324 *e*P **P 19 57 03.8 -1.2**
AKBB Malin Array Si 31.24 324 *e*P **P 19 57 03.8 -1.2**
KIEV Kiev 31.24 324 *e*P **P 19 57 03.8 -1.3**
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
KIEV Kiev 31.24 324 *e*P **P 19 57 03.8 -1.3**
comp=Z,7.1nm,0.6s,mb4.7
KIEV Kiev 31.24 324 *e*P **P 19 57 03.8 -1.3**
comp=Z,7.0nm,0.6s,mb4.7
SOKR Solikamsk 31.53 359 ⇑*i*P **P 19 57 08.9 +1.4**
SOKR pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
SOKR Solikamsk 31.53 359 *i* P **P 19 57 08.9 +1.4**
comp=Z,8.0nm,0.6s,mb4.7
VAY Valandovo 31.55 304 *e*P **P 19 57 07.0 -0.9**
VAY Valandovo 31.55 304 *e*P **P 19 57 07.0 -0.9**
BURAR Bucovina Array 31.91 317 ⇓*i*P **P 19 57 11.2 +0.2**
BURAR Bucovina Array 31.91 317 ⇓*i*P **P 19 57 11.2 +0.2**
BUR08 Bucovina Ar. S 31.93 317 *e*P **P 19 57 10.6 -0.6**
BUR08 Bucovina Ar. S 31.93 317 *e*P **P 19 57 10.6 -0.6**
SKO Skopje 32.53 305 *e*P **P 19 57 16.4 -0.1**
SKO Skopje 32.53 305 *e*P **P 19 57 16.4 -0.1**
KRUS Krusevo 32.53 304 *e*P **P 19 57 16.0 -0.5**
KRUS Krusevo 32.53 304 *e*P **P 19 57 16.0 -0.5**
NISS 32.53 308 *e*P **P 19 57 15.9 -0.6**
NVS Novosibirsk 32.57 28 *e*P **P 19 57 15.7 -1.0**
NVS *i* *PP PcP 20 00 01.8 -0.6
NVS *e*S **S 20 02 21.0 -8.4**
NVS pmax pmax
comp=N,7.0nm,1.0s
NVS pmax pmax
comp=Z,14nm,1.0s,mb4.8
NVS smax
comp=N,25nm,1.8s
NVS smax
comp=E,18nm,1.8s
NVS Novosibirsk 32.57 28 *e*P **P 19 57 15.7 -1.0**
ZAA0 Zalesovo Array 32.64 30 *e*P **P 19 57 16.3 -1.0**
ZAA0 Zalesovo Array 32.64 30 *e*P **P 19 57 16.3 -1.0**
ZALV Zalesovo Beam 32.64 30 P **P 19 57 15.9 -1.4**
comp=E,12nm,0.7s,mb5.0,baz=243,slow=9.6,SNR=36
ZALV PcP PcP 19 59 59.8 -2.7
comp=E,2.7nm,0.6s,baz=253,slow=4.6,SNR=4.1
ZALV S **S 20 02 28.2 -2.2**
comp=E,0.7nm,0.4s,baz=228,slow=15,SNR=4.4
BOLS Boljevac 32.65 308 ⇑*i*P **P 19 57 18.1 +0.6**
OHR Ohrid 32.81 303 *e*P **P 19 57 18.3 -0.7**
OHR Ohrid 32.81 303 *e*P **P 19 57 18.2 -0.7**
BZS Buzias 33.43 311 ⇑*i*P **P 19 57 27.0 +2.7**
GRUS Gruza 33.53 308 ⇓*i*P **P 19 57 24.4 -0.8**
LVV L'vov 33.61 320 *e*P **P 19 57 24.3 -1.5**
LVV L'vov 33.61 320 *e*P **P 19 57 24.3 -1.5**
TRUS Trudelj 33.83 309 *e*P **P 19 57 26.4 -1.4**
DIVS Divibare 34.09 308 *e*P **P 19 57 28.9 -1.1**
UZH Uzhgorod 34.12 317 *e*P **P 19 57 30.0 -0.2**
UZH *e* pP 19 57 42.5 +1.4
UZH Uzhgorod 34.12 317 *e*P **P 19 57 30.0 -0.2**
KOLS Kolonicke sedl 34.25 317 *i* P **P 19 57 31.8 +0.4**
KOLS *e* pP 19 57 42.0 -0.3
KOLS pmax pmax
comp=Z,37nm,1.1s,mb5.2
KOLS Kolonicke sedl 34.25 317 *i* P **P 19 57 31.8 +0.4**
comp=Z,37nm,1.1s,mb5.2
KOLS *e* pP 19 57 42.0 -0.3
KOLS Kolonicke sedl 34.25 317 *i* P **P 19 57 31.8 +0.4**
KOLS *e*pP pP 19 57 42.0 -0.3
KOLS Kolonicke sedl 34.25 317 *i* P **P 19 57 31.8 +0.4**
comp=Z,37nm,1.1s,mb5.2
KWP Kalwaria Pacla 34.29 319 *e*P **P 19 57 31.6 -0.1**
KWP Kalwaria Pacla 34.29 319 *e*P **P 19 57 31.1 -0.6**
comp=Z,14nm,0.6s,mb5.1
KWP Kalwaria Pacla 34.29 319 *e*P **P 19 57 31.1 -0.6**
comp=Z,14nm,0.6s,mb5.1
BBLS Lazići 34.44 308 *e*P **P 19 57 32.8 -0.3**
KMBO Kilima Mbogo 35.01 217 *e*P **P 19 57 40.8 +2.5**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
KMBO Kilima Mbogo 35.01 217 P **P 19 57 40.3 +2.0**
comp=Z,3.1nm,0.9s,mb4.2,baz=39,slow=12,SNR=8.1
KMBO Kilima Mbogo 35.01 217 *e*P **P 19 57 40.8 +2.5**
comp=Z,5.6nm,0.8s,mb4.5
KLMR Klimovskoe 35.03 345 *e*P **P 19 57 36.3 -1.7**
KLMR pmax pmax
comp=Z,47nm,1.6s,mb5.2
KLMR Klimovskoe 35.03 345 *e*P **P 19 57 36.3 -1.7**
comp=Z,47nm,1.6s,mb5.2
STHS Stebnicka Huta 35.07 318 *e*P **P 19 57 38.3 -0.1**
STHS *e* pP 19 57 47.5 -1.9
STHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
STHS Stebnicka Huta 35.07 318 *e*P **P 19 57 38.3 -0.1**
comp=Z,2.0nm,1.1s,mb4.0
STHS *e* pP 19 57 47.5 -1.9
STHS Stebnicka Huta 35.07 318 *e*P **P 19 57 38.3 -0.1**
STHS *e*pP pP 19 57 47.5 -1.9
STHS Stebnicka Huta 35.07 318 *e*P **P 19 57 38.3 -0.1**
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 35.16 316 *e*P **P 19 57 39.5 +0.2**
KECS *e* pP 19 57 48.9 -1.3
KECS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KECS Kecovo 35.16 316 *e*P **P 19 57 39.5 +0.2**
comp=Z,5.5nm,1.2s,mb4.4
KECS *e* pP 19 57 48.9 -1.3
KECS Kecovo 35.16 316 *e*P **P 19 57 39.5 +0.2**
KECS *e*pP pP 19 57 48.9 -1.3
IDID Didziasalis 35.21 329 *e*P **P 19 57 39.6 0.0**
IDID Didziasalis 35.21 329 *e*P **P 19 57 39.6 0.0**
TIP Timpagrande 35.58 299 *e*P **P 19 57 43.3 +0.3**
comp=Z,67nm,1.4s,mb5.4
TIP Timpagrande 35.58 299 *e*P **P 19 57 43.3 +0.3**
comp=Z,67nm,1.4s,mb5.4
PKSM Moragy 35.59 311 ⇓*i*P pP 19 57 55.4 +1.5
ISAL Salakas 35.65 329 *e*P **P 19 57 43.6 +0.3**
ISAL Salakas 35.65 329 *e*P **P 19 57 43.6 +0.3**
IZAR Zarasai 35.70 330 *e*P **P 19 57 43.7 -0.1**
IZAR Zarasai 35.70 330 *e*P **P 19 57 43.7 -0.1**
SUW Suwalki 36.16 325 *e*P **P 19 57 47.2 -0.6**
SUW Suwalki 36.16 325 *e*P **P 19 57 47.2 -0.6**
VYHS Vyhne 36.19 315 *e*P **P 19 57 47.5 -0.6**
VYHS *e* pP 19 57 57.6 -1.5
VYHS pmax pmax
comp=Z,17nm,2.1s,mb4.6
VYHS Vyhne 36.19 315 *e*P **P 19 57 47.5 -0.6**
comp=Z,17nm,2.1s,mb4.6
VYHS *e* pP 19 57 57.6 -1.5
VYHS Vyhne 36.19 315 *e*P **P 19 57 47.5 -0.6**
VYHS *e*pP pP 19 57 57.6 -1.5
VYHS Vyhne 36.19 315 *e*P **P 19 57 47.5 -0.6**
comp=Z,17nm,2.1s,mb4.6
LIKS Likavka 36.22 316 *e*P **P 19 57 48.2 -0.1**
LIKS *e* pP 19 58 00.7 +1.4
LIKS pmax pmax
comp=Z,15nm,1.0s,mb4.9
LIKS Likavka 36.22 316 *e*P **P 19 57 48.2 -0.1**
comp=Z,15nm,1.0s,mb4.9
LIKS *e* pP 19 58 00.7 +1.4
LIKS Likavka 36.22 316 *e*P **P 19 57 48.2 -0.1**
LIKS *e*pP pP 19 58 00.7 +1.4
LIKS Likavka 36.22 316 *e*P **P 19 57 48.2 -0.1**
comp=Z,15nm,1.0s,mb4.9
OJC Ojcow 36.25 318 *e*P **P 19 57 47.8 -0.7**
OJC Ojcow 36.25 318 *e*P **P 19 57 47.8 -0.7**
KOLL Kolacno 36.49 315 *e*P **P 19 57 50.8 +0.1**
KOLL Kolacno 36.49 315 *e*P **P 19 57 50.8 +0.1**
KOLL Kolacno 36.49 315 *e*P **P 19 57 50.8 +0.1**
GTA Gaotai 36.53 61 *e*P **P 19 57 51.5 +0.3**
GTA pP pP 19 58 09.7 +7.6
GTA sP sP 19 58 19.1 +12
GTA PP PP 19 59 20.0 +5.3
GTA S **S 20 03 30.7 -0.2**
GTA sS sS 20 04 00.6 +12
GTA SS SS 20 06 06.4 -5.0
GTA pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,550nm,7.2s
GTA LR LR
comp=N,800nm,20.7s,MS4.6
GTA LR LR
comp=E,690nm,21.9s,MS4.6
GTA LR LR
comp=Z,2μm,23.4s,MS4.7
VSU Vasula 37.23 333 ⇓*e*P **P 19 57 56.3 -0.5**
VSU pmax pmax
comp=Z,23nm,1.2s,mb4.9
VSU Vasula 37.23 333 *e*P **P 19 57 56.3 -0.5**
comp=Z,23nm,1.2s,mb4.9
KOGS Kog 37.25 311 *e*P **P 19 57 56.4 -0.7**
KOGS Kog 37.25 311 *e*P **P 19 57 56.4 -0.7**
MORC Moravsky Berou 37.43 317 *e*P **P 19 57 54.3 -4.3**
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
MORC Moravsky Berou 37.43 317 *e*P **P 19 57 54.3 -4.3**
comp=Z,7.3nm,0.9s,mb4.5
MORC Moravsky Berou 37.43 317 ⇑*i*P **P 19 57 55.2 -3.4**
MORC Moravsky Berou 37.43 317 *e*P **P 19 57 57.3 -1.3**
BOJS Bojanci 37.70 309 *e*P **P 19 58 00.5 -0.5**
BOJS Bojanci 37.70 309 *e*P **P 19 58 00.5 -0.5**
CONA Conrad Observa 37.90 313 ⇑*i*P **P 19 58 01.8 -0.9**
comp=Z,6.4nm,1.5s,mb4.1
CONA Conrad Observa 37.90 313 P **P 19 58 01.8 -0.9**
comp=Z,6.4nm,1.5s,mb4.1
AQU L'Aquila 38.47 304 *e*P **P 19 58 07.9 +0.4**
AQU pmax pmax
comp=Z,56nm,0.9s,mb5.3
AQU L'Aquila 38.47 304 *e*P **P 19 58 07.9 +0.4**
comp=Z,56nm,0.9s,mb5.3
AQU L'Aquila 38.47 304 *e*P **P 19 58 07.9 +0.4**
comp=Z,56nm,0.9s,mb5.3
VOY Vojsko 38.74 310 *e*P **P 19 58 11.1 +1.4**
VOY *e* pP 19 58 22.8 +2.0
CADS Cadrg 38.89 310 *e*P **P 19 58 09.8 -1.2**
CADS Cadrg 38.89 310 *e*P **P 19 58 09.8 -1.2**
MOA Molln 38.92 313 ⇑*i*P **P 19 58 10.2 -1.0**
comp=Z,13nm,1.3s,mb4.5,SNR=7.5
MOA Molln 38.92 313 P **P 19 58 10.2 -1.0**
comp=Z,13nm,1.3s,mb4.5,SNR=7.5
CMAR Chiang Mai Arr 38.93 95 P **P 19 58 12.5 +0.8**
comp=Z,0.9nm,0.6s,mb3.7,baz=285,slow=9.8,SNR=8.0
CMAR pP pP 19 58 24.5 +1.8
comp=Z,1.0nm,0.8s,baz=286,slow=11,SNR=3.9
CMAR PcP PcP 20 00 21.5 -0.4
comp=Z,0.8nm,0.8s,baz=290,slow=4.6,SNR=4.7
KBA Koelnbreinsper 39.34 311 ⇑*i*P **P 19 58 13.8 -0.9**
comp=Z,12nm,1.5s,mb4.4
KBA Koelnbreinsper 39.34 311 P **P 19 58 13.8 -0.9**
comp=Z,12nm,1.5s,mb4.4
FINES FINESS Array B 39.49 337 P **P 19 58 14.5 -1.2**
comp=Z,4.4nm,0.6s,mb4.4,baz=134,slow=9.4,SNR=15
FINES pP pP 19 58 26.2 -0.6
comp=Z,6.5nm,0.6s,baz=132,slow=9.5,SNR=9.7
FINES FINESS Array B 39.49 337 P **P 19 58 14.5 -1.2**
FINES pP pP 19 58 26.2 -0.6
FINES FINESS Array B 39.49 337 P **P 19 58 14.5 -1.2**
FINES pP pP 19 58 26.2 -0.6
GEC2 GERESS Array S 39.54 314 *e*P **P 19 58 15.2 -1.2**
comp=Z,17nm,1.3s,mb4.6
GEC2 *e*pP pP 19 58 24.7 -2.7
GEC2 GERESS Array S 39.54 314 *e*P **P 19 58 15.2 -1.2**
GEC2 *e**PP pP 19 58 24.7 -2.7
GEC2 pmax pmax
comp=Z,17nm,1.3s,mb4.6
GEC2 GERESS Array S 39.54 314 *e*P **P 19 58 15.2 -1.2**
comp=Z,17nm,1.3s,mb4.6
GEC2 *e*pP pP 19 58 24.7 -2.7
GERES GERESS Array B 39.54 314 P **P 19 58 13.8 -2.6**
comp=Z,2.2nm,0.6s,mb4.0,baz=107,slow=8.9,SNR=32
GERES PcP PcP 20 00 22.8 -0.5
comp=Z,2.6nm,0.8s,baz=119,slow=3.5,SNR=5.9
GERES ScP ScP 20 04 09.3 +0.4
comp=Z,0.5nm,0.7s,baz=123,slow=4.9,SNR=3.7
GERES GERESS Array B 39.54 314 P **P 19 58 13.8 -2.6**
GERES GERESS Array B 39.54 314 PcP PcP 20 00 22.8 -0.4
KHC Kasperske Hory 39.69 314 *e*P **P 19 58 16.5 -1.1**
KHC pmax pmax
comp=Z,11nm,0.8s,mb4.6
KHC Kasperske Hory 39.69 314 *e*P **P 19 58 16.4 -1.2**
comp=Z,11nm,0.8s,mb4.7
KHC Kasperske Hory 39.69 314 *e*P **P 19 58 16.5 -1.1**
comp=Z,11nm,0.8s,mb4.6
ABTA Abfaltersbach 39.83 310 ⇑*i*P **P 19 58 17.5 -1.2**
comp=Z,6.8nm,1.0s,mb4.3
ABTA Abfaltersbach 39.83 310 P **P 19 58 17.5 -1.3**
comp=Z,6.8nm,1.0s,mb4.3
MOY Mondy 39.97 42 *e*P **P 19 58 20.3 +0.4**
MOY Mondy 39.97 42 *e*P **P 19 58 20.3 +0.4**
BRG Berggiesshubel 39.97 317 *e*P **P 19 58 18.7 -1.2**
comp=Z,5.0nm,1.1s,mb4.2
BRG Berggiesshubel 39.97 317 *e*P **P 19 58 18.5 -1.4**
comp=Z,4.8nm,1.1s,mb4.2
BRG
comp=N,818nm,23.4s
BRG
comp=E,277nm,20.2s
BRG
comp=Z,937nm,21.4s
BRG Berggiesshubel 39.97 317 *e*P **P 19 58 18.5 -1.4**
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
BRG MLR MLR
comp=N,490nm,23.4s,MS4.3
BRG MLR MLR
comp=E,166nm,20.2s,MS4.3
BRG MLR MLR
comp=Z,561nm,21.4s,MS4.4
BRG Berggiesshubel 39.97 317 *e*P **P 19 58 18.5 -1.4**
comp=Z,561nm,21.4s
CD2 Chengdu 40.00 74 P **P 19 58 20.8 +0.3**
CD2 pP pP 19 58 43.5 +12
CD2 sP sP 19 58 55.1 +19
CD2 PP PP 19 59 58.2 +5.4
CD2 S **S 20 04 18.2 -5.3**
CD2 sS sS 20 04 57.8 +16
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,470nm,11.6s
CD2 LR LR
comp=N,950nm,16.6s
CD2 LR LR
comp=Z,1μm,18.4s,MS4.7
WET Wettzell 40.14 314 *e*P **P 19 58 20.1 -1.2**
comp=Z,17nm,1.5s,mb4.5
WET *e*pP pP 19 58 30.1 -2.3
WET Wettzell 40.14 314 *e*P **P 19 58 20.1 -1.2**
WET *e**PP pP 19 58 30.1 -2.3
WET pmax pmax
comp=Z,17nm,1.5s,mb4.5
WET Wettzell 40.14 314 *e*P **P 19 58 20.1 -1.2**
comp=Z,17nm,1.5s,mb4.5
WET *e*pP pP 19 58 30.1 -2.3
KMI Kunming 40.23 83 P **P 19 58 25.9 +3.5**
KMI pmax pmax
comp=Z,8.0nm,1.4s,mb4.3
WTTA Wattenberg 40.52 311 *i* P **P 19 58 23.3 -1.2**
comp=Z,19nm,1.3s,mb4.6,SNR=7.7
WTTA Wattenberg 40.52 311 P **P 19 58 23.3 -1.2**
comp=Z,19nm,1.3s,mb4.6,SNR=7.7
CLL Collm 40.67 317 *e*P **P 19 58 25.4 -0.3**
comp=Z,18nm,1.1s,mb4.6
CLL *e*pP pP 19 58 35.0 -1.7
CLL Collm 40.67 317 ⇓*i*P **P 19 58 25.2 -0.5**
CLL *i* pP 19 58 34.6 -2.1
CLL pmax pmax
comp=Z,18nm,1.1s,mb4.6
CLL Collm 40.67 317 ⇓*i*P **P 19 58 25.2 -0.5**
comp=Z,18nm,1.1s,mb4.6
CLL *i* pP 19 58 34.6 -2.1
CLL Collm 40.67 317 ⇓*i*P **P 19 58 25.2 -0.5**
comp=Z,18nm,1.1s,mb4.6
CLL *i* pP pP 19 58 34.6 -2.1
comp=Z,18nm,1.1s
CLL Collm 40.67 317 *i* P **P 19 58 25.2 -0.5**
comp=Z,18nm,1.1s,mb4.6
ROTZ Rotzenmuhle 40.73 315 *e*P **P 19 58 25.3 -0.9**
comp=Z,12nm,1.4s,mb4.3
ROTZ *e*pP pP 19 58 34.7 -2.5
MOTA Moosalm 40.89 311 ⇓*i*P **P 19 58 26.1 -1.5**
comp=Z,8.7nm,1.0s,mb4.3
MOTA Moosalm 40.89 311 P **P 19 58 26.1 -1.5**
comp=Z,8.7nm,1.0s,mb4.3
BSD Bornholm Skovb 40.93 323 *i* P **P 19 58 25.8 -2.0**
BSD *i* pP 19 58 35.8 -3.1
BSD pmax pmax
comp=Z,17nm,0.7s,mb4.8
BSD MLR MLR
comp=Z,2μm,19.0s,MS5.0
BSD Bornholm Skovb 40.93 323 *i* P **P 19 58 25.8 -2.0**
comp=Z,17nm,0.7s,mb4.8
BSD *i* pP 19 58 35.8 -3.1
BSD
comp=Z,2μm,19.0s
BSD Bornholm Skovb 40.93 323 *i* P **P 19 58 25.8 -2.0**
comp=Z,17nm,0.7s,mb4.8
FETA Feichten 41.08 310 *i* P **P 19 58 27.8 -1.3**
comp=Z,8.7nm,0.8s,mb4.5,SNR=9.4
FETA Feichten 41.08 310 P **P 19 58 27.8 -1.3**
comp=Z,8.7nm,0.8s,mb4.5,SNR=9.4
RETA Reutte 41.14 311 ⇑*i*P **P 19 58 27.7 -2.0**
comp=Z,4.4nm,0.6s,mb4.2
RETA Reutte 41.14 311 P **P 19 58 27.7 -2.0**
comp=Z,4.4nm,0.6s,mb4.2
GRA1 Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
comp=Z,26nm,1.3s,mb4.7
GRA1 *e*pP pP 19 58 40.3 -1.9
GRA1 Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
comp=Z,26nm,1.3s,mb4.7
GRA1 *e*pP pP 19 58 40.3 -1.9
GRF Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
comp=Z,26nm,1.3s,mb4.7
GRF *e*pP pP 19 58 40.3 -1.9
GRF Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
GRF *e**PP pP 19 58 40.3 -1.9
GRF pmax pmax
comp=Z,26nm,1.3s,mb4.7
GRF Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
GRF *e**PP pP 19 58 40.3 -1.9
GRF pmax pmax
comp=Z,26nm,1.3s,mb4.7
GRF Grafenberg Arr 41.33 315 *e*P **P 19 58 30.2 -0.9**
comp=Z,26nm,1.3s,mb4.7
GRF *e*pP pP 19 58 40.3 -1.9
KEST Kesra 41.42 293 P **P 19 58 32.1 +0.1**
comp=Z,2.4nm,1.1s,mb3.8,baz=133,slow=2.2,SNR=5.2
DAVA Damuels 41.70 311 ⇑*i*P **P 19 58 32.7 -1.5**
comp=Z,16nm,0.9s,mb4.6,SNR=5.7
DAVA Damuels 41.70 311 P **P 19 58 32.7 -1.5**
comp=Z,16nm,0.9s,mb4.6,SNR=5.7
PGF Pioggiola 41.73 304 *e*P **P 19 58 32.2 -2.3**
comp=Z,32nm,0.8s,mb4.7
PGF Pioggiola 41.73 304 *e*P **P 19 58 32.2 -2.3**
comp=Z,16nm,0.8s,mb4.7
APA Apatity 42.19 346 ⇑*i*P **P 19 58 37.6 -0.3**
APA *i* 20 00 22.4
APA pmax pmax
comp=Z,18nm,1.0s,mb4.7
APA MLR MLR
comp=Z,1μm,23.0s,MS4.7
APA Apatity 42.19 346 *i* P **P 19 58 37.6 -0.3**
comp=Z,18nm,1.0s,mb4.7
UBBA Unterbreizbach 42.36 316 *e*P **P 19 58 39.7 +0.2**
comp=Z,8.0nm,1.4s,mb4.2
CLZ Clausthal 42.39 317 *e*P **P 19 58 39.4 -0.4**
comp=Z,19nm,1.1s,mb4.6
CLZ *e*pP pP 19 58 48.7 -2.2
CLZ Clausthal 42.39 317 *e*P **P 19 58 39.4 -0.4**
CLZ *e**PP pP 19 58 48.7 -2.2
CLZ pmax pmax
comp=Z,19nm,1.1s,mb4.6
CLZ Clausthal 42.39 317 *e*P **P 19 58 39.4 -0.4**
comp=Z,19nm,1.1s,mb4.6
CLZ *e*pP pP 19 58 48.7 -2.2
SONM Songino Array 42.40 49 P **P 19 58 39.4 -0.5**
comp=Z,3.5nm,1.0s,mb4.0,baz=256,slow=6.5,SNR=16
SONM Songino Array 42.40 49 P **P 19 58 39.4 -0.5**
STU Stuttgart 42.42 313 *e*P **P 19 58 37.7 -2.4**
comp=Z,12nm,0.7s,mb4.6
NRDL Niedersach Rie 42.73 318 *e*P **P 19 58 42.0 -0.5**
comp=Z,13nm,1.3s,mb4.5
ULN Ulaanbaatar 42.84 49 *e*P **P 19 58 43.1 -0.4**
ULN pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ULN Ulaanbaatar 42.84 49 *e*P **P 19 58 43.1 -0.4**
comp=Z,2.9nm,0.6s,mb4.2
ULN Ulaanbaatar 42.84 49 *e*P **P 19 58 43.1 -0.4**
comp=Z,3.0nm,0.6s,mb4.2
SAOF Saorge 42.89 306 *e*P **P 19 58 42.9 -1.1**
SAOF Saorge 42.89 306 *e*P **P 19 58 42.9 -1.1**

SBF Sospel 42.97 305⇑ iP P 19 58 43.5 -1.1
comp=Z,41nm,0.7s,mb5.0
SBF Sospel 42.97 305⇑ iP P 19 58 43.5 -1.1
SBF pmax pmax
comp=Z,21nm,0.7s,mb5.0
SBF Sospel 42.97 305⇑ iP P 19 58 43.5 -1.1
comp=Z,21nm,0.7s,mb5.0
SBF Sospel 42.97 305⇑ iP P 19 58 43.5 -1.1
comp=Z,21nm,0.7s,mb5.0
BSEG Bad Segeberg 43.02 320 eP P 19 58 44.5 -0.4
comp=Z,7.0nm,0.9s,mb4.4
BSEG epP pP 19 58 54.3 -1.7
BSEG Bad Segeberg 43.02 320 eP P 19 58 44.5 -0.4
BSEG e*PP pP 19 58 54.3 -1.7
BSEG pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
BSEG Bad Segeberg 43.02 320 eP P 19 58 44.5 -0.4
comp=Z,7.0nm,0.9s,mb4.4
BSEG epP pP 19 58 54.3 -1.7
TOUF Mont Tournerai 43.12 306 eP P 19 58 45.2 -0.6
TOUF Mont Tournerai 43.12 306 eP P 19 58 45.2 -0.6
MVIF Mont Vial 43.18 305 eP P 19 58 45.2 -1.1
MVIF Mont Vial 43.18 305 eP P 19 58 45.2 -1.1
TNS Taunus Mts 43.19 315 eP P 19 58 45.5 -0.8
comp=Z,35nm,1.4s,mb4.9
TNS Taunus Mts 43.19 315 eP P 19 58 45.5 -0.8
TNS pmax pmax
comp=Z,35nm,1.4s,mb4.9
TNS Taunus Mts 43.19 315 eP P 19 58 45.5 -0.8
comp=Z,35nm,1.4s,mb4.9
GYA Guiyang 43.34 80 P P 19 58 48.8 +0.9
GYA pP pP 19 59 10.2 +11
GYA sP sP 19 59 22.0 +18
GYA PP PP 20 00 32.8 +3.8
GYA PcP PcP 20 00 38.9 +2.8
GYA ScP ScP 20 04 18.6 -5.9
GYA PcS PcS 20 04 29.0 +0.1
GYA S **S 20 05 09.3 -3.7**
GYA sS sS 20 05 45.6 +14
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,530nm,17.0s,MS4.7
GYA LR LR
comp=E,490nm,16.0s,MS4.7
GYA LR LR
comp=Z,510nm,17.0s,MS4.5
MBDF Montbardon 43.51 307 eP P 19 58 47.4 -1.6
comp=Z,19nm,0.7s,mb4.7
MBDF Montbardon 43.51 307 eP P 19 58 47.4 -1.6
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
MBDF Montbardon 43.51 307 eP P 19 58 47.4 -1.6
comp=Z,9.5nm,0.7s,mb4.6
MBDF Montbardon 43.51 307 eP P 19 58 47.4 -1.6
comp=Z,9.5nm,0.7s,mb4.7
FRF La Foret Royal 43.52 305 eP P 19 58 46.9 -2.1
comp=Z,8.6nm,0.8s,mb4.2
FRF La Foret Royal 43.52 305 eP P 19 58 46.9 -2.1
FRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
FRF La Foret Royal 43.52 305 eP P 19 58 46.9 -2.1
comp=Z,4.3nm,0.8s,mb4.2
FRF La Foret Royal 43.52 305 eP P 19 58 46.9 -2.1
comp=Z,4.3nm,0.8s,mb4.2
LPG La Plagne 43.60 308⇑ iP P 19 58 48.4 -1.2
comp=Z,22nm,0.7s,mb4.7
LPG La Plagne 43.60 308⇑ iP P 19 58 48.4 -1.2
LPG pmax pmax
comp=Z,11nm,0.7s,mb4.7
LPG La Plagne 43.60 308⇑ iP P 19 58 48.4 -1.2
comp=Z,11nm,0.7s,mb4.7
LPG La Plagne 43.60 308⇑ iP P 19 58 48.4 -1.2
comp=Z,11nm,0.7s,mb4.7
LMR La Mourre 43.61 304 eP P 19 58 47.4 -2.3
LMR La Mourre 43.61 304 eP P 19 58 47.4 -2.3
BNI Bardonecchia 43.61 307 eP P 19 58 48.4 -1.3
BNI pmax pmax
comp=Z,14nm,0.8s,mb4.7
BNI Bardonecchia 43.61 307 eP P 19 58 48.4 -1.3
comp=Z,14nm,0.8s,mb4.7
BNI Bardonecchia 43.61 307 eP P 19 58 48.4 -1.3
comp=Z,14nm,0.8s,mb4.7
CDF Champ du Feu 43.61 312 eP P 19 58 47.5 -2.2
CDF Champ du Feu 43.61 312 eP P 19 58 47.5 -2.2
LPL La Plagne 43.61 308⇑ iP P 19 58 48.5 -1.3
comp=Z,14nm,0.6s,mb4.6
LPL La Plagne 43.61 308⇑ iP P 19 58 48.5 -1.3
LPL pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
LPL La Plagne 43.61 308⇑ iP P 19 58 48.5 -1.3
comp=Z,6.9nm,0.6s,mb4.6
LPL La Plagne 43.61 308⇑ iP P 19 58 48.5 -1.3
comp=Z,6.9nm,0.6s,mb4.6
ECH Echery 43.66 312 eP P 19 58 48.0 -2.1
ECH Echery 43.66 312 eP P 19 58 48.3 -1.8
ECH pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
ECH Echery 43.66 312 eP P 19 58 48.3 -1.8
comp=Z,4.8nm,1.0s,mb4.2
ECH Echery 43.66 312 eP P 19 58 48.0 -2.1
LOMF Lomont 43.76 310 eP P 19 58 49.5 -1.4
LOMF Lomont 43.76 310 eP P 19 58 49.5 -1.4
HINF Hinteralfeld 43.80 311 eP P 19 58 49.3 -2.0
HINF Hinteralfeld 43.80 311 eP P 19 58 49.3 -2.0
XAN Xi'an 43.94 69 P P 19 58 52.7 +0.1
XAN PP PP 20 00 35.0 -0.3
XAN S **S 20 05 22.0 +0.4**
XAN pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
XAN LR LR
comp=N,460nm,20.3s,MS4.4
XAN LR LR
comp=E,280nm,23.4s,MS4.4
XAN LR LR
comp=Z,430nm,21.3s,MS4.3
IBBN Ibbenburen 44.07 318 eP P 19 58 52.9 -0.5
comp=Z,13nm,1.0s,mb4.6
IBBN epP pP 19 59 02.4 -2.1
ORIF Oris-en-Rattie 44.16 307 eP P 19 58 51.8 -2.4
comp=Z,6.6nm,0.7s,mb4.2
ORIF Oris-en-Rattie 44.16 307 eP P 19 58 51.8 -2.4
comp=Z,3.3nm,0.7s,mb4.2
HAU Haudompre 44.17 311 eP P 19 58 52.6 -1.6
HAU Haudompre 44.17 311 eP P 19 58 52.6 -1.6
CABF La Chapelle 44.17 309 eP P 19 58 53.2 -1.0
comp=Z,18nm,0.8s,mb4.5
CABF La Chapelle 44.17 309 eP P 19 58 53.2 -1.0
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CABF La Chapelle 44.17 309 eP P 19 58 53.2 -1.0
comp=Z,9.3nm,0.8s,mb4.6
CABF La Chapelle 44.17 309 eP P 19 58 53.2 -1.0
comp=Z,9.2nm,0.8s,mb4.5
BUG Bochum--Univer 44.18 316 eP P 19 58 53.6 -0.6
comp=Z,16nm,1.1s,mb4.7
SMRF Simiane la Rot 44.32 305 eP P 19 58 53.7 -1.8
comp=Z,7.6nm,0.8s,mb4.2
SMRF Simiane la Rot 44.32 305 eP P 19 58 53.7 -1.8
comp=Z,7.6nm,0.8s,mb4.5
SMRF Simiane la Rot 44.32 305 eP P 19 58 53.7 -1.8
comp=Z,3.8nm,0.8s,mb4.2
MUD Monsted U'grnd 44.44 324 i P P 19 58 56.1 -0.1
MUD pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
MUD MLR MLR
comp=Z,2µm,19.0s,MS5.1
MUD Monsted U'grnd 44.44 324 i P P 19 58 56.1 -0.1
comp=Z,5.8nm,0.9s,mb4.3
MUD
comp=Z,2µm,19.0s
MUD Monsted U'grnd 44.44 324 i P P 19 58 56.1 -0.1
comp=Z,2µm,19.0s
WLF Walferdange 44.54 314 P P 19 58 56.5 -0.7
comp=Z,6.5nm,1.5s,mb4.2
WLF Walferdange 44.54 314 eP P 19 58 55.8 -1.4
comp=Z,20nm,1.6s,mb4.7
WLF Walferdange 44.54 314 P P 19 58 56.5 -0.7
comp=Z,6.5nm,1.5s,mb4.2
MEM Membach 44.80 315 P P 19 58 59.5 +0.4
MEM Membach 44.80 315 P P 19 58 59.5 +0.3
ENH Enshi 44.98 74 eP P 19 59 03.0 +2.1
comp=Z,15nm,1.1s,mb4.7
VIVF Saint-Julien-l 45.01 307 eP P 19 58 59.4 -1.6
comp=Z,22nm,1.0s,mb4.6
VIVF Saint-Julien-l 45.01 307 eP P 19 58 59.4 -1.6
VIVF pmax pmax
comp=Z,11nm,1.0s,mb4.6
VIVF Saint-Julien-l 45.01 307 eP P 19 58 59.4 -1.6
comp=Z,11nm,1.0s,mb4.6
VIVF Saint-Julien-l 45.01 307 eP P 19 58 59.4 -1.6
comp=Z,11nm,1.0s,mb4.6
SSB Saint Sauveur 45.13 307 eP P 19 59 00.6 -1.3
SSB pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SSB Saint Sauveur 45.13 307 eP P 19 59 00.6 -1.3
comp=Z,7.4nm,0.8s,mb4.6
SSB Saint Sauveur 45.13 307 eP P 19 59 00.6 -1.3
comp=Z,7.0nm,0.8s,mb4.5
NB2 NORSAR Subarra 45.19 330 P P 19 59 00.5 -1.6
comp=Z,17nm,1.4s,mb4.7,baz=115,slow=7.9
NB2 NORSAR Subarra 45.19 330 P P 19 59 00.5 -1.6
comp=Z,17nm,1.4s,mb4.7,baz=115,slow=7.9,SNR=9.0
NOA NORSAR Array B 45.19 330 P P 19 58 59.6 -2.5
comp=Z,2.2nm,0.8s,mb4.1,baz=118,slow=7.6,SNR=9.3
NOA pP pP 19 59 10.9 -2.4
comp=Z,3.4nm,0.8s,baz=115,slow=7.9,SNR=8.3
NOA sP sP 19 59 17.4 -0.6
comp=Z,4.9nm,0.9s,baz=115,slow=7.9,SNR=7.4
NOA NORSAR Array B 45.19 330 P P 19 58 59.7 -2.4
NOA pP pP 19 59 10.9 -2.4
BCLA Clavier 45.21 314 P P 19 59 02.1 -0.3
comp=Z,6.2nm,1.2s,mb4.3
BCLA Clavier 45.21 314 P P 19 59 02.0 -0.4
comp=Z,6.2nm,1.2s,mb4.3
GIVF Givet 45.46 314⇑ iP P 19 59 04.0 -0.5
comp=Z,71nm,1.3s,mb5.0
GIVF Givet 45.46 314⇑ iP P 19 59 04.0 -0.5
GIVF pmax pmax
comp=Z,36nm,1.3s,mb5.0
GIVF Givet 45.46 314⇑ iP P 19 59 04.0 -0.5
comp=Z,36nm,1.3s,mb5.0
GIVF Givet 45.46 314⇑ iP P 19 59 04.0 -0.5
comp=Z,36nm,1.3s,mb5.0
ARCES ARCESS Array B 45.51 345 P P 19 59 03.1 -1.4
comp=Z,6.3nm,0.7s,mb4.6,baz=140,slow=7.9,SNR=28
ARCES PcP PcP 20 00 41.7 -1.1
comp=Z,3.9nm,0.8s,baz=153,slow=2.9,SNR=3.9
ARCES ARCESS Array B 45.51 345 P P 19 59 03.1 -1.4
ARCES PcP PcP 20 00 41.7 -1.1
ARCES ARCESS Array B 45.51 345 P P 19 59 03.2 -1.3
ARCES ARCESS Array B 45.51 345 PcP PcP 20 00 41.7 -1.0
ARE0 ARCESS Array S 45.51 345 eP P 19 59 02.7 -1.8
ARE0 ARCESS Array S 45.51 345 eP P 19 59 02.7 -1.8
LASF Ste Croix 45.56 305⇑ iP P 19 59 04.2 -1.1
comp=Z,19nm,1.0s,mb4.7
LASF Ste Croix 45.56 305⇑ iP P 19 59 04.2 -1.1
comp=Z,9.6nm,1.0s,mb4.7
HHC Hu-ho-hao-te 45.58 59 eP P 19 59 05.2 -0.3
HHC pP pP 19 59 23.7 +7.0
HHC sP sP 19 59 33.1 +12
HHC PcP PcP 20 00 42.2 -1.4
HHC PP PP 20 00 55.5 +2.9
HHC ScP ScP 20 04 27.7 -5.7
HHC PcS PcS 20 04 37.9 +0.3
HHC S **S 20 05 39.4 -5.8**
HHC pmax pmax
comp=Z,16nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,710nm,5.2s
HHC LR LR
comp=N,610nm,16.2s,MS4.8
HHC LR LR
comp=E,800nm,17.2s,MS4.8
HHC LR LR
comp=Z,710nm,17.9s,MS4.7
DOU Dourbes 45.61 314 P P 19 59 05.6 0.0
DOU Dourbes 45.61 314 P P 19 59 05.6 0.0
SMF Signal de Mont 45.72 309⇑ iP P 19 59 05.1 -1.4
comp=Z,50nm,1.1s,mb5.0
SMF Signal de Mont 45.72 309⇑ iP P 19 59 05.1 -1.4
SMF pmax pmax
comp=Z,25nm,1.1s,mb5.1
SMF Signal de Mont 45.72 309⇑ iP P 19 59 05.1 -1.4
comp=Z,25nm,1.1s,mb5.0
SMF Signal de Mont 45.72 309⇑ iP P 19 59 05.1 -1.4
comp=Z,25nm,1.1s,mb5.0
LOR Lormes 45.76 310⇑ iP P 19 59 05.1 -1.7
comp=Z,15nm,0.9s,mb4.7
LOR Lormes 45.76 310⇑ iP P 19 59 05.1 -1.7
LOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LOR Lormes 45.76 310⇑ iP P 19 59 05.1 -1.7
comp=Z,7.7nm,0.9s,mb4.6
LOR Lormes 45.76 310⇑ iP P 19 59 05.1 -1.7
comp=Z,7.7nm,0.9s,mb4.7
BAIF Baives 45.85 314⇑ iP P 19 59 07.2 -0.3
comp=Z,49nm,1.3s,mb5.0
BAIF Baives 45.85 314⇑ iP P 19 59 07.2 -0.3
BAIF pmax pmax
comp=Z,24nm,1.3s,mb5.0
BAIF Baives 45.85 314⇑ iP P 19 59 07.2 -0.3
comp=Z,24nm,1.3s,mb5.0
BAIF Baives 45.85 314⇑ iP P 19 59 07.2 -0.3
comp=Z,24nm,1.3s,mb5.0
SSF Saint Saulge 45.98 310⇑ iP P 19 59 07.3 -1.3
comp=Z,13nm,0.7s,mb4.7
SSF Saint Saulge 45.98 310⇑ iP P 19 59 07.3 -1.3
SSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SSF Saint Saulge 45.98 310⇑ iP P 19 59 07.3 -1.3
comp=Z,6.6nm,0.7s,mb4.7
SSF Saint Saulge 45.98 310⇑ iP P 19 59 07.3 -1.3
comp=Z,6.6nm,0.7s,mb4.7
LBL Lubilhac 46.04 307 eP P 19 59 08.2 -0.9
LBL Lubilhac 46.04 307 eP P 19 59 08.2 -0.9
AVF Avril sur Loir 46.06 309⇑ iP P 19 59 07.7 -1.6
comp=Z,22nm,1.1s,mb4.7
AVF Avril sur Loir 46.06 309⇑ iP P 19 59 07.7 -1.6
AVF pmax pmax
comp=Z,11nm,1.0s,mb4.7
AVF Avril sur Loir 46.06 309⇑ iP P 19 59 07.7 -1.6
comp=Z,11nm,1.0s,mb4.7
AVF Avril sur Loir 46.06 309⇑ iP P 19 59 07.7 -1.6
comp=Z,11nm,1.1s,mb4.7
AGO Saint Agoulin 46.17 308 eP P 19 59 09.0 -1.1
AGO Saint Agoulin 46.17 308 eP P 19 59 09.0 -1.1
PYM Petit Puy Mans 46.24 308 eP P 19 59 09.6 -1.0
PYM Petit Puy Mans 46.24 308 eP P 19 59 09.6 -1.0
BGF Bois d'Agland 46.40 309 eP P 19 59 11.2 -0.7
comp=Z,23nm,0.9s,mb4.8
BGF Bois d'Agland 46.40 309 eP P 19 59 11.2 -0.7
BGF pmax pmax
comp=Z,12nm,0.9s,mb4.8
BGF Bois d'Agland 46.40 309 eP P 19 59 11.2 -0.7
comp=Z,12nm,0.9s,mb4.8
BGF Bois d'Agland 46.40 309 eP P 19 59 11.2 -0.7
comp=Z,12nm,0.9s,mb4.8
MTLF Montolieu 46.74 304⇑ iP P 19 59 14.0 -0.6
comp=Z,37nm,1.2s,mb4.9
MTLF Montolieu 46.74 304⇑ iP P 19 59 14.0 -0.6
MTLF pmax pmax
comp=Z,19nm,1.2s,mb4.9
MTLF Montolieu 46.74 304⇑ iP P 19 59 14.0 -0.6
comp=Z,19nm,1.2s,mb4.9
MTLF Montolieu 46.74 304⇑ iP P 19 59 14.0 -0.6
comp=Z,19nm,1.2s,mb4.9
TCF Toulx Ste Croi 46.82 308⇑ iP P 19 59 14.1 -1.1
comp=Z,23nm,1.0s,mb4.8
TCF Toulx Ste Croi 46.82 308⇑ iP P 19 59 14.1 -1.1
TCF pmax pmax
comp=Z,12nm,1.0s,mb4.8
TCF Toulx Ste Croi 46.82 308⇑ iP P 19 59 14.1 -1.1
comp=Z,12nm,1.0s,mb4.8
TCF Toulx Ste Croi 46.82 308⇑ iP P 19 59 14.1 -1.1
comp=Z,12nm,1.0s,mb4.8
CAF Calviac 46.87 307⇑ iP P 19 59 14.7 -0.9
comp=Z,16nm,0.8s,mb4.7
CAF Calviac 46.87 307⇑ iP P 19 59 14.7 -0.9
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CAF Calviac 46.87 307⇑ iP P 19 59 14.7 -0.9
comp=Z,8.0nm,0.8s,mb4.7
CAF Calviac 46.87 307⇑ iP P 19 59 14.7 -0.9
comp=Z,8.0nm,0.8s,mb4.7
RJF Les Rejaudoux 47.27 307⇑ iP P 19 59 18.1 -0.6
comp=Z,27nm,0.8s,mb4.9
RJF Les Rejaudoux 47.27 307⇑ iP P 19 59 18.1 -0.6
RJF pmax pmax
comp=Z,14nm,0.8s,mb4.9
RJF Les Rejaudoux 47.27 307⇑ iP P 19 59 18.1 -0.6
comp=Z,14nm,0.8s,mb4.9
RJF Les Rejaudoux 47.27 307⇑ iP P 19 59 18.1 -0.6
comp=Z,14nm,0.8s,mb4.9
EPOB Poblet 47.62 302 P P 19 59 20.4 -1.1
comp=Z,28nm,1.1s,mb5.2
EPOB Poblet 47.62 302 P P 19 59 20.4 -1.1
comp=Z,28nm,1.1s,mb5.2
LFF La Frestale 47.81 307⇑ iP P 19 59 22.1 -0.8
comp=Z,30nm,0.8s,mb5.1
LFF La Frestale 47.81 307⇑ iP P 19 59 22.1 -0.8
LFF pmax pmax
comp=Z,15nm,0.8s,mb5.1
LFF La Frestale 47.81 307⇑ iP P 19 59 22.1 -0.8
comp=Z,15nm,0.8s,mb5.1
LFF La Frestale 47.81 307⇑ iP P 19 59 22.1 -0.8
comp=Z,15nm,0.8s,mb5.1
EPF Esparros 48.11 304 eP P 19 59 24.3 -1.0
EPF Esparros 48.11 304 eP P 19 59 24.3 -1.0
ERTA Horta de San J 48.20 301 P P 19 59 23.8 -2.3
comp=Z,23nm,1.3s,mb5.1
ERTA Horta de San J 48.20 301 P P 19 59 23.8 -2.2
comp=Z,23nm,1.3s,mb5.1
MFF Saint Martin d 48.46 309 eP P 19 59 27.5 -0.4
comp=Z,31nm,1.4s,mb4.9
MFF Saint Martin d 48.46 309 eP P 19 59 27.5 -0.4
MFF pmax pmax
comp=Z,16nm,1.4s,mb4.9
MFF Saint Martin d 48.46 309 eP P 19 59 27.5 -0.4
comp=Z,16nm,1.4s,mb4.8
MFF Saint Martin d 48.46 309 eP P 19 59 27.5 -0.4
comp=Z,16nm,1.4s,mb4.9
LDF La Druitiere 48.52 311 eP P 19 59 27.4 -1.0
comp=Z,8.8nm,0.5s,mb4.7
LDF La Druitiere 48.52 311 eP P 19 59 27.4 -1.0
LDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
LDF La Druitiere 48.52 311 eP P 19 59 27.4 -1.0
comp=Z,4.4nm,0.5s,mb4.7
LDF La Druitiere 48.52 311 eP P 19 59 27.4 -1.0
comp=Z,4.4nm,0.5s,mb4.7
FLN La Foliniere 48.77 312 eP P 19 59 29.3 -1.0
FLN La Foliniere 48.77 312 eP P 19 59 29.3 -1.0
ETSF Etsaut 48.78 304 eP P 19 59 30.1 -0.3
comp=Z,19nm,0.9s,mb4.8
ETSF Etsaut 48.78 304 eP P 19 59 30.1 -0.3
ETSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ETSF Etsaut 48.78 304 eP P 19 59 30.1 -0.3
comp=Z,9.6nm,0.9s,mb4.8
ETSF Etsaut 48.78 304 eP P 19 59 30.1 -0.3
comp=Z,9.6nm,0.9s,mb4.8
EMOS Mosqueruela 48.85 300 P P 19 59 32.0 +0.9
comp=Z,12nm,0.7s,mb5.0
EMOS Mosqueruela 48.85 300 P P 19 59 32.0 +1.0
comp=Z,12nm,0.7s,mb5.0
BOD Bodaibo 48.91 36 eP P 19 59 29.8 -1.4
BOD e 20 06 29.6
BOD pmax pmax
comp=Z,25nm,1.0s,mb5.2
BOD Bodaibo 48.91 36 eP P 19 59 29.8 -1.4
comp=Z,25nm,1.0s,mb5.2
GRR Gorron 49.00 311 eP P 19 59 31.0 -1.0
comp=Z,18nm,0.9s,mb4.8
GRR Gorron 49.00 311 eP P 19 59 31.0 -1.0
GRR pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
GRR Gorron 49.00 311 eP P 19 59 31.0 -1.0
comp=Z,9.3nm,0.9s,mb4.8
GRR Gorron 49.00 311 eP P 19 59 31.0 -1.0
comp=Z,9.2nm,0.9s,mb4.8
BJI Beijing 49.14 60 P P 19 59 32.5 -0.7
BJI pmax pmax
comp=Z,12nm,0.8s,mb5.0
SJPF Ste Jean 49.26 304 eP P 19 59 33.6 -0.5
comp=Z,18nm,0.9s,mb4.8
SJPF Ste Jean 49.26 304 eP P 19 59 33.6 -0.5
SJPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
SJPF Ste Jean 49.26 304 eP P 19 59 33.6 -0.5
comp=Z,9.0nm,0.9s,mb4.8
SJPF Ste Jean 49.26 304 eP P 19 59 33.6 -0.5
comp=Z,9.0nm,0.9s,mb4.8
ECHE Chera 49.30 299 P P 19 59 35.1 +0.6
ECHE pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ECHE Chera 49.30 299 P P 19 59 35.1 +0.6
comp=Z,6.8nm,0.6s,mb4.8
ECHE Chera 49.30 299 P P 19 59 35.1 +0.6
comp=Z,7.0nm,0.6s,mb4.9
EMUR La Murta 49.69 297 P P 19 59 35.6 -1.9
comp=Z,31nm,1.2s,mb5.2
EMUR La Murta 49.69 297 P P 19 59 35.6 -1.9
comp=Z,31nm,1.2s,mb5.2
ETOR Torete 50.02 301 P P 19 59 37.8 -2.1
ETOR pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
ETOR Torete 50.02 301 P P 19 59 37.8 -2.2
comp=Z,9.1nm,1.3s,mb4.7
ETOR Torete 50.02 301 P P 19 59 37.8 -2.1
comp=Z,9.0nm,1.3s,mb4.6
SGMF Saint Gilles 50.13 311 eP P 19 59 40.7 0.0
comp=Z,25nm,1.0s,mb4.9
SGMF Saint Gilles 50.13 311 eP P 19 59 40.7 0.0
SGMF pmax pmax
comp=Z,12nm,1.0s,mb4.9
SGMF Saint Gilles 50.13 311 eP P 19 59 40.7 0.0
comp=Z,12nm,1.0s,mb4.9
SGMF Saint Gilles 50.13 311 eP P 19 59 40.7 0.0
comp=Z,12nm,1.0s,mb4.9
QUIF Quistinic 50.53 310 eP P 19 59 43.0 -0.7
QUIF Quistinic 50.53 310 eP P 19 59 43.0 -0.7
EVIA Vianos 50.59 298 P P 19 59 44.5 +0.3
EVIA pmax pmax
comp=Z,12nm,0.9s,mb4.8
EVIA Vianos 50.59 298 P P 19 59 44.5 +0.3
comp=Z,12nm,0.9s,mb4.8
EVIA Vianos 50.59 298 P P 19 59 44.5 +0.3
comp=Z,12nm,0.9s,mb4.8
EQES Quesada 51.14 297 P P 19 59 47.5 -1.0
comp=Z,22nm,2.0s,mb4.7
EQES Quesada 51.14 297 P P 19 59 47.5 -0.9
comp=Z,22nm,2.0s,mb4.7
ESDC Sonseca Array 51.59 300 P P 19 59 49.8 -2.0
comp=Z,3.1nm,0.6s,mb4.4,baz=72,slow=7.8,SNR=14
ESDC pP pP 20 00 02.3 -0.8
comp=Z,1.3nm,0.5s,baz=65,slow=8.1,SNR=3.6
ESDC Sonseca Array 51.59 300 P P 19 59 51.4 -0.4
comp=Z,5.8nm,1.1s,mb4.4
ESDC Sonseca Array 51.59 300 P P 19 59 51.4 -0.4
comp=Z,5.8nm,1.1s,mb4.4
GUD Guadarrama 51.62 301 P P 19 59 51.9 -0.1
GUD pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GUD Guadarrama 51.62 301 P P 19 59 51.9 -0.1
comp=Z,8.2nm,0.9s,mb4.7
GUD Guadarrama 51.62 301 P P 19 59 51.9 -0.1
comp=Z,8.0nm,0.9s,mb4.7
EBAN Banos Encina 51.65 298 P P 19 59 51.9 -0.3
EBAN pmax pmax
comp=Z,16nm,0.7s,mb5.1
EBAN Banos Encina 51.65 298 P P 19 59 51.9 -0.3
comp=Z,16nm,0.7s,mb5.1
EBAN Banos Encina 51.65 298 P P 19 59 51.9 -0.3
comp=Z,16nm,0.7s,mb5.1
LSZ Lusaka 51.67 217 eP P 19 59 53.9 +1.4
LSZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
LSZ Lusaka 51.67 217 eP P 19 59 53.9 +1.4
comp=Z,3.4nm,0.9s,mb4.3
PAB San Pablo 51.90 300 eP P 19 59 53.2 -0.9
PAB pmax pmax
comp=Z,30nm,1.5s,mb5.0
PAB San Pablo 51.90 300 eP P 19 59 53.2 -0.9
comp=Z,30nm,1.5s,mb5.0
PAB San Pablo 51.90 300 eP P 19 59 53.2 -0.9
comp=Z,30nm,1.5s,mb5.0
EADA Adamuz 52.26 298 P P 19 59 56.6 -0.2
comp=Z,64nm,1.9s,mb5.2
EADA Adamuz 52.26 298 P P 19 59 56.7 -0.1
comp=Z,64nm,1.9s,mb5.2
NJ2 Nanjing 52.49 70 eP P 20 00 01.5 +2.9
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
EMIJ Mijas 52.67 296 P P 19 59 58.3 -1.5
comp=Z,18nm,0.9s,mb5.0
EMIJ Mijas 52.67 296 P P 19 59 58.3 -1.5

comp=Z,18nm,0.9s,mb5.0
ZFT Errachidia 53.21 290 *i* P **P 20 00 05.0 +1.1**
ECAL Calabor 53.41 303 P **P 20 00 05.0 -0.2**
comp=Z,34nm,1.6s,mb5.0
ECAL Calabor 53.41 303 P **P 20 00 05.0 -0.2**
comp=Z,34nm,1.6s,mb5.0
PBRG Braganca 53.43 303 *eP* **P 20 00 05.3 -0.1**
comp=Z,11nm,1.2s,mb4.7
PBRG Braganca 53.43 303 *eP* **P 20 00 05.3 -0.1**
comp=Z,11nm,1.2s,mb4.7
ESPR Espera 53.47 297 P **P 20 00 03.8 -2.0**
comp=Z,30nm,1.4s,mb5.0
ESPR Espera 53.47 297 P **P 20 00 03.8 -2.0**
comp=Z,30nm,1.4s,mb5.0
CZD Col de Zad 53.56 292 *i* P **P 20 00 09.0 +2.5**
MVO Moncorvo 53.73 302 *eP* **P 20 00 07.5 0.0**
comp=Z,22nm,2.2s,mb4.7
MVO Moncorvo 53.73 302 *eP* **P 20 00 07.5 0.0**
comp=Z,22nm,2.2s,mb4.7
EMIN Mina Concepcio 53.96 298 P **P 20 00 08.3 -1.0**
comp=Z,25nm,1.3s,mb5.0
EMIN Mina Concepcio 53.96 298 P **P 20 00 08.3 -1.0**
comp=Z,25nm,1.3s,mb5.0
TOA0 Torodi Ar. Sit 54.03 266 *eP* **P 20 00 09.5 -0.6**
TOA0 Torodi Ar. Sit 54.03 266 *eP* **P 20 00 09.5 -0.6**
TORD Torodi Ar. Bea 54.03 266 P **P 20 00 09.9 -0.2**
comp=Z,49nm,0.6s,mb5.6,baz=61,slow=7.0,SNR=345
TORD pP pP 20 00 22.1 +0.6
comp=Z,9.8nm,0.5s,baz=67,slow=3.7,SNR=5.4
EBAD Badajoz 54.06 299 P **P 20 00 08.8 -1.3**
comp=Z,27nm,1.3s,mb5.0
EBAD Badajoz 54.06 299 P **P 20 00 08.8 -1.3**
comp=Z,27nm,1.3s,mb5.0
PBAR Barrancos 54.18 298 *eP* **P 20 00 11.0 +0.1**
comp=Z,36nm,0.9s,mb5.3
PBAR Barrancos 54.18 298 *eP* **P 20 00 11.0 +0.1**
comp=Z,36nm,0.9s,mb5.3
MTE Manteigas 54.22 301 *eP* **P 20 00 11.8 +0.7**
comp=Z,27nm,1.5s,mb5.0
MTE *i* P pP 20 00 23.1 +0.5
MTE Manteigas 54.22 301 *eP* **P 20 00 09.6 -1.6**
comp=Z,17nm,1.1s,mb4.9
MTE Manteigas 54.22 301 *eP* **P 20 00 09.6 -1.5**
comp=Z,17nm,1.1s,mb4.9
PVRL Vila Real 54.22 302 *eP* **P 20 00 11.5 +0.3**
comp=Z,12nm,1.3s,mb4.7
PVRL *i* P pP 20 00 22.2 -0.4
PVRL Vila Real 54.22 302 *eP* **P 20 00 11.5 +0.3**
comp=Z,12nm,1.3s,mb4.7
PMRV Marv??o 54.25 300 *eP* **P 20 00 11.5 +0.1**
comp=Z,28nm,1.1s,mb5.1
PMRV *i* P pP 20 00 21.8 -1.0
PMRV Marv??o 54.25 300 *eP* **P 20 00 11.5 +0.1**
comp=Z,28nm,1.1s,mb5.1
PCBR Castelo Branco 54.25 301 *eP* **P 20 00 11.9 +0.5**
comp=Z,48nm,1.3s,mb5.3
PCBR *i* P pP 20 00 22.5 -0.3
PCBR Castelo Branco 54.25 301 *eP* **P 20 00 11.9 +0.5**
comp=Z,48nm,1.3s,mb5.3
ELOB Lobios 54.40 303 P **P 20 00 12.1 -0.4**
comp=Z,22nm,1.0s,mb5.0
ELOB Lobios 54.40 303 P **P 20 00 12.1 -0.4**
comp=Z,22nm,1.0s,mb5.0
PVIS Viseu 54.44 302 *eP* **P 20 00 13.3 +0.6**
comp=Z,26nm,1.3s,mb5.0
PVIS *i* P pP 20 00 25.7 +1.6
PVIS Viseu 54.44 302 *eP* **P 20 00 13.3 +0.6**
comp=Z,26nm,1.3s,mb5.0
KIB El Ksiba 54.48 292 *i* P **P 20 00 12.5 -0.7**
PESTR Estremoz 54.49 299 *eP* **P 20 00 13.0 -0.2**
comp=Z,20nm,2.1s,mb4.7
PESTR Estremoz 54.49 299 *eP* **P 20 00 13.0 -0.2**
comp=Z,20nm,2.1s,mb4.7
KBS Kingsbay 54.69 350 *eP* **P 20 00 13.1 -0.9**
KBS pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KBS Kingsbay 54.69 350 *eP* **P 20 00 13.1 -0.9**
comp=Z,5.6nm,0.6s,mb4.8
KBS Kingsbay 54.69 350 ⇑ *iP* **P 20 00 12.9 -1.1**
SNR=35
PBEJ Beja 54.85 298 *eP* **P 20 00 15.9 +0.1**
comp=Z,23nm,2.0s,mb4.9
PBEJ *i* P pP 20 00 27.3 +0.1
PBEJ Beja 54.85 298 *eP* **P 20 00 15.9 +0.1**
comp=Z,23nm,2.0s,mb4.9
EVO Evora 54.87 299 *eP* **P 20 00 16.3 +0.4**
comp=Z,41nm,1.4s,mb5.3
EVO *i* P pP 20 00 26.7 -0.7
EVO Evora 54.87 299 *eP* **P 20 00 16.3 +0.4**
comp=Z,41nm,1.4s,mb5.3
PTOM Tomar 55.00 300 *eP* **P 20 00 17.5 +0.7**
comp=Z,69nm,1.3s,mb5.5
PTOM *i* P pP 20 00 27.9 -0.3
PTOM Tomar 55.00 300 *eP* **P 20 00 17.5 +0.7**
comp=Z,69nm,1.3s,mb5.5
PCVE Castro Verde 55.05 298 *eP* **P 20 00 17.3 +0.1**
comp=Z,26nm,1.4s,mb5.1
PCVE Castro Verde 55.05 298 *eP* **P 20 00 17.3 +0.1**
comp=Z,26nm,1.4s,mb5.1
CN2 Changchun 55.62 54 *eP* **P 20 00 19.6 -1.6**
CN2 *ep*P pP 20 00 38.7 +6.0
CN2 *e*S **S 20 07 56.6 -7.8**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,18.0s,MS4.9
CN2 LR LR
comp=E,600nm,18.0s,MS4.9
CN2 LR LR
comp=Z,500nm,17.0s,MS4.7
OUK Oukaimeden 56.32 290 *i* P **P 20 00 27.0 +0.6**
TIXI Tiksi 57.74 21 *eP* **P 20 00 33.9 -1.9**
TIXI pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TIXI Tiksi 57.74 21 *eP* **P 20 00 33.8 -2.0**
comp=Z,5.8nm,0.7s,mb4.7
TIXI Tiksi 57.74 21 *eP* **P 20 00 33.8 -2.0**
comp=Z,5.8nm,0.7s,mb4.7
KSRS Korea Array 58.60 61 P **P 20 00 40.5 -1.9**
KSRS pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KSRS Korea Array 58.60 61 P **P 20 00 40.5 -2.0**
comp=Z,4.0nm,0.7s,mb4.5,baz=274,slow=7.3,SNR=13
KSRS Korea Array 58.60 61 P **P 20 00 40.5 -1.9**
comp=Z,4.0nm,0.7s,mb4.6
KLR Kul'dur 59.20 47 *eP* **P 20 00 39.8 -6.5**
DAG Danmarks Havn 59.80 345 ⇓ *iP* **P 20 00 49.1 -1.0**
DAG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
DAG Danmarks Havn 59.80 345 ⇓ *iP* **P 20 00 49.1 -1.0**
comp=Z,9.0nm,0.8s,mb4.8
LBTB Lobatse 61.12 213 *eP* **P 20 01 00.8 +1.1**
LBTB pmax pmax
comp=Z,26nm,1.1s,mb5.3
LBTB Lobatse 61.12 213 *eP* **P 20 01 00.8 +1.1**
comp=Z,26nm,1.1s,mb5.3
HABR Khabarovsk 61.47 48 *eP* **P 20 01 00.0 -1.9**
HABR *e* 20 03 16.0
HABR *e*S **S 20 09 11.5 -8.9**
HABR *e*SS SS 20 13 15.5 -5.8
HABR *e*SSS 20 16 07.1
HABR pmax pmax
comp=Z,9.0nm,1.4s,mb4.7
HABR pmax pmax
comp=E,9.0nm,1.2s
HABR pmax pmax
comp=N,4.0nm,0.9s
HABR Khabarovsk 61.47 48 *eP* **P 20 01 00.0 -1.9**
comp=N,4.0nm,0.9s,mb4.5
DBIC Dimbokro 62.69 263 *eP* **P 20 01 10.8 +0.2**
DBIC pmax pmax
comp=Z,9.0nm,0.6s
DBIC Dimbokro 62.69 263 P **P 20 01 09.9 -0.7**
comp=Z,8.3nm,0.5s,mb5.1,baz=52,slow=7.7,SNR=9.8
DBIC Dimbokro 62.69 263 *eP* **P 20 01 10.8 +0.2**
comp=Z,9.1nm,0.6s,mb5.1
KIC Kosan Boka 62.73 262 *eP* **P 20 01 10.8 -0.1**
comp=Z,66nm,1.3s,mb5.6
TIC Toumodi 62.84 263 *eP* **P 20 01 11.4 -0.2**
comp=Z,18nm,0.6s,mb5.4
TIC Toumodi 62.84 263 *eP* **P 20 01 11.4 -0.2**
TIC pmax pmax
comp=Z,18nm,0.6s,mb5.4
LIC Lamto 63.05 262 *eP* **P 20 01 13.0 0.0**
comp=Z,17nm,0.5s,mb5.1
LIC Lamto 63.05 262 *eP* **P 20 01 14.1 +1.1**
comp=Z,30nm,0.5s,mb5.6
LIC Lamto 63.05 262 *eP* **P 20 01 13.0 0.0**
comp=Z,8.6nm,0.5s,mb5.1
BOSA Boshof 64.32 212 *eP* **P 20 01 21.7 +0.7**
BOSA pmax pmax
comp=Z,12nm,0.8s,mb5.0
BOSA Boshof 64.32 212 P **P 20 01 21.7 +0.7**
comp=Z,12nm,0.7s,mb5.0,baz=36,slow=6.5,SNR=29
BOSA Boshof 64.32 212 *eP* **P 20 01 21.6 +0.7**
comp=Z,12nm,0.8s,mb5.0
SUMG Summit 65.33 341 *eP* **P 20 01 26.2 -0.8**
comp=Z,19nm,0.9s,mb5.1
SUMG Summit 65.33 341 *eP* **P 20 01 26.2 -0.8**
comp=Z,19nm,0.9s,mb5.1
YSS Yuzh-Sakhalins 66.88 48 *eP* **P 20 01 35.1 -2.3**
YSS Yuzh-Sakhalins 66.88 48 *eP* **P 20 01 35.1 -2.3**
BILL Bilibino 70.90 22 ⇑ *iP* **P 20 02 01.3 -0.7**
BILL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
BILL Bilibino 70.90 22 *eP* **P 20 02 00.9 -1.1**
comp=Z,2.5nm,0.4s,mb4.5
BILL Bilibino 70.90 22 *eP* **P 20 02 00.9 -1.1**
comp=Z,2.5nm,0.4s,mb4.5
RES Resolute Bay 75.98 353 P **P 20 02 30.9 -0.9**
RES pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
RES Resolute Bay 75.98 353 P **P 20 02 30.9 -1.0**
comp=Z,1.7nm,0.8s,mb4.0,baz=40,slow=10.0,SNR=6.1
RES Resolute Bay 75.98 353 *eP* **P 20 02 30.8 -1.1**
RES Resolute Bay 75.98 353 *eP* **P 20 02 30.8 -1.0**
KAKA Kakadu 82.84 108 *eP* **P 20 03 09.7 -0.4**
comp=Z,66nm,0.8s,mb5.7
NWAO Narrogin (SRO) 82.89 133 *eP* **P 20 03 10.0 +0.1**
INK Inuvik 83.59 4 *eP* **P 20 03 11.6 -1.5**
INK Inuvik 83.59 4 *eP* **P 20 03 11.6 -1.5**
SCHQ Schefferville 84.75 331 P **P 20 03 17.9 -1.4**
comp=Z,4.9nm,0.8s,mb4.7,baz=58,slow=5.6,SNR=6.2
SCHQ Schefferville 84.75 331 *eP* **P 20 03 17.0 -2.2**
comp=Z,4.0nm,0.8s,mb4.6
SCHQ Schefferville 84.75 331 *eP* **P 20 03 17.0 -2.2**
comp=Z,4.0nm,0.8s,mb4.6
CHUM Lake Minchumin 85.39 13 *eP* **P 20 03 21.4 -0.9**
comp=Z,6.7nm,0.9s,mb4.8
CHUM Lake Minchumin 85.39 13 *eP* **P 20 03 21.4 -0.9**
comp=Z,6.7nm,0.9s,mb4.8
MCK McKinley 86.16 12 *eP* **P 20 03 24.2 -1.9**
MCK McKinley 86.16 12 *eP* **P 20 03 24.2 -1.9**
DAWY Dawson 87.23 7 *eP* **P 20 03 29.1 -2.2**
DAWY Dawson 87.23 7 *eP* **P 20 03 29.1 -2.2**
WRA Warramunga Arr 88.08 114 P **P 20 03 36.5 +0.4**
comp=Z,5.2nm,0.7s,mb4.8,baz=311,slow=4.3,SNR=38
WRAB Tennant Creek 88.09 114 *eP* **P 20 03 36.8 +0.7**
WRAB pmax pmax
comp=Z,13nm,1.1s,mb5.1
WRAB Tennant Creek 88.09 114 *eP* **P 20 03 36.8 +0.6**
comp=Z,13nm,1.1s,mb5.1
WB2 Warramunga Arr 88.09 114 *eP* **P 20 03 36.8 +0.6**
YKA Yellowknife Ar 89.58 356 P **P 20 03 40.4 -2.1**
comp=Z,1.6nm,0.7s,mb4.5,baz=1.5,slow=5.2,SNR=24
YKA pP pP 20 03 53.4 -1.1
comp=Z,1.1nm,0.7s,baz=2.2,slow=4.8,SNR=6.4
YKA Yellowknife Ar 89.58 356 P **P 20 03 40.4 -2.1**
YKA pP pP 20 03 53.4 -1.1
YKA Yellowknife Ar 89.58 356 P **P 20 03 40.4 -2.1**
YKA pP pP 20 03 53.4 -1.1
ASAR Alice Springs 89.63 117 P **P 20 03 43.2 -0.1**
comp=Z,1.4nm,0.7s,mb4.4,baz=303,slow=4.6,SNR=25
CMIG Matias Romero 127.86 326 PKP PKPdf 20 09 49.0 -2.6
comp=Z,3.3nm,0.8s,baz=8.8,slow=2.5,SNR=6.2

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*NEIC **07** 20:05:05.6±0.9, 8°.64N×73°.75W, h35km, Error ellipse: s-maj=23.1km s-min=15.7km az=150.0*
*IDC **07** 20:05:05.2±0.9, 8°.57N×73°.73W, h32km±6km, mb3.1/2, mb1 3.6/5, mb1mx3.4/23, mbtmp3.5/5, ML2.9/3, MS3.1/2, Ms1 3.1/2, ms1mx3.0/15, Error ellipse: s-maj=20.3km s-min=14.9km az=163.0*
ISC 07 20:05:03.1±2.1, 8.7N±0°.1×73.78W±0°.08, h11km±13km, n9, σ1$07/12, mb3.3/2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**3.12**	**86**	Pn	**Pn**	**20 05 52.6**	**+0.3**
	7.1nm,0.3s,baz=309,slow=18,SNR=37						
SDV				Pg	**Pg**	**20 06 02.7**	**-0.2**
	21nm,0.3s,baz=310,slow=16,SNR=17						
SDV				Sn	**Sn**	**20 06 31.2**	**+1.6**
	22nm,0.3s,baz=47,slow=23,SNR=14						
SDV				Lg		20 06 43.8	
	50nm,0.3s,baz=322,slow=19,SNR=12						
SDV				LR	LR	20 07 15.1	
	comp=Z,216nm,19.6s,baz=143,slow=42						
SDV	**Santo Domingo**	**3.12**	**86**	Pn	**Pn**	**20 05 52.6**	**+0.3**
SDV				Pg	**Pg**	**20 06 02.7**	**-0.2**
SDV				Sn	**Sn**	**20 06 31.2**	**+1.6**
SDV				Lg		20 06 43.8	
SDV				LR	LR	20 07 15.1	
ROSC	**El Rosal**	**3.85**	**188**	Pn	**Pn**	**20 06 01.9**	**-0.4**
	2.9nm,0.3s,baz=90,slow=16,SNR=2.3						
ROSC				LR	LR	20 06 57.5	
	comp=Z,332nm,18.5s,baz=198,slow=30						
ROSC				Lg		20 07 04.9	
	7.4nm,0.3s,baz=84,slow=19,SNR=6.0						
ROSC	**El Rosal**	**3.85**	**188**	*eP*	**Pn**	**20 06 02.5**	**+0.2**
ROSC				LR	LR	20 06 57.5	
ROSC				Lg		20 07 04.9	
PCRV	**Puerto La Cruz**	**9.14**	**80**	Pn	**Pn**	**20 07 15.7**	**+0.6**
	0.5nm,0.3s,baz=333,slow=6.8,SNR=1.5						
PCRV				Sn	**Sn**	**20 08 56.5**	**-1.7**
	0.9nm,0.3s,baz=73,slow=22,SNR=1.5						
YKA	**Yellowknife Ar**	**61.29**	**340**	P	**P**	**20 15 18.7**	**+0.4**
	0.3nm,0.5s,mb3.7,baz=131,slow=7.3,SNR=5.0						
YKA				pP	pP	20 15 27.8	+6.0
	0.2nm,0.5s,baz=127,slow=6.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**74.01**	**79**	P	**P**	**20 16 36.2**	**-3.3**
	0.1nm,0.5s,mb3.0,baz=270,slow=5.8,SNR=2.8						
ASAR	**Alice Springs**	**149.61**	**237**	PKPbc	PKPbc	20 24 52.8	-0.9
	0.2nm,0.7s,baz=126,slow=3.0,SNR=1.3						
ASAR				pPKPbc	pPKPbc	20 25 02.1	+4.7
	0.3nm,0.6s,baz=116,slow=3.3,SNR=3.0						
WRA	**Warramunga Arr**	**150.60**	**245**	PKPbc	PKPbc	20 24 54.0	-2.1
	0.2nm,0.5s,baz=104,slow=2.7,SNR=1.9						
WRA				pPKPbc	pPKPbc	20 25 05.4	+5.5
	0.5nm,0.5s,baz=102,slow=2.6,SNR=3.2						

IDC 07 20:16:51.4±2.3, 16°.13S×168°.54E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/17, mbtmp4.0/5, Error ellipse: s-maj=78.3km s-min=33.6km az=137.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.07**	**233**	P	P	20 22 54.7	+1.1
	0.5nm,0.4s,baz=84,slow=12,SNR=7.2						
WRA	**Warramunga Arr**	**32.71**	**258**	P	P	20 23 24.7	-1.2
	0.5nm,0.5s,baz=84,slow=8.3,SNR=8.4						
ASAR	**Alice Springs**	**33.36**	**251**	P	P	20 23 31.4	-0.2
	6.2nm,0.5s,baz=78,slow=8.8,SNR=226						
ASAR				PcP	PcP	20 26 12.1	-1.4
	0.3nm,0.7s,baz=64,slow=3.1,SNR=4.1						
FITZ	**Fitzroy Crossi**	**40.99**	**261**	P	P	20 24 36.5	+0.1
	1.5nm,0.4s,baz=100,slow=10,SNR=15						
SONM	**Songino Array**	**84.34**	**323**	P	P	20 29 27.0	+1.7
	0.4nm,0.8s,baz=117,slow=5.0,SNR=3.0						
ARCES	**ARCESS Array B**	**121.91**	**346**	PKP	PKPdf	20 35 46.1	-0.9
	1.4nm,0.9s,baz=48,slow=1.3,SNR=5.9						

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*ISCJB **07** 20:19:17.3±1.7, 36°.16N±0°.04×142°.21E±0°.06, h11km±11km, mb3.8/18, Error ellipse: s-maj=8.0km s-min=6.1km az=19.6*
*IDC **07** 20:19:17.8±1.0, 36°.17N×142°.15E, h0km, mb3.7/10, mb1 3.8/14, mb1mx3.7/28, mbtmp3.7/14, ML3.7/4, Error ellipse: s-maj=22.5km s-min=19.0km az=82.0*
*MOS **07** 20:19:20.3±1.0, 36°.16N×142°.14E, h33km, mb4.3/6, Error ellipse: s-maj=15.7km s-min=10.2km az=43.7*
*BJI **07** 20:19:20.1, 35°.62N×141°.74E, h19km, mb4.2/3*
*JMA **07** 20:19:20.8±0.2, 36°.16N×142°.00E, h70km, M3.7*
*NEIC **07** 20:19:22.9±0.6, 36°.09N×142°.05E, h35km, mb4.3/5, Error ellipse: s-maj=13.7km s-min=11.0km az=220.0*
ISC 07 20:19:18.0±1.4, 36°.15N±0°.04×142°.13E±0°.06, h3km±8km, n41, σ0$77/47, mb3.8/18, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.12**	**247**	P	**Pg**	**20 19 39.9**	**+0.4**
CHOJ				S	**Sg**	**20 19 54.5**	**+0.4**
JHO	**Hitachi**	**1.34**	**291**	P	**Pn**	**20 19 42.2**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.44**	**312**	P	**Pn**	**20 19 43.8**	**-1.1**
JFK	**Kawauchi**	**1.58**	**321**	P	**Pn**	**20 19 46.1**	**-0.8**
BSO1	**Boso 1**	**1.76**	**213**	P	**Pn**	**20 19 49.4**	**0.0**
BSO1				S	**Sn**	**20 20 11.4**	**-1.0**
BSO3	**Boso 3**	**1.89**	**225**	P	**Pn**	**20 19 50.4**	**-0.7**
BSO3				S	**Sn**	**20 20 15.2**	**-0.2**
JFT	**Otama**	**1.99**	**314**	P	**Pn**	**20 19 52.7**	**+0.2**
JFT				*e*S	**Sn**	**20 20 16.6**	**-1.3**
JMM	**Marumori**	**2.02**	**328**	P	**Pn**	**20 19 52.7**	**-0.3**
JAG	**Ashikaga**	**2.18**	**278**	P	**Pn**	**20 19 54.3**	**-0.9**
MJAR	**Matsushiro Arr**	**3.19**	**278**	Pn	**Pn**	**20 20 08.7**	**-0.4**
	11nm,0.3s,baz=104,slow=8.0,SNR=83						
MJAR				Sn	**Sn**	**20 20 48.6**	**+0.9**
	6.1nm,0.3s,baz=157,slow=23,SNR=6.6						
MAJO	**Matsushiro**	**3.19**	**278**	*eP*	**Pn**	**20 20 09.4**	**+0.3**
MAT	**Matsushiro**	**3.19**	**278**	P	**Pn**	**20 20 08.9**	**-0.2**
MAT				S	**Sn**	**20 20 48.6**	**+0.9**
JHJ	**Hachijo jima 2**	**3.59**	**213**	Pn	**Pn**	**20 20 15.0**	**+0.4**
	34nm,0.3s,baz=42,slow=17,SNR=3.1						
JHJ				Sn	**Sn**	**20 20 52.6**	**-4.8**
	62nm,0.3s,baz=262,slow=24,SNR=11						
ASAJ	**Asahikawa**	**7.97**	**2**	P	**Pn**	**20 21 15.0**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.97**	**2**	Pn	**Pn**	**20 21 14.9**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=300,slow=7.6,SNR=8.3						
CBIJ	**Chichi jima**	**9.02**	**180**	Sn	**Sn**	**20 23 01.6**	**-10**
	comp=Z,4.4nm,0.3s,baz=237,slow=22,SNR=2.2						
KSRS	**Korea Array**	**11.47**	**281**	Pn	**Pn**	**20 22 03.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=91,slow=14,SNR=5.7						
ENH	**Enshi**	**27.85**	**267**	*eP*	**P**	**20 25 07.5**	**-1.3**
	comp=Z,5.6nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**28.34**	**305**	*eP*	**P**	**20 25 14.2**	**+1.3**
BOD	**Bodaibo**	**28.59**	**328**	*eP*	**P**	**20 25 14.7**	**-0.4**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
SONM	**Songino Array**	**28.76**	**305**	P	**P**	**20 25 17.2**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.9,baz=92,slow=9.4,SNR=12						
ZAK	**Zakamensk**	**31.27**	**309**	*eP*	**P**	**20 25 38.5**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
GTA	**Gaotai**	**33.38**	**289**	*eP*	**P**	**20 25 58.3**	**+0.7**
GTA				pP	pP	20 26 02.8	+4.4
GTA				sP	sP	20 26 05.9	+7.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**41.85**	**257**	P	**P**	**20 27 09.7**	**+0.3**
	comp=Z,0.1nm,0.3s,mb2.9,baz=48,slow=5.3,SNR=4.5						
LSA	**Lhasa**	**42.88**	**277**	*eP*	**P**	**20 27 19.6**	**+1.9**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
LSA	**Lhasa**	**42.88**	**277**	*eP*	**P**	**20 27 19.6**	**+1.8**
	comp=Z,1.6nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**42.94**	**313**	P	**P**	**20 27 18.3**	**+0.4**
	comp=Z,0.8nm,0.5s,mb3.7,baz=87,slow=6.1,SNR=6.7						
MKAR	**Makanchi Array**	**45.08**	**303**	P	**P**	**20 27 35.3**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=90,slow=8.4,SNR=13						
KURK	**Kurchatov**	**46.94**	**309**	*eP*	**P**	**20 27 49.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**46.94**	**309**	*eP*	**P**	**20 27 49.4**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**51.42**	**299**	*eP*	**P**	**20 28 24.7**	**+0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
AAK	**Ala-Archa**	**51.42**	**299**	*eP*	**P**	**20 28 24.7**	**+0.4**
	comp=Z,1.1nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**51.60**	**313**	P	**P**	**20 28 25.9**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=65,slow=8.1,SNR=4.2						
WRAB	**Tennant Creek**	**56.26**	**189**	P	**P**	**20 28 58.3**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
WRAB	**Tennant Creek**	**56.26**	**189**	P	**P**	**20 28 58.3**	**-1.4**
	comp=Z,3.9nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**56.27**	**189**	P	**P**	**20 28 59.5**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.7,baz=5.9,slow=7.2,SNR=2.9						
ASAR	**Alice Springs**	**59.99**	**189**	P	**P**	**20 29 27.1**	**+1.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=15,slow=11,SNR=6.3						
YKA	**Yellowknife Ar**	**64.28**	**30**	P	**P**	**20 29 54.8**	**+0.5**
	comp=Z,0.2nm,0.7s,mb3.2,baz=307,slow=6.1,SNR=2.7						
NOA	**NORSAR Array B**	**75.23**	**338**	P	**P**	**20 31 02.0**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=39,slow=5.8,SNR=3.9						
AKASG	**Malin Array Be**	**75.35**	**323**	P	**P**	**20 31 02.5**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=48,slow=5.4,SNR=5.4						
LPAZ	**La Paz**	**146.62**	**62**	PKPbc	PKPbc	20 39 00.8	-0.7
	comp=Z,0.9nm,0.5s,baz=354,slow=1.8,SNR=2.4						

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*IDC **07** 20:34:14.8±0.8, 36°.30N×141°.54E, h0km, mb3.9/17, mb1 4.0/22, mb1mx3.9/32, mbtmp3.9/22, ML3.7/4, MS3.7/1, Ms1 3.7/1, ms1mx3.1/42, Error ellipse: s-maj=21.5km s-min=14.0km az=82.0*
*ISCJB **07** 20:34:16.6±1.1, 36°.30N±0°.04×141°.58E±0°.06, h25km±6km, mb3.9/26, Error ellipse: s-maj=8.2km s-min=6.4km az=8.4*
*MOS **07** 20:34:17.4±0.8, 36°.32N×141°.59E, h33km, mb4.4/3, Error ellipse: s-maj=16.2km s-min=10.5km az=43.4*
*JMA **07** 20:34:19.0±0.1, 36°.30N×141°.39E, h50km±3km, M3.9*
JMA Felt I J1.
*BJI **07** 20:34:19.9, 36°.30N×141°.40E, h40km, mB5.1/5, mb4.3/10, Ms4.2/6, Ms7 4.1/6*
*NEIC **07** 20:34:21.0±1.7, 36°.27N×141°.37E, h40km±12km, mb4.3/5, Error ellipse: s-maj=14.9km s-min=9.0km az=77.0*
NEIC Recorded [1 JMA] in Ibaraki and Tochigi.
ISC 07 20:34:17.6±1.4, 36°.32N±0°.03×141°.51E±0°.05, h17km±8km, n47, σ0$75/57, mb3.9/26, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.81**	**291**	⇓ P	**Pb**	**20 34 33.0**	**-0.2**
CHOJ	**Chosi**	**0.81**	**221**	P	**Pb**	**20 34 33.6**	**+0.4**
CHOJ				*e*S	**Sb**	**20 34 43.6**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.96**	**324**	P	**Pb**	**20 34 35.9**	**+0.1**
JYT	**Yasato**	**1.07**	**265**	P	**Pb**	**20 34 36.5**	**-1.0**
JYT				*e*S	**Sb**	**20 34 50.4**	**-0.8**
JFK	**Kawauchi**	**1.16**	**334**	P	**Pn**	**20 34 38.4**	**-0.6**
JFT	**Otama**	**1.52**	**322**	P	**Pn**	**20 34 44.6**	**+0.7**
JMM	**Marumori**	**1.64**	**340**	P	**Pn**	**20 34 45.6**	**0.0**
JAG	**Ashikaga**	**1.66**	**274**	P	**Pn**	**20 34 45.1**	**-0.8**
MJAR	**Matsushiro Arr**	**2.67**	**276**	Pn	**Pn**	**20 34 60.0**	**+0.2**
	20nm,0.3s,baz=111,slow=9.1,SNR=58						
MJAR				Sn	**Sn**	**20 35 32.7**	**+1.1**
	20nm,0.3s,baz=120,slow=18,SNR=2.8						
MJAR	**Matsushiro Arr**	**2.67**	**276**	Pn	**Pn**	**20 34 60.0**	**+0.2**
MJAR				Sn	**Sn**	**20 35 32.8**	**+1.1**
MAJO	**Matsushiro**	**2.67**	**276**	*eP*	**Pn**	**20 35 00.3**	**+0.5**
MAT	**Matsushiro**	**2.67**	**276**	P	**Pn**	**20 35 00.4**	**+0.6**
MAT				S	**Sn**	**20 35 31.2**	**-0.5**
JHJ	**Hachijo jima 2**	**3.50**	**204**	Pn	**Pn**	**20 35 11.0**	**-0.1**
	41nm,0.3s,baz=252,slow=22,SNR=14						
JHJ				Sn	**Sn**	**20 35 52.7**	**+0.6**
	65nm,0.3s,baz=68,slow=22,SNR=5.7		

HHC			ScP	ScP	20 46 47.4	-2.5
HHC			PcS	PcS	20 46 52.9	+1.1
HHC			pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2					
HHC			pmax	pmax		
	comp=Z,230nm,6.2s					
HHC			LR	LR		
	comp=N,230nm,12.7s					
HHC			LR	LR		
	comp=E,290nm,13.9s					
HHC			LR	LR		
	comp=Z,410nm,14.3s					
XAN	**Xi'an**	**26.67 275**	P	**P**	**20 39 54.6**	**-0.9**
XAN			pP	pP	20 40 03.2	+2.4
XAN			sP	sP	20 40 07.2	+4.2
XAN			S	**S**	**20 44 29.0**	**-0.9**
XAN			sS	sS	20 44 44.0	+5.3
XAN			pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7					
XAN			pmax	pmax		
	comp=Z,41nm,12.5s					
ENH	**Enshi**	**27.36 267**	*e*P	**P**	**20 40 00.3**	**-1.5**
	comp=Z,4.9nm,0.7s,mb4.2					
BOD	**Bodaibo**	**28.17 328**	*e*P	**P**	**20 40 08.2**	**-0.5**
BOD			pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9					
SONM	**Songino Array**	**28.25 305**	P	**P**	**20 40 09.2**	**-0.3**
	comp=Z,1.3nm,0.6s,mb3.7,baz=106,slow=8.6,SNR=12					
LZH	**Lanzhou**	**30.27 281**	*e*P	**P**	**20 40 28.5**	**+0.9**
LZH			pP	pP	20 40 39.0	+6.1
LZH			sP	sP	20 40 43.2	+8.1
LZH			pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7					
KMI	**Kunming**	**34.94 262**	P	**P**	**20 41 08.4**	**-0.1**
KMI			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3					
CMAR	**Chiang Mai Arr**	**41.40 256**	P	**P**	**20 42 03.1**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.0,baz=51,slow=7.2,SNR=2.5					
LSA	**Lhasa**	**42.35 276**	P	**P**	**20 42 10.9**	**+0.1**
LSA			pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9					
LSA	**Lhasa**	**42.35 276**	P	**P**	**20 42 10.9**	**+0.1**
	comp=Z,3.1nm,1.0s,mb3.9					
ZALV	**Zalesovo Beam**	**42.45 313**	P	**P**	**20 42 11.3**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.0,baz=88,slow=7.0,SNR=9.7					
MKAR	**Makanchi Array**	**44.56 303**	P	**P**	**20 42 28.4**	**0.0**
	comp=Z,1.9nm,0.9s,mb3.9,baz=92,slow=8.5,SNR=7.3					
KURK	**Kurchatov**	**46.43 309**	P	**P**	**20 42 43.5**	**+0.4**
KURK			pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3					
KURK	**Kurchatov**	**46.43 309**	P	**P**	**20 42 43.5**	**+0.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=84,slow=8.0,SNR=15					
KURK	**Kurchatov**	**46.43 309**	*e*P	**P**	**20 42 42.8**	**-0.3**
	comp=Z,8.0nm,0.9s,mb4.7					
AAK	**Ala-Archa**	**50.90 299**	P	**P**	**20 43 18.6**	**+1.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=30,slow=22,SNR=2.6					
BVAR	**Borovoye Array**	**51.11 313**	P	**P**	**20 43 18.9**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=87,slow=9.1,SNR=3.1					
AML	**Almayashu**	**51.61 299**	*e*P	**P**	**20 43 24.4**	**+1.5**
	comp=Z,3.3nm,0.7s,mb4.4					
FITZ	**Fitzroy Crossi**	**56.17 198**	P	**P**	**20 43 56.5**	**+0.1**
	comp=Z,1.9nm,0.9s,mb4.1,baz=339,slow=7.8,SNR=1.9					
WRA	**Warramunga Arr**	**56.37 188**	P	**P**	**20 43 57.1**	**-0.6**
	comp=Z,1.6nm,0.8s,mb4.1,baz=6.9,slow=7.8,SNR=7.9					
ABKAR	**Akbulak array**	**58.46 310**	*e*P	**P**	**20 44 11.8**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.2					
ASAR	**Alice Springs**	**60.09 188**	P	**P**	**20 44 23.6**	**-0.2**
	comp=Z,0.6nm,0.8s,mb3.7,baz=16,slow=6.8,SNR=6.5					
ARCES	**ARCESS Array B**	**64.69 340**	P	**P**	**20 44 54.5**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=52,slow=7.9,SNR=5.9					
FINES	**FINESS Array B**	**69.48 332**	P	**P**	**20 45 24.7**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=48,slow=5.7,SNR=5.6					
NB2	**NORSAR Subarra**	**74.87 337**	P	**P**	**20 45 57.3**	**+0.5**
	comp=Z,1.3nm,0.7s,mb4.0,baz=43,slow=6.2					
NOA	**NORSAR Array B**	**74.87 337**	P	**P**	**20 45 57.0**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=40,slow=5.9,SNR=3.4					
AKASG	**Malin Array Be**	**74.91 322**	P	**P**	**20 45 56.8**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=47,slow=6.2,SNR=11					
NVAR	**Mina Array Bea**	**75.35 53**	P	**P**	**20 46 01.4**	**+1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=338,slow=6.8,SNR=2.1					
BRTR	**Keskin Array B**	**79.38 312**	P	**P**	**20 46 23.3**	**+0.8**
	comp=Z,0.6nm,0.9s,mb3.5,baz=42,slow=4.5,SNR=2.3					
GERES	**GERESS Array B**	**83.36 328**	P	**P**	**20 46 43.9**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=70,slow=13,SNR=2.4					

*IDC **07** 20:35:01.7±3.6, 3°.87N×95°.15E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, ML3.3/2, MS3.4/1, Ms1 3.4/1, ms1mx3.2/29, Error ellipse: s-maj=95.1km s-min=29.8km az=67.0*

*NEIC **07** 20:35:07.8±1.7, 3°.94N×95°.36E, h35km, mb4.3/1, Error ellipse: s-maj=40.0km s-min=12.3km az=68.0*

ISC 07 20:35:04.5±1.4, 3°.8N±0°.1×94°.7E±0°.1, h35km, n6, σ0°51/7, mb3.7/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.33 103**		P	**Pn**	**20 36 03.5**	**-4.4**
	2.2nm,0.3s,baz=305,slow=14,SNR=4.8						
PSI				Sn	**Sn**	**20 36 57.4**	**+0.2**
	1.8nm,0.3s,baz=206,slow=22,SNR=5.6						
PSI				LR	LR	20 37 51.5	
	comp=Z,468nm,18.2s,baz=333,slow=43						
CMAR	**Chiang Mai Arr**	**15.16**	**16**	Pn	**Pn**	**20 38 35.6**	**-0.6**
	0.1nm,0.3s,baz=205,slow=12,SNR=2.8						
SONM	**Songino Array**	**45.03**	**11**	P	**P**	**20 43 17.6**	**+0.9**
	0.4nm,0.8s,mb3.3,baz=196,slow=7.2,SNR=2.4						
WRA	**Warramunga Arr**	**45.52 123**		P	**P**	**20 43 20.7**	**-0.3**
	0.3nm,0.5s,mb3.4,baz=302,slow=9.1,SNR=2.4						
WRAB	**Tennant Creek**	**45.52 123**		*e*P	**P**	**20 43 20.9**	**-0.2**
	4.7nm,1.1s,mb4.3						
ASAR	**Alice Springs**	**46.94 128**		P	**P**	**20 43 32.2**	**+0.1**
	0.5nm,0.4s,mb3.8,baz=300,slow=7.3,SNR=14						

*ISCJB **07** 20:37:42.6±1.4, 36°.13N±0°.04×142°.15E±0°.07, h18km±8km, mb3.9/15, Error ellipse: s-maj=9.7km s-min=6.7km az=173.2*

*IDC **07** 20:37:42.1±1.4, 36°.13N×142°.06E, h0km, mb3.7/9, mb1 3.8/14, mb1mx3.7/30, mbtmp3.8/14, ML3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/41, Error ellipse: s-maj=34.9km s-min=18.2km az=78.0*

*BJI **07** 20:37:44.7, 36°.12N×142°.22E, h37km, mB5.0/6, mb4.2/8, Ms4.2/4, Ms7 4.0/4*

*JMA **07** 20:37:44.8±0.3, 36°.13N×142°.01E, h62km, M3.4*

*NEIC **07** 20:37:49.0±3.1, 36°.08N×141°.80E, h44km±20km, mb4.1/4, Error ellipse: s-maj=32.9km s-min=13.7km az=74.0*

ISC 07 20:37:45.1±1.7, 36°.12N±0°.04×142°.02E±0°.07, h19km±11km, n33, σ1°00/41, mb3.9/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.03 246**		P	**Pb**	**20 38 03.6**	**-0.7**
CHOJ				S	**Sb**	**20 38 17.7**	**+0.2**
JHO	**Hitachi**	**1.27 293**		P	**Pn**	**20 38 05.8**	**-2.0**
JFK	**Kawauchi**	**1.55 324**		P	**Pn**	**20 38 10.0**	**-1.6**
JFK				S	**Sn**	**20 38 29.6**	**-1.5**
BSO1	**Boso 1**	**1.69 210**		*e*S	**Sn**	**20 38 35.4**	**+0.6**
JFT	**Otama**	**1.94 316**		P	**Pn**	**20 38 17.4**	**+0.4**
JFT				S	**Sn**	**20 38 41.5**	**+0.6**
JMM	**Marumori**	**2.00 331**		P	**Pn**	**20 38 18.0**	**+0.2**
MJAR	**Matsushiro Arr**	**3.11 279**		Pn	**Pn**	**20 38 33.2**	**+0.1**
	3.7nm,0.3s,baz=102,slow=8.0,SNR=10						
MJAR				LR	LR	20 39 50.1	
	comp=Z,626nm,18.2s,baz=50,slow=41						
MJAR	**Matsushiro Arr**	**3.11 279**		Pn	**Pn**	**20 38 33.2**	**+0.1**
MJAR				LR	LR	20 39 50.1	
MAJO	**Matsushiro**	**3.11 279**		*e*P	**Pn**	**20 38 33.2**	**+0.2**
MAT	**Matsushiro**	**3.11 279**		P	**Pn**	**20 38 33.2**	**+0.1**
MAT				S	**Sn**	**20 39 10.9**	**+1.2**
JHJ	**Hachijo jima 2**	**3.52 212**		**Pn**	**Pn**	**20 38 39.3**	**+0.6**
	22nm,0.3s,baz=24,slow=18,SNR=2.0						
JHJ				Sn	**Sn**	**20 39 16.5**	**-3.3**
	59nm,0.3s,baz=312,slow=24,SNR=6.2						
ASAJ	**Asahikawa**	**8.00**	**3**	Pn	**Pn**	**20 39 40.1**	**-0.1**
	0.5nm,0.3s,baz=207,slow=11,SNR=6.0						
CBIJ	**Chichi jima**	**9.00 179**		Pn	**Pn**	**20 39 52.9**	**-1.1**
	2.8nm,0.3s,baz=263,slow=19,SNR=5.4						
CBIJ				Sn	**Sn**	**20 41 25.2**	**-10**
	5.9nm,0.3s,baz=127,slow=22,SNR=1.5						
KSRS	**Korea Array**	**11.38 281**		Pn	**Pn**	**20 40 27.7**	**+1.1**
	0.1nm,0.3s,baz=99,slow=16,SNR=5.1						
HHC	**Hu-ho-hao-te**	**24.24 290**		*e*P	**P**	**20 43 01.4**	**+0.7**
HHC				pP		20 43 10.8	
HHC				sP	sP	20 43 14.9	+6.0
HHC				PP		20 43 36.5	
HHC				PcP	PcP	20 46 44.8	+4.2
HHC				S	**S**	**20 47 16.4**	**-1.8**
HHC				sS	sS	20 47 29.1	+1.3
HHC				SS		20 48 08.0	
HHC				ScP	ScP	20 50 18.2	+0.1
HHC				PcS	PcS	20 50 24.2	+3.9
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,210nm,6.9s						
HHC				LR	LR		
	comp=N,260nm,15.5s						
HHC				LR	LR		
	comp=E,250nm,14.5s						
HHC				LR	LR		
	comp=Z,290nm,14.7s						
XAN	**Xi'an**	**27.10 275**		P	**P**	**20 43 26.2**	**-0.4**
XAN				pP	pP	20 43 35.0	+2.5
XAN				sP	sP	20 43 38.9	+4.0
XAN				S	**S**	**20 48 02.8**	**-1.0**
XAN				sS	sS	20 48 17.7	+4.2
XAN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ENH	**Enshi**	**27.76 267**		*e*P	**P**	**20 43 31.4**	**-1.2**
	comp=Z,3.1nm,0.7s,mb4.0						
SONM	**Songino Array**	**28.70 305**		P	**P**	**20 43 41.2**	**+0.4**
	comp=Z,2.7nm,1.0s,mb4.0,baz=102,slow=9.3,SNR=12						
LZH	**Lanzhou**	**30.71 281**		*e*P	**P**	**20 44 02.5**	**+3.7**
LZH				pP	pP	20 44 13.0	+8.3
LZH				sP	sP	20 44 17.5	+10
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
WMQ	**Urumqi**	**41.69 298**		*e*P	**P**	**20 45 34.7**	**+2.2**
CMAR	**Chiang Mai Arr**	**41.75 257**		P	**P**	**20 45 32.1**	**-1.1**
	comp=Z,0.6nm,0.8s,mb3.3,baz=48,slow=7.5,SNR=4.5						
LSA	**Lhasa**	**42.79 276**		*e*P	**P**	**20 45 42.1**	**+0.5**
	comp=Z,0.8nm,0.4s,mb3.8						
ZALV	**Zalesovo Beam**	**42.89 313**		P	**P**	**20 45 42.0**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.7,baz=110,slow=6.5,SNR=5.2						
MKAR	**Makanchi Array**	**45.02 303**		P	**P**	**20 45 59.6**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.8,baz=97,slow=9.3,SNR=5.5						
KURK	**Kurchatov**	**46.88 309**		P	**P**	**20 46 14.0**	**+0.1**
	comp=Z,1.9nm,0.9s,mb4.0,baz=83,slow=7.9,SNR=7.4						
KURK	**Kurchatov**	**46.88 309**		*e*P	**P**	**20 46 12.5**	**-1.4**
	comp=Z,2.1nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**51.55 313**		P	**P**	**20 46 50.0**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=69,slow=8.1,SNR=3.5						
BVAR	**Borovoye Array**	**51.55 313**		P	**P**	**20 46 50.0**	**+0.5**
AML	**Almayashu**	**52.07 299**		*e*P	**P**	**20 46 55.4**	**+1.8**
	comp=Z,1.9nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**56.23 189**		P	**P**	**20 47 23.7**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=4.8,slow=7.1,SNR=2.8						
ABKAR	**Akbulak array**	**58.90 311**		*e*P	**P**	**20 47 42.5**	**-0.2**
ASAR	**Alice Springs**	**59.96 189**		P	**P**	**20 47 51.2**	**+1.1**
	comp=Z,0.3nm,0.8s,mb3.4,baz=22,slow=10.0,SNR=2.1						
NOA	**NORSAR Array B**	**75.22 338**		P	**P**	**20 49 26.2**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=37,slow=5.8,SNR=3.2						

*IDC **07** 20:38:07.7±0.7, 16°.09N×148°.08E, h0km, mb4.1/18, mb1 4.2/19, mb1mx4.1/29, mbtmp4.1/19, ML4.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, Error ellipse: s-maj=22.4km s-min=13.7km az=93.0*

*ISCJB **07** 20:38:09.7±5.8, 16°.06N±0°.06×148°.1E±0°.1, h26km±40km, mb4.1/23, Error ellipse: s-maj=21.5km s-min=10.9km az=2.2*

*NEIC **07** 20:38:12.9±0.4, 16°.04N×148°.07E, h35km, mb4.2/4, Error ellipse: s-maj=10.9km s-min=7.1km az=98.0*

ISC 07 20:38:12.6±5.4, 16°.04N±0°.06×148°.0E±0°.1, h32km±37km, n40, σ0°96/35, mb4.1/23, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.89 232**		Pn	**Pn**	**20 39 10.2**	**0.0**
	39nm,0.3s,baz=295,slow=4.6,SNR=19						
GUMO				Sn	**Sn**	**20 39 52.5**	**-2.3**
	20nm,0.3s,baz=55,slow=21,SNR=5.5						
GUMO				LR	LR	20 40 22.4	
	comp=Z,171nm,18.4s,baz=222,slow=34						
JOW	**Kunigami**	**21.25 304**		P	**P**	**20 42 56.4**	**+0.2**
	13nm,0.9s,mb4.3,baz=149,slow=5.9,SNR=2.7						
MJAR	**Matsushiro Arr**	**22.20 339**		P	**P**	**20 43 05.4**	**-0.9**
	2.7nm,0.7s,mb3.8,baz=173,slow=11,SNR=4.7						
MAT	**Matsushiro**	**22.20 339**		P	**P**	**20 43 05.5**	**-0.8**
SSLB	**Suanglung**	**26.55 291**		*e*P	**P**	**20 43 48.9**	**+1.2**
	19nm,0.9s,mb4.6						
KSRS	**Korea Array**	**27.75 324**		P	**P**	**20 43 57.2**	**-1.2**
	1.3nm,0.6s,mb3.7,baz=148,slow=9.6,SNR=5.2						
ENH	**Enshi**	**37.95 299**		*e*P	**P**	**20 45 28.7**	**+1.3**
WRAB	**Tennant Creek**	**38.18 201**		*e*P	**P**	**20 45 29.5**	**+0.1**
WRA	**Warramunga Arr**	**38.20 201**		P	**P**	**20 45 29.6**	**+0.1**
	4.8nm,0.8s,mb4.3,baz=23,slow=9.1,SNR=16						
FITZ	**Fitzroy Crossi**	**40.45 214**		P	**P**	**20 45 47.6**	**-0.8**
	2.8nm,0.8s,mb4.0,baz=32,slow=14,SNR=2.4						
ASAR	**Alice Springs**	**41.80 200**		P	**P**	**20 45 59.5**	**+0.1**
	2.7nm,0.7s,mb4.0,baz=24,slow=8.6,SNR=25						
SONM	**Songino Array**	**46.59 322**		P	**P**	**20 46 37.5**	**+0.1**
	0.7nm,0.5s,mb3.8,baz=134,slow=8.2,SNR=6.8						
SONM				PcP	PcP	20 48 12.5	+1.3
	0.4nm,0.8s,baz=99,slow=1.1,SNR=2.4						
CMAR	**Chiang Mai Arr**	**46.81 280**		P	**P**	**20 46 40.8**	**+1.1**
	1.1nm,0.5s,mb4.0,baz=74,slow=6.5,SNR=9.5						
STKA	**Stephens Creek**	**48.03 187**		P	**P**	**20 46 49.7**	**+0.9**
	1.3nm,0.8s,mb4.0,baz=351,slow=13,SNR=3.6						
STKA	**Stephens Creek**	**48.03 187**		P	**P**	**20 46 49.7**	**+0.9**
BILL	**Bilibino**	**53.28**	**8**	*e*P	**P**	**20 47 28.4**	**+0.4**
	1.6nm,0.8s,mb4.0						
LSA	**Lhasa**	**53.65 295**		P	**P**	**20 47 33.2**	**+1.8**
LSA	**Lhasa**	**53.65 295**		*e*P	**P**	**20 47 33.6**	**+2.3**
TIXI	**Tiksi**	**56.76 353**		*e*P	**P**	**20 47 52.6**	**-0.5**
	1.8nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**56.89 211**		P	**P**	**20 47 54.9**	**+0.4**
	3.5nm,0.5s,mb4.6,baz=36,slow=8.7,SNR=5.5						
NWAO	**Narrogin (SRO)**	**56.89 211**		P	**P**	**20 47 54.9**	**+0.4**
ZALV	**Zalesovo Beam**	**61.46 323**		P	**P**	**20 48 26.2**	**+0.3**
	0.4nm,0.5s,mb3.9,baz=95,slow=8.7,SNR=2.4						
MKAR	**Makanchi Array**	**61.89 315**		P	**P**	**20 48 30.6**	**+1.6**
	0.3nm,0.4s,mb3.8,baz=99,slow=6.2,SNR=5.4						
KURK	**Kurchatov**	**64.72 319**		P	**P**	**20 48 47.7**	**+0.2**
	4.8nm,0.8s,mb4.6,baz=96,slow=7.2,SNR=17						
KURK	**Kurchatov**	**64.72 319**		*e*P	**P**	**20 48 47.5**	**-0.1**
BVAR	**Borovoye Array**	**69.92 321**		P	**P**	**20 49 20.6**	**+0.1**
	1.7nm,0.7s,mb4.1,baz=97,slow=8.2,SNR=11						
BVAR	**Borovoye Array**	**69.92 321**		P	**P**	**20 49 20.6**	**+0.1**
INK	**Inuvik**	**70.95**	**23**	P	**P**	**20 49 25.9**	**-0.6**
	1.0nm,0.7s,mb3.9,baz=284,slow=9.2,SNR=3.6						
INK	**Inuvik**	**70.95**	**23**	P	**P**	**20 49 25.9**	**-0.6**
ABKAR	**Akbulak array**	**76.78 318**		*e*P	**P**	**20 50 00.7**	**-0.4**
	0.3nm,0.4s,mb3.6						
YKA	**Yellowknife Ar**	**79.29**	**28**	P	**P**	**20 50 14.0**	**-0.7**
	0.8nm,0.6s,mb3.8,baz=285,slow=5.6,SNR=11						
NVAR	**Mina Array Bea**	**83.03**	**52**	P	**P**	**20 50 35.9**	**+0.8**
	0.4nm,0.5s,mb3.7,baz=260,slow=5.0,SNR=2.0						
JOF	**Joensuu**	**87.34 336**		*e*p	**P**	**20 50 54.1**	**-2.0**
	1.1nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**90.21 336**		P	**P**	**20 51 08.3**	**-1.3**
	1.1nm,0.4s,mb4.5,baz=65,slow=4.5,SNR=22						
TORD	**Torodi Ar. Bea**	**135.84 309**		PKP	PKPdf	20 57 30.5	-0.6
	0.3nm,0.8s,baz=52,slow=2.0,SNR=4.4						
DBIC	**Dimbokro**	**144.92 308**		PKP	PKPdf	20 57 46.2	-1.3
	5.1nm,0.6s,baz=56,slow=2.8,SNR=9.4						
KIC	**Kosan Boka**	**145.03 307**		*e*PKP1	PKPbc	20 57 46.8	-0.3
	15nm,0.9s						
TIC	**Toumodi**	**145.06 308**		*e*PKP1	PKPbc	20 57 46.8	-0.4
	21nm,0.4s						
LPAZ	**La Paz**	**145.31 96**		PKPbc	PKPbc	20 57 49.6	+1.7
	2.3nm,0.5s,baz=284,slow=3.2,SNR=10.0						
LIC	**Lamto**	**145.34 308**		*e*PKP1	PKPbc	20 57 47.7	-0.4
	56nm,1.0s						

*IDC **07** 20:57:54.6±1.6, 36°.25N×142°.04E, h0km, mb3.6/6, mb1 3.8/10, mb1mx3.6/29, mbtmp3.8/10, ML3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=43.0km s-min=19.3km az=76.0*

*JMA **07** 20:57:58.8±0.2, 36°.21N×141°.84E, h56km, M3.4*

*NEIC **07** 20:58:00.2±1.1, 36°.21N×141°.83E, h35km, mb4.2/1, Error ellipse: s-maj=26.4km s-min=15.9km az=47.0*

ISC 07 20:57:57.9±1.9, 36°.21N±0°.03×141°.90E±0°.06, h19km±13km, n24, σ0°85/33, mb3.7/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.98 239**		P	**Pb**	**20 58 16.0**	**-0.3**
CHOJ				S	**Sb**	**20 58 29.2**	**+0.3**
JHO	**Hitachi**	**1.14 291**		P	**Pn**	**20 58 17.7**	**-1.2**
JHO				*e*S	**Sb**	**20 58 33.1**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.25 315**		P	**Pn**	**20 58 19.6**	**-0.8**
JFK	**Kawauchi**	**1.42 325**		P	**Pn**	**20 58 22.5**	**-0.1**
JFK				*e*S	**Sn**	**20 58 40.4**	**-0.3**
BSO1	**Boso 1**	**1.73 206**		P	**Pn**	**20 58 27.8**	**+0.9**
BSO1				S	**Sn**	**20 58 49.6**	**+1.2**
BSO3	**Boso 3**	**1.81 219**		P	**Pn**	**20 58 28.1**	**+0.1**
JFT	**Otama**	**1.81 317**		P	**Pn**	**20 58 28.5**	**+0.5**
JFT				S	**Sn**	**20 58 51.2**	**+0.8**
JMM	**Marumori**	**1.87 332**		P	**Pn**	**20 58 29.9**	**+1.0**
JAG	**Ashikaga**	**1.98 277**		P	**Pn**	**20 58 29.8**	**-0.6**
JRY	**Ryogami san**	**2.43 266**		P	**Pn**	**20 58 36.3**	**-0.3**
JRY				*e*S	**Sn**	**20 59 04.8**	**-1.0**
MJAR	**Matsushiro Arr**	**2.99 277**		Pn	**Pn**	**20 58 44.8**	**+0.4**
	11nm,0.3s,baz=108,slow=8.4,SNR=77						
MAJO	**Matsushiro**	**3.00 277**		*e*P	**Pn**	**20 58 44.9**	**+0.6**
MAT	**Matsushiro**	**3.00 277**		P	**Pn**	**20 58 45.3**	**+1.0**
MAT				S	**Sn**	**20 59 20.7**	**+1.0**
JHJ	**Hachijo jima 2**	**3.54 210**		Pn	**Pn**	**20 58 52.2**	**+0.3**
	18nm,0.3s,baz=69,slow=22,SNR=6.4						
JHJ				Sn	**Sn**	**20 59 30.6**	**-2.7**
	39nm,0.3s,baz=288,slow=20,SNR=7.8						
JHJ				LR	LR	20 59 57.9	
	comp=Z,184nm,21.8s,baz=4.3,slow=34						
ASAJ	**Asahikawa**	**7.91**	**4**	Pn	**Pn**	**20 59 51.6**	**-0.3**
	0.3nm,0.3s,baz=192,slow=19,SNR=1.9						
CBIJ	**Chichi jima**	**9.09 178**		Pn	**Pn**	**21 00 07.3**	**-0.8**
	2.2nm,0.3s,baz=255,slow=19,SNR=6.3						
CBIJ				Sn	**Sn**	**21 01 41.2**	**-8.7**
	4.9nm,0.3s,baz=274,slow=19,SNR=2.0						
KSRS	**Korea Array**	**11.27 280**		Pn	**Pn**	**21 00 42.7**	**+4.8**
	0.2nm,0.3s,baz=89,slow=14,SNR=2.1						
ENH	**Enshi**	**27.66 267**		*e*P	**P**	**21 03 42.6**	**-1.9**
	3.4nm,0.5s,mb4.2						
SONM	**Songino Array**	**28.57 305**		P	**P**	**21 03 53.0**	**+0.5**
	1.3nm,0.8s,mb3.7,baz=106,slow=9.6,SNR=8.0						
ZALV	**Zalesovo Beam**	**42.76 313**		P	**P**	**21 05 53.4**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=95,slow=7.4,SNR=4.2						
MKAR	**Makanchi Array**	**44.89 303**		P	**P**	**21 06 11.8**	**+0.8**
	0.9nm,0.6s,mb3.8,baz=104,slow=7.1,SNR=5.8						
WRA	**Warramunga Arr**	**56.30 189**		P	**P**	**21 07 36.9**	**-0.4**
	0.4nm,0.6s,mb3.6,baz=5.3,slow=7.3,SNR=2.6						
ASAR	**Alice Springs**	**60.03 188**		P	**P**	**21 08 04.5**	**+1.1**
	0.4nm,0.8s,mb3.5,baz=12,slow=9.0,SNR=3.2						
AKASG	**Malin Array Be**	**75.19 323**		P	**P**	**21 09 38.1**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=44,slow=7.0,SNR=2.2						

*NIED **07** 21:07:00, 36°.10N×142°.00E, h35km, Mw4.1 Best double couple: M0 1.51000×10^15 NP1:φs343.00000°, δ72.00000°, λ59.00000°. NP2:φs226.00000°, δ35.00000°, λ148.00000°.*

*IDC **07** 21:07:26.7±1.0, 36°.05N×142°.15E, h0km, mb3.7/10, mb1 3.8/15, mb1mx3.8/29, mbtmp3.8/15, ML3.7/5, MS3.7/2, Ms1 3.7/2, ms1mx2.8/43, Error ellipse: s-maj=27.4km s-min=17.0km az=82.0*

*ISCJB **07** 21:07:30.2±0.9, 36°.11N±0°.03×142°.05E±0°.07, h36km±7km, mb3.9/18, Error ellipse: s-maj=9.2km s-min=5.6km az=4.0*

*JMA **07** 21:07:30.3±0.2, 36°.15N×142°.02E, h66km±5km, M3.7*

*NEIC **07** 21:07:33.0±1.9, 35°.97N×141°.90E, h42km±13km, mb4.1/7, Error ellipse: s-maj=16.1km s-min=8.5km az=90.0*

ISC 07 21:07:30.0±1.3, 36°.11N±0°.03×142°.04E±0°.05, h21km±9km, n47, σ0°90/58, mb3.9/18, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.04 247**		P	**Pb**	**21 07 49.4**	**0.0**
CHOJ				*e*S	**Sb**	**21 08 03.3**	**+0.6**
JHO	**Hitachi**	**1.29 293**	

*IDC **07** 21:13:28.6±3.0, 36°.06N×141°.95E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.4/27, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=65.8km s-min=25.8km az=63.0*
*ISCJB **07** 21:13:29.9±2.1, 36°.18N±0°.04×142°.01E±0°.09, h24km±20km, mb3.3/2, Error ellipse: s-maj=12.3km s-min=6.6km az=170.6*
*JMA **07** 21:13:31.7±0.2, 36°.24N×141°.87E, h61km, M2.9*
ISC 07 21:13:29.6±1.6, 36°.19N±0°.04×141°.99E±0°.07, h12km±8km, n16, σ0°93/24, mb3.3/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.03**	**242**	P	**Pg**	**21 13 49.7**	**+0.2**
CHOJ				S	**Sg**	**21 14 03.4**	**+0.5**
JHO	**Hitachi**	**1.22**	**291**	P	**Pn**	**21 13 51.0**	**-1.4**
JHO				S	**Sb**	**21 14 06.8**	**-1.4**
JFK	**Kawauchi**	**1.48**	**323**	P	**Pn**	**21 13 55.7**	**-0.3**
BSO1	**Boso 1**	**1.74**	**209**	P	**Pn**	**21 13 59.6**	**0.0**
BSO1				S	**Sn**	**21 14 22.9**	**+1.2**
BSO3	**Boso 3**	**1.83**	**221**	P	**Pn**	**21 14 01.0**	**+0.1**
JFT	**Otama**	**1.87**	**316**	P	**Pn**	**21 14 01.8**	**+0.3**
JFT				S	**Sn**	**21 14 24.9**	**-0.1**
JMM	**Marumori**	**1.93**	**331**	P	**Pn**	**21 14 02.9**	**+0.7**
JMM				S	**Sn**	**21 14 26.4**	**0.0**
JAG	**Ashikaga**	**2.06**	**277**	P	**Pn**	**21 14 03.6**	**-0.4**
JAG				S	**Sn**	**21 14 27.5**	**-2.1**
JFY	**Yanaizu**	**2.20**	**304**	P	**Pn**	**21 14 06.4**	**+0.5**
JFY				S	**Sn**	**21 14 33.2**	**+0.2**
JKT	**Katashina**	**2.28**	**285**	P	**Pn**	**21 14 07.2**	**+0.2**
MJAR	**Matsushiro Arr**	**3.07**	**278**	Pn	**Pn**	**21 14 18.4**	**+0.6**
	3.0nm,0.3s,baz=99,slow=9.2,SNR=22						
MAT	**Matsushiro**	**3.07**	**278**	P	**Pn**	**21 14 18.7**	**+0.8**
MAT				S	**Sn**	**21 14 56.2**	**+1.6**
JHJ	**Hachijo jima 2**	**3.56**	**211**	Pn	**Pn**	**21 14 23.0**	**-1.6**
	12nm,0.3s,baz=224,slow=19,SNR=5.3						
CBIJ	**Chichi jima**	**9.07**	**179**	Pn	**Pn**	**21 15 38.8**	**-1.5**
	3.6nm,0.3s,baz=277,slow=19,SNR=4.3						
SONM	**Songino Array**	**28.64**	**305**	P	**P**	**21 19 27.2**	**+1.3**
	0.2nm,0.7s,mb3.0,baz=113,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**56.29**	**189**	P	**P**	**21 23 10.2**	**+0.1**
	0.5nm,0.9s,mb3.5,baz=4.0,slow=7.2,SNR=2.9						

*ISCJB **07** 21:21:43.6±0.4, 32°.35N±0°.04×137°.95E±0°.06, h388km±3km, mb3.5/25, Error ellipse: s-maj=8.2km s-min=6.9km az=7.0*
*BJI **07** 21:21:43.6, 32°.40N×138°.05E, h399km, mB4.7/4, mb4.3/6*
*IDC **07** 21:21:44.1±0.6, 32°.35N×137°.92E, h372km±6km, mb3.2/15, mb1 3.3/20, mb1mx3.2/31, mbtmp3.3/20, Error ellipse: s-maj=13.3km s-min=10.3km az=82.0*
*NEIC **07** 21:21:45.1±0.6, 32°.41N×137°.88E, h384km±5km, mb3.7/8, Error ellipse: s-maj=8.3km s-min=6.1km az=124.0*
*JMA **07** 21:21:46.2±0.2, 32°.54N×137°.87E, h385km, M3.7*
ISC 07 21:21:44.9±0.4, 32°.40N±0°.05×137°.93E±0°.06, h381km±3km, n59, σ0°98/74, mb3.5/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.72**	**65**	P	**Pn**	**21 22 37.2**	**0.0**
	22nm,0.3s,baz=292,slow=12,SNR=17						
JHJ				S	**S**	**21 23 17.3**	**-2.2**
	37nm,0.3s,baz=244,slow=23,SNR=5.8						
JHJ2	**Mitsune**	**1.74**	**66**	P	**Pn**	**21 22 39.4**	**+2.0**
JNY	**Yasuok**	**2.95**	**359**	P	**Pn**	**21 22 48.1**	**+2.1**
JOD2	**Odawara 2**	**3.01**	**18**	P	**Pn**	**21 22 47.9**	**+1.4**
JOD2				S	**S**	**21 23 38.7**	**+2.3**
JYN	**Shimob**	**3.13**	**9**	P	**Pn**	**21 22 49.2**	**+1.7**
BSO3	**Boso 3**	**3.22**	**41**	P	**Pn**	**21 22 48.8**	**+0.5**
BSO3				S	**S**	**21 23 38.7**	**-1.0**
BSO4	**Boso 4**	**3.27**	**37**	P	**Pn**	**21 22 50.1**	**+1.3**
BSO4				S	**S**	**21 23 40.8**	**+0.3**
JWT	**Wachi**	**3.56**	**324**	P	**Pn**	**21 22 52.1**	**+0.7**
JWT				S	**S**	**21 23 44.3**	**-1.0**
JHU	**Hanno**	**3.62**	**18**	P	**Pn**	**21 22 52.8**	**+0.9**
JHU				S	**S**	**21 23 44.1**	**-2.2**
JRY	**Ryogami san**	**3.69**	**12**	P	**Pn**	**21 22 54.0**	**+1.4**
JRY				S	**S**	**21 23 47.5**	**-0.1**
MJAR	**Matsushiro Arr**	**4.13**	**3**	P	**Pn**	**21 22 57.5**	**+0.6**
	3.4nm,0.3s,baz=182,slow=7.4,SNR=21						
MJAR				S	**S**	**21 23 54.8**	**-0.5**
	0.7nm,0.3s,baz=217,slow=16,SNR=4.5						
MJAR	**Matsushiro Arr**	**4.13**	**3**	P	**Pn**	**21 22 57.5**	**+0.6**
MJAR				S	**S**	**21 23 54.8**	**-0.5**
MAJO	**Matsushiro**	**4.13**	**3**	*e*Pn	**Pn**	**21 22 57.3**	**+0.4**
MAJO				*e*S	**S**	**21 23 54.4**	**-1.0**
MAT	**Matsushiro**	**4.13**	**3**	P	**Pn**	**21 22 57.4**	**+0.5**
MAT				S	**S**	**21 23 54.3**	**-1.0**
JAG	**Ashikaga**	**4.21**	**17**	P	**Pn**	**21 22 57.1**	**-0.5**
JAG				S	**S**	**21 23 53.6**	**-3.0**
JYT	**Yasato**	**4.25**	**26**	P	**Pn**	**21 22 57.2**	**-0.9**
JYT				S	**S**	**21 23 53.8**	**-3.6**
CBIJ	**Chichi jima**	**6.46**	**144**	P	**Pn**	**21 23 19.9**	**-2.1**
	38nm,0.3s,baz=134,slow=21,SNR=64						
CBIJ				S	**S**	**21 24 34.0**	**-6.8**
	18nm,0.3s,baz=255,slow=23,SNR=9.4						
KSRS	**Korea Array**	**9.63**	**304**	P	**Pn**	**21 23 59.5**	**+1.1**
	1.5nm,0.3s,baz=122,slow=10,SNR=31						
JOW	**Kunigami**	**10.07**	**239**	P	**Pn**	**21 24 02.9**	**-0.8**
	1.0nm,0.3s,baz=28,slow=9.8,SNR=5.2						
INCN	**Inchon**	**10.56**	**302**	*e*P	**Pn**	**21 24 10.0**	**+0.7**
	40nm,0.9s						
ASAJ	**Asahikawa**	**12.25**	**16**	P	**P**	**21 24 29.1**	**+1.2**
	1.6nm,0.3s,baz=221,slow=14,SNR=14						
ASAJ				S	**S**	**21 26 42.6**	**0.0**
	0.4nm,0.3s,baz=48,slow=29,SNR=5.0						
CN2	**Changchun**	**15.01**	**323**	*e*P	**P**	**21 24 58.6**	**+0.6**
TPUB	**Ta-pu**	**17.76**	**244**	*e*P	**P**	**21 25 28.7**	**+0.8**
BJT	**Baijiatuan**	**19.10**	**300**	*e*P	**P**	**21 25 41.7**	**0.0**
XAN	**Xi'an**	**24.29**	**282**	P	**P**	**21 26 28.6**	**-0.9**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.0						
ENH	**Enshi**	**24.36**	**273**	P	**P**	**21 26 28.3**	**-1.8**
PET	**Petropavlovsk**	**25.45**	**30**	P	**P**	**21 26 38.8**	**-0.8**
ULN	**Ulaanbaatar**	**27.97**	**313**	*e*P	**P**	**21 27 01.9**	**0.0**
	comp=Z,1.1nm,0.3s,mb3.6						
SONM	**Songino Array**	**28.37**	**312**	P	**P**	**21 27 06.1**	**+0.6**
	comp=Z,1.0nm,0.4s,mb3.4,baz=121,slow=8.2,SNR=15						
CHTO	**Chiang Mai**	**37.46**	**258**	P	**P**	**21 28 23.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**37.63**	**258**	P	**P**	**21 28 25.4**	**+0.3**
	comp=Z,0.3nm,0.4s,mb2.9,baz=39,slow=9.4,SNR=3.2						
BILL	**Bilibino**	**39.27**	**16**	*e*P	**P**	**21 28 37.3**	**-0.6**
	comp=Z,5.2nm,1.2s,mb3.6						
ZALV	**Zalesovo Beam**	**43.09**	**316**	P	**P**	**21 29 08.4**	**-0.3**
	comp=Z,1.8nm,0.4s,mb3.5,baz=79,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**44.31**	**306**	P	**P**	**21 29 18.5**	**-0.1**
	comp=Z,1.9nm,0.5s,mb3.5,baz=94,slow=8.4,SNR=31						
KURK	**Kurchatov**	**46.67**	**311**	*e*P	**P**	**21 29 36.1**	**-0.6**
	comp=Z,2.6nm,0.6s,mb3.6						
KSH	**Kashi**	**49.79**	**297**	P	**P**	**21 30 04.1**	**+3.7**
KSH				pmax	pmax		
	comp=Z,41nm,4.2s						
AAK	**Ala-Archa**	**50.28**	**301**	*e*P	**P**	**21 30 03.9**	**-0.1**
EKS2	**Erkin-Say**	**50.79**	**301**	P	**P**	**21 30 07.4**	**-0.4**
AML	**Almayashu**	**50.95**	**300**	*e*P	**P**	**21 30 09.4**	**+0.4**
	comp=Z,1.9nm,0.4s,mb3.7						
BVAR	**Borovoye Array**	**51.67**	**315**	P	**P**	**21 30 14.1**	**0.0**
	comp=Z,1.5nm,0.5s,mb3.6,baz=100,slow=7.0,SNR=16						
BVAR				PcP	PcP	21 31 21.4	-0.1
	comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=4.2						
BRVK	**Borovoye**	**51.73**	**315**	*e*P	**P**	**21 30 13.8**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.4						
WRAB	**Tennant Creek**	**52.15**	**184**	P	**P**	**21 30 19.0**	**+1.0**
WRA	**Warramunga Arr**	**52.16**	**184**	P	**P**	**21 30 17.6**	**-0.4**
	comp=Z,0.3nm,0.7s,mb2.7,baz=359,slow=7.5,SNR=3.3						
KDAK	**Kodiak Island**	**52.48**	**39**	P	**P**	**21 30 20.9**	**+1.0**
	comp=Z,13nm,1.0s,mb4.2,baz=348,slow=17,SNR=9.2						
ASAR	**Alice Springs**	**55.89**	**184**	P	**P**	**21 30 44.1**	**-0.5**
	comp=Z,0.2nm,0.8s,mb2.5,baz=10,slow=11,SNR=3.4						
KBL	**Kabul**	**56.46**	**292**	*e*P	**P**	**21 30 47.5**	**-1.1**
	comp=Z,1.4nm,0.4s,mb3.6						
ARU	**Arti**	**57.98**	**320**	*e*P	**P**	**21 30 58.3**	**-0.4**
	comp=Z,2.8nm,0.5s,mb3.9						
ABKAR	**Akbulak array**	**58.78**	**311**	*e*P	**P**	**21 31 04.3**	**0.0**
	comp=Z,3.4nm,0.4s,mb4.1						
INK	**Inuvik**	**59.80**	**25**	P	**P**	**21 31 11.2**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.2,baz=316,slow=7.5,SNR=9.3						
ARCES	**ARCESS Array B**	**67.31**	**339**	P	**P**	**21 31 59.7**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.6,baz=67,slow=9.3,SNR=6.8						
ARCES	**ARCESS Array B**	**67.31**	**339**	P	**P**	**21 31 59.7**	**+0.3**
RES	**Resolute Bay**	**67.77**	**13**	*e*P	**P**	**21 32 02.3**	**+0.1**
JOF	**Joensuu**	**68.69**	**332**	*e*p	**P**	**21 32 06.8**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.6						
YKA	**Yellowknife Ar**	**69.24**	**28**	P	**P**	**21 32 12.1**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.4,baz=304,slow=5.8,SNR=7.7						
FINES	**FINESS Array B**	**71.55**	**332**	P	**P**	**21 32 25.1**	**-0.1**
	comp=Z,1.6nm,0.6s,mb3.9,baz=66,slow=5.5,SNR=16						
AKASG	**Malin Array Be**	**76.17**	**322**	P	**P**	**21 32 51.7**	**-0.2**
	comp=Z,0.9nm,0.3s,mb3.9,baz=52,slow=5.5,SNR=7.1						
AKASG	**Malin Array Be**	**76.17**	**322**	P	**P**	**21 32 51.7**	**-0.2**
NOA	**NORSAR Array B**	**77.31**	**336**	P	**P**	**21 32 57.8**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=45,slow=5.5,SNR=3.1						
BRTR	**Keskin Array B**	**79.72**	**311**	P	**P**	**21 33 11.8**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.7,baz=107,slow=4.5,SNR=4.9						

*IDC **07** 21:26:52.1±0.8, 36°.30N×141°.51E, h0km, mb3.9/14, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.8/4, Error ellipse: s-maj=20.3km s-min=15.6km az=100.0*
*ISCJB **07** 21:26:55.1±0.8, 36°.32N±0°.03×141°.56E±0°.07, h40km±6km, mb3.9/21, Error ellipse: s-maj=9.0km s-min=5.7km az=10.6*
*MOS **07** 21:26:55.1±1.2, 36°.43N×141°.47E, h33km, mb4.4/5, Error ellipse: s-maj=13.8km s-min=9.4km az=107.8*
*JMA **07** 21:26:56.8±0.1, 36°.35N×141°.39E, h46km±3km, M3.6*
JMA Felt I J1.
*NEIC **07** 21:26:57.9±1.6, 36°.38N×141°.41E, h42km±12km, mb4.3/7, Error ellipse: s-maj=16.0km s-min=11.2km az=143.0*
ISC 07 21:26:55.1±1.0, 36°.34N±0°.03×141°.50E±0°.06, h21km±6km, n52, σ1°04/60, mb3.9/21, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.80**	**290**	⇓P	**Pb**	**21 27 10.4**	**+0.2**
CHOJ	**Chosi**	**0.82**	**219**	P	**Pb**	**21 27 11.3**	**+0.7**
CHOJ				S	**Sb**	**21 27 21.8**	**+0.7**
ONAJ	**Iwakimizuishiy**	**0.95**	**324**	⇓P	**Pb**	**21 27 12.7**	**-0.1**
JYT	**Yasato**	**1.06**	**264**	P	**Pn**	**21 27 14.4**	**-0.2**
JYT				S	**Sb**	**21 27 26.5**	**-1.6**
JFK	**Kawauchi**	**1.14**	**334**	⇓P	**Pn**	**21 27 15.6**	**-0.2**
JFK				S	**Sb**	**21 27 29.9**	**-0.7**
JFT	**Otama**	**1.50**	**322**	⇓P	**Pn**	**21 27 21.7**	**+1.0**
JFT				S	**Sn**	**21 27 40.1**	**+0.4**
JMM	**Marumori**	**1.63**	**340**	P	**Pn**	**21 27 22.8**	**+0.3**
JAG	**Ashikaga**	**1.65**	**274**	P	**Pn**	**21 27 22.7**	**-0.1**
MJAR	**Matsushiro Arr**	**2.66**	**275**	Pn	**Pn**	**21 27 38.0**	**+1.3**
	6.2nm,0.3s,baz=109,slow=9.3,SNR=43						
MJAR				Sn	**Sn**	**21 28 11.7**	**+3.4**
	8.3nm,0.3s,baz=80,slow=14,SNR=7.3						
MAJO	**Matsushiro**	**2.66**	**275**	*e*Pn	**Pn**	**21 27 38.2**	**+1.5**
MAJO				*e*Sn	**Sn**	**21 28 07.3**	**-0.9**
MAT	**Matsushiro**	**2.66**	**275**	P	**Pn**	**21 27 37.8**	**+1.1**
MAT				S	**Sn**	**21 28 11.3**	**+3.0**
JHJ	**Hachijo jima 2**	**3.51**	**204**	Pn	**Pn**	**21 27 48.6**	**+0.3**
	33nm,0.3s,baz=117,slow=13,SNR=8.3						
JHJ				Sn	**Sn**	**21 28 28.9**	**-0.3**
	65nm,0.3s,baz=69,slow=22,SNR=7.4						
ASAJ	**Asahikawa**	**7.82**	**6**	P	**Pn**	**21 28 47.6**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.82**	**6**	Pn	**Pn**	**21 28 47.5**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=247,slow=8.7,SNR=9.4						
CBIJ	**Chichi jima**	**9.23**	**176**	Pn	**Pn**	**21 29 05.0**	**-2.0**
	comp=Z,6.0nm,0.3s,baz=311,slow=17,SNR=4.9						
YSS	**Yuzh-Sakhalins**	**10.65**	**5**	P	**Pn**	**21 29 26.0**	**-0.3**
ENH	**Enshi**	**27.35**	**267**	*e*P	**P**	**21 32 36.1**	**-2.5**
	comp=Z,2.9nm,0.4s,mb4.2						
ULN	**Ulaanbaatar**	**27.81**	**305**	*e*P	**P**	**21 32 40.4**	**-2.1**
BOD	**Bodaibo**	**28.16**	**328**	*e*P	**P**	**21 32 44.0**	**-1.5**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.8						
SONM	**Songino Array**	**28.23**	**305**	P	**P**	**21 32 46.8**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.4,baz=104,slow=9.1,SNR=6.9						
ZAA0	**Zalesovo Array**	**42.44**	**313**	*e*P	**P**	**21 34 46.5**	**-1.5**
ZALV	**Zalesovo Beam**	**42.44**	**313**	P	**P**	**21 34 48.7**	**+0.7**
	comp=Z,1.6nm,0.5s,mb3.9,baz=90,slow=7.1,SNR=10.0						
ZALV	**Zalesovo Beam**	**42.44**	**313**	P	**P**	**21 34 48.7**	**+0.7**
NVS	**Novosibirsk**	**43.37**	**314**	*e*P	**P**	**21 34 46.0**	**-10**
MKAR	**Makanchi Array**	**44.55**	**303**	P	**P**	**21 35 05.7**	**+0.6**
	comp=Z,0.8nm,0.8s,mb3.6,baz=106,slow=6.4,SNR=4.9						
MKAR	**Makanchi Array**	**44.55**	**303**	P	**P**	**21 35 05.7**	**+0.6**
KURK	**Kurchatov**	**46.42**	**309**	*e*P	**P**	**21 35 19.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**46.42**	**309**	*e*P	**P**	**21 35 19.4**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.3						
KDAK	**Kodiak Island**	**47.57**	**41**	P	**P**	**21 35 30.2**	**+1.4**
	comp=Z,6.8nm,0.7s,mb4.8,baz=34,slow=3.6,SNR=2.9						
PMR	**Palmer**	**49.15**	**36**	P	**P**	**21 35 39.8**	**-1.1**
AAK	**Ala-Archa**	**50.88**	**299**	P	**P**	**21 35 52.9**	**-1.5**
BVAR	**Borovoye Array**	**51.09**	**313**	P	**P**	**21 35 56.1**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=71,slow=6.4,SNR=5.4						
AML	**Almayashu**	**51.60**	**298**	*e*P	**P**	**21 36 00.1**	**+0.4**
	comp=Z,4.0nm,1.0s,mb4.3						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**21 36 25.7**	**+1.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**54.98**	**27**	P	**P**	**21 36 25.7**	**+1.5**
	comp=Z,1.5nm,0.6s,mb4.2,baz=296,slow=3.9,SNR=9.2						
INK	**Inuvik**	**54.98**	**27**	*e*P	**P**	**21 36 23.6**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**56.38**	**188**	P	**P**	**21 36 35.2**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=7.2,slow=7.9,SNR=3.3						
ARU	**Arti**	**56.93**	**319**	*e*P	**P**	**21 36 36.2**	**-2.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ARU	**Arti**	**56.93**	**319**	*e*P	**P**	**21 36 36.2**	**-2.1**
	comp=Z,3.0nm,0.5s,mb4.6						
ABKAR	**Akbulak array**	**58.44**	**310**	*e*P	**P**	**21 36 48.0**	**-1.1**
	comp=Z,1.1nm,0.5s,mb4.1						
ASAR	**Alice Springs**	**60.11**	**188**	P	**P**	**21 37 00.7**	**0.0**
	comp=Z,0.2nm,0.7s,mb3.3,baz=85,slow=38,SNR=3.6						
RES	**Resolute Bay**	**63.26**	**14**	*e*P	**P**	**21 37 22.1**	**+0.7**
RES				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
RES	**Resolute Bay**	**63.26**	**14**	*e*P	**P**	**21 37 22.1**	**+0.6**
	comp=Z,0.7nm,0.4s,mb4.1						
YKA	**Yellowknife Ar**	**64.38**	**30**	P	**P**	**21 37 29.3**	**+0.3**
	comp=Z,0.2nm,0.6s,mb3.3,baz=299,slow=6.2,SNR=4.1						
ARCES	**ARCESS Array B**	**64.67**	**340**	P	**P**	**21 37 32.1**	**+1.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=55,slow=11,SNR=4.8						
FINES	**FINESS Array B**	**69.46**	**332**	P	**P**	**21 38 00.8**	**-0.5**
	comp=Z,1.7nm,0.8s,mb4.0,baz=104,slow=8.0,SNR=6.8						
NB2	**NORSAR Subarra**	**74.86**	**337**	P	**P**	**21 38 34.5**	**+0.9**
	comp=Z,0.9nm,0.8s,mb3.8,baz=39,slow=5.9						
NOA	**NORSAR Array B**	**74.86**	**337**	P	**P**	**21 38 34.6**	**+1.0**
	comp=Z,1.7nm,0.8s,mb4.0,baz=40,slow=5.7,SNR=5.3						
AKASG	**Malin Array Be**	**74.89**	**322**	P	**P**	**21 38 34.2**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.1,baz=49,slow=6.0,SNR=9.4						
AKASG	**Malin Array Be**	**74.89**	**322**	P	**P**	**21 38 34.2**	**+0.2**
CLL	**Collm**	**81.73**	**330**	*e*P	**P**	**21 39 12.0**	**+0.2**
GERES	**GERESS Array B**	**83.34**	**328**	P	**P**	**21 39 21.0**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.6,baz=47,slow=5.9,SNR=4.0						

*IDC **07** 21:45:34.4±0.7, 54°.77N×161°.15W, h0km, mb4.1/23, mb1 4.2/26, mb1mx4.2/37, mbtmp4.1/26, ML4.3/3, MS3.4/5, Ms1 3.4/5, ms1mx3.0/52, Error ellipse: s-maj=21.3km s-min=10.8km az=178.0*
*BJI **07** 21:45:35.4, 54°.16N×160°.99W, h51km, mB4.9/8, mb4.7/13, Ms4.7/7, Ms7 4.5/6*
*ISCJB **07** 21:45:40.2±0.5, 54°.84N±0°.03×161°.19W±0°.04, h54km±4km, mb4.2/42, MS3.5/3, Error ellipse: s-maj=5.2km s-min=3.5km az=172.7*
*NEIC **07** 21:45:41.0±0.5, 54°.69N×161°.12W, h54km±4km, mb4.3/14, ML4.1(AEIC), Error ellipse: s-maj=7.7km s-min=3.7km az=161.0*
ISC 07 21:45:42.1±0.5, 54°.80N±0°.04×161°.23W±0°.04, h55km±4km, h62km±2.2km: pP-P, n238, σ0°69/246, mb4.2/42, MS3.5/3, 83C-66D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.70**	**38**	*e*P	**Pn**	**21 45 53.0**	**-3.0**
FALS	**False Pass**	**1.27**	**274**	P	**Pn**	**21 46 03.2**	**-0.2**
FALS				S	**Sn**	**21 46 23.4**	**+3.9**
CHGN	**Chignik**	**2.20**	**45**	P	**Pn**	**21 46 15.8**	**-0.2**
AKUT	**Akutan**	**2.73**	**258**	*e*P	**Pn**	**21 46 24.1**	**+0.7**
AKLV	**Akutan Long Va**	**2.83**	**259**	P	**Pn**	**21 46 24.8**	**+0.1**
UNV	**Unalaska Valle**	**3.23**	**255**	P	**Pn**	**21 46 29.8**	**-0.5**
NIKO	**Nikolski**	**4.87**	**251**	P	**Pn**	**21 46 51.0**	**-1.6**
NIKO				*e*Sn	**Sn**	**21 47 50.9**	**+3.3**
OHAK	**Old Harbor**	**5.08**	**58**	P	**Pn**	**21 46 52.5**	**-2.9**
SPIA	**Saint Paul Isl**	**5.60**	**299**	P	**Pn**	**21 47 04.3**	**+1.7**
KDAK	**Kodiak Island**	**5.67**	**55**	Pn	**Pn**	**21 47 00.6**	**-2.9**
	6.0nm,0.3s,baz=240,slow=6.3,SNR=55						
KDAK				Sn	**Sn**	**21 48 00.7**	**-6.5**
	6.0nm,0.3s,baz=6.6,slow=16,SNR=6.5						
KDAK				Lg		21 48 30.4	
	10nm,0.3s,baz=19,slow=16,SNR=7.5						
KDAK	**Kodiak Island**	**5.67**	**55**	P	**Pn**	**21 47 00.8**	**-2.8**
SVW2	**Sparrevohn**	**7.00**	**23**	*e*P	**Pn**	**21 47 22.4**	**+0.7**
RSO	**Redoubt South**	**7.27**	**35**	*e*Pn	**Pn**	**21 47 26.6**	**+1.1**
RSO				*e*Sn	**Sn**	**21 48 47.1**	**+0.5**
SEW	**Seward**	**8.28**	**45**	P	**Pn**	**21 47 38.1**	**-1.2**
TT01	**Tatalina**	**8.57**	**16**	P	**Pn**	**21 47 43.5**	**+0.3**
TTA	**Tatalina**	**8.59**	**16**	*e*P	**Pn**	**21 47 45.1**	**+1.6**
RC01	**Rabbit Creek A**	**8.77**	**39**	*e*Pn	**Pn**	**21 47 45.4**	**-0.6**
	12nm,0.3s						
RC01				*e*Sn	**Sn**	**21 49 22.3**	**-1.0**
SKT	**Skwentna**	**8.81**	**31**	P	**Pn**	**21 47 47.0**	**+0.5**
PPLA	**Purkeypile**	**9.37**	**26**	*e*Pn	**Pn**	**21 47 56.5**	**+2.4**
	16nm,0.7s						
PPLA				*e*Sn	**Sn**	**21 49 43.0**	**+5.2**
ADK	**Adak**	**9.69**	**259**	*e*Pn	**Pn**	**21 47 57.9**	**-0.7**
CHUM	**Lake Minchumin**	**10.18**	**23**	*e*Pn	**Pn**	**21 48 06.4**	**+1.3**
	12nm,0.5s						
CHUM				*e*Sn	**Sn**	**21 50 00.7**	**+3.2**
KTH	**Kantishna Hill**	**10.24**	**27**	*e*Pn	**Pn**	**21 48 05.9**	**0.0**
	2.2nm,1.1s						
KTH				*e*Sn	**Sn**	**21 50 03.0**	**+4.0**
TRF	**Thorofare Moun**	**10.32**	**28**	*e*Pn	**Pn**	**21 48 07.0**	**-0.1**
	26nm,0.9s						
BPAW	**Bear Paw Mtn.**	**10.67**	**25**	*e*Pn	**Pn**	**21 48 12.4**	**+0.4**
	2.2nm,1.1s						
MCK	**McKinley**	**10.93**	**30**	*e*Pn	**Pn**	**21 48 14.4**	**-1.0**
	10um,0.6s						
COLA	**College**	**12.11**	**28**	*e*Pn	**Pn**	**21 48 31.3**	**-0.2**
	10.0nm,0.8s						
MENT	**Mentasta**	**12.15**	**41**	*e*P	**Pn**	**21 48 32.4**	**+0.3**
PNL	**Peninsula**	**12.76**	**59**	*e*Pn	**Pn**	**21 48 38.6**	**-1.9**
	52nm,0.8s						
PNL				*e*Sn	**Sn**	**21 51 03.0**	**+2.2**
COLD	**Coldfoot**	**13.54**	**19**	*e*Pn	**Pn**	**21 48 51.3**	**+0.4**
	7.8nm,1.0s						
HYT	**Haines Junctio**	**13.96**	**55**	*e*Pn	**Pn**	**21 48 56.2**	**-0.6**
EGAK	**Eagle**	**14.14**	**37**	*e*Pn	**Pn**	**21 48 55.4**	**-3.6**
DAWY	**Dawson**	**14.40**	**41**	*e*Pn	**Pn**	**21 48 57.9**	**-4.6**
SKAG	**Skagway**	**14.77**	**61**	*e*P	**Pn**	**21 49 07.1**	**-0.2**
	11nm,0.5s						
DLBC	**Dease Lake**	**17.46**	**65**	P	**Pn**	**21 49 40.5**	**-0.9**
	0.6nm,0.3s,baz=286,slow=12,SNR=7.5						
DLBC				LR	LR	21 55 41.2	
	comp=Z,142nm,20.0s,baz=81,slow=35						
DLBC	**Dease Lake**	**17.46**	**65**	*e*Pn	**Pn**	**21 49 40.9**	**-0.4**
**IN

baz=33
ELK Elko 33.30 96 P P 21 52 14.4 +0.2
5.4nm,0.8s,mb4.5,baz=304,slow=7.9,SNR=22
N12A Clover Valley, 33.35 95 eP P 21 52 14.6 0.0
16nm,1.1s,mb4.9
O11A Cowboy Ranch, 33.47 97 ⇓P P 21 52 15.7 +0.1
baz=33
I16A Newdale 33.52 88 ⇑P P 21 52 15.6 -0.4
baz=33
M13A Montello 33.53 94 eP P 21 52 15.5 -0.5
3.9nm,0.8s,mb4.4
O12A Currie 33.90 96 ⇓P P 21 52 19.4 0.0
baz=34,SNR=8.0
M14A Sheep Mountain 33.91 93 ⇓P P 21 52 19.4 0.0
baz=34
L15A Malad City 34.15 91 ⇓P P 21 52 21.6 +0.1
baz=34
Q11A Duckwater 34.33 99 ⇓P P 21 52 23.6 +0.5
baz=34
P12A McGill 34.33 97 ⇑P P 21 52 23.2 +0.1
baz=34,SNR=7.7
N14A Grayback Hills 34.42 94 ⇑P P 21 52 23.9 +0.1
baz=34
S10A Tonopah Range, 34.42 101 ⇑P P 21 52 23.8 -0.1
baz=34
Q12A Willow Creek R 34.67 98 ⇓P P 21 52 26.3 +0.3
baz=34
R11A Troy Canyon, C 34.71 99 ⇑P P 21 52 26.2 -0.1
baz=34,SNR=7.3
M16A Huntsville 35.02 92 ⇑P P 21 52 29.1 +0.1
baz=35
DUG Dugway 35.06 94 ⇑P P 21 52 29.8 +0.4
baz=35
MPMC Manual Prospec 35.23 104 ⇑P P 21 52 31.0 +0.1
baz=35,SNR=5.0
FURC Furnace Creek, 35.30 103 ⇓P P 21 52 31.7 +0.3
baz=35
PDAR Pinedale Array 35.31 88 P P 21 52 30.9 -0.6
0.4nm,0.5s,mb3.6,baz=291,slow=6.0,SNR=4.9
P14A Drum Mountains 35.31 95 ⇓P P 21 52 31.5 -0.1
baz=35
M17A Scullys Gap (B 35.48 91 ⇓P P 21 52 32.8 -0.2
baz=35
Q14A Sevier Lake (B 35.60 96 ⇓P P 21 52 34.3 +0.3
baz=35
S12A Delamar Landin 35.64 99 ⇑P P 21 52 34.5 +0.2
baz=36
T11A Corn Creek, Al 35.68 100 ⇑P P 21 52 34.6 -0.1
baz=36
R13A O'Grain Ranch, 35.75 98 ⇑P P 21 52 35.4 +0.1
baz=36
O16A Springville 35.81 93 ⇑P P 21 52 36.0 +0.2
baz=36
S13A Holt Ranch, En 36.22 98 ⇑P P 21 52 39.3 0.0
baz=36
V11A Goodsprings 36.55 102 ⇓P P 21 52 42.3 +0.1
baz=36
T13A Saint George 36.59 99 ⇓P P 21 52 42.9 +0.5
baz=36
N19A John Jarvie Ra 36.71 90 ⇓P P 21 52 42.8 -0.7
baz=36
P17A Butcher Ranch, 36.74 93 ⇑P P 21 52 43.9 +0.1
baz=36
Q16A Castle Valley 36.86 94 ⇑P P 21 52 45.0 +0.3
baz=37
M20A Sweetwater, Wa 36.90 89 ⇑P P 21 52 45.2 +0.1
baz=37
V12A Nelson 36.96 102 ⇓P P 21 52 45.8 +0.1
baz=37
U13A Pakoon Wash 36.98 100 ⇓P P 21 52 46.1 +0.3
baz=37
T14A Hurricane 37.03 98 ⇑P P 21 52 46.7 +0.5
baz=37
SRU San Rafael 37.10 94 ⇑P P 21 52 46.9 +0.1
baz=37
SRU San Rafael 37.10 94 eP P 21 52 47.0 +0.2
11nm,0.8s,mb4.7
R16A Teasdale 37.11 95 ⇓P P 21 52 47.6 +0.8
baz=37
O19A Miners Draw (B 37.13 91 ⇑P P 21 52 47.1 +0.1
baz=37
GMRC Granite Mounta 37.19 103 ⇑P P 21 52 47.6 0.0
baz=37
Q18A Rafter H Ranch 37.34 93 ⇑P P 21 52 48.6 -0.1
baz=37,SNR=6.8
V13A Grand Canyon W 37.37 101 ⇑P P 21 52 49.3 +0.2
baz=37
U14A Mt Trumbull 37.42 99 ⇓P P 21 52 50.0 +0.4
baz=37,SNR=5.4
T15A Red Dirt Ranch 37.46 98 ⇓P P 21 52 49.9 +0.1
baz=37
R17A Hanksville Air 37.46 95 ⇑P P 21 52 49.6 -0.3
baz=37
P19A Cripple Cowboy 37.65 92 ⇓P P 21 52 51.0 -0.4
baz=38,SNR=6.6
U15A North Rim 37.93 98 ⇓P P 21 52 53.8 0.0
baz=38
IRM Iron Mountain 37.93 104 ⇑P P 21 52 53.9 +0.1
baz=38
S17A Black Ridge (B 37.94 96 ⇑P P 21 52 53.8 -0.1
baz=38
R18A Canyonlands Na 37.95 94 ⇑P P 21 52 53.9 -0.1
baz=38
W13A Hualapai Mount 37.96 101 ⇑P P 21 52 54.1 0.0
baz=38
V14A Boquillas Ranc 38.02 100 ⇓P P 21 52 54.8 +0.2
baz=38
W14A Seligman 38.34 100 ⇓P P 21 52 57.6 +0.3
baz=38
X13A Yucca 38.36 102 ⇓P P 21 52 57.1 -0.4
baz=38
S18A Hurst Farm, Bl 38.37 95 ⇑P P 21 52 56.9 -0.6
baz=38,SNR=7.5
R19A Curley Farm, L 38.38 94 ⇑P P 21 52 57.5 -0.1
baz=38
V15A Kaibab Nationa 38.42 99 ⇑P P 21 52 58.4 +0.4
baz=38,SNR=10.0
ULM Lac du Bonnet 38.73 69 P P 21 52 59.3 -1.1
5.8nm,0.8s,mb4.4,baz=304,slow=9.8,SNR=7.4
ULM Lac du Bonnet 38.73 69 eP P 21 52 59.0 -1.4
4.1nm,0.9s,mb4.2
U17A Shonto 38.74 97 ⇑P P 21 53 00.4 -0.2
baz=39
U16A Tuba City 38.79 98 ⇑P P 21 53 01.1 +0.1
baz=39
T18A Mexican Hat 38.82 95 ⇑P P 21 53 00.0 -1.3
baz=39,SNR=9.5
R20A Redvale 38.97 93 ⇑P P 21 53 02.3 -0.2
baz=39
X14A Yava 38.98 101 ⇑P P 21 53 02.7 0.0
baz=39,SNR=6.4
WUAZ Wupatki 39.09 99 ⇓P P 21 53 03.8 +0.2
baz=39
W16A Flagstaff 39.30 99 ⇓P P 21 53 05.9 +0.5
baz=39
R21A Cimarron 39.32 92 ⇓P P 21 53 05.1 -0.3
baz=39
X15A Humboldt 39.34 100 ⇓P P 21 53 05.6 -0.1
baz=39
V17A Tonalea, Kykot 39.35 98 ⇑P P 21 53 05.7 0.0
baz=39,SNR=6.1
Z13A Yuma Proving G 39.48 103 ⇓P P 21 53 06.6 -0.2
baz=39
T19A Beclabito 39.52 95 ⇑P P 21 53 06.7 -0.5
baz=39,SNR=9.4
MVCO Mesa Verde 39.56 94 ⇑P P 21 53 07.4 -0.1
baz=39
S21A Coal Bank Pass 39.66 93 ⇑P P 21 53 08.2 -0.1
baz=40
Y15A Casa Rosa Ranc 39.67 101 ⇓P P 21 53 08.8 +0.3
baz=40
113A Mohawk Valley, 39.73 104 ⇓P P 21 53 10.0 +1.0
baz=40
Z14A Wintersburg 39.76 102 ⇓P P 21 53 09.1 -0.1
baz=40
V18A Ganado 39.78 97 ⇑P P 21 53 09.6 +0.3
baz=40
X16A Lo Mia Camp, P 39.84 100 ⇑P P 21 53 10.2 +0.3
baz=40
114A Black Gap (USA 40.24 103 ⇑P P 21 53 13.5 +0.4
baz=40
Y17A Roosevelt 40.71 100 ⇑P P 21 53 17.3 +0.3
baz=40
214A Organ Pipe Nat 40.88 104 ⇓P P 21 53 18.8 +0.4
baz=41
W20A Ramah 41.02 96 ⇑P P 21 53 19.2 -0.4
baz=41
V21A Milan 41.04 95 ⇑P P 21 53 19.9 +0.2
baz=41
X19A St. Johns 41.07 98 ⇑P P 21 53 20.2 +0.2
baz=41
Y19A Nutrioso 41.43 98 ⇑P P 21 53 23.5 +0.6
baz=41
X20A Quemado 41.44 97 ⇑P P 21 53 23.1 +0.1
baz=41
117A Oracle 41.59 101 ⇑P P 21 53 24.6 +0.4
baz=41
Z19A T-Link Ranch, 41.90 99 ⇑P P 21 53 27.0 +0.2
baz=42
X21A Alamocita Cree 41.92 96 ⇓P P 21 53 27.1 +0.2
baz=42
Y20A Horse Springs, 41.97 98 ⇑P P 21 53 27.7 +0.3
baz=42
118A Homack Ranch, 41.98 100 ⇓P P 21 53 27.3 -0.2
baz=42
217A Green Valley 42.14 102 ⇑P P 21 53 28.8 +0.1
baz=42
119A Ashpeak Ranch, 42.27 100 ⇓P P 21 53 30.0 +0.2
baz=42
Y21A Point of Rocks 42.30 97 ⇓P P 21 53 30.5 +0.5
baz=42
Z20A Nine Sixteen R 42.42 99 ⇑P P 21 53 31.2 +0.1
baz=42
Y22A Socorro 42.76 96 ⇓P P 21 53 33.6 -0.2
baz=43
Z22A Elephant Butte 43.25 97 ⇑P P 21 53 37.7 0.0
baz=43
Y23A Lovelace Mesa, 43.28 95 ⇑P P 21 53 38.3 +0.3
baz=43
W25A X Bar L Ranch, 43.29 93 ⇓P P 21 53 38.0 0.0
baz=43
121A Cookes Peak, D 43.31 98 ⇑P P 21 53 38.1 -0.1
baz=43
220A Playas Peak, P 43.34 100 ⇑P P 21 53 38.7 +0.2
baz=43
Y24A Capitan 43.65 95 ⇑P P 21 53 41.0 +0.1
baz=44
320A Kipp Ranch, An 43.76 100 ⇓P P 21 53 42.0 +0.1
baz=44
Y25A Mesa, Roswell 44.08 94 ⇓P P 21 53 44.1 -0.3
baz=44
FRB Frobisher Bay 44.10 40 P P 21 53 44.1 -0.1
2.4nm,0.5s,mb4.2,baz=303,slow=8.7,SNR=8.5
X26A CR and CF Fran 44.14 93 ⇓P P 21 53 44.8 0.0
baz=44
124A Stringfield Ra 44.52 96 ⇓P P 21 53 48.2 +0.3
baz=44
MJAR Matsushiro Arr 44.56 272 P P 21 53 47.7 -0.5
3.7nm,0.6s,mb4.4,baz=36,slow=6.9,SNR=2.5
MAT Matsushiro 44.56 272 P P 21 53 47.7 -0.5
224A Corundas Mount 44.94 97 ⇑P P 21 53 51.4 +0.2
baz=45
Y27A Causey 44.99 93 ⇑P P 21 53 51.4 -0.2
baz=45
425A Indio Mountain 46.20 98 ⇑P P 21 54 01.1 -0.1
baz=46
SPITS Spitsbergen Ar 47.28 1 P P 21 54 09.3 +0.2
1.8nm,0.7s,mb4.1,baz=297,slow=3.7,SNR=4.3
SPITS Spitsbergen Ar 47.28 1 P P 21 54 09.3 +0.2
TXAR Lajitas Array 48.04 98 P P 21 54 15.1 -0.5
1.0nm,0.5s,mb4.1,baz=314,slow=6.0,SNR=8.5
KSRS Korea Array 49.85 280 P P 21 54 29.9 +0.6
2.1nm,0.8s,mb4.2,baz=51,slow=6.6,SNR=9.1
SCHQ Schefferville 50.26 49 P P 21 54 31.4 -0.8
2.3nm,0.8s,mb4.3,baz=299,slow=6.4,SNR=5.9
SADO Sadowa 51.02 65 P P 21 54 36.5 -1.6
11nm,1.0s,mb4.7,baz=320,slow=3.9,SNR=3.2
WVT Waverly 52.23 79 eP P 21 54 45.5 -1.7
10nm,0.9s,mb4.8
TLY Talaya 52.72 309 eP P 21 54 50.6 0.0
2.1nm,0.6s,mb4.2
PLAL Pickwick Lake 52.91 80 eP P 21 54 50.1 -2.1
5.8nm,1.0s,mb4.5
ULN Ulaanbaatar 53.77 303 eP P 21 54 57.3 -1.0
1.1nm,0.6s,mb4.0
SONM Songino Array 54.11 304 P P 21 55 01.5 +0.6
1.2nm,0.8s,mb3.9,baz=43,slow=7.3,SNR=12
SONM PcP PcP 21 56 05.2 +0.3
0.5nm,0.8s,baz=26,slow=3.7,SNR=2.8
TKL Tuckaleechee C 54.86 76 P P 21 55 04.4 -2.1
2.1nm,0.7s,mb4.3,baz=214,slow=3.6,SNR=3.0
ARCES ARCESS Array B 55.88 357 P P 21 55 12.7 -0.6
0.9nm,0.7s,mb3.9,baz=33,slow=9.1,SNR=4.0
HHC Hu-ho-hao-te 56.46 295 eP P 21 55 19.2 +1.4
HHC pP pP 21 55 35.2 +2.5
HHC sP sP 21 55 42.1 +3.1
HHC PP PP 21 57 26.3 +2.7
HHC ScP ScP 22 00 08.0 -0.4
HHC PcS PcS 22 00 14.8 +0.1
HHC S S 22 03 05.0 +0.5
HHC sS sS 22 03 31.7 +2.1
HHC ScS ScS 22 05 00.1 -1.7
HHC SS SS 22 06 49.9 -1.8
HHC pmax pmax
comp=Z,72nm,5.5s
HHC LR LR
comp=N,150nm,16.3s,MS4.3
HHC LR LR
comp=E,110nm,15.7s,MS4.3
HHC LR LR
comp=Z,140nm,15.8s,MS4.2
JOF Joensuu 62.22 354 ep P 21 55 57.7 +0.5
comp=Z,1.0nm,0.6s,mb4.1
KAF Kangasniemi 63.28 356 ep P 21 56 03.9 -0.4
comp=Z,1.0nm,0.5s,mb4.2
FINES FINESS Array B 63.96 356 P P 21 56 09.7 +0.9
comp=Z,2.2nm,1.1s,mb4.1,baz=28,slow=8.6,SNR=7.7
LZH Lanzhou 64.04 296 eP P 21 56 08.0 -1.7
LZH pP pP 21 56 25.0 +0.2
LZH sP sP 21 56 33.1 +2.0
LZH pmax pmax
comp=Z,14nm,1.0s,mb5.0
NOA NORSAR Array B 64.36 4 P P 21 56 12.5 +1.2
comp=Z,0.3nm,0.6s,mb3.5,baz=44,slow=22,SNR=2.5
BVAR Borovoye Array 64.37 328 P P 21 56 12.2 +0.5
comp=Z,0.9nm,0.7s,mb3.9,baz=56,slow=9.1,SNR=7.9
MK31 Makanchi Array 65.49 317 eP P 21 56 17.6 -1.3
MKAR Makanchi Array 65.49 317 P P 21 56 18.6 -0.3
comp=Z,1.4nm,0.6s,mb4.2,baz=46,slow=5.2,SNR=17
WMQ Urumqi 65.69 312 eP P 21 56 22.6 +2.3
CD2 Chengdu 68.09 293 P P 21 56 34.9 -0.8
CD2 pP pP 21 56 51.3 +0.3
CD2 sP sP 21 56 58.2 +1.0
CD2 PP PP 21 59 07.5 +1.4
CD2 S S 22 05 28.0 -3.1
CD2 sS sS 22 05 55.8 -1.0
CD2 SS SS 22 09 52.3 -1.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,180nm,10.3s
CD2 LR LR
comp=N,140nm,4.8s
CD2 LR LR
comp=Z,160nm,7.7s
GYA Guiyang 69.99 288 eP P 21 56 47.9 +0.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ABKAR Akbulak array 70.72 333 eP P 21 56 51.8 +0.1
comp=Z,1.8nm,0.8s,mb4.0
AAK Ala-Archa 71.97 320 eP P 21 56 58.6 -0.8
comp=Z,1.3nm,0.9s,mb3.9
AML Almayashu 72.70 320 eP P 21 57 03.4 -0.3
comp=Z,2.0nm,0.4s,mb4.4
KMI Kunming 73.20 290 P P 21 57 05.7 -1.2
KMI pP pP 21 57 22.1 -0.2
KMI sP sP 21 57 28.1 -0.4
KMI pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
KSH Kashi 74.10 317 eP P 21 57 16.1 +4.1
KSH epP pP 21 57 26.1 -1.3
KSH esP sP 21 57 30.1 -3.5
KSH ePcP PcP 21 57 31.2 +4.3
KSH ePP PP 22 00 03.0 +5.7
KSH eS S 22 06 44.1 +3.7
KSH eSKS 22 07 16.1
KSH eScS ScS 22 07 20.2 +2.9
KSH pmax pmax
comp=Z,24nm,2.3s,mb4.7
KSH LR LR
comp=N,91nm,6.5s
KSH LR LR
comp=E,99nm,5.5s
CLL Collm 74.16 4 eP P 21 57 12.0 -0.1
AKASG Malin Array Be 74.51 353 P P 21 57 13.5 -0.7
comp=E,0.6nm,0.5s,mb3.8,baz=9.6,slow=5.9,SNR=4.2
LSA Lhasa 75.56 301 eP P 21 57 20.8 +0.2
comp=E,3.4nm,0.7s,mb4.4
CMAR Chiang Mai Arr 80.64 289 P P 21 57 49.0 +0.1
comp=E,2.9nm,0.8s,mb4.2,baz=17,slow=5.4,SNR=18
QSPA South Pole Qui 144.57 180 PKP PKPdf 22 05 08.2 -2.1
comp=E,1.9nm,0.7s,baz=83,slow=2.2,SNR=12

*ISCJB **07** 21:52:11.9±1.8, 7°.22S±0°.08×126°.7E±0°.1, h370km±21km, mb3.8/8, Error ellipse: s-maj=19.8km s-min=10.1km az=152.9*
*NEIC **07** 21:52:14.4±1.6, 7°.22S×126°.66E, h380km±19km, mb4.0/5, Error ellipse: s-maj=11.9km s-min=8.6km az=70.0*
*IDC **07** 21:52:14.9±3.8, 7°.23S×126°.68E, h381km±45km, mb3.3/5, mb1 3.4/8, mb1mx3.2/17, mbtmp3.3/8, Error ellipse: s-maj=54.3km s-min=16.0km az=65.0*
ISC 07 21:52:14.2±1.7, 7°.23S±0°.07×126°.7E±0°.1, h377km±19km, n27, σ0.9 67/29, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.86	185	P	Pn	21 54 42.0	-0.3
3.0nm,0.3s,baz=23,slow=9.8,SNR=89							
FITZ	Fitzroy Crossi	10.86	185	eP	Pn	21 54 41.9	-0.3
WRAB	Tennant Creek	14.66	150	eP	P	21 55 24.0	0.0
2.8nm,0.4s							
WRA	Warramunga Arr	14.67	150	P	P	21 55 23.8	-0.2
0.6nm,0.3s,baz=327,slow=12,SNR=9.0							
WRA				S	S	21 57 59.9	-1.4
0.1nm,0.3s,baz=333,slow=22,SNR=7.4							
WB2	Warramunga Arr	14.67	150	eP	P	21 55 24.1	-0.1
MBWA	Marble Bar	15.39	205	eP	P	21 55 32.5	+0.6
2.7nm,0.5s							
ASAR	Alice Springs	17.76	158	P	P	21 55 58.2	+0.9
0.5nm,0.3s,baz=340,slow=12,SNR=9.6							
ASAR				S	S	21 59 03.2	+1.1
0.2nm,0.3s,baz=336,slow=22,SNR=6.5							
NWAO	Narrogin (SRO)	27.03	198	P	P	21 57 23.6	0.0
STKA	Stephens Creek	28.20	152	P	P	21 57 34.5	+0.6
COCO	West Island	29.81	258	eP	P	21 57 47.5	-0.8
CHTO	Chiang Mai	37.64	314	P	P	21 58 55.1	+0.1
TAU	Tasmania Unive	39.92	156	eP	P	21 59 13.1	-0.2
MAJO	Matsushiro	44.86	13	P	P	21 59 51.8	-0.9
LSA	Lhasa	50.13	319	P	P	22 00 33.3	+0.4
SONM	Songino Array	57.68	344	P	P	22 01 26.5	0.0
0.3nm,0.5s,mb2.9,baz=170,slow=6.8,SNR=4.6							
CASY	Casey	60.01	187	eP	P	22 01 42.1	0.0
7.6nm,0.9s,mb4.1							
PETK	Petropavlovsk-	65.61	20	P	P	22 02 19.5	+0.7
1.4nm,0.6s,mb3.9,baz=241,slow=3.0,SNR=3.0							
PETK	Petropavlovsk-	65.61	20	P	P	22 02 19.5	+0.6
MK31	Makanchi Array	66.65	328	eP	P	22 02 26.1	+0.6
MKAR	Makanchi Array	66.65	328	P	P	22 02 26.2	+0.7
0.6nm,0.5s,mb3.5,baz=128,slow=7.3,SNR=7.5							
MKAR	Makanchi Array	66.65	328	P	P	22 02 26.2	+0.7
AAK	Ala-Archa	68.61	321	P	P	22 02 37.7	0.0
ZALV	Zalesovo Beam	70.36	335	P	P	22 02 47.8	-0.3
1.3nm,0.4s,mb4.0,baz=128,slow=4.9,SNR=9.0							
MAW	Mawson	73.55	201	P	P	22 03 05.8	-0.8
BVAR	Borovoye Array	76.52	329	P	P	22 03 24.4	+0.7
1.0nm,0.5s,mb3.8,baz=129,slow=10.0,SNR=7.7							
BRVK	Borovoye	76.59	329	eP	P	22 03 22.3	-1.7
1.6nm,0.5s,mb4.0							
GNI	Garni	88.48	311	eP	P	22 04 25.4	+0.3
1.5nm,0.6s,mb4.0							

MAN 07 22:02:07, 12°.84N×123°.66E, h32km, mb4.3, ML3.1, MS2.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	Virac	0.89	33	eP	Pn	22 02 23.6	+0.2
PVCP				eS	Sn	22 02 35.1	-0.1
CNP	Cataraman	1.04	108	eP	Pn	22 02 25.4	+0.1
CNP				eS	Sn	22 02 39.1	+0.4
AUQP	San Andres	1.07	297	eP	Pn	22 02 26.4	+0.6
AUQP				eS	Sn	22 02 39.8	+0.2
RCP	Roxas	1.55	215	⇓eP	Pn	22 02 30.2	-2.2
RCP				eS	Sn	22 02 51.7	+0.2
BOAC	Boac	1.87	289	eP	Pn	22 02 43.7	+6.9
GUIM	Jordan	2.44	206	eP	Pn	22 02 45.3	+0.7

*ISCJB **07** 22:04:14.8±1.4, 43°.08N±0°.05×126°.5W±0°.1, h5km±13km, mb3.6/2, Error ellipse: s-maj=17.2km s-min=6.7km az=158.3*
*IDC **07** 22:04:18.5±2.5, 43°.19N×126°.04W, h0km, mb3.5/3, mb1 3.6/8, mb1mx3.5/30, mbtmp3.4/8, ML3.3/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=43.6km s-min=15.1km az=55.0*
*NEIC **07** 22:04:19.2±2.8, 43°.11N×126°.25W, h10km, ML2.9, Error ellipse: s-maj=32.7km s-min=8.1km az=72.0*
ISC 07 22:04:17.9±1.8, 43°.10N±0°.05×126°.3W±0°.1, h4km±16km, n41, σ1.9 09/50, mb3.6/2, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.49	98	P	Pn	22 04 43.4	-2.0
RNO	Roman Nose	2.06	66	P	Pn	22 04 52.4	-0.8
DBO	Dodson Butte	2.27	88	P	Pn	22 04 55.0	-1.1
HSO	Harness Mounta	2.41	79	P	Pn	22 04 57.2	-0.8
HUMO	Hull Mountain	2.54	100	ePn	Pn	22 04 58.0	-1.7
HUMO				eSn	Sn	22 05 31.5	+0.4
COR	Corvallis	2.65	55	ePn	Pn	22 05 01.2	-0.1
COR				eSn	Sn	22 05 37.5	+3.6
BBOR	Butler Butte	2.70	93	P	Pn	22 05 01.6	-0.4
YBH	Yreka Blue Hor	3.02	116	Pn	Pn	22 05 05.9	-0.4
0.7nm,0.3s,baz=282,slow=11,SNR=29							
YBH				Sn	Sn	22 05 41.8	-1.1
0.6nm,0.3s,baz=118,slow=12,SNR=3.5							
YBH	Yreka Blue Hor	3.02	116	ePn	Pn	22 05 06.0	-0.4
YBH				eSn	Sn	22 05 43.4	+0.5
IRO	Indian Ridge	3.11	72	P	Pn	22 05 07.8	+0.2
FRIS	Frissel Point	3.27	69	P	Pn	22 05 10.2	+0.3
HUOR	Husband	3.42	71	P	Pn	22 05 12.5	+0.6
BKCOR	Black Crater	3.58	69	P	Pn	22 05 14.5	+0.5
HOOD	Mount Hood Mea	4.04	55	ePn	Pn	22 05 18.5	-1.9
HOOD				Sn	Sn	22 06 11.4	+3.4
LVP	Lakeview Peak	4.09	42	P	Pn	22 05 21.8	+0.8
MTMW	Mount Mitchell	4.16	44	P	Pn	22 05 22.5	+0.5
ESD	East Dome	4.30	43	P	Pn	22 05 25.1	+1.1
VIPM	Ingram Point	4.38	69	P	Pn	22 05 25.2	+0.2
LON	Longmire	4.87	40	ePn	Pn	22 05 32.3	+0.6
LON				eSn	Sn	22 06 31.8	+3.4
WPW	White Pass	4.95	42	P	Pn	22 05 33.9	+0.9
GNW	Green Mountain	5.11	28	ePn	Pn	22 05 33.6	-1.4
GNW				eSn	Sn	22 06 31.7	-2.7
WVOR	Wild Horse Val	5.71	94	Pn	Pn	22 05 42.3	-1.1
4.2nm,1.0s							
RSW	Rattlesnake Hi	5.83	53	ePn	Pn	22 05 44.7	-0.3
RSW				Sn	Sn	22 06 48.6	-3.5
JCW	Jim Creek	5.96	30	ePn	Pn	22 05 46.9	+0.1
JCW				eSn	Sn	22 06 54.1	-1.2
RPW	Rockport	6.32	31	ePn	Pn	22 05 52.3	+0.5
3.0nm,0.4s							
RPW				eSn	Sn	22 07 04.5	+0.1
BMO	Blue Mountains	6.75	72	ePn	Pn	22 05 56.9	-0.8
4.3nm,0.8s							
NVAR	Mina Array Bea	7.68	125	Pn	Pn	22 06 10.7	+0.3
0.2nm,0.3s,baz=303,slow=14,SNR=2.1							
ELK	Elko	8.61	102	Pn	Pn	22 06 25.5	+2.4
0.1nm,0.3s,baz=272,slow=11,SNR=5.4							
ELK				LR	LR	22 10 11.2	
comp=Z,33nm,19.0s,baz=166,slow=42							
ELK	Elko	8.61	102	Pn	Pn	22 06 25.5	+2.4
ELK				LR	LR	22 10 11.2	
HLID	Hailey	8.71	83	ePn	Pn	22 06 26.4	+1.9
1.1nm,0.3s							
N12A	Clover Valley,	8.72	101	ePn	Pn	22 06 26.8	+2.2
3.2nm,0.7s							
N12A				eSn	Sn	22 08 09.4	+6.1
BBB	Bella Bella	9.17	353	LR	LR	22 09 11.5	
comp=Z,58nm,18.6s,baz=97,slow=32							
BSMT	Bassoo Peak	9.40	56	ePn	Pn	22 06 34.0	0.0
2.0nm,0.8s							
MSO	Missoula	9.55	63	ePn	Pn	22 06 35.5	-0.5
4.7nm,1.1s							
TPAW	Teton Pass	11.23	83	ePn	Pn	22 06 59.4	+0.3
8.2nm,1.0s							
PDAR	Pinedale Array	12.31	86	Pn	Pn	22 07 14.2	+0.4
0.1nm,0.3s,baz=286,slow=11,SNR=6.2							

ANMO Albuquerque 17.43 111 P Pn 22 08 21.8 0.0
0.1nm,0.3s,baz=334,slow=11,SNR=3.7
YKA Yellowknife Ar 20.62 16 P P 22 08 57.8 +0.1
1.4nm,0.9s,baz=202,slow=11,SNR=12
ULM Lac du Bonnet 21.98 60 P P 22 09 11.9 -0.7
2.5nm,0.9s,mb3.6,baz=259,slow=10,SNR=3.1
INK Inuvik 25.55 354 P P 22 09 48.1 +0.8
2.2nm,1.2s,mb3.6,baz=187,slow=7.1,SNR=3.2
SCHQ Schefferville 39.62 51 LR LR 22 28 35.2
comp=Z,86nm,18.6s,baz=270,slow=37

*ISCJB **07** 22:07:26.1±1.2, 18°.98N±0°.08×145°.17E±0°.09, h527km±15km, mb3.6/24, Error ellipse: s-maj=13.5km s-min=12.9km az=13.3*
*NEIC **07** 22:07:26.9±0.7, 18°.97N×145°.18E, h523km±8km, mb3.9/14, Error ellipse: s-maj=7.2km s-min=6.9km az=65.0*
*IDC **07** 22:07:26.8±6.9, 18°.98N×145°.19E, h519km±82km, mb3.0/13, mb1 3.2/13, mb1mx3.0/26, mbtmp3.0/13, Error ellipse: s-maj=29.0km s-min=15.6km az=71.0*
ISC 07 22:07:27.0±1.2, 18°.96N±0°.09×145°.20E±0°.09, h524km±15km, n47, σ0°63/43, mb3.6/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.35**	**183**	*eP*	**P**	**22 08 58.6**	**+0.1**
MAJO	**Matsushiro**	**18.57**	**342**	*eP*	**P**	**22 11 11.2**	**0.0**
9.8nm,0.5s							
YULB	**Yu-li**	**22.71**	**285**	P	**P**	**22 11 48.6**	**-0.3**
YHNB	**Yeheng**	**22.82**	**289**	*eP*	**P**	**22 11 49.2**	**-0.7**
5.9nm,0.8s,mb4.3							
SSLB	**Suanglung**	**23.07**	**286**	P	**P**	**22 11 52.2**	**+0.1**
TPUB	**Ta-pu**	**23.31**	**285**	*eP*	**P**	**22 11 53.4**	**-0.9**
4.3nm,0.4s,mb4.4							
INCN	**Inchon**	**24.58**	**322**	*eP*	**P**	**22 12 04.9**	**-0.3**
12nm,0.4s,mb4.9							
KKM	**Kota Kinabalu**	**31.01**	**249**	*eP*	**P**	**22 13 01.8**	**-0.1**
7.1nm,0.7s,mb4.3							
QIZ	**Qiongzhong**	**33.40**	**276**	P	**P**	**22 13 22.1**	**0.0**
ENH	**Enshi**	**34.23**	**296**	P	**P**	**22 13 28.8**	**-0.2**
KSM	**Kuching**	**38.35**	**247**	P	**P**	**22 14 03.1**	**-0.1**
WRAB	**Tennant Creek**	**40.09**	**196**	*eP*	**P**	**22 14 16.8**	**-0.3**
2.0nm,0.8s,mb3.7							
WRA	**Warramunga Arr**	**40.10**	**196**	P	**P**	**22 14 17.1**	**-0.1**
0.1nm,0.3s,mb2.8,baz=13,slow=8.5,SNR=3.4							
FITZ	**Fitzroy Crossi**	**41.55**	**209**	P	**P**	**22 14 28.6**	**-0.1**
1.2nm,0.2s,mb4.0,baz=82,slow=13,SNR=15							
FITZ	**Fitzroy Crossi**	**41.55**	**209**	*eP*	**P**	**22 14 28.7**	**0.0**
1.2nm,0.2s,mb4.1							
ULN	**Ulaanbaatar**	**42.27**	**322**	P	**P**	**22 14 34.2**	**+0.1**
SONM	**Songino Array**	**42.65**	**321**	P	**P**	**22 14 37.0**	**0.0**
0.3nm,0.5s,mb3.1,baz=161,slow=6.2,SNR=3.6							
CMAR	**Chiang Mai Arr**	**43.72**	**277**	P	**P**	**22 14 46.8**	**+0.9**
0.7nm,0.5s,mb3.5,baz=68,slow=7.5,SNR=6.6							
KULM	**Kulim**	**45.48**	**258**	*eP*	**P**	**22 14 59.4**	**-0.1**
1.4nm,0.4s,mb3.8							
LSA	**Lhasa**	**50.02**	**293**	*eP*	**P**	**22 15 35.1**	**+1.9**
ZALV	**Zalesovo Beam**	**57.52**	**322**	P	**P**	**22 16 25.9**	**0.0**
0.5nm,0.3s,mb3.2,baz=80,slow=10,SNR=3.3							
MKAR	**Makanchi Array**	**57.94**	**314**	P	**P**	**22 16 29.5**	**+0.6**
0.3nm,0.4s,mb2.9,baz=106,slow=6.7,SNR=6.3							
MKAR	**Makanchi Array**	**57.94**	**314**	P	**P**	**22 16 29.5**	**+0.6**
KURK	**Kurchatov**	**60.76**	**318**	P	**P**	**22 16 48.2**	**+0.5**
1.6nm,0.5s,mb3.6,baz=97,slow=7.2,SNR=11							
KURK	**Kurchatov**	**60.76**	**318**	*eP*	**P**	**22 16 47.1**	**-0.6**
0.6nm,0.4s,mb3.3							
PMR	**Palmer**	**61.96**	**30**	*eP*	**P**	**22 16 55.2**	**-0.1**
TKM2	**Tokmak 2**	**62.52**	**309**	*eP*	**P**	**22 16 60.0**	**+0.6**
0.9nm,0.3s,mb3.7							
COLA	**College**	**63.24**	**26**	P	**P**	**22 17 03.7**	**+0.1**
UCH	**Uchtor**	**63.34**	**308**	P	**P**	**22 17 04.8**	**+0.2**
AML	**Almayashu**	**63.95**	**308**	*eP*	**P**	**22 17 09.4**	**+0.8**
0.5nm,0.4s,mb3.3							
BVAR	**Borovoye Array**	**65.97**	**320**	P	**P**	**22 17 21.2**	**+0.2**
1.3nm,0.4s,mb3.8,baz=95,slow=9.1,SNR=9.5							
KBL	**Kabul**	**68.34**	**300**	*eP*	**P**	**22 17 36.4**	**+0.4**
INK	**Inuvik**	**69.32**	**23**	P	**P**	**22 17 41.4**	**+0.2**
0.9nm,0.5s,mb3.6,baz=295,slow=6.1,SNR=7.0							
INK	**Inuvik**	**69.32**	**23**	*eP*	**P**	**22 17 41.3**	**0.0**
1.2nm,0.7s,mb3.5							
ARU	**Arti**	**72.58**	**324**	*eP*	**P**	**22 18 00.5**	**-0.2**
1.1nm,0.3s,mb3.8							
YKA	**Yellowknife Ar**	**77.98**	**28**	P	**P**	**22 18 31.0**	**+0.4**
1.1nm,0.8s,mb3.2,baz=289,slow=5.3,SNR=6.6							
RES	**Resolute Bay**	**79.28**	**14**	*eP*	**P**	**22 18 36.8**	**-0.6**
0.6nm,0.6s,mb3.1							
ARCES	**ARCESS Array B**	**82.10**	**342**	P	**P**	**22 18 52.0**	**-0.1**
1.2nm,0.7s,mb3.4,baz=78,slow=8.0,SNR=9.2							
JOF	**Joensuu**	**83.59**	**335**	*ep*	**P**	**22 18 57.7**	**-2.0**
1.4nm,0.5s,mb3.8							
ELK	**Elko**	**84.80**	**49**	P	**P**	**22 19 07.1**	**+0.9**
0.6nm,0.7s,mb3.2,baz=308,slow=10,SNR=4.9							
ELK	**Elko**	**84.80**	**49**	P	**P**	**22 19 07.1**	**+0.9**
FINES	**FINESS Array B**	**86.45**	**335**	P	**P**	**22 19 11.9**	**-1.6**
0.5nm,0.5s,mb3.5,baz=46,slow=5.5,SNR=6.2							
AHID	**Auburn Hatcher**	**86.93**	**46**	P	**P**	**22 19 16.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**131.93**	**309**	PKP	PKPdf	22 25 41.2	-0.4
0.3nm,0.8s,baz=34,slow=2.1,SNR=4.4							
TORD	**Torodi Ar. Bea**	**131.93**	**309**	PKP	PKPdf	22 25 41.2	-0.4
LPAZ	**La Paz**	**148.15**	**91**	PKPbc	PKPbc	22 26 16.8	+2.2
0.6nm,0.5s,baz=27,slow=3.2,SNR=3.6							
LPAZ	**La Paz**	**148.15**	**91**	PKPbc	PKPbc	22 26 16.8	+2.2

MAN 07 22:09:46, 12°.70N×123°.66E, h25km, mb4.1, ML2.9, MS2.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataman**	**0.99**	**101**	*eP*	Pn	22 10 05.2	+0.8
CNP				*eS*	Sb	22 10 18.5	+1.2
PVCP	**Virac**	**1.01**	**28**	*eP*	Pn	22 10 03.5	-1.1
PVCP				*eS*	Sb	22 10 14.7	-2.9
AUQP	**San Andres**	**1.14**	**303**	*eP*	Pn	22 10 06.9	+0.5
AUQP				*eS*	Sn	22 10 25.5	+4.2
RCP	**Roxas**	**1.45**	**218**	*eP*	Pn	22 10 10.0	-0.6
RCP				*eS*	Sn	22 10 29.8	+0.9
BOAC	**Boac**	**1.93**	**293**	*eP*	Pn	22 10 19.9	+2.7

*ISCJB **07** 22:10:39.4±0.9, 24°.79N±0°.07×109°.50W±0°.09, h10km, mb3.7/4, Error ellipse: s-maj=12.8km s-min=9.5km az=153.2*
*IDC **07** 22:10:39.7±4.2, 24°.73N×109°.59W, h0km, mb3.5/2, mb1 3.8/6, mb1mx3.6/23, mbtmp3.5/6, ML3.6/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/27, Error ellipse: s-maj=61.3km s-min=28.2km az=166.0*
*NEIC **07** 22:10:40.9±0.9, 24°.75N×109°.53W, h10km, mb3.7/6, Error ellipse: s-maj=13.2km s-min=8.7km az=224.0*
ISC 07 22:10:40.6±0.9, 24°.72N±0°.07×109°.55W±0°.09, h10km, n28, σ0°95/29, mb3.7/4, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.97**	**48**	Pn	**Pn**	**22 12 22.9**	**+0.1**
0.2nm,0.3s,baz=228,slow=14,SNR=4.1							
TXAR				Pg	**Pg**	**22 12 51.2**	**-3.0**
0.2nm,0.3s,baz=224,slow=15,SNR=7.7							
TXAR				Lg		22 14 21.5	
0.6nm,0.3s,baz=230,slow=29,SNR=5.4							
TUC	**Tucson**	**7.64**	**352**	Pn	**Pn**	**22 12 29.9**	**-2.1**
TUC				*eS*	Sx	22 14 32.2	
MNTX	**Cornudas Mount**	**7.87**	**27**	*ePn*	**Pn**	**22 12 35.3**	**+0.2**
4.0nm,0.8s							
MNTX				*ePg*	Pn	22 13 09.5	+34
MNTX				*eSn*	**Sn**	**22 14 07.9**	**+3.7**
MNTX				Sg	Sn	22 14 39.2	+35
LAZ	**Ladron**	**9.87**	**12**	Pn	**Pn**	**22 13 02.1**	**-0.6**
LAZ				Sn	**Sn**	**22 14 54.6**	**+1.0**
ANMO	**Albuquerque**	**10.54**	**14**	*ePn*	**Pn**	**22 13 11.5**	**-0.3**
WMOK	**Wichita Mounta**	**13.67**	**41**	*ePn*	**Pn**	**22 13 54.6**	**0.0**
SMCO	**Snowmass**	**14.58**	**8**	Pn	**Pn**	**22 14 06.9**	**-0.1**
4.7nm,0.9s							
NVAR	**Mina Array Bea**	**15.56**	**334**	Pn	**Pn**	**22 14 25.0**	**+5.0**
0.3nm,0.3s,baz=151,slow=13,SNR=4.7							
CMIG	**Matias Romero**	**15.66**	**116**	LR	LR	22 20 10.5	
comp=Z,74nm,21.3s,baz=11,slow=36							
CMB	**Columbia Colle**	**16.16**	**328**	*ePn*	**Pn**	**22 14 26.9**	**-0.9**
1.3nm,0.5s							
ELK	**Elko**	**16.67**	**345**	Pn	**Pn**	**22 14 37.3**	**+3.0**
0.1nm,0.3s,baz=183,slow=9.3,SNR=5.6							
N12A	**Clover Valley,**	**16.73**	**345**	*ePn*	**Pn**	**22 14 35.0**	**-0.1**
7.3nm,1.1s							
HWUT	**Hardware Ranch**	**16.93**	**355**	*ePn*	**Pn**	**22 14 37.9**	**+0.4**
4.3nm,1.1s							
MIAR	**Mount Ida**	**16.98**	**51**	Pn	**Pn**	**22 14 38.9**	**+0.7**
PDAR	**Pinedale Array**	**18.00**	**360**	P	**Pn**	**22 14 50.3**	**-0.6**
0.1nm,0.3s,baz=160,slow=11,SNR=11							
KSU1	**Kansas State U**	**18.03**	**34**	*ePn*	**Pn**	**22 14 50.5**	**-0.8**
HLID	**Hailey**	**19.21**	**349**	P	**Pn**	**22 15 05.7**	**0.0**
BMO	**Blue Mountains**	**21.05**	**345**	P	**P**	**22 15 26.4**	**+1.7**
WVT	**Waverly**	**21.86**	**54**	*eP*	**P**	**22 15 33.3**	**-0.3**
2.9nm,0.8s,mb3.8							
NEW	**Newport**	**24.25**	**348**	*eP*	**P**	**22 15 57.5**	**-0.1**
WALA	**Waterton Lakes**	**24.53**	**353**	*eP*	**P**	**22 16 00.3**	**0.0**
TKL	**Tuckaleechee C**	**24.73**	**58**	LR	LR	22 25 24.2	
comp=Z,58nm,21.0s,baz=267,slow=36							
YKA	**Yellowknife Ar**	**37.91**	**356**	P	**P**	**22 17 57.2**	**-0.6**
0.6nm,1.0s,mb3.3,baz=168,slow=8.0,SNR=7.4							
OTAV	**Otavalo**	**38.70**	**124**	*eP*	**P**	**22 18 06.1**	**+1.1**
1.8nm,0.5s,mb4.1							
BBSR	**BB Station**	**39.90**	**68**	P	**P**	**22 18 14.7**	**-0.2**
RES	**Resolute Bay**	**50.60**	**5**	P	**P**	**22 19 40.6**	**+1.5**
1.1nm,0.8s,mb3.8,baz=222,slow=5.7,SNR=3.6							
RES	**Resolute Bay**	**50.60**	**5**	*eP*	**P**	**22 19 39.4**	**+0.2**
1.0nm,0.6s,mb3.9							
CPUP	**Villa Florida**	**71.55**	**132**	P	**P**	**22 22 01.7**	**-0.3**

*IDC **07** 22:11:18.1±8.4, 0°.53N×120°.79E, h114km±84km, mb3.4/3, mb1 3.7/4, mb1mx3.2/21, mbtmp3.5/4, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/37, Error ellipse: s-maj=93.7km s-min=24.4km az=57.0*
*ISCJB **07** 22:11:25.9±1.1, 0°.72S±0°.06×122°.67E±0°.05, h23km±7km, mb3.6/2, Error ellipse: s-maj=11.2km s-min=7.1km az=29.4*
*DJA **07** 22:11:26, 0°.69S×122°.72E, h18km, MLv4.0/7*
ISC 07 22:11:25.7±1.3, 0°.67S±0°.06×122°.64E±0°.05, h15km±7km, n11, σ1°10/16, mb3.6/2, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.39**	**160**	P	**Pg**	**22 11 32.8**	**-0.8**
LUWI				S	**Sg**	**22 11 38.5**	**-0.4**
APSI	**Ampana**	**1.02**	**257**	P	**Pb**	**22 11 44.8**	**-0.3**
APSI				S	**Sg**	**22 12 01.3**	**+2.5**
MRSI	**Marisa**	**1.34**	**329**	P	**Pn**	**22 11 48.2**	**-1.7**
MPSI	**Mapaga**	**2.92**	**290**	S	**Sn**	**22 12 50.6**	**+4.0**
KDI	**Kendari**	**3.26**	**180**	P	**Pn**	**22 12 16.8**	**+0.4**
KDI				S	**Sn**	**22 12 55.2**	**+0.2**
TTSI	**Tana Toraja**	**3.67**	**230**	P	**Pn**	**22 12 22.0**	**-0.1**
NLAI	**Namlea**	**5.13**	**120**	P	**Pn**	**22 12 43.5**	**+1.3**
88nm,0.8s,1μm0.3nm							
NLAI				S	**Sn**	**22 13 41.2**	**0.0**
88nm,0.8s,1μm0.3nm							
KAPI	**Kappang**	**5.19**	**214**	P	**Pn**	**22 12 40.7**	**-2.2**
7.1nm,0.3s,baz=73,slow=2.1,SNR=9.8							
KAPI				S	**Sn**	**22 13 41.5**	**-1.0**
2.1nm,0.3s,baz=216,slow=22,SNR=9.6							
KAPI				LR	LR	22 14 54.4	
comp=Z,216nm,19.0s,baz=108,slow=39							
KAPI	**Kappang**	**5.19**	**214**	P	**Pn**	**22 12 42.4**	**-0.5**
WRA	**Warramunga Arr**	**22.31**	**150**	P	**P**	**22 16 24.6**	**+1.7**
1.9nm,0.6s,mb3.7,baz=334,slow=9.8,SNR=18							
ASAR	**Alice Springs**	**25.33**	**155**	P	**P**	**22 16 52.1**	**-0.1**
0.8nm,0.6s,mb3.4,baz=344,slow=14,SNR=19							

*ISCJB **07** 22:12:35.7±1.8, 36°.21N±0°.04×142°.11E±0°.07, h24km±14km, mb3.9/5, Error ellipse: s-maj=9.7km s-min=7.1km az=174.0*
*IDC **07** 22:12:36.2±2.6, 36°.26N×141°.83E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, ML3.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/38, Error ellipse: s-maj=60.3km s-min=26.8km az=69.0*
*JMA **07** 22:12:37.0±0.2, 36°.22N×142°.04E, h70km, M3.2*
*NEIC **07** 22:12:40.8±1.0, 36°.31N×141°.81E, h35km, mb4.0/3, Error ellipse: s-maj=19.4km s-min=13.7km az=59.0*
ISC 07 22:12:35.3±1.9, 36°.21N±0°.04×142°.08E±0°.07, h9km±13km, n28, σ0°84/35, mb3.9/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.11**	**243**	P	**Pb**	**22 12 56.7**	**+0.1**
CHOJ				*eS*	**Sb**	**22 13 12.8**	**+1.6**
JHO	**Hitachi**	**1.28**	**289**	P	**Pn**	**22 12 58.5**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.36**	**311**	P	**Pn**	**22 12 59.9**	**-0.5**
JFK	**Kawauchi**	**1.50**	**320**	P	**Pn**	**22 13 02.2**	**-0.2**
BSO1	**Boso 1**	**1.79**	**210**	P	**Pn**	**22 13 06.1**	**-0.3**
BSO1				*eS*	**Sn**	**22 13 29.4**	**+0.1**
BSO3	**Boso 3**	**1.90**	**223**	P	**Pn**	**22 13 07.9**	**+0.1**
JFT	**Otama**	**1.91**	**314**	P	**Pn**	**22 13 08.7**	**+0.7**
JFT				*eS*	**Sn**	**22 13 32.0**	**-0.2**
JMM	**Marumori**	**1.94**	**329**	P	**Pn**	**22 13 08.0**	**-0.5**
JAG	**Ashikaga**	**2.13**	**277**	P	**Pn**	**22 13 10.8**	**-0.2**
JRY	**Ryogami san**	**2.58**	**267**	P	**Pn**	**22 13 16.9**	**-0.3**
JRY				*eS*	**Sn**	**22 13 48.3**	**-0.3**
JOD2	**Odawara 2**	**2.61**	**250**	P	**Pn**	**22 13 17.6**	**0.0**
MJAR	**Matsushiro Arr**	**3.14**	**277**	Pn	**Pn**	**22 13 25.1**	**+0.2**
4.3nm,0.3s,baz=92,slow=13,SNR=16							
MAJO	**Matsushiro**	**3.14**	**277**	*ePn*	**Pn**	**22 13 25.3**	**+0.5**
MAJO				Sn	**Sn**	**22 14 01.1**	**-1.3**
MAT	**Matsushiro**	**3.14**	**277**	P	**Pn**	**22 13 25.8**	**+0.9**
MAT				S	**Sn**	**22 14 02.7**	**+0.2**
JHJ	**Hachijo jima 2**	**3.62**	**212**	Pn	**Pn**	**22 13 30.9**	**-0.6**
36nm,0.3s,baz=236,slow=20,SNR=18							
JHJ				Sn	**Sn**	**22 14 10.5**	**-3.7**
16nm,0.3s,baz=268,slow=23,SNR=3.8							
CBIJ	**Chichi jima**	**9.09**	**179**	Pn	**Pn**	**22 14 44.9**	**-1.7**
2.3nm,0.3s,baz=270,slow=20,SNR=5.6							
CBIJ				Sn	**Sn**	**22 16 20.1**	**-9.0**
4.3nm,0.3s,baz=285,slow=20,SNR=4.8							
KSRS	**Korea Array**	**11.41**	**280**	LR	LR	22 19 26.2	
comp=Z,53nm,19.4s,baz=185,slow=36							
TATO	**Taipei**	**20.92**	**243**	P	**P**	**22 17 18.1**	**0.0**
ENH	**Enshi**	**27.81**	**267**	*eP*	**P**	**22 18 23.4**	**-1.4**
3.9nm,0.3s,mb4.5							
SONM	**Songino Array**	**28.69**	**305**	P	**P**	**22 18 32.7**	**+0.3**
0.5nm,0.6s,mb3.4,baz=105,slow=8.2,SNR=4.4							
LSA	**Lhasa**	**42.82**	**276**	P	**P**	**22 20 34.6**	**+1.0**
KURK	**Kurchatov**	**46.86**	**309**	P	**P**	**22 21 06.5**	**+1.0**
0.5nm,0.4s,mb3.8,baz=82,slow=7.7,SNR=4.7							
KURK	**Kurchatov**	**46.86**	**309**	*eP*	**P**	**22 21 05.6**	**+0.1**
0.6nm,0.4s,mb3.9							
AAK	**Ala-Archa**	**51.35**	**299**	P	**P**	**22 21 40.0**	**0.0**
AML	**Almayashu**	**52.07**	**299**	*eP*	**P**	**22 21 46.0**	**+0.6**
0.6nm,0.5s,mb3.8							
FITZ	**Fitzroy Crossi**	**56.21**	**199**	*eP*	**P**	**22 22 17.4**	**+1.7**
WRA	**Warramunga Arr**	**56.32**	**189**	P	**P**	**22 22 19.5**	**+3.0**
0.4nm,0.3s,mb3.9,baz=6.3,slow=8.4,SNR=6.8							
ARU	**Arti**	**57.33**	**319**	P	**P**	**22 22 22.9**	**-0.4**

*ISCJB **07** 22:20:33.4±4.9, 14°.9N±0°.1×147°.2E±0°.1, h9km±30km, mb4.0/17, Error ellipse: s-maj=23.2km s-min=10.3km az=44.0*
*IDC **07** 22:20:33.9±1.4, 14°.85N×147°.17E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.8/24, mbtmp3.9/10, ML3.7/1, Error ellipse: s-maj=32.0km s-min=22.4km az=114.0*
*NEIC **07** 22:20:38.9±0.6, 14°.82N×147°.12E, h35km, mb4.2/8, Error ellipse: s-maj=12.9km s-min=8.1km az=131.0*
ISC 07 22:20:33.9±5.7, 14°.9N±0°.1×147°.2E±0°.1, h1km±35km, n28, σ0°53/30, mb4.0/17, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.57**	**241**	Pn	**Pn**	**22 21 17.1**	**+0.4**
15nm,0.3s,baz=222,slow=10,SNR=3.3							
GUMO				Sn	**Sn**	**22 21 47.9**	**-0.6**
53nm,0.3s,baz=144,slow=22,SNR=14							
GUMO	**Guam**	**2.57**	**241**	*ePn*	**Pn**	**22 21 16.2**	**-0.4**
GUMO				*eSn*	**Sn**	**22 21 48.8**	**+0.2**
JOW	**Kunigami**	**21.28**	**307**	P	**P**	**22 25 22.6**	**+0.8**
7.9nm,0.5s,mb4.3,baz=124,slow=21,SNR=5.3							
DAV	**Davao City (W)**	**22.56**	**252**	P	**P**	**22 25 35.4**	**-0.3**
YULB	**Yu-li**	**25.85**	**293**	P	**P**	**22 26 06.7**	**-0.4**
SSLB	**Suanglung**	**26.26**	**294**	P	**P**	**22 26 10.7**	**-0.2**
ERM	**Erimo**	**27.29**	**353**	*eP*	**P**	**22 26 18.9**	**-1.0**
8.0nm,0.6s,mb4.4							
KSRS	**Korea Array**	**28.27**	**326**	P	**P**	**22 26 28.4**	**-0.3**
0.9nm,0.7s,mb3.5,baz=145,slow=9.0,SNR=4.1							
BJT	**Baijiatuan**	**36.91**	**319**	P	**P**	**22 27 44.2**	**0.0**
ASAR	**Alice Springs**	**40.42**	**199**	P	**P**	**22 28 13.7**	**-0.2**
0.5nm,0.7s,mb3.4,baz=20,slow=7.2,SNR=5.4							
CM31	**Chiang Mai Arr**	**46.25**	**281**	*eP*	**P**	**22 29 01.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**46.25**	**281**	P	**P**	**22 29 02.0**	**+0.8**
0.8nm,0.5s,mb3.9,baz=84,slow=5.5,SNR=8.0							
ULN	**Ulaanbaatar**	**46.67**	**323**	*eP*	**P**	**22 29 03.8**	**-0.2**
1.5nm,0.7s,mb4.0							
SONM	**Songino Array**	**47.03**	**323**	P	**P**	**22 29 07.1**	**+0.2**
1.2nm,0.6s,mb4.0,baz=141,slow=6.5,SNR=11							
LSA	**Lhasa**	**53.44**	**296**	*eP*	**P**	**22 29 56.5**	**+0.7**
2.3nm,0.6s,mb4.3							
ZALV	**Zalesovo Beam**	**61.92**	**324**	P	**P**	**22 30 54.4**	**-0.6**
0.5nm,0.5s,mb4.0,baz=125,slow=9.2,SNR=3.1							
MKAR	**Makanchi Array**	**62.16**	**315**	P	**P**	**22 30 57.3**	**+0.5**
1.6nm,0.5s,mb4.4,baz=101,slow=6.8,SNR=26							
PMR	**Palmer**	**64.62**	**28**	P	**P**	**22 31 12.9**	**+0.1**
KURK	**Kurchatov**	**65.08**	**319**	*eP*	**P**	**22 31 15.1**	**-0.9**
3.7nm,1.0s,mb4.4							
TKM2	**Tokmak 2**	**66.59**	**311**	*eP*	**P**	**22 31 26.6**	**+0.6**
1.4nm,0.6s,mb4.2							
UCH	**Uchtor**	**67.38**	**310**	*eP*	**P**	**22 31 31.9**	**+0.9**
0.8nm,0.6s,mb3.9							
AML	**Almayashu**	**67.99**	**310**	*eP*	**P**	**22 31 34.6**	**-0.2**
1.3nm,0.6s,mb4.1							
BVAR	**Borovoye Array**	**70.34**	**321**	P	**P**	**22 31 48.7**	**-0.4**
1.0nm,0.4s,mb4.1,baz=103,slow=6.7,SNR=8.1							
INK	**Inuvik**	**72.35**	**23**	P	**P**	**22 32 01.1**	**0.0**
ARU	**Arti**	**77.01**	**325**	*eP*	**P**	**22 32 28.2**	**-0.1**
ABKAR	**Akbulak array**	**77.12**	**318**	*eP*	**P**	**22 32 28.4**	**-0.6**
0.3nm,0.5s,mb3.5							
YKA	**Yellowknife Ar**	**80.71**	**28**	P	**P**	**22 32 49.2**	**+0.7**
0.2nm,0.5s,mb3.3,baz=282,slow=5.2,SNR=3.8							
YKA	**Yellowknife Ar**	**80.71**	**28**	P	**P**	**22 32 49.2**	**+0.7**

*IDC **07** 22:23:43.9±1.0, 55°.37S×158°.81E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.2/13, mbtmp4.2/7, MS3.7/2, Ms1 3.7/2, ms1mx3.2/20, Error ellipse: s-maj=52.4km s-min=20.2km az=78.0*
*ISCJB **07** 22:23:44.3±0.7, 55°.28S±0°.09×158°.6E±0°.2, h10km, mb4.2/9, Error ellipse: s-maj=17.7km s-min=12.8km az=4.7*
*NEIC **07** 22:23:45.7±0.4, 55°.37S×158°.47E, h10km, mb3.8/5, Error ellipse: s-maj=12.2km s-min=9.4km az=104.0*
ISC 07 22:23:45.7±7.8, 55°.3S±0°.1×158°.4E±0°.2, h6km±51km, n33, σ0°96/15, mb4.2/9, 3C-1D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODZ	**Otahua Downs**	**12.91**	**42**	*ePn*	**Pn**	**22 26 47.7**	**-1.9**
16nm,0.7s							
RPZ	**Rata Peaks**	**14.20**	**40**	Pn	**Pn**	**22 27 08.8**	**+1.7**
1.8nm,0.3s,baz=201,slow=1.2,SNR=6.5							
RPZ				LR	LR	22 31 57.2	
comp=Z,322nm,18.8s,baz=230,slow=35							
TAU	**Tasmania Unive**	**14.37**	**325**	*ePn*	**Pn**	**22 27 09.4**	**-0.2**
URZ	**Urewera**	**21.22**	**44**	LR	LR	22 36 40.9	
comp=Z,215nm,19.0s,baz=128,slow=37							
STKA	**Stephens Creek**	**26.28**	**326**	P	**P**	**22 29 24.2**	**+2.5**
0.5nm,0.4s,mb3.4,baz=150,slow=20,SNR=2.5							
STKA	**Stephens Creek**	**26.28**	**326**	*eP*	**P**	**22 29 21.9**	**+0.1**
1.6nm,1.3s,mb3.4							
QSPA	**South Pole Qui**	**34.78**	**180**	P	**P**	**22 30 36.8**	**+0.5**
3.8nm,1.1s,mb4.2,baz=354,slow=5.7,SNR=5.0							
ASAR	**Alice Springs**	**36.46**	**320**	P	**P**	**22 30 52.0**	**+0.6**
2.6nm,0.8s,mb4.2,baz=156,slow=8.1,SNR=19							
ASAR				PcP	PcP	22 33 14.1	-1.1
0.9nm,0.7s,baz=146,slow=3.3,SNR=7.5							
WB2	**Warramunga Arr**	**39.73**	**323**	*eP*	**P**	**22 31 18.5**	**-0.3**
WRA	**Warramunga Arr**	**39.73**	**323**	P	**P**	**22 31 18.7**	**-0.2**
2.8nm,0.7s,mb4.1,baz=157,slow=7.1,SNR=13							
WRAB	**Tennant Creek**	**39.74**	**323**	*eP*	**P**	**22 31 18.4**	**-0.6**
2.0nm,0.5s,mb4.1							
MAW	**Mawson**	**42.54**	**214**	P	**P**

comp=Z,21nm,19.2s,baz=308,slow=36
ULN Ulaanbaatar 28.31 305 *eP* **P 22 30 33.9 +0.3**
2.1nm,0.8s,mb3.8
SONM Songino Array 28.73 305 P **P 22 30 38.5 +1.1**
1.3nm,0.6s,mb3.8,baz=103,slow=8.5,SNR=8.3
CMAR Chiang Mai Arr 41.77 257 P **P 22 32 30.1 +0.5**
0.4nm,0.6s,mb3.2,baz=51,slow=6.5,SNR=4.2
LSA Lhasa 42.81 277 P **P 22 32 38.6 +0.5**
1.3nm,0.7s,mb3.8
ZALV Zalesovo Beam 42.92 313 P **P 22 32 39.8 +1.3**
0.5nm,0.4s,mb3.6,baz=77,slow=6.7,SNR=3.7
MKAR Makanchi Array 45.05 303 P **P 22 32 57.0 +1.3**
0.9nm,0.6s,mb3.8,baz=92,slow=8.4,SNR=5.4
KURK Kurchatov 46.91 309 *eP* **P 22 33 09.9 -0.4**
1.5nm,0.4s,mb4.3
EKS2 Erkin-Say 51.89 299 *eP* **P 22 33 46.7 -1.8**
AML Almayashu 52.10 299 P **P 22 33 49.8 -0.3**
1.2nm,0.4s,mb4.2
WRAB Tennant Creek 56.20 189 *eP* **P 22 34 19.2 -0.9**
WRA Warramunga Arr 56.22 189 P **P 22 34 20.9 +0.7**
0.5nm,0.5s,mb3.8,baz=5.0,slow=7.3,SNR=3.3
ASAR Alice Springs 59.94 189 P **P 22 34 47.5 +1.3**
0.2nm,0.4s,mb3.5,baz=210,slow=27,SNR=2.9
STKA Stephens Creek 67.62 180 P **P 22 35 34.4 -2.3**

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*ISCJB **07** 22:41:53.0±0.5, 36°.23N±0°.03×71°.30E±0°.05, h100km±8km, mb3.5/5, Error ellipse: s-maj=7.0km s-min=5.3km az=3.3*
*IDC **07** 22:41:53.3±5.7, 36°.13N×71°.21E, h86km±44km, mb3.3/6, mb1 3.3/11, mb1mx3.2/30, mbtmp3.3/11, Error ellipse: s-maj=53.9km s-min=31.9km az=142.0*
*NEIC **07** 22:41:54.6±0.9, 36°.21N×71°.09E, h94km±8km, mb3.6/1, Error ellipse: s-maj=17.5km s-min=7.2km az=132.0*
*NNC **07** 22:42:03.0±6.2, 37°.10N×69°.71E, h0km, mb3.9, mpv4.2, Error ellipse: s-maj=50.1km s-min=39.6km az=150.0*
ISC 07 22:41:54.2±0.5, 36°.19N±0°.03×71°.30E±0°.05, h98km±7km, n41, σ1§13/50, mb3.5/5, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.47**	**229**	*ePn*	**Pn**	**22 42 32.0**	**-0.8**
KBL				*eSn*	**Sn**	**22 43 03.6**	**+1.0**
KSH	**Kashi**	**4.97**	**47**	Pn	**Pn**	**22 43 04.3**	**-2.2**
KSH				Sn	**Sn**	**22 43 52.2**	**-10**
KSH				smax			
	comp=N,44nm,0.2s						
KSH				smax			
	comp=E,47nm,0.2s						
AML	**Almayashu**	**6.21**	**17**	P	**Pn**	**22 43 24.9**	**+1.6**
	SNR=41						
AML	**Almayashu**	**6.21**	**17**	*ePn*	**Pn**	**22 43 24.8**	**+1.4**
	comp=E,14nm,0.5s						
AML				*eSn*	**Sn**	**22 44 30.5**	**-2.4**
UCH	**Uchtor**	**6.52**	**22**	P	**Pn**	**22 43 29.3**	**+1.8**
	SNR=6.4						
UCH	**Uchtor**	**6.52**	**22**	*ePn*	**Pn**	**22 43 29.1**	**+1.6**
	comp=E,3.3nm,0.7s						
UCH				*eS*	**Sn**	**22 44 39.0**	**-1.4**
EKS2	**Erkin-Say**	**6.74**	**16**	P	**Pn**	**22 43 32.0**	**+1.6**
	SNR=11						
EKS2	**Erkin-Say**	**6.74**	**16**	*ePn*	**Pn**	**22 43 31.8**	**+1.3**
	comp=E,5.9nm,0.5s						
EKS2				*eSn*	**Sn**	**22 44 44.6**	**-1.0**
AAK	**Ala-Archa**	**6.89**	**20**	P	**Pn**	**22 43 34.6**	**+2.0**
	SNR=8.8						
AAK	**Ala-Archa**	**6.89**	**20**	P	**Pn**	**22 43 34.5**	**+1.9**
	comp=E,0.0nm,0.3s,baz=151,slow=4.9,SNR=18						
AAK				S	**Sn**	**22 44 48.7**	**-0.7**
	comp=E,0.0nm,0.3s,baz=19,slow=18,SNR=7.1						
AAK	**Ala-Archa**	**6.89**	**20**	*ePn*	**Pn**	**22 43 34.4**	**+1.9**
	comp=E,5.6nm,0.4s						
AAK				Sn	**Sn**	**22 44 50.3**	**+1.0**
KK31	**Karatay Array**	**6.93**	**355**	⇑Pn	**Pn**	**22 43 32.8**	**-0.2**
	comp=E,6.9nm,0.3s,baz=181,slow=13,SNR=665						
KK31				Sn	**Sn**	**22 44 44.2**	**-6.0**
	comp=E,1.9nm,0.3s,baz=189,slow=26,SNR=8.2						
USP	**Ospenovka**	**7.48**	**18**	P	**Pn**	**22 43 41.8**	**+1.2**
	SNR=11						
TKM2	**Tokmak 2**	**7.49**	**25**	*ePn*	**Pn**	**22 43 41.0**	**+0.3**
PYUN	**Piuthan**	**12.77**	**126**	*eP*	**Pn**	**22 44 52.0**	**-0.1**
	comp=E,10nm,0.3s						
KOLN	**Koldanda**	**13.39**	**125**	*eP*	**Pn**	**22 45 00.5**	**+0.2**
	comp=E,3.5nm,0.3s						
MKAR	**Makanchi Array**	**13.40**	**34**	P	**Pn**	**22 45 02.7**	**+2.4**
	comp=E,0.0nm,0.3s,baz=205,slow=13,SNR=2.4						
GKN	**Gorkha**	**13.94**	**122**	*eP*	**Pn**	**22 45 07.5**	**+0.1**
	comp=E,11nm,0.4s						
DMN	**Daman**	**14.51**	**122**	*eP*	**Pn**	**22 45 14.5**	**-0.3**
	comp=E,2.7nm,0.2s						
KKN	**Kakani**	**14.52**	**121**	*eP*	**Pn**	**22 45 13.7**	**-1.1**
	comp=E,2.6nm,0.2s						
PKIN	**Phulchoki**	**14.73**	**122**	*eP*	**Pn**	**22 45 17.4**	**-0.2**
	comp=E,3.3nm,0.2s						
PKI	**Pulchoki**	**14.74**	**122**	*eP*	**Pn**	**22 45 17.4**	**-0.3**
	comp=E,4.3nm,0.2s						
GUN	**Gumba**	**14.86**	**120**	*eP*	**Pn**	**22 45 18.7**	**-0.5**
	comp=E,4.6nm,0.3s						
KURK	**Kurchatov**	**15.45**	**18**	P	**Pn**	**22 45 27.2**	**+0.8**
	comp=E,0.0nm,0.3s,baz=204,slow=10,SNR=5.4						
AB31	**Akbulak array**	**15.47**	**331**	P	**Pn**	**22 45 24.2**	**-2.5**
	comp=E,0.8nm,0.4s,baz=144,slow=13,SNR=55						
AB31				⇓S	**Sn**	**22 48 02.6**	**-15**
	comp=E,0.2nm,0.3s,baz=152,slow=23,SNR=3.2						
ABKAR	**Akbulak array**	**15.47**	**331**	*ePn*	**Pn**	**22 45 24.7**	**-2.0**
	comp=E,1.6nm,0.4s						
BVAR	**Borovoye Array**	**16.84**	**358**	P	**Pn**	**22 45 44.1**	**+0.4**
	comp=E,0.2nm,0.3s,baz=164,slow=12,SNR=4.1						
AKTK	**Aktyubinsk**	**17.16**	**330**	P	**Pn**	**22 45 47.5**	**-0.2**
AKTO	**Aktyubinsk**	**17.16**	**330**	⇑P	**Pn**	**22 45 46.6**	**-1.1**
	comp=E,0.5nm,0.9s						
AKTO	**Aktyubinsk**	**17.16**	**330**	P	**Pn**	**22 45 47.5**	**-0.2**
	comp=E,0.3nm,0.3s,baz=134,slow=15,SNR=9.5						
ZALV	**Zalesovo Beam**	**20.10**	**24**	P	**P**	**22 46 19.8**	**0.0**
	comp=E,0.8nm,0.3s,baz=222,slow=11,SNR=5.3						
ZALV	**Zalesovo Beam**	**20.10**	**24**	P	**P**	**22 46 19.8**	**0.0**
GNI	**Garni**	**21.22**	**289**	*eP*	**P**	**22 46 31.3**	**-0.6**
ARU	**Arti**	**22.00**	**341**	P	**P**	**22 46 40.4**	**+0.3**
TIRR	**Tirgusor**	**33.40**	**298**	P	**P**	**22 48 22.2**	**-1.0**
FINES	**FINESS Array B**	**37.87**	**326**	P	**P**	**22 49 02.2**	**+1.1**
	comp=E,0.6nm,0.6s,mb3.6,baz=134,slow=11,SNR=4.2						
ARCES	**ARCESS Array B**	**41.52**	**338**	P	**P**	**22 49 32.5**	**+1.1**
	comp=E,0.7nm,0.7s,mb3.5,baz=108,slow=7.8,SNR=3.9						
NOA	**NORSAR Array B**	**44.77**	**323**	P	**P**	**22 49 58.2**	**+0.6**
	comp=E,0.4nm,0.4s,mb3.5,baz=96,slow=7.8,SNR=3.5						
TORD	**Torodi Ar. Bea**	**65.95**	**269**	P	**P**	**22 52 29.3**	**-0.9**
	comp=E,0.4nm,0.6s,mb3.4,baz=45,slow=6.2,SNR=9.6						
YKA	**Yellowknife Ar**	**81.54**	**3**	P	**P**	**22 54 01.6**	**+1.2**
	comp=E,0.3nm,0.6s,mb3.3,baz=351,slow=5.2,SNR=5.5						
YKA	**Yellowknife Ar**	**81.54**	**3**	P	**P**	**22 54 01.6**	**+1.2**

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*IDC **07** 22:50:09.0±2.3, 36°.11N×141°.89E, h0km, mb3.5/5, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, ML3.8/1, Error ellipse: s-maj=58.9km s-min=22.6km az=66.0*
*JMA **07** 22:50:09.9±0.3, 36°.11N×142°.00E, h72km, M3.1*
*ISCJB **07** 22:50:11.8±1.1, 36°.10N±0°.04×141°.88E±0°.09, h36km±8km, mb3.8/9, Error ellipse: s-maj=12.0km s-min=6.8km az=176.9*
*NEIC **07** 22:50:14.5±0.8, 36°.06N×141°.73E, h35km, mb4.3/4, Error ellipse: s-maj=17.3km s-min=9.9km az=60.0*
ISC 07 22:50:12.3±1.6, 36°.11N±0°.04×141°.84E±0°.08, h25km±10km, n31, σ1§06/38, mb3.8/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.90**	**243**	P	**Pb**	**22 50 28.9**	**-0.3**
CHOJ				S	**Sb**	**22 50 43.4**	**+2.6**
JHO	**Hitachi**	**1.14**	**296**	P	**Pn**	**22 50 31.6**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.30**	**320**	P	**Pn**	**22 50 33.5**	**-1.3**
JFK	**Kawauchi**	**1.47**	**328**	P	**Pn**	**22 50 36.1**	**-1.2**
BSO1	**Boso 1**	**1.62**	**206**	P	**Pn**	**22 50 38.2**	**-1.1**
BSO1				*eS*	**Sn**	**22 50 59.8**	**+0.5**
JFT	**Otama**	**1.85**	**320**	P	**Pn**	**22 50 42.3**	**-0.2**
JMM	**Marumori**	**1.94**	**335**	P	**Pn**	**22 50 43.7**	**0.0**
JAG	**Ashikaga**	**1.96**	**280**	P	**Pn**	**22 50 43.6**	**-0.3**
JRY	**Ryogami san**	**2.38**	**269**	P	**Pn**	**22 50 49.4**	**-0.4**
JYN	**Shimob**	**2.75**	**258**	P	**Pn**	**22 50 55.6**	**+0.8**
MJAR	**Matsushiro Arr**	**2.96**	**279**	Pn	**Pn**	**22 50 58.7**	**+1.0**
	3.0nm,0.3s,baz=101,slow=8.5,SNR=25						
MJAR				Sn	**Sn**	**22 51 30.4**	**-2.1**
	1.7nm,0.3s,baz=93,slow=16,SNR=6.0						
MJAR	**Matsushiro Arr**	**2.96**	**279**	Pn	**Pn**	**22 50 58.7**	**+1.0**
MJAR				Sn	**Sn**	**22 51 30.4**	**-2.1**
MAJO	**Matsushiro**	**2.97**	**279**	*ePn*	**Pn**	**22 50 58.0**	**+0.3**
MAJO				*eSn*	**Sn**	**22 51 31.1**	**-1.5**
MAT	**Matsushiro**	**2.97**	**279**	P	**Pn**	**22 50 58.3**	**+0.5**
MAT				S	**Sn**	**22 51 35.0**	**+2.4**
JHJ	**Hachijo jima 2**	**3.44**	**210**	Pn	**Pn**	**22 51 02.6**	**-1.6**
	24nm,0.3s,baz=113,slow=21,SNR=7.4						
JHJ				Sn	**Sn**	**22 51 42.9**	**-1.3**
	29nm,0.3s,baz=71,slow=23,SNR=6.7						
TATO	**Taipei**	**20.71**	**243**	*eP*	**P**	**22 54 50.6**	**-0.2**
SSLB	**Suanglung**	**21.82**	**241**	*eP*	**P**	**22 55 01.9**	**-0.8**
TPUB	**Ta-pu**	**22.36**	**241**	*eP*	**P**	**22 55 07.8**	**-0.7**
	6.8nm,0.3s,mb4.6						
SONM	**Songino Array**	**28.59**	**305**	P	**P**	**22 56 06.3**	**0.0**
	0.5nm,0.6s,mb3.4,baz=108,slow=9.5,SNR=3.3						
MKAR	**Makanchi Array**	**44.90**	**303**	P	**P**	**22 58 26.5**	**+1.8**
	0.4nm,0.8s,mb3.3,baz=95,slow=8.7,SNR=3.3						
MKAR	**Makanchi Array**	**44.90**	**303**	P	**P**	**22 58 26.5**	**+1.8**
KURK	**Kurchatov**	**46.77**	**309**	P	**P**	**22 58 39.9**	**+0.5**
	0.6nm,0.5s,mb3.8,baz=89,slow=7.5,SNR=3.0						
KURK	**Kurchatov**	**46.77**	**309**	P	**P**	**22 58 38.8**	**-0.6**
TKM2	**Tokmak 2**	**50.38**	**299**	*eP*	**P**	**22 59 08.9**	**+1.7**
	2.3nm,0.6s,mb4.4						
AAK	**Ala-Archa**	**51.23**	**299**	P	**P**	**22 59 13.2**	**-0.6**
BRVK	**Borovoye**	**51.51**	**313**	P	**P**	**22 59 16.1**	**+0.5**
AML	**Almayashu**	**51.95**	**299**	*eP*	**P**	**22 59 20.2**	**+1.1**
	0.9nm,0.4s,mb4.0						
WRAB	**Tennant Creek**	**56.19**	**188**	*eP*	**P**	**22 59 49.7**	**-0.4**
	1.6nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	**56.20**	**188**	P	**P**	**22 59 50.9**	**+0.7**
WRA	**Warramunga Arr**	**56.20**	**189**	P	**P**	**22 59 50.7**	**+0.6**
	0.3nm,0.6s,mb3.5,baz=6.4,slow=7.5,SNR=3.5						
ASAR	**Alice Springs**	**59.93**	**188**	P	**P**	**23 00 17.3**	**+1.1**
	0.2nm,0.6s,mb3.4,baz=0.0,slow=9.3,SNR=2.9						

IDC 07 23:11:22.1±5.4, 24°.71N×109°.60W, h0km, mb3.2/1, mb1 3.6/4, mb1mx3.4/21, mbtmp3.2/4, ML3.5/3, Error ellipse: s-maj=75.7km s-min=31.0km az=164.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**7.02**	**48**	Pn	Pn	23 13 06.0	0.0
	0.1nm,0.3s,baz=228,slow=15,SNR=6.3						
TXAR				Pg	Pg	23 13 35.5	-1.1
	0.2nm,0.3s,baz=215,slow=15,SNR=5.8						
TXAR				Lg		23 15 03.9	
	0.3nm,0.3s,baz=230,slow=29,SNR=4.0						
ELK	**Elko**	**16.67**	**345**	Pn	Pn	23 15 20.3	+3.2
	0.0nm,0.3s,baz=194,slow=8.2,SNR=3.6						
PDAR	**Pinedale Array**	**18.01**	**0**	P	Pn	23 15 34.8	+1.0
	0.0nm,0.3s,baz=166,slow=8.9,SNR=6.0						
YKA	**Yellowknife Ar**	**37.92**	**356**	P	P	23 18 40.6	-0.2
	0.2nm,0.9s,baz=175,slow=7.4,SNR=5.0						

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*IDC **08** 00:06:49.1±5.7, 36°.04N×71°.38E, h77km±45km, mb3.3/6, mb1 3.5/9, mb1mx3.3/28, mbtmp3.4/9, ML3.8/4, Error ellipse: s-maj=55.2km s-min=34.1km az=145.0*
*ISCJB **08** 00:06:54.4±0.7, 36°.52N±0°.06×71°.26E±0°.09, h118km±7km, mb3.4/6, Error ellipse: s-maj=14.0km s-min=5.6km az=35.7*
*NEIC **08** 00:06:54.5±0.9, 36°.34N×71°.41E, h118km±8km, mb4.1/7, Error ellipse: s-maj=15.7km s-min=8.0km az=134.0*
*NNC **08** 00:06:54.4±6.0, 36°.80N×70°.92E, h0km, mb4.2, mpv4.4, Error ellipse: s-maj=67.3km s-min=51.3km az=69.0*
ISC 08 00:06:55.7±0.7, 36°.51N±0°.06×71°.23E±0°.09, h115km±7km, n47, σ1§18/57, mb3.4/6, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.65**	**223**	*ePn*	**Pn**	**00 07 36.5**	**-0.7**
KBL				*eSn*	**Sn**	**00 08 08.8**	**-0.3**
KSH	**Kashi**	**4.80**	**50**	Pn	**Pn**	**00 08 01.4**	**-4.4**
KSH				Sn	**Sn**	**00 08 48.2**	**-12**
KSH				smax			
	comp=N,110nm,0.3s						
KSH				smax			
	comp=E,100nm,0.3s						
AML	**Almayashu**	**5.93**	**18**	P	**Pn**	**00 08 22.0**	**+1.0**
	SNR=591						
AML	**Almayashu**	**5.93**	**18**	*ePn*	**Pn**	**00 08 21.9**	**+0.8**
	comp=E,146nm,0.4s						
AML				*eS*	**Sn**	**00 09 26.4**	**-1.2**
UCH	**Uchtor**	**6.25**	**23**	P	**Pn**	**00 08 26.5**	**+1.1**
	SNR=63						
UCH	**Uchtor**	**6.25**	**23**	*ePn*	**Pn**	**00 08 26.3**	**+0.9**
	comp=E,28nm,0.4s						
UCH				*eSn*	**Sn**	**00 09 33.9**	**-1.4**
KZA	**Kyzart**	**6.37**	**28**	P	**Pn**	**00 08 27.8**	**+0.8**
	SNR=32						
EKS2	**Erkin-Say**	**6.45**	**17**	P	**Pn**	**00 08 29.1**	**+1.0**
	SNR=56						
EKS2	**Erkin-Say**	**6.45**	**17**	*ePn*	**Pn**	**00 08 28.8**	**+0.8**
	comp=E,22nm,0.4s						
EKS2				*eSn*	**Sn**	**00 09 39.2**	**-1.0**
KK31	**Karatay Array**	**6.61**	**355**	P	**Pn**	**00 08 30.7**	**+0.5**
	comp=E,12nm,0.2s,baz=179,slow=13,SNR=1144						
KK31				⇓S	**Sn**	**00 09 42.3**	**-1.8**
	comp=E,11nm,0.4s						
AAK	**Ala-Archa**	**6.62**	**21**	P	**Pn**	**00 08 31.5**	**+1.2**
	SNR=76						
AAK	**Ala-Archa**	**6.62**	**21**	P	**Pn**	**00 08 30.9**	**+0.7**
	comp=E,0.4nm,0.3s,baz=164,slow=6.1,SNR=197						
AAK				S	**Sn**	**00 09 44.5**	**+0.3**
	comp=E,0.0nm,0.3s,baz=338,slow=22,SNR=8.1						
AAK	**Ala-Archa**	**6.62**	**21**	*ePn*	**Pn**	**00 08 31.3**	**+1.0**
AAK				*eSn*	**Sn**	**00 09 44.0**	**-0.2**
KBK	**Karagaybulak**	**6.78**	**24**	P	**Pn**	**00 08 33.7**	**+1.2**
	SNR=8.8						
ULHL	**Ulahol**	**6.92**	**33**	P	**Pn**	**00 08 35.1**	**+0.7**
	SNR=7.8						
CHMS	**Chumysh**	**7.03**	**22**	P	**Pn**	**00 08 36.7**	**+0.9**
	SNR=29						
USP	**Ospenovka**	**7.20**	**19**	P	**Pn**	**00 08 38.4**	**+0.2**
	SNR=131						
TKM2	**Tokmak 2**	**7.23**	**26**	⇑P	**Pn**	**00 08 39.2**	**+0.6**
	comp=E,14nm,0.6s						
TKM2	**Tokmak 2**	**7.23**	**26**	P	**Pn**	**00 08 39.5**	**+0.8**
	SNR=24						
TKM2	**Tokmak 2**	**7.23**	**26**	*ePn*	**Pn**	**00 08 39.1**	**+0.4**
	comp=E,15nm,0.4s						
TKM2				S	**Sn**	**00 09 58.5**	**-0.6**
MK31	**Makanchi Array**	**13.18**	**35**	Pn	**Pn**	**00 09 56.5**	**-1.6**
MKAR	**Makanchi Array**	**13.18**	**35**	P	**Pn**	**00 09 57.5**	**-0.6**
	comp=E,0.1nm,0.3s,baz=228,slow=19,SNR=3.2						
KURBB	**Kurchatov Arra**	**15.06**	**18**	⇑P	**Pn**	**00 10 24.0**	**+1.8**
	comp=E,0.6nm,0.7s						
KURK	**Kurchatov**	**15.16**	**18**	P	**Pn**	**00 10 19.0**	**-4.5**
	comp=E,0.1nm,0.3s,baz=203,slow=10,SNR=7.7						
KURK	**Kurchatov**	**15.16**	**18**	*ePn*	**Pn**	**00 10 25.0**	**+1.4**
	comp=E,2.0nm,0.7s						
AB31	**Akbulak array**	**15.17**	**331**	⇑P	**Pn**	**00 10 22.3**	**-1.3**
	comp=E,2.1nm,0.6s						
ABKAR	**Akbulak array**	**15.17**	**331**	*ePn*	**Pn**	**00 10 22.1**	**-1.5**
	comp=E,2.7nm,0.4s						
ABKAR				*eSn*	**Sn**	**00 12 59.1**	**-12**
BVAR	**Borovoye Array**	**16.53**	**358**	P	**Pn**	**00 10 40.2**	**-0.2**
	comp=E,0.5nm,0.3s,baz=168,slow=13,SNR=13						
BRVK	**Borovoye**	**16.56**	**358**	*ePn*	**Pn**	**00 10 40.6**	**-0.2**
	comp=E,1.3nm,0.3s						
AKTK	**Aktyubinsk**	**16.87**	**330**	P	**Pn**	**00 10 45.3**	**+0.7**
AKTO	**Aktyubinsk**	**16.87**	**330**	⇓P	**Pn**	**00 10 46.9**	**+2.4**
	comp=E,1.0nm,0.6s						
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**Pn**	**00 10 45.3**	**+0.7**
	comp=E,0.8nm,0.3s,baz=142,slow=11,SNR=31						
ZAA0	**Zalesovo Array**	**19.83**	**24**	*ePn*	**Pn**	**00 11 15.8**	**-4.0**
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**00 11 16.2**	**-0.9**
	comp=E,2.1nm,0.4s,baz=223,slow=9.5,SNR=13						
ARU	**Arti**	**21.69**	**341**	*eP*	**P**	**00 11 37.4**	**+0.4**
	comp=E,2.3nm,0.7s,mb3.6						
TIRR	**Tirgusor**	**33.21**	**297**	P	**P**	**00 13 21.7**	**+0.3**
BJT	**Baijiatuan**	**35.17**	**70**	*eP*	**P**	**00 13 35.9**	**-2.5**
FINES	**FINESS Array B**	**37.58**	**326**	P	**P**	**00 13 58.6**	**0.0**
	comp=E,0.3nm,0.4s,mb3.5,baz=120,slow=6.8,SNR=4.5						
GVD	**Gavdhos**	**38.04**	**282**	*eP*	**P**	**00 14 00.2**	**-2.6**
KEV	**Kevo**	**40.86**	**338**	P	**P**	**00 14 28.3**	**+2.6**
ARCES	**ARCESS Array B**	**41.21**	**338**	P	**P**	**00 14 30.6**	**+2.0**
	comp=E,0.5nm,0.4s,mb3.7,baz=116,slow=8.3,SNR=12						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**00 14 56.5**	**+1.4**
	comp=E,0.5nm,0.7s,mb3.4,baz=97,slow=7.9,SNR=3.5						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**00 14 56.5**	**+1.3**
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**00 17 27.8**	**-1.7**
	comp=E,0.2nm,0.4s,mb3.3,baz=53,slow=5.6,SNR=12						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**00 17 27.8**	**-1.8**
YKA	**Yellowknife Ar**	**81.23**	**3**	P	**P**	**00 18 58.9**	**+0.6**
	comp=E,0.1nm,0.4s,mb3.0,baz=351,slow=5.5,SNR=4.3						
YKA	**Yellowknife Ar**	**81.23**	**3**	P	**P**	**00 18 58.9**	**+0.6**

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*IDC **08** 00:07:26.8±3.4, 49°.89N×177°.11E, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.5/28, mbtmp3.6/4, ML3.4/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/20, Error ellipse: s-maj=96.4km s-min=39.4km az=8.0*
*ISCJB **08** 00:07:27.4±4.2, 50°.3N±0°.3×177°.1E±0°.1, h7km±27km, mb3.6/3, Error ellipse: s-maj=46.2km s-min=13.5km az=169.1*
*NEIC **08** 00:07:31.5, 50°.21N×176°.98E, h26km, ML3.9(AEIC), After AEIC.*
ISC 08 00:07:30.4±4.6, 50°.3N±0°.3×177°.1E±0°.1, h14km±30km, n12, σ0§51/13, mb3.6/3, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**4.25**	**65**	P	**Pn**	**00 08 34.5**	**-0.1**
ADK				S	**Sn**	**00 09 23.5**	**-0.3**
SPIA	**Saint Paul Isl**	**10.20**	**42**	P	**Pn**	**00 09 55.4**	**-0.8**
UNV	**Unalaska Valle**	**10.72**	**64**	Pn	**Pn**	**00 10 03.1**	**-0.2**
PETK	**Petropavlovsk-**	**12.38**	**291**	Pn	**Pn**	**00 10 25.7**	**-0.2**
	0.2nm,0.3s,baz=92,slow=17,SNR=5.5						
PETK				LR	LR	00 14 16.8	
	comp=Z,19nm,18.9s,baz=210,slow=33						
FALS	**False Pass**	**12.71**	**61**	*ePn*	**Pn**	**00 10 30.1**	**-0.3**
SDPT	**Sand Point**	**14.46**	**61**	Pn	**Pn**	**00 10 55.2**	**+0.9**
SVW2	**Sparrevohn**	**18.69**	**44**	P	**Pn**	**00 11 48.7**	**+0.5**
YKA	**Yellowknife Ar**	**37.88**	**45**	P	**P**	**00 14 47.0**	**+0.7**
	0.4nm,0.5s,mb3.4,baz=285,slow=7.6,SNR=17						
YKA	**Yellowknife Ar**	**37.88**	**45**	P	**P**	**00 14 47.0**	**+0.7**
EDM	**Edmonton**	**41.62**	**58**	*eP*	**P**	**00 15 18.1**	**+0.5**
PDAR	**Pinedale Array**	**49.13**	**69**	P	**P**	**00 16 17.2**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=324,slow=4.5,SNR=4.2						
TXAR	**Lajitas Array**	**61.41**	**78**	P	**P**	**00 17 45.3**	**-0.7**
	0.4nm,0.6s,mb3.7,baz=313,slow=7.3,SNR=5.5						

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*ISCJB **08** 00:27:19.6±0.4, 21°.85S±0°.03×68°.44W±0°.04, h97km±3km, mb4.9/87, Error ellipse: s-maj=6.2km s-min=4.8km az=143.2*
*IDC **08** 00:27:22.6±0.3, 22°.13S×68°.80W, h116km±2km, mb4.4/13, mb1 4.4/17, mb1mx4.4/19, mbtmp4.3/17, MS3.7/8, Ms1 3.7/8, ms1mx3.4/21, Error ellipse: s-maj=15.1km s-min=8.4km az=89.0*
*GUC **08** 00:27:22.4±1.1, 21°.99S×68°.83W, h110km±8km, ML5.2*
*NEIC **08** 00:27:22.4, 21°.99S×68°.83W, h110km, mb5.0/71, After GUC.*
NEIC Felt [IV] at Calama and [II] at Tocopilla.
ISC 08 00:27:20.5±0.4, 21°.89S±0°.03×68°.43W±0°.04, h91km±3km, h118km±.5km: pP-P, n678, σ0§68/642, mb4.9/87, 222C-182D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.85**	**212**	P	**Pn**	**00 27 41.4**	**+2.8**
	6μm,0.3s,baz=14,slow=6.4						
LVC				S	**Sn**	**00 27 55.1**	**+3.1**
	16μm,0.3s,baz=186,slow=15,SNR=120						
LVC	**Limon Verde**	**0.85**	**212**	*ePn*	**Pn**	**00 27 42.0**	**+3.4**
LVC				*eSn*	**Sn**	**00 27 55.3**	**+3.2**
LVC	**Limon Verde**	**0.85**	**212**	⇓*iP*	**Pn**	**00 27 40.8**	**+2.3**
LVC				*eS*	**Sn**	**00 27 55.1**	**+3.1**
LVC				AML	AML	00 27 56.5	
	comp=N,137μm,0.5s						
MACH	**Maria Elena**	**1.27**	**256**	⇑*iP*	**Pn**	**00 27 43.6**	**+0.2**
MACH				*i* S	**Sn**	**00 27 59.4**	**-1.3**
PB01	**Plate Boundary**	**1.30**	**310**	⇑*iP*	**Pn**	**00 27 45.5**	**+1.7**
PB01				*i* S	**Sn**	**00 28 02.6**	**+1.3**
PB01				AML	AML	00 28 04.4	
	comp=N,58μm,0.3s						
PECH	**Pedro de Valdi**	**1.35**	**238**	*eP*	**Pn**	**00 27 44.5**	**+0.1**
PECH				*i* S	**Sn**	**00 28 01.0**	**-1.5**
PECH				AML	AML	00 28 01.7	
	comp=E,74μm,0.3s						
HMBC	**Humberston**	**2.10**	**319**	*eP*	**Pn**	**00 27 54.5

NHSC	New Hope	55.83	348	eP	P	00 36 49.0 +0.6
	comp=N,57nm,1.0s,mb5.5					
GOGA	Godfrey	56.83	345	eP	P	00 36 54.6 -0.9
	comp=N,10nm,1.1s,mb4.8					
LRAL	Lakeview Retre	57.42	341	eP	P	00 36 58.1 -1.6
NATX	Nacogdoches	58.97	334	eP	P	00 37 10.0 -0.5
	comp=N,60nm,0.8s,mb5.7					
CPCT	Cooper Cave	59.03	345	eP	P	00 37 09.9 -0.9
CPCT				epP	pP	00 37 38.6 +5.1
TKL	Tuckaleechee C	59.05	345	eP	P	00 37 09.7 -1.3
TKL				epP	pP	00 37 38.7 +5.1
TKL				esP	sP	00 37 52.4 +8.7
SWET	Sewanee	59.17	343	eP	P	00 37 10.7 -1.1
SWET				epP	pP	00 37 39.6 +5.1
OXF	Oxford	59.53	340	eP	P	00 37 12.8 -1.5
	comp=N,50nm,1.0s,mb5.5					
OXF				epP	pP	00 37 41.2 +4.3
PLAL	Pickwick Lake	59.56	341	eP	P	00 37 12.6 -1.9
PLAL				epP	pP	00 37 40.9 +3.7
VNA3	Neumayer Olymp	59.56	161	eP	P	00 37 14.5 +0.4
VNA3				e		00 37 43.1
TZTN	Tazewell	59.85	346	eP	P	00 37 15.7 -0.7
	comp=N,33nm,1.5s,mb5.1					
BLA	Blacksburg	59.86	349	eP	P	00 37 16.3 -0.2
	comp=N,25nm,0.9s,mb5.2					
BLA				epP	pP	00 37 43.7 +4.5
JSRW	J. Sargeant Re	59.93	351	eP	P	00 37 17.0 +0.1
ELN	Prospectdale	59.94	349	eP	P	00 37 16.8 -0.2
ELN				epP	pP	00 37 45.0 +5.3
VNA2	Neumayer--Watz	60.14	161	eP	P	00 37 18.9 +0.9
VNA2				e		00 37 46.9
JCT	Junction City	60.16	329	eP	P	00 37 17.7 -1.0
JCT				epP	pP	00 37 46.5 +5.1
WVT	Waverly	60.55	342	eP	P	00 37 19.4 -1.8
MIAR	Mount Ida	61.00	336	eP	P	00 37 23.3 -1.0
627A	Terlingua Ranc	61.15	325	⇓P	P	00 37 24.5 -0.9
	baz=62,SNR=20					
TXAR	Lajitas Array	61.20	325	P	P	00 37 24.8 -1.0
	comp=N,4.2nm,0.8s,mb4.5,baz=149,slow=8.5,SNR=46					
TXAR				pP	pP	00 37 52.9 +4.3
	comp=N,3.3nm,1.0s,baz=138,slow=14,SNR=4.2					
LPIG	La Paz	61.22	316	LR	LR	00 59 59.8
	comp=N,225nm,20.5s,baz=0.0,slow=32					
528A	Cox Ranch, San	61.40	326	⇓P	P	00 37 26.1 -1.0
	baz=62,SNR=17					
626A	Big Bend Ranch	61.62	325	⇓P	P	00 37 28.3 -0.4
	baz=62,SNR=49					
428A	Kincaid Ranch,	61.80	327	⇑P	P	00 37 29.0 -0.8
	baz=62,SNR=9.8					
527A	Woodward Ranch	61.81	326	⇑P	P	00 37 29.1 -0.8
	baz=62,SNR=21					
526A	Mary Lane Ranc	62.00	325	⇓P	P	00 37 30.6 -0.6
	baz=62,SNR=34					
MVL	Millersville	62.01	353	eP	P	00 37 31.4 +0.4
	comp=N,20nm,0.9s,mb5.1					
WCI	Wyandotte Cave	62.11	344	eP	P	00 37 30.3 -1.4
WCI				epP	pP	00 37 59.5 +4.9
MCWV	Mont Chateau	62.15	350	eP	P	00 37 32.4 +0.5
MCWV				epP	pP	00 38 01.4 +6.7
427A	Hayter Ranch,	62.26	326	⇓P	P	00 37 31.9 -1.0
	baz=63,SNR=11					
328A	Wristen Ranch,	62.39	327	⇑P	P	00 37 32.6 -1.1
	baz=63,SNR=17					
SIUC	Southern Illin	62.43	341	eP	P	00 37 32.8 -1.1
	comp=N,45nm,1.3s,mb5.3					
SIUC				epP	pP	00 38 02.3 +5.6
426A	McDonald Obser	62.45	326	⇑P	P	00 37 33.5 -0.6
	baz=63,SNR=15					
SSPA	Standing Stone	62.82	352	eP	P	00 37 36.5 +0.1
326A	Caldwell Ranch	62.93	326	⇑P	P	00 37 36.5 -0.8
	baz=63,SNR=14					
FVM	French Village	63.04	341	eP	P	00 37 36.6 -1.3
425A	Indio Mountain	63.05	325	⇓P	P	00 37 37.3 -0.8
	baz=64,SNR=41					
OLIL	Olney	63.06	343	epP	pP	00 38 06.4 +5.5
227A	Bennet, Jal	63.14	327	⇓P	P	00 37 38.0 -0.7
	baz=64,SNR=7.3					
WMOK	Wichita Mounta	63.27	332	eP	P	00 37 37.8 -1.7
ACSO	Alum Creek Sta	63.27	348	eP	P	00 37 38.7 -0.7
325A	Bean Ranch, Si	63.50	325	⇓P	P	00 37 40.3 -0.8
	baz=64,SNR=76					
226A	Malaga, Loving	63.59	326	⇓P	P	00 37 41.4 -0.3
	baz=64,SNR=17					
CLNB	Carlsbad	63.63	327	eP	P	00 37 41.3 -0.7
	comp=N,3.4nm,0.7s,mb4.3					
CLNB				epP	pP	00 38 10.3 +5.4
127A	Arkansas Junct	63.70	327	⇑P	P	00 37 41.1 -1.3
	baz=64					
324A	Moseley Ranch,	63.82	325	⇑P	P	00 37 41.8 -1.4
	baz=64,SNR=21					
GDL2	Guadalupe Moun	63.83	326	eP	P	00 37 42.9 -0.4
MNTX	Cornudas Mount	63.97	325	eP	P	00 37 42.4 -1.8
	comp=N,12nm,0.9s,mb4.7					
MNTX				epP	pP	00 38 10.8 +3.7
MNTX				esP	sP	00 38 24.6 +7.5
225A	Deer Hill, Car	64.00	326	⇓P	P	00 37 43.6 -0.7
	baz=64,SNR=19					
Z27A	Tatum	64.14	328	⇑P	P	00 37 43.9 -1.4
	baz=65,SNR=18					
BINY	Binghamton	64.15	354	eP	P	00 37 45.7 +0.6
BINY				epP	pP	00 38 15.3 +7.2
CPRX	Cap Rock	64.24	327	eP	P	00 37 45.1 -0.8
	comp=N,31nm,0.8s,mb5.2					
CPRX				epP	pP	00 38 13.7 +4.8
CPRX				ePcP	PcP	00 38 19.9 -0.1
224A	Corundas Mount	64.34	325	⇑P	P	00 37 45.3 -1.3
	baz=65,SNR=21					
125A	Gardner Draw,	64.35	326	⇑P	P	00 37 45.2 -1.5
	baz=65,SNR=12					
MSTX	Muleshoe	64.46	329	⇓P	P	00 37 46.1 -1.3
	baz=65,SNR=18					
TRY	Troy	64.48	356	eP	P	00 37 48.1 +0.8
TRY				epP	pP	00 38 17.6 +7.4
Z26A	Caprock	64.49	327	⇓P	P	00 37 46.5 -1.0
	baz=65,SNR=11					
Y27A	Causey	64.58	328	⇑P	P	00 37 46.7 -1.4
	baz=65,SNR=15					
AMTX	Amarillo	64.69	330	eP	P	00 37 47.8 -1.0
223A	Chaparral, Ant	64.77	325	⇑P	P	00 37 48.6 -0.8
	baz=65					
124A	Stringfield Ra	64.79	326	⇓P	P	00 37 48.8 -0.7
	baz=65,SNR=20					
Z25A	Roswell	64.87	327	⇓P	P	00 37 48.8 -1.2
	baz=65,SNR=17					
Y26A	Elida	64.94	328	⇑P	P	00 37 50.9 +0.5
	baz=65					
ACCN	Adirondack Com	65.13	356	eP	P	00 37 51.5 +0.1
X27A	F and S Farms,	65.17	329	⇑P	P	00 37 50.5 -1.4
	baz=66					
222A	Williams Famil	65.21	324	⇑P	P	00 37 52.1 -0.1
	baz=66,SNR=8.5					
Y25A	Mesa, Roswell	65.37	327	⇓P	P	00 37 52.0 -1.3
	baz=66,SNR=17					
320A	Kipp Ranch, An	65.41	323	⇑P	P	00 37 53.6 0.0
	baz=66,SNR=5.8					
X26A	CR and CF Fran	65.43	328	⇓P	P	00 37 52.8 -0.9
	baz=66,SNR=13					
221A	Mesquite Ranch	65.50	324	⇓P	P	00 37 54.4 +0.3
	baz=66					
122A	Conniff Cattle	65.61	325	⇑P	P	00 37 55.1 +0.3
	baz=66					
Y24A	Capitan	65.75	327	⇑P	P	00 37 54.6 -1.1
	baz=66					
NCB	Newcomb	65.75	355	eP	P	00 37 55.9 +0.4
X25A	Clemmons Ranch	65.83	328	⇓P	P	00 37 54.9 -1.3
	baz=66					
220A	Playas Peak, P	65.84	323	⇑P	P	00 37 56.1 -0.2
	baz=66,SNR=22					
319A	Douglas	65.87	322	⇑P	P	00 37 56.6 +0.1
	baz=66,SNR=18					
121A	Cookes Peak, D	65.91	324	⇓P	P	00 37 57.2 +0.5
	baz=66,SNR=14					
Z22A	Elephant Butte	66.02	325	⇑P	P	00 37 57.7 +0.3
	baz=66,SNR=45					
Y23A	Lovelace Mesa,	66.07	326	⇓P	P	00 37 57.3 -0.4
	baz=67,SNR=12					
KSU1	Kansas State U	66.16	336	eP	P	00 37 56.9 -1.3
X24A	Lazy VL Ranch,	66.25	327	⇓P	P	00 37 58.2 -0.7
	baz=67					
MAIT	Maitri	66.28	159	eP	P	00 37 59.7 +1.1
MAIT				eE		00 38 10.1
W25A	X Bar L Ranch,	66.28	328	⇓P	P	00 37 58.2 -0.9
	baz=67,SNR=22					
219A	White Tail Can	66.32	323	⇓P	P	00 37 59.4 0.0
	baz=67,SNR=11					
318A	Bisbee	66.32	322	⇓P	P	00 37 59.4 0.0
	baz=67,SNR=18					
120A	U Bar Ranch, L	66.38	323	⇓P	P	00 37 59.9 +0.2
	baz=67,SNR=9.2					
LONY	Lake Ozonia	66.42	355	eP	P	00 37 59.9 +0.1
Z21A	St. Cloud Mine	66.44	325	⇑P	P	00 38 00.5 +0.4
	baz=67,SNR=24					
BNM	Barren Site	66.53	326	eP	P	00 38 00.7 -0.1
	comp=N,38nm,1.6s,mb5.0					
BNM				epP	pP	00 38 28.1 +4.3
Y22A	Socorro	66.55	326	⇓P	P	00 38 00.8 0.0
	baz=67					
FRNY	Flat Rock	66.57	356	eP	P	00 38 00.8 +0.1
LPM	Los Pinos Moun	66.66	326	eP	P	00 38 01.6 +0.1
LPM				epP	pP	00 38 30.6 +5.9
218A	Dragoon	66.75	322	⇑P	P	00 38 02.1 0.0
	baz=67,SNR=18					
Z20A	Nine Sixteen R	66.79	324	⇓P	P	00 38 02.7 +0.4
	baz=67,SNR=17					
PKME	Peaks-Kenny Pk	66.83	359	eP	P	00 38 02.9 +0.6
119A	Ashpeak Ranch,	66.92	323	⇓P	P	00 38 03.3 +0.1
	baz=67,SNR=6.0					
Y21A	Point of Rocks	66.97	325	⇓P	P	00 38 04.3 +0.7
	baz=68,SNR=25					
LAZ	Ladron	67.00	326	eP	P	00 38 03.5 -0.2
	comp=N,23nm,1.5s,mb4.8					
LAZ				epP	pP	00 38 32.0 +5.2
X22A	Bernardo	67.01	326	⇓P	P	00 38 04.4 +0.7
	baz=68					
217A	Green Valley	67.04	321	⇓P	P	00 38 04.1 +0.1
	baz=68,SNR=18					
ANMO	Albuquerque	67.07	327	eP	P	00 38 04.2 0.0
ANMO				epP	pP	00 38 33.6 +6.3
W23A	Werner Place,	67.08	327	⇑P	P	00 38 04.1 0.0
	baz=68,SNR=12					
CBKS	Cedar Bluff	67.14	334	eP	P	00 38 04.3 -0.1
CBKS				epP	pP	00 38 33.5 +6.0
118A	Homack Ranch,	67.20	323	⇑P	P	00 38 04.9 0.0
	baz=68,SNR=16					
Y20A	Horse Springs,	67.27	325	⇑P	P	00 38 05.9 +0.5
	baz=68,SNR=20					
Z19A	T-Link Ranch,	67.29	324	⇑P	P	00 38 06.1 +0.6
	baz=68,SNR=5.2					
X21A	Alamocita Cree	67.37	325	⇑P	P	00 38 06.6 +0.6
	baz=68,SNR=31					
W22A	Albuquerque	67.38	326	⇑P	P	00 38 06.5 +0.5
	baz=68,SNR=8.3					
TUC	Tucson	67.42	322	eP	P	00 38 06.2 -0.2
Z18A	Geronimo	67.56	323	⇑P	P	00 38 07.4 +0.1
	baz=68					
216A	Three Points,	67.58	321	⇑P	P	00 38 07.5 +0.1
	baz=68,SNR=13					
117A	Oracle	67.58	322	⇑P	P	00 38 07.5 +0.1
	baz=68,SNR=13					
Y19A	Nutrioso	67.78	324	⇓P	P	00 38 09.4 +0.8
	baz=68,SNR=34					
W21A	San Fidel	67.81	326	⇓P	P	00 38 09.2 +0.4
	baz=68,SNR=12					
X20A	Quemado	67.82	325	⇓P	P	00 38 09.4 +0.6
	baz=68,SNR=13					
Z17A	San Carlos Hig	67.97	323	⇑P	P	00 38 09.5 -0.3
	baz=68					
LIC	Lamto	68.07	73	eP	P	00 38 11.6 +0.7
	comp=N,28nm,0.6s,mb5.0,baz=251					
LIC	Lamto	68.07	73	eP	P	00 38 11.2 +0.3
	comp=N,48nm,0.6s,mb5.5					
LIC	Lamto	68.07	73	eP	P	00 38 11.6 +0.7
	comp=N,14nm,0.6s,mb5.0					
Y18A	Canyon Day Jun	68.08	323	⇑P	P	00 38 10.5 0.0
	baz=69,SNR=6.5					
116A	Eloy	68.13	321	⇓P	P	00 38 10.8 -0.1
	baz=69					
X19A	St. Johns	68.16	324	⇓P	P	00 38 11.2 +0.2
	baz=69					
TIC	Toumodi	68.26	73	eP	P	00 38 12.7 +0.6
	comp=N,13nm,0.2s,mb5.5					
W20A	Ramah	68.27	325	⇑P	P	00 38 12.0 +0.4
	baz=69					
V21A	Milan	68.34	326	⇑P	P	00 38 12.5 +0.4
	baz=69,SNR=12					
214A	Organ Pipe Nat	68.34	320	⇓P	P	00 38 12.5 +0.3
	baz=69,SNR=14					
KIC	Kosan Boka	68.38	73	eP	P	00 38 13.4 +0.6
	comp=N,45nm,0.5s,mb5.5					
DBIC	Dimbokro	68.42	73	P	P	00 38 14.0 +0.9
	comp=N,21nm,0.8s,mb5.0,baz=223,slow=5.7,SNR=24					
DBIC				pP	pP	00 38 44.1 +7.8
	comp=N,16nm,0.7s,baz=189,slow=4.9,SNR=3.5					
DBIC				sP	sP	00 38 56.7 +11
	comp=N,14nm,0.8s,baz=230,slow=4.5,SNR=2.7					
DBIC	Dimbokro	68.42	73	eP	P	00 38 14.4 +1.3
Y17A	Roosevelt	68.47	323	⇑P	P	00 38 13.3 +0.4
	baz=69,SNR=12					
115A	Sonoran Desert	68.54	321	⇓P	P	00 38 13.7 +0.4
	baz=69,SNR=6.2					
Z16A	Peralta Trail,	68.54	322	⇑P	P	00 38 13.4 0.0
	baz=69,SNR=6.9					
X18A	Snowflake	68.59	324	⇑P	P	00 38 14.0 +0.3
	baz=69					
W19A	Sanders	68.73	325	⇓P	P	00 38 14.8 +0.3
	baz=69,SNR=5.4					
V20A	Brimhall	68.76	326	⇓P	P	00 38 14.8 +0.1
	baz=69,SNR=11					
SDCO	Great Sand Dun	68.81	329	eP	P	00 38 15.1 +0.2
T22A	Edith	68.91	328	⇑P	P	00 38 16.0 +0.4
	baz=69,SNR=14					
W18A	Petrified Fore	68.92	325	⇑P	P	00 38 15.8 +0.2
	baz=69,SNR=6.4					
Z15A	Gila River Ind	68.92	322	⇑P	P	00 38 15.8 +0.1
	baz=69					
X17A	Forest Lakes	68.92	323	⇑P	P	00 38 16.3 +0.5
	baz=69					
114A	Black Gap (USA	68.95	321	⇓P	P	00 38 16.0 0.0
	baz=69,SNR=8.3					
Y16A	Circle Bar Ran	68.96	323	⇓P	P	00 38 16.4 +0.5
	baz=69,SNR=11					
V19A	Window Rock	69.00	325	⇓P	P	00 38 16.6 +0.4
	baz=70,SNR=9.7					
U20A	Newcomb	69.23	326	⇑P	P	00 38 17.7 +0.1
	baz=70,SNR=5.9					
X16A	Lo Mia Camp, P	69.34	323	⇓P	P	00 38 18.8 +0.5
	baz=70,SNR=14					
W17A	Winslow	69.42	324	⇑P	P	00 38 18.9 +0.2
	baz=70					
Z14A	Wintersburg	69.43	321	⇑P	P	00 38 18.8 -0.1
	baz=70					
V18A	Ganado	69.47	325	⇑P	P	00 38 18.9 -0.2
	baz=70					
113A	Mohawk Valley,	69.49	320	⇓P	P	00 38 19.1 -0.2
	baz=70					
Y15A	Casa Rosa Ranc	69.50	322	⇑P	P	00 38 19.4 +0.1
	baz=70,SNR=15					
U19A	Dine' College,	69.53	326	⇓P	P	00 38 18.9 -0.5
	baz=70					
Z13A	Yuma Proving G	69.73	321	⇓P	P	00 38 20.7 0.0
	baz=70,SNR=5.2					
R22A	Saguache, Gunn	69.79	329	⇓P	P	00 38 21.3 +0.3
	baz=70,SNR=5.5					
112A	Yuma	69.81	320	⇑P	P	00 38 20.9 -0.4
	baz=70					
X15A	Humboldt	69.83	322	⇑P	P	00 38 21.8 +0.5
	baz=70,SNR=17					
T19A	Beclabito	69.84	326	⇑P	P	00 38 21.3 -0.1
	baz=70,SNR=29					
S21A	Coal Bank Pass	69.86	328	⇑P	P	00 38 21.7 +0.3
	baz=70,SNR=16					
MVCO	Mesa Verde	69.86	327	⇑P	P	00 38 21.7 +0.2
	baz=70,SNR=20					
MVCO	Mesa Verde	69.86	327	eP	P	00 38 21.8 +0.3
V17A	Tonalea, Kykot	69.87	324	⇑P	P	00 38 22.0 +0.5
	baz=70					
Y14A	Wickenburg	69.88	322	⇑P	P	00 38 21.6 0.0
	baz=70,SNR=6.2					
OGNE	Ogallala	69.88	333	eP	P	00 38 21.1 -0.3
	comp=N,92nm,1.4s,mb5.4					
OGNE				ePcP	PcP	00 38 43.3 -0.1
OGNE				epP	pP	00 38 49.5 +4.7
W16A	Flagstaff	69.88	323	⇑P	P	00 38 22.5 +0.9
	baz=70,SNR=16					
U18A	Rough Rock, Ch	69.97	325	⇓P	P	00 38 22.5 +0.3
	baz=70,SNR=16					
WUAZ	Wupatki	70.11	324	⇑P	P	00 38 23.6 +0.6
	baz=71					
WUAZ	Wupatki	70.11	324	eP	P	00 38 23.4 +0.4
	comp=N,30nm,1.0s,mb5.1					
WUAZ				ePcP	PcP	00 38 44.5 0.0
X14A	Yava	70.19	322	⇑P	P	00 38 23.9 +0.3
	baz=71,SNR=7.7					
ECSD	EROS Data Cent	70.24	339	eP	P	00 38 22.4 -1.2
Y13A	Salome	70.27	321	⇑P	P	00 38 24.2 +0.1
	baz=71,SNR=12					
R21A	Cimarron	70.29	328	⇑P	P	00 38 24.3 +0.3
	baz=71,SNR=6.9					
GLA	Glamis	70.32	320	⇓P	P	00 38 24.4 0.0
	baz=71					
GLA	Glamis	70.32	320	eP	P	00 38 24.9 +0.5
W15A	Williams	70.35	323	⇓P	P	00 38 25.4 +0.9
	baz=71					
Q22A	Crested Butte,	70.37	329	⇓P	P	00 38 25.0 +0.5
	baz=71					
U16A	Tuba City	70.44	324	⇑P	P	00 38 25.5 +0.5
	baz=71,SNR=7.9					
ISCO	Idaho Springs	70.50	330	eP	P	00 38 25.5 +0.2
	comp=N,26nm,1.1s,mb5.0					
ISCO				ePcP	PcP	00 38 46.0 0.0
ISCO				epP	pP	00 38 53.9 +5.2
ISCO				esP	sP	00 39 08.3 +10
T18A	Mexican Hat	70.52	326	⇑P	P	00 38 25.3 -0.1
	baz=71,SNR=50					
U17A	Shonto	70.53	325	⇑P	P	00 38 26.0 +0.5
	baz=71,SNR=10					
R20A	Redvale	70.56	328	⇑P	P	00 38 26.4 +0.7
	baz=71,SNR=25					
S19A	Harvey Farm, M	70.60	327	⇓P	P	00 38 26.1 +0.2
	baz=71,SNR=43					
Y12C	Blythe	70.63	320	⇑P	P	00 38 26.4 +0.2
	baz=71,SNR=5.7					
SMCO	Snowmass	70.65	329	eP	P	00 38 26.9 +0.7
Q21A	Lamborn Mesa,	70.67	328	⇑P	P	00 38 26.5 +0.1
	baz=71					
V15A	Kaibab Nationa	70.77	323	⇓P	P	00 38 27.8 +0.7
	baz=71,SNR=16					
PDMCI	Parker Dam,Lak	70.79	321	⇓P	P	00 38 27.3 +0.1
	baz=71					
X13A	Yucca	70.82	322	⇓P	P	00 38 27.5 +0.2
	baz=71,SNR=12					
DVTC	Desert V Tower	70.82	319	⇑P	P	00 38 27.9 +0.5
	baz=71					
SWSC	Sam W. Stewart	70.83	319	⇓P	P	00 38 27.7 +0.2
	baz=71					
W14A	Seligman	70.84	322	⇑P	P	00 38 28.2 +0.8
	baz=71					
T17A	Navajo Res., N	70.90	325	⇓P	P	00 38 28.8 +1.0
	baz=71					
S18A	Hurst Farm, Bl	71.00	326	⇑P	P	00 38 29.0 +0.6
	baz=72,SNR=60					
R19A	Curley Farm, L	71.08	327	⇓P	P	00 38 29.0 +0.1
	baz=72,SNR=19					
Q20A	Ridgley Place,	71.11	328	⇓P	P	00 38 28.8 -0.2
	baz=72,SNR=5.0					
BC3	Big Chuckw Mtn	71.12	320	⇑P	P	00 38 29.3 +0.1
	baz=72,SNR=8.6					
V14A	Boquillas Ranc	71.16	323	⇑P	P	00 38 30.0 +0.7
	baz=72,SNR=17					
MONP	Monument Peak	71.18	319	⇑P	P	00 38 29.8 +0.2
	baz=72,SNR=6.2					
BAR	Barrett	71.19	318	eP	P	00 38 29.9 +0.3
BAR				epP	pP	00 38 59.5 +6.5
W13A	Hualapai Mount	71.21	322	⇓P	P	00 38 30.1 +0.4
	baz=72,SNR=12					
T16A	Glen Canyon Da	71.26	325	⇓P	P	00 38 30.5 +0.5
	baz=72					
U15A	North Rim	71.28	324	⇓P	P	00 38 31.0 +0.9
	baz=72,SNR=14					
IRM	Iron Mountain	71.29	320	⇓P	P	00 38 30.4 +0.2
	baz=72					
S17A	Black Ridge (B	71.38	326	⇓P	P	00 38 31.1 +0.5
	baz=72,SNR=5.9					
R18A	Canyonlands Na	71.47	327	⇑P	P	00 38 31.0 -0.2
	baz=72,SNR=18					
P20A	De Beque	71.58	328	⇓P	P	00 38 32.2 +0.4
	baz=72					
109C	Camp Elliot, M	71.60	318	⇓P	P	00 38 32.1 0.0
	baz=72					
PHWY	Pilot Hill	71.64	331	eP	P	00 38 32.4 +0.2
BELC	Belle Mtn.	71.68	320	⇑P	P	00 38 33.0 +0.4
	baz=72					
PFO	Pinyon Flat Ob	71.69	319	⇑P	P	00 38 32.8 +0.2
	baz=72,SNR=5.8					
PFO	Pinyon Flat Ob	71.69	319	LR	LR	01 07 56.4
	comp=N,41nm,18.6s,baz=321,slow=34					
PFO	Pinyon Flat Ob	71.69	319	eP	P	00 38 32.9 +0.3
N22A	Wattenberg Ran	71.69	330	⇓P	P	00 38 33.2 +0.7
	baz=72,SNR=29					
O21A	Pagoda	71.70	329	⇑P	P	00 38 33.3 +0.8
	baz=72					
T15A	Red Dirt Ranch	71.76	324	⇓P	P	00 38 33.7 +0.8
	baz=72,SNR=20					
U14A	Mt Trumbull	71.76	323	⇑P	P	00 38 33.7 +0.7
	baz=72,SNR=13					
V13A	Grand Canyon W	71.81	322	⇑P	P	00 38 33.7 +0.4
	baz=72,SNR=10					
R17A	Hanksville Air	71.92	326	⇑P	P	00 38 34.2 +0.3
	baz=72,SNR=24					
W12A	Cal Nev Ari	71.92	321	⇓P	P	00 38 34.2 +0.2
	baz=72					
P19A	Cripple Cowboy	71.97	328	⇓P	P	00 38 34.7 +0.6
	baz=72,SNR=43					
O20A	White River Ci	72.00	329	⇑P	P	00 38 34.7 +0.4
	baz=72,SNR=34					
GMRC	Granite Mounta	72.02	321	⇓P	P	00 38 34.9 +0.3
	baz=72,SNR=16					
MURC	Murrieta	72.14	319	⇑P	P	00 38 35.5 +0.2
	baz=73					
Q18A	Rafter H Ranch	72.14	327	⇓P	P	00 38 35.4 +0.2
	baz=73,SNR=13					
N21A	Black Mountain	72.15	330	⇓P	P	00 38 36.0 +0.8
	baz=73,SNR=9.0					
T14A	Hurricane	72.18	324	⇓P	P	00 38 36.2 +0.8
	baz=73					
U13A	Pakoon Wash	72.20	323	⇓P	P	00 38 36.2 +0.6
	baz=73					
V12A	Nelson	72.21	322	⇑P	P	00 38 35.9 +0.2
	baz=73					
R16A	Teasdale	72.22	326	⇑P	P	00 38 35.9 +0.3
	baz=73,SNR=7.5					
M22A	Cedar Creek Ra	72.23	331	⇑P	P	00 38 36.0 +0.3
	baz=73,SNR=11					
S15A	Panguitch	72.23	325	⇓P	P	00 38 36.3 +0.5
	baz=73					
SRU	San Rafael	72.34	327	⇑P	P	00 38 36.6 +0.2
	baz=73,SNR=18					
SRU	San Rafael	72.34	327	eP	P	00 38 36.6 +0.2
SRU				epP	pP	00 39 06.4 +6.6
BBRC	Big Bear Sol-O	72.42	319	⇓P	P	00 38 37.5 +0.6
	baz=73					
HEC	Hector,Ludlow	72.45	320	⇑P	P	00 38 37.7 +0.5
	baz=73					
Q16A	Castle Valley	72.53	326	⇑P	P	00 38 37.8 +0.3
	baz=73,SNR=7.5		

RRX Edison Barstow 72.89 320 ⇊P P 00 38 40.3 +0.5
baz=73
ARUT Antelope Range 72.90 324 eP P 00 38 40.6 +0.9
comp=N,38nm,1.0s,mb5.2
SHPR Sheep Range 72.94 322 eP P 00 38 40.5 +0.5
SHPR epP pP 00 39 10.1 +6.6
O18A Roosevelt 72.96 328 ⇈P P 00 38 40.4 +0.4
baz=74
S13A Holt Ranch, En 72.98 324 ⇈P P 00 38 41.0 +0.8
baz=74,SNR=16
U11A Corn Creek 73.01 322 ⇈P P 00 38 41.0 +0.6
baz=74
L21A Rawlins 73.03 331 ⇊P P 00 38 40.4 0.0
baz=74,SNR=42
M20A Sweetwater, Wa 73.04 330 ⇈P P 00 38 40.5 +0.1
baz=74,SNR=15
N19A John Jarvie Ra 73.04 329 ⇈P P 00 38 40.4 -0.1
baz=74,SNR=33
R14A James Farms, M 73.05 325 ⇊P P 00 38 41.3 +0.7
baz=74,SNR=5.2
GSC Goldstone 73.06 320 ⇊P P 00 38 41.2 +0.5
baz=74
GSC Goldstone 73.06 320 eP P 00 38 41.6 +0.9
SHOC Shoshone 73.16 321 ⇈P P 00 38 41.4 0.0
baz=74
Q15A Fillmore 73.22 326 ⇊P P 00 38 42.2 +0.6
baz=74
DECC Green Verdugo 73.27 319 ⇈P P 00 38 42.3 +0.3
baz=74
O17A Robinson Place 73.27 327 ⇈P P 00 38 42.5 +0.7
baz=74,SNR=45
P16A Fountain Green 73.30 326 ⇈P P 00 38 42.5 +0.5
baz=74
RSSD Black Hills 73.34 334 eP P 00 38 42.2 +0.1
RSSD epP pP 00 39 12.4 +6.8
N18A Larsen Ranch, 73.34 329 ⇊P P 00 38 42.2 0.0
baz=74,SNR=12
R13A O'Grain Ranch, 73.47 324 ⇈P P 00 38 43.8 +0.7
baz=74,SNR=8.0
EDW2 Edwards Air Fo 73.48 319 ⇊P P 00 38 42.8 -0.4
baz=74
T11A Corn Creek, Al 73.49 323 ⇈P P 00 38 43.8 +0.6
baz=74
M19A Rock Springs 73.50 329 ⇊P P 00 38 43.1 -0.1
baz=74
L20A Wamsutter 73.51 330 ⇊P P 00 38 43.3 +0.1
baz=74,SNR=27
S12A Delamar Landin 73.55 323 ⇈P P 00 38 44.2 +0.7
baz=74
U10A Ash Meadows, A 73.55 321 ⇊P P 00 38 44.2 +0.6
baz=74
MPU Maple Canyon 73.59 327 eP P 00 38 44.4 +0.7
MPU epP pP 00 39 14.6 +7.4
P15A Leamington 73.59 326 ⇊P P 00 38 44.2 +0.5
baz=74
BLG Laguna Peak 73.63 318 ⇈P P 00 38 43.9 -0.2
baz=74
O16A Springville 73.67 327 ⇊P P 00 38 44.5 +0.3
baz=74,SNR=9.7
Q14A Sevier Lake (B 73.69 325 ⇊P P 00 38 45.1 +0.8
baz=74,SNR=32
DAU Daniels Canyon 73.69 327 eP P 00 38 45.0 +0.7
NLU North Lily Min 73.77 326 eP P 00 38 45.6 +0.8
NLU epP pP 00 39 16.0 +7.8
M18A Lyman 73.88 329 ⇈P P 00 38 45.1 -0.3
baz=74,SNR=9.7
N17A Moffit Pass 73.89 328 ⇈P P 00 38 46.2 +0.7
baz=74,SNR=23
R12A Pony Springs, 73.93 324 ⇈P P 00 38 46.6 +0.8
baz=74,SNR=20
JLU Jordanelle 73.94 327 eP P 00 38 46.3 +0.6
JLU epP pP 00 39 16.3 +7.1
MPMC Manual Prospec 73.98 320 ⇈P P 00 38 46.0 -0.2
baz=74,SNR=5.8
P14A Drum Mountains 74.02 326 ⇈P P 00 38 47.0 +0.8
baz=74,SNR=34
K20A Yellowstone Ra 74.02 331 ⇊P P 00 38 45.9 -0.3
baz=74,SNR=16
Q13A Wheeler Ranch, 74.06 325 ⇈P P 00 38 46.9 +0.4
baz=75,SNR=18
L19A Farson 74.06 330 ⇊P P 00 38 46.7 +0.2
baz=75,SNR=28
AGMN Agassiz Refuge 74.06 341 eP P 00 38 45.5 -0.8
S11A Rachel 74.08 323 ⇈P P 00 38 47.5 +0.8
baz=75
N16A Rees Ranch, Co 74.14 327 ⇊P P 00 38 47.3 +0.4
baz=75,SNR=7.3
M17A Scullys Gap (B 74.20 328 ⇈P P 00 38 46.9 -0.4
baz=75,SNR=11
O15A The Old Anders 74.21 326 ⇊P P 00 38 47.9 +0.5
baz=75
L18A Fontenelle, Gr 74.25 329 ⇈P P 00 38 47.6 0.0
baz=75,SNR=17
SBC Santa Barbara 74.25 318 ⇈P P 00 38 48.7 +0.9
baz=75
ISA Isabella 74.30 320 ⇈P P 00 38 48.2 +0.2
baz=75,SNR=7.5
ISA Isabella 74.30 320 eP P 00 38 48.6 +0.6
ISA epP pP 00 39 18.4 +6.9
DUG Dugway 74.33 326 ⇈P P 00 38 48.3 +0.3
baz=75,SNR=25
DUG Dugway 74.33 326 eP P 00 38 48.4 +0.4
K19A Absolon Red Bu 74.38 330 ⇈P P 00 38 47.9 -0.4
baz=75,SNR=26
P13A Bates Ranch, G 74.42 325 ⇊P P 00 38 49.3 +0.7
baz=75,SNR=19
R11A Troy Canyon, C 74.48 323 ⇈P P 00 38 49.4 +0.4
baz=75,SNR=20
GRAC Grapevine Rang 74.56 321 ⇊P P 00 38 49.8 +0.4
baz=75
Q12A Willow Creek R 74.56 324 ⇊P P 00 38 49.8 +0.4
baz=75,SNR=8.7
M16A Huntsville 74.56 328 ⇊P P 00 38 49.4 0.0
baz=75
CWC Cottonwood Cre 74.59 320 ⇈P P 00 38 50.2 +0.5
baz=75
PKM Peak Mountain 74.61 318 ⇈P P 00 38 50.0 +0.1
baz=75,SNR=7.4
BW06 Boulder Array 74.67 330 ⇊P P 00 38 49.5 -0.5
baz=75,SNR=15
BW06 Boulder Array 74.67 330 eP P 00 38 49.4 -0.6
PDAR Pinedale Array 74.67 330 P P 00 38 49.5 -0.4
comp=N,3.9nm,0.7s,mb4.2,baz=148,slow=7.0,SNR=36
PDAR pP pP 00 39 18.9 +5.4
comp=N,2.3nm,0.6s,baz=126,slow=8.4,SNR=3.5
N15A Stansbury Isla 74.69 327 ⇈P P 00 38 50.1 0.0
baz=75
HWUT Hardware Ranch 74.75 328 eP P 00 38 50.3 -0.1
HWUT epP pP 00 39 18.2 +4.3
S10A Tonopah Range, 74.75 322 ⇈P P 00 38 50.7 +0.2
baz=75,SNR=14
L17A Cokeville 74.78 329 ⇈P P 00 38 50.3 -0.3
baz=75,SNR=19
VES Vestal, Richgr 74.79 319 ⇊P P 00 38 50.7 -0.2
baz=75
K18A Toltan Ranch, 74.80 329 ⇈P P 00 38 51.2 +0.5
baz=75,SNR=27
R10A Warm Springs 74.84 323 ⇈P P 00 38 52.0 +1.0
baz=75,SNR=10.0
Q11A Duckwater 74.87 324 ⇈P P 00 38 51.5 +0.3
baz=75,SNR=11
O13A Hicks Ranch, I 74.89 325 ⇈P P 00 38 51.5 +0.2
baz=75
P12A McGill 74.91 324 ⇊P P 00 38 51.9 +0.5
baz=75,SNR=12
BGU Big Grassy Mou 74.98 327 eP P 00 38 51.3 -0.5
comp=N,26nm,1.3s,mb4.8
BGU epP pP 00 39 20.4 +5.1
L16A Fish Haven 74.99 328 ⇊P P 00 38 51.5 -0.3
baz=76,SNR=26
SMMC Simmler 75.00 318 ⇊P P 00 38 52.2 +0.1
baz=76
N14A Grayback Hills 75.00 326 ⇊P P 00 38 51.8 -0.1
baz=76,SNR=22
M15A Larsen Ranch, 75.08 327 ⇈P P 00 38 52.0 -0.3
baz=76,SNR=7.0
TIN Tinemaha 75.10 321 ⇈P P 00 38 53.0 +0.4
baz=76
RCTC Rector, Farmer 75.20 320 ⇊P P 00 38 52.2 -0.9
baz=76
J18A Kendall Valley 75.23 330 ⇈P P 00 38 53.1 0.0
baz=76,SNR=95
Q10A Clear Creek Ra 75.27 323 ⇊P P 00 38 53.8 +0.3
baz=76,SNR=6.4
K17A Gardner Place, 75.30 329 ⇊P P 00 38 53.6 0.0
baz=76,SNR=20
O12A Currie 75.39 325 ⇊P P 00 38 54.5 +0.3
baz=76,SNR=17
AHID Auburn Hatcher 75.40 329 eP P 00 38 54.4 +0.2
comp=N,53nm,1.0s,mb5.2
AHID epP pP 00 39 22.9 +5.2
P11A Circle Ranch, 75.42 324 ⇊P P 00 38 54.7 +0.3
baz=76
L15A Malad City 75.45 328 ⇊P P 00 38 54.1 -0.4
baz=76,SNR=36
HVU Hansel Valley 75.48 327 eP P 00 38 54.9 +0.3
MTUM Tungsten Hills 75.50 321 eP P 00 38 55.5 +0.6
MTUM epP pP 00 39 25.4 +7.0
I18A Diamond G Ranc 75.51 330 ⇊P P 00 38 55.0 +0.2
baz=76,SNR=46
SBA Scott Base 75.53 190 eP P 00 38 55.5 +1.0
comp=N,5.1nm,1.1s,mb4.2
N13A Wendover, West 75.53 326 ⇊P P 00 38 54.9 -0.1
baz=76
M14A Sheep Mountain 75.56 327 ⇊P P 00 38 55.0 -0.1
baz=76,SNR=32
J17A Brown Place, J 75.67 330 ⇊P P 00 38 56.0 +0.3
baz=76,SNR=33
K16A Soda Springs 75.68 329 ⇈P P 00 38 56.3 +0.6
baz=76,SNR=45
REDW Red Top Meadow 75.73 329 eP P 00 38 56.3 +0.3
SNOW Snow King Moun 75.76 330 eP P 00 38 56.3 +0.1
comp=N,32nm,0.8s,mb5.1
SNOW epP pP 00 39 24.6 +4.8
O11A Cowboy Ranch, 75.78 325 ⇈P P 00 38 56.7 +0.3
baz=76,SNR=9.5
LOHW Long Hollow 75.81 330 eP P 00 38 56.6 +0.1
comp=N,27nm,0.9s,mb5.0
LOHW epP pP 00 39 23.8 +3.8
LOHW esP sP 00 39 36.4 +6.5
ULM Lac du Bonnet 75.82 342 P P 00 38 55.1 -1.2
comp=N,8.6nm,0.6s,mb4.7,baz=154,slow=5.2,SNR=22
ULM Lac du Bonnet 75.82 342 eP P 00 38 55.0 -1.4
comp=N,6.5nm,0.6s,mb4.5
MLAC Mammoth Lakes 75.84 321 ⇊P P 00 38 57.1 +0.3
baz=76
P10A Eureka 75.86 324 ⇈P P 00 38 57.5 +0.6
baz=76
TPAW Teton Pass 75.88 330 eP P 00 38 56.9 0.0
comp=N,52nm,1.2s,mb5.1
M13A Montello 75.88 326 ⇈P P 00 38 56.5 -0.4
baz=76,SNR=6.5
M13A Montello 75.88 326 eP P 00 38 56.6 -0.4
comp=N,9.7nm,1.1s,mb4.5
L14A Malta 75.90 327 ⇊P P 00 38 56.9 -0.2
baz=76,SNR=17
RRI2 Red Ridge 75.94 329 eP P 00 38 57.3 0.0
comp=N,52nm,1.0s,mb5.2
N12A Clover Valley, 75.97 325 ⇊P P 00 38 57.2 -0.2
baz=76
N12A Clover Valley, 75.97 325 eP P 00 38 57.0 -0.4
comp=N,15nm,1.4s,mb4.5
J16A Bone 76.03 329 ⇊P P 00 38 57.9 +0.2
baz=76,SNR=8.7
I17A Pilgrim Ck. 76.03 330 ⇈P P 00 38 58.5 +0.7
baz=76,SNR=29
K15A Arbon 76.03 328 ⇈P P 00 38 57.6 -0.1
baz=76,SNR=10
DCID1 Drake Creek 76.07 329 eP P 00 38 58.8 +0.9
NVAR Mina Array Bea 76.07 322 P P 00 38 58.6 +0.5
comp=N,3.2nm,0.8s,mb4.1,baz=158,slow=7.7,SNR=8.9
NVAR pP pP 00 39 27.2 +5.5
comp=N,4.1nm,0.9s,baz=166,slow=6.2,SNR=5.3
IMW Indian Meadow 76.18 330 eP P 00 38 58.5 -0.1
comp=N,30nm,0.9s,mb5.0
K14A Jones Ranch, D 76.25 328 ⇈P P 00 38 58.6 -0.4
baz=77,SNR=6.7
L13A Double Diamond 76.30 327 ⇈P P 00 38 59.5 +0.2
baz=77,SNR=19
M12A Wells 76.31 326 ⇊P P 00 38 59.2 -0.2
baz=77,SNR=14
N11A Elko Archery C 76.31 325 ⇈P P 00 38 59.2 -0.2
baz=77
LAO LASA Array 76.33 334 eP P 00 38 58.8 -0.5
comp=N,61nm,1.2s,mb5.2
LAO epP pP 00 39 29.3 +6.4
O10A Cortez Mining, 76.35 324 ⇈P P 00 38 59.7 +0.1
baz=77
RLMT Red Lodge 76.37 332 ⇊P P 00 38 59.9 +0.4
baz=77,SNR=42
RLMT Red Lodge 76.37 332 eP P 00 38 59.8 +0.2
comp=N,52nm,1.1s,mb5.2
RLMT epP pP 00 39 30.9 +7.7
H17A Grant Village 76.39 330 ⇊P P 00 39 00.9 +1.1
baz=77,SNR=14
SCHQ Schefferville 76.42 1 P P 00 38 59.6 0.0
comp=N,8.3nm,1.0s,mb4.4,baz=162,slow=4.7,SNR=8.2
SCHQ Schefferville 76.42 1 eP P 00 38 59.6 -0.1
comp=N,18nm,0.7s,mb4.9
SCHQ e 00 39 16.1
I16A Newdale 76.42 329 ⇈P P 00 39 00.3 +0.3
baz=77,SNR=12
J15A Blackfoot 76.52 329 ⇈P P 00 39 00.8 +0.4
baz=77,SNR=17
YFT Old Faithful 76.56 330 eP P 00 39 02.8 +2.1
G18A Lazy EL Ranch, 76.65 332 ⇈P P 00 39 01.3 +0.1
baz=77,SNR=52
N10A Dunphy 76.66 324 ⇈P P 00 39 01.2 -0.1
baz=77
YNR Norris Junctio 76.69 330 eP P 00 39 01.9 +0.5
comp=N,33nm,1.3s,mb4.9
YNR epP pP 00 39 32.9 +7.9
K13A Stover Farm, H 76.78 327 ⇊P P 00 39 02.1 +0.1
baz=77,SNR=5.4
M11A Holland Ranch, 76.78 325 ⇈P P 00 39 02.2 +0.2
baz=77,SNR=10
WAKR Walker 76.78 321 eP P 00 39 02.5 +0.4
YMR Madison River 76.78 330 eP P 00 39 02.4 +0.5
comp=N,104nm,1.3s,mb5.4
L12A House Creek Ra 76.89 326 ⇈P P 00 39 03.0 +0.4
baz=77,SNR=5.8
H16A Russell Place, 76.94 330 ⇈P P 00 39 03.6 +0.7
baz=78,SNR=32
J14A Carey 76.99 328 ⇊P P 00 39 03.8 +0.7
baz=78,SNR=13
I15A Monteview 76.99 329 ⇊P P 00 39 03.9 +0.8
baz=78,SNR=5.0
DGMT Dagmar 77.00 336 ⇈P P 00 39 03.4 +0.3
baz=78,SNR=6.3
DGMT Dagmar 77.00 336 eP P 00 39 03.0 -0.1
comp=N,50nm,1.0s,mb5.2
DGMT epP pP 00 39 34.1 +7.3
CMB Columbia Colle 77.03 320 eP P 00 39 03.5 0.0
CMB epP pP 00 39 32.5 +5.4
GCMT Greycliff 77.06 332 eP P 00 39 02.9 -0.6
comp=N,28nm,0.9s,mb5.0
GCMT epP pP 00 39 31.7 +4.6
TOA0 Torodi Ar. Sit 77.07 70 eP P 00 39 04.5 +0.2
TOA0 epP pP 00 39 34.9 +7.0
TORD Torodi Ar. Bea 77.07 70 P P 00 39 04.8 +0.5
comp=N,12nm,0.5s,mb4.9,baz=262,slow=5.7,SNR=83
QLMT Earthquake Lak 77.12 330 eP P 00 39 04.9 +1.1
F18A Big Timber 77.17 332 ⇈P P 00 39 04.2 +0.1
baz=78,SNR=42
G17A Pierce Place, 77.18 331 ⇊P P 00 39 04.8 +0.6
baz=78,SNR=9.1
K12A Draper Farm, C 77.18 327 ⇊P P 00 39 04.8 +0.6
baz=78,SNR=29
M10A I.L. Ranch, Tu 77.24 325 ⇈P P 00 39 04.8 +0.2
baz=78
L11A Cat Creek Ranc 77.28 326 ⇈P P 00 39 05.1 +0.3
baz=78,SNR=17
J13A Cove Ranch, Pi 77.37 328 ⇈P P 00 39 05.7 +0.4
baz=78,SNR=16
I14A Mackay 77.40 328 ⇈P P 00 39 06.2 +0.8
baz=78,SNR=22
WCN Washoe City 77.50 322 ⇈P P 00 39 06.4 +0.3
baz=78
H15A Lima 77.53 329 ⇊P P 00 39 06.9 +0.8
baz=78
PAHR Pah Rah Range 77.56 322 eP P 00 39 07.2 +0.8
F17A Fitzpatrick Pl 77.59 331 ⇊P P 00 39 06.9 +0.5
baz=78,SNR=42
L10A Juniper Basin 77.59 325 ⇈P P 00 39 06.9 +0.3
baz=78,SNR=38
G16A Moss Hill, Enn 77.60 330 ⇈P P 00 39 06.6 +0.1
baz=78,SNR=12
HLID Hailey 77.61 328 ⇈P P 00 39 07.3 +0.7
baz=78,SNR=52
HLID Hailey 77.61 328 eP P 00 39 07.2 +0.6
HLID epP pP 00 39 37.1 +6.9
I13A Wildhorse Cree 77.72 328 ⇈P P 00 39 07.8 +0.6
baz=78,SNR=28
J12A Stokes Ranch, 77.72 327 ⇈P P 00 39 07.6 +0.4
baz=78,SNR=11
E18A Harlowton 77.78 332 ⇊P P 00 39 07.5 +0.1
baz=78,SNR=32
MCMT McKenzie Canyo 77.78 329 eP P 00 39 08.0 +0.5
comp=N,4.5nm,0.8s,mb4.2
MCMT epP pP 00 39 37.3 +6.1
BOZ Bozeman (W) 77.83 331 ⇈P P 00 39 07.7 -0.1
baz=78,SNR=19
BOZ Bozeman (W) 77.83 331 eP P 00 39 07.3 -0.5
comp=N,12nm,1.1s,mb4.5
BOZ epP pP 00 39 38.1 +6.7
K11A Parker Ranch, 77.86 326 ⇈P P 00 39 08.2 +0.2
baz=78,SNR=12
G15A Dillon 77.87 330 ⇈P P 00 39 08.3 +0.3
baz=78
H14A Leadore 77.87 329 ⇊P P 00 39 08.5 +0.5
baz=78,SNR=15
F16A Kennard Place, 77.94 331 ⇊P P 00 39 08.3 -0.1
baz=78
SUR Sutherland 78.00 120 eP P 00 39 10.0 +0.8
DLMT Dillon 78.06 330 eP P 00 39 09.5 +0.4
E17A Martinsdale 78.11 332 ⇊P P 00 39 09.5 +0.2
baz=79,SNR=29
I12A Atlanta 78.14 327 ⇈P P 00 39 10.0 +0.4
baz=79,SNR=20
MFID Camas Ranch 78.21 327 ⇈P P 00 39 10.2 +0.2
baz=79,SNR=18
D18A Linhart Farms, 78.22 333 ⇈P P 00 39 09.9 0.0
baz=79
BEKR Beckwourth 78.22 322 ⇊P P 00 39 10.2 +0.1
baz=79,SNR=8.9
H13A Challis 78.26 328 ⇊P P 00 39 10.6 +0.4
baz=79,SNR=72
K10A MacKenzie Ranc 78.30 326 ⇊P P 00 39 10.4 0.0
baz=79,SNR=13
LRM Limekiln Ridge 78.34 330 eP P 00 39 10.9 +0.3
LRM epP pP 00 39 41.0 +6.7
LRM esP sP 00 39 51.7 +7.6
F15A Butte 78.38 330 ⇊P P 00 39 11.1 +0.3
baz=79,SNR=28
G14A Jackson 78.38 329 ⇈P P 00 39 11.2 +0.4
baz=79,SNR=5.4
OHCM Honcut 78.53 321 eP P 00 39 12.0 +0.2
E16A East Helena 78.53 331 ⇈P P 00 39 11.7 +0.1
baz=79,SNR=11
H12A Diamond D Ranc 78.55 328 ⇊P P 00 39 12.2 +0.4
baz=79,SNR=36
D17A Six Diamond Ra 78.56 332 ⇊P P 00 39 11.9 +0.1
baz=79,SNR=39
I11A Placerville 78.63 327 ⇈P P 00 39 12.0 -0.3
baz=79
G13A Cobalt 78.64 329 ⇊P P 00 39 12.9 +0.7
baz=79
J10A Berg Farm, Mel 78.70 326 ⇈P P 00 39 12.3 -0.4
baz=79
HRY Holter Researc 78.73 331 eP P 00 39 13.1 +0.4
HRY epP pP 00 39 44.0 +7.6
F14A Wisdom 78.76 330 ⇊P P 00 39 13.6 +0.7
baz=79,SNR=10
EGMT Eagleton 78.84 333 ⇈P P 00 39 12.8 -0.5
baz=79,SNR=15
EGMT Eagleton 78.84 333 eP P 00 39 12.6 -0.7
comp=N,41nm,1.2s,mb5.1
EGMT epP pP 00 39 38.3 +1.3
D16A Dana Ranch, Ca 78.85 332 ⇈P P 00 39 13.9 +0.5
baz=79,SNR=61
E15A Deer Lodge 78.88 331 ⇊P P 00 39 13.8 +0.3
baz=79,SNR=30
C17A Wharram Farm, 78.97 332 ⇊P P 00 39 13.6 -0.4
baz=80,SNR=16
B18A Beardsley Farm 79.14 333 ⇊P P 00 39 14.7 -0.2
baz=80,SNR=28
J09A Fry Pan Ranch, 79.16 326 ⇊P P 00 39 15.0 -0.2
baz=80
G12A Big Creek, Yel 79.19 328 ⇈P P 00 39 15.4 +0.1
baz=80
F13A Darby 79.20 329 ⇈P P 00 39 15.6 +0.3
baz=80,SNR=77
H11A Donnelly 79.23 328 ⇊P P 00 39 15.3 -0.2
baz=80,SNR=14
E14A Clinton 79.27 330 ⇊P P 00 39 16.0 +0.4
baz=80,SNR=8.3
D15A Lincoln 79.29 331 ⇊P P 00 39 16.3 +0.5
baz=80,SNR=12
B17A L&G Farms, Che 79.49 333 ⇊P P 00 39 16.2 -0.6
baz=80,SNR=6.7
TSUM Tsumeb 79.50 107 eP P 00 39 17.7 0.0
comp=N,18nm,0.8s,mb5.0
TSUM ePcP PcP 00 39 25.3 -0.1
C16A Fuhringer Ranc 79.52 332 ⇈P P 00 39 16.8 -0.2
baz=80,SNR=26
CHMT Chamberlain Mo 79.53 331 P P 00 39 17.6 +0.5
J08A Circle Bar Ran 79.55 325 ⇊P P 00 39 17.3 0.0
baz=80,SNR=7.9
MOD Modoc 79.55 323 eP P 00 39 17.2 0.0
A18A Metzger Ranch, 79.58 334 ⇈P P 00 39 16.6 -0.7
baz=80,SNR=7.1
I09A Lost Marbles R 79.59 326 ⇈P P 00 39 17.4 -0.1
baz=80,SNR=9.3
E13A Victor 79.61 330 ⇈P P 00 39 17.9 +0.4
baz=80,SNR=23
F12A Elk City 79.62 329 ⇈P P 00 39 17.6 0.0
baz=80,SNR=16
D14A Greenough 79.77 331 ⇈P P 00 39 18.4 0.0
baz=80,SNR=6.9
MSO Missoula 79.78 330 eP P 00 39 18.7 +0.3
comp=N,15nm,1.3s,mb4.7
MSO epP pP 00 39 47.7 +5.5
G11A Walters Elk Ra 79.85 328 ⇈P P 00 39 18.9 +0.1
baz=80
SLMT Seeley Lake 79.88 331 eP P 00 39 18.3 -0.7
comp=N,25nm,1.1s,mb5.0
SLMT epP pP 00 39 47.5 +4.7
C15A Salmond Ranch, 79.88 331 ⇊P P 00 39 19.3 +0.3
baz=80,SNR=57
A17A Triple J Farms 79.95 333 ⇈P P 00 39 18.8 -0.5
baz=80,SNR=22
B16A M & M Farms, S 79.97 332 ⇊P P 00 39 18.7 -0.8
baz=80,SNR=15
BMO Blue Mountains 79.98 327 eP P 00 39 19.4 -0.2
comp=N,36nm,1.1s,mb5.1
BMO epP pP 00 39 48.9 +5.5
H09A Durkee 80.03 327 ⇈P P 00 39 19.7 -0.2
baz=80
F11A Grangeville 80.15 328 ⇊P P 00 39 20.0 -0.4
baz=81,SNR=24
D13A Huson 80.22 330 ⇊P P 00 39 20.9 +0.1
baz=81,SNR=17
E12A Beaver Dam Sad 80.24 329 ⇈P P 00 39 20.8 -0.2
baz=81,SNR=14
B15A Bradely Ranch, 80.27 332 ⇈P P 00 39 20.3 -0.7
baz=81,SNR=23
SWMT Swartz Lake 80.31 331 eP P 00 39 21.1 -0.2
comp=N,20nm,1.2s,mb4.8
SWMT epP pP 00 39 49.1 +4.0
A16A West Butte Ran 80.34 333 ⇈P P 00 39 21.1 -0.3
baz=81,SNR=53
C14A Swan Lake 80.39 331 ⇊P P 00 39 21.8 +0.2
baz=81
K05A Summer Lake 80.42 324 ⇈P P 00 39 22.4 +0.4
baz=81,SNR=11
H08A Prairie City 80.45 326 ⇈P P 00 39 22.2 +0.1
baz=81,SNR=15
E11A Bogner Ranch, 80.51 329 ⇊P P 00 39 21.8 -0.6
baz=81,SNR=11
G09A Cove 80.52 327 ⇊P P 00 39 22.6 +0.1
baz=81,SNR=44
YBMT Yellow Bay 80.58 331 eP P 00 39 23.0 +0.3
YBMT epP pP 00 39 53.3 +6.8
I07A Izee 80.58 325 ⇊P P 00 39 23.1 +0.2
baz=81,SNR=12
D12A Red Ives Fores 80.60 330 ⇊P P 00 39 22.7 -0.1
baz=81,SNR=31
JTMT Jette 80.62 331 eP P 00 39 23.0 +0.1
C13A Hot Springs 80.70 330 ⇈P P 00 39 23.5 +0.1
baz=81,SNR=21
F10A Beach Ranch, E 80.73 328 ⇈P P 00 39 23.5 -0.1
baz=81,SNR=15
A15A Johnson Ranch, 80.84 332 ⇊P P 00 39 23.0 -1.1
baz=81,SNR=7.3
F09A S2 Ranch, Elgi 80.89 327 ⇈P P 00 39 24.1 -0.3
baz=81
BSMT Bassoo Peak 80.92 330 eP P 00 39 24.8 +0.3
BSMT epP pP 00 39 55.6 +7.3
E10A Myers Farm, Un 81.04 328 ⇈P P 00 39 24.9 -0.3
baz=82
D11A Klaveano Farm, 81.06 329 ⇈P P 00 39 24.6 -0.7

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
	baz=82,SNR=10							
G08A	Pilot Rock	81.13	327	⇑P		P	00 39 25.5	-0.2
	baz=82,SNR=8.9							
C12B	Naegeli Ranch,	81.14	330	⇓P		P	00 39 25.6	-0.1
	baz=82,SNR=6.7							
A14A	Double T Ranch	81.14	332	⇓P		P	00 39 25.0	-0.7
	baz=82,SNR=14							
B13A	Whitefish	81.16	331	⇑P		P	00 39 25.7	-0.1
	baz=82,SNR=20							
WALA	Waterton Lakes	81.42	332	*e*P		P	00 39 26.9	-0.2
WALA				*ep*P		pP	00 39 56.0	+5.0
WALA				*es*P		sP	00 40 08.3	+7.5
H06A	Lindquist Farm	81.47	325	⇓P		P	00 39 27.9	+0.4
	baz=82,SNR=8.8							
D10A	Wagner Farm, O	81.52	329	⇑P		P	00 39 27.0	-0.7
	baz=82,SNR=7.3							
FFC	Flin Flon	81.54	341	*e*P		P	00 39 26.6	-1.0
	comp=N,22nm,1.4s,mb4.8							
FFC				*ep*P		pP	00 39 56.1	+4.6
A13A	Flathead Natio	81.55	331	⇑P		P	00 39 28.0	+0.1
	baz=82,SNR=22							
E09A	Wood Farm, Sta	81.57	328	⇑P		P	00 39 27.2	-0.8
	baz=82							
B12A	Libby	81.74	330	⇑P		P	00 39 28.9	+0.1
	baz=82,SNR=9.6							
PBDV	Barranco-do-Ve	81.86	45	*e*P		P	00 39 36.3	+6.6
	comp=N,63nm,2.1s,mb5.1							
G06A	Carlson Farm,	81.96	326	⇓P		P	00 39 30.4	+0.3
	baz=82							
CROR	Criterion Ridg	81.98	325	P		P	00 39 30.5	+0.3
PCVE	Castro Verde	82.01	44	*e*P		P	00 39 36.0	+5.5
	comp=N,34nm,1.9s,mb4.8							
D09A	Jones Farm, Ri	82.03	328	⇓P		P	00 39 30.0	-0.4
	baz=82,SNR=9.3							
B11A	Sandpoint	82.08	330	⇑P		P	00 39 30.1	-0.6
	baz=83,SNR=5.2							
PVAQ	Vaqueiros	82.09	45	*e*P		P	00 39 37.1	+6.1
	comp=N,33nm,1.8s,mb4.9							
A12A	Yaak River Ran	82.11	331	⇑P		P	00 39 30.4	-0.3
	baz=83,SNR=5.0							
HAWA	Hanford	82.18	327	*e*P		P	00 39 31.4	+0.3
HAWA				*ep*P		pP	00 40 01.1	+6.0
RSW	Rattlesnake Hi	82.21	327	*e*P		P	00 39 31.9	+0.5
NEW	Newport	82.31	330	*e*P		P	00 39 30.3	-1.5
	comp=N,4.8nm,1.0s,mb4.3							
D08A	Wollman Farm,	82.33	328	⇓P		P	00 39 31.6	-0.4
	baz=83							
PBEJ	Beja	82.35	44	*e*P		P	00 39 40.5	+8.2
	comp=N,22nm,2.0s,mb4.7							
H04A	Detroit Lake	82.42	325	⇑P		P	00 39 31.7	-0.8
	baz=83							
A11A	Hall Mountain,	82.45	330	⇑P		P	00 39 32.1	-0.5
	baz=83,SNR=31							
E07A	Sunnyside	82.45	327	⇓P		P	00 39 32.4	-0.2
	baz=83							
OD2	Odessa Site #2	82.46	328	P		P	00 39 32.4	-0.2
C09A	Chrisman Ranch	82.53	329	⇑P		P	00 39 32.5	-0.5
	baz=83,SNR=6.0							
BOSA	Boshof	82.87	118	P		P	00 39 36.1	+0.7
	comp=N,5.2nm,0.8s,mb4.4,baz=198,slow=4.1,SNR=8.4							
BOSA				LR		LR	01 15 17.7	
	comp=N,103nm,18.6s,baz=342,slow=35							
BOSA	Boshof	82.87	118	*e*P		P	00 39 35.6	+0.2
BOSA				*ep*P		pP	00 40 06.3	+7.1
B09A	Rice	82.90	329	⇓P		P	00 39 34.2	-0.7
	baz=83,SNR=8.0							
G04A	Mulino	82.92	325	⇓P		P	00 39 34.2	-0.8
	baz=83							
PTOM	Tomar	82.93	42	*e*P		P	00 39 43.0	+7.7
D07A	Quincy	82.94	327	⇓P		P	00 39 34.8	-0.3
	baz=83							
PBAR	Barrancos	82.97	44	*e*P		P	00 39 43.5	+8.0
	comp=N,16nm,1.1s,mb4.8							
E06A	Yakima	83.02	326	⇓P		P	00 39 35.1	-0.5
	baz=84							
A10A	Northport	83.02	330	⇑P		P	00 39 34.3	-1.1
	baz=84							
MPOR	Mary's Peak	83.04	324	P		P	00 39 36.1	+0.4
FCC	Fort Churchill	83.11	347	*e*P		P	00 39 35.2	-0.5
FCC				*e*		pP	00 39 58.7	-0.9
FCC				*ep*P		pP	00 40 06.0	+6.4
FCC				*es*P		sP	00 40 20.3	+11
C07A	Waterville	83.33	328	⇑P		P	00 39 36.6	-0.5
	baz=84,SNR=6.1							
F04A	Amboy	83.36	325	⇑P		P	00 39 36.6	-0.8
	baz=84							
ETW	Entiat	83.40	328	*e*P		P	00 39 36.8	-0.7
	comp=N,12nm,1.0s,mb4.7							
ETW				*ep*P		pP	00 40 07.6	+6.1
B08A	Colville Reser	83.43	329	⇑P		P	00 39 36.5	-1.1
	baz=84,SNR=5.4							
A09A	Danville	83.50	329	⇑P		P	00 39 37.1	-0.9
	baz=84,SNR=7.0							
PCBR	Castelo Branco	83.64	43	*e*P		P	00 39 46.7	+7.8
	comp=N,16nm,1.8s,mb4.5							
A08A	Turner Farm, O	83.81	329	⇓P		P	00 39 38.9	-0.6
	baz=84,SNR=13							
MAW	Mawson	83.83	163	P		P	00 39 38.7	-0.8
	comp=N,3.8nm,0.7s,mb4.4,baz=179,slow=7.2,SNR=10							
MAW	Mawson	83.83	163	*e*P		P	00 39 39.7	+0.2
MAW				*ep*P		pP	00 40 08.3	+4.8
B07A	Winthrop	83.88	328	⇓P		P	00 39 39.0	-1.0
	baz=84,SNR=11							
MTE	Manteigas	83.92	42	*e*P		P	00 39 47.7	+7.3
	comp=N,18nm,1.2s,mb4.8							
D05A	Enumclaw	83.96	327	⇑P		P	00 39 39.7	-0.7
	baz=84							
EDM	Edmonton	84.30	335	*e*P		P	00 39 40.7	-1.2
E03A	Lebam	84.36	325	⇓P		P	00 39 42.0	-0.4
	baz=85							
A07A	Ashnola River,	84.41	329	⇑P		P	00 39 42.3	-0.3
	baz=85,SNR=15							
LBTB	Lobatse	84.45	115	*e*P		P	00 39 43.9	+0.4
	comp=N,8.5nm,0.8s,mb4.6							
LBTB				*ep*P		pP	00 40 15.1	+7.5
B06A	Marblemount	84.59	328	⇑P		P	00 39 42.3	-1.2
	baz=85							
TAM	Tamanrasset	84.60	63	*e*P		P	00 39 46.7	+2.5
	comp=N,3.0nm,0.6s,mb4.4							
MVO	Moncorvo	84.69	42	*e*P		P	00 39 52.3	+8.1
	comp=N,14nm,1.3s,mb4.7							
A06A	Chilliwack	84.97	328	⇓P		P	00 39 44.3	-1.1
	baz=86							
A05A	Maple Falls	85.21	328	⇑P		P	00 39 45.5	-1.1
	baz=86							
PBRG	Braganca	85.23	41	*e*P		P	00 39 54.9	+8.0
	comp=N,15nm,1.7s,mb4.7							
ESDC	Sonseca Array	85.80	44	P		P	00 39 52.1	+2.3
	comp=N,0.9nm,0.7s,mb3.8,baz=246,slow=5.2,SNR=5.5							
ESDC				pP		pP	00 40 21.4	+7.5
	comp=N,0.5nm,0.4s,baz=237,slow=4.8,SNR=2.9							
ESDC				sP		sP	00 40 34.5	+11
	comp=N,2.7nm,0.9s,baz=236,slow=4.7,SNR=3.1							
ESLA	Sonseca Array	85.80	44	*e*P		P	00 39 50.3	+0.6
LSZ	Lusaka	90.36	107	*e*P		P	00 40 12.6	+0.4
QUIF	Quistinic	90.73	38	*e*P		P	00 40 11.3	-1.7
ROSF	Rostrenen	90.90	37	*e*P		P	00 40 13.0	-0.8
	comp=N,31nm,1.1s,mb5.1							
ROSF	Rostrenen	90.90	37	*e*P		P	00 40 13.0	-0.8
	comp=N,15nm,1.1s,mb5.0							
SGMF	Saint Gilles	91.26	38	*e*P		P	00 40 14.3	-1.2
YKA	Yellowknife Ar	91.70	340	P		P	00 40 16.3	-0.8
	comp=N,11nm,0.8s,mb5.2,baz=135,slow=4.5,SNR=228							
YKA				pP		pP	00 40 47.7	+6.3
	comp=N,9.6nm,0.7s,baz=132,slow=4.5,SNR=13							
YKA				sP		sP	00 41 00.8	+10
	comp=N,7.4nm,0.8s,baz=135,slow=4.6,SNR=5.4							
YKA				LR		LR	01 21 29.9	
	comp=N,3.9nm,18.1s,baz=350,slow=35							
YKA	Yellowknife Ar	91.70	340	P		P	00 40 16.3	-0.8
YKA				pP		pP	00 40 47.7	+6.3
YKA				sP		sP	00 41 00.8	+10
YKA				LR		LR	01 21 29.9	
MFF	Saint Martin d	91.81	40	*e*P		P	00 40 17.2	-0.8
	comp=N,10nm,0.8s,mb4.8							
MFF	Saint Martin d	91.81	40	*e*P		P	00 40 17.2	-0.8
	comp=N,5.1nm,0.8s,mb4.8							
CASY	Casey	92.10	180	*e*P		P	00 40 19.8	+0.6
GRR	Gorron	92.30	38	*e*P		P	00 40 18.4	-1.9
	comp=N,30nm,1.0s,mb5.2							
GRR	Gorron	92.30	38	*e*P		P	00 40 18.4	-1.9
	comp=N,15nm,1.0s,mb5.2							
LDF	La Druitiere	92.82	38	*e*P		P	00 40 20.9	-1.8
	comp=N,68nm,1.4s,mb5.5							
LDF	La Druitiere	92.82	38	*e*P		P	00 40 20.9	-1.8
	comp=N,34nm,1.4s,mb5.5							
TCF	Toulx Ste Croi	93.07	41	*e*P		P	00 40 22.0	-1.9
	comp=N,3.7nm,0.7s,mb4.5							
TCF	Toulx Ste Croi	93.07	41	*e*P		P	00 40 22.0	-1.9
	comp=N,1.9nm,0.6s,mb4.6							
KEST	Kesra	93.18	53	LR		LR	01 26 48.2	
	comp=N,34nm,19.5s,baz=289,slow=38							
AVF	Avril sur Loir	94.00	41	*e*P		P	00 40 26.4	-1.8
SSF	Saint Saulge	94.22	41	*e*P		P	00 40 27.1	-2.1
	comp=N,9.0nm,1.1s,mb4.7							
SSF	Saint Saulge	94.22	41	*e*P		P	00 40 27.1	-2.1
	comp=N,4.5nm,1.1s,mb4.7							
SMF	Signal de Mont	94.23	41	*e*P		P	00 40 27.6	-1.6
	comp=N,9.1nm,0.8s,mb4.9							
SMF	Signal de Mont	94.23	41	*e*P		P	00 40 27.6	-1.6
	comp=N,4.6nm,0.8s,mb4.9							
LOR	Lormes	94.53	41	*e*P		P	00 40 28.6	-2.0
	comp=N,5.2nm,0.8s,mb4.7							
LOR	Lormes	94.53	41	*e*P		P	00 40 28.6	-2.0
	comp=N,2.6nm,0.8s,mb4.7							
ORIF	Oris-en-Rattie	94.72	43	*e*P		P	00 40 30.9	-0.6
	comp=N,11nm,0.9s,mb5.0							
ORIF	Oris-en-Rattie	94.72	43	*e*P		P	00 40 30.9	-0.6
	comp=N,5.3nm,0.9s,mb5.0							
DLBC	Dease Lake	94.75	332	*e*P		P	00 40 30.8	-0.5
DLBC				*ep*P		pP	00 41 00.8	+5.2
DLBC				*es*P		sP	00 41 14.2	+9.0
MBDF	Montbardon	95.21	44	*e*P		P	00 40 32.9	-0.9
MEZF	Maizieres J'vi	95.81	40	*e*P		P	00 40 34.6	-1.8
SUMG	Summit	96.38	9	*e*P		P	00 40 38.7	+0.2
RES	Resolute Bay	97.84	353	P		P	00 40 45.0	0.0
DAVOX	Darder/Dischmat	98.04	43	LR		LR	01 24 51.3	
	comp=N,34nm,19.1s,baz=48,slow=35							
INK	Inuvik	101.46	340	P		Pdif	00 41 00.8	-1.1
MALT	Malatya	116.15	57	*e*PKPdf		PKPdf	00 45 52.2	-1.0
ARU	Arti	128.22	34	*e*PKPdf		PKPdf	00 46 15.7	-0.1
TIXI	Tiksi	129.23	353	*e*PKPdf		PKPdf	00 46 16.1	-1.3
TIXI				*ep*PKPdf		pPKPdf	00 46 47.4	+4.8
ASAR	Alice Springs	129.77	207	PKP		PKPdf	00 46 17.9	-2.0
	comp=N,6.4nm,0.9s,baz=134,slow=2.3,SNR=15							
ABKAR	Abkulak array	131.13	43	*e*PKPdf		PKPdf	00 46 21.8	+0.2
WRA	Warramunga Arr	132.84	210	PKP		PKPdf	00 46 25.1	-0.7
	comp=N,5.1nm,0.7s,baz=153,slow=1.7,SNR=15							
WRAB	Tennant Creek	132.85	210	*e*PKPdf		PKPdf	00 46 24.9	-0.9
BRVK	Borovoye	135.79	35	*e*PKPdf		PKPdf	00 46 30.2	0.0
BVAR	Borovoye Array	135.86	35	PKP		PKPdf	00 46 30.7	+0.4
	comp=N,3.3nm,0.8s,baz=280,slow=2.7,SNR=18							
KURK	Kurchatov	141.41	34	*e*PKPdf		PKPdf	00 46 40.6	+0.1
ZAA0	Zalesovo Array	142.11	26	*e*PKPpre			00 46 37.3	
ZAA0				*e*PKPdf		PKPdf	00 46 41.9	+0.2
ZALV	Zalesovo Beam	142.11	26	PKhKP			00 46 37.2	
	comp=N,6.1nm,0.9s,baz=321,slow=4.0,SNR=10							
ZALV				PKP		PKPdf	00 46 41.4	-0.3
	comp=N,7.3nm,0.6s,baz=323,slow=3.8,SNR=27							
ZALV				pPKP		pPKPdf	00 47 12.9	+6.0
	comp=N,3.7nm,0.7s,baz=296,slow=2.4,SNR=3.1							
ZALV	Zalesovo Beam	142.11	26	PKP			00 46 37.2	
ZALV				PKP		PKPdf	00 46 41.4	-0.3
ZALV				pPKP		pPKPdf	00 47 12.9	+6.0
EKS2	Erkin-Say	142.34	48	*e*PKPdf		PKPdf	00 46 42.7	+0.2
AML	Almayashu	142.47	49	*e*PKPdf		PKPdf	00 46 41.1	-1.7
AML				*ep*PKPdf		pPKPdf	00 47 14.0	+6.0
AAK	Ala-Archa	142.84	47	*e*PKPdf		PKPdf	00 46 40.5	-2.9
UCH	Uchtor	143.00	48	*e*PKPdf		PKPdf	00 46 43.4	-0.3
TKM2	Tokmak 2	143.48	46	*e*PKPdf		PKPdf	00 46 43.7	-0.8
TKM2				*ep*PKPdf		pPKPdf	00 47 14.9	+5.1
KSH	Kashi	144.99	52	PKPbc		PKPbc	00 46 47.1	+0.3
MK31	Makanchi Array	145.68	37	*e*PKPdf		PKPdf	00 46 48.7	+0.5
MKAR	Makanchi Array	145.68	37	PKPbc		PKPbc	00 46 48.3	-0.4
	comp=N,16nm,0.8s,baz=302,slow=2.3,SNR=48							
MKAR				pPKPbc		pPKPbc	00 47 20.6	+7.0
	comp=N,11nm,0.8s,baz=337,slow=2.8,SNR=6.2							
HYB	Hyderabad	148.62	92	*i* PKP		PKPdf	00 46 57.0	+3.0
HYB				*e*			00 47 14.0	
HYB				*ep*PKP		pPKPdf	00 47 37.0	+18
DDI	Dehra Dun	148.84	67	*ex*		x	00 46 58.0	
WMQ	Urumqi	150.52	37	*e*PKPbc		PKPbc	00 46 54.2	-7.5
KAPI	Kappang	152.09	198	*e*PKPbc		PKPbc	00 47 05.2	-1.0
MJAR	Matsushiro Arr	152.66	308	PKPbc		PKPbc	00 47 06.0	-0.9
	comp=N,9.6nm,0.9s,baz=86,slow=2.0,SNR=20							
MJAR				PKPab		PKPab	00 47 17.0	-0.8
	comp=N,2.2nm,0.7s,baz=107,slow=0.9,SNR=5.7							
MAJO	Matsushiro	152.66	308	*e*PKPbc		PKPbc	00 47 05.7	-1.1
MAT	Matsushiro	152.66	308	PKP		PKPbc	00 47 05.7	-1.1
MDJ	Mudanjiang	152.90	331	PKPbc		PKPdf	00 46 58.9	-0.9
MDJ				AMB		AMB		
	comp=Z,35nm,4.3s							
SONM	Songino Array	153.78	8	PKP		PKPdf	00 47 01.3	+0.3
	comp=Z,3.5nm,0.8s,baz=325,slow=0.9,SNR=23							
SONM				PKPbc		PKPbc	00 47 08.1	-0.7
	comp=Z,4.2nm,0.8s,baz=317,slow=1.1,SNR=19							
SONM				PKPab		PKPab	00 47 22.7	+0.7
	comp=Z,3.5nm,0.7s,baz=327,slow=3.9,SNR=11							
SONM				pPKP		pPKPdf	00 47 31.8	+5.5
	comp=Z,7.9nm,0.7s,baz=320,slow=1.3,SNR=12							
ULN	Ulaanbaatar	153.83	7	*e*PKPdf		PKPdf	00 47 01.6	+0.6
CN2	Changchun	155.30	335	*e*PKP		PKPdf	00 47 02.3	-0.9
CN2				LR		LR		
	comp=N,900nm,23.0s							
CN2				LR		LR		
	comp=E,500nm,23.0s							
CN2				LR		LR		
	comp=Z,200nm,24.0s							
KSRS	Korea Array	159.02	321	PKP		PKPdf	00 47 08.2	+0.1
	comp=Z,3.6nm,0.9s,baz=63,slow=0.9,SNR=16							
KSRS				pPKP		pPKPdf	00 47 38.3	+4.9
	comp=Z,3.4nm,0.9s,baz=46,slow=1.2,SNR=4.1							
GTA	Gaotai	159.85	27	*e*PKP		PKPdf	00 47 09.4	+0.4
GTA				PKS			00 50 42.0	
GTA				AMB		AMB		
	comp=Z,47nm,9.0s							
GTA				LR		LR		
	comp=N,230nm,24.0s							
GTA				LR		LR		
	comp=E,320nm,20.1s							
GTA				LR		LR		
	comp=Z,60nm,19.2s							
BJI	Beijing	161.49	349	PKP		PKPdf	00 47 10.7	-0.1
LZH	Lanzhou	164.33	24	*e*PKP		PKPdf	00 47 12.2	-1.4
LZH				pPKP		pPKPdf	00 47 41.0	+2.0
LZH				sPKP			00 47 52.5	
LZH				PP		PP	00 51 56.2	+2.7
LZH				SKS		SKSdf	00 54 05.1	-4.9
LZH				SKKS		SKKSac	00 58 32.1	-1.6
LZH				SS		SS	01 12 17.0	+0.2
LZH				AMB		AMB		
	comp=Z,92nm,4.4s							
CMAR	Chiang Mai Arr	167.66	104	PKP		PKPdf	00 47 16.9	+0.1
	comp=Z,1.0nm,0.3s,baz=268,slow=2.1,SNR=8.0							
CMAR				PKPab		PKPab	00 48 24.3	+0.8
	comp=Z,0.9nm,0.3s,baz=251,slow=5.6,SNR=2.6							
XAN	Xi'an	167.67	10	PKP		PKPdf	00 47 16.7	+0.3
XAN				pPKP		pPKPdf	00 47 43.7	+1.9
XAN				sPKP			00 47 52.4	
XAN				PP		PP	00 52 18.1	+7.7
XAN				SKKS		SKKSac	00 58 54.0	+3.6
CD2	Chengdu	168.62	36	PKP		PKPdf	00 47 13.0	-4.1
CD2				PP		PP	00 52 15.1	-0.9
CD2				SKS		SKSdf	00 54 05.3	-7.5
CD2				SKKS		SKKSac	00 58 51.9	-3.5
CD2				AMB		AMB		
	comp=Z,60nm,5.4s							
CD2				LR		LR		
	comp=N,130nm,10.7s							
CD2				LR		LR		
	comp=Z,180nm,10.1s							
KMI	Kunming	171.28	67	PKP		PKPdf	00 47 15.8	-3.0
KMI				sPKP			00 48 00.8	
KMI				PP		PP	00 52 31.3	+0.8
KMI				AMB		AMB		
	comp=Z,74nm,7.0s							
KMI				LR		LR		
	comp=Z,100nm,23.1s							
GYA	Guiyang	173.62	44	PKP		PKPdf	00 47 16.0	-3.8
GYA				PKPab		PKPab	00 48 48.0	-1.6
GYA				PKS			00 50 46.5	
GYA				PP		PP	00 52 40.6	-0.5
GYA				AMB		AMB		
	comp=Z,130nm,8.4s							

NNC ***08*** *00:32:32.1±1.8, 39°.32N×70°.90E, h0km, mb3.7, mpv3.2,*
Error ellipse: s-maj=14.4km s-min=10.0km az=18.0
ISC 08 00:32:31.0±2.2, 38°.8N±0°.1×70°.9E±0°.1, h35km, n8,
σ0 95/11, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
AML	Almayashu	3.94	32	P		Pn	00 33 29.5	+0.6
	SNR=16							
KK31	Karatay Array	4.30	356	Pn		Pn	00 33 34.5	+0.7
	1.4nm,0.2s,baz=177,slow=12,SNR=118							
KK31				⇑Sn		Sn	00 34 23.8	+1.1
	7.4nm,0.4s							
KK31				⇑Lg			00 34 35.1	
	24nm,0.5s							
UCH	Uchtor	4.39	38	P		Pn	00 33 34.7	-0.3
	SNR=11							
EKS2	Erkin-Say	4.42	29	P		Pn	00 33 37.1	+1.6
	SNR=5.4							
KZA	Kyzart	4.66	44	P		Pn	00 33 38.5	-0.3
	SNR=24							
AAK	Ala-Archa	4.70	34	P		Pn	00 33 39.2	-0.1
	SNR=17							
TKM2	Tokmak 2	5.43	39	⇓Pn		Pn	00 33 49.5	+0.1
	2.6nm,0.6s							
TKM2				⇑Sn		Sn	00 34 49.2	-1.5
	9.1nm,0.7s							
TKM2				⇑Lg			00 35 07.0	
	13nm,0.9s							
AB31	Abkulak array	13.07	327	Pn		Pn	00 35 32.9	-1.1
	1.3nm,0.8s,baz=149,slow=11,SNR=19							
AB31				⇑Sn		Sn	00 37 54.2	-3.7
	2.7nm,0.6s							

BJI ***08*** *00:50:26.9, 51°.05N×156°.10E, h136km, mB4.5/5, mb4.3/5*
MOS ***08*** *00:50:29.4±0.9, 50°.39N×155°.19E, h124km, mb4.6/24,*
Error ellipse: s-maj=11.0km s-min=6.0km az=83.8
ISCJB ***08*** *00:50:30.2±0.5, 50°.34N±0°.05×155°.31E±0°.07,*
h134km±3km, mb4.0/55, Error ellipse: s-maj=9.4km
s-min=5.2km az=44.7
IDC ***08*** *00:50:31.8±0.7, 50°.50N×155°.13E, h129km±5km, mb3.6/21,*
mb1 3.8/24, mb1mx3.7/28, mbtmp3.6/24, Error ellipse:
s-maj=15.2km s-min=8.1km az=145.0
KRSC ***08*** *00:50:31.3±0.9, 50°.13N×156°.37E, h154km±35km, ML4.7*
NEIC ***08*** *00:50:32.3±0.6, 50°.45N×155°.18E, h136km±5km, mb4.2/35,*
Error ellipse: s-maj=6.8km s-min=4.0km az=141.0
ISC 08 00:50:32.0±0.5, 50°.39N±0°.05×155°.28E±0°.07, h134km±4km,
h126km±2.6km; pP-P, n175, σ1 902/187, mb4.0/55, 6C-2D,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
SKR	Severo-Kuril's	0.61	61	⇓*i*PN		Pn	00 50 49.0	-3.0
SKR				*i* S		Sn	00 51 04.0	-3.3
SKR				pmax		pmax		
	comp=N,850nm,0.5s							
SKR				pmax		pmax		
	comp=Z,2μm,0.5s							
SKR				pmax		pmax		
	comp=E,610nm,0.3s							
SKR				pmax		pmax		
	comp=Z,5μm,1.0s							
SKR				smax				
	comp=N,8μm,2.0s							
SKR				smax				
	comp=E,8μm,2.0s							
SKR				smax				
	comp=N,3μm,0.4s							
SKR				smax				
	comp=E,4μm,0.4s							
MIPR	Malaya Ipel'ka	2.10	26	*e*P		Pn	00 51 08.0	+0.7
MIPR				*i* S		Sn	00 51 34.3	-0.1
RUS	Russkaya	2.88	43	*i* P		Pn	00 51 16.1	-0.9
RUS				*i* S		Sn	00 51 49.6	-2.2
PEA0B	Petropavlovsk-	3.11	28	*e*Pn		Pn	00 51 21.1	+1.1
PEA0B				*e*Sn		Sn	00 51 55.7	-1.5
PETK	Petropavlovsk-	3.11	28	*e*PN		Pn	00 51 21.3	+1.3
PETK				pmax		pmax		
	comp=Z,7.0nm,0.3s							
PETK	Petropavlovsk-	3.11	28	P		Pn	00 51 20.8	+0.8
	comp=Z,6.8nm,0.3s,baz=201,slow=11,SNR=67							
PETK				S		Sn	00 51 58.1	+1.0
	comp=Z,7.4nm,0.3s,baz=119,slow=20,SNR=7.1							
PET	Petropavlovsk	3.37	37	*e*PN		Pn	00 51 23.8	+0.4
PET				*e*S		Sn	00 52 03.8	+0.6
PET				pmax		pmax		
	comp=Z,42nm,0.3s							
PET				smax				
	comp=N,546nm,0.5s							
PET	Petropavlovsk	3.37	37	*e*P		Pn	00 51 23.9	+0.5
PET				*i* S		Sn	00 52 02.6	-0.6
PET	Petropavlovsk	3.37	37	*e*Pn		Pn	00 51 23.7	+0.3
PET				*e*Sn		Sn	00 52 02.8	-0.4
SDLR	Sedlovina	3.65	36	*i* P		Pn	00 51 28.2	+1.1
SDLR				*i* S		Sn	00 52 09.8	-0.1
GNL	Ganaly	3.69	25	*i* P		Pn	00 51 29.5	+1.9
GNL				*e*S		Sn	00 52 12.0	+1.2
NLC	Nalytchevo	3.76	41	*e*P		Pn	00 51 27.4	-1.1
NLC				*i* S		Sn	00 52 08.4	-3.9
MKZ	Mys Kozlova	5.74	41	*e*P		Pn	00 51 53.0	-1.8
MK

INK **Inuvik** 37.82 35 P P 00 57 35.5 +0.6
INK 00 59 48.4
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 37.82 35 P P 00 57 35.5 +0.6
comp=Z,1.0nm,0.4s,mb3.8,baz=295,slow=6.1,SNR=11
INK PcP PcP 00 59 48.4 +0.1
comp=Z,0.5nm,0.5s,baz=280,slow=3.5,SNR=4.2
INK Inuvik 37.82 35 *e*P P 00 57 35.0 +0.1
comp=Z,1.2nm,0.3s,mb4.0
INK PcP PcP 00 59 48.4 +0.1
TPUB Ta-pu 38.16 238 *e*P P 00 57 37.6 -0.6
comp=Z,7.8nm,0.4s,mb4.7
TWG Pinlang 38.31 237 P P 00 57 39.7 +0.2
ZALV Zalesovo Beam 41.73 303 P P 00 58 07.5 +0.2
comp=Z,1.1nm,0.3s,mb4.0,baz=65,slow=6.1,SNR=5.9
ZALV pP pP 00 58 35.0 -2.1
comp=Z,0.3nm,0.3s,baz=63,slow=7.0,SNR=1.8
ZALV PcP PcP 01 00 00.9 -0.1
comp=Z,1.0nm,0.4s,baz=57,slow=5.5,SNR=7.3
KURK Kurchatov 46.61 302⇑ *e*P P 00 58 46.2 0.0
KURK pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
KURK Kurchatov 46.61 302 *e*P P 00 58 45.7 -0.5
comp=Z,4.8nm,0.4s,mb4.5
KURK *e* pP 00 59 19.1 +2.5
MK31 Makanchi Array 46.62 295 *e*P P 00 58 45.5 -0.8
MKAR Makanchi Array 46.62 295 *e*P P 00 58 46.5 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 46.62 295 P P 00 58 45.4 -0.9
comp=Z,1.6nm,0.4s,mb4.0,baz=41,slow=6.0,SNR=13
MKAR pP pP 00 59 14.1 -2.6
comp=Z,0.4nm,0.4s,baz=70,slow=4.9,SNR=1.7
RES Resolute Bay 46.92 20 *e*P P 00 58 48.5 +0.2
RES pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
RES Resolute Bay 46.92 20 P P 00 58 48.4 +0.1
comp=Z,0.6nm,0.4s,mb3.6,baz=296,slow=8.0,SNR=7.4
RES Resolute Bay 46.92 20 *e*P P 00 58 48.5 +0.2
comp=Z,1.0nm,0.6s,mb3.6
YKA Yellowknife Ar 47.17 39 P P 00 58 50.8 +0.5
comp=Z,0.9nm,0.8s,mb3.5,baz=299,slow=7.7,SNR=12
YKA pP pP 00 59 19.1 -1.6
comp=Z,0.3nm,0.6s,baz=293,slow=6.9,SNR=3.0
YKA PcP PcP 01 00 20.2 +0.6
comp=Z,0.5nm,0.8s,baz=311,slow=4.2,SNR=3.8
BVAR Borovoye Array 49.70 308 P P 00 59 09.8 -0.1
comp=Z,2.1nm,0.5s,mb4.0,baz=60,slow=7.7,SNR=15
BVAR pP pP 00 59 37.3 -3.4
comp=Z,0.8nm,0.3s,baz=74,slow=7.0,SNR=3.3
BVAR PcP PcP 01 00 28.8 -0.2
comp=Z,1.3nm,0.4s,baz=82,slow=3.0,SNR=7.3
BRVK Borovoye 49.74 308 *d i*P P 00 59 10.8 +0.6
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
BRVK Borovoye 49.74 308 *e*P P 00 59 09.3 -0.9
comp=Z,2.9nm,0.6s,mb4.1
LSA Lhasa 51.56 272 P P 00 59 22.8 -1.3
ARU Arti 53.33 317 *e*P P 00 59 35.7 -1.1
ARU pmax pmax
comp=Z,7.0nm,0.3s,mb4.9
ARU Arti 53.33 317 *e*P P 00 59 35.7 -1.1
comp=Z,7.4nm,0.3s,mb4.9
AAK Ala-Archa 53.55 295 P P 00 59 37.7 -0.9
NEW Newport 53.88 56 P P 00 59 40.0 -0.9
EKS2 Erkin-Say 53.95 296 *e*P P 00 59 40.5 -1.0
comp=Z,1.8nm,0.5s,mb4.1
AML Almayashu 54.33 295 P P 00 59 43.6 -0.7
CHTO Chiang Mai 54.38 256 *e*P P 00 59 46.3 +1.4
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
CHTO Chiang Mai 54.38 256 *e*P P 00 59 46.3 +1.3
comp=Z,3.7nm,0.7s,mb4.2
CM31 Chiang Mai Arr 54.65 256 P P 00 59 46.6 -0.3
CMAR Chiang Mai Arr 54.65 256 P P 00 59 48.6 +1.7
comp=Z,4.0nm,0.6s,mb4.3,baz=35,slow=7.0,SNR=18
ARCES ARCESS Array B 54.89 341 P P 00 59 46.5 -1.3
comp=Z,0.9nm,0.7s,mb3.6,baz=44,slow=8.5,SNR=12
ARCES PcP PcP 01 00 47.1 -1.0
comp=Z,1.3nm,0.7s,baz=58,slow=5.4,SNR=3.7
WALA Waterton Lakes 55.06 53 P P 00 59 49.8 +0.4
SUMG Summit 56.96 5 *e*P P 01 00 02.6 0.0
comp=Z,6.6nm,0.8s,mb4.5
FFC Flin Flon 57.05 42 *i*P P 01 00 05.1 +1.6
FFC Flin Flon 57.05 42 *e*P P 01 00 03.6 +0.2
ABKAR Akbulak array 57.22 309 *e*P P 01 00 04.1 -0.6
comp=Z,2.6nm,0.7s,mb4.2
ABKAR *e*PcP PcP 01 00 57.6 0.0
FCC Fort Churchill 57.44 35 *e*P P 01 00 05.9 -0.3
FCC *e**PP pP 01 00 36.4 -1.3
JOF Joensuu 58.71 334 *e*P P 01 00 12.4 -2.5
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
JOF Joensuu 58.71 334 *e*p P 01 00 12.4 -2.5
comp=Z,1.9nm,0.5s,mb4.2
NVAR Mina Array Bea 59.54 65 P P 01 00 21.4 +0.4
comp=Z,1.2nm,0.5s,mb4.0,baz=299,slow=6.0,SNR=5.2
ISA Isabella 61.31 68 *e*P P 01 00 32.8 -0.3
FINES FINESS Array B 61.35 335 P P 01 00 31.2 -1.8
comp=Z,1.0nm,0.5s,mb3.9,baz=32,slow=6.4,SNR=15
FINES PcP PcP 01 01 13.7 -0.3
comp=Z,1.9nm,0.5s,baz=41,slow=4.0,SNR=11
FINES FINESS Array B 61.35 335 P P 01 00 31.2 -1.8
FINES PcP PcP 01 01 13.7 -0.3
DUG Dugway 61.47 61 P P 01 00 34.7 +0.6
PDAR Pinedale Array 61.49 57 P P 01 00 34.3 +0.1
comp=Z,0.9nm,0.9s,mb3.6,baz=316,slow=6.2,SNR=6.8
TPNV Topopah Spring 61.74 65 *e*P P 01 00 36.7 +0.8
KBL Kabul 62.08 291 P P 01 00 37.5 -0.7
KULM Kulim 63.94 245 P P 01 00 50.8 +0.1
NOA NORSAR Array B 65.23 342 P P 01 00 58.0 -0.5
comp=Z,0.5nm,0.5s,mb3.6,baz=27,slow=6.6,SNR=3.2
NOA pP pP 01 01 29.1 -1.6
comp=Z,0.9nm,0.6s,baz=25,slow=3.4,SNR=4.3
ANMO Albuquerque 68.74 61 *e*P P 01 01 21.7 +0.6
AKASG Malin Array Be 69.31 327 P P 01 01 22.3 -2.0
comp=Z,0.7nm,0.3s,mb3.8,baz=31,slow=5.8,SNR=2.9
SCHQ Schefferville 69.39 24 P P 01 01 24.6 -0.2
comp=Z,1.2nm,0.4s,mb4.0,baz=342,slow=4.5,SNR=9.8
SCHQ Schefferville 69.39 24 *e*P P 01 01 24.4 -0.4
comp=Z,1.6nm,0.4s,mb4.1
ANN Anapa 70.93 318 *e*P P 01 01 31.8 -2.5
ANN pmax pmax
comp=Z,33nm,1.2s,mb4.9
KWP Kalwaria Pacla 72.41 330 P P 01 01 42.4 -0.7
KWP Kalwaria Pacla 72.41 330⇑ *i*P P 01 01 43.0 -0.1
FITZ Fitzroy Crossi 73.03 209 *e*P P 01 01 47.3 +0.3
comp=Z,3.4nm,0.7s,mb4.2
WMOK Wichita Mounta 73.08 56 P P 01 01 47.2 -0.1
BUR08 Bucovina Ar. S 73.30 327 *e*P P 01 01 47.6 -0.8
BURAR Bucovina Array 73.32 327⇑ *i*P P 01 01 47.7 -0.8
MORC Moravsky Beron 73.87 333 P P 01 01 50.9 -0.7
TXAR Lajitas Array 74.50 63 P P 01 01 56.6 +0.9
comp=Z,0.9nm,0.6s,mb3.7,baz=297,slow=4.6,SNR=19
TXAR pP pP 01 02 26.9 -1.8
comp=Z,0.4nm,0.4s,baz=293,slow=4.9,SNR=3.9
PSZ Piszkesteto 74.81 331 P P 01 01 56.3 -0.8
MLR Muntele Rosu 74.89 326⇑ *i*P P 01 01 57.8 +0.2
GERES GERESS Array B 75.79 335 P P 01 02 02.2 -0.5
comp=Z,0.4nm,0.6s,mb3.3,baz=31,slow=6.2,SNR=6.8
ASAR Alice Springs 76.12 200 *e*P P 01 02 05.2 +0.5
ASAR pmax pmax
comp=Z,10.0nm,0.5s
ASAR Alice Springs 76.12 200 P P 01 02 05.2 +0.5
comp=Z,0.5nm,0.5s,mb3.4,baz=14,slow=5.5,SNR=9.1
BR131 Keskin Array S 76.70 318 *e*P P 01 02 07.2 -0.8
BR131 *e*PcP PcP 01 02 18.9 +0.1
BRTR Keskin Array B 76.70 318 P P 01 02 07.9 -0.1
comp=Z,0.5nm,0.5s,mb3.4,baz=33,slow=5.2,SNR=4.9
UMR Umm Al-Rimmam 77.95 302 *e*P P 01 02 16.6 +1.4
MIB Mutribah 77.96 302 *e*P P 01 02 14.9 -0.3
MIB AML AML 01 02 17.9
comp=Z,13nm,0.6s
MEZF Maizieres J'vi 78.22 340 *e*P P 01 02 18.6 +2.3
comp=Z,9.0nm,0.8s,mb4.2
MEZF Maizieres J'vi 78.22 340 *e*P P 01 02 18.6 +2.3
comp=Z,9.0nm,0.8s,mb4.5
RDF Al-Radifah 78.53 302 *e*P P 01 02 19.3 +1.0
RDF AML AML 01 02 21.5
comp=Z,13nm,0.6s
FLN La Foliniere 79.06 344 *e*P P 01 02 21.4 +0.5
comp=Z,5.8nm,0.6s,mb4.1
FLN La Foliniere 79.06 344 *e*P P 01 02 21.4 +0.5
FLN pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
FLN La Foliniere 79.06 344 *e*P P 01 02 21.4 +0.5
comp=Z,2.9nm,0.6s,mb4.1
LDF La Druitiere 79.15 344 *e*P P 01 02 21.6 +0.2
comp=Z,4.6nm,0.7s,mb3.9
LDF La Druitiere 79.15 344 *e*P P 01 02 21.6 +0.2
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
LDF La Druitiere 79.15 344 *e*P P 01 02 21.6 +0.2
comp=Z,2.3nm,0.7s,mb3.9
GRR Gorron 79.48 344 *e*P P 01 02 23.8 +0.6
comp=Z,5.7nm,0.6s,mb4.1
GRR Gorron 79.48 344 *e*P P 01 02 23.8 +0.6
GRR pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
GRR Gorron 79.48 344 *e*P P 01 02 23.8 +0.6
comp=Z,2.8nm,0.6s,mb4.1
SGMF Saint Gilles 79.90 345 *e*P P 01 02 26.1 +0.6
comp=Z,5.6nm,0.6s,mb4.1
SGMF Saint Gilles 79.90 345 *e*P P 01 02 26.1 +0.6
SGMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
SGMF Saint Gilles 79.90 345 *e*P P 01 02 26.1 +0.6
comp=Z,2.8nm,0.6s,mb4.1
AVF Avril sur Loir 80.20 341 *e*P P 01 02 27.4 +0.3
comp=Z,2.8nm,0.5s,mb3.9
AVF Avril sur Loir 80.20 341 *e*P P 01 02 27.4 +0.3
AVF pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
AVF Avril sur Loir 80.20 341 *e*P P 01 02 27.4 +0.3
comp=Z,1.4nm,0.5s,mb3.9
SMF Signal de Mont 80.24 340 *e*P P 01 02 27.8 +0.5
comp=Z,4.4nm,0.7s,mb3.9
SMF Signal de Mont 80.24 340 *e*P P 01 02 27.8 +0.5
SMF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
SMF Signal de Mont 80.24 340 *e*P P 01 02 27.8 +0.5
comp=Z,2.2nm,0.7s,mb3.9
BGF Bois d'Agland 80.53 341 *e*P P 01 02 29.5 +0.6
comp=Z,3.2nm,0.5s,mb3.9
BGF Bois d'Agland 80.53 341 *e*P P 01 02 29.5 +0.6
BGF pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
BGF Bois d'Agland 80.53 341 *e*P P 01 02 29.5 +0.6
comp=Z,1.6nm,0.5s,mb3.9
LPL La Plagne 80.65 338 *e*P P 01 02 29.8 +0.3
comp=Z,3.9nm,0.5s,mb4.0
LPL La Plagne 80.65 338 *e*P P 01 02 29.8 +0.3
LPL pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
LPL La Plagne 80.65 338 *e*P P 01 02 29.8 +0.3
comp=Z,2.0nm,0.5s,mb4.0
LPG La Plagne 80.67 338 *e*P P 01 02 30.3 +0.7
comp=Z,6.3nm,0.6s,mb4.1
LPG La Plagne 80.67 338 *e*P P 01 02 30.3 +0.7
LPG pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
LPG La Plagne 80.67 338 *e*P P 01 02 30.3 +0.7
comp=Z,3.2nm,0.6s,mb4.1
MFF Saint Martin d 81.08 343 *e*P P 01 02 32.1 +0.3
comp=Z,4.2nm,0.7s,mb3.9
MFF Saint Martin d 81.08 343 *e*P P 01 02 32.1 +0.3
MFF pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
MFF Saint Martin d 81.08 343 *e*P P 01 02 32.1 +0.3
comp=Z,2.1nm,0.7s,mb3.9
MBDF Montbardon 81.39 338 *e*P P 01 02 33.7 +0.3
comp=Z,4.3nm,0.6s,mb3.9
MBDF Montbardon 81.39 338 *e*P P 01 02 33.7 +0.3
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
MBDF Montbardon 81.39 338 *e*P P 01 02 33.7 +0.3
comp=Z,2.2nm,0.6s,mb4.0
ORIF Oris-en-Rattie 81.42 339 *e*P P 01 02 34.7 +1.1
comp=Z,4.3nm,0.6s,mb4.0
ORIF Oris-en-Rattie 81.42 339 *e*P P 01 02 34.7 +1.1
ORIF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
ORIF Oris-en-Rattie 81.42 339 *e*P P 01 02 34.7 +1.1
comp=Z,2.2nm,0.6s,mb4.0
VIVF Saint-Julien-l 81.75 339 *e*P P 01 02 35.5 +0.1
SBF Sospel 82.04 337 *e*P P 01 02 36.8 -0.1
CAF Calviac 82.25 341 *e*P P 01 02 38.0 0.0
comp=Z,4.1nm,0.5s,mb4.0
CAF Calviac 82.25 341 *e*P P 01 02 38.0 0.0
CAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
CAF Calviac 82.25 341 *e*P P 01 02 38.0 0.0
comp=Z,2.0nm,0.5s,mb4.0
SMRF Simiane la Rot 82.38 338 *e*P P 01 02 39.7 +1.1
comp=Z,2.5nm,0.7s,mb3.7
SMRF Simiane la Rot 82.38 338 *e*P P 01 02 39.7 +1.1
comp=Z,2.5nm,0.7s,mb4.0
LFF La Frestale 82.51 342 *e*P P 01 02 40.1 +0.8
FRF La Foret Royal 82.52 338 *e*P P 01 02 38.5 -0.9
comp=Z,1.9nm,0.6s,mb3.7
FRF La Foret Royal 82.52 338 *e*P P 01 02 38.5 -0.9
FRF pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
FRF La Foret Royal 82.52 338 *e*P P 01 02 38.5 -0.9
comp=Z,0.9nm,0.6s,mb3.7
LMR La Mourre 82.76 338 *e*P P 01 02 40.3 -0.3
comp=Z,4.9nm,0.7s,mb4.1
LMR La Mourre 82.76 338 *e*P P 01 02 40.3 -0.3
LMR pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
LMR La Mourre 82.76 338 *e*P P 01 02 40.3 -0.3
comp=Z,2.5nm,0.7s,mb4.0
PGF Pioggiola 82.86 336 *e*P P 01 02 41.1 -0.1
comp=Z,5.6nm,0.7s,mb4.1
PGF Pioggiola 82.86 336 *e*P P 01 02 41.1 -0.1
PGF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
PGF Pioggiola 82.86 336 *e*P P 01 02 41.1 -0.1
comp=Z,2.8nm,0.7s,mb4.1
MTLF Montolieu 83.74 341 *e*P P 01 02 45.9 +0.3
comp=Z,2.4nm,0.6s,mb3.8
MTLF Montolieu 83.74 341 *e*P P 01 02 45.9 +0.3
MTLF pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
MTLF Montolieu 83.74 341 *e*P P 01 02 45.9 +0.3
comp=Z,1.2nm,0.6s,mb3.8
ESDC Sonseca Array 88.48 344 P P 01 03 08.1 -0.8
comp=Z,0.7nm,0.4s,mb3.8,baz=356,slow=3.6,SNR=7.2
KEST Kesra 89.12 333 P P 01 03 11.9 -0.1
comp=Z,0.6nm,0.7s,mb3.7,baz=136,slow=3.4,SNR=4.8
CPUP Villa Florida 145.37 58 PKPbc PKPbc 01 09 53.9 +0.1
comp=Z,0.2nm,0.3s,baz=135,slow=2.4,SNR=3.3

*JMA **08** 01:19:22.8±0.2, 36°.19N×142°.01E, h68km, M3.4*
*IDC **08** 01:19:22.8±1.0, 36°.64N×142°.01E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.6/27, mbtmp3.7/11, ML3.5/2, MS2.9/2, Ms1 2.9/2, ms1mx2.3/30, Error ellipse: s-maj=29.3km s-min=19.6km az=57.0*
*NEIC **08** 01:19:28.5±0.8, 36°.53N×141°.76E, h35km, MG3.4(JMA), Error ellipse: s-maj=16.2km s-min=14.5km az=119.0*
ISC 08 01:19:20.5±1.4, 36°.24N±0°.04×142°.06E±0°.07, h2km±7km, n30, σ1°.05/39, mb3.8/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.11**	**241**	P	**Pg**	**01 19 42.0**	**+0.2**
CHOJ				S	**Sg**	**01 19 57.2**	**+1.0**
JHO	**Hitachi**	**1.25**	**287**	P	**Pg**	**01 19 44.1**	**-0.5**
JHO				S	**Sg**	**01 20 00.8**	**-0.1**
ONAJ	**Iwakimizuishiy**	**1.33**	**311**	P	**Pg**	**01 19 45.5**	**-0.5**
JFK	**Kawauchi**	**1.47**	**320**	P	**Pn**	**01 19 47.8**	**-0.3**
JFK				S	**Sg**	**01 20 06.4**	**-1.4**
BSO1	**Boso 1**	**1.81**	**209**	P	**Pn**	**01 19 51.4**	**-1.4**
BSO1				S	**Sn**	**01 20 14.1**	**-2.3**
JFT	**Otama**	**1.88**	**313**	P	**Pn**	**01 19 54.6**	**+0.9**
JFT				S	**Sn**	**01 20 17.9**	**-0.1**
JMM	**Marumori**	**1.91**	**328**	P	**Pn**	**01 19 54.2**	**+0.1**
BSO3	**Boso 3**	**1.91**	**222**	P	**Pn**	**01 19 53.1**	**-1.1**
JAG	**Ashikaga**	**2.11**	**276**	P	**Pn**	**01 19 56.1**	**-0.8**
JRY	**Ryogami san**	**2.56**	**266**	P	**Pn**	**01 20 02.5**	**-0.6**
JOD2	**Odawara 2**	**2.60**	**249**	P	**Pn**	**01 20 03.4**	**-0.3**
JYN	**Shimob**	**2.95**	**256**	P	**Pn**	**01 20 08.4**	**0.0**
MJAR	**Matsushiro Arr**	**3.12**	**277**	Pn	**Pn**	**01 20 11.0**	**+0.3**
MJAR				Sn	**Sn**	**01 20 52.0**	**+3.4**
MJAR				LR	LR	01 21 36.5	
MAJO	**Matsushiro**	**3.12**	**277**	*e*Pn	**Pn**	**01 20 11.6**	**+0.8**
MAT	**Matsushiro**	**3.12**	**277**	P	**Pn**	**01 20 11.5**	**+0.7**
MAT				S	**Sn**	**01 20 48.1**	**-0.5**
JHJ	**Hachijo jima 2**	**3.64**	**212**	Pn	**Pn**	**01 20 18.7**	**+0.8**
JHJ				Sn	**Sn**	**01 20 55.2**	**-6.1**
ERM	**Erimo**	**5.83**	**8**	*e*Pn	**Pn**	**01 20 49.8**	**+1.8**
ERM				*e*S	**Sn**	**01 21 53.1**	**-2.2**
KSRS	**Korea Array**	**11.39**	**280**	Pn	**Pn**	**01 22 06.5**	**+2.3**
KSRS				LR	LR	01 26 30.5	
SONM	**Songino Array**	**28.66**	**305**	P	**P**	**01 25 19.9**	**+1.4**
ZALV	**Zalesovo Beam**	**42.83**	**313**	P	**P**	**01 27 20.1**	**+0.3**
MKAR	**Makanchi Array**	**44.98**	**303**	P	**P**	**01 27 35.9**	**-1.2**
KURK	**Kurchatov**	**46.83**	**309**	P	**P**	**01 27 52.0**	**+0.3**
BVAR	**Borovoye Array**	**51.49**	**313**	P	**P**	**01 28 29.0**	**+1.7**
WRA	**Warramunga Arr**	**56.35**	**189**	P	**P**	**01 29 08.4**	**+5.3**
AKTK	**Aktyubinsk**	**59.59**	**312**	P	**P**	**01 29 25.0**	**-0.6**
AKTO	**Aktyubinsk**	**59.59**	**312**	P	**P**	**01 29 25.0**	**-0.6**
ASAR	**Alice Springs**	**60.08**	**189**	P	**P**	**01 29 34.9**	**+5.7**
ARCES	**ARCESS Array B**	**64.92**	**340**	P	**P**	**01 30 01.9**	**+0.8**
LPAZ	**La Paz**	**146.63**	**61**	PKPbc	PKPbc	01 39 05.7	+1.4

*IDC **08** 01:23:41.2±0.5, 18°.73S×172°.84W, h0km, mb4.7/14, mb1 4.9/14, mb1mx4.7/20, mbtmp4.6/14, MS4.2/15, Ms1 4.2/15, ms1mx4.1/18, Error ellipse: s-maj=23.6km s-min=16.0km az=138.0*
*ISCJB **08** 01:23:44.2±0.2, 18°.69S±0°.06×172°.93W±0°.05, h30km, mb4.8/75, MS4.3/25, Error ellipse: s-maj=9.9km s-min=4.8km az=145.8*
*NEIC **08** 01:23:46.6±0.2, 18°.61S×173°.00W, h35km, mb4.9/57, Error ellipse: s-maj=9.3km s-min=4.8km az=144.0*
*SZGRF **08** 01:25:45.8, 17°.50S×170°.50W, h33km, Tonga Islands region*
ISC 08 01:23:44.3±3.6, 18°.62S±0°.07×172°.92W±0°.05, h19km±22km, h32km±1.9km:pP-P, n584, σ0°.58/427, mb4.8/75, MS4.3/25, 162C-173D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.81**	**13**	Pn	**Pn**	**01 24 52.4**	**-3.5**
AFI				Sn	Sx	01 25 43.8	
AFI				LR	LR	01 26 41.2	
AFI	**Afiamalu**	**4.81**	**13**	*e*Pn	**Pn**	**01 24 53.1**	**-2.8**
AFI				*e*Sn	Sx	01 25 45.1	
RAO	**Raoul Island**	**11.53**	**202**	Sn	Sx	01 28 27.5	
RAO	**Raoul Island**	**11.53**	**202**	*e*Pn	**Pn**	**01 26 26.7**	**-1.3**
RAR	**Rarotonga**	**12.63**	**104**	*e*Pn	**Pn**	**01 26 34.6**	**-8.5**
RAR				*e*S	Sx	01 28 38.3	
DZM	**Mont Dzumac**	**19.65**	**256**	*e*P	**Pn**	**01 28 13.4**	**-0.3**
DZM				*e*LR	LR	01 32 54.6	
OUZ	**Omahuta**	**20.41**	**213**	*e*P	**P**	**01 28 19.9**	**-0.5**
URZ	**Urewera**	**21.41**	**202**	P	**P**	**01 28 31.2**	**+0.1**
URZ	**Urewera**	**21.41**	**202**	*e*P	**P**	**01 28 32.5**	**+1.3**
URZ				*e*S	**S**	**01 32 19.5**	**-8.6**
PAE	**Paea**	**22.20**	**91**	*e*P	**P**	**01 28 42.3**	**+2.5**
PPT	**Papeete**	**22.21**	**91**	*e*P	**P**	**01 28 42.9**	**+3.0**
PPT				*e*LR	LR	01 33 45.3	
PPT	**Papeete**	**22.21**	**91**	LR	LR	01 34 35.8	
TIAR	**Tiarei**	**22.43**	**91**	*e*P	**P**	**01 28 45.3**	**+3.1**
SNZO	**South Karori**	**24.97**	**202**	*e*P	**P**	**01 29 08.3**	**+1.6**
KHZ	**Kahutara**	**26.36**	**203**	*e*P	**P**	**01 29 24.6**	**+5.3**
RPZ	**Rata Peaks**	**28.43**	**205**	P	**P**	**01 29 37.5**	**-0.4**
RPZ	**Rata Peaks**	**28.43**	**205**	*e*P	**P**	**01 29 44.7**	**+6.8**
TAOE	**Nuku Hiva Isla**	**33.22**	**77**	*e*S	**S**	**01 35 39.1**	**-0.7**
TAOE				*e*LR	LR	01 39 00.5	
EIDS	**Eidsvold**	**33.98**	**252**	*e*P	**P**	**01 30 26.2**	**-0.8**
CTAO	**Charters Tower**	**38.48**	**261**	*e*P	**P**	**01 31 05.0**	**-0.6**
CTAO				*e*pP	pP	01 31 18.0	+6.7
STKA	**Stephens Creek**	**42.91**	**243**	P	**P**	**01 31 40.7**	**-1.3**
STKA				LR	LR	01 47 56.0	
STKA	**Stephens Creek**	**42.91**	**243**	*e*P	**P**	**01 31 41.7**	**-0.3**
WB2	**Warramunga Arr**	**49.62**	**259**	*e*P	**P**	**01 32 34.0**	**-0.9**
WRAB	**Tennant Creek**	**49.62**	**259**	*e*P	**P**	**01 32 34.2**	**-0.8**
ASAR	**Alice Springs**	**49.63**	**254**	P	**P**	**01 32 34.4**	**-0.6**
WRA	**Warramunga Arr**	**49.63**	**259**	P	**P**	**01 32 33.7**	**-1.4**
WRA				LR	LR	01 52 38.9	
KAKA	**Kakadu**	**52.78**	**268**	*e*P	**P**	**01 32 57.3**	**-1.5**
SBA	**Scott Base**	**60.10**	**185**	*e*P	**P**	**01 33 43.9**	**-6.0**
MBWA	**Marble Bar**	**62.95**	**255**	*e*P	**P**	**01 34 10.1**	**-0.1**
MJAR	**Matsushiro Arr**	**71.69**	**320**	P	**P**	**01 35 06.7**	**+1.6**
MJAR				LR	LR	02 00 44.1	
MONP	**Monument Peak**	**74.40**	**47**	⇑P	**P**	**01 35 21.5**	**+0.2**
EDW2	**Edwards Air Fo**	**74.50**	**44**	⇓P	**P**	**01 35 21.5**	**-0.3**
ISA	**Isabella**	**74.64**	**43**	⇑P	**P**	**01 35 22.4**	**-0.2**
ISA	**Isabella**	**74.64**	**43**	*e*P	**P**	**01 35 21.8**	**-0.8**
PFO	**Pinyon Flat Ob**	**74.79**	**46**	⇑P	**P**	**01 35 23.3**	**-0.2**
PFO	**Pinyon Flat Ob**	**74.79**	**46**	*e*P	**P**	**01 35 23.6**	**+0.1**
SWSC	**Sam W. Stewart**	**74.86**	**47**	⇑P	**P**	**01 35 23.5**	**-0.4**
CMB	**Columbia Colle**	**74.88**	**40**	*e*P	**P**	**01 35 24.2**	**+0.3**
WDC	**Whiskeytown Da**	**75.23**	**37**	*e*P	**P**	**01 35 26.8**	**+0.9**
112A	**Yuma**	**75.49**	**48**	⇑P	**P**	**01 35 27.4**	**-0.1**
MPMC	**Manual Prospec**	**75.52**	**44**	⇓P	**P**	**01 35 27.3**	**-0.3**
GLA	**Glamis**	**75.60**	**47**	⇓P	**P**	**01 35 28.4**	**+0.2**
MTUM	**Tungsten Hills**	**75.60**	**42**	*e*P	**P**	**01 35 28.8**	**+0.7**
MTUM				*e*pP	pP	01 35 36.9	+2.7
WAKR	**Walker**	**75.76**	**41**	*e*P	**P**	**01 35 29.7**	**+0.8**
PETK	**Petropavlovsk-**	**75.82**	**342**	P	**P**	**01 35 29.3**	**+0.3**
PETK				LR	LR	02 06 10.6	
IRM	**Iron Mountain**	**75.99**	**46**	⇑P	**P**	**01 35 30.3**	**-0.1**
GMRC	**Granite Mounta**	**76.00**	**46**	⇓P	**P**	**01 35 30.3**	**-0.1**
BEKR	**Beckwourth**	**76.05**	**39**	⇓P	**P**	**01 35 30.3**	**-0.3**

WCN	Washoe City baz=76	76.06	40	⇓P	P	01 35 31.0 +0.3
GRAC	Grapevine Rang baz=76,SNR=8.1	76.15	43	⇓P	P	01 35 31.2 -0.1
113A	Mohawk Valley, baz=76	76.19	48	⇓P	P	01 35 31.6 0.0
Y12C	Blythe baz=76	76.20	47	⇓P	P	01 35 31.7 +0.1
NVAR	Mina Array Bea 5.8nm,1.0s,mb4.5,baz=229,slow=8.2,SNR=16	76.42	41	P	P	01 35 33.0 +0.3
214A	Organ Pipe Nat baz=77	76.43	49	⇓P	P	01 35 33.1 +0.1
Z13A	Yuma Proving G baz=77	76.50	48	⇑P	P	01 35 33.7 +0.3
PAHR	Pah Rah Range 8.5nm,1.0s,mb4.6	76.53	40	eP	P	01 35 33.5 +0.2
PAHR				epP	pP	01 35 42.5 +3.1
Y13A	Salome baz=77	76.72	47	⇑P	P	01 35 34.5 0.0
V11A	Goodsprings baz=77	76.75	45	⇓P	P	01 35 35.0 +0.3
PDMCI	Parker Dam,Lak baz=77	76.77	47	⇑P	P	01 35 34.9 +0.1
114A	Black Gap (USA baz=77	76.81	49	⇓P	P	01 35 35.4 +0.3
W12A	Cal Nev Ari baz=77	76.83	45	⇑P	P	01 35 35.0 -0.1
V12A	Nelson baz=77	77.08	45	⇓P	P	01 35 37.0 +0.5
Z14A	Wintersburg baz=77	77.09	48	⇓P	P	01 35 37.0 +0.4
X13A	Yucca baz=77,SNR=8.1	77.14	47	⇓P	P	01 35 36.8 -0.1
S10A	Tonopah Range, baz=77,SNR=9.9	77.20	42	⇓P	P	01 35 36.9 -0.2
115A	Sonoran Desert baz=77	77.25	49	⇓P	P	01 35 37.5 0.0
SHPR	Sheep Range	77.31	44	eP	P	01 35 38.5 +0.7
Y14A	Wickenburg baz=78	77.36	47	⇓P	P	01 35 38.3 +0.2
MOD	Modoc	77.37	37	eP	P	01 35 38.7 +0.6
W13A	Hualapai Mount baz=78,SNR=8.3	77.38	46	⇑P	P	01 35 38.2 0.0
216A	Three Points, baz=78	77.43	50	⇓P	P	01 35 38.6 0.0
116A	Eloy baz=78	77.55	49	⇑P	P	01 35 38.8 -0.4
K05A	Summer Lake baz=78	77.56	36	⇑P	P	01 35 39.4 +0.4
S11A	Rachel baz=78	77.58	43	⇓P	P	01 35 39.1 -0.2
R10A	Warm Springs baz=78,SNR=6.2	77.60	42	⇓P	P	01 35 39.3 -0.1
U12A	Valley of Fire baz=78	77.68	45	⇓P	P	01 35 40.0 +0.1
T11A	Corn Creek, Al baz=78	77.69	44	⇑P	P	01 35 39.8 -0.1
X14A	Yava baz=78,SNR=7.5	77.72	47	⇓P	P	01 35 40.0 -0.2
T12A	Moapa baz=78	77.73	44	⇑P	P	01 35 40.3 +0.2
V13A	Grand Canyon W baz=78	77.73	45	⇑P	P	01 35 40.3 +0.1
217A	Green Valley baz=78,SNR=6.8	77.78	50	⇑P	P	01 35 40.5 -0.1
Y15A	Casa Rosa Ranc baz=78,SNR=14	77.84	48	⇓P	P	01 35 40.7 -0.1
Q10A	Clear Creek Ra baz=78	77.85	42	⇓P	P	01 35 41.0 +0.3
W14A	Seligman baz=78,SNR=7.1	77.99	46	⇓P	P	01 35 41.4 -0.3
U13A	Pakoon Wash baz=78,SNR=5.4	78.06	45	⇑P	P	01 35 41.9 -0.1
TUC	Tucson 10nm,1.1s,mb4.7	78.08	50	eP	P	01 35 42.4 +0.2
R11A	Troy Canyon, C baz=78,SNR=9.2	78.09	43	⇑P	P	01 35 41.6 -0.5
H04A	Detroit Lake baz=78	78.12	34	⇓P	P	01 35 42.0 -0.1
S12A	Delamar Landin baz=78,SNR=8.8	78.14	44	⇑P	P	01 35 42.0 -0.4
Z16A	Peralta Trail, baz=78	78.15	49	⇓P	P	01 35 42.4 -0.2
X15A	Humboldt baz=78,SNR=8.2	78.19	47	⇑P	P	01 35 42.6 -0.1
V14A	Boquillas Ranc baz=78,SNR=6.8	78.21	46	⇑P	P	01 35 43.0 +0.1
318A	Bisbee baz=78,SNR=6.3	78.22	51	⇓P	P	01 35 42.8 -0.2
117A	Oracle baz=78,SNR=8.1	78.25	50	⇑P	P	01 35 42.8 -0.4
P10A	Eureka baz=78	78.28	41	⇑P	P	01 35 43.1 -0.1
Q11A	Duckwater baz=78,SNR=16	78.33	42	⇓P	P	01 35 43.5 +0.1
Y16A	Circle Bar Ran baz=79,SNR=10	78.40	48	⇓P	P	01 35 44.2 +0.2
T13A	Saint George baz=79	78.43	44	⇑P	P	01 35 44.2 +0.2
218A	Dragoon baz=79	78.45	51	⇑P	P	01 35 44.3 +0.1
W15A	Williams baz=79	78.54	47	⇓P	P	01 35 45.2 +0.5
U14A	Mt Trumbull baz=79,SNR=8.9	78.59	45	⇓P	P	01 35 45.2 +0.3
O10A	Cortez Mining, baz=79	78.65	41	⇓P	P	01 35 45.2 0.0
WVOR	Wild Horse Val 29nm,1.6s,mb5.0	78.67	38	eP	P	01 35 44.9 -0.3
P11A	Circle Ranch, baz=79	78.68	41	⇓P	P	01 35 45.5 +0.1
R12A	Pony Springs, baz=79,SNR=15	78.71	43	⇓P	P	01 35 45.7 +0.1
X16A	Lo Mia Camp, P baz=79,SNR=11	78.71	48	⇑P	P	01 35 45.9 +0.3
319A	Douglas baz=79,SNR=5.7	78.71	51	⇓P	P	01 35 45.8 +0.1
Y17A	Roosevelt baz=79	78.75	49	⇑P	P	01 35 46.3 +0.4
KSRS	Korea Array 6.5nm,0.9s,mb4.5,baz=128,slow=5.7,SNR=25	78.77	316	P	P	01 35 48.1 +2.2
KSRS				LR	LR	02 07 47.0
	comp=Z,101nm,19.1s,MS4.2,baz=294,slow=34					
S13A	Holt Ranch, En baz=79,SNR=9.1	78.78	44	⇓P	P	01 35 46.2 +0.3
118A	Homack Ranch, baz=79,SNR=7.4	78.84	50	⇓P	P	01 35 46.4 0.0
N10A	Dunphy baz=79	78.90	40	⇓P	P	01 35 46.6 +0.1
V15A	Kaibab Nationa baz=79,SNR=7.7	78.94	46	⇓P	P	01 35 47.2 +0.3
Q12A	Willow Creek R baz=79,SNR=7.1	78.97	42	⇓P	P	01 35 46.6 -0.3
W16A	Flagstaff baz=79	79.00	47	⇑P	P	01 35 47.6 +0.4
T14A	Hurricane baz=79	79.00	45	⇑P	P	01 35 47.3 +0.1
Z18A	Geronimo baz=79	79.02	50	⇑P	P	01 35 47.4 0.0
219A	White Tail Can baz=79,SNR=7.6	79.04	51	⇑P	P	01 35 47.3 -0.2
R13A	O'Grain Ranch, baz=79,SNR=5.2	79.04	43	⇑P	P	01 35 47.4 0.0
O11A	Cowboy Ranch, baz=79,SNR=10	79.08	41	⇓P	P	01 35 47.5 0.0
CCUT	Cedar City 9.5nm,1.1s,mb4.6	79.09	44	eP	P	01 35 48.2 +0.6
X17A	Forest Lakes baz=79	79.11	48	⇑P	P	01 35 48.2 +0.4
H06A	Lindquist Farm baz=79	79.16	35	⇑P	P	01 35 48.1 +0.2
P12A	McGill baz=79	79.17	42	⇑P	P	01 35 48.3 +0.2
U15A	North Rim baz=79,SNR=8.3	79.19	46	⇓P	P	01 35 48.6 +0.4
I07A	Izee baz=79	79.20	36	⇓P	P	01 35 48.5 +0.4
320A	Kipp Ranch, An baz=79	79.25	52	⇓P	P	01 35 49.3 +0.6
J08A	Circle Bar Ran baz=80,SNR=5.6	79.33	37	⇑P	P	01 35 48.5 -0.4
WUAZ	Wupatki baz=80	79.33	47	⇓P	P	01 35 49.5 +0.5
M10A	I.L. Ranch, Tu baz=80,SNR=5.7	79.36	40	⇓P	P	01 35 49.3 +0.3
Y18A	Canyon Day Jun baz=80,SNR=9.7	79.37	49	⇓P	P	01 35 49.6 +0.3
119A	Ashpeak Ranch, baz=80	79.39	50	⇓P	P	01 35 49.8 +0.4
N11A	Elko Archery C baz=80	79.43	40	⇓P	P	01 35 49.5 +0.1
Q13A	Wheeler Ranch, baz=80,SNR=8.7	79.44	43	⇓P	P	01 35 49.3 -0.3
T15A	Red Dirt Ranch baz=80	79.45	45	⇓P	P	01 35 50.2 +0.5
220A	Playas Peak, P baz=80,SNR=10	79.53	51	⇓P	P	01 35 50.4 +0.2
W17A	Winslow baz=80	79.56	48	⇓P	P	01 35 50.7 +0.4
Z19A	T-Link Ranch, baz=80	79.68	50	⇓P	P	01 35 51.1 +0.2
ELK	Elko 22nm,1.7s,mb4.8	79.69	41	eP	P	01 35 51.4 +0.5
R14A	James Farms, M baz=80	79.73	44	⇑P	P	01 35 51.3 +0.2
O12A	Currie baz=80,SNR=6.2	79.73	41	⇓P	P	01 35 50.8 -0.2
P13A	Bates Ranch, G baz=80,SNR=8.6	79.73	42	⇓P	P	01 35 51.0 0.0
L10A	Juniper Basin baz=80,SNR=11	79.73	39	⇓P	P	01 35 50.7 -0.3
J09A	Fry Pan Ranch, baz=80,SNR=5.6	79.74	37	⇓P	P	01 35 50.7 -0.4
M11A	Holland Ranch, baz=80,SNR=7.9	79.76	40	⇓P	P	01 35 51.3 +0.1
120A	U Bar Ranch, L baz=80,SNR=5.6	79.77	51	⇑P	P	01 35 51.7 +0.2
V17A	Tonalea, Kykot baz=80,SNR=10.0	79.79	47	⇑P	P	01 35 51.7 +0.1
X18A	Snowflake baz=80	79.82	48	⇓P	P	01 35 51.9 +0.2
S15A	Panguitch baz=80	79.82	45	⇑P	P	01 35 52.3 +0.7
U16A	Tuba City baz=80	79.83	46	⇓P	P	01 35 52.1 +0.3
N12A	Clover Valley, baz=80	79.88	41	⇓P	P	01 35 52.0 +0.1
D05A	Enumclaw baz=80	79.89	33	⇓P	P	01 35 52.2 +0.4
K10A	MacKenzie Ranc baz=80,SNR=8.0	79.91	38	⇑P	P	01 35 51.4 -0.6
Q14A	Sevier Lake (B baz=80,SNR=25	79.94	43	⇑P	P	01 35 52.5 +0.3
H08A	Prairie City baz=80	79.94	36	⇑P	P	01 35 52.3 +0.1
E06A	Yakima baz=80	79.98	33	⇑P	P	01 35 52.3 -0.1
T16A	Glen Canyon Da baz=80	80.02	46	⇑P	P	01 35 53.2 +0.5
Y19A	Nutrioso baz=80,SNR=11	80.02	49	⇑P	P	01 35 53.5 +0.6
Z20A	Nine Sixteen R baz=80,SNR=7.5	80.08	50	⇓P	P	01 35 53.8 +0.6
O13A	Hicks Ranch, I baz=80	80.13	42	⇑P	P	01 35 53.4 +0.1
221A	Mesquite Ranch baz=80	80.14	51	⇑P	P	01 35 53.7 +0.2
R15A	Junction baz=80	80.17	44	⇓P	P	01 35 54.1 +0.6
L11A	Cat Creek Ranc baz=80,SNR=8.3	80.21	39	⇓P	P	01 35 53.2 -0.4
X19A	St. Johns baz=80	80.24	49	⇑P	P	01 35 54.2 +0.2
G08A	Pilot Rock baz=80,SNR=9.0	80.27	35	⇑P	P	01 35 53.7 -0.2
W18A	Petrified Fore baz=80	80.27	48	⇑P	P	01 35 54.6 +0.5
M12A	Wells baz=80,SNR=8.7	80.28	40	⇓P	P	01 35 53.8 -0.2
J10A	Berg Farm, Mel baz=80	80.36	38	⇑P	P	01 35 53.8 -0.6
121A	Cookes Peak, D baz=80	80.39	51	⇑P	P	01 35 55.2 +0.3
U17A	Shonto baz=81	80.39	46	⇓P	P	01 35 55.5 +0.7
MSU	Marysvale	80.40	44	eP	P	01 35 55.4 +0.7
K11A	Parker Ranch, baz=81	80.40	39	⇓P	P	01 35 54.6 0.0
N13A	Wendover, West baz=81	80.40	41	⇑P	P	01 35 54.4 -0.2
N13A	Wendover, West 32nm,1.6s,mb5.0	80.40	41	eP	P	01 35 54.7 +0.1
P14A	Drum Mountains baz=81,SNR=11	80.41	43	⇑P	P	01 35 54.6 -0.2
V18A	Ganado baz=81	80.44	47	⇓P	P	01 35 55.4 +0.4
D06A	Cle Elum baz=81	80.48	33	⇑P	P	01 35 54.9 -0.1
T17A	Navajo Res., N baz=81,SNR=6.0	80.51	46	⇓P	P	01 35 55.8 +0.5
W19A	Sanders baz=81	80.51	48	⇑P	P	01 35 55.7 +0.3
Q15A	Fillmore baz=81	80.53	43	⇓P	P	01 35 55.8 +0.4
E07A	Sunnyside baz=81	80.59	34	⇓P	P	01 35 55.5 -0.1
H09A	Durkee baz=81	80.60	36	⇓P	P	01 35 55.6 -0.1
Y20A	Horse Springs, baz=81,SNR=15	80.63	50	⇑P	P	01 35 56.6 +0.5
HAWA	Hanford	80.65	34	eP	P	01 35 56.5 +0.6
222A	Williams Famil baz=81	80.69	52	⇑P	P	01 35 56.7 +0.3
M13A	Montello baz=81,SNR=5.7	80.71	41	⇓P	P	01 35 55.9 -0.5
M13A	Montello 15nm,1.6s,mb4.7	80.71	41	eP	P	01 35 56.6 +0.3
R16A	Teasdale baz=81	80.73	44	⇑P	P	01 35 56.9 +0.4
S17A	Black Ridge (B baz=81	80.84	45	⇓P	P	01 35 56.9 -0.2
U18A	Rough Rock, Ch baz=81	80.85	47	⇑P	P	01 35 57.5 +0.3
Z21A	St. Cloud Mine baz=81,SNR=15	80.85	50	⇓P	P	01 35 57.9 +0.6
X20A	Quemado baz=81,SNR=6.2	80.86	49	⇑P	P	01 35 57.5 +0.2
MFID	Camas Ranch baz=81	80.90	38	⇓P	P	01 35 57.0 -0.3
DUG	Dugway baz=81	80.91	42	⇓P	P	01 35 57.4 -0.1
DUG	Dugway 11nm,1.4s,mb4.6	80.91	42	eP	P	01 35 57.0 -0.4
P15A	Leamington baz=81	80.91	43	⇑P	P	01 35 57.8 +0.3
G09A	Cove baz=81,SNR=7.1	80.91	36	⇑P	P	01 35 57.0 -0.3
BMO	Blue Mountains	80.92	36	eP	P	01 35 57.9 +0.6
K12A	Draper Farm, C baz=81	81.00	39	⇑P	P	01 35 57.5 -0.4
ETW	Entiat 9.8nm,1.3s,mb4.6	81.01	33	eP	P	01 35 57.9 +0.1
N14A	Grayback Hills baz=81	81.04	42	⇓P	P	01 35 58.1 0.0
V19A	Window Rock baz=81	81.06	48	⇑P	P	01 35 58.7 +0.3
W20A	Ramah baz=81	81.15	48	⇓P	P	01 35 58.9 +0.1
BGU	Big Grassy Mou 7.4nm,1.5s,mb4.4	81.18	42	eP	P	01 35 58.9 0.0
Y21A	Point of Rocks baz=81,SNR=9.9	81.19	50	⇑P	P	01 35 59.6 +0.5
C07A	Waterville baz=81	81.21	33	⇓P	P	01 35 58.4 -0.5
T18A	Mexican Hat baz=81,SNR=26	81.21	46	⇑P	P	01 35 59.4 +0.2
J12A	Stokes Ranch, baz=81	81.24	39	⇓P	P	01 35 59.0 -0.1
U19A	Dine' College, baz=81	81.24	47	⇓P	P	01 35 59.6 +0.3
L13A	Double Diamond baz=81	81.26	40	⇓P	P	01 35 59.4 +0.1
Q16A	Castle Valley baz=81	81.28	44	⇓P	P	01 35 59.9 +0.5
M14A	Sheep Mountain baz=82,SNR=12	81.30	41	⇓P	P	01 35 59.1 -0.3
R17A	Hanksville Air baz=82	81.32	45	⇑P	P	01 35 59.8 +0.2
X21A	Alamocita Cree baz=82,SNR=6.2	81.32	49	⇓P	P	01 36 00.3 +0.5
P16A	Fountain Green baz=82	81.33	43	⇓P	P	01 36 00.4 +0.7
Z22A	Elephant Butte baz=82,SNR=12	81.34	51	⇓P	P	01 35 59.9 0.0
S18A	Hurst Farm, Bl baz=82	81.42	46	⇑P	P	01 36 00.4 +0.2
K13A	Stover Farm, H baz=82	81.50	40	⇑P	P	01 36 00.7 +0.2
V20A	Brimhall baz=82	81.51	48	⇑P	P	01 36 00.7 0.0
I12A	Atlanta baz=82,SNR=10	81.53	38	⇑P	P	01 36 00.5 -0.2
H11A	Donnelly baz=82,SNR=8.2	81.56	37	⇑P	P	01 36 00.1 -0.7
324A	Moseley Ranch, baz=82,SNR=11	81.59	53	⇑P	P	01 36 00.9 -0.4
T19A	Beclabito baz=82	81.64	47	⇓P	P	01 36 01.8 +0.4
F10A	Beach Ranch, E baz=82	81.64	36	⇑P	P	01 36 00.9 -0.3
425A	Indio Mountain baz=82,SNR=10	81.66	54	⇓P	P	01 36 01.4 -0.2
Y22A	Socorro baz=82	81.67	50	⇓P	P	01 36 02.0 +0.3
D09A	Jones Farm, Ri baz=82	81.73	34	⇓P	P	01 36 01.2 -0.4
U20A	Newcomb baz=82	81.76	47	⇑P	P	01 36 02.2 +0.2
626A	Big Bend Ranch baz=82,SNR=12	81.76	55	⇓P	P	01 36 02.1 -0.1
LAZ	Ladron 2.2nm,1.2s,mb4.0	81.77	50	eP	P	01 36 03.1 +1.0
MNTX	Cornudas Mount 10nm,1.0s,mb4.7	81.78	53	eP	P	01 36 01.9 -0.3
SRU	San Rafael baz=82,SNR=6.2	81.81	44	⇓P	P	01 36 01.9 -0.4
SRU	San Rafael 24nm,1.6s,mb4.9	81.81	44	eP	P	01 36 02.5 +0.3
HVU	Hansel Valley	81.81	41	eP	P	01 36 02.2 0.0
HLID	Hailey baz=82,SNR=11	81.82	39	⇑P	P	01 36 02.1 -0.1
HLID	Hailey 8.7nm,1.1s,mb4.6	81.82	39	eP	P	01 36 02.2 0.0
G11A	Walters Elk Ra baz=82	81.83	36	⇑P	P	01 36 01.5 -0.7
M15A	Larsen Ranch, baz=82	81.84	41	⇓P	P	01 36 02.1 -0.2
R18A	Canyonlands Na baz=82,SNR=14	81.85	45	⇓P	P	01 36 02.3 -0.2
224A	Corundas Mount baz=82,SNR=9.2	81.85	52	⇓P	P	01 36 02.4 -0.3
P17A	Butcher Ranch, baz=82	81.86	44	⇑P	P	01 36 02.6 +0.1
J13A	Cove Ranch, Pi baz=82,SNR=14	81.87	39	⇓P	P	01 36 02.2 -0.2
325A	Bean Ranch, Si baz=82,SNR=12	81.94	53	⇑P	P	01 36 02.7 -0.5
K14A	Jones Ranch, D baz=82	81.99	40	⇑P	P	01 36 03.3 +0.2
526A	Mary Lane Ranc baz=82,SNR=14	82.02	55	⇑P	P	01 36 03.4 -0.2
DAU	Daniels Canyon	82.02	43	eP	P	01 36 04.2 +0.9
TXAR	Lajitas Array 22nm,1.3s,mb4.9,baz=222,slow=5.0,SNR=42	82.03	56	P	P	01 36 03.5 -0.2
TXAR				LR	LR	02 03 52.7
	comp=Z,141nm,21.7s,MS4.3,baz=235,slow=29					
S19A	Harvey Farm, M baz=82,SNR=5.8	82.03	46	⇓P	P	01 36 03.3 -0.1
Q18A	Rafter H Ranch baz=82	82.06	44	⇑P	P	01 36 03.4 -0.1
LPM	Los Pinos Moun	82.09	50	eP	P	01 36 04.8 +1.0
LPM				epP	pP	01 36 13.4 +3.4
V21A	Milan baz=82	82.10	48	⇓P	P	01 36 04.2 +0.4
H12A	Diamond D Ranc baz=82,SNR=5.4	82.14	38	⇑P	P	01 36 03.1 -0.7
N16A	Rees Ranch, Co baz=82	82.16	42	⇑P	P	01 36 04.0 0.0
124A	Stringfield Ra baz=82,SNR=6.1	82.19	52	⇓P	P	01 36 04.6 +0.2
MVCO	Mesa Verde baz=82	82.19	47	⇓P	P	01 36 04.5 +0.2
I13A	Wildhorse Cree baz=82	82.20	39	⇑P	P	01 36 04.3 +0.1
G12A	Big Creek, Yel baz=82	82.20	37	⇑P	P	01 36 03.3 -0.9
C09A	Chrisman Ranch baz=82	82.21	34	⇓P	P	01 36 03.6 -0.5
J14A	Carey baz=82,SNR=10	82.22	39	⇓P	P	01 36 04.7 +0.4
R19A	Curley Farm, L baz=82	82.22	45	⇓P	P	01 36 04.5 +0.1
O17A	Robinson Place baz=82,SNR=10.0	82.24	43	⇓P	P	01 36 04.7 +0.2
P18A	Preston Nutter baz=82	82.26	44	⇓P	P	01 36 05.0 +0.3
M16A	Huntsville baz=82	82.27	42	⇓P	P	01 36 04.4 -0.2
627A	Terlingua Ranc baz=82,SNR=21	82.30	56	⇓P	P	01 36 04.9 -0.1
Y23A	Lovelace Mesa, baz=82	82.33	50	⇑P	P	01 36 05.1 0.0
426A	McDonald Obser baz=82,SNR=14	82.34	54	⇓P	P	01 36 05.1 -0.1
225A	Deer Hill, Car baz=83,SNR=6.6	82.39	53	⇓P	P	01 36 05.3 -0.1
DIV	Divide	82.41	13	eP	P	01 36 05.7 +0.8
A08A	Turner Farm, O baz=83	82.42	32	⇓P	P	01 36 05.0 -0.2
527A	Woodward Ranch baz=83,SNR=15	82.43	55	⇓P	P	01 36 05.3 -0.4
E11A	Bogner Ranch, baz=83	82.44	36	⇑P	P	01 36 05.7 +0.3
HWUT	Hardware Ranch 9.8nm,1.4s,mb4.5	82.47	42	eP	P	01 36 05.0 -0.6
H13A	Challis baz=83,SNR=7.1	82.50	38	⇑P	P	01 36 05.4 -0.3
BMRM	Bremner River 62nm,1.7s,mb5.4	82.52	13	eP	P	01 36 05.5 +0.1
ANMO	Albuquerque 8.5nm,1.3s,mb4.6	82.52	49	eP	P	01 36 06.8 +0.8
I14A	Mackay baz=83	82.61	39	⇓P	P	01 36 06.6 +0.3
F12A	Elk City baz=83,SNR=14	82.62	37	⇓P	P	01 36 05.7 -0.6
326A	Caldwell Ranch baz=83	82.67	54	⇑P	P	01 36 06.6 -0.3
125A	Gardner Draw, baz=83	82.77	52	⇑P	P	01 36 07.5 +0.1
R20A	Redvale baz=83	82.77	46	⇑P	P	01 36 07.4 +0.1
L16A	Fish Haven baz=83,SNR=6.6	82.78	41	⇓P	P	01 36 06.5 -0.8
Y24A	Capitan baz=83,SNR=6.0	82.78	51	⇓P	P	01 36 07.3 -0.1
G13A	Cobalt baz=83	82.81	38	⇑P	P	01 36 07.0 -0.4
W23A	Werner Place, baz=83	82.84	49	⇑P	P	01 36 07.6 -0.1
427A	Hayter Ranch, baz=83,SNR=8.8	82.91	54	⇓P	P	01 36 08.0 -0.2
S21A	Coal Bank Pass baz=83,SNR=10	82.91	47	⇓P	P	01 36 08.3 +0.3
226A	Malaga, Loving baz=83,SNR=5.4	82.92	53	⇑P	P	01 36 07.7 -0.5
J15A	Blackfoot baz=83,SNR=7.9	82.92	40	⇑P	P	01 36 08.2 +0.3
M17A	Scullys Gap (B baz=83	82.97	42	⇑P	P	01 36 07.7 -0.6
Z25A	Roswell baz=83	83.01	52	⇑P	P	01 36 09.0 +0.3
H14A	Leadore baz=83,SNR=13	83.05	38	⇓P	P	01 36 08.6 +0.1
528A	Cox Ranch, San baz=83,SNR=11	83.08	55	⇑P	P	01 36 08.8 -0.3
X24A	Lazy VL Ranch, baz=83	83.08	50	⇓P	P	01 36 08.7 -0.3
P19A	Cripple Cowboy baz=83,SNR=7.8	83.10	44	⇓P	P	01 36 08.8 -0.2
K16A	Soda Springs baz=83	83.12	41	⇑P	P	01 36 08.9 -0.1
F13A	Darby baz=83,SNR=5.7	83.16	37	⇑P	P	01 36 08.3 -0.8
L17A	Cokeville baz=83	83.17	41	⇑P	P	01 36 08.3 -1.0
Q20A	Ridgley Place, baz=83,SNR=8.5	83.21	45	⇓P	P	01 36 09.4 -0.2
A10A	Northport baz=84	83.32	33	⇑P	P	01 36 09.5 -0.4
M18A	Lyman baz=84	83.33	42	⇓P	P	01 36 09.9 -0.2
Y25A	Mesa, Roswell baz=84,SNR=7.1	83.33	51	⇑P	P	01 36 10.0 -0.3
D12A	Red Ives Fores	83.33	36	⇑P	P	01 36 09.5 -0.5

baz=84
N18A **Larsen Ranch,** 83.34 43 ⇑P P 01 36 09.9 -0.3
baz=84
G14A **Jackson** 83.35 38 ⇑P P 01 36 10.1 0.0
baz=84
O19A **Miners Draw (B** 83.35 44 ⇑P P 01 36 10.2 -0.1
baz=84
J16A **Bone** 83.35 40 ⇑P P 01 36 10.0 -0.2
baz=84,SNR=7.3
428A **Kincaid Ranch,** 83.41 55 ⇓P P 01 36 11.1 +0.3
baz=84,SNR=5.1
P20A **De Beque** 83.42 45 ⇓P P 01 36 10.4 -0.3
baz=84,SNR=12
R21A **Cimarron** 83.42 46 ⇓P P 01 36 10.9 +0.3
baz=84,SNR=8.7
MCMT **McKenzie Canyo** 83.47 38 eP P 01 36 11.4 +0.6
6.6nm,1.1s,mb4.6
K17A **Gardner Place,** 83.49 41 ⇑P P 01 36 10.7 -0.2
baz=84
Z26A **Caprock** 83.56 52 ⇑P P 01 36 11.1 -0.4
baz=84,SNR=6.4
RRI2 **Red Ridge** 83.57 40 eP P 01 36 11.9 +0.6
16nm,1.3s,mb5.0
328A **Wristen Ranch,** 83.60 54 ⇑P P 01 36 11.4 -0.3
baz=84
B11A **Sandpoint** 83.61 34 ⇓P P 01 36 11.4 +0.1
baz=84
L18A **Fontenelle, Gr** 83.61 42 ⇓P P 01 36 11.7 +0.2
baz=84
E13A **Victor** 83.62 36 ⇑P P 01 36 10.4 -1.1
baz=84,SNR=5.6
N19A **John Jarvie Ra** 83.62 43 ⇓P P 01 36 11.3 -0.3
baz=84
X25A **Clemmons Ranch** 83.63 51 ⇓P P 01 36 11.6 -0.2
baz=84
SKAG **Skagway** 83.63 18 eP P 01 36 12.2 +1.0
24nm,1.3s,mb5.2
Q21A **Lamborn Mesa,** 83.64 46 ⇑P P 01 36 12.1 +0.3
baz=84
C12B **Naegeli Ranch,** 83.65 35 ⇑P P 01 36 11.0 -0.6
baz=84
TRF **Thorofare Moun** 83.70 10 eP P 01 36 10.8 -0.6
12nm,0.9s,mb5.0
127A **Arkansas Junct** 83.75 53 ⇓P P 01 36 12.1 -0.4
baz=84
I16A **Newdale** 83.76 40 ⇑P P 01 36 12.7 +0.5
baz=84
CHUM **Lake Minchumin** 83.78 9 eP P 01 36 12.3 +0.4
4.0nm,0.8s,mb4.6
CN2 **Changchun** 83.84 320 eP P 01 36 14.4 +1.7
CN2 esP sP 01 36 28.9 +7.8
CN2 ePP PP 01 39 30.8 +4.4
CN2 eS S 01 46 35.7 +0.6
CN2 eSS SS 01 52 08.1 +4.7
CN2 LR LR
comp=N,500nm,25.0s,MS4.9
CN2 LR LR
comp=E,300nm,25.0s,MS4.9
CN2 LR LR
comp=Z,200nm,27.0s,MS4.4
O20A **White River Ci** 83.84 44 ⇓P P 01 36 12.4 -0.4
baz=84,SNR=6.1
D13A **Huson** 83.85 36 ⇑P P 01 36 11.3 -1.3
baz=84,SNR=7.8
REDW **Red Top Meadow** 83.86 40 eP P 01 36 12.6 -0.2
comp=Z,13nm,1.3s,mb4.9
G15A **Dillon** 83.87 38 ⇓P P 01 36 12.6 -0.2
baz=84
TPAW **Teton Pass** 83.87 40 eP P 01 36 12.8 -0.1
comp=Z,16nm,1.3s,mb5.0
R22A **Saguache, Gunn** 83.90 46 ⇓P P 01 36 13.3 +0.2
baz=84,SNR=8.8
DLMT **Dillon** 83.92 38 eP P 01 36 13.2 +0.2
comp=Z,7.5nm,0.9s,mb4.8
A11A **Hall Mountain,** 83.93 34 ⇑P P 01 36 12.9 -0.1
baz=84
M19A **Rock Springs** 83.95 43 ⇑P P 01 36 13.1 -0.2
baz=84
J17A **Brown Place, J** 83.95 40 ⇓P P 01 36 12.8 -0.5
baz=84,SNR=7.5
Y26A **Elida** 83.97 51 ⇑P P 01 36 13.4 -0.1
baz=84
SNOW **Snow King Moun** 83.98 40 eP P 01 36 13.2 -0.2
comp=Z,7.8nm,0.8s,mb4.9
K18A **Toltan Ranch,** 83.98 41 ⇓P P 01 36 13.1 -0.3
baz=84,SNR=7.5
E14A **Clinton** 84.00 37 ⇑P P 01 36 12.6 -0.8
baz=84
W25A **X Bar L Ranch,** 84.09 50 ⇓P P 01 36 13.7 -0.5
baz=84,SNR=14
IMW **Indian Meadow** 84.10 40 eP P 01 36 13.8 -0.2
comp=Z,5.5nm,0.9s,mb4.7
Q22A **Crested Butte,** 84.11 46 ⇓P P 01 36 14.0 -0.2
baz=84,SNR=9.8
BSMT **Bassoo Peak** 84.11 35 eP P 01 36 12.7 -1.2
comp=Z,5.6nm,1.4s,mb4.5
C13A **Hot Springs** 84.12 35 ⇓P P 01 36 13.7 -0.4
baz=84
L19A **Farson** 84.13 42 ⇑P P 01 36 13.6 -0.6
baz=84,SNR=9.1
HYT **Haines Junctio** 84.14 17 eP P 01 36 14.6 +0.8
Z27A **Tatum** 84.15 52 ⇑P P 01 36 13.9 -0.6
baz=84,SNR=5.1
LOHW **Long Hollow** 84.15 40 eP P 01 36 14.0 -0.2
comp=Z,5.1nm,1.0s,mb4.6
MCK **McKinley** 84.19 10 eP P 01 36 13.3 -0.6
comp=Z,26nm,1.3s,mb5.2
N20A **Spence Gulch,** 84.19 44 ⇑P P 01 36 14.1 -0.4
baz=84,SNR=11
SMCO **Snowmass** 84.22 46 eP P 01 36 15.0 +0.3
comp=Z,17nm,1.4s,mb5.0
F15A **Butte** 84.25 38 ⇑P P 01 36 14.1 -0.6
baz=84,SNR=5.1
LRM **Limekiln Ridge** 84.26 38 eP P 01 36 15.6 +0.8
J18A **Kendall Valley** 84.30 41 ⇑P P 01 36 14.6 -0.4
baz=84,SNR=29
G16A **Moss Hill, Enn** 84.31 38 ⇓P P 01 36 14.3 -0.8
baz=84,SNR=8.1
QLMT **Earthquake Lak** 84.31 39 eP P 01 36 15.9 +0.8
comp=Z,9.2nm,1.1s,mb4.8
I17A **Pilgrim Ck.** 84.33 40 ⇑P P 01 36 15.0 -0.2
baz=84
H16A **Russell Place,** 84.35 39 ⇑P P 01 36 15.7 +0.4
baz=84,SNR=17
BW06 **Boulder Array** 84.35 41 ⇓P P 01 36 14.4 -0.9
baz=84,SNR=12
BW06 **Boulder Array** 84.35 41 eP P 01 36 14.5 -0.8
PDAR **Pinedale Array** 84.35 41 P P 01 36 14.5 -0.8
comp=Z,4.1nm,0.7s,mb4.7,baz=216,slow=3.6,SNR=37
PDAR LR LR 02 08 27.8
comp=Z,114nm,18.1s,MS4.3,baz=242,slow=32
D14A **Greenough** 84.37 36 ⇑P P 01 36 14.3 -0.9
baz=84
O21A **Pagoda** 84.40 44 ⇓P P 01 36 15.3 -0.3
baz=85
CHMT **Chamberlain Mo** 84.42 36 eP P 01 36 14.9 -0.6
Y27A **Causey** 84.44 52 ⇓P P 01 36 15.5 -0.5
baz=85,SNR=8.2
E15A **Deer Lodge** 84.49 37 ⇓P P 01 36 15.3 -0.6
baz=85
DLBC **Dease Lake** 84.52 21 eP P 01 36 17.1 +1.3
SDCO **Great Sand Dun** 84.53 47 eP P 01 36 16.3 0.0
comp=Z,14nm,1.5s,mb4.9
M20A **Sweetwater, Wa** 84.57 43 ⇑P P 01 36 16.3 -0.2
baz=85,SNR=6.2
H17A **Grant Village** 84.59 40 ⇑P P 01 36 17.2 +0.7
baz=85,SNR=5.3
N21A **Black Mountain** 84.64 44 ⇓P P 01 36 16.6 -0.2
baz=85,SNR=9.7
BOZ **Bozeman (W)** 84.64 38 ⇑P P 01 36 16.3 -0.4
baz=85,SNR=13
BOZ **Bozeman (W)** 84.64 38 eP P 01 36 16.4 -0.3
comp=Z,5.6nm,1.0s,mb4.7
I18A **Diamond G Ranc** 84.68 41 ⇓P P 01 36 16.8 -0.1
baz=85
F16A **Kennard Place,** 84.72 38 ⇑P P 01 36 17.0 -0.1
baz=85
L20A **Wamsutter** 84.73 43 ⇑P P 01 36 16.9 -0.3
baz=85,SNR=8.4
MSTX **Muleshoe** 84.77 52 ⇓P P 01 36 17.2 -0.4
baz=85,SNR=6.0
K19A **Absolon Red Bu** 84.83 42 ⇑P P 01 36 17.3 -0.4
baz=85
X27A **F and S Farms,** 84.83 51 ⇑P P 01 36 17.6 -0.3
baz=85
D15A **Lincoln** 84.90 37 ⇑P P 01 36 17.3 -0.6
baz=85,SNR=5.9
MAW **Mawson** 84.90 199 LR LR 02 09 48.4
comp=Z,204nm,20.6s,MS4.5,baz=134,slow=33
A13A **Flathead Natio** 84.94 34 ⇑P P 01 36 17.4 -0.8
baz=85
E16A **East Helena** 85.10 37 ⇑P P 01 36 18.1 -0.9
baz=85,SNR=7.6
HRY **Holter Researc** 85.11 37 eP P 01 36 18.5 -0.5
M21A **Separation Pea** 85.16 43 ⇓P P 01 36 18.4 -1.0
baz=85,SNR=5.2
C15A **Salmond Ranch,** 85.27 36 ⇑P P 01 36 18.7 -1.1
baz=85,SNR=6.0
WHN **Wuhan** 85.28 304 eP P 01 36 23.5 +3.2
WALA **Waterton Lakes** 85.29 34 eP P 01 36 20.3 +0.5
RWWY **Rawlins** 85.30 43 eP P 01 36 20.9 +0.8
L21A **Rawlins** 85.33 43 ⇓P P 01 36 19.5 -0.7
baz=86
F17A **Fitzpatrick Pl** 85.35 38 ⇑P P 01 36 19.8 -0.5
baz=86,SNR=6.2
N22A **Wattenberg Ran** 85.36 44 ⇓P P 01 36 20.4 -0.1
baz=86
COLA **College** 85.42 10 eP P 01 36 19.8 -0.4
comp=Z,21nm,0.9s,mb5.3
D16A **Dana Ranch, Ca** 85.45 37 ⇑P P 01 36 19.9 -0.8
baz=86,SNR=5.3
A14A **Double T Ranch** 85.50 35 ⇓P P 01 36 19.9 -1.0
baz=86
E17A **Martinsdale** 85.54 38 ⇓P P 01 36 20.6 -0.5
baz=86
JCT **Junction City** 85.55 56 eP P 01 36 20.8 -0.8
comp=Z,25nm,1.9s,mb5.1
M22A **Cedar Creek Ra** 85.56 44 ⇑P P 01 36 20.9 -0.5
baz=86
B15A **Bradely Ranch,** 85.59 36 ⇑P P 01 36 21.1 -0.3
baz=86
G18A **Lazy EL Ranch,** 85.69 39 ⇑P P 01 36 21.5 -0.4
baz=86
C16A **Fuhringer Ranc** 85.76 36 ⇑P P 01 36 21.2 -1.1
baz=86,SNR=5.4
RLMT **Red Lodge** 85.77 40 ⇓P P 01 36 21.9 -0.4
baz=86
F18A **Big Timber** 85.91 39 ⇓P P 01 36 22.8 -0.2
baz=86
AMTX **Amarillo** 85.98 51 eP P 01 36 23.2 -0.5
comp=Z,19nm,1.0s,mb5.3
D17A **Six Diamond Ra** 86.01 37 ⇑P P 01 36 23.5 0.0
baz=86
E18A **Harlowton** 86.14 38 ⇓P P 01 36 23.8 -0.3
baz=86,SNR=7.2
C17A **Wharram Farm,** 86.23 37 ⇑P P 01 36 23.4 -1.2
baz=86,SNR=9.3
DAWY **Dawson** 86.41 14 eP P 01 36 25.3 +0.3
EGAK **Eagle** 86.63 13 eP P 01 36 26.2 0.0
comp=Z,14nm,1.1s,mb5.1
PLCA **Paso Flores** 87.02 132 P P 01 36 29.9 +1.1
comp=Z,1.7nm,0.9s,mb4.3,baz=228,slow=12,SNR=2.9
PLCA LR LR 02 08 41.9
comp=Z,224nm,20.9s,MS4.5,baz=105,slow=31
PLCA **Paso Flores** 87.02 132 P P 01 36 29.9 +1.1
PLCA LR LR 02 08 41.9
BILL **Bilibino** 87.74 352 eP P 01 36 31.6 +0.1
comp=Z,13nm,1.0s,mb5.1
EDM **Edmonton** 87.98 31 eP P 01 36 32.4 -0.5
BJI **Beijing** 88.01 313 P P 01 36 35.9 +2.5
BJI PP PP 01 40 03.4 +3.1
BJI S S 01 47 17.5 +1.3
BJI pmax pmax
comp=Z,21nm,1.0s,mb5.3
BJI pmax pmax
comp=Z,160nm,4.0s
BJI LR LR
comp=N,74nm,20.6s,MS4.3
BJI LR LR
comp=E,110nm,24.2s,MS4.3
BJI LR LR
comp=Z,91nm,23.4s,MS4.1
WMOK **Wichita Mounta** 88.08 52 eP P 01 36 33.4 -0.4
comp=Z,6.3nm,1.2s,mb4.7
GYA **Guiyang** 89.95 298 P P 01 36 44.8 +1.9
GYA pP pP 01 36 55.5 +6.4
GYA sP sP 01 37 01.2 +10
GYA PP PP 01 40 20.8 +4.7
GYA SKS 01 47 11.3
GYA S S 01 47 33.4 -1.6
GYA sS sS 01 47 51.9 +6.6
GYA SS SS 01 53 37.0 +3.4
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,110nm,5.4s
GYA LR LR
comp=N,530nm,19.0s,MS5.1
GYA LR LR
comp=E,490nm,18.0s,MS5.1
GYA LR LR
comp=Z,510nm,19.0s,MS5.0
VNA2 **Neumayer--Watz** 90.12 175 eP P 01 36 42.3 -0.6
XAN **Xi'an** 90.88 306 P P 01 36 49.1 +2.1
XAN pP pP 01 36 56.9 +3.7
XAN sP sP 01 37 00.8 +5.4
XAN PP PP 01 40 26.0 +2.7
XAN S S 01 47 45.4 +2.2
XAN pmax pmax
comp=Z,2.0nm,1.5s,mb4.2
XAN pmax pmax
comp=Z,190nm,4.7s
XAN LR LR
comp=N,44nm,17.1s,MS4.0
XAN LR LR
comp=E,34nm,21.2s,MS4.0
XAN LR LR
comp=Z,35nm,19.4s,MS3.8
INK **Inuvik** 91.27 14 eP P 01 36 47.7 -0.3
comp=Z,18nm,1.4s,mb5.2
HHC **Hu-ho-hao-te** 91.54 313 eP P 01 36 51.7 +1.8
HHC pP pP 01 37 02.5 +6.4
HHC sP sP 01 37 06.3 +8.0
HHC PP PP 01 40 32.2 +3.8
HHC SKS 01 47 19.9
HHC S S 01 47 46.7 -2.3
HHC sS sS 01 48 02.9 +3.6
HHC SS SS 01 53 57.5 +1.5
HHC pmax pmax
comp=Z,22nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,79nm,6.7s
HHC LR LR
comp=N,130nm,19.2s,MS4.5
HHC LR LR
comp=E,120nm,16.5s,MS4.5
HHC LR LR
comp=Z,140nm,17.7s,MS4.5
KMI **Kunming** 92.82 295 P P 01 37 00.0 +3.8
KMI pmax pmax
comp=Z,11nm,0.6s,mb5.5
YKA **Yellowknife Ar** 92.86 23 P P 01 36 54.8 -0.6
comp=Z,1.0nm,0.7s,mb4.3,baz=235,slow=4.2,SNR=20
YKA LR LR 02 09 35.7
comp=Z,7.5nm,20.3s,MS3.1,baz=355,slow=30
ECSD **EROS Data Cent** 93.20 45 eP P 01 36 57.0 -0.5
comp=Z,14nm,1.2s,mb5.2
CD2 **Chengdu** 93.87 301 P P 01 37 02.7 +1.8
CD2 pP pP 01 37 13.3 +6.2
CD2 sP sP 01 37 17.2 +7.8
CD2 PP PP 01 40 52.6 +5.6
CD2 SKS 01 47 33.7
CD2 S S 01 48 08.5 -1.7
CD2 sS sS 01 48 26.2 +5.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,120nm,8.3s
CD2 LR LR
comp=N,120nm,8.3s
CD2 LR LR
comp=Z,100nm,7.7s
CMAR **Chiang Mai Arr** 94.05 288 P P 01 37 03.5 +1.4
comp=Z,1.3nm,0.3s,mb4.8,baz=90,slow=2.5,SNR=6.0
LZH **Lanzhou** 95.49 306 eP P 01 37 10.5 +2.3
LZH pP pP 01 37 20.0 +5.5
LZH sP sP 01 37 24.5 +7.8
LZH PP PP 01 41 04.2 +4.7
LZH pmax pmax
comp=Z,14nm,1.5s,mb5.2
FVM **French Village** 95.54 52 eP P 01 37 08.6 +0.1
ULM **Lac du Bonnet** 96.13 39 LR LR 02 15 55.1
comp=Z,145nm,18.1s,MS4.5,baz=272,slow=33
SONM **Songino Array** 97.54 318 LR LR 02 15 35.8
comp=Z,86nm,21.4s,MS4.2,baz=107,slow=32
LPAZ **La Paz** 98.28 110 LR LR 02 13 32.3
comp=Z,122nm,19.5s,MS4.4,baz=59,slow=30
ROSC **El Rosal** 99.66 88 LR LR 02 11 07.4
comp=Z,45nm,19.2s,MS4.0,baz=25,slow=29
KURK **Kurchatov** 115.84 318 PKP PKPdf 01 42 24.1 -1.5
comp=Z,0.8nm,0.7s,baz=90,slow=1.8,SNR=6.3
UCH **Uchtor** 118.87 308 ePKPdf PKPdf 01 42 32.1 +0.4
BVAR **Borovoye Array** 120.68 321 PKP PKPdf 01 42 34.3 -0.5
comp=Z,2.2nm,0.6s,baz=74,slow=1.8,SNR=16
ARU **Arti** 126.30 327 ePKPdf PKPdf 01 42 46.1 +0.5
ARCES **ARCESS Array B** 127.85 352 PKP PKPdf 01 42 48.5 +0.3
comp=Z,1.5nm,0.8s,baz=11,slow=1.2,SNR=7.7
AKTK **Aktyubinsk** 128.77 320 PKP PKPdf 01 42 49.8 -0.6
AKTO **Aktyubinsk** 128.77 320 PKP PKPdf 01 42 49.8 -0.6
comp=Z,0.5nm,0.7s,baz=313,slow=3.9,SNR=4.2
FINES **FINESS Array B** 135.17 347 PKP PKPdf 01 43 01.6 -0.6
comp=Z,1.0nm,0.9s,baz=183,slow=3.8,SNR=3.9
EKA **Eskdalemuir Ar** 142.53 10 PKP PKPdf 01 43 13.3 -2.5
comp=Z,0.8nm,0.8s,baz=322,slow=5.3,SNR=3.7
SUW **Suwalki** 142.56 344 ePKP PKPdf 01 43 09.5 -6.4
AKASG **Malin Array Be** 143.47 336 PKhKP 01 43 14.4
comp=Z,1.5nm,0.4s,baz=30,slow=3.0,SNR=11
KMBO **Kilima Mbogo** 144.44 240 PKP PKPdf 01 43 19.2 -1.2
comp=Z,7.8nm,0.8s,baz=65,slow=5.0,SNR=23
KMBO **Kilima Mbogo** 144.44 240 ePKPdf PKPdf 01 43 19.6 -0.9
BSEG **Bad Segeberg** 144.66 357 ePKPbc PKPdf 01 43 17.7 -1.9
BSEG **Bad Segeberg** 144.66 357 ePKPbc PKPdf 01 43 17.7 -1.9
WAR **Warsaw** 144.71 345 ePKP PKPdf 01 43 20.3 +0.6
WIT **Witteveen** 145.88 0⇑ eP PKPdf 01 43 23.0 +1.3
comp=Z,276nm,1.2s
WIT **Witteveen** 145.88 0 ex x 01 43 33.2
IBBN **Ibbenburen** 146.38 359 ePKPbc PKPbc 01 43 23.6 -0.2
IBBN epPKPbc pPKPbc 01 43 33.8 +3.6
MALT **Malatya** 146.41 312 ePKPbc PKPbc 01 43 25.6 +1.2
MALT **Malatya** 146.41 312 ⇓iP PKPbc 01 43 25.9 +1.5
KIS **Kishinev** 146.55 333 eP PKPdf 01 43 23.0 -0.1
KWP **Kalwaria Pacla** 146.61 341 ePKP PKPbc 01 43 25.3 +0.7
KWP **Kalwaria Pacla** 146.61 341 ePKPbc PKPbc 01 43 25.2 +0.6
KWP **Kalwaria Pacla** 146.61 341 ⇓iP PKPbc 01 43 25.0 +0.4
WTSB **Winterswijk** 146.72 0⇑ eP PKPbc 01 43 24.6 -0.2
comp=Z,36nm,2.0s
WTSB **Winterswijk** 146.72 0 ex x 01 43 34.5
OJC **Ojcow** 146.87 345 ePKPdf PKPdf 01 43 22.6 -0.9
OJC ePKPab PKPab 01 43 25.5 -1.2
OJC epPKPdf pPKPdf 01 43 33.2 +3.3
OJC epPKPab pPKPab 01 43 35.7 +2.8
KSP **Ksiaz** 147.03 349 ePKP PKPbc 01 43 26.4 +0.6
CLL **Collm** 147.05 353 ePKPbc PKPbc 01 43 25.5 -0.3
CLL epPKPbc pPKPbc 01 43 35.5 +3.3
CLL **Collm** 147.05 353 ⇑iPKP PKPbc 01 43 25.8 0.0
CLL iPKP pPKPdf 01 43 35.2 +5.1
CLL i 01 43 39.0
CLL ePP PP 01 46 50.0 +0.3
CLL LR LR
comp=Z,100nm,19.2s,MS4.6
CLL **Collm** 147.05 353 ⇑iPKPbc PKPbc 01 43 25.8 0.0
comp=Z,32nm,1.3s
CLL iPKPbc pPKPbc 01 43 35.2 +3.0
comp=Z,29nm,1.1s
CLL iPKiKP 01 43 39.0
CLL ePP PP 01 46 50.0 +0.3
STHS **Stebnicka Huta** 147.23 343 ePKP PKPbc 01 43 28.0 +1.6
STHS **Stebnicka Huta** 147.23 343 ePKP PKPbc 01 43 28.0 +1.6
BRG **Berggiesshubel** 147.36 352 iPKP PKPdf 01 43 24.7 +0.4
comp=Z,30nm,1.6s
BRG i 01 43 36.4
comp=Z,20nm,1.2s
BRG i 01 43 47.5
comp=Z,16nm,1.3s
KOLS **Kolonicke sedl** 147.36 341 ePKP PKPdf 01 43 25.5 +1.1
KOLS e 01 43 39.8
KOLS **Kolonicke sedl** 147.36 341 ePKP PKPdf 01 43 25.5 +1.1
KOLS e 01 43 39.8
UPC **Upice** 147.40 349 ePKP PKPbc 01 43 27.2 +0.4
UPC epPKP pPKPdf 01 43 35.4 +4.6
BUR08 **Bucovina Ar. S** 147.49 337 ePKPbc PKPbc 01 43 27.5 +0.3
DPC **Dobruska-Polom** 147.49 349 ePKP PKPbc 01 43 27.6 +0.5
DPC epPKP pPKPdf 01 43 35.8 +4.9
BURAR **Bucovina Array** 147.51 337 ⇓iP PKPbc 01 43 28.8 +1.6
PVCC **Panska Ves** 147.61 351 ePKP PKPbc 01 43 28.0 +0.6
PVCC epPKP pPKPdf 01 43 36.9 +5.8
PVCC AMS AMS 02 53 30.0
comp=Z,100nm,15.8s
OKC **Ostrava-Krasne** 147.62 347 ePKP PKPdf 01 43 26.8 +2.1
OKC epPKP pPKPdf 01 43 35.3 +4.2
MORC **Moravsky Berou** 147.80 347 ePKPbc PKPbc 01 43 28.9 +1.0
MORC **Moravsky Berou** 147.80 347 ⇓iP PKPbc 01 43 29.0 +1.1
UCC **Uccle** 147.82 3 PKPbc PKPbc 01 43 27.4 -0.6
MOX **Moxa** 147.85 355 ePKP PKPbc 01 43 29.3 +1.3
comp=Z,39nm,1.9s
MOX **Moxa** 147.85 355 ePKPbc PKPbc 01 43 27.8 -0.2
MOX **Moxa** 147.85 355 ePKP PKPbc 01 43 29.3 +1.3
BEBN **Eben Emael** 147.88 2 PKPbc PKPbc 01 43 28.9 +0.8
BEBN APKPbc 01 43 38.5
HGN **Heimansgroeve** 147.92 1⇑ eP PKPbc 01 43 27.8 -0.4
comp=Z,17nm,2.0s
HGN **Heimansgroeve** 147.92 1 ex x 01 43 38.0
WERD **Werda** 147.97 354 ePKPbc PKPbc 01 43 28.2 -0.2
GUNZ **Gunzen** 148.05 354 ePKPbc PKPbc 01 43 28.7 +0.1
MEM **Membach** 148.07 1 PKPbc PKPbc 01 43 27.3 -1.3
WERN **Wernitzgruen** 148.12 354 ePKPbc PKPbc 01 43 29.1 +0.3
WERN epPKPbc pPKPbc 01 43 38.7 +3.6
PRU **Pruhonice** 148.14 351 ePKP PKPbc 01 43 29.2 +0.4
PRU epPKP pPKPdf 01 43 39.1 +7.1
PRU AMS AMS 02 48 30.0
comp=Z,100nm,24.8s
NKC **Novy Kostel** 148.17 353 ePKP PKPbc 01 43 29.0 +0.1
NKC epPKP pPKPdf 01 43 38.3 +6.3
BCLA **Clavier** 148.24 2 PKPbc PKPdf 01 43 25.8 0.0
KECS **Kecovo** 148.29 343 ePKP PKPbc 01 43 30.7 +1.4
KECS **Kecovo** 148.29 343 ePKP PKPbc 01 43 30.7 +1.4
VRI **Vrincioaia** 148.33 333 ⇓iP PKPbc 01 43 29.8 +0.3
VRAC **Vranov** 148.44 348 PKPbc PKPbc 01 43 30.8 +1.2
comp=Z,1.2nm,0.4s,baz=41,slow=5.8,SNR=12
DOU **Dourbes** 148.54 3 PKP PKPbc 01 43 28.5 -1.4
DOU APKP 01 43 39.5
GIVF **Givet** 148.54 3 ePKP1 PKPbc 01 43 29.7 -0.2
BAIF **Baives** 148.55 4 ePKP1 PKPbc 01 43 29.9 0.0
comp=Z,107nm,1.7s
TREC **Trest** 148.66 349 ePKP PKPbc 01 43 30.5 +0.3
TREC epPKP pPKPdf 01 43 39.6 +6.7
TREC AMS AMS 02 53 40.0
comp=Z,100nm,18.5s
VYHS **Vyhne** 148.71 345 ePKP PKPbc 01 43 30.9 +0.5
VYHS **Vyhne** 148.71 345 ePKP PKPbc 01 43 30.9 +0.5
KOLL **Kolacno** 148.74 345 ePKP PKPbc 01 43 32.2 +1.8
KOLL **Kolacno** 148.74 345 ePKP PKPbc 01 43 32.2 +1.8
ABH **Alteburg** 148.81 359 PKP PKPbc 01 43 30.2 -0.4
GRA1 **Grafenberg Arr** 148.82 355 ePKPbc PKPbc 01 43 30.8 +0.2
GRF **Grafenberg Arr** 148.82 355 ePKPbc PKPbc 01 43 30.8 +0.2
GRF **Grafenberg Arr** 148.82 355 ePKP PKPbc 01 43 30.8 +0.2
BR131 **Keskin Array S** 148.90 318 ePKPbc PKPbc 01 43 31.6 +0.5
BRTR **Keskin Array B** 148.90 318 PKPbc PKPbc 01 43 31.0 -0.1
comp=Z,1.8nm,0.6s,baz=32,slow=7.3,SNR=4.3
MLR **Muntele Rosu** 148.96 334 PKPbc PKPbc 01 43 31.7 +0.6
comp=Z,9.6nm,1.2s,baz=3.6,slow=3.1,SNR=10
MLR **Muntele Rosu** 148.96 334 ⇑iP PKPbc 01 43 32.7 +1.6
PSZ **Piszkesteto** 148.97 343 ePKPbc PKPbc 01 43 31.8 +0.8
PSZ **Piszkesteto** 148.97 343 ⇑ePKP PKPbc 01 43 31.5 +0.5
PSZ **Piszkesteto** 148.97 343 ⇓iP PKPbc 01 43 31.7 +0.7
RUP **Ruppelstein** 148.99 0 PKP PKPbc 01 43 31.1 +0.1
WLF **Walferdange** 149.02 1 APKP 01 43 40.6
WLF **Walferdange** 149.02 1 ePKPbc PKPbc 01 43 31.3 +0.2
WLF **Walferdange** 149.02 1 ePKPbc PKPbc 01 43 32.1 +0.9
TOD **Tromm** 149.06 358 PKP PKPbc 01 43 31.1 -0.1
KHC **Kasperske Hory** 149.12 352 ePKPbc PKPbc 01 43 32.2 +0.9
KHC **Kasperske Hory** 149.12 352 ePKP PKPbc 01 43 31.6 +0.2
KHC epPKP pPKPdf 01 43 41.5 +7.9
KHC AMS AMS 02 49 40.0
comp=Z,100nm,24.6s
ROSF **Rostrenen** 149.19 14 ePKP1 PKPbc 01 43 30.6 -1.0
comp=Z,20nm,0.9s
FLN **La Foliniere** 149.31 10 ePKP1 PKPbc 01 43 31.1 -0.8
comp=Z,61nm,1.0s
FLN eMLR MLR
comp=Z,154nm,21.0s,MS4.5
FLN **La Foliniere** 149.31 10 ePKP PKPbc 01 43 31.1 -0.8
FLN LR LR
comp=Z,150nm,21.0s,MS4.8
VOIR 149.37 335 ⇓iP PKPbc 01 43 33.4 +1.3
GEC2 **GERESS Array S** 149.38 351 ePKPbc PKPbc 01 43 31.8 -0.3
GERES **GERESS Array B** 149.38 351 PKP PKPdf 01 43 27.0 -0.7

comp=Z,1.3nm,0.8s,baz=95,slow=3.1,SNR=4.1
GERES PKPbc PKPbc 01 43 32.6 +0.6
comp=Z,1.2nm,0.9s,baz=40,slow=2.3,SNR=17
SGMF Saint Gilles 149.42 13 *e*PKP1 PKPbc 01 43 31.3 -0.9
comp=Z,71nm,1.4s
LDF La Druitiere 149.54 9 *e*PKP1 PKPbc 01 43 31.6 -0.8
comp=Z,121nm,1.6s
BUD Budapest 149.60 344⇓ *ep*PKP PKPbc 01 43 33.7 +1.1
QUIF Quistinic 149.61 14 *e*PKP1 PKPbc 01 43 31.7 -0.9
comp=Z,22nm,1.1s
GRR Gorron 149.61 10 *e*PKP1 PKPbc 01 43 31.9 -0.7
comp=Z,24nm,0.9s
LANF Langenberg 149.71 359 PKP PKPbc 01 43 32.6 -0.3
CSNA Conrad Observa 149.90 348⇓ *i*PKiKP PKiKP 01 43 34.3 0.0
comp=Z,15nm,1.2s
ASF Jabal al Asfar 149.99 303 PKPbc PKPbc 01 43 35.0 +0.9
comp=Z,4.2nm,0.8s,baz=312,slow=3.1,SNR=7.3
MEZF Maizieres J'vi 150.15 3 *e*PKP1 PKPbc 01 43 34.0 +0.1
comp=Z,71nm,1.4s
MOA Molln 150.26 350⇓ *i*PKiKP PKiKP 01 43 34.4 -0.7
comp=Z,5.9nm,1.2s
CDF Champ du Feu 150.28 360 *e*PKP1 PKPbc 01 43 34.1 -0.2
comp=Z,58nm,1.6s
BFO Black Forest 150.35 358 *e*PKPbc PKPbc 01 43 34.6 +0.2
BFO Black Forest 150.35 358 *e*PKPbc PKPbc 01 43 34.6 +0.2
THEF They Montfort 150.46 1 PKP PKPbc 01 43 34.8 +0.1
ECH Echery 150.48 360 PKP PKPbc 01 43 34.5 -0.2
BZS Buzias 150.50 339⇑ *i*P PKPbc 01 43 34.1 -0.8
HAU Haudompre 150.69 1 *e*PKP1 PKPbc 01 43 35.0 -0.2
comp=Z,54nm,1.5s
HAU *e*MLR MLR
comp=Z,90nm,19.8s,MS4.3
HAU Haudompre 150.69 1 *e*PKP PKPbc 01 43 35.0 -0.2
HAU LR LR
comp=Z,90nm,19.8s,MS4.6
FELD Feldberg im Sc 150.81 359 PKP PKPbc 01 43 35.0 -0.5
MOF Molkenrain 150.84 360 PKP PKPbc 01 43 34.8 -0.8
MMAI Mount Meron Ar 150.87 305 PKPbc PKPbc 01 43 36.5 +0.3
comp=Z,13nm,0.9s,baz=70,slow=7.2,SNR=7.7
MMAI PKPab PKPab 01 43 44.4 +1.0
comp=Z,3.8nm,0.7s,baz=97,slow=2.7,SNR=4.4
PKSM Moragy 150.87 343⇓ *i*P PKPbc 01 43 36.2 +0.5
HINF Hinteralfeld 150.88 0 *e*PKP1 PKPbc 01 43 35.2 -0.5
RETA Reutte 151.05 355⇑ *i*PKiKP PKiKP 01 43 35.8 -0.9
comp=Z,8.1nm,1.3s
MOTA Moosalm 151.16 354⇑ *i*PKiKP PKiKP 01 43 36.5 -0.4
comp=Z,12nm,1.4s
BBS Basel-Blauen 151.23 359 PKP PKPbc 01 43 36.3 -0.2
SOKA Soboth 151.26 349⇓ *i*PKiKP PKiKP 01 43 36.2 -0.9
comp=Z,6.4nm,1.1s
LOR Lormes 151.31 5 *e*PKP1 PKPbc 01 43 36.5 -0.2
comp=Z,39nm,1.2s
LOR *e*MLR MLR
comp=Z,103nm,20.5s,MS4.3
LOR Lormes 151.31 5 *e*PKP PKPbc 01 43 36.5 -0.2
LOR LR LR
comp=Z,100nm,20.5s,MS4.6
LOMF Lomont 151.35 0 PKP PKPbc 01 43 36.7 -0.1
MFF Saint Martin d 151.47 10 *e*PKP1 PKPbc 01 43 36.3 -0.8
comp=Z,67nm,1.4s
SSF Saint Saulge 151.48 5 *e*PKP1 PKPbc 01 43 36.9 -0.2
comp=Z,45nm,1.2s
FETA Feichten 151.52 355⇑ *i*PKiKP PKiKP 01 43 38.4 +0.7
comp=Z,16nm,1.2s
ABTA Abfaltersbach 151.60 352⇓ *i*PKiKP PKiKP 01 43 37.1 -0.7
comp=Z,7.2nm,0.7s
AVF Avril sur Loir 151.74 5 *e*PKP1 PKPbc 01 43 37.0 -0.7
comp=Z,25nm,1.3s
DAVOX Davos/Dischmat 151.82 356 PKPbc PKPbc 01 43 38.9 +1.0
comp=Z,2.5nm,0.7s,baz=27,slow=4.6,SNR=6.4
BGF Bois d'Agland 151.92 6 *e*PKP1 PKPbc 01 43 37.6 -0.5
comp=Z,15nm,0.9s
SMF Signal de Mont 151.93 5 *e*PKP1 PKPbc 01 43 37.5 -0.7
CABF La Chapelle 152.07 1 *e*PKP1 PKPbc 01 43 38.8 +0.3
comp=Z,14nm,0.9s
TCF Toulx Ste Croi 152.12 7 *e*PKP1 PKPbc 01 43 37.8 -0.8
comp=Z,48nm,1.6s
VISS Visnje 152.14 348 *e*PKPdf PKPbc 01 43 39.2 +0.5
VISS *i* 01 43 49.4
JAVS Javornik 152.19 350 *i*PKPdf PKPbc 01 43 41.0 +2.2
JAVS *i* 01 43 49.5
BOJS Bojanci 152.35 348 *e*PKPdf PKPbc 01 43 38.8 -0.4
BOJS *i*PKPbc PKPab 01 43 48.8 -0.3
BOJS *e* 01 44 03.2
EIL Elat 152.36 299 PKPbc PKPbc 01 43 40.1 +0.4
comp=Z,4.8nm,0.9s,baz=50,slow=8.8,SNR=5.1
PYM Petit Puy Mans 152.74 6 PKP PKPbc 01 43 40.7 +0.7
RJF Les Rejaudoux 152.99 9 *e*PKP1 PKPbc 01 43 40.0 -0.6
comp=Z,31nm,1.5s
RJF *e*MLR MLR
comp=Z,129nm,19.0s,MS4.5
RJF Les Rejaudoux 152.99 9 *e*PKP PKPbc 01 43 40.0 -0.6
RJF LR LR
comp=Z,130nm,19.0s,MS4.8
LFF La Frestale 153.23 10 *e*PKP1 PKPbc 01 43 41.8 +0.7
LBL Lubilhac 153.27 6 PKP PKPbc 01 43 41.1 -0.1
CAF Calviac 153.44 8 *e*PKP1 PKPbc 01 43 41.0 -0.6
comp=Z,9.8nm,0.9s
BNI Bardonecchia 153.64 1 *e*PKPdf PKPdf 01 43 35.0 +0.7
ESDC Sonseca Array 156.95 22 PKPab PKPab 01 44 08.9 +0.1
comp=Z,0.5nm,0.5s,baz=334,slow=4.4,SNR=4.9
LIC Lamto 162.94 135 *e*PKIKP PKPdf 01 43 44.8 -1.6
comp=Z,28nm,1.2s
LIC *e*MLR MLR
comp=Z,135nm,21.0s
LIC Lamto 162.94 135 *e*PKPdf PKPdf 01 43 44.8 -1.6
LIC LR LR
comp=Z,70nm,21.0s
TOA0 Torodi Ar. Sit 172.49 136 *e*PKPdf PKPdf 01 43 51.4 -1.7
TORD Torodi Ar. Bea 172.49 136 PKP PKPdf 01 43 50.4 -2.7
comp=Z,2.9nm,1.2s,baz=287,slow=0.8,SNR=9.3
TORD PKPab PKPab 01 45 17.2 -0.6
comp=Z,4.2nm,1.0s,baz=253,slow=3.7,SNR=13

ISCJB ***08*** *01:38:41.2±0.7, 45°.54N±0°.04×26°.36E±0°.05, h148km±6km, Error ellipse: s-maj=6.2km s-min=5.4km az=149.8*
CSEM ***08*** *01:38:41.6±0.3, 45°.54N×26°.34E, h149km±3km, MD4.2/2, Error ellipse: s-maj=4.8km s-min=4.3km az=169.0*
NEIC ***08*** *01:38:41.8, 45°.55N×26°.39E, h150km, MG3.4(BUC), After BUC.*
BUC ***08*** *01:38:41.6±0.9, 45°.54N×26°.36E, h150km±9km, MD4.2/2, Error ellipse: s-maj=6.7km s-min=5.7km az=103.0*
ISC 08 01:38:41.6±0.7, 45°.54N±0°.04×26°.37E±0°.05, h151km±6km, n76, σ0°.79/101, 40C-19D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.30**	**260**	P	**Pn**	**01 39 02.5**	**+0.3**
MLR	**Muntele Rosu**	**0.30**	**260**⇓	*i*P	**Pn**	**01 39 02.5**	**+0.4**
MLR				*i*S	**Sn**	**01 39 18.4**	**+0.7**
MLR	**Muntele Rosu**	**0.30**	**260**⇓	*i*P	**Pn**	**01 39 02.5**	**+0.4**
MLR	**Muntele Rosu**	**0.30**	**260**⇓	*i*P	**Pn**	**01 39 02.5**	**+0.4**
MLR				*i*S	**Sn**	**01 39 18.4**	**+0.7**
PLOR	**Plostina**	**0.37**	**33**⇑	*i*P	**Pn**	**01 39 02.4**	**0.0**
PLOR				*i*S	**Sn**	**01 39 17.6**	**-0.7**
PLOR	**Plostina**	**0.37**	**33**⇑	*i*P	**Pn**	**01 39 02.4**	**0.0**
PLOR	**Plostina**	**0.37**	**33**⇑	*i*P	**Pn**	**01 39 02.4**	**0.0**
PLOR				*i*S	**Sn**	**01 39 17.6**	**-0.7**
VRI	**Vrincioaia**	**0.41**	**38**	P	**Pn**	**01 39 02.6**	**+0.1**
VRI	**Vrincioaia**	**0.41**	**38**⇑	*i*P	**Pn**	**01 39 02.7**	**+0.2**
VRI				*i*S	**Sn**	**01 39 18.3**	**-0.3**
VRI	**Vrincioaia**	**0.41**	**38**⇑	*i*P	**Pn**	**01 39 02.7**	**+0.2**
VRI	**Vrincioaia**	**0.41**	**38**	P	**Pn**	**01 39 02.6**	**+0.1**
VRI				*i*S	**Sn**	**01 39 18.3**	**-0.3**
ISR	**Istrita**	**0.44**	**163**⇑	*i*P	**Pn**	**01 39 03.2**	**+0.5**
ISR	**Istrita**	**0.44**	**163**⇑	*i*P	**Pn**	**01 39 03.2**	**+0.5**
ISR	**Istrita**	**0.44**	**163**⇑	*i*P	**Pn**	**01 39 03.2**	**+0.5**
BRD	**Bordesti**	**0.47**	**88**⇑	*i*P	**Pn**	**01 39 04.4**	**+1.6**
BRD	**Bordesti**	**0.47**	**88**⇑	*i*P	**Pn**	**01 39 04.4**	**+1.6**
BRD	**Bordesti**	**0.47**	**88**⇑	*i*P	**Pn**	**01 39 04.4**	**+1.6**
ODB	**Odobesti**	**0.54**	**64**	P	**Pn**	**01 39 04.4**	**+1.3**
ODB	**Odobesti**	**0.54**	**64**	P	**Pn**	**01 39 04.4**	**+1.3**
VOIR		**0.93**	**264**	P	**Pn**	**01 39 05.6**	**-0.1**
VOIR		**0.93**	**264**⇓	*i*P	**Pn**	**01 39 05.5**	**-0.3**
VOIR				*i*S	**Sn**	**01 39 23.8**	**-0.4**
VOIR		**0.93**	**264**⇓	*i*P	**Pn**	**01 39 05.5**	**-0.3**
VOIR		**0.93**	**264**	P	**Pn**	**01 39 05.6**	**-0.2**
VOIR				*i*S	**Sn**	**01 39 23.8**	**-0.4**
BUC1	**Bucharest**	**1.22**	**191**	P	**Pn**	**01 39 08.8**	**+0.5**
BUC1	**Bucharest**	**1.22**	**191**⇑	*i*P	**Pn**	**01 39 08.8**	**+0.5**
BUC1				*i*S	**Sn**	**01 39 29.1**	**+0.4**
BUC1	**Bucharest**	**1.22**	**191**⇑	*i*P	**Pn**	**01 39 08.8**	**+0.5**
BUC1	**Bucharest**	**1.22**	**191**⇑	*i*P	**Pn**	**01 39 08.8**	**+0.5**
BUC1				*i*S	**Sn**	**01 39 29.1**	**+0.4**
HARR	**Harsova**	**1.40**	**127**⇑	*i*P	**Pn**	**01 39 10.6**	**+0.5**
HARR				*i*S	**Sn**	**01 39 31.7**	**-0.2**
HARR	**Harsova**	**1.40**	**127**⇑	*i*P	**Pn**	**01 39 10.6**	**+0.5**
HARR	**Harsova**	**1.40**	**127**⇑	*i*P	**Pn**	**01 39 10.6**	**+0.5**
HARR				*i*S	**Sn**	**01 39 31.7**	**-0.2**
MDB	**Medias**	**1.51**	**294**	P	**Pn**	**01 39 11.8**	**+0.6**
MDB	**Medias**	**1.51**	**294**⇑	*i*P	**Pn**	**01 39 11.6**	**+0.4**
MDB	**Medias**	**1.51**	**294**⇑	*i*P	**Pn**	**01 39 11.6**	**+0.4**
MDB	**Medias**	**1.51**	**294**⇑	*i*P	**Pn**	**01 39 11.6**	**+0.4**
LEOM	**Leova**	**1.61**	**54**⇑	*i*P	**Pn**	**01 39 12.6**	**+0.3**
LEOM				*i*S	**Sn**	**01 39 35.5**	**-0.3**
LEOM	**Leova**	**1.61**	**54**⇑	*i*P	**Pn**	**01 39 12.6**	**+0.3**
LEOM	**Leova**	**1.61**	**54**⇑	*i*P	**Pn**	**01 39 12.6**	**+0.3**
LEOM				*i*S	**Sn**	**01 39 35.5**	**-0.3**
CVD	**Cernavoda**	**1.71**	**135**⇑	*i*P	**Pn**	**01 39 13.8**	**+0.4**
CVD				*i*S	**Sn**	**01 39 37.0**	**-0.7**
CVD	**Cernavoda**	**1.71**	**135**⇑	*i*P	**Pn**	**01 39 13.8**	**+0.4**
CVD	**Cernavoda**	**1.71**	**135**⇑	*i*P	**Pn**	**01 39 13.8**	**+0.4**
CVD				*i*S	**Sn**	**01 39 37.0**	**-0.7**
TIRR	**Tirgusor**	**1.81**	**126**	*e*Pn	**Pn**	**01 39 14.9**	**+0.4**
TIRR				*e*S	**Sn**	**01 39 39.4**	**-0.4**
TIRR	**Tirgusor**	**1.81**	**126**⇑	*i*P	**Pn**	**01 39 15.1**	**+0.6**
TIRR				*i*S	**Sn**	**01 39 39.0**	**-0.8**
TIRR	**Tirgusor**	**1.81**	**126**⇑	*i*P	**Pn**	**01 39 15.1**	**+0.6**
TIRR	**Tirgusor**	**1.81**	**126**	*e*Pn	**Pn**	**01 39 14.9**	**+0.4**
TIRR	**Tirgusor**	**1.81**	**126**⇑	*i*P	**Pn**	**01 39 15.1**	**+0.6**
TIRR				*i*S	**Sn**	**01 39 39.0**	**-0.8**
IAS	**Iasi**	**1.85**	**26**⇑	*i*P	**Pn**	**01 39 14.9**	**0.0**
IAS				*i*S	**Sn**	**01 39 39.6**	**-1.0**
IAS	**Iasi**	**1.85**	**26**⇑	*i*P	**Pn**	**01 39 14.9**	**0.0**
IAS	**Iasi**	**1.85**	**26**⇑	*i*P	**Pn**	**01 39 14.9**	**0.0**
IAS				*i*S	**Sn**	**01 39 39.6**	**-1.0**
ZIMR		**2.02**	**201**⇓	*i*P	**Pn**	**01 39 17.0**	**+0.1**
ZIMR				*i*S	**Sn**	**01 39 43.1**	**-0.9**
ZIMR		**2.02**	**201**⇓	*i*P	**Pn**	**01 39 17.0**	**+0.1**
BUR08	**Bucovina Array**	**2.22**	**340**⇓	*i*P	**Pn**	**01 39 20.4**	**+1.2**
BUR08	**Bucovina Array**	**2.22**	**340**⇓	*i*P	**Pn**	**01 39 20.4**	**+1.2**
BUR08	**Bucovina Array**	**2.22**	**340**⇓	*i*P	**Pn**	**01 39 20.4**	**+1.2**
KIS	**Kishinev**	**2.24**	**49**	P	**Pn**	**01 39 19.7**	**+0.2**
KIS	**Kishinev**	**2.24**	**49**⇑	*i*P	**Pn**	**01 39 19.5**	**0.0**
KIS	**Kishinev**	**2.24**	**49**⇑	*i*P	**Pn**	**01 39 19.5**	**0.0**
KIS	**Kishinev**	**2.24**	**49**	P	**Pn**	**01 39 19.7**	**+0.2**
KIS				*i*S	**Sn**	**01 39 46.0**	**-2.7**
	300nm,0.8s						
BUR08	**Bucovina Ar. S**	**2.25**	**340**	*e*Pn	**Pn**	**01 39 20.5**	**+0.9**
BUR08	**Bucovina Ar. S**	**2.25**	**340**	*e*Pn	**Pn**	**01 39 20.5**	**+0.9**
DEV	**Deva**	**2.45**	**279**⇑	*i*P	**Pn**	**01 39 22.6**	**+0.6**
DEV	**Deva**	**2.45**	**279**⇑	*i*P	**Pn**	**01 39 22.6**	**+0.6**
DEV	**Deva**	**2.45**	**279**⇑	*i*P	**Pn**	**01 39 22.6**	**+0.6**
GZR	**Gura Zlata**	**2.53**	**268**	P	**Pn**	**01 39 22.7**	**-0.3**
GZR	**Gura Zlata**	**2.53**	**268**⇓	*i*P	**Pn**	**01 39 23.3**	**+0.3**
GZR				*i*S	**Sn**	**01 39 54.8**	**-0.2**
GZR	**Gura Zlata**	**2.53**	**268**⇓	*i*P	**Pn**	**01 39 23.3**	**+0.3**
GZR	**Gura Zlata**	**2.53**	**268**⇓	*i*P	**Pn**	**01 39 23.3**	**+0.3**
GZR				*i*S	**Sn**	**01 39 54.8**	**-0.2**
DRGR		**2.83**	**298**⇓	*i*P	**Pn**	**01 39 26.0**	**-0.7**
DRGR		**2.83**	**298**⇓	*i*P	**Pn**	**01 39 26.0**	**-0.7**
DRGR		**2.83**	**298**⇓	*i*P	**Pn**	**01 39 26.0**	**-0.7**
BZS	**Buzias**	**3.33**	**273**⇑	*i*P	**Pn**	**01 39 32.7**	**-0.5**
BZS	**Buzias**	**3.33**	**273**⇑	*i*P	**Pn**	**01 39 32.7**	**-0.5**
BZS	**Buzias**	**3.33**	**273**⇑	*i*P	**Pn**	**01 39 32.7**	**-0.5**
BOLS	**Boljevac**	**3.58**	**243**⇓	*i*Pn	**Pn**	**01 39 36.3**	**-0.1**
NISS		**3.82**	**238**⇓	*i*Pn	**Pn**	**01 39 39.8**	**+0.4**
GRUS	**Gruza**	**4.35**	**250**⇓	*i*Pn	**Pn**	**01 39 45.0**	**-1.4**
TRUS	**Trudelj**	**4.43**	**255**	*e*Pn	**Pn**	**01 39 44.7**	**-2.8**

MAN 08 02:07:47, 12°.77N×123°.65E, h30km, mb3.8, ML2.6, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.96**	**31**	*e*P	Pn	02 08 03.2	-1.2
PVCP				*e*S	Sn	02 08 17.7	+0.7
CNP	**Catarman**	**1.02**	**104**	*e*P	Pn	02 08 05.1	-0.2
CNP				*e*S	Sn	02 08 18.7	0.0
RCP	**Roxas**	**1.49**	**216**⇓	*e*P	Pn	02 08 12.8	+1.1
RCP				*e*S	Sn	02 08 29.9	-0.3
GUIM	**Jordan**	**2.37**	**206**	*e*P	Pn	02 08 24.8	+0.9
GUIM				*e*S	Sn	02 08 48.0	-3.9

NEIC ***08*** *02:12:39.1, 36°.37S×72°.02W, h42km, MD3.7(GUC), After GUC.*
GUC 08 02:12:39.1±1.3, 36°.37S×72°.02W, h42km±8km, MD3.7, ML3.7, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**1.02**	**18**	*i*P	Pn	02 12 57.5	+0.6
TALC				*i*S	Sn	02 13 11.5	+1.5
TALC				AML	AML	02 13 11.9	
	comp=N,4μm,0.1s						
NICH	**Los Niches**	**1.51**	**25**	*e*P	Pn	02 13 02.2	-1.5
NICH				*i*S	Sn	02 13 20.7	-1.4
LNV	**Longovilo**	**2.46**	**12**	*e*P	Pn	02 13 17.6	+0.9
LNV				*i*S	Sn	02 13 49.2	+3.7
CACH	**El Canelo**	**2.53**	**28**	*e*P	Pn	02 13 18.8	+1.1
CACH				*i*S	Sn	02 13 49.0	+1.7
TACH	**Talagante**	**2.85**	**18**	*e*P	Pn	02 13 23.5	+1.4
LMEL	**Las Melosas**	**2.92**	**31**	P	Pn	02 13 25.5	+2.4
LMEL				*e*S	Sn	02 13 58.8	+1.9
LMEL	**Las Melosas**	**2.92**	**31**	*e*P	Pn	02 13 25.5	+2.4
LMEL				*e*S	Sn	02 13 58.8	+1.9
LMEL				AML	AML	02 14 03.5	
	comp=N,186nm,0.1s						
PCH	**Pirque**	**3.01**	**25**	*e*P	Pn	02 13 25.2	+0.9
PCH				*e*S	Sn	02 14 02.6	+3.6
ANTU	**Antumapu**	**3.02**	**23**	*i*S	Sn	02 14 05.0	+5.7
CLCH	**Cerro Calan**	**3.21**	**23**	*e*P	Pn	02 13 30.2	+3.2
CLCH				*e*S	Sn	02 14 07.2	+3.3
CLCH				AML	AML	02 14 13.6	
	comp=E,149nm,0.9s						
PEL	**Peldehue**	**3.40**	**19**	*e*P	Pn	02 13 32.2	+2.6
PEL				*e*S	Sn	02 14 13.2	+4.4
PEL				AML	AML	02 14 18.0	
	comp=E,208nm,0.3s						

TRN ***08*** *02:49:56.8, 17°.70N×63°.86W, h3km*
NEIC ***08*** *02:49:58.8, 17°.56N×63°.61W, h77km, MD3.6(RSPR), After RSPR.*
RSPR ***08*** *02:49:58.8, 17°.56N×63°.61W, h77km±12km, MD3.6/4, MD3.6/4*
ISC 08 02:49:57.0±3.1, 17°.5N±0°.1×63°.7W±0°.2, h13km±28km, n14, σ0°.21/21, 10C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.27**	**314**⇑	*e*P	**Pn**	**02 50 20.4**	**-0.1**
TBVI				*e*S	**Sb**	**02 50 37.1**	**0.0**
TBVI	**Tortola**	**1.27**	**314**⇑	*e*P	**Pn**	**02 50 20.4**	**-0.1**
ABV	**Anegada**	**1.36**	**332**	*e*S	**Sn**	**02 50 39.6**	**+0.1**
ABV	**Anegada**	**1.36**	**332**	*e*S	**Sn**	**02 50 39.6**	**+0.1**
STVI	**Saint Thomas**	**1.48**	**304**⇑	*e*P	**Pn**	**02 50 23.6**	**+0.2**
STVI				*e*S	**Sn**	**02 50 42.5**	**-0.2**
STVI	**Saint Thomas**	**1.48**	**304**⇑	*e*P	**Pn**	**02 50 23.6**	**+0.2**
STVI				*e*S	**Sn**	**02 50 42.5**	**-0.2**
MTP	**Monte Pirata**	**1.89**	**288**⇑	*e*P	**Pn**	**02 50 29.1**	**+0.1**
MTP	**Monte Pirata**	**1.89**	**288**	*e*Pn	**Pn**	**02 50 29.2**	**+0.1**
MTP				*e*S	**Sn**	**02 50 52.9**	**+0.1**
MTP	**Monte Pirata**	**1.89**	**288**⇑	*e*P	**Pn**	**02 50 29.1**	**+0.1**
MTP				*e*S	**Sn**	**02 50 53.2**	**+0.4**
CPD	**Cerro la Pandu**	**2.21**	**284**⇑	*e*P	**Pn**	**02 50 33.4**	**0.0**
CPD	**Cerro la Pandu**	**2.21**	**284**⇑	*e*P	**Pn**	**02 50 33.4**	**0.0**
CBYP	**Canovanas**	**2.22**	**290**⇑	*e*P	**Pn**	**02 50 33.3**	**-0.3**
CBYP	**Canovanas**	**2.22**	**290**	*e*Pn	**Pn**	**02 50 33.6**	**0.0**
CBYP				*e*S	**Sn**	**02 51 01.2**	**+0.3**
CBYP	**Canovanas**	**2.22**	**290**⇑	*e*P	**Pn**	**02 50 33.3**	**-0.3**
CBYP				*e*S	**Sn**	**02 51 00.4**	**-0.5**

ISCJB ***08*** *03:03:19.8±1.1, 37°.72N±0°.06×29°.36E±0°.08, h5km±12km, Error ellipse: s-maj=11.4km s-min=7.6km az=39.5*
CSEM ***08*** *03:03:19.6, 37°.74N×29°.31E, h7km, MD2.5, After DDA*
DDA ***08*** *03:03:19.6, 37°.74N×29°.31E, h7km±5km, Md2.5*
ISC 08 03:03:20.2±1.1, 37°.72N±0°.06×29°.34E±0°.07, h10km±10km, n8, σ0°.98/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNZL	**Cakiroluk**	**0.24**	**263**	*i*P	**Pg**	**03 03 22.6**	**-2.5**
DNZL				*i*S	**Sg**	**03 03 29.3**	**+0.9**
DNZL	**Cakiroluk**	**0.24**	**263**	*i*P	**Pg**	**03 03 22.6**	**-2.5**
DNZL				*i*S	**Sg**	**03 03 29.3**	**+1.0**
GOLH	**Golhisar**	**0.51**	**160**	*i*P	**Pg**	**03 03 30.7**	**+0.5**
GOLH				*i*S	**Sg**	**03 03 45.7**	**+8.8**
GOLH	**Golhisar**	**0.51**	**160**	*i*P	**Pg**	**03 03 30.7**	**+0.5**
GOLH				*i*S	**Sg**	**03 03 45.7**	**+8.8**
KHAL	**Karahalli**	**0.66**	**10**	*i*P	**Pg**	**03 03 32.4**	**-0.6**
KHAL				*i*S	**Sg**	**03 03 42.3**	**+0.6**
KHAL	**Karahalli**	**0.66**	**10**	*i*P	**Pg**	**03 03 32.4**	**-0.6**
KHAL				*i*S	**Sg**	**03 03 42.3**	**+0.7**
AYDN	**Tasoluk**	**1.16**	**268**	*i*P	**Pb**	**03 03 42.1**	**-0.3**
AYDN				*i*S	**Sb**	**03 03 57.9**	**+0.4**
AYDN	**Tasoluk**	**1.16**	**268**	*i*P	**Pb**	**03 03 42.1**	**-0.3**
AYDN				*i*S	**Sb**	**03 03 57.9**	**+0.4**

DDA ***08*** *03:04:10.4, 37°.79N×29°.27E, h7km±3km, Md2.8*
ISK ***08*** *03:04:10.9, 37°.86N×29°.31E, h16km, MD2.9*
ISCJB ***08*** *03:04:11.7±0.4, 37°.85N±0°.03×29°.28E±0°.04, h23km±5km, Error ellipse: s-maj=5.7km s-min=4.3km az=1.8*
CSEM ***08*** *03:04:11.0±0.2, 37°.87N×29°.29E, h20km, MD2.8, Error ellipse: s-maj=5.8km s-min=4.7km az=90.0*
ISC 08 03:04:11.5±0.4, 37°.86N±0°.02×29°.29E±0°.04, h18km±4km, n26, σ1°.12/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.23**	**243**	*e*PG	**Pg**	**03 04 16.6**	**-0.3**
DENT				*e*SG	**Sg**	**03 04 21.6**	**+1.2**
DENT	**Denizli**	**0.23**	**243**	*e*Pg	**Pg**	**03 04 16.6**	**-0.2**
DENT				*e*Sg	**Sg**	**03 04 21.7**	**+1.2**
DNZL	**Cakiroluk**	**0.25**	**229**	*i*P	**Pg**	**03 04 15.0**	**-2.3**
DNZL				*i*S	**Sg**	**03 04 22.2**	**+1.0**
KHL	**Karahalli**	**0.50**	**22**	*e*PG	**Pg**	**03 04 21.1**	**-0.6**
KHL				*e*SG	**Sg**	**03 04 29.1**	**+0.6**
KHL	**Karahalli**	**0.50**	**22**	*e*Pg	**Pg**	**03 04 21.1**	**-0.6**
KHL				*e*Sg	**Sg**	**03 04 29.1**	**+0.6**
KHAL	**Karahalli**	**0.54**	**17**	*i*P	**Pb**	**03 04 22.0**	**-0.4**
KHAL				*i*S	**Sb**	**03 04 31.1**	**+1.3**
KHAL	**Karahalli**	**0.54**	**17**	*i*P	**Pb**	**03 04 22.0**	**-0.4**
KHAL				*i*S	**Sb**	**03 04 31.1**	**+1.3**
GOLH	**Golhisar**	**0.66**	**160**	*i*P	**Pb**	**03 04 22.0**	**-2.3**
GOLH				*i*S	**Sb**	**03 04 35.1**	**+2.1**
GOLH	**Golhisar**	**0.66**	**160**	*i*P	**Pb**	**03 04 22.0**	**-2.3**
GOLH				*i*S	**Sb**	**03 04 35.2**	**+2.1**
GLHS	**Glhisar (BURDU**	**0.72**	**166**	*e*PG	**Pg**	**03 04 25.3**	**-0.3**
GLHS				*e*SG	**Sg**	**03 04 35.7**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.72**	**166**	*e*Pg	**Pg**	**03 04 25.3**	**-0.3**
GLHS				*e*Sg	**Sg**	**03 04 35.7**	**+0.5**
KULA	**Kula-Manisa**	**0.82**	**323**	*e*PG	**Pg**	**03 04 26.9**	**-0.6**
KULA				*e*SG	**Sg**	**03 04 38.9**	**+0.4**
KULA	**Kula-Manisa**	**0.82**	**323**	*e*Pg	**Pg**	**03 04 26.9**	**-0.7**
KULA				*e*Sg	**Sg**	**03 04 38.9**	**+0.4**
ISP	**Isparta**	**0.97**	**90**	*e*PG	**Pg**	**03 04 30.1**	**-0.2**
YER	**Yerkesik**	**1.07**	**228**	*e*PN	**Pn**	**03 04 32.3**	**+0.7**
YER	**Yerkesik**	**1.07**	**228**	*e*Pn	**Pn**	**03 04 32.3**	**+0.7**
BCK	**Bucak**	**1.11**	**110**	*e*PN	**Pn**	**03 04 31.6**	**-0.4**
BCK	**Bucak**	**1.11**	**110**	*e*Pn	**Pn**	**03 04 31.6**	**-0.4**
AYDN	**Tasoluk**	**1.13**	**261**	*i*P	**Pn**	**03 04 31.7**	**-0.7**
AYDN				*i*S	**Sb**	**03 04 46.4**	**-0.5**
AYDN	**Tasoluk**	**1.13**	**261**	*i*P	**Pn**	**03 04 31.7**	**-0.7**
AYDN				*i*S	**Sb**	**03 04 46.3**	**-0.5**
ELL	**Elmali**	**1.21**	**156**	*e*PN	**Pn**	**03 04 34.2**	**+0.8**
ELL	**Elmali**	**1.21**	**156**	*e*Pn	**Pn**	**03 04 34.2**	**+0.7**
SHUT	**Suhut-Afyon**	**1.22**	**55**	*e*PN	**Pn**	**03 04 33.1**	**-0.4**
SHUT	**Suhut-Afyon**	**1.22**	**55**	*e*Pn	**Pn**	**03 04 33.1**	**-0.4**
DEMI	**Demirci**	**1.27**	**339**	*i*P	**Pn**	**03 04 31.8**	**-2.5**
DEMI				*i*S	**Sn**	**03 04 52.8**	**+2.0**
DEMI	**Demirci**	**1.27**	**339**	*i*P	**Pn**	**03 04 31.8**	**-2.4**

ISCJB ***08*** *03:37:40.8±1.1, 36°.21N±0°.04×69°.07E±0°.07, h42km±11km, mb4.1/26, MS3.5/8, Error ellipse: s-maj=9.5km s-min=4.8km

NDI eS Sn 03 41 56.0 -1.3
SONA Sohna 10.37 137 eP Pn 03 40 10.2 +1.5
SONA eS Sn 03 42 00.8 -2.8
JOSI Joshimath 10.38 119 eP Pn 03 40 12.7 +3.9
JOSI eS Sn 03 42 00.5 -3.3
JOSI AML AML 03 43 19.2
comp=N,224nm,0.7s
JOSI AML AML 03 43 29.7
comp=E,161nm,0.6s
PYUN Piuthan 14.25 120 eP Pn 03 41 00.9 -0.7
comp=E,17nm,0.3s
MK31 Makanchi Array 14.55 39 ⇓P Pn 03 41 03.9 -1.7
comp=E,4.3nm,0.8s,baz=233,slow=12,SNR=4.6
MK31 Makanchi Array 14.55 39 ePn Pn 03 41 04.2 -1.4
MKAR Makanchi Array 14.55 39 Pn Pn 03 41 04.1 -1.6
comp=E,0.2nm,0.3s,baz=230,slow=14,SNR=6.7
MKAR Makanchi Array 14.55 39 Pn Pn 03 41 04.1 -1.6
AB31 Akbulak array 14.73 336 ⇓P Pn 03 41 02.8 -5.2
comp=E,20nm,0.5s,baz=150,slow=12,SNR=352
ABKAR Akbulak array 14.73 336 ePn Pn 03 41 02.9 -5.1
comp=E,22nm,0.6s
ABKAR eSg Sn 03 43 41.4 -8.4
KOLN Koldanda 14.87 120 eP Pn 03 41 08.9 -1.1
comp=E,14nm,0.3s
GKN Gorkha 15.47 117 eP Pn 03 41 17.0 -0.8
comp=E,64nm,0.5s
KURBB Kurchatov Arra 16.04 22 ⇑P Pn 03 41 20.5 -4.4
comp=E,0.6nm,0.7s
DMN Daman 16.04 117 eP Pn 03 41 24.5 -0.6
comp=E,36nm,0.6s
KKN Kakani 16.06 117 eP Pn 03 41 25.2 -0.2
comp=E,97nm,0.7s
KURK Kurchatov 16.15 22 ⇓P Pn 03 41 22.3 -4.0
comp=E,6.7nm,1.0s
KURK Kurchatov 16.15 22 Pn Pn 03 41 20.4 -5.8
comp=E,0.1nm,0.3s,baz=217,slow=12,SNR=8.0
KURK LR LR 03 48 12.7
comp=E,123nm,18.2s,baz=220,slow=39
KURK Kurchatov 16.15 22 ePn Pn 03 41 23.2 -3.0
comp=E,11nm,0.9s
PKIN Phulchoki 16.27 117 eP Pn 03 41 27.9 -0.1
comp=E,53nm,0.6s
PKI Pulchoki 16.28 117 eP Pn 03 41 28.1 0.0
comp=E,69nm,0.7s
AKTK Aktyubinsk 16.39 334 Pn Pn 03 41 25.7 -3.7
AKTK LR LR 03 48 27.8
AKTO Aktyubinsk 16.39 334 Pn Pn 03 41 25.7 -3.7
comp=E,1.0nm,0.3s,baz=153,slow=13,SNR=27
AKTO LR LR 03 48 27.8
comp=E,185nm,19.2s,baz=134,slow=40
GUN Gumba 16.43 115 eP Pn 03 41 30.2 +0.2
comp=E,49nm,0.5s
VOSK Vostochnaya 16.67 4 ⇑P Pn 03 41 28.6 -4.2
comp=E,10nm,1.1s
BVA0 Borovoye Array 16.94 3 P Pn 03 41 31.9 -4.4
comp=E,2.0nm,1.4s,baz=164,slow=15,SNR=39
BVAR Borovoye Array 16.94 3 Pn Pn 03 41 32.4 -3.9
comp=E,0.4nm,0.3s,baz=177,slow=13,SNR=24
BVAR LR LR 03 48 51.8
comp=E,293nm,18.3s,slow=40
BRVK Borovoye 16.97 3 ⇑P Pn 03 41 32.8 -3.8
comp=E,21nm,1.0s
BRVK Borovoye 16.97 3 ePn Pn 03 41 32.9 -3.7
comp=E,7.8nm,0.6s
BRVK eS Sn 03 44 32.8 -11
LSA Lhasa 19.60 103 P Pn 03 42 12.1 +3.3
LSA Lhasa 19.60 103 eP Pn 03 42 10.4 +1.6
comp=E,8.8nm,0.9s
HYB Hyderabad 20.44 153 i P P 03 42 20.0 +3.7
ZAA0 Zalesovo Array 20.95 27 eP P 03 42 20.6 -0.9
ZALV Zalesovo Beam 20.95 27 P P 03 42 20.4 -1.1
comp=E,6.4nm,0.4s,baz=220,slow=11,SNR=18
ZALV LR LR 03 51 39.4
comp=E,72nm,21.9s,MS3.0,baz=232,slow=40
ARU Arti 21.53 344 eP P 03 42 26.4 -1.4
comp=E,24nm,1.0s,mb4.6
SHL Shillong 22.19 112 eP P 03 42 39.0 +3.9
SHL eS S 03 46 42.0 +4.8
GTA Gaotai 24.48 73 eP P 03 43 00.3 +2.7
GTA pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
ASF Jabal al Asfar 26.84 271 LR LR 03 54 32.9
comp=Z,40nm,20.9s,MS3.0,baz=90,slow=38
BRTR Keskin Array B 28.06 288 P P 03 43 29.9 0.0
comp=Z,0.4nm,0.6s,mb3.2,baz=78,slow=7.7,SNR=3.6
SONM Songino Array 29.85 55 P P 03 43 47.1 +1.5
comp=Z,2.3nm,0.9s,mb3.9,baz=262,slow=9.4,SNR=6.3
SONM pP pP 03 43 56.1 -0.9
comp=Z,2.5nm,0.8s,baz=266,slow=9.0,SNR=7.3
SONM LR LR 03 57 00.5
comp=Z,102nm,20.0s,MS3.5,baz=238,slow=39
CMAR Chiang Mai Arr 31.67 116 P P 03 44 03.6 +1.6
comp=Z,1.2nm,0.3s,mb4.2,baz=292,slow=8.1,SNR=7.0
AKASG Malin Array Be 31.98 310 P P 03 44 03.9 -0.5
comp=Z,0.8nm,0.5s,mb3.8,baz=89,slow=7.8,SNR=6.9
AKASG pP pP 03 44 12.8 -3.0
comp=Z,1.3nm,0.6s,baz=86,slow=7.3,SNR=3.5
AKASG Malin Array Be 31.98 310 P P 03 44 03.9 -0.5
AKASG pP pP 03 44 12.8 -3.0
JOF Joensuu 35.44 331 ep P 03 44 33.6 -0.7
comp=Z,4.2nm,0.5s,mb4.6
FINES FINESS Array B 36.94 327 P P 03 44 47.2 +0.1
comp=Z,1.9nm,0.5s,mb4.2,baz=116,slow=8.7,SNR=11
FINES LR LR 04 01 17.9
comp=Z,196nm,18.2s,MS3.9,baz=153,slow=38
KAF Kangasniemi 37.11 328 ep P 03 44 47.9 -0.7
comp=Z,2.3nm,0.5s,mb4.3
ARCES ARCESS Array B 40.92 338 P P 03 45 20.6 +0.3
comp=Z,1.4nm,0.7s,mb3.7,baz=123,slow=9.0,SNR=12
ARCES pP pP 03 45 29.1 -2.9
comp=Z,1.7nm,0.7s,baz=134,slow=8.7,SNR=2.9
ARCES LR LR 04 03 30.3
comp=Z,84nm,18.5s,MS3.6,baz=327,slow=38
GERES GERESS Array B 41.88 305 P P 03 45 28.9 +0.5
comp=Z,0.2nm,0.6s,mb3.0,baz=86,slow=6.0,SNR=3.4
GERES LR LR 04 05 14.8
comp=Z,32nm,18.5s,MS3.2,baz=270,slow=40
PSI Prapat 43.12 133 P P 03 45 40.0 +1.1
comp=Z,2.5nm,0.6s,mb4.1,baz=313,slow=10,SNR=3.8
NB2 NORSAR Subarra 43.75 323 P P 03 45 42.4 -1.0
comp=Z,2.7nm,0.7s,mb4.1,baz=99,slow=8.6
NOA NORSAR Array B 43.75 323 P P 03 45 42.5 -0.9
comp=Z,2.4nm,0.7s,mb4.0,baz=98,slow=8.1,SNR=18
NOA LR LR 04 07 20.2
comp=Z,67nm,19.5s,MS3.6,baz=105,slow=41
NOA NORSAR Array B 43.75 323 P P 03 45 42.5 -0.9
NOA LR LR 04 07 20.2
KSRS Korea Array 46.49 70 P P 03 46 05.9 +0.4
comp=Z,0.6nm,0.4s,mb3.8,baz=298,slow=4.2,SNR=4.2
HAU Haudompre 46.84 305 eP P 03 46 09.1 +1.1
comp=Z,2.0nm,0.4s,mb4.1
HAU Haudompre 46.84 305 eP P 03 46 09.1 +1.1
comp=Z,1.0nm,0.4s,mb4.1
LPG La Plagne 47.02 302 eP P 03 46 10.7 +1.2
comp=Z,10nm,1.2s,mb4.3
LPG La Plagne 47.02 302 eP P 03 46 10.7 +1.2
comp=Z,5.1nm,1.2s,mb4.3
LPL La Plagne 47.02 302 eP P 03 46 10.9 +1.3
comp=Z,4.9nm,0.8s,mb4.2
LPL La Plagne 47.02 302 eP P 03 46 10.9 +1.3
comp=Z,2.5nm,0.8s,mb4.2
CABF La Chapelle 47.25 303 eP P 03 46 12.2 +0.9
comp=Z,2.6nm,0.6s,mb4.0
CABF La Chapelle 47.25 303 eP P 03 46 12.2 +0.9
comp=Z,1.3nm,0.6s,mb4.0
MEZF Maizieres J'vi 47.61 306 eP P 03 46 14.8 +0.8
comp=Z,7.8nm,0.7s,mb4.6
MEZF Maizieres J'vi 47.61 306 eP P 03 46 14.8 +0.8
comp=Z,7.8nm,0.6s,mb4.9
SMF Signal de Mont 48.77 304 eP P 03 46 23.4 +0.4
comp=Z,6.5nm,0.7s,mb4.5
SMF Signal de Mont 48.77 304 eP P 03 46 23.4 +0.4
comp=Z,3.3nm,0.7s,mb4.5
AVF Avril sur Loir 49.06 304 eP P 03 46 25.6 +0.3
comp=Z,6.5nm,0.8s,mb4.4
AVF Avril sur Loir 49.06 304 eP P 03 46 25.6 +0.3
comp=Z,3.3nm,0.8s,mb4.4
TORD Torodi Ar. Bea 64.14 268 P P 03 48 11.3 -1.5
comp=Z,3.1nm,0.6s,mb4.5,baz=47,slow=5.2,SNR=72
TORD Torodi Ar. Bea 64.14 268 P P 03 48 11.3 -1.5
DBIC Dimbokro 73.11 266 P P 03 49 07.8 -1.0
comp=Z,1.9nm,0.8s,mb4.1,baz=76,slow=4.2,SNR=3.2
YKA Yellowknife Ar 81.69 2 P P 03 49 56.0 0.0
comp=Z,0.3nm,0.7s,mb3.3,baz=352,slow=5.4,SNR=7.0
YKA Yellowknife Ar 81.69 2 P P 03 49 56.0 0.0
WRA Warramunga Arr 83.13 121 P P 03 50 03.4 -0.8
comp=Z,2.2nm,0.8s,mb4.2,baz=323,slow=4.9,SNR=11
WB2 Warramunga Arr 83.14 121 eP P 03 50 03.1 -1.0
ASAR Alice Springs 85.33 124 P P 03 50 15.2 0.0
comp=Z,1.7nm,0.6s,mb4.3,baz=310,slow=5.1,SNR=19
ULM Lac du Bonnet 92.99 350 LR LR 04 36 57.1
comp=Z,46nm,18.6s,MS4.0,baz=298,slow=38

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*ISCJB **08** 03:41:24.9±0.3,23°.67N±0°.01×121°.68E±0°.02,h29km±1km,*
Error ellipse: s-maj=2.9km s-min=1.8km az=32.7
*JMA **08** 03:41:24.8±0.4,23°.68N×121°.64E,h67km,M3.1*
*NEIC **08** 03:41:25.4±1.6,23°.69N×121°.62E,h35km,MG3.1(JMA),*
Error ellipse: s-maj=30.4km s-min=9.0km az=110.0
*TAP **08** 03:41:25.0,23°.70N×121°.63E,h36km,ML3.7,B*
ISC 08 03:41:25.2±0.3,23°.67N±0°.01×121°.67E±0°.02,h28km±1km,
n76,σ0s68/145,5C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village** baz=276	**0.12**	**287**	*i* P	**Pb**	**03 41 31.4**	**+1.0**
TEGC	baz=276			*i* S	**Sb**	**03 41 36.0**	**+2.2**
ESF	**Shoufeng Towns** baz=320	**0.25**	**323**	*e*P	**Pb**	**03 41 31.7**	**0.0**
ESF	baz=320			S	**Sb**	**03 41 37.4**	**+1.2**
ESL	**Shilin** baz=292	**0.26**	**303**	⇓*i*P	**Pb**	**03 41 32.1**	**+0.3**
ESL	baz=292			S	**Sb**	**03 41 36.9**	**+0.5**
HWA	**Hwalien** baz=360	**0.31**	**349**	P	**Pb**	**03 41 32.8**	**+0.3**
HWA	baz=360			S	**Sb**	**03 41 38.5**	**+0.9**
EHY	**Hungye** baz=245	**0.36**	**243**	*i* P	**Pb**	**03 41 33.2**	**0.0**
EHY	baz=245			*e*S	**Sb**	**03 41 38.7**	**-0.1**
TWD	**Chiawan** baz=2.0	**0.41**	**351**	P	**Pb**	**03 41 34.1**	**0.0**
TWD	baz=2.0			S	**Sb**	**03 41 40.9**	**+0.7**
YULB	**Yu-li**	**0.44**	**231**	*e*Pg	**Pb**	**03 41 34.0**	**-0.5**
YULB				*e*Sg	**Sb**	**03 41 40.8**	**-0.2**
TWF1	**Yuli** baz=234	**0.47**	**227**	⇑*i*P	**Pb**	**03 41 34.9**	**-0.1**
TWF1	baz=234			*e*S	**Sb**	**03 41 41.6**	**0.0**
NACB	**Ninganchiao**	**0.50**	**352**	*e*Pg	**Pb**	**03 41 34.8**	**-0.8**
NACB				*e*Sg	**Sb**	**03 41 42.6**	**0.0**
WHF	**Hehuan Shan** baz=315	**0.60**	**322**	⇓*i*P	**Pb**	**03 41 36.6**	**-0.6**
WHF	baz=315			*e*S	**Sb**	**03 41 45.0**	**-0.3**
CHKT	**Chengkung** baz=192	**0.64**	**206**	*e*P	**Pb**	**03 41 37.6**	**-0.2**
CHKT	baz=192			*e*S	**Sb**	**03 41 45.7**	**-0.6**
SSLB	**Suanglung**	**0.67**	**280**	*e*Pg	**Pb**	**03 41 37.3**	**-1.0**
SSLB				*e*Sg	**Sb**	**03 41 46.9**	**-0.2**
YUS	**Yu-Shan** baz=251	**0.68**	**255**	⇑P	**Pb**	**03 41 38.8**	**+0.2**
YUS	baz=251			S	**Sb**	**03 41 47.8**	**+0.1**
TWT	**Tachien** baz=317	**0.73**	**322**	P	**Pb**	**03 41 39.1**	**-0.3**
TWT	baz=317			*e*S	**Sb**	**03 41 48.2**	**-0.9**
SMLT	**Sun Moon Lake** baz=280	**0.73**	**287**	⇓*i*P	**Pb**	**03 41 39.0**	**-0.5**
SMLT	baz=280			S	**Sb**	**03 41 48.9**	**-0.2**
ENA	**Nanau** baz=17	**0.76**	**5**	*e*P	**Pb**	**03 41 38.5**	**-1.3**
ENA	baz=17			*e*S	**Sb**	**03 41 49.9**	**+0.2**
ELDTW	**Lidau** baz=224	**0.77**	**231**	*e*P	**Pb**	**03 41 38.9**	**-1.1**
ELDTW	baz=224			*e*S	**Sb**	**03 41 49.3**	**-0.8**
TYC	**Yuchr** baz=291	**0.78**	**287**	⇓*i*P	**Pb**	**03 41 39.5**	**-0.7**
TYC	baz=291			S	**Sb**	**03 41 50.1**	**-0.2**
ALS	**Alishan** baz=263	**0.81**	**259**	⇑*i*P	**Pb**	**03 41 40.8**	**+0.1**
ALS	baz=263			*e*S	**Sb**	**03 41 51.1**	**-0.2**
NNS	**Nan Shan** baz=342	**0.81**	**341**	P	**Pb**	**03 41 39.9**	**-0.8**
NNS	baz=342			*e*S	**Sb**	**03 41 50.1**	**-1.2**
CHN5	**Tsauling** baz=263	**0.91**	**265**	⇑P	**Pn**	**03 41 42.3**	**+0.1**
CHN5	baz=263			S	**Sb**	**03 41 54.5**	**+0.4**
WNT	**Mingjian** baz=281	**0.93**	**283**	*e*P	**Pn**	**03 41 41.4**	**-0.9**
WNT	baz=281			*e*S	**Sb**	**03 41 54.5**	**0.0**
TWC	**Suao** baz=21	**0.95**	**10**	P	**Pn**	**03 41 42.3**	**-0.3**
TWC	baz=21			*i* S	**Sb**	**03 41 55.3**	**+0.1**
STYT	**Tauyuan** baz=232	**0.98**	**239**	P	**Pn**	**03 41 43.0**	**-0.1**
STYT	baz=232			*e*S	**Sn**	**03 41 55.9**	**-0.2**
TWG	**Pinlang** baz=211	**1.01**	**213**	*e*Pg	**Pn**	**03 41 43.4**	**-0.1**
TWG	**Pinlang** baz=211	**1.01**	**213**	*e*P	**Pn**	**03 41 42.5**	**-1.1**
TWG	baz=211			*e*S	**Sn**	**03 41 57.1**	**+0.3**
WGK	**Gukeng** baz=269	**1.01**	**271**	*e*P	**Pn**	**03 41 44.0**	**+0.4**
WGK	baz=269			*e*S	**Sn**	**03 41 57.1**	**+0.2**
TCU	**Taichung** baz=296	**1.02**	**298**	*e*P	**Pn**	**03 41 43.6**	**-0.1**
TCU	baz=296			*e*S	**Sn**	**03 41 57.6**	**+0.4**
TPUB	**Ta-pu**	**1.02**	**249**	*e*Pg	**Pn**	**03 41 43.8**	**+0.1**
TPUB				*e*S	**Sn**	**03 41 58.2**	**+1.0**
YHNB	**Yeheng**	**1.03**	**345**	*e*Pg	**Pn**	**03 41 43.1**	**-0.7**
YHNB				*e*S	**Sn**	**03 41 54.2**	**-3.1**
TTN	**Taitung** baz=206	**1.03**	**208**	*e*P	**Pn**	**03 41 43.4**	**-0.5**
TTN	baz=206			*e*S	**Sn**	**03 41 57.5**	**+0.2**
CHN4	**Tsaushan** baz=250	**1.04**	**252**	*e*P	**Pn**	**03 41 44.4**	**+0.5**
CHN4	baz=250			*e*S	**Sn**	**03 41 58.2**	**+0.7**
NSK	**Sanguang** baz=346	**1.04**	**344**	⇓*i*P	**Pn**	**03 41 43.5**	**-0.5**
NSK	baz=346			*i* S	**Sn**	**03 41 56.2**	**-1.3**
TWE	**Neicheng** baz=354	**1.04**	**360**	P	**Pn**	**03 41 43.4**	**-0.6**
TWE	baz=354			S	**Sn**	**03 41 56.7**	**-1.0**
WTP	**Ta-pu** baz=245	**1.06**	**247**	⇑P	**Pn**	**03 41 44.5**	**+0.3**
WTP	baz=245			*e*S	**Sn**	**03 41 58.5**	**+0.5**
TWQ1	**Liyutan** baz=308	**1.06**	**310**	*e*P	**Pn**	**03 41 44.7**	**+0.4**
TWQ1	baz=308			*e*S	**Sn**	**03 41 58.3**	**+0.2**
ILA	**Ilan** baz=355	**1.09**	**4**	*e*P	**Pn**	**03 41 44.6**	**0.0**
ILA	baz=355			*e*S	**Sn**	**03 41 59.2**	**+0.4**
CHN2	**Minshiung** baz=261	**1.10**	**263**	*e*P	**Pn**	**03 41 44.9**	**+0.1**
CHN2	baz=261			*e*S	**Sn**	**03 41 59.9**	**+0.7**
NSY	**Sanyi** baz=311	**1.11**	**312**	*e*P	**Pn**	**03 41 45.1**	**+0.2**
NSY	baz=311			*e*S	**Sn**	**03 42 00.2**	**+0.8**
NSTT	**Nanjuang** baz=327	**1.13**	**328**	*e*P	**Pn**	**03 41 45.7**	**+0.4**
NSTT	baz=327			*e*S	**Sn**	**03 41 59.3**	**-0.6**
CHN1	**Nanshi** baz=244	**1.16**	**245**	*e*P	**Pn**	**03 41 45.9**	**+0.4**
CHN1	baz=244			*e*S	**Sn**	**03 42 01.0**	**+0.6**
CHY	**Chiayi** baz=260	**1.16**	**262**	*e*P	**Pn**	**03 41 45.3**	**-0.2**
CHY	baz=260			*e*S	**Sn**	**03 42 00.6**	**+0.2**
TWK	**Hsinying** baz=248	**1.16**	**250**	*e*P	**Pn**	**03 41 45.9**	**+0.4**
TWK	baz=248			*e*S	**Sn**	**03 42 00.4**	**0.0**
SGST	**Jiashian** baz=230	**1.16**	**240**	*e*P	**Pn**	**03 41 45.8**	**+0.2**
SGST	baz=230			*e*S	**Sn**	**03 42 01.0**	**+0.5**
ECL	**Taimali** baz=201	**1.26**	**212**	*e*P	**Pn**	**03 41 45.5**	**-1.4**
WTCT	**Ta-ch'eng** baz=277	**1.29**	**279**	*e*P	**Pn**	**03 41 47.3**	**0.0**
WTCT	baz=277			*e*S	**Sn**	**03 42 04.5**	**+0.9**
HSN	**Hsinchu** baz=332	**1.29**	**331**	*e*P	**Pn**	**03 41 47.5**	**+0.1**
HSN	baz=332			*e*S	**Sn**	**03 42 05.0**	**+1.1**
TWA	**Mucha** baz=349	**1.30**	**357**	*e*P	**Pn**	**03 41 47.2**	**-0.3**
TWA	baz=349			*e*S	**Sn**	**03 42 03.8**	**-0.3**
TATO	**Taipei**	**1.31**	**353**	*e*Pn	**Pn**	**03 41 47.8**	**+0.2**
TATO				*e*S	**Sn**	**03 42 04.4**	**+0.2**
SSD	**Sandimen** baz=212	**1.33**	**226**	*e*P	**Pn**	**03 41 48.1**	**+0.2**
SSD	baz=212			*e*S	**Sn**	**03 42 05.2**	**+0.6**
CHN3	**Shinhua** baz=243	**1.34**	**244**	*e*P	**Pn**	**03 41 48.9**	**+0.8**
CHN3	baz=243			*e*S	**Sn**	**03 42 05.1**	**+0.2**
TWB1	**Santiao Chiao** baz=15	**1.36**	**12**	P	**Pn**	**03 41 48.6**	**+0.3**
TWB1	baz=15			S	**Sn**	**03 42 05.9**	**+0.3**
NCU	**National Centr** baz=328	**1.36**	**341**	*e*P	**Pn**	**03 41 49.1**	**+0.6**
NCU	baz=328			*e*S	**Sn**	**03 42 05.8**	**+0.2**
TAP1	**Taipei** baz=357	**1.37**	**354**	*e*P	**Pn**	**03 41 49.2**	**+0.8**
TAP1	baz=357			*e*S	**Sn**	**03 42 05.4**	**-0.3**
CHN8	**Yiju** baz=255	**1.38**	**257**	*e*P	**Pn**	**03 41 48.6**	**0.0**
CHN8	baz=255			*e*S	**Sn**	**03 42 06.0**	**+0.1**
NWF	**Wu-fen Shan** baz=350	**1.40**	**4**	*e*P	**Pn**	**03 41 49.0**	**+0.1**
NWF	baz=350			*e*S	**Sn**	**03 42 06.7**	**+0.3**
TWM1	**Shoushan** baz=245	**1.42**	**234**	*e*P	**Pn**	**03 41 50.9**	**+1.7**
TWM1	baz=245			*e*S	**Sn**	**03 42 11.2**	**+4.1**
TWS1	**Kuangyinshan** baz=4.0	**1.44**	**351**	*e*P	**Pn**	**03 41 49.5**	**0.0**
TWS1	baz=4.0			*e*S	**Sn**	**03 42 07.7**	**+0.2**
YOJ	**Yonaguni jima**	**1.46**	**57**	P	**Pn**	**03 41 49.7**	**0.0**
YOJ				S	**Sn**	**03 42 08.6**	**+0.7**
YOJ	**Yonaguni jima** baz=58	**1.46**	**57**	*e*P	**Pn**	**03 41 48.8**	**-0.9**
YOJ	baz=58			*e*S	**Sn**	**03 42 07.8**	**-0.1**
EAST	**Anshuo** baz=202	**1.49**	**211**	*e*P	**Pn**	**03 41 49.4**	**-0.7**
TWY	**Chenhua**	**1.60**	**358**	*e*P	**Pn**	**03 41 51.6**	**0.0**
TWY				*e*S	**Sn**	**03 42 11.7**	**+0.3**
SCZT	**Fangliau** baz=215	**1.61**	**217**	*e*P	**Pn**	**03 41 52.5**	**+0.7**
LAY	**Lan-yu** baz=177	**1.63**	**184**	*e*P	**Pn**	**03 41 50.3**	**-1.8**
LAY	baz=177			*e*S	**Sn**	**03 42 09.7**	**-2.5**
HEN	**Hengchun** baz=200	**1.87**	**208**	*e*P	**Pn**	**03 41 56.1**	**+0.7**
HEN	baz=200			*e*S	**Sn**	**03 42 17.9**	**-0.2**
WDGT	**Dungji** baz=257	**1.89**	**258**	*e*P	**Pn**	**03 41 55.0**	**-0.7**
TSEB	**Hengchuen, Pin** baz=203	**1.90**	**202**	*e*P	**Pn**	**03 41 56.7**	**+0.9**
TSEB	baz=203			*e*S	**Sn**	**03 42 18.8**	**0.0**
PNG	**Penghu** baz=255	**1.94**	**267**	*e*P	**Pn**	**03 41 55.8**	**-0.6**
PNG	baz=255			*e*S	**Sn**	**03 42 18.8**	**-1.1**
PCYT	**Pengchaiyu** baz=28	**1.98**	**11**	*e*P	**Pn**	**03 41 56.3**	**-0.6**
PCYT	baz=28			*e*S	**Sn**	**03 42 21.2**	**+0.4**
HATJ	**Hateruma jima**	**1.99**	**79**	P	**Pn**	**03 41 57.1**	**0.0**
HATJ				S	**Sn**	**03 42 21.4**	**+0.3**
IRIF	**Iriomote-Funau**	**2.00**	**70**	P	**Pn**	**03 41 57.5**	**+0.4**
IRIF				*e*S	**Sn**	**03 42 22.3**	**+1.1**
JKRS	**Kuro-shima**	**2.21**	**75**	P	**Pn**	**03 42 00.8**	**+0.7**
JKRS				*e*S	**Sn**	**03 42 27.4**	**+0.8**
JIJ	**Ishigaki jima**	**2.36**	**73**	P	**Pn**	**03 42 02.1**	**-0.1**
JIJ				*e*S	**Sn**	**03 42 29.1**	**-1.2**
JTJ	**Tarama**	**2.93**	**70**	P	**Pn**	**03 42 10.6**	**+0.6**
KNM	**Kinmen** baz=284	**3.05**	**285**	*e*P	**Pn**	**03 42 12.4**	**+0.8**
QZH	**Quanzhou**	**3.08**	**295**	Pn	**Pn**	**03 42 11.7**	**-0.3**
QZH				Sn	**Sn**	**03 42 45.5**	**-2.4**
QZH	comp=N,190nm,0.6s			smax			
QZH	comp=E,120nm,0.9s			smax			

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*IDC **08** 03:50:39.4±3.1,36°.15N×142°.22E,h0km,mb3.6/2,*
mb1 3.7/4,mb1mx3.4/27,mbtmp3.6/4,ML3.6/2,Error
ellipse: s-maj=65.5km s-min=31.3km az=61.0
*JMA **08** 03:50:42.6±0.3,36°.15N×142°.04E,h53km,M3.4*
*ISCJB **08** 03:50:43.6±1.1,36°.10N±0°.04×142°.00E±0°.10,*
h43km±14km,mb3.6/2,Error ellipse: s-maj=13.2km
s-min=6.8km az=177.6
ISC 08 03:50:43.7±1.8,36°.11N±0°.04×142°.00E±0°.09,h26km±13km,
n18,σ0s64/24,mb3.6/2,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.01**	**247**	P	**Pn**	**03 51 01.6**	**-0.6**
CHOJ				S	**Sb**	**03 51 15.7**	**+0.3**
JHO	**Hitachi**	**1.26**	**294**	P	**Pn**	**03 51 04.2**	**-1.4**
JFK	**Kawauchi**	**1.55**	**325**	P	**Pn**	**03 51 08.7**	**-0.9**
BSO1	**Boso 1**	**1.67**	**210**	P	**Pn**	**03 51 11.0**	**-0.3**
BSO1				S	**Sn**	**03 51 32.7**	**+0.8**
BSO3	**Boso 3**	**1.78**	**223**	P	**Pn**	**03 51 12.6**	**-0.2**
JFT	**Otama**	**1.94**	**317**	P	**Pn**	**03 51 15.1**	**+0.2**
JFT				S	**Sn**	**03 51 37.7**	**-0.7**
JMM	**Marumori**	**2.00**	**332**	P	**Pn**	**03 51 16.3**	**+0.5**
JAG	**Ashikaga**	**2.08**	**280**	P	**Pn**	**03 51 16.4**	**-0.5**
JFY	**Yanaizu**	**2.25**	**306**	P	**Pn**	**03 51 20.3**	**+1.1**
JKT	**Katashina**	**2.31**	**287**	P	**Pn**	**03 51 20.5**	**+0.4**
JRY	**Ryogami san**	**2.51**	**269**	P	**Pn**	**03 51 22.2**	**-0.6**
JRY				S	**Sn**	**03 51 52.7**	**+0.2**
JIM2	**Oshima 3**	**2.51**	**237**	P	**Pn**	**03 51 22.0**	**-0.8**
JOD2	**Odawara 2**	**2.51**	**251**	P	**Pn**	**03 51 23.0**	**+0.1**
MJAR	**Matsushiro Arr** 3.4nm,0.3s,baz=102,slow=8.6,SNR=26	**3.09**	**279**	Pn	**Pn**	**03 51 31.6**	**+0.9**
MAT	**Matsushiro**	**3.09**	**279**	P	**Pn**	**03 51 31.4**	**+0.6**
MAT				S	**Sn**	**03 52 07.2**	**+0.3**
JHJ	**Hachijo jima 2** 22nm,0.3s,baz=68,slow=22,SNR=8.0	**3.50**	**212**	Pn	**Pn**	**03 51 36.7**	**+0.4**
JHJ	48nm,0.3s,baz=87,slow=22,SNR=6.8			Sn	**Sn**	**03 52 16.0**	**-0.9**
SONM	**Songino Array** 0.7nm,0.7s,mb3.5,baz=107,slow=8.5,SNR=4.0	**28.70**	**305**	P	**P**	**03 56 39.2**	**+0.8**
WRA	**Warramunga Arr** 0.3nm,0.5s,mb3.6,baz=5.7,slow=7.4,SNR=2.5	**56.21**	**189**	P	**P**	**04 00 21.7**	**+0.2**

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*IDC **08** 03:51:59.8±3.1,36°.86N×141°.93E,h0km,mb3.7/3,*

mb1 3.8/4, mb1mx3.5/25, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=79.5km s-min=30.1km az=52.0
ISCJB ***08*** *03:52:01.2±1.4, 36°.10N±0°.05×142°.0E±0°.1, h59km±16km, mb3.7/2, Error ellipse: s-maj=18.0km s-min=8.0km az=2.9*
JMA ***08*** *03:52:01.0±0.3, 36°.14N×142°.00E, h57km, M3.3*
ISC 08 03:52:02.0±1.4, 36°.11N±0°.05×142°.1E±0°.1, h46km±20km, n17, σ0°80/20, mb3.7/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.05**	**248**	P	**Pn**	**03 52 19.5**	**-0.7**
CHOJ				S	**Sn**	**03 52 33.5**	**-0.2**
JHO	**Hitachi**	**1.29**	**293**	P	**Pn**	**03 52 22.4**	**-1.2**
JFK	**Kawauchi**	**1.57**	**323**	P	**Pn**	**03 52 26.4**	**-1.0**
JFK				S	**Sn**	**03 52 45.4**	**-1.1**
BSO1	**Boso 1**	**1.70**	**211**	P	**Pn**	**03 52 28.9**	**-0.2**
JFT	**Otama**	**1.96**	**316**	P	**Pn**	**03 52 33.1**	**+0.3**
JMM	**Marumori**	**2.02**	**331**	P	**Pn**	**03 52 34.7**	**+1.1**
JAG	**Ashikaga**	**2.12**	**279**	P	**Pn**	**03 52 34.5**	**-0.4**
JFY	**Yanaizu**	**2.28**	**305**	P	**Pn**	**03 52 38.3**	**+1.1**
JKT	**Katashina**	**2.35**	**287**	P	**Pn**	**03 52 38.7**	**+0.6**
JRY	**Ryogami san**	**2.55**	**269**	P	**Pn**	**03 52 40.1**	**-0.7**
JOD2	**Odawara 2**	**2.55**	**252**	P	**Pn**	**03 52 40.6**	**-0.3**
MJAR	**Matsushiro Arr**	**3.13**	**279**	Pn	**Pn**	**03 52 49.0**	**+0.2**
	3.0nm,0.3s,baz=96,slow=8.9,SNR=5.0						
MAT	**Matsushiro**	**3.13**	**279**	P	**Pn**	**03 52 50.2**	**+1.4**
MAT				S	**Sn**	**03 53 25.8**	**+0.9**
JHJ	**Hachijo jima 2**	**3.52**	**213**	Pn	**Pn**	**03 52 55.2**	**+1.1**
	14nm,0.3s,baz=66,slow=20,SNR=3.0						
JHJ				Sn	**Sn**	**03 53 34.0**	**-0.5**
	66nm,0.3s,baz=327,slow=24,SNR=5.4						
SONM	**Songino Array**	**28.73**	**305**	P	**P**	**03 57 54.3**	**-0.5**
	0.8nm,0.5s,mb3.7,baz=106,slow=9.3,SNR=5.8						
WRA	**Warramunga Arr**	**56.22**	**189**	P	**P**	**04 01 46.0**	**+8.5**
	0.3nm,0.3s,mb3.7,baz=2.5,slow=7.5,SNR=2.0						
ASAR	**Alice Springs**	**59.95**	**189**	P	pP	04 02 13.7	-2.8
	0.5nm,0.6s,baz=18,slow=9.5,SNR=4.9						

IDC ***08*** *04:36:08.1±0.9, 10°.08S×75°.51W, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.7/21, mbtmp3.7/8, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/25, Error ellipse: s-maj=26.9km s-min=12.8km az=119.0*
ISCJB ***08*** *04:36:14.0±1.3, 10°.3S±0°.1×75°.47W±0°.10, h66km±18km, mb3.6/5, Error ellipse: s-maj=18.7km s-min=13.3km az=39.1*
NEIC ***08*** *04:36:14.9±1.8, 10°.31S×75°.53W, h62km±25km, Error ellipse: s-maj=25.7km s-min=12.5km az=186.0*
ISC 08 04:36:14.8±1.2, 10°.22S±0°.10×75°.50W±0°.09, h56km±17km, n13, σ0°64/14, mb3.8/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.20**	**217**	Pn	**Pn**	**04 36 47.8**	**-1.2**
	72nm,0.3s,baz=18,slow=13,SNR=166						
NNA				Pg	**Pn**	**04 36 50.1**	**+1.1**
	72nm,0.3s,baz=14,slow=13,SNR=163						
NNA				Sn	**Sn**	**04 37 15.7**	**+0.6**
	52nm,0.3s,baz=322,slow=21,SNR=8.4						
NNA				Lg		04 37 21.5	
	105nm,0.3s,baz=285,slow=18,SNR=21						
NNA	**Nana**	**2.20**	**217**	*e*Pn	**Pn**	**04 36 47.8**	**-1.2**
NNA				*e*Sg	**Sn**	**04 37 21.8**	**+6.8**
ATAH	**Atahualpa**	**4.29**	**318**	Pn	**Pn**	**04 37 17.5**	**-0.2**
	4.1nm,0.3s,baz=101,slow=5.5,SNR=20						
ATAH				Lg		04 38 10.2	
	1.7nm,0.3s,baz=43,slow=17,SNR=4.3						
LPAZ	**La Paz**	**9.37**	**131**	Pn	**Pn**	**04 38 27.4**	**+0.2**
	0.1nm,0.3s,baz=317,slow=9.2,SNR=2.8						
LPAZ				Lg		04 40 56.6	
	0.1nm,0.3s,baz=9.3,slow=24,SNR=2.1						
LVC	**Limon Verde**	**13.85**	**154**	LR	LR	04 44 54.4	
	comp=Z,89nm,20.2s,baz=72,slow=38						
SIV	**San Ignacio**	**15.17**	**114**	Pn	**Pn**	**04 39 45.5**	**-0.3**
	0.1nm,0.3s,baz=305,slow=16,SNR=2.8						
SIV				Lg		04 44 02.7	
	0.3nm,0.3s,baz=359,slow=16,SNR=3.9						
PCRV	**Puerto La Cruz**	**22.96**	**28**	P	**P**	**04 41 15.1**	**+0.5**
	12nm,1.0s,mb4.3,baz=175,slow=23,SNR=1.9						
TXAR	**Lajitas Array**	**47.79**	**326**	P	**P**	**04 44 47.8**	**+1.0**
	0.2nm,0.5s,mb3.4,baz=151,slow=6.8,SNR=4.3						
ULM	**Lac du Bonnet**	**62.79**	**345**	P	**P**	**04 46 33.8**	**-0.5**
	0.8nm,0.5s,mb4.1,baz=169,slow=7.4,SNR=3.9						
YKA	**Yellowknife Ar**	**78.55**	**343**	P	**P**	**04 48 09.1**	**-0.8**
	0.3nm,0.6s,mb3.4,baz=136,slow=5.9,SNR=7.1						
TORD	**Torodi Ar. Bea**	**80.05**	**75**	P	**P**	**04 48 19.3**	**+0.1**
	0.9nm,0.9s,mb3.7,baz=250,slow=3.4,SNR=5.3						
TORD	**Torodi Ar. Bea**	**80.05**	**75**	P	**P**	**04 48 19.3**	**+0.1**
KSRS	**Korea Array**	**145.64**	**326**	PKPbc	PKPbc	04 55 49.0	+1.3
	1.8nm,0.8s,baz=44,slow=3.3,SNR=5.4						

NEIC ***08*** *05:14:43.7, 16°.69N×98°.20W, h30km, MD4.2(MEX), After MEX.*
MEX 08 05:14:41.2±0.9, 16°.39N×98°.26W, h10km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.13**	**88**	*e*P	Pg	05 14 43.1	-1.1
PNIG				*i* S	Sg	05 14 46.6	+0.3
VHO	**Vista Hermosa**	**1.61**	**65**	*i* P	Pn	05 15 05.8	-4.0
VHO				*i* S	Sn	05 15 24.1	-6.5
VHO	**Vista Hermosa**	**1.61**	**65**	*i* P	Pn	05 15 05.8	-4.0
VHO				*i* S	Sn	05 15 26.5	-4.1
ACX	**Acapulco**	**1.66**	**287**	*i* P	Pn	05 15 09.0	-1.4
CAIG	**El Cayaco**	**2.03**	**289**	*i* P	Pn	05 15 13.9	-1.6
CAIG				*i* S	Sn	05 15 37.2	-3.8
CAIG	**El Cayaco**	**2.03**	**289**	*i* P	Pn	05 15 12.1	-3.4
CAIG				*i* S	Sn	05 15 37.2	-3.8
HUIG	**Huatulco**	**2.16**	**106**	*i* P	Pn	05 15 16.9	-0.4
HUIG				*i* S	Sn	05 15 41.7	-2.3
HUIG	**Huatulco**	**2.16**	**106**	*e*P	Pn	05 15 15.0	-2.2
HUIG				*i* S	Sn	05 15 41.0	-3.1
TPIG	**Tehuac#an**	**2.19**	**23**	*i* P	Pn	05 15 15.9	-1.8
TPIG				*i* S	Sn	05 15 41.6	-3.4
PLIG	**Platanillo**	**2.32**	**329**	*i* P	Pn	05 15 15.6	-3.9
PLIG				*i* S	Sn	05 15 42.7	-5.3
YAIG	**Yautepec**	**2.58**	**343**	*i* P	Pn	05 15 20.6	-2.4
YAIG				*i* S	Sn	05 15 50.1	-4.4
CMIG	**Matias Romero**	**3.31**	**77**	*i* P	Pn	05 15 29.0	-4.0
CMIG				*i* S	Sn	05 16 06.8	-5.7
CMIG	**Matias Romero**	**3.31**	**77**	*i* P	Pn	05 15 29.0	-4.0
CMIG				*i* S	Sn	05 16 10.1	-2.4

ISCJB ***08*** *05:24:51.9±1.8, 40°.25N±0°.07×113°.41E±0°.08, h8km±14km, mb3.6/7, Error ellipse: s-maj=12.5km s-min=10.7km az=14.5*
IDC ***08*** *05:24:52.2±1.1, 40°.19N×113°.38E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/26, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=28.6km s-min=19.6km az=66.0*
BJI ***08*** *05:24:53.9, 40°.32N×113°.14E, h15km, ML3.2/8*
NEIC ***08*** *05:24:54.3±0.6, 40°.20N×113°.23E, h10km, Error ellipse: s-maj=12.9km s-min=10.3km az=38.0*
ISC 08 05:24:54.4±2.0, 40°.16N±0°.07×113°.35E±0°.08, h12km±15km, n16, σ1°00/18, mb3.6/7, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJT	**Baijiatuan**	**2.17**	**93**	*e*Pn	**Pg**	**05 25 33.4**	**-2.7**
BJT				*e*S	**Sg**	**05 26 06.0**	**+1.8**
BTO	**Baotou**	**2.58**	**281**	*e*Pg	**Pn**	**05 25 36.6**	**+0.7**
BTO				Sg	**Sn**	**05 26 08.6**	**+1.5**
BTO				smax			
	comp=N,68nm,0.7s						
BTO				smax			
	comp=E,47nm,0.8s						
XAN	**Xi'an**	**7.05**	**211**	Pg	**Pb**	**05 27 03.2**	**+6.4**
XAN				smax			
	comp=N,13nm,0.9s						
XAN				smax			
	comp=E,4.0nm,0.9s						
LZH	**Lanzhou**	**8.52**	**245**	Pg	Px	05 27 22.0	
LZH				Sg	Sx	05 29 13.2	
LZH				smax			
	comp=N,36nm,0.7s						
LZH				smax			
	comp=E,43nm,0.8s						
LZH				LR	LR		
	comp=E,96nm,6.1s						
LZH				LR	LR		
	comp=Z,110nm,7.4s						
ULN	**Ulaanbaatar**	**8.94**	**332**	*e*Pn	**Pn**	**05 27 02.7**	**-0.5**
SONM	**Songino Array**	**9.16**	**329**	Pn	**Pn**	**05 27 05.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=145,slow=15,SNR=4.8						
SONM				Sn	**Sn**	**05 28 50.3**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=152,slow=19,SNR=3.1						
SONM				Lg		05 29 42.4	
	comp=Z,0.5nm,0.3s,baz=139,slow=29,SNR=8.5						
HIA	**Hailar**	**10.18**	**24**	*e*Pn	**Pn**	**05 27 19.8**	**-0.4**
GTA	**Gaotai**	**10.44**	**270**	*e*P	**Pn**	**05 27 23.0**	**-0.9**
GTA				pP		05 27 27.4	
GTA				sP		05 27 30.7	
MKAR	**Makanchi Array**	**23.39**	**297**	P	**P**	**05 30 02.3**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.0,baz=100,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**23.63**	**315**	P	**P**	**05 30 06.2**	**+0.9**
	comp=Z,0.9nm,0.3s,mb3.7,baz=128,slow=9.3,SNR=2.6						
CMAR	**Chiang Mai Arr**	**24.94**	**214**	P	**P**	**05 30 17.5**	**0.0**
	comp=Z,0.7nm,0.3s,mb3.6,baz=19,slow=8.7,SNR=3.4						
KURK	**Kurchatov**	**26.33**	**305**	P	**P**	**05 30 29.3**	**-0.5**
	comp=Z,1.3nm,0.9s,mb3.5,baz=100,slow=10.0,SNR=4.9						
INK	**Inuvik**	**61.03**	**23**	P	**P**	**05 35 06.3**	**-1.0**
	comp=Z,0.8nm,0.9s,mb3.9,baz=314,slow=4.4,SNR=3.8						
INK	**Inuvik**	**61.03**	**23**	P	**P**	**05 35 06.3**	**-1.0**
ASAR	**Alice Springs**	**66.32**	**159**	P	**P**	**05 35 42.7**	**+0.1**
	comp=Z,0.1nm,0.2s,mb3.4,baz=0.9,slow=5.7,SNR=4.1						
YKA	**Yellowknife Ar**	**70.70**	**21**	P	**P**	**05 36 09.4**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=323,slow=5.6,SNR=15						

NIED ***08*** *05:26:00, 36°.10N×142°.10E, h23km, Mw4.6 Best double couple: M0 8.05000×10^15 NP1:φ0 15.00000°, δ61.00000°, λ81.00000°. NP2:φ0 214.00000°, δ30.00000°, λ106.00000°.*
IDC ***08*** *05:26:26.4±0.5, 36°.01N×141°.97E, h0km, mb4.3/23, mb1 4.4/28, mb1mx4.4/32, mbtmp4.3/28, ML4.2/5, MS4.1/26, Ms1 4.1/26, ms1mx3.8/49, Error ellipse: s-maj=14.2km s-min=12.7km az=87.0*
JMA ***08*** *05:26:27.9±0.2, 36°.13N×142°.09E, h62km, M4.9*
JMA Felt I J1.
BJI ***08*** *05:26:28.5, 36°.07N×141°.79E, h20km, mB4.7/25, mb4.7/45, Ms4.4/44, Ms7 4.1/41*
ISCJB ***08*** *05:26:29.6±0.8, 36°.11N±0°.03×141°.93E±0°.03, h31km±5km, mb4.5/69, MS4.2/42, Error ellipse: s-maj=4.8km s-min=4.4km az=40.0*
MOS ***08*** *05:26:29.5±1.1, 36°.03N×141°.94E, h33km, mb5.0/25, MS4.1/9, Error ellipse: s-maj=10.4km s-min=5.7km az=119.6*
SZGRF ***08*** *05:26:30.8, 36°.13N×143°.36E, h33km, mb4.8, Off east coast of Honshu, Japan*
NEIC ***08*** *05:26:31.8±0.2, 35°.99N×141°.92E, h35km, mb4.6/31, MW4.5(NIED), Error ellipse: s-maj=5.9km s-min=4.7km az=177.0*
NEIC Recorded [1 JMA] in Fukushima.
DJA ***08*** *05:26:32, 36°.03N×141°.84E, h30km, mb4.9/11*
ISC 08 05:26:30.8±0.9, 36°.11N±0°.03×141°.89E±0°.03, h27km±6km, h35km±2.0km: pP-P, n173, σ1°07/187, mb4.5/69, MS4.2/42, 18C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.93**	**245**	⇑P	**Pn**	**05 26 47.3**	**-0.8**
CHOJ				S	**Sb**	**05 27 01.4**	**+1.1**
JHO	**Hitachi**	**1.18**	**296**	⇑P	**Pn**	**05 26 50.2**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.33**	**319**	⇑P	**Pn**	**05 26 52.0**	**-1.6**
JFK	**Kawauchi**	**1.50**	**327**	⇑P	**Pn**	**05 26 54.5**	**-1.4**
JFK				*e*S	**Sn**	**05 27 14.0**	**-0.6**
BSO1	**Boso 1**	**1.63**	**208**	P	**Pn**	**05 26 56.8**	**-0.9**
BSO1				*e*S	**Sn**	**05 27 18.5**	**+0.7**
BSO3	**Boso 3**	**1.72**	**221**	P	**Pn**	**05 26 58.5**	**-0.5**
BSO3				S	**Sn**	**05 27 21.2**	**+1.1**
JFT	**Otama**	**1.88**	**319**	⇑P	**Pn**	**05 27 00.5**	**-0.7**
JFT				*e*S	**Sn**	**05 27 24.8**	**+0.7**
JMM	**Marumori**	**1.97**	**334**	⇑P	**Pn**	**05 26 59.6**	**-2.7**
JAG	**Ashikaga**	**2.00**	**280**	⇑P	**Pn**	**05 27 02.0**	**-0.8**
JRY	**Ryogami san**	**2.43**	**269**	⇑P	**Pn**	**05 27 08.1**	**-0.5**
JOD2	**Odawara 2**	**2.43**	**251**	P	**Pn**	**05 27 09.0**	**+0.2**
JNS	**Sasagawa**	**2.68**	**310**	S	**Sn**	**05 27 48.6**	**+4.9**
JYN	**Shimob**	**2.79**	**258**	P	**Pn**	**05 27 14.4**	**+0.8**
MJAR	**Matsushiro Arr**	**3.01**	**279**	Pn	**Pn**	**05 27 17.4**	**+0.8**
	28nm,0.3s,baz=103,slow=7.9,SNR=186						
MJAR				Sn	**Sn**	**05 27 58.1**	**+6.3**
	28nm,0.3s,baz=135,slow=16,SNR=6.1						
MAJO	**Matsushiro**	**3.01**	**279**	*e*P	**Pn**	**05 27 17.4**	**+0.7**
MAT	**Matsushiro**	**3.01**	**279**	P	**Pn**	**05 27 17.4**	**+0.7**
MAT				S	**Sn**	**05 27 53.7**	**+1.9**
JHJ	**Hachijo jima 2**	**3.45**	**211**	Pn	**Pn**	**05 27 21.3**	**-1.4**
	102nm,0.3s,baz=82,slow=12,SNR=17						
JHJ				Sn	**Sn**	**05 27 59.5**	**-3.2**
	88nm,0.3s,baz=227,slow=23,SNR=7.5						
ERM	**Erimo**	**5.98**	**9**	*e*Pn	**Pn**	**05 27 54.0**	**-3.5**
ERM				*e*Sn	**Sn**	**05 29 02.9**	**-2.2**
ASAJ	**Asahikawa**	**8.02**	**4**	P	**Pn**	**05 28 23.3**	**-2.2**
ASAJ						05 29 53.5	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,18.5s						
ASAJ	**Asahikawa**	**8.02**	**4**	Pn	**Pn**	**05 28 23.3**	**-2.2**
	comp=Z,2.9nm,0.3s,baz=195,slow=11,SNR=7.4						
ASAJ				Sn	**Sn**	**05 29 53.5**	**-1.7**
	comp=Z,2.2nm,0.3s,baz=47,slow=21,SNR=3.7						
ASAJ				LR	LR	05 32 31.7	
	comp=Z,1μm,18.5s,baz=175,slow=45						
YUK	**Yuzh-Kuril'sk**	**8.48**	**20**	*e*P	**Pn**	**05 28 36.0**	**+4.2**
YUK				pmax	pmax		
	comp=Z,180nm,0.3s						
CBIJ	**Chichi jima**	**8.98**	**178**	Pn	**Pn**	**05 28 34.0**	**-4.8**
	comp=Z,21nm,0.3s,baz=272,slow=17,SNR=11						
CBIJ				Sn	**Sn**	**05 30 08.6**	**-10**
	comp=Z,9.2nm,0.3s,baz=284,slow=23,SNR=3.5						
VLA	**Vladivostok**	**10.41**	**315**	P	**Pn**	**05 28 59.0**	**+0.7**
VLA				*e*		05 30 53.0	
VLA				pmax	pmax		
	comp=Z,55nm,1.1s						
VLA				MLR	MLR		
	comp=Z,800nm,14.5s						
KSRS	**Korea Array**	**11.29**	**281**	Pn	**Pn**	**05 29 12.4**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=98,slow=13,SNR=40						
KSRS				LR	LR	05 33 36.6	
	comp=Z,616nm,18.1s,baz=244,slow=38						
MDJ	**Mudanjiang**	**12.65**	**316**	P	**Pn**	**05 29 30.5**	**+1.7**
MDJ				S	**Sn**	**05 31 51.4**	**+2.7**
MDJ				PcP	PcP	05 35 05.9	+0.5
MDJ				ScP	ScP	05 38 36.4	-0.1
MDJ				PcS	PcS	05 38 40.2	+0.7
MDJ				ScS	ScS	05 42 12.8	+0.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,89nm,4.5s						
MDJ				LR	LR		
	comp=N,460nm,11.0s						
MDJ				LR	LR		
	comp=E,310nm,12.8s						
MDJ				LR	LR		
	comp=Z,840nm,14.6s						
CN2	**Changchun**	**14.76**	**306**	*e*P	**Pn**	**05 29 55.6**	**-2.0**
CN2				*e*PP		05 30 07.8	
CN2				*e*S	**Sn**	**05 32 39.3**	**-0.8**
CN2				*e*SS		05 32 56.6	
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,600nm,13.0s						
CN2				LR	LR		
	comp=Z,900nm,14.0s						
KLR	**Kul'dur**	**15.07**	**334**	*e*P	**Pn**	**05 30 01.9**	**+0.2**
KLR				MLR	MLR		
	comp=E,600nm,12.5s						
KLR				MLR	MLR		
	comp=Z,6μm,12.5s						
SNY	**Shenyang**	**15.34**	**297**	⇓P	**Pn**	**05 30 04.8**	**-0.5**
SNY				S	**Sn**	**05 32 54.8**	**+0.5**
SNY				pmax	pmax		
	comp=Z,11nm,0.5s						
SNY				pmax	pmax		
	comp=Z,350nm,5.2s						
SNY				LR	LR		
	comp=N,490nm,13.7s						
SNY				LR	LR		
	comp=E,760nm,17.2s						
SNY				LR	LR		
	comp=Z,860nm,16.7s						
DL2	**Dalian**	**16.32**	**286**	P	**Pn**	**05 30 19.1**	**+1.1**
DL2				sP	sP	05 30 31.1	-0.5
DL2				S	**Sn**	**05 33 17.6**	**-0.6**
DL2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DL2				pmax	pmax		
	comp=Z,140nm,5.8s						
DL2				LR	LR		
	comp=N,290nm,11.7s						
DL2				LR	LR		
	comp=E,580nm,13.6s						
DL2				LR	LR		
	comp=Z,610nm,14.6s						
SSE	**Sheshan**	**17.95**	**260**	P	**Pn**	**05 30 36.9**	**-1.5**
SSE				sP	sP	05 30 52.2	+2.5
SSE				S	**Sn**	**05 33 56.3**	**-1.5**
SSE				pmax	pmax		
	comp=Z,33nm,0.6s						
SSE				pmax	pmax		
	comp=Z,56nm,8.2s						
SSE				LR	LR		
	comp=N,420nm,15.4s						
SSE				LR	LR		
	comp=E,230nm,15.4s						
SSE				LR	LR		
	comp=Z,530nm,14.2s						
NJ2	**Nanjing**	**19.50**	**265**	*e*P	**Pn**	**05 30 57.5**	**+0.4**
NJ2				pP	pP	05 31 04.4	+1.2
NJ2				sP	sP	05 31 07.0	+0.3
NJ2				PP		05 31 09.9	
NJ2				S	**Sn**	**05 34 27.5**	**-7.6**
NJ2				sS	sS	05 34 44.0	-2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,80nm,3.6s						
NJ2				LR	LR		
	comp=N,400nm,19.9s						
NJ2				LR	LR		
	comp=E,300nm,19.5s						
NJ2				LR	LR		
	comp=Z,330nm,18.3s						
PETK	**Petropavlovsk-**	**20.31**	**28**	P	**P**	**05 31 04.7**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=212,slow=6.8,SNR=4.1						
BJI	**Beijing**	**20.60**	**289**	P	**P**	**05 31 05.4**	**-2.3**
BJI				S	**S**	**05 34 56.6**	**0.0**
BJI				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI				pmax	pmax		
	comp=Z,84nm,3.7s						
BJI				LR	LR		
	comp=N,490nm,13.5s,MS4.2						
BJI				LR	LR		
	comp=E,440nm,13.5s,MS4.2						
BJI				LR	LR		
	comp=Z,190nm,17.7s,MS3.5						
HIA	**Hailar**	**20.84**	**316**	*e*P	**P**	**05 31 13.7**	**+3.5**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
HIA	**Hailar**	**20.84**	**316**	*e*P	**P**	**05 31 13.7**	**+3.5**
	comp=Z,3.8nm,0.4s						
QZH	**Quanzhou**	**22.89**	**247**	*e*P	**P**	**05 31 29.1**	**-3.3**
QZH				*e*S	**S**	**05 35 30.2**	**-10**
QZH				LR	LR		
	comp=N,400nm,10.9s,MS4.3						
QZH				LR	LR		
	comp=E,510nm,12.7s,MS4.3						
QZH				LR	LR		
	comp=Z,590nm,16.6s,MS4.1						
CLNS	**Chul'man**	**23.69**	**336**	*e*P	**P**	**05 31 40.2**	**+0.1**
CLNS				*e**PP		05 31 46.2	
CLNS				*e*		05 31 54.6	
CLNS				*e*S	PcP	05 35 20.4	-3.2
CLNS				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
CLNS				pmax	pmax		
	comp=N,43nm,1.5s						
CLNS				pmax	pmax		
	comp=E,12nm,1.4s						
CLNS				MLR	MLR		
	comp=Z,403nm,13.0s,MS4.1						
CLNS				MLR	MLR		
	comp=N,391nm,12.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,211nm,12.0s,MS4.2						
HHC	**Hu-ho-hao-te**	**24.15**	**291**	*e*P	**P**	**05 31 44.9**	**+0.4**
HHC				pP		05 31 54.7	
HHC				sP	sP	05 31 58.0	+2.2
HHC				PP		05 32 20.1	
HHC				PcP	PcP	05 35 26.5	+1.6
HHC				S	**S**	**05 35 58.8**	**-1.9**
HHC				sS	sS	05 36 14.2	+0.3
HHC				SS		05 36 51.8	
HHC				ScP	ScP	05 39 01.3	-0.2
HHC				PcS	PcS	05 39 03.3	-1.2
HHC				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,350nm,12.2s,MS4.3						
HHC				LR	LR		
	comp=E,460nm,13.0s,MS4.3						
HHC				LR	LR		
	comp=Z,460nm,14.4s,MS4.1						
XAN	**Xi'an**	**27.00**	**275**	P	**P**	**05 32 09.2**	**-1.2**
XAN				pP	pP	05 32 18.5	+0.1
XAN				sP	sP	05 32 21.8	+0.1
XAN				S	**S**	**05 36 45.5**	**-0.6**
XAN				sS	sS	05 37 01.5	+2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
XAN				LR	LR		
	comp=N,170nm,17.3s,MS3.7						
XAN				LR	LR		
	comp=E,110nm,18.6s,MS3.7						
XAN				LR	LR		
	comp=Z,110nm,16.6s,MS3.5						
YAK	**Yakutsk**	**27.06**	**347**	*e*P	**P**	**05 32 09.8**	**-0.8**
YAK				*e**PP	pP	05 32 19.1	+0.5
YAK				*e*PPP		05 32 59.7	
YAK				*e*S	**S**	**05 36 43.7**	**-2.8**
YAK				*e*SSS		05 38 03.6	
YAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,25nm,1.3s						
YAK				smax			
	comp=N,108nm,14.1s						
YAK				MLR	MLR		
	comp=Z,540nm,15.0s,MS4.2						
YAK				MLR	MLR		
	comp=N,452nm,15.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,156nm,13.0s,MS4.2						
SEY	**Seymchan**	**27.63**	**10**	*c*eP	**P**	**05 32 16.5**	**+0.8**
ENH	**Enshi**	**27.66**	**267**	*e*P	**P**	**05 32 15.5**	**-0.8**
	comp=E,37nm,0.8s,mb5.1						
ULN	**Ulaanbaatar**	**28.20**	**306**	*e*P	**P**	**05

LZH pmax pmax
comp=Z,85nm,4.9s
LZH LR LR
comp=E,880nm,14.5s
LZH LR LR
comp=Z,1μm,17.4s,MS4.7
ZAK Zakamensk 31.15 309 *e*P **P 05 32 46.8 -0.3**
ZAK pmax pmax
comp=Z,16nm,1.2s,mb4.7
TLY Talaya 31.23 312 *e*P **P 05 32 48.5 +0.7**
TLY *e* 05 33 57.4
TLY *e*S **S 05 37 47.3 -5.1**
TLY pmax pmax
comp=Z,24nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,493nm,15.0s,MS4.3
TLY Talaya 31.23 312 *e*P **P 05 32 48.5 +0.7**
comp=Z,16nm,0.9s,mb4.9
GYA Guiyang 31.46 262 P **P 05 32 50.0 -0.1**
GYA pP pP 05 33 01.5 +3.3
GYA sP sP 05 33 06.3 +4.8
GYA PP PP 05 33 55.7 -5.6
GYA S **S 05 37 54.8 -1.6**
GYA sS sS 05 38 11.2 +1.5
GYA ScP ScP 05 39 23.5 -0.6
GYA SS SS 05 39 44.0 -28
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,480nm,15.8s,MS4.4
GYA LR LR
comp=E,460nm,15.3s,MS4.4
GYA LR LR
comp=Z,450nm,15.5s,MS4.2
CD2 Chengdu 32.08 272 P **P 05 32 54.8 -0.7**
CD2 pP pP 05 33 04.3 +0.8
CD2 PP PP 05 34 01.5 -6.6
CD2 S **S 05 38 03.4 -2.5**
CD2 sS sS 05 38 19.5 +0.2
CD2 SS SS 05 39 58.0 -26
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,90nm,5.5s
CD2 LR LR
comp=N,440nm,16.0s
CD2 LR LR
comp=Z,440nm,17.2s,MS4.2
MOY Mondy 32.84 311 *e*P **P 05 33 02.4 +0.5**
MOY pmax pmax
comp=Z,23nm,2.8s,mb4.6
QIZ Qiongzhong 32.91 247 P **P 05 33 07.9 +5.0**
QIZ LR LR
comp=N,210nm,14.4s
QIZ LR LR
comp=Z,200nm,12.5s,MS4.0
GTA Gaotai 33.22 289 P **P 05 33 05.9 +0.6**
GTA pP pP 05 33 15.0 +1.6
GTA sP sP 05 33 20.1 +3.3
GTA PP PP 05 34 18.2 -2.4
GTA PcP PcP 05 35 49.5 +2.0
GTA S **S 05 38 21.7 -1.8**
GTA sS sS 05 38 37.6 +0.8
GTA SS SS 05 40 22.6 -24
GTA pmax pmax
comp=Z,22nm,1.1s,mb5.0
GTA pmax pmax
comp=Z,66nm,6.0s
GTA LR LR
comp=N,390nm,18.6s,MS4.4
GTA LR LR
comp=E,620nm,19.2s,MS4.4
GTA LR LR
comp=Z,380nm,16.2s,MS4.2
BILL Bilibino 34.81 16⇑ *e*P **P 05 33 18.2 -0.6**
BILL pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
BILL MLR MLR
comp=Z,200nm,19.0s,MS3.9
KMI Kunming 35.22 263 P **P 05 33 22.9 +0.1**
KMI S **S 05 38 50.6 -4.1**
KMI pmax pmax
comp=Z,11nm,0.9s,mb4.8
KMI LR LR
comp=Z,110nm,23.3s,MS3.5
CHTO Chiang Mai 41.45 257 *e*P **P 05 34 15.2 -0.1**
CHTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
CHTO Chiang Mai 41.45 257 *e*P **P 05 34 15.2 -0.1**
comp=Z,2.6nm,0.7s,mb4.0
WMQ Urumqi 41.61 298 P **P 05 34 17.7 +1.3**
WMQ pmax pmax
comp=Z,33nm,1.0s,mb4.9
WMQ LR LR
comp=N,76nm,14.0s
WMQ LR LR
comp=E,90nm,21.0s
WMQ LR LR
comp=Z,160nm,20.0s
CMAR Chiang Mai Arr 41.65 257 P **P 05 34 17.1 +0.2**
comp=Z,2.8nm,0.8s,mb3.9,baz=47,slow=5.4,SNR=11
CMAR LR LR 05 51 57.3
comp=Z,85nm,19.0s,MS3.6,baz=225,slow=37
LSA Lhasa 42.69 276 P **P 05 34 27.2 +1.9**
LSA Lhasa 42.69 276 *e*P **P 05 34 27.3 +2.0**
LSA pmax pmax
comp=Z,12nm,0.9s,mb4.6
LSA Lhasa 42.69 276 *e*P **P 05 34 27.2 +1.9**
comp=Z,12nm,0.9s,mb4.6
ZAA0 Zalesovo Array 42.83 313 *e*P **P 05 34 26.4 +0.2**
ZALV Zalesovo Beam 42.83 313 P **P 05 34 26.5 +0.3**
comp=Z,9.6nm,0.9s,mb4.5,baz=92,slow=7.6,SNR=15
ZALV LR LR 05 53 12.2
comp=Z,177nm,18.1s,MS4.0,baz=63,slow=37
NVS Novosibirsk 43.76 314 *e*P **P 05 34 30.0 -3.7**
NVS pmax pmax
comp=Z,20nm,1.2s,mb4.7
NVS pmax pmax
comp=E,18nm,1.3s
MK31 Makanchi Array 44.94 303 *e*P **P 05 34 43.8 +0.6**
MKAR Makanchi Array 44.94 303 P **P 05 34 43.8 +0.6**
comp=E,7.3nm,0.7s,mb4.6,baz=95,slow=8.6,SNR=27
MKAR LR LR 05 54 19.4
comp=E,167nm,18.7s,MS4.0,baz=354,slow=37
KAPI Kappang 45.87 212 *e*P **P 05 34 50.6 -0.3**
comp=E,34nm,1.1s,mb5.2
KURK Kurchatov 46.81 309*c i*P **P 05 34 57.5 -0.4**
KURK pmax pmax
comp=Z,33nm,1.2s,mb5.1
KURK Kurchatov 46.81 309 P **P 05 34 58.1 +0.2**
comp=Z,11nm,0.7s,mb4.9,baz=84,slow=8.0,SNR=39
KURK LR LR 05 55 34.0
comp=Z,227nm,18.5s,MS4.2,baz=95,slow=37
KURK Kurchatov 46.81 309 *e*P **P 05 34 57.6 -0.3**
comp=Z,40nm,1.3s,mb5.2
TKM2 Tokmak 2 50.42 299 *e*P **P 05 35 27.0 +1.3**
TKM2 pmax pmax
comp=Z,17nm,1.1s,mb5.0
TKM2 Tokmak 2 50.42 299 *e*P **P 05 35 27.0 +1.2**
comp=Z,17nm,1.1s,mb5.0
KSH Kashi 51.14 295 *e*P **P 05 35 35.1 +3.8**
KSH *e*pP pP 05 35 45.1 +5.5
KSH *e*sP sP 05 35 48.1 +5.2
KSH *e*PcP PcP 05 36 49.2 +2.6
KSH *e*PP PP 05 37 32.1 +4.2
KSH *e*ScP ScP 05 40 42.1 +1.0
KSH *e*PcS PcS 05 40 45.1 +0.9
KSH *e*S **S 05 42 49.7 +2.2**
KSH sS sS 05 43 08.1 +6.8
KSH *e*ScS ScS 05 45 19.2 -0.7
KSH *e*SS SS 05 46 26.2 +3.5
KSH pmax pmax
comp=Z,45nm,3.4s
KSH LR LR
comp=N,320nm,10.8s
KSH LR LR
comp=E,160nm,9.2s
AAK Ala-Archa 51.28 299 P **P 05 35 32.5 +0.3**
comp=E,1.7nm,0.5s,mb4.3,baz=6.4,slow=2.6,SNR=7.3
AAK LR LR 05 58 39.8
comp=E,634nm,18.8s,MS4.7,baz=148,slow=38
AAK Ala-Archa 51.28 299 *e*P **P 05 35 32.6 +0.3**
UCH Uchtor 51.38 299 *e*P **P 05 35 34.3 +1.3**
comp=E,6.4nm,1.1s,mb4.5
BVAR Borovoye Array 51.48 313 P **P 05 35 34.0 +0.4**
BVAR 05 36 47.9
BVAR Borovoye Array 51.48 313 P **P 05 35 34.0 +0.3**
comp=E,5.1nm,0.9s,mb4.4,baz=79,slow=7.7,SNR=20
BVAR PcP PcP 05 36 47.9 +0.3
comp=E,1.8nm,0.8s,baz=90,slow=1.4,SNR=3.7
BVAR LR LR 05 58 40.8
comp=E,305nm,18.6s,MS4.4,slow=38
BRVK Borovoye 51.54 313*c i*P **P 05 35 34.1 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BRVK Borovoye 51.54 313 *e*P **P 05 35 34.2 +0.2**
comp=Z,10.0nm,1.0s,mb4.7
PSI Prapat 51.66 240 LR LR 05 59 47.7
comp=Z,115nm,18.3s,MS3.9,baz=64,slow=39
EKS2 Erkin-Say 51.77 299 *e*P **P 05 35 36.3 +0.3**
comp=Z,5.4nm,1.0s,mb4.4
AML Almayashu 51.99 299 *e*P **P 05 35 39.0 +1.4**
comp=Z,17nm,0.9s,mb5.0
INK Inuvik 55.04 27 *e*P **P 05 36 00.2 +0.7**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 55.04 27 P **P 05 35 60.0 +0.4**
comp=Z,2.7nm,0.8s,mb4.3,baz=296,slow=6.9,SNR=17
INK Inuvik 55.04 27 *e*P **P 05 36 00.2 +0.7**
comp=Z,4.9nm,1.1s,mb4.5
SVE Sverdlovsk 56.10 319 *e*P **P 05 36 05.0 -2.3**
WRAB Tennant Creek 56.19 189 *e*P **P 05 36 07.1 -1.2**
WRAB pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
WRAB Tennant Creek 56.19 189 *e*P **P 05 36 07.1 -1.2**
comp=Z,4.7nm,0.8s,mb4.6
WRA Warramunga Arr 56.20 189 P **P 05 36 07.2 -1.2**
comp=Z,4.4nm,0.8s,mb4.5,baz=6.8,slow=7.4,SNR=16
ARU Arti 57.31 319*c i*P **P 05 36 15.9 0.0**
ARU 05 38 20.0
ARU S **S 05 44 10.7 +0.5**
ARU SS SS 05 47 59.7 +0.5
ARU pmax pmax
comp=Z,29nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,256nm,16.0s,MS4.4
ARU Arti 57.31 319 *e*P **P 05 36 16.4 +0.4**
comp=Z,18nm,1.1s,mb5.0
ABKAR Akbulak array 58.84 311 *e*P **P 05 36 26.4 -0.3**
comp=Z,2.8nm,0.5s,mb4.5
AKTO Aktyubinsk 59.59 312 LR LR 06 03 30.8
comp=Z,167nm,19.0s,MS4.2,baz=282,slow=37
ASAR Alice Springs 59.92 188 P **P 05 36 33.9 -0.5**
comp=Z,1.1nm,0.8s,mb4.0,baz=12,slow=8.6,SNR=14
DZM Mont Dzumac 62.35 154 *e*LR LR 05 55 07.6
comp=Z,186nm,21.3s
RES Resolute Bay 63.40 14 *e*P **P 05 36 56.9 -0.4**
RES pmax pmax
comp=Z,81nm,3.0s
RES Resolute Bay 63.40 14 *e*P **P 05 36 56.9 -0.4**
comp=Z,81nm,3.0s
APA Apatity 63.69 336⇑ *e*P **P 05 36 59.5 +0.2**
APA MLR MLR
comp=Z,300nm,16.0s,MS4.6
YKA Yellowknife Ar 64.42 30 P **P 05 37 04.4 +0.3**
comp=Z,1.3nm,0.8s,mb4.0,baz=298,slow=6.4,SNR=12
YKA Yellowknife Ar 64.42 30 *e*P **P 05 37 04.4 +0.3**
KLMR Klimovskoe 64.75 328 *e*P **P 05 37 06.1 -0.2**
KLMR pmax pmax
comp=Z,18nm,1.5s,mb4.9
ARCES ARCESS Array B 65.00 340 P **P 05 37 08.1 +0.2**
comp=Z,4.6nm,0.9s,mb4.5,baz=56,slow=11,SNR=8.2
ARCES LR LR 06 12 01.0
comp=Z,176nm,18.8s,MS4.3,baz=33,slow=42
ARCES ARCESS Array B 65.00 340 P **P 05 37 08.1 +0.2**
ARCES LR LR 06 12 01.0
JOF Joensuu 66.96 332 *e*P **P 05 37 19.7 -0.8**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
JOF Joensuu 66.96 332 *e*p **P 05 37 19.7 -0.8**
comp=Z,3.5nm,0.6s,mb4.6
STKA Stephens Creek 67.63 180 P **P 05 37 24.2 -0.8**
comp=Z,1.9nm,1.0s,mb4.1,baz=284,slow=7.4,SNR=3.1
STKA LR LR 06 07 23.6
comp=Z,53nm,21.1s,MS3.7,baz=38,slow=36
OBN Obninsk 69.07 324⇑ *e*P **P 05 37 33.9 0.0**
OBN pmax pmax
comp=Z,32nm,1.4s,mb5.1
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
KAF Kangasniemi 69.31 333 *e*P **P 05 37 33.9 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KAF Kangasniemi 69.31 333 *e*p **P 05 37 33.9 -1.4**
comp=Z,3.7nm,0.7s,mb4.4
FINES FINESS Array B 69.82 333 P **P 05 37 38.6 +0.3**
comp=Z,5.4nm,0.8s,mb4.5,baz=46,slow=8.2,SNR=14
VSR Storozhevoye 69.89 319 *e*P **P 05 37 38.9 -0.1**
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,7.0nm,0.4s
VORD Divnogorie 69.95 319 *e*P **P 05 37 37.5 -1.9**
VORD pmax pmax
comp=N,390nm,0.5s
VORD pmax pmax
comp=Z,130nm,0.5s
VORD pmax pmax
comp=E,220nm,0.4s
KIV Kislovodsk 71.81 311*c i*P **P 05 37 51.5 +0.7**
KIV pmax pmax
comp=Z,15nm,1.0s,mb4.9
GNI Garni 72.57 307⇑ *e*P **P 05 37 57.2 +1.7**
GNI pmax pmax
comp=Z,11nm,1.2s
FFC Flin Flon 74.28 33*ce*P **P 05 38 06.0 +0.8**
FFC Flin Flon 74.28 33 *e*P **P 05 38 05.6 +0.4**
comp=Z,2.4nm,0.9s,mb4.1
HRY Holter Researc 74.36 43 *e*P **P 05 38 07.1 +1.2**
comp=Z,2.0nm,0.8s,mb4.1
ANN Anapa 74.45 314 *e*P **P 05 38 04.9 -1.6**
ANN pmax pmax
comp=Z,83nm,2.5s,mb5.2
LRM Limekiln Ridge 74.54 44 *e*P **P 05 38 08.0 +1.0**
comp=Z,50nm,1.4s,mb5.2
FCC Fort Churchill 74.66 27 *e*P **P 05 38 07.1 -0.3**
comp=Z,0.1nm,1.1s
HFS Hagfors 75.09 336 LR LR 06 14 08.0
comp=Z,155nm,19.5s,MS4.3,baz=21,slow=38
NB2 NORSAR Subarra 75.19 338 P **P 05 38 10.6 +0.2**
comp=Z,10nm,1.1s,mb4.7,baz=40,slow=5.9
NOA NORSAR Array B 75.19 338 P **P 05 38 10.9 +0.5**
comp=Z,4.0nm,0.9s,mb4.4,baz=39,slow=5.7,SNR=11
NOA LR LR 06 14 42.2
comp=Z,150nm,18.8s,MS4.3,baz=180,slow=38
RAO Raoul Island 75.20 144 P **P 05 38 09.5 -1.3**
comp=Z,287nm,0.6s,baz=251,slow=22,SNR=2.9
NVAR Mina Array Bea 75.23 53 P **P 05 38 12.1 +1.0**
comp=Z,0.9nm,0.8s,mb3.8,baz=277,slow=7.2,SNR=5.5
AKASG Malin Array Be 75.27 323 P **P 05 38 10.9 -0.1**
AKASG Malin Array Be 75.27 323 P **P 05 38 10.9 -0.1**
comp=Z,3.4nm,0.7s,mb4.4,baz=46,slow=5.7,SNR=16
AKASG Malin Array Be 75.27 323 P **P 05 38 10.9 -0.1**
KIEV Kiev 75.28 323 *e*P **P 05 38 10.7 -0.4**
KIEV *e**PP pP 05 38 22.2 +2.4
KIEV pmax pmax
comp=Z,19nm,1.4s,mb4.8
KIEV Kiev 75.28 323 *e*P **P 05 38 10.7 -0.5**
comp=Z,19nm,1.4s,mb4.8
KIEV *e*pP pP 05 38 22.2 +2.4
IMW Indian Meadow 76.55 45 *e*P **P 05 38 20.4 +1.9**
comp=Z,4.7nm,1.3s,mb4.3
LAO LASA Array 77.42 41 *e*P **P 05 38 23.6 +0.3**
comp=Z,2.6nm,0.9s,mb4.2
PDAR Pinedale Array 78.04 46 P **P 05 38 27.5 +0.6**
comp=Z,0.6nm,0.8s,mb3.6,baz=302,slow=2.8,SNR=5.3
KWP Kalwaria Pacla 79.11 325 *e*P **P 05 38 33.4 +0.8**
BUR08 Bucovina Ar. S 79.27 322 *e*P **P 05 38 34.2 +0.7**
BR131 Keskin Array S 79.76 312 *e*P **P 05 38 37.6 +1.3**
comp=Z,4.0nm,1.0s,mb4.3
BRTR Keskin Array B 79.76 312 P **P 05 38 37.6 +1.3**
comp=Z,2.9nm,0.9s,mb4.2,baz=116,slow=5.6,SNR=11
BRTR LR LR 06 19 21.0
comp=Z,50nm,18.1s,MS3.9,baz=243,slow=40
STHS Stebnicka Huta 79.94 325 *e*P **P 05 38 38.8 +1.6**
STHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
STHS Stebnicka Huta 79.94 325 *e*P **P 05 38 38.8 +1.6**
comp=Z,2.6nm,1.2s,mb4.0
STHS Stebnicka Huta 79.94 325 *e*P **P 05 38 38.8 +1.6**
ULM Lac du Bonnet 80.06 33 P **P 05 38 37.8 0.0**
comp=Z,1.9nm,0.8s,mb4.1,baz=333,slow=5.9,SNR=4.6
MLR Muntele Rosu 80.34 320 LR LR 06 17 43.2
comp=Z,302nm,18.9s,MS4.7,baz=284,slow=38
KECS Kecovo 80.96 325 *e*P **P 05 38 43.9 +1.3**
KECS pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
KECS Kecovo 80.96 325 *e*P **P 05 38 43.9 +1.3**
comp=Z,1.4nm,0.9s,mb3.9
KECS Kecovo 80.96 325 *e*P **P 05 38 43.9 +1.3**
VYHS Vyhne 81.71 326 *e*P **P 05 38 47.2 +0.6**
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
VYHS Vyhne 81.71 326 *e*P **P 05 38 47.2 +0.6**
comp=Z,2.2nm,1.0s,mb4.0
VYHS Vyhne 81.71 326 *e*P **P 05 38 47.2 +0.6**
CLL Collm 82.09 330 *e*P **P 05 38 48.0 -0.6**
CLL *i* pP 05 38 55.7 -1.7
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CLL MLR MLR
comp=Z,200nm,16.8s,MS4.5
CLL Collm 82.09 330 *e*P **P 05 38 48.0 -0.6**
comp=Z,6.0nm,0.8s,mb4.6
CLL *i* pP 05 38 55.7 -1.7
CLL LR LR
comp=Z,200nm,16.8s,MS4.5
CLL Collm 82.09 330 *e*P **P 05 38 48.0 -0.6**
comp=Z,6.0nm,0.8s,mb4.6
CLL *i* (PcP) PcP 05 38 55.7 +1.7
VRAC Vranov 82.11 327 LR LR 06 18 55.6
comp=Z,171nm,18.1s,MS4.5,baz=166,slow=38
MMAI Mount Meron Ar 82.82 306 LR LR 06 18 39.4
comp=Z,90nm,21.9s,MS4.1,baz=55,slow=38
MOX Moxa 83.16 331 *e*P **P 05 39 01.0 +6.8**
MOX
comp=Z,100nm,18.0s
GERES GERESS Array B 83.70 329 P **P 05 38 57.2 +0.3**
comp=Z,0.7nm,0.6s,mb4.0,baz=20,slow=4.3,SNR=8.1
GERES LR LR 06 21 58.4
comp=Z,84nm,18.2s,MS4.2,baz=359,slow=40
PPT Papeete 83.87 117 *e*LR LR 06 05 10.8
comp=Z,105nm,22.5s
PPT Papeete 83.87 117 LR LR 06 09 10.5
comp=Z,127nm,20.1s,MS4.3,baz=323,slow=31
GRA1 Grafenberg Arr 84.07 330 *e*P **P 05 38 59.8 +1.0**
comp=Z,6.0nm,0.9s,mb4.7
GRF Grafenberg Arr 84.07 330 *e*P **P 05 38 59.8 +1.0**
comp=Z,6.0nm,0.9s,mb4.7
GRF Grafenberg Arr 84.07 330 *e*P **P 05 38 59.8 +1.0**
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
GRF Grafenberg Arr 84.07 330 *e*P **P 05 38 59.8 +1.0**
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
EIL Elat 85.21 303 LR LR 06 22 23.3
comp=Z,51nm,18.7s,MS3.9,baz=325,slow=39
TAOE Nuku Hiva Isla 85.57 104 *e*LR LR 06 06 03.8
comp=Z,90nm,25.4s
SCHQ Schefferville 86.12 16 LR LR 06 18 21.3
comp=Z,98nm,19.1s,MS4.2,baz=34,slow=36
DAVOX Davos/Dischmat 86.92 329 LR LR 06 21 49.1
comp=Z,141nm,18.2s,MS4.4,baz=189,slow=38
TXAR Lajitas Array 90.38 53 P **P 05 39 30.4 +0.5**
comp=Z,0.4nm,0.8s,mb3.8,baz=232,slow=1.4,SNR=6.5
VAE Valguarnera 92.10 321 LR LR 06 26 15.7
comp=Z,132nm,18.1s,MS4.4,baz=147,slow=39
ESDC Sonseca Array 98.29 334 LR LR 06 29 07.6
comp=Z,113nm,18.2s,MS4.4,baz=180,slow=38
LPAZ La Paz 146.81 61 PKPbc PKPbc 05 46 11.6 +0.8
comp=Z,2.1nm,0.5s,baz=341,slow=2.3,SNR=19

MAN 08 05:28:16,8.88N×126.14E,h53km,mb4.9,ML3.8,MS3.8, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.52**	**280**	*e*P	Pn	05 28 31.2	+3.5
BUTP				*e*S	Sn	05 28 39.5	+3.4
BIPH	**Bislig**	**0.72**	**162⇑**	*i*P	Pn	05 28 30.8	+0.6
BIPH				*i*S	Sn	05 28 42.2	+1.8
BUKP	**Musuan**	**1.46**	**227**	*e*P	Pn	05 28 41.8	+1.8
BUKP				*e*S	Sn	05 28 54.0	-4.0
CGP	**Cagayan de Oro**	**1.49**	**254⇑**	*i*P	Pn	05 28 41.5	+1.1
CGP				*i*S	Sn	05 29 00.7	+1.9
MSLP	**Maasin**	**1.78**	**315**	*e*P	Pn	05 28 46.9	+2.5
MATI	**Mati**	**1.92**	**177**	*e*P	Pn	05 28 47.0	+0.7
TBP	**Tagbilaran**	**2.39**	**290**	*e*P	Pn	05 28 54.0	+1.2
TBP				*e*S	Sn	05 29 21.6	+0.7
CNP	**Catarman**	**3.89**	**338**	*e*P	Pn	05 29 15.7	+2.3
PVCP	**Virac**	**5.08**	**338**	*e*P	Pn	05 29 31.1	+1.5

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*DJA **08** 05:50:35,2.44S×128.80E,h9km,MLv4.2/7*
*IDC **08** 05:50:39.5±10.0,2.62S×129.35E,h75km±94km,mb3.7/3, mb1 4.0/5,mb1mx3.6/20,mbtmp3.8/5,ML4.1/2,Error ellipse: s-maj=90.4km s-min=36.5km az=66.0*
*NEIC **08** 05:50:40.0±4.3,2.85S×128.98E,h72km±42km,mb4.2/3, Error ellipse: s-maj=32.4km s-min=26.7km az=65.0*
ISC 08 05:50:36.5±0.6,2.70S±0.04×128.81E±0.05,h50km±10km, n19,σ1.23/25,mb3.9/4,1D,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.66**	**170**	P	**Pn**	**05 50 51.3**	**+1.6**
MSAI				S	**Sn**	**05 51 05.5**	**+6.3**
AAI	**Ambon**	**1.16**	**212**	P	**Pn**	**05 50 59.2**	**+2.8**
NLAI	**Namlea**	**1.79**	**252**	P	**Pn**	**05 51 06.1**	**+1.1**
NLAI				S	**Sn**	**05 51 31.9**	**+5.3**
LBMI	**Labuha**	**2.43**	**327**	P	**Pn**	**05 51 12.2**	**-1.5**
LBMI				S	**Sn**	**05 51 41.2**	**-1.0**
SWI	**Sorong**	**3.05**	**53**	P	**Pn**	**05 51 22.6**	**+0.4**
SWI				S	**Sn**	**05 51 57.7**	**+0.2**
APSI	**Ampana**	**7.38**	**284**	P	**Pn**	**05 52 21.3**	**-0.3**
APSI				S	**Sn**	**05 53 43.3**	**-0.7**
KCP	**Kidapawan**	**10.33**	**339⇓**	*i*P	**Pn**	**05 52 57.0**	**-5.1**
KAKA	**Kakadu**	**10.58**	**160**	*e*Pn	**Pn**	**05 53 04.6**	**-0.9**
KAKA				*e*S	**Sn**	**05 55 01.1**	**-1.5**
FITZ	**Fitzroy Crossi**	**15.62**	**191**	P	**Pn**	**05 54 17.2**	**+3.7**
	0.3nm,0.3s,baz=24,slow=16,SNR=9.3						
WRAB	**Tennant Creek**	**17.97**	**163**	*e*P	**Pn**	**05 54 41.4**	**-1.4**
	9.1nm,0.7s						
WRA	**Warramunga Arr**	**17.97**	**163**	P	**Pn**	**05 54 41.2**	**-1.7**
	1.2nm,0.3s,baz=344,slow=12,SNR=27						
WB2	**Warramunga Arr**	**17.98**	**163**	*e*P	**Pn**	**05 54 41.8**	**-1.1**
COEN	**Coen**	**18.07**	**129**	Pn	**Pn**	**05 54 45.2**	**+1.1**
	131nm,1.1s						
COEN				*e*S	**S**	**05 57 57.1**	**-12**
MBWA	**Marble Bar**	**20.37**	**205**	*e*P	**P**	**05 55 09.1**	**0.0**
ASAR	**Alice Springs**	**21.42**	**167**	P	**P**	**05 55 21.2**	**+0.8**
	15nm,0.7s,mb4.4,baz=351,slow=12,SNR=96						
KURK	**Kurchatov**	**68.25**	**328**	P	**P**	**06 01 32.9**	**+0.9**
	0.4nm,0.3s,mb4.0,baz=120,slow=6.1,SNR=5.1						
BVAR	**Borovoye Array**	**73.81**	**328**	P	**P**	**06 02 07.2**	**+1.5**
	0.3nm,0.5s,mb3.5,baz=94,slow=4.8,SNR=3.2						
ABKAR	**Akbulak array**	**78.42**	**321**	*e*P	**P**	**06 02 36.0**	**+4.0**
	0.3nm,0.4s,mb3.6						
TORD	**Torodi Ar. Bea**	**126.71**	**284**	PKP	PKPdf	06 09 37.9	+2.4
	0.3nm,0.7s,baz=40,slow=1.1,SNR=2.6						

NEIC 08 05:55:01.0,39.54N×119.92W,h3km,ML3.8(REN), MW3.6(SLM),MW3.6(BRK),After REN.,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAHR	**Pah Rah Range**	**0.45**	**68**	*e*Pg	Pg	05 55 10.2	+0.6
WAKR	**Walker**	**1.10**	**160**	*e*Pg	Pg	05 55 22.2	0.0
OHCM	**Honcut**	**1.23**	**261**	*e*Pg	Pg	05 55 23.7	-0.8
CMB	**Columbia Colle**	**1.55**	**194**	*e*Pn	Pn	05 55 29.4	0.0
CMB				*e*Sn	Sn	05 55 49.3	-0.8
WDC	**Whiskeytown Da**	**2.26**	**298**	*e*Pn	Pn	05 55 38.0	-1.3
WDC				*e*Sg	Sg	05 56 13.2	-0.5
MOD	**Modoc**	**2.38**	**353**	*e*Pg	Pg	05 55 43.9	-2.7
MOD				*e*Sg	Sg	05 56 19.1	+1.8
MTUM	**Tungsten Hills**	**2.43**	**154**	*e*Pn	Pn	05 55 44.2	+2.6
HOPS	**Hopland**	**2.51**	**258**	*e*Pn	Pn	05 55 43.0	+0.4
SAC	**San Andreas**	**2.77**	**226**	*e*Pn	Pn	05 55 47.7	+1.4
KCPM	**Cahto Peak**	**2.83**	**274**	*e*Pn	Pn	05 55 51.0	+3.9
SAO	**San Andreas Ge**	**3.02**	**204**	*e*Pn	Pn	05 55 50.9	+1.2
SAO				*e*Sn	Sn	05 56 29.6	+3.2
YBH	**Yreka Blue Hor**	**3.05**	**317**	*e*Pg	Pg	05 55 58.7	-0.7

YBH				*e*Sg	Sg	05 56 42.5	+3.6
KHMM	**Horse Mountain**	**3.21**	**296**	*e*Pn	Pn	05 55 55.7	+3.5
ELK	**Elko**	**3.78**	**70**	*e*Pn	Pn	05 56 00.2	0.0
HUMO	**Hull Mountain**	**3.83**	**324**	*e*Pn	Pn	05 56 03.5	+2.8
HUMO				*e*Sg	Sg	05 57 03.2	-0.7
ISA	**Isabella**	**4.04**	**163**	*e*Sg	Sg	05 57 09.1	-1.6
N13A	**Wendover, West**	**4.57**	**71**	*e*Pn	Pn	05 56 11.4	+0.4
N13A				*e*Sg	Sg	05 57 25.4	-2.4
M13A	**Montello**	**4.75**	**66**	*e*Pn	Pn	05 56 12.7	-0.8
SHPR	**Sheep Range**	**4.83**	**127**	*e*Pn	Pn	05 56 15.5	+1.0
DUG	**Dugway**	**5.51**	**81**	*e*Pn	Pn	05 56 25.4	+1.5
DUG				*e*Sg	Sg	05 57 54.8	-3.1
CCUT	**Cedar City**	**5.51**	**109**	*e*Pn	Pn	05 56 25.7	+1.7
CCUT				*e*Sg	Sg	05 57 54.7	-3.3
HLID	**Hailey**	**5.76**	**44**	Pn	Pn	05 56 28.5	+1.2
HLID				*e*Sg	Sg	05 58 03.0	-3.0
NLU	**North Lily Min**	**6.06**	**84**	*e*Pn	Pn	05 56 33.4	+1.9
NLU				*e*Sg	Sg	05 58 13.3	-2.3
MSU	**Marysvale**	**6.12**	**97**	*e*Pn	Pn	05 56 34.3	+2.0
MPU	**Maple Canyon**	**6.40**	**83**	Pn	Pn	05 56 37.0	+0.9
PFO	**Pinyon Flat Ob**	**6.54**	**154**	*e*Sg	Sg	05 58 36.0	+4.9
JLU	**Jordanelle**	**6.58**	**78**	*e*Pn	Pn	05 56 37.7	-0.9
JLU				*e*Sg	Sg	05 58 29.9	-2.5
HWUT	**Hardware Ranch**	**6.69**	**69**	*e*Pn	Pn	05 56 45.0	+5.0
HWUT				*e*Sg	Sg	05 58 30.5	-5.2
DAU	**Daniels Canyon**	**6.71**	**80**	*e*Pn	Pn	05 56 42.6	+2.2
DAU				*e*Sg	Sg	05 58 35.5	-1.0
TMUT	**Trail Mountain**	**6.75**	**89**	*e*Pn	Pn	05 56 41.5	+0.5
TMUT				*e*Sg	Sg	05 58 36.6	-1.1
SRU	**San Rafael**	**7.30**	**90**	*e*Pn	Pn	05 56 52.4	+4.0
SRU				*e*Sg	Sg	05 58 53.7	-1.6
DCID1	**Drake Creek**	**7.70**	**55**	*e*Pg	Pg	05 57 26.3	-2.1
DCID1				*e*Sg	Sg	05 59 11.8	+3.7
TPAW	**Teton Pass**	**7.80**	**57**	*e*Pg	Pg	05 57 27.5	-2.8
TPAW				*e*Sg	Sg	05 59 16.2	+4.9
WUAZ	**Wupatki**	**7.89**	**118**	*e*Sg	Sg	05 59 12.7	-1.5
LRM	**Limekiln Ridge**	**8.34**	**39**	*e*Sg	Sg	05 59 23.4	-5.3
BOZ	**Bozeman (W)**	**8.63**	**42**	*e*Pg	Pg	05 57 41.0	-5.3
LKWY	**Lake**	**8.68**	**52**	*e*Pg	Pg	05 57 39.9	-7.2
SMCO	**Snowmass**	**10.04**	**88**	*e*Pn	Pn	05 57 30.8	+4.8

IDC 08 06:06:03.1±2.9, 40°.34N×113°.57E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.3/25, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=63.1km s-min=35.9km az=26.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.10**	**328**	Pn	Pn	06 08 14.5	-1.0
	0.1nm,0.3s,baz=148,slow=14,SNR=2.3						
SONM				Lg		06 10 52.8	
	0.1nm,0.3s,baz=146,slow=32,SNR=5.5						
MKAR	**Makanchi Array**	**23.46**	**296**	P	P	06 11 14.5	+0.3
	0.4nm,0.5s,baz=110,slow=11,SNR=4.0						
YKA	**Yellowknife Ar**	**70.47**	**22**	P	P	06 17 18.9	+0.1
	0.7nm,0.8s,baz=323,slow=5.6,SNR=8.5						

*IDC **08** 06:12:28.2±2.8, 23°.53S×70°.35W, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=73.4km s-min=57.3km az=56.0*
*ISCJB **08** 06:12:35.6±0.7, 23°.06S±0°.07×70°.3W±0°.1, h47km±8km, mb3.7/2, Error ellipse: s-maj=24.0km s-min=6.9km az=24.9*
*GUC **08** 06:12:35.6±0.9, 22°.99S×70°.31W, h39km±3km, ML3.9*
ISC 08 06:12:36.3±0.7, 23°.08S±0°.07×70°.3W±0°.1, h40km±9km, n9, σ0°.79/15, mb3.7/2, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.17**	**260**	⇑*i*P	**Pn**	**06 12 42.4**	**-0.9**
MECH				AML	AML	06 12 48.5	
	comp=E,28μm,0.3s						
ANCH	**Antofagasta**	**0.62**	**193**	⇑*i*P	**Pn**	**06 12 48.6**	**-0.1**
ANCH				*i* S	**Sn**	**06 12 58.1**	**+0.7**
ANCH				AML	AML	06 13 00.5	
	comp=N,5μm,0.5s						
PECH	**Pedro de Valdi**	**0.72**	**49**	⇓*i*P	**Pn**	**06 12 49.8**	**-0.2**
PECH				*i* S	**Sn**	**06 12 59.9**	**+0.1**
PECH				AML	AML	06 13 00.1	
	comp=E,9μm,0.2s						
MACH	**Maria Elena**	**0.99**	**28**	⇓*i*P	**Pn**	**06 12 53.2**	**-0.5**
MACH				*i* S	**Sn**	**06 13 05.8**	**-0.7**
PB04	**Plate Boundary**	**1.08**	**42**	⇓*i*P	**Pn**	**06 12 49.0**	**-5.9**
PB04				*i* S	**Sn**	**06 12 58.5**	**-10**
PB04				AML	AML	06 13 00.2	
	comp=E,12μm,0.2s						
PB01	**Plate Boundary**	**2.15**	**20**	⇑*i*P	**Pn**	**06 13 09.8**	**+0.3**
PB01				*i* S	**Sn**	**06 13 35.5**	**+0.6**
PB01				AML	AML	06 13 41.6	
	comp=E,1μm,0.2s						
LPAZ	**La Paz**	**7.04**	**17**	Pn	**Pn**	**06 14 19.5**	**+2.6**
	comp=E,0.5nm,0.3s,baz=190,slow=11,SNR=31						
LPAZ				Sn	**Sn**	**06 15 54.7**	**+19**
	comp=E,0.0nm,0.3s,baz=351,slow=15,SNR=1.9						
TORD	**Torodi Ar. Bea**	**79.06**	**71**	P	**P**	**06 24 36.2**	**-0.7**
	comp=E,0.7nm,0.5s,mb3.9,baz=258,slow=5.1,SNR=12						
YKA	**Yellowknife Ar**	**92.25**	**341**	P	**P**	**06 25 41.4**	**-0.1**
	comp=E,0.2nm,0.7s,mb3.5,baz=144,slow=4.5,SNR=3.8						

IDC 08 06:15:06.4±3.0, 30°.00S×138°.89E, h0km, mb1 2.9/3, mb1mx2.9/14, mbtmp2.7/3, ML2.6/3, Error ellipse: s-maj=107.7km s-min=16.7km az=47.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.98**	**130**	Pn	Pn	06 15 55.5	+0.6
	0.4nm,0.3s,baz=310,slow=14,SNR=6.3						
STKA				Pg	Pg	06 16 02.8	-0.8
	1.0nm,0.3s,baz=298,slow=14,SNR=12						
STKA				Sn	Sn	06 16 31.2	-0.3
	0.9nm,0.3s,baz=309,slow=15,SNR=4.1						
STKA				Lg		06 16 39.0	
	1.2nm,0.3s,baz=328,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**7.72**	**324**	Pn	Pn	06 16 59.4	-0.7
	0.1nm,0.3s,baz=150,slow=12,SNR=3.0						
ASAR				Sn	Sn	06 18 37.5	+9.2
	0.1nm,0.3s,baz=152,slow=22,SNR=4.5						
WRA	**Warramunga Arr**	**10.83**	**337**	Pn	Pn	06 17 42.6	-0.1
	0.1nm,0.3s,baz=155,slow=14,SNR=3.6						

IDC 08 06:16:41.3±2.7, 53°.47N×87°.53E, h0km, mb1 3.5/3, mb1mx3.2/29, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=24.8km s-min=12.7km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.68**	**288**	Pg	Pg	06 17 10.7	-2.9
	7.0nm,0.3s,baz=101,slow=14,SNR=41						
ZALV				Lg		06 17 34.1	
	6.4nm,0.3s,baz=113,slow=29,SNR=10						
KURK	**Kurchatov**	**6.14**	**247**	Pn	Pn	06 18 15.4	+2.2
	0.5nm,0.3s,baz=62,slow=14,SNR=37						
KURK				Sn	Sn	06 19 26.6	+2.5
	0.0nm,0.3s,baz=60,slow=25,SNR=2.3						
KURK				Lg		06 20 01.4	
	0.1nm,0.3s,baz=67,slow=31,SNR=7.3						
MKAR	**Makanchi Array**	**7.48**	**209**	Pn	Pn	06 18 32.9	+1.4
	0.5nm,0.3s,baz=27,slow=12,SNR=17						
MKAR				Sn	Sn	06 19 55.8	-1.2
	0.1nm,0.3s,baz=16,slow=29,SNR=2.8						
MKAR				Lg		06 20 37.8	
	0.2nm,0.3s,baz=33,slow=34,SNR=4.3						
BVAR	**Borovoye Array**	**10.29**	**274**	Pn	Pn	06 19 08.7	-1.2
	0.2nm,0.3s,baz=62,slow=15,SNR=3.4						
BVAR				Sn	Sn	06 21 01.0	-4.8
	0.1nm,0.3s,baz=91,slow=22,SNR=2.8						

*NIED **08** 06:26:00, 36°.20N×141°.90E, h23km, Mw3.6 Best double couple: M0=3.28000×10^14 NP1:φ=21.00000°, δ=68.00000°, λ=89.00000°. NP2:φ=202.00000°, δ=22.00000°, λ=91.00000°.*
*ISCJB **08** 06:26:05.0±1.7, 36°.19N±0°.04×141°.98E±0°.07, h28km±12km, mb3.6/7, Error ellipse: s-maj=10.2km s-min=6.8km az=171.0*
*JMA **08** 06:26:05.9±0.2, 36°.21N×141°.86E, h66km±5km, M3.5*
*IDC **08** 06:26:11.0±3.8, 36°.01N×141°.67E, h61km±31km, mb3.3/7, mb1 3.4/9, mb1mx3.3/28, mbtmp3.4/9, ML3.6/2, MS3.5/1, ms1 3.5/1, ms1mx2.3/24, Error ellipse: s-maj=36.7km s-min=15.1km az=80.0*

ISC 08 06:26:04.4±1.5, 36°.21N±0°.04×141°.93E±0°.07, h11km±8km, n21, σ0°.99/27, mb3.6/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.01**	**240**	P	**Pg**	**06 26 23.9**	**0.0**
CHOJ				S	**Sg**	**06 26 37.7**	**+0.7**
JHO	**Hitachi**	**1.17**	**290**	P	**Pb**	**06 26 25.4**	**-1.3**
JHO				*e*S	**Sb**	**06 26 41.2**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.27**	**315**	P	**Pn**	**06 26 27.2**	**-1.0**
JFK	**Kawauchi**	**1.43**	**324**	P	**Pn**	**06 26 29.6**	**-0.8**
JFK				*e*S	**Sn**	**06 26 48.4**	**-0.9**
BSO1	**Boso 1**	**1.74**	**207**	*e*S	**Sn**	**06 26 56.4**	**-0.4**
BSO3	**Boso 3**	**1.82**	**220**	P	**Pn**	**06 26 35.7**	**-0.1**
JFT	**Otama**	**1.83**	**316**	P	**Pn**	**06 26 36.4**	**+0.5**
JFT				*e*S	**Sn**	**06 27 00.1**	**+1.1**
JMM	**Marumori**	**1.89**	**331**	P	**Pn**	**06 26 36.6**	**-0.1**
JAG	**Ashikaga**	**2.02**	**277**	P	**Pn**	**06 26 37.8**	**-0.6**
JRY	**Ryogami san**	**2.46**	**266**	P	**Pn**	**06 26 44.1**	**-0.5**
MJAR	**Matsushiro Arr**	**3.02**	**277**	P	**Pn**	**06 26 52.6**	**+0.3**
	9.5nm,0.3s,baz=318,slow=23,SNR=55						
MJAR				S	**Sn**	**06 27 31.1**	**+2.6**
	5.3nm,0.3s,baz=308,slow=6.9,SNR=7.7						
MAT	**Matsushiro**	**3.03**	**277**	P	**Pn**	**06 26 53.0**	**+0.7**
MAT				S	**Sn**	**06 27 28.1**	**-0.5**
JHJ	**Hachijo jima 2**	**3.56**	**211**	P	**Pn**	**06 27 01.0**	**+1.4**
	16nm,0.3s,baz=237,slow=20,SNR=4.0						
JHJ				S	**Sn**	**06 27 38.0**	**-3.6**
	44nm,0.3s,baz=29,slow=22,SNR=7.8						
SONM	**Songino Array**	**28.60**	**305**	P	**P**	**06 32 00.6**	**+0.1**
	0.9nm,0.6s,mb3.7,baz=109,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**06 34 19.3**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=94,slow=7.8,SNR=4.8						
KURK	**Kurchatov**	**46.77**	**309**	P	**P**	**06 34 34.3**	**+0.6**
	0.9nm,0.3s,mb4.1,baz=84,slow=7.7,SNR=5.4						
BVAR	**Borovoye Array**	**51.44**	**313**	P	**P**	**06 35 09.7**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=90,slow=2.9,SNR=3.0						
INK	**Inuvik**	**54.93**	**27**	P	**P**	**06 35 37.0**	**+2.1**
	0.5nm,0.7s,mb3.7,baz=315,slow=5.0,SNR=4.4						
CTA	**Charters Tower**	**56.14**	**175**	LR	LR	06 54 33.7	
	comp=Z,48nm,21.6s,baz=52,slow=30						
WRA	**Warramunga Arr**	**56.31**	**189**	P	**P**	**06 35 44.8**	**-0.5**
	0.5nm,0.8s,mb3.6,baz=5.8,slow=7.5,SNR=2.8						
ASAR	**Alice Springs**	**60.03**	**189**	P	**P**	**06 36 08.6**	**-2.7**
	0.2nm,0.8s,mb3.2,baz=24,slow=7.7,SNR=2.9						

*NIED **08** 06:29:00, 36°.30N×141°.90E, h23km, Mw4.2 Best double couple: M0=2.16000×10^15 NP1:φ=22.00000°, δ=67.00000°, λ=101.00000°. NP2:φ=174.00000°, δ=25.00000°, λ=64.00000°.*
*BJI **08** 06:29:06.5, 36°.12N×142°.15E, h33km, mB4.6/6, mb4.5/9, Ms4.1/4, Ms7 3.7/4*
*ISCJB **08** 06:29:07.3±1.3, 36°.27N±0°.03×142°.03E±0°.05, h26km±8km, mb4.2/40, MS3.6/9, Error ellipse: s-maj=7.1km s-min=5.5km az=3.8*
*MOS **08** 06:29:08.6±0.9, 36°.26N×141°.93E, h33km, mb4.6/15, Error ellipse: s-maj=12.8km s-min=7.6km az=122.9*
*JMA **08** 06:29:09.0±0.2, 36°.30N×141°.85E, h66km±5km, M3.9*
*NEIC **08** 06:29:11.1±0.3, 36°.16N×141°.81E, h35km, mb4.5/6, MW4.2(NIED), Error ellipse: s-maj=8.6km s-min=7.3km az=194.0*
*IDC **08** 06:29:13.2±2.5, 36°.16N×141°.72E, h53km±22km, mb3.8/21, mb1 4.0/24, mb1mx3.9/31, mbtmp3.9/24, ML3.8/3, MS3.6/7, Ms1 3.6/7, ms1mx3.1/41, Error ellipse: s-maj=18.2km s-min=10.9km az=65.0*

ISC 08 06:29:07.7±1.5, 36°.26N±0°.03×141°.96E±0°.05, h13km±9km, n78, σ0°.98/89, mb4.2/40, MS3.6/9, 5C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.05**	**238**	P	**Pb**	**06 29 27.5**	**-0.2**
CHOJ				S	**Sb**	**06 29 42.6**	**+1.3**
JHO	**Hitachi**	**1.17**	**288**	⇓P	**Pn**	**06 29 28.1**	**-1.6**
ONAJ	**Iwakimizuishiy**	**1.25**	**312**	⇓P	**Pn**	**06 29 29.4**	**-1.5**
JFK	**Kawauchi**	**1.41**	**322**	P	**Pn**	**06 29 32.2**	**-0.8**
BSO1	**Boso 1**	**1.79**	**207**	P	**Pn**	**06 29 38.5**	**+0.3**
BSO1				*e*S	**Sn**	**06 30 02.1**	**+1.3**
JFT	**Otama**	**1.81**	**315**	P	**Pn**	**06 29 38.4**	**-0.1**
JFT				*e*S	**Sn**	**06 30 01.3**	**+0.1**
JMM	**Marumori**	**1.85**	**330**	⇑P	**Pn**	**06 29 38.5**	**-0.6**
BSO3	**Boso 3**	**1.87**	**219**	P	**Pn**	**06 29 39.6**	**+0.2**
JAG	**Ashikaga**	**2.03**	**275**	P	**Pn**	**06 29 40.8**	**-0.7**
JFY	**Yanaizu**	**2.14**	**303**	⇑P	**Pn**	**06 29 43.1**	**+0.1**
JFY				*e*S	**Sn**	**06 30 10.5**	**+1.1**
JKT	**Katashina**	**2.24**	**284**	P	**Pn**	**06 29 44.5**	**+0.1**
MJAR	**Matsushiro Arr**	**3.04**	**276**	P	**Pn**	**06 29 56.0**	**+0.7**
	19nm,0.3s,baz=109,slow=8.5,SNR=39						
MJAR				S	**Sn**	**06 30 30.1**	**-1.4**
	9.7nm,0.3s,baz=236,slow=9.2,SNR=7.4						
MAJO	**Matsushiro**	**3.04**	**276**	*e*P	**Pn**	**06 29 56.1**	**+0.7**
MAT	**Matsushiro**	**3.04**	**276**	P	**Pn**	**06 29 56.3**	**+0.9**
MAT				S	**Sn**	**06 30 32.6**	**+1.0**
JHJ	**Hachijo jima 2**	**3.61**	**210**	P	**Pn**	**06 30 03.5**	**+0.3**
	30nm,0.3s,baz=354,slow=9.2,SNR=7.1						
JHJ				S	**Sn**	**06 30 43.1**	**-2.5**
	137nm,0.3s,baz=61,slow=23,SNR=11						
ASAJ	**Asahikawa**	**7.86**	**3**	P	**Pn**	**06 31 02.2**	**+0.5**
ASAJ				S	**Sn**	**06 32 29.6**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.86**	**3**	P	**Pn**	**06 31 02.1**	**+0.5**
	comp=N,1.0nm,0.3s,baz=278,slow=27,SNR=2.5						
ASAJ				S	**Sn**	**06 32 29.6**	**-0.9**
	comp=N,0.8nm,0.3s,baz=64,slow=31,SNR=3.2						
CBIJ	**Chichi jima**	**9.14**	**179**	P	**Pn**	**06 31 17.2**	**-2.0**
	comp=N,6.5nm,0.3s,baz=300,slow=22,SNR=3.8						
CBIJ				S	**Sn**	**06 32 54.0**	**-8.0**
	comp=N,6.5nm,0.3s,baz=316,slow=21,SNR=3.5						
VLA	**Vladivostok**	**10.34**	**315**	*e*P	**Pn**	**06 31 42.9**	**+7.3**
VLA				pmax	pmax		
	comp=Z,33nm,0.9s						
KSRS	**Korea Array**	**11.31**	**280**	P	**Pn**	**06 31 50.4**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=93,slow=13,SNR=13						
KSRS				LR	LR	06 36 04.2	
	comp=Z,166nm,19.9s,baz=338,slow=37						
KLR	**Kul'dur**	**14.96**	**333**	*e*P	**Pn**	**06 32 43.4**	**+4.8**
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
WHN	**Wuhan**	**23.70**	**264**	P	**P**	**06 34 20.9**	**+1.6**
WHN				LR	LR		
	comp=N,510nm,19.3s,MS4.2						
WHN				LR	LR		
	comp=E,620nm,15.6s,MS4.2						
WHN				LR	LR		
	comp=Z,360nm,19.0s,MS3.9						
YAK	**Yakutsk**	**26.92**	**347**	*e*P	**P**	**06 34 47.6**	**-0.6**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
YAK				MLR	MLR		
	comp=N,77nm,13.0s						
YAK				MLR	MLR		
	comp=Z,96nm,14.0s,MS3.5						
XAN	**Xi'an**	**27.03**	**275**	P	**P**	**06 34 48.5**	**-1.0**
XAN				pP	pP	06 34 54.6	+1.0
XAN				sP	sP	06 34 57.7	+2.4
XAN				S	**S**	**06 39 27.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
XAN				pmax	pmax		
	comp=Z,11nm,5.5s						
XAN				LR	LR		
	comp=N,77nm,15.5s						
XAN				LR	LR		
	comp=Z,33nm,11.7s,MS3.1						
ENH	**Enshi**	**27.71**	**267**	*e*P	**P**	**06 34 54.8**	**-0.9**
	comp=Z,18nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**28.15**	**305**	*e*P	**P**	**06 35 00.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**28.15**	**305**	*e*P	**P**	**06 35 00.1**	**+0.6**
	comp=Z,3.9nm,0.8s,mb4.1						
BOD	**Bodaibo**	**28.42**	**328**	*e*P	**P**	**06 35 00.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**28.58**	**305**	P	**P**	**06 35 03.0**	**-0.3**
	comp=Z,7.6nm,0.8s,mb4.5,baz=107,slow=6.8,SNR=33						
SONM				LR	LR	06 46 47.0	
	comp=Z,100nm,18.8s,MS3.4,baz=85,slow=37						
ZAK	**Zakamensk**	**31.09**	**309**	*e*P	**P**	**06 35 20.5**	**-5.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
TLY	**Talaya**	**31.17**	**312**	*e*P	**P**	**06 35 27.2**	**+1.1**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
GTA	**Gaotai**	**33.21**	**288**	*e*P	**P**	**06 35 44.5**	**+0.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BILL	**Bilibino**	**34.65**	**16**	*e*P	**P**	**06 35 56.3**	**0.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
TIXI	**Tiksi**	**36.11**	**353**	*e*P	**P**	**06 36 08.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
CMAR	**Chiang Mai Arr**	**41.73**	**257**	P	**P**	**06 36 56.0**	**-0.5**
	comp=Z,1.2nm,0.3s,mb4.0,baz=46,slow=5.4,SNR=7.0						
ZALV	**Zalesovo Beam**	**42.76**	**313**	P	**P**	**06 37 04.8**	**+0.3**
	comp=Z,3.1nm,0.3s,mb4.5,baz=89,slow=7.6,SNR=5.7						
ZALV				LR	LR	06 55 38.8	
	comp=Z,66nm,18.8s,MS3.5,baz=58,slow=37						
NVS	**Novosibirsk**	**43.69**	**314**	*e*P	**P**	**06 37 11.4**	**-0.6**
MK31	**Makanchi Array**	**44.90**	**303**	*e*P	**P**	**06 37 21.8**	**0.0**
MKAR	**Makanchi Array**	**44.90**	**303**	P	**P**	**06 37 22.1**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.4,baz=95,slow=8.2,SNR=21						
MKAR				LR	LR	06 56 11.9	
	comp=Z,61nm,20.7s,MS3.5,baz=355,slow=36						
KURK	**Kurchatov**	**46.75**	**309**	*e*P	**P**	**06 37 36.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
KURK	**Kurchatov**	**46.75**	**309**	P	**P**	**06 37 36.6**	**+0.2**
	comp=Z,5.4nm,0.7s,mb4.6,baz=84,slow=8.2,SNR=20						
TKM2	**Tokmak 2**	**50.38**	**299**	*e*P	**P**	**06 38 05.4**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**50.38**	**299**	*e*P	**P**	**06 38 05.4**	**+1.0**
	comp=Z,3.7nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**51.24**	**299**	P	**P**	**06 38 10.5**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.2,baz=67,slow=7.7,SNR=6.3						
AAK				LR	LR	07 01 24.8	
	comp=Z,158nm,18.1s,MS4.1,baz=276,slow=38						
BVAR	**Borovoye Array**	**51.42**	**313**	P	**P**	**06 38 12.4**	**+0.3**
	comp=Z,1.7nm,0.6s,mb4.1,baz=62,slow=7.2,SNR=11						
BVAR				LR	LR	07 00 57.6	
	comp=Z,72nm,20.0s,MS3.7,slow=37						
BRVK	**Borovoye**	**51.47**	**313**	*c i*P	**P**	**06 38 12.4**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AML	**Almayashu**	**51.96**	**299**	*e*P	**P**	**06 38 17.6**	**+1.3**
	comp=Z,5.3nm,0.8s,mb4.5						
INK	**Inuvik**	**54.88**	**27**	P	**P**	**06 38 39.0**	**+1.7**
	comp=Z,1.0nm,0.7s,mb4.0,baz=292,slow=4.7,SNR=11						
WRAB	**Tennant Creek**	**56.35**	**189**	*e*P	**P**	**06 38 47.8**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**56.35**	**189**	*e*P	**P**	**06 38 47.8**	**-0.6**
	comp=Z,4.7nm,1.1s,mb4.4						
WB2	**Warramunga Arr**	**56.35**	**189**	*e*P	**P**	**06 38 46.5**	**-1.9**
WRA	**Warramunga Arr**	**56.36**	**189**	P	**P**	**06 38 48.3**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=6.1,slow=7.9,SNR=5.6						
ARU	**Arti**	**57.23**	**319**	*c i*P	**P**	**06 38 54.2**	**-0.1**
ARU				*e*		06 40 58.6	
ARU				S	**S**	**06 46 48.2**	**-1.3**
ARU				SS	SS	06 50 34.8	-3.2
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**58.77**	**311**	*e*P	**P**	**06 39 04.8**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.3						
ABKAR				*e*		06 39 11.3	
AKTK	**Aktyubinsk**	**59.52**	**312**	P	**P**	**06 39 08.5**	**-1.9**
AKTK				LR	LR	07 05 57.1	
AKTO	**Aktyubinsk**	**59.52**	**312**	P	**P**	**06 39 08.5**	**-1.9**
	comp=Z,2.7nm,0.9s,mb4.3,baz=90,slow=6.1,SNR=6.4						
AKTO				LR	LR	07 05 57.1	
	comp=Z,67nm,18.7s,MS3.8,baz=221,slow=37						
ASAR	**Alice Springs**	**60.08**	**189**	P	**P**	**06 39 14.7**	**+0.2**
	comp=Z,0.5nm,0.8s,mb3.6,baz=11,slow=6.7,SNR=4.2						
YKA	**Yellowknife Ar**	**64.26**	**30**	P	**P**	**06 39 43.3**	**+1.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=300,slow=6.1,SNR=6.3						
YKA	**Yellowknife Ar**	**64.26**	**30**	P	**P**	**06 39 43.3**	**+1.2**
ARCES	**ARCESS Array B**	**64.87**	**340**	P	**P**	**06 39 46.1**	**+0.1**
	comp=Z,2.9nm,1.0s,mb4.3,baz=56,slow=8.9,SNR=5.2						
JOF	**Joensuu**	**66.85**	**332**	*e*P	**P**	**06 39 57.8**	**-1.0**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**66.85**	**332**	*e*p	**P**	**06 39 57.8**	**-1.0**
	comp=Z,2.5nm,0.6s,mb4.4						
KAF	**Kangasniemi**	**69.19**	**333**

AKS				*e*SN		**Sn**	**06 32 40.0 -0.8**
AKS	**Akhisar**	**1.15**	**53**	*e*Pn		**Pn**	**06 32 23.2 -1.3**
AKS				*e*Sn		**Sn**	**06 32 40.0 -0.7**
AKHS	**Akhisar**	**1.15**	**53**	*i* P		**Pg**	**06 32 22.7 -0.8**
AKHS				*i* S		**Sg**	**06 32 38.2 -0.1**
AKHS	**Akhisar**	**1.15**	**53**	*i* P		**Pg**	**06 32 22.7 -0.8**
AKHS				*i* S		**Sg**	**06 32 38.2 -0.1**
MLSB	**Milas**	**1.27**	**135**	*e*PN		**Pn**	**06 32 25.1 -1.0**
MLSB				*e*SN		**Sn**	**06 32 42.5 -1.2**
MLSB	**Milas**	**1.27**	**135**	*e*Pn		**Pn**	**06 32 25.1 -1.1**
MLSB				*e*Sn		**Sn**	**06 32 42.5 -1.2**
KULA	**Kula-Manisa**	**1.62**	**78**	*e*PN		**Pn**	**06 32 31.5 +0.5**
KULA	**Kula-Manisa**	**1.62**	**78**	*e*Pn		**Pn**	**06 32 31.5 +0.5**
DAT	**Datca**	**1.64**	**153**	*e*PN		**Pn**	**06 32 31.1 -0.2**
DAT	**Datca**	**1.64**	**153**	*e*Pn		**Pn**	**06 32 31.1 -0.2**
YER	**Yerkesik**	**1.68**	**129**	*e*PN		**Pn**	**06 32 31.6 -0.1**
YER	**Yerkesik**	**1.68**	**129**	*e*Pn		**Pn**	**06 32 31.7 -0.1**
BOZC	**Bozcaada**	**1.71**	**345**	*i* P		**Pn**	**06 32 30.1 -2.1**
BOZC				*i* S		**Sn**	**06 32 54.9 +0.2**
BALY	**Balya**	**1.72**	**26**	*i* P		**Pn**	**06 32 32.9 +0.4**
BALY				*i* S		**Sn**	**06 32 53.8 -1.2**
BALY	**Balya**	**1.72**	**26**	*i* P		**Pn**	**06 32 32.8 +0.4**
BALB	**Balíkesir**	**1.74**	**33**	*e*PN		**Pn**	**06 32 33.2 +0.6**
BALB	**Balikesir**	**1.74**	**33**	*e*Pn		**Pn**	**06 32 33.2 +0.6**
DEMI	**Demirci**	**1.83**	**62**	*i* P		**Pn**	**06 32 33.4 -0.6**
DEMI				*i* S		**Sn**	**06 32 58.4 +0.7**
DEMI	**Demirci**	**1.83**	**62**	*i* P		**Pn**	**06 32 33.4 -0.5**
DEMI				*i* S		**Sn**	**06 32 58.4 +0.7**
DENT	**Denizli**	**1.94**	**102**	*e*PN		**Pn**	**06 32 35.9 +0.5**
DENT	**Denizli**	**1.94**	**102**	*e*Pn		**Pn**	**06 32 35.9 +0.5**
DNZL	**Cakiroluk**	**1.96**	**104**	*i* P		**Pn**	**06 32 34.7 -1.0**
DNZL	**Cakiroluk**	**1.96**	**104**	*i* P		**Pn**	**06 32 34.7 -1.1**
DURS	**Dursunbey**	**2.00**	**45**	*i* P		**Pn**	**06 32 34.9 -1.4**
DURS				*i* S		**Sn**	**06 32 59.2 -2.7**
DURS	**Dursunbey**	**2.00**	**45**	*i* P		**Pn**	**06 32 34.9 -1.4**
LIA	**Limnos Island**	**2.05**	**327**	*e*PN		**Pn**	**06 32 35.0 -1.9**
LIA	**Limnos Island**	**2.05**	**327**	*e*Pn		**Pn**	**06 32 35.0 -1.9**
GADA	**Gvkgeada**	**2.08**	**344**	*e*PN		**Pn**	**06 32 38.5 +1.2**
GADA	**Gvkgeada**	**2.08**	**344**	*e*Pn		**Pn**	**06 32 38.5 +1.2**
DST	**Dursunbey**	**2.10**	**47**	*e*PN		**Pn**	**06 32 38.5 +1.0**
LPK	**Lapseki**	**2.18**	**2**	*e*PN		**Pn**	**06 32 40.1 +1.4**
LPK	**Lapseki**	**2.18**	**2**	*e*Pn		**Pn**	**06 32 40.1 +1.4**
KHAL	**Karahalli**	**2.25**	**85**	*i* P		**Pn**	**06 32 39.7 +0.1**
KHAL	**Karahalli**	**2.25**	**85**	*i* P		**Pn**	**06 32 39.7 0.0**
BNT	**Bandirma**	**2.38**	**24**	*e*PN		**Pn**	**06 32 42.8 +1.3**
GDZ	**Gediz**	**2.40**	**67**	*i* P		**Pn**	**06 32 45.4 +3.7**
GDZ				*i* S		**Sn**	**06 33 15.5 +3.9**
KCT	**Karacabey**	**2.46**	**32**	*e*PN		**Pn**	**06 32 43.4 +0.8**
KCT	**Karacabey**	**2.46**	**32**	*e*Pn		**Pn**	**06 32 43.4 +0.8**
FETY	**Fethiye**	**2.49**	**128**	*e*PN		**Pn**	**06 32 43.1 +0.1**
FETY	**Fethiye**	**2.49**	**128**	*e*Pn		**Pn**	**06 32 43.1 +0.2**
RKY	**Sarkoy-Tekirda**	**2.53**	**9**	*e*PN		**Pn**	**06 32 45.4 +1.9**
RKY	**Sarkoy-Tekirda**	**2.53**	**9**	*e*Pn		**Pn**	**06 32 45.4 +1.9**
ENEZ	**Enez**	**2.57**	**352**	*e*PN		**Pn**	**06 32 46.0 +1.9**
ENEZ	**Enez**	**2.57**	**352**	*e*Pn		**Pn**	**06 32 46.0 +1.9**
ULDT	**Uludag**	**2.75**	**44**	*i* P		**Pn**	**06 32 49.4 +2.9**
ULDT	**Uludag**	**2.75**	**44**	*i* P		**Pn**	**06 32 49.4 +2.9**
ALT	**Altintas**	**2.85**	**71**	*e*PN		**Pn**	**06 32 48.6 +0.7**
ALT	**Altintas**	**2.85**	**71**	*e*Pn		**Pn**	**06 32 48.6 +0.7**
RDO	**Rodhopi**	**3.07**	**344**	*e*PN		**Pn**	**06 32 49.5 -1.5**
RDO	**Rodhopi**	**3.07**	**344**	*e*Pn		**Pn**	**06 32 49.5 -1.5**
YLV	**Yalova**	**3.18**	**41**	*e*PN		**Pn**	**06 32 53.7 +1.3**
YLV	**Yalova**	**3.18**	**41**	*e*Pn		**Pn**	**06 32 53.7 +1.3**
ADVT	**Abdulvahap**	**3.28**	**46**	*e*PN		**Pn**	**06 32 55.0 +1.1**
ADVT	**Abdulvahap**	**3.28**	**46**	*e*Pn		**Pn**	**06 32 55.0 +1.1**
ESKT	**Eskisehir**	**3.54**	**67**	*i* P		**Pg**	**06 33 07.7 -1.7**

*IDC **08** 06:37:36.8±3.4, 31°.86S×176°.30W, h0km, mb3.6/3, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, ML4.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/22, Error ellipse: s-maj=70.5km s-min=32.9km az=104.0*
*NEIC **08** 06:37:37.2±2.3, 31°.93S×176°.13W, h10km, mb3.9/1, Error ellipse: s-maj=46.9km s-min=15.2km az=98.0*
*ISCJB **08** 06:37:43.0±3.1, 31°.80S±0°.07×177°.0W±0°.4, h33km, mb3.6/4, Error ellipse: s-maj=52.3km s-min=7.8km az=7.6*
ISC 08 06:37:45.3±3.3, 31°.74S±0°.07×176°.9W±0°.4, h35km, n8, σ1§41/10, mb3.6/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.62**	**341**	Pn	**Pn**	**06 38 24.9**	**-0.2**
	58nm,0.3s,baz=251,slow=22,SNR=3.7						
RAO				Sn	**Sn**	**06 38 54.4**	**-1.2**
	332nm,0.3s,baz=11,slow=21,SNR=8.3						
RAO				LR	LR	06 39 02.7	
	comp=Z,320nm,21.6s,baz=35,slow=29						
URZ	**Urewera**	**8.14**	**215**	Pn	**Pn**	**06 39 39.3**	**-1.5**
	0.5nm,0.3s,baz=154,slow=21,SNR=7.6						
URZ				Sn	**Sn**	**06 41 11.4**	**-0.1**
	2.9nm,0.3s,baz=164,slow=20,SNR=14						
RPZ	**Rata Peaks**	**15.25**	**215**	Pn	**Pn**	**06 41 14.4**	**-3.5**
	0.7nm,0.3s,baz=234,slow=22,SNR=3.3						
RPZ				Sn	**Sn**	**06 43 54.8**	**-11**
	0.2nm,0.3s,baz=345,slow=17,SNR=3.5						
STKA	**Stephens Creek**	**35.09**	**259**	P	**P**	**06 44 35.3**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=112,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**43.96**	**268**	P	**P**	**06 45 51.3**	**+2.1**
	0.1nm,0.3s,mb3.0,baz=104,slow=7.1,SNR=2.8						
WRAB	**Tennant Creek**	**45.06**	**273**	P	**P**	**06 46 00.8**	**+2.8**
	1.0nm,0.7s,mb3.8						
WRA	**Warramunga Arr**	**45.07**	**273**	P	**P**	**06 45 59.1**	**+1.1**
	0.5nm,0.4s,mb3.7,baz=112,slow=7.8,SNR=6.8						
FINES	**FINESS Array B**	**146.71**	**340**	PKPbc	PKPdf	06 57 19.8	-1.1
	0.6nm,0.6s,baz=38,slow=2.5,SNR=2.5						

IDC 08 06:46:30.8±6.1, 7°.63N×74°.76W, h86km±122km, mb2.9/1, mb1 3.1/2, mb1mx2.9/21, mbtmp2.9/2, ML1.6/1, Error ellipse: s-maj=603.8km s-min=38.1km az=86.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.79**	**171**	P	Pn	06 47 15.1	+1.6
	2.0nm,0.3s,baz=105,slow=21,SNR=15						
ROSC				S	Sn	06 47 47.4	+1.1
	3.3nm,0.3s,baz=90,slow=22,SNR=5.7						
YKA	**Yellowknife Ar**	**61.95**	**340**	P	P	06 56 40.9	-0.4
	0.1nm,0.3s,baz=135,slow=6.2,SNR=4.6						
WRA	**Warramunga Arr**	**149.27**	**244**	PKPbc	PKPbc	07 06 10.5	-1.0
	0.2nm,0.4s,baz=102,slow=3.5,SNR=5.9						

MAN 08 06:46:39, 12°.74N×123°.56E, h9km, mb4.3, ML3.1, MS2.9, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.39**	**170**	*e*P	Pg	06 46 47.5	+0.9
MMPH				*e*S	Sg	06 46 54.0	+2.3
PVCP	**Virac**	**1.03**	**34**	*e*P	Pg	06 46 57.9	-0.9
PVCP				*e*S	Sg	06 47 07.3	-5.0
AUQP	**San Andres**	**1.03**	**304**	*e*P	Pg	06 46 48.4	-10
CNP	**Cataram**	**1.11**	**102**	*e*P	Pg	06 47 00.1	-0.2
CNP				*e*S	Sg	06 47 14.5	-0.1
RCP	**Roxas**	**1.42**	**214⇑**	*e*P	Pn	06 47 04.9	-0.1
RCP				*e*S	Sn	06 47 23.9	+0.2
OTRP	**Odiongan**	**1.54**	**256**	*e*P	Pn	06 47 09.2	+2.5
GQP	**Guinayangan**	**1.58**	**317⇑**	*e*P	Pn	06 47 05.5	-1.7
GQP				*i* S	Sn	06 47 30.3	+2.5
BOAC	**Boac**	**1.81**	**293**	*e*P	Pn	06 47 10.9	+0.5
POLP	**Polilio Island**	**2.52**	**322**	*e*P	Pn	06 47 25.2	+5.0
TBP	**Tagbilaran**	**3.05**	**174**	*e*P	Pn	06 47 28.3	+0.9

*NIED **08** 06:49:00, 36°.40N×141°.90E, h20km, Mw4.0 Best double couple: M0=1.03000×10^15 NP1:φs=17.00000°, δ70.00000°, λ88.00000°. NP2:φs=201.00000°, δ20.00000°, λ94.00000°.*
*ISCJB **08** 06:49:51.3±1.8, 36°.32N±0°.04×142°.06E±0°.08, h23km±12km, mb3.9/9, MS3.1/2, Error ellipse: s-maj=11.4km s-min=7.3km az=178.8*
*NEIC **08** 06:49:53.4±0.8, 35°.96N×142°.01E, h35km, mb4.1/2, Error ellipse: s-maj=19.3km s-min=15.2km az=211.0*
*JMA **08** 06:49:53.4±0.2, 36°.36N×141°.85E, h64km, M3.7*
*IDC **08** 06:49:56.5±5.3, 36°.09N×141°.94E, h60km±43km, mb3.6/7, mb1 3.7/10, mb1mx3.4/28, mbtmp3.6/10, ML3.5/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/32, Error ellipse: s-maj=44.0km s-min=12.9km az=69.0*
ISC 08 06:49:50.8±1.5, 36°.31N±0°.04×142°.01E±0°.08, h7km±8km, n26, σ0§80/30, mb3.9/9, MS3.1/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.11**	**237**	P	**Pg**	**06 50 12.5**	**+0.3**
CHOJ				*e*S	**Sg**	**06 50 26.9**	**+0.3**
JHO	**Hitachi**	**1.20**	**285**	P	**Pb**	**06 50 12.3**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.26**	**309**	P	**Pn**	**06 50 13.2**	**-1.5**
JFK	**Kawauchi**	**1.40**	**319**	P	**Pn**	**06 50 15.7**	**-0.9**
JFT	**Otama**	**1.81**	**312**	P	**Pn**	**06 50 22.4**	**+0.2**
JFT				*e*S	**Sn**	**06 50 45.3**	**0.0**
JMM	**Marumori**	**1.83**	**328**	P	**Pn**	**06 50 21.9**	**-0.7**
BSO1	**Boso 1**	**1.86**	**207**	P	**Pn**	**06 50 23.4**	**+0.5**
BSO1				*e*S	**Sn**	**06 50 46.5**	**-0.1**
BSO3	**Boso 3**	**1.94**	**220**	P	**Pn**	**06 50 24.3**	**+0.2**
JAG	**Ashikaga**	**2.07**	**274**	P	**Pn**	**06 50 25.2**	**-0.6**
MJAR	**Matsushiro Arr**	**3.08**	**275**	P	**Pn**	**06 50 40.0**	**+0.3**
	9.9nm,0.3s,baz=111,slow=8.8,SNR=47						
MJAR				S	**Sn**	**06 51 17.1**	**+0.4**
	9.1nm,0.3s,baz=118,slow=15,SNR=7.0						
MAJO	**Matsushiro**	**3.08**	**275**	*e*Pn	**Pn**	**06 50 40.5**	**+0.8**
MAT	**Matsushiro**	**3.08**	**275**	P	**Pn**	**06 50 40.5**	**+0.8**
MAT				S	**Sn**	**06 51 17.1**	**+0.4**
JHJ	**Hachijo jima 2**	**3.67**	**211**	P	**Pn**	**06 50 48.0**	**+0.1**
	10.0nm,0.3s,baz=64,slow=22,SNR=6.5						
JHJ				S	**Sn**	**06 51 28.8**	**-2.7**
	35nm,0.3s,baz=228,slow=23,SNR=8.0						
CBIJ	**Chichi jima**	**9.19**	**179**	LR	LR	06 55 42.1	
	comp=Z,56nm,18.2s,baz=58,slow=38						
KSRS	**Korea Array**	**11.34**	**280**	P	**Pn**	**06 52 36.8**	**+3.6**
	0.3nm,0.3s,baz=94,slow=13,SNR=4.8						
KSRS				LR	LR	06 56 47.7	
	comp=Z,110nm,18.4s,baz=347,slow=36						
PETK	**Petropavlovsk-**	**20.08**	**28**	LR	LR	07 02 05.5	
	comp=Z,25nm,18.6s,MS2.6,baz=293,slow=36						
SONM	**Songino Array**	**28.59**	**305**	P	**P**	**06 55 47.2**	**-0.1**
	3.4nm,0.8s,mb4.1,baz=105,slow=9.5,SNR=11						
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**06 58 05.9**	**0.0**
	1.1nm,0.6s,mb3.9,baz=98,slow=8.7,SNR=6.2						
KURK	**Kurchatov**	**46.76**	**309**	P	**P**	**06 58 20.7**	**+0.3**
	1.6nm,0.5s,mb4.2,baz=84,slow=8.0,SNR=9.2						
KURK	**Kurchatov**	**46.76**	**309**	P	**P**	**06 58 20.7**	**+0.3**
BVAR	**Borovoye Array**	**51.42**	**313**	P	**P**	**06 58 56.2**	**+0.2**
	0.8nm,0.6s,mb3.8,baz=90,slow=7.4,SNR=3.2						
BVAR				LR	LR	07 21 49.6	
	comp=Z,57nm,18.1s,MS3.6,slow=37						
AML	**Almayashu**	**51.98**	**299**	*e*P	**P**	**06 59 01.6**	**+1.2**
	1.6nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**56.41**	**189**	P	**P**	**06 59 28.9**	**-4.0**
	0.6nm,0.9s,mb3.6,baz=6.1,slow=8.1,SNR=2.8						
ABKAR	**Akbulak array**	**58.77**	**311**	*e*P	**P**	**06 59 48.9**	**-0.4**
	0.6nm,0.6s,mb3.8						
ABKAR				*e*pP	pP	06 59 57.0	+5.4
FINES	**FINESS Array B**	**69.68**	**333**	P	**P**	**07 01 01.3**	**+0.7**
	0.4nm,0.4s,mb3.7,baz=317,slow=16,SNR=4.1						
NOA	**NORSAR Array B**	**75.04**	**338**	P	**P**	**07 01 33.1**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=39,slow=5.7,SNR=3.2						

*IDC **08** 07:01:55.8±0.7, 16°.79S×173°.46W, h0km, mb4.5/12, mb1 4.7/13, mb1mx4.5/19, mbtmp4.5/13, ML2.2/1, MS3.5/10, Ms1 3.6/10, ms1mx3.4/21, Error ellipse: s-maj=34.6km s-min=15.5km az=138.0*
*BJI **08** 07:01:58.4, 16°.60S×173°.70W, h15km, mB5.0/2, mb4.8/5*
*NEIC **08** 07:01:59.5±0.4, 16°.61S×173°.67W, h15km, mb4.5/17, Error ellipse: s-maj=25.4km s-min=9.2km az=140.0*
*ISCJB **08** 07:02:00.3±0.3, 16°.6S±0°.1×173°.9W±0°.1, h33km, mb4.4/31, MS3.6/9, Error ellipse: s-maj=22.4km s-min=6.9km az=145.3*
*SZGRF **08** 07:02:02.7, 16°.75S×174°.49W, h33km, Tonga Islands*
ISC 08 07:02:02.1±0.3, 16°.6S±0°.1×173°.79W±0°.10, h35km, n300, σ0§54/203, mb4.4/31, MS3.6/9, 96C-74D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.33**	**36**	Pn	**Pn**	**07 02 47.9**	**-3.9**
	16nm,0.3s,baz=191,slow=2.4,SNR=22						
AFI				Sn	**Sn**	**07 03 20.1**	**-10**
	62nm,0.3s,baz=54,slow=19,SNR=12						
AFI				LR	LR	07 03 43.4	
	comp=Z,234nm,21.6s,baz=245,slow=33						
DZM	**Mont Dzumac**	**19.41**	**251**	*e*LR	LR	07 11 04.5	
	505nm,25.6s						
URZ	**Urewera**	**22.99**	**199**	P	**P**	**07 07 03.1**	**-0.6**
	7.7nm,0.5s,mb4.4,baz=9.0,slow=16,SNR=13						
URZ				LR	LR	07 14 48.0	
	comp=Z,105nm,20.9s,MS3.3,baz=63,slow=34						
PPT	**Papeete**	**23.16**	**96**	*e*LR	LR	07 12 20.0	
	277nm,25.2s						
PPT	**Papeete**	**23.16**	**96**	LR	LR	07 12 44.6	
	comp=Z,159nm,19.6s,MS3.5,baz=252,slow=28						
TAOE	**Nuku Hiva Isla**	**33.67**	**81**	*e*LR	LR	07 17 18.4	
	174nm,28.7s						
ARMA	**Armidale**	**34.40**	**240**	*e*P	**P**	**07 08 46.7**	**+0.6**
CMSA	**Cobar Meteorol**	**39.62**	**240**	⇓*i*P	**P**	**07 09 30.2**	**-0.3**
STKA	**Stephens Creek**	**43.11**	**241**	*e*P	**P**	**07 09 58.9**	**-0.2**
	12nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**43.11**	**241**	P	**P**	**07 09 59.5**	**+0.4**
	16nm,0.8s,mb4.8,baz=93,slow=9.7,SNR=34						
STKA				LR	LR	07 27 23.9	
	comp=Z,79nm,19.5s,MS3.6,baz=26,slow=35						
BBOO	**Buckleboo**	**47.88**	**241**	*e*P	**P**	**07 10 36.5**	**-0.4**
	8.8nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**49.20**	**258**	*e*P	**P**	**07 10 46.7**	**-0.5**
WRA	**Warramunga Arr**	**49.21**	**258**	P	**P**	**07 10 46.6**	**-0.7**
	1.8nm,0.4s,mb4.4,baz=96,slow=7.2,SNR=44						
WRA				PcP	PcP	07 12 10.9	+0.7
	0.9nm,0.5s,baz=92,slow=3.4,SNR=4.5						
WRA				LR	LR	07 29 12.1	
	comp=Z,63nm,19.4s,MS3.6,baz=225,slow=33						
WRA	**Warramunga Arr**	**49.21**	**258**	P	**P**	**07 10 46.6**	**-0.7**
WRA				PcP	PcP	07 12 10.9	+0.7
WRA				LR	LR	07 29 12.1	
ASAR	**Alice Springs**	**49.38**	**253**	P	**P**	**07 10 48.5**	**-0.1**
	30nm,0.7s,mb5.5,baz=88,slow=8.5,SNR=366						
GUMO	**Guam**	**50.69**	**304**	LR	LR	07 28 26.2	
	comp=Z,25nm,20.9s,MS3.2,baz=150,slow=31						
MBWA	**Marble Bar**	**62.66**	**254**	*e*P	**P**	**07 12 23.6**	**-0.1**
	15nm,1.4s,mb4.9						
PETK	**Petropavlovsk-**	**73.68**	**343**	P	**P**	**07 13 32.9**	**+0.9**
	4.8nm,0.7s,mb4.6,baz=138,slow=11,SNR=9.1						
NVAR	**Mina Array Bea**	**75.49**	**42**	P	**P**	**07 13 42.1**	**-0.8**
	1.6nm,0.8s,mb4.0,baz=226,slow=9.6,SNR=12						
114A	**Black Gap (USA**	**76.13**	**49**	⇓P	**P**	**07 13 46.8**	**+0.1**
	baz=76						
S10A	**Tonopah Range,**	**76.31**	**43**	⇑P	**P**	**07 13 47.4**	**-0.1**
	baz=76						
KSRS	**Korea Array**	**76.77**	**316**	P	**P**	**07 13 53.1**	**+3.0**
	1.0nm,0.4s,mb4.1,baz=138,slow=5.9,SNR=6.3						
T11A	**Corn Creek, Al**	**76.84**	**44**	⇓P	**P**	**07 13 50.2**	**-0.4**
	baz=77						
Y15A	**Casa Rosa Ranc**	**77.14**	**49**	⇑P	**P**	**07 13 52.6**	**+0.3**
	baz=77						
R11A	**Troy Canyon, C**	**77.21**	**43**	⇑P	**P**	**07 13 52.6**	**0.0**
	baz=77						
W14A	**Seligman**	**77.24**	**47**	⇑P	**P**	**07 13 53.4**	**+0.5**
	baz=77						
U13A	**Pakoon Wash**	**77.25**	**46**	⇑P	**P**	**07 13 52.9**	**+0.1**
	baz=77						
Q11A	**Duckwater**	**77.44**	**43**	⇑P	**P**	**07 13 53.9**	**+0.1**
	baz=78						
V14A	**Boquillas Ranc**	**77.44**	**47**	⇑P	**P**	**07 13 54.0**	**0.0**
	baz=78						
X15A	**Humboldt**	**77.47**	**48**	⇑P	**P**	**07 13 54.8**	**+0.7**
	baz=78						
Y16A	**Circle Bar Ran**	**77.71**	**49**	⇑P	**P**	**07 13 56.3**	**+0.8**
	baz=78						
U14A	**Mt Trumbull**	**77.80**	**46**	⇑P	**P**	**07 13 56.1**	**+0.2**
	baz=78						
R12A	**Pony Springs,**	**77.84**	**44**	⇑P	**P**	**07 13 56.1**	**0.0**
	baz=78						
S13A	**Holt Ranch, En**	**77.94**	**45**	⇑P	**P**	**07 13 57.0**	**+0.3**
	baz=78						
X16A	**Lo Mia Camp, P**	**78.01**	**48**	⇑P	**P**	**07 13 57.7**	**+0.5**
	baz=78						
H06A	**Lindquist Farm**	**78.03**	**36**	⇓P	**P**	**07 13 56.8**	**-0.2**
	baz=78						
Q12A	**Willow Creek R**	**78.08**	**43**	⇓P	**P**	**07 13 57.5**	**+0.1**
	baz=78						
O11A	**Cowboy Ranch,**	**78.14**	**42**	⇑P	**P**	**07 13 58.2**	**+0.4**
	baz=78						
G06A	**Carlson Farm,**	**78.17**	**35**	⇑P	**P**	**07 13 57.5**	**-0.3**
	baz=78						
V15A	**Kaibab Nationa**	**78.19**	**47**	⇑P	**P**	**07 13 58.7**	**+0.6**
	baz=78						
P12A	**McGill**	**78.26**	**43**	⇑P	**P**	**07 13 58.9**	**+0.5**
	baz=78						
M10A	**I.L. Ranch, Tu**	**78.37**	**40**	⇑P	**P**	**07 13 59.4**	**+0.4**
	baz=78						
U15A	**North Rim**	**78.42**	**46**	⇓P	**P**	**07 13 59.7**	**+0.4**
	baz=78						
219A	**White Tail Can**	**78.45**	**52**	⇓P	**P**	**07 14 00.4**	**+0.8**
	baz=78						
Q13A	**Wheeler Ranch,**	**78.56**	**43**	⇓P	**P**	**07 13 59.8**	**-0.3**
	baz=79						
T15A	**Red Dirt Ranch**	**78.66**	**46**	⇓P	**P**	**07 14 00.9**	**+0.2**
	baz=79						
J09A	**Fry Pan Ranch,**	**78.69**	**38**	⇓P	**P**	**07 14 00.6**	**-0.1**
	baz=79						
L10A	**Juniper Basin**	**78.73**	**40**	⇓P	**P**	**07 14 00.9**	**0.0**
	baz=79						
O12A	**Currie**	**78.80**	**42**	⇑P	**P**	**07 14 01.4**	**0.0**
	baz=79						
P13A	**Bates Ranch, G**	**78.83**	**43**	⇓P	**P**	**07 14 01.8**	**+0.2**
	baz=79						
H08A	**Prairie City**	**78.84**	**37**	⇑P	**P**	**07 14 01.9**	**+0.4**
	baz=79						
R14A	**James Farms, M**	**78.88**	**44**	⇑P	**P**	**07 14 02.2**	**+0.3**
	baz=79						
K10A	**MacKenzie Ranc**	**78.88**	**39**	⇓P	**P**	**07 14 01.7**	**0.0**
	baz=79						
N12A	**Clover Valley,**	**78.93**	**41**	⇓P	**P**	**07 14 02.1**	**0.0**
	baz=79						
220A	**Playas Peak, P**	**78.95**	**52**	⇑P	**P**	**07 14 03.5**	**+1.1**
	baz=79						
I09A	**Lost Marbles R**	**79.06**	**38**	⇑P	**P**	**07 14 02.3**	**-0.4**
	baz=79						
Q14A	**Sevier Lake (B**	**79.07**	**44**	⇓P	**P**	**07 14 03.1**	**+0.2**
	baz=79						
U16A	**Tuba City**	**79.08**	**47**	⇓P	**P**	**07 14 03.8**	**+0.7**
	baz=79						
G08A	**Pilot Rock**	**79.14**	**36**	⇑P	**P**	**07 14 03.0**	**-0.2**
	baz=79						
L11A	**Cat Creek Ranc**	**79.22**	**40**	⇓P	**P**	**07 14 03.8**	**+0.2**
	baz=79						
M12A	**Wells**	**79.32**	**41**	⇓P	**P**	**07 14 04.1**	**-0.1**
	baz=79						
K11A	**Parker Ranch,**	**79.39**	**39**	⇓P	**P**	**07 14 04.5**	**0.0**
	baz=80						
Z20A	**Nine Sixteen R**	**79.46**	**51**	⇓P	**P**	**07 14 05.9**	**+0.7**
	baz=80						
P14A	**Drum Mountains**	**79.53**	**43**	⇓P	**P**	**07 14 05.4**	**0.0**
	baz=80						
G09A	**Cove**	**79.80**	**36**	⇓P	**P**	**07 14 06.3**	**-0.4**
	baz=80						
MFID	**Camas Ranch**	**79.87**	**39**	⇑P	**P**	**07 14 06.9**	**-0.2**
	baz=80						
R16A	**Teasdale**	**79.91**	**45**	⇑P	**P**	**07 14 07.8**	**+0.3**
	baz=80						
DUG	**Dugway**	**80.01**	**43**	⇑P	**P**	**07 14 08.1**	**+0.1**
	baz=80						
I11A	**Placerville**	**80.08**	**38**	⇓P	**P**	**07 14 08.0**	**-0.3**
	baz=80						
X20A	**Quemado**	**80.20**	**50**	⇓P	**P**	**07 14 09.7**	**+0.6**
	baz=80						
J12A	**Stokes Ranch,**	**80.22**	**39**	⇑P	**P**	**07 14 08.9**	**-0.2**
	baz=80						
M14A	**Sheep Mountain**	**80.36**	**42**	⇓P	**P**	**07 14 09.8**	**0.0**
	baz=80						
T18A	**Mexican Hat**	**80.45**	**47**	⇓P	**P**	**07 14 10.7**	**+0.3**
	baz=80,SNR=8.2						
W20A	**Ramah**	**80.47**	**49**	⇑P	**P**	**07 14 11.2**	**+0.6**
	baz=80						
H11A	**Donnelly**	**80.49**	**38**	⇑P	**P**	**07 14 10.0**	**-0.4**
	baz=81						
I12A	**Atlanta**	**80.50**	**39**	⇑P	**P**	**07 14 10.5**	**0.0**
	baz=81						
R17A	**Hanksville Air**	**80.50**	**45**	⇑P	**P**	**07 14 10.7**	**0.0**
	baz=81						
U19A	**Dine' College,**	**80.51**	**48**	⇑P	**P

O19A	Miners Draw (B baz=83	82.50	44	⇓P	P	07 14 21.7 +0.5
E13A	Victor baz=83	82.53	37	⇓P	P	07 14 20.7 -0.5
K17A	Gardner Place, baz=83	82.55	41	⇑P	P	07 14 21.1 -0.3
RRI2	Red Ridge 5.5nm,1.2s,mb4.5	82.60	41	*e*P	P	07 14 21.5 -0.2
P20A	De Beque baz=83,SNR=5.2	82.61	45	⇑P	P	07 14 21.7 -0.1
F14A	Wisdom baz=83	82.66	38	⇑P	P	07 14 21.8 0.0
D13A	Huson baz=83	82.74	36	⇑P	P	07 14 21.3 -1.0
I16A	Newdale baz=83,SNR=7.1	82.77	40	⇑P	P	07 14 22.9 +0.4
G15A	Dillon baz=83,SNR=8.4	82.84	39	⇓P	P	07 14 22.7 -0.2
Q21A	Lamborn Mesa, baz=83	82.86	46	⇓P	P	07 14 23.3 +0.2
DLMT	Dillon 3.4nm,1.1s,mb4.3	82.88	39	*e*P	P	07 14 22.8 -0.2
REDW	Red Top Meadow 3.3nm,1.2s,mb4.2	82.90	41	*e*P	P	07 14 23.1 -0.1
TPAW	Teton Pass 2.9nm,0.9s,mb4.3	82.91	41	*e*P	P	07 14 23.3 +0.1
E14A	Clinton baz=83	82.92	37	⇑P	P	07 14 22.8 -0.4
J17A	Brown Place, J baz=83	82.99	41	⇑P	P	07 14 23.5 -0.2
C13A	Hot Springs baz=83	83.00	36	⇑P	P	07 14 23.3 -0.3
O20A	White River Ci baz=83	83.01	45	⇑P	P	07 14 23.9 0.0
K18A	Toltan Ranch, baz=83,SNR=6.1	83.05	42	⇓P	P	07 14 24.1 +0.1
IMW	Indian Meadow 5.5nm,1.2s,mb4.5	83.12	40	*e*P	P	07 14 24.4 0.0
R22A	Saguache, Gunn baz=83,SNR=5.5	83.15	47	⇑P	P	07 14 25.0 +0.4
F15A	Butte baz=83,SNR=5.5	83.19	38	⇓P	P	07 14 24.3 -0.4
LRM	Limekiln Ridge 9.2nm,0.9s,mb4.8	83.21	38	*e*P	P	07 14 24.4 -0.4
L19A	Farson baz=83	83.23	43	⇓P	P	07 14 24.7 -0.2
D14A	Greenough baz=83	83.27	37	⇑P	P	07 14 23.8 -1.2
G16A	Moss Hill, Enn baz=83	83.28	39	⇑P	P	07 14 25.1 -0.1
QLMT	Earthquake Lak 1.3nm,0.4s,mb4.3	83.30	39	*e*P	P	07 14 25.5 +0.3
Q22A	Crested Butte, baz=83	83.33	46	⇓P	P	07 14 25.7 +0.2
N20A	Spence Gulch, baz=83	83.33	44	⇑P	P	07 14 25.3 -0.2
H16A	Russell Place, baz=83,SNR=13	83.35	40	⇑P	P	07 14 26.1 +0.7
J18A	Kendall Valley baz=83,SNR=16	83.35	41	⇑P	P	07 14 25.3 -0.3
I17A	Pilgrim Ck. baz=83	83.36	41	⇓P	P	07 14 26.0 +0.5
BW06	Boulder Array baz=84,SNR=7.1	83.42	42	⇓P	P	07 14 25.3 -0.6
PDAR	Pinedale Array 3.3nm,0.8s,mb4.4,baz=237,slow=2.4,SNR=31	83.43	42	P	P	07 14 25.1 -0.9
PDAR	comp=Z,37nm,18.4s,MS3.8,baz=81,slow=32			LR	LR	07 46 28.6
SMCO	Snowmass 2.0nm,0.8s,mb4.2	83.43	46	*e*P	P	07 14 25.5 -0.6
W25A	X Bar L Ranch, baz=84	83.47	50	⇑P	P	07 14 26.0 -0.4
YMR	Madison River 6.1nm,0.8s,mb4.8	83.50	40	*e*P	P	07 14 27.0 +0.7
H17A	Grant Village baz=84	83.60	40	⇑P	P	07 14 27.8 +1.0
BOZ	Bozeman (W) baz=84,SNR=8.6	83.61	39	⇑P	P	07 14 26.6 -0.1
BOZ	Bozeman (W) 2.5nm,0.8s,mb4.4	83.61	39	*e*P	P	07 14 26.4 -0.3
X26A	CR and CF Fran baz=84	83.67	51	⇑P	P	07 14 27.4 +0.1
F16A	Kennard Place, baz=84	83.68	39	⇑P	P	07 14 27.2 +0.1
M20A	Sweetwater, Wa baz=84	83.70	44	⇓P	P	07 14 27.1 -0.2
I18A	Diamond G Ranc baz=84	83.72	41	⇑P	P	07 14 27.2 -0.2
N21A	Black Mountain baz=84,SNR=5.1	83.80	44	⇓P	P	07 14 28.0 +0.1
LKWY	Lake 4.4nm,0.9s,mb4.6	83.80	40	*e*P	P	07 14 29.1 +1.3
D15A	Lincoln baz=84,SNR=7.0	83.82	37	⇑P	P	07 14 27.5 -0.3
L20A	Wamsutter baz=84	83.84	43	⇓P	P	07 14 28.2 +0.1
Y27A	Causey baz=84	83.87	52	⇓P	P	07 14 28.3 -0.2
K19A	Absolon Red Bu baz=84	83.91	42	⇓P	P	07 14 27.5 -0.9
G17A	Pierce Place, baz=84	83.97	39	⇓P	P	07 14 28.9 +0.3
E16A	East Helena baz=84	84.04	38	⇓P	P	07 14 28.8 -0.2
HRY	Holter Researc 6.9nm,0.7s,mb4.9	84.04	38	*e*P	P	07 14 28.6 -0.4
K20A	Yellowstone Ra baz=84	84.16	42	⇓P	P	07 14 28.9 -0.8
C15A	Salmond Ranch, baz=84	84.16	36	⇓P	P	07 14 28.9 -0.7
MSTX	Muleshoe baz=84	84.20	52	⇑P	P	07 14 30.3 +0.2
X27A	F and S Farms, baz=84	84.24	51	⇑P	P	07 14 30.6 +0.3
M21A	Separation Pea baz=84	84.30	44	⇑P	P	07 14 30.2 -0.2
F17A	Fitzpatrick Pl baz=84,SNR=5.3	84.32	39	⇓P	P	07 14 30.4 0.0
A14A	Double T Ranch baz=84	84.35	35	⇑P	P	07 14 29.9 -0.7
D16A	Dana Ranch, Ca baz=84	84.38	37	⇑P	P	07 14 30.4 -0.3
L21A	Rawlins baz=84	84.46	43	⇓P	P	07 14 30.9 -0.4
B15A	Bradely Ranch, baz=85	84.47	36	⇓P	P	07 14 30.5 -0.6
N22A	Wattenberg Ran baz=85,SNR=5.7	84.53	45	⇑P	P	07 14 31.4 -0.2
C16A	Fuhringer Ranc baz=85,SNR=5.1	84.67	37	⇑P	P	07 14 31.2 -0.9
G18A	Lazy EL Ranch, baz=85,SNR=5.8	84.69	40	⇓P	P	07 14 31.9 -0.4
DAWY	Dawson	84.70	14	*e*P	P	07 14 32.0 +0.1
M22A	Cedar Creek Ra baz=85	84.71	44	⇑P	P	07 14 33.0 +0.5
A15A	Johnson Ranch, baz=85,SNR=5.1	84.74	35	⇓P	P	07 14 31.5 -1.0
RLMT	Red Lodge baz=85	84.77	40	⇓P	P	07 14 32.9 +0.1
RLMT	Red Lodge 1.0nm,0.6s,mb4.1	84.77	40	*e*P	P	07 14 32.7 0.0
F18A	Big Timber baz=85	84.89	39	⇓P	P	07 14 33.1 -0.2
D17A	Six Diamond Ra baz=85	84.94	38	⇑P	P	07 14 33.0 -0.5
E18A	Harlowton baz=85	85.10	38	⇑P	P	07 14 34.4 +0.1
C17A	Wharram Farm, baz=85,SNR=8.9	85.15	37	⇑P	P	07 14 34.1 -0.4
A16A	West Butte Ran baz=86,SNR=9.8	85.36	36	⇓P	P	07 14 35.0 -0.5
B17A	L&G Farms, Che baz=86	85.47	37	⇓P	P	07 14 35.3 -0.8
A17A	Triple J Farms baz=86,SNR=5.9	85.86	36	⇑P	P	07 14 37.6 -0.4
B18A	Beardsley Farm baz=86	86.10	37	⇑P	P	07 14 38.5 -0.7
A18A	Metzger Ranch, baz=86	86.33	36	⇑P	P	07 14 39.5 -0.9
XAN	Xi'an	89.04	306	P	P	07 14 56.1 +2.3
XAN				pP	pP	07 15 02.3 -2.6
XAN				pmax	pmax	
	comp=Z,1.0nm,1.2s,mb4.0					
DGMT	Dagmar baz=90	89.42	39	⇓P	P	07 14 54.6 -0.5
YKA	Yellowknife Ar comp=Z,1.0nm,0.9s,mb4.1,baz=231,slow=4.6,SNR=12	91.37	24	P	P	07 15 03.3 -0.6
CMAR	Chiang Mai Arr	92.64	288	P	P	07 15 12.9 +2.0
	comp=Z,2.7nm,0.7s,mb4.8,baz=111,slow=2.5,SNR=12					
CMAR				LR	LR	07 54 46.0
	comp=Z,42nm,18.1s,MS3.9,baz=342,slow=34					
ULM	Lac du Bonnet	95.12	39	P	P	07 15 18.8 -2.7
	comp=Z,1.1nm,0.7s,mb4.4,baz=249,slow=8.1,SNR=4.2					
ULM				LR	LR	07 51 21.1
	comp=Z,50nm,18.6s,MS4.0,baz=346,slow=31					
BVAR	Borovoye Array	118.61	322	PKP	PKPdf	07 20 43.8 -2.3
	comp=Z,0.7nm,0.5s,baz=70,slow=4.9,SNR=4.9					
ARCES	ARCESS Array B	125.77	352	PKP	PKPdf	07 20 58.4 -1.1
	comp=Z,2.0nm,0.8s,baz=50,slow=1.9,SNR=6.8					
KMBO	Kilima Mbogo	144.66	243	PKP	PKPdf	07 21 36.4 +0.2
	comp=Z,3.6nm,0.8s,baz=56,slow=7.3,SNR=11					
OJC	Ojcow	144.74	345	*e*PX	PKPdf	07 21 34.7 -0.4
CLL	Collm	144.98	353	*e*PKPbc	PKPdf	07 21 35.0 -0.5
CLL	Collm	144.98	353	⇑*i*P	PKPdf	07 21 34.9 -0.6
CLL				*i*		07 21 36.4
CLL	Collm	144.98	353	⇑*i*PKPdf	PKPdf	07 21 34.9 -0.6
	comp=Z,20nm,1.5s					
CLL				*i*		07 21 36.4
	comp=Z,10.0nm,0.9s					
STHS	Stebnicka Huta	145.09	343	*e*P	PKPdf	07 21 37.0 +1.2
STHS	Stebnicka Huta	145.09	343	*e*PKP	PKPdf	07 21 37.0 +1.2
NEUB	Neuenburg	145.22	354	*e*PKPbc	PKPbc	07 21 36.0 +0.4
KOLS	Kolonicke sedl	145.22	341	*e*P	PKPbc	07 21 36.6 +0.9
KOLS				*e*		07 21 46.7
KOLS	Kolonicke sedl	145.22	341	*e*PKP	PKPdf	07 21 36.6 +0.6
KOLS				*e*		07 21 46.7
BUG	Bochum--Univer	145.26	359	*e*PKPbc	PKPbc	07 21 35.8 +0.1
BRG	Berggiesshubel	145.28	351	*i* PKP	PKPdf	07 21 36.3 +0.3
	comp=Z,7.5nm,0.8s					
UPC	Upice	145.29	349	*e*PKP	PKPdf	07 21 36.8 +0.7
BUR08	Bucovina Ar. S	145.34	337	*e*PKPdf	PKPdf	07 21 37.5 +1.2
OKC	Ostrava-Krasne	145.49	346	*e*PKP	PKPdf	07 21 37.3 +0.9
OKC				*ex*	x	07 21 48.7
PVCC	Panska Ves	145.52	351	*e*PKP	PKPdf	07 21 37.5 +1.0
MORC	Moravsky Berou	145.68	347	*e*PKPdf	PKPdf	07 21 37.9 +1.1
MOX	Moxa	145.79	354	*e*PKP	PKPdf	07 21 37.9 +1.0
	comp=Z,21nm,1.0s					
WERD	Werda	145.91	353	*e*PKPbc	PKPbc	07 21 38.4 +0.6
TANN	Tannenbergstha	145.92	353	*e*PKPbc	PKPbc	07 21 38.4 +0.6
GUNZ	Gunzen	145.99	353	*e*PKPbc	PKPbc	07 21 38.7 +0.7
PRU	Pruhonice	146.05	350	*e*PKP	PKPbc	07 21 38.9 +0.7
NKC	Novy Kostel	146.10	353	*e*PKP	PKPbc	07 21 39.1 +0.7
KECS	Kecovo	146.15	343	*e*P	PKPab	07 21 40.0 +0.8
KECS	Kecovo	146.15	343	*e*PKP	PKPab	07 21 40.0 +0.8
TNS	Taunus Mts	146.44	357	*e*PKPbc	PKPbc	07 21 40.2 +0.8
VYHS	Vyhne	146.58	345	*e*P	PKPbc	07 21 40.7 +0.9
VYHS				*e*		07 21 55.5
VYHS	Vyhne	146.58	345	*e*PKP	PKPbc	07 21 40.7 +0.9
VYHS				*e*		07 21 55.4
GIVF	Givet	146.59	2	*e*PKP1	PKPbc	07 21 40.0 +0.2
	comp=Z,28nm,0.9s					
BAIF	Baives	146.61	2	*e*PKP1	PKPbc	07 21 40.3 +0.4
	comp=Z,24nm,0.8s					
GRF	Grafenberg Arr	146.77	354	*e*PKPbc	PKPbc	07 21 41.1 +0.8
BR131	Keskin Array S	146.85	319	*e*PKPdf	PKPbc	07 21 41.6 +0.7
BRTR	Keskin Array B	146.85	319	PKPbc	PKPbc	07 21 41.7 +0.8
	comp=Z,4.0nm,0.7s,baz=134,slow=3.6,SNR=12					
KHC	Kasperske Hory	147.03	351	*e*PKP	PKPbc	07 21 41.8 +0.7
KHC				*ex*	x	07 21 55.0
WLF	Walferdange	147.05	0	*e*PKPbc	PKPbc	07 21 42.6 +1.5
GERES	GERESS Array B	147.29	351	PKPbc	PKPbc	07 21 41.9 0.0
	comp=Z,1.5nm,0.6s,baz=32,slow=3.3,SNR=13					
GRB5	Grafenberg Arr	147.30	353	*e*PKPbc	PKPbc	07 21 42.5 +0.6
ROSF	Rostrenen	147.44	12	*e*PKP1	PKPbc	07 21 41.6 -0.7
FLN	La Foliniere	147.49	8	*e*PKP1	PKPbc	07 21 42.1 -0.3
SGMF	Saint Gilles	147.65	11	*e*PKP1	PKPbc	07 21 42.5 -0.4
	comp=Z,13nm,0.8s					
LDF	La Druitiere	147.70	8	*e*PKP1	PKPbc	07 21 42.6 -0.4
	comp=Z,15nm,0.8s					
CONA	Conrad Observa	147.79	348	⇑*i*PKPbc	PKPbc	07 21 43.5 +0.2
	comp=Z,7.1nm,1.2s					
GRR	Gorron	147.80	9	*e*PKP1	PKPbc	07 21 43.2 -0.1
	comp=Z,15nm,0.7s					
FUR	Furstenfeldbru	148.27	354	*e*PKPbc	PKPbc	07 21 45.5 +1.0
CDF	Champ du Feu	148.29	359	*e*PKP1	PKPbc	07 21 45.0 +0.4
	comp=Z,15nm,0.9s					
BFO	Black Forest	148.34	357	*e*PKPbc	PKPbc	07 21 45.3 +0.6
ECH	Echery	148.49	359	*e*PKPdf	PKPbc	07 21 45.8 +0.7
ECH				*e*PKPbc	PKPab	07 21 48.7 +0.3
ECH				*e*PKPab	pPKPdf	07 21 52.0 -0.9
HAU	Haudompre	148.71	360	*e*PKP1	PKPbc	07 21 46.1 +0.4
	comp=Z,15nm,0.8s					
LOR	Lormes	149.38	3	*e*PKP1	PKPbc	07 21 47.8 +0.4
	comp=Z,9.0nm,0.7s					
FETA	Feichten	149.46	354	⇑*i*pPKPdf	PKPbc	07 21 48.2 +0.7
	comp=Z,9.8nm,1.1s					
ABTA	Abfaltersbach	149.51	351	⇑*i*PKPbc	PKPbc	07 21 47.6 -0.1
	comp=Z,9.9nm,1.0s					
SSF	Saint Saulge	149.57	4	*e*PKP1	PKPbc	07 21 48.3 +0.4
	comp=Z,16nm,0.9s					
MFF	Saint Martin d	149.65	9	*e*PKP1	PKPbc	07 21 48.0 -0.1
	comp=Z,12nm,0.9s					
MFF	Saint Martin d	149.65	9	*e*PKP	PKPbc	07 21 48.0 -0.1
AVF	Avril sur Loir	149.83	4	*e*PKP1	PKPbc	07 21 48.5 0.0
	comp=Z,7.3nm,0.8s					
SMF	Signal de Mont	150.00	3	*e*PKP1	PKPbc	07 21 49.0 +0.1
BGF	Bois d'Agland	150.03	5	*e*PKP1	PKPbc	07 21 49.2 +0.2
	comp=Z,22nm,0.9s					
BGF	Bois d'Agland	150.03	5	*e*PKP	PKPbc	07 21 49.2 +0.2
CABF	La Chapelle	150.10	0	*e*PKP1	PKPbc	07 21 50.1 +0.9
	comp=Z,35nm,1.0s					
TCF	Toulx Ste Croi	150.24	6	*e*PKP1	PKPbc	07 21 49.4 -0.1
	comp=Z,20nm,1.2s					
TCF	Toulx Ste Croi	150.24	6	*e*PKP	PKPbc	07 21 49.4 -0.1
RJF	Les Rejaudoux	151.14	7	*e*PKP1	PKPbc	07 21 51.7 0.0
RJF	Les Rejaudoux	151.14	7	*e*PKP	PKPbc	07 21 51.7 0.0
LPL	La Plagne	151.20	359	*e*PKP1	PKPbc	07 21 52.9 +1.1
	comp=Z,5.1nm,0.7s					
LPL	La Plagne	151.20	359	*e*PKP	PKPbc	07 21 52.9 +1.1
LPG	La Plagne	151.21	359	*e*PKP1	PKPbc	07 21 53.2 +1.4
LPG	La Plagne	151.21	359	*e*PKP	PKPbc	07 21 53.2 +1.4
SSB	Saint Sauveur	151.40	2	*e*PKPbc	PKPbc	07 21 53.3 +1.0
LFF	La Frestale	151.40	8	*e*PKP1	PKPbc	07 21 52.2 -0.1
LFF	La Frestale	151.40	8	*e*PKP	PKPbc	07 21 52.2 -0.1
CAF	Calviac	151.57	6	*e*PKP1	PKPbc	07 21 52.9 +0.2
CAF	Calviac	151.57	6	*e*PKP	PKPbc	07 21 52.9 +0.2
BNI	Bardonecchia	151.66	359	*e*PKPab	PKPab	07 22 01.6 0.0
ORIF	Oris-en-Rattie	151.80	0	*e*PKP1	PKPbc	07 21 53.7 +0.5
ORIF	Oris-en-Rattie	151.80	0	*e*PKP	PKPbc	07 21 53.7 +0.5
VIVF	Saint-Julien-l	151.83	2	*e*PKP1	PKPbc	07 21 53.7 +0.4
	comp=Z,19nm,1.1s					
VIVF	Saint-Julien-l	151.83	2	*e*PKP	PKPbc	07 21 53.7 +0.4
MBDF	Montbardon	151.98	359	*e*PKP1	PKPbc	07 21 54.2 +0.6
	comp=Z,5.2nm,0.7s					
MBDF	Montbardon	151.98	359	*e*PKP	PKPbc	07 21 54.2 +0.6
LASF	Ste Croix	152.57	4	*e*PKP1	PKPbc	07 21 55.5 +0.5
	comp=Z,3.7nm,0.7s					
LASF	Ste Croix	152.57	4	*e*PKP	PKPbc	07 21 55.5 +0.5
SMRF	Simiane la Rot	152.73	1	*e*PKP1	PKPbc	07 21 56.2 +0.9
	comp=Z,4.7nm,0.7s					
SMRF	Simiane la Rot	152.73	1	*e*PKP	PKPbc	07 21 56.2 +0.9
MTLF	Montolieu	153.16	6	*e*PKP1	PKPbc	07 21 56.5 +0.2
	comp=Z,9.4nm,1.1s					
MTLF	Montolieu	153.16	6	*e*PKP	PKPbc	07 21 56.5 +0.2
ETSF	Etsaut	153.19	11	*e*PKP1	PKPbc	07 21 56.6 +0.2
ETSF	Etsaut	153.19	11	*e*PKP	PKPbc	07 21 56.6 +0.2
EPF	Esparros	153.21	10	*e*PKP1	PKPbc	07 21 56.2 -0.2
EPF	Esparros	153.21	10	*e*PKP	PKPbc	07 21 56.2 -0.2
PGF	Pioggiola	154.06	355	*e*PKP1	PKPbc	07 21 59.2 +0.9
PGF	Pioggiola	154.06	355	*e*PKP	PKPbc	07 21 59.2 +0.9

DJA 08 07:04:28.0⏲63S×123⏲21E, h22km, MLv3.7/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.60	227	P	Pb	07 04 39.3	-0.5
LUWI				S	Sb	07 04 48.0	+0.1
APSI	Ampana	1.59	260	P	Pn	07 04 57.2	+2.4
APSI				S	Sn	07 05 20.2	+5.6
MRSI	Marisa	1.68	311	P	Pn	07 04 55.2	-0.9
KDI	Kendari	3.36	190	P	Pn	07 05 20.1	+0.9
KDI				S	Sn	07 06 00.8	+2.4
TTSI	Tana Toraja	4.15	235	P	Pn	07 05 32.7	+2.6
TTSI				S	Sn	07 06 20.0	+2.0
NLAI	Namlea	4.67	124	P	Pn	07 05 37.8	+0.5

*TRN **08** 07:04:44.7, 18⏲00N×62⏲58W, h29km, MD3.2*
*ISCJB **08** 07:04:45.7±1.1, 18⏲07N±0⏲09×62⏲56W±0⏲06, h48km±13km,*
Error ellipse: s-maj=16.5km s-min=5.5km az=30.8
*NEIC **08** 07:04:46.1, 18⏲14N×62⏲48W, h28km, MD3.6(RSPR), After RSPR.*
*RSPR **08** 07:04:46.1, 18⏲14N×62⏲48W, h28km±4km, MD3.6/6, MD3.6/6*

ISC 08 07:04:46.3±1.3, 18⏲05N±0⏲07×62⏲55W±0⏲05, h32km±6km, n20, σ0⏲45/35, 14C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.50	270	⇑*e*P	Pb	07 04 56.5	-0.4
SMRT	St. Maarten	0.50	270	⇑*e*P	Pb	07 04 56.5	-0.4
SMRT				*e*S	Sb	07 05 04.4	+0.3
SEUS	St. Eustatius	0.69	217	⇑*e*P	Pn	07 04 59.5	-0.4
SEUS	St. Eustatius	0.69	217	⇑*e*P	Pn	07 04 59.5	-0.4
SEUS				*e*S	Sb	07 05 09.9	+0.6
SKI	Saint Kitts	0.74	194	*e*P	Pn	07 05 00.0	-0.5
SKI				*e*S	Sb	07 05 09.9	-0.7
SKI	Saint Kitts	0.74	194	*e*P	Pn	07 05 00.0	-0.5
SKI				*e*S	Sb	07 05 09.9	-0.7
SABA	Saba	0.79	237	⇑*e*P	Pn	07 05 00.9	-0.4
SABA	Saba	0.79	237	⇑*e*P	Pn	07 05 00.9	-0.4
SABA				*e*S	Sn	07 05 12.6	+0.6
BPA	Boggy Peak	1.20	147	*e*P	Pn	07 05 07.3	+0.4
BPA				*e*S	Sn	07 05 22.2	+0.2
BPA	Boggy Peak	1.20	147	*e*P	Pn	07 05 07.3	+0.4
BPA				*e*S	Sn	07 05 22.2	+0.2
LZG	Guadaloupe-1	2.04	159	*e*P	Pn	07 05 18.3	-0.1
BCG	Bois Riant Cap	2.15	156	*e*P	Pn	07 05 20.0	0.0
STVI	Saint Thomas	2.31	278	⇑*e*P	Pn	07 05 21.6	-0.5
STVI				*e*S	Sn	07 05 49.0	-0.4
STVI	Saint Thomas	2.31	278	⇑*e*P	Pn	07 05 21.6	-0.5
STVI				*e*S	Sn	07 05 49.0	-0.4
MTP	Monte Pirata	2.86	271	⇑*e*P	Pn	07 05 29.7	0.0
MTP				*e*S	Sn	07 06 02.6	-0.4
MTP	Monte Pirata	2.86	271	⇑*e*P	Pn	07 05 29.7	0.0
MTP				*e*S	Sn	07 06 02.6	-0.4
CBYP	Canovanas	3.15	274	⇑*e*P	Pn	07 05 34.4	+0.7
CBYP				*e*S	Sn	07 06 10.6	+0.3
CBYP	Canovanas	3.15	274	⇑*e*P	Pn	07 05 34.4	+0.7
CBYP				*e*S	Sn	07 06 10.6	+0.3
CPD	Cerro la Pandu	3.21	270	⇑*e*P	Pn	07 05 35.2	+0.8
CPD				*e*S	Sn	07 06 11.3	-0.2
CPD	Cerro la Pandu	3.21	270	⇑*e*P	Pn	07 05 35.2	+0.8
CPD				*e*S	Sn	07 06 11.3	-0.2

*NEIC **08** 07:14:45.4, 31⏲72S×71⏲22W, h44km, MD3.9(GUC), After GUC.*

GUC 08 07:14:45.4±0.8, 31⏲72S×71⏲22W, h44km±2km, MD3.9, ML3.6, 10C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.29	236	⇑*i*P	Pn	07 14 53.9	0.0
CHNG				*i* S	Sn	07 15 00.3	+0.4
CMCH	Combarbala	0.57	19	⇑*i*P	Pn	07 14 57.5	+0.2
CMCH				*i* S	Sn	07 15 06.9	+1.2
CMCH	Combarbala	0.57	19	⇑*i*P	Pn	07 14 57.5	+0.2
CMCH				*i* S	Sn	07 15 06.9	+1.2
CMCH				AML	AML	07 15 08.4	
	comp=E,21μm,0.7s						
PACH	Papudo	0.84	193	⇓*i*P	Pn	07 15 01.7	+0.9
PACH				*i* S	Sn	07 15 12.6	+0.6
JACH	Jahuel	1.10	151	*e*P	Pn	07 15 05.0	+0.7
OVCH	Ovalle	1.11	1	⇓*i*P	Pn	07 15 05.6	+1.1
OVCH				*i* S	Sn	07 15 20.4	+1.9
OVCH	Ovalle	1.11	1	⇓*i*P	Pn	07 15 05.6	+1.1
OVCH				*i* S	Sn	07 15 20.4	+1.9
OVCH				AML	AML	07 15 23.6	
	comp=N,2μm,0.4s						
PEL	Peldehue	1.49	163	⇑*i*P	Pn	07 15 10.3	+0.6
PEL				*i* S	Sn	07 15 30.2	+2.3
PEL				AML	AML	07 15 32.2	
	comp=E,2μm,0.3s						
TLL	Tololo Astrono	1.59	13	*e*P	Pn	07 15 12.7	+1.6
TLL				*i* S	Sn	07 15 32.6	+2.3
TLL	Tololo Astrono	1.59	13	*e*P	Pn	07 15 12.7	+1.6
TLL				*i* S	Sn	07 15 32.6	+2.3
TLL				AML	AML	07 15 53.5	
	comp=N,401nm,0.6s						
CLCH	Cerro Calan	1.77	161	⇓*i*P	Pn	07 15 14.3	+0.7
CLCH				AML	AML	07 15 43.6	
	comp=E,985nm,0.4s						
FCH	Farellones	1.79	154	*e*P	Pn	07 15 14.4	+0.6
FCH				*i* S	Sn	07 15 36.6	+1.4
FSR	Penalolen	1.85	162	⇑*i*P	Pn	07 15 16.1	+1.5
FSR				*i* S	Sn	07 15 38.5	+1.7
FSR	Penalolen	1.85	162	⇑*i*P	Pn	07 15 16.1	+1.5
FSR				*i* S	Sn	07 15 38.5	+1.7
FSR				AML	AML	07 15 55.1	
	comp=N,207nm,0.5s						
ANTU	Antumapu	1.91	165	⇑*i*P	Pn	07 15 16.3	+0.9
ANTU				*i* S	Sn	07 15 39.8	+1.5
ANTU	Antumapu	1.91	165	⇑*i*P	Pn	07 15 16.3	+0.9
ANTU				*i* S	Sn	07 15 39.8	+1.5
ANTU				AML	AML	07 15 45.8	
	comp=E,790nm,0.4s						
TACH	Talagante	1.94	173	⇓*i*P	Pn	07 15 16.8	+0.9
TACH				*i* S	Sn	07 15 40.4	+1.3
PCH	Pirque	1.99	163	*e*P	Pn	07 15 17.4	+0.9
LNV	Longovilo	2.24	184	⇓*i*P	Pn	07 15 20.2	+0.2
LMEL	Las Melosas	2.29	158	⇑*i*P	Pn	07 15 22.2	+1.6
LMEL				S	Sn	07 15 50.5	+2.9
LMEL	Las Melosas

HDMB	Hadim	2.62	90	*e*PN	Pn	07 16 33.5	+1.0
HDMB	Hadim	2.62	90	*e*Pn	Pn	07 16 33.5	+1.0
IKL	Isikli	3.68	101	*e*PN	Pn	07 16 48.8	+1.7
IKL	Isikli	3.68	101	*e*Pn	Pn	07 16 48.8	+1.7

*ISCJB **08** 07:38:05.4±1.4, 24°.4S±0°.3×179°.8E±0°.2, h500km, mb4.1/11, Error ellipse: s-maj=47.1km s-min=20.6km az=153.6*
*IDC **08** 07:38:05.1±3.5, 24°.15S×179°.83E, h486km±34km, mb3.4/5, mb1 3.6/5, mb1mx3.4/14, mbtmp3.4/5, Error ellipse: s-maj=62.8km s-min=24.9km az=153.0*
ISC 08 07:38:06.4±1.4, 24°.4S±0°.3×179°.8E±0°.2, h500km, n15, σ0s79/12, mb4.1/11, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMSA	Cobar Meteorol	30.87	249	⇓*i*P	P	07 43 41.9	+0.7
CTA	Charters Tower	31.32	271	*e*P	P	07 43 46.1	+0.9
	12nm,0.5s,mb4.6						
MTSU	Mount Surprise	33.60	274	*e*P	P	07 44 05.6	+0.9
	21nm,0.8s,mb4.6						
STKA	Stephens Creek	34.37	249	P	P	07 44 11.8	+0.8
	3.5nm,0.5s,mb4.0,baz=92,slow=10,SNR=13						
BBOO	Buckleboo	39.09	247	⇓*i*P	P	07 44 49.4	-0.5
	2.8nm,0.3s,mb4.2						
ASAR	Alice Springs	41.79	261	P	P	07 45 11.6	-0.1
	1.6nm,0.5s,mb3.7,baz=97,slow=7.5,SNR=28						
WRA	Warramunga Arr	42.21	267	P	P	07 45 14.6	-0.5
	5.0nm,0.5s,mb4.2,baz=101,slow=8.4,SNR=94						
WRA				ScP	ScP	07 50 02.6	+2.0
	1.2nm,0.7s,baz=102,slow=4.1,SNR=6.9						
FORT	Forrest	45.97	250	*e*P	P	07 45 43.2	-0.9
	8.8nm,0.5s,mb4.5						
KAKA	Kakadu	46.20	276	*e*P	P	07 45 44.0	-2.0
	9.1nm,1.0s,mb4.2						
FITZ	Fitzroy Crossi	50.63	266	*e*P	P	07 46 19.1	+0.1
	8.7nm,0.8s,mb4.1						
KSRS	Korea Array	78.55	320	P	P	07 49 15.7	+0.2
	0.9nm,0.7s,mb3.4,baz=126,slow=6.4,SNR=4.6						
TXAR	Lajitas Array	90.85	58	P	P	07 50 16.4	+0.1
	0.5nm,0.7s,mb3.5,baz=212,slow=6.5,SNR=6.4						
ARCES	ARCESS Array B	132.37	348	PKP	PKPdf	07 56 21.1	-1.4
	2.5nm,1.1s,baz=18,slow=4.2,SNR=4.1						
AKASG	Malin Array Be	145.33	327	PKPbc	PKPbc	07 56 44.2	-3.3
	0.7nm,0.5s,baz=45,slow=3.2,SNR=4.5						
BRTR	Keskin Array B	147.76	306	PKPbc	PKPbc	07 56 53.4	-1.3
	0.6nm,0.6s,baz=123,slow=5.7,SNR=3.3						

*NIED **08** 07:53:00.36°.20N×141°.80E, h17km, Mw3.8 Best double couple: M0=6.60000×10^14 NP1:φ=60.00000°, δ=82.00000°, λ=104.00000°. NP2:φ=179.00000°, δ=16.00000°, λ=29.00000°.*
*IDC **08** 07:53:18.7±1.5, 36°.18N×142°.14E, h0km, mb3.7/6, mb1 3.8/11, mb1mx3.6/30, mbtmp3.8/11, ML3.7/5, MS3.0/2, Ms1 3.0/2, ms1mx2.3/35, Error ellipse: s-maj=39.2km s-min=17.7km az=72.0*
*ISCJB **08** 07:53:21.0±1.3, 36°.22N±0°.03×141°.96E±0°.07, h24km±8km, mb3.7/6, Error ellipse: s-maj=8.9km s-min=5.7km az=178.6*
*JMA **08** 07:53:23.2±0.1, 36°.25N×141°.81E, h51km±4km, M3.6*
ISC 08 07:53:21.6±1.8, 36°.22N±0°.03×141°.91E±0°.06, h16km±12km, n24, σ0s97/34, mb3.7/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.00	239	P	Pb	07 53 40.4	0.0
CHOJ				S	Sb	07 53 52.9	-0.3
JHO	Hitachi	1.15	290	P	Pn	07 53 42.1	-0.8
JHO				S	Sb	07 53 56.5	-1.2
ONAJ	Iwakimizuishiy	1.25	315	P	Pn	07 53 43.5	-0.9
JFK	Kawauchi	1.41	324	P	Pn	07 53 46.0	-0.6
JFK				S	Sn	07 54 03.2	-1.6
BSO1	Boso 1	1.74	206	P	Pn	07 53 51.2	+0.2
JFT	Otama	1.81	316	P	Pn	07 53 52.4	+0.4
JFT				S	Sn	07 54 12.9	-1.7
BSO3	Boso 3	1.82	219	P	Pn	07 53 52.1	0.0
BSO3				S	Sn	07 54 14.5	-0.3
JMM	Marumori	1.87	332	P	Pn	07 53 53.1	+0.3
JAG	Ashikaga	1.99	277	P	Pn	07 53 54.4	-0.1
JFY	Yanaizu	2.13	304	P	Pn	07 53 56.9	+0.5
JRY	Ryogami san	2.44	266	P	Pn	07 54 00.6	-0.1
JRY				S	Sn	07 54 28.8	-1.4
JOD2	Odawara 2	2.48	248	P	Pn	07 54 02.0	+0.7
MJAR	Matsushiro Arr	3.00	277	Pn	Pn	07 54 09.2	+0.8
	6.2nm,0.3s,baz=107,slow=8.4,SNR=34						
MJAR				Sn	Sn	07 54 45.9	+1.9
	4.5nm,0.3s,baz=68,slow=14,SNR=11						
MAT	Matsushiro	3.00	277	P	Pn	07 54 09.8	+1.4
MAT				S	Sn	07 54 45.8	+1.7
JHJ	Hachijo jima 2	3.56	210	Pn	Pn	07 54 15.8	-0.2
	18nm,0.3s,baz=77,slow=13,SNR=7.5						
JHJ				Sn	Sn	07 54 57.2	-0.5
	21nm,0.3s,baz=59,slow=19,SNR=4.0						
ASAJ	Asahikawa	7.91	4	Pn	Pn	07 55 15.6	-0.1
	1.2nm,0.3s,baz=172,slow=18,SNR=3.6						
ASAJ				Sn	Sn	07 56 40.6	-4.1
	0.5nm,0.3s,baz=74,slow=19,SNR=2.0						
CBIJ	Chichi jima	9.10	178	Pn	Pn	07 55 29.8	-2.4
	4.1nm,0.3s,baz=108,slow=22,SNR=15						
KSRS	Korea Array	11.28	280	Pn	Pn	07 56 05.9	+3.9
	0.2nm,0.3s,baz=67,slow=16,SNR=3.3						
KSRS				LR	LR	07 59 56.9	
	comp=Z,51nm,20.9s,baz=338,slow=35						
SONM	Songino Array	28.57	305	P	P	07 59 17.6	+1.0
	0.9nm,0.5s,mb3.7,baz=116,slow=12,SNR=5.2						
MKAR	Makanchi Array	44.89	303	P	P	08 01 36.3	+1.1
	0.6nm,0.6s,mb3.6,baz=92,slow=8.9,SNR=4.4						
KURK	Kurchatov	46.75	309	P	P	08 01 50.9	+1.1
	1.6nm,0.6s,mb4.1,baz=84,slow=7.9,SNR=7.9						
BVAR	Borovoye Array	51.42	313	P	P	08 02 26.4	+0.9
	0.4nm,0.4s,mb3.7,baz=77,slow=7.7,SNR=3.0						
BVAR				LR	LR	08 25 01.6	
	comp=Z,22nm,20.4s,slow=37						
WRA	Warramunga Arr	56.31	189	P	P	08 03 01.5	0.0
	0.7nm,0.6s,mb3.9,baz=5.8,slow=7.4,SNR=6.3						
ASAR	Alice Springs	60.04	188	P	P	08 03 27.3	-0.2
	0.2nm,0.6s,mb3.3,baz=17,slow=9.7,SNR=4.0						

*IDC **08** 08:02:27.1±2.6, 53°.53N×87°.84E, h0km, mb1 3.5/3, mb1mx3.2/28, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=22.9km s-min=13.6km az=59.0*
*NNC **08** 08:02:28.9±2.3, 53°.22N×87°.77E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=18.1km s-min=14.0km az=66.0*
ISC 08 08:02:30.9±1.9, 53°.65N±0°.06×87°.8E±0°.2, h35km, n8, σ1s03/14, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.80	281	Pg	Pn	08 02 59.2	-0.1
	12nm,0.3s,baz=99,slow=19,SNR=16						
ZALV				Lg		08 03 26.6	
	19nm,0.3s,baz=104,slow=26,SNR=20						
KURK	Kurchatov	6.37	246	⇑Pn	Pn	08 04 02.5	+0.5
	3.1nm,1.2s						
KURK				⇓Sn	Sn	08 05 13.0	-0.5
	1.8nm,0.5s						
KURK				⇑Lg		08 05 46.2	
	3.5nm,0.5s						
KURK	Kurchatov	6.37	246	Pn	Pn	08 04 04.0	+1.9
	0.4nm,0.3s,baz=64,slow=14,SNR=32						
KURK				Sn	Sn	08 05 15.2	+1.7
	0.2nm,0.3s,baz=61,slow=29,SNR=4.5						
KURK				Lg		08 05 50.5	
	0.2nm,0.3s,baz=56,slow=32,SNR=8.5						
KURBB	Kurchatov Arra	6.46	246	⇑Pn	Pn	08 04 03.7	+0.3
	0.3nm,0.3s						
KURBB				⇑Sn	Sn	08 05 15.4	-0.5
	2.2nm,0.7s						
KURBB				⇓Lg		08 05 50.4	
	2.1nm,0.6s						
MK31	Makanchi Array	7.72	209	⇑Pn	Pn	08 04 19.2	-1.5
	0.5nm,0.6s,baz=25,slow=14,SNR=6.0						
MK31				⇓Sn	Sn	08 05 47.0	+0.3
	0.4nm,0.3s						
MKAR	Makanchi Array	7.72	209	Pn	Pn	08 04 20.7	+0.1
	0.4nm,0.3s,baz=27,slow=13,SNR=6.9						
MKAR				Sn	Sn	08 05 46.8	0.0
	0.4nm,0.3s,baz=35,slow=20,SNR=5.4						
MKAR				Lg		08 06 29.1	
	0.4nm,0.3s,baz=32,slow=30,SNR=5.4						

VOSK	Vostochnaya	10.15	272	⇑Pn	Pn	08 04 56.3	+2.4
	0.5nm,0.3s						
BVAR	Borovoye Array	10.44	274	Pn	Pn	08 04 56.4	-1.4
	0.4nm,0.3s,baz=82,slow=12,SNR=5.6						
BVAR				Sn	Sn	08 06 52.7	-0.7
	0.6nm,0.3s,baz=66,slow=26,SNR=5.9						

*ISCJB **08** 08:11:57.6±0.4, 27°.94N±0°.05×87°.80E±0°.03, h105km±4km, mb3.9/9, Error ellipse: s-maj=9.1km s-min=4.7km az=8.6*
*NDI **08** 08:11:57.8±2.9, 28°.06N×87°.74E, h33km, ML4.0*
*DMN **08** 08:11:57.1±0.0, 28°.18N×87°.93E, h60km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IDC **08** 08:12:01.2±5.9, 28°.08N×87°.71E, h106km±53km, mb3.6/9, mb1 3.7/11, mb1mx3.5/28, mbtmp3.5/11, MS2.8/1, Ms1 2.8/1, ms1mx2.3/25, Error ellipse: s-maj=39.6km s-min=14.3km az=54.0*
ISC 08 08:11:58.4±0.4, 28°.08N±0°.06×87°.81E±0°.03, h87km±6km, n42, σ1s23/59, mb3.8/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	0.73	187	*e*Pg	Pn	08 12 14.8	-0.2
TAPN				*e*Sg	Sn	08 12 27.2	0.0
GTK	Gangtok	1.03	136	*e*P	Pn	08 12 18.0	-0.2
GTK				*e*S	Sn	08 12 32.0	-1.1
JIRN	Jiri	1.49	254	*e*Pg	Pn	08 12 24.9	+1.0
JIRN				*e*Sg	Sn	08 12 44.9	+1.7
RAMN	Ramite	1.56	224	*e*Pg	Pn	08 12 24.8	+0.1
RAMN				*e*Sg	Sn	08 12 46.0	+1.4
GUN	Gumba	1.71	265	*e*Pg	Pn	08 12 27.8	+1.1
GUN				*e*Sg	Sn	08 12 49.0	+0.8
PKI	Pulchoki	2.18	257	*e*Pg	Pn	08 12 33.9	+1.0
PKI				*e*Sg	Sn	08 13 00.0	+0.7
	540nm,0.3s						
PKIN	Phulchoki	2.19	257	*e*Pg	Pn	08 12 33.8	+0.8
PKIN				*e*Sg	Sn	08 13 00.2	+0.7
	883nm,0.4s						
KKN	Kakani	2.25	263	*e*Pn	Pn	08 12 34.6	+0.7
KKN				*e*Sg	Sn	08 13 01.6	+0.6
	430nm,0.2s						
DMN	Daman	2.44	260	*e*Pn	Pn	08 12 37.1	+0.8
DMN				*e*Sg	Sn	08 13 05.5	+0.1
	622nm,0.3s						
GKN	Gorkha	2.80	269	*e*Pn	Pn	08 12 41.1	-0.1
GKN				*e*Sn	Sn	08 13 14.5	+0.4
	593nm,0.3s						
LSA	Lhasa	3.34	60	P	Pn	08 12 49.0	+0.5
KOLN	Koldanda	3.74	266	*e*Pn	Pn	08 12 53.2	-0.6
KOLN				*e*Sg	Sn	08 13 36.2	-0.5
	540nm,0.3s						
PYUN	Piuthan	4.26	271	*e*Pn	Pn	08 12 59.6	-1.3
PYUN				*e*Sn	Sn	08 13 47.5	-1.9
	269nm,0.3s						
SHL	Shillong	4.42	124	*e*P	Pn	08 13 03.0	-0.1
SHL				*i*S	Sn	08 13 50.0	-3.3
BOK	Bokaro	4.61	202	*e*P	Pn	08 13 05.0	-0.6
BOK				*e*S	Sn	08 13 53.3	-4.6
PTH	Pithoragarh	6.82	284	*e*x	x	08 13 48.0	
PTH				*e*S	Sn	08 14 46.0	-5.9
JOSI	Joshimath	7.61	291	*e*x	x	08 14 05.1	
JOSI				*e*S	Sn	08 15 06.0	-5.3
AGRA	Agra	8.79	267	*e*P	Pn	08 14 00.2	-2.4
AGRA				*e*S	Sn	08 15 31.5	-8.5
AGRA				AML	AML	08 15 40.2	
	comp=N,144nm,0.2s						
AGRA				AML	AML	08 15 40.6	
	comp=E,170nm,0.3s						
NDI	New Delhi	9.35	276	*e*x	x	08 15 42.0	
AYAN	Aya Nagar	9.43	275	*e*P	Pn	08 14 08.7	-2.7
AYAN				*e*S	Sn	08 15 45.9	-10
SONA	Sohna	9.47	274	*e*S	Sn	08 15 47.6	-9.0
SONA				AML	AML	08 15 54.7	
	comp=N,35nm,0.2s						
SONA				AML	AML	08 15 55.1	
	comp=E,35nm,0.2s						
BHPL	Bhopal	10.53	245	*e*P	Pn	08 14 23.1	-3.3
BHPL				*e*S	Sn	08 16 12.0	-11
KHET	Khetri	10.60	273	*e*P	Pn	08 14 24.2	-3.1
KHET				*e*S	Sn	08 16 14.2	-10
AJM	Ajmer	11.82	265	*e*P	Pn	08 14 40.8	-3.2
AJM				*e*S	Sn	08 16 42.6	-11
HYB	Hyderabad	13.61	221	*i*P	Pn	08 15 05.5	-2.3
HYB				*e*		08 15 15.0	
HYB				*e*S	Sn	08 17 40.5	+3.0
CMAR	Chiang Mai Arr	14.01	131	P	Pn	08 15 15.6	+2.6
	comp=E,0.7nm,0.3s,baz=319,slow=11,SNR=4.9						
POO	Poona	15.95	236	*e*P	Pn	08 15 37.7	0.0
KAD	Karad	16.51	232	*e*x	Pn	08 15 41.3	-3.4
KAD				*e*x	x	08 18 45.7	
AAK	Ala-Archa	18.10	327	LR	LR	08 23 42.8	
	comp=E,30nm,20.2s,baz=46,slow=39						
XAN	Xi'an	19.02	67	P	Pn	08 16 12.1	-3.0
XAN				pP	pP	08 16 17.3	-13
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	19.18	348	P	Pn	08 16 16.4	-0.3
	comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=5.2						
KURK	Kurchatov	23.66	345	P	P	08 17 02.2	+0.5
	comp=Z,1.2nm,0.6s,mb3.4,baz=167,slow=8.6,SNR=12						
SONM	Songino Array	24.45	31	P	P	08 17 10.6	+1.6
	comp=Z,0.6nm,0.4s,mb3.2,baz=208,slow=10,SNR=3.4						
FINES	FINESS Array B	52.28	328	P	P	08 21 00.8	+0.2
	comp=Z,1.5nm,0.6s,mb4.2,baz=120,slow=8.2,SNR=5.8						
ARCES	ARCESS Array B	54.35	337	P	P	08 21 16.4	+0.7
	comp=Z,1.5nm,0.9s,mb4.0,baz=105,slow=7.8,SNR=13						
NB2	NORSAR Subarra	59.42	327	P	P	08 21 51.7	+0.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=86,slow=6.5						
NOA	NORSAR Array B	59.42	327	P	P	08 21 51.3	-0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=86,slow=6.7,SNR=3.9						
WRA	Warramunga Arr	65.60	131	P	P	08 22 34.4	+1.1
	comp=Z,2.8nm,0.4s,mb4.4,baz=326,slow=6.6,SNR=56						
ASAR	Alice Springs	67.98	135	P	P	08 22 49.6	+1.2
	comp=Z,3.6nm,0.6s,mb4.4,baz=317,slow=6.3,SNR=69						
TORD	Torodi Ar. Bea	80.55	280	P	P	08 24 02.0	+0.3
	comp=Z,0.3nm,0.4s,mb3.5,baz=78,slow=3.7,SNR=5.8						
YKA	Yellowknife Ar	87.97	10	P	P	08 24 38.4	0.0
	comp=Z,0.3nm,0.6s,mb3.5,baz=333,slow=4.8,SNR=4.1						
TXAR	Lajitas Array	121.86	12	PKP	PKPdf	08 30 43.7	+0.8
	comp=Z,0.5nm,0.9s,baz=116,slow=2.9,SNR=4.0						

*ISCJB **08** 08:20:40.0±0.8, 71°.4N±0°.1×12°.8W±0°.1, h10km, Error ellipse: s-maj=17.2km s-min=5.4km az=4.3*
*CSEM **08** 08:20:41.6±0.3, 71°.27N×12°.68W, h10km, ML1.6, Error ellipse: s-maj=16.8km s-min=7.0km az=2.0*
*BER **08** 08:20:44.1±0.7, 71°.88N×11°.92W, h2km, MD2.9, ML3.0*
ISC 08 08:20:41.3±0.8, 71°.2N±0°.1×12°.7W±0°.1, h10km, n9, σ0s90/15, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.32	101	*e*P	Pn	08 21 07.1	+1.4
JMI				*e*S	Sb	08 21 23.7	+0.7
JMI				AML	AML	08 21 30.7	
	comp=Z,238nm,0.5s						
JMI	Jan Mayen	1.32	101	*e*P	Pn	08 21 07.1	+1.4
	SNR=53						
JMI				*e*S	Sb	08 21 23.7	+0.7
	comp=Z,238nm,0.5s,SNR=53						
JNW	Jan Mayen West	1.39	96	*e*P	Pn	08 21 07.0	+0.3
JNW				*e*S	Sn	08 21 23.5	-1.6
JNW				AML	AML	08 21 28.4	
	comp=Z,207nm,0.3s						
JNW	Jan Mayen West	1.39	96	*e*P	Pn	08 21 07.0	+0.3
	SNR=53						
JNW				*e*S	Sn	08 21 23.5	-1.6
	comp=Z,207nm,0.3s,SNR=53						
JNE	Jan Mayen East	1.44	97	*e*S	Sn	08 21 25.7	-0.6
JNE				AML	AML	08 21 26.8	
	comp=Z,163nm,0.3s						
JNE	Jan Mayen East	1.44	97	*e*S	Sn	08 21 25.7	-0.7
	comp=Z,163nm,0.3s,SNR=53						
SCO	Scoresbysund	3.15	261	*i*P	Pn	08 21 31.4	+0.6
SCO				*e*S	Sn	08 22 07.5	-0.9
SCO	Scoresbysund	3.15	261	*i*P	Pn	08 21 31.5	+0.7
	SNR=90						
SCO				*e*S	Sn	08 22 07.6	-0.8
	comp=Z,3.9nm,0.6s,SNR=90						
KBS	Kingsbay	9.88	28	*i*P	Pn	08 23 03.0	0.0
	SNR=75						

*ISK **08** 08:36:10.9, 37°.06N×37°.13E, h5km, MD2.8*
*ISCJB **08** 08:36:13.0±0.6, 37°.15N±0°.04×37°.11E±0°.06, h10km, Error ellipse: s-maj=8.0km s-min=5.0km az=36.9*
*DDA **08** 08:36:12.9, 37°.17N×37°.08E, h7km±3km, Md2.7*
*CSEM **08** 08:36:13.1±0.3, 37°.14N×37°.11E, h5km, MD2.7, Error ellipse: s-maj=10.7km s-min=7.0km az=126.0*
ISC 08 08:36:13.4±0.6, 37°.15N±0°.04×37°.13E±0°.06, h10km, n15, σ0s93/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.07	73	PG	Pg	08 36 13.7	-1.8
GAZ				*e*SG	Sg	08 36 16.5	-0.6
GAZ	Gaziantep	0.07	73	*i*Pg	Pg	08 36 13.7	-1.8
GAZ				*e*Sg	Sg	08 36 16.5	-0.6
KUZU	Kuzuini	0.38	187	*i*P	Pg	08 36 20.4	-0.5
KUZU				*i*S	Sg	08 36 26.7	+0.8
KUZU	Kuzuini	0.38	187	*i*P	Pg	08 36 20.4	-0.5
KUZU				*i*S	Sg	08 36 26.7	+0.8
KMRS	Kahramanmaras	0.40	332	*e*PG	Pg	08 36 21.6	+0.4
KMRS	Kahramanmaras	0.40	332	*e*Pg	Pg	08 36 21.6	+0.4
GZT	Gaziantep	0.40	59	*e*P	Pg	08 36 26.5	+5.3
GZT				*e*S	Sg	08 36 33.4	+6.8
COBT	Iskenderun	0.94	228	*i*P	Pg	08 36 31.1	-0.5
COBT				*i*S	Sg	08 36 44.3	+0.5
COBT	Iskenderun	0.94	228	*i*P	Pg	08 36 31.1	-0.5
COBT				*i*S	Sg	08 36 44.3	+0.4
KOZT	Kozan	1.09	288	*e*PN	Pg	08 36 33.5	-0.9
KOZT	Kozan	1.09	288	*e*Pn	Pg	08 36 33.5	-0.8
MALT	Malatya	1.55	41	*e*PN	Pn	08 36 42.2	+1.2
MALT	Malatya	1.55	41	*e*Pn	Pn	08 36 42.2	+1.2
MYA	Malataya	1.56	41	*e*PN	Pn	08 36 42.4	+1.3
MYA	Malataya	1.56	41	*e*Pn	Pn	08 36 42.4	+1.3

*ISCJB **08** 08:45:23.7±5.2, 6°.33S±0°.09×154°.98E±0°.09, h57km±47km, mb4.4/23, MS3.4/6, Error ellipse: s-maj=16.0km s-min=14.4km az=43.2*
*NEIC **08** 08:45:25.5±0.4, 6°.33S×155°.02E, mb4.4/3, Error ellipse: s-maj=12.2km s-min=8.3km az=105.0*
*IDC **08** 08:45:26.0±0.7, 6°.35S×155°.03E, h64km±5km, mb4.1/18, mb1 4.2/18, mb1mx4.2/20, mbtmp4.1/18, MS3.3/7, Ms1 3.3/7, ms1mx3.1/25, Error ellipse: s-maj=18.1km s-min=12.9km az=96.0*
ISC 08 08:45:25.4±3.6, 6°.35S±0°.09×154°.98E±0°.09, h58km±34km, h63km±2.0km: pP-P, n38, σ0s77/31, mb4.4/23, MS3.4/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	16.07	211	LR	LR	08 53 24.4	
	comp=Z,35nm,18.7s,baz=227,slow=30						
DZM	Mont Dzumac	19.15	146	*e*P	Pn	08 49 45.6	0.0
EIDS	Eidsvold	19.27	191	Pn	Pn	08 49 46.7	-0.3
	2.4nm,0.7s						
KAKA	Kakadu	23.10	252	*e*P	P	08 50 25.4	-1.2
WRAB	Tennant Creek	24.16	234	*e*P	P	08 50 37.5	+1.1
	14nm,0.6s,mb4.5						
WRAB				*e*pP		08 50 52.1	
WRAB				*e*PcP	PcP	08 54 16.3	+0.1
WB2	Warramunga Arr	24.16	234	*e*P	P	08 50 37.5	+1.1
WB2				*e*PcP	PcP	08 54 15.9	-0.3
WRA	Warramunga Arr	24.17	234	P	P	08 50 37.8	+1.3
	9.1nm,0.5s,mb4.4,baz=59,slow=9.7,SNR=132						
WRA				PcP	PcP	08 54 16.2	0.0
	1.7nm,0.6s,baz=58,slow=2.5,SNR=14						
WRA				pPcP		08 54 33.1	
	1.2nm,0.5s,baz=54,slow=2.5,SNR=6.6						
ASAR	Alice Springs	26.59	227	P	P	08 50 58.7	+0.3
	2.2nm,0.5s,mb3.9,baz=58,slow=8.6,SNR=31						
ASAR				PcP	PcP	08 54 21.6	0.0
	0.8nm,0.6s,baz=74,slow=2.2,SNR=7.1						
ASAR				pPcP		08 54 38.1	
	0.8nm,0.7s,baz=57,slow=3.2,SNR=4.2						
STKA	Stephens Creek	28.31	205	*e*P	P	08 51 13.7	0.0
	2.0nm,0.6s,mb3.9						
STKA	Stephens Creek	28.31	205	P	P	08 51 13.2	-0.5
	2.2nm,0.6s,mb4.0,baz=21,slow=11,SNR=7.0						
STKA				LR	LR	09 01 27.4	
	comp=Z,128nm,19.0s,MS3.5,baz=21,slow=34						
FITZ	Fitzroy Crossi	30.91	245	*e*P	P	08 51 36.6	-0.2
	11nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	30.91	245	P	P	08 51 36.8	-0.1
	5.3nm,0.7s,mb4.5,baz=104,slow=7.8,SNR=15						
BBOO	Buckleboo	31.67	211	*e*P	P	08 51 42.0	-1.4
	1.9nm,0.4s,mb4.3						
AFI	Afiamalu	33.54	106	LR	LR	09 02 10.5	
	comp=Z,49nm,19.2s,MS3.2,baz=288,slow=30						
FORT	Forrest	35.05	223	*e*P	P	08 52 12.8	0.0
	10nm,0.6s,mb4.9						
URZ	Urewera	37.57	151	P	P	08 52 33.8	-0.5
	11nm,0.6s,mb4.8,baz=143,slow=1.1,SNR=5.9						
RPZ	Rata Peaks	39.80	162	P	P	08 52 53.6	+0.7
	12nm,0.9s,mb4.6,baz=202,slow=10,SNR=5.6						
RPZ				LR	LR	09 07 51.3	
	comp=Z,80nm,18.4s,MS3.6,baz=190,slow=34						
MEEK	Meekatharra	40.06	236	*e*P	P	08 52 55.7	+0.4
	11nm,0.9s,mb4.6						
MORW	Morawa	43.12	234	*e*P	P	08 53 18.6	-1.7
MJAR	Matsushiro Arr	45.47	341	P	P	08 53 39.1	+0.1
	0.5nm,0.3s,mb3.8,baz=125,slow=9.5,SNR=2.9						
KSRS	Korea Array	50.37	332	P	P	08 54 16.9	+0.1
	1.1nm,0.7s,mb4.0,baz=142,slow=7.6,SNR=6.4						
KSRS				LR	LR	09 12 43.3	
	comp=Z,18nm,18.6s,MS3.1,baz=175,slow=32						
PETK	Pet

mb1mx2.6/29, mbtmp2.6/4, ML2.8/4, Error ellipse: s-maj=23.4km s-min=6.3km az=28.0

*NNC **08** 08:52:30.6±2.4, 52°.04N×76°.00E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=107.2km s-min=7.2km az=31.0*

ISC 08 08:52:29.5±0.6, 51°.5N±0°.1×75°.3E±0°.1, h10km, n8, σ0§94/14, 4C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.25**	**112**	⇑Pn	**Pn**	**08 53 07.6**	**+0.9**
	0.5nm,0.6s						
KURBB				⇑Sn	**Sn**	**08 53 35.7**	**+1.2**
	3.7nm,0.7s						
KURK	**Kurchatov**	**2.27**	**110**	⇓Pn	**Pn**	**08 53 06.9**	**0.0**
	1.6nm,0.4s						
KURK				⇑Sn	**Sn**	**08 53 35.1**	**+0.2**
	18nm,1.0s						
KURK	**Kurchatov**	**2.27**	**110**	Pn	**Pn**	**08 53 06.3**	**-0.6**
	0.6nm,0.3s,baz=302,slow=19,SNR=18						
KURK				Pg	**Pb**	**08 53 08.7**	**-1.7**
	0.6nm,0.3s,baz=294,slow=19,SNR=20						
KURK				Lg		08 53 37.3	
	0.7nm,0.3s,baz=297,slow=32,SNR=8.1						
VOSK	**Vostochnaya**	**2.90**	**296**	⇑Pn	**Pb**	**08 53 20.6**	**-0.7**
	2.2nm,0.5s						
BVA0	**Borovoye Array**	**3.35**	**299**	⇓Pn	**Pb**	**08 53 28.4**	**-0.5**
	0.5nm,1.1s,baz=110,slow=15,SNR=6.6						
BVAR	**Borovoye Array**	**3.35**	**299**	Pn	**Pn**	**08 53 23.3**	**+1.5**
	0.5nm,0.3s,baz=112,slow=13,SNR=5.3						
BVAR				Pg	**Pb**	**08 53 29.0**	**+0.1**
	0.9nm,0.3s,baz=126,slow=17,SNR=8.1						
BVAR				Sn	**Sn**	**08 54 01.9**	**+0.3**
	0.5nm,0.3s,baz=89,slow=19,SNR=3.1						
BVAR				Lg		08 54 14.7	
	1.7nm,0.3s,baz=113,slow=25,SNR=10						
ZALV	**Zalesovo Beam**	**6.29**	**64**	Pn	**Pn**	**08 54 02.0**	**-0.2**
	0.6nm,0.3s,baz=260,slow=14,SNR=2.2						
ZALV				Lg		08 55 47.3	
	baz=239,slow=25,SNR=1.8						
MKAR	**Makanchi Array**	**6.61**	**133**	Pn	**Pn**	**08 54 04.9**	**-1.7**
	0.2nm,0.3s,baz=317,slow=12,SNR=3.5						
MKAR				Sn	**Sn**	**08 55 22.5**	**+0.7**
	0.2nm,0.3s,baz=324,slow=24,SNR=3.0						
MKAR				Lg		08 55 56.8	
	0.3nm,0.3s,baz=322,slow=35,SNR=4.1						

IDC 08 08:54:14.5±2.3, 17°.15S×176°.98W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.9/17, mbtmp4.1/4, ML2.1/1, Error ellipse: s-maj=166.8km s-min=31.3km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.96**	**58**	Pn	Pn	08 55 44.3	+0.1
	2.6nm,0.3s,baz=50,slow=19,SNR=7.0						
AFI				Sn	Sn	08 56 38.9	-14
	4.8nm,0.3s,baz=262,slow=23,SNR=9.4						
STKA	**Stephens Creek**	**40.19**	**241**	P	P	09 01 53.1	+0.3
	2.0nm,0.9s,baz=90,slow=9.9,SNR=4.8						
WRA	**Warramunga Arr**	**46.11**	**259**	P	P	09 02 40.7	-0.2
	0.6nm,0.5s,baz=95,slow=7.0,SNR=21						
ASAR	**Alice Springs**	**46.31**	**253**	P	P	09 02 42.1	-0.2
	3.6nm,0.6s,baz=88,slow=8.5,SNR=74						

IDC 08 08:56:51.5±2.7, 53°.47N×87°.59E, h0km, mb1 3.6/3, mb1mx3.3/28, mbtmp3.6/3, ML3.3/3, Error ellipse: s-maj=24.1km s-min=13.1km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.71**	**287**	Pg	Pg	08 57 21.1	-3.2
	8.7nm,0.3s,baz=104,slow=19,SNR=40						
ZALV				Lg		08 57 44.8	
	8.3nm,0.3s,baz=107,slow=23,SNR=8.0						
KURK	**Kurchatov**	**6.18**	**247**	Pn	Pn	08 58 25.1	+1.2
	0.4nm,0.3s,baz=61,slow=14,SNR=24						
KURK				Sn	Sn	08 59 36.4	+1.3
	0.1nm,0.3s,baz=64,slow=22,SNR=1.9						
KURK				Lg		09 00 10.9	
	0.1nm,0.3s,baz=63,slow=33,SNR=8.9						
MKAR	**Makanchi Array**	**7.50**	**209**	Pn	Pn	08 58 43.0	+1.0
	0.4nm,0.3s,baz=22,slow=9.8,SNR=8.1						
MKAR				Sn	Sn	09 00 08.6	+0.8
	0.4nm,0.3s,baz=31,slow=25,SNR=4.0						
MKAR				Lg		09 00 51.0	
	0.2nm,0.3s,baz=26,slow=28,SNR=5.5						
BVAR	**Borovoye Array**	**10.32**	**274**	Pn	Pn	08 59 20.6	0.0
	0.2nm,0.3s,baz=82,slow=12,SNR=3.5						
BVAR				Sn	Sn	09 01 13.5	-3.4
	0.6nm,0.3s,baz=87,slow=28,SNR=5.1						

*NNC **08** 09:07:46.6±8.7, 37°.25N×71°.01E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=80.5km s-min=63.3km az=42.0*

ISC 08 09:07:46.9±2.9, 37°.0N±0°.2×71°.1E±0°.2, h35km, n9, σ0§86/10, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.52**	**21**	P	**Pn**	**09 09 06.9**	**+0.4**
	SNR=95						
UCH	**Uchtor**	**5.87**	**26**	P	**Pn**	**09 09 11.2**	**0.0**
	SNR=30						
KZA	**Kyzart**	**6.02**	**31**	P	**Pn**	**09 09 12.7**	**-0.6**
	SNR=25						
EKS2	**Erkin-Say**	**6.04**	**19**	P	**Pn**	**09 09 14.0**	**+0.4**
	SNR=13						
KK31	**Karatay Array**	**6.13**	**356**	⇑P	**Pn**	**09 09 17.2**	**+2.3**
	5.2nm,0.2s,baz=176,slow=13,SNR=99						
KK31				⇑S	**Sn**	**09 10 23.4**	**-0.3**
	3.8nm,0.3s,baz=179,slow=23						
AAK	**Ala-Archa**	**6.22**	**24**	P	**Pn**	**09 09 16.3**	**+0.2**
	SNR=22						
TKM2	**Tokmak 2**	**6.87**	**29**	⇓P	**Pn**	**09 09 24.0**	**-1.0**
	5.8nm,0.6s						
TKM2	**Tokmak 2**	**6.87**	**29**	P	**Pn**	**09 09 24.2**	**-0.8**
	SNR=14						
AB31	**Akbulak array**	**14.71**	**330**	P	**Pn**	**09 11 11.2**	**-0.9**
	1.1nm,0.5s,baz=136,slow=14,SNR=45						

DDA 08 09:13:10.9, 37°.37N×28°.05E, h7km±4km, Md2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.23**	**251**	*e*PG	Pg	09 13 17.5	+2.1
AYDN	**Tasoluk**	**0.32**	**335**	*i* P	Pg	09 13 17.1	0.0
AYDN				*i* S	Sg	09 13 21.8	+0.5
GCAM	**G?zelcaml?**	**0.73**	**297**	*e*P	Pg	09 13 25.6	+0.8
DAT	**Datca**	**0.74**	**211**	*e*SG	Pg	09 13 25.6	+0.5
GOLH	**Golhisar**	**1.21**	**96**	*e*P	Pn	09 13 28.4	-5.9
GOLH				*i* S	Sg	09 13 51.2	+1.3

*ISCJB **08** 09:19:21.4±0.5, 52°.5N±0°.1×177°.4W±0°.1, h267km±5km, mb3.6/7, Error ellipse: s-maj=18.5km s-min=9.1km az=155.5*

*NEIC **08** 09:19:21.9, 52°.13N×177°.23W, h274km, mb4.2/10, After AEIC.*

NEIC .

*IDC **08** 09:19:25.5±6.8, 52°.80N×177°.49W, h296km±72km, mb3.0/9, mb1 3.4/10, mb1mx3.1/28, mbtmp3.1/10, Error ellipse: s-maj=32.3km s-min=12.9km az=167.0*

ISC 08 09:19:22.4±0.5, 52°.4N±0°.1×177°.3W±0°.1, h264km±5km, n32, σ1§03/35, mb3.6/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.67**	**144**	P	**Pn**	**09 19 56.3**	**-1.1**
ADK				S	**S**	**09 20 25.4**	**+0.4**
GSTR	**Great Sitkin T**	**0.85**	**113**	*e*Pn	**Pn**	**09 19 57.5**	**-0.5**
GSTR				*e*Sn	**S**	**09 20 27.1**	**+0.9**
ATKA	**Atka Island**	**1.94**	**95**	P	**Pn**	**09 20 04.6**	**-0.8**
ATKA				S	**S**	**09 20 38.2**	**-1.2**
SMY	**Shemya**	**5.24**	**277**	P	**Pn**	**09 20 43.3**	**+2.0**
SPIA	**Saint Paul Isl**	**6.28**	**38**	P	**Pn**	**09 20 56.5**	**+2.5**
UNV	**Unalaska Valle**	**6.67**	**73**	P	**Pn**	**09 20 59.8**	**+0.9**
SVW2	**Sparrevohn**	**14.69**	**45**	*e*Pn	**Pn**	**09 22 38.4**	**+0.4**
KDAK	**Kodiak Island**	**15.10**	**59**	P	**Pn**	**09 22 39.5**	**-3.3**
	3.5nm,0.3s,baz=81,slow=16,SNR=25						
PETK	**Petropavlovsk-**	**15.11**	**283**	P	**Pn**	**09 22 41.6**	**-1.5**
	0.5nm,0.3s,baz=89,slow=14,SNR=16						
TTA	**Tatalina**	**15.43**	**39**	*e*P	**Pn**	**09 22 46.4**	**-0.3**
	9.0nm,1.0s						
PPLA	**Purkeypile**	**16.93**	**42**	*e*P	**P**	**09 23 02.5**	**+0.4**
	9.9nm,0.8s						
CHUM	**Lake Minchumin**	**17.34**	**39**	*e*P	**P**	**09 23 06.6**	**0.0**
	8.1nm,0.9s						
KTH	**Kantishna Hill**	**17.73**	**41**	*e*P	**P**	**09 23 10.8**	**-0.1**
	24nm,0.8s						
TRF	**Thorofare Moun**	**17.95**	**42**	*e*P	**P**	**09 23 12.4**	**-0.7**
	7.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**17.96**	**39**	*e*P	**P**	**09 23 12.9**	**-0.4**
	7.5nm,0.6s						
MCK	**McKinley**	**18.61**	**42**	*e*P	**P**	**09 23 21.8**	**+1.5**
	4.3nm,0.9s						
BMRM	**Bremner River**	**19.71**	**51**	*e*P	**P**	**09 23 32.6**	**+0.6**
	3.9nm,0.5s						
COLD	**Coldfoot**	**19.89**	**31**	*e*P	**P**	**09 23 34.9**	**+1.0**
	4.6nm,1.0s						
MENT	**Mentasta**	**20.56**	**46**	*e*P	**P**	**09 23 41.1**	**+0.1**
EGAK	**Eagle**	**22.16**	**42**	*e*P	**P**	**09 23 55.7**	**-0.5**
	6.1nm,0.6s,mb4.1						
DAWY	**Dawson**	**22.72**	**44**	*e*P	**P**	**09 24 00.7**	**-0.7**
INK	**Inuvik**	**26.08**	**36**	P	**P**	**09 24 30.3**	**-1.3**
	1.0nm,0.4s,mb3.6,baz=245,slow=12,SNR=14						
INK	**Inuvik**	**26.08**	**36**	P	**P**	**09 24 30.3**	**-1.3**
YKA	**Yellowknife Ar**	**33.85**	**48**	P	**P**	**09 25 38.7**	**-1.1**
	1.3nm,0.5s,mb3.7,baz=282,slow=8.3,SNR=15						
MJAR	**Matsushiro Arr**	**34.85**	**261**	P	**P**	**09 25 48.6**	**0.0**
	2.0nm,0.7s,mb3.8,baz=43,slow=5.6,SNR=6.3						
NVAR	**Mina Array Bea**	**42.53**	**85**	P	**P**	**09 26 53.0**	**+0.9**
	0.3nm,0.6s,baz=299,slow=8.2,SNR=3.9						
PDAR	**Pinedale Array**	**45.13**	**74**	P	**P**	**09 27 12.2**	**-0.4**
	0.7nm,0.5s,mb3.2,baz=338,slow=3.2,SNR=8.1						
TXAR	**Lajitas Array**	**57.61**	**83**	P	**P**	**09 28 45.4**	**+0.5**
	0.3nm,0.6s,baz=296,slow=4.3,SNR=6.5						
TXAR	**Lajitas Array**	**57.61**	**83**	P	**P**	**09 28 45.4**	**+0.5**
MKAR	**Makanchi Array**	**60.09**	**309**	P	**P**	**09 28 59.2**	**-2.5**
	0.2nm,0.4s,baz=43,slow=7.7,SNR=3.2						
WRA	**Warramunga Arr**	**83.40**	**225**	P	**P**	**09 31 20.5**	**+0.5**
	0.2nm,0.5s,mb3.2,baz=31,slow=5.7,SNR=6.0						
ASAR	**Alice Springs**	**86.88**	**224**	P	**P**	**09 31 38.5**	**+1.5**
	0.4nm,0.7s,mb3.4,baz=19,slow=5.5,SNR=6.0						

*ISK **08** 09:25:57.7, 37°.31N×28°.24E, h5km, MD2.9*

*ISCJB **08** 09:25:59.7±0.6, 37°.24N±0°.04×28°.26E±0°.04, h10km, Error ellipse: s-maj=5.9km s-min=4.3km az=42.7*

*CSEM **08** 09:25:59.5±0.2, 37°.23N×28°.24E, h10km, MD2.9, Error ellipse: s-maj=6.8km s-min=5.1km az=41.0*

*DDA **08** 09:25:59.9, 37°.23N×28°.27E, h7km±5km, Md2.8*

ISC 08 09:26:00.2±0.6, 37°.25N±0°.04×28°.26E±0°.04, h9km±12km, n18, σ1§20/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**169**	*e*PG	**Pg**	**09 26 01.8**	**-1.1**
YER	**Yerkesik**	**0.11**	**169**	*e*Pg	**Pg**	**09 26 01.8**	**-1.1**
MLSB	**Milas**	**0.39**	**277**	*e*PG	**Pg**	**09 26 06.0**	**-1.8**
MLSB				*e*SG	**Sg**	**09 26 12.3**	**-0.6**
MLSB	**Milas**	**0.39**	**277**	*e*Pg	**Pg**	**09 26 06.0**	**-1.8**
MLSB				*e*Sg	**Sg**	**09 26 12.3**	**-0.6**
TURN	**Turunc**	**0.46**	**143**	*i* P	**Pg**	**09 26 08.3**	**-0.9**
TURN				*i* S	**Sg**	**09 26 15.7**	**+0.4**
TURN	**Turunc**	**0.46**	**143**	*i* P	**Pg**	**09 26 08.3**	**-0.9**
TURN				*i* S	**Sg**	**09 26 15.7**	**+0.4**
AYDN	**Tasoluk**	**0.51**	**324**	*i* P	**Pg**	**09 26 09.4**	**-0.8**
AYDN				*i* S	**Sg**	**09 26 16.9**	**0.0**
AYDN	**Tasoluk**	**0.51**	**324**	*i* P	**Pg**	**09 26 09.4**	**-0.8**
AYDN				*i* S	**Sg**	**09 26 16.9**	**0.0**
DAT	**Datca**	**0.75**	**227**	*e*PG	**Pg**	**09 26 14.1**	**-0.5**
DAT				*e*SG	**Sg**	**09 26 26.2**	**+1.8**
DAT	**Datca**	**0.75**	**227**	*e*Pg	**Pg**	**09 26 14.1**	**-0.6**
DNZL	**Cakiroluk**	**0.77**	**55**	*i* P	**Pg**	**09 26 15.3**	**+0.3**
DNZL	**Cakiroluk**	**0.77**	**55**	*i* P	**Pg**	**09 26 15.3**	**+0.3**
GCAM	**G?zelcaml?**	**0.93**	**299**	*e*P	**Pg**	**09 26 18.8**	**+0.6**
GCAM				*i* S	**Sg**	**09 26 32.7**	**+2.4**
GCAM	**G?zelcaml?**	**0.93**	**299**	*e*P	**Pg**	**09 26 18.8**	**+0.7**
GOLH	**Golhisar**	**1.04**	**90**	*e*P	**Pg**	**09 26 22.8**	**+2.6**
GOLH				*i* S	**Sg**	**09 26 38.9**	**+5.2**
GOLH	**Golhisar**	**1.04**	**90**	*e*P	**Pg**	**09 26 22.8**	**+2.6**
KULA	**Kula-Manisa**	**1.31**	**14**	*e*PN	**Pn**	**09 26 23.8**	**-0.8**
KULA	**Kula-Manisa**	**1.31**	**14**	*e*Pn	**Pn**	**09 26 23.8**	**-0.8**

*ISCJB **08** 09:34:22.9±0.8, 59°.27N±0°.03×27°.3E±0°.1, h0km, Error ellipse: s-maj=10.9km s-min=3.9km az=9.4*

*NAO **08** 09:34:24.6±1.2, 59°.31N×27°.09E, ML2.2*

*CSEM **08** 09:34:24.6±0.5, 59°.28N×27°.32E, h2km, ML2.2, Error ellipse: s-maj=14.1km s-min=5.2km az=104.0, Suspected Mining explosion.*

*BER **08** 09:34:25.2±3.1, 59°.34N×27°.16E, h0km±14km, ML2.2(NAO)*

*IDC **08** 09:34:26.7±2.0, 59°.44N×27°.09E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=16.4km s-min=9.7km az=128.0*

*UPP **08** 09:34:30.0, 59°.54N×27°.09E, h0km, ML2.0, Suspected Mining explosion.*

ISC 08 09:34:24.1±0.6, 59°.28N±0°.03×27°.3E±0°.1, h0km, n26, σ1§20/36, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.87**	**199**	Pg	**Pg**	**09 34 41.1**	**+0.4**
VSU				Lg		09 34 52.6	
VSU	**Vasula**	**0.87**	**199**	P	**Pg**	**09 34 41.2**	**+0.5**
VSU				S	**Sg**	**09 34 52.5**	**+0.5**
VSU				Lg		09 34 52.6	
	SNR=53						
VJF	**Virojoki**	**1.27**	**6**	P	**Pg**	**09 34 48.0**	**-0.3**
VJF				S	**Sg**	**09 35 04.5**	**-0.3**
PVF	**Pernaja**	**1.45**	**331**	P	**Pn**	**09 34 50.8**	**-0.7**
PVF				S	**Sg**	**09 35 08.7**	**-2.0**
MEF	**Metsahovi**	**1.73**	**304**	P	**Pn**	**09 34 55.5**	**+0.1**
MTSE	**Matsula**	**1.88**	**254**	P	**Pn**	**09 34 57.7**	**+0.3**
MTSE				S	**Sn**	**09 35 21.7**	**-0.1**
FIA0	**FINESS Array S**	**2.25**	**345**	Pn	**Pn**	**09 35 03.1**	**+0.6**
	baz=163,slow=16						
FIA0				Lg		09 35 33.2	
	baz=160,slow=28						
FIA0				Rg		09 35 45.1	
	baz=180,slow=28						
FIA0	**FINESS Array S**	**2.25**	**345**	P	**Pn**	**09 35 03.1**	**+0.6**
FIA0				S	**Sn**	**09 35 31.4**	**+0.6**
	6.7nm,0.2s						
FIA0				Lg		09 35 33.2	
	baz=160,slow=26,SNR=53						
FINES	**FINESS Array B**	**2.25**	**345**	Pn	**Pn**	**09 35 02.3**	**-0.1**
	2.2nm,0.3s,baz=165,slow=16,SNR=32						
FINES				Pg	**Pg**	**09 35 04.1**	**-3.0**
	2.2nm,0.3s,baz=167,slow=16,SNR=32						
FINES				Lg		09 35 32.4	
	3.6nm,0.3s,baz=166,slow=25,SNR=17						
KAF	**Kangasniemi**	**2.88**	**351**	P	**Pn**	**09 35 12.4**	**+1.3**
KEF	**Keuruu**	**3.13**	**339**	P	**Pn**	**09 35 16.3**	**+1.8**
RAF	**Rauma**	**3.26**	**305**	P	**Pn**	**09 35 18.1**	**+1.7**
SUF	**Sumiainen**	**3.49**	**351**	P	**Pn**	**09 35 21.1**	**+1.6**
NACGM	**Naroch**	**4.40**	**184**	*e*	**Sb**	**09 36 32.0**	**-3.8**
MICGM	**Minsk**	**4.81**	**176**	*e*	**Sg**	**09 36 57.0**	**-1.4**
BURU	**Burvik**	**6.00**	**335**	P	**Pn**	**09 35 54.3**	**+0.3**
BREU	**Bredtraesk**	**6.21**	**322**	P	**Pn**	**09 35 58.3**	**+1.5**
SVAU	**Svanoeiden**	**6.37**	**328**	P	**Pn**	**09 35 59.2**	**+0.2**
SJUU	**Sjulsmark**	**6.78**	**340**	P	**Pn**	**09 36 05.8**	**+1.2**
HFS	**Hagfors**	**6.92**	**283**	Sn	**Sn**	**09 37 19.8**	**-6.2**
	baz=87,slow=28						
HFS				Lg		09 37 56.6	
	baz=86,slow=37						
HFS	**Hagfors**	**6.92**	**283**	Pn	**Pn**	**09 36 05.6**	**-1.1**
	0.2nm,0.3s,baz=113,slow=15,SNR=3.1						
HFS				Sn	**Sn**	**09 37 20.6**	**-5.4**
	0.2nm,0.3s,baz=93,slow=27,SNR=5.9						
HFS				Lg		09 37 57.4	
	0.5nm,0.3s,baz=87,slow=26,SNR=5.5						
LILU	**Lilltraesk**	**6.94**	**333**	P	**Pn**	**09 36 07.2**	**+0.3**
NOA	**NORSAR Array B**	**8.20**	**289**	Pn	**Pn**	**09 36 21.1**	**-3.0**
	0.2nm,0.3s,baz=86,slow=13,SNR=3.1						
NOA				Sn	**Sn**	**09 37 51.2**	**-6.1**
	0.1nm,0.3s,baz=111,slow=20,SNR=2.3						
NOA				Lg		09 38 36.2	
	0.4nm,0.3s,baz=38,slow=24,SNR=5.3						
ARA0	**ARCESS Array S**	**10.32**	**357**	Pn	**Pn**	**09 36 51.8**	**-1.4**
	baz=176,slow=14						
ARA0				Sn	**Sn**	**09 38 39.5**	**-10**
	baz=179,slow=28						
ARA0	**ARCESS Array S**	**10.32**	**357**	Pn	**Pn**	**09 36 51.8**	**-1.3**
	baz=176,slow=14						
ARCES	**ARCESS Array B**	**10.32**	**357**	Pn	**Pn**	**09 36 51.4**	**-1.8**
	0.1nm,0.3s,baz=176,slow=15,SNR=5.6						
ARCES				Sn	**Sn**	**09 38 40.8**	**-8.6**
	0.1nm,0.3s,baz=174,slow=34,SNR=2.8						
ARCES				Lg		09 39 42.3	
	0.3nm,0.3s,baz=174,slow=26,SNR=8.8						

*DDA **08** 09:37:38.1, 36°.26N×29°.05E, h6km±5km, Md3.0*

*CSEM **08** 09:37:39.8±0.5, 36°.42N×29°.20E, h5km, MD2.9, Error ellipse: s-maj=10.3km s-min=6.4km az=25.0*

*ISK **08** 09:37:39.3, 36°.44N×29°.20E, h9km, MD2.9*

*ISCJB **08** 09:37:40.5±0.7, 36°.42N±0°.04×29°.25E±0°.05, h10km, Error ellipse: s-maj=7.4km s-min=4.9km az=40.3*

ISC 08 09:37:40.2±0.9, 36°.41N±0°.05×29°.20E±0°.06, h4km±7km, n28, σ1§24/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**337**	*e*PG	**Pg**	**09 37 44.1**	**-1.0**
FETY	**Fethiye**	**0.25**	**337**	*e*Pg	**Pg**	**09 37 44.1**	**-1.0**
AKAS	**Kas**	**0.37**	**118**	*i* P	**Pg**	**09 37 47.1**	**-0.2**
AKAS				*i* S	**Sg**	**09 37 53.5**	**+1.4**
AKAS	**Kas**	**0.37**	**118**	*i* P	**Pg**	**09 37 47.1**	**-0.2**
AKAS				*i* S	**Sg**	**09 37 53.5**	**+1.4**
ELL	**Elmali**	**0.66**	**59**	*e*PG	**Pg**	**09 37 52.5**	**-0.4**
ELL	**Elmali**	**0.66**	**59**	*e*Pg	**Pg**	**09 37 52.5**	**-0.4**
TURN	**Turunc**	**0.67**	**314**	*i* P	**Pg**	**09 37 56.2**	**+3.0**
TURN				*i* S	**Sg**	**09 38 09.7**	**+7.8**
TURN	**Turunc**	**0.67**	**314**	*i* P	**Pg**	**09 37 56.2**	**+3.1**
GLHS	**Glhisar (BURDU**	**0.79**	**17**	*e*PG	**Pg**	**09 37 54.2**	**-1.1**
GLHS				*e*SG	**Sg**	**09 38 05.2**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.79**	**17**	*e*Pg	**Pg**	**09 37 54.2**	**-1.1**
GLHS				*e*Sg	**Sg**	**09 38 05.2**	**-0.3**
GOLH	**Golhisar**	**0.88**	**19**	*i* P	**Pg**	**09 37 56.0**	**-1.0**
GOLH				*i* S	**Sg**	**09 38 10.4**	**+1.9**
GOLH	**Golhisar**	**0.88**	**19**	*i* P	**Pg**	**09 37 56.0**	**-1.1**
GOLH				*i* S	**Sg**	**09 38 10.4**	**+1.9**
YER	**Yerkesik**	**1.04**	**315**	*e*PG	**Pg**	**09 37 58.9**	**-1.2**
YER	**Yerkesik**	**1.04**	**315**	*e*Pg	**Pg**	**09 37 58.9**	**-1.2**
KORT	**Korkueli**	**1.10**	**57**	*e*P	**Pg**	**09 38 02.5**	**+1.3**
KORT				*i* S	**Sg**	**09 38 21.5**	**+6.0**
KORT	**Korkueli**	**1.10**	**57**	*e*P	**Pg**	**09 38 02.5**	**+1.3**
DNZL	**Cakiroluk**	**1.29**	**354**	*i* P	**Pn**	**09 38 05.0**	**0.0**
DNZL	**Cakiroluk**	**1.29**	**354**	*i* P	**Pn**	**09 38 04.9**	**0.0**
DAT	**Datca**	**1.35**	**284**	*e*PN	**Pn**	**09 38 04.9**	**-0.8**
DAT	**Datca**	**1.35**	**284**	*e*Pn	**Pn**	**09 38 04.9**	**-0.9**
BCK	**Bucak**	**1.53**	**46**	*e*PN	**Pn**	**09 38 06.8**	**-1.5**
BCK	**Bucak**	**1.53**	**46**	*e*Pn	**Pn**	**09 38 06.8**	**-1.5**
AYDN	**Tasoluk**	**1.64**	**320**	*i* P	**Pn**	**09 38 11.3**	**+1.5**
AYDN				*i* S	**Sn**	**09 38 33.9**	**+2.6**
AYDN	**Tasoluk**	**1.64**	**320**	*i* P	**Pn**	**09 38 11.3**	**+1.5**
AYDN				*i* S	**Sn**	**09 38 33.9**	**+2.6**
SUTC	**Sutluce-Ispart**	**1.79**	**53**	*e*PN	**Pn**	**09 38 10.9**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.79**	**53**	*e*Pn	**Pn**	**09 38 10.9**	**-1.0**
HDMB	**Hadim**	**2.70**	**77**	*e*PN	**Pn**	**09 38 24.0**	**-0.3**
HDMB	**Hadim**	**2.70**	**77**	*e*Pn	**Pn**	**09 38 24.0**	**-0.3**

*NIED **08** 09:40:00, 36°.20N×142°.10E, h14km, Mw4.9 Best double couple: M0=2.95000×10^16 NP1:φs=1.00000°, δ69.00000°, λ50.00000°. NP2:φs247.00000°, δ44.00000°, λ149.00000°.*

*IDC **08** 09:40:32.5±0.5, 36°.12N×142°.09E, h0km, mb4.4/29, mb1 4.5/34, mb1mx4.5/38, mbtmp4.5/34, ML4.4/4, MS4.5/23, Ms1 4.5/23, ms1mx4.2/41, Error ellipse: s-maj=14.0km s-min=11.0km az=105.0*

*ISCJB **08** 09:40:35.0±0.7, 36°.17N±0°.03×141°.98E±0°.02, h19km±5km, mb4.7/121, MS4.7/52, Error ellipse: s-maj=4.3km s-min=2.8km az=170.1*

*BJI **08** 09:40:34.9, 36°.28N×141°.73E, h13km, mB4.9/35, mb4.8/54, Ms4.9/57, Ms7 4.7/49*

*JMA **08** 09:40:35.1±0.2, 36°.15N×142°.13E, h73km, M4.9*

*NEIC **08** 09:40:36.6±3.5, 36°.09N×141°.93E, h19km±21km, mb4.7/54, MW4.9(NIED), Error ellipse: s-maj=7.4km s-min=5.5km az=151.0*

*GCMT **08** 09:40:36.6±0.3, 36°.08N×142°.41E, h18km±1km, MW5.0/68, Moment Tensor Solution. s33,c42; s68,c117; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.38±.16; Mθθ-0.54±.09; Mφφ-1.84±.11; Mrθ1.25±.24; Mrφ-1.37±.06; Mθφ3.50±.36; Best double couple: M0=4.50800×10^16 NP1:φs225.00000°, δ18.00000°, λ112.00000°. NP2: φs22.00000°, δ73.00000°, λ83.00000°. Principal axes: T 4.3950, Plg61.0000°, Azm281.0000°; N 0.2270, Plg7.0000°, Azm24.0000°; P -4.6210, Plg28.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **08** 09:40:38.9±0.9, 36°.58N×141°.93E, h33km, mb5.0/38, MS5.0/15 Error ellipse: s-maj=8.5km s-min=4.8km az=111.7*

*DJA **08** 09:40:46, 35°.82N×140°.14E, h10km, mb5.2/9*

**ISC 08 09:40:36.0±0.9, 36°.17N±0°.02×141°.98E±0°.02, h15km±5km, h19km±3.3km; pP-P

KUR			smax			
	comp=N,190nm,0.9s					
KUR			smax			
	comp=E,170nm,0.9s					
VLA	**Vladivostok**	**10.42**	**315**	*e*P	**Pn**	**09 43 06.9 +2.1**
VLA				pmax	pmax	
	comp=Z,97nm,1.8s					
VLA				MLR	MLR	
	comp=Z,3μm,13.8s					
YSS	**Yuzh-Sakhalins**	**10.79**	**3⇑**	*i*P	**Pn**	**09 43 09.0 -0.9**
YSS				*e*S	**Sn**	**09 45 07.0 -3.3**
YSS				pmax	pmax	
	comp=Z,30nm,1.0s					
YSS				smax		
	comp=N,160nm,1.5s					
YSS				MLR	MLR	
	comp=N,2μm,16.0s					
YSS				MLR	MLR	
	comp=Z,4μm,16.0s					
YSS	**Yuzh-Sakhalins**	**10.79**	**3**	*e*Pn	**Pn**	**09 43 09.4 -0.4**
KSRS	**Korea Array**	**11.34**	**281**	Pn	**Pn**	**09 43 21.1 +3.6**
	comp=Z,0.4nm,0.3s,baz=95,slow=13,SNR=50					
KSRS				LR	LR	09 47 48.2
	comp=Z,2μm,18.7s,baz=94,slow=38					
MDJ	**Mudanjiang**	**12.65**	**316**	P	**Pn**	**09 43 35.1 -0.2**
MDJ				S	**Sn**	**09 45 56.4 +0.6**
MDJ				PcP	PcP	09 49 13.1 +0.6
MDJ				ScP	ScP	09 52 46.2 +1.1
MDJ				PcS	PcS	09 52 47.4 +0.7
MDJ				ScS	ScS	09 56 22.5 +1.3
MDJ				pmax	pmax	
	comp=Z,8.0nm,0.7s					
MDJ				pmax	pmax	
	comp=Z,370nm,10.9s					
MDJ				LR	LR	
	comp=N,580nm,16.1s					
MDJ				LR	LR	
	comp=E,3μm,10.8s					
MDJ				LR	LR	
	comp=Z,3μm,12.1s					
HABR	**Khabarovsk**	**13.31**	**340**	*e*P	**Pn**	**09 43 42.6 -1.7**
HABR						09 46 08.6
HABR				pmax	pmax	
	comp=Z,47nm,1.8s					
HABR				pmax	pmax	
	comp=N,15nm,1.4s					
HABR				pmax	pmax	
	comp=E,30nm,1.5s					
HABR				MLR	MLR	
	comp=Z,1μm,14.0s					
CN2	**Changchun**	**14.77**	**306**	*e*P	**Pn**	**09 44 03.8 -0.4**
CN2				*e*sP	sP	09 44 10.7 -5.6
CN2				*e*S	**Sn**	**09 46 46.5 -1.1**
CN2				pmax	pmax	
	comp=Z,30nm,1.0s					
CN2				pmax	pmax	
	comp=Z,200nm,4.0s					
CN2				LR	LR	
	comp=N,3μm,12.0s					
CN2				LR	LR	
	comp=E,2μm,12.0s					
CN2				LR	LR	
	comp=Z,4μm,14.0s					
JOW	**Kunigami**	**14.93**	**235**	Pn	**Pn**	**09 44 05.9 -0.6**
	baz=11,slow=16,SNR=2.9					
KLR	**Kul'dur**	**15.04**	**333**	*e*P	**Pn**	**09 44 03.0 -4.9**
KLR				MLR	MLR	
	comp=Z,27μm,12.5s					
SNY	**Shenyang**	**15.37**	**297**	⇑P	**Pn**	**09 44 11.9 -0.4**
SNY				S	**Sn**	**09 46 51.8 -10**
SNY				pmax	pmax	
	comp=Z,21nm,1.6s					
SNY				pmax	pmax	
	comp=Z,510nm,14.1s					
SNY				LR	LR	
	comp=N,2μm,12.2s					
SNY				LR	LR	
	comp=E,3μm,14.2s					
SNY				LR	LR	
	comp=Z,3μm,14.7s					
DL2	**Dalian**	**16.37**	**286**	⇑P	**Pn**	**09 44 25.7 +0.5**
DL2				S	**Sn**	**09 47 26.6 +0.1**
DL2				pmax	pmax	
	comp=Z,20nm,0.7s					
DL2				pmax	pmax	
	comp=Z,410nm,5.7s					
DL2				LR	LR	
	comp=N,1μm,11.6s					
DL2				LR	LR	
	comp=E,1μm,14.1s					
DL2				LR	LR	
	comp=Z,2μm,14.2s					
SSE	**Sheshan**	**18.03**	**260**	P	**Pn**	**09 44 44.5 -1.5**
SSE				S	**Sn**	**09 48 06.1 -0.7**
SSE				pmax	pmax	
	comp=Z,31nm,0.7s					
SSE				pmax	pmax	
	comp=Z,300nm,12.0s					
SSE				LR	LR	
	comp=N,2μm,16.8s					
SSE				LR	LR	
	comp=E,1μm,16.8s					
SSE				LR	LR	
	comp=Z,2μm,13.1s					
NJ2	**Nanjing**	**19.57**	**265**	*e*P	**Pn**	**09 45 05.7 +1.0**
NJ2				pP	pP	09 45 08.9 +1.4
NJ2				sP	sP	09 45 12.6 +3.2
NJ2				PP		09 45 22.2
NJ2				S	**Sn**	**09 48 34.5 -10**
NJ2				sS	sS	09 48 43.5 -7.0
NJ2				pmax	pmax	
	comp=Z,20nm,1.0s					
NJ2				pmax	pmax	
	comp=Z,180nm,7.2s					
NJ2				LR	LR	
	comp=N,1μm,15.5s					
NJ2				LR	LR	
	comp=E,2μm,18.4s					
NJ2				LR	LR	
	comp=Z,2μm,13.9s					
PETK	**Petropavlovsk-**	**20.22**	**28**	P	**P**	**09 45 09.1 -1.1**
	comp=Z,5.5nm,0.9s,baz=190,slow=4.9,SNR=5.4					
PETK				LR	LR	09 54 21.7
	comp=Z,675nm,18.3s,MS4.0,baz=215,slow=41					
PET	**Petropavlovsk**	**20.53**	**30**	*e*P	**P**	**09 45 18.4 +4.8**
PET				*e*		09 45 34.8
PET				*e*S	**S**	**09 49 01.1 -1.6**
PET				pmax	pmax	
	comp=Z,100nm,5.8s					
PET				MLR	MLR	
	comp=Z,1μm,17.0s,MS4.4					
PET				MLR	MLR	
	comp=Z,1μm,20.0s					
BJI	**Beijing**	**20.64**	**289**	P	**P**	**09 45 13.6 -1.3**
BJI				S	**S**	**09 49 03.8 -1.4**
BJI				pmax	pmax	
	comp=Z,35nm,1.4s					
BJI				pmax	pmax	
	comp=Z,170nm,3.4s					
BJI				LR	LR	
	comp=E,1μm,13.8s,MS4.6					
BJI				LR	LR	
	comp=N,1μm,15.2s,MS4.6					
BJI				LR	LR	
	comp=Z,670nm,16.6s,MS4.1					
HIA	**Hailar**	**20.84**	**316**	*e*P	**P**	**09 45 18.0 +1.1**
HIA				pmax	pmax	
	comp=Z,15nm,0.7s					
HIA	**Hailar**	**20.84**	**316**	*e*P	**P**	**09 45 18.0 +1.0**
	comp=Z,15nm,0.7s					
SSLB	**Suanglung**	**21.94**	**242**	*e*P	**P**	**09 45 24.6 -4.4**
	comp=Z,18nm,0.9s,mb4.5					
TWG	**Pinlang**	**22.48**	**239**	*e*P	**P**	**09 45 37.5 +2.7**
	comp=Z,22nm,0.7s,mb4.7					
TPUB	**Ta-pu**	**22.48**	**241**	*e*P	**P**	**09 45 32.1 -2.6**
	comp=Z,32nm,0.8s,mb4.8					
QZH	**Quanzhou**	**22.98**	**247⇑**	*i*P	**P**	**09 45 39.0 -1.0**
QZH				S	**S**	**09 49 44.1 -5.9**
QZH				pmax	pmax	
	comp=Z,60nm,0.7s,mb5.1					
QZH				LR	LR	
	comp=N,3μm,16.6s,MS5.0					
QZH				LR	LR	
	comp=E,3μm,17.1s,MS5.0					
QZH				LR	LR	
	comp=Z,2μm,16.4s,MS4.6					

NRGR	**Nerungri**	**23.57**	**336**	*e*P	**P**	**09 45 44.1 -1.8**
NRGR				S	**S**	**09 49 44.8 -14**
NRGR				smax		
	comp=N,12nm,0.5s					
TIY	**Taiyuan**	**23.62**	**283**	*e*P	**P**	**09 45 47.9 +1.3**
TIY				sP	sP	09 45 55.6 +2.7
TIY				pmax	pmax	
	comp=Z,160nm,3.9s					
TIY				LR	LR	
	comp=N,1μm,11.8s,MS5.0					
TIY				LR	LR	
	comp=E,3μm,13.8s,MS5.0					
TIY				LR	LR	
	comp=Z,3μm,13.5s,MS4.9					
CLNS	**Chul'man**	**23.66**	**336**	*e*P	**P**	**09 45 45.2 -1.5**
CLNS				*e**PP		09 45 52.1
CLNS				*e*		09 45 59.1
CLNS				*e*PPP		09 46 10.1
CLNS				*e*S	**S**	**09 49 56.0 -4.5**
CLNS				*e*SS		09 50 39.5
CLNS				pmax	pmax	
	comp=Z,57nm,1.2s,mb4.9					
CLNS				pmax	pmax	
	comp=N,53nm,1.3s					
CLNS				pmax	pmax	
	comp=E,13nm,1.2s					
CLNS				smax		
	comp=E,260nm,12.2s					
CLNS				smax		
	comp=N,575nm,12.7s					
CLNS				MLR	MLR	
	comp=Z,2μm,13.0s,MS4.8					
CLNS				MLR	MLR	
	comp=N,2μm,13.0s,MS4.8					
CLNS				MLR	MLR	
	comp=E,1μm,14.0s,MS4.8					
WHN	**Wuhan**	**23.71**	**264**	⇑P	**P**	**09 45 44.5 -2.9**
WHN				S	**S**	**09 49 51.0 -11**
WHN				pmax	pmax	
	comp=Z,430nm,12.0s					
WHN				LR	LR	
	comp=N,920nm,10.4s,MS5.2					
WHN				LR	LR	
	comp=E,5μm,14.6s,MS5.2					
WHN				LR	LR	
	comp=Z,6μm,14.2s,MS5.2					
HHC	**Hu-ho-hao-te**	**24.19**	**290**	*e*P	**P**	**09 45 52.7 +1.0**
HHC				pP		09 46 02.0
HHC				pmax	pmax	
	comp=Z,50nm,1.2s,mb4.8					
HHC				pmax	pmax	
	comp=Z,210nm,6.2s					
HHC				LR	LR	
	comp=N,1μm,14.1s,MS4.7					
HHC				LR	LR	
	comp=E,1μm,13.9s,MS4.7					
HHC				LR	LR	
	comp=Z,1μm,13.8s,MS4.6					
BTO	**Baotou**	**25.36**	**290**	*e*P	**P**	**09 46 02.3 -0.1**
CIT	**Chita**	**25.62**	**317**	*e*P	**P**	**09 46 04.8 +0.2**
CIT				*e*		09 46 12.6
CIT				pmax	pmax	
	comp=Z,246nm,1.9s,mb5.4					
YAK	**Yakutsk**	**27.01**	**347**	*e*P	**P**	**09 46 15.0 -2.1**
YAK				*e**PP	pP	09 46 26.0 +4.4
YAK				*e*PPP		09 47 13.1
YAK				*e*S	**S**	**09 50 45.7 -8.2**
YAK				*e*SS		09 51 56.1
YAK				pmax	pmax	
	comp=Z,32nm,1.0s,mb4.8					
YAK				pmax	pmax	
	comp=E,6.0nm,1.0s					
YAK				pmax	pmax	
	comp=N,15nm,1.0s					
YAK				smax		
	comp=N,589nm,13.6s					
YAK				smax		
	comp=E,203nm,13.4s					
YAK				MLR	MLR	
	comp=N,2μm,14.0s,MS4.8					
YAK				MLR	MLR	
	comp=Z,2μm,15.0s,MS4.8					
YAK				MLR	MLR	
	comp=E,1μm,15.0s,MS4.8					
YAK	**Yakutsk**	**27.01**	**347**	*e*P	**P**	**09 46 17.5 +0.4**
	comp=E,45nm,0.7s,mb5.1					
XAN	**Xi'an**	**27.06**	**275**	P	**P**	**09 46 17.1 -0.7**
XAN				pP	pP	09 46 20.3 -2.0
XAN				sP	sP	09 46 21.9 -2.3
XAN				PcP	PcP	09 49 39.0 +0.2
XAN				S	**S**	**09 50 55.7 +0.6**
XAN				sS	sS	09 51 01.0 -1.6
XAN				pmax	pmax	
	comp=Z,11nm,1.4s,mb4.2					
XAN				pmax	pmax	
	comp=Z,83nm,6.5s					
XAN				LR	LR	
	comp=N,850nm,18.1s,MS4.4					
XAN				LR	LR	
	comp=E,430nm,17.2s,MS4.4					
XAN				LR	LR	
	comp=Z,440nm,18.1s,MS4.1					
SEY	**Seymchan**	**27.55**	**10***c*	*i*P	**P**	**09 46 21.7 -0.3**
ENH	**Enshi**	**27.73**	**267**	*e*P	**P**	**09 46 22.4 -1.4**
	comp=Z,53nm,0.7s,mb5.3					
ULN	**Ulaanbaatar**	**28.22**	**305**	*e*P	**P**	**09 46 29.2 +1.1**
ULN				pmax	pmax	
	comp=Z,21nm,0.8s,mb4.8					
ULN	**Ulaanbaatar**	**28.22**	**305**	*e*P	**P**	**09 46 29.2 +1.2**
	comp=Z,21nm,0.8s,mb4.8					
ULN	**Ulaanbaatar**	**28.22**	**305**	P	**P**	**09 46 29.7 +1.6**
	SNR=21					
ULN				P		09 46 29.7
	SNR=21					
BOD	**Bodaibo**	**28.50**	**328**	*e*P	**P**	**09 46 30.2 -0.3**
BOD				pmax	pmax	
	comp=Z,9.0nm,1.2s,mb4.4					
BOD				pmax	pmax	
	comp=Z,49nm,1.5s,mb5.0					
SONM	**Songino Array**	**28.65**	**305**	P	**P**	**09 46 33.2 +1.3**
	comp=Z,19nm,0.9s,mb4.8,baz=113,slow=7.6,SNR=54					
SONM				LR	LR	09 58 29.7
	comp=Z,467nm,18.6s,MS4.1,baz=315,slow=38					
LZH	**Lanzhou**	**30.67**	**281**	*e*P	**P**	**09 46 49.7 -0.2**
LZH				pP	pP	09 46 54.5 +0.1
LZH				sP	sP	09 46 57.0 +0.7
LZH				PP	PP	09 47 48.8 -10
LZH				S	**S**	**09 51 49.6 -2.3**
LZH				sS	sS	09 51 55.5 -3.9
LZH				SS	SS	09 53 27.1 -36
LZH				pmax	pmax	
	comp=Z,19nm,1.1s,mb4.8					
LZH				pmax	pmax	
	comp=Z,88nm,4.0s					
LZH				LR	LR	
	comp=N,1μm,15.8s					
LZH				LR	LR	
	comp=Z,2μm,17.3s,MS4.8					
IRK	**Irkutsk**	**31.02**	**313**	*e*P	**P**	**09 46 53.0 +0.2**
IRK				*e*		09 48 05.4
IRK				pmax	pmax	
	comp=Z,41nm,1.6s,mb5.0					
ZAK	**Zakamensk**	**31.16**	**309⇑**	*i*P	**P**	**09 46 54.7 +0.6**
ZAK				pmax	pmax	
	comp=Z,30nm,1.4s,mb4.9					
TLY	**Talaya**	**31.24**	**312**	*e*P	**P**	**09 46 55.1 +0.3**
TLY				*e*		09 47 53.0
TLY				*e*		09 49 45.2
TLY				*e*S	**S**	**09 52 04.2 +3.7**
TLY				*e*SS	SS	09 53 46.0 -28
TLY				*e*SSS		09 54 00.8
TLY				pmax	pmax	
	comp=Z,28nm,0.9s,mb5.1					
TLY				MLR	MLR	
	comp=Z,2μm,14.0s,MS4.9					
TLY	**Talaya**	**31.24**	**312**	*e*P	**P**	**09 46 55.8 +1.0**
	comp=Z,110nm,1.7s,mb5.4					
TLY	**Talaya**	**31.24**	**312**	P	**P**	**09 46 55.6 +0.8**
	SNR=18					
TLY				P		09 46 55.6
	SNR=18					
GYA	**Guiyang**	**31.54**	**262**	P	**P**	**09 46 58.6 +0.9**
GYA				PP	PP	09 48 02.3 -6.6
GYA				S	**S**	**09 52 05.9 +0.2**
GYA				ScP	ScP	09 53 34.5 +1.6

GYA				SS	SS	09 53 53.4 -27
GYA				pmax	pmax	
	comp=Z,20nm,1.0s,mb4.9					
GYA				pmax	pmax	
	comp=Z,110nm,4.6s					
GYA				LR	LR	
	comp=N,530nm,14.8s,MS4.5					
GYA				LR	LR	
	comp=E,460nm,15.3s,MS4.5					
GYA				LR	LR	
	comp=Z,510nm,15.0s,MS4.3					
CD2	**Chengdu**	**32.14**	**272**	P	**P**	**09 47 03.7 +0.8**
CD2				pP	pP	09 47 08.1 +0.6
CD2				sP	sP	09 47 10.7 +1.4
CD2				PP	PP	09 48 09.9 -5.6
CD2				S	**S**	**09 52 14.2 -0.8**
CD2				sS	sS	09 52 21.0 -1.5
CD2				SS	SS	09 54 06.0 -27
CD2				pmax	pmax	
	comp=Z,40nm,0.7s,mb5.4					
CD2				pmax	pmax	
	comp=Z,190nm,8.2s					
CD2				LR	LR	
	comp=N,2μm,16.6s					
CD2				LR	LR	
	comp=Z,2μm,16.7s,MS4.8					
DAV	**Davao City (W)**	**32.62**	**211**	LR	LR	09 58 20.0
	comp=Z,758nm,18.7s,MS4.4,baz=79,slow=33					
MOY	**Mondy**	**32.84**	**311**	*e*P	**P**	**09 47 09.3 +0.4**
MOY				pmax	pmax	
	comp=Z,40nm,2.4s,mb4.9					
QIZ	**Qiongzhong**	**33.00**	**247**	P	**P**	**09 47 11.5 +0.9**
QIZ				S	**S**	**09 52 32.7 +4.1**
QIZ				sS	sS	09 52 38.9 +2.9
QIZ				pmax	pmax	
	comp=Z,15nm,1.6s,mb4.7					
QIZ				pmax	pmax	
	comp=Z,99nm,8.5s					
QIZ				LR	LR	
	comp=N,880nm,15.5s					
QIZ				LR	LR	
	comp=Z,770nm,15.4s,MS4.5					
GTA	**Gaotai**	**33.26**	**289**	⇑P	**P**	**09 47 13.2 +0.6**
GTA				pP	pP	09 47 18.0 +0.8
GTA				sP	sP	09 47 21.0 +2.0
GTA				S	**S**	**09 52 32.1 -0.2**
GTA				sS	sS	09 52 38.7 -1.0
GTA				SS	SS	09 54 33.0 -23
GTA				pmax	pmax	
	comp=Z,54nm,0.8s,mb5.5					
GTA				pmax	pmax	
	comp=Z,180nm,5.4s					
GTA				LR	LR	
	comp=N,1μm,18.6s,MS4.8					
GTA				LR	LR	
	comp=E,1μm,18.9s,MS4.8					
GTA				LR	LR	
	comp=Z,1μm,17.4s,MS4.6					
BILL	**Bilibino**	**34.73**	**16⇑**	*e*P	**P**	**09 47 24.2 -0.9**
BILL				*e*S	**S**	**09 52 57.9 +3.5**
BILL				pmax	pmax	
	comp=Z,8.0nm,1.6s,mb4.4					
BILL				MLR	MLR	
	comp=Z,600nm,17.0s,MS4.4					
KMI	**Kunming**	**35.29**	**263**	P	**P**	**09 47 29.6 -0.8**
KMI				pP	pP	09 47 34.9 -0.1
KMI				sP	sP	09 47 36.3 -0.5
KMI				PP	PP	09 48 51.9 +1.4
KMI				PcP	PcP	09 50 03.5 +2.7
KMI				S	**S**	**09 53 04.3 +0.4**
KMI				sS	sS	09 53 10.2 -1.2
KMI				SS	SS	09 55 19.3 -18
KMI				pmax	pmax	
	comp=Z,27nm,1.3s,mb5.0					
KMI				pmax	pmax	
	comp=Z,92nm,3.1s					
KMI				LR	LR	
	comp=N,960nm,14.4s,MS4.9					
KMI				LR	LR	
	comp=E,1μm,13.8s,MS4.9					
KMI				LR	LR	
	comp=Z,990nm,13.1s,MS4.8					
TIXI	**Tiksi**	**36.20**	**353**	*e*P	**P**	**09 47 36.9 -0.8**
TIXI				*e*S	**S**	**09 53 14.3 -2.6**
TIXI				pmax	pmax	
	comp=Z,16nm,2.1s,mb4.6					
TIXI				MLR	MLR	
	comp=Z,1μm,16.0s,MS4.7					
TIXI	**Tiksi**	**36.20**	**353**	*e*P	**P**	**09 47 37.0 -0.7**
	comp=Z,5.3nm,0.9s,mb4.5					
CHTO	**Chiang Mai**	**41.53**	**257**	*e*P	**P**	**09 48 22.5 -0.4**
CHTO				pmax	pmax	
	comp=Z,39nm,1.6s,mb4.8					
CHTO	**Chiang Mai**	**41.53**	**257**	*e*P	**P**	**09 48 22.5 -0.4**
	comp=Z,39nm,1.6s,mb4.8					
CHTO	**Chiang Mai**	**41.53**	**257**	P	**P**	**09 48 23.0 +0.1**
	SNR=7.0					
CHTO				P		09 48 23.0
	SNR=7.0					
WMQ	**Urumqi**	**41.64**	**298**	*e*P	**P**	**09 48 24.7 +1.1**
WMQ				S	**S**	**09 54 39.5 +0.1**
WMQ				sS	sS	09 54 48.6 +1.6
WMQ				SS	SS	09 57 39.8 -4.7
WMQ				ScS	ScS	09 58 27.1 +0.7
WMQ				pmax	pmax	
	comp=Z,39nm,1.5s,mb4.8					
WMQ				pmax	pmax	
	comp=Z,360nm,3.0s					
WMQ				LR	LR	
	comp=N,1μm,16.0s,MS4.9					
WMQ				LR	LR	
	comp=E,500nm,15.0s,MS4.9					
WMQ				LR	LR	
	comp=Z,440nm,19.0s,MS4.3					
CMAR	**Chiang Mai Arr**	**41.73**	**257**	P	**P**	**09 48 23.8 -0.7**
	comp=Z,4.2nm,0.9s,mb4.1,baz=47,slow=7.7,SNR=8.5					
LSA	**Lhasa**	**42.75**	**276**	P	**P**	**09 48 32.9 +0.1**
LSA				sP	sP	09 48 45.1 +5.9
LSA				S	**S**	**09 54 56.8 +0.7**
LSA				LR	LR	
	comp=E,820nm,13.4s					
LSA				LR	LR	
	comp=Z,1μm,14.0s,MS4.9					
LSA	**Lhasa**	**42.75**	**276**	*e*P	**P**	**09 48 33.4 +0.6**
LSA				pmax	pmax	
	comp=Z,30nm,1.1s,mb4.9					
LSA	**Lhasa**	**42.75**	**276**	*e*P	**P**	**09 48 33.4 +0.6**
	comp=Z,30nm,1.1s,mb4.9					
ZAA0	**Zalesovo Array**	**42.83**	**313**	*e*P	**P**	**09 48 33.5 +0.4**
ZALV	**Zalesovo Beam**	**42.83**	**313**	P	**P**	**09 48 32.7 -0.4**
	comp=Z,8.4nm,0.5s,mb4.7,baz=98,slow=6.7,SNR=12					
ZALV				LR	LR	10 07 01.8
	comp=Z,428nm,18.2s,MS4.4,baz=259,slow=37					
ZALV	**Zalesovo Beam**	**42.83**	**313**	P	**P**	**09 48 32.7 -0.4**
ZALV				LR	LR	10 07 01.8
NVS	**Novosibirsk**	**43.77**	**314**	*e*P	**P**	**09 48 40.3 -0.4**
NVS				*e*S	**S**	**09 55 05.8 -4.6**
NVS				pmax	pmax	
	comp=Z,53nm,1.8s,mb5.0					
NVS				pmax	pmax	
	comp=E,42nm,1.5s					
NVS				smax		
	comp=E,45nm,2.6s					
SHL	**Shillong**	**43.86**	**271**	*e*P	**P**	**09 48 44.0 +2.2**
MK31	**Makanchi Array**	**44.97**	**303**	*e*P	**P**	**09 48 50.5 +0.1**
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**09 48 50.5 +0.2**
	comp=E,10nm,0.7s,mb4.8,baz=92,slow=9.1,SNR=28					
MKAR				LR	LR	10 08 18.5
	comp=E,332nm,19.4s,MS4.3,baz=256,slow=37					
KSM	**Kuching**	**45.29**	**228**	*e*P	**P**	**09 48 53.4 +0.1**
	comp=E,72nm,1.6s,mb5.2					
KAPI	**Kappang**	**45.95**	**212**	P	**P**	**09 48 58.1 -0.4**
	comp=E,6.5nm,0.6s,mb4.8,baz=237,slow=8.5,SNR=4.5					
KAPI	**Kappang**	**45.95**	**212**	*e*P	**P**	**09 49 01.1 +2.6**
	comp=E,143nm,1.8s,mb5.6					
KAPI	**Kappang**	**45.95**	**212**	P	**P**	**09 48 59.0 +0.5**
	SNR=5.9					
KAPI				P		09 48 59.0
	SNR=5.9					
KURK	**Kurchatov**	**46.82**	**309***c*	*i*P	**P**	**09 49 04.6 -0.4**
KURK				pmax	pmax	
	comp=Z,57nm,1.2s,mb5.4					
KURK	**Kurchatov**	**46.82**	**309**	P	**P**	**09 49 05.2 +0.2**
	comp=Z,15nm,0.7s,mb5.0,baz=84,slow=7.8,SNR=49					
KURK	**Kurchatov**	**46.82**	**309**	*e*P	**P**	**09 49 04.7 -0.3**
	comp=Z,46nm,1.1s,mb5.3					

KURK **Kurchatov** 46.82 309 P P 09 49 05.0 0.0
SNR=31
KURK P 09 49 05.0
SNR=31
KDAK **Kodiak Island** 47.44 41 *i* P P 09 49 09.9 +0.2
KDAK **Kodiak Island** 47.44 41 P P 09 49 08.4 -1.3
comp=Z,10nm,0.7s,mb4.9,baz=221,slow=16,SNR=5.1
GUN **Gumba** 47.70 277 *e*P P 09 49 12.4 +0.3
comp=Z,39nm,0.8s,mb5.5
BPAW **Bear Paw Mtn.** 48.20 33 *e*P P 09 49 16.3 +0.8
comp=Z,2.2nm,0.7s,mb4.3
PKI **Pulchoki** 48.22 277 *e*P P 09 49 16.4 +0.2
PKIN **Phulchoki** 48.23 277 *e*P P 09 49 16.6 +0.4
comp=Z,18nm,0.7s,mb5.2
KKN **Kakani** 48.23 277 *e*P P 09 49 16.8 +0.6
comp=Z,24nm,0.7s,mb5.3
DMN **Daman** 48.45 277 *e*P P 09 49 18.7 +0.8
comp=Z,14nm,0.6s,mb5.1
GKN **Gorkha** 48.66 277 *e*P P 09 49 19.5 0.0
comp=Z,38nm,0.8s,mb5.5
KAKA **Kakadu** 49.44 192 *e*P P 09 49 24.1 -1.4
comp=Z,14nm,0.8s,mb5.0
KOLN **Koldanda** 49.59 278 *e*P P 09 49 27.1 +0.4
comp=Z,21nm,0.7s,mb5.3
PYUN **Piuthan** 49.94 278 *e*P P 09 49 30.5 +1.2
comp=Z,30nm,0.6s,mb5.5
TKM2 **Tokmak 2** 50.44 299 *e*P P 09 49 33.9 +1.0
TKM2 pmax pmax
comp=Z,28nm,0.7s,mb5.4
TKM2 **Tokmak 2** 50.44 299 *e*P P 09 49 33.9 +0.9
comp=Z,28nm,0.7s,mb5.4
FRU **Bishkek** 51.16 299 *e*P P 09 49 38.0 -0.3
FRU *e* 09 51 01.0
FRU MLR MLR
comp=Z,2μm,18.0s,MS5.1
KSH **Kashi** 51.18 295 *e*P P 09 49 42.6 +4.1
KSH *e*pP pP 09 49 53.2 +10
KSH *e*sP sP 09 49 56.2 +11
KSH *e*PcP PcP 09 50 56.2 +2.4
KSH *e*PP PP 09 51 41.0 +5.9
KSH *e*ScP ScP 09 54 48.0 -1.8
KSH PcS PcS 09 54 52.3 +0.8
KSH S S 09 57 00.2 +4.0
KSH ScS ScS 09 59 27.4 -1.2
KSH SS SS 10 00 36.1 +4.8
KSH pmax pmax
comp=Z,73nm,3.8s
KSH LR LR
comp=N,110nm,6.4s
KSH LR LR
comp=E,93nm,6.1s
AAK **Ala-Archa** 51.30 299 *e*P P 09 49 40.1 +0.7
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
AAK **Ala-Archa** 51.30 299 *e*P P 09 49 40.1 +0.6
comp=Z,8.3nm,0.8s,mb4.7
AAK **Ala-Archa** 51.30 299 P P 09 49 40.0 +0.6
SNR=11
AAK P 09 49 40.0
SNR=11
UCH **Uchtor** 51.41 299 *e*P P 09 49 41.5 +1.3
comp=Z,33nm,1.5s,mb5.0
BVAR **Borovoye Array** 51.49 313 P P 09 49 40.3 -0.4
comp=Z,2.3nm,0.7s,mb4.2,baz=90,slow=8.9,SNR=15
BVAR LR LR 10 12 39.3
comp=Z,650nm,18.3s,MS4.7,slow=37
BVAR **Borovoye Array** 51.49 313 P P 09 49 40.3 -0.4
BVAR LR LR 10 12 39.3
BRVK **Borovoye** 51.55 313*c* *i*P P 09 49 40.9 -0.2
BRVK pmax pmax
comp=Z,31nm,2.5s,mb4.8
BRVK **Borovoye** 51.55 313 *e*P P 09 49 41.1 0.0
comp=Z,9.4nm,0.8s,mb4.8
BRVK **Borovoye** 51.55 313 P P 09 49 41.4 +0.3
SNR=11
BRVK P 09 49 41.4
SNR=11
PSI **Prapat** 51.75 240 P P 09 49 42.3 -0.8
comp=Z,4.3nm,0.6s,mb4.6,baz=35,slow=8.3,SNR=7.0
EKS2 **Erkin-Say** 51.80 299 *e*P P 09 49 43.7 +0.5
comp=Z,7.0nm,0.8s,mb4.6
AML **Almayashu** 52.02 299 *e*P P 09 49 46.2 +1.5
comp=Z,20nm,0.7s,mb5.1
DDI **Dehra Dun** 52.93 283 *e*x x 09 49 51.5
HYT **Haines Junctio** 54.73 36 *e*P P 09 50 06.3 +1.9
INK **Inuvik** 54.95 27 *e*P P 09 50 06.0 +0.1
INK pmax pmax
comp=Z,5.0nm,0.7s
INK **Inuvik** 54.95 27 *e*P P 09 50 06.0 +0.1
comp=Z,5.5nm,0.7s,mb4.7
CTA **Charters Tower** 56.09 175 LR LR 10 12 47.0
comp=Z,114nm,21.0s,MS3.9,baz=249,slow=34
SVE **Sverdlovsk** 56.10 319⇑ *e*P P 09 50 14.7 +0.4
SVE *e*S S 09 58 16.0 +14
SVE pmax pmax
comp=Z,30nm,1.5s,mb5.1
SVE MLR MLR
comp=Z,1μm,14.0s,MS5.1
FITZ **Fitzroy Crossi** 56.15 199 *e*P P 09 50 13.9 -1.1
comp=Z,6.8nm,0.6s,mb4.8
FITZ **Fitzroy Crossi** 56.15 199 P P 09 50 13.7 -1.3
comp=Z,1.9nm,0.6s,mb4.3,baz=46,slow=8.9,SNR=12
WRAB **Tennant Creek** 56.26 189 *e*P P 09 50 14.4 -1.4
WRAB pmax pmax
comp=Z,22nm,1.1s,mb5.1
WRAB **Tennant Creek** 56.26 189 *e*P P 09 50 14.4 -1.4
comp=Z,22nm,1.1s,mb5.1
WB2 **Warramunga Arr** 56.27 189 *e*P P 09 50 15.2 -0.6
WRA **Warramunga Arr** 56.27 189 P P 09 50 13.7 -2.2
comp=Z,3.6nm,0.6s,mb4.6,baz=5.6,slow=6.9,SNR=58
SOKR **Solikamsk** 57.29 323 *e*P P 09 50 23.2 +0.4
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,760nm,15.0s,MS4.9
ARU **Arti** 57.31 319*c* *i*P P 09 50 22.7 -0.2
ARU *e* 09 52 27.6
ARU S S 09 58 17.5 -0.9
ARU SS SS 10 02 02.8 -4.4
ARU pmax pmax
comp=Z,34nm,1.7s,mb5.1
ARU **Arti** 57.31 319 *e*P P 09 50 22.8 -0.1
comp=Z,98nm,1.8s,mb5.5
HYB **Hyderabad** 58.64 269 *i*P P 09 50 32.0 -0.8
ABKAR **Akbulak array** 58.84 311 *e*P P 09 50 33.3 -0.5
comp=Z,6.1nm,0.6s,mb4.8
AKTK **Aktyubinsk** 59.59 312 P P 09 50 38.2 -0.7
AKTO **Aktyubinsk** 59.59 312 P P 09 50 38.2 -0.7
comp=Z,7.7nm,1.0s,mb4.7,baz=70,slow=6.8,SNR=15
ASAR **Alice Springs** 60.00 189 P P 09 50 40.4 -1.5
comp=Z,1.6nm,0.8s,mb4.1,baz=10,slow=8.2,SNR=24
SPITS **Spitsbergen Ar** 61.46 349 P P 09 50 49.3 -2.0
comp=Z,2.2nm,0.6s,mb4.4,baz=96,slow=0.8,SNR=3.6
DZM **Mont Dzumac** 62.38 154 *e*P P 09 50 57.1 -1.0
comp=Z,54nm,1.3s,mb5.5
DZM *e*S S 09 59 17.5 -6.8
comp=Z,675nm,27.2s
DZM *e*LR LR 10 09 28.1
comp=Z,522nm,21.4s
RES **Resolute Bay** 63.33 14 *e*P P 09 51 03.3 -0.5
RES pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
RES **Resolute Bay** 63.33 14 *e*P P 09 51 03.3 -0.6
comp=Z,8.8nm,0.8s,mb4.9
APA **Apatity** 63.66 336⇑ *e*P P 09 51 08.8 +2.7
APA MLR MLR
comp=Z,800nm,18.0s,MS4.9
YKA **Yellowknife Ar** 64.33 30 P P 09 51 09.9 -0.7
comp=Z,1.3nm,0.7s,mb4.1,baz=303,slow=6.9,SNR=13
YKA LR LR 10 24 05.1
comp=Z,18nm,18.8s,baz=50,slow=41
KLMR **Klimovskoe** 64.73 328 *e*P P 09 51 12.6 -0.6
KLMR *e* 09 53 34.8
KLMR pmax pmax
comp=Z,28nm,1.5s,mb5.1
ARCES **ARCESS Array B** 64.97 340 P P 09 51 14.1 -0.5
comp=Z,3.0nm,0.9s,mb4.3,baz=53,slow=22,SNR=5.6
ARCES LR LR 10 25 07.2
comp=Z,477nm,18.2s,MS4.7,baz=274,slow=41
AFI **Afiamalu** 66.23 130 LR LR 10 14 49.8
comp=Z,202nm,19.4s,MS4.3,baz=169,slow=31
DAG **Danmarks Havn** 66.67 355⇑ *e*P P 09 51 25.1 -0.5
DAG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
DAG **Danmarks Havn** 66.67 355⇑ *i*P P 09 51 25.1 -0.5
comp=Z,4.2nm,0.9s,mb4.5

JOF **Joensuu** 66.94 332 *e*P P 09 51 26.0 -1.4
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
JOF **Joensuu** 66.94 332 *e*p P 09 51 26.0 -1.4
comp=Z,7.0nm,0.8s,mb4.7
CMSA **Cobar Meteorol** 67.44 177 *e*P P 09 51 30.3 -0.6
STKA **Stephens Creek** 67.69 180 P P 09 51 32.3 -0.1
comp=Z,1.2nm,0.4s,mb4.3,baz=43,slow=2.6,SNR=3.6
STKA LR LR 10 20 17.1
comp=Z,159nm,18.0s,MS4.3,baz=203,slow=35
FORT **Forrest** 67.86 193 *e*P P 09 51 33.1 -0.5
comp=Z,13nm,0.7s,mb5.1
FORT **Forrest** 67.86 193 *e*P P 09 51 33.4 -0.2
MOS **Moscow** 68.22 324 *e*P P 09 51 34.6 -1.0
MOS *e* 09 54 12.5
MOS *e* 10 00 21.3
MOS MLR MLR
comp=Z,1μm,17.0s,MS5.1
BBOO **Buckleboo** 68.84 185 *e*P P 09 51 39.4 -0.2
comp=Z,4.2nm,1.0s,mb4.3
ETW **Entiat** 68.94 46 *e*P P 09 51 40.8 +0.4
comp=Z,2.8nm,0.7s,mb4.3
OBN **Obninsk** 69.06 324⇑ *i*P P 09 51 40.8 -0.1
OBN *e*SS SS 10 05 12.5 +2.1
OBN pmax pmax
comp=Z,24nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,600nm,15.0s,MS5.0
E06A **Yakima** 69.11 47 ⇑P P 09 51 42.1 +0.7
baz=69
B08A **Colville Reser** 69.13 45 ⇓P P 09 51 41.1 -0.4
baz=69
KAF **Kangasniemi** 69.28 333 *e*P P 09 51 38.9 -3.3
KAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KAF **Kangasniemi** 69.28 333 *e*p P 09 51 38.9 -3.3
comp=Z,9.7nm,1.0s,mb4.7
EDM **Edmonton** 69.74 38 *e*P P 09 51 48.5 +3.3
B09A **Rice** 69.77 44 ⇓P P 09 51 45.6 +0.2
baz=70
FINES **FINESS Array B** 69.79 333 P P 09 51 45.0 -0.3
comp=Z,3.6nm,0.8s,mb4.3,baz=46,slow=8.2,SNR=13
FINES LR LR 10 27 19.5
comp=Z,743nm,18.8s,MS5.0,baz=177,slow=40
VSR **Storozhevoye** 69.88 319 *e*P P 09 51 45.7 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,9.0nm,0.9s
VSR pmax pmax
comp=E,8.0nm,1.1s
VORD **Divnogorie** 69.95 319 *e*P P 09 51 45.8 -0.7
VORD pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
VORD pmax pmax
comp=N,6.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,0.6s
NEW **Newport** 70.43 44 *e*P P 09 51 49.2 -0.3
NEW pmax pmax
comp=Z,12nm,1.4s
NEW **Newport** 70.43 44 *e*P P 09 51 49.2 -0.3
comp=Z,12nm,1.4s,mb4.6
A11A **Hall Mountain,** 70.48 43 ⇑P P 09 51 50.0 +0.2
baz=70
K05A **Summer Lake** 71.14 51 ⇑P P 09 51 54.0 +0.1
baz=71
VSU **Vasula** 71.43 330 *e*P P 09 51 54.9 -0.4
VSU pmax pmax
comp=Z,11nm,1.1s,mb4.7
D11A **Klaveano Farm,** 71.54 45 ⇓P P 09 51 55.7 -0.5
baz=71
H08A **Prairie City** 71.55 48 ⇑P P 09 51 56.2 -0.1
baz=71
SUMG **Summit** 71.55 0 *e*P P 09 51 58.9 +3.0
ZEI **Tsey** 71.71 310 *e*P P 09 51 55.1 -2.2
ZEI pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
WALA **Waterton Lakes** 71.77 42 *e*P P 09 51 59.0 +1.4
comp=Z,0.2nm,0.8s
KIV **Kislovodsk** 71.82 311*c* *i*P P 09 51 58.4 +0.5
KIV pmax pmax
comp=Z,28nm,1.2s,mb5.1
KIV **Kislovodsk** 71.82 311 *e*P P 09 51 59.4 +1.4
KIV **Kislovodsk** 71.82 311 P P 09 51 59.0 +1.1
SNR=5.7
KIV P 09 51 59.0
SNR=5.7
B13A **Whitefish** 71.86 43 ⇑P P 09 51 57.9 -0.2
baz=72
E11A **Bopner Ranch,** 72.00 45 ⇑P P 09 51 58.7 -0.3
baz=72
A14A **Double T Ranch** 72.09 42 ⇑P P 09 51 59.2 -0.3
baz=72
BMO **Blue Mountains** 72.19 47 *e*P P 09 52 02.8 +2.7
C13A **Hot Springs** 72.19 44 ⇓P P 09 51 59.3 -0.8
baz=72
F11A **Grangeville** 72.29 46 ⇓P P 09 52 00.3 -0.4
baz=72
J08A **Circle Bar Ran** 72.30 49 ⇑P P 09 52 00.2 -0.6
baz=72
JTMT **Jette** 72.31 43 *e*P P 09 52 01.4 +0.6
E12A **Beaver Dam Sad** 72.33 45 ⇓P P 09 52 00.9 0.0
baz=72
I09A **Lost Marbles R** 72.41 48 ⇑P P 09 52 00.8 -0.6
baz=72
A15A **Johnson Ranch,** 72.46 42 ⇑P P 09 52 00.9 -0.8
baz=72
G11A **Walters Elk Ra** 72.49 46 ⇓P P 09 52 01.9 0.0
baz=72
D13A **Huson** 72.58 44 ⇑P P 09 52 02.0 -0.4
baz=72
GNI **Garni** 72.59 307⇑ *e*P P 09 52 04.3 +1.7
GNI pmax pmax
comp=Z,16nm,1.2s
C14A **Swan Lake** 72.60 43 ⇑P P 09 52 02.5 -0.1
baz=72
SWMT **Swartz Lake** 72.60 44 *e*P P 09 52 02.5 -0.1
J09A **Fry Pan Ranch,** 72.75 49 ⇓P P 09 52 03.2 -0.3
baz=72
F12A **Elk City** 72.88 46 ⇑P P 09 52 03.6 -0.7
baz=73
B15A **Bradely Ranch,** 72.94 42 ⇑P P 09 52 04.0 -0.6
baz=73,SNR=13
BEKR **Beckwourth** 73.02 53 ⇓P P 09 52 04.7 -0.5
baz=73
MSO **Missoula** 73.02 44 *e*P P 09 52 05.1 0.0
H11A **Donnelly** 73.03 47 ⇓P P 09 52 04.5 -0.7
baz=73
SLMT **Seeley Lake** 73.04 44 *e*P P 09 52 05.2 0.0
A16A **West Butte Ran** 73.09 41 ⇓P P 09 52 05.1 -0.3
baz=73
D14A **Greenough** 73.12 44 ⇓P P 09 52 05.1 -0.5
baz=73
C15A **Salmond Ranch,** 73.22 43 ⇑P P 09 52 05.6 -0.7
baz=73,SNR=9.0
B16A **M & M Farms, S** 73.34 42 ⇑P P 09 52 06.6 -0.3
baz=73,SNR=11
F13A **Darby** 73.40 45 ⇑P P 09 52 06.6 -0.7
baz=73
MICGM **Minsk** 73.47 326 *e* P 09 52 06.0 -1.6
MNK **Minsk** 73.49 326 *e*P P 09 52 06.0 -1.7
MNK MLR MLR
comp=Z,3μm,10.0s,MS5.8
A17A **Triple J Farms** 73.57 41 ⇑P P 09 52 07.6 -0.7
baz=73
K10A **MacKenzie Ranc** 73.60 49 ⇓P P 09 52 08.2 -0.4
baz=73
C16A **Fuhringer Ranc** 73.68 42 ⇑P P 09 52 08.5 -0.4
baz=73
D15A **Lincoln** 73.70 43 ⇑P P 09 52 08.7 -0.3
baz=74
H12A **Diamond D Ranc** 73.80 46 ⇑P P 09 52 09.4 -0.3
baz=74
G13A **Cobalt** 73.85 46 ⇑P P 09 52 10.3 +0.3
baz=74
B17A **L&G Farms, Che** 73.90 42 ⇓P P 09 52 10.0 -0.2
baz=74
F14A **Wisdom** 73.93 45 ⇓P P 09 52 10.4 0.0
baz=74
E15A **Deer Lodge** 73.99 44 ⇓P P 09 52 10.7 -0.1
baz=74
CMB **Columbia Colle** 74.00 55 P P 09 52 10.9 -0.1
CMB pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CMB **Columbia Colle** 74.00 55 P P 09 52 10.9 -0.1
comp=Z,10nm,1.3s,mb4.6

A18A **Metzger Ranch,** 74.03 41 ⇑P P 09 52 10.8 -0.2
baz=74
I12A **Atlanta** 74.07 47 ⇓P P 09 52 11.5 +0.2
baz=74
K11A **Parker Ranch,** 74.11 48 ⇑P P 09 52 11.7 +0.1
baz=74
H13A **Challis** 74.14 46 ⇑P P 09 52 11.4 -0.3
baz=74,SNR=10
FFC **Flin Flon** 74.19 33 *i*P P 09 52 12.1 +0.3
FFC **Flin Flon** 74.19 33 *e*P P 09 52 11.1 -0.7
L10A **Juniper Basin** 74.24 49 ⇓P P 09 52 11.8 -0.5
baz=74
D16A **Dana Ranch, Ca** 74.24 43 ⇑P P 09 52 12.0 -0.2
baz=74
HRY **Holter Researc** 74.27 43 *e*P P 09 52 12.5 0.0
C17A **Wharram Farm,** 74.31 42 ⇓P P 09 52 12.5 -0.2
baz=74
B18A **Beardsley Farm** 74.39 41 ⇑P P 09 52 12.9 -0.2
baz=74
J12A **Stokes Ranch,** 74.40 48 ⇑P P 09 52 13.1 -0.1
baz=74
F15A **Butte** 74.41 44 ⇓P P 09 52 13.1 -0.2
baz=74,SNR=10
LRM **Limekiln Ridge** 74.45 44 *e*P P 09 52 13.7 +0.2
ANN **Anapa** 74.46 314 *e*P P 09 52 12.3 -1.2
ANN pmax pmax
comp=Z,69nm,2.6s,mb5.1
E16A **East Helena** 74.46 43 ⇑P P 09 52 13.4 -0.2
baz=74
M10A **I.L. Ranch, Tu** 74.51 50 ⇑P P 09 52 13.5 -0.4
baz=74
FCC **Fort Churchill** 74.57 27 *e*P P 09 52 13.6 -0.3
comp=Z,0.3nm,1.1s
I13A **Wildhorse Cree** 74.60 47 ⇓P P 09 52 14.0 -0.4
baz=74
EGMT **Eagleton** 74.62 41 ⇑P P 09 52 14.1 -0.3
baz=74
EGMT **Eagleton** 74.62 41 *e*P P 09 52 14.1 -0.3
L11A **Cat Creek Ranc** 74.63 49 ⇑P P 09 52 14.8 +0.2
baz=74
HLID **Hailey** 74.63 47 ⇑P P 09 52 15.2 +0.6
baz=74
HLID **Hailey** 74.63 47 *e*P P 09 52 17.8 +3.2
H14A **Leadore** 74.63 46 ⇓P P 09 52 14.4 -0.2
baz=74
DLMT **Dillon** 74.64 45 *e*P P 09 52 15.1 +0.6
MCMT **McKenzie Canyo** 74.81 45 *e*P P 09 52 17.2 +1.6
comp=Z,1.5nm,1.0s,mb3.9
G15A **Dillon** 74.81 45 ⇓P P 09 52 15.7 +0.1
baz=75
J13A **Cove Ranch, Pi** 74.87 47 ⇑P P 09 52 16.0 +0.1
baz=75
K12A **Draper Farm, C** 74.87 48 ⇓P P 09 52 15.8 -0.1
baz=75
F16A **Kennard Place,** 74.94 44 ⇓P P 09 52 16.4 +0.1
baz=75
E17A **Martinsdale** 74.96 43 ⇓P P 09 52 16.4 -0.1
baz=75
I14A **Mackay** 74.98 46 ⇑P P 09 52 17.2 +0.6
baz=75,SNR=9.8
BOZ **Bozeman (W)** 75.02 44 ⇓P P 09 52 16.6 -0.2
baz=75,SNR=8.2
BOZ **Bozeman (W)** 75.02 44 *e*P P 09 52 17.0 +0.2
L12A **House Creek Ra** 75.09 49 ⇓P P 09 52 16.7 -0.5
baz=75
NVAR **Mina Array Bea** 75.14 53 P P 09 52 17.4 -0.3
comp=Z,2.2nm,0.7s,mb4.2,baz=287,slow=5.9,SNR=21
NB2 **NORSAR Subarra** 75.16 338 P P 09 52 16.8 -0.5
comp=Z,3.5nm,0.7s,mb4.4,baz=41,slow=5.9
NOA **NORSAR Array B** 75.16 338 P P 09 52 16.4 -0.9
comp=Z,1.9nm,0.5s,mb4.2,baz=39,slow=5.8,SNR=13
NOA LR LR 10 28 59.2
comp=Z,460nm,18.3s,MS4.8,baz=35,slow=39
G16A **Moss Hill, Enn** 75.17 45 ⇑P P 09 52 17.5 -0.2
baz=75,SNR=5.4
AKASG **Malin Array Be** 75.26 323 P P 09 52 17.3 -0.8
comp=Z,3.2nm,0.6s,mb4.5,baz=46,slow=6.3,SNR=16
AKASG LR LR 10 28 23.7
comp=Z,658nm,19.0s,MS5.0,baz=30,slow=38
AKBB **Malin Array Si** 75.26 323 *e*P P 09 52 17.5 -0.6
KIEV **Kiev** 75.27 323 *e*P P 09 52 17.6 -0.5
KIEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KIEV **Kiev** 75.27 323 *e*P P 09 52 17.6 -0.6
comp=Z,6.5nm,0.6s,mb4.7
J14A **Carey** 75.30 47 ⇑P P 09 52 18.8 +0.3
baz=75,SNR=9.6
K13A **Stover Farm, H** 75.36 48 ⇑P P 09 52 19.0 +0.2
baz=75
F17A **Fitzpatrick Pl** 75.41 44 ⇑P P 09 52 19.2 +0.2
baz=75
E18A **Harlowton** 75.42 43 ⇑P P 09 52 19.2 +0.2
baz=75
I15A **Monteview** 75.51 46 ⇓P P 09 52 19.9 +0.3
baz=75
M12A **Wells** 75.57 49 ⇑P P 09 52 20.4 +0.4
baz=75
QLMT **Earthquake Lak** 75.62 45 *e*P P 09 52 22.2 +1.9
G17A **Pierce Place,** 75.71 44 ⇑P P 09 52 21.1 +0.3
baz=76
L13A **Double Diamond** 75.77 48 ⇑P P 09 52 21.6 +0.5
baz=76
H16A **Russell Place,** 75.80 45 ⇑P P 09 52 21.6 +0.3
baz=76
N12A **Clover Valley,** 75.82 50 *e*P P 09 52 23.3 +1.8
comp=Z,5.0nm,0.8s,mb4.5
O11A **Cowboy Ranch,** 75.86 51 ⇓P P 09 52 22.2 +0.5
baz=76
J15A **Blackfoot** 75.89 46 ⇓P P 09 52 22.3 +0.5
baz=76
F18A **Big Timber** 75.93 43 ⇑P P 09 52 22.2 +0.2
baz=76,SNR=9.6
YMR **Madison River** 75.98 45 *e*P P 09 52 24.4 +2.1
comp=Z,14nm,1.3s,mb4.7
GCMT **Greycliff** 76.03 43 *e*P P 09 52 23.3 +0.8
comp=Z,5.7nm,1.1s,mb4.4
M13A **Montello** 76.06 49 ⇓P P 09 52 23.1 +0.2
baz=76
M13A **Montello** 76.06 49 *e*P P 09 52 23.2 +0.4
Q10A **Clear Creek Ra** 76.14 52 ⇓P P 09 52 22.9 -0.5
baz=76
I16A **Newdale** 76.16 46 ⇑P P 09 52 24.3 +0.9
baz=76,SNR=11
L14A **Malta** 76.22 48 ⇑P P 09 52 24.1 +0.3
baz=76
O12A **Currie** 76.34 50 ⇓P P 09 52 25.0 +0.5
baz=76,SNR=7.0
LKWY **Lake** 76.36 45 *e*P P 09 52 28.7 +4.2
H17A **Grant Village** 76.37 45 ⇑P P 09 52 24.8 +0.3
baz=76
IMW **Indian Meadow** 76.46 45 *e*P P 09 52 26.5 +1.4
M14A **Sheep Mountain** 76.47 48 ⇑P P 09 52 25.0 -0.1
baz=76
DCID1 **Drake Creek** 76.50 46 *e*P P 09 52 26.3 +1.0
comp=Z,9.3nm,0.9s,mb4.7
S10A **Tonopah Range,** 76.54 53 ⇑P P 09 52 25.4 -0.2
baz=76
GRAC **Grapevine Rang** 76.57 54 ⇓P P 09 52 26.0 +0.2
baz=76
RRI2 **Red Ridge** 76.57 46 *e*P P 09 52 27.8 +2.1
HVU **Hansel Valley** 76.65 48 *e*P P 09 52 27.8 +1.6
I17A **Pilgrim Ck.** 76.66 45 ⇓P P 09 52 26.2 +0.1
baz=76
RLMT **Red Lodge** 76.66 44 ⇓P P 09 52 25.8 -0.3
baz=76
RLMT **Red Lodge** 76.66 44 *e*P P 09 52 27.8 +1.6
TPAW **Teton Pass** 76.70 46 *e*P P 09 52 27.4 +0.9
comp=Z,4.6nm,0.8s,mb4.5
P12A **McGill** 76.71 51 ⇓P P 09 52 26.6 0.0
baz=76
K16A **Soda Springs** 76.73 46 ⇓P P 09 52 26.1 -0.5
baz=76
LOHW **Long Hollow** 76.83 45 *e*P P 09 52 27.6 +0.4
SNOW **Snow King Moun** 76.83 46 *e*P P 09 52 28.2 +1.0
comp=Z,6.7nm,1.0s,mb4.5
REDW **Red Top Meadow** 76.83 46 *e*P P 09 52 27.4 +0.2
comp=Z,6.6nm,1.1s,mb4.5
R11A **Troy Canyon, C** 76.94 52 ⇓P P 09 52 27.9 0.0
baz=77
FURC **Furnace Creek,** 77.21 54 ⇓P P 09 52 29.6 +0.2
baz=77
I18A **Diamond G Ranc** 77.22 45 ⇓P P 09 52 29.1 -0.3
baz=77
DGMT **Dagmar** 77.23 39 *e*P P 09 52 30.0 +0.7
S11A **Rachel** 77.25 53 ⇑P P 09 52 29.5 -0.1
baz=77
P13A **Bates Ranch, G** 77.28 50 ⇑P P 09 52 29.6 -0.1

	baz=77						
LAO	**LASA Array**	**77.33**	**41**	*e*P	**P**	**09 52 30.1**	**+0.2**
	comp=Z,13nm,1.1s,mb4.8						
EDW2	**Edwards Air Fo**	**77.38**	**56**	⇑P	**P**	**09 52 30.3**	**-0.1**
	baz=77						
J18A	**Kendall Valley**	**77.41**	**45**	⇑P	**P**	**09 52 30.5**	**+0.1**
	baz=77						
HWUT	**Hardware Ranch**	**77.48**	**47**	*e*P	**P**	**09 52 30.9**	**0.0**
	comp=Z,10nm,1.1s,mb4.7						
Q13A	**Wheeler Ranch,**	**77.57**	**51**	⇑P	**P**	**09 52 31.3**	**-0.1**
	baz=77						
R12A	**Pony Springs,**	**77.57**	**52**	⇓P	**P**	**09 52 31.4**	**0.0**
	baz=77						
DUG	**Dugway**	**77.58**	**49**	⇑P	**P**	**09 52 31.5**	**+0.1**
	baz=77						
DUG	**Dugway**	**77.58**	**49**	*e*P	**P**	**09 52 31.7**	**+0.3**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
DUG	**Dugway**	**77.58**	**49**	*e*P	**P**	**09 52 31.7**	**+0.3**
	comp=Z,7.8nm,1.0s,mb4.6						
L17A	**Cokeville**	**77.59**	**47**	⇑P	**P**	**09 52 31.8**	**+0.3**
	baz=77						
MALT	**Malatya**	**77.67**	**308**	*e*P	**P**	**09 52 33.2**	**+1.3**
MALT				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MALT	**Malatya**	**77.67**	**308**	*e*P	**P**	**09 52 33.2**	**+1.3**
	comp=Z,6.6nm,1.0s,mb4.5						
K18A	**Toltan Ranch,**	**77.75**	**46**	⇓P	**P**	**09 52 32.2**	**-0.2**
	baz=78						
P14A	**Drum Mountains**	**77.78**	**50**	⇑P	**P**	**09 52 32.7**	**+0.1**
	baz=78						
T11A	**Corn Creek, Al**	**77.82**	**53**	⇑P	**P**	**09 52 33.2**	**+0.4**
	baz=78						
KIS	**Kishinev**	**77.85**	**320**	*e*P	**P**	**09 52 25.0**	**-7.8**
KIS				*e*S	S	10 02 10.0	-15
KIS	**Kishinev**	**77.85**	**320**	*e*P	**P**	**09 52 25.0**	**-7.8**
KIS				*e*		09 52 40.0	
KIS				*e*S	S	10 02 10.0	-15
KIS				MLR	MLR		
	comp=N,600nm,15.0s,MS5.2						
KIS				MLR	MLR		
	comp=E,700nm,15.0s,MS5.2						
KIS				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.3						
KIS				MLR	MLR		
	comp=Z,900nm,16.0s						
BW06	**Boulder Array**	**77.95**	**46**	⇑P	**P**	**09 52 33.1**	**-0.3**
	baz=78						
BW06	**Boulder Array**	**77.95**	**46**	*e*P	**P**	**09 52 32.7**	**-0.8**
PDAR	**Pinedale Array**	**77.95**	**46**	P	**P**	**09 52 32.7**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.2,baz=292,slow=2.4,SNR=18						
Q14A	**Sevier Lake (B**	**78.02**	**50**	⇓P	**P**	**09 52 34.1**	**+0.2**
	baz=78,SNR=12						
JLU	**Jordanelle**	**78.16**	**48**	*e*P	**P**	**09 52 36.5**	**+1.9**
NLU	**North Lily Min**	**78.17**	**49**	*e*P	**P**	**09 52 36.5**	**+1.7**
SHPR	**Sheep Range**	**78.30**	**53**	*e*P	**P**	**09 52 35.6**	**+0.1**
DAU	**Daniels Canyon**	**78.39**	**48**	*e*P	**P**	**09 52 37.9**	**+1.9**
MPU	**Maple Canyon**	**78.41**	**49**	*e*P	**P**	**09 52 37.9**	**+1.9**
S13A	**Holt Ranch, En**	**78.49**	**52**	⇓P	**P**	**09 52 36.3**	**-0.2**
	baz=78						
ARUT	**Antelope Range**	**78.63**	**51**	*e*P	**P**	**09 52 37.8**	**+0.5**
ARUT				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
ARUT	**Antelope Range**	**78.63**	**51**	*e*P	**P**	**09 52 37.8**	**+0.5**
	comp=Z,6.3nm,1.2s,mb4.4						
T13A	**Saint George**	**78.80**	**52**	⇓P	**P**	**09 52 38.4**	**+0.1**
	baz=79						
CCUT	**Cedar City**	**78.83**	**52**	*e*P	**P**	**09 52 39.1**	**+0.7**
O17A	**Robinson Place**	**78.84**	**48**	⇓P	**P**	**09 52 38.9**	**+0.5**
	baz=79						
MSU	**Marysvale**	**78.99**	**50**	*e*P	**P**	**09 52 42.0**	**+2.7**
N18A	**Larsen Ranch,**	**78.99**	**47**	⇑P	**P**	**09 52 39.2**	**0.0**
	baz=79						
R15A	**Junction**	**79.11**	**51**	⇓P	**P**	**09 52 39.9**	**0.0**
	baz=79						
U13A	**Pakoon Wash**	**79.12**	**53**	⇑P	**P**	**09 52 40.0**	**0.0**
	baz=79						
BUR08	**Bucovina Ar. S**	**79.26**	**322**	*e*P	**P**	**09 52 40.7**	**+0.2**
P17A	**Butcher Ranch,**	**79.28**	**49**	⇓P	**P**	**09 52 40.3**	**-0.5**
	baz=79						
T14A	**Hurricane**	**79.30**	**52**	⇑P	**P**	**09 52 40.5**	**-0.5**
	baz=79						
N19A	**John Jarvie Ra**	**79.34**	**47**	⇑P	**P**	**09 52 41.1**	**-0.1**
	baz=79						
P18A	**Preston Nutter**	**79.49**	**48**	⇑P	**P**	**09 52 41.1**	**-0.9**
	baz=79						
M20A	**Sweetwater, Wa**	**79.54**	**46**	⇑P	**P**	**09 52 41.9**	**-0.3**
	baz=79						
R16A	**Teasdale**	**79.56**	**50**	⇑P	**P**	**09 52 42.7**	**+0.4**
	baz=79						
U14A	**Mt Trumbull**	**79.62**	**52**	⇓P	**P**	**09 52 42.8**	**0.0**
	baz=79						
SRU	**San Rafael**	**79.64**	**49**	⇑P	**P**	**09 52 42.8**	**0.0**
	baz=79,SNR=9.8						
SRU	**San Rafael**	**79.64**	**49**	*e*P	**P**	**09 52 43.2**	**+0.4**
L21A	**Rawlins**	**79.72**	**45**	⇑P	**P**	**09 52 43.2**	**+0.1**
	baz=80						
O19A	**Miners Draw (B**	**79.74**	**47**	⇑P	**P**	**09 52 43.2**	**-0.2**
	baz=80						
BR131	**Keskin Array S**	**79.77**	**312**	*e*P	**P**	**09 52 43.9**	**+0.4**
BRTR	**Keskin Array B**	**79.77**	**312**	P	**P**	**09 52 43.0**	**-0.4**
	comp=Z,3.5nm,0.9s,mb4.3,baz=90,slow=3.7,SNR=12						
BRTR				LR	LR	10 33 16.4	
	comp=Z,206nm,18.4s,MS4.5,baz=214,slow=40						
T15A	**Red Dirt Ranch**	**79.77**	**52**	⇓P	**P**	**09 52 43.0**	**-0.5**
	baz=80						
KOLS	**Kolonicke sedl**	**79.79**	**324**	*e*P	**P**	**09 52 44.4**	**+1.0**
KOLS				*e*		09 53 02.8	
KOLS	**Kolonicke sedl**	**79.79**	**324**	*e*P	**P**	**09 52 44.4**	**+1.0**
KOLS				*e*		09 53 02.8	
N20A	**Spence Gulch,**	**79.92**	**46**	⇓P	**P**	**09 52 44.3**	**+0.1**
	baz=80						
STHS	**Stebnicka Huta**	**79.93**	**325**	*e*P	**P**	**09 52 45.2**	**+1.0**
STHS				*e*		09 53 00.8	
STHS				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.4						
STHS	**Stebnicka Huta**	**79.93**	**325**	*e*P	**P**	**09 52 45.2**	**+1.0**
	comp=Z,8.6nm,1.8s,mb4.4						
STHS				*e*		09 53 00.8	
STHS				*e*		09 53 11.0	
STHS	**Stebnicka Huta**	**79.93**	**325**	*e*P	**P**	**09 52 45.2**	**+1.0**
STHS				*e*		09 53 00.8	
STHS				*e*		09 53 11.0	
M21A	**Separation Pea**	**79.95**	**45**	⇑P	**P**	**09 52 43.9**	**-0.6**
	baz=80						
R17A	**Hanksville Air**	**79.95**	**50**	⇓P	**P**	**09 52 44.5**	**0.0**
	baz=80						
W13A	**Hualapai Mount**	**79.97**	**54**	⇓P	**P**	**09 52 44.7**	**0.0**
	baz=80						
ULM	**Lac du Bonnet**	**79.98**	**34**	P	**P**	**09 52 43.4**	**-1.0**
	comp=Z,1.8nm,0.8s,mb4.1,baz=289,slow=4.2,SNR=6.3						
OJC	**Ojcow**	**80.01**	**326**	*e*P	**P**	**09 52 44.1**	**-0.5**
V14A	**Boquillas Ranc**	**80.15**	**53**	⇓P	**P**	**09 52 45.6**	**0.0**
	baz=80						
U15A	**North Rim**	**80.19**	**52**	⇑P	**P**	**09 52 45.7**	**-0.1**
	baz=80						
P19A	**Cripple Cowboy**	**80.25**	**48**	⇓P	**P**	**09 52 46.2**	**+0.1**
	baz=80						
X13A	**Yucca**	**80.31**	**54**	⇑P	**P**	**09 52 46.5**	**0.0**
	baz=80						
O20A	**White River Ci**	**80.37**	**47**	⇓P	**P**	**09 52 46.6**	**-0.2**
	baz=80						
S17A	**Black Ridge (B**	**80.38**	**50**	⇑P	**P**	**09 52 47.0**	**+0.1**
	baz=80						
N21A	**Black Mountain**	**80.40**	**46**	⇓P	**P**	**09 52 46.7**	**-0.2**
	baz=80						
W14A	**Seligman**	**80.42**	**53**	⇓P	**P**	**09 52 47.0**	**-0.1**
	baz=80						
R18A	**Canyonlands Na**	**80.48**	**49**	⇓P	**P**	**09 52 47.2**	**-0.2**
	baz=80						
V15A	**Kaibab Nationa**	**80.64**	**52**	⇑P	**P**	**09 52 48.0**	**-0.2**
	baz=80						
T17A	**Navajo Res., N**	**80.78**	**51**	⇑P	**P**	**09 52 48.8**	**-0.1**
	baz=81						
S18A	**Hurst Farm, Bl**	**80.85**	**50**	⇑P	**P**	**09 52 49.3**	**0.0**
	baz=81						
URZ	**Urewera**	**80.87**	**153**	LR	LR	10 24 11.5	
	comp=Z,214nm,19.0s,MS4.5,baz=152,slow=32						
R19A	**Curley Farm, L**	**80.92**	**49**	⇑P	**P**	**09 52 49.6**	**-0.2**
	baz=81						
KECS	**Kecovo**	**80.94**	**325**	*e*P	**P**	**09 52 52.6**	**+3.0**
KECS				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
KECS	**Kecovo**	**80.94**	**325**	*e*P	**P**	**09 52 52.6**	**+3.0**
	comp=Z,1.4nm,0.9s,mb3.9						
KECS				*e*		09 53 12.5	
KECS	**Kecovo**	**80.94**	**325**	*e*P	**P**	**09 52 52.6**	**+3.0**
KECS				*e*		09 53 12.5	
N22A	**Wattenberg Ran**	**80.99**	**46**	⇓P	**P**	**09 52 50.5**	**+0.4**
	baz=81						
X14A	**Yava**	**81.00**	**54**	⇑P	**P**	**09 52 50.3**	**+0.1**
	baz=81						
OKC	**Ostrava-Krasne**	**81.02**	**327**	AMS	AMS	10 33 20.0	
	comp=Z,800nm,15.8s						
Q20A	**Ridgley Place,**	**81.09**	**48**	⇑P	**P**	**09 52 50.7**	**+0.1**
	baz=81						
U16A	**Tuba City**	**81.10**	**52**	⇑P	**P**	**09 52 50.8**	**+0.1**
	baz=81						
Y14A	**Wickenburg**	**81.25**	**54**	⇓P	**P**	**09 52 51.4**	**-0.1**
	baz=81						
Z13A	**Yuma Proving G**	**81.27**	**55**	⇑P	**P**	**09 52 51.6**	**-0.1**
	baz=81						
T18A	**Mexican Hat**	**81.27**	**50**	⇑P	**P**	**09 52 51.5**	**-0.2**
	baz=81						
MORC	**Moravsky Berou**	**81.33**	**327**	*e*P	**P**	**09 52 51.6**	**-0.1**
WUAZ	**Wupatki**	**81.33**	**52**	⇑P	**P**	**09 52 52.0**	**0.0**
	baz=81						
WUAZ	**Wupatki**	**81.33**	**52**	*e*P	**P**	**09 52 51.7**	**-0.3**
	comp=Z,6.1nm,1.0s,mb4.5						
S19A	**Harvey Farm, M**	**81.34**	**49**	⇓P	**P**	**09 52 52.1**	**+0.1**
	baz=81						
X15A	**Humboldt**	**81.41**	**54**	⇓P	**P**	**09 52 52.4**	**0.0**
	baz=81						
DPC	**Dobruska-Polom**	**81.43**	**328**	*e*P	**P**	**09 52 52.2**	**0.0**
DPC				MLR	MLR		
	comp=Z,700nm,14.4s,MS5.2						
DPC	**Dobruska-Polom**	**81.43**	**328**	*e*P	**P**	**09 52 52.2**	**0.0**
DPC				AMS	AMS	10 33 40.0	
	comp=Z,700nm,14.4s						
113A	**Mohawk Valley,**	**81.45**	**56**	⇓P	**P**	**09 52 52.8**	**+0.2**
	baz=81						
R20A	**Redvale**	**81.52**	**49**	⇓P	**P**	**09 52 53.1**	**+0.2**
	baz=81						
Q21A	**Lamborn Mesa,**	**81.60**	**48**	⇑P	**P**	**09 52 53.4**	**+0.1**
	baz=81						
V17A	**Tonalea, Kykot**	**81.64**	**52**	⇑P	**P**	**09 52 53.7**	**+0.1**
	baz=81,SNR=5.6						
Y15A	**Casa Rosa Ranc**	**81.68**	**54**	⇓P	**P**	**09 52 54.1**	**+0.3**
	baz=82						
VYHS	**Vyhne**	**81.69**	**326**	*e*P	**P**	**09 52 54.2**	**+0.6**
VYHS				*e*		09 53 12.2	
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
VYHS	**Vyhne**	**81.69**	**326**	*e*P	**P**	**09 52 54.2**	**+0.6**
	comp=Z,3.9nm,1.5s,mb4.1						
VYHS	**Vyhne**	**81.69**	**326**	*e*P	**P**	**09 52 54.2**	**+0.6**
VYHS				*e*		09 53 12.2	
VYHS				*e*		09 53 21.8	
U18A	**Rough Rock, Ch**	**81.72**	**51**	⇑P	**P**	**09 52 54.5**	**+0.5**
	baz=82						
SMCO	**Snowmass**	**81.73**	**47**	*e*P	**P**	**09 52 56.1**	**+2.0**
	comp=Z,3.5nm,1.1s,mb4.2						
X16A	**Lo Mia Camp, P**	**81.97**	**53**	⇓P	**P**	**09 52 54.9**	**-0.5**
	baz=82						
Q22A	**Crested Butte,**	**81.98**	**47**	⇑P	**P**	**09 52 55.1**	**-0.2**
	baz=82						
BRG	**Berggiesshubel**	**82.03**	**330**	S	S	10 03 11.0	+2.0
PVCC	**Panska Ves**	**82.03**	**329**	AMS	AMS	10 35 20.0	
	comp=Z,700nm,16.4s						
CLL	**Collm**	**82.07**	**330**	*e*P	**P**	**09 52 53.0**	**-2.6**
CLL				*e*S	S	10 03 15.0	+5.6
CLL	**Collm**	**82.07**	**330**	*e*S	S	10 03 15.0	+5.6
CLL				*e*(SS)		10 09 12.0	
CLL				*e*SSS		10 12 18.0	
MVCO	**Mesa Verde**	**82.07**	**49**	⇑P	**P**	**09 52 55.9**	**+0.1**
	baz=82						
MVCO	**Mesa Verde**	**82.07**	**49**	*e*P	**P**	**09 52 54.1**	**-1.7**
	comp=Z,7.9nm,1.1s,mb4.6						
V18A	**Ganado**	**82.13**	**51**	⇓P	**P**	**09 52 56.6**	**+0.5**
	baz=82						
U19A	**Dine' College,**	**82.22**	**51**	⇑P	**P**	**09 52 56.8**	**+0.2**
	baz=82						
PRU	**Pruhonice**	**82.46**	**329**	*e*P	**P**	**09 52 58.4**	**+0.8**
PRU				MLR	MLR		
	comp=Z,600nm,12.9s,MS5.2						
PRU	**Pruhonice**	**82.46**	**329**	*e*P	**P**	**09 52 58.4**	**+0.8**
PRU				AMS	AMS	10 34 40.0	
	comp=Z,600nm,12.9s						
TREC	**Trest**	**82.58**	**328**	*e*P	**P**	**09 52 58.1**	**-0.2**
TREC				MLR	MLR		
	comp=Z,800nm,14.7s,MS5.2						
TREC	**Trest**	**82.58**	**328**	*e*P	**P**	**09 52 58.1**	**-0.2**
TREC				AMS	AMS	10 35 00.0	
	comp=Z,800nm,14.7s						
Y17A	**Roosevelt**	**82.81**	**53**	⇑P	**P**	**09 53 00.3**	**+0.5**
	baz=83						
MMAI	**Mount Meron Ar**	**82.84**	**306**	P	**P**	**09 53 00.5**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.3,baz=91,slow=5.8,SNR=3.3						
NKC	**Novy Kostel**	**83.13**	**330**	AMS	AMS	10 33 30.0	
	comp=Z,700nm,15.2s						
T22A	**Edith**	**83.18**	**49**	⇑P	**P**	**09 53 01.9**	**+0.3**
	baz=83						
X19A	**St. Johns**	**83.35**	**52**	⇓P	**P**	**09 53 02.9**	**+0.4**
	baz=83						
KHC	**Kasperske Hory**	**83.52**	**329**	*e*P	**P**	**09 53 02.7**	**-0.4**
KHC				MLR	MLR		
	comp=Z,700nm,13.6s,MS5.2						
KHC	**Kasperske Hory**	**83.52**	**329**	*e*P	**P**	**09 53 02.8**	**-0.3**
	comp=Z,9.3nm,0.8s,mb5.0						
KHC	**Kasperske Hory**	**83.52**	**329**	*e*P	**P**	**09 53 02.7**	**-0.4**
KHC				AMS	AMS	10 35 10.0	
	comp=Z,700nm,13.6s						
SDCO	**Great Sand Dun**	**83.54**	**47**	*e*P	**P**	**09 53 09.9**	**+6.5**
GERES	**GERESS Array B**	**83.69**	**329**	P	**P**	**09 53 03.5**	**-0.5**
	comp=Z,0.6nm,0.4s,mb4.1,baz=12,slow=6.3,SNR=6.1						
GERES				LR	LR	10 34 37.9	
	comp=Z,427nm,18.0s,MS4.9,baz=257,slow=39						
X20A	**Quemado**	**83.78**	**52**	⇑P	**P**	**09 53 04.7**	**0.0**
	baz=84						
PPT	**Papeete**	**83.84**	**117**	*e*LR	LR	10 19 08.6	
	comp=Z,311nm,21.5s,baz=313						
PPT	**Papeete**	**83.84**	**117**	LR	LR	10 24 34.6	
	comp=Z,275nm,19.4s,MS4.6,baz=310,slow=32						
217A	**Green Valley**	**84.03**	**55**	⇓P	**P**	**09 53 06.2**	**+0.1**
	baz=84						
118A	**Homack Ranch,**	**84.04**	**54**	⇑P	**P**	**09 53 05.9**	**-0.3**
	baz=84						
EKA	**Eskdalemuir Ar**	**84.10**	**341**	P	**P**	**09 53 04.8**	**-1.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=46,slow=4.8,SNR=4.1						
Y20A	**Horse Springs,**	**84.26**	**52**	⇑P	**P**	**09 53 07.3**	**+0.1**
	baz=84						
X21A	**Alamocita Cree**	**84.29**	**51**	⇓P	**P**	**09 53 07.3**	**0.0**
	baz=84						
ECSD	**EROS Data Cent**	**84.31**	**38**	*e*P	**P**	**09 53 09.9**	**+2.6**
Z20A	**Nine Sixteen R**	**84.63**	**53**	⇓P	**P**	**09 53 09.1**	**0.0**
	baz=84						
Y21A	**Point of Rocks**	**84.64**	**51**	⇓P	**P**	**09 53 08.9**	**-0.3**
	baz=84						
318A	**Bisbee**	**84.79**	**55**	⇓P	**P**	**09 53 09.4**	**-0.5**
	baz=85						
ANMO	**Albuquerque**	**84.79**	**50**	*e*P	**P**	**09 53 12.1**	**+2.2**
219A	**White Tail Can**	**84.91**	**54**	⇓P	**P**	**09 53 10.4**	**-0.1**
	baz=85						
Y22A	**Socorro**	**85.14**	**51**	⇓P	**P**	**09 53 11.6**	**0.0**
	baz=85						
220A	**Playas Peak, P**	**85.45**	**54**	⇑P	**P**	**09 53 13.3**	**+0.1**
	baz=85						
TAOE	**Nuku Hiva Isla**	**85.52**	**104**	*e*LR	LR	10 20 02.6	
	comp=Z,311nm,24.0s						
Z22A	**Elephant Butte**	**85.58**	**52**	⇓P	**P**	**09 53 13.9**	**+0.1**
	baz=85						
Y23A	**Lovelace Mesa,**	**85.71**	**51**	⇓P	**P**	**09 53 14.3**	**-0.2**
	baz=86						
W25A	**X Bar L Ranch,**	**85.84**	**49**	⇓P	**P**	**09 53 15.7**	**+0.5**
	baz=86						
CDF	**Champ du Feu**	**86.62**	**332**	*e*P	**P**	**09 53 18.4**	**-0.3**
	comp=Z,8.9nm,0.8s,mb4.7						
CDF	**Champ du Feu**	**86.62**	**332**	*e*P	**P**	**09 53 18.4**	**-0.3**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
CDF	**Champ du Feu**	**86.62**	**332**	*e*P	**P**	**09 53 18.4**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.7						
DAVOX	**Davos/Dischmat**	**86.90**	**329**	LR	LR	10 35 35.1	
	comp=Z,235nm,20.3s,MS4.6,baz=80,slow=38						
MEZF	**Maizieres J'vi**	**87.38**	**333**	*e*P	**P**	**09 53 22.2**	**-0.2**
	comp=Z,3.1nm,0.4s,mb4.6						
MEZF	**Maizieres J'vi**	**87.38**	**333**	*e*P	**P**	**09 53 22.2**	**-0.2**
	comp=Z,3.1nm,0.4s,mb4.9						
LPG	**La Plagne**	**89.22**	**330**	*e*P	**P**	**09 53 31.3**	**+0.1**
	comp=Z,0.9nm,0.3s,mb4.2						
LPG	**La Plagne**	**89.22**	**330**	*e*P	**P**	**09 53 31.3**	**+0.1**
	comp=Z,0.4nm,0.3s,mb4.2						
ORIF	**Oris-en-Rattie**	**90.04**	**330**	*e*P	**P**	**09 53 34.6**	**-0.4**
	comp=Z,1.4nm,0.4s,mb4.3						
ORIF	**Oris-en-Rattie**	**90.04**	**330**	*e*P	**P**	**09 53 34.6**	**-0.4**
ORIF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.5						
ORIF	**Oris-en-Rattie**	**90.04**	**330**	*e*P	**P**	**09 53 34.6**	**-0.4**
	comp=Z,0.7nm,0.4s,mb4.3						
TXAR	**Lajitas Array**	**90.29**	**53**	P	**P**	**09 53 35.9**	**-0.6**
	comp=Z,0.9nm,0.7s,mb4.2,baz=297,slow=3.4,SNR=18						
TXAR				LR	LR	10 31 08.6	
	comp=Z,159nm,18.8s,MS4.5,baz=180,slow=34						
KEST	**Kesra**	**95.99**	**323**	LR	LR	10 43 35.3	
	comp=Z,162nm,19.0s,MS4.5,baz=340,slow=39						
TORD	**Torodi Ar. Bea**	**118.26**	**315**	PKP	PKPdf	09 59 22.3	-1.0
	comp=Z,0.2nm,0.8s,baz=4.3,slow=1.9,SNR=2.2						
TORD				PP	PP	10 00 37.5	-0.6
	comp=Z,0.7nm,0.9s,baz=24,slow=7.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**118.26**	**315**	PKP	PKPdf	09 59 22.2	-1.0
TORD				PP	PP	10 00 37.5	-0.6
LPAZ	**La Paz**	**146.72**	**61**	PKPbc	PKPbc	10 00 17.7	0.0
	comp=Z,1.2nm,0.5s,baz=266,slow=3.3,SNR=8.3						

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*NIED **08** 09:48:00, 36°10N×142°20E, h14^{km}, Mw4.6 Best double couple: $M_0$7.90000×10^{15} NP1:ϕ_s357.00000°, δ71.00000°, λ49.00000°. NP2:ϕ_s246.00000°, δ44.00000°, λ152.00000°.*
*IDC **08** 09:48:38.5±0.5, 36°04N×142°11E, h0^{km}, mb4.4/25, mb1 4.5/30, mb1mx4.4/36, mbtmp4.4/30, ML4.2/5, MS4.2/3, Ms1 4.2/3, ms1mx3.3/40, Error ellipse: s-maj=14.4km s-min=11.0km az=110.0*
*ISCJB **08** 09:48:39.1±0.9, 36°08N±0°03×142°20E±0°03, h13^{km}±5^{km}, mb4.6/94, MS4.5/16, Error ellipse: s-maj=5.4km s-min=3.9km az=148.9*
*NEIC **08** 09:48:40.8±3.6, 35°96N×142°10E, h14^{km}±22^{km}, mb4.7/43, MW4.5(NIED), Error ellipse: s-maj=7.5km s-min=6.1km az=134.0*
*BJI **08** 09:48:40.6, 36°10N×141°72E, h8^{km}, mB5.0/20, mb4.9/45, Ms4.7/29, Ms7 4.5/28*
*JMA **08** 09:48:41.5±0.2, 36°13N×142°16E, h64^{km}, M4.7*
*MOS **08** 09:48:44.2±0.9, 36°46N×142°03E, h33^{km}, mb4.9/38, MS4.5/7, Error ellipse: s-maj=9.5km s-min=6.0km az=109.6*
*DJA **08** 09:48:51, 36°02N×141°52E, h64^{km}, mb5.0/9*
ISC 08 09:48:40.3±0.9, **36°07N**±0°03×**142°13E**±0°03, **h9**^{km}±5^{km}, **h14**^{km}±1.1^{km}**:pP-P, n191,** σ1.04/211, **mb4.6**/94, **MS4.5**/16, **14C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.10**	**251**	⇑P	**Pg**	**09 49 01.9**	**+0.5**
CHOJ				*e*S	**Sg**	**09 49 16.6**	**+1.0**
JHO	**Hitachi**	**1.38**	**294**	P	**Pn**	**09 49 04.7**	**-1.0**
JHO				*e*S	**Sb**	**09 49 24.0**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.49**	**314**	⇑P	**Pn**	**09 49 06.1**	**-1.1**
JFK	**Kawauchi**	**1.64**	**322**	⇑P	**Pn**	**09 49 07.9**	**-1.5**
BSO1	**Boso 1**	**1.70**	**214**	P	**Pn**	**09 49 10.0**	**-0.1**
BSO1				*e*S	**Sn**	**09 49 32.5**	**+0.5**
BSO3	**Boso 3**	**1.83**	**227**	P	**Pn**	**09 49 12.1**	**+0.2**
JFT	**Otama**	**2.04**	**316**	⇑P	**Pn**	**09 49 14.7**	**-0.2**
JAG	**Ashikaga**	**2.20**	**280**	P	**Pn**	**09 49 16.7**	**-0.3**
JFY	**Yanaizu**	**2.37**	**305**	P	**Pn**	**09 49 19.3**	**0.0**
JOD2	**Odawara 2**	**2.61**	**253**	⇑P	**Pn**	**09 49 23.1**	**+0.5**
JOD2				*e*S	**Sn**	**09 49 55.0**	**+0.6**
JRY	**Ryogami san**	**2.62**	**270**	⇑P	**Pn**	**09 49 22.8**	**0.0**
JNS	**Sasagawa**	**2.85**	**309**	P	**Pn**	**09 49 26.3**	**+0.3**
JMK	**Ichinoseki**	**2.97**	**346**	P	**Pn**	**09 49 25.8**	**-1.8**
JYN	**Shimob**	**2.97**	**260**	P	**Pn**	**09 49 28.8**	**+1.2**
MJAR	**Matsushiro Arr**	**3.21**	**280**	Pn	**Pn**	**09 49 31.2**	**+0.4**
	33nm,0.3s,baz=89,slow=15,SNR=110						
MJAR				Sn	**Sn**	**09 50 13.9**	**+4.8**
	19nm,0.3s,baz=150,slow=31,SNR=5.9						
MAJO	**Matsushiro**	**3.21**	**280**	*e*P	**Pn**	**09 49 32.0**	**+1.1**
MAT	**Matsushiro**	**3.21**	**280**	P	**Pn**	**09 49 31.6**	**+0.7**
MAT				S	**Sn**	**09 50 12.4**	**+3.2**
JHJ	**Hachijo jima 2**	**3.52**	**214**	Pn	**Pn**	**09 49 35.7**	**+0.5**
	110nm,0.3s,baz=49,slow=4.8,SNR=22						
JHJ				Sn	**Sn**	**09 50 14.5**	**-2.5**
	362nm,0.3s,baz=60,slow=23,SNR=15						
ERM	**Erimo**	**5.99**	**7**	*e*Pn	**Pn**	**09 50 06.5**	**-2.6**
ERM				*e*Sn	**Sn**	**09 51 19.1**	**+1.3**
ASAJ	**Asahikawa**	**8.05**	**2**	P	**Pn**	**09 50 35.1**	**-2.2**
ASAJ						09 52 04.0	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.05**	**2**	Pn	**Pn**	**09 50 35.1**	**-2.2**
	comp=N,3.6nm,0.3s,baz=198,slow=10,SNR=24						
ASAJ				Sn	**Sn**	**09 52 04.0**	**-4.4**
	comp=N,2.2nm,0.3s,baz=63,slow=18,SNR=2.9						
YUK	**Yuzh-Kuril'sk**	**8.45**	**19**	P	**Pn**	**09 50 43.6**	**+0.7**
YUK				*e*S	**Sn**	**09 52 08.8**	**-10**
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				smax			
	comp=N,2µm,0.7s						
YUK				smax			
	comp=E,2µm,0.7s						
YUK				smax			
	comp=N,580nm,0.5s						
YUK				smax			
	comp=E,280nm,0.6s						
CBIJ	**Chichi jima**	**8.95**	**180**	Pn	**Pn**	**09 50 46.4**	**-3.3**
	comp=E,17nm,0.3s,baz=134,slow=18,SNR=20						
CBIJ				Sn	**Sn**	**09 52 21.1**	**-9.5**
	comp=E,37nm,0.3s,baz=23,slow=21,SNR=7.7						
KUR	**Kuril'sk**	**10.13**	**24**	P	**Pn**	**09 51 13.8**	**+7.9**
KUR				S	**Sn**	**09 52 49.8**	**-10**
KUR				smax			
	comp=N,70nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
VLA	**Vladivostok**	**10.58**	**315**	*e*P	**Pn**	**09 51 15.5**	**+3.5**
VLA				pmax	pmax		
	comp=Z,44nm,0.7s						
VLA				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS	**Yuzh-Sakhalins**	**10.89**	**2**	*e*P	**Pn**	**09 51 12.7**	**-3.5**
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS				MLR	MLR		
	comp=N,900nm,12.0s						
YSS				MLR	MLR		
	comp=E,900nm,12.0s						
KSRS	**Korea Array**	**11.48**	**281**	P	**Pn**	**09 51 27.4**	**+3.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**11.48**	**281**	Pn	**Pn**	**09 51 27.4**	**+2.9**
	comp=Z,0.5nm,0.3s,baz=95,slow=13,SNR=59						
MDJ	**Mudanjiang**	**12.81**	**316**	P	**Pn**	**09 51 45.8**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,1µm,12.9s						
CN2	**Changchun**	**14.93**	**306**	*e*P	**Pn**	**09 52 10.0**	**-1.5**
CN2				*e*sP	sP	09 52 17.0	-3.8
CN2				*e*S	**Sn**	**09 54 56.9**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,15.0s						
CN2				LR	LR		
	comp=E,700nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
JOW	**Kunigami**	**14.98**	**236**	Pn	**Pn**	**09 52 09.4**	**-2.8**
	comp=Z,0.8nm,0.3s,baz=98,slow=9.8,SNR=4.1						
JOW				LR	LR	09 56 55.1	
	comp=Z,680nm,20.1s,baz=355,slow=33						
KLR	**Kul'dur**	**15.19**	**333**	*e*P	**Pn**	**09 52 08.8**	**-6.1**
SNY	**Shenyang**	**15.53**	**297**	⇓P	**Pn**	**09 52 18.9**	**-0.5**
SNY				pmax	pmax		
	comp=Z,21nm,1.0s						
DL2	**Dalian**	**16.52**	**286**	P	**Pn**	**09 52 33.3**	**+1.1**
DL2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**19.69**	**265**	*e*P	**Pn**	**09 53 18.2**	**+7.0**
NJ2				pP	pP	09 53 22.4	+10
NJ2				sP	sP	09 53 25.3	+12
NJ2				PP		09 53 36.6	
NJ2				S	**Sn**	**09 56 53.2**	**+0.8**
NJ2				sS	sS	09 57 01.2	+5.3

NJ2 pmax pmax
comp=Z,120nm,1.1s
NJ2 pmax pmax
comp=Z,210nm,5.2s
NJ2 LR LR
comp=N,2μm,16.4s
NJ2 LR LR
comp=E,1μm,15.4s
NJ2 LR LR
comp=Z,2μm,17.9s
PETK Petropavlovsk- 20.25 28 P **P 09 53 17.0 +1.3**
comp=Z,2.2nm,0.8s,baz=163,slow=12,SNR=3.1
BJI Beijing 20.80 289 P **P 09 53 20.3 -1.5**
BJI pmax pmax
comp=Z,26nm,0.7s
SSLB Suanglung 22.01 242 *e*P **P 09 53 32.1 -2.8**
comp=Z,5.0nm,0.6s,mb4.1
YULB Yu-li 22.01 241 *e*P **P 09 53 33.2 -1.8**
comp=Z,13nm,0.6s,mb4.5
GUMO Guam 22.52 173 LR LR 10 01 45.1
comp=Z,307nm,18.3s,MS3.8,baz=271,slow=35
TPUB Ta-pu 22.54 242 *e*P **P 09 53 38.2 -2.4**
comp=Z,14nm,0.6s,mb4.6
CLNS Chul'man 23.80 336 *e*P **P 09 53 53.2 0.0**
CLNS *e**PP 09 54 02.6
CLNS *e* 09 54 16.6
CLNS *e*S **S 09 57 51.4 -17**
CLNS *e*SS 09 58 48.2
CLNS pmax pmax
comp=Z,24nm,1.1s,mb4.5
CLNS pmax pmax
comp=N,22nm,1.3s
CLNS pmax pmax
comp=E,8.0nm,1.6s
CLNS pmax pmax
comp=Z,14nm,1.0s,mb4.3
CLNS pmax pmax
comp=N,12nm,1.2s
CLNS pmax pmax
comp=E,3.0nm,0.6s
CLNS smax
comp=E,1μm,12.4s
CLNS smax
comp=N,816nm,13.1s
CLNS MLR MLR
comp=Z,692nm,13.0s,MS4.3
CLNS MLR MLR
comp=N,637nm,13.0s,MS4.3
CLNS MLR MLR
comp=E,363nm,14.0s,MS4.3
WHN Wuhan 23.82 265 P **P 09 53 53.3 -0.4**
HHC Hu-ho-hao-te 24.34 291 *e*P **P 09 53 58.1 -0.2**
HHC pP 09 54 02.3
HHC sP sP 09 54 05.3 +3.2
HHC PP 09 54 33.7
HHC PcP PcP 09 57 37.7 -0.1
HHC S **S 09 58 15.0 -2.7**
HHC sS sS 09 58 21.1 -1.0
HHC ScP ScP 10 01 14.5 -2.1
HHC PcS PcS 10 01 17.3 -0.2
HHC pmax pmax
comp=Z,38nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,240nm,6.4s
HHC LR LR
comp=N,450nm,14.7s,MS4.4
HHC LR LR
comp=E,730nm,12.9s,MS4.4
HHC LR LR
comp=Z,940nm,13.0s,MS4.5
YAK Yakutsk 27.14 347 *e*P **P 09 54 20.7 -2.7**
YAK *e**PP pP 09 54 31.5 +5.4
YAK *e* 09 55 01.8
YAK *e*S **S 09 58 56.3 -5.4**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.4
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=Z,18nm,0.7s,mb4.7
YAK pmax pmax
comp=N,20nm,0.9s
YAK pmax pmax
comp=E,11nm,1.0s
YAK smax
comp=E,738nm,10.0s
XAN Xi'an 27.19 276 P **P 09 54 23.1 -1.2**
XAN pP pP 09 54 26.1 -0.8
XAN sP sP 09 54 27.4 -0.7
XAN S **S 09 59 02.3 -0.8**
XAN sS sS 09 59 07.6 0.0
XAN pmax pmax
comp=Z,6.0nm,1.3s,mb4.0
XAN pmax pmax
comp=Z,24nm,7.7s
XAN LR LR
comp=N,270nm,13.4s,MS4.0
XAN LR LR
comp=E,140nm,17.2s,MS4.0
XAN LR LR
comp=Z,150nm,15.5s,MS3.7
SEY Seymchan 27.63 10⇑ *i*P **P 09 54 26.6 -1.3**
ENH Enshi 27.85 267 *e*P **P 09 54 29.7 -0.5**
comp=Z,54nm,0.8s,mb5.2
ULN Ulaanbaatar 28.38 305 *e*P **P 09 54 35.7 +1.0**
ULN pmax pmax
comp=Z,18nm,0.7s,mb4.8
ULN Ulaanbaatar 28.38 305 *e*P **P 09 54 35.7 +0.9**
comp=Z,18nm,0.7s,mb4.8
BOD Bodaibo 28.65 328 *e*P **P 09 54 36.0 -1.0**
BOD *e* 09 54 40.8
BOD pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
SONM Songino Array 28.81 305 P **P 09 54 38.5 0.0**
comp=Z,16nm,0.8s,mb4.8,baz=104,slow=9.2,SNR=61
LZH Lanzhou 30.82 282 ⇑P **P 09 54 57.0 +0.6**
LZH pP pP 09 55 01.0 +1.9
LZH sP sP 09 55 04.5 +4.2
LZH PP PP 09 55 57.3 -8.6
LZH S **S 09 59 57.0 -3.0**
LZH sS sS 10 00 03.1 -1.4
LZH SS SS 10 01 38.5 -33
LZH pmax pmax
comp=Z,51nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,170nm,4.8s
LZH LR LR
comp=N,2μm,14.2s
LZH LR LR
comp=Z,2μm,16.2s,MS4.9
ZAK Zakamensk 31.33 309⇑ *i*P **P 09 55 00.9 +0.1**
ZAK pmax pmax
comp=Z,14nm,1.2s,mb4.7
TLY Talaya 31.40 312 *e*P **P 09 55 03.0 +1.6**
TLY pmax pmax
comp=Z,16nm,0.7s,mb5.0
TLY MLR MLR
comp=Z,428nm,14.0s,MS4.3
TLY Talaya 31.40 312 *e*P **P 09 55 03.1 +1.7**
comp=Z,17nm,0.7s,mb5.0
GYA Guiyang 31.65 262 P **P 09 55 03.8 -0.1**
GYA PP PP 09 56 08.7 -6.6
GYA S **S 10 00 11.9 -1.4**
GYA ScP ScP 10 01 39.4 +0.1
GYA SS SS 10 02 00.4 -28
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,110nm,4.6s
GYA LR LR
comp=N,470nm,14.5s,MS4.4
GYA LR LR
comp=E,440nm,15.7s,MS4.4
GYA LR LR
comp=Z,490nm,15.4s,MS4.3
CD2 Chengdu 32.27 272 P **P 09 55 09.2 -0.1**
CD2 pP pP 09 55 13.6 +1.6
CD2 sP sP 09 55 16.2 +3.1
CD2 PP PP 09 56 16.3 -5.8
CD2 S **S 10 00 21.2 -1.7**
CD2 sS sS 10 00 27.9 +0.5
CD2 SS SS 10 02 14.4 -27
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,180nm,8.2s
CD2 LR LR
comp=N,2μm,15.2s
CD2 LR LR
comp=Z,1μm,16.3s,MS4.8
MOY Mondy 33.01 311 *e*P **P 09 55 15.9 +0.4**
GTA Gaotai 33.41 289 ⇑P **P 09 55 19.9 +0.7**
GTA pP pP 09 55 24.5 +2.6
GTA sP sP 09 55 27.4 +4.4
GTA PP PP 09 56 31.5 -3.2
GTA S **S 10 00 41.7 +1.2**
GTA sS sS 10 00 48.3 +3.4
GTA pmax pmax
comp=Z,55nm,1.0s,mb5.4
GTA pmax pmax
comp=Z,140nm,6.0s
GTA LR LR
comp=N,660nm,16.5s,MS4.6
GTA LR LR
comp=E,810nm,18.9s,MS4.6
GTA LR LR
comp=Z,590nm,15.9s,MS4.4
BILL Bilibino 34.79 16 *e*P **P 09 55 29.5 -1.3**
BILL pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KMI Kunming 35.41 263 P **P 09 55 36.2 -0.4**
KMI pP pP 09 55 40.1 +0.7
KMI sP sP 09 55 41.3 +0.8
KMI PP PP 09 56 54.7 -2.2
KMI S **S 10 01 08.1 -3.4**
KMI pmax pmax
comp=Z,16nm,0.9s,mb5.0
KMI pmax pmax
comp=Z,92nm,3.2s
KMI LR LR
comp=N,510nm,10.8s,MS4.7
KMI LR LR
comp=E,450nm,11.2s,MS4.7
KMI LR LR
comp=Z,430nm,11.2s,MS4.5
TIXI Tiksi 36.32 353 *e*P **P 09 55 42.0 -1.9**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
TIXI MLR MLR
comp=Z,497nm,14.0s,MS4.4
CHTO Chiang Mai 41.63 257 *e*P **P 09 56 29.5 +0.5**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
CHTO Chiang Mai 41.63 257 *e*P **P 09 56 29.5 +0.5**
comp=Z,9.3nm,0.9s,mb4.4
WMQ Urumqi 41.80 298 *e*P **P 09 56 29.3 -0.8**
WMQ pmax pmax
comp=Z,20nm,1.0s,mb4.7
WMQ LR LR
comp=N,290nm,14.0s,MS4.6
WMQ LR LR
comp=E,430nm,13.0s,MS4.6
WMQ LR LR
comp=Z,470nm,14.0s,MS4.5
CMAR Chiang Mai Arr 41.83 257 P **P 09 56 30.2 -0.4**
comp=Z,3.9nm,0.8s,mb4.1,baz=50,slow=7.0,SNR=17
ZAA0 Zalesovo Array 42.99 313 *e*P **P 09 56 39.6 -0.1**
ZALV Zalesovo Beam 42.99 313 P **P 09 56 39.0 -0.7**
comp=Z,6.6nm,0.5s,mb4.6,baz=90,slow=7.4,SNR=12
ZALV PcP PcP 09 58 29.7 -0.2
comp=Z,1.8nm,0.3s,baz=64,slow=3.4,SNR=2.7
NVS Novosibirsk 43.93 314 *e*P **P 09 56 46.3 -0.9**
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.6
NVS pmax pmax
comp=E,22nm,1.4s
MKAR Makanchi Array 45.13 303*ce*P **P 09 56 59.5 +2.6**
MKAR pmax pmax
comp=Z,21nm,0.8s
MKAR Makanchi Array 45.13 303 P **P 09 56 56.6 -0.3**
comp=Z,21nm,0.8s,mb5.0,baz=97,slow=8.7,SNR=34
KSM Kuching 45.32 228 *e*P **P 09 57 00.1 +1.3**
comp=Z,16nm,0.6s,mb5.0
KAPI Kappang 45.94 212 P **P 09 57 02.2 -1.5**
comp=Z,3.3nm,0.3s,mb4.7,baz=60,slow=14,SNR=2.6
KURK Kurchatov 46.99 309 P **P 09 57 11.6 +0.1**
KURK pmax pmax
comp=Z,25nm,0.9s,mb5.1
KURK Kurchatov 46.99 309 P **P 09 57 11.6 +0.1**
comp=Z,25nm,0.9s,mb5.1,baz=83,slow=8.2,SNR=33
KURK Kurchatov 46.99 309 *e*P **P 09 57 11.1 -0.4**
comp=Z,25nm,0.9s,mb5.2
KDAK Kodiak Island 47.43 41 P **P 09 57 15.8 +0.9**
comp=Z,10.0nm,0.9s,mb4.8,baz=139,slow=19,SNR=3.5
GUN Gumba 47.84 277 *e*P **P 09 57 19.2 +0.8**
comp=Z,17nm,0.5s,mb5.3
PKI Pulchoki 48.36 277 *e*P **P 09 57 23.3 +0.8**
comp=Z,19nm,0.7s,mb5.2
PKIN Phulchoki 48.37 277 *e*P **P 09 57 22.8 +0.3**
comp=Z,16nm,0.8s,mb5.1
KKN Kakani 48.37 277 *e*P **P 09 57 23.0 +0.4**
comp=Z,18nm,0.7s,mb5.2
DMN Daman 48.59 277 *e*P **P 09 57 24.7 +0.5**
comp=Z,21nm,1.0s,mb5.1
GKN Gorkha 48.80 278 *e*P **P 09 57 26.4 +0.5**
comp=Z,46nm,0.9s,mb5.5
KOLN Koldanda 49.73 278 *e*P **P 09 57 33.5 +0.5**
comp=Z,12nm,0.6s,mb5.1
PYUN Piuthan 50.08 279 *e*P **P 09 57 36.3 +0.7**
comp=Z,38nm,0.9s,mb5.4
TKM2 Tokmak 2 50.60 299 *e*P **P 09 57 40.7 +1.3**
TKM2 pmax pmax
comp=Z,18nm,0.7s,mb5.1
TKM2 Tokmak 2 50.60 299 *e*P **P 09 57 40.7 +1.3**
comp=Z,18nm,0.7s,mb5.1
KSH Kashi 51.34 295 *e*P **P 09 57 47.1 +2.1**
KSH *e*pP pP 09 57 51.2 +3.4
KSH *e*sP sP 09 57 54.1 +5.2
KSH *e*PcP PcP 09 59 00.0 +0.2
KSH *e*PP PP 09 59 45.2 +3.4
KSH *e*ScP ScP 10 02 55.3 -1.2
KSH *e*PcS PcS 10 02 57.2 -0.3
KSH *e*S **S 10 05 05.0 +0.8**
KSH *e*sS sS 10 05 13.1 +4.2
KSH *e*SS SS 10 08 40.2 +0.6
KSH pmax pmax
comp=Z,98nm,4.6s
KSH LR LR
comp=N,960nm,15.6s,MS5.1
KSH LR LR
comp=E,740nm,12.8s,MS5.1
AAK Ala-Archa 51.46 299 *e*P **P 09 57 45.8 -0.1**
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
AAK Ala-Archa 51.46 299 *e*P **P 09 57 45.8 0.0**
comp=Z,6.1nm,0.6s,mb4.7
BVAR Borovoye Array 51.65 313 P **P 09 57 46.9 -0.3**
comp=Z,4.6nm,0.9s,mb4.4,baz=79,slow=7.7,SNR=16
BVAR PcP PcP 09 59 00.5 -0.2
comp=Z,2.3nm,0.6s,baz=92,slow=4.6,SNR=4.1
BRVK Borovoye 51.71 313*c i*P **P 09 57 47.2 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRVK Borovoye 51.71 313 *e*P **P 09 57 47.2 -0.3**
comp=Z,7.2nm,0.9s,mb4.6
PSI Prapat 51.81 240 P **P 09 57 49.1 +0.3**
comp=Z,5.7nm,0.5s,mb4.7,baz=14,slow=4.7,SNR=7.1
AML Almayashu 52.18 299 *e*P **P 09 57 52.6 +1.4**
comp=Z,19nm,0.7s,mb5.1
INK Inuvik 54.98 27 *e*P **P 09 58 11.8 +0.4**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 54.98 27 P **P 09 58 11.4 0.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=277,slow=5.6,SNR=16
INK Inuvik 54.98 27 *e*P **P 09 58 11.8 +0.4**
comp=Z,3.7nm,0.6s,mb4.6
FITZ Fitzroy Crossi 56.09 199 P **P 09 58 20.0 +0.1**
comp=Z,3.1nm,0.7s,mb4.4,baz=32,slow=9.9,SNR=6.9
WRAB Tennant Creek 56.18 189 *e*P **P 09 58 26.5 +6.0**
WRAB pmax pmax
comp=Z,34nm,1.7s,mb5.1
WRAB Tennant Creek 56.18 189 *e*P **P 09 58 26.5 +6.0**
comp=Z,34nm,1.7s,mb5.1
WRA Warramunga Arr 56.19 189 P **P 09 58 19.6 -1.0**
comp=Z,1.6nm,0.4s,mb4.4,baz=6.1,slow=7.2,SNR=41
SVE Sverdlovsk 56.26 319 *e*P **P 09 58 20.5 -0.2**
SVE pmax pmax
comp=Z,20nm,0.9s,mb5.2
ARU Arti 57.47 319*d i*P **P 09 58 28.8 -0.5**
ARU *e* 10 00 33.9
ARU S **S 10 06 27.3 +0.9**
ARU pmax pmax
comp=Z,20nm,1.0s,mb5.1
ARU Arti 57.47 319 *e*P **P 09 58 29.1 -0.3**
comp=Z,21nm,1.0s,mb5.1
ABKAR Akbulak array 59.01 311 *e*P **P 09 58 39.6 -0.6**
comp=Z,8.5nm,0.7s,mb4.9
ASAR Alice Springs 59.92 189 P **P 09 58 46.1 -0.5**
comp=Z,0.5nm,0.5s,mb3.9,baz=2.6,slow=6.5,SNR=14
RES Resolute Bay 63.39 14 *e*P **P 09 59 08.9 -0.6**
RES pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
RES Resolute Bay 63.39 14 *e*P **P 09 59 08.9 -0.7**
comp=Z,4.2nm,0.7s,mb4.7
YKA Yellowknife Ar 64.35 30 P **P 09 59 15.4 -0.6**
comp=Z,0.9nm,0.8s,mb3.8,baz=300,slow=6.7,SNR=9.5
KLMR Klimovskoe 64.88 328 *e*P **P 09 59 18.8 -0.7**
KLMR pmax pmax
comp=Z,13nm,1.5s,mb4.7
ARCES ARCESS Array B 65.10 340 P **P 09 59 20.1 -0.7**
comp=Z,2.9nm,0.8s,mb4.4,baz=67,slow=9.3,SNR=5.3
STKA Stephens Creek 67.59 180 P **P 09 59 36.6 -0.5**
comp=Z,0.6nm,0.3s,mb4.1,baz=316,slow=23,SNR=3.6
OBN Obninsk 69.22 324 *e*P **P 09 59 46.6 -0.5**
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
FINES FINESS Array B 69.94 333 P **P 09 59 50.9 -0.6**
comp=Z,4.9nm,0.8s,mb4.5,baz=60,slow=9.1,SNR=10.0
VSR Storozhevoye 70.04 319 *e*P **P 09 59 52.1 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,4.0nm,0.5s
VORD Divnogorie 70.11 319 *e*P **P 09 59 52.3 -0.4**
VORD pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,20nm,0.6s
VSU Vasula 71.58 330*c i*P **P 10 00 01.4 -0.1**
VSU pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SUMG Summit 71.65 0 *e*P **P 10 00 02.8 +1.1**
ZEI Tsey 71.87 310 *e*P **P 10 00 01.8 -1.8**
ZEI pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
KIV Kislovodsk 71.98 311⇓ *i*P **P 10 00 04.9 +0.7**
KIV pmax pmax
comp=Z,17nm,0.8s,mb5.0
KIV Kislovodsk 71.98 311 *e*P **P 10 00 05.8 +1.6**
comp=Z,17nm,0.9s,mb5.0
BMO Blue Mountains 72.16 47 *e*P **P 10 00 05.5 +0.2**
comp=Z,2.2nm,1.1s,mb4.0
SWMT Swartz Lake 72.59 44 *e*P **P 10 00 08.9 +1.1**
comp=Z,3.4nm,1.1s,mb4.2
SLMT Seeley Lake 73.02 44 *e*P **P 10 00 10.7 +0.3**
FFC Flin Flon 74.20 33 *e*P **P 10 00 16.7 -0.5**
HRY Holter Researc 74.26 43 *e*P **P 10 00 18.3 +0.6**
LRM Limekiln Ridge 74.43 44 *e*P **P 10 00 19.4 +0.7**
EGMT Eagleton 74.61 41 *e*P **P 10 00 20.3 +0.6**
comp=Z,7.6nm,1.2s,mb4.5
DLMT Dillon 74.62 45 *e*P **P 10 00 20.5 +0.8**
comp=Z,4.2nm,1.0s,mb4.3
BOZ Bozeman (W) 75.00 44 *e*P **P 10 00 22.5 +0.5**
BOZ pmax pmax
comp=Z,36nm,2.8s,mb4.8
BOZ Bozeman (W) 75.00 44 *e*P **P 10 00 22.5 +0.6**
comp=Z,36nm,2.8s,mb4.8
RAO Raoul Island 75.06 144 LR LR 10 32 01.7
comp=Z,296nm,18.7s,MS4.6,baz=40,slow=35
NVAR Mina Array Bea 75.10 53 P **P 10 00 23.3 +0.6**
comp=Z,1.2nm,0.8s,mb3.9,baz=295,slow=6.0,SNR=7.9
NB2 NORSAR Subarra 75.30 338 P **P 10 00 22.8 -0.6**
comp=Z,3.8nm,0.7s,mb4.4,baz=38,slow=5.9
NOA NORSAR Array B 75.30 338 P **P 10 00 23.1 -0.2**
comp=Z,4.3nm,0.8s,mb4.5,baz=39,slow=5.7,SNR=13
AKASG Malin Array Be 75.42 323*ce*P **P 10 00 23.7 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 75.42 323 P **P 10 00 23.4 -0.8**
comp=Z,2.5nm,0.5s,mb4.4,baz=48,slow=6.2,SNR=10
AKASG Malin Array Be 75.42 323 P **P 10 00 23.4 -0.8**
IMW Indian Meadow 76.44 45 *e*P **P 10 00 32.0 +1.8**
comp=Z,4.2nm,1.2s,mb4.2
DCID1 Drake Creek 76.48 46 *e*P **P 10 00 26.3 -4.1**
comp=Z,5.7nm,0.6s,mb4.7
TPAW Teton Pass 76.68 46 *e*P **P 10 00 37.7 +6.1**
comp=Z,6.6nm,1.4s,mb4.4
REDW Red Top Meadow 76.81 46 P **P 10 00 33.7 +1.3**
comp=Z,6.0nm,1.4s,mb4.3
DUG Dugway 77.55 49 *e*P **P 10 00 37.4 +0.9**
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
DUG Dugway 77.55 49 *e*P **P 10 00 37.4 +0.9**
comp=Z,2.8nm,0.8s,mb4.2
PDAR Pinedale Array 77.93 46 P **P 10 00 38.7 +0.1**
comp=Z,0.8nm,0.6s,mb3.8,baz=273,slow=1.9,SNR=10
CCUT Cedar City 78.79 52 *e*P **P 10 00 51.3 +7.8**
comp=Z,5.7nm,1.5s,mb4.3
SRU San Rafael 79.61 49 *e*P **P 10 00 48.7 +0.8**
SRU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SRU San Rafael 79.61 49 *e*P **P 10 00 48.7 +0.7**
comp=Z,3.8nm,0.7s,mb4.4
BR131 Keskin Array S 79.93 312 *e*P **P 10 00 50.6 +0.9**
comp=Z,2.2nm,0.7s,mb4.2
BRTR Keskin Array B 79.93 312 P **P 10 00 50.0 +0.3**
comp=Z,4.3nm,1.0s,mb4.3,baz=90,slow=3.7,SNR=12
KOLS Kolonicke sedl 79.94 324 *e*P **P 10 00 51.4 +1.8**
KOLS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KOLS Kolonicke sedl 79.94 324 *e*P **P 10 00 51.4 +1.8**
comp=Z,3.4nm,1.1s,mb4.2
KOLS Kolonicke sedl 79.94 324 *e*P **P 10 00 51.4 +1.8**
STHS Stebnicka Huta 80.08 325 *e*P **P 10 00 51.4 +1.1**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 80.08 325 *e*P **P 10 00 51.4 +1.1**
comp=Z,2.6nm,1.0s,mb4.1
STHS Stebnicka Huta 80.08 325 *e*P **P 10 00 51.4 +1.1**
KECS Kecovo 81.10 325 *e*P **P 10 00 55.8 0.0**
KECS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
KECS Kecovo 81.10 325 *e*P **P 10 00 55.8 0.0**
comp=Z,3.5nm,1.4s,mb4.1
KECS Kecovo 81.10 325 *e*P **P 10 00 55.8 0.0**
VYHS Vyhne 81.85 326 *e*P **P 10 00 59.9 +0.2**
VYHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
VYHS Vyhne 81.85 326 *e*P **P 10 00 59.9 +0.2**
comp=Z,1.9nm,1.1s,mb3.9
VYHS Vyhne 81.85 326 *e*P **P 10 00 59.9 +0.2**
BRG Berggiesshubel 82.18 330 *e*P **P 10 01 01.5 +0.1**
comp=Z,2.5nm,0.6s,mb4.3
BRG
comp=N,658nm,14.1s
BRG
comp=E,351nm,15.9s
BRG
comp=Z,741nm,14.6s
BRG Berggiesshubel 82.18 330 *e*P **P 10 01 01.5 +0.1**
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BRG MLR MLR
comp=N,394nm,14.1s,MS5.0
BRG MLR MLR
comp=E,210nm,15.9s,MS5.0
BRG MLR MLR
comp=Z,444nm,14.6s,MS5.0
CLL Collm 82.22 331 *i* P **P 10 01 01.1 -0.5**
CLL *e* 10 01 09.0
CLL pmax pmax
comp=Z,11nm,1.3s,mb4.6
CLL Collm 82.22 331 *i* P **P 10 01 01.1 -0.5**
comp=Z,11nm,1.3s,mb4.6
CLL *e* 10 01 09.0
CLL Collm 82.22 331 *i* P **P 10 01 01.1 -0.5**
comp=Z,11nm,1.3s,mb4.6
CLL *es*P sP 10 01 09.0 +3.4
CLL *e* 10 01 19.0
GEC2 GERESS Array S 83.84 329 *e*P **P 10 01 08.9 -1.2**
GERES GERESS Array B 83.84 329 P **P 10 01 09.7 -0.4**
comp=Z,0.8nm,0.6s,mb4.0,baz=44,slow=5.9,SNR=7.3
GRA1 Grafenberg Arr 84.20 330 *e*P **P 10 01 11.7 -0.2**
comp=Z,6.0nm,0.9s,mb4.7
GRA1 LR LR

comp=Z,400nm,18.0s,MS4.8
GRF Grafenberg Arr 84.20 330 *e*P **P 10 01 11.7 -0.2**
comp=Z,6.0nm,0.9s,mb4.7
GRF *e*L 10 33 29.4
comp=Z,404nm,18.0s
GRF Grafenberg Arr 84.20 330 *e*P **P 10 01 11.7 -0.2**
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
GRF MLR MLR
comp=Z,400nm,18.0s,MS4.8
GRF Grafenberg Arr 84.20 330 *e*P **P 10 01 11.7 -0.2**
GRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
GRF MLR MLR
comp=Z,400nm,18.0s,MS4.8
CDF Champ du Feu 86.77 332 *e*P **P 10 01 24.5 -0.2**
comp=Z,15nm,1.1s,mb4.9
CDF Champ du Feu 86.77 332 *e*P **P 10 01 24.5 -0.2**
CDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
CDF Champ du Feu 86.77 332 *e*P **P 10 01 24.5 -0.2**
comp=Z,7.7nm,1.1s,mb4.8
CABF La Chapelle 88.71 331 *e*P **P 10 01 36.6 +2.5**
comp=Z,32nm,1.5s,mb5.1
CABF La Chapelle 88.71 331 *e*P **P 10 01 36.6 +2.5**
CABF pmax pmax
comp=Z,16nm,1.5s,mb5.1
CABF La Chapelle 88.71 331 *e*P **P 10 01 36.6 +2.5**
comp=Z,16nm,1.5s,mb5.1
AVF Avril sur Loir 89.59 333 *e*P **P 10 01 38.2 0.0**
comp=Z,8.6nm,0.9s,mb4.8
AVF Avril sur Loir 89.59 333 *e*P **P 10 01 38.2 0.0**
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
AVF Avril sur Loir 89.59 333 *e*P **P 10 01 38.2 0.0**
comp=Z,4.3nm,0.9s,mb4.8
TXAR Lajitas Array 90.25 53 P **P 10 01 41.6 0.0**
comp=Z,0.5nm,0.6s,mb4.0,baz=311,slow=2.9,SNR=9.0
VIVF Saint-Julien-l 90.72 331 *e*P **P 10 01 43.5 0.0**
comp=Z,17nm,1.2s,mb4.9
VIVF Saint-Julien-l 90.72 331 *e*P **P 10 01 43.5 0.0**
VIVF pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
VIVF Saint-Julien-l 90.72 331 *e*P **P 10 01 43.5 0.0**
comp=Z,8.5nm,1.2s,mb5.0
TORD Torodi Ar. Bea 118.42 315 PKP PKPdf 10 07 26.9 -2.0
comp=Z,0.5nm,1.1s,baz=307,slow=2.0,SNR=2.9
TORD PP PP 10 08 40.4 -4.0
comp=Z,0.9nm,1.0s,baz=41,slow=8.2,SNR=4.1
LPAZ La Paz 146.66 62 PKPbc PKPbc 10 08 23.1 +0.3
comp=Z,1.4nm,0.5s,baz=298,slow=1.4,SNR=6.4
SIV San Ignacio 151.24 52 PKPbc PKPbc 10 08 33.7 -0.9
comp=Z,1.4nm,0.7s,baz=335,slow=3.6,SNR=9.4

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*ISK **08** 10:06:59.4, 36.°49N×37.°01E, h18km, MD3.1*
*DDA **08** 10:07:00.9, 36.°51N×36.°90E, h4km±5km, Md3.1*
*CSEM **08** 10:07:00.3±0.5, 36.°55N×36.°94E, h20km, MD3.1, Error ellipse: s-maj=19.2km s-min=6.7km az=137.0*
*ISCJB **08** 10:07:01.1±0.9, 36.°53N±0.°07×36.°94E±0.°08, h20km±9km, Error ellipse: s-maj=15.6km s-min=4.5km az=136.5*
ISC 08 10:07:01.1±0.9, 36.°52N±0.°07×36.°92E±0.°08, h15km±6km, n21, σ1°11/33, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.28**	**26**	*i* P	**Pg**	**10 07 06.5**	**-0.5**
KUZU				*i* S	**Sg**	**10 07 11.0**	**0.0**
KUZU	**Kuzuini**	**0.28**	**26**	*i* P	**Pg**	**10 07 06.5**	**-0.5**
KUZU				*i* S	**Sg**	**10 07 11.0**	**0.0**
COBT	**Iskenderun**	**0.54**	**270**	*i* P	**Pg**	**10 07 11.2**	**-0.4**
COBT				*i* S	**Sg**	**10 07 18.1**	**-0.7**
COBT	**Iskenderun**	**0.54**	**270**	*i* P	**Pg**	**10 07 11.2**	**-0.4**
COBT				*i* S	**Sg**	**10 07 18.1**	**-0.7**
GAZ	**Gaziantep**	**0.69**	**20**	*e*PG	**Pg**	**10 07 13.6**	**-1.0**
GAZ				*e*SG	**Sg**	**10 07 24.0**	**+0.4**
GAZ	**Gaziantep**	**0.69**	**20**	*e*Pg	**Pg**	**10 07 13.6**	**-0.9**
GAZ				*e*Sg	**Sg**	**10 07 24.0**	**+0.3**
HTY	**Hatay**	**0.75**	**238**	*e*PG	**Pg**	**10 07 15.2**	**-0.4**
HTY				*e*SG	**Sg**	**10 07 26.7**	**+1.2**
HTY	**Hatay**	**0.75**	**238**	*e*Pg	**Pg**	**10 07 15.3**	**-0.3**
HTY				*e*Sg	**Sg**	**10 07 26.7**	**+1.2**
YAYL	**Yayladag**	**0.82**	**234**	*i* P	**Pg**	**10 07 16.3**	**-0.6**
YAYL				*i* S	**Sg**	**10 07 29.5**	**+1.8**
YAYL	**Yayladag**	**0.82**	**234**	*i* P	**Pg**	**10 07 16.3**	**-0.6**
YAYL				*i* S	**Sg**	**10 07 29.5**	**+1.8**
GZT	**Gaziantep**	**0.98**	**32**	*i* P	**Pb**	**10 07 20.2**	**+0.5**
GZT				*i* S	**Sg**	**10 07 35.5**	**+2.7**
KMRS	**Kahramanmaras**	**0.98**	**359**	*e*PG	**Pg**	**10 07 19.5**	**-0.6**
KRTS	**Karatas**	**1.25**	**273**	*e*PN	**Pn**	**10 07 23.5**	**-0.4**
KOZT	**Kozan**	**1.30**	**318**	*e*PN	**Pn**	**10 07 24.2**	**-0.5**
URFA	**Urfa**	**1.78**	**58**	*e*PN	**Pn**	**10 07 29.2**	**-2.1**
URFA	**Urfa**	**1.78**	**58**	*e*Pn	**Pn**	**10 07 29.2**	**-2.1**
AKCD	**Akcadag**	**1.94**	**24**	*e*P	**Pn**	**10 07 38.1**	**+4.5**
AKCD				*e*S	**Sn**	**10 08 00.6**	**+3.0**
MALT	**Malatya**	**2.15**	**33**	*e*PN	**Pn**	**10 07 36.2**	**-0.3**
MALT	**Malatya**	**2.15**	**33**	*e*Pn	**Pn**	**10 07 36.2**	**-0.2**
SARI	**SarD1z-Kayseri**	**2.16**	**355**	*e*PN	**Pn**	**10 07 32.7**	**-3.8**
SARI	**SarD1z-Kayseri**	**2.16**	**355**	*e*Pn	**Pn**	**10 07 32.7**	**-3.8**

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*ISCJB **08** 10:07:28.5±0.7, 20.°97S±0.°04×69.°2W±0.°2, h132km±10km, mb3.9/2, Error ellipse: s-maj=29.6km s-min=6.7km az=175.7*
*GUC **08** 10:07:29.4±0.9, 20.°96S×68.°98W, h105km±11km, ML4.0*
*NEIC **08** 10:07:29.0, 20.°96S×68.°98W, h105km, MG4.0(GUC), After GUC.*
*IDC **08** 10:07:31.5±1.4, 21.°06S×68.°40W, h114km±16km, mb3.9/2, mb1 3.8/4, mb1mx3.4/15, mbtmp3.8/4, Error ellipse: s-maj=52.8km s-min=16.8km az=107.0*
ISC 08 10:07:29.5±0.7, 20.°97S±0.°04×69.°2W±0.°2, h125km±10km, n16, σ1°06/20, mb4.0/2, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.32**	**256**	⇑*i*P	**Pn**	**10 07 45.6**	**-1.6**
PB01				*i* S	**Sn**	**10 07 58.5**	**-2.0**
PB01				AML	AML	10 08 00.1	
comp=N,5μm,0.3s							
HMBC	**Humberston**	**0.97**	**315**	⇑*i*P	**Pn**	**10 07 51.4**	**-0.3**
HMBC				*i* S	**Sn**	**10 08 08.4**	**-0.2**
HMBC				AML	AML	10 08 10.3	
comp=N,3μm,0.6s							
PB04	**Plate Boundary**	**1.33**	**193**	*e*P	**Pn**	**10 07 59.6**	**+4.2**
PB04				AML	AML	10 08 29.3	
comp=N,2μm,0.4s							
MACH	**Maria Elena**	**1.35**	**205**	⇓*i*P	**Pn**	**10 07 56.1**	**+0.5**
MACH				*i* S	**Sn**	**10 08 16.1**	**+0.6**
LVC	**Limon Verde**	**1.66**	**172**	P	**Pn**	**10 07 59.3**	**+0.2**
comp=N,23nm,0.3s,baz=5.2,slow=11,SNR=267							
LVC				S	**Sn**	**10 08 22.2**	**+0.5**
comp=N,175nm,0.3s,baz=340,slow=6.7,SNR=64							
PECH	**Pedro de Valdi**	**1.69**	**196**	*e*P	**Pn**	**10 07 59.9**	**+0.3**
PECH				*i* S	**Sn**	**10 08 23.9**	**+1.3**
PECH				AML	AML	10 08 27.3	
comp=N,4μm,0.5s							
MNMC	**Miaee Miae**	**1.87**	**347**	⇓*i*P	**Pn**	**10 08 01.8**	**+0.1**
MNMC				*i* S	**Sn**	**10 08 27.4**	**+1.1**
MNMC				AML	AML	10 08 34.3	
comp=N,1μm,0.3s							
LPAZ	**La Paz**	**4.75**	**12**	P	**Pn**	**10 08 40.7**	**+1.4**
comp=N,3.1nm,0.3s,baz=186,slow=17,SNR=45							
LPAZ	**La Paz**	**4.75**	**12**	P	**Pn**	**10 08 40.7**	**+1.4**
SIV	**San Ignacio**	**9.12**	**59**	P	**Pn**	**10 09 32.3**	**-6.0**
comp=N,2.5nm,0.3s,baz=231,slow=13,SNR=24							
CFAA	**Coronel Fontan**	**10.63**	**176**	P	**Pn**	**10 09 55.5**	**-2.8**
comp=N,0.0nm,0.3s,baz=4.6,slow=13,SNR=7.1							
DBIC	**Dimbokro**	**68.80**	**74**	P	**P**	**10 18 20.2**	**-0.5**
comp=N,2.8nm,0.6s,mb4.3,baz=218,slow=3.1,SNR=3.1							
DBIC	**Dimbokro**	**68.80**	**74**	P	**P**	**10 18 20.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**77.39**	**71**	P	**P**	**10 19 11.0**	**-0.2**
comp=N,0.6nm,0.4s,mb3.7,baz=249,slow=6.3,SNR=15							
YKA	**Yellowknife Ar**	**90.61**	**341**	pP	pP	10 20 49.1	-0.4
comp=N,0.1nm,0.5s,baz=130,slow=4.4,SNR=1.9							
YKA				sP	sP	10 20 60.0	-2.6
comp=N,0.4nm,0.8s,baz=133,slow=4.9,SNR=3.3							
MKAR	**Makanchi Array**	**145.33**	**35**	PKPbc	PKPbc	10 26 54.8	+2.3
comp=N,1.0nm,0.7s,baz=300,slow=2.8,SNR=5.5							

IDC 08 10:10:21.8±3.8, 4.°86S×149.°13E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=122.7km s-min=48.6km az=115.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.78**	**223**	P	P	10 15 05.6	+1.0
0.6nm,0.5s,baz=47,slow=11,SNR=15							
ASAR	**Alice Springs**	**23.77**	**217**	P	P	10 15 35.7	-0.6
0.2nm,0.6s,baz=51,slow=8.8,SNR=4.7							
FITZ	**Fitzroy Crossi**	**26.46**	**238**	P	P	10 16 00.6	-0.2
1.6nm,0.7s,baz=68,slow=9.3,SNR=6.3							
TORD	**Torodi Ar. Bea**	**146.83**	**287**	PKPbc	PKPbc	10 30 06.4	-0.7
0.5nm,0.9s,baz=95,slow=3.0,SNR=5.1							

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*IDC **08** 10:26:35.8±7.6, 33.°10N×135.°11E, h180km±104km, mb2.9/3, mb1 3.0/5, mb1mx2.8/28, mbtmp2.9/5, Error ellipse: s-maj=113.3km s-min=20.4km az=58.0*
*ISCJB **08** 10:26:43.1±0.7, 34.°1N±0.°1×137.°43E±0.°09, h353km±6km, mb2.7/3, Error ellipse: s-maj=16.5km s-min=11.2km az=164.5*
*JMA **08** 10:26:43.9±0.3, 33.°94N×137.°47E, h345km±3km, M2.9*
ISC 08 10:26:44.2±0.7, 34.°1N±0.°1×137.°44E±0.°09, h346km±6km, n19, σ0°81/25, mb2.7/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.69**	**299**	P	**Pn**	**10 27 28.7**	**+0.4**
HMMJ	**Hamamatsu 2**	**0.82**	**17**	P	**Pn**	**10 27 29.4**	**+0.7**
JKN2	**Miekihoku**	**0.98**	**280**	P	**Pn**	**10 27 29.5**	**+0.1**
JKN2				S	**S**	**10 28 04.1**	**-1.4**
JAO	**Obara**	**1.21**	**353**	P	**Pn**	**10 27 30.9**	**+0.6**
JWZ	**Kozaga**	**1.53**	**250**	P	**Pn**	**10 27 31.7**	**-0.4**
JWY	**Kouya**	**1.54**	**276**	P	**Pn**	**10 27 32.2**	**+0.1**
JGM	**Miyama**	**1.73**	**340**	P	**Pn**	**10 27 33.8**	**+0.6**
JOD2	**Odawara 2**	**1.81**	**48**	P	**Pn**	**10 27 34.2**	**+0.5**
JHJ	**Hachijo jima 2**	**2.17**	**115**	P	**Pn**	**10 27 37.1**	**+0.8**
6.4nm,0.3s,baz=232,slow=16,SNR=13							
JHJ				S	**S**	**10 28 23.8**	**+5.6**
1.0nm,0.3s,baz=29,slow=19,SNR=2.3							
JHJ2	**Mitsune**	**2.20**	**115**	P	**Pn**	**10 27 37.1**	**+0.5**
JRY	**Ryogami san**	**2.29**	**31**	P	**Pn**	**10 27 38.3**	**+1.2**
JRY				S	**S**	**10 28 20.5**	**+0.8**
JHU	**Hanno**	**2.34**	**40**	P	**Pn**	**10 27 37.9**	**+0.4**
JHU				S	**S**	**10 28 18.8**	**-1.6**
MJAR	**Matsushiro Arr**	**2.55**	**14**	P	**Pn**	**10 27 39.4**	**+0.2**
0.6nm,0.3s,baz=195,slow=10,SNR=4.5							
BSO4	**Boso 4**	**2.57**	**68**	P	**Pn**	**10 27 39.1**	**-0.3**
BSO4				S	**S**	**10 28 23.8**	**0.0**
BSO3	**Boso 3**	**2.65**	**73**	P	**Pn**	**10 27 39.3**	**-0.8**
BSO3				S	**S**	**10 28 24.0**	**-0.9**
JHO	**Hitachi**	**3.61**	**44**	P	**Pn**	**10 27 48.4**	**-0.5**
MKAR	**Makanchi Array**	**43.02**	**304**	P	**P**	**10 34 08.6**	**-2.1**
0.3nm,0.4s,mb2.8,baz=84,slow=6.4,SNR=4.2							
KURK	**Kurchatov**	**45.28**	**310**	P	**P**	**10 34 29.3**	**+0.9**
0.6nm,0.8s,mb2.8,baz=99,slow=11,SNR=2.9							
WRA	**Warramunga Arr**	**53.79**	**184**	P	**P**	**10 35 31.9**	**-0.3**
0.1nm,0.3s,mb2.6,baz=0.1,slow=7.6,SNR=6.2							

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*ISCJB **08** 10:31:38.5±2.7, 22.°6S±0.°1×179.°7W±0.°1, h595km±37km, mb3.6/5, Error ellipse: s-maj=21.0km s-min=18.0km az=169.8*
*IDC **08** 10:31:40.0±3.2, 22.°71S×179.°59W, h602km±43km, mb3.2/7, mb1 3.5/8, mb1mx3.3/17, mbtmp3.2/8, Error ellipse: s-maj=44.8km s-min=14.9km az=162.0*
ISC 08 10:31:40.5±2.8, 22.°8S±0.°1×179.°6W±0.°1, h609km±35km, n12, σ0°95/14, mb3.6/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.72**	**190**	P	**P**	**10 34 53.9**	**-0.7**
0.6nm,0.3s,baz=319,slow=19,SNR=3.8							
URZ				S	**S**	**10 37 32.6**	**-0.3**
0.2nm,0.3s,baz=354,slow=19,SNR=2.9							
ARMA	**Armidale**	**26.81**	**247**	*e*P	**P**	**10 36 35.4**	**+1.2**
CNB	**Canberra Magne**	**29.78**	**238**	*e*P	**P**	**10 37 01.6**	**+1.8**
CTA	**Charters Tower**	**31.89**	**268**	*e*P	**P**	**10 37 17.7**	**-0.3**
3.5nm,0.3s							
STKA	**Stephens Creek**	**35.53**	**247**	P	**P**	**10 37 48.7**	**+0.5**
2.8nm,0.4s,baz=90,slow=10,SNR=15							
ASAR	**Alice Springs**	**42.62**	**259**	P	**P**	**10 38 45.0**	**-0.2**
5.3nm,0.7s,baz=99,slow=7.8,SNR=73							
ASAR				S	**S**	**10 44 26.2**	**+0.5**
0.3nm,0.9s,baz=92,slow=14,SNR=3.3							
WRA	**Warramunga Arr**	**42.89**	**265**	P	**P**	**10 38 46.2**	**-1.1**
2.0nm,0.3s,mb4.1,baz=95,slow=8.0,SNR=169							
KAKA	**Kakadu**	**46.61**	**274**	*e*P	**P**	**10 39 13.1**	**-2.7**
7.7nm,0.9s							
FITZ	**Fitzroy Crossi**	**51.32**	**265**	P	**P**	**10 39 50.3**	**-0.1**
1.8nm,0.3s,mb4.0,baz=103,slow=6.6,SNR=37							
NVAR	**Mina Array Bea**	**83.66**	**44**	P	**P**	**10 43 06.7**	**+0.3**
0.6nm,0.7s,mb3.2,baz=208,slow=7.0,SNR=5.5							
TXAR	**Lajitas Array**	**89.49**	**58**	P	**P**	**10 43 35.0**	**+0.8**
0.7nm,0.9s,mb3.5,baz=210,slow=6.4,SNR=6.9							
PDAR	**Pinedale Array**	**91.59**	**44**	P	**P**	**10 43 43.2**	**-0.4**
0.3nm,0.8s,mb3.4,baz=197,slow=2.8,SNR=3.1							

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*IDC **08** 10:49:07.8±2.6, 36.°09N×142.°60E, h0km, mb3.9/3, mb1 3.7/8, mb1mx3.5/31, mbtmp3.9/8, ML3.6/5, Error ellipse: s-maj=48.4km s-min=25.5km az=92.0*
*ISCJB **08** 10:49:10.7±1.6, 36.°15N±0.°04×142.°29E±0.°07, h19km±12km, mb3.8/3, Error ellipse: s-maj=10.1km s-min=6.4km az=13.3*
*JMA **08** 10:49:12.6±0.2, 36.°14N×142.°20E, h69km, M3.2*
*NEIC **08** 10:49:12.6, 36.°14N×142.°20E, h69km, MG3.2(JMA), After JMA.*
ISC 08 10:49:11.4±1.9, 36.°13N±0.°03×142.°31E±0.°08, h21km±19km, n22, σ1°05/34, mb3.8/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.25**	**251**	P	**Pn**	**10 49 33.5**	**-0.1**
CHOJ				S	**Sn**	**10 49 49.1**	**-0.7**
JHO	**Hitachi**	**1.48**	**290**	P	**Pn**	**10 49 36.2**	**-0.7**
JHO				S	**Sn**	**10 49 54.6**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.56**	**309**	P	**Pn**	**10 49 37.4**	**-0.5**
JFK	**Kawauchi**	**1.69**	**318**	P	**Pn**	**10 49 39.7**	**0.0**
JFK				S	**Sn**	**10 50 00.0**	**-0.7**
BSO1	**Boso 1**	**1.83**	**217**	P	**Pn**	**10 49 41.4**	**-0.2**
BSO1				S	**Sn**	**10 50 05.7**	**+1.6**
BSO3	**Boso 3**	**1.97**	**228**	P	**Pn**	**10 49 43.7**	**+0.1**
JFT	**Otama**	**2.10**	**312**	P	**Pn**	**10 49 46.3**	**+0.9**
JFT				S	**Sn**	**10 50 09.8**	**-1.2**
JMM	**Marumori**	**2.12**	**326**	P	**Pn**	**10 49 45.3**	**-0.3**
JAG	**Ashikaga**	**2.32**	**278**	P	**Pn**	**10 49 48.1**	**-0.3**
JOD2	**Odawara 2**	**2.76**	**253**	P	**Pn**	**10 49 54.6**	**+0.2**
JOD2				S	**Sn**	**10 50 25.8**	**-1.3**
JRY	**Ryogami san**	**2.76**	**269**	P	**Pn**	**10 49 54.3**	**-0.1**
JRY				S	**Sn**	**10 50 27.4**	**+0.3**
JMK	**Ichinoseki**	**2.95**	**343**	P	**Pn**	**10 49 57.8**	**+0.7**
JMK				S	**Sn**	**10 50 31.9**	**+0.1**
MJAR	**Matsushiro Arr**	**3.33**	**278**	Pn	**Pn**	**10 50 02.8**	**+0.5**
3.9nm,0.3s,baz=92,slow=14,SNR=26							
MAJO	**Matsushiro**	**3.34**	**278**	*e*Pn	**Pn**	**10 50 03.8**	**+1.5**
MAJO				*e*Sn	**Sn**	**10 50 46.0**	**+4.6**
MAT	**Matsushiro**	**3.34**	**278**	P	**Pn**	**10 50 03.0**	**+0.7**
MAT				S	**Sn**	**10 50 44.8**	**+3.5**
JHJ	**Hachijo jima 2**	**3.65**	**215**	Pn	**Pn**	**10 50 06.8**	**+0.1**
21nm,0.3s,baz=104,slow=19,SNR=15							
JHJ				Sn	**Sn**	**10 50 46.8**	**-2.3**
57nm,0.3s,baz=73,slow=19,SNR=13							
ASAJ	**Asahikawa**	**7.99**	**2**	Pn	**Pn**	**10 51 05.2**	**-0.9**
0.4nm,0.3s,baz=209,slow=19,SNR=3.7							
ASAJ				Sn	**Sn**	**10 52 32.0**	**-3.8**
0.1nm,0.3s,baz=189,slow=19,SNR=2.3							
CBIJ	**Chichi jima**	**9.00**	**181**	Pn	**Pn**	**10 51 18.5**	**-1.7**
4.3nm,0.3s,baz=342,slow=20,SNR=13							
KSRS	**Korea Array**	**11.61**	**281**	Pn	**Pn**	**10 51 59.8**	**+3.9**
0.2nm,0.3s,baz=96,slow=14,SNR=5.7							
SONM	**Songino Array**	**28.89**	**305**	P	**P**	**10 55 11.0**	**+2.4**
0.9nm,0.7s,mb3.6,baz=109,slow=8.2,SNR=3.7							
MKAR	**Makanchi Array**	**45.21**	**303**	P	**P**	**10 57 27.8**	**+0.9**
1.6nm,0.8s,mb3.9,baz=88,slow=7.9,SNR=3.4							
KURK	**Kurchatov**	**47.06**	**309**	P	**P**	**10 57 43.2**	**+1.9**
0.8nm,0.5s,mb3.9,baz=84,slow=8.6,SNR=2.9							

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*IDC **08** 10:51:32.9±2.6, 53.°50N×87.°72E, h0km, mb1 3.7/3, mb1mx3.3/29, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=23.4km s-min=13.0km az=57.0*

*NNC **08** 10:51:36.4±2.1, 53.°20N×87.°40E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=16.8km s-min=13.4km az=54.0*
ISC 08 10:51:37.5±2.0, 53.°65N±0.°08×87.°5E±0.°2, h35km, n7, σ0°70/13, 5C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.62**	**282**	Pg	**Pn**	**10 52 03.5**	**-0.1**
10nm,0.3s,baz=100,slow=16,SNR=28							
ZALV				Lg		10 52 29.6	
21nm,0.3s,baz=100,slow=25,SNR=15							
KURK	**Kurchatov**	**6.20**	**245**	⇑Pn	**Pn**	**10 53 06.5**	**+0.1**
3.1nm,0.6s							
KURK				⇓Sn	**Sn**	**10 54 15.6**	**-0.5**
3.3nm,0.6s							
KURK	**Kurchatov**	**6.20**	**245**	Pn	**Pn**	**10 53 08.0**	**+1.5**
0.7nm,0.3s,baz=62,slow=14,SNR=57							
KURK				Sn	**Sn**	**10 54 19.9**	**+3.8**
0.2nm,0.3s,baz=60,slow=26,SNR=5.5							
KURK				Lg		10 54 55.1	
0.3nm,0.3s,baz=64,slow=33,SNR=7.5							
KURBB	**Kurchatov Arra**	**6.30**	**245**	⇑Pn	**Pn**	**10 53 08.0**	**+0.2**
1.1nm,0.4s							
KURBB				⇑Sn	**Sn**	**10 54 18.4**	**-0.1**
1.3nm,0.5s							
MK31	**Makanchi Array**	**7.63**	**208**	⇑Pn	**Pn**	**10 53 25.3**	**-0.8**
1.9nm,0.8s,baz=28,slow=13,SNR=14							
MK31				⇑Sn	**Sn**	**10 54 52.2**	**+0.9**
2.1nm,0.6s							
MKAR	**Makanchi Array**	**7.63**	**208**	Pn	**Pn**	**10 53 25.3**	**-0.8**
0.6nm,0.3s,baz=27,slow=12,SNR=14							
MKAR				Sn	**Sn**	**10 54 51.1**	**-0.1**
0.4nm,0.3s,baz=32,slow=25,SNR=5.6							
MKAR				Lg		10 55 31.4	
0.5nm,0.3s,baz=27,slow=29,SNR=6.1							
BVAR	**Borovoye Array**	**10.26**	**273**	Pn	**Pn**	**10 54 02.9**	**+0.9**
0.6nm,0.3s,baz=74,slow=14,SNR=6.6							
BVAR				Sn	**Sn**	**10 55 55.0**	**-0.6**
0.5nm,0.3s,baz=83,slow=24,SNR=3.9							

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*ISCJB **08** 11:17:59.9±1.0, 36.°22N±0.°04×142.°05E±0.°09, h34km±11km, mb3.5/5, Error ellipse: s-maj=11.6km s-min=7.4km az=2.4*
*JMA **08** 11:18:01.6±0.3, 36.°31N×141.°77E, h73km, M3.0*
*NEIC **08** 11:18:03.4±1.1, 35.°99N×141.°73E, h35km, MG3.0(JMA), Error ellipse: s-maj=25.1km s-min=17.5km az=188.0*
*IDC **08** 11:18:06.2±3.5, 35.°97N×141.°53E, h60km±33km, mb3.3/5, mb1 3.5/8, mb1mx3.3/28, mbtmp3.5/8, ML3.3/3, MS2.7/1, Ms1 2.7/1, ms1mx1.7/18, Error ellipse: s-maj=42.8km s-min=22.7km az=63.0*
ISC 08 11:18:00.4±1.8, 36.°24N±0.°04×142.°01E±0.°08, h24km±13km, n24, σ0°90/29, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.07**	**241**	P	**Pn**	**11 18 19.9**	**0.0**
CHOJ				S	**Sb**	**11 18 34.5**	**+0.7**
JHO	**Hitachi**	**1.22**	**288**	P	**Pn**	**11 18 20.1**	**-1.8**
ONAJ	**Iwakimizuishiy**	**1.30**	**312**	P	**Pn**	**11 18 21.5**	**-1.5**
JFK	**Kawauchi**	**1.45**	**321**	P	**Pn**	**11 18 24.4**	**-0.6**
BSO1	**Boso 1**	**1.79**	**208**	P	**Pn**	**11 18 31.0**	**+1.3**
JFT	**Otama**	**1.85**	**314**	P	**Pn**	**11 18 30.4**	**-0.2**
BSO3	**Boso 3**	**1.88**	**221**	P	**Pn**	**11 18 31.8**	**+0.8**
JMM	**Marumori**	**1.89**	**329**	P	**Pn**	**11 18 30.6**	**-0.5**
JAG	**Ashikaga**	**2.07**	**276**	P	**Pn**	**11 18 32.9**	**-0.7**
JFY	**Yanaizu**	**2.19**	**303**	P	**Pn**	**11 18 35.4**	**+0.3**
JRY	**Ryogami san**	**2.52**	**266**	P	**Pn**	**11 18 39.1**	**-0.7**
JMK	**Ichinoseki**	**2.78**	**347**	P	**Pn**	**11 18 43.6**	**+0.3**
MJAR	**Matsushiro Arr**	**3.08**	**277**	P	**Pn**	**11 18 47.2**	**-0.2**
3.5nm,0.3s,baz=116,slow=9.4,SNR=28							
MJAR				S	**Sn**	**11 19 24.3**	**+0.8**
2.4nm,0.3s,baz=154,slow=33,SNR=5.6							
MJAR	**Matsushiro Arr**	**3.08**	**277**	P	**Pn**	**11 18 47.2**	**-0.2**
MJAR				S	**Sn**	**11 19 24.3**	**+0.8**
MAJO	**Matsushiro**	**3.08**	**277**	*e*Pn	**Pn**	**11 18 48.3**	**+0.8**
MAT	**Matsushiro**	**3.08**	**277**	P	**Pn**	**11 18 48.3**	**+0.8**
MAT				S	**Sn**	**11 19 23.4**	**-0.1**
JHJ	**Hachijo jima 2**	**3.61**	**211**	P	**Pn**	**11 18 55.2**	**+0.4**
6.8nm,0.3s,baz=60,slow=20,SNR=17							
JHJ				S	**Sn**	**11 19 34.7**	**-1.9**
25nm,0.3s,baz=56,slow=23,SNR=7.2							
CBIJ	**Chichi jima**	**9.12**	**179**	P	**Pn**	**11 20 09.7**	**-0.7**
1.9nm,0.3s,baz=312,slow=14,SNR=7.5							
CBIJ				S	**Sn**	**11 21 47.5**	**-4.7**
2.5nm,0.3s,baz=332,slow=17,SNR=3.5							
KSRS	**Korea Array**	**11.35**	**280**	LR	LR	11 24 44.1	
comp=Z,34nm,19.3s,baz=190,slow=36							
SONM	**Songino Array**	**28.63**	**305**	P	**P**	**11 23 55.7**	**+1.0**
0.9nm,0.6s,mb3.7,baz=93,slow=9.4,SNR=4.6							
MKAR	**Makanchi Array**	**44.95**	**303**	P	**P**	**11 26 13.3**	**+0.1**
0.7nm,0.7s,mb3.6,baz=110,slow=6.9,SNR=3.1							
WRA	**Warramunga Arr**	**56.34**	**189**	P	**P**	**11 27 38.8**	**-0.5**
0.4nm,0.9s

YKA Yellowknife Ar 71.41 357 P P 11 38 46.6 -1.0
0.3nm,0.7s,mb3.3,baz=173,slow=5.9,SNR=3.6
CMAR Chiang Mai Arr 150.90 292 PKPbc PKPbc 11 47 21.1 -0.4
1.0nm,0.6s,baz=76,slow=1.1,SNR=5.2

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*MOS **08** 11:31:23.1±0.8, 5°.72N×94°.67E, h33km, mb5.2/74, MS4.4/9, Error ellipse: s-maj=9.8km s-min=4.4km az=122.8*
*NEIC **08** 11:31:23.9±0.1, 5°.51N×94°.70E, h35km, mb5.0/72, Error ellipse: s-maj=5.4km s-min=3.3km az=209.0*
NEIC Felt at Banda Aceh.
*GCMT **08** 11:31:23.9±0.4, 5°.21N×94°.49E, h53km±1km, MW5.0/63, Moment Tensor Solution. s36,c51; s63,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.17±.21; $M_{\theta\theta}$-2.38±.15; $M_{\phi\phi}$-0.78±.20; $M_{r\theta}$1.83±.10; $M_{\theta\phi}$2.53±.12; $M_{\phi r}$-0.73±.12; Best double couple: $M_0$4.20900×10^{16} NP1:ϕ_s318.00000°, δ59.00000°, λ79.00000°. NP2: ϕ_s117.00000°, δ59.00000°, λ79.00000°. Principal axes: T 3.7190, Plg73.0000°, Azm358.0000°; N 0.9850, Plg10.0000°, Azm123.0000°; P -4.6990, Plg14.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **08** 11:31:24.6±0.1, 5°.54N±0°.03×94°.68E±0°.02, h53km, mb5.0/176, MS4.3/38 Error ellipse: s-maj=4.3km s-min=2.4km az=34.3*
*IDC **08** 11:31:27.0±2.5, 5°.49N×94°.78E, h63km±23km, mb4.6/27, mb1 4.7/29, mb1mx4.6/33, mbtmp4.6/29, ML4.7/2, MS4.1/13, Ms1 4.1/13, ms1mx3.8/35, Error ellipse: s-maj=15.6km s-min=10.0km az=50.0*
*BJI **08** 11:31:27.9, 5°.42N×94°.61E, h97km, mB4.9/34, mb5.1/59*
*SZGRF **08** 11:31:28.5, 6°.74N×94°.81E, h33km, mb5.0, MS5.4, Nicobar Islands, India, region*
*DJA **08** 11:31:28, 5°.44N×94°.70E, h44km, mb5.0/33*
ISC 08 11:31:26.5±0.1, 5°.54N±0°.03×94°.69E±0°.02, h55km, **h55**km±2.6km:**pP-P, n515,** σ0**999**/495, **mb5.0**/176, **MS4.3**/38, **33C-15D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.61**	**94**	P	**Pn**	**11 31 39.3**	**0.0**
BSI				S	**Sn**	**11 31 49.6**	**+0.9**
BSI	**Banda Aceh**	**0.61**	**94**	P	**Pn**	**11 31 39.0**	**-0.3**
LHMI	**Lhok Sumawe**	**2.27**	**98**	P	**Pn**	**11 32 02.8**	**+1.2**
TSI	**Tuntungan**	**4.37**	**118**	P	**Pn**	**11 32 32.0**	**+1.7**
PSI	**Prapat**	**5.03**	**123**	P	**Pn**	**11 32 40.5**	**+1.1**
PSI				S	**Sn**	**11 33 35.5**	**-0.8**
PSI	**Prapat**	**5.03**	**123**	P	**Pn**	**11 32 40.5**	**+1.1**
	11nm,0.3s,baz=302,slow=11,SNR=23						
PSI				S	**Sn**	**11 33 35.5**	**-0.8**
	7.0nm,0.3s,baz=306,slow=16,SNR=4.1						
PSI				LR	LR	11 35 04.6	
	comp=Z,2μm,19.7s,baz=284,slow=44						
PSI	**Prapat**	**5.03**	**123**	P	**Pn**	**11 32 40.5**	**+1.0**
PSI				S	**Sn**	**11 33 35.5**	**-0.8**
PSI				LR	LR	11 35 04.6	
GSI	**Gunungsitoli**	**5.11**	**145**	P	**Pn**	**11 32 38.3**	**-2.2**
	185nm,0.7s,4μm1.1nm						
KULM	**Kulim**	**5.94**	**92**	P	**Pn**	**11 32 53.0**	**+1.0**
KULM	**Kulim**	**5.94**	**92**	*e*Pn	**Pn**	**11 32 52.2**	**+0.3**
	124nm,0.8s						
KULM				*e*Sn	**Sn**	**11 33 56.0**	**-2.7**
KULM	**Kulim**	**5.94**	**92**	P	**Pn**	**11 32 52.9**	**+0.9**
	152nm,0.9s,2μm0.8nm						
IPM	**Ipoh**	**6.40**	**99**	P	**Pn**	**11 32 58.6**	**+0.3**
IPM	**Ipoh**	**6.40**	**99**	P	**Pn**	**11 32 58.4**	**+0.1**
	107nm,0.9s,2μm0.5nm						
IPM	**Ipoh**	**6.40**	**99**	P	**Pn**	**11 32 57.9**	**-0.4**
	97nm,0.6s,2μm0.5nm						
MNSI	**Mandailing Nat**	**6.79**	**134**	P	**Pn**	**11 33 02.6**	**-1.0**
	172nm,0.9s,3μm						
MNSI	**Mandailing Nat**	**6.79**	**134**	P	**Pn**	**11 33 02.2**	**-1.4**
	172nm,0.9s,3μm						
FRIM	**Kepong**	**7.29**	**108**	P	**Pn**	**11 33 10.6**	**+0.1**
SISI	**Saibi**	**8.12**	**147**	P	**Pn**	**11 33 25.6**	**+3.8**
	92nm,0.8s						
SISI	**Saibi**	**8.12**	**147**	P	**Pn**	**11 33 25.9**	**+4.1**
	92nm,0.8s						
BKNI	**Bangkinang**	**8.19**	**129**	P	**Pn**	**11 33 22.6**	**-0.2**
	158nm,0.8s,1μm						
BKNI	**Bangkinang**	**8.19**	**129**	P	**Pn**	**11 33 28.5**	**+5.7**
	172nm,1.1s,1μm						
PPI	**Padang Panjang**	**8.25**	**136**	P	**Pn**	**11 33 24.5**	**+0.9**
	86nm,0.9s,2μm						
KTGM	**Kuala Trenggan**	**8.41**	**91**	P	**Pn**	**11 33 28.1**	**+2.3**
PDSI	**Padang**	**8.63**	**138**	P	**Pn**	**11 33 28.1**	**-0.6**
	124nm,0.8s						
PDSI	**Padang**	**8.63**	**138**	P	**Pn**	**11 33 27.7**	**-1.0**
	124nm,0.8s						
KGM	**Kluang**	**9.30**	**112**	P	**Pn**	**11 33 39.3**	**+1.4**
SDSI	**Sungai Dareh**	**9.31**	**133**	P	**Pn**	**11 33 36.5**	**-1.7**
SDSI	**Sungai Dareh**	**9.31**	**133**	P	**Pn**	**11 33 38.3**	**+0.1**
	30nm,1.0s						
MYKOM	**Kota Tinggi**	**9.88**	**112**	P	**Pn**	**11 33 45.7**	**-0.1**
MYKOM	**Kota Tinggi**	**9.88**	**112**	P	**Pn**	**11 33 47.4**	**+1.5**
	30nm,1.1s						
MYKOM	**Kota Tinggi**	**9.88**	**112**	P	**Pn**	**11 33 46.4**	**+0.5**
	30nm,1.1s						
JMBI	**JAMBI**	**11.44**	**128**	P	**Pn**	**11 34 06.7**	**-0.5**
	97nm,0.7s,1μm						
CM31	**Chiang Mai Arr**	**13.49**	**18**	Pn	**Pn**	**11 34 34.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**13.49**	**18**	P	**Pn**	**11 34 37.7**	**+2.5**
	2.8nm,0.3s,baz=211,slow=14,SNR=62						
CMAR				LR	LR	11 39 41.2	
	comp=Z,554nm,20.7s,baz=205,slow=37						
MDSI	**Maura Dua**	**13.75**	**136**	P	**Pn**	**11 34 36.5**	**-2.3**
	43nm,1.0s						
PPBI	**Pangkal Pinang**	**13.76**	**123**	P	**Pn**	**11 34 49.3**	**+10**
CHTO	**Chiang Mai**	**13.83**	**17**	*e*Pn	**Pn**	**11 34 42.2**	**+2.4**
CHTO	**Chiang Mai**	**13.83**	**17**	Pn	**Pn**	**11 34 46.0**	**+6.2**
	SNR=36						
CHTO				Pn	**Pn**	**11 34 46.0**	**+6.2**
	SNR=36						
CHTO	**Chiang Mai**	**13.83**	**17**	P	**Pn**	**11 34 45.6**	**+5.8**
	141nm,0.9s,1μm						
CHTO	**Chiang Mai**	**13.83**	**17**	P	**Pn**	**11 34 45.0**	**+5.2**
	141nm,0.9s,1μm						
PALK	**Pallekele**	**14.00**	**278**	Pn	**Pn**	**11 34 42.3**	**+0.1**
	249nm,0.6s,SNR=13						
PALK	**Pallekele**	**14.00**	**278**	*e*P	**Pn**	**11 34 41.9**	**-0.3**
PALK				pmax	pmax		
	comp=Z,23nm,0.6s						
PALK	**Pallekele**	**14.00**	**278**	*e*Pn	**Pn**	**11 34 41.9**	**-0.2**
	comp=Z,23nm,0.6s						
PALK	**Pallekele**	**14.00**	**278**	P	**Pn**	**11 34 41.7**	**-0.5**
	comp=Z,21nm,1.3s						
PALK	**Pallekele**	**14.00**	**278**	P	**Pn**	**11 34 41.5**	**-0.7**
	comp=Z,21nm,1.3s						
KSM	**Kuching**	**16.11**	**104**	*e*Pn	**Pn**	**11 35 06.8**	**-2.6**
	comp=Z,38nm,0.9s						
KSM	**Kuching**	**16.11**	**104**	P	**Pn**	**11 35 13.5**	**+4.0**
	comp=Z,43nm,0.9s,comp=Z,551nm						
CGJI	**Cibinong**	**16.33**	**138**	P	**Pn**	**11 35 13.7**	**+1.5**
	comp=Z,47nm,1.0s						
VIS	**Vishakhapatnam**	**16.42**	**318**	*ex*	**Pn**	**11 35 15.4**	**+2.0**
STKI	**Sintang**	**17.63**	**107**	P	**Pn**	**11 35 30.3**	**+1.9**
	comp=Z,40nm,1.0s						
SBUM	**Sibu**	**17.76**	**99**	P	**Pn**	**11 35 30.7**	**+0.7**
	comp=Z,22nm,1.5s,comp=Z,384nm						
SBUM	**Sibu**	**17.76**	**99**	P	**Pn**	**11 35 30.5**	**+0.5**
	comp=Z,22nm,1.5s,comp=Z,384nm						
HYB	**Hyderabad**	**19.70**	**308**	*i* P	**Pn**	**11 35 53.5**	**+0.1**
	comp=Z,50nm,1.0s						
HYB				*e*		11 39 21.0	
HYB				*e*S	**S**	**11 39 26.0**	**-4.9**
QIZ	**Qiongzhong**	**19.95**	**46**	P	**Pn**	**11 35 56.1**	**-0.1**
QIZ				pP	pP	11 36 15.0	+8.6
QIZ				sP	sP	11 36 27.2	+14
QIZ				S	**S**	**11 39 29.7**	**-6.1**
QIZ				sS	sS	11 40 01.2	+5.7
QIZ				pmax	pmax		
	comp=Z,37nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,420nm,10.9s						
QIZ				LR	LR		
	comp=N,870nm,15.9s						
QIZ				LR	LR		
	comp=Z,1μm,18.5s						
QIZ	**Qiongzhong**	**19.95**	**46**	*e*Pn	**Pn**	**11 35 54.5**	**-1.7**
	comp=Z,154nm,1.6s						
BOK	**Bokaro**	**20.03**	**336**	*e*P	**P**	**11 35 56.0**	**+1.0**
KMI	**Kunming**	**20.94**	**21**	⇑P	**P**	**11 36 08.2**	**+3.3**
KMI				pP		11 36 27.4	
KMI				PP		11 36 36.2	
KMI				sP	sP	11 36 39.1	+15
KMI				S	**S**	**11 39 54.5**	**-0.9**
KMI				sS	sS	11 40 25.2	+10
KMI				SS		11 40 34.9	
KMI				ScP	ScP	11 43 39.0	-4.4
KMI				PcS	PcS	11 43 48.6	-0.5
KMI				pmax	pmax		
	comp=Z,64nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,3.1s						
KMI				LR	LR		
	comp=N,420nm,16.2s,MS4.1						
KMI				LR	LR		
	comp=E,500nm,17.6s,MS4.1						
KMI				LR	LR		
	comp=Z,590nm,18.5s,MS4.0						
NGJI	**Ngawi**	**21.09**	**127**	P	**P**	**11 36 09.4**	**+2.9**
	comp=Z,70nm,1.0s,mb5.0						
GRJI	**Gresik**	**21.64**	**125**	P	**P**	**11 36 14.3**	**+1.8**
	comp=Z,122nm,1.2s,comp=Z,2μm,mb5.2						
NGP	**Nagpur**	**21.69**	**317**	*e*P	**P**	**11 36 10.7**	**-2.2**
LATR	**Latur**	**21.83**	**307**	*e*P	**P**	**11 36 15.0**	**+0.5**
BBKI	**Banjar Baru**	**22.03**	**114**	P	**P**	**11 36 17.2**	**+0.6**
	comp=Z,214nm,0.8s,comp=Z,2μm,mb5.6						
KDM	**Kudat**	**22.06**	**85**	P	**P**	**11 36 17.7**	**+0.7**
SDKM	**Sandakan**	**22.40**	**89**	P	**P**	**11 36 20.7**	**+0.1**
RAMN	**Ramite**	**22.64**	**341**	*e*P	**P**	**11 36 23.7**	**+0.7**
	comp=Z,71nm,0.8s,mb5.2						
TAPN	**Taplejung**	**22.68**	**344**	*e*P	**P**	**11 36 23.2**	**-0.2**
	comp=Z,52nm,0.5s,mb5.2						
KMMI	**Kalianget**	**22.95**	**123**	P	**P**	**11 36 27.0**	**+0.6**
	comp=Z,82nm,1.8s,mb4.9						
KBKI	**Kotabaru**	**23.18**	**112**	P	**P**	**11 36 28.5**	**-0.4**
	comp=Z,27nm,0.9s,mb4.7						
KAD	**Karad**	**23.22**	**302**	*e*P	**P**	**11 36 29.7**	**+0.6**
ABJI	**Asem Bagus**	**23.58**	**124**	P	**P**	**11 36 33.6**	**+1.1**
	comp=Z,104nm,1.5s,mb5.0						
PKI	**Pulchoki**	**23.62**	**339**	*e*P	**P**	**11 36 32.2**	**-0.5**
	comp=Z,125nm,1.1s,mb5.2						
PKIN	**Phulchoki**	**23.63**	**339**	*e*P	**P**	**11 36 32.0**	**-0.8**
	comp=Z,49nm,0.7s,mb5.0						
MYLDM	**Lahad Datu**	**23.71**	**90**	P	**P**	**11 36 35.0**	**+1.3**
	comp=Z,41nm,1.5s,mb4.6						
MYLDM	**Lahad Datu**	**23.71**	**90**	P	**P**	**11 36 35.0**	**+1.3**
	comp=Z,41nm,1.5s,mb4.6						
GYA	**Guiyang**	**23.74**	**28**	⇑*i*P	**P**	**11 36 35.8**	**+2.0**
GYA				pP		11 36 54.5	
GYA				sP	sP	11 37 08.4	+15
GYA				PP		11 37 12.3	
GYA				PcP	PcP	11 40 16.0	-0.6
GYA				S	**S**	**11 40 42.9**	**-2.3**
GYA				sS	sS	11 41 17.5	+9.3
GYA				SS		11 41 40.6	
GYA				ScP	ScP	11 43 45.0	-5.5
GYA				PcS	PcS	11 43 56.4	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
GYA				pmax	pmax		
	comp=Z,150nm,4.5s						
GYA				LR	LR		
	comp=N,6μm,12.5s,MS5.4						
GYA				LR	LR		
	comp=E,4μm,13.7s,MS5.4						
GYA				LR	LR		
	comp=Z,5μm,11.4s,MS5.3						
DMN	**Daman**	**23.76**	**338**	*e*P	**P**	**11 36 33.5**	**-0.5**
	comp=Z,71nm,0.7s,mb5.2						
GUN	**Gumba**	**23.77**	**340**	*e*P	**P**	**11 36 33.3**	**-0.7**
	comp=Z,131nm,0.8s,mb5.4						
KKN	**Kakani**	**23.86**	**339**	*e*P	**P**	**11 36 34.5**	**-0.4**
	comp=Z,104nm,0.9s,mb5.3						
BHPL	**Bhopal**	**24.22**	**318**	*e*P	**P**	**11 36 38.8**	**+0.5**
LSA	**Lhasa**	**24.26**	**352**	P	**P**	**11 36 39.4**	**+0.9**
LSA				S	**S**	**11 40 49.8**	**-3.8**
LSA				LR	LR		
	comp=N,240nm,30.2s,MS3.7						
LSA				LR	LR		
	comp=E,290nm,28.7s,MS3.7						
LSA				LR	LR		
	comp=Z,470nm,29.6s,MS3.8						
LSA	**Lhasa**	**24.26**	**352**	*e*P	**P**	**11 36 39.1**	**+0.6**
LSA				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.1						
LSA	**Lhasa**	**24.26**	**352**	*e*P	**P**	**11 36 39.1**	**+0.6**
	comp=Z,45nm,0.6s,mb5.1						
GKN	**Gorkha**	**24.29**	**338**	*e*P	**P**	**11 36 38.3**	**-0.5**
	comp=Z,53nm,0.4s,mb5.3						
KOLN	**Koldanda**	**24.49**	**336**	*e*P	**P**	**11 36 40.9**	**+0.3**
	comp=Z,191nm,0.7s,mb5.7						
SRBI	**Singaraja**	**24.55**	**123**	P	**P**	**11 36 42.5**	**+1.2**
	comp=Z,190nm,0.9s,comp=Z,2μm,mb5.6						
SRBI	**Singaraja**	**24.55**	**123**	P	**P**	**11 36 42.6**	**+1.3**
	comp=Z,190nm,0.9s,comp=Z,2μm,mb5.6						
PYUN	**Piuthan**	**25.03**	**335**	*e*P	**P**	**11 36 45.3**	**-0.3**
	comp=Z,122nm,0.5s,mb5.7						
TTSI	**Tana Toraja**	**26.52**	**108**	P	**P**	**11 37 01.9**	**+2.7**
CD2	**Chengdu**	**26.64**	**18**	P	**P**	**11 37 00.2**	**+0.1**
CD2				pP	pP	11 37 21.7	+7.9
CD2				sP	sP	11 37 33.5	+13
CD2				PP		11 37 52.1	
CD2				S	**S**	**11 41 28.0**	**-3.3**
CD2				sS	sS	11 42 06.3	+12
CD2				SS		11 42 50.0	
CD2				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.1						
CD2				pmax	pmax		
	comp=Z,100nm,4.5s						
CD2				LR	LR		
	comp=N,590nm,14.9s						
CD2				LR	LR		
	comp=Z,390nm,17.8s,MS4.0						
AGRA	**Agra**	**26.82**	**325**	*e*P	**P**	**11 37 01.7**	**-0.1**
KAPI	**Kappang**	**27.14**	**112**	P	**P**	**11 37 03.3**	**-1.5**
	comp=Z,18nm,0.7s,mb4.7,baz=281,slow=9.1,SNR=15						
KAPI				LR	LR	11 48 21.7	
	comp=Z,220nm,20.7s,MS3.7,baz=186,slow=38						
KAPI	**Kappang**	**27.14**	**112**	*e*P	**P**	**11 37 03.4**	**-1.4**
	comp=Z,131nm,1.6s,mb5.2						
KAPI	**Kappang**	**27.14**	**112**	P	**P**	**11 37 03.8**	**-1.0**
	comp=Z,25nm,1.6s,comp=Z,342nm,mb4.5						
KAPI	**Kappang**	**27.14**	**112**	P	**P**	**11 37 03.7**	**-1.1**
	comp=Z,25nm,1.6s,comp=Z,342nm,mb4.5						
MRSI	**Marisa**	**27.67**	**100**	P	**P**	**11 37 09.7**	**+0.1**
	comp=Z,29nm,1.0s,mb4.9						
MRSI	**Marisa**	**27.67**	**100**	P	**P**	**11 37 09.6**	**0.0**
	comp=Z,29nm,1.0s,mb4.9						
APSI	**Ampana**	**27.68**	**103**	P	**P**	**11 37 10.6**	**+0.9**
	comp=Z,75nm,1.2s,comp=Z,892nm,mb5.2						
APSI	**Ampana**	**27.68**	**103**	P	**P**	**11 37 10.6**	**+0.9**
	comp=Z,75nm,1.2s,comp=Z,892nm,mb5.2						
SONA	**Sohna**	**28.09**	**325**	*e*P	**P**	**11 37 13.3**	**+0.2**
AYAN	**Aya Nagar**	**28.24**	**326**	*e*P	**P**	**11 37 14.6**	**+0.1**
AYAN				AMb	AMB	11 37 15.7	
	comp=Z,16nm,0.7s,mb4.7						
AJM	**Ajmer**	**28.27**	**320**	*e*P	**P**	**11 37 16.2**	**+1.4**
ENH	**Enshi**	**28.27**	**28**	*e*P	**P**	**11 37 14.3**	**-0.5**
	comp=Z,24nm,0.8s,mb4.9						
JOSI	**Joshimath**	**28.66**	**332**	*e*P	**P**	**11 37 19.7**	**+1.5**
KHET	**Khetri**	**28.70**	**323**	*e*P	**P**	**11 37 19.2**	**+0.6**
KHET				AMb	AMB	11 37 20.1	
	comp=Z,14nm,0.4s,mb5.1						
LUWI	**Luwuk**	**28.80**	**102**	P	**P**	**11 37 18.6**	**-1.1**
	comp=Z,90nm,0.9s,comp=Z,790nm,mb5.5						
QZH	**Quanzhou**	**29.96**	**47**	*e*P	**P**	**11 37 31.7**	**+1.9**
QZH				*e*S	**S**	**11 42 21.5**	**-2.4**
QZH				LR	LR		
	comp=N,780nm,12.4s,MS4.6						
QZH				LR	LR		
	comp=E,770nm,15.8s,MS4.6						
QZH				LR	LR		
	comp=Z,1μm,18.0s,MS4.6						
SMLA	**Simla**	**30.30**	**329**	*ex*	**P**	**11 37 31.5**	**-1.2**
WHN	**Wuhan**	**31.00**	**34**	⇓P	**P**	**11 37 40.3**	**+1.4**
WHN				pP	pP	11 37 57.8	+5.1
WHN				S	**S**	**11 42 37.5**	**-2.4**
WHN				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
WHN				LR	LR		
	comp=N,240nm,7.3s						
WHN				LR	LR		
	comp=E,960nm,11.8s						
WHN				LR	LR		
	comp=Z,2μm,14.9s,MS4.8						
XAN	**Xi'an**	**31.28**	**23**	P	**P**	**11 37 41.2**	**-0.1**
XAN				S	**S**	**11 42 42.8**	**-1.4**
XAN				sS	sS	11 43 18.7	+11
XAN				SS	SS	11 44 37.9	-22
XAN				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
XAN				pmax	pmax		
	comp=Z,18nm,5.8s						
XAN				LR	LR		
	comp=N,340nm,19.4s						
XAN				LR	LR		
	comp=Z,180nm,20.7s,MS3.7						
LZH	**Lanzhou**	**31.54**	**14**	*e*P	**P**	**11 37 43.7**	**+0.1**
LZH				pP	pP	11 38 03.0	+5.6
LZH				PP	PP	11 38 52.0	-3.7
LZH				S	**S**	**11 42 45.7**	**-2.6**
LZH				sS	sS	11 43 23.0	+11
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.2						
LZH				pmax	pmax		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=N,860nm,14.3s						
LZH				LR	LR		
	comp=Z,1μm,15.9s,MS4.7						
GTA	**Gaotai**	**34.03**	**7**	P	**P**	**11 38 05.6**	**+0.3**
GTA				pP	pP	11 38 28.0	+8.8
GTA				sP	sP	11 38 38.9	+13
GTA				PP	PP	11 39 23.9	+0.7
GTA				S	**S**	**11 43 25.2**	**-1.7**
GTA				sS	sS	11 44 04.1	+14
GTA				SS	SS	11 45 40.9	-15
GTA				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.4						
GTA				pmax	pmax		
	comp=Z,99nm,5.4s						
GTA				LR	LR		
	comp=N,260nm,22.8s,MS4.1						
GTA				LR	LR		
	comp=E,280nm,20.1s,MS4.1						
GTA				LR	LR		
	comp=Z,310nm,19.5s,MS4.0						
NJ2	**Nanjing**	**34.73**	**38**	*e*P	**P**	**11 38 13.0**	**+1.5**
NJ2				pP	pP	11 38 34.5	+9.1
NJ2				sP	sP	11 38 44.7	+13
NJ2				PP	PP	11 39 32.0	+0.9
NJ2				S	**S**	**11 43 36.0**	**-1.9**
NJ2				sS	sS	11 44 12.5	+11
NJ2				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.5						
NJ2				pmax	pmax		
	comp=Z,340nm,6.2s						
NJ2				LR	LR		
	comp=N,740nm,21.4s,MS4.6						
NJ2				LR	LR		
	comp=E,820nm,22.8s,MS4.6						
NJ2				LR	LR		
	comp=Z,890nm,24.9s,MS4.4						
SSE	**Sheshan**	**35.56**	**41**	P	**P**	**11 38 19.3**	**+0.7**
SSE				pP	pP	11 38 40.2	+7.6
SSE				S	**S**	**11 43 50.6**	**-0.1**
SSE				sS	sS	11 44 27.1	+13
SSE				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
SSE				pmax	pmax		
	comp=Z,66nm,10.8s						
SSE				LR	LR		
	comp=N,500nm,17.2s,MS4.5						
SSE				LR	LR		
	comp=E,420nm,17.2s,MS4.5						
SSE				LR	LR		
	comp=Z,650nm,13.8s,MS4.5						
SWI	**Sorong**	**37.08**	**99**	P	**P**	**11 38 30.7**	**-1.1**
	comp=Z,83nm,1.0s,comp=Z,689nm,mb5.5						
KSH	**Kashi**	**37.81**	**336**	⇑*i*P	**P**	**11 38 36.3**	**-1.3**
KSH				*e*pP	pP	11 38 58.2	+6.5
KSH				*e*sP	sP	11 39 10.3	+12
KSH				*e*PP	PP	11 40 07.1	+2.3
KSH				*e*PcP	PcP	11 40 52.1	-1.3
KSH				*e*S	**S**	**11 44 17.5**	**-7.2**
KSH				*e*ScP	ScP	11 44 29.2	-7.3
KSH				*e*PcS	PcS	11 44 39.2	-2.9
KSH				*e*SS	SS	11 46 57.2	-15
KSH				*e*ScS	ScS	11 48 36.7	-8.6
KSH				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.1						
KSH				LR	LR		
	comp=N,68nm,5.4s						
KSH				LR	LR		
	comp=E,160nm,7.8s						
HHC	**Hu-ho-hao-te**	**38.27**	**21**	⇑P	**P**	**11 38 43.0**	**+1.5**
HHC				PP	PP	11 40 14.8	+4.9
HHC				PcP	PcP	11 40 56.1	+1.3
HHC				S	**S**	**11 44 36.1**	**+4.4**
HHC				PcS	PcS	11 44 44.3	+0.5
HHC				SS	SS	11 47 15.2	-6.7
HHC				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
HHC				pmax	pmax		
	comp=Z,130nm,6.9s						
HHC				LR	LR		
	comp=N,740nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=E,610nm,14.9s,MS4.7						
HHC				LR	LR		
	comp=Z,580nm,14.7s,MS4.5						
JOW	**Kunigami**	**38.37**	**53**	P	**P**	**11 38 42.0**	**-0.6**
	comp=Z,12nm,0.8s,mb4.7,baz=264,slow=9.6,SNR=7.5						
JOW				LR	LR	11 54 28.4	
	comp=Z,446nm,20.6s,MS4.3,baz=331,slow=36						
JOW	**Kunigami**	**38.37**	**53**	P	**P**	**11 38 42.0**	**-0.6**
JOW				LR	LR	11 54 28.4	
FITZ	**Fitzroy Crossi**	**38.53**	**128**	*e*P	**P**	**11 38 42.0**	**-2.0**
	comp=Z,18nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**38.53**	**128**	P	**P**	**11 38 42.3**	**-1.7**
	comp=Z,9.8nm,0.7s,mb4.7,baz=295,slow=5.9,SNR=16						
FITZ	**Fitzroy Crossi**	**38.53**	**128**	*e*P	**P**	**11 38 42.2**	**-1.8**
	comp=Z,12nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**38.53**	**128**	P	**P**	**11 38 42.8**	**-1.2**
	comp=Z,43nm,1.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**38.53**	**128**	P	**P**	**11 38 42.4**	**-1.6**
	comp=Z,44nm,1.0s,mb5.2						
WMQ	**Urumqi**	**38.62**	**352**	*e*P	**P**	**11 38 45.3**	**+1.0**
WMQ				sP	sP	11 39 17.5	+13
WMQ				PP	PP	11 40 22.0	+8.4
WMQ				S	**S**	**11 44 35.3**	**-1.5**
WMQ				sS	sS	11 45 12.7	+12
WMQ				SS	SS	11 47 23.0	-5.7
WMQ				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,150nm,30.0s,MS4.0						
WMQ				LR	LR		
	comp=E,320nm,29.0s,MS4.0

SNR=35
TKM2 Tokmak 2 40.88 338 *e*P **P 11 39 04.1 +0.9**
TKM2 pmax pmax
comp=Z,29nm,0.6s,mb5.1
TKM2 Tokmak 2 40.88 338 *e*P **P 11 39 04.1 +0.9**
comp=Z,29nm,0.6s,mb5.1
KBK Karagaybulak 40.89 338 P **P 11 39 05.2 +1.9**
SNR=60
AML Almayashu 40.94 336 P **P 11 39 05.4 +1.8**
SNR=135
AAK Ala-Archa 41.05 337 P **P 11 39 06.3 +1.8**
comp=Z,327nm,0.8s,mb6.0,SNR=24
AAK Ala-Archa 41.05 337 P **P 11 39 05.7 +1.2**
SNR=38
AAK Ala-Archa 41.05 337*c i*P **P 11 39 06.1 +1.6**
AAK pmax pmax
comp=Z,25nm,0.8s,mb4.9
AAK Ala-Archa 41.05 337 *e*P **P 11 39 05.6 +1.1**
comp=Z,51nm,0.9s,mb5.2
AAK Ala-Archa 41.05 337 P **P 11 39 06.4 +1.8**
SNR=20
AAK P 11 39 06.4
SNR=20
AAK Ala-Archa 41.05 337 P **P 11 39 06.3 +1.8**
comp=Z,16nm,0.8s,comp=Z,165nm,mb4.7
FRU Bishkek 41.17 337 *e*P **P 11 39 07.0 +1.4**
FRU *e* 11 40 42.5
FRU pmax pmax
comp=Z,180nm,2.2s,mb5.3
DL2 Dalian 41.20 32 P **P 11 39 07.3 +1.4**
DL2 pP pP 11 39 25.4 +5.3
DL2 *e*S **S 11 45 15.7 0.0**
DL2 pmax pmax
comp=Z,40nm,0.9s,mb5.0
DL2 pmax pmax
comp=Z,120nm,4.6s
DL2 LR LR
comp=N,210nm,17.8s,MS4.2
DL2 LR LR
comp=E,190nm,16.9s,MS4.2
DL2 LR LR
comp=Z,310nm,14.7s,MS4.3
CHMS Chumysh 41.26 338 P **P 11 39 07.7 +1.4**
SNR=10
EKS2 Erkin-Say 41.35 337 P **P 11 39 08.6 +1.5**
SNR=38
EKS2 Erkin-Say 41.35 337 *e*P **P 11 39 08.1 +1.1**
comp=Z,42nm,0.8s,mb5.1
USP Ospenovka 41.58 338 P **P 11 39 09.3 +0.4**
SNR=55
KAKA Kakadu 41.67 116 *e*P **P 11 39 07.3 -2.8**
comp=Z,7.8nm,0.6s,mb4.5
KAKA Kakadu 41.67 116 *e*P **P 11 39 07.9 -2.2**
MK31 Makanchi Array 42.46 347 *e*P **P 11 39 16.6 +0.5**
MKAR Makanchi Array 42.46 347 P **P 11 39 16.5 +0.4**
comp=Z,28nm,0.7s,mb5.0,baz=163,slow=8.5,SNR=102
MKAR LR LR 11 59 37.6
comp=Z,128nm,21.8s,MS3.8,baz=158,slow=40
SONM Songino Array 43.31 11 P **P 11 39 23.2 +0.3**
SONM 11 41 11.6
SONM Songino Array 43.31 11 P **P 11 39 23.2 +0.3**
comp=Z,24nm,0.8s,mb5.0,baz=192,slow=8.4,SNR=85
SONM PcP PcP 11 41 11.6 +0.6
comp=Z,3.8nm,0.6s,baz=189,slow=4.0,SNR=10
SONM LR LR 11 57 55.9
comp=Z,374nm,18.1s,MS4.3,baz=234,slow=37
ULN Ulaanbaatar 43.48 12 *e*P **P 11 39 23.8 -0.4**
ULN *e* 11 41 10.3
ULN pmax pmax
comp=Z,17nm,0.7s,mb4.9
ULN MLR MLR
comp=Z,305nm,20.0s,MS4.2
ULN Ulaanbaatar 43.48 12 *e*P **P 11 39 23.8 -0.4**
comp=Z,17nm,0.7s,mb4.9
ULN *e*PcP PcP 11 41 10.3 -1.2
ULN LR LR
comp=Z,305nm,20.0s,MS4.2
ULN Ulaanbaatar 43.48 12 P **P 11 39 24.5 +0.3**
SNR=7.4
ULN P 11 39 24.5
SNR=7.4
ULN Ulaanbaatar 43.48 12 P **P 11 39 24.5 +0.3**
comp=Z,28nm,0.8s,comp=Z,269nm,mb5.0
ULN Ulaanbaatar 43.48 12 P **P 11 39 24.3 +0.1**
comp=Z,28nm,0.8s,comp=Z,268nm,mb5.0
NWAO Narrogin (SRO) 43.84 152 P **P 11 39 29.2 +1.8**
comp=Z,4.2nm,0.8s,mb4.2,baz=355,slow=4.6,SNR=3.2
NWAO Narrogin (SRO) 43.84 152 P **P 11 39 29.2 +1.8**
KSRS Korea Array 43.89 39 P **P 11 39 27.4 -0.4**
comp=Z,12nm,0.9s,mb4.7,baz=220,slow=8.7,SNR=60
SNY Shenyang 44.35 31 ⇓P **P 11 39 31.1 -0.2**
SNY S **S 11 46 06.3 +4.5**
SNY pmax pmax
comp=Z,100nm,1.4s,mb5.3
SNY pmax pmax
comp=Z,25nm,3.5s
SNY LR LR
comp=N,260nm,18.6s
SNY LR LR
comp=E,270nm,12.7s
SNY LR LR
comp=Z,390nm,16.5s,MS4.4
ZAK Zakamensk 45.27 8 *e*P **P 11 39 38.3 -0.2**
ZAK *e* 11 41 15.8
ZAK pmax pmax
comp=Z,11nm,1.5s,mb4.5
MOY Mondy 46.27 5 *e*P **P 11 39 53.6 +7.2**
ABKT Ailbek 46.30 319 P **P 11 39 47.3 +0.5**
comp=Z,227nm,0.5s,mb6.4,SNR=7.6
WRA Warramunga Arr 46.49 124 P **P 11 39 47.6 -1.1**
comp=Z,22nm,0.7s,mb5.2,baz=301,slow=10.0,SNR=159
WRAB Tennant Creek 46.50 124 P **P 11 39 47.9 -0.8**
comp=Z,293nm,0.8s,mb6.3,SNR=22
WRAB Tennant Creek 46.50 124 *e*P **P 11 39 47.4 -1.3**
WRAB pmax pmax
comp=Z,17nm,0.5s,mb5.2
WRAB MLR MLR
comp=Z,315nm,19.0s,MS4.3
WRAB Tennant Creek 46.50 124 *e*P **P 11 39 47.4 -1.3**
comp=Z,18nm,0.5s,mb5.2
WRAB LR LR
comp=Z,315nm,19.0s,MS4.3
WRAB Tennant Creek 46.50 124 P **P 11 39 47.8 -0.9**
comp=Z,70nm,1.2s,comp=Z,799nm,mb5.5
WRAB Tennant Creek 46.50 124 P **P 11 39 47.7 -1.0**
comp=Z,70nm,1.2s,comp=Z,799nm,mb5.5
WB2 Warramunga Arr 46.50 124 *e*P **P 11 39 47.5 -1.2**
TLY Talaya 46.58 8 P **P 11 39 49.6 +0.8**
comp=Z,87nm,0.9s,mb5.7,SNR=5.6
TLY Talaya 46.58 8 *e*P **P 11 39 49.5 +0.7**
TLY pmax pmax
comp=Z,16nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,221nm,16.0s,MS4.2
TLY Talaya 46.58 8 *e*P **P 11 39 49.7 +0.8**
comp=Z,9.0nm,0.7s,mb4.8
TLY Talaya 46.58 8 P **P 11 39 50.1 +1.2**
SNR=7.1
TLY P 11 39 50.1
SNR=7.1
CN2 Changchun 46.72 31 *e*P **P 11 39 50.4 +0.3**
CN2 *e*pP pP 11 40 13.5 +9.0
CN2 *e*S **S 11 46 33.6 -2.4**
CN2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,12.0s,MS4.4
CN2 LR LR
comp=E,200nm,12.0s,MS4.4
CN2 LR LR
comp=Z,200nm,14.0s,MS4.2
KURK Kurchatov 46.99 346 P **P 11 39 52.9 +0.9**
comp=Z,664nm,0.8s,SNR=46
KURK Kurchatov 46.99 346*c i*P **P 11 39 52.7 +0.7**
KURK pmax pmax
comp=Z,74nm,0.7s,mb5.7
KURK Kurchatov 46.99 346 *e*P **P 11 39 52.8 +0.8**
comp=Z,41nm,0.6s,mb5.5
KURK Kurchatov 46.99 346 P **P 11 39 53.1 +1.1**
SNR=41
KURK P 11 39 53.1
SNR=41
IRK Irkutsk 47.22 8 *e*P **P 11 39 53.0 -0.8**
IRK pmax pmax
comp=Z,32nm,1.4s,mb5.1

ASAR Alice Springs 48.03 129 P **P 11 39 59.6 -0.9**
comp=Z,14nm,0.8s,mb5.1,baz=304,slow=7.5,SNR=128
FORT Forrest 48.20 141 *e*P **P 11 40 00.6 -1.1**
comp=Z,22nm,0.6s,mb5.4
FORT Forrest 48.20 141 *e*P **P 11 40 00.4 -1.3**
comp=Z,29nm,0.8s,mb5.4
HIA Hailar 48.46 22 *e*P **P 11 40 02.3 -1.1**
HIA pmax pmax
comp=Z,16nm,0.8s
HIA Hailar 48.46 22 *e*P **P 11 40 02.3 -1.1**
comp=Z,16nm,0.8s,mb5.1
ZAA0 Zalesovo Array 48.92 352 *e*P **P 11 40 07.0 +0.1**
ZALV Zalesovo Beam 48.92 352 P **P 11 40 07.4 +0.5**
comp=Z,40nm,0.6s,mb5.6,baz=179,slow=7.0,SNR=55
MDJ Mudanjiang 49.45 33 P **P 11 40 12.3 +1.2**
MDJ pmax pmax
comp=Z,28nm,1.0s,mb5.2
MDJ pmax pmax
comp=Z,65nm,4.8s
MDJ Mudanjiang 49.45 33 *e*P **P 11 40 10.3 -0.8**
comp=Z,31nm,0.9s,mb5.3
VLA Vladivostok 49.77 35 P **P 11 40 14.0 +0.4**
VLA pmax pmax
comp=Z,74nm,1.6s,mb5.5
VLA MLR MLR
comp=Z,500nm,18.9s,MS4.5
CBIJ Chichi jima 49.98 59 LR LR 12 02 36.2
comp=Z,109nm,19.3s,MS3.9,baz=309,slow=37
NVS Novosibirsk 50.01 351⇑*i*P **P 11 40 15.0 -0.2**
NVS *i* *PP pP 11 40 27.0 -2.8
NVS *i* S **S 11 47 17.7 -4.3**
NVS pmax pmax
comp=N,28nm,1.1s
NVS pmax pmax
comp=E,19nm,1.1s
NVS pmax pmax
comp=Z,38nm,1.1s,mb5.3
NVS smax
comp=N,19nm,1.8s
NVS smax
comp=E,31nm,1.8s
GUMO Guam 50.05 77 LR LR 12 00 45.1
comp=E,140nm,19.4s,MS4.0,baz=91,slow=35
KBD Kabd 50.19 304 *e*P **P 11 40 17.3 +0.3**
RDF Al-Radifah 50.23 303 *e*P **P 11 40 18.4 +1.1**
RDF AMb AMB 11 40 19.4
comp=Z,57nm,1.2s,mb5.5
UMR Umm Al-Rimmam 50.29 304 *e*P **P 11 40 18.1 +0.3**
UMR AMb AMB 11 40 19.1
comp=Z,57nm,1.0s,mb5.5
MIB Mutribah 50.68 304 *e*P **P 11 40 21.0 +0.3**
MIB AMb AMB 11 40 22.3
comp=Z,100nm,0.9s,mb5.7
BVAR Borovoye Array 51.35 341 P **P 11 40 25.6 +0.2**
comp=Z,29nm,0.7s,mb5.3,baz=145,slow=8.5,SNR=140
BRVK Borovoye 51.42 341 P **P 11 40 26.7 +0.9**
comp=Z,309nm,0.6s,SNR=26
BRVK Borovoye 51.42 341*c i*P **P 11 40 26.0 +0.2**
BRVK pmax pmax
comp=Z,53nm,1.0s,mb5.4
BRVK Borovoye 51.42 341 *e*P **P 11 40 25.8 0.0**
comp=Z,19nm,0.6s,mb5.2
BRVK Borovoye 51.42 341 P **P 11 40 26.4 +0.6**
SNR=24
BRVK P 11 40 26.4
SNR=24
ABKAR Akbulak array 52.52 332 *e*P **P 11 40 34.2 +0.1**
comp=Z,32nm,0.8s,mb5.3
KLR Kul'dur 53.62 29 *e*P **P 11 40 38.6 -3.6**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,80nm,2.0s,mb5.3
BOD Bodaibo 54.28 13 *e*P **P 11 40 46.4 -0.5**
BOD pmax pmax
comp=Z,29nm,1.0s,mb5.2
HABR Khabarovsk 54.81 32 *e*P **P 11 40 47.8 -3.0**
HABR *e* 11 41 49.7
HABR *e* 11 42 51.4
HABR *e*PPP 11 44 03.2
HABR *e*SS SS 11 52 06.5 -5.2
HABR pmax pmax
comp=Z,71nm,2.3s,mb5.3
HABR pmax pmax
comp=E,67nm,1.9s
HABR pmax pmax
comp=N,60nm,2.7s
HABR MLR MLR
comp=Z,265nm,19.0s,MS4.3
GNI Garni 56.45 315*c i*P **P 11 41 03.2 +0.4**
GNI pmax pmax
comp=Z,14nm,1.0s
GNI Garni 56.45 315 *e*P **P 11 41 03.3 +0.5**
comp=Z,12nm,0.8s,mb5.0
GNI Garni 56.45 315 P **P 11 41 03.7 +0.9**
SNR=5.7
GNI P 11 41 03.7
SNR=5.7
ASAJ Asahikawa 56.83 40 LR LR 12 06 26.5
comp=Z,352nm,18.4s,MS4.5,baz=212,slow=37
QLP Quilpie 57.62 126 *e*P **P 11 41 10.7 -0.6**
KMBO Kilima Mbogo 57.74 265 *i*P **P 11 41 15.1 +2.7**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 57.74 265 P **P 11 41 13.3 +0.9**
comp=Z,2.7nm,0.8s,mb4.3,baz=63,slow=11,SNR=7.0
KMBO LR LR 12 04 53.5
comp=Z,126nm,18.4s,MS4.1,baz=85,slow=35
KMBO Kilima Mbogo 57.74 265 *e*P **P 11 41 13.9 +1.6**
SVE Sverdlovsk 57.75 339⇓*e*P **P 11 41 12.1 +0.4**
SVE *e*S **S 11 49 09.6 +3.1**
SVE pmax pmax
comp=Z,51nm,0.9s,mb5.5
ZEI Tsey 58.11 318 *e*P **P 11 41 13.7 -0.8**
ZEI pmax pmax
comp=Z,16nm,0.7s,mb5.2
STKA Stephens Creek 58.12 133 *e*P **P 11 41 12.1 -2.6**
comp=Z,14nm,1.7s,mb4.7
STKA Stephens Creek 58.12 133 P **P 11 41 13.1 -1.7**
comp=Z,5.7nm,0.8s,mb4.7,baz=305,slow=6.8,SNR=9.8
STKA LR LR 12 06 25.5
comp=Z,154nm,21.5s,MS4.1,baz=26,slow=36
STKA Stephens Creek 58.12 133 *e*P **P 11 41 13.5 -1.3**
ARU Arti 58.23 337 P **P 11 41 14.5 -0.5**
comp=Z,162nm,1.0s,mb6.0,SNR=5.2
ARU Arti 58.23 337*c i*P **P 11 41 14.8 -0.2**
ARU *e* 11 42 02.7
ARU *e* 11 43 26.5
ARU S **S 11 49 11.0 -1.8**
ARU pmax pmax
comp=Z,30nm,1.0s,mb5.3
ARU Arti 58.23 337 *e*P **P 11 41 14.7 -0.4**
comp=Z,22nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 58.29 37 *e*P **P 11 41 16.0 +0.3**
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.5
KIV Kislovodsk 59.40 319*c i*P **P 11 41 23.0 -0.4**
KIV *i* pP 11 41 38.7 +0.4
KIV *e* 11 43 36.4
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.3
KIV Kislovodsk 59.40 319 *e*P **P 11 41 23.2 -0.2**
comp=Z,31nm,1.0s,mb5.3
ASF Jabal al Asfar 59.95 304 P **P 11 41 28.1 +0.7**
comp=Z,3.6nm,0.6s,mb4.6,baz=62,slow=2.1,SNR=8.8
MALT Malatya 60.38 311 *e*P **P 11 41 30.5 +0.2**
MALT pmax pmax
comp=Z,11nm,1.1s,mb4.8
MALT Malatya 60.38 311 *e*P **P 11 41 30.5 +0.2**
comp=Z,11nm,1.1s,mb4.8
MALT Malatya 60.38 311 P **P 11 41 30.4 +0.1**
CMSA Cobar Meteorol 61.00 131⇑*i*P **P 11 41 33.9 -0.6**
EIL Elat 61.06 301 P **P 11 41 35.6 +0.6**
comp=Z,8.0nm,0.9s,mb4.9,baz=31,slow=3.7,SNR=7.3
SOKR Solikamsk 61.15 339*c i*P **P 11 41 35.2 +0.1**
SOKR pmax pmax
comp=Z,20nm,0.7s,mb5.4
MMAI Mount Meron Ar 61.36 305 P **P 11 41 37.9 +0.9**
comp=Z,17nm,0.9s,mb5.2,baz=91,slow=5.8,SNR=13
ANN Anapa 63.21 318 *e*P **P 11 41 46.8 -2.3**
ANN pmax pmax
comp=Z,25nm,1.0s,mb5.3
BRTR Keskin Array B 64.36 312 P **P 11 41 56.2 -0.6**
comp=Z,21nm,0.6s,mb5.3,baz=124,slow=7.2,SNR=2.1
BR131 Keskin Array S 64.36 312 *e*P **P 11 41 55.9 -0.9**
comp=Z,7.7nm,0.7s,mb4.8

VORD Divnogorie 64.42 325 *e*P **P 11 41 55.3 -1.6**
VORD pmax pmax
comp=Z,30nm,0.8s,mb5.4
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,30nm,0.6s
VSR Storozhevoye 64.59 325 *e*P **P 11 41 56.4 -1.7**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.6s
MOS Moscow 67.34 329 *e*P **P 11 42 13.3 -2.4**
MOS *e* pP 11 42 28.7 -2.1
MOS *e* 11 51 13.5
MOS pmax pmax
comp=Z,52nm,0.8s,mb5.6
OBN Obninsk 67.63 328*c i*P **P 11 42 16.7 -0.8**
OBN *i* pP 11 42 29.2 -3.4
OBN *e* 11 44 45.8
OBN pmax pmax
comp=Z,75nm,1.6s,mb5.5
KLMR Klimovskoe 68.78 334 *e*P **P 11 42 24.0 -0.6**
KLMR pmax pmax
comp=Z,33nm,1.6s,mb5.0
LSZ Lusaka 69.02 251 *e*P **P 11 42 28.5 +1.6**
LSZ pmax pmax
comp=Z,21nm,1.3s,mb4.9
LSZ Lusaka 69.02 251 *e*P **P 11 42 28.5 +1.6**
comp=Z,21nm,1.3s,mb4.9
TIRR Tirgusor 69.28 315 *e*P **P 11 42 27.1 -0.9**
comp=Z,18nm,1.2s,mb4.9
TIRR Tirgusor 69.28 315⇑*i*P **P 11 42 27.2 -0.8**
TIXI Tiksi 69.40 11 *i* P **P 11 42 26.7 -1.5**
TIXI pmax pmax
comp=Z,38nm,1.2s,mb5.2
TIXI Tiksi 69.40 11 *e*P **P 11 42 26.8 -1.4**
comp=Z,23nm,0.8s,mb5.2
KIS Kishinev 69.60 318 *e*P **P 11 42 26.0 -4.0**
KIS LRM 12 26 38.0
comp=Z,300nm,16.0s
AKASG Malin Array Be 70.31 322 P **P 11 42 32.8 -1.4**
comp=Z,9.3nm,0.6s,mb4.9,baz=91,slow=5.1,SNR=36
AKBB Malin Array Si 70.31 322 *e*P **P 11 42 32.7 -1.5**
KIEV Kiev 70.32 322 *e*P **P 11 42 32.7 -1.6**
KIEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KIEV Kiev 70.32 322 *e*P **P 11 42 32.7 -1.6**
comp=Z,6.0nm,0.6s,mb4.7
VRI Vrincioaia 70.75 317 P **P 11 42 37.4 +0.4**
VRI Vrincioaia 70.75 317⇑*i*P **P 11 42 37.5 +0.5**
PLOR Plostina 70.80 317 P **P 11 42 38.0 +0.7**
PLOR Plostina 70.80 317⇓*i*P **P 11 42 37.8 +0.5**
SEY Seymchan 70.81 24⇑*i*P **P 11 42 36.3 -0.7**
MLR Muntele Rosu 71.21 316 P **P 11 42 40.1 +0.3**
MLR Muntele Rosu 71.21 316⇑*i*P **P 11 42 40.0 +0.2**
VOIR 71.82 316 P **P 11 42 42.7 -0.8**
VOIR 71.82 316⇓*i*P **P 11 42 43.0 -0.5**
BURAR Bucovina Array 72.13 318⇓P **P 11 42 45.7 +0.4**
BURAR Bucovina Array 72.13 318⇓*i*P **P 11 42 45.7 +0.4**
MICGM Minsk 72.14 326 *e* **P 11 42 47.0 +1.8**
BUR08 Bucovina Ar. S 72.15 318 *e*P **P 11 42 45.0 -0.4**
MNK Minsk 72.17 326 *e*P **P 11 42 47.0 +1.6**
NACGM Naroch 72.87 326 *e* **P 11 42 46.0 -3.5**
VAY Valandovo 72.94 311 *e*P **P 11 42 48.6 -1.7**
JOF Joensuu 73.17 335 *e*P **P 11 42 48.4 -2.8**
JOF pmax pmax
comp=Z,14nm,0.9s,mb4.9
JOF Joensuu 73.17 335 *e*p **P 11 42 48.4 -2.8**
comp=Z,14nm,0.9s,mb4.9
LVV L'vov 73.34 320 *e*P pP 11 43 06.6 -1.2
DRGR 73.66 317 P **P 11 42 54.7 +0.3**
DRGR 73.66 317⇑*i*P **P 11 42 54.5 +0.1**
VSU Vasula 73.86 330 *i* P **P 11 42 54.6 -0.7**
VSU pmax pmax
comp=Z,18nm,0.9s,mb5.0
LVZ Lovozero 73.92 340*c i*P **P 11 42 54.8 -0.7**
LVZ pmax pmax
comp=Z,12nm,0.7s,mb4.9
KRUS Krusevo 73.93 311 *e*P **P 11 42 54.0 -2.0**
KWP Kalwaria Pacla 74.15 320 *e*P **P 11 42 57.2 0.0**
KWP *e* pP 11 43 12.5 0.0
KWP *e* 11 43 20.0
KWP Kalwaria Pacla 74.15 320 *e*P **P 11 42 57.2 0.0**
KWP *e* pP 11 43 12.5 0.0
KWP Kalwaria Pacla 74.15 320 *e*P **P 11 42 56.7 -0.4**
comp=Z,40nm,1.1s,mb5.3
KWP Kalwaria Pacla 74.15 320⇑*i*P **P 11 42 57.2 0.0**
APA Apatity 74.21 340⇓*i*P **P 11 42 57.0 -0.1**
APA *i* *PP pP 11 43 12.6 +0.1
APA *e*S S 11 52 24.0 -2.3
APA pmax pmax
comp=Z,31nm,1.0s,mb5.2
APA MLR MLR
comp=Z,400nm,18.0s,MS4.8
BZS Buzias 74.23 316 P **P 11 42 57.7 0.0**
OHR Ohrid 74.24 311 *e*P **P 11 42 55.3 -2.6**
UZH Uzhgorod 74.24 319 *e*P **P 11 42 58.0 +0.3**
UZH *e* pP 11 43 13.0 -0.1
KOLS Kolonicke sedl 74.31 319 *e*P **P 11 42 58.6 +0.5**
KOLS pmax pmax
comp=Z,13nm,0.9s,mb4.9
KOLS Kolonicke sedl 74.31 319 *e*P **P 11 42 58.6 +0.5**
comp=Z,13nm,0.9s,mb4.9
KOLS *e*PcP pP 11 43 13.6 +0.1
KOLS Kolonicke sedl 74.31 319 *e*P **P 11 42 58.6 +0.5**
KOLS *e*sP pP 11 43 13.6 +0.1
SUW Suwalki 74.70 325 *e*P **P 11 42 59.6 -0.7**
SUW Suwalki 74.70 325 *e*P **P 11 42 59.2 -1.1**
BOSA Boshof 74.83 239 P **P 11 43 01.7 +0.2**
comp=Z,6.1nm,0.9s,mb4.5,baz=112,slow=6.4,SNR=9.9
BOSA LR LR 12 11 54.6
comp=Z,154nm,20.5s,MS4.3,baz=153,slow=32
FINES FINESS Array B 75.01 332 P **P 11 43 01.5 -0.4**
comp=Z,6.3nm,0.6s,mb4.7,baz=104,slow=8.0,SNR=23
STHS Stebnicka Huta 75.05 320 *e*P **P 11 43 03.4 +1.0**
STHS pmax pmax
comp=Z,14nm,0.8s,mb4.9
STHS Stebnicka Huta 75.05 320 *e*P **P 11 43 03.4 +1.0**
comp=Z,14nm,0.8s,mb4.9
STHS *e*PcP pP 11 43 16.7 -1.1
STHS Stebnicka Huta 75.05 320 *e*P **P 11 43 03.4 +1.0**
STHS *e*sP pP 11 43 16.7 -1.1
KAF Kangasniemi 75.10 333 *e*P **P 11 43 00.8 -1.6**
KAF pmax pmax
comp=Z,11nm,0.7s,mb4.9
KAF Kangasniemi 75.10 333 *e*p **P 11 43 00.8 -1.6**
comp=Z,11nm,0.7s,mb4.9,baz=104,slow=5.2
KECS Kecovo 75.41 319 *i* P **P 11 43 04.6 +0.1**
KECS pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KECS Kecovo 75.41 319 *i* P **P 11 43 04.6 +0.1**
comp=Z,8.9nm,0.7s,mb4.8
KECS *e*PcP pP 11 43 20.4 +0.5
KECS Kecovo 75.41 319 *i* P **P 11 43 04.5 0.0**
KECS *e*sP pP 11 43 20.4 +0.5
NIE Niedzica 75.65 320 *e*P **P 11 43 06.5 +0.6**
PSZ Piszkesteto 75.72 318 *e*P **P 11 43 05.8 -0.5**
comp=Z,14nm,0.9s,mb4.9
PSZ Piszkesteto 75.72 318⇓*i*P **P 11 43 06.1 -0.2**
OJC Ojcow 76.10 320 *e*P **P 11 43 08.4 0.0**
PKSM Moragy 76.36 316 ⇓P **P 11 43 09.5 -0.5**
PKSM Moragy 76.36 316⇓*i*P **P 11 43 09.5 -0.5**
MAW Mawson 76.38 192 LR LR 12 10 58.6
comp=Z,137nm,20.0s,MS4.3,baz=185,slow=31
VYHS Vyhne 76.50 318 *e*P **P 11 43 10.3 -0.4**
VYHS pmax pmax
comp=Z,13nm,1.4s,mb4.7
VYHS Vyhne 76.50 318 *e*P **P 11 43 10.3 -0.4**
comp=Z,13nm,1.4s,mb4.7
VYHS *e*PcP pP 11 43 26.2 +0.1
VYHS Vyhne 76.50 318 *e*P **P 11 43 10.3 -0.4**
VYHS *e*sP sP 11 43 26.2 -6.0
MORC Moravsky Berou 77.49 320 *e*P **P 11 43 15.9 -0.3**
comp=Z,24nm,1.1s,mb5.0
MORC Moravsky Berou 77.49 320⇑*i*P **P 11 43 16.4 +0.2**
ARCES ARCESS Array B 77.63 340 P **P 11 43 16.6 0.0**
comp=Z,8.9nm,0.6s,mb4.9,baz=96,slow=5.7,SNR=71
ARCES PP PP 11 46 12.7 +0.6
comp=Z,4.8nm,0.9s,baz=111,slow=9.8,SNR=4.8
BILL Bilibino 78.04 21⇑*i*P **P 11 43 18.1 -0.8**
BILL pmax pmax

comp=Z,13nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.8
BILL Biiibino 78.04 21 *e*P **P 11 43 18.4 -0.5**
comp=Z,3.9nm,0.4s,mb4.7
KSP Ksiaz 78.39 321 *e*P **P 11 43 21.7 +0.5**
KSP *e* pP 11 43 37.3 +0.6
KSP Ksiaz 78.39 321 *e*P **P 11 43 21.3 +0.1**
KSP *e**PP pP 11 43 37.2 +0.5
CSNA Conrad Observa 78.42 318⇑*i*P **P 11 43 21.3 -0.1**
comp=Z,12nm,1.2s,mb4.7
GCIS Gornji Cirnik 78.42 316 *i* P **P 11 43 21.7 +0.2**
ARSA Arzberg 78.59 317⇓*i*P **P 11 43 22.7 +0.3**
comp=Z,29nm,1.5s,mb5.0
BOJS Bojanci 78.66 315 *i* P **P 11 43 22.6 -0.3**
BOJS *i* pP 11 43 38.5 +0.2
PERS Pernice 78.83 316 *e*P **P 11 43 24.0 +0.3**
SOKA Soboth 78.89 316⇑*i*P **P 11 43 24.4 +0.4**
comp=Z,34nm,1.2s,mb5.2
VISS Visnje 78.97 315 *i* P **P 11 43 24.4 -0.1**
LJU Ljubljana 79.20 316 *e*P **P 11 43 26.0 +0.2**
OBKA Obir 79.21 316⇑*i*P **P 11 43 26.2 +0.4**
comp=Z,17nm,1.0s,mb4.9
MOA Molln 79.48 318⇑*i*P **P 11 43 27.0 -0.2**
comp=Z,9.2nm,0.9s,mb4.7
JAVS Javornik 79.52 316 *i* P **P 11 43 27.1 -0.4**
JAVS *i* pP 11 43 42.7 -0.3
VOY Vojsko 79.64 316 *e* pP 11 43 42.9 -0.8
VOY *e* 11 43 43.8
MYKA Terra Mystica 79.84 316⇑*i*P **P 11 43 29.2 0.0**
comp=Z,12nm,0.9s,mb4.8
BRG Berggiesshubel 79.88 321 *e*P **P 11 43 29.4 +0.1**
comp=Z,15nm,1.1s,mb4.8
BRG
comp=N,177nm,14.0s
BRG
comp=E,105nm,12.5s
BRG
comp=Z,259nm,15.8s
BRG Berggiesshubel 79.88 321 *e*P **P 11 43 29.4 0.0**
BRG pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BRG MLR MLR
comp=N,106nm,14.0s,MS4.4
BRG MLR MLR
comp=E,63nm,12.5s,MS4.4
BRG MLR MLR
comp=Z,155nm,15.8s,MS4.5
GEC2 GERESS Array S 79.92 318 *e*P **P 11 43 29.7 +0.1**
GEC2 *e**PP pP 11 43 41.8 -3.3
GERES GERESS Array B 79.92 318 P **P 11 43 30.3 +0.7**
comp=Z,14nm,0.7s,mb5.0,baz=91,slow=5.3,SNR=65
KHC Kasperske Hory 80.01 319 *e*P **P 11 43 30.0 -0.1**
KHC pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KHC Kasperske Hory 80.01 319 *e*P **P 11 43 30.0 -0.1**
comp=Z,5.8nm,0.7s,mb4.6
KBA Koelnbreinsper 80.07 317 *i* P **P 11 43 30.0 -0.4**
comp=Z,15nm,1.3s,mb4.8,SNR=6.2
CLL Collm 80.50 321 *i* P **P 11 43 31.8 -0.9**
CLL *e* pP 11 43 44.0 -4.2
CLL pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
CLL Collm 80.50 321 *i* P **P 11 43 31.8 -0.9**
comp=Z,8.0nm,1.1s,mb4.6
CLL *e* pP 11 43 44.0 -4.2
CLL *i* pP 11 43 48.7 +0.5
CLL *i* 11 43 52.6
CLL Collm 80.50 321 *i* P **P 11 43 31.8 -0.9**
comp=Z,8.0nm,1.1s,mb4.6
CLL *e*pP pP 11 43 44.0 -4.2
CLL *i* sP sP 11 43 48.7 -5.6
CLL *i* (sPcP) 11 43 52.6
WTTA Wattenberg 81.24 317⇑*i*P **P 11 43 36.2 -0.6**
comp=Z,24nm,0.9s,mb5.1
WATA Walderalm 81.28 317⇑*i*P **P 11 43 36.3 -0.7**
comp=Z,6.4nm,0.5s,mb4.8
GRA1 Grafenberg Arr 81.57 319 *e*P **P 11 43 38.8 +0.4**
comp=Z,18nm,1.0s,mb5.0
GRA1 LR LR
comp=Z,2μm,19.6s,MS5.4
GRF Grafenberg Arr 81.57 319 *e*P **P 11 43 38.8 +0.4**
comp=Z,18nm,1.0s,mb5.0
GRF *e*L 12 37 26.5
comp=Z,2μm,19.6s
GRF Grafenberg Arr 81.57 319 *e*P **P 11 43 38.8 +0.4**
GRF pmax pmax
comp=Z,18nm,1.0s,mb5.0
GRF MLR MLR
comp=Z,2μm,19.6s,MS5.4
GRF Grafenberg Arr 81.57 319 *e*P **P 11 43 38.8 +0.4**
GRF pmax pmax
comp=Z,18nm,1.0s,mb5.0
GRF MLR MLR
comp=Z,2μm,19.6s,MS5.4
MOTA Moosalm 81.60 317⇑*i*P **P 11 43 38.1 -0.6**
comp=Z,12nm,0.7s,mb4.9
RETA Reutte 81.84 317⇓*i*P **P 11 43 39.6 -0.3**
comp=Z,19nm,0.7s,mb5.1,SNR=9.5
FETA Feichten 81.85 317⇑*i*P **P 11 43 39.8 -0.1**
comp=Z,10nm,0.8s,mb4.8,SNR=9.4
NOA NORSAR Array B 82.01 331 P **P 11 43 39.9 -0.6**
comp=Z,3.0nm,0.9s,mb4.2,baz=94,slow=5.4,SNR=5.3
SPITS Spitsbergen Ar 82.21 348 P **P 11 43 40.8 -0.5**
comp=Z,18nm,0.7s,mb5.1,baz=107,slow=6.7,SNR=33
SPB4 Spitsbergen Ar 82.22 348 *e*P **P 11 43 40.7 -0.6**
DAVA Damuels 82.44 317⇑*i*P **P 11 43 43.0 0.0**
comp=Z,17nm,1.1s,mb4.9
KEST Kesra 83.02 305 P **P 11 43 47.0 +0.7**
comp=Z,7.0nm,0.9s,mb4.7,baz=39,slow=0.8,SNR=14
PGF Pioggiola 83.11 312 *e*P **P 11 43 46.5 -0.1**
comp=Z,15nm,0.8s,mb4.8
PGF Pioggiola 83.11 312 *e*P **P 11 43 46.5 -0.1**
PGF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
PGF Pioggiola 83.11 312 *e*P **P 11 43 46.5 -0.1**
comp=Z,7.7nm,0.8s,mb4.8
BFO Black Forest 83.47 318 *e*P **P 11 43 48.0 -0.3**
BFO pmax pmax
comp=Z,15nm,1.3s,mb4.9
BFO Black Forest 83.47 318 *e*P **P 11 43 48.0 -0.4**
comp=Z,15nm,1.3s,mb4.9
FELD Feldberg im Sc 83.70 317 *e*P **P 11 43 50.3 +0.8**
LANF Langenberg 83.81 319 *e*P **P 11 43 49.9 -0.1**
SAOF Saorge 84.12 314 *e*P **P 11 43 51.7 -0.1**
CDF Champ du Feu 84.17 318 *e*P **P 11 43 51.3 -0.6**
comp=Z,10nm,0.8s,mb4.7
CDF Champ du Feu 84.17 318 *e*P **P 11 43 51.3 -0.6**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
CDF Champ du Feu 84.17 318 *e*P **P 11 43 51.3 -0.6**
comp=Z,5.1nm,0.8s,mb4.7
SBF Sospel 84.21 313 *e*P **P 11 43 52.0 -0.2**
comp=Z,50nm,0.8s,mb5.4
SBF Sospel 84.21 313 *e*P **P 11 43 52.0 -0.2**
SBF pmax pmax
comp=Z,25nm,0.8s,mb5.4
SBF Sospel 84.21 313 *e*P **P 11 43 52.0 -0.2**
comp=Z,25nm,0.8s,mb5.4
AUTN L'Aution 84.22 314 *e*P **P 11 43 52.5 +0.3**
ECH Echery 84.26 318 *e*P **P 11 43 51.7 -0.7**
ECH pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
ECH Echery 84.26 318 *e*P **P 11 43 51.7 -0.7**
comp=Z,10nm,1.3s,mb4.8
REVF Revere 84.27 313 *e*P **P 11 43 52.4 -0.1**
TOUF Mont Tournerai 84.34 314 *e*P **P 11 43 53.0 +0.1**
MVIF Mont Vial 84.42 313 *e*P **P 11 43 53.5 +0.2**
CALN Calern 84.61 313 *e*P **P 11 43 54.8 +0.5**
LPG La Plagne 84.64 315 *e*P **P 11 43 54.5 +0.2**
comp=Z,24nm,0.8s,mb5.1
LPG La Plagne 84.64 315 *e*P **P 11 43 54.5 +0.2**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.1
LPG La Plagne 84.64 315 *e*P **P 11 43 54.5 +0.2**
comp=Z,12nm,0.8s,mb5.1
LPL La Plagne 84.65 315 *e*P **P 11 43 54.5 +0.1**
comp=Z,32nm,0.8s,mb5.2
LPL La Plagne 84.65 315 *e*P **P 11 43 54.5 +0.1**
LPL pmax pmax
comp=Z,16nm,0.8s,mb5.2
LPL La Plagne 84.65 315 *e*P **P 11 43 54.5 +0.1**
comp=Z,16nm,0.8s,mb5.2
MBDF Montbardon 84.66 314 *e*P **P 11 43 53.7 -0.8**
comp=Z,5.7nm,0.7s,mb4.5
MBDF Montbardon 84.66 314 *e*P **P 11 43 53.7 -0.8**

MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
MBDF Montbardon 84.66 314 *e*P **P 11 43 53.7 -0.8**
comp=Z,2.8nm,0.6s,mb4.6
FRF La Foret Royal 84.80 313 *e*P **P 11 43 55.1 -0.1**
comp=Z,36nm,0.8s,mb5.2
FRF La Foret Royal 84.80 313 *e*P **P 11 43 55.1 -0.1**
FRF pmax pmax
comp=Z,18nm,0.8s,mb5.2
FRF La Foret Royal 84.80 313 *e*P **P 11 43 55.1 -0.1**
comp=Z,18nm,0.8s,mb5.2
HAU Haudompre 84.81 318 *e*P **P 11 43 54.5 -0.6**
comp=Z,24nm,0.8s,mb5.1
HAU Haudompre 84.81 318 *e*P **P 11 43 54.5 -0.6**
HAU pmax pmax
comp=Z,12nm,0.8s,mb5.1
HAU Haudompre 84.81 318 *e*P **P 11 43 54.5 -0.6**
comp=Z,12nm,0.8s,mb5.1
LMR La Mourre 84.91 313 *e*P **P 11 43 55.5 -0.3**
comp=Z,29nm,1.0s,mb5.1
LMR La Mourre 84.91 313 *e*P **P 11 43 55.5 -0.3**
LMR pmax pmax
comp=Z,15nm,1.0s,mb5.1
LMR La Mourre 84.91 313 *e*P **P 11 43 55.5 -0.3**
comp=Z,15nm,1.0s,mb5.1
THEF They Montfort 85.04 318 *e*P **P 11 43 55.7 -0.6**
CABF La Chapelle 85.05 316 *e*P **P 11 43 56.3 -0.1**
comp=Z,19nm,0.8s,mb5.0
CABF La Chapelle 85.05 316 *e*P **P 11 43 56.3 -0.1**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
CABF La Chapelle 85.05 316 *e*P **P 11 43 56.3 -0.1**
comp=Z,9.4nm,0.8s,mb5.0
TAVF Tavernes 85.22 313 *e*P **P 11 43 57.7 +0.4**
ORIF Oris-en-Rattie 85.28 315 *e*P **P 11 43 57.7 +0.1**
comp=Z,12nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.28 315 *e*P **P 11 43 57.7 +0.1**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.28 315 *e*P **P 11 43 57.7 +0.1**
comp=Z,5.8nm,0.8s,mb4.8
BERF Bertagne 85.51 313 *e*P **P 11 43 57.3 -1.5**
SMRF Simiane la Rot 85.55 314 *e*P **P 11 43 59.3 +0.3**
comp=Z,16nm,0.9s,mb5.0
SMRF Simiane la Rot 85.55 314 *e*P **P 11 43 59.3 +0.3**
comp=Z,16nm,0.9s,mb5.3
MEZF Maizieres J'vi 85.65 318 *e*P **P 11 43 58.9 -0.4**
BAIF Baives 86.10 320 *e*P **P 11 44 01.4 -0.1**
comp=Z,11nm,0.7s,mb4.9
BAIF Baives 86.10 320 *e*P **P 11 44 01.4 -0.1**
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
BAIF Baives 86.10 320 *e*P **P 11 44 01.4 -0.1**
comp=Z,5.7nm,0.7s,mb4.9
VIVF Saint-Julien-l 86.14 315 *e*P **P 11 44 01.6 -0.3**
comp=Z,25nm,1.0s,mb5.1
VIVF Saint-Julien-l 86.14 315 *e*P **P 11 44 01.6 -0.3**
VIVF pmax pmax
comp=Z,12nm,1.0s,mb5.1
VIVF Saint-Julien-l 86.14 315 *e*P **P 11 44 01.6 -0.3**
comp=Z,12nm,1.0s,mb5.1
SSB Saint Sauveur 86.20 315 *e*P **P 11 44 01.6 -0.6**
SSB *e**PP pP 11 44 13.5 -4.3
SSB pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SSB Saint Sauveur 86.20 315 *e*P **P 11 44 01.6 -0.6**
comp=Z,7.5nm,1.0s,mb4.9
SSB *e*pP pP 11 44 13.5 -4.3
LOR Lormes 86.53 317 *e*P **P 11 44 03.2 -0.5**
comp=Z,19nm,0.8s,mb5.1
LOR Lormes 86.53 317 *e*P **P 11 44 03.2 -0.5**
LOR pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
LOR Lormes 86.53 317 *e*P **P 11 44 03.2 -0.5**
comp=Z,9.6nm,0.8s,mb5.1
SMF Signal de Mont 86.59 316 *e*P **P 11 44 03.4 -0.6**
comp=Z,26nm,0.9s,mb5.1
SMF Signal de Mont 86.59 316 *e*P **P 11 44 03.4 -0.6**
SMF pmax pmax
comp=Z,13nm,0.9s,mb5.2
SMF Signal de Mont 86.59 316 *e*P **P 11 44 03.4 -0.6**
comp=Z,13nm,0.9s,mb5.2
LASF Ste Croix 86.78 314 *e*P **P 11 44 05.1 +0.1**
comp=Z,20nm,1.1s,mb5.0
SSF Saint Saulge 86.79 317 *e*P **P 11 44 05.0 0.0**
comp=Z,9.8nm,0.8s,mb4.8
SSF Saint Saulge 86.79 317 *e*P **P 11 44 05.0 0.0**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SSF Saint Saulge 86.79 317 *e*P **P 11 44 05.0 0.0**
comp=Z,4.9nm,0.8s,mb4.8
PLDF La Plantade 86.80 316 *e*P **P 11 44 05.0 0.0**
AVF Avril sur Loir 86.92 317 *e*P **P 11 44 05.1 -0.5**
comp=Z,19nm,1.1s,mb5.0
AVF Avril sur Loir 86.92 317 *e*P **P 11 44 05.1 -0.5**
AVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
AVF Avril sur Loir 86.92 317 *e*P **P 11 44 05.1 -0.5**
comp=Z,9.4nm,1.0s,mb5.0
LBL Lubilhac 87.12 315 *e*P **P 11 44 06.9 +0.3**
PYM Petit Puy Mans 87.24 316 *e*P **P 11 44 07.3 +0.1**
BGF Bois d'Agland 87.28 316 *e*P **P 11 44 07.3 -0.1**
TCF Toulx Ste Croi 87.75 316 *e*P **P 11 44 09.5 -0.1**
CAF Calviac 87.98 315 *e*P **P 11 44 11.0 +0.2**
comp=Z,5.9nm,0.7s,mb4.7
CAF Calviac 87.98 315 *e*P **P 11 44 11.0 +0.2**
CAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CAF Calviac 87.98 315 *e*P **P 11 44 11.0 +0.2**
comp=Z,3.0nm,0.7s,mb4.6
MTLF Montolieu 88.03 313 *e*P **P 11 44 11.1 +0.1**
comp=Z,9.6nm,0.9s,mb4.8
MTLF Montolieu 88.03 313 *e*P **P 11 44 11.1 +0.1**
MTLF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
MTLF Montolieu 88.03 313 *e*P **P 11 44 11.1 +0.1**
comp=Z,4.8nm,0.9s,mb4.7
RJF Les Rejaudoux 88.33 315 *e*P **P 11 44 12.7 +0.3**
LFF La Frestale 88.92 315 *e*P **P 11 44 15.6 +0.4**
LDF La Druitiere 89.06 319 *e*P **P 11 44 15.6 -0.2**
comp=Z,6.7nm,0.6s,mb4.8
LDF La Druitiere 89.06 319 *e*P **P 11 44 15.6 -0.2**
LDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
LDF La Druitiere 89.06 319 *e*P **P 11 44 15.6 -0.2**
comp=Z,3.3nm,0.6s,mb4.8
FLN La Foliniere 89.28 319 *e*P **P 11 44 16.6 -0.2**
comp=Z,12nm,0.7s,mb5.1
FLN La Foliniere 89.28 319 *e*P **P 11 44 16.6 -0.2**
FLN pmax pmax
comp=Z,6.0nm,0.6s,mb5.1
FLN La Foliniere 89.28 319 *e*P **P 11 44 16.6 -0.2**
comp=Z,6.2nm,0.6s,mb5.1
MFF Saint Martin d 89.33 317 *e*P **P 11 44 17.0 -0.1**
comp=Z,24nm,1.2s,mb5.1
MFF Saint Martin d 89.33 317 *e*P **P 11 44 17.0 -0.1**
MFF pmax pmax
comp=Z,12nm,1.2s,mb5.1
MFF Saint Martin d 89.33 317 *e*P **P 11 44 17.0 -0.1**
comp=Z,12nm,1.2s,mb5.1
DAG Danmarks Havn 89.85 348⇓*e*P **P 11 44 18.0 -0.9**
DAG pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
DAG Danmarks Havn 89.85 348⇓*i*P **P 11 44 18.0 -0.9**
comp=Z,5.0nm,0.9s,mb4.8
ETSF Etsaut 90.10 313 *e*P **P 11 44 21.5 +0.7**
comp=Z,17nm,0.9s,mb5.0
ETSF Etsaut 90.10 313 *e*P **P 11 44 21.5 +0.7**
ETSF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
ETSF Etsaut 90.10 313 *e*P **P 11 44 21.5 +0.7**
comp=Z,8.5nm,0.9s,mb5.1
SJPF Ste Jean 90.56 313 *e*P **P 11 44 23.5 +0.6**
comp=Z,8.5nm,0.7s,mb4.9
SJPF Ste Jean 90.56 313 *e*P **P 11 44 23.5 +0.6**
SJPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
SJPF Ste Jean 90.56 313 *e*P **P 11 44 23.5 +0.6**
comp=Z,4.3nm,0.7s,mb4.9
ROSF Rostrenen 91.17 319 *e*P **P 11 44 25.6 0.0**
TORD Torodi Ar. Bea 91.66 283 P **P 11 44 28.7 +0.2**
comp=Z,2.9nm,0.9s,mb4.6,baz=81,slow=4.2,SNR=15
TORD PP PP 11 48 10.8 +3.1
comp=Z,0.4nm,0.8s,baz=92,slow=6.6,SNR=4.6
TORD Torodi Ar. Bea 91.66 283 P **P 11 44 28.7 +0.2**
TORD PP PP 11 48 10.8 +3.1

ESDC Sonseca Array 93.12 310 P **P 11 44 34.7 -0.2**
comp=Z,1.5nm,0.5s,mb4.7,baz=56,slow=4.2,SNR=7.2
ESDC Sonseca Array 93.12 310 P **P 11 44 34.7 -0.2**
CHUM Lake Minchumin 94.94 24 *e*P **P 11 44 43.2 +0.6**
comp=Z,16nm,1.0s,mb5.4
BPAW Bear Paw Mtn. 95.39 24 *e*P **P 11 44 44.6 -0.1**
comp=Z,30nm,1.4s,mb5.5
COLA College 96.27 22 PFAKE 11 45 00.0 +11
COLA LR LR
comp=Z,194nm,19.0s,MS4.6
MCK McKinley 96.36 24 *e*P **P 11 44 48.8 -0.3**
SUMG Summit 96.52 347 *e*P **P 11 44 50.4 +0.7**
comp=Z,2.8nm,0.6s,mb4.9
INK Inuvik 99.06 16 *e*P **P 11 44 59.1 -2.1**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 99.06 16 P **P 11 45 00.3 -0.9**
comp=Z,3.7nm,1.0s,mb4.9,baz=313,slow=4.8,SNR=12
INK Inuvik 99.06 16 *e*P **P 11 44 59.1 -2.1**
comp=Z,5.7nm,1.1s,mb5.0
YKA Yellowknife Ar 108.55 14 P Pdif 11 45 44.9 +1.3
YKA 11 50 10.7
YKA Yellowknife Ar 108.55 14 Pdiff Pdif 11 45 44.9 +1.3
comp=Z,0.3nm,0.8s,baz=322,slow=4.7,SNR=3.7
YKA PP PP 11 50 10.6 -3.3
comp=Z,0.7nm,0.7s,baz=337,slow=7.7,SNR=5.3
YKA PKKP PKKPbc 12 01 13.3 +12
comp=Z,0.3nm,0.7s,baz=152,slow=2.5,SNR=4.3
YKA Yellowknife Ar 108.55 14 Pdif Pdif 11 45 44.9 +1.3
YKA PP PP 11 50 10.7 -3.3
YKA PKKP PKKPbc 12 01 13.3 +12
SCHQ Schefferville 117.90 348 PKP PKPdf 11 50 06.3 -0.6
comp=Z,1.4nm,0.4s,baz=349,slow=5.2,SNR=5.9
SCHQ Schefferville 117.90 348 PKP PKPdf 11 50 06.3 -0.6
FFC Flin Flon 118.36 11 *e*PKIKP PKPdf 11 50 07.0 -0.8
FFC Flin Flon 118.36 11 *i* PKIKP PKPdf 11 50 07.5 -0.3
MSO Missoula 122.02 23 *e*PKPdf PKPdf 11 50 14.2 -0.8
WVOR Wild Horse Val 123.45 29 *e*PKIKP PKPdf 11 50 17.2 -0.7
ULM Lac du Bonnet 123.69 8 PKP PKPdf 11 50 17.4 -0.8
comp=Z,8.1nm,0.7s,baz=15,slow=2.9,SNR=20
ULM Lac du Bonnet 123.69 8 *e*PKPdf PKPdf 11 50 16.9 -1.3
DLMT Dillon 123.75 23 *e*PKPdf PKPdf 11 50 18.4 0.0
MCMT McKenzie Canyo 124.10 23 *e*PKPdf PKPdf 11 50 19.2 +0.1
GCMT Greycliff 124.47 20 *e*PKPdf PKPdf 11 50 19.9 +0.1
HLID Hailey 124.50 25 *e*PKPdf PKPdf 11 50 20.3 +0.4
LAO LASA Array 124.78 17 *e*PKPdf PKPdf 11 50 21.0 +0.6
RLMT Red Lodge 125.19 21 *e*PKPdf PKPdf 11 50 21.6 +0.4
LKWY Lake 125.26 22 *e*PKIKP PKPdf 11 50 23.5 +2.2
RRI2 Red Ridge 125.94 23 *e*PKPdf PKPdf 11 50 22.9 +0.2
TPAW Teton Pass 125.97 23 *e*PKPdf PKPdf 11 50 22.9 +0.2
LOHW Long Hollow 126.00 23 *e*PKPdf PKPdf 11 50 23.4 +0.6
SNOW Snow King Moun 126.07 23 *e*PKPdf PKPdf 11 50 23.6 +0.6
REDW Red Top Meadow 126.11 23 *e*PKPdf PKPdf 11 50 23.2 +0.2
NVAR Mina Array Bea 126.61 32 PKP PKPdf 11 50 25.1 +0.9
comp=Z,3.4nm,0.8s,baz=283,slow=2.3,SNR=11
PDAR Pinedale Array 127.12 22 PKP PKPdf 11 50 24.9 -0.1
comp=Z,3.8nm,0.9s,baz=29,slow=2.1,SNR=16
RSSD Black Hills 127.76 17 *e*PKIKP PKPdf 11 50 25.9 -0.2
EFI East Falkland 128.76 201 *i* PKIKP PKPdf 11 50 27.6 -0.2
TMUT Trail Mountain 129.37 26 *e*PKPdf PKPdf 11 50 29.1 -0.3
MSU Marysvale 129.58 27 *e*PKIKP PKPdf 11 50 30.9 +1.1
ECSD EROS Data Cent 129.90 11 *e*PKPdf PKPdf 11 50 29.5 -0.8
ANMO Albuquerque 135.06 25 *e*PKIKP PKPdf 11 50 39.6 -0.6
CPRX Cap Rock 137.79 23 *e*PKPdf PKPdf 11 50 47.1 +1.8
GDL2 Guadalupe Moun 138.31 25 *e*PKPdf PKPdf 11 50 46.7 +0.4
MNTX Cornudas Mount 138.31 26 *e*PKPdf PKPdf 11 50 46.2 -0.2
MIAR Mount Ida 139.37 10 *e*PKIKP PKPdf 11 50 48.5 +0.3
TXAR Lajitas Array 141.09 26 PKP PKPdf 11 50 51.4 -0.1
comp=Z,2.2nm,0.6s,baz=302,slow=0.5,SNR=12
JCT Junction City 141.59 20 *e*PKHKP 11 50 45.8
CPUP Villa Florida 146.22 229 PKPbc PKPbc 11 51 00.8 -0.8
comp=Z,3.2nm,0.7s,baz=93,slow=5.0,SNR=9.9
MTP Monte Pirata 149.47 321 *e*PKPbc PKPbc 11 51 10.0 -0.5
APG El Apazote 158.96 14 PKPab PKPab 11 51 54.0 -1.5
comp=Z,10nm,1.0s,baz=334,slow=5.8,SNR=8.7
LPAZ La Paz 160.05 236 PKP PKPdf 11 51 21.0 +0.3
comp=Z,1.5nm,0.8s,baz=56,slow=3.6,SNR=5.3
LPAZ PKPab PKPab 11 52 01.6 +1.0
comp=Z,2.3nm,0.8s,baz=135,slow=4.3,SNR=6.0
LPAZ La Paz 160.05 236 *e*PKPdf PKPdf 11 51 21.4 +0.7

NIED ***08*** *11:37:00,36°.10N×142°.20E,h11km,Mw4.6 Best double couple: M0 7.99000×10^15 NP1:φ=15.00000°,δ62.00000°, λ72.00000°. NP2:φ=228.00000°,δ33.00000°,λ119.00000°.*
IDC ***08*** *11:37:09.3±0.5,36°.03N×142°.23E,h0km,mb4.2/19, mb1 4.4/25,mb1mx4.3/31,mbtmp4.3/25,ML4.2/5,MS3.9/4, Ms1 3.9/4,ms1mx3.3/37,Error ellipse: s-maj=15.7km s-min=13.1km az=111.0*
ISCJB ***08*** *11:37:10.8±1.2,36°.05N±0°.03×142°.19E±0°.05,h19km±8km, mb4.5/44,MS4.1/7,Error ellipse: s-maj=7.1km s-min=5.0km az=30.0*
BJI ***08*** *11:37:11.9,36°.03N×142°.09E,h24km,mB4.7/9,mb4.8/21, Ms4.4/13,Ms7 4.2/11*
JMA ***08*** *11:37:11.4±0.2,36°.14N×142°.21E,h77km,M4.1*
MOS ***08*** *11:37:12.6±0.8,36°.02N×142°.16E,h33km,mb5.0/17,Error ellipse: s-maj=11.3km s-min=7.5km az=121.2*
NEIC ***08*** *11:37:14.7±0.3,35°.98N×142°.16E,h35km,mb4.7/15, MW4.5(NIED),Error ellipse: s-maj=7.4km s-min=5.0km az=162.0*

ISC 08 11:37:11.0±1.2,36°.06N±0°.03×142°.18E±0°.05,h9km±7km, n106,σ1°.09/113,mb4.5/44,MS4.1/7,7C-1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.13**	**252**	⇑P	**Pg**	**11 37 32.7**	**0.0**
CHOJ				S	**Sg**	**11 37 49.2**	**+1.8**
JHO	**Hitachi**	**1.41**	**293**	⇑P	**Pn**	**11 37 35.2**	**-1.6**
ONAJ	**Iwakimizuishiy**	**1.52**	**313**	⇑P	**Pn**	**11 37 36.8**	**-1.7**
JFK	**Kawauchi**	**1.67**	**322**	⇑P	**Pn**	**11 37 38.5**	**-1.9**
BSO1	**Boso 1**	**1.71**	**215**	P	**Pn**	**11 37 40.8**	**-0.2**
BSO1				*e*S	**Sn**	**11 38 03.5**	**+0.5**
JMM	**Marumori**	**2.11**	**329**	P	**Pn**	**11 37 44.6**	**-1.9**
JAG	**Ashikaga**	**2.23**	**280**	⇑P	**Pn**	**11 37 47.3**	**-0.8**
JOD2	**Odawara 2**	**2.64**	**253**	P	**Pn**	**11 37 53.9**	**+0.2**
JRY	**Ryogami san**	**2.65**	**270**	P	**Pn**	**11 37 53.4**	**-0.5**
JNS	**Sasagawa**	**2.88**	**308**	P	**Pn**	**11 37 58.0**	**+0.9**
JMK	**Ichinoseki**	**2.98**	**346**	⇓P	**Pn**	**11 37 57.2**	**-1.2**
JYN	**Shimob**	**3.01**	**260**	P	**Pn**	**11 37 59.1**	**+0.3**
JYK	**Kaneyama**	**3.19**	**334**	P	**Pn**	**11 38 00.3**	**-1.0**
MJAR	**Matsushiro Arr**	**3.24**	**280**	Pn	**Pn**	**11 38 02.5**	**+0.5**
	24nm,0.3s,baz=98,slow=7.3,SNR=121						
MAJO	**Matsushiro**	**3.24**	**280**	*e*P	**Pn**	**11 38 02.8**	**+0.8**
MAT	**Matsushiro**	**3.24**	**280**	P	**Pn**	**11 38 02.4**	**+0.4**
MAT				S	**Sn**	**11 38 43.7**	**+3.0**
MAT	**Matsushiro**	**3.24**	**280**	P	**Pn**	**11 38 02.7**	**+0.7**
JOM	**Ohasama**	**3.47**	**349**	P	**Pn**	**11 38 03.8**	**-1.4**
JHJ2	**Mitsune**	**3.53**	**214**	P	**Pn**	**11 38 05.2**	**-0.8**
JHJ2				S	**Sn**	**11 38 45.5**	**-2.3**
JHJ	**Hachijo jima 2**	**3.54**	**215**	Pn	**Pn**	**11 38 05.5**	**-0.6**
	90nm,0.3s,baz=106,slow=2.9,SNR=26						
JHJ				Sn	**Sn**	**11 38 45.0**	**-3.0**
	193nm,0.3s,baz=37,slow=20,SNR=16						
JSD	**Sado**	**3.70**	**303**	P	**Pn**	**11 38 07.9**	**-0.4**
ERM	**Erimo**	**5.99**	**7**	*e*Pn	**Pn**	**11 38 47.0**	**+7.3**
ERM				*e*Sn	**Sn**	**11 39 45.5**	**-3.0**
ASAJ	**Asahikawa**	**8.05**	**2**	P	**Pn**	**11 39 06.0**	**-2.0**
ASAJ						11 40 34.5	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,18.4s						
ASAJ	**Asahikawa**	**8.05**	**2**	Pn	**Pn**	**11 39 06.0**	**-2.0**
	comp=Z,2.8nm,0.3s,baz=208,slow=13,SNR=21						
ASAJ				Sn	**Sn**	**11 40 34.5**	**-4.6**
	comp=Z,1.2nm,0.3s,baz=114,slow=20,SNR=3.8						
ASAJ				LR	LR	11 43 13.7	
	comp=Z,1μm,18.4s,baz=164,slow=45						
YUK	**Yuzh-Kuril'sk**	**8.45**	**18**	P	**Pn**	**11 39 16.5**	**+3.1**
CBIJ	**Chichi jima**	**8.94**	**180**	Pn	**Pn**	**11 39 17.3**	**-3.0**
	comp=Z,25nm,0.3s,baz=300,slow=20,SNR=35						
CBIJ				Sn	**Sn**	**11 40 53.9**	**-7.2**
	comp=Z,31nm,0.3s,baz=316,slow=21,SNR=7.1						
KUR	**Kuril'sk**	**10.12**	**23**	P	Px	11 39 57.5	
VLA	**Vladivostok**	**10.61**	**315**	*e*P	**Pn**	**11 39 50.0**	**+7.0**
VLA				pmax	pmax		
	comp=Z,64nm,1.3s						
VLA				MLR	MLR		

comp=Z,800nm,13.8s
YSS Yuzh-Sakhalins 10.89 2 *e*P **Pn 11 39 49.7 +2.8**
YSS MLR MLR
comp=Z,1μm,16.0s
YSS MLR MLR
comp=N,700nm,17.0s
YSS Yuzh-Sakhalins 10.89 2 Pn **Pn 11 39 50.9 +4.0**
KSRS Korea Array 11.52 281 Pn **Pn 11 39 57.4 +1.9**
comp=N,0.2nm,0.3s,baz=98,slow=14,SNR=27
KSRS LR LR 11 44 25.2
comp=N,492nm,18.6s,baz=256,slow=38
JOW Kunigami 15.00 236 Pn **Pn 11 40 44.0 +0.9**
comp=N,0.1nm,0.3s,baz=69,slow=14,SNR=2.2
SNY Shenyang 15.56 297 ⇑P **Pn 11 40 54.0 +3.5**
SNY pmax pmax
comp=Z,16nm,0.9s
SNY pmax pmax
comp=Z,160nm,4.7s
SNY LR LR
comp=N,730nm,13.5s
SNY LR LR
comp=E,830nm,15.7s
SNY LR LR
comp=Z,890nm,14.3s
DL2 Dalian 16.55 286 P **Pn 11 41 03.3 0.0**
DL2 *e*S **Sn 11 44 04.8 -2.3**
DL2 pmax pmax
comp=Z,10.0nm,0.7s
DL2 pmax pmax
comp=Z,130nm,6.8s
DL2 LR LR
comp=N,350nm,11.2s
DL2 LR LR
comp=E,420nm,13.9s
DL2 LR LR
comp=Z,600nm,14.4s
PETK Petropavlovsk- 20.24 28 LR LR 11 51 16.9
comp=Z,178nm,18.2s,MS3.5,baz=305,slow=42
CLNS Chul'man 23.82 336 *e*P **P 11 42 24.3 +0.3**
CLNS *e**PP 11 42 33.4
CLNS *e*PPP 11 42 58.7
CLNS *e* 11 46 04.7
CLNS *e*S **S 11 46 25.5 -14**
CLNS pmax pmax
comp=Z,37nm,1.3s,mb4.7
CLNS pmax pmax
comp=N,32nm,1.4s
CLNS pmax pmax
comp=E,11nm,1.4s
CLNS smax
comp=N,132nm,11.9s
CLNS smax
comp=E,79nm,13.4s
CLNS MLR MLR
comp=Z,624nm,13.0s,MS4.3
CLNS MLR MLR
comp=N,560nm,13.0s,MS4.3
CLNS MLR MLR
comp=E,449nm,12.0s,MS4.3
HHC Hu-ho-hao-te 24.38 291 *e*P **P 11 42 29.4 +0.1**
HHC pP 11 42 39.1
HHC sP sP 11 42 42.8 +9.5
HHC pmax pmax
comp=Z,22nm,1.1s,mb4.5
HHC pmax pmax
comp=Z,87nm,5.7s
HHC LR LR
comp=N,380nm,13.5s,MS4.3
HHC LR LR
comp=E,610nm,14.5s,MS4.3
HHC LR LR
comp=Z,430nm,14.2s,MS4.1
YAK Yakutsk 27.15 347 *e*P **P 11 42 52.6 -1.6**
YAK *e**PP pP 11 43 05.9 +8.9
YAK *e*PPP 11 43 45.3
YAK *e*S **S 11 47 31.5 -0.9**
YAK *e*SS 11 48 42.4
YAK *e*SSS 11 49 11.3
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=Z,23nm,1.1s,mb4.6
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK smax
comp=N,201nm,15.4s
YAK smax
comp=E,53nm,12.6s
YAK MLR MLR
comp=N,374nm,12.0s,MS4.2
YAK MLR MLR
comp=Z,492nm,14.0s,MS4.2
YAK MLR MLR
comp=E,65nm,10.0s,MS4.2
ENH Enshi 27.88 268 *e*P **P 11 43 00.7 -0.5**
comp=E,20nm,0.6s,mb4.9
ULN Ulaanbaatar 28.41 305 *e*P **P 11 43 06.9 +1.3**
ULN pmax pmax
comp=Z,15nm,0.8s,mb4.7
ULN Ulaanbaatar 28.41 305 *e*P **P 11 43 06.9 +1.3**
comp=Z,15nm,0.8s,mb4.7
BOD Bodaibo 28.68 328 *e*P **P 11 43 04.7 -3.2**
BOD pmax pmax
comp=Z,22nm,1.4s,mb4.7
SONM Songino Array 28.84 305 P **P 11 43 10.7 +1.3**
comp=Z,13nm,0.9s,mb4.7,baz=104,slow=9.1,SNR=24
LZH Lanzhou 30.85 282 *e*P **P 11 43 27.5 +0.1**
LZH pP pP 11 43 31.5 +1.3
LZH pmax pmax
comp=Z,53nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,160nm,4.6s
LZH LR LR
comp=E,390nm,15.8s
LZH LR LR
comp=Z,490nm,18.2s,MS4.2
ZAK Zakamensk 31.36 309⇑ *i*P **P 11 43 32.0 +0.3**
ZAK pmax pmax
comp=Z,16nm,1.2s,mb4.7
TLY Talaya 31.43 312 *e*P **P 11 43 32.6 +0.3**
TLY *e* 11 43 41.9
TLY pmax pmax
comp=Z,18nm,0.9s,mb4.9
TLY Talaya 31.43 312 *e*P **P 11 43 33.1 +0.7**
comp=Z,15nm,0.9s,mb4.8
GTA Gaotai 33.45 289 P **P 11 43 51.1 +1.0**
GTA pP pP 11 44 00.3 +7.3
GTA S **S 11 49 12.9 +1.3**
GTA pmax pmax
comp=Z,34nm,1.0s,mb5.2
GTA pmax pmax
comp=Z,63nm,6.0s
GTA LR LR
comp=N,460nm,22.2s,MS4.3
GTA LR LR
comp=E,570nm,27.0s,MS4.3
GTA LR LR
comp=Z,390nm,16.8s
CHTO Chiang Mai 41.66 257 *e*P **P 11 45 00.2 +0.3**
CHTO pmax pmax
comp=Z,8.0nm,1.3s,mb4.2
CHTO Chiang Mai 41.66 257 *e*P **P 11 45 00.2 +0.2**
comp=Z,8.2nm,1.3s,mb4.2
CMAR Chiang Mai Arr 41.86 257 P **P 11 45 01.7 +0.1**
comp=Z,1.8nm,0.6s,mb3.9,baz=47,slow=7.0,SNR=12
ZALV Zalesovo Beam 43.02 313 P **P 11 45 09.7 -0.8**
comp=Z,5.0nm,0.5s,mb4.5,baz=88,slow=7.6,SNR=4.2
NVS Novosibirsk 43.95 314 *i*P **P 11 45 17.4 -0.7**
NVS pmax pmax
comp=Z,18nm,1.7s,mb4.5
NVS pmax pmax
comp=E,14nm,1.2s
MK31 Makanchi Array 45.16 303 *e*P **P 11 45 28.4 +0.6**
MKAR Makanchi Array 45.16 303 P **P 11 45 28.0 +0.2**
comp=E,13nm,0.8s,mb4.8,baz=95,slow=8.3,SNR=26
KURK Kurchatov 47.02 309 *e*P **P 11 45 42.2 -0.2**
KURK pmax pmax
comp=Z,26nm,0.9s,mb5.2
KURK Kurchatov 47.02 309 LR LR 12 06 01.3
comp=Z,134nm,18.3s,MS3.9,baz=130,slow=37
KURK Kurchatov 47.02 309 *e*P **P 11 45 42.2 -0.2**
comp=Z,26nm,0.9s,mb5.2
TKM2 Tokmak 2 50.64 299 *e*P **P 11 46 11.3 +1.0**
TKM2 pmax pmax
comp=Z,31nm,1.2s,mb5.1
TKM2 Tokmak 2 50.64 299 *e*P **P 11 46 11.3 +1.0**
comp=Z,31nm,1.2s,mb5.1
AAK Ala-Archa 51.49 299 *e*P **P 11 46 17.3 +0.5**
AAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AAK Ala-Archa 51.49 299 *e*P **P 11 46 17.3 +0.6**
comp=Z,7.8nm,1.1s,mb4.5
BVAR Borovoye Array 51.68 313 P **P 11 46 18.3 +0.3**
comp=Z,4.3nm,1.0s,mb4.3,baz=98,slow=5.1,SNR=6.9
AML Almayashu 52.21 299 *e*P **P 11 46 23.2 +1.1**
comp=Z,10nm,0.7s,mb4.9
INK Inuvik 54.97 27 *e*P **P 11 46 42.6 +0.7**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 54.97 27 P **P 11 46 41.8 -0.2**
comp=Z,1.7nm,0.6s,mb4.2,baz=327,slow=4.7,SNR=7.7
INK Inuvik 54.97 27 *e*P **P 11 46 42.6 +0.7**
comp=Z,3.6nm,0.6s,mb4.6
FITZ Fitzroy Crossi 56.10 199 P **P 11 46 50.4 -0.2**
comp=Z,1.4nm,0.5s,mb4.2,baz=19,slow=4.0,SNR=7.7
WRA Warramunga Arr 56.19 189 P **P 11 46 50.5 -0.7**
comp=Z,2.4nm,0.7s,mb4.3,baz=6.1,slow=6.7,SNR=16
ARU Arti 57.49 319 *e*P **P 11 47 00.5 +0.4**
ARU pmax pmax
comp=Z,15nm,1.0s,mb5.0
ARU Arti 57.49 319 *e*P **P 11 47 00.5 +0.4**
comp=Z,15nm,1.0s,mb5.0
ASAR Alice Springs 59.92 189 P **P 11 47 16.7 -0.6**
comp=Z,4.1nm,1.1s,mb4.4,baz=358,slow=6.5,SNR=8.3
RES Resolute Bay 63.39 14 *e*P **P 11 47 40.6 +0.5**
RES pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
RES Resolute Bay 63.39 14 *e*P **P 11 47 40.6 +0.5**
comp=Z,4.1nm,0.9s,mb4.6
YKA Yellowknife Ar 64.34 30 P **P 11 47 46.6 0.0**
comp=Z,1.1nm,0.7s,mb4.0,baz=302,slow=6.7,SNR=9.6
ARCES ARCESS Array B 65.12 340 P **P 11 47 52.0 +0.4**
comp=Z,4.2nm,1.1s,mb4.4,baz=57,slow=6.7,SNR=4.6
OBN Obninsk 69.24 324 *e*P **P 11 48 18.3 +0.4**
OBN pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
FINES FINESS Array B 69.96 333 P **P 11 48 22.1 -0.2**
comp=Z,7.2nm,1.0s,mb4.5,baz=35,slow=7.0,SNR=7.4
KIV Kislovodsk 72.01 312 *e*P **P 11 48 35.8 +0.8**
KIV pmax pmax
comp=Z,19nm,1.2s,mb4.9
YBMT Yellow Bay 72.36 43 *e*P **P 11 48 33.0 -4.1**
SWMT Swartz Lake 72.57 44 *e*P **P 11 48 39.0 +0.7**
SLMT Seeley Lake 73.00 44 *e*P **P 11 48 41.3 +0.5**
FFC Flin Flon 74.19 33 *e*P **P 11 48 47.5 -0.2**
HRY Holter Researc 74.24 43 *e*P **P 11 48 47.5 -0.6**
LRM Limekiln Ridge 74.41 44 *e*P **P 11 48 50.4 +1.2**
DLMT Dillon 74.60 45 *e*P **P 11 48 51.1 +0.8**
comp=Z,13nm,1.4s,mb4.7
BOZ Bozeman (W) 74.98 44 *e*P **P 11 48 53.4 +0.9**
NVAR Mina Array Bea 75.08 53 P **P 11 48 53.7 +0.6**
comp=Z,1.2nm,0.7s,mb3.9,baz=292,slow=6.1,SNR=9.9
NB2 NORSAR Subarra 75.32 338 P **P 11 48 54.2 +0.1**
comp=Z,14nm,1.4s,mb4.7,baz=39,slow=5.9
NOA NORSAR Array B 75.32 338 P **P 11 48 53.9 -0.2**
comp=Z,3.4nm,0.8s,mb4.3,baz=39,slow=5.7,SNR=9.1
AKASG Malin Array Be 75.44 323 P **P 11 48 54.4 -0.6**
comp=Z,1.5nm,0.5s,mb4.2,baz=47,slow=5.7,SNR=11
IMW Indian Meadow 76.42 45 *e*P **P 11 49 02.8 +2.0**
LAO LASA Array 77.30 41 *e*P **P 11 49 08.8 +3.1**
comp=Z,10.0nm,1.3s,mb4.6
PDAR Pinedale Array 77.91 46 P **P 11 49 09.7 +0.6**
comp=Z,0.8nm,0.7s,mb3.7,baz=256,slow=0.2,SNR=7.6
SRU San Rafael 79.59 49 *e*P **P 11 49 18.0 -0.4**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SRU San Rafael 79.59 49 *e*P **P 11 49 18.0 -0.4**
comp=Z,5.2nm,0.8s,mb4.5
BR131 Keskin Array S 79.95 312 *e*P **P 11 49 19.5 -0.9**
BRTR Keskin Array B 79.96 312 P **P 11 49 21.7 +1.2**
comp=Z,13nm,0.4s,mb5.2,baz=34,slow=6.5,SNR=2.6
ULM Lac du Bonnet 79.97 34 P **P 11 49 19.9 -0.5**
comp=Z,0.9nm,0.6s,mb3.9,baz=343,slow=3.5,SNR=3.8
CLL Collm 82.24 331 *e*P **P 11 49 32.0 -0.4**
CLL *e* 11 49 48.0
CLL Collm 82.24 331 *e*P **P 11 49 32.0 -0.4**
CLL *e*sP sP 11 49 48.0 +11
GERES GERESS Array B 83.86 329 P **P 11 49 40.7 -0.1**
comp=Z,0.6nm,0.6s,mb3.9,baz=57,slow=6.0,SNR=4.7
LENM Lemitar 84.92 51 *e*P **P 11 49 45.0 -1.5**
comp=Z,4.8nm,0.8s,mb4.7
TXAR Lajitas Array 90.22 53 P **P 11 50 12.9 +0.8**
comp=Z,0.8nm,0.8s,mb4.1,baz=293,slow=2.4,SNR=11
LPAZ La Paz 146.63 62 PKP2 PKPab 11 56 53.9 -0.6
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
LPAZ La Paz 146.63 62 PKPbc PKPbc 11 56 53.9 +0.5
comp=Z,1.3nm,0.7s,baz=333,slow=2.3,SNR=5.0

*IDC **08** 11:45:32.8±1.6, 8°.74S×109°.58W, h0km, mb3.6/6, mb1 4.0/6, mb1mx4.0/13, mbtmp3.6/6, MS4.2/7, Ms1 4.2/7, ms1mx4.0/11, Error ellipse: s-maj=62.0km s-min=28.4km az=62.0*
*ISCJB **08** 11:45:35.5±1.0, 8°.3S±0°.1×108°.8W±0°.2, h10km, mb3.8/13, MS4.2/7, Error ellipse: s-maj=22.6km s-min=20.6km az=30.2*
*GCMT **08** 11:45:38.9±0.3, 9°.02S×108°.91W, h12km±1km, MW5.0/74, Moment Tensor Solution. s35,c42; s74,c108; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.16±.12; Mθθ 1.65±.13; Mφφ-1.48±.15; Mrθ-0.40±.32; Mrφ3.29±.11; Mθφ0.67±.34; Best double couple: M0 3.72900×10^16 NP1:φs102.00000°, δ81.00000°, λ-9.00000°. NP2: φs193.00000°, δ82.00000°, λ-171.00000°. Principal axes: T 3.7280, Plg0.0000°, Azm328.0000°; N 0.0090, Plg78.0000°, Azm236.0000°; P -3.7290, Plg12.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 11:45:38.9±1.7, 8°.10S×108°.58W, h10km, mb4.3/6 Error ellipse: s-maj=63.2km s-min=22.8km az=63.0*
ISC 08 11:45:37.3±1.0, 8°.3S±0°.1×108°.8W±0°.2, h10km, n22, σ1°04/15, mb3.8/13, MS4.2/7, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**29.49**	**38**	LR	LR	12 01 14.1	
comp=Z,1μm,20.3s,MS4.5,baz=236,slow=31							
TAOE	**Nuku Hiva Isla**	**30.95**	**267**	*e*LR	LR	11 59 55.2	
206nm,25.1s							
NNA	**Nana**	**31.69**	**99**	LR	LR	12 00 41.3	
comp=Z,380nm,18.8s,MS4.1,baz=275,slow=28							
TXAR	**Lajitas Array**	**37.78**	**7**	P	**P**	**11 52 55.1**	**+1.2**
1.3nm,1.1s,mb3.6,baz=190,slow=9.8,SNR=2.7							
MNTX	**Cornudas Mount**	**39.95**	**5**	*e*P	**P**	**11 53 11.3**	**-0.6**
4.0nm,1.1s,mb4.1							
PPT	**Papeete**	**40.66**	**253**	*e*S	**S**	**11 59 28.5**	**0.0**
314nm,32.2s							
PPT				*e*LQ		12 02 31.4	
1μm,29.2s							
PPT				*e*LR	LR	12 04 13.9	
894nm,26.0s,baz=81							
LAZ	**Ladron**	**42.54**	**2**	P	**P**	**11 53 34.6**	**+1.4**
9.7nm,1.7s,mb4.3							
MIAR	**Mount Ida**	**45.04**	**18**	*e*P	**P**	**11 53 51.7**	**-1.7**
8.1nm,1.3s,mb4.4							
PLCA	**Paso Flores**	**46.85**	**140**	LR	LR	12 08 47.6	
comp=Z,494nm,21.4s,MS4.4,baz=292,slow=30							
NVAR	**Mina Array Bea**	**47.36**	**350**	P	**P**	**11 54 12.2**	**+0.7**
1.1nm,0.8s,mb3.9,baz=174,slow=9.1,SNR=7.3							
PDAR	**Pinedale Array**	**50.86**	**359**	P	**P**	**11 54 38.1**	**-0.2**
0.3nm,0.7s,mb3.3,baz=163,slow=7.5,SNR=2.8							
PDAR				LR	LR	12 13 41.0	
comp=Z,296nm,18.4s,MS4.3,baz=192,slow=33							
HLID	**Hailey**	**51.90**	**355**	*e*P	**P**	**11 54 46.8**	**+0.7**
4.4nm,1.1s,mb4.3							
CPUP	**Villa Florida**	**51.96**	**117**	P	**P**	**11 54 47.6**	**+0.7**
0.7nm,0.4s,mb3.9,baz=270,slow=20,SNR=3.1							
CPUP				LR	LR	12 12 17.2	
comp=Z,382nm,20.7s,MS4.4,baz=260,slow=31							
IMW	**Indian Meadow**	**52.02**	**358**	*e*P	**P**	**11 54 47.2**	**+0.2**
11nm,1.4s,mb4.6							
MCMT	**McKenzie Canyo**	**53.04**	**356**	*e*P	**P**	**11 54 55.0**	**+0.4**
1.9nm,1.1s,mb3.9							
HRY	**Holter Researc**	**54.87**	**357**	P	**P**	**11 55 09.2**	**+1.3**
FCC	**Fort Churchill**	**67.93**	**8**	*e*P	**P**	**11 56 34.6**	**-1.4**
0.1nm,0.8s,mb2.9							
DLBC	**Dease Lake**	**68.73**	**348**	LR	LR	12 21 29.9	
comp=Z,98nm,18.5s,MS4.1,baz=320,slow=31							
YKA	**Yellowknife Ar**	**70.76**	**357**	P	**P**	**11 56 51.8**	**-1.7**
0.2nm,0.7s,mb3.2,baz=175,slow=5.5,SNR=3.6							
YKA				LR	LR	12 26 08.7	
comp=Z,15nm,18.3s,MS3.3,baz=145,slow=34							
INK Inuvik 78.43 351 P **P 11 57 36.7 -1.2**							
0.7nm,0.8s,mb3.6,baz=154,slow=4.5,SNR=3.9							
AML Almayashu 146.27 357 *e*PKPdf PKPdf 12 05 20.9 +3.5							
CMAR Chiang Mai Arr 151.20 293 PKPbc PKPbc 12 05 27.6 -4.4							
0.3nm,0.3s,baz=48,slow=1.3,SNR=4.0							

*IDC **08** 11:52:23.7±4.6, 8°.95S×108°.53W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.8/12, mbtmp3.4/4, MS3.5/1, Ms1 3.5/1, ms1mx3.1/7, Error ellipse: s-maj=231.6km s-min=53.8km az=109.0*
*GCMT **08** 11:52:24.0±0.3, 9°.03S×108°.92W, h22km±2km, MW4.9/68, Moment Tensor Solution. s11,c11; s68,c91; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.55±.21; Mθθ 1.28±.15; Mφφ-0.72±.16; Mrθ-0.05±.24; Mrφ2.72±.10; Mθφ-0.61±.26; Best double couple: M0 2.97000×10^16 NP1:φs280.00000°, δ77.00000°, λ-5.00000°. NP2: φs11.00000°, δ85.00000°, λ-167.00000°. Principal axes: T 3.2160, Plg6.0000°, Azm145.0000°; N -0.4880, Plg76.0000°, Azm30.0000°; P -2.7240, Plg12.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC 08 11:52:24.3±1.2, 9°.10S×108°.22W, h10km, mb4.7/1 Error ellipse: s-maj=141.0km s-min=17.8km az=92.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**17.96**	**183**	P	Pn	11 56 34.1	-0.1
44nm,0.7s							
ROSC	**El Rosal**	**36.51**	**69**	LR	LR	12 12 38.1	
comp=Z,64nm,18.5s,baz=36,slow=33							
TXAR	**Lajitas Array**	**38.46**	**6**	P	P	11 59 48.3	+1.8
0.4nm,1.0s,baz=188,slow=12,SNR=3.8							
PPT	**Papeete**	**41.04**	**254**	*e*LQ		12 09 19.8	
825nm,28.8s							
PPT				*e*LR	LR	12 11 03.7	
595nm,26.0s,baz=77							
NVAR	**Mina Array Bea**	**48.21**	**349**	P	P	12 01 05.8	+0.7
0.6nm,0.7s,baz=184,slow=9.4,SNR=4.8							
PDAR	**Pinedale Array**	**51.63**	**359**	P	P	12 01 29.8	-1.2
0.4nm,0.7s,baz=173,slow=7.9,SNR=3.6							
YKA	**Yellowknife Ar**	**71.55**	**357**	P	P	12 03 44.0	-1.2
0.2nm,0.6s,baz=171,slow=5.4,SNR=4.6							
CMAR	**Chiang Mai Arr**	**152.07**	**292**	PKPbc	PKPbc	12 12 21.8	+0.9
0.8nm,0.7s,baz=339,slow=0.9,SNR=5.3							

*IDC **08** 11:54:43.6±0.8, 36°.02N×141°.96E, h0km, mb3.6/10, mb1 3.7/14, mb1mx3.6/30, mbtmp3.7/14, ML3.5/4, Error ellipse: s-maj=22.4km s-min=16.7km az=88.0*
*ISCJB **08** 11:54:45.9±1.8, 36°.07N±0°.04×141°.98E±0°.08, h29km±12km, mb3.6/11, Error ellipse: s-maj=11.3km s-min=6.5km az=6.8*
*JMA **08** 11:54:46.5±0.2, 36°.10N×141°.90E, h66km±5km, M3.3*
*NEIC **08** 11:54:49.0±0.6, 36°.02N×141°.85E, h35km, MG3.3(JMA), Error ellipse: s-maj=15.6km s-min=11.9km az=191.0*
ISC 08 11:54:47.3±1.5, 36°.05N±0°.04×141°.89E±0°.07, h25km±10km, n32, σ0°97/40, mb3.6/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.91**	**248**	P	**Pb**	**11 55 04.1**	**-0.3**
CHOJ				S	**Sb**	**11 55 17.1**	**+1.1**
JHO	**Hitachi**	**1.20**	**298**	P	**Pn**	**11 55 07.2**	**-1.3**
JFK	**Kawauchi**	**1.54**	**328**	P	**Pn**	**11 55 11.9**	**-1.3**
BSO1	**Boso 1**	**1.58**	**208**	P	**Pn**	**11 55 13.7**	**0.0**
BSO1				*e*S	**Sn**	**11 55 35.2**	**+1.8**
BSO3	**Boso 3**	**1.68**	**222**	P	**Pn**	**11 55 15.3**	**+0.2**
JFT	**Otama**	**1.92**	**320**	P	**Pn**	**11 55 18.4**	**0.0**
JFT				*e*S	**Sn**	**11 55 42.2**	**+0.4**
JAG	**Ashikaga**	**2.00**	**281**	P	**Pn**	**11 55 18.9**	**-0.6**
JMM	**Marumori**	**2.01**	**334**	P	**Pn**	**11 55 19.0**	**-0.6**
JFY	**Yanaizu**	**2.21**	**308**	P	**Pn**	**11 55 23.2**	**+0.8**
JOD2	**Odawara 2**	**2.41**	**252**	P	**Pn**	**11 55 25.7**	**+0.5**
JRY	**Ryogami san**	**2.42**	**270**	P	**Pn**	**11 55 24.9**	**-0.4**
JYN	**Shimob**	**2.78**	**259**	P	**Pn**	**11 55 31.0**	**+0.9**
JMK	**Ichinoseki**	**2.94**	**350**	P	**Pn**	**11 55 31.7**	**-0.7**
MJAR	**Matsushiro Arr**	**3.01**	**280**	**Pn**	**Pn**	**11 55 34.1**	**+0.7**
7.6nm,0.3s,baz=99,slow=8.3,SNR=57							
MJAR				Sn	**Sn**	**11 56 14.0**	**+5.3**
8.7nm,0.3s,baz=104,slow=24,SNR=7.1							
MAJO	**Matsushiro**	**3.02**	**280**	*e*Pn	**Pn**	**11 55 33.2**	**-0.2**
MAT	**Matsushiro**	**3.02**	**280**	P	**Pn**	**11 55 33.7**	**+0.3**
MAT				S	**Sn**	**11 56 07.3**	**-1.4**
JHJ	**Hachijo jima 2**	**3.40**	**211**	Pn	**Pn**	**11 55 38.6**	**-0.2**
22nm,0.3s,baz=27,slow=12,SNR=18							
JHJ				Sn	**Sn**	**11 56 16.1**	**-2.3**
61nm,0.3s,baz=39,slow=13,SNR=11							
ASAJ	**Asahikawa**	**8.07**	**4**	Pn	**Pn**	**11 56 43.5**	**+0.6**
0.4nm,0.3s,baz=188,slow=19,SNR=3.5							
ASAJ				Sn	**Sn**	**11 58 07.5**	**-5.7**
0.4nm,0.3s,baz=180,slow=20,SNR=2.4							
CBIJ	**Chichi jima**	**8.93**	**178**	Pn	**Pn**	**11 56 52.1**	**-2.6**
3.1nm,0.3s,baz=86,slow=18,SNR=11							
CBIJ				Sn	**Sn**	**11 58 25.9**	**-8.7**
6.5nm,0.3s,baz=315,slow=20,SNR=6.2							
KSRS	**Korea Array**	**11.29**	**281**	Pn	**Pn**	**11 57 30.5**	**+3.4**
0.1nm,0.3s,baz=96,slow=14,SNR=4.3							
SONM	**Songino Array**	**28.66**	**305**	P	**P**	**12 00 41.7**	**-0.1**
1.5nm,0.6s,mb3.9,baz=100,slow=7.6,SNR=7.5							
GTA	**Gaotai**	**33.23**	**289**	*e*P	**P**	**12 01 21.2**	**-1.0**
GTA				pP	pP	12 01 25.3	-4.4
GTA				sP	sP	12 01 29.2	-3.5
GTA				pmax	pmax		
comp=Z,3.0nm,1.1s,mb4.1							
ZALV	**Zalesovo Beam**	**42.86**	**313**	P	**P**	**12 02 45.3**	**+2.1**
comp=Z,1.2nm,0.4s,mb4.0,baz=88,slow=7.5,SNR=1.8							
MKAR	**Makanchi Array**	**44.97**	**303**	P	**P**	**12 03 00.6**	**+0.4**
comp=Z,0.4nm,0.4s,mb3.6,baz=112,slow=8.0,SNR=3.7							
KURK	**Kurchatov**	**46.84**	**309**	P	**P**	**12 03 15.5**	**+0.5**
comp=Z,1.1nm,0.5s,mb4.0,baz=84,slow=7.7,SNR=4.6							
BVAR	**Borovoye Array**	**51.52**	**313**	P	**P**	**12 03 50.0**	**-0.6**
comp=Z,0.3nm,0.5s,mb3.5,baz=65,slow=6.8,SNR=3.0							
INK	**Inuvik**	**55.09**	**27**	P	**P**	**12 04 17.8**	**+1.1**
comp=Z,0.3nm,0.6s,mb3.5,baz=263,slow=6.3,SNR=4.5							
INK	**Inuvik**	**55.09**	**27**	P	**P**	**12 04 17.8**	**+1.1**
WRA	**Warramunga Arr**	**56.15**	**189**	P	**P**	**12 04 24.7**	**-0.1**
comp=Z,0.2nm,0.5s,mb3.4,baz=5.6,slow=7.0,SNR=7.7							
ASAR	**Alice Springs**	**59.87**	**188**	P	**P**	**12 04 51.2**	**+0.4**
comp=Z,0.2nm,0.6s,mb3.3,baz=7.6,slow=7.4,SNR=4.5							
YKA	**Yellowknife Ar**	**64.46**	**30**	P	**P**	**12 05 20.8**	**-0.5**
comp=Z,0.2nm,0.7s,mb3.3,baz=308,slow=6.7,SNR=3.2							
TXAR	**Lajitas Array**	**90.41**	**53**	P	**P**	**12 07 47.5**	**+0.7**
comp=Z,0.2nm,0.7s,mb3.6,baz=280,slow=2.3,SNR=3.8							

JMA 08 11:55:26.7±0.2, 36°.36N×141°.96E, h63km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.11**	**234**	P	Pn	11 55 46.7	+0.5
CHOJ				S	Sn	11 56 01.8	+1.0
JHO	**Hitachi**	**1.15**	**283**	P	Pn	11 55 46.6	-0.2
JFT	**Otama**	**1.74**	**312**	P	Pn	11 55 57.9	+3.2
MAT	**Matsushiro**	**3.03**	**275**	P	Pn	11 56 14.3	+2.1
MAT				S	Sn	11 56 48.2	+0.9

*ISCJB **08** 11:55:54.4±0.5, 40°.38N±0°.02×25°.38E±0°.03, h5km±4km, Error ellipse: s-maj=4.1km s-min=3.6km az=178.0*
*ATH **08** 11:55:54.3, 40°.35N×25°.42E, h26km±1km, MD3.2/7*
*NEIC **08** 11:55:54.3, 40°.35N×25°.42E, h26km, MD3.2(ATH), After ATH.*
*THE **08** 11:55:54.7, 40°.38N×25°.37E, h6km±1km, ML2.8/2, Error ellipse: s-maj=1.5km s-min=0.4km az=131.0*
*CSEM **08** 11:55:54.4±0.2, 40°.40N×25°.34E, h2km, MD2.7, Error ellipse: s-maj=4.9km s-min=3.8km az=179.0*
*DDA **08** 11:55:56.4, 40°.39N×25°.58E, h7km±3km, Md2.9*
*ISK **08** 11:55:56.4, 40°.39N×25°.53E, h8km, MD2.7*
ISC 08 11:55:54.9±0.4, 40°.37N±0°.03×25°.38E±0°.03, h8km±4km, n46, σ0°89/71, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.44**	**115**	*e*PG	**Pg**	**11 56 03.8**	**+0.4**
GADA				*e*SG	**Sg**	**11 56 08.7**	**-0.5**
GADA	**Gvkgeada**	**0.44**	**115**	*e*Pg	**Pg**	**11 56 03.8**	**+0.4**

GADA				*e*Sg		**Sg**	**11 56 08.7 -0.4**
LOS	**Limnos**	**0.49**	**208**	P		**Pg**	**11 56 04.4 -0.1**
LOS	**Limnos**	**0.49**	**208**	P		**Pg**	**11 56 04.4 -0.1**
LIA	**Limnos Island**	**0.50**	**198**	*e*PB		**Pg**	**11 56 04.7 +0.1**
LIA				*e*SB		**Sg**	**11 56 11.7 +0.6**
LIA	**Limnos Island**	**0.50**	**198**	*e*Pb		**Pg**	**11 56 04.7 +0.1**
LIA				*e*Sb		**Sg**	**11 56 11.7 +0.6**
ENEZ	**Enez**	**0.69**	**58**	*e*PG		**Pg**	**11 56 07.9 -0.3**
ENEZ				*e*SG		**Sg**	**11 56 17.1 -0.2**
ENEZ	**Enez**	**0.69**	**58**	*e*Pg		**Pg**	**11 56 07.9 -0.3**
ENEZ				*e*Sg		**Sg**	**11 56 17.1 -0.1**
ALN	**Alexandroupoli**	**0.73**	**44**	*e*PN		**Pg**	**11 56 08.5 -0.4**
ALN				*e*SN		**Sg**	**11 56 18.1 -0.3**
ALN	**Alexandroupoli**	**0.73**	**44**	P		**Pg**	**11 56 08.4 -0.5**
ALN				S		**Sg**	**11 56 18.4 0.0**
ALN	**Alexandroupoli**	**0.73**	**44**	P		**Pg**	**11 56 08.4 -0.5**
ALN				S		**Sg**	**11 56 18.4 0.0**
BOZC	**Bozcaada**	**0.74**	**136**	*i* P		**Pg**	**11 56 08.9 -0.3**
BOZC				*i* S		**Sg**	**11 56 19.1 +0.3**
RDO	**Rodhopi**	**0.78**	**9**	*e*PN		**Pg**	**11 56 09.9 0.0**
RDO				*e*SN		**Sg**	**11 56 21.8 +1.7**
RDO	**Rodhopi**	**0.78**	**9**	P		**Pg**	**11 56 09.4 -0.5**
RDO				S		**Sg**	**11 56 20.7 +0.6**
RDO	**Rodhopi**	**0.78**	**9**	P		**Pg**	**11 56 09.4 -0.5**
RDO	**Rodhopi**	**0.78**	**9**	*e*Pn		**Pg**	**11 56 09.9 0.0**
RDO				S		**Sg**	**11 56 20.7 +0.6**
EZN	**Ezine**	**0.91**	**127**	*e*PG		**Pg**	**11 56 12.8 +0.5**
EZN	**Ezine**	**0.91**	**127**	*e*Pg		**Pg**	**11 56 12.8 +0.4**
LPK	**Lapseki**	**1.05**	**90**	*e*PG		**Pg**	**11 56 14.8 -0.4**
LPK	**Lapseki**	**1.05**	**90**	*e*Pg		**Pg**	**11 56 14.8 -0.4**
OUR	**Ouranopolis**	**1.07**	**268**	P		**Pg**	**11 56 14.7 -0.7**
OUR				S		**Sg**	**11 56 30.0 +0.7**
OUR	**Ouranopolis**	**1.07**	**268**	P		**Pg**	**11 56 14.7 -0.7**
OUR				S		**Sg**	**11 56 30.0 +0.7**
PRK	**Paraskevi**	**1.32**	**148**	*e*PN		**Pn**	**11 56 18.6 -1.0**
PRK	**Paraskevi**	**1.32**	**148**	*e*Pn		**Pn**	**11 56 18.6 -1.0**
RKY	**Sarkoy-Tekirda**	**1.41**	**77**	*e*PN		**Pn**	**11 56 20.8 0.0**
RKY	**Sarkoy-Tekirda**	**1.41**	**77**	*e*Pn		**Pn**	**11 56 20.8 0.0**
SART	**Tekirdag**	**1.41**	**77**	*i* P		**Pn**	**11 56 20.7 -0.1**
SART				*i* S		**Sb**	**11 56 37.8 -1.7**
SART	**Tekirdag**	**1.41**	**77**	*i* P		**Pn**	**11 56 20.7 -0.1**
SART				*i* S		**Sb**	**11 56 37.8 -1.7**
PLG	**Polygyros**	**1.48**	**271**	*e*PB		**Pn**	**11 56 20.4 -1.4**
PLG	**Polygyros**	**1.48**	**271**	*e*Pb		**Pn**	**11 56 20.4 -1.4**
NVR	**Nevrokopi**	**1.51**	**311**	*e*PB		**Pn**	**11 56 21.3 -0.9**
NVR				*e*SN		**Sn**	**11 56 42.9 +0.9**
NVR	**Nevrokopi**	**1.51**	**311**	*e*Pb		**Pn**	**11 56 21.3 -0.9**
NVR				*e*Sn		**Sn**	**11 56 42.9 +0.9**
SRS	**Serrai**	**1.55**	**299**	P		**Pn**	**11 56 21.8 -1.0**
SRS				S		**Sn**	**11 56 42.7 -0.3**
SRS	**Serrai**	**1.55**	**299**	P		**Pn**	**11 56 21.8 -1.0**
SRS				S		**Sn**	**11 56 42.7 -0.3**
SOH	**Sokhos**	**1.61**	**287**	*e*PN		**Pn**	**11 56 23.8 +0.2**
SOH	**Sokhos**	**1.61**	**287**	*e*PN		**Pn**	**11 56 23.8 +0.2**
EDRB	**Edirne**	**1.80**	**35**	*e*PN		**Pn**	**11 56 27.4 +1.2**
EDRB	**Edirne**	**1.80**	**35**	*e*Pn		**Pn**	**11 56 27.4 +1.2**
BALY	**Balya**	**1.83**	**109**	*i* P		**Pn**	**11 56 26.8 +0.2**
BALY				*i* S		**Sn**	**11 56 52.3 +2.3**
BALY	**Balya**	**1.83**	**109**	*i* P		**Pn**	**11 56 26.8 +0.2**
BALY				*i* S		**Sn**	**11 56 52.3 +2.3**
CTYL	**Yal??k??y-??at**	**2.46**	**63**	*e*PN		**Pn**	**11 56 36.5 +1.2**
CTYL	**Yal??k??y-??at**	**2.46**	**63**	*e*Pn		**Pn**	**11 56 36.6 +1.3**
DURS	**Dursunbey**	**2.50**	**107**	*i* P		**Pn**	**11 56 39.1 +3.3**
DURS				*i* S		**Sn**	**11 57 04.8 -1.7**
DURS	**Dursunbey**	**2.50**	**107**	*i* P		**Pn**	**11 56 39.1 +3.3**
DURS				*i* S		**Sn**	**11 57 04.8 -1.7**
CTKS	**Kestanelik-??a**	**2.52**	**69**	*e*PN		**Pn**	**11 56 37.5 +1.4**
CTKS	**Kestanelik-??a**	**2.52**	**69**	*e*Pn		**Pn**	**11 56 37.5 +1.3**

*IDC **08** 11:58:48.7±0.6, 36°.04N×141°.90E, h0km, mb3.8/14, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.7/4, MS3.7/2, Ms1 3.8/2, ms1mx3.0/31, Error ellipse: s-maj=17.4km s-min=15.8km az=93.0*

*ISCJB **08** 11:58:50.5±1.5, 36°.06N±0°.04×142°.00E±0°.06, h28km±11km, mb3.9/18, MS3.8/2, Error ellipse: s-maj=8.8km s-min=6.1km az=11.2*

*JMA **08** 11:58:51.3±0.2, 36°.10N×141°.93E, h66km±5km, M3.7*

*NEIC **08** 11:58:54.0±0.5, 36°.12N×141°.85E, h35km, mb4.4/3, Error ellipse: s-maj=12.3km s-min=9.1km az=171.0*

*BJI **08** 11:58:54.1, 35°.88N×141°.35E, h24km, mB5.1/1, mb4.3/3*

ISC 08 11:58:50.6±2.0, 36°.07N±0°.04×141°.94E±0°.05, h14km±12km, n45, σ0°.87/48, mb3.9/18, MS3.8/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.95**	**248**	P		**Pb**	**11 59 09.1 +0.2**
CHOJ				*e*S		**Sb**	**11 59 22.8 +1.4**
JHO	**Hitachi**	**1.23**	**296**	P		**Pn**	**11 59 12.1 -1.3**
JFK	**Kawauchi**	**1.55**	**327**	P		**Pn**	**11 59 16.8 -1.0**
BSO1	**Boso 1**	**1.62**	**209**	P		**Pn**	**11 59 18.7 -0.1**
JFT	**Otama**	**1.94**	**319**	P		**Pn**	**11 59 23.1 0.0**
JFT				*e*S		**Sn**	**11 59 47.1 -0.1**
JMM	**Marumori**	**2.01**	**333**	P		**Pn**	**11 59 23.5 -0.7**
JAG	**Ashikaga**	**2.04**	**281**	P		**Pn**	**11 59 23.8 -0.8**
JFY	**Yanaizu**	**2.24**	**307**	P		**Pn**	**11 59 27.7 +0.4**
JKT	**Katashina**	**2.28**	**288**	P		**Pn**	**11 59 27.9 +0.1**
JOD2	**Odawara 2**	**2.46**	**252**	P		**Pn**	**11 59 30.7 +0.4**
JRY	**Ryogami san**	**2.47**	**270**	P		**Pn**	**11 59 29.9 -0.5**
JYN	**Shimob**	**2.82**	**259**	P		**Pn**	**11 59 36.1 +0.8**
MJAR	**Matsushiro Arr**	**3.05**	**280**	Pn		**Pn**	**11 59 38.8 +0.4**
	17nm,0.3s,baz=68,slow=30,SNR=47						
MAJO	**Matsushiro**	**3.06**	**280**	*e*Pn		**Pn**	**11 59 39.0 +0.5**
MAT	**Matsushiro**	**3.06**	**280**	P		**Pn**	**11 59 38.8 +0.3**
MAT				S		**Sn**	**12 00 14.8 0.0**
JHJ	**Hachijo jima 2**	**3.44**	**212**	Pn		**Pn**	**11 59 43.9 +0.1**
	31nm,0.3s,baz=79,slow=20,SNR=16						
JHJ				Sn		**Sn**	**12 00 22.3 -2.1**
	70nm,0.3s,baz=89,slow=23,SNR=9.4						
ERM	**Erimo**	**6.01**	**9**	*e*Pn		**Pn**	**12 00 17.7 -1.4**
ERM				*e*Sn		**Sn**	**12 01 27.0 -0.6**
ASAJ	**Asahikawa**	**8.05**	**3**	Pn		**Pn**	**12 00 47.5 +0.5**
	0.6nm,0.3s,baz=80,slow=23,SNR=5.6						
ASAJ				Sn		**Sn**	**12 02 14.2 -3.6**
	0.6nm,0.3s,baz=189,slow=19,SNR=6.6						
CBIJ	**Chichi jima**	**8.95**	**179**	Pn		**Pn**	**12 00 58.2 -1.2**
	3.5nm,0.3s,baz=263,slow=23,SNR=7.0						
CBIJ				Sn		**Sn**	**12 02 32.2 -7.9**
	8.4nm,0.3s,baz=304,slow=22,SNR=5.8						
KSRS	**Korea Array**	**11.33**	**281**	Pn		**Pn**	**12 01 35.6 +3.5**
	0.2nm,0.3s,baz=103,slow=13,SNR=10.0						
XAN	**Xi'an**	**27.04**	**275**	P		**P**	**12 04 31.7 -0.7**
XAN				pP		pP	12 04 38.3 +1.7
XAN				pmax		pmax	
	comp=Z,1.0nm,0.9s,mb3.4						
ENH	**Enshi**	**27.70**	**267**	P		**P**	**12 04 37.0 -1.3**
	comp=Z,5.8nm,0.6s,mb4.4						
SONM	**Songino Array**	**28.68**	**305**	P		**P**	**12 04 47.5 +0.5**
	comp=Z,2.7nm,0.8s,mb4.0,baz=102,slow=8.7,SNR=15						
GTA	**Gaotai**	**33.27**	**289**	*e*P		**P**	**12 05 28.2 +0.7**
GTA				pP		pP	12 05 33.1 +1.4
GTA				sP		sP	12 05 36.2 +2.8
GTA				pmax		pmax	
	comp=Z,5.0nm,1.1s,mb4.4						
CMAR	**Chiang Mai Arr**	**41.68**	**257**	LR		LR	12 25 48.9
	comp=Z,44nm,18.4s,MS3.4,baz=0.0,slow=39						
ZALV	**Zalesovo Beam**	**42.88**	**313**	P		**P**	**12 06 48.8 +0.5**
	comp=Z,1.1nm,0.3s,mb4.0,baz=90,slow=6.2,SNR=1.8						
MKAR	**Makanchi Array**	**45.00**	**303**	P		**P**	**12 07 05.7 +0.3**
	comp=Z,1.4nm,0.8s,mb3.9,baz=89,slow=7.8,SNR=6.7						
MKAR	**Makanchi Array**	**45.00**	**303**	P		**P**	**12 07 05.7 +0.3**
KURK	**Kurchatov**	**46.86**	**309**	P		**P**	**12 07 20.2 +0.1**
	comp=Z,2.0nm,0.3s,mb4.5,baz=83,slow=7.9,SNR=9.7						
KURK	**Kurchatov**	**46.86**	**309**	*e*P		**P**	**12 07 19.0 -1.0**
	comp=Z,2.6nm,0.5s,mb4.4						
BVAR	**Borovoye Array**	**51.54**	**313**	P		**P**	**12 07 55.2 -0.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=69,slow=7.9,SNR=3.2						
AML	**Almayashu**	**52.04**	**299**	*e*P		**P**	**12 08 00.5 +0.8**
	comp=Z,4.4nm,1.0s,mb4.3						
INK	**Inuvik**	**55.05**	**27**	P		**P**	**12 08 23.0 +1.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=278,slow=6.5,SNR=10						
INK	**Inuvik**	**55.05**	**27**	P		**P**	**12 08 23.0 +1.6**
WRA	**Warramunga Arr**	**56.17**	**189**	P		**P**	**12 08 29.6 -0.3**
	comp=Z,0.6nm,0.9s,mb3.6,baz=6.7,slow=7.9,SNR=4.9						
ASAR	**Alice Springs**	**59.90**	**189**	P		**P**	**12 08 56.1 +0.1**
	comp=Z,0.2nm,0.6s,mb3.3,baz=13,slow=8.8,SNR=3.3						
YKA	**Yellowknife Ar**	**64.42**	**30**	P		**P**	**12 09 26.0 0.0**
	comp=Z,0.6nm,0.8s,mb3.7,baz=302,slow=7.2,SNR=6.8						
STKA	**Stephens Creek**	**67.59**	**180**	LR		LR	12 36 40.1
	comp=Z,132nm,20.6s,MS4.2,baz=153,slow=34						

NVAR	**Mina Array Bea**	**75.22**	**53**	P		**P**	**12 10 33.6 +0.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=286,slow=4.1,SNR=3.7						
AKASG	**Malin Array Be**	**75.32**	**323**	P		**P**	**12 10 33.6 +0.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=47,slow=5.3,SNR=2.9						
PDAR	**Pinedale Array**	**78.04**	**46**	P		**P**	**12 10 50.2 +1.5**
	comp=Z,0.2nm,0.6s,mb3.2,baz=270,slow=0.9,SNR=3.3						
ULM	**Lac du Bonnet**	**80.07**	**33**	P		**P**	**12 10 58.9 -0.9**
	comp=Z,1.0nm,0.5s,mb4.0,baz=252,slow=2.6,SNR=3.5						
TXAR	**Lajitas Array**	**90.37**	**53**	P		**P**	**12 11 53.2 +1.5**
	comp=Z,0.3nm,0.7s,mb3.7,baz=286,slow=3.3,SNR=6.1						
LPAZ	**La Paz**	**146.79**	**61**	PKPbc		PKPbc	12 18 34.2 +1.5
	comp=Z,0.8nm,0.5s,baz=338,slow=4.2,SNR=4.4						
PLCA	**Paso Flores**	**154.20**	**110**	PKPbc		PKPbc	12 18 50.9 +0.9
	comp=Z,1.3nm,0.8s,baz=249,slow=8.3,SNR=3.5						

*CSEM **08** 12:13:48.7, 12°.15N×43°.85E, h3km, ML3.5, After DHMR*

DHMR 08 12:13:48.7±0.8, 12°.15N×43°.85E, h3km±7km, ML3.5, 2C-3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.27**	**60**	⇓*i* P		Pg 12 14 12.4	-0.6
ADEN				*i* S		Sg 12 14 30.4	+0.9
ADEN				AML		AML 12 14 36.4	
	comp=E,1μm,0.5s						
ADEN	**Aden**	**1.27**	**60**	⇓*i* P		Pg 12 14 12.4	-0.6
ADEN				*i* S		Sg 12 14 30.4	+0.9
	comp=E,549nm,0.5s						
ZUQR	**Zugar Island**	**2.12**	**330**	⇑*i* P		Pn 12 14 26.5	+1.4
ZUQR				*i* S		Sn 12 14 55.4	+3.4
ZUQR				AML		AML 12 15 08.1	
	comp=E,452nm,0.8s						
ZUQR	**Zugar Island**	**2.12**	**330**	⇑*i* P		Pn 12 14 26.5	+1.4
ZUQR				*i* S		Sn 12 14 55.3	+3.4
	comp=E,226nm,0.8s						
LBOS		**2.19**	**38**	⇓*i* P		Pn 12 14 28.0	+2.0
LBOS				*i* S		Sn 12 14 58.1	+4.4
DHBB	**Dhamar BB**	**2.47**	**12**	*i* S		Sn 12 15 06.5	+6.0
DHBB	**Dhamar BB**	**2.47**	**12**	*i* S		Sn 12 15 06.5	+6.0
BDHA	**Al Bayda'**	**2.47**	**42**	*i* P		Pn 12 14 31.8	+2.0
BDHA				*i* S		Sn 12 15 06.0	+5.5
BDHA				AML		AML 12 15 18.1	
	comp=N,236nm,0.7s						
BDHA	**Al Bayda'**	**2.47**	**42**	*i* P		Pn 12 14 31.8	+2.0
BDHA				*i* S		Sn 12 15 06.0	+5.5
	comp=N,118nm,0.7s						

*NEIC **08** 12:17:27.1, 61°.66N×141°.72W, h0km, ML2.5(AEIC), After AEIC.*

PGC 08 12:17:25.9±3.9, 61°.58N×142°.11W, h5km, ML3.0/4, 6D, 231km east of Valdez, Ak Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MENT	**Mentasta**	**1.55**	**332**	*e*Pg		Pg 12 17 55.8	+0.2
MENT				*e*Sg		Sg 12 18 08.8	-7.0
HYT	**Haines Junctio**	**2.36**	**107**	⇑Pn		Pn 12 18 05.4	+0.3
HYT				⇓Sg		Sg 12 18 38.5	-3.0
DAWY	**Dawson**	**2.79**	**25**	*e*Pn		Pn 12 18 10.4	-0.7
DAWY				*e*Sg		Sg 12 18 47.6	-7.7
DAWY	**Dawson**	**2.79**	**25**	⇑Pn		Pn 12 18 10.6	-0.5
DAWY				⇑Pg		Pg 12 18 15.1	-4.1
DAWY				⇑Sn		Sn 12 18 44.2	-0.8
EGAK	**Eagle**	**3.23**	**7**	*e*Pn		Pn 12 18 17.5	+0.3
PLBC	**Pleasant Camp**	**3.55**	**124**	⇓Pn		Pn 12 18 20.3	-1.3
PLBC				⇓Sg		Sg 12 19 16.4	-3.4
WHY	**Whitehorse**	**3.63**	**102**	⇑Pn		Pn 12 18 22.2	-0.4
WHY				⇓Pg		Pg 12 18 29.8	-5.5
WHY				⇑Sn		Sn 12 19 04.1	-1.7
WHY				⇑Sg		Sg 12 19 19.1	-3.2
MCK	**McKinley**	**3.81**	**307**	*e*Pn		Pn 12 18 33.6	+8.5
DLBC	**Dease Lake**	**6.83**	**112**	⇓Sg		Sg 12 20 57.5	-7.4
INK	**Inuvik**	**7.66**	**25**	⇓Pn		Pn 12 19 16.5	-1.5
INK				⇑Sn		Sn 12 20 38.2	-6.8
FNBB	**Fort Nelson**	**9.87**	**97**	⇑Sg		Sn 12 22 31.6	+53

*BJI **08** 12:26:16.3, 36°.00N×21°.32E, h12km, mB5.0/21, mb4.9/34, Ms4.5/8, Ms7 4.6/21*

*HLW **08** 12:26:16.9, 36°.61N×22°.00E, h33km±41km, Ml4.6*

*ATH **08** 12:26:19.2, 36°.06N×21°.75E, h5km±1km, MD4.5/35, ML4.7*

*ISCJB **08** 12:26:20.4±0.1, 36°.12N±0°.01×21°.96E±0°.01, h10km, mb4.7/112, MS4.2/42, Error ellipse: s-maj=1.9km s-min=1.6km az=32.8*

*CSEM **08** 12:26:21.8±0.1, 36°.09N×21°.90E, h2km, mb4.7/20, Ms3.8, Mw4.9, Error ellipse: s-maj=3.3km s-min=2.8km az=29.0*

*NEIC **08** 12:26:22.6±0.3, 36°.11N×21°.95E, h10km, mb4.5/77, ML4.7(ATH), Error ellipse: s-maj=4.1km s-min=2.8km az=192.0*

*GCMT **08** 12:26:22.6±0.5, 36°.26N×21°.81E, h14km, MW4.9/66, Moment Tensor Solution. s35,c40; s66,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.98±.15; $M_{\theta\theta}$-2.20±.10; $M_{\phi\phi}$-0.78±.10; $M_{r\theta}$0.87±.22; $M_{\theta\phi}$1.22±.06; $M_{\phi r}$-0.20±.28; Best double couple: $M_0$3.07300×10^{16} NP1:ϕ_s304.00000°, δ37.00000°, λ97.00000°. NP2: ϕ_s115.00000°, δ53.00000°, λ84.00000°. Principal axes: T 3.1220, Plg81.0000°, Azm0.0000°; N -0.1000, Plg4.0000°, Azm119.0000°; P -3.0240, Plg8.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*THE **08** 12:26:22.5, 36°.16N×21°.86E, h0km±1km, ML5.5/16 Error ellipse: s-maj=2.0km s-min=0.6km az=228.0*

*IDC **08** 12:26:23.8±2.4, 36°.19N×22°.03E, h23km±16km, mb4.3/26, mb1 4.3/36, mb1mx4.3/42, mbtmp4.2/36, ML4.2/9, MS4.1/23, Ms1 4.1/23, ms1mx3.9/41, Error ellipse: s-maj=11.9km s-min=9.0km az=20.0*

*PDG **08** 12:26:24.2±0.3, 36°.26N×21°.01E, h12km±11km, MD5.0/3, ML4.9/10, Error ellipse: s-maj=33.1km s-min=4.0km az=90.0*

*MOS **08** 12:26:24.1±1.4, 36°.20N×21°.99E, h33km, mb4.9/42, MS4.1/29, Error ellipse: s-maj=4.0km s-min=2.0km az=104.6*

*PRU **08** 12:26:26.7, 36°.68N×21°.89E, h0km, M4.5*

*BEO **08** 12:26:32.4±1.7, 36°.88N×21°.11E, h0km, ML4.4/5*

ISC 08 12:26:22.5±0.4, 36°.10N±0°.01×22°.00E±0°.01, h12km±2km, h14km±1.2km: pP-P, n949, σ1°.36/1047, mb4.7/112, MS4.2/42, 42C-22D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.82**	**345**	*e*PB		**Pg**	**12 26 35.8 -2.6**
PYL				*e*SB		**Sg**	**12 26 47.5 -1.6**
PYL	**PYLOS**	**0.82**	**345**	P		**Pg**	**12 26 36.0 -2.4**
PYL				S		**Sg**	**12 26 47.5 -1.6**
PYL	**PYLOS**	**0.82**	**345**	P		**Pg**	**12 26 36.0 -2.4**
PYL				S		**Sg**	**12 26 47.5 -1.6**
KYTH	**Kithira**	**0.85**	**78**	*e*PB		**Pg**	**12 26 39.8 +0.7**
KYTH	**Kithira**	**0.85**	**78**	*e*Pb		**Pg**	**12 26 39.8 +0.7**
VLI	**Veliai**	**0.97**	**51**	*e*PB		**Pg**	**12 26 41.8 +0.5**
VLI				*e*SB		**Sg**	**12 26 57.9 +3.9**
VLI	**Veliai**	**0.97**	**51**	*e*Pb		**Pg**	**12 26 41.8 +0.5**
VLI				*e*Sb		**Sg**	**12 26 57.9 +3.9**
ITM	**Ithomi**	**1.08**	**357**	*e*PB		**Pg**	**12 26 40.9 -2.4**
ITM				*e*SB		**Sg**	**12 26 56.7 -0.6**
ITM	**Ithomi**	**1.08**	**357**	P		**Pg**	**12 26 41.3 -2.0**
ITM				S		**Sb**	**12 26 57.0 -0.1**
ITM	**Ithomi**	**1.08**	**357**	*e*Pb		**Pg**	**12 26 40.9 -2.4**
ITM	**Ithomi**	**1.08**	**357**	P		**Pg**	**12 26 41.3 -2.0**
ITM				*e*Sb		**Sg**	**12 26 56.7 -0.6**
ITM				S		**Sb**	**12 26 57.0 -0.1**
VLX	**Vlachokerasia**	**1.30**	**13**	*e*PG		**Pn**	**12 26 45.4 -1.1**
VLX				*e*SB		**Sg**	**12 27 05.3 +0.8**
VLX	**Vlachokerasia**	**1.30**	**13**	P		**Pn**	**12 26 45.7 -0.8**
VLX				S		**Sg**	**12 27 05.4 +0.9**
VLX	**Vlachokerasia**	**1.30**	**13**	*e*Pg		**Pn**	**12 26 45.4 -1.1**
VLX	**Vlachokerasia**	**1.30**	**13**	P		**Pn**	**12 26 45.7 -0.8**
VLX				*e*Sb		**Sg**	**12 27 05.3 +0.8**
KARN	**Karanos**	**1.71**	**114**	*e*PG		**Pg**	**12 26 54.5 -0.8**
KARN				*e*SN		**Sg**	**12 27 21.5 +4.1**
KARN	**Karanos**	**1.71**	**114**	*e*Pg		**Pg**	**12 26 54.5 -0.8**
KARN				*e*Sn		**Sg**	**12 27 21.5 +4.1**
DID	**Didima**	**1.72**	**35**	*e*PN		**Pg**	**12 26 54.4 -1.1**
DID				*e*SN		**Sg**	**12 27 20.5 +2.7**
DID	**Didima**	**1.72**	**35**	P		**Pn**	**12 26 53.5 +1.3**
DID				S		**Sn**	**12 27 16.8 +2.8**
DID	**Didima**	**1.72**	**35**	P		**Pn**	**12 26 53.5 +1.3**
DID				S		**Sn**	**12 27 16.8 +2.8**
DID	**Didima**	**1.72**	**35**	*e*Pn		**Pg**	**12 26 54.4 -1.1**
DID				S		**Sn**	**12 27 16.8 +2.8**
DID				*e*Sn		**Sg**	**12 27 20.5 +2.7**
GUR	**Goura**	**1.85**	**8**	*e*PG		**Pg**	**12 26 55.4 -2.6**
GUR	**Goura**	**1.85**	**8**	P		**Pn**	**12 26 54.4 +0.4**
GUR				S		**Sn**	**12 27 18.9 +1.6**
GUR	**Goura**	**1.85**	**8**	P		**Pn**	**12 26 54.4 +0.4**
GUR	**Goura**	**1.85**	**8**	*e*Pg		**Pg**	**12 26 55.4 -2.6**
GUR				S		**Sn**	**12 27 18.9 +1.6**
VAM	**Vamos**	**1.92**	**111**	*e*PN		**Pg**	**12 26 57.8 -1.5**
VAM	**Vamos**	**1.92**	**111**	*e*Pn		**Pg**	**12 26 57.8 -1.5**
RLS	**Riolos of Patr**	**2.00**	**348**	*e*PN		**Pg**	**12 26 57.1 -3.8**
RLS	**Riolos of Patr**	**2.00**	**348**	*e*Pn		**Pg**	**12 26 57.1 -3.8**
NAIG	**Nisos Aigina**	**2.04**	**35**	*e*PN		**Pb**	**12 26 59.3 -0.1**
NAIG	**Nisos Aigina**	**2.04**	**35**	*e*Pn		**Pb**	**12 26 59.3 -0.1**
LTK	**Loutraki**	**2.07**	**22**	*e*PN		**Pb**	**12 26 58.3 -1.6**
LTK	**Loutraki**	**2.07**	**22**	P		**Pb**	**12 26 58.0 -1.9**
LTK	**Loutraki**	**2.07**	**22**	P		**Pb**	**12 26 58.0 -1.9**
LTK	**Loutraki**	**2.07**	**22**	*e*Pn		**Pb**	**12 26 58.3 -1.6**
GVD	**Gavdhos**	**2.12**	**126**	*e*PN		**Pb**	**12 27 00.5 -0.3**
GVD	**Gavdhos**	**2.12**	**126**	*e*Pn		**Pb**	**12 27 00.5 -0.3**
LAKA	**Lakka**	**2.13**	**360**	P		**Pg**	**12 26 59.8 -3.7**
LAKA	**Lakka**	**2.13**	**360**	P		**Pg**	**12 26 59.8 -3.7**
UPR	**University Cam**	**2.18**	**356**	*e*PG		**Pg**	**12 27 00.2 -4.2**
UPR	**University Cam**	**2.18**	**356**	P		**Pg**	**12 27 02.8 -1.6**
UPR	**University Cam**	**2.18**	**356**	*e*Pg		**Pg**	**12 27 00.2 -4.2**
KFL	**Anninata**	**2.23**	**335**	P		**Pb**	**12 26 58.4 -4.3**
TRIZ	**Trizonia**	**2.26**	**1**	P		**Pb**	**12 27 01.0 -2.2**
TRIZ	**Trizonia**	**2.26**	**1**	P		**Pb**	**12 27 01.0 -2.2**
KALE	**Kalithea**	**2.29**	**3**	P		**Pb**	**12 27 00.8 -2.9**
KALE	**Kalithea**	**2.29**	**3**	P		**Pb**	**12 27 00.8 -2.9**
ATH	**Athens Observa**	**2.32**	**36**	*e*PN		**Pb**	**12 27 03.2 -1.0**
ATH	**Athens Observa**	**2.32**	**36**	*e*Pn		**Pb**	**12 27 03.2 -1.0**
EFP	**Efpalio**	**2.32**	**358**	*e*PG		**Pg**	**12 27 02.9 -4.1**
EFP	**Efpalio**	**2.32**	**358**	P		**Pg**	**12 27 03.5 -3.5**
EFP	**Efpalio**	**2.32**	**358**	*e*Pg		**Pg**	**12 27 02.9 -4.1**
EFP	**Efpalio**	**2.32**	**358**	P		**Pg**	**12 27 03.5 -3.5**
ATHU	**Athens Univers**	**2.34**	**37**	P		**Pn**	**12 27 01.9 +1.1**
ATHU	**Athens Univers**	**2.34**	**37**	P		**Pn**	**12 27 01.9 +1.1**
VLS	**Valsamata**	**2.36**	**332**	*e*PN		**Pb**	**12 27 01.1 -3.8**
VLS	**Valsamata**	**2.36**	**332**	P		**Pb**	**12 27 00.6 -4.3**
VLS	**Valsamata**	**2.36**	**332**	P		**Pb**	**12 27 00.6 -4.3**
VLS	**Valsamata**	**2.36**	**332**	*e*Pn		**Pb**	**12 27 01.1 -3.8**
PTL	**Penteli**	**2.45**	**37**	*e*PN		**Pb**	**12 27 04.9 -1.5**
PTL				*e*SN		**Sb**	**12 27 38.7 +2.1**
PTL	**Penteli**	**2.45**	**37**	*e*Pn		**Pb**	**12 27 04.9 -1.5**
PTL				*e*Sn		**Sb**	**12 27 38.7 +2.1**
IDI	**Anoyia**	**2.49**	**108**	Pn		**Pn**	**12 27 04.6 +1.8**
	30nm,0.3s,baz=282,slow=13,SNR=103						
IDI				Pg		**Pg**	**12 27 10.5 +0.3**
	42nm,0.3s,baz=269,slow=11,SNR=23						

SOH	Sokhos	4.83	12	*e*Pn	Pn	12 27 38.1	+3.1
BIA	Bitola	4.94	354	P	Pn	12 27 39.0	+2.5
BIA	Bitola	4.94	354	*i* Pn	Pn	12 27 37.4	+1.0
BIA				*e*Sg	Sn	12 28 33.6	+0.1
BIA	Bitola	4.94	354	P	Pn	12 27 36.8	+0.3
BIA	Bitola	4.94	354	P	Pn	12 27 36.8	+0.3
BIA	Bitola	4.94	354	*i* Pn	Pn	12 27 37.4	+0.9
ARG	Arkhangelos	4.96	87	P	Pn	12 27 39.8	+3.1
ARG	Arkhangelos	4.96	87	P	Pn	12 27 39.8	+3.1
OHR	Ohrid	5.09	350	P	Pn	12 27 39.5	+1.0
OHR	Ohrid	5.09	350	*i* Pn	Pn	12 27 39.1	+0.6
OHR				*e*Sg	Sn	12 28 35.0	-2.2
OHR	Ohrid	5.09	350	P	Pn	12 27 39.8	+1.3
OHR	Ohrid	5.09	350	*i* Pn	Pn	12 27 39.1	+0.6
OHR	Ohrid	5.09	350	P	Pn	12 27 39.5	+1.0
SOI	Samo	5.14	294	P	Pn	12 27 38.4	-0.9
SRS	Serrai	5.16	13	P	Pn	12 27 41.0	+1.5
SRS	Serrai	5.16	13	P	Pn	12 27 40.5	+1.0
SRS	Serrai	5.16	13	P	Pn	12 27 41.0	+1.5
TIP	Timpagrande	5.17	308	P	Pn	12 27 38.3	-1.4
TIP	Timpagrande	5.17	308	P	Pn	12 27 38.3	-1.4
GRI	Girifalco	5.20	303	P	Pn	12 27 40.6	+0.5
VAY	Valandovo	5.23	5	P	Pn	12 27 42.3	+1.8
VAY	Valandovo	5.23	5	*i* Pn	Pn	12 27 41.2	+0.7
VAY				*e*Sg	Sn	12 28 39.7	-0.9
VAY	Valandovo	5.23	5	P	Pn	12 27 41.4	+0.9
VAY	Valandovo	5.23	5	*i* Pn	Pn	12 27 41.1	+0.6
VAY	Valandovo	5.23	5	P	Pn	12 27 41.4	+0.9
KRUS	Krusevo	5.29	354	*i* Pn	Pn	12 27 41.2	-0.1
KRUS				*e*Sg	Sn	12 28 40.4	-1.7
KRUS	Krusevo	5.29	354	*i* Pn	Pn	12 27 41.2	-0.1
SLUM		5.32	149	P	Pn	12 27 40.7	-1.0
SLUM	baz=151			S	Sn	12 28 39.9	-3.0
SLUM	baz=151	5.32	149	P	Pn	12 27 40.7	-1.0
SLUM				S	Sn	12 28 39.9	-3.0
LJBD	Adjabya	5.39	197	*i* P	Pn	12 27 43.9	+1.2
LJBD	201nm,1.6s,SNR=23			*e*S	Sn	12 28 43.5	-1.2
MTTG	280nm,0.6s,SNR=23 Motta San Giov	5.39	292	P	Pn	12 27 41.9	-0.8
MTTG	Motta San Giov	5.39	292	P	Pn	12 27 41.9	-0.8
NVR	Nevrokopi	5.44	15	*e*PN	Pn	12 27 46.0	+2.7
NVR	Nevrokopi	5.44	15	*e*Pn	Pn	12 27 46.0	+2.7
SCLL	Scilla	5.46	295	P	Pn	12 27 45.4	+1.7
SCLL	Scilla	5.46	295	P	Pn	12 27 45.4	+1.7
TIR	Tirane	5.50	343	P	Pn	12 27 45.8	+1.7
AGST	Augusta-Monte	5.57	284	P	Pn	12 27 46.5	+1.4
AGST	Augusta-Monte	5.57	284	P	Pn	12 27 46.5	+1.4
STIP	Stip	5.59	1	*i* Pn	Pn	12 27 46.0	+0.7
STIP	Stip	5.59	1	P	Pn	12 27 46.6	+1.2
STIP	Stip	5.59	1	P	Pn	12 27 46.6	+1.2
HAVL	Avola	5.60	281	P	Pn	12 27 45.0	-0.6
HAVL	Avola	5.60	281	P	Pn	12 27 45.0	-0.6
MMB	Musomiste	5.64	13	P	Pn	12 27 49.6	+3.5
SSY	Sortino	5.67	283	P	Pn	12 27 47.0	+0.5
SSY	Sortino	5.67	283	P	Pn	12 27 47.0	+0.5
PHP	Peshkopia	5.71	348	*e*PN	Pn	12 27 47.9	+0.9
PHP				*i* SN	Sg	12 29 39.5	+14
PHP	Peshkopia	5.71	348	*e*Pn	Pn	12 27 47.9	+0.9
ALN	Alexandroupoli	5.74	32	P	Pn	12 27 49.4	+1.9
ALN	Alexandroupoli	5.74	32	P	Pn	12 27 49.4	+1.9
RDO	Rodhopi	5.75	28	P	Pn	12 27 49.3	+1.7
RDO	Rodhopi	5.75	28	P	Pn	12 27 49.3	+1.7
KKB	Krupnik	5.82	8	P	Pn	12 27 51.4	+2.9
KKB	Krupnik	5.82	8	P	Pn	12 27 51.4	+2.9
HMDC	Modica	5.88	280	P	Pn	12 27 48.2	-1.2
HMDC	Modica	5.88	280	P	Pn	12 27 48.2	-1.2
SKO	Skopje	5.88	356	P	Pn	12 27 50.7	+1.3
SKO	Skopje	5.88	356	*e*Pn	Pn	12 27 49.7	+0.4
SKO				*e*Sg	Sn	12 28 55.4	-1.2
SKO	Skopje	5.88	356	P	Pn	12 27 50.6	+1.2
SKO	Skopje	5.88	356	P	Pn	12 27 50.6	+1.2
ORI	Oriolo Calabro	5.90	314	P	Pn	12 27 48.6	-1.1
HVZN	Vizzini	5.96	283	P	Pn	12 27 51.1	+0.6
HVZN	Vizzini	5.96	283	P	Pn	12 27 51.1	+0.6
RZN	Rozhen	5.97	20	P	Sn	12 28 53.8	-5.0
LTRZ	Laterza	6.06	319	P	Pn	12 27 50.1	-1.8
LTRZ	Laterza	6.06	319	P	Pn	12 27 50.1	-1.8
WDD	Wield Dalam	6.07	270	*e*Pn	Pn	12 27 51.9	-0.1
WDD	143nm,0.6s Wield Dalam	6.07	270	*e*Pn	Pn	12 27 51.9	-0.1
KDZ	Kurdzhali	6.15	25	P	Sn	12 28 54.3	-8.9
PUK	Puka	6.16	345	*e*PN	Pn	12 27 53.6	+0.4
PUK				*i* SN	Sg	12 29 44.1	+4.1
PUK	Puka	6.16	345	*e*Pn	Pn	12 27 53.6	+0.4
ULC	Ulcinj	6.23	341	⇑*i*Pn	Pn	12 27 52.7	-1.5
ULC				*i* Sn	Sn	12 28 58.6	-6.7
ULC	Ulcinj	6.23	341	⇑*i*Pn	Pn	12 27 52.7	-1.5
RAFF	Raffo Rosso	6.24	283	P	Pn	12 27 58.6	+4.2
VAE	Valguarnera	6.24	285	Pn	Pn	12 27 56.9	+2.5
VAE	4.2nm,0.3s,baz=111,slow=7.1,SNR=7.3			Sn	Sn	12 29 07.4	+1.7
VAE	12nm,0.3s,baz=194,slow=5.9,SNR=8.1 Valguarnera	6.24	285	Pn	Pn	12 27 56.9	+2.5
VAE				Sn	Sn	12 29 07.4	+1.7
PLD	Plovdiv	6.35	18	P	Pn	12 27 59.2	+3.3
PLD	Plovdiv	6.35	18	*e*P	Sn	12 29 04.9	-3.4
PLD	Plovdiv	6.35	18	P	Pn	12 27 59.2	+3.3
PTRP	Pietrapertosa	6.42	315	P	Pn	12 27 58.2	+1.3
PTRP	Pietrapertosa	6.42	315	P	Pn	12 27 58.2	+1.3
BCI	Bajram Curri	6.43	347	*e*PN	Pn	12 27 56.9	-0.1
BCI	Bajram Curri	6.43	347	*e*Pn	Pn	12 27 56.9	-0.1
MGR	Morigerati	6.49	310	P	Pn	12 27 57.5	-0.2
MGR	Morigerati	6.49	310	P	Pn	12 27 57.5	-0.2
DIM	Dimitrovgrad	6.54	24	P	Pn	12 28 02.8	+4.3
VTS	Vitosha	6.55	8	*e*Pn	Pn	12 28 01.9	+3.3
VTS	Vitosha	6.55	8	*e*PN	Pn	12 28 02.3	+3.7
VTS	Vitosha	6.55	8	P	Pn	12 28 00.2	+1.6
VTS	Vitosha	6.55	8	P	Pn	12 28 00.2	+1.6
VTS	Vitosha	6.55	8	*e*Pn	Pn	12 28 01.9	+3.3
HMAT	Matruh	6.56	138	P	Pn	12 27 56.6	-2.1
HMAT	baz=140			AMP		12 29 00.0	
HMAT	comp=E,300µm,0.6s,logA/T=5.7,baz=140			S	Sn	12 29 07.8	-5.6
HMAT	baz=140 Matruh	6.56	138	P	Pn	12 27 56.6	-2.1
HMAT				S	Sn	12 29 07.8	-5.6
BUM	Brajici-Budva	6.64	340	⇓*i*Pn	Pn	12 27 57.9	-2.0
BUM				*e*Sn	Sn	12 29 08.9	-6.5
BUM	Brajici-Budva	6.64	340	⇓*i*Pn	Pn	12 27 57.9	-2.0
GIB	Gibilmanna	6.65	289	P	Pn	12 28 01.0	+1.0
PDG	Podgorica	6.67	342	⇓*i*Pn	Pn	12 27 58.5	-1.7
TTG	Podgorica	6.67	342	⇓*i*Pn	Pn	12 27 58.5	-1.7
TTG				*i* Sn	Sn	12 29 09.5	-6.5
TTG	Podgorica	6.67	342	P	Pn	12 27 58.5	-1.7
PVY	Plav	6.67	347	⇓*i*Pn	Pn	12 28 00.2	-0.1
PVY				*e*Sn	Sn	12 29 11.4	-4.8
PVY	Plav	6.67	347	⇓*i*Pn	Pn	12 28 00.2	-0.1
BARS	Barje	6.71	359	*e*Pn	Pn	12 28 00.6	-0.1
BARS	Barje	6.71	359	P	Pn	12 28 01.6	+0.9
BARS	Barje	6.71	359	*e*Pn	Pn	12 28 00.6	-0.1
BARS	Barje	6.71	359	P	Pn	12 28 01.6	+0.9
SGO	Sicignano	6.89	312	P	Pn	12 28 03.5	+0.2
HCY	Herceg Novi	6.89	338	⇑*i*Pn	Pn	12 28 00.8	-2.5
HCY				*e*Sn	Sn	12 29 14.1	-7.5
BEY	Berane	6.95	347	⇑*i*Pn	Pn	12 28 04.0	-0.1
IVA	Berane	6.95	347	⇑*i*Pn	Pn	12 28 04.0	-0.1
IVA				*e*Sn	Sn	12 29 18.6	-4.5
IVA	Berane	6.95	347	P	Pn	12 28 04.0	-0.1
LUJL	Ujela	6.99	185	*i* P	Pn	12 28 05.4	+0.7
NKY	comp=E,109nm,1.0s,SNR=22 Niksic	7.09	342	⇓*i*Pn	Pn	12 28 04.8	-1.2
NKY				*e*Sn	Sn	12 29 20.0	-6.5
NKY	Niksic	7.09	342	⇓*i*Pn	Pn	12 28 04.8	-1.2
ZAPS	Zavoj	7.18	4	*e*Pn	Pn	12 28 08.7	+1.5
ZAPS				*e*Sn	Sn	12 29 20.7	-7.9
TREB	Trebinje	7.18	338	*e*Pn	Pn	12 28 05.4	-1.9
CSSN	Cassano Irpino	7.25	313	P	Pn	12 28 08.5	+0.3
CSSN	Cassano Irpino	7.25	313	P	Pn	12 28 08.5	+0.3
NISS		7.29	360	*e*Pn	Pn	12 28 08.9	+0.1
NISS		7.29	360	*e*Pn	Pn	12 28 08.9	+0.1
BRY	Bratogost	7.30	340	⇓*i*Pn	Pn	12 28 06.4	-2.4
BRY				*i* Sn	Sn	12 29 23.7	-7.8
SJES	Sjenica	7.32	348	*e*Pn	Pn	12 28 09.0	-0.1
SJES	Sjenica	7.32	348	*e*Pn	Pn	12 28 09.0	-0.1
MSAG	Monte S. Angel	7.34	322	P	Pn	12 28 08.5	-1.0
MSAG	Monte S. Angel	7.34	322	P	Pn	12 28 08.5	-1.0
FG5	Orsara di Pugl	7.38	317	P	Pn	12 28 09.5	-0.5
FG5	Orsara di Pugl	7.38	317	P	Pn	12 28 09.5	-0.5
SWA2		7.43	156	P	Pn	12 28 10.8	0.0
SWA2	baz=157			S	Sn	12 29 30.7	-4.3
SWA2	baz=157	7.43	156	P	Pn	12 28 10.8	0.0
SWA2				S	Sn	12 29 30.7	-4.3
MRB1	Monte Rocchett	7.45	314	P	Pn	12 28 10.7	-0.2
MRB1	Monte Rocchett	7.45	314	P	Pn	12 28 10.7	-0.2
SGRT	San Giovanni R	7.46	321	P	Pn	12 28 09.7	-1.4
SGRT	San Giovanni R	7.46	321	P	Pn	12 28 09.7	-1.4
RGNG	Rignano Grg	7.48	320	P	Pn	12 28 10.2	-1.2
RGNG	Rignano Grg	7.48	320	P	Pn	12 28 10.2	-1.2
UPM	Unac-Piva	7.48	342	⇓*i*Pn	Pn	12 28 09.9	-1.5
UPM				*i* Sn	Sn	12 29 29.2	-6.9
UPM	Unac-Piva	7.48	342	⇓*i*Pn	Pn	12 28 09.9	-1.5
USI	Ustica	7.49	293	P	Pn	12 28 13.5	+2.0
USI	Ustica	7.49	293	P	Pn	12 28 13.5	+2.0
PLE	Pljevlja	7.49	345	*e*Pn	Pn	12 28 11.2	-0.3
PLE				*i* Sn	Sn	12 29 30.9	-5.5
PLE	Pljevlja	7.49	345	*e*Pn	Pn	12 28 11.2	-0.3
STON	Ston	7.53	335	*i* Pn	Pn	12 28 08.9	-3.2
STON				Sn	Sn	12 29 29.7	-7.7
PSB1	Pescosannita	7.60	314	P	Pn	12 28 13.3	+0.3
PSB1	Pescosannita	7.60	314	P	Pn	12 28 13.3	+0.3
FG2	Serracapriola	7.80	319	P	Pn	12 28 15.8	+0.1
FG2	Serracapriola	7.80	319	P	Pn	12 28 15.8	+0.1
CIGN	Sant'Elia a Pi	7.83	317	P	Pn	12 28 16.3	+0.1
CIGN	Sant'Elia a Pi	7.83	317	P	Pn	12 28 16.3	+0.1
GRUS	Gruza	7.84	353	⇓*i*Pn	Pn	12 28 14.2	-2.1
GRUS	Gruza	7.84	353	P	Pn	12 28 15.2	-1.1
GRUS	Gruza	7.84	353	P	Pn	12 28 15.2	-1.1
SGG	Gregorio Mates	7.96	314	P	Pn	12 28 17.6	-0.3
SGG	Gregorio Mates	7.96	314	P	Pn	12 28 17.6	-0.3
BBLS	Lazići	8.01	346	*e*Pn	Pn	12 28 16.4	-2.2
BBLS	Lazići	8.01	346	P	Pn	12 28 18.1	-0.5
BBLS	Lazići	8.01	346	P	Pn	12 28 18.1	-0.5
DIVS	Divibare	8.13	350	⇑*i*Pn	Pn	12 28 17.9	-2.4
DIVS	Divibare	8.13	350	P	Pn	12 28 17.9	-2.4
RFI	Roccamonfina	8.14	312	P	Pn	12 28 21.5	+1.1
RFI	Roccamonfina	8.14	312	P	Pn	12 28 21.5	+1.1
SVIS	Svilajnac	8.18	356	*e*Pn	Pn	12 28 20.7	-0.2
MIDA	Miranda	8.19	315	P	Pn	12 28 21.9	+0.8
MIDA	Miranda	8.19	315	P	Pn	12 28 21.9	+0.8
TRUS	Trudelj	8.20	352	⇑*i*Pn	Pn	12 28 18.5	-2.8
PRD	Provadia	8.22	29	P	Pn	12 28 26.3	+4.8
RNI2	Rionero Sannit	8.29	315	P	Pn	12 28 22.9	+0.5
RNI2	Rionero Sannit	8.29	315	P	Pn	12 28 22.9	+0.5
LZLA	Zalla	8.41	208	*i* P	Pn	12 28 24.2	0.0
DJES	SNR=22 Djerdap	8.56	2	⇓*i*Pn	Pn	12 28 25.9	-0.3
INTR	Introdacqua	8.63	316	P	Pn	12 28 27.1	0.0
INTR	Introdacqua	8.63	316	P	Pn	12 28 27.1	0.0
VVLD	Villa Vallelon	8.70	314	P	Pn	12 28 28.0	-0.1
VVLD	Villa Vallelon	8.70	314	P	Pn	12 28 28.0	-0.1
LJFR	Jufra	8.71	219	*i* P	Pn	12 28 27.6	-0.7
GUAR	SNR=22 Guarcino	8.84	313	P	Pn	12 28 29.6	-0.4
GUAR	Guarcino	8.84	313	P	Pn	12 28 29.6	-0.4
LSHF	Shwairf	8.92	229	*i* P	Pn	12 28 31.2	+0.1
PTQR	SNR=22 Pietraquaria	8.92	314	P	Pn	12 28 33.7	+2.5
PTQR	Pietraquaria	8.92	314	P	Pn	12 28 33.7	+2.5
AQU	L'Aquila	9.13	316	P	Pn	12 28 35.4	+1.4
FRGS	Fruska Gora	9.20	350	⇑*i*Pn	Pn	12 28 32.9	-2.0
TERO	Teramo	9.20	318	P	Pn	12 28 38.2	+3.3
FIAM	Fiamignano	9.24	314	P	Pn	12 28 37.6	+2.1
FIAM	Fiamignano	9.24	314	P	Pn	12 28 37.6	+2.1
GZR	Gura Zlata	9.30	3	P	Pn	12 28 38.6	+2.3
GZR	Gura Zlata	9.30	3	⇑*i*P	Pn	12 28 36.7	+0.4
GZR	Gura Zlata	9.30	3	P	Pn	12 28 36.7	+0.4
OFFI	Offida	9.37	319	P	Pn	12 28 40.4	+3.1
BLY	Banja Luka	9.38	338	*e*Pn	Pn	12 28 35.0	-2.4
BLY	Banja Luka	9.38	338	P	Pn	12 28 37.5	+0.1
BLY	Banja Luka	9.38	338	P	Pn	12 28 37.5	+0.1
BZS	Buzias	9.51	358	⇑*i*P	Pn	12 28 40.0	+0.8
BZS	Buzias	9.51	358	P	Pn	12 28 40.0	+0.8
VOIR		9.61	13	P	Pn	12 28 42.7	+2.2
VOIR		9.61	13	⇑*i*P	Pn	12 28 42.5	+2.0
VOIR		9.61	13	P	Pn	12 28 42.7	+2.2
NRCA	Norcia	9.61	317	P	Pn	12 28 41.0	+0.5
NRCA	Norcia	9.61	317	P	Pn	12 28 41.0	+0.5
TIRR	Tirgusor	9.67	28	*e*Pn	Pn	12 28 41.4	0.0
TIRR	comp=E,20nm,0.9s Tirgusor	9.67	28	⇑*i*P	Pn	12 28 44.3	+2.9
TIRR	Tirgusor	9.67	28	*e*Pn	Pn	12 28 41.4	0.0
TIRR	comp=E,20nm,0.9s Tirgusor	9.67	28	P	Pn	12 28 44.3	+2.9
HARR	Harsova	9.69	26	⇑*i*P	Pn	12 28 44.7	+3.0
HARR	Harsova	9.69	26	P	Pn	12 28 44.6	+2.9
AWBH		9.71	141	P	Pn	12 28 41.2	-0.8
AWBH	baz=142	9.71	141	P	Pn	12 28 41.2	-0.8
MLR	Muntele Rosu	9.84	16	P	Pn	12 28 46.3	+2.6
MLR						12 30 29.0	
MLR	Muntele Rosu	9.84	16	Pn	Pn	12 28 46.3	+2.6
MLR	comp=E,0.3nm,0.3s,baz=286,slow=14,SNR=5.6			Sn	Sn	12 30 29.0	-5.1
MLR	comp=E,0.4nm,0.3s,baz=349,slow=23,SNR=1.8			Lg		12 31 29.1	
MLR	comp=E,0.2nm,0.3s,baz=92,slow=17,SNR=1.9 Muntele Rosu	9.84	16	P	Pn	12 28 46.3	+2.6
AOI	Ancona	9.85	322	P	Pn	12 28 46.5	+2.7
AOI	Ancona	9.85	322	P	Pn	12 28 46.5	+2.7
BR131	Keskin Array S	9.88	65	*e*Pn	Pn	12 28 48.8	+4.6
BR131	Keskin Array S	9.88	65	*e*Pn	Pn	12 28 48.8	+4.5
BRTR	Keskin Array B	9.88	65	Pn	Pn	12 28 47.3	+3.1
BRTR	comp=E,5.6nm,0.3s,baz=40,slow=27,SNR=3.1 Keskin Array B	9.88	65	P	Pn	12 28 47.3	+3.0
FYM	Al Fayyum	9.93	128	AMP		12 30 00.0	
CING	comp=Z,5682000µm,0.5s,logA/T=10.1,baz=129 Cingoli	9.93	320	P	Pn	12 28 45.3	+0.3
CING	Cingoli	9.93	320	P	Pn	12 28 45.3	+0.3
SNTG	Esanatoglia	9.98	318	P	Pn	12 28 45.4	-0.3
SNTG	Esanatoglia	9.98	318	P	Pn	12 28 45.4	-0.3
NVLJ	Novalja	10.05	329	*i* Pn	Pn	12 28 45.2	-1.3
NVLJ				Sn	Sn	12 30 30.3	-8.8
NVLJ	Novalja	10.05	329	*i* Pn	Pn	12 28 45.2	-1.4
KEST	Kesra	10.27	272	Pn	Pn	12 28 51.8	+2.1
KEST	comp=Z,0.1nm,0.3s,baz=57,slow=7.8,SNR=3.4			Sn	Sn	12 30 40.5	-4.2
KEST	comp=Z,0.1nm,0.3s,baz=237,slow=23,SNR=3.6			LR	LR	12 34 11.8	
KOT	comp=Z,188nm,18.6s,baz=27,slow=46 Kottamia	10.29	124	P	Pn	12 28 48.5	-1.5
KOT	baz=126			AMP		12 30 00.0	
KOT	comp=N,80µm,0.6s,logA/T=5.2,baz=126 Kottamia	10.29	124	P	Pn	12 28 48.5	-1.4
HSAF	As Saff	10.31	126	P	Pn	12 28 48.6	-1.5
HSAF	baz=128 As Saff	10.31	126	P	Pn	12 28 48.6	-1.6
PLOR	Plostina	10.35	18	⇑P	Pn	12 28 54.0	+3.3
PLOR	Plostina	10.35	18	⇑*i*P	Pn	12 28 54.0	+3.3
PLOR	Plostina	10.35	18	P	Pn	12 28 54.0	+3.3
FSSB	Fossombrone	10.37	320	P	Pn	12 28 51.5	+0.5
FSSB	Fossombrone	10.37	320	P	Pn	12 28 51.5	+0.5
VRI	Vrincioaia	10.38	19	P	Pn	12 28 56.0	+4.8
VRI	Vrincioaia	10.38	19	⇑*i*P	Pn	12 28 54.0	+2.8
VRI	Vrincioaia	10.38	19	P	Pn	12 28 54.0	+2.8
PIEI	Pieia	10.39	318	P	Pn	12 28 51.5	+0.2
PIEI	Pieia	10.39	318	P	Pn	12 28 51.5	+0.2
PKSM	Moragy	10.41	347	P	Pn	12 28 51.6	+0.1
PKSM				P		12 28 58.6	
PKSM	Moragy	10.41	347	⇓*i*P	Pn	12 28 49.7	-1.8
PKSM	Moragy	10.41	347	P	Pn	12 28 51.6	+0.1
HFRF	Wahat Farafira	10.42	147	P	Pn	12 28 50.3	-1.4
HFRF	baz=148 Wahat Farafira	10.42	147	P	Pn	12 28 50.3	-1.4
GLL	Jalalah	10.44	126	P	Pn	12 28 50.0	-1.9
GLL	baz=128 Jalalah	10.44	126	P	Pn	12 28 50.0	-1.9
HHAG	baz=125 Hagoal	10.46	123	P	Pn	12 28 50.8	-1.4
HHAG	baz=125 Hagoal	10.46	123	P	Pn	12 28 50.8	-1.4
BADI	Badiali	10.53	318	P	Pn	12 28 56.8	+3.6
BOJS	Bojanci	10.69	334	*e*Pn	Pn	12 28 53.4	-1.9
BOJS				*i* Sn	Sn	12 30 45.5	-9.3
BOJS	Bojanci	10.69	334	*e*Pn	Pn	12 28 53.4	-1.9
DRGR		10.69	3	P	Pn	12 28 56.3	+0.9
DRGR		10.69	3	⇓*i*P	Pn	12 28 56.2	+0.8
DRGR		10.69	3	P	Pn	12 28 56.3	+0.9
AMAG	Maghara	10.83	117	P	Pn	12 28 55.0	-2.4
AMAG	baz=119 Maghara	10.83	117	P	Pn	12 28 55.0	-2.4
CRES	Cresnjev	10.90	335	P	Pn	12 28 57.1	-1.1
CRES	Cresnjev	10.90	335	P	Pn	12 28 57.1	-1.1
SUZ		11.03	121	P	Pn	12 28 59.0	-1.1
SUZ	baz=123	11.03	121	P	Pn	12 28 59.0	-1.0
BEHE	Becsehely	11.08	341	⇑*e*P	Pn	12 28 59.9	-0.7
ZNM		11.34	123	P	Pn	12 29 03.0	-1.4
ZNM	baz=125	11.34	123	P	Pn	12 29 02.9	-1.5
LJU	Ljubljana	11.41	333	*i* Pn	Pn	12 29 04.7	-0.6
LJU				*i* Sn	Sn	12 31 03.9	-8.7
LJU	Ljubljana	11.41	333	*i* P	Pn	12 29 04.7	-0.6
JAVS	Javornik	11.47	331	*i* Pn	Pn	12 29 03.9	-2.1
JAVS				*i* Sn	Sn	12 31 04.5	-9.3
JAVS	Javornik	11.47	331	*i* Pn	Pn	12 29 03.9	-2.1
MMAI	Mount Meron Ar	11.47	102	Pn	Pn	12 29 04.5	-1.6
MMAI	comp=N,3.1nm,0.3s,baz=275,slow=11,SNR=12			Sn	Sn	12 31 14.5	+0.4
CRNS	comp=N,5.3nm,0.3s,baz=299,slow=26,SNR=6.9 Crni Vrh	11.55	332	*e*Pn	Pn	12 29 06.2	-0.8
CRNS				*e*Sn	Sn	12 31 04.7	-11
KZIT	Kziot	11.57	113	P	Pn	12 29 08.4	+1.0
KZIT	Kziot	11.57	113	P	Pn	12 29 08.4	+1.0
BUD	Budapest	11.59	350	⇓*e*P	Pn	12 29 08.3	+0.7
BUD	Budapest	11.59	350	⇓*e*P	Pn	12 29 08.3	+0.7
VOY	Vojsko	11.65	331	*e*Pn	Pn	12 29 07.2	-1.2
VOY				*e*		12 29 08.0	
VOY				*e*Sn	Sn	12 31 07.7	-11
VOY				*e*		12 31 09.3	
VOY				*e*		12 31 11.2	
VOY	Vojsko	11.65	331	*e*Pn	Pn	12 29 07.2	-1.2
PERS	Pernice	11.72	336	*i* Pn	Pn	12 29 06.7	-2.7
PERS				*i* Sn	Sn	12 31 08.7	-11
BURAR	Bucovina Array	11.75	11	P	Pn	12 29 12.8	+3.0
BURAR	Bucovina Array	11.75	11	⇑P	Pn	12 29 12.9	+3.1
BURAR	Bucovina Array	11.75	11	P	Pn	12 29 12.8	+3.0
BUR08	Bucovina Ar. S	11.78	11	*e*Pn	Pn	12 29 11.6	+1.5
BUR08	Bucovina Ar. S	11.78	11	*e*Pn	Pn	12 29 11.6	+1.4
HNKL	Nakhl	11.78	118	P	Pn	12 29 07.7	-2.7
HNKL	baz=120 Nakhl	11.78	118	P	Pn	12 29 07.7	-2.7
SOKA	Soboth	11.79	336	⇑*i*Pn	Pn	12 29 07.6	-2.7
SOKA				⇑*i*Sn	Sn	12 31 10.9	-11
OBKA	Obir	11.80	334	⇑*i*Pn	Pn	12 29 08.4	-2.1
OBKA				⇓*i*Sn	Sn	12 31 11.8	-10
PSZ	Piszkesteto	11.91	353	*e*Pn	Pn	12 29 10.8	-1.3
PSZ				*e*Sn	Sn	12 31 21.5	-3.3
PSZ	Piszkesteto	11.91	353	⇑*e*P	Pn	12 29 11.5	-0.5
PSZ	Piszkesteto	11.91	353	⇑*i*P	Pn	12 29 11.0	-1.0
PSZ	Piszkesteto	11.91	353	P	Pn	12 29 11.0	-1.0
PGF	Pioggiola	11.94	307	*e*P	Pn	12 29 12.9	+0.4
PGF	comp=N,95nm,1.2s Pioggiola	11.94	307	*e*P	Pn	12 29 12.9	+0.4
PGF				pmax	pmax		
PGF	comp=Z,47nm,1.2s Pioggiola	11.94	307	*e*P	Pn	12

STHS	Stebnicka Huta	13.32 358	*e*Pn	Pn	12 29 30.6	-0.6
STHS			*e*Sn	Sn	12 31 44.0	-15
STHS	Stebnicka Huta	13.32 358	*e*PN	Pn	12 29 30.6	-0.6
STHS			*e*		12 29 43.4	
STHS	Stebnicka Huta	13.32 358	*e*P	Pn	12 29 30.6	-0.6
NIE	Niedzica	13.37 355	*e*P	Pn	12 29 40.8	+8.9
KWP	Kalwaria Pacla	13.53 2	*e*P	Pn	12 29 35.3	+1.1
KWP	Kalwaria Pacla	13.53 2	P	Pn	12 29 35.4	+1.2
KWP	Kalwaria Pacla	13.53 2	⇑*i*P	Pn	12 29 35.5	+1.3
KWP	Kalwaria Pacla	13.53 2	*e*P	Pn	12 29 35.3	+1.1
WTTA	Wattenberg	13.56 328	⇑*i*Pn	Pn	12 29 32.6	-2.0
SAOF	Saorge	13.57 310	*e*P	Pn	12 29 33.3	-1.4
SAOF	Saorge	13.57 310	*e*P	Pn	12 29 33.3	-1.4
SBF	Sospel	13.58 309	*e*P	Pn	12 29 33.4	-1.5
	comp=Z,74nm,1.2s					
SBF	Sospel	13.58 309	*e*P	Pn	12 29 33.4	-1.5
SBF			pmax	pmax		
	comp=Z,37nm,1.2s					
SBF	Sospel	13.58 309	*e*P	Pn	12 29 33.4	-1.5
	comp=Z,37nm,1.2s					
SBF	Sospel	13.58 309	*e*P	Pn	12 29 33.4	-1.5
	comp=Z,37nm,1.2s					
KRUC	Moravsky	13.59 344	P	Pn	12 29 34.4	-0.5
AUTN	L'Aution	13.65 310	*e*P	Pn	12 29 30.9	-5.0
TOUF	Mont Tournerai	13.78 309	*e*P	Pn	12 29 35.9	-1.6
TOUF	Mont Tournerai	13.78 309	*e*P	Pn	12 29 35.9	-1.6
VRAC	Vranov	13.78 345	Pn	Pn	12 29 37.0	-0.6
	comp=Z,0.2nm,0.3s,baz=174,slow=18,SNR=3.7					
VRAC	Vranov	13.78 345	Pn	Pn	12 29 37.0	-0.6
VRAC			P		12 29 44.7	
VRAC	Vranov	13.78 345	P	Pn	12 29 37.0	-0.5
LVV	L'vov	13.79 6	*e*P	Pn	12 29 46.4	+8.7
LVV			MLR	MLR		
	comp=Z,800nm,8.0s					
LVV			MLR	MLR		
	comp=E,800nm,13.0s					
LVV			MLR	MLR		
	comp=N,900nm,9.0s					
LMR	La Mourre	13.93 306	*e*P	Pn	12 29 42.3	+2.7
	comp=N,38nm,1.3s					
LMR	La Mourre	13.93 306	*e*P	Pn	12 29 42.3	+2.7
LMR			pmax	pmax		
	comp=Z,19nm,1.3s					
LMR	La Mourre	13.93 306	*e*P	Pn	12 29 42.3	+2.7
	comp=Z,19nm,1.3s					
FRF	La Foret Royal	13.94 307	*e*P	Pn	12 29 42.4	+2.6
	comp=Z,16nm,0.9s					
FRF	La Foret Royal	13.94 307	*e*P	Pn	12 29 42.4	+2.6
FRF			pmax	pmax		
	comp=Z,8.0nm,0.9s					
FRF	La Foret Royal	13.94 307	*e*P	Pn	12 29 42.4	+2.6
	comp=Z,7.8nm,0.9s					
DAVOX	Davos/Dischmat	14.00 323	Pn	Pn	12 29 41.2	+0.7
	comp=Z,0.5nm,0.3s,baz=163,slow=16,SNR=4.1					
DAVOX			Sn	Sn	12 32 13.7	-2.1
	comp=Z,0.9nm,0.3s,baz=316,slow=18,SNR=4.8					
DAVOX	Davos/Dischmat	14.00 323	Pn	Pn	12 29 41.2	+0.7
OKC	Ostrava-Krasne	14.01 350	*e*P	Pn	12 29 41.1	+0.4
OKC			MLR	MLR		
	comp=Z,2μm,9.1s					
OKC	Ostrava-Krasne	14.01 350	*e*P	Pn	12 29 41.1	+0.4
OKC			AMS	AMS	12 36 50.0	
	comp=Z,2μm,9.1s					
OKC	Ostrava-Krasne	14.01 350	*e*P	Pn	12 29 41.1	+0.4
	comp=Z,2μm,9.1s					
TREC	Trest	14.02 342	AMS	AMS	12 35 50.0	
	comp=Z,3μm,9.9s					
MORC	Moravsky Berou	14.05 348	*e*P	Pn	12 29 40.6	-0.6
MORC	Moravsky Berou	14.05 348	⇑*i*P	Pn	12 29 42.2	+1.0
MORC	Moravsky Berou	14.05 348	*e*P	Pn	12 29 40.6	-0.6
DAVOS	Davos	14.08 323	P	Pn	12 29 41.2	-0.5
DAVOS					12 32 13.7	
DAVOS	Davos	14.08 323	P	Pn	12 29 41.2	-0.5
GERES	GERESS Array B	14.12 337	Pn	Pn	12 29 41.7	-0.5
	comp=Z,1.0nm,0.3s,baz=161,slow=14,SNR=15					
GERES			Sn	Sn	12 32 12.7	-6.0
	comp=Z,1.1nm,0.3s,baz=155,slow=22,SNR=5.7					
GERES	GERESS Array B	14.12 337	P	Pn	12 29 41.7	-0.5
OJC	Ojcow	14.20 354	*e*P	Pn	12 29 47.5	+4.2
OJC			*e*S	Sn	12 32 25.0	+4.3
OJC			L		12 36 38.8	
	comp=Z,0.8nm,16.1s					
OJC	Ojcow	14.20 354	*e*P	Pn	12 29 47.5	+4.2
	comp=Z,800nm,16.1s					
KHC	Kasperske Hory	14.41 337	*e*P	Pn	12 29 45.9	-0.2
KHC			MLR	MLR		
	comp=Z,3μm,11.2s					
KHC	Kasperske Hory	14.41 337	*e*P	Pn	12 29 45.9	-0.2
KHC			*ex*	x	12 29 54.9	
KHC			*ex*	x	12 30 00.0	
KHC			x	x	12 30 10.5	
KHC			AMS	AMS	12 36 10.0	
	comp=Z,3μm,11.2s					
MBDF	Montbardon	14.43 311	*e*P	Pn	12 29 48.3	+1.8
	comp=Z,56nm,1.0s					
MBDF	Montbardon	14.43 311	*e*P	Pn	12 29 48.3	+1.8
MBDF			pmax	pmax		
	comp=Z,28nm,1.0s					
MBDF	Montbardon	14.43 311	*e*P	Pn	12 29 48.3	+1.8
	comp=Z,28nm,1.0s					
ANN	Anapa	14.59 49	*e*P	Pn	12 29 54.1	+5.4
ANN			pmax	pmax		
	comp=Z,74nm,1.3s					
SMRF	Simiane la Rot	14.82 307	*e*P	Pn	12 29 54.6	+2.8
	comp=Z,25nm,1.2s					
SMRF	Simiane la Rot	14.82 307	*e*P	Pn	12 29 54.6	+2.8
	comp=Z,25nm,1.2s					
DPC	Dobruska-Polom	14.82 346	*e*P	Pn	12 29 50.0	-1.8
DPC			MLR	MLR		
	comp=Z,2μm,11.7s					
DPC	Dobruska-Polom	14.82 346	P	Pn	12 29 53.4	+1.6
DPC	Dobruska-Polom	14.82 346	*e*P	Pn	12 29 50.0	-1.8
DPC			*ex*	x	12 30 00.3	
DPC			AMS	AMS	12 36 30.0	
	comp=Z,2μm,11.7s					
LPG	La Plagne	14.86 314	*e*P	Pn	12 29 54.3	+2.0
	comp=Z,19nm,0.9s					
LPG	La Plagne	14.86 314	*e*P	Pn	12 29 54.3	+2.0
LPG			pmax	pmax		
	comp=Z,10.0nm,0.9s					
LPG	La Plagne	14.86 314	*e*P	Pn	12 29 54.3	+2.0
	comp=Z,9.5nm,0.9s					
LPL	La Plagne	14.88 314	*e*P	Pn	12 29 53.9	+1.3
	comp=Z,13nm,0.9s					
LPL	La Plagne	14.88 314	*e*P	Pn	12 29 53.9	+1.3
LPL			pmax	pmax		
	comp=Z,6.0nm,0.9s					
LPL	La Plagne	14.88 314	*e*P	Pn	12 29 53.9	+1.3
	comp=Z,6.4nm,0.9s					
PRU	Pruhonice	14.90 341	*e*P	Pn	12 29 52.7	-0.1
PRU			MLR	MLR		
	comp=Z,2μm,9.9s					
PRU	Pruhonice	14.90 341	*e*P	Pn	12 29 52.7	-0.1
PRU			*ex*	x	12 30 04.9	
PRU			AMS	AMS	12 36 30.0	
	comp=Z,2μm,9.9s					
PRA	Prague	15.00 341	P	Pn	12 29 53.0	-1.2
PRA			*ex*	x	12 29 56.0	
PRA			*ex*	x	12 30 06.0	
UPC	Upice	15.04 345	*e*P	Pn	12 29 55.4	+0.8
UPC			*ex*	x	12 30 06.8	
ORIF	Oris-en-Rattie	15.08 311	*e*P	Pn	12 29 56.9	+1.7
	comp=Z,37nm,1.3s					
ORIF			*e*MLR	MLR		
	comp=Z,1μm,21.8s					
ORIF	Oris-en-Rattie	15.08 311	*e*P	Pn	12 29 56.9	+1.7
ORIF			pmax	pmax		
	comp=Z,19nm,1.3s					
ORIF	Oris-en-Rattie	15.08 311	*e*P	Pn	12 29 56.9	+1.7
	comp=Z,19nm,1.3s					
KSP	Ksiaz	15.30 346	*e*P	Pn	12 30 03.7	+5.6
KSP			*e*		12 30 10.6	
KSP	Ksiaz	15.30 346	*e*P	Pn	12 30 03.1	+5.0
KSP	Ksiaz	15.30 346	*e*P	Pn	12 30 03.1	+5.0
PVCC	Panska Ves	15.39 342	AMS	AMS	12 36 40.0	
	comp=Z,2μm,9.4s					
SPAK	Spaichingen-Ko	15.46 325	*e*P	Pn	12 30 05.5	+5.2
SPAK	Spaichingen-Ko	15.46 325	*e*P	Pn	12 30 05.5	+5.2
KIEV	Kiev	15.48 17	*e*P	Pn	12 29 58.7	-1.8
KIEV			pmax	pmax		
	comp=Z,14nm,0.7s					
KIEV	Kiev	15.48 17	*e*Pn	Pn	12 29 58.7	-1.9
	comp=Z,14nm,0.7s					
AKASG	Malin Array Be	15.49 17	Pn	Pn	12 29 58.0	-2.7
	comp=Z,1.2nm,0.3s,baz=207,slow=12,SNR=12					
AKBB	Malin Array Si	15.49 17	*e*P	Pn	12 29 59.6	-1.1
BBS	Basel-Blauen	15.65 321	*e*P	Pn	12 30 05.5	+2.8
BBS	Basel-Blauen	15.65 321	*e*P	Pn	12 30 05.5	+2.8
FELD	Feldberg im Sc	15.68 323	*e*P	Pn	12 30 03.3	+0.2
GRA1	Grafenberg Arr	15.69 333	*e*P	Pn	12 30 01.0	-2.2
	comp=Z,136nm,1.5s					
GRF	Grafenberg Arr	15.69 333	*e*P	Pn	12 30 01.0	-2.2
	comp=Z,136nm,1.5s					
GRF	Grafenberg Arr	15.69 333	*e*P	Pn	12 30 01.0	-2.2
GRF			pmax	pmax		
	comp=Z,136nm,1.5s					
GRF	Grafenberg Arr	15.69 333	*e*P	Pn	12 30 01.0	-2.2
GRF			pmax	pmax		
	comp=Z,136nm,1.5s					
NKC	Novy Kostel	15.73 337	*e*P	Pn	12 30 01.7	-2.0
NKC			MLR	MLR		
	comp=Z,2μm,10.6s					
NKC	Novy Kostel	15.73 337	*e*P	Pn	12 30 01.7	-2.0
NKC			AMS	AMS	12 37 00.0	
	comp=Z,2μm,10.6s					
VIVF	Saint-Julien-l	15.80 309	*e*P	Pn	12 30 05.3	+0.7
	comp=Z,11nm,0.9s					
VIVF	Saint-Julien-l	15.80 309	*e*P	Pn	12 30 05.3	+0.7
VIVF			pmax	pmax		
	comp=Z,5.0nm,0.9s					
VIVF	Saint-Julien-l	15.80 309	*e*P	Pn	12 30 05.3	+0.7
	comp=Z,5.3nm,0.9s					
BFO	Black Forest	15.84 325	*e*P	Pn	12 30 04.8	-0.4
BFO			pmax	pmax		
	comp=Z,12nm,0.9s					
BFO	Black Forest	15.84 325	*e*Pn	Pn	12 30 04.8	-0.4
	comp=Z,12nm,0.9s					
BFO	Black Forest	15.84 325	*e*Pn	Pn	12 30 04.8	-0.4
	comp=Z,12nm,0.9s					
BRG	Berggiesshubel	15.87 341	*e*P	Pn	12 30 05.3	-0.2
	comp=Z,5.7nm,1.0s					
BRG			*i*		12 30 12.7	
	comp=Z,11nm,1.2s					
BRG						
	comp=N,1μm,9.9s					
BRG						
	comp=E,1μm,10.8s					
BRG						
	comp=Z,2μm,9.2s					
BRG	Berggiesshubel	15.87 341	*e*P	Pn	12 30 05.3	-0.2
BRG			pmax	pmax		
	comp=Z,3.0nm,1.0s					
BRG			pmax	pmax		
	comp=Z,7.0nm,1.2s					
BRG			MLR	MLR		
	comp=N,619nm,9.9s					
BRG			MLR	MLR		
	comp=E,736nm,10.8s					
BRG			MLR	MLR		
	comp=Z,1μm,9.2s					
CABF	La Chapelle	15.88 316	*e*P	Pn	12 30 06.8	+1.1
	comp=Z,33nm,1.0s					
CABF	La Chapelle	15.88 316	*e*P	Pn	12 30 06.8	+1.1
CABF			pmax	pmax		
	comp=Z,16nm,1.0s					
CABF	La Chapelle	15.88 316	*e*P	Pn	12 30 06.8	+1.1
	comp=Z,16nm,1.0s					
LOMF	Lomont	15.93 320	*e*P	Pn	12 30 05.7	-0.6
SSB	Saint Sauveur	16.08 310	*e*P	Pn	12 30 11.4	+3.1
SSB			pmax	pmax		
	comp=Z,3.0nm,0.8s					
SSB	Saint Sauveur	16.08 310	*e*P	Pn	12 30 11.4	+3.1
	comp=Z,3.4nm,0.8s					
SSB	Saint Sauveur	16.08 310	*e*P	Pn	12 30 11.4	+3.1
	comp=Z,3.4nm,0.8s					
MOF	Molkenrain	16.09 321	*e*P	Pn	12 30 08.5	+0.1
HINF	Hinteralfeld	16.21 321	*e*P	Pn	12 30 10.6	+0.6
	comp=Z,46nm,1.1s					
HINF	Hinteralfeld	16.21 321	*e*P	Pn	12 30 10.6	+0.6
HINF			pmax	pmax		
	comp=Z,23nm,1.1s					
HINF	Hinteralfeld	16.21 321	*e*P	Pn	12 30 10.6	+0.6
	comp=Z,23nm,1.1s					
ECH	Echery	16.32 322	*e*P	Pn	12 30 09.8	-1.6
ECH	Echery	16.32 322	*e*P	Pn	12 30 09.6	-1.8
ECH			pmax	pmax		
	comp=Z,19nm,0.9s					
ECH	Echery	16.32 322	*e*Pn	Pn	12 30 09.6	-1.9
	comp=Z,19nm,0.9s					
ECH	Echery	16.32 322	*e*Pn	Pn	12 30 09.6	-1.8
	comp=Z,19nm,0.9s					
MOX	Moxa	16.36 336	*e*(P)	Pn	12 30 11.0	-0.8
MOX						
	comp=Z,1μm,15.0s					
CDF	Champ du Feu	16.40 323	*e*P	Pn	12 30 11.2	-1.2
	comp=Z,69nm,1.2s					
CDF	Champ du Feu	16.40 323	*e*P	Pn	12 30 11.2	-1.2
CDF			pmax	pmax		
	comp=Z,35nm,1.2s					
CDF	Champ du Feu	16.40 323	*e*P	Pn	12 30 11.2	-1.2
	comp=Z,35nm,1.2s					
CLL	Collm	16.51 340	*e*P	Pn	12 30 16.0	+2.2
CLL			MLR	MLR		
	comp=Z,800nm,24.3s					
CLL	Collm	16.51 340	*e*P	Pn	12 30 16.0	+2.2
CLL			*i*		12 30 22.2	
CLL			*e*S	Sn	12 33 24.0	+7.1
CLL	Collm	16.51 340	*e*P	Pn	12 30 16.0	+2.2
CLL			*i* PP		12 30 22.2	
	comp=Z,39nm,1.3s					
CLL			*i* (PPP)		12 30 33.9	
CLL			*e*S	Sn	12 33 24.0	+7.1
CLL			Lmax		12 37 23.0	
CLL	Collm	16.51 340	*e*P	Pn	12 30 16.0	+2.2
	comp=Z,800nm,24.3s					
LANF	Langenberg	16.55 325	*e*P	Pn	12 30 17.2	+2.9
LANF	Langenberg	16.55 325	*e*P	Pn	12 30 17.2	+2.9
HAU	Haudompre	16.59 321	*e*P	Pn	12 30 13.7	-1.1
	comp=Z,61nm,1.0s					
HAU			*e*MLR	MLR		
	comp=Z,782nm,18.8s					
HAU	Haudompre	16.59 321	*e*P	Pn	12 30 13.7	-1.1
HAU			pmax	pmax		
	comp=Z,31nm,1.0s					
HAU	Haudompre	16.59 321	*e*P	Pn	12 30 13.7	-1.1
	comp=Z,31nm,1.0s					
LBL	Lubilhac	16.87 308	*e*P	Pn	12 30 18.9	+0.6
LBL	Lubilhac	16.87 308	*e*P	Pn	12 30 18.9	+0.6
THEF	They Montfort	16.92 321	*e*P	Pn	12 30 16.1	-2.9
MSL	Mosul	17.03 83	*e*P	Pn	12 30 21.0	+0.6
MSL			*e*S	Sn	12 33 41.0	+11
SMF	Signal de Mont	17.19 313	*e*P	Pn	12 30 21.4	-0.9
	comp=Z,20nm,0.9s					
SMF	Signal de Mont	17.19 313	*e*P	Pn	12 30 21.4	-0.9
SMF			pmax	pmax		
	comp=Z,10.0nm,0.9s					
SMF	Signal de Mont	17.19 313	*e*P	Pn	12 30 21.4	-0.9
	comp=Z,9.9nm,0.9s					
PYM	Petit Puy Mans	17.25 310	*e*P	Pn	12 30 23.0	-0.1
PYM	Petit Puy Mans	17.25 310	*e*P	Pn	12 30 23.0	-0.1
AGO	Saint Agoulin	17.32 311	*e*P	Pn	12 30 24.0	+0.1
AGO	Saint Agoulin	17.32 311	*e*P	Pn	12 30 24.0	+0.1
CAF	Calviac	17.50 306	*e*P	Pn	12 30 28.4	+2.1
	comp=Z,46nm,1.2s					
CAF	Calviac	17.50 306	*e*P	Pn	12 30 28.4	+2.1
CAF			pmax	pmax		
	comp=Z,23nm,1.2s					
CAF	Calviac	17.50 306	*e*P	Pn	12 30 28.4	+2.1
	comp=Z,23nm,1.2s					
CAF	Calviac	17.50 306	*e*P	Pn	12 30 28.4	+2.1
	comp=Z,23nm,1.2s					
LOR	Lormes	17.51 315	*e*P	Pn	12 30 24.7	-1.6
	comp=Z,41nm,1.2s					
LOR			*e*MLR	MLR		
	comp=Z,601nm,18.2s					
LOR	Lormes	17.51 315	*e*P	Pn	12 30 24.7	-1.6
LOR			pmax	pmax		
	comp=Z,20nm,1.2s					
LOR	Lormes	17.51 315	*e*P	Pn	12 30 24.7	-1.6
	comp=Z,20nm,1.2s					
AVF	Avril sur Loir	17.55 313	*e*P	Pn	12 30 25.6	-1.2
	comp=Z,17nm,1.0s					
AVF	Avril sur Loir	17.55 313	*e*P	Pn	12 30 25.6	-1.2
AVF			pmax	pmax		
	comp=Z,8.0nm,1.0s					
AVF	Avril sur Loir	17.55 313	*e*P	Pn	12 30 25.6	-1.2
	comp=Z,8.4nm,1.0s					
MEZF	Maizieres J'vi	17.58 320	*e*P	Pn	12 30 28.5	+1.3
	comp=Z,70nm,1.0s					
MEZF	Maizieres J'vi	17.58 320	*e*P	Pn	12 30 28.5	+1.3
	comp=Z,70nm,1.0s					
MEZF	Maizieres J'vi	17.58 320	*e*P	Pn	12 30 28.5	+1.3
	comp=Z,35nm,1.0s					
SSF	Saint Saulge	17.60 314	*e*P	Pn	12 30 24.9	-2.5
	comp=Z,24nm,1.2s					
SSF	Saint Saulge	17.60 314	*e*P	Pn	12 30 24.9	-2.5
SSF			pmax	pmax		
	comp=Z,12nm,1.2s					
SSF	Saint Saulge	17.60 314	*e*P	Pn	12 30 24.9	-2.5
	comp=Z,12nm,1.2s					
ERTA	Horta de San J	17.62 293	P	Pn	12 30 32.2	+4.4
	comp=Z,106nm,4.8s					
KIV	Kislovodsk	17.65 57	*c i*P	Pn	12 30 27.2	-0.9
KIV			*e*S	Sn	12 33 44.1	-0.4
KIV			pmax	pmax		
	comp=Z,41nm,1.2s					
KIV			MLR	MLR		
	comp=Z,400nm,18.0s					
KIV	Kislovodsk	17.65 57	*e*Pn	Pn	12 30 29.6	+1.5
	comp=Z,45nm,0.8s					
KIV	Kislovodsk	17.65 57	*e*Pn	Pn	12 30 29.6	+1.5
	comp=Z,45nm,0.8s					
BGF	Bois d'Agland	17.73 312	*e*P	Pn	12 30 28.3	-0.8
	comp=Z,62nm,1.2s					
BGF	Bois d'Agland	17.73 312	*e*P	Pn	12 30 28.3	-0.8
BGF			pmax	pmax		
	comp=Z,31nm,1.2s					
BGF	Bois d'Agland	17.73 312	*e*P	Pn	12 30 28.3	-0.8
	comp=Z,31nm,1.2s					
BGF	Bois d'Agland	17.73 312	*e*P	Pn	12 30 28.3	-0.8
	comp=Z,31nm,1.2s					
WLF	Walferdange	17.80 325	*e*P	Pn	12 30 31.1	+1.2
WLF			pmax	pmax		
	comp=Z,37nm,1.0s					
WLF	Walferdange	17.80 325	*e*P	Pn	12 30 31.1	+1.2
	comp=Z,37nm,1.0s					
WLF	Walferdange	17.80 325	*e*P	Pn	12 30 31.1	+1.2
	comp=Z,37nm,1.0s					
SUW	Suwalki	17.93 2	*e*P	Pn	12 30 31.4	-0.1
SUW			*e*		12 30 38.8	
SUW	Suwalki	17.93 2	*e*P	Pn	12 30 30.9	-0.6
SUW			pmax	pmax		
	comp=Z,285nm,1.0s					
SUW	Suwalki	17.93 2	*e*Pn	Pn	12 30 30.9	-0.6
	comp=Z,285nm,1.0s					
SUW	Suwalki	17.93 2	*e*Pn	Pn	12 30 30.9	-0.6
	comp=Z,285nm,1.0s					
SUW	Suwalki	17.93 2	*e*P	Pn	12 30 31.3	-0.2
TCF	Toulx Ste Croi	17.99 311	*e*P	Pn	12 30 30.8	-1.5
	comp=Z,48nm,1.3s					
TCF	Toulx Ste Croi	17.99 311	*e*P	Pn	12 30 30.8	-1.5
TCF			pmax	pmax		
	comp=Z,24nm,1.3s					
TCF	Toulx Ste Croi	17.99 311	*e*P	Pn	12 30 30.8	-1.5
	comp=Z,24nm,1.3s					
TCF	Toulx Ste Croi	17.99 311	*e*P	Pn	12 30 30.8	-1.5
	comp=Z,24nm,1.3s					
RJF	Les Rejaudoux	18.01 307	*e*P	Pn	12 30 34.9	+2.4
	comp=Z,44nm,1.2s					
RJF			*e*MLR	MLR		
	comp=Z,420nm,20.5s					
RJF	Les Rejaudoux	18.01 307	*e*P	Pn	12 30 34.9	+2.4
RJF			pmax	pmax		
	comp=Z,22nm,1.2s					
RJF	Les Rejaudoux	18.01 307	*e*P	Pn	12 30 34.9	+2.4
	comp=Z,22nm,1.2s					
RJF	Les Rejaudoux	18.01 307	*e*P	Pn	12 30 34.9	+2.4
	comp=Z,22nm,1.2s					
EBIE	Bielsa	18.11 298	P	Pn	12 30 34.9	+1.1
	comp=Z,13nm,0.9s					
EBIE	Bielsa	18.11 298	P	Pn	12 30 34.9	+1.2
	comp=Z,13nm,0.9s					
ZEI	Tsey	18.15 62	*e*P	Pn	12 30 34.5	+0.2
ZEI			pmax	pmax		
	comp=Z,15nm,0.7s					
GNI	Garni	18.33 70	*c i*P	Pn	12 30 36.9	+0.4
GNI			pmax	pmax		
	comp=Z,28nm,1.0s					
GNI			MLR	MLR		
	comp=Z,369nm,16.0s					
GNI	Garni	18.33 70	*e*P	Pn	12 30 37.5	+1.0
	comp=Z,23nm,0.8s					
GNI	Garni	18.33 70	*e*P	Pn	12 30 37.5	+1.0
	comp=Z,23nm,0.8s					
LFF	La Frestale	18.38 305	*e*P	Pn	12 30 39.7	+2.7
LFF	La Frestale	18.38 305	*e*P	Pn	12 30 39.7	+2.7
ETSF	Etsaut	18.66 298	*e*P	Pn	12 30 41.8	+1.3
	comp=Z,26nm,1.0s					
ETSF	Etsaut	18.66 298	*e*P	Pn	12 30 41.8	+1.3
ETSF			pmax	pmax		
	comp=Z,13nm,1.0s					
ETSF	Etsaut	18.66 298	*e*P	Pn	12 30 41.8	+1.3
	comp=Z,13nm,1.0s					
ETSF	Etsaut	18.66 298	*e*P	Pn	12 30 41.8	+1.3
	comp=Z,13nm,1.0s					
HGN	Heimansgroeve	18.67 327	*e*P	Pn	12 30 44.8	+4.2
	comp=Z,29nm,2.7s					
HGN	Heimansgroeve	18.67 327	*e*S	Sn	12 34 20.9	+12
BCLA	Clavier	18.72 325	P	Pn	12 30 42.4	+1.3
	comp=Z,26nm,1.7s					
GIVF	Givet	18.73 324	*e*P	Pn	12 30 42.3	+1.1
	comp=Z,223nm,1.3s					
GIVF	Givet	18.73 324	*e*P	Pn	12 30 42.3	+1.1
GIVF			pmax	pmax		
	comp=Z,112nm,1.3s					
GIVF	Givet	18.73 324	*e*P	Pn	12 30 42.3	+1.1
	comp=Z,112nm,1.3s					
GIVF	Givet	18.73 324	*e*P	Pn	12 30 42.3	+1.1
	comp=Z,112nm,1.3s					
DOU	Dourbes	18.83 323	P	Pn	12 30 43.1	+0.5
	comp=Z,18nm,1.1s					
MNK	Minsk	18.84 11⇑	*e*P	Pn	12 30 37.0	-5.5
MNK			MLR	MLR		
	comp=Z,3μm,10.0s					
MICGM	Minsk	18.84 11⇑	*e*P	Pn	12 30 37.0	-5.6
BAIF	Baives	19.00 323	*e*P	Pn	12 30 44.4	-0.1
	comp=Z,76nm,1.2s					
BAIF	Baives	19.00 323	*e*P	Pn	12 30 44.4	-0.1
BAIF			pmax	pmax		
	comp=Z,38nm,1.2s					
BAIF	Baives	19.00 323	*e*P	Pn	12 30 44.4	-0.1
	comp=Z,38nm,1.2s					
BAIF	Baives	19.00 323	*e*P	Pn	12 30 44.4	-0.1
	comp=Z,38nm,1.2s					
NACGM	Naroch	19.09 8	*e*P	Pn	12 30 42.0	-3.5
SJPF	Ste Jean	19.18 298	*e*P	Pn	12 30 46.5	-0.3
	comp=Z,56nm,1.2s					
SJPF	Ste Jean	19.18 298	*e*P	Pn	12 30 46.5	-0.3
SJPF			pmax	pmax		
	comp=Z,28nm,1.2s					
SJPF	Ste Jean	19.18 298	*e*P	Pn	12 30 46.5	-0.3
	comp=Z,28nm,1.2s					
SJPF	Ste Jean	19.18 298	*e*P	Pn	12 30 46.5	-0.3
	comp=Z,28nm,1.2s					
WTSB	Winterswijk	19.20 330	*e*P	Pn	12 30 49.5	+2.6
	comp=Z,51nm,1.6s					
VORD	Divnogorie	19.37 35	*e*P	Pn	12 30 46.7	-2.2
VORD			*e*S	Sn	12 34 20.2	-5.7
VORD			pmax	pmax		
	comp=Z,4.0nm,0.3s					
VORD			pmax	pmax		
	comp=N,9.0nm,0.5s					
VORD			pmax	pmax		
	comp=E,5.0nm,0.4s					
VORD			smax			
	comp=N,100nm,2.5s					
VORD			smax			
	comp=Z,90nm,2.8s					
VORD			smax			
	comp=E,100nm,2.2s					
ETOR	Torete	19.40 291	P	Pn	12 30 50.6	+1.2
	comp=E,0.2nm,1.2s					
ETOR	Tor

comp=Z,5.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR smax
comp=N,140nm,3.8s
VSR smax
comp=Z,130nm,4.1s
VSR smax
comp=E,130nm,3.6s
VSR MLR MLR
comp=N,110nm,8.0s
VSR MLR MLR
comp=E,220nm,8.0s
VSR MLR MLR
comp=Z,330nm,8.0s
IDID Didziasalis 19.49 8 *e*P **Pn 12 30 47.8 -2.6**
MFF Saint Martin d 19.60 309 *e*P **Pn 12 30 50.9 -0.8**
comp=Z,69nm,1.4s
MFF Saint Martin d 19.60 309 *e*P **Pn 12 30 50.9 -0.8**
MFF pmax pmax
comp=Z,34nm,1.4s
MFF Saint Martin d 19.60 309 *e*P **Pn 12 30 50.9 -0.8**
comp=Z,34nm,1.4s
MFF Saint Martin d 19.60 309 *e*P **Pn 12 30 50.9 -0.8**
comp=Z,34nm,1.4s
EVIA Vianos 19.63 285 P **Pn 12 30 55.6 +3.4**
EVIA pmax pmax
comp=Z,28nm,2.3s
EVIA Vianos 19.63 285 P **Pn 12 30 55.6 +3.4**
comp=Z,28nm,2.3s
BSD Bornholm Skovb 19.63 348 *i* P **Pn 12 30 50.4 -1.6**
BSD *e*S **Sn 12 34 25.0 -7.2**
BSD pmax pmax
comp=Z,45nm,0.9s
BSD MLR MLR
comp=Z,440nm,20.0s
BSD Bornholm Skovb 19.63 348 *i* P **Pn 12 30 50.4 -1.6**
comp=Z,45nm,0.9s
BSD *e*S **Sn 12 34 25.0 -7.2**
BSD
comp=Z,430nm,20.0s
BSD Bornholm Skovb 19.63 348 *i* P **Pn 12 30 50.4 -1.6**
comp=Z,45nm,0.9s
ISAL Salakas 19.68 7 *e*P **Pn 12 30 49.7 -2.9**
VOR Voronezh 19.86 33 P **Pn 12 30 55.0 +0.2**
VOR pmax pmax
comp=Z,100nm,1.2s
VOR Voronezh 19.86 33 P **Pn 12 30 55.0 +0.2**
comp=Z,100nm,1.2s
EBER Berja 20.02 280 P **P 12 31 00.4 +5.3**
comp=Z,58nm,4.7s
EQES Quesada 20.10 282 P **P 12 31 00.5 +4.6**
comp=Z,23nm,4.0s
LDF La Druitiere 20.48 314 *e*P **P 12 30 59.0 -1.0**
comp=Z,43nm,0.9s
LDF La Druitiere 20.48 314 *e*P **P 12 30 59.0 -1.0**
LDF pmax pmax
comp=Z,22nm,0.9s
LDF La Druitiere 20.48 314 *e*P **P 12 30 59.0 -1.0**
comp=Z,22nm,0.9s
LDF La Druitiere 20.48 314 *e*P **P 12 30 59.0 -1.0**
comp=Z,22nm,0.9s
ECOG Cogollos-Vega 20.52 281 P **P 12 31 04.6 +4.0**
ECOG pmax pmax
comp=Z,7.0nm,0.8s
ECOG Cogollos-Vega 20.52 281 P **P 12 31 04.6 +4.0**
comp=Z,6.6nm,0.8s
EGUA Guajares 20.56 280 P **P 12 31 04.3 +3.3**
EGUA pmax pmax
comp=Z,286nm,1.8s
EGUA Guajares 20.56 280 P **P 12 31 04.3 +3.3**
comp=Z,286nm,1.8s
EBAN Banos Encina 20.65 283 P **P 12 31 05.5 +3.6**
EBAN pmax pmax
comp=Z,14nm,1.0s
EBAN Banos Encina 20.65 283 P **P 12 31 05.5 +3.6**
comp=Z,14nm,1.0s
COP Copenhagen 20.65 345 *i* P **P 12 31 08.2 +6.4**
COP *e*S **S 12 34 54.3 +2.2**
COP pmax pmax
comp=Z,21nm,0.9s
COP MLR MLR
comp=Z,300nm,18.0s,MS3.7
COP Copenhagen 20.65 345 *i* P **P 12 31 08.2 +6.4**
comp=Z,21nm,0.9s
COP *e*S **S 12 34 54.3 +2.2**
COP
comp=Z,300nm,18.0s
FLN La Foliniere 20.77 314 *e*P **P 12 31 02.7 -0.5**
comp=Z,33nm,0.8s
FLN *e*MLR MLR
comp=Z,586nm,20.0s,MS3.6
FLN La Foliniere 20.77 314 *e*P **P 12 31 02.7 -0.5**
FLN pmax pmax
comp=Z,17nm,0.8s
FLN MLR MLR
comp=Z,590nm,20.0s,MS4.0
FLN La Foliniere 20.77 314 *e*P **P 12 31 02.7 -0.5**
comp=Z,17nm,0.8s
FLN LR LR
comp=Z,590nm,20.0s,MS4.0
FLN La Foliniere 20.77 314 *e*P **P 12 31 02.7 -0.5**
comp=Z,17nm,0.8s
ESDC Sonseca Array 20.78 288 P **P 12 31 03.4 +0.1**
comp=Z,2.0nm,0.4s,baz=84,slow=11,SNR=9.6
ESLA Sonseca Array 20.78 288 *e*P **P 12 31 03.2 -0.1**
ESLA Sonseca Array 20.78 288 *e*P **P 12 31 03.2 -0.1**
MAK Makhachkala 20.78 63 *e*P **P 12 31 00.5 -2.8**
MAK *e* 12 31 17.1
MAK *e*S **S 12 34 55.9 +0.9**
MAK *e*SS 12 35 12.9
MAK pmax pmax
comp=Z,157nm,1.0s
MAK MLR MLR
comp=Z,607nm,18.0s,MS4.0
ELAN Lanestosa 20.79 298 P **P 12 31 03.7 +0.3**
comp=Z,12nm,0.9s
ELAN Lanestosa 20.79 298 P **P 12 31 03.7 +0.3**
comp=Z,12nm,0.9s
GRR Gorron 20.82 313 *e*P **P 12 31 04.6 +1.0**
GRR Gorron 20.82 313 *e*P **P 12 31 04.6 +1.0**
GUD Guadarrama 20.97 290 P **P 12 31 06.1 +0.7**
GUD pmax pmax
comp=Z,11nm,1.6s
GUD Guadarrama 20.97 290 P **P 12 31 06.1 +0.8**
comp=Z,11nm,1.6s
GUD Guadarrama 20.97 290 P **P 12 31 06.1 +0.7**
comp=Z,11nm,1.6s
PAB San Pablo 21.07 287 *e*P **P 12 31 08.3 +1.8**
PAB pmax pmax
comp=Z,19nm,1.0s,mb4.4
PAB San Pablo 21.07 287 *e*P **P 12 31 08.2 +1.8**
comp=Z,19nm,1.0s,mb4.4
PAB San Pablo 21.07 287 *e*P **P 12 31 08.2 +1.7**
comp=Z,19nm,1.0s,mb4.4
EADA Adamuz 21.27 284 P **P 12 31 09.5 +0.9**
comp=Z,53nm,2.4s,mb4.4
EADA Adamuz 21.27 284 P **P 12 31 09.5 +0.9**
comp=Z,53nm,2.4s,mb4.4
OBN Obninsk 21.49 23⇑ *i*P **P 12 31 09.2 -1.6**
OBN *i* 12 31 28.3
OBN *i* S **S 12 35 04.5 -4.2**
OBN *i* 12 35 13.3
OBN pmax pmax
comp=Z,88nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,600nm,23.0s,MS3.9
OBN Obninsk 21.49 23 *e*P **P 12 31 09.2 -1.7**
comp=Z,53nm,0.8s,mb4.9
EMIJ Mijas 21.56 279 P **P 12 31 14.3 +2.6**
comp=Z,89nm,2.3s,mb4.8
EMIJ Mijas 21.56 279 P **P 12 31 14.3 +2.6**
comp=Z,89nm,2.3s,mb4.8
SGMF Saint Gilles 21.77 312 *e*P **P 12 31 13.3 -0.6**
comp=Z,40nm,1.1s,mb4.5
SGMF Saint Gilles 21.77 312 *e*P **P 12 31 13.3 -0.6**
SGMF pmax pmax
comp=Z,20nm,1.1s,mb4.5
SGMF Saint Gilles 21.77 312 *e*P **P 12 31 13.3 -0.6**
comp=Z,20nm,1.1s,mb4.5
SGMF Saint Gilles 21.77 312 *e*P **P 12 31 13.3 -0.6**
comp=Z,20nm,1.1s,mb4.5
QUIF Quistinic 22.01 310 *e*P **P 12 31 15.7 -0.8**
comp=Z,54nm,1.1s,mb4.6
QUIF Quistinic 22.01 310 *e*P **P 12 31 15.7 -0.8**
QUIF pmax pmax
comp=Z,27nm,1.1s,mb4.6
QUIF Quistinic 22.01 310 *e*P **P 12 31 15.7 -0.8**
comp=Z,27nm,1.1s,mb4.6
QUIF Quistinic 22.01 310 *e*P **P 12 31 15.7 -0.8**
comp=Z,27nm,1.1s,mb4.6
EARI Arriondas 22.07 297 P **P 12 31 13.5 -3.7**
comp=Z,89nm,2.7s,mb4.7
MUD Monsted U'grnd 22.13 341 *i* P **P 12 31 20.9 +3.2**
MUD *e*S **S 12 35 23.6 +2.4**
MUD pmax pmax
comp=Z,34nm,0.9s,mb4.8
MUD MLR MLR
comp=Z,390nm,22.0s,MS3.8
MUD Monsted U'grnd 22.13 341 *i* P **P 12 31 20.9 +3.2**
comp=Z,34nm,0.9s,mb4.8
MUD *e*S **S 12 35 23.6 +2.4**
MUD
comp=Z,380nm,22.0s
MUD Monsted U'grnd 22.13 341 *i* P **P 12 31 20.9 +3.2**
comp=Z,34nm,0.9s,mb4.8,SNR=34
MIB Mutribah 22.14 99 *e*P **P 12 31 17.1 -0.9**
MIB AMb AMB 12 31 19.2
comp=Z,137nm,0.5s,mb5.6
MIB Mutribah 22.14 99 *e*P **P 12 31 17.1 -0.9**
comp=Z,137nm,0.5s,mb5.6
MDT Midelt 22.17 269 P **P 12 31 18.4 +0.1**
comp=Z,4.5nm,0.9s,mb3.9,baz=85,slow=12,SNR=6.2
ROSF Rostrenen 22.24 311 *e*P **P 12 31 18.4 -0.6**
comp=Z,31nm,0.9s,mb4.4
ROSF Rostrenen 22.24 311 *e*P **P 12 31 18.4 -0.6**
ROSF pmax pmax
comp=Z,15nm,0.9s,mb4.4
ROSF Rostrenen 22.24 311 *e*P **P 12 31 18.4 -0.6**
comp=Z,15nm,0.9s,mb4.4
MOS Moscow 22.35 24 *e*P **P 12 31 18.8 -1.2**
MOS *e* 12 31 26.6
MOS *e*S **S 12 35 22.9 -2.5**
MOS *e*SS 12 35 52.7
MOS pmax pmax
comp=Z,73nm,0.8s,mb5.2
ESPR Espera 22.39 280 P **P 12 31 20.2 -0.3**
comp=Z,7.9nm,0.8s,mb4.2
UMR Umm Al-Rimmam 22.54 99 *e*P **P 12 31 21.9 -0.4**
UMR AMb AMB 12 31 23.6
comp=Z,109nm,0.3s,mb5.7
UMR Umm Al-Rimmam 22.54 99 *e*P **P 12 31 21.9 -0.4**
comp=Z,109nm,0.3s,mb5.8
RDF Al-Radifah 22.66 101 *e*P **P 12 31 23.6 0.0**
RDF AMb AMB 12 31 25.0
comp=Z,42nm,0.4s,mb5.3
RDF Al-Radifah 22.66 101 *e*P **P 12 31 23.6 0.0**
comp=Z,42nm,0.4s,mb5.2
KBD Kabd 22.67 100 *e*P **P 12 31 23.3 -0.4**
KBD AMb AMB 12 31 25.7
comp=Z,28nm,0.5s,mb5.0
KBD Kabd 22.67 100 *e*P **P 12 31 23.3 -0.4**
comp=Z,28nm,0.5s,mb5.0
EMIN Mina Concepcio 22.95 283 P **P 12 31 26.3 -0.2**
comp=Z,14nm,1.0s,mb4.3
PBRG Braganca 23.01 293 *e*P **P 12 31 28.0 +0.9**
comp=Z,20nm,1.5s,mb4.3
PBRG Braganca 23.01 293 *e*P **P 12 31 28.0 +0.9**
comp=Z,20nm,1.5s,mb4.3
ECAL Calabor 23.02 293 P **P 12 31 23.7 -3.5**
comp=Z,70nm,2.4s,mb4.7
EBAD Badajoz 23.15 285 P **P 12 31 27.4 -1.4**
comp=Z,12nm,0.8s,mb4.4
MVO Moncorvo 23.18 291 *e*P **P 12 31 27.7 -1.2**
comp=Z,34nm,1.5s,mb4.6
MVO *e*LR LR 12 35 55.9
comp=Z,203nm,20.0s
MVO Moncorvo 23.18 291 *e*P **P 12 31 27.7 -1.2**
comp=Z,34nm,1.5s,mb4.6
PBAR Barrancos 23.20 284 *e*P **P 12 31 30.6 +1.3**
comp=Z,30nm,1.0s,mb4.7
PBAR *e*LR LR 12 35 53.5
comp=Z,150nm,18.0s
PBAR Barrancos 23.20 284 *e*P **P 12 31 30.6 +1.3**
comp=Z,30nm,1.0s,mb4.7
PMRV Marv??o 23.43 287 *e*P **P 12 31 32.1 +0.5**
comp=Z,20nm,1.6s,mb4.3
PMRV *e*LR LR 12 35 59.2
comp=Z,134nm,20.0s
PMRV Marv??o 23.43 287 *e*P **P 12 31 32.1 +0.5**
comp=Z,20nm,1.6s,mb4.3
PCBR Castelo Branco 23.49 288 *e*P **P 12 31 30.8 -1.4**
comp=Z,19nm,1.4s,mb4.3
PCBR Castelo Branco 23.49 288 *e*P **P 12 31 30.8 -1.4**
comp=Z,19nm,1.4s,mb4.3
MTE Manteigas 23.54 289 *e*S **S 12 35 46.3 +0.2**
MTE *e*LR LR 12 37 40.8
comp=Z,229nm,18.0s
MTE Manteigas 23.54 289 *e*S **S 12 35 46.3 +0.2**
PESTR Estremoz 23.60 286 *e*P **P 12 31 35.2 +1.9**
comp=Z,34nm,1.6s,mb4.5
PESTR *e*LR LR 12 35 25.6
comp=Z,197nm,18.0s
PESTR Estremoz 23.60 286 *e*P **P 12 31 35.2 +1.9**
comp=Z,34nm,1.6s,mb4.5
EGRO El Granado 23.61 282 P **P 12 31 31.8 -1.6**
comp=Z,35nm,3.0s
PVAQ Vaqueiros 23.81 282 *e*P **P 12 31 37.3 +2.1**
comp=Z,37nm,1.8s,mb4.5
PVAQ *e*LR LR 12 35 50.3
comp=Z,135nm,18.0s
PVAQ Vaqueiros 23.81 282 *e*P **P 12 31 37.3 +2.1**
comp=Z,37nm,1.8s,mb4.5
PVIS Viseu 23.82 290 *e*P **P 12 31 36.0 +0.7**
comp=Z,26nm,1.2s,mb4.5
PVIS Viseu 23.82 290 *e*P **P 12 31 36.0 +0.7**
comp=Z,26nm,1.2s,mb4.5
PBEJ Beja 23.87 284 *e*P **P 12 31 38.2 +2.4**
comp=Z,41nm,1.5s,mb4.6
PBEJ Beja 23.87 284 *e*P **P 12 31 38.2 +2.4**
comp=Z,41nm,1.5s,mb4.6
PBDV Barranco-do-Ve 23.99 282 *e*P **P 12 31 39.0 +2.1**
comp=Z,71nm,1.4s,mb4.9
PBDV *e*LR LR 12 35 21.2
comp=Z,192nm,20.0s
PBDV Barranco-do-Ve 23.99 282 *e*P **P 12 31 39.0 +2.1**
comp=Z,71nm,1.4s,mb4.9
PCVE Castro Verde 24.04 283 *e*P **P 12 31 37.1 -0.2**
comp=Z,42nm,1.5s,mb4.7
PCVE *e*LR LR 12 36 12.3
comp=Z,196nm,18.0s
PCVE Castro Verde 24.04 283 *e*P **P 12 31 37.1 -0.2**
comp=Z,42nm,1.5s,mb4.7
PTOM Tomar 24.21 288 *e*P **P 12 31 39.3 +0.4**
PTOM Tomar 24.21 288 *e*P **P 12 31 39.3 +0.4**
HFS Hagfors 24.64 350 P **P 12 31 40.6 -1.9**
comp=Z,11nm,0.5s,mb4.6,baz=163,slow=11,SNR=34
PFVI Vila Bisbo 24.72 282 *e*P **P 12 31 45.6 +2.1**
comp=Z,72nm,1.6s,mb5.0
PFVI Vila Bisbo 24.72 282 *e*P **P 12 31 45.6 +2.1**
comp=Z,72nm,1.6s,mb5.0
KONO Kongsberg 24.90 345 *e*P **P 12 31 44.7 -0.3**
KONO pmax pmax
comp=Z,53nm,1.3s,mb4.9
KONO Kongsberg 24.90 345 *e*P **P 12 31 44.7 -0.3**
comp=Z,53nm,1.3s,mb4.9
PMAFR Mafra 24.91 286 *e*LR LR 12 34 49.2
comp=Z,196nm,18.0s
FINES FINESS Array B 25.49 5 P **P 12 31 49.2 -1.1**
comp=Z,6.0nm,0.5s,mb4.4,baz=154,slow=11,SNR=25
FINES LR LR 12 43 02.0
comp=Z,842nm,20.6s,MS4.2,baz=177,slow=39
NAO01 NORSAR Array S 25.76 347 *e*P **P 12 31 51.9 -0.8**
comp=Z,27nm,0.8s,mb4.8
EKA Eskdalemuir Ar 25.81 326 P **P 12 31 52.4 -0.8**
comp=Z,5.9nm,0.7s,mb4.2,baz=128,slow=8.4,SNR=9.7
ESK Eskdalemuir 25.82 326 *e*P **P 12 31 51.4 -1.9**
ESK pmax pmax
comp=Z,27nm,1.2s,mb4.7
ESK Eskdalemuir 25.82 326 *e*P **P 12 31 51.4 -1.9**
comp=Z,27nm,1.2s,mb4.7
NB2 NORSAR Subarra 25.89 348 P **P 12 31 52.7 -1.2**
comp=Z,15nm,0.8s,mb4.6,baz=150,slow=10
NB2 NORSAR Subarra 25.89 348 P **P 12 31 52.7 -1.2**
comp=Z,15nm,0.8s,mb4.6,SNR=3.5
NOA NORSAR Array B 25.89 348 P **P 12 31 52.0 -1.8**
comp=Z,2.0nm,0.5s,mb3.9,baz=152,slow=9.9,SNR=18
NOA LR LR 12 43 42.3
comp=Z,331nm,19.8s,MS3.9,baz=170,slow=40
KAF Kangasniemi 26.17 5 *e*P **P 12 31 55.3 -1.2**
KAF pmax pmax
comp=Z,58nm,1.1s,mb5.0
KAF Kangasniemi 26.17 5 *e*P **P 12 31 55.3 -1.2**
comp=Z,58nm,1.1s,mb5.0
KLMR Klimovskoe 27.18 19 *e*P **P 12 32 07.6 +2.1**
KLMR *e*S **S 12 36 46.2 +2.5**
KLMR pmax pmax
comp=Z,34nm,1.0s,mb4.8
JOF Joensuu 27.46 9 *e*P **P 12 32 07.2 -0.8**
JOF pmax pmax
comp=Z,13nm,0.7s,mb4.6
JOF Joensuu 27.46 9 *e*P **P 12 32 07.2 -0.8**
comp=Z,12nm,0.7s,mb4.5
TOA0 Torodi Ar. Sit 29.25 224 *e*P **P 12 32 24.6 +0.2**
TORD Torodi Ar. Bea 29.25 224 P **P 12 32 24.8 +0.3**
comp=Z,8.9nm,0.7s,mb4.6,baz=33,slow=9.0,SNR=88
TORD LR LR 12 46 05.6
comp=Z,862nm,18.2s,MS4.4,baz=35,slow=40
AKTK Aktyubinsk 29.55 50 P **P 12 32 26.7 -0.1**
AKTK LR LR 12 47 08.7
AKTO Aktyubinsk 29.55 50 P **P 12 32 26.7 -0.1**
comp=Z,1.8nm,0.3s,mb4.2,baz=251,slow=7.2,SNR=10
AKTO LR LR 12 47 08.7
comp=Z,352nm,20.0s,MS4.0,baz=140,slow=42
ABKAR Akbulak array 30.50 53 *e*P **P 12 32 33.9 -1.3**
comp=Z,14nm,0.8s,mb4.7
ARU Arti 31.88 39*d i*P **P 12 32 45.7 -1.6**
ARU *e* 12 33 49.0
ARU S **S 12 37 56.5 -1.1**
ARU SS SS 12 39 41.2 -33
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.6
ARU Arti 31.88 39 *e*P **P 12 32 46.1 -1.1**
comp=Z,24nm,1.1s,mb4.9
APA Apatity 32.18 8⇓ *e*P **P 12 32 51.0 +1.2**
APA *i* 12 33 50.0
APA *e*S **S 12 38 00.0 -2.0**
APA MLR MLR
comp=Z,900nm,22.0s,MS4.4
SOKR Solikamsk 32.49 33 *e*P **P 12 32 51.2 -1.4**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,210nm,14.0s,MS4.0
SVE Sverdlovsk 33.09 39⇑ *e*P **P 12 32 56.7 -1.2**
SVE *e*S **S 12 38 04.3 -12**
SVE pmax pmax
comp=Z,43nm,0.8s,mb5.4
SVE MLR MLR
comp=Z,343nm,14.0s,MS4.2
ARCES ARCESS Array B 33.55 2 P **P 12 33 00.6 -1.1**
comp=Z,5.8nm,0.5s,mb4.8,baz=187,slow=9.2,SNR=50
ARCES LR LR 12 47 41.4
comp=Z,384nm,20.0s,MS4.1,baz=200,slow=38
BRVK Borovoye 37.53 48⇑ *i*P **P 12 33 35.6 -0.5**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
BRVK Borovoye 37.53 48 *e*P **P 12 33 35.7 -0.4**
comp=Z,19nm,0.8s,mb4.9
BVAR Borovoye Array 37.59 48 P **P 12 33 35.9 -0.7**
comp=Z,3.6nm,0.6s,mb4.3,baz=250,slow=8.8,SNR=17
BVAR LR LR 12 52 09.5
comp=Z,213nm,21.6s,MS3.9,slow=41
CMLA Cha da Macela 37.71 287 *e*LR LR 12 43 11.3
DBIC Dimbokro 38.25 226 *e*P **P 12 33 42.2 -0.4**
DBIC pmax pmax
comp=Z,12nm,0.8s
DBIC Dimbokro 38.25 226 P **P 12 33 42.6 0.0**
comp=Z,12nm,0.9s,mb4.7,baz=24,slow=12,SNR=13
DBIC LR LR 12 51 25.2
comp=Z,398nm,18.1s,MS4.3,baz=15,slow=39
DBIC Dimbokro 38.25 226 *e*P **P 12 33 42.2 -0.4**
comp=Z,12nm,0.8s,mb4.7
TIC Toumodi 38.36 227 *e*P **P 12 33 43.4 -0.2**
comp=Z,36nm,1.0s,mb5.0
TIC Toumodi 38.36 227 *e*P **P 12 33 43.4 -0.2**
TIC pmax pmax
comp=Z,36nm,1.0s,mb5.1
KIC Kosan Boka 38.43 226 *e*P **P 12 33 43.9 -0.2**
comp=Z,37nm,1.0s,mb5.1
LIC Lamto 38.70 226 *e*P **P 12 33 46.4 0.0**
comp=Z,50nm,0.8s,mb5.3
KMBO Kilima Mbogo 39.67 156 LR LR 12 51 49.7
comp=Z,254nm,18.2s,MS4.1,baz=273,slow=38
EKS2 Erkin-Say 40.03 64 *e*P **P 12 33 57.6 +0.3**
comp=Z,24nm,0.8s,mb5.0
AML Almayashu 40.05 65 *e*P **P 12 33 58.1 +0.7**
comp=Z,3.8nm,0.5s,mb4.4
AAK Ala-Archa 40.56 64*c i*P **P 12 34 01.2 -0.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
AAK Ala-Archa 40.56 64 P **P 12 34 01.8 +0.2**
comp=Z,6.4nm,0.7s,mb4.4,baz=240,slow=2.7,SNR=13
AAK LR LR 12 53 11.7
comp=Z,143nm,21.0s,MS3.8,baz=176,slow=40
AAK Ala-Archa 40.56 64 *e*P **P 12 34 01.8 +0.2**
comp=Z,16nm,0.9s,mb4.7
FRU Bishkek 40.62 64 *e*P **P 12 34 01.0 -1.1**
FRU pmax pmax
comp=Z,70nm,1.6s,mb5.0
UCH Uchtor 40.63 65 *e*P **P 12 34 03.4 +1.2**
comp=Z,8.5nm,0.9s,mb4.4
TKM2 Tokmak 2 41.31 64 *e*P **P 12 34 07.7 -0.1**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
TKM2 Tokmak 2 41.31 64 *e*P **P 12 34 07.7 -0.1**
comp=Z,9.6nm,0.8s,mb4.5
SCO Scoresbysund 41.54 339 *i* P **P 12 34 16.4 +7.1**
SCO Scoresbysund 41.54 339 *i* P Px 12 34 19.5
comp=Z,18nm,0.9s
SCO
comp=Z,190nm,21.0s
KSH Kashi 42.25 69 *e*P **P 12 34 16.1 +0.6**
KSH *e*pP pP 12 34 20.1 +0.8
KSH *e*sP sP 12 34 23.2 +2.3
KSH PP PP 12 35 57.1 +3.8
KSH *e*PcP PcP 12 36 10.3 +1.0
KSH *e*S **S 12 40 35.1 -0.6**
KSH *e*SS SS 12 43 37.1 -6.6
KSH *e*ScS ScS 12 44 15.0 -2.5
KSH pmax pmax
comp=Z,45nm,2.9s,mb4.6
KSH LR LR
comp=N,110nm,9.1s
KSH LR LR
comp=E,91nm,5.3s
SPITS Spitsbergen Ar 42.25 358 P **P 12 34 15.0 -0.1**
comp=E,3.1nm,0.4s,mb4.3,baz=152,slow=9.9,SNR=24
KURK Kurchatov 42.60 52⇑ *i*P **P 12 34 18.4 +0.2**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.5
KURK MLR MLR
comp=Z,220nm,25.0s,MS4.0
KURK Kurchatov 42.60 52 LR LR 12 55 13.7
comp=Z,178nm,21.9s,MS3.9,baz=270,slow=41
KURK Kurchatov 42.60 52 *e*P **P 12 34 17.4 -0.8**
comp=Z,13nm,1.0s,mb4.6
KBS Kingsbay 43.14 357⇑ *e*P **P 12 34 20.6 -1.6**
KBS pmax pmax
comp=Z,39nm,1.7s,mb4.9
NVS Novosibirsk 45.25 46 *i* P **P 12 34 39.4 -0.1**
NVS *i* S **S 12 41 14.0 -5.2**
NVS pmax pmax
comp=E,15nm,1.0s
NVS pmax pmax
comp=Z,32nm,1.0s,mb5.1
NVS pmax pmax
comp=N,9.0nm,1.2s
NVS smax
comp=N,21nm,1.8s
NVS smax
comp=E,14nm,2.0s
SDNR Sundarnagar 45.40 79 *e*P **P 12 34 39.5 -1.5**
MK31 Makanchi Array 45.41 57 *e*P **P 12 34 39.4 -1.4**
MKAR Makanchi Array 45.41 57 P **P 12 34 39.6 -1.2**
comp=E,6.4nm,0.3s,mb4.9,baz=272,slow=7.9,SNR=44
MKAR LR LR 12 56 52.1
comp=E,222nm,21.3s,MS4.1,baz=285,slow=40
ZAA0 Zalesovo Array 46.22 47 *e*P **P 12 34 45.8 -1.4**
ZALV Zalesovo Beam 46.22 47 P **P 12 34 45.9 -1.2**
comp=E,5.6nm,0.5s,mb4.8,baz=273,slow=7.5,SNR=8.5
ZALV LR LR 12 57 32.8
comp=E,147nm,19.2s,MS4.0,baz=53,slow=40
ZALV Zalesovo Beam 46.22 47 P **P 12 34 45.9 -1.2**
ZALV LR LR 12 57 32.8
SUMG Summit 47.18 339 P **P 12 34 55.1 +0.7**
comp=E,18nm,1.0s,mb5.0
WMQ Urumqi 49.76 60 *e*P **P 12 35 15.3 +0.6**

WMQ pmax pmax
comp=Z,20nm,1.0s,mb5.1
WMQ LR LR
comp=N,350nm,26.0s,MS4.2
WMQ LR LR
comp=E,110nm,29.0s,MS4.2
WMQ LR LR
comp=Z,270nm,26.0s,MS4.1
SFJD Kangerlussuaq 50.62 331 *i* P **P 12 35 23.6 +2.8**
SFJD pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SFJD MLR MLR
comp=Z,290nm,19.0s,MS4.3
SFJD Kangerlussuaq 50.62 331 *i* P **P 12 35 23.6 +2.8**
comp=Z,7.7nm,0.8s,mb4.7
SFJD
comp=Z,290nm,19.0s
PYUN Piuthan 51.55 81 *e*P **P 12 35 28.0 -0.4**
comp=Z,30nm,0.6s,mb5.4
KOLN Koldanda 52.18 81 *e*P **P 12 35 32.6 -0.5**
comp=Z,14nm,0.5s,mb5.1
GKN Gorkha 52.90 80 *e*P **P 12 35 37.6 -0.9**
comp=Z,39nm,0.5s,mb5.6
DMN Daman 53.45 80 *e*P **P 12 35 41.2 -1.3**
comp=Z,45nm,0.6s,mb5.6
KKN Kakani 53.51 80 *e*P **P 12 35 41.7 -1.3**
comp=Z,27nm,0.6s,mb5.4
PKIN Phulchoki 53.70 80 *e*P **P 12 35 43.5 -0.8**
comp=Z,25nm,0.7s,mb5.3
PKI Pulchoki 53.71 80 *e*P **P 12 35 43.6 -0.8**
comp=Z,36nm,0.8s,mb5.4
GUN Gumba 53.93 79 *e*P **P 12 35 45.4 -0.7**
comp=Z,17nm,0.4s,mb5.4
MOY Mondy 56.27 47 *e*P **P 12 36 09.3 +6.7**
LSA Lhasa 57.32 75 P **P 12 36 10.4 0.0**
LSA Lhasa 57.32 75 *e*P **P 12 36 10.6 +0.2**
LSA pmax pmax
comp=Z,12nm,0.5s,mb5.2
LSA Lhasa 57.32 75 *e*P **P 12 36 10.6 +0.2**
comp=Z,12nm,0.5s,mb5.2
TLY Talaya 57.84 47 *e*P **P 12 36 18.4 +4.7**
TLY pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
TLY MLR MLR
comp=Z,207nm,16.0s,MS4.3
ZAK Zakamensk 58.04 48 *e*P **P 12 36 14.3 -0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
GTA Gaotai 59.78 61 *e*P **P 12 36 31.4 +4.0**
GTA pP pP 12 36 36.2 +4.9
GTA sP sP 12 36 38.9 +6.1
GTA S **S 12 44 47.9 +10**
GTA sS sS 12 44 56.6 +12
GTA pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,54nm,5.1s
GTA LR LR
comp=Z,120nm,16.2s,MS4.1
SCHQ Schefferville 60.79 318 P **P 12 36 33.0 -1.1**
comp=Z,4.6nm,0.7s,mb4.8,baz=63,slow=5.5,SNR=11
SCHQ LR LR 13 04 26.0
comp=Z,84nm,18.4s,MS3.9,baz=6.9,slow=38
SCHQ Schefferville 60.79 318 P **P 12 36 33.0 -1.1**
SCHQ LR LR 13 04 26.0
SONM Songino Array 60.87 50 P **P 12 36 33.2 -1.5**
comp=Z,1.7nm,0.7s,mb4.3,baz=286,slow=7.3,SNR=7.5
SONM Songino Array 60.87 50 P **P 12 36 33.2 -1.5**
TIXI Tiksi 61.18 20 *e*P **P 12 36 34.7 -1.8**
TIXI pmax pmax
comp=Z,13nm,0.9s,mb5.1
TIXI MLR MLR
comp=Z,276nm,18.0s,MS4.5
TIXI Tiksi 61.18 20 *e*P **P 12 36 35.5 -0.9**
comp=Z,10nm,0.8s,mb5.0
ULN Ulaanbaatar 61.27 50 *e*P **P 12 36 37.0 -0.4**
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
ULN Ulaanbaatar 61.27 50 *e*P **P 12 36 37.0 -0.4**
comp=Z,3.5nm,0.8s,mb4.5
BOD Bodaibo 61.29 38 *e*P **P 12 36 29.6 -7.8**
BOD *e* pP 12 36 34.9 -6.4
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
RES Resolute Bay 62.09 344 P **P 12 36 46.1 +3.6**
RES pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
RES Resolute Bay 62.09 344 P **P 12 36 46.1 +3.6**
comp=Z,4.3nm,0.8s,mb4.6
LZH Lanzhou 64.08 63 *e*P **P 12 36 56.5 +0.1**
LZH pP pP 12 36 59.0 -1.4
LZH sP sP 12 37 01.0 -0.8
LZH PP PP 12 39 19.1 +2.1
LZH S **S 12 45 28.0 -4.8**
LZH SS SS 12 49 43.0 +1.7
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,50nm,4.0s
LZH LR LR
comp=E,310nm,17.1s
LZH LR LR
comp=Z,480nm,18.0s,MS4.7
BOSA Boshof 64.44 177 P **P 12 36 59.3 +0.7**
comp=Z,3.6nm,0.9s,mb4.4,baz=344,slow=4.2,SNR=3.6
BOSA LR LR 13 06 23.0
comp=Z,387nm,21.0s,MS4.6,baz=156,slow=37
YAK Yakutsk 66.33 29 *e*P **P 12 37 12.9 +2.4**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.9
CD2 Chengdu 66.44 68 P **P 12 37 12.8 +1.0**
CD2 pP pP 12 37 17.5 +1.7
CD2 sP sP 12 37 19.8 +2.5
CD2 PP PP 12 39 40.7 +2.8
CD2 S S 12 46 00.8 -1.2
CD2 SS SS 12 50 17.7 -0.6
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.6
CD2 pmax pmax
comp=Z,90nm,4.7s
CD2 LR LR
comp=N,150nm,9.5s
CD2 LR LR
comp=Z,120nm,9.5s
HHC Hu-ho-hao-te 67.24 55 *e*P **P 12 37 16.6 -0.1**
HHC pP pP 12 37 21.5 +0.8
HHC sP sP 12 37 24.3 +2.1
HHC PcP PcP 12 37 45.0 +0.5
HHC PP PP 12 39 45.9 +1.4
HHC ScP 12 41 46.4
HHC S S 12 46 08.6 -2.7
HHC ScS ScS 12 47 10.4 -4.0
HHC pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,88nm,6.5s
HHC LR LR
comp=N,170nm,18.2s,MS4.4
HHC LR LR
comp=E,150nm,17.7s,MS4.4
HHC LR LR
comp=Z,190nm,16.9s,MS4.4
KMI Kunming 68.54 74 P **P 12 37 25.9 +0.8**
KMI pP pP 12 37 28.9 -0.2
KMI sP sP 12 37 30.1 -0.5
KMI PP PP 12 39 58.7 +2.5
KMI S S 12 46 25.9 -1.4
KMI SS SS 12 50 51.0 0.0
KMI pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
KMI pmax pmax
comp=Z,39nm,3.1s
KMI LR LR
comp=N,120nm,17.0s,MS4.3
KMI LR LR
comp=E,130nm,19.4s,MS4.3
KMI LR LR
comp=Z,150nm,19.4s,MS4.2
XAN Xi'an 68.72 63 P **P 12 37 24.6 -1.5**
XAN pP pP 12 37 27.9 -2.2
XAN PP PP 12 39 55.6 -1.9
XAN S S 12 46 27.5 -1.6
XAN SS SS 12 50 52.4 -0.9
XAN pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
XAN pmax pmax
comp=Z,15nm,5.3s
XAN LR LR
comp=N,66nm,16.7s,MS4.0
XAN LR LR
comp=E,50nm,18.9s,MS4.0
XAN LR LR
comp=Z,44nm,20.2s,MS3.7
CMAR Chiang Mai Arr 69.00 82 P **P 12 37 27.4 -0.6**
comp=Z,3.0nm,0.7s,mb4.4,baz=300,slow=7.4,SNR=19
BJI Beijing 70.69 54 P **P 12 37 37.6 -0.6**
BJI S S 12 46 49.9 -2.3
BJI SS SS 12 51 29.4 +6.0
BJI pmax pmax
comp=Z,14nm,1.2s,mb4.8
BJI pmax pmax
comp=Z,130nm,4.7s
GYA Guiyang 70.88 71 P **P 12 37 39.8 +0.2**
GYA PcP PcP 12 38 01.2 +1.1
GYA PP PP 12 40 18.4 +2.0
GYA S S 12 46 47.8 -7.0
GYA SKS 12 47 38.9
GYA SS SS 12 51 26.7 -0.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,110nm,5.6s
GYA LR LR
comp=Z,490nm,19.4s,MS4.8
FCC Fort Churchill 71.64 330 *e*P **P 12 37 43.2 -0.4**
comp=Z,0.2nm,0.8s
FCC Fort Churchill 71.64 330 *e*P **P 12 37 43.2 -0.3**
comp=Z,0.2nm,0.8s
BILL Bilibino 72.77 13 *i*P *e*P **P 12 37 50.1 -0.1**
BILL *i* 12 37 57.4
BILL *e*S S 12 47 15.5 +0.3
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BILL Bilibino 72.77 13 *e*P **P 12 37 50.1 -0.1**
comp=Z,5.0nm,1.2s,mb4.3
SEY Seymchan 73.64 21 *i*P *i*P **P 12 37 56.0 +0.6**
SEY Seymchan 73.64 21 *i*P **P 12 37 56.0 +0.6**
CN2 Changchun 74.44 47 *e*P **P 12 38 00.1 -0.3**
CN2 *e*sP sP 12 38 07.0 +1.1
CN2 *e*S S 12 47 31.7 -3.2
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,400nm,16.0s,MS4.8
WHN Wuhan 74.45 63 *e*P **P 12 38 08.7 +8.0**
KLR Kul'dur 74.72 40 *e*P **P 12 37 58.2 -3.7**
YKA Yellowknife Ar 75.74 341 P **P 12 38 06.5 -1.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=31,slow=5.6,SNR=9.6
YKA LR LR 13 14 15.3
comp=Z,11nm,18.1s,MS3.2,baz=75,slow=38
NJ2 Nanjing 76.83 60 *e*P **P 12 38 16.8 +2.4**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
HABR Khabarovsk 76.89 39 *c e*P **P 12 38 12.6 -1.7**
HABR *e* 12 38 23.9
HABR *e* 12 41 04.3
HABR *e*PPP 12 42 50.9
HABR *e*S S 12 47 59.4 -2.4
HABR *e* 12 48 27.3
HABR *e*SS SS 12 52 54.2 -3.0
HABR *e*SSS 12 56 19.2
HABR pmax pmax
comp=Z,53nm,1.5s,mb5.2
HABR pmax pmax
comp=N,31nm,1.2s
HABR pmax pmax
comp=E,52nm,1.1s
HABR MLR MLR
comp=Z,119nm,16.0s,MS4.3
FFC Flin Flon 77.57 330 *i* P **P 12 38 19.0 +1.0**
ULM Lac du Bonnet 78.07 325 P **P 12 38 20.2 -0.7**
comp=Z,0.9nm,0.4s,mb4.1,baz=46,slow=8.7,SNR=3.5
ULM LR LR 13 12 23.5
comp=Z,294nm,20.3s,MS4.6,baz=38,slow=35
EGAK Eagle 78.58 353 P **P 12 38 24.6 +1.1**
comp=Z,3.3nm,0.6s,mb4.4
KSRS Korea Array 79.72 51 P **P 12 38 29.1 -1.1**
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,104nm,20.8s,MS4.2
KSRS Korea Array 79.72 51 P **P 12 38 29.1 -1.1**
comp=Z,2.7nm,0.6s,mb4.4,baz=311,slow=4.5,SNR=17
KSRS LR LR 13 17 20.8
comp=Z,104nm,20.8s,MS4.2,baz=145,slow=38
YSS Yuzh-Sakhalins 81.74 37 *e*P **P 12 38 41.0 +0.1**
YSS pmax pmax
comp=Z,70nm,1.2s,mb5.5
PETK Petropavlovsk- 83.19 25 P **P 12 38 49.5 +1.1**
comp=Z,1.3nm,0.8s,mb4.0,baz=239,slow=39,SNR=2.9
PETK LR LR 13 23 22.7
comp=Z,105nm,19.0s,MS4.2,baz=304,slow=41
ASAJ Asahikawa 83.68 39 P **P 12 38 51.1 +0.1**
ASAJ pmax pmax
comp=Z,4.0nm,0.5s
ASAJ Asahikawa 83.68 39 P **P 12 38 51.0 0.0**
comp=Z,3.5nm,0.5s,mb4.7,baz=53,slow=23,SNR=5.3
HRY Holter Researc 87.72 330 P **P 12 39 11.4 +0.3**
NEW Newport 88.44 334 *e*P **P 12 39 15.4 +1.0**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 88.44 334 *e*P **P 12 39 15.4 +1.0**
comp=Z,4.4nm,0.8s,mb4.7
PDAR Pinedale Array 89.93 327 P **P 12 39 21.6 +0.1**
comp=Z,0.2nm,0.4s,mb3.8,baz=98,slow=4.5,SNR=4.1
PDAR LR LR 13 21 21.0
comp=Z,134nm,18.7s,MS4.4,baz=47,slow=37
CPUP Villa Florida 97.14 243 LR LR 13 28 36.4
comp=Z,199nm,19.0s,MS4.6,baz=213,slow=38
TXAR Lajitas Array 97.26 314 P **P 12 39 54.2 -1.3**
comp=Z,0.3nm,0.9s,mb3.7,baz=85,slow=2.6,SNR=3.7
TXAR LR LR 13 22 22.7
comp=Z,80nm,18.8s,MS4.2,baz=0.0,slow=35
TXAR Lajitas Array 97.26 314 P **P 12 39 54.2 -1.3**
TXAR LR LR 13 22 22.7
LPAZ La Paz 99.52 257 LR LR 13 22 17.0
comp=Z,109nm,20.1s,MS4.3,baz=220,slow=34
WRA Warramunga Arr 119.24 94 PKP PKPdf 12 45 11.1 -0.7
comp=Z,0.9nm,0.6s,baz=308,slow=1.7,SNR=15
ASAR Alice Springs 120.74 98 PKIKP PKPdf 12 45 13.8 -0.8
ASAR pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 120.74 98 PKP PKPdf 12 45 13.8 -0.8
comp=Z,1.0nm,0.5s,baz=310,slow=1.2,SNR=26
CTA Charters Tower 128.96 88 PKIKP PKPdf 12 45 29.5 -1.0
CTA pmax pmax
comp=Z,4.0nm,1.0s
CTA Charters Tower 128.96 88 PKP PKPdf 12 45 29.5 -0.9
comp=Z,4.3nm,1.0s,baz=111,slow=2.7,SNR=3.1

*ISCJB **08** 12:30:31.5±0.8, 36°.09N±0°.04×142°.30E±0°.07, h33km, mb3.9/3, Error ellipse: s-maj=8.8km s-min=5.9km az=18.8*
*IDC **08** 12:30:31.4±2.2, 35°.80N×142°.23E, h0km, mb4.1/3, mb1 4.0/6, mb1mx3.6/28, mbtmp4.1/6, ML3.6/3, Error ellipse: s-maj=47.7km s-min=22.8km az=73.0*
*JMA **08** 12:30:32.1±0.2, 36°.16N×142°.20E, h68km, M3.3*
*NEIC **08** 12:30:38.4±1.8, 35°.59N×141°.65E, h35km, MG3.3(JMA), Error ellipse: s-maj=49.5km s-min=21.1km az=49.0*
ISC 08 12:30:32.7±0.8, 36°.11N±0°.04×142°.30E±0°.07, h35km, n22, σ1§00/30, mb3.9/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.24**	**252**	P	**Pn**	**12 30 53.2**	**-0.3**
CHOJ				S	**Sn**	**12 31 08.7**	**-0.2**
JHO	**Hitachi**	**1.49**	**290**	P	**Pn**	**12 30 55.5**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.57**	**310**	P	**Pn**	**12 30 56.8**	**-1.2**
JFK	**Kawauchi**	**1.70**	**318**	P	**Pn**	**12 30 59.2**	**-0.6**
BSO1	**Boso 1**	**1.81**	**217**	P	**Pn**	**12 31 01.1**	**-0.2**
BSO1				*e*S	**Sn**	**12 31 24.7**	**+1.7**
JFT	**Otama**	**2.12**	**312**	P	**Pn**	**12 31 05.8**	**+0.3**
JMM	**Marumori**	**2.13**	**326**	P	**Pn**	**12 31 05.1**	**-0.7**
JAG	**Ashikaga**	**2.33**	**279**	P	**Pn**	**12 31 07.9**	**-0.5**
JOD2	**Odawara 2**	**2.75**	**253**	P	**Pn**	**12 31 14.5**	**+0.3**
JOD2				*e*S	**Sn**	**12 31 45.6**	**-0.6**
JRY	**Ryogami san**	**2.76**	**269**	P	**Pn**	**12 31 13.8**	**-0.5**
JMK	**Ichinoseki**	**2.97**	**343**	P	**Pn**	**12 31 17.5**	**+0.2**
JYN	**Shimob**	**3.12**	**260**	P	**Pn**	**12 31 19.9**	**+0.7**
MJAR	**Matsushiro Arr**	**3.33**	**279**	**Pn**	**Pn**	**12 31 22.9**	**+0.6**
	3.3nm,0.3s,baz=112,slow=8.8,SNR=21						
MJAR				Sn	**Sn**	**12 32 02.0**	**+1.3**
	2.8nm,0.3s,baz=154,slow=29,SNR=6.4						
MAJO	**Matsushiro**	**3.34**	**279**	*e*Pn	**Pn**	**12 31 22.7**	**+0.4**
MAT	**Matsushiro**	**3.34**	**279**	P	**Pn**	**12 31 22.6**	**+0.3**
MAT				S	**Sn**	**12 32 00.5**	**-0.2**
JHJ	**Hachijo jima 2**	**3.63**	**216**	Pn	**Pn**	**12 31 26.2**	**-0.2**
	10.0nm,0.3s,baz=182,slow=9.6,SNR=26						
JHJ				Sn	**Sn**	**12 32 06.7**	**-1.3**
	35nm,0.3s,baz=252,slow=22,SNR=8.7						
ASAJ	**Asahikawa**	**8.01**	**2**	Pn	**Pn**	**12 32 28.4**	**+2.0**
	0.6nm,0.3s,baz=331,slow=10.0,SNR=5.0						
ASAJ				Sn	**Sn**	**12 33 54.5**	**-1.2**
	0.3nm,0.3s,baz=339,slow=10,SNR=2.5						
CBIJ	**Chichi jima**	**8.98**	**181**	Pn	**Pn**	**12 32 38.1**	**-1.7**
	4.3nm,0.3s,baz=88,slow=23,SNR=11						
CBIJ				Sn	**Sn**	**12 34 11.7**	**-8.1**
	1.1nm,0.3s,baz=332,slow=23,SNR=2.7						
ULN	**Ulaanbaatar**	**28.47**	**305**	P	**P**	**12 36 26.9**	**+2.7**
MKAR	**Makanchi Array**	**45.22**	**303**	P	**P**	**12 38 51.0**	**+4.8**
	0.9nm,0.7s,mb3.7,baz=81,slow=8.9,SNR=3.0						
KURK	**Kurchatov**	**47.07**	**309**	P	**P**	**12 39 07.2**	**+6.4**
	0.6nm,0.2s,mb4.1,baz=82,slow=8.0,SNR=3.6						
WRA	**Warramunga Arr**	**56.25**	**189**	P	**P**	**12 40 11.0**	**+1.5**
	0.8nm,0.9s,mb3.7,baz=7.8,slow=7.7,SNR=11						

*NEIC **08** 12:43:35.2±1.3, 8°.16S×119°.76E, h190km±16km, Error ellipse: s-maj=39.7km s-min=9.2km az=55.0*
*IDC **08** 12:43:36.3±2.0, 7°.92S×120°.11E, h194km±19km, mb3.2/3, mb1 3.2/6, mb1mx3.0/21, mbtmp3.0/6, Error ellipse: s-maj=64.5km s-min=11.9km az=54.0*
ISC 08 12:43:35.9±1.4, 8°.1S±0°.2×119°.9E±0°.2, h200km±17km, n8, σ0§72/11, mb3.6/2, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.05**	**357**	P	**Pn**	**12 44 26.1**	**-0.1**
	2.0nm,0.3s,baz=178,slow=7.1,SNR=7.0						
FITZ	**Fitzroy Crossi**	**11.41**	**151**	P	**Pn**	**12 46 12.9**	**-0.4**
	0.1nm,0.3s,baz=94,slow=19,SNR=11						
FITZ				S	**Sn**	**12 48 13.6**	**-7.0**
	0.2nm,0.3s,baz=160,slow=22,SNR=8.6						
WRA	**Warramunga Arr**	**18.28**	**132**	P	**P**	**12 47 35.2**	**+0.3**
	0.3nm,0.3s,baz=312,slow=9.8,SNR=18						
WRA				S	**S**	**12 50 52.4**	**-1.1**
	0.1nm,0.3s,baz=119,slow=7.8,SNR=5.7						
WRAB	**Tennant Creek**	**18.28**	**132**	*e*P	**P**	**12 47 34.9**	**0.0**
ASAR	**Alice Springs**	**20.49**	**141**	P	**P**	**12 47 58.9**	**+0.3**
	1.0nm,0.5s,baz=315,slow=9.8,SNR=18						
ASAR				S	**S**	**12 51 42.2**	**+5.4**
	0.2nm,0.8s,baz=222,slow=39,SNR=2.7						
KULM	**Kulim**	**23.36**	**304**	*e*P	**P**	**12 48 25.8**	**-0.9**
STKA	**Stephens Creek**	**31.10**	**143**	P	**P**	**12 49 37.1**	**+1.5**
	1.6nm,0.5s,mb3.9,baz=327,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	**64.06**	**332**	P	**P**	**12 53 48.8**	**+0.4**
	0.4nm,0.5s,mb3.3,baz=122,slow=7.5,SNR=3.4						

*ISCJB **08** 13:11:41.3±0.9, 26°.0N±0°.2×44°.9W±0°.1, h10km, mb4.1/12, MS3.3/7, Error ellipse: s-maj=24.0km s-min=16.3km az=151.5*
*NEIC **08** 13:11:43.0±0.9, 25°.93N×44°.83W, h10km, mb4.5/6, Error ellipse: s-maj=24.2km s-min=17.6km az=140.0*
*IDC **08** 13:11:43.0±1.2, 26°.27N×44°.85W, h0km, mb3.8/8, mb1 4.1/8, mb1mx3.8/26, mbtmp3.8/8, MS3.3/7, Ms1 3.3/7, ms1mx3.0/32, Error ellipse: s-maj=34.1km s-min=25.0km az=165.0*
ISC 08 13:11:43.5±0.9, 26°.0N±0°.2×44°.9W±0°.1, h10km, n20, σ1§25/16, mb4.1/12, MS3.3/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.23**	**253**	*e*P	**P**	**13 16 29.1**	**-0.5**
	22nm,1.0s,mb4.5						
BBTS	**Babate**	**28.78**	**108**	LR	LR	13 26 13.2	
	comp=Z,82nm,20.1s,MS3.3,baz=37,slow=30						
CNNC	**Cliffs of the**	**29.77**	**296**	*e*P	**P**	**13 17 52.2**	**+1.9**
	70nm,1.2s,mb5.3						
SCHQ	**Schefferville**	**33.02**	**337**	LR	LR	13 28 14.7	
	comp=Z,46nm,21.1s,MS3.2,baz=351,slow=30						
MDT	**Midelt**	**35.54**	**69**	LR	LR	13 28 47.8	
	comp=Z,54nm,20.9s,MS3.3,baz=158,slow=29						
AGMN	**Agassiz Refuge**	**45.36**	**313**	*e*P	**P**	**13 19 59.8**	**-2.1**
	3.6nm,0.9s,mb4.2						
ULM	**Lac du Bonnet**	**45.76**	**316**	P	**P**	**13 20 03.7**	**-1.3**
	3.2nm,0.9s,mb4.3,baz=100,slow=7.4,SNR=5.9						
ULM				LR	LR	13 36 29.8	
	comp=Z,83nm,18.4s,MS3.7,baz=30,slow=33						
LPAZ	**La Paz**	**47.75**	**211**	P	**P**	**13 20 24.3**	**+3.4**
	1.6nm,1.0s,mb4.0,baz=38,slow=13,SNR=3.9						
LPAZ	**La Paz**	**47.75**	**211**	*e*P	**P**	**13 20 22.1**	**+1.2**
	2.1nm,1.0s,mb4.1						
NNA	**Nana**	**48.94**	**223**	*e*P	**P**	**13 20 27.2**	**-3.0**
	40nm,1.4s						
NOA	**NORSAR Array B**	**51.29**	**31**	P	**P**	**13 20 47.2**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=251,slow=7.8,SNR=2.7						
RLMT	**Red Lodge**	**54.33**	**308**	*e*P	**P**	**13 21 11.2**	**+1.0**
	2.7nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**54.68**	**305**	P	**P**	**13 21 13.6**	**+0.8**
	2.1nm,1.0s,mb4.1,baz=84,slow=7.6,SNR=13						
PDAR				LR	LR	13 42 06.3	
	comp=Z,48nm,19.3s,MS3.6,baz=264,slow=33						
YKA	**Yellowknife Ar**	**57.94**	**329**	P	**P**	**13 21 34.7**	**-1.0**
	1.3nm,0.9s,mb3.9,baz=95,slow=7.5,SNR=14						
YKA				LR	LR	13 45 44.3	
	comp=Z,7.4nm,19.0s,MS2.8,baz=150,slow=35						
YKA	**Yellowknife Ar**	**57.94**	**329**	P	**P**	**13 21 34.7**	**-1.0**
YKA				LR	LR	13 45 44.3	
IDI	**Anoyia**	**59.62**	**63**	LR	LR	13 45 26.7	
	comp=Z,24nm,21.0s,MS3.3,baz=278,slow=34						
NVAR	**Mina Array Bea**	**61.89**	**301**	P	**P**	**13 22 04.3**	**+1.1**
	0.1nm,0.3s,mb3.4,baz=142,slow=3.4,SNR=3.5						
NVAR	**Mina Array Bea**	**61.89**	**301**	P	**P**	**13 22 04.3**	**+1.1**
BRTR	**Keskin Array B**	**65.41**	**56**	P	**P**	**13 22 26.6**	**+0.1**
	0.4nm,0.6s,mb3.6,baz=297,slow=6.3,SNR=2.8						
BVAR	**Borovoye Array**	**83.36**	**33**	P	**P**	**13 24 10.9**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=222,slow=1.9,SNR=4.0						

*ISCJB **08** 13:21:46.8±1.2, 12°.14N±0°.05×141°.17E±0°.06, h41km±11km, mb4.9/71, MS3.8/20, Error ellipse: s-maj=10.4km s-min=7.7km az=173.9*
*MOS **08** 13:21:46.1±0.9, 12°.18N×141°.05E, h33km, mb5.1/22, Error ellipse: s-maj=12.4km s-min=7.0km az=113.5*
*BJI **08** 13:21:48.1, 12°.06N×141°.27E, h60km, mB4.9/20, mb4.8/35, Ms4.3/23, Ms7 4.0/22*
*DJA **08** 13:21:49, 12°.13N×141°.12E, h39km, mb4.7/7*
*NEIC **08** 13:21:50.2±1.2, 12°.18N×141°.15E, h57km±12km, mb4.8/26, Error ellipse: s-maj=7.9km s-min=5.7km az=91.0*
*IDC **08** 13:21:50.6±3.1, 12°.22N×141°.09E, h57km±29km, mb4.3/17, mb1 4.4/18, mb1mx4.3/24, mbtmp4.3/18, ML4.4/1, MS3.5/12, Ms1 3.5/12, ms1mx3.4/25, Error ellipse: s-maj=19.9km s-min=12.5km az=80.0*
ISC 08 13:21:50.3±1.1, 12°.14N±0°.05×141°.19E±0°.06, h55km±11km, h60km±1.6km: pP-P, n136, σ1§03/139, mb4.9/71, MS3.8/20, 3C-9D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.87**	**68**	P	**Pn**	**13 22 48.5**	**+1.3**
	28nm,0.3s,baz=192,slow=9.1,SNR=22						
GUMO	**Guam**	**3.87**	**68**	*e*Pn	**Pn**	**13 22 47.6**	**+0.4**
CBIJ	**Chichi jima**	**14.90**	**3**	LR	LR	13 30 24.2	
	comp=Z,100nm,21.2s,baz=218,slow=35						
JOW	**Kunigami**	**18.99**	**322**	LR	LR	13 31 42.2	
	comp=Z,142nm,21.5s,baz=124,slow=31						
JHJ	**Hachijo jima 2**	**20.92**	**357**	LR	LR	13 32 47.8	
	comp=Z,187nm,18.3s,MS3.5,baz=196,slow=32						
YHNB	**Yeheng**	**22.52**	**306**	*e*P	**P**	**13 26 44.2**	**-1.2**
	53nm,1.4s,mb4.8						
MJAR	**Matsushiro Arr**	**24.44**	**354**	P	**P**	**13 27 02.1**	**-1.7**
	1.2nm,0.7s,baz=174,slow=10.0,SNR=4.9						
MJAR				LR	LR	13 35 15.6	
	comp=Z,70nm,20.3s,MS3.1,baz=170,slow=33						
KAKA	**Kakadu**	**26.18**	**200**	*e*P	**P**	**13 27 17.2**	**-2.5**
	20nm,0.8s,mb4.7						
KAKA	**Kakadu**	**26.18**	**200**	*e*P	**P**	**13 27 16.9**	**-2.8**
	67nm,0.8s,mb5.2						

KSRS Korea Array 27.87 337 P **P** **13 27 32.6 -2.1**
0.9nm,0.7s,baz=150,slow=11,SNR=4.9
KSRS LR LR 13 36 40.1
comp=Z,151nm,22.0s,MS3.5,baz=157,slow=32
NJ2 Nanjing 28.54 318 *e*P **P** **13 27 41.2 +0.4**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
CTA Charters Tower 32.41 171 *e*P **P** **13 28 16.6 +1.6**
comp=Z,11nm,0.7s,mb4.8
CTAO Charters Tower 32.41 171 *e*P **P** **13 28 16.5 +1.5**
CTAO pmax pmax
comp=Z,15nm,0.8s,mb4.9
CTAO Charters Tower 32.41 171 *e*P **P** **13 28 16.5 +1.4**
comp=Z,15nm,0.8s,mb4.9
WRAB Tennant Creek 32.58 192 *e*P **P** **13 28 16.7 +0.2**
WRAB pmax pmax
comp=Z,26nm,0.8s,mb5.2
WRAB Tennant Creek 32.58 192 *e*P **P** **13 28 16.7 +0.2**
comp=Z,26nm,0.8s,mb5.2
WB2 Warramunga Arr 32.59 192 *e*P **P** **13 28 16.8 +0.2**
WRA Warramunga Arr 32.59 192 P **P** **13 28 16.6 +0.1**
comp=Z,24nm,0.8s,mb5.2,baz=10,slow=9.8,SNR=112
WRA PcP PcP 13 31 02.5 +0.4
comp=Z,0.8nm,0.7s,baz=3.0,slow=3.1,SNR=4.8
FITZ Fitzroy Crossi 33.74 207 *e*P **P** **13 28 24.9 -1.8**
comp=Z,7.9nm,1.8s,mb4.3
CN2 Changchun 34.34 340 *e*P **P** **13 28 33.4 +1.8**
CN2 *e*pP pP 13 28 48.5 +2.8
CN2 *e*S **S** **13 33 56.1 +0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,11.0s,MS4.3
CN2 LR LR
comp=E,200nm,11.0s,MS4.3
CN2 LR LR
comp=Z,200nm,11.0s,MS4.1
ENH Enshi 34.45 307 *e*P **P** **13 28 31.9 -0.9**
comp=Z,9.0nm,0.9s,mb4.7
GYA Guiyang 35.42 299 P **P** **13 28 41.8 +0.6**
GYA pP pP 13 28 57.0 +1.6
GYA sP sP 13 29 05.3 +3.4
GYA PP PP 13 30 02.6 +0.1
GYA S **S** **13 34 12.2 -0.2**
GYA sS sS 13 34 38.0 +1.7
GYA ScP ScP 13 34 51.0 -0.5
GYA SS SS 13 36 32.6 -16
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,580nm,16.8s,MS4.5
GYA LR LR
comp=E,560nm,17.3s,MS4.5
GYA LR LR
comp=Z,650nm,16.5s,MS4.5
BJI Beijing 35.48 326 P **P** **13 28 41.1 -0.4**
BJI PP PP 13 30 01.1 -1.9
BJI S **S** **13 34 13.8 +0.9**
BJI pmax pmax
comp=Z,15nm,0.9s,mb4.9
BJI LR LR
comp=N,140nm,18.6s
BJI LR LR
comp=E,90nm,27.6s
BJI LR LR
comp=Z,130nm,30.0s
ASAR Alice Springs 36.30 191 P **P** **13 28 49.3 +0.7**
comp=Z,6.7nm,0.6s,mb4.8,baz=18,slow=12,SNR=108
ASAR PcP PcP 13 31 12.4 -0.2
comp=Z,0.8nm,0.8s,baz=20,slow=3.6,SNR=4.1
XAN Xi'an 36.57 312 P **P** **13 28 51.0 +0.1**
XAN pP pP 13 29 05.6 +0.5
XAN sP sP 13 29 11.3 -0.3
XAN PP PP 13 30 15.0 -0.1
XAN S **S** **13 34 30.8 +1.1**
XAN sS sS 13 34 53.5 -0.2
XAN LR LR
comp=N,56nm,12.1s,MS3.6
XAN LR LR
comp=E,38nm,14.7s,MS3.6
XAN LR LR
comp=Z,41nm,12.1s,MS3.4
HABR Khabarovsk 36.58 353 *e*P **P** **13 28 46.1 -4.6**
HABR *e* 13 30 12.8
HABR *e*S **S** **13 34 20.3 -9.1**
HABR MLR MLR
comp=Z,186nm,20.0s,MS3.9
KLR Kul'dur 37.79 350 *e*P **P** **13 28 56.0 -5.0**
KMI Kunming 38.51 295 P **P** **13 29 08.3 +0.8**
KMI pP pP 13 29 23.3 +1.6
KMI sP sP 13 29 30.0 +1.8
KMI PP PP 13 30 40.6 +4.1
KMI S **S** **13 34 58.8 -0.6**
KMI sS sS 13 35 25.3 +1.8
KMI SS SS 13 37 41.0 -10
KMI pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
KMI pmax pmax
comp=Z,49nm,4.9s
KMI LR LR
comp=N,130nm,10.9s,MS4.1
KMI LR LR
comp=E,110nm,13.4s,MS4.1
KMI LR LR
comp=Z,120nm,17.2s,MS3.8
HHC Hu-ho-hao-te 38.64 323 *e*P **P** **13 29 10.1 +1.8**
HHC pP pP 13 29 25.5 +2.9
HHC sP sP 13 29 32.5 +3.4
HHC PP PP 13 30 44.7 +7.0
HHC PcP PcP 13 31 17.1 -2.5
HHC S **S** **13 35 03.8 +2.9**
HHC PcS PcS 13 35 10.1 +1.2
HHC sS sS 13 35 28.3 +3.3
HHC SS SS 13 37 48.6 -4.4
HHC ScS ScS 13 39 13.0 -0.7
HHC pmax pmax
comp=Z,16nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,96nm,5.6s
HHC LR LR
comp=N,140nm,14.9s,MS4.0
HHC LR LR
comp=E,120nm,14.1s,MS4.0
HHC LR LR
comp=Z,120nm,15.3s,MS3.8
CD2 Chengdu 39.26 304 P **P** **13 29 14.7 +1.0**
CD2 pP pP 13 29 30.0 +2.1
CD2 sP sP 13 29 37.2 +2.8
CD2 PP PP 13 30 50.2 +5.6
CD2 S **S** **13 35 11.0 +0.5**
CD2 sS sS 13 35 37.2 +2.5
CD2 SS SS 13 37 59.6 -6.1
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,100nm,5.9s
CD2 LR LR
comp=N,120nm,7.1s
CD2 LR LR
comp=Z,130nm,8.9s
CM31 Chiang Mai Arr 41.16 284 *e*P **P** **13 29 29.9 +0.4**
CMAR Chiang Mai Arr 41.16 284 P **P** **13 29 30.1 +0.6**
comp=Z,16nm,0.9s,mb4.7,baz=87,slow=6.3,SNR=79
CMAR LR LR 13 47 42.2
comp=Z,47nm,18.1s,MS3.4,baz=275,slow=38
CHTO Chiang Mai 41.17 285 *e*P **P** **13 29 29.2 -0.4**
CHTO pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
CHTO Chiang Mai 41.17 285 *e*P **P** **13 29 29.2 -0.4**
comp=Z,6.3nm,1.0s,mb4.2
LZH Lanzhou 41.21 312 *e*P **P** **13 29 32.0 +2.3**
LZH pP pP 13 29 44.5 +0.4
LZH sP sP 13 29 54.5 +3.9
LZH PP PP 13 31 11.3 +5.6
LZH *e*S **S** **13 35 42.1 +2.6**
LZH sS sS 13 36 08.4 +4.7
LZH SS SS 13 38 42.5 -1.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.5
LZH pmax pmax
comp=Z,70nm,4.0s
LZH LR LR
comp=E,210nm,14.5s
LZH LR LR
comp=Z,340nm,15.4s,MS4.3
PETK Petropavlovsk- 42.94 15 P **P** **13 29 44.6 +1.1**
comp=Z,6.6nm,0.9s,mb4.4,baz=140,slow=9.7,SNR=6.3
PETK LR LR 13 47 26.5
comp=Z,45nm,18.5s,MS3.4,baz=301,slow=36
STKA Stephens Creek 43.77 180 *e*P **P** **13 29 50.5 +0.1**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 43.77 180 *e*P **P** **13 29 50.7 +0.3**
comp=Z,9.6nm,0.6s,mb4.7
STKA Stephens Creek 43.77 180 P **P** **13 29 50.7 +0.3**
comp=Z,18nm,0.8s,mb4.8,baz=349,slow=8.2,SNR=34
STKA LR LR 13 49 02.0
comp=Z,80nm,20.4s,MS3.6,baz=25,slow=37
STKA Stephens Creek 43.77 180 *e*P **P** **13 29 50.5 +0.1**
comp=Z,3.4nm,0.8s,mb4.1
FORT Forrest 44.50 196 *e*P **P** **13 29 56.7 +0.4**
comp=Z,27nm,0.7s,mb5.2
GTA Gaotai 45.52 314 *e*P **P** **13 30 04.3 -0.1**
GTA pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ULN Ulaanbaatar 45.61 328 *e*P **P** **13 30 05.6 +0.7**
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ULN Ulaanbaatar 45.61 328 *e*P **P** **13 30 05.6 +0.7**
comp=Z,3.6nm,0.8s,mb4.4
SONM Songino Array 45.93 328 P **P** **13 30 06.7 -0.8**
SONM 13 31 42.6
SONM Songino Array 45.93 328 P **P** **13 30 06.7 -0.8**
comp=Z,1.2nm,0.8s,mb3.9,baz=140,slow=8.3,SNR=7.4
SONM PcP PcP 13 31 42.6 -1.0
comp=Z,1.4nm,0.7s,baz=154,slow=4.3,SNR=4.0
SONM LR LR 13 47 44.3
comp=Z,75nm,20.1s,MS3.6,baz=82,slow=34
SONM Songino Array 45.93 328 P **P** **13 30 06.7 -0.8**
SONM PcP PcP 13 31 42.6 -1.0
SONM LR LR 13 47 44.3
ZAK Zakamensk 49.12 329 ⇓*i*P **P** **13 30 32.5 +0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
LSA Lhasa 49.50 299 P **P** **13 30 36.2 +0.8**
LSA Lhasa 49.50 299 *e*P **P** **13 30 35.8 +0.4**
LSA pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LSA Lhasa 49.50 299 *e*P **P** **13 30 35.8 +0.4**
comp=Z,6.0nm,0.7s,mb4.7
TOO Toolangi 49.61 176 *e*P **P** **13 30 38.2 +2.1**
TLY Talaya 49.74 330 *e*P **P** **13 30 37.3 +0.4**
TLY *e*S **S** **13 37 51.9 +10**
TLY pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
TLY MLR MLR
comp=Z,73nm,20.0s,MS3.7
BOD Bodaibo 50.05 341 *e*P **P** **13 30 38.8 -0.3**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
YAK Yakutsk 50.50 353 *e*P **P** **13 30 41.2 -1.2**
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.2
YAK pmax pmax
comp=N,18nm,1.2s
YAK Yakutsk 50.50 353 *e*P **P** **13 30 41.7 -0.7**
comp=N,44nm,1.0s,mb5.4
MOY Mondy 51.04 329 *e*P **P** **13 30 47.4 +0.7**
SEY Seymchan 51.34 7 *i*P **P** **13 30 49.7 +0.9**
GUN Gumba 53.85 296 *e*P **P** **13 31 08.2 +0.2**
comp=N,99nm,1.0s,mb5.7
PKI Pulchoki 54.24 295 *e*P **P** **13 31 10.6 -0.2**
PKIN Phulchoki 54.25 295 *e*P **P** **13 31 10.3 -0.6**
comp=N,44nm,1.3s,mb5.2
KKN Kakani 54.37 295 *e*P **P** **13 31 11.3 -0.5**
comp=N,42nm,0.9s,mb5.4
DMN Daman 54.51 295 *e*P **P** **13 31 12.5 -0.3**
comp=N,46nm,1.0s,mb5.5
GKN Gorkha 54.95 296 *e*P **P** **13 31 14.9 -1.1**
comp=N,71nm,1.0s,mb5.6
WMQ Urumqi 55.58 315 *e*P **P** **13 31 20.8 +0.6**
WMQ pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
WMQ LR LR
comp=Z,69nm,23.0s,MS3.7
KOLN Koldanda 55.85 295 *e*P **P** **13 31 19.5 -2.9**
comp=Z,51nm,0.8s,mb5.6
PYUN Piuthan 56.41 296 *e*P **P** **13 31 22.5 -3.9**
comp=Z,74nm,0.9s,mb5.7
BILL Bilibino 58.21 11 *d i*P **P** **13 31 38.4 0.0**
BILL pmax pmax
comp=Z,32nm,1.2s,mb5.2
BILL Bilibino 58.21 11 *e*P **P** **13 31 38.0 -0.4**
comp=Z,18nm,0.9s,mb5.1
TIXI Tiksi 59.94 356 *e*P **P** **13 31 50.9 +0.6**
TIXI pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
TIXI Tiksi 59.94 356 *e*P **P** **13 31 49.5 -0.8**
comp=Z,6.2nm,0.9s,mb4.6
MK31 Makanchi Array 60.07 317 *e*P **P** **13 31 51.6 0.0**
MKAR Makanchi Array 60.07 317 P **P** **13 31 52.0 +0.3**
comp=Z,4.5nm,0.9s,mb4.5,baz=104,slow=8.9,SNR=19
MKAR Makanchi Array 60.07 317 P **P** **13 31 52.0 +0.3**
ZAA0 Zalesovo Array 60.74 326 *e*P **P** **13 31 54.9 -1.2**
ZALV Zalesovo Beam 60.74 326 P **P** **13 31 55.9 -0.2**
ZALV 13 32 38.3
ZALV Zalesovo Beam 60.74 326 P **P** **13 31 55.9 -0.2**
comp=Z,2.2nm,0.5s,mb4.6,baz=100,slow=7.6,SNR=6.0
ZALV PcP PcP 13 32 38.3 -1.3
comp=Z,2.0nm,0.7s,baz=116,slow=6.8,SNR=3.7
ZALV LR LR 13 57 09.6
comp=Z,37nm,19.5s,MS3.5,baz=69,slow=35
NVS Novosibirsk 61.92 326 *i*P **P** **13 32 04.2 +0.2**
NVS pmax pmax
comp=N,7.0nm,1.7s
NVS pmax pmax
comp=Z,14nm,1.7s,mb4.8
NVS pmax pmax
comp=E,11nm,1.5s
KSH Kashi 63.28 308 *e*P **P** **13 32 15.9 +2.5**
KSH *e*pP pP 13 32 31.8 +3.2
KSH *e*sP sP 13 32 38.7 +3.8
KSH *e*PcP PcP 13 32 52.3 +2.1
KSH *e*PP PP 13 34 36.8 +3.7
KSH *e*ScP ScP 13 36 47.6 -0.5
KSH *e*PcS PcS 13 36 53.1 -0.7
KSH *e*S **S** **13 40 41.1 -0.4**
KSH *e*sS sS 13 41 09.3 +2.2
KSH *e*SS SS 13 44 49.7 +1.1
KSH pmax pmax
comp=Z,99nm,4.8s
KSH LR LR
comp=N,69nm,5.0s
KSH LR LR
comp=E,83nm,4.4s
KURK Kurchatov 63.40 321 *d i*P **P** **13 32 13.8 -0.2**
KURK pmax pmax
comp=Z,47nm,1.2s,mb5.5
KURK Kurchatov 63.40 321 *e*P **P** **13 32 13.9 0.0**
ULHL Ulahol 63.42 311 P **P** **13 32 15.1 +0.8**
SNR=10
TNA Tin City 63.47 21 *e*P **P** **13 32 14.7 +0.5**
comp=Z,16nm,1.1s,mb5.1
TKM2 Tokmak 2 63.98 312 P **P** **13 32 18.4 +0.4**
SNR=7.5
TKM2 Tokmak 2 63.98 312 *e*P **P** **13 32 18.1 +0.1**
TKM2 pmax pmax
comp=Z,12nm,1.3s,mb4.8
TKM2 Tokmak 2 63.98 312 *e*P **P** **13 32 18.1 +0.1**
comp=Z,12nm,1.3s,mb4.8
KZA Kyzart 64.13 311 P **P** **13 32 20.4 +1.5**
SNR=25
KBK Karagaybulak 64.42 312 P **P** **13 32 21.7 +0.8**
SNR=5.6
UCH Uchtor 64.69 311 P **P** **13 32 23.9 +1.3**
SNR=25
UCH Uchtor 64.69 311 *e*P **P** **13 32 23.4 +0.8**
UCH pmax pmax
comp=Z,21nm,1.1s,mb5.1
UCH Uchtor 64.69 311 *e*P **P** **13 32 23.4 +0.8**
comp=Z,21nm,1.1s,mb5.1
AAK Ala-Archa 64.75 311 ⇑*i*P **P** **13 32 22.8 -0.2**
AAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
AAK Ala-Archa 64.75 311 *e*P **P** **13 32 22.6 -0.3**
comp=Z,5.0nm,1.0s,mb4.5
USP Ospenovka 64.82 312 P **P** **13 32 23.7 +0.3**
SNR=6.2
EKS2 Erkin-Say 65.28 311 P **P** **13 32 27.2 +0.7**
SNR=5.7
EKS2 Erkin-Say 65.28 311 *e*P **P** **13 32 26.0 -0.4**
EKS2 pmax pmax
comp=Z,13nm,1.3s,mb4.8
EKS2 Erkin-Say 65.28 311 *e*P **P** **13 32 26.0 -0.4**
comp=Z,13nm,1.3s,mb4.8
AML Almayashu 65.28 311 P **P** **13 32 27.2 +0.8**
SNR=14
AML Almayashu 65.28 311 *e*P **P** **13 32 26.3 -0.2**
AML pmax pmax
comp=Z,19nm,1.2s,mb5.0
AML Almayashu 65.28 311 *e*P **P** **13 32 26.3 -0.2**
comp=Z,19nm,1.2s,mb5.0
KBL Kabul 68.56 302 *e*P **P** **13 32 47.3 -0.2**
BVAR Borovoye Array 68.85 322 P **P** **13 32 48.9 +0.1**
comp=Z,17nm,0.6s,mb5.1,baz=105,slow=8.0,SNR=100
BVAR LR LR 14 00 36.1
comp=Z,76nm,21.1s,MS3.9,baz=83,slow=34
BRVK Borovoye 68.92 322 *d i*P **P** **13 32 49.3 0.0**
BRVK pmax pmax
comp=Z,41nm,1.2s,mb5.2
BRVK Borovoye 68.92 322 *e*P **P** **13 32 48.9 -0.3**
comp=Z,18nm,0.6s,mb5.2
BPAW Bear Paw Mtn. 69.52 26 *e*P **P** **13 32 52.9 +0.1**
comp=Z,6.4nm,1.1s,mb4.5
COLD Coldfoot 70.65 23 *e*P **P** **13 32 58.1 -1.6**
comp=Z,5.5nm,0.9s,mb4.5
SVE Sverdlovsk 74.76 326 ⇓*e*P **P** **13 33 24.6 +0.3**
SVE pmax pmax
comp=Z,21nm,1.1s,mb5.0
ABKAR Akbulak array 75.20 318 ⇓*i*P **P** **13 33 26.4 -0.6**
comp=Z,8.2nm,0.6s,mb4.8
ARU Arti 75.91 325 ⇓*i*P **P** **13 33 30.2 -0.6**
ARU pmax pmax
comp=Z,14nm,0.9s,mb4.9
ARU Arti 75.91 325 ⇓*i*P **P** **13 33 30.2 -0.6**
comp=Z,14nm,0.9s,mb4.9
AKTK Aktyubinsk 76.41 319 P **P** **13 33 33.2 -0.6**
AKTO Aktyubinsk 76.41 319 P **P** **13 33 33.2 -0.6**
comp=Z,5.6nm,0.6s,mb4.6,baz=89,slow=8.1,SNR=28
SOKR Solikamsk 76.79 329 *c i*P **P** **13 33 36.3 +0.5**
SOKR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
INK Inuvik 77.06 22 *e*P **P** **13 33 37.0 -0.2**
KLMR Klimovskoe 85.10 331 *e*P **P** **13 34 18.9 -1.1**
KLMR pmax pmax
comp=Z,28nm,1.9s,mb5.1
APA Apatity 85.50 338 ⇓*e*P **P** **13 34 29.0 +7.1**
APA pmax pmax
comp=Z,13nm,1.0s,mb5.1
APA MLR MLR
comp=Z,200nm,22.0s,MS4.5
YKA Yellowknife Ar 85.77 27 P **P** **13 34 23.0 -0.3**
comp=Z,0.9nm,0.7s,mb4.1,baz=291,slow=4.9,SNR=11
RES Resolute Bay 86.76 13 *e*P **P** **13 34 27.5 -0.5**
RES pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
RES Resolute Bay 86.76 13 *e*P **P** **13 34 27.5 -0.5**
comp=Z,5.3nm,1.0s,mb4.7
ZEI Tsey 87.13 313 *e*P **P** **13 34 27.6 -2.8**
ZEI pmax pmax
comp=Z,8.0nm,1.4s,mb4.8
ARCES ARCESS Array B 87.33 342 P **P** **13 34 30.1 -0.7**
comp=Z,3.7nm,0.6s,mb4.8,baz=66,slow=7.0,SNR=23
JOF Joensuu 88.07 334 *e*P **P** **13 34 30.9 -3.6**
JOF pmax pmax
comp=Z,12nm,0.8s,mb5.2
JOF Joensuu 88.07 334 *e*p **P** **13 34 30.9 -3.6**
comp=Z,12nm,0.8s,mb5.2
OBN Obninsk 88.32 326 ⇑*i*P **P** **13 34 34.1 -1.7**
OBN pmax pmax
comp=Z,16nm,1.1s,mb5.2
KAF Kangasniemi 90.52 335 *e*P **P** **13 34 43.2 -2.7**
KAF pmax pmax
comp=Z,15nm,0.8s,mb5.4
KAF Kangasniemi 90.52 335 *e*p **P** **13 34 43.2 -2.7**
comp=Z,15nm,0.8s,mb5.4,baz=60,slow=4.4
NVAR Mina Array Bea 90.61 51 P **P** **13 34 48.0 +1.1**
comp=Z,1.2nm,0.7s,mb4.3,baz=266,slow=5.5,SNR=10.0
FINES FINESS Array B 90.92 334 P **P** **13 34 46.1 -1.8**
comp=Z,10nm,0.7s,mb5.3,baz=90,slow=5.7,SNR=38
RRI2 Red Ridge 94.10 44 *e*P **P** **13 35 02.5 -0.4**
comp=Z,2.2nm,1.0s,mb4.5
FFC Flin Flon 94.92 31 *i*P **P** **13 35 07.8 +1.4**
BRTR Keskin Array B 95.42 312 LR LR 14 21 05.4
comp=Z,20nm,18.8s,MS3.6,baz=198,slow=37
NOA NORSAR Array B 97.08 338 P **P** **13 35 14.2 -1.9**
comp=Z,1.2nm,0.7s,mb4.4,baz=50,slow=4.8,SNR=3.3
GERES GERESS Array B 103.67 327 Pdiff Pdif 13 35 44.4 -1.2
comp=Z,0.5nm,0.5s,baz=35,slow=4.9,SNR=4.4
TORD Torodi Ar. Bea 132.62 301 PP PP 13 43 22.0 -1.9
comp=Z,0.9nm,1.0s,baz=71,slow=4.7,SNR=4.0
LPAZ La Paz 151.30 102 PKPbc PKPbc 13 41 40.4 +1.8
comp=Z,9.9nm,0.7s,baz=275,slow=2.1,SNR=40
LPAZ PKPab PKPab 13 41 49.0 +2.3
comp=Z,3.4nm,0.5s,baz=281,slow=20,SNR=5.3
LPAZ La Paz 151.30 102 PKPbc PKPbc 13 41 40.4 +1.8
LPAZ PKPab PKPab 13 41 49.0 +2.3

ATH ***08*** *13:31:27.8, 36°.18N×21°.88E, h6km±1km, MD3.7/19, ML3.2*
NEIC ***08*** *13:31:27.8, 36°.18N×21°.88E, h6km, ML3.2(ATH), After ATH.*
CSEM ***08*** *13:31:28.3±0.4, 36°.14N×21°.92E, h2km, ML3.9/3, Error ellipse: s-maj=10.2km s-min=5.0km az=49.0*
THE ***08*** *13:31:28.8, 36°.21N×21°.83E, h0km±1km, ML3.9/3, Error ellipse: s-maj=2.7km s-min=1.2km az=240.0*
ISCJB ***08*** *13:31:30.0±0.7, 36°.23N±0°.03×21°.87E±0°.05, h10km, Error ellipse: s-maj=6.8km s-min=3.7km az=147.2*
ISC 08 13:31:30.5±0.7, 36°.23N±0°.03×21°.87E±0°.05, h10km, n71, σ1§34/112, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.68**	**351**	*e*PG	**Pg**	**13 31 41.3**	**-2.2**
PYL				*e*SB	**Sg**	**13 31 51.6**	**-0.8**
PYL	**PYLOS**	**0.68**	**351**	P	**Pg**	**13 31 41.5**	**-2.0**
PYL				S	**Sg**	**13 31 51.6**	**-0.8**
PYL	**PYLOS**	**0.68**	**351**	P	**Pg**	**13 31 41.5**	**-2.0**
PYL				S	**Sg**	**13 31 51.6**	**-0.8**
KYTH	**Kithira**	**0.94**	**86**	*e*PB	**Pg**	**13 31 45.6**	**-3.0**
KYTH	**Kithira**	**0.94**	**86**	*e*Pb	**Pg**	**13 31 45.6**	**-3.0**
ITM	**Ithomi**	**0.95**	**3**	*e*PB	**Pg**	**13 31 46.7**	**-2.1**
ITM				*e*SB	**Sg**	**13 32 00.0**	**-1.2**
ITM	**Ithomi**	**0.95**	**3**	P	**Pg**	**13 31 46.6**	**-2.2**
ITM				S	**Sg**	**13 32 01.3**	**+0.1**
ITM	**Ithomi**	**0.95**	**3**	*e*Pb	**Pg**	**13 31 46.7**	**-2.1**
ITM				*e*Sb	**Sg**	**13 32 00.0**	**-1.2**
ITM				S	**Sg**	**13 32 01.3**	**+0.1**
VLI	**Veliai**	**0.99**	**60**	*e*PB	**Pg**	**13 31 47.1**	**-2.4**
VLI				*e*SB	**Sg**	**13 32 00.9**	**-1.4**
VLI	**Veliai**	**0.99**	**60**	*e*Pb	**Pg**	**13 31 47.1**	**-2.4**
VLI				*e*Sb	**Sg**	**13 32 00.9**	**-1.4**
VLX	**Vlachokerasia**	**1.21**	**19**	*e*PG	**Pn**	**13 31 51.1**	**-2.4**
VLX				*e*SB	**Sb**	**13 32 08.6**	**-0.6**
VLX	**Vlachokerasia**	**1.21**	**19**	P	**Pn**	**13 31 51.3**	**-2.2**
VLX				S	**Sb**	**13 32 09.8**	**+0.6**
VLX	**Vlachokerasia**	**1.21**	**19**	P	**Pn**	**13 31 51.3**	**-2.2**
VLX				*e*Sb	**Sb**	**13 32 08.6**	**-0.6**
VLX				S	**Sb**	**13 32 09.8**	**+0.6**
DID	**Didima**	**1.68**	**40**	*e*PN	**Pn**	**13 31 59.8**	**-0.1**
DID				*e*SN	**Sn**	**13 32 23.3**	**+1.8**
DID	**Didima**	**1.68**	**40**	P	**Pn**	**13 31 59.4**	**-0.5**
DID				S	**Sn**	**13 32 23.6**	**+2.1**
DID	**Didima**	**1.68**	**40**	P	**Pn**	**13 31 59.4**	**-0.5**
DID	**Didima**	**1.68**	**40**	*e*Pn	**Pn**	**13 31 59.8**	**-0.1**
DID				*e*Sn	**Sn**	**13 32 23.3**	**+1.8**
DID				S	**Sn**	**13 32 23.6**	**+2.1**
GUR	**Goura**	**1.75**	**12**	*e*PN	**Pn**	**13 32 01.3**	**+0.5**
GUR				*e*SN	**Sg**	**13 32 26.1**	**-0.5**
GUR	**Goura**	**1.75**	**12**	P	**Pn**	**13 32 00.6**	**-0.2**
GUR				S	**Sn**	**13 32 24.2**	**+1.1**
GUR	**Goura**	**1.75**	**12**	P	**Pn**	**13 32 00.6**	**-0.2**
GUR	**Goura**	**1.75**	**12**	*e*Pn	**Pn**	**13 32 01.3**	**+0.5**
GUR				S	**Sn**	**13 32 24.2**	**+1.1**
GUR				*e*Sn	**Sg**	**13 32 26.1**	**-0.5**
KARN	**Karanos**	**1.85**	**116**	*e*PG	**Pn**	**13 32 01.2**	**-1.1**
KARN				*e*SN	**Sn**	**13 32 25.6**	**-0.2**
KARN	**Karanos**	**1.85**	**116**	P	**Pn**	**13 32 00.9**	**-1.4**
KARN				S	**Sn**	**13 32 27.0**	**+1.2**
KARN	**Karanos**	**1.85**	**116**	P	**Pn**	**13 32 00.9**	**-1.4**

KARN	**Karanos**	**1.85**	**116**	*e*Pg	**Pn**	**13 32 01.2**	**-1.1**
KARN				*e*Sn	**Sn**	**13 32 25.6**	**-0.2**
KARN				S	**Sn**	**13 32 27.0**	**+1.2**
RLS	**Riolos of Patr**	**1.86**	**350**	*e*PN	**Pn**	**13 32 02.6**	**+0.3**
RLS				*e*SN	**Sg**	**13 32 29.1**	**-1.0**
RLS	**Riolos of Patr**	**1.86**	**350**	*e*Pn	**Pn**	**13 32 02.6**	**+0.3**
RLS				*e*Sn	**Sg**	**13 32 29.1**	**-1.0**
LTK	**Loutraki**	**2.00**	**26**	*e*PN	**Pn**	**13 32 04.6**	**+0.4**
LTK	**Loutraki**	**2.00**	**26**	P	**Pn**	**13 32 03.7**	**-0.5**
LTK	**Loutraki**	**2.00**	**26**	P	**Pn**	**13 32 03.7**	**-0.5**
LTK	**Loutraki**	**2.00**	**26**	*e*Pn	**Pn**	**13 32 04.6**	**+0.4**
NAIG	**Nisos Aigina**	**2.00**	**40**	*e*PN	**Pn**	**13 32 04.5**	**+0.2**
NAIG	**Nisos Aigina**	**2.00**	**40**	*e*Pn	**Pn**	**13 32 04.5**	**+0.2**
LAKA	**Lakka**	**2.01**	**2**	P	**Pn**	**13 32 05.2**	**+0.8**
LAKA				S	**Sn**	**13 32 31.3**	**+1.7**
LAKA	**Lakka**	**2.01**	**2**	P	**Pn**	**13 32 05.2**	**+0.8**
LAKA				S	**Sn**	**13 32 31.3**	**+1.7**
VAM	**Vamos**	**2.06**	**113**	*e*PG	**Pn**	**13 32 05.5**	**+0.4**
VAM				*e*SN	**Sn**	**13 32 32.4**	**+1.5**
VAM	**Vamos**	**2.06**	**113**	*e*Pg	**Pn**	**13 32 05.5**	**+0.4**
VAM				*e*Sn	**Sn**	**13 32 32.4**	**+1.5**
TRIZ	**Trizonia**	**2.14**	**4**	P	**Pn**	**13 32 06.7**	**+0.5**
TRIZ	**Trizonia**	**2.14**	**4**	P	**Pn**	**13 32 06.7**	**+0.5**
KALE	**Kalithea**	**2.17**	**6**	P	**Pn**	**13 32 08.1**	**+1.5**
KALE	**Kalithea**	**2.17**	**6**	P	**Pn**	**13 32 08.1**	**+1.5**
EFP	**Efpalio**	**2.20**	**1**	*e*PG	**Pn**	**13 32 08.8**	**+1.8**
EFP	**Efpalio**	**2.20**	**1**	P	**Pn**	**13 32 08.1**	**+1.1**
EFP	**Efpalio**	**2.20**	**1**	P	**Pn**	**13 32 08.1**	**+1.1**
EFP	**Efpalio**	**2.20**	**1**	*e*Pg	**Pn**	**13 32 08.8**	**+1.8**
VLS	**Valsamata**	**2.20**	**333**	*e*PN	**Pn**	**13 32 08.0**	**+1.0**
VLS				*e*SN	**Sn**	**13 32 36.7**	**+2.4**
VLS	**Valsamata**	**2.20**	**333**	P	**Pn**	**13 32 06.2**	**-0.8**
VLS				S	**Sn**	**13 32 35.4**	**+1.1**
VLS	**Valsamata**	**2.20**	**333**	P	**Pn**	**13 32 06.2**	**-0.8**
VLS	**Valsamata**	**2.20**	**333**	*e*Pn	**Pn**	**13 32 08.0**	**+1.0**
VLS				S	**Sn**	**13 32 35.4**	**+1.1**
VLS				*e*Sn	**Sn**	**13 32 36.7**	**+2.4**
ATH	**Athens Observa**	**2.28**	**40**	*e*PN	**Pn**	**13 32 08.1**	**-0.1**
ATH	**Athens Observa**	**2.28**	**40**	*e*Pn	**Pn**	**13 32 08.1**	**-0.1**
ATHU	**Athens Univers**	**2.31**	**41**	P	**Pn**	**13 32 08.0**	**-0.6**
ATHU	**Athens Univers**	**2.31**	**41**	P	**Pn**	**13 32 08.0**	**-0.6**
PTL	**Penteli**	**2.42**	**41**	*e*PN	**Pn**	**13 32 11.0**	**+1.0**
PTL				*e*SN	**Sn**	**13 32 41.1**	**+1.4**
PTL	**Penteli**	**2.42**	**41**	*e*Pn	**Pn**	**13 32 11.0**	**+1.0**
PTL				*e*Sn	**Sn**	**13 32 41.1**	**+1.4**
LKR	**Lokris**	**2.58**	**20**	*e*PN	**Pn**	**13 32 13.3**	**+1.0**
LKR	**Lokris**	**2.58**	**20**	P	**Pn**	**13 32 11.3**	**-1.0**
LKR				S	**Sn**	**13 32 45.3**	**+1.6**
LKR	**Lokris**	**2.58**	**20**	P	**Pn**	**13 32 11.3**	**-1.0**
LKR	**Lokris**	**2.58**	**20**	*e*Pn	**Pn**	**13 32 13.3**	**+1.0**
LKR				S	**Sn**	**13 32 45.3**	**+1.6**
EVR	**Evrytania**	**2.69**	**359**	*e*PN	**Pn**	**13 32 14.5**	**+0.8**
EVR	**Evrytania**	**2.69**	**359**	*e*Pn	**Pn**	**13 32 14.5**	**+0.8**
AGG	**Agios Georgios**	**2.81**	**7**	P	**Pn**	**13 32 17.8**	**+2.3**
AGG	**Agios Georgios**	**2.81**	**7**	P	**Pn**	**13 32 17.8**	**+2.3**
LAST	**Lasithi**	**3.12**	**109**	P	**Pn**	**13 32 18.1**	**-1.6**
LAST	**Lasithi**	**3.12**	**109**	P	**Pn**	**13 32 18.1**	**-1.6**
THL	**Klokotos Trika**	**3.33**	**2**	*e*PB	**Pn**	**13 32 24.2**	**+1.6**
KEK	**Kerkira**	**3.85**	**335**	P	**Pn**	**13 32 28.9**	**-0.8**
KEK	**Kerkira**	**3.85**	**335**	P	**Pn**	**13 32 28.9**	**-0.8**
KRUS	**Krusevo**	**5.16**	**355**	*e*Pn	**Pn**	**13 32 46.0**	**-1.7**
KRUS				*e*Sg	**Sn**	**13 33 44.5**	**-2.8**
KRUS	**Krusevo**	**5.16**	**355**	*e*Pn	**Pn**	**13 32 45.9**	**-1.8**
STON	**Ston**	**7.38**	**335**	*i* Pn	**Pn**	**13 33 14.3**	**-3.8**
STON				Sn	**Sn**	**13 34 35.0**	**-6.8**

*IDC **08** 13:36:44.8±1.3, 32.°57N×139.°16E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.5/26, mbtmp3.9/4, ML3.0/2, Error ellipse: s-maj=35.9km s-min=14.3km az=114.0*
*ISCJB **08** 13:36:45.7±0.7, 33.°16N±0.°04×140.°89E±0.°06, h66km±10km, mb4.0/2, Error ellipse: s-maj=9.0km s-min=6.3km az=1.4*
*JMA **08** 13:36:46.2±0.1, 33.°21N×140.°90E, h55km±5km, M3.4*
ISC 08 13:36:46.9±0.8, 33.°17N±0.°04×140.°89E±0.°07, h53km±12km, n21, σ0.°94/35, mb4.0/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.90**	**267**	P	**Pn**	**13 37 03.3**	**-0.1**
JHJ2				S	**Sn**	**13 37 16.2**	**+0.7**
JHJ	**Hachijo jima 2**	**0.93**	**267**	Pn	**Pn**	**13 37 03.3**	**-0.4**
	188nm,0.3s,baz=148,slow=6.2,SNR=141						
JHJ				Sn	**Sn**	**13 37 16.1**	**-0.1**
	234nm,0.3s,baz=233,slow=24,SNR=6.5						
JMY	**Miyakejima3**	**1.46**	**309**	P	**Pn**	**13 37 10.8**	**-0.1**
JMY				S	**Sn**	**13 37 27.8**	**-1.2**
BSO1	**Boso 1**	**1.48**	**3**	P	**Pn**	**13 37 10.4**	**-0.9**
BSO2	**Boso 2**	**1.58**	**356**	S	**Sn**	**13 37 31.9**	**-0.1**
BSO3	**Boso 3**	**1.66**	**349**	P	**Pn**	**13 37 13.0**	**-0.7**
BSO3				S	**Sn**	**13 37 33.2**	**-0.6**
JKO	**Kozu shima**	**1.78**	**305**	P	**Pn**	**13 37 15.5**	**+0.2**
JKO				S	**Sn**	**13 37 36.2**	**-0.6**
BSO4	**Boso 4**	**1.88**	**346**	P	**Pn**	**13 37 16.4**	**-0.2**
BSO4				S	**Sn**	**13 37 39.9**	**+0.8**
JIM2	**Oshima 3**	**1.96**	**322**	P	**Pn**	**13 37 17.5**	**-0.3**
JIM2				S	**Sn**	**13 37 40.0**	**-1.3**
JIZS	**Izushimoda**	**2.28**	**313**	P	**Pn**	**13 37 22.6**	**+0.5**
JIZS				S	**Sn**	**13 37 48.4**	**-0.5**
JOD2	**Odawara 2**	**2.57**	**325**	P	**Pn**	**13 37 26.0**	**-0.1**
JOD2				S	**Sn**	**13 37 53.8**	**-2.3**
TK04	**Tokai 4**	**2.79**	**297**	S	**Sn**	**13 38 01.3**	**-0.2**
TK01	**Tokai 1**	**2.82**	**283**	S	**Sn**	**13 38 02.2**	**-0.1**
SHZ3	**Shizuoka 3**	**2.92**	**311**	P	**Pn**	**13 37 32.8**	**+1.9**
JYN	**Shimob**	**3.03**	**321**	P	**Pn**	**13 37 33.4**	**+1.1**
JYN				S	**Sn**	**13 38 08.8**	**+1.4**
JRY	**Ryogami san**	**3.28**	**331**	P	**Pn**	**13 37 36.6**	**+0.8**
JRY				S	**Sn**	**13 38 12.0**	**-1.6**
MJAR	**Matsushiro Arr**	**4.02**	**328**	Pn	**Pn**	**13 37 47.7**	**+1.7**
	1.9nm,0.3s,baz=151,slow=12,SNR=21						
MJAR				Sn	**Sn**	**13 38 35.2**	**+3.3**
	1.3nm,0.3s,baz=142,slow=22,SNR=5.2						
MAT	**Matsushiro**	**4.03**	**328**	P	**Pn**	**13 37 47.2**	**+1.2**
MAT				S	**Sn**	**13 38 33.1**	**+1.2**
CBIJ	**Chichi jima**	**6.15**	**169**	Pn	**Pn**	**13 38 14.8**	**-0.5**
	0.8nm,0.3s,baz=275,slow=21,SNR=4.6						
CBIJ				Sn	**Sn**	**13 39 19.4**	**-4.9**
	2.6nm,0.3s,baz=78,slow=22,SNR=3.3						
WRA	**Warramunga Arr**	**53.18**	**188**	P	**P**	**13 45 59.2**	**-0.5**
	1.3nm,0.5s,mb4.1,baz=4.1,slow=7.6,SNR=39						
ASAR	**Alice Springs**	**56.91**	**188**	P	**P**	**13 46 26.1**	**-0.3**
	0.6nm,0.6s,mb3.8,baz=15,slow=11,SNR=13						

PRU 08 13:39:14.2, 50.°42N×19.°22E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.42**	**118**	*e*Pg	Pg	13 39 22.8	+0.5
OJC				*e*Sg	Sg	13 39 28.3	+0.6
OKC	**Ostrava-Krasne**	**0.90**	**230**	*e*PG	Pg	13 39 31.3	-0.2
OKC				*e*SG	Sg	13 39 43.6	+0.4
	comp=Z,6.3nm,0.4s						
NIE	**Niedzica**	**1.23**	**144**	*e*Pg	Pg	13 39 36.9	-0.8
NIE				*e*Sg	Sg	13 39 52.0	-1.5
NIE	**Niedzica**	**1.23**	**144**	*e*Pg	Pg	13 39 36.9	-0.8
DPC	**Dobruska-Polom**	**1.86**	**269**	*e*PG	Pg	13 39 48.0	-1.8
DPC				*e*SG	Sg	13 40 13.4	-0.4
	comp=Z,3.8nm,0.8s						
KHC	**Kasperske Hory**	**3.88**	**253**	*e*SG	Sg	13 41 18.5	-0.2

IDC 08 13:41:24.9±57.0, 18.°41S×170.°46W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=1127.0km s-min=200.1km az=83.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.08**	**243**	P	P	13 49 41.5	-1.5
	0.7nm,0.5s,baz=73,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**51.92**	**254**	P	P	13 50 36.0	+0.2
	0.9nm,0.7s,baz=93,slow=9.6,SNR=9.5						
WRA	**Warramunga Arr**	**51.96**	**259**	P	P	13 50 36.8	+0.7
	1.2nm,0.8s,baz=92,slow=6.4,SNR=13						

*IDC **08** 14:03:23.3±2.0, 13.°27N×124.°83E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, ML4.5/1, Error ellipse: s-maj=78.5km s-min=24.1km az=55.0*
*ISCJB **08** 14:03:27.7±0.8, 12.°72N±0.°05×123.°60E±0.°04, h26km±8km, mb3.6/3, Error ellipse: s-maj=8.7km s-min=6.7km az=161.0*
*MAN **08** 14:03:27, 12.°71N×123.°58E, h17km, mb4.6, ML3.5, MS3.4*
ISC 08 14:03:27.5±0.8, 12.°74N±0.°04×123.°59E±0.°04, h16km±6km, n17, σ0.°98/23, mb3.6/3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.38**	**175**	*e*P	**Pg**	**14 03 34.1**	**-1.1**
MMPH				*e*S	**Sg**	**14 03 41.1**	**+0.7**
PVCP	**Virac**	**1.02**	**33**	*e*P	**Pb**	**14 03 44.8**	**-1.9**
AUQP	**San Andres**	**1.07**	**303**	*e*P	**Pb**	**14 03 47.7**	**+0.1**
AUQP				*e*S	**Sb**	**14 04 05.6**	**+4.3**
CNP	**Catarman**	**1.07**	**102**	*e*P	**Pb**	**14 03 47.1**	**-0.5**
CNP				*e*S	**Sb**	**14 04 02.3**	**+1.0**
RCP	**Roxas**	**1.43**	**215⇑**	*e*P	**Pn**	**14 03 51.5**	**-1.2**
RCP				*e*S	**Sn**	**14 04 12.0**	**+0.7**
OTRP	**Odiongan**	**1.58**	**257**	*e*P	**Pn**	**14 03 55.0**	**+0.2**
OTRP				*e*S	**Sn**	**14 04 14.2**	**-0.6**
KALP	**Kalibo**	**1.61**	**230**	*e*P	**Sn**	**14 04 13.8**	**-2.0**
BOAC	**Boac**	**1.85**	**293**	*e*P	**Pn**	**14 03 59.2**	**+0.7**
BOAC				*e*S	**Sn**	**14 04 21.6**	**0.0**
GUIM	**Jordan**	**2.31**	**205**	*e*P	**Pn**	**14 04 06.4**	**+1.5**
SJMP	**San Jose**	**2.43**	**264**	*e*P	**Pn**	**14 04 07.2**	**+0.7**
MSLP	**Maasin**	**2.87**	**154**	*e*P	**Pn**	**14 04 20.1**	**+7.6**
TGY	**Tagaytay City**	**2.92**	**298**	Pn	**Pg**	**14 04 23.8**	**+0.4**
	34nm,0.3s,baz=128,slow=6.9,SNR=6.2						
CUYO	**Cuyo Island**	**3.14**	**234**	*e*P	**Pn**	**14 04 16.2**	**-0.1**
ENPP	**El Nido**	**4.35**	**250**	*e*P	**Pn**	**14 04 33.3**	**+0.3**
WRA	**Warramunga Arr**	**34.15**	**162**	P	**P**	**14 10 10.4**	**-1.5**
	0.3nm,0.6s,mb3.4,baz=346,slow=8.8,SNR=5.9						
ASAR	**Alice Springs**	**37.56**	**164**	P	**P**	**14 10 42.1**	**+1.0**
	0.3nm,0.5s,mb3.3,baz=339,slow=6.9,SNR=14						
MKAR	**Makanchi Array**	**48.49**	**323**	P	**P**	**14 12 10.4**	**+1.0**
	1.3nm,1.0s,mb3.9,baz=124,slow=6.6,SNR=5.4						

MAN 08 14:08:58, 17.°48N×122.°47E, h30km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.42**	**186**	*e*P	Pb	14 09 07.9	+0.8
PALP				*e*S	Sb	14 09 16.9	+3.6
CAUP	**Cauayan**	**0.82**	**230**	*e*P	Pn	14 09 14.9	+1.4
CAUP				*e*S	Sb	14 09 25.5	+1.1
APYP	**Conner**	**1.23**	**288**	*e*P	Pn	14 09 18.6	-0.7
APYP				*e*S	Sn	14 09 35.7	+0.9
ABRA	**Dolores**	**1.69**	**276**	*e*P	Pn	14 09 26.1	+0.6
BALP	**Baler**	**1.93**	**207**	*e*P	Pn	14 09 31.0	+2.2

*IDC **08** 14:10:07.8±2.0, 6.°45S×129.°94E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/17, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=73.5km s-min=27.6km az=77.0*
*NEIC **08** 14:10:12.1±1.5, 6.°53S×130.°16E, h35km, Error ellipse: s-maj=41.4km s-min=17.0km az=70.0*
ISC 08 14:10:17.4±3.1, 7.°0S±0.°2×129.°8E±0.°2, h35km, n6, σ1.°32/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.72**	**200**	Pn	**Pn**	**14 13 04.9**	**+2.6**
	0.1nm,0.3s,baz=53,slow=15,SNR=14						
FITZ				Sn	**Sn**	**14 15 11.6**	**-0.4**
	0.2nm,0.3s,baz=82,slow=21,SNR=4.9						
WRAB	**Tennant Creek**	**13.55**	**162**	*e*Pn	**Pn**	**14 13 25.7**	**-1.5**
	2.7nm,0.7s						
WRAB				*e*Sn	**Sn**	**14 15 52.9**	**-3.6**
WRA	**Warramunga Arr**	**13.55**	**162**	Pn	**Pn**	**14 13 27.6**	**+0.3**
	0.4nm,0.3s,baz=342,slow=14,SNR=26						
WRA				Sn	**Sn**	**14 15 57.0**	**+0.3**
	0.2nm,0.3s,baz=332,slow=22,SNR=4.8						
WB2	**Warramunga Arr**	**13.56**	**162**	*e*Pn	**Pn**	**14 13 26.8**	**-0.5**
ASAR	**Alice Springs**	**16.99**	**167**	P	**Pn**	**14 14 14.2**	**+1.8**
	0.2nm,0.3s,baz=349,slow=9.3,SNR=19						
MKAR	**Makanchi Array**	**68.16**	**327**	P	**P**	**14 21 07.2**	**-6.8**
	0.4nm,0.7s,baz=126,slow=7.3,SNR=3.3						

*ISCJB **08** 14:12:49.5±0.9, 52.°00N±0.°03×177.°59W±0.°03, h16km±6km, mb4.8/214, MS4.1/44, Error ellipse: s-maj=5.7km s-min=2.5km az=11.8*
*NEIC **08** 14:12:50.3±1.4, 51.°96N×177.°63W, h12km±8km, mb5.0/159, MS4.2/3, ML4.7(AEIC), Error ellipse: s-maj=5.3km s-min=2.6km az=187.0*
*BGS **08** 14:12:50.7±2.0, 51.°99N×178.°30E, h15km±999km, mb5.1*
*GCMT **08** 14:12:50.3±0.3, 52.°08N×177.°57W, h22km±1km, MW4.9/72, Moment Tensor Solution. s15,c21; s72,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.12; $M_{\theta\theta}$1.52±.10; $M_{\phi\phi}$-1.42±.10; $M_{r\theta}$0.25±.16; $M_{\theta\phi}$-1.99±.07; $M_{\phi r}$-0.85±.17; Best double couple: $M_0$2.63000×10^{16} NP1:ϕ_s72.00000°, δ70.00000°, λ-178.00000°. NP2: ϕ_s341.00000°, δ88.00000°, λ-20.00000°. Principal axes: T 2.6610, Plg13.0000°, Azm28.0000°; N -0.0630, Plg70.0000°, Azm157.0000°; P -2.5980, Plg15.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **08** 14:12:52.3±1.1, 52.°02N×177.°59W, h33km, mb5.1/92, MS4.0/14 Error ellipse: s-maj=7.5km s-min=4.6km az=88.7*
*IDC **08** 14:12:53.3±2.0, 52.°05N×177.°66W, h31km±13km, mb4.5/26, mb1 4.7/28, mb1mx4.6/33, mbtmp4.6/28, ML4.7/2, MS4.0/24, Ms1 4.0/24, ms1mx4.0/31, Error ellipse: s-maj=16.7km s-min=9.6km az=160.0*
*BJI **08** 14:12:53.4, 51.°79N×178.°54W, h11km, mB4.9/19, mb4.8/31, Ms4.5/25, Ms7 4.2/25*
*SZGRF **08** 14:12:55.8, 51.°96N×178.°97W, h33km, mb5.1, Andreanof Islands, Aleutian Islands, United States*
*DJA **08** 14:12:55, 52.°48N×177.°72W, h10km, mb4.8/7*
ISC 08 14:12:52.5±1.0, 52.°04N±0.°03×177.°59W±0.°03, h22km±6km, h41km±3.2km; pP-P, n858, σ0.°77/856, mb4.8/214, MS4.1/44, 219C-204D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.94**	**86**	*e*P	**Pb**	**14 13 07.7**	**-2.4**
ATKA	**Atka Island**	**2.10**	**84**	P	**Pn**	**14 13 24.4**	**-1.8**
ATKA				S	**Sn**	**14 13 50.8**	**-0.7**
SMY	**Shemya**	**5.14**	**281**	*e*P	**Pn**	**14 14 04.1**	**-3.9**
SMY	**Shemya**	**5.14**	**281**	P	**Pn**	**14 14 07.0**	**-1.0**
SMY				S	**Sn**	**14 15 06.3**	**-0.2**
NIKO	**Nikolski**	**5.41**	**77**	P	**Pn**	**14 14 11.4**	**-0.3**
NIKO				S	**Sn**	**14 15 17.0**	**+3.7**
UNV	**Unalaska Valle**	**6.94**	**71**	*e*Pn	**Pn**	**14 14 32.1**	**-0.5**
AKUT	**Akutan**	**7.42**	**69**	*e*Pn	**Pn**	**14 14 39.4**	**+0.2**
FALS	**False Pass**	**8.91**	**66**	*e*Pn	**Pn**	**14 15 01.6**	**+1.9**
SDPT	**Sand Point**	**10.67**	**65**	*e*Pn	**Pn**	**14 15 24.8**	**+1.1**
CHGN	**Chignik**	**12.00**	**62**	*e*Pn	**Pn**	**14 15 42.5**	**+0.5**
TNA	**Tin City**	**14.42**	**16**	*e*Pn	**Pn**	**14 16 15.0**	**+0.1**
	60nm,1.0s						
PET	**Petropavlovsk**	**14.48**	**283**	*e*P	**Pn**	**14 16 15.8**	**0.0**
PET				pmax	pmax		
	comp=Z,23nm,0.8s						
PET				MLR	MLR		
	comp=Z,700nm,20.0s						
PET	**Petropavlovsk**	**14.48**	**283**	*e*Pn	**Pn**	**14 16 14.8**	**-1.0**
OHAK	**Old Harbor**	**14.95**	**60**	*e*Pn	**Pn**	**14 16 21.6**	**-0.5**
PEA0B	**Petropavlovsk-**	**15.05**	**284**	*e*Pn	**Pn**	**14 16 22.7**	**-0.7**
PETK	**Petropavlovsk-**	**15.05**	**284**	Pn	**Pn**	**14 16 23.0**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=84,slow=19,SNR=27						
PETK				LR	LR	14 21 45.4	
	comp=Z,336nm,20.7s,baz=301,slow=36						
PETK	**Petropavlovsk-**	**15.05**	**284**	Pn	**Pn**	**14 16 23.0**	**-0.4**
PETK				LR	LR	14 21 45.4	
SVW2	**Sparrevohn**	**15.07**	**44**	*e*P	**Pn**	**14 16 24.6**	**+0.9**
KDAK	**Kodiak Island**	**15.43**	**58**	P	**Pn**	**14 16 31.4**	**+3.0**
	comp=Z,2μm,0.7s,SNR=8.5						
KDAK	**Kodiak Island**	**15.43**	**58**	*i* P	**Pn**	**14 16 27.5**	**-0.9**
KDAK	**Kodiak Island**	**15.43**	**58**	Pn	**Pn**	**14 16 29.2**	**+0.8**
	comp=Z,11nm,0.3s,baz=263,slow=5.4,SNR=43						
KDAK				LR	LR	14 23 12.5	
	comp=Z,2μm,18.9s,baz=244,slow=40						
KDAK	**Kodiak Island**	**15.43**	**58**	*e*Pn	**Pn**	**14 16 27.3**	**-1.1**
	comp=Z,193nm,0.8s						
TTA	**Tatalina**	**15.82**	**38**	*e*P	**Pn**	**14 16 37.7**	**+4.2**
TTA	**Tatalina**	**15.82**	**38**	*e*P	**Pn**	**14 16 39.0**	**+5.5**
RSO	**Redoubt South**	**16.08**	**49**	*e*P	**Pn**	**14 16 40.9**	**+4.1**
PPLA	**Purkeypile**	**17.32**	**41**	*e*P	**Pn**	**14 16 56.3**	**+3.9**
	comp=Z,431nm,1.2s						

SEW	**Seward**	**17.54**	**52**	*e*P	**Pn**	**14 16 54.7**	**-0.5**
	comp=Z,129nm,0.7s						
CHUM	**Lake Minchumin**	**17.74**	**38**	*e*Pn	**Pn**	**14 16 58.8**	**+1.2**
	comp=Z,61nm,0.8s						
BILL	**Bilibino**	**17.85**	**340**	*c i*P	**Pn**	**14 16 58.8**	**-0.1**
BILL				*e*S	**Sn**	**14 20 16.4**	**-0.6**
BILL				pmax	pmax		
	comp=Z,55nm,1.6s						
BILL				MLR	MLR		
	comp=Z,400nm,17.0s						
BILL	**Bilibino**	**17.85**	**340**	*e*P	**Pn**	**14 16 58.8**	**-0.2**
	comp=Z,48nm,1.1s						
PMR	**Palmer**	**18.12**	**47**	*e*P	**Pn**	**14 17 02.9**	**+0.5**
PMR	**Palmer**	**18.12**	**47**	*e*P	**Pn**	**14 17 04.2**	**+1.8**
	comp=Z,51nm,1.4s						
KTH	**Kantishna Hill**	**18.13**	**40**	*e*Pn	**Pn**	**14 17 03.1**	**+0.7**
	comp=Z,324nm,1.0s						
TRF	**Thorofare Moun**	**18.34**	**41**	*e*P	**Pn**	**14 17 05.5**	**+0.6**
	comp=Z,126nm,0.8s						
BPAW	**Bear Paw Mtn.**	**18.36**	**39**	*e*P	**Pn**	**14 17 05.1**	**-0.1**
	comp=Z,128nm,0.8s						
MCK	**McKinley**	**19.00**	**41**	*e*P	**Pn**	**14 17 12.7**	**-0.3**
MCK				pmax	pmax		
	comp=Z,89nm,1.0s						
MCK	**McKinley**	**19.00**	**41**	*e*Pn	**Pn**	**14 17 12.7**	**-0.3**
	comp=Z,89nm,1.0s						
SEY	**Seymchan**	**19.27**	**316⇑**	*i*P	**Pn**	**14 17 15.1**	**-1.2**
DIV	**Divide**	**19.55**	**50**	*e*Pn	**Pn**	**14 17 19.0**	**-0.6**
	comp=Z,229nm,1.3s						
COLA	**College**	**19.92**	**38**	P	**Pn**	**14 17 21.8**	**-2.2**
COLA				pmax	pmax		
	comp=Z,80nm,1.0s						
COLA	**College**	**19.92**	**38**	*e*P	**Pn**	**14 17 21.7**	**-2.3**
	comp=Z,80nm,0.9s						
BMRM	**Bremner River**	**20.07**	**51**	*e*P	**P**	**14 17 24.2**	**+0.3**
	comp=Z,279nm,1.2s						
PAX	**Paxson**	**20.18**	**45**	*e*P	**P**	**14 17 25.7**	**+0.6**
PAX				pmax	pmax		
	comp=Z,57nm,0.8s						
PAX	**Paxson**	**20.18**	**45**	*e*P	**P**	**14 17 25.7**	**+0.6**
	comp=Z,57nm,0.8s						
COLD	**Coldfoot**	**20.29**	**31**	*e*P	**P**	**14 17 27.2**	**+0.9**
	comp=Z,111nm,0.9s						
MENT	**Mentasta**	**20.94**	**45**	*e*P	**P**	**14 17 34.0**	**+0.7**
PNL	**Peninsula**	**22.48**	**55**	*e*P	**P**	**14 17 48.3**	**-1.5**
	comp=Z,62nm,0.8s,mb5.1						
EGAK	**Eagle**	**22.55**	**42**	*e*P	**P**	**14 17 50.4**	**-0.1**
	comp=Z,172nm,0.8s,mb5.5						
DAWY	**Dawson**	**23.10**	**44**	*e*P	**P**	**14 17 56.9**	**+0.5**
HYT	**Haines Junctio**	**23.49**	**52**	*e*P	**P**	**14 18 01.3**	**+0.9**
SKAG	**Skagway**	**24.55**	**56**	*e*P	**P**	**14 18 10.7**	**+0.6**
	comp=Z,15nm,0.8s,mb4.6						
SIT	**Sitka**	**24.71**	**62**	*e*P	**P**	**14 18 07.4**	**-4.2**
SIT				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
SIT	**Sitka**	**24.71**	**62**	*e*P	**P**	**14 18 07.4**	**-4.2**
	comp=Z,16nm,0.9s,mb4.5						
YSS	**Yuzh-Sakhalins**	**26.02**	**275**	*e*P	**P**	**14 18 30.3**	**+6.8**
INK	**Inuvik**	**26.48**	**35**	*e*P	**P**	**14 18 27.8**	**+0.3**
INK				pmax	pmax		
	comp=Z,53nm,0.9s						
INK	**Inuvik**	**26.48**	**35**	P	**P**	**14 18 28.4**	**+0.9**
	comp=Z,40nm,0.8s,mb5.0,baz=250,slow=8.6,SNR=200						
INK				ScP	ScP	14 25 27.9	-2.1
	comp=Z,3.5nm,1.2s,baz=271,slow=8.8,SNR=4.1						
INK				LR	LR	14 29 47.6	
	comp=Z,558nm,18.9s,MS4.1,baz=101,slow=38						
INK	**Inuvik**	**26.48**	**35**	*e*P	**P**	**14 18 27.8**	**+0.3**
	comp=Z,53nm,0.8s,mb5.1						
DLBC	**Dease Lake**	**27.36**	**58**	P	**P**	**14 18 37.1**	**+1.6**
	comp=Z,1.4nm,0.9s,mb3.5,baz=330,slow=23,SNR=3.2						
DLBC				LR	LR	14 30 31.8	
	comp=Z,663nm,19.1s,MS4.2,baz=42,slow=39						
DLBC	**Dease Lake**	**27.36**	**58

LON **Longmire** 35.91 76 eP P 14 19 50.9 +0.2
comp=Z,17nm,0.7s,mb5.1
F04A **Amboy** 35.96 77 ⇑P P 14 19 51.6 +0.5
baz=36,SNR=8.9
B07A **Winthrop** 36.10 72 ⇓P P 14 19 52.3 0.0
baz=36,SNR=12
COR **Corvallis** 36.12 80 eP P 14 19 53.2 +0.8
COR pmax pmax
comp=Z,80nm,1.2s,mb5.5
COR **Corvallis** 36.12 80 eP P 14 19 53.2 +0.7
comp=Z,80nm,1.2s,mb5.5
D06A **Cle Elum** 36.27 75 ⇓P P 14 19 54.0 +0.3
baz=36,SNR=7.7
G04A **Mulino** 36.29 78 ⇓P P 14 19 54.7 +0.7
baz=36,SNR=6.4
A08A **Turner Farm, O** 36.36 71 ⇓P P 14 19 54.2 -0.4
baz=36,SNR=8.9
ETW **Entiat** 36.38 74 eP P 14 19 55.0 +0.3
C07A **Waterville** 36.50 73 ⇓P P 14 19 55.4 -0.3
baz=36,SNR=9.0
E06A **Yakima** 36.51 76 ⇑P P 14 19 56.3 +0.5
baz=36,SNR=8.2
B08A **Colville Reser** 36.61 72 ⇑P P 14 19 56.3 -0.3
baz=36,SNR=9.8
HOOD **Mount Hood Mea** 36.73 78 eP P 14 19 59.4 +1.7
H04A **Detroit Lake** 36.74 79 ⇓P P 14 19 58.5 +0.7
baz=37,SNR=27
A09A **Danville** 36.76 71 ⇑P P 14 19 57.9 0.0
baz=37,SNR=8.3
D07A **Quincy** 36.79 74 ⇓P P 14 19 58.2 0.0
baz=37,SNR=7.6
C08A **Higginbotham F** 37.05 73 ⇑P P 14 19 59.8 -0.6
baz=37,SNR=5.1
E07A **Sunnyside** 37.18 75 ⇓P P 14 20 01.7 +0.2
baz=37
B09A **Rice** 37.27 71 ⇑P P 14 20 01.8 -0.4
baz=37,SNR=8.0
G06A **Carlson Farm,** 37.39 77 ⇓P P 14 20 03.7 +0.4
baz=37,SNR=6.8
HUMO **Hull Mountain** 37.40 82 eP P 14 20 05.3 +1.9
comp=Z,19nm,1.0s,mb4.9
RSW **Rattlesnake Hi** 37.42 75 eP P 14 20 04.3 +0.8
OD2 **Odessa Site #2** 37.44 73 eP P 14 20 03.6 -0.1
HAWA **Hanford** 37.45 75 eP P 14 20 04.5 +0.6
comp=Z,48nm,0.8s,mb5.4
F07A **Phinny Hill Vi** 37.47 76 ⇑P P 14 20 04.5 +0.5
baz=37,SNR=12
D08A **Wollman Farm,** 37.48 74 ⇓P P 14 20 03.8 -0.3
baz=37,SNR=8.7
C09A **Chrisman Ranch** 37.50 72 ⇓P P 14 20 03.6 -0.5
baz=37
E08A **Dider Farm, El** 37.69 75 ⇓P P 14 20 05.3 -0.4
baz=38,SNR=7.3
EDM **Edmonton** 37.83 62 eP P 14 20 07.2 +0.3
H06A **Lindquist Farm** 37.84 78 ⇓P P 14 20 07.4 +0.3
baz=38,SNR=17
D09A **Jones Farm, Ri** 37.84 73 ⇓P P 14 20 06.5 -0.6
baz=38,SNR=5.2
NEW **Newport** 37.95 71 eP P 14 20 07.3 -0.7
NEW pmax pmax
comp=Z,14nm,0.8s
NEW **Newport** 37.95 71 eP P 14 20 07.2 -0.7
comp=Z,14nm,0.8s,mb4.7
YBH **Yreka Blue Hor** 38.05 83 eP P 14 20 10.9 +2.0
YBH pmax pmax
comp=Z,30nm,1.0s
YBH **Yreka Blue Hor** 38.05 83 eP P 14 20 10.9 +2.0
comp=Z,30nm,0.9s,mb5.0
A11A **Hall Mountain,** 38.05 70 ⇓P P 14 20 08.8 -0.1
baz=38,SNR=6.9
CN2 **Changchun** 38.16 281 eP P 14 20 10.4 +0.5
CN2 eS S 14 25 59.1 -2.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,17.0s,MS4.4
CN2 LR LR
comp=E,300nm,17.0s,MS4.4
CN2 LR LR
comp=Z,300nm,18.0s,MS4.2
BOD **Bodaibo** 38.19 306 eP P 14 20 08.0 -1.9
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
F08A **Pendleton** 38.21 75 ⇑P P 14 20 10.3 0.0
baz=38
E09A **Wood Farm, Sta** 38.22 74 ⇓P P 14 20 09.9 -0.4
baz=38
B11A **Sandpoint** 38.30 70 ⇓P P 14 20 10.4 -0.6
baz=38
D10A **Wagner Farm, O** 38.46 73 ⇓P P 14 20 11.4 -0.9
baz=38,SNR=9.9
LNOR **Lincton Mounta** 38.47 75 eP P 14 20 12.1 -0.3
K05A **Summer Lake** 38.59 81 ⇓P P 14 20 15.2 +1.8
baz=38,SNR=22
I07A **Izee** 38.69 78 ⇑P P 14 20 14.8 +0.6
baz=38,SNR=40
F09A **S2 Ranch, Elgi** 38.78 75 ⇑P P 14 20 15.0 0.0
baz=39
WDC **Whiskeytown Da** 38.82 85 eP P 14 20 16.7 +1.3
WDC pmax pmax
comp=Z,19nm,1.0s,mb4.8
WDC **Whiskeytown Da** 38.82 85 eP P 14 20 16.7 +1.3
comp=Z,20nm,1.0s,mb4.8
RES **Resolute Bay** 38.82 25 P P 14 20 14.5 -0.5
RES pmax pmax
comp=Z,18nm,1.0s,mb4.8
RES **Resolute Bay** 38.82 25 P P 14 20 14.5 -0.5
comp=Z,18nm,1.0s,mb4.8,baz=255,slow=10.0,SNR=4.0
RES **Resolute Bay** 38.82 25 eP P 14 20 15.4 +0.4
comp=Z,31nm,1.1s,mb5.0
H08A **Prairie City** 38.95 77 ⇓P P 14 20 16.5 +0.1
baz=39,SNR=14
D11A **Klaveano Farm,** 39.02 72 ⇑P P 14 20 15.6 -1.4
baz=39,SNR=7.8
CBIJ **Chichi jima** 39.04 246 P P 14 20 17.9 +0.6
comp=Z,53nm,0.6s,mb5.4,baz=320,slow=18,SNR=11
F10A **Beach Ranch, E** 39.04 74 ⇓P P 14 20 16.7 -0.5
baz=39,SNR=7.4
G09A **Cove** 39.08 75 ⇓P P 14 20 17.4 -0.1
baz=39,SNR=30
MOD **Modoc** 39.42 82 eP P 14 20 21.8 +1.4
E11A **Bogner Ranch,** 39.45 73 ⇓P P 14 20 19.2 -1.3
baz=39,SNR=6.9
H09A **Durkee** 39.48 76 ⇓P P 14 20 21.1 +0.2
baz=39,SNR=7.9
BSMT **Bassoo Peak** 39.51 70 eP P 14 20 20.9 -0.1
BMO **Blue Mountains** 39.59 76 eP P 14 20 21.8 0.0
comp=Z,19nm,0.8s,mb4.9
J08A **Circle Bar Ran** 39.71 78 ⇓P P 14 20 23.2 +0.4
baz=40,SNR=15
C13A **Hot Springs** 39.72 70 ⇓P P 14 20 21.9 -0.9
baz=40,SNR=6.3
F11A **Grangeville** 39.72 74 ⇓P P 14 20 21.8 -1.1
baz=40,SNR=7.1
A14A **Double T Ranch** 39.74 68 ⇓P P 14 20 22.0 -1.0
baz=40,SNR=7.7
E12A **Beaver Dam Sad** 39.79 73 ⇓P P 14 20 22.4 -1.0
baz=40,SNR=14
I09A **Lost Marbles R** 39.81 77 ⇓P P 14 20 23.5 -0.1
baz=40,SNR=11
JTMT **Jette** 39.86 70 eP P 14 20 23.9 -0.1
G11A **Walters Elk Ra** 39.92 74 ⇓P P 14 20 23.7 -0.8
baz=40,SNR=17
D13A **Huson** 40.09 71 ⇓P P 14 20 24.6 -1.3
baz=40,SNR=5.7
WVOR **Wild Horse Val** 40.13 80 eP P 14 20 26.8 +0.5
WVOR pmax pmax
comp=Z,36nm,0.9s,mb5.1
WVOR **Wild Horse Val** 40.13 80 eP P 14 20 26.8 +0.4
comp=Z,36nm,0.9s,mb5.1
A15A **Johnson Ranch,** 40.13 68 ⇑P P 14 20 24.5 -1.7
baz=40
SWMT **Swartz Lake** 40.15 70 eP P 14 20 25.2 -1.1
comp=Z,5.5nm,1.3s,mb4.1
J09A **Fry Pan Ranch,** 40.15 78 ⇑P P 14 20 26.9 +0.5
baz=40,SNR=32
OHCM **Honcut** 40.21 86 eP P 14 20 27.8 +0.8
I10A **Payette** 40.31 76 ⇑P P 14 20 28.2 +0.4
baz=40,SNR=5.3
F12A **Elk City** 40.33 73 ⇓P P 14 20 27.2 -0.7
baz=40,SNR=37
KSRS **Korea Array** 40.38 271 P P 14 20 27.5 -1.0
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KSRS MLR MLR
comp=Z,70nm,18.4s,MS3.5
KSRS **Korea Array** 40.38 271 P P 14 20 27.4 -1.0
comp=Z,2.6nm,0.8s,mb4.0,baz=54,slow=7.6,SNR=14
KSRS LR LR 14 37 46.6
comp=Z,70nm,18.4s,MS3.5,baz=228,slow=37
H11A **Donnelly** 40.45 75 ⇓P P 14 20 28.5 -0.4
baz=40,SNR=31
MSO **Missoula** 40.53 71 eP P 14 20 28.6 -1.0
comp=Z,6.9nm,0.9s,mb4.3
B15A **Bradely Ranch,** 40.56 69 ⇓P P 14 20 28.4 -1.4
baz=40,SNR=7.1
SLMT **Seeley Lake** 40.58 70 eP P 14 20 29.0 -0.9
BEKR **Beckwourth** 40.59 84 ⇓P P 14 20 30.6 +0.5
baz=40,SNR=9.8
E13A **Victor** 40.59 72 ⇑P P 14 20 29.0 -1.0
baz=40,SNR=7.0
D14A **Greenough** 40.65 71 ⇑P P 14 20 29.3 -1.3
baz=40,SNR=9.8
A16A **West Butte Ran** 40.80 67 ⇑P P 14 20 29.8 -1.9
baz=41
C15A **Salmond Ranch,** 40.81 69 ⇑P P 14 20 31.3 -0.6
baz=41,SNR=21
F13A **Darby** 40.85 73 ⇑P P 14 20 31.5 -0.7
baz=41,SNR=6.8
CHMT **Chamberlain Mo** 40.89 71 eP P 14 20 31.6 -0.9
I11A **Placerville** 40.92 76 ⇓P P 14 20 32.3 -0.5
baz=41
K10A **MacKenzie Ranc** 41.01 78 ⇓P P 14 20 34.0 +0.5
baz=41,SNR=30
H12A **Diamond D Ranc** 41.22 75 ⇑P P 14 20 34.7 -0.6
baz=41,SNR=17
D15A **Lincoln** 41.25 70 ⇓P P 14 20 34.4 -1.1
baz=41,SNR=5.7
MFID **Camas Ranch** 41.27 77 ⇓P P 14 20 35.4 -0.3
baz=41,SNR=12
PAHR **Pah Rah Range** 41.28 84 eP P 14 20 37.1 +1.3
comp=Z,28nm,0.9s,mb4.9
G13A **Cobalt** 41.29 74 ⇑P P 14 20 35.3 -0.5
baz=41,SNR=28
WCN **Washoe City** 41.30 84 ⇑P P 14 20 37.0 +1.1
baz=41
C16A **Fuhringer Ranc** 41.30 69 ⇓P P 14 20 34.5 -1.3
baz=41,SNR=9.8
A17A **Triple J Farms** 41.31 67 ⇑P P 14 20 34.0 -1.9
baz=41,SNR=7.1
I12A **Atlanta** 41.48 76 ⇓P P 14 20 37.2 -0.2
baz=41,SNR=64
E15A **Deer Lodge** 41.51 71 ⇓P P 14 20 36.5 -1.1
baz=41,SNR=8.3
K11A **Parker Ranch,** 41.52 78 ⇑P P 14 20 37.9 +0.2
baz=41,SNR=13
H13A **Challis** 41.57 74 ⇓P P 14 20 37.5 -0.7
baz=41,SNR=13
B17A **L&G Farms, Che** 41.59 68 ⇓P P 14 20 36.5 -1.7
baz=41,SNR=6.4
L10A **Juniper Basin** 41.65 79 ⇓P P 14 20 39.1 +0.2
baz=42,SNR=29
G14A **Jackson** 41.67 73 ⇓P P 14 20 38.0 -0.9
baz=42
CMB **Columbia Colle** 41.69 86 eP P 14 20 39.2 0.0
CMB pmax pmax
comp=Z,13nm,1.0s,mb4.5
CMB **Columbia Colle** 41.69 86 eP P 14 20 39.2 0.0
comp=Z,13nm,0.9s,mb4.5
J12A **Stokes Ranch,** 41.80 76 ⇓P P 14 20 40.3 +0.2
baz=42,SNR=33
D16A **Dana Ranch, Ca** 41.82 70 ⇑P P 14 20 38.9 -1.2
baz=42
HRY **Holter Researc** 41.83 70 eP P 14 20 39.5 -0.7
ALE **Alert** 41.84 10 P P 14 20 40.0 +0.1
comp=Z,146nm,0.8s,mb5.7,SNR=18
M10A **I.L. Ranch, Tu** 41.94 79 ⇓P P 14 20 41.7 +0.5
baz=42,SNR=16
LRM **Limekiln Ridge** 41.94 72 eP P 14 20 39.8 -1.4
C17A **Wharram Farm,** 41.95 68 ⇓P P 14 20 39.7 -1.5
baz=42,SNR=5.7
WAKR **Walker** 41.98 85 eP P 14 20 42.7 +1.1
E16A **East Helena** 42.01 70 ⇑P P 14 20 40.6 -1.1
baz=42,SNR=7.1
I13A **Wildhorse Cree** 42.02 75 ⇑P P 14 20 41.6 -0.2
baz=42,SNR=60
L11A **Cat Creek Ranc** 42.03 78 ⇓P P 14 20 42.3 +0.3
baz=42,SNR=50
HLID **Hailey** 42.04 76 ⇑P P 14 20 41.9 -0.1
baz=42,SNR=51
HLID **Hailey** 42.04 76 eP P 14 20 42.1 +0.1
comp=Z,24nm,0.9s,mb4.8
H14A **Leadore** 42.07 74 ⇑P P 14 20 41.8 -0.4
baz=42
DLMT **Dillon** 42.11 72 eP P 14 20 42.1 -0.4
comp=Z,5.1nm,0.9s,mb4.2
B18A **Beardsley Farm** 42.12 67 ⇑P P 14 20 40.9 -1.6
baz=42,SNR=8.3
BMN **Battle Mountai** 42.17 81 eP P 14 20 43.7 +0.6
BMN pmax pmax
comp=Z,18nm,0.9s,mb4.7
BMN **Battle Mountai** 42.17 81 eP P 14 20 43.7 +0.7
comp=Z,18nm,0.9s,mb4.7
D17A **Six Diamond Ra** 42.25 69 ⇑P P 14 20 42.4 -1.3
baz=42,SNR=7.2
MCMT **McKenzie Canyo** 42.26 73 eP P 14 20 43.2 -0.5
comp=Z,6.1nm,0.7s,mb4.3
J13A **Cove Ranch, Pi** 42.27 76 ⇑P P 14 20 44.0 +0.1
baz=42,SNR=43
K12A **Draper Farm, C** 42.27 77 ⇓P P 14 20 44.2 +0.2
baz=42,SNR=38
G15A **Dillon** 42.28 73 ⇓P P 14 20 42.7 -1.2
baz=42,SNR=6.2
EGMT **Eagleton** 42.32 67 ⇑P P 14 20 42.6 -1.6
baz=42,SNR=12
EGMT **Eagleton** 42.32 67 eP P 14 20 42.8 -1.4
comp=Z,13nm,1.0s,mb4.5
I14A **Mackay** 42.41 75 ⇓P P 14 20 44.8 -0.1
baz=42,SNR=28
M11A **Holland Ranch,** 42.44 79 ⇑P P 14 20 46.1 +0.8
baz=42,SNR=17
L12A **House Creek Ra** 42.49 78 ⇓P P 14 20 46.2 +0.5
baz=42,SNR=34
H15A **Lima** 42.50 73 ⇓P P 14 20 44.9 -0.8
baz=42,SNR=7.0
BOZ **Bozeman (W)** 42.52 71 ⇓P P 14 20 45.3 -0.6
baz=42,SNR=21
BOZ **Bozeman (W)** 42.52 71 eP P 14 20 45.3 -0.6
BOZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
BOZ **Bozeman (W)** 42.52 71 eP P 14 20 45.3 -0.5
comp=Z,9.4nm,0.8s,mb4.6
E17A **Martinsdale** 42.52 70 ⇓P P 14 20 45.2 -0.7
baz=42
G16A **Moss Hill, Enn** 42.65 72 ⇑P P 14 20 46.2 -0.7
baz=42,SNR=20
O10A **Cortez Mining,** 42.69 81 ⇑P P 14 20 48.3 +1.0
baz=42,SNR=12
J14A **Carey** 42.71 75 ⇑P P 14 20 47.8 +0.4
baz=42,SNR=28
NVAR **Mina Array Bea** 42.73 84 P P 14 20 48.9 +1.2
comp=Z,10nm,0.9s,mb4.6,baz=292,slow=8.3,SNR=51
NVAR PcP PcP 14 22 39.2 +0.3
comp=Z,3.5nm,0.9s,baz=270,slow=4.1,SNR=4.7
NVAR ScP ScP 14 26 27.4 -0.8
comp=Z,0.2nm,0.4s,baz=286,slow=5.5,SNR=4.1
D18A **Linhart Farms,** 42.74 68 ⇑P P 14 20 47.1 -0.5
baz=42
K13A **Stover Farm, H** 42.76 77 ⇑P P 14 20 48.0 +0.2
baz=43
F17A **Fitzpatrick Pl** 42.95 71 ⇓P P 14 20 48.3 -1.1
baz=43,SNR=7.9
M12A **Wells** 42.98 79 ⇑P P 14 20 50.4 +0.8
baz=43,SNR=19
E18A **Harlowton** 43.02 69 ⇓P P 14 20 49.5 -0.4
baz=43,SNR=10.0
QLMT **Earthquake Lak** 43.09 72 eP P 14 20 50.3 -0.2
FFC **Flin Flon** 43.14 55 iP P 14 20 49.5 -1.3
ELK **Elko** 43.19 80 eP P 14 20 52.4 +1.1
ELK pmax pmax
comp=Z,26nm,0.9s
ELK **Elko** 43.19 80 eP P 14 20 52.4 +1.1
comp=Z,26nm,0.9s,mb5.0
G17A **Pierce Place,** 43.22 71 ⇑P P 14 20 51.0 -0.6
baz=43
MTUM **Tungsten Hills** 43.24 86 eP P 14 20 53.5 +1.7
N12A **Clover Valley,** 43.24 79 eP P 14 20 52.0 +0.2
comp=Z,47nm,1.0s,mb5.2
H16A **Russell Place,** 43.27 72 ⇑P P 14 20 51.3 -0.6
baz=43,SNR=15
O11A **Cowboy Ranch,** 43.30 81 ⇓P P 14 20 52.9 +0.6
baz=43,SNR=19
J15A **Blackfoot** 43.31 75 ⇑P P 14 20 52.7 +0.4
baz=43,SNR=7.2
K14A **Jones Ranch, D** 43.37 76 ⇑P P 14 20 52.8 +0.1
baz=43
YMR **Madison River** 43.46 72 eP P 14 20 52.7 -0.7
comp=Z,85nm,1.1s,mb5.4
M13A **Montello** 43.47 78 ⇑P P 14 20 53.8 +0.2
baz=43
M13A **Montello** 43.47 78 eP P 14 20 54.1 +0.5
comp=Z,34nm,1.2s,mb5.0
F18A **Big Timber** 43.49 70 ⇓P P 14 20 53.0 -0.8
baz=43
GCMT **Greycliff** 43.59 70 eP P 14 20 53.4 -1.1
comp=Z,2.5nm,0.8s,mb4.0
P11A **Circle Ranch,** 43.60 81 ⇓P P 14 20 55.4 +0.7
baz=43,SNR=13
YNR **Norris Junctio** 43.60 72 eP P 14 20 54.8 +0.2
comp=Z,17nm,0.9s,mb4.8
L14A **Malta** 43.63 77 ⇑P P 14 20 55.2 +0.3
baz=43,SNR=31
Q10A **Clear Creek Ra** 43.65 83 ⇓P P 14 20 55.8 +0.7
baz=44,SNR=39
YFT **Old Faithful** 43.66 72 eP P 14 20 55.6 +0.5
comp=Z,21nm,1.0s,mb4.8
K15A **Arbon** 43.67 76 ⇑P P 14 20 55.8 +0.6
baz=44,SNR=24
N13A **Wendover, West** 43.75 79 ⇓P P 14 20 56.3 +0.5
baz=44,SNR=7.8
N13A **Wendover, West** 43.75 79 eP P 14 20 56.8 +1.0
comp=Z,37nm,0.9s,mb5.1
O12A **Currie** 43.77 80 ⇑P P 14 20 56.6 +0.5
baz=44,SNR=31
H17A **Grant Village** 43.84 72 ⇑P P 14 20 57.4 +0.8
baz=44,SNR=16
LKWY **Lake** 43.85 72 eP P 14 20 57.8 +1.2
LKWY pmax pmax
comp=Z,17nm,0.9s,mb4.8
LKWY **Lake** 43.85 72 eP P 14 20 57.8 +1.2
comp=Z,18nm,0.8s,mb4.8
J16A **Bone** 43.88 74 ⇑P P 14 20 57.0 +0.2
baz=44,SNR=15
M14A **Sheep Mountain** 43.88 77 ⇑P P 14 20 56.9 0.0
baz=44,SNR=17
VES **Vestal, Richgr** 43.89 88 ⇑P P 14 20 57.0 0.0
baz=44
IMW **Indian Meadow** 43.91 73 eP P 14 20 56.8 -0.3
comp=Z,10nm,0.9s,mb4.6
RRI2 **Red Ridge** 44.01 74 eP P 14 20 58.1 +0.2
comp=Z,12nm,0.8s,mb4.7
R10A **Warm Springs** 44.04 83 ⇓P P 14 20 58.6 +0.3
baz=44
PKM **Peak Mountain** 44.05 89 ⇓P P 14 20 59.4 +1.0
baz=44
HVU **Hansel Valley** 44.06 77 eP P 14 20 58.6 +0.3
HVU pmax pmax
comp=Z,28nm,0.7s,mb5.1
HVU **Hansel Valley** 44.06 77 eP P 14 20 58.6 +0.3
comp=Z,28nm,0.7s,mb5.1
Q11A **Duckwater** 44.09 82 ⇑P P 14 20 59.2 +0.5
baz=44,SNR=22
S10A **Tonopah Range,** 44.09 84 ⇑P P 14 20 59.1 +0.5
baz=44,SNR=29
I17A **Pilgrim Ck.** 44.12 73 ⇓P P 14 20 58.9 +0.1
baz=44
CWC **Cottonwood Cre** 44.12 86 ⇓P P 14 20 59.8 +0.9
baz=44,SNR=6.6
TPAW **Teton Pass** 44.14 74 eP P 14 20 58.9 -0.1
comp=Z,15nm,1.4s,mb4.5
K16A **Soda Springs** 44.15 75 ⇓P P 14 20 59.7 +0.7
baz=44,SNR=16
L15A **Malad City** 44.16 76 ⇑P P 14 20 59.0 -0.1
baz=44,SNR=14
P12A **McGill** 44.16 81 ⇑P P 14 20 59.8 +0.6
baz=44,SNR=23
RLMT **Red Lodge** 44.20 71 ⇓P P 14 20 58.9 -0.5
baz=44,SNR=8.6
RLMT **Red Lodge** 44.20 71 eP P 14 20 59.0 -0.4
comp=Z,18nm,1.1s,mb4.7
GRAC **Grapevine Rang** 44.20 85 ⇓P P 14 21 00.4 +0.8
baz=44
REDW **Red Top Meadow** 44.27 74 eP P 14 21 00.2 +0.2
comp=Z,8.9nm,1.0s,mb4.5
LOHW **Long Hollow** 44.28 73 eP P 14 20 59.8 -0.3
comp=Z,5.2nm,0.8s,mb4.3
N14A **Grayback Hills** 44.37 78 ⇑P P 14 21 01.0 +0.2
baz=44
ISA **Isabella** 44.38 88 ⇑P P 14 21 00.9 -0.1
baz=44,SNR=8.2
ISA **Isabella** 44.38 88 eP P 14 21 01.0 0.0
ISA pmax pmax
comp=Z,13nm,0.9s,mb4.7
ISA **Isabella** 44.38 88 eP P 14 21 01.0 0.0
comp=Z,13nm,0.9s,mb4.7
BGU **Big Grassy Mou** 44.42 78 eP P 14 21 01.1 -0.1
comp=Z,12nm,0.8s,mb4.7
M15A **Larsen Ranch,** 44.44 77 ⇑P P 14 21 01.4 0.0
baz=44,SNR=9.9
R11A **Troy Canyon, C** 44.45 83 ⇑P P 14 21 01.7 +0.2
baz=44,SNR=49
Q12A **Willow Creek R** 44.48 81 ⇑P P 14 21 02.2 +0.5
baz=44,SNR=15
SPUT **South Promonto** 44.53 77 eP P 14 21 02.9 +0.7
comp=Z,20nm,0.9s,mb4.9
I18A **Diamond G Ranc** 44.69 73 ⇓P P 14 21 03.0 -0.3
baz=44,SNR=7.4
P13A **Bates Ranch, G** 44.72 80 ⇓P P 14 21 03.9 +0.3
baz=44,SNR=26
L16A **Fish Haven** 44.72 76 ⇓P P 14 21 03.8 +0.2
baz=44,SNR=22
MPMC **Manual Prospec** 44.73 86 ⇓P P 14 21 04.5 +0.7
baz=45,SNR=11
N15A **Stansbury Isla** 44.74 78 ⇓P P 14 21 03.8 0.0
baz=45,SNR=5.3
FURC **Furnace Creek,** 44.85 85 ⇑P P 14 21 05.2 +0.4
baz=45,SNR=11
J18A **Kendall Valley** 44.86 73 ⇓P P 14 21 04.3 -0.4
baz=45,SNR=12
HWUT **Hardware Ranch** 44.89 76 eP P 14 21 05.3 +0.4
comp=Z,14nm,0.9s,mb4.8
FCC **Fort Churchill** 44.95 47 eP P 14 21 03.7 -1.5
comp=Z,0.4nm,0.8s
LRMC **Laurel Mountai** 44.99 87 ⇑P P 14 21 06.2 +0.3
baz=45
DUG **Dugway** 44.99 79 ⇑P P 14 21 06.1 +0.3
baz=45,SNR=30
DUG **Dugway** 44.99 79 eP P 14 21 06.3 +0.5
DUG pmax pmax
comp=Z,43nm,0.9s,mb5.3
DUG **Dugway** 44.99 79 eP P 14 21 06.3 +0.5
comp=Z,43nm,0.9s,mb5.3
L17A **Cokeville** 45.01 75 ⇑P P 14 21 05.7 -0.2
baz=45
Q13A **Wheeler Ranch,** 45.02 81 ⇓P P 14 21 06.3 +0.3
baz=45,SNR=12
M16A **Huntsville** 45.02 77 ⇑P P 14 21 06.0 -0.1
baz=45,SNR=25
BLG **Laguna Peak** 45.04 90 ⇓P P 14 21 06.5 +0.2
baz=45
R12A **Pony Springs,** 45.06 82 ⇓P P 14 21 06.6 +0.2
baz=45,SNR=22
LAO **LASA Array** 45.06 67 eP P 14 21 05.1 -1.2
comp=Z,5.5nm,0.6s,mb4.6
O15A **The Old Anders** 45.15 78 ⇑P P 14 21 07.3 +0.3
baz=45,SNR=5.3
K18A **Toltan Ranch,** 45.18 74 ⇑P P 14 21 07.3 0.0
baz=45,SNR=13
EDW2 **Edwards Air Fo** 45.20 88 ⇓P P 14 21 07.7 +0.3
baz=45,SNR=8.4
P14A **Drum Mountains** 45.21 79 ⇑P P 14 21 08.0 +0.5
baz=45
U10A **Ash Meadows, A** 45.21 85 ⇓P P 14 21 08.6 +1.0
baz=45
S12A **Delamar Landin** 45.36 83 ⇑P P 14 21 09.8 +1.0
baz=45,SNR=7.9
T11A **Corn Creek, Al** 45.37 83 ⇓P P 14 21 09.3 +0.4
baz=45,SNR=48
BW06 **Boulder Array** 45.39 74 ⇑P P 14 21 08.3 -0.7
baz=45,SNR=49
BW06 **Boulder Array** 45.39 74 eP P 14 21 07.8 -1.2
comp=Z,20nm,0.8s,mb5.0
PDAR **Pinedale Array** 45.39 74 P P 14 21 08.4 -0.6
comp=Z,17nm,0.7s,mb5.0,baz=304,slow=4.1,SNR=160
PDAR ScP ScP 14 26 38.1 -1.0
comp=Z,1.2nm,1.0s,baz=329,slow=2.6,SNR=5.0
PDAR LR LR 14 37 33.0
comp=Z,121nm,20.4s,MS3.8,baz=127,slow=33
N16A **Rees Ranch, Co** 45.40 77 ⇓P P 14 21 09.1 0.0
baz=45
Q14A **Sevier Lake (B** 45.45 80 ⇑P P 14 21 09.8 +0.3

baz=45,SNR=57
M17A Scullys Gap (B 45.51 76 ⇓P P 14 21 09.4 -0.5
baz=45,SNR=15
R13A O'Grain Ranch, 45.54 82 ⇑P P 14 21 10.7 +0.5
baz=45,SNR=18
JLU Jordanelle 45.56 77 eP P 14 21 11.0 +0.6
comp=Z,23nm,0.9s,mb5.1
NLU North Lily Min 45.59 78 eP P 14 21 10.4 -0.1
comp=Z,21nm,0.8s,mb5.1
MWC Mount Wilson 45.59 89 eP P 14 21 10.9 +0.3
MWC pmax pmax
comp=Z,27nm,1.0s,mb5.1
MWC Mount Wilson 45.59 89 eP P 14 21 10.9 +0.3
comp=Z,28nm,0.9s,mb5.2
L18A Fontenelle, Gr 45.61 75 ⇑P P 14 21 10.3 -0.3
baz=45,SNR=8.3
GSC Goldstone 45.65 87 ⇓P P 14 21 11.4 +0.3
baz=46,SNR=21
GSC Goldstone 45.65 87 eP P 14 21 11.9 +0.8
GSC pmax pmax
comp=Z,40nm,1.0s,mb5.3
GSC Goldstone 45.65 87 eP P 14 21 11.9 +0.9
comp=Z,40nm,1.0s,mb5.3
P15A Leamington 45.70 79 ⇑P P 14 21 11.7 +0.3
baz=46,SNR=11
O16A Springville 45.78 78 ⇓P P 14 21 12.2 +0.2
baz=46,SNR=9.3
K19A Absolon Red Bu 45.78 73 ⇑P P 14 21 10.9 -1.1
baz=46,SNR=22
DAU Daniels Canyon 45.80 77 eP P 14 21 13.0 +0.8
BFSC Mount Baldy St 45.82 88 ⇑P P 14 21 13.0 +0.5
baz=46,SNR=11
SHPR Sheep Range 45.88 84 eP P 14 21 13.3 +0.4
M18A Lyman 45.89 75 ⇑P P 14 21 12.3 -0.6
baz=46,SNR=8.4
L19A Farson 45.91 74 ⇑P P 14 21 12.3 -0.7
baz=46,SNR=6.9
BJI Beijing 45.97 282 P P 14 21 14.5 +0.9
BJI PP PP 14 22 58.6 -2.7
BJI S S 14 27 54.7 -2.3
BJI pmax pmax
comp=Z,17nm,0.7s,mb5.1
BJI pmax pmax
comp=Z,85nm,5.4s
BJI LR LR
comp=N,210nm,20.7s,MS4.2
BJI LR LR
comp=E,220nm,20.7s,MS4.2
BJI LR LR
comp=Z,220nm,23.2s,MS4.0
S13A Holt Ranch, En 45.99 82 ⇓P P 14 21 14.2 +0.5
baz=46,SNR=20
Q15A Fillmore 45.99 80 ⇑P P 14 21 14.2 +0.4
baz=46,SNR=8.0
TUQ Turquoise Moun 46.10 86 ⇑P P 14 21 15.0 +0.3
baz=46,SNR=6.9
ARUT Antelope Range 46.11 82 eP P 14 21 14.8 +0.1
ARUT pmax pmax
comp=Z,21nm,1.2s,mb4.9
ARUT Antelope Range 46.11 82 eP P 14 21 14.8 +0.1
comp=Z,21nm,1.2s,mb4.9
V11A Goodsprings 46.14 85 ⇑P P 14 21 15.5 +0.5
baz=46
K20A Yellowstone Ra 46.18 73 ⇑P P 14 21 13.7 -1.4
baz=46,SNR=6.8
O17A Robinson Place 46.24 77 ⇓P P 14 21 16.1 +0.4
baz=46,SNR=8.4
HEC Hector,Ludlow 46.25 87 ⇓P P 14 21 16.0 +0.2
baz=46,SNR=9.5
S14A Cedar City 46.30 81 ⇑P P 14 21 16.4 +0.3
baz=46
U12A Valley of Fire 46.31 84 ⇑P P 14 21 16.8 +0.6
baz=46,SNR=6.5
CCUT Cedar City 46.31 82 eP P 14 21 16.8 +0.5
comp=Z,10nm,0.9s,mb4.8
T13A Saint George 46.32 83 ⇑P P 14 21 17.0 +0.6
baz=46,SNR=18
N18A Larsen Ranch, 46.40 76 ⇓P P 14 21 16.1 -0.8
baz=46,SNR=12
MSU Marysvale 46.42 80 eP P 14 21 17.9 +0.8
TMUT Trail Mountain 46.52 78 eP P 14 21 18.6 +0.7
comp=Z,48nm,0.8s,mb5.5
R15A Junction 46.55 80 ⇓P P 14 21 18.7 +0.5
baz=46,SNR=9.0
L20A Wamsutter 46.57 74 ⇑P P 14 21 17.1 -1.2
baz=46,SNR=5.7
V12A Nelson 46.57 85 ⇑P P 14 21 18.7 +0.3
baz=46,SNR=5.3
O18A Roosevelt 46.64 77 ⇑P P 14 21 18.9 +0.1
baz=46
ULN Ulaanbaatar 46.64 296 eP P 14 21 19.7 +1.0
ULN pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
ULN Ulaanbaatar 46.64 296 eP P 14 21 19.7 +0.9
comp=Z,5.6nm,1.2s,mb4.4
U13A Pakoon Wash 46.67 83 ⇑P P 14 21 19.6 +0.5
baz=46,SNR=28
P17A Butcher Ranch, 46.69 78 ⇑P P 14 21 19.4 +0.2
baz=46,SNR=8.6
GMRC Granite Mounta 46.70 86 ⇓P P 14 21 19.4 +0.1
baz=46,SNR=15
N19A John Jarvie Ra 46.75 75 ⇓P P 14 21 18.9 -0.8
baz=46,SNR=13
Q16A Castle Valley 46.78 79 ⇑P P 14 21 20.2 +0.3
baz=47,SNR=14
T14A Hurricane 46.79 82 ⇓P P 14 21 20.7 +0.7
baz=47,SNR=5.1
S15A Panguitch 46.84 81 ⇑P P 14 21 21.1 +0.7
baz=47,SNR=10
P18A Preston Nutter 46.89 77 ⇓P P 14 21 21.1 +0.3
baz=47,SNR=27
M20A Sweetwater, Wa 46.97 74 ⇓P P 14 21 21.0 -0.4
baz=47,SNR=5.1
PFO Pinyon Flat Ob 46.99 88 ⇓P P 14 21 21.6 -0.1
baz=47
PFO Pinyon Flat Ob 46.99 88 eP P 14 21 21.7 +0.1
PFO pmax pmax
comp=Z,17nm,1.0s,mb4.9
PFO Pinyon Flat Ob 46.99 88 eP P 14 21 21.7 +0.1
comp=Z,17nm,1.0s,mb4.9
R16A Teasdale 46.99 80 ⇓P P 14 21 22.4 +0.9
baz=47,SNR=47
SONM Songino Array 47.02 297 P P 14 21 21.1 -0.7
comp=Z,1.4nm,0.8s,mb4.0,baz=54,slow=8.8,SNR=8.5
SONM LR LR 14 42 02.9
comp=Z,284nm,18.9s,MS4.2,baz=73,slow=37
V13A Grand Canyon W 47.02 84 ⇑P P 14 21 22.2 +0.4
baz=47,SNR=17
SRU San Rafael 47.05 78 ⇑P P 14 21 22.0 0.0
baz=47,SNR=34
SRU San Rafael 47.05 78 eP P 14 21 21.9 -0.1
SRU pmax pmax
comp=Z,32nm,0.8s,mb5.3
SRU San Rafael 47.05 78 eP P 14 21 21.9 -0.2
comp=Z,32nm,0.8s,mb5.3
U14A Mt Trumbull 47.15 83 ⇑P P 14 21 23.5 +0.6
baz=47,SNR=17
O19A Miners Draw (B 47.15 76 ⇑P P 14 21 22.3 -0.5
baz=47,SNR=22
L21A Rawlins 47.17 73 ⇓P P 14 21 22.0 -1.0
baz=47,SNR=16
T15A Red Dirt Ranch 47.25 82 ⇓P P 14 21 24.2 +0.6
baz=47,SNR=20
ZAK Zakamensk 47.26 301 eP P 14 21 24.6 +1.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
Q18A Rafter H Ranch 47.29 78 ⇓P P 14 21 23.4 -0.5
baz=47,SNR=27
N20A Spence Gulch, 47.33 75 ⇑P P 14 21 23.8 -0.4
baz=47,SNR=10
R17A Hanksville Air 47.37 79 ⇑P P 14 21 24.5 -0.1
baz=47,SNR=36
M21A Separation Pea 47.39 74 ⇓P P 14 21 23.6 -1.1
baz=47,SNR=10
IRM Iron Mountain 47.42 87 ⇑P P 14 21 25.0 0.0
baz=47,SNR=9.0
RWWY Rawlins 47.43 73 eP P 14 21 23.0 -2.0
comp=Z,15nm,0.9s,mb4.9
BAR Barrett 47.48 89 eP P 14 21 25.6 +0.1
comp=Z,18nm,0.9s,mb5.0
MONP Monument Peak 47.49 89 ⇑P P 14 21 25.9 +0.3
baz=47
BC3 Big Chuckw Mtn 47.58 87 ⇓P P 14 21 25.8 -0.4
baz=47
W13A Hualapai Mount 47.58 85 ⇓P P 14 21 26.4 +0.1
baz=47,SNR=12
P19A Cripple Cowboy 47.65 77 ⇓P P 14 21 26.5 -0.2
baz=48,SNR=73

U15A North Rim 47.69 82 ⇓P P 14 21 27.7 +0.7
baz=48,SNR=50
V14A Boquillas Ranc 47.71 84 ⇑P P 14 21 27.7 +0.5
baz=48,SNR=25
O20A White River Ci 47.78 76 ⇓P P 14 21 26.9 -0.8
baz=48,SNR=9.2
T16A Glen Canyon Da 47.81 81 ⇑P P 14 21 27.5 -0.5
baz=48
RSSD Black Hills 47.81 69 eP P 14 21 25.8 -2.1
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
RSSD Black Hills 47.81 69 eP P 14 21 25.8 -2.1
comp=Z,3.7nm,0.8s,mb4.5
S17A Black Ridge (B 47.82 80 ⇓P P 14 21 28.2 +0.2
baz=48,SNR=43
N21A Black Mountain 47.82 75 ⇑P P 14 21 27.3 -0.8
baz=48,SNR=9.3
R18A Canyonlands Na 47.89 79 ⇓P P 14 21 27.8 -0.7
baz=48,SNR=26
X13A Yucca 47.95 85 ⇓P P 14 21 29.0 -0.1
baz=48,SNR=10
PDMCI Parker Dam,Lak 47.95 86 ⇑P P 14 21 29.0 -0.1
baz=48,SNR=7.5
M22A Cedar Creek Ra 47.97 73 ⇓P P 14 21 28.1 -1.1
baz=48,SNR=6.8
W14A Seligman 48.00 84 ⇑P P 14 21 29.8 +0.3
baz=48,SNR=12
Y12C Blythe 48.08 87 ⇓P P 14 21 30.1 0.0
baz=48
P20A De Beque 48.09 76 ⇑P P 14 21 29.6 -0.5
baz=48,SNR=6.4
V15A Kaibab Nationa 48.16 83 ⇑P P 14 21 31.5 +0.8
baz=48,SNR=38
O21A Pagoda 48.19 75 ⇓P P 14 21 30.4 -0.5
baz=48
T17A Navajo Res., N 48.23 81 ⇓P P 14 21 30.8 -0.4
baz=48,SNR=13
HHC Hu-ho-hao-te 48.23 286 eP P 14 21 32.4 +1.2
HHC PcP PcP 14 22 59.0 +1.0
HHC PP PP 14 23 24.9 +1.5
HHC ScP ScP 14 26 50.1 -0.9
HHC PcS PcS 14 26 54.6 +0.8
HHC S S 14 28 28.2 -1.0
HHC ScS ScS 14 31 18.7 -3.8
HHC SS SS 14 31 51.4 -6.8
HHC pmax pmax
comp=Z,12nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,80nm,5.3s
HHC LR LR
comp=N,240nm,18.8s,MS4.4
HHC LR LR
comp=E,240nm,17.3s,MS4.4
HHC LR LR
comp=Z,190nm,17.8s,MS4.1
S18A Hurst Farm, Bl 48.27 79 ⇓P P 14 21 31.2 -0.3
baz=48,SNR=68
R19A Curley Farm, L 48.33 78 ⇑P P 14 21 31.5 -0.5
baz=48,SNR=12
GLA Glamis 48.37 87 ⇑P P 14 21 32.4 0.0
baz=48
GLA Glamis 48.37 87 eP P 14 21 32.6 +0.3
GLA pmax pmax
comp=Z,16nm,1.0s,mb5.0
GLA Glamis 48.37 87 eP P 14 21 32.6 +0.2
comp=Z,16nm,0.9s,mb5.1
N22A Wattenberg Ran 48.43 74 ⇑P P 14 21 32.1 -0.6
baz=48,SNR=13
Y13A Salome 48.47 86 ⇓P P 14 21 33.3 +0.2
baz=48
Q20A Ridgley Place, 48.49 77 ⇓P P 14 21 32.4 -0.8
baz=48
W15A Williams 48.52 83 ⇑P P 14 21 34.2 +0.7
baz=48,SNR=11
U16A Tuba City 48.58 82 ⇑P P 14 21 34.2 +0.2
baz=48
X14A Yava 48.61 85 ⇓P P 14 21 34.6 +0.4
baz=48,SNR=14
ULM Lac du Bonnet 48.69 58 P P 14 21 32.4 -2.2
comp=Z,2.2nm,0.7s,mb4.3,baz=303,slow=7.9,SNR=4.9
ULM LR LR 14 43 28.4
comp=Z,296nm,18.7s,MS4.3,baz=352,slow=38
T18A Mexican Hat 48.70 80 ⇓P P 14 21 34.2 -0.6
baz=48,SNR=22
PHWY Pilot Hill 48.71 73 eP P 14 21 33.2 -1.6
comp=Z,4.7nm,0.8s,mb4.6
GUMO Guam 48.72 232 LR LR 14 39 18.3
comp=Z,117nm,21.1s,MS3.9,baz=343,slow=33
S19A Harvey Farm, M 48.76 79 ⇓P P 14 21 34.8 -0.5
baz=49,SNR=49
WUAZ Wupatki 48.85 82 ⇑P P 14 21 36.3 +0.4
baz=49,SNR=16
WUAZ Wupatki 48.85 82 eP P 14 21 37.0 +1.0
comp=Z,28nm,1.0s,mb5.2
112A Yuma 48.87 88 ⇑P P 14 21 36.4 +0.2
baz=49
Y14A Wickenburg 48.89 85 ⇓P P 14 21 36.3 0.0
baz=49,SNR=8.8
R20A Redvale 48.93 78 ⇑P P 14 21 36.0 -0.5
baz=49,SNR=6.8
Z13A Yuma Proving G 48.99 86 ⇓P P 14 21 37.0 -0.1
baz=49,SNR=13
X15A Humboldt 49.00 84 ⇑P P 14 21 37.6 +0.4
baz=49,SNR=8.3
Q21A Lamborn Mesa, 49.00 77 ⇑P P 14 21 36.6 -0.5
baz=49,SNR=10
W16A Flagstaff 49.03 83 ⇓P P 14 21 38.1 +0.8
baz=49,SNR=10.0
V17A Tonalea, Kykot 49.13 82 ⇑P P 14 21 38.7 +0.5
baz=49,SNR=38
SMCO Snowmass 49.14 76 eP P 14 21 37.3 -0.9
comp=Z,8.0nm,0.8s,mb4.8
KBS Kingsbay 49.17 358 d iP P 14 21 37.8 -0.1
KBS pmax pmax
comp=Z,77nm,1.7s,mb5.5
U18A Rough Rock, Ch 49.17 81 ⇓P P 14 21 38.5 0.0
baz=49,SNR=11
113A Mohawk Valley, 49.21 87 ⇑P P 14 21 38.5 -0.3
baz=49
Y15A Casa Rosa Ranc 49.30 85 ⇓P P 14 21 39.6 +0.1
baz=49,SNR=9.1
R21A Cimarron 49.31 77 ⇑P P 14 21 39.3 -0.2
baz=49,SNR=10
Z14A Wyersburg 49.32 86 ⇓P P 14 21 39.5 -0.1
baz=49
Q22A Crested Butte, 49.38 76 ⇓P P 14 21 39.9 -0.1
baz=49,SNR=13
T19A Beclabito 49.42 80 ⇓P P 14 21 40.0 -0.3
baz=49,SNR=77
MVCO Mesa Verde 49.49 79 ⇑P P 14 21 40.5 -0.4
baz=49,SNR=11
MVCO Mesa Verde 49.49 79 eP P 14 21 40.4 -0.4
comp=Z,18nm,1.0s,mb5.1
X16A Lo Mia Camp, P 49.53 84 ⇓P P 14 21 41.9 +0.6
baz=49,SNR=8.9
W17A Winslow 49.54 82 ⇓P P 14 21 41.5 +0.2
baz=49
NJ2 Nanjing 49.54 272 eP P 14 21 43.4 +2.0
NJ2 pmax pmax
comp=Z,40nm,0.6s,mb5.6
ISCO Idaho Springs 49.56 74 eP P 14 21 41.5 +0.1
ISCO pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ISCO Idaho Springs 49.56 74 eP P 14 21 41.5 +0.1
comp=Z,9.2nm,0.8s,mb4.9
V18A Ganado 49.60 81 ⇑P P 14 21 41.9 +0.2
baz=49,SNR=11
S21A Coal Bank Pass 49.62 78 ⇓P P 14 21 42.1 +0.2
baz=49,SNR=19
U19A Dine' College, 49.66 80 ⇓P P 14 21 42.0 -0.2
baz=50,SNR=6.2
SPB4 Spitsbergen Ar 49.76 356 eP P 14 21 42.4 -0.1
114A Black Gap (USA 49.77 86 ⇑P P 14 21 43.1 0.0
baz=50
Y16A Circle Bar Ran 49.87 84 ⇑P P 14 21 44.4 +0.5
baz=50,SNR=13
U20A Newcomb 50.02 80 ⇓P P 14 21 44.9 0.0
baz=50
V19A Window Rock 50.14 81 ⇑P P 14 21 46.0 +0.2
baz=50,SNR=6.0
115A Sonoran Desert 50.21 86 ⇓P P 14 21 46.6 +0.2
baz=50,SNR=10.0
W19A Sanders 50.33 81 ⇓P P 14 21 47.5 +0.2
baz=50
214A Organ Pipe Nat 50.36 87 ⇓P P 14 21 47.4 -0.1
baz=50,SNR=7.2
X18A Snowflake 50.37 82 ⇓P P 14 21 48.0 +0.4
baz=50,SNR=7.3

Y17A Roosevelt 50.39 84 ⇓P P 14 21 48.1 +0.3
baz=50,SNR=14
V20A Brimhall 50.44 80 ⇓P P 14 21 47.9 -0.2
baz=50,SNR=8.8
T22A Edith 50.58 78 ⇓P P 14 21 49.6 +0.4
baz=50,SNR=25
116A Eloy 50.63 86 ⇑P P 14 21 49.5 -0.1
baz=50
Y18A Canyon Day Jun 50.83 83 ⇓P P 14 21 51.6 +0.6
baz=51,SNR=6.8
X19A St. Johns 50.85 82 ⇓P P 14 21 51.5 +0.3
baz=51,SNR=7.5
W20A Ramah 50.86 81 ⇑P P 14 21 51.3 0.0
baz=51
Z17A San Carlos Hig 50.88 84 ⇑P P 14 21 51.7 +0.2
baz=51
V21A Milan 50.93 80 ⇓P P 14 21 51.7 -0.1
baz=51,SNR=8.5
SDCO Great Sand Dun 50.95 76 eP P 14 21 52.0 +0.1
comp=Z,18nm,0.9s,mb5.0
Y19A Nutrioso 51.18 82 ⇑P P 14 21 54.3 +0.6
baz=51,SNR=11
117A Oracle 51.21 85 ⇑P P 14 21 54.4 +0.4
baz=51,SNR=14
X20A Quemado 51.25 81 ⇓P P 14 21 54.8 +0.6
baz=51,SNR=17
Z18A Geronimo 51.30 84 ⇓P P 14 21 54.9 +0.3
baz=51
TUC Tucson 51.36 85 eP P 14 21 55.4 +0.3
TUC pmax pmax
comp=Z,13nm,1.0s,mb4.8
TUC Tucson 51.36 85 eP P 14 21 55.4 +0.3
comp=Z,14nm,1.0s,mb4.9
W21A San Fidel 51.39 80 ⇑P P 14 21 55.0 -0.3
baz=51
Z19A T-Link Ranch, 51.63 83 ⇓P P 14 21 57.5 +0.5
baz=52
217A Green Valley 51.71 86 ⇑P P 14 21 57.8 +0.1
baz=52,SNR=7.0
X21A Alamocita Cree 51.75 81 ⇑P P 14 21 58.9 +0.9
baz=52,SNR=40
Y20A Horse Springs, 51.75 82 ⇑P P 14 21 58.9 +0.9
baz=52,SNR=22
W22A Albuquerque 51.89 80 ⇑P P 14 21 59.5 +0.5
baz=52
119A Ashpeak Ranch, 51.96 84 ⇑P P 14 21 59.9 +0.4
baz=52,SNR=14
218A Dragoon 52.05 85 ⇓P P 14 22 00.5 +0.3
baz=52,SNR=17
Y21A Point of Rocks 52.12 81 ⇓P P 14 22 01.5 +0.8
baz=52,SNR=10
Z20A Nine Sixteen R 52.16 83 ⇓P P 14 22 01.4 +0.3
baz=52,SNR=16
LAZ Ladron 52.18 81 eP P 14 22 01.7 +0.5
comp=Z,12nm,1.1s,mb4.7
X22A Bernardo 52.19 80 ⇓P P 14 22 01.8 +0.6
baz=52
ANMO Albuquerque 52.22 80 eP P 14 22 01.9 +0.4
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO Albuquerque 52.22 80 eP P 14 22 01.9 +0.4
comp=Z,12nm,1.1s,mb4.7
W23A Werner Place, 52.27 79 ⇓P P 14 22 01.8 0.0
baz=52,SNR=6.6
LENM Lemitar 52.44 81 eP P 14 22 04.1 +1.0
318A Bisbee 52.45 85 ⇓P P 14 22 03.4 +0.1
baz=52,SNR=10
SUMG Summit 52.47 14 eP P 14 22 02.4 -0.4
comp=Z,59nm,1.0s,mb5.5
219A White Tail Can 52.52 84 ⇓P P 14 22 03.9 +0.2
baz=52,SNR=9.2
120A U Bar Ranch, L 52.52 83 ⇓P P 14 22 04.0 +0.2
baz=52,SNR=13
LPM Los Pinos Moun 52.55 80 eP P 14 22 04.0 +0.2
Z21A St. Cloud Mine 52.59 82 ⇓P P 14 22 04.7 +0.4
baz=52
Y22A Socorro 52.60 81 ⇓P P 14 22 04.8 +0.5
baz=52,SNR=13
BNM Barren Site 52.66 80 eP P 14 22 05.1 +0.4
comp=Z,26nm,1.4s,mb5.0
319A Douglas 52.93 85 ⇓P P 14 22 06.8 0.0
baz=53
220A Playas Peak, P 53.03 84 ⇑P P 14 22 07.6 +0.1
baz=53,SNR=16
121A Cookes Peak, D 53.05 83 ⇑P P 14 22 08.0 +0.3
baz=53,SNR=11
Z22A Elephant Butte 53.06 81 ⇓P P 14 22 08.1 +0.3
baz=53,SNR=16
Y23A Lovelace Mesa, 53.16 80 ⇓P P 14 22 08.6 +0.2
baz=53,SNR=33
W25A X Bar L Ranch, 53.25 78 ⇓P P 14 22 09.0 -0.1
baz=53,SNR=27
WHN Wuhan 53.36 274 P P 14 22 11.0 +1.0
221A Mesquite Ranch 53.42 83 ⇓P P 14 22 10.7 +0.4
baz=53
122A Conniff Cattle 53.42 82 ⇑P P 14 22 11.0 +0.7
baz=53
320A Kipp Ranch, An 53.42 84 ⇓P P 14 22 10.6 +0.2
baz=53,SNR=14
Y24A Capitan 53.53 80 ⇑P P 14 22 11.4 +0.3
baz=53,SNR=62
X25A Clemmons Ranch 53.60 79 ⇓P P 14 22 11.9 +0.3
baz=53
CBKS Cedar Bluff 53.66 71 eP P 14 22 10.9 -1.2
CBKS pmax pmax
comp=Z,21nm,0.9s,mb5.1
CBKS Cedar Bluff 53.66 71 eP P 14 22 10.9 -1.2
comp=Z,21nm,0.9s,mb5.1
Y25A Mesa, Roswell 53.99 79 ⇑P P 14 22 14.3 -0.2
baz=54,SNR=27
X26A CR and CF Fran 54.10 78 ⇑P P 14 22 14.8 -0.4
baz=54,SNR=11
ZALV Zalesovo Beam 54.12 314 LR LR 14 46 55.1
comp=Z,114nm,19.1s,MS4.0,baz=243,slow=38
SSLB Suanglung 54.15 263 eP P 14 22 15.7 0.0
comp=Z,13nm,0.8s,mb4.9
NVS Novosibirsk 54.23 315 eP P 14 22 13.4 -2.6
XAN Xi'an 54.27 281 P P 14 22 15.8 -0.8
XAN pP pP 14 22 27.4 +3.8
XAN sP sP 14 22 32.3 +6.0
XAN PP PP 14 24 17.7 -0.6
XAN S S 14 29 50.3 -2.5
XAN ScS ScS 14 32 01.7 -2.7
XAN SS SS 14 33 33.7 -0.7
XAN LR LR
comp=N,130nm,21.5s,MS4.0
XAN LR LR
comp=E,61nm,19.2s,MS4.0
XAN LR LR
comp=Z,62nm,22.6s,MS3.6
124A Stringfield Ra 54.36 81 ⇓P P 14 22 17.1 -0.1
baz=54,SNR=8.0
Z25A Roswell 54.41 80 ⇓P P 14 22 17.5 -0.1
baz=54,SNR=8.6
Y26A Elida 54.52 79 ⇓P P 14 22 18.0 -0.4
baz=54
SFJD Kangerlussuaq 54.75 23 i P P 14 22 19.3 -0.2
SFJD pmax pmax
comp=Z,16nm,0.9s,mb5.0
SFJD Kangerlussuaq 54.75 23 i P P 14 22 19.3 -0.2
comp=Z,16nm,0.9s,mb5.0
QZH Quanzhou 54.75 266 ⇑ i P P 14 22 20.6 +0.5
224A Corundas Mount 54.75 81 ⇑P P 14 22 20.0 -0.1
baz=55,SNR=13
Z26A Caprock 54.87 79 ⇓P P 14 22 20.7 -0.2
baz=55,SNR=6.8
125A Gardner Draw, 54.88 80 ⇑P P 14 22 20.9 -0.1
baz=55,SNR=16
Y27A Causey 54.94 78 ⇓P P 14 22 21.0 -0.5
baz=55,SNR=30
MNTX Cornudas Mount 55.10 82 eP P 14 22 22.3 -0.3
comp=Z,19nm,1.1s,mb5.0
CPRX Cap Rock 55.10 79 eP P 14 22 21.8 -0.8
comp=Z,6.0nm,0.8s,mb4.7
MSTX Muleshoe 55.12 78 ⇑P P 14 22 22.2 -0.6
baz=55,SNR=12
AMTX Amarillo 55.15 76 eP P 14 22 21.8 -1.2
comp=Z,22nm,1.0s,mb5.1
225A Deer Hill, Car 55.16 81 ⇑P P 14 22 22.9 -0.1
baz=55,SNR=8.3
324A Moseley Ranch, 55.22 82 ⇑P P 14 22 23.0 -0.4
baz=55,SNR=8.2
Z27A Tatum 55.30 79 ⇓P P 14 22 23.2 -0.8
baz=55,SNR=11
GDL2 Guadalupe Moun 55.37 81 eP P 14 22 24.3 -0.3
325A Bean Ranch, Si 55.58 82 ⇓P P 14 22 25.8 -0.2
baz=55,SNR=21

226A Malaga, Loving 55.63 80 ⇓P P 14 22 26.0 -0.5
baz=55,SNR=8.2
127A Arkansas Junct 55.66 79 ⇑P P 14 22 25.6 -1.0
baz=56
LZH Lanzhou 55.92 287 eP P 14 22 33.0 +4.5
LZH PP PP 14 24 37.0 +4.0
LZH eS S 14 30 14.3 -0.5
LZH SS SS 14 33 57.1 -3.2
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,98nm,4.4s
LZH LR LR
comp=N,620nm,16.0s
LZH LR LR
comp=Z,780nm,18.2s,MS4.8
425A Indio Mountain 55.98 82 ⇓P P 14 22 28.7 -0.2
baz=56,SNR=25
GTA Gaotai 56.02 292 eP P 14 22 29.7 +0.6
GTA pP pP 14 22 42.4 +6.3
GTA PP PP 14 24 35.9 +2.1
GTA S S 14 30 14.1 -1.9
GTA SS SS 14 34 02.1 +0.5
GTA pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
GTA pmax pmax
comp=Z,80nm,6.9s
GTA LR LR
comp=N,390nm,17.4s,MS4.7
GTA LR LR
comp=E,330nm,17.1s,MS4.7
GTA LR LR
comp=Z,200nm,18.3s,MS4.2
326A Caldwell Ranch 56.22 81 ⇑P P 14 22 30.2 -0.5
baz=56,SNR=6.0
SCO Scoresbysund 56.52 10 i P P 14 22 31.3 -0.9
SCO pmax pmax
comp=Z,12nm,0.8s,mb5.0
SCO Scoresbysund 56.52 10 i P P 14 22 31.3 -0.9
comp=Z,12nm,0.8s,mb5.0
ENH Enshi 56.54 278 eP P 14 22 31.6 -1.4
comp=Z,6.3nm,0.7s,mb4.8
426A McDonald Obser 56.65 82 ⇑P P 14 22 33.1 -0.6
baz=56
328A Wristen Ranch, 56.89 80 ⇓P P 14 22 34.5 -0.9
baz=57,SNR=11
427A Hayter Ranch, 56.90 81 ⇑P P 14 22 34.9 -0.6
baz=57,SNR=5.1
WMOK Wichita Mounta 56.98 74 eP P 14 22 35.1 -0.9
WMOK pmax pmax
comp=Z,13nm,1.0s,mb4.9
WMOK Wichita Mounta 56.98 74 eP P 14 22 35.1 -0.9
comp=Z,13nm,0.9s,mb5.0
526A Mary Lane Ranc 57.04 82 ⇑P P 14 22 36.3 -0.2
baz=57,SNR=10
527A Woodward Ranch 57.27 82 ⇑P P 14 22 37.2 -0.9
baz=57,SNR=7.7
626A Big Bend Ranch 57.37 83 ⇑P P 14 22 38.2 -0.7
baz=57,SNR=16
428A Kincaid Ranch, 57.43 81 ⇑P P 14 22 38.9 -0.3
baz=57,SNR=8.6
ARCES ARCESS Array B 57.56 351 P P 14 22 39.6 0.0
comp=Z,21nm,0.7s,mb5.2,baz=27,slow=7.2,SNR=42
528A Cox Ranch, San 57.76 81 ⇑P P 14 22 41.1 -0.5
baz=58,SNR=7.1
TXAR Lajitas Array 57.81 82 P P 14 22 41.4 -0.6
comp=Z,7.8nm,0.9s,mb4.7,baz=305,slow=4.4,SNR=36
627A Terlingua Ranc 57.90 82 ⇓P P 14 22 41.9 -0.7
baz=58,SNR=12
LVZ Lovozero 57.98 346 ceP P 14 22 42.7 +0.2
LVZ pmax pmax
comp=Z,60nm,1.0s,mb5.6
SCHQ Schefferville 59.01 39 P P 14 22 49.4 -0.6
comp=Z,13nm,0.9s,mb5.0,baz=319,slow=6.4,SNR=13
SCHQ LR LR 14 51 50.8
comp=Z,201nm,18.2s,MS4.3,baz=313,slow=40
SCHQ Schefferville 59.01 39 eP P 14 22 49.1 -0.8
comp=Z,14nm,0.8s,mb5.0
KURK Kurchatov 59.10 314 P P 14 22 49.1 -1.6
comp=Z,35nm,0.7s,mb5.5,SNR=5.6
KURK Kurchatov 59.10 314 ⇑i P P 14 22 49.5 -1.2
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
KURK Kurchatov 59.10 314 eP P 14 22 48.5 -2.2
comp=Z,4.0nm,0.7s,mb4.6
JCT Junction City 59.35 79 eP P 14 22 51.3 -1.4
JCT pmax pmax
comp=Z,14nm,0.9s,mb5.0
JCT Junction City 59.35 79 eP P 14 22 51.2 -1.4
comp=Z,14nm,0.9s,mb5.0
CD2 Chengdu 59.58 282 P P 14 22 55.2 +1.0
CD2 pP pP 14 23 07.9 +6.7
CD2 PP PP 14 25 08.4 +2.9
CD2 S S 14 30 59.1 -3.7
CD2 SS SS 14 34 55.9 -2.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,90nm,5.1s
CD2 LR LR
comp=N,190nm,14.9s
CD2 LR LR
comp=Z,140nm,11.8s,MS4.3
WMQ Urumqi 59.61 303 eP P 14 22 57.2 +2.9
WMQ LR LR
comp=N,300nm,24.0s,MS4.5
WMQ LR LR
comp=E,220nm,23.0s,MS4.5
WMQ LR LR
comp=Z,180nm,20.0s,MS4.2
MIAR Mount Ida 60.19 71 eP P 14 22 57.1 -1.3
MIAR pmax pmax
comp=Z,15nm,0.9s,mb5.0
MIAR Mount Ida 60.19 71 eP P 14 22 57.1 -1.3
comp=Z,15nm,0.9s,mb5.0
MKAR Makanchi Array 60.21 309 P P 14 22 58.1 -0.2
comp=Z,1.2nm,0.9s,mb3.9,baz=76,slow=5.1,SNR=5.0
MKAR LR LR 14 50 41.5
comp=Z,145nm,18.3s,MS4.2,baz=298,slow=38
BVAR Borovoye Array 60.87 320 P P 14 23 02.3 -0.4
comp=Z,11nm,0.6s,mb5.2,baz=50,slow=7.0,SNR=85
BVAR LR LR 14 52 20.2
comp=Z,236nm,18.2s,MS4.4,baz=182,slow=39
BRVK Borovoye 60.88 320 eP P 14 23 01.7 -1.1
BRVK pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
BRVK Borovoye 60.88 320 eP P 14 23 01.7 -1.2
comp=Z,8.4nm,0.6s,mb5.0
GYA Guiyang 61.00 277 ⇑i P P 14 23 05.4 +1.4
GYA pP pP 14 23 17.6 +6.5
GYA PP PP 14 25 21.0 +2.8
GYA S S 14 31 18.7 -2.5
GYA SS SS 14 35 20.0 -0.4
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,120nm,5.3s
GYA LR LR
comp=N,780nm,18.8s,MS5.0
GYA LR LR
comp=E,560nm,19.3s,MS5.0
GYA LR LR
comp=Z,650nm,18.5s,MS4.8
SVE Sverdlovsk 61.44 328 eP P 14 23 07.1 +0.6
SVE e 14 25 28.1
SVE eS S 14 31 27.6 +1.7
SVE pmax pmax
comp=Z,11nm,1.1s,mb4.9
SVE MLR MLR
comp=Z,267nm,18.0s,MS4.4
ARU Arti 62.43 329 d i P P 14 23 13.6 +0.4
ARU e 14 25 32.5
ARU S S 14 31 39.6 +1.1
ARU SS SS 14 35 41.4 0.0
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 62.43 329 eP P 14 23 12.5 -0.7
comp=Z,7.0nm,0.7s,mb4.9
PLAL Pickwick Lake 63.05 67 eP P 14 23 15.4 -2.3
comp=Z,71nm,2.4s,mb5.4
JOF Joensuu 63.14 346 eP P 14 23 16.9 -0.9
JOF pmax pmax
comp=Z,32nm,0.8s,mb5.5
JOF Joensuu 63.14 346 ep P 14 23 16.9 -0.9
comp=Z,32nm,0.8s,mb5.5
KLMR Klimovskoe 63.60 341 eP P 14 23 19.1 -1.8
KLMR pmax pmax
comp=Z,40nm,1.4s,mb5.3
BINY Binghamton 64.28 54 eP P 14 23 24.5 -1.1
comp=Z,20nm,1.0s,mb5.1
KMI Kunming 64.38 278 P P 14 23 28.0 +1.4
KMI pP pP 14 23 40.3 +6.7
KMI PP PP 14 25 51.5 +3.5
KMI S S 14 32 00.2 -3.4
KMI SS SS 14 36 12.2 -1.0
KMI pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KMI pmax pmax
comp=Z,56nm,3.4s
KMI LR LR
comp=Z,58nm,34.0s,MS3.5
SSPA Standing Stone 64.47 56 eP P 14 23 23.1 -3.8
comp=Z,19nm,0.8s,mb5.2
KAF Kangasniemi 64.62 348 eP P 14 23 25.7 -1.9
KAF pmax pmax
comp=Z,34nm,0.7s,mb5.5
KAF Kangasniemi 64.62 348 ep P 14 23 25.7 -1.9
comp=Z,34nm,0.7s,mb5.5,baz=14,slow=5.8
FINES FINESS Array B 65.30 348 P P 14 23 30.9 -1.1
comp=Z,21nm,0.8s,mb5.2,baz=19,slow=8.1,SNR=63
FINES LR LR 14 58 44.2
comp=Z,152nm,18.5s,MS4.2,baz=256,slow=42
AFI Afiamalu 65.87 174 LR LR 14 48 39.1
comp=Z,37nm,19.6s,MS3.6,baz=15,slow=33
JSRW J. Sargeant Re 66.66 58 eP P 14 23 40.0 -1.1
AAK Ala-Archa 67.02 310 eP P 14 23 43.6 +0.3
NB2 NORSAR Subarra 67.05 355 P P 14 23 43.0 -0.2
comp=Z,28nm,0.9s,mb5.3,baz=5.0,slow=6.5
NOA NORSAR Array B 67.05 355 P P 14 23 42.9 -0.3
comp=Z,18nm,0.8s,mb5.1,baz=4.9,slow=6.4,SNR=48
NOA LR LR 14 56 32.3
comp=Z,57nm,19.3s,MS3.8,baz=35,slow=39
AML Almayashu 67.78 310 eP P 14 23 49.4 +1.2
comp=Z,2.3nm,0.9s,mb4.2
ABKAR Akbulak array 67.86 323 eP P 14 23 47.2 -1.3
comp=Z,1.8nm,0.6s,mb4.3
VSU Vasula 68.09 347 c i P P 14 23 49.4 -0.4
VSU pmax pmax
comp=Z,62nm,1.0s,mb5.6
LRW Lerwick 68.14 2 eP P 14 23 49.6 -0.5
LRW AMb AMB 14 23 51.1
comp=Z,26nm,1.0s,mb5.2
KONO Kongsberg 68.51 356 eP P 14 23 52.7 +0.3
KONO pmax pmax
comp=Z,39nm,1.3s,mb5.2
KONO Kongsberg 68.51 356 eP P 14 23 52.6 +0.2
comp=Z,39nm,1.3s,mb5.2
TAOE Nuku Hiva Isla 68.63 140 eT 15 38 14.9
comp=Z,154nm,0.3s
OBN Obninsk 69.51 340 ⇓eP P 14 23 58.7 0.0
OBN e 14 24 23.8
OBN pmax pmax
comp=Z,49nm,1.6s,mb5.2
ORE Reay 69.65 3 eP P 14 24 00.1 +0.5
SHL Shillong 70.59 287 eP P 14 24 05.0 -0.8
MCD Coleburn Disti 70.64 3 eP P 14 24 05.3 -0.3
MDO Dochfour 70.74 4 eP P 14 24 06.5 +0.3
IZAR Zarasai 70.78 346 eP P 14 24 06.1 -0.4
KPL Plockton 70.78 5 eP P 14 24 06.6 +0.2
KPL AMb AMB 14 24 07.8
comp=Z,19nm,0.9s,mb5.0
MME1 Meikle Cairn 70.92 3 eP P 14 24 07.1 -0.2
ISAL Salakas 70.97 346 eP P 14 24 07.0 -0.6
IDID Didziasalis 71.12 346 eP P 14 24 08.7 +0.1
CHTO Chiang Mai 71.42 277 eP P 14 24 11.7 +0.8
PMOR Pomariorio Ree 71.57 150 eT 15 41 58.7
comp=Z,17nm,0.3s
CMAR Chiang Mai Arr 71.69 277 P P 14 24 11.0 -1.6
comp=Z,5.1nm,0.9s,mb4.5,baz=16,slow=6.9,SNR=22
CMAR LR LR 14 58 29.8
comp=Z,53nm,19.1s,MS3.8,baz=60,slow=38
EBH Black Hill 71.96 3 eP P 14 24 13.7 +0.1
EAB Aberfoyle 71.99 4 eP P 14 24 13.9 +0.1
COP Copenhagen 72.32 354 eP P 14 24 17.3 +1.6
COP pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
COP Copenhagen 72.32 354 i P P 14 24 17.3 +1.6
comp=Z,8.8nm,0.9s,mb4.7
ESY Stoneypath 72.33 3 eP P 14 24 15.9 +0.1
PGBU Glenifferbraes 72.36 4 eP P 14 24 16.4 +0.4
PGBU AMb AMB 14 24 17.4
comp=Z,35nm,1.0s,mb5.2
EAU Auchinoon 72.37 3 eP P 14 24 16.7 +0.7
VSR Storozhevoye 72.53 337 eP P 14 24 17.0 -0.1
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,9.0nm,1.1s
BSD Bornholm Skovb 72.71 353 i P P 14 24 17.0 -1.1
BSD pmax pmax
comp=Z,15nm,0.9s,mb4.9
BSD Bornholm Skovb 72.71 353 i P P 14 24 17.0 -1.1
comp=Z,15nm,0.9s,mb4.9
VORD Divnogorie 72.73 337 eP P 14 24 18.0 -0.3
VORD pmax pmax
comp=N,9.0nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=E,10.0nm,0.7s
ESK Eskdalemuir 72.91 3 eP P 14 24 19.3 0.0
ESK AMb AMB 14 24 20.6
comp=Z,31nm,1.1s,mb5.1
ESK Eskdalemuir 72.91 3 i P P 14 24 20.4 +1.1
ECK Cauldkaine Hil 73.05 3 eP P 14 24 20.4 +0.3
GAL1 Galloway 73.29 4 eP P 14 24 21.6 +0.1
GAL1 AMb AMB 14 24 22.8
comp=Z,30nm,1.0s,mb5.2
PPT Papeete 73.49 152 eLR LR 14 47 13.0
comp=Z,69nm,23.5s
PPT eT 15 44 24.2
comp=Z,5.5nm,0.2s
PAE Paea 73.57 152 eT 15 44 30.5
comp=Z,2.0nm,0.4s
DZM Mont Dzumac 75.11 195 eLR LR 14 47 49.0
comp=Z,284nm,24.9s
AKASG Malin Array Be 75.14 343 P P 14 24 31.8 -0.6
comp=Z,12nm,0.6s,mb5.0,baz=21,slow=6.0,SNR=29
AKASG LR LR 15 05 31.0
comp=Z,150nm,18.3s,MS4.3,baz=10.0,slow=42
AKBB Malin Array Si 75.14 343 eP P 14 24 31.8 -0.6
KIEV Kiev 75.15 343 eP P 14 24 31.6 -0.9
KIEV pmax pmax
comp=Z,21nm,0.9s,mb5.1
KIEV Kiev 75.15 343 eP P 14 24 31.6 -0.8
comp=Z,21nm,0.9s,mb5.1
HTR Trewern Hill 76.14 4 eP P 14 24 37.9 -0.2
MCH1 Michaelchurch 76.23 3 eP P 14 24 38.6 0.0
MCH1 AMb AMB 14 24 38.8
comp=Z,32nm,2.2s,mb4.8
CLL Collm 76.64 353 ⇓i P P 14 24 41.0 +0.1
CLL e pP 14 24 48.0 -0.1
CLL pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 76.64 353 ⇓i P P 14 24 41.0 +0.1
comp=Z,10.0nm,0.9s,mb4.8
CLL e pP 14 24 48.0 -0.1
CLL Collm 76.64 353 ⇓i P P 14 24 41.0 +0.1
comp=Z,10.0nm,0.9s,mb4.8
CLL e(sP) sP 14 24 48.0 -2.8
BRG Berggiesshubel 77.00 353 i P P 14 24 43.1 +0.2
comp=Z,12nm,1.0s,mb4.8
BRG
comp=N,92nm,21.0s
BRG
comp=E,127nm,16.7s
BRG
comp=Z,130nm,16.2s
BRG Berggiesshubel 77.00 353 i P P 14 24 43.1 +0.2
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,55nm,21.0s,MS4.1
BRG MLR MLR
comp=E,76nm,16.7s,MS4.1
BRG MLR MLR
comp=Z,78nm,16.2s,MS4.1
OJC Ojcow 77.05 349 eP P 14 24 39.7 -3.6
KWP Kalwaria Pacla 77.24 347 eP P 14 24 45.0 +0.7
KWP Kalwaria Pacla 77.24 347 ⇓i P P 14 24 44.8 +0.4
DPC Dobruska-Polom 77.30 351 eP P 14 24 45.4 +0.7
DPC MLR MLR
comp=Z,100nm,19.5s,MS4.1
DPC Dobruska-Polom 77.30 351 eP P 14 24 45.4 +0.7
DPC AMS AMS 15 06 30.0
comp=Z,100nm,19.5s
MOX Moxa 77.39 354 eP P 14 24 45.6 +0.4
comp=Z,18nm,1.2s,mb4.9
MOX Moxa 77.39 354 eP P 14 24 45.6 +0.4
MOX pmax pmax
comp=Z,1.0nm,1.2s,mb3.6
KAKA Kakadu 77.55 230 eP P 14 24 42.2 -4.2
comp=Z,14nm,0.6s,mb5.1
KAKA Kakadu 77.55 230 eP P 14 24 43.3 -3.1
comp=Z,46nm,0.7s,mb5.5
STHS Stebnicka Huta 77.66 348 eP P 14 24 47.8 +1.1
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
STHS Stebnicka Huta 77.66 348 eP P 14 24 47.8 +1.1
comp=Z,5.3nm,0.7s,mb4.6
STHS Stebnicka Huta 77.66 348 eP P 14 24 47.8 +1.1
MEM Membach 77.68 358 P P 14 24 46.2 -0.6
comp=Z,14nm,1.2s,mb4.8
SNF Seneffe 77.81 359 P P 14 24 48.3 +0.7
comp=Z,6.8nm,1.1s,mb4.5
PRU Pruhonice 77.83 352 eP P 14 24 48.3 +0.7
PRU MLR MLR
comp=Z,100nm,21.1s,MS4.1
PRU Pruhonice 77.83 352 eP P 14 24 48.3 +0.7
PRU AMS AMS 15 03 20.0
comp=Z,100nm,21.1s
BCLA Clavier 77.88 358 P P 14 24 48.8 +0.8
comp=Z,9.2nm,1.9s,mb4.4
KOLS Kolonicke sedl 77.99 347 eP P 14 24 48.4 -0.1
KOLS Kolonicke sedl 77.99 347 eP P 14 24 48.3 -0.2
GIVF Givet 78.21 358 eP P 14 24 50.1 +0.4
comp=Z,45nm,1.1s,mb5.0
GIVF Givet 78.21 358 eP P 14 24 50.1 +0.4
GIVF pmax pmax
comp=Z,23nm,1.1s,mb5.0
GIVF Givet 78.21 358 eP P 14 24 50.1 +0.4
comp=Z,23nm,1.1s,mb5.0
DOU Dourbes 78.22 359 P P 14 24 50.0 +0.2
comp=Z,9.0nm,1.1s,mb4.6
KIV Kislovodsk 78.25 332 ⇑eP P 14 24 50.7 +0.6
KIV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BAIF Baives 78.26 359 ⇑i P P 14 24 50.7 +0.7
comp=Z,44nm,0.9s,mb5.1
BAIF Baives 78.26 359 ⇑i P P 14 24 50.7 +0.7
BAIF pmax pmax
comp=Z,22nm,0.9s,mb5.1
BAIF Baives 78.26 359 ⇑i P P 14 24 50.7 +0.7
comp=Z,22nm,0.9s,mb5.1
GRA1 Grafenberg Arr 78.37 354 eP P 14 24 51.2 +0.6
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 78.37 354 eP P 14 24 51.2 +0.6
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 78.37 354 eP P 14 24 51.2 +0.6
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 78.37 354 eP P 14 24 51.2 +0.6
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.9
TREC Trest 78.43 351 AMS AMS 15 06 40.0
comp=Z,100nm,15.2s
WLF Walferdange 78.62 358 P P 14 24 52.6 +0.6
comp=Z,9.6nm,1.1s,mb4.6
KECS Kecovo 78.67 348 eP P 14 24 52.8 +0.5
KECS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KECS Kecovo 78.67 348 eP P 14 24 52.8 +0.5
comp=Z,5.6nm,1.1s,mb4.4
KECS Kecovo 78.67 348 eP P 14 24 52.8 +0.5
TRPA Tarpa 78.73 346 ⇑i P P 14 24 53.2 +0.5
KHC Kasperske Hory 78.76 353 P P 14 24 53.6 +0.8
KHC pmax pmax
comp=Z,16nm,1.3s,mb4.8
KHC Kasperske Hory 78.76 353 eP P 14 24 53.1 +0.4
comp=Z,16nm,1.4s,mb4.7
KHC Kasperske Hory 78.76 353 eP P 14 24 53.5 +0.7
KHC AMS AMS 15 10 00.0
comp=Z,100nm,19.0s
KIS Kishinev 78.77 342 eP P 14 24 50.0 -2.9
KIS LRM 15 07 54.0
comp=Z,500nm,16.0s
BUR08 Bucovina Ar. S 78.79 345 eP P 14 24 53.5 +0.5
BURAR Bucovina Array 78.82 344 ⇑P P 14 24 53.6 +0.5
BURAR Bucovina Array 78.82 344 ⇑i P P 14 24 53.6 +0.5
VYHS Vyhne 78.86 349 eP P 14 24 53.8 +0.4
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
VYHS Vyhne 78.86 349 eP P 14 24 53.8 +0.4
comp=Z,4.1nm,1.3s,mb4.2
VYHS Vyhne 78.86 349 eP P 14 24 53.8 +0.4
ZEI Tsey 78.97 330 eP P 14 24 53.6 -0.4
ZEI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
GERES GERESS Array B 79.03 352 P P 14 24 54.3 +0.1
comp=Z,1.4nm,0.6s,mb4.1,baz=354,slow=5.4,SNR=13
GERES LR LR 15 04 50.4
comp=Z,122nm,19.6s,MS4.2,baz=181,slow=39
PSZ Piszkesteto 79.30 348 eP P 14 24 55.9 +0.1
FLN La Foliniere 79.54 2 eP P 14 24 57.1 0.0
comp=Z,45nm,1.1s,mb5.0
FLN eMLR MLR
comp=Z,95nm,20.0s,MS3.8
FLN La Foliniere 79.54 2 eP P 14 24 57.1 0.0
FLN pmax pmax
comp=Z,23nm,1.1s,mb5.0
FLN MLR MLR
comp=Z,100nm,20.0s,MS4.2
FLN La Foliniere 79.54 2 eP P 14 24 57.1 0.0
comp=Z,22nm,1.1s,mb5.0
FLN LR LR
comp=Z,100nm,20.0s,MS4.2
LDF La Druitiere 79.72 2 eP P 14 24 58.0 0.0
comp=Z,45nm,0.9s,mb5.1
LDF La Druitiere 79.72 2 eP P 14 24 58.0 0.0
LDF pmax pmax
comp=Z,23nm,0.9s,mb5.1
LDF La Druitiere 79.72 2 eP P 14 24 58.0 0.0
comp=Z,23nm,0.9s,mb5.1
CONA Conrad Observa 79.75 351 ⇑i P P 14 24 58.7 +0.5
comp=Z,8.5nm,1.3s,mb4.5
MEZF Maizieres J'vi 79.81 358 ⇑i P P 14 24 59.1 +0.6
comp=Z,29nm,0.9s,mb4.9
MEZF Maizieres J'vi 79.81 358 ⇑i P P 14 24 59.1 +0.6
comp=Z,29nm,0.9s,mb5.2
CDF Champ du Feu 79.84 357 eP P 14 24 58.9 +0.2
comp=Z,18nm,0.8s,mb4.8
CDF Champ du Feu 79.84 357 eP P 14 24 58.9 +0.2
CDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CDF Champ du Feu 79.84 357 eP P 14 24 58.9 +0.2
comp=Z,9.1nm,0.8s,mb4.8
ROSF Rostrenen 79.88 4 eP P 14 24 59.2 +0.3
GRR Gorron 79.91 2 ⇑i P P 14 24 59.4 +0.3
comp=Z,27nm,0.8s,mb4.9
GRR Gorron 79.91 2 ⇑i P P 14 24 59.4 +0.3
GRR pmax pmax
comp=Z,13nm,0.8s,mb4.9
GRR Gorron 79.91 2 ⇑i P P 14 24 59.4 +0.3
comp=Z,13nm,0.8s,mb4.9
SGMF Saint Gilles 79.99 3 ⇑i P P 14 24 59.8 +0.3
comp=Z,44nm,1.1s,mb5.0
SGMF Saint Gilles 79.99 3 ⇑i P P 14 24 59.8 +0.3
SGMF pmax pmax
comp=Z,22nm,1.1s,mb5.0
SGMF Saint Gilles 79.99 3 ⇑i P P 14 24 59.8 +0.3
comp=Z,22nm,1.1s,mb5.0
DRGR 80.02 346 ⇓P P 14 25 00.2 +0.5
DRGR 80.02 346 ⇓i P P 14 25 00.2 +0.5
ECH Echery 80.04 357 eP P 14 24 59.4 -0.4
ECH pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ECH Echery 80.04 357 eP P 14 24 59.4 -0.4
comp=Z,10nm,1.1s,mb4.7
VRI Vrincioaia 80.25 343 ⇓P P 14 25 02.0 +1.0
VRI Vrincioaia 80.25 343 ⇓i P P 14 25 02.0 +1.0
HAU Haudompre 80.27 357 ⇑i P P 14 25 01.3 +0.3
comp=Z,18nm,0.8s,mb4.8
HAU eMLR MLR
comp=Z,179nm,22.5s,MS4.1
HAU Haudompre 80.27 357 ⇑i P P 14 25 01.3 +0.3
HAU pmax pmax

comp=Z,9.0nm,0.8s,mb4.8
HAU MLR MLR
HAU Haudompre 80.27 357⇑iP P 14 25 01.3 +0.3
comp=Z,9.1nm,0.8s,mb4.8
HAU LR LR
comp=Z,180nm,22.5s,MS4.4
QUIF Quistinic 80.31 4 eP P 14 25 02.7 +1.5
HINF Hinteralfeld 80.45 357⇑iP P 14 25 02.0 0.0
comp=Z,10nm,0.8s,mb4.5
HINF Hinteralfeld 80.45 357⇑iP P 14 25 02.0 0.0
HINF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HINF Hinteralfeld 80.45 357⇑iP P 14 25 02.0 0.0
comp=Z,5.2nm,0.8s,mb4.5
TLCR 80.51 341⇓iP P 14 25 03.4 +1.0
TLCR 80.51 341⇓iP P 14 25 03.4 +1.0
MLR Muntele Rosu 80.75 343⇓iP P 14 25 05.6 +1.9
MLR Muntele Rosu 80.75 343⇓iP P 14 25 05.6 +1.9
KBA Koelnbreinsper 80.81 352⇑iP P 14 25 04.5 +0.6
comp=Z,16nm,0.6s,mb5.1
VOIR 80.96 344⇓P P 14 25 06.9 +2.1
VOIR 80.96 344⇓iP P 14 25 06.9 +2.1
FETA Feichten 81.06 354⇑iP P 14 25 05.9 +0.6
comp=Z,11nm,1.1s,mb4.7
LOR Lormes 81.06 359 eP P 14 25 05.6 +0.3
comp=Z,32nm,0.9s,mb4.9
LOR eMLR MLR
comp=Z,109nm,19.0s,MS3.9
LOR Lormes 81.06 359 eP P 14 25 05.6 +0.3
LOR pmax pmax
comp=Z,16nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,110nm,19.0s,MS4.2
LOR Lormes 81.06 359 eP P 14 25 05.6 +0.3
comp=Z,16nm,0.9s,mb5.0
LOR LR LR
comp=Z,110nm,19.0s,MS4.2
SOKA Soboth 81.06 351⇑iP P 14 25 05.9 +0.6
comp=Z,16nm,1.4s,mb4.8
SSF Saint Saulge 81.27 359⇑iP P 14 25 06.8 +0.4
comp=Z,24nm,0.9s,mb4.8
SSF Saint Saulge 81.27 359⇑iP P 14 25 06.8 +0.4
SSF pmax pmax
comp=Z,12nm,0.9s,mb4.8
SSF Saint Saulge 81.27 359⇑iP P 14 25 06.8 +0.4
comp=Z,12nm,0.9s,mb4.8
OBKA Obir 81.28 352⇑iP P 14 25 07.1 +0.7
comp=Z,9.6nm,0.7s,mb4.8
TIRR Tirgusor 81.29 341⇓P P 14 25 07.5 +0.9
TIRR Tirgusor 81.29 341⇓iP P 14 25 07.5 +0.9
BZS Buzias 81.33 346⇓P P 14 25 07.0 +0.3
BZS Buzias 81.33 346⇓iP P 14 25 07.0 +0.3
GZR Gura Zlata 81.37 346⇓P P 14 25 07.5 +0.5
GZR Gura Zlata 81.37 346⇓iP P 14 25 07.5 +0.5
AVF Avril sur Loir 81.54 359⇑iP P 14 25 08.2 +0.4
comp=Z,27nm,1.1s,mb4.8
AVF Avril sur Loir 81.54 359⇑iP P 14 25 08.2 +0.4
AVF pmax pmax
comp=Z,13nm,1.1s,mb4.8
AVF Avril sur Loir 81.54 359⇑iP P 14 25 08.2 +0.4
comp=Z,13nm,1.1s,mb4.8
CABF La Chapelle 81.67 357⇑iP P 14 25 09.2 +0.7
comp=Z,32nm,1.1s,mb4.9
CABF La Chapelle 81.67 357⇑iP P 14 25 09.2 +0.7
CABF pmax pmax
comp=Z,16nm,1.1s,mb4.9
CABF La Chapelle 81.67 357⇑iP P 14 25 09.2 +0.7
comp=Z,16nm,1.1s,mb4.9
SMF Signal de Mont 81.68 359⇑iP P 14 25 08.9 +0.3
comp=Z,25nm,0.8s,mb4.9
SMF Signal de Mont 81.68 359⇑iP P 14 25 08.9 +0.3
SMF pmax pmax
comp=Z,12nm,0.8s,mb4.9
SMF Signal de Mont 81.68 359⇑iP P 14 25 08.9 +0.3
comp=Z,12nm,0.8s,mb4.9
MFF Saint Martin d 81.71 2⇑iP P 14 25 09.2 +0.5
comp=Z,19nm,0.8s,mb4.8
MFF Saint Martin d 81.71 2⇑iP P 14 25 09.2 +0.5
MFF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MFF Saint Martin d 81.71 2⇑iP P 14 25 09.2 +0.5
comp=Z,9.7nm,0.8s,mb4.8
BGF Bois d'Agland 81.78 360 eP P 14 25 09.5 +0.4
comp=Z,42nm,1.3s,mb4.9
BGF Bois d'Agland 81.78 360 eP P 14 25 09.5 +0.4
BGF pmax pmax
comp=Z,21nm,1.3s,mb4.9
BGF Bois d'Agland 81.78 360 eP P 14 25 09.5 +0.4
comp=Z,21nm,1.3s,mb4.9
TCF Toulx Ste Croi 82.05 0 eP P 14 25 10.8 +0.3
comp=Z,13nm,0.8s,mb4.6
TCF Toulx Ste Croi 82.05 0 eP P 14 25 10.8 +0.3
TCF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 82.05 0 eP P 14 25 10.8 +0.3
comp=Z,6.4nm,0.8s,mb4.6
LPL La Plagne 82.75 357 eP P 14 25 15.5 +1.3
comp=Z,8.2nm,0.9s,mb4.5
LPL La Plagne 82.75 357 eP P 14 25 15.5 +1.3
LPL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LPL La Plagne 82.75 357 eP P 14 25 15.5 +1.3
comp=Z,4.1nm,0.9s,mb4.5
LPG La Plagne 82.77 357⇑iP P 14 25 15.8 +1.5
comp=Z,15nm,1.1s,mb4.6
LPG La Plagne 82.77 357⇑iP P 14 25 15.8 +1.5
LPG pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
LPG La Plagne 82.77 357⇑iP P 14 25 15.8 +1.5
comp=Z,7.5nm,1.1s,mb4.6
WRAB Tennant Creek 83.00 225 eP P 14 25 13.6 -2.1
WRAB pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
WRAB Tennant Creek 83.00 225 eP P 14 25 13.6 -2.1
comp=Z,10nm,1.0s,mb4.8
WB2 Warramunga Arr 83.01 225 eP P 14 25 14.6 -1.1
WRA Warramunga Arr 83.02 225 P P 14 25 14.2 -1.5
comp=Z,6.5nm,0.7s,mb4.8,baz=34,slow=6.0,SNR=18
RJF Les Rejaudoux 83.03 1 eP P 14 25 15.9 +0.3
RJF eMLR MLR
comp=Z,106nm,18.8s,MS3.9
RJF Les Rejaudoux 83.03 1 eP P 14 25 15.9 +0.3
RJF LR LR
comp=Z,110nm,18.8s,MS4.2
SSB Saint Sauveur 83.04 358 eP P 14 25 16.1 +0.4
SSB pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SSB Saint Sauveur 83.04 358 eP P 14 25 16.1 +0.4
comp=Z,4.1nm,0.8s,mb4.5
ORIF Oris-en-Rattie 83.37 358 eP P 14 25 18.5 +1.1
comp=Z,8.3nm,0.9s,mb4.5
ORIF eMLR MLR
comp=Z,84nm,21.0s,MS3.8
ORIF Oris-en-Rattie 83.37 358 eP P 14 25 18.5 +1.1
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.37 358 eP P 14 25 18.5 +1.1
comp=Z,4.2nm,0.9s,mb4.5
LFF La Frestale 83.39 1 eP P 14 25 18.1 +0.6
comp=Z,10nm,0.5s,mb4.8
LFF La Frestale 83.39 1 eP P 14 25 18.1 +0.6
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
LFF La Frestale 83.39 1 eP P 14 25 18.1 +0.6
comp=Z,5.3nm,0.5s,mb4.8
CAF Calviac 83.41 0 eP P 14 25 18.3 +0.7
comp=Z,10nm,0.7s,mb4.7
CAF Calviac 83.41 0 eP P 14 25 18.3 +0.7
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CAF Calviac 83.41 0 eP P 14 25 18.3 +0.7
comp=Z,5.2nm,0.7s,mb4.7
VIVF Saint-Julien-l 83.46 358 eP P 14 25 18.6 +0.7
comp=Z,8.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 83.46 358 eP P 14 25 18.6 +0.7
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 83.46 358 eP P 14 25 18.6 +0.7
comp=Z,4.0nm,0.8s,mb4.5
MBDF Montbardon 83.54 357 eP P 14 25 19.3 +1.0
comp=Z,11nm,0.9s,mb4.7
MBDF Montbardon 83.54 357 eP P 14 25 19.3 +1.0
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
MBDF Montbardon 83.54 357 eP P 14 25 19.3 +1.0
comp=Z,5.7nm,0.9s,mb4.7

PSI Prapat 83.79 267 P P 14 25 18.8 -1.2
comp=Z,16nm,0.8s,mb5.2,baz=356,slow=7.2,SNR=9.4
SMRF Simiane la Rot 84.32 358 eP P 14 25 23.6 +1.3
comp=Z,12nm,0.9s,mb4.7
SMRF Simiane la Rot 84.32 358 eP P 14 25 23.6 +1.3
comp=Z,12nm,0.9s,mb5.0
SBF Sospel 84.38 356 eP P 14 25 22.7 +0.1
BR131 Keskin Array S 84.65 336 eP P 14 25 23.9 -0.1
BRTR Keskin Array B 84.65 336 P P 14 25 23.3 -0.7
BRTR 14 28 38.2
BRTR Keskin Array B 84.65 336 iP P 14 25 24.7 +0.7
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 84.65 336 P P 14 25 23.2 -0.8
comp=Z,4.6nm,0.8s,mb4.6,baz=48,slow=2.7,SNR=15
BRTR PP PP 14 28 38.2 -0.8
comp=Z,1.5nm,0.9s,baz=32,slow=7.7,SNR=4.4
BRTR LR LR 15 07 57.1
comp=Z,54nm,19.5s,MS3.9,baz=173,slow=39
FRF La Foret Royal 84.70 357 eP P 14 25 25.3 +1.1
comp=Z,9.8nm,0.9s,mb4.6
FRF La Foret Royal 84.70 357 eP P 14 25 25.3 +1.1
FRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
FRF La Foret Royal 84.70 357 eP P 14 25 25.3 +1.1
comp=Z,4.9nm,0.9s,mb4.6
LMR La Mourre 84.94 357 eP P 14 25 25.8 +0.4
comp=Z,21nm,1.1s,mb4.9
LMR La Mourre 84.94 357 eP P 14 25 25.8 +0.4
LMR pmax pmax
comp=Z,11nm,1.1s,mb4.9
LMR La Mourre 84.94 357 eP P 14 25 25.8 +0.4
comp=Z,11nm,1.1s,mb4.9
MTLF Montolieu 85.00 0 eP P 14 25 26.5 +0.8
comp=Z,17nm,0.9s,mb4.9
MTLF Montolieu 85.00 0 eP P 14 25 26.5 +0.8
MTLF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
MTLF Montolieu 85.00 0 eP P 14 25 26.5 +0.8
comp=Z,8.5nm,0.9s,mb4.9
SJPF Ste Jean 85.17 3 eP P 14 25 26.8 +0.2
comp=Z,5.5nm,0.8s,mb4.5
SJPF Ste Jean 85.17 3 eP P 14 25 26.8 +0.2
SJPF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
SJPF Ste Jean 85.17 3 eP P 14 25 26.8 +0.2
comp=Z,2.8nm,0.8s,mb4.4
EPF Esparros 85.29 2⇑iP P 14 25 27.2 0.0
comp=Z,14nm,1.0s,mb4.7
EPF Esparros 85.29 2⇑iP P 14 25 27.2 0.0
EPF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
EPF Esparros 85.29 2⇑iP P 14 25 27.2 0.0
comp=Z,7.1nm,1.0s,mb4.8
ETSF Etsaut 85.40 2⇑iP P 14 25 28.7 +0.9
comp=Z,10nm,0.9s,mb4.7
ETSF Etsaut 85.40 2⇑iP P 14 25 28.7 +0.9
ETSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
ETSF Etsaut 85.40 2⇑iP P 14 25 28.7 +0.9
comp=Z,5.2nm,0.9s,mb4.7
FITZ Fitzroy Crossi 85.47 233 eP P 14 25 28.0 -0.2
comp=Z,13nm,0.7s,mb5.2
FITZ Fitzroy Crossi 85.47 233 eP P 14 25 27.7 -0.5
comp=Z,7.8nm,0.8s,mb4.9
PGF Pioggiola 85.61 355 eP P 14 25 29.1 +0.3
comp=Z,37nm,1.1s,mb5.2
PGF Pioggiola 85.61 355 eP P 14 25 29.1 +0.3
PGF pmax pmax
comp=Z,18nm,1.1s,mb5.2
PGF Pioggiola 85.61 355 eP P 14 25 29.1 +0.3
comp=Z,18nm,1.1s,mb5.2
ARMA Armidale 86.44 206 eP P 14 25 32.6 -0.1
ASAR Alice Springs 86.49 223 P P 14 25 32.5 -0.7
comp=Z,3.2nm,0.7s,mb4.7,baz=25,slow=5.5,SNR=46
STKA Stephens Creek 90.90 214 eP P 14 25 53.6 -0.3
comp=Z,4.7nm,0.6s,mb5.0
STKA Stephens Creek 90.90 214 P P 14 25 52.8 -1.0
comp=Z,4.9nm,0.6s,mb5.0,baz=351,slow=5.4,SNR=9.3
STKA LR LR 15 03 32.7
comp=Z,149nm,20.0s,MS4.4,baz=25,slow=33
TORD Torodi Ar. Bea 115.08 1 PKP PKiKP 14 31 29.3 -2.6
comp=Z,0.5nm,0.7s,baz=188,slow=1.1,SNR=2.2
TORD PP PP 14 32 26.1 -4.3
comp=Z,1.3nm,0.9s,baz=6.7,slow=6.0,SNR=3.6
TORD PKKPbc PKKPbc 14 42 11.0 +5.7
comp=Z,0.1nm,0.3s,baz=176,slow=3.3,SNR=4.8
CPUP Villa Florida 128.77 84 PKP PKPdf 14 31 56.4 -1.3
comp=Z,0.5nm,0.4s,baz=309,slow=10,SNR=4.7
PLCA Paso Flores 130.44 107 PKP PKPdf 14 32 01.4 +1.0
comp=Z,3.5nm,1.0s,baz=329,slow=1.0,SNR=4.7
MAW Mawson 147.47 218 PKPbc PKPbc 14 32 33.6 +0.5
comp=Z,8.5nm,0.7s,baz=79,slow=6.9,SNR=15
BOSA Boshof 151.06 315 PKPbc PKPbc 14 32 41.2 -2.0
comp=Z,4.4nm,0.7s,baz=228,slow=1.1,SNR=7.1
BOSA Boshof 151.06 315 PKPbc PKPbc 14 32 41.2 -2.0
SYO Syowa Base 155.64 212⇑ eP PKPab 14 33 09.8 +0.7
VNA3 Neumayer Olymp 159.98 169 ePKPdf PKPab 14 33 31.6 +3.8
VNA2 Neumayer--Watz 160.53 170 ePKPdf PKPab 14 33 33.0 +2.7

*CSEM **08** 14:31:58.6±0.7, 36.°14N×21.°91E, h2km, MD3.1, Error ellipse: s-maj=13.0km s-min=6.4km az=58.0*
*ATH **08** 14:31:58.9, 36.°15N×21.°90E, h8km±2km, MD3.1/9*
*THE **08** 14:31:58.2, 36.°14N×21.°72E, h5km±1km, ML3.7/3, Error ellipse: s-maj=5.1km s-min=1.2km az=253.0*
ISC 08 14:31:58.6±1.3, 36.°13N±0.°05×21.°85E±0.°07, h0km±5km, n32, σ0°92/58, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.77**	**354**	*e*PB	**Pg**	**14 32 12.5**	**-0.8**
PYL				*e*SG	**Sg**	**14 32 24.4**	**+1.1**
PYL	**PYLOS**	**0.77**	**354**	P	**Pg**	**14 32 12.5**	**-0.8**
PYL				S	**Sg**	**14 32 23.6**	**+0.3**
PYL	**PYLOS**	**0.77**	**354**	P	**Pg**	**14 32 12.5**	**-0.8**
PYL				S	**Sg**	**14 32 23.6**	**+0.3**
PYL				*e*Sg	**Sg**	**14 32 24.4**	**+1.1**
KYTH	**Kithira**	**0.97**	**81**	*e*PN	**Pg**	**14 32 17.0**	**-0.2**
KYTH	**Kithira**	**0.97**	**81**	*e*Pn	**Pg**	**14 32 17.0**	**-0.2**
ITM	**Ithomi**	**1.05**	**3**	*e*PG	**Pg**	**14 32 17.9**	**-0.8**
ITM				*e*SG	**Sg**	**14 32 33.1**	**+0.8**
ITM	**Ithomi**	**1.05**	**3**	P	**Pg**	**14 32 17.9**	**-0.8**
ITM				S	**Sg**	**14 32 32.8**	**+0.5**
ITM	**Ithomi**	**1.05**	**3**	P	**Pg**	**14 32 17.9**	**-0.8**
ITM				S	**Sg**	**14 32 32.8**	**+0.5**
ITM				*e*Sg	**Sg**	**14 32 33.1**	**+0.8**
VLI	**Veliai**	**1.05**	**56**	*e*PG	**Pg**	**14 32 18.0**	**-0.8**
VLI				*e*SB	**Sg**	**14 32 32.2**	**-0.3**
VLI	**Veliai**	**1.05**	**56**	*e*Pg	**Pg**	**14 32 18.0**	**-0.8**
VLI				*e*Sb	**Sg**	**14 32 32.2**	**-0.3**
VLX	**Vlachokerasia**	**1.31**	**19**	*e*PN	**Pn**	**14 32 22.2**	**-1.8**
VLX				*e*SB	**Sb**	**14 32 40.6**	**-0.7**
VLX	**Vlachokerasia**	**1.31**	**19**	P	**Pn**	**14 32 22.1**	**-1.9**
VLX				S	**Sg**	**14 32 42.3**	**+1.7**
VLX	**Vlachokerasia**	**1.31**	**19**	P	**Pn**	**14 32 22.1**	**-1.9**
VLX				*e*Sb	**Sb**	**14 32 40.6**	**-0.7**
VLX				S	**Sg**	**14 32 42.3**	**+1.7**
DID	**Didima**	**1.77**	**39**	*e*PG	**Pn**	**14 32 30.9**	**+0.5**
DID				*e*SN	**Sn**	**14 32 54.7**	**+1.2**
DID	**Didima**	**1.77**	**39**	P	**Pn**	**14 32 30.3**	**-0.1**
DID				S	**Sn**	**14 32 55.0**	**+1.5**
DID	**Didima**	**1.77**	**39**	P	**Pn**	**14 32 30.3**	**-0.1**
DID	**Didima**	**1.77**	**39**	*e*Pg	**Pn**	**14 32 30.9**	**+0.5**
DID				*e*Sn	**Sn**	**14 32 54.7**	**+1.2**
DID				S	**Sn**	**14 32 55.0**	**+1.5**
KARN	**Karanos**	**1.83**	**113**	P	**Pn**	**14 32 31.2**	**0.0**
KARN				S	**Sn**	**14 32 55.8**	**+0.7**
KARN	**Karanos**	**1.83**	**113**	P	**Pn**	**14 32 31.2**	**0.0**
KARN				S	**Sn**	**14 32 55.8**	**+0.7**
GUR	**Goura**	**1.84**	**12**	*e*PG	**Pb**	**14 32 32.8**	**-0.3**
GUR	**Goura**	**1.84**	**12**	P	**Pn**	**14 32 32.0**	**+0.6**
GUR				S	**Sn**	**14 32 54.2**	**-1.2**
GUR	**Goura**	**1.84**	**12**	P	**Pn**	**14 32 32.0**	**+0.6**
GUR	**Goura**	**1.84**	**12**	*e*Pg	**Pb**	**14 32 32.8**	**-0.3**
GUR				S	**Sn**	**14 32 54.2**	**-1.2**
LTK	**Loutraki**	**2.09**	**25**	*e*PG	**Pb**	**14 32 36.7**	**-0.6**
LTK	**Loutraki**	**2.09**	**25**	P	**Pn**	**14 32 34.4**	**-0.4**
LTK				S	**Sn**	**14 33 01.1**	**-0.4**
LTK	**Loutraki**	**2.09**	**25**	P	**Pn**	**14 32 34.4**	**-0.4**
LTK	**Loutraki**	**2.09**	**25**	*e*Pg	**Pb**	**14 32 36.7**	**-0.6**
LTK				S	**Sn**	**14 33 01.1**	**-0.4**
LAKA	**Lakka**	**2.11**	**3**	P	**Pn**	**14 32 35.8**	**+0.8**
LAKA				S	**Sn**	**14 33 01.0**	**-0.9**
LAKA	**Lakka**	**2.11**	**3**	P	**Pn**	**14 32 35.8**	**+0.8**
LAKA				S	**Sn**	**14 33 01.0**	**-0.9**
KALE	**Kalithea**	**2.27**	**6**	P	**Pn**	**14 32 38.3**	**+1.1**
KALE	**Kalithea**	**2.27**	**6**	P	**Pn**	**14 32 38.3**	**+1.1**
EFP	**Efpalio**	**2.29**	**1**	*e*PN	**Pn**	**14 32 39.4**	**+1.8**

IDC 08 14:34:38.9±47.0, 22.°42S×171.°13W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/18, mbtmp4.0/3, Error ellipse: s-maj=918.8km s-min=180.8km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.83**	**247**	P	P	14 42 37.4	-1.3
	0.9nm,0.4s,baz=102,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**50.33**	**257**	P	P	14 43 38.0	+0.2
	0.4nm,0.3s,baz=94,slow=7.3,SNR=49						
WRA	**Warramunga Arr**	**50.68**	**262**	P	P	14 43 41.2	+0.7
	1.3nm,0.3s,baz=99,slow=6.7,SNR=64						

MAN 08 14:58:44, 12.°80N×123.°63E, h22km, mb4.8, ML3.7, MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.94**	**33**	*e*P	Pb	14 59 01.5	-0.2
PVCP				*e*S	Sb	14 59 05.3	-8.5
CNP	**Catarman**	**1.05**	**106**	*e*P	Pn	14 59 03.7	+0.3
CNP				*e*S	Sb	14 59 18.3	+1.5
AUQP	**San Andres**	**1.06**	**299**	*e*P	Pn	14 59 04.4	+0.8
BOAC	**Boac**	**1.86**	**291**	*e*P	Pn	14 59 14.7	+0.2
GUIM	**Jordan**	**2.39**	**205**	*e*P	Pn	14 59 23.5	+1.7
GUIM				*e*S	Sn	14 59 52.1	+1.7

*IDC **08** 15:21:06.5±3.4, 0.°59S×100.°30E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=153.5km s-min=20.4km az=56.0*
*NEIC **08** 15:21:08.6±1.1, 1.°26S×99.°48E, h35km, mb4.0/1, Error ellipse: s-maj=36.1km s-min=8.6km az=63.0*
NEIC Felt [II] at Pariaman, Sumatra.
*ISCJB **08** 15:21:09.7±0.5, 1.°02S±0.°04×99.°54E±0.°05, h60km±5km, mb4.0/6, Error ellipse: s-maj=7.6km s-min=7.0km az=166.7*
*DJA **08** 15:21:10, 1.°03S×99.°55E, h22km, MLv4.0/6*
ISC 08 15:21:10.9±0.5, 1.°03S±0.°04×99.°55E±0.°04, h52km±6km, n20, σ1°03/25, mb4.0/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.55**	**237**	P	**Pn**	**15 21 21.8**	**-1.0**
SISI	**Saibi**	**0.55**	**237**	P	**Pn**	**15 21 22.1**	**-0.7**
SISI				S	**Sn**	**15 21 30.4**	**-0.9**
PDSI	**Padang**	**0.92**	**83**	P	**Pn**	**15 21 26.8**	**-0.8**
PDSI				S	**Sn**	**15 21 38.9**	**-1.0**
PPI	**Padang Panjang**	**1.02**	**56**	P	**Pn**	**15 21 28.2**	**-0.7**
PPI				S	**Sn**	**15 21 41.8**	**-0.5**
PPSI	**Pulau Pagai**	**1.79**	**165**	P	**Pn**	**15 21 39.6**	**+0.3**
PPSI				S	**Sn**	**15 22 02.0**	**+1.1**
MNSI	**Mandailing Nat**	**1.81**	**1**	P	**Pn**	**15 21 40.7**	**+1.1**
SDSI	**Sungai Dareh**	**1.89**	**87**	P	**Pn**	**15 21 42.6**	**+1.9**
GSI	**Gunungsitoli**	**3.04**	**320**	P	**Pn**	**15 21 56.4**	**-0.1**
PSI	**Prapat**	**3.85**	**351**	Pn	**Pn**	**15 22 07.2**	**-0.4**
	3.3nm,0.3s,baz=179,slow=10.0,SNR=11						
KSI	**Kapahiang**	**4.01**	**131**	P	**Pn**	**15 22 10.7**	**+0.9**
MDSI	**Maura Dua**	**5.76**	**127**	P	**Pn**	**15 22 35.0**	**+1.1**
	26nm,0.8s,0.1nm						
KULM	**Kulim**	**6.37**	**10**	*e*Pg	**Pn**	**15 22 43.3**	**+1.1**
KASI	**Kota Agung**	**6.66**	**132**	P	**Pn**	**15 22 46.9**	**+0.7**
WRA	**Warramunga Arr**	**38.88**	**121**	P	**P**	**15 28 30.4**	**-1.2**
	1.8nm,0.8s,mb3.9,baz=301,slow=9.1,SNR=14						
WRAB	**Tennant Creek**	**38.88**	**121**	*e*P	**P**	**15 28 30.5**	**-1.1**
	1.5nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**38.89**	**121**	*e*P	**P**	**15 28 30.1**	**-1.6**
ASAR	**Alice Springs**	**40.19**	**127**	P	**P**	**15 28 42.0**	**-0.4**
	2.1nm,0.8s,mb3.9,baz=296,slow=7.9,SNR=27						
SONM	**Songino Array**	**49.03**	**6**	P	**P**	**15 29 50.8**	**-1.6**
	0.6nm,0.5s,mb3.9,baz=187,slow=10,SNR=3.6						
MK31	**Makanchi Array**	**49.97**	**345**	*e*P	**P**	**15 30 00.9**	**+1.2**
MKAR	**Makanchi Array**	**49.97**	**345**	P	**P**	**15 30 00.1**	**+0.4**
	0.5nm,0.3s,mb4.0,baz=164,slow=8.6,SNR=11						
ZALV	**Zalesovo Beam**	**56.13**	**350**	P	**P**	**15 30 46.4**	**+1.5**
	0.8nm,0.4s,mb4.1,baz=179,slow=7.1,SNR=7.1						

IDC 08 15:28:18.5±5.6, 7.°08S×130.°00E, h335km±60km, mb2.8/1, mb1 2.7/5, mb1mx2.6/18, mbtmp2.6/5, Error ellipse: s-maj=60.9km s-min=21.8km az=62.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.40**	**281**	P	Pn	15 30 41.1	-0.3
	2.2nm,0.3s,baz=175,slow=12,SNR=4.2						
FITZ	**Fitzroy Crossi**	**11.76**	**201**	P	Pn	15 30 55.4	-2.1
	0.1nm,0.3s,baz=293,slow=20,SNR=7.9						
FITZ				S	S	15 33 07.4	-1.2
	0.1nm,0.3s,baz=47,slow=8.6,SNR=3.3						
WRA	**Warramunga Arr**	**13.46**	**162**	P	Pn	15 31 17.1	-0.8
	0.1nm,0.3s,baz=345,slow=11,SNR=5.7						
WRA				S	S	15 33 43.4	-1.5
	0.1nm,0.3s,baz=328,slow=24,SNR=5.6						
ASAR	**Alice Springs**	**16.91**	**168**	P	P	15 31 56.6	+2.0
	0.1nm,0.3s,baz=344,slow=9.6,SNR=7.7						
MKAR	**Makanchi Array**	**68.29**	**327**	P	P	15 38 44.3	+0.2
	0.2nm,0.4s,baz=109,slow=6.3,SNR=3.5						

GUC 08 15:31:05.3±0.8, 34.°69S×72.°02W, h15km±7km, MD3.6, ML3.2, 5C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.72**	**116**	⇓*i*P	Pg	15 31 18.9	-0.5
NICH				*i* S	Sg	15 31 28.5	-0.4
TALC	**Talca**	**0.78**	**156**	⇑*i*P	Pg	15 31 19.5	-0.9
TALC				*i* S	Sg	15 31 29.8	-0.9
TALC				AML	AML	15 31 30.1	
	comp=E,9μm,0.2s						
LNV	**Longovilo**	**0.89**	**35**	⇑*i*P	Pb	15 31 21.0	-1.4
LNV				*i* S	Sb	15 31 32.6	-1.4
CACH	**El Canelo**	**1.30**	**65**	⇓*i*P	Pn	15 31 28.4	-0.5
CACH				*i* S	Sb	15 31 46.0	0.0
CHCH	**Chadas Angostu**	**1.36**	**57**	*e*P	Pn	15 31 29.2	-0.5
CHCH				*i* S	Sn	15 31 46.8	-0.6
RCDM	**Rinconada Maip**	**1.56**	**40**	⇑*i*P	Pn	15 31 31.9	-0.6
RCDM				*i* S	Sn	15 31 51.9	-0.6
RCDM				AML	AML	15 31 52.6	
	comp=E,309nm,0.1s						
ANTU	**Antumapu**	**1.60**	**46**	⇑*i*P	Pn	15 31 33.2	+0.2
ANTU				*i* S	Sn	15 31 53.0	-0.4
ANTU				AML	AML	15 31 56.0	
	comp=E,457nm,0.8s						
LMEL	**Las Melosas**	**1.72**	**61**	⇑*i*P	Pn	15 31 35.1	+0.4
LMEL				*i* S	Sn	15 31 57.1	+0.7
LMEL				AML	AML	15 31 58.9	
	comp=N,506nm,0.3s						
CLCH	**Cerro Calan**	**1.78**	**44**	*e*P	Pn	15 31 35.2	-0.3
CLCH				*i* S	Sn	15 31 58.3	+0.4
CLCH				AML	AML	15 32 06.2	
	comp=N,356nm,0.5s						
CLCH				AML	AML	15 32 06.8	
	comp=N,461nm,0.3s						
PEL	**Peldehue**	**1.90**	**36**	⇓*i*P	Pn	15 31 36.9	-0.3
PEL				*i* S	Sn	15 32 01.8	+1.1
PEL				AML	AML	15 32 07.8	
	comp=N,368nm,0.4s						
FCH	**Farellones**	**1.98**	**47**	AML	AML	15 32 06.7	
	comp=N,223nm,0.2s						

*IDC **08** 15:42:30.4±7.1, 8.°59S×125.°03E, h75km±83km, mb3.5/6, mb1 3.7/9, mb1mx3.5/17, mbtmp3.5/9, ML3.5/3, Error ellipse: s-maj=48.8km s-min=44.0km az=41.0*
*NEIC **08** 15:42:31.9±3.0, 8.°66S×125.°22E, h96km±37km, mb3.7/1, Error ellipse: s-maj=28.1km s-min=23.7km az=49.0*
ISC 08 15:42:30.5±3.2, 8.°5S±0.°1×125.°2E±0.°2, h77km±38km, n16, σ1°14/18, mb3.7/7, Timor region

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

KAKA	Kakadu	8.20 121	ePn	Pn	15 44 27.6	+0.9
FITZ	Fitzroy Crossi	9.51 178	P	Pn	15 44 44.4	-0.3
	0.2nm,0.3s,baz=43,slow=5.3,SNR=11					
FITZ			S	Sn	15 46 30.6	+0.7
	0.8nm,0.3s,baz=149,slow=15,SNR=5.3					
FITZ	Fitzroy Crossi	9.51 178	eP	Pn	15 44 45.0	+0.3
FITZ			S	Sn	15 46 30.6	+0.7
WRAB	Tennant Creek	14.35 143	ePn	Pn	15 45 48.7	-1.1
	8.1nm,0.8s					
WRA	Warramunga Arr	14.35 143	P	Pn	15 45 49.2	-0.7
	0.4nm,0.3s,baz=318,slow=12,SNR=26					
WRA			S	Sx	15 48 25.1	
	0.2nm,0.3s,baz=314,slow=24,SNR=5.1					
WB2	Warramunga Arr	14.36 143	P	Pn	15 45 48.1	-1.9
ASAR	Alice Springs	17.17 152	P	Pn	15 46 27.0	+1.5
	0.2nm,0.3s,baz=324,slow=11,SNR=18					
STKA	Stephens Creek	27.75 149	P	P	15 48 21.9	+10
	0.8nm,0.5s,mb3.5,baz=327,slow=12,SNR=5.5					
CMAR	Chiang Mai Arr	37.33 316	P	P	15 49 34.5	-1.1
	0.6nm,0.6s,mb3.7,baz=154,slow=7.0,SNR=5.1					
MJAR	Matsushiro Arr	46.47 14	P	P	15 50 50.6	+0.8
	2.4nm,0.9s,mb3.9,baz=194,slow=8.7,SNR=4.6					
SONM	Songino Array	58.56 345	P	P	15 52 20.8	+1.8
	0.4nm,0.5s,mb3.7,baz=177,slow=2.9,SNR=3.3					
MK31	Makanchi Array	67.04 329	eP	P	15 53 15.3	-0.1
MKAR	Makanchi Array	67.04 329	P	P	15 53 16.3	+1.0
	0.9nm,0.7s,mb3.7,baz=123,slow=8.8,SNR=6.1					
ZALV	Zalesovo Beam	70.97 336	P	P	15 53 37.8	-1.8
	0.4nm,0.4s,mb3.6,baz=149,slow=6.4,SNR=4.6					
KURK	Kurchatov	71.46 331	P	P	15 53 41.4	-1.2
	0.7nm,0.7s,mb3.6,baz=147,slow=5.5,SNR=5.5					
KURK	Kurchatov	71.46 331	eP	P	15 53 43.1	+0.5
	0.9nm,0.7s,mb3.7					

*IDC **08** 15:44:08.3±2.9,53°.09N×87°.54E,h0km,mb1 3.1/3, mb1mx3.0/28,mbtmp3.1/3,ML2.9/3,Error ellipse: s-maj=28.9km s-min=12.6km az=69.0*
*NEIC **08** 15:44:09.5±7.1,53°.26N×87°.53E,h10km,Error ellipse: s-maj=90.1km s-min=15.0km az=65.0*
*NNC **08** 15:44:12.1±1.4,52°.72N×87°.26E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=15.1km s-min=10.7km az=103.0*

ISC 08 15:44:09.3±2.8,53°.17N±0°.07×87°.6E±0°.3,h10km,n11, σ0s81/14,3C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.81	297	ePn	Pn	15 44 40.0	-0.4
ZAA0				eSn	Sn	15 45 04.2	+0.7
ZALV	Zalesovo Beam	1.81	297	Pg	Pg	15 44 41.0	-3.0
	5.0nm,0.3s,baz=116,slow=14,SNR=48						
ZALV				Lg		15 45 05.5	
	6.1nm,0.3s,baz=119,slow=25,SNR=17						
KURK	Kurchatov	6.04	250	⇑Lg		15 47 15.0	
	4.3nm,0.8s						
KURK	Kurchatov	6.04	250	Pn	Pn	15 45 39.8	+1.2
	0.1nm,0.3s,baz=65,slow=15,SNR=14						
KURK				Lg		15 47 22.6	
	0.1nm,0.3s,baz=65,slow=34,SNR=12						
KURBB	Kurchatov Arra	6.14	249	⇓Pn	Pn	15 45 39.7	-0.2
	0.2nm,0.5s						
KURBB				⇑Lg		15 47 15.8	
	1.3nm,0.6s						
MK31	Makanchi Array	7.22	210	⇓Pn	Pn	15 45 55.0	+0.2
	0.6nm,0.5s,baz=29,slow=12,SNR=36						
MK31				⇑Sn	Sn	15 47 16.4	-0.5
	1.3nm,0.6s						
MK31	Makanchi Array	7.22	210	eP	Pn	15 45 55.0	+0.2
MKAR	Makanchi Array	7.22	210	Pn	Pn	15 45 55.0	+0.2
	0.7nm,0.3s,baz=28,slow=12,SNR=44						
MKAR				Sn	Sn	15 47 16.7	-0.2
	0.3nm,0.3s,baz=24,slow=18,SNR=5.1						
MKAR				Lg		15 47 56.3	
	0.3nm,0.3s,baz=32,slow=28,SNR=6.4						
MKAR	Makanchi Array	7.22	210	Pn	Pn	15 45 55.0	+0.2
MKAR				Sn	Sn	15 47 16.7	-0.2
MKAR				Lg		15 47 56.3	
BVAR	Borovoye Array	10.33	276	Pn	Pn	15 46 37.6	+0.2
	0.0nm,0.3s,baz=66,slow=16,SNR=2.4						
BVAR	Borovoye Array	10.33	276	Pn	Pn	15 46 37.6	+0.2

*IDC **08** 15:52:02.7±3.1,3°.62N×95°.86E,h0km,mb3.8/2,mb1 4.0/4, mb1mx3.5/24,mbtmp3.8/4,ML3.8/2,MS2.9/1,Ms1 2.9/1, ms1mx2.3/23,Error ellipse: s-maj=63.3km s-min=44.2km az=52.0*
*ISCJB **08** 15:52:06.8±1.5,3°.9N±0°.1×95°.9E±0°.1,h50km±17km, mb3.9/2,Error ellipse: s-maj=25.9km s-min=7.8km az=135.2*
*DJA **08** 15:52:08,4°.52N×96°.54E,h21km,MLv4.4/7*

ISC 08 15:52:08.2±1.5,3°.9N±0°.1×95°.9E±0°.1,h48km±18km,n11, σ1s09/12,mb3.9/2,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.69	341	P	Pn	15 52 33.9	-1.5
BSI				S	Sn	15 52 55.9	0.0
LHMI	Lhok Sumawe	1.72	39	P	Px	15 52 23.1	
LHMI				S	Sx	15 52 36.5	
TSI	Tuntungan	2.73	98	P	Pn	15 52 45.0	-4.5
TSI				S	Sn	15 53 21.0	-0.3
GSI	Gunungsitoli	3.09	146	P	Px	15 53 00.7	
PSI	Prapat	3.24	109	Pn	Pn	15 52 55.4	-1.2
	6.7nm,0.3s,baz=319,slow=13,SNR=21						
PSI				Sn	Sn	15 53 33.7	-0.3
	13nm,0.3s,baz=22,slow=22,SNR=4.2						
PSI				LR	LR	15 54 28.9	
	comp=Z,178nm,18.1s,baz=120,slow=46						
TRSI	Tarutung	3.61	121	P	Pn	15 53 02.4	+0.8
MNSI	Mandailing Nat	4.82	129	P	Pn	15 53 19.8	+1.5
IPM	Ipoh	5.18	83	P	Pn	15 53 13.9	-9.4
CMAR	Chiang Mai Arr	14.79	12	Pn	Pn	15 55 36.9	+2.4
	0.2nm,0.3s,baz=198,slow=12,SNR=6.9						
WRA	Warramunga Arr	44.60	124	P	P	16 00 15.4	-0.7
	1.8nm,0.5s,mb4.2,baz=303,slow=9.1,SNR=24						
ASAR	Alice Springs	46.09	128	P	P	16 00 27.8	-0.1
	0.5nm,0.6s,mb3.6,baz=301,slow=7.7,SNR=25						

*NEIC **08** 16:19:47.5,30°.28S×72°.20W,h41km,MD3.6(GUC),After GUC.*

GUC 08 16:19:47.5±0.7,30°.28S×72°.20W,h41km±5km,MD3.6, ML3.1,1C-6D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.92	111	⇓iP	Pn	16 20 04.2	+0.3
OVCH				i S	Sn	16 20 17.1	+1.1
OVCH	Ovalle	0.92	111	⇓iP	Pn	16 20 04.2	+0.3
OVCH				i S	Sn	16 20 17.1	+1.1
OVCH				AML	AML	16 20 25.6	
	comp=N,517nm,0.4s						
TLL	Tololo Astrono	1.21	85	⇓iP	Pn	16 20 09.5	+1.5
TLL				i S	Sn	16 20 26.5	+3.3
TLL	Tololo Astrono	1.21	85	⇓iP	Pn	16 20 09.5	+1.5
TLL				i S	Sn	16 20 26.5	+3.3
TLL				AML	AML	16 20 35.6	
	comp=N,517nm,0.5s						
CMCH	Combarbala	1.36	131	eP	Pn	16 20 11.2	+1.2
CMCH				i S	Sn	16 20 29.0	+2.2
CMCH	Combarbala	1.36	131	eP	Pn	16 20 11.2	+1.2
CMCH				i S	Sn	16 20 29.0	+2.2
CMCH				AML	AML	16 20 37.2	
	comp=E,2μm,0.6s						
CHNG	Los Chungos	1.71	160	⇓iP	Pn	16 20 15.3	+0.6
CHNG				AML	AML	16 20 46.5	
	comp=E,129nm,0.4s						
LCO	Las Campanas	1.82	46	⇑iP	Pn	16 20 17.8	+1.5
LCO				AML	AML	16 20 53.5	
	comp=E,230nm,0.5s						
PEL	Peldehue	3.13	156	⇓eP	Pn	16 20 36.0	+1.7
PEL				AML	AML	16 21 36.6	
	comp=E,175nm,0.7s						

*ISCJB **08** 16:40:48.2±1.2,7°.8S±0°.1×123°.9E±0°.1,h265km±19km, mb3.8/2,Error ellipse: s-maj=24.4km s-min=13.6km az=143.2*
*NEIC **08** 16:40:49.6±0.9,7°.92S×123°.86E,h248km±18km,mb3.9/1, Error ellipse: s-maj=26.7km s-min=12.5km az=211.0*
*IDC **08** 16:40:56.3±7.8,8°.39S×123°.81E,h288km±56km,mb3.5/2, mb1 3.4/5,mb1mx3.0/19,mbtmp3.3/5,Error ellipse: s-maj=67.6km s-min=39.7km az=175.0*

ISC 08 16:40:49.6±1.1,8°.0S±0°.1×123°.9E±0°.1,h250km±18km,n11, σ0s92/14,mb4.0/2,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	5.07	305	eP	Pn	16 42 05.4	-0.9
KAKA	Kakadu	9.62	120	eP	Pn	16 43 03.6	+0.3
FITZ	Fitzroy Crossi	10.22	171	P	Pn	16 43 11.6	+0.7
	0.2nm,0.3s,baz=56,slow=8.1,SNR=8.7						
FITZ				S	S	16 45 05.5	-0.3
	0.5nm,0.3s,baz=63,slow=9.0,SNR=3.6						
FITZ	Fitzroy Crossi	10.22	171	eP	Pn	16 43 11.6	+0.6
FITZ				S	S	16 45 05.5	-0.3
WRA	Warramunga Arr	15.61	141	P	Pn	16 44 16.7	-0.4
	0.6nm,0.3s,baz=311,slow=13,SNR=25						
WRA				S	S	16 47 05.6	-2.3
	1.3nm,0.6s,mb3.8,baz=334,slow=11,SNR=5.1						
WRAB	Tennant Creek	15.61	141	eP	Pn	16 44 17.9	+0.8
	1.9nm,0.4s						
WB2	Warramunga Arr	15.62	141	eP	Pn	16 44 16.7	-0.5
ASAR	Alice Springs	18.32	150	P	P	16 44 47.2	+1.5
	0.4nm,0.3s,baz=322,slow=9.7,SNR=56						
NWAO	Narrogin (SRO)	25.61	193	P	P	16 45 56.4	+0.1
	4.7nm,0.8s,mb4.2,baz=32,slow=9.5,SNR=4.1						
STKA	Stephens Creek	28.93	148	P	P	16 46 26.5	+0.7
	1.3nm,0.6s,mb3.8,baz=334,slow=11,SNR=5.1						
STKA	Stephens Creek	28.93	148	P	P	16 46 26.5	+0.7

*IDC **08** 16:40:49.9±0.8,2°.69N×95°.90E,h0km,mb4.3/14, mb1 4.3/16,mb1mx4.1/27,mbtmp4.3/16,ML4.1/2,MS3.7/1, Ms1 3.7/1,ms1mx2.6/34,Error ellipse: s-maj=26.2km s-min=14.1km az=52.0*
*NEIC **08** 16:40:52.8±0.4,2°.69N×95°.94E,mb4.5/19,Error ellipse: s-maj=10.1km s-min=6.3km az=213.0*
*DJA **08** 16:40:53,2°.60N×95°.61E,h47km,MLv4.7/9*
*ISCJB **08** 16:40:55.4±0.7,2°.73N±0°.04×96°.02E±0°.05,h60km±6km, mb4.5/42,Error ellipse: s-maj=9.3km s-min=5.1km az=142.3*
*BJI **08** 16:40:55.9,2°.58N×95°.86E,h80km,mB4.8/19,mb4.7/34, Ms4.3/16,Ms7 4.1/13*

ISC 08 16:40:56.6±0.7,2°.72N±0°.04×95°.99E±0°.05,h53km±6km, h82km±4.2km:pP-P,n86,σ1s03/94,mb4.5/42,MS3.7/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	2.12	132	P	Pn	16 41 28.4	-1.2
GSI				S	Sn	16 41 54.5	-0.3
LHMI	Lhok Sumawe	2.67	21	P	Pn	16 41 37.7	+0.5
TSI	Tuntungan	2.69	73	P	Pn	16 41 39.0	+1.6
BSI	Banda Aceh	2.84	346	P	Pn	16 41 36.7	-2.9
BSI				S	Sn	16 42 11.7	-0.9
PSI	Prapat	2.93	88	Pn	Pn	16 41 40.9	+0.1
	6.7nm,0.3s,baz=282,slow=6.5,SNR=37						
PSI				Sn	Sn	16 42 13.6	-1.2
	9.9nm,0.3s,baz=74,slow=19,SNR=4.0						
TRSI	Tarutung	3.05	103	P	Pn	16 41 44.1	+1.8
MNSI	Mandailing Nat	4.07	118	P	Pn	16 41 55.9	-0.4
KULM	Kulim	5.30	61	P	Pn	16 42 14.3	+1.0
KULM	Kulim	5.30	61	ePn	Pn	16 42 13.5	+0.1
	148nm,0.9s						
KULM				eSn	Sn	16 43 26.8	+14
IPM	Ipoh	5.32	71	P	Pn	16 42 14.8	+1.2
IPM	Ipoh	5.32	71	ePn	Pn	16 42 13.8	+0.3
	48nm,0.5s						
IPM	Ipoh	5.32	71	P	Pn	16 42 14.3	+0.8
PPI	Padang Panjang	5.42	126	P	Pn	16 42 15.4	+0.5
	54nm,1.0s,2μm0.2nm						
BKNI	Bangkinang	5.58	115	P	Pn	16 42 17.4	+0.3
	53nm,0.7s,927nm0.4nm						
FRIM	Kepong	5.65	85	P	Pn	16 42 18.8	+0.7
PDSI	Padang	5.74	129	P	Pn	16 42 19.4	+0.1
KGM	Kluang	7.36	95	P	Pn	16 42 42.5	+1.0
KTGM	Kuala Trenggan	7.58	70	P	Pn	16 42 45.2	+0.6
MYKOM	Kota Tinggi	7.91	97	P	Pn	16 42 50.0	+1.0
KSI	Kapahiang	9.14	134	P	Pn	16 43 05.6	-0.3
MDSI	Maura Dua	10.87	131	P	Pn	16 43 28.1	-1.5
KSM	Kuching	14.36	95	ePn	Pn	16 44 15.2	-1.9
	6.1nm,0.9s						
KSM				e		16 44 23.7	
PALK	Pallekele	15.88	287	eP	Pn	16 44 35.8	-1.1
CM31	Chiang Mai Arr	15.91	10	ePn	Pn	16 44 36.0	-1.1
	9.5nm,0.8s						
CM31				e		16 44 45.0	
CMAR	Chiang Mai Arr	15.91	10	Pn	Pn	16 44 35.6	-1.5
	0.6nm,0.3s,baz=198,slow=12,SNR=46						
SBUM	Sibu	16.22	91	P	Pn	16 44 45.1	+4.0
CHTO	Chiang Mai	16.26	10	eP	Pn	16 44 39.4	-2.1
	6.6nm,0.8s						
KKM	Kota Kinabalu	20.43	80	eP	P	16 45 28.5	-1.3
	17nm,0.9s						
QIZ	Qiongzhong	21.13	39	P	P	16 45 40.5	+3.3
QIZ				LR	LR		
	comp=N,260nm,16.9s,MS3.8						
QIZ				LR	LR		
	comp=E,140nm,16.1s,MS3.8						
QIZ				LR	LR		
	comp=Z,160nm,17.6s,MS3.5						
SDKM	Sandakan	21.35	81	P	P	16 45 43.5	+3.9
SHL	Shillong	23.06	350	eP	P	16 45 59.0	+1.4
KMI	Kunming	23.21	16	P	P	16 46 00.3	+1.1
KMI				pP		16 46 17.0	
KMI				sP	sP	16 46 28.7	+11
KMI				PP		16 46 32.8	
KMI				S	S	16 49 59.9	-7.1
KMI				sS	sS	16 50 32.2	+2.8
KMI				SS		16 50 51.1	
KMI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
KMI				pmax	pmax		
	comp=Z,61nm,3.1s						
KMI				LR	LR		
	comp=N,210nm,13.7s,MS3.8						
KMI				LR	LR		
	comp=E,140nm,14.9s,MS3.8						
KMI				LR	LR		
	comp=Z,190nm,13.1s,MS3.7						
KAPI	Kappang	24.95	108	P	P	16 46 15.4	+0.1
	comp=Z,16nm,0.8s,mb4.6,baz=300,slow=5.8,SNR=10						
KAPI	Kappang	24.95	108	eP	P	16 46 12.9	-2.4
	comp=Z,34nm,1.2s,mb4.8						
GYA	Guiyang	25.73	22	P	P	16 46 21.0	-1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
PKI	Pulchoki	26.70	339	eP	P	16 46 31.7	+0.7
	comp=Z,28nm,0.8s,mb4.8						
PKIN	Phulchoki	26.71	339	eP	P	16 46 31.7	+0.6
	comp=Z,16nm,0.6s,mb4.7						
GUN	Gumba	26.85	340	eP	P	16 46 33.2	+0.9
	comp=Z,44nm,0.7s,mb5.1						
DMN	Daman	26.85	338	eP	P	16 46 33.0	+0.7
	comp=Z,23nm,0.7s,mb4.8						
KKN	Kakani	26.95	339	eP	P	16 46 33.7	+0.5
	comp=Z,50nm,0.9s,mb5.0						
LSA	Lhasa	27.23	351	P	P	16 46 37.0	+1.3
GKN	Gorkha	27.38	338	eP	P	16 46 37.7	+0.6
	comp=Z,28nm,0.7s,mb4.9						
KOLN	Kolganda	27.58	336	eP	P	16 46 39.5	+0.6
	comp=Z,8.9nm,0.5s,mb4.6						
CD2	Chengdu	28.99	14	P	P	16 46 50.4	-0.9
CD2				pP	pP	16 47 10.2	+5.4
CD2				sP	sP	16 47 20.9	+10
CD2				PP	PP	16 47 47.7	-10
CD2				S	S	16 51 34.1	-4.7
CD2				sS	sS	16 52 08.5	+7.0
CD2				SS	SS	16 53 08.7	-35
CD2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
CD2				pmax	pmax		
	comp=Z,80nm,5.5s						
CD2				LR	LR		
	comp=N,230nm,15.5s						
CD2				LR	LR		
	comp=Z,320nm,13.7s,MS4.1						
WHN	Wuhan	32.68	30	eP	P	16 47 28.9	+5.0
XAN	Xi'an	33.42	20	P	P	16 47 29.4	-0.9
XAN				pP	pP	16 47 48.2	+4.3
XAN				sP	sP	16 47 58.3	+8.2
XAN				PP	PP	16 48 46.7	-0.1
XAN				S	S	16 52 45.3	-2.7
XAN				sS	sS	16 53 18.2	+7.4
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
XAN				pmax	pmax		
	comp=Z,18nm,5.6s						
XAN				LR	LR		
	comp=N,46nm,14.7s,MS3.4						
XAN				LR	LR		
	comp=E,22nm,15.0s,MS3.4						
XAN				LR	LR		
	comp=Z,29nm,12.9s,MS3.2						
LZH	Lanzhou	33.99	11	eP	P	16 47 35.0	-0.3
LZH				pP	pP	16 47 55.0	+6.2
LZH				sP	sP	16 48 05.0	+10
LZH				PP	PP	16 48 50.3	-2.8
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,68nm,4.0s						
GTA	Gaotai	36.69	5	eP	P	16 47 58.1	-0.3
GTA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
HHC	Hu-ho-hao-te	40.48	18	eP	P	16 48 31.4	+1.2
HHC				pP	pP	16 48 54.4	+10
HHC				PP	PP	16 50 10.1	+5.8
HHC				PcP	PcP	16 50 32.4	+0.3
HHC				ScP	ScP	16 54 12.1	-5.2
HHC				PcS	PcS	16 54 21.8	-0.9
HHC				S	S	16 54 33.5	-1.8
HHC				sS	sS	16 55 13.1	+15
HHC				SS	SS	16 57 31.7	-4.8
HHC				ScS	ScS	16 58 25.2	-6.2
HHC				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,98nm,6.1s						
HHC				LR	LR		
	comp=N,170nm,14.5s,MS4.1						
HHC				LR	LR		
	comp=E,130nm,14.8s,MS4.1						
HHC				LR	LR		
	comp=Z,140nm,15.0s,MS3.9						
KSH	Kashi	40.90	336	eP	P	16 48 32.4	-1.3
KSH				epP	pP	16 48 50.5	+3.0
KSH				esP	sP	16 48 59.2	+5.5
KSH				ePP	PP	16 50 09.0	+0.1
KSH				ePcP	PcP	16 50 34.6	+1.1
KSH				eScP	ScP	16 54 15.2	-3.8
KSH				ePcS	PcS	16 54 23.1	-1.3
KSH				eS	S	16 54 33.9	-7.7
KSH				esS	sS	16 55 06.0	+1.2
KSH				eScS	ScS	16 58 28.2	-5.8
KSH				pmax	pmax		
	comp=Z,82nm,4.8s						
KSH				LR	LR		
	comp=N,85nm,5.2s						
KSH				LR	LR		
	comp=E,77nm,4.8s						
BJI	Beijing	41.41	24	P	P	16 48 39.3	+1.4
BJI				pP	pP	16 48 56.0	+4.3
BJI				S	S	16 54 44.9	-4.3
BJI				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.4						
BJI				pmax	pmax		
	comp=Z,160nm,4.2s						
WMQ	Urumqi	41.59	351	eP	P	16 48 40.3	+1.1
UCH	Uchtor	43.78	337	eP	P	16 48 57.6	+0.5
	comp=Z,4.5nm,0.8s,mb4.2						
WRA	Warramunga Arr	43.86	123	P	P	16 48 58.5	+0.4
	comp=Z,1.6nm,0.6s,mb3.9,baz=301,slow=9.0,SNR=6.8						
WRAB	Tennant Creek	43.87	123	eP	P	16 48 56.2	-1.9
	comp=Z,6.3nm,1.0s,mb4.3						
TKM2	Tokmak 2	43.97	338	eP	P	16 48 59.0	+0.4
	comp=Z,5.5nm,1.0s,mb4.2						
AML	Almayashu	44.03	336	eP	P	16 49 00.0	+0.9
	comp=Z,8.5nm,1.0s,mb4.4						
AAK	Ala-Archa	44.14	337	P	P	16 49 02.0	+2.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=341,slow=21,SNR=6.0						
AAK	Ala-Archa	44.14	337	eP	P	16 49 01.9	+1.9
	comp=Z,2.9nm,0.9s,mb4.0						
EKS2	Erkin-Say	44.44	337	eP	P	16 49 02.8	+0.4
	comp=Z,3.5nm,0.8s,mb4.1						
EKS2				e		16 49 10.3	
ASAR	Alice Springs	45.27	128	P	P	16 49 09.2	0.0
	comp=Z,0.7nm,0.6s,mb3.7,baz=302,slow=7.9,SNR=8.8						
KSRS	Korea Array	45.32	36	P	P	16 49 09.4	-0.1
	comp=Z,3.0nm,0.8s,mb4.2,baz=228,slow=8.8,SNR=13						
KSRS				LR	LR	17 10 19.3	
	comp=Z,78nm,18.5s,MS3.7,baz=225,slow=39						
MK31	Makanchi Array	45.49	347	eP	P	16 49 10.5	-0.1
MK31				e		16 49 17.0	
MKAR	Makanchi Array	45.49	347	P	P	16 49 10.9	+0.3
	comp=Z,4.3nm,0.6s,mb4.5,baz=156,slow=8.2,SNR=23						
SONM	Songino Array	45.83	10	P	P	16 49 13.8	+0.5
	comp=Z,6.3nm,0.6s,mb4.7,baz=190,slow=9.0,SNR=31						
ULN	Ulaanbaatar	45.98	10	eP	P	16 49 13.8	-0.6
	comp=Z,4.4nm,0.9s,mb4.4						
ULN				e		16 49 21.1	
CN2	Changchun	48.53	28	eP	P	16 49 34.1	-0.3
KURK	Kurchatov	50.03	346	eP	P	16 49 45.5	-0.2
	comp=Z,9.4nm,1.0s,mb4.8						
ZAA0	Zalesovo Array	51.88	352	eP	P	16 49 59.0	-0.6
ZAA0				e		16 50 05.1	
ZALV	Zalesovo Beam	51.88	352	P	P	16 49 59.6	0.0
	comp=Z,7.3nm,0.7s,mb4.7,baz=180,slow=6.5,SNR=36						
BVAR	Borovoye Array	54.43	341	P	P	16 50 18.1	-0.2
	comp=Z,2.3nm,0.6s,mb4.3,baz=142,slow=7.5,SNR=12						
BRVK	Borovoye	54.49	341	eP	P	16 50 17.6	-1.1
	comp=Z,2.7nm,0.6s,mb4.3						
STKA	Stephens Creek	55.27	132	P	P	16 50 25.6	+0.9
	comp=Z,2.3nm,0.7s,mb4.3,baz=254,slow=17,SNR=5.2						
STKA	Stephens Creek	55.27	132	eP	P	16 50 25.3	+0.5
	comp=Z,1.3nm,1.2s,mb3.8						
ABKAR	Akbulak array	55.61	332	eP	P	16 50 26.4	-0.6
	comp=Z,4.8nm,0.8s,mb4.6						
ASAJ	Asahikawa	58.20	38	P	P	16 50 47.6	+2.2
	comp=Z,4.9nm,0.9s,mb4.5,baz=219,slow=14,SNR=2.1						
ARU	Arti	61.32	337	eP	P	16 51 05.7	-0.9
	comp=Z,6.1nm,1.0s,mb4.7						
YAK	Yakutsk	64.32	17	eP	P	16 51 25.7	-0.7
	comp=Z,20nm,0.9s,mb5.2						
TIXI	Tiksi	71.92	10	eP	P	16 52 12.6	-1.2
	comp=Z,11nm,1.3s,mb4.6						
FINES	FINESS Array B	78.10	333	P	P	16 52 49.8	+0.1
	comp=Z,1.9nm,0.7s,mb4.2,baz=103,slow=8.4,SNR=7.0						
BILL	Bilibino	80.19	21	eP	P	16 53 00.6	-0.4
	comp=Z,19nm,1.8s,mb4.7						
ARCES	ARCESS Array B	80.71	340	P	P	16 53 04.0	+0.2
	comp=Z,2.2nm,0.8s,mb4.1,baz=94,slow=6.9,SNR=11						
ARCES	ARCESS Array B	80.71	340	P	P	16 53 04.0	+0.2
GERES	GERESS Array B	82.88	319	P	P	16 53 16.3	+0.7
	comp=Z,1.0nm,0.9s,mb3.8,baz=79,slow=7.1,SNR=6.4						
CPUP	Villa Florida	145.26	225	PKPbc	PKPbc	17 00 30.0	+1.0
	comp

TGUH **Tegucigalpa,Un** 10.45 4 *e*Pn Pn 16 52 24.2 +5.2
147nm,0.7s
APG **El Apazote** 11.60 349 Pn Pn 16 52 39.0 +4.3
8.5nm,0.3s,baz=169,slow=9.1,SNR=25
APG LR LR 16 56 30.9
comp=Z,444nm,19.3s,baz=67,slow=34
ROSC **El Rosal** 13.78 84 LR LR 16 57 55.2
comp=Z,180nm,20.7s,baz=335,slow=34
ROSC **El Rosal** 13.78 84 Pn Pn 16 53 04.6 0.0
ATAH **Atahualpa** 14.28 137 Pn Pn 16 53 18.2 +6.8
0.4nm,0.3s,baz=322,slow=12,SNR=14
ATAH LR LR 16 57 24.8
comp=Z,186nm,20.9s,baz=116,slow=32
CMIG **Matias Romero** 15.00 334 Pn Pn 16 53 22.5 +1.3
0.1nm,0.3s,baz=120,slow=11,SNR=3.9
VHO **Vista Hermosa** 15.88 328 *e*P Pn 16 53 38.2 +5.6
VHO *i* S Px 16 54 08.0
PNIG **Pinotepa** 16.12 323 *i* P Pn 16 53 35.4 -0.4
PNIG *i* S Px 16 53 47.8
ACX **Acapulco** 17.59 320 *i* P Pn 16 54 03.0 +8.6
CAIG **El Cayaco** 17.95 319 *i* P Pn 16 54 08.0 +9.2
SDV **Santo Domingo** 18.14 72 P Pn 16 54 06.0 +4.8
0.2nm,0.3s,baz=221,slow=13,SNR=3.7
SDV LR LR 17 00 34.7
comp=Z,105nm,19.7s,baz=5.9,slow=35
SDV **Santo Domingo** 18.14 72 *e*P Pn 16 54 06.6 +5.5
20nm,1.0s
SDV LR LR 17 00 34.7
NNA **Nana** 19.07 144 LR LR 17 00 11.3
comp=Z,317nm,19.8s,baz=316,slow=33
SJG **San Juan** 25.89 54 LR LR 17 05 56.4
comp=Z,201nm,18.7s,MS3.7,baz=74,slow=37
LPAZ **La Paz** 27.90 136 P P 16 55 41.2 +1.8
1.3nm,0.5s,mb3.8,baz=316,slow=6.9,SNR=6.6
LPAZ LR LR 17 06 15.9
comp=Z,180nm,18.7s,MS3.7,baz=246,slow=35
LPAZ **La Paz** 27.90 136 *e*P P 16 55 40.4 +1.0
2.0nm,0.6s,mb3.9
628A **Black Gap, Mar** 29.35 333 ⇓P P 16 55 52.8 +0.7
baz=30
627A **Terlingua Ranc** 29.55 332 ⇓P P 16 55 54.1 +0.1
baz=30
TXAR **Lajitas Array** 29.58 332 P P 16 55 54.6 +0.4
2.0nm,0.9s,mb3.9,baz=156,slow=9.6,SNR=6.2
TXAR LR LR 17 06 52.1
comp=Z,118nm,21.0s,MS3.5,baz=110,slow=35
626A **Big Bend Ranch** 29.99 331 ⇑P P 16 55 58.2 +0.4
baz=30
527A **Woodward Ranch** 30.24 333 ⇓P P 16 56 00.2 +0.1
baz=30
526A **Mary Lane Ranc** 30.39 332 ⇓P P 16 56 02.1 +0.7
baz=30
427A **Hayter Ranch,** 30.74 334 ⇓P P 16 56 04.6 +0.1
baz=31
426A **McDonald Obser** 30.87 333 ⇑P P 16 56 06.6 +1.0
baz=31
328A **Wristen Ranch,** 30.95 335 ⇑P P 16 56 06.9 +0.6
baz=31
MIAR **Mount Ida** 31.24 351 *e*P P 16 56 07.0 -1.8
7.0nm,0.7s,mb4.6
326A **Caldwell Ranch** 31.40 333 ⇓P P 16 56 10.4 +0.1
baz=32
425A **Indio Mountain** 31.42 331 ⇑P P 16 56 10.5 0.0
baz=32
325A **Bean Ranch, Si** 31.90 332 ⇓P P 16 56 13.8 -0.9
baz=32
LVC **Limon Verde** 32.06 145 *e*P P 16 56 17.3 +1.1
8.6nm,1.0s,mb4.5
226A **Malaga, Loving** 32.09 334 ⇑P P 16 56 16.7 +0.4
baz=32,SNR=13
324A **Moseley Ranch,** 32.20 331 ⇓P P 16 56 16.6 -0.8
baz=32,SNR=6.3
MNTX **Cornudas Mount** 32.37 332 *e*P P 16 56 17.6 -1.2
5.1nm,0.9s,mb4.3
225A **Deer Hill, Car** 32.45 333 ⇓P P 16 56 19.6 +0.1
baz=33
WMOK **Wichita Mounta** 32.56 344 *e*P P 16 56 19.8 -0.6
8.3nm,1.1s,mb4.6
224A **Corundas Mount** 32.75 332 ⇓P P 16 56 21.4 -0.6
baz=33
Z27A **Tatum** 32.80 336 ⇓P P 16 56 22.6 +0.1
baz=33
CPRX **Cap Rock** 32.82 335 *e*P P 16 56 22.9 +0.2
8.8nm,0.9s,mb4.7
125A **Gardner Draw,** 32.84 334 ⇑P P 16 56 22.9 0.0
baz=33
SIV **San Ignacio** 33.04 127 P P 16 56 26.1 +1.3
0.5nm,0.5s,mb3.7,baz=308,slow=11,SNR=2.9
Z26A **Caprock** 33.07 335 ⇑P P 16 56 25.1 +0.2
baz=33,SNR=17
MSTX **Muleshoe** 33.20 337 ⇑P P 16 56 26.0 0.0
baz=33
124A **Stringfield Ra** 33.23 333 ⇓P P 16 56 26.1 -0.2
baz=33
Y27A **Causey** 33.27 337 ⇓P P 16 56 26.6 -0.1
baz=33,SNR=9.5
Z25A **Roswell** 33.40 334 ⇓P P 16 56 27.8 +0.1
baz=34
222A **Williams Famil** 33.53 330 ⇑P P 16 56 29.6 +0.6
baz=34
Y26A **Elida** 33.57 336 ⇓P P 16 56 30.0 +0.7
baz=34
320A **Kipp Ranch, An** 33.67 327 ⇓P P 16 56 29.9 -0.2
baz=34
221A **Mesquite Ranch** 33.80 329 ⇓P P 16 56 32.1 +0.8
baz=34
Y25A **Mesa, Roswell** 33.94 335 ⇓P P 16 56 33.0 +0.6
baz=34
319A **Douglas** 34.11 327 ⇑P P 16 56 33.9 0.0
baz=34
220A **Playas Peak, P** 34.11 328 ⇓P P 16 56 34.6 +0.6
baz=34
X26A **CR and CF Fran** 34.12 337 ⇓P P 16 56 35.2 +1.2
baz=34
Y24A **Capitan** 34.26 334 ⇓P P 16 56 36.0 +0.8
baz=34
Z22A **Elephant Butte** 34.40 331 ⇓P P 16 56 37.0 +0.5
baz=34,SNR=12
Y23A **Lovelace Mesa,** 34.54 333 ⇑P P 16 56 38.5 +0.8
baz=35,SNR=14
318A **Bisbee** 34.55 326 ⇑P P 16 56 37.0 -0.8
baz=35
W25A **X Bar L Ranch,** 34.96 336 ⇓P P 16 56 41.9 +0.6
baz=35
Y22A **Socorro** 34.96 332 ⇓P P 16 56 42.2 +0.8
baz=35,SNR=6.9
Z20A **Nine Sixteen R** 35.09 329 ⇓P P 16 56 42.6 +0.1
baz=35
LENM **Lemitar** 35.16 332 *e*P P 16 56 43.2 +0.2
5.0nm,0.9s,mb4.4
217A **Green Valley** 35.27 325 ⇑P P 16 56 43.6 -0.4
baz=35
LAZ **Ladron** 35.43 332 *e*P P 16 56 42.1 -3.2
4.5nm,0.7s,mb4.5
118A **Homack Ranch,** 35.45 327 ⇓P P 16 56 45.7 +0.1
baz=36
Y20A **Horse Springs,** 35.62 330 ⇑P P 16 56 47.5 +0.5
baz=36
X21A **Alamocita Cree** 35.77 332 ⇑P P 16 56 49.7 +1.4
baz=36,SNR=10
Y19A **Nutrioso** 36.10 329 ⇑P P 16 56 51.7 +0.6
baz=36
V23A **Ortiz Mt. (NFS** 36.12 335 ⇓P P 16 56 51.0 -0.4
baz=36
KSU1 **Kansas State U** 36.21 349 P P 16 56 50.8 -1.2
14nm,0.6s,mb5.1
W20A **Ramah** 36.66 331 ⇓P P 16 56 57.0 +1.1
baz=37
X18A **Snowflake** 36.90 329 ⇓P P 16 56 57.7 -0.2
baz=37
V20A **Brimhall** 37.19 332 ⇓P P 16 57 00.9 +0.5
baz=37
T22A **Edith** 37.51 335 ⇑P P 16 57 03.3 +0.2
baz=38
SDCO **Great Sand Dun** 37.57 337 *e*P P 16 57 03.7 +0.2
6.8nm,1.0s,mb4.3
X16A **Lo Mia Camp, P** 37.60 328 ⇑P P 16 57 03.3 -0.6
baz=38
U20A **Newcomb** 37.69 333 ⇓P P 16 57 04.9 +0.2
baz=38
Z13A **Yuma Proving G** 37.95 324 ⇓P P 16 57 07.0 +0.2
baz=38
V17A **Tonalea, Kykot** 38.19 329 ⇑P P 16 57 09.0 +0.2
baz=38,SNR=7.9
T19A **Beclabito** 38.29 332 ⇓P P 16 57 10.1 +0.4
baz=38
MVCO **Mesa Verde** 38.37 333 ⇑P P 16 57 10.7 +0.4
baz=38
MVCO **Mesa Verde** 38.37 333 *e*P P 16 57 11.2 +0.9
5.1nm,1.0s,mb4.2
WUAZ **Wupatki** 38.40 329 ⇑P P 16 57 11.5 +0.8
baz=38
WUAZ **Wupatki** 38.40 329 *e*P P 16 57 10.9 +0.2
10nm,1.0s,mb4.5
X14A **Yava** 38.43 326 ⇑P P 16 57 11.2 +0.3
baz=38
S21A **Coal Bank Pass** 38.43 335 ⇑P P 16 57 11.3 +0.4
baz=39
Y13A **Salome** 38.48 324 ⇑P P 16 57 11.7 +0.3
baz=39
W15A **Williams** 38.62 327 ⇓P P 16 57 13.2 +0.7
baz=39
U16A **Tuba City** 38.76 330 ⇓P P 16 57 14.1 +0.4
baz=39
R21A **Cimarron** 38.93 335 ⇑P P 16 57 15.8 +0.8
baz=39
T18A **Mexican Hat** 38.94 332 ⇓P P 16 57 15.4 +0.2
baz=39
X13A **Yucca** 39.05 325 ⇓P P 16 57 15.8 -0.3
baz=39
V15A **Kaibab Nationa** 39.05 328 ⇑P P 16 57 16.8 +0.7
baz=39
W14A **Seligman** 39.08 327 ⇑P P 16 57 16.2 -0.2
baz=39
Q22A **Crested Butte,** 39.09 336 ⇑P P 16 57 16.6 +0.2
baz=39
S19A **Harvey Farm, M** 39.09 333 ⇓P P 16 57 16.6 +0.2
baz=39
T17A **Navajo Res., N** 39.27 331 ⇓P P 16 57 18.9 +0.9
baz=39
Q21A **Lamborn Mesa,** 39.33 336 ⇓P P 16 57 18.7 +0.3
baz=40
BC3 **Big Chuckw Mtn** 39.33 323 ⇓P P 16 57 18.2 -0.3
baz=39
SMCO **Snowmass** 39.38 337 *e*P P 16 57 19.9 +1.1
3.2nm,0.6s,mb4.2
ISCO **Idaho Springs** 39.41 339 *e*P P 16 57 20.0 +1.0
9.7nm,1.1s,mb4.5
V14A **Boquillas Ranc** 39.41 327 ⇓P P 16 57 19.9 +0.8
baz=40
S18A **Hurst Farm, Bl** 39.44 332 ⇑P P 16 57 19.9 +0.6
baz=40
W13A **Hualapai Mount** 39.44 326 ⇓P P 16 57 19.9 +0.5
baz=40
IRM **Iron Mountain** 39.50 324 ⇑P P 16 57 19.5 -0.4
baz=40
U15A **North Rim** 39.58 329 ⇓P P 16 57 20.8 +0.3
baz=40
CFAA **Coronel Fontan** 39.76 153 P P 16 57 21.9 -0.1
0.4nm,0.6s,mb3.3,baz=285,slow=4.9,SNR=5.8
S17A **Black Ridge (B** 39.78 331 ⇓P P 16 57 21.9 -0.3
baz=40
P21A **Newcastle** 39.87 336 ⇓P P 16 57 23.7 +0.9
baz=40
PFO **Pinyon Flat Ob** 39.91 322 P P 16 57 23.3 0.0
21nm,0.9s,mb4.9,baz=294,slow=3.6,SNR=16
U14A **Mt Trumbull** 40.04 328 ⇑P P 16 57 24.6 +0.3
baz=40
P20A **De Beque** 40.23 335 ⇑P P 16 57 26.8 +0.9
baz=40
GMRC **Granite Mounta** 40.24 324 ⇓P P 16 57 26.3 +0.3
baz=40
R17A **Hanksville Air** 40.36 332 ⇓P P 16 57 26.7 -0.2
baz=40
P19A **Cripple Cowboy** 40.59 335 ⇑P P 16 57 29.4 +0.5
baz=41
N22A **Wattenberg Ran** 40.59 338 ⇓P P 16 57 29.7 +0.9
baz=41,SNR=5.6
R16A **Teasdale** 40.62 331 ⇑P P 16 57 29.3 +0.2
baz=41
Q18A **Rafter H Ranch** 40.65 333 ⇑P P 16 57 29.6 +0.2
baz=41
HEC **Hector,Ludlow** 40.67 323 ⇑P P 16 57 28.9 -0.7
baz=41
ECSD **EROS Data Cent** 40.70 351 *e*P P 16 57 29.2 -0.5
8.4nm,0.9s,mb4.4
P18A **Preston Nutter** 41.13 334 ⇓P P 16 57 33.7 +0.4
baz=41
MSU **Marysvale** 41.13 331 *e*P P 16 57 33.3 -0.1
6.3nm,1.5s,mb4.0
O19A **Miners Draw (B** 41.21 335 ⇑P P 16 57 34.3 +0.4
baz=41
S13A **Holt Ranch, En** 41.27 328 ⇑P P 16 57 33.8 -0.7
baz=41
N20A **Spence Gulch,** 41.31 337 ⇑P P 16 57 34.6 -0.1
baz=42
O18A **Roosevelt** 41.55 334 ⇓P P 16 57 37.1 +0.4
baz=42
EDW2 **Edwards Air Fo** 41.71 322 ⇓P P 16 57 38.2 0.0
baz=42
N19A **John Jarvie Ra** 41.73 336 ⇓P P 16 57 38.3 +0.1
baz=42
T11A **Corn Creek, Al** 41.74 327 ⇑P P 16 57 38.5 +0.1
baz=42
U10A **Ash Meadows, A** 41.77 325 ⇑P P 16 57 38.0 -0.7
baz=42
O17A **Robinson Place** 41.81 334 ⇓P P 16 57 39.4 +0.5
baz=42
M20A **Sweetwater, Wa** 41.84 337 ⇑P P 16 57 39.1 0.0
baz=42
L21A **Rawlins** 41.94 338 ⇓P P 16 57 40.4 +0.5
baz=42
N18A **Larsen Ranch,** 42.00 335 ⇑P P 16 57 40.5 +0.1
baz=42
Q14A **Sevier Lake (B** 42.04 330 ⇑P P 16 57 40.6 -0.2
baz=42,SNR=7.8
CPUP **Villa Florida** 42.06 137 P P 16 57 41.5 +0.3
3.1nm,0.9s,mb3.9,baz=306,slow=13,SNR=2.8
CPUP LR LR 17 16 53.5
comp=Z,93nm,21.5s,MS3.6,baz=294,slow=39
MPMC **Manual Prospec** 42.20 324 ⇑P P 16 57 41.3 -0.8
baz=42
DAU **Daniels Canyon** 42.22 333 *e*P P 16 57 42.3 +0.1
6.9nm,1.1s,mb4.2
L20A **Wamsutter** 42.34 337 ⇓P P 16 57 43.3 +0.1
baz=42
Q13A **Wheeler Ranch,** 42.39 330 ⇑P P 16 57 43.4 -0.2
baz=42
P14A **Drum Mountains** 42.41 331 ⇑P P 16 57 43.9 +0.1
baz=42
N16A **Rees Ranch, Co** 42.69 334 ⇑P P 16 57 46.4 +0.4
baz=43
R11A **Troy Canyon, C** 42.75 328 ⇓P P 16 57 46.9 +0.3
baz=43
P13A **Bates Ranch, G** 42.77 330 ⇓P P 16 57 47.0 +0.3
baz=43
RSSD **Black Hills** 42.77 343 *e*P P 16 57 47.0 +0.4
7.7nm,0.9s,mb4.4
L19A **Farson** 42.82 337 ⇓P P 16 57 47.2 +0.2
baz=43
M17A **Scullys Gap (B** 42.83 335 ⇓P P 16 57 47.0 -0.2
baz=43
Q12A **Willow Creek R** 42.87 329 ⇑P P 16 57 47.3 -0.2
baz=43
K20A **Yellowstone Ra** 42.90 338 ⇓P P 16 57 47.7 -0.1
baz=43
L18A **Fontenelle, Gr** 42.95 336 ⇑P P 16 57 47.9 -0.2
baz=43
S10A **Tonopah Range,** 42.99 326 ⇓P P 16 57 49.0 +0.4
baz=43
P12A **McGill** 43.23 329 ⇓P P 16 57 50.7 +0.2
baz=43
K19A **Absolon Red Bu** 43.24 338 ⇓P P 16 57 50.1 -0.3
baz=43
HWUT **Hardware Ranch** 43.33 334 *e*P P 16 57 50.9 -0.3
7.8nm,0.8s,mb4.5
BGU **Big Grassy Mou** 43.44 332 *e*P P 16 57 51.3 -0.8
8.2nm,1.0s,mb4.4
N14A **Grayback Hills** 43.45 332 ⇓P P 16 57 52.3 +0.1
baz=44
BW06 **Boulder Array** 43.46 337 ⇓P P 16 57 51.9 -0.4
baz=44
PDAR **Pinedale Array** 43.46 337 P P 16 57 51.9 -0.4
2.1nm,0.9s,mb3.9,baz=116,slow=10,SNR=11
PDAR LR LR 17 15 41.6
comp=Z,44nm,19.6s,MS3.4,baz=303,slow=36
Q10A **Clear Creek Ra** 43.53 327 ⇑P P 16 57 52.5 -0.4
baz=44
K18A **Toltan Ranch,** 43.55 336 ⇓P P 16 57 53.3 +0.4
baz=44
M15A **Larsen Ranch,** 43.60 333 ⇑P P 16 57 53.2 -0.2
baz=44
L15A **Malad City** 44.01 334 ⇓P P 16 57 56.6 -0.1
baz=44
J18A **Kendall Valley** 44.02 337 ⇑P P 16 57 56.7 0.0
baz=44
M14A **Sheep Mountain** 44.04 333 ⇑P P 16 57 56.3 -0.6
baz=44,SNR=9.3
O11A **Cowboy Ranch,** 44.11 329 ⇓P P 16 57 57.2 -0.3
baz=44
NVAR **Mina Array Bea** 44.30 326 P P 16 57 60.0 +0.9
4.8nm,0.8s,mb4.3,baz=134,slow=7.6,SNR=19
M13A **Montello** 44.31 332 ⇑P P 16 57 59.1 0.0
baz=44
N12A **Clover Valley,** 44.34 331 ⇓P P 16 57 59.4 +0.1
baz=44
I18A **Diamond G Ranc** 44.35 337 ⇓P P 16 57 58.9 -0.5
baz=44
REDW **Red Top Meadow** 44.48 336 *e*P P 16 57 59.7 -0.7
14nm,1.1s,mb4.6
LOHW **Long Hollow** 44.59 337 *e*P P 16 58 00.8 -0.5
3.8nm,0.9s,mb4.2
TPAW **Teton Pass** 44.62 336 *e*P P 16 58 02.1 +0.5
4.9nm,0.8s,mb4.4
RRI2 **Red Ridge** 44.65 336 *e*P P 16 58 01.1 -0.7
9.0nm,0.9s,mb4.6
M12A **Wells** 44.71 331 ⇓P P 16 58 01.9 -0.4
baz=45
J16A **Bone** 44.71 336 ⇓P P 16 58 02.0 -0.3
baz=45
K14A **Jones Ranch, D** 44.79 334 ⇑P P 16 58 03.0 0.0
baz=45
IMW **Indian Meadow** 44.96 337 *e*P P 16 58 04.0 -0.2
3.3nm,0.7s,mb4.3
M11A **Holland Ranch,** 45.15 330 ⇑P P 16 58 05.6 -0.2
baz=45
RLMT **Red Lodge** 45.37 339 ⇓P P 16 58 07.7 +0.2
baz=46
RLMT **Red Lodge** 45.37 339 *e*P P 16 58 06.9 -0.6
3.8nm,0.8s,mb4.3
J14A **Carey** 45.56 334 ⇓P P 16 58 08.8 -0.2
baz=46,SNR=13
G18A **Lazy EL Ranch,** 45.64 339 ⇑P P 16 58 09.4 -0.2
baz=46
K12A **Draper Farm, C** 45.65 332 ⇑P P 16 58 10.2 +0.4
baz=46
LAO **LASA Array** 45.75 343 *e*P P 16 58 09.4 -1.1
11nm,0.9s,mb4.8
H16A **Russell Place,** 45.75 337 ⇑P P 16 58 10.9 +0.4
baz=46
J13A **Cove Ranch, Pi** 45.91 334 ⇑P P 16 58 11.7 -0.1
baz=46
QLMT **Earthquake Lak** 45.93 337 *e*P P 16 58 11.5 -0.5
2.9nm,0.6s,mb4.4
L10A **Juniper Basin** 45.97 331 ⇓P P 16 58 12.3 0.0
baz=46
I14A **Mackay** 46.02 335 ⇑P P 16 58 12.8 +0.1
baz=46
G17A **Pierce Place,** 46.08 338 ⇓P P 16 58 13.2 +0.1
baz=46
HLID **Hailey** 46.15 333 ⇑P P 16 58 13.7 0.0
baz=46
HLID **Hailey** 46.15 333 *e*P P 16 58 13.4 -0.3
14nm,0.1s
F18A **Big Timber** 46.20 339 ⇑P P 16 58 13.6 -0.4
baz=46,SNR=16
H15A **Lima** 46.24 336 ⇑P P 16 58 14.3 -0.1
baz=46,SNR=12
I13A **Wildhorse Cree** 46.30 334 ⇑P P 16 58 14.8 -0.1
baz=46,SNR=5.5
G16A **Moss Hill, Enn** 46.41 337 ⇓P P 16 58 16.0 +0.3
baz=47
BEKR **Beckwourth** 46.45 325 ⇑P P 16 58 16.2 +0.1
baz=46
MCMT **McKenzie Canyo** 46.50 336 *e*P P 16 58 16.9 +0.5
3.9nm,1.2s,mb4.2
H14A **Leadore** 46.54 335 ⇑P P 16 58 16.7 0.0
baz=47
G15A **Dillon** 46.63 336 ⇓P P 16 58 18.0 +0.6
baz=47
I12A **Atlanta** 46.66 333 ⇓P P 16 58 17.6 0.0
baz=47,SNR=12
MFID **Camas Ranch** 46.68 332 ⇓P P 16 58 17.5 -0.3
baz=47
BOZ **Bozeman (W)** 46.69 337 ⇑P P 16 58 17.4 -0.5
baz=47,SNR=13
BOZ **Bozeman (W)** 46.69 337 *e*P P 16 58 17.2 -0.7
9.2nm,1.1s,mb4.6
F16A **Kennard Place,** 46.80 337 ⇑P P 16 58 18.5 -0.3
baz=47
DLMT **Dillon** 46.83 336 *e*P P 16 58 18.7 -0.3
6.8nm,1.1s,mb4.5
E18A **Harlowton** 46.84 339 ⇓P P 16 58 18.9 -0.1
baz=47
H13A **Challis** 46.88 334 ⇑P P 16 58 19.3 0.0
baz=47
PLCA **Paso Flores** 46.92 162 P P 16 58 18.1 -1.6
5.8nm,0.9s,mb4.5,baz=329,slow=7.4,SNR=4.8
PLCA LR LR 17 13 13.3
comp=Z,188nm,21.0s,MS4.0,baz=285,slow=30
PLCA **Paso Flores** 46.92 162 *e*P P 16 58 18.0 -1.7
7.8nm,1.0s,mb4.6
PLCA *e* pP 16 58 21.8 -1.1
ULM **Lac du Bonnet** 46.98 353 P P 16 58 20.4 +0.4
5.4nm,0.9s,mb4.5,baz=170,slow=8.6,SNR=6.2
ULM LR LR 17 20 04.9
comp=Z,54nm,19.5s,MS3.5,baz=235,slow=39
ULM **Lac du Bonnet** 46.98 353 *e*P P 16 58 19.4 -0.6
7.5nm,1.1s,mb4.5
E17A **Martinsdale** 47.09 339 ⇓P P 16 58 20.6 -0.4
baz=47
I11A **Placerville** 47.12 333 ⇓P P 16 58 21.4 +0.1
baz=47
H12A **Diamond D Ranc** 47.13 334 ⇓P P 16 58 20.8 -0.5
baz=47
LRM **Limekiln Ridge** 47.16 337 *e*P P 16 58 20.4 -1.1
16nm,0.7s,mb5.0
F15A **Butte** 47.19 337 ⇑P P 16 58 21.6 -0.2
baz=47
G13A **Cobalt** 47.29 335 ⇓P P 16 58 22.6 +0.1
baz=47
E16A **East Helena** 47.45 338 ⇓P P 16 58 23.3 -0.5
baz=48
J09A **Fry Pan Ranch,** 47.55 331 ⇑P P 16 58 24.5 -0.1
baz=48
D17A **Six Diamond Ra** 47.62 339 ⇑P P 16 58 25.0 -0.1
baz=48
E15A **Deer Lodge** 47.73 337 ⇓P P 16 58 25.2 -0.8
baz=48
H11A **Donnelly** 47.76 333 ⇑P P 16 58 25.5 -0.8
baz=48
F13A **Darby** 47.89 335 ⇓P P 16 58 26.7 -0.6
baz=48
J08A **Circle Bar Ran** 47.91 330 ⇑P P 16 58 26.5 -1.0
baz=48
TRQA **Tornquist** 47.97 152 *e*P P 16 58 28.7 +0.8
5.4nm,1.1s,mb4.5
C17A **Wharram Farm,** 48.05 339 ⇑P P 16 58 28.0 -0.5
baz=48
E14A **Clinton** 48.06 336 ⇓P P 16 58 28.1 -0.4
baz=48
F12A **Elk City** 48.25 335 ⇓P P 16 58 29.6 -0.4
baz=48
E13A **Victor** 48.36 336 ⇑P P 16 58 30.6 -0.2
baz=48
CHMT **Chamberlain Mo** 48.37 337 *e*P P 16 58 29.9 -1.0
5.0nm,1.0s,mb4.5
G11A **Walters Elk Ra** 48.41 334 ⇑P P 16 58 31.0 -0.3
baz=48
C16A **Fuhringer Ranc** 48.55 339 ⇑P P 16 58 32.0 -0.3
baz=49
MSO **Missoula** 48.57 336 *e*P P 16 58 32.2 -0.2
6.1nm,1.0s,mb4.6
D14A **Greenough** 48.61 337 ⇓P P 16 58 32.6 -0.1
baz=49
K05A **Summer Lake** 48.70 328 ⇓P P 16 58 33.4 -0.2
baz=49
A18A **Metzger Ranch,** 48.86 341 ⇑P P 16 58 34.5 -0.2
baz=49
H08A **Prairie City** 48.86 331 ⇑P P 16 58 34.6 -0.2
baz=49
E12A **Beaver Dam Sad** 48.91 335 ⇓P P 16 58 35.0 -0.1
baz=49
I07A **Izee** 48.95 330 ⇑P P 16 58 34.6 -0.9
baz=49
D13A **Huson** 48.99 336 ⇑P P 16 58 35.1 -0.6
baz=49,SNR=5.1
G09A **Cove** 49.01 332 ⇓P P 16 58 35.2 -0.7
baz=49
C14A **Swan Lake** 49.27 337 ⇑P P 16 58 37.9 +0.1
baz=49
D12A **Red Ives Fores** 49.33 336 ⇓P P 16 58 38.1 -0.2
baz=50
A16A **West Butte Ran** 49.47 340 ⇑P P 16 58 39.1 -0.3

	baz=50						
A15A	Johnson Ranch,	49.89	339	⇑P	P	16 58 42.1	-0.5
	baz=50						
B13A	Whitefish	50.04	337	⇑P	P	16 58 43.6	0.0
	baz=50						
G06A	Carlson Farm,	50.34	330	⇑P	P	16 58 46.2	+0.1
	baz=50						
E06A	Yakima	51.45	331	⇑P	P	16 58 54.6	+0.2
	baz=52						
C08A	Higginbotham F	51.47	334	⇓P	P	16 58 54.2	-0.3
	baz=52						
A07A	Ashnola River,	53.01	334	⇓P	P	16 59 05.7	-0.2
	baz=53,SNR=8.0						
TAOE	Nuku Hiva Isla	53.34	256	eLR	LR	17 14 29.5	
	141nm,25.2s						
EDM	Edmonton	53.69	341	P	P	16 59 10.9	0.0
SCHQ	Schefferville	53.94	15	LR	LR	17 20 09.1	
	comp=Z,96nm,20.9s,MS3.8,baz=239,slow=34						
FCC	Fort Churchill	55.24	356	eP	P	16 59 21.4	-0.6
	0.2nm,1.0s						
YKA	Yellowknife Ar	62.00	346	P	P	17 00 08.0	-1.0
	1.1nm,0.6s,mb4.1,baz=143,slow=6.7,SNR=16						
YKA				LR	LR	17 28 54.7	
	comp=Z,6.2nm,18.7s,MS2.8,baz=70,slow=38						
DLBC	Dease Lake	63.70	337	P	P	17 00 20.4	-0.1
PPT	Papeete	64.15	249	eLR	LR	17 19 39.4	
	84nm,26.2s						
PPT	Papeete	64.15	249	eLR	LR	17 16 14.0	
	81nm,27.8s						
PPT	Papeete	64.15	249	LR	LR	17 20 19.8	
	comp=Z,74nm,21.2s,MS3.8,baz=53,slow=29						
RES	Resolute Bay	71.16	358	eP	P	17 01 05.7	-1.7
	8.1nm,1.5s,mb4.4						
INK	Inuvik	71.47	344	eP	P	17 01 08.5	-0.9
	2.2nm,0.8s,mb4.1						
DBIC	Dimbokro	82.88	84	LR	LR	17 38 31.2	
	comp=Z,57nm,21.1s,MS3.9,baz=233,slow=35						
AFI	Afiamalu	84.73	256	LR	LR	17 29 32.0	
	comp=Z,76nm,19.2s,MS4.1,baz=64,slow=28						
VNA3	Neumayer Olymp	89.64	162	eP	P	17 02 44.7	-1.9
NOA	NORSAR Array B	91.41	29	LR	LR	17 40 03.4	
	comp=Z,19nm,21.5s,MS3.5,baz=355,slow=33						
CN2	Changchun	124.04	331	ePKP	PKPdf	17 08 49.1	+1.2
KURK	Kurchatov	124.74	10	PKP	PKPdf	17 08 47.6	-1.5
	0.4nm,0.8s,baz=345,slow=2.3,SNR=4.8						
HHC	Hu-ho-hao-te	132.28	340	ePKP	PKPdf	17 09 02.4	-1.3
HHC				PKS		17 12 37.7	
HHC				SKS	SKSdf	17 16 12.8	-2.7
HHC				SKKS	SKSac	17 18 14.9	-7.7
HHC				AMB	AMB		
	comp=Z,47nm,5.8s						
HHC				LR	LR		
	comp=N,110nm,21.0s,MS4.7						
HHC				LR	LR		
	comp=E,81nm,18.2s,MS4.7						
HHC				LR	LR		
	comp=Z,75nm,17.4s,MS4.5						
WMQ	Urumqi	132.68	4	ePKP	PKPdf	17 09 04.2	-0.2
ASAR	Alice Springs	134.81	240	PKP	PKPdf	17 09 09.4	+0.4
	comp=Z,0.2nm,0.8s,baz=104,slow=1.9,SNR=2.8						
WRA	Warramunga Arr	135.56	245	PKP	PKPdf	17 09 10.8	+0.4
	comp=Z,0.5nm,0.9s,baz=94,slow=2.0,SNR=3.4						
LZH	Lanzhou	139.00	345	ePKP	PKPdf	17 09 13.5	-2.9
CD2	Chengdu	143.90	343	PKP	PKPdf	17 09 26.1	+0.8
GYA	Guiyang	146.91	335	ePKPbc	PKPdf	17 09 27.9	-2.7
GYA				PKPab	PKPab	17 09 33.7	-0.1
GYA				PP	PP	17 12 58.0	+2.7
GYA				AMB	AMB		
	comp=Z,60nm,7.9s						
KMI	Kunming	149.60	340	PKPbc	PKPdf	17 09 34.5	-0.6
CMAR	Chiang Mai Arr	157.04	343	PKPab	PKPab	17 10 13.9	-2.0
	comp=Z,1.3nm,0.7s,baz=354,slow=4.6,SNR=4.5						

*ISCJB **08** 16:57:31.6±0.5, 36.02N±0.03×4.80W±0.02, h101km±5km, Error ellipse: s-maj=4.3km s-min=3.1km az=1.2*
*SFS **08** 16:57:33.0, 35.94N×4.74W, h89km, ML2.7*
*NEIC **08** 16:57:33.4, 35.94N×4.75W, h87km, MG2.7(MDD), After MDD.*
*INMG **08** 16:57:33.6±1.4, 36.06N×4.89W, h10km, ML2.7, Error ellipse: s-maj=6.3km s-min=3.3km az=178.0*
*MDD **08** 16:57:33.2±0.5, 35.93N×4.75W, h88km±7km, mb2.7/21, Error ellipse: s-maj=4.8km s-min=3.9km az=157.0, PRIMO*
*CSEM **08** 16:57:33.4±0.2, 36.04N×4.80W, h89km±3km, ML3.6/12, Error ellipse: s-maj=4.2km s-min=2.9km az=169.0*
*CNRM **08** 16:57:41.2, 35.39N×4.70W, h30km, MD3.3*
ISC 08 16:57:32.6±0.5, 36.01N±0.03×4.79W±0.02, h94km±6km, n167, σ1.07/303, 12C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	Mijas	0.56	1	⇓P	Pn	16 57 48.3	+0.1
EMIJ				S	Sn	16 57 59.4	-0.3
EMIJ	Mijas	0.56	1	⇓P	Pn	16 57 48.3	+0.1
	4.3nm,0.2s,SNR=18						
EMIJ				S	Sn	16 57 59.4	-0.3
	49nm,0.2s,SNR=7.9						
EMIJ	Mijas	0.56	1	⇓P	Pn	16 57 48.3	+0.1
	4.3nm,0.2s,SNR=18						
EMIJ				S	Sn	16 57 59.4	-0.3
	49nm,0.2s,SNR=7.9						
EMIJ	Mijas	0.56	1	P	Pn	16 57 48.3	+0.1
	4.3nm,0.2s,SNR=18						
EMIJ				S	Sn	16 57 59.4	-0.4
	49nm,0.2s,SNR=7.9						
DKH	Dar Kharkhour	0.69	222	P	Pn	16 57 52.0	+2.6
DKH				S	Sn	16 58 00.0	-1.9
DKH	Dar Kharkhour	0.69	222	P	Pn	16 57 52.0	+2.6
DKH				S	Sn	16 58 00.0	-1.9
DKH	Dar Kharkhour	0.69	222	iP	Pn	16 57 52.0	+2.6
DKH				iS	Sn	16 58 00.0	-1.9
EMAL	Malaga-Limoner	0.81	21	P	Pn	16 57 58.0	+7.6
EMAL				S	Sn	16 58 10.9	+7.1
EMAL	Malaga-Limoner	0.81	21	P	Pn	16 57 58.0	+7.6
	1.7nm,0.1s,SNR=7.9						
EMAL				S	Sn	16 58 10.9	+7.1
	17nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	0.81	21	P	Pn	16 57 58.0	+7.6
	1.7nm,0.1s,SNR=7.9						
EMAL				S	Sn	16 58 10.9	+7.1
	17nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	0.81	21	iP	Pn	16 57 51.1	+0.6
EMAL				eS	Sn	16 58 02.0	-1.9
LIJA	Lijar	1.03	331	P	Pn	16 57 59.8	+7.0
LIJA				S	Sn	16 58 09.9	+1.8
LIJA	Lijar	1.03	331	P	Pn	16 57 59.8	+7.0
LIJA				S	Sn	16 58 09.9	+1.8
ESPR	Espera	1.22	315	P	Pn	16 57 56.5	+1.4
ESPR				S	Sn	16 58 13.7	+1.7
ESPR	Espera	1.22	315	P	Pn	16 57 56.5	+1.4
	1.7nm,0.1s,SNR=7.7						
ESPR				S	Sn	16 58 12.3	+0.4
	37nm,0.2s,SNR=7.9						
ESPR	Espera	1.22	315	P	Pn	16 57 56.5	+1.4
	1.7nm,0.1s,SNR=7.7						
ESPR				S	Sn	16 58 12.3	+0.4
	37nm,0.2s,SNR=7.9						
ESPR	Espera	1.22	315	P	Pn	16 57 56.5	+1.4
	1.7nm,0.1s,SNR=7.7						
ESPR				S	Sn	16 58 13.7	+1.7
	37nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	1.25	24	P	Pn	16 57 57.5	+2.1
ELOJ				S	Sn	16 58 13.0	+0.3
ELOJ	Sierra Loja	1.25	24	P	Pn	16 57 56.9	+1.4
	3.3nm,0.2s,SNR=7.9						
ELOJ				S	Sn	16 58 13.0	+0.3
	5.4nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	1.25	24	P	Pn	16 57 56.9	+1.4
	3.3nm,0.2s,SNR=7.9						
ELOJ				S	Sn	16 58 13.0	+0.3
	5.4nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	1.25	24	P	Pn	16 57 57.5	+2.1
	3.3nm,0.2s,SNR=7.9						
ELOJ				S	Sn	16 58 13.0	+0.4
	5.4nm,0.3s,SNR=7.9						
GIBL	Gibalbin	1.26	311	S	Sn	16 58 14.9	+2.1
GIBL	Gibalbin	1.26	311	S	Sn	16 58 14.9	+2.1
GIBL	Gibalbin	1.26	311	eS	Sn	16 58 14.9	+2.1
ERON	Agron	1.28	38	P	Pn	16 57 55.9	+0.1
ERON				S	Sn	16 58 14.0	+0.6
ERON	Agron	1.28	38	P	Pn	16 57 55.9	+0.1
	2.4nm,0.1s,SNR=7.9						
ERON				S	Sn	16 58 14.0	+0.6
	3.3nm,0.2s,SNR=7.9						
ERON	Agron	1.28	38	P	Pn	16 57 55.9	+0.1
	2.4nm,0.1s,SNR=7.9						
ERON				S	Sn	16 58 14.0	+0.6
	3.3nm,0.2s,SNR=7.9						
ERON	Agron	1.28	38	P	Pn	16 57 55.9	+0.1
	2.4nm,0.1s,SNR=7.9						
ERON				S	Sn	16 58 14.0	+0.6
	3.3nm,0.2s,SNR=7.9						
EGUA	Guajares	1.29	50	P	Pn	16 57 55.0	-0.9
EGUA				S	Sn	16 58 11.4	-2.1
EGUA	Guajares	1.29	50	P	Pn	16 57 55.0	-0.9
	41nm,0.2s,SNR=7.9						
EGUA				S	Sn	16 58 11.4	-2.1
	51nm,0.2s,SNR=7.9						
EGUA	Guajares	1.29	50	P	Pn	16 57 55.0	-0.9
	41nm,0.2s,SNR=7.9						
EGUA				S	Sn	16 58 11.4	-2.1
	51nm,0.2s,SNR=7.9						
EGUA	Guajares	1.29	50	P	Pn	16 57 55.0	-0.9
	41nm,0.2s,SNR=7.9						
EGUA				S	Sn	16 58 11.4	-2.0
	51nm,0.2s,SNR=7.9						
RSA	Sarsar	1.41	217	P	Pn	16 57 58.0	+0.6
RSA				S	Sn	16 58 11.0	-5.1
RSA	Sarsar	1.41	217	P	Pn	16 57 58.0	+0.6
RSA				S	Sn	16 58 11.0	-5.1
RSA	Sarsar	1.41	217	iP	Pn	16 57 58.0	+0.6
ECOG	Cogollos-Vega	1.61	37	P	Pn	16 58 01.4	+1.6
ECOG				S	Sn	16 58 22.8	+2.3
ECOG	Cogollos-Vega	1.61	37	P	Pn	16 58 01.4	+1.6
	3.3nm,0.2s,SNR=7.9						
ECOG				S	Sn	16 58 22.8	+2.3
	5.5nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	1.61	37	P	Pn	16 58 01.4	+1.6
	3.3nm,0.2s,SNR=7.9						
ECOG				S	Sn	16 58 22.8	+2.3
	5.5nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	1.61	37	P	Pn	16 58 01.4	+1.6
	3.3nm,0.2s,SNR=7.9						
ECOG				S	Sn	16 58 22.8	+2.3
	5.5nm,0.2s,SNR=7.9						
ELUQ	Luque	1.61	15	P	Pn	16 58 00.9	+1.1
ELUQ				S	Sn	16 58 21.7	+1.1
ELUQ	Luque	1.61	15	P	Pn	16 58 00.9	+1.1
	9.0nm,0.2s,SNR=7.9						
ELUQ				S	Sn	16 58 21.7	+1.1
	35nm,0.2s,SNR=7.9						
ELUQ	Luque	1.61	15	P	Pn	16 58 00.9	+1.1
	9.0nm,0.2s,SNR=7.9						
ELUQ				S	Sn	16 58 21.7	+1.1
	35nm,0.2s,SNR=7.9						
ELUQ	Luque	1.61	15	P	Pn	16 58 00.9	+1.0
	9.0nm,0.2s,SNR=7.9						
ELUQ				S	Sn	16 58 21.7	+1.2
	35nm,0.2s,SNR=7.9						
EQUE	Quentar	1.62	42	P	Pn	16 58 01.4	+1.5
	4.2nm,0.2s,SNR=16						
EQUE				S	Sn	16 58 20.2	-0.5
	4.0nm,0.2s,SNR=6.9						
EQUE	Quentar	1.62	42	P	Pn	16 58 01.4	+1.5
	4.2nm,0.2s,SNR=16						
EQUE				S	Sn	16 58 20.2	-0.5
	4.0nm,0.2s,SNR=6.9						
EQUE	Quentar	1.62	42	P	Pn	16 58 01.4	+1.4
	4.2nm,0.2s,SNR=16						
EQUE				S	Sn	16 58 20.2	-0.5
	4.0nm,0.2s,SNR=6.9						
EBER	Berja	1.77	59	⇑P	Pn	16 58 01.5	-0.4
EBER				S	Sn	16 58 23.2	-1.0
EBER	Berja	1.77	59	⇑P	Pn	16 58 01.5	-0.4
	12nm,0.2s,SNR=18						
EBER				S	Sn	16 58 23.2	-1.0
	8.6nm,0.2s,SNR=7.9						
EBER	Berja	1.77	59	⇑P	Pn	16 58 01.5	-0.4
	12nm,0.2s,SNR=18						
EBER				S	Sn	16 58 23.2	-1.0
	8.6nm,0.2s,SNR=7.9						
EBER	Berja	1.77	59	P	Pn	16 58 01.5	-0.4
	12nm,0.2s,SNR=18						
EBER				S	Sn	16 58 23.2	-1.0
	8.6nm,0.2s,SNR=7.9						
TZK	Tazeka	1.98	165	P	Pn	16 58 03.0	-1.6
TZK				S	Sn	16 58 20.0	-9.0
TZK	Tazeka	1.98	165	P	Pn	16 58 03.0	-1.6
TZK				S	Sn	16 58 20.0	-9.0
EADA	Adamuz	2.17	4	⇑P	Pn	16 58 08.1	+1.0
EADA				S	Sn	16 58 32.4	-1.0
EADA	Adamuz	2.17	4	⇑P	Pn	16 58 08.0	+1.0
	2.7nm,0.2s,SNR=18						
EADA				S	Sn	16 58 32.4	-1.0
	22nm,0.1s						
EADA	Adamuz	2.17	4	⇑P	Pn	16 58 08.0	+1.0
	2.7nm,0.2s,SNR=18						
EADA				S	Sn	16 58 32.4	-1.0
	22nm,0.1s						
EADA	Adamuz	2.17	4	P	Pn	16 58 08.0	+0.9
	2.7nm,0.2s,SNR=18						
EADA				S	Sn	16 58 32.4	-1.0
	22nm,0.1s						
EQES	Quesada	2.26	37	P	Pn	16 58 09.3	+1.0
EQES				S	Sn	16 58 35.8	+0.1
EQES	Quesada	2.26	37	P	Pn	16 58 09.3	+1.0
	5.1nm,0.1s,SNR=11						
EQES				S	Sn	16 58 35.8	+0.1
	23nm,0.2s,SNR=15						
EQES	Quesada	2.26	37	P	Pn	16 58 09.3	+1.0
	5.1nm,0.1s,SNR=11						
EQES				S	Sn	16 58 35.8	+0.1
	23nm,0.2s,SNR=15						
EQES	Quesada	2.26	37	P	Pn	16 58 09.3	+1.0
	5.1nm,0.1s,SNR=11						
EQES				S	Sn	16 58 35.8	+0.1
	23nm,0.2s,SNR=15						
ENIJ	Nijar	2.29	64	P	Pn	16 58 08.5	-0.3
ENIJ				S	Sn	16 58 35.0	-1.5
ENIJ	Nijar	2.29	64	P	Pn	16 58 08.5	-0.3
	3.9nm,0.2s,SNR=7.9						
ENIJ				S	Sn	16 58 35.0	-1.5
	3.7nm,0.3s,SNR=7.9						
ENIJ	Nijar	2.29	64	P	Pn	16 58 08.5	-0.3
	3.9nm,0.2s,SNR=7.9						
ENIJ				S	Sn	16 58 35.0	-1.5
	3.7nm,0.3s,SNR=7.9						
ENIJ	Nijar	2.29	64	P	Pn	16 58 08.5	-0.2
	3.9nm,0.2s,SNR=7.9						
ENIJ				S	Sn	16 58 35.0	-1.4
	3.7nm,0.3s,SNR=7.9						
EBAN	Banos Encina	2.30	20	P	Pn	16 58 09.4	+0.6
EBAN				S	Sn	16 58 35.5	-1.1
EBAN	Banos Encina	2.30	20	P	Pn	16 58 09.4	+0.6
	19nm,0.1s,SNR=18						
EBAN				S	Sn	16 58 35.5	-1.1
	16nm,0.1s						
EBAN	Banos Encina	2.30	20	P	Pn	16 58 09.4	+0.6
	19nm,0.1s,SNR=18						
EBAN				S	Sn	16 58 35.5	-1.1
	16nm,0.1s						
EBAN	Banos Encina	2.30	20	P	Pn	16 58 09.4	+0.6
	19nm,0.1s,SNR=18						
EBAN				S	Sn	16 58 35.5	-1.1
	16nm,0.1s						
EMIN	Mina Concepcio	2.32	320	⇑P	Pn	16 58 09.8	+0.7
EMIN				S	Sn	16 58 36.1	-0.9
EMIN	Mina Concepcio	2.32	320	⇑P	Pn	16 58 09.8	+0.7
	4.8nm,0.1s,SNR=18						
EMIN				S	Sn	16 58 36.1	-0.9
	9.5nm,0.1s,SNR=27						
EMIN	Mina Concepcio	2.32	320	⇑P	Pn	16 58 09.8	+0.7
	4.8nm,0.1s,SNR=18						
EMIN				S	Sn	16 58 36.1	-0.9
	9.5nm,0.1s,SNR=27						
EMIN	Mina Concepcio	2.32	320	P	Pn	16 58 09.8	+0.7
	4.8nm,0.1s,SNR=18						
EMIN				S	Sn	16 58 36.1	-0.9
	9.5nm,0.1s,SNR=27						
ERIP	Rio Piedras	2.41	305	P	Pn	16 58 10.7	+0.5
ERIP				S	Sn	16 58 38.8	-0.3
ERIP	Rio Piedras	2.41	305	P	Pn	16 58 10.7	+0.5
	13nm,0.1s,SNR=7.9						
ERIP				S	Sn	16 58 38.8	-0.3
	52nm,0.1s,SNR=7.9						
ERIP	Rio Piedras	2.41	305	P	Pn	16 58 10.7	+0.5
	13nm,0.1s,SNR=7.9						
ERIP				S	Sn	16 58 38.8	-0.3
	52nm,0.1s,SNR=7.9						
ERIP	Rio Piedras	2.41	305	P	Pn	16 58 10.7	+0.5
	13nm,0.1s,SNR=7.9						
ERIP				S	Sn	16 58 38.8	-0.3
	52nm,0.1s,SNR=7.9						
MIF	Mishlifen	2.62	188	P	Pn	16 58 12.0	-1.1
MIF				S	Sn	16 58 36.0	-8.1
MIF	Mishlifen	2.62	188	P	Pn	16 58 12.0	-1.1
MIF				S	Sn	16 58 36.0	-8.1
EGRO	El Granado	2.65	306	⇑P	Pn	16 58 13.8	+0.3
EGRO				S	Sn	16 58 44.5	-0.3
EGRO	El Granado	2.65	306	⇑P	Pn	16 58 13.8	+0.3
	1.9nm,0.1s,SNR=18						
EGRO				S	Sn	16 58 44.5	-0.3
	46nm,0.1s						
EGRO	El Granado	2.65	306	⇑P	Pn	16 58 13.8	+0.3
	1.9nm,0.1s,SNR=18						
EGRO				S	Sn	16 58 44.5	-0.3
	46nm,0.1s						
EGRO	El Granado	2.65	306	P	Pn	16 58 13.8	+0.4
	1.9nm,0.1s,SNR=18						
EGRO				S	Sn	16 58 44.5	-0.3
	46nm,0.1s						
PVAQ	Vaqueiros	2.74	302	ePn	Pn	16 58 14.8	+0.2
PVAQ				eSn	Sn	16 58 46.5	-0.5
PVAQ				A		16 58 47.9	
	43nm,0.2s						
PVAQ	Vaqueiros	2.74	302	P	Pn	16 58 14.8	+0.2
PVAQ				S	Sn	16 58 46.5	-0.5
	43nm,0.2s						
PVAQ	Vaqueiros	2.74	302	P	Pn	16 58 14.8	+0.2
PVAQ				S	Sn	16 58 46.5	-0.5
	43nm,0.2s						
PVAQ	Vaqueiros	2.74	302	ePn	Pn	16 58 14.8	+0.2
PVAQ				eSn	Sn	16 58 46.5	-0.5
	43nm,0.2s						
PBDV	Barranco-do-Ve	2.81	297	ePn	Pn	16 58 16.1	+0.4
PBDV				eSn	Sn	16 58 48.6	-0.2
PBDV				A		16 58 52.5	
	17nm,0.4s						
PBDV	Barranco-do-Ve	2.81	297	P	Pn	16 58 16.1	+0.4
PBDV				S	Sn	16 58 48.6	-0.2
	17nm,0.4s						
PBDV	Barranco-do-Ve	2.81	297	P	Pn	16 58 16.1	+0.4
PBDV				S	Sn	16 58 48.6	-0.2
	17nm,0.4s						
PBDV	Barranco-do-Ve	2.81	297	ePn	Pn	16 58 16.1	+0.4
PBDV				eSn	Sn	16 58 48.6	-0.2
	17nm,0.4s						
PBAR	Barrancos	2.82	321	ePn	Pn	16 58 16.4	+0.7
PBAR				eSn	Sn	16 58 48.3	-0.6
PBAR				A		16 58 51.9	
	15nm,0.2s						
PBAR	Barrancos	2.82	321	P	Pn	16 58 16.4	+0.7
PBAR				S	Sn	16 58 48.3	-0.6
	15nm,0.2s						
PBAR	Barrancos	2.82	321	P	Pn	16 58 16.4	+0.7
PBAR				S	Sn	16 58 48.3	-0.6
	15nm,0.2s						
PBAR	Barrancos	2.82	321	ePn	Pn	16 58 16.4	+0.7
PBAR				eSn	Sn	16 58 48.3	-0.6
	15nm,0.2s						
CZD	Col de Zad	2.97	184	P	Pn	16 58 16.0	-1.8
CZD				S	Sn	16 58 44.0	-8.6
CZD	Col de Zad	2.97	184	P	Pn	16 58 16.0	-1.8
CZD				S	Sn	16 58 44.0	-8.6
PCVE	Castro Verde	3.07	303	ePn	Pn	16 58 19.5	+0.4
PCVE				eSn	Sn	16 58 54.4	-0.6
PCVE				A		16 58 55.0	
	23nm,0.2s						
PCVE	Castro Verde	3.07	303	P	Pn	16 58 19.5	+0.4
PCVE				S	Sn	16 58 54.4	-0.6
	23nm,0.2s						
PCVE	Castro Verde	3.07	303	P	Pn	16 58 19.5	+0.4
PCVE				S	Sn	16 58 54.4	-0.6
	23nm,0.2s						
PCVE	Castro Verde	3.07	303	ePn	Pn	16 58 19.5	+0.4
PCVE				eSn	Sn	16 58 54.4	-0.6
	23nm,0.2s						
PBEJ	Beja	3.18	310	eSn	Sn	16 58 57.0	-0.7
PBEJ				A		16 58 58.6	
	21nm,0.3s						
PBEJ	Beja	3.18	310	S	Sn	16 58 57.0	-0.7
	10nm,0.3s						
PBEJ	Beja	3.18	310	S	Sn	16 58 57.0	-0.7
	10nm,0.3s						
PBEJ	Beja	3.18	310	eSn	Sn	16 58 57.0	-0.7
	21nm,0.3s						
EVIA	Vianos	3.20	34	P	Pn	16 58 20.9	+0.1
EVIA				S	Sn	16 58 55.6	-2.4
EVIA	Vianos	3.20	34	P	Pn	16 58 20.9	+0.1
	2.3nm,0.1s,SNR=8.3						
EVIA				S	Sn	16 58 55.6	-2.4
	9.5nm,0.1s						
EVIA	Vianos	3.20	34	P	Pn	16 58 20.9	+0.1
	2.3nm,0.1s,SNR=8.3						
EVIA				S	Sn	16 58 55.6	-2.4
	9.5nm,0.1s						
EVIA	Vianos	3.20	34	P	Pn	16 58 20.9	+0.1
	2.3nm,0.1s,SNR=8.3						
EVIA				S	Sn	16 58 55.6	-2.4
	9.5nm,0.1s						
EBAD	Badajoz	3.27	328	P	Pn	16 58 22.8	+1.1
EBAD				S	Sn	16 58 58.7	-1.0
EBAD	Badajoz	3.27	328	P	Pn	16 58 22.8	+1.1
	0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	16 58 58.7	-1.0
	18nm,0.2s,SNR=13						
EBAD	Badajoz	3.27	328	P	Pn	16 58 22.8	+1.1
	0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	16 58 58.7	-1.0
	18nm,0.2s,SNR=13						
EBAD	Badajoz	3.27	328	P	Pn	16 58 22.8	+1.0
	0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	16 58 58.7	-1.0
	18nm,0.2s,SNR=13						
MORF	Marmelete	3.37	294	ePn	Pn	16 58 23.3	+0.2
MORF				eSn	Sn	16 59 01.2	-0.9
MORF				A		16 59 02.6	
	38nm,0.1s						
MORF	Marmelete	3.37	294	P	Pn	16 58 23.2	+0.2
MORF				S	Sn	16 59 00.8	-1.3
MORF	Marmelete	3.37	294	P	Pn	16 58 23.2	+0.2
MORF				S	Sn	16 59 00.8	-1.3
MORF	Marmelete	3.37	294	ePn	Pn	16 58 23.3	+0.2
MORF				eSn	Sn	16 59 01.2	-0.9
	38nm,0.1s						
PFVI	Vila Bisbo	3.44	290	ePn	Pn	16 58 24.6	+0.5
PFVI				eSn	Sn	16 59 02.8	-1.1
PFVI				A		16 59 03.7	
	35nm,0.4s						
PFVI	Vila Bisbo	3.44	290	ePn	Pn	16 58 24.6	+0.5
PFVI				eSn	Sn	16 59 02.8	-1.1
	35nm,0.4s						
PTEO	Sao Teotonio	3.51	297	ePn	Pn	16 58 25.8	+0.7
PTEO				eSn	Sn	16 59 05.0	-0.7
PTEO				A		16 59 07.7	
	15nm,0.2s						
PTEO	Sao Teotonio	3.51	297	P	Pn	16 58 25.8	+0.7
PTEO				S	Sn	16 59 05.0	-0.7
	7.7nm,0.2s						
PTEO	Sao Teotonio	3.51	297	P	Pn	16 58 25.8	+0.7
PTEO				S	Sn	16 59 05.0	-0.7
	7.7nm,0.2s						
PTEO	Sao Teotonio	3.51	297	ePn	Pn	16 58 25.8	+0.7
PTEO				eSn	Sn	16 59 05.0	-0.7
	15nm,0.2s						
KIB	El Ksiba	3.57	197	P	Pn	16 58 27.0	+1.1
KIB				S	Sn	16 58 59.0	-8.1
KIB	El Ksiba	3.57	197	P	Pn	16 58 27.0	+1.1
KIB				S	Sn	16 58 59.0	-8.1
KIB	El Ksiba	3.57	197	iP	Pn	16 58 27.0	+1.1
EVO	Evora	3.60	315	eSn	Sn	16 59 06.6	-1.2
EVO				A		16 59 09.3	
	42nm,0.3s						
EVO	Evora	3.60	315	S	Sn	16 59 06.6	-1.2
	42nm,0.3s						
EVO	Evora	3.60	315	S	Sn	16 59 06.6	-1.2
	42nm,0.3s						
EVO	Evora	3.60	315	eSn	Sn	16 59 06.6	-1.2
	42nm,0.3s						
PESTR	Estremoz	3.62	323	ePn	Pn	16 58 27.7	+1.1
PESTR				eSn	Sn	16 59 07.3	-1.0
PESTR				A		16 59 09.1	
	6.3nm,0.4s						
PESTR	Estremoz	3.62	323	P	Pn	16 58 27.7	+1.1
PESTR				S	Sn	16 59 07.3	-1.0
	6.3nm,0.4s						

PESTR Estremoz 3.62 323 P Pn 16 58 27.7 +1.1
PESTR S Sn 16 59 07.3 -1.0
6.3nm,0.4s
PESTR Estremoz 3.62 323 ePn Pn 16 58 27.7 +1.1
PESTR eSn Sn 16 59 07.3 -1.0
6.3nm,0.4s
ETOB Tobarra 3.69 43 P Pn 16 58 27.5 +0.1
ETOB S Sn 16 59 07.7 -2.2
ETOB Tobarra 3.69 43 P Pn 16 58 27.5 +0.1
5.3nm,0.1s,SNR=51
ETOB S Sn 16 59 07.7 -2.2
3.3nm,0.2s
ETOB Tobarra 3.69 43 P Pn 16 58 27.5 +0.1
5.3nm,0.1s,SNR=51
ETOB S Sn 16 59 07.7 -2.2
3.3nm,0.2s
ETOB Tobarra 3.69 43 P Pn 16 58 27.5 +0.1
5.3nm,0.1s,SNR=51
ETOB S Sn 16 59 07.7 -2.2
3.3nm,0.2s
ESDC Sonseca Array 3.72 10 P Pn 16 58 27.4 -0.5
ESDC S Sn 16 59 08.7 -1.9
ESDC Sonseca Array 3.72 10 S Sn 16 59 08.7 -1.9
3.4nm,0.1s,baz=189,slow=22,SNR=7.9
ESDC Sonseca Array 3.72 10 S Sn 16 59 08.7 -1.9
3.4nm,0.1s,baz=189,slow=22,SNR=7.9
ESDC Sonseca Array 3.72 10 P Pn 16 58 27.4 -0.5
ESDC S Sn 16 59 08.7 -1.9
3.4nm,0.1s,baz=189,slow=22,SNR=7.9
MOE Montemor 3.79 313 eSn Sn 16 59 11.9 -0.5
MOE Montemor 3.79 313 eSn Sn 16 59 11.9 -0.5
PMRV Marv??o 3.99 330 ePn Pn 16 58 32.7 +1.2
PMRV eSn Sn 16 59 16.4 -0.8
PMRV A 16 59 30.3
5.2nm,0.5s
PMRV Marv??o 3.99 330 P Pn 16 58 32.7 +1.2
PMRV S Sn 16 59 16.4 -0.8
2.6nm,0.5s
PMRV Marv??o 3.99 330 P Pn 16 58 32.7 +1.2
PMRV S Sn 16 59 16.4 -0.8
2.6nm,0.5s
PMRV Marv??o 3.99 330 ePn Pn 16 58 32.7 +1.2
PMRV eSn Sn 16 59 16.4 -0.8
5.2nm,0.5s
PMAFR Mafra 4.63 311 eSn Sn 16 59 32.3 -0.4
PMAFR A 16 59 35.0
20nm,0.6s
PMAFR Mafra 4.63 311 eSn Sn 16 59 32.3 -0.4
20nm,0.6s
ECHE Chera 4.69 39 P Pn 16 58 41.5 +0.5
ECHE Chera 4.69 39 P Pn 16 58 41.5 +0.5
1.3nm,0.2s,SNR=7.9
ECHE Chera 4.69 39 P Pn 16 58 41.5 +0.5
1.3nm,0.2s,SNR=7.9
ECHE Chera 4.69 39 P Pn 16 58 41.5 +0.6
1.3nm,0.2s,SNR=7.9
ETOR Torete 5.26 23 P Pn 16 58 49.7 +0.9
ETOR S Sn 16 59 43.6 -4.5
ETOR Torete 5.26 23 P Pn 16 58 49.7 +0.9
8.2nm,0.1s,SNR=7.9
ETOR S Sn 16 59 43.6 -4.5
9.1nm,0.2s,SNR=7.9
ETOR Torete 5.26 23 P Pn 16 58 49.7 +0.9
8.2nm,0.1s,SNR=7.9
ETOR S Sn 16 59 43.6 -4.5
9.1nm,0.2s,SNR=7.9
ETOR Torete 5.26 23 P Pn 16 58 49.7 +0.9
8.2nm,0.1s,SNR=7.9
MVO Moncorvo 5.44 342 eSn Sn 16 59 53.0 +0.6
MVO Moncorvo 5.44 342 eSn Sn 16 59 53.0 +0.6
EMOS Mosqueruela 5.52 37 P Pn 16 58 53.5 +1.2
EMOS S Sn 16 59 50.7 -3.7
EMOS Mosqueruela 5.52 37 P Pn 16 58 53.4 +1.2
0.6nm,0.2s,SNR=7.9
EMOS S Sn 16 59 50.7 -3.7
2.7nm,0.4s,SNR=7.9
EMOS Mosqueruela 5.52 37 P Pn 16 58 53.4 +1.2
0.6nm,0.2s,SNR=7.9
EMOS S Sn 16 59 50.7 -3.7
2.7nm,0.4s,SNR=7.9
EMOS Mosqueruela 5.52 37 P Pn 16 58 53.5 +1.2
PVRL Vila Real 5.74 337 eSn Sn 16 59 59.7 0.0
PVRL Vila Real 5.74 337 S Sn 16 59 59.7 0.0
PVRL Vila Real 5.74 337 S Sn 16 59 59.7 0.0
PVRL Vila Real 5.74 337 eSn Sn 16 59 59.7 0.0

JMA 08 17:04:23.1±0.1, 28°.13N×141°.57E, h30km, M3.5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.17	152	P	Pn	17 04 43.6	+0.2
CBIJ				eS	Sn	17 04 58.6	+0.4
JHHJ	Haha-jima-NKT	1.59	160	P	Pn	17 04 49.9	+0.7
BSO1	Boso 1	6.52	356	P	Pn	17 06 00.5	+3.5
JHU	Hanno	7.94	346	P	Pn	17 06 23.3	+6.9
JAG	Ashikaga	8.46	348	P	Pn	17 06 27.9	+4.3

ISCJB 08 17:04:30.4±0.9, 20°.12S±0°.07×178°.01W±0°.08, h521km±11km, mb4.3/36, Error ellipse: s-maj=14.0km s-min=7.5km az=41.0
BJI 08 17:04:30.2, 20°.30S×177°.90W, h543km, mB4.7/13, mb4.5/19
NEIC 08 17:04:32.2±0.9, 20°.29S×177°.86W, h543km±9km, mb4.5/12, Error ellipse: s-maj=13.2km s-min=6.9km az=139.0
IDC 08 17:04:32.5±1.8, 20°.21S×177°.92W, h538km±19km, mb3.7/17, mb1 3.9/19, mb1mx3.8/21, mbtmp3.7/19, Error ellipse: s-maj=16.2km s-min=11.2km az=134.0
ISC 08 17:04:31.0±0.9, 20°.12S±0°.07×177°.93W±0°.08, h518km±11km, h543km±3.3km:pP-P, n135, σ0s99/70, mb4.3/36, 10C-6D, Fiji Islands region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AFI Afiamalu 8.53 45 P P 17 06 35.4 +2.0
7.5nm,0.3s,baz=13,slow=2.5,SNR=18
AFI S S 17 08 12.5 -1.2
5.2nm,0.3s,baz=142,slow=21,SNR=5.6
AFI Afiamalu 8.53 45 eP P 17 06 35.1 +1.8
44nm,0.7s
AFI eS S 17 08 12.2 -1.5
URZ Urewera 18.58 192 P P 17 08 13.9 -1.7
12nm,0.3s,baz=306,slow=2.9,SNR=40
RPZ Rata Peaks 25.27 199 P P 17 09 14.2 -1.4
12nm,0.7s,mb4.6,baz=343,slow=6.2,SNR=7.8
ARMA Armidale 29.29 243 eP P 17 09 52.9 +1.7
CNB Canberra Magne 32.49 235 eP P 17 10 20.0 +1.4
CTA Charters Tower 33.59 264 eP P 17 10 28.8 +0.7
8.0nm,0.4s,mb4.6
CTA Charters Tower 33.59 264 P P 17 10 28.8 +0.7
15nm,0.6s,mb4.7,baz=92,slow=11,SNR=26
CTAO Charters Tower 33.59 264 eP P 17 10 28.5 +0.4
TOO Toolangi 36.17 233 eP P 17 10 50.4 +1.0
STKA Stephens Creek 38.01 244 ⇓iP P 17 11 05.5 +0.9
2.8nm,0.4s,mb4.2
STKA Stephens Creek 38.01 244 P P 17 11 05.5 +0.9
3.3nm,0.3s,mb4.3,baz=90,slow=8.5,SNR=23
STKA PcP PcP 17 13 06.5 -0.3
2.0nm,0.6s,baz=89,slow=8.8,SNR=3.4
STKA Stephens Creek 38.01 244 eP P 17 11 05.3 +0.7
3.1nm,1.1s,mb3.8
ASAR Alice Springs 44.67 256 P P 17 11 57.6 +0.1
18nm,0.8s,mb4.7,baz=94,slow=7.6,SNR=223
ASAR PcP PcP 17 13 28.4 -0.8
3.4nm,0.7s,baz=98,slow=4.0,SNR=11
ASAR S S 17 17 51.8 -4.4
0.8nm,0.7s,baz=92,slow=14,SNR=8.3
WB2 Warramunga Arr 44.71 262 eP P 17 11 56.9 -1.0
WRAB Tennant Creek 44.71 262 eP P 17 11 57.9 -0.1
10nm,0.7s,mb4.5
WRA Warramunga Arr 44.72 262 P P 17 11 57.4 -0.6
8.8nm,0.3s,mb4.8,baz=97,slow=7.5,SNR=817
WRA PcP PcP 17 13 28.6 -0.8
1.6nm,0.6s,baz=99,slow=3.5,SNR=5.8
WRA S S 17 17 52.1 -4.9
2.7nm,0.9s,baz=95,slow=13,SNR=9.2
KAKA Kakadu 48.03 271 eP P 17 12 21.6 -1.6
8.5nm,0.4s,mb4.6
FORT Forrest 49.50 246 ⇓iP P 17 12 33.3 -0.7
22nm,0.6s,mb4.8
FITZ Fitzroy Crossi 53.14 262 eP P 17 13 00.5 0.0
5.6nm,0.4s,mb4.2
FITZ Fitzroy Crossi 53.14 262 P P 17 13 00.3 -0.2

3.2nm,0.5s,mb3.9,baz=79,slow=2.7,SNR=24
MBWA Marble Bar 58.00 257 eP P 17 13 33.2 -1.1
SBA Scott Base 58.25 184 eP P 17 13 37.9 +2.9
NWAO Narrogin (SRO) 58.59 243 eP P 17 13 37.8 -0.3
CASY Casey 64.33 205 eP P 17 14 15.1 +0.1
MJAR Matsushiro Arr 69.94 324 P P 17 14 49.6 -0.4
5.3nm,0.5s,mb4.3,baz=158,slow=5.9,SNR=16
MAT Matsushiro 69.94 324 P P 17 14 48.8 -1.2
KSM Kuching 73.42 278 eP P 17 15 10.3 -0.6
4.6nm,0.6s,mb4.1
YSS Yuzh-Sakhalins 75.58 333 eP P 17 15 22.8 +0.5
PEA0B Petropavlovsk- 75.92 345 eP P 17 15 23.9 -0.1
PETK Petropavlovsk- 75.92 345 P P 17 15 23.6 -0.3
9.3nm,0.7s,mb4.3,baz=125,slow=5.8,SNR=24
KSRS Korea Array 76.65 318 P P 17 15 28.7 +0.4
2.1nm,0.6s,mb3.7,baz=129,slow=6.0,SNR=12
MDJ Mudanjiang 80.25 325 P P 17 15 48.1 +0.7
MDJ pmax pmax
comp=Z,15nm,0.8s,mb4.4
MDJ pmax pmax
comp=Z,51nm,3.4s
MDJ Mudanjiang 80.25 325 eP P 17 15 47.7 +0.3
comp=Z,11nm,0.8s,mb4.2
KDAK Kodiak Island 80.43 13 P P 17 15 49.3 +1.2
comp=Z,6.0nm,0.8s,mb4.0,baz=172,slow=7.1,SNR=2.7
NVAR Mina Array Bea 80.71 43 P P 17 15 51.5 +1.5
comp=Z,0.7nm,0.7s,mb3.2,baz=232,slow=11,SNR=5.7
MAW Mawson 81.94 200 P P 17 15 55.6 -0.3
comp=Z,1.7nm,0.5s,mb3.7,baz=94,slow=6.9,SNR=4.1
MAW Mawson 81.94 200 P P 17 15 54.7 -1.2
CN2 Changchun 82.04 322 eP P 17 15 58.3 +1.6
TTA Tatalina 84.56 10 eP P 17 16 09.4 +0.5
comp=Z,3.3nm,0.8s,mb3.9
BMRM Bremner River 85.15 16 eP P 17 16 11.6 -0.2
BJI Beijing 85.67 315 P P 17 16 14.7 -0.1
BJI pP pP 17 18 11.2 +2.9
BJI S S 17 26 01.5 -2.2
BJI pmax pmax
comp=Z,16nm,0.5s,mb4.9
BJI pmax pmax
comp=Z,87nm,3.9s
ENH Enshi 85.88 304 eP P 17 16 16.3 +0.2
comp=Z,19nm,1.2s,mb4.6
TRF Thorofare Moun 86.07 12 eP P 17 16 14.8 -1.3
comp=Z,9.8nm,0.7s,mb4.5
GYA Guiyang 86.52 300 P P 17 16 18.8 -0.3
GYA pP pP 17 18 18.5 +5.5
GYA sP sP 17 19 12.0 +6.4
GYA PP PP 17 19 54.6 +4.0
GYA SKS 17 25 54.7
GYA S S 17 26 09.3 -3.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
MCK McKinley 86.59 12 eP P 17 16 17.9 -0.7
comp=Z,6.1nm,0.7s,mb4.3
TXAR Lajitas Array 86.80 57 P P 17 16 21.8 +1.4
comp=Z,0.8nm,0.8s,mb3.3,baz=218,slow=6.8,SNR=6.7
TXAR Lajitas Array 86.80 57 P P 17 16 21.8 +1.4
COLA College 87.83 12 eP P 17 16 23.1 -1.2
comp=Z,7.6nm,0.8s,mb4.5
XAN Xi'an 87.95 307 P P 17 16 25.9 +0.2
XAN pP pP 17 18 24.1 +4.1
XAN sP sP 17 19 19.0 +6.5
XAN PP PP 17 20 02.1 +0.3
XAN S S 17 26 24.2 -1.3
XAN sS sS 17 29 56.0 +6.8
XAN SS SS 17 32 29.7 +0.5
XAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
XAN pmax pmax
comp=Z,14nm,9.2s
VNA3 Neumayer Olymp 88.51 176 eP P 17 16 27.3 -0.4
VNA3 e 17 16 39.8
PDAR Pinedale Array 88.64 43 P P 17 16 29.5 +0.8
comp=Z,0.6nm,0.6s,mb3.6,baz=228,slow=3.2,SNR=6.3
VNA2 Neumayer--Watz 88.96 177 eP P 17 16 29.8 0.0
VNA2 e 17 16 42.4
DAWY Dawson 89.08 16 eP P 17 16 30.2 0.0
HHC Hu-ho-hao-te 89.13 314 eP P 17 16 31.9 +0.9
HHC pP pP 17 18 32.1 +6.4
HHC sP sP 17 19 24.2 +6.2
HHC PP PP 17 20 15.1 +4.2
HHC SKS 17 26 09.2
HHC S S 17 26 34.0 -2.0
HHC sS sS 17 30 05.7 +5.2
HHC SS SS 17 32 48.1 +2.2
HHC pmax pmax
comp=Z,15nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,65nm,5.6s
VNA1 Neumayer--Stat 89.18 177 eP P 17 16 31.0 +0.2
EGAK Eagle 89.22 15 eP P 17 16 30.9 0.0
comp=Z,7.3nm,1.0s,mb4.5
KMI Kunming 89.23 297 P P 17 16 33.6 +1.7
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
CMAR Chiang Mai Arr 90.05 290 P P 17 16 36.6 +0.8
comp=Z,5.2nm,0.8s,mb4.4,baz=117,slow=2.8,SNR=34
CHTO Chiang Mai 90.17 290 eP P 17 16 36.9 +0.5
comp=Z,7.3nm,0.8s,mb4.6
CD2 Chengdu 90.64 303 P P 17 16 38.0 -0.3
CD2 pP pP 17 18 38.1 +5.0
CD2 sP sP 17 19 31.0 +5.6
CD2 PP PP 17 20 26.0 +3.1
CD2 SKS 17 26 17.7
CD2 S S 17 26 46.4 -3.6
CD2 sS sS 17 30 18.9 +3.6
CD2 SS SS 17 33 09.7 +1.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,70nm,6.4s
LZH Lanzhou 92.59 307 eP P 17 16 45.0 -2.1
LZH pP pP 17 18 47.5 +5.4
LZH sP sP 17 19 41.0 +6.7
LZH pmax pmax
comp=Z,14nm,1.5s,mb4.8
INK Inuvik 93.89 15 eP P 17 16 51.0 -1.3
SONM Songino Array 95.51 319 P P 17 17 00.7 +0.6
comp=Z,0.4nm,0.5s,mb3.9,baz=119,slow=5.3,SNR=2.4
YKA Yellowknife Ar 96.14 25 P P 17 17 01.0 -1.6
comp=Z,0.2nm,0.5s,mb3.6,baz=238,slow=5.1,SNR=5.2
YKA Yellowknife Ar 96.14 25 P P 17 17 01.0 -1.6
ZALV Zalesovo Beam 110.24 321 PKiKP PKiKP 17 22 01.5 -2.0
comp=Z,0.6nm,0.6s,baz=136,slow=2.5,SNR=4.1
ZALV Zalesovo Beam 110.24 321 PKPdf PKiKP 17 22 01.5 -2.0
MK31 Makanchi Array 110.98 314 PKiKP PKiKP 17 22 03.1 -2.1
MKAR Makanchi Array 110.98 314 PKiKP PKiKP 17 22 03.3 -1.9
comp=Z,1.0nm,0.6s,baz=228,slow=1.3,SNR=8.4
KURK Kurchatov 113.76 318 PKiKP PKiKP 17 22 08.4 -1.9
comp=Z,1.2nm,0.6s,baz=89,slow=1.7,SNR=5.9
KURK Kurchatov 113.76 318 ePKiKP PKiKP 17 22 08.5 -1.9
BVAR Borovoye Array 118.83 320 PKP PKPdf 17 22 18.5 -1.5
comp=Z,1.7nm,0.4s,baz=104,slow=1.7,SNR=13
ARU Arti 124.93 326 ePKPdf PKPdf 17 22 29.8 -1.9
AKTK Aktyubinsk 126.83 319 PKP PKPdf 17 22 34.0 -1.4
AKTO Aktyubinsk 126.83 319 PKP PKPdf 17 22 34.0 -1.4
comp=Z,1.1nm,0.6s,baz=208,slow=2.0,SNR=4.4
ARCES ARCESS Array B 128.56 350 PKP PKPdf 17 22 36.8 -1.4
comp=Z,1.6nm,0.6s,baz=25,slow=1.2,SNR=12
FINES FINESS Array B 135.43 344 PKhKP 17 22 46.4
comp=Z,0.7nm,0.4s,baz=36,slow=3.5,SNR=6.0
FINES FINESS Array B 135.43 344 PKP 17 22 46.4
NOA NORSAR Array B 138.62 353 PKhKP 17 22 47.7
comp=Z,0.2nm,0.5s,baz=16,slow=5.0,SNR=3.9
NOA NORSAR Array B 138.62 353 PKP 17 22 47.7
AKASG Malin Array Be 142.71 331 PKhKP 17 23 00.4
comp=Z,3.4nm,0.3s,baz=44,slow=4.4,SNR=34
AKBB Malin Array Si 142.71 331 ePKPpre 17 23 00.4
MALT Malatya 143.75 308 ePKPdf PKPdf 17 23 05.8 -1.4
MALT Malatya 143.75 308 ⇑iP PKPdf 17 23 06.0 -1.1
KWP Kalwaria Pacla 146.27 336 ePKP PKPdf 17 23 12.7 +1.6
KWP Kalwaria Pacla 146.27 336 ePKPbc PKPbc 17 23 12.5 -0.7
KWP ePKPab PKPab 17 23 15.2 -0.2
KWP Kalwaria Pacla 146.27 336 ⇑iP PKPdf 17 23 12.7 +1.6
BR131 Keskin Array S 146.63 313 ePKPbc PKPbc 17 23 13.3 -1.3
BRTR Keskin Array B 146.63 313 PKPbc PKPbc 17 23 13.6 -1.0
comp=Z,4.0nm,0.6s,baz=133,slow=4.5,SNR=21
BUR08 Bucovina Ar. S 146.75 331 ePKPbc PKPbc 17 23 14.3 -0.3
BURAR Bucovina Array 146.76 331 ⇓iP PKPbc 17 23 14.3 -0.4
STHS Stebnicka Huta 147.00 337 ePKP PKPbc 17 23 15.0 -0.2
STHS e 17 23 19.2
KOLS Kolonicke sedl 147.00 335 ePKP PKPbc 17 23 15.0 -0.2
KOLS e 17 23 18.1

VRI Vrincioaia 147.28 327 ⇑iP PKPbc 17 23 15.4 -0.7
KSP Ksiaz 147.35 343 ePKP PKPbc 17 23 15.8 -0.3
TRPA Tarpa 147.53 334 ⇓iP PKPbc 17 23 15.8 -0.9
CLL Collm 147.71 347 ⇓iPKPbc PKPbc 17 23 16.5 -0.5
comp=Z,16nm,0.8s
CLL ⇑iPKPab PKPab 17 23 20.4 -0.7
comp=Z,8.0nm,0.9s
UPC Upice 147.73 343 ePKPbc PKPbc 17 23 16.6 -0.5
UPC ePKPab PKPab 17 23 21.3 +0.1
DPC Dobruska-Polom 147.79 343 ePKPbc PKPbc 17 23 17.1 -0.1
DPC ePKPab PKPab 17 23 21.8 +0.3
BRG Berggiesshubel 147.91 346 i PKP PKPbc 17 23 16.9 -0.6
comp=Z,7.5nm,0.8s
BRG i 17 23 21.5
comp=Z,6.7nm,0.8s
MLR Muntele Rosu 147.94 328 ⇑iP PKPdf 17 23 15.8 +1.8
KECS Kecovo 148.05 337 ePKP PKPbc 17 23 17.6 -0.4
KECS e 17 23 22.6
PVCC Panska Ves 148.08 345 ePKPbc PKPbc 17 23 17.6 -0.4
VOIR 148.43 328 ⇑iP PKPbc 17 23 18.8 -0.2
PRU Pruhonice 148.59 344 ePKPbc PKPbc 17 23 19.0 -0.3
PRU ePKPab PKPab 17 23 24.3 -0.5
VYHS Vyhne 148.63 338 ePKP PKPbc 17 23 19.1 -0.3
VYHS e 17 23 24.9
KOLL Kolacno 148.71 339 ePKP PKPbc 17 23 19.5 -0.1
NKC Novy Kostel 148.84 347 ePKPbc PKPbc 17 23 19.5 -0.4
NKC ePKPab PKPab 17 23 25.7 -0.1
GZR Gura Zlata 149.54 331 ⇓iP PKPbc 17 23 21.2 -0.5
GRF Grafenberg Arr 149.60 348 ePKP PKPbc 17 23 21.3 -0.4
KHC Kasperske Hory 149.62 345 ePKPbc PKPbc 17 23 21.2 -0.5
KHC ePKPab PKPab 17 23 29.0 -0.1
BCLA Clavier 149.66 356 PKPab PKPab 17 23 27.8 -1.3
GEC2 GERESS Array S 149.85 345 ePKPbc PKPbc 17 23 21.9 -0.5
GERES GERESS Array B 149.85 345 PKP PKPdf 17 23 16.8 -0.1
comp=Z,1.5nm,0.6s,baz=29,slow=2.2,SNR=2.8
GERES PKPbc PKPbc 17 23 21.7 -0.7
comp=Z,2.7nm,0.6s,baz=42,slow=2.2,SNR=32
BZS Buzias 149.90 332 ⇑iP PKPbc 17 23 21.4 -1.2
GIVF Givet 150.00 356 ePKIKP PKPbc 17 23 21.8 -0.9
comp=Z,24nm,0.8s
DOU Dourbes 150.02 357 PKPbc PKPbc 17 23 22.1 -0.6
DOU PKPab PKPab 17 23 29.8 -0.9
BAIF Baives 150.08 357 ePKIKP PKPbc 17 23 22.2 -0.6
comp=Z,12nm,0.7s
CONA Conrad Observa 150.09 341 ⇑iPKiKP PKPbc 17 23 22.8 -0.1
comp=Z,5.8nm,0.6s
WLF Walferdange 150.34 355 PKPbc PKPbc 17 23 23.6 +0.2
FLN La Foliniere 151.35 4 ePKIKP PKPbc 17 23 24.6 -1.2
comp=Z,8.7nm,0.5s
CDF Champ du Feu 151.47 353 ePKIKP PKPbc 17 23 25.0 -1.1
comp=Z,4.5nm,0.7s
LDF La Druitiere 151.54 3 ePKIKP PKPbc 17 23 24.8 -1.4
comp=Z,9.3nm,0.7s
KBA Koelnbreinsper 151.58 344 ⇑iPKiKP PKPbc 17 23 25.1 -1.3
comp=Z,2.1nm,0.5s
MEZF Maizieres J'vi 151.59 356 ePKIKP PKPbc 17 23 25.7 -0.6
SGMF Saint Gilles 151.69 7 ePKIKP PKPbc 17 23 25.1 -1.5
comp=Z,12nm,0.7s
GRR Gorron 151.70 4 ePKIKP PKPbc 17 23 25.5 -1.1
comp=Z,15nm,0.7s
HAU Haudompre 151.97 354 ePKIKP PKPbc 17 23 25.9 -1.3
HINF Hinteralfeld 152.10 353 ePKIKP PKPbc 17 23 26.1 -1.4
ABTA Abfaltersbach 152.10 345 ⇑iPKiKP PKPbc 17 23 26.3 -1.2
comp=Z,5.0nm,0.6s
LOR Lormes 152.88 357 ePKIKP PKPbc 17 23 28.1 -1.1
comp=Z,5.0nm,0.8s
SSF Saint Saulge 153.10 358 ePKIKP PKPbc 17 23 28.8 -0.9
CABF La Chapelle 153.37 354 ePKIKP PKPbc 17 23 29.8 -0.5
TORD Torodi Ar. Bea 173.06 177 PKP PKPdf 17 23 39.2 -2.2
comp=Z,0.7nm,0.8s,baz=191,slow=1.5,SNR=4.5
TORD PKPab PKPab 17 25 12.0 0.0
comp=Z,0.5nm,0.7s,baz=206,slow=3.6,SNR=6.4

IDC 08 17:08:11.7±0.9, 36°.34N×84°.59E, h0km, mb3.5/9, mb1 3.8/15, mb1mx3.7/29, mbtmp3.6/15, ML3.5/6, MS2.8/3, Ms1 2.8/3, ms1mx2.4/32, Error ellipse: s-maj=30.3km s-min=15.2km az=52.0
ISCJB 08 17:08:12.0±0.6, 36°.47N±0°.07×84°.67E±0°.08, h10km, mb3.5/10, Error ellipse: s-maj=10.9km s-min=7.6km az=42.6
NEIC 08 17:08:13.4±0.6, 36°.34N×84°.55E, h10km, mb3.7/3, Error ellipse: s-maj=11.9km s-min=7.7km az=222.0
BJI 08 17:08:13.9, 36°.46N×84°.52E, h14km, mB4.3/1, mb3.9/1, ML4.1/7, Ms3.7/2, Ms7 3.7/1
NNC 08 17:08:19.6±2.2, 37°.06N×84°.62E, h0km, mb4.0, Error ellipse: s-maj=36.1km s-min=14.8km az=93.0
ISC 08 17:08:13.8±0.6, 36°.46N±0°.06×84°.75E±0°.08, h10km, n40, σ1s03/43, mb3.5/10, 4C-1D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KSH Kashi 7.57 296 ePn Pn 17 10 05.3 +1.1
KSH smax
comp=N,160nm,1.1s
KSH smax
comp=E,150nm,1.3s
KSH Kashi 7.57 296 Pn Pn 17 10 05.7 +1.5
KSH Sn Sn 17 11 11.2 -19
ULHL Ulahol 8.76 314 P Pn 17 10 20.7 +0.2
SNR=40
KZA Kyzart 9.26 310 P Pn 17 10 27.7 +0.4
SNR=8.7
TKM2 Tokmak 2 9.56 315 ⇑Pn Pn 17 10 31.8 +0.5
comp=E,14nm,0.9s
TKM2 ⇑Lg 17 13 09.6
comp=E,22nm,0.9s
TKM2 Tokmak 2 9.56 315 P Pn 17 10 31.9 +0.5
SNR=23
TKM2 Tokmak 2 9.56 315 eP Pn 17 10 31.6 +0.3
comp=E,9.9nm,0.5s
KBK Karagaybulak 9.77 312 P Pn 17 10 35.4 +1.1
SNR=15
UCH Uchtor 9.80 309 P Pn 17 10 35.5 +0.9
SNR=9.7
UCH Uchtor 9.80 309 ePn Pn 17 10 34.9 +0.3
AAK Ala-Archa 10.03 311 P Pn 17 10 40.2 +2.3
SNR=6.0
AAK Ala-Archa 10.03 311 Pn Pn 17 10 39.9 +2.0
comp=E,0.0nm,0.3s,baz=129,slow=9.7,SNR=15
AAK Lg 17 13 23.4
comp=E,0.0nm,0.3s,baz=264,slow=20,SNR=3.6
AAK LR LR 17 15 03.4
comp=E,73nm,21.5s,baz=282,slow=41
AAK Ala-Archa 10.03 311 Pn Pn 17 10 39.9 +2.0
AAK Lg 17 13 23.4
AAK LR LR 17 15 03.4
AML Almayashu 10.27 307 P Pn 17 10 41.8 +0.7
SNR=10
AML Almayashu 10.27 307 ePn Pn 17 10 41.2 +0.1
MK31 Makanchi Array 10.49 351 Pn Pn 17 10 45.6 +1.5
comp=E,13nm,1.0s,baz=164,slow=14,SNR=38
MK31 ⇓Sn Sn 17 12 40.7 -0.9
comp=E,5.4nm,0.6s
MK31 Makanchi Array 10.49 351 eP Pn 17 10 45.7 +1.6
MKAR Makanchi Array 10.49 351 Pn Pn 17 10 45.8 +1.7
comp=E,0.6nm,0.3s,baz=163,slow=13,SNR=36
MKAR Sn Sn 17 12 40.4 -1.2
comp=E,0.9nm,0.3s,baz=182,slow=21,SNR=5.8
EKS2 Erkin-Say 10.49 310 P Pn 17 10 46.0 +1.8
SNR=6.1
EKS2 Erkin-Say 10.49 310 Pn Pn 17 10 43.7 -0.5
KURK Kurchatov 14.92 345 Pn Pn 17 11 44.2 -0.3
comp=E,0.0nm,0.3s,baz=170,slow=12,SNR=6.0
ZAA0 Zalesovo Array 17.49 0 eP Pn 17 12 17.9 +0.4
ZALV Zalesovo Beam 17.49 0 P Pn 17 12 16.8 -0.8
comp=E,0.4nm,0.3s,baz=181,slow=13,SNR=10
ZALV LR LR 17 18 46.2
comp=E,17nm,21.9s,baz=59,slow=36
VOSK Vostochnaya 18.93 334 ⇑Pn Pn 17 12 36.0 +0.7
comp=E,4.4nm,0.9s
BVA0 Borovoye Array 19.39 333 ⇑Pn Pn 17 12 39.8 -1.0
comp=E,0.5nm,0.8s,baz=229,slow=43,SNR=14
BVAR Borovoye Array 19.39 333 P Pn 17 12 40.9 +0.2
comp=E,0.2nm,0.3s,baz=136,slow=12,SNR=15
BVAR LR LR 17 21 00.1
comp=E,47nm,20.0s,baz=323,slow=40
BRVK Borovoye 19.46 333 eP Pn 17 12 40.9 -0.6
comp=E,3.8nm,0.7s
SONM Songino Array 19.60 48 P Pn 17 12 44.1 +0.8
comp=E,0.2nm,0.3s,baz=212,slow=14,SNR=2.8
ULN Ulaanbaatar 20.00 48 P Pn 17 12 50.6 +2.5
comp=E,1.2nm,0.6s
CMAR Chiang Mai Arr 21.86 141 P P 17 13 06.9 +0.2

comp=E,0.6nm,0.3s,mb3.4,baz=310,slow=10,SNR=4.8
ABKAR **Akbulak array** 22.11 313 *e*P P 17 13 08.0 -1.1
comp=E,2.6nm,0.6s,mb3.8
AKTK **Aktyubinsk** 23.75 314 P P 17 13 25.1 -1.1
AKTO **Aktyubinsk** 23.75 314 P P 17 13 25.1 -1.1
comp=E,1.1nm,0.8s,mb3.4,baz=107,slow=11,SNR=4.4
BRTR **Keskin Array B** 39.92 291 P P 17 15 47.5 -0.4
comp=E,1.4nm,0.9s,mb3.7,baz=92,slow=7.4,SNR=7.0
FINES **FINESS Array B** 43.92 324 P P 17 16 19.4 -1.0
comp=E,1.2nm,0.7s,mb3.8,baz=96,slow=7.6,SNR=3.4
NOA **NORSAR Array B** 51.09 323 P P 17 17 14.8 -1.3
comp=E,0.7nm,0.7s,mb3.7,baz=84,slow=7.3,SNR=3.3
GERES **GERESS Array B** 51.89 307 P P 17 17 20.4 -1.9
comp=E,0.3nm,0.7s,mb3.3,baz=87,slow=8.1,SNR=4.1
WRA **Warramunga Arr** 73.08 132 P P 17 19 43.5 -0.8
comp=E,0.3nm,0.6s,mb3.4,baz=327,slow=6.0,SNR=5.2
ASAR **Alice Springs** 75.68 134 P P 17 19 59.6 +0.3
comp=E,0.3nm,0.9s,mb3.2,baz=311,slow=6.0,SNR=3.5
YKA **Yellowknife Ar** 80.16 9 P P 17 20 23.4 -0.3
comp=E,0.1nm,0.3s,mb3.2,baz=336,slow=5.1,SNR=1.9

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*THE **08** 17:10:29.0, 35°.92N×21°.11E, h32km±45km, ML3.9/2, Error ellipse: s-maj=45.6km s-min=1.9km az=282.0*
*CSEM **08** 17:10:33.7±0.5, 36°.21N×21°.98E, h0km±1km, MD3.5, Error ellipse: s-maj=12.8km s-min=5.3km az=55.0*
*ATH **08** 17:10:33.3, 36°.14N×21°.96E, h5km, MD3.5/10*
ISC 08 17:10:28.4±1.5, 35°.93N±0°.05×21°.59E±0°.09, h4km±6km, n36, σ1°.12/48, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.98**	**7**	*e*PB	**Pg**	**17 10 47.5**	**+0.4**
PYL	**PYLOS**	**0.98**	**7**	P	**Pg**	**17 10 47.1**	**0.0**
PYL				S	**Sg**	**17 11 02.4**	**+2.6**
PYL	**PYLOS**	**0.98**	**7**	P	**Pg**	**17 10 47.1**	**0.0**
PYL	**PYLOS**	**0.98**	**7**	*e*Pb	**Pg**	**17 10 47.5**	**+0.4**
KYTH	**Kithira**	**1.22**	**73**	*e*PB	**Pg**	**17 10 50.3**	**-1.6**
KYTH	**Kithira**	**1.22**	**73**	*e*Pb	**Pg**	**17 10 50.3**	**-1.6**
ITM	**Ithomi**	**1.28**	**12**	*e*PG	**Pg**	**17 10 52.5**	**-0.5**
ITM				*e*SB	**Sb**	**17 11 08.7**	**-1.1**
ITM	**Ithomi**	**1.28**	**12**	P	**Pg**	**17 10 51.8**	**-1.2**
ITM				S	**Sg**	**17 11 11.0**	**+1.4**
ITM	**Ithomi**	**1.28**	**12**	P	**Pg**	**17 10 51.8**	**-1.2**
ITM	**Ithomi**	**1.28**	**12**	*e*Pg	**Pg**	**17 10 52.5**	**-0.5**
VLI	**Veliai**	**1.34**	**54**	*e*PB	**Pn**	**17 10 52.3**	**-1.6**
VLI	**Veliai**	**1.34**	**54**	*e*Pb	**Pn**	**17 10 52.3**	**-1.6**
VLX	**Vlachokerasia**	**1.58**	**24**	*e*PG	**Pn**	**17 10 56.9**	**-0.2**
VLX				*e*SB	**Sn**	**17 11 15.3**	**-2.6**
VLX	**Vlachokerasia**	**1.58**	**24**	P	**Pn**	**17 10 57.0**	**-0.1**
VLX				S	**Sn**	**17 11 18.9**	**+1.0**
VLX	**Vlachokerasia**	**1.58**	**24**	P	**Pn**	**17 10 57.0**	**-0.1**
KARN	**Karanos**	**1.97**	**105**	*e*PN	**Pg**	**17 11 06.4**	**+0.3**
KARN	**Karanos**	**1.97**	**105**	P	**Pg**	**17 11 05.7**	**-0.4**
KARN				S	**Sg**	**17 11 33.0**	**+1.4**
KARN	**Karanos**	**1.97**	**105**	P	**Pg**	**17 11 05.7**	**-0.4**
KARN	**Karanos**	**1.97**	**105**	*e*Pn	**Pg**	**17 11 06.4**	**+0.3**
KARN				S	**Sg**	**17 11 33.0**	**+1.4**
DID	**Didima**	**2.06**	**39**	*e*PG	**Pb**	**17 11 05.3**	**-1.0**
DID	**Didima**	**2.06**	**39**	P	**Pn**	**17 11 04.5**	**+0.8**
DID				S	**Sg**	**17 11 33.6**	**-1.0**
DID	**Didima**	**2.06**	**39**	P	**Pn**	**17 11 04.5**	**+0.8**
DID	**Didima**	**2.06**	**39**	*e*Pg	**Pb**	**17 11 05.3**	**-1.0**
GUR	**Goura**	**2.10**	**16**	*e*PN	**Pg**	**17 11 09.1**	**+0.5**
GUR	**Goura**	**2.10**	**16**	P	**Pn**	**17 11 05.1**	**+0.9**
GUR				S	**Sn**	**17 11 30.3**	**-0.4**
GUR	**Goura**	**2.10**	**16**	P	**Pn**	**17 11 05.1**	**+0.9**
GUR				S	**Sn**	**17 11 30.3**	**-0.4**
LAKA	**Lakka**	**2.33**	**8**	P	**Pb**	**17 11 09.7**	**-1.2**
LAKA	**Lakka**	**2.33**	**8**	P	**Pb**	**17 11 09.7**	**-1.2**
LTK	**Loutraki**	**2.37**	**27**	*e*PG	**Pb**	**17 11 12.1**	**+0.6**
LTK	**Loutraki**	**2.37**	**27**	P	**Pn**	**17 11 09.2**	**+1.3**
LTK				S	**Sn**	**17 11 38.3**	**+0.9**
LTK	**Loutraki**	**2.37**	**27**	P	**Pn**	**17 11 09.2**	**+1.3**
LTK	**Loutraki**	**2.37**	**27**	*e*Pg	**Pb**	**17 11 12.1**	**+0.6**
LTK				S	**Sn**	**17 11 38.3**	**+0.9**
KALE	**Kalithea**	**2.50**	**10**	P	**Pn**	**17 11 10.6**	**+0.8**
KALE	**Kalithea**	**2.50**	**10**	P	**Pn**	**17 11 10.6**	**+0.8**
EFP	**Efpalio**	**2.51**	**6**	*e*PG	**Pg**	**17 11 15.3**	**-1.2**
EFP	**Efpalio**	**2.51**	**6**	*e*Pg	**Pg**	**17 11 15.3**	**-1.2**

DJA 08 17:14:34, 0°.59N×98°.64E, h20km, MLv3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.96**	**78**	P	Pb	17 14 51.6	-0.4
MNSI				S	Sb	17 15 05.6	+1.3
GSI	**Gunungsitoli**	**1.28**	**304**	P	Pn	17 14 56.5	-0.2
TRSI	**Tarutung**	**1.46**	**13**	P	Pn	17 14 59.0	-0.3
PPI	**Padang Panjang**	**2.04**	**121**	P	Pn	17 15 08.0	+0.8
PPI				S	Sn	17 15 33.5	+1.3
PDSI	**Padang**	**2.35**	**129**	P	Pn	17 15 13.2	+1.6
PDSI				S	Sn	17 15 41.9	+2.0

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*NEIC **08** 17:15:18.3±11.0, 33°.32S×177°.35W, h100km, mb4.4/2, Error ellipse: s-maj=204.0km s-min=16.5km az=92.0*
*IDC **08** 17:15:24.2±8.3, 32°.89S×179°.05W, h41km±62km, mb4.0/4, mb1 4.2/6, mb1mx3.8/19, mbtmp4.1/6, ML4.0/2, MS3.3/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=63.2km s-min=35.3km az=61.0*
ISC 08 17:15:22.3±4.3, 32°.9S±0°.1×178°.9W±0°.6, h35km, n13, σ0°.93/12, mb4.1/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.30**	**210**	P	**Pn**	**17 16 54.2**	**+1.5**
	3.9nm,0.3s,baz=0.4,slow=4.5,SNR=25						
URZ				S	**Sn**	**17 18 03.4**	**0.0**
	6.5nm,0.3s,baz=254,slow=21,SNR=11						
RPZ	**Rata Peaks**	**13.40**	**213**	P	**Pn**	**17 18 28.5**	**-1.4**
	0.7nm,0.3s,baz=333,slow=3.8,SNR=3.3						
RPZ				S	**Sn**	**17 20 44.0**	**-14**
	0.6nm,0.3s,baz=350,slow=19,SNR=3.6						
STKA	**Stephens Creek**	**33.28**	**261**	LR	LR	17 33 38.2	
	comp=Z,44nm,18.9s,baz=26,slow=33						
CTA	**Charters Tower**	**33.56**	**284**	P	**P**	**17 22 00.5**	**+1.5**
	1.5nm,0.5s,mb4.2,baz=95,slow=13,SNR=5.5						
CTA	**Charters Tower**	**33.56**	**284**	P	**P**	**17 22 00.5**	**+1.5**
CTAO	**Charters Tower**	**33.56**	**284**	*e*P	**P**	**17 21 59.9**	**+0.9**
	6.6nm,0.9s,mb4.6						
ASAR	**Alice Springs**	**42.31**	**270**	P	**P**	**17 23 12.9**	**+0.1**
	1.1nm,0.5s,mb3.7,baz=109,slow=7.7,SNR=40						
WB2	**Warramunga Arr**	**43.51**	**275**	*e*P	**P**	**17 23 22.0**	**-0.5**
WRAB	**Tennant Creek**	**43.52**	**275**	*e*P	**P**	**17 23 23.3**	**+0.7**
	4.6nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**43.52**	**275**	P	**P**	**17 23 21.7**	**-1.0**
	1.9nm,0.5s,mb4.1,baz=116,slow=7.8,SNR=43						
FITZ	**Fitzroy Crossi**	**51.67**	**272**	P	**P**	**17 24 25.3**	**-0.6**
	3.6nm,1.0s,mb4.2,baz=126,slow=14,SNR=4.2						
KAF	**Kangasniemi**	**146.60**	**339**	*e*p	PKPdf	17 34 58.1	+0.4
	1.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**160.36**	**182**	PKPab	PKPab	17 36 00.1	+0.7
	0.4nm,0.5s,baz=169,slow=5.0,SNR=4.2						

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*NEIC **08** 17:19:34.1, 17°.09N×94°.95W, h121km, MD3.6(MEX), After MEX.*
MEX 08 17:19:34.2±0.6, 17°.08N×94°.95W, h120km±5km, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.06**	**81**	*i* P	Pn	17 19 49.1	-1.5
CMIG				*i* S	Sn	17 20 01.2	-1.7
CMIG	**Matias Romero**	**0.06**	**81**	*i* P	Pn	17 19 49.1	-1.5
CMIG				*i* S	Sn	17 20 01.2	-1.7
VHO	**Vista Hermosa**	**1.71**	**270**	*i* P	Pn	17 20 03.1	-1.0
VHO				*i* S	Sn	17 20 26.1	-0.9
VHO	**Vista Hermosa**	**1.71**	**270**	*i* P	Pn	17 20 03.1	-1.0
VHO				*i* S	Sn	17 20 26.1	-0.9
HUIG	**Huatulco**	**1.72**	**221**	*i* P	Pn	17 20 02.6	-1.6
HUIG				*i* S	Sn	17 20 25.6	-1.5
HUIG	**Huatulco**	**1.72**	**221**	*i* P	Pn	17 20 02.6	-1.6
HUIG				*i* S	Sn	17 20 25.6	-1.5
TGIG		**1.77**	**100**	*e*P	Pn	17 20 03.7	-1.1
TGIG				*i* S	Sn	17 20 26.6	-1.7
PCIG		**2.15**	**129**	*i* P	Pn	17 20 08.8	-0.8
PCIG				*i* S	Sn	17 20 34.4	-2.3
CCIG	**Comitan**	**2.81**	**106**	*e*P	Pn	17 20 17.7	-0.3
CCIG				*i* S	Sn	17 20 49.9	-1.8
CCIG	**Comitan**	**2.81**	**106**	*e*P	Pn	17 20 17.7	-0.3
CCIG				*i* S	Sn	17 20 49.9	-1.8
UTMO	**Huajuapan**	**2.83**	**286**	*e*P	Pn	17 20 17.0	-1.3
UTMO				*i* S	Sn	17 20 50.3	-1.9
PNIG	**Pinotepa**	**3.12**	**258**	*e*P	Pn	17 20 22.9	+0.8
PNIG				*i* S	Sn	17 20 56.2	-2.9
PNIG	**Pinotepa**	**3.12**	**258**	*e*P	Pn	17 20 22.9	+0.8
PNIG				*i* S	Sn	17 20 56.2	-2.9
PPM	**Popocatepetl**	**4.02**	**300**	*e*P	Pn	17 20 32.4	-1.6
PPM				*i* S	Sn	17 21 21.2	+0.8
PPM	**Popocatepetl**	**4.02**	**300**	*e*P	Pn	17 20 32.4	-1.6
PPM				*i* S	Sn	17 21 21.2	+0.8

IDC 08 17:21:29.8±3.3, 47°.85N×153°.87E, h91km±31km, mb3.4/3, mb1 3.5/4, mb1mx3.1/27, mbtmp3.5/4, Error ellipse: s-maj=41.4km s-min=25.1km az=139.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.80**	**23**	P	Pn	17 22 52.5	-0.7
	0.2nm,0.3s,baz=167,slow=12,SNR=11						
ASAJ	**Asahikawa**	**8.69**	**249**	P	Pn	17 23 33.6	+1.0
	0.5nm,0.3s,baz=58,slow=16,SNR=4.5						
KURK	**Kurchatov**	**47.19**	**303**	P	P	17 29 53.3	+0.4
	0.8nm,0.6s,baz=69,slow=8.2,SNR=5.2						
ASAR	**Alice Springs**	**73.42**	**199**	P	P	17 32 51.5	-0.4
	0.3nm,0.8s,baz=20,slow=5.0,SNR=4.9						
TXAR	**Lajitas Array**	**76.51**	**61**	P	P	17 33 10.9	+1.0
	0.2nm,0.6s,baz=316,slow=5.2,SNR=3.5						

IDC 08 17:28:21.4±2.2, 9°.02N×92°.34E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=69.4km s-min=22.4km az=67.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.36**	**34**	Pn	Pn	17 31 05.5	+0.3
	0.2nm,0.3s,baz=226,slow=15,SNR=8.7						
MKAR	**Makanchi Array**	**38.61**	**349**	P	P	17 35 46.8	+0.6
	0.3nm,0.7s,baz=168,slow=10,SNR=3.0						
SONM	**Songino Array**	**40.48**	**15**	P	P	17 36 01.3	-0.5
	0.6nm,0.6s,baz=189,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	**50.37**	**125**	P	P	17 37 20.5	-0.1
	0.4nm,0.5s,baz=303,slow=8.8,SNR=9.7						
ASAR	**Alice Springs**	**52.01**	**129**	P	P	17 37 33.0	+0.1
	0.2nm,0.6s,baz=304,slow=7.6,SNR=11						

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*IDC **08** 17:28:55.7±3.7, 36°.48N×71°.24E, h197km±32km, mb3.1/7, mb1 3.3/13, mb1mx3.1/30, mbtmp3.2/13, Error ellipse: s-maj=27.0km s-min=18.0km az=20.0*
*BJI **08** 17:28:55.3, 36°.71N×70°.77E, h216km, mB4.7/1, mb4.2/2*
*ISCJB **08** 17:28:57.5±0.4, 36°.67N±0°.03×71°.19E±0°.07, h224km±6km, mb3.3/6, Error ellipse: s-maj=8.6km s-min=5.3km az=175.6*
*NEIC **08** 17:28:58.4±0.9, 36°.62N×71°.22E, h222km±10km, mb4.0/2, Error ellipse: s-maj=14.9km s-min=10.9km az=122.0*
ISC 08 17:28:58.5±0.4, 36°.66N±0°.03×71°.23E±0°.07, h216km±5km, n39, σ0°.95/46, mb3.3/6, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.76**	**221**	*e*P	Pn	**17 29 46.9**	**+0.5**
KBL				*e*S	**S**	**17 30 22.4**	**-1.4**
CEP	**Cherat**	**2.88**	**169**	⇑P	Pn	**17 29 49.0**	**+1.3**
CEP				S	**S**	**17 30 21.0**	**-5.3**
CHCP	**Chirah Chowk**	**3.43**	**150**	⇑P	Pn	**17 29 55.4**	**+1.4**
KSH	**Kashi**	**4.71**	**51**	⇓*i*P	Pn	**17 30 05.4**	**-4.1**
KSH				S	**S**	**17 30 56.1**	**-10**
KSH				smax			
	comp=N,70nm,0.6s						
KSH				smax			
	comp=E,47nm,0.3s						
SARP	**Sargodha**	**4.88**	**165**	⇑P	Pn	**17 30 12.0**	**+0.2**
THN	**Thein Dam**	**5.61**	**137**	*e*P	Pn	**17 30 21.0**	**0.0**
THN				*e*S	**S**	**17 31 24.6**	**-1.9**
AML	**Almayashu**	**5.79**	**19**	P	Pn	**17 30 23.5**	**+0.3**
	SNR=75						
UCH	**Uchtor**	**6.11**	**24**	P	Pn	**17 30 27.8**	**+0.5**
	SNR=26						
UCH	**Uchtor**	**6.11**	**24**	*e*P	Pn	**17 30 27.9**	**+0.6**
	comp=E,13nm,0.6s						
UCH				*e*S	**S**	**17 31 35.0**	**-3.0**
KZA	**Kyzart**	**6.24**	**29**	P	Pn	**17 30 29.0**	**+0.1**
	SNR=7.1						
EKS2	**Erkin-Say**	**6.31**	**17**	P	Pn	**17 30 30.2**	**+0.4**
	SNR=28						
KK31	**Karatay Array**	**6.46**	**355**	P	Pn	**17 30 31.1**	**-0.6**
	comp=E,0.8nm,0.2s,baz=178,slow=13,SNR=135						
KK31				⇑S	**S**	**17 31 39.9**	**-6.1**
	comp=E,4.0nm,0.3s,baz=176,slow=21						
AAK	**Ala-Archa**	**6.48**	**22**	P	Pn	**17 30 32.7**	**+0.8**
	comp=E,0.0nm,0.3s,baz=153,slow=4.1,SNR=22						
AAK				S	**S**	**17 31 46.1**	**-0.3**
	comp=E,0.0nm,0.3s,baz=321,slow=22,SNR=11						
USP	**Ospenovka**	**7.06**	**20**	P	Pn	**17 30 39.1**	**-0.3**
	SNR=6.7						
TKM2	**Tokmak 2**	**7.10**	**27**	⇑P	Pn	**17 30 40.3**	**+0.3**
	comp=E,4.5nm,0.8s						
TKM2	**Tokmak 2**	**7.10**	**27**	P	Pn	**17 30 40.5**	**+0.5**
	SNR=6.8						
MK31	**Makanchi Array**	**13.05**	**36**	*e*P	Pn	**17 31 58.6**	**+2.7**
MKAR	**Makanchi Array**	**13.05**	**36**	P	Pn	**17 31 55.4**	**-0.5**
	comp=E,0.2nm,0.3s,baz=215,slow=10,SNR=12						
KOLN	**Koldanda**	**13.71**	**127**	*e*P	Pn	**17 32 04.7**	**+0.5**
	comp=E,4.1nm,0.3s						
GKN	**Gorkha**	**14.24**	**124**	*e*P	Pn	**17 32 11.8**	**+1.1**
	comp=E,7.8nm,0.3s						
DMN	**Daman**	**14.81**	**124**	*e*P	Pn	**17 32 17.7**	**0.0**
	comp=E,2.8nm,0.2s						
KKN	**Kakani**	**14.81**	**123**	*e*P	Pn	**17 32 17.9**	**+0.2**
	comp=E,2.8nm,0.2s						
KURK	**Kurchatov**	**15.02**	**18**	P	Pn	**17 32 18.8**	**-1.2**
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=5.0						
KURK	**Kurchatov**	**15.02**	**18**	P	Pn	**17 32 18.8**	**-1.2**
ABKAR	**Akbulak array**	**15.04**	**330**	*e*P	Pn	**17 32 18.9**	**-1.3**
	comp=E,2.5nm,0.5s						
GUN	**Gumba**	**15.14**	**121**	*e*P	Pn	**17 32 21.4**	**-0.3**
	comp=E,2.0nm,0.2s						
BVAR	**Borovoye Array**	**16.38**	**358**	P	P	**17 32 35.5**	**+0.3**
	comp=E,0.3nm,0.3s,baz=184,slow=11,SNR=3.6						
AKTK	**Aktyubinsk**	**16.73**	**329**	P	P	**17 32 40.2**	**+1.1**
AKTO	**Aktyubinsk**	**16.73**	**329**	P	P	**17 32 40.2**	**+1.1**
	comp=E,0.2nm,0.3s,baz=154,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**19.69**	**24**	P	P	**17 33 11.5**	**+0.4**
	comp=E,0.7nm,0.3s,baz=221,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**19.69**	**24**	P	P	**17 33 11.5**	**+0.4**
SONM	**Songino Array**	**28.09**	**55**	P	P	**17 34 29.2**	**-0.7**
	comp=E,0.5nm,0.4s,mb3.5,baz=247,slow=7.5,SNR=2.9						
ARCES	**ARCESS Array B**	**41.07**	**337**	P	P	**17 36 21.4**	**+1.0**
	comp=E,1.8nm,0.9s,mb3.5,baz=111,slow=6.6,SNR=4.8						
NOA	**NORSAR Array B**	**44.36**	**323**	P	P	**17 36 46.2**	**-0.8**
	comp=E,0.5nm,0.5s,mb3.1,baz=96,slow=7.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	P	**17 39 20.4**	**-1.1**
	comp=E,0.2nm,0.5s,mb3.0,baz=40,slow=7.2,SNR=4.6						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	P	**17 40 49.7**	**+0.7**
	comp=E,0.8nm,0.5s,mb3.6,baz=349,slow=5.3,SNR=16						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	P	**17 40 49.7**	**+0.7**
WRA	**Warramunga Arr**	**81.92**	**122**	P	P	**17 40 53.1**	**-0.9**
	comp=E,0.2nm,0.7s,baz=308,slow=7.4,SNR=4.1						
ASAR	**Alice Springs**	**84.19**	**125**	P	P	**17 41 04.5**	**-1.0**
	comp=E,0.2nm,0.7s,mb3.0,baz=315,slow=4.4,SNR=6.4						

MAN 08 17:31:34, 12°.77N×123°.66E, h45km, mb4.6, ML3.5, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.95**	**31**	*e*P	Pn	17 31 52.0	+1.1
PVCP				*e*S	Sn	17 32 06.1	+2.7
CNP	**Catarman**	**1.02**	**105**	*e*P	Pn	17 31 53.6	+1.8
CNP				*e*S	Sn	17 32 06.5	+1.5
AUQP	**San Andres**	**1.10**	**300**	*e*P	Pn	17 31 54.3	+1.3
AUQP				*e*S	Sn	17 32 09.4	+2.4
RCP	**Roxas**	**1.50**	**217**	⇑*e*P	Pn	17 32 00.6	+2.2
RCP				*e*S	Sn	17 32 18.2	+1.3
BOAC	**Boac**	**1.89**	**291**	*e*P	Pn	17 32 04.7	+0.8
GUIM	**Jordan**	**2.38**	**206**	*e*P	Pn	17 32 13.2	+2.7

DHMR 08 17:31:46.5±1.3, 11°.68N×42°.90E, h2km±999km, ML4.1, 2C, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZUQR	**Zugar Island**	**2.29**	**356**	⇑*i*P	Pn	17 32 27.1	+1.7
ZUQR				*i* S	Sn	17 32 58.1	+3.9
ZUQR				AML	AML	17 33 07.2	
	comp=N,2μm,0.4s						
LBOS		**3.16**	**46**	⇑*i*P	Pn	17 32 39.5	+2.1
LBOS				*i* S	Sn	17 33 22.2	+6.5
DHBB	**Dhamar BB**	**3.22**	**27**	*i* P	Pn	17 32 41.7	+3.6
DHBB				*i* S	Sn	17 33 23.9	+6.9

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*NIED **08** 17:37:00, 36°.20N×141°.90E, h20km, Mw4.2 Best double couple: M0:2.18000×10^15 NP1:φ0=347.00000°, δ80.00000°, λ56.00000°. NP2:φ0=243.00000°, δ35.00000°, λ163.00000°.*
*ISCJB **08** 17:37:55.7±1.4, 36°.19N±0°.03×142°.04E±0°.05, h31km±10km, mb4.1/33, MS3.5/3, Error ellipse: s-maj=7.3km s-min=5.1km az=178.1*
*DJA **08** 17:37:56, 36°.21N×141°.91E, h10km, mb4.7/6*
*JMA **08** 17:37:56.8±0.1, 36°.20N×141°.94E, h65km±4km, M3.9*
*MOS **08** 17:37:56.0±0.9, 36°.19N×142°.08E, h33km, mb4.6/11, Error ellipse: s-maj=14.1km s-min=7.7km az=134.7*
*IDC **08** 17:37:57.4±0.6, 36°.06N×141°.95E, h27km±4km, mb3.8/18, mb1 4.0/21, mb1mx3.9/31, mbtmp3.9/21, ML4.1/3, MS3.3/6, Ms1 3.3/6, ms1mx2.9/40, Error ellipse: s-maj=16.8km s-min=12.4km az=89.0*
*BJI **08** 17:37:58.1, 35°.95N×141°.28E, h13km, mB4.3/4, mb4.6/18, Ms4.0/3, Ms7 3.7/2*
*NEIC **08** 17:37:59.2±1.5, 36°.13N×141°.93E, h40km±12km, mb4.5/7, MW4.2(NIED), Error ellipse: s-maj=11.3km s-min=8.6km az=82.0*
ISC 08 17:37:56.5±1.4, 36°.17N±0°.03×141°.97E±0°.06, h21km±9km, h27km±2.8km; pP-P, n83, σ0°.90/92, mb4.1/33, MS3.5/3, 10C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.02**	**243**	⇑P	**Pn**	**17 38 15.3**	**-0.3**
CHOJ				S	**Sb**	**17 38 28.8**	**+0.4**
JHO	**Hitachi**	**1.21**	**291**	⇑P	**Pn**	**17 38 17.3**	**-0.9**
JHO				S	**Sn**	**17 38 33.3**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.32**	**315**	⇑P	**Pn**	**17 38 18.8**	**-0.9**
JFK	**Kawauchi**	**1.48**	**324**	⇑P	**Pn**	**17 38 20.9**	**-1.0**
JFK				S	**Sn**	**17 38 39.8**	**-0.8**
BSO1	**Boso 1**	**1.72**	**208**	P	**Pn**	**17 38 24.9**	**-0.3**
BSO1				S	**Sn**	**17 38 46.2**	**-0.3**
BSO3	**Boso 3**	**1.82**	**221**	P	**Pn**	**17 38 26.5**	**0.0**
JFT	**Otama**	**1.88**	**316**	⇑P	**Pn**	**17 38 27.5**	**+0.1**
JFT				S	**Sn**	**17 38 50.4**	**0.0**
JMM	**Marumori**	**1.94**	**331**	⇑P	**Pn**	**17 38 27.0**	**-1.2**
JAG	**Ashikaga**	**2.05**	**278**	⇑P	**Pn**	**17 38 29.4**	**-0.3**
JFY	**Yanaizu**	**2.20**	**305**	P	**Pn**	**17 38 32.0**	**+0.2**
JFY				S	**Sn**	**17 38 57.2**	**-1.1**
JRY	**Ryogami san**	**2.49**	**267**	P	**Pn**	**17 38 35.7**	**-0.1**
JOD2	**Odawara 2**	**2.52**	**250**	P	**Pn**	**17 38 36.5**	**+0.3**
JNS	**Sasagawa**	**2.69**	**308**	P	**Pn**	**17 38 39.7**	**+1.2**
JMK	**Ichinoseki**	**2.84**	**348**	S	**Sn**	**17 39 12.3**	**-1.8**
JYN	**Shimob**	**2.87**	**257**	P	**Pn**	**17 38 42.0**	**+1.0**
MJAR	**Matsushiro Arr**	**3.06**	**278**	Pn	**Pn**	**17 38 44.0**	**+0.4**
	20nm,0.3s,baz=104,slow=7.8,SNR=173						
MAJO	**Matsushiro**	**3.06**	**278**	*e*P	**Pn**	**17 38 44.6**	**+0.9**
MAT	**Matsushiro**	**3.06**	**278**	P	**Pn**	**17 38 44.4**	**+0.7**
MAT				S	**Sn**	**17 39 19.6**	**0.0**
JHJ	**Hachijo jima 2**	**3.54**	**211**	Pn	**Pn**	**17 38 49.0**	**-1.3**
	60nm,0.3s,baz=185,slow=4.3,SNR=40						
JHJ				Sn	**Sn**	**17 39 27.5**	**-4.0**
	36nm,0.3s,baz=90,slow=20,SNR=4.2						
JHJ				LR	LR	17 39 58.0	
	comp=Z,142nm,19.8s,baz=263,slow=35						
ASAJ	**Asahikawa**	**7.95**	**3**	P	**Pn**	**17 39 49.9**	**-0.8**
ASAJ						17 41 16.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,252nm,19.1s						
ASAJ	**Asahikawa**	**7.95**	**3**	Pn	**Pn**	**17 39 49.9**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=323,slow=33,SNR=10.0						
ASAJ				Sn	**Sn**	**17 41 16.1**	**-3.9**
	comp=Z,1.3nm,0.3s,baz=328,slow=19,SNR=4.1						
ASAJ				LR	LR	17 44 04.7	
	comp=Z,252nm,19.1s,baz=313,slow=46						
CBIJ	**Chichi jima**	**9.05**	**179**	Pn	**Pn**	**17 40 03.0**	**-3.0**
	comp=Z,8.7nm,0.3s,baz=290,slow=

NVS	Novosibirsk	43.76	314	eP	P	17 46 00.2	0.0
MK31	Makanchi Array	44.96	303	eP	P	17 46 10.2	+0.3
MKAR	Makanchi Array	44.96	303	P	P	17 46 10.3	+0.5
	comp=Z,4.6nm,0.8s,mb4.4,baz=88,slow=8.2,SNR=26						
KURK	Kurchatov	46.82	309	P	P	17 46 25.5	+1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KURK	Kurchatov	46.82	309	P	P	17 46 25.4	+0.9
	comp=Z,5.9nm,0.7s,mb4.6,baz=84,slow=7.8,SNR=17						
KURK	Kurchatov	46.82	309	eP	P	17 46 24.2	-0.2
	comp=Z,7.4nm,0.8s,mb4.7						
TKM2	Tokmak 2	50.44	299	eP	P	17 46 53.4	+0.9
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	Tokmak 2	50.44	299	eP	P	17 46 53.4	+1.0
	comp=Z,4.2nm,0.6s,mb4.7						
AAK	Ala-Archa	51.30	299	⇑ iP	P	17 46 57.9	-1.0
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
AAK	Ala-Archa	51.30	299	P	P	17 47 00.1	+1.2
	comp=Z,0.7nm,0.4s,mb3.9,baz=123,slow=6.5,SNR=4.5						
BVAR	Borovoye Array	51.48	313	P	P	17 47 00.2	0.0
	comp=Z,0.9nm,0.5s,mb3.9,baz=79,slow=7.7,SNR=7.4						
BVAR				PcP	PcP	17 48 14.8	+0.6
	comp=Z,0.6nm,0.5s,baz=80,slow=1.8,SNR=3.5						
BVAR	Borovoye Array	51.48	313	P	P	17 47 00.2	0.0
BVAR				PcP	PcP	17 48 14.8	+0.6
BRVK	Borovoye	51.54	313	⇓ iP	P	17 47 00.2	-0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
INK	Inuvik	54.95	27	P	P	17 47 26.5	+1.1
	comp=Z,0.5nm,0.7s,mb3.6,baz=336,slow=7.8,SNR=4.4						
WB2	Warramunga Arr	56.27	189	eP	P	17 47 34.6	-0.9
WRA	Warramunga Arr	56.27	189	P	P	17 47 34.7	-0.8
	comp=Z,1.5nm,0.6s,mb4.2,baz=6.0,slow=7.3,SNR=21						
WRA				pP	pP	17 47 41.9	-0.3
	comp=Z,1.9nm,0.4s,baz=1.3,slow=7.6,SNR=9.6						
ARU	Arti	57.30	319	c iP	P	17 47 42.4	0.0
ARU				e		17 49 47.5	
ARU				S	S	17 55 36.9	-0.3
ARU				SS	SS	17 59 21.6	-4.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
ABKAR	Akbulak array	58.84	311	eP	P	17 47 53.1	-0.2
	comp=Z,1.5nm,0.5s,mb4.3						
AKTK	Aktyubinsk	59.59	312	P	P	17 47 58.1	-0.3
AKTO	Aktyubinsk	59.59	312	P	P	17 47 58.1	-0.3
	comp=Z,2.5nm,0.9s,mb4.2,baz=77,slow=11,SNR=8.0						
ASAR	Alice Springs	60.00	189	P	P	17 48 01.1	-0.4
	comp=Z,0.6nm,0.7s,mb3.7,baz=1.4,slow=7.0,SNR=10						
ASAR				pP	pP	17 48 09.3	+1.0
	comp=Z,1.4nm,0.5s,baz=16,slow=13,SNR=11						
SPITS	Spitsbergen Ar	61.45	349	LR	LR	18 19 08.5	
	comp=Z,35nm,18.1s,MS3.6,baz=35,slow=40						
YKA	Yellowknife Ar	64.33	30	P	P	17 48 30.7	+0.7
	comp=Z,0.4nm,0.8s,mb3.5,baz=303,slow=6.9,SNR=5.4						
ARCES	ARCESS Array B	64.96	340	pP	pP	17 48 44.4	+3.4
	comp=Z,1.1nm,0.7s,baz=57,slow=8.8,SNR=1.4						
ARCES				LR	LR	18 19 57.0	
	comp=Z,34nm,19.6s,MS3.5,baz=74,slow=39						
FINES	FINESS Array B	69.78	333	P	P	17 49 04.6	-0.2
	comp=Z,1.4nm,0.8s,mb3.9,baz=25,slow=7.6,SNR=3.7						
STOK	Stokkvaagen	70.59	341	i P	P	17 49 11.2	+1.6
ANN	Anapa	74.45	314	eP	P	17 49 30.1	-2.9
ANN				eS	S	17 59 02.6	-4.0
ANN				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
NVAR	Mina Array Bea	75.14	53	P	P	17 49 37.2	0.0
	comp=Z,0.2nm,0.4s,mb3.4,baz=259,slow=6.3,SNR=4.4						
NVAR				pP	pP	17 49 47.5	+3.4
	comp=Z,0.8nm,0.7s,baz=284,slow=7.2,SNR=5.2						
NVAR	Mina Array Bea	75.14	53	P	P	17 49 37.2	0.0
NVAR				pP	pP	17 49 47.5	+3.4
NB2	NORSAR Subarra	75.15	338	P	P	17 49 37.3	+0.5
	comp=Z,0.8nm,0.6s,mb3.8,baz=40,slow=5.9						
NOA	NORSAR Array B	75.15	338	P	P	17 49 36.9	+0.1
NOA				*PP	pP	17 49 46.1	+2.4
NOA	NORSAR Array B	75.15	338	P	P	17 49 36.9	+0.1
	comp=Z,0.6nm,0.6s,mb3.7,baz=41,slow=5.6,SNR=3.0						
NOA				pP	pP	17 49 46.1	+2.3
	comp=Z,1.1nm,0.8s,baz=39,slow=5.7,SNR=4.5						
NOA				LR	LR	18 24 52.8	
	comp=Z,24nm,21.9s,MS3.5,baz=15,slow=37						
AKASG	Malin Array Be	75.25	323	P	P	17 49 37.2	-0.3
	comp=Z,1.4nm,0.5s,mb4.1,baz=47,slow=4.6,SNR=8.4						
AKASG				pP	pP	17 49 47.3	+2.8
	comp=Z,0.9nm,0.4s,baz=48,slow=5.4,SNR=3.4						
AKASG	Malin Array Be	75.25	323	P	P	17 49 37.2	-0.3
AKASG				pP	pP	17 49 47.3	+2.8
BRTR	Keskin Array B	79.76	312	ceP	P	17 50 04.6	+1.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	Keskin Array B	79.76	312	P	P	17 50 04.2	+1.3
	comp=Z,1.8nm,1.0s,mb4.0,baz=81,slow=4.0,SNR=5.9						
GERES	GERESS Array B	83.68	329	P	P	17 50 23.3	-0.2
	comp=Z,0.3nm,0.5s,mb3.7,baz=25,slow=4.4,SNR=3.8						
LPAZ	La Paz	146.72	61	PKPbc	PKPbc	17 57 39.1	+1.9
	comp=Z,0.9nm,0.5s,baz=336,slow=0.3,SNR=5.8						

*IDC **08** 17:56:36.8±2.0, 9°.62S×97°.39E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, MS3.3/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=70.8km s-min=16.7km az=53.0*

*ISCJB **08** 17:56:40.6±1.6, 9°.5S±0°.2×97°.6E±0°.3, h33km, mb3.9/12, MS3.3/2, Error ellipse: s-maj=54.4km s-min=12.6km az=142.0*

*NEIC **08** 17:56:42.5±1.2, 9°.60S×97°.50E, h35km, mb4.2/3, Error ellipse: s-maj=44.4km s-min=8.9km az=51.0*

ISC 08 17:56:42.8±1.6, 9°.6S±0°.2×97°.5E±0°.3, h35km, n15, σ0=56/14, mb3.9/12, MS3.3/2, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	27.89	3	P	P	18 02 29.4	-0.2
	0.4nm,0.7s,mb3.1,baz=189,slow=8.4,SNR=5.3						
CMAR				LR	LR	18 14 33.5	
	comp=Z,41nm,18.1s,MS3.0,baz=210,slow=38						
FITZ	Fitzroy Crossi	28.54	110	P	P	18 02 35.4	-0.1
	1.4nm,1.0s,mb3.6,baz=228,slow=19,SNR=2.4						
WRA	Warramunga Arr	36.97	110	P	P	18 03 48.8	-0.2
	2.6nm,0.7s,mb4.2,baz=281,slow=9.8,SNR=19						
WRAB	Tennant Creek	36.98	110	eP	P	18 03 49.1	0.0
	4.3nm,0.8s,mb4.3						
ASAR	Alice Springs	37.43	117	P	P	18 03 52.9	0.0
	0.5nm,0.4s,mb3.7,baz=294,slow=7.6,SNR=16						
LSA	Lhasa	39.53	351	eP	P	18 04 11.8	+1.5
	4.4nm,0.6s,mb4.4						
STKA	Stephens Creek	46.38	125	P	P	18 05 06.5	+0.5
	2.8nm,0.7s,mb4.3,baz=311,slow=5.8,SNR=8.1						
STKA				LR	LR	18 24 04.3	
	comp=Z,48nm,18.6s,MS3.5,baz=208,slow=35						
STKA	Stephens Creek	46.38	125	P	P	18 05 06.5	+0.5
STKA				LR	LR	18 24 04.3	
KSRS	Korea Array	54.76	30	P	P	18 06 08.6	-0.4
	0.8nm,0.8s,mb3.8,baz=218,slow=6.9,SNR=5.9						
SONM	Songino Array	57.69	7	P	P	18 06 30.2	+0.4
	0.4nm,0.5s,mb3.7,baz=193,slow=5.9,SNR=3.0						
ZALV	Zalesovo Beam	64.19	352	P	P	18 07 13.0	-0.7
	2.7nm,0.6s,mb4.5,baz=180,slow=6.0,SNR=14						
ZALV	Zalesovo Beam	64.19	352	P	P	18 07 13.0	-0.7
BVAR	Borovoye Array	66.52	343	P	P	18 07 28.2	-0.7
	0.5nm,0.8s,mb3.6,baz=152,slow=6.5,SNR=3.7						
ABKAR	Akbulak array	67.22	334	eP	P	18 07 33.4	0.0
	0.2nm,0.3s,mb3.6						
TXAR	Lajitas Array	152.05	42	PKPbc	PKPbc	18 16 35.0	-0.1
	0.6nm,0.7s,baz=298,slow=1.3,SNR=7.7						

IDC 08 17:58:25.6±8.5, 1°.56S×100°.73E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=175.6km s-min=120.9km az=134.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	19.97	355	P	Pn	18 02 59.6	-1.6
	0.1nm,0.3s,baz=188,slow=9.4,SNR=4.6						
SONM	Songino Array	49.44	5	P	P	18 07 17.3	0.0
	0.8nm,0.5s,baz=185,slow=9.5,SNR=5.7						
MKAR	Makanchi Array	50.81	344	P	P	18 07 28.1	+0.4
	0.6nm,0.5s,baz=163,slow=8.8,SNR=10.0						
BVAR	Borovoye Array	60.03	339	P	P	18 08 33.8	-0.3
	0.3nm,0.4s,baz=144,slow=10,SNR=3.9						

MAN 08 18:04:29, 12°.81N×123°.63E, h31km, mb3.8, ML2.6, MS2.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	Virac	0.94	33	eP	Pn	18 04 46.9	+0.8
PVCP				eS	Sn	18 04 57.6	-0.8
CNP	Cataraman	1.05	106	eP	Pn	18 04 48.9	+1.3
CNP				eS	Sn	18 05 01.7	+0.5
AUQP	San Andres	1.06	299	eP	Pn	18 04 48.7	+1.0
AUQP				eS	Sn	18 05 08.9	+7.4
RCP	Roxas	1.51	215	⇑ eP	Pn	18 04 54.5	+0.6
RCP				eS	Sn	18 05 13.6	+1.0
BOAC	Boac	1.86	291	eP	Pn	18 04 59.9	+1.2
BOAC				eS	Sn	18 05 18.9	-2.2
GUIM	Jordan	2.40	205	eP	Pn	18 05 08.6	+2.5
GUIM				eS	Sn	18 05 31.7	-2.7

*VIE **08** 18:12:29.2±0.6, 45°.22N×18°.61E, h12km±2km, mb3.0/7, ML3.0/7, Error ellipse: s-maj=4.9km s-min=2.7km az=130.0 37 km S of Osijek*

*LDG **08** 18:12:29.7±0.1, 45°.33N×18°.57E, h10km, Ml3.4/3, Error ellipse: s-maj=1.7km s-min=1.3km az=26.0*

*PDG **08** 18:12:29.0±0.4, 45°.32N×18°.55E, h3km±1km, ML3.5/10, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*

*CSEM **08** 18:12:29.8±0.1, 45°.31N×18°.51E, h2km, ML3.9/2, Error ellipse: s-maj=3.2km s-min=2.1km az=54.0*

*ISCJB **08** 18:12:29.0±0.4, 45°.30N±0°.01×18°.50E±0°.02, h1km±3km, Error ellipse: s-maj=2.7km s-min=1.9km az=143.3*

*NEIC **08** 18:12:30.9±0.4, 45°.30N×18°.38E, h10km, ML3.5(PDG), ML3.7(FUR), ML4.0(ZAG), Error ellipse: s-maj=6.3km s-min=4.5km az=68.0*

*PRU **08** 18:12:30.4, 45°.32N×18°.42E, h0km*

*BEO **08** 18:12:31.5±0.3, 45°.29N×18°.52E, h20km±3km, ML3.6/11*

ISC 08 18:12:30.3±0.3, 45°.29N±0°.01×18°.49E±0°.02, h4km±2km, n181, σ1=23/265, 53C-22D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RHK3	Tenkes	0.62	345	ePg	Pg	18 12 42.3	0.0
PKSM	Moragy	0.93	7	ePg	Pg	18 12 47.9	-0.2
PKSM				eSg	Sg	18 13 02.0	+1.8
PKSM	Moragy	0.93	7	⇑ iP	Pg	18 12 47.9	-0.2
PKSM				S	Sg	18 13 01.8	+1.6
PKSM	Moragy	0.93	7	⇑ iP	Pg	18 12 47.9	-0.2
PKSM				S	Sg	18 13 01.8	+1.6
FGSL	Fruska Gora	0.94	98	⇑ iPg	Pg	18 12 47.7	-0.7
FGSL				eSg	Sg	18 13 02.1	+1.4
FRGS	Fruska Gora	0.94	98	⇑ iPg	Pg	18 12 47.7	-0.7
FRGS				eSg	Sg	18 13 02.1	+1.4
BLY	Banja Luka	1.07	240	i Pg	Pg	18 12 50.6	-0.3
BLY				eSg	Sg	18 13 06.1	+1.4
BLY	Banja Luka	1.07	240	i Pg	Pg	18 12 50.6	-0.3
BLY				eSg	Sg	18 13 06.1	+1.4
PKS2	Kecel	1.30	23	ePn	Pn	18 12 55.5	+0.2
PKS2				eSn	Sn	18 13 14.6	+1.4
PKS9	Tamasi	1.31	354	⇑ ePn	Pn	18 12 53.9	-1.4
PKS9				⇑ eSn	Sn	18 13 14.3	+1.1
BEO	Beograd	1.49	108	ePg	Pg	18 12 57.7	-0.1
BEO				eSg	Sg	18 13 18.5	+0.5
SISC	Sisak	1.50	278	ePn	Pn	18 12 58.7	+0.7
SISC				Sn	Sg	18 13 19.6	+1.0
SISC	Sisak	1.50	278	ePn	Pn	18 12 58.7	+0.7
SISC				Sn	Sg	18 13 19.5	+0.9
PKS6	Bocsa	1.51	29	⇑ ePn	Pg	18 13 00.7	+1.4
PKS6				eSn	Sg	18 13 20.5	+1.6
BBLS	Lazići	1.57	155	⇑ iPn	Pn	18 12 58.2	-0.7
BBLS				eSg	Sg	18 13 21.2	+0.6
BBLS	Lazići	1.57	155	⇑ iPn	Pn	18 12 58.2	-0.7
BBLS				eSg	Sg	18 13 21.2	+0.6
DIVS	Divibare	1.60	137	⇑ iPn	Pn	18 12 58.2	-1.2
DIVS				eSg	Sg	18 13 21.5	-0.3
BEHE	Becsehely	1.68	315	⇓ ePn	Pn	18 12 59.8	-0.7
BEHE				eSn	Sg	18 13 26.8	+2.5
TRUS	Trudelj	1.73	127	⇑ iPn	Pn	18 12 58.9	-2.3
TRUS	Trudelj	1.73	127	⇑ iPn	Pn	18 12 58.9	-2.3
PKSN	Nyarlorinc	1.87	30	⇑ ePn	Pn	18 13 05.7	+2.6
TIM	Timisoara	1.97	76	⇓ iP	Pg	18 13 09.4	+1.3
TIM	Timisoara	1.97	76	S	Sg	18 13 35.3	+1.6
PLE	Pljevlja	2.06	161	⇓ iPn	Pn	18 13 05.6	-0.2
PLE				eSn	Sg	18 13 35.1	-1.5
PLE	Pljevlja	2.06	161	⇓ iPn	Pn	18 13 05.6	-0.2
PLE				eSn	Sg	18 13 35.1	-1.5
GCIS	Gornji Cirnik	2.09	287	i Pn	Pn	18 13 05.4	-0.7
PKSG		2.10	358	⇑ ePn	Pn	18 13 05.0	-1.3
UPM	Unac-Piva	2.11	172	⇑ iPn	Pn	18 13 06.1	-0.3
UPM				eSn	Sg	18 13 36.0	-2.0
UPM	Unac-Piva	2.11	172	⇑ iPn	Pn	18 13 06.1	-0.3
UPM				eSn	Sg	18 13 36.0	-2.0
GRUS	Gruza	2.12	131	⇑ iPn	Pn	18 13 05.1	-1.4
GRUS	Gruza	2.12	131	ePg	Pn	18 13 09.7	+3.2
GRUS				eSg	Sg	18 13 38.7	+0.3
GRUS	Gruza	2.12	131	⇑ iPn	Pn	18 13 05.1	-1.4
GRUS	Gruza	2.12	131	ePg	Pn	18 13 09.7	+3.2
GRUS				eSg	Sg	18 13 38.7	+0.3
SVIS	Svilajnac	2.20	117	⇑ iPn	Pn	18 13 06.5	-1.1
SVIS				eSg	Sg	18 13 40.0	-0.8
BUD	Budapest	2.23	9	⇓ ePB	Pb	18 13 12.8	+1.7
BUD				eSg	Sg	18 13 44.0	+2.2
BZS	Buzias	2.23	80	⇑ iP	Pn	18 13 07.0	-1.0
BZS	Buzias	2.23	80	⇑ iP	Pn	18 13 07.0	-1.0
BZS				S	Sn	18 13 36.6	+0.7
BOJS	Bojanci	2.29	277	ePn	Pn	18 13 08.8	-0.1
BOJS				eSn	Sn	18 13 42.4	+4.9
BOJS							
	comp=Z,144nm,0.6s						
BOJS	Bojanci	2.29	277	ePn	Pn	18 13 08.8	-0.1
BOJS				eSn	Sn	18 13 42.4	+4.9
BOJS	Bojanci	2.29	277	ePn	Pn	18 13 08.8	-0.1
BOJS				eSn	Sn	18 13 42.4	+4.9
	comp=Z,144nm,0.6s						
SJES	Sjenica	2.29	152	ePn	Pn	18 13 08.9	0.0
LEGS	Legarje	2.32	288	i Pn	Pn	18 13 08.2	-1.0
LEGS	Legarje	2.32	288	i Pn	Pn	18 13 08.2	-1.1
BRY	Bratogost	2.39	179	⇑ iPn	Pn	18 13 10.4	+0.2
BRY				eSn	Sn	18 13 42.6	+2.7
BRY	Bratogost	2.39	179	⇑ iPn	Pn	18 13 10.4	+0.2
BRY				eSn	Sn	18 13 42.6	+2.7
STON	Ston	2.48	193	⇑ iPn	Pn	18 13 13.2	+1.7
STON				Sn	Sn	18 13 42.1	-0.1
STON	Ston	2.48	193	⇑ iPn	Pn	18 13 13.2	+1.7
STON				Sn	Sn	18 13 42.1	-0.1
NKY	Niksic	2.50	171	⇓ iPn	Pn	18 13 11.8	0.0
NKY				eSn	Sn	18 13 45.6	+2.9
NKY	Niksic	2.50	171	⇓ iPn	Pn	18 13 11.8	0.0
NKY				eSn	Sn	18 13 45.6	+2.9
VISS	Visnje	2.62	283	i Pn	Pn	18 13 13.0	-0.3
VISS	Visnje	2.62	283	i Pn	Pn	18 13 13.0	-0.3
BEY	Berane	2.62	157	⇓ iPn	Pn	18 13 13.5	+0.1
BEY				eSn	Sn	18 13 48.6	+2.9
IVA	Berane	2.62	157	⇓ iPn	Pn	18 13 13.5	+0.1
IVA				eSn	Sn	18 13 48.6	+2.9
IVA	Berane	2.62	157	⇓ iPn	Pn	18 13 13.5	+0.1
IVA				eSn	Sn	18 13 48.6	+2.9
PERS	Pernice	2.71	301	ePn	Pn	18 13 13.9	-0.7
PERS	Pernice	2.71	301	ePn	Pn	18 13 13.9	-0.7
SOP	Sopron	2.74	332	⇑ ePn	Pn	18 13 14.7	-0.4
SOKA	Soboth	2.78	301	⇓ iPn	Pn	18 13 14.6	-1.0
SOKA				⇑ iSn	Sn	18 13 49.8	+0.2
SOKA	Soboth	2.78	301	Pn	Pn	18 13 14.6	-1.0
SOKA				Sn	Sn	18 13 49.8	+0.2
PSZ	Piszkesteto	2.80	20	eP	Pn	18 13 13.6	-2.3
PSZ	Piszkesteto	2.80	20	ePnd		18 13 14.0	
PSZ				eSB	Sb	18 14 01.5	+5.9
PSZ	Piszkesteto	2.80	20	⇑ iP	Pn	18 13 14.2	-1.7
PSZ	Piszkesteto	2.80	20	eP	Pn	18 13 13.6	-2.3
PSZ	Piszkesteto	2.80	20	⇓ ePn	Pn	18 13 14.0	-1.9
HCY	Herceg Novi	2.84	180	⇓ iPn	Pn	18 13 17.3	+0.9
HCY				eSn	Sn	18 13 53.9	+2.8
HCY	Herceg Novi	2.84	180	⇓ iPn	Pn	18 13 17.3	+0.9
HCY				eSn	Sn	18 13 53.9	+2.8
ARSA	Arzberg	2.84	315	⇑ ePn	Pn	18 13 15.7	-0.7
	SNR=57						
ARSA	Arzberg	2.84	315	Pn	Pn	18 13 15.7	-0.7
LJU	Ljubljana	2.88	287	ePn	Pg	18 13 24.5	-1.0
LJU				eSn	Sg	18 14 05.0	+2.3
PVY	Plav	2.90	158	⇓ iPn	Pn	18 13 17.4	+0.2
PVY				eSn	Sn	18 13 55.0	+2.5
PVY	Plav	2.90	158	⇓ iPn	Pn	18 13 17.4	+0.2
PVY				eSn	Sn	18 13 55.0	+2.5
PDG	Podgorica	2.91	169	⇑ iPn	Pn	18 13 17.8	+0.4
PDG				eSn	Sn	18 13 55.4	+2.6
TTG	Podgorica	2.91	169	⇑ iPn	Pn	18 13 17.8	+0.4
TTG				eSn	Sn	18 13 55.4	+2.6
TTG	Podgorica	2.91	169	⇑ iPn	Pn	18 13 17.8	+0.4
TTG				eSn	Sn	18 13 55.4	+2.6
BUM	Brajici-Budva	3.00	174	⇑ iPn	Pn	18 13 19.5	+0.8
BUM				eSn	Sn	18 13 57.3	+2.2
BUM	Brajici-Budva	3.00	174	⇑ iPn	Pn	18 13 19.5	+0.8
BUM				eSn	Sn	18 13 57.3	+2.2
OBKA	Obir	3.01	295	⇑ iPn	Pn	18 13 18.1	-0.6
	SNR=9.7						
OBKA	Obir	3.01	295	Pn	Pn	18 13 18.1	-0.6
GZR	Gura Zlata	3.03	87	⇓ iP	Pn	18 13 18.2	-0.8
GZR	Gura Zlata	3.03	87	⇓ iP	Pn	18 13 18.2	-0.8
NISS		3.12	126	ePn	Pn	18 13 19.2	-1.0
NISS		3.12	126	ePg	Pg	18 13 28.0	-2.0
NISS				eSn	Sn	18 13 56.3	-1.6
NISS				eSg	Sg	18 14 08.9	-1.5
NISS		3.12	126	ePg	Pg	18 13 28.0	-2.0
NISS				eSn	Sn	18 13 56.3	-1.6
NISS				eSg	Sg	18 14 08.9	-1.5
BCI	Bajram Curri	3.14	158	ePG	Pn	18 13 21.5	+1.0
BCI				i SG	Sn	18 13 52.2	-6.2
SKDS	Skadanscina	3.16	276	i Pn	Pn	18 13 21.9	+1.1
CONA	Conrad Observa	3.20	327	⇑ iPn	Pn	18 13 21.1	-0.3
	SNR=24						
CONA	Conrad Observa	3.20	327	Pn	Pn	18 13 21.1	-0.3
	SNR=24						
VYHS	Vyhne	3.21	4	ePn	Pn	18 13 20.8	-0.8
VYHS				eSn	Sn	18 13 59.2	-1.1
VYHS	Vyhne	3.21	4	ePN	Pn	18 13 20.8	-0.8
VYHS				eSN	Sn	18 13 59.2	-1.1
VYHS	Vyhne	3.21	4	ePn	Pn	18 13 20.8	-0.8
VYHS				eSn	Sn	18 13 59.2	-1.1
KOLL	Kolacno	3.29	359	ePn	Pn	18 13 21.7	-0.9
KOLL				eSn	Sn	18 13 58.6	-3.6
KOLL	Kolacno	3.29	359	ePN	Pn	18 13 21.7	-0.9
KOLL				eSN	Sn	18 13 58.6	-3.6
KOLL	Kolacno	3.29	359	ePn	Pn	18 13 21.7	-0.9
KOLL				eSn	Sn	18 13 58.6	-3.6
DRGR		3.30	61	⇓ iP	Pn	18 13 22.2	-0.6
DRGR		3.30	61	⇓ iP	Pn	18 13 22.2	-0.6
VOY	Vojsko	3.31	285	ePn	Pn	18 13 23.7	+0.9
VOY				e		18 13 36.3	
VOY				e		18 14 14.3	
VOY				e		18 14 16.3	
VOY	Vojsko	3.31	285	ePn	Pn	18 13 23.7	+0.9
SMOL	Smolenice	3.31	348	ePn	Pn	18 13 22.8	0.0
SMOL	Smolenice	3.31	348	ePN	Pn	18 13 22.8	0.0
SMOL	Smolenice	3.31	348	ePn	Pn	18 13 22.8	0.0
ULC	Ulcinj	3.37	170	⇑ iPn	Pn	18 13 24.4	+0.7
ULC				eSn	Sn	18 14 06.0	+1.9
ULC	Ulcinj	3.37	170	⇑ iPn	Pn	18 13 24.4	+0.7
ULC				eSn	Sn	18 14 06.0	+1.9
PUK	Puka	3.40	162	ePG	Pn	18 13 24.9	+0.8
PUK				i SG	Sn	18 14 04.6	-0.3
BARS	Barje	3.44	135	⇑ iPn	Pn	18 13 24.2	-0.5
BARS				eSn	Sn	18 14 02.7	-3.3
BARS	Barje	3.44	135	⇑ iPn	Pn	18 13 24.2	-0.5
BARS				eSn	Sn	18 14 02.7	-3.3
KECS	Kecovo	3.48	22	ePn	Pn	18 13 24.5	-0.7
KECS	Kecovo	3.48	22	ePN	Pn	18 13 24.5	-0.7
ZAPS	Zavoj	3.59	123	⇑ iPn	Pn	18 13 26.4	-0.4
ZAPS	Zavoj	3.59	123	ePg	Pg	18 13 35.6	-3.6
ZAPS				eSg	Sg	18 14 24.6	-1.2
MOA	Molln	3.88	313	⇑ iPn	Pn	18 13 31.1	+0.5
	SNR=17						
MOA				⇑ iSn	Sn	18 14 18.5	+1.9
MOA	Molln	3.88	313	Pn	Pn	18 13 31.1	+0.4
MOA				Sn	Sn	18 14 18.5	+1.9
TRPA	Tarpa	3.98	43	⇑ iP	Pn	18 13 31.5	-0.6
TRPA	Tarpa	3.98	43	⇑ iP	Pn	18 13 31.5	-0.6
KBA	Koelnbreinsper	4.00	298	⇓ iPn	Pn	18 13 32.1	-0.2
	SNR=8.5						
KBA				⇓ iSn	Sn	18 14 20.2	+0.7
KBA

MOX	**Moxa**	**7.07 322**	*e*PN	**Pn**	**18 14 16.0**	**+1.5**
MOX	**Moxa**	**7.07 322**	*e*Pn	**Pn**	**18 14 16.0**	**+1.5**
PGF	**Pioggiola**	**7.38 252**	*e*Pn	**Pn**	**18 14 16.3**	**-2.5**
LPG	**La Plagne**	**8.27 276**	*e*P	**Pn**	**18 14 33.8**	**+2.9**
LPG			*e*Sn	**Sn**	**18 15 56.6**	**-8.1**
	comp=Z,14nm,1.0s					
LPG	**La Plagne**	**8.27 276**	*e*Pn	**Pn**	**18 14 28.4**	**-2.5**
LPG			*e*P		18 14 33.8	
LPG			*e*Sn	**Sn**	**18 15 56.6**	**-8.1**
LPL	**La Plagne**	**8.28 276**	*e*Pn	**Pn**	**18 14 28.4**	**-2.7**
MBDF	**Montbardon**	**8.32 270**	*e*P	**Pn**	**18 14 34.8**	**+3.1**
MBDF			*e*Sn	**Sn**	**18 15 57.7**	**-8.4**
	comp=Z,1.9nm,0.4s					
MBDF	**Montbardon**	**8.32 270**	*e*Pn	**Pn**	**18 14 29.0**	**-2.7**
MBDF			*e*P		18 14 34.8	
MBDF			*e*Sn	**Sn**	**18 15 57.7**	**-8.4**
HINF	**Hinteralfeld**	**8.41 292**	*e*Pn	**Pn**	**18 14 29.6**	**-3.3**
HINF			*e*Sn	**Sn**	**18 15 59.4**	**-8.8**
	comp=Z,5.7nm,0.7s					
FRF	**La Foret Royal**	**8.65 263**	*e*Pn	**Pn**	**18 14 34.3**	**-1.9**
FRF	**La Foret Royal**	**8.65 263**	*e*Pn	**Pn**	**18 14 34.3**	**-1.9**
CABF	**La Chapelle**	**8.74 283**	*e*Pn	**Pn**	**18 14 35.4**	**-2.0**
CABF	**La Chapelle**	**8.74 283**	*e*Pn	**Pn**	**18 14 35.4**	**-2.0**
LMR	**La Mourre**	**8.81 261**	*e*Pn	**Pn**	**18 14 36.2**	**-2.2**
LMR	**La Mourre**	**8.81 261**	*e*Pn	**Pn**	**18 14 36.2**	**-2.2**

*NEIC **08** 18:18:15.3, 16°.97N×100°.54W, h12km, MD3.7(MEX), After MEX.*

MEX 08 18:18:15.4±0.6, 16°.98N×100°.53W, h13km±4km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.26**	**75**	*i* P	Pg	18 18 20.1	-0.8
CAIG				*i* S	Sg	18 18 24.6	0.0
CAIG	**El Cayaco**	**0.26**	**75**	*i* P	Pg	18 18 20.1	-0.8
CAIG				*i* S	Sg	18 18 24.6	0.0
ACX	**Acapulco**	**0.60**	**101**	*i* P	Pg	18 18 26.0	-1.1
ACX				*i* S	Sg	18 18 33.3	-1.8
ACX	**Acapulco**	**0.60**	**101**	*i* P	Pg	18 18 26.0	-1.1
ACX				*i* S	Sg	18 18 33.3	-1.8
ZIIG	**Zihuatanejo**	**1.09**	**305**	*e*P	Pb	18 18 32.5	-3.6
ZIIG				*i* S	Sb	18 18 46.1	-4.1
ZIIG	**Zihuatanejo**	**1.09**	**305**	*e*P	Pb	18 18 32.5	-3.6
ZIIG				*i* S	Sb	18 18 46.1	-4.1
PLIG	**Platanillo**	**1.71**	**35**	*e*P	Pn	18 18 41.5	-3.4
PLIG				*i* S	Sn	18 19 01.7	-5.1
PLIG	**Platanillo**	**1.71**	**35**	*e*P	Pn	18 18 41.5	-3.4
PLIG				*i* S	Sn	18 19 01.7	-5.1
PNIG	**Pinotepa**	**2.38**	**104**	*e*P	Pn	18 18 51.2	-3.0
PNIG				*i* S	Sn	18 19 18.9	-4.4
PNIG	**Pinotepa**	**2.38**	**104**	*e*P	Pn	18 18 51.2	-3.0
PNIG				*i* S	Sn	18 19 18.9	-4.4
MZVM		**2.52**	**29**	*e*P	Pn	18 18 53.9	-2.2
MZVM				*i* S	Sn	18 19 23.7	-3.1
UTMO	**Huajuapan**	**2.74**	**72**	*e*P	Pn	18 18 56.8	-2.3
UTMO				*i* S	Sn	18 19 29.0	-3.1
PPM	**Popocatepetl**	**2.75**	**41**	*e*P	Pn	18 18 58.0	-1.4
PPM				*i* S	Sn	18 19 29.6	-2.9
PPM	**Popocatepetl**	**2.75**	**41**	*e*P	Pn	18 18 58.0	-1.4
PPM				*i* S	Sn	18 19 29.6	-2.9
IIO	**Organos**	**3.11**	**33**	*e*P	Pn	18 19 01.8	-2.5
IIO				*i* S	Sn	18 19 39.3	-2.1
IIO	**Organos**	**3.11**	**33**	*e*P	Pn	18 19 01.8	-2.5
IIO				*i* S	Sn	18 19 39.3	-2.1

*IDC **08** 18:21:12.0±2.0, 35°.94N×142°.05E, h0km, mb3.5/4, mb1 3.5/8, mb1mx3.4/28, mbtmp3.6/8, ML3.3/4, Error ellipse: s-maj=44.3km s-min=20.2km az=65.0*
*ISCJB **08** 18:21:13.6±2.0, 36°.16N±0°.04×142°.21E±0°.08, h33km±17km, mb3.4/4, Error ellipse: s-maj=11.2km s-min=6.0km az=11.7*
*JMA **08** 18:21:13.6±0.2, 36°.16N×142°.18E, h69km, M3.0*

ISC 08 18:21:13.9±1.7, 36°.14N±0°.04×142°.20E±0°.08, h26km±12km, n22, σ1s03/32, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.17**	**249**	P	**Pn**	**18 21 34.4**	**-0.1**
CHOJ				S	**Sb**	**18 21 50.6**	**+0.5**
JHO	**Hitachi**	**1.40**	**290**	P	**Pn**	**18 21 36.8**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.48**	**311**	P	**Pn**	**18 21 38.1**	**-0.7**
JFK	**Kawauchi**	**1.62**	**320**	P	**Pn**	**18 21 40.3**	**-0.5**
BSO1	**Boso 1**	**1.78**	**214**	P	**Pn**	**18 21 42.9**	**-0.1**
BSO1				S	**Sn**	**18 22 05.0**	**+0.2**
BSO3	**Boso 3**	**1.92**	**226**	P	**Pn**	**18 21 44.8**	**0.0**
BSO3				S	**Sn**	**18 22 06.8**	**-1.2**
JFT	**Otama**	**2.03**	**313**	P	**Pn**	**18 21 46.8**	**+0.4**
JMM	**Marumori**	**2.06**	**327**	P	**Pn**	**18 21 46.0**	**-0.8**
JMM				S	**Sn**	**18 22 10.1**	**-1.5**
JAG	**Ashikaga**	**2.23**	**278**	P	**Pn**	**18 21 49.2**	**0.0**
JRY	**Ryogami san**	**2.67**	**268**	P	**Pn**	**18 21 55.1**	**-0.1**
JOD2	**Odawara 2**	**2.67**	**252**	P	**Pn**	**18 21 55.6**	**+0.4**
JOD2				S	**Sn**	**18 22 27.5**	**+0.7**
JMK	**Ichinoseki**	**2.92**	**345**	P	**Pn**	**18 21 58.4**	**-0.1**
JMK				S	**Sn**	**18 22 32.0**	**-0.7**
JYN	**Shimob**	**3.04**	**259**	P	**Pn**	**18 22 01.1**	**+0.9**
MJAR	**Matsushiro Arr**	**3.24**	**278**	Pn	**Pn**	**18 22 03.8**	**+0.7**
	2.7nm,0.3s,baz=108,slow=8.0,SNR=24						
MJAR				Sn	**Sn**	**18 22 45.8**	**+4.9**
	0.8nm,0.3s,baz=101,slow=11,SNR=3.7						
MAT	**Matsushiro**	**3.25**	**278**	P	**Pn**	**18 22 03.9**	**+0.8**
MAT				S	**Sn**	**18 22 40.0**	**-0.9**
JHJ	**Hachijo jima 2**	**3.61**	**214**	Pn	**Pn**	**18 22 04.5**	**-3.6**
	2.6nm,0.3s,baz=229,slow=20,SNR=3.8						
JHJ				Sn	**Sn**	**18 22 46.7**	**-3.1**
	29nm,0.3s,baz=243,slow=22,SNR=9.3						
CBIJ	**Chichi jima**	**9.01**	**180**	Pn	**Pn**	**18 23 20.2**	**-2.1**
	3.7nm,0.3s,baz=144,slow=23,SNR=8.0						
CBIJ				Sn	**Sn**	**18 24 54.2**	**-8.8**
	4.4nm,0.3s,baz=289,slow=22,SNR=6.4						
KSRS	**Korea Array**	**11.52**	**281**	Pn	**Pn**	**18 23 58.4**	**+1.8**
	0.1nm,0.3s,baz=98,slow=14,SNR=3.9						
SONM	**Songino Array**	**28.81**	**305**	P	**P**	**18 27 12.0**	**+2.4**
	0.5nm,0.4s,mb3.6,baz=110,slow=8.3,SNR=6.9						
MKAR	**Makanchi Array**	**45.13**	**303**	P	**P**	**18 29 29.1**	**+1.1**
	0.9nm,0.8s,mb3.7,baz=91,slow=9.7,SNR=6.4						
WRA	**Warramunga Arr**	**56.27**	**189**	P	**P**	**18 30 52.9**	**+0.8**
	0.1nm,0.3s,mb3.3,baz=6.0,slow=7.2,SNR=4.0						
ASAR	**Alice Springs**	**59.99**	**189**	P	**P**	**18 31 19.4**	**+1.3**
	0.2nm,0.9s,mb3.1,baz=1.0,slow=6.1,SNR=2.8						

IDC 08 19:03:18.9±6.9, 19°.55S×174°.21W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.8/18, mbtmp3.9/4, ML2.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=223.6km s-min=33.9km az=130.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.07**	**23**	Pn	Pn	19 04 50.0	0.0
	5.0nm,0.3s,baz=79,slow=5.2,SNR=4.5						
AFI				Sn	Sn	19 05 55.5	-4.7
	7.5nm,0.3s,baz=115,slow=17,SNR=4.0						
CTA	**Charters Tower**	**37.14**	**262**	LR	LR	19 21 26.9	
	comp=Z,45nm,21.7s,baz=36,slow=29						
STKA	**Stephens Creek**	**41.41**	**244**	P	P	19 11 06.3	-0.9
	1.2nm,0.5s,baz=84,slow=8.5,SNR=7.5						
ASAR	**Alice Springs**	**48.21**	**255**	P	P	19 12 01.5	-0.1
	0.6nm,0.5s,baz=91,slow=8.6,SNR=29						
WRA	**Warramunga Arr**	**48.27**	**260**	P	P	19 12 02.8	+0.7
	0.6nm,0.4s,baz=96,slow=7.2,SNR=28						
MJAR	**Matsushiro Arr**	**71.63**	**321**	LR	LR	19 40 19.3	
	comp=Z,20nm,22.0s,baz=200,slow=31						

*ISCJB **08** 19:09:49.5±1.2, 30°.86N±0°.07×132°.0E±0°.1, h57km±30km, Error ellipse: s-maj=19.8km s-min=8.6km az=26.9*
*JMA **08** 19:09:49.6±0.1, 30°.85N×132°.02E, h53km±2km, M3.4*

ISC 08 19:09:50.7±1.2, 30°.86N±0°.07×132°.0E±0°.1, h51km±40km, n11, σ0s34/18, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.89**	**257**	P	**Pn**	**19 10 06.6**	**-0.3**
JTN				S	**Sn**	**19 10 19.0**	**+0.2**
JNAR	**Kushima--Naru**	**0.90**	**318**	P	**Pn**	**19 10 06.8**	**-0.3**
JNAR				S	**Sn**	**19 10 19.3**	**+0.1**
JTSR	**Tashiro 2**	**0.96**	**289**	P	**Pn**	**19 10 07.3**	**-0.6**
JTSR				*e*S	**Sn**	**19 10 21.0**	**+0.4**
JTZ	**Takazaki**	**1.29**	**324**	P	**Pn**	**19 10 12.0**	**-0.4**
JTZ				S	**Sn**	**19 10 28.6**	**+0.1**
JTSN	**Tsuno**	**1.44**	**344**	P	**Pn**	**19 10 14.0**	**-0.4**
JTSN				S	**Sn**	**19 10 32.1**	**-0.1**
JSU	**Suzuyama**	**1.46**	**297**	P	**Pn**	**19 10 14.7**	**+0.1**
JSU				*e*S	**Sn**	**19 10 32.8**	**+0.2**
JKC	**Kuchinoerabu**	**1.59**	**256**	P	**Pn**	**19 10 16.3**	**-0.1**
JKC				*e*S	**Sn**	**19 10 36.1**	**+0.3**
JIU2	**Izumi 2**	**1.95**	**330**	P	**Pn**	**19 10 21.8**	**+0.4**
JNN	**Nakanoshima**	**2.08**	**241**	P	**Pn**	**19 10 23.3**	**+0.1**
JSJ	**Shimokoshiki**	**2.10**	**293**	P	**Pn**	**19 10 23.2**	**-0.3**
MAT	**Matsushiro**	**7.68**	**41**	P	**Pn**	**19 11 40.7**	**+0.8**

*MOS **08** 19:13:18.7±1.0, 49°.48N×155°.94E, h45km, mb4.6/1, Error ellipse: s-maj=27.4km s-min=8.0km az=72.7*
*KRSC **08** 19:13:18.7±2.0, 49°.34N×157°.16E, h10km±10km, ML4.4*
*ISCJB **08** 19:13:19.5±1.2, 49°.49N±0°.09×156°.1E±0°.1, h53km±11km, mb3.7/10, Error ellipse: s-maj=18.9km s-min=8.9km az=43.6*
*IDC **08** 19:13:21.8±3.3, 49°.47N×156°.01E, h55km±30km, mb3.4/9, mb1 3.6/11, mb1mx3.4/27, mbtmp3.5/11, ML3.2/2, MS3.3/1, Ms1 3.3/1, ms1mx2.1/28, Error ellipse: s-maj=26.4km s-min=17.0km az=130.0*
*NEIC **08** 19:13:22.0±2.1, 49°.51N×156°.02E, h57km±18km, mb4.1/1, Error ellipse: s-maj=22.4km s-min=17.5km az=141.0*

ISC 08 19:13:21.4±1.1, 49°.51N±0°.08×156°.0E±0°.1, h50km±10km, n31, σ1s23/39, mb3.7/10, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.18**	**3**	‖*i*PN	**Pn**	**19 13 39.0**	**-2.5**
SKR				*i* S	**Sn**	**19 13 54.7**	**-1.7**
SKR				pmax	pmax		
	comp=N,250nm,0.5s						
SKR				pmax	pmax		
	comp=Z,420nm,0.5s						
SKR				pmax	pmax		
	comp=E,200nm,0.3s						
SKR				smax			
	comp=N,2μm,0.3s						
SKR				smax			
	comp=E,2μm,0.3s						
MIPR	**Malaya Ipel'ka**	**2.81**	**9**	*e*P	**Pn**	**19 14 04.2**	**+0.4**
RUS	**Russkaya**	**3.33**	**27**	*e*P	**Pn**	**19 14 10.5**	**-0.3**
RUS				*i* S	**Sn**	**19 14 48.3**	**-0.7**
PEA0B	**Petropavlovsk-**	**3.76**	**16**	*e*P	**Pn**	**19 14 18.2**	**+1.5**
PETK	**Petropavlovsk-**	**3.76**	**16**	P	**Pn**	**19 14 18.2**	**+1.5**
	comp=E,3.0nm,0.3s,baz=174,slow=12,SNR=95						
PET	**Petropavlovsk**	**3.89**	**24**	P	**Pn**	**19 14 19.5**	**+1.0**
PET				*i* S	**Sn**	**19 15 04.0**	**+1.1**
PET	**Petropavlovsk**	**3.89**	**24**	*e*P	**Pn**	**19 14 17.6**	**-1.0**
SDLR	**Sedlovina**	**4.18**	**24**	*e*P	**Pn**	**19 14 23.7**	**+1.2**
SDLR				*i* S	**Sn**	**19 15 11.2**	**+1.2**
NLC	**Nalytchevo**	**4.22**	**28**	P	**Pn**	**19 14 22.5**	**-0.5**
NLC				*i* S	**Sn**	**19 15 08.8**	**-2.2**
GNL	**Ganaly**	**4.36**	**15**	*e*P	**Pn**	**19 14 27.6**	**+2.6**
SPN	**Mys Shipunski**	**4.38**	**33**	*e*P	**Pn**	**19 14 25.4**	**+0.1**
SPN				*i* S	**Sn**	**19 15 13.5**	**-1.5**
MKZ	**Mys Kozlova**	**6.16**	**33**	*e*P	**Pn**	**19 14 48.7**	**-0.9**
MKZ				*i* S	**Sn**	**19 15 53.7**	**-5.0**
KMNR	**Kamenistaya**	**6.76**	**21**	P	**Pn**	**19 14 59.9**	**+2.0**
ZLN	**Zelenaya**	**7.14**	**22**	P	**Pn**	**19 15 04.1**	**+1.1**
SRDR	**Sredinnyy**	**7.18**	**17**	P	**Pn**	**19 15 05.1**	**+1.5**
KBTR	**Krutoberegovo**	**7.87**	**29**	P	**Pn**	**19 15 12.6**	**-0.4**
BKI	**Bering**	**8.34**	**43**	*e*P	**Pn**	**19 15 17.4**	**-2.1**
BKI				*i* S	**Sn**	**19 16 42.6**	**-10**
ASAJ	**Asahikawa**	**10.66**	**245**	P	**Pn**	**19 15 50.5**	**-0.8**
	comp=E,2.2nm,0.3s,baz=187,slow=19,SNR=2.4						
MKAR	**Makanchi Array**	**47.44**	**296**	P	**P**	**19 21 51.5**	**+0.9**
	comp=E,0.3nm,0.8s,mb3.3,baz=64,slow=5.3,SNR=3.3						
YKA	**Yellowknife Ar**	**47.55**	**39**	P	**P**	**19 21 51.8**	**+0.5**
	comp=E,0.5nm,0.9s,mb3.5,baz=298,slow=8.4,SNR=4.4						
RES	**Resolute Bay**	**47.59**	**20**	P	**P**	**19 21 51.7**	**+0.2**
	comp=E,0.3nm,0.4s,mb3.7,baz=322,slow=6.8,SNR=4.9						
RES	**Resolute Bay**	**47.59**	**20**	P	**P**	**19 21 51.7**	**+0.2**
BVAR	**Borovoye Array**	**50.63**	**309**	P	**P**	**19 22 14.2**	**-0.8**
	comp=E,0.8nm,0.3s,mb4.1,baz=53,slow=8.9,SNR=7.7						
BVAR				LR	LR	19 46 57.1	
	comp=E,28nm,19.5s,baz=150,slow=40						
BVAR	**Borovoye Array**	**50.63**	**309**	P	**P**	**19 22 14.2**	**-0.8**
BVAR				LR	LR	19 46 57.1	
CMAR	**Chiang Mai Arr**	**54.91**	**257**	P	**P**	**19 22 48.0**	**+1.0**
	comp=E,0.6nm,0.6s,mb3.8,baz=33,slow=7.1,SNR=6.2						
ARCES	**ARCESS Array B**	**55.88**	**341**	P	**P**	**19 22 52.3**	**-1.0**
	comp=E,2.3nm,0.9s,mb4.2,baz=30,slow=9.4,SNR=4.9						
ABKAR	**Akbulak array**	**58.16**	**310**	*e*P	**P**	**19 23 08.8**	**-0.9**
	comp=E,0.7nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**71.77**	**201**	P	**P**	**19 24 36.7**	**-1.5**
	comp=E,1.3nm,1.1s,mb3.8,baz=17,slow=6.1,SNR=6.6						
TXAR	**Lajitas Array**	**74.47**	**63**	P	**P**	**19 24 54.8**	**+0.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=273,slow=6.2,SNR=3.0						
ASAR	**Alice Springs**	**75.46**	**201**	*e*P	**P**	**19 25 00.2**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAR	**Alice Springs**	**75.46**	**201**	P	**P**	**19 25 00.2**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=14,slow=5.6,SNR=6.7						

PRE 08 19:15:24.6±0.5, 20°.76S×33°.00E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.19**	**240**	*e*P	Pn	19 16 16.7	+1.2
MSNA				*e*S	Sn	19 16 54.8	+0.9
MSNA				AML	AML	19 17 07.4	
	comp=Z,106nm,0.4s						
POGA	**Pongola**	**6.71**	**191**	*e*P	Pn	19 17 04.1	+0.3
POGA				*e*S	Sn	19 18 16.6	-4.0
POGA				AML	AML	19 19 06.0	
	comp=Z,14nm,0.6s						
PRYS	**Parys**	**8.02**	**219**	*e*P	Pn	19 17 22.9	+1.0
PRYS				*e*S	Sn	19 18 49.3	-3.7
PRYS				AML	AML	19 19 45.2	
	comp=Z,16nm,0.6s						
LBTB	**Lobatse**	**8.04**	**237**	*e*P	Pn	19 17 23.1	+1.1
LBTB				*e*S	Sn	19 18 49.5	-3.9
LBTB				AML	AML	19 19 37.5	
	comp=Z,14nm,0.5s						
BOSA	**Boshof**	**10.52**	**220**	*e*P	Pn	19 17 57.7	+1.6
BOSA				*e*S	Sn	19 19 49.6	-4.9
BOSA				AML	AML	19 21 09.9	
	comp=Z,5.7nm,0.5s						

MAN 08 19:16:48, 16°.01N×120°.09E, h28km, mb4.4, ML3.2, MS3.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.29**	**217**	*e*P	Pb	19 16 58.0	+2.8
SCZP				*e*S	Sb	19 17 04.3	+4.3
BOLP	**Bolinao**	**0.41**	**335**	*e*P	Pb	19 16 59.2	+2.3
BOLP				*e*S	Sb	19 17 06.7	+3.8
BCPH	**Baguio City Da**	**0.60**	**52**	‖*e*P	Pb	19 17 01.3	+1.3
BCPH				*e*S	Sb	19 17 12.5	+4.4
ABRA	**Dolores**	**1.73**	**20**	*e*P	Pn	19 17 17.0	+0.7
ABRA				*e*S	Sn	19 17 39.9	+2.4
APYP	**Conner**	**2.15**	**31**	*e*P	Pn	19 17 20.1	-1.8
APYP				*e*S	Sn	19 17 50.3	+2.7

*ISCJB **08** 19:23:38.4±0.5, 13°.77N±0°.04×120°.29E±0°.06, h77km±5km, mb3.9/6, Error ellipse: s-maj=10.2km s-min=5.5km az=166.5*
*MAN **08** 19:23:38, 13°.79N×120°.28E, h65km, mb4.7, ML3.6, MS3.5*
*NEIC **08** 19:23:39.8±0.6, 13°.70N×120°.50E, mb4.3/1, Error ellipse: s-maj=25.3km s-min=12.6km az=71.0*
*IDC **08** 19:23:39.9±2.0, 13°.75N×120°.62E, h81km±18km, mb3.5/5, mb1 3.6/5, mb1mx3.2/22, mbtmp3.5/5, Error ellipse: s-maj=65.8km s-min=17.4km az=71.0*

ISC 08 19:23:39.5±0.5, 13°.77N±0°.04×120°.30E±0°.06, h70km±5km, n25, σ1s03/34, mb3.9/6, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.06**	**233**	*e*P	**Pn**	**19 23 50.3**	**+0.6**
LUBP				*e*S	**Sn**	**19 23 56.0**	**-1.2**
PGP	**Puerto Galera**	**0.69**	**113**	⇑*i*P	**Pn**	**19 23 53.8**	**-0.6**
TGY	**Tagaytay City**	**0.70**	**62**	P	**Pn**	**19 23 54.7**	**+0.3**
	839nm,0.3s,baz=260,slow=2.0,SNR=71						
TGY				S	**Sn**	**19 24 05.8**	**+0.3**
	711nm,0.3s,baz=311,slow=20,SNR=46						
TGY	**Tagaytay City**	**0.70**	**62**	⇑*e*P	**Pn**	**19 23 54.8**	**+0.3**
TGY				*e*S	**Sn**	**19 24 05.8**	**+0.2**
SJMP	**San Jose**	**1.53**	**148**	*e*P	**Pn**	**19 24 05.4**	**+0.6**
SJMP				*e*S	**Sn**	**19 24 16.9**	**-7.2**
BOAC	**Boac**	**1.54**	**101**	*e*P	**Pn**	**19 24 04.8**	**-0.2**
BOAC				*e*S	**Sn**	**19 24 21.5**	**-2.7**
BUSP	**Coron**	**1.76**	**183**	*e*P	**Pn**	**19 24 08.3**	**+0.4**
BUSP				*e*S	**Sn**	**19 24 23.6**	**-5.9**
SCZP	**Santa Cruz**	**2.03**	**349**	*e*P	**Pn**	**19 24 11.2**	**-0.3**
SCZP				*e*S	**Sn**	**19 24 34.7**	**-1.3**
DTRP	**Odiongan**	**2.19**	**130**	*e*P	**Pn**	**19 24 13.9**	**+0.2**
BALP	**Baler**	**2.32**	**32**	*e*P	**Pn**	**19 24 15.8**	**+0.4**
BALP				*e*S	**Sn**	**19 24 38.5**	**-4.5**
AUQP	**San Andres**	**2.36**	**101**	*e*P	**Pn**	**19 24 19.9**	**+3.9**
BOLP	**Bolinao**	**2.62**	**352**	*e*P	**Pn**	**19 24 19.7**	**+0.1**
BOLP				*e*S	**Sn**	**19 24 48.9**	**-1.5**
ENPP	**El Nido**	**2.69**	**199**	*e*P	**Pn**	**19 24 21.1**	**+0.6**
CUYO	**Cuyo Island**	**2.99**	**166**	*e*P	**Pn**	**19 24 24.3**	**-0.3**
CAUP	**Cauayan**	**3.48**	**25**	*e*P	**Pn**	**19 24 32.9**	**+1.6**
PVCP	**Virac**	**3.75**	**92**	*e*P	**Pn**	**19 24 36.0**	**+1.1**
GUIM	**Jordan**	**3.85**	**144**	*e*P	**Pn**	**19 24 37.5**	**+1.3**
ABRA	**Dolores**	**3.88**	**6**	*e*P	**Pn**	**19 24 37.3**	**+0.6**
APYP	**Conner**	**4.17**	**13**	*e*P	**Pn**	**19 24 42.4**	**+1.8**
SONM	**Songino Array**	**35.88**	**344**	P	**P**	**19 30 32.8**	**+0.3**
	2.2nm,0.6s,mb4.3,baz=162,slow=9.3,SNR=7.5						
WRA	**Warramunga Arr**	**36.24**	**157**	P	**P**	**19 30 33.6**	**-2.3**
	0.4nm,0.5s,mb3.6,baz=336,slow=9.9,SNR=8.2						
WRA				pP	pP	19 30 53.3	+0.3
	0.5nm,0.7s,baz=336,slow=9.4,SNR=4.6						
ASAR	**Alice Springs**	**39.52**	**160**	P	**P**	**19 31 02.2**	**-1.3**
	0.5nm,0.6s,mb3.5,baz=339,slow=6.7,SNR=11						
ASAR				pP	pP	19 31 21.9	+1.1
	0.2nm,0.6s,baz=343,slow=6.4,SNR=4.9						
KURK	**Kurchatov**	**49.91**	**326**	*e*P	**P**	**19 32 26.6**	**+0.7**
	3.4nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**55.49**	**326**	P	**P**	**19 33 07.7**	**+0.7**
	0.8nm,0.5s,mb4.0,baz=117,slow=9.4,SNR=11						
YKA	**Yellowknife Ar**	**92.86**	**22**	P	**P**	**19 36 43.0**	**-1.2**
	0.1nm,0.4s,mb3.5,baz=315,slow=4.3,SNR=3.1						

*IDC **08** 19:24:04.5±3.1, 36°.05N×141°.80E, h0km, mb3.3/2, mb1 3.5/5, mb1mx3.3/27, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=66.4km s-min=27.4km az=62.0*
*JMA **08** 19:24:07.8±0.2, 36°.05N×141°.70E, h43km, M3.0*
*ISCJB **08** 19:24:08.7±1.1, 36°.04N±0°.04×141°.7E±0°.1, h44km±13km, mb3.6/2, Error ellipse: s-maj=15.1km s-min=6.9km az=178.6*

ISC 08 19:24:08.1±1.7, 36°.04N±0°.04×141°.71E±0°.10, h26km±11km, n18, σ0s72/23, mb3.6/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.77**	**245**	P	**Pb**	**19 24 22.2**	**-0.6**
CHOJ				*e*S	**Sb**	**19 24 33.5**	**+0.7**
JHO	**Hitachi**	**1.09**	**302**	P	**Pn**	**19 24 26.5**	**-1.1**
JFK	**Kawauchi**	**1.49**	**333**	P	**Pn**	**19 24 32.6**	**-0.5**
BSO1	**Boso 1**	**1.50**	**204**	P	**Pn**	**19 24 33.3**	**-0.1**
BSO1				*e*S	**Sn**	**19 24 52.7**	**+0.6**
BSO3	**Boso 3**	**1.57**	**219**	P	**Pn**	**19 24 35.3**	**+1.0**
JFT	**Otama**	**1.84**	**324**	P	**Pn**	**19 24 38.7**	**+0.6**
JAG	**Ashikaga**	**1.87**	**283**	P	**Pn**	**19 24 37.6**	**-0.7**
JMM	**Marumori**	**1.97**	**338**	P	**Pn**	**19 24 39.7**	**0.0**
JFY	**Yanaizu**	**2.11**	**311**	P	**Pn**	**19 24 42.4**	**+0.7**
JKT	**Katashina**	**2.12**	**291**	P	**Pn**	**19 24 42.0**	**+0.2**
JOD2	**Odawara 2**	**2.27**	**251**	P	**Pn**	**19 24 44.5**	**+0.6**
JRY	**Ryogami san**	**2.28**	**270**	P	**Pn**	**19 24 43.3**	**-0.7**
MJAR	**Matsushiro Arr**	**2.88**	**281**	Pn	**Pn**	**19 24 52.5**	**+0.3**
	2.3nm,0.3s,baz=137,slow=18,SNR=24						
MAT	**Matsushiro**	**2.88**	**281**	P	**Pn**	**19 24 53.0**	**+0.8**
MAT				S	**Sn**	**19 25 25.2**	**-0.8**
JHJ	**Hachijo jima 2**	**3.32**	**209**	Pn	**Pn**	**19 24 58.5**	**+0.2**
	12nm,0.3s,baz=86,slow=22,SNR=16						
JHJ				Sn	**Sn**	**19 25 36.0**	**-0.9**
	16nm,0.3s,baz=91,slow=23,SNR=9.0						
CBIJ	**Chichi jima**	**8.92**	**177**	Pn

2μm,0.6s
GIB Gibilmanna 2.12 25 Pn **Pn 19 53 06.0 +0.5**
2μm,0.6s
HAGA Augusta 2.18 56 Pn **Pn 19 53 05.9 -0.6**
1μm,0.6s
HAGA Augusta 2.18 56 Pn **Pn 19 53 05.9 -0.6**
1μm,0.6s
ESLN Serra La Nave 2.32 45 Pn **Pn 19 53 09.2 +0.8**
2μm,0.9s
ESLN Serra La Nave 2.32 45 Pn **Pn 19 53 09.2 +0.8**
2μm,0.9s
USI Ustica 2.64 5 Pn **Pn 19 53 11.7 -1.0**
752nm,0.5s
USI Ustica 2.64 5 Pn **Pn 19 53 11.7 -1.0**
752nm,0.5s
MMME Mongiuffi-Meli 2.65 45 Pn **Pn 19 53 13.4 +0.5**
240nm,0.4s
MMME Mongiuffi-Meli 2.65 45 Pn **Pn 19 53 13.4 +0.5**
240nm,0.4s
IACL Alicudi 2.72 25 Pn **Pn 19 53 13.2 -0.6**
370nm,0.5s
IACL Alicudi 2.72 25 Pn **Pn 19 53 13.2 -0.6**
370nm,0.5s
IFIL Filicudi i Eol 2.82 28⇑ *i* Pn **Pn 19 53 14.6 -0.6**
597nm,0.4s
IFIL Filicudi i Eol 2.82 28⇑ *i* Pn **Pn 19 53 14.6 -0.6**
597nm,0.4s
LLI Lipari 2.88 34 Pn **Pn 19 53 16.2 +0.2**
1μm,0.4s
LLI Lipari 2.88 34 Pn **Pn 19 53 16.2 +0.2**
1μm,0.4s
MILZ Milazzo 2.88 40 Pn **Pn 19 53 16.3 +0.3**
256nm,0.4s
MILZ Milazzo 2.88 40 Pn **Pn 19 53 16.3 +0.3**
256nm,0.4s
KEST Kesra 2.90 264 Pn **Pn 19 53 17.6 +1.3**
1.1nm,0.3s,baz=51,slow=6.9,SNR=48
KEST Sn **Sn 19 53 50.8 -0.5**
3.2nm,0.3s,baz=37,slow=21,SNR=11
MTTG Motta San Giov 2.95 48⇑ *i* Pn **Pn 19 53 17.5 +0.5**
204nm,0.6s
MTTG Motta San Giov 2.95 48⇑ *i* Pn **Pn 19 53 17.5 +0.5**
204nm,0.6s
MSRU Castanea 3.02 43⇑ *i* Pn **Pn 19 53 18.6 +0.6**
658nm,1.3s
MSRU Castanea 3.02 43⇑ *i* Pn **Pn 19 53 18.6 +0.6**
658nm,1.3s
MPAZ Palizzi 3.12 52 Pn **Pn 19 53 19.5 +0.2**
107nm,0.4s
MPAZ Palizzi 3.12 52 Pn **Pn 19 53 19.5 +0.2**
107nm,0.4s
SCLL Scilla 3.13 45 Pn **Pn 19 53 20.2 +0.7**
46nm,0.6s
SCLL Scilla 3.13 45 Pn **Pn 19 53 20.2 +0.7**
46nm,0.6s
MSCL Scilla 3.16 46 Pn **Pn 19 53 20.7 +0.8**
165nm,0.7s
MSCL Scilla 3.16 46 Pn **Pn 19 53 20.7 +0.8**
165nm,0.7s
SOI Samo 3.22 51 Pn **Pn 19 53 20.9 +0.2**
53nm,0.5s
SOI Samo 3.22 51 Pn **Pn 19 53 20.9 +0.2**
53nm,0.5s
ALAS Alassa 3.39 199 *i* P **Pn 19 53 24.4 +1.3**
SNR=101
ALAS *e*S **Sn 19 54 02.6 -0.8**
63nm,0.6s,SNR=101
JOPP Joppolo 3.48 42 Pn **Pn 19 53 24.3 +0.1**
34nm,0.3s
JOPP Joppolo 3.48 42 Pn **Pn 19 53 24.3 +0.1**
34nm,0.3s
PLAC Placanica 3.69 49 Pn **Pn 19 53 27.7 +0.5**
22nm,0.3s
PLAC Placanica 3.69 49 Pn **Pn 19 53 27.7 +0.5**
22nm,0.3s
GHAR Gharyan 3.94 178 *i* P **Pn 19 53 31.6 +0.9**
SNR=99
GHAR *e*S **Sn 19 54 15.8 -1.2**
97nm,0.5s,SNR=99
CARO Carolei 4.13 39 Pn **Pn 19 53 32.5 -0.7**
108nm,0.8s
CARO Carolei 4.13 39 Pn **Pn 19 53 32.5 -0.7**
108nm,0.8s
SERS Sersale 4.22 44 Pn **Pn 19 53 35.4 +0.9**
28nm,0.6s
SERS Sersale 4.22 44 Pn **Pn 19 53 35.4 +0.9**
28nm,0.6s
TIP Timpagrande 4.36 44 Pn **Pn 19 53 37.1 +0.7**
28nm,0.6s
TIP Timpagrande 4.36 44 Pn **Pn 19 53 37.1 +0.7**
28nm,0.6s
VSL Villasalto 4.41 322 Pn **Pn 19 53 37.0 0.0**
23nm,0.4s
VSL Villasalto 4.41 322 Pn **Pn 19 53 37.0 0.0**
23nm,0.4s
BULG Bulgheria - Ca 4.45 25⇑ *i* Pn **Pn 19 53 37.4 -0.2**
33nm,0.3s
BULG Bulgheria - Ca 4.45 25⇑ *i* Pn **Pn 19 53 37.4 -0.2**
33nm,0.3s
MGR Morigerati 4.57 27 Pn **Pn 19 53 38.8 -0.4**
13nm,0.4s
MGR Morigerati 4.57 27 Pn **Pn 19 53 38.8 -0.4**
13nm,0.4s
SIRI Monte Sirino - 4.72 29 Pn **Pn 19 53 41.6 +0.2**
29nm,0.4s
SIRI Monte Sirino - 4.72 29 Pn **Pn 19 53 41.6 +0.2**
29nm,0.4s
MTSN Montesano sull 4.75 27 Pn **Pn 19 53 42.3 +0.5**
28nm,0.7s
MTSN Montesano sull 4.75 27 Pn **Pn 19 53 42.3 +0.5**
28nm,0.7s
CDRU Civita di Ruta 4.80 23 Pn **Pn 19 53 42.6 +0.2**
9.0nm,0.3s
CDRU Civita di Ruta 4.80 23 Pn **Pn 19 53 42.6 +0.2**
9.0nm,0.3s
SCHR S. Chirico Rap 4.82 30 Pn **Pn 19 53 44.0 +1.3**
13nm,0.5s
SCHR S. Chirico Rap 4.82 30 Pn **Pn 19 53 44.0 +1.3**
13nm,0.5s
MCEL Monticello 4.82 27 Pn **Pn 19 53 43.1 +0.4**
19nm,0.6s
MCEL Monticello 4.82 27 Pn **Pn 19 53 43.1 +0.4**
19nm,0.6s
DGI Dorgali Grotta 4.97 330 Pn **Pn 19 53 45.0 +0.3**
36nm,0.8s
DGI Dorgali Grotta 4.97 330 Pn **Pn 19 53 45.0 +0.3**
36nm,0.8s
LTRZ Laterza 5.47 33 Pn **Pn 19 53 52.2 +0.5**
705nm,7.1s
LTRZ Laterza 5.47 33 Pn **Pn 19 53 52.2 +0.5**
705nm,7.1s
LGHD Ghdames 6.70 207 *i* P **Pn 19 54 07.2 -1.3**
10.0nm,0.4s,SNR=94
PGF Pioggiola 7.14 336 *e*Pn **Pn 19 54 16.1 +1.6**
PGF *e*Sn **Sn 19 55 32.2 -3.4**
17nm,0.5s
PGF Pioggiola 7.14 336 *e*Pn **Pn 19 54 16.1 +1.6**
PGF *e*Sn **Sn 19 55 32.2 -3.4**
8.3nm,0.5s
LMR La Mourre 8.76 328 *e*Pn **Pn 19 54 35.5 -1.3**
LMR La Mourre 8.76 328 *e*Pn **Pn 19 54 35.5 -1.3**
SBF Sospel 8.84 333 *e*Pn **Pn 19 54 38.6 +0.8**
SBF *e*Sn **Sn 19 56 13.5 -3.9**
16nm,0.8s
SBF Sospel 8.84 333 *e*Pn **Pn 19 54 38.6 +0.8**
SBF *e*Sn **Sn 19 56 13.5 -3.9**
8.1nm,0.8s
FRF La Foret Royal 8.89 329 *e*Pn **Pn 19 54 37.0 -1.5**
FRF *e*Sn **Sn 19 56 15.9 -2.7**
1.8nm,0.5s
FRF La Foret Royal 8.89 329 *e*Pn **Pn 19 54 37.0 -1.5**
FRF *e*Sn **Sn 19 56 15.9 -2.7**
0.9nm,0.5s
SMRF Simiane la Rot 9.68 327 *e*Pn **Pn 19 54 50.4 +1.0**
SMRF Simiane la Rot 9.68 327 *e*Pn **Pn 19 54 50.4 +1.0**
MBDF Montbardon 9.82 334 *e*Pn **Pn 19 54 53.3 +2.0**
MBDF *e*Sn **Sn 19 56 38.0 -3.6**
3.9nm,0.6s
MBDF Montbardon 9.82 334 *e*Pn **Pn 19 54 53.3 +2.0**
MBDF *e*Sn **Sn 19 56 38.0 -3.6**
2.0nm,0.6s
ORIF Oris-en-Rattie 10.32 331 *e*Pn **Pn 19 54 59.1 +1.0**
ORIF Oris-en-Rattie 10.32 331 *e*Pn **Pn 19 54 59.1 +1.0**
DAVOX Davos/Dischmat 10.93 349 Pn **Pn 19 55 08.1 +1.6**
0.1nm,0.3s,baz=169,slow=19,SNR=2.1
DAVOX LR LR 19 59 36.1
comp=Z,50nm,19.8s,baz=208,slow=39
GERES GERESS Array B 12.78 2 Pn **Pn 19 55 31.2 -0.6**
0.1nm,0.3s,baz=149,slow=34,SNR=2.3
GERES LR LR 20 00 58.9
comp=Z,50nm,18.6s,baz=352,slow=40
VRAC Vranov 13.50 10 LR LR 20 01 00.4
comp=Z,49nm,20.1s,baz=188,slow=38
BRG Berggiesshubel 14.81 3 *e*P **Pn 19 56 06.8 +7.3**
6.0nm,1.3s
HFS Hagfors 24.08 1 P **P 19 57 43.7 -1.8**
1.3nm,0.6s,mb3.5,baz=177,slow=10,SNR=4.9
TORD Torodi Ar. Bea 24.95 207 LR LR 20 09 04.4
comp=Z,84nm,18.8s,MS3.3,baz=35,slow=40
NOA NORSAR Array B 25.01 358 LR LR 20 08 33.5
comp=Z,12nm,20.7s,MS2.4,baz=295,slow=39
KURK Kurchatov 48.38 51 P **P 20 01 11.4 -0.5**
0.4nm,0.7s,mb3.6,baz=282,slow=6.9,SNR=3.9
MKAR Makanchi Array 51.55 55 P **P 20 01 36.0 -0.1**
0.3nm,0.6s,mb3.4,baz=285,slow=7.9,SNR=4.0
ZALV Zalesovo Beam 51.58 46 P **P 20 01 37.4 +1.2**
0.3nm,0.3s,mb3.7,baz=277,slow=12,SNR=2.2

NIED ***08*** *20:11:00,36°.20N×141°.50E,h29km,Mw4.5 Best double couple: M0:6.62000×1015 NP1:φ=85.00000°,δ=86.00000°, λ=121.00000°. NP2:φ=182.00000°,δ=31.00000°,λ=8.00000°.*
IDC ***08*** *20:11:43.0±0.6,36°.08N×141°.50E,h0km,mb4.3/24, mb1 4.4/28,mb1mx4.4/33,mbtmp4.3/28,ML4.4/4,MS3.8/18, Ms1 3.9/18,ms1mx3.7/33,Error ellipse: s-maj=15.0km s-min=12.8km az=120.0*
BJI ***08*** *20:11:44.3,36°.26N×141°.49E,h20km,mB4.6/13,mb4.4/26, Ms4.0/5,Ms7 3.8/6*
ISCJB ***08*** *20:11:45.7±0.8,36°.13N±0°.03×141°.57E±0°.04,h30km±5km, mb4.5/67,MS3.9/25,Error ellipse: s-maj=5.5km s-min=4.5km az=15.9*
MOS ***08*** *20:11:46.3±1.1,36°.20N×141°.56E,h33km,mb4.8/28,Error ellipse: s-maj=9.4km s-min=5.4km az=111.2*
JMA ***08*** *20:11:46.6±0.1,36°.15N×141°.49E,h48km±4km,M4.6*
JMA Felt II J1.
DJA ***08*** *20:11:46,36°.14N×141°.52E,h10km,mb4.7/7*
NEIC ***08*** *20:11:47.0±1.9,36°.07N×141°.50E,h26km±13km,mb4.5/22, MW4.5(NIED),Error ellipse: s-maj=6.4km s-min=5.0km az=135.0*
NEIC Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba and Fukushima.
ISC 08 20:11:46.0±1.2,36°.14N±0°.03×141°.54E±0°.04,h18km±7km, h30km±4.7km:pP-P,n158,σ=0.92/163,mb4.5/67,MS3.9/25, 11C-11D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
CHOJ	**Chosi**	**0.70**	**232**	⇑P		**Pb**	**20 12 00.0**	**+0.4**
CHOJ				S		**Sb**	**20 12 10.3**	**+1.4**
JHO	**Hitachi**	**0.92**	**302**	⇓P		**Pb**	**20 12 02.4**	**-0.9**
JHO				S		**Sb**	**20 12 15.5**	**+0.4**
ONAJ	**Iwakimizuishiy**	**1.13**	**329**	⇓P		**Pn**	**20 12 05.5**	**-1.4**
JFK	**Kawauchi**	**1.34**	**337**	⇓P		**Pn**	**20 12 08.6**	**-1.2**
BSO1	**Boso 1**	**1.55**	**197**	P		**Pn**	**20 12 12.3**	**-0.3**
BSO3	**Boso 3**	**1.57**	**213**	P		**Pn**	**20 12 12.8**	**-0.2**
JFT	**Otama**	**1.68**	**325**	⇓P		**Pn**	**20 12 14.5**	**0.0**
JAG	**Ashikaga**	**1.71**	**280**	⇓P		**Pn**	**20 12 13.7**	**-1.1**
JAG				*e*S		**Sn**	**20 12 33.8**	**-2.4**
JMM	**Marumori**	**1.83**	**341**	⇓P		**Pn**	**20 12 15.9**	**-0.6**
JMM				*e*S		**Sn**	**20 12 37.7**	**-1.4**
JFY	**Yanaizu**	**1.94**	**311**	P		**Pn**	**20 12 18.2**	**+0.1**
JFY				*e*S		**Sn**	**20 12 42.4**	**+0.4**
JRY	**Ryogami san**	**2.14**	**268**	P		**Pn**	**20 12 19.8**	**-0.9**
JRY				*e*S		**Sn**	**20 12 44.3**	**-2.5**
JOD2	**Odawara 2**	**2.18**	**247**	P		**Pn**	**20 12 21.9**	**+0.6**
JNS	**Sasagawa**	**2.45**	**314**	P		**Pn**	**20 12 26.1**	**+1.1**
JYN	**Shimob**	**2.52**	**256**	P		**Pn**	**20 12 27.3**	**+1.4**
MJAR	**Matsushiro Arr**	**2.72**	**280**	Pn		**Pn**	**20 12 28.9**	**+0.2**
MJAR				Sn		**Sn**	**20 13 03.6**	**+2.5**
MAJO	**Matsushiro**	**2.72**	**280**	*e*P		**Pn**	**20 12 29.5**	**+0.8**
MAT	**Matsushiro**	**2.72**	**280**	P		**Pn**	**20 12 28.9**	**+0.2**
MAT				S		**Sn**	**20 13 01.2**	**+0.1**
JMK	**Ichinoseki**	**2.82**	**355**	P		**Pn**	**20 12 30.4**	**+0.3**
JHJ	**Hachijo jima 2**	**3.34**	**206**	Pn		**Pn**	**20 12 36.9**	**-0.4**
JHJ				Sn		**Sn**	**20 13 14.8**	**-1.7**
ERM	**Erimo**	**6.00**	**12**	*e*P		**Pn**	**20 13 13.1**	**-0.8**
ERM				pmax		pmax		
ERM	**Erimo**	**6.00**	**12**	*e*P		**Pn**	**20 13 13.1**	**-0.8**
ASAJ	**Asahikawa**	**8.01**	**5**	P		**Pn**	**20 13 40.1**	**-1.3**
ASAJ							20 15 09.3	
ASAJ				pmax		pmax		
ASAJ				smax				
ASAJ				MLR		MLR		
ASAJ	**Asahikawa**	**8.01**	**5**	Pn		**Pn**	**20 13 40.0**	**-1.4**
ASAJ				Sn		**Sn**	**20 15 09.3**	**-2.2**
ASAJ				LR		LR	20 17 57.4	
YUK	**Yuzh-Kuril'sk**	**8.55**	**21**	P		**Pn**	**20 13 48.4**	**-0.5**
YUK				*e*S		**Sn**	**20 15 17.9**	**-6.9**
YUK				smax				
YUK				smax				
CBIJ	**Chichi jima**	**9.03**	**176**	Pn		**Pn**	**20 13 52.6**	**-2.8**
CBIJ				Sn		**Sn**	**20 15 26.4**	**-10**
VLA	**Vladivostok**	**10.19**	**316**	*e*P		**Pn**	**20 14 12.6**	**+1.3**
VLA				pmax		pmax		
VLA				MLR		MLR		
YSS	**Yuzh-Sakhalins**	**10.85**	**4**	*e*P		**Pn**	**20 14 19.0**	**-1.2**
YSS				pmax		pmax		
YSS				MLR		MLR		
YSS				MLR		MLR		
KSRS	**Korea Array**	**11.00**	**281**	Pn		**Pn**	**20 14 26.6**	**+4.2**
KSRS				LR		LR	20 18 33.2	
MDJ	**Mudanjiang**	**12.43**	**317**	P		**Pn**	**20 14 46.4**	**+4.5**
MDJ				pmax		pmax		
MDJ				pmax		pmax		
MDJ	**Mudanjiang**	**12.43**	**317**	*e*P		**Pn**	**20 14 44.1**	**+2.3**
HABR	**Khabarovsk**	**13.22**	**341**	P		Px	20 15 03.0	
HABR				*e*			20 17 16.4	
HABR				MLR		MLR		
CN2	**Changchun**	**14.51**	**307**	*e*P		**Pn**	**20 15 16.6**	**+6.4**
CN2				pmax		pmax		
JOW	**Kunigami**	**14.62**	**234**	Pn		**Pn**	**20 15 18.4**	**+6.6**
JOW				LR		LR	20 20 46.2	
KLR	**Kul'dur**	**14.92**	**334**	*e*P		**Pn**	**20 15 16.0**	**+0.2**
KLR				MLR		MLR		
KLR				MLR		MLR		
NJ2	**Nanjing**	**19.21**	**264**	*e*P		**Pn**	**20 16 11.6**	**+1.7**
NJ2				pmax		pmax		
PETK	**Petropavlovsk-**	**20.42**	**29**	P		**P**	**20 16 23.0**	**+1.1**
PETK				LR		LR	20 24 23.8	
HIA	**Hailar**	**20.61**	**316**	*e*P		**P**	**20 16 24.9**	**+0.8**
HIA				pmax		pmax		
HIA	**Hailar**	**20.61**	**316**	*e*P		**P**	**20 16 24.9**	**+0.8**
WHN	**Wuhan**	**23.35**	**264**	*e*P		**P**	**20 16 51.8**	**-1.7**
WHN				LR		LR		
CLNS	**Chul'man**	**23.54**	**337**	*e*P		**P**	**20 16 49.1**	**-6.1**
CLNS				pmax		pmax		
CLNS				pmax		pmax		
CLNS				MLR		MLR		
CLNS				MLR		MLR		
HHC	**Hu-ho-hao-te**	**23.87**	**290**	*e*P		**P**	**20 16 59.1**	**+0.8**
HHC				pP			20 17 03.3	
HHC				sP		sP	20 17 06.3	+0.1
HHC				PP			20 17 33.4	
HHC				PcP		PcP	20 20 42.2	+1.4
HHC				S		**S**	**20 21 13.2**	**-0.1**
HHC				sS		sS	20 21 19.8	-2.7
HHC				ScP		ScP	20 24 18.2	0.0
HHC				PcS		PcS	20 24 21.0	+0.7
HHC				pmax		pmax		
HHC				pmax		pmax		
HHC				pmax		pmax		
HHC				LR		LR		
HHC				LR		LR		
HHC				LR		LR		
HHC				LR		LR		
XAN	**Xi'an**	**26.71**	**275**	P		**P**	**20 17 24.4**	**+0.3**
XAN				pP		pP	20 17 31.7	+2.0
XAN				sP		sP	20 17 34.5	+2.5
XAN				pmax		pmax		
XAN				pmax		pmax		
XAN				LR		LR		
XAN				LR		LR		
YAK	**Yakutsk**	**26.97**	**348**	*e*P		**P**	**20 17 25.4**	**-0.8**
YAK				*e*PP		pP	20 17 34.7	+2.9
YAK				*e*			20 18 06.7	
YAK				*e*S		**S**	**20 22 02.1**	**-0.2**
YAK				pmax		pmax		
YAK				pmax		pmax		
YAK				pmax		pmax		
YAK				pmax		pmax		
YAK				smax				
YAK				smax				
YAK				MLR		MLR		
YAK				MLR		MLR		
ENH	**Enshi**	**27.37**	**267**	*e*P		**P**	**20 17 29.4**	**-0.8**
SEY	**Seymchan**	**27.65**	**11**⇑	*i*P		**P**	**20 17 33.4**	**+1.1**
ULN	**Ulaanbaatar**	**27.95**	**306**	*e*P		**P**	**20 17 35.2**	**+0.1**
ULN				pmax		pmax		
ULN	**Ulaanbaatar**	**27.95**	**306**	*e*P		**P**	**20 17 35.2**	**0.0**
BOD	**Bodaibo**	**28.34**	**329**	*e*P		**P**	**20 17 38.1**	**-0.4**
BOD				pmax		pmax		
SONM	**Songino Array**	**28.38**	**305**	P		**P**	**20 17 38.9**	**-0.1**
SONM				LR		LR	20 29 38.5	
ZAK	**Zakamensk**	**30.91**	**309**⇑	*i*P		**P**	**20 18 01.5**	**+0.1**
ZAK				pmax		pmax		
TLY	**Talaya**	**31.00**	**312**	*e*P		**P**	**20 18 02.0**	**-0.1**
TLY				pmax		pmax		
TLY				MLR		MLR		
MOY	**Mondy**	**32.60**	**311**	*e*P		**P**	**20 18 16.4**	**+0.2**
GTA	**Gaotai**	**32.93**	**288**	*e*P		**P**	**20 18 19.5**	**+0.2**
GTA				pP		pP	20 18 23.9	-1.0
GTA				sP		sP	20 18 27.0	-0.2
GTA				pmax		pmax		
BILL	**Biiibino**	**34.86**	**16**⇑	*e*P		**P**	**20 18 35.8**	**+0.1**
BILL				pmax		pmax		
TIXI	**Tiksi**	**36.19**	**353**	*d i*P		**P**	**20 18 47.0**	**-0.1**
TIXI				pmax		pmax		
TIXI				MLR		MLR		
TIXI	**Tiksi**	**36.19**	**353**	*e*P		**P**	**20 18 46.3**	**-0.8**
WMQ	**Urumqi**	**41.34**	**298**	*e*P		**P**	**20 19 31.5**	**+0.9**
WMQ				pmax		pmax		
CMAR	**Chiang Mai Arr**	**41.38**	**256**	P		**P**	**20 19 31.6**	**+0.4**
CMAR				LR		LR	20 37 41.1	
ZAA0	**Zalesovo Array**	**42.60**	**313**	*e*P		**P**	**20 19 40.5**	**-0.2**
ZALV	**Zalesovo Beam**	**42.60**	**313**	P		**P**	**20 19 40.8**	**+0.1**
ZALV							20 21 32.6	
ZALV	**Zalesovo Beam**	**42.60**	**313**	P		**P**	**20 19 40.8**	**+0.1**
ZALV				PcP		PcP	20 21 32.6	-0.1
ZALV				LR		LR	20 38 13.6	
NVS	**Novosibirsk**	**43.54**	**314**	*i*P		**P**	**20 19 47.6**	**-0.7**
NVS				*i*			20 19 59.6	
NVS				pmax		pmax		
NVS				pmax		pmax		
NVS				pmax		pmax		
MK31	**Makanchi Array**	**44.69**	**303**	*e*P		**P**	**20 19 57.9**	**+0.3**
MKAR	**Makanchi Array**	**44.69**	**303**	P		**P**	**20 19 58.0**	**+0.4**
MKAR				LR		LR	20 39 17.4	
MKAR	**Makanchi Array**	**44.69**	**303**	P		**P**	**20 19 58.0**	**+0.4**
MKAR				LR		LR	20 39 17.4	
KAPI	**Kappang**	**45.74**	**211**	*e*P		**P**	**20 20 05.6**	**-0.7**
KURK	**Kurchatov**	**46.57**	**309**	*c i*P		**P**	**20 20 11.7**	**-0.7**
KURK				pmax		pmax		
KURK	**Kurchatov**	**46.57**	**309**	P		**P**	**20 20 12.4**	**0.0**
KURK	**Kurchatov**	**46.57**	**309**	*e*P		**P**	**20 20 11.8**	**-0.6**
GUN	**Gumba**	**47.35**	**277**	*e*P		**P**	**20 20 19.6**	**+0.7**
KDAK	**Kodiak Island**	**47.70**	**41**	P		**P**	**20 20 21.7**	**+0.5**
KKN	**Kakani**	**47.88**	**277**	*e*P		**P**	**20 20 23.0**	**0.0**
DMN	**Daman**	**48.10**	**277**	*e*P		**P**	**20 20 25.0**	**+0.3**
GKN	**Gorkha**	**48.31**	**277**	*e*P		**P**	**20 20 26.6**	**+0.3**
KOLN	**Koldanda**	**49.24**	**278**	*e*P		**P**	**20 20 33.8**	**+0.3**
PYUN	**Piuthan**	**49.59**	**278**	*e*P		**P**	**20 20 37.5**	**+1.4**
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P		**P**	**20 20 41.1**	**+0.9**
TKM2				pmax		pmax		
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P		**P**	**20 20 41.0**	**+0.9**
AAK	**Ala-Archa**	**51.01**	**299**	*c i*P		**P**	**20 20 46.2**	**-0.5**
AAK				pmax		pmax		
AAK	**Ala-Archa**	**51.01**	**299**	P		**P**	**20 20 47.2**	**+0.5**
AAK	**Ala-Archa**	**51.01**	**299**	*e*P		**P**	**20 20 46.9**	**+0.3**
UCH	**Uchtor**	**51.11**	**299**	*e*P		**P**	**20 20 48.4**	**+1.0**

comp=Z,2.3nm,0.8s,mb4.2
BVAR Borovoye Array 51.25 313 P **P** **20 20 48.2 -0.1**
comp=Z,4.2nm,0.9s,mb4.4,baz=91,slow=7.4,SNR=21
BVAR LR LR 20 43 41.0
comp=Z,169nm,18.1s,MS4.1,baz=259,slow=37
BRVK Borovoye 51.31 313*c i*P **P** **20 20 48.5 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BRVK Borovoye 51.31 313 *e*P **P** **20 20 49.1 +0.4**
AML Almayashu 51.72 299 *e*P **P** **20 20 52.9 +0.9**
comp=Z,9.8nm,0.8s,mb4.8
INK Inuvik 55.14 27 *e*P **P** **20 21 17.5 +0.8**
INK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 55.14 27 P **P** **20 21 17.6 +0.9**
comp=Z,1.2nm,0.6s,mb4.1,baz=280,slow=7.4,SNR=7.7
INK Inuvik 55.14 27 *e*P **P** **20 21 17.5 +0.8**
comp=Z,1.6nm,0.6s,mb4.2
SVE Sverdlovsk 55.89 319⇑*e*P **P** **20 21 23.0 +0.7**
SVE *e* 20 22 21.4
SVE *e* 20 23 29.3
SVE *e*SS SS 20 32 53.9 -0.1
SVE pmax pmax
comp=Z,15nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,217nm,16.0s,MS4.3
WRAB Tennant Creek 56.17 188 *e*P **P** **20 21 24.0 -0.6**
WRAB pmax pmax
comp=Z,27nm,1.4s,mb5.1
WRAB Tennant Creek 56.17 188 *e*P **P** **20 21 24.0 -0.7**
comp=Z,26nm,1.4s,mb5.1
WB2 Warramunga Arr 56.19 188 *e*P **P** **20 21 23.7 -1.0**
WRA Warramunga Arr 56.19 188 P **P** **20 21 23.9 -0.8**
comp=Z,5.3nm,0.9s,mb4.6,baz=6.4,slow=7.5,SNR=24
ARU Arti 57.10 319*c i*P **P** **20 21 30.8 -0.1**
ARU *e* 20 23 35.9
ARU S **S** **20 29 25.7 +0.9**
ARU SS SS 20 33 14.1 +1.0
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.9
ARU MLR MLR
comp=Z,98nm,16.0s,MS4.0
ARU Arti 57.10 319 *e*P **P** **20 21 30.4 -0.6**
comp=Z,14nm,1.1s,mb4.9
KBL Kabul 57.84 292 *e*P **P** **20 21 35.7 -0.7**
KBL pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KBL Kabul 57.84 292 *e*P **P** **20 21 35.7 -0.8**
comp=Z,3.0nm,1.0s,mb4.3
ABKAR Akbulak array 58.60 311 *e*P **P** **20 21 40.9 -0.7**
comp=Z,4.3nm,0.6s,mb4.7
AKTO Aktyubinsk 59.35 312 LR LR 20 48 30.7
comp=Z,81nm,19.5s,MS3.9,baz=267,slow=37
ASAR Alice Springs 59.91 188 P **P** **20 21 50.2 -0.6**
comp=Z,0.9nm,0.7s,mb3.9,baz=9.1,slow=5.0,SNR=9.1
MBWA Marble Bar 60.60 203 *e*P **P** **20 21 55.1 -0.5**
DZM Mont Dzumac 62.50 154 *e*LR LR 20 40 38.7
comp=Z,153nm,22.2s
RES Resolute Bay 63.45 14 *e*P **P** **20 22 14.7 +0.6**
RES pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
RES Resolute Bay 63.45 14 P **P** **20 22 14.3 +0.3**
comp=Z,3.7nm,0.8s,mb4.6,baz=325,slow=3.3,SNR=17
RES Resolute Bay 63.45 14 *e*P **P** **20 22 14.7 +0.6**
comp=Z,4.8nm,0.9s,mb4.6
YKA Yellowknife Ar 64.53 30 P **P** **20 22 21.8 +0.5**
comp=Z,1.5nm,0.8s,mb4.0,baz=299,slow=6.6,SNR=18
YKA LR LR 20 51 16.8
comp=Z,2.9nm,22.0s,baz=5.0,slow=37
YKA Yellowknife Ar 64.53 30 P **P** **20 22 21.8 +0.5**
YKA LR LR 20 51 16.8
ARCES ARCESS Array B 64.87 340 P **P** **20 22 23.9 +0.4**
comp=Z,2.8nm,0.8s,mb4.3,baz=64,slow=6.1,SNR=4.1
JOF Joensuu 66.80 332 *e*P **P** **20 22 34.4 -1.6**
JOF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
JOF Joensuu 66.80 332 *e*p **P** **20 22 34.4 -1.6**
comp=Z,5.7nm,0.9s,mb4.6
STKA Stephens Creek 67.66 180 *e*P **P** **20 22 37.7 -3.9**
OBN Obninsk 68.88 323⇓*i*P **P** **20 22 49.0 -0.2**
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KAF Kangasniemi 69.15 333 *e*P **P** **20 22 49.2 -1.6**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KAF Kangasniemi 69.15 333 *e*p **P** **20 22 49.2 -1.6**
comp=Z,1.5nm,0.4s,mb4.3
FINES FINESS Array B 69.66 332 P **P** **20 22 53.7 -0.2**
comp=Z,5.5nm,0.9s,mb4.5,baz=57,slow=7.0,SNR=13
FINES LR LR 20 58 02.8
comp=Z,138nm,18.1s,MS4.2,baz=322,slow=40
FINES FINESS Array B 69.66 332 P **P** **20 22 53.7 -0.2**
FINES LR LR 20 58 02.8
VSR Storozhevoye 69.67 319 *e*P **P** **20 22 53.9 -0.3**
VSR pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.5s
VORD Divnogorie 69.74 319 *e*P **P** **20 22 54.3 -0.3**
VORD pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
VORD pmax pmax
comp=N,3.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.9s
YBH Yreka Blue Hor 70.81 52 LR LR 20 48 46.2
comp=E,31nm,19.9s,MS3.6,baz=84,slow=31
VSU Vasula 71.28 330 *e*P **P** **20 23 03.8 -0.1**
VSU pmax pmax
comp=Z,12nm,1.0s,mb4.8
ZEI Tsey 71.46 310 *e*P **P** **20 23 03.2 -2.1**
ZEI pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KIV Kislovodsk 71.57 311⇑*e*P **P** **20 23 05.7 -0.2**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV Kislovodsk 71.57 311 *e*P **P** **20 23 07.1 +1.2**
comp=Z,8.0nm,0.9s,mb4.7
SUMG Summit 71.58 360 *e*P **P** **20 23 06.8 +1.3**
comp=Z,9.6nm,0.9s,mb4.7
GNI Garni 72.32 307*c i*P **P** **20 23 11.5 +1.0**
GNI pmax pmax
comp=Z,8.0nm,1.2s
IDID Didziasalis 73.28 327 *e*P **P** **20 23 15.7 -0.3**
ISAL Salakas 73.39 328 *e*P **P** **20 23 16.4 -0.1**
ANN Anapa 74.23 314 *e*P **P** **20 23 18.8 -2.8**
ANN *e**PP pP 20 23 30.5 +2.8
ANN pmax pmax
comp=Z,40nm,1.5s,mb5.1
FFC Flin Flon 74.41 33 *i*P **P** **20 23 23.6 +1.1**
FFC Flin Flon 74.41 33 *e*P **P** **20 23 23.0 +0.5**
comp=Z,1.7nm,0.8s,mb4.0
HFS Hagfors 74.95 336 LR LR 20 58 37.7
comp=Z,152nm,20.0s,MS4.3,baz=23,slow=38
NB2 NORSAR Subarra 75.05 337 P **P** **20 23 26.1 0.0**
comp=Z,4.7nm,0.9s,mb4.4,baz=40,slow=5.9
NOA NORSAR Array B 75.05 337 P **P** **20 23 26.1 0.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=39,slow=5.7,SNR=10
NOA LR LR 20 59 43.1
comp=Z,182nm,19.0s,MS4.4,baz=180,slow=38
AKASG Malin Array Be 75.07 322 *i*P **P** **20 23 26.2 -0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 75.07 322 P **P** **20 23 25.9 -0.5**
comp=Z,2.5nm,0.5s,mb4.4,baz=47,slow=5.7,SNR=17
AKASG LR LR 20 59 25.2
comp=Z,130nm,18.4s,MS4.3,baz=55,slow=38
BOZ Bozeman (W) 75.29 44 *e*P **P** **20 23 29.3 +1.5**
BOZ pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BOZ Bozeman (W) 75.29 44 *e*P **P** **20 23 29.3 +1.6**
comp=Z,2.4nm,0.9s,mb4.1
NVAR Mina Array Bea 75.45 53 P **P** **20 23 30.5 +1.7**
comp=Z,1.7nm,0.7s,mb4.1,baz=281,slow=5.8,SNR=7.3
IMW Indian Meadow 76.73 45 *e*P **P** **20 23 37.8 +1.8**
comp=Z,4.0nm,1.1s,mb4.3
KIS Kishinev 77.64 320 *e*P **P** **20 23 35.0 -6.1**
KIS MLR MLR
comp=Z,500nm,17.0s,MS4.9
KIS MLR MLR
comp=Z,500nm,16.0s
PDAR Pinedale Array 78.22 45 P **P** **20 23 45.2 +0.8**
comp=Z,0.7nm,0.6s,mb3.8,baz=300,slow=3.1,SNR=6.2
BUR08 Bucovina Ar. S 79.07 322 *e*P **P** **20 23 49.2 +0.3**

BRTR Keskin Array B 79.52 312 *i*P **P** **20 23 52.5 +0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 79.52 312 P **P** **20 23 52.3 +0.7**
comp=Z,1.5nm,0.8s,mb4.0,baz=87,slow=6.0,SNR=7.9
OJC Ojcow 79.84 326 *e*P **P** **20 23 53.4 +0.3**
CLL Collm 81.92 330⇓*i*P **P** **20 24 04.3 +0.1**
CLL *e* 20 24 15.0
CLL *e* 20 24 18.0
CLL *e*S S 20 34 20.0 +3.1
CLL pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CLL Collm 81.92 330⇓*i*P **P** **20 24 04.3 +0.1**
comp=Z,4.0nm,1.0s,mb4.3
CLL *e* 20 24 15.0
CLL *e* 20 24 18.0
CLL *e*S S 20 34 20.0 +3.1
CLL Collm 81.92 330⇓*i*P **P** **20 24 04.3 +0.1**
comp=Z,4.0nm,1.0s,mb4.3
CLL *e*sP sP 20 24 15.0 +2.5
CLL *e*pPcP 20 24 18.0
CLL *e* 20 24 30.0
CLL *e*S S 20 34 20.0 +3.1
GERES GERESS Array B 83.53 328 P **P** **20 24 12.5 -0.1**
comp=Z,0.4nm,0.5s,mb3.8,baz=57,slow=4.9,SNR=6.3
GERES LR LR 21 05 29.0
comp=Z,53nm,19.3s,MS3.9,baz=200,slow=39
PMOR Pomariorio Ree 83.73 114 *e*T 21 56 15.2
comp=Z,4.4nm,0.2s
PPT Papeete 84.14 117 *e*LR LR 20 50 41.5
comp=Z,77nm,26.5s
SCHQ Schefferville 86.17 16 P **P** **20 24 26.0 +0.2**
comp=Z,2.7nm,0.9s,mb4.5,baz=331,slow=5.7,SNR=3.6
SCHQ LR LR 21 05 28.7
comp=Z,47nm,19.3s,MS3.9,baz=331,slow=37
TXAR Lajitas Array 90.59 52 P **P** **20 24 47.7 +0.3**
comp=Z,0.6nm,0.8s,mb4.0,baz=285,slow=4.8,SNR=4.7
TXAR Lajitas Array 90.59 52 P **P** **20 24 47.7 +0.3**
ESDC Sonseca Array 98.14 334 LR LR 21 13 47.6
comp=Z,92nm,20.7s,MS4.3,baz=40,slow=38
LPAZ La Paz 147.05 61 PKPbc PKPbc 20 31 28.5 +0.4
comp=Z,1.5nm,0.8s,baz=37,slow=3.1,SNR=5.6
LPAZ La Paz 147.05 61 PKPbc PKPbc 20 31 28.5 +0.4

GUC 08 20:15:55.6±0.6,32°.15S×71°.55W,h27^{km}±5^{km}, MD3.5, ML2.7, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.08**	**26**	*e*P	Pn	20 16 14.8	-0.3
CMCH				*i* S	Sn	20 16 29.6	+0.5
CMCH				AML	AML	20 16 33.6	
comp=E,541nm,0.4s							
PEL	**Peldehue**	**1.23**	**144**	⇓*i*P	Pn	20 16 17.4	+0.3
PEL				*i* S	Sn	20 16 34.0	+1.2
PEL				AML	AML	20 16 37.4	
comp=E,355nm,0.3s							
RCDM	**Rinconada Maip**	**1.47**	**155**	⇓*i*P	Pn	20 16 21.0	+0.6
RCDM				*i* S	Sn	20 16 40.0	+1.2
RCDM				AML	AML	20 16 40.8	
comp=E,168nm,0.1s							
FCH	**Farellones**	**1.58**	**138**	⇓*i*P	Pn	20 16 23.2	+1.3
FCH				*i* S	Sn	20 16 44.3	+2.8
FCH				AML	AML	20 16 47.1	
comp=E,131nm,0.3s							
CHCH	**Chadas Angostu**	**1.93**	**157**	*i* S	Sn	20 16 52.8	+2.7
TLL	**Tololo Astrono**	**2.08**	**18**	AML	AML	20 17 06.0	
comp=E,71nm,0.3s							

IDC 08 20:31:42.0±9.0,18°.70S×178°.71W,h441^{km}±257^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.1/18, mbtmp3.3/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/6, Error ellipse: s-maj=238.4km s-min=76.6km az=114.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.18**	**55**	P	P	20 33 39.6	+0.3
6.0nm,0.3s,baz=260,slow=11.7,SNR=7.9							
CTA	**Charters Tower**	**33.05**	**262**	LR	LR	20 49 38.3	
comp=Z,53nm,18.3s,baz=119,slow=33							
STKA	**Stephens Creek**	**38.01**	**242**	P	P	20 38 20.6	-0.1
1.1nm,0.4s,baz=96,slow=7.6,SNR=7.0							
WRA	**Warramunga Arr**	**44.22**	**260**	P	P	20 39 10.6	0.0
0.9nm,0.4s,baz=96,slow=7.4,SNR=3.7							
ASAR	**Alice Springs**	**44.31**	**255**	P	P	20 39 11.3	0.0
1.1nm,0.4s,baz=88,slow=8.3,SNR=4.7							
FITZ	**Fitzroy Crossi**	**52.62**	**261**	P	P	20 40 13.6	-0.2
2.2nm,0.9s,baz=131,slow=11,SNR=5.4							

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*BJI **08** 20:31:44.4, 3°.80N×126°.10E, h71^{km}, mB4.8/5, mb4.8/6*
*NEIC **08** 20:31:46.5±1.3, 3°.84N×126°.05E, h72^{km}±12^{km}, mb4.7/14, Error ellipse: s-maj=15.2km s-min=6.6km az=79.0*
*ISCJB **08** 20:31:47.5±0.5, 3°.82N±0°.03×126°.13E±0°.06, h95^{km}±5^{km}, mb4.5/33, Error ellipse: s-maj=9.5km s-min=4.4km az=174.1*
*IDC **08** 20:31:47.1±1.6, 3°.81N×125°.86E, h78^{km}±14^{km}, mb4.2/21, mb1 4.2/22, mb1mx4.1/27, mbtmp4.2/22, MS3.3/8, Ms1 3.3/8, ms1mx3.0/32, Error ellipse: s-maj=22.5km s-min=8.9km az=82.0*
*DJA **08** 20:31:51, 3°.61N×126°.20E, h63^{km}, mb4.9/10*
ISC 08 20:31:49.1±0.5, 3°.82N±0°.03×126°.12E±0°.06, h94^{km}±5^{km}, n95, σ1^{s}.27/98, mb4.5/32, 3C-3D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.53**	**333**	*e*P	Pn	20 32 26.8	-1.7
GSPH				*i* S	Sn	20 32 56.4	-2.2
MATI	**Mati**	**3.10**	**3**	*e*P	Pn	20 32 35.6	-0.5
DAV	**Davao City (W)**	**3.27**	**351**	P	Pn	20 32 37.5	-0.8
40nm,0.3s,baz=296,slow=7.3,SNR=3.6							
DAV				S	Sn	20 33 19.6	+3.3
47nm,0.3s,baz=116,slow=21,SNR=3.7							
DAV	**Davao City (W)**	**3.27**	**351**	*e*P	Pn	20 32 34.0	-4.3
DAV				S	Sn	20 33 19.6	+3.3
DAV	**Davao City (W)**	**3.27**	**351**	P	Pn	20 32 43.1	+4.8
CTBH	**Cotabato--PC H**	**3.85**	**331**⇑	*e*P	Pn	20 32 45.5	-0.8
CTBH				*i* S	Sn	20 33 30.3	-0.2
BUKP	**Musuan**	**4.16**	**345**	*e*P	Pn	20 32 52.5	+2.1
BUKP				*e*S	Sn	20 33 31.6	-6.4
BIPH	**Bislig**	**4.34**	**3**⇑	*e*P	Pn	20 32 52.8	+0.1
BIPH				*i* S	Sn	20 33 48.3	+6.1
CGP	**Cagayan de Oro**	**4.81**	**343**⇓	*e*P	Pn	20 33 00.9	+1.7
CGP				*e*S	Sn	20 34 02.5	+8.7
PAGZ	**Pagadian**	**4.84**	**326**	*e*P	Pn	20 32 59.5	-0.1
ZMPH	**Zamboanga City**	**5.10**	**308**	⇓*i*P	Pn	20 33 01.6	-1.5
ZMPH				*i* S	Sn	20 33 47.5	-13
ZMPH	**Zamboanga City**	**5.10**	**308**	⇑*i*P	Px	20 33 40.6	
ZMPH				*i* S	Sn	20 33 47.5	-13
BUTP	**Butuan**	**5.13**	**354**	*e*P	Pn	20 33 06.9	+3.3
IPIL	**Ipil**	**5.29**	**318**	*e*P	Pn	20 33 04.9	-0.8
MRSI	**Marisa**	**5.34**	**232**	P	Pn	20 33 05.3	-1.0
LUWI	**Luwuk**	**5.88**	**215**	P	Pn	20 33 15.2	+1.5
TBP	**Tagbilaran**	**6.24**	**339**	*e*P	Pn	20 33 18.7	0.0
MSLP	**Maasin**	**6.39**	**349**	*e*P	Pn	20 33 21.3	+0.6
APSI	**Ampana**	**6.49**	**224**	P	Pn	20 33 23.7	+1.7
810nm,0.7s,8μm2.9nm							
LLP	**Lapu-Lapu**	**6.79**	**342**⇓	*e*P	Pn	20 33 26.8	+0.6
NLAI	**Namlea**	**7.08**	**172**	P	Pn	20 33 27.3	-2.8
133nm,0.6s,7μm2.1nm							
GUIM	**Jordan**	**7.61**	**333**	*e*P	Pn	20 33 38.6	+1.3
AAI	**Ambon**	**7.74**	**164**	P	Pn	20 33 38.4	-0.7
128nm,1.1s,3μm0.6nm							
KDI	**Kendari**	**8.48**	**204**	P	Pn	20 33 48.8	-0.4
92nm,1.1s,1μm							
CUYO	**Cuyo Island**	**8.62**	**324**	*e*P	Pn	20 33 51.1	0.0
TTSI	**Tana Toraja**	**9.29**	**223**	P	Pn	20 34 01.1	+1.0
193nm,1.0s							
KAPI	**Kappang**	**10.84**	**216**	P	Pn	20 34 20.5	-0.8
2.7nm,0.3s,baz=26,slow=7.5,SNR=15							
KAPI				LR	LR	20 39 21.7	
comp=Z,82nm,18.6s,baz=213,slow=43							
KAPI	**Kappang**	**10.84**	**216**	P	Pn	20 34 20.9	-0.4
23nm,1.1s							
SBUM	**Sibu**	**13.95**	**265**	P	Pn	20 35 04.6	+2.0
43nm,1.3s							
STKI	**Sintang**	**15.10**	**256**	P	Pn	20 35 21.8	+4.3
17nm,1.2s							
KSM	**Kuching**	**15.96**	**262**	*e*P	Pn	20 35 31.1	+2.8
8.2nm,0.6s							
KSM	**Kuching**	**15.96**	**262**	P	Pn	20 35 31.7	+3.3
16nm,0.8s							

KAKA Kakadu 17.59 159 *e*P **Pn** **20 35 43.4 -4.8**
20nm,0.5s
KAKA Kakadu 17.59 159 *e*P **Pn** **20 35 43.1 -5.2**
84nm,0.7s
KAKA Kakadu 17.59 159 P **Pn** **20 35 50.3 +2.1**
TPUB Ta-pu 20.08 345 *e*P **P** **20 36 12.2 -2.9**
13nm,0.6s
SSLB Suanglung 20.46 346 *e*P **P** **20 36 16.7 -2.5**
10nm,0.6s
GUMO Guam 20.90 61 LR LR 20 43 37.9
comp=Z,39nm,18.2s,baz=163,slow=34
FITZ Fitzroy Crossi 21.79 181 *e*P **P** **20 36 31.5 -2.0**
38nm,0.4s,mb5.1
FITZ Fitzroy Crossi 21.79 181 P **P** **20 36 31.9 -1.6**
40nm,0.7s,mb4.9,baz=5.2,slow=7.7,SNR=78
JOW Kunigami 22.97 5 P **P** **20 36 46.6 +0.9**
26nm,0.7s,mb4.7,baz=211,slow=7.8,SNR=22
JOW LR LR 20 44 33.5
comp=Z,78nm,20.1s,baz=307,slow=33
COEN Coen 24.46 137 *e*P **P** **20 36 59.6 +0.1**
102nm,0.7s,mb5.3
WRAB Tennant Creek 24.96 161 *e*P **P** **20 37 03.0 -0.8**
107nm,0.9s,mb5.3
WRA Warramunga Arr 24.96 161 P **P** **20 37 03.1 -0.8**
89nm,0.9s,mb5.2,baz=343,slow=10,SNR=208
WRA S **S** **20 41 26.2 +5.4**
3.7nm,0.8s,baz=345,slow=18,SNR=4.9
WRA ScP ScP 20 44 08.7 +0.9
1.5nm,0.8s,baz=341,slow=3.2,SNR=5.3
WB2 Warramunga Arr 24.96 161 *e*P **P** **20 37 03.1 -0.8**
CBIJ Chichi jima 27.77 32 P **P** **20 37 28.4 -0.8**
49nm,0.5s,mb5.3,baz=204,slow=2.0,SNR=20
CBIJ LR LR 20 46 23.0
comp=Z,84nm,20.5s,baz=67,slow=31
ASAR Alice Springs 28.36 165 P **P** **20 37 34.0 -0.4**
7.6nm,0.5s,mb4.5,baz=345,slow=7.6,SNR=151
ASAR PcP PcP 20 40 45.6 +0.5
1.9nm,0.5s,baz=347,slow=2.2,SNR=7.3
ASAR S **S** **20 42 17.9 +3.5**
0.9nm,1.0s,baz=344,slow=13,SNR=3.9
ASAR ScP ScP 20 44 19.3 +1.4
2.3nm,0.8s,baz=354,slow=2.9,SNR=10
CMAR Chiang Mai Arr 30.30 301 P **P** **20 37 53.5 +1.7**
0.2nm,0.5s,baz=88,slow=6.5,SNR=3.2
CMAR S **S** **20 42 45.3 +0.2**
0.4nm,0.3s,baz=105,slow=22,SNR=4.9
CMAR ScP ScP 20 44 24.9 +0.7
0.4nm,0.3s,baz=132,slow=1.3,SNR=5.7
CTA Charters Tower 30.92 141 *e*P **P** **20 37 58.2 +1.1**
4.2nm,0.6s,mb4.3
CTA Charters Tower 30.92 141 P **P** **20 37 58.0 +0.9**
9.2nm,1.1s,mb4.4,baz=336,slow=13,SNR=5.2
KSRS Korea Array 33.51 3 P **P** **20 38 20.5 +0.9**
3.9nm,0.5s,mb4.5,baz=176,slow=9.9,SNR=19
KSRS LR LR 20 49 47.2
comp=Z,59nm,20.8s,baz=343,slow=32
MAJO Matsushiro 34.41 17 *e*P **P** **20 38 27.3 -0.1**
5.7nm,0.6s,mb4.6
MAT Matsushiro 34.41 17 P **P** **20 38 26.5 -0.9**
MJAR Matsushiro Arr 34.41 17 P **P** **20 38 27.0 -0.4**
4.2nm,0.8s,mb4.3,baz=191,slow=9.6,SNR=18
MJAR LR LR 20 50 20.8
comp=Z,61nm,20.2s,baz=225,slow=32
FORT Forrest 34.46 177 *e*P **P** **20 38 27.2 -0.7**
21nm,0.5s,mb5.2
FORT Forrest 34.46 177 *e*P **P** **20 38 27.3 -0.6**
14nm,0.4s,mb5.1
NWAO Narrogin (SRO) 37.51 192 P **P** **20 38 53.1 -0.8**
6.2nm,0.3s,mb4.9,baz=23,slow=7.8,SNR=34
EIDS Eidsvold 37.80 141 *e*P **P** **20 38 56.2 -0.3**
8.6nm,0.8s,mb4.6
STKA Stephens Creek 38.44 159 *e*P **P** **20 39 02.0 +0.3**
20nm,0.6s,mb5.1
STKA Stephens Creek 38.44 159 P **P** **20 39 01.8 +0.1**
26nm,0.7s,mb5.2,baz=334,slow=7.7,SNR=76
STKA PcP PcP 20 41 13.7 +0.4
3.5nm,0.5s,baz=342,slow=3.5,SNR=44
STKA ScP ScP 20 44 54.3 +1.4
1.8nm,0.7s,baz=259,slow=5.2,SNR=4.5
STKA Stephens Creek 38.44 159 *e*P **P** **20 39 01.4 -0.3**
STKA PcP PcP 20 41 13.7 +0.4
STKA ScP ScP 20 44 54.3 +1.4
SHL Shillong 39.33 307 *e*P **P** **20 39 12.0 +2.7**
MDJ Mudanjiang 40.74 4 P **P** **20 39 21.8 +1.2**
MDJ pmax pmax
comp=Z,14nm,0.7s,mb4.9
MDJ pmax pmax
comp=Z,58nm,4.3s
MDJ Mudanjiang 40.74 4 *e*P **P** **20 39 21.9 +1.2**
comp=Z,8.9nm,0.6s,mb4.8
ARMA Armidale 41.88 146 *e*P **P** **20 39 31.7 +1.5**
LSA Lhasa 41.92 312 *e*P **P** **20 39 33.1 +2.5**
comp=Z,2.3nm,0.6s,mb4.1
TOO Toolangi 44.95 158 *e*P **P** **20 39 56.4 +1.6**
SONM Songino Array 47.02 342 P **P** **20 40 08.6 -2.3**
comp=Z,0.6nm,0.6s,mb3.5,baz=157,slow=9.4,SNR=2.9
PETK Petropavlovsk- 55.57 23 P **P** **20 41 16.1 +1.4**
comp=Z,5.4nm,0.7s,mb4.7,baz=210,slow=3.8,SNR=9.8
PETK LR LR 21 01 56.9
comp=Z,26nm,21.9s,baz=56,slow=32
MKAR Makanchi Array 57.13 125 P **P** **20 41 25.2 -0.7**
comp=Z,0.8nm,0.4s,mb4.1,baz=124,slow=7.5,SNR=13
MKAR ScP ScP 20 46 10.9 0.0
comp=Z,0.9nm,0.8s,baz=126,slow=4.5,SNR=6.3
MKAR LR LR 21 05 47.6
comp=Z,30nm,18.9s,baz=175,slow=36
ZALV Zalesovo Beam 60.23 333 P **P** **20 41 44.4 -2.9**
comp=Z,0.5nm,0.5s,mb3.8,baz=131,slow=8.0,SNR=2.4
KURK Kurchatov 61.34 328 *e*P **P** **20 41 53.7 -1.0**
comp=Z,3.6nm,0.6s,mb4.6
BVAR Borovoye Array 66.91 327 P **P** **20 42 30.5 -0.7**
comp=Z,0.5nm,0.6s,mb3.6,baz=69,slow=5.2,SNR=6.1
TIXI Tiksi 67.76 1 *e*P **P** **20 42 35.9 -0.3**
comp=Z,3.7nm,0.8s,mb4.3
CASY Casey 70.84 187 *e*P **P** **20 42 55.6 +0.3**
ABKAR Akbulak array 71.69 321 *e*P **P** **20 43 00.1 -0.7**
AKTK Aktyubinsk 73.21 322 P **P** **20 43 08.8 -1.0**
AKTO Aktyubinsk 73.21 322 P **P** **20 43 08.8 -1.0**
comp=Z,0.6nm,0.5s,mb3.7,baz=99,slow=9.2,SNR=4.7
KDAK Kodiak Island 82.14 32 P **P** **20 44 01.1 +1.9**
comp=Z,8.6nm,0.8s,mb4.7,baz=280,slow=11,SNR=3.5
MAW Mawson 83.63 200 P **P** **20 44 07.2 +0.5**
comp=Z,1.7nm,0.6s,mb4.0,baz=67,slow=7.7,SNR=3.7
COLD Coldfoot 84.04 23 *e*P **P** **20 44 11.0 +2.1**
comp=Z,6.8nm,1.0s,mb4.4
MCK McKinley 84.35 26 *e*P **P** **20 44 11.9 +1.4**
ARCES ARCESS Array B 90.15 340 P **P** **20 44 37.8 -0.6**
comp=Z,3.4nm,0.6s,mb4.6,baz=79,slow=7.5,SNR=12
FINES FINESS Array B 91.46 332 P **P** **20 44 43.9 -0.8**
comp=Z,0.6nm,0.5s,mb4.0,baz=57,slow=7.0,SNR=5.7
HFS Hagfors 97.65 332 P **P** **20 45 12.4 -0.6**
comp=Z,0.7nm,0.6s,mb4.4,baz=121,slow=5.6,SNR=3.2
NB2 NORSAR Subarra 98.43 333 P **P** **20 45 15.9 -0.6**
comp=Z,1.5nm,0.7s,mb4.6,baz=67,slow=4.6
NOA NORSAR Array B 98.43 333 P **P** **20 45 15.8 -0.7**
comp=Z,1.7nm,0.8s,mb4.6,baz=66,slow=4.6,SNR=5.1
NOA NORSAR Array B 98.43 333 P **P** **20 45 15.8 -0.7**
YKA Yellowknife Ar 99.66 24 P Pdif 20 45 22.2 +0.2
comp=Z,0.3nm,0.9s,baz=300,slow=4.7,SNR=3.5
PDAR Pinedale Array 111.68 41 PKKPab PKKPab 21 01 15.5 -1.8
comp=Z,0.5nm,0.7s,baz=123,slow=3.3,SNR=4.6
TXAR Lajitas Array 122.02 52 PKP PKPdf 20 50 34.5 +1.1
comp=Z,0.2nm,0.6s,baz=187,slow=1.0,SNR=3.4
TXAR Lajitas Array 122.02 52 PKP PKPdf 20 50 34.5 +1.1
TORD Torodi Ar. Bea 122.31 288 PKP PKPdf 20 50 33.4 -0.8
comp=Z,0.8nm,0.7s,baz=82,slow=1.4,SNR=7.5
WVT Waverly 129.14 36 *e*P Pdif 20 47 33.3 +0.1
CPUP Villa Florida 157.38 172 PKPab PKPab 20 52 07.5 +1.1
comp=Z,2.3nm,0.8s,baz=203,slow=6.4,SNR=4.7

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*ISCJB **08** 21:06:19.2±1.3, 15°.92S±0°.07×173°.94W±0°.07, h85^{km}±11^{km}, mb4.2/29, Error ellipse: s-maj=14.2km s-min=8.0km az=136.8*
*NEIC **08** 21:06:21.9±0.9, 15°.98S×173°.88W, h98^{km}±8^{km}, mb4.4/19, Error ellipse: s-maj=8.7km s-min=5.0km az=143.0*
*IDC **08** 21:06:21.8±2.6, 16°.00S×173°.87W, h96^{km}±23^{km}, mb4.0/12, mb1 4.2/13, mb1mx4.1/19, mbtmp4.0/13, Error ellipse: s-maj=25.7km s-min=13.8km az=140.0*
ISC 08 21:06:20.9±1.2, 15°.96S±0°.07×173°.89W±0°.07, h87^{km}±10^{km}, n88, σ0^{s}.66/50, mb4.2/29, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.88**	**45**	P	**Pn**	**21 07 06.3**	**+1.5**
17nm,0.3s,baz=26,slow=3.3,SNR=23							

AFI				S		Sn	21 07 37.0	-1.6
	43nm,0.3s,baz=233,slow=20,SNR=3.7							
RAR	Rarotonga	14.36	113	*e*Pn		Pn	21 09 40.1	0.0
DZM	Mont Dzumac	19.56	249	*e*LR		LR	21 15 23.3	
	83nm,26.8s							
PPT	Papeete	23.33	97	*e*LR		LR	21 16 22.6	
	134nm,35.0s							
URZ	Urewera	23.59	198	P		P	21 11 24.6	+0.8
	5.4nm,0.3s,mb4.3,baz=300,slow=6.2,SNR=7.2							
URZ				S		S	21 15 30.3	-1.4
	10nm,1.0s,baz=25,slow=19,SNR=3.1							
URZ	Urewera	23.59	198	*e*P		P	21 11 24.0	+0.2
	11nm,0.4s,mb4.5							
EIDS	Eidsvold	34.00	248	P		P	21 12 56.2	-0.4
ARMA	Armidale	34.65	239	*e*P		P	21 13 03.2	+1.0
TAU	Tasmania Unive	42.59	223	*e*P		P	21 14 07.7	-0.7
	7.5nm,0.7s,mb4.5							
STKA	Stephens Creek	43.35	240	P		P	21 14 14.8	+0.1
	4.1nm,0.8s,mb4.2,baz=57,slow=11,SNR=6.4							
STKA	Stephens Creek	43.35	240	*e*P		P	21 14 14.5	-0.2
	0.6nm,0.5s,mb3.6							
MIDW	Midway	44.04	356	P		P	21 14 20.4	+0.2
WB2	Warramunga Arr	49.25	257	*e*P		P	21 15 00.9	-0.2
WRAB	Tennant Creek	49.25	257	*e*P		P	21 15 01.2	+0.1
	1.8nm,0.4s,mb4.3							
WRA	Warramunga Arr	49.26	257	P		P	21 15 00.5	-0.7
	1.6nm,0.5s,mb4.2,baz=91,slow=6.7,SNR=36							
ASAR	Alice Springs	49.49	252	P		P	21 15 02.3	-0.6
	4.2nm,0.5s,mb4.6,baz=88,slow=8.0,SNR=90							
FITZ	Fitzroy Crossi	57.64	258	*e*P		P	21 16 02.5	-0.1
	1.4nm,0.5s,mb4.2							
RPN	Rapa Nui	60.51	112	P		P	21 16 21.3	-0.9
SBA	Scott Base	62.66	185	*e*P		P	21 16 37.6	+1.7
	6.0nm,0.8s,mb4.6							
MBWA	Marble Bar	62.76	254	*e*P		P	21 16 37.2	-0.3
NWAO	Narrogin (SRO)	63.94	241	P		P	21 16 44.2	-0.9
PETK	Petropavlovsk-	73.02	343	P		P	21 17 41.7	+0.7
	3.0nm,0.8s,mb4.2,baz=127,slow=9.1,SNR=4.8							
YULB	Yu-li	74.44	300	*e*P		P	21 17 49.8	-0.3
TPUB	Ta-pu	74.96	300	*e*P		P	21 17 52.7	-0.4
NVAR	Mina Array Bea	75.06	42	P		P	21 17 53.8	+0.5
	3.4nm,0.8s,mb4.1,baz=224,slow=9.0,SNR=9.3							
MOD	Modoc	75.85	38	*e*P		P	21 17 58.1	+0.4
	7.9nm,1.1s,mb4.4							
MOD				*e*PcP		PcP	21 18 09.9	0.0
KSRS	Korea Array	76.23	316	P		P	21 18 00.3	+0.3
	0.9nm,0.6s,mb3.6,baz=137,slow=9.1,SNR=3.7							
KSM	Kuching	76.77	275	*e*P		P	21 18 04.5	+0.8
KSM				*e*PcP		PcP	21 18 14.7	0.0
N12A	Clover Valley,	78.50	41	*e*P		P	21 18 12.9	+0.3
	7.4nm,1.0s,mb4.4							
MSU	Marysvale	79.15	45	*e*P		P	21 18 17.5	+1.2
	1.6nm,0.7s,mb4.0							
MSU				*e*PcP		PcP	21 18 24.9	+0.5
HVU	Hansel Valley	80.43	42	*e*P		P	21 18 22.4	-0.7
	2.9nm,0.8s,mb4.2							
TXAR	Lajitas Array	81.31	56	P		P	21 18 28.4	+0.3
	2.5nm,0.8s,mb4.1,baz=210,slow=7.2,SNR=15							
ANMO	Albuquerque	81.52	50	*e*P		P	21 18 29.3	+0.3
	6.7nm,1.2s,mb4.3							
MCK	McKinley	81.76	11	*e*P		P	21 18 29.3	-0.3
REDW	Red Top Meadow	82.46	41	*e*P		P	21 18 34.0	+0.3
	7.0nm,1.2s,mb4.4							
BSMT	Bassoo Peak	82.49	36	P		P	21 18 33.3	-0.5
	2.5nm,1.0s,mb4.0							
IMW	Indian Meadow	82.68	40	*e*P		P	21 18 35.2	+0.3
	10nm,1.1s,mb4.6							
PDAR	Pinedale Array	82.99	42	P		P	21 18 36.2	-0.3
	5.7nm,0.8s,mb4.5,baz=236,slow=2.4,SNR=37							
COLA	College	83.00	11	*e*P		P	21 18 35.9	-0.1
	9.7nm,0.9s,mb4.6							
SMCO	Snowmass	83.03	46	*e*P		P	21 18 37.6	+0.7
	3.3nm,0.7s,mb4.3							
SDCO	Great Sand Dun	83.44	48	*e*P		P	21 18 38.0	-0.9
	2.7nm,1.0s,mb4.0							
DAWY	Dawson	84.08	14	*e*P		P	21 18 41.1	-0.5
RLMT	Red Lodge	84.32	40	*e*P		P	21 18 43.4	+0.1
	4.7nm,1.0s,mb4.3							
COLD	Coldfoot	84.77	9	*e*P		P	21 18 45.2	+0.2
	2.8nm,0.9s,mb4.2							
MAW	Mawson	87.12	199	P		P	21 18 56.7	-0.2
	3.7nm,0.7s,mb4.4,baz=198,slow=4.0,SNR=7.6							
MAW	Mawson	87.12	199	*e*P		P	21 18 57.0	+0.2
INK	Inuvik	88.92	14	P		P	21 19 05.0	-0.2
	0.8nm,0.9s,mb3.7,baz=233,slow=6.3,SNR=2.6							
INK	Inuvik	88.92	14	*e*P		P	21 19 04.6	-0.5
YKA	Yellowknife Ar	90.79	24	P		P	21 19 13.6	-0.4
	0.9nm,1.0s,mb3.9,baz=235,slow=4.5,SNR=10							
ULN	Ulaanbaatar	94.54	318	P		P	21 19 32.2	+0.6
AML	Almayashu	117.10	309	*e*PKPdf		PKPdf	21 24 55.9	-0.1
BRVK	Borovoye	118.09	322	*e*PKPdf		PKPdf	21 24 57.2	-0.4
ARCES	ARCESS Array B	125.09	352	PKP		PKPdf	21 25 09.9	-0.6
	3.2nm,0.7s,baz=32,slow=4.8,SNR=7.0							
FINES	FINESS Array B	132.38	347	PKP		PKPdf	21 25 24.8	+0.1
	0.9nm,0.6s,baz=343,slow=6.0,SNR=6.0							
MALT	Malatya	143.92	314	PKPdf		PKPdf	21 25 44.7	-1.9
CLL	Collm	144.31	353	*e*PKPdf		PKPdf	21 25 45.0	-1.8
KECS	Kecovo	145.49	343	*e*PKP		PKPdf	21 25 50.0	+1.1
BAIF	Baives	145.95	2	*e*PKP1		PKPbc	21 25 50.7	+0.2
BR131	Keskin Array S	146.29	320	*e*PKPdf		PKPdf	21 25 51.1	+0.6
BRTR	Keskin Array B	146.29	320	PKPbc		PKPbc	21 25 52.0	+0.2
	2.2nm,0.8s,baz=103,slow=2.8,SNR=9.7							
GERES	GERESS Array B	146.62	351	PKPbc		PKPbc	21 25 52.5	0.0
	0.8nm,0.7s,baz=31,slow=3.1,SNR=10.0							
FLN	La Foliniere	146.84	8	*e*PKP1		PKPbc	21 25 52.2	-0.9
SGMF	Saint Gilles	147.01	11	*e*PKP1		PKPbc	21 25 52.6	-1.0
	33nm,1.2s							
LDF	La Druitiere	147.06	8	*e*PKP1		PKPbc	21 25 52.8	-0.9
GRR	Gorron	147.16	9	*e*PKP1		PKPbc	21 25 53.3	-0.7
	13nm,0.8s							
QUIF	Quistinic	147.23	12	*e*PKP1		PKPbc	21 25 54.0	-0.2
CDF	Champ du Feu	147.62	359	*e*PKP1		PKPbc	21 25 55.0	-0.3
	11nm,0.9s							
HAU	Haudompre	148.04	360	*e*PKP1		PKPbc	21 25 56.1	-0.3
	12nm,0.8s							
LOR	Lormes	148.73	3	*e*PKP1		PKPbc	21 25 57.9	-0.3
	8.7nm,0.8s							
SSF	Saint Saulge	148.91	3	*e*PKP1		PKPbc	21 25 58.5	-0.2
	15nm,0.9s							
MFF	Saint Martin d	149.01	8	*e*PKP1		PKPbc	21 25 58.2	-0.7
AVF	Avril sur Loir	149.18	4	*e*PKP1		PKPbc	21 25 58.8	-0.6
	4.4nm,0.7s							
SMF	Signal de Mont	149.35	3	*e*PKP1		PKPbc	21 25 59.2	-0.6
	16nm,1.2s							
BGF	Bois d'Agland	149.37	4	*e*PKP1		PKPbc	21 25 59.4	-0.5
	8.7nm,0.8s							
CABF	La Chapelle	149.44	0	*e*PKP1		PKPbc	21 26 00.4	+0.4
	21nm,1.0s							
TCF	Toulx Ste Croi	149.59	5	*e*PKP1		PKPbc	21 25 59.8	-0.6
RJF	Les Rejaudoux	150.49	7	*e*PKP1		PKPbc	21 26 02.1	-0.5
LPL	La Plagne	150.53	359	*e*PKP1		PKPbc	21 26 03.3	+0.6
	7.5nm,0.8s							
LPG	La Plagne	150.55	359	*e*PKP1		PKPbc	21 26 03.6	+0.9
	8.2nm,0.9s							
LFF	La Frestale	150.76	8	*e*PKP1		PKPbc	21 26 02.8	-0.5
	14nm,0.8s							
CAF	Calviac	150.92	6	*e*PKP1		PKPbc	21 26 03.3	-0.3
	5.2nm,0.8s							
ORIF	Oris-en-Rattie	151.13	0	*e*PKP1		PKPbc	21 26 04.2	+0.1
	6.9nm,0.8s							
VIVF	Saint-Julien-l	151.17	2	*e*PKP1		PKPbc	21 26 04.2	0.0
	7.7nm,0.9s							
MBDF	Montbardon	151.32	359	*e*PKP1		PKPbc	21 26 04.5	-0.1
	8.5nm,0.8s							
LASF	Ste Croix	151.91	3	*e*PKP1		PKPbc	21 26 06.0	+0.1
	11nm,0.9s							
SMRF	Simiane la Rot	152.07	1	*e*PKP1		PKPbc	21 26 06.6	+0.3
	8.8nm,0.9s							
FRF	La Foret Royal	152.49	359	*e*PKP1		PKPbc	21 26 07.5	+0.2
TORD	Torodi Ar. Bea	174.89	123	PKP		PKPdf	21 26 19.5	-2.1
	0.6nm,0.8s,baz=247,slow=2.0,SNR=3.6							
TORD				PKPab		PKPab	21 27 55.2	-1.4
	2.1nm,0.9s,baz=258,slow=2.9,SNR=8.6							

*ISCJB **08** 21:11:10.9±0.4,49°.84N±0°.03×18°.43E±0°.03,h0km, Error ellipse: s-maj=4.6km s-min=2.6km az=5.1*
*CSEM **08** 21:11:11.9±0.2,49°.79N×18°.51E,h1km,ML2.7/5, Error ellipse: s-maj=3.7km s-min=2.6km az=175.0*
*IPEC **08** 21:11:12.5±0.1,49°.82N×18°.53E,h8km±1km,ML1.7/4, Error ellipse: s-maj=2.0km s-min=0.7km az=162.0*
*VIE **08** 21:11:12.7±0.9,49°.69N×18°.45E,h0km,mb1.9/2,ML2.2/3, Error ellipse: s-maj=6.0km s-min=3.8km az=87.0 21 km SE of Ostrava Suspected Mining induced.*

*PRU **08** 21:11:13.1,49°.85N×18°.45E,h0km*
ISC 08 21:11:11.8±0.4,49°.84N±0°.03×18°.47E±0°.03,h0km,n31,
σ1811/54,3C-2D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.21	269	*e*PG	Pg	21 11 17.4	+1.6
OKC				*e*SG	Sg	21 11 20.5	+2.0
	comp=Z,137nm,0.6s						
OKC	Ostrava-Krasne	0.21	269	*e*Pg	Pg	21 11 16.9	+1.1
	baz=95						
RAC	Raciborz	0.30	324	*e*Sg	Sg	21 11 25.6	+4.1
MORC	Moravsky Berou	0.60	264	*e*Pg	Pg	21 11 24.2	+0.8
	baz=86						
MORC				*e*Sg	Sg	21 11 33.2	+2.0
	comp=Z,13nm,0.1s,baz=86						
OJC	Ojcow	0.94	66	*e*Pg	Pg	21 11 29.4	-0.4
OJC				*e*Sg	Sg	21 11 41.9	0.0
OJC	Ojcow	0.94	66	*e*Pg	Pg	21 11 29.4	-0.4
	baz=244						
OJC				*e*Sg	Sg	21 11 41.9	0.0
	baz=244						
JAVC	Velka Javorina	1.11	208	*e*Pg	Pg	21 11 34.4	+1.3
	baz=30						
KOLL	Kolacno	1.26	182	*e*PN	Pn	21 11 35.9	-0.8
KOLL	Kolacno	1.26	182	*e*Pn	Pn	21 11 35.9	-0.8
NIE	Niedzica	1.27	109	*e*Pg	Pg	21 11 35.9	-0.2
NIE				*e*Sg	Sg	21 11 54.1	+1.5
NIE	Niedzica	1.27	109	*e*Pg	Pg	21 11 35.9	-0.2
NIE				*e*Sg	Sg	21 11 54.1	+1.5
VRAC	Vranov	1.33	247	*e*Pg	Pg	21 11 37.0	-0.3
	baz=67						
VRAC				*e*Sg	Sg	21 11 55.5	+0.9
	comp=Z,17nm,0.2s,baz=67						
VYHS	Vyhne	1.37	170	*e*PG	Pg	21 11 37.1	-0.9
VYHS	Vyhne	1.37	170	*e*Pg	Pg	21 11 37.1	-0.9
DPC	Dobruska-Polom	1.47	291	*e*PG	Pg	21 11 39.8	-0.2
DPC				*e*SG	Sg	21 12 00.4	+1.3
	comp=Z,6.9nm,0.4s						
DPC	Dobruska-Polom	1.47	291	*e*Pn	Pn	21 11 39.7	+0.1
	baz=110						
DPC				*e*Sg	Sg	21 12 00.6	+1.5
	baz=110						
SMOL	Smolenice	1.49	208	*e*PN	Pn	21 11 39.7	-0.1
SMOL				*e*SN	Sn	21 11 59.2	-0.8
SMOL	Smolenice	1.49	208	*e*Pn	Pn	21 11 39.7	-0.1
SMOL				*e*Sn	Sn	21 11 59.2	-0.8
KRUC	Moravsky	1.56	241	*e*Pn	Pn	21 11 40.8	0.0
	baz=61						
KRUC				*e*Sg	Sg	21 12 02.0	+0.1
	comp=Z,7.2nm,0.2s,baz=61						
UPC	Upice	1.71	294	*e*PG	Pg	21 11 43.8	-0.9
UPC				*e*SG	Sg	21 12 07.7	+0.8
STHS	Stebnicka Huta	1.85	102	*e*PN	Pn	21 11 47.2	+2.4
STHS				*e*SN	Sn	21 12 12.7	+3.8
STHS	Stebnicka Huta	1.85	102	*e*Pn	Pn	21 11 47.2	+2.4
KECS	Kecovo	1.90	135	*e*PN	Pn	21 11 44.5	-0.9
KECS				*e*SN	Sn	21 12 10.2	+0.3
PRU	Pruhonice	2.54	275	*e*PG	Pg	21 11 58.6	-1.9
PRU				*e*SG	Sg	21 12 33.9	+0.5
	comp=Z,2.9nm,0.4s						
CSNA	Conrad Observa	2.58	223	⇓*i*Pn	Pn	21 11 54.2	-0.5
CSNA				⇑*i*Sg	Sg	21 12 35.2	+0.7
	comp=Z,1.5nm,0.2s						
CSNA	Conrad Observa	2.58	223	Pn	Pn	21 11 54.2	-0.5
CSNA				Sg	Sg	21 12 35.2	+0.7
	comp=Z,1.5nm,0.2s						
PVCC	Panska Ves	2.60	287	*e*SG	Sg	21 12 34.7	-0.6
BRG	Berggiesshubel	3.08	291	PG	Pg	21 12 08.8	-1.9
BRG				SG	Sg	21 12 48.2	-2.4
	comp=Z,3.8nm,0.7s						
KHC	Kasperske Hory	3.27	259	*e*PN	Pn	21 12 04.3	+0.1
KHC				*e*PG	Pg	21 12 11.9	-2.5
KHC				*e*SG	Sg	21 12 56.8	+0.1
	comp=Z,3.9nm,0.4s						
MOA	Molln	3.42	236	⇑*i*Pn	Pn	21 12 05.6	-0.6
MOA				⇓*i*Pg	Pg	21 12 16.1	-1.2
MOA				⇑*i*Sg	Sg	21 13 00.7	-0.8
	comp=Z,2.7nm,0.4s						
MOA	Molln	3.42	236	Pn	Pn	21 12 05.6	-0.7

*IDC **08** 21:12:15.2±1.0,36°.20N×142°.28E,h0km,mb3.6/8, mb1 3.7/12,mb1mx3.6/28,mbtmp3.7/12,ML3.6/4, Error ellipse: s-maj=25.9km s-min=17.0km az=85.0*
*ISCJB **08** 21:12:17.9±0.5,36°.31N±0°.03×142°.26E±0°.05,h33km, mb3.8/14,Error ellipse: s-maj=5.7km s-min=4.5km az=9.2*
*JMA **08** 21:12:17.9±0.2,36°.31N×142°.16E,h70km,M3.4*
*NEIC **08** 21:12:21.7±0.6,36°.34N×142°.02E,h35km,mb4.2/5, Error ellipse: s-maj=13.4km s-min=9.7km az=59.0*
ISC 08 21:12:20.5±0.5,36°.32N±0°.03×142°.11E±0°.06,h35km,n42,
σ1826/54,mb3.8/14,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.19	239	P	Pn	21 12 39.4	-1.2
CHOJ				*e*S	Sn	21 12 56.6	+1.1
JHO	Hitachi	1.28	284	P	Pn	21 12 40.5	-1.3
JHO				*e*S	Sn	21 12 56.6	-1.1
ONAJ	Iwakimizuishiy	1.31	307	P	Pn	21 12 41.1	-1.2
JFK	Kawauchi	1.44	317	P	Pn	21 12 42.5	-1.6
JFK				S	Sn	21 13 01.4	-0.4
JFT	Otama	1.86	311	P	Pn	21 12 49.5	-0.3
JFT				*e*S	Sn	21 13 13.2	+1.1
JMM	Marumori	1.87	326	P	Pn	21 12 48.3	-1.7
BSO1	Boso 1	1.90	209	P	Pn	21 12 48.7	-1.7
BSO1				S	Sn	21 13 13.2	0.0
BSO3	Boso 3	2.00	221	P	Pn	21 12 50.3	-1.5
BSO3				*e*S	Sn	21 13 16.0	+0.4
JAG	Ashikaga	2.15	274	P	Pn	21 12 52.8	-1.0
JIO	Ouri	2.22	344	P	Pn	21 12 54.3	-0.4
JRY	Ryogami san	2.62	264	P	Pn	21 12 59.4	-0.8
JOD2	Odawara 2	2.68	248	P	Pn	21 13 00.9	-0.1
JMK	Ichinoseki	2.72	345	P	Pn	21 13 00.5	-1.2
JYK	Kaneyama	2.94	332	P	Pn	21 13 04.3	-0.4
MJAR	Matsushiro Arr	3.16	275	Pn	Pn	21 13 07.8	+0.1
	5.1nm,0.3s,baz=102,slow=8.8,SNR=32						
MJAR				Sn	Sn	21 13 47.5	+3.4
	3.4nm,0.3s,baz=95,slow=19,SNR=5.3						
MAJO	Matsushiro	3.16	275	*e*Pn	Pn	21 13 08.2	+0.5
MAJO				*e*Sn	Sn	21 13 47.8	+3.7
MAT	Matsushiro	3.16	275	P	Pn	21 13 08.0	+0.3
MAT				S	Sn	21 13 48.5	+4.4
JHJ	Hachijo jima 2	3.73	212	Pn	Pn	21 13 13.3	-2.2
	7.3nm,0.3s,baz=64,slow=21,SNR=17						
JHJ				Sn	Sn	21 13 54.5	-3.6
	40nm,0.3s,baz=244,slow=22,SNR=9.6						
ASAJ	Asahikawa	7.80	3	Pn	Pn	21 14 11.3	-0.1
	1.4nm,0.3s,baz=155,slow=21,SNR=9.3						
ASAJ				Sn	Sn	21 15 36.8	-1.6
	0.6nm,0.3s,baz=351,slow=16,SNR=2.9						
CBIJ	Chichi jima	9.20	180	Pn	Pn	21 14 27.7	-2.9
	2.2nm,0.3s,baz=197,slow=17,SNR=9.4						
CBIJ				Sn	Sn	21 16 00.8	-12
	3.3nm,0.3s,baz=240,slow=20,SNR=4.3						
BJT	Baijiatuau	20.71	288	P	P	21 16 58.2	+0.6
GUMO	Guam	22.77	173	P	P	21 17 22.7	+2.8
ENH	Enshi	27.84	267	*e*P	P	21 18 05.9	-0.7
	5.9nm,0.7s,mb4.3						
ULN	Ulaanbaatar	28.22	305	*e*P	P	21 18 10.3	+0.5
	0.8nm,0.3s,mb3.8						
SONM	Songino Array	28.65	305	P	P	21 18 14.6	+1.0
	1.2nm,0.5s,mb3.9,baz=97,slow=11,SNR=6.9						
TLY	Talaya	31.22	312	*e*P	P	21 18 37.4	+1.0
	2.0nm,0.5s,mb4.2						
GTA	Gaotai	33.32	288	*e*P	P	21 18 55.9	+1.0
GTA				pP	pP	21 19 00.6	-4.4
GTA				sP	sP	21 19 03.5	-5.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
CHTO	Chiang Mai	41.67	257	P	P	21 20 06.3	+0.6
CMAR	Chiang Mai Arr	41.87	257	P	P	21 20 08.8	+1.4
	comp=Z,0.2nm,0.3s,mb3.2,baz=50,slow=8.4,SNR=2.6						
ZALV	Zalesovo Beam	42.81	313	P	P	21 20 15.4	+0.8
	comp=Z,0.4nm,0.4s,mb3.5,baz=72,slow=6.2,SNR=2.7						
MKAR	Makanchi Array	44.98	303	P	P	21 20 34.6	+2.5
	comp=Z,1.3nm,0.7s,mb3.9,baz=89,slow=9.0,SNR=10						
KURK	Kurchatov	46.82	309	*e*P	P	21 20 46.9	+0.4
	comp=Z,2.0nm,0.8s,mb4.1						
MCK	McKinley	48.92	33	P	P	21 21 04.7	+2.1
BVAR	Borovoye Array	51.47	313	P	P	21 21 22.6	+0.5
	comp=Z,0.2nm,0.4s,mb3.4,baz=50,slow=9.8,SNR=2.4						
AML	Almayashu	52.04	299	*e*P	P	21 21 27.9	+1.4
	comp=Z,2.1nm,0.9s,mb4.1						
FITZ	Fitzroy Crossi	56.32	199	P	P	21 22 00.3	+2.5
WB2	Warramunga Arr	56.44	189	P	P	21 22 01.3	+2.7
WRA	Warramunga Arr	56.44	189	P	P	21 21 57.5	-1.1
	comp=Z,0.6nm,0.8s,mb3.7,baz=7.8,slow=7.7,SNR=7.9						
ARU	Arti	57.27	319	*e*P	P	21 22 03.9	-0.3
ASAR	Alice Springs	60.16	189	P	P	21 22 23.9	-0.6
	comp=Z,0.2nm,0.6s,mb3.4,baz=16,slow=7.8,SNR=3.1						
MBWA	Marble Bar	60.96	204	*e*P	P	21 22 31.8	+1.8
YKA	Yellowknife Ar	64.14	30	P	P	21 22 51.7	+0.8
	comp=Z,0.2nm,0.6s,mb3.4,baz=306,slow=7.3,SNR=3.6						

*NIED **08** 21:18:00,36°.30N×142°.20E,h11km,Mw4.9 Best double couple: M0=2.73000×10^16 NP1:φs=1.00000°,δ79.00000°, λ72.00000°. NP2:φs=241.00000°,δ21.00000°,λ148.00000°.*
*IDC **08** 21:18:38.2±0.5,36°.24N×142°.14E,h0km,mb4.7/26, mb1 4.8/30,mb1mx4.8/33,mbtmp4.7/30,ML4.4/4,MS4.3/23, Ms1 4.3/23,ms1mx4.2/31,Error ellipse: s-maj=13.4km s-min=11.7km az=118.0*
*JMA **08** 21:18:40.9±0.2,36°.32N×142°.16E,h71km,M5.0*
JMA Felt II J1.
*ISCJB **08** 21:18:42.5±0.1,36°.27N±0°.02×142°.00E±0°.02,h35km, mb5.0/214,MS4.6/65,Error ellipse: s-maj=3.3km s-min=2.0km az=164.9*
*DJA **08** 21:18:43,36°.25N×141°.80E,h10km,Mw5.4/9*
*GCMT **08** 21:18:43.3±0.4,36°.25N×142°.46E,h27km±1km,MW5.0/57, Moment Tensor Solution. s20,c27; s57,c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.98±.18; Mθθ-0.10±.10; Mφφ-1.88±.12; Mrθ0.70±.18; Mrφ-1.19±.07; Mθφ2.60±.23; Best double couple: M0=3.50200×10^16 NP1:φs220.00000°,δ21.00000°,λ112.00000°. NP2: φs17.00000°,δ71.00000°,λ82.00000°. Principal axes: T 3.2910, Plg64.0000°, Azm274.0000°; N 0.4220, Plg8.0000°, Azm20.0000°; P -3.7130, Plg25.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 21:18:43.4±1.3,36°.28N×142°.03E,h32km±9km,mb5.0/116, MS4.7/4,MW4.9(NIED) Error ellipse: s-maj=4.4km s-min=3.0km az=147.0*
NEIC Felt at Tokyo and Yokosuka. Recorded [2 JMA] in Ibaraki and [1 JMA] in Fukushima, Miyagi and Saitama.
*MOS **08** 21:18:44.0±0.8,36°.68N×142°.00E,h33km,mb5.3/89, MS4.8/27,Error ellipse: s-maj=7.3km s-min=3.9km az=110.1*
*BJI **08** 21:18:44.4,36°.52N×141°.53E,h30km,mB5.0/32,mb5.2/59, Ms4.8/67,Ms7 4.7/55*
*SZGRF **08** 21:18:47.4,37°.40N×142°.35E,h34km,mb5.0,MS4.5,Off east coast of Honshu, Japan*
ISC 08 21:18:44.4±0.1,36°.30N±0°.02×141°.98E±0°.02,h37km,
h37km±.7km:pP-P,n764,σ0°80/776,mb5.0/214,MS4.6/65,
198C-104D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.08	237	⇑P	Pn	21 19 02.4	-0.7
CHOJ				*e*S	Sn	21 19 18.5	+1.6
JHO	Hitachi	1.18	286	P	Pn	21 19 03.3	-1.1
JHO				S	Sn	21 19 20.9	+1.7
ONAJ	Iwakimizuishiy	1.24	311	P	Pn	21 19 04.1	-1.2
JFK	Kawauchi	1.39	321	⇑P	Pn	21 19 05.7	-1.6
JSB	Shiboa	1.79	293	⇑P	Pn	21 19 13.1	+0.4
JFT	Otama	1.79	313	⇑P	Pn	21 19 12.8	-0.1
JMM	Marumori	1.83	329	⇑P	Pn	21 19 11.5	-1.9
BSO1	Boso 1	1.83	207	P	Pn	21 19 11.8	-1.6
BSO3	Boso 3	1.91	219	P	Pn	21 19 13.6	-0.9
JAG	Ashikaga	2.04	274	⇑P	Pn	21 19 16.0	-0.3
JFY	Yanaizu	2.13	302	⇑P	Pn	21 19 17.6	+0.1
JIO	Ouri	2.21	347	⇑P	Pn	21 19 15.8	-2.8
JKT	Katashina	2.25	283	⇑P	Pn	21 19 19.7	+0.6
JYS	Shirataka	2.45	322	⇑P	Pn	21 19 21.5	-0.4
JRY	Ryogami san	2.51	264	⇑P	Pn	21 19 22.4	-0.2
JHK	Hiroka	2.56	293	⇑P	Pn	21 19 24.0	+0.6
JOD2	Odawara 2	2.57	247	⇑P	Pn	21 19 23.4	-0.1
JNS	Sasagawa	2.62	306	P	Pn	21 19 25.0	+0.9
JGK	Kuni	2.71	277	P	Pn	21 19 26.0

YSS	**Yuzh-Sakhalins**	**10.66**	**3**	⇑*i*P	**Pn**	**21 21 10.6**	**-3.9**
YSS				*e*S	**Sn**	**21 23 08.0**	**-4.6**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax			
	comp=N,80nm,1.1s						
YSS				smax			
	comp=E,70nm,1.1s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
YSS				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS	**Yuzh-Sakhalins**	**10.66**	**3**	*e*Pn	**Pn**	**21 21 14.0**	**-0.6**
	comp=Z,68nm,0.8s						
KSRS	**Korea Array**	**11.32 280**		P	**Pn**	**21 21 27.1**	**+3.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,2μm,18.4s						
KSRS	**Korea Array**	**11.32 280**		Pn	**Pn**	**21 21 27.1**	**+3.5**
	comp=Z,0.7nm,0.3s,baz=97,slow=13,SNR=58						
KSRS				LR	LR	21 25 51.6	
	comp=Z,2μm,18.4s,baz=107,slow=38						
INCN	**Inchon**	**12.35 280**		*e*Pn	**Pn**	**21 21 38.0**	**+0.4**
MDJ	**Mudanjiang**	**12.56 315**		*e*Pn	**Pn**	**21 21 40.0**	**-0.4**
	comp=Z,45nm,0.9s						
UGL	**Uglegorsk**	**12.77**	**0**	P	**Pn**	**21 21 48.0**	**+4.7**
UGL				pmax	pmax		
	comp=Z,36nm,0.4s						
UGL				MLR	MLR		
	comp=N,2μm,18.0s						
UGL				MLR	MLR		
	comp=E,5μm,18.0s						
HABR	**Khabarovsk**	**13.19 339**		*e*P	**Pn**	**21 21 46.0**	**-3.1**
HABR				*e*		21 24 12.0	
HABR				pmax	pmax		
	comp=Z,40nm,1.6s						
HABR				pmax	pmax		
	comp=N,32nm,1.2s						
HABR				pmax	pmax		
	comp=E,10.0nm,0.8s						
HABR				MLR	MLR		
	comp=Z,2μm,17.0s						
CN2	**Changchun**	**14.70 306**		*e*P	**Pn**	**21 22 08.0**	**-1.6**
CN2				*e*S	**Sn**	**21 24 43.4**	**-7.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,2μm,12.0s						
CN2				LR	LR		
	comp=E,2μm,12.0s						
CN2				LR	LR		
	comp=Z,3μm,14.0s						
KLR	**Kul'dur**	**14.93 333**		*e*P	**Pn**	**21 22 05.4**	**-7.2**
KLR				MLR	MLR		
	comp=N,3μm,13.0s						
KLR				MLR	MLR		
	comp=Z,6μm,13.0s						
JOW	**Kunigami**	**15.00 235**		Pn	**Pn**	**21 22 15.9**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=31,slow=11,SNR=16						
SNY	**Shenyang**	**15.31 297**		⇑P	**Pn**	**21 22 17.0**	**-0.7**
SNY				pmax	pmax		
	comp=Z,65nm,1.0s						
SNY				pmax	pmax		
	comp=Z,490nm,10.4s						
SNY				LR	LR		
	comp=N,2μm,12.0s						
SNY				LR	LR		
	comp=E,3μm,14.7s						
SNY				LR	LR		
	comp=Z,3μm,14.9s						
DL2	**Dalian**	**16.34 285**		⇑*i*P	**Pn**	**21 22 30.7**	**-0.2**
DL2				S	S	21 25 22.3	-20
DL2				pmax	pmax		
	comp=Z,30nm,0.9s						
DL2				pmax	pmax		
	comp=Z,200nm,7.1s						
DL2				LR	LR		
	comp=N,860nm,12.8s						
DL2				LR	LR		
	comp=E,1μm,14.0s						
DL2				LR	LR		
	comp=Z,2μm,14.6s						
SKR	**Severo-Kuril's**	**17.62**	**31**	*e*P	**Pn**	**21 22 48.5**	**+1.7**
SKR				pmax	pmax		
	comp=Z,180nm,1.0s						
SSE	**Sheshan**	**18.05 259**		P	**Pn**	**21 22 49.6**	**-2.7**
SSE				S	**S**	**21 26 01.1**	**-16**
SSE				pmax	pmax		
	comp=Z,41nm,0.7s						
SSE				pmax	pmax		
	comp=Z,230nm,9.1s						
SSE				LR	LR		
	comp=N,1μm,14.2s						
SSE				LR	LR		
	comp=E,2μm,14.2s						
SSE				LR	LR		
	comp=Z,2μm,13.1s						
NJ2	**Nanjing**	**19.59 264**		*e*P	**Pn**	**21 23 18.8**	**+8.0**
NJ2				pP	pP	21 23 22.8	+4.0
NJ2				sP	sP	21 23 25.4	+1.9
NJ2				PP		21 23 35.2	
NJ2				S	**S**	**21 26 53.5**	**+5.1**
NJ2				sS	sS	21 27 01.0	-2.5
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,110nm,7.6s						
NJ2				LR	LR		
	comp=N,2μm,17.1s						
NJ2				LR	LR		
	comp=E,2μm,15.4s						
NJ2				LR	LR		
	comp=Z,2μm,13.7s						
PEA0B	**Petropavlovsk-**	**20.11**	**28**	*e*Pn	**P**	**21 23 15.0**	**+0.2**
PETK	**Petropavlovsk-**	**20.11**	**28**	P	**P**	**21 23 13.3**	**-1.4**
	comp=Z,9.1nm,0.9s,baz=190,slow=8.4,SNR=8.2						
PET	**Petropavlovsk**	**20.42**	**30**	*e*P	**P**	**21 23 20.5**	**+2.4**
PET				*e*S	**S**	**21 27 05.1**	**+0.5**
PET				pmax	pmax		
	comp=Z,380nm,10.2s						
PET				pmax	pmax		
	comp=Z,61nm,1.2s						
PET				MLR	MLR		
	comp=Z,417nm,17.0s,MS3.9						
PET				MLR	MLR		
	comp=Z,610nm,20.5s						
PET	**Petropavlovsk**	**20.42**	**30**	*e*P	**P**	**21 23 17.8**	**-0.3**
	comp=Z,124nm,1.4s						
BJI	**Beijing**	**20.61 288**		P	**P**	**21 23 17.8**	**-2.5**
BJI				S	**S**	**21 27 02.7**	**-5.9**
BJI				pmax	pmax		
	comp=Z,49nm,2.0s						
BJI				pmax	pmax		
	comp=Z,220nm,3.4s						
BJI				LR	LR		
	comp=N,850nm,16.8s,MS4.5						
BJI				LR	LR		
	comp=E,1μm,14.3s,MS4.5						
BJI				LR	LR		
	comp=Z,650nm,16.8s,MS4.1						
BJT	**Baijiatuau**	**20.61 288**		*e*P	**P**	**21 23 19.5**	**-0.8**
HIA	**Hailar**	**20.75 316**		*e*P	**P**	**21 23 18.7**	**-3.0**
TATO	**Taipei**	**20.89 243**		P	**P**	**21 23 22.3**	**-1.2**
YHNB	**Yeheng**	**21.16 243**		*e*P	**P**	**21 23 20.8**	**-5.5**
	comp=Z,33nm,1.1s,mb4.6						
NACB	**Ninganchiao**	**21.31 241**		*e*P	**P**	**21 23 26.4**	**-1.6**
SSLB	**Suanglung**	**22.01 241**		*e*P	**P**	**21 23 33.0**	**-2.4**
	comp=Z,27nm,0.7s,mb4.8						
YULB	**Yu-li**	**22.02 240**		*e*P	**P**	**21 23 31.8**	**-3.8**
	comp=Z,32nm,0.9s,mb4.8						
TPUB	**Ta-pu**	**22.54 241**		*e*P	**P**	**21 23 38.0**	**-3.2**
	comp=Z,42nm,0.7s,mb5.0						
TWG	**Pinlang**	**22.55 239**		*e*P	**P**	**21 23 37.5**	**-3.7**
	comp=Z,25nm,0.5s,mb4.9						
QZH	**Quanzhou**	**23.03 247**		⇓*i*P	**P**	**21 23 44.7**	**-1.6**
QZH				sS	sS	21 28 06.1	-5.4
QZH				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.2						
QZH				LR	LR		
	comp=N,1μm,13.4s,MS4.7						
QZH				LR	LR		
	comp=E,660nm,11.3s,MS4.7						
QZH				LR	LR		
	comp=Z,2μm,18.0s						
NRGR	**Nerungri**	**23.45 336**		*e*P	**P**	**21 23 49.6**	**-0.7**
NRGR				S	**S**	**21 27 58.6**	**-2.1**
NRGR				smax			
	comp=N,16nm,0.4s						
CLNS	**Chul'man**	**23.54 336**		*e*P	**P**	**21 23 51.2**	**+0.1**
CLNS				*e**PP		21 24 01.6	
CLNS				*e*		21 24 20.5	
CLNS				*e*PPP		21 24 34.4	
CLNS				*e*S	**S**	**21 27 54.1**	**-8.0**
CLNS				*e*SS		21 28 45.7	
CLNS				pmax	pmax		
	comp=Z,119nm,1.0s,mb5.3						
CLNS				pmax	pmax		
	comp=N,109nm,1.4s						
CLNS				pmax	pmax		
	comp=E,36nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,42nm,0.8s,mb4.9						
CLNS				pmax	pmax		
	comp=N,17nm,0.8s						
CLNS				pmax	pmax		
	comp=E,50nm,1.1s						
CLNS				smax			
	comp=E,492nm,12.1s						
CLNS				smax			
	comp=N,747nm,13.8s						
CLNS				MLR	MLR		
	comp=Z,2μm,14.0s,MS4.7						
CLNS				MLR	MLR		
	comp=N,2μm,14.0s,MS4.7						
CLNS				MLR	MLR		
	comp=E,587nm,11.0s,MS4.7						
TIY	**Taiyuan**	**23.60 282**		*e*P	**P**	**21 23 53.4**	**+1.5**
TIY				pmax	pmax		
	comp=Z,310nm,7.8s						
TIY				LR	LR		
	comp=N,1μm,14.6s,MS4.9						
TIY				LR	LR		
	comp=E,3μm,15.4s,MS4.9						
TIY				LR	LR		
	comp=Z,3μm,14.8s,MS4.9						
WHN	**Wuhan**	**23.72 264**		⇑P	**P**	**21 23 51.4**	**-1.7**
WHN				pP		21 24 02.7	
WHN				S	**S**	**21 28 04.5**	**-1.1**
WHN				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.2						
WHN				LR	LR		
	comp=N,3μm,13.1s,MS5.1						
WHN				LR	LR		
	comp=E,4μm,16.9s,MS5.1						
WHN				LR	LR		
	comp=Z,5μm,15.6s,MS5.1						
HHC	**Hu-ho-hao-te**	**24.14 290**		*e*P	**P**	**21 23 54.9**	**-1.9**
HHC				pP		21 24 00.4	
HHC				sP	sP	21 24 03.8	-7.9
HHC				PP		21 24 29.8	
HHC				PcP	PcP	21 27 38.7	+1.7
HHC				S	**S**	**21 28 09.6**	**-2.7**
HHC				sS	sS	21 28 20.7	-8.7
HHC				ScP	ScP	21 31 14.5	+1.9
HHC				PcS	PcS	21 31 17.3	+0.6
HHC				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,190nm,6.4s						
HHC				LR	LR		
	comp=N,1μm,12.6s,MS4.6						
HHC				LR	LR		
	comp=E,910nm,13.9s,MS4.6						
HHC				LR	LR		
	comp=Z,1μm,14.8s,MS4.5						
BTO	**Baotou**	**25.32 290**		*e*P	**P**	**21 24 05.8**	**-1.7**
YAK	**Yakutsk**	**26.89 347**		*e*P	**P**	**21 24 20.0**	**-1.5**
YAK				*e*S	**S**	**21 28 54.7**	**-0.7**
YAK				*e*SS		21 29 55.1	
YAK				pmax	pmax		
	comp=N,148nm,1.3s						
YAK				pmax	pmax		
	comp=E,28nm,1.1s						
YAK				smax			
	comp=E,76nm,1.9s						
YAK				smax			
	comp=N,22nm,1.5s						
YAK				MLR	MLR		
	comp=Z,2μm,15.0s,MS4.8						
YAK				MLR	MLR		
	comp=N,1μm,14.0s,MS4.8						
YAK				MLR	MLR		
	comp=E,431nm,12.0s,MS4.8						
XAN	**Xi'an**	**27.05 275**		P	**P**	**21 24 22.6**	**-0.6**
XAN				PcP	PcP	21 27 46.6	+2.8
XAN				S	**S**	**21 28 49.1**	**-9.4**
XAN				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.5						
XAN				pmax	pmax		
	comp=Z,76nm,6.8s						
XAN				LR	LR		
	comp=N,790nm,16.0s,MS4.4						
XAN				LR	LR		
	comp=E,260nm,14.3s,MS4.4						
XAN				LR	LR		
	comp=Z,310nm,14.3s,MS4.0						
SEY	**Seymchan**	**27.43**	**10**	⇑*i*P	**P**	**21 24 26.5**	**+0.2**
ENH	**Enshi**	**27.74 267**		*e*P	**P**	**21 24 29.1**	**-0.3**
GZH	**Guangzhou**	**28.03 250**		P	**P**	**21 24 27.5**	**-4.6**
GZH				S	**S**	**21 29 00.7**	**-13**
GZH				LR	LR		
	comp=N,1μm,13.8s,MS4.7						
GZH				LR	LR		
	comp=E,630nm,12.2s,MS4.7						
GZH				LR	LR		
	comp=Z,1μm,14.0s,MS4.7						
ULN	**Ulaanbaatar**	**28.15 305**		*e*P	**P**	**21 24 33.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**28.15 305**		*e*P	**P**	**21 24 33.5**	**+0.6**
	comp=Z,64nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**28.15 305**		P	**P**	**21 24 34.3**	**+1.4**
ULN	SNR=42						
				P		21 24 34.3	
	SNR=42						
BOD	**Bodaibo**	**28.39 328**		*e*P	**P**	**21 24 34.2**	**-0.8**
BOD				pmax	pmax		
	comp=Z,72nm,1.5s,mb5.1						
SONM	**Songino Array**	**28.58 305**		P	**P**	**21 24 37.7**	**+1.0**
	comp=Z,61nm,0.9s,mb5.3,baz=104,slow=8.9,SNR=213						
SONM				LR	LR	21 36 14.4	
	comp=Z,458nm,20.1s,MS4.1,baz=72,slow=37						
LZH	**Lanzhou**	**30.65 281**		⇓P	**P**	**21 24 55.5**	**+0.3**
LZH				PP	PP	21 25 59.3	-5.4
LZH				S	**S**	**21 29 45.0**	**-10**
LZH				SS	SS	21 31 28.1	-38
LZH				pmax	pmax		
	comp=Z,88nm,1.0s,mb5.5						
LZH				pmax	pmax		
	comp=Z,280nm,4.0s						
LZH				LR	LR		
	comp=E,2μm,15.0s						
LZH				LR	LR		
	comp=Z,3μm,17.3s,MS5.0						
IRK	**Irkutsk**	**30.93 313**		*e*P	**P**	**21 24 57.4**	**-0.1**
IRK				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.1						
ZAK	**Zakamensk**	**31.08 309**		⇑*i*P	**P**	**21 24 59.7**	**+0.8**
ZAK				*e*		21 27 58.8	
ZAK				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.3						
TLY	**Talaya**	**31.16 312**		*e*P	**P**	**21 25 00.0**	**+0.5**
TLY				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.3						
TLY				MLR	MLR		
	comp=Z,1μm,14.0s,MS4.7						
TLY	**Talaya**	**31.16 312**		*e*P	**P**	**21 25 00.7**	**+1.2**
GYA	**Guiyang**	**31.56 262**		P	**P**	**21 25 02.8**	**-0.5**
GYA				PP	PP	21 26 05.0	-10
GYA				S	**S**	**21 29 58.4**	**-11**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,680nm,16.4s,MS4.5						
GYA				LR	LR		
	comp=E,560nm,17.0s,MS4.5						
GYA				LR	LR		
	comp=Z,850nm,16.7s,MS4.5						
CD2	**Chengdu**	**32.14 272**		P	**P**	**21 25 08.0**	**-0.4**
CD2				PP	PP	21 26 15.3	-6.0
CD2				S	**S**	**21 30 07.8**	**-11**
CD2				SS	SS	21 32 01.0	-36
CD2				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.3						
CD2				pmax	pmax		
	comp=Z,120nm,6.3s						
CD2				LR	LR		
	comp=N,1μm,17.2s						
CD2				LR	LR		
	comp=Z,1μm,14.9s,MS4.8						
MOY	**Mondy**	**32.76 311**		*e*P	**P**	**21 25 14.4**	**+0.8**
MOY				pmax	pmax		
	comp=Z,58nm,2.6s,mb5.0						
QIZ	**Qiongzhong**	**33.05 247**		P	**P**	**21 25 24.7**	**+8.2**
QIZ				S	**S**	**21 30 41.3**	**+8.4**
QIZ				sS	sS	21 30 56.0	+5.8
QIZ				SS	SS	21 32 52.3	-3.8
QIZ				LR	LR		
	comp=N,550nm,15.8s						
QIZ				LR	LR		
	comp=Z,510nm,14.8s,MS4.4						
QIZ	**Qiongzhong**	**33.05 247**		P	**P**	**21 25 16.2**	**-0.3**
GTA	**Gaotai**	**33.22 288**		P	**P**	**21 25 18.1**	**+0.3**
GTA				pP	pP	21 25 27.5	-0.8
GTA				sP	sP	21 25 31.5	-1.2
GTA				PP	PP	21 26 28.7	-4.5
GTA				PcP	PcP	21 28 00.4	+0.7
GTA				S	**S**	**21 30 29.4**	**-5.7**
GTA				sS	sS	21 30 50.1	-2.4
GTA				SS	SS	21 32 33.1	-26
GTA				pmax	pmax		
	comp=Z,120nm,0.7s,mb5.9						
GTA				pmax	pmax		
	comp=Z,290nm,6.9s						
GTA				LR	LR		
	comp=N,660nm,21.6s						
GTA				LR	LR		
	comp=E,800nm,16.2s						
GTA				LR	LR		
	comp=Z,750nm,16.5s						
BILL	**Bilibino**	**34.61**	**16**	⇓*i*P	**P**	**21 25 28.0**	**-1.4**
BILL				*i*	pP	21 25 38.6	-1.4
BILL				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
BILL				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.2						
BILL	**Bilibino**	**34.61**	**16**	*e*P	**P**	**21 25 27.8**	**-1.6**
	comp=Z,31nm,1.1s,mb5.2						
BILL				*e*	pP	21 25 38.6	-1.3
KMI	**Kunming**	**35.31 263**		P	**P**	**21 25 36.0**	**0.0**
KMI				PP	PP	21 26 56.5	0.0
KMI				PcP	PcP	21 28 10.7	+4.8
KMI				S	**S**	**21 30 56.5**	**-11**
KMI				PcS	PcS	21 31 54.1	+1.0
KMI				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.4						
KMI				pmax	pmax		
	comp=Z,180nm,3.1s						
KMI				LR	LR		
	comp=N,700nm,13.8s,MS4.8						
KMI				LR	LR		
	comp=E,1μm,14.4s,MS4.8						
KMI				LR	LR		
	comp=Z,1μm,15.0s,MS4.7						
TIXI	**Tiksi**	**36.07 353**		*e*P	**P**	**21 25 40.8**	**-1.2**
TIXI				*e*S	**S**	**21 31 18.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,1μm,16.0s,MS4.7						
TIXI	**Tiksi**	**36.07 353**		*e*P	**P**	**21 25 40.9**	**-1.1**
	comp=Z,38nm,1.6s,mb5.1						
KDM	**Kudat**	**37.20 224**		P	**P**	**21 25 51.3**	**-0.9**
SDKM	**Sandakan**	**38.05 223**		P	**P**	**21 25 60.0**	**+0.6**
KKM	**Kota Kinabalu**	**38.26 224**		P	**P**	**21 26 01.9**	**+0.7**
KKM	**Kota Kinabalu**	**38.26 224**		P	**P**	**21 26 01.0**	**-0.2**
CHTO	**Chiang Mai**	**41.56 257**		*e*P	**P**	**21 26 29.1**	**+0.5**
CHTO	**Chiang Mai**	**41.56 257**		P	**P**	**21 26 29.5**	**+0.9**
	SNR=11						
CHTO				P		21 26 29.5	
	SNR=11						
WMQ	**Urumqi**	**41.58 298**		P	**P**	**21 26 30.0**	**+1.5**
WMQ				PP	PP	21 28 08.6	+3.8
WMQ				PcP	PcP	21 28 29.5	+4.4
WMQ				S	**S**	**21 32 35.0**	**-6.9**
WMQ				SS	SS	21 35 34.5	-13
WMQ				ScS	ScS	21 36 22.5	-6.2
WMQ				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.2						
WMQ				pmax	pmax		
	comp=Z,400nm,3.0s						
WMQ				LR	LR		
	comp=N,830nm,19.0s,MS4.6						
WMQ				LR	LR		
	comp=E,190nm,21.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,510nm,20.0s,MS4.4						
CM31	**Chiang Mai Arr**	**41.76 257**		*e*P	**P**	**21 26 31.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**41.76 257**		P	**P**	**21 26 30.8**	**+0.6**
	comp=Z,8.6nm,0.8s,mb4.4,baz=48,slow=6.2,SNR=49						
CMAR				LR	LR	21 44 37.9	
	comp=Z,296nm,20.0s,MS4.2,baz=65,slow=37						
BTM	**Bintulu**	**42.37 226**		P	**P**	**21 26 35.9**	**+0.8**
LSA	**Lhasa**	**42.73 276**		P	**P**	**21 26 39.2**	**+1.1**
LSA				sP	sP	21 26 54.8	+1.6
LSA				S	**S**	**21 32 58.2**	**-1.1**
LSA				pmax	pmax		
	comp=Z,40nm,0.4s,mb5.5						
LSA				LR	LR		
	comp=N,250nm,13.3s,MS4.8						
LSA				LR	LR		
	comp=E,760nm,15.4s,MS4.8						
LSA				LR	LR		
	comp=Z,1μm,15.1s,MS4.8						
LSA	**Lhasa**	**42.73 276**		*e*P	**P**	**21 26 38.8**	**+0.7**
LSA				*e*	pP	21 26 49.6	+0.8
LSA				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.0						
LSA	**Lhasa**	**42.73 276**		*e*P	**P**	**21 26 38.8**	**+0.7**
	comp=Z,23nm,0.7s,mb5.0						
LSA				*e*	pP	21 26 49.6	+0.8
ZAA0	**Zalesovo Array**	**42.75 313**		*e*P	**P**	**21 26 38.1**	**+0.3**
ZALV	**Zalesovo Beam**	**42.75 313**		P	**P**	**21 26 38.3**	**+0.5**
	comp=Z,20nm,0.8s,mb4.9,baz=91,slow=6.7,SNR=75						
ZALV				LR	LR	21 45 24.9	
	comp=Z,523nm,18.7s,MS4.5,baz=79,slow=38						
SBUM	**Sibu**	**43.47 226**		P	**P**	**21 26 44.7**	**+0.5**
NVS	**Novosibirsk**	**43.68 314**		⇑*i*P	**P**	**21 26 45.3**	**0.0**
NVS				*e*SS	SS	21 36 14.6	-14
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.0						
NVS				pmax	pmax		
	comp=E,52nm,1.4s						
SHL	**Shillong**	**43.86 270**		⇑*i*P	**P**	**21 26 48.0**	**+0.8**
SHL				*i* x	x	21 28 24.0	
MK31	**Makanchi Array**	**44.90 303**		*e*P	**P**	**21 26 55.7**	**+0.5**
MKAR	**Makanchi Array**	**44.90 303**		P	**P**	**21 26 55.6**	**+0.4**
	comp=E,51nm,0.9s,mb5.4,baz=94,slow=7.9,SNR=79						
MKAR				LR	LR	21 46 11.5	
	comp=E,401nm,20.3s,MS4.3,baz=86,slow=37						
KSM	**Kuching**	**45.38 228**		P	**P**	**21 27 00.1**	**+0.7**
KSM	**Kuching**	**45.38 228**		*e*P	**P**	**21 27 00.3**	**+1.0**
	comp=E,191nm,2.0s,mb5.6						
TTA	**Tatalina**	**45.77**	**34**	*e*P	**P**	**21 27 02.9**	**+1.0**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
TTA	**Tatalina**	**45.77**	**34**	*e*P	**P**	**21 27 02.9**	**+1.0**
	comp=Z,9.0nm,1.0s,mb4.7						
KAPI	**Kappang**	**46.07 212**		P	**P**	**21 27 03.3**	**-1.5**
	comp=Z,12nm,0.6s,mb5.0,baz=38,slow=4.6,SNR=8.5						
KAPI	**Kappang**	**46.07 212**		*e*P	**P**	**21 27 02.9**	**-1.9**
	comp=Z,38nm,0.9s,mb5.3						
KAPI				*e*	pP	21 27 13.4	-2.1
KURK	**Kurchatov**	**46.75 309**		P	**P**	**21 27 09.6**	**-0.1**
	comp=Z,489nm,0.9s,mb6.4,SNR=77						
KURK	**Kurchatov**	**46.75 309**	*c*	*i*P	**P**	**21 27 09.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,114nm,1.2s,mb5.7						
KURK	**Kurchatov**	**46.75 309**		P	**P**	**21 27 10.2**	**+0.5**

comp=Z,48nm,0.8s,mb5.5,baz=84,slow=8.1,SNR=111
KURK Kurchatov 46.75 309 *e*P **P 21 27 09.5 -0.2**
comp=Z,49nm,0.7s,mb5.5
KTGM Kuala Trenggan 47.09 239 P **P 21 27 13.3 +0.5**
KDAK Kodiak Island 47.34 41 P **P 21 27 12.7 -1.6**
comp=Z,14nm,0.8s,mb5.0,baz=191,slow=7.1,SNR=4.5
CHUM Lake Minchumin 47.50 33 *e*P **P 21 27 15.6 +0.2**
comp=Z,19nm,1.0s,mb5.0
CHUM *e* pP 21 27 26.3 +0.1
PPLA Purkeypile 47.51 35 *e*P **P 21 27 15.1 -0.4**
comp=Z,30nm,1.3s,mb5.2
RAMN Ramite 47.52 275 *e*P **P 21 27 17.0 +0.9**
comp=Z,126nm,0.8s,mb6.0
GUN Gumba 47.69 277 *e*P **P 21 27 18.3 +0.9**
comp=Z,142nm,1.0s,mb6.0
BPAW Bear Paw Mtn. 48.09 33 *e*P **P 21 27 20.1 +0.1**
comp=Z,3.7nm,1.0s,mb4.4
BPAW *e* pP 21 27 31.1 +0.3
KTH Kantishna Hill 48.10 34 *e*P **P 21 27 20.7 +0.6**
comp=Z,20nm,1.0s,mb5.1
KTH *e* pP 21 27 30.2 -0.8
PKI Pulchoki 48.21 276 *e*P **P 21 27 22.0 +0.6**
comp=Z,31nm,0.7s,mb5.5
PKIN Phulchoki 48.22 276 *e*P **P 21 27 22.0 +0.5**
comp=Z,24nm,0.6s,mb5.4
KKN Kakani 48.22 277 *e*P **P 21 27 22.1 +0.6**
comp=Z,56nm,0.8s,mb5.6
TRF Thorofare Moun 48.39 34 *e*P **P 21 27 22.7 +0.4**
comp=Z,9.8nm,1.0s,mb4.8
DMN Daman 48.44 277 *e*P **P 21 27 23.8 +0.6**
comp=Z,34nm,0.8s,mb5.4
GKN Gorkha 48.64 277 *e*P **P 21 27 25.5 +0.7**
comp=Z,231nm,1.2s,mb6.1
KULM Kulim 48.85 241 P **P 21 27 27.3 +0.9**
KULM Kulim 48.85 241 *e*P **P 21 27 25.8 -0.7**
KULM *e* pP 21 27 36.6 -0.7
KULM *e*PcP PcP 21 28 51.1 +0.4
PMR Palmer 48.95 36 *e*P **P 21 27 27.0 +0.4**
MCK McKinley 48.99 33 *e*P **P 21 27 25.3 -1.6**
MCK *e* pP 21 27 37.8 0.0
IPM Ipoh 49.16 240 *i*P **P 21 27 29.1 +0.3**
MYKOM Kota Tinggi 49.20 235 P **P 21 27 30.0 +0.9**
KGM Kluang 49.38 235 P **P 21 27 31.5 +1.0**
COLA College 49.46 32 *e*P **P 21 27 30.8 +0.3**
COLA *e* pP 21 27 41.0 -0.4
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
COLA College 49.46 32 *e*P **P 21 27 30.8 +0.3**
comp=Z,6.7nm,0.7s,mb4.8
COLA *e* pP 21 27 41.0 -0.3
KAKA Kakadu 49.57 192 *e*P **P 21 27 30.5 -1.3**
comp=Z,24nm,0.8s,mb5.3
KOLN Koldanda 49.57 278 *e*P **P 21 27 32.6 +0.7**
comp=Z,90nm,1.2s,mb5.7
FRIM Kepong 49.63 238 P **P 21 27 32.1 -0.4**
PYUN Piuthan 49.92 278 *e*P **P 21 27 35.3 +0.8**
comp=Z,130nm,1.0s,mb5.9
ULHL Ulahol 50.11 298 P **P 21 27 36.5 +0.7**
SNR=29
TKM2 Tokmak 2 50.38 299 P **P 21 27 39.4 +1.6**
SNR=28
TKM2 Tokmak 2 50.38 299 *e*P **P 21 27 38.9 +1.1**
TKM2 pmax pmax
comp=Z,121nm,1.3s,mb5.8
TKM2 Tokmak 2 50.38 299 *e*P **P 21 27 38.9 +1.1**
comp=Z,121nm,1.3s,mb5.8
DIV Divide 50.59 37 *e*P **P 21 27 38.9 -0.2**
KZA Kyzart 50.87 298 P **P 21 27 43.9 +2.4**
SNR=24
KBK Karagaybulak 50.92 299 P **P 21 27 43.1 +1.3**
SNR=40
CHMS Chumysh 50.96 299 P **P 21 27 43.0 +0.8**
SNR=10
USP Ospenovka 51.06 300 P **P 21 27 43.6 +0.7**
SNR=21
FRU Bishkek 51.10 299 *e*P **P 21 27 43.5 +0.3**
FRU pmax pmax
comp=Z,80nm,1.6s,mb5.4
FRU MLR MLR
comp=Z,1μm,20.0s,MS4.8
KSH Kashi 51.12 295 P **P 21 27 48.2 +4.7**
KSH PcP PcP 21 29 03.1 +4.4
KSH PP PP 21 29 46.4 +6.2
KSH ScP ScP 21 32 49.6 -2.6
KSH PcS PcS 21 32 59.5 +3.2
KSH S **S 21 34 54.1 -4.7**
KSH SS SS 21 38 28.5 -5.5
KSH pmax pmax
comp=Z,35nm,1.3s,mb5.1
KSH LR LR
comp=N,1μm,15.7s,MS5.0
KSH LR LR
comp=E,570nm,14.5s,MS5.0
KSH LR LR
comp=Z,1μm,17.2s,MS5.0
BMRM Bremner River 51.17 37 *e*P **P 21 27 43.7 +0.2**
comp=Z,78nm,1.7s,mb5.4
BMRM *e* 21 28 01.1
AAK Ala-Archa 51.24 299 P **P 21 27 45.2 +0.9**
SNR=15
AAK Ala-Archa 51.24 299 *c*e P **P 21 27 42.2 -2.1**
AAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
AAK Ala-Archa 51.24 299 P **P 21 27 45.2 +0.9**
comp=Z,14nm,0.7s,mb5.0,baz=78,slow=4.7,SNR=26
AAK Ala-Archa 51.24 299 *e*P **P 21 27 44.6 +0.3**
UCH Uchtor 51.35 299 P **P 21 27 46.9 +1.8**
SNR=11
UCH Uchtor 51.35 299 *e*P **P 21 27 46.4 +1.3**
comp=Z,11nm,0.9s,mb4.8
UCH PcP PcP 21 28 59.9 +0.4
BVAR Borovoye Array 51.41 313 P **P 21 27 45.4 0.0**
comp=Z,14nm,0.9s,mb4.9,baz=79,slow=7.7,SNR=57
BVAR LR LR 21 50 52.7
comp=Z,819nm,18.6s,MS4.8,baz=74,slow=38
BVAR Borovoye Array 51.41 313 P **P 21 27 45.4 0.0**
BVAR LR LR 21 50 52.7
BRVK Borovoye 51.46 313 P **P 21 27 46.4 +0.6**
comp=Z,115nm,1.1s,mb5.7,SNR=16
BRVK Borovoye 51.46 313 ⇑*i*P **P 21 27 44.8 -1.0**
BRVK pmax pmax
comp=Z,27nm,1.0s,mb5.1
BRVK Borovoye 51.46 313 *e*P **P 21 27 45.5 -0.3**
BRVK *e* pP 21 27 53.7 +0.7
JOSI Joshimath 51.63 283 *e*P **P 21 27 48.0 +0.7**
EKS2 Erkin-Say 51.74 299 P **P 21 27 48.8 +0.8**
SNR=20
EKS2 Erkin-Say 51.74 299 *e*P **P 21 27 48.7 +0.7**
comp=Z,21nm,0.9s,mb5.1
AML Almayashu 51.96 299 P **P 21 27 51.6 +1.9**
SNR=51
AML Almayashu 51.96 299 *e*P **P 21 27 51.0 +1.4**
comp=Z,47nm,0.8s,mb5.5
AML *e* pP 21 28 03.5 +3.0
AML *e*PcP PcP 21 29 03.2 +1.4
DAWY Dawson 53.17 33 *e*P **P 21 27 58.3 0.0**
DAWY *e* pP 21 28 08.7 -0.6
SMLA Simla 53.27 284 *i*P **P 21 27 58.2 -1.3**
SMLA *i* x x 21 35 34.1
THN Thein Dam 53.87 287 *e*P **P 21 28 03.1 -0.8**
BISR Bishrakh 54.14 281 *e*P **P 21 28 06.2 +0.3**
AGRA Agra 54.33 280 *e*P **P 21 28 07.0 -0.3**
AGRA AMb AMB 21 28 08.0
comp=Z,55nm,0.1s
AYAN Aya Nagar 54.42 282 *e*P **P 21 28 08.3 +0.3**
AYAN AMb AMB 21 28 09.1
comp=Z,26nm,1.0s,mb5.1
SONA Sohna 54.56 281 *e*P **P 21 28 09.2 +0.3**
SONA AMb AMB 21 28 10.4
comp=Z,29nm,0.9s,mb5.3
RTK Rohtak 54.74 282 *e*x x 21 28 02.3
INK Inuvik 54.84 27 P **P 21 28 10.1 -0.3**
INK pmax pmax
comp=Z,4.0nm,0.7s
INK Inuvik 54.84 27 P **P 21 28 10.1 -0.3**
comp=Z,3.7nm,0.7s,mb4.5,baz=278,slow=7.4,SNR=24
INK Inuvik 54.84 27 *e*P **P 21 28 10.0 -0.3**
comp=Z,10nm,0.9s,mb4.9
INK *e* pP 21 28 20.9 -0.4
KHET Khetri 55.65 282 *e*P **P 21 28 16.7 -0.2**
KHET AMb AMB 21 28 18.8
comp=Z,22nm,1.2s,mb5.1
SVE Sverdlovsk 56.00 319 ⇓*e*P **P 21 28 18.8 -0.1**
SVE *e* 21 30 29.1
SVE *e*S **S 21 36 06.1 +1.8**
SVE pmax pmax
comp=Z,56nm,1.2s,mb5.5
SVE MLR MLR
comp=Z,1μm,19.0s,MS4.9
CTA Charters Tower 56.22 175 LR LR 21 47 06.1
comp=Z,89nm,21.5s,MS3.8,baz=11,slow=30
FITZ Fitzroy Crossi 56.27 199 *e*P **P 21 28 21.3 +0.1**
comp=Z,17nm,0.7s,mb5.2
FITZ Fitzroy Crossi 56.27 199 *e*P **P 21 28 21.8 +0.7**
comp=Z,26nm,1.3s,mb5.1
WRAB Tennant Creek 56.39 189 *e*P **P 21 28 20.8 -1.2**
WRAB *e* pP 21 28 30.8 -2.2
WB2 Warramunga Arr 56.40 189 *e*P **P 21 28 20.7 -1.3**
WB2 *e* pP 21 28 30.5 -2.6
WRA Warramunga Arr 56.40 189 P **P 21 28 20.9 -1.2**
comp=Z,7.3nm,0.8s,mb4.8,baz=8.1,slow=7.4,SNR=44
SOKR Solikamsk 57.19 323 *c i*P **P 21 28 23.0 -4.3**
SOKR pmax pmax
comp=Z,30nm,1.2s,mb5.2
SOKR MLR MLR
comp=Z,510nm,17.0s,MS4.7
ARU Arti 57.21 319 P **P 21 28 27.4 -0.1**
comp=Z,251nm,1.0s,mb6.2,SNR=17
ARU Arti 57.21 319 *c i*P **P 21 28 27.5 0.0**
ARU 21 29 20.0
ARU *e* 21 30 37.2
ARU PPP 21 31 55.2
ARU S **S 21 36 22.9 +2.5**
ARU SS SS 21 40 04.6 -4.6
ARU pmax pmax
comp=Z,89nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,636nm,19.0s,MS4.7
ARU Arti 57.21 319 *e*P **P 21 28 27.4 -0.2**
ARU *e* pP 21 28 37.3 -1.3
AJM Ajmer 57.29 281 *e*P **P 21 28 28.0 -0.6**
KBL Kabul 58.11 292 *e*P **P 21 28 33.9 -0.3**
KBL pmax pmax
comp=Z,19nm,0.9s,mb5.1
KBL Kabul 58.11 292 *e*P **P 21 28 33.9 -0.3**
comp=Z,18nm,0.9s,mb5.1
HYB Hyderabad 58.64 269 *i*P **P 21 28 38.5 +0.4**
HYB *e* pP 21 28 48.5 -0.7
ABKAR Akbulak array 58.76 311 *e*P **P 21 28 38.3 -0.2**
comp=Z,22nm,0.8s,mb5.2
ABKAR *e* pP 21 28 49.2 -0.4
DLBC Dease Lake 58.93 38 P **P 21 28 39.5 0.0**
comp=Z,2.2nm,0.9s,mb4.2,baz=357,slow=12,SNR=4.5
DLBC Dease Lake 58.93 38 *e*P **P 21 28 39.8 +0.3**
DLBC *e* pP 21 28 50.0 -0.6
JASL Jaisalmer 60.04 283 *e*P **P 21 28 47.7 0.0**
ASAR Alice Springs 60.12 189 P **P 21 28 47.1 -0.9**
comp=Z,2.8nm,0.7s,mb4.4,baz=17,slow=8.9,SNR=43
ALE Alert 60.82 4 P **P 21 28 52.9 +0.7**
comp=Z,88nm,1.0s,mb5.8,SNR=8.2
MBWA Marble Bar 60.90 204 *e*P **P 21 28 52.9 -0.5**
MBWA Marble Bar 60.90 204 *e*P **P 21 28 53.1 -0.2**
comp=Z,12nm,0.8s,mb5.1
MBWA *e* pP 21 29 02.8 -1.7
POO Poona 61.86 273 ⇑*i*P **P 21 28 59.5 -0.6**
comp=Z,40nm,1.0s,mb5.5
DZM Mont Dzumac 62.49 154 *e*S **S 21 37 21.7 -7.2**
comp=Z,106nm,23.7s
DZM *e*LR LR 21 47 33.8
comp=Z,374nm,21.1s
LVZ Lovozero 62.97 336 ⇑*i*P **P 21 29 06.3 -0.5**
LVZ pmax pmax
comp=Z,33nm,1.7s,mb5.2
RES Resolute Bay 63.20 14 *e*P **P 21 29 07.5 -0.7**
RES *e* pP 21 29 17.1 -2.3
RES pmax pmax
comp=Z,20nm,0.9s,mb5.2
RES Resolute Bay 63.20 14 *e*P **P 21 29 07.5 -0.8**
comp=Z,20nm,0.9s,mb5.2
RES *e* pP 21 29 17.1 -2.3
APA Apatity 63.55 336 ⇓*i*P **P 21 29 10.8 +0.2**
APA pmax pmax
comp=Z,31nm,1.0s,mb5.3
APA MLR MLR
comp=Z,800nm,12.0s,MS5.1
YKA Yellowknife Ar 64.22 30 P **P 21 29 14.2 -0.8**
comp=Z,3.5nm,0.7s,mb4.5,baz=303,slow=6.8,SNR=53
YKA Yellowknife Ar 64.22 30 P **P 21 29 14.2 -0.8**
ABKT Ailbek 64.59 299 P **P 21 29 18.0 0.0**
comp=Z,92nm,1.0s,mb5.8,SNR=7.7
KLMR Klimovskoe 64.62 328 ⇑*i*P **P 21 29 17.6 -0.2**
KLMR *e* 21 31 39.1
KLMR pmax pmax
comp=Z,74nm,1.7s,mb5.4
ARCES ARCESS Array B 64.84 340 P **P 21 29 19.4 +0.3**
comp=Z,7.5nm,1.0s,mb4.7,baz=61,slow=10.0,SNR=7.0
ARCES LR LR 22 00 37.8
comp=Z,225nm,20.0s,MS4.4,baz=178,slow=39
AFI Afiamalu 66.31 130 LR LR 21 54 02.2
comp=Z,183nm,19.1s,MS4.3,baz=324,slow=32
DAG Danmarks Havn 66.55 355 ⇓*e*P **P 21 29 29.1 -0.9**
DAG pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
DAG Danmarks Havn 66.55 355 ⇓*i*P **P 21 29 29.1 -0.9**
comp=Z,5.6nm,0.5s,mb4.8
JOF Joensuu 66.83 332 *e*P **P 21 29 30.7 -1.2**
JOF pmax pmax
comp=Z,24nm,0.9s,mb5.2
JOF Joensuu 66.83 332 *e*p **P 21 29 30.7 -1.2**
comp=Z,24nm,0.9s,mb5.2
CMSA Cobar Meteorol 67.57 177 *e*P **P 21 29 35.8 -1.1**
STKA Stephens Creek 67.82 180 *e*P **P 21 29 38.0 -0.5**
comp=Z,4.0nm,0.9s,mb4.5
STKA Stephens Creek 67.82 180 P **P 21 29 37.7 -0.7**
comp=Z,1.5nm,0.8s,mb4.0,baz=342,slow=5.6,SNR=3.8
STKA LR LR 21 59 32.3
comp=Z,78nm,20.2s,MS3.9,baz=25,slow=36
STKA Stephens Creek 67.82 180 *e*P **P 21 29 39.8 +1.4**
comp=Z,1.3nm,0.9s,mb4.0
STKA *e* pP 21 29 50.6 +0.9
FORT Forrest 67.99 193 *e*P **P 21 29 39.3 -0.3**
comp=Z,28nm,0.6s,mb5.5
FORT Forrest 67.99 193 *e*P **P 21 29 38.9 -0.7**
comp=Z,27nm,0.6s,mb5.5
FORT *e* pP 21 29 48.8 -2.0
MOS Moscow 68.11 324 *e*P **P 21 29 38.2 -2.0**
MOS *e* pP 21 29 49.2 -2.2
MOS pmax pmax
comp=Z,62nm,1.1s,mb5.5
ETW Entiat 68.85 46 *e*P **P 21 29 44.9 -0.1**
comp=Z,4.1nm,0.6s,mb4.5
ETW *e* pP 21 29 54.6 -1.6
OBN Obninsk 68.96 324 ⇑*i*P **P 21 29 45.2 -0.3**
OBN *i* pP 21 29 57.3 +0.6
OBN *e* 21 30 08.4
OBN pmax pmax
comp=Z,60nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,500nm,14.0s,MS4.9
OBN Obninsk 68.96 324 *e*P **P 21 29 45.2 -0.2**
OBN *e* pP 21 29 56.8 0.0
B08A Colville Reser 69.04 45 ⇓P **P 21 29 46.2 +0.1**
baz=69
KAF Kangasniemi 69.17 333 *e*P **P 21 29 45.2 -1.5**
KAF pmax pmax
comp=Z,27nm,1.0s,mb5.1
KAF Kangasniemi 69.17 333 *e*p **P 21 29 45.2 -1.5**
comp=Z,27nm,1.0s,mb5.1,baz=50,slow=6.0
C08A Higginbotham F 69.50 45 ⇑P **P 21 29 48.6 -0.4**
baz=70
B09A Rice 69.68 44 ⇑P **P 21 29 49.8 -0.2**
baz=70
FINES FINESS Array B 69.68 333 P **P 21 29 49.5 -0.3**
comp=Z,22nm,0.9s,mb5.1,baz=57,slow=7.0,SNR=49
FINES LR LR 21 58 48.3
comp=Z,181nm,21.4s,MS4.3,baz=96,slow=34
A10A Northport 69.71 44 ⇑P **P 21 29 49.9 -0.4**
baz=70
VSR Storozhevoye 69.79 319 *c i*P **P 21 29 50.4 -0.3**
VSR *e**SP sP 21 29 59.7 -6.5
VSR pmax pmax
comp=Z,50nm,1.1s,mb5.4
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR MLR MLR
comp=Z,720nm,16.0s,MS5.0
VSR MLR MLR
comp=N,270nm,15.0s,MS4.8
VSR MLR MLR
comp=E,420nm,17.0s,MS4.8
VORD Divnogorie 69.86 319 *e*P **P 21 29 50.8 -0.3**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=E,30nm,1.2s
OD2 Odessa Site #2 69.90 46 P **P 21 29 50.0 -1.4**
comp=E,6.2nm,1.1s,mb4.5
NEW Newport 70.34 44 P **P 21 29 53.0 -1.1**
A11A Hall Mountain, 70.39 43 ⇓P **P 21 29 55.2 +0.8**
baz=71
B11A Sandpoint 70.67 44 ⇓P **P 21 29 56.3 +0.2**
baz=71
F08A Pendleton 70.71 47 ⇓P **P 21 29 56.7 +0.3**
baz=71
GOF Gofitskoye 70.93 312 *e*P **P 21 30 07.3 +10**
GOF pmax pmax
comp=Z,80nm,1.3s,mb5.5
K05A Summer Lake 71.06 51 ⇓P **P 21 29 58.7 +0.1**
baz=71
I07A Izee 71.19 49 ⇓P **P 21 29 59.8 +0.4**
baz=72
VSU Vasula 71.32 330 *c i*P **P 21 29 59.6 -0.3**
VSU pmax pmax
comp=Z,45nm,1.2s,mb5.3
SUMG Summit 71.42 0 *e*P **P 21 30 00.9 +0.6**
SUMG *e* pP 21 30 12.8 +1.2
H08A Prairie City 71.46 48 ⇓P **P 21 30 01.1 +0.1**
baz=72
F10A Beach Ranch, E 71.53 46 ⇑P **P 21 30 01.7 +0.3**
baz=72
G09A Cove 71.58 47 ⇑P **P 21 30 01.5 -0.1**
baz=72
ZEI Tsey 71.63 310 *e*P **P 21 29 59.2 -2.8**
ZEI pmax pmax
comp=Z,20nm,1.5s,mb4.8
KIV Kislovodsk 71.73 311 P **P 21 30 03.9 +1.3**
comp=Z,351nm,1.0s,mb6.2,SNR=20
KIV Kislovodsk 71.73 311 ⇑*e*P **P 21 30 02.2 -0.4**
KIV pmax pmax
comp=Z,70nm,1.0s,mb5.5
KIV Kislovodsk 71.73 311 *e*P **P 21 30 03.1 +0.5**
KIV *e* pP 21 30 14.1 +0.1
B13A Whitefish 71.76 43 ⇑P **P 21 30 02.3 -0.4**
baz=72
E11A Bogner Ranch, 71.91 45 ⇓P **P 21 30 03.4 -0.2**
baz=72
A14A Double T Ranch 71.99 42 ⇑P **P 21 30 04.1 0.0**
baz=72
C13A Hot Springs 72.09 44 ⇓P **P 21 30 04.6 -0.1**
baz=72
F11A Grangeville 72.20 46 ⇓P **P 21 30 05.0 -0.4**
baz=72
J08A Circle Bar Ran 72.21 49 ⇓P **P 21 30 05.2 -0.4**
baz=72
JTMT Jette 72.22 44 *e*P **P 21 30 04.3 -1.1**
comp=Z,6.6nm,1.0s,mb4.5
JTMT *e* pP 21 30 15.9 -0.9
I09A Lost Marbles R 72.32 48 ⇓P **P 21 30 05.7 -0.4**
baz=73
HOQ Hoqain 72.34 287 P **P 21 30 07.5 +0.9**
SNR=6.7
A15A Johnson Ranch, 72.36 42 ⇑P **P 21 30 05.8 -0.5**
baz=73
G11A Walters Elk Ra 72.40 46 ⇓P **P 21 30 06.5 -0.1**
baz=73
D13A Huson 72.49 44 ⇑P **P 21 30 06.9 -0.2**
baz=73
SWMT Swartz Lake 72.51 44 *e*P **P 21 30 05.8 -1.4**
comp=Z,8.1nm,1.0s,mb4.6
GNI Garni 72.51 307 *d i*P **P 21 30 08.3 +0.9**
GNI pmax pmax
comp=Z,23nm,1.2s
GNI Garni 72.51 307 *e*P **P 21 30 07.1 -0.3**
comp=Z,19nm,1.0s,mb5.0
GNI Garni 72.51 307 P **P 21 30 09.0 +1.6**
SNR=7.2
GNI P 21 30 09.0
SNR=7.2
HATD Hatta, Dubai 72.59 288 P **P 21 30 09.4 +1.3**
SNR=6.1
WVOR Wild Horse Val 72.62 50 *e*P **P 21 30 10.1 +2.1**
WVOR *e* pP 21 30 19.1 -0.2
WVOR pmax pmax
comp=Z,18nm,1.7s,mb4.7
WVOR Wild Horse Val 72.62 50 *e*P **P 21 30 10.1 +2.1**
comp=Z,18nm,1.7s,mb4.7
WVOR *e* pP 21 30 19.1 -0.3
NWAO Narrogin (SRO) 72.65 202 *e*P **P 21 30 07.6 -0.4**
J09A Fry Pan Ranch, 72.66 49 ⇑P **P 21 30 08.4 +0.2**
baz=73
ASHO Ashiyiah 72.72 288 P **P 21 30 09.7 +0.8**
SNR=6.0
F12A Elk City 72.79 46 ⇑P **P 21 30 08.8 -0.2**
baz=73,SNR=8.7
B15A Bradely Ranch, 72.84 42 ⇑P **P 21 30 08.8 -0.3**
baz=73
MSO Missoula 72.93 44 *e*P **P 21 30 09.7 0.0**
comp=Z,3.8nm,0.9s,mb4.3
BEKR Beckwourth 72.94 53 ⇑P **P 21 30 09.9 -0.1**
baz=73
H11A Donnelly 72.94 47 ⇑P **P 21 30 09.3 -0.5**
baz=73
SLMT Seeley Lake 72.94 44 *e*P **P 21 30 09.0 -0.8**
comp=Z,13nm,0.9s,mb4.8
SLMT *e* pP 21 30 20.1 -1.0
A16A West Butte Ran 72.99 41 ⇓P **P 21 30 09.4 -0.6**
baz=73
D14A Greenough 73.03 44 ⇓P **P 21 30 09.7 -0.6**
baz=73
ARQ Araqi 73.08 287 P **P 21 30 12.3 +1.2**
SNR=7.3
C15A Salmond Ranch, 73.12 43 ⇑P **P 21 30 10.6 -0.3**
baz=73,SNR=8.5
B16A M & M Farms, S 73.24 42 ⇑P **P 21 30 10.9 -0.6**
baz=74
CHMT Chamberlain Mo 73.27 44 *e*P **P 21 30 10.9 -0.8**
comp=Z,3.9nm,1.2s,mb4.2
IZAR Zarasai 73.27 328 *e*P **P 21 30 12.1 +0.5**
F13A Darby 73.30 45 ⇑P **P 21 30 11.2 -0.7**
baz=74
IDID Didziasalis 73.34 327 *e*P **P 21 30 12.3 +0.4**
MICGM Minsk 73.36 326 ⇓*e*P **P 21 30 11.0 -1.1**
MNK Minsk 73.38 326 ⇓*e*P **P 21 30 11.0 -1.3**
MNK pmax pmax
comp=Z,70nm,1.0s,mb5.5
ISAL Salakas 73.44 328 *e*P **P 21 30 12.9 +0.3**
K10A MacKenzie Ranc 73.51 49 ⇓P **P 21 30 13.0 -0.2**
baz=74
NACGM Naroch 73.59 327 *e* **P 21 30 11.0 -2.5**
H12A Diamond D Ranc 73.71 46 ⇑P **P 21 30 13.9 -0.5**
baz=74
SOC Sochi 73.73 312 *e*P **P 21 30 18.0 +3.5**
SOC *e* 21 33 07.5
SOC *i* S S 21 39 43.2 +0.5
SOC *e* 21 40 15.2
SOC pmax pmax
comp=Z,26nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,467nm,21.0s,MS4.8
G13A Cobalt 73.76 46 ⇓P **P 21 30 14.3 -0.4**
baz=74
MFID Camas Ranch 73.78 48 ⇓P **P 21 30 14.6 -0.2**
baz=74
B17A L&G Farms, Che 73.80 42 ⇑P **P 21 30 14.6 -0.3**
baz=74
E15A Deer Lodge 73.89 44 ⇑P **P 21 30 14.8 -0.6**
baz=74,SNR=8.1
CMB Columbia Colle 73.93 55 *e*P **P 21 30 15.4 -0.4**
A18A Metzger Ranch, 73.93 41 ⇓P **P 21 30 15.1 -0.5**
baz=74
I12A Atlanta 73.98 47 ⇓P **P 21 30 15.9 -0.1**
baz=74
K11A Parker Ranch, 74.03 49 ⇑P **P 21 30 16.1 -0.2**
baz=74
H13A Challis 74.05 46 ⇑P **P 21 30 15.8 -0.6**
baz=74,SNR=11
FFC Flin Flon 74.08 33 *e*P **P 21 30 15.8 -0.5**
FFC *e* pP 21 30 25.1 -2.6
FFC pmax pmax
comp=Z,16nm,0.9s,mb5.0
FFC Flin Flon 74.08 33 *e*P **P 21 30 15.8 -0.6**
comp=Z,16nm,0.9s,mb5.0
FFC *e* pP 21 30 25.1 -2.6
D16A Dana Ranch, Ca 74.14 43 ⇑P **P 21 30 16.1 -0.8**

baz=74
L10A Juniper Basin 74.15 49 ⇊P P 21 30 17.1 +0.1
baz=74
HRY Holter Researc 74.18 43 eP P 21 30 17.0 -0.1
comp=Z,18nm,1.0s,mb5.0
C17A Wharram Farm, 74.22 42 ⇊P P 21 30 16.5 -0.8
baz=74
B18A Beardsley Farm 74.29 41 ⇊P P 21 30 17.2 -0.5
baz=75
F15A Butte 74.32 44 ⇊P P 21 30 17.9 0.0
baz=75,SNR=12
LRM Limekiln Ridge 74.36 44 eP P 21 30 18.2 +0.1
comp=Z,82nm,0.9s,mb5.7
E16A East Helena 74.37 43 ⇑P P 21 30 17.8 -0.4
baz=75
ANN Anapa 74.37 314 eP P 21 30 16.2 -2.0
ANN eS S 21 39 49.8 -0.1
ANN pmax pmax
comp=Z,50nm,1.2s,mb5.3
M10A I.L. Ranch, Tu 74.43 50 ⇑P P 21 30 18.5 -0.2
baz=75
FCC Fort Churchill 74.46 27 eP P 21 30 17.5 -0.9
comp=Z,0.8nm,1.1s,mb3.6
FCC e pP 21 30 27.1 -2.7
I13A Wildhorse Cree 74.51 47 ⇑P P 21 30 18.9 -0.1
baz=75
EGMT Eagleton 74.52 41 ⇑P P 21 30 18.6 -0.5
baz=75
EGMT Eagleton 74.52 41 eP P 21 30 18.7 -0.3
comp=Z,19nm,1.0s,mb5.0
L11A Cat Creek Ranc 74.54 49 ⇊P P 21 30 19.2 -0.1
baz=75
HLID Hailey 74.54 47 ⇊P P 21 30 19.5 +0.2
baz=75
D17A Six Diamond Ra 74.54 43 ⇊P P 21 30 18.8 -0.4
baz=75
DLMT Dillon 74.54 45 eP P 21 30 19.0 -0.2
comp=Z,13nm,1.0s,mb4.8
MCMT McKenzie Canyo 74.71 45 eP P 21 30 19.3 -0.9
comp=Z,1.5nm,0.8s,mb4.0
G15A Dillon 74.72 45 ⇊P P 21 30 20.5 +0.3
baz=75
K12A Draper Farm, C 74.78 48 ⇊P P 21 30 21.2 +0.5
baz=75
F16A Kennard Place, 74.84 44 ⇊P P 21 30 20.8 -0.1
baz=75
E17A Martinsdale 74.86 43 ⇊P P 21 30 21.2 +0.2
baz=75,SNR=8.5
I14A Mackay 74.89 46 ⇊P P 21 30 21.7 +0.4
baz=75,SNR=9.9
BOZ Bozeman (W) 74.92 44 ⇑P P 21 30 21.4 0.0
baz=75,SNR=9.9
BOZ Bozeman (W) 74.92 44 eP P 21 30 21.1 -0.3
BOZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BOZ Bozeman (W) 74.92 44 eP P 21 30 21.1 -0.3
comp=Z,7.7nm,0.9s,mb4.6
M11A Holland Ranch, 74.94 50 ⇑P P 21 30 22.6 +1.0
baz=75
NB2 NORSAR Subarra 75.04 338 P P 21 30 21.8 0.0
comp=Z,26nm,0.9s,mb5.2,baz=38,slow=5.9
NOA NORSAR Array B 75.04 338 P P 21 30 21.8 0.0
NOA 21 33 16.5
NOA NORSAR Array B 75.04 338 P P 21 30 21.8 0.0
comp=Z,16nm,0.8s,mb5.0,baz=39,slow=5.7,SNR=51
NOA PP PP 21 33 16.5 +7.2
comp=Z,3.5nm,1.0s,baz=39,slow=7.5,SNR=3.7
NOA LR LR 22 07 08.1
comp=Z,332nm,18.3s,MS4.7,baz=35,slow=39
NVAR Mina Array Bea 75.06 53 P P 21 30 22.4 0.0
comp=Z,3.5nm,0.7s,mb4.4,baz=289,slow=5.6,SNR=20
G16A Moss Hill, Enn 75.07 45 ⇑P P 21 30 22.6 +0.4
baz=75
AKASG Malin Array Be 75.16 323 P P 21 30 22.2 -0.4
comp=Z,15nm,0.9s,mb4.9,baz=47,slow=6.0,SNR=56
AKASG LR LR 22 06 46.1
comp=Z,690nm,18.3s,MS5.0,baz=55,slow=38
AKBB Malin Array Si 75.16 323 eP P 21 30 22.3 -0.4
AKBB e pP 21 30 33.3 -0.7
KIEV Kiev 75.17 323 eP P 21 30 22.5 -0.2
KIEV e pP 21 30 33.0 -1.1
KIEV pmax pmax
comp=Z,22nm,0.9s,mb5.1
KIEV Kiev 75.17 323 eP P 21 30 22.5 -0.2
comp=Z,22nm,0.9s,mb5.1
KIEV e pP 21 30 33.0 -1.1
J14A Carey 75.21 47 ⇊P P 21 30 23.9 +0.8
baz=76
NAO01 NORSAR Array S 75.29 338 eP P 21 30 23.1 -0.2
comp=Z,16nm,0.9s,mb5.0
NAO01 e pP 21 30 35.3 +0.7
F17A Fitzpatrick Pl 75.31 44 ⇑P P 21 30 23.4 -0.2
baz=76
E18A Harlowton 75.32 43 ⇊P P 21 30 23.7 0.0
baz=76
M12A Wells 75.48 49 ⇊P P 21 30 25.2 +0.5
baz=76
QLMT Earthquake Lak 75.52 45 P P 21 30 24.3 -0.6
comp=Z,3.6nm,0.8s,mb4.3
P10A Eureka 75.56 51 ⇑P P 21 30 25.9 +0.7
baz=76
G17A Pierce Place, 75.62 44 ⇑P P 21 30 25.6 +0.2
baz=76
ELK Elko 75.68 50 P P 21 30 26.1 +0.3
L13A Double Diamond 75.68 48 ⇊P P 21 30 26.4 +0.6
baz=76
H16A Russell Place, 75.70 45 ⇊P P 21 30 26.2 +0.3
baz=76
SUW Suwalki 75.75 328 eP P 21 30 26.2 +0.2
SUW ePcP PcP 21 30 37.9 -0.7
SUW LMZ 22 07 10.1
comp=Z,600nm,18.9s
O11A Cowboy Ranch, 75.77 51 ⇊P P 21 30 27.2 +0.8
baz=76
F18A Big Timber 75.83 43 ⇑P P 21 30 26.6 0.0
baz=76,SNR=8.8
K14A Jones Ranch, D 75.87 47 ⇊P P 21 30 27.6 +0.6
baz=76
M13A Montello 75.97 49 ⇑P P 21 30 27.6 +0.1
baz=76
Q10A Clear Creek Ra 76.06 52 ⇊P P 21 30 28.7 +0.7
baz=76
L14A Malta 76.14 48 ⇊P P 21 30 29.3 +0.9
baz=76
SIM Simferopol' 76.17 316 P P 21 30 28.6 0.0
SIM S S 21 40 13.1 +3.2
SIM pmax pmax
comp=Z,19nm,0.9s,mb5.0
SIM MLR MLR
comp=Z,320nm,15.0s,MS4.8
O12A Currie 76.26 50 ⇑P P 21 30 29.3 +0.1
baz=77,SNR=13
IMW Indian Meadow 76.37 45 eP P 21 30 30.8 +1.1
comp=Z,8.6nm,0.9s,mb4.7
IMW e pP 21 30 40.9 -0.2
S10A Tonopah Range, 76.46 53 ⇊P P 21 30 30.4 0.0
baz=77,SNR=5.9
RRI2 Red Ridge 76.48 46 eP P 21 30 31.0 +0.6
comp=Z,11nm,1.0s,mb4.7
GRAC Grapevine Rang 76.49 54 ⇊P P 21 30 30.9 +0.3
baz=77
Q11A Duckwater 76.52 52 ⇊P P 21 30 31.1 +0.4
baz=77
I17A Pilgrim Ck. 76.56 45 ⇊P P 21 30 32.1 +1.3
baz=77
RLMT Red Lodge 76.56 44 ⇊P P 21 30 31.4 +0.6
baz=77
RLMT Red Lodge 76.56 44 eP P 21 30 31.7 +0.9
comp=Z,5.0nm,0.9s,mb4.4
SFJD Kangerlussuaq 76.58 5 i P PcP 21 30 41.8 -0.1
SFJD pmax pmax
comp=Z,16nm,0.9s,mb5.0
SFJD MLR MLR
comp=Z,100nm,18.0s,MS4.2
SFJD Kangerlussuaq 76.58 5 i P PcP 21 30 41.8 -0.1
comp=Z,16nm,0.9s
SFJD
comp=Z,100nm,18.0s
TPAW Teton Pass 76.61 46 eP P 21 30 31.6 +0.5
comp=Z,6.5nm,0.9s,mb4.6
TPAW e pP 21 30 41.0 -1.5
P12A McGill 76.63 51 ⇊P P 21 30 31.5 +0.2
baz=77,SNR=7.0
KONO Kongsberg 76.63 337 eP P 21 30 30.8 -0.1
KONO e pP 21 30 41.7 -0.6
KONO pmax pmax
comp=Z,11nm,0.9s,mb4.8
KONO Kongsberg 76.63 337 eP P 21 30 30.8 -0.1
comp=Z,11nm,0.9s,mb4.8
KONO e pP 21 30 41.7 -0.6
K16A Soda Springs 76.64 46 ⇊P P 21 30 32.3 +1.1
baz=77
L15A Malad City 76.66 48 ⇑P P 21 30 31.9 +0.5
baz=77
LOHW Long Hollow 76.73 45 eP P 21 30 32.2 +0.5
comp=Z,3.4nm,0.9s,mb4.3
LOHW e pP 21 30 42.8 -0.4
R11A Troy Canyon, C 76.86 52 ⇑P P 21 30 32.7 +0.1
baz=77,SNR=7.5
N14A Grayback Hills 76.87 49 ⇑P P 21 30 33.2 +0.6
baz=77
BGU Big Grassy Mou 76.92 49 eP P 21 30 32.6 -0.3
comp=Z,3.8nm,0.8s,mb4.4
Q12A Willow Creek R 76.93 51 ⇊P P 21 30 33.4 +0.4
baz=77
M15A Larsen Ranch, 76.95 48 ⇑P P 21 30 33.6 +0.6
baz=77
I18A Diamond G Ranc 77.13 45 ⇊P P 21 30 34.6 +0.6
baz=77
P13A Bates Ranch, G 77.19 50 ⇊P P 21 30 35.0 +0.5
baz=78
LAO LASA Array 77.23 41 eP P 21 30 35.0 +0.5
comp=Z,24nm,1.0s,mb5.1
LAO e pP 21 30 45.1 -0.8
N15A Stansbury Isla 77.25 49 ⇊P P 21 30 35.3 +0.6
baz=78
EDW2 Edwards Air Fo 77.30 56 ⇑P P 21 30 35.2 +0.1
baz=78
J18A Kendall Valley 77.32 45 ⇊P P 21 30 35.2 +0.1
baz=78
HWUT Hardware Ranch 77.39 47 eP P 21 30 35.6 +0.1
Q13A Wheeler Ranch, 77.49 51 ⇑P P 21 30 36.4 +0.3
baz=78
R12A Pony Springs, 77.49 52 ⇊P P 21 30 36.2 0.0
baz=78
DUG Dugway 77.49 49 ⇑P P 21 30 35.8 -0.3
baz=78
DUG Dugway 77.49 49 eP P 21 30 35.7 -0.4
U10A Ash Meadows, A 77.51 54 ⇊P P 21 30 37.1 +0.9
baz=78
M16A Huntsville 77.53 48 ⇑P P 21 30 36.7 +0.4
baz=78
MALT Malatya 77.59 308 eP P 21 30 37.8 +1.1
MALT Malatya 77.59 308 ⇑i P 21 30 38.1 +1.4
K18A Toltan Ranch, 77.66 46 ⇑P P 21 30 37.7 +0.7
baz=78
P14A Drum Mountains 77.70 50 ⇊P P 21 30 37.5 +0.2
baz=78,SNR=16
T11A Corn Creek, Al 77.74 53 ⇑P P 21 30 37.6 +0.1
baz=78,SNR=6.2
KIS Kishinev 77.75 320 eP P 21 30 35.0 -2.4
KIS e pP 21 30 44.0 -4.8
KIS e 21 40 28.0
KIS MLR MLR
comp=Z,600nm,17.0s,MS5.0
KIS MLR MLR
comp=Z,600nm,16.0s
BW06 Boulder Array 77.86 46 eP P 21 30 37.6 -0.5
BW06 e pP 21 30 48.3 -1.2
PDAR Pinedale Array 77.86 46 P P 21 30 37.5 -0.5
comp=Z,1.9nm,0.7s,mb4.2,baz=283,slow=2.2,SNR=23
PDAR LR LR 22 07 47.8
comp=Z,52nm,18.1s,MS3.9,baz=170,slow=38
Q14A Sevier Lake (B 77.93 50 ⇑P P 21 30 38.5 0.0
baz=78,SNR=11
R13A O'Grain Ranch, 77.98 51 ⇑P P 21 30 39.6 +0.7
baz=78
M17A Scullys Gap (B 78.01 47 ⇑P P 21 30 39.1 +0.1
baz=78
JLU Jordanelle 78.07 48 P P 21 30 40.1 +0.8
N17A Moffit Pass 78.23 48 ⇑P P 21 30 40.6 +0.3
baz=78
LVV L'vov 78.24 324 eP P 21 30 40.2 +0.1
LVV e pP 21 30 52.8 +1.3
LVV ePPP 21 35 29.4
LVV MLR MLR
comp=E,500nm,15.0s,MS5.0
LVV MLR MLR
comp=Z,600nm,15.0s,MS5.0
LVV MLR MLR
comp=N,300nm,16.0s,MS5.0
DAU Daniels Canyon 78.31 48 eP P 21 30 40.9 +0.3
DAU pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
DAU Daniels Canyon 78.31 48 eP P 21 30 40.9 +0.2
comp=Z,7.6nm,0.8s,mb4.7
BSD Bornholm Skovb 78.31 332 i P P 21 30 39.6 -0.7
BSD pmax pmax
comp=Z,22nm,1.0s,mb5.0
BSD MLR MLR
comp=Z,320nm,18.0s,MS4.7
BSD Bornholm Skovb 78.31 332 i P P 21 30 39.6 -0.7
comp=Z,22nm,1.0s,mb5.0
BSD
comp=Z,310nm,18.0s
TUQ Turquoise Moun 78.35 55 ⇑P P 21 30 41.3 +0.3
baz=79
L19A Farson 78.39 46 ⇑P P 21 30 41.6 +0.5
baz=79
Q15A Fillmore 78.48 50 ⇊P P 21 30 42.3 +0.7
baz=79
T13A Saint George 78.72 52 ⇊P P 21 30 43.4 +0.5
baz=79
O17A Robinson Place 78.75 48 ⇑P P 21 30 44.0 +0.9
baz=79
GKP Gorka Klasztor 78.77 330 eP P 21 30 42.9 -0.1
COP Copenhagen 78.79 334 ⇑i P P 21 30 43.0 0.0
COP pmax pmax
comp=Z,12nm,1.0s,mb4.8
COP MLR MLR
comp=Z,120nm,17.0s,MS4.3
COP Copenhagen 78.79 334 ⇑i P P 21 30 43.0 0.0
comp=Z,12nm,1.0s,mb4.8
COP
comp=Z,110nm,17.0s
MSU Marysvale 78.90 50 eP P 21 30 43.5 -0.5
MSU pmax pmax
comp=Z,14nm,1.3s,mb4.7
MSU Marysvale 78.90 50 eP P 21 30 43.5 -0.4
comp=Z,14nm,1.3s,mb4.7
KWP Kalwaria Pacla 78.99 325 eP P 21 30 45.4 +1.1
KWP LMZ 22 09 11.1
comp=Z,800nm,16.2s
KWP Kalwaria Pacla 78.99 325 eP P 21 30 44.3 +0.1
comp=Z,58nm,1.0s,mb5.5
KWP e pP 21 30 56.3 +0.7
KWP Kalwaria Pacla 78.99 325 ⇑i P P 21 30 44.9 +0.7
U13A Pakoon Wash 79.04 53 ⇑P P 21 30 45.1 +0.3
baz=79
LDFC Landfair 79.10 55 eP P 21 30 44.4 -0.7
comp=Z,12nm,0.4s,mb5.2
LDFC e pP 21 30 55.1 -1.4
BUR08 Bucovina Ar. S 79.16 322 eP P 21 30 45.1 -0.1
BUR08 e pP 21 30 56.4 -0.2
BURAR Bucovina Array 79.17 322 P P 21 30 46.1 +0.9
BURAR Bucovina Array 79.17 322 ⇑i P P 21 30 45.7 +0.5
P17A Butcher Ranch, 79.20 49 ⇊P P 21 30 45.7 +0.2
baz=80
N19A John Jarvie Ra 79.25 47 ⇊P P 21 30 46.3 +0.5
baz=80
MUD Monsted U'grnd 79.31 336 ⇑i P P 21 30 45.8 0.0
MUD pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MUD MLR MLR
comp=Z,410nm,18.0s,MS4.8
MUD Monsted U'grnd 79.31 336 ⇑i P P 21 30 45.8 0.0
comp=Z,8.5nm,1.1s,mb4.6
MUD
comp=Z,400nm,18.0s
V13A Grand Canyon W 79.37 53 ⇑P P 21 30 46.6 +0.1
baz=80
P18A Preston Nutter 79.40 48 ⇑P P 21 30 46.7 0.0
baz=80
R16A Teasdale 79.47 50 ⇊P P 21 30 47.7 +0.6
baz=80
U14A Mt Trumbull 79.54 52 ⇑P P 21 30 47.6 +0.1
baz=80
SRU San Rafael 79.55 49 ⇑P P 21 30 47.4 -0.1
baz=80,SNR=12
SRU San Rafael 79.55 49 eP P 21 30 47.2 -0.3
SRU e pP 21 30 57.6 -1.3
SRU pmax pmax
comp=Z,14nm,0.8s,mb4.9
SRU San Rafael 79.55 49 eP P 21 30 47.2 -0.3
comp=Z,14nm,0.8s,mb4.9
SRU e pP 21 30 57.6 -1.4
VRI Vrincioaia 79.58 320 P P 21 30 49.4 +1.9
VRI Vrincioaia 79.58 320 ⇊i P P 21 30 48.3 +0.8
L21A Rawlins 79.62 45 ⇑P P 21 30 48.0 +0.1
baz=80
BR131 Keskin Array S 79.68 312 eP P 21 30 48.7 +0.5
comp=Z,8.2nm,0.8s,mb4.7
BR131 e pP 21 30 58.9 -0.7
BRTR Keskin Array B 79.68 312 i P P 21 30 49.0 +0.8
BRTR pmax pmax
comp=Z,11nm,1.0s
BRTR Keskin Array B 79.68 312 P P 21 30 48.5 +0.3
comp=Z,11nm,1.0s,mb4.7,baz=97,slow=3.9,SNR=39
BRTR PP PP 21 33 59.5 +11
comp=Z,4.3nm,1.2s,baz=97,slow=6.3,SNR=4.7
BRTR LR LR 22 11 41.7
comp=Z,135nm,19.0s,MS4.3,baz=228,slow=40
KOLS Kolonicke sedl 79.69 324 eP P 21 30 48.0 0.0
KOLS e pP 21 31 00.0 +0.5
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 79.69 324 eP P 21 30 48.0 0.0
comp=Z,6.0nm,1.1s,mb4.4
KOLS ePP pP 21 31 00.0 +0.5
KOLS Kolonicke sedl 79.69 324 eP P 21 30 48.0 0.0
KOLS epP pP 21 30 59.9 +0.4
BC3 Big Chuckw Mtn 79.72 56 ⇊P P 21 30 48.9 +0.4
baz=80
Q18A Rafter H Ranch 79.80 49 ⇑P P 21 30 48.9 +0.1
baz=80
STHS Stebnicka Huta 79.82 325 eP P 21 30 49.3 +0.6
STHS e 21 31 03.4
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
STHS Stebnicka Huta 79.82 325 eP P 21 30 49.3 +0.6
comp=Z,6.8nm,1.1s,mb4.5
STHS ePP pP 21 31 03.4 +3.2
STHS Stebnicka Huta 79.82 325 eP P 21 30 49.3 +0.6
STHS epP pP 21 31 03.4 +3.2
N20A Spence Gulch, 79.82 47 ⇑P P 21 30 49.2 +0.3
baz=80
M21A Separation Pea 79.85 45 ⇑P P 21 30 49.6 +0.5
baz=80
ULM Lac du Bonnet 79.87 34 P P 21 30 47.9 -1.0
comp=Z,2.6nm,0.7s,mb4.3,baz=322,slow=4.2,SNR=4.7
ULM Lac du Bonnet 79.87 34 eP P 21 30 48.2 -0.7
comp=Z,18nm,1.4s,mb4.8
ULM e pP 21 30 56.9 -3.6
R17A Hanksville Air 79.87 50 ⇊P P 21 30 49.9 +0.6
baz=80
W13A Hualapai Mount 79.89 54 ⇊P P 21 30 49.9 +0.5
baz=80
UZH Uzhgorod 79.89 324 eP P 21 30 50.4 +1.3
UZH e 21 30 57.0
OJC Ojcow 79.90 326 eP P 21 30 49.3 +0.1
OJC ePcP PcP 21 30 59.9 +3.2
OJC eS S 21 40 37.7 -12
OJC L 22 10 23.4
comp=Z,0.5nm,18.1s
V14A Boquillas Ranc 80.07 53 ⇊P P 21 30 50.4 0.0
baz=80
RSSD Black Hills 80.07 42 eP P 21 30 50.2 0.0
RSSD e pP 21 31 01.0 -0.7
U15A North Rim 80.11 52 ⇊P P 21 30 51.2 +0.7
baz=80
TRPA Tarpa 80.12 324 ⇑i P P 21 30 51.1 +0.7
P19A Cripple Cowboy 80.16 48 ⇑P P 21 30 50.9 +0.2
baz=80
X13A Yucca 80.23 54 ⇊P P 21 30 50.9 -0.4
baz=80
MLR Muntele Rosu 80.24 320 ⇊P P 21 30 51.7 +0.6
MLR Muntele Rosu 80.24 320 ⇊i P P 21 30 51.7 +0.6
NIE Niedzica 80.25 326 eP P 21 30 51.8 +0.8
S17A Black Ridge (B 80.30 50 ⇊P P 21 30 51.3 -0.2
baz=81
W14A Seligman 80.34 53 ⇊P P 21 30 51.9 +0.1
baz=81
R18A Canyonlands Na 80.39 49 ⇑P P 21 30 52.5 +0.5
baz=81
V15A Kaibab Nationa 80.56 52 ⇑P P 21 30 53.4 +0.4
baz=81
VOIR 80.74 321 ⇑P P 21 30 54.0 +0.2
VOIR 80.74 321 ⇑i P P 21 30 54.0 +0.2
S18A Hurst Farm, Bl 80.76 50 ⇑P P 21 30 53.6 -0.4
baz=81
KECS Kecovo 80.84 325 eP P 21 30 52.5 -1.7
KECS e 21 31 08.5
KECS Kecovo 80.84 325 eP P 21 30 52.5 -1.7
KECS epP pP 21 31 08.5 +2.8
OKC Ostrava-Krasne 80.91 327 eP P 21 30 55.2 +0.6
OKC epP pP 21 31 05.1 -1.0
OKC AMS AMS 22 11 20.0
comp=Z,500nm,15.5s
X14A Yava 80.92 54 ⇊P P 21 30 55.4 +0.4
baz=81
BSEG Bad Segeberg 80.92 333 eP P 21 30 54.4 -0.2
comp=Z,23nm,1.1s,mb5.0
BSEG epP pP 21 31 04.3 -1.7
KSP Ksiaz 80.97 329 eP P 21 30 55.5 +0.6
KSP e pP 21 31 05.9 -0.5
KSP Ksiaz 80.97 329 eP P 21 30 55.0 +0.1
KSP e*PP pP 21 31 05.3 -1.0
DRGR 80.98 323 ⇑P P 21 30 55.4 +0.4
DRGR 80.98 323 ⇑i P P 21 30 55.4 +0.4
Q20A Ridgley Place, 81.00 48 ⇊P P 21 30 55.4 +0.1
baz=81
U16A Tuba City 81.02 52 ⇑P P 21 30 55.8 +0.4
baz=81
Y14A Wickenburg 81.17 54 ⇊P P 21 30 56.3 +0.1
baz=82
T18A Mexican Hat 81.19 50 ⇑P P 21 30 56.0 -0.3
baz=82
Z13A Yuma Proving G 81.19 55 ⇊P P 21 30 56.7 +0.3
baz=82
MORC Moravsky Berou 81.22 327 eP P 21 30 56.4 +0.1
MORC e pP 21 31 08.0 +0.3
MORC Moravsky Berou 81.22 327 ⇊i P P 21 30 57.3 +1.0
WUAZ Wupatki 81.25 52 ⇊P P 21 30 56.9 +0.2
baz=82
S19A Harvey Farm, M 81.26 49 ⇊P P 21 30 56.6 -0.1
baz=82
DPC Dobruska-Polom 81.32 328 eP P 21 30 57.4 +0.6
DPC epP pP 21 31 07.8 -0.5
DPC AMS AMS 22 11 30.0
comp=Z,500nm,13.6s
X15A Humboldt 81.33 54 ⇑P P 21 30 57.4 +0.3
baz=82
UPC Upice 81.34 328 eP P 21 30 57.0 +0.2
UPC epP pP 21 31 07.7 -0.6
R20A Redvale 81.44 49 ⇊P P 21 30 58.1 +0.5
baz=82
Q21A Lamborn Mesa, 81.51 48 ⇑P P 21 30 58.3 +0.3
baz=82
PSZ Piszkesteto 81.52 325 eP P 21 30 58.5 +0.7
PSZ e pP 21 31 10.7 +1.3
PSZ Piszkesteto 81.52 325 ⇑eP P 21 30 58.6 +0.7
PSZ Piszkesteto 81.52 325 ⇊i P P 21 30 59.0 +1.1
V17A Tonalea, Kykot 81.56 52 ⇑P P 21 30 58.6 +0.3
baz=82
VYHS Vyhne 81.59 326 eP P 21 30 58.0 -0.2
VYHS e pP 21 31 10.2 +0.5
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 81.59 326 eP P 21 30 58.0 -0.2
comp=Z,6.0nm,1.2s,mb4.4
VYHS ePP pP 21 31 10.2 +0.5
VYHS Vyhne 81.59 326 eP P 21 30 58.0 -0.2
VYHS epP pP 21 31 10.2 +0.5
Y15A Casa Rosa Ranc 81.60 54 ⇑P P 21 30 58.8 +0.3
baz=82
U18A Rough Rock, Ch 81.64 51 ⇊P P 21 30 59.1 +0.4
baz=82
SMCO Snowmass 81.64 47 eP P 21 30 59.9 +1.2
comp=Z,10nm,1.1s,mb4.7
SMCO e pP 21 31 10.7 +0.6
KOLL Kolacno 81.72 326 eP P 21 30 59.9 +1.0
KOLL Kolacno 81.72 326 eP P 21 30 59.9 +1.0
R21A Cimarron 81.82 48 ⇊P P 21 30 60.0 +0.3
baz=82
Q22A Crested Butte, 81.89 47 ⇑P P 21 31 00.1 +0.2
baz=82
X16A Lo Mia Camp, P 81.89 53 ⇑P P 21 31 00.6 +0.5
baz=82
BRG Berggiesshubel 81.92 330 eP P 21 31 00.0 +0.1

comp=Z,11nm,1.0s,mb4.7
BRG Berggiesshubel 81.92 330 *i* P **P 21 30 59.5 -0.4**
comp=Z,9.9nm,1.1s,mb4.7
BRG *i* pP 21 31 11.6 +0.2
comp=Z,15nm,1.2s
BRG *e*PP PP 21 34 03.4 -3.5
comp=Z,5.2nm,0.9s
BRG S S 21 41 14.0 +3.2
BRG SS SS 21 46 33.0 +4.5
BRG
comp=N,516nm,14.8s
BRG
comp=E,404nm,14.9s
BRG
comp=Z,636nm,14.7s
BRG Berggiesshubel 81.92 330 *i* P **P 21 30 59.5 -0.4**
BRG *i* pP 21 31 11.6 +0.2
BRG *e* 21 34 03.4
BRG S S 21 41 14.0 +3.2
BRG SS SS 21 46 33.0 +4.5
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRG MLR MLR
comp=N,309nm,14.8s,MS4.9
BRG MLR MLR
comp=E,242nm,14.9s,MS4.9
BRG MLR MLR
comp=Z,381nm,14.7s,MS4.9
GZR Gura Zlata 81.92 322 ⇑P **P 21 31 00.8 +0.8**
GZR Gura Zlata 81.92 322 ⇑*i*P **P 21 31 00.8 +0.8**
PVCC Panska Ves 81.92 329 *e*P **P 21 31 00.3 +0.4**
PVCC *e*pP pP 21 31 10.9 -0.5
PVCC AMS AMS 22 10 40.0
comp=Z,500nm,15.0s
CLL Collm 81.96 330 *e*P **P 21 30 59.6 -0.5**
comp=Z,17nm,1.0s,mb4.9
CLL Collm 81.96 330 ⇑*i*P **P 21 31 00.0 -0.1**
CLL *i* pP 21 31 11.5 -0.1
CLL *e* 21 34 06.0
CLL *e*S S 21 41 12.0 +0.8
CLL pmax pmax
comp=Z,17nm,1.0s,mb4.9
CLL MLR MLR
comp=Z,600nm,16.0s,MS5.0
CLL Collm 81.96 330 ⇑*i*P **P 21 31 00.0 -0.1**
comp=Z,17nm,1.0s,mb4.9
CLL *i* PcP PcP 21 31 04.2 -1.4
CLL *i* pP 21 31 11.5 -0.1
CLL *e*PP PP 21 34 06.0 -1.3
CLL *e*S S 21 41 12.0 +0.8
CLL LR LR
comp=Z,600nm,16.0s,MS5.0
CLL Collm 81.96 330 ⇑*i*P **P 21 31 00.0 -0.1**
comp=Z,17nm,1.0s,mb4.9
CLL LH 21 06 00.0
comp=N,300nm,19.3s
CLL LH 21 06 00.0
comp=E,400nm,21.3s
CLL *i* PcP PcP 21 31 04.3 -1.3
CLL *i* pP pP 21 31 10.3 -1.3
CLL *i* sP sP 21 31 14.1 -1.8
CLL *e*PP PP 21 34 06.0 -1.3
CLL *e*S S 21 41 12.0 +0.8
CLL *e*SS SS 21 46 36.0 +6.9
CLL *e* 21 47 31.0
VRAC Vranov 81.99 327 P **P 21 31 01.3 +1.0**
VRAC Vranov 81.99 327 ⇑*i*P **P 21 31 00.7 +0.4**
MVCO Mesa Verde 81.99 49 ⇓P **P 21 31 01.3 +0.7**
baz=82
MVCO Mesa Verde 81.99 49 *e*P **P 21 31 01.3 +0.8**
comp=E,9.8nm,0.9s,mb4.7
ISCO Idaho Springs 82.04 46 *e*P **P 21 31 01.3 +0.5**
U19A Dine' College, 82.13 51 ⇓P **P 21 31 01.4 +0.1**
baz=82
NRDL Niedersach Rie 82.14 333 *e*P **P 21 31 00.5 -0.6**
comp=Z,11nm,1.2s,mb4.7
SMOL Smolenice 82.21 326 *e*P **P 21 31 02.8 +1.3**
SMOL Smolenice 82.21 326 *e*P **P 21 31 02.8 +1.3**
BUD Budapest 82.24 325 ⇑*e*pP pP 21 31 13.8 +0.6
BZS Buzias 82.34 322 ⇓P **P 21 31 02.4 +0.2**
BZS Buzias 82.34 322 ⇓*i*P **P 21 31 02.4 +0.2**
PRU Pruhonice 82.35 329 *e*P **P 21 31 02.5 +0.3**
PRU *e*pP pP 21 31 12.7 -1.0
PRU AMS AMS 22 12 10.0
comp=Z,600nm,14.1s
TREC Trest 82.47 328 *e*P **P 21 31 02.8 0.0**
TREC *e*pP pP 21 31 13.4 -0.9
TREC AMS AMS 22 12 20.0
comp=Z,500nm,13.0s
CLZ Clausthal 82.56 332 *e*P **P 21 31 02.9 -0.4**
comp=Z,20nm,1.1s,mb5.1
CLZ Clausthal 82.56 332 *e*P **P 21 31 02.9 -0.4**
CLZ pmax pmax
comp=Z,20nm,1.1s,mb5.1
TANN Tannenbergstha 82.87 330 *e*P **P 21 31 04.6 -0.3**
comp=Z,6.0nm,1.3s,mb4.5
WERD Werda 82.91 330 *e*P **P 21 31 05.0 -0.1**
comp=Z,9.0nm,1.2s,mb4.7
V20A Brimhall 82.91 51 ⇑P **P 21 31 05.7 +0.3**
baz=83
GUNZ Gunzen 82.96 330 *e*P **P 21 31 05.6 +0.2**
comp=Z,10.0nm,1.2s,mb4.7
WERN Wernitzgruen 83.00 330 *e*P **P 21 31 05.9 +0.3**
comp=Z,10.0nm,1.0s,mb4.8
NKC Novy Kostel 83.02 330 *e*P **P 21 31 05.8 +0.1**
NKC *e*pP pP 21 31 17.4 +0.2
NKC AMS AMS 22 11 40.0
comp=Z,500nm,12.9s
MOX Moxa 83.03 331 *e*P **P 21 31 06.0 +0.3**
MOX *e* pP 21 31 16.0 -1.2
comp=Z,14nm,0.9s
MOX
comp=Z,300nm,17.0s
MOX Moxa 83.03 331 *e*P **P 21 31 05.6 -0.1**
comp=Z,7.0nm,1.0s,mb4.7
MOX Moxa 83.03 331 *e*P **P 21 31 06.0 +0.3**
MOX *e* pP 21 31 16.0 -1.2
MOX pmax pmax
comp=Z,18nm,0.9s,mb5.1
MOX MLR MLR
comp=Z,14µm,17.0s
MOX Moxa 83.03 331 *e*P **P 21 31 06.0 +0.3**
comp=Z,14nm,0.9s,mb5.0
MOX *e* pP 21 31 16.0 -1.2
MOX LR LR
comp=Z,300nm,17.0s,MS4.7
KDZ Kurdzhali 83.14 318 P **P 21 31 07.4 +1.0**
IBBN Ibbenburen 83.15 334 *e*P **P 21 31 06.0 -0.3**
comp=Z,26nm,1.2s,mb5.1
CONA Conrad Observa 83.34 327 ⇑*i*P **P 21 31 08.3 +1.0**
comp=Z,15nm,1.3s,mb4.9
KHC Kasperske Hory 83.41 329 *e*P **P 21 31 07.6 -0.1**
comp=Z,11nm,0.9s,mb4.9
KHC *e* pP 21 31 18.8 -0.4
KHC Kasperske Hory 83.41 329 *e*P **P 21 31 07.8 +0.1**
KHC *e*PCP PcP 21 31 12.5 +0.5
KHC *e*pP pP 21 31 18.0 -1.2
KHC AMS AMS 22 13 00.0
comp=Z,600nm,14.2s
SDCO Great Sand Dun 83.45 47 *e*P **P 21 31 08.9 +0.7**
ROTZ Rotzenmuhle 83.48 330 *e*P **P 21 31 08.1 +0.1**
comp=Z,24nm,1.4s,mb5.0
RZN Rozhen 83.49 318 P **P 21 31 09.0 +0.7**
EYMN Ely 83.51 33 *e*P **P 21 31 06.3 -1.9**
comp=Z,3.8nm,0.9s,mb4.5
GEC2 GERESS Array S 83.58 329 *e*P **P 21 31 08.5 -0.1**
comp=Z,7.0nm,1.2s,mb4.7
GEC2 GERESS Array S 83.58 329 *e*P **P 21 31 08.5 -0.1**
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
GERES GERESS Array B 83.58 329 P **P 21 31 08.5 -0.1**
GERES 21 34 21.8
GERES GERESS Array B 83.58 329 P **P 21 31 08.5 -0.1**
comp=Z,3.9nm,0.9s,mb4.5,baz=38,slow=5.0,SNR=28
GERES PP PP 21 34 21.8 +1.2
comp=Z,0.8nm,0.8s,baz=51,slow=9.3,SNR=3.9
GERES LR LR 22 11 55.6
comp=Z,354nm,18.0s,MS4.8,baz=21,slow=38
VTS Vitosha 83.67 319 P **P 21 31 09.8 +0.6**
WET Wettzell 83.69 329 *e*P **P 21 31 09.2 +0.1**
comp=Z,9.0nm,1.3s,mb4.7
WET Wettzell 83.69 329 *e*P **P 21 31 09.2 +0.1**
WET pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
PPT Papeete 83.90 117 *e*LR LR 21 57 32.4
comp=Z,216nm,21.2s,baz=310
PPT Papeete 83.90 117 LR LR 22 02 33.1
comp=Z,190nm,19.1s,MS4.5,baz=222,slow=32
GRA1 Grafenberg Arr 83.94 330 *e*P **P 21 31 10.5 +0.1**
comp=Z,37nm,1.1s,mb5.4
GRA1 *e*pP pP 21 31 19.9 -2.0
GRA1 LR LR
comp=Z,200nm,19.8s,MS4.5
GRF Grafenberg Arr 83.94 330 *e*P **P 21 31 10.5 +0.1**
comp=Z,37nm,1.1s,mb5.4
GRF *e*pP pP 21 31 19.9 -2.0
GRF *e*L 22 11 28.9
comp=Z,189nm,19.8s
GRF Grafenberg Arr 83.94 330 *e*P **P 21 31 10.5 +0.1**
GRF *e**PP pP 21 31 19.9 -2.0
GRF pmax pmax
comp=Z,37nm,1.1s,mb5.4
GRF MLR MLR
comp=Z,200nm,19.8s,MS4.5
GRF Grafenberg Arr 83.94 330 *e*P **P 21 31 10.5 +0.1**
GRF *e**PP pP 21 31 19.9 -2.0
GRF pmax pmax
comp=Z,37nm,1.1s,mb5.4
GRF MLR MLR
comp=Z,200nm,19.8s,MS4.5
MMB Musomiste 84.09 318 P **P 21 31 11.8 +0.5**
MOA Molln 84.10 328 ⇑*i*P **P 21 31 11.3 +0.1**
comp=Z,8.4nm,1.4s,mb4.7
Y20A Horse Springs, 84.18 52 ⇓P **P 21 31 12.9 +1.0**
baz=84
ECSD EROS Data Cent 84.21 38 *e*P **P 21 31 11.4 -0.5**
comp=Z,22nm,1.5s,mb5.1
KKB Krupnik 84.24 319 P **P 21 31 12.3 +0.2**
218A Dragoon 84.33 54 ⇑P **P 21 31 13.4 +0.7**
baz=85
Z20A Nine Sixteen R 84.55 53 ⇑P **P 21 31 13.8 0.0**
baz=85
TNS Taunus Mts 84.59 332 *e*P **P 21 31 13.8 +0.1**
comp=Z,14nm,1.1s,mb5.0
TNS Taunus Mts 84.59 332 *e*P **P 21 31 13.8 +0.1**
TNS pmax pmax
comp=Z,14nm,1.1s,mb5.0
PERS Pernice 84.65 326 *i* P **P 21 31 13.8 -0.2**
PERS *e* pP 21 31 25.1 -0.5
SOKA Soboth 84.66 326 ⇑*i*P **P 21 31 13.9 -0.2**
comp=Z,14nm,1.3s,mb4.9
ANMO Albuquerque 84.71 50 *e*P **P 21 31 14.6 0.0**
318A Bisbee 84.71 55 ⇓P **P 21 31 13.7 -1.0**
baz=85
RJOB Jochberg 84.82 328 *e*P **P 21 31 14.9 0.0**
comp=Z,11nm,1.1s,mb4.9
219A White Tail Can 84.83 54 ⇑P **P 21 31 14.7 -0.6**
baz=85
STIP Stip 84.84 319 *e*P **P 21 31 15.0 -0.1**
VAY Valandovo 84.90 319 *e*P **P 21 31 15.3 -0.2**
SKO Skopje 85.03 320 *e*P **P 21 31 17.4 +1.4**
FUR Furstenfeldbru 85.12 329 *e*P **P 21 31 16.7 +0.3**
comp=Z,38nm,1.4s,mb5.3
FUR Furstenfeldbru 85.12 329 *e*P **P 21 31 16.7 +0.3**
FUR pmax pmax
comp=Z,38nm,1.4s,mb5.3
BNM Barren Site 85.13 51 *e*P **P 21 31 16.8 +0.1**
comp=Z,4.9nm,1.0s,mb4.6
MEM Membach 85.17 334 P **P 21 31 16.6 0.0**
comp=Z,8.2nm,1.2s,mb4.7
220A Playas Peak, P 85.37 54 ⇓P **P 21 31 18.9 +0.9**
baz=86
VISS Visnje 85.41 326 *i* P **P 21 31 17.2 -0.7**
BOJS Bojanci 85.45 326 *i* P **P 21 31 17.4 -0.7**
BOJS *i* pP 21 31 30.6 +0.9
STU Stuttgart 85.47 331 *e*P **P 21 31 18.5 +0.4**
STU *e* pP 21 31 29.7 0.0
STU pmax pmax
comp=Z,33nm,1.1s,mb5.4
STU Stuttgart 85.47 331 *e*P **P 21 31 18.5 +0.3**
comp=Z,33nm,1.1s,mb5.4
STU *e* pP 21 31 29.7 0.0
TAOE Nuku Hiva Isla 85.55 104 *e*LR LR 21 58 12.2
comp=Z,316nm,23.4s
KRUS Krusevo 85.56 320 *e*P **P 21 31 18.1 -0.7**
BCLA Clavier 85.58 334 P **P 21 31 18.6 0.0**
comp=Z,12nm,1.5s,mb4.9
Y23A Lovelace Mesa, 85.63 51 ⇑P **P 21 31 19.7 +0.5**
baz=86
JAVS Javornik 85.69 326 *i* P **P 21 31 18.1 -1.2**
JAVS *i* pP 21 31 29.9 -0.9
W25A X Bar L Ranch, 85.76 49 ⇓P **P 21 31 20.3 +0.5**
baz=86
MOTA Moosalm 85.84 329 ⇑*i*P **P 21 31 19.7 -0.2**
comp=Z,2.7nm,0.8s,mb4.5
RETA Reutte 85.87 329 ⇑*i*P **P 21 31 20.1 0.0**
comp=Z,15nm,1.3s,mb5.1
SNF Seneffe 85.87 334 P **P 21 31 19.8 -0.2**
WLF Walferdange 85.90 333 P **P 21 31 20.8 +0.6**
comp=Z,11nm,1.7s,mb4.8
WLF AP PcP 21 31 24.8 +1.8
SCHQ Schefferville 85.92 16 tx pP 21 31 29.6 -2.2
comp=Z,4.7nm,0.9s,baz=322,slow=6.7,SNR=5.6
SCHQ LR LR 22 12 33.4
comp=Z,156nm,18.5s,MS4.4,baz=292,slow=38
GIVF Givet 86.02 334 *e*P **P 21 31 20.4 -0.4**
DOU Dourbes 86.10 334 P **P 21 31 20.8 -0.5**
DOU AP pP 21 31 26.0 -6.7
BFO Black Forest 86.17 331 P **P 21 31 21.0 -0.6**
comp=Z,76nm,1.1s,mb5.8,SNR=6.5
BFO Black Forest 86.17 331 *e*P **P 21 31 21.3 -0.3**
comp=Z,17nm,1.1s,mb5.2
BFO *e*pP pP 21 31 31.5 -1.7
BFO Black Forest 86.17 331 *e*P **P 21 31 21.3 -0.3**
BFO *e**PP pP 21 31 31.5 -1.7
BFO pmax pmax
comp=Z,17nm,1.1s,mb5.2
BAIF Baives 86.27 334 ⇑*i*P **P 21 31 21.5 -0.6**
comp=Z,17nm,0.9s,mb5.0
BAIF Baives 86.27 334 ⇑*i*P **P 21 31 21.5 -0.6**
BAIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
BAIF Baives 86.27 334 ⇑*i*P **P 21 31 21.5 -0.6**
comp=Z,8.4nm,0.9s,mb5.0
DAVA Damuels 86.39 330 ⇑*i*P **P 21 31 22.7 0.0**
comp=Z,9.6nm,1.0s,mb5.0
CDF Champ du Feu 86.51 332 ⇑*i*P **P 21 31 23.0 -0.3**
comp=Z,29nm,1.1s,mb5.1
CDF Champ du Feu 86.51 332 ⇑*i*P **P 21 31 23.0 -0.3**
CDF pmax pmax
comp=Z,14nm,1.1s,mb5.1
CDF Champ du Feu 86.51 332 ⇑*i*P **P 21 31 23.0 -0.3**
comp=Z,14nm,1.1s,mb5.1
ECH Echery 86.72 332 *e*P **P 21 31 23.6 -0.7**
ECH *e* pP 21 31 36.3 +0.5
ECH pmax pmax
comp=Z,13nm,1.0s,mb5.1
ECH Echery 86.72 332 *e*P **P 21 31 23.6 -0.7**
comp=Z,12nm,1.0s,mb5.1
ECH *e* pP 21 31 36.3 +0.5
HINF Hinteralfeld 87.16 332 *e*P **P 21 31 25.6 -0.9**
comp=Z,8.0nm,0.9s,mb4.6
HINF Hinteralfeld 87.16 332 *e*P **P 21 31 25.6 -0.9**
HINF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
HINF Hinteralfeld 87.16 332 *e*P **P 21 31 25.6 -0.9**
comp=Z,4.0nm,0.9s,mb4.7
HAU Haudompre 87.20 332 ⇑*i*P **P 21 31 26.0 -0.6**
comp=Z,21nm,1.1s,mb5.0
HAU *e*MLR MLR
comp=Z,273nm,22.8s,MS4.3
HAU Haudompre 87.20 332 ⇑*i*P **P 21 31 26.0 -0.6**
HAU pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,270nm,22.8s,MS4.6
HAU Haudompre 87.20 332 ⇑*i*P **P 21 31 26.0 -0.6**
comp=Z,10nm,1.1s,mb5.0
HAU LR LR
comp=Z,270nm,22.8s,MS4.6
MEZF Maizieres J'vi 87.27 333 ⇑*i*P **P 21 31 26.8 -0.2**
comp=Z,21nm,0.9s,mb5.1
MEZF Maizieres J'vi 87.27 333 ⇑*i*P **P 21 31 26.8 -0.2**
comp=Z,21nm,0.9s,mb5.4
Z26A Caprock 87.36 50 ⇓P **P 21 31 27.8 +0.1**
baz=88
Z27A Tatum 87.80 50 ⇓P **P 21 31 31.1 +1.3**
baz=88
425A Indio Mountain 88.39 52 ⇑P **P 21 31 32.8 +0.1**
baz=89
CABF La Chapelle 88.45 331 *e*P **P 21 31 32.2 -0.4**
comp=Z,24nm,1.3s,mb5.0
CABF La Chapelle 88.45 331 *e*P **P 21 31 32.2 -0.4**
CABF pmax pmax
comp=Z,12nm,1.3s,mb5.0
CABF La Chapelle 88.45 331 *e*P **P 21 31 32.2 -0.4**
comp=Z,12nm,1.3s,mb5.0
LOR Lormes 88.74 333 *e*P **P 21 31 33.6 -0.4**
comp=Z,34nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,257nm,17.5s,MS4.4
LOR Lormes 88.74 333 *e*P **P 21 31 33.6 -0.4**
LOR pmax pmax
comp=Z,17nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,260nm,17.5s,MS4.7
LOR Lormes 88.74 333 *e*P **P 21 31 33.6 -0.4**
comp=Z,17nm,1.3s,mb5.2
LOR LR LR
comp=Z,260nm,17.5s,MS4.7
FLN La Foliniere 88.97 336 *e*P **P 21 31 34.5 -0.5**
FLN *e*MLR MLR
comp=Z,464nm,19.8s,MS4.6
FLN La Foliniere 88.97 336 *e*P **P 21 31 34.5 -0.5**
FLN LR LR
comp=Z,460nm,19.8s,MS4.9
LDF La Druitiere 89.00 336 *e*P **P 21 31 34.7 -0.5**
comp=Z,64nm,1.5s,mb5.4
LDF La Druitiere 89.00 336 *e*P **P 21 31 34.7 -0.5**
LDF pmax pmax
comp=Z,32nm,1.5s,mb5.4
LDF La Druitiere 89.00 336 *e*P **P 21 31 34.7 -0.5**
comp=Z,32nm,1.5s,mb5.4
SSF Saint Saulge 89.05 333 *e*P **P 21 31 35.0 -0.4**
comp=Z,22nm,1.3s,mb5.0
SSF Saint Saulge 89.05 333 *e*P **P 21 31 35.0 -0.4**
SSF pmax pmax
comp=Z,11nm,1.3s,mb5.0
SSF Saint Saulge 89.05 333 *e*P **P 21 31 35.0 -0.4**
comp=Z,11nm,1.3s,mb5.0
LPL La Plagne 89.10 330 ⇑*i*P **P 21 31 35.5 -0.2**
comp=Z,13nm,1.1s,mb4.9
LPL La Plagne 89.10 330 ⇑*i*P **P 21 31 35.5 -0.2**
LPL pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
LPL La Plagne 89.10 330 ⇑*i*P **P 21 31 35.5 -0.2**
comp=Z,6.6nm,1.1s,mb4.9
LPG La Plagne 89.11 330 ⇑*i*P **P 21 31 35.7 -0.1**
comp=Z,9.1nm,0.8s,mb4.8
LPG La Plagne 89.11 330 ⇑*i*P **P 21 31 35.7 -0.1**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
LPG La Plagne 89.11 330 ⇑*i*P **P 21 31 35.7 -0.1**
comp=Z,4.6nm,0.8s,mb4.9
SMF Signal de Mont 89.27 333 *e*P **P 21 31 36.2 -0.3**
comp=Z,27nm,1.2s,mb5.1
SMF Signal de Mont 89.27 333 *e*P **P 21 31 36.2 -0.3**
SMF pmax pmax
comp=Z,14nm,1.2s,mb5.2
SMF Signal de Mont 89.27 333 *e*P **P 21 31 36.2 -0.3**
comp=Z,14nm,1.2s,mb5.2
AVF Avril sur Loir 89.33 333 *e*P **P 21 31 36.5 -0.3**
comp=Z,24nm,1.0s,mb5.2
AVF Avril sur Loir 89.33 333 *e*P **P 21 31 36.5 -0.3**
AVF pmax pmax
comp=Z,12nm,1.0s,mb5.2
AVF Avril sur Loir 89.33 333 *e*P **P 21 31 36.5 -0.3**
comp=Z,12nm,1.0s,mb5.2
328A Wristen Ranch, 89.36 51 ⇑P **P 21 31 37.2 -0.1**
baz=90
GRR Gorron 89.42 336 ⇑*i*P **P 21 31 36.9 -0.2**
comp=Z,37nm,1.2s,mb5.3
GRR Gorron 89.42 336 ⇑*i*P **P 21 31 36.9 -0.2**
GRR pmax pmax
comp=Z,19nm,1.2s,mb5.3
GRR Gorron 89.42 336 ⇑*i*P **P 21 31 36.9 -0.2**
comp=Z,19nm,1.2s,mb5.3
526A Mary Lane Ranc 89.45 52 ⇓P **P 21 31 38.2 +0.6**
baz=90
BGF Bois d'Agland 89.71 333 *e*P **P 21 31 38.2 -0.4**
MBDF Montbardon 89.73 330 *e*P **P 21 31 37.6 -1.1**
comp=Z,7.4nm,0.7s,mb4.8
MBDF Montbardon 89.73 330 *e*P **P 21 31 37.6 -1.1**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
MBDF Montbardon 89.73 330 *e*P **P 21 31 37.6 -1.1**
comp=Z,3.7nm,0.7s,mb4.8
ORIF Oris-en-Rattie 89.93 330 *e*P **P 21 31 39.9 +0.3**
ORIF *e*MLR MLR
comp=Z,356nm,17.5s,MS4.5
SGMF Saint Gilles 90.08 337 ⇑*i*P **P 21 31 40.0 -0.2**
comp=Z,19nm,1.0s,mb5.1
SGMF Saint Gilles 90.08 337 ⇑*i*P **P 21 31 40.0 -0.2**
SGMF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
SGMF Saint Gilles 90.08 337 ⇑*i*P **P 21 31 40.0 -0.2**
comp=Z,9.7nm,1.0s,mb5.1
SBF Sospel 90.17 329 *e*P **P 21 31 39.5 -1.3**
TCF Toulx Ste Croi 90.17 333 ⇑*i*P **P 21 31 40.6 -0.1**
comp=Z,9.5nm,1.0s,mb4.8
TCF Toulx Ste Croi 90.17 333 ⇑*i*P **P 21 31 40.6 -0.1**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
TCF Toulx Ste Croi 90.17 333 ⇑*i*P **P 21 31 40.6 -0.1**
comp=Z,4.8nm,1.0s,mb4.8
TXAR Lajitas Array 90.21 53 P **P 21 31 40.9 -0.3**
comp=Z,1.6nm,0.7s,mb4.4,baz=291,slow=3.5,SNR=16
TXAR LR LR 22 13 01.0
comp=Z,126nm,18.1s,MS4.4,baz=185,slow=36
ROSF Rostrenen 90.22 338 ⇑*i*P **P 21 31 40.9 0.0**
comp=Z,21nm,1.0s,mb5.1
ROSF Rostrenen 90.22 338 ⇑*i*P **P 21 31 40.9 0.0**
ROSF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
ROSF Rostrenen 90.22 338 ⇑*i*P **P 21 31 40.9 0.0**
comp=Z,10nm,1.0s,mb5.1
VIVF Saint-Julien-l 90.46 331 ⇑*i*P **P 21 31 41.8 -0.3**
comp=Z,23nm,1.2s,mb5.1
VIVF Saint-Julien-l 90.46 331 ⇑*i*P **P 21 31 41.8 -0.3**
VIVF pmax pmax
comp=Z,12nm,1.2s,mb5.1
VIVF Saint-Julien-l 90.46 331 ⇑*i*P **P 21 31 41.8 -0.3**
comp=Z,12nm,1.2s,mb5.1
QUIF Quistinic 90.56 337 *e*P **P 21 31 42.8 +0.3**
PGF Pioggiola 90.57 327 *e*P **P 21 31 41.6 -1.0**
MFF Saint Martin d 90.73 335 ⇑*i*P **P 21 31 43.3 0.0**
comp=Z,26nm,1.1s,mb5.2
MFF Saint Martin d 90.73 335 ⇑*i*P **P 21 31 43.3 0.0**
MFF pmax pmax
comp=Z,13nm,1.1s,mb5.2
MFF Saint Martin d 90.73 335 ⇑*i*P **P 21 31 43.3 0.0**
comp=Z,13nm,1.1s,mb5.2
FRF La Foret Royal 90.74 329 ⇑*i*P **P 21 31 42.3 -1.1**
comp=Z,9.7nm,1.1s,mb4.8
FRF La Foret Royal 90.74 329 ⇑*i*P **P 21 31 42.3 -1.1**
FRF pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
FRF La Foret Royal 90.74 329 ⇑*i*P **P 21 31 42.3 -1.1**
comp=Z,4.8nm,1.1s,mb4.7
SMRF Simiane la Rot 90.84 330 ⇑*i*P **P 21 31 43.2 -0.7**
comp=Z,26nm,1.4s,mb5.0
SMRF Simiane la Rot 90.84 330 ⇑*i*P **P 21 31 43.2 -0.7**
comp=Z,26nm,1.4s,mb5.4
LMR La Mourre 90.99 329 ⇑*i*P **P 21 31 43.7 -0.9**
comp=Z,27nm,1.1s,mb5.2
LMR La Mourre 90.99 329 ⇑*i*P **P 21 31 43.7 -0.9**
LMR pmax pmax
comp=Z,14nm,1.1s,mb5.2
LMR La Mourre 90.99 329 ⇑*i*P **P 21 31 43.7 -0.9**
comp=Z,14nm,1.1s,mb5.2
RJF Les Rejaudoux 91.27 333 ⇑*i*P **P 21 31 45.9 +0.1**
comp=Z,20nm,1.0s,mb5.1
RJF *e*MLR MLR
comp=Z,358nm,18.5s,MS4.5
RJF Les Rejaudoux 91.27 333 ⇑*i*P **P 21 31 45.9 +0.1**
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
RJF MLR MLR
comp=Z,360nm,18.5s,MS4.8
RJF Les Rejaudoux 91.27 333 ⇑*i*P **P 21 31 45.9 +0.1**
comp=Z,10nm,1.0s,mb5.1
RJF LR LR
comp=Z,360nm,18.5s,MS4.8
CAF Calviac 91.39 333 ⇑*i*P **P 21 31 46.7 +0.3**
comp=Z,26nm,1.0s,mb5.2
CAF Calviac 91.39 333 ⇑*i*P **P 21 31 46.7 +0.3**

CAF pmax pmax
comp=Z,13nm,1.0s,mb5.2
CAF Calviac 91.39 333⇑*iP* **P 21 31 46.7 +0.3**
comp=Z,13nm,1.0s,mb5.2
LASF Ste Croix 91.43 331 *eP* **P 21 31 46.4 -0.2**
comp=Z,17nm,1.1s,mb5.0
LFF La Frestale 91.86 334⇑*iP* **P 21 31 48.7 +0.1**
comp=Z,24nm,1.0s,mb5.2
LFF La Frestale 91.86 334⇑*iP* **P 21 31 48.7 +0.1**
LFF pmax pmax
comp=Z,12nm,1.0s,mb5.2
LFF La Frestale 91.86 334⇑*iP* **P 21 31 48.7 +0.1**
comp=Z,12nm,1.0s,mb5.2
MTLF Montolieu 92.69 332⇑*iP* **P 21 31 52.4 0.0**
comp=Z,29nm,1.5s,mb5.2
MTLF Montolieu 92.69 332⇑*iP* **P 21 31 52.4 0.0**
MTLF pmax pmax
comp=Z,14nm,1.5s,mb5.2
MTLF Montolieu 92.69 332⇑*iP* **P 21 31 52.4 0.0**
comp=Z,14nm,1.5s,mb5.2
ETSF Etsaut 94.10 333 *eP* **P 21 31 59.4 +0.5**
comp=Z,11nm,0.9s,mb5.0
ETSF Etsaut 94.10 333 *eP* **P 21 31 59.4 +0.5**
ETSF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
ETSF Etsaut 94.10 333 *eP* **P 21 31 59.4 +0.5**
comp=Z,5.5nm,0.9s,mb5.0
KEST Kesra 95.88 323 LR LR 22 21 05.5
comp=Z,103nm,18.4s,MS4.3,baz=259,slow=39
ESDC Sonseca Array 98.15 334 LR LR 22 22 40.8
comp=Z,283nm,18.3s,MS4.8,baz=355,slow=39
KMBO Kilima Mbogo 102.52 278 PP PP 21 36 57.8 +7.2
comp=Z,1.8nm,0.2s,baz=67,slow=10,SNR=3.1
JTS JuntasAbangare 116.00 53 *e*PKIKP PKPdf 21 37 23.6 -0.3
TORD Torodi Ar. Bea 118.17 315 tx tx 21 37 34.1
comp=Z,1.1nm,1.0s,baz=34,slow=1.9,SNR=5.3
TORD PP PP 21 38 39.6 -3.1
comp=Z,2.5nm,0.9s,baz=32,slow=7.3,SNR=8.0
SDV Santo Domingo 125.59 41 PKP PKPdf 21 37 41.9 -0.4
comp=Z,3.9nm,0.7s,baz=326,slow=3.8,SNR=5.9
SDV Santo Domingo 125.59 41 *e*PKPdf PKPdf 21 37 42.3 0.0
LPAZ La Paz 146.66 61 PKPbc PKPbc 21 38 22.5 0.0
comp=Z,2.3nm,0.8s,baz=337,slow=4.6,SNR=11
LPAZ La Paz 146.66 61 *e*PKPdf PKPdf 21 38 22.5 +1.5
RCBR Riachuelo 149.61 356 *e*PKPdf PKPdf 21 38 25.8 -0.2
RCBR *e*PKPbc PKPbc 21 38 30.2 -0.3
RCBR *e*PKPab PKPab 21 38 36.0 +0.4
LVC Limon Verde 149.99 72 PKPbc PKPbc 21 38 31.6 +0.4
comp=Z,3.0nm,0.7s,baz=249,slow=2.0,SNR=2.5
LVC Limon Verde 149.99 72 PKPdf PKPdf 21 38 25.8 -0.4
LVC PKPbc PKPbc 21 38 31.6 +0.4
SIV San Ignacio 151.20 51 PKPbc PKPbc 21 38 33.3 -0.9
comp=Z,5.3nm,0.9s,baz=356,slow=0.5,SNR=22
CFAA Coronel Fontan 154.56 88 PKPbc PKPbc 21 38 44.1 +2.9
comp=Z,0.1nm,0.3s,baz=344,slow=7.4,SNR=2.6

IDC 08 21:29:02.7±2.4, 15°.80S×70°.60W, h201km±22km, mb3.4/3, mb1 3.5/5, mb1mx3.3/19, mbtmp3.4/5, Error ellipse: s-maj=35.5km s-min=20.6km az=111.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.42**	**102**	P	Pn	21 29 47.1	+1.4
	1.8nm,0.3s,baz=281,slow=8.9,SNR=45						
LPAZ				S	Sn	21 30 20.6	+1.4
	0.6nm,0.3s,baz=26,slow=21,SNR=12						
LVC	**Limon Verde**	**6.96**	**167**	P	Pn	21 30 44.4	+2.1
	3.9nm,0.3s,baz=360,slow=11,SNR=50						
LVC				S	Sn	21 32 00.3	-1.3
	1.6nm,0.3s,baz=230,slow=23,SNR=16						
ULM	**Lac du Bonnet**	**69.43**	**343**	P	P	21 39 47.4	-1.4
	1.3nm,0.4s,baz=176,slow=4.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**77.05**	**72**	P	P	21 40 34.4	+0.2
	0.2nm,0.5s,baz=258,slow=5.1,SNR=8.8						
YKA	**Yellowknife Ar**	**85.31**	**341**	P	P	21 41 17.4	+0.8
	0.2nm,0.5s,baz=135,slow=4.8,SNR=7.2						

CASC 08 22:03:05.3±1.7, 13°.46N×90°.40W, h28km±5km, MD3.8, ML3.1, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.71**	**356**	⇑*iP*	Pb	22 03 19.6	+0.3
RTR	**El Retiro**	**0.85**	**59**	*iP*	Pn	22 03 21.4	0.0
RBDL	**Robledal**	**0.95**	**47**	*iP*	Pn	22 03 22.6	-0.2
PCG	**Pacaya**	**0.95**	**348**	⇓*eP*	Pn	22 03 23.2	+0.4
PCG				*eS*	Sn	22 03 35.1	-0.3
FUG	**Fuego 3**	**1.07**	**336**	*eP*	Pn	22 03 24.4	-0.1
BOQS	**Boqueron**	**1.12**	**76**	*eP*	Pn	22 03 25.2	+0.1
BOQS				*eS*	Sn	22 03 40.4	+0.8
NBG	**Las Nubes**	**1.12**	**3**	*eP*	Pn	22 03 26.2	+1.0
NBG				*eS*	Sn	22 03 42.6	+2.9
SNET	**Serv Nac Est T**	**1.16**	**78**	*eP*	Pn	22 03 25.7	+0.1
FG6		**1.19**	**337**	*eP*	Pn	22 03 26.2	+0.1
LFRS	**El Faro**	**1.31**	**83**	*eP*	Pn	22 03 27.7	0.0
LBRS	**Las Brisas**	**1.35**	**78**	*eP*	Pn	22 03 28.4	+0.2
LBRS				*eS*	Sn	22 03 46.5	+1.4
TP2	**Tecpan 2**	**1.45**	**335**	⇓*eP*	Pn	22 03 30.7	+1.0
TP2				*eS*	Sn	22 03 48.7	+1.0
JAT	**Jato**	**1.48**	**306**	⇓*eP*	Pn	22 03 30.3	+0.3
SNVI	**San Vicente**	**1.52**	**84**	*eP*	Pn	22 03 31.2	+0.6
MRL	**Marmol**	**1.74**	**23**	⇓*eP*	Pn	22 03 34.4	+0.8
VSM	**San Miguel**	**2.07**	**91**	*eP*	Pn	22 03 39.3	+1.2
BLLM	**Bellamira**	**2.10**	**90**	*eP*	Pn	22 03 39.1	+0.6
CAHU	**Cacacuatique**	**2.15**	**81**	*eP*	Pn	22 03 39.2	0.0
CNCH	**Conchagua**	**2.50**	**94**	*eP*	Pn	22 03 44.4	+0.3
CNCH				*eS*	Sn	22 04 15.2	+1.5
CRIN	**San Cristobal**	**3.35**	**103**	*eP*	Pn	22 03 56.0	+0.3
CRIN				*eS*	Sn	22 04 34.2	-0.4
CRIN				AML	AML	22 04 46.4	
	comp=N,381nm,0.3s						
TICN	**Ticuantepe**	**4.30**	**109**	*eP*	Pn	22 04 09.5	+0.6
BOAB	**BOACO BROADBAN**	**7.72**	**102**	*eP*	Pn	22 04 13.0	-1.6
BOAB				AML	AML	22 05 30.6	
	comp=E,6.4nm,0.5s						

*NEIC **08** 22:07:48.8±1.5, 26°.07S×178°.36E, h605km±18km, mb4.1/5, Error ellipse: s-maj=15.1km s-min=10.3km az=204.0*
*ISCJB **08** 22:07:49.0±2.0, 26°.1S±0°.1×178°.3E±0°.1, h621km±27km, mb4.0/13, Error ellipse: s-maj=19.8km s-min=13.7km az=18.7*
*IDC **08** 22:07:49.4±2.6, 26°.10S×178°.37E, h609km±33km, mb3.4/9, mb1 3.6/11, mb1mx3.4/18, mbtmp3.4/11, Error ellipse: s-maj=31.5km s-min=15.3km az=171.0*
ISC 08 22:07:49.2±2.0, 26°.1S±0°.1×178°.4E±0°.1, h608km±25km, n42, σ0s81/31, mb4.0/13, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.21**	**185**	P	P	22 10 29.4	-0.5
	0.7nm,0.3s,baz=331,slow=10,SNR=3.2						
URZ				S	S	22 12 36.2	-5.8
	0.2nm,0.3s,baz=270,slow=20,SNR=4.0						
RPZ	**Rata Peaks**	**18.60**	**197**	P	P	22 11 29.2	-0.5
	0.9nm,0.3s,baz=16,slow=18,SNR=4.0						
ARMA	**Armidale**	**23.95**	**253**	*eP*	P	22 12 19.4	+1.6
CNB	**Canberra Magne**	**26.54**	**243**	*eP*	P	22 12 42.1	+1.6
TOO	**Toolangi**	**30.08**	**239**	*eP*	P	22 13 12.2	+1.1
CTA	**Charters Tower**	**30.11**	**275**	*eP*	P	22 13 11.3	-0.3
	2.7nm,0.4s,mb4.2						
CTA	**Charters Tower**	**30.11**	**275**	P	P	22 13 11.9	+0.3
	3.9nm,0.4s,mb4.4,baz=78,slow=12,SNR=6.6						
CTAO	**Charters Tower**	**30.11**	**275**	*eP*	P	22 13 11.7	+0.1
	3.8nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**32.61**	**251**	*eP*	P	22 13 33.1	+0.5
	4.7nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**32.61**	**251**	P	P	22 13 33.0	+0.4
	6.0nm,0.5s,mb4.5,baz=100,slow=12,SNR=41						
STKA	**Stephens Creek**	**32.61**	**251**	*eP*	P	22 13 32.6	0.0
	1.1nm,0.4s,mb3.8						
ASAR	**Alice Springs**	**40.30**	**263**	P	P	22 14 35.5	-0.1
	6.9nm,0.4s,mb4.5,baz=91,slow=7.5,SNR=158						
ASAR				S	S	22 20 00.9	0.0
	0.8nm,0.7s,baz=94,slow=16,SNR=5.0						
WRAB	**Tennant Creek**	**40.86**	**269**	*eP*	P	22 14 39.4	-0.7
	4.0nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**40.86**	**269**	P	P	22 14 39.3	-0.9
	6.1nm,0.5s,mb4.4,baz=104,slow=7.8,SNR=55						
FORT	**Forrest**	**44.23**	**252**	*eP*	P	22 15 05.5	-0.7
	17nm,0.6s,mb4.7						
KAKA	**Kakadu**	**45.11**	**278**	*eP*	P	22 15 11.2	-2.0
	4.5nm,0.4s,mb4.3						
KAKA	**Kakadu**	**45.11**	**278**	*eP*	P	22 15 10.9	-2.3
FITZ	**Fitzroy Crossi**	**49.25**	**268**	*eP*	P	22 15 44.2	+0.1
	6.8nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**49.25**	**268**	P	P	22 15 43.9	-0.2
	3.4nm,0.5s,mb4.0,baz=131,slow=7.0,SNR=15						
FITZ	**Fitzroy Crossi**	**49.25**	**268**	*eP*	P	22 15 44.0	-0.1
	3.4nm,0.5s,mb4.0						
CASY	**Casey**	**57.54**	**206**	*eP*	P	22 16 41.7	0.0
	3.2nm,0.6s,mb3.6						
KSM	**Kuching**	**71.07**	**281**	P	P	22 18 07.7	-0.2
MAW	**Mawson**	**75.22**	**201**	P	P	22 18 30.8	+0.3
YSS	**Yuzh-Sakhalins**	**79.48**	**336**	P	P	22 18 53.6	0.0
PETK	**Petropavlovsk-**	**80.87**	**348**	P	P	22 19 00.8	+0.2
	1.2nm,0.7s,mb3.4,baz=121,slow=6.8,SNR=5.3						
NVAR	**Mina Array Bea**	**87.31**	**45**	P	P	22 19 33.6	+1.1
	0.5nm,0.6s,mb3.4,baz=221,slow=8.9,SNR=4.2						
PLCA	**Paso Flores**	**87.80**	**135**	*eP*	P	22 19 34.0	-0.9
TXAR	**Lajitas Array**	**92.80**	**59**	P	P	22 19 58.3	+0.2
	0.3nm,0.9s,mb3.3,baz=221,slow=9.1,SNR=3.9						
PDAR	**Pinedale Array**	**95.24**	**45**	P	P	22 20 09.0	+0.1
	0.3nm,0.7s,mb3.5,baz=224,slow=6.3,SNR=3.0						
BVAR	**Borovoye Array**	**121.08**	**318**	PKP	PKPdf	22 25 33.2	-0.2
	0.7nm,0.4s,baz=56,slow=3.7,SNR=5.0						
ARCES	**ARCESS Array B**	**133.68**	**347**	PKP	PKPdf	22 25 57.9	+0.9
	2.0nm,0.8s,baz=29,slow=2.8,SNR=5.5						
FINES	**FINESS Array B**	**139.99**	**340**	PKhKP		22 26 01.4	
	0.5nm,0.5s,baz=59,slow=7.4,SNR=6.2						
FINES	**FINESS Array B**	**139.99**	**340**	PKP		22 26 01.4	
NOA	**NORSAR Array B**	**143.95**	**349**	PKP	PKPdf	22 26 15.3	-0.5
	6.3nm,0.8s,baz=22,slow=2.6,SNR=23						
NOA	**NORSAR Array B**	**143.95**	**349**	PKP	PKPdf	22 26 15.3	-0.5
IZAR	**Zarasai**	**144.10**	**333**	*eP*	PKPdf	22 26 16.1	-0.1
IDID	**Didziasalis**	**144.20**	**332**	*eP*	PKPdf	22 26 16.1	-0.3
ISAL	**Salakas**	**144.27**	**333**	*eP*	PKPdf	22 26 16.4	-0.1
AKASG	**Malin Array Be**	**145.93**	**324**	PKPbc	PKPbc	22 26 21.1	-0.5
	2.1nm,0.7s,baz=42,slow=3.9,SNR=7.4						
BRTR	**Keskin Array B**	**147.64**	**304**	PKPbc	PKPbc	22 26 26.6	+0.1
	0.9nm,0.7s,baz=128,slow=4.3,SNR=4.5						
CLL	**Collm**	**152.44**	**340**	⇑PKPbc	PKPbc	22 26 37.7	+0.4
	comp=Z,4.0nm,0.8s						
CLL				*i* PKPab	PKPab	22 26 50.7	+0.1
GERES	**GERESS Array B**	**154.31**	**336**	PKPab	PKPab	22 26 58.8	+0.1
	comp=Z,0.5nm,0.7s,baz=27,slow=3.3,SNR=4.4						

*BJI **08** 22:20:48.4, 23°.82N×91°.27E, h31km, mB4.4/2, mb4.0/9, ML4.4/1*
*ISCJB **08** 22:20:50.3±0.8, 23°.94N±0°.05×91°.13E±0°.04, h39km±7km, mb3.9/21, Error ellipse: s-maj=9.2km s-min=5.2km az=26.8*
*NEIC **08** 22:20:51.4±2.1, 24°.01N×91°.21E, h31km±15km, mb3.9/8, Error ellipse: s-maj=9.4km s-min=5.1km az=47.0*
*IDC **08** 22:20:52.1±0.8, 24°.04N×91°.25E, h33km±6km, mb3.8/15, mb1 3.9/16, mb1mx3.7/29, mbtmp3.8/16, ML3.6/1, MS4.0/1, Ms1 4.0/1, ms1mx2.6/33, Error ellipse: s-maj=22.2km s-min=12.5km az=55.0*
ISC 08 22:20:52.7±0.7, 23°.97N±0°.05×91°.17E±0°.04, h42km±6km, h34km±1.1km: pP-P, n50, σ0s95/57, mb3.9/21, 1C, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**1.72**	**22**	⇑*iPN*	Pn	22 21 21.0	+0.9
SHL				*i* SN	Sn	22 21 42.0	+1.2
RAMN	**Ramite**	**5.09**	**307**	*ePn*	Pn	22 22 07.3	+0.9
LSA	**Lhasa**	**5.71**	**360**	Pn	Pn	22 22 16.4	+1.5
LSA	**Lhasa**	**5.71**	**360**	*ePn*	Pn	22 22 15.6	+0.7
	25nm,0.4s						
LSA				*eSn*	Sn	22 23 18.0	-1.1
GUN	**Gumba**	**6.17**	**311**	*ePn*	Pn	22 22 22.4	+1.1
GUN				*eSn*	Sn	22 23 31.7	+1.1
	110nm,0.4s						
PKI	**Pulchoki**	**6.31**	**306**	*ePn*	Pn	22 22 23.5	+0.3
PKIN	**Phulchoki**	**6.33**	**306**	*ePn*	Pn	22 22 23.7	+0.3
PKIN				*eSn*	Sn	22 23 33.8	-0.6
	230nm,0.6s						
KKN	**Kakani**	**6.53**	**307**	*ePn*	Pn	22 22 26.6	+0.4
KKN				*eSn*	Sn	22 23 40.1	+0.7
	31nm,0.2s						
DMN	**Daman**	**6.56**	**305**	*ePn*	Pn	22 22 27.0	+0.4
GKN	**Gorkha**	**7.12**	**306**	*ePn*	Pn	22 22 34.2	-0.1
GKN				*eSn*	Sn	22 23 52.7	-1.2
	106nm,0.3s						
KOLN	**Koldanda**	**7.80**	**301**	*ePn*	Pn	22 22 42.3	-1.3
KOLN				*eSn*	Sn	22 24 07.1	-3.5
	82nm,0.5s						
PYUN	**Piuthan**	**8.43**	**301**	*ePn*	Pn	22 22 50.8	-1.5
PYUN				*eSn*	Sn	22 24 22.9	-3.2
	34nm,0.4s						
CHTO	**Chiang Mai**	**8.87**	**124**	*ePn*	Pn	22 22 56.4	-2.0
CHTO				*eSn*	Sn	22 24 30.6	-6.4
CMAR	**Chiang Mai Arr**	**9.09**	**126**	Pn	Pn	22 23 00.8	-0.5
	0.2nm,0.3s,baz=301,slow=13,SNR=8.6						
CMAR				Sn	Sn	22 24 45.6	+3.2
	0.7nm,0.3s,baz=314,slow=19,SNR=4.8						
LZH	**Lanzhou**	**16.30**	**39**	*ePn*	Pn	22 24 39.5	+1.0
LZH				pP	pP	22 24 45.0	-6.2
LZH				sP	sP	22 24 47.5	-9.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
ENH	**Enshi**	**17.46**	**65**	*ePn*	Pn	22 24 52.0	-1.1
	comp=Z,11nm,0.6s						
KBL	**Kabul**	**21.95**	**304**	*eP*	P	22 25 43.2	+0.5
	comp=Z,4.7nm,0.8s,mb4.0						
UCH	**Uchtor**	**22.87**	**327**	*eP*	P	22 25 52.9	+0.6
	comp=Z,1.8nm,0.7s,mb3.6						
AAK	**Ala-Archa**	**23.18**	**327**	P	P	22 25 57.6	+2.0
	comp=Z,0.4nm,0.3s,mb3.3,baz=150,slow=9.3,SNR=6.3						
AAK	**Ala-Archa**	**23.18**	**327**	*eP*	P	22 25 54.4	-1.2
	comp=Z,6.6nm,1.3s,mb3.9						
AML	**Almayashu**	**23.21**	**325**	*eP*	P	22 25 55.0	-1.0
	comp=Z,1.6nm,0.6s,mb3.6						
EKS2	**Erkin-Say**	**23.55**	**327**	*eP*	P	22 26 00.0	+0.7
	comp=Z,1.1nm,0.6s,mb3.5						
MK31	**Makanchi Array**	**23.86**	**345**	*eP*	P	22 26 02.4	+0.4
MKAR	**Makanchi Array**	**23.86**	**345**	P	P	22 26 02.1	+0.1
	comp=Z,3.7nm,0.5s,mb4.1,baz=166,slow=9.3,SNR=48						
SONM	**Songino Array**	**26.72**	**23**	P	P	22 26 28.1	+0.2
	comp=Z,0.9nm,0.6s,mb3.5,baz=201,slow=9.6,SNR=4.9						
SONM				pP	pP	22 26 37.9	-1.4
	comp=Z,1.8nm,0.6s,baz=211,slow=9.8,SNR=6.1						
ULN	**Ulaanbaatar**	**26.98**	**24**	P	P	22 26 29.2	-1.2
KURK	**Kurchatov**	**28.42**	**343**	P	P	22 26 42.9	-0.2
	comp=Z,2.1nm,0.7s,mb3.9,baz=174,slow=8.5,SNR=6.2						
ZAA0	**Zalesovo Array**	**30.32**	**353**	*eP*	P	22 26 59.4	-0.5
ZALV	**Zalesovo Beam**	**30.32**	**353**	P	P	22 27 00.0	+0.1
	comp=Z,2.3nm,0.5s,mb4.1,baz=180,slow=8.0,SNR=16						
JOW	**Kunigami**	**33.56**	**77**	P	P	22 27 28.1	-0.6
	comp=Z,2.7nm,0.5s,mb4.5,baz=292,slow=5.4,SNR=4.7						
KSRS	**Korea Array**	**34.11**	**58**	P	P	22 27 31.4	-2.0
	comp=Z,0.6nm,0.3s,mb3.9,baz=255,slow=9.5,SNR=2.7						
ARU	**Arti**	**40.18**	**332**	*eP*	P	22 28 24.9	+0.3
ASAJ	**Asahikawa**	**46.28**	**51**	LR	LR	22 48 40.0	
	comp=Z,195nm,21.1s,baz=201,slow=36						
YSS	**Yuzh-Sakhalins**	**46.87**	**47**	P	P	22 29 18.0	-0.6
TIXI	**Tiksi**	**52.23**	**14**	*eP*	P	22 29 58.3	-0.8
FINES	**FINESS Array B**	**57.36**	**329**	P	P	22 30 36.1	-0.2
	comp=Z,1.2nm,0.6s,mb4.1,baz=102,slow=6.4,SNR=6.4						
ARCES	**ARCESS Array B**	**59.29**	**338**	P	P	22 30 49.9	+0.2
	comp=Z,1.1nm,0.6s,mb4.1,baz=99,slow=7.7,SNR=6.2						
WRA	**Warramunga Arr**	**60.61**	**132**	P	P	22 31 00.3	+0.8
	comp=Z,2.3nm,0.5s,mb4.5,baz=323,slow=7.2,SNR=32						
WRA				pP	pP	22 31 09.8	-1.9
	comp=Z,2.1nm,0.5s,baz=321,slow=7.2,SNR=8.8						
MORC	**Moravsky Berou**	**61.66**	**315**	*eP*	P	22 31 05.7	-0.5
	comp=Z,1.1nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**62.95**	**136**	P	P	22 31 15.9	+0.9
	comp=Z,0.8nm,0.5s,mb4.1,baz=318,slow=6.9,SNR=13						
ASAR				pP	pP	22 31 25.5	-1.9
	comp=Z,0.9nm,0.6s,baz=316,slow=6.6,SNR=6.5						
GERES	**GERESS Array B**	**64.25**	**314**	P	P	22 31 23.4	0.0
	comp=Z,0.5nm,0.6s,mb3.7,baz=80,slow=9.6,SNR=5.5						
NB2	**NORSAR Subarra**	**64.50**	**328**	P	P	22 31 24.1	-0.7
	comp=Z,0.8nm,0.5s,mb4.0,baz=86,slow=6.5						
NOA	**NORSAR Array B**	**64.50**	**328**	P	P	22 31 24.5	-0.3
	comp=Z,1.0nm,0.5s,mb4.1,baz=86,slow=6.5,SNR=5.9						
WLF	**Walferdange**	**68.98**	**316**	P	P	22 31 53.4	-0.1
BPAW	**Bear Paw Mtn.**	**79.90**	**23**	*eP*	P	22 32 57.7	+1.0
	comp=Z,3.3nm,0.8s,mb4.3						
LBTB	**Lobatse**	**80.02**	**237**	P	P	22 32 59.3	+1.3
TORD	**Torodi Ar. Bea**	**84.29**	**282**	P	P	22 33 21.5	+0.8
	comp=Z,0.5nm,0.7s,mb3.8,baz=70,slow=5.5,SNR=5.8						
YKA	**Yellowknife Ar**	**91.41**	**12**	P	P	22 33 53.9	-0.1
	comp=Z,0.2nm,0.5s,mb3.7,baz=337,slow=5.4,SNR=5.6						
TXAR	**Lajitas Array**	**125.12**	**16**	PKP	PKPdf	22 39 49.8	+0.7
	comp=Z,0.2nm,0.7s,baz=325,slow=2.0,SNR=4.4						
CPUP	**Villa Florida**	**151.43**	**259**	PKPbc	PKPbc	22 40 42.6	+0.2
	comp=Z,0.6nm,0.4s,baz=102,slow=2.0,SNR=5.3						
CPUP				PKPab	PKPab	22 40 52.0	+1.2
	comp=Z,0.9nm,0.5s,baz=90,slow=10,SNR=3.6						

IDC 08 22:25:34.1±1.2, 18°.84N×145°.83E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/22, mbtmp3.7/8, Error ellipse: s-maj=47.1km s-min=20.3km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.15**	**197**	P	P	22 33 12.1	+0.1
	0.8nm,0.3s,baz=14,slow=8.7,SNR=18						
SONM	**Songino Array**	**43.12**	**321**	P	P	22 33 36.6	+0.5
	0.3nm,0.5s,baz=134,slow=8.3,SNR=3.0						
ASAR	**Alice Springs**	**43.82**	**196**	P	P	22 33 41.8	-0.1
	0.4nm,0.7s,baz=30,slow=7.5,SNR=5.1						
MKAR	**Makanchi Array**	**58.46**	**314**	P	P	22 35 32.5	+0.6
	0.2nm,0.5s,baz=96,slow=8.0,SNR=4.3						
KURK	**Kurchatov**	**61.26**	**318**	P	P	22 35 51.4	+0.4
	0.5nm,0.4s,baz=94,slow=7.4,SNR=3.2						
BVAR	**Borovoye Array**	**66.45**	**320**	P	P	22 36 25.2	0.0
	0.8nm,0.5s,baz=97,slow=7.3,SNR=7.2						
YKA	**Yellowknife Ar**	**77.81**	**28**	P	P	22 37 33.6	+0.6
	0.3nm,0.6s,baz=288,slow=5.4,SNR=6.5						
FINES	**FINESS Array B**	**86.81**	**335**	P	P	22 38 18.2	-2.0
	0.5nm,0.4s,baz=66,slow=4.6,SNR=4.9						

*ISCJB **08** 22:39:09.1±0.5, 76°.94N±0°.03×18°.4E±0°.2, h10km, Error ellipse: s-maj=8.2km s-min=3.9km az=159.8*
*NEIC **08** 22:39:10.9±1.5, 76°.88N×17°.72E, h6km±13km, ML3.3(BER), Error ellipse: s-maj=34.0km s-min=7.9km az=79.0*
*NAO **08** 22:39:11.7±1.9, 76°.98N×18°.61E, h19km±18km, ML3.3*
*CSEM **08** 22:39:11.4±0.3, 76°.97N×18°.50E, h20km, ML3.4, Error ellipse: s-maj=13.9km s-min=4.9km az=66.0*
*BER **08** 22:39:14.8±4.3, 77°.05N×19°.04E, h18km±21km, MD2.6, ML3.4, ML3.3(NAO)*
*IDC **08** 22:39:18.1±4.2, 76°.67N×22°.08E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.2/25, mbtmp3.5/3, ML3.5/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/25, Error ellipse: s-maj=80.1km s-min=23.5km az=102.0*
ISC 08 22:39:10.6±1.0, 76°.99N±0°.04×18°.9E±0°.3, h5km±10km, n25, σ0s72/41, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.77**	**273**	*eP*	Pg	22 39 26.1	+0.8
HSP				*eS*	Sg	22 39 35.5	+0.3
SPA0	**Spitsbergen Ar**	**1.31**	**336**	Pg	Pg	22 39 35.7	-0.1
	baz=152,slow=22						
SPA0				Lg		22 39 52.4	
	baz=159,slow=28						
SPA0	**Spitsbergen Ar**	**1.31**	**336**	Pg	Pg	22 39 35.7	-0.1
	SNR=94						
SPA0				Lg		22 39 52.4	
	SNR=50						
HOPEN	**Hopen**	**1.48**	**106**	*eP*	Pn	22 39 38.0	+0.2
HOPEN				*eS*	Sn	22 39 57.7	+0.2
HOPEN				AML	AML	22 40 03.0	
	comp=Z,1μm,0.3s						
HOPEN	**Hopen**	**1.48**	**106**	*eP*	Pn	22 39 38.0	+0.2
	SNR=55						
HOPEN				*eS*	Sn	22 39 57.7	+0.2
	comp=Z,1μm,0.3s,SNR=55						
KBS	**Kingsbay**	**2.43**	**326**	Pn	Pn	22 39 50.5	-0.4
KBS				Pg	Pg	22 39 56.3	-0.9
KBS				Lg		22 40 25.6	
KBS	**Kingsbay**	**2.43**	**326**	*eP*	Pn	22 39 50.3	-0.6
KBS				*ePg*	Pg	22 39 56.6	-0.6
KBS				*eSg*	Sg	22 40 28.9	+0.3
KBS				AML	AML	22 40 35.1	
	comp=Z,1μm,0.9s						
KBS	**Kingsbay**	**2.43**	**326**	*eP*	Pn	22 39 50.3	-0.6
	SNR=55						
KBS	**Kingsbay**	**2.43**	**326**	Pn	Pn	22 39 50.5	-0.4
KBS	**Kingsbay**	**2.43**	**326**	Pg	Pg	22 39 56.3	-0.9
KBS				Lg		22 40 25.6	
KBS				*eSg*	Sg	22 40 28.9	+0.2
	comp=Z,1μm,0.9s,SNR=92						
BJO	**Bjornoya**	**2.50**

ISC 08 22:43:08.6±0.3,35°62N±0'02×140°00E±0'03,h70km±2km, h72km±2.1km:pP-P,n283,σ0990/302,mb4.5/101,28C-17D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.21**	**289**	⇓P	**Pn**	**22 43 19.7**	**+0.5**
TOK				S	**Sn**	**22 43 28.5**	**+1.5**
JCN	**Nagara**	**0.26**	**140**	⇑P	**Pn**	**22 43 19.9**	**+0.4**
JCN				S	**Sn**	**22 43 28.9**	**+1.4**
JOD2	**Odawara 2**	**0.82**	**245**	⇓P	**Pn**	**22 43 24.9**	**0.0**
JOD2				*e*S	**Sn**	**22 43 36.8**	**-0.2**
JAG	**Ashikaga**	**0.92**	**331**	⇓P	**Pn**	**22 43 25.5**	**-0.6**
JAG				S	**Sn**	**22 43 39.1**	**+0.1**
BSO3	**Boso 3**	**0.92**	**153**	P	**Pn**	**22 43 25.3**	**-0.8**
JRY	**Ryogami san**	**0.97**	**294**	⇓P	**Pn**	**22 43 27.2**	**+0.4**
JIM2	**Oshima 3**	**1.01**	**207**	P	**Pn**	**22 43 26.5**	**-0.8**
JIM2				S	**Sn**	**22 43 41.1**	**0.0**
JYN	**Shimob**	**1.19**	**265**	⇓P	**Pn**	**22 43 29.8**	**+0.3**
JYN				*e*S	**Sn**	**22 43 45.8**	**+0.6**
BSO1	**Boso 1**	**1.26**	**140**	P	**Pn**	**22 43 28.9**	**-1.5**
JIZS	**Izushimoda**	**1.28**	**226**	⇑P	**Pn**	**22 43 30.8**	**0.0**
JIZS				S	**Sn**	**22 43 47.3**	**0.0**
JKT	**Katashina**	**1.29**	**332**	⇓P	**Pn**	**22 43 30.4**	**-0.5**
MJAR	**Matsushiro Arr**	**1.72**	**303**	P	**Pn**	**22 43 36.4**	**0.0**
	115nm,0.3s,baz=133,slow=15,SNR=982						
MJAR				S	**Sn**	**22 43 55.0**	**-2.5**
	95nm,0.3s,baz=166,slow=21,SNR=8.9						
MAJO	**Matsushiro**	**1.72**	**303**	⇓*e*Pn	**Pn**	**22 43 36.7**	**+0.2**
MAJO				*e*Sn	**Sn**	**22 43 56.1**	**-1.5**
MAT	**Matsushiro**	**1.72**	**303**	P	**Pn**	**22 43 36.8**	**+0.3**
MAT				S	**Sn**	**22 43 58.8**	**+1.3**
JHJ	**Hachijo jima 2**	**2.50**	**184**	P	**Pn**	**22 43 46.7**	**-0.4**
	491nm,0.3s,baz=330,slow=11,SNR=256						
JHJ				S	**Sn**	**22 44 16.8**	**+0.3**
	578nm,0.3s,baz=58,slow=23,SNR=9.7						
ERM	**Erimo**	**6.84**	**20**	*e*P	**Pn**	**22 44 44.0**	**-2.3**
ERM				*e*		22 45 57.5	
ERM				pmax	pmax		
	comp=Z,47nm,0.4s						
ERM	**Erimo**	**6.84**	**20**	*e*Pn	**Pn**	**22 44 44.0**	**-2.3**
	comp=Z,47nm,0.4s						
ERM				*e*Sn	**Sn**	**22 45 57.5**	**-5.1**
CBIJ	**Chichi jima**	**8.70**	**167**	P	**Pn**	**22 45 07.9**	**-3.9**
	comp=Z,88nm,0.3s,baz=354,slow=7.7,SNR=84						
CBIJ				S	**Sn**	**22 46 39.5**	**-8.8**
	comp=Z,19nm,0.3s,baz=120,slow=22,SNR=3.6						
ASAJ	**Asahikawa**	**8.72**	**12**	P	**Pn**	**22 45 08.9**	**-3.0**
ASAJ				S	**Sn**	**22 46 43.7**	**-4.8**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ	**Asahikawa**	**8.72**	**12**	P	**Pn**	**22 45 08.8**	**-3.0**
	comp=N,7.7nm,0.3s,baz=212,slow=12,SNR=22						
ASAJ				S	**Sn**	**22 46 43.6**	**-4.8**
	comp=N,2.8nm,0.3s,baz=1.7,slow=28,SNR=4.8						
YUK	**Yuzh-Kuril'sk**	**9.53**	**26**	P	**Pn**	**22 45 25.0**	**+2.0**
YUK				pmax	pmax		
	comp=Z,150nm,0.4s						
VLA	**Vladivostok**	**9.77**	**323**	*e*P	**Pn**	**22 45 25.7**	**-0.5**
VLA				*e*		22 47 13.3	
VLA				pmax	pmax		
	comp=Z,67nm,1.5s						
VLA				MLR	MLR		
	comp=Z,300nm,12.6s						
KSRS	**Korea Array**	**9.89**	**284**	P	**Pn**	**22 45 31.9**	**+4.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,317nm,20.9s						
KSRS	**Korea Array**	**9.89**	**284**	P	**Pn**	**22 45 31.9**	**+4.0**
	comp=Z,0.6nm,0.3s,baz=100,slow=14,SNR=47						
KSRS				LR	LR	22 49 14.1	
	comp=Z,317nm,20.9s,baz=103,slow=37						
YSS	**Yuzh-Sakhalins**	**11.51**	**10**	P	**Pn**	**22 45 44.0**	**-5.9**
YSS	**Yuzh-Sakhalins**	**11.51**	**10**	*e*Pn	**Pn**	**22 45 47.2**	**-2.7**
MDJ	**Mudanjiang**	**12.00**	**322**	P	**Pn**	**22 45 58.2**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,30nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,84nm,4.3s						
MDJ				LR	LR		
	comp=N,120nm,17.4s						
MDJ				LR	LR		
	comp=E,170nm,15.8s						
MDJ				LR	LR		
	comp=Z,290nm,17.4s						
MDJ	**Mudanjiang**	**12.00**	**322**	*e*Pn	**Pn**	**22 45 58.3**	**+1.7**
JOW	**Kunigami**	**13.31**	**232**	P	**Pn**	**22 46 18.0**	**+3.5**
	comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=4.9						
JOW				LR	LR	22 51 36.5	
	comp=Z,97nm,19.4s,baz=132,slow=38						
HABR	**Khabarovsk**	**13.35**	**346**	*e*P	**Pn**	**22 46 21.7**	**+6.7**
HABR				*e*		22 48 38.1	
HABR				MLR	MLR		
	comp=Z,124nm,17.0s						
CN2	**Changchun**	**13.85**	**311**	*e*P	**Pn**	**22 46 23.9**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	**Kul'dur**	**14.89**	**339**	*e*P	**Pn**	**22 46 30.0**	**-5.0**
DL2	**Dalian**	**14.99**	**288**	P	**Pn**	**22 46 40.4**	**+4.0**
DL2				S	**Sn**	**22 49 29.5**	**+8.1**
DL2				pmax	pmax		
	comp=Z,20nm,0.8s						
DL2				pmax	pmax		
	comp=Z,110nm,4.2s						
DL2				LR	LR		
	comp=N,120nm,17.3s						
DL2				LR	LR		
	comp=E,140nm,14.0s						
DL2				LR	LR		
	comp=Z,250nm,14.2s						
BJI	**Beijing**	**19.31**	**290**	P	**Pn**	**22 47 27.7**	**-1.9**
BJI				S	**S**	**22 50 57.7**	**-5.0**
BJI				pmax	pmax		
	comp=Z,14nm,2.2s						
BJI				pmax	pmax		
	comp=Z,76nm,3.8s						
BJI				LR	LR		
	comp=N,110nm,33.2s						
BJI				LR	LR		
	comp=E,130nm,26.9s						
BJI				LR	LR		
	comp=Z,220nm,27.8s						
BJT	**Baijiatuau**	**19.31**	**290**	*e*P	**Pn**	**22 47 27.8**	**-1.9**
BJT				pmax	pmax		
	comp=Z,40nm,1.0s						
BJT	**Baijiatuau**	**19.31**	**290**	*e*P	**Pn**	**22 47 27.8**	**-1.9**
	comp=Z,40nm,1.0s						
HIA	**Hailar**	**20.15**	**319**	*e*P	**P**	**22 47 35.1**	**-1.9**
HIA				pmax	pmax		
	comp=Z,18nm,1.1s						
HIA	**Hailar**	**20.15**	**319**	*e*P	**P**	**22 47 35.1**	**-1.9**
	comp=Z,18nm,1.1s						
YULB	**Yu-li**	**20.29**	**238**	P	**P**	**22 47 38.5**	**-0.2**
PETK	**Petropavlovsk-**	**21.48**	**30**	P	**P**	**22 47 50.6**	**-0.7**
	comp=Z,12nm,1.1s,mb4.2,baz=206,slow=6.4,SNR=7.7						
PETK	**Petropavlovsk-**	**21.48**	**30**	P	**P**	**22 47 50.6**	**-0.7**
PET	**Petropavlovsk**	**21.82**	**31**	*e*P	**P**	**22 48 03.1**	**+8.3**
PET				*e*S	**S**	**22 51 56.8**	**+5.0**
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	**Petropavlovsk**	**21.82**	**31**	P	**P**	**22 47 54.3**	**-0.5**
HHC	**Hu-ho-hao-te**	**22.88**	**292**	*e*P	**P**	**22 48 05.4**	**-0.9**
HHC				PP		22 48 35.2	
HHC				PcP	PcP	22 51 56.6	+2.0
HHC				S	**S**	**22 52 11.7**	**+1.1**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
HHC				pmax	pmax		
	comp=Z,71nm,5.5s						
HHC				LR	LR		
	comp=N,120nm,11.1s						
HHC				LR	LR		
	comp=E,120nm,10.1s						
HHC				LR	LR		
	comp=Z,79nm,10.5s						
XAN	**Xi'an**	**25.51**	**276**	P	**P**	**22 48 30.2**	**-0.3**
XAN				pP	pP	22 48 44.8	-2.2
XAN				sP	sP	22 48 52.2	-3.0
XAN				S	**S**	**22 52 53.7**	**+0.9**
XAN				sS	sS	22 53 19.4	-1.9
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
XAN				LR	LR		
	comp=N,64nm,16.8s						
XAN				LR	LR		
	comp=E,28nm,14.0s						
XAN				LR	LR		
	comp=Z,49nm,15.9s						
ENH	**Enshi**	**26.09**	**267**	*e*P	**P**	**22 48 35.2**	**-0.6**
	comp=Z,7.0nm,0.7s,mb4.2						
YAK	**Yakutsk**	**27.22**	**349**	*e*P	**P**	**22 48 44.5**	**-1.1**
YAK				*e*		22 49 34.3	
YAK				*e*		22 51 59.4	
YAK				*e*S	**S**	**22 53 17.9**	**-1.4**
YAK				*e*SS		22 54 40.4	
YAK				*e*		22 59 25.4	
YAK				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,28nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.5						
YAK				pmax	pmax		
	comp=N,25nm,1.6s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				smax			
	comp=N,13nm,2.2s						
YAK				smax			
	comp=E,47nm,3.3s						
YAK	**Yakutsk**	**27.22**	**349**	*e*P	**P**	**22 48 45.0**	**-0.6**
	comp=E,86nm,1.5s,mb5.1						
ULN	**Ulaanbaatar**	**27.24**	**307**	*e*P	**P**	**22 48 45.3**	**-0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**27.24**	**307**	*e*P	**P**	**22 48 45.3**	**-0.7**
	comp=Z,3.1nm,0.8s,mb3.9						
SONM	**Songino Array**	**27.67**	**307**	P	**P**	**22 48 48.8**	**-0.9**
	comp=Z,3.7nm,0.9s,mb3.9,baz=110,slow=8.7,SNR=9.5						
SONM				LR	LR	23 00 04.9	
	comp=Z,237nm,20.1s,baz=62,slow=37						
BOD	**Bodaibo**	**28.15**	**330**	*e*P	**P**	**22 48 52.9**	**-1.0**
BOD				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
SEY	**Seymchan**	**28.40**	**12**	⇓*i*P	**P**	**22 48 56.7**	**+0.6**
LZH	**Lanzhou**	**29.20**	**282**	*e*P	**P**	**22 49 03.0**	**-0.6**
LZH				pP	pP	22 49 19.0	-1.2
LZH				sP	sP	22 49 27.0	-1.4
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
ZAK	**Zakamensk**	**30.28**	**311**	*e*P	**P**	**22 49 11.6**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
CD2	**Chengdu**	**30.55**	**272**	P	**P**	**22 49 17.5**	**+2.0**
CD2				pP	pP	22 49 32.3	+0.1
CD2				sP	sP	22 49 39.6	-0.8
CD2				PP	PP	22 50 19.6	-5.9
CD2				S	**S**	**22 54 14.0**	**+1.7**
CD2				sS	sS	22 54 39.0	-1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,90nm,5.9s						
CD2				LR	LR		
	comp=N,200nm,15.5s						
CD2				LR	LR		
	comp=Z,210nm,15.5s						
KMI	**Kunming**	**33.63**	**262**	P	**P**	**22 49 43.9**	**+1.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
BILL	**Bilibino**	**35.70**	**17**	⇑*e*P	**P**	**22 50 00.1**	**+0.2**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BILL	**Bilibino**	**35.70**	**17**	*e*P	**P**	**22 49 58.9**	**-1.0**
	comp=Z,7.0nm,1.0s,mb4.5						
TIXI	**Tiksi**	**36.56**	**354**	*e*P	**P**	**22 50 05.4**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
TIXI	**Tiksi**	**36.56**	**354**	*e*P	**P**	**22 50 06.5**	**-0.7**
	comp=Z,5.4nm,0.6s,mb4.7						
NIKO	**Nikolski**	**39.57**	**48**	P	**P**	**22 50 32.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**40.04**	**256**	LR	LR	23 08 50.9	
	comp=Z,41nm,19.4s,baz=171,slow=39						
WMQ	**Urumqi**	**40.48**	**298**	P	**P**	**22 50 41.2**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=Z,73nm,25.0s						
LSA	**Lhasa**	**41.21**	**276**	*e*P	**P**	**22 50 48.1**	**+1.5**
LSA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
LSA	**Lhasa**	**41.21**	**276**	*e*P	**P**	**22 50 48.1**	**+1.5**
	comp=Z,5.3nm,1.1s,mb4.3						
ZAA0	**Zalesovo Array**	**42.04**	**314**	*e*P	**P**	**22 50 52.7**	**-0.4**
ZALV	**Zalesovo Beam**	**42.04**	**314**	P	**P**	**22 50 52.5**	**-0.5**
ZALV						22 52 46.3	
ZALV	**Zalesovo Beam**	**42.04**	**314**	P	**P**	**22 50 52.5**	**-0.6**
	comp=Z,9.1nm,0.7s,mb4.6,baz=92,slow=6.7,SNR=47						
ZALV				PcP	PcP	22 52 46.3	-0.4
	comp=Z,3.2nm,0.8s,baz=84,slow=2.7,SNR=5.0						
ZALV				LR	LR	23 08 30.2	
	comp=Z,28nm,18.9s,baz=242,slow=36						
NVS	**Novosibirsk**	**43.01**	**315**	*i* P	**P**	**22 51 00.4**	**-0.4**
NVS				*e*		22 52 48.3	
NVS				pmax	pmax		
	comp=N,6.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,24nm,1.1s						
NVS				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
KSM	**Kuching**	**43.75**	**226**	P	**P**	**22 51 06.4**	**-0.9**
MK31	**Makanchi Array**	**43.92**	**303**	*e*P	**P**	**22 51 08.5**	**+0.2**
MKAR	**Makanchi Array**	**43.92**	**303**	*ce*P	**P**	**22 51 08.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**43.92**	**303**	P	**P**	**22 51 08.3**	**0.0**
	comp=Z,12nm,0.8s,mb4.7,baz=97,slow=8.9,SNR=88						
MKAR				LR	LR	23 09 57.6	
	comp=Z,132nm,18.1s,baz=170,slow=37						
KURK	**Kurchatov**	**45.92**	**309**	*c i*P	**P**	**22 51 23.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.1						
KURK	**Kurchatov**	**45.92**	**309**	P	**P**	**22 51 24.2**	**+0.1**
	comp=Z,13nm,0.8s,mb4.7,baz=86,slow=7.6,SNR=16						
KURK	**Kurchatov**	**45.92**	**309**	*e*P	**P**	**22 51 23.9**	**-0.2**
	comp=Z,27nm,0.9s,mb5.0						
GUN	**Gumba**	**46.16**	**276**	*e*P	**P**	**22 51 26.5**	**+0.1**
	comp=Z,27nm,0.9s,mb5.0						
PKI	**Pulchoki**	**46.68**	**276**	*e*P	**P**	**22 51 30.5**	**+0.1**
	comp=Z,16nm,0.8s,mb4.8						
PKIN	**Phulchoki**	**46.69**	**276**	*e*P	**P**	**22 51 30.5**	**0.0**
	comp=Z,17nm,0.6s,mb5.0						
KKN	**Kakani**	**46.70**	**276**	*e*P	**P**	**22 51 30.3**	**-0.3**
	comp=Z,22nm,0.8s,mb4.9						
DMN	**Daman**	**46.91**	**276**	*e*P	**P**	**22 51 32.5**	**+0.3**
	comp=Z,12nm,0.9s,mb4.6						
GKN	**Gorkha**	**47.13**	**277**	*e*P	**P**	**22 51 34.0**	**+0.1**
	comp=Z,33nm,0.9s,mb5.1						
KOLN	**Koldanda**	**48.07**	**277**	*e*P	**P**	**22 51 41.5**	**+0.3**
	comp=Z,9.1nm,0.7s,mb4.7						
PYUN	**Piuthan**	**48.42**	**278**	*e*P	**P**	**22 51 44.5**	**+0.6**
	comp=Z,64nm,1.0s,mb5.4						
KAKA	**Kakadu**	**48.60**	**190**	*e*P	**P**	**22 51 44.1**	**-1.1**
KDAK	**Kodiak Island**	**48.91**	**41**	P	**P**	**22 51 47.2**	**0.0**
	comp=Z,12nm,1.0s,mb4.8,baz=75,slow=4.9,SNR=5.0						
ULHL	**Ulahol**	**49.01**	**298**	P	**P**	**22 51 47.9**	**-0.3**
	SNR=9.8						
TKM2	**Tokmak 2**	**49.31**	**299**	P	**P**	**22 51 51.8**	**+1.3**
	SNR=12						
TKM2	**Tokmak 2**	**49.31**	**299**	*e*P	**P**	**22 51 51.7**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
TKM2	**Tokmak 2**	**49.31**	**299**	*e*P	**P**	**22 51 51.7**	**+1.2**
	comp=Z,25nm,1.0s,mb5.1						
COEN	**Coen**	**49.40**	**176**	*e*P	**P**	**22 51 51.6**	**+0.2**
	comp=Z,6.8nm,0.4s,mb4.9						
BPAW	**Bear Paw Mtn.**	**49.53**	**33**	*e*P	**P**	**22 51 51.8**	**-0.1**
	comp=Z,0.7nm,0.4s,mb3.9						
KZA	**Kyzart**	**49.77**	**298**	P	**P**	**22 51 55.9**	**+1.9**
	SNR=13						
KBK	**Karagaybulak**	**49.84**	**299**	P	**P**	**22 51 55.5**	**+1.0**
	SNR=19						
KSH	**Kashi**	**49.95**	**295**	P	**P**	**22 51 59.0**	**+3.6**
KSH				pP	pP	22 52 14.3	+1.2
KSH				sP	sP	22 52 21.1	+0.1
KSH				PcP	PcP	22 53 17.5	+2.8
KSH				PP	PP	22 53 55.3	+4.6
KSH				ScP	ScP	22 57 06.5	+2.4
KSH				PcS	PcS	22 57 13.4	+1.8
KSH				S	**S**	**22 59 05.5**	**+4.9**
KSH				sS	sS	22 59 32.7	+2.1
KSH				ScS	ScS	23 01 41.3	+1.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KSH				pmax	pmax		
	comp=Z,59nm,5.6s						
KSH				LR	LR		
	comp=N,42nm,3.7s						
KSH				LR	LR		
	comp=E,70nm,5.1s						
USP	**Ospenovka**	**50.00**	**300**	P	**P**	**22 51 55.9**	**+0.1**
	SNR=13						
FRU	**Bishkek**	**50.03**	**299**	*e*P	**P**	**22 51 55.5**	**-0.4**
AAK	**Ala-Archa**	**50.16**	**299**	P	**P**	**22 51 57.5**	**+0.5**
	SNR=7.9						
AAK	**Ala-Archa**	**50.16**	**299**	*c i*P	**P**	**22 51 56.2**	**-0.8**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
AAK	**Ala-Archa**	**50.16**	**299**	*e*P	**P**	**22 51 56.8**	**-0.2**
	comp=Z,6.4nm,0.9s,mb4.5						
UCH	**Uchtor**	**50.26**	**298**	P	**P**	**22 51 59.6**	**+1.9**
	SNR=7.8						
UCH	**Uchtor**	**50.26**	**298**	*e*P	**P**	**22 51 59.5**	**+1.8**
	comp=Z,4.0nm,0.8s,mb4.4						
UCH				*e*pP	pP	22 52 07.5	-7.8
MCK	**McKinley**	**50.44**	**33**	*e*P	**P**	**22 51 58.1**	**-0.6**
EKS2	**Erkin-Say**	**50.67**	**299**	P	**P**	**22 52 01.1**	**+0.3**
	SNR=8.0						
EKS2	**Erkin-Say**	**50.67**	**299**	*e*P	**P**	**22 52 01.0**	**+0.2**
	comp=Z,4.0nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**50.69**	**313**	P	**P**	**22 52 00.3**	**-0.5**
	comp=Z,1.3nm,0.4s,mb4.3,baz=76,slow=6.3,SNR=20						
BVAR				LR	LR	23 14 39.2	
	comp=Z,65nm,18.1s,baz=107,slow=37						
BRVK	**Borovoye**	**50.74**	**313**	⇑*i*P	**P**	**22 52 00.8**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
BRVK	**Borovoye**	**50.74**	**313**	*e*P	**P**	**22 52 01.2**	**0.0**
	comp=Z,9.1nm,0.9s,mb4.8						
AML	**Almayashu**	**50.87**	**299**	P	**P**	**22 52 03.8**	**+1.4**
	SNR=38						
AML	**Almayashu**	**50.87**	**299**	*e*P	**P**	**22 52 03.8**	**+1.5**
	comp=Z,30nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**55.13**	**197**	*e*P	**P**	**22 52 33.8**	**0.0**
SVE	**Sverdlovsk**	**55.46**	**319**	⇓*e*P	**P**	**22 52 35.0**	**-0.8**
SVE				*e*		22 53 30.2	
SVE				*e*S	**S**	**23 00 07.4**	**-7.8**
SVE				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
WRAB	**Tennant Creek**	**55.51**	**186**	*e*P	**P**	**22 52 35.5**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**55.51**	**186**	*e*P	**P**	**22 52 35.5**	**-1.0**
	comp=Z,8.6nm,0.9s,mb4.8						
WB2	**Warramunga Arr**	**55.52**	**186**	*e*P	**P**	**22 52 35.8**	**-0.7**
WRA	**Warramunga Arr**	**55.52**	**186**	P	**P**	**22 52 35.5**	**-1.1**
	comp=Z,7.9nm,0.7s,mb4.8,baz=1.7,slow=7.6,SNR=62						
CTAO	**Charters Tower**	**55.72**	**173**	*e*P	**P**	**22 52 36.8**	**-1.2**
INK	**Inuvik**	**56.16**	**27**	P	**P**	**22 52 40.7**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**56.16**	**27**	P	**P**	**22 52 40.7**	**0.0**
	comp=Z,0.9nm,0.5s,mb4.1,baz=285,slow=7.9,SNR=6.6						
INK	**Inuvik**	**56.16**	**27**	*e*P	**P**	**22 52 41.4**	**+0.8**
	comp=Z,40nm,2.5s,mb5.0						
ARU	**Arti**	**56.67**	**319**	*c i*P	**P**	**22 52 44.1**	**-0.3**
ARU				*e*		22 54 48.4	
ARU				S	**S**	**23 00 35.6**	**+4.4**
ARU				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.0						
ARU	**Arti**	**56.67**	**319**	*e*P	**P**	**22 52 43.8**	**-0.5**
	comp=Z,9.8nm,0.8s,mb4.9						
ARU				*e*	pP	22 53 00.8	-1.6
KBL	**Kabul**	**56.86**	**291**	*e*P	**P**	**22 52 46.2**	**+0.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KBL	**Kabul**	**56.86**	**291**	*e*P	**P**	**22 52 46.1**	**0.0**
	comp=Z,6.6nm,1.0s,mb4.6						
ABKAR	**Akbulak array**	**57.98**	**310**	*e*P	**P**	**22 52 53.6**	**-0.2**
	comp=Z,3.2nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**59.24**	**187**	P	**P**	**22 53 02.0**	**-0.7**
	comp=Z,1.8nm,0.8s,mb4.2,baz=8.7,slow=6.7,SNR=16						
ASAR				pP	pP	22 53 21.7	+0.9
	comp=Z,1.3nm,0.5s,baz=16,slow=12,SNR=4.7						
DLBC	**Dease Lake**	**60.44**	**37**	P	**P**	**22 53 10.0**	**-0.6**
	comp=Z,1.0nm,0.8s,mb3.9,baz=315,slow=5.7,SNR=3.3						
DLBC	**Dease Lake**	**60.44**	**37**	P	**P**	**22 53 10.2**	**-0.4**
DZM	**Mont Dzumac**	**62.61**	**152**	*e*LR	LR	23 12 12.2	
	comp=Z,178nm,34.5s						
RES	**Resolute Bay**	**64.25**	**14**	*e*P	**P**	**22 53 35.6**	**-0.2**
RES				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
RES	**Resolute Bay**	**64.25**	**14**	*e*P	**P**	**22 53 35.6**	**-0.2**
	comp=Z,10nm,1.4s,mb4.5						
KLMR	**Klimovskoe**	**64.34**	**328**	*e*P	**P**	**22 53 36.0**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
ARCES	**ARCESS Array B**	**64.91**	**339**	P	**P**	**22 53 40.0**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.4,baz=53,slow=6.9,SNR=14						
YKA	**Yellowknife Ar**	**65.60**	**29**	P	**P**	**22 53 44.3**	**-0.5**
	comp=Z,0.8nm,0.8s,mb3.6,baz=301,slow=6.5,SNR=10.0						
JOF	**Joensuu**	**66.67**	**332**	*e*P	**P**	**22 53 50.1**	**-1.4**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
JOF	**Joensuu**	**66.67**	**332**	*e*p	**P**	**22 53 50.1**	**-1.4**
	comp=Z,4.5nm,0.4s,mb4.7						
FORT	**Forrest**	**67.00**	**191**	*e*P	**P**	**22 53 53.8**	**-0.2**
	comp=Z,23nm,0.7s,mb5.1						
STKA	**Stephens Creek**	**67.16**	**179**	P	**P**	**22 53 54.1**	**-0.8**
	comp=Z,0.8nm,0.5s,mb3.8,baz=332,slow=9.0,SNR=4.8						
STKA	**Stephens Creek**	**67.16**	**179**	*e*P	**P**	**22 53 54.5**	**-0.4**
	comp=Z,0.2nm,0.6s						
OBN	**Obninsk**	**68.54**	**323**

comp=Z,2.5nm,1.0s,mb3.9
SLMT Seeley Lake 74.54 43 *eP* **P 22 54 40.3 +0.6**
AKASG Malin Array Be 74.71 322 P **P 22 54 40.0 -0.7**
comp=Z,2.8nm,0.4s,mb4.3,baz=48,slow=6.0,SNR=26
AKASG pP pP 22 55 00.3 +0.9
comp=Z,0.6nm,0.3s,baz=49,slow=6.0,SNR=2.5
AKBB Malin Array Si 74.71 322 *eP* **P 22 54 40.0 -0.6**
KIEV Kiev 74.72 322 *eP* **P 22 54 40.0 -0.7**
KIEV pmax pmax
comp=Z,14nm,1.0s,mb4.7
KIEV Kiev 74.72 322 *eP* **P 22 54 40.0 -0.7**
comp=Z,14nm,1.0s,mb4.7
NB2 NORSAR Subarra 75.04 337 P **P 22 54 42.1 -0.2**
comp=Z,12nm,1.0s,mb4.6,baz=40,slow=5.9
NOA NORSAR Array B 75.04 337 P **P 22 54 42.0 -0.3**
comp=Z,7.1nm,0.9s,mb4.4,baz=40,slow=5.7,SNR=20
FFC Flin Flon 75.51 32 *eP* **P 22 54 45.9 +0.8**
FFC pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
FFC Flin Flon 75.51 32 *eP* **P 22 54 45.9 +0.7**
comp=Z,4.1nm,1.0s,mb4.1
FCC Fort Churchill 75.77 26 *eP* **P 22 54 46.8 +0.2**
comp=Z,0.4nm,1.4s
LRM Limekiln Ridge 75.96 43 *eP* **P 22 54 49.3 +1.5**
DLMT Dillon 76.15 44 *eP* **P 22 54 50.5 +1.5**
comp=Z,11nm,1.3s,mb4.4
HLID Hailey 76.17 46 *eP* **P 22 54 49.2 +0.1**
BOZ Bozeman (W) 76.52 43 *eP* **P 22 54 51.2 +0.1**
BOZ pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
BOZ Bozeman (W) 76.52 43 *eP* **P 22 54 51.2 +0.2**
comp=Z,4.4nm,1.3s,mb4.0
MALT Malatya 76.74 308 *eP* **P 22 54 53.9 +1.5**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
MALT Malatya 76.74 308 *eP* **P 22 54 53.9 +1.4**
comp=Z,4.9nm,1.1s,mb4.2
MALT Malatya 76.74 308 ⇑*iP* **P 22 54 53.7 +1.3**
NVAR Mina Array Bea 76.75 52 P **P 22 54 54.0 +1.4**
comp=Z,0.5nm,0.5s,mb3.5,baz=312,slow=5.1,SNR=4.4
GKP Gorka Klasztor 78.53 329 *eP* **P 22 55 02.0 -0.2**
KWP Kalwaria Pacla 78.60 324 *eP* **P 22 55 03.1 +0.5**
KWP Kalwaria Pacla 78.60 324 *eP* **P 22 55 03.0 +0.4**
comp=Z,26nm,0.9s,mb5.1
KWP Kalwaria Pacla 78.60 324 ⇑*iP* **P 22 55 03.3 +0.7**
BUR08 Bucovina Ar. S 78.69 321 *eP* **P 22 55 03.7 +0.6**
BURAR Bucovina Array 78.70 321 ⇓*iP* **P 22 55 03.9 +0.7**
BR131 Keskin Array S 78.92 311 *eP* **P 22 55 04.9 +0.4**
BRTR Keskin Array B 78.92 311 P **P 22 55 04.7 +0.2**
comp=Z,2.3nm,0.9s,mb4.0,baz=102,slow=5.3,SNR=9.3
BRTR sP sP 22 55 30.2 -0.9
comp=Z,3.4nm,1.1s,baz=116,slow=4.3,SNR=5.3
HWUT Hardware Ranch 79.03 46 *eP* **P 22 55 05.2 +0.1**
VRI Vrincioaia 79.05 319 ⇓*iP* **P 22 55 06.4 +1.3**
DUG Dugway 79.15 48 *eP* **P 22 55 07.6 +1.9**
KOLS Kolonicke sedl 79.28 324 *eP* **P 22 55 06.5 +0.2**
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 79.28 324 *eP* **P 22 55 06.5 +0.2**
comp=Z,5.7nm,1.1s,mb4.3
KOLS Kolonicke sedl 79.28 324 *eP* **P 22 55 06.5 +0.2**
STHS Stebnicka Huta 79.45 324 *eP* **P 22 55 07.7 +0.5**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
STHS Stebnicka Huta 79.45 324 *eP* **P 22 55 07.7 +0.5**
comp=Z,5.2nm,1.0s,mb4.3
STHS Stebnicka Huta 79.45 324 *eP* **P 22 55 07.7 +0.5**
BW06 Boulder Array 79.47 45 P **P 22 55 07.0 -0.5**
PDAR Pinedale Array 79.47 45 P **P 22 55 08.2 +0.8**
comp=Z,0.5nm,0.5s,mb3.6,baz=252,slow=1.0,SNR=6.8
UZH Uzhgorod 79.48 323 *eP* **P 22 55 07.0 -0.4**
OJC Ojcow 79.57 326 *eP* **P 22 55 08.2 +0.4**
TRPA Tarpa 79.70 323 ⇑*iP* **P 22 55 09.3 +0.7**
NIE Niedzica 79.89 325 *eP* **P 22 55 10.3 +0.7**
CCUT Cedar City 80.42 51 *eP* **P 22 55 15.3 +2.6**
comp=Z,22nm,2.5s,mb4.5
DRGR 80.52 322 ⇓*iP* **P 22 55 13.9 +0.8**
MSU Marysvale 80.57 49 *eP* **P 22 55 15.5 +2.0**
MSU pmax pmax
comp=Z,4.0nm,1.5s,mb4.0
MSU Marysvale 80.57 49 *eP* **P 22 55 15.5 +2.1**
comp=Z,3.7nm,1.5s,mb4.0
TMUT Trail Mountain 80.67 48 *eP* **P 22 55 17.7 +3.7**
comp=Z,202nm,2.0s,mb5.6
KSP Ksiaz 80.69 328 *eP* **P 22 55 14.5 +0.6**
MORC Moravsky Berou 80.91 326 *eP* **P 22 55 15.6 +0.6**
MORC pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MORC Moravsky Berou 80.91 326 *eP* **P 22 55 15.6 +0.5**
comp=Z,7.2nm,1.0s,mb4.5
MORC Moravsky Berou 80.91 326 ⇑*iP* **P 22 55 15.8 +0.8**
DPC Dobruska-Polom 81.04 327 *eP* **P 22 55 16.1 +0.4**
DPC *epP* pP 22 55 36.2 +1.5
PSZ Piszkesteto 81.13 324 *eP* **P 22 55 16.1 -0.2**
PSZ pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
PSZ Piszkesteto 81.13 324 *eP* **P 22 55 16.1 -0.2**
comp=Z,7.7nm,1.2s,mb4.4
PSZ Piszkesteto 81.13 324 ⇓*iP* **P 22 55 17.3 +1.0**
VYHS Vyhne 81.23 325 *eP* **P 22 55 17.2 +0.4**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
VYHS Vyhne 81.23 325 *eP* **P 22 55 17.2 +0.4**
comp=Z,4.5nm,1.2s,mb4.2
VYHS Vyhne 81.23 325 *eP* **P 22 55 17.2 +0.4**
VRAC Vranov 81.67 326 ⇓*iP* **P 22 55 20.2 +1.1**
BRG Berggiesshubel 81.68 329 *eP* **P 22 55 19.1 0.0**
comp=Z,4.5nm,0.8s,mb4.3
BRG Berggiesshubel 81.68 329 *eP* **P 22 55 19.1 0.0**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
CLL Collm 81.74 330 ⇑*iP* **P 22 55 18.9 -0.5**
CLL *e* 22 55 27.0
CLL pmax pmax
comp=Z,12nm,0.9s,mb4.7
CLL Collm 81.74 330 ⇑*iP* **P 22 55 18.9 -0.5**
comp=Z,12nm,0.9s,mb4.7
CLL *e* 22 55 27.0
CLL *e* pP 22 55 39.0 +0.6
CLL *e* 22 55 44.0
CLL Collm 81.74 330 ⇑*iP* **P 22 55 18.9 -0.5**
comp=Z,12nm,0.9s,mb4.7
CLL *e*PcP PcP 22 55 26.0 +1.0
CLL *e*(pP) pP 22 55 39.0 +0.6
CLL *e*sP sP 22 55 45.0 -1.1
SMOL Smolenice 81.87 326 *eP* **P 22 55 21.3 +1.1**
SMOL Smolenice 81.87 326 *eP* **P 22 55 21.3 +1.1**
PRU Pruhonice 82.08 328 *eP* **P 22 55 22.1 +0.9**
PRU *epP* pP 22 55 41.9 +1.6
CONA Conrad Observa 83.02 326 ⇓*iP* **P 22 55 26.8 +0.7**
comp=Z,7.1nm,1.3s,mb4.3
KHC Kasperske Hory 83.14 328 *eP* **P 22 55 26.8 +0.1**
KHC *epP* pP 22 55 47.1 +1.3
GERES GERESS Array B 83.30 328 P **P 22 55 26.9 -0.6**
comp=Z,1.5nm,0.8s,mb3.9,baz=36,slow=5.0,SNR=14
GRA1 Grafenberg Arr 83.71 329 *eP* **P 22 55 30.0 +0.3**
comp=Z,9.0nm,1.0s,mb4.5
GRF Grafenberg Arr 83.71 329 *eP* **P 22 55 30.0 +0.3**
comp=Z,9.0nm,1.0s,mb4.5
GRF Grafenberg Arr 83.71 329 *eP* **P 22 55 30.0 +0.3**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
GRF Grafenberg Arr 83.71 329 *eP* **P 22 55 30.0 +0.3**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
GRF Grafenberg Arr 83.71 329 *eP* **P 22 55 30.0 +0.3**
comp=Z,9.0nm,1.0s,mb4.5
SOKA Soboth 84.32 325 ⇓*iP* **P 22 55 32.9 +0.1**
comp=Z,12nm,1.0s,mb4.7
PMOR Pomariorio Ree 84.68 113 *eT* 00 28 35.4
comp=Z,4.0nm,0.2s
PPT Papeete 85.04 116 *e*LR LR 23 22 26.7
comp=Z,191nm,34.8s
SDCO Great Sand Dun 85.09 46 P **P 22 55 37.3 +0.4**
ABTA Abfaltersbach 85.41 327 ⇑*iP* **P 22 55 37.3 -1.0**
comp=Z,3.8nm,1.0s,mb4.3
GIVF Givet 85.90 333 *eP* **P 22 55 40.1 -0.6**
BAIF Baives 86.16 333 *eP* **P 22 55 41.3 -0.7**
CDF Champ du Feu 86.33 331 ⇑*iP* **P 22 55 42.4 -0.4**
comp=Z,12nm,1.1s,mb4.5
CDF Champ du Feu 86.33 331 ⇑*iP* **P 22 55 42.4 -0.4**
CDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CDF Champ du Feu 86.33 331 ⇑*iP* **P 22 55 42.4 -0.4**
comp=Z,6.2nm,1.1s,mb4.5
ANMO Albuquerque 86.37 49 P **P 22 55 43.5 +0.2**
LPM Los Pinos Moun 86.69 50 *eP* **P 22 55 41.8 -3.0**
HINF Hinteralfeld 86.97 330 *eP* **P 22 55 45.2 -0.8**
HAU Haudompre 87.02 331 *eP* **P 22 55 45.4 -0.8**
MEZF Maizieres J'vi 87.12 332 *eP* **P 22 55 46.4 -0.3**
comp=Z,14nm,1.1s,mb4.5
MEZF Maizieres J'vi 87.12 332 *eP* **P 22 55 46.4 -0.3**
comp=Z,14nm,1.1s,mb4.8
CABF La Chapelle 88.25 330 *eP* **P 22 55 52.8 +0.7**
comp=Z,3.4nm,0.8s,mb4.1
CABF La Chapelle 88.25 330 *eP* **P 22 55 52.8 +0.7**
CABF pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
CABF La Chapelle 88.25 330 *eP* **P 22 55 52.8 +0.7**
comp=Z,1.7nm,0.8s,mb4.1
LOR Lormes 88.60 332 *eP* **P 22 55 53.1 -0.6**
FLN La Foliniere 88.92 335 *eP* **P 22 55 55.7 +0.5**
SMF Signal de Mont 89.12 331 *eP* **P 22 55 56.0 -0.2**
AVF Avril sur Loir 89.19 332 *eP* **P 22 55 56.3 -0.2**
GRR Gorron 89.37 335 *eP* **P 22 55 57.0 -0.3**
SBF Sospel 89.90 328 *eP* **P 22 55 58.8 -1.1**
comp=Z,10nm,0.8s,mb4.7
SBF Sospel 89.90 328 *eP* **P 22 55 58.8 -1.1**
SBF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
SBF Sospel 89.90 328 *eP* **P 22 55 58.8 -1.1**
comp=Z,5.2nm,0.8s,mb4.7
VIVF Saint-Julien-l 90.26 330 *eP* **P 22 56 01.1 -0.4**
MFF Saint Martin d 90.65 334 ⇑*iP* **P 22 56 03.2 -0.1**
comp=Z,11nm,1.0s,mb4.6
MFF Saint Martin d 90.65 334 ⇑*iP* **P 22 56 03.2 -0.1**
MFF pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
MFF Saint Martin d 90.65 334 ⇑*iP* **P 22 56 03.2 -0.1**
comp=Z,5.3nm,1.0s,mb4.6
LMR La Mourre 90.72 328 *eP* **P 22 56 02.9 -0.9**
comp=Z,9.5nm,1.1s,mb4.5
LMR La Mourre 90.72 328 *eP* **P 22 56 02.9 -0.9**
LMR pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
LMR La Mourre 90.72 328 *eP* **P 22 56 02.9 -0.9**
comp=Z,4.8nm,1.1s,mb4.5
RJF Les Rejaudoux 91.13 332 *eP* **P 22 56 05.6 0.0**
comp=Z,23nm,1.2s,mb4.9
RJF Les Rejaudoux 91.13 332 *eP* **P 22 56 05.6 0.0**
RJF pmax pmax
comp=Z,11nm,1.2s,mb4.9
RJF Les Rejaudoux 91.13 332 *eP* **P 22 56 05.6 0.0**
comp=Z,11nm,1.2s,mb4.9
LASF Ste Croix 91.23 330 *eP* **P 22 56 06.0 -0.1**
CAF Calviac 91.24 332 *eP* **P 22 56 06.4 +0.3**
LFF La Frestale 91.73 332 ⇑*iP* **P 22 56 08.5 +0.1**
comp=Z,12nm,0.9s,mb4.8
LFF La Frestale 91.73 332 ⇑*iP* **P 22 56 08.5 +0.1**
LFF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
LFF La Frestale 91.73 332 ⇑*iP* **P 22 56 08.5 +0.1**
comp=Z,6.0nm,0.9s,mb4.8
TXAR Lajitas Array 91.89 52 P **P 22 56 10.4 +1.0**
comp=Z,0.2nm,0.7s,mb3.5,baz=298,slow=5.5,SNR=3.4
MTLF Montolieu 92.50 331 *eP* **P 22 56 12.0 0.0**
comp=Z,31nm,1.6s,mb5.1
MTLF Montolieu 92.50 331 *eP* **P 22 56 12.0 0.0**
MTLF pmax pmax
comp=Z,16nm,1.6s,mb5.1
MTLF Montolieu 92.50 331 *eP* **P 22 56 12.0 0.0**
comp=Z,16nm,1.6s,mb5.1
TORD Torodi Ar. Bea 117.49 313 PKP PKPdf 23 01 46.3 -0.6
comp=Z,0.4nm,0.8s,baz=45,slow=1.0,SNR=3.6
TORD pPKP pPKPdf 23 02 06.3 -0.7
comp=Z,0.4nm,0.8s,baz=43,slow=0.8,SNR=2.1
LPAZ La Paz 148.39 60 PKIKP PKPdf 23 02 44.9 +0.9

JMA 08 22:43:10.3, 34°.82N×137°.87E, h16km±1km, M1.4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHMK	**Hamakita**	**0.09**	**268**	P	Pg	22 43 13.6	0.0
JHMK				S	Sg	22 43 15.8	0.0
JKKG	**Kakegawa**	**0.09**	**112**	P	Pg	22 43 13.5	-0.1
JKKG				S	Sg	22 43 15.7	-0.1
HMMJ	**Hamamatsu 2**	**0.13**	**286**	P	Pg	22 43 14.2	+0.2
HMMJ				S	Sg	22 43 16.8	+0.3
JYZW	**Yoshizawa**	**0.21**	**327**	P	Pg	22 43 15.3	+0.1
JYZW				S	Sg	22 43 18.6	+0.1
SHZ3	**Shizuoka 3**	**0.37**	**49**	P	Pg	22 43 17.6	-0.3
SHZ3				S	Sg	22 43 22.9	-0.2
JNY	**Yasuok**	**0.54**	**359**	S	Sg	22 43 27.9	-0.3
JAA	**Atsumi**	**0.63**	**253**	P	Pg	22 43 22.2	-0.4

*NIED **08** 22:48:00, 35°.70N×140°.00E, h80km, Mw4.1 Best double couple: M0=1.37000×10^15 NP1:φs=269.00000°, δ77.00000°, λ-118.00000°. NP2:φs=157.00000°, δ30.00000°, λ-26.00000°.*
*ISCJB **08** 22:48:01.2±0.4, 35°.59N±0°.03×140°.03E±0°.05, h81km±2km, mb4.0/22, Error ellipse: s-maj=7.2km s-min=4.7km az=156.8*
*NEIC **08** 22:48:01.6±0.4, 35°.63N×140°.10E, mb4.5/4, MW4.0(NIED), Error ellipse: s-maj=9.2km s-min=7.5km az=93.0*
*IDC **08** 22:48:01.7±0.8, 35°.56N×140°.13E, h67km±6km, mb3.6/15, mb1 3.8/18, mb1mx3.7/28, mbtmp3.7/18, MS2.6/2, Ms1 2.6/2, ms1mx2.3/32, Error ellipse: s-maj=14.7km s-min=6.6km az=65.0*
*JMA **08** 22:48:02.0±0.2, 35°.67N×140°.04E, h71km±2km, M4.0*
JMA Felt II J1.

ISC 08 22:48:02.2±0.4, 35°.61N±0°.03×140°.05E±0°.05, h73km±2km, n58, σ0°88/73, mb4.0/22, 4C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.22**	**147**	⇑P	**Pn**	**22 48 13.9**	**+0.7**
JCN				*e*S	**Sn**	**22 48 22.8**	**+1.6**
TOK	**Tokyo**	**0.25**	**289**	⇓P	**Pn**	**22 48 13.7**	**+0.4**
TOK				*e*S	**Sn**	**22 48 22.2**	**+0.7**
JOD2	**Odawara 2**	**0.86**	**247**	⇑P	**Pn**	**22 48 19.0**	**0.0**
JOD2				S	**Sn**	**22 48 30.6**	**-1.0**
BSO3	**Boso 3**	**0.89**	**155**	P	**Pn**	**22 48 19.4**	**0.0**
JAG	**Ashikaga**	**0.95**	**330**	⇓P	**Pn**	**22 48 19.6**	**-0.6**
JAG				*e*S	**Sn**	**22 48 32.1**	**-1.5**
JIM2	**Oshima 3**	**1.02**	**210**	P	**Pn**	**22 48 20.6**	**-0.4**
JIM2				*e*S	**Sn**	**22 48 35.0**	**-0.1**
JRY	**Ryogami san**	**1.02**	**294**	⇓P	**Pn**	**22 48 21.4**	**+0.4**
JRY				*e*S	**Sn**	**22 48 35.3**	**+0.2**
BSO1	**Boso 1**	**1.22**	**141**	P	**Pn**	**22 48 23.2**	**-0.3**
JYN	**Shimob**	**1.23**	**265**	⇑P	**Pn**	**22 48 23.9**	**+0.2**
JYN				*e*S	**Sn**	**22 48 39.8**	**-0.1**
JIZS	**Izushimoda**	**1.31**	**228**	⇑P	**Pn**	**22 48 24.7**	**0.0**
JIZS				S	**Sn**	**22 48 41.0**	**-0.5**
JKT	**Katashina**	**1.33**	**331**	⇓P	**Pn**	**22 48 24.5**	**-0.4**
JKT				*e*S	**Sn**	**22 48 41.6**	**-0.5**
MJAR	**Matsushiro Arr**	**1.76**	**303**	P	**Pn**	**22 48 30.7**	**0.0**
	55nm,0.3s,baz=86,slow=1.0,SNR=56						
MJAR				S	**Sn**	**22 48 52.9**	**+0.7**
	59nm,0.3s,baz=151,slow=17,SNR=12						
MJAR	**Matsushiro Arr**	**1.76**	**303**	P	**Pn**	**22 48 30.7**	**0.0**
MJAR				S	**Sn**	**22 48 52.9**	**+0.7**
MAJO	**Matsushiro**	**1.76**	**303**	*e*Pn	**Pn**	**22 48 31.1**	**+0.4**
MAJO				*e*Sn	**Sn**	**22 48 50.5**	**-1.8**
MAT	**Matsushiro**	**1.76**	**303**	P	**Pn**	**22 48 31.1**	**+0.4**
MAT				S	**Sn**	**22 48 53.2**	**+0.9**
JHJ	**Hachijo jima 2**	**2.49**	**185**	P	**Pn**	**22 48 40.7**	**+0.2**
	312nm,0.3s,baz=327,slow=8.8,SNR=23						
JHJ				S	**Sn**	**22 49 08.9**	**-0.9**
	157nm,0.3s,baz=53,slow=20,SNR=5.3						
CBIJ	**Chichi jima**	**8.68**	**167**	P	**Pn**	**22 50 01.9**	**-3.0**
	39nm,0.3s,baz=105,slow=23,SNR=18						
CBIJ				S	**Sn**	**22 51 33.0**	**-8.2**
	4.6nm,0.3s,baz=287,slow=19,SNR=3.2						
CBIJ				LR	LR	22 52 45.6	
	comp=Z,30nm,20.5s,baz=101,slow=33						
ASAJ	**Asahikawa**	**8.72**	**12**	P	**Pn**	**22 50 02.8**	**-2.6**
	2.4nm,0.3s,baz=224,slow=17,SNR=5.0						
ASAJ				S	**Sn**	**22 51 37.8**	**-4.3**
	0.7nm,0.3s,baz=270,slow=20,SNR=2.5						
KSRS	**Korea Array**	**9.94**	**284**	P	**Pn**	**22 50 24.5**	**+2.5**
	0.3nm,0.3s,baz=96,slow=14,SNR=4.4						
MDJ	**Mudanjiang**	**12.04**	**322**	P	**Pn**	**22 50 56.0**	**+5.4**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,7.6s						
MDJ	**Mudanjiang**	**12.04**	**322**	Pn	**Pn**	**22 50 49.7**	**-0.9**
JOW	**Kunigami**	**13.33**	**232**	P	**Pn**	**22 51 11.5**	**+3.2**
	comp=Z,0.5nm,0.3s,baz=65,slow=18,SNR=3.7						
SSLB	**Suanglung**	**20.30**	**240**	P	**P**	**22 52 32.5**	**+0.3**
YULB	**Yu-li**	**20.32**	**238**	*e*P	**P**	**22 52 32.3**	**0.0**
PETK	**Petropavlovsk-**	**21.47**	**30**	P	**P**	**22 52 44.6**	**+0.2**
	comp=Z,4.0nm,0.8s,mb3.8,baz=201,slow=7.9,SNR=5.3						
PETK				LR	LR	23 00 00.5	
	comp=Z,26nm,20.0s,baz=185,slow=34						
ULN	**Ulaanbaatar**	**27.29**	**307**	P	**P**	**22 53 38.9**	**-0.7**
ZALV	**Zalesovo Beam**	**42.08**	**314**	P	**P**	**22 55 47.1**	**+0.5**
	comp=Z,0.8nm,0.4s,mb3.8,baz=101,slow=6.2,SNR=5.9						
MK31	**Makanchi Array**	**43.96**	**303**	*e*P	**P**	**22 56 00.6**	**-1.2**
MKAR	**Makanchi Array**	**43.96**	**303**	P	**P**	**22 56 02.6**	**+0.8**
	comp=Z,1.2nm,0.5s,mb3.9,baz=92,slow=8.2,SNR=16						
MKAR				pP	pP	22 56 19.0	-0.8
	comp=Z,1.1nm,0.8s,baz=101,slow=10.0,SNR=3.6						
MKAR				sP	sP	22 56 26.9	-1.2
	comp=Z,0.9nm,0.6s,baz=92,slow=8.7,SNR=3.6						
KURK	**Kurchatov**	**45.96**	**309**	P	**P**	**22 56 18.4**	**+0.7**
	comp=Z,2.0nm,0.5s,mb4.2,baz=82,slow=7.4,SNR=13						
AAK	**Ala-Archa**	**50.21**	**299**	P	**P**	**22 56 50.4**	**-0.2**
EKS2	**Erkin-Say**	**50.71**	**299**	*e*P	**P**	**22 56 54.1**	**-0.3**
BVAR	**Borovoye Array**	**50.73**	**313**	P	**P**	**22 56 54.7**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.8,baz=78,slow=9.4,SNR=3.9						
BRVK	**Borovoye**	**50.79**	**313**	*e*P	**P**	**22 56 53.5**	**-1.3**
AML	**Almayashu**	**50.92**	**299**	*e*P	**P**	**22 56 56.9**	**+1.0**
	comp=Z,3.6nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**55.50**	**187**	*e*P	**P**	**22 57 29.2**	**-0.4**
	comp=Z,2.7nm,0.4s,mb4.6						
WB2	**Warramunga Arr**	**55.51**	**187**	*e*P	**P**	**22 57 29.6**	**0.0**
WRA	**Warramunga Arr**	**55.51**	**187**	P	**P**	**22 57 29.1**	**-0.6**
	comp=Z,3.0nm,0.5s,mb4.6,baz=0.6,slow=7.5,SNR=37						
WRA				pP	pP	22 57 47.0	-1.2
	comp=Z,1.7nm,0.7s,baz=3.6,slow=7.6,SNR=3.7						
INK	**Inuvik**	**56.16**	**27**	P	**P**	**22 57 33.5**	**-0.3**
ARU	**Arti**	**56.71**	**319**	*e*P	**P**	**22 57 37.9**	**0.0**
	comp=Z,2.1nm,0.4s,mb4.5						
KBL	**Kabul**	**56.90**	**291**	P	**P**	**22 57 39.2**	**-0.5**
ABKAR	**Akbulak array**	**58.02**	**310**	*e*P	**P**	**22 57 47.6**	**+0.3**
	comp=Z,1.2nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**59.23**	**187**	P	**P**	**22 57 55.6**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.7,baz=2.7,slow=7.8,SNR=7.8						
ARCES	**ARCESS Array B**	**64.94**	**339**	P	**P**	**22 58 34.1**	**+0.5**
	comp=Z,3.2nm,0.8s,mb4.2,baz=65,slow=9.5,SNR=3.9						
YKA	**Yellowknife Ar**	**65.59**	**29**	P	**P**	**22 58 38.5**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.4,baz=302,slow=6.4,SNR=7.8						
YKA	**Yellowknife Ar**	**65.59**	**29**	P	**P**	**22 58 38.5**	**+0.7**
JOF	**Joensuu**	**66.70**	**332**	*e*p	**P**	**22 58 44.2**	**-0.8**
	comp=Z,1.8nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**69.07**	**333**	*e*p	**P**	**22 58 57.5**	**-2.3**
	comp=Z,2.1nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**69.56**	**332**	P	**P**	**22 59 03.2**	**+0.3**
	comp=Z,2.6nm,0.6s,mb4.2,baz=70,slow=5.1,SNR=14						
AKASG	**Malin Array Be**	**74.75**	**322**	P	**P**	**22 59 34.0**	**0.0**
	comp=Z,0.8nm,0.4s,mb3.9,baz=48,slow=6.0,SNR=5.6						
NB2	**NORSAR Subarra**	**75.07**	**337**	P	**P**	**22 59 36.2**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.7,baz=40,slow=5.6						
NOA	**NORSAR Array B**	**75.07**	**337**	P	**P**	**22 59 36.2**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.7,baz=41,slow=5.7,SNR=5.5						
NOA	**NORSAR Array B**	**75.07**	**337**	P	**P**	**22 59 36.2**	**+0.5**
BRTR	**Keskin Array B**	**78.97**	**311**	P	**P**	**22 59 59.9**	**+1.9**
	comp=Z,0.4nm,0.7s,mb3.4,baz=52,slow=4.1,SNR=3.0						
PDAR	**Pinedale Array**	**79.45**	**45**	P	**P**	**23 00 01.3**	**+0.7**
	comp=Z,0.3nm,0.5s,mb3.3,baz=290,slow=5.7,SNR=3.4						
CLL	**Collm**	**81.78**	**330**	*i P*	**P**	**23 00 13.7**	**+0.9**
	comp=Z,6.0nm,1.5s,mb4.2						
GERES	**GERESS Array B**	**83.34**	**328**	P	**P**	**23 00 21.7**	**+0.7**
	comp=Z,0.1nm,0.3s,mb3.2,baz=44,slow=4.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	**117.53**	**313**	PKP	PKPdf	23 06 40.9	+0.7
	comp=Z,0.4nm,0.9s,baz=67,slow=1.2,SNR=3.0						

MAN 08 22:53:37, 17°.60N×122°.59E, h15km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.56**	**197**	*e*P	Pg	22 53 49.0	+1.1
PALP				*e*S	Sg	22 53 57.7	+2.3
SGCP	**Mt. Cagua**	**0.82**	**321**	*e*P	Pb	22 53 51.8	-1.3
CAUP	**Cauayan**	**0.98**	**229**	*e*P	Pb	22 53 56.0	+0.3
APYP	**Conner**	**1.31**	**282**	*e*P	Pn	22 54 00.6	-0.2
APYP				*e*S	Sb	22 54 14.3	-3.7
ABRA	**Dolores**	**1.79**	**272**	*e*P	Pn	22 54 07.0	-0.4
BALP	**Baler**	**2.09**	**208**	*e*P	Pn	22 54 12.1	+0.6
BBP	**Basco**	**2.89**	**348**	*e*P	Pn	22 54 23.4	+0.9
SJMP	**San Jose**	**5.30**	**196**	*e*P	Pn	22 54 48.0	-7.7

*IDC **08** 23:01:51.4±1.0, 35°.84N×140°.59E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/26, mbtmp3.9/10, ML4.2/2, Error ellipse: s-maj=29.0km s-min=18.6km az=65.0*
*NEIC **08** 23:01:56.9±1.3, 35°.78N×140°.51E, h43km±10km, mb4.3/5, Error ellipse: s-maj=13.0km s-min=8.4km az=76.0*
*ISCJB **08** 23:02:00.1±0.4, 35°.61N±0°.04×140°.05E±0°.06, h80km±3km, mb3.8/14, Error ellipse: s-maj=8.9km s-min=4.8km az=150.2*
*JMA **08** 23:02:00.8±0.2, 35°.66N×140°.03E, h73km±2km, M3.3*

ISC 08 23:02:01.1±0.4, 35°.61N±0°.04×140°.06E±0°.06, h73km±3km, n37, σ1°03/50, mb3.8/14, 2C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.22**	**148**	P	**Pn**	**23 02 12.8**	**+0.6**
JCN				S	**Sn**	**23 02 22.1**	**+1.9**
TOK	**Tokyo**	**0.26**	**288**	⇓P	**Pn**	**23 02 12.6**	**+0.3**
TOK				S	**Sn**	**23 02 21.3**	**+0.7**
JOD2	**Odawara 2**	**0.86**	**247**	⇓P	**Pn**	**23 02 17.7**	**-0.4**
JOD2				*e*S	**Sn**	**23 02 29.7**	**-1.0**
BSO3	**Boso 3**	**0.89**	**155**	P	**Pn**	**23 02 18.2**	**-0.2**
BSO3				*e*S	**Sn**	**23 02 32.5**	**+1.3**
JAG	**Ashikaga**	**0.95**	**329**	⇑P	**Pn**	**23 02 18.5**	**-0.6**
JAG				*e*S	**Sn**	**23 02 30.4**	**-2.1**
JRY	**Ryogami san**	**1.02**	**294**	⇓P	**Pn**	**23 02 20.1**	**+0.1**
JRY				*e*S	**Sn**	**23 02 34.2**	**+0.1**
JIM2	**Oshima 3**	**1.03**	**210**	P	**Pn**	**23 02 19.4**	**-0.7**
JIM2				*e*S	**Sn**	**23 02 33.3**	**-0.9**
BSO1	**Boso 1**	**1.22**	**141**	P	**Pn**	**23 02 21.9**	**-0.

WB2	Warramunga Arr	55.51	187	P	P	23 11 29.2 +0.6
WRA	Warramunga Arr	55.51	187	P	P	23 11 28.8 +0.2
	0.4nm,0.5s,mb3.8,baz=0.5,slow=7.5,SNR=5.3					
ARU	Arti	56.71	319	eP	P	23 11 35.8 -1.0
	1.5nm,0.5s,mb4.3					
JOF	Joensuu	66.70	332	ep	P	23 12 42.2 -1.7
	1.1nm,0.4s,mb4.0					
FINES	FINESS Array B	69.56	332	P	P	23 13 01.9 +0.1
	1.2nm,0.6s,mb3.9,baz=82,slow=5.9,SNR=11					
NOA	NORSAR Array B	75.07	337	P	P	23 13 34.4 -0.2
	0.5nm,0.6s,mb3.4,baz=27,slow=8.2,SNR=3.8					
PDAR	Pinedale Array	79.45	45	P	P	23 13 58.5 -0.9
	0.1nm,0.5s,mb2.9,baz=289,slow=2.2,SNR=3.7					

NIED **08** *23:21:00,36°.30N×141°.90E,h17km,Mw5.5 Best double couple: M₀2.10000×10¹⁷ NP1:φs353.00000°,δ67.00000°, λ75.00000°. NP2:φs207.00000°,δ27.00000°,λ121.00000°.*
IDC **08** *23:21:04.1±0.4,36°.10N×141°.83E,h0km,mb5.2/30, mb1 5.3/35,mb1mx5.2/37,mbtmp5.2/35,ML4.9/4,MS5.2/29, Ms1 5.2/29,ms1mx5.0/39,Error ellipse: s-maj=13.0km s-min=11.4km az=94.0*
NEIC **08** *23:21:07.0±0.1,36°.11N×141°.68E,h17km,mb5.6/252, MS5.2/196,MW5.5,MW5.5(NIED),Error ellipse: s-maj=3.1km s-min=2.2km az=159.0,Moment Tensor Solution. s125 Moment tensor: Scale 10¹⁷Nm; Mrr0.72; Mθθ-0.19; Mφφ-0.52; Mrθ0.23; Mθφ-0.71; Mφr1.77; Best double couple: M₀2.00000×10¹⁷ NP1:φs249.00000°, δ21.00000°,λ147.00000°. NP2:φs10.00000°,δ79.00000°, λ73.00000°. Principal axes: T 2.0000, Plg53.0000°, Azm259.0000°; N 0.0600, Plg17.0000°, Azm13.0000°; P -2.0500, Plg31.0000°, Azm114.0000°;*
NEIC Felt [III] at Tokyo. Also felt at Yamato and Yokosuka. Recorded [3 JMA] in Ibaraki; [2 JMA] in Chiba, Fukushima, Miyagi, Niigata, Saitama, Tochigi and Tokyo; [1 JMA] in Akita, Gumma, Kanagawa, Nagano, Shizuoka and Yamanashi.
BJI **08** *23:21:06.3,36°.25N×141°.48E,h10km,mB5.7/41,mb5.7/67, Ms5.7/77,Ms7 5.6/60*
JMA **08** *23:21:06.4±0.2,36°.19N×141°.98E,h69km±5km,M5.8*
JMA Felt III J1.
ISCJB **08** *23:21:07.7±0.1,36°.15N±0°.02×141°.78E±0°.01,h30km, mb5.5/382,MS5.3/259,Error ellipse: s-maj=2.5km s-min=1.5km az=174.0*
MOS **08** *23:21:07.5±1.2,36°.25N×141°.87E,h33km,mb6.0/143, MS5.4/67,Error ellipse: s-maj=8.4km s-min=5.5km az=107.1*
GCMT **08** *23:21:07.0±0.1,36°.12N×142°.08E,h23km,MW5.6/96, Moment Tensor Solution. s69,c121; s96,c224; Duration: 1ŝ5 Moment tensor: Scale 10¹⁷Nm; Mrr1.74±.04; Mθθ0.02±.03; Mφφ-1.76±.03; Mrθ-0.04±.05; Mθφ-0.54±.02; Mφr1.93±.06; Best double couple: M₀2.66000×10¹⁷ NP1:φs209.00000°,δ23.00000°, λ114.00000°. NP2:φs3.00000°,δ69.00000°,λ80.00000°. Principal axes: T 2.6200, Plg65.0000°, Azm257.0000°; N 0.0810, Plg9.0000°, Azm7.0000°; P -2.6990, Plg23.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BGS **08** *23:21:09.6±1.6,35°.36N×138°.83E,h33km,mb5.4*
SZGRF **08** *23:21:10.8,36°.53N×141°.64E,h33km,mb5.7,MS5.7,Near east coast of eastern Honshu, Japan*
DJA **08** *23:21:18,36°.12N×141°.29E,h85km,Mw6.1/41*
ISC 08 23:21:09.6±0.1,36°.18N±0°.02×141°.76E±0°.01,h32km, h32km±.5km:pP-P,n1569,σ0s75/1545,mb5.5/382, MS5.3/259,546C-224D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.88**	**237**	⇑P	**Pn**	**23 21 25.5**	**-0.1**
CHOJ				S	**Sn**	**23 21 40.0**	**+2.8**
JHO	**Hitachi**	**1.06**	**294**	⇓P	**Pn**	**23 21 27.4**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.21**	**320**	⇓P	**Pn**	**23 21 29.1**	**-1.1**
ONAJ				eS	**Sn**	**23 21 46.2**	**+0.8**
JFK	**Kawauchi**	**1.38**	**329**	⇑P	**Pn**	**23 21 31.5**	**-1.2**
JFK				eS	**Sn**	**23 21 50.5**	**+0.7**
BSO1	**Boso 1**	**1.65**	**203**	P	**Pn**	**23 21 34.7**	**-1.6**
JSB	**Shiboa**	**1.68**	**299**	⇑P	**Pn**	**23 21 37.3**	**+0.6**
BSO3	**Boso 3**	**1.71**	**217**	P	**Pn**	**23 21 36.3**	**-0.9**
JFT	**Otama**	**1.76**	**320**	⇑P	**Pn**	**23 21 38.0**	**+0.2**
JMM	**Marumori**	**1.85**	**336**	⇑P	**Pn**	**23 21 37.6**	**-1.5**
JAG	**Ashikaga**	**1.88**	**278**	⇑P	**Pn**	**23 21 39.5**	**0.0**
JFY	**Yanaizu**	**2.06**	**307**	⇑P	**Pn**	**23 21 42.2**	**+0.3**
JKT	**Katashina**	**2.11**	**287**	⇑P	**Pn**	**23 21 43.5**	**+0.9**
JIO	**Ouri**	**2.29**	**352**	⇑P	**Pn**	**23 21 43.0**	**-2.2**
JRY	**Ryogami san**	**2.32**	**267**	⇑P	**Pn**	**23 21 45.7**	**+0.1**
JOU	**Okura**	**2.35**	**338**	⇑P	**Pn**	**23 21 44.8**	**-1.2**
JOD2	**Odawara 2**	**2.36**	**248**	⇑P	**Pn**	**23 21 46.6**	**+0.5**
JYS	**Shirataka**	**2.45**	**327**	⇑P	**Pn**	**23 21 47.3**	**0.0**
JHK	**Hiroka**	**2.45**	**297**	⇑P	**Pn**	**23 21 48.3**	**+1.0**
AJI	**Ajiro2**	**2.45**	**243**	⇑P	**Pn**	**23 21 47.2**	**-0.2**
JGK	**Kuni**	**2.55**	**280**	⇑P	**Pn**	**23 21 49.5**	**+0.8**
JNS	**Sasagawa**	**2.55**	**311**	P	**Pn**	**23 21 50.3**	**+1.6**
JYN	**Shimob**	**2.70**	**256**	P	**Pn**	**23 21 51.7**	**+0.9**
JIZS	**Izushimoda**	**2.77**	**239**	⇑P	**Pn**	**23 21 51.3**	**-0.4**
JIZZ	**Izumozaki**	**2.80**	**300**	⇑P	**Pn**	**23 21 54.0**	**+1.9**
JMK	**Ichinoseki**	**2.80**	**351**	⇑P	**Pn**	**23 21 50.3**	**-1.8**
JMK				eS	**Sn**	**23 22 23.8**	**-1.0**
MJAR	**Matsushiro Arr**	**2.89**	**278**	Pn	**Pn**	**23 21 54.0**	**+0.6**
	301nm,0.3s,baz=96,slow=9.2,SNR=3216						
MAJO	**Matsushiro**	**2.89**	**278**	⇑P	**Pn**	**23 21 54.1**	**+0.7**
MAT	**Matsushiro**	**2.89**	**278**	P	**Pn**	**23 21 53.7**	**+0.3**
MAT				S	**Sn**	**23 22 29.3**	**+2.2**
OFUJ	**Ofunato**	**2.90**	**359**	⇑P	**Pn**	**23 21 50.9**	**-2.6**
JYA	**Atsumi**	**2.91**	**326**	⇑P	**Pn**	**23 21 53.6**	**0.0**
JYK	**Kaneyama**	**2.95**	**338**	⇑P	**Pn**	**23 21 53.5**	**-0.7**
JNT	**Takato**	**2.96**	**265**	⇑P	**Pn**	**23 21 56.4**	**+2.2**
JNG	**Nsakai**	**2.97**	**275**	⇑P	**Pn**	**23 21 55.8**	**+1.4**
JJN	**Nakama**	**3.04**	**289**	⇑P	**Pn**	**23 21 57.3**	**+1.9**
SHZ3	**Shizuoka 3**	**3.10**	**250**	P	**Pn**	**23 21 57.3**	**+1.0**
JNY	**Yasuok**	**3.28**	**257**	P	**Pn**	**23 22 00.6**	**+1.9**
JRG	**Rokugo**	**3.33**	**345**	P	**Pn**	**23 21 58.6**	**-0.9**
JSD	**Sado**	**3.36**	**305**	⇑P	**Pn**	**23 21 59.9**	**+0.1**
MIYJ	**Miyakonagasawa**	**3.39**	**1**	⇑P	**Pn**	**23 21 57.4**	**-2.9**
JHJ	**Hachijo jima 2**	**3.46**	**209**	Pn	**Pn**	**23 21 58.7**	**-2.5**
	298nm,0.3s,baz=124,slow=1.4,SNR=42						
JHJ				Sn	**Sn**	**23 22 38.7**	**-2.4**
	1μm,0.3s,baz=275,slow=22,SNR=11						
JHJ				LR	LR	23 23 18.2	
	comp=Z,11μm,20.5s,baz=2.4,slow=39						
JTT	**Ttatey**	**3.60**	**278**	⇑P	**Pn**	**23 22 05.8**	**+2.7**
JGF	**Kuroka**	**3.62**	**262**	P	**Pn**	**23 22 05.7**	**+2.2**
JSZ	**Suzu**	**3.75**	**291**	⇑P	**Pn**	**23 22 06.3**	**+1.1**
JTH	**Tanohata**	**3.75**	**1**	P	**Pn**	**23 22 03.0**	**-2.2**
JAO	**Obara**	**3.78**	**257**	P	**Pn**	**23 22 07.0**	**+1.4**
JJH	**Hakui**	**4.08**	**282**	P	**Pn**	**23 22 11.5**	**+1.8**
JHG	**Hegura jima**	**4.22**	**295**	⇑P	**Pn**	**23 22 12.7**	**+1.1**
JKN2	**Miekihoku**	**4.89**	**248**	P	**Pn**	**23 22 22.3**	**+1.4**
JWT	**Wachi**	**5.25**	**262**	⇑P	**Pn**	**23 22 27.2**	**+1.4**
ERM	**Erimo**	**5.93**	**10**	Pn	**Pn**	**23 22 31.5**	**-3.6**
	2μm,1.0s,SNR=24						
ERM	**Erimo**	**5.93**	**10**	eP	**Pn**	**23 22 31.5**	**-3.6**
ERM				e		23 23 37.5	
ERM				pmax	pmax		
	comp=Z,306nm,0.8s						
ERM	**Erimo**	**5.93**	**10**	ePn	**Pn**	**23 22 31.5**	**-3.6**
	comp=Z,306nm,0.8s						
ERM				eSn	**Sn**	**23 23 37.5**	**-4.3**
JAD	**Aida**	**6.31**	**261**	P	**Pn**	**23 22 41.5**	**+1.1**
JKU	**Kubokawa**	**7.71**	**251**	P	**Pn**	**23 23 01.4**	**+1.8**
ASAJ	**Asahikawa**	**7.95**	**4**	P	**Pn**	**23 23 00.2**	**-2.7**
ASAJ						23 24 27.1	
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ASAJ				smax			
	comp=N,13nm,0.3s						
ASAJ	**Asahikawa**	**7.95**	**4**	Pn	**Pn**	**23 23 00.1**	**-2.7**
	comp=N,9.7nm,0.3s,baz=209,slow=14,SNR=16						
ASAJ				Sn	**Sn**	**23 24 27.1**	**-4.6**
	comp=N,13nm,0.3s,baz=176,slow=13,SNR=3.7						
JHIK	**Hikimi**	**8.20**	**261**	P	**Pn**	**23 23 08.0**	**+1.7**
YUK	**Yuzh-Kuril'sk**	**8.45**	**21**	eP	**Pn**	**23 23 04.0**	**-5.7**
YUK				pmax	pmax		
	comp=N,180nm,0.5s						
YUK				pmax	pmax		
	comp=Z,360nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=N,1μm,1.0s						
YUK				pmax	pmax		
	comp=E,2μm,1.2s						
YUK				MLR	MLR		
	comp=N,12μm,20.0s						
YUK				MLR	MLR		
	comp=E,16μm,20.0s						
CBIJ	**Chichi jima**	**9.06**	**178**	Pn	**Pn**	**23 23 13.1**	**-5.1**
	comp=E,54nm,0.3s,baz=54,slow=3.3,SNR=51						
CBIJ				Sn	**Sn**	**23 24 48.4**	**-11**
	comp=E,89nm,0.3s,baz=133,slow=23,SNR=5.9						
CBIJ				LR	LR	23 25 40.6	
	comp=E,3μm,20.7s,baz=358,slow=31						
KUR	**Kuril'sk**	**10.16**	**25**	P	**Pn**	**23 23 23.0**	**-10**
KUR				pmax	pmax		
	comp=Z,240nm,0.7s						
KUR				MLR	MLR		
	comp=N,20μm,14.0s						
KUR				MLR	MLR		
	comp=E,23μm,14.0s						
KUR				MLR	MLR		
	comp=Z,19μm,14.0s						
VLA	**Vladivostok**	**10.29**	**315**	⇑P	**Pn**	**23 23 36.1**	**+1.2**
VLA				eS	**Sn**	**23 25 31.9**	**+2.9**
VLA				pmax	pmax		
	comp=Z,546nm,1.6s						
VLA				MLR	MLR		
	comp=Z,15μm,14.0s						
YSS	**Yuzh-Sakhalins**	**10.79**	**4**	ePn	**Pn**	**23 23 40.6**	**-1.2**
YSS				Sn	**Sn**	**23 25 41.0**	**-0.3**
KSRS	**Korea Array**	**11.17**	**281**	P	**Pn**	**23 23 50.9**	**+3.9**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,16μm,18.5s						
KSRS	**Korea Array**	**11.17**	**281**	Pn	**Pn**	**23 23 50.9**	**+3.9**
	comp=Z,2.8nm,0.3s,baz=94,slow=13,SNR=238						
KSRS				LR	LR	23 28 13.3	
	comp=Z,16μm,18.5s,baz=88,slow=38						
INCN	**Inchon**	**12.20**	**281**	ePn	**Pn**	**23 24 00.3**	**-0.7**
INCN	**Inchon**	**12.20**	**281**	Pn	**Pn**	**23 24 04.2**	**+3.2**
	SNR=23						
INCN				Pn	**Pn**	**23 24 04.2**	**+3.2**
	SNR=23						
MDJ	**Mudanjiang**	**12.52**	**316**	P	**Pn**	**23 24 05.0**	**-0.4**
MDJ				S	**Sn**	**23 26 25.5**	**+1.8**
MDJ				PcP	PcP	23 29 44.7	+1.5
MDJ				ScP	ScP	23 33 16.4	+2.6
MDJ				PcS	PcS	23 33 18.2	+0.9
MDJ				ScS	ScS	23 36 53.2	+3.4
MDJ				pmax	pmax		
	comp=Z,33nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2μm,8.5s						
MDJ				LR	LR		
	comp=N,9μm,17.2s						
MDJ				LR	LR		
	comp=E,12μm,14.9s						
MDJ				LR	LR		
	comp=Z,20μm,14.9s						
MDJ	**Mudanjiang**	**12.52**	**316**	⇑ePn	**Pn**	**23 24 05.1**	**-0.3**
	comp=Z,418nm,1.4s						
MDJ				S	**Sn**	**23 26 31.0**	**+7.3**
UGL	**Uglegorsk**	**12.89**	**1**	eP	Px	23 24 21.0	
UGL				pmax	pmax		
	comp=Z,202nm,1.0s						
UGL				MLR	MLR		
	comp=E,23μm,19.0s						
UGL				MLR	MLR		
	comp=N,14μm,18.0s						
HABR	**Khabarovsk**	**13.24**	**340**	eP	**Pn**	**23 24 12.3**	**-2.9**
HABR				e		23 26 38.6	
HABR				pmax	pmax		
	comp=E,36nm,1.3s						
HABR				pmax	pmax		
	comp=Z,101nm,1.2s						
HABR				pmax	pmax		
	comp=N,49nm,1.2s						
HABR				MLR	MLR		
	comp=E,21μm,17.0s						
HABR				MLR	MLR		
	comp=N,10μm,16.0s						
HABR				MLR	MLR		
	comp=Z,11μm,13.0s						
CN2	**Changchun**	**14.63**	**306**	eP	**Pn**	**23 24 32.5**	**-1.6**
CN2				esP	sP	23 24 39.4	-13
CN2				eS	**Sn**	**23 27 14.1**	**-0.9**
CN2				pmax	pmax		
	comp=Z,60nm,1.6s						
CN2				pmax	pmax		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=N,20μm,15.0s						
CN2				LR	LR		
	comp=E,10μm,15.0s						
CN2				LR	LR		
	comp=Z,17μm,14.0s						
JOW	**Kunigami**	**14.79**	**235**	Pn	**Pn**	**23 24 34.1**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=54,slow=11,SNR=11						
JOW				LR	LR	23 30 13.5	
	comp=Z,9μm,20.2s,baz=212,slow=37						
KLR	**Kul'dur**	**14.96**	**334**	eP	**Pn**	**23 24 29.9**	**-8.6**
KLR				MLR	MLR		
	comp=Z,46μm,13.0s						
SNY	**Shenyang**	**15.21**	**297**	⇑P	**Pn**	**23 24 41.5**	**-0.5**
SNY				S	**Sn**	**23 27 32.4**	**+3.1**
SNY				pmax	pmax		
	comp=Z,170nm,1.3s						
SNY				pmax	pmax		
	comp=Z,2μm,12.0s						
SNY				LR	LR		
	comp=N,16μm,13.5s						
SNY				LR	LR		
	comp=E,20μm,15.9s						
SNY				LR	LR		
	comp=Z,22μm,16.5s						
DL2	**Dalian**	**16.20**	**286**	⇑iP	**Pn**	**23 24 54.6**	**-0.1**
DL2				S	**Sn**	**23 27 53.6**	**+0.2**
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
DL2				pmax	pmax		
	comp=Z,2μm,5.4s						
DL2				LR	LR		
	comp=N,8μm,11.8s						
DL2				LR	LR		
	comp=E,14μm,13.3s						
DL2				LR	LR		
	comp=Z,16μm,15.0s						
SKR	**Severo-Kuril's**	**17.81**	**31**	eP	**Pn**	**23 25 10.4**	**-4.3**
SKR				eS	**Sn**	**23 28 30.5**	**-1.6**
SKR				pmax	pmax		
	comp=Z,220nm,1.0s						
SKR				pmax	pmax		
	comp=Z,2μm,4.0s						
SKR				smax			
	comp=E,640nm,1.5s						
SKR				smax			
	comp=N,3μm,16.0s						
SKR				smax			
	comp=E,6μm,16.0s						
SKR				MLR	MLR		
	comp=N,6μm,16.0s						
SKR				MLR	MLR		
	comp=E,8μm,16.0s						
SKR				MLR	MLR		
	comp=Z,11μm,16.0s						
SSE	**Sheshan**	**17.86**	**259**	P	**Pn**	**23 25 14.2**	**-1.4**
SSE				sP	sP	23 25 23.4	-5.2
SSE				S	**Sn**	**23 28 32.9**	**-0.8**
SSE				pmax	pmax		
	comp=Z,70nm,1.0s						
SSE				pmax	pmax		
	comp=Z,2μm,12.0s						
SSE				LR	LR		
	comp=N,10μm,13.8s						
SSE				LR	LR		
	comp=E,10μm,13.8s						
SSE				LR	LR		
	comp=Z,9μm,13.3s						
NJ2	**Nanjing**	**19.40**	**264**	eP	**Pn**	**23 25 31.7**	**-2.5**
NJ2				pP	pP	23 25 35.7	-5.8
NJ2				sP	sP	23 25 38.2	-7.4
NJ2				PP		23 25 44.9	
NJ2				S	**Sn**	**23 29 05.5**	**-5.4**
NJ2				sS	sS	23 29 13.0	-11
NJ2				pmax	pmax		
	comp=Z,100nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1μm,4.4s						
NJ2				LR	LR		
	comp=N,12μm,15.1s						
NJ2				LR	LR		
	comp=E,10μm,14.2s						
NJ2				LR	LR		
	comp=Z,9μm,16.5s						
TIA	**Tai'an**	**19.88**	**277**	⇑P	**Pn**	**23 25 35.8**	**-4.1**
TIA				pmax	pmax		
	comp=Z,320nm,1.6s						
TIA				pmax	pmax		
	comp=Z,3μm,4.0s						
TIA				LR	LR		
	comp=N,6μm,14.0s						
TIA				LR	LR		
	comp=E,7μm,14.0s						
PEA0B	**Petropavlovsk-**	**20.29**	**29**	eP	**P**	**23 25 41.5**	**-0.9**
PETK	**Petropavlovsk-**	**20.29**	**29**	P	**P**	**23 25 41.9**	**-0.6**
	comp=E,35nm,0.9s,baz=204,slow=8.8,SNR=35						
PETK				LR	LR	23 33 22.3	
	comp=E,3μm,20.2s,MS4.6,baz=216,slow=36						
BJI	**Beijing**	**20.48**	**289**	P	**P**	**23 25 41.1**	**-3.5**
BJI				S	**S**	**23 29 35.5**	**+3.5**
BJI				pmax	pmax		
	comp=Z,170nm,1.4s						
BJI				pmax	pmax		
	comp=Z,900nm,4.2s						
BJI				LR	LR		
	comp=N,7μm,15.2s,MS5.4						
BJI				LR	LR		
	comp=E,10μm,14.3s,MS5.4						
BJI				LR	LR		
	comp=Z,5μm,18.1s,MS4.9						
BJT	**Baijiatuau**	**20.48**	**289**	eP	**P**	**23 25 43.1**	**-1.5**
BJT				pmax	pmax		
	comp=Z,201nm,0.6s						
BJT				MLR	MLR		
	comp=Z,7μm,19.0s						
BJT	**Baijiatuau**	**20.48**	**289**	eP	**P**	**23 25 43.1**	**-1.6**
	comp=Z,201nm,0.6s						
BJT				LR	LR		
	comp=Z,7μm,19.0s,MS5.0						
PET	**Petropavlovsk**	**20.61**	**30**	κ iP	**P**	**23 25 44.6**	**-1.2**
PET				e		23 26 05.6	
PET				eS	**S**	**23 29 29.9**	**-4.4**
PET				pmax	pmax		
	comp=Z,1μm,14.4s						
PET				pmax	pmax		
	comp=Z,154nm,1.3s						
PET				pmax	pmax		
	comp=Z,1μm,12.9s						
PET				pmax	pmax		
	comp=Z,2μm,6.4s						
PET				pmax	pmax		
	comp=Z,1μm,21.6s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s,MS4.6						
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
PET	**Petropavlovsk**	**20.61**	**30**	eP	**P**	**23 25 45.3**	**-0.5**
	comp=Z,234nm,1.3s						
PET				eS	**S**	**23 29 39.4**	**+5.0**
PET				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
TATO	**Taipei**	**20.68**	**243**	eP	**P**	**23 25 44.8**	**-2.1**
	comp=Z,176nm,1.1s						
TATO				LR	LR		
	comp=Z,5μm,19.0s,MS4.9						
HIA	**Hailar**	**20.71**	**316**	eP	**P**	**23 25 42.6**	**-4.4**
HIA				pmax	pmax		
	comp=Z,280nm,1.4s						
HIA				MLR	MLR		
	comp=Z,11μm,19.0s						
HIA	**Hailar**	**20.71**	**316**	eP	**P**	**23 25 42.6**	**-4.4**
	comp=Z,280nm,1.4s						
HIA				LR	LR		
	comp=Z,11μm,19.0s,MS5.3						
YHNB	**Yeheng**	**20.95**	**242**	⇑eP	**P**	**23 25 45.5**	**-4.3**
	comp=Z,98nm,0.9s						
YHNB				eS	**S**	**23 29 41.5**	**0.0**
YHNB				LR	LR		
	comp=Z,4μm,19.0s,MS4.8						
NACB	**Ninganchiao**	**21.10**	**241**	eP	**P**	**23 25 47.2**	**-4.2**
	comp=Z,141nm,0.9s,mb5.3						
NACB				eS	**S**	**23 29 39.2**	**-5.3**
SSLB	**Suanglung**	**21.80**	**241**	eP	**P**	**23 25 55.0**	**-3.9**
	comp=Z,244nm,1.1s,mb5.5						
YULB	**Yu-li**	**21.81**	**240**	eP	**P**	**23 25 54.6**	**-4.4**
	comp=Z,93nm,0.8s,mb5.3						
YULB				eS	**S**	**23 29 53.7**	**-4.6**
TPUB	**Ta-pu**	**22.33**	**241**	eP	**P**	**23 26 00.9**	**-3.8**
	comp=Z,222nm,0.9s,mb5.6						
TPUB				eS	**S**	**23 30 08.6**	**-0.1**
TWG	**Pinlang**	**22.34**	**239**	eP	**P**	**23 26 00.4**	**-4.2**
	comp=Z,77nm,1.7s,mb4.9						
TWG				eS	**S**	**23 30 07.9**	**-0.8**
GUMO	**Guam**	**22.67**	**172**	eP	**P**	**23 26 08.8**	**+0.6**
GUMO				S	**S**	**23 30 16.2**	**+1.6**
GUMO				pmax	pmax		
	comp=Z,2μm,2.1s,mb6.2						
GUMO				MLR	MLR		
	comp=Z,6μm,19.0s,MS5.0						
GUMO	**Guam**	**22.67**	**172**	P	**P**	**23 26 12.5**	**+4.3**
	comp=Z,200nm,1.1s,mb5.5,baz=298,slow=7.5,SNR=5.8						
GUMO				S	**S**	**23 30 16.2**	**+1.6**
	comp=Z,20nm,0.4s,baz=212,slow=21,SNR=1.7						
GUMO	**Guam**	**22.67**	**172**	eP	**P**	**23 26 08.8**	**+0.6**
	comp=Z,2μm,2.1s,mb6.2						
GUMO				S	**S**	**23 30 16.2**	**+1.6**
GUMO				LR	LR		
	comp=Z,6μm,19.0s,MS5.0						
QZH	**Quanzhou**	**22.82**	**247**	⇑iP	**P**	**23 26 06.2**	**-3.6**
QZH				S	**S**	**23 30 05.1**	**-12**
QZH				pmax	pmax		
	comp=Z,710nm,2.4s,mb5.7						
QZH				LR	LR		
	comp=N,16μm,16.1s,MS5.6						
QZH				LR	LR		
	comp=E,6μm,12.4s,MS5.6						
QZH				LR	LR		
	comp=Z,22μm,18.1s						
TIY	**Taiyuan**	**23.45**	**283**	eP	**P**	**23 26 12.4**	**-3.9**
TIY				sP	sP	23 26 25.7	-3.4
TIY				PP		23 26 44.6	
TIY				S	**S**	**23 30 19.8**	**-7.4**
TIY				pmax	pmax		
	comp=Z,1μm,7.4s						
TIY				LR	LR		
	comp=N,12μm,14.3s,MS5.8						
TIY				LR	LR		
	comp=E,22μm,13.8s,MS5.8						
TIY				LR	LR		
	comp=Z,28μm,14.3s,MS5.9						
NRGR	**Nerungri**	**23.49**	**336**	eP	**P**	**23 26 14.2**	**-2.2**
NRGR				S	**S**	**23 30 25.5**	**-1.9**
NRGR				smax			
	comp=N,180nm,1.3s						
WHN	**Wuhan**	**23.54**	**264**	⇑P	**P**	**23 26 14.6**	**-2.5**
WHN				S	**S**	**23 30 27.2**	**-1.5**
WHN				pmax	pmax		
	comp=Z,430nm,1.1s,mb5.8						
WHN				pmax	pmax		
	comp=Z,2μm,5.6s						
WHN				LR	LR		
	comp=N,21μm,17.5s,MS6.0						
WHN				LR	LR		
	comp=E,32μm,14.8s,MS6.0						
WHN				LR	LR		
	comp=Z,21μm,17.5s,MS5.7						
CLNS	**Chul'man**	**23.58**	**336**	eP	**P**	**23 26 16.1**	**-1.1**
CLNS				e*PP		23 26 23.8	
CLNS				ePPP		23 26 50.9	
CLNS				e		23 30 05.4	
CLNS				eS	**S**	**23 30 24.5**	**-4.4**
CLNS				eSS		23 31 09.0	
CLNS				e		23 37 19.4	
CLNS				pmax	pmax		
	comp=Z,502nm,1.3s,mb5.8						
CLNS				pmax	pmax		
	comp=N,455nm,1.4s						
CLNS				pmax	pmax		

comp=E,146nm,1.2s
CLNS smax
comp=E,3μm,15.1s
CLNS smax
comp=N,2μm,13.6s
CLNS MLR MLR
comp=N,8μm,15.0s,MS5.3
CLNS MLR MLR
comp=Z,9μm,15.0s,MS5.3
CLNS MLR MLR
comp=E,5μm,18.0s,MS5.3
HHC Hu-ho-hao-te 24.02 290 ⇑P **P 23 26 18.4 -3.1**
HHC pP 23 26 22.9
HHC sP sP 23 26 25.5 -9.1
HHC PP 23 26 52.8
HHC PcP PcP 23 30 02.2 -0.4
HHC S **S 23 30 32.3 -4.1**
HHC sS sS 23 30 39.1 -13
HHC SS 23 31 22.7
HHC ScP ScP 23 33 38.2 -0.4
HHC pmax pmax
comp=Z,34nm,1.2s,mb4.7
HHC pmax pmax
comp=Z,1μm,5.4s
HHC LR LR
comp=N,6μm,13.5s,MS5.5
HHC LR LR
comp=E,10μm,14.1s,MS5.5
HHC LR LR
comp=Z,11μm,13.5s,MS5.5
BTO Baotou 25.19 290 *e*P **P 23 26 28.9 -3.2**
BTO S **S 23 30 48.3 -6.9**
BTO LR LR
comp=N,3μm,13.9s,MS5.2
BTO LR LR
comp=E,4μm,14.1s,MS5.2
CIT Chita 25.49 317 *e*P **P 23 26 35.2 +0.5**
CIT *e* pP 23 26 45.8 +1.8
CIT *e* 23 26 51.2
CIT pmax pmax
comp=Z,1μm,1.9s,mb6.1
XAN Xi'an 26.88 275 P **P 23 26 46.9 -0.6**
XAN pP pP 23 26 50.0 -6.8
XAN sP sP 23 26 51.3 -9.4
XAN PcP PcP 23 30 09.6 +0.4
XAN S **S 23 31 23.9 +1.8**
XAN sS sS 23 31 29.1 -8.4
XAN pmax pmax
comp=Z,76nm,1.5s,mb5.0
XAN pmax pmax
comp=Z,400nm,7.1s
XAN LR LR
comp=N,4μm,15.8s,MS5.2
XAN LR LR
comp=E,2μm,14.2s,MS5.2
XAN LR LR
comp=Z,3μm,15.0s,MS4.9
YAK Yakutsk 26.96 347*c i*P **P 23 26 47.3 -0.6**
YAK *e* 23 27 33.8
YAK *e* 23 30 08.7
YAK *e*S **S 23 31 15.6 -7.2**
YAK pmax pmax
comp=Z,466nm,1.6s,mb5.8
YAK pmax pmax
comp=N,434nm,1.5s
YAK pmax pmax
comp=E,191nm,1.8s
YAK pmax pmax
comp=Z,387nm,1.9s,mb5.6
YAK pmax pmax
comp=N,441nm,2.0s
YAK pmax pmax
comp=E,317nm,1.9s
YAK smax
comp=E,1μm,2.8s
YAK smax
comp=N,387nm,3.4s
YAK Yakutsk 26.96 347 *e*P **P 23 26 47.1 -0.8**
comp=N,598nm,1.1s,mb6.0
YAK *e*S **S 23 31 24.4 +1.6**
YAK LR LR
comp=Z,6μm,21.0s,MS5.2
ENH Enshi 27.56 267⇑*i*P **P 23 26 52.5 -1.1**
comp=Z,605nm,0.8s,mb6.3
ENH *e*S **S 23 31 36.8 +4.0**
ENH LR LR
comp=Z,7μm,19.0s,MS5.3
SEY Seymchan 27.58 10⇓*i*P **P 23 26 54.1 +0.7**
WAKE Wake Island 27.60 121 *e*P **P 23 26 52.7 -1.4**
WAKE LR LR
comp=Z,5μm,21.0s,MS5.1
GZH Guangzhou 27.82 250 P **P 23 26 50.2 -5.8**
GZH S **S 23 31 30.8 -6.2**
GZH LR LR
comp=N,6μm,14.9s,MS5.6
GZH LR LR
comp=E,9μm,15.9s,MS5.6
GZH LR LR
comp=Z,12μm,18.0s,MS5.5
ULN Ulaanbaatar 28.07 305 *e*P **P 23 26 58.0 0.0**
ULN pmax pmax
comp=Z,240nm,1.1s,mb5.7
ULN Ulaanbaatar 28.07 305⇑*i*P **P 23 26 58.0 0.0**
comp=Z,243nm,1.1s,mb5.7
ULN *e*S **S 23 31 47.4 +6.8**
ULN LR LR
comp=Z,5μm,20.0s,MS5.1
ULN Ulaanbaatar 28.07 305 P **P 23 26 58.3 +0.3**
SNR=162
ULN P 23 26 58.3
SNR=162
BOD Bodaibo 28.40 328 *e*P **P 23 27 00.1 -0.7**
BOD pmax pmax
comp=Z,211nm,1.3s,mb5.6
SONM Songino Array 28.50 305 P **P 23 27 02.0 +0.2**
comp=Z,204nm,1.0s,mb5.8,baz=102,slow=6.7,SNR=200
SONM LR LR 23 38 38.1
comp=Z,5μm,20.0s,MS5.1,baz=101,slow=37
LZH Lanzhou 30.50 281 ⇑P **P 23 27 19.5 -0.2**
LZH pP pP 23 27 23.6 -5.4
LZH sP sP 23 27 26.4 -6.5
LZH PP PP 23 28 19.0 -10
LZH S **S 23 32 18.2 -0.7**
LZH sS sS 23 32 25.8 -8.5
LZH SS SS 23 33 58.1 -31
LZH pmax pmax
comp=Z,310nm,1.2s,mb5.9
LZH pmax pmax
comp=Z,1μm,4.0s
LZH LR LR
comp=E,14μm,15.6s
LZH LR LR
comp=Z,17μm,16.8s,MS5.8
IRK Irkutsk 30.89 313⇑*i*P **P 23 27 22.8 -0.1**
IRK *e* 23 34 02.4
IRK *e* 23 34 35.1
IRK pmax pmax
comp=Z,292nm,1.5s,mb5.9
ZAK Zakamensk 31.02 309 *e*P **P 23 27 24.2 +0.1**
ZAK pmax pmax
comp=Z,234nm,1.2s,mb5.9
TLY Talaya 31.11 312 P **P 23 27 25.5 +0.7**
comp=Z,1μm,1.1s,mb6.7,SNR=99
TLY Talaya 31.11 312*c i*P **P 23 27 25.0 +0.2**
TLY *e*S **S 23 32 35.4 +7.3**
TLY pmax pmax
comp=Z,345nm,1.2s,mb6.1
TLY MLR MLR
comp=Z,11μm,16.0s,MS5.6
TLY Talaya 31.11 312⇑*i*P **P 23 27 24.6 -0.2**
comp=Z,375nm,1.2s,mb6.1
TLY *e*S **S 23 32 24.4 -3.7**
TLY LR LR
comp=Z,8μm,19.0s,MS5.4
GYA Guiyang 31.37 262⇑*i*P **P 23 27 27.9 +0.5**
GYA pP pP 23 27 32.5 -4.2
GYA PP PP 23 28 30.9 -7.6
GYA PcP PcP 23 30 22.0 +1.3
GYA S **S 23 32 31.3 -1.4**
GYA ScP ScP 23 34 04.9 +3.6
GYA SS SS 23 34 20.0 -27
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,310nm,4.8s
GYA LR LR
comp=N,8μm,15.8s,MS5.6
GYA LR LR
comp=E,6μm,15.6s,MS5.6
GYA LR LR
comp=Z,8μm,15.9s,MS5.5
CD2 Chengdu 31.97 272 P **P 23 27 31.8 -0.8**
CD2 pP pP 23 27 43.7 +1.7
CD2 PP PP 23 28 38.2 -6.9
CD2 S **S 23 32 37.7 -4.3**
CD2 SS SS 23 34 30.4 -29
CD2 pmax pmax
comp=Z,220nm,1.0s,mb5.9
CD2 pmax pmax
comp=Z,900nm,10.3s
CD2 LR LR
comp=N,11μm,14.9s
CD2 LR LR
comp=Z,14μm,16.7s,MS5.7
DAV Davao City (W) 32.54 211 LR LR 23 39 14.9
comp=Z,2μm,21.0s,MS4.9,baz=58,slow=34
DAV Davao City (W) 32.54 211 *e*P **P 23 27 36.1 -1.6**
DAV *e*S **S 23 33 06.1 +15**
DAV LR LR
comp=Z,3μm,20.0s,MS5.0
MOY Mondy 32.71 311 *e*P **P 23 27 38.2 -0.7**
MOY pmax pmax
comp=Z,228nm,1.2s,mb6.0
QIZ Qiongzhong 32.85 247 P **P 23 27 40.1 -0.3**
QIZ pP pP 23 27 49.5 -0.3
QIZ S **S 23 32 54.1 -1.7**
QIZ pmax pmax
comp=Z,56nm,1.3s,mb5.3
QIZ pmax pmax
comp=Z,540nm,14.6s
QIZ LR LR
comp=N,5μm,15.5s,MS5.3
QIZ LR LR
comp=E,2μm,16.4s,MS5.3
QIZ LR LR
comp=Z,5μm,16.7s,MS5.3
QIZ Qiongzhong 32.85 247⇑*e*P **P 23 27 39.9 -0.6**
comp=Z,92nm,1.3s,mb5.5
QIZ *e*PP PP 23 28 55.9 +1.0
QIZ *e*S **S 23 32 58.0 +2.2**
QIZ LR LR
comp=Z,4μm,20.0s,MS5.1
GTA Gaotai 33.09 288 P **P 23 27 42.0 -0.4**
GTA pP pP 23 27 51.3 -0.5
GTA sP sP 23 27 55.6 -0.1
GTA PP PP 23 28 52.1 -5.3
GTA PcP PcP 23 30 26.4 +1.2
GTA S **S 23 32 57.7 -1.6**
GTA sS sS 23 33 14.7 -0.1
GTA SS SS 23 34 57.7 -25
GTA ScS ScS 23 38 06.4 -0.9
GTA pmax pmax
comp=Z,260nm,1.2s,mb6.0
GTA pmax pmax
comp=Z,830nm,6.0s
GTA LR LR
comp=N,5μm,18.0s,MS5.6
GTA LR LR
comp=E,9μm,17.4s,MS5.6
GTA LR LR
comp=Z,10μm,17.4s,MS5.6
ADK Adak 33.23 49 PFAKE 23 28 00.0 +17
ADK LR LR
comp=Z,2μm,20.0s,MS4.8
BILL Bilibino 34.77 16*d i*P **P 23 27 56.5 -0.1**
BILL *i* 23 28 09.4
BILL *i* S **S 23 33 29.1 +4.5**
BILL pmax pmax
comp=Z,54nm,1.6s,mb5.2
BILL MLR MLR
comp=Z,3μm,15.0s,MS5.1
BILL Bilibino 34.77 16 *e*P **P 23 27 56.9 +0.3**
comp=Z,137nm,1.5s,mb5.7
BILL *e*S **S 23 33 27.1 +2.6**
BILL LR LR
comp=Z,4μm,19.0s,MS5.1
KMI Kunming 35.12 263 ⇑P **P 23 27 59.9 -0.3**
KMI pP pP 23 28 05.5 -4.1
KMI sP sP 23 28 07.5 -6.0
KMI PP PP 23 29 18.8 -1.3
KMI PcP PcP 23 30 32.8 +1.6
KMI S **S 23 33 31.0 +0.1**
KMI sS sS 23 33 39.1 -7.4
KMI ScP ScP 23 34 15.5 +1.1
KMI PcS PcS 23 34 18.3 +0.1
KMI SS SS 23 35 42.8 -21
KMI ScS ScS 23 38 18.7 +0.2
KMI pmax pmax
comp=Z,200nm,1.2s,mb5.9
KMI pmax pmax
comp=Z,1μm,3.4s
KMI LR LR
comp=N,7μm,15.0s,MS5.7
KMI LR LR
comp=E,8μm,15.0s,MS5.7
KMI LR LR
comp=Z,9μm,12.5s,MS5.7
MIDW Midway 35.28 91 PFAKE 23 28 10.0 +8.5
MIDW LR LR
comp=Z,3μm,20.0s,MS5.1
TIXI Tiksi 36.17 353*c i*P **P 23 28 07.6 -1.0**
TIXI *e*S **S 23 33 46.1 +0.1**
TIXI pmax pmax
comp=Z,54nm,1.5s,mb5.3
TIXI MLR MLR
comp=Z,6μm,14.0s,MS5.5
TIXI Tiksi 36.17 353⇑*i*P **P 23 28 07.8 -0.7**
comp=Z,60nm,1.4s,mb5.3
TIXI *e*S **S 23 33 42.7 -3.3**
TIXI LR LR
comp=Z,4μm,21.0s,MS5.1
KDM Kudat 36.99 224 P **P 23 28 15.8 -0.4**
KKM Kota Kinabalu 38.05 224 P **P 23 28 25.0 -0.2**
KKM Kota Kinabalu 38.05 224 *e*P **P 23 28 23.8 -1.4**
comp=Z,194nm,1.7s,mb5.6
KKM *e*PP PP 23 29 51.4 -1.1
KKM LR LR
comp=Z,2μm,20.0s,MS4.9
CHTO Chiang Mai 41.36 257 *e*P **P 23 28 51.5 -1.3**
CHTO LR LR
comp=Z,3μm,21.0s,MS5.1
CHTO Chiang Mai 41.36 257 P **P 23 28 52.8 +0.1**
SNR=60
CHTO P 23 28 52.8
SNR=60
TNA Tin City 41.46 29 *e*P **P 23 28 57.9 +5.0**
comp=Z,39nm,1.2s,mb4.9
WMQ Urumqi 41.48 298 P **P 23 28 54.9 +1.5**
WMQ PP PP 23 30 30.8 +1.4
WMQ ScP ScP 23 34 37.7 -0.6
WMQ PcS PcS 23 34 43.0 +1.2
WMQ S **S 23 35 06.3 -0.3**
WMQ SS SS 23 38 06.6 -4.9
WMQ ScS ScS 23 38 53.3 -1.2
WMQ pmax pmax
comp=Z,390nm,1.4s,mb5.8
WMQ pmax pmax
comp=Z,3μm,5.0s
WMQ LR LR
comp=N,9μm,17.0s,MS5.7
WMQ LR LR
comp=E,2μm,20.0s,MS5.7
WMQ LR LR
comp=Z,4μm,18.0s,MS5.3
CM31 Chiang Mai Arr 41.56 257 *e*P **P 23 28 54.8 +0.4**
CM31 LR LR
comp=Z,5μm,21.0s,MS5.4
CMAR Chiang Mai Arr 41.56 257 P **P 23 28 54.5 +0.2**
comp=Z,54nm,0.9s,mb5.2,baz=46,slow=6.2,SNR=183
CMAR LR LR 23 47 08.0
comp=Z,3μm,19.7s,MS5.1,baz=56,slow=38
BTM Bintulu 42.16 226 P **P 23 28 59.1 -0.2**
LSA Lhasa 42.58 276 P **P 23 29 03.2 +0.7**
LSA S **S 23 35 27.4 +4.3**
LSA pmax pmax
comp=Z,180nm,1.3s,mb5.6
LSA LR LR
comp=N,2μm,15.0s,MS5.7
LSA LR LR
comp=E,6μm,15.5s,MS5.7
LSA LR LR
comp=Z,9μm,16.6s,MS5.7
LSA Lhasa 42.58 276⇑*i*P **P 23 29 04.1 +1.6**
LSA pmax pmax
comp=Z,218nm,1.1s,mb5.8
LSA MLR MLR
comp=Z,2μm,19.0s,MS5.1
LSA Lhasa 42.58 276⇑*i*P **P 23 29 04.1 +1.6**
comp=Z,218nm,1.1s,mb5.8
LSA *e*S **S 23 35 34.0 +11**
LSA LR LR
comp=Z,2μm,19.0s,MS5.1
ZAA0 Zalesovo Array 42.70 313 *e*P **P 23 29 03.0 -0.3**
ZAA0 *e*S **S 23 35 40.8 +16**
ZALV Zalesovo Beam 42.70 313 P **P 23 29 03.0 -0.2**
comp=Z,142nm,1.0s,mb5.7,baz=91,slow=6.4,SNR=344
ZALV LR LR 23 47 39.3
comp=Z,5μm,18.4s,MS5.4,baz=87,slow=37
SBUM Sibu 43.27 226 P **P 23 29 08.5 +0.3**
NVS Novosibirsk 43.64 314⇑*i*P **P 23 29 11.0 +0.2**
NVS *i* pP 23 29 20.6 +0.3
NVS *e*S **S 23 35 33.4 -4.6**
NVS pmax pmax
comp=Z,290nm,1.3s,mb5.8
NVS pmax pmax
comp=N,57nm,1.6s
NVS pmax pmax
comp=E,285nm,1.4s
NVS smax
comp=N,65nm,2.3s
NVS smax
comp=E,135nm,2.3s
SHL Shillong 43.69 270⇑*i*P **P 23 29 13.0 +1.4**
SHL *i* S **S 23 35 43.0 +3.5**
MK31 Makanchi Array 44.81 303 *e*P **P 23 29 19.9 -0.4**
MKAR Makanchi Array 44.81 303 P **P 23 29 20.7 +0.4**
MKAR S **S 23 36 00.1 +4.7**
MKAR Makanchi Array 44.81 303 P **P 23 29 20.6 +0.3**
comp=E,119nm,0.9s,mb5.7,baz=94,slow=8.5,SNR=290
MKAR S **S 23 36 00.1 +4.7**
comp=E,1.7nm,1.1s,baz=120,slow=8.8,SNR=2.2
MKAR LR LR 23 48 55.3
comp=E,4μm,18.2s,MS5.4,baz=82,slow=37
TARA Tarawa 45.09 133 *e*P **P 23 29 21.3 -1.6**
comp=E,112nm,1.0s,mb5.7
TARA LR LR
comp=Z,2μm,19.0s,MS5.1
KSM Kuching 45.17 227 P **P 23 29 24.3 +0.8**
KSM Kuching 45.17 227 *e*P **P 23 29 24.0 +0.5**
comp=Z,620nm,1.7s,mb6.2
KSM LR LR
comp=Z,870nm,19.0s,MS4.7
KAPI Kappang 45.87 211 P **P 23 29 28.4 -0.6**
comp=Z,2μm,1.3s,mb7.0,SNR=48
KAPI Kappang 45.87 211⇑*i*P **P 23 29 27.6 -1.4**
comp=Z,712nm,1.3s,mb6.4
KAPI LR LR
comp=Z,691nm,19.0s,MS4.6
TTA Tatalina 45.97 34 *e*P **P 23 29 29.6 +0.4**
SVW2 Sparrevohn 46.03 37 *e*P **P 23 29 30.1 +0.3**
KURK Kurchatov 46.68 309 P **P 23 29 34.7 -0.3**
comp=Z,2μm,0.9s,mb7.0
KURK Kurchatov 46.68 309⇑*i*P **P 23 29 34.9 -0.1**
KURK *e*S **S 23 36 27.7 +5.5**
KURK pmax pmax
comp=Z,337nm,0.9s,mb6.3
KURK MLR MLR
comp=Z,6μm,19.0s,MS5.5
KURK Kurchatov 46.68 309⇑*i*P **P 23 29 34.9 -0.1**
comp=Z,337nm,0.9s,mb6.3
KURK *e*S **S 23 36 27.7 +5.5**
KURK LR LR
comp=Z,6μm,19.0s,MS5.5
KTGM Kuala Trenggan 46.88 238 P **P 23 29 36.9 -0.1**
JOHN Johnston Islan 47.18 101 *e*P **P 23 29 38.7 -0.6**
JOHN *e*S **S 23 36 34.8 +4.8**
JOHN LR LR
comp=Z,3μm,21.0s,MS5.2
OHAK Old Harbor 47.20 42 *e*P **P 23 29 38.1 -0.8**
RAMN Ramite 47.35 275 *e*P **P 23 29 41.2 +0.6**
comp=Z,1μm,1.1s,mb6.8
RSO Redoubt South 47.40 38 *e*P **P 23 29 40.8 +0.3**
GUN Gumba 47.53 277 *e*P **P 23 29 42.7 +0.8**
comp=Z,958nm,1.1s,mb6.7
KDAK Kodiak Island 47.55 41 P **P 23 29 40.0 -1.7**
comp=Z,965nm,0.7s,mb6.9,SNR=5.1
KDAK Kodiak Island 47.55 41 *e*P **P 23 29 40.6 -1.1**
KDAK *e* pP 23 29 50.7 -0.6
KDAK pmax pmax
comp=Z,114nm,0.8s,mb6.0
KDAK MLR MLR
comp=Z,2μm,20.0s,MS5.1
KDAK Kodiak Island 47.55 41 *e*P **P 23 29 40.5 -1.1**
comp=Z,114nm,0.8s,mb6.0
KDAK *e* pP 23 29 50.7 -0.6
KDAK LR LR
comp=Z,2μm,20.0s,MS5.1
CHUM Lake Minchumin 47.69 33 *e*P **P 23 29 43.4 +0.8**
comp=Z,43nm,0.9s,mb5.5
CHUM *e*pP pP 23 29 53.5 +1.2
PPLA Purkeypile 47.71 34 *e*P **P 23 29 43.5 +0.7**
comp=Z,152nm,1.4s,mb5.8
CAL Calcutta 47.96 269⇑*i*P **P 23 29 42.3 -3.0**
CAL *ex* x 23 35 53.9
PKI Pulchoki 48.05 276 *e*P **P 23 29 46.4 +0.4**
comp=Z,434nm,1.2s,mb6.4
PKIN Phulchoki 48.05 276 *e*P **P 23 29 46.3 +0.3**
comp=Z,409nm,1.3s,mb6.3
KKN Kakani 48.06 277 *e*P **P 23 29 46.7 +0.7**
comp=Z,829nm,1.3s,mb6.6
DMN Daman 48.27 277 *e*P **P 23 29 48.2 +0.5**
comp=Z,452nm,1.4s,mb6.3
BPAW Bear Paw Mtn. 48.29 33 *e*P **P 23 29 47.7 +0.4**
comp=Z,19nm,0.9s,mb5.1
KTH Kantishna Hill 48.30 34 *e*P **P 23 29 48.2 +0.9**
comp=Z,46nm,0.9s,mb5.5
GKN Gorkha 48.49 277 *e*P **P 23 29 49.9 +0.6**
comp=Z,1μm,1.2s,mb6.9
TRF Thorofare Moun 48.58 34 *e*P **P 23 29 49.9 +0.3**
comp=Z,30nm,1.0s,mb5.3
KULM Kulim 48.64 241 P **P 23 29 51.1 +0.5**
KULM Kulim 48.64 241 *e*P **P 23 29 50.3 -0.3**
comp=Z,172nm,1.3s,mb5.9
KULM LR LR
comp=Z,2μm,19.0s,MS5.2
COLD Coldfoot 48.76 29 *e*P **P 23 29 51.5 +0.6**
comp=Z,17nm,0.9s,mb5.1
IPM Ipoh 48.95 240 P **P 23 29 53.5 +0.5**
MYKOM Kota Tinggi 48.99 234 P **P 23 29 53.9 +0.7**
SEW Seward 49.06 38 *e*P **P 23 29 53.5 +0.2**
comp=Z,79nm,1.1s,mb5.7
PMR Palmer 49.15 36 *e*P **P 23 29 53.9 0.0**
KGM Kluang 49.17 235 P **P 23 29 55.3 +0.7**
MCK McKinley 49.19 33 *e*P **P 23 29 54.3 +0.1**
MCK pmax pmax
comp=Z,34nm,0.9s,mb5.4
MCK McKinley 49.19 33 *e*P **P 23 29 54.3 +0.1**
comp=Z,34nm,0.9s,mb5.4
AAA Alma-Ata 49.24 299 *i* P **P 23 29 56.6 +1.7**
AAA *i* S **S 23 37 03.0 +4.4**
AAA pmax pmax
comp=Z,2μm,9.6s
AAA smax
comp=N,2μm,16.4s
AAA MLR MLR
comp=Z,18μm,18.0s,MS6.1
KAKA Kakadu 49.41 192 *e*P **P 23 29 54.3 -2.1**
comp=Z,115nm,0.8s,mb6.0
KAKA Kakadu 49.41 192 *e*P **P 23 29 54.6 -1.9**
comp=Z,350nm,0.8s,mb6.4
KAKA *e*pP pP 23 30 04.6 -1.5
KOLN Koldanda 49.42 278 *e*P **P 23 29 57.1 +0.6**
comp=Z,624nm,1.3s,mb6.5
FRIM Kepong 49.42 238 P **P 23 29 56.9 +0.2**
COLA College 49.65 32 *e*P **P 23 29 58.2 +0.5**
comp=Z,39nm,0.8s,mb5.5
COLA LR LR
comp=Z,1μm,19.0s,MS5.0
PYUN Piuthan 49.77 278 *e*P **P 23 30 00.0 +0.9**
comp=Z,975nm,1.2s,mb6.7
COEN Coen 49.88 178 *e*P **P 23 30 00.1 +0.1**
comp=Z,252nm,0.8s,mb6.3
ULHL Ulahol 50.02 298 P **P 23 30 01.7 +0.8**
SNR=63
TKM2 Tokmak 2 50.29 299 P **P 23 30 04.3 +1.5**
SNR=96

TKM2	**Tokmak 2**	50.29 299	⇑	*i* P	P	23 30 04.2	+1.3
TKM2				pmax	pmax		
	comp=Z,377nm,1.4s,mb6.2						
TKM2	**Tokmak 2**	50.29 299	⇑	*i* P	P	23 30 04.2	+1.3
	comp=Z,377nm,1.4s,mb6.2						
KZA	**Kyzart**	50.77 298		P	P	23 30 08.7	+2.2
	SNR=98						
DIV	**Divide**	50.79 37		*e*P	P	23 30 07.1	+0.7
	comp=Z,90nm,1.0s,mb5.7						
KBK	**Karagaybulak**	50.82 299		P	P	23 30 08.1	+1.2
	SNR=107						
CHMS	**Chumysh**	50.86 299		P	P	23 30 07.8	+0.6
	SNR=48						
USP	**Ospenovka**	50.97 300		P	P	23 30 08.6	+0.6
	SNR=109						
FRU	**Bishkek**	51.01 299	⇑	*i* P	P	23 30 09.0	+0.7
FRU				*e*		23 32 03.0	
FRU				*e*S	S	23 37 42.0	+19
FRU				pmax	pmax		
	comp=Z,420nm,2.0s,mb6.0						
FRU				MLR	MLR		
	comp=Z,10μm,18.0s,MS5.9						
KSH	**Kashi**	51.02 295	⇑	*i* P	P	23 30 12.4	+4.0
KSH				*e*PP	PP	23 32 13.7	+8.8
KSH				*e*PcS	PcS	23 35 18.0	-3.7
KSH				*e*S	S	23 37 29.1	+5.6
KSH				pmax	pmax		
	comp=Z,390nm,2.0s,mb6.0						
KSH				LR	LR		
	comp=N,9μm,16.2s,MS6.0						
KSH				LR	LR		
	comp=E,6μm,13.8s,MS6.0						
AAK	**Ala-Archa**	51.15 299		P	P	23 30 10.2	+0.8
	SNR=54						
AAK	**Ala-Archa**	51.15 299		*c i* P	P	23 30 09.9	+0.5
AAK				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
AAK	**Ala-Archa**	51.15 299	⇑	*i* P	P	23 30 09.8	+0.4
	comp=Z,100nm,1.2s,mb5.6						
AAK				*e*S	S	23 37 34.2	+9.0
AAK				LR	LR		
	comp=Z,11μm,20.0s,MS5.9						
UCH	**Uchtor**	51.25 299		P	P	23 30 11.7	+1.6
	SNR=47						
UCH	**Uchtor**	51.25 299	⇑	*i* P	P	23 30 11.6	+1.5
	comp=Z,30nm,0.8s,mb5.3						
UCH				LR	LR		
	comp=Z,9μm,20.0s,MS5.8						
BVAR	**Borovoye Array**	51.36 313		P	P	23 30 10.8	0.0
BVAR				S	S	23 37 38.3	+11
BVAR						23 39 58.9	
BVAR	**Borovoye Array**	51.36 313		P	P	23 30 10.8	+0.1
	comp=Z,52nm,0.9s,mb5.5,baz=79,slow=7.7,SNR=178						
BVAR				S	S	23 37 38.3	+10
	comp=Z,2.8nm,1.0s,baz=101,slow=23,SNR=3.5						
BVAR				ScS	ScS	23 39 58.9	+0.5
	comp=Z,2.2nm,1.1s,baz=191,slow=2.4,SNR=3.7						
BVAR				LR	LR	23 53 07.5	
	comp=Z,7μm,19.2s,MS5.7,baz=75,slow=37						
BMRM	**Bremner River**	51.37 37		*e*P	P	23 30 11.4	+0.7
	comp=Z,120nm,1.2s,mb5.7						
PTH	**Pithoragarh**	51.37 281		*e*P	P	23 30 12.0	+0.8
BRVK	**Borovoye**	51.41 313		P	P	23 30 11.7	+0.5
	comp=Z,648nm,1.0s,mb6.5,SNR=37						
BRVK	**Borovoye**	51.41 313	⇑	*i* P	P	23 30 11.2	0.0
BRVK				*e*S	S	23 37 28.3	-0.3
BRVK				pmax	pmax		
	comp=Z,142nm,1.1s,mb5.8						
BRVK				MLR	MLR		
	comp=Z,7μm,19.0s,MS5.7						
BRVK	**Borovoye**	51.41 313	⇑	*i* P	P	23 30 11.2	0.0
	comp=Z,142nm,1.1s,mb5.8						
BRVK				*e*S	S	23 37 28.3	-0.2
BRVK				LR	LR		
	comp=Z,7μm,19.0s,MS5.7						
MENT	**Mentasta**	51.58 34		*e*P	P	23 30 13.3	+1.1
EKS2	**Erkin-Say**	51.65 299		P	P	23 30 13.9	+0.8
	SNR=71						
EKS2	**Erkin-Say**	51.65 299	⇑	*i* P	P	23 30 13.6	+0.5
	comp=Z,73nm,1.2s,mb5.5						
EKS2				LR	LR		
	comp=Z,10μm,20.0s,MS5.8						
AML	**Almayashu**	51.86 299		P	P	23 30 16.4	+1.7
	SNR=183						
AML	**Almayashu**	51.86 299	⇑	*i* P	P	23 30 16.3	+1.6
	comp=Z,239nm,1.0s,mb6.1						
AML				LR	LR		
	comp=Z,10μm,19.0s,MS5.9						
ALBI	**Allahabad**	51.94 276		*e*x	x	23 30 25.6	
EGAK	**Eagle**	52.52 32		*e*P	P	23 30 18.9	-0.3
EGAK				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
DDI	**Dehra Dun**	52.76 283	⇑	*i*P	P	23 30 21.3	-0.3
DDI				*e*x	x	23 38 08.4	
SMLA	**Simla**	53.13 284		*i* P	P	23 30 22.9	-1.4
SMLA				*i* x	x	23 37 52.9	
SMLA				*i* S	S	23 37 52.9	+0.2
SDNR	**Sundarnagar**	53.14 285		*e*P	P	23 30 23.5	-0.8
DAWY	**Dawson**	53.37 33		*e*P	P	23 30 26.1	+0.5
THN	**Thein Dam**	53.74 287		*e*P	P	23 30 27.4	-1.3
KIP	**Kipapa**	54.00 88		*e*P	P	23 30 25.6	-5.2
KIP				*e*S	S	23 38 04.9	+0.2
NDI	**New Delhi**	54.12 282		*e*P	P	23 30 30.0	-1.5
NDI				*e*x	x	23 38 25.0	
PNL	**Peninsula**	54.13 38		*e*P	P	23 30 31.5	+0.3
	comp=Z,50nm,0.9s,mb5.5						
JBP	**Jabalpur**	54.41 274	⇑	*i*P	P	23 30 33.9	+0.2
JBP				*e*x	x	23 30 37.4	
	comp=Z,279nm,1.3s						
JBP				*e*x	x	23 38 28.0	
VIS	**Vishakhapatnam**	54.45 267		*i* P	P	23 30 33.2	-0.8
VIS				*e*x	x	23 30 36.8	
	comp=Z,205nm,1.3s						
VIS				*i* S	S	23 38 09.7	-1.0
HYT	**Haines Junctio**	54.82 36		*e*P	P	23 30 37.8	+1.6
INK	**Inuvik**	55.02 27		*e*P	P	23 30 37.8	+0.3
INK				pmax	pmax		
	comp=Z,62nm,1.0s						
INK	**Inuvik**	55.02 27		*e*P	P	23 30 37.8	+0.3
	comp=Z,62nm,1.0s,mb5.6						
SVE	**Sverdlovsk**	55.98 319	⇓	*e*P	P	23 30 44.7	+0.2
SVE				*e*S	S	23 38 32.3	+2.1
SVE				*e*		23 40 25.1	
SVE				pmax	pmax		
	comp=Z,277nm,1.4s,mb6.1						
SVE				MLR	MLR		
	comp=Z,8μm,16.0s,MS5.9						
FITZ	**Fitzroy Crossi**	56.10 199		*e*P	P	23 30 45.5	-0.3
	comp=Z,33nm,0.6s,mb5.5						
FITZ				*e*S	S	23 38 33.3	+0.8
FITZ	**Fitzroy Crossi**	56.10 199		LR	LR	23 50 59.3	
	comp=Z,386nm,20.4s,MS4.5,baz=14,slow=32						
FITZ	**Fitzroy Crossi**	56.10 199	⇑	*i*P	P	23 30 45.2	-0.5
	comp=Z,89nm,1.3s,mb5.6						
CTA	**Charters Tower**	56.12 175		*e*P	P	23 30 44.7	-1.2
	comp=Z,11nm,0.9s,mb4.9						
CTA				*e*S	S	23 38 32.3	-0.4
CTA	**Charters Tower**	56.12 175		LR	LR	23 53 22.6	
	comp=Z,628nm,18.6s,MS4.7,baz=199,slow=35						
CTAO	**Charters Tower**	56.12 175		*e*P	P	23 30 45.0	-0.9
CTAO				MLR	MLR		
	comp=Z,762nm,20.0s,MS4.8						
NGP	**Nagpur**	56.15 273	⇑	*i*x	x	23 30 41.8	
NGP				*e*x	x	23 30 44.6	
	comp=Z,166nm,1.8s						
NGP				*i* x	x	23 38 25.9	
SKAG	**Skagway**	56.20 38		*e*P	P	23 30 47.2	+1.2
WRAB	**Tennant Creek**	56.24 188		P	P	23 30 45.0	-1.8
	comp=Z,310nm,0.7s,mb6.5,SNR=18						
WRAB	**Tennant Creek**	56.24 188		*e*P	P	23 30 45.4	-1.4
WRAB				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.7						
WRAB				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.0						
WRAB	**Tennant Creek**	56.24 188		*e*P	P	23 30 45.4	-1.3
	comp=Z,79nm,1.0s,mb5.7						
WRAB				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
WB2	**Warramunga Arr**	56.25 188		*e*P	P	23 30 45.4	-1.4
WRA	**Warramunga Arr**	56.26 188		P	P	23 30 45.5	-1.4
	comp=Z,26nm,0.9s,mb5.3,baz=7.7,slow=7.4,SNR=61						
WRA				LR	LR	23 51 20.4	
	comp=Z,1μm,21.4s,MS4.9,baz=0.0,slow=32						
BHPL	**Bhopal**	56.44 276		*e*P	P	23 30 47.9	-0.5
BHPL				AMb	AMB	23 30 50.2	
	comp=Z,122nm,1.7s,mb5.7						
POHA	**Pohakuloa**	56.84 89		P	P	23 30 51.2	0.0
POHA				LR	LR		
	comp=Z,2μm,22.0s,MS5.1						
SIT	**Sitka**	56.85 40		*e*P	P	23 30 52.0	+1.2
SIT				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.3						
SIT	**Sitka**	56.85 40		*e*P	P	23 30 52.0	+1.2
	comp=Z,42nm,1.3s,mb5.3						
AJM	**Ajmer**	57.14 281		*e*P	P	23 30 52.6	-0.7
AJM				AMb	AMB	23 30 56.9	
	comp=Z,185nm,1.5s,mb5.9						
SOKR	**Solikamsk**	57.18 323		*c i*P	P	23 30 53.1	0.0
SOKR				S	S	23 38 47.3	+1.2
SOKR				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,4μm,15.0s,MS5.6						
ARU	**Arti**	57.19 319		P	P	23 30 53.7	+0.6
	comp=Z,1μm,1.5s,mb6.6,SNR=65						
ARU	**Arti**	57.19 319		*c i*P	P	23 30 53.0	-0.1
ARU				*e*		23 31 47.4	
ARU				*e*		23 33 01.8	
ARU				PPP		23 34 19.5	
ARU				*e*S	S	23 38 47.6	+1.3
ARU						23 40 37.2	
ARU				SS	SS	23 42 30.3	-4.6
ARU				pmax	pmax		
	comp=Z,425nm,1.7s,mb6.2						
ARU				MLR	MLR		
	comp=Z,7μm,16.0s,MS5.8						
ARU	**Arti**	57.19 319	⇑	*i*P	P	23 30 52.9	-0.3
	comp=Z,377nm,1.4s,mb6.2						
ARU				*e*S	S	23 38 52.7	+6.4
ARU				LR	LR		
	comp=Z,5μm,19.0s,MS5.7						
KBL	**Kabul**	57.99 292		*e*P	P	23 30 59.1	0.0
HYB	**Hyderabad**	58.47 269		*i* P	P	23 31 02.5	-0.2
	comp=Z,100nm,1.0s,mb5.8						
HYB				*e*S	S	23 39 10.0	+6.0
CRAG	**Craig**	58.51 42		*e*P	P	23 31 03.2	+0.8
CRAG				*e*pP	pP	23 31 13.6	+1.3
ABKAR	**Akbulak array**	58.71 311	⇑	*i*P	P	23 31 03.6	-0.3
	comp=Z,53nm,0.7s,mb5.7						
DLBC	**Dease Lake**	59.13 38		*e*P	P	23 31 06.5	-0.2
AKTO	**Aktyubinsk**	59.46 312		LR	LR	23 58 06.8	
	comp=Z,5μm,18.4s,MS5.7,baz=66,slow=37						
LATR	**Latur**	59.56 271		*e*P	P	23 31 10.5	+0.3
ASAR	**Alice Springs**	59.98 188		P	P	23 31 11.7	-1.2
	comp=Z,8.4nm,0.7s,mb4.9,baz=11,slow=6.8,SNR=51						
ASAR				PKP2bc		00 00 49.0	
	comp=Z,1.6nm,1.0s,baz=163,slow=1.5,SNR=4.3						
ASAR	**Alice Springs**	59.98 188		P	P	23 31 11.7	-1.2
ASAR				⇑ *e*		00 00 49.0	
MBWA	**Marble Bar**	60.72 204		*e*P	P	23 31 17.3	-0.6
MBWA	**Marble Bar**	60.72 204		*e*P	P	23 31 17.0	-0.9
	comp=Z,31nm,0.8s,mb5.5						
MBWA				LR	LR		
	comp=Z,694nm,20.0s,MS4.8						
ALE	**Alert**	60.95 4		P	P	23 31 19.6	+0.7
	comp=Z,217nm,1.0s,mb6.2,SNR=28						
SPITS	**Spitsbergen Ar**	61.42 349		P	P	23 31 20.7	-1.3
	comp=Z,20nm,1.0s,mb5.2,baz=165,slow=14,SNR=5.5						
SPB4	**Spitsbergen Ar**	61.42 349		*e*P	P	23 31 22.9	+0.9
KBS	**Kingsbay**	61.55 350		*c i*P	P	23 31 23.3	+0.4
KBS				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.4						
KBS	**Kingsbay**	61.55 350		*e*P	P	23 31 23.7	+0.7
	comp=Z,39nm,0.9s,mb5.5						
KBS				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
POO	**Poona**	61.69 273		*e*P	P	23 31 23.8	-1.0
POO				AMb	AMB	23 31 27.0	
	comp=Z,162nm,1.3s,mb6.0						
EIDS	**Eidsvold**	61.84 170		*e*P	P	23 31 25.4	-0.1
KAD	**Karad**	62.06 272		*e*P	P	23 31 26.8	-0.5
KAD				AMb	AMB	23 31 29.3	
	comp=Z,184nm,1.1s,mb6.1						
DZM	**Mont Dzumac**	62.46 154		*e*P	P	23 31 30.1	+0.4
	comp=Z,97nm,1.3s,mb5.8						
DZM				*e*S	S	23 39 50.8	-3.9
	comp=Z,3μm,27.6s						
DZM				*e*LR	LR	23 49 59.7	
	comp=Z,3μm,21.0s						
DZM	**Mont Dzumac**	62.46 154		*e*P	P	23 31 29.9	+0.3
	comp=Z,68nm,1.3s,mb5.6						
DZM				*e*PP	PP	23 33 50.2	+2.6
PALK	**Pallekele**	62.47 258		*e*P	P	23 31 29.8	-0.2
PALK				pmax	pmax		
	comp=Z,129nm,1.4s,mb5.9						
PALK	**Pallekele**	62.47 258		*e*P	P	23 31 29.8	-0.3
	comp=Z,129nm,1.4s,mb5.9						
BHJ	**Bhuj**	62.66 280		*e*P	P	23 31 30.1	-1.2
BHJ				AMb	AMB	23 31 33.2	
	comp=Z,158nm,0.9s,mb6.1						
GOA	**Goa**	63.32 270	⇓	*i*P	P	23 31 34.7	-1.0
GOA			⇑	*i*P		23 31 35.5	
GOA			⇑	*i*P		23 31 35.6	
RES	**Resolute Bay**	63.36 14		*e*P	P	23 31 34.5	-0.6
APA	**Apatity**	63.58 336	⇑	*i*P	P	23 31 36.4	-0.2
APA				*i*		23 31 51.0	
APA				*i*		23 33 54.0	
APA				*i* S	S	23 40 09.0	+1.2
APA				*i* PS		23 40 26.0	
APA				*i* SS	SS	23 44 15.0	+0.4
APA				pmax	pmax		
	comp=Z,91nm,1.0s,mb5.8						
APA				pmax	pmax		
	comp=Z,500nm,4.2s						
APA				MLR	MLR		
	comp=Z,3μm,18.0s,MS5.6						
COCO	**West Island**	64.10 230		PFAKE		23 31 50.0	+9.2
COCO				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
KEV	**Kevo**	64.34 339		*e*P	P	23 31 41.6	0.0
KEV				pmax	pmax		
	comp=Z,151nm,1.4s,mb5.8						
KEV				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.5						
KEV	**Kevo**	64.34 339		*e*P	P	23 31 41.6	0.0
	comp=Z,151nm,1.4s,mb5.8						
KEV				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
YKA	**Yellowknife Ar**	64.41 30		P	P	23 31 41.9	-0.2
	comp=Z,12nm,1.0s,mb4.9,baz=297,slow=6.5,SNR=93						
YKA				LR	LR	23 58 17.5	
	comp=Z,70nm,20.3s,baz=240,slow=35						
YKA				PKP2bc		00 00 46.0	
	comp=Z,0.4nm,0.8s,baz=115,slow=3.1,SNR=3.6						
YKA	**Yellowknife Ar**	64.41 30		P	P	23 31 41.9	-0.2
YKA				LR	LR	23 58 17.5	
YKA				⇑ *e*		00 00 46.0	
ABKT	**Ailbek**	64.50 299		P	P	23 31 43.8	+0.6
	comp=Z,253nm,1.2s,mb6.1,SNR=21						
VAN	**Vannovskaya**	64.50 299	⇑	*i*P	P	23 31 42.9	-0.3
VAN				*i* S	S	23 40 22.6	+2.6
KLMR	**Klimovskoe**	64.63 328	⇑	*i*P	P	23 31 43.4	-0.2
KLMR				*e*		23 34 04.9	
KLMR				*e*S	S	23 40 19.0	-2.0
KLMR				*e*SS	SS	23 44 30.3	-0.9
KLMR				pmax	pmax		
	comp=Z,231nm,1.5s,mb6.0						
TRD	**Trivandrum**	64.72 262	⇓	*e*x	x	23 31 42.0	
ARCES	**ARCESS Array B**	64.90 340		P	P	23 31 45.8	+0.6
	comp=Z,34nm,0.9s,mb5.4,baz=52,slow=7.9,SNR=44						
ARCES				LR	LR	00 06 19.4	
	comp=Z,4μm,18.3s,MS5.7,baz=30,slow=42						
ARE0	**ARCESS Array S**	64.90 340		*e*P	P	23 31 45.5	+0.2
XMAS	**Kiritimati**	65.45 106		*e*P	P	23 31 52.3	+2.6
XMAS				*e*S	S	23 40 32.0	-0.4
XMAS				LR	LR		
	comp=Z,3μm,19.0s,MS5.4						
AFI	**Afiamalu**	66.37 130		*e*P	P	23 31 55.1	-0.3
AFI				pmax	pmax		
	comp=Z,105nm,1.4s,mb5.7						
AFI				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
AFI	**Afiamalu**	66.37 130		*e*P	P	23 31 55.1	-0.4
	comp=Z,105nm,1.4s,mb5.7						
AFI				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
TRO	**Tromso**	66.61 341		*e*	P	23 31 57.1	+0.8
DAG	**Danmarks Havn**	66.65 355	⇓	*e*P	P	23 31 56.0	-0.4
DAG				pmax	pmax		
	comp=Z,120nm,1.9s,mb5.6						
DAG	**Danmarks Havn**	66.65 355	⇓	*i*P	P	23 31 56.0	-0.4
	comp=Z,115nm,1.9s,mb5.6						
PGC	**Sidney**	66.73 46		*e*P	P	23 31 58.4	+1.0
JOF	**Joensuu**	66.85 332		*e*P	P	23 31 56.6	-1.3
JOF				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.7						
JOF	**Joensuu**	66.85 332		*e*p	P	23 31 56.6	-1.3
	comp=Z,80nm,1.0s,mb5.7						
ARMA	**Armidale**	66.89 171		*e*P	P	23 32 00.8	+2.4
ARMA	**Armidale**	66.89 171		*e*P	P	23 32 00.3	+1.9
	comp=Z,49nm,1.4s,mb5.3						
NLWA	**Neilton Lookou**	67.09 47	⇓	P	P	23 32 00.4	+0.8
	baz=67,SNR=12						
NLWA	**Neilton Lookou**	67.09 47		*e*P	P	23 32 01.1	+1.4
	comp=Z,139nm,1.0s,mb5.9						
NLWA				*e*pP	pP	23 32 10.9	+1.3
NLWA				*e*PP	PP	23 34 30.9	+3.6
NLWA				LR	LR		
	comp=Z,632nm,20.0s,MS4.8						
A05A	**Maple Falls**	67.35 45	⇑	P	P	23 32 01.1	-0.2
	baz=67						
GNW	**Green Mountain**	67.62 47		*e*P	P	23 32 04.0	+1.0
	comp=Z,40nm,1.2s,mb5.3						
E03A	**Lebam**	67.68 48	⇓	P	P	23 32 04.0	+0.5
	baz=68,SNR=5.6						
STKA	**Stephens Creek**	67.70 180		*e*P	P	23 32 03.1	-0.4
	comp=Z,21nm,0.9s,mb5.2						
STKA	**Stephens Creek**	67.70 180		P	P	23 32 02.9	-0.7
	comp=Z,12nm,0.8s,mb5.0,baz=338,slow=6.9,SNR=22						
STKA				LR	LR	23 59 28.5	
	comp=Z,684nm,19.9s,MS4.9,baz=0.5,slow=34						
STKA	**Stephens Creek**	67.70 180		*e*P	P	23 32 03.2	-0.4
JCW	**Jim Creek**	67.83 46		*e*P	P	23 32 05.1	+0.7
FORT	**Forrest**	67.84 193		*e*P	P	23 32 03.8	-0.6
	comp=Z,68nm,0.6s,mb5.8						
FORT	**Forrest**	67.84 193		*e*P	P	23 32 03.8	-0.6
	comp=Z,88nm,0.6s,mb6.0						
B06A	**Marblemount**	67.93 45	⇑	P	P	23 32 05.0	0.0
	baz=68						
RPW	**Rockport**	67.95 46		*e*P	P	23 32 05.3	+0.3
	comp=Z,7.4nm,0.9s,mb4.7						
RPW				*e*pP	pP	23 32 15.3	+0.2
F03A	**Seaside**	67.98 49	⇑	P	P	23 32 05.5	+0.2
	baz=68						
MOS	**Moscow**	68.11 324		*e*P	P	23 32 02.9	-3.0
MOS				*e*		23 32 28.9	
MOS				*e*		23 34 33.1	
MOS				*e*PPP		23 36 12.5	
MOS				*i* S	S	23 41 03.2	-0.1
MOS				*i*		23 41 20.1	
MOS				*i*		23 41 54.6	
MOS				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MOS				pmax	pmax		
	comp=Z,1.0nm,2.0s						
MOS				MLR	MLR		
	comp=Z,4μm,16.0s,MS5.7						
MOS				MLR	MLR		
	comp=E,3μm,16.0s						
A07A	**Ashnola River,**	68.29 45	⇓	P	P	23 32 07.0	-0.2
	baz=68,SNR=18						
D05A	**Enumclaw**	68.30 47	⇓	P	P	23 32 07.7	+0.4
	baz=68,SNR=7.4						
C06A	**Tall Timber Ra**	68.57 46	⇓	P	P	23 32 08.9	-0.1
	baz=68						
LON	**Longmire**	68.63 47		*e*P	P	23 32 09.2	-0.2
LON				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
LON	**Longmire**	68.63 47		*e*P	P	23 32 09.2	-0.1
	comp=Z,22nm,0.9s,mb5.1						
F04A	**Amboy**	68.67 48	⇑	P	P	23 32 10.0	+0.3
	baz=68,SNR=12						
F04A			⇓	S	S	23 41 12.2	+1.8
	baz=68						
B07A	**Winthrop**	68.74 45	⇑	P	P	23 32 09.9	-0.1
	baz=69,SNR=16						
B07A			⇑	S	S	23 41 12.7	+1.6
	baz=69						
COR	**Corvallis**	68.81 50		P	P	23 32 11.9	+1.3
COR				pmax	pmax		
	comp=Z,210nm,1.6s,mb5.8						
COR	**Corvallis**	68.81 50		*e*P	P	23 32 11.8	+1.3
	comp=Z,209nm,1.6s,mb5.8						
COR				*e*pP	pP	23 32 21.6	+1.0
COR				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
OBN	**Obninsk**	68.95 324		P	P	23 32 11.8	+0.6
	comp=Z,873nm,0.8s,mb6.7,SNR=8.5						
OBN	**Obninsk**	68.95 324		*c i*P	P	23 32 11.0	-0.2
OBN				*i*		23 32 28.3	
OBN				*e*		23 34 47.8	
OBN				*i* S	S	23 41 15.3	+2.0
OBN				*e*SS	SS	23 45 43.6	+5.3
OBN				pmax	pmax		
	comp=Z,292nm,1.6s,mb6.0						
OBN				MLR	MLR		
	comp=Z,4μm,15.0s,MS5.8						
OBN	**Obninsk**	68.95 324		*e*P	P	23 32 11.2	0.0
	comp=Z,381nm,1.4s,mb6.1						
OBN				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
A08A	**Turner Farm, O**	68.97 44	⇑	P	P	23 32 11.3	-0.1
	baz=69,SNR=17						
A08A			⇑	S	S	23 41 14.8	+1.0
	baz=69						
D06A	**Cle Elum**	68.97 46	⇓	P	P	23 32 11.6	+0.1
	baz=69						
G04A	**Mulino**	69.00 49	⇓	P	P	23 32 11.5	-0.2
	baz=69						
KEBM	**Edson Butte**	69.03 52		*e*P	P	23 32 13.7	+1.8
KEBM				*e*pP	pP	23 32 23.2	+1.2
PUL	**Pulkovo**	69.07 330		*c i*P	P	23 32 12.1	+0.2
PUL				pmax	pmax		
	comp=Z,77nm,0.5s,mb5.9						
C07A	**Waterville**	69.17 46	⇓	P	P	23 32 12.1	-0.6
	baz=69,SNR=13						
C07A			⇑	S	S	23 41 16.7	+0.5
	baz=69						
KAF	**Kangasniemi**	69.20 333		*e*P	P	23 32 10.3	-2.3
KAF	**Kangasniemi**	69.20 333		*e*p	P	23 32 10.3	-2.3
MAK	**Makhachkala**	69.21 308		*c i*P	P	23 32 13.3	+0.2
MAK				*e*		23 32 40.5	
MAK				*e*		23 34 46.5	
MAK				*e*PPP		23 36 31.4	
MAK				*i* S	S	23 41 14.0	-2.8
MAK				*e*		23 42 05.7	
MAK				pmax	pmax		
	comp=Z,98nm,1.3s,mb5.6						
MAK				MLR	MLR		
	comp=Z,5μm,15.0s,MS5.9						
E06A	**Yakima**	69.22 47	⇓	P	P	23 32 13.1	0.0
	baz=69,SNR=17						
B08A	**Colville Reser**	69.24 45	⇓	P	P	23 32 12.9	-0.3
	baz=69,SNR=20						
B08A			⇑	S	S	23 41 18.4	+1.4
	baz=69						
A09A	**Danville**	69.35 44	⇓	P	P	23 32 13.7	-0.1
	baz

VSR				smax			
	comp=E,250nm,3.4s						
VSR				smax			
	comp=Z,40nm,2.6s						
VSR				smax			
	comp=N,200nm,2.3s						
VSR				MLR	MLR		
	comp=N,3µm,16.0s,MS5.9						
VSR				MLR	MLR		
	comp=Z,7µm,16.0s,MS6.0						
VSR				MLR	MLR		
	comp=E,4µm,15.0s,MS5.9						
VORD	**Divnogorie**	**69.83**	**319**	*c iP*	**P**	**23 32 16.2**	**-0.5**
VORD				*e**SP	sP	23 32 29.7	-0.9
VORD				*e*		23 34 49.8	
VORD				*e*S	S	23 41 23.2	-0.6
VORD				pmax	pmax		
	comp=E,40nm,0.9s						
VORD				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.7						
VORD				pmax	pmax		
	comp=N,5.0nm,0.6s						
VORD				pmax	pmax		
	comp=N,80nm,1.9s						
VORD				pmax	pmax		
	comp=Z,90nm,1.9s,mb5.4						
VORD				pmax	pmax		
	comp=E,140nm,2.0s						
VORD				smax			
	comp=E,70nm,4.5s						
VORD				smax			
	comp=Z,20nm,4.7s						
VORD				smax			
	comp=N,60nm,4.1s						
VORD				MLR	MLR		
	comp=Z,4µm,14.0s,MS5.9						
VORD				MLR	MLR		
	comp=N,2µm,15.0s,MS5.8						
VORD				MLR	MLR		
	comp=E,4µm,16.0s,MS5.8						
EDM	**Edmonton**	**69.84**	**38**	*e*P	**P**	**23 32 16.9**	**+0.1**
E07A	**Sunnyside**	**69.88**	**47**	⇓P	**P**	**23 32 17.1**	**0.0**
	baz=70						
B09A	**Rice**	**69.88**	**44**	⇓P	**P**	**23 32 17.0**	**-0.1**
	baz=70,SNR=22						
A10A	**Northport**	**69.92**	**44**	⇑P	**P**	**23 32 17.2**	**-0.1**
	baz=70						
HUMO	**Hull Mountain**	**70.03**	**51**	*e*P	**P**	**23 32 18.3**	**+0.1**
	comp=E,45nm,1.4s,mb5.2						
HUMO				LR	LR		
	comp=Z,579nm,19.0s,MS4.8						
G06A	**Carlson Farm,**	**70.11**	**48**	⇑P	**P**	**23 32 18.9**	**+0.4**
	baz=70,SNR=8.0						
OD2	**Odessa Site #2**	**70.11**	**45**	*e*P	**P**	**23 32 18.5**	**0.0**
RSW	**Rattlesnake Hi**	**70.12**	**47**	*e*P	**P**	**23 32 19.5**	**+0.8**
C09A	**Chrisman Ranch**	**70.14**	**45**	⇓P	**P**	**23 32 18.8**	**+0.1**
	baz=70,SNR=8.2						
HAWA	**Hanford**	**70.16**	**47**	*e*P	**P**	**23 32 18.7**	**-0.1**
	comp=Z,42nm,1.1s,mb5.3						
HAWA				*e*	pP	23 32 27.6	-1.3
HAWA				LR	LR		
	comp=Z,759nm,19.0s,MS5.0						
D08A	**Wollman Farm,**	**70.16**	**46**	⇓P	**P**	**23 32 18.6**	**-0.3**
	baz=70,SNR=10						
E08A	**Dider Farm, El**	**70.38**	**46**	⇓P	**P**	**23 32 20.1**	**-0.1**
	baz=70,SNR=6.3						
KHMM	**Horse Mountain**	**70.43**	**53**	*e*P	**P**	**23 32 22.6**	**+1.9**
KHMM				*e*pP	pP	23 32 32.0	+1.3
B10A	**Chitwood Farm,**	**70.47**	**44**	⇑P	**P**	**23 32 20.2**	**-0.5**
	baz=70						
D09A	**Jones Farm, Ri**	**70.52**	**46**	⇑P	**P**	**23 32 20.5**	**-0.5**
	baz=70,SNR=6.4						
NEW	**Newport**	**70.55**	**44**	*e*P	**P**	**23 32 21.3**	**+0.1**
NEW				*e*	pP	23 32 31.1	-0.1
NEW				pmax	pmax		
	comp=Z,49nm,0.8s						
NEW				MLR	MLR		
	comp=Z,913nm,19.0s						
NEW	**Newport**	**70.55**	**44**	*e*P	**P**	**23 32 21.3**	**+0.1**
	comp=Z,49nm,0.8s,mb5.5						
NEW				*e*	pP	23 32 31.1	-0.1
NEW				LR	LR		
	comp=Z,913nm,19.0s,MS5.0						
A11A	**Hall Mountain,**	**70.59**	**43**	⇑P	**P**	**23 32 21.4**	**0.0**
	baz=70,SNR=26						
YBH	**Yreka Blue Hor**	**70.64**	**52**	*e*P	**P**	**23 32 22.9**	**+1.0**
YBH				*e*	pP	23 32 32.5	+0.5
YBH				pmax	pmax		
	comp=Z,30nm,0.9s						
YBH				MLR	MLR		
	comp=Z,483nm,20.0s						
YBH	**Yreka Blue Hor**	**70.64**	**52**	*e*P	**P**	**23 32 22.9**	**+0.9**
	comp=Z,30nm,0.9s,mb5.2						
YBH				*e*	pP	23 32 32.5	+0.5
YBH				LR	LR		
	comp=Z,483nm,20.0s,MS4.8						
C10A	**Spilker Farm,**	**70.68**	**45**	⇓P	**P**	**23 32 22.3**	**+0.2**
	baz=70						
B11A	**Sandpoint**	**70.88**	**44**	⇓P	**P**	**23 32 23.4**	**+0.2**
	baz=71,SNR=13						
GOF	**Gofitskoye**	**70.88**	**312**	*e*P	**P**	**23 32 32.0**	**+8.7**
GOF				pmax	pmax		
	comp=Z,200nm,1.3s,mb5.9						
E09A	**Wood Farm, Sta**	**70.90**	**46**	⇓P	**P**	**23 32 23.4**	**0.0**
	baz=71,SNR=14						
F08A	**Pendleton**	**70.92**	**47**	⇑P	**P**	**23 32 23.6**	**+0.1**
	baz=71,SNR=8.2						
A12A	**Yaak River Ran**	**71.00**	**43**	⇓P	**P**	**23 32 24.3**	**+0.3**
	baz=71						
D10A	**Wagner Farm, O**	**71.11**	**45**	⇓P	**P**	**23 32 24.3**	**-0.4**
	baz=71,SNR=8.7						
LNOR	**Lincton Mounta**	**71.17**	**47**	*e*P	**P**	**23 32 25.8**	**+0.8**
K05A	**Summer Lake**	**71.27**	**51**	⇑P	**P**	**23 32 26.5**	**+0.8**
	baz=71,SNR=31						
B12A	**Libby**	**71.29**	**43**	⇑P	**P**	**23 32 25.9**	**+0.2**
	baz=71						
VSU	**Vasula**	**71.33**	**330**	*c iP*	**P**	**23 32 25.7**	**-0.1**
VSU				pmax	pmax		
	comp=Z,269nm,1.6s,mb5.9						
WDC	**Whiskeytown Da**	**71.36**	**53**	*e*P	**P**	**23 32 26.4**	**+0.1**
WDC				*e*	pP	23 32 35.7	-0.6
WDC				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
WDC				MLR	MLR		
	comp=Z,644nm,21.0s,MS4.9						
WDC	**Whiskeytown Da**	**71.36**	**53**	*e*P	**P**	**23 32 26.4**	**+0.2**
	comp=Z,46nm,1.0s,mb5.4						
WDC				*e*	pP	23 32 35.7	-0.6
WDC				LR	LR		
	comp=Z,644nm,21.0s,MS4.9						
I07A	**Izee**	**71.40**	**49**	⇑P	**P**	**23 32 26.7**	**+0.3**
	baz=71,SNR=17						
WBK	**Wadi Bani Khal**	**71.43**	**285**	P	**P**	**23 32 28.4**	**+1.5**
	SNR=13						
CAN	**Canberra**	**71.45**	**174**	PFAKE		23 32 40.0	+13
CAN				LR	LR		
	comp=Z,966nm,19.0s,MS5.1						
F09A	**S2 Ranch, Elgi**	**71.48**	**47**	⇓P	**P**	**23 32 26.5**	**-0.4**
	baz=71						
E10A	**Myers Farm, Un**	**71.52**	**46**	⇓P	**P**	**23 32 27.0**	**-0.1**
	baz=71,SNR=16						
SUMG	**Summit**	**71.54**	**0**	*e*P	**P**	**23 32 27.6**	**+0.8**
	comp=Z,42nm,1.0s,mb5.3						
SUMG				*e*	pP	23 32 37.0	+0.1
ZEI	**Tsey**	**71.57**	**310**	*e*P	**P**	**23 32 27.1**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.3						
ZEI				pmax	pmax		
	comp=N,59nm,1.8s						
ZEI				pmax	pmax		
	comp=E,53nm,1.6s						
MTA	**Mtatsminda**	**71.58**	**308**	P	**P**	**23 32 27.5**	**-0.1**
BIDO	**Bidbid**	**71.61**	**286**	P	**P**	**23 32 29.1**	**+1.1**
	SNR=15						
D11A	**Klaveano Farm,**	**71.66**	**45**	⇑P	**P**	**23 32 27.4**	**-0.5**
	baz=72,SNR=36						
H08A	**Prairie City**	**71.67**	**48**	⇓P	**P**	**23 32 28.1**	**0.0**
	baz=72,SNR=23						
KIV	**Kislovodsk**	**71.68**	**311**	P	**P**	**23 32 28.6**	**+0.5**
	comp=E,952nm,1.1s,mb6.6,SNR=50						
KIV	**Kislovodsk**	**71.68**	**311**	*c iP*	**P**	**23 32 28.7**	**+0.6**
KIV				*i*		23 32 42.1	
KIV				*e*		23 35 07.9	
KIV				*e*S	S	23 41 50.5	+4.9
KIV				*e*SS	SS	23 46 20.1	-0.7
KIV				pmax	pmax		
	comp=Z,267nm,1.2s,mb6.0						
KIV				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.6						
KIV	**Kislovodsk**	**71.68**	**311**	⇑*iP*	**P**	**23 32 28.5**	**+0.4**
	comp=Z,290nm,1.3s,mb6.0						
KIV				*e*PP	PP	23 35 06.8	-0.2
KIV				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
F10A	**Beach Ranch, E**	**71.73**	**46**	⇑P	**P**	**23 32 28.4**	**0.0**
	baz=72						
BANOM	**Banah**	**71.75**	**289**	P	**P**	**23 32 29.8**	**+0.9**
	SNR=11						
C12B	**Naegeli Ranch,**	**71.78**	**44**	⇓P	**P**	**23 32 28.5**	**-0.2**
	baz=72,SNR=5.7						
G09A	**Cove**	**71.79**	**47**	⇑P	**P**	**23 32 28.9**	**+0.1**
	baz=72,SNR=19						
KEH	**Kehvi**	**71.80**	**309**	P	**P**	**23 32 28.6**	**-0.2**
HOPS	**Hopland**	**71.85**	**55**	PFAKE		23 32 40.0	+11
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
GOR	**Gori**	**71.86**	**309**	P	**P**	**23 32 30.1**	**+0.8**
WALA	**Waterton Lakes**	**71.88**	**42**	*e*P	**P**	**23 32 29.7**	**+0.5**
	comp=Z,1.2nm,0.8s						
SMDO	**Samad**	**71.91**	**286**	P	**P**	**23 32 30.9**	**+1.0**
	SNR=18						
ONI	**Oni**	**71.95**	**310**	P	**P**	**23 32 30.5**	**+0.8**
B13A	**Whitefish**	**71.96**	**43**	⇓P	**P**	**23 32 30.1**	**+0.3**
	baz=72,SNR=30						
MOD	**Modoc**	**72.08**	**51**	*e*P	**P**	**23 32 30.3**	**-0.3**
	comp=Z,29nm,0.8s,mb5.3						
MOD				*e*	pP	23 32 40.5	-0.1
MOD				LR	LR		
	comp=Z,865nm,19.0s,MS5.0						
BSMT	**Bassoo Peak**	**72.08**	**44**	*e*P	**P**	**23 32 31.4**	**+0.9**
E11A	**Bogner Ranch,**	**72.11**	**45**	⇓P	**P**	**23 32 30.4**	**-0.3**
	baz=72,SNR=24						
H09A	**Durkee**	**72.19**	**47**	⇑P	**P**	**23 32 31.4**	**+0.2**
	baz=72,SNR=5.6						
A14A	**Double T Ranch**	**72.20**	**42**	⇑P	**P**	**23 32 31.1**	**-0.1**
	baz=72,SNR=19						
HOQ	**Hoqain**	**72.21**	**286**	P	**P**	**23 32 32.0**	**+0.3**
	SNR=26						
JMDO	**Jabal Madar**	**72.24**	**285**	P	**P**	**23 32 32.4**	**+0.6**
	SNR=15						
C13A	**Hot Springs**	**72.30**	**44**	⇑P	**P**	**23 32 31.8**	**+0.1**
	baz=72,SNR=24						
BMO	**Blue Mountains**	**72.30**	**47**	*e*P	**P**	**23 32 32.4**	**+0.5**
	comp=Z,43nm,1.0s,mb5.3						
BMO				LR	LR		
	comp=Z,685nm,20.0s,MS4.9						
F11A	**Grangeville**	**72.40**	**46**	⇓P	**P**	**23 32 32.3**	**-0.2**
	baz=72,SNR=60						
JTMT	**Jette**	**72.42**	**43**	*e*P	**P**	**23 32 33.1**	**+0.6**
	comp=Z,50nm,0.9s,mb5.4						
J08A	**Circle Bar Ran**	**72.42**	**49**	⇑P	**P**	**23 32 32.8**	**+0.2**
	baz=72,SNR=13						
MCCM	**Marconi Confer**	**72.43**	**55**	PFAKE		23 32 40.0	+7.3
MCCM				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
GNI	**Garni**	**72.44**	**307**	*e*P	**P**	**23 32 32.8**	**0.0**
GNI				*e*		23 35 13.0	
GNI				pmax	pmax		
	comp=Z,69nm,1.1s						
GNI				MLR	MLR		
	comp=Z,1µm,22.0s						
GNI	**Garni**	**72.44**	**307**	*e*P	**P**	**23 32 32.8**	**0.0**
	comp=Z,69nm,1.1s,mb5.5						
GNI				*e*PP	PP	23 35 13.0	-0.7
GNI				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
GNI	**Garni**	**72.44**	**307**	P	**P**	**23 32 34.3**	**+1.5**
	SNR=30						
GNI				P		23 32 34.3	
	SNR=30						
HATD	**Hatta, Dubai**	**72.46**	**288**	P	**P**	**23 32 33.7**	**+0.6**
	SNR=32						
NWAO	**Narrogin (SRO)**	**72.48**	**201**	*e*P	**P**	**23 32 32.3**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,20nm,0.8s						
NWAO	**Narrogin (SRO)**	**72.48**	**201**	*e*P	**P**	**23 32 32.2**	**-0.6**
	comp=Z,111nm,0.8s,mb5.8						
NWAO	**Narrogin (SRO)**	**72.48**	**201**	*e*P	**P**	**23 32 32.3**	**-0.5**
	comp=Z,20nm,0.8s,mb5.1						
YBMT	**Yellow Bay**	**72.51**	**43**	*e*P	**P**	**23 32 33.8**	**+0.8**
	comp=Z,37nm,1.0s,mb5.3						
YBMT				*e*pP	pP	23 32 43.6	+0.5
I09A	**Lost Marbles R**	**72.53**	**48**	⇓P	**P**	**23 32 33.3**	**+0.1**
	baz=72,SNR=14						
A15A	**Johnson Ranch,**	**72.56**	**42**	⇓P	**P**	**23 32 32.9**	**-0.4**
	baz=72,SNR=22						
ASHO	**Ashiyiah**	**72.59**	**288**	P	**P**	**23 32 34.4**	**+0.5**
	SNR=35						
G11A	**Walters Elk Ra**	**72.61**	**46**	⇑P	**P**	**23 32 33.5**	**-0.2**
	baz=72,SNR=85						
D13A	**Huson**	**72.69**	**44**	⇓P	**P**	**23 32 34.1**	**0.0**
	baz=72,SNR=17						
OHCM	**Honcut**	**72.71**	**54**	*e*P	**P**	**23 32 34.3**	**0.0**
SWMT	**Swartz Lake**	**72.71**	**43**	*e*P	**P**	**23 32 34.9**	**+0.6**
NAZ	**Nazwa, Dubai**	**72.73**	**289**	P	**P**	**23 32 35.1**	**+0.4**
	SNR=12						
BSY	**Bisya**	**72.74**	**286**	P	**P**	**23 32 35.5**	**+0.7**
	SNR=17						
WVOR	**Wild Horse Val**	**72.83**	**50**	*e*P	**P**	**23 32 35.4**	**+0.4**
WVOR				*e**PP	pP	23 32 46.1	+1.0
WVOR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
WVOR				MLR	MLR		
	comp=Z,937nm,19.0s,MS5.1						
WVOR	**Wild Horse Val**	**72.83**	**50**	*e*P	**P**	**23 32 35.4**	**+0.3**
	comp=Z,20nm,0.9s,mb5.0						
WVOR				*e*pP	pP	23 32 46.1	+1.0
WVOR				LR	LR		
	comp=Z,937nm,19.0s,MS5.1						
J09A	**Fry Pan Ranch,**	**72.87**	**49**	⇑P	**P**	**23 32 35.2**	**0.0**
	baz=73,SNR=23						
FAQ	**Al Faqa, Dubai**	**72.92**	**288**	P	**P**	**23 32 35.9**	**+0.1**
	SNR=14						
ARQ	**Araqi**	**72.95**	**287**	P	**P**	**23 32 36.9**	**+0.8**
	SNR=29						
SCO	**Scoresbysund**	**72.99**	**354**	*i* P	**P**	**23 32 36.0**	**+0.5**
SCO				*i* S	S	23 42 03.5	+3.8
SCO				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
SCO	**Scoresbysund**	**72.99**	**354**	*i* P	**P**	**23 32 36.0**	**+0.5**
	comp=Z,16nm,1.0s,mb4.9						
SCO				*i* S	S	23 42 03.5	+3.8
F12A	**Elk City**	**73.00**	**46**	⇑P	**P**	**23 32 36.1**	**+0.1**
	baz=73,SNR=62						
I10A	**Payette**	**73.03**	**48**	⇑P	**P**	**23 32 36.3**	**+0.1**
	baz=73						
B15A	**Bradely Ranch,**	**73.04**	**42**	⇑P	**P**	**23 32 36.1**	**-0.1**
	baz=73,SNR=71						
MSO	**Missoula**	**73.14**	**44**	*e*P	**P**	**23 32 36.6**	**-0.2**
	comp=Z,29nm,1.0s,mb5.2						
MSO				*e*pP	pP	23 32 46.9	+0.1
MSO				LR	LR		
	comp=Z,389nm,21.0s,MS4.7						
BEKR	**Beckwourth**	**73.15**	**53**	⇓P	**P**	**23 32 36.8**	**-0.2**
	baz=73,SNR=12						
SLMT	**Seeley Lake**	**73.15**	**44**	*e*P	**P**	**23 32 37.0**	**+0.2**
H11A	**Donnelly**	**73.15**	**47**	⇑P	**P**	**23 32 36.5**	**-0.4**
	baz=73,SNR=15						
DIGO	**Kars**	**73.18**	**308**	⇑*iP*	**P**	**23 32 38.2**	**+1.1**
ASUD	**Al Ashush, Dub**	**73.18**	**288**	P	**P**	**23 32 38.1**	**+0.7**
	SNR=17						
A16A	**West Butte Ran**	**73.19**	**41**	⇓P	**P**	**23 32 36.6**	**-0.4**
	baz=73,SNR=9.4						
E13A	**Victor**	**73.22**	**44**	⇓P	**P**	**23 32 36.7**	**-0.5**
	baz=73,SNR=6.1						
D14A	**Greenough**	**73.23**	**44**	⇓P	**P**	**23 32 37.0**	**-0.3**
	baz=73,SNR=16						
IZAR	**Zarasai**	**73.28**	**328**	*i* P	**P**	**23 32 37.6**	**+0.2**
C15A	**Salmond Ranch,**	**73.33**	**43**	⇑P	**P**	**23 32 38.1**	**+0.2**
	baz=73,SNR=22						
IDID	**Didziasalis**	**73.35**	**327**	*i* P	**P**	**23 32 38.2**	**+0.4**
MICGM	**Minsk**	**73.36**	**326**	⇑*iP*	**P**	**23 32 36.0**	**-2.0**
MNK	**Minsk**	**73.39**	**326**	⇑*iP*	**P**	**23 32 36.0**	**-2.1**
MNK				*e*		23 32 48.0	
MNK				*e*S	S	23 42 04.0	-0.7
MNK				*e*SS	SS	23 46 50.0	+3.8
MNK				pmax	pmax		
	comp=E,270nm,1.5s						
MNK				pmax	pmax		
	comp=Z,440nm,1.5s,mb6.2						
MNK				pmax	pmax		
	comp=N,290nm,1.5s						
MNK				MLR	MLR		
	comp=N,7µm,12.0s,MS6.3						
MNK				MLR	MLR		
	comp=Z,10µm,12.0s,MS6.3						
MNK				MLR	MLR		
	comp=E,6µm,12.0s,MS6.3						
J10A	**Berg Farm, Mel**	**73.42**	**48**	⇓P	**P**	**23 32 38.1**	**-0.4**
	baz=73						
B16A	**M & M Farms, S**	**73.45**	**42**	⇑P	**P**	**23 32 38.6**	**+0.1**
	baz=73,SNR=22						
ISAL	**Salakas**	**73.45**	**328**	*i* P	**P**	**23 32 38.8**	**+0.3**
TOO	**Toolangi**	**73.46**	**177**	*e*P	**P**	**23 32 40.8**	**+2.3**
CHMT	**Chamberlain Mo**	**73.47**	**44**	*e*P	**P**	**23 32 38.9**	**+0.2**
	comp=E,16nm,1.0s,mb4.9						
F13A	**Darby**	**73.51**	**45**	⇓P	**P**	**23 32 38.5**	**-0.5**
	baz=73,SNR=29						
NACGM	**Naroch**	**73.60**	**327**	*e*P	**P**	**23 32 36.0**	**-3.3**
E14A	**Clinton**	**73.63**	**44**	⇓P	**P**	**23 32 39.4**	**-0.3**
	baz=73,SNR=12						
I11A	**Placerville**	**73.63**	**47**	⇑P	**P**	**23 32 39.3**	**-0.4**
	baz=73						
ARTV	**Artvin**	**73.67**	**309**	⇑*iP*	**P**	**23 32 40.5**	**+0.5**
SOC	**Sochi**	**73.68**	**312**	*c iP*	**P**	**23 32 39.8**	**-0.2**
SOC				*e*		23 32 52.5	
SOC				*e*		23 35 29.1	
SOC				*e*PPP		23 37 07.8	
SOC				*e*S	S	23 42 03.9	-4.5
SOC				*e*		23 42 36.8	
SOC				*e*SS	SS	23 46 59.9	+8.6
SOC				pmax	pmax		
	comp=Z,109nm,1.4s,mb5.6						
SOC				pmax	pmax		
	comp=Z,288nm,5.2s						
K10A	**MacKenzie Ranc**	**73.72**	**49**	⇓P	**P**	**23 32 40.5**	**+0.2**
	baz=74,SNR=23						
DAGI	**Agillar**	**73.74**	**309**	⇑*iP*	**P**	**23 32 40.7**	**+0.3**
DBOC	**Borcka**	**73.74**	**309**	⇑*iP*	**P**	**23 32 41.0**	**+0.5**
C16A	**Fuhringer Ranc**	**73.79**	**42**	⇑P	**P**	**23 32 40.5**	**-0.1**
	baz=74,SNR=50						
D15A	**Lincoln**	**73.81**	**43**	⇑P	**P**	**23 32 40.3**	**-0.4**
	baz=74						
WCN	**Washoe City**	**73.85**	**53**	⇓P	**P**	**23 32 41.3**	**+0.2**
	baz=74						
DBAD	**Bademkaya**	**73.91**	**309**	⇑*iP*	**P**	**23 32 42.0**	**+0.6**
H12A	**Diamond D Ranc**	**73.92**	**46**	⇓P	**P**	**23 32 41.2**	**-0.2**
	baz=74,SNR=20						
DDEM	**Demirkent**	**73.94**	**309**	⇑*iP*	**P**	**23 32 42.0**	**+0.4**
G13A	**Cobalt**	**73.97**	**46**	⇑P	**P**	**23 32 41.3**	**-0.4**
	baz=74,SNR=43						
MFID	**Camas Ranch**	**73.99**	**48**	⇓P	**P**	**23 32 42.2**	**+0.3**
	baz=74,SNR=20						
B17A	**L&G Farms, Che**	**74.01**	**42**	⇑P	**P**	**23 32 41.8**	**-0.1**
	baz=74,SNR=23						
F14A	**Wisdom**	**74.05**	**45**	⇑P	**P**	**23 32 41.8**	**-0.3**
	baz=74						
E15A	**Deer Lodge**	**74.10**	**44**	⇑P	**P**	**23 32 42.3**	**-0.2**
	baz=74,SNR=19						
SAO	**San Andreas Ge**	**74.13**	**56**	PFAKE		23 32 50.0	+7.2
SAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
A18A	**Metzger Ranch,**	**74.14**	**41**	⇑P	**P**	**23 32 42.3**	**-0.3**
	baz=74,SNR=10						
CMB	**Columbia Colle**	**74.14**	**54**	*e*P	**P**	**23 32 42.8**	**0.0**
CMB				*e*	pP	23 32 52.6	-0.3
CMB				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.3						
CMB				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
CMB	**Columbia Colle**	**74.14**	**54**	*e*P	**P**	**23 32 42.8**	**0.0**
	comp=Z,39nm,0.9s,mb5.3						
CMB				*e*	pP	23 32 52.6	-0.3
CMB				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
I12A	**Atlanta**	**74.19**	**47**	⇓P	**P**	**23 32 43.1**	**+0.1**
	baz=74,SNR=44						
K11A	**Parker Ranch,**	**74.23**	**48**	⇑P	**P**	**23 32 43.4**	**+0.1**
	baz=74,SNR=22						
H13A	**Challis**	**74.26**	**46**	⇓P	**P**	**23 32 43.5**	**+0.1**
	baz=74,SNR=22						
FFC	**Flin Flon**	**74.27**	**33**	P	**P**	**23 32 43.7**	**+0.4**
	comp=Z,299nm,0.9s,mb6.2,SNR=18						
FFC	**Flin Flon**	**74.27**	**33**	*e*P	**P**	**23 32 42.9**	**-0.4**
FFC				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
FFC				MLR	MLR		
	comp=Z,804nm,20.0s,MS5.0						
FFC	**Flin Flon**	**74.27**	**33**	*e*P	**P**	**23 32 42.9**	**-0.4**
	comp=Z,42nm,0.9s,mb5.4						
FFC				LR	LR		
	comp=Z,804nm,20.0s,MS5.0						
HOMI	**Horasan**	**74.32**	**308**	⇑*iP*	**P**	**23 32 44.3**	**+0.5**
G14A	**Jackson**	**74.33**	**45**	⇑P	**P**	**23 32 43.4**	**-0.4**
	baz=74						
ANN	**Anapa**	**74.33**	**314**	*e*P	**P**	**23 32 41.8**	**-2.0**
ANN				*e*		23 32 56.4	
ANN				*e*		23 35 28.5	
ANN				*e*S	S	23 42 15.5	-0.1
ANN				*e*		23 42 47.0	
ANN				pmax	pmax		
	comp=Z,228nm,1.6s,mb5.8						
D16A	**Dana Ranch, Ca**	**74.35**	**43**	⇓P	**P**	**23 32 43.8**	**-0.1**
	baz=74,SNR=29						
L10A	**Juniper Basin**	**74.36**	**49**	⇓P	**P**	**23 32 44.3**	**+0.2**
	baz=74,SNR=14						
HRY	**Holter Researc**	**74.38**	**43**	*e*P	**P**	**23 32 44.5**	**+0.5**
	comp=Z,85nm,0.7s,mb5.8						
HRY				*e*	pP	23 32 54.5	+0.4
C17A	**Wharram Farm,**	**74.42**	**42**	⇓P	**P**	**23 32 43.7**	**-0.6**
	baz=74,SNR=20						
B18A	**Beardsley Farm**	**74.49**	**41**	⇓P	**P**	**23 32 44.6**	**-0.1**
	baz=74,SNR=38						
J12A	**Stokes Ranch,**	**74.52**	**48**	⇑P	**P**	**23 32 45.3**	**+0.3**
	baz=74,SNR=8.4						
F15A	**Butte**	**74.53**	**44**	⇓P	**P**	**23 32 45.0**	**+0.1**
	baz=74,SNR=71						
LRM	**Limekiln Ridge**	**74.56**	**44**	*e*P	**P**	**23 32 45.3**	**+0.2**
	comp=Z,704nm,0.8s,mb6.6						
LRM				*e*	pP	23 32 55.0	-0.2
E16A	**East Helena**	**74.57**	**43**	⇓P	**P**	**23 32 45.4**	**+0.2**
	baz=74,SNR=8.3						
M10A	**I.L. Ranch, Tu**	**74.64**	**50**	⇓P	**P**	**23 32 46.0**	**+0.4**
	baz=74,SNR=17						
FCC	**Fort Churchill**	**74.64**	**27**	*e*P	**P**	**23 32 44.5**	**-0.8**
	comp=Z,2.3nm,1.2s						
I13A	**Wildhorse Cree**	**74.72**	**47**	⇑P	**P**	**23 32 46.4**	**+0.3**
	baz=74,SNR=26						
EGMT	**Eagleton**	**74.73**	**41**	⇑P	**P**	**23 32 46.0**	**-0.1**
	baz=74,SNR=23						
**EG

baz=75,SNR=12
K12A Draper Farm, C 74.99 48 ⇊P **P 23 32 48.0 +0.3**
baz=75,SNR=12
F16A Kennard Place, 75.05 44 ⇊P **P 23 32 48.3 +0.3**
baz=75,SNR=7.4
E17A Martinsdale 75.07 43 ⇑P **P 23 32 48.5 +0.4**
baz=75,SNR=38
NB2 NORSAR Subarra 75.08 337 P **P 23 32 48.0 +0.1**
comp=Z,98nm,1.0s,mb5.7,baz=40,slow=5.9
NOA NORSAR Array B 75.08 337 P **P 23 32 47.8 -0.1**
comp=Z,48nm,0.9s,mb5.4,baz=39,slow=5.7,SNR=124
NOA LR LR 00 08 14.0
comp=Z,3μm,21.0s,MS5.5,baz=30,slow=38
N10A Dunphy 75.11 50 ⇑P **P 23 32 48.5 +0.1**
baz=75
BOZ Bozeman (W) 75.13 44 ⇊P **P 23 32 48.6 +0.2**
baz=75,SNR=46
BOZ Bozeman (W) 75.13 44 *e*P **P 23 32 49.3 +0.9**
BOZ *e* pP 23 32 58.9 +0.4
BOZ pmax pmax
comp=Z,48nm,0.8s,mb5.5
BOZ MLR MLR
comp=Z,579nm,20.0s,MS4.9
BOZ Bozeman (W) 75.13 44 *e*P **P 23 32 49.3 +0.9**
comp=Z,48nm,0.8s,mb5.5
BOZ *e* pP 23 32 58.9 +0.3
BOZ LR LR
comp=Z,579nm,20.0s,MS4.9
AKASG Malin Array Be 75.15 323 P **P 23 32 48.1 -0.3**
comp=Z,53nm,0.8s,mb5.5,baz=46,slow=5.9,SNR=202
AKASG LR LR 00 08 52.1
comp=Z,6μm,18.6s,MS5.9,baz=50,slow=38
AKBB Malin Array Si 75.15 323 ⇑*i*P **P 23 32 48.1 -0.3**
AKBB *e* 23 35 36.2
M11A Holland Ranch, 75.15 49 ⇊P **P 23 32 49.5 +0.9**
baz=75,SNR=20
MACK Trabzon 75.15 310 ⇑*i*P **P 23 32 48.9 +0.3**
KIEV Kiev 75.16 323 ⇑*i*P **P 23 32 48.2 -0.3**
comp=Z,107nm,1.0s,mb5.7
KIEV *e*PP PP 23 35 36.0 -0.3
KIEV LR LR
comp=Z,5μm,20.0s,MS5.8
H15A Lima 75.16 45 ⇑P **P 23 32 48.1 -0.6**
baz=75
D18A Linhart Farms, 75.20 42 ⇊P **P 23 32 49.1 +0.3**
baz=75,SNR=14
L12A House Creek Ra 75.21 48 ⇑P **P 23 32 49.3 +0.3**
baz=75
KOPT Kop Dagi 75.22 309 ⇑*i*P **P 23 32 50.5 +1.4**
NVAR Mina Array Bea 75.28 53 P **P 23 32 50.3 +0.9**
comp=Z,20nm,1.0s,mb5.0,baz=283,slow=6.2,SNR=56
G16A Moss Hill, Enn 75.28 44 ⇊P **P 23 32 49.4 +0.1**
baz=75,SNR=26
NAO01 NORSAR Array S 75.34 337 *e*P **P 23 32 49.0 -0.3**
comp=Z,40nm,1.0s,mb5.3
NAO01 LR LR
comp=Z,3μm,20.0s,MS5.6
O10A Cortez Mining, 75.36 51 ⇑P **P 23 32 50.5 +0.6**
baz=75,SNR=11
MLAC Mammoth Lakes 75.38 54 ⇊P **P 23 32 50.4 +0.4**
baz=75
J14A Carey 75.42 47 ⇑P **P 23 32 51.3 +1.2**
baz=75,SNR=18
K13A Stover Farm, H 75.48 48 ⇊P **P 23 32 50.9 +0.5**
baz=75,SNR=6.1
F17A Fitzpatrick Pl 75.52 43 ⇊P **P 23 32 50.8 +0.2**
baz=75,SNR=33
E18A Harlowton 75.53 43 ⇑P **P 23 32 51.2 +0.5**
baz=75,SNR=28
N11A Elko Archery C 75.54 50 ⇊P **P 23 32 51.2 +0.4**
baz=75
MSL Mosul 75.58 305 *e*P **P 23 32 53.0 +1.8**
MSL *e*S S 23 42 29.0 -0.9
I15A Monteview 75.62 46 ⇑P **P 23 32 51.7 +0.4**
baz=75
M12A Wells 75.69 49 ⇊P **P 23 32 52.5 +0.7**
baz=76,SNR=30
QLMT Earthquake Lak 75.73 45 *e*P **P 23 32 52.8 +0.9**
comp=Z,35nm,1.1s,mb5.2
SUW Suwalki 75.76 328 *i*P **P 23 32 51.5 -0.3**
SUW *e*S S 23 42 32.8 +1.6
SUW LMZ 00 09 19.6
comp=Z,3μm,19.7s
SUW Suwalki 75.76 328 ⇑*i*P **P 23 32 51.5 -0.4**
SUW *e*S S 23 42 32.8 +1.5
SUW MLR MLR
comp=Z,3μm,19.7s,MS5.7
SUW Suwalki 75.76 328 *e*P **P 23 32 51.5 -0.4**
comp=Z,155nm,1.1s,mb5.8
P10A Eureka 75.77 51 ⇑P **P 23 32 52.3 +0.1**
baz=76,SNR=8.8
G17A Pierce Place, 75.83 44 ⇑P **P 23 32 53.1 +0.7**
baz=76,SNR=6.5
RCTC Rector, Farmer 75.86 55 ⇑P **P 23 32 52.1 -0.7**
baz=76
ELK Elko 75.89 50 *e*P **P 23 32 53.8 +0.9**
ELK *e* pP 23 33 04.1 +1.1
ELK pmax pmax
comp=Z,41nm,1.0s
ELK MLR MLR
comp=Z,1μm,19.0s
ELK Elko 75.89 50 *e*P **P 23 32 53.8 +0.9**
comp=Z,41nm,1.0s,mb5.3
ELK *e* pP 23 33 04.1 +1.1
ELK LR LR
comp=Z,1μm,19.0s,MS5.2
L13A Double Diamond 75.89 48 ⇑P **P 23 32 53.4 +0.6**
baz=76,SNR=7.6
H16A Russell Place, 75.91 45 ⇑P **P 23 32 53.1 +0.2**
baz=76,SNR=29
SMMC Simmler 75.91 57 ⇊P **P 23 32 53.3 +0.2**
baz=76
N12A Clover Valley, 75.95 50 *e*P **P 23 32 54.2 +1.0**
comp=Z,62nm,1.0s,mb5.5
N12A *e* pP 23 33 03.8 +0.4
O11A Cowboy Ranch, 75.98 50 ⇑P **P 23 32 53.8 +0.4**
baz=76,SNR=13
J15A Blackfoot 76.01 46 ⇑P **P 23 32 54.1 +0.6**
baz=76,SNR=9.4
F18A Big Timber 76.04 43 ⇊P **P 23 32 53.8 +0.2**
baz=76,SNR=42
K14A Jones Ranch, D 76.08 47 ⇊P **P 23 32 54.5 +0.6**
baz=76,SNR=11
YMR Madison River 76.09 45 *e*P **P 23 32 54.4 +0.4**
comp=Z,50nm,0.8s,mb5.5
YMR *e*PcP PcP 23 33 05.0 -1.1
OSL Oslo 76.09 337 *e* **P 23 32 53.9 +0.2**
TIN Tinemaha 76.11 54 ⇊P **P 23 32 54.4 +0.3**
baz=76
GCMT Greycliff 76.14 43 *e*P **P 23 32 54.9 +0.7**
comp=Z,33nm,0.9s,mb5.3
GCMT *e* pP 23 33 04.6 +0.3
SIM Simferopol' 76.14 316 *e*P **P 23 32 54.8 +0.6**
SIM *e*S S 23 42 37.0 +1.3
SIM pmax pmax
comp=Z,78nm,0.8s,mb5.7
SIM MLR MLR
comp=Z,2μm,18.0s,MS5.5
TPH Tonopah 76.18 53 P **P 23 32 48.5 -6.1**
TPH *e* pP 23 32 57.7 -7.0
TPH pmax pmax
comp=Z,72nm,1.4s,mb5.4
TPH Tonopah 76.18 53 PFAKE 23 33 10.0 +15
TPH LR LR
comp=Z,949nm,20.0s,MS5.1
M13A Montello 76.18 49 ⇑P **P 23 32 54.8 +0.2**
baz=76,SNR=11
M13A Montello 76.18 49 *e*P **P 23 32 55.1 +0.6**
comp=Z,27nm,1.1s,mb5.1
M13A *e*PcP PcP 23 33 05.4 -1.1
UMR Umm Al-Rimmam 76.19 296 *e*P **P 23 32 54.3 -0.5**
UMR AMb AMB 23 32 57.6
comp=Z,144nm,1.5s,mb5.7
YNR Norris Junctio 76.23 44 *e*P **P 23 32 56.3 +1.6**
comp=Z,52nm,1.2s,mb5.3
YNR *e*PcP PcP 23 33 06.3 -0.3
VES Vestal, Richgr 76.23 56 ⇑P **P 23 32 55.3 +0.4**
baz=76,SNR=8.3
P11A Circle Ranch, 76.26 51 ⇊P **P 23 32 55.6 +0.6**
baz=76,SNR=5.5
PKM Peak Mountain 76.27 57 ⇑P **P 23 32 55.5 +0.4**
baz=76
Q10A Clear Creek Ra 76.27 52 ⇊P **P 23 32 55.2 +0.1**
baz=76,SNR=20
YFT Old Faithful 76.30 45 *e*P **P 23 32 58.1 +3.0**
comp=Z,86nm,0.9s,mb5.7
YFT *e*PcP PcP 23 33 07.5 +0.5

MIB Mutribah 76.33 297 *e*P **P 23 32 55.0 -0.6**
MIB AMb AMB 23 32 56.5
comp=Z,132nm,1.5s,mb5.7
L14A Malta 76.34 48 ⇑P **P 23 32 56.1 +0.7**
baz=76,SNR=8.8
K15A Arbon 76.38 47 ⇑P **P 23 32 55.8 +0.2**
baz=76
KBD Kabd 76.42 296 *e*P **P 23 32 55.4 -0.7**
KBD AMb AMB 23 32 57.3
comp=Z,125nm,1.4s,mb5.7
N13A Wendover, West 76.46 49 ⇊P **P 23 32 56.8 +0.7**
baz=76,SNR=6.2
N13A Wendover, West 76.46 49 *e*P **P 23 32 56.6 +0.5**
comp=Z,73nm,0.9s,mb5.6
N13A *e*PcP PcP 23 33 06.9 -0.9
O12A Currie 76.47 50 ⇑P **P 23 32 56.8 +0.6**
baz=76,SNR=36
LKWY Lake 76.48 44 PFAKE 23 33 10.0 +14
LKWY LR LR
comp=Z,1μm,20.0s,MS5.3
BHD Baghdad 76.48 301 *e*P **P 23 32 58.0 +1.6**
BHD *e*S S 23 42 36.0 -3.9
H17A Grant Village 76.48 45 ⇑P **P 23 32 57.7 +1.5**
baz=76,SNR=34
G18A Lazy EL Ranch, 76.48 43 ⇊P **P 23 32 57.2 +1.0**
baz=76
QRN Al-Qurain 76.50 296 *e*P **P 23 32 55.9 -0.6**
QRN AMb AMB 23 32 59.4
comp=Z,234nm,1.7s,mb5.8
CWC Cottonwood Cre 76.55 55 ⇑P **P 23 32 57.4 +0.7**
baz=76
J16A Bone 76.56 46 ⇑P **P 23 32 57.2 +0.6**
baz=76,SNR=9.6
IMW Indian Meadow 76.58 45 *e*P **P 23 32 58.2 +1.5**
comp=Z,61nm,0.9s,mb5.5
IMW *e*PcP PcP 23 33 08.2 0.0
M14A Sheep Mountain 76.59 48 ⇑P **P 23 32 57.2 +0.3**
baz=76,SNR=27
SBC Santa Barbara 76.60 57 ⇑P **P 23 32 57.0 -0.1**
baz=76
DCID1 Drake Creek 76.62 46 *e*P **P 23 32 57.7 +0.8**
comp=Z,72nm,0.9s,mb5.6
DCID1 *e*PcP PcP 23 33 08.2 -0.1
R10A Warm Springs 76.64 52 ⇑P **P 23 32 57.6 +0.4**
baz=76
RDF Al-Radifah 76.66 296 *e*P **P 23 32 57.5 0.0**
RDF AMb AMB 23 32 59.5
comp=Z,307nm,1.1s,mb6.1
S10A Tonopah Range, 76.67 53 ⇊P **P 23 32 57.4 0.0**
baz=76,SNR=40
DIYA Diyarbakir 76.67 307 ⇑*i*P **P 23 32 58.3 +0.9**
KONO Kongsberg 76.67 337 *e*P **P 23 32 56.8 -0.2**
KONO *e* 23 35 49.0
KONO pmax pmax
comp=Z,63nm,1.4s,mb5.3
KONO MLR MLR
comp=Z,4μm,19.0s,MS5.7
KONO Kongsberg 76.67 337 *e*P **P 23 32 56.8 -0.1**
comp=Z,62nm,1.4s,mb5.3
KONO *e*PP PP 23 35 49.0 +0.1
KONO LR LR
comp=Z,4μm,19.0s,MS5.7
RRI2 Red Ridge 76.69 46 *e*P **P 23 32 58.4 +1.0**
comp=Z,32nm,0.9s,mb5.3
RRI2 *e* pP 23 33 08.2 +0.7
GRAC Grapevine Rang 76.70 54 ⇑P **P 23 32 57.6 +0.1**
baz=76,SNR=7.1
SFJD Kangerlussuaq 76.71 5 P **P 23 32 56.8 -0.3**
SFJD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SFJD Kangerlussuaq 76.71 5 P **P 23 32 56.8 -0.3**
comp=Z,9.8nm,1.0s,mb4.7,baz=332,slow=7.8,SNR=3.8
SFJD Kangerlussuaq 76.71 5 *e*P **P 23 32 54.0 -3.0**
comp=Z,20nm,0.9s,mb5.0
SFJD *e*PcP PcP 23 33 07.5 -0.8
SFJD LR LR
comp=Z,1μm,21.0s,MS5.2
SFJD Kangerlussuaq 76.71 5 *i*P **P 23 32 57.9 +0.8**
comp=Z,15nm,0.8s,mb5.0
Q11A Duckwater 76.73 52 ⇑P **P 23 32 57.8 +0.1**
baz=77,SNR=21
ISA Isabella 76.74 56 ⇑P **P 23 32 57.0 -0.8**
baz=77,SNR=6.4
ISA Isabella 76.74 56 *e*P **P 23 32 56.8 -1.0**
ISA *e* pP 23 33 06.9 -1.0
ISA pmax pmax
comp=Z,22nm,1.0s,mb5.0
ISA Isabella 76.74 56 *e*P **P 23 32 56.8 -1.0**
comp=Z,22nm,1.0s,mb5.0
ISA *e* pP 23 33 06.9 -1.1
I17A Pilgrim Ck. 76.77 45 ⇊P **P 23 32 59.0 +1.2**
baz=77,SNR=27
RLMT Red Lodge 76.77 43 ⇑P **P 23 32 58.1 +0.3**
baz=77,SNR=37
RLMT Red Lodge 76.77 43 *e*P **P 23 32 58.3 +0.5**
comp=Z,61nm,1.2s,mb5.4
RLMT *e*PcP PcP 23 33 08.3 -0.7
RLMT LR LR
comp=Z,682nm,19.0s,MS5.0
HVU Hansel Valley 76.78 48 *e*P **P 23 32 58.7 +0.8**
HVU *e* pP 23 33 08.5 +0.5
HVU pmax pmax
comp=Z,48nm,0.8s,mb5.5
HVU Hansel Valley 76.78 48 *e*P **P 23 32 58.7 +0.8**
comp=Z,48nm,0.8s,mb5.5
HVU *e* pP 23 33 08.5 +0.5
ARVC Arvin 76.81 56 ⇊P **P 23 32 57.6 -0.6**
baz=77
TPAW Teton Pass 76.82 46 *e*P **P 23 32 59.0 +1.0**
comp=Z,76nm,1.0s,mb5.6
TPAW *e*PcP PcP 23 33 09.3 0.0
P12A McGill 76.84 51 ⇊P **P 23 32 58.6 +0.4**
baz=77,SNR=42
K16A Soda Springs 76.84 46 ⇑P **P 23 32 58.9 +0.7**
baz=77,SNR=25
L15A Malad City 76.87 47 ⇑P **P 23 32 58.7 +0.3**
baz=77,SNR=16
BSC Santa Cruz Isl 76.91 58 ⇊P **P 23 32 58.8 +0.1**
baz=77
LOHW Long Hollow 76.94 45 *e*P **P 23 33 00.0 +1.3**
comp=Z,27nm,1.0s,mb5.1
LOHW *e*PcP PcP 23 33 09.5 -0.2
SNOW Snow King Moun 76.95 45 *e*P **P 23 32 58.9 +0.1**
comp=Z,18nm,0.9s,mb5.0
SNOW *e*PcP PcP 23 33 09.6 -0.2
REDW Red Top Meadow 76.95 46 *e*P **P 23 32 59.6 +0.7**
comp=Z,64nm,1.3s,mb5.4
REDW *e*PcP PcP 23 33 09.6 -0.2
DAC Darwin (Calif) 76.97 55 PFAKE 23 33 10.0 +11
DAC LR LR
comp=Z,995nm,19.0s,MS5.2
O13A Hicks Ranch, I 77.02 50 ⇑P **P 23 32 59.6 +0.3**
baz=77
J17A Brown Place, J 77.03 46 ⇊P **P 23 33 00.2 +0.9**
baz=77,SNR=13
ELZG Elazig 77.06 308 ⇑*i*P **P 23 33 00.8 +1.2**
R11A Troy Canyon, C 77.07 52 ⇑P **P 23 32 59.7 +0.1**
baz=77,SNR=59
N14A Grayback Hills 77.08 49 ⇊P **P 23 33 00.1 +0.5**
baz=77,SNR=22
BGU Big Grassy Mou 77.13 49 *e*P **P 23 33 00.9 +1.0**
comp=Z,27nm,0.8s,mb5.2
BGU *e*PcP PcP 23 33 10.4 -0.3
Q12A Willow Creek R 77.14 51 ⇑P **P 23 33 00.5 +0.5**
baz=77,SNR=16
ERBA Erbaa 77.16 311 ⇑*i*P **P 23 33 00.9 +0.8**
M15A Larsen Ranch, 77.16 48 ⇑P **P 23 33 00.5 +0.5**
baz=77,SNR=42
MPMC Manual Prospec 77.16 55 ⇊P **P 23 33 00.1 -0.1**
baz=77,SNR=17
AHID Auburn Hatcher 77.17 46 *e*P **P 23 33 00.6 +0.5**
comp=Z,40nm,0.9s,mb5.3
AHID *e*PcP PcP 23 33 10.5 -0.3
AHID LR LR
comp=Z,729nm,19.0s,MS5.0
OSI Osito Adit 77.17 57 ⇊P **P 23 33 00.2 -0.1**
baz=77
BLG Laguna Peak 77.23 57 ⇑P **P 23 33 00.0 -0.6**
baz=77
SPUT South Promonto 77.25 48 *e*P **P 23 33 01.3 +0.7**
comp=Z,41nm,1.1s,mb5.3
SPUT *e*PcP PcP 23 33 11.3 +0.1
K17A Gardner Place, 77.28 46 ⇊P **P 23 33 00.7 -0.1**
baz=77
DGMT Dagmar 77.33 39 ⇊P **P 23 33 00.9 0.0**
baz=77

DGMT Dagmar 77.33 39 *e*P **P 23 33 00.6 -0.3**
comp=Z,75nm,1.1s,mb5.5
DGMT *e*PcP PcP 23 33 10.9 -0.4
DGMT LR LR
comp=Z,961nm,19.0s,MS5.1
I18A Diamond G Ranc 77.34 45 ⇑P **P 23 33 00.9 -0.1**
baz=77,SNR=6.9
FURC Furnace Creek, 77.34 54 ⇊P **P 23 33 01.1 -0.1**
baz=77,SNR=16
LRMC Laurel Mountai 77.37 55 ⇊P **P 23 33 01.8 +0.4**
baz=77
S11A Rachel 77.38 53 ⇑P **P 23 33 01.5 +0.1**
baz=77,SNR=9.3
P13A Bates Ranch, G 77.40 50 ⇑P **P 23 33 01.7 +0.2**
baz=77,SNR=22
SNCC San Nicolas Is 77.41 58 ⇊P **P 23 33 01.8 +0.2**
baz=77
L16A Fish Haven 77.43 47 ⇊P **P 23 33 02.3 +0.7**
baz=77,SNR=6.1
LAO LASA Array 77.44 41 *e*P **P 23 33 01.8 +0.3**
comp=Z,68nm,0.9s,mb5.6
LAO *e*PcP PcP 23 33 11.7 -0.1
LAO LR LR
comp=Z,881nm,20.0s,MS5.1
N15A Stansbury Isla 77.46 48 ⇊P **P 23 33 02.3 +0.6**
baz=77,SNR=37
EDW2 Edwards Air Fo 77.51 56 ⇊P **P 23 33 02.0 -0.1**
baz=77,SNR=9.1
J18A Kendall Valley 77.52 45 ⇊P **P 23 33 02.4 +0.3**
baz=77,SNR=29
MALT Malatya 77.52 308 P **P 23 33 03.6 +1.5**
MALT Malatya 77.52 308 ⇑*i*P **P 23 33 03.2 +1.0**
comp=Z,79nm,1.2s,mb5.5
MALT *e*PP PP 23 35 56.1 -0.6
MALT LR LR
comp=Z,2μm,21.0s,MS5.4
MALT Malatya 77.52 308 ⇑*i*P **P 23 33 03.4 +1.3**
TOKA Tokat 77.54 311 ⇑*i*P **P 23 33 02.9 +0.7**
HWUT Hardware Ranch 77.60 47 *e*P **P 23 33 03.3 +0.8**
comp=Z,87nm,1.1s,mb5.6
HWUT *e*PcP PcP 23 33 13.2 +0.5
HWUT LR LR
comp=Z,615nm,19.0s,MS5.0
Q13A Wheeler Ranch, 77.70 51 ⇊P **P 23 33 03.3 +0.2**
baz=78,SNR=14
R12A Pony Springs, 77.70 51 ⇊P **P 23 33 03.5 +0.4**
baz=78,SNR=34
DUG Dugway 77.70 49 ⇊P **P 23 33 03.2 +0.1**
baz=78,SNR=38
DUG Dugway 77.70 49 *e*P **P 23 33 03.8 +0.7**
DUG *e* pP 23 33 14.5 +1.2
DUG pmax pmax
comp=Z,86nm,0.9s,mb5.7
DUG MLR MLR
comp=Z,889nm,19.0s,MS5.1
DUG Dugway 77.70 49 *e*P **P 23 33 03.8 +0.7**
comp=Z,86nm,0.9s,mb5.7
DUG *e*PcP PcP 23 33 14.5 +1.3
DUG LR LR
comp=Z,889nm,19.0s,MS5.1
L17A Cokeville 77.71 47 ⇑P **P 23 33 03.4 +0.3**
baz=78
U10A Ash Meadows, A 77.72 54 ⇑P **P 23 33 03.4 +0.1**
baz=78,SNR=12
KIS Kishinev 77.73 320 *e*P **P 23 33 00.0 -3.1**
KIS *i*S S 23 42 48.0 -5.0
KIS LRM 00 10 16.0
comp=Z,6μm,16.0s
KIS Kishinev 77.73 320 *e*P **P 23 33 00.0 -3.1**
KIS *e* 23 33 14.0
KIS *e*S S 23 42 48.0 -5.0
KIS *i* 23 43 05.0
KIS *i* 23 43 34.0
KIS MLR MLR
comp=Z,69μm,16.0s
KIS MLR MLR
comp=N,3μm,15.0s,MS5.9
KIS MLR MLR
comp=E,4μm,15.0s,MS5.9
KIS MLR MLR
comp=Z,6μm,16.0s,MS6.0
KIS Kishinev 77.73 320 P **P 23 33 03.3 +0.2**
M16A Huntsville 77.74 48 ⇊P **P 23 33 03.5 +0.2**
baz=78
PASC Pasadena Art C 77.79 57 *e*P **P 23 33 03.5 -0.2**
MWC Mount Wilson 77.84 57 *e*P **P 23 33 03.6 -0.4**
MWC *e* pP 23 33 13.8 -0.4
MWC pmax pmax
comp=Z,37nm,1.4s,mb5.1
MWC Mount Wilson 77.84 57 *e*P **P 23 33 03.6 -0.4**
comp=Z,36nm,1.4s,mb5.1
MWC *e*PcP PcP 23 33 13.8 0.0
NOQ North Oquirrh 77.85 48 *e*P **P 23 33 05.0 +1.1**
comp=Z,118nm,0.9s,mb5.8
NOQ *e*PcP PcP 23 33 14.5 +0.7
AKCD Akcadag 77.85 309 ⇑*i*P **P 23 33 05.0 +1.0**
O15A The Old Anders 77.86 49 ⇑P **P 23 33 04.7 +0.7**
baz=78
K18A Toltan Ranch, 77.86 46 ⇑P **P 23 33 04.1 +0.2**
baz=78,SNR=5.5
P14A Drum Mountains 77.91 50 ⇊P **P 23 33 04.6 +0.3**
baz=78,SNR=42
WAR Warsaw 77.93 327 *e*P **P 23 33 04.8 +0.7**
WAR *e*S S 23 42 58.5 +3.5
WAR LMZ 00 11 24.2
comp=Z,3μm,16.1s
WAR Warsaw 77.93 327 ⇑*e*P **P 23 33 04.8 +0.7**
WAR *e*S S 23 42 58.5 +3.6
WAR MLR MLR
comp=Z,3μm,16.1s,MS5.8
T11A Corn Creek, Al 77.95 53 ⇑P **P 23 33 04.9 +0.4**
baz=78,SNR=17
RBK Rabkut 77.96 283 P **P 23 33 05.0 +0.1**
SNR=10
S12A Delamar Landin 77.97 52 ⇊P **P 23 33 04.8 +0.1**
baz=78,SNR=10
FMP Fort Macarthur 77.98 57 ⇊P **P 23 33 04.2 -0.6**
baz=78
SHOC Shoshone 78.05 54 ⇑P **P 23 33 05.1 -0.1**
baz=78,SNR=6.5
GSC Goldstone 78.06 55 ⇊P **P 23 33 04.8 -0.3**
baz=78,SNR=7.2
GSC Goldstone 78.06 55 P **P 23 33 05.3 +0.1**
GSC pmax pmax
comp=Z,55nm,1.3s,mb5.3
GSC Goldstone 78.06 55 *e*P **P 23 33 05.1 -0.1**
comp=Z,55nm,1.4s,mb5.3
GSC *e*PcP PcP 23 33 15.1 +0.3
BW06 Boulder Array 78.06 45 ⇑P **P 23 33 04.6 -0.4**
baz=78,SNR=17
BW06 Boulder Array 78.06 45 *e*P **P 23 33 05.1 +0.1**
comp=Z,26nm,0.8s,mb5.2
BW06 *e*PcP PcP 23 33 14.8 +0.1
BW06 LR LR
comp=Z,636nm,19.0s,MS5.0
PDAR Pinedale Array 78.06 45 P **P 23 33 05.0 -0.1**
comp=Z,4.8nm,0.7s,mb4.5,baz=288,slow=2.5,SNR=49
PDAR LR LR 00 01 45.9
comp=Z,496nm,22.0s,MS4.8,baz=80,slow=31
WHFO Wadi Hawf 78.07 283 P **P 23 33 04.8 -0.6**
SNR=11
CIS Catalina Islan 78.08 57 ⇊P **P 23 33 04.9 -0.5**
baz=78
ATAB Bozova 78.11 308 ⇑*i*P **P 23 33 06.6 +1.2**
N16A Rees Ranch, Co 78.12 48 ⇑P **P 23 33 05.5 +0.1**
baz=78
Q14A Sevier Lake (B 78.14 50 ⇊P **P 23 33 06.0 +0.5**
baz=78,SNR=72
RRX Edison Barstow 78.17 55 ⇊P **P 23 33 05.6 -0.2**
baz=78
R13A O'Grain Ranch, 78.19 51 ⇑P **P 23 33 06.1 +0.2**
baz=78,SNR=13
M17A Scullys Gap (B 78.22 47 ⇊P **P 23 33 06.0 +0.1**
baz=78,SNR=9.9
LVV L'vov 78.24 324 *e*P **P 23 33 05.2 -0.7**
LVV *e* pP 23 33 16.2 +0.2
LVV *e* 23 36 06.4
LVV *e*PPP 23 37 56.6
LVV *e*S S 23 42 55.8 -2.6
LVV *e*PS 23 43 49.8
LVV MLR MLR
comp=E,4μm,15.0s,MS5.9
LVV MLR MLR
comp=Z,3μm,15.0s,MS5.8
LVV MLR MLR
comp=N,400nm,11.0s,MS5.9

IAS **Iasi** 78.25 321 P P 23 33 06.5 +0.5
JLU **Jordanelle** 78.28 48 eP P 23 33 06.9 +0.6
comp=N,53nm,1.1s,mb5.4
JLU ePcP PcP 23 33 17.0 +1.4
NLU **North Lily Min** 78.30 49 eP P 23 33 07.2 +0.8
comp=N,50nm,0.9s,mb5.4
NLU ePcP PcP 23 33 17.1 +1.3
L18A **Fontenelle, Gr** 78.31 46 ⇓P P 23 33 06.6 +0.2
baz=78,SNR=19
BSD **Bornholm Skovb** 78.33 332⇑iP P 23 33 05.7 -0.6
BSD pmax pmax
comp=Z,38nm,0.9s,mb5.3
BSD **Bornholm Skovb** 78.33 332⇑iP P 23 33 05.7 -0.6
comp=Z,38nm,0.9s,mb5.3
U11A **Corn Creek** 78.33 53 ⇓P P 23 33 06.9 +0.3
baz=78
LEOM **Leova** 78.37 320 ⇑P P 23 33 06.8 +0.1
LEOM **Leova** 78.37 320⇑iP P 23 33 06.8 +0.1
CTKT **Corum** 78.38 312⇑iP P 23 33 07.7 +0.8
P15A **Leamington** 78.41 49 ⇓P P 23 33 07.0 0.0
baz=78,SNR=12
K19A **Absolon Red Bu** 78.44 45 ⇑P P 23 33 06.6 -0.6
baz=78,SNR=12
N17A **Moffit Pass** 78.44 48 ⇑P P 23 33 07.1 -0.1
baz=78,SNR=16
DAU **Daniels Canyon** 78.52 48 eP P 23 33 08.8 +1.2
DAU e pP 23 33 18.6 +0.8
DAU pmax pmax
comp=Z,62nm,0.8s,mb5.6
DAU **Daniels Canyon** 78.52 48 eP P 23 33 08.8 +1.2
comp=Z,62nm,0.8s,mb5.6
DAU e pP 23 33 18.6 +0.8
MPU **Maple Canyon** 78.53 49 eP P 23 33 08.6 +0.9
comp=Z,91nm,1.0s,mb5.7
MPU ePcP PcP 23 33 18.0 +1.3
BORG **Borgarnes** 78.53 353 P P 23 33 08.9 +1.6
comp=Z,56nm,0.9s,mb5.5,baz=25,slow=2.8,SNR=9.1
BORG **Borgarnes** 78.53 353 eP P 23 33 07.6 +0.4
TUQ **Turquoise Moun** 78.56 54 ⇓P P 23 33 08.0 0.0
baz=78,SNR=16
PINB **Pinarbasi** 78.58 310⇑iP P 23 33 08.5 +0.5
T12A **Moapa** 78.58 53 ⇓P P 23 33 07.9 -0.1
baz=78
BBRC **Big Bear Sol-O** 78.59 56 ⇓P P 23 33 07.8 -0.3
baz=78
L19A **Farson** 78.59 46 ⇓P P 23 33 07.9 -0.1
baz=78,SNR=6.4
M18A **Lyman** 78.60 47 ⇑P P 23 33 08.0 -0.1
baz=78,SNR=8.3
S13A **Holt Ranch, En** 78.62 52 ⇑P P 23 33 08.2 0.0
baz=78,SNR=36
GZT **Gaziantep** 78.64 308⇑iP P 23 33 09.3 +0.9
V11A **Goodsprings** 78.65 54 ⇓P P 23 33 08.4 0.0
baz=78,SNR=7.1
HEC **Hector,Ludlow** 78.65 55 ⇓P P 23 33 08.1 -0.4
baz=78
BALT **Daday** 78.66 313⇑iP P 23 33 09.2 +0.9
Q15A **Fillmore** 78.69 50 ⇑P P 23 33 08.4 -0.2
baz=78,SNR=9.0
ARUT **Antelope Range** 78.76 51 eP P 23 33 09.2 +0.2
ARUT pmax pmax
comp=Z,66nm,1.2s,mb5.4
ARUT **Antelope Range** 78.76 51 eP P 23 33 09.2 +0.2
comp=Z,66nm,1.2s,mb5.4
ABTO **Aybut** 78.76 283 P P 23 33 09.4 +0.1
SNR=15
P16A **Fountain Green** 78.76 49 ⇑P P 23 33 09.4 +0.5
baz=79
GKP **Gorka Klasztor** 78.79 330 iP P 23 33 08.9 0.0
GKP eS S 23 43 04.5 +0.4
GKP eScS ScS 23 43 20.7 -7.2
GKP LMZ 00 14 56.8
comp=Z,5μm,17.9s
MURC **Murrieta** 78.79 57 ⇓P P 23 33 09.1 -0.2
baz=79
COP **Copenhagen** 78.81 333 iP P 23 33 09.0 0.0
COP iS S 23 43 05.3 +0.9
COP pmax pmax
comp=Z,29nm,0.9s,mb5.2
COP **Copenhagen** 78.81 333 iP P 23 33 09.0 0.0
comp=Z,29nm,0.9s,mb5.2
COP iS S 23 43 05.3 +0.9
K20A **Yellowstone Ra** 78.83 45 ⇑P P 23 33 09.0 -0.3
baz=79,SNR=8.0
U12A **Valley of Fire** 78.87 53 ⇓P P 23 33 09.9 +0.2
baz=79
TAU **Tasmania Unive** 78.88 176 PFAKE 23 33 20.0 +11
TAU LR LR
comp=Z,770nm,19.0s,MS5.1
SOFL **Sornfelli, Far** 78.88 346 eP P 23 33 10.1 +0.9
SOFL AMb AMB 23 33 11.1
comp=Z,116nm,1.5s,mb5.6
TLCR 78.91 318 ⇑P P 23 33 10.3 +0.6
TLCR 78.91 318⇑iP P 23 33 10.3 +0.6
T13A **Saint George** 78.93 52 ⇓P P 23 33 10.4 +0.5
baz=79,SNR=14
S14A **Cedar City** 78.95 51 ⇓P P 23 33 10.2 +0.1
baz=79
CCUT **Cedar City** 78.95 52 eP P 23 33 10.5 +0.4
comp=Z,87nm,1.4s,mb5.5
CCUT e pP 23 33 20.7 +0.4
O17A **Robinson Place** 78.96 48 ⇑P P 23 33 10.4 +0.3
baz=79,SNR=24
KWP **Kalwaria Pacla** 78.99 325 iP P 23 33 11.1 +1.1
KWP ePP PP 23 36 09.9 +1.4
KWP eS S 23 43 07.5 +1.1
KWP eScS ScS 23 43 22.8 -6.9
KWP LMZ 00 11 43.6
comp=Z,7μm,17.0s
KWP **Kalwaria Pacla** 78.99 325⇑iP P 23 33 11.1 +1.1
KWP e 23 36 10.0
KWP eS S 23 43 07.5 +1.1
KWP e 23 43 22.8
KWP MLR MLR
comp=Z,7μm,17.0s,MS6.0
KWP **Kalwaria Pacla** 78.99 325 eP P 23 33 10.3 +0.3
comp=Z,226nm,1.2s,mb6.0
KWP ePP PP 23 36 07.6 -0.9
KWP S S 23 43 08.2 +1.8
KWP LR LR
comp=Z,2μm,21.0s,MS5.4
KWP **Kalwaria Pacla** 78.99 325⇑iP P 23 33 10.6 +0.6
M19A **Rock Springs** 79.08 46 ⇓P P 23 33 10.3 -0.5
baz=79
V12A **Nelson** 79.09 54 ⇑P P 23 33 10.7 -0.1
baz=79,SNR=12
MVU **Marysvale** 79.10 50 PFAKE 23 33 20.0 +9.2
MVU LR LR
comp=Z,648nm,19.0s,MS5.0
N18A **Larsen Ranch,** 79.11 47 ⇓P P 23 33 10.6 -0.3
baz=79,SNR=8.6
MSU **Marysvale** 79.11 50 eP P 23 33 12.7 +1.8
MSU e pP 23 33 21.8 +0.7
MSU pmax pmax
comp=Z,70nm,1.2s,mb5.5
MSU **Marysvale** 79.11 50 eP P 23 33 12.7 +1.7
comp=Z,70nm,1.2s,mb5.5
MSU e pP 23 33 21.8 +0.7
GMRC **Granite Mounta** 79.12 55 ⇓P P 23 33 11.1 0.0
baz=79,SNR=10
BUR08 **Bucovina Ar. S** 79.15 322 eP P 23 33 11.1 +0.2
BUR08 ePP PP 23 36 07.1 -2.8
BUR01 **Bucovina Ar. S** 79.16 322 P P 23 33 11.9 +0.9
BURAR **Bucovina Array** 79.16 322 P P 23 33 11.4 +0.4
BURAR **Bucovina Array** 79.16 322⇑iP P 23 33 11.3 +0.3
TMUT **Trail Mountain** 79.23 49 eP P 23 33 12.6 +1.0
comp=Z,80nm,1.4s,mb5.5
TMUT e 23 33 19.7
R15A **Junction** 79.24 50 ⇓P P 23 33 12.4 +0.8
baz=79,SNR=6.5
L20A **Wamsutter** 79.24 46 ⇓P P 23 33 11.7 +0.2
baz=79,SNR=11
CDAG **Cicekdag** 79.25 311⇑iP P 23 33 11.5 -0.2
U13A **Pakoon Wash** 79.25 53 ⇑P P 23 33 11.6 -0.1
baz=79,SNR=26
109C **Camp Elliot, M** 79.27 57 ⇑P P 23 33 11.8 -0.1
baz=79
PFO **Pinyon Flat Ob** 79.28 56 P P 23 33 12.0 0.0
comp=Z,154nm,1.2s,mb5.8,SNR=5.9
PFO **Pinyon Flat Ob** 79.28 56 ⇓P P 23 33 11.4 -0.6
baz=79,SNR=8.7
PFO **Pinyon Flat Ob** 79.28 56 eP P 23 33 11.3 -0.7
PFO e pP 23 33 21.8 -0.3
PFO e 23 36 14.4
PFO pmax pmax
comp=Z,69nm,1.3s,mb5.4
PFO MLR MLR
comp=Z,808nm,20.0s,MS5.1
PFO **Pinyon Flat Ob** 79.28 56 eP P 23 33 11.3 -0.7
comp=Z,69nm,1.3s,mb5.4
PFO e pP 23 33 21.8 -0.3
PFO ePP PP 23 36 14.4 +2.8
PFO LR LR
comp=Z,808nm,20.0s,MS5.1
KUZU **Kuzuini** 79.31 308⇑iP P 23 33 12.9 +0.9
LDFC **Landfair** 79.31 54 eP P 23 33 12.4 +0.3
comp=Z,19nm,0.4s,mb5.4
W12A **Cal Nev Ari** 79.33 54 ⇑P P 23 33 11.7 -0.5
baz=79
MUD **Monsted U'grnd** 79.35 335⇑iP P 23 33 11.5 -0.4
MUD pmax pmax
comp=Z,20nm,1.0s,mb5.0
MUD **Monsted U'grnd** 79.35 335⇑iP P 23 33 11.5 -0.4
comp=Z,20nm,1.0s,mb5.0
O18A **Roosevelt** 79.36 48 ⇓P P 23 33 12.7 +0.4
baz=79,SNR=7.0
BELC **Belle Mtn.** 79.36 56 ⇓P P 23 33 11.8 -0.6
baz=79,SNR=8.1
RGN **Rugen** 79.36 332 eP P 23 33 12.2 +0.2
comp=Z,170nm,1.4s,mb5.8
RGN eS S 23 43 11.5 +1.3
RGN **Rugen** 79.36 332 eP P 23 33 12.3 +0.3
comp=Z,186nm,1.5s,mb5.8
RGN e 23 33 24.7
P17A **Butcher Ranch,** 79.41 49 ⇓P P 23 33 12.8 +0.3
baz=79,SNR=16
T14A **Hurricane** 79.43 52 ⇑P P 23 33 13.0 +0.3
baz=79,SNR=11
RAR **Rarotonga** 79.43 126 PFAKE 23 33 20.0 +7.3
RAR LR LR
comp=Z,2μm,20.0s,MS5.5
N19A **John Jarvie Ra** 79.46 47 ⇓P P 23 33 12.4 -0.3
baz=79,SNR=15
Q16A **Castle Valley** 79.49 49 ⇑P P 23 33 13.3 +0.3
baz=79,SNR=13
S15A **Panguitch** 79.51 51 ⇓P P 23 33 13.6 +0.5
baz=79,SNR=7.8
VRI **Vrincioaia** 79.56 320⇑iP P 23 33 14.0 +0.8
V13A **Grand Canyon W** 79.58 53 ⇓P P 23 33 13.5 0.0
baz=79,SNR=22
TIRR **Tirgusor** 79.60 318 eP P 23 33 13.5 0.0
comp=Z,49nm,1.4s,mb5.2
TIRR **Tirgusor** 79.60 318⇓iP P 23 33 13.3 -0.2
PLOR **Plostina** 79.61 320 P P 23 33 14.4 +0.9
BR131 **Keskin Array S** 79.63 312 eP P 23 33 13.9 +0.2
comp=Z,31nm,0.9s,mb5.2
BR131 ePP PP 23 36 13.9 -0.3
BR131 LR LR
comp=Z,1μm,19.0s,MS5.2
BRTR **Keskin Array B** 79.63 312 P P 23 33 13.5 -0.2
comp=Z,38nm,1.0s,mb5.3,baz=107,slow=3.6,SNR=124
BRTR PKPPKP 00 00 00.4
comp=Z,0.4nm,0.4s,baz=247,slow=7.9,SNR=5.0
BRTR LR LR 00 14 34.5
comp=Z,1μm,18.1s,MS5.3,baz=198,slow=40
M20A **Sweetwater, Wa** 79.66 46 ⇑P P 23 33 14.5 +0.7
baz=80,SNR=18
KOLS **Kolonicke sedl** 79.68 324 eP P 23 33 14.0 +0.2
KOLS pmax pmax
comp=Z,37nm,1.2s,mb5.2
KOLS **Kolonicke sedl** 79.68 324 eP P 23 33 14.0 +0.2
comp=Z,37nm,1.2s,mb5.2
KOLS **Kolonicke sedl** 79.68 324 eP P 23 33 14.0 +0.2
R16A **Teasdale** 79.68 50 ⇓P P 23 33 14.7 +0.7
baz=80,SNR=28
BAR **Barrett** 79.69 57 eP P 23 33 13.5 -0.6
comp=Z,23nm,0.9s,mb5.1
BAR e pP 23 33 23.3 -1.0
MONP **Monument Peak** 79.73 57 ⇑P P 23 33 14.2 -0.2
baz=80
U14A **Mt Trumbull** 79.75 52 ⇑P P 23 33 14.2 -0.3
baz=80,SNR=16
SRU **San Rafael** 79.76 49 ⇓P P 23 33 14.3 -0.2
baz=80
SRU **San Rafael** 79.76 49 eP P 23 33 14.8 +0.3
SRU e pP 23 33 25.3 +0.7
SRU pmax pmax
comp=Z,93nm,0.8s,mb5.8
SRU **San Rafael** 79.76 49 eP P 23 33 14.8 +0.3
comp=Z,93nm,0.8s,mb5.8
SRU e pP 23 33 25.3 +0.6
NEE2 **Needles Airpor** 79.82 54 ⇑P P 23 33 14.5 -0.4
baz=80
STHS **Stebnicka Huta** 79.82 325 eP P 23 33 15.5 +0.9
STHS pmax pmax
comp=Z,31nm,1.2s,mb5.1
STHS **Stebnicka Huta** 79.82 325 eP P 23 33 15.5 +0.9
comp=Z,31nm,1.2s,mb5.1
STHS **Stebnicka Huta** 79.82 325 eP P 23 33 15.5 +0.9
L21A **Rawlins** 79.83 45 ⇑P P 23 33 14.5 -0.2
baz=80,SNR=16
IRM **Iron Mountain** 79.83 55 ⇑P P 23 33 14.8 -0.1
baz=80,SNR=24
O19A **Miners Draw (B** 79.86 47 ⇑P P 23 33 14.8 -0.2
baz=80,SNR=14
UZH **Uzhgorod** 79.88 324 eP P 23 33 15.0 +0.1
UZH e 23 33 18.7
UZH e 23 36 20.0
UZH eS S 23 43 14.0 -1.9
UZH i 23 44 09.0
UZH e 23 48 30.0
T15A **Red Dirt Ranch** 79.90 51 ⇑P P 23 33 15.4 +0.2
baz=80,SNR=12
OJC **Ojcow** 79.91 326 iP P 23 33 15.3 +0.3
OJC esP sP 23 33 31.5 +2.6
OJC ePP PP 23 36 15.5 -0.6
OJC eS S 23 43 16.1 0.0
OJC L 00 13 10.1
comp=Z,3.8nm,17.4s
OJC **Ojcow** 79.91 326⇑iP P 23 33 15.3 +0.3
OJC e*SP sP 23 33 31.5 +2.6
OJC e 23 36 15.5
OJC eS S 23 43 16.1 0.0
OJC MLR MLR
comp=Z,4μm,17.4s,MS5.8
BC3 **Big Chuckw Mtn** 79.93 56 ⇓P P 23 33 15.2 -0.2
baz=80,SNR=15
Q18A **Rafter H Ranch** 80.01 49 ⇑P P 23 33 15.5 -0.3
baz=80,SNR=9.7
N20A **Spence Gulch,** 80.03 46 ⇓P P 23 33 16.4 +0.5
baz=80,SNR=36
BBAL **Bala** 80.06 312⇑iP P 23 33 16.0 0.0
M21A **Separation Pea** 80.06 45 ⇓P P 23 33 15.8 -0.2
baz=80,SNR=8.9
ULM **Lac du Bonnet** 80.06 33 P P 23 33 15.3 -0.5
comp=Z,6.7nm,0.9s,mb4.5,baz=311,slow=6.0,SNR=11
ULM LR LR 00 06 25.1
comp=Z,709nm,21.6s,MS5.0,baz=236,slow=34
ULM **Lac du Bonnet** 80.06 33 eP P 23 33 16.2 +0.3
comp=Z,28nm,1.0s,mb5.2
ULM e pP 23 33 24.7 -1.3
ULM ePP PP 23 36 21.3 +3.9
ULM LR LR
comp=Z,1μm,19.0s,MS5.2
R17A **Hanksville Air** 80.08 50 ⇑P P 23 33 15.9 -0.3
baz=80
DVTC **Desert V Tower** 80.09 57 ⇑P P 23 33 16.1 -0.2
baz=80
RWWY **Rawlins** 80.10 45 eP P 23 33 16.5 +0.3
comp=Z,48nm,0.9s,mb5.4
RWWY e pP 23 33 25.9 -0.6
W13A **Hualapai Mount** 80.10 54 ⇓P P 23 33 16.2 -0.1
baz=80,SNR=8.9
TRPA **Tarpa** 80.11 324⇑iP P 23 33 16.6 +0.4
SWSC **Sam W. Stewart** 80.12 56 ⇓P P 23 33 16.1 -0.5
baz=80
MLR **Muntele Rosu** 80.22 320 P P 23 33 17.2 +0.4
comp=Z,32nm,1.2s,mb5.1,baz=21,slow=4.1,SNR=28
MLR **Muntele Rosu** 80.22 320 P P 23 33 17.2 +0.4
MLR **Muntele Rosu** 80.22 320⇑iP P 23 33 16.8 0.0
NIE **Niedzica** 80.25 326 eP P 23 33 17.5 +0.6
RSSD **Black Hills** 80.28 42 eP P 23 33 17.1 0.0
RSSD e pP 23 33 26.8 -0.5
RSSD pmax pmax
comp=Z,30nm,1.0s,mb5.2
RSSD MLR MLR
comp=Z,691nm,22.0s,MS5.0
RSSD **Black Hills** 80.28 42 eP P 23 33 17.1 -0.1
comp=Z,30nm,1.0s,mb5.2
RSSD e pP 23 33 26.8 -0.6
RSSD LR LR
comp=Z,691nm,22.0s,MS5.0
V14A **Boquillas Ranc** 80.28 53 ⇑P P 23 33 17.7 +0.4
baz=80,SNR=38
U15A **North Rim** 80.32 52 ⇓P P 23 33 18.0 +0.5
baz=80,SNR=20
P19A **Cripple Cowboy** 80.37 48 ⇑P P 23 33 17.6 -0.1
baz=80,SNR=38
YAYL **Yayladag** 80.37 308⇑iP P 23 33 17.5 -0.3
PDMCI **Parker Dam,Lak** 80.41 55 ⇓P P 23 33 18.0 0.0
baz=80,SNR=5.3
X13A **Yucca** 80.44 54 ⇑P P 23 33 18.1 -0.1
baz=80,SNR=18
GULE **Gulek** 80.45 309⇑iP P 23 33 19.1 +0.9
T16A **Glen Canyon Da** 80.47 51 ⇓P P 23 33 18.0 -0.3
baz=80
O20A **White River Ci** 80.49 47 ⇓P P 23 33 18.1 -0.2
baz=80,SNR=9.5
Y12C **Blythe** 80.49 55 ⇑P P 23 33 18.1 -0.4
baz=80,SNR=10
S17A **Black Ridge (B** 80.51 50 ⇓P P 23 33 18.1 -0.4
baz=80,SNR=18
N21A **Black Mountain** 80.51 46 ⇑P P 23 33 18.3 -0.2
baz=80
W14A **Seligman** 80.55 53 ⇓P P 23 33 18.8 0.0
baz=80,SNR=25
R18A **Canyonlands Na** 80.60 49 ⇑P P 23 33 18.7 -0.3
baz=80,SNR=12
M22A **Cedar Creek Ra** 80.63 45 ⇑P P 23 33 19.0 -0.1
baz=80,SNR=11
GLA **Glamis** 80.71 56 ⇓P P 23 33 19.3 -0.4
baz=81,SNR=5.8
GLA **Glamis** 80.71 56 P P 23 33 20.2 +0.5
GLA pmax pmax
comp=Z,63nm,1.0s,mb5.5
GLA **Glamis** 80.71 56 eP P 23 33 21.3 +1.6
comp=Z,63nm,1.0s,mb5.5
GLA e pP 23 33 29.8 0.0
RAC **Raciborz** 80.72 327 eP P 23 33 20.0 +0.6
VOIR 80.72 320 P P 23 33 20.3 +0.8
VOIR 80.72 320⇑iP P 23 33 20.6 +1.1
V15A **Kaibab Nationa** 80.77 52 ⇑P P 23 33 20.1 +0.2
baz=81,SNR=20
RUE **Ruedersdorf** 80.77 331 eP P 23 33 19.7 +0.1
comp=Z,140nm,1.4s,mb5.7
RUE eS S 23 43 25.1 0.0
RUE **Ruedersdorf** 80.77 331 eP P 23 33 19.2 -0.4
comp=Z,32nm,0.8s,mb5.3
P20A **De Beque** 80.80 47 ⇓P P 23 33 20.3 +0.3
baz=81
KECS **Kecovo** 80.84 325 eP P 23 33 20.3 +0.3
KECS pmax pmax
comp=Z,13nm,1.2s,mb4.7
KECS **Kecovo** 80.84 325 eP P 23 33 20.3 +0.3
comp=Z,13nm,1.2s,mb4.8
KECS **Kecovo** 80.84 325 eP P 23 33 20.3 +0.3
O21A **Pagoda** 80.89 46 ⇑P P 23 33 20.7 +0.1
baz=81
T17A **Navajo Res., N** 80.90 51 ⇑P P 23 33 20.3 -0.3
baz=81,SNR=7.9
Y13A **Salome** 80.91 55 ⇓P P 23 33 20.1 -0.6
baz=81
OKC **Ostrava-Krasne** 80.92 327⇑iP P 23 33 20.6 +0.1
OKC e*PP pP 23 33 35.3 +4.6
OKC e 23 36 25.5
OKC eS S 23 43 28.3 +1.6
OKC MLR MLR
comp=Z,2μm,15.5s,MS5.6
OKC **Ostrava-Krasne** 80.92 327⇑iP P 23 33 20.6 +0.1
OKC ex x 23 33 35.3
OKC ePP PP 23 36 25.5 +1.0
OKC eS S 23 43 28.3 +1.6
OKC AMS AMS 00 14 30.0
comp=Z,2μm,15.5s
BSEG **Bad Segeberg** 80.95 333 eP P 23 33 20.6 +0.1
comp=Z,91nm,1.2s,mb5.6
BSEG eS S 23 43 26.2 -0.7
DRGR 80.96 323 P P 23 33 21.1 +0.3
DRGR 80.96 323⇓iP P 23 33 20.9 +0.1
S18A **Hurst Farm, Bl** 80.97 50 ⇑P P 23 33 20.8 -0.2
baz=81,SNR=17
KSP **Ksiaz** 80.98 328 iP P 23 33 21.0 +0.2
KSP ePP PP 23 36 25.4 +0.4
KSP eS S 23 43 28.6 +1.3
KSP eScS ScS 23 43 44.6 -1.3
KSP LMZ 00 13 09.8
comp=Z,4μm,18.1s
KSP **Ksiaz** 80.98 328⇑eP P 23 33 20.8 +0.1
KSP e*PP pP 23 33 37.0 +6.1
KSP e 23 36 23.0
KSP eS S 23 43 27.0 -0.3
KSP MLR MLR
comp=Z,5μm,18.1s,MS5.9
PRD **Provadia** 80.98 318 P P 23 33 21.3 +0.4
R19A **Curley Farm, L** 81.05 49 ⇓P P 23 33 21.4 0.0
baz=81,SNR=14
LIKS **Likavka** 81.06 326 eP P 23 33 22.7 +1.5
LIKS pmax pmax
comp=Z,40nm,1.0s,mb5.3
LIKS **Likavka** 81.06 326 eP P 23 33 22.7 +1.5
comp=Z,40nm,1.0s,mb5.3
LIKS **Likavka** 81.06 326 eP P 23 33 22.7 +1.5
W15A **Williams** 81.10 53 ⇓P P 23 33 22.3 +0.6
baz=81,SNR=8.4
N22A **Wattenberg Ran** 81.10 46 ⇓P P 23 33 21.9 +0.3
baz=81,SNR=19
X14A **Yava** 81.13 54 ⇓P P 23 33 22.2 +0.4
baz=81,SNR=17
112A **Yuma** 81.19 56 ⇑P P 23 33 21.9 -0.4
baz=81
Q20A **Ridgley Place,** 81.21 48 ⇓P P 23 33 22.5 +0.3
baz=81,SNR=16
MORC **Moravsky Berou** 81.23 327 P P 23 33 22.5 +0.4
MORC **Moravsky Berou** 81.23 327 eP P 23 33 22.1 0.0
comp=Z,50nm,1.1s,mb5.4
MORC e 23 33 39.0
MORC **Moravsky Berou** 81.23 327⇑iP P 23 33 22.4 +0.3
U16A **Tuba City** 81.23 52 ⇑P P 23 33 22.5 +0.1
baz=81,SNR=17
U17A **Shonto** 81.24 51 ⇓P P 23 33 22.5 +0.1
baz=81,SNR=15
KDHN **Kadinhani** 81.31 312⇑iP P 23 33 22.4 -0.4
DPC **Dobruska-Polom** 81.33 328⇑iP P 23 33 23.2 +0.6
DPC e*PP pP 23 33 40.5 +7.7
DPC e 23 36 27.0
DPC eS S 23 43 31.9 +0.9
DPC MLR MLR
comp=Z,3μm,14.6s,MS5.7
DPC **Dobruska-Polom** 81.33 328⇑iP P 23 33 23.2 +0.6
DPC ex x 23 33 40.5
DPC ePP PP 23 36 27.0 -0.9
DPC eS S 23 43 31.9 +0.9
DPC AMS AMS 00 15 40.0
comp=Z,3μm,14.6s
PHWY **Pilot Hill** 81.35 45 eP P 23 33 22.5 -0.4
comp=Z,55nm,1.4s,mb5.3
Y14A **Wickenburg** 81.38 54 ⇓P P 23 33 22.8 -0.4
baz=81,SNR=15
T18A **Mexican Hat** 81.40 50 ⇓P P 23 33 22.9 -0.3
baz=81,SNR=19
Z13A **Yuma Proving G** 81.40 55 ⇑P P 23 33 23.1 -0.2
baz=81,SNR=26
ESKT **Eskisehir** 81.43 313⇑iP P 23 33 22.9 -0.5
BORA **Eskisehir** 81.43 314⇑iP P 23 33 23.1 -0.3
WUAZ **Wupatki** 81.46 52 ⇑P P 23 33 23.7 +0.1
baz=81,SNR=13
WUAZ **Wupatki** 81.46 52 eP P 23 33 25.9 +2.3
comp=Z,59nm,1.0s,mb5.5
WUAZ e 23 33 33.1
WUAZ LR LR
comp=Z,774nm,19.0s,MS5.1
S19A **Harvey Farm, M** 81.47 49 ⇑P P 23 33 23.3 -0.3
baz=81,SNR=25
AGMN **Agassiz Refuge** 81.48 35 PFAKE 23 33 30.0 +6.5
AGMN LR LR
comp=Z,750nm,19.0s,MS5.1
PSZ **Piszkesteto** 81.52 325 eP P 23 33 24.0 +0.3
PSZ pmax pmax
comp=Z,160nm,1.5s,mb5.7
PSZ MLR MLR
comp=Z,4μm,19.0s,MS5.8
PSZ **Piszkesteto** 81.52 325 eP P 23 33 24.0 +0.3
comp=Z,160nm,1.5s,mb5.7
PSZ LR LR
comp=Z,4μm,19.0s,MS5.8
PSZ **Piszkesteto** 81.52 325⇑eP P 23 33 24.3 +0.6
PSZ **Piszkesteto** 81.52 325⇑iP P 23 33 24.1 +0.4

X15A Humboldt 81.55 53 ⇑P P 23 33 24.3 +0.2
baz=81,SNR=16
VYHS Vyhne 81.59 326 *eP* **P 23 33 24.5 +0.5**
VYHS pmax pmax
comp=Z,28nm,1.2s,mb5.1
VYHS Vyhne 81.59 326 *eP* **P 23 33 24.5 +0.5**
comp=Z,28nm,1.2s,mb5.1
VYHS Vyhne 81.59 326 *eP* **P 23 33 24.5 +0.5**
113A Mohawk Valley, 81.59 56 ⇑P **P 23 33 23.9 -0.5**
baz=81
W16A Flagstaff 81.62 53 ⇓P **P 23 33 24.6 +0.1**
baz=81
R20A Redvale 81.65 49 ⇓P **P 23 33 24.7 +0.2**
baz=82,SNR=22
Q21A Lamborn Mesa, 81.72 48 ⇑P **P 23 33 24.6 -0.3**
baz=82
ELBA Catalca 81.77 316 ⇑*iP* **P 23 33 25.0 -0.1**
V17A Tonalea, Kykot 81.77 52 ⇓P **P 23 33 25.6 +0.3**
baz=82,SNR=47
Z14A Wintersburg 81.77 55 ⇑P **P 23 33 24.9 -0.4**
baz=82
Y15A Casa Rosa Ranc 81.81 54 ⇓P **P 23 33 25.5 0.0**
baz=82,SNR=18
U18A Rough Rock, Ch 81.85 51 ⇓P **P 23 33 25.8 +0.2**
baz=82,SNR=6.7
SMCO Snowmass 81.85 47 *eP* **P 23 33 26.1 +0.5**
comp=Z,40nm,1.0s,mb5.3
SMCO *e* pP 23 33 35.6 -0.2
GZR Gura Zlata 81.91 321 ⇓P **P 23 33 26.2 +0.4**
GZR Gura Zlata 81.91 321 ⇓*iP* **P 23 33 26.1 +0.3**
JMB Yambol 81.92 317 P **P 23 33 26.8 +0.9**
JMB Yambol 81.92 317 P **P 23 33 26.7 +0.8**
BRG Berggiesshubel 81.93 330 *eP* **P 23 33 25.7 -0.1**
comp=Z,48nm,1.2s,mb5.3
BRG *eS* S 23 43 36.3 -0.9
BRG Berggiesshubel 81.93 330 ⇑*iP* **P 23 33 26.8 +1.0**
comp=Z,48nm,1.2s,mb5.3
BRG *i* 23 33 42.5
comp=Z,56nm,1.3s
BRG *i* PP PP 23 36 25.0 -7.8
comp=Z,16nm,1.2s
BRG S S 23 43 33.0 -4.2
BRG
comp=N,3μm,13.7s
BRG
comp=E,3μm,17.6s
BRG
comp=Z,3μm,14.7s
BRG Berggiesshubel 81.93 330 ⇑*iP* **P 23 33 26.8 +1.0**
BRG *i* 23 33 42.5
BRG S S 23 43 33.0 -4.2
BRG pmax pmax
comp=Z,29nm,1.2s,mb5.1
BRG MLR MLR
comp=N,2μm,13.7s,MS5.7
BRG MLR MLR
comp=E,2μm,17.6s,MS5.7
BRG MLR MLR
comp=Z,2μm,14.7s,MS5.6
PVCC Panska Ves 81.94 329 ⇑*iP* **P 23 33 26.2 +0.4**
PVCC *e**PP pP 23 33 42.4 +6.4
PVCC *eS* S 23 43 38.5 +1.2
PVCC MLR MLR
comp=Z,4μm,15.2s,MS5.9
PVCC Panska Ves 81.94 329 ⇑*iP* **P 23 33 26.2 +0.4**
PVCC *ex* x 23 33 42.4
PVCC *eS* S 23 43 38.5 +1.2
PVCC AMS AMS 00 14 50.0
comp=Z,4μm,15.2s
CLL Collm 81.98 330 *eP* **P 23 33 25.6 -0.4**
comp=Z,61nm,1.0s,mb5.5
CLL Collm 81.98 330 ⇑*iP* **P 23 33 25.5 -0.5**
CLL *i* 23 33 42.2
CLL *e* 23 36 31.0
CLL *eS* S 23 43 36.0 -1.7
CLL pmax pmax
comp=Z,61nm,1.0s,mb5.5
CLL Collm 81.98 330 ⇑*iP* **P 23 33 25.5 -0.5**
comp=Z,61nm,1.0s,mb5.5
CLL *i* 23 33 42.2
CLL *i* 23 33 45.2
CLL *i* 23 33 50.4
CLL *e*PP PP 23 36 31.0 -2.2
CLL *eS* S 23 43 36.0 -1.7
CLL Collm 81.98 330 ⇑*iP* **P 23 33 25.5 -0.5**
comp=Z,61nm,1.0s,mb5.5
CLL LmH 23 12 00.0
comp=N,2μm,19.5s
CLL LmH 23 12 00.0
comp=E,3μm,20.0s
CLL *i* 23 33 42.2
CLL *i* 23 33 45.2
CLL *e*PP PP 23 36 31.0 -2.2
CLL *i* pPP 23 36 39.4
CLL *e*PPP 23 38 25.0
CLL *e*PPPP 23 39 48.0
CLL *eS* S 23 43 36.0 -1.7
comp=N,400nm,20.1s
CLL *eS* S 23 43 36.0 -1.7
comp=E,700nm,20.9s
CLL *e*PS 23 44 32.0
CLL *eS*S SS 23 48 59.0 +3.5
CLL *e* 23 49 59.0
CLL *e*SSS 23 52 24.0
CLL *e*SSSS 23 55 24.0
MVH1 Achvaich 81.99 342 *eP* **P 23 33 25.9 -0.1**
VRAC Vranov 81.99 327 P **P 23 33 26.6 +0.5**
VRAC pmax pmax
comp=Z,28nm,1.0s
VRAC Vranov 81.99 327 P **P 23 33 26.6 +0.5**
comp=Z,28nm,1.0s,mb5.1,baz=51,slow=4.9,SNR=67
VRAC Vranov 81.99 327 P **P 23 33 26.7 +0.5**
VRAC Vranov 81.99 327 ⇑*iP* **P 23 33 26.7 +0.6**
ULDT Uludag 82.02 314 ⇑*iP* **P 23 33 26.5 0.0**
R21A Cimarron 82.03 48 ⇓P **P 23 33 27.0 +0.4**
baz=82,SNR=17
Q22A Crested Butte, 82.09 47 ⇑P **P 23 33 27.4 +0.5**
baz=82,SNR=26
X16A Lo Mia Camp, P 82.10 53 ⇑P **P 23 33 27.1 +0.1**
baz=82,SNR=12
T19A Beclabito 82.12 50 ⇑P **P 23 33 27.5 +0.4**
baz=82,SNR=12
W17A Winslow 82.16 52 ⇑P **P 23 33 27.3 0.0**
baz=82
NRDL Niedersach Rie 82.17 333 *eP* **P 23 33 26.7 -0.3**
comp=Z,36nm,1.1s,mb5.2
114A Black Gap (USA 82.19 55 ⇑P **P 23 33 27.5 0.0**
baz=82,SNR=8.3
MVCO Mesa Verde 82.20 49 ⇑P **P 23 33 27.9 +0.4**
baz=82,SNR=10
MVCO Mesa Verde 82.20 49 *eP* **P 23 33 28.6 +1.1**
comp=Z,46nm,0.9s,mb5.4
MVCO *e* pP 23 33 38.4 +0.7
MVCO LR LR
comp=Z,668nm,19.0s,MS5.0
MME1 Meikle Cairn 82.23 342 *eP* **P 23 33 26.9 -0.3**
BUD Budapest 82.24 325 ⇑*eP* **P 23 33 27.6 +0.1**
ISCO Idaho Springs 82.25 46 *eP* **P 23 33 28.3 +0.6**
ISCO *e* pP 23 33 38.4 +0.5
ISCO pmax pmax
comp=Z,22nm,0.8s,mb5.1
ISCO MLR MLR
comp=Z,729nm,20.0s,MS5.0
ISCO Idaho Springs 82.25 46 *eP* **P 23 33 28.3 +0.6**
comp=Z,22nm,0.8s,mb5.2
ISCO *e* pP 23 33 38.4 +0.6
ISCO LR LR
comp=Z,729nm,20.0s,MS5.0
V18A Ganado 82.26 51 ⇑P **P 23 33 28.0 +0.2**
baz=82
BZS Buzias 82.33 322 ⇓P **P 23 33 27.8 -0.2**
BZS Buzias 82.33 322 ⇓*iP* **P 23 33 27.8 -0.2**
Z15A Gila River Ind 82.33 54 ⇑P **P 23 33 28.5 +0.2**
baz=82
S21A Coal Bank Pass 82.34 49 ⇑P **P 23 33 28.7 +0.5**
baz=82,SNR=12
PRA Prague 82.34 329 ⇑P **P 23 33 28.0 0.0**
PRA *ex* x 23 33 46.0
PRA *ex* x 23 35 58.0
PRA S S 23 43 44.0 +2.6
PRA AMS AMS 00 14 25.0
U19A Dine' College, 82.34 50 ⇑P **P 23 33 28.4 +0.2**
baz=82,SNR=8.9
PRU Pruhonice 82.36 329 ⇑*iP* **P 23 33 28.6 +0.5**
PRU *e**PP pP 23 33 45.9 +7.6
PRU *e* 23 36 35.7
PRU *eS* S 23 43 43.1 +1.5
PRU MLR MLR
comp=Z,3μm,15.4s,MS5.8
PRU Pruhonice 82.36 329 ⇑*iP* **P 23 33 28.6 +0.5**
PRU *ex* x 23 33 45.9
PRU *e*PP PP 23 36 35.7 -0.6
PRU *eS* S 23 43 43.1 +1.5
PRU AMS AMS 00 18 00.0
comp=Z,3μm,15.4s
Y16A Circle Bar Ran 82.41 53 ⇓P **P 23 33 28.6 0.0**
baz=82,SNR=8.9
TIM Timisoara 82.44 323 P **P 23 33 30.2 +1.6**
MDO Dochfour 82.47 342 *eP* **P 23 33 28.3 -0.1**
TREC Trest 82.48 328 ⇑*iP* **P 23 33 28.9 +0.2**
TREC *e**PP pP 23 33 46.3 +7.4
TREC *e* 23 36 39.2
TREC MLR MLR
comp=Z,4μm,15.4s,MS5.9
TREC Trest 82.48 328 ⇑*iP* **P 23 33 28.9 +0.2**
TREC *ex* x 23 33 46.3
TREC *e*PP PP 23 36 39.2 +1.8
TREC AMS AMS 00 14 30.0
comp=Z,4μm,15.4s
GDZ Gediz 82.51 313 ⇑*iP* **P 23 33 28.8 -0.3**
X17A Forest Lakes 82.56 53 ⇓P **P 23 33 29.9 +0.5**
baz=82,SNR=9.3
CLZ Clausthal 82.59 332 *eP* **P 23 33 29.4 +0.2**
comp=Z,87nm,1.2s,mb5.7
CLZ *eS* S 23 43 41.9 -2.0
CLZ Clausthal 82.59 332 *eP* **P 23 33 29.4 +0.2**
CLZ *eS* S 23 43 41.9 -2.0
CLZ pmax pmax
comp=Z,87nm,1.2s,mb5.7
R22A Saguache, Gunn 82.60 48 ⇑P **P 23 33 30.2 +0.6**
baz=82,SNR=12
KAC Achnashellach 82.64 343 *eP* **P 23 33 29.7 +0.3**
115A Sonoran Desert 82.65 55 ⇑P **P 23 33 29.7 -0.3**
baz=82,SNR=5.8
ISP Isparta 82.71 312 *eP* **P 23 33 30.2 +0.1**
ISP MLR MLR
comp=Z,1μm,19.0s,MS5.4
U20A Newcomb 82.72 50 ⇑P **P 23 33 29.9 -0.3**
baz=82
214A Organ Pipe Nat 82.72 56 ⇓P **P 23 33 30.1 -0.2**
baz=83,SNR=8.0
DURS Dursunbey 82.76 314 ⇑*iP* **P 23 33 30.3 -0.1**
DIM Dimitrovgrad 82.77 318 P **P 23 33 31.0 +0.6**
SART Tekirdag 82.78 316 ⇑*iP* **P 23 33 30.6 +0.2**
Z16A Peralta Trail, 82.78 54 ⇑P **P 23 33 30.2 -0.4**
baz=83
CSS Prodhromos 82.81 308 *eP* **P 23 33 30.6 -0.2**
comp=Z,32nm,0.8s,mb5.4
CSS LR LR
comp=Z,2μm,21.0s,MS5.4
V19A Window Rock 82.81 51 ⇑P **P 23 33 30.9 +0.2**
baz=83
SNZO South Karori 82.82 156 PFAKE 23 33 40.0 +10
SNZO LR LR
comp=Z,1μm,19.0s,MS5.3
KPL Plockton 82.87 343 ⇑*eP* **P 23 33 30.7 +0.1**
KPL AMb AMB 23 33 31.9
comp=Z,83nm,1.3s,mb5.6
TANN Tannenbergstha 82.89 330 *eP* **P 23 33 30.8 0.0**
comp=Z,33nm,1.4s,mb5.2
WERD Werda 82.92 330 *eP* **P 23 33 31.0 0.0**
comp=Z,34nm,1.2s,mb5.2
KSB Sheil Bridge 82.93 343 *eP* **P 23 33 31.1 +0.2**
Y17A Roosevelt 82.94 53 ⇓P **P 23 33 31.0 -0.4**
baz=83,SNR=7.1
GUNZ Gunzen 82.98 330 *eP* **P 23 33 31.3 0.0**
comp=Z,45nm,1.2s,mb5.4
W19A Sanders 82.98 51 ⇑P **P 23 33 32.1 +0.6**
baz=83
DEMI Demirci 82.99 314 ⇑*iP* **P 23 33 30.6 -0.9**
X18A Snowflake 82.99 52 ⇑P **P 23 33 31.5 -0.2**
baz=83
KSK Scoval 83.00 343 *eP* **P 23 33 31.4 +0.2**
WERN Wernitzgruen 83.02 330 *eP* **P 23 33 31.6 +0.1**
comp=Z,153nm,2.1s,mb5.7
NKC Novy Kostel 83.03 330 ⇑*iP* **P 23 33 31.5 -0.1**
NKC *eS* S 23 43 49.7 +1.2
NKC MLR MLR
comp=Z,3μm,14.7s,MS5.8
NKC Novy Kostel 83.03 330 ⇑*iP* **P 23 33 31.5 -0.1**
NKC *eS* S 23 43 49.7 +1.2
NKC AMS AMS 00 15 30.0
comp=Z,3μm,14.7s
MOX Moxa 83.05 331 *eP* **P 23 33 31.4 -0.2**
comp=Z,70nm,1.7s,mb5.4
MOX *e* 23 33 48.9
comp=Z,73nm,1.8s
MOX *eS* S 23 43 51.0 +2.4
MOX
comp=Z,2μm,18.0s
MOX Moxa 83.05 331 *eP* **P 23 33 31.5 -0.1**
comp=Z,44nm,1.3s,mb5.3
MOX Moxa 83.05 331 *eP* **P 23 33 31.4 -0.2**
MOX *e* 23 33 48.9
MOX *eS* S 23 43 51.0 +2.4
116A Eloy 83.09 55 ⇑P **P 23 33 32.0 -0.1**
baz=83
KDZ Kurdzhali 83.11 317 P **P 23 33 33.2 +1.1**
V20A Brimhall 83.12 50 ⇑P **P 23 33 32.2 -0.1**
baz=83,SNR=5.9
WIT Witteveen 83.15 334 ⇑*iP* **P 23 33 32.5 +0.4**
comp=Z,320nm,1.1s,mb6.3
BALY Balya 83.16 315 ⇑*iP* **P 23 33 32.2 -0.3**
PGB Panagyurishte 83.17 319 P **P 23 33 33.0 +0.6**
IBBN Ibbenburen 83.18 334 *eP* **P 23 33 31.9 -0.4**
comp=Z,66nm,1.1s,mb5.6
IBBN *eS* S 23 43 47.8 -2.1
PLD Plovdiv 83.18 318 P **P 23 33 32.5 0.0**
PLD Plovdiv 83.18 318 P **P 23 33 32.5 0.0**
ALN Alexandroupoli 83.27 317 *eP* **P 23 33 33.0 0.0**
ALN Alexandroupoli 83.27 317 P **P 23 33 32.5 -0.5**
KAR1 Arisaig 83.29 343 *eP* **P 23 33 32.6 -0.2**
T22A Edith 83.30 49 ⇓P **P 23 33 33.2 0.0**
baz=83,SNR=19
EBH Black Hill 83.31 341 *eP* **P 23 33 33.1 +0.2**
PKSM Moragy 83.34 324 P **P 23 33 33.4 +0.1**
PKSM Moragy 83.34 324 ⇑*iP* **P 23 33 32.7 -0.6**
CONA Conrad Observa 83.35 327 ⇓*iP* **P 23 33 33.7 +0.4**
comp=Z,76nm,1.4s,mb5.5,SNR=58
KORT Korkueli 83.36 311 ⇑*iP* **P 23 33 32.3 -1.2**
ESY Stoneypath 83.37 341 *eP* **P 23 33 32.1 -1.1**
RDO Rodhopi 83.39 317 *eP* **P 23 33 33.8 +0.2**
RDO Rodhopi 83.39 317 P **P 23 33 33.4 -0.2**
Y18A Canyon Day Jun 83.41 53 ⇓P **P 23 33 34.2 +0.3**
baz=83,SNR=7.6
KHC Kasperske Hory 83.42 329 ⇑*iP* **P 23 33 33.6 0.0**
KHC *e* 23 33 39.0
KHC *e**PP pP 23 33 51.2 +7.4
KHC *e* 23 36 43.3
KHC *eS* S 23 43 54.3 +1.9
KHC MLR MLR
comp=Z,4μm,15.1s,MS5.9
KHC Kasperske Hory 83.42 329 *eP* **P 23 33 33.7 +0.1**
comp=Z,47nm,1.0s,mb5.5
KHC PP PP 23 36 45.7 +0.6
KHC Kasperske Hory 83.42 329 ⇑*iP* **P 23 33 33.6 0.0**
KHC *e*pP pP 23 33 39.0 -4.8
KHC *ex* x 23 33 51.2
KHC *e*PP PP 23 36 43.3 -1.7
KHC *eS* S 23 43 54.3 +1.9
KHC AMS AMS 00 15 30.0
comp=Z,4μm,15.1s
Z17A San Carlos Hig 83.43 53 ⇓P **P 23 33 34.2 +0.2**
baz=83
MANT Manisa 83.45 313 ⇑*iP* **P 23 33 34.0 0.0**
RZN Rozhen 83.46 318 P **P 23 33 34.9 +0.9**
X19A St. Johns 83.48 52 ⇑P **P 23 33 34.2 +0.1**
baz=83,SNR=8.2
ROTZ Rotzenmuhle 83.49 330 *eP* **P 23 33 34.5 +0.6**
comp=Z,141nm,1.6s,mb5.8
ROTZ *eS* S 23 43 54.3 +1.1
OGNE Ogallala 83.51 43 PFAKE 23 33 50.0 +16
OGNE LR LR
comp=Z,632nm,21.0s,MS5.0
W20A Ramah 83.53 51 ⇓P **P 23 33 34.1 -0.3**
baz=83
UBBA Unterbreizbach 83.54 332 *eP* **P 23 33 34.0 -0.2**
comp=Z,44nm,1.6s,mb5.3
EAB Aberfoyle 83.58 342 ⇑*eP* **P 23 33 33.7 -0.5**
GEC2 GERESS Array S 83.59 328 *eP* **P 23 33 34.2 -0.2**
comp=Z,33nm,1.1s,mb5.4
GEC2 GERESS Array S 83.59 328 *eP* **P 23 33 34.2 -0.2**
GEC2 pmax pmax
comp=Z,33nm,1.1s,mb5.4
GERES GERESS Array B 83.59 328 P **P 23 33 34.2 -0.2**
GERES 23 36 50.3
GERES GERESS Array B 83.59 328 P **P 23 33 34.2 -0.2**
comp=Z,12nm,0.8s,mb5.0,baz=36,slow=5.0,SNR=102
GERES PP PP 23 36 50.3 +3.9
comp=Z,1.5nm,0.8s,baz=52,slow=8.6,SNR=3.9
GERES LR LR 00 15 42.1
comp=Z,3μm,18.1s,MS5.7,baz=20,slow=39
216A Three Points, 83.60 55 ⇓P **P 23 33 34.8 0.0**
baz=83,SNR=7.7
AKHS Akhisar 83.62 314 ⇑*iP* **P 23 33 34.6 -0.3**
V21A Milan 83.63 50 ⇓P **P 23 33 34.8 -0.1**
baz=83,SNR=5.3
VTS Vitosha 83.64 319 P **P 23 33 35.4 +0.5**
VTS Vitosha 83.64 319 P **P 23 33 35.5 +0.6**
EAU Auchinoon 83.65 341 *eP* **P 23 33 34.7 +0.1**
SDCO Great Sand Dun 83.66 47 *eP* **P 23 33 35.9 +0.8**
comp=Z,34nm,1.1s,mb5.4
SDCO *e* pP 23 33 45.3 0.0
SDCO LR LR
comp=Z,782nm,19.0s,MS5.1
DNZL Cakiroluk 83.69 313 ⇑*iP* **P 23 33 34.8 -0.4**
WET Wettzell 83.70 329 *eP* **P 23 33 35.2 +0.2**
comp=Z,100nm,1.8s,mb5.6
WET *eS* S 23 43 55.2 -0.1
WET Wettzell 83.70 329 *eP* **P 23 33 35.2 +0.2**
WET *eS* S 23 43 55.2 -0.1
WET pmax pmax
comp=Z,100nm,1.8s,mb5.6
EYMN Ely 83.70 33 *eP* **P 23 33 33.9 -1.2**
comp=Z,49nm,1.0s,mb5.6
EYMN *e* pP 23 33 44.2 -1.1
EYMN LR LR
comp=Z,1μm,20.0s,MS5.2
117A Oracle 83.71 54 ⇑P **P 23 33 35.1 -0.3**
baz=84,SNR=9.2
Y19A Nutrioso 83.80 52 ⇓P **P 23 33 36.3 +0.4**
baz=84,SNR=8.7
WTSB Winterswijk 83.80 334 ⇑*iP* **P 23 33 35.1 -0.4**
comp=Z,41nm,1.3s,mb5.4
TUC Tucson 83.85 54 *eP* **P 23 33 36.6 +0.5**
TUC *e* pP 23 33 46.2 -0.1
TUC pmax pmax
comp=Z,45nm,1.4s,mb5.4
TUC MLR MLR
comp=Z,2μm,20.0s,MS5.4
TUC Tucson 83.85 54 *eP* **P 23 33 36.6 +0.5**
comp=Z,45nm,1.4s,mb5.4
TUC *e* pP 23 33 46.2 -0.1
TUC LR LR
comp=Z,2μm,20.0s,MS5.4
Z18A Geronimo 83.85 53 ⇓P **P 23 33 36.2 +0.1**
baz=84
GRA1 Grafenberg Arr 83.95 330 *eP* **P 23 33 36.7 +0.4**
comp=Z,186nm,1.3s,mb6.1
GRA1 *eS* S 23 43 57.8 0.0
GRF Grafenberg Arr 83.95 330 *eP* **P 23 33 36.7 +0.4**
comp=Z,186nm,1.3s,mb6.1
GRF *eS* S 23 43 57.8 0.0
GRF Grafenberg Arr 83.95 330 *eL* 00 18 26.8
comp=Z,3μm,18.2s
GRF Grafenberg Arr 83.95 330 *eP* **P 23 33 36.7 +0.4**
GRF *eS* S 23 43 57.8 0.0
GRF pmax pmax
comp=Z,186nm,1.3s,mb6.1
GRF MLR MLR
comp=Z,3μm,18.2s,MS5.7
GRF Grafenberg Arr 83.95 330 *eP* **P 23 33 36.7 +0.4**
comp=Z,186nm,1.3s,mb6.1
GRF *eS* S 23 43 57.8 0.0
GRF LR LR
comp=Z,3μm,18.2s,MS5.7
PGBU Glenifferbraes 83.95 342 ⇑*eP* **P 23 33 35.8 -0.4**
PGBU AMb AMB 23 33 37.4
comp=Z,98nm,1.4s,mb5.7
PGBU Glenifferbraes 83.95 342 P **P 23 33 35.8 -0.4**
PGBU AMb AMB 23 33 37.4
comp=Z,98nm,1.4s,mb5.7
BOZC Bozcaada 83.98 316 ⇑*iP* **P 23 33 36.3 -0.3**
PPT Papeete 84.00 117 *ePP* PP 23 36 41.1 -10
comp=Z,80nm,24.8s
PPT *eS* S 23 43 54.7 -4.3
comp=Z,2μm,32.5s
PPT *eSS* SS 23 49 20.8 -7.4
comp=Z,304nm,24.2s
PPT *eLR* LR 23 59 51.8
comp=Z,2μm,22.0s,baz=313
PPT Papeete 84.00 117 LR LR 00 04 23.9
comp=Z,1μm,20.1s,MS5.3,baz=321,slow=31
ARSA Arzberg 84.01 326 *iP* **P 23 33 36.8 +0.2**
comp=Z,44nm,1.7s,mb5.3,SNR=20
EKA Eskdalemuir Ar 84.03 341 P **P 23 33 37.0 +0.4**
comp=Z,5.5nm,0.8s,mb4.8,baz=26,slow=4.3,SNR=14
ESK Eskdalemuir 84.06 341 ⇑*eP* **P 23 33 35.9 -0.9**
ESK AMb AMB 23 33 37.6
comp=Z,45nm,1.9s,mb5.3
ESK Eskdalemuir 84.06 341 *eP* **P 23 33 36.7 0.0**
ESK MLR MLR
comp=Z,1μm,19.0s,MS5.3
ESK Eskdalemuir 84.06 341 *eP* **P 23 33 36.7 0.0**
ESK LR LR
comp=Z,1μm,19.0s,MS5.3
BUG Bochum--Univer 84.06 333 *eP* **P 23 33 36.3 -0.5**
comp=Z,176nm,2.0s,mb5.8
BUG *eS* S 23 43 57.8 -1.0
MMB Musomiste 84.07 318 P **P 23 33 37.5 +0.5**
W21A San Fidel 84.07 50 ⇓P **P 23 33 37.2 0.0**
baz=84
MOA Molln 84.11 328 ⇑*iP* **P 23 33 37.1 0.0**
comp=Z,40nm,1.3s,mb5.4,SNR=27
ECK Cauldkaine Hil 84.16 341 ⇑*eP* **P 23 33 37.2 0.0**
NVR Nevrokopi 84.16 318 *eP* **P 23 33 37.7 +0.2**
217A Green Valley 84.16 55 ⇑P **P 23 33 37.4 -0.3**
baz=84,SNR=22
Z19A T-Link Ranch, 84.22 53 ⇑P **P 23 33 37.9 -0.1**
baz=84
KKB Krupnik 84.22 319 P **P 23 33 38.4 +0.6**
DIVS Divibare 84.22 322 P **P 23 33 37.0 -0.8**
PRK Paraskevi 84.27 315 *eP* **P 23 33 37.9 -0.2**
PRK Paraskevi 84.27 315 P **P 23 33 37.3 -0.8**
AKAS Kas 84.31 311 ⇑*iP* **P 23 33 37.0 -1.4**
Y20A Horse Springs, 84.39 52 ⇓P **P 23 33 39.3 +0.4**
baz=84,SNR=18
AYDN Tasoluk 84.40 313 ⇑*iP* **P 23 33 39.5 +0.6**
BLCB Balcova 84.40 314 P **P 23 33 39.0 +0.2**
ECSD EROS Data Cent 84.41 38 *eP* **P 23 33 38.1 -0.6**
comp=Z,30nm,0.8s,mb5.5
ECSD LR LR
comp=Z,882nm,19.0s,MS5.2
X21A Alamocita Cree 84.42 51 ⇑P **P 23 33 39.5 +0.5**
baz=84,SNR=11
LIA Limnos Island 84.44 316 *eP* **P 23 33 38.5 -0.5**
LIA Limnos Island 84.44 316 P **P 23 33 38.1 -0.9**
SRS Serrai 84.47 318 P **P 23 33 38.6 -0.5**
TURN Turunc 84.49 312 ⇑*iP* **P 23 33 40.3 +1.0**
119A Ashpeak Ranch, 84.53 53 ⇑P **P 23 33 39.6 +0.1**
baz=84,SNR=11
218A Dragoon 84.55 54 ⇓P **P 23 33 39.7 +0.1**
baz=84,SNR=12
W22A Albuquerque 84.58 50 ⇓P **P 23 33 39.9 +0.1**
baz=84
TNS Taunus Mts 84.61 332 *eP* **P 23 33 39.6 0.0**
comp=Z,73nm,1.3s,mb5.7
TNS Taunus Mts 84.61 332 *eP* **P 23 33 39.6 0.0**
TNS pmax pmax
comp=Z,73nm,1.3s,mb5.7
PERS Pernice 84.66 326 *iP* **P 23 33 39.6 -0.3**
SOKA Soboth 84.66 326 ⇓*iP* **P 23 33 39.8 -0.2**
comp=Z,80nm,1.6s,mb5.6
GCAM G?zelcaml? 84.75 314 ⇑*iP* **P 23 33 40.0 -0.6**
Z20A Nine Sixteen R 84.76 53 ⇓P **P 23 33 40.9 +0.2**
baz=85,SNR=27
Y21A Point of Rocks 84.77 51 ⇓P **P 23 33 41.0 +0.3**
baz=85,SNR=6.5
OUR Ouranopolis 84.80 317 P **P 23 33 39.5 -1.3**
SOH Sokhos 84.80 318 *eP* **P 23 33 40.3 -0.5**
SOH Sokhos 84.80 318 P **P 23 33 39.7 -1.1**
STIP Stip 84.82 319 *eP* **P 23 33 40.6 -0.2**
STIP Stip 84.82 319 P **P 23 33 40.0 -0.8**
RJOB Jochberg 84.83 328 *eP* **P 23 33 41.0 +0.2**
comp=Z,48nm,1.2s,mb5.5

RJOB eS S 23 43 59.9 -6.7
LAZ Ladron 84.85 51 eP P 23 33 41.7 +0.6
comp=Z,17nm,1.2s,mb5.0
LAZ e pP 23 33 51.6 +0.2
GAL1 Galloway 84.86 341 eP P 23 33 39.7 -1.1
GAL1 AMb AMB 23 33 41.6
comp=Z,67nm,1.3s,mb5.6
VAY Valandovo 84.88 319 i P P 23 33 40.8 -0.3
VAY Valandovo 84.88 319 P P 23 33 40.4 -0.7
ANMO Albuquerque 84.92 50 eP P 23 33 42.2 +0.7
ANMO e pP 23 33 51.3 -0.4
ANMO e 23 36 53.3
ANMO pmax pmax
comp=Z,46nm,1.1s
ANMO MLR MLR
comp=Z,791nm,19.0s
ANMO Albuquerque 84.92 50 eP P 23 33 42.2 +0.7
comp=Z,46nm,1.1s,mb5.5
ANMO e pP 23 33 51.3 -0.4
ANMO ePP PP 23 36 53.2 -4.5
ANMO LR LR
comp=Z,791nm,19.0s,MS5.1
318A Bisbee 84.92 55 ⇓P P 23 33 41.3 -0.3
baz=85,SNR=25
TOD Tromm 84.97 331⇑eP P 23 33 41.3 -0.2
SMG Samos 84.98 314 eP P 23 33 41.4 -0.3
OBKA Obir 85.01 326⇑iP P 23 33 41.2 -0.5
comp=Z,11nm,0.9s,mb5.0,SNR=10
SKO Skopje 85.01 320 i P P 23 33 43.2 +1.4
219A White Tail Can 85.05 54 ⇑P P 23 33 42.0 -0.2
baz=85,SNR=24
PLG Polygyros 85.07 318 eP P 23 33 41.7 -0.4
PLG Polygyros 85.07 318 P P 23 33 41.6 -0.5
PLE Pljevlja 85.08 322⇑iP P 23 33 42.7 +0.6
PLE Pljevlja 85.08 322⇑iP P 23 33 42.8 +0.6
HGN Heimansgroeve 85.10 334⇑iP P 23 33 41.6 -0.5
comp=Z,67nm,1.2s,mb5.7
120A U Bar Ranch, L 85.10 53 ⇓P P 23 33 42.5 +0.1
baz=85,SNR=8.7
KBA Koelnbreinsper 85.10 327⇑iP P 23 33 41.8 -0.3
comp=Z,21nm,1.0s,mb5.2,SNR=18
LENM Lemitar 85.11 51 eP P 23 33 42.9 +0.5
comp=Z,12nm,1.1s,mb4.9
FUR Furstenfeldbru 85.13 329 eP P 23 33 42.3 0.0
comp=Z,82nm,1.1s,mb5.8
FUR Furstenfeldbru 85.13 329 eP P 23 33 42.3 0.0
FUR pmax pmax
comp=Z,82nm,1.1s,mb5.8
IVA Berane 85.16 321⇑iP P 23 33 42.7 +0.2
BEBN Eben Emael 85.16 334 P P 23 33 42.0 -0.4
comp=Z,21nm,1.5s,mb5.0
MEM Membach 85.20 334 P P 23 33 42.2 -0.3
comp=Z,34nm,1.5s,mb5.2
ARG Arkhangelos 85.22 312 eP P 23 33 43.0 0.0
Z21A St. Cloud Mine 85.23 52 ⇓P P 23 33 43.2 +0.2
baz=85,SNR=13
ABH Alteburg 85.23 332⇑eP P 23 33 42.5 -0.2
LHO Holmfirth 85.25 339 eP P 23 33 42.6 -0.1
Y22A Socorro 85.26 51 ⇓P P 23 33 43.1 -0.1
baz=85,SNR=8.6
MYKA Terra Mystica 85.32 327⇑iP P 23 33 42.3 -0.9
comp=Z,16nm,1.0s,mb5.1
PVY Plav 85.32 321⇑iP P 23 33 42.3 -1.0
PVY Plav 85.32 321⇑iP P 23 33 42.3 -1.0
BNM Barren Site 85.34 51 eP P 23 33 43.6 0.0
comp=Z,30nm,1.2s,mb5.3
LJU Ljubljana 85.37 326 i P P 23 33 42.5 -1.0
LJU eS S 23 44 09.4 -2.7
UPM Unac-Piva 85.42 322⇑iP P 23 33 43.3 -0.5
UPM Unac-Piva 85.42 322⇑iP P 23 33 43.4 -0.5
319A Douglas 85.43 54 ⇑P P 23 33 43.8 -0.3
baz=85,SNR=9.0
BCI Bajram Curri 85.44 321 ePN **P 23 33 44.0 +0.1**
BOJS Bojanci 85.45 325 i P P 23 33 43.3 -0.6
BOJS eS S 23 44 11.6 -1.3
KTD Kalmit 85.48 332⇑eP P 23 33 43.6 -0.4
STU Stuttgart 85.49 331 eP P 23 33 43.9 -0.2
comp=Z,90nm,1.0s,mb5.8
STU Stuttgart 85.49 331 eP P 23 33 43.6 -0.5
STU pmax pmax
comp=Z,69nm,0.9s,mb5.8
STU Stuttgart 85.49 331 eP P 23 33 43.6 -0.5
comp=Z,69nm,0.9s,mb5.8
KRUS Krusevo 85.54 319 i P P 23 33 44.1 -0.4
RUP Ruppelstein 85.56 332⇑eP P 23 33 44.3 -0.1
220A Playas Peak, P 85.58 53 ⇑P P 23 33 44.5 -0.3
baz=85,SNR=19
BCLA Clavier 85.61 334 P P 23 33 44.2 -0.4
comp=Z,37nm,1.6s,mb5.4
UCC Uccle 85.63 334 P P 23 33 44.5 -0.2
comp=Z,45nm,1.8s,mb5.4
121A Cookes Peak, D 85.66 53 ⇓P P 23 33 45.6 +0.4
baz=86,SNR=8.2
NKY Niksic 85.66 322⇑iP P 23 33 43.8 -1.2
NKY Niksic 85.66 322⇑iP P 23 33 43.9 -1.1
WATA Walderalm 85.66 329⇓iP P 23 33 44.5 -0.4
comp=Z,8.7nm,1.0s,mb4.9
VOY Vojsko 85.67 327 eP P 23 33 43.5 -1.5
VOY e 23 34 00.6
WTTA Wattenberg 85.69 329⇑iP P 23 33 44.9 -0.2
comp=Z,17nm,1.1s,mb5.2,SNR=12
TAOE Nuku Hiva Isla 85.69 104 eS S 23 44 11.2 -4.8
comp=Z,451nm,24.7s
TAOE eSS SS 23 49 48.7 -4.5
comp=Z,205nm,23.5s
TAOE eLR LR 00 00 43.9
comp=Z,2μm,21.7s,baz=312
JAVS Javornik 85.69 326 eP P 23 33 43.9 -1.3
Z22A Elephant Butte 85.71 52 ⇓P P 23 33 45.2 -0.2
baz=86
ABTA Abfaltersbach 85.72 328⇓iP P 23 33 43.8 -1.4
comp=Z,17nm,1.0s,mb5.2
BIA Bitola 85.75 319 eP P 23 33 44.9 -0.6
PUK Puka 85.76 321 ePN **P 23 33 45.0 -0.6**
LIT Litokhoron 85.78 318 eP P 23 33 44.9 -0.8
LIT Litokhoron 85.78 318 P P 23 33 44.5 -1.2
CWF Charnwood Fore 85.80 339⇑eP P 23 33 44.0 -1.5
CWF AMb AMB 23 33 46.0
comp=Z,69nm,1.3s,mb5.7
TTG Podgorica 85.80 321⇑iP P 23 33 45.4 -0.3
TTG Podgorica 85.80 321⇑iP P 23 33 45.4 -0.3
BRY Bratogost 85.82 322⇑iP P 23 33 45.1 -0.7
BRY Bratogost 85.82 322⇑iP P 23 33 45.2 -0.6
Y23A Lovelace Mesa, 85.84 51 ⇑P P 23 33 45.9 -0.2
baz=86,SNR=6.7
MOTA Moosalm 85.85 329⇓iP P 23 33 45.5 -0.4
comp=Z,20nm,1.0s,mb5.3,SNR=15
LANF Langenberg 85.86 332⇑eP P 23 33 45.6 -0.3
RETA Reutte 85.88 329 i P P 23 33 45.8 -0.3
comp=Z,49nm,1.1s,mb5.6,SNR=20
FNA Florina 85.89 319 P P 23 33 45.4 -0.8
SNF Seneffe 85.90 334 P P 23 33 45.9 -0.1
comp=Z,44nm,1.6s,mb5.4
SNF AP pP 23 33 52.6 -3.7
WLF Walferdange 85.93 333 P P 23 33 46.6 +0.4
comp=Z,56nm,1.8s,mb5.5
WLF Walferdange 85.93 333 eP P 23 33 46.4 +0.2
comp=Z,131nm,1.5s,mb5.9
WLF Walferdange 85.93 333 eP P 23 33 46.4 +0.2
WLF pmax pmax
comp=Z,123nm,1.5s,mb5.9
WLF MLR MLR
comp=Z,2μm,19.0s,MS5.5
WLF Walferdange 85.93 333 eP P 23 33 46.4 +0.2
comp=Z,123nm,1.5s,mb5.9
WLF LR LR
comp=Z,2μm,19.0s,MS5.5
320A Kipp Ranch, An 85.95 54 ⇑P P 23 33 46.5 -0.2
baz=86
OHR Ohrid 85.96 319 i P P 23 33 45.7 -0.9
W25A X Bar L Ranch, 85.97 49 ⇑P P 23 33 46.4 -0.3
baz=86,SNR=7.0
TRI Trieste 85.97 326 eP P 23 33 44.8 -1.7
TRI pmax pmax
comp=Z,87nm,1.8s,mb5.7
TRI MLR MLR
comp=Z,2μm,19.0s,MS5.5
TRI Trieste 85.97 326 eP P 23 33 44.8 -1.7
comp=Z,87nm,1.8s,mb5.7
TRI LR LR
comp=Z,2μm,19.0s,MS5.5
221A Mesquite Ranch 86.00 53 ⇓P P 23 33 46.6 -0.3
baz=86
KZN Kozani 86.02 318 eP P 23 33 45.8 -1.1
GIVF Givet 86.05 334⇑iP P 23 33 46.2 -0.6
comp=Z,140nm,1.5s,mb5.7
GIVF Givet 86.05 334⇑iP P 23 33 46.2 -0.6
GIVF pmax pmax
comp=Z,70nm,1.5s,mb5.7
GIVF Givet 86.05 334⇑iP P 23 33 46.2 -0.6
comp=Z,70nm,1.5s,mb5.7
122A Coniff Cattle 86.05 52 ⇑P P 23 33 47.1 -0.1
baz=86
BUM Brajici-Budva 86.08 321⇑iP P 23 33 46.3 -0.8
BUM Brajici-Budva 86.08 321⇑iP P 23 33 46.3 -0.8
SCHQ Schefferville 86.08 16 P P 23 33 48.2 +1.4
comp=Z,7.3nm,0.9s,mb4.9,baz=341,slow=4.1,SNR=7.2
SCHQ LR LR 00 12 57.6
comp=Z,2μm,21.2s,MS5.4,baz=344,slow=36
SCHQ Schefferville 86.08 16 eP P 23 33 47.1 +0.2
comp=Z,32nm,1.1s,mb5.5
SCHQ LR LR
comp=Z,2μm,22.0s,MS5.5
DOU Dourbes 86.13 334 P P 23 33 46.8 -0.5
comp=Z,19nm,1.8s,mb5.0
ULC Ulcinj 86.15 321⇑iP P 23 33 47.1 -0.4
ULC Ulcinj 86.15 321⇑iP P 23 33 47.1 -0.3
COWI Conover 86.16 33 eP P 23 33 47.7 +0.3
comp=Z,12nm,0.6s,mb5.3
COWI e pP 23 33 56.8 -0.9
COWI LR LR
comp=Z,810nm,20.0s,MS5.1
HCY Herceg Novi 86.17 322⇑iP P 23 33 46.7 -0.9
HCY Herceg Novi 86.17 322⇑iP P 23 33 46.7 -0.9
APE Apeiranthos 86.18 314 eP P 23 33 42.2 -5.5
WLF1 Llynfaes 86.18 340⇑eP P 23 33 47.3 -0.1
WLF1 AMb AMB 23 33 48.8
comp=Z,231nm,1.7s,mb6.1
BFO Black Forest 86.19 331 P P 23 33 47.7 +0.2
comp=Z,303nm,1.0s,mb6.5,SNR=20
BFO Black Forest 86.19 331 eP P 23 33 47.2 -0.3
comp=Z,71nm,1.1s,mb5.8
BFO Black Forest 86.19 331 eP P 23 33 47.2 -0.3
BFO pmax pmax
comp=Z,71nm,1.1s,mb5.8
SPAK Spaichingen-Ko 86.19 331⇑eP P 23 33 47.1 -0.4
STR Strasbourg 86.20 331⇑eP P 23 33 47.3 -0.3
Y24A Capitan 86.23 50 ⇑P P 23 33 47.7 -0.4
baz=86,SNR=7.0
CBKS Cedar Bluff 86.26 43 P P 23 33 47.1 -1.0
CBKS e pP 23 33 57.1 -1.2
CBKS pmax pmax
comp=Z,96nm,1.3s,mb5.9
CBKS MLR MLR
comp=Z,777nm,21.0s,MS5.1
CBKS Cedar Bluff 86.26 43 P P 23 33 47.1 -0.9
comp=Z,96nm,1.3s,mb5.9
CBKS e pP 23 33 57.1 -1.2
CBKS LR LR
comp=Z,777nm,21.0s,MS5.1
FETA Feichten 86.26 329⇑iP P 23 33 47.8 -0.2
comp=Z,21nm,1.1s,mb5.3,SNR=12
BAIF Baives 86.30 334⇑iP P 23 33 47.4 -0.6
comp=Z,48nm,1.0s,mb5.4
BAIF Baives 86.30 334⇑iP P 23 33 47.4 -0.6
BAIF pmax pmax
comp=Z,24nm,1.0s,mb5.4
BAIF Baives 86.30 334⇑iP P 23 33 47.4 -0.6
comp=Z,24nm,1.0s,mb5.4
X25A Clemmons Ranch 86.31 49 ⇑P P 23 33 47.9 -0.5
baz=86
KBN Korca 86.32 319 ePN **P 23 33 48.0 -0.3**
222A Williams Famil 86.37 52 ⇑P P 23 33 48.3 -0.5
baz=86
DAVA Damuels 86.40 329⇓iP P 23 33 48.3 -0.3
comp=Z,47nm,1.1s,mb5.7,SNR=17
THL Klokotos Trika 86.42 318 eP P 23 33 47.4 -1.4
HLM1 Long Mynd 86.45 339⇑eP P 23 33 48.3 -0.4
LKR Lokris 86.52 317 P P 23 33 47.1 -2.3
CDF Champ du Feu 86.53 332⇑iP P 23 33 48.7 -0.5
comp=Z,104nm,1.1s,mb5.7
CDF Champ du Feu 86.53 332⇑iP P 23 33 48.7 -0.5
CDF pmax pmax
comp=Z,52nm,1.1s,mb5.7
CDF Champ du Feu 86.53 332⇑iP P 23 33 48.7 -0.5
comp=Z,52nm,1.1s,mb5.7
MENF Mencas 86.58 336⇑eP P 23 33 48.9 -0.5
LIBD Limburg 86.62 331⇑eP P 23 33 49.5 -0.1
AGG Agios Georgios 86.63 317 eP P 23 33 48.7 -1.2
FELD Feldberg im Sc 86.68 331⇑eP P 23 33 49.5 -0.5
Y25A Mesa, Roswell 86.69 50 ⇑P P 23 33 50.0 -0.2
baz=86,SNR=5.4
ECH Echery 86.74 332⇑eP P 23 33 49.7 -0.5
ECH Echery 86.74 332 eP P 23 33 49.8 -0.4
ECH e 23 37 10.3
ECH pmax pmax
comp=Z,53nm,1.4s,mb5.6
ECH MLR MLR
comp=Z,1μm,19.0s,MS5.4
ECH Echery 86.74 332 eP P 23 33 49.8 -0.4
comp=Z,53nm,1.4s,mb5.6
ECH ePP PP 23 37 10.3 -1.7
ECH LR LR
comp=Z,1μm,19.0s,MS5.4
DAVOS Davos 86.80 329 P P 23 33 51.2 +0.7
DAVOX Davos/Dischmat 86.81 329 P P 23 33 51.1 +0.6
comp=Z,7.3nm,0.8s,mb5.0,baz=335,slow=2.9,SNR=16
X26A CR and CF Fran 86.81 49 ⇓P P 23 33 50.6 -0.3
baz=87
MCH1 Michaelchurch 86.94 339⇑eP P 23 33 50.2 -0.9
MCH1 AMb AMB 23 33 52.4
comp=Z,68nm,2.1s,mb5.5
MCH1 Michaelchurch 86.94 339 P P 23 33 50.2 -0.9
MCH1 AMb AMB 23 33 52.4
comp=Z,68nm,2.1s,mb5.5
HTR Trewern Hill 86.95 339 eP P 23 33 51.0 -0.1
LTK Loutraki 86.98 316 eP P 23 33 51.8 +0.2
JAN Janina 86.98 318 eP P 23 33 51.2 -0.4
124A Stringfield Ra 87.03 51 ⇓P P 23 33 51.7 -0.2
baz=87
MOF Molkenrain 87.04 331⇑eP P 23 33 51.0 -0.7
Z25A Roswell 87.11 50 ⇓P P 23 33 52.1 -0.2
baz=87,SNR=8.6
THEF They Montfort 87.17 332⇑eP P 23 33 52.1 -0.3
X27A F and S Farms, 87.18 48 ⇑P P 23 33 52.3 -0.4
baz=87
HINF Hinteralfeld 87.18 331⇑iP P 23 33 51.4 -1.0
comp=Z,48nm,1.4s,mb5.2
HINF Hinteralfeld 87.18 331⇑iP P 23 33 51.4 -1.0
HINF pmax pmax
comp=Z,24nm,1.4s,mb5.2
HINF Hinteralfeld 87.18 331⇑iP P 23 33 51.4 -1.0
comp=Z,24nm,1.4s,mb5.2
HGH Gray Hill 87.20 339 eP P 23 33 52.1 -0.3
BBS Basel-Blauen 87.21 331⇑eP P 23 33 51.9 -0.7
HAU Haudompre 87.22 332⇑iP P 23 33 51.7 -0.9
comp=Z,48nm,1.2s,mb5.3
HAU eMLR MLR
comp=Z,2μm,20.8s,MS5.2
HAU Haudompre 87.22 332⇑iP P 23 33 51.7 -0.9
HAU pmax pmax
comp=Z,24nm,1.2s,mb5.3
HAU MLR MLR
comp=Z,2μm,20.8s,MS5.5
HAU Haudompre 87.22 332⇑iP P 23 33 51.7 -0.9
comp=Z,24nm,1.2s,mb5.3
HAU LR LR
comp=Z,2μm,20.8s,MS5.5
Y26A Elida 87.22 49 ⇓P P 23 33 52.0 -0.9
baz=87
SRN Sarande 87.27 319 ePN **P 23 33 51.8 -1.2**
EFP Efpalio 87.28 317 eP P 23 33 51.8 -1.3
MEZF Maizieres J'vi 87.30 333⇑iP P 23 33 52.7 -0.2
comp=Z,178nm,1.5s,mb5.8
MEZF Maizieres J'vi 87.30 333⇑iP P 23 33 52.7 -0.2
comp=Z,178nm,1.5s,mb6.1
GUR Goura 87.39 316 eP P 23 33 51.6 -2.0
224A Corundas Mount 87.40 52 ⇓P P 23 33 53.3 -0.5
baz=87
SCIA State Center 87.45 38 P P 23 33 54.6 +0.8
comp=Z,61nm,0.9s,mb5.8
SCIA LR LR
comp=Z,992nm,20.0s,MS5.2
KEK Kerkira 87.50 319 eP P 23 33 53.2 -0.9
125A Gardner Draw, 87.56 51 ⇑P P 23 33 54.3 -0.2
baz=87,SNR=7.5
Z26A Caprock 87.57 50 ⇑P P 23 33 54.2 -0.4
baz=87
LOMF Lomont 87.57 331⇑eP P 23 33 53.6 -0.7
Y27A Causey 87.66 49 ⇑P P 23 33 54.7 -0.3
baz=88
MNTX Cornudas Mount 87.74 52 eP P 23 33 54.8 -0.6
comp=Z,40nm,1.7s,mb5.4
MNTX LR LR
comp=Z,532nm,19.0s,MS5.0
KSU1 Kansas State U 87.76 42 eP P 23 33 54.5 -0.9
comp=Z,58nm,0.8s,mb5.9
KSU1 e pP 23 34 03.8 -1.9
KSU1 LR LR
comp=Z,1μm,20.0s,MS5.3
RLS Riolos of Patr 87.79 317 eP P 23 33 56.1 +0.6
MSTX Muleshoe 87.83 49 ⇓P P 23 33 55.0 -0.8
baz=88
324A Moseley Ranch, 87.84 52 ⇓P P 23 33 55.6 -0.4
baz=88
AMTX Amarillo 87.87 47 eP P 23 33 55.7 -0.2
comp=Z,18nm,0.8s,mb5.3
AMTX e pP 23 34 06.3 0.0
AMTX LR LR
comp=Z,804nm,20.0s,MS5.1
HEX Exmoor 88.00 339 eP P 23 33 55.7 -0.5
Z27A Tatum 88.01 49 ⇓P P 23 33 56.4 -0.3
baz=88
GDL2 Guadalupe Moun 88.05 51 P P 23 33 57.1 +0.2
comp=Z,4.6nm,0.8s,mb4.8
JFWS Jewell Farm 88.12 35 eP P 23 33 57.3 +0.3
JFWS e pP 23 34 05.8 -1.5
JFWS pmax pmax
comp=Z,32nm,0.9s,mb5.5
JFWS MLR MLR
comp=Z,1μm,20.0s,MS5.3
JFWS Jewell Farm 88.12 35 P P 23 33 58.1 +1.1
JFWS pmax pmax
comp=Z,32nm,0.9s,mb5.5
JFWS Jewell Farm 88.12 35 eP P 23 33 57.3 +0.3
comp=Z,32nm,0.9s,mb5.5
JFWS e pP 23 34 05.8 -1.4
JFWS LR LR
comp=Z,1μm,20.0s,MS5.3
ITM Ithomi 88.16 316 eP P 23 33 51.5 -5.8
325A Bean Ranch, Si 88.22 52 ⇓P P 23 33 57.2 -0.5
baz=88
226A Malaga, Loving 88.31 51 ⇓P P 23 33 57.3 -0.8
baz=88
PYL PYLOS 88.46 316 eP P 23 33 56.7 -2.0
CABF La Chapelle 88.47 331⇑iP P 23 33 58.1 -0.5
GVD Gavdhos 88.56 313 P P 23 33 59.5 +0.3
425A Indio Mountain 88.60 52 ⇓P P 23 33 58.8 -0.7
baz=88
DYA Yadsworthy 88.60 339⇑eP P 23 33 57.6 -1.5
DYA AMb AMB 23 33 59.3
comp=Z,40nm,1.7s,mb5.5
DYA Yadsworthy 88.60 339 P P 23 33 57.6 -1.5
DYA AMb AMB 23 33 59.3
comp=Z,40nm,1.7s,mb5.5
LOR Lormes 88.77 333⇑iP P 23 33 59.4 -0.6
comp=Z,175nm,1.6s,mb5.8
LOR eMLR MLR
comp=Z,2μm,19.0s,MS5.3
LOR Lormes 88.77 333⇑iP P 23 33 59.4 -0.6
LOR pmax pmax
comp=Z,87nm,1.6s,mb5.8
LOR MLR MLR
comp=Z,2μm,19.0s,MS5.6
LOR Lormes 88.77 333⇑iP P 23 33 59.4 -0.6
comp=Z,87nm,1.6s,mb5.8
LOR LR LR
comp=Z,2μm,19.0s,MS5.6
326A Caldwell Ranch 88.88 51 ⇑P P 23 34 00.3 -0.5
baz=89
FLN La Foliniere 89.00 336⇑iP P 23 34 00.4 -0.6
comp=Z,56nm,1.2s,mb5.5
FLN eMLR MLR
comp=Z,3μm,21.2s,MS5.4
FLN La Foliniere 89.00 336⇑iP P 23 34 00.4 -0.6
FLN pmax pmax
comp=Z,28nm,1.2s,mb5.5
FLN MLR MLR
comp=Z,3μm,21.3s,MS5.7
FLN La Foliniere 89.00 336⇑iP P 23 34 00.4 -0.6
comp=Z,28nm,1.2s,mb5.5
FLN LR LR
comp=Z,3μm,21.3s,MS5.7
LDF La Druitiere 89.03 336⇑iP P 23 34 00.6 -0.6
comp=Z,184nm,1.7s,mb5.8
LDF La Druitiere 89.03 336⇑iP P 23 34 00.6 -0.6
LDF pmax pmax
comp=Z,92nm,1.7s,mb5.8
LDF La Druitiere 89.03 336⇑iP P 23 34 00.6 -0.6
comp=Z,92nm,1.7s,mb5.8
SSF Saint Saulge 89.07 333⇑iP P 23 34 00.9 -0.5
comp=Z,46nm,1.2s,mb5.4
SSF Saint Saulge 89.07 333⇑iP P 23 34 00.9 -0.5
SSF pmax pmax
comp=Z,23nm,1.2s,mb5.4
SSF Saint Saulge 89.07 333⇑iP P 23 34 00.9 -0.5
comp=Z,23nm,1.2s,mb5.4
GLMI Grayling 89.10 31 eP P 23 34 01.0 -0.6
comp=Z,186nm,0.8s,mb6.5
GLMI e pP 23 34 12.1 +0.2
GLMI LR LR
comp=Z,811nm,20.0s,MS5.1
LPL La Plagne 89.11 330⇑iP P 23 34 01.2 -0.4
comp=Z,32nm,1.2s,mb5.2
LPL La Plagne 89.11 330⇑iP P 23 34 01.2 -0.4
LPL pmax pmax
comp=Z,16nm,1.2s,mb5.2
LPL La Plagne 89.11 330⇑iP P 23 34 01.2 -0.4
comp=Z,16nm,1.2s,mb5.2
LPG La Plagne 89.12 330⇑iP P 23 34 01.4 -0.3
comp=Z,44nm,1.2s,mb5.3
LPG La Plagne 89.12 330⇑iP P 23 34 01.4 -0.3
LPG pmax pmax
comp=Z,22nm,1.2s,mb5.4
LPG La Plagne 89.12 330⇑iP P 23 34 01.4 -0.3
comp=Z,22nm,1.2s,mb5.4
JSA Saint Aubin 89.17 337⇑eP P 23 34 00.4 -1.5
JSA AMb AMB 23 34 03.0
comp=Z,40nm,1.6s,mb5.5
SMF Signal de Mont 89.30 333⇑iP P 23 34 02.0 -0.5
comp=Z,133nm,1.4s,mb5.8
SMF Signal de Mont 89.30 333⇑iP P 23 34 02.0 -0.5
SMF pmax pmax
comp=Z,67nm,1.4s,mb5.8
SMF Signal de Mont 89.30 333⇑iP P 23 34 02.0 -0.5
comp=Z,67nm,1.4s,mb5.8
AVF Avril sur Loir 89.36 333⇑iP P 23 34 02.3 -0.4
comp=Z,134nm,1.3s,mb5.8
AVF Avril sur Loir 89.36 333⇑iP P 23 34 02.3 -0.4
AVF pmax pmax
comp=Z,67nm,1.3s,mb5.8
AVF Avril sur Loir 89.36 333⇑iP P 23 34 02.3 -0.4
comp=Z,67nm,1.3s,mb5.8
GRR Gorron 89.45 336⇑iP P 23 34 02.8 -0.4
comp=Z,82nm,1.1s,mb5.7
GRR Gorron 89.45 336⇑iP P 23 34 02.8 -0.4
GRR pmax pmax
comp=Z,41nm,1.1s,mb5.7
GRR Gorron 89.45 336⇑iP P 23 34 02.8 -0.4
comp=Z,41nm,1.1s,mb5.7
427A Hayter Ranch, 89.56 51 ⇑P P 23 34 03.1 -0.9
baz=89
328A Wristen Ranch, 89.57 51 ⇑P P 23 34 03.2 -0.9
baz=89,SNR=5.8
526A Mary Lane Ranc 89.66 52 ⇑P P 23 34 03.7 -0.7
baz=90,SNR=10
WMOK Wichita Mounta 89.67 46 eP P 23 34 04.1 -0.4
WMOK pmax pmax
comp=Z,38nm,1.4s,mb5.5
WMOK MLR MLR
comp=Z,812nm,19.0s,MS5.2
WMOK Wichita Mounta 89.67 46 eP P 23 34 04.1 -0.4
comp=Z,38nm,1.4s,mb5.5
WMOK LR LR
comp=Z,812nm,19.0s,MS5.2
MSEY Mahe Island 89.73 264 PFAKE 23 34 20.0 +15
MSEY LR LR
comp=Z,1μm,20.0s,MS5.3
BGF Bois d'Agland 89.74 333⇑iP P 23 34 04.1 -0.4
comp=Z,41nm,1.3s,mb5.3
BGF Bois d'Agland 89.74 333⇑iP P 23 34 04.1 -0.4
BGF pmax pmax
comp=Z,21nm,1.3s,mb5.3
BGF Bois d'Agland 89.74 333⇑iP P 23 34 04.1 -0.4
comp=Z,21nm,1.3s,mb5.3
MBDF Montbardon 89.75 330⇑iP P 23 34 03.5 -1.1
comp=Z,23nm,1.1s,mb5.1
MBDF Montbardon 89.75 330⇑iP P 23 34 03.5 -1.1

MBDF pmax pmax
comp=Z,11nm,1.1s,mb5.1
MBDF Montbardon 89.75 330⇑iP P 23 34 03.5 -1.1
comp=Z,11nm,1.1s,mb5.1
527A Woodward Ranch 89.91 52 ⇓P P 23 34 04.4 -1.3
baz=90
ORIF Oris-en-Rattie 89.95 330⇑iP P 23 34 05.1 -0.5
comp=Z,38nm,1.4s,mb5.2
ORIF eMLR MLR
comp=Z,2µm,19.0s,MS5.2
ORIF Oris-en-Rattie 89.95 330⇑iP P 23 34 05.1 -0.5
ORIF pmax pmax
comp=Z,19nm,1.4s,mb5.2
ORIF Oris-en-Rattie 89.95 330⇑iP P 23 34 05.1 -0.5
comp=Z,19nm,1.4s,mb5.2
PLDF La Plantade 89.95 332⇑eP P 23 34 05.4 -0.1
626A Big Bend Ranch 89.97 53 ⇑P P 23 34 04.6 -1.4
baz=90
SAOF Saorge 90.03 329⇑eP P 23 34 05.0 -0.9
AGO Saint Agoulin 90.06 333⇑eP P 23 34 05.9 -0.2
AUTN L'Aution 90.07 329⇑eP P 23 34 05.3 -0.9
428A Kincaid Ranch, 90.10 51 ⇓P P 23 34 06.0 -0.5
baz=90
SGMF Saint Gilles 90.12 337 eP P 23 34 05.9 -0.4
comp=Z,64nm,1.1s,mb5.6
SGMF Saint Gilles 90.12 337 eP P 23 34 05.9 -0.4
SGMF pmax pmax
comp=Z,32nm,1.1s,mb5.6
SGMF Saint Gilles 90.12 337 eP P 23 34 05.9 -0.4
comp=Z,32nm,1.1s,mb5.6
TOUF Mont Tournerai 90.13 329⇑eP P 23 34 05.5 -0.9
SSB Saint Sauveur 90.18 331 eP P 23 34 05.3 -1.3
SSB e 23 37 39.6
SSB pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
SSB MLR MLR
comp=Z,2µm,19.0s,MS5.5
SSB Saint Sauveur 90.18 331 eP P 23 34 05.3 -1.3
comp=Z,8.3nm,1.1s,mb5.0
SSB ePP PP 23 37 39.6 +0.1
SSB LR LR
comp=Z,2µm,19.0s,MS5.5
SBF Sospel 90.18 329⇑iP P 23 34 05.2 -1.4
comp=Z,106nm,1.4s,mb5.7
SBF Sospel 90.18 329⇑iP P 23 34 05.2 -1.4
SBF pmax pmax
comp=Z,53nm,1.4s,mb5.7
SBF Sospel 90.18 329⇑iP P 23 34 05.2 -1.4
comp=Z,53nm,1.4s,mb5.7
LUCF Luceram 90.19 329⇑eP P 23 34 05.7 -1.0
TCF Toulx Ste Croi 90.20 333⇑iP P 23 34 06.4 -0.3
comp=Z,105nm,1.6s,mb5.6
TCF Toulx Ste Croi 90.20 333⇑iP P 23 34 06.4 -0.3
TCF pmax pmax
comp=Z,52nm,1.6s,mb5.6
TCF Toulx Ste Croi 90.20 333⇑iP P 23 34 06.4 -0.3
comp=Z,52nm,1.6s,mb5.6
ROSF Rostrenen 90.27 338 eP P 23 34 06.6 -0.4
comp=Z,114nm,1.3s,mb5.8
ROSF Rostrenen 90.27 338 eP P 23 34 06.6 -0.4
ROSF pmax pmax
comp=Z,57nm,1.3s,mb5.7
ROSF Rostrenen 90.27 338 eP P 23 34 06.6 -0.4
comp=Z,57nm,1.3s,mb5.7
MVIF Mont Vial 90.27 329⇑eP P 23 34 06.0 -1.1
REVF Revere 90.31 329⇑eP P 23 34 06.1 -1.1
PYM Petit Puy Mans 90.36 333⇑eP P 23 34 07.3 -0.2
HDIL Hopedale 90.39 36 eP P 23 34 08.0 +0.3
comp=Z,16nm,0.6s,mb5.5
HDIL e pP 23 34 15.9 -2.1
HDIL LR LR
comp=Z,1µm,19.0s,MS5.3
528A Cox Ranch, San 90.42 51 ⇓P P 23 34 06.9 -1.1
baz=90
TXAR Lajitas Array 90.42 53 P P 23 34 08.3 +0.3
TXAR S SKSac 23 44 39.5 +2.3
TXAR Lajitas Array 90.42 53 P P 23 34 08.3 +0.3
comp=Z,3.7nm,0.8s,mb4.8,baz=296,slow=3.2,SNR=46
TXAR S SKSac 23 44 39.5 +2.3
comp=Z,0.6nm,0.7s,baz=134,slow=9.9,SNR=8.9
TXAR LR LR 00 16 45.7
comp=Z,1µm,18.1s,MS5.5,baz=5.0,slow=37
VIVF Saint-Julien-l 90.48 331⇑iP P 23 34 07.5 -0.5
comp=Z,51nm,1.1s,mb5.5
VIVF Saint-Julien-l 90.48 331⇑iP P 23 34 07.5 -0.5
VIVF pmax pmax
comp=Z,25nm,1.1s,mb5.5
VIVF Saint-Julien-l 90.48 331⇑iP P 23 34 07.5 -0.5
comp=Z,25nm,1.1s,mb5.5
CALN Calern 90.50 329⇑eP P 23 34 07.3 -0.8
627A Terlingua Ranc 90.52 52 ⇑P P 23 34 07.7 -0.8
baz=90
PGF Pioggiola 90.57 327⇑iP P 23 34 07.4 -1.1
comp=Z,63nm,1.2s,mb5.5
PGF Pioggiola 90.57 327⇑iP P 23 34 07.4 -1.1
PGF pmax pmax
comp=Z,31nm,1.2s,mb5.5
PGF Pioggiola 90.57 327⇑iP P 23 34 07.4 -1.1
comp=Z,32nm,1.2s,mb5.5
QUIF Quistinic 90.61 337⇑iP P 23 34 08.0 -0.5
comp=Z,64nm,1.4s,mb5.5
QUIF Quistinic 90.61 337⇑iP P 23 34 08.0 -0.5
QUIF pmax pmax
comp=Z,32nm,1.4s,mb5.5
QUIF Quistinic 90.61 337⇑iP P 23 34 08.0 -0.5
comp=Z,32nm,1.4s,mb5.5
CEL Celeste 90.62 320 PFAKE 23 34 20.0 +11
CEL LR LR
comp=Z,2µm,22.0s,MS5.5
LBL Lubilhac 90.71 332⇑eP P 23 34 09.3 +0.2
FRF La Foret Royal 90.75 329⇑iP P 23 34 08.1 -1.2
comp=Z,79nm,1.3s,mb5.6
FRF La Foret Royal 90.75 329⇑iP P 23 34 08.1 -1.2
FRF pmax pmax
comp=Z,39nm,1.3s,mb5.6
FRF La Foret Royal 90.75 329⇑iP P 23 34 08.1 -1.2
comp=Z,39nm,1.3s,mb5.6
MFF Saint Martin d 90.77 335⇑iP P 23 34 09.1 -0.2
comp=Z,113nm,1.1s,mb5.8
MFF Saint Martin d 90.77 335⇑iP P 23 34 09.1 -0.2
MFF pmax pmax
comp=Z,57nm,1.1s,mb5.8
MFF Saint Martin d 90.77 335⇑iP P 23 34 09.1 -0.2
comp=Z,57nm,1.1s,mb5.8
SMRF Simiane la Rot 90.85 330⇑iP P 23 34 09.2 -0.6
comp=Z,58nm,1.4s,mb5.4
SMRF Simiane la Rot 90.85 330⇑iP P 23 34 09.2 -0.6
comp=Z,58nm,1.4s,mb5.7
LMR La Mourre 91.00 329⇑iP P 23 34 09.5 -1.0
comp=Z,135nm,1.3s,mb5.8
LMR La Mourre 91.00 329⇑iP P 23 34 09.5 -1.0
LMR pmax pmax
comp=Z,68nm,1.3s,mb5.8
LMR La Mourre 91.00 329⇑iP P 23 34 09.5 -1.0
comp=Z,68nm,1.3s,mb5.8
TREF Trevaresse 91.22 330 eP P 23 34 11.3 -0.2
RJF Les Rejaudoux 91.30 333⇑iP P 23 34 11.6 -0.2
comp=Z,78nm,1.1s,mb5.7
RJF eMLR MLR
comp=Z,2µm,17.0s,MS5.4
RJF Les Rejaudoux 91.30 333⇑iP P 23 34 11.6 -0.2
RJF pmax pmax
comp=Z,39nm,1.1s,mb5.7
RJF MLR MLR
comp=Z,2µm,17.0s,MS5.7
RJF Les Rejaudoux 91.30 333⇑iP P 23 34 11.6 -0.2
comp=Z,39nm,1.1s,mb5.7
RJF LR LR
comp=Z,2µm,17.0s,MS5.7
CAF Calviac 91.42 333⇑iP P 23 34 12.5 +0.1
comp=Z,84nm,1.1s,mb5.7
CAF Calviac 91.42 333⇑iP P 23 34 12.5 +0.1
CAF pmax pmax
comp=Z,42nm,1.1s,mb5.7
CAF Calviac 91.42 333⇑iP P 23 34 12.5 +0.1
comp=Z,42nm,1.1s,mb5.7
LASF Ste Croix 91.45 331⇑iP P 23 34 12.4 -0.2
comp=Z,104nm,1.4s,mb5.7
AAM Ann Arbor 91.56 32 PFAKE 23 34 20.0 +6.9
AAM LR LR
comp=Z,1µm,20.0s,MS5.4
FVM French Village 91.82 39 eP P 23 34 13.6 -0.8
FVM e pP 23 34 23.6 -1.1
FVM pmax pmax
comp=Z,24nm,0.9s,mb5.5
FVM French Village 91.82 39 eP P 23 34 13.6 -0.8
comp=Z,24nm,0.9s,mb5.5
FVM e pP 23 34 23.6 -1.1
LFF La Frestale 91.89 333⇑iP P 23 34 14.6 0.0
comp=Z,108nm,1.2s,mb5.8
LFF La Frestale 91.89 333⇑iP P 23 34 14.6 0.0
LFF pmax pmax
comp=Z,54nm,1.2s,mb5.8
LFF La Frestale 91.89 333⇑iP P 23 34 14.6 0.0
comp=Z,54nm,1.2s,mb5.8
JCT Junction City 92.06 49 eP P 23 34 15.4 -0.2
JCT e pP 23 34 23.9 -2.1
JCT pmax pmax
comp=Z,13nm,0.8s,mb5.3
JCT MLR MLR
comp=Z,644nm,19.0s,MS5.1
JCT Junction City 92.06 49 eP P 23 34 15.4 -0.3
comp=Z,13nm,0.8s,mb5.3
JCT e pP 23 34 23.9 -2.1
JCT LR LR
comp=Z,644nm,19.0s,MS5.1
OLIL Olney 92.39 37 eP P 23 34 17.5 +0.5
comp=Z,55nm,1.1s,mb5.8
OLIL e pP 23 34 25.9 -1.4
SIUC Southern Illin 92.63 38 eP P 23 34 18.6 +0.4
comp=Z,35nm,0.9s,mb5.8
MTLF Montolieu 92.71 332⇑iP P 23 34 18.2 -0.2
comp=Z,60nm,1.3s,mb5.6
MTLF Montolieu 92.71 332⇑iP P 23 34 18.2 -0.2
MTLF pmax pmax
comp=Z,30nm,1.3s,mb5.6
MTLF Montolieu 92.71 332⇑iP P 23 34 18.2 -0.2
comp=Z,30nm,1.3s,mb5.6
MIAR Mount Ida 92.76 43 eP P 23 34 18.7 -0.1
MIAR e pP 23 34 27.5 -1.6
MIAR pmax pmax
comp=Z,59nm,1.1s,mb5.9
MIAR MLR MLR
comp=Z,1µm,20.0s,MS5.3
MIAR Mount Ida 92.76 43 eP P 23 34 18.7 -0.1
comp=Z,59nm,1.1s,mb5.9
MIAR e pP 23 34 27.5 -1.6
MIAR LR LR
comp=Z,1µm,20.0s,MS5.3
LONY Lake Ozonia 93.09 25 PFAKE 23 34 30.0 +10
LONY LR LR
comp=Z,894nm,19.0s,MS5.2
EJON La Jonquera 93.20 331 P P 23 34 19.6 -1.0
comp=Z,28nm,1.1s,mb5.6
ERPA Erie 93.23 30 PFAKE 23 34 30.0 +9.2
ERPA LR LR
comp=Z,1µm,19.0s,MS5.3
MLS Moulis 93.46 332⇑eP P 23 34 20.8 -1.1
ACSO Alum Creek Sta 93.55 33 eP P 23 34 22.5 +0.2
ACSO e pP 23 34 31.9 -0.7
ACSO LR LR
comp=Z,1µm,21.0s,MS5.3
HBAR Harrisburg 93.56 40 eP P 23 34 23.4 +0.9
WCI Wyandotte Cave 93.65 36 eP P 23 34 21.6 -1.2
WCI e pP 23 34 32.1 -1.1
WCI pmax pmax
comp=Z,25nm,1.4s,mb5.5
WCI MLR MLR
comp=Z,822nm,19.0s,MS5.2
WCI Wyandotte Cave 93.65 36 eP P 23 34 21.6 -1.2
comp=Z,25nm,1.4s,mb5.5
WCI e pP 23 34 32.1 -1.1
WCI LR LR
comp=Z,822nm,19.0s,MS5.2
EPF Esparros 93.68 333⇑iP P 23 34 22.3 -0.6
comp=Z,31nm,1.3s,mb5.3
EPF Esparros 93.68 333⇑iP P 23 34 22.3 -0.6
EPF pmax pmax
comp=Z,15nm,1.3s,mb5.3
EPF Esparros 93.68 333⇑iP P 23 34 22.3 -0.6
comp=Z,15nm,1.3s,mb5.3
NCB Newcomb 93.79 25 PFAKE 23 34 30.0 +6.7
NCB LR LR
comp=Z,878nm,21.0s,MS5.2
RESF Ens 93.87 333⇑eP P 23 34 24.8 +1.0
EBIE Bielsa 94.05 333 P P 23 34 24.9 +0.3
comp=Z,62nm,2.3s,mb5.6
ETSF Etsaut 94.13 333 eP P 23 34 25.2 +0.3
comp=Z,14nm,0.8s,mb5.1
ETSF Etsaut 94.13 333 eP P 23 34 25.2 +0.3
ETSF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
ETSF Etsaut 94.13 333 eP P 23 34 25.2 +0.3
comp=Z,6.9nm,0.8s,mb5.1
SJPF Ste Jean 94.18 334⇑iP P 23 34 26.4 +1.2
EALK Alkurruntz 94.19 334 P P 23 34 24.6 -0.6
comp=Z,59nm,1.6s,mb5.8
NATX Nacogdoches 94.20 45 PFAKE 23 34 40.0 +15
NATX LR LR
comp=Z,1µm,19.0s,MS5.4
PKME Peaks-Kenny Pk 94.21 21 PFAKE 23 34 40.0 +15
PKME LR LR
comp=Z,1µm,21.0s,MS5.3
LBNH Lisbon 94.32 24 PFAKE 23 34 40.0 +14
LBNH LR LR
comp=Z,927nm,21.0s,MS5.2
WVT Waverly 94.56 38 eP P 23 34 27.2 +0.1
WVT e pP 23 34 36.0 -1.4
WVT pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
WVT MLR MLR
comp=Z,1µm,20.0s,MS5.3
WVT Waverly 94.56 38 eP P 23 34 27.2 +0.1
comp=Z,7.9nm,0.9s,mb5.1
WVT e pP 23 34 36.0 -1.4
WVT LR LR
comp=Z,1µm,20.0s,MS5.3
BINY Binghamton 94.71 27 PFAKE 23 34 40.0 +12
BINY LR LR
comp=Z,1µm,21.0s,MS5.3
HKT Hockley 94.84 47 PFAKE 23 34 40.0 +12
HKT LR LR
comp=Z,607nm,20.0s,MS5.1
EPOB Poblet 94.84 331 P P 23 34 26.8 -1.4
comp=Z,167nm,2.8s,mb6.0
ELAN Lanestosa 94.84 335 P P 23 34 27.2 -1.0
comp=Z,44nm,1.5s,mb5.7
OXF Oxford 95.02 40 PFAKE 23 34 40.0 +11
OXF LR LR
comp=Z,475nm,19.0s,MS5.0
ECRI Cripan 95.08 334 P P 23 34 29.6 +0.3
ECRI pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
ECRI Cripan 95.08 334 P P 23 34 29.6 +0.3
comp=Z,5.1nm,0.6s,mb5.1
KVTX Kingsville 95.31 50 PFAKE 23 34 40.0 +9.4
KVTX LR LR
comp=Z,1µm,19.0s,MS5.4
SSPA Standing Stone 95.33 29 PFAKE 23 34 40.0 +10
SSPA LR LR
comp=Z,847nm,19.0s,MS5.2
PLAL Pickwick Lake 95.34 39 PFAKE 23 34 40.0 +9.4
PLAL LR LR
comp=Z,1µm,20.0s,MS5.3
MCWV Mont Chateau 95.36 31 PFAKE 23 34 40.0 +9.4
MCWV LR LR
comp=Z,1µm,19.0s,MS5.5
KEST Kesra 95.87 323 LR LR 00 23 15.6
comp=Z,797nm,18.2s,MS5.2,baz=153,slow=39
VBMS Vicksburg 96.19 42 PFAKE 23 34 50.0 +15
VBMS LR LR
comp=Z,951nm,19.0s,MS5.3
ETOR Torete 96.48 333 P P 23 34 35.0 -0.7
ETOR pmax pmax
comp=Z,10.0nm,1.5s,mb5.0
ETOR Torete 96.48 333 P P 23 34 35.0 -0.7
comp=Z,9.5nm,1.5s,mb5.0
TKL Tuckaleechee C 96.92 36 P P 23 34 37.5 -0.3
TKL e pP 23 34 46.5 -1.6
ECAL Calabor 97.08 337 P P 23 34 36.5 -1.9
comp=Z,39nm,1.8s,mb5.5
BLA Blacksburg 97.17 33 P P 23 34 40.3 +1.4
BLA MLR MLR
comp=Z,893nm,21.0s,MS5.2
GUD Guadarrama 97.39 335 P P 23 34 39.5 -0.3
GUD pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
GUD Guadarrama 97.39 335 P P 23 34 39.5 -0.3
comp=Z,5.8nm,1.0s,mb5.0
LRAL Lakeview Retre 97.42 40 PFAKE 23 34 50.0 +10
LRAL LR LR
comp=Z,870nm,21.0s,MS5.2
EZAM Zamans 97.50 338 P P 23 34 41.1 +0.8
EZAM pmax pmax
comp=Z,32nm,0.9s,mb5.8
EZAM Zamans 97.50 338 P P 23 34 41.1 +0.8
comp=Z,32nm,0.9s,mb5.8
CBN Corbin 97.61 30 PFAKE 23 34 50.0 +9.1
CBN LR LR
comp=Z,933nm,20.0s,MS5.3
MVO Moncorvo 97.88 337 eP P 23 34 46.1 +4.1
MVO Moncorvo 97.88 337 ePP PP 23 38 40.4 +0.8
MVO eSKS 23 52 50.4
MVO eLQ 00 07 52.3
MVO eLR LR 00 14 47.9
comp=Z,1µm,18.0s
ESDC Sonseca Array 98.18 334 P P 23 34 42.0 -1.4
comp=Z,1.7nm,0.9s,mb4.6,baz=12,slow=4.8,SNR=6.6
ESDC LR LR 00 26 52.4
comp=Z,1µm,18.1s,MS5.5,baz=45,slow=40
ESDC Sonseca Array 98.18 334 P P 23 34 42.6 -0.8
comp=Z,2.1nm,1.1s,mb4.6
ESLA Sonseca Array 98.18 334 PFAKE 23 34 50.0 +6.6
ESLA LR LR
comp=Z,11µm,20.0s,MS6.3
PAB San Pablo 98.43 334 PFAKE 23 35 00.0 +15
PAB LR LR
comp=Z,2µm,19.0s,MS5.6
MTE Manteigas 98.74 337 eP P 23 34 55.6 +10
MTE Manteigas 98.74 337 ePP PP 23 38 48.9 +2.7
MTE eLQ 00 07 33.9
MTE eLR LR 00 14 00.7
comp=Z,1µm,20.0s
MTE Manteigas 98.74 337 PFAKE 23 35 00.0 +14
MTE LR LR
comp=Z,2µm,20.0s,MS5.5
GOGA Godfrey 98.89 37 PFAKE 23 35 00.0 +13
GOGA LR LR
comp=Z,748nm,19.0s,MS5.2
BRAL Brewton 98.98 41 PFAKE 23 35 00.0 +13
BRAL LR LR
comp=Z,1µm,20.0s,MS5.3
EQES Quesada 99.51 332 P P 23 34 53.6 +4.2
comp=Z,41nm,1.6s,mb5.6
PMRV Marv??o 99.57 336 eP Pdif 23 34 54.7 +5.1
PMRV Marv??o 99.57 336 ePP PP 23 38 56.0 +3.5
PMRV eLQ 00 08 14.8
PMRV eLR LR 00 15 56.7
comp=Z,2µm,18.0s
CNNC Cliffs of the 99.92 32 PFAKE 23 35 00.0 +8.9
CNNC LR LR
comp=Z,855nm,19.0s,MS5.3
PESTR Estremoz 100.14 336 ePP PP 23 39 00.1 +3.2
PESTR eLQ 00 08 03.9
PESTR eLR LR 00 16 03.4
comp=Z,2µm,18.0s
EVO Evora 100.58 336 eP Pdif 23 35 06.5 +12
EVO Evora 100.58 336 ePP PP 23 39 03.0 +2.8
PBAR Barrancos 100.59 335 ePP PP 23 39 04.1 +3.8
PBAR eLQ 00 08 48.5
PBAR eLR LR 00 14 05.8
comp=Z,2µm,18.0s
PMAFR Mafra 100.60 337 ePP PP 23 38 58.5 -1.8
PMAFR eLR LR 00 13 48.5
comp=Z,1µm,20.0s
NHSC New Hope 100.70 35 PFAKE 23 35 10.0 +15
NHSC LR LR
comp=Z,1µm,19.0s,MS5.3
PCVE Castro Verde 101.41 336 eP Pdif 23 35 13.2 +15
PCVE Castro Verde 101.41 336 ePP PP 23 39 06.0 -0.5
PCVE eSKS 23 53 40.5
PCVE eLQ 00 08 41.7
PCVE eLR LR 00 16 57.6
comp=Z,2µm,18.0s
PVAQ Vaqueiros 101.51 336 eP Pdif 23 34 57.1 -1.1
PVAQ i P 23 39 00.1
PVAQ eLQ 00 09 09.1
PVAQ eLR LR 00 17 00.4
comp=Z,2µm,18.0s
PBDV Barranco-do-Ve 101.73 336 ePP PP 23 39 16.8 +7.9
PBDV eLQ 00 11 10.5
PBDV eLR LR 00 17 19.1
comp=Z,2µm,16.0s
SFS San Fernando 101.84 334 PFAKE 23 35 10.0 +10
SFS LR LR
comp=Z,4µm,19.0s,MS6.0
MORF Marmelete 101.91 336 eP Pdif 23 35 20.9 +21
MORF Marmelete 101.91 336 ePP PP 23 39 08.6 -1.6
MORF eS SS 23 53 50.1 +8.2
MORF eLR LR 00 17 15.5
comp=Z,1µm,20.0s
PFVI Vila Bisbo 102.12 336 eP Pdif 23 35 05.6 +4.7
PFVI Vila Bisbo 102.12 336 ePP PP 23 39 14.3 +2.5
PFVI eLR LR 00 17 05.3
comp=Z,2µm,18.0s
KMBO Kilima Mbogo 102.37 278 PFAKE 23 35 10.0 +8.0
KMBO LR LR
comp=Z,554nm,20.0s,MS5.1
DWPF Disney 104.22 39 PFAKE 23 35 20.0 +10
DWPF LR LR
comp=Z,752nm,21.0s,MS5.2
RTC Rabat Centre 104.30 333 PFAKE 23 35 20.0 +9.4
RTC LR LR
comp=Z,1µm,21.0s,MS5.3
ABPO Ambohimpanom 104.53 257 PFAKE 23 35 20.0 +8.4
ABPO LR LR
comp=Z,631nm,21.0s,MS5.1
CASY Casey 104.93 193 PFAKE 23 35 20.0 +6.6
CASY LR LR
comp=Z,567nm,21.0s,MS5.1
CMLA Cha da Macela 105.49 350 PFAKE 23 39 40.0 +11
CMLA LR LR
comp=Z,784nm,22.0s,MS5.2
BBSR BB Station 107.44 23 PFAKE 23 39 40.0 +6.9
BBSR LR LR
comp=Z,610nm,20.0s,MS5.2
TGUH Tegucigalpa,Un 111.89 52 PFAKE 23 39 50.0 +8.2
TGUH LR LR
comp=Z,645nm,20.0s,MS5.2
GTBY Guantanamo Bay 114.19 38 PFAKE 23 40 00.0 +14
GTBY LR LR
comp=Z,718nm,20.0s,MS5.3
MTDJ Mount Denham 114.36 41 PFAKE 23 40 00.0 +14
MTDJ LR LR
comp=Z,992nm,20.0s,MS5.4
GRTK Grand Turk 114.73 34 PFAKE 23 40 00.0 +13
GRTK LR LR
comp=Z,767nm,19.0s,MS5.3
SBA Scott Base 114.77 174 PFAKE 23 40 00.0 +15
SBA LR LR
comp=Z,356nm,19.0s,MS5.0
JTS JuntasAbangare 116.21 53 PFAKE 23 40 00.0 +10
JTS LR LR
comp=Z,573nm,19.0s,MS5.2
SDDR Presa de Saban 116.85 35 PFAKE 23 40 00.0 +8.7
SDDR LR LR
comp=Z,1µm,19.0s,MS5.5
LSZ Lusaka 117.79 271 ePKIKP PKPdf 23 39 52.0 -1.0
LSZ e 23 41 06.2
LSZ MLR MLR
comp=Z,677nm,19.0s,MS5.3
TORD Torodi Ar. Bea 118.13 315 PKP PKPdf 23 39 52.1 -1.7
comp=Z,0.8nm,0.6s,baz=10,slow=1.5,SNR=12
TORD PKKPab PKKPab 23 50 13.1 -4.6
comp=Z,0.8nm,0.8s,baz=204,slow=3.7,SNR=4.6
SJG San Juan 119.89 31 PFAKE 23 40 10.0 +13
SJG LR LR
comp=Z,1µm,21.0s,MS5.5
BCIP Isla Barro Col 120.29 49 PFAKE 23 40 10.0 +12
BCIP LR LR
comp=Z,494nm,21.0s,MS5.1
PAYG Puerto Ayora 120.29 66 PFAKE 23 40 10.0 +12
PAYG LR LR
comp=Z,869nm,19.0s,MS5.4
ANWB Willy Bob 122.00 27 PFAKE 23 40 10.0 +8.8
ANWB LR LR
comp=Z,694nm,22.0s,MS5.3
LBTB Lobatse 124.81 263 ePKIKP PKPdf 23 40 05.7 -0.6
LBTB e 23 41 54.5
LBTB MLR MLR
comp=Z,1µm,20.0s,MS5.5
FDF Fort de France 124.92 27 PFAKE 23 40 20.0 +13
FDF LR LR
comp=Z,736nm,20.0s,MS5.3
SDV Santo Domingo 125.79 41 ePKPdf PKPdf 23 40 06.8 -1.8
SDV e 23 40 13.9
SDV LR LR

comp=Z,322nm,20.0s,MS5.0
QSPA South Pole Qui 125.92 180 PFAKE 23 40 20.0 +13
QSPA LR LR
comp=Z,578nm,20.0s,MS5.2
ROSC El Rosal 127.02 47 PKP PKPdf 23 40 11.6 +0.7
comp=Z,3.9nm,0.3s,baz=92,slow=22,SNR=4.2
DBIC Dimbokro 127.11 317 PFAKE 23 40 20.0 +8.9
DBIC LR LR
comp=Z,1μm,20.0s,MS5.5
GRGR Grenville 127.11 29 PFAKE 23 40 20.0 +8.9
GRGR LR LR
comp=Z,836nm,20.0s,MS5.4
OTAV Otavalo 127.98 55 PFAKE 23 40 20.0 +7.2
OTAV LR LR
comp=Z,523nm,20.0s,MS5.2
TSUM Tsumeb 128.44 273 *e*PKPdf PKPdf 23 40 13.5 +0.1
TSUM *e*PP PP 23 42 18.9 +0.2
TSUM LR LR
comp=Z,611nm,22.0s,MS5.2
SUR Sutherland 131.71 256 PFAKE 23 40 30.0 +11
SUR LR LR
comp=Z,776nm,19.0s,MS5.4
NNA Nana 137.72 65 *e*PKPdf PKPdf 23 40 32.0 +1.0
NNA LR LR
comp=Z,1μm,19.0s,MS5.6
ASCN Ascension 144.43 316 PFAKE 23 40 50.0 +6.9
ASCN LR LR
comp=Z,242nm,22.0s,MS4.9
LPAZ La Paz 146.87 61 PKPbc PKPbc 23 40 49.2 +0.1
comp=Z,10.0nm,0.5s,baz=337,slow=1.8,SNR=44
LPAZ La Paz 146.87 61 *e*PKPdf PKPdf 23 40 48.8 +1.7
LPAZ LR LR
comp=Z,883nm,20.0s,MS5.5
RCBR Riachuelo 149.72 355 *e*PKPdf PKPdf 23 40 52.0 0.0
RCBR *e*PKPab PKPab 23 41 02.2 +0.4
RCBR LR LR
comp=Z,631nm,19.0s,MS5.4
LVC Limon Verde 150.19 71 *e*PKPbc PKPbc 23 40 58.2 +0.7
LVC *e*PKPab PKPab 23 41 05.0 +1.4
LVC LR LR
comp=Z,860nm,22.0s,MS5.5
LCO Las Campanas 151.82 85 *e*PKPdf PKPdf 23 40 55.1 +0.3
LCO *e*PKPab PKPab 23 41 10.8 +0.5
LCO LR LR
comp=Z,838nm,19.0s,MS5.6
PLCA Paso Flores 154.37 110 PKPbc PKPbc 23 41 06.3 -0.1
comp=Z,2.3nm,0.7s,baz=216,slow=9.7,SNR=1.7
PLCA Paso Flores 154.37 110 PKPbc PKPbc 23 41 06.3 -0.1
PLCA LR LR
comp=Z,392nm,20.0s,MS5.2
EFI East Falkland 159.03 144 PFAKE 23 41 10.0 +6.3
EFI LR LR
comp=Z,538nm,19.0s,MS5.4
TRQA Tornquist 160.98 103 PFAKE 23 41 20.0 +14
TRQA LR LR
comp=Z,1μm,21.0s
SPB Sao Paulo 165.15 35 PFAKE 23 41 20.0 +9.2
SPB LR LR
comp=Z,704nm,19.0s

CASC 08 23:39:29.7±3.3, 11°.27N×86°.98W, h20km±17km, MD4.2, ML3.4, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.97**	**43**	*e*P	Pb	23 39 47.5	-0.3
COPN	**Copaltepe**	**0.98**	**23**	*e*P	Pb	23 39 47.6	-0.4
TICN	**Ticuantepe**	**1.05**	**44**	*e*P	Pb	23 39 48.9	-0.4
CSAN		**1.05**	**31**	*e*P	Pb	23 39 48.2	-1.1
XAVN	**Gruta Xavier**	**1.08**	**36**	*e*P	Pb	23 39 48.9	-0.9
APON	**Apoyo**	**1.10**	**54**	*e*P	Pn	23 39 48.8	-1.2
SSN	**San Juan del S**	**1.10**	**88**	*e*P	Pn	23 39 47.7	-2.4
MGAN	**Managua**	**1.12**	**39**	*e*P	Pn	23 39 49.3	-1.1
MGAN				*e*S	Sb	23 40 07.2	+2.4
MGAN				AML	AML	23 40 08.2	
	comp=N,734nm,0.4s						
APYN	**Apoyeque**	**1.14**	**33**	*e*P	Pn	23 39 49.6	-1.0
WILN	**Americas 2**	**1.17**	**41**	*e*P	Pn	23 39 49.8	-1.2
MIRN	**Miramar**	**1.19**	**13**	*e*P	Pn	23 39 50.6	-0.7
MOMN	**Momotombo**	**1.21**	**21**	*e*P	Pn	23 39 51.2	-0.3
CNGN	**Cerro Negro**	**1.25**	**13**	*e*P	Pn	23 39 51.1	-1.0
CNGN				*e*S	Sb	23 40 10.4	+2.0
CNGN				AML	AML	23 40 14.7	
	comp=E,474nm,0.3s						
HUEN		**1.32**	**37**	*e*P	Pn	23 39 51.7	-1.3
TELN	**Telica**	**1.33**	**6**	*e*P	Pn	23 39 53.0	-0.2
CONN	**Concepcion**	**1.36**	**78**	*e*P	Pn	23 39 51.7	-1.9
CRIN	**San Cristobal**	**1.42**	**357**	*e*P	Pn	23 39 53.8	-0.7
CRIN				*e*S	Sn	23 40 14.7	+2.1
CRIN				AML	AML	23 40 26.3	
	comp=E,796nm,0.4s						
BOAB	**BOACO BROADBAN**	**.74**	**48**	*e*P	Pn	23 39 57.0	-1.8
VCR	**Vista de Mar**	**1.75**	**131**	*e*P	Pn	23 39 59.2	+0.3
JCR	**Jicaral**	**2.32**	**127**	*e*P	Pn	23 40 08.5	+1.8
JCR				*e*S	Sn	23 40 47.2	+13
FORC	**Fortuna**	**2.40**	**109**	*e*P	Pn	23 40 10.2	+2.2
CGA2	**Cerro Gallo 2**	**2.77**	**117**	*e*P	Pn	23 40 12.3	-0.6
LAJ	**Bijagual**	**3.14**	**116**	*e*P	Pn	23 40 13.4	-4.7
URSC	**Urasca**	**3.46**	**114**	⇑*i*P	Pn	23 40 23.0	+0.5
BUS	**Buena Vista**	**3.60**	**118**	*e*P	Pn	23 40 26.0	+1.6
BAR1		**4.13**	**119**	*e*P	Pn	23 40 35.6	+3.8

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*IDC **08** 23:48:54.0±0.7, 35°.97N×141°.99E, h0km, mb4.0/16, mb1 4.2/19, mb1mx4.1/27, mbtmp4.0/19, ML4.1/3, Error ellipse: s-maj=17.8km s-min=15.4km az=98.0*
*ISCJB **08** 23:48:56.4±0.9, 36°.02N±0°.04×142°.06E±0°.08, h37km±7km, mb4.2/38, Error ellipse: s-maj=10.5km s-min=6.1km az=13.9*
*MOS **08** 23:48:56.3±1.5, 35°.99N×142°.00E, h33km, mb4.5/13, Error ellipse: s-maj=12.3km s-min=7.9km az=124.7*
*BJI **08** 23:48:56.0, 35°.69N×141°.75E, h23km, mb4.4/10, Ms4.3/1, Ms7 4.2/1*
*JMA **08** 23:48:57.2±0.3, 36°.16N×141°.98E, h62km*
*NEIC **08** 23:48:58.6±0.5, 36°.04N×141°.91E, h35km, mb4.5/15, MW4.3(NIED), Error ellipse: s-maj=10.3km s-min=8.4km az=122.0*
NEIC Recorded [1 JMA] in Tochigi.
*NIED **08** 23:49:00, 36°.20N×141°.80E, h23km, Mw4.3 Best double couple: M₀3.58000×10¹⁵ NP1:φ₁57.00000°, δ55.00000°, λ130.00000°. NP2:φ₂181.00000°, δ51.00000°, λ47.00000°.*

ISC 08 23:48:58.0±1.8, 36°.04N±0°.04×141°.98E±0°.08, h31km±12km, n84, σ1§13/88, mb4.2/38, 3C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**250**	P	**Pn**	**23 49 15.6**	**+0.1**
CHOJ				*e*S	**Sb**	**23 49 29.8**	**+1.1**
JHO	**Hitachi**	**1.27**	**297**	P	**Pn**	**23 49 18.2**	**-1.4**
ONAJ	**Iwakimizuishiy**	**1.42**	**318**	P	**Pn**	**23 49 19.9**	**-1.8**
JFK	**Kawauchi**	**1.59**	**326**	P	**Pn**	**23 49 22.5**	**-1.5**
JAG	**Ashikaga**	**2.08**	**281**	P	**Pn**	**23 49 30.5**	**-0.2**
JOD2	**Odawara 2**	**2.48**	**253**	P	**Pn**	**23 49 37.4**	**+1.2**
JRY	**Ryogami san**	**2.49**	**270**	P	**Pn**	**23 49 36.4**	**0.0**
MJAR	**Matsushiro Arr**	**3.09**	**280**	Pn	**Pn**	**23 49 44.9**	**+0.3**
	9.3nm,0.3s,baz=99,slow=8.7,SNR=55						
MAJO	**Matsushiro**	**3.09**	**280**	*e*Pn	**Pn**	**23 49 45.5**	**+0.9**
MAJO				S	**Sn**	**23 50 35.5**	**+15**
JHJ	**Hachijo jima 2**	**3.43**	**212**	Pn	**Pn**	**23 49 49.2**	**-0.1**
	59nm,0.3s,baz=236,slow=5.9,SNR=12						
JHJ				Sn	**Sn**	**23 50 28.0**	**-1.0**
	117nm,0.3s,baz=51,slow=21,SNR=6.2						
ASAJ	**Asahikawa**	**8.08**	**3**	P	**Pn**	**23 50 56.4**	**+3.3**
ASAJ						23 52 23.0	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.08**	**3**	Pn	**Pn**	**23 50 56.4**	**+3.2**
	comp=N,3.8nm,0.3s,baz=213,slow=15,SNR=4.9						
ASAJ				Sn	**Sn**	**23 52 22.9**	**-0.4**
	comp=N,2.1nm,0.3s,baz=73,slow=26,SNR=2.8						
YUK	**Yuzh-Kuril'sk**	**8.52**	**19**	P	**Pn**	**23 50 56.0**	**-3.1**
CBIJ	**Chichi jima**	**8.92**	**179**	Pn	**Pn**	**23 51 03.5**	**-1.3**
	comp=N,8.3nm,0.3s,baz=272,slow=17,SNR=18						
CBIJ				Sn	**Sn**	**23 52 38.8**	**-5.5**
	comp=N,9.4nm,0.3s,baz=91,slow=22,SNR=3.2						
YSS	**Yuzh-Sakhalins**	**10.92**	**3**	P	**Pn**	**23 51 31.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**10.92**	**3**	Pn	**Pn**	**23 51 34.1**	**+2.1**
KSRS	**Korea Array**	**11.37**	**281**	Pn	**Pn**	**23 51 41.1**	**+2.9**
	comp=N,0.3nm,0.3s,baz=100,slow=14,SNR=8.9						
KLR	**Kul'dur**	**15.15**	**334**	*e*P	**Pn**	**23 52 39.2**	**+10**
NACB	**Ninganchiao**	**21.19**	**242**	*e*P	**P**	**23 53 42.0**	**+1.0**
YULB	**Yu-li**	**21.89**	**240**	*e*P	**P**	**23 53 48.4**	**-0.1**
TPUB	**Ta-pu**	**22.42**	**241**	P	**P**	**23 53 54.1**	**0.0**
YAK	**Yakutsk**	**27.13**	**347**	*e*P	**P**	**23 54 42.0**	**+4.0**
YAK				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK	**Yakutsk**	**27.13**	**347**	*e*P	**P**	**23 54 37.3**	**-0.7**
	comp=N,21nm,0.8s,mb4.7						
ENH	**Enshi**	**27.72**	**267**	*e*P	**P**	**23 54 43.3**	**-0.4**
	comp=N,19nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**28.29**	**306**	*e*P	**P**	**23 54 48.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**28.29**	**306**	*e*P	**P**	**23 54 48.7**	**+0.1**
	comp=Z,4.3nm,0.8s,mb4.1						
BOD	**Bodaibo**	**28.61**	**328**	*e*P	**P**	**23 54 55.1**	**+3.9**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**28.72**	**305**	P	**P**	**23 54 53.0**	**+0.7**
	comp=Z,2.2nm,0.7s,mb4.0,baz=98,slow=11,SNR=8.5						
ZAK	**Zakamensk**	**31.24**	**309**	⇑*i*P	**P**	**23 55 15.3**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
TLY	**Talaya**	**31.33**	**312**	P	**P**	**23 55 14.2**	**-1.1**
GTA	**Gaotai**	**33.30**	**289**	*e*P	**P**	**23 55 33.8**	**+1.0**
GTA				pP	pP	23 55 38.2	-3.6
GTA				sP	sP	23 55 41.3	-4.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BILL	**Bilibino**	**34.85**	**16**	⇑*e*P	pP	23 55 55.7	+0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KKM	**Kota Kinabalu**	**38.08**	**224**	P	**P**	**23 56 13.2**	**-0.8**
CHTO	**Chiang Mai**	**41.50**	**257**	*e*P	**P**	**23 56 42.0**	**-0.5**
LSA	**Lhasa**	**42.76**	**277**	P	**P**	**23 56 51.9**	**-0.8**
ZALV	**Zalesovo Beam**	**42.92**	**313**	P	**P**	**23 56 54.4**	**+0.8**
	comp=Z,2.0nm,0.9s,mb3.9,baz=104,slow=4.9,SNR=7.6						
NVS	**Novosibirsk**	**43.85**	**314**	*i* P	**P**	**23 57 01.4**	**+0.3**
NVS				pmax	pmax		
	comp=E,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
MK31	**Makanchi Array**	**45.03**	**303**	*e*P	**P**	**23 57 08.5**	**-2.2**
MKAR	**Makanchi Array**	**45.03**	**303**	P	**P**	**23 57 13.1**	**+2.4**
	comp=Z,1.9nm,0.8s,mb4.0,baz=90,slow=7.6,SNR=12						
MKAR	**Makanchi Array**	**45.03**	**303**	P	**P**	**23 57 13.1**	**+2.4**
KURK	**Kurchatov**	**46.90**	**309**	*e*P	**P**	**23 57 25.8**	**+0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**46.90**	**309**	P	**P**	**23 57 26.0**	**+0.6**
	comp=Z,2.7nm,0.4s,mb4.5,baz=84,slow=7.9,SNR=10						
KURK	**Kurchatov**	**46.90**	**309**	*e*P	**P**	**23 57 22.4**	**-3.0**
	comp=Z,7.6nm,0.7s,mb4.7						
MCK	**McKinley**	**49.21**	**33**	P	**P**	**23 57 41.8**	**-1.1**
TKM2	**Tokmak 2**	**50.51**	**299**	*e*P	**P**	**23 57 50.9**	**-2.2**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
TKM2	**Tokmak 2**	**50.51**	**299**	*e*P	**P**	**23 57 50.9**	**-2.2**
	comp=Z,4.5nm,0.4s,mb4.8						
AAK	**Ala-Archa**	**51.37**	**299**	⇑*e*P	**P**	**23 58 00.1**	**+0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
UCH	**Uchtor**	**51.47**	**299**	*e*P	**P**	**23 58 01.1**	**+0.7**
	comp=Z,1.7nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**51.58**	**313**	P	**P**	**23 58 01.7**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.6,baz=76,slow=9.1,SNR=3.4						
BRVK	**Borovoye**	**51.63**	**313**	*e*P	**P**	**23 58 00.3**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	**51.63**	**313**	*e*P	**P**	**23 58 00.2**	**-1.2**
	comp=Z,1.9nm,0.5s,mb4.3						
EKS2	**Erkin-Say**	**51.86**	**299**	P	**P**	**23 58 01.5**	**-1.8**
AML	**Almayashu**	**52.08**	**299**	*e*P	**P**	**23 58 04.8**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.6						
INK	**Inuvik**	**55.06**	**27**	P	**P**	**23 58 27.6**	**+1.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**55.06**	**27**	P	**P**	**23 58 27.6**	**+1.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=294,slow=6.5,SNR=14						
INK	**Inuvik**	**55.06**	**27**	*e*P	**P**	**23 58 26.2**	**-0.2**
	comp=Z,1.6nm,0.5s,mb4.3						
CTAO	**Charters Tower**	**55.97**	**175**	*e*P	**P**	**23 58 40.5**	**+7.1**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.1						
CTAO	**Charters Tower**	**55.97**	**175**	*e*P	**P**	**23 58 40.5**	**+7.1**
	comp=Z,5.8nm,0.3s,mb5.1						
FITZ	**Fitzroy Crossi**	**56.03**	**199**	*e*P	**P**	**23 58 32.3**	**-1.5**
WRAB	**Tennant Creek**	**56.14**	**189**	*e*P	**P**	**23 58 34.9**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**56.14**	**189**	*e*P	**P**	**23 58 34.9**	**+0.3**
	comp=Z,5.4nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**56.15**	**189**	*e*P	**P**	**23 58 35.4**	**+0.7**
WRA	**Warramunga Arr**	**56.15**	**189**	P	**P**	**23 58 34.7**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.3,baz=9.3,slow=7.5,SNR=10						
ARU	**Arti**	**57.40**	**319**	P	**P**	**23 58 49.1**	**+5.8**
ARU	**Arti**	**57.40**	**319**	*e*P	**P**	**23 58 42.0**	**-1.2**
	comp=Z,3.8nm,0.8s,mb4.5						
KBL	**Kabul**	**58.20**	**292**	*e*P	**P**	**23 58 48.9**	**-0.3**
KBL				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KBL	**Kabul**	**58.20**	**292**	*e*P	**P**	**23 58 48.9**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.3						
ABKAR	**Akbulak array**	**58.93**	**311**	*e*P	**P**	**23 58 53.9**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.3						
AKTK	**Aktyubinsk**	**59.68**	**313**	P	**P**	**23 58 59.2**	**0.0**
AKTO	**Aktyubinsk**	**59.68**	**313**	P	**P**	**23 58 59.2**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=80,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**59.87**	**189**	P	**P**	**23 59 00.6**	**-0.2**
	comp=Z,0.8nm,0.9s,mb3.8,baz=22,slow=8.4,SNR=5.1						
RES	**Resolute Bay**	**63.45**	**14**	*e*P	**P**	**23 59 22.6**	**-1.7**
RES				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.4						
RES	**Resolute Bay**	**63.45**	**14**	*e*P	**P**	**23 59 22.6**	**-1.7**
	comp=Z,3.8nm,1.2s,mb4.4						
YKA	**Yellowknife Ar**	**64.44**	**30**	P	**P**	**23 59 31.7**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.9,baz=297,slow=6.7,SNR=12						
ARCES	**ARCESS Array B**	**65.08**	**340**	P	**P**	**23 59 38.7**	**+3.7**
	comp=Z,1.5nm,0.6s,mb4.2,baz=60,slow=9.9,SNR=6.9						
FINES	**FINESS Array B**	**69.90**	**333**	P	**P**	**00 00 06.4**	**+0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=46,slow=8.0,SNR=3.4						
NVAR	**Mina Array Bea**	**75.22**	**53**	P	**P**	**00 00 39.8**	**+2.1**
	comp=Z,0.4nm,0.3s,mb3.8,baz=270,slow=5.9,SNR=4.8						
NB2	**NORSAR Subarra**	**75.28**	**338**	P	**P**	**00 00 43.9**	**+6.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**75.28**	**338**	P	**P**	**00 00 40.8**	**+3.2**
	comp=Z,2.4nm,0.9s,mb4.1,baz=39,slow=5.7,SNR=6.3						
AKASG	**Malin Array Be**	**75.36**	**323**	P	**P**	**00 00 39.2**	**+1.0**
	comp=Z,0.7nm,0.4s,mb3.9,baz=45,slow=5.7,SNR=4.0						
PDAR	**Pinedale Array**	**78.03**	**46**	P	**P**	**00 00 54.8**	**+1.2**
	comp=Z,0.5nm,0.9s,mb3.4,baz=316,slow=4.1,SNR=3.7						
BRTR	**Keskin Array B**	**79.85**	**312**	P	**P**	**00 01 09.2**	**+5.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=64,slow=2.9,SNR=4.9						
GERES	**GERESS Array B**	**83.79**	**329**	P	**P**	**00 01 28.5**	**+4.4**
	comp=Z,0.4nm,0.6s,mb3.8,baz=21,slow=5.8,SNR=4.5						
TXAR	**Lajitas Array**	**90.36**	**53**	P	**P**	**00 01 57.9**	**+1.5**
	comp=Z,0.4nm,0.6s,mb3.9,baz=299,slow=3.9,SNR=6.5						

JMA 08 23:49:03.2±0.2, 36°.21N×141°.84E, h85km±4km, M4.4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.94**	**238**	P	Pn	23 49 22.2	+0.3
CHOJ				*e*S	Sn	23 49 36.8	+0.9
JHO	**Hitachi**	**1.10**	**292**	P	Pn	23 49 23.5	-0.2
ONAJ	**Iwakimizuishiy**	**1.22**	**317**	P	Pn	23 49 25.5	+0.3
JFK	**Kawauchi**	**1.39**	**326**	P	Pn	23 49 27.7	+0.4
BSO1	**Boso 1**	**1.71**	**205**	*e*S	Sn	23 49 54.5	+1.8
JRY	**Ryogami san**	**2.39**	**266**	P	Pn	23 49 42.2	+1.9
MAT	**Matsushiro**	**2.95**	**278**	P	Pn	23 49 50.9	+3.0
MAT				S	Sn	23 50 25.0	+2.6

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*MOS **08** 23:55:31.3±0.7, 48°.25N×154°.09E, h44km, mb4.6/16, Error ellipse: s-maj=16.1km s-min=7.3km az=90.4*
*ISCJB **08** 23:55:34.4±0.9, 48°.35N±0°.07×154°.29E±0°.10, h70km±7km, mb4.0/34, Error ellipse: s-maj=14.4km s-min=5.6km az=136.1*
*NEIC **08** 23:55:36.3±0.7, 48°.32N×154°.24E, h75km±5km, mb4.3/15, Error ellipse: s-maj=7.9km s-min=4.3km az=147.0*
*IDC **08** 23:55:37.4±2.7, 48°.37N×154°.20E, h83km±24km, mb3.6/18, mb1 3.8/20, mb1mx3.7/28, mbtmp3.7/20, Error ellipse: s-maj=19.6km s-min=12.2km az=151.0*

ISC 08 23:55:37.2±0.8, 48°.37N±0°.07×154°.21E±0°.10, h80km±6km, n102, σ0§66/104, mb4.0/34, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.63**	**27**	*e*PN	**Pn**	**23 56 12.9**	**-4.5**
SKR				*e*S	**Sn**	**23 56 44.1**	**-4.3**
SKR				pmax	pmax		
	comp=N,110nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,290nm,0.5s						
SKR				smax			
	comp=E,700nm,0.4s						
SKR				smax			
	comp=Z,210nm,0.4s						
SKR				smax			
	comp=N,410nm,0.3s						
PEA0B	**Petropavlovsk-**	**5.24**	**24**	*e*Pn	**Pn**	**23 56 52.8**	**-0.1**
PEA0B				Sn	**Sn**	**23 57 52.8**	**+1.0**
PETK	**Petropavlovsk-**	**5.24**	**24**	*e*PN	**Pn**	**23 56 52.6**	**-0.3**
PETK				pmax	pmax		
	comp=Z,9.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.24**	**24**	P	**Pn**	**23 56 52.7**	**-0.2**
	comp=Z,8.9nm,0.3s,baz=181,slow=12,SNR=330						
PETK	**Petropavlovsk-**	**5.24**	**24**	P	**Pn**	**23 56 52.7**	**-0.2**
KUR	**Kuril'sk**	**5.36**	**237**	*e*PN	**Pn**	**23 56 54.5**	**-0.1**
KUR				*e*S	**Sn**	**23 57 59.0**	**+4.0**
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
KUR				smax			
	comp=N,90nm,0.6s						
KUR				smax			
	comp=E,60nm,0.6s						
PET	**Petropavlovsk**	**5.45**	**30**	*e*PN	**Pn**	**23 56 54.5**	**-1.2**
PET				pmax	pmax		
	comp=Z,61nm,0.6s						
PET	**Petropavlovsk**	**5.45**	**30**	*e*Pn	**Pn**	**23 56 53.6**	**-2.1**
	comp=Z,33nm,0.4s						
PET				*e*Sn	**Sn**	**23 57 56.8**	**-0.2**
YSS	**Yuzh-Sakhalins**	**7.86**	**264**	PN	**Pn**	**23 57 29.0**	**+0.3**
ASAJ	**Asahikawa**	**9.10**	**246**	P	**Pn**	**23 57 47.1**	**+1.6**
	baz=72,slow=13,SNR=2.9						
KLR	**Kul'dur**	**14.82**	**282**	*e*P	Px	23 59 14.3	
MDJ	**Mudanjiang**	**17.34**	**267**	Pn	**Pn**	**23 59 34.1**	**+0.4**
YAK	**Yakutsk**	**19.40**	**324**	*e*P	**Pn**	**23 59 57.0**	**-1.4**
KSRS	**Korea Array**	**22.02**	**250**	*e*P	**P**	**00 00 25.9**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
KSRS	**Korea Array**	**22.02**	**250**	P	**P**	**00 00 25.0**	**+0.2**
	comp=Z,1.6nm,0.6s,mb3.5,baz=53,slow=9.6,SNR=6.1						
MCK	**McKinley**	**33.95**	**42**	*e*P	**P**	**00 02 12.4**	**+0.1**
COLA	**College**	**34.41**	**40**	*e*P	**P**	**00 02 16.3**	**-0.1**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
COLA	**College**	**34.41**	**40**	*e*P	**P**	**00 02 16.3**	**-0.1**
	comp=Z,4.3nm,0.9s,mb4.3						
YULB	**Yu-li**	**36.05**	**238**	P	**P**	**00 02 30.2**	**-0.6**
INK	**Inuvik**	**39.89**	**34**	*e*P	**P**	**00 03 03.5**	**+0.9**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**39.89**	**34**	P	**P**	**00 03 01.7**	**-0.9**
	comp=Z,1.5nm,0.4s,mb4.1,baz=299,slow=6.8,SNR=22						
INK	**Inuvik**	**39.89**	**34**	*e*P	**P**	**00 03 03.5**	**+0.9**
	comp=Z,2.1nm,0.5s,mb4.2						
ZALV	**Zalesovo Beam**	**42.28**	**305**	P	**P**	**00 03 21.7**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.6,baz=64,slow=9.8,SNR=2.5						
ZALV				PcP	PcP	00 05 15.2	+0.5
	comp=Z,1.1nm,0.5s,baz=82,slow=3.1,SNR=5.5						
MKAR	**Makanchi Array**	**46.87**	**296**	P	**P**	**00 03 58.7**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.3,baz=66,slow=6.3,SNR=5.1						
MKAR	**Makanchi Array**	**46.87**	**296**	P	**P**	**00 03 58.7**	**-0.3**
KURK	**Kurchatov**	**47.10**	**303**	P	**P**	**00 04 00.4**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.7,baz=68,slow=8.6,SNR=7.0						
KURK	**Kurchatov**	**47.10**	**303**	P	**P**	**00 04 00.3**	**-0.4**
RES	**Resolute Bay**	**49.07**	**19**	*e*P	**P**	**00 04 16.3**	**+0.7**
RES				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
RES	**Resolute Bay**	**49.07**	**19**	*e*P	**P**	**00 04 16.3**	**+0.7**
	comp=Z,1.6nm,0.4s,mb4.3						
YKA	**Yellowknife Ar**	**49.19**	**38**	P	**P**	**00 04 17.3**	**+0.7**
	comp=Z,1.9nm,0.7s,mb4.1,baz=297,slow=7.3,SNR=24						
YKA	**Yellowknife Ar**	**49.19**	**38**	P	**P**	**00 04 17.3**	**+0.7**
BVAR	**Borovoye Array**	**50.41**	**309**	P	**P**	**00 04 25.3**	**-0.7**
	comp=Z,0.9nm,0.4s,mb4.1,baz=57,slow=7.8,SNR=13						
BVAR				PcP	PcP	00 05 42.8	-0.5
	comp=Z,0.7nm,0.5s,baz=86,slow=4.6,SNR=4.5						
BVAR	**Borovoye Array**	**50.41**	**309**	P	**P**	**00 04 25.3**	**-0.7**
BVAR				PcP	PcP	00 05 42.8	-0.5
BRVK	**Borovoye**	**50.45**	**309**	P	**P**

LOR	Lormes	81.32	340	eP	P	00 07 44.4 -0.1
	comp=Z,6.5nm,0.9s,mb4.2					
LOR	Lormes	81.32	340	eP	P	00 07 44.4 -0.1
LOR				pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.1					
LOR	Lormes	81.32	340	eP	P	00 07 44.4 -0.1
	comp=Z,3.3nm,0.9s,mb4.2					
CABF	La Chapelle	81.41	338	eP	P	00 07 44.6 -0.4
	comp=Z,3.2nm,0.8s,mb3.9					
CABF	La Chapelle	81.41	338	eP	P	00 07 44.6 -0.4
CABF				pmax	pmax	
	comp=Z,2.0nm,0.8s,mb4.0					
CABF	La Chapelle	81.41	338	eP	P	00 07 44.6 -0.4
	comp=Z,1.6nm,0.8s,mb3.9					
SSF	Saint Saulge	81.59	340	eP	P	00 07 46.0 +0.1
	comp=Z,2.0nm,0.7s,mb3.8					
SSF	Saint Saulge	81.59	340	eP	P	00 07 46.0 +0.1
SSF				pmax	pmax	
	comp=Z,1.0nm,0.7s,mb3.8					
SSF	Saint Saulge	81.59	340	eP	P	00 07 46.0 +0.1
	comp=Z,1.0nm,0.7s,mb3.8					
SGMF	Saint Gilles	81.67	345	eP	P	00 07 46.4 +0.1
AVF	Avril sur Loir	81.88	340	eP	P	00 07 47.5 0.0
	comp=Z,3.3nm,0.7s,mb4.0					
AVF	Avril sur Loir	81.88	340	eP	P	00 07 47.5 0.0
AVF				pmax	pmax	
	comp=Z,2.0nm,0.7s,mb4.1					
AVF	Avril sur Loir	81.88	340	eP	P	00 07 47.5 0.0
	comp=Z,1.6nm,0.7s,mb4.0					
SMF	Signal de Mont	81.91	340	eP	P	00 07 47.7 +0.1
LPL	La Plagne	82.27	338	eP	P	00 07 50.5 +1.0
LPG	La Plagne	82.28	338	eP	P	00 07 50.7 +1.1
	comp=Z,11nm,1.1s,mb4.3					
LPG	La Plagne	82.28	338	eP	P	00 07 50.7 +1.1
LPG				pmax	pmax	
	comp=Z,5.0nm,1.1s,mb4.3					
LPG	La Plagne	82.28	338	eP	P	00 07 50.7 +1.1
	comp=Z,5.4nm,1.1s,mb4.3					
TCF	Toulx Ste Croi	82.61	341	eP	P	00 07 51.6 +0.3
	comp=Z,12nm,1.1s,mb4.3					
TCF	Toulx Ste Croi	82.61	341	eP	P	00 07 51.6 +0.3
TCF				pmax	pmax	
	comp=Z,6.0nm,1.0s,mb4.4					
TCF	Toulx Ste Croi	82.61	341	eP	P	00 07 51.6 +0.3
	comp=Z,5.8nm,1.0s,mb4.4					
MFF	Saint Martin d	82.81	342	eP	P	00 07 52.6 +0.3
ORIF	Oris-en-Rattie	83.04	338	eP	P	00 07 54.5 +1.0
CAF	Calviac	83.94	340	eP	P	00 07 58.7 +0.6
FRF	La Foret Royal	84.11	337	eP	P	00 07 59.4 +0.4
LMR	La Mourre	84.36	337	eP	P	00 08 00.4 +0.1
PGF	Pioggiola	84.41	335	eP	P	00 08 00.7 +0.1
	comp=Z,12nm,0.8s,mb4.5					
PGF	Pioggiola	84.41	335	eP	P	00 08 00.7 +0.1
PGF				pmax	pmax	
	comp=Z,6.0nm,0.8s,mb4.5					
PGF	Pioggiola	84.41	335	eP	P	00 08 00.7 +0.1
	comp=Z,6.1nm,0.8s,mb4.5					
TORD	Torodi Ar. Bea	114.07	330	PKP	PKiKP	00 14 06.2 -1.2
	comp=Z,0.2nm,0.4s,baz=15,slow=2.6,SNR=8.7					

NOU 08 23:57:36.5±1.1, 20°.91S×168°.38E, h30km, MD2.3, ML3.5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	1.86	228	eP	Pn	23 58 05.2	-1.2
BAYA				eS	Sn	23 58 26.0	-3.0
DZM	Mont Dzumac	2.14	237	eP	Pn	23 58 09.3	-0.9
DZM				eS	Sn	23 58 34.2	-1.6
DZM				AMP		23 58 38.0	
	comp=Z,3μm,1.1s						
NOUC	Port Laguerre	2.27	238	eP	Pn	23 58 11.6	-0.4
NOUC				eS	Sn	23 58 37.6	-1.4
NOUC				AMP		23 58 41.2	
	comp=Z,111nm,0.0s						
ONTRN	Noumea	2.27	232	eP	Pn	23 58 11.1	-0.8
ONTRN				eS	Sn	23 58 36.6	-2.3
ONTRN				AMP		23 58 38.7	
	comp=Z,784nm,0.4s						

NIED ***08*** *23:58:00, 36°.60N×140°.90E, h62km, Mw4.3 Best double couple: M0 3.50000×10^15 NP1:φ0=255.00000°, δ86.00000°, λ-92.00000°. NP2:φ0=109.00000°, δ4.00000°, λ-56.00000°.*
NEIC ***08*** *23:58:29.9±0.3, 36°.55N×140°.99E, h35km, mb4.4/11, Error ellipse: s-maj=8.6km s-min=7.0km az=155.0*
NEIC Recorded [3 JMA] in Ibaraki; [2 JMA] in Fukushima and Tochigi; [1 JMA] in Chiba, Gumma, Miyagi and Saitama.
ISCJB ***08*** *23:58:30.3±0.5, 36°.59N±0°.03×140°.98E±0°.05, h56km±3km, mb4.0/24, Error ellipse: s-maj=7.1km s-min=4.5km az=31.7*
JMA ***08*** *23:58:31.9±0.1, 36°.61N×140°.89E, h51km±1km, M4.2*
JMA Felt III J1.
IDC ***08*** *23:58:31.0±0.7, 36°.59N×140°.98E, h44km±6km, mb3.8/18, mb1 4.0/22, mb1mx4.0/29, mbtmp3.9/22, ML4.2/4, MS3.8/1, Ms1 3.8/1, ms1mx2.8/27, Error ellipse: s-maj=9.8km s-min=8.5km az=132.0*

ISC 08 23:58:31.4±0.5, 36°.59N±0°.03×140°.97E±0°.05, h47km±4km, h46km±2.9km:pP-P, n56, σ0=73/69, mb4.0/24, 1C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.32	273	⇓P	Pn	23 58 40.9	+0.4
JHO				S	Sn	23 58 46.9	-0.1
ONAJ	Iwakimizuishiy	0.53	345	⇓P	Pn	23 58 42.9	0.0
ONAJ				S	Sn	23 58 50.7	-0.3
JYT	Yasato	0.72	240	⇑P	Pn	23 58 45.3	-0.1
JYT				S	Sn	23 58 54.7	-0.7
JFK	Kawauchi	0.78	354	⇓P	Pn	23 58 45.8	-0.3
JFK				S	Sn	23 58 55.9	-0.8
JFT	Otama	1.05	332	⇓P	Pn	23 58 50.5	+0.7
JFT				S	Sn	23 59 03.6	+0.2
JAG	Ashikaga	1.23	263	⇓P	Pn	23 58 52.3	+0.1
JAG				S	Sn	23 59 06.5	-1.2
JMM	Marumori	1.28	354	⇓P	Pn	23 58 53.0	+0.1
JMM				S	Sn	23 59 08.9	0.0
JFY	Yanaizu	1.30	309	⇓P	Pn	23 58 53.3	+0.2
JKT	Katashina	1.39	278	P	Pn	23 58 54.9	+0.5
JKT				S	Sn	23 59 11.5	-0.1
MJAR	Matsushiro Arr	2.22	270	P	Pn	23 59 06.1	+0.3
	31nm,0.3s,baz=97,slow=9.7,SNR=148						
MJAR				S	Sn	23 59 32.0	0.0
	65nm,0.3s,baz=89,slow=15,SNR=12						
MJAR				LR	LR	23 59 43.2	
	comp=Z,2μm,18.1s,baz=155,slow=33						
MAJO	Matsushiro	2.22	270	ePn	Pn	23 59 06.9	+1.1
MAJO				eSn	Sn	23 59 32.4	+0.4
MAT	Matsushiro	2.22	270	P	Pn	23 59 07.0	+1.2
MAT				S	Sn	23 59 32.3	+0.3
JHJ	Hachijo jima 2	3.60	196	P	Pn	23 59 25.5	+0.8
	26nm,0.3s,baz=74,slow=23,SNR=12						
JHJ				S	Sn	00 00 06.6	+0.7
	61nm,0.3s,baz=79,slow=23,SNR=4.0						
ASAJ	Asahikawa	7.62	9	P	Pn	00 00 19.3	-0.5
	4.1nm,0.3s,baz=153,slow=16,SNR=5.9						
ASAJ				S	Sn	00 01 43.8	-0.9
	1.7nm,0.3s,baz=330,slow=20,SNR=2.2						
CBIJ	Chichi jima	9.52	173	P	Pn	00 00 43.9	-2.1
	10nm,0.3s,baz=300,slow=19,SNR=12						
CBIJ				S	Sn	00 02 23.4	-8.2
	12nm,0.3s,baz=102,slow=22,SNR=6.4						
YSS	Yuzh-Sakhalins	10.44	7	ePn	Pn	00 00 58.4	0.0
PETK	Petropavlovsk-	20.25	30	P	P	00 03 04.3	+1.8
	10.0nm,0.9s,baz=215,slow=7.2,SNR=7.1						
PET	Petropavlovsk	20.58	31	eP	P	00 03 07.2	+1.1
	42nm,1.3s						
ENH	Enshi	26.94	266	eP	P	00 04 07.2	-1.2
	2.8nm,0.3s,mb4.3						
ULN	Ulaanbaatar	27.31	305	P	P	00 04 11.4	-0.1
SONM	Songino Array	27.74	305	P	P	00 04 15.0	-0.3
	1.7nm,0.9s,mb3.7,baz=108,slow=9.8,SNR=6.0						
MIDW	Midway	35.93	91	P	P	00 05 25.0	-2.3
LSA	Lhasa	41.89	275	eP	P	00 06 17.7	+0.5
ZALV	Zalesovo Beam	41.95	313	P	P	00 06 16.9	-0.4
	1.4nm,0.3s,mb4.1,baz=89,slow=7.8,SNR=6.4						
MKAR	Makanchi Array	44.05	302	P	P	00 06 35.0	+0.5
	0.5nm,0.6s,mb3.4,baz=93,slow=9.3,SNR=5.1						
KURK	Kurchatov	45.92	308	P	P	00 06 49.3	0.0
	1.2nm,0.4s,mb4.2,baz=86,slow=8.2,SNR=4.1						
KURK	Kurchatov	45.92	308	eP	P	00 06 48.1	-1.1
	5.8nm,0.8s,mb4.6						
AAK	Ala-Archa	50.39	299	eP	P	00 07 23.1	-0.6
UCH	Uchtor	50.49	298	P	P	00 07 24.4	-0.2
BVAR	Borovoye Array	50.61	313	P	P	00 07 24.4	-0.8
	0.6nm,0.5s,mb3.8,baz=70,slow=9.3,SNR=5.2						
AML	Almayashu	51.10	298	eP	P	00 07 30.4	+1.2
	1.7nm,0.6s,mb4.2						
INK	Inuvik	54.94	27	P	P	00 07 58.4	+1.3
	1.2nm,0.5s,mb4.2,baz=305,slow=7.0,SNR=14						
INK	Inuvik	54.94	27	eP	P	00 07 56.8	-0.2
	1.5nm,0.6s,mb4.2						
ARU	Arti	56.45	319	eP	P	00 08 07.7	-0.4
	2.9nm,0.5s,mb4.6						
WRAB	Tennant Creek	56.56	187	eP	P	00 08 09.3	+0.1
	2.7nm,0.5s,mb4.5						
WB2	Warramunga Arr	56.57	187	eP	P	00 08 09.4	+0.2
WRA	Warramunga Arr	56.58	187	P	P	00 08 09.2	0.0
	4.7nm,0.6s,mb4.7,baz=6.0,slow=7.6,SNR=21						
ABKAR	Akbulak array	57.95	310	eP	P	00 08 17.9	-0.8
	1.0nm,0.4s,mb4.2						
ABKAR				e	pP	00 08 31.2	-0.8
ASAR	Alice Springs	60.30	187	P	P	00 08 34.6	-0.6
	2.2nm,0.8s,mb4.2,baz=8.6,slow=6.6,SNR=14						
PALK	Pallekele	61.92	258	P	P	00 08 46.3	-0.2
RES	Resolute Bay	63.12	14	eP	P	00 08 54.2	+0.6
	1.3nm,0.7s,mb4.2						
YKA	Yellowknife Ar	64.37	30	P	P	00 09 02.3	+0.3
	0.3nm,0.6s,mb3.5,baz=306,slow=7.1,SNR=6.6						
STKA	Stephens Creek	68.11	179	P	P	00 09 25.5	-0.7
	2.5nm,0.7s,mb4.4,baz=338,slow=8.2,SNR=6.9						
STKA	Stephens Creek	68.11	179	eP	P	00 09 26.0	-0.2
	0.4nm,0.5s,mb3.7						
FINES	FINESS Array B	69.04	332	P	P	00 09 31.4	-0.3
	0.8nm,0.5s,mb3.9,baz=116,slow=8.7,SNR=5.0						
FINES				pP	pP	00 09 42.9	-2.4
	1.7nm,0.7s,baz=96,slow=5.7,SNR=3.9						
FINES	FINESS Array B	69.04	332	P	P	00 09 31.4	-0.3
FINES				pP	pP	00 09 42.9	-2.4
AKASG	Malin Array Be	74.43	322	P	P	00 10 03.3	-1.0
	1.1nm,0.4s,mb4.1,baz=46,slow=6.3,SNR=7.6						
NOA	NORSAR Array B	74.46	337	P	P	00 10 03.7	-0.5
	0.8nm,0.6s,mb3.8,baz=38,slow=5.8,SNR=4.8						
NOA				pP	pP	00 10 17.6	-0.3
	1.0nm,0.8s,baz=39,slow=5.8,SNR=3.7						
NOA	NORSAR Array B	74.46	337	P	P	00 10 03.7	-0.5
NOA				pP	pP	00 10 17.6	-0.3
FCC	Fort Churchill	74.56	26	P	P	00 10 05.2	+0.3
LRM	Limekiln Ridge	74.71	44	eP	P	00 10 06.7	+0.7
	16nm,0.8s,mb5.0						
NVAR	Mina Array Bea	75.54	53	P	P	00 10 10.4	-0.5
	0.3nm,0.3s,mb3.7,baz=292,slow=4.8,SNR=3.4						
PDAR	Pinedale Array	78.23	45	P	P	00 10 27.3	+1.3
	0.3nm,0.4s,mb3.6,baz=308,slow=4.9,SNR=3.6						
BRTR	Keskin Array B	78.88	311	pP	pP	00 10 43.3	-0.1
	0.7nm,0.7s,baz=47,slow=6.3,SNR=3.3						
GERES	GERESS Array B	82.90	328	P	P	00 10 51.7	+0.9
	0.2nm,0.4s,mb3.5,baz=343,slow=5.2,SNR=3.2						
GERES				pP	pP	00 11 04.6	-0.2
	0.4nm,0.5s,baz=34,slow=5.0,SNR=3.3						
TXAR	Lajitas Array	90.67	52	P	P	00 11 29.7	+0.5
	0.3nm,0.8s,mb3.7,baz=289,slow=3.8,SNR=5.4						

JMA ***09*** *00:24:17.0±0.4, 36°.21N×142°.06E, h0km, M3.6*
IDC ***09*** *00:24:18.4±1.0, 36°.09N×141°.95E, h0km, mb3.6/7, mb1 3.7/10, mb1mx3.6/27, mbtmp3.7/10, ML3.4/3, Error ellipse: s-maj=28.1km s-min=20.0km az=76.0*
NEIC ***09*** *00:24:23.6±0.4, 36°.08N×141°.86E, h35km, mb3.9/3, Error ellipse: s-maj=9.3km s-min=8.6km az=190.0*

ISC 09 00:24:18.8±1.3, 36°.17N±0°.03×141°.98E±0°.06, h4km±7km, n37, σ0=95/46, mb3.6/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.02	243	P	Pg	00 24 38.5	+0.2
CHOJ				eS	Sg	00 24 54.7	+3.2
JHO	Hitachi	1.22	292	P	Pg	00 24 40.8	-1.4
ONAJ	Iwakimizuishiy	1.33	315	P	Pn	00 24 42.8	-1.4
ONAJ				eS	Sg	00 25 01.8	+0.2
JFK	Kawauchi	1.49	324	P	Pn	00 24 45.2	-1.2
JFK				eS	Sn	00 25 05.4	-0.9
BSO1	Boso 1	1.71	209	P	Pn	00 24 49.8	+0.3
BSO1				eS	Sn	00 25 12.5	+0.7
BSO3	Boso 3	1.81	222	P	Pn	00 24 51.5	+0.7
JMM	Marumori	1.94	331	P	Pn	00 24 52.6	0.0
JAG	Ashikaga	2.05	278	P	Pn	00 24 53.1	-1.0
JRY	Ryogami san	2.49	267	P	Pn	00 24 59.0	-1.2
JRY				eS	Sn	00 25 30.2	-0.8
JOD2	Odawara 2	2.52	250	P	Pn	00 25 01.7	+1.2
JMK	Ichinoseki	2.84	348	P	Pn	00 25 06.6	+1.6
JMK				eS	Sn	00 25 39.7	0.0
JYN	Shimob	2.87	258	P	Pn	00 25 07.0	+1.7
JYK	Kaneyama	3.03	335	P	Pn	00 25 12.8	+5.2
MJAR	Matsushiro Arr	3.06	278	Pn	Pn	00 25 08.4	+0.4
	4.3nm,0.3s,baz=106,slow=8.1,SNR=50						
MAJO	Matsushiro	3.06	278	ePn	Pn	00 25 08.3	+0.3
MAJO				Sn	Sn	00 25 45.2	0.0
MAT	Matsushiro	3.06	278	P	Pn	00 25 09.8	+1.8
MAT				S	Sn	00 25 50.2	+5.1
JHJ	Hachijo jima 2	3.54	211	Pn	Pn	00 25 13.4	-1.1
	6.2nm,0.3s,baz=230,slow=13,SNR=3.7						
JHJ				Sn	Sn	00 25 52.1	-4.6
	40nm,0.3s,baz=252,slow=19,SNR=5.5						
CBIJ	Chichi jima	9.04	179	Pn	Pn	00 26 28.7	-1.5
	1.8nm,0.3s,baz=270,slow=20,SNR=5.6						
CBIJ				Sn	Sn	00 28 04.0	-8.5
	3.0nm,0.3s,baz=253,slow=19,SNR=3.4						
INCN	Inchon	12.37	281	Pn	Pn	00 27 15.6	-0.1
TATO	Taipei	20.83	243	P	P	00 28 59.8	-1.6
YAK	Yakutsk	27.01	347	Pn	P	00 30 01.9	+0.2
SONM	Songino Array	28.65	305	P	P	00 30 18.3	+1.9
	1.2nm,0.6s,mb3.8,baz=84,slow=11,SNR=3.9						
LSA	Lhasa	42.75	276	eP	P	00 32 17.7	+0.4
ZALV	Zalesovo Beam	42.84	313	P	P	00 32 17.6	-0.1
	0.6nm,0.5s,mb3.5,baz=99,slow=9.2,SNR=3.9						
MKAR	Makanchi Array	44.97	303	P	P	00 32 35.4	+0.4
	0.6nm,0.6s,mb3.6,baz=91,slow=9.4,SNR=5.8						
KULM	Kulim	48.78	241	P	P	00 33 04.3	-0.8
AAK	Ala-Archa	51.30	299	P	P	00 33 24.1	+0.1
UCH	Uchtor	51.41	299	P	P	00 33 24.5	-0.3
AML	Almayashu	52.02	299	eP	P	00 33 30.8	+1.5
	0.6nm,0.4s,mb3.9						
INK	Inuvik	54.95	27	eP	P	00 33 51.0	+0.4
	0.5nm,0.5s,mb3.8						
WRAB	Tennant Creek	56.26	189	P	P	00 33 59.8	-0.6
WRA	Warramunga Arr	56.27	189	P	P	00 33 60.0	-0.5
	0.6nm,0.4s,mb4.0,baz=4.5,slow=7.4,SNR=3.7						
ABKAR	Akbulak array	58.85	311	eP	P	00 34 18.8	+0.3
	0.5nm,0.5s,mb3.8						
ASAR	Alice Springs	59.99	189	P	P	00 34 26.4	-0.1
	0.1nm,0.4s,mb3.2,baz=22,slow=10.0,SNR=3.8						
YKA	Yellowknife Ar	64.33	30	P	P	00 34 55.8	+0.6
	0.1nm,0.7s,mb3.0,baz=305,slow=7.8,SNR=4.2						
BRTR	Keskin Array B	79.77	312	P	P	00 36 27.4	-0.8
	0.8nm,1.0s,mb3.6,baz=40,slow=4.7,SNR=3.3						
LPAZ	La Paz	146.73	61	PKPbc	PKPbc	00 44 03.9	+1.4
	1.0nm,0.5s,baz=288,slow=3.9,SNR=6.5						

IDC 09 01:26:57.2±5.5, 25°.04N×109°.73W, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.5/21, mbtmp3.1/4, ML3.3/2, Error ellipse: s-maj=77.3km s-min=25.8km az=167.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.89	50	Pn	Pn	01 28 39.3	-0.1
	0.1nm,0.3s,baz=231,slow=14,SNR=9.0						
TXAR				Pg	Pg	01 29 11.9	+2.7
	0.2nm,0.3s,baz=236,slow=16,SNR=10						
TXAR				Sn	Sn	01 29 56.9	-1.6
	0.4nm,0.3s,baz=230,slow=27,SNR=6.2						
TXAR				Lg		01 30 35.3	
	0.7nm,0.3s,baz=236,slow=26,SNR=5.3						
NVAR	Mina Array Bea	15.21	333	Pn	Pn	01 30 36.0	+2.7
	0.1nm,0.3s,baz=166,slow=12,SNR=2.3						
PDAR	Pinedale Array	17.69	0	P	Pn	01 31 06.3	+1.4
	0.1nm,0.3s,baz=160,slow=9.3,SNR=8.5						
YKA	Yellowknife Ar	37.59	356	P	P	01 34 13.3	+0.2
	0.4nm,0.9s,baz=178,slow=7.6,SNR=6.6						

IDC 09 01:43:15.9±1.9, 3°.70N×124°.70E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, Error ellipse: s-maj=134.0km s-min=24.0km az=68.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.68	178	P	P	01 48 10.0	+1.6
	0.8nm,0.3s,baz=8.8,slow=9.2,SNR=14						
WRA	Warramunga Arr	25.33	158	P	P	01 48 44.0	-0.6
	0.7nm,0.4s,baz=332,slow=11,SNR=5.0						
ASAR	Alice Springs	28.64	162	P	P	01 49 13.6	-0.8
	0.2nm,0.4s,baz=337,slow=7.6,SNR=4.6						
MKAR	Makanchi Array	56.44	326	P	P	01 52 59.5	+0.1
	0.4nm,0.4s,baz=136,slow=7.2,SNR=4.1						

IDC 09 01:50:16.2±1.6, 56°.53S×22°.91W, h0km, mb4.1/2, mb1 4.1/2, mb1mx3.7/13, mbtmp4.0/2, Error ellipse: s-maj=94.6km s-min=53.8km az=92.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	72.39	25	P	P	02 01 44.4	+0.5
	0.8nm,0.7s,baz=191,slow=6.1,SNR=5.1						
ASAR	Alice Springs	97.75	159	P	P	02 03 53.7	+0.6
	0.5nm,0.9s,baz=164,slow=4.6,SNR=4.5						
INK	Inuvik	147.70	319	PKPbc	PKPbc	02 10 00.2	-0.8
	1.6nm,0.8s,baz=121,slow=5.8,SNR=8.0						
SONM	Songino Array	148.39	84	PKPbc	PKPbc	02 10 01.9	-1.5
	0.3nm,0.3s,baz=230,slow=3.6,SNR=2.6						

JMA 09 02:09:02.6±0.4, 36°.13N×142°.06E, h73km, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	1.30	292	P	Pn	02 09 25.5	+0.5
ONAJ	Iwakimizuishiy	1.40	314	P	Pn	02 09 26.9	+0.5
BSO1	Boso 1	1.72	211	P	Pn	02 09 30.2	-0.3
BSO3	Boso 3	1.83	224	P	Pn	02 09 33.0	+1.0
JAG	Ashikaga	2.13	279	P	Pn	02 09 37.0	+1.0

NIED ***09*** *02:09:00, 36°.10N×142°.10E, h20km, Mw4.1 Best double couple: M0 1.43000×10^15 NP1:φ0=3.00000°, δ63.00000°, λ71.00000°. NP2:φ0=220.00000°, δ33.00000°, λ123.00000°.*
IDC ***09*** *02:09:22.3±0.8, 36°.09N×141°.97E, h0km, mb3.9/13, mb1 4.0/17, mb1mx3.9/30, mbtmp3.9/17, ML3.7/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/35, Error ellipse: s-maj=20.1km s-min=17.0km az=82.0*
JMA ***09*** *02:09:24.1±0.2, 36°.10N×142°.10E, h65km, M3.9*
ISCJB ***09*** *02:09:24.0±1.7, 36°.06N±0°.04×142°.09E±0°.06, h27km±12km, mb4.0/25, Error ellipse: s-maj=7.5km s-min=6.0km az=5.9*
MOS ***09*** *02:09:25.1±0.8, 36°.10N×142°.03E, h33km, mb4.4/8, Error ellipse: s-maj=17.3km s-min=10.3km az=133.2*
BJI ***09*** *02:09:27.4, 36°.10N×141°.90E, h40km, mB4.9/1, mb4.4/4*
NEIC ***09*** *02:09:28.5±1.6, 36°.08N×141°.89E, h41km±12km, mb4.3/11, Error ellipse: s-maj=12.3km s-min=9.1km az=87.0*

ISC 09 02:09:23.5±1.8, 36°.06N±0°.03×142°.04E±0°.05, h9km±11km, n57, σ0=80/63, mb4.0/25, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.02	250	P	Pb	02 09 43.8	+0.5
CHOJ				eS	Sb	02 09 58.1	+1.3
JHO	Hitachi	1.31	295	P	Pn	02 09 46.8	-1.1
ONAJ	Iwakimizuishiy	1.44	317	P	Pn	02 09 48.3	-1.5
JFK	Kawauchi	1.60	325	P	Pn	02 09 51.0	-1.0
BSO1	Boso 1	1.65	212	P	Pn	02 09 52.5	-0.1
BSO1				eS	Sn	02 10 14.3	+0.4
BSO3	Boso 3	1.77	225	P	Pn	02 09 54.1	-0.1
JFT	Otama	2.00	317	P	Pn	02 09 58.1	+0.7
JFT				eS	Sn	02 10 23.7	+1.2
JMM	Marumori	2.06	331	P	Pn	02 09 58.1	-0.2
JAG	Ashikaga	2.12	281	P	Pn	02 09 58.8	-0.3
JAG				eS	Sn	02 10 25.2	-0.4
JOD2	Odawara 2	2.53	253	P	Pn	02 10 05.2	+0.5
JRY	Ryogami san	2.54	270	P	Pn	02 10 04.5	-0.4
MJAR	Matsushiro Arr	3.13	280	Pn	Pn	02 10 13.7	+0.7
	10nm,0.3s,baz=96,slow=8.8,SNR=50						
MJAR				Sn	Sn	02 10 50.2	-0.2
	7.4nm,0.3s,baz=314,slow=19,SNR=5.0						
MAJO	Matsushiro	3.13	280	eP	Pn	02 10 13.7	+0.7
MAT	Matsushiro	3.13	280	P	Pn	02 10 13.8	+0.8
MAT				S	Sn	02 10 50.2	-0.3
JHJ	Hachijo jima 2	3.47	213	Pn	Pn	02 10 18.5	+0.8
	30nm,0.3s,baz=322,slow=16,SNR=5.2						
JHJ				Sn	Sn	02 10 57.1	-1.8
	70nm,0.3s,baz=68,slow=23,SNR=13						
CBIJ	Chichi jima	8.94	179	Pn	Pn	02 11 31.5	-1.3
	2.8nm,0.3s,baz=90,slow=20,SNR=4.8						
CBIJ				Sn	Sn	02 13 05.0	-8.6
	3.2nm,0.3s,baz=238,slow=22,SNR=3.6						
KSRS	Korea Array	11.41	281	Pn	Pn	02 12 05.7	-0.9
	0.3nm,0.3s,baz=94,slow=12,SNR=2.3						
KSRS				LR	LR	02 16 13.8	
	comp=Z,50nm,18.8s,baz=166,slow=36						
ENH	Enshi	27.77	267	eP	P	02 15 11.7	-0.9
	7.1nm,0.6s,mb4.5						
BOD	Bodaibo	28.62	328	eP	P	02 15 18.9	-1.0
SONM	Songino Array	28.75	305	P	P	02 15 20.0	-1.2
	3.4nm,0.8s,mb4.1,baz=104,slow=11,

comp=Z,1.4nm,0.8s,mb4.0,baz=80,slow=11,SNR=5.3
ASAR Alice Springs 59.90 189 P **P 02 19 30.2 +0.5**
comp=Z,0.3nm,0.5s,mb3.5,baz=16,slow=11,SNR=5.8
RES Resolute Bay 63.42 14 *eP* **P 02 19 53.3 +0.4**
RES pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
RES Resolute Bay 63.42 14 *eP* **P 02 19 53.3 +0.4**
comp=Z,0.7nm,0.7s,mb3.9
YKA Yellowknife Ar 64.40 30 P **P 02 20 00.1 +0.6**
comp=Z,0.3nm,0.9s,mb3.3,baz=260,slow=8.0,SNR=3.7
YKA Yellowknife Ar 64.40 30 P **P 02 20 00.1 +0.6**
FINES FINESS Array B 69.91 333 P **P 02 20 33.7 -0.8**
comp=Z,1.1nm,0.9s,mb3.8,baz=96,slow=7.9,SNR=4.4
NB2 NORSAR Subarra 75.28 338 P **P 02 21 07.0 +0.5**
comp=Z,0.4nm,0.4s,mb3.7,baz=42,slow=6.2
NOA NORSAR Array B 75.28 338 P **P 02 21 06.6 +0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=39,slow=5.7,SNR=3.1
AKASG Malin Array Be 75.38 323 P **P 02 21 05.9 -1.3**
comp=Z,0.2nm,0.3s,mb3.6,baz=46,slow=4.2,SNR=4.3
LPAZ La Paz 146.73 62 PKPbc PKPbc 02 29 07.6 +1.3
comp=Z,0.6nm,0.5s,baz=346,slow=4.9,SNR=5.2
LPAZ La Paz 146.73 62 PKPbc PKPbc 02 29 07.6 +1.3

*IDC **09** 02:14:43.8±1.1, 35°.97N×142°.49E, h0km, mb3.5/5, mb1 3.8/8, mb1mx3.5/28, mbtmp3.7/8, ML3.7/3, Error ellipse: s-maj=31.5km s-min=21.8km az=118.0*
*ISCJB **09** 02:14:47.0±0.7, 36°.10N±0°.04×142°.21E±0°.07, h33km, mb3.5/8, Error ellipse: s-maj=8.8km s-min=6.0km az=14.1*
*NEIC **09** 02:14:48.9±0.8, 35°.99N×142°.29E, h35km, mb3.7/3, Error ellipse: s-maj=23.2km s-min=13.6km az=178.0*
*JMA **09** 02:14:48.2±0.2, 36°.15N×142°.05E, h71km±5km, M3.2*
ISC 09 02:14:48.1±2.6, 36°.11N±0°.04×142°.14E±0°.09, h28km±19km, n26, σ1°09/31, mb3.5/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.12**	**249**	P	**Pn**	**02 15 07.9**	**+0.1**
CHOJ				*eS*	**Sn**	**02 15 22.1**	**-0.1**
JHO	**Hitachi**	**1.37**	**292**	P	**Pn**	**02 15 10.5**	**-0.7**
JFK	**Kawauchi**	**1.62**	**321**	P	**Pn**	**02 15 13.9**	**-0.8**
JFK				*eS*	**Sn**	**02 15 33.1**	**-1.5**
BSO1	**Boso 1**	**1.73**	**214**	P	**Pn**	**02 15 15.9**	**-0.4**
BSO3	**Boso 3**	**1.86**	**226**	P	**Pn**	**02 15 18.1**	**0.0**
JFT	**Otama**	**2.02**	**315**	P	**Pn**	**02 15 20.5**	**+0.3**
JAG	**Ashikaga**	**2.20**	**279**	P	**Pn**	**02 15 22.6**	**-0.1**
JRY	**Ryogami san**	**2.63**	**269**	P	**Pn**	**02 15 28.7**	**+0.1**
JMK	**Ichinoseki**	**2.93**	**346**	*eS*	**Sn**	**02 16 05.4**	**-1.6**
JYN	**Shimob**	**2.99**	**259**	P	**Pn**	**02 15 34.7**	**+1.2**
MJAR	**Matsushiro Arr**	**3.21**	**279**	Pn	**Pn**	**02 15 37.6**	**+1.1**
	3.9nm,0.3s,baz=98,slow=8.8,SNR=8.3						
MAJO	**Matsushiro**	**3.21**	**279**	*ePn*	**Pn**	**02 15 38.5**	**+1.9**
MAT	**Matsushiro**	**3.21**	**279**	P	**Pn**	**02 15 35.2**	**-1.4**
MAT				S	**Sn**	**02 16 07.9**	**-5.9**
JHJ	**Hachijo jima 2**	**3.56**	**214**	Pn	**Pn**	**02 15 41.4**	**0.0**
	15nm,0.3s,baz=319,slow=9.5,SNR=6.0						
JHJ				Sn	**Sn**	**02 16 20.9**	**-1.6**
	34nm,0.3s,baz=268,slow=22,SNR=6.1						
CBIJ	**Chichi jima**	**8.98**	**180**	Pn	**Pn**	**02 16 52.4**	**-3.6**
	3.5nm,0.3s,baz=90,slow=20,SNR=4.9						
CBIJ				Sn	**Sn**	**02 18 27.4**	**-8.8**
	2.2nm,0.3s,baz=118,slow=23,SNR=2.8						
MK31	**Makanchi Array**	**45.11**	**303**	*eP*	**P**	**02 23 03.9**	**+2.2**
MKAR	**Makanchi Array**	**45.11**	**303**	P	**P**	**02 23 05.1**	**+3.4**
	0.7nm,0.8s,mb3.5,baz=92,slow=7.3,SNR=4.0						
MKAR	**Makanchi Array**	**45.11**	**303**	P	**P**	**02 23 05.1**	**+3.4**
KURK	**Kurchatov**	**46.97**	**309**	*eP*	**P**	**02 23 17.3**	**+1.1**
	0.7nm,0.4s,mb3.9						
TKM2	**Tokmak 2**	**50.59**	**299**	*eP*	**P**	**02 23 45.7**	**+1.5**
	0.1nm,0.4s,mb3.1						
INK	**Inuvik**	**54.95**	**27**	P	**P**	**02 24 16.4**	**+0.4**
	0.4nm,0.6s,mb3.6,baz=302,slow=3.8,SNR=5.0						
WRA	**Warramunga Arr**	**56.23**	**189**	P	**P**	**02 24 25.0**	**-0.7**
	0.4nm,0.7s,mb3.6,baz=4.4,slow=6.9,SNR=3.4						
ABKAR	**Akbulak array**	**58.99**	**311**	*eP*	**P**	**02 24 45.1**	**+0.2**
	0.3nm,0.5s,mb3.6						
YKA	**Yellowknife Ar**	**64.31**	**30**	P	**P**	**02 25 19.4**	**-1.1**
	0.2nm,0.8s,mb3.2,baz=297,slow=6.2,SNR=4.3						
YKA	**Yellowknife Ar**	**64.31**	**30**	P	**P**	**02 25 19.4**	**-1.1**
TXAR	**Lajitas Array**	**90.22**	**53**	P	**P**	**02 27 46.5**	**+0.3**
	0.2nm,0.6s,mb3.6,baz=335,slow=5.5,SNR=3.4						

*NAO **09** 02:55:17.6±1.9, 67°.68N×33°.69E, ML2.3*
*HEL **09** 02:55:17.2±0.3, 67°.72N×33°.75E, h0km, ML2.3, ML2.3(NAO), Explosion*
*CSEM **09** 02:55:18.5±0.6, 67°.75N×33°.44E, h2km, ML2.3, Error ellipse: s-maj=12.2km s-min=5.9km az=82.0, Mining explosion.*
*IDC **09** 02:55:20.5±2.7, 67°.66N×33°.18E, h0km, mb1 3.1/4, mb1mx2.9/26, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=29.1km s-min=10.2km az=74.0*
ISC 09 02:55:16.9±1.2, 67°.73N±0°.04×33°.7E±0°.2, h0km, n27, σ1°21/50, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.28**	**244**	Pg	**Pg**	**02 55 22.4**	**+0.2**
APA0				Lg		02 55 27.2	
	baz=52,slow=56						
APA0				Rg		02 55 28.2	
APA0	**Apatity Array**	**0.28**	**244**	*i* P	**Pg**	**02 55 22.4**	**+0.2**
APA0				*i* S	**Sg**	**02 55 27.2**	**+1.3**
APA0				*e*RG		02 55 28.2	
APA0	**Apatity Array**	**0.28**	**244**	P	**Pg**	**02 55 22.4**	**+0.1**
APA0				S	**Sg**	**02 55 27.2**	**+1.3**
APA0				Lg		02 55 27.2	
	baz=52,slow=46						
VRF	**Varrio**	**1.54**	**273**	*e*P	**Pn**	**02 55 45.3**	**-0.2**
VRF				*e*S	**Sn**	**02 56 05.8**	**-0.4**
VRF	**Varrio**	**1.54**	**273**	P	**Pn**	**02 55 45.3**	**-0.2**
VRF				S	**Sn**	**02 56 05.8**	**-0.4**
KU6	**Riekki**	**2.27**	**223**	*e*P	**Pn**	**02 55 56.0**	**+0.5**
KU6				*e*S	**Sn**	**02 56 25.0**	**+0.9**
KU6	**Riekki**	**2.27**	**223**	P	**Pn**	**02 55 56.0**	**+0.5**
KU6				S	**Sn**	**02 56 24.9**	**+0.8**
MSF	**Maaselka**	**2.58**	**227**	*e*P	**Pn**	**02 56 01.3**	**+1.5**
MSF				*e*S	**Sn**	**02 56 32.5**	**+0.6**
MSF	**Maaselka**	**2.58**	**227**	P	**Pn**	**02 56 01.2**	**+1.4**
MSF				S	**Sn**	**02 56 32.5**	**+0.6**
SGF	**Sodankyl**	**2.75**	**267**	*e*P	**Pn**	**02 56 02.4**	**+0.3**
SGF				*e*S	**Sn**	**02 56 35.6**	**-0.3**
SGF	**Sodankyl**	**2.75**	**267**	P	**Pn**	**02 56 02.4**	**+0.3**
SGF				S	**Sn**	**02 56 35.6**	**-0.4**
KEV	**Kevo**	**3.16**	**313**	*e*P	**Pn**	**02 56 09.5**	**+1.7**
KEV				*e*S	**Sn**	**02 56 46.7**	**+0.6**
KEV				MSG		02 56 57.1	
	comp=Z,12nm,0.2s						
KEV	**Kevo**	**3.16**	**313**	P	**Pn**	**02 56 09.5**	**+1.7**
KEV				S	**Sn**	**02 56 46.7**	**+0.5**
	comp=Z,12nm,0.2s						
RNF	**Rovaniemi**	**3.19**	**253**	*e*P	**Pn**	**02 56 08.5**	**+0.4**
RNF				*e*S	**Sn**	**02 56 46.0**	**-0.7**
RNF	**Rovaniemi**	**3.19**	**253**	P	**Pn**	**02 56 08.5**	**+0.4**
RNF				S	**Sn**	**02 56 46.0**	**-0.7**
ARA0	**ARCESS Array S**	**3.49**	**305**	Pn	**Pn**	**02 56 13.1**	**+0.8**
	baz=122,slow=16						
ARA0				Pg	**Pg**	**02 56 22.1**	**-1.6**
	baz=112,slow=16						
ARA0				Sn	**Sn**	**02 56 54.9**	**+0.7**
	baz=116,slow=28						
ARA0				Lg		02 57 05.2	
	baz=114,slow=37						
ARA0	**ARCESS Array S**	**3.49**	**305**	*e*P	**Pn**	**02 56 13.1**	**+0.8**
ARA0				*e*PG	**Pg**	**02 56 22.1**	**-1.6**
ARA0				*e*S	**Sn**	**02 56 54.9**	**+0.7**
ARA0				*e*SG	**Sg**	**02 57 05.2**	**-3.6**
ARA0	**ARCESS Array S**	**3.49**	**305**	P	**Pn**	**02 56 13.1**	**+0.8**
ARA0	**ARCESS Array S**	**3.49**	**305**	Pg	**Pg**	**02 56 22.1**	**-1.6**
	baz=112,slow=15,SNR=90						
ARA0				S	**Sn**	**02 56 54.9**	**+0.7**
ARA0				Sg	**Sg**	**02 57 05.2**	**-3.7**
	comp=Z,4.4nm,0.3s						
ARA0				Lg		02 57 05.2	
	baz=114,slow=32						
ARCES	**ARCESS Array B**	**3.49**	**305**	Pn	**Pn**	**02 56 13.2**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=122,slow=15,SNR=6.6						
ARCES				Pg	**Pg**	**02 56 20.9**	**-2.8**
	comp=Z,1.5nm,0.3s,baz=119,slow=15,SNR=5.2						
ARCES				Sn	**Sn**	**02 56 54.6**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=112,slow=23,SNR=5.1						
ARCES				Lg		02 57 06.7	
	comp=Z,0.6nm,0.3s,baz=112,slow=29,SNR=7.3						

HEF Hetta 3.81 285 MSG 02 57 22.5
comp=Z,5.4nm,0.2s
KJN Kajaani 4.40 216 MSG 02 57 36.9
comp=Z,4.4nm,0.3s
FIA0 FINESS Array S 7.10 211 Sn **Sn 02 58 20.0 -3.0**
baz=32,slow=22
FIA0 Lg 02 58 52.7
baz=21,slow=28
FIA0 FINESS Array S 7.10 211 *e*S **Sn 02 58 20.0 -3.0**
FIA0 *e*SG **Sg 02 58 52.7 -12**
FINES FINESS Array B 7.10 211 Pn **Pn 02 57 00.5 -1.3**
comp=Z,0.2nm,0.3s,baz=34,slow=14,SNR=1.0
FINES Sn **Sn 02 58 19.3 -3.8**
comp=Z,0.2nm,0.3s,baz=12,slow=20,SNR=2.2
FINES Lg 02 58 52.5
comp=Z,0.4nm,0.3s,baz=27,slow=26,SNR=7.8
HFS Hagfors 11.57 238 Pn **Pn 02 57 60.0 -3.0**
comp=Z,0.1nm,0.3s,baz=49,slow=6.5,SNR=3.1
HFS Lg 03 01 11.4
comp=Z,0.1nm,0.3s,baz=54,slow=27,SNR=2.7
NOA NORSAR Array B 11.74 246 Pn **Pn 02 58 02.5 -2.8**
comp=Z,0.1nm,0.3s,baz=40,slow=11,SNR=2.0
NOA Lg 03 01 20.3
comp=Z,0.1nm,0.3s,baz=45,slow=25,SNR=2.2

CASC 09 03:06:48.4±2.5, 7°.91N×82°.92W, h18km±19km, MD3.8, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.91**	**14**	*e*P	Pb	03 07 04.7	-1.0
BRU2				*e*S	Sb	03 07 17.8	+0.2
TBS2		**0.92**	**16**	*e*P	Pb	03 07 06.8	+1.0
BAR1		**1.38**	**344**	*e*P	Pn	03 07 12.0	-0.9
BAR1				*e*S	Sn	03 07 32.4	+1.6
CNI	**Changuinola**	**1.55**	**15**	*e*S	Sn	03 07 14.8	-20
BUS	**Buena Vista**	**1.84**	**333**	*e*P	Pn	03 07 18.9	-0.2
BUS				*e*S	Sn	03 07 43.0	+1.1
QCR	**Quepos**	**1.95**	**321**	*e*P	Pn	03 07 20.8	+0.2
QCR				*e*S	Sn	03 07 45.3	+0.7
URSC	**Urasca**	**2.10**	**336**	*e*P	Pn	03 07 24.6	+1.9
URSC				*e*S	Sn	03 07 50.0	+1.7
PRS1	**Puriscal**	**2.48**	**326**	*e*P	Pn	03 07 26.4	-1.6

*ISK **09** 03:18:40.6, 38°.44N×39°.10E, h3km, MD3.0*
*ISCJB **09** 03:18:41.3±0.4, 38°.42N±0°.03×39°.10E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.1km az=169.7*
*CSEM **09** 03:18:41.6±0.1, 38°.44N×39°.10E, h5km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.3km az=164.0*
*DDA **09** 03:18:41.4, 38°.42N×39°.13E, h5km±4km, Md3.0*
ISC 09 03:18:42.0±0.4, 38°.43N±0°.03×39°.11E±0°.03, h8km±5km, n31, σ0°61/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.12**	**304**	*i* P	**Pg**	**03 18 44.8**	**+0.2**
ELZG				*i* S	**Sg**	**03 18 47.0**	**+0.5**
ELZG	**Elazig**	**0.12**	**304**	*i* P	**Pg**	**03 18 44.8**	**+0.2**
ELZG				*i* S	**Sg**	**03 18 47.0**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.16**	**109**	PG	**Pg**	**03 18 44.9**	**-0.5**
SVRC				*e*SG	**Sg**	**03 18 48.0**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.16**	**109**	*i* Pg	**Pg**	**03 18 44.9**	**-0.5**
SVRC				*e*Sg	**Sg**	**03 18 48.0**	**+0.4**
PTK	**Pertek**	**0.51**	**26**	PG	**Pg**	**03 18 51.1**	**-0.7**
PTK				*e*SG	**Sg**	**03 18 59.0**	**+0.5**
PTK	**Pertek**	**0.51**	**26**	*i* Pg	**Pg**	**03 18 51.2**	**-0.6**
PTK				*e*Sg	**Sg**	**03 18 59.0**	**+0.5**
MYA	**Malataya**	**0.55**	**259**	*e*PG	**Pg**	**03 18 52.0**	**-0.6**
MYA	**Malataya**	**0.55**	**259**	*e*Pg	**Pg**	**03 18 52.0**	**-0.6**
MALT	**Malatya**	**0.55**	**258**	*e*PG	**Pg**	**03 18 51.9**	**-0.6**
MALT	**Malatya**	**0.55**	**258**	*e*Pg	**Pg**	**03 18 51.9**	**-0.7**
AKCD	**Akcadag**	**0.94**	**262**	*i* P	**Pg**	**03 18 59.1**	**-1.0**
AKCD				*i* S	**Sg**	**03 19 12.2**	**-0.2**
AKCD	**Akcadag**	**0.94**	**262**	*i* P	**Pg**	**03 18 59.1**	**-1.0**
AKCD				*i* S	**Sg**	**03 19 12.2**	**-0.1**
DIYA	**Diyarbakir**	**0.94**	**122**	*i* P	**Pg**	**03 19 00.2**	**+0.1**
DIYA				*i* S	**Sg**	**03 19 13.2**	**+0.9**
DIYA	**Diyarbakir**	**0.94**	**122**	*i* P	**Pg**	**03 19 00.2**	**+0.1**
DIYA				*i* S	**Sg**	**03 19 13.2**	**+0.8**
URFA	**Urfa**	**1.01**	**193**	*e*PG	**Pg**	**03 19 01.0**	**-0.4**
URFA	**Urfa**	**1.01**	**193**	*e*Pg	**Pg**	**03 19 01.0**	**-0.5**
DARE	**Darende-Malaty**	**1.15**	**297**	*e*PN	**Pg**	**03 19 05.3**	**+1.3**
DARE	**Darende-Malaty**	**1.15**	**297**	*e*Pn	**Pg**	**03 19 05.3**	**+1.3**
ATAB	**Bozova**	**1.16**	**214**	*e*P	**Pg**	**03 19 04.1**	**-0.1**
ATAB				*i* S	**Sg**	**03 19 19.7**	**+0.5**
ATAB	**Bozova**	**1.16**	**214**	*e*P	**Pg**	**03 19 04.1**	**-0.1**
ATAB				*i* S	**Sg**	**03 19 19.7**	**+0.5**
EZC	**Erzincan**	**1.33**	**8**	*e*PN	**Pn**	**03 19 06.7**	**-0.1**
GZT	**Gaziantep**	**1.63**	**229**	*e*P	**Pg**	**03 19 13.0**	**-0.2**
GZT				*e*S	**Sg**	**03 19 35.5**	**+1.2**
BEST	**Besiri**	**1.79**	**107**	*i* P	**Pn**	**03 19 13.6**	**+0.5**
BEST				*i* S	**Sg**	**03 19 38.4**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.91**	**278**	*e*PN	**Pg**	**03 19 17.9**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.91**	**278**	*e*Pn	**Pg**	**03 19 17.9**	**-0.6**
GAZ	**Gaziantep**	**1.96**	**231**	*e*PN	**Pn**	**03 19 15.8**	**+0.3**
GAZ	**Gaziantep**	**1.96**	**231**	*e*Pn	**Pn**	**03 19 15.8**	**+0.3**
KMRS	**Kahramanmaras**	**1.98**	**243**	*e*PN	**Pn**	**03 19 16.0**	**+0.3**
KMRS	**Kahramanmaras**	**1.98**	**243**	*e*Pn	**Pn**	**03 19 16.0**	**+0.3**
KUZU	**Kuzuini**	**2.31**	**225**	*e*P	**Pg**	**03 19 26.2**	**-0.1**
KUZU				*e*S	**Sg**	**03 19 55.8**	**-0.5**
KUZU	**Kuzuini**	**2.31**	**225**	*e*P	**Pg**	**03 19 26.2**	**-0.1**
KUZU				*e*S	**Sg**	**03 19 55.8**	**-0.5**

*CASC **09** 03:20:20.7±1.5, 12°.15N×87°.95W, h19km±5km, MD3.8, ML3.4, mb3.7(NEIC)*
*ISCJB **09** 03:20:21.2±0.8, 12°.11N±0°.07×87°.93W±0°.05, h50km±11km, mb3.5/5, Error ellipse: s-maj=13.3km s-min=5.6km az=27.6*
*IDC **09** 03:20:27.7±2.1, 12°.68N×87°.28W, h92km±32km, mb3.2/4, mb1 3.4/6, mb1mx3.2/22, mbtmp3.1/6, Error ellipse: s-maj=86.8km s-min=16.9km az=38.0*
*NEIC **09** 03:20:28.0±1.3, 12°.65N×87°.25W, h99km±12km, mb3.7/1, Error ellipse: s-maj=41.0km s-min=13.4km az=59.0*
ISC 09 03:20:21.8±0.9, 12°.11N±0°.08×87°.91W±0°.05, h51km±10km, n29, σ0°96/36, mb3.5/5, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.02**	**55**	*e*P	**Pn**	**03 20 39.7**	**-0.2**
CRIN				*e*S	**Sn**	**03 20 54.4**	**+1.1**
CRIN				AML	AML	03 21 01.6	
	comp=N,981nm,0.2s						
TEL3	**Telica 3**	**1.14**	**66**	*e*P	**Pn**	**03 20 40.7**	**-0.7**
TELN	**Telica**	**1.16**	**65**	*e*P	**Pn**	**03 20 41.8**	**0.0**
CNCH	**Conchagua**	**1.16**	**4**	*i* P	**Pn**	**03 20 40.7**	**-1.1**
CNCH				*e*S	**Sn**	**03 20 56.4**	**-0.2**
MIRN	**Miramar**	**1.22**	**74**	*e*P	**Pn**	**03 20 42.1**	**-0.4**
CNGN	**Cerro Negro**	**1.25**	**72**	*e*P	**Pn**	**03 20 42.6**	**-0.3**
COPN	**Copaltepe**	**1.29**	**87**	*e*P	**Pn**	**03 20 43.4**	**0.0**
COPN				*e*S	**Sn**	**03 21 02.8**	**+3.2**
VSM	**San Miguel**	**1.36**	**345**	*e*P	**Pn**	**03 20 43.5**	**-1.0**
BLLM	**Bellamira**	**1.36**	**346**	*e*P	**Pn**	**03 20 43.5**	**-1.0**
MOMN	**Momotombo**	**1.37**	**77**	*e*P	**Pn**	**03 20 44.8**	**+0.2**
CSAN		**1.46**	**87**	*e*P	**Pn**	**03 20 46.1**	**+0.4**
CAHU	**Cacacuatique**	**1.68**	**350**	*e*P	**Pn**	**03 20 48.6**	**-0.2**
HUEN		**1.71**	**82**	*e*P	**Pn**	**03 20 49.6**	**+0.3**
LFRS	**El Faro**	**1.88**	**323**	*e*P	**Pn**	**03 20 50.3**	**-1.3**
LFRS				*e*S	**Sn**	**03 21 15.4**	**+1.3**
LBRS	**Las Brisas**	**1.96**	**326**	*e*P	**Pn**	**03 20 51.7**	**-1.0**
TGUH	**Tegucigalpa,Un**	**2.03**	**18**	*e*Pn	**Pn**	**03 20 53.0**	**-0.7**
TGUH	**Tegucigalpa,Un**	**2.03**	**18**	*e*P	**Pn**	**03 20 53.2**	**-0.5**
TGUH				*e*S	**Sn**	**03 21 17.8**	**-0.1**
BOAB	**BOACO BROADBAN**	**2.22**	**81**	*e*P	**Pn**	**03 20 56.5**	**+0.3**
SBLS	**San Blas**	**2.40**	**316**	*e*P	**Pn**	**03 20 58.8**	**+0.1**
RTR	**El Retiro**	**2.46**	**317**	*e*P	**Pn**	**03 20 59.5**	**+0.1**
RBDL	**Robledal**	**2.64**	**319**	*e*P	**Pn**	**03 21 02.6**	**+0.7**
RBDL				*e*S	**Sn**	**03 21 34.7**	**+1.9**
MTO2	**Montecristo 2**	**2.68**	**328**	*e*P	**Pn**	**03 21 02.3**	**-0.2**
JTS	**JuntasAbangare**	**3.42**	**122**	P	**Pn**	**03 21 17.1**	**+4.5**
	comp=N,0.8nm,0.3s,baz=311,slow=16,SNR=4.3						
APG	**El Apazote**	**3.80**	**319**	P	**Pn**	**03 21 26.0**	**+8.1**
	comp=N,0.4nm,0.3s,baz=85,slow=13,SNR=4.3						
APG				S	**Sn**	**03 22 09.8**	**+8.3**
	comp=N,0.5nm,0.3s,baz=116,slow=12,SNR=6.6						
TXAR	**Lajitas Array**	**22.56**	**322**	P	**P**	**03 25 19.7**	**+2.0**
	comp=N,1.6nm,0.8s,mb3.5,baz=137,slow=9.9,SNR=25						
AMTX	**Amarillo**	**25.89**	**333**	*e*P	**P**	**03 25 49.6**	**+0.5**
	comp=N,1.5nm,0.5s,mb3.8						

PDAR Pinedale Array 35.86 332 P **P 03 27 18.0 +1.2**
comp=N,0.3nm,0.7s,mb3.3,baz=119,slow=7.3,SNR=2.9
SCHQ Schefferville 45.73 17 P **P 03 28 33.8 -4.1**
comp=N,1.4nm,0.7s,mb4.0,baz=203,slow=7.6,SNR=2.4
YKA Yellowknife Ar 53.82 345 P **P 03 29 36.8 -2.3**
comp=N,0.2nm,0.8s,mb3.1,baz=137,slow=7.4,SNR=4.5

*ISCJB **09** 03:20:54.2±1.4, 36°.08N±0°.06×21°.4E±0°.1, h10km, Error ellipse: s-maj=12.8km s-min=7.3km az=160.7*
*CSEM **09** 03:20:55.4±0.9, 36°.08N×21°.44E, h10km, MD3.3, Error ellipse: s-maj=20.3km s-min=11.9km az=60.0*
*THE **09** 03:20:56.8, 36°.10N×21°.45E, h11km±6km, ML3.4/2, Error ellipse: s-maj=8.4km s-min=1.6km az=242.0*
*ATH **09** 03:20:58.9, 36°.16N×21°.89E, h31km±12km, MD3.3/4*
ISC 09 03:20:54.9±1.8, 36°.07N±0°.07×21°.4E±0°.1, h8km±9km, n20, σ0°96/31, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**1.18**	**21**	*e*PN	**Pg**	**03 21 18.2**	**+0.5**
ITM				*e*SN	**Sg**	**03 21 32.3**	**-0.7**
ITM	**Ithomi**	**1.18**	**21**	P	**Pg**	**03 21 18.3**	**+0.6**
ITM				S	**Sg**	**03 21 34.8**	**+1.8**
ITM	**Ithomi**	**1.18**	**21**	*e*Pn	**Pg**	**03 21 18.2**	**+0.5**
ITM				*e*Sn	**Sg**	**03 21 32.3**	**-0.7**
ITM				S	**Sg**	**03 21 34.8**	**+1.8**
KYTH	**Kithira**	**1.35**	**81**	*e*PN	**Pn**	**03 21 16.6**	**-3.4**
VLI	**Veliai**	**1.40**	**62**	*e*PN	**Pn**	**03 21 18.6**	**-2.2**
VLI				*e*SN	**Sn**	**03 21 32.4**	**-7.1**
VLI	**Veliai**	**1.40**	**62**	*e*Pn	**Pn**	**03 21 18.6**	**-2.2**
VLX	**Vlachokerasia**	**1.52**	**31**	*e*PN	**Pn**	**03 21 22.5**	**+0.1**
VLX	**Vlachokerasia**	**1.52**	**31**	P	**Pn**	**03 21 21.9**	**-0.5**
VLX				S	**Sn**	**03 21 41.8**	**-0.5**
VLX	**Vlachokerasia**	**1.52**	**31**	P	**Pn**	**03 21 21.9**	**-0.5**
VLX	**Vlachokerasia**	**1.52**	**31**	*e*Pn	**Pn**	**03 21 22.5**	**+0.1**
VLX				S	**Sn**	**03 21 41.8**	**-0.5**
GUR	**Goura**	**2.01**	**22**	P	**Pg**	**03 21 33.0**	**-0.4**
GUR	**Goura**	**2.01**	**22**	P	**Pg**	**03 21 33.0**	**-0.4**
DID	**Didima**	**2.06**	**45**	P	**Pn**	**03 21 30.6**	**+0.8**
DID				S	**Sn**	**03 21 56.0**	**+0.3**
DID	**Didima**	**2.06**	**45**	P	**Pn**	**03 21 30.6**	**+0.8**
DID				S	**Sn**	**03 21 56.0**	**+0.3**
KARN	**Karanos**	**2.16**	**107**	P	**Pn**	**03 21 31.3**	**+0.1**
KARN				S	**Sn**	**03 21 59.2**	**+1.0**
KARN	**Karanos**	**2.16**	**107**	P	**Pn**	**03 21 31.3**	**+0.1**
KARN				S	**Sn**	**03 21 59.2**	**+1.0**
VLS	**Valsamata**	**2.19**	**343**	P	**Pn**	**03 21 32.4**	**+0.7**
VLS	**Valsamata**	**2.19**	**343**	P	**Pn**	**03 21 32.4**	**+0.7**
LAKA	**Lakka**	**2.21**	**12**	P	**Pg**	**03 21 37.1**	**-0.2**
LAKA	**Lakka**	**2.21**	**12**	P	**Pg**	**03 21 37.1**	**-0.2**

*IDC **09** 03:35:35.7±1.7, 12°.89N×123°.98E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, ML4.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/28, Error ellipse: s-maj=72.5km s-min=26.5km az=61.0*
*MAN **09** 03:35:36, 12°.79N×123°.59E, h1km, mb4.5, ML3.4, MS3.3*
*NEIC **09** 03:35:37.1±0.7, 12°.90N×123°.99E, h10km, mb4.1/2, Error ellipse: s-maj=30.1km s-min=11.3km az=57.0*
*ISCJB **09** 03:35:38.0±0.8, 12°.75N±0°.04×123°.71E±0°.06, h25km±8km, mb3.8/5, Error ellipse: s-maj=10.5km s-min=6.7km az=10.2*
ISC 09 03:35:37.4±0.8, 12°.77N±0°.04×123°.66E±0°.06, h9km±7km, n16, σ0°95/21, mb3.8/5, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.41**	**185**	*e*P	**Pg**	**03 35 45.5**	**0.0**
MMPH				*e*S	Sg	03 35 05.8	-45
PVCP	**Virac**	**0.96**	**30**	*e*P	**Pg**	**03 35 55.9**	**0.0**
PVCP				*e*S	**Sg**	**03 36 06.8**	**-1.5**
CNP	**Catarman**	**1.01**	**104**	*e*P	**Pg**	**03 35 58.3**	**+1.3**
CNP				*e*S	**Sg**	**03 36 15.0**	**+4.9**
AUQP	**San Andres**	**1.11**	**300**	*e*P	**Pg**	**03 35 59.0**	**+0.2**
AUQP				*e*S	**Sg**	**03 36 18.5**	**+5.4**
RCP	**Roxas**	**1.50**	**217**	*e*P	**Pn**	**03 36 02.6**	**-1.8**
RCP				*i* S	**Sn**	**03 36 23.0**	**-1.0**
GQP	**Guinayangan**	**1.64**	**314**	*e*P	**Pn**	**03 36 05.3**	**-1.1**
GQP				*i* S	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**1.43**	**129**	*i* P	**Pn**	**03 37 10.4**	**-0.1**
AYVA				*i* S	**Sn**	**03 37 29.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.53**	**72**	*e*PN	**Pn**	**03 37 12.5**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.53**	**72**	*e*Pn	**Pn**	**03 37 12.5**	**+0.6**
SART	**Tekirdag**	**1.54**	**72**	*e*P	**Pn**	**03 37 11.4**	**-0.6**
SART				*i* S	**Sn**	**03 37 33.2**	**+1.3**
SART	**Tekirdag**	**1.54**	**72**	*e*P	**Pn**	**03 37 11.4**	**-0.5**
SART				*i* S	**Sn**	**03 37 33.2**	**+1.3**
NVR	**Nevrokopi**	**1.55**	**317**	*e*PN	**Pn**	**03 37 11.9**	**-0.2**
NVR				*e*SN	**Sn**	**03 37 30.3**	**-1.9**
NVR	**Nevrokopi**	**1.55**	**317**	*e*Pn	**Pn**	**03 37 11.9**	**-0.2**
NVR				*e*Sn	**Sn**	**03 37 30.3**	**-1.9**
BALY	**Balya**	**1.88**	**104**	*i* P	**Pn**	**03 37 16.4**	**-0.2**
BALY				*i* S	**Sn**	**03 37 40.1**	**-0.2**
BALY	**Balya**	**1.88**	**104**	*i* P	**Pn**	**03 37 16.4**	**-0.2**
BALY				*i* S	**Sn**	**03 37 40.1**	**-0.2**
EDRB	**Edirne**	**1.97**	**34**	*e*PN	**Pn**	**03 37 20.2**	**+2.3**
BNT	**Bandirma**	**2.04**	**85**	*e*PN	**Pn**	**03 37 19.4**	**+0.6**
CRLT	**Corlu**	**2.09**	**64**	*e*PN	**Pn**	**03 37 20.5**	**+0.9**
CRLT	**Corlu**	**2.09**	**64**	*e*Pn	**Pn**	**03 37 20.5**	**+1.0**
URLA	**Izmir**	**2.13**	**150**	*e*P	**Pn**	**03 37 20.0**	**-0.2**
URLA				*e*S	**Sn**	**03 37 52.8**	**+6.2**
URLA	**Izmir**	**2.13**	**150**	*e*P	**Pn**	**03 37 20.0**	**-0.1**
CTKS	**Kestanelik-??a**	**2.67**	**67**	*e*PN	**Pn**	**03 37 28.9**	**+1.5**
CTKS	**Kestanelik-??a**	**2.67**	**67**	*e*Pn	**Pn**	**03 37 28.9**	**+1.4**

*NEIC **09** 03:40:11.6, 40°.17N×25°.23E, h37km, MD3.0(ATH), After ATH.*
*ATH **09** 03:40:11.6, 40°.17N×25°.23E, h37km±1km, MD3.0/5*
*ISCJB **09** 03:40:12.7±0.5, 40°.23N±0°.03×25°.26E±0°.03, h9km±4km, Error ellipse: s-maj=4.5km s-min=4.2km az=22.9*
*CSEM **09** 03:40:12.9±0.2, 40°.21N×25°.25E, h15km, MD3.0, Error ellipse: s-maj=4.8km s-min=4.3km az=160.0*
*THE **09** 03:40:13.4, 40°.22N×25°.26E, h16km±3km, ML2.7/2, Error ellipse: s-maj=4.6km s-min=0.4km az=156.0*
*DDA **09** 03:40:13.3, 40°.19N×25°.41E, h8km±2km, Md2.8*
*ISK **09** 03:40:15.5, 40°.23N×25°.48E, h4km, MD2.9*
ISC 09 03:40:13.3±0.5, 40°.22N±0°.03×25°.26E±0°.04, h12km±4km, n38, σ0°.92/60, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.32**	**206**	P	**Pg**	**03 40 19.8**	**+0.2**
LOS	**Limnos**	**0.32**	**206**	P	**Pg**	**03 40 19.8**	**+0.2**
LIA	**Limnos Island**	**0.33**	**190**	*e*PB	**Pg**	**03 40 20.2**	**+0.4**
LIA				*e*SB	**Sg**	**03 40 25.3**	**+1.1**
LIA	**Limnos Island**	**0.33**	**190**	P	**Pg**	**03 40 20.2**	**+0.4**
LIA				S	**Sg**	**03 40 25.2**	**+1.0**
LIA	**Limnos Island**	**0.33**	**190**	P	**Pg**	**03 40 20.2**	**+0.4**
LIA				S	**Sg**	**03 40 25.2**	**+1.0**
GADA	**Gvkgeada**	**0.49**	**93**	*e*PG	**Pg**	**03 40 22.7**	**-0.2**
GADA	**Gvkgeada**	**0.49**	**93**	*e*Pg	**Pg**	**03 40 22.7**	**-0.2**
BOZC	**Bozcaada**	**0.72**	**121**	*i* P	**Pg**	**03 40 27.0**	**-0.1**
BOZC				*i* S	**Sg**	**03 40 36.5**	**0.0**
ENEZ	**Enez**	**0.86**	**53**	*e*PG	**Pg**	**03 40 29.6**	**-0.2**
ENEZ				*e*SG	**Sg**	**03 40 40.7**	**-0.3**
ENEZ	**Enez**	**0.86**	**53**	*e*Pg	**Pg**	**03 40 29.6**	**-0.2**
ENEZ				*e*Sg	**Sg**	**03 40 40.7**	**-0.3**
ALN	**Alexandroupoli**	**0.91**	**41**	*e*PN	**Pg**	**03 40 30.0**	**-0.7**
ALN				*e*SN	**Sg**	**03 40 42.7**	**+0.1**
ALN	**Alexandroupoli**	**0.91**	**41**	P	**Pg**	**03 40 30.2**	**-0.5**
ALN				S	**Sg**	**03 40 42.8**	**+0.2**
ALN	**Alexandroupoli**	**0.91**	**41**	P	**Pg**	**03 40 30.2**	**-0.5**
ALN				S	**Sg**	**03 40 42.8**	**+0.2**
EZN	**Ezine**	**0.91**	**115**	*e*PG	**Pg**	**03 40 31.0**	**+0.2**
EZN				*e*SG	**Sg**	**03 40 41.9**	**-0.7**
EZN	**Ezine**	**0.91**	**115**	*e*Pg	**Pg**	**03 40 31.0**	**+0.2**
EZN				*e*Sg	**Sg**	**03 40 41.9**	**-0.7**
RDO	**Rodhopi**	**0.95**	**13**	*e*PN	**Pg**	**03 40 30.7**	**-0.9**
RDO				*e*SN	**Sg**	**03 40 44.5**	**+0.5**
RDO	**Rodhopi**	**0.95**	**13**	P	**Pg**	**03 40 30.8**	**-0.8**
RDO				S	**Sg**	**03 40 44.5**	**+0.5**
RDO	**Rodhopi**	**0.95**	**13**	P	**Pg**	**03 40 30.8**	**-0.8**
RDO				S	**Sg**	**03 40 44.5**	**+0.5**
OUR	**Ouranopolis**	**0.98**	**277**	P	**Pg**	**03 40 31.9**	**-0.3**
OUR				S	**Sg**	**03 40 45.4**	**+0.3**
OUR	**Ouranopolis**	**0.98**	**277**	P	**Pg**	**03 40 31.9**	**-0.3**
OUR				S	**Sg**	**03 40 45.4**	**+0.3**
LPK	**Lapseki**	**1.16**	**82**	*e*PG	**Pn**	**03 40 34.8**	**-0.4**
LPK	**Lapseki**	**1.16**	**82**	*e*Pg	**Pn**	**03 40 34.8**	**-0.4**
PRK	**Paraskevi**	**1.25**	**141**	*e*PN	**Pn**	**03 40 34.0**	**-2.4**
PRK	**Paraskevi**	**1.25**	**141**	*e*Pn	**Pn**	**03 40 34.0**	**-2.4**
AYVA	**Ayvalik**	**1.43**	**129**	*i* P	**Pn**	**03 40 38.2**	**-0.8**
AYVA				*i* S	**Sn**	**03 40 57.1**	**-0.5**
AYVA	**Ayvalik**	**1.43**	**129**	*i* P	**Pn**	**03 40 38.2**	**-0.8**
AYVA				*i* S	**Sn**	**03 40 57.1**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.54**	**72**	*e*PN	**Pn**	**03 40 41.9**	**+1.5**
RKY	**Sarkoy-Tekirda**	**1.54**	**72**	*e*Pn	**Pn**	**03 40 41.9**	**+1.5**
SART	**Tekirdag**	**1.54**	**72**	*e*P	**Pn**	**03 40 40.3**	**-0.2**
SART				*i* S	**Sn**	**03 41 00.3**	**0.0**
SART	**Tekirdag**	**1.54**	**72**	*e*P	**Pn**	**03 40 40.3**	**-0.2**
SART				*i* S	**Sn**	**03 41 00.3**	**-0.1**
NVR	**Nevrokopi**	**1.55**	**317**	*e*PN	**Pn**	**03 40 38.8**	**-1.8**
NVR	**Nevrokopi**	**1.55**	**317**	*e*Pn	**Pn**	**03 40 38.8**	**-1.8**
BALY	**Balya**	**1.88**	**104**	*e*P	**Pn**	**03 40 45.6**	**+0.5**
BALY				*i* S	**Sn**	**03 41 09.4**	**+0.7**
BALY	**Balya**	**1.88**	**104**	*e*P	**Pn**	**03 40 45.6**	**+0.5**
BALY				*i* S	**Sn**	**03 41 09.4**	**+0.7**
EDRB	**Edirne**	**1.98**	**34**	*e*PN	**Pn**	**03 40 49.3**	**+2.8**
EDRB	**Edirne**	**1.98**	**34**	*e*Pn	**Pn**	**03 40 49.3**	**+2.8**
CTKS	**Kestanelik-??a**	**2.67**	**67**	*e*PN	**Pn**	**03 40 58.4**	**+2.4**
CTKS	**Kestanelik-??a**	**2.67**	**67**	*e*Pn	**Pn**	**03 40 58.4**	**+2.4**

CASC 09 03:43:01.7±2.1, 13°.67N×90°.21W, h81km±10km, MD3.5, ML2.8, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.55**	**334**	⇑*e*P	Pn	03 43 16.2	+0.2
RTR	**El Retiro**	**0.59**	**68**	*e*P	Pn	03 43 16.3	-0.1
SBLS	**San Blas**	**0.59**	**74**	⇓*e*P	Pn	03 43 16.1	-0.2
SBLS				AML	AML	03 43 31.9	
	comp=Z,238nm,0.2s						
SNJE	**San Jose**	**0.62**	**72**	*e*P	Pn	03 43 16.5	-0.1
RBDL	**Robledal**	**0.67**	**49**	*e*P	Pn	03 43 16.7	-0.4
PCG	**Pacaya**	**0.81**	**332**	*e*P	Pn	03 43 20.6	+1.9
PCG				*e*S	Sn	03 43 33.8	+2.5
BQQS	**Boqueron**	**0.90**	**86**	*e*P	Pn	03 43 19.7	+0.1
BQQS				*e*S	Sn	03 43 35.4	+2.4
NBG	**Las Nubes**	**0.92**	**352**	⇓*e*P	Pn	03 43 20.9	+1.0
SNET	**Serv Nac Est T**	**0.95**	**89**	*e*P	Pn	03 43 19.5	-0.7
SNET				*e*S	Sn	03 43 34.3	+0.3
FUG	**Fuego 3**	**0.99**	**321**	*e*P	Pn	03 43 20.9	+0.3
MTO2	**Montecristo 2**	**1.09**	**49**	*e*P	Pn	03 43 21.6	-0.3
MTO2				*e*S	Sn	03 43 37.1	0.0
FG6		**1.10**	**323**	*e*P	Pn	03 43 22.6	+0.6
FG6				*e*S	Sn	03 43 38.4	+1.3
LFRS	**El Faro**	**1.11**	**92**	*e*P	Pn	03 43 22.1	0.0
LFRS				*e*S	Sn	03 43 39.5	+1.9
LBRS	**Las Brisas**	**1.13**	**87**	*e*P	Pn	03 43 21.7	-0.7
LBRS				*e*S	Sn	03 43 40.2	+2.3
SNVI	**San Vicente**	**1.33**	**92**	*e*P	Pn	03 43 25.3	+0.4
SNVI				*e*S	Sn	03 43 44.6	+2.3
TP2	**Tecpan 2**	**1.36**	**325**	⇑*e*P	Pn	03 43 26.6	+1.4
TP2				*e*S	Sn	03 43 47.9	+5.0
MRL	**Marmol**	**1.47**	**20**	⇓*e*P	Pn	03 43 27.9	+1.2
VSM	**San Miguel**	**1.90**	**97**	*e*P	Pn	03 43 33.3	+1.1
CAHU	**Cacacuatique**	**1.94**	**87**	*e*P	Pn	03 43 32.4	-0.4
CNCH	**Conchagua**	**2.34**	**99**	*e*P	Pn	03 43 38.5	+0.3
CNCH				*e*S	Sn	03 44 09.2	+3.0

MAN 09 03:44:47, 6°.80N×123°.25E, h32km, mb4.7, ML3.6, MS3.6, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**1.05**	**7**	*e*P	Pn	03 45 06.1	+0.5
CTBH	**Cotabato--PC H**	**1.07**	**67**	⇓*i*P	Pn	03 45 06.7	+0.8
CTBH				*i* S	Sn	03 45 20.0	+0.3
ZMPH	**Zamboanga City**	**1.19**	**278**	⇓*i*P	Pn	03 45 07.9	+0.5
ZMPH				*i* S	Sn	03 45 13.9	-8.6
IPIL	**Ipil**	**1.20**	**326**	*e*P	Pn	03 45 08.9	+1.4
IPIL				*e*S	Sn	03 45 19.6	-3.1
BUKP	**Musuan**	**2.09**	**59**	*e*P	Pn	03 45 23.1	+3.2

*NIED **09** 03:44:00, 36°.30N×141°.80E, h17km, Mw3.9 Best double couple: M0=7.54000×10^14 NP1:φ0=39.00000°, δ75.00000°, λ106.00000°. NP2:φ0=171.00000°, δ22.00000°, λ44.00000°.*
*IDC **09** 03:44:49.7±0.9, 36°.29N×142°.02E, h0km, mb3.8/11, mb1 3.9/14, mb1mx3.8/28, mbtmp3.9/14, ML3.9/3, MS3.1/5, Ms1 3.2/5, ms1mx2.7/33, Error ellipse: s-maj=25.6km s-min=18.0km az=90.0*
*NEIC **09** 03:44:51.7±6.7, 36°.29N×142°.01E, h12km±40km, mb4.3/6, Error ellipse: s-maj=16.5km s-min=12.3km az=80.0*
*JMA **09** 03:44:53.6±0.2, 36°.28N×141°.84E, h64km±5km, M3.8*
ISC 09 03:44:50.4±1.1, 36°.29N±0°.03×141°.99E±0°.06, h3km±6km, n39, σ0°.84/48, mb4.0/17, MS3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.09**	**238**	P	**Pg**	**03 45 11.5**	**+0.3**
CHOJ				S	**Sg**	**03 45 25.8**	**+0.5**
JHO	**Hitachi**	**1.19**	**286**	P	**Pg**	**03 45 12.5**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.26**	**311**	P	**Pg**	**03 45 14.0**	**-0.4**
ONAJ				*e*S	**Sg**	**03 45 30.3**	**-0.4**
JFK	**Kawauchi**	**1.40**	**321**	P	**Pn**	**03 45 16.5**	**-0.2**
JFK				*e*S	**Sb**	**03 45 34.3**	**-1.1**
JFT	**Otama**	**1.81**	**313**	P	**Pn**	**03 45 23.2**	**+0.9**
JFT				*e*S	**Sn**	**03 45 45.7**	**0.0**
BSO1	**Boso 1**	**1.83**	**207**	P	**Pn**	**03 45 22.7**	**+0.1**
BSO1				*e*S	**Sn**	**03 45 45.1**	**-1.2**
JMM	**Marumori**	**1.84**	**329**	P	**Pn**	**03 45 23.3**	**+0.5**
JMM				*e*S	**Sn**	**03 45 45.6**	**-1.0**
BSO3	**Boso 3**	**1.91**	**220**	P	**Pn**	**03 45 23.5**	**-0.3**
JAG	**Ashikaga**	**2.05**	**275**	P	**Pn**	**03 45 25.1**	**-0.6**
JFY	**Yanaizu**	**2.15**	**302**	P	**Pn**	**03 45 27.7**	**+0.7**
JKT	**Katashina**	**2.26**	**283**	S	**Sn**	**03 45 56.5**	**-0.4**
JRY	**Ryogami san**	**2.52**	**265**	P	**Pn**	**03 45 31.7**	**-0.4**
JRY				S	**Sn**	**03 46 00.2**	**-3.0**
JOD2	**Odawara 2**	**2.57**	**247**	P	**Pn**	**03 45 33.2**	**+0.3**
MJAR	**Matsushiro Arr**	**3.06**	**276**	Pn	**Pn**	**03 45 40.1**	**+0.5**
	17nm,0.3s,baz=115,slow=8.6,SNR=105						
MJAR				LR	LR	03 46 53.9	
	comp=Z,282nm,19.9s,baz=140,slow=41						
MAJO	**Matsushiro**	**3.06**	**276**	*e*Pn	**Pn**	**03 45 40.4**	**+0.8**
MAT	**Matsushiro**	**3.06**	**276**	P	**Pn**	**03 45 40.6**	**+1.0**
MAT				S	**Sn**	**03 46 18.4**	**+1.7**
JHJ	**Hachijo jima 2**	**3.65**	**211**	Pn	**Pn**	**03 45 48.1**	**+0.5**
	22nm,0.3s,baz=44,slow=22,SNR=7.7						
JHJ				Sn	**Sn**	**03 46 26.4**	**-4.8**
	81nm,0.3s,baz=259,slow=23,SNR=9.2						
CBIJ	**Chichi jima**	**9.17**	**179**	Pn	**Pn**	**03 47 01.6**	**-1.8**
	5.3nm,0.3s,baz=270,slow=20,SNR=4.2						
CBIJ				Sn	**Sn**	**03 48 38.0**	**-9.2**
	7.5nm,0.3s,baz=285,slow=20,SNR=4.9						
CBIJ				LR	LR	03 50 41.0	
	comp=Z,44nm,18.1s,baz=137,slow=38						
KSRS	**Korea Array**	**11.33**	**280**	Pn	**Pn**	**03 47 36.4**	**+3.3**
	0.2nm,0.3s,baz=95,slow=14,SNR=4.4						
KSRS				LR	LR	03 51 55.4	
	comp=Z,72nm,18.2s,baz=90,slow=37						
ENH	**Enshi**	**27.75**	**267**	*e*P	**P**	**03 50 39.0**	**-1.1**
	4.5nm,0.6s,mb4.3						
SONM	**Songino Array**	**28.59**	**305**	P	**P**	**03 50 47.4**	**-0.1**
	2.6nm,0.8s,mb4.0,baz=105,slow=9.2,SNR=11						
ZALV	**Zalesovo Beam**	**42.76**	**313**	P	**P**	**03 52 48.9**	**+0.2**
	1.6nm,0.4s,mb4.1,baz=89,slow=9.0,SNR=4.9						
MK31	**Makanchi Array**	**44.91**	**303**	*e*P	**P**	**03 53 06.4**	**+0.3**
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**03 53 06.3**	**+0.2**
	1.2nm,0.6s,mb3.9,baz=96,slow=7.6,SNR=8.3						
KURK	**Kurchatov**	**46.76**	**309**	*e*P	**P**	**03 53 20.4**	**-0.3**
	5.4nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**50.40**	**299**	*e*P	**P**	**03 53 49.9**	**+1.1**
	2.8nm,0.7s,mb4.4						
AAK	**Ala-Archa**	**51.26**	**299**	*e*P	**P**	**03 53 55.9**	**+0.6**
	1.0nm,0.5s,mb4.0						
AML	**Almayashu**	**51.97**	**299**	*e*P	**P**	**03 54 02.1**	**+1.4**
	1.8nm,0.4s,mb4.3						
INK	**Inuvik**	**54.84**	**27**	P	**P**	**03 54 20.2**	**-1.0**
	0.6nm,1.0s,mb3.6,baz=251,slow=4.1,SNR=2.3						
WRA	**Warramunga Arr**	**56.39**	**189**	P	**P**	**03 54 32.2**	**-0.7**
	0.6nm,0.6s,mb3.8,baz=6.9,slow=7.6,SNR=4.1						
ABKAR	**Akbulak array**	**58.78**	**311**	*e*P	**P**	**03 54 49.2**	**-0.3**
	0.6nm,0.4s,mb4.0						
ASAR	**Alice Springs**	**60.12**	**189**	P	**P**	**03 54 59.8**	**+0.9**
	0.3nm,0.8s,mb3.4,baz=19,slow=9.3,SNR=2.4						
YKA	**Yellowknife Ar**	**64.22**	**30**	P	**P**	**03 55 26.9**	**+0.9**
	0.2nm,0.7s,mb3.3,baz=302,slow=6.4,SNR=3.5						
ARCES	**ARCESS Array B**	**64.86**	**340**	P	**P**	**03 55 29.8**	**-0.4**
	2.9nm,0.8s,mb4.4,baz=36,slow=7.8,SNR=2.3						
ARCES				LR	LR	04 30 23.5	
	comp=Z,30nm,18.8s,MS3.5,baz=173,slow=42						
FINES	**FINESS Array B**	**69.69**	**333**	P	**P**	**03 56 00.1**	**-0.9**
	0.8nm,0.6s,mb3.8,baz=8.9,slow=9.8,SNR=3.2						
NB2	**NORSAR Subarra**	**75.05**	**338**	P	**P**	**03 56 33.8**	**+0.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**75.05**	**338**	P	**P**	**03 56 33.3**	**+0.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=39,slow=5.7,SNR=5.2						
NOA				LR	LR	04 31 25.5	
	comp=Z,21nm,19.8s,MS3.4,baz=300,slow=37						
AKASG	**Malin Array Be**	**75.17**	**323**	P	**P**	**03 56 34.0**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=44,slow=5.1,SNR=3.1						
RPZ	**Rata Peaks**	**83.90**	**159**	LR	LR	04 29 11.8	
	comp=Z,181nm,19.2s,MS4.5,baz=291,slow=32						

*ISCJB **09** 03:52:59.5±0.6, 49°.9S±0°.1×126°.7E±0°.5, h10km, mb4.2/6, Error ellipse: s-maj=47.6km s-min=9.7km az=17.3*
*IDC **09** 03:53:00.1±1.1, 49°.93S×126°.74E, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.2/13, mbtmp4.3/5, MS3.4/2, Ms1 3.3/2, ms1mx2.9/19, Error ellipse: s-maj=71.9km s-min=19.4km az=109.0*
*NEIC **09** 03:53:01.6±0.4, 49°.92S×126°.70E, h10km, mb4.2/3, Error ellipse: s-maj=29.1km s-min=7.5km az=109.0*
ISC 09 03:53:01.6±0.6, 49°.9S±0°.1×126°.7E±0°.5, h10km, n18, σ0°.48/11, mb4.2/6, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**18.34**	**334**	LR	LR	04 01 41.0	
	comp=Z,119nm,20.9s,baz=35,slow=28						
CASY	**Casey**	**18.41**	**201**	*e*P	**Pn**	**03 57 16.2**	**-0.3**
	7.5nm,1.0s						
FORT	**Forrest**	**19.12**	**4**	*e*P	**Pn**	**03 57 24.6**	**-0.8**
	22nm,0.6s						
STKA	**Stephens Creek**	**21.17**	**37**	P	**P**	**03 57 46.9**	**0.0**
	15nm,1.0s,mb4.3,baz=198,slow=11,SNR=26						
STKA				LR	LR	04 04 40.3	
	comp=Z,103nm,20.1s,baz=250,slow=33						
ASAR	**Alice Springs**	**26.78**	**15**	P	**P**	**03 58 41.9**	**+0.3**
	6.5nm,0.7s,mb4.3,baz=188,slow=9.3,SNR=31						
WRA	**Warramunga Arr**	**30.50**	**14**	P	**P**	**03 59 14.3**	**-0.4**
	1.5nm,0.8s,mb3.9,baz=193,slow=7.5,SNR=5.6						
WRAB	**Tennant Creek**	**30.51**	**14**	*e*P	**P**	**03 59 15.7**	**+0.9**
	3.0nm,0.9s,mb4.1						
MAW	**Mawson**	**35.52**	**216**	P	**P**	**03 59 58.3**	**+0.2**
	3.0nm,0.9s,mb4.2,baz=76,slow=8.3,SNR=3.5						
QSPA	**South Pole Qui**	**40.23**	**180**	P	**P**	**04 00 37.1**	**-0.6**
	5.4nm,1.0s,mb4.2,baz=347,slow=4.0,SNR=9.0						
QSPA	**South Pole Qui**	**40.23**	**180**	P	**P**	**04 00 37.1**	**-0.6**
VNA2	**Neumayer--Watz**	**55.08**	**197**	*e*	**P**	**04 02 33.5**	**+0.5**
VNA2				*e*		04 02 40.4	
VNA3	**Neumayer Olymp**	**55.23**	**196**	*e*	**P**	**04 02 34.2**	**+0.1**
VNA3				*e*		04 02 40.6	
YKA	**Yellowknife Ar**	**145.07**	**45**	PKPbc	PKPbc	04 12 37.7	+0.4
	1.9nm,0.9s,baz=266,slow=3.6,SNR=17						
YKA	**Yellowknife Ar**	**145.07**	**45**	PKPbc	PKPbc	04 12 37.7	+0.4
YKW3	**Yellowknife Ar**	**145.07**	**45**	*e*PKPbc	PKPbc	04 12 37.9	+0.6
RES	**Resolute Bay**	**149.75**	**20**	*e*PKPbc	PKPbc	04 12 49.8	-0.2
FFC	**Flin Flon**	**150.36**	**62**	*e*PKPbc	PKPbc	04 12 52.9	+0.9
FCC	**Fort Churchill**	**154.99**	**54**	*e*PKPab	PKPab	04 13 17.8	-0.1

*IDC **09** 04:30:57.7±4.3, 36°.26N×70°.47E, h182km±38km, mb3.2/6, mb1 3.3/11, mb1mx3.1/29, mbtmp3.2/11, Error ellipse: s-maj=30.1km s-min=22.0km az=22.0*
*NNC **09** 04:30:57.5±8.1, 36°.82N×70°.01E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=70.7km s-min=51.5km az=161.0*
*ISCJB **09** 04:31:00.0±0.4, 36°.46N±0°.03×70°.57E±0°.05, h209km±6km, mb3.4/6, Error ellipse: s-maj=7.3km s-min=4.0km az=166.4*
*NEIC **09** 04:31:00.8±0.7, 36°.40N×70°.56E, h210km±7km, mb3.9/6, Error ellipse: s-maj=13.2km s-min=8.1km az=125.0*
ISC 09 04:31:00.9±0.4, 36°.49N±0°.03×70°.56E±0°.06, h198km±5km, n49, σ1°.24/62, mb3.4/6, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.30**	**213**	*e*Pn	**Pn**	**04 31 43.1**	**+0.6**
KBL				*e*Sn	**Sn**	**04 32 13.9**	**-1.0**
CEP	**Cherat**	**2.88**	**157**	⇓P	**Pn**	**04 31 51.3**	**+2.2**
CEP				S	**Sn**	**04 32 27.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.59**	**141**	P	**Pn**	**04 32 00.2**	**+2.6**
SARP	**Sargodha**	**4.88**	**158**	P	Px	04 32 24.8	
SARP				S	**Sn**	**04 33 10.0**	**-1.1**
KSH	**Kashi**	**5.24**	**53**	*e*Pn	**Pn**	**04 32 15.2**	**-3.0**
KSH				Sn	**Sn**	**04 33 11.1**	**-8.2**
KSH				smax			
	comp=N,54nm,0.3s						
KSH				smax			
	comp=E,63nm,0.3s						
THN	**Thein Dam**	**5.87**	**132**	*e*P	**Pn**	**04 32 26.7**	**+0.2**
THN				*e*S	**Sn**	**04 33 33.2**	**-0.9**
AML	**Almayashu**	**6.14**	**22**	*e*Pn	**Pn**	**04 32 30.5**	**+0.7**
	comp=E,16nm,0.4s						
AML				*e*Sn	**Sn**	**04 33 38.9**	**-1.4**
UCH	**Uchtor**	**6.50**	**27**	*e*Pn	**Pn**	**04 32 35.7**	**+1.1**
	comp=E,4.6nm,0.6s						
UCH				*e*Sn	**Sn**	**04 33 47.9**	**-0.9**
KK31	**Karatay Array**	**6.61**	**360**	⇑P	**Pn**	**04 32 35.4**	**-0.5**
	comp=E,2.0nm,0.4s,baz=185,slow=12,SNR=7.8						
KK31				S	**Sn**	**04 33 46.2**	**-5.1**
	comp=E,7.7nm,0.7s,baz=186,slow=25,SNR=9.7						
EKS2	**Erkin-Say**	**6.65**	**21**	*e*Pn	**Pn**	**04 32 37.3**	**+0.8**
AAK	**Ala-Archa**	**6.85**	**25**	P	**Pn**	**04 32 40.4**	**+1.3**
	comp=E,0.0nm,0.3s,baz=201,slow=3.1,SNR=13						
AAK				S	**Sn**	**04 33 57.1**	**+0.2**
	comp=E,0.0nm,0.3s,baz=171,slow=13,SNR=15						
AAK	**Ala-Archa**	**6.85**	**25**	P	**Pn**	**04 32 40.4**	**+1.3**
AAK				S	**Sn**	**04 33 57.1**	**+0.2**
SDNR	**Sundarnagar**	**7.28**	**131**	*e*P	**Pn**	**04 32 45.1**	**+0.3**
SDNR				*e*S	**Sn**	**04 34 04.5**	**-2.8**
TKM2	**Tokmak 2**	**7.51**	**30**	⇑P	**Pn**	**04 32 48.3**	**+0.7**
	comp=E,1.8nm,0.5s						
TKM2				S	**Sn**	**04 34 11.3**	**-1.2**
TKM2	**Tokmak 2**	**7.51**	**30**	*e*Pn	**Pn**	**04 32 48.3**	**+0.7**
	comp=E,3.1nm,0.5s						
SMLA	**Simla**	**7.67**	**132**	*e*P	**Pn**	**04 32 48.4**	**-1.4**
SMLA				*e*S	**Sn**	**04 34 12.8**	**-3.6**
SMLA				AML	AML	04 34 15.7	
	comp=N,94nm,0.3s						
SMLA				AML	AML	04 34 16.2	
	comp=E,107nm,0.4s						
KHET	**Khetri**	**9.49**	**151**	*e*S	**Sn**	**04 34 54.3**	**-5.5**
KHET				AML	AML	04 34 55.4	
	comp=N,28nm,0.3s						
KHET				AML	AML	04 34 56.1	
	comp=E,27nm,0.4s						
JOSI	**Joshimath**	**9.56**	**126**	*e*P	**Pn**	**04 33 15.7**	**+1.3**
JOSI				*e*S	**Sn**	**04 34 57.1**	**-4.3**
JOSI				AML	AML	04 35 01.1	
	comp=E,52nm,0.3s						
JOSI				AML	AML	04 35 03.3	
	comp=N,63nm,0.5s						
SONA	**Sohna**	**9.89**	**144**	*e*S	**Sn**	**04 35 01.6**	**-7.7**
PYUN	**Piuthan**	**13.42**	**125**	*e*P	**Pn**	**04 34 03.7**	**-0.1**
	comp=N,9.6nm,0.4s						
MK31	**Makanchi Array**	**13.51**	**37**	*e*Pn	**Pn**	**04 34 05.3**	**+0.7**
MKAR	**Makanchi Array**	**13.51**	**37**	P	**Pn**

59nm,0.3s,baz=286,slow=2.7,SNR=393
URZ S S 04 39 13.3 -0.1
22nm,0.3s,baz=228,slow=22,SNR=25
ASAR Alice Springs 39.89 277 P P 04 45 20.9 +0.2
1.7nm,0.6s,baz=118,slow=8.0,SNR=26
WRA Warramunga Arr 41.49 282 P P 04 45 33.3 -0.4
1.2nm,0.5s,baz=122,slow=7.3,SNR=42
ARCES ARCESS Array B 144.08 344 PKP PKPdf 04 57 15.1 -0.8
1.7nm,0.8s,baz=19,slow=3.1,SNR=3.1

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*ISCJB **09** 05:11:39.3±2.9, 39°.5N±0°.3×74°.4E±0°.2, h33km, Error ellipse: s-maj=48.0km s-min=7.6km az=23.6*
*NNC **09** 05:11:43.3±1.9, 39°.75N×74°.06E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=16.7km s-min=10.7km az=176.0*
ISC 09 05:11:39.9±3.0, 39°.4N±0°.3×74°.4E±0°.2, h35km, n4, σ0°.96/6, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.24**	**82**	Pg	**Pn**	**05 11 59.9**	**-0.7**
KSH				Sg	**Sn**	**05 12 16.3**	**+0.2**
KSH				smax			
	comp=N,60nm,0.4s						
KSH				smax			
	comp=E,47nm,0.7s						
TKM2	**Tokmak 2**	**3.68**	**14**	⇓Pn	**Pn**	**05 12 38.0**	**+3.8**
	comp=E,1.8nm,0.6s						
TKM2				⇑Lg		05 13 29.7	
	comp=E,7.2nm,0.7s						
KK31	**Karatay Array**	**4.75**	**323**	Pn	**Pn**	**05 12 49.2**	**+0.3**
	comp=E,0.3nm,0.2s,baz=137,slow=12,SNR=20						
KK31				⇑Sn	**Sn**	**05 13 42.1**	**-0.7**
	comp=E,1.0nm,0.3s,baz=137,slow=24,SNR=5.2						
KK31				⇑Lg		05 14 00.1	
	comp=E,1.5nm,0.4s,baz=155,slow=27,SNR=4.3						
AB31	**Akbulak array**	**14.29**	**319**	⇑P	**Pn**	**05 14 60.0**	**+0.4**
	comp=E,0.1nm,0.1s,baz=128,slow=13,SNR=4.2						

IDC 09 05:11:39.4±1.2, 22°.50S×148°.06E, h0km, mb4.1/4, mb1 4.1/8, mb1mx4.0/15, mbtmp4.0/8, ML3.8/4, Error ellipse: s-maj=27.3km s-min=15.5km az=59.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.93**	**325**	Pn	Pn	05 12 27.0	-0.3
	18nm,0.3s,baz=132,slow=16,SNR=81						
CTA				Pg	Pg	05 12 33.1	-2.5
	39nm,0.3s,baz=142,slow=16,SNR=31						
CTA				Lg		05 13 10.7	
	27nm,0.3s,baz=52,slow=20,SNR=9.5						
STKA	**Stephens Creek**	**10.96**	**210**	Pn	Pn	05 14 18.0	+0.5
	0.6nm,0.3s,baz=39,slow=13,SNR=11						
STKA				Sn	Sn	05 16 16.3	-4.5
	0.3nm,0.3s,baz=299,slow=20,SNR=1.8						
STKA				Lg		05 17 21.0	
	0.4nm,0.3s,baz=325,slow=18,SNR=2.9						
WRA	**Warramunga Arr**	**13.04**	**279**	Pn	Pn	05 14 44.9	-1.1
	0.4nm,0.3s,baz=99,slow=12,SNR=20						
WRA				Sn	Sn	05 17 17.6	+5.7
	0.2nm,0.3s,baz=127,slow=26,SNR=3.5						
WRA				Lg		05 18 36.4	
	0.3nm,0.3s,baz=103,slow=29,SNR=7.3						
ASAR	**Alice Springs**	**13.08**	**262**	Pn	Pn	05 14 46.5	0.0
	0.3nm,0.3s,baz=90,slow=13,SNR=12						
ASAR				Sn	Sn	05 17 13.5	+0.8
	0.2nm,0.3s,baz=83,slow=20,SNR=4.5						
ASAR				Lg		05 18 35.6	
	0.2nm,0.3s,baz=89,slow=26,SNR=6.3						
FITZ	**Fitzroy Crossi**	**21.47**	**278**	P	P	05 16 29.8	+0.2
	2.5nm,0.8s,baz=300,slow=10,SNR=3.4						
FITZ				Lg		05 23 02.1	
	5.1nm,1.0s,baz=297,slow=18,SNR=3.4						
CMAR	**Chiang Mai Arr**	**62.95**	**306**	P	P	05 22 08.7	+0.6
	0.9nm,0.4s,baz=161,slow=9.4,SNR=4.8						
QSPA	**South Pole Qui**	**67.56**	**180**	P	P	05 22 36.9	-0.2
	2.4nm,0.8s,baz=349,slow=1.5,SNR=12						
SONM	**Songino Array**	**79.38**	**333**	P	P	05 23 48.1	+1.0
	0.8nm,0.4s,baz=144,slow=5.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**146.72**	**260**	PKPbc	PKPbc	05 31 23.2	-0.8
	1.8nm,0.7s,baz=104,slow=3.0,SNR=12						

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*ISCJB **09** 05:12:26.4±1.9, 16°.5S±0°.7×179°.2W±0°.4, h357km±27km, mb3.7/9, Error ellipse: s-maj=116.2km s-min=16.0km az=152.6*
*NEIC **09** 05:12:27.8±1.9, 16°.62S×179°.10W, h366km±28km, mb4.5/2, Error ellipse: s-maj=118.1km s-min=15.4km az=154.0*
*IDC **09** 05:12:44.9±8.9, 16°.88S×179°.30W, h556km±112km, mb3.3/8, mb1 3.6/8, mb1mx3.4/17, mbtmp3.3/8, Error ellipse: s-maj=109.5km s-min=29.6km az=161.0*
ISC 09 05:12:27.8±2.0, 16°.6S±0°.6×179°.1W±0°.4, h360km±28km, n14, σ0°.91/11, mb3.7/9, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.57**	**71**	*e*Pn	**Pn**	**05 14 17.0**	**-0.1**
	56nm,0.9s						
STKA	**Stephens Creek**	**38.69**	**240**	P	**P**	**05 19 19.3**	**+0.9**
	3.4nm,0.8s,mb3.6,baz=80,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**44.21**	**258**	P	**P**	**05 20 03.8**	**+0.8**
	2.2nm,0.5s,mb3.5,baz=95,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**44.51**	**253**	P	**P**	**05 20 06.2**	**+0.9**
	17nm,0.5s,mb4.4,baz=88,slow=8.0,SNR=59						
FORT	**Forrest**	**49.97**	**244**	*e*P	**P**	**05 20 45.2**	**-1.6**
	11nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.58**	**260**	P	**P**	**05 21 04.8**	**-1.3**
	3.9nm,0.8s,mb3.8,baz=143,slow=5.1,SNR=7.4						
NVAR	**Mina Array Bea**	**78.95**	**44**	P	**P**	**05 23 53.6**	**+1.2**
	0.4nm,0.5s,mb3.4,baz=234,slow=5.1,SNR=4.2						
TXAR	**Lajitas Array**	**85.87**	**58**	P	**P**	**05 24 27.9**	**-0.1**
	0.6nm,0.8s,mb3.5,baz=205,slow=6.3,SNR=8.3						
TXAR	**Lajitas Array**	**85.87**	**58**	P	**P**	**05 24 27.9**	**-0.1**
PDAR	**Pinedale Array**	**86.86**	**44**	P	**P**	**05 24 32.2**	**-0.3**
	0.5nm,0.5s,mb3.6,baz=227,slow=4.4,SNR=6.7						
YKA	**Yellowknife Ar**	**93.41**	**25**	P	**P**	**05 25 02.0**	**-0.5**
	0.2nm,0.8s,mb3.2,baz=259,slow=4.3,SNR=4.3						
BRTR	**Keskin Array B**	**143.36**	**316**	PKP	PKPdf	05 31 15.6	-4.4
	0.9nm,0.8s,baz=132,slow=1.8,SNR=4.7						
CLL	**Collm**	**144.02**	**347**	⇓*i*PKPdf	PKPdf	05 31 17.9	-2.8
	comp=Z,5.0nm,0.7s						
GERES	**GERESS Array B**	**146.15**	**345**	PKPbc	PKPbc	05 31 24.1	-2.1
	comp=Z,0.7nm,0.5s,baz=318,slow=1.8,SNR=6.8						

MAN 09 05:12:35, 9°.39N×125°.46E, h27km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.44**	**160**	*e*P	Pb	05 12 45.6	+1.2
BUTP				*e*S	Sb	05 12 55.2	+4.5
CGP	**Cagayan de Oro**	**1.20**	**219**	⇑*i*P	Pn	05 12 57.1	+1.0
CGP				*i*S	Sn	05 13 12.4	+0.9
BUKP	**Musuan**	**1.55**	**195**	*e*P	Pn	05 13 03.3	+2.5
BUKP				*e*S	Sn	05 13 20.6	+0.5
TBP	**Tagbilaran**	**1.61**	**281**	*e*P	Pn	05 13 02.1	+0.4

IDC 09 05:24:35.9±2.7, 4°.54S×131°.39E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, ML3.9/3, Error ellipse: s-maj=120.7km s-min=29.4km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.60**	**202**	Pn	Pn	05 28 02.3	-1.6
	0.3nm,0.3s,baz=44,slow=13,SNR=16						
FITZ				Sn	Sn	05 30 34.5	-12
	0.7nm,0.3s,baz=200,slow=11,SNR=6.7						
WRA	**Warramunga Arr**	**15.57**	**170**	Pn	Pn	05 28 15.2	-1.8
	0.5nm,0.3s,baz=356,slow=13,SNR=29						
WRA				Sn	Sn	05 30 59.2	-11
	0.8nm,0.3s,baz=342,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**19.17**	**173**	P	Pn	05 29 02.4	+0.4
	0.4nm,0.3s,baz=358,slow=9.2,SNR=14						
ASAR				S	Sn	05 32 28.1	-9.2
	0.2nm,0.3s,baz=3.0,slow=27,SNR=4.4						
MKAR	**Makanchi Array**	**66.96**	**326**	P	P	05 35 30.6	+0.2
	0.4nm,0.5s,baz=119,slow=7.6,SNR=3.8						

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*DDA **09** 05:36:29.6, 40°.40N×26°.14E, h7km±2km, Md3.2*
*ISCJB **09** 05:36:30.3±0.5, 40°.44N±0°.03×26°.09E±0°.04, h20km±6km, Error ellipse: s-maj=5.6km s-min=4.1km az=33.5*
*CSEM **09** 05:36:30.3±0.1, 40°.45N×26°.06E, h20km, ML3.5/4, Error ellipse: s-maj=1.9km s-min=1.6km az=72.0*
*THE **09** 05:36:31.1, 40°.46N×26°.04E, h22km±1km, ML3.5/4, Error ellipse: s-maj=2.1km s-min=0.4km az=314.0*
ISC 09 05:36:30.0±0.6, 40°.43N±0°.03×26°.09E±0°.04, h14km±5km, n26, σ0°.67/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALN	**Alexandroupoli**	**0.47**	**356**	P	**Pg**	**05 36 39.5**	**+0.2**
ALN				S	**Sg**	**05 36 46.5**	**+0.8**
ALN	**Alexandroupoli**	**0.47**	**356**	P	**Pg**	**05 36 39.5**	**+0.2**
ALN				S	**Sg**	**05 36 46.5**	**+0.8**
BOZC	**Bozcaada**	**0.58**	**183**	*i*P	**Pg**	**05 36 40.9**	**-0.6**
BOZC				*i*S	**Sg**	**05 36 49.2**	**0.0**
SART	**Tekirdag**	**0.87**	**72**	*i*P	**Pg**	**05 36 45.5**	**-1.3**
SART				*i*S	**Sg**	**05 36 58.4**	**+0.2**
SART	**Tekirdag**	**0.87**	**72**	*i*P	**Pg**	**05 36 45.5**	**-1.3**
SART				*i*S	**Sg**	**05 36 58.4**	**+0.2**
LIA	**Limnos Island**	**0.87**	**233**	P	**Pg**	**05 36 46.7**	**-0.2**
LIA				S	**Sg**	**05 36 59.5**	**+1.1**
LIA	**Limnos Island**	**0.87**	**233**	P	**Pg**	**05 36 46.7**	**-0.2**
LIA				S	**Sg**	**05 36 59.5**	**+1.1**
PRK	**Paraskevi**	**1.19**	**173**	P	**Pn**	**05 36 52.2**	**0.0**
PRK				S	**Sb**	**05 37 08.4**	**+0.9**
PRK	**Paraskevi**	**1.19**	**173**	P	**Pn**	**05 36 52.2**	**0.0**
PRK				S	**Sb**	**05 37 08.4**	**+0.9**
AYVA	**Ayvalik**	**1.21**	**157**	*i*P	**Pn**	**05 36 52.4**	**-0.1**
AYVA				*i*S	**Sb**	**05 37 08.1**	**-0.1**
AYVA	**Ayvalik**	**1.21**	**157**	*i*P	**Pn**	**05 36 52.4**	**-0.1**
AYVA				*i*S	**Sb**	**05 37 08.1**	**-0.1**
SIGR	**SIGRI**	**1.23**	**189**	P	**Pn**	**05 36 52.5**	**-0.3**
SIGR				S	**Sb**	**05 37 09.1**	**+0.4**
SIGR	**SIGRI**	**1.23**	**189**	P	**Pn**	**05 36 52.5**	**-0.3**
SIGR				S	**Sb**	**05 37 09.1**	**+0.4**
BALY	**Balya**	**1.36**	**120**	*i*P	**Pn**	**05 36 54.7**	**+0.1**
BALY				*i*S	**Sn**	**05 37 12.7**	**+0.3**
BALY	**Balya**	**1.36**	**120**	*i*P	**Pn**	**05 36 54.7**	**+0.1**
BALY				*i*S	**Sn**	**05 37 12.7**	**+0.3**
OUR	**Ouranopolis**	**1.61**	**267**	P	**Pn**	**05 36 57.0**	**-1.1**
OUR	**Ouranopolis**	**1.61**	**267**	P	**Pn**	**05 36 57.0**	**-1.1**
ELBA	**Catalca**	**1.92**	**67**	*i*P	**Pn**	**05 37 01.3**	**-0.9**
ELBA				*i*S	**Sn**	**05 37 27.3**	**+1.1**
ELBA	**Catalca**	**1.92**	**67**	*i*P	**Pn**	**05 37 01.3**	**-1.0**
ELBA				*i*S	**Sn**	**05 37 27.3**	**+1.1**
DURS	**Dursunbey**	**2.01**	**113**	*i*P	**Pn**	**05 37 03.7**	**+0.2**
DURS				*i*S	**Sn**	**05 37 27.8**	**-0.6**
DURS	**Dursunbey**	**2.01**	**113**	*i*P	**Pn**	**05 37 03.7**	**+0.2**
DURS				*i*S	**Sn**	**05 37 27.8**	**-0.6**
AYDN	**Tasoluk**	**3.09**	**153**	*e*P	**Pn**	**05 37 18.7**	**+0.2**
AYDN				*e*S	**Sn**	**05 37 55.6**	**+0.3**
AYDN	**Tasoluk**	**3.09**	**153**	*e*P	**Pn**	**05 37 18.7**	**+0.3**
AYDN				*e*S	**Sn**	**05 37 55.6**	**+0.4**
VLI	**Veliai**	**4.45**	**215**	*e*PB	**Sb**	**05 38 40.5**	**-1.0**
ITM	**Ithomi**	**4.59**	**226**	*e*PB	**Sn**	**05 38 38.0**	**+5.8**
KYTH	**Kithira**	**4.79**	**211**	*e*PB	**Sn**	**05 38 41.0**	**+4.0**

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*NOU **09** 05:38:03.7±0.6, 19°.45S×169°.56E, h30km, MD2.9, ML2.7*
*IDC **09** 05:38:18.1±7.3, 18°.80S×167°.59E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/14, mbtmp3.8/4, MS3.4/1, Ms1 3.3/1, ms1mx2.5/23, Error ellipse: s-maj=166.1km s-min=56.9km az=114.0*
ISC 09 05:38:08.1±4.6, 20°.3S±0°.7×169°.8E±0°.7, h35km, n7, σ0°.88/8, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.34**	**235**	*e*S	**Sn**	**05 39 36.7**	**+0.6**
LASL	**Noumea**	**3.65**	**237**	*e*S	**Sn**	**05 39 44.0**	**+0.2**
NOUC	**Port Laguerre**	**3.77**	**240**	*e*P	**Pn**	**05 39 03.1**	**-0.7**
NOUC				*e*S	**Sn**	**05 39 46.8**	**-0.1**
NOUC				AMP		05 39 51.8	
	comp=Z,34nm,0.6s						
STKA	**Stephens Creek**	**27.80**	**240**	P	**P**	**05 43 59.9**	**+6.0**
	comp=Z,1.6nm,0.7s,mb3.8,baz=86,slow=8.4,SNR=4.7						
STKA				LR	LR	05 55 06.8	
	comp=Z,76nm,19.6s,baz=27,slow=38						
WRA	**Warramunga Arr**	**33.30**	**264**	P	**P**	**05 44 41.3**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=90,slow=8.4,SNR=6.0						
ASAR	**Alice Springs**	**33.44**	**258**	P	**P**	**05 44 43.5**	**-0.4**
	comp=Z,1.2nm,0.9s,mb3.8,baz=83,slow=9.2,SNR=8.9						
CMAR	**Chiang Mai Arr**	**79.43**	**294**	P	**P**	**05 50 12.9**	**+1.7**
	comp=Z,0.4nm,0.3s,mb3.8,baz=92,slow=3.1,SNR=2.8						

KRSC 09 05:47:27.2±0.8, 55°.13N×161°.49E, h104km±44km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.59**	**166**	*i*P	Pn	05 47 45.4	+1.4
MKZ				*i*S	Sn	05 47 58.6	+2.0
BZGR	**Bezymyannyi-Gr**	**0.93**	**331**	*i*P	Pn	05 47 48.3	+1.2
BZGR				*i*S	Sn	05 48 03.8	+1.7
KMNR	**Kamenistaya**	**0.95**	**312**	*i*P	Pn	05 47 48.8	+1.5
KMNR				*i*S	Sn	05 48 04.7	+2.2
ZLN	**Zelenaya**	**0.97**	**337**	*i*P	Pn	05 47 48.9	+1.4
ZLN				*i*S	Sn	05 48 04.5	+1.6
KPT	**Kopyto**	**1.10**	**320**	P	Pn	05 47 49.6	+0.6
KPT				*i*S	Sn	05 48 05.9	+0.4
KRSR	**Krestovskiy**	**1.21**	**335**	P	Pn	05 47 51.3	+1.1
KRSR				*i*S	Sn	05 48 08.7	+1.2
KLY	**Klyuchi**	**1.28**	**339**	*e*P	Pn	05 47 51.3	+0.4
KLY				*i*S	Sn	05 48 09.1	+0.2
KOZ	**Kozyrevsk**	**1.31**	**316**	P	Pn	05 47 52.4	+1.1
KOZ				*i*S	Sn	05 48 10.6	+1.1
KBTR	**Krutoberegovo**	**1.32**	**34**	*i*P	Pn	05 47 52.2	+0.8
KBTR				*i*S	Sn	05 48 10.4	+0.7
SRKR	**Sorokina**	**1.54**	**353**	*i*P	Pn	05 47 55.1	+1.0
SRKR				*i*S	Sn	05 48 15.4	+0.9
SRDR	**Sredinnyy**	**1.56**	**321**	*e*P	Pn	05 47 54.6	+0.3
SRDR				*i*S	Sn	05 48 14.9	+0.1
KII	**Karymskiy**	**1.62**	**228**	P	Pn	05 47 56.9	+1.9
KII				*i*S	Sn	05 48 18.1	+1.9
SPN	**Mys Shipunski**	**2.21**	**204**	*i*P	Pn	05 48 02.9	+0.3
SPN				*i*S	Sn	05 48 29.2	-0.5
NLC	**Nalytchevo**	**2.33**	**214**	*e*P	Pn	05 48 05.3	+1.1
NLC				*i*S	Sn	05 48 32.7	+0.2
SDLR	**Sedlovina**	**2.41**	**221**	*i*P	Pn	05 48 07.0	+1.9
SDLR				*i*S	Sn	05 48 36.5	+2.3
GNL	**Ganaly**	**2.52**	**237**	*i*P	Pn	05 48 08.4	+1.8
BKI	**Bering**	**2.57**	**87**	*i*P	Pn	05 48 07.8	+0.5
BKI				*i*S	Sn	05 48 37.1	-1.0
PET	**Petropavlovsk**	**2.69**	**220**	*e*P	Pn	05 48 10.5	+1.6
PET				*i*S	Sn	05 48 41.7	+0.8
RUS	**Russkaya**	**3.23**	**214**	*e*P	Pn	05 48 16.6	+0.6
RUS				*i*S	Sn	05 48 52.8	-0.9

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*ISCJB **09** 05:48:56.5±0.3, 23°.48N±0°.02×121°.73E±0°.02, h38km±10km, Error ellipse: s-maj=3.5km s-min=2.3km az=44.8*
*TAP **09** 05:48:56.3, 23°.50N×121°.65E, h48km, ML3.7, C*
*JMA **09** 05:48:56.7±0.4, 23°.50N×121°.75E, h77km, M2.8*
ISC 09 05:48:56.8±0.4, 23°.49N±0°.02×121°.72E±0°.02, h32km±2km, n54, σ0°.79/98, 4C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.28**	**324**	*e*P	**Pb**	**05 49 05.0**	**+0.8**
	baz=336						
EHY	**Hungye**	**0.36**	**273**	*i*P	**Pb**	**05 49 05.3**	**-0.1**
	baz=270						
EHY				S	**Sb**	**05 49 11.6**	**+0.4**
	baz=270						
TWF1	**Yuli**	**0.41**	**251**	*i*P	**Pb**	**05 49 05.9**	**-0.1**
	baz=255						
TWF1				S	**Sb**	**05 49 12.9**	**+0.6**
	baz=255						
ESL	**Shilin**	**0.42**	**321**	P	**Pb**	**05 49 05.9**	**-0.2**
	baz=322						
ESL				*e*S	**Sb**	**05 49 12.7**	**+0.1**
	baz=322						
HWA	**Hwalien**	**0.50**	**348**	*e*P	**Pb**	**05 49 06.7**	**-0.7**
	baz=359						
HWA				*e*S	**Sb**	**05 49 16.0**	**+1.4**
	baz=359						
CHKT	**Chengkung**	**0.50**	**220**	*i*P	**Pb**	**05 49 07.1**	**-0.3**
	baz=206						
CHKT				S	**Sb**	**05 49 14.9**	**+0.3**
	baz=206						
TWD	**Chiawan**	**0.60**	**349**	P	**Pb**	**05 49 08.5**	**-0.5**
	baz=347						
TWD				*e*S	**Sb**	**05 49 17.6**	**+0.2**
	baz=347						
YUS	**Yu-Shan**	**0.70**	**271**	⇑*i*P	**Pn**	**05 49 10.5**	**0.0**
	baz=273						
YUS				S	**Sb**	**05 49 19.8**	**-0.3**
	baz=273						
ELDTW	**Lidau**	**0.71**	**246**	*i*P	**Pn**	**05 49 09.3**	**-1.2**
	baz=236						
ELDTW				S	**Sb**	**05 49 19.1**	**-1.2**
	baz=236						
WHF	**Hehuan Shan**	**0.78**	**328**	⇓*i*P	**Pn**	**05 49 10.8**	**-0.8**
	baz=333						
WHF				S	**Sn**	**05 49 21.2**	**-0.9**
	baz=333						
ALS	**Alishan**	**0.84**	**272**	⇑*i*P	**Pn**	**05 49 12.4**	**0.0**
	baz=276						
ALS				S	**Sn**	**05 49 23.2**	**-0.4**
	baz=276						
SMLT	**Sun Moon Lake**	**0.85**	**298**	P	**Pn**	**05 49 12.1**	**-0.4**
	baz=300						
SMLT				S	**Sn**	**05 49 23.5**	**-0.4**
	baz=300						
TWG	**Pinlang**	**0.89**	**222**	P	**Pn**	**05 49 11.7**	**-1.4**
	baz=216						
TWG				S	**Sn**	**05 49 23.7**	**-1.2**
	baz=216						
TYC	**Yuchr**	**0.89**	**298**	P	**Pn**	**05 49 12.7**	**-0.4**
	baz=300						
TYC				S	**Sn**	**05 49 24.6**	**-0.4**
	baz=300						
TTN	**Taitung**	**0.90**	**216**	*e*S	**Sn**	**05 49 26.2**	**+1.2**
	baz=219						
TWT	**Tachien**	**0.91**	**327**	P	**Pn**	**05 49 13.3**	**-0.1**
	baz=327						
TWT				*e*S	**Sn**	**05 49 24.4**	**-1.1**
	baz=327						
STYT	**Tauyuan**	**0.94**	**250**	*i*P	**Pn**	**05 49 13.3**	**-0.4**
	baz=243						
STYT				S	**Sn**	**05 49 25.5**	**-0.6**
	baz=243						
CHN5	**Tsauling**	**0.96**	**277**	*i*P	**Pn**	**05 49 13.7**	**-0.3**
	baz=276						
CHN5				*e*S	**Sn**	**05 49 26.7**	**+0.1**
	baz=276						
NNS	**Nan Shan**	**1.00**	**342**	P	**Pn**	**05 49 14.3**	**-0.4**
	baz=353						
NNS				S	**Sn**	**05 49 27.0**	**-0.6**
	baz=353						
WNT	**Mingjian**	**1.03**	**293**	P	**Pn**	**05 49 15.1**	**+0.2**
	baz=293						
WNT				*e*S	**Sn**	**05 49 28.3**	**+0.1**
	baz=293						
CHN4	**Tsaushan**	**1.04**	**263**	⇑*i*P	**Pn**	**05 49 15.2**	**0.0**
	baz=260						
CHN4				S	**Sn**	**05 49 29.2**	**+0.6**
	baz=260						
WTP	**Ta-pu**	**1.04**	**257**	*i*P	**Pn**	**05 49 15.4**	**+0.2**
	baz=255						
WTP				*e*S	**Sn**	**05 49 29.0**	**+0.4**
	baz=255						
WGK	**Gukeng**	**1.08**	**281**	*e*P	**Pn**	**05 49 15.5**	**-0.2**
	baz=280						
WGK				*e*S	**Sn**	**05 49 30.0**	**+0.5**
	baz=280						
SGST	**Jiashian**	**1.12**	**249**	P	**Pn**	**05 49 16.7**	**+0.5**
	baz=240						
SGST				S	**Sn**	**05 49 31.4**	**+1.0**
	baz=240						
TWC	**Suao**	**1.12**	**6**	*e*P	**Pn**	**05 49 16.1**	**-0.3**
	baz=12						
TWC				*e*S	**Sn**	**05 49 30.7**	**0.0**
	baz=12						
ECL	**Taimali**	**1.13**	**219**	P	**Pn**	**05 49 14.5**	**-1.9**
	baz=204						
ECL				*e*S	**Sn**	**05 49 28.7**	**-2.1**
	baz=204						
CHN1	**Nanshi**	**1.13**	**255**	⇑*i*P	**Pn**	**05 49 16.5**	**+0.1**
	baz=251						
CHN1				S	**Sn**	**05 49 31.9**	**+1.0**
	baz=251						
CHN2	**Minshiung**	**1.14**	**273**	*e*P	**Pn**	**05 49 16.4**	**-0.2**
	baz=283						
CHN2				*e*S	**Sn**	**05 49 32.1**	**+1.0**
	baz=283						
TWK	**Hsinying**	**1.15**	**259**	P	**Pn**	**05 49 16.7**	**0.0**
	baz=256						
TWK				S	**Sn**	**05 49 31.7**	**+0.4**
	baz=256						
TCU	**Taichung**	**1.16**	**305**	*e*P	**Pn**	**05 49 16.5**	**-0.3**
	baz=307						
TCU				*e*S	**Sn**	**05 49 32.3**	**+0.7**
	baz=307						
CHY	**Chiayi**	**1.19**	**271**	*e*P	**Pn**	**05 49 17.1**	**-0.1**
	baz=269						
CHY				*e*S	**Sn**	**05 49 32.4**	**+0.2**
	baz=269						
TWQ1	**Liyutan**	**1.22**	**315**	*e*P	**Pn**	**05 49 18.0**	**+0.4**
	baz=318						
TWQ1				*e*S	**Sn**	**05 49 33.4**	**+0.4**
	baz=318						
NSK	**Sanguang**	**1.23**	**345**	P	**Pn**	**05 49 17.4**	**-0.4**
	baz=359						
NSK				*e*S	**Sn**	**05 49 32.7**	**-0.6**
	baz=359						
TWE	**Neicheng**	**1.23**	**358**	P	**Pn**	**05 49 17.5**	**-0.3**
	baz=356						
TWE				*e*S	**Sn**	**05 49 33.8**	**+0.5**
	baz=356						
SSD	**Sandimen**	**1.24**	**234**	P	**Pn**	**05 49 18.0**	**+0.1**
	baz=229						
SSD				*e*S	**Sn**	**05 49 34.0**	**+0.4**
	baz=229						
NSY	**Sanyi**	**1.27**	**317**	*e*P	**Pn**	**05 49 18.1**	**-0.3**
	baz=320						
NSY				*e*S	**Sn**	**05 49 34.0**	**-0.4**
	baz=320						
CHN3	**Shinhua**	**1.31**	**252**	*e*S	**Sn**	**05 49 37.6**	**+2.4**
	baz=248						
NSTT	**Nanjuang**	**1.32**	**330**	*e*P	**Pn**	**05 49 19.7**	**+0.7**
	baz=323						
EAST	**Anshuo**	**1.36**	**216**	P	**Pn**	**05 49 18.0**	**-1.6**
	baz=205						
TWM1	**Shoushan**	**1.36**	**241**	*e*P	**Pn**	**05 49 21.9**	**+2.3**
	baz=238						
TWM1

*IDC **09** 05:59:45.9±2.4, 10.72S×112.76E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=113.6km s-min=20.4km az=46.0*
*ISCJB **09** 05:59:50.7±1.4, 10.44S±0.09×113.03E±0.08, h41km±16km, mb3.6/4, Error ellipse: s-maj=17.0km s-min=10.4km az=30.0*
*DJA **09** 05:59:52, 10.27S×113.03E, h20km, MLv4.1/8*
ISC 09 05:59:51.0±2.9, 10.47S±0.07×113.06E±0.08, h30km±25km, n15, σ0.87/18, mb3.6/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	Gumukmas	2.22	10	P	Pn	06 00 24.9	-0.8
GMJI				S	Sn	06 00 51.1	-0.9
NBBI	Negara	2.60	37	P	Pn	06 00 31.3	+0.4
PWJI	Pagerwojo	2.73	333	P	Pn	06 00 32.3	-0.4
PWJI				S	Sn	06 01 04.0	-0.7
ABJI	Asem Bagus	2.90	24	P	Pn	06 00 36.5	+1.4
PCJI	Pacitan	2.92	320	P	Pn	06 00 35.1	-0.3
SJI	Sawahan	3.00	335	P	Pn	06 00 36.6	+0.1
SRBI	Singaraja	3.19	42	P	Pn	06 00 39.3	+0.3
KHKI	Kahang-Kahang	3.27	51	P	Pn	06 00 41.0	+0.8
NGJI	Ngawi	3.46	333	P	Pn	06 00 48.2	+5.4
UGM	Wanagama	3.56	315	P	Pn	06 00 44.7	+0.5
FITZ	Fitzroy Crossi	14.36	123	Pn	Pn	06 03 09.8	-2.4
	0.3nm,0.3s,baz=310,slow=10,SNR=9.6						
FITZ				Sn	Sn	06 05 38.7	-12
	0.1nm,0.3s,baz=340,slow=19,SNR=3.6						
WRA	Warramunga Arr	22.57	117	P	P	06 04 48.5	-0.5
	0.8nm,0.7s,mb3.3,baz=290,slow=12,SNR=7.1						
ASAR	Alice Springs	23.82	126	P	P	06 05 02.5	+1.0
	0.8nm,0.5s,mb3.4,baz=301,slow=8.5,SNR=16						
CMAR	Chiang Mai Arr	31.94	334	P	P	06 06 15.3	+1.1
	0.7nm,0.3s,mb4.0,baz=167,slow=9.4,SNR=5.8						
MKAR	Makanchi Array	63.29	337	P	P	06 10 16.8	0.0
	0.2nm,0.4s,mb3.6,baz=163,slow=7.5,SNR=4.9						

*CSEM **09** 06:00:56.5±0.3, 40.26N×25.15E, h15km, ML2.4/3, Error ellipse: s-maj=7.5km s-min=2.5km az=111.0*
*ISCJB **09** 06:00:57.3±1.2, 40.23N±0.04×25.31E±0.08, h4km±8km, Error ellipse: s-maj=11.6km s-min=5.7km az=23.8*
*THE **09** 06:00:58.0, 40.21N×25.34E, h4km±25km, ML2.4/3, Error ellipse: s-maj=26.0km s-min=0.6km az=285.0*
*DDA **09** 06:00:58.3, 40.27N×25.46E, h6km±2km, Md2.8*
ISC 09 06:00:57.6±1.2, 40.23N±0.04×25.29E±0.09, h8km±8km, n11, σ0.58/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	Limnos Island	0.34	193	P	Pg	06 01 04.3	+0.1
LIA				S	Sg	06 01 09.2	+0.5
LIA	Limnos Island	0.34	193	P	Pg	06 01 04.3	+0.1
LIA				S	Sg	06 01 09.2	+0.5
BOZC	Bozcaada	0.70	123	*i* P	Pg	06 01 11.0	-0.1
BOZC				*i* S	Sg	06 01 20.0	-0.3
ALN	Alexandroupoli	0.88	41	P	Pg	06 01 14.2	-0.3
ALN				S	Sg	06 01 26.8	+0.8
ALN	Alexandroupoli	0.88	41	P	Pg	06 01 14.2	-0.3
ALN				S	Sg	06 01 26.8	+0.8
SIGR	SIGRI	1.11	157	P	Pg	06 01 18.5	-0.3
SIGR				S	Sg	06 01 33.2	0.0
SIGR	SIGRI	1.11	157	P	Pg	06 01 18.5	-0.3
SIGR				S	Sg	06 01 33.2	0.0
SART	Tekirdag	1.52	72	*i* P	Pn	06 01 24.3	-0.7
SART				*i* S	Sn	06 01 44.4	-0.6
SART	Tekirdag	1.52	72	*i* P	Pn	06 01 24.3	-0.7
SART				*i* S	Sn	06 01 44.4	-0.5
BALY	Balya	1.86	105	*i* P	Pn	06 01 25.4	-4.3
BALY				*i* S	Sn	06 01 54.6	+1.2
BALY	Balya	1.86	105	*i* P	Pn	06 01 25.4	-4.3
BALY				*i* S	Sn	06 01 54.6	+1.2

*DDA **09** 06:03:49.8, 39.33N×41.10E, h7km±2km, Md2.8*
*ISCJB **09** 06:03:50.5±0.7, 39.37N±0.03×41.04E±0.06, h7km±8km, Error ellipse: s-maj=9.0km s-min=4.0km az=29.7*
*CSEM **09** 06:03:50.9±0.4, 39.34N×40.99E, h10km, MD2.8, Error ellipse: s-maj=11.2km s-min=6.1km az=123.0*
*ISK **09** 06:03:50.5, 39.39N×41.00E, h16km, MD2.8*
ISC 09 06:03:50.9±0.7, 39.35N±0.04×41.06E±0.06, h8km±8km, n17, σ0.97/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	Erzurum	0.60	23	*e*PG	Pg	06 04 02.5	0.0
EZM				*e*SG	Sg	06 04 11.1	+0.6
ERZM	Erzurum	0.60	23	*i* P	Pg	06 04 01.3	-1.3
ERZM				*i* S	Sg	06 04 11.2	+0.7
ERZM	Erzurum	0.60	23	*i* P	Pg	06 04 01.3	-1.3
ERZM				*i* S	Sg	06 04 11.2	+0.7
BINT	Bingol	0.65	223	*e*PG	Pg	06 04 03.6	+0.2
BINT				*e*SG	Sg	06 04 13.3	+1.5
BINT	Bingol	0.65	223	*e*Pg	Pg	06 04 03.6	+0.2
BINT				*e*Sg	Sg	06 04 13.3	+1.5
KOPT	Kop Dagi	0.80	327	*i* P	Pg	06 04 05.7	-0.5
KOPT				*i* S	Sg	06 04 18.0	+1.4
KOPT	Kop Dagi	0.80	327	*i* P	Pg	06 04 05.7	-0.5
KOPT				*i* S	Sg	06 04 18.0	+1.4
HOMI	Horasan	0.95	43	*i* P	Pg	06 04 08.4	-0.9
HOMI				*i* S	Sg	06 04 21.4	-0.3
PTK	Pertek	1.37	251	*e*PN	Pn	06 04 14.6	-1.8
PTK	Pertek	1.37	251	*e*Pn	Pn	06 04 14.6	-1.7
EZC	Erzincan	1.38	288	*e*PN	Pg	06 04 15.1	-2.2
BEST	Besiri	1.47	173	*i* P	Pn	06 04 16.8	-0.8
BEST				*i* S	Sn	06 04 37.9	+1.0
AGRB	Hanur-Agry	1.52	81	*e*PN	Pn	06 04 18.4	+0.1
AGRB	Hanur-Agry	1.52	81	*e*Pn	Pn	06 04 18.4	+0.1
DDEM	Demirkent	1.63	19	*i* P	Pn	06 04 20.8	+1.0
DDEM				*i* S	Sg	06 04 43.7	+0.4
DDEM	Demirkent	1.63	19	*i* P	Pn	06 04 20.8	+0.9
DDEM				*i* S	Sg	06 04 43.7	+0.4
DAGI	Agillar	1.85	21	*i* P	Pn	06 04 23.4	+0.5
DAGI				*i* S	Sg	06 04 50.2	-0.1

IGQ 09 06:40:02.9, 0.85S×81.18W, h10km±12km, Mb4.3, Ms4.1, 4C, Error ellipse: s-maj=10.8km s-min=4.9km az=32.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	Jama	1.13	59	S	Sb	06 40 39.6	+0.2
JAMA	Jama	1.13	59	P	Pb	06 40 25.1	+0.5
IGUA	Igualata	2.62	104	⇑S	Sn	06 41 18.7	+1.6
IGUA	Igualata	2.62	104	⇑P	Pn	06 40 48.1	+2.8
JUA2	San Juan 2	2.65	76	P	Pn	06 40 47.5	+1.7
TERV	Terraza Guagua	2.66	75	P	Pn	06 40 52.2	+6.3
PINO	Pino	2.66	75	P	Pn	06 40 47.4	+1.5
GGP	Refugio Guagua	2.67	75	P	Pn	06 40 48.2	+2.2
RIOE	Riobamba	2.70	109	⇑P	Pn	06 40 48.0	+1.6
YANA	Yana	2.71	74	P	Pn	06 40 48.6	+2.1
NAS2	Nasa	2.72	86	P	Pn	06 40 50.4	+3.7
MOV1	Cotopaxi Vol s	2.74	87	P	Pn	06 40 52.8	+5.8
PITA	Cotopaxi Volc	2.76	84	P	Pn	06 40 50.4	+3.2
JUI6	Juive	2.77	102	⇑P	Pn	06 40 50.5	+3.1
VC1	Cotopaxi 1	2.78	86	P	Pn	06 40 52.5	+4.9
PISA	Pisayambo	2.80	94	P	Pn	06 40 51.3	+3.5
RUN5	Runtun	2.81	102	P	Pn	06 40 51.7	+3.8
TAMB	Tambo	2.81	87	P	Pn	06 40 52.4	+4.4
PATA	Patacocha	2.82	103	P	Pn	06 40 51.5	+3.4
ULBA	Ulba	2.83	102	P	Pn	06 40 51.3	+3.1
OTAV	Otavalo	2.93	68	P	Pn	06 40 51.2	+1.6
COTA	Cotacachi	3.07	68	P	Pn	06 40 50.7	-0.9
MACE	Macas	3.29	115	S	Sn	06 41 35.5	+1.7
MACE	Macas	3.29	115	P	Pn	06 40 57.7	+3.1
CAYA	Cayambe	3.32	74	P	Pn	06 40 59.3	+4.3

*IDC **09** 06:52:53.9±0.7, 35.14S×111.50W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/17, mbtmp4.0/9, MS3.8/5, Ms1 3.8/5, ms1mx3.3/22, Error ellipse: s-maj=27.6km s-min=24.1km az=163.0*
*ISCJB **09** 06:52:54.0±0.6, 35.2S±0.1×111.5W±0.2, h10km, mb4.0/12, MS3.8/5, Error ellipse: s-maj=19.4km s-min=14.9km az=168.9*
*NEIC **09** 06:52:55.5±0.4, 35.15S×111.50W, h10km, mb4.3/5, Error ellipse: s-maj=13.7km s-min=13.6km az=133.0*
ISC 09 06:52:55.9±0.6, 35.2S±0.1×111.5W±0.2, h10km, n30, σ0.61/17, mb4.0/12, MS3.8/5, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.58	112	P	P	06 59 27.4	+0.1
	1.9nm,0.8s,mb4.1,baz=253,slow=12,SNR=3.9						
PLCA	Paso Flores	32.58	112	*e*P	P	06 59 27.3	0.0
	3.7nm,1.0s,mb4.3						
MEH	Mehetia	36.69	288	*e*T		07 38 47.2	
	34nm,0.3s						
PPT	Papeete	38.04	287	*e*LR	LR	07 10 29.1	
	160nm,25.2s						
PPT	Papeete	38.04	287	LR	LR	07 11 19.6	
	comp=Z,144nm,21.3s,MS3.8,baz=113,slow=29						
LVC	Limon Verde	39.08	83	P	P	07 00 23.6	+0.4
	2.0nm,0.7s,mb4.0,baz=247,slow=4.5,SNR=4.2						
LPAZ	La Paz	42.99	75	P	P	07 00 55.1	-0.4
	1.3nm,0.7s,mb3.8,baz=106,slow=4.0,SNR=6.7						
LPAZ	La Paz	42.99	75	*e*P	P	07 00 55.3	-0.2
	2.0nm,0.9s,mb3.9						
CPUP	Villa Florida	46.92	95	LR	LR	07 17 55.8	
	comp=Z,81nm,18.4s,MS3.7,baz=65,slow=32						
QSPA	South Pole Qui	55.04	180	P	P	07 02 26.6	-0.4
	0.3nm,0.7s,mb3.5,baz=189,slow=6.5,SNR=3.0						
URZ	Urewera	55.96	244	LR	LR	07 21 26.1	
	comp=Z,119nm,18.7s,MS4.0,baz=35,slow=31						
AFI	Afiamalu	57.87	275	LR	LR	07 20 42.7	
	comp=Z,58nm,20.8s,MS3.7,baz=246,slow=29						
VNA3	Neumayer Olymp	60.80	159	*e*	P	07 03 07.8	+0.3
VNA3				*e*		07 03 13.9	
VNA2	Neumayer--Watz	61.60	159	*e*	P	07 03 13.0	0.0
VNA2				*e*		07 03 19.3	
DZM	Mont Dzumac	71.36	256	*e*LR	LR	07 25 55.8	
	106nm,30.6s						
NVAR	Mina Array Bea	73.49	354	P	P	07 04 29.7	+1.3
	1.4nm,0.8s,mb3.9,baz=194,slow=6.5,SNR=2.1						
DAU	Daniels Canyon	75.20	0	*e*P	P	07 04 38.4	+0.1
	5.3nm,1.0s,mb4.4						
PDAR	Pinedale Array	77.57	1	P	P	07 04 51.2	-0.4
	1.4nm,0.9s,mb3.9,baz=145,slow=5.4,SNR=12						
TPAW	Teton Pass	78.28	0	*e*P	P	07 04 54.7	-0.9
	3.7nm,1.1s,mb4.2						
HLID	Hailey	78.39	358	*e*P	P	07 04 56.7	+0.5
	3.5nm,1.0s,mb4.2						
STKA	Stephens Creek	84.32	235	P	P	07 05 29.1	+0.9
	1.9nm,1.0s,mb4.2,baz=108,slow=4.8,SNR=3.9						
STKA				LR	LR	07 34 58.5	
	comp=Z,73nm,20.7s,MS4.0,baz=206,slow=30						
ASAR	Alice Springs	94.79	237	P	P	07 06 17.5	-0.6
	0.5nm,0.7s,mb4.0,baz=153,slow=5.6,SNR=4.8						
YKA	Yellowknife Ar	97.34	359	P	P	07 06 27.6	-0.9
	0.1nm,0.4s,mb3.6,baz=172,slow=5.0,SNR=4.3						
YKA	Yellowknife Ar	97.34	359	P	P	07 06 27.6	-0.9
ENH	Enshi	145.32	274	*e*PKPdf	PKPdf	07 12 34.5	+0.5
BUR08	Bucovina Ar. S	145.67	55	*e*PKPdf	PKPdf	07 12 33.8	-0.3
AKASG	Malin Array Be	147.78	49	PKPbc	PKPbc	07 12 38.9	-1.5
	0.6nm,0.5s,baz=292,slow=2.5,SNR=4.6						
CMAR	Chiang Mai Arr	148.28	246	PKPbc	PKPbc	07 12 42.5	-0.2
	1.8nm,0.7s,baz=175,slow=2.4,SNR=8.2						
SONM	Songino Array	149.21	306	PKPbc	PKPbc	07 12 43.4	-0.7
	1.2nm,0.7s,baz=100,slow=3.3,SNR=4.6						
BRTR	Keskin Array B	152.09	70	PKPbc	PKPbc	07 12 50.6	-0.6
	1.4nm,1.0s,baz=197,slow=3.9,SNR=5.5						

IDC 09 07:03:28.3±4.6, 19.05S×176.55W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=128.4km s-min=40.5km az=30.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.17	260	P	P	07 11 55.3	+0.2
	0.5nm,0.2s,baz=97,slow=7.4,SNR=55						
ASAR	Alice Springs	46.20	255	P	P	07 11 55.0	-0.2
	1.1nm,0.7s,baz=96,slow=7.9,SNR=13						
FITZ	Fitzroy Crossi	54.59	261	P	P	07 12 58.7	-0.2
	0.6nm,0.5s,baz=68,slow=11,SNR=4.4						
QSPA	South Pole Qui	71.01	180	P	P	07 14 47.9	+0.5
	1.4nm,1.0s,baz=32,slow=2.4,SNR=6.3						
AKASG	Malin Array Be	142.38	333	PKP	PKPdf	07 23 02.0	-0.8
	0.9nm,0.4s,baz=41,slow=4.0,SNR=5.7						

*NEIC **09** 07:07:49.3, 16.93N×95.27W, h108km, MD3.9(MEX), After MEX.*
MEX 09 07:07:49.3±1.1, 16.93N×95.27W, h108km±8km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.40	66	*i* P	Pn	07 08 04.0	-1.3
CMIG				*i* S	Sn	07 08 15.3	-2.0
CMIG	Matias Romero	0.40	66	*i* P	Pn	07 08 04.0	-1.3
CMIG				*i* S	Sn	07 08 15.3	-2.0
HUIG	Huatulco	1.41	215	*i* P	Pn	07 08 13.5	-1.4
HUIG				*i* S	Sn	07 08 33.3	-1.0
HUIG	Huatulco	1.41	215	*i* P	Pn	07 08 13.5	-1.4
HUIG				*i* S	Sn	07 08 33.3	-1.0
VHO	Vista Hermosa	1.41	276	*i* P	Pn	07 08 14.2	-0.7
VHO				*i* S	Sn	07 08 33.5	-0.8
VHO	Vista Hermosa	1.41	276	*i* P	Pn	07 08 14.2	-0.7
VHO				*i* S	Sn	07 08 33.5	-0.8
TGIG		2.06	94	*e*P	Pn	07 08 22.7	-0.2
TGIG				*i* S	Sn	07 08 47.5	-1.2
PCIG		2.31	121	*i* P	Pn	07 08 26.1	-0.1
PCIG				*i* S	Sn	07 08 50.0	-4.6
TPIG	Tehuac#an	2.49	307	*i* P	Pn	07 08 27.3	-1.2
TPIG				*i* S	Sn	07 08 54.8	-3.8
UTMO	Huajuapan	2.58	291	*i* P	Pn	07 08 28.4	-1.4
UTMO				*i* S	Sn	07 08 59.6	-1.2
PNIG	Pinotepa	2.79	259	*i* P	Pn	07 08 31.9	-0.6
PNIG				*i* S	Sn	07 09 02.5	-3.3
PNIG	Pinotepa	2.79	259	*i* P	Pn	07 08 31.9	-0.6
PNIG				*i* S	Sn	07 09 02.5	-3.3
CCIG	Comitan	3.07	102	*i* P	Pn	07 08 34.8	-1.4
CCIG				*i* S	Sn	07 09 09.8	-2.5
CCIG	Comitan	3.07	102	*i* P	Pn	07 08 34.8	-1.4
CCIG				*i* S	Sn	07 09 09.8	-2.5
PPM	Popocatepetl	3.84	304	*i* P	Pn	07 08 46.8	+0.4
PPM				*i* S	Sn	07 09 30.0	-0.8
PPM	Popocatepetl	3.84	304	*i* P	Pn	07 08 46.8	+0.4
PPM				*i* S	Sn	07 09 30.0	-0.8

*IDC **09** 07:26:40.1±2.8, 36.33N×141.85E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.3/4, ML3.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.2/22, Error ellipse: s-maj=76.8km s-min=29.5km az=56.0*
*JMA **09** 07:26:41.7±0.1, 35.96N×141.84E, h61km±3km, M2.9*
*ISCJB **09** 07:26:43.3±1.1, 36.01N±0.05×141.8E±0.1, h33km, mb3.5/3, Error ellipse: s-maj=13.2km s-min=7.1km az=2.3*
ISC 09 07:26:40.1±3.2, 35.97N±0.07×141.9E±0.2, h14km±17km, n16, σ0.54/19, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.92	253	P	Pg	07 26 57.8	-0.1
CHOJ				*e*S	Sg	07 27 10.0	0.0
JHO	Hitachi	1.28	300	P	Pn	07 27 02.8	-0.8
BSO1	Boso 1	1.54	211	P	Pn	07 27 06.7	-0.4
JFK	Kawauchi	1.63	329	P	Pn	07 27 08.1	-0.4
BSO3	Boso 3	1.65	225	P	Pn	07 27 08.4	-0.3
JFT	Otama	2.01	321	P	Pn	07 27 14.7	+1.1
JAG	Ashikaga	2.06	283	P	Pn	07 27 13.8	-0.6
JMM	Marumori	2.10	334	P	Pn	07 27 15.0	+0.1
JMM				*e*S	Sn	07 27 40.1	-0.7
JFY	Yanaizu	2.30	309	P	Pn	07 27 18.0	+0.4
JKT	Katashina	2.31	291	P	Pn	07 27 18.0	+0.2
JRY	Ryogami san	2.46	272	P	Pn	07 27 19.7	-0.2
MJAR	Matsushiro Arr	3.07	282	Pn	Pn	07 27 28.1	-0.1
	2.3nm,0.3s,baz=94,slow=8.8,SNR=11						
MAT	Matsushiro	3.07	282	P	Pn	07 27 28.9	+0.7
MAT				S	Sn	07 28 09.1	+4.3
KURK	Kurchatov	46.92	309	P	P	07 35 10.3	+0.3
	0.7nm,0.5s,mb3.9,baz=85,slow=9.9,SNR=1.8						
KURK				LR	LR	07 58 10.1	
	comp=Z,23nm,18.9s,baz=200,slow=40						
WRA	Warramunga Arr	56.07	189	P	P	07 36 22.9	+4.1
	0.4nm,0.7s,mb3.6,baz=2.7,slow=7.3,SNR=4.7						
ASAR	Alice Springs	59.80	189	P	P	07 36 49.8	+5.0
	0.2nm,0.8s,mb3.2,baz=19,slow=12,SNR=3.4						

NNC 09 07:29:49.5±4.8, 49.99N×87.59E, h4km±21km, mb3.7, mpv3.3, 7C-1D, Error ellipse: s-maj=39.7km s-min=22.5km az=88.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.76	230	⇑Pn	Pn	07 31 02.8	+0.8
	5.1nm,0.7s,baz=58,slow=12,SNR=101						
MK31				⇑Pg	Pg	07 31 16.0	-4.7
	2.4nm,0.5s,baz=65,slow=12,SNR=5.0						
MK31				⇑Sn	Sn	07 31 58.8	+1.3
	6.2nm,0.5s						
MK31				⇑Lg		07 32 20.0	
	8.7nm,0.6s						
KURK	Kurchatov	5.79	281	⇑Pn	Pn	07 31 15.7	-0.3
	3.0nm,0.5s						
KURBB	Kurchatov Arra	5.84	280	⇑Pn	Pn	07 31 16.7	-0.1
	0.8nm,0.4s						
KURBB				⇓Sn	Sn	07 32 24.7	+0.6
	1.8nm,0.6s						
KURBB				⇑Lg		07 32 56.4	
	3.7nm,0.6s						

*NIED **09** 07:41:00, 40.50N×142.40E, h53km, Mw3.5 Best double couple: M0 1.75000×10^14 NP1:φ=217.00000°, δ75.00000°, λ135.00000°. NP2:φ=322.00000°, δ47.00000°, λ20.00000°.*
*IDC **09** 07:41:18.2±17.0, 40.85N×143.67E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, MS3.0/1, Ms1 3.2/1, ms1mx2.2/39, Error ellipse: s-maj=607.5km s-min=35.8km az=61.0*
*ISCJB **09** 07:41:28.7±0.9, 40.47N±0.05×142.4E±0.1, h62km±8km, mb3.5/3, Error ellipse: s-maj=13.7km s-min=7.7km az=3.6*
*JMA **09** 07:41:29.4±0.1, 40.49N×142.40E, h41km±2km, M3.7*
JMA Felt I J1.
ISC 09 07:41:29.6±0.9, 40.48N±0.05×142.4E±0.1, h51km±10km, n13, σ0.45/19, mb3.5/3, 2C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	Nango	0.66	261	⇑P	Pn	07 41 42.8	-0.1
JANG				S	Sn	07 41 52.2	-0.3
JTH	Tanohata	0.67	216	⇑P	Pn	07 41 42.6	-0.3
JTH				*e*S	Sn	07 41 52.2	-0.4
JKZ	Kuzumaki	0.94	238	⇓P	Pn	07 41 46.9	+0.4
JKZ				S	Sn	07 41 59.2	+0.3
JTM	Tenmabayashi	1.04	287	⇓P	Pn	07 41 47.5	-0.3
JTM				S	Sn	07 42 00.8	-0.4
JOM	Ohasama	1.31	220	⇓P	Pn	07 41 52.0	+0.6
JOM				*e*S	Sn	07 42 08.0	+0.3
JOT	Ohata	1.34	312	⇓P	Pn	07 41 51.7	-0.3
JAH	Hinai	1.36	258	⇓P	Pn	07 41 52.6	+0.5
JAH				S	Sn	07 42 09.3	+0.3
JEM	Erimo	1.64	21	P	Pn	07 41 56.4	+0.4
JKB	Kayabe	1.73	325	P	Pn	07 41 57.5	+0.3
JKB				*e*S	Sn	07 42 17.7	-0.4
MKAR	Makanchi Array	43.01	299	P	P	07 49 24.6	+0.9
	0.5nm,0.6s,mb3.4,baz=84,slow=9.8,SNR=5.7						
CMAR	Chiang Mai Arr	43.17	252	LR	LR	08 07 17.1	
	comp=Z,20nm,21.6s,baz=180,slow=35						
WRA	Warramunga Arr	60.58	189	P	P	07 51 33.9	-0.8
	0.6nm,0.9s,mb3.7,baz=7.5,slow=7.0,SNR=4.8						
ASAR	Alice Springs	64.30	189	P	P	07 51 59.0	-0.6
	0.4nm,0.9s,mb3.5,baz=19,slow=7.2,SNR=3.6						

*NEIC **09** 08:04:48.1, 16.46N×98.49W, h15km, MD3.8(MEX), After MEX.*
MEX 09 08:04:48.1±0.9, 16.46N×98.49W, h15km±12km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.35	101	*i* P	Pg	08 04 54.5	-0.8
PNIG				*i* S	Sg	08 04 59.8	-0.4
PNIG	Pinotepa	0.35	101	*i* P	Pg	08 04 54.5	-0.8
PNIG				*i* S	Sg	08 04 59.8	-0.4
ACX	Acapulco	1.43	287	*e*P	Pn	08 05 10.1	-3.5
ACX				*i* S	Sn	08 05 27.0	-5.1
ACX	Acapulco	1.43	287	*e*P	Pn	08 05 10.1	-3.5
ACX				*i* S	Sn	08 05 27.0	-5.1
UTMO	Huajuapan	1.51	25	*i* P	Pn	08 05 11.4	-3.2
UTMO				*i* S	Sn	08 05 29.0	-5.1
VHO	Vista Hermosa	1.79	70	*i* P	Pn	08 05 14.9	-3.5
VHO				*i* S	Sn	08 05 36.7	-4.1
VHO	Vista Hermosa	1.79	70	*i* P	Pn	08 05 14.9	-3.5
VHO				*i* S	Sn	08 05 36.7	-4.1
CAIG	El Cayaco	1.81	289	*e*P	Pn	08 05 15.2	-3.5
CAIG				*i* S	Sn	08 05 35.7	-5.6
CAIG	El Cayaco	1.81	289	*e*P	Pn	08 05 15.2	-3.5
CAIG				*i* S	Sn	08 05 35.7	-5.6
TPIG	Tehuac#an	2.23	29	*e*P	Pn	08 05 21.7	-2.7
TPIG				*i* S	Sn	08 05 47.8	-3.9
HUIG	Huatulco	2.38	106	*e*P	Pn	08 05 23.9	-2.7
HUIG				*i* S	Sn	08 05 51.2	-4.4
HUIG	Huatulco	2.38	106	*e*P	Pn	08 05 23.9	-2.7
HUIG				*i* S	Sn	08 05 51.2	-4.4
PPM	Popocatepetl	2.60	357	*e*P	Pn	08 05 25.9	-3.7
PPM				*i* S	Sn	08 06 04.8	+3.9
PPM	Popocatepetl	2.60	357	*e*P	Pn	08 05 25.9	-3.7
PPM				*i* S	Sn	08 06 04.8	+3.9
MZVM		2.81	345	*e*P	Pn	08 05 34.1	+1.6
MZVM				*i* S	Sn	08 06 11.5	+5.4
IIO	Organos	3.13	356	*e*P	Pn	08 05 40.3	+3.4
IIO				*i* S	Sn	08 06 08.6	-5.3
IIO	Organos	3.13	356	*e*P	Pn	08 05 40.3	+3.4
IIO				*i* S	Sn	08 06 08.6	-5.3
CMIG	Matias Romero	3.51	79	*e*P	Pn	08 05 39.1	-3.0
CMIG

SIGR				S		Sg	08 07 13.5	+0.4
SIGR	**SIGRI**	**1.10**	**156**	P		**Pg**	08 06 58.2	-0.6
SIGR				S		**Sg**	08 07 13.5	+0.4
PRK	**Paraskevi**	**1.24**	**141**	*e*PN		**Pn**	08 07 00.4	-0.7
PRK				*e*SN		**Sn**	08 07 18.4	+0.4
PRK	**Paraskevi**	**1.24**	**141**	P		**Pn**	08 07 00.4	-0.7
PRK				S		**Sb**	08 07 16.9	-0.4
PRK	**Paraskevi**	**1.24**	**141**	P		**Pn**	08 07 00.4	-0.7
PRK				S		**Sb**	08 07 16.9	-0.4
PRK				*e*Sn		**Sn**	08 07 18.4	+0.4
AYVA	**Ayvalik**	**1.42**	**129**	*i* P		**Pn**	08 07 03.3	-0.4
AYVA				*i* S		**Sn**	08 07 21.5	-1.0
AYVA	**Ayvalik**	**1.42**	**129**	*i* P		**Pn**	08 07 03.3	-0.3
AYVA				*i* S		**Sn**	08 07 21.5	-1.0
KDZ	**Kurdzhali**	**1.43**	**4**	*i* P		**Pn**	08 07 03.5	-0.2
KDZ	**Kurdzhali**	**1.43**	**4**	*i* P		**Pn**	08 07 03.5	-0.2
RZN	**Rozhen**	**1.52**	**344**	P		**Pn**	08 07 06.6	+1.6
RZN	**Rozhen**	**1.52**	**344**	P		**Pn**	08 07 06.6	+1.6
SART	**Tekirdag**	**1.53**	**72**	*i* P		**Pn**	08 07 03.8	-1.3
SART				*i* S		**Sn**	08 07 25.9	+0.8
SART	**Tekirdag**	**1.53**	**72**	*i* P		**Pn**	08 07 03.8	-1.3
SART				*i* S		**Sn**	08 07 25.9	+0.8
SRS	**Serrai**	**1.56**	**306**	P		**Pn**	08 07 04.6	-0.9
SRS	**Serrai**	**1.56**	**306**	P		**Pn**	08 07 04.6	-0.9
MMB	**Musomiste**	**1.80**	**320**	P		**Pn**	08 07 07.9	-0.9
MMB	**Musomiste**	**1.80**	**320**	P		**Pn**	08 07 07.9	-0.9
BALY	**Balya**	**1.87**	**104**	*i* P		**Pn**	08 07 09.6	-0.1
BALY				*i* S		**Sn**	08 07 35.6	+2.2
BALY	**Balya**	**1.87**	**104**	*i* P		**Pn**	08 07 09.6	-0.1
BALY				*i* S		**Sn**	08 07 35.7	+2.3
KKB	**Krupnik**	**2.33**	**316**	P		**Pn**	08 07 16.5	+0.4
KKB	**Krupnik**	**2.33**	**316**	P		**Pn**	08 07 16.5	+0.4
JMB	**Yambol**	**2.45**	**23**	P		**Pn**	08 07 17.2	-0.6
JMB	**Yambol**	**2.45**	**23**	P		**Pn**	08 07 17.2	-0.6
DURS	**Dursunbey**	**2.54**	**103**	*i* P		**Pn**	08 07 18.8	-0.2
DURS				*i* S		**Sg**	08 07 55.6	-3.6
DURS	**Dursunbey**	**2.54**	**103**	*i* P		**Pn**	08 07 18.8	-0.2
DURS				*i* S		**Sg**	08 07 55.6	-3.6
VTS	**Vitosha**	**2.83**	**327**	P		**Pn**	08 07 24.7	+1.7
VTS	**Vitosha**	**2.83**	**327**	P		**Pn**	08 07 24.7	+1.7

IDC 09 08:28:43.2±0.9, 39°.03N×110°.67E, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.7/26, mbtmp3.9/8, ML3.3/1, Error ellipse: s-maj=32.9km s-min=16.4km az=68.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.33**	**342**	Pn	Pn	08 30 59.6	+0.7
	0.3nm,0.3s,baz=164,slow=11,SNR=20						
SONM				Lg		08 33 36.7	
	0.4nm,0.3s,baz=160,slow=27,SNR=4.6						
MKAR	**Makanchi Array**	**22.10**	**300**	P	P	08 33 39.9	0.0
	2.5nm,1.0s,baz=101,slow=12,SNR=13						
CMAR	**Chiang Mai Arr**	**22.89**	**210**	P	P	08 33 48.3	-0.1
	5.3nm,0.8s,baz=15,slow=9.5,SNR=20						
KURK	**Kurchatov**	**25.34**	**308**	P	P	08 34 11.8	+0.3
	0.8nm,0.4s,baz=109,slow=9.8,SNR=6.2						
NOA	**NORSAR Array B**	**60.95**	**327**	P	P	08 38 58.2	+0.6
	0.6nm,0.5s,baz=60,slow=6.3,SNR=2.6						
WRA	**Warramunga Arr**	**62.71**	**155**	P	P	08 39 09.5	-0.4
	0.7nm,0.7s,baz=343,slow=6.4,SNR=5.9						
ASAR	**Alice Springs**	**66.05**	**157**	P	P	08 39 32.0	+0.3
	0.7nm,0.7s,baz=344,slow=6.2,SNR=11						
YKA	**Yellowknife Ar**	**72.48**	**20**	P	P	08 40 11.1	-0.1
	0.6nm,0.8s,baz=328,slow=5.7,SNR=6.5						

*CSEM **09** 08:45:59.1±1.6, 36°.22N×21°.72E, h2km, MD3.6, Error ellipse: s-maj=34.4km s-min=17.6km az=53.0*
*THE **09** 08:45:59.0, 36°.48N×21°.02E, h19km±5km, ML3.5/3, Error ellipse: s-maj=8.1km s-min=3.0km az=207.0*
*ATH **09** 08:45:59.6, 36°.25N×21°.74E, h5km, MD3.6/6*
ISC 09 08:45:56.8±2.1, 36°.15N±0°.08×21°.6E±0°.1, h12km±8km, n21, σ1.9/07/29, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**10**	*e*PB	**Pg**	08 46 12.1	+0.6
PYL	**PYLOS**	**0.76**	**10**	P	**Pg**	08 46 12.2	+0.7
PYL	**PYLOS**	**0.76**	**10**	*e*Pb	**Pg**	08 46 12.1	+0.6
ITM	**Ithomi**	**1.07**	**15**	*e*PB	**Pg**	08 46 17.8	+0.5
ITM				*e*SB	**Sg**	08 46 31.3	+0.1
ITM	**Ithomi**	**1.07**	**15**	P	**Pg**	08 46 17.7	+0.4
ITM				S	**Sg**	08 46 31.5	+0.3
ITM	**Ithomi**	**1.07**	**15**	*e*Pb	**Pg**	08 46 17.8	+0.5
ITM				*e*Sb	**Sg**	08 46 31.3	+0.1
KYTH	**Kithira**	**1.19**	**83**	*e*PN	**Pg**	08 46 20.1	+0.4
KYTH	**Kithira**	**1.19**	**83**	*e*Pn	**Pg**	08 46 20.1	+0.4
VLI	**Veliai**	**1.24**	**62**	*e*PG	**Pg**	08 46 19.9	-0.7
VLI	**Veliai**	**1.24**	**62**	*e*Pg	**Pg**	08 46 19.9	-0.7
VLX	**Vlachokerasia**	**1.38**	**28**	*e*PG	**Pg**	08 46 22.8	-0.5
VLX	**Vlachokerasia**	**1.38**	**28**	P	**Pn**	08 46 22.9	+1.0
VLX				S	**Sn**	08 46 40.6	+0.5
VLX	**Vlachokerasia**	**1.38**	**28**	P	**Pn**	08 46 22.9	+1.0
VLX				S	**Sn**	08 46 40.6	+0.5
GUR	**Goura**	**1.89**	**19**	*e*PN	**Pn**	08 46 33.0	+4.1
GUR	**Goura**	**1.89**	**19**	P	**Pn**	08 46 31.0	+2.1
GUR	**Goura**	**1.89**	**19**	P	**Pn**	08 46 31.0	+2.1
GUR	**Goura**	**1.89**	**19**	*e*Pn	**Pn**	08 46 33.0	+4.1
DID	**Didima**	**1.90**	**44**	P	**Pg**	08 46 32.4	-0.9
DID				S	**Sg**	08 46 58.1	+0.2
DID	**Didima**	**1.90**	**44**	P	**Pg**	08 46 32.4	-0.9
DID				S	**Sg**	08 46 58.1	+0.2
LAKA	**Lakka**	**2.11**	**9**	P	**Pn**	08 46 29.3	-2.7
LAKA				S	**Sn**	08 46 54.9	-3.3
LAKA	**Lakka**	**2.11**	**9**	P	**Pn**	08 46 29.3	-2.7

*NEIC **09** 08:48:23.6, 16°.16N×97°.59W, h29km, MD3.5(MEX), After MEX.*
MEX 09 08:48:23.6±0.6, 16°.16N×97°.59W, h29km±13km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.56**	**294**	*i* P	Pb	08 48 32.9	-2.1
PNIG				*i* S	Sb	08 48 41.0	-1.8
PNIG	**Pinotepa**	**0.56**	**294**	*i* P	Pb	08 48 32.9	-2.1
PNIG				*i* S	Sb	08 48 41.0	-1.8
VHO	**Vista Hermosa**	**1.23**	**42**	*i* P	Pn	08 48 42.5	-2.3
VHO				*i* S	Sn	08 48 57.6	-2.7
VHO	**Vista Hermosa**	**1.23**	**42**	*i* P	Pn	08 48 42.5	-2.3
VHO				*i* S	Sn	08 48 57.6	-2.7
HUIG	**Huatulco**	**1.48**	**105**	*i* P	Pn	08 48 46.7	-1.6
HUIG				*i* S	Sn	08 49 03.6	-3.0
HUIG	**Huatulco**	**1.48**	**105**	*i* P	Pn	08 48 46.7	-1.6
HUIG				*i* S	Sn	08 49 03.6	-3.0
UTMO	**Huajuapan**	**1.67**	**353**	*i* P	Pn	08 48 49.5	-1.4
UTMO				*i* S	Sn	08 49 09.6	-1.9
CMIG	**Matias Romero**	**2.76**	**70**	*i* P	Pn	08 49 03.9	-1.9
CMIG				*i* S	Sn	08 49 35.2	-3.0
CMIG	**Matias Romero**	**2.76**	**70**	*i* P	Pn	08 49 03.9	-1.9
CMIG				*i* S	Sn	08 49 35.2	-3.0
PPM	**Popocatepetl**	**3.05**	**341**	*i* P	Pn	08 49 10.1	+0.1
PPM				*i* S	Sn	08 49 43.8	-1.8
PPM	**Popocatepetl**	**3.05**	**341**	*i* P	Pn	08 49 10.1	+0.1
PPM				*i* S	Sn	08 49 43.8	-1.8

*NEIC **09** 09:03:18.0, 17°.17N×100°.72W, h16km, MD3.5(MEX), After MEX.*
MEX 09 09:03:18.0±0.9, 17°.17N×100°.72W, h16km±710km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.45**	**105**	*i* P	Pg	09 03 25.5	-1.6
CAIG				*i* S	Sg	09 03 31.9	-1.3
CAIG	**El Cayaco**	**0.45**	**105**	*i* P	Pg	09 03 25.5	-1.6
CAIG				*i* S	Sg	09 03 31.9	-1.3
ACX	**Acapulco**	**0.83**	**111**	*i* P	Pb	09 03 31.9	-2.1
ACX				*i* S	Sb	09 03 40.2	-4.6
ACX	**Acapulco**	**0.83**	**111**	*i* P	Pb	09 03 31.9	-2.1
ACX				*i* S	Sb	09 03 40.2	-4.6
PNIG	**Pinotepa**	**2.60**	**107**	*e*P	Pn	09 03 56.9	-2.5
PNIG				*i* S	Sn	09 04 27.1	-3.5
PNIG	**Pinotepa**	**2.60**	**107**	*e*P	Pn	09 03 56.9	-2.5
PNIG				*i* S	Sn	09 04 27.1	-3.5
PPM	**Popocatepetl**	**2.75**	**46**	*e*P	Pn	09 03 58.0	-3.4
PPM				*i* S	Sn	09 04 32.7	-1.5
PPM	**Popocatepetl**	**2.75**	**46**	*e*P	Pn	09 03 58.0	-3.4
PPM				*i* S	Sn	09 04 32.7	-1.5
UTMO	**Huajuapan**	**2.86**	**76**	*e*P	Pn	09 04 01.1	-1.8
UTMO				*i* S	Sn	09 04 34.5	-2.5

*CSEM **09** 09:12:45.6±0.2, 42°.39N×14°.10E, h30km, ML2.9/7, Error ellipse: s-maj=4.4km s-min=2.9km az=46.0*
*ISCJB **09** 09:12:46.7±0.4, 42°.40N±0°.03×14°.09E±0°.04, h26km±5km, Error ellipse: s-maj=6.3km s-min=3.8km az=140.1*
*ROM **09** 09:12:46.3±0.2, 42°.41N×14°.08E, h8km±3km, Md2.4/14, Ml2.2/15, Error ellipse: s-maj=2.5km s-min=1.8km az=39.0*
ISC 09 09:12:46.9±0.4, 42°.40N±0°.03×14°.08E±0°.04, h21km±7km, n40, σ0.78/62, 2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAFR	**Castel Frentan**	**0.26**	**131**	*i* Pg	**Pb**	09 12 52.6	-0.5
CAFR				Sg	**Sb**	09 12 58.0	+0.8
	993nm,0.2s						
CAFR	**Castel Frentan**	**0.26**	**131**	*i* Pg	**Pb**	09 12 52.6	-0.5
CAFR				Sg	**Sb**	09 12 58.0	+0.8
	993nm,0.2s						
LPEL	**Lama dei Pelig**	**0.36**	**168**	Pg	**Pb**	09 12 54.3	-0.4
LPEL				Sg	**Sb**	09 13 00.2	+0.3
	218nm,0.2s						
LPEL	**Lama dei Pelig**	**0.36**	**168**	Pg	**Pb**	09 12 54.3	-0.4
LPEL				Sg	**Sb**	09 13 00.2	+0.3
	218nm,0.2s						
FAGN	**Fagnano**	**0.39**	**250**	Pg	**Pb**	09 12 55.1	-0.1
	219nm,0.2s						
FAGN	**Fagnano**	**0.39**	**250**	Pg	**Pb**	09 12 55.1	-0.1
	219nm,0.2s						
INTR	**Introdacqua**	**0.41**	**199**	Pg	**Pb**	09 12 55.2	-0.3
INTR				Sg	**Sb**	09 13 02.5	+1.2
	93nm,0.2s						
INTR	**Introdacqua**	**0.41**	**199**	Pg	**Pb**	09 12 55.2	-0.3
INTR				Sg	**Sb**	09 13 02.5	+1.2
	93nm,0.2s						
TERO	**Teramo**	**0.42**	**302**	Pg	**Pb**	09 12 54.7	-1.0
TERO				Sg	**Sb**	09 13 01.7	+0.1
	280nm,0.3s						
TERO	**Teramo**	**0.42**	**302**	Pg	**Pb**	09 12 54.7	-1.0
TERO				Sg	**Sb**	09 13 01.7	+0.1
	280nm,0.3s						
TRTR	**Tortoreto Alta**	**0.43**	**343**	Pg	**Pb**	09 12 55.5	-0.3
TRTR				Sg	**Sb**	09 13 03.2	+1.4
TRTR	**Tortoreto Alta**	**0.43**	**343**	Pg	**Pb**	09 12 55.5	-0.3
TRTR				Sg	**Sb**	09 13 03.2	+1.4
AQU	**L'Aquila**	**0.51**	**265**	Pg	**Pb**	09 12 56.6	-0.5
AQU				Sg	**Sb**	09 13 04.7	+0.6
	133nm,0.6s						
AQU	**L'Aquila**	**0.51**	**265**	Pg	**Pb**	09 12 56.6	-0.5
AQU				Sg	**Sb**	09 13 04.7	+0.6
	133nm,0.6s						
CAMP	**Campotosto**	**0.52**	**285**	Pg	**Pb**	09 12 56.6	-0.7
CAMP				Sg	**Sb**	09 13 04.6	+0.2
CAMP	**Campotosto**	**0.52**	**285**	Pg	**Pb**	09 12 56.6	-0.7
CAMP				Sg	**Sb**	09 13 04.6	+0.2
OFFI	**Offida**	**0.61**	**331**	Pg	**Pb**	09 12 58.7	-0.2
OFFI				Sg	**Sb**	09 13 07.5	+0.5
	209nm,0.8s						
OFFI	**Offida**	**0.61**	**331**	Pg	**Pb**	09 12 58.7	-0.2
OFFI				Sg	**Sb**	09 13 07.5	+0.5
	209nm,0.8s						
FRES	**Fresagrandinar**	**0.61**	**134**	Pg	**Pb**	09 12 57.6	-1.3
	120nm,0.7s						
FRES	**Fresagrandinar**	**0.61**	**134**	Pg	**Pb**	09 12 57.6	-1.3
	120nm,0.7s						
VVLD	**Villa Vallelon**	**0.63**	**213**	Pg	**Pb**	09 12 59.0	-0.2
	50nm,0.4s						
VVLD	**Villa Vallelon**	**0.63**	**213**	Pg	**Pb**	09 12 59.0	-0.2
	50nm,0.4s						
FIAM	**Fiamignano**	**0.73**	**260**	Pg	**Pb**	09 13 01.1	+0.2
	44nm,0.6s						
FIAM	**Fiamignano**	**0.73**	**260**	Pg	**Pb**	09 13 01.1	+0.2
	44nm,0.6s						
POFI	**Posta Fibreno**	**0.74**	**202**	Pg	**Pb**	09 13 00.9	-0.1
	22nm,0.6s						
POFI	**Posta Fibreno**	**0.74**	**202**	Pg	**Pb**	09 13 00.9	-0.1
	22nm,0.6s						
LNSS	**Leonessa**	**0.80**	**285**	Pg	**Pb**	09 13 01.2	-0.9
LNSS				Sg	**Sb**	09 13 13.8	+1.4
	136nm,0.3s						
LNSS	**Leonessa**	**0.80**	**285**	Pg	**Pb**	09 13 01.2	-0.9
LNSS				Sg	**Sb**	09 13 13.8	+1.4
	136nm,0.3s						
NRCA	**Norcia**	**0.84**	**301**	Pg	**Pb**	09 13 01.3	-1.5
NRCA				Sg	**Sb**	09 13 13.8	+0.2
NRCA	**Norcia**	**0.84**	**301**	Pg	**Pb**	09 13 01.3	-1.5
NRCA				Sg	**Sb**	09 13 13.8	+0.2
CESI	**CESI - Serrava**	**1.06**	**305**	Pg	**Pn**	09 13 05.1	-1.4
	24nm,0.5s						
CESI	**CESI - Serrava**	**1.06**	**305**	Pg	**Pn**	09 13 05.1	-1.4
	24nm,0.5s						
CING	**Cingoli**	**1.17**	**326**	Pg	**Pn**	09 13 09.3	+1.2
	27nm,0.4s						
CING	**Cingoli**	**1.17**	**326**	Pg	**Pn**	09 13 09.3	+1.2
	27nm,0.4s						
SGRT	**San Giovanni R**	**1.39**	**117**	Pg	**Pn**	09 13 11.8	+0.7
SGRT	**San Giovanni R**	**1.39**	**117**	Pg	**Pn**	09 13 11.8	+0.7
MSAG	**Monte S. Angel**	**1.52**	**116**	Pg	**Pn**	09 13 14.1	+1.2
	61nm,0.4s						
MSAG	**Monte S. Angel**	**1.52**	**116**	Pg	**Pn**	09 13 14.1	+1.2
	61nm,0.4s						
NVLJ	**Novalja**	**2.24**	**15**	*e*Pn	**Pn**	09 13 22.2	-0.5
NVLJ				Sn	**Sn**	09 13 49.7	+0.1
NVLJ	**Novalja**	**2.24**	**15**	*e*Pn	**Pn**	09 13 22.1	-0.6
NVLJ				Sn	**Sn**	09 13 49.6	0.0

*IDC **09** 09:14:50.5±1.6, 35°.94N×141°.98E, h0km, mb3.5/5, mb1 3.7/9, mb1mx3.5/28, mbtmp3.7/9, ML3.5/4, Error ellipse: s-maj=39.2km s-min=18.1km az=77.0*
*NEIC **09** 09:14:51.8±0.8, 35°.94N×141°.96E, h10km, mb4.4/2, Error ellipse: s-maj=20.9km s-min=13.7km az=201.0*
*ISCJB **09** 09:14:52.8±1.3, 36°.03N±0°.04×141°.88E±0°.06, h26km±9km, mb3.7/7, Error ellipse: s-maj=8.8km s-min=6.0km az=172.4*
*JMA **09** 09:14:53.5±0.3, 36°.07N×141°.81E, h26km±4km, M3.4*
ISC 09 09:14:52.8±1.9, 36°.03N±0°.03×141°.84E±0°.06, h15km±12km, n21, σ0.91/30, mb3.7/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.86**	**248**	P	**Pb**	09 15 09.4	-0.2
CHOJ				*e*S	**Sb**	09 15 20.9	0.0
JHO	**Hitachi**	**1.18**	**300**	P	**Pn**	09 15 13.4	-1.4
JHO				*e*S	**Sb**	09 15 29.5	-0.5
JFK	**Kawauchi**	**1.54**	**330**	P	**Pn**	09 15 19.1	-0.7
JFK				*e*S	**Sn**	09 15 39.1	-0.5
BSO1	**Boso 1**	**1.55**	**207**	P	**Pn**	09 15 20.8	+0.9
BSO1				*e*S	**Sn**	09 15 41.0	+1.3
BSO3	**Boso 3**	**1.64**	**222**	P	**Pn**	09 15 21.8	+0.6
JFT	**Otama**	**1.91**	**321**	P	**Pn**	09 15 25.6	+0.7
JFT				*e*S	**Sn**	09 15 49.0	+0.2
JAG	**Ashikaga**	**1.97**	**282**	P	**Pn**	09 15 24.9	-0.8
JAG				*e*S	**Sn**	09 15 49.5	-0.7
JMM	**Marumori**	**2.01**	**336**	P	**Pn**	09 15 26.6	+0.3
MJAR	**Matsushiro Arr**	**2.98**	**281**	Pn	**Pn**	09 15 39.9	+0.3
	5.0nm,0.3s,baz=275,slow=3.3,SNR=36						
MAJO	**Matsushiro**	**2.98**	**281**	*e*Pn	**Pn**	09 15 40.4	+0.8
MAT	**Matsushiro**	**2.98**	**281**	P	**Pn**	09 15 40.0	+0.4
MAT				S	**Sn**	09 16 15.0	-0.1
JHJ	**Hachijo jima 2**	**3.37**	**211**	Pn	**Pn**	09 15 45.2	+0.3
	34nm,0.3s,baz=4.4,slow=17,SNR=8.3						
JHJ				Sn	**Sn**	09 16 23.6	-1.1
	19nm,0.3s,baz=66,slow=21,SNR=5.0						
ASAJ	**Asahikawa**	**8.10**	**4**	Pn	**Pn**	09 16 50.0	+0.1
	0.5nm,0.3s,baz=141,slow=13,SNR=5.6						
CBIJ	**Chichi jima**	**8.91**	**178**	Pn	**Pn**	09 16 59.0	-2.1
	2.0nm,0.3s,baz=288,slow=20,SNR=3.9						
CBIJ				Sn	**Sn**	09 18 31.9	-9.5
	2.3nm,0.3s,baz=240,slow=23,SNR=2.7						
SONM	**Songino Array**	**28.64**	**305**	P	**P**	09 20 49.4	+0.7
	0.4nm,0.5s,mb3.4,baz=107,slow=9.2,SNR=2.2						
ZALV	**Zalesovo Beam**	**42.85**	**313**	P	**P**	09 22 51.3	+1.2
	0.8nm,0.3s,mb3.9,baz=93,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**44.95**	**303**	P	**P**	09 23 09.4	+2.3
	0.4nm,0.6s,mb3.4,baz=95,slow=9.0,SNR=4.4						
WRA	**Warramunga Arr**	**56.12**	**189**	P	**P**	09 24 29.7	-2.0
	0.3nm,0.5s,mb3.5,baz=5.6,slow=7.6,SNR=6.6						
ASAR	**Alice Springs**	**59.85**	**188**	P	**P**	09 24 58.5	+0.7
	0.2nm,0.8s,mb3.2,baz=19,slow=9.0,SNR=3.7						
ISA	**Isabella**	**76.77**	**56**	*e*P	**P**	09 26 43.2	-0.7
	1.6nm,0.6s,mb4.1						
ISCO	**Idaho Springs**	**82.30**	**46**	*e*P	**P**	09 27 13.7	-0.2
	2.0nm,0.5s,mb4.3						

GUC 09 09:15:17.5±0.9, 21°.97S×68°.73W, h118km±16km, ML3.5, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.76**	**247**	‖ *i* P	Pn	09 15 44.4	+7.2
PB04				*i* S	Sn	09 16 04.0	+12
PB04				AML	AML	09 16 07.7	
	comp=N,617nm,0.1s						
MACH	**Maria Elena**	**0.98**	**257**	⇑ *i* P	Pn	09 15 40.1	+0.9
MACH				*i* S	Sn	09 15 57.0	+1.4
PECH	**Pedro de Valdi**	**1.08**	**234**	⇑ *i* P	Pn	09 15 41.2	+1.1
PECH				*i* S	Sn	09 15 58.3	+1.0
PECH				AML	AML	09 15 59.6	
	comp=E,2μm,0.5s						
PB01	**Plate Boundary**	**1.16**	**322**	⇑ *i* P	Pn	09 15 41.6	+0.6
PB01				*i* S	Sn	09 16 00.1	+1.2
PB01				AML	AML	09 16 00.9	
	comp=N,752nm,0.4s						
HMBC	**Humberston**	**2.00**	**327**	⇑ *i* P	Pn	09 15 51.3	+0.4
HMBC				AML	AML	09 16 20.3	
	comp=N,359nm,0.3s						

CASC 09 09:29:06.4±2.0, 13°.94N×91°.33W, h56km±40km, MD3.5, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.69**	**43**	‖ *e*P	Pn	09 29 20.8	+0.5
FG6		**0.75**	**35**	*e*P	Pn	09 29 21.8	+0.7
FG6				*e*S	Sn	09 29 33.1	+1.3
PCG	**Pacaya**	**0.83**	**57**	*e*P	Pn	09 29 22.8	+0.7
PCG				*e*S	Sn	09 29 35.9	+2.3
TP2	**Tecpan 2**	**0.89**	**20**	*e*P	Pn	09 29 23.9	+1.1
TP2				*e*S	Sn	09 29 36.7	+1.7
NBG	**Las Nubes**	**1.15**	**56**	*e*P	Pn	09 29 27.0	+0.7
NBG				*e*S	Sn	09 29 43.4	+2.3
RBDL	**Robledal**	**1.60**	**84**	*e*P	Pn	09 29 31.2	-1.2
RBDL				*e*S	Sn	09 29 52.6	+0.6
RTR	**El Retiro**	**1.64**	**91**	*e*P	Pn	09 29 32.8	0.0
SBLS	**San Blas**	**1.66**	**93**	*e*P	Pn	09 29 33.7	+0.5
MRL	**Marmol**	**1.94**	**55**	*e*P	Pn	09 29 36.7	-0.3
LFRS	**El Faro**	**2.23**	**98**	*e*P	Pn	09 29 41.9	+1.0
LFRS				*e*S	Sn	09 30 09.4	+2.2
LBRS	**Las Brisas**	**2.23**	**95**	*e*P	Pn	09 29 41.0	0.0
SNVI	**San Vicente**	**2.44**	**97**	*e*P	Pn	09 29 44.6	+0.8
SNVI				*e*S	Sn	09 30 15.7	+3.1

*ISCJB **09** 09:42:58.6±0.9, 61°.15S±0°.2×25°.8W×0°.6, h10km, mb3.8/5, MS3.4/2, Error ellipse: s-maj=48.2km s-min=12.0km az=149.0*
*IDC **09** 09:42:59.9±1.0, 60°.66S×25°.56W, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/14, mbtmp3.9/5, MS3.4/2, Ms1 3.4/2, ms1mx3.1/14, Error ellipse: s-maj=43.1km s-min=24.4km az=67.0*
ISC 09 09:43:00.9±0.8, 61°.0S±0°.2×25°.7W±0°.6, h10km, n10, σ0.75/10, mb3.8/5, MS3.4/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.00**	**151**	*e*	**Pn**	09 45 51.8	+0.1
VNA3	**Neumayer Olymp**	**12.13**	**155**	*e*	**Pn**	09 45 53.3	-0.1
VNA3				*e*S	**Sn**	09 47 56.8	-12
VNA2	**Neumayer--Watz**	**12.40**	**151**	*e*	**Pn**	09 45 56.3	-0.8
VNA2				*e*S	**Sn**	09 47 58.7	-16
QSPA	**South Pole Qui**	**29.27**	**180**	P	**P**	09 49 07.0	+4.5
	1.5nm,0.6s,mb3.9,baz=207,slow=2.2,SNR=23						
PLCA	**Paso Flores**	**33.87**	**286**	LR	LR	10 02 34.4	
	comp=Z,51nm,19.6s,MS3.2,baz=285,slow=35						
CPUP	**Villa Florida**	**40.72**	**314**	P	**P**	09 50 40.4	-1.1
	0.7nm,0.4s,mb3.7,baz=127,slow=6.2,SNR=6.2						
CPUP				LR	LR	10 07 03.7	
	comp=Z,57nm,19.4s,MS3.4,baz=13,slow=36						
LPAZ	**La Paz**	**53.90**	**307**	P	**P**	09 52 24.8	+0.6
	0.6nm,0.4s,mb3.9,baz=122,slow=9.5,SNR=7.9						
TORD	**Torodi Ar. Bea**	**77.02**	**27**	P	**P**	09 54 53.7	0.0
	0.8nm,0.5s,mb3.9,baz=204,slow=5.2,SNR=5.6						
ASAR	**Alice Springs**	**94.06**	**161**	P	**P**	09 56 20.4	+1.3
	0.2nm,0.6s,mb3

2.4nm,0.8s,mb4.0,baz=102,slow=8.9,SNR=14
ZALV Zalesovo Beam 42.73 313 P **P 10 10 38.4 -0.4**
0.6nm,0.3s,mb3.8,baz=100,slow=3.3,SNR=3.8
MKAR Makanchi Array 44.86 303 P **P 10 10 56.1 +0.1**
1.9nm,0.8s,mb4.0,baz=90,slow=8.5,SNR=12
KURK Kurchatov 46.72 309 *eP* **P 10 11 10.2 -0.4**
2.2nm,0.6s,mb4.3
BVAR Borovoye Array 51.38 313 P **P 10 11 46.9 +0.6**
0.8nm,0.5s,mb3.9,baz=64,slow=6.6,SNR=3.5
AML Almayashu 51.92 299 *eP* **P 10 11 51.6 +1.1**
WRA Warramunga Arr 56.34 189 P **P 10 12 21.8 -1.0**
0.4nm,0.3s,mb3.9,baz=6.0,slow=7.4,SNR=25
ABKAR Abkulak array 58.74 311 *eP* **P 10 12 38.9 -0.6**
0.7nm,0.5s,mb4.0
ASAR Alice Springs 60.07 188 P **P 10 12 48.0 -0.8**
0.4nm,0.7s,mb3.6,baz=4.9,slow=6.9,SNR=6.2
YKA Yellowknife Ar 64.29 30 P **P 10 13 17.1 +0.3**
0.3nm,0.5s,mb3.5,baz=299,slow=6.1,SNR=4.6
YKA Yellowknife Ar 64.29 30 P **P 10 13 17.1 +0.3**
FINES FINESS Array B 69.69 333 P **P 10 13 51.1 0.0**
1.3nm,0.8s,mb3.9,baz=50,slow=3.0,SNR=5.0
NB2 NORSAR Subarra 75.06 338 P **P 10 14 23.1 -0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=42,slow=5.9
NOA NORSAR Array B 75.06 338 P **P 10 14 23.5 +0.3**
comp=Z,1.0nm,0.7s,mb3.8,baz=40,slow=5.7,SNR=4.9
NVAR Mina Array Bea 75.15 53 P **P 10 14 25.8 +1.7**
comp=Z,0.5nm,0.7s,mb3.5,baz=305,slow=5.2,SNR=4.3
ESK Eskdalemuir 84.02 341 *eP* **P 10 15 06.3 -5.7**
comp=Z,8.5nm,0.4s,mb5.2
TXAR Lajitas Array 90.29 53 P **P 10 15 43.6 +0.6**
comp=Z,0.2nm,0.8s,mb3.5,baz=299,slow=2.6,SNR=3.8
LPAZ La Paz 146.75 61 PKPbc PKPbc 10 22 25.0 +0.8
comp=Z,0.9nm,0.6s,baz=252,slow=4.8,SNR=7.5
LPAZ La Paz 146.75 61 PKPbc PKPbc 10 22 25.0 +0.8

*NEIC **09** 10:16:21.0,37.°95N×26.°63E,h7km,MD3.0(ISK),*
MD3.6(ATH),After ISK.
*DDA **09** 10:16:24.7,38.°21N×26.°61E,h17km±1km,Md3.2*
*ATH **09** 10:16:24.9,38.°21N×26.°69E,h28km±7km,MD3.6/4*
*ISCJB **09** 10:16:25.2±0.5,38.°20N±0.°02×26.°59E±0.°03,h10km±3km,*
Error ellipse: s-maj=4.4km s-min=2.9km az=152.8
*ISK **09** 10:16:25.8,38.°16N×26.°63E,h19km,ML3.1*
*CSEM **09** 10:16:25.3±0.2,38.°18N×26.°59E,h10km,MD3.2,Error*
ellipse: s-maj=4.0km s-min=2.8km az=54.0
*THE **09** 10:16:26.3,38.°22N×26.°65E,h11km±5km,ML4.0/4,Error*
ellipse: s-maj=6.2km s-min=1.4km az=93.0
ISC 09 10:16:25.6±0.5,38.°20N±0.°02×26.°59E±0.°03,h10km±3km,
n70,σ0°83/112,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.17**	**1**	*i P*	**Pg**	**10 16 28.8**	**-0.5**
URLA				*i* S	**Sg**	**10 16 32.4**	**+0.7**
URLA	**Izmir**	**0.17**	**1**	*i P*	**Pg**	**10 16 28.8**	**-0.5**
URLA				*i* S	**Sg**	**10 16 32.4**	**+0.6**
BLCB	**Balcova**	**0.40**	**62**	P	**Pg**	**10 16 33.1**	**-0.4**
BLCB				S	**Sg**	**10 16 38.5**	**-0.4**
BLCB	**Balcova**	**0.40**	**62**	P	**Pg**	**10 16 33.1**	**-0.4**
BLCB				S	**Sg**	**10 16 38.5**	**-0.4**
SMG	**Samos**	**0.52**	**158**	*eP*	**Pg**	**10 16 35.6**	**-0.2**
SMG				*e*SN	**Sg**	**10 16 43.6**	**+0.9**
SMG	**Samos**	**0.52**	**158**	*eP*	**Pg**	**10 16 35.6**	**-0.2**
IZM	**Izmir**	**0.56**	**69**	PG	**Pg**	**10 16 37.6**	**+1.0**
GCAM	**G?zelcaml?**	**0.71**	**134**	*i P*	**Pg**	**10 16 38.9**	**-0.4**
GCAM				*i* S	**Sg**	**10 16 48.8**	**+0.3**
GCAM	**G?zelcaml?**	**0.71**	**134**	*i P*	**Pg**	**10 16 38.8**	**-0.5**
GCAM				*i* S	**Sg**	**10 16 48.8**	**+0.3**
PRK	**Paraskevi**	**1.08**	**347**	*e*PN	**Pg**	**10 16 45.8**	**-0.6**
PRK				*e*SN	**Sg**	**10 17 00.6**	**+0.2**
PRK	**Paraskevi**	**1.08**	**347**	P	**Pg**	**10 16 46.0**	**-0.4**
PRK				S	**Sg**	**10 17 01.0**	**+0.6**
PRK	**Paraskevi**	**1.08**	**347**	P	**Pg**	**10 16 46.0**	**-0.4**
PRK				*e*Sn	**Sg**	**10 17 00.6**	**+0.2**
PRK				S	**Sg**	**10 17 01.0**	**+0.6**
AYVA	**Ayvalik**	**1.11**	**4**	*i P*	**Pg**	**10 16 45.8**	**-1.2**
AYVA				*i* S	**Sg**	**10 17 02.1**	**+0.6**
AYVA	**Ayvalik**	**1.11**	**4**	*i P*	**Pg**	**10 16 45.8**	**-1.3**
AYVA				*i* S	**Sg**	**10 17 02.1**	**+0.6**
AYDN	**Tasoluk**	**1.15**	**117**	*i P*	**Pb**	**10 16 46.8**	**-0.7**
AYDN				*i* S	**Sb**	**10 17 01.7**	**-0.7**
AYDN	**Tasoluk**	**1.15**	**117**	*i P*	**Pb**	**10 16 46.8**	**-0.7**
AYDN				*i* S	**Sb**	**10 17 01.7**	**-0.8**
SIGR	**SIGRI**	**1.17**	**331**	P	**Pb**	**10 16 47.4**	**-0.5**
SIGR				S	**Sb**	**10 17 03.2**	**+0.2**
SIGR	**SIGRI**	**1.17**	**331**	P	**Pb**	**10 16 47.4**	**-0.5**
SIGR				S	**Sb**	**10 17 03.2**	**+0.2**
AKHS	**Akhisar**	**1.18**	**54**	*i P*	**Pb**	**10 16 46.8**	**-1.2**
AKHS				*i* S	**Sb**	**10 17 03.3**	**0.0**
AKHS	**Akhisar**	**1.18**	**54**	*i P*	**Pb**	**10 16 46.8**	**-1.2**
AKHS				*i* S	**Sb**	**10 17 03.3**	**0.0**
AKS	**Akhisar**	**1.18**	**54**	*e*PN	**Pn**	**10 16 47.0**	**-1.0**
AKS				*e*SN	**Sn**	**10 17 03.7**	**-0.4**
AKS	**Akhisar**	**1.18**	**54**	*e*Pn	**Pn**	**10 16 47.0**	**-1.1**
AKS				*e*Sn	**Sn**	**10 17 03.7**	**-0.4**
APE	**Apeiranthos**	**1.41**	**217**	P	**Pn**	**10 16 50.0**	**-1.2**
APE				S	**Sn**	**10 17 11.0**	**+1.2**
APE	**Apeiranthos**	**1.41**	**217**	P	**Pn**	**10 16 50.0**	**-1.2**
APE				S	**Sn**	**10 17 11.0**	**+1.2**
MANT	**Manisa**	**1.57**	**79**	*i P*	**Pn**	**10 16 54.1**	**+0.6**
MANT				*i* S	**Sn**	**10 17 14.2**	**+0.3**
MANT	**Manisa**	**1.57**	**79**	*i P*	**Pn**	**10 16 54.2**	**+0.7**
MANT				*i* S	**Sn**	**10 17 14.2**	**+0.3**
EZN	**Ezine**	**1.64**	**353**	*e*PN	**Pn**	**10 16 55.1**	**+0.6**
EZN	**Ezine**	**1.64**	**353**	*e*Pn	**Pn**	**10 16 55.1**	**+0.6**
KULA	**Kula-Manisa**	**1.66**	**78**	*e*PN	**Pn**	**10 16 54.6**	**-0.1**
KULA	**Kula-Manisa**	**1.66**	**78**	*e*Pn	**Pn**	**10 16 54.6**	**-0.1**
YER	**Yerkesik**	**1.71**	**128**	*e*PN	**Pn**	**10 16 54.3**	**-1.1**
YER				*e*SN	**Sn**	**10 17 16.3**	**-0.9**
YER	**Yerkesik**	**1.71**	**128**	*e*Pn	**Pn**	**10 16 54.3**	**-1.1**
YER				*e*Sn	**Sn**	**10 17 16.3**	**-1.0**
BALY	**Balya**	**1.74**	**27**	*i P*	**Pn**	**10 16 55.3**	**-0.6**
BALY				*i* S	**Sn**	**10 17 17.3**	**-0.7**
BALY	**Balya**	**1.74**	**27**	*i P*	**Pn**	**10 16 55.3**	**-0.5**
BALY				*i* S	**Sn**	**10 17 17.3**	**-0.7**
BALB	**Balikesir**	**1.76**	**34**	*e*PN	**Pn**	**10 16 56.9**	**+0.8**
BALB	**Balikesir**	**1.76**	**34**	*e*Pn	**Pn**	**10 16 56.9**	**+0.8**
DEMI	**Demirci**	**1.87**	**62**	*i P*	**Pn**	**10 16 59.2**	**+1.7**
DEMI				*i* S	**Sn**	**10 17 21.2**	**0.0**
DEMI	**Demirci**	**1.87**	**62**	*i P*	**Pn**	**10 16 59.2**	**+1.6**
DEMI				*i* S	**Sn**	**10 17 21.2**	**0.0**
DENT	**Denizli**	**1.98**	**102**	*e*PN	**Pn**	**10 16 58.6**	**-0.5**
DENT	**Denizli**	**1.98**	**102**	*e*Pn	**Pn**	**10 16 58.6**	**-0.5**
DNZL	**Cakiroluk**	**2.00**	**104**	*e*P	**Pn**	**10 17 01.5**	**+2.0**
DNZL				*e*S	**Sn**	**10 17 31.1**	**+6.6**
DNZL	**Cakiroluk**	**2.00**	**104**	*e*P	**Pn**	**10 17 01.5**	**+2.0**
LIA	**Limnos Island**	**2.02**	**328**	*e*PN	**Pn**	**10 16 59.7**	**0.0**
LIA	**Limnos Island**	**2.02**	**328**	P	**Pn**	**10 16 59.4**	**-0.3**
LIA				S	**Sn**	**10 17 23.7**	**-1.4**
LIA	**Limnos Island**	**2.02**	**328**	P	**Pn**	**10 16 59.4**	**-0.3**
LIA	**Limnos Island**	**2.02**	**328**	*e*Pn	**Pn**	**10 16 59.7**	**0.0**
LIA				S	**Sn**	**10 17 23.7**	**-1.4**
DURS	**Dursunbey**	**2.03**	**46**	*i P*	**Pn**	**10 16 58.7**	**-1.1**
DURS				*e*S	**Sn**	**10 17 24.6**	**-0.6**
DURS	**Dursunbey**	**2.03**	**46**	*i P*	**Pn**	**10 16 58.7**	**-1.1**
DURS				*e*S	**Sn**	**10 17 24.6**	**-0.6**
GADA	**Gvkgeada**	**2.06**	**345**	*e*PN	**Pn**	**10 17 01.1**	**+0.8**
GADA	**Gvkgeada**	**2.06**	**345**	*e*Pn	**Pn**	**10 17 01.1**	**+0.8**
LOS	**Limnos**	**2.10**	**326**	P	**Pn**	**10 17 01.4**	**+0.7**
LOS	**Limnos**	**2.10**	**326**	P	**Pn**	**10 17 01.4**	**+0.7**
DST	**Dursunbey**	**2.12**	**48**	*e*PN	**Pn**	**10 17 01.6**	**+0.5**
DST	**Dursunbey**	**2.12**	**48**	*e*Pn	**Pn**	**10 17 01.6**	**+0.5**
KHAL	**Karahalli**	**2.29**	**85**	*i P*	**Pn**	**10 17 04.2**	**+0.8**
KHAL				*i* S	**Sn**	**10 17 33.5**	**+1.9**
KHAL	**Karahalli**	**2.29**	**85**	*i P*	**Pn**	**10 17 04.2**	**+0.8**
KHAL				*i* S	**Sn**	**10 17 33.5**	**+1.9**
ARG	**Arkhangelos**	**2.32**	**148**	P	**Pn**	**10 17 03.5**	**-0.4**
ARG	**Arkhangelos**	**2.32**	**148**	P	**Pn**	**10 17 03.5**	**-0.4**
GDZ	**Gediz**	**2.43**	**68**	*i P*	**Pn**	**10 17 11.3**	**+5.9**
KCT	**Karacabey**	**2.48**	**33**	*e*PN	**Pn**	**10 17 07.1**	**+1.1**
KCT	**Karacabey**	**2.48**	**33**	*e*Pn	**Pn**	**10 17 07.1**	**+1.1**
SART	**Tekirdag**	**2.53**	**10**	*i P*	**Pn**	**10 17 06.5**	**-0.2**
SART				*i* S	**Sn**	**10 17 39.1**	**+1.5**
SART	**Tekirdag**	**2.53**	**10**	*i P*	**Pn**	**10 17 06.5**	**-0.2**
SART				*i* S	**Sn**	**10 17 39.1**	**+1.5**
ALN	**Alexandroupoli**	**2.73**	**351**	P	**Pn**	**10 17 09.6**	**+0.1**
ALN				S	**Sn**	**10 17 42.1**	**-0.4**
ALN	**Alexandroupoli**	**2.73**	**351**	P	**Pn**	**10 17 09.6**	**+0.1**
ALN				S	**Sn**	**10 17 42.1**	**-0.4**
ALT	**Altintas**	**2.89**	**72**	*e*PN	**Pn**	**10 17 10.9**	**-0.7**
ALT	**Altintas**	**2.89**	**72**	*e*Pn	**Pn**	**10 17 10.9**	**-0.7**
RDO	**Rodhopi**	**3.06**	**345**	*e*PN	**Pn**	**10 17 14.1**	**+0.2**
RDO	**Rodhopi**	**3.06**	**345**	P	**Pn**	**10 17 14.0**	**+0.1**
RDO	**Rodhopi**	**3.06**	**345**	P	**Pn**	**10 17 14.0**	**+0.1**

*IDC **09** 10:19:25.0±0.9,13.°17N×125.°41E,h0km,mb3.8/8,*
mb1 3.9/9,mb1mx3.7/23,mbtmp3.9/9,ML3.8/1,MS2.9/4,
Ms1 2.9/4,ms1mx2.5/28,Error ellipse: s-maj=59.0km
s-min=16.3km az=72.0
*NEIC **09** 10:19:26.4±0.6,13.°20N×125.°50E,h10km,Error ellipse:*
s-maj=29.2km s-min=9.8km az=75.0
*ISCJB **09** 10:19:27.1±3.9,13.°20N±0.°06×125.°5E±0.°1,h29km±29km,*
mb3.9/8,MS2.9/3,Error ellipse: s-maj=20.3km
s-min=10.7km az=1.3
*MAN **09** 10:19:34,13.°09N×124.°74E,h33km,mb4.3,ML3.2,MS3.0*
ISC 09 10:19:27.6±2.9,13.°19N±0.°06×125.°5E±0.°1,h18km±17km,
n21,σ0°90/20,mb3.9/8,MS2.9/3,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.04**	**229**	*e*P	**Pb**	**10 19 47.0**	**0.0**
CNP				*e*S	**Sb**	**10 19 55.4**	**-4.9**
PVCP	**Virac**	**1.34**	**288**	*e*P	**Pn**	**10 19 49.1**	**-2.4**
PVCP				*e*S	**Sn**	**10 19 59.4**	**-9.5**
AUQP	**San Andres**	**2.72**	**273**	*e*P	**Pg**	**10 20 20.1**	**+0.2**
GQP	**Guinayangan**	**3.02**	**284**	*e*P	**Pn**	**10 20 17.3**	**+2.6**
RCP	**Roxas**	**3.12**	**239**	*e*P	**Pn**	**10 20 16.5**	**+0.5**
GUIM	**Jordan**	**3.80**	**228**	*e*P	**Pn**	**10 20 24.6**	**-0.7**
BALP	**Baler**	**4.54**	**304**	*e*P	**Pn**	**10 20 35.2**	**-0.4**
JOW	**Kunigami**	**13.82**	**11**	Pn	**Pn**	**10 22 42.5**	**-0.3**
0.9nm,0.3s,baz=148,slow=16,SNR=8.0							
JOW	**Kunigami**	**13.82**	**11**	Pn	**Pn**	**10 22 42.5**	**-0.3**
GUMO	**Guam**	**18.88**	**87**	LR	LR	10 30 03.5	
comp=Z,19nm,20.7s,baz=213,slow=34							
JHJ	**Hachijo jima 2**	**23.75**	**31**	LR	LR	10 33 45.7	
comp=Z,34nm,18.7s,MS2.8,baz=331,slow=36							
KSRS	**Korea Array**	**24.26**	**5**	P	**P**	**10 24 44.5**	**+0.7**
3.9nm,1.0s,mb3.8,baz=185,slow=11,SNR=8.1							
KSRS				LR	LR	10 33 15.6	
comp=Z,30nm,18.3s,MS2.8,baz=225,slow=34							
MJAR	**Matsushiro Arr**	**25.91**	**24**	LR	LR	10 33 33.9	
comp=Z,53nm,20.1s,MS3.1,baz=85,slow=33							
WRA	**Warramunga Arr**	**34.06**	**165**	P	**P**	**10 26 10.2**	**-0.9**
0.3nm,0.6s,mb3.4,baz=346,slow=9.2,SNR=4.2							
ASAR	**Alice Springs**	**37.55**	**167**	P	**P**	**10 26 42.2**	**+1.3**
0.3nm,0.3s,mb3.5,baz=347,slow=6.6,SNR=4.9							
SONM	**Songino Array**	**38.02**	**339**	P	**P**	**10 26 44.2**	**-0.6**
1.5nm,0.8s,mb3.8,baz=160,slow=9.5,SNR=6.2							
STKA	**Stephens Creek**	**47.40**	**161**	P	**P**	**10 28 00.7**	**-0.3**
2.0nm,0.8s,mb4.1,baz=346,slow=4.5,SNR=5.9							
MK31	**Makanchi Array**	**49.25**	**322**	*e*P	**P**	**10 28 15.5**	**+0.3**
MKAR	**Makanchi Array**	**49.25**	**322**	P	**P**	**10 28 15.4**	**+0.2**
1.4nm,0.7s,mb4.1,baz=112,slow=8.2,SNR=8.0							
KURK	**Kurchatov**	**53.24**	**325**	P	**P**	**10 28 45.0**	**0.0**
2.1nm,0.7s,mb4.2,baz=121,slow=7.5,SNR=15							
BVAR	**Borovoye Array**	**58.84**	**325**	P	**P**	**10 29 25.2**	**+0.2**
0.6nm,0.4s,mb3.9,baz=120,slow=8.5,SNR=3.1							

MAN 09 10:21:45,12.°72N×123.°60E,h6km,mb4.5,ML3.3,MS3.2,
1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.36**	**176**	*e*P	Pg	10 21 53.2	+1.2
MMPH				*e*S	Sg	10 22 00.1	+3.4
PVCP	**Virac**	**1.03**	**32**	*e*P	Pg	10 22 04.3	-0.4
PVCP				*e*S	Sg	10 22 15.2	-2.9
CNP	**Catarman**	**1.06**	**101**	*e*P	Pg	10 22 06.2	+0.8
CNP				*e*S	Sg	10 22 18.4	-0.8
AUQP	**San Andres**	**1.08**	**304**	*e*P	Pg	10 22 07.3	+1.5
AUQP				*e*S	Sg	10 22 20.4	+0.5
RCP	**Roxas**	**1.42**	**216**	*e*P	Pn	10 22 11.3	-0.1
RCP				*e*S	Sb	10 22 30.9	+0.6
OTRP	**Odiongan**	**1.58**	**257**	*e*P	Pn	10 22 14.2	+0.7
GQP	**Guinayangan**	**1.63**	**317**	*e*P	Pn	10 22 13.4	-0.8
GQP				*e*S	Sn	10 22 34.9	-0.6
BOAC	**Boac**	**1.86**	**294**	*e*P	Pn	10 22 15.9	-1.5
GUIM	**Jordan**	**2.30**	**206**	*e*P	Pn	10 22 28.3	+4.8

*ISK **09** 11:19:30.1,37.°87N×26.°76E,h9km,MD2.8*
*ISCJB **09** 11:19:32.6±0.7,38.°19N±0.°03×26.°54E±0.°06,h11km±4km,*
Error ellipse: s-maj=8.2km s-min=4.7km az=174.7
*CSEM **09** 11:19:32.9±0.3,38.°20N×26.°59E,h10km,MD3.0,Error*
ellipse: s-maj=8.1km s-min=5.6km az=85.0
*ATH **09** 11:19:32.7,38.°15N×26.°83E,h44km,MD3.0/3*
*DDA **09** 11:19:33.6,38.°26N×26.°72E,h6km±5km,Md3.0*
ISC 09 11:19:33.0±0.7,38.°19N±0.°03×26.°55E±0.°06,h13km±4km,
n24,σ0°88/40,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**11**	*i P*	**Pg**	**11 19 36.8**	**-0.3**
URLA				*i* S	**Sg**	**11 19 39.9**	**0.0**
URLA	**Izmir**	**0.18**	**11**	*i P*	**Pg**	**11 19 36.8**	**-0.3**
URLA				*i* S	**Sg**	**11 19 39.9**	**0.0**
SMG	**Samos**	**0.53**	**155**	*e*P	**Pg**	**11 19 43.4**	**0.0**
SMG				*e*S	**Sg**	**11 19 51.4**	**+1.0**
SMG	**Samos**	**0.53**	**155**	*e*P	**Pg**	**11 19 43.4**	**0.0**
SMG				*e*S	**Sg**	**11 19 51.4**	**+1.0**
IZM	**Izmir**	**0.60**	**69**	*e*PG	**Pg**	**11 19 43.5**	**-1.2**
IZM				*e*SG	**Sg**	**11 19 53.0**	**+0.4**
GCAM	**G?zelcaml?**	**0.72**	**132**	*i P*	**Pg**	**11 19 46.8**	**-0.3**
GCAM				*i* S	**Sg**	**11 19 56.6**	**-0.1**
GCAM	**G?zelcaml?**	**0.72**	**132**	*i P*	**Pg**	**11 19 46.8**	**-0.3**
GCAM				*i* S	**Sg**	**11 19 56.6**	**0.0**
PRK	**Paraskevi**	**1.08**	**348**	*e*P	**Pg**	**11 19 53.9**	**0.0**
PRK	**Paraskevi**	**1.08**	**348**	*e*P	**Pg**	**11 19 53.9**	**0.0**
AYVA	**Ayvalik**	**1.12**	**5**	*i P*	**Pg**	**11 19 54.4**	**-0.3**
AYVA				*i* S	**Sg**	**11 20 10.4**	**+1.0**
AYVA	**Ayvalik**	**1.12**	**5**	*i P*	**Pg**	**11 19 54.4**	**-0.3**
AYVA				*i* S	**Sg**	**11 20 10.4**	**+1.0**
AKS	**Akhisar**	**1.21**	**55**	*e*PN	**Pn**	**11 19 55.0**	**-0.6**
AKS	**Akhisar**	**1.21**	**55**	*e*Pn	**Pn**	**11 19 55.0**	**-0.6**
AKHS	**Akhisar**	**1.21**	**55**	*i P*	**Pn**	**11 19 53.9**	**-1.7**
AKHS				*i* S	**Sb**	**11 20 11.9**	**+0.7**
AKHS	**Akhisar**	**1.21**	**55**	*i P*	**Pn**	**11 19 53.9**	**-1.7**
AKHS				*i* S	**Sb**	**11 20 11.9**	**+0.7**
BODT	**Bodrum**	**1.27**	**152**	*e*PG	**Pn**	**11 19 48.0**	**-8.5**
BODT				*e*SG	**Sn**	**11 20 01.4**	**-12**
APE	**Apeiranthos**	**1.38**	**216**	*e*P	**Pn**	**11 19 58.4**	**+0.4**
APE	**Apeiranthos**	**1.38**	**216**	*e*P	**Pn**	**11 19 58.4**	**+0.4**
MANT	**Manisa**	**1.60**	**79**	*i P*	**Pn**	**11 20 03.5**	**+2.4**
MANT				*i* S	**Sn**	**11 20 21.7**	**+0.1**
MANT	**Manisa**	**1.60**	**79**	*i P*	**Pn**	**11 20 03.5**	**+2.4**
MANT				*i* S	**Sn**	**11 20 21.7**	**+0.1**
KULA	**Kula-Manisa**	**1.69**	**78**	*e*PN	**Pn**	**11 20 00.4**	**-1.8**
KULA	**Kula-Manisa**	**1.69**	**78**	*e*Pn	**Pn**	**11 20 00.4**	**-1.8**
BALY	**Balya**	**1.76**	**28**	*i P*	**Pn**	**11 20 03.0**	**-0.2**
BALY				*i* S	**Sn**	**11 20 26.2**	**+0.7**
BALY	**Balya**	**1.76**	**28**	*i P*	**Pn**	**11 20 03.0**	**-0.2**
BALY				*i* S	**Sn**	**11 20 26.2**	**+0.8**

*IDC **09** 11:29:34.0±51.0,16.°40S×176.°99E,h0km,mb3.6/3,*
mb1 3.8/3,mb1mx3.6/15,mbtmp3.6/3,Error ellipse:
s-maj=906.5km s-min=147.7km az=75.0
*NOU **09** 11:30:50.7±0.3,20.°05S×168.°60E,h30km,MD2.6,ML3.3*
ISC 09 11:30:51.3±7.0,20.°2S±0.°2×168.°3E±0.°6,h4km±61km,n6,
σ1°21/7,mb3.6/3,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.35**	**214**	*e*S	**Sn**	**11 31 59.2**	**-0.7**
DZM	**Mont Dzumac**	**2.54**	**223**	*e*P	**Pn**	**11 31 33.1**	**-0.2**
DZM				*e*S	**Sn**	**11 32 04.3**	**-0.3**
DZM				AMP		11 32 17.6	
comp=Z,1μm,1.7s							
NOUC	**Port Laguerre**	**2.65**	**224**	*e*S	**Sn**	**11 32 08.4**	**+0.9**
NOUC				AMP		11 32 21.3	
comp=Z,56nm,4.5s							
STKA	**Stephens Creek**	**26.59**	**239**	P	**P**	**11 36 32.3**	**+1.7**
comp=Z,0.8nm,0.5s,mb3.5,baz=84,slow=9.2,SNR=3.3							
WRA	**Warramunga Arr**	**31.87**	**265**	P	**P**	**11 37 16.8**	**-1.0**
comp=Z,0.7nm,1.0s,mb3.4,baz=89,slow=8.4,SNR=7.7							
ASAR	**Alice Springs**	**32.05**	**257**	P	**P**	**11 37 18.9**	**-0.3**
comp=Z,1.1nm,0.7s,mb3.8,baz=85,slow=9.0,SNR=15							

KRSC 09 11:32:26.0±2.1,49.°56N×156.°70E,h10km±10km,ML3.5,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.50**	**331**	*e*P	Pn	11 32 51.9	-1.1
MIPR	**Malaya Ipel'ka**	**2.72**	**1**	P	Pn	11 33 10.9	+1.2
RUS	**Russkaya**	**3.10**	**21**	*e*P	Pn	11 33 16.9	+2.0
RUS				*e*S	Sn	11 33 54.0	+2.1
PET	**Petropavlovsk**	**3.68**	**19**	S	Sn	11 34 09.8	+3.6
SDLR	**Sedlovina**	**3.97**	**19**	P	Pn	11 33 29.3	+2.5
SPN	**Mys Shipunski**	**4.11**	**29**	S	Sn	11 34 17.9	+1.0
GNL	**Ganaly**	**4.21**	**10**	P	Pn	11 33 33.9	+3.7
KBTR	**Krutoberegovo**	**7.62**	**27**	P	Pn	11 34 20.3	+3.4

*NIED **09** 11:39:00,43.°00N×140.°60E,h170km,Mw4.1 Best*
double couple: M0=1.49000×10^15 NP1:φs=229.00000°,
δ76.00000°,λ61.00000°. NP2:φs=117.00000°,δ32.00000°,
λ154.00000°.
*ISCJB **09** 11:39:32.5±0.2,43.°00N±0.°03×140.°63E±0.°05,*
h165km±2km,mb4.1/25,Error ellipse: s-maj=6.3km
s-min=4.3km az=40.4
*BJI **09** 11:39:32.9,43.°10N×140.°79E,h184km,mB4.6/3,mb4.3/5*
*MOS **09** 11:39:32.0±1.4,43.°07N×140.°54E,h161km,mb4.4/4,Error*
ellipse: s-maj=14.2km s-min=8.1km az=100.4
*IDC **09** 11:39:33.7±0.9,42.°98N×140.°64E,h161km±8km,mb3.9/19,*
mb1 3.9/21,mb1mx3.8/29,mbtmp3.8/21,Error ellipse:
s-maj=11.6km s-min=11.0km az=119.0
*JMA **09** 11:39:33.9±0.1,43.°00N×140.°64E,h157km±1km,M3.6*
*NEIC **09** 11:39:33.6±0.6,43.°02N×140.°62E,h158km±6km,mb4.4/5,*
Error ellipse: s-maj=8.5km s-min=6.7km az=113.0
ISC 09 11:39:33.6±0.2,42.°99N±0.°03×140.°64E±0.°05,h161km±2km,
n72,σ0°88/90,mb4.1/25,1D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.38**	**342**	P	**Pn**	**11 39 55.7**	**+0.1**
JSK				*e*S	**Sn**	**11 40 12.2**	**-0.4**
JSH	**Shimam**	**0.56**	**232**	P	**Pn**	**11 39 56.7**	**+0.3**
JSH				*e*S	**Sn**	**11 40 13.5**	**-0.3**
JNB	**Noboribetsu**	**0.60**	**151**	P	**Pn**	**11 39 56.6**	**-0.1**
JNB				*e*S	**Sn**	**11 40 14.2**	**0.0**
JEW	**Eniwo**	**0.61**	**104**	P	**Pn**	**11 39 57.2**	**+0.5**
JEW				*e*S	**Sn**	**11 40 15.1**	**+0.8**
JYM2	**Yakumo 2**	**0.90**	**193**	P	**Pn**	**11 39 58.7**	**+0.1**
JYM2				*e*S	**Sn**	**11 40 17.3**	**-0.3**
JHR	**Hokuryu**	**1.09**	**46**	P	**Pn**	**11 40 00.8**	**+0.7**
JHR				*e*S	**Sn**	**11 40 21.1**	**+0.7**
JKB	**Kayabe**	**1.14**	**165**	P	**Pn**	**11 40 00.6**	**0.0**
JKB				*e*S	**Sn**	**11 40 21.0**	**-0.2**
JOSM	**Okushiri--Mats**	**1.25**	**224**	P	**Pn**	**11 40 01.7**	**+0.1**
JOSM				*e*S	**Sn**	**11 40 22.6**	**-0.3**
JAB	**Ashibetsu**	**1.27**	**66**	P	**Pn**	**11 40 02.4**	**+0.8**
JAB				*e*S	**Sn**	**11 40 24.0**	**+0.8**
JBT2	**Biratori 2**	**1.28**	**99**	P	**Pn**	**11 40 01.8**	**0.0**
JBT2				*e*S	**Sn**	**11 40 23.4**	**0.0**
JFR	**Furan**	**1.44**	**82**	P	**Pn**	**11 40 03.3**	**0.0**
JFR				*e*S	**Sn**	**11 40 25.8**	**-0.4**
JSR	**Shiriuchi**	**1.47**	**187**	P	**Pn**	**11 40 03.8**	**+0.1**
JYG	**Yagishiri**	**1.54**	**21**	P	**Pn**	**11 40 04.4**	**0.0**
JOT	**Ohata**	**1.64**	**169**	P	**Pn**	**11 40 05.1**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.71**	**114**	P	**Pn**	**11 40 05.7**	**-0.5**
JKK2	**Kamakawa 2**	**

FINES	FINESS Array B	63.30	331	P	P	11 49 44.3	-0.5
	comp=Z,5.1nm,0.4s,mb4.7,baz=54,slow=7.2,SNR=46						
ASAR	Alice Springs	66.61	187	P	P	11 50 07.1	+0.5
	comp=Z,1.1nm,0.8s,mb3.8,baz=8.5,slow=6.5,SNR=19						
NB2	NORSAR Subarra	68.49	336	P	P	11 50 17.1	-0.8
	comp=Z,1.4nm,0.6s,mb3.9,baz=36,slow=6.5						
NOA	NORSAR Array B	68.49	336	P	P	11 50 17.7	-0.3
	comp=Z,1.2nm,0.5s,mb3.9,baz=37,slow=6.3,SNR=7.7						
NOA	NORSAR Array B	68.49	336	P	P	11 50 17.7	-0.3
AKASG	Malin Array Be	69.27	321	P	P	11 50 22.6	-0.4
	comp=Z,2.0nm,0.4s,mb4.2,baz=43,slow=6.4,SNR=7.6						
DLMT	Dillon	70.57	46	eP	P	11 50 32.1	+1.1
	comp=Z,1.5nm,0.6s,mb3.9						
NVAR	Mina Array Bea	71.94	54	P	P	11 50 40.5	+1.1
	comp=Z,1.3nm,0.6s,mb3.8,baz=293,slow=6.3,SNR=11						
BUR08	Bucovina Ar. S	73.30	320	eP	P	11 50 47.8	+0.6
HWUT	Hardware Ranch	73.66	48	eP	P	11 50 50.9	+1.5
	comp=Z,3.1nm,0.4s,mb4.4						
PDAR	Pinedale Array	73.94	46	P	P	11 50 51.6	+0.6
	comp=Z,1.7nm,0.7s,mb3.9,baz=300,slow=2.0,SNR=17						
STKA	Stephens Creek	74.51	179	P	P	11 50 55.1	+0.9
	comp=Z,1.6nm,0.7s,mb3.8,baz=300,slow=9.6,SNR=4.7						
ULM	Lac du Bonnet	74.87	34	P	P	11 50 56.0	-0.2
	comp=Z,1.3nm,0.5s,mb3.8,baz=342,slow=7.2,SNR=5.4						
TXAR	Lajitas Array	86.94	52	P	P	11 52 01.0	+0.4
	comp=Z,0.2nm,0.5s,mb3.2,baz=281,slow=2.0,SNR=5.1						
VNA2	Neumayer--Watz	147.81	199	e	PKPbc	11 58 58.8	+0.6
VNA3	Neumayer Olymp	148.11	198	e	PKPbc	11 58 59.3	+0.3

*IDC **09** 11:44:22.1±0.7, 37.°40N×86.°81E, h0km, mb3.8/11, mb1 3.9/16, mb1mx3.8/30, mbtmp3.8/16, ML3.4/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/32, Error ellipse: s-maj=27.1km s-min=14.3km az=52.0*

*NEIC **09** 11:44:23.7±0.6, 37.°62N×87.°10E, h10km, mb4.3/2, Error ellipse: s-maj=17.0km s-min=9.5km az=54.0*

*ISCJB **09** 11:44:25.2±0.6, 37.°82N±0.°06×86.°68E±0.°06, h10km, mb3.7/12, Error ellipse: s-maj=9.7km s-min=5.7km az=29.5*

*BJI **09** 11:44:26.1, 37.°65N×86.°64E, h24km, mB4.5/5, mb4.4/5, ML4.3/9, Ms3.8/5, Ms7 3.6/4*

ISC 09 11:44:26.5±0.6, 37.°73N±0.°06×86.°69E±0.°06, h10km, n36, σ1°22/44, mb3.7/12, 2C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	6.13	7	Pn	Pn	11 45 59.2	+2.1
WMQ				smax			
	comp=N,130nm,0.8s						
WMQ				smax			
	comp=E,130nm,0.8s						
KSH	Kashi	8.58	285	P	Pn	11 46 35.4	+4.7
KSH				smax			
	comp=N,63nm,0.9s						
KSH				smax			
	comp=E,72nm,1.0s						
KSH	Kashi	8.58	285	Pn	Pn	11 46 34.7	+4.0
KSH				Sn	Sn	11 48 07.9	+0.4
MK31	Makanchi Array	9.62	342	⇑P	Pn	11 46 45.9	+0.9
	comp=E,5.1nm,0.3s,baz=169,slow=14,SNR=203						
MK31				⇑S	Sn	11 48 32.0	-1.1
	comp=E,12nm,0.6s,baz=163,slow=23,SNR=7.7						
MK31	Makanchi Array	9.62	342	ePn	Pn	11 46 45.7	+0.7
MK31				eSn	Sn	11 48 34.2	+1.1
MKAR	Makanchi Array	9.62	342	Pn	Pn	11 46 45.7	+0.7
	comp=E,5.6nm,0.3s,baz=162,slow=14,SNR=132						
MKAR				Sn	Sn	11 48 33.4	+0.3
	comp=E,2.3nm,0.3s,baz=165,slow=22,SNR=7.2						
MKAR				Lg		11 49 46.6	
	baz=160,slow=26,SNR=2.0						
MKAR	Makanchi Array	9.62	342	Pn	Pn	11 46 45.7	+0.7
MKAR				Sn	Sn	11 48 33.4	+0.3
MKAR				Lg		11 49 46.6	
TKM2	Tokmak 2	9.93	305	ePn	Pn	11 46 51.9	+2.7
	comp=E,13nm,0.5s						
UCH	Uchtor	10.37	299	ePn	Pn	11 46 59.4	+4.2
	comp=E,8.4nm,0.9s						
GTA	Gaotai	10.41	77	eP	Pn	11 47 00.9	+5.0
GTA				pP		11 47 05.2	
GTA				sP		11 47 07.9	
GTA				S	Sn	11 49 04.6	+12
GTA				sS		11 49 10.6	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,34nm,5.1s						
GTA				LR	LR		
	comp=N,390nm,10.2s						
GTA				LR	LR		
	comp=E,180nm,10.5s						
GTA				LR	LR		
	comp=Z,110nm,11.4s						
AAK	Ala-Archa	10.53	301	Pn	Pn	11 46 58.9	+1.4
	comp=Z,0.0nm,0.3s,baz=129,slow=14,SNR=2.4						
AAK				Lg		11 50 15.5	
	comp=Z,0.0nm,0.3s,baz=255,slow=19,SNR=2.5						
AAK				LR	LR	11 51 53.2	
	comp=Z,74nm,19.2s,baz=64,slow=42						
LZH	Lanzhou	13.83	92	eP	Pn	11 47 52.5	+10
LZH				pP		11 47 58.0	
LZH				sP		11 48 01.2	
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
KURK	Kurchatov	14.20	339	Pn	Pn	11 47 44.9	-2.6
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=14						
KURK	Kurchatov	14.20	339	Pn	Pn	11 47 44.9	-2.6
CD2	Chengdu	15.65	111	P	Pn	11 48 08.9	+1.8
CD2				pP	pP	11 48 16.5	+2.4
CD2				sP	sP	11 48 21.1	+5.7
CD2				S	Sn	11 51 00.8	+0.3
CD2				sS	sS	11 51 12.9	-7.3
CD2				SS		11 51 19.4	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,100nm,4.9s						
CD2				LR	LR		
	comp=N,220nm,10.1s						
CD2				LR	LR		
	comp=Z,190nm,9.5s						
ZAA0	Zalesovo Array	16.27	356	ePn	Pn	11 48 13.4	-1.5
ZALV	Zalesovo Beam	16.27	356	Pn	Pn	11 48 12.5	-2.5
	comp=Z,1.0nm,0.3s,baz=175,slow=14,SNR=18						
ZALV				Sn	Sn	11 51 06.7	-8.6
	comp=Z,0.2nm,0.3s,baz=183,slow=16,SNR=3.3						
ZALV				LR	LR	11 55 28.7	
	comp=Z,30nm,21.3s,baz=258,slow=40						
SONM	Songino Array	17.59	49	P	Pn	11 48 31.9	+0.2
	comp=Z,0.1nm,0.3s,baz=224,slow=14,SNR=3.4						
SONM				Lg		11 53 50.2	
	comp=Z,0.2nm,0.3s,baz=204,slow=32,SNR=3.1						
BVAR	Borovoye Array	19.03	329	P	Pn	11 48 49.7	+0.5
	comp=Z,0.4nm,0.3s,baz=141,slow=13,SNR=7.7						
BVAR				LR	LR	11 57 04.6	
	comp=Z,89nm,18.8s,baz=339,slow=39						
BVAR	Borovoye Array	19.03	329	P	Pn	11 48 49.7	+0.5
BVAR				LR	LR	11 57 04.6	
BRVK	Borovoye	19.10	329	eP	Pn	11 48 50.7	+0.7
	comp=Z,22nm,0.8s						
CMAR	Chiang Mai Arr	22.00	147	P	P	11 49 15.1	-5.8
	comp=Z,0.4nm,0.4s,mb3.2,baz=347,slow=11,SNR=5.7						
ABKAR	Akbulak array	22.44	309	eP	P	11 49 25.3	-0.1
	comp=Z,3.7nm,0.6s,mb4.0						
AKTK	Aktyubinsk	24.03	311	P	P	11 49 41.5	+0.1
AKTO	Aktyubinsk	24.03	311	P	P	11 49 41.5	+0.1
	comp=Z,2.9nm,0.7s,mb3.9,baz=92,slow=9.0,SNR=7.0						
BRTR	Keskin Array B	40.93	290	P	P	11 52 08.0	-1.1
	comp=Z,1.0nm,0.5s,mb3.7,baz=81,slow=7.9,SNR=5.6						
FINES	FINESS Array B	43.83	323	P	P	11 52 32.2	-0.1
	comp=Z,0.5nm,0.6s,mb3.5,baz=78,slow=7.7,SNR=2.4						
ARCES	ARCESS Array B	45.18	334	P	P	11 52 42.9	-0.2
	comp=Z,2.7nm,0.9s,mb4.1,baz=96,slow=9.2,SNR=3.4						
NB2	NORSAR Subarra	51.02	323	P	P	11 53 27.3	-1.0
	comp=Z,1.1nm,0.7s,mb3.9,baz=81,slow=7.4						
NOA	NORSAR Array B	51.02	323	P	P	11 53 27.6	-0.7
	comp=Z,1.0nm,0.8s,mb3.8,baz=81,slow=7.3,SNR=4.0						
INK	Inuvik	70.09	15	P	P	11 55 37.9	-0.4
	comp=Z,1.3nm,0.9s,mb3.9,baz=353,slow=6.4,SNR=2.6						
INK	Inuvik	70.09	15	P	P	11 55 37.9	-0.4
WRA	Warramunga Arr	72.79	133	P	P	11 55 50.3	-5.0
	comp=Z,0.6nm,0.7s,mb3.6,baz=328,slow=5.9,SNR=6.9						
ASAR	Alice Springs	75.49	136	P	P	11 56 06.5	-4.5
	comp=Z,0.7nm,0.8s,mb3.6,baz=334,slow=5.5,SNR=8.6						
TORD	Torodi Ar. Bea	78.17	277	P	P	11 56 24.4	-2.0
	comp=Z,2.5nm,0.8s,mb4.2,baz=47,slow=4.6,SNR=14						
YKA	Yellowknife Ar	78.65	10	P	P	11 56 26.6	-1.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.4,SNR=2.6						

MAN 09 11:46:35, 17.°55N×120.°43E, h1km, mb4.4, ML3.2, MS3.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.28	71	eP	Pg	11 46 41.4	+0.9
ABRA				eS	Sg	11 46 45.0	+0.8
PIP	Pasuquin	0.79	13	⇑iP	Pg	11 46 49.5	-0.6
APYP	Conner	0.83	68	eP	Pg	11 46 50.0	-1.0
APYP				eS	Sg	11 46 59.7	-2.1
BOLP	Bolinao	1.27	203	eP	Pg	11 47 00.1	+0.8
CVP	Callao Caves	1.34	83	eP	Pg	11 46 59.1	-1.5
CVP				eS	Sg	11 47 18.8	+0.9
CAUP	Cauayan	1.46	114	eP	Pn	11 47 04.0	+1.4
SGCP	Mt. Cagua	1.68	66	eP	Pn	11 47 09.1	+3.5
SCZP	Santa Cruz	1.84	196	eP	Sg	11 47 38.8	+4.7
PALP	Palanan	1.97	104	eP	Pn	11 47 07.3	-2.2
BALP	Baler	2.11	148	eP	Pn	11 47 12.9	+1.4
BBP	Basco	3.22	27	eP	Pn	11 47 29.1	+2.5

*NEIC **09** 11:50:19.8±2.3, 20.°54S×177.°69W, h458km±21km, Error ellipse: s-maj=77.8km s-min=13.4km az=153.0*

*IDC **09** 11:50:20.1±3.3, 20.°50S×177.°70W, h463km±34km, mb3.4/7, mb1 3.6/8, mb1mx3.4/17, mbtmp3.4/8, Error ellipse: s-maj=78.9km s-min=14.7km az=153.0*

ISC 09 11:50:20.0±2.2, 20.°4S±0.°4×177.°8W±0.°2, h459km±25km, n16, σ0°63/17, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.67	42	P	P	11 52 22.9	0.0
	2.7nm,0.3s,baz=212,slow=18,SNR=6.1						
AFI				S	S	11 53 57.0	-6.9
	13nm,0.3s,baz=195,slow=22,SNR=15						
CTA	Charters Tower	33.69	264	eP	P	11 56 22.6	+0.9
	5.3nm,0.4s,mb4.3						
CTA	Charters Tower	33.69	264	P	P	11 56 22.7	+1.0
	5.8nm,0.4s,mb4.4,baz=90,slow=9.9,SNR=20						
STKA	Stephens Creek	37.99	244	eP	P	11 56 58.4	+1.0
	1.7nm,0.5s,mb3.7						
STKA	Stephens Creek	37.99	244	P	P	11 56 58.0	+0.7
	2.4nm,0.5s,mb3.9,baz=91,slow=10,SNR=9.6						
BBOO	Buckleboo	42.74	243	eP	P	11 57 35.8	+0.1
	4.4nm,0.4s,mb4.2						
ASAR	Alice Springs	44.72	257	P	P	11 57 51.5	+0.3
	9.2nm,0.7s,mb4.3,baz=88,slow=8.6,SNR=188						
ASAR				PcP	PcP	11 59 23.1	-1.0
	0.7nm,0.7s,baz=97,slow=4.1,SNR=4.2						
WRA	Warramunga Arr	44.80	262	P	P	11 57 51.4	-0.5
	2.3nm,0.4s,mb4.0,baz=98,slow=8.0,SNR=112						
KAKA	Kakadu	48.16	271	eP	P	11 58 16.3	-1.3
	1.6nm,0.2s,mb4.0						
FORT	Forrest	49.49	247	eP	P	11 58 26.9	-0.4
	8.7nm,0.5s,mb4.3						
KNA	Kununurra	50.83	266	eP	P	11 58 37.1	-0.3
	3.8nm,0.4s,mb4.1						
FITZ	Fitzroy Crossi	53.23	262	eP	P	11 58 54.8	+0.1
	5.4nm,0.6s,mb4.0						
MORW	Morawa	60.03	248	eP	P	11 59 40.8	-0.8
NVAR	Mina Array Bea	80.85	43	P	P	12 01 45.1	+0.1
	0.4nm,0.6s,mb3.1,baz=231,slow=12,SNR=3.3						
TXAR	Lajitas Array	86.86	57	P	P	12 02 15.1	-0.1
	0.2nm,0.7s,mb3.0,baz=236,slow=4.2,SNR=3.7						
CMAR	Chiang Mai Arr	90.28	289	P	P	12 02 32.4	+1.0
	0.9nm,0.6s,mb3.8,baz=134,slow=3.1,SNR=5.6						

*ISCJB **09** 11:52:56.4±3.0, 48.°4N±0.°3×155.°0E±0.°4, h47km±31km, mb3.4/4, Error ellipse: s-maj=66.0km s-min=13.8km az=135.9*

*MOS **09** 11:52:56.6±1.5, 48.°30N×155.°08E, h47km, mb4.3/1, Error ellipse: s-maj=43.8km s-min=16.6km az=64.6*

*IDC **09** 11:53:00.0±4.0, 48.°48N×155.°00E, h65km±40km, mb3.2/4, mb1 3.6/6, mb1mx3.2/26, mbtmp3.4/6, ML3.6/2, Error ellipse: s-maj=62.1km s-min=22.4km az=139.0*

ISC 09 11:52:58.4±2.4, 48.°4N±0.°3×155.°1E±0.°4, h49km±25km, n11, σ0°92/11, mb3.4/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.35	16	ePN	Pn	11 53 33.6	-0.8
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PETK	Petropavlovsk-	4.96	18	ePN	Pn	11 54 14.2	+4.0
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	4.96	18	P	Pn	11 54 10.9	+0.7
	comp=Z,0.7nm,0.3s,baz=167,slow=12,SNR=14						
ASAJ	Asahikawa	9.68	248	PN	Pn	11 55 16.6	+1.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	9.68	248	P	Pn	11 55 16.6	+1.8
	comp=Z,1.0nm,0.3s,baz=92,slow=16,SNR=9.3						
ERM	Erimo	10.59	237	iPN	Pn	11 55 26.1	-1.2
CMAR	Chiang Mai Arr	54.07	257	P	P	12 02 17.5	-0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	54.07	257	P	P	12 02 17.4	-0.6
	comp=Z,1.1nm,0.7s,mb3.9,baz=37,slow=7.1,SNR=5.3						
WRA	Warramunga Arr	70.55	201	P	P	12 04 07.9	-0.2
	comp=Z,0.1nm,0.4s,mb3.1,baz=16,slow=6.4,SNR=4.7						
ASAR	Alice Springs	74.24	200	P	P	12 04 30.0	0.0
	comp=Z,0.2nm,0.5s,mb3.3,baz=11,slow=4.9,SNR=6.9						
TXAR	Lajitas Array	75.50	62	P	P	12 04 38.1	+0.6
	comp=Z,0.2nm,0.5s,mb3.3,baz=303,slow=6.1,SNR=5.6						

KRSC 09 11:57:42.8±0.5, 53.°01N×160.°39E, h32km±21km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.24	292	iP	Pb	11 57 50.3	+0.6
SPN				iS	Sb	11 57 55.3	+1.0
NLC	Nalytchevo	0.65	285	iP	Pb	11 57 55.6	-0.1
NLC				iS	Sb	11 58 04.6	+0.1
SDLR	Sedlovina	0.95	287	iP	Pn	11 58 00.2	+0.4
SDLR				iS	Sn	11 58 12.6	+0.4
PET	Petropavlovsk	1.05	271	iP	Pn	11 58 01.3	+0.1
PET				iS	Sn	11 58 14.3	-0.4
KII	Karymskiy	1.17	332	iP	Pn	11 58 03.6	+0.7
KII				iS	Sn	11 58 18.5	+0.7
RUS	Russkaya	1.28	244	iP	Pn	11 58 04.4	0.0
RUS				iS	Sn	11 58 20.2	-0.2
GRL	Gorelyy	1.48	253	P	Pn	11 58 08.4	+1.3
GNL	Ganaly	1.62	296	iP	Pn	11 58 10.7	+1.6
GNL				iS	Sn	11 58 31.3	+2.5
MKZ	Mys Kozlova	1.74	27	iP	Pn	11 58 10.1	-0.6
MKZ				iS	Sn	11 58 29.9	-1.9
MIPR	Malaya Ipel'ka	2.33	253	P	Pn	11 58 20.0	+1.1
KMNR	Kamenistaya	2.75	358	eP	Pn	11 58 26.9	+2.3
BZGR	Bezymyannyi-Gr	2.94	3	P	Pn	11 58 30.2	+3.0
BZGR				iS	Sn	11 59 03.7	+2.3
KPT	Kopyto	2.96	358	P	Pn	11 58 29.4	+1.9
ZLN	Zelenaya	3.02	4	eP	Pn	11 58 31.1	+2.8
ZLN				eS	Sn	11 59 07.0	+3.6
SRDR	Sredinnyy	3.34	354	P	Pn	11 58 33.7	+1.0
KBTR	Krutoberegovo	3.50	23	eP	Pn	11 58 36.7	+1.8
KBTR				eS	Sn	11 59 17.3	+2.1
SRKR	Sorokina	3.68	7	P	Pn	11 58 39.7	+2.3
SRKR				iS	Sn	11 59 20.8	+1.2

*IDC **09** 12:01:47.3±0.7, 50.°08N×179.°05W, h0km, mb4.0/18, mb1 4.2/19, mb1mx4.0/31, mbtmp4.0/19, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/24, Error ellipse: s-maj=22.1km s-min=15.5km az=162.0*

*ISCJB **09** 12:01:50.6±0.6, 50.°17N±0.°08×179.°00W±0.°06, h33km, mb4.0/20, MS3.1/3, Error ellipse: s-maj=11.5km s-min=5.3km az=166.2*

*NEIC **09** 12:01:53.5, 50.°20N×178.°97W, h21km, mb4.0/1, ML4.0(AEIC), After AEIC.*

ISC 09 12:01:52.7±0.6, 50.°15N±0.°08×179.°00W±0.°06, h35km, n34, σ0°56/36, mb4.0/20, MS3.1/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	2.69	42	ePn	Pn	12 02 34.3	+0.9
GSTR				eSn	Sn	12 03 04.7	0.0
ATKA	Atka Island	3.66	54	P	Pn	12 02 46.4	-0.4
ATKA				S	Sn	12 03 28.2	-0.4
SMY	Shemya	5.04	304	P	Pn	12 03 05.4	-0.2
SMY				S	Sn	12 04 02.0	-0.5
NIKO	Nikolski	6.93	62	P	Pn	12 03 31.2	-0.4
OKFG	Magazine Ridge	7.61	60	P	Pn	12 03 41.2	+0.2
UNV	Unalaska Valle	8.55	60	P	Pn	12 03 54.2	+0.3
SPIA	Saint Paul Isl	8.75	33	P	Pn	12 03 56.8	+0.2
KDAK	Kodiak Island	17.23	54	P	Pn	12 05 49.1	-1.2
	0.6nm,0.3s,baz=294,slow=20,SNR=3.8						
BILL	Bilibino	19.37	343	eP	Pn	12 06 16.3	-0.1
	12nm,1.1s						
INK	Inuvik	28.55	34	P	P	12 07 44.4	-0.3
	0.3nm,0.4s,mb3.3,baz=256,slow=7.5,SNR=6.0						
INK				PcP	PcP	12 10 55.5	+0.4
	0.6nm,0.8s,baz=245,slow=5.3,SNR=3.7						
INK				LR	LR	12 18 51.1	
	comp=Z,27nm,19.2s,MS2.9,baz=298,slow=36						
DLBC	Dease Lake	29.16	55	LR	LR	12 19 06.4	
	comp=Z,46nm,18.9s,MS3.1,baz=125,slow=36						
YKA	Yellowknife Ar	36.18	45	P	P	12 08 52.7	+1.3
	1.6nm,0.8s,mb4.0,baz=280,slow=8.3,SNR=14						
YKA				PcP	PcP	12 11 16.9	+0.8
	0.3nm,0.6s,baz=288,slow=3.5,SNR=4.7						
YKA	Yellowknife Ar	36.18	45	P	P	12 08 52.7	+1.3
YKA				PcP	PcP	12 11 16.9	+0.8
KSRS	Korea Array	39.55	272	P	P	12 09 21.1	+1.1
	2.0nm,0.8s,mb3.9,baz=62,slow=8.2,SNR=5.2						
PDAR	Pinedale Array	46.82	71	P	P	12 10 18.6	-0.1
	0.5nm,0.6s,mb3.6,baz=290,slow=7.4,SNR=3.6						
PDAR	Pinedale Array	46.82	71	P	P	12 10 18.6	-0.1
SONM	Songino Array	47.10	298	P	P	12 10 21.6	+0.8
	0.2nm,0.3s,mb3.5,baz=79,slow=7.7,SNR=3.9						
SPITS	Spitsbergen Ar	51.60	356	P	P	12 10 55.2	+0.3
	6.4nm,0.8s,mb4.6,baz=63,slow=9.6,SNR=4.5						
TXAR	Lajitas Array	58.98	80	P	P	12 11 48.9	+0.3
	0.4nm,0.7s,mb3.5,baz=298,slow=5.2,SNR=6.7						
TXAR				PcP	PcP	12 12 38.6	+1.2
	0.5nm,0.7s,baz=259,slow=2.2,SNR=6.1						
ARCES	ARCESS Array B	59.29	350	P	P	12 11 50.0	-0.2
	2.8nm,0.7s,mb4.4,baz=27,slow=11,SNR=4.5						
KURK	Kurchatov	59.79	314	P	P	12 11 54.7	+0.8
	1.5nm,0.8s,mb4.1,baz=43,slow=6.5,SNR=7.7						
MKAR	Makanchi Array	60.71	309	P	P	12 11 59.8	-0.4
	0.6nm,0.6s,mb3.9,baz=51,slow=4.8,SNR=7.3						
BVAR	Borovoye Array	61.76	320	P	P	12 12 06.9	-0.4
	1.1nm,0.6s,mb4.2,baz=51,slow=9.7,SNR=7.0						
BVAR				LR	LR	12 41 46.5	
	comp=Z,24nm,19.7s,MS3.4,baz=45,slow=39						
JOF	Joensuu	64.76	345	ep	P	12 12 26.8	-0.2
	2.2nm,0.6s,mb4.4						
KAF	Kangasniemi	66.29	347	ep	P	12 12 36.3	-0.5
	2.1nm,0.6s,mb4.3						
FINES	FINESS Array B	66.96	347	P	P	12 12 41.5	+0.4
	3.0nm,0.7s,mb4.4,baz=18,slow=8.0,SNR=9.3						
AKTK	Aktyubinsk	68.62	325	P	P	12 12 51.4	-0.4
AKTO	Aktyubinsk	68.62	325	P	P	12 12 51.4	-0.4
	1.6nm,0.7s,mb4.0,baz=85,slow=9.7,SNR=5.3						
NB2	NORSAR Subarra	68.86	355	P	P	12 12 54.2	+1.1
	comp=Z,1.0nm,0.7s,mb3.9,baz=6.5,slow=6.5						
NOA	NORSAR Array B	68.86	355	P	P	12 12 53.5	+0.3
	comp=Z,1.8nm,0.7s,mb4.1,baz=7.1,slow=6.3,SNR=6.3						
CMAR	Chiang Mai Arr	71.02	276	P	P	12 13 07.0	0.0
	comp=Z,0.9nm,0.5s,mb4.0,baz=32,slow=7.2,SNR=6.0						
AKASG	Malin Array Be	76.69	342	P	P	12 13 40.0	+0.4
	comp=Z,1.3nm,0.7s,mb4.0,baz=23,slow=5.9,SNR=4.1						
WRA	Warramunga Arr	81.04	224	P	P	12 14 02.7	-1.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=32,slow=5.7,SNR=12						
ASAR	Alice Springs	84.49	222	P	P	12 14 21.4	-0.3
	comp=Z,1.0nm,0.9s,mb3.9,baz=25,slow=5.7,SNR=12						

*ISCJB **09** 12:08:08.2±1.4, 47.°98N±0.°05×23.°21E±0.°07, h4km±11km, Error ellipse: s-maj=10.0km s-min=6.8km az=41.4*

*BUC **09** 12:08:08.1±0.2, 47.°97N×23.°20E, h10km, MD2.8/2, Error ellipse: s-maj=2.6km s-min=1.3km az=357.0*

ISC 09 12:08:08.8±1.5, 47.°96N±0.°06×23.°20E±0.°09, h10km±13km, n8, σ0°57/13, 4C-2D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRPA	Tarpa	0.48	291	⇑iP	Pg	12 08 17.6	-0.5
TRPA				iS	Sg	12 08 24.9	+0.5
TRPA	Tarpa	0.48	291	⇑iP	Pg	12 08 17.6	-0.5
TRPA				S	Sg	12 08 24.9	+0.5
KOLS	Kolonicke sedl	1.15	328	ePN	Pn	12 08 30.4	-0.6
KOLS				eSN	Sn	12 08 47.7	+1.0
DRGR		1.22	196	⇓iP	Pb	12 08 31.5	-0.4
DRGR				iS	Sg	12 08 48.5	+0.5
DRGR		1.22	196	⇓iP	Pb	12 08 31.5	-0.4
BURAR	Bucovina Array	1.40	104	⇑iP	Pn	12 08 34.5	+0.2
BURAR				iS	Sb	12 08 53.0	+0.1
BURAR	Bucovina Array	1.40	104	⇑iP	Pn	12 08 34.5	+0.2
VYHS	Vyhne	2.97	282	ePN	Pn	12 08 55.0	-0.9

MAN 09 12:22:50, 13.°54N×120.°62E, h94km, mb3.6, ML2.3, MS1.8, Mindoro

| Code | Station Name |

PLIG	Platanillo	4.86	306	*i* S	Sn	13 06 38.1	-2.0
CAIG	El Cayaco	4.93	288	*e*P	Pn	13 05 43.7	-1.8
CAIG				*i* S	Sn	13 06 39.4	-2.4
CAIG	El Cayaco	4.93	288	*e*P	Pn	13 05 43.7	-1.8
CAIG				*i* S	Sn	13 06 39.4	-2.4
IIO	Organos	5.14	322	*e*P	Pn	13 05 48.0	-0.4
IIO				*i* S	Sn	13 06 45.9	-1.0
IIO	Organos	5.14	322	*e*P	Pn	13 05 48.0	-0.4
IIO				*i* S	Sn	13 06 45.9	-1.0
MZVM		5.17	315	*e*P	Pn	13 05 44.0	-4.8
MZVM				*i* S	Sn	13 06 44.4	-3.2
ZIIG	Zihuatanejo	6.19	290	*e*P	Pn	13 06 00.5	-2.3
ZIIG				*i* S	Sn	13 07 12.2	-0.6
ZIIG	Zihuatanejo	6.19	290	*e*P	Pn	13 06 00.5	-2.3
ZIIG				*i* S	Sn	13 07 12.2	-0.6
JTS	JuntasAbangare	11.42	116	*e*Pn	Pn	13 07 06.6	-8.0
	11nm,1.0s						
PAYG	Puerto Ayora	16.88	162	*e*Pn	Pn	13 08 15.7	-12

CASC 09 13:05:12.6±1.0, 13°.89N×91°.60W, h26km±11km, MD3.7, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.92	53⇑	*e*P	Pn	13 05 29.8	-0.1
FG6		0.96	46	*e*P	Pn	13 05 30.6	+0.1
TP2	Tecpan 2	1.05	32	*e*P	Pn	13 05 31.7	+0.1
PCG	Pacaya	1.09	63	*e*P	Pn	13 05 32.6	+0.4
RTR	El Retiro	1.90	90	*e*P	Pn	13 05 44.0	+0.6
RTR				*e*S	Sn	13 06 08.4	+1.9
SBLS	San Blas	1.93	91	*e*P	Pn	13 05 43.9	+0.2
SBLS				*e*S	Sn	13 06 08.5	+1.4
SNJE	San Jose	1.94	90	*e*P	Pn	13 05 44.3	+0.4
SNJE				*e*S	Sn	13 06 08.6	+1.1
MRL	Marmol	2.19	58	*e*P	Pn	13 05 48.1	+0.8
BOQS	Boqueron	2.26	94	*e*P	Pn	13 05 49.1	+0.7
LFRS	El Faro	2.48	96	*e*P	Pn	13 05 52.0	+0.6
LFRS				*e*S	Sn	13 06 22.2	+1.3

IDC 09 13:08:16.5±27.0, 20°.92S×178°.03W, h451km±251km, mb3.3/3, mb1 3.5/3, mbtmp3.3/15, mbtmp3.3/3, Error ellipse: s-maj=164.0km s-min=110.5km az=90.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.42	265	*e*P	P	13 14 17.5	+1.1
	2.2nm,0.4s						
CMSA	Cobar Meteorol	34.08	244	*e*P	P	13 14 22.8	+1.0
STKA	Stephens Creek	37.58	245	P	P	13 14 51.3	+0.2
	1.2nm,0.5s,baz=91,slow=13,SNR=5.5						
BBOO	Buckleboo	42.34	244	*e*P	P	13 15 29.4	-0.1
	1.0nm,0.3s						
ASAR	Alice Springs	44.40	257	P	P	13 15 45.9	+0.1
	4.2nm,0.8s,baz=93,slow=7.6,SNR=95						
ASAR				PcP	PcP	13 17 19.9	-0.5
	0.5nm,0.6s,baz=112,slow=3.2,SNR=5.8						
WRA	Warramunga Arr	44.51	262	P	P	13 15 46.2	-0.5
	1.7nm,0.5s,baz=97,slow=7.7,SNR=44						
MBWA	Marble Bar	57.73	258	*e*P	P	13 17 22.4	-0.9
ARCES	ARCESS Array B	129.32	350	PKP	PKPdf	13 26 31.3	-0.7
	2.8nm,1.1s,baz=310,slow=4.6,SNR=3.9						
AKASG	Malin Array Be	143.36	331	PKP	PKPdf	13 26 56.8	-1.7
	1.3nm,0.4s,baz=42,slow=4.7,SNR=11						
BRTR	Keskin Array B	147.09	312	PKPbc	PKPbc	13 27 08.4	+0.3
	0.4nm,0.6s,baz=90,slow=4.3,SNR=2.8						

IDC 09 13:21:48.1±4.3, 8°.58S×157°.75E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=125.7km s-min=39.2km az=107.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.30	241	P	P	13 27 17.3	+0.7
	1.1nm,0.8s,baz=70,slow=10,SNR=5.5						
ASAR	Alice Springs	27.31	234	P	P	13 27 33.9	-0.8
	0.6nm,0.9s,baz=61,slow=8.3,SNR=5.1						
STKA	Stephens Creek	27.62	211	P	P	13 27 37.6	+0.2
	1.0nm,0.7s,baz=42,slow=12,SNR=3.2						
MKAR	Makanchi Array	86.39	318	P	P	13 34 32.5	+0.1
	0.1nm,0.4s,baz=123,slow=5.3,SNR=2.0						
MKAR				pP		13 34 40.8	
	0.4nm,0.7s,baz=100,slow=6.7,SNR=3.8						

*ISCJB **09** 13:39:59.1±0.7, 32°.3N±0°.1×85°.2E±0°.2, h10km, mb3.5/8, Error ellipse: s-maj=25.1km s-min=9.7km az=147.5*
*IDC **09** 13:39:59.5±1.1, 32°.38N×85°.22E, h0km, mb3.5/7, mb1 3.7/10, mb1mx3.5/26, mbtmp3.5/10, ML3.4/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/26, Error ellipse: s-maj=36.6km s-min=18.7km az=59.0*
*NEIC **09** 13:40:04.2±0.7, 32°.32N×85°.28E, h35km, mb3.5/3, Error ellipse: s-maj=21.4km s-min=9.8km az=57.0*
ISC 09 13:40:01.0±0.7, 32°.3N±0°.1×85°.2E±0°.2, h10km, n16, σ0§93/14, mb3.5/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	13.34	323	LR	LR	13 48 48.2	
	comp=Z,36nm,20.4s,baz=244,slow=40						
MK31	Makanchi Array	14.61	352	*e*Pn	Pn	13 43 29.0	+1.4
MKAR	Makanchi Array	14.61	352	Pn	Pn	13 43 24.0	-3.5
	0.0nm,0.3s,baz=212,slow=9.7,SNR=3.5						
CM31	Chiang Mai Arr	18.53	135	*e*Pn	Pn	13 44 16.9	-1.0
	1.8nm,0.5s						
CMAR	Chiang Mai Arr	18.53	135	P	Pn	13 44 17.9	+0.1
	0.2nm,0.3s,baz=330,slow=12,SNR=4.8						
KURK	Kurchatov	19.00	347	P	Pn	13 44 21.6	-1.6
	0.0nm,0.3s,baz=165,slow=11,SNR=5.7						
KURK	Kurchatov	19.00	347	*e*P	Pn	13 44 22.0	-1.3
	3.2nm,1.1s						
ZALV	Zalesovo Beam	21.60	359	P	P	13 44 49.9	-0.8
	2.6nm,0.7s,mb3.8,baz=182,slow=9.9,SNR=12						
SONM	Songino Array	22.28	40	P	P	13 44 59.4	+1.2
	1.3nm,0.8s,mb3.4,baz=225,slow=10.0,SNR=7.7						
ABKAR	Akbulak array	25.36	319	*e*P	P	13 45 28.7	+0.7
	1.1nm,0.8s,mb3.4						
KSRS	Korea Array	35.15	70	LR	LR	14 02 22.9	
	comp=Z,19nm,21.2s,baz=225,slow=38						
AKASG	Malin Array Be	44.62	311	P	P	13 48 13.2	-0.1
	0.7nm,0.5s,mb3.8,baz=80,slow=7.7,SNR=4.0						
GERES	GERESS Array B	54.77	310	P	P	13 49 31.2	+0.5
	0.2nm,0.3s,mb3.6,baz=65,slow=9.4,SNR=4.6						
WRA	Warramunga Arr	70.07	131	P	P	13 51 13.7	+0.4
	0.6nm,0.8s,mb3.6,baz=327,slow=6.4,SNR=4.5						
ASAR	Alice Springs	72.54	134	P	P	13 51 28.7	+0.5
	0.2nm,0.6s,mb3.2,baz=321,slow=5.9,SNR=5.7						
YKA	Yellowknife Ar	84.15	9	P	P	13 52 31.4	-0.5
	0.3nm,0.7s,mb3.5,baz=348,slow=5.1,SNR=5.3						

*ISCJB **09** 13:44:54.2±0.6, 7°.07N±0°.07×73°.22W±0°.09, h143km±8km, mb3.1/3, Error ellipse: s-maj=16.8km s-min=7.0km az=38.0*
*IDC **09** 13:44:54.3±0.7, 6°.76N×73°.00W, h159km±9km, mb2.9/2, mb1 3.6/5, mb1mx3.2/23, mbtmp3.4/5, Error ellipse: s-maj=31.1km s-min=7.3km az=132.0*
*NEIC **09** 13:44:55.2±0.8, 6°.75N×73°.03W, h169km±8km, mb3.1/1, Error ellipse: s-maj=18.2km s-min=11.0km az=130.0*
*FUNV **09** 13:44:58.8, 7°.08N×73°.03W, h145km, MW4.0*
ISC 09 13:44:55.3±0.6, 7°.04N±0°.07×73°.19W±0°.09, h140km±8km, n21, σ1§19/31, mb3.1/3, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.19	47⇑	*i*P	Pn	13 45 23.8	+2.9
CAPV				*e*S	Sn	13 45 40.5	+0.1
ROSC	El Rosal	2.45	208	P	Pn	13 45 35.6	+0.2
	90nm,0.3s,baz=290,slow=7.3,SNR=125						
ROSC				S	Sn	13 46 04.9	-1.3
	248nm,0.3s,baz=83,slow=21,SNR=23						
ROSC	El Rosal	2.45	208	*e*Pn	Pn	13 45 35.3	-0.1
ROSC				*e*Sn	Sn	13 46 05.2	-1.0
VIGV	El Vigia	2.54	45⇑	*i*P	Pn	13 45 38.4	+1.9
VIGV				*e*S	Sn	13 46 06.3	-1.8
SOCV	Socops	2.62	62⇑	*e*P	Pn	13 45 38.5	+1.1
SOCV				*e*S	Sn	13 46 08.0	-1.9
SDV	Santo Domingo	3.12	54	P	Pn	13 45 45.3	+1.5
	78nm,0.3s,baz=224,slow=3.8,SNR=329						
SDV				S	Sn	13 46 22.6	+1.2
	43nm,0.3s,baz=70,slow=22,SNR=24						
SDV	Santo Domingo	3.12	54	*e*Pn	Pn	13 45 44.9	+1.0
SDV				*e*Pn	Pn	13 45 45.1	+1.3
SDV				*e*Sn	Sn	13 46 22.3	+0.9
VIRV	Villa del Rosa	3.52	13⇓	*e*P	Pn	13 45 50.5	+1.4
VIRV				*e*S	Sn	13 46 28.7	-2.0
QARV	Quebrada Arrib	4.10	40	*e*S	Sn	13 46 40.5	-3.7
CURV	Curarigua	4.34	47	*e*P	Pn	13 46 00.3	+0.4
CURV				*e*S	Sn	13 46 45.6	-4.4
SANV	Sanarito	4.36	56	*e*P	Pn	13 46 00.1	0.0
SIQV	Siquisique	4.90	43	*e*P	Pn	13 46 07.5	+0.3
SIQV				*e*S	Sn	13 46 58.1	-5.1
TEPV	Terepaima	4.90	53	*e*P	Pn	13 46 07.0	-0.2
MONV	Montecano	5.82	33	*e*P	Pn	13 46 19.6	+0.1
MONV				*e*S	Sn	13 47 19.8	-5.5
TURV	Turiamo	6.28	57	*e*P	Pn	13 46 24.3	-1.3
PCRV	Puerto La Cruz	9.01	69	P	Pn	13 47 02.1	-0.2
	1.3nm,0.3s,baz=259,slow=5.2,SNR=5.3						
LPAZ	La Paz	23.71	168	*e*P	P	13 49 49.8	-4.8
	0.4nm,0.6s,mb3.1						
TXAR	Lajitas Array	36.27	312	P	P	13 51 45.4	+0.1
	0.1nm,0.6s,mb2.6,baz=120,slow=11,SNR=2.7						
YKA	Yellowknife Ar	63.03	340	P	P	13 55 06.4	-0.7
	0.4nm,0.6s,mb3.4,baz=131,slow=6.9,SNR=11						
ASAR	Alice Springs	149.19	235	PKPbc	PKPbc	14 04 23.9	-4.2
	0.7nm,0.7s,baz=116,slow=3.8,SNR=19						
WRA	Warramunga Arr	150.39	242	PKPbc	PKPbc	14 04 27.7	-3.4
	0.5nm,0.4s,baz=111,slow=2.3,SNR=26						

*ISCJB **09** 13:50:06.7±1.9, 34°.54N±0°.06×69°.67E±0°.08, h33km±22km, mb3.5/3, Error ellipse: s-maj=13.6km s-min=7.7km az=141.9*
*NNC **09** 13:50:13.6±3.1, 34°.90N×69°.22E, h19km±68km, mb3.9, mpv4.0, Error ellipse: s-maj=69.5km s-min=14.8km az=8.0*
*IDC **09** 13:50:27.6±14.0, 35°.74N×69°.84E, h118km±85km, mb3.3/3, mb1 3.1/8, mb1mx3.0/28, mbtmp3.0/8, ML3.3/5, Error ellipse: s-maj=138.7km s-min=34.2km az=14.0*
*NEIC **09** 13:50:28.7±6.0, 35°.90N×69°.77E, h122km±26km, mb4.1/5, Error ellipse: s-maj=66.6km s-min=15.0km az=189.0*
ISC 09 13:50:11.2±1.7, 34°.56N±0°.08×69°.6E±0°.1, h63km±21km, n25, σ1§28/31, mb3.5/3, 1C-3D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	5.55	111	*e*S	Sx	13 52 20.8	
KSH	Kashi	7.11	44	Pn	Pn	13 51 48.9	-3.6
KSH				Sn	Sn	13 52 59.0	-13
KSH				smax			
	comp=N,25nm,0.3s						
KSH				smax			
	comp=E,17nm,0.3s						
SMLA	Simla	7.24	116	*i* P	Pn	13 52 02.5	+8.1
SMLA				*i* S	Sn	13 53 11.7	-3.4
SMLA				*ex*	x	13 53 15.7	
	comp=N,397nm,0.5s						
SMLA				*ex*	x	13 53 16.2	
	comp=E,265nm,0.3s						
AML	Almayashu	8.22	22	*e*Pn	Pn	13 52 08.2	+0.5
	comp=E,12nm,0.5s						
AML				*e*Sn	Sn	13 53 39.2	+0.2
KHET	Khetri	8.37	139	*e*S	Sx	13 53 38.8	
KK01	Karatay Array	8.56	5	⇓P	Pn	13 52 12.1	-0.2
	comp=E,3.5nm,0.5s,baz=188,slow=13						
KK01				⇓S	Sn	13 53 46.3	-1.1
	comp=E,4.1nm,0.6s,baz=192,slow=24						
UCH	Uchtor	8.58	25	*e*Pn	Pn	13 52 13.3	+0.8
	comp=E,4.7nm,0.7s						
UCH				*e*Sn	Sn	13 53 42.7	-5.0
AAK	Ala-Archa	8.93	24	P	Pn	13 52 18.3	+0.9
	comp=E,0.0nm,0.3s,baz=172,slow=4.4,SNR=5.0						
AAK				S	Sn	13 53 56.0	-0.4
	comp=E,0.0nm,0.3s,baz=334,slow=23,SNR=6.3						
AAK	Ala-Archa	8.93	24	*e*Pn	Pn	13 52 17.4	0.0
	comp=E,4.2nm,0.6s						
AAK				*e*Sn	Sn	13 53 56.6	+0.2
SONA	Sohna	8.98	132	*e*S	Sx	13 53 49.8	
JOSI	Joshimath	9.32	113	*e*P	Pn	13 52 31.0	+8.2
JOSI				*e*S	Sn	13 54 05.6	-0.4
JOSI				AML	AML	13 54 55.4	
	comp=N,29nm,0.5s						
JOSI				AML	AML	13 54 58.0	
	comp=E,22nm,0.3s						
TKM2	Tokmak 2	9.58	28	⇓P	Pn	13 52 28.7	+2.5
	comp=E,1.7nm,0.5s						
TKM2				⇑S	Sn	13 54 14.9	+2.7
	comp=E,3.5nm,1.1s						
TKM2	Tokmak 2	9.58	28	*e*Pn	Pn	13 52 27.7	+1.5
	comp=E,2.2nm,0.4s						
AGRA	Agra	10.24	133	*e*S	Sn	13 54 17.9	-11
AGRA				AML	AML	13 55 51.9	
	comp=E,58nm,0.4s						
AGRA				AML	AML	13 55 53.5	
	comp=N,70nm,0.2s						
MK31	Makanchi Array	15.54	34	*e*Pn	Pn	13 53 44.9	-1.4
MKAR	Makanchi Array	15.54	34	P	Pn	13 53 47.3	+1.1
	comp=N,0.1nm,0.3s,baz=222,slow=13,SNR=4.2						
AB31	Akbulak array	16.32	337	P	Pn	13 53 56.3	+0.2
	comp=N,0.8nm,0.5s,baz=154,slow=12,SNR=33						
ABKAR	Akbulak array	16.32	337	*e*Pn	Pn	13 53 55.7	-0.4
	comp=N,0.9nm,0.4s						
KURK	Kurchatov	17.44	19	P	Pn	13 54 08.2	-1.8
	comp=N,0.0nm,0.3s,baz=211,slow=10,SNR=3.4						
AKTK	Aktyubinsk	17.98	335	P	Pn	13 54 16.6	+0.1
AKTO	Aktyubinsk	17.98	335	P	Pn	13 54 16.6	+0.1
	comp=N,0.3nm,0.3s,baz=124,slow=3.6,SNR=2.9						
BVAR	Borovoye Array	18.47	2	P	Pn	13 54 19.6	-2.9
	comp=N,0.2nm,0.3s,baz=168,slow=7.4,SNR=2.1						
ZALV	Zalesovo Beam	22.16	24	P	P	13 55 01.4	-0.1
	comp=N,0.6nm,0.3s,mb3.5,baz=228,slow=12,SNR=3.0						
SONM	Songino Array	30.41	53	P	P	13 56 20.6	+3.3
	comp=N,0.2nm,0.4s,mb3.2,baz=262,slow=8.9,SNR=2.5						
ARCES	ARCESS Array B	42.51	339	P	P	13 58 03.0	+3.1
	comp=N,2.0nm,0.9s,mb3.8,baz=108,slow=7.8,SNR=4.9						

*ISCJB **09** 13:51:07.5±1.0, 38°.19N±0°.04×26°.58E±0°.06, h10km±5km, Error ellipse: s-maj=9.2km s-min=4.7km az=135.2*
*CSEM **09** 13:51:07.3±0.4, 38°.17N×26°.55E, h10km, MD3.0, Error ellipse: s-maj=8.2km s-min=3.9km az=47.0*
*ISK **09** 13:51:07.5, 38°.07N×26°.67E, h21km, MD2.7*
*DDA **09** 13:51:08.2, 38°.20N×26°.67E, h6km±3km, Md3.0*
*THE **09** 13:51:09.4, 38°.26N×26°.71E, h15km±6km, ML3.1/2, Error ellipse: s-maj=8.6km s-min=0.5km az=116.0*
ISC 09 13:51:07.3±0.9, 38°.16N±0°.04×26°.56E±0°.06, h13km±4km, n25, σ0§91/42, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.20	9	*i* P	Pg	13 51 11.4	-0.4
URLA				*i* S	Sg	13 51 14.4	-0.4
URLA	Izmir	0.20	9	*i* P	Pg	13 51 11.4	-0.4
URLA				*i* S	Sg	13 51 14.4	-0.4
BLCB	Balcova	0.44	60	*e*PG	Pg	13 51 16.8	+0.7
BLCB	Balcova	0.44	60	P	Pg	13 51 15.6	-0.5
BLCB				S	Sg	13 51 20.4	-1.6
BLCB	Balcova	0.44	60	P	Pg	13 51 15.6	-0.5
BLCB	Balcova	0.44	60	*e*Pg	Pg	13 51 16.8	+0.7
IZM	Izmir	0.60	67	*e*PG	Pg	13 51 19.6	+0.5
IZM				*e*SG	Sg	13 51 28.0	+0.9
GCAM	G?zelcaml?	0.71	131	*i* P	Pg	13 51 21.4	+0.4
GCAM				*i* S	Sg	13 51 31.2	+0.9
GCAM	G?zelcaml?	0.71	131	*i* P	Pg	13 51 21.4	+0.3
GCAM				*i* S	Sg	13 51 31.2	+0.9
PRK	Paraskevi	1.10	348	P	Pg	13 51 28.3	-0.3
PRK				S	Sg	13 51 43.1	+0.1
PRK	Paraskevi	1.10	348	P	Pg	13 51 28.3	-0.3
PRK				S	Sg	13 51 43.1	+0.1
AYDN	Tasoluk	1.16	115	*i* P	Pb	13 51 29.2	0.0
AYDN				*i* S	Sb	13 51 44.2	+0.1
AYDN	Tasoluk	1.16	115	*i* P	Pb	13 51 29.2	0.0
AYDN				*i* S	Sb	13 51 44.2	+0.1
SIGR	SIGRI	1.18	332	P	Pn	13 51 29.9	+0.3
SIGR				S	Sb	13 51 45.6	+0.8
SIGR	SIGRI	1.18	332	P	Pn	13 51 29.9	+0.3
SIGR				S	Sb	13 51 45.6	+0.8
AKS	Akhisar	1.22	54	*e*PN	Pn	13 51 29.6	-0.5
AKS	Akhisar	1.22	54	*e*Pn	Pn	13 51 29.6	-0.4
MLSB	Milas	1.30	132	*e*PN	Pn	13 51 28.9	-2.2
MLSB				*e*SN	Sn	13 51 45.0	-3.3
MLSB	Milas	1.30	132	*e*Pn	Pn	13 51 28.9	-2.2
MANT	Manisa	1.61	78	*i* P	Pn	13 51 37.5	+2.2
MANT				*i* S	Sn	13 51 56.6	+0.6
MANT	Manisa	1.61	78	*i* P	Pn	13 51 37.5	+2.1
MANT				*i* S	Sn	13 51 56.6	+0.6
KULA	Kula-Manisa	1.69	77	*e*PN	Pn	13 51 36.0	-0.5
KULA	Kula-Manisa	1.69	77	*e*Pn	Pn	13 51 36.0	-0.5
BALY	Balya	1.78	27	*i* P	Pn	13 51 37.8	+0.1
BALY				*i* S	Sn	13 51 59.8	-0.4
BALY	Balya	1.78	27	*i* P	Pn	13 51 37.8	0.0
BALY				*i* S	Sn	13 51 59.8	-0.4

*ISCJB **09** 14:18:32.9±0.8, 15°.46N±0°.06×95°.78W±0°.03, h33km, mb4.1/2, Error ellipse: s-maj=9.6km s-min=3.9km az=14.5*
*MEX **09** 14:18:34.0±1.4, 15°.38N×95°.83W, h35km±24km, MD4.0*
*NEIC **09** 14:18:34.0, 15°.38N×95°.83W, h35km, mb4.3/3, MD4.0(MEX), After MEX.*
ISC 09 14:18:33.5±1.0, 15°.49N±0°.07×95°.77W±0°.04, h26km±8km, n28, σ0§92/53, mb4.1/2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.43	311	*i* P	Pb	14 18 42.7	0.0
HUIG				*i* S	Sb	14 18 48.9	0.0
HUIG	Huatulco	0.43	311	*i* P	Pb	14 18 42.7	0.0
HUIG				*i* S	Sb	14 18 48.9	0.0
CMIG	Matias Romero	1.81	28	*e*P	Pn	14 19 02.6	-0.4
CMIG				*i* S	Sn	14 19 24.6	-0.5
CMIG	Matias Romero	1.81	28	*e*P	Pn	14 19 02.6	-0.4
CMIG				*i* S	Sn	14 19 24.6	-0.5
VHO	Vista Hermosa	1.83	330	*i* P	Pn	14 19 02.4	-0.9
VHO				*i* S	Sn	14 19 25.7	+0.1
VHO	Vista Hermosa	1.83	330	*i* P	Pn	14 19 02.4	-0.9
VHO				*i* S	Sn	14 19 25.7	+0.1
OXX	Oaxaca	1.83	330	*e*P	Pn	14 19 03.7	+0.3
OXX				*i* S	Sn	14 19 24.9	-0.8
OXX	Oaxaca	1.83	330	*e*P	Pn	14 19 03.7	+0.3
OXX				*i* S	Sn	14 19 24.9	-0.8
PNIG	Pinotepa	2.44	292	*e*P	Pn	14 19 10.6	-1.2
PNIG				*i* S	Sn	14 19 36.2	-4.6
PNIG	Pinotepa	2.44	292	*e*P	Pn	14 19 10.6	-1.2
PNIG				*i* S	Sn	14 19 36.2	-4.6
PCIG		2.47	85	*i* P	Pn	14 19 11.4	-0.6
PCIG				*i* S	Sn	14 19 41.5	+0.2
TGIG		2.85	63	*e*P	Pn	14 19 17.5	+0.2
TGIG				*i* S	Sn	14 19 51.1	+0.3
UTMO	Huajuapan	3.04	320	*e*P	Pn	14 19 20.8	+0.9
UTMO				*i* S	Sn	14 19 54.0	-1.5
TPIG	Tehuac#an	3.29	333	*e*P	Pn	14 19 24.0	+0.6
TPIG				*i* S	Sn	14 20 03.0	+1.2
CCIG	Comitan	3.58	77	*e*P	Pn	14 19 29.0	+1.6
CCIG				*i* S	Sn	14 20 07.6	-1.3
CCIG	Comitan	3.58	77	*e*P	Pn	14 19 29.0	+1.6
CCIG				*i* S	Sn	14 20 07.6	-1.3
ACX	Acapulco	4.22	290	*e*P	Pn	14 19 35.2	-0.9
ACX				*i* S	Sn	14 20 16.7	-7.9
ACX	Acapulco	4.22	290	*e*P	Pn	14 19 35.2	-0.9
ACX				*i* S	Sn	14 20 16.7	-7.9
PPM	Popocatepetl	4.49	323	*e*P	Pn	14 19 40.7	+0.9
PPM				*i* S	Sn	14 20 36.7	+5.4
PPM	Popocatepetl	4.49	323	*e*P	Pn	14 19 40.7	+0.9
PPM				*i* S	Sn	14 20 36.7	+5.4
CAIG	El Cayaco	4.59	290	*i* P	Pn	14 19 41.7	+0.4
CAIG				*i* S	Sn	14 20 26.2	-7.6
CAIG	El Cayaco	4.59	290	*i* P	Pn	14 19 41.7	+0.4
CAIG				*i* S	Sn	14 20 26.2	-7.6
MZVM		4.95	319	*e*P	Pn	14 19 45.9	-0.3
MZVM				*i* S	Sn	14 20 43.5	+0.9
IIO	Organos	4.96	326	*e*P	Pn	14 19 51.8	+5.4
IIO				*i* S	Sn	14 20 49.7	+6.8
IIO	Organos	4.96	326	*e*P	Pn	14 19 51.8	+5.4
IIO				*i* S	Sn	14 20 49.7	+6.8
JCT	Junction City	15.38	347	*e*Pn	Pn	14 22 05.4	-3.3
	8.9nm,0.4s						
BNM	Barren Site	21.01	334	*e*P	P	14 23 19.4	+4.3
	2.6nm,1.2s,mb3.4						
SCIA	State Center	26.42	4	*e*P	P	14 24 09.8	+1.8
	15nm,0.6s,mb4.7						

*THE **09** 14:45:35.2, 36°.11N×21°.64E, h4km±2km, ML4.2/2, Error ellipse: s-maj=5.8km s-min=1.3km az=268.0*
*CSEM **09** 14:45:37.1±1.1, 36°.22N×22°.00E, h2km, MD3.6, Error ellipse: s-maj=26.8km s-min=9.2km az=49.0*
*ATH **09** 14:45:39.1, 36°.33N×22°.06E, h5km±4km, MD3.6/8*
ISC 09 14:45:35.4±1.6, 36°.12N±0°.05×21°.8E±0°.1, h7km±7km, n28, σ1§14/39, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.78	356	*e*PB	Pg	14 45 50.2	-0.2
PYL				*e*SB	Sg	14 46 00.0	-0.6
PYL	PYLOS	0.78	356	P	Pg	14 45 50.2	-0.2
PYL				S	Sg	14 46 02.1	+1.5
PYL	PYLOS	0.78	356	P	Pg	14 45 50.2	-0.2
PYL				*e*Sb	Sg	14 46 00.0	-0.6
PYL				S	Sg	14 46 02.1	+1.5
KYTH	Kithira	1.01	80	*e*PB	Pg	14 45 54.1	-0.7
KYTH	Kithira	1.01	80	*e*Pb	Pg	14 45 54.1	-0.7
ITM	Ithomi	1.07	5	*e*PB	Pg	14 45 55.6	-0.3
ITM	Ithomi	1.07	5	P	Pg	14 45 55.3	-0.6
ITM				S	Sg	14 46 11.0	+1.2
ITM	Ithomi	1.07	5	P

KLI	Kotabumi	4.05 116	P	Pn	15 40 34.7	+0.3
KASI	Kota Agung	4.07 126	P	Pn	15 40 34.9	+0.1
MNSI	Mandailing Nat	4.20 337	P	Pn	15 40 38.7	+2.1
TPRI	Tanjung Pinang	5.21 40	P	Pn	15 40 49.3	-1.0
	93nm,0.7s,946nm					
MYKOM	Kota Tinggi	5.55 29	P	Pn	15 40 55.2	+0.3
KULM	Kulim	8.36 356	*e*Pn	Pn	15 41 30.4	-3.1
	9.5nm,1.0s					
CMAR	Chiang Mai Arr	21.55 354	P	P	15 44 17.3	-0.5
	0.9nm,0.6s,mb3.3,baz=182,slow=9.0,SNR=7.0					
WRA	Warramunga Arr	36.41 120	P	P	15 46 31.2	-0.7
	1.4nm,0.5s,mb4.1,baz=302,slow=9.0,SNR=15					
WRAB	Tennant Creek	36.41 120	*e*P	P	15 46 30.3	-1.7
	3.0nm,0.7s,mb4.3					
ASAR	Alice Springs	37.64 126	P	P	15 46 42.2	-0.1
	0.8nm,0.6s,mb3.8,baz=299,slow=8.4,SNR=26					
STKA	Stephens Creek	47.52 132	P	P	15 48 03.0	+0.6
	0.9nm,0.6s,mb3.8,baz=317,slow=18,SNR=2.7					
STKA	Stephens Creek	47.52 132	*e*P	P	15 48 01.7	-0.7
	0.6nm,1.1s,mb3.3					
SONM	Songino Array	50.94 5	P	P	15 48 29.2	+1.1
	0.9nm,0.5s,mb4.0,baz=190,slow=9.2,SNR=10.0					
TKM2	Tokmak 2	51.32 336	*e*P	P	15 48 31.7	+0.7
	2.8nm,0.7s,mb4.4					
AML	Almayashu	51.48 334	*e*P	P	15 48 30.7	-1.5
	2.3nm,0.8s,mb4.3					
EKS2	Erkin-Say	51.87 334	*e*P	P	15 48 36.6	+1.5
	4.2nm,0.8s,mb4.5					
MK31	Makanchi Array	52.42 344	*e*P	P	15 48 38.6	-0.5
MKAR	Makanchi Array	52.42 344	P	P	15 48 39.7	+0.6
	3.4nm,0.7s,mb4.5,baz=150,slow=8.0,SNR=38					
ZAA0	Zalesovo Array	58.48 349	*e*P	P	15 49 22.4	-0.1
ZALV	Zalesovo Beam	58.48 349	P	P	15 49 22.2	-0.2
	5.2nm,0.6s,mb4.8,baz=170,slow=5.4,SNR=32					
BVAR	Borovoye Array	61.63 339	P	P	15 49 42.9	-1.2
	0.9nm,0.7s,mb3.9,baz=141,slow=9.6,SNR=6.3					
ABKAR	Akbulak array	63.18 331	*e*P	P	15 49 54.3	-0.2
	0.9nm,0.5s,mb4.0					
BRTR	Keskin Array B	74.95 312	P	P	15 51 08.0	+0.4
	0.7nm,0.6s,mb3.6,baz=140,slow=7.8,SNR=4.4					
GERES	GERESS Array B	90.67 319	P	P	15 52 30.3	+1.6
	0.3nm,0.3s,mb4.0,baz=60,slow=3.2,SNR=3.9					
TXAR	Lajitas Array	144.82 40	PKP	PKPdf	15 59 03.4	0.0
	1.0nm,0.6s,baz=270,slow=1.3,SNR=15					

*ISCJB **09** 15:42:43.3±0.7, 38°.23N±0°.06×39°.50E±0°.06, h2km±12km, Error ellipse: s-maj=11.5km s-min=5.0km az=32.2*
*ISK **09** 15:42:43.0, 38°.25N×39°.50E, h13km, MD2.6*
*CSEM **09** 15:42:43.3±0.1, 38°.25N×39°.51E, h10km, MD2.6, Error ellipse: s-maj=2.9km s-min=1.8km az=32.0*
*DDA **09** 15:42:43.2, 38°.20N×39°.45E, h7km±4km, Md2.6*
ISC 09 15:42:43.6±0.8, 38°.25N±0°.06×39°.51E±0°.06, h11km±9km, n16, σ0§37/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.20	308	*e*PG	Pg	15 42 47.9	-0.1
SVRC				*e*SG	Sg	15 42 51.2	+0.4
SVRC	Sivrice-ELAZID	0.20	308	*e*Pg	Pg	15 42 47.9	0.0
SVRC				*e*Sg	Sg	15 42 51.2	+0.4
ELZG	Elazig	0.48	301	*e*P	Pg	15 42 52.8	-0.2
ELZG				*e*S	Sg	15 42 59.1	-0.3
ELZG	Elazig	0.48	301	*e*P	Pg	15 42 52.8	-0.2
ELZG				*e*S	Sg	15 42 59.1	-0.3
DIYA	Diyarbakir	0.58	124	*e*P	Pg	15 42 54.6	-0.3
DIYA				*e*S	Sg	15 43 03.0	+0.5
DIYA	Diyarbakir	0.58	124	*e*P	Pg	15 42 54.6	-0.3
DIYA				*e*S	Sg	15 43 03.0	+0.5
PTK	Pertek	0.65	352	*e*PG	Pg	15 42 56.1	0.0
PTK	Pertek	0.65	352	*e*Pg	Pg	15 42 56.1	0.0
MALT	Malatya	0.86	274	*e*PG	Pg	15 42 59.6	-0.5
MALT				*e*SG	Sg	15 43 12.0	+0.8
MALT	Malatya	0.86	274	*e*Pg	Pg	15 42 59.6	-0.5
MALT				*e*Sg	Sg	15 43 12.0	+0.8
MYA	Malataya	0.86	275	*e*PG	Pg	15 42 59.7	-0.4
MYA	Malataya	0.86	275	*e*Pg	Pg	15 42 59.7	-0.4
URFA	Urfa	0.98	214	*e*PG	Pg	15 43 02.1	-0.3
URFA	Urfa	0.98	214	*e*Pg	Pg	15 43 02.1	-0.3
AKCD	Akcadag	1.25	272	*e*P	Pn	15 43 07.3	+0.3
AKCD				*e*S	Sb	15 43 23.4	+0.1
AKCD	Akcadag	1.25	272	*e*P	Pn	15 43 07.3	+0.3
AKCD				*e*S	Sb	15 43 23.4	+0.1

*NEIC **09** 15:45:24.7±1.4, 9°.55S×119°.11E, h35km, Error ellipse: s-maj=40.0km s-min=10.4km az=65.0*
IDC 09 15:45:24.8±8.1, 9°.51S×119°.10E, h37km±72km, mb3.0/1, mb1 3.2/5, mb1mx3.1/19, mbtmp3.1/5, ML3.1/3, Error ellipse: s-maj=102.3km s-min=21.8km az=68.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	4.52	8	Pn	Pn	15 46 31.4	+0.7
	1.6nm,0.3s,baz=191,slow=16,SNR=4.1						
KAPI				Sn	Sn	15 47 21.2	-0.9
	2.0nm,0.3s,baz=210,slow=20,SNR=3.6						
FITZ	Fitzroy Crossi	10.64	144	Pn	Pn	15 47 54.6	-0.1
	0.2nm,0.3s,baz=297,slow=14,SNR=4.5						
FITZ				Sn	Sn	15 49 46.4	-6.3
	0.8nm,0.3s,baz=189,slow=22,SNR=9.6						
WRA	Warramunga Arr	18.01	127	P	Pn	15 49 31.5	-0.8
	0.0nm,0.3s,baz=303,slow=15,SNR=3.0						
WRA				S	S	15 52 36.7	-21
	0.1nm,0.3s,baz=303,slow=24,SNR=6.7						
WB2	Warramunga Arr	18.02	127	*e*Pn	Pn	15 49 31.6	-0.8
ASAR	Alice Springs	19.96	137	P	Pn	15 49 54.5	-1.3
	0.0nm,0.3s,baz=310,slow=9.4,SNR=4.5						
ASAR				S	S	15 53 26.8	-10
	0.0nm,0.3s,baz=316,slow=25,SNR=3.8						
MKAR	Makanchi Array	64.95	333	P	P	15 56 00.7	0.0
	0.2nm,0.6s,baz=146,slow=8.7,SNR=2.9						

*ISCJB **09** 16:02:53.0±0.2, 23°.89N±0°.01×121°.00E±0°.02, h28km±2km, Error ellipse: s-maj=2.9km s-min=1.8km az=29.9*
*NEIC **09** 16:02:52.5±0.9, 23°.90N×121°.03E, h5km, Error ellipse: s-maj=16.8km s-min=6.6km az=113.0*
*TAP **09** 16:02:52.2, 23°.89N×120°.98E, h28km, ML3.8, B*
ISC 09 16:02:53.0±0.2, 23°.89N±0°.01×121°.00E±0°.02, h27km±2km, n63, σ0§66/108, 7C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLT	Sun Moon Lake	0.09	265	⇑*i*P	Pb	16 02 57.6	-0.2
	baz=266						
SMLT				*i* S	Sb	16 03 01.1	+0.1
	baz=266						
SSLB	Suanglung	0.11	202	*e*P	Pb	16 02 57.2	-0.7
SSLB				*e*S	Sb	16 03 00.7	-0.6
TYC	Yuchr	0.13	276	⇑*i*P	Pb	16 02 57.8	-0.3
	baz=278						
TYC				*i* S	Sb	16 03 01.7	+0.1
	baz=278						
WNT	Mingjian	0.29	268	⇓*i*P	Pb	16 02 59.9	-0.1
	baz=268						
WNT				S	Sb	16 03 05.5	+0.8
	baz=268						
WHF	Hehuan Shan	0.35	44	P	Pb	16 03 01.0	+0.1
	baz=51						
WHF				*e*S	Sb	16 03 06.9	+0.5
	baz=51						
TCU	Taichung	0.39	311	⇓*i*P	Pb	16 03 01.5	0.0
	baz=304						
TCU				*e*S	Sb	16 03 08.0	+0.7
	baz=304						
TWT	Tachien	0.40	24	⇓*i*P	Pb	16 03 01.3	-0.3
	baz=26						
TWT				*e*S	Sb	16 03 07.0	-0.4
	baz=26						
YUS	Yu-Shan	0.40	186	⇓*i*P	Pb	16 03 02.0	+0.3
	baz=176						
YUS				*e*S	Sb	16 03 08.0	+0.4
	baz=176						
ESL	Shilin	0.41	101	⇑*i*P	Pb	16 03 01.8	0.0
	baz=95						
ESL				*e*S	Sb	16 03 08.2	+0.5
	baz=95						
CHN5	Tsauling	0.41	225	⇓*i*P	Pb	16 03 01.6	-0.3
	baz=223						
CHN5				*i* S	Sb	16 03 08.2	+0.3
	baz=223						
ALS	Alishan	0.42	205	⇓*i*P	Pb	16 03 01.9	0.0
	baz=195						
ALS				S	Sb	16 03 08.7	+0.7
	baz=195						
WGK	Gukeng	0.45	243	⇓*i*P	Pb	16 03 02.3	-0.2
	baz=241						
WGK				*e*S	Sb	16 03 09.7	+0.8
	baz=241						
ESF	Shoufeng Towns	0.47	92	*e*P	Pb	16 03 01.7	-1.1
	baz=93						
EHY	Hungye	0.48	142	⇑*i*P	Pb	16 03 03.2	+0.2
	baz=134						
EHY				S	Sb	16 03 10.3	+0.5
	baz=134						
TWQ1	Liyutan	0.50	336	⇓*i*P	Pb	16 03 03.2	-0.1
	baz=339						
TWQ1				S	Sb	16 03 11.1	+0.8
	baz=339						
HWA	Hwalien	0.56	81	⇑*i*P	Pb	16 03 04.4	+0.1
	baz=82						
HWA				*i* S	Sb	16 03 13.0	+1.0
	baz=82						
NSY	Sanyi	0.57	338	*i* P	Pb	16 03 04.5	+0.1
	baz=350						
NSY				S	Sb	16 03 13.8	+1.7
	baz=350						
YULB	Yu-li	0.57	151	*e*P	Pb	16 03 03.6	-0.8
YULB				*e*S	Sb	16 03 11.8	-0.3
TWD	Chiawan	0.58	71	⇓*i*P	Pb	16 03 04.3	-0.3
	baz=79						
TWD				*e*S	Sb	16 03 12.4	-0.1
	baz=79						
CHN2	Minshiung	0.60	233	*e*P	Pb	16 03 04.3	-0.6
	baz=231						
CHN2				*e*S	Sb	16 03 13.8	+0.9
	baz=231						
TWF1	Yuli	0.60	153	⇓*i*P	Pb	16 03 05.0	0.0
	baz=142						
TWF1				S	Sb	16 03 13.3	+0.2
	baz=142						
NACB	Ninganchiao	0.61	63	*e*P	Pb	16 03 04.2	-1.0
NACB				*e*S	Sb	16 03 12.9	-0.6
NNS	Nan Shan	0.65	32	P	Pb	16 03 05.2	-0.5
	baz=29						
NNS				*e*S	Sb	16 03 13.7	-0.7
	baz=29						
CHN4	Tsaushan	0.65	215	⇓*i*P	Pb	16 03 05.3	-0.6
	baz=213						
CHN4				*e*S	Sb	16 03 15.3	+0.8
	baz=213						
CHY	Chiayi	0.66	234	P	Pb	16 03 05.3	-0.6
	baz=231						
CHY				S	Sb	16 03 15.0	+0.4
	baz=231						
WTCT	Ta-ch'eng	0.66	268	*e*P	Pb	16 03 05.1	-0.8
	baz=267						
WTCT				*e*S	Sb	16 03 15.1	+0.4
	baz=267						
TPUB	Ta-pu	0.68	210	*e*P	Pb	16 03 04.8	-1.4
TPUB				*e*S	Sb	16 03 15.4	+0.1
ELDTW	Lidau	0.70	179	⇓*i*P	Pb	16 03 06.2	-0.4
	baz=176						
ELDTW				*e*S	Sb	16 03 15.4	-0.4
	baz=176						
WTP	Ta-pu	0.73	209	⇓*i*P	Pb	16 03 06.2	-1.0
	baz=200						
WTP				*e*S	Sb	16 03 16.9	+0.1
	baz=200						
NSTT	Nanjuang	0.74	0	⇓*i*P	Pb	16 03 07.0	-0.2
	baz=355						
NSTT				*e*S	Sb	16 03 17.1	+0.1
	baz=355						
STYT	Tauyuan	0.76	197	⇓*i*P	Pb	16 03 07.0	-0.6
	baz=195						
STYT				*e*S	Sb	16 03 17.2	-0.3
	baz=195						
TWK	Hsinying	0.78	217	P	Pb	16 03 07.2	-0.7
	baz=222						
TWK				*e*S	Sb	16 03 18.0	-0.1
	baz=222						
CHN1	Nanshi	0.82	212	P	Pb	16 03 07.8	-1.0
	baz=216						
CHN1				S	Sb	16 03 19.8	+0.4
	baz=216						
NSK	Sanguang	0.85	23	⇓*i*P	Pb	16 03 08.7	-0.5
	baz=17						
NSK				*e*S	Sb	16 03 21.2	+1.0
	baz=17						
YHNB	Yeheng	0.85	24	*e*P	Pb	16 03 08.0	-1.1
YHNB				*e*S	Sb	16 03 20.4	+0.2
CHKT	Chengkung	0.86	157	⇓*i*P	Pb	16 03 09.3	0.0
	baz=142						
CHKT				*e*S	Sb	16 03 21.6	+1.3
	baz=142						
ENA	Nanau	0.86	52	*e*P	Pb	16 03 08.9	-0.5
	baz=53						
SGST	Jiashian	0.89	205	P	Pn	16 03 09.0	-0.8
	baz=203						
SGST				*e*S	Sb	16 03 21.4	+0.1
	baz=203						
CHN8	Yiju	0.90	233	⇑*i*P	Pn	16 03 09.3	-0.6
	baz=244						
CHN8				*e*S	Sb	16 03 22.5	+0.8
	baz=244						
HSN	Hsinchu	0.91	358	*e*P	Pn	16 03 09.6	-0.4
	baz=2.0						
CHN3	Shinhua	1.00	216	*e*P	Pn	16 03 11.2	0.0
	baz=214						
SCLT	Jiali	1.02	226	*e*P	Pn	16 03 11.3	-0.3
	baz=223						
SCLT				*e*S	Sb	16 03 26.1	+0.9
	baz=223						
TWE	Neicheng	1.03	36	*e*P	Pn	16 03 11.8	+0.1
	baz=49						
TWE				*e*S	Sn	16 03 25.0	-0.2
	baz=49						
TWC	Suao	1.06	47	P	Pn	16 03 12.4	+0.3
	baz=50						
TWC				S	Sn	16 03 26.3	+0.4
	baz=50						
TWG	Pinlang	1.07	176	*e*P	Pn	16 03 12.0	-0.2
TWG				*e*S	Sn	16 03 26.6	+0.4
TWG	Pinlang	1.07	176	⇓*i*P	Pn	16 03 12.4	+0.2
	baz=165						
TWG				*e*S	Sn	16 03 26.8	+0.6
	baz=165						
NCU	National Centr	1.09	9	*e*P	Pn	16 03 12.1	-0.5
	baz=10.0						
TAI1	Yung-k'ang	1.10	220	*e*P	Pn	16 03 12.4	-0.3
	baz=219						
ILA	Ilan	1.11	38	*e*P	Pn	16 03 12.8	0.0
	baz=27						
TTN	Taitung	1.14	173	*e*P	Pn	16 03 13.7	+0.4
	baz=172						
TATO	Taipei	1.17	22	*e*P	Pn	16 03 14.4	+0.8
TATO				*e*S	Sn	16 03 30.8	+2.1
TWM1	Shoushan	1.19	207	*e*P	Pn	16 03 14.1	+0.3
	baz=205						
SSD	Sandimen	1.19	197	*e*P	Pn	16 03 14.1	+0.3
	baz=179						
SSD				*e*S	Sn	16 03 30.1	+1.0
	baz=179						
SGLT	Jiouru	1.25	202	*e*P	Pn	16 03 15.3	+0.6
	baz=213						
TWS1	Kuangyinshan	1.26	18	*e*P	Pn	16 03 14.6	-0.4
	baz=5.0						
ECL	Taimali	1.29	182	⇓*i*P	Pn	16 03 15.6	+0.4
	baz=168						
PNG	Penghu	1.36	257	⇑P	Pn	16 03 15.0	-1.2
	baz=256						
NWF	Wu-fen Shan	1.38	31	*e*P	Pn	16 03 17.6	+1.2
	baz=16						
TWB1	Santiao Chiao	1.43	39	*e*P	Pn	16 03 18.5	+1.3
	baz=21						
EAST	Anshuo	1.51	185	P	Pn	16 03 18.7	+0.5
	baz=201						
SCZT	Fangliau	1.55	193	*e*P	Pn	16 03 18.8	-0.1
	baz=208						
LAY	Lan-yu	1.91	164	*e*P	Pn	16 03 23.5	-0.3
	baz=153						
QZH	Quanzhou	2.43	296	Pn	Pn	16 03 30.2	-0.8
QZH				Sn	Sn	16 03 57.4	-2.5
QZH				smax			
	comp=N,200nm,0.6s						
QZH				smax			
	comp=E,140nm,0.4s						

BEO 09 16:07:08.0±0.8, 44°.04N×19°.29E, h6km±6km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBLS	Lazići	0.19	154	*i* Pg	Pg	16 07 11.2	-0.6
BBLS				*e*Sg	Sg	16 07 15.9	+1.5
DIVS	Divibare	0.51	83	*e*Pg	Pg	16 07 16.4	-1.4
DIVS				*e*Sg	Sg	16 07 24.7	+0.3
DIVS	Divibare	0.51	83	*e*Pg	Pg	16 07 16.4	-1.4
TRUS	Trudelj	0.82	77	*e*Pg	Pg	16 07 22.9	-0.9
GRUS	Gruza	1.04	98	*e*Pg	Pg	16 07 27.7	-0.2
FRGS	Fruska Gora	1.18	18	*e*Pg	Pg	16 07 28.8	-1.8
FRGS				*e*Sg	Sg	16 07 45.6	-0.3

*ISCJB **09** 16:08:16.7±1.6, 24°.73S±0°.07×179°.74E±0°.09, h477km±19km, mb4.1/19, Error ellipse: s-maj=13.2km s-min=10.7km az=12.3*
*NEIC **09** 16:08:17.2±1.4, 24°.74S×179°.78E, h478km±17km, mb5.0/6, Error ellipse: s-maj=16.5km s-min=12.6km az=135.0*
*IDC **09** 16:08:20.4±1.5, 24°.80S×179°.69E, h504km±15km, mb3.6/14, mb1 3.8/15, mb1mx3.8/18, mbtmp3.6/15, Error ellipse: s-maj=17.0km s-min=12.1km az=151.0*
ISC 09 16:08:17.4±1.3, 24°.78S±0°.07×179°.77E±0°.09, h473km±16km, n51, σ1§03/42, mb4.1/19, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	13.43	38	P	P	16 11 10.2	-1.3
	6.4nm,0.3s,baz=49,slow=4.1,SNR=29						
AFI				S	S	16 13 26.7	-8.6
	0.9nm,0.3s,baz=30,slow=23,SNR=3.5						
AFI	Afiamalu	13.43	38	*e*P	P	16 11 09.9	-1.7
	66nm,0.9s						
AFI				*e*S	S	16 13 26.2	-9.0
URZ	Urewera	13.63	189	P	P	16 11 14.0	+0.7
	6.0nm,0.3s,baz=38,slow=1.5,SNR=34						
URZ				S	S	16 13 38.4	-0.2
	1.1nm,0.3s,baz=196,slow=22,SNR=17						
SNZO	South Karori	17.02	193	*e*P	P	16 11 48.6	-0.5
RPZ	Rata Peaks	20.19	199	P	P	16 12 19.5	+0.5
	9.9nm,0.5s,baz=24,slow=2.8,SNR=14						
ARMA	Armidale	25.53	251	*e*P	P	16 13 10.0	+2.8
CTA	Charters Tower	31.29	272	⇓*i*P	P	16 13 59.3	+1.6
	20nm,0.3s,mb5.0						
CTAO	Charters Tower	31.29	272	*e*P	P	16 13 59.1	+1.5
	31nm,0.5s,mb5.0						
STKA	Stephens Creek	34.21	249	*e*P	P	16 14 23.6	+1.1
	3.2nm,0.4s,mb4.1						
STKA	Stephens Creek	34.21	249	P	P	16 14 23.8	+1.3
	4.0nm,0.4s,mb4.2,baz=93,slow=12,SNR=30						
STKA	Stephens Creek	34.21	249	*e*P	P	16 14 19.3	-3.2
	1.1nm,0.7s,mb3.4						
COEN	Coen	36.06	280	*e*P	P	16 14 38.9	+0.8
	192nm,1.2s,mb5.4						
ASAR	Alice Springs	41.70	262	P	P	16 15 24.4	+0.5
	3.4nm,0.3s,mb4.2,baz=94,slow=7.0,SNR=297						
ASAR				ScP	ScP	16 20 12.1	-2.5
	1.2nm,1.1s,baz=128,slow=3.4,SNR=4.2						
ASAR				S	S	16 21 02.5	-3.4
	0.8nm,1.0s,baz=107,slow=13,SNR=5.1						
WB2	Warramunga Arr	42.14	267	*e*P	P	16 15 26.9	-0.5
WRAB	Tennant Creek	42.14	267	*e*P	P	16 15 26.2	-1.2
	26nm,0.8s,mb4.7						
WRA	Warramunga Arr	42.15	267	P	P	16 15 27.1	-0.4
	10nm,0.3s,mb4.7,baz=99,slow=6.8,SNR=833						
WRA				ScP	ScP	16 20 15.1	-1.4
	2.0nm,0.9s,baz=101,slow=3.7,SNR=6.7						
WRA				S	S	16 21 10.6	-1.9
	0.9nm,0.8s,baz=99,slow=13,SNR=4.5						
FORT	Forrest	45.82	250	*e*P	P	16 15 55.3	-0.6
	24nm,0.6s,mb4.8						
FORT	Forrest	45.82	250	*e*P	P	16 15 54.5	-1.5
	29nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	50.56	266	*e*P	P	16 16 32.1	+0.4
	20nm,0.7s,mb4.6						
FITZ	Fitzroy Crossi	50.56	266	P	P	16 16 32.2	+0.5
	9.8nm,0.6s,mb4.3,baz=117,slow=7.6,SNR=20						
SBA	Scott Base	53.49	183	*e*P	P	16 16 51.3	-0.6
	1.1nm,0.8s,mb3.2						
CASY	Casey	59.23	206	*e*P	P	16 17 31.3	-0.5
	12nm,0.9s,mb4.2						
KAPI	Kappang	60.75	278	P	P	16 17 40.9	-2.0
	2.7nm,0.5s,mb4.0,baz=207,slow=11,SNR=3.3						
MJAR	Matsushiro Arr	72.51	326	P	P	16 18 55.0	-0.3
	2.7nm,0.8s,mb3.8,baz=165,slow=6.2,SNR=6.0						
MAW	Mawson	76.86	201	P	P	16 19 20.1	+0.6
	2.1nm,0.6s,mb3.8,baz=87,slow=8.1,SNR=4.0						
KSRS	Korea Array	78.79	320	P	P	16 19 30.9	+0.6
	1.7nm,0.7s,mb3.7,baz=133,slow=6.1,SNR=7.4						
PETK	Petropavlovsk-	79.90	347	P	P	16 19 35.2	-0.6
	2.1nm,0.6s,mb3.9,baz=121,slow=8.3,SNR=7.4						
PETK	Petropavlovsk-	79.90	347	P	P	16 19 35.2	-0.6
VNA3	Neumayer Olymp	84.01	177	*e*	P	16 19 56.2	-0.5
VNA3	Neumayer Olymp	84.01	177	*e*	P	16 19 56.2	-0.5
MAIT	Maitri	84.33	184	*e*P	P	16 19 57.8	-0.5
MAIT				*e*E		16 20 38.9	
VNA2	Neumayer--Watz	84.42	178	*e*	P	16 19 58.5	-0.3
VNA2	Neumayer--Watz	84.42	178	*e*	P	16 19 58.5	-0.3
NVAR	Mina Array Bea	85.53	44	P	P	16 20 04.5	-0.2
	0.8nm,0.7s,mb3.4,baz=223,slow=7.4,SNR=4.3						
CMAR	Chiang Mai Arr	89.64	290	P	P	16 20 25.8	+1.4
	2.6nm,0.8s,mb4.1,baz=139,slow=3.3,SNR=16						
TXAR	Lajitas Array	91.07	58	P	P	16 20 31.9	+1.0
	0.7nm,0.7s,mb3.7,baz=209,slow=7.2,SNR=7.2						
PDAR	Pinedale Array	93.46	44	P	P	16 20 43.3	+1.8
	0.3nm,0.8s,mb3.4,baz=176,slow=1.4,SNR=2.8						
MKAR	Makanchi Array	112.59	312	SKP		16 28 45.4	
	0.2nm,0.5s,baz=108,slow=0.5,SNR=3.8						
BVAR	Borovoye Array	120.96	318	PKP	PKPdf	16 26 13.8	-1.3
	1.1nm,0.4s,baz=117,slow=1.4,SNR=12						
ARCES	ARCESS Array B	132.70	348	PKP	PKPdf	16 26 35.1	-1.8
	1.0nm,0.6s,baz=27,slow=3.0,SNR=7.9						
FINES	FINESS Array B	139.21	341	PKhKP		16 26 39.5	
	0.3nm,0.3s,baz=62,slow=6.5,SNR=5.6						
FINES				PKP	PKPdf	16 26 49.6	+0.4
	0.5nm,0.5s,baz=117,slow=2.6,SNR=3.7						
FINES				SKPbc	SKPbc	16 29 35.0	-4.5
	1.1nm,0.6s,baz=37,slow=4.8,SNR=5.8						
NOA	NORSAR Array B	142.91	351	PKhKP		16 26 52.4	
	1.8nm,0.8s,baz=15,slow=4.9,SNR=6.1						
IDID	Didziasalis	143.62	334	*e*P	PKPdf	16 26 55.1	-2.2
ISAL	Salakas	143.68	335	*e*P	PKPdf	16 26 55.3	-2.1
AKASG	Malin Array Be	145.59	326	PKPbc	PKPbc	16 27 00.7	-1.5
	1.7nm,0.4s,baz=45,slow=4.2,SNR=11						
BR131	Keskin Array S	147.94	306	*e*PKPbc	PKPbc	16 27 07.4	-1.4
BRTR	Keskin Array B	147.94	306	PKPbc	PKPbc	16 27 08.0	-0.9
	1.6nm,0.7s,baz=133,slow=3.7,SNR=11						
BRTR				PKPab	PKPab	16 27 12.8	-0.3

GSPH				*e*S	**Sn**	**16 11 30.4**	**-1.1**
KCP	**Kidapawan**	**0.92**	**311**	⇓*i*P	**Pn**	**16 11 16.5**	**+2.1**
KCP				*i* S	**Sn**	**16 11 34.2**	**+2.1**
BUKP	**Musuan**	**1.64**	**334**	*e*P	**Pn**	**16 11 21.1**	**-0.4**
BUKP				*e*S	**Sn**	**16 11 39.7**	**-5.2**
KAKA	**Kakadu**	**20.10**	**161**	*e*P	**P**	**16 15 13.7**	**0.0**
FITZ	**Fitzroy Crossi**	**24.34**	**180**	*e*P	**P**	**16 15 56.8**	**+1.1**
	4.7nm,1.2s,mb3.9						
FITZ	**Fitzroy Crossi**	**24.34**	**180**	P	**P**	**16 15 56.0**	**+0.3**
	1.7nm,0.4s,mb3.9,baz=16,slow=9.5,SNR=15						
WRAB	**Tennant Creek**	**27.49**	**162**	*e*P	**P**	**16 16 22.4**	**-1.6**
	1.2nm,0.5s,mb3.8						
ASAR	**Alice Springs**	**30.91**	**165**	P	**P**	**16 16 55.0**	**+0.8**
	1.2nm,0.4s,mb3.9,baz=343,slow=7.1,SNR=13						
STKA	**Stephens Creek**	**40.94**	**159**	P	**P**	**16 18 21.1**	**+1.6**
	1.6nm,0.4s,mb4.0,baz=334,slow=10,SNR=9.5						
MKAR	**Makanchi Array**	**54.85**	**325**	P	**P**	**16 20 05.0**	**-1.4**
	0.2nm,0.5s,mb3.1,baz=126,slow=8.1,SNR=5.7						

*IDC **09** 16:17:27.4±1.7,5.˚10N×93.˚34E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/24, mbtmp3.6/10, ML4.1/1, Error ellipse: s-maj=72.5km s-min=17.6km az=60.0*
*NEIC **09** 16:17:32.5±0.7,5.˚11N×93.˚37E, h35km, mb3.7/2, Error ellipse: s-maj=17.7km s-min=8.6km az=56.0*
*ISCJB **09** 16:17:36.0±5.1,5.˚3N±0.˚2×93.˚7E±0.˚2, h76km±42km, mb3.6/10, Error ellipse: s-maj=43.6km s-min=13.4km az=143.2*

ISC 09 16:17:37.2±4.6,5.˚3N±0.˚2×93.˚7E±0.˚2, h70km±38km, n13, σ0§43/14, mb3.6/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.93**	**90**	*e*Pn	**Pn**	**16 19 15.8**	**-0.4**
KULM				*e*Sn	**Sn**	**16 20 33.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.05**	**21**	Pn	**Pn**	**16 20 53.8**	**+0.8**
	0.3nm,0.3s,baz=217,slow=15,SNR=5.0						
MKAR	**Makanchi Array**	**42.50**	**348**	P	**P**	**16 25 25.6**	**0.0**
	0.5nm,0.6s,mb3.4,baz=167,slow=9.2,SNR=7.1						
SONM	**Songino Array**	**43.76**	**12**	P	**P**	**16 25 35.4**	**-0.4**
	0.6nm,0.7s,mb3.5,baz=201,slow=7.9,SNR=4.1						
KURK	**Kurchatov**	**46.99**	**347**	P	**P**	**16 26 00.8**	**-0.5**
	0.8nm,0.5s,mb3.7,baz=172,slow=6.9,SNR=9.4						
WRA	**Warramunga Arr**	**47.18**	**123**	P	**P**	**16 26 03.8**	**+0.6**
	0.9nm,0.6s,mb3.7,baz=301,slow=9.2,SNR=12						
WRAB	**Tennant Creek**	**47.19**	**123**	*e*P	**P**	**16 26 03.6**	**+0.3**
	1.0nm,0.6s,mb3.7						
ASAR	**Alice Springs**	**48.65**	**128**	P	**P**	**16 26 14.5**	**0.0**
	0.2nm,0.5s,mb3.3,baz=305,slow=7.8,SNR=7.5						
ZALV	**Zalesovo Beam**	**49.04**	**353**	P	**P**	**16 26 17.6**	**+0.6**
	0.4nm,0.4s,mb3.7,baz=141,slow=5.5,SNR=2.9						
BVAR	**Borovoye Array**	**51.28**	**342**	P	**P**	**16 26 33.7**	**-0.2**
	0.4nm,0.6s,mb3.6,baz=142,slow=7.3,SNR=3.4						
STKA	**Stephens Creek**	**58.69**	**132**	P	**P**	**16 27 28.1**	**+0.3**
	0.6nm,0.6s,mb3.8,baz=12,slow=9.3,SNR=2.8						
STKA	**Stephens Creek**	**58.69**	**132**	*e*P	**P**	**16 27 27.4**	**-0.4**
	0.2nm,0.8s,mb3.2						
ARCES	**ARCESS Array B**	**77.53**	**340**	P	**P**	**16 29 24.6**	**-0.5**
	1.4nm,0.9s,mb3.7,baz=93,slow=7.3,SNR=5.7						

*ISCJB **09** 16:40:31.9±0.6,51.˚47N±0.˚03×16.˚15E±0.˚04, h0km, Error ellipse: s-maj=4.6km s-min=2.9km az=25.0*
*IPEC **09** 16:40:33.8±0.3,51.˚51N×16.˚26E, h0km, ML2.1/4, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*WAR **09** 16:40:35.3,51.˚47N×16.˚14E, ML2.5, Mining Induced*
*PRU **09** 16:40:35.7,51.˚40N×16.˚13E, h0km*
*CSEM **09** 16:40:35.1±0.4,51.˚43N×16.˚17E, h2km, ML2.9/4, Error ellipse: s-maj=6.6km s-min=4.6km az=175.0*

ISC 09 16:40:33.6±0.6,51.˚48N±0.˚03×16.˚16E±0.˚04, h0km, n23, σ1§02/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**172**	*e*Pg	**Pg**	**16 40 46.9**	**+1.1**
KSP				*e*Sg	**Sg**	**16 40 54.3**	**+0.1**
KSP	**Ksiaz**	**0.64**	**172**	*e*Pg	**Pg**	**16 40 46.6**	**+0.7**
	baz=358						
KSP				*e*Sg	**Sg**	**16 40 55.2**	**+1.0**
UPC	**Upice**	**0.98**	**186**	*e*PG	**Pg**	**16 40 53.0**	**+0.7**
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*PG	**Pg**	**16 40 55.7**	**+0.4**
DPC				*e*SG	**Sg**	**16 41 09.2**	**-0.8**
	comp=Z,28nm,0.6s						
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*Pg	**Pg**	**16 40 55.6**	**+0.3**
	baz=358						
DPC				*e*Sg	**Sg**	**16 41 10.2**	**+0.2**
	baz=358						
PVCC	**Panska Ves**	**1.38**	**227**	*e*PG	**Pg**	**16 41 00.8**	**+0.7**
PVCC				*e*SG	**Sg**	**16 41 19.0**	**+1.0**
	comp=Z,85nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**227**	*e*Pg	**Pg**	**16 41 00.5**	**+0.4**
	baz=47						
PVCC				*e*Sg	**Sg**	**16 41 19.1**	**+1.1**
	baz=47						
BRG	**Berggiesshubel**	**1.52**	**247**	PG	**Pg**	**16 41 03.1**	**+0.4**
BRG				SG	**Sg**	**16 41 23.4**	**+1.0**
	comp=Z,33nm,0.6s						
PRU	**Pruhonice**	**1.81**	**215**	*e*PG	**Pg**	**16 41 08.3**	**0.0**
PRU				*e*SG	**Sg**	**16 41 31.4**	**-0.4**
	comp=Z,28nm,0.3s						
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**16 41 07.5**	**+0.1**
	baz=335						
MORC				*e*Sg	**Sg**	**16 41 34.0**	**-1.2**
	comp=Z,13nm,0.4s,baz=335						
CLL	**Collm**	**1.98**	**266**	*e*Pg	**Pg**	**16 41 10.0**	**-1.6**
CLL				*e*		16 41 14.0	
CLL				*e*Sg	**Sg**	**16 41 38.0**	**+0.7**
	comp=Z,13nm,0.6s						
OKC	**Ostrava-Krasne**	**2.07**	**142**	*e*SG	**Sg**	**16 41 39.2**	**-1.0**
VRAC	**Vranov**	**2.19**	**173**	*e*Pn	**Pn**	**16 41 11.7**	**+0.5**
	baz=354						
VRAC				*e*Sg	**Sg**	**16 41 43.0**	**-0.9**
	comp=Z,10nm,0.3s,baz=354						
TREC	**Trest**	**2.23**	**191**	*e*PG	**Pg**	**16 41 15.6**	**-0.7**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**16 41 15.4**	**+1.0**
	baz=358						
KRUC				*e*Sg	**Sg**	**16 41 50.5**	**-0.9**
	comp=Z,5.0nm,0.2s,baz=358						
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**16 41 24.4**	**+0.5**
OJC				*e*Sg	**Sg**	**16 41 58.8**	**+0.8**
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**16 41 24.4**	**+0.5**
OJC				*e*Sg	**Sg**	**16 41 58.8**	**+0.8**
NKC	**Novy Kostel**	**2.66**	**243**	*e*PG	**Pg**	**16 41 24.4**	**-0.2**
NKC				*e*SG	**Sg**	**16 41 59.0**	**0.0**
	comp=Z,28nm,0.4s						
JAVC	**Velka Javorina**	**2.80**	**159**	*e*Pn	**Pn**	**16 41 22.0**	**+2.5**
JAVC				*e*Sg	**Sg**	**16 42 04.2**	**+0.8**
	comp=Z,7.0nm,0.6s						
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PN	**Pn**	**16 41 21.4**	**+0.8**
KHC				*e*PG	**Pg**	**16 41 26.8**	**-1.8**
KHC				*e*SN	**Sn**	**16 41 53.0**	**-2.8**
KHC				*e*SG	**Sg**	**16 42 04.0**	**-1.9**
	comp=Z,7.6nm,0.4s						
MOX	**Moxa**	**2.99**	**256**	*e*PG	**Pg**	**16 41 31.2**	**+0.4**
MOX				*e*SG	**Sg**	**16 42 10.4**	**+1.0**
BSD	**Bornholm Skovb**	**3.72**	**349**	*i* P	**Pn**	**16 41 31.6**	**-0.6**
BSD				*i* S	**Sn**	**16 42 14.5**	**-2.1**
BSD	**Bornholm Skovb**	**3.72**	**349**	*i* P	**Pn**	**16 41 31.6**	**-0.6**
	SNR=49						
BSD				*i* S	**Sn**	**16 42 14.5**	**-2.1**
	comp=Z,2.1nm,0.6s,SNR=49						

*ISCJB **09** 16:45:59.4±1.4,38.˚07N±0.˚07×20.˚03E±0.˚07, h6km±6km, Error ellipse: s-maj=12.3km s-min=7.1km az=30.6*
*CSEM **09** 16:46:00.6±0.3,37.˚98N×20.˚08E, h5km, ML3.0/2, Error ellipse: s-maj=6.4km s-min=5.4km az=34.0*
*THE **09** 16:46:02.5,37.˚97N×20.˚22E, h1km±2km, ML3.0/2, Error ellipse: s-maj=4.8km s-min=1.2km az=295.0*
*ATH **09** 16:46:07.6,38.˚28N×20.˚64E, h5km, MD3.5/4*

ISC 09 16:46:00.4±1.5,38.˚03N±0.˚07×20.˚07E±0.˚07, h5km±6km, n23, σ0§59/36, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.44**	**70**	*e*PG	**Pg**	**16 46 10.0**	**+1.1**
VLS	**Valsamata**	**0.44**	**70**	P	**Pg**	**16 46 09.6**	**+0.7**
VLS				S	**Sg**	**16 46 14.5**	**-0.1**
VLS	**Valsamata**	**0.44**	**70**	P	**Pg**	**16 46 09.6**	**+0.7**
VLS	**Valsamata**	**0.44**	**70**	*e*Pg	**Pg**	**16 46 10.0**	**+1.1**
VLS				S	**Sg**	**16 46 14.5**	**-0.1**
KFL	**Anninata**	**0.58**	**82**	P	**Pg**	**16 46 11.5**	**0.0**
KFL				S	**Sg**	**16 46 18.4**	**-0.6**
RLS	**Riolos of Patr**	**1.11**	**88**	*e*PB	**Pg**	**16 46 21.4**	**-0.2**
RLS	**Riolos of Patr**	**1.11**	**88**	*e*Pb	**Pg**	**16 46 21.4**	**-0.2**
LAKA	**Lakka**	**1.52**	**81**	P	**Pn**	**16 46 28.4**	**+0.1**
LAKA				S	**Sn**	**16 46 49.0**	**+0.6**
LAKA	**Lakka**	**1.52**	**81**	P	**Pn**	**16 46 28.4**	**+0.1**
LAKA				S	**Sn**	**16 46 49.0**	**+0.6**
TRIZ	**Trizonia**	**1.62**	**77**	P	**Pn**	**16 46 29.2**	**-0.3**
TRIZ				S	**Sn**	**16 46 51.0**	**+0.3**
TRIZ	**Trizonia**	**1.62**	**77**	P	**Pn**	**16 46 29.2**	**-0.3**
TRIZ				S	**Sn**	**16 46 51.0**	**+0.3**
EVR	**Evrytania**	**1.63**	**57**	*e*PG	**Pn**	**16 46 28.5**	**-1.2**
EVR	**Evrytania**	**1.63**	**57**	*e*Pg	**Pn**	**16 46 28.5**	**-1.2**
KEK	**Kerkira**	**1.69**	**353**	*e*PB	**Pg**	**16 46 37.8**	**+4.9**
KEK	**Kerkira**	**1.69**	**353**	*e*Pb	**Pg**	**16 46 37.8**	**+4.9**
ITM	**Ithomi**	**1.71**	**119**	P	**Pn**	**16 46 30.6**	**-0.1**
ITM				S	**Sn**	**16 46 52.1**	**-0.8**
ITM	**Ithomi**	**1.71**	**119**	P	**Pn**	**16 46 30.6**	**-0.1**
ITM				S	**Sn**	**16 46 52.1**	**-0.8**
PYL	**PYLOS**	**1.75**	**130**	P	**Pn**	**16 46 31.4**	**0.0**
PYL	**PYLOS**	**1.75**	**130**	P	**Pn**	**16 46 31.4**	**0.0**
GUR	**Goura**	**1.80**	**92**	P	**Pn**	**16 46 32.9**	**+0.8**
GUR				S	**Sn**	**16 46 55.8**	**+0.5**
GUR	**Goura**	**1.80**	**92**	P	**Pn**	**16 46 32.9**	**+0.8**
GUR				S	**Sn**	**16 46 55.8**	**+0.5**
STON	**Ston**	**5.16**	**340**	*e*Pn	**Pn**	**16 47 19.1**	**+0.8**
STON				Sn	**Sn**	**16 48 17.5**	**-0.7**
STON	**Ston**	**5.16**	**340**	*e*Pn	**Pn**	**16 47 19.1**	**+0.8**
STON				Sn	**Sn**	**16 48 17.5**	**-0.7**

MAN 09 16:59:08,14.˚13N×123.˚61E, h1km, mb4.5, ML3.4, MS3.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.74**	**135**	*e*P	Pg	16 59 23.3	+1.0
PVCP				*e*S	Sg	16 59 29.9	-2.1
GQP	**Guinayangan**	**1.15**	**259**	⇓*e*P	Pg	16 59 28.2	-1.9
GQP				*i* S	Sg	16 59 44.0	-1.1
AUQP	**San Andres**	**1.21**	**229**	*e*P	Pg	16 59 31.9	+0.6
AUQP				*e*S	Sg	16 59 45.7	-1.3
POLP	**Polilio Island**	**1.73**	**290**	*e*P	Pn	16 59 39.8	+0.6
BOAC	**Boac**	**1.84**	**249**	*e*P	Pn	16 59 41.7	+0.9
CNP	**Catarman**	**1.91**	**147**	*e*P	Pn	16 59 42.7	+1.0
CNP				*e*S	Sn	17 00 07.7	+1.4
BALP	**Baler**	**2.54**	**309**	*e*P	Pn	16 59 50.4	0.0
BALP				*e*S	Sn	17 00 17.1	-4.9
SJMP	**San Jose**	**2.94**	**236**	*e*P	Pn	16 59 57.7	+1.8
CAUP	**Cauayan**	**3.29**	**329**	*e*P	Pn	17 00 01.8	+1.1
CAUP				*e*S	Sn	17 00 25.2	-15
APYP	**Conner**	**4.36**	**329**	*e*P	Pn	17 00 18.5	+3.1
ABRA	**Dolores**	**4.48**	**322**	*e*P	Pn	17 00 19.0	+2.0

*ISCJB **09** 17:04:55.5±0.5, 67.˚09N±0.˚03×20.˚9E±0.˚1, h0km, Error ellipse: s-maj=5.8km s-min=3.7km az=13.6*
*UPP **09** 17:04:56.0, 67.˚08N×20.˚93E, h0km, ML2.1, Mining explosion.*
*CSEM **09** 17:04:56.9±0.3, 67.˚08N×21.˚02E, h2km, ML2.1, Error ellipse: s-maj=7.6km s-min=4.3km az=103.0, Mining explosion.*
*HEL **09** 17:04:56.8±0.1, 67.˚08N×20.˚95E, h0km, ML2.1(UPP), Explosion*
*IDC **09** 17:04:57.3±0.9, 67.˚01N×21.˚52E, h0km, mb1 2.7/4, mb1mx2.7/25, mbtmp2.7/4, ML2.4/4, Error ellipse: s-maj=18.7km s-min=8.9km az=109.0*

ISC 09 17:04:56.6±0.5, 67.˚09N±0.˚03×20.˚97E±0.˚10, h0km, n39, σ0§81/57, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.54**	**47**	*i* P	**Pg**	**17 05 06.8**	**-0.1**
MASU	**Masugnsbyn**	**0.54**	**47**	P	**Pg**	**17 05 06.8**	**-0.1**
ERTU	**Ertsjaerv**	**0.73**	**138**	*i* P	**Pg**	**17 05 09.6**	**-0.9**
ERTU	**Ertsjaerv**	**0.73**	**138**	P	**Pg**	**17 05 09.6**	**-0.9**
PAJU	**Pajala**	**0.84**	**94**	*i* P	**Pg**	**17 05 11.9**	**-0.8**
PAJU	**Pajala**	**0.84**	**94**	P	**Pg**	**17 05 11.9**	**-0.8**
KUA	**Kurravaara**	**0.90**	**345**	*e*P	**Pg**	**17 05 12.8**	**-0.9**
LANU	**Lannavaara**	**1.04**	**22**	*e*P	**Pg**	**17 05 15.3**	**-1.1**
LANU	**Lannavaara**	**1.04**	**22**	P	**Pg**	**17 05 15.4**	**-1.0**
KALU	**Kalix**	**1.57**	**141**	*e*P	**Pn**	**17 05 24.7**	**-0.9**
KALU	**Kalix**	**1.57**	**141**	P	**Pn**	**17 05 24.6**	**-1.0**
SJUU	**Sjulsmark**	**1.61**	**171**	*e*P	**Pn**	**17 05 25.4**	**-0.9**
SJUU	**Sjulsmark**	**1.61**	**171**	P	**Pn**	**17 05 25.4**	**-0.8**
HEF	**Hetta**	**1.67**	**37**	*e*P	**Pn**	**17 05 26.6**	**-0.4**
HEF				*e*S	**Sn**	**17 05 48.5**	**-0.6**
HEF	**Hetta**	**1.67**	**37**	P	**Pn**	**17 05 26.6**	**-0.4**
HEF				S	**Sn**	**17 05 48.4**	**-0.7**
LILU	**Lilltraesk**	**1.87**	**195**	*e*P	**Pn**	**17 05 29.4**	**-0.3**
LILU	**Lilltraesk**	**1.87**	**195**	P	**Pn**	**17 05 29.5**	**-0.3**
KIF	**Kilpisjarvi**	**1.92**	**358**	*e*P	**Pn**	**17 05 31.8**	**+1.4**
KIF				*e*S	**Sn**	**17 05 57.0**	**+1.8**
KIF	**Kilpisjarvi**	**1.92**	**358**	P	**Pn**	**17 05 31.8**	**+1.3**
KIF				S	**Sn**	**17 05 57.0**	**+1.7**
RNF	**Rovaniemi**	**2.05**	**101**	*e*P	**Pn**	**17 05 33.3**	**+1.0**
RNF				*e*S	**Sn**	**17 05 59.3**	**+0.8**
RNF	**Rovaniemi**	**2.05**	**101**	P	**Pn**	**17 05 33.2**	**+0.9**
RNF				S	**Sn**	**17 05 59.3**	**+0.8**
SGF	**Sodankyl**	**2.19**	**78**	*e*P	**Pn**	**17 05 34.1**	**0.0**
SGF				*e*S	**Sn**	**17 06 02.5**	**+0.7**
SGF	**Sodankyl**	**2.19**	**78**	P	**Pn**	**17 05 34.0**	**-0.1**
SGF				S	**Sn**	**17 06 02.5**	**+0.7**
BURU	**Burvik**	**2.53**	**176**	*e*P	**Pn**	**17 05 39.1**	**+0.3**
BURU	**Burvik**	**2.53**	**176**	P	**Pn**	**17 05 39.0**	**+0.2**
SVAU	**Svanoeiden**	**2.67**	**193**	*e*P	**Pn**	**17 05 40.8**	**0.0**
SVAU	**Svanoeiden**	**2.67**	**193**	P	**Pn**	**17 05 40.8**	**0.0**
OUL	**Oulu**	**2.84**	**133**	*e*P	**Pn**	**17 05 44.7**	**+1.5**
OUL				*e*S	**Sn**	**17 06 18.7**	**+0.7**
OUL	**Oulu**	**2.84**	**133**	P	**Pn**	**17 05 44.6**	**+1.5**
OUL				S	**Sn**	**17 06 18.7**	**+0.7**
ARCES	**ARCESS Array B**	**2.98**	**32**	Pn	**Pn**	**17 05 45.4**	**+0.5**
	0.3nm,0.3s,baz=210,slow=14,SNR=58						
ARCES				Sn	**Sn**	**17 06 20.6**	**-0.6**
	0.4nm,0.3s,baz=214,slow=22,SNR=5.7						
UMAU	**Umeaa**	**3.23**	**182**	*e*P	**Pn**	**17 05 48.3**	**-0.1**
UMAU	**Umeaa**	**3.23**	**182**	P	**Pn**	**17 05 48.3**	**-0.1**
VRF	**Varrio**	**3.40**	**75**	*e*P	**Pn**	**17 05 51.1**	**+0.4**
VRF				*e*S	**Sn**	**17 06 30.2**	**-1.4**
VRF	**Varrio**	**3.40**	**75**	P	**Pn**	**17 05 51.1**	**+0.4**
VRF				S	**Sn**	**17 06 30.2**	**-1.4**
KEV	**Kevo**	**3.48**	**37**	*e*P	**Pn**	**17 05 52.8**	**+0.9**
KEV				*e*S	**Sn**	**17 06 33.5**	**-0.2**
KEV				*e*SG	**Sg**	**17 06 44.1**	**-4.2**
KEV	**Kevo**	**3.48**	**37**	P	**Pn**	**17 05 52.8**	**+0.9**
KEV				S	**Sn**	**17 06 33.4**	**-0.3**
KEV				Sg	**Sg**	**17 06 44.0**	**-4.2**
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**17 06 28.2**	**+0.5**
	0.2nm,0.3s,baz=348,slow=13,SNR=7.1						
FINES				Sn	**Sn**	**17 07 31.7**	**-6.3**
	0.1nm,0.3s,baz=352,slow=24,SNR=2.2						
NOA	**NORSAR Array B**	**7.42**	**220**	Pn	**Pn**	**17 06 45.5**	**-0.5**
	0.1nm,0.3s,baz=76,slow=2.2,SNR=2.7						
HFS	**Hagfors**	**7.70**	**208**	Pn	**Pn**	**17 06 49.4**	**-0.3**
	0.2nm,0.3s,baz=20,slow=13,SNR=6.5						

*NEIC **09** 17:11:41.6, 18.˚66N×68.˚52W, h165km, MD3.6(RSPR), After RSPR.*

RSPR 09 17:11:41.6, 18.˚66N×68.˚52W, h165km±2km, MD3.6/12, MD3.6/12, 12C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.35**	**98**	⇑*e*P	**Pn**	17 12 11.5	+0.7
AGPR				*e*S	Sn	17 12 33.4	+0.2
CRPR	**Cabo Rojo, PR**	**1.49**	**116**	⇑*e*P	**Pn**	17 12 11.3	-0.8
LRS	**Lares**	**1.63**	**103**	⇑*e*P	Pn	17 12 13.9	+0.3
LRS				*e*S	Sn	17 12 39.0	+0.8
GBPR	**Guanica, Bosqu**	**1.70**	**113**	⇑*e*P	Pn	17 12 14.7	+0.3
GBPR				*e*S	Sn	17 12 41.5	+2.0
AOPR	**Arecibo Observ**	**1.70**	**100**	⇑*e*P	Pn	17 12 15.2	+0.8
AOPR				*e*S	Sn	17 12 40.5	+1.0
CELP	**Cerrillos**	**1.93**	**107**	⇑*e*P	Pn	17 12 17.0	+0.2
CELP				*e*S	Sn	17 12 44.8	+0.8
SJG	**San Juan**	**2.31**	**103**	⇑*e*P	Pn	17 12 21.7	+0.5
CPD	**Cerro la Pandu**	**2.55**	**104**	⇑*e*P	Pn	17 12 24.0	-0.1
CPD				*e*S	Sn	17 12 57.3	+0.4
CBYP	**Canovanas**	**2.56**	**98**	⇑*e*P	Pn	17 12 24.0	-0.1
HUMP	**Col San Antoni**	**2.58**	**101**	⇑*e*P	Pn	17 12 24.5	+0.1
HUMP				*e*S	Sn	17 12 57.7	+0.1
SDDR	**Presa de Saban**	**2.64**	**277**	*e*Pn	Pn	17 12 22.6	-2.6
SDDR				*e*Sn	Sn	17 12 57.4	-1.4
MTP	**Monte Pirata**	**2.87**	**101**	⇑*e*P	Pn	17 12 28.3	+0.4
STVI	**Saint Thomas**	**3.40**	**95**	⇑*e*P	Pn	17 12 35.4	+0.9

*ISCJB **09** 17:23:39.5±0.4, 39.˚13N±0.˚03×107.˚59W±0.˚04, h0km, Error ellipse: s-maj=5.5km s-min=3.6km az=146.6*
*NEIC **09** 17:23:41.6±0.6, 39.˚09N×107.˚36W, h1km, ML3.1, Error ellipse: s-maj=9.1km s-min=7.3km az=193.0, Suspected Mining induced.*
NEIC Probable coal bump.
*IDC **09** 17:23:43.1±1.7, 39.˚44N×105.˚40W, h0km, mb2.9/1, mb1 3.4/5, mb1mx3.3/28, mbtmp3.1/5, ML3.3/4, Error ellipse: s-maj=36.9km s-min=11.6km az=65.0*

ISC 09 17:23:41.0±0.4, 39.˚10N±0.˚03×107.˚44W±0.˚04, h0km, n42, σ1§52/53, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCO	**Snowmass**	**0.37**	**77**	*e*Pg	**Pg**	**17 23 48.5**	**+0.4**
SMCO				*e*Sg	**Sg**	**17 23 57.3**	**+4.5**
ISCO	**Idaho Springs**	**1.57**	**63**	*e*Pn	**Pn**	**17 24 11.8**	**+1.6**
SDCO	**Great Sand Dun**	**2.03**	**131**	*e*Pn	**Pn**	**17 24 15.8**	**-0.6**
MVCO	**Mesa Verde**	**2.06**	**204**	*e*Pn	**Pn**	**17 24 16.6**	**-0.3**
SRU	**San Rafael**	**2.40**	**271**	*e*Pn	**Pn**	**17 24 23.8**	**+2.2**
RWWY	**Rawlins**	**2.59**	**4**	*e*Pn	**Pg**	**17 24 29.5**	**-1.2**
PHWY	**Pilot Hill**	**2.67**	**34**	*e*Pn	**Pn**	**17 24 23.4**	**-1.9**
TMUT	**Trail Mountain**	**2.94**	**275**	*e*Pn	**Pn**	**17 24 32.1**	**+3.2**
DAU	**Daniels Canyon**	**3.22**	**295**	*e*Pn	**Pn**	**17 24 35.7**	**+2.8**
JLU	**Jordanelle**	**3.44**	**297**	*e*Pn	**Pn**	**17 24 37.0**	**+1.2**
NLU	**North Lily Min**	**3.69**	**285**	*e*Pn	**Pn**	**17 24 38.3**	**-0.9**
MSU	**Marysvale**	**3.75**	**263**	*e*Pn	**Pn**	**17 24 43.5**	**+3.5**
PDAR	**Pinedale Array**	**4.00**	**337**	Pn	**Pg**	**17 24 57.4**	**-0.3**
	0.6nm,0.3s,baz=146,slow=16,SNR=27						
PDAR				Sn	**Sg**	**17 25 51.2**	**+1.6**
	0.1nm,0.3s,baz=175,slow=22,SNR=2.5						
HWUT	**Hardware Ranch**	**4.03**	**310**	*e*Pn	**Pn**	**17 24 45.6**	**+1.7**
HWUT				*e*Pg	**Pg**	**17 24 57.0**	**-1.2**
ANMO	**Albuquerque**	**4.21**	**169**	Pn	**Pb**	**17 24 55.8**	**-0.2**
	0.3nm,0.3s,baz=357,slow=15,SNR=8.5						
ANMO				Sn	**Sb**	**17 25 47.8**	**+0.4**
	0.1nm,0.3s,baz=261,slow=19,SNR=2.6						
ANMO	**Albuquerque**	**4.21**	**169**	Pn	**Pn**	**17 24 42.6**	**-3.8**
ANMO				Sn	**Sb**	**17 25 47.8**	**+0.4**
DUG	**Dugway**	**4.29**	**286**	*e*Pn	**Pn**	**17 24 48.6**	**+1.1**
BGU	**Big Grassy Mou**	**4.67**	**295**	*e*Pn	**Pn**	**17 24 53.9**	**+1.2**
WUAZ	**Wupatki**	**4.76**	**223**	*e*Pn	**Pn**	**17 24 54.2**	**+0.3**
WUAZ				*e*Pg	**Pg**	**17 25 06.0**	**-6.1**
WUAZ				*e*Sg	**Sg**	**17 26 06.1**	**-7.7**
LPM	**Los Pinos Moun**	**4.82**	**172**	*e*Pn	**Pg**	**17 25 08.4**	**-5.0**
HVU	**Hansel Valley**	**4.88**	**305**	Pn	**Pn**	**17 24 51.2**	**-4.3**
HVU				*e*Sg	**Sg**	**17 26 16.9**	**-0.6**
ARUT	**Antelope Range**	**4.89**	**256**	*e*Pn	**Pn**	**17 24 54.0**	**-1.8**
CCUT	**Cedar City**	**4.91**	**254**	*e*Pn	**Pn**	**17 24 59.2**	**+3.2**
LENM	**Lemitar**	**4.94**	**176**	Pn	**Pn**	**17 24 56.0**	**-0.4**
LENM				*e*Pg	**Pg**	**17 25 10.2**	**-5.4**
REDW	**Red Top Meadow**	**4.98**	**330**	*e*Pn	**Pn**	**17 24 57.1**	**+0.1**
	24nm,0.9s						
BNM	**Barren Site**	**4.98**	**172**	*e*Pb	**Pb**	**17 25 07.7**	**-1.3**
LOHW	**Long Hollow**	**5.10**	**333**	*e*Pn	**Pn**	**17 25 01.4**	**+2.7**
TPAW	**Teton Pass**	**5.12**	**330**	*e*Pn	**Pn**	**17 24 49.1**	**-10**
RRI2	**Red Ridge**	**5.16**	**327**	*e*Pn	**Pn**	**17 24 54.4**	**-5.0**
IMW	**Indian Meadow**	**5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
JFK	Kawauchi	1.60	325	P	Pn	17 41 20.8	-0.9
BSO1	Boso 1	1.65	212	P	Pn	17 41 22.2	-0.2
BSO1				S	Sn	17 41 43.7	+0.7
BSO3	Boso 3	1.77	225	P	Pn	17 41 23.9	-0.1
BSO3				eS	Sn	17 41 44.0	-2.0
JFT	Otama	1.99	317	P	Pn	17 41 27.3	+0.2
JMM	Marumori	2.05	332	P	Pn	17 41 27.1	-0.9
JAG	Ashikaga	2.11	281	P	Pn	17 41 28.4	-0.4
JFY	Yanaizu	2.30	306	P	Pn	17 41 32.0	+0.7
JOD2	Odawara 2	2.52	252	P	Pn	17 41 34.8	+0.4
JOD2				S	Sn	17 42 05.3	+0.6
JRY	Ryogami san	2.53	270	P	Pn	17 41 34.4	-0.2
JYN	Shimob	2.89	260	P	Pn	17 41 40.2	+0.8
JMK	Ichinoseki	2.96	348	P	Pn	17 41 40.1	-0.3
MJAR	Matsushiro Arr	3.12	280	Pn	Pn	17 41 43.3	+0.7
	7.1nm,0.3s,baz=252,slow=2.1,SNR=70						
MAJO	Matsushiro	3.12	280	ePn	Pn	17 41 42.9	+0.2
MAT	Matsushiro	3.12	280	P	Pn	17 41 43.4	+0.7
MAT				S	Sn	17 42 18.5	-1.0
JHJ	Hachijo jima 2	3.47	213	Pn	Pn	17 41 46.2	-1.3
	23nm,0.3s,baz=20,slow=14,SNR=11						
JHJ				Sn	Sn	17 42 26.4	-1.7
	35nm,0.3s,baz=81,slow=23,SNR=7.6						
ASAJ	Asahikawa	8.06	3	Pn	Pn	17 42 48.4	-2.1
	1.0nm,0.3s,baz=128,slow=19,SNR=11						
ASAJ				Sn	Sn	17 44 15.8	-5.2
	0.1nm,0.3s,baz=252,slow=20,SNR=2.5						
KSRS	Korea Array	11.40	281	LR	LR	17 47 54.0	
	comp=Z,18nm,19.0s,baz=85,slow=37						
ENH	Enshi	27.76	267	P	P	17 46 40.8	-1.3
	3.5nm,0.7s,mb4.1						
SONM	Songino Array	28.74	305	P	P	17 46 51.5	+0.9
	1.0nm,0.6s,mb3.7,baz=110,slow=8.2,SNR=6.5						
GTA	Gaotai	33.33	289	eP	P	17 47 32.7	+1.5
GTA				pP	pP	17 47 40.4	+3.6
GTA				sP	sP	17 47 45.0	+6.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ZALV	Zalesovo Beam	42.94	313	P	P	17 48 52.7	+0.9
	comp=Z,0.4nm,0.4s,mb3.5,baz=127,slow=9.3,SNR=2.5						
MKAR	Makanchi Array	45.06	303	P	P	17 49 08.9	-0.1
	comp=Z,0.5nm,0.6s,mb3.5,baz=89,slow=8.1,SNR=6.6						
INK	Inuvik	55.03	27	P	P	17 50 24.8	+0.5
	comp=Z,0.5nm,0.6s,mb3.7,baz=224,slow=5.7,SNR=3.5						
WRA	Warramunga Arr	56.17	189	P	P	17 50 33.8	+0.8
	comp=Z,0.1nm,0.4s,mb3.2,baz=5.4,slow=7.3,SNR=3.5						
ASAR	Alice Springs	59.90	189	P	P	17 51 00.6	+1.5
	comp=Z,0.1nm,0.5s,mb3.1,baz=13,slow=8.6,SNR=3.7						

NEIC 09 17:47:11.8±4.0, 5.66S×145.82E, h130km±32km, mb4.6/3, Error ellipse: s-maj=34.3km s-min=20.0km az=223.0
ISCJB 09 17:47:14.3±4.1, 5.9S±0.2×145.6E±0.2, h144km±35km, mb3.8/4, Error ellipse: s-maj=37.6km s-min=23.4km az=153.6
IDC 09 17:47:17.2±9.8, 5.85S×145.82E, h175km±81km, mb3.1/4, mb1 3.4/6, mb1mx3.1/17, mbtmp3.2/6, Error ellipse: s-maj=63.1km s-min=33.7km az=54.0
ISC 09 17:47:14.4±4.3, 5.9S±0.2×145.6E±0.2, h128km±35km, n17, σ0.89/17, mb3.8/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
COEN	Coen	8.36	196	ePn	Pn	17 49 12.3	-0.5
	128nm,0.4s						
COEN				eSn	Sn	17 50 44.7	-1.0
CTA	Charters Tower	14.13	177	eP	Pn	17 50 30.6	+1.7
	3.0nm,0.3s						
CTA	Charters Tower	14.13	177	P	Pn	17 50 29.9	+0.9
	1.0nm,0.3s,baz=350,slow=13,SNR=14						
CTAO	Charters Tower	14.13	177	ePn	Pn	17 50 30.1	+1.2
	10.0nm,0.8s						
KAKA	Kakadu	14.63	241	eP	Pn	17 50 36.8	+1.6
	14nm,0.4s						
KAKA	Kakadu	14.63	241	ePn	Pn	17 50 36.5	+1.3
	39nm,0.5s						
WRAB	Tennant Creek	17.72	217	eP	Pn	17 51 13.2	0.0
WB2	Warramunga Arr	17.73	217	eP	Pn	17 51 12.8	-0.6
WRA	Warramunga Arr	17.74	217	P	Pn	17 51 13.3	-0.1
	0.3nm,0.3s,baz=39,slow=11,SNR=24						
WRA				PcP	PcP	17 55 41.1	-3.1
	0.1nm,0.3s,baz=23,slow=2.0,SNR=5.0						
ASAR	Alice Springs	20.95	211	P	P	17 51 48.2	+1.0
	0.7nm,0.6s,baz=25,slow=14,SNR=15						
FITZ	Fitzroy Crossi	22.94	236	eP	P	17 52 08.8	+1.1
	4.5nm,0.5s,mb4.2						
FITZ	Fitzroy Crossi	22.94	236	P	P	17 52 08.5	+0.8
	2.4nm,0.5s,mb3.9,baz=72,slow=11,SNR=10						
STKA	Stephens Creek	26.12	188	P	P	17 52 36.1	-0.4
	0.5nm,0.4s,mb3.5,baz=358,slow=13,SNR=3.0						
STKA	Stephens Creek	26.12	188	P	P	17 52 35.7	-0.8
KULM	Kulim	46.21	283	P	P	17 55 25.5	-1.4
	12nm,1.0s,mb4.5						
CMAR	Chiang Mai Arr	51.95	299	P	P	17 56 10.3	-0.3
	0.4nm,0.5s,mb3.3,baz=122,slow=5.8,SNR=4.2						
TORD	Torodi Ar. Bea	143.69	284	PKP	PKPdf	18 06 30.9	-4.4
	0.4nm,0.9s,baz=90,slow=2.9,SNR=3.6						

NEIC 09 17:48:08.8, 32.54S×71.69W, h29km, ML3.2(GUC), After GUC.
GUC 09 17:48:08.8±0.8, 32.54S×71.69W, h29km±3km, MD3.7, ML3.2, 5C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CHNG	Los Chungos	0.68	14	⇑iP	Pb	17 48 21.6	-0.5
CHNG				iS	Sb	17 48 31.2	+0.1
CHNG				AML	AML	17 48 33.3	
	comp=N,868nm,0.3s						
ROCH	El Roble	0.71	127	⇑iP	Pb	17 48 22.5	-0.2
ROCH				iS	Sb	17 48 32.8	+0.6
JACH	Jahuel	0.94	99	⇑iP	Pn	17 48 26.0	0.0
JACH				iS	Sn	17 48 38.5	+0.1
TACH	Talagante	1.27	151	⇓iP	Pn	17 48 31.0	+0.3
CLCH	Cerro Calan	1.29	132	⇓iP	Pn	17 48 31.3	+0.5
CLCH				iS	Sn	17 48 48.7	+1.6
CLCH				AML	AML	17 48 53.5	
	comp=N,760nm,0.3s						
CLCH				AML	AML	17 48 54.1	
	comp=N,945nm,0.3s						
ANTU	Antumapu	1.35	139	eP	Pn	17 48 32.4	+0.6
ANTU				eS	Sn	17 48 50.4	+1.6
ANTU	Antumapu	1.35	139	eP	Pn	17 48 32.4	+0.6
ANTU				eS	Sn	17 48 50.4	+1.6
ANTU				AML	AML	17 48 55.7	
	comp=N,809nm,0.7s						
FCH	Farellones	1.41	124	⇓iP	Pn	17 48 32.5	-0.1
FCH				AML	AML	17 48 51.0	
	comp=E,623nm,0.2s						
FCH				iS	Sn	17 48 51.2	+1.0
LNV	Longovilo	1.43	171	iP	Pn	17 48 32.2	-0.5
LNV				iS	Sn	17 48 50.9	+0.3
PCH	Pirque	1.46	138	⇓iP	Pn	17 48 34.0	+0.8
PCH				iS	Sn	17 48 53.5	+2.1
CHCH	Chadas Angostu	1.64	148	⇓iP	Pn	17 48 37.1	+1.4
CHCH				iS	Sn	17 48 57.1	+1.3
LMEL	Las Melosas	1.80	137	⇑iP	Pn	17 48 39.6	+1.7
LMEL				iS	Sn	17 49 03.4	+3.6
LMEL	Las Melosas	1.80	137	⇑iP	Pn	17 48 39.6	+1.7
LMEL				iS	Sn	17 49 03.4	+3.6
LMEL				AML	AML	17 49 07.8	
	comp=N,628nm,0.1s						
CACH	El Canelo	1.81	150	eP	Pn	17 48 40.1	+2.0
CACH				eS	Sn	17 49 04.4	+4.2
TLL	Tololo Astrono	2.49	18	eP	Pn	17 48 48.8	+1.5

NEIC 09 17:49:46.4±0.8, 22.52N×143.04E, h150km, mb3.6/2, Error ellipse: s-maj=38.6km s-min=12.8km az=87.0
ISCJB 09 17:49:47.6±1.7, 22.51N±0.09×142.9E±0.3, h175km±16km, mb3.5/10, Error ellipse: s-maj=51.5km s-min=14.9km az=177.2
IDC 09 17:49:48.2±2.0, 22.53N×143.03E, h166km±19km, mb3.3/9, mb1 3.5/10, mb1mx3.2/24, mbtmp3.3/10, Error ellipse: s-maj=44.0km s-min=13.5km az=86.0
ISC 09 17:49:48.6±1.7, 22.52N±0.09×143.0E±0.3, h169km±16km, n12, σ0.83/13, mb3.5/10, Volcano Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
CBIJ	Chichi jima	4.62	351	P	Pn	17 50 58.5	+1.2
	15nm,0.3s,baz=248,slow=22,SNR=18						
CBIJ				S	Sn	17 51 50.1	-1.0
	28nm,0.3s,baz=282,slow=21,SNR=8.2						
WRAB	Tennant Creek	43.03	192	P	P	17 57 31.2	-0.4
	1.1nm,0.4s,mb3.8						
WRA	Warramunga Arr	43.04	192	P	P	17 57 31.0	-0.6
	0.5nm,0.3s,mb3.6,baz=17,slow=9.2,SNR=13						
FITZ	Fitzroy Crossi	43.79	204	P	P	17 57 38.6	+0.9
	1.3nm,0.7s,mb3.7,baz=45,slow=7.1,SNR=4.3						
ASAR	Alice Springs	46.75	191	P	P	17 58 01.1	+0.2
	0.1nm,0.3s,mb2.9,baz=15,slow=6.7,SNR=6.2						
MKAR	Makanchi Array	54.02	312	P	P	17 58 55.5	+0.3
	0.1nm,0.3s,mb3.0,baz=79,slow=9.0,SNR=2.6						
STKA	Stephens Creek	54.10	181	P	P	17 58 55.5	-0.4
	1.2nm,0.4s,mb4.0,baz=6.6,slow=8.0,SNR=7.9						
STKA	Stephens Creek	54.10	181	eP	P	17 58 55.1	-0.8
	0.2nm,0.4s,mb3.2						
BVAR	Borovoye Array	61.94	319	P	P	17 59 50.8	+0.6
	0.5nm,0.4s,mb3.7,baz=79,slow=7.5,SNR=3.2						
YKA	Yellowknife Ar	75.82	28	P	P	18 01 16.3	+0.6
	0.1nm,0.4s,mb2.8,baz=289,slow=5.9,SNR=3.2						
ARCES	ARCESS Array B	78.09	341	P	P	18 01 28.8	+0.5
	6.9nm,1.1s,mb4.2,baz=70,slow=7.8,SNR=2.9						
FINES	FINESS Array B	82.37	334	P	P	18 01 49.5	-1.8
	0.5nm,0.6s,mb3.3,baz=38,slow=7.0,SNR=3.2						

CNRM 09 18:04:09.1, 35.15N×2.77W, h12km, MD2.9
CSEM 09 18:04:11.1±0.5, 35.07N×2.95W, h20km, MD2.9, Error ellipse: s-maj=11.6km s-min=4.8km az=122.0
MDD 09 18:04:10.7±0.4, 35.02N×2.87W, h12km±4km, mb3.2/2, mbLg2.3/9, 2C, Error ellipse: s-maj=5.1km s-min=4.3km az=88.0, PRIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
ZAI	Zaio	0.11	115	P	Pg	18 04 13.0	-0.7
ZAI				S	Sg	18 04 16.0	+0.2
ZAI	Zaio	0.11	115	P	Pg	18 04 13.0	-0.7
ZAI				S	Sg	18 04 16.0	+0.2
EMLI	Melilla	0.29	346	P	Pg	18 04 16.9	+0.2
	38nm,0.1s,SNR=7.9						
EMLI				S	Sg	18 04 20.4	-0.3
	290nm,0.1s,SNR=7.9						
EMEL	Melilla	0.29	345	P	Pg	18 04 16.9	+0.2
	38nm,0.1s,SNR=7.9						
EMEL				S	Sg	18 04 20.4	-0.3
	290nm,0.1s,SNR=7.9						
EMEL	Melilla	0.29	345	P	Pg	18 04 16.9	+0.2
	38nm,0.1s,SNR=7.9						
EMEL				S	Sg	18 04 20.4	-0.3
	290nm,0.1s,SNR=7.9						
TOU	Touzarine	0.73	266	P	Pg	18 04 24.0	-0.9
TOU				S	Sg	18 04 35.0	+0.5
TOU	Touzarine	0.73	266	P	Pg	18 04 24.0	-0.9
TOU				S	Sg	18 04 35.0	+0.5
TOU	Touzarine	0.73	266	iP	Pg	18 04 24.0	-0.9
TOU				iS	Sg	18 04 35.0	+0.5
TZK	Tazeka	1.43	230	P	Pn	18 04 35.0	-1.4
TZK				S	Sn	18 04 54.0	-1.1
TZK	Tazeka	1.43	230	P	Pn	18 04 35.0	-1.4
TZK				S	Sn	18 04 54.0	-1.1
TZK	Tazeka	1.43	230	iP	Pn	18 04 35.0	-1.4
TZK				iS	Sn	18 04 54.0	-1.1
EBER	Berja	1.88	359	P	Pn	18 04 41.0	-1.6
	11nm,0.7s,SNR=6.5						
EBER				S	Sn	18 05 03.5	-2.8
	27nm,0.5s,SNR=7.1						
EBER	Berja	1.88	359	P	Pn	18 04 41.0	-1.6
	11nm,0.7s,SNR=6.5						
EBER				S	Sn	18 05 03.5	-2.8
	27nm,0.5s,SNR=7.1						
EBER	Berja	1.88	359	P	Pn	18 04 40.6	-2.0
	11nm,0.7s,SNR=6.5						
EBER				S	Sn	18 05 03.0	-3.2
	27nm,0.5s,SNR=7.1						
EGUA	Guajares	1.90	343	⇑P	Pn	18 04 40.7	-2.2
	22nm,0.2s,SNR=18						
EGUA				S	Sn	18 05 03.1	-3.6
	7.6nm,0.2s,SNR=7.9						
EGUA	Guajares	1.90	343	⇑P	Pn	18 04 40.7	-2.2
	22nm,0.2s,SNR=18						
EGUA				S	Sn	18 05 03.1	-3.6
	7.6nm,0.2s,SNR=7.9						
EGUA	Guajares	1.90	343	P	Pn	18 04 40.7	-2.2
	22nm,0.2s,SNR=18						
EMIJ	Mijas	2.19	315	P	Pn	18 04 44.2	-2.6
	2.1nm,0.1s,SNR=17						
EMIJ				S	Sn	18 05 07.2	-6.7
	3.5nm,0.3s						
EMIJ	Mijas	2.19	315	P	Pn	18 04 44.2	-2.6
	2.1nm,0.1s,SNR=17						
EMIJ				S	Sn	18 05 07.2	-6.7
	3.5nm,0.3s						
EMIJ	Mijas	2.19	315	P	Pn	18 04 44.2	-2.7
	2.1nm,0.1s,SNR=17						
EMIJ				S	Sn	18 05 07.2	-6.7
	3.5nm,0.3s						
EQUE	Quentar	2.23	348	P	Pn	18 04 46.9	-0.6
	2.3nm,0.2s,SNR=12						
EQUE				S	Sn	18 05 11.6	-3.4
	4.7nm,0.3s,SNR=4.5						
EQUE	Quentar	2.23	348	P	Pn	18 04 46.9	-0.6
	2.3nm,0.2s,SNR=12						
EQUE				S	Sn	18 05 11.6	-3.4
	4.7nm,0.3s,SNR=4.5						
EQUE	Quentar	2.23	348	P	Pn	18 04 46.9	-0.6
	2.3nm,0.2s,SNR=12						
EQUE				S	Sn	18 05 11.6	-3.4
	4.7nm,0.3s,SNR=4.5						
MIF	Mishlifen	2.53	231	P	Pn	18 04 51.0	-0.6
MIF				S	Sn	18 05 22.0	-0.3
MIF	Mishlifen	2.53	231	P	Pn	18 04 51.0	-0.6
MIF				S	Sn	18 05 22.0	-0.3
MIF	Mishlifen	2.53	231	eP	Pn	18 04 51.0	-0.6
MIF				iS	Sn	18 05 22.0	-0.3
EQES	Quesada	2.79	357	P	Pn	18 04 56.0	+0.9
	5.2nm,0.2s,SNR=14						
EQES				S	Sn	18 05 29.7	+1.0
	14nm,0.5s						
EQES	Quesada	2.79	357	P	Pn	18 04 56.0	+0.9
	5.2nm,0.2s,SNR=14						
EQES				S	Sn	18 05 29.7	+1.0
	14nm,0.5s						
EQES	Quesada	2.79	357	P	Pn	18 04 56.0	+0.9
	5.2nm,0.2s,SNR=14						
EQES				S	Sn	18 05 29.7	+1.1
	14nm,0.5s						
EHUE	Huescar	2.80	4	P	Pn	18 04 56.1	+0.8
	0.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	18 05 28.9	-0.1
	1.4nm,0.2s,SNR=7.9						
EHUE	Huescar	2.80	4	P	Pn	18 04 56.1	+0.8
	0.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	18 05 28.9	-0.1
	1.4nm,0.2s,SNR=7.9						
EHUE	Huescar	2.80	4	P	Pn	18 04 56.8	+1.5
	0.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	18 05 29.7	+0.7
	1.4nm,0.2s,SNR=7.9						
EMUR	La Murta	3.11	24	P	Pn	18 04 59.5	-0.1
	0.4nm,0.2s,SNR=7.9						
EMUR	La Murta	3.11	24	P	Pn	18 04 59.5	-0.1
	0.4nm,0.2s,SNR=7.9						
EMUR	La Murta	3.11	24	P	Pn	18 04 59.0	-0.6
	0.4nm,0.2s,SNR=7.9						
EADA	Adamuz	3.43	337	P	Pn	18 05 02.7	-1.3
	0.9nm,0.1s,SNR=12						
EADA				S	Sn	18 05 40.8	-3.8
	5.3nm,0.6s,SNR=7.9						
EADA	Adamuz	3.43	337	P	Pn	18 05 02.7	-1.3
	0.9nm,0.1s,SNR=12						
EADA				S	Sn	18 05 40.8	-3.8
	5.3nm,0.6s,SNR=7.9						
EADA	Adamuz	3.43	337	P	Pn	18 05 02.7	-1.3
	0.9nm,0.1s,SNR=12						
EADA				S	Sn	18 05 40.8	-3.8
	5.3nm,0.6s,SNR=7.9						
EVIA	Vianos	3.63	5	P	Pn	18 05 06.6	-0.1
	0.9nm,0.4s,SNR=7.9						
EVIA				S	Sn	18 05 47.8	-1.6
	4.3nm,0.5s,SNR=7.9						
EVIA	Vianos	3.63	5	P	Pn	18 05 06.6	-0.1
	0.9nm,0.4s,SNR=7.9						
EVIA				S	Sn	18 05 47.8	-1.6
	4.3nm,0.5s,SNR=7.9						
ETOB	Tobarra	3.77	16	P	Pn	18 05 09.1	+0.4
	0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	18 05 51.0	-2.0
	2.0nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.77	16	P	Pn	18 05 09.1	+0.4
	0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	18 05 51.0	-2.0
	2.0nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.77	16	P	Pn	18 05 10.3	+1.6
	0.2nm,0.2s,SNR=7.9						
ETOB				S	Sn	18 05 50.1	-2.9
	2.0nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	4.12	313	P	Pn	18 05 11.5	-1.9
	1.5nm,0.2s,SNR=15						
EMIN				S	Sn	18 05 55.6	-5.9
	0.5nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	4.12	313	P	Pn	18 05 11.5	-1.9
	1.5nm,0.2s,SNR=15						
EMIN				S	Sn	18 05 55.6	-5.9
	0.5nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	4.12	313	P	Pn	18 05 11.5	-1.9
	1.5nm,0.2s,SNR=15						
EMIN				S	Sn	18 05 53.4	-8.1
	0.5nm,0.3s,SNR=7.9						
EGRO	El Granado	4.50	305	P	Pn	18 05 16.7	-1.9
	1.0nm,0.1s,SNR=5.3						
EGRO	El Granado	4.50	305	P	Pn	18 05 16.7	-1.9
	1.0nm,0.1s,SNR=5.3						
EGRO	El Granado	4.50	305	P	Pn	18 05 16.7	-1.9
	1.0nm,0.1s,SNR=5.3						
PVAQ	Vaqueiros	4.59	303	ePn	Pn	18 05 18.6	-1.3
PVAQ					A	18 06 23.2	
	3.9nm,0.8s						
PVAQ	Vaqueiros	4.59	303	Pn	Pn	18 05 18.6	-1.3
PVAQ	Vaqueiros	4.59	303	Pn	Pn	18 05 18.6	-1.3
PVAQ	Vaqueiros	4.59	303	ePn	Pn	18 05 18.6	-1.3
	3.9nm,0.8s						
PBAR	Barrancos	4.61	314	ePn	Pn	18 05 18.5	-1.6
PBAR					A	18 06 15.7	
	2.2nm,0.5s						
PBAR	Barrancos	4.61	314	Pn	Pn	18 05 18.5	-1.6
PBAR	Barrancos	4.61	314	Pn	Pn	18 05 18.5	-1.6
PBAR	Barrancos	4.61	314	ePn	Pn	18 05 18.5	-1.6
	2.2nm,0.5s						
ESDC	Sonseca Array	4.73	350	P	Pn	18 05 21.0	-0.8
	0.6nm,0.3s,baz=173,slow=12,SNR=4.6						
ESDC	Sonseca Array	4.73	350	P	Pn	18 05 21.0	-0.8
	0.6nm,0.3s,baz=173,slow=12,SNR=4.6						
ESDC	Sonseca Array	4.73	350	P	Pn	18 05 22.4	+0.6
	0.6nm,0.3s,baz=173,slow=12,SNR=4.6						
PCVE	Castro Verde	4.92	304	ePn	Pn	18 05 22.8	-1.7
PCVE	Castro Verde	4.92	304	Pn	Pn	18 05 22.8	-1.7
PCVE	Castro Verde	4.92	304	Pn	Pn	18 05 22.8	-1.7
PCVE	Castro Verde	4.92	304	ePn	Pn	18 05 22.8	-1.7
EBAD	Badajoz	5.00	320	P	Pn	18 05 24.1	-1.4
	1.7nm,0.3s,SNR=7.7						
EBAD				S	Sn	18 06 17.9	-5.3
	1.4nm,0.2s,SNR=5.0						
EBAD	Badajoz	5.00	320	P	Pn	18 05 24.1	-1.4
	1.7nm,0.3s,SNR=7.7						
EBAD				S	Sn	18 06 17.9	-5.3
	1.4nm,0.2s,SNR=5.0						
EBAD	Badajoz	5.00	320	P	Pn	18 05 23.1	-2.4
	1.7nm,0.3s,SNR=7.7						
EBAD				S	Sn	18 06 19.8	-3.4
	1.4nm,0.2s,SNR=5.0						

ISCJB 09 18:07:58.6±0.5, 43.79N±0.04×105.27W±0.05, h0km, Error ellipse: s-maj=5.7km s-min=5.3km az=142.6
IDC 09 18:07:58.6±1.8, 43.67N×105.42W, h0km, mb1 3.6/4, mb1mx3.4/27, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=45.8km s-min=8.9km az=149.0
NEIC 09 18:08:00.2±0.4, 43.76N×105.27W, h0km, ML3.2, Error ellipse: s-maj=5.4km s-min=4.7km az=140.0, Suspected Mining explosion.
NEIC 60 km [40 miles] SSE of Gillette.
ISC 09 18:08:00.3±0.4, 43.77N±0.04×105.26W±0.05, h0km, n46, σ0.98/47, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
RSSD	Black Hills	0.95	68	ePg	Pg	18 08 19.4	+0.9
PHWY	Pilot Hill	2.47	183	ePn	Pn	18 08 42.3	+0.5
RWWY	Rawlins	2.53	215	ePn	Pn	18 08 43.9	+1.3
LAO	LASA Array	2.99	347	ePn	Pn	18 08 49.3	+0.4
RLMT	Red Lodge	3.17	297	ePn	Pn	18 08 51.7	+0.3
PDAR	Pinedale Array	3.30	254	Pn	Pn	18 08 53.8	+0.6
	4.1nm,0.3s,baz=71,slow=16,SNR=28						
PDAR					Lg	18 09 36.5	
	5.5nm,0.3s,baz=76,slow=34,SNR=4.2						
OGNE	Ogallala	3.70	139	ePn	Pn	18 08 58.2	-0.5
GCMT	Greycliff	3.73	304	ePn	Pn	18 08 59.8	+0.7
LKWY	Lake	3.78	284	ePn	Pn	18 09 00.3	+0.5
LOHW	Long Hollow	3.88	269	ePn	Pn	18 09 00.2	-0.9
ISCO	Idaho Springs	3.98	184	ePn	Pn	18 09 03.0	+0.4
SNOW	Snow King Moun	4.00	267	ePn	Pn	18 09 07.2	+4.3
YNR	Norris Junctio	4.01	285	Pn	Pn	18 09 04.5	+1.6
REDW	Red Top Meadow	4.08	266	ePn	Pn	18 09 05.2	+1.3
IMW	Indian Meadow	4.11	274	ePn	Pn	18 09 04.6	+0.3
TPAW	Teton Pass	4.14	268	ePn	Pn	18 09 04.7	0.0
YMR	Madison River	4.20	284	ePn	Pn	18 09 06.3	+0.8
RRI2	Red Ridge	4.42	267	ePn	Pn	18 09 08.8	+0.1
QLMT	Earthquake Lak	4.55	286	ePn	Pn	18 09 10.6	+0.2
DGMT	Dagmar	4.76	9	ePn	Pn	18 09 14.7	+1.5
BOZ	Bozeman (W)	4.91	295	ePn	Pn	18 09 13.8	-1.5
HWUT	Hardware Ranch	5.13	247	ePn	Pn	18 09 18.4	+0.1
	10nm,0.5s						
EGMT	Eagleton	5.28	325	ePn	Pn	18 09 19.6	-0.9
	23nm,0.5s						
DLMT	Dillon	5.48	289	ePn	Pn	18 09 23.5	+0.4
	4.8nm,0.6s						
HRY	Holter Researc	5.49	305	ePn	Pn	18 09 23.7	+0.4
	12nm,0.4s						
LRM	Limekiln Ridge	5.51	294	ePn	Pn	18 09 24.1	+0.6
	24nm,0.4s						
MCMT	McKenzie Canyo	5.55	284	ePn	Pn	18 09 22.2	-1.9
	2.2nm,0.4s						
DAU	Daniels Canyon	5.58	235	ePn	Pn	18 09 25.5	+0.9
	8.0nm,0.4s						
JLU	Jordanelle	5.58	238	Pn	Pn	18 09 21.4	-3.1
	6.8nm,0.5s						
HVU	Hansel Valley	5.88	253	ePn	Pn	18 09 27.5	-1.1
	5.0nm,0.4s						
SRU	San Rafael	6.11	222	ePn	Pn	18 09 30.9	-0.8
	15nm,0.6s						
ECSD	EROS Data Cent	6.26	87	ePn	Pn	18 09 34.3	+0.4
	8.5nm,0.3s						
TMUT	Trail Mountain	6.32	227	ePn	Pn	18 09 32.7	-2.0
	6.8nm,0.4s						
NLU	North Lily Min	6.36	235	ePn	Pn	18 09 35.1	-0.1
BGU	Big Grassy Mou	6.42	246	ePn	Pn	18 09 36.0	0.0
	1.6nm,0.4s						
CHMT	Chamberlain Mo	6.45	302	ePn	Pn	18 09 36.6	+0.2
	2.3nm,0.4s						
SWMT	Swartz Lake	7.17	304	ePn	Pn	18 09 46.5	+0.1
	2.3nm,0.4s						
MSU	Marysvale	7.41	227	ePn	Pn	18 09 50.4	+0.8
	2.6nm,0.4s						
JTMT	Jette	7.46	305	ePn	Pn	18 09 51.0	+0.8
ELK	Elko	8.00	251	Pn	Pn	18 09 55.7	-1.9
ELK	Elko	8.00	251	Pn	Pn	18 09 55.7	-1.9
	0.1nm,0.3s,baz=62,slow=9.8,SNR=2.0						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 10 11.3	-1.6
ULM				Pn	Pn	18 10 12.9	0.0
ULM					Lg	18 12 41.0	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 10 11.3	-1.6
	0.7nm,0.3s,baz=231,slow=14,SNR=6.7						
ULM					Lg	18 12 41.0	
	0.3nm,0.3s,baz=162,slow=20,SNR=1.7						
FFC	Flin Flon	11.17	10	ePn	Pn	18 10 39.6	-1.4
	2.6nm,0.3s						
FCC	Fort Churchill	16.52	21	ePn	Pn	18 11 49.2	-3.9
YKA	Yellowknife Ar	19.53	347	P	Pn	18 12 28.8	-1.4
	0.1nm,0.3s,baz=165,slow=13,SNR=7.3						

MOS 09 18:11:06.3±0.9, 18.54N×121.15E, h33km, mb4.8/29, Error ellipse: s-maj=10.7km s-min=6.0km az=111.6
NEIC 09 18:11:09.1±0.8, 18.57N×121.14E, h39km±6km, mb4.6/37, Error ellipse: s-maj=6.4km s-min=5.9km az=129.0
NEIC Felt [II PIVS] at Pasuquin. Also felt at Laoag.
BJI 09 18:11:09.0, 18.79N×120.98E, h31km, mB4.6/25, mb4.4/38, ML4.4/4, Ms4.1/28, Ms7 3.9/30
ISCJB 09 18:11:10.5±0.3, 18.78N±0.02×120.99E±0.04, h55km±4km,

mb4.5/77, MS3.6/18, Error ellipse: s-maj=5.7km s-min=3.4km az=3.3
DJA ***09*** *18:11:10, 18°.44N×121°.32E, h56km, mb4.3/4*
IDC ***09*** *18:11:10.4±3.0, 18°.59N×121°.07E, h49km±28km, mb3.9/18, mb1 4.1/20, mb1mx4.0/24, mbtmp4.0/20, ML4.1/2, MS3.6/14, Ms1 3.7/14, ms1mx3.4/36, Error ellipse: s-maj=20.0km s-min=12.4km az=69.0*
MAN ***09*** *18:11:11, 18°.66N×120°.87E, h18km, mb5.0, ML4.0, MS4.0*
MAN INTENSITY II - PASUQUIN ILOCOS NORTE.
ISC 09 18:11:12.1±0.3, 18°.77N±0°.02×121°.03E±0°.03, h55km±3km, h38km±9.2km: pP-P, n195, σ1s 21/218, mb4.5/77, MS3.6/18, 23C-8D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.59**	**222**	⇑*i*P	**Pn**	**18 11 19.6**	**-5.1**
PIP				*e*S	**Sn**	**18 11 26.5**	**-7.3**
APYP	**Conner**	**0.92**	**167**	*e*P	**Pn**	**18 11 27.3**	**-1.6**
APYP				*e*S	**Sn**	**18 11 39.9**	**-1.4**
SGCP	**Mt. Cagua**	**1.09**	**118**	*e*P	**Pn**	**18 11 31.9**	**+0.7**
SGCP				*e*S	**Sn**	**18 11 46.5**	**+1.1**
ABRA	**Dolores**	**1.15**	**195**	*e*P	**Pn**	**18 11 29.1**	**-2.9**
ABRA				*e*S	**Sn**	**18 11 42.7**	**-4.1**
CVP	**Callao Caves**	**1.30**	**144**	*i*P	**Pn**	**18 11 33.7**	**-0.3**
CVP				*i*S	**Sn**	**18 11 52.1**	**+1.8**
BBP	**Basco**	**1.88**	**28**	*e*P	**Pn**	**18 11 44.3**	**+2.3**
BBP				*e*S	**Sn**	**18 12 04.1**	**-0.5**
CAUP	**Cauayan**	**1.96**	**157**	*e*P	**Pn**	**18 11 44.6**	**+1.6**
CAUP				*e*S	**Sn**	**18 12 16.6**	**+10**
PALP	**Palanan**	**2.15**	**142**	*e*P	**Pn**	**18 11 47.2**	**+1.6**
PALP				*e*S	**Sn**	**18 12 16.9**	**+5.7**
BCPH	**Baguio City Da**	**2.41**	**190**	⇓*e*P	**Pn**	**18 11 47.6**	**-1.5**
BOLP	**Bolinao**	**2.60**	**204**	*e*P	**Pn**	**18 11 52.2**	**+0.5**
BOLP				*e*S	**Sn**	**18 12 19.8**	**-2.4**
BALP	**Baler**	**3.05**	**170**	*e*P	**Pn**	**18 11 58.0**	**0.0**
SCZP	**Santa Cruz**	**3.16**	**200**	*e*P	**Pn**	**18 11 59.3**	**-0.1**
TWG	**Pinlang**	**4.03**	**1**	*e*Pn	**Pn**	**18 12 09.5**	**-1.9**
TWG				*e*Sn	**Sn**	**18 12 45.6**	**-12**
POLP	**Polilio Island**	**4.11**	**168**	*e*P	**Pn**	**18 12 13.1**	**+0.6**
TPUB	**Ta-pu**	**4.53**	**355**	*e*Pn	**Pn**	**18 12 16.4**	**-1.8**
YULB	**Yu-li**	**4.61**	**3**	*e*Pn	**Pn**	**18 12 18.3**	**-1.0**
TGY	**Tagaytay City**	**4.64**	**181**	P	**Pn**	**18 12 20.0**	**+0.3**
	24nm,0.3s,baz=330,slow=1.3,SNR=8.7						
SSLB	**Suanglung**	**5.00**	**359**	*e*Pn	**Pn**	**18 12 23.4**	**-1.2**
	96nm,0.5s						
GQP	**Guinayangan**	**5.02**	**164**	⇑*e*P	**Pn**	**18 12 24.9**	**-0.1**
GQP				*i*S	**Sn**	**18 13 23.4**	**+1.8**
LUBP	**Lubang**	**5.06**	**189**	*e*P	**Pn**	**18 12 27.1**	**+1.6**
BOAC	**Boac**	**5.33**	**171**	*e*P	**Pn**	**18 12 31.1**	**+1.8**
NACB	**Ninganchiao**	**5.41**	**5**	*e*Pn	**Pn**	**18 12 30.0**	**-0.2**
	63nm,0.3s						
NACB				*e*Sn	**Sn**	**18 13 29.4**	**-1.7**
YHNB	**Yeheng**	**5.88**	**3**	*e*Pn	**Pn**	**18 12 37.5**	**+0.8**
	128nm,0.6s						
YHNB				*e*Sn	**Sn**	**18 13 42.1**	**-0.7**
TATO	**Taipei**	**6.19**	**4**	*e*Pn	**Pn**	**18 12 43.0**	**+2.0**
TATO				*e*Sn	**Sn**	**18 13 48.1**	**-2.3**
SJMP	**San Jose**	**6.27**	**179**	*e*P	**Pn**	**18 12 44.7**	**+2.6**
QZH	**Quanzhou**	**6.55**	**340**	⇑*i*Pn	**Pn**	**18 12 45.2**	**-0.7**
QZH				Sn	**Sn**	**18 13 55.3**	**-3.9**
QZH				smax			
	comp=N,180nm,0.8s						
QZH				smax			
	comp=E,160nm,1.0s						
QZH				LR	LR		
	comp=Z,1μm,15.7s						
BUSP	**Coron**	**6.77**	**187**	*e*P	**Pn**	**18 12 47.5**	**-1.5**
GZH	**Guangzhou**	**8.37**	**302**	P	**Pn**	**18 13 07.5**	**-3.3**
GZH				smax			
	comp=N,120nm,1.0s						
GZH				smax			
	comp=E,130nm,0.9s						
JOW	**Kunigami**	**10.44**	**38**	P	**Pn**	**18 13 40.1**	**+1.0**
	comp=E,2.6nm,0.3s,baz=233,slow=10,SNR=7.4						
JOW				LR	LR	18 18 17.0	
	comp=E,262nm,18.2s,baz=117,slow=40						
JOW	**Kunigami**	**10.44**	**38**	P	**Pn**	**18 13 40.1**	**+1.0**
JOW				LR	LR	18 18 17.0	
QIZ	**Qiongzhong**	**10.59**	**273**	P	**Pn**	**18 13 36.5**	**-4.8**
QIZ				S	**Sn**	**18 15 31.1**	**-7.4**
QIZ				LR	LR		
	comp=N,270nm,15.4s						
QIZ				LR	LR		
	comp=Z,400nm,20.4s						
QIZ	**Qiongzhong**	**10.59**	**273**	*e*Pn	**Pn**	**18 13 36.4**	**-4.8**
	comp=Z,28nm,0.7s						
QIZ				*e*Sn	**Sn**	**18 15 27.9**	**-11**
DAV	**Davao City (W)**	**12.44**	**159**	LR	LR	18 20 03.0	
	comp=Z,659nm,18.1s,baz=328,slow=43						
WHN	**Wuhan**	**13.20**	**334**	*e*P	**Pn**	**18 14 14.8**	**-2.0**
WHN				S	**Sn**	**18 16 43.2**	**+1.2**
WHN				LR	LR		
	comp=Z,1μm,20.2s						
NJ2	**Nanjing**	**13.37**	**352**	*e*P	**Pn**	**18 14 20.6**	**+1.4**
NJ2				pP		18 14 28.0	
NJ2				PP		18 14 31.7	
NJ2				sP		18 14 32.8	
NJ2				S	**Sn**	**18 16 52.0**	**+5.8**
NJ2				sS		18 17 03.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,210nm,6.5s						
NJ2				LR	LR		
	comp=N,250nm,22.2s						
NJ2				LR	LR		
	comp=E,230nm,16.8s						
NJ2				LR	LR		
	comp=Z,330nm,13.3s						
GYA	**Guiyang**	**15.31**	**303**	P	**Pn**	**18 14 45.0**	**+0.2**
GYA				pP	pP	18 14 52.4	-8.2
GYA				sP	sP	18 14 58.9	-8.7
GYA				S	**S**	**18 17 36.8**	**-10**
GYA				sS	sS	18 17 48.2	-18
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,70nm,4.6s						
GYA				LR	LR		
	comp=N,540nm,12.4s						
GYA				LR	LR		
	comp=E,490nm,11.0s						
GYA				LR	LR		
	comp=Z,460nm,10.8s						
ENH	**Enshi**	**15.53**	**320**	*e*Pn	**Pn**	**18 14 48.2**	**+0.6**
	comp=Z,63nm,1.8s						
KMI	**Kunming**	**18.10**	**294**	P	**Pn**	**18 15 21.2**	**+1.5**
KMI				pP	pP	18 15 28.9	-2.7
KMI				sP	sP	18 15 33.3	-5.3
KMI				PP		18 15 37.0	
KMI				S	**S**	**18 18 40.8**	**-3.3**
KMI				sS	sS	18 18 52.7	-11
KMI				SS		18 19 05.0	
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,57nm,3.8s						
KMI				LR	LR		
	comp=N,230nm,12.9s						
KMI				LR	LR		
	comp=E,340nm,17.2s						
KMI				LR	LR		
	comp=Z,330nm,17.2s						
XAN	**Xi'an**	**18.66**	**327**	P	**Pn**	**18 15 28.2**	**+1.8**
XAN				pP	pP	18 15 37.3	-0.4
XAN				LR	LR		
	comp=N,140nm,16.6s						
XAN				LR	LR		
	comp=E,56nm,15.3s						
XAN				LR	LR		
	comp=Z,87nm,15.3s						
KSRS	**Korea Array**	**19.57**	**17**	P	**Pn**	**18 15 36.4**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=202,slow=11,SNR=21						
KSRS				LR	LR	18 24 20.6	
	comp=Z,129nm,18.3s,baz=35,slow=40						
CD2	**Chengdu**	**19.77**	**311**	P	**Pn**	**18 15 40.5**	**+0.9**
CD2				pP	pP	18 15 49.2	-0.7
CD2				sP	sP	18 15 53.6	-3.3
CD2				PP		18 16 00.0	
CD2				S	**S**	**18 19 18.6**	**+1.1**
CD2				sS	sS	18 19 31.4	-5.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,170nm,8.3s						
CD2				LR	LR		
	comp=N,320nm,16.1s						
CD2				LR	LR		
	comp=Z,450nm,17.2s						
KSM	**Kuching**	**20.15**	**213**	*e*P	**P**	**18 15 41.9**	**0.0**
	comp=Z,14nm,1.0s						
CHTO	**Chiang Mai**	**20.91**	**274**	*e*P	**P**	**18 15 50.6**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s						
CHTO	**Chiang Mai**	**20.91**	**274**	*e*P	**P**	**18 15 50.6**	**+0.4**
	comp=Z,11nm,0.9s						
CM31	**Chiang Mai Arr**	**20.94**	**273**	*e*P	**P**	**18 15 51.4**	**+0.9**
	comp=Z,2.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.94**	**273**	P	**P**	**18 15 50.8**	**+0.3**
CMAR						18 19 57.0	
CMAR	**Chiang Mai Arr**	**20.94**	**273**	P	**P**	**18 15 50.8**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=88,slow=8.6,SNR=32						
CMAR				PcP	PcP	18 19 57.0	+0.3
	comp=Z,1.5nm,0.7s,baz=41,slow=1.0,SNR=12						
CMAR				LR	LR	18 22 56.6	
	comp=Z,126nm,21.9s,MS3.2,baz=222,slow=34						
BJT	**Baijiatuau**	**21.59**	**350**	*e*P	**P**	**18 15 57.7**	**+0.4**
BJI	**Beijing**	**21.61**	**350**	P	**P**	**18 15 58.6**	**+1.1**
BJI				S	**S**	**18 19 55.4**	**+1.7**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
BJI				LR	LR		
	comp=N,220nm,17.7s,MS3.6						
BJI				LR	LR		
	comp=E,130nm,20.2s,MS3.6						
BJI				LR	LR		
	comp=Z,160nm,17.3s,MS3.5						
LZH	**Lanzhou**	**22.97**	**322**	*e*P	**P**	**18 16 13.0**	**+1.1**
LZH				pP		18 16 22.5	
LZH				sP	sP	18 16 25.5	-5.9
LZH				PP		18 16 43.3	
LZH				S	**S**	**18 20 21.1**	**+3.0**
LZH				sS	sS	18 20 35.4	-5.2
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.5						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=N,510nm,13.5s						
LZH				LR	LR		
	comp=Z,880nm,14.7s,MS4.3						
MAJO	**Matsushiro**	**23.28**	**37**	P	**P**	**18 16 13.4**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
MAJO	**Matsushiro**	**23.28**	**37**	P	**P**	**18 16 13.4**	**-1.7**
	comp=Z,7.2nm,0.9s,mb4.1						
MJAR	**Matsushiro Arr**	**23.28**	**37**	P	**P**	**18 16 14.2**	**-0.9**
	comp=Z,1.4nm,0.7s,mb3.5,baz=331,slow=20,SNR=3.9						
MJAR				LR	LR	18 24 29.5	
	comp=Z,72nm,21.7s,MS3.1,baz=235,slow=34						
MJAR	**Matsushiro Arr**	**23.28**	**37**	P	**P**	**18 16 14.2**	**-0.9**
MJAR				LR	LR	18 24 29.5	
GUMO	**Guam**	**23.45**	**99**	LR	LR	18 23 22.8	
	comp=Z,166nm,21.6s,MS3.5,baz=315,slow=31						
HHC	**Hu-ho-hao-te**	**23.46**	**342**	*e*P	**P**	**18 16 17.8**	**+1.1**
HHC				pP		18 16 27.3	
HHC				sP	sP	18 16 31.3	-5.2
HHC				PP		18 16 51.5	
HHC				PcP	PcP	18 20 02.5	+1.2
HHC				S	**S**	**18 20 29.8**	**+3.8**
HHC				sS	sS	18 20 43.2	-5.9
HHC				ScP	ScP	18 23 36.0	+1.1
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=N,270nm,12.5s,MS4.0						
HHC				LR	LR		
	comp=E,170nm,13.9s,MS4.0						
HHC				LR	LR		
	comp=Z,310nm,14.7s,MS3.9						
KAPI	**Kappang**	**23.66**	**183**	LR	LR	18 25 55.5	
	comp=Z,158nm,21.6s,MS3.4,baz=212,slow=38						
KULM	**Kulim**	**23.97**	**239**	*e*P	**P**	**18 16 19.5**	**-2.1**
	comp=Z,21nm,1.1s,mb4.5						
CN2	**Changchun**	**25.23**	**8**	*e*P	**P**	**18 16 33.3**	**+0.5**
CN2				*es*P	sP	18 16 46.5	-6.6
CN2				*e*S	**S**	**18 20 55.1**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,500nm,23.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,23.0s,MS4.0						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS3.6						
VLA	**Vladivostok**	**25.96**	**18**	*e*P	**P**	**18 16 39.3**	**-0.1**
VLA				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.6						
MDJ	**Mudanjiang**	**26.75**	**14**	P	**P**	**18 16 46.7**	**+0.2**
MDJ				pP	pP	18 16 55.1	-5.2
MDJ				sP	sP	18 16 59.1	-7.8
MDJ				S	**S**	**18 21 23.9**	**+5.5**
MDJ				ScS	ScS	18 27 33.0	-1.7
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb3.7						
MDJ				pmax	pmax		
	comp=Z,33nm,4.7s						
MDJ				LR	LR		
	comp=N,31nm,32.4s						
MDJ				LR	LR		
	comp=E,75nm,22.3s						
MDJ				LR	LR		
	comp=Z,75nm,22.3s						
MDJ	**Mudanjiang**	**26.75**	**14**	*e*P	**P**	**18 16 44.9**	**-1.6**
	comp=Z,5.9nm,0.8s,mb4.2						
PSI	**Prapat**	**26.83**	**236**	LR	LR	18 27 18.1	
	comp=Z,284nm,18.6s,MS3.9,baz=178,slow=36						
GTA	**Gaotai**	**27.57**	**323**	*e*P	**P**	**18 16 55.2**	**+1.3**
GTA				pP	pP	18 17 04.5	-3.2
GTA				sP	sP	18 17 08.5	-5.8
GTA				PP		18 17 45.6	
GTA				S	**S**	**18 21 36.7**	**+5.3**
GTA				sS	sS	18 21 52.6	-2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
GTA				pmax	pmax		
	comp=Z,29nm,4.5s						
GTA				LR	LR		
	comp=N,95nm,18.0s,MS3.6						
GTA				LR	LR		
	comp=E,120nm,19.2s,MS3.6						
GTA				LR	LR		
	comp=Z,150nm,18.0s,MS3.6						
LSA	**Lhasa**	**29.26**	**298**	P	**P**	**18 17 11.0**	**+1.9**
LSA	**Lhasa**	**29.26**	**298**	*e*P	**P**	**18 17 10.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LSA	**Lhasa**	**29.26**	**298**	*e*P	**P**	**18 17 10.4**	**+1.3**
	comp=Z,4.1nm,0.8s,mb4.2						
HIA	**Hailar**	**30.45**	**358**	P	**P**	**18 17 18.6**	**-0.7**
SONM	**Songino Array**	**31.36**	**341**	P	**P**	**18 17 28.5**	**+1.1**
SONM						18 20 20.6	
SONM	**Songino Array**	**31.36**	**341**	P	**P**	**18 17 28.5**	**+1.1**
	comp=Z,2.3nm,0.7s,mb4.1,baz=161,slow=8.4,SNR=16						
SONM				PcP	PcP	18 20 20.6	+0.4
	comp=Z,1.5nm,1.0s,baz=143,slow=1.1,SNR=4.4						
SONM				LR	LR	18 31 15.4	
	comp=Z,192nm,18.9s,MS3.8,baz=178,slow=38						
KLR	**Kul'dur**	**31.60**	**13**	*e*P	**P**	**18 17 26.3**	**-3.2**
JIRN	**Jiri**	**33.13**	**292**	*e*P	**P**	**18 17 44.1**	**+0.9**
	comp=Z,26nm,0.9s,mb5.2						
YSS	**Yuzh-Sakhalins**	**33.29**	**28**	*e*P	**P**	**18 17 43.2**	**-1.1**
YSS	**Yuzh-Sakhalins**	**33.29**	**28**	*e*P	**P**	**18 17 44.7**	**+0.4**
	comp=Z,13nm,0.8s,mb4.9						
GUN	**Gumba**	**33.44**	**292**	*e*P	**P**	**18 17 46.6**	**+0.7**
	comp=Z,48nm,0.9s,mb5.5						
PKI	**Pulchoki**	**33.80**	**292**	*e*P	**P**	**18 17 49.0**	**-0.1**
KKN	**Kakani**	**33.95**	**292**	*e*P	**P**	**18 17 50.2**	**-0.1**
	comp=Z,27nm,0.9s,mb5.2						
DMN	**Daman**	**34.08**	**292**	*e*P	**P**	**18 17 51.0**	**-0.5**
	comp=Z,36nm,1.0s,mb5.2						
GKN	**Gorkha**	**34.54**	**292**	*e*P	**P**	**18 17 55.0**	**-0.5**
	comp=Z,37nm,0.9s,mb5.3						
KOLN	**Koldanda**	**35.42**	**292**	*e*P	**P**	**18 18 02.4**	**-0.7**
	comp=Z,21nm,0.9s,mb5.1						
TLY	**Talaya**	**35.59**	**341**	*e*P	**P**	**18 18 05.2**	**+1.0**
TLY				*e*	pP	18 18 22.6	+4.4
TLY				*e*		18 26 35.6	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TLY				MLR	MLR		
	comp=Z,155nm,18.0s,MS3.8						
TLY	**Talaya**	**35.59**	**341**	*e*P	**P**	**18 18 04.7**	**+0.5**
TLY				*e*	pP	18 18 22.4	+4.2
PYUN	**Piuthan**	**35.99**	**292**	*e*P	**P**	**18 18 06.5**	**-1.5**
	comp=Z,24nm,1.0s,mb5.1						
WMQ	**Urumqi**	**37.48**	**319**	*e*P	**P**	**18 18 22.8**	**+2.4**
WMQ				LR	LR		
	comp=N,73nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=E,88nm,20.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,69nm,22.0s,MS3.4						
BOD	**Bodaibo**	**39.34**	**354**	*e*P	**P**	**18 18 36.4**	**+0.6**
MBWA	**Marble Bar**	**39.70**	**182**	*e*P	**P**	**18 18 36.6**	**-2.6**
	comp=Z,6.7nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**40.62**	**161**	*e*P	**P**	**18 18 42.1**	**-4.7**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
WRAB	**Tennant Creek**	**40.62**	**161**	*e*P	**P**	**18 18 42.1**	**-4.7**
	comp=Z,8.9nm,1.1s,mb4.3						
WRA	**Warramunga Arr**	**40.62**	**161**	P	**P**	**18 18 42.9**	**-3.9**
	comp=Z,2.7nm,0.8s,mb3.9,baz=343,slow=9.0,SNR=23						
WRA				PcP	PcP	18 20 47.6	-0.4
	comp=Z,1.4nm,0.6s,baz=344,slow=3.1,SNR=9.5						
PALK	**Pallekele**	**40.82**	**259**	*e*P	**P**	**18 18 44.5**	**-4.2**
PALK				pmax	pmax		
	comp=Z,58nm,1.4s,mb5.0						
PALK	**Pallekele**	**40.82**	**259**	*e*P	**P**	**18 18 44.5**	**-4.1**
	comp=Z,58nm,1.4s,mb5.0						
MK31	**Makanchi Array**	**42.26**	**320**	*e*P	**P**	**18 19 00.8**	**+0.8**
MK31				*e*		18 20 52.7	
MKAR	**Makanchi Array**	**42.26**	**320**	P	**P**	**18 19 00.9**	**+0.9**
MKAR						18 20 52.8	
MKAR	**Makanchi Array**	**42.26**	**320**	P	**P**	**18 19 00.9**	**+0.9**
	comp=Z,5.6nm,0.8s,mb4.3,baz=116,slow=9.2,SNR=33						
MKAR				PcP	PcP	18 20 52.8	-0.2
	comp=Z,3.3nm,0.8s,baz=113,slow=3.2,SNR=9.0						
MKAR				LR	LR	18 37 51.7	
	comp=Z,52nm,19.6s,MS3.4,baz=177,slow=38						
YAK	**Yakutsk**	**43.65**	**6**	*e*P	**P**	**18 19 10.6**	**-0.4**
YAK				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
YAK				pmax	pmax		
	comp=N,9.0nm,1.4s						
YAK	**Yakutsk**	**43.65**	**6**	*e*P	**P**	**18 19 10.7**	**-0.3**
	comp=N,11nm,0.6s,mb4.8						
KSH	**Kashi**	**43.91**	**308**	P	**P**	**18 19 16.6**	**+3.1**
KSH				pP	pP	18 19 26.4	-1.5
KSH				sP	sP	18 19 29.8	-4.5
KSH				PP	PP	18 21 00.3	+3.7
KSH				ScP	ScP	18 24 49.6	+3.6
KSH				PcS	PcS	18 24 52.1	+0.3
KSH				S	**S**	**18 25 46.9**	**+5.8**
KSH				sS	sS	18 26 03.4	-1.9
KSH				SS	SS	18 28 56.9	-2.3
KSH				ScS	ScS	18 29 09.5	+1.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
KSH				pmax	pmax		
	comp=Z,61nm,3.7s						
KSH				LR	LR		
	comp=Z,110nm,6.4s						
KSH				LR	LR		
	comp=N,95nm,5.1s						
KSH				LR	LR		
	comp=E,86nm,5.3s						
ASAR	**Alice Springs**	**44.01**	**163**	P	**P**	**18 19 11.4**	**-2.9**
	comp=E,1.1nm,0.4s,mb3.9,baz=342,slow=6.9,SNR=25						
ASAR				PcP	PcP	18 20 58.2	-1.0
	comp=E,0.7nm,0.6s,baz=344,slow=2.9,SNR=5.3						
PETK	**Petropavlovsk-**	**44.49**	**31**	P	**P**	**18 19 17.8**	**-0.2**
	comp=E,2.6nm,0.8s,mb4.0,baz=241,slow=2.2,SNR=9.1						
PETK				LR	LR	18 36 33.0	
	comp=E,28nm,21.2s,MS3.2,baz=346,slow=34						
ZALV	**Zalesovo Beam**	**44.78**	**330**	P	**P**	**18 19 20.0**	**-0.2**
ZALV						18 21 00.5	
ZALV	**Zalesovo Beam**	**44.78**	**330**	P	**P**	**18 19 20.0**	**-0.2**
	comp=E,1.7nm,0.7s,mb4.0,baz=116,slow=6.8,SNR=7.5						
ZALV				PcP	PcP	18 21 00.5	-0.9
	comp=E,0.5nm,0.3s,baz=120,slow=5.2,SNR=2.5						
ZALV				LR	LR	18 39 03.7	
	comp=E,75nm,20.9s,MS3.6,baz=78,slow=37						
PET	**Petropavlovsk**	**44.91**	**31**	P	**P**	**18 19 22.3**	**+1.0**
KZA	**Kyzart**	**45.14**	**311**	P	**P**	**18 19 25.6**	**+2.4**
	SNR=23						
TKM2	**Tokmak 2**	**45.14**	**312**	P	**P**	**18 19 25.4**	**+2.2**
	SNR=7.5						
TKM2	**Tokmak 2**	**45.14**	**312**	*e*P	**P**	**18 19 24.4**	**+1.2**
TKM2				*e*		18 21 02.9	
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**45.14**	**312**	*e*P	**P**	**18 19 24.4**	**+1.1**
	comp=Z,5.9nm,1.0s,mb4.4						
TKM2				*e*PcP	PcP	18 21 02.9	0.0
	SNR=6.8						
KBK	**Karagaybulak**	**45.52**	**312**	P	**P**	**18 19 28.5**	**+2.2**
	SNR=25						
UCH	**Uchtor**	**45.70**	**311**	P	**P**	**18 19 30.3**	**+2.6**
UCH	**Uchtor**	**45.70**	**311**	⇑*i*P	**P**	**18 19 30.1**	**+2.4**
UCH				*e*		18 21 05.0	
UCH				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
UCH	**Uchtor**	**45.70**	**311**	⇑*i*P	**P**	**18 19 30.1**	**+2.4**
	comp=Z,22nm,1.0s,mb5.0						
UCH				*e*PcP	PcP	18 21 05.0	+0.1
AAK	**Ala-Archa**	**45.83**	**312**	*d i*P	**P**	**18 19 30.0**	**+1.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**45.83**	**312**	*e*P	**P**	**18 19 29.9**	**+1.2**
	comp=Z,7.8nm,1.3s,mb4.5						
NVS	**Novosibirsk**	**46.06**	**331**	*e*P	**P**	**18 19 30.0**	**-0.3**
NVS				pmax	pmax		
	comp=N,9.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.8s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.8s,mb4.4						
KURK	**Kurchatov**	**46.25**	**324**	*c i*P	**P**	**18 19 32.5**	**+0.7**
KURK				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
KURK	**Kurchatov**	**46.25**	**324**	⇑*i*P	**P**	**18 19 32.0**	**+0.2**
	comp=Z,23nm,1.0s,mb5.1						
AML	**Almayashu**	**46.26**	**311**	P	**P**	**18 19 34.4**	**+2.3**
	SNR=16						
AML	**Almayashu**	**46.26**	**311**	⇑*i*P	**P**	**18 19 34.0**	**+1.9**
AML				*e*		18 21 07.5	
AML				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
AML	**Almayashu**	**46.26**	**311**	⇑*i*P	**P**	**18 19 34.0**	**+1.9**
	comp=Z,19nm,1.1s,mb4.9						
AML				*e*PcP	PcP	18 21 07.5	+0.7
EKS2	**Erk

TIXI	Tiksi	53.09	3	⇑	iP		P	18 20 22.5	-1.0
	comp=Z,2.8nm,0.6s,mb4.4								
STKA	Stephens Creek	54.08	158		eP		P	18 20 28.5	-2.8
STKA						pmax	pmax		
	comp=Z,1.0nm,0.9s								
STKA	Stephens Creek	54.08	158	P			P	18 20 29.0	-2.3
	comp=Z,2.9nm,0.8s,mb4.2,baz=330,slow=8.7,SNR=6.7								
STKA	Stephens Creek	54.08	158		eP		P	18 20 28.5	-2.8
	comp=Z,0.7nm,0.9s,mb3.6								
BILL	Bilibino	56.82	19	⇓	eP		P	18 20 50.7	+0.2
BILL						pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6								
BILL	Bilibino	56.82	19		eP		P	18 20 50.4	-0.2
	comp=Z,2.5nm,0.5s,mb4.5								
ABKAR	Akbulak array	57.20	317	⇑	iP		P	18 20 53.5	0.0
	comp=Z,8.0nm,0.9s,mb4.8								
ABKAR					e		pP	18 21 11.3	+2.9
SVE	Sverdlovsk	58.37	326	⇓	eP		P	18 21 02.1	+0.5
SVE						pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9								
ARU	Arti	59.39	325	d	iP		P	18 21 08.3	-0.4
ARU					e			18 23 17.8	
ARU						S	S	18 29 07.0	-6.4
ARU						SS	SS	18 33 06.2	-2.5
ARU						pmax	pmax		
	comp=Z,15nm,1.7s,mb4.8								
ARU	Arti	59.39	325	⇑	iP		P	18 21 08.1	-0.6
	comp=Z,5.7nm,0.8s,mb4.7								
NIKO	Nikolski	63.28	40		eP		P	18 21 34.4	-0.7
	comp=Z,49nm,0.9s,mb5.6								
UNV	Unalaska Valle	64.74	39	P			P	18 21 44.7	+0.1
KBD	Kabd	66.88	294		eP		P	18 21 57.4	-1.5
KBD						AMb	AMB	18 21 58.1	
	comp=Z,15nm,1.1s,mb5.0								
RDF	Al-Radifah	67.04	294		eP		P	18 21 58.9	-1.0
RDF						AMb	AMB	18 21 59.9	
	comp=Z,25nm,0.7s,mb5.4								
MIB	Mutribah	67.08	295		eP		P	18 21 58.5	-1.7
MIB						AMb	AMB	18 21 59.3	
	comp=Z,10nm,0.6s,mb5.0								
GNI	Garni	67.82	306	c	eP		P	18 22 06.4	+1.8
GNI						pmax	pmax		
	comp=Z,11nm,1.2s								
ZEI	Tsey	68.18	309		eP		P	18 22 06.5	-0.3
ZEI						pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8								
KIV	Kislovodsk	68.94	311	α	eP		P	18 22 11.5	0.0
KIV					e			18 22 17.0	
KIV					e			18 22 33.5	
KIV						pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0								
KIV	Kislovodsk	68.94	311	⇑	iP		P	18 22 11.3	-0.2
	comp=Z,14nm,0.7s,mb5.0								
KLMR	Klimovskoe	69.68	329		eP		P	18 22 14.0	-1.7
KLMR						pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6								
TTA	Tatalina	70.28	29		eP		P	18 22 20.1	+0.7
TTA						pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8								
TTA	Tatalina	70.28	29		eP		P	18 22 20.1	+0.8
	comp=Z,15nm,1.3s,mb4.8								
VSR	Storozhevoye	70.55	319		eP		P	18 22 20.6	-0.7
VSR						pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8								
VSR						pmax	pmax		
	comp=N,3.0nm,0.5s								
VSR						pmax	pmax		
	comp=E,4.0nm,0.5s								
OBN	Obninsk	71.68	323	⇑	P		P	18 22 27.5	-0.5
OBN						pmax	pmax		
	comp=Z,20nm,2.5s,mb4.6								
COLD	Coldfoot	72.39	24		eP		P	18 22 32.5	+0.5
	comp=Z,4.0nm,1.0s,mb4.3								
BPAW	Bear Paw Mtn.	72.43	27		eP		P	18 22 32.7	+0.4
	comp=Z,16nm,1.3s,mb4.8								
MALT	Malatya	72.94	305		eP		P	18 22 36.2	+0.3
MALT						pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5								
MALT	Malatya	72.94	305		eP		P	18 22 36.2	+0.3
	comp=Z,6.9nm,1.2s,mb4.5								
MALT	Malatya	72.94	305	⇑	iP		P	18 22 36.3	+0.4
JOF	Joensuu	73.36	331		eP		P	18 22 36.4	-1.4
JOF						pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7								
JOF	Joensuu	73.36	331		ep		P	18 22 36.4	-1.4
	comp=Z,4.8nm,0.5s,mb4.7								
MCK	McKinley	73.38	28		eP		P	18 22 37.7	-0.2
MCK						pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5								
MCK	McKinley	73.38	28		eP		P	18 22 37.7	-0.2
	comp=Z,6.3nm,1.0s,mb4.5								
ARCES	ARCESS Array B	74.50	339	P			P	18 22 43.8	-0.6
	comp=Z,24nm,0.8s,mb4.2,baz=60,slow=7.7,SNR=6.2								
KAF	Kangasniemi	75.79	331		eP		P	18 22 50.2	-1.7
KAF						pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3								
KAF	Kangasniemi	75.79	331		ep		P	18 22 50.2	-1.7
	comp=Z,3.2nm,0.7s,mb4.4								
FINES	FINESS Array B	76.05	330	P			P	18 22 52.8	-0.6
	comp=Z,2.6nm,0.8s,mb4.2,baz=104,slow=8.0,SNR=9.3								
BRTR	Keskin Array B	76.30	308	P			P	18 22 54.4	-1.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=117,slow=4.7,SNR=6.7								
EGAK	Eagle	76.48	26		eP		P	18 22 55.8	0.0
	comp=Z,3.6nm,0.9s,mb4.3								
AKASG	Malin Array Be	76.83	319	P			P	18 22 56.8	-1.4
	comp=Z,3.2nm,0.7s,mb4.3,baz=64,slow=5.8,SNR=8.8								
INK	Inuvik	78.29	21	P			P	18 23 05.7	-0.2
	comp=Z,2.8nm,0.8s,mb4.2,baz=298,slow=7.4,SNR=14								
SUW	Suwalki	79.53	324		eP		P	18 23 11.8	-1.1
SUW						pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0								
SUW	Suwalki	79.53	324		eP		P	18 23 11.8	-1.2
	comp=Z,22nm,1.0s,mb5.0								
VRI	Vrincioaia	79.69	315	⇓	iP		P	18 23 14.6	+0.6
BURAR	Bucovina Array	80.18	317	⇓	iP		P	18 23 16.8	+0.2
BUR08	Bucovina Ar. S	80.18	317		eP		P	18 23 16.1	-0.5
MLR	Muntele Rosu	80.32	315	⇓	iP		P	18 23 17.6	+0.2
NB2	NORSAR Subarra	82.94	333	P			P	18 23 29.6	-1.3
	comp=Z,1.2nm,0.7s,mb4.0,baz=64,slow=4.8								
NOA	NORSAR Array B	82.94	333	P			P	18 23 29.7	-1.2
	comp=Z,1.8nm,0.8s,mb4.2,baz=64,slow=5.0,SNR=8.0								
NOA						LR	LR	19 03 24.9	
	comp=Z,82nm,20.1s,MS4.1,baz=120,slow=38								
PSZ	Piszkesteto	83.48	318		eP		P	18 23 33.2	-0.8
PSZ						pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4								
PSZ	Piszkesteto	83.48	318		eP		P	18 23 33.2	-0.8
	comp=Z,3.1nm,0.8s,mb4.4								
DLBC	Dease Lake	83.67	30		eP		P	18 23 31.0	-3.7
RES	Resolute Bay	84.01	9		eP		P	18 23 35.8	-0.4
RES						pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3								
RES	Resolute Bay	84.01	9		eP		P	18 23 35.8	-0.4
	comp=Z,2.1nm,0.8s,mb4.3								
MORC	Moravsky Berou	84.25	321		eP		P	18 23 36.7	-1.1
BRG	Berggiesshubel	85.93	323		eP		P	18 23 45.9	-0.4
	comp=Z,4.2nm,1.0s,mb4.6								
BRG	Berggiesshubel	85.93	323		eP		P	18 23 45.9	-0.3
BRG						pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.5								
CLL	Collm	86.28	323		eP		P	18 23 48.0	0.0
CLL						pmax	pmax		
	comp=Z,11nm,1.6s,mb4.8								
CLL	Collm	86.28	323		eP		P	18 23 48.0	0.0
	comp=Z,11nm,1.6s,mb4.8								
CLL	Collm	86.28	323		eP		P	18 23 48.0	0.0
	comp=Z,11nm,1.6s,mb4.8								
GERES	GERESS Array B	86.93	321	P			P	18 23 51.1	-0.1
	comp=Z,0.4nm,0.4s,mb4.0,baz=57,slow=4.9,SNR=5.3								
GERES						LR	LR	19 08 38.6	
	comp=Z,41nm,20.1s,MS3.8,baz=93,slow=40								
YKA	Yellowknife Ar	88.00	23	P			P	18 23 56.2	+0.2
	comp=Z,2.7nm,0.6s,mb4.7,baz=310,slow=4.4,SNR=52								
YKA	Yellowknife Ar	88.00	23	P			P	18 23 56.2	+0.2
TXAR	Lajitas Array	115.61	43	PKP			PKPdf	18 29 48.7	0.0
	comp=Z,0.7nm,0.6s,baz=252,slow=0.6,SNR=5.8								
TXAR	Lajitas Array	115.61	43	PKP			PKPdf	18 29 48.7	-0.1
SDV	Santo Domingo	150.21	24	ePKPdf			PKPdf	18 30 52.6	-0.2
SDV				ePKPbc			PKPbc	18 30 57.6	-0.3

IDC 09 18:31:30.4±1.4, 29°.54S×178°.75W, h363km±17km, mb2.7/2, mb1 3.1/3, mb1mx3.0/15, mbtmp3.0/3, Error ellipse: s-maj=48.7km s-min=26.4km az=113.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.78	69	P	Pn	18 32 16.9	+0.1
	103nm,0.3s,baz=58,slow=19,SNR=4.3						
URZ	Urewera	9.36	200	P	Pn	18 33 41.4	+0.9
	3.9nm,0.3s,baz=256,slow=2.4,SNR=21						
URZ				S	S	18 35 26.2	-1.0
	1.5nm,0.3s,baz=104,slow=22,SNR=8.7						
ASAR	Alice Springs	42.51	266	P	P	18 38 51.8	+0.1
	0.3nm,0.4s,baz=102,slow=6.9,SNR=17						
WRA	Warramunga Arr	43.42	272	P	P	18 38 58.6	-0.3
	0.3nm,0.4s,baz=110,slow=8.1,SNR=8.3						
FINES	FINESS Array B	144.12	340	PKP	PKPdf	18 50 21.8	-0.7
	0.7nm,0.3s,baz=56,slow=4.0,SNR=13						

*DDA **09** 18:37:59.0, 38°.21N×26°.65E, h7km±1km, Md3.0*
*ISCJB **09** 18:37:59.8±0.8, 38°.20N±0°.03×26°.69E±0°.05, h3km±8km, Error ellipse: s-maj=7.4km s-min=5.5km az=154.8*
*ISK **09** 18:37:59.8, 38°.20N×26°.70E, h8km, MD2.9*
*CSEM **09** 18:38:00.2±0.2, 38°.19N×26°.71E, h8km, MD2.9, Error ellipse: s-maj=5.6km s-min=3.1km az=82.0*
ISC 09 18:37:59.2±1.3, 38°.18N±0°.04×26°.62E±0°.08, h1km±9km, n21, σ0°.27/30, 1C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.18	355	⇑ iPg	Pg	18 38 02.5	-0.2
URLA				i Sg	Sg	18 38 05.4	+0.3
BLCB	Balcova	0.39	58	ePG	Pg	18 38 06.8	0.0
BLCB				eSG	Sg	18 38 11.5	-0.3
BLCB	Balcova	0.39	58	ePg	Pg	18 38 06.8	0.0
BLCB				eSg	Sg	18 38 11.5	-0.4
IZM	Izmir	0.55	66	ePG	Pg	18 38 09.9	+0.1
GCAM	G?zelcaml?	0.68	134	⇓ iP	Pg	18 38 12.4	+0.1
GCAM				i S	Sg	18 38 21.2	+0.1
GCAM	G?zelcaml?	0.68	134	i P	Pg	18 38 12.4	+0.1
GCAM				i S	Sg	18 38 21.2	+0.1
AYDN	Tasoluk	1.12	117	eP	Pg	18 38 20.2	-0.5
AYDN				eS	Sg	18 38 35.6	+0.3
AYDN	Tasoluk	1.12	117	eP	Pg	18 38 20.2	-0.5
AYDN				eS	Sg	18 38 35.6	+0.3
AKS	Akhisar	1.17	53	ePN	Pg	18 38 21.4	-0.3
AKS				eSN	Sg	18 38 37.3	+0.5
AKS	Akhisar	1.17	53	ePn	Pg	18 38 21.4	-0.3
AKS				eSn	Sg	18 38 37.3	+0.5
MLSB	Milas	1.27	133	ePN	Pn	18 38 24.0	-0.2
MLSB	Milas	1.27	133	ePn	Pn	18 38 24.0	-0.2
DAT	Datca	1.64	152	ePN	Pn	18 38 29.4	+0.3
DAT	Datca	1.64	152	ePn	Pn	18 38 29.4	+0.3
KULA	Kula-Manisa	1.64	78	ePN	Pn	18 38 29.1	-0.1
KULA	Kula-Manisa	1.64	78	ePn	Pn	18 38 29.1	-0.1
EZN	Ezine	1.66	352	ePN	Pn	18 38 29.7	+0.2
EZN	Ezine	1.66	352	ePn	Pn	18 38 29.7	+0.2
BALB	Balikesir	1.76	34	ePN	Pn	18 38 30.7	-0.2
BALB	Balikesir	1.76	34	ePn	Pn	18 38 30.7	-0.2
VAM	Vamos	3.38	216	ePg	Pg	18 39 10.5	+6.5

*NEIC **09** 19:13:25.6, 33°.20S×70°.39W, h105km, MD3.8(GUC), After GUC.*
NEIC Felt [II] at Santiago.
GUC 09 19:13:25.6±0.8, 33°.20S×70°.39W, h105km±4km, MD3.8, ML3.9, 1C-7D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	Farellones	0.15	148	⇓ iP	Pn	19 13 40.4	+0.2
FCH				i S	Sn	19 13 51.1	-0.1
CLCH	Cerro Calan	0.23	212	⇑ iP	Pn	19 13 40.7	+0.2
CLCH				i S	Sn	19 13 52.0	+0.3
CLCH				AML	AML	19 13 53.7	
	comp=E,11μm,0.4s						
PEL	Peldehue	0.26	282	⇓ iP	Pn	19 13 40.6	+0.1
PEL				i S	Sn	19 13 51.4	-0.3
PEL				AML	AML	19 13 53.2	
	comp=N,7μm,0.6s						
SAN	Santiago	0.34	222	eP	Pn	19 13 40.7	-0.2
SAN				i S	Sn	19 13 52.4	-0.1
ANTU	Antumapu	0.42	209	eP	Pn	19 13 41.5	+0.1
ANTU				i S	Sn	19 13 53.3	+0.1
PCH	Pirque	0.43	194	⇓ iP	Pn	19 13 41.8	+0.4
PCH				i S	Sn	19 13 53.6	+0.3
JACH	Jahuel	0.54	341	⇓ iP	Pn	19 13 42.2	0.0
TACH	Talagante	0.65	225	⇓ eP	Pn	19 13 43.0	0.0
TACH				i S	Sn	19 13 55.9	-0.2
CACH	El Canelo	0.93	191	eP	Pn	19 13 46.4	+0.7
CACH				i S	Sn	19 14 02.2	+1.4
IHA	Instituto Hidr	1.07	279	eP	Pn	19 13 47.0	-0.1
IHA				i S	Sn	19 14 03.6	+0.4
LNV	Longovilo	1.14	228	i P	Pn	19 13 47.2	-0.6
LNV				i S	Sn	19 14 04.2	-0.6
CHNG	Los Chungos	1.61	324	eP	Pn	19 13 53.5	0.0
TLL	Tololo Astrono	3.04	353	⇓ eP	Pn	19 14 12.3	+0.3
TLL				i S	Sn	19 14 48.4	+0.6
TLL	Tololo Astrono	3.04	353	⇓ eP	Pn	19 14 12.3	+0.3
TLL				i S	Sn	19 14 48.4	+0.6
TLL				AML	AML	19 14 50.3	
	comp=N,203nm,0.4s						
LCO	Las Campanas	4.18	356	ePn	Pn	19 14 26.2	-1.1
LCO				eSn	Sn	19 15 12.3	-2.9

*IDC **09** 19:13:28.9±1.8, 5°.59S×154°.01E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/17, mbtmp3.9/7, Error ellipse: s-maj=57.8km s-min=24.3km az=109.0*
*NEIC **09** 19:13:29.7±2.1, 5°.61S×154°.02E, h10km, mb4.6/3, Error ellipse: s-maj=61.0km s-min=17.0km az=112.0*
ISC 09 19:13:33.9±2.5, 5°.6S±0°.2×154°.0E±0°.4, h35km, n13, σ1°.20/11, mb4.0/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	22.36	250	eP	P	19 18 27.6	-1.5
	33nm,0.8s,mb4.8						
WRAB	Tennant Creek	23.78	232	eP	P	19 18 43.7	+0.2
	3.4nm,0.8s,mb3.8						
WRA	Warramunga Arr	23.79	232	P	P	19 18 44.0	+0.4
	1.9nm,0.7s,mb3.6,baz=56,slow=10,SNR=17						
WRA				PcP	PcP	19 22 27.7	+1.0
	0.9nm,0.9s,baz=64,slow=2.2,SNR=10.0						
ASAR	Alice Springs	26.35	225	P	P	19 19 07.6	+0.8
	2.2nm,0.9s,mb3.7,baz=58,slow=8.9,SNR=25						
ASAR				PcP	PcP	19 22 33.8	+1.5
	0.9nm,0.6s,baz=63,slow=2.6,SNR=16						
FITZ	Fitzroy Crossi	30.29	243	P	P	19 19 42.2	+0.1
	5.4nm,0.9s,mb4.3,baz=81,slow=8.6,SNR=9.7						
NWAO	Narrogin (SRO)	43.64	227	P	P	19 21 34.0	-1.3
	14nm,1.1s,mb4.6						
MAJO	Matsushiro	44.47	342	P	P	19 21 39.0	-2.7
CMAR	Chiang Mai Arr	59.26	295	P	P	19 23 34.5	+2.1
	0.7nm,0.8s,mb3.8,baz=96,slow=3.8,SNR=4.7						
SONM	Songino Array	67.63	327	P	P	19 24 28.1	+0.9
	0.3nm,0.5s,mb3.5,baz=124,slow=5.7,SNR=2.6						
MKAR	Makanchi Array	81.70	319	P	P	19 25 49.8	+1.0
	0.8nm,0.8s,mb3.7,baz=103,slow=5.4,SNR=6.9						
ZALV	Zalesovo Beam	82.47	326	P	P	19 25 51.8	-0.9
	0.4nm,0.4s,mb3.7,baz=97,slow=3.5,SNR=2.8						
TORD	Torodi Ar. Bea	151.65	287	PKPbc	PKPbc	19 33 25.9	+0.2
	0.9nm,0.8s,baz=61,slow=2.3,SNR=4.6						
TORD				PKPab	PKPab	19 33 33.7	-0.7
	0.9nm,0.7s,baz=59,slow=1.6,SNR=4.5						
TORD	Torodi Ar. Bea	151.65	287	PKPbc	PKPbc	19 33 25.9	+0.2
TORD				PKPab	PKPab	19 33 33.7	-0.7

*CSEM **09** 19:17:31.5±1.0, 36°.04N×21°.79E, h2km, ML3.1/2, Error ellipse: s-maj=21.4km s-min=7.5km az=58.0*
*ATH **09** 19:17:31.8, 36°.05N×21°.83E, h10km, MD3.2/3*
*THE **09** 19:17:32.6, 36°.08N×21°.76E, h1km±6km, ML3.1/2, Error ellipse: s-maj=11.0km s-min=1.2km az=248.0*
ISC 09 19:17:30.2±2.1, 36°.00N±0°.07×21°.6E±0°.2, h4km±11km, n17, σ0°.91/27, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.90	7	P	Pg	19 17 47.5	0.0
PYL				S	Sg	19 17 59.6	+0.4
PYL	PYLOS	0.90	7	P	Pg	19 17 47.5	0.0
PYL				S	Sg	19 17 59.6	+0.4
KYTH	Kithira	1.19	76	ePG	Pn	19 17 50.5	-3.1
KYTH	Kithira	1.19	76	ePg	Pn	19 17 50.5	-3.1
ITM	Ithomi	1.21	12	ePN	Pn	19 17 53.0	-0.8
ITM	Ithomi	1.21	12	P	Pn	19 17 53.0	-0.8
ITM				S	Sg	19 18 08.8	-0.1
ITM	Ithomi	1.21	12	P	Pn	19 17 53.0	-0.8
ITM				S	Sg	19 18 08.8	-0.1
VLI	Veliai	1.29	56	ePN	Pn	19 17 53.3	-1.7
VLI	Veliai	1.29	56	ePn	Pn	19 17 53.3	-1.7
VLX	Vlachokerasia	1.50	24	P	Pn	19 17 57.9	0.0
VLX				S	Sn	19 18 17.7	-0.2
VLX	Vlachokerasia	1.50	24	P	Pn	19 17 57.9	0.0
VLX				S	Sn	19 18 17.7	-0.2
KARN	Karanos	1.97	107	P	Pn	19 18 04.7	+0.4
KARN				S	Sn	19 18 30.2	+0.8
KARN	Karanos	1.97	107	P	Pn	19 18 04.7	+0.4
KARN				S	Sn	19 18 30.2	+0.8
DID	Didima	1.99	40	P	Pn	19 18 05.3	+0.7
DID				S	Sn	19 18 30.1	+0.1
DID	Didima	1.99	40	P	Pn	19 18 05.3	+0.7
DID				S	Sn	19 18 30.1	+0.1
GUR	Goura	2.02	17	P	Pn	19 18 06.5	+1.5
GUR	Goura	2.02	17	P	Pn	19 18 06.5	+1.5

*DDA **09** 19:18:29.9, 36°.97N×27°.79E, h7km±7km, Md2.7*
*ISCJB **09** 19:18:32.5±0.7, 37°.08N±0°.04×27°.69E±0°.07, h14km±7km, Error ellipse: s-maj=9.9km s-min=6.2km az=24.4*
*CSEM **09** 19:18:32.7±0.2, 37°.09N×27°.66E, h5km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.1km az=94.0*
*ISK **09** 19:18:32.2, 37°.08N×27°.71E, h4km, MD2.9*
ISC 09 19:18:32.4±0.8, 37°.10N±0°.04×27°.67E±0°.07, h18km±7km, n12, σ0°.28/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.22	23	ePG	Pg	19 18 37.5	-0.1
MLSB				eSG	Sg	19 18 41.2	+0.1
MLSB	Milas	0.22	23	ePg	Pg	19 18 37.5	-0.1
MLSB				eSg	Sg	19 18 41.2	+0.1
DAT	Datca	0.37	192	ePG	Pg	19 18 39.8	-0.4
DAT				eSG	Sg	19 18 45.9	+0.4
DAT	Datca	0.37	192	ePg	Pg	19 18 39.8	-0.4
DAT				eSg	Sg	19 18 45.9	+0.5
YER	Yerkesik	0.49	85	ePG	Pg	19 18 42.2	-0.1
YER				eSG	Sg	19 18 49.0	0.0
YER	Yerkesik	0.49	85	ePg	Pg	19 18 42.2	-0.1
YER				eSg	Sg	19 18 49.0	0.0
AYDN	Tasoluk	0.59	16	eP	Pb	19 18 44.3	0.0
AYDN				eS	Sb	19 18 52.5	+0.2
AYDN	Tasoluk	0.59	16	eP	Pb	19 18 44.3	0.0
AYDN				eS	Sb	19 18 52.5	+0.2
GCAM	G?zelcaml?	0.70	330	eP	Pb	19 18 45.6	-0.5
GCAM				eS	Sb	19 18 55.7	+0.3
GCAM	G?zelcaml?	0.70	330	eP	Pb	19 18 45.6	-0.5
GCAM				eS	Sb	19 18 55.7	+0.3
TURN	Turunc	0.78	106	eP	Pb	19 18 39.9	-7.6
TURN				eS	Sb	19 18 52.0	-5.7
TURN	Turunc	0.78	106	eP	Pb	19 18 39.8	-7.7
TURN				eS	Sb	19 18 52.0	-5.7

CASC 09 19:20:49.1±1.7, 12°.27N×87°.88W, h65km±64km, MD3.5, ML2.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.92	62	eP	Pn	19 21 06.9	+0.6
CRIN				eS	Sn	19 21 21.4	+2.3
CRIN				AML	AML	19 21 30.5	
	comp=N,414nm,0.2s						
CNCH	Conchagua	1.00	3	eP	Pn	19 21 07.8	+0.3
CNCH				eS	Sn	19 21 21.9	+0.9
CNGN	Cerro Negro	1.18	79	eP	Pn	19 21 09.4	-0.2
CNGN				eS	Sn	19 21 25.2	+0.2
CNGN				AML	AML	19 21 33.8	
	comp=E,83nm,0.5s						
BLLM	Bellamira	1.22	343	eP	Pn	19 21 09.9	-0.3
BLLM				eS	Sn	19 21 26.3	+0.3
COPN	Copaltepe	1.26	94	eP	Pn	19 21 10.5	-0.3
COPN				eS	Sn	19 21 26.5	-0.5
MOMN	Momotombo	1.32	84	eP	Pn	19 21 11.9	+0.4
CAHU	Cacacuatique	1.53	348	eP	Pn	19 21 15.3	+1.0
LFRS	El Faro	1.77	320	eP	Pn	19 21 17.9	+0.3
LFRS				eS	Sn	19 21 40.5	+1.4

*ISK **09** 19:24:55.9, 37°.02N×29°.14E, h21km, MD3.0*
*ISCJB **09** 19:24:56.8±0.5, 36°.99N±0°.04×29°.15E±0°.05, h29km±6km, Error ellipse: s-maj=6.6km s-min=6.2km az=31.4*
*CSEM **09** 19:24:56.5±0.2, 37°.03N×29°.12E, h20km, MD3.0, Error ellipse: s-maj=5.6km s-min=5.1km az=56.0*
*DDA **09** 19:24:58.6, 37°.02N×29°.20E, h7km±5km, Md3.0*
ISC 09 19:24:57.0±0.5, 36°.99N±0°.04×29°.15E±0°.05, h26km±7km, n25, σ0°.85/34, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.33	60	ePG	Pb	19 25 03.2	-1.2
GLHS	Glhisar (BURDU	0.33	60	ePg	Pb	19 25 03.2	-1.2
FETY	Fethiye	0.36	188	ePG	Pb	19 25 04.3	-0.6
FETY				eSG	Sb	19 25 10.6	+0.2
FETY	Fethiye	0.36	188	ePg	Pb	19 25 04.3	-0.7
FETY				eSg	Sb	19 25 10.6	+0.2
GOLH	Golhisar	0.41	54	⇑ iPg	Pb	19 25 05.2	-0.6
GOLH				i Sg	Sb	19 25 12.0	+0.2
ELL	Elmali	0.66	112	ePG	Pb	19 25 10.1	+0.2
ELL	Elmali

LPAZ La Paz 24.43 164 P **P 19 35 26.0 -0.5**
1.0nm,0.5s,mb3.4,baz=352,slow=5.5,SNR=3.6
LPAZ La Paz 24.43 164 P **P 19 35 26.0 -0.5**
LPAZ *eP* 19 35 26.7
SIV San Ignacio 26.98 149 P **P 19 35 48.1 -1.5**
1.3nm,0.8s,mb3.5,baz=323,slow=12,SNR=7.1
TXAR Lajitas Array 34.71 313 P **P 19 36 58.5 +1.0**
0.2nm,0.7s,mb3.0,baz=110,slow=7.8,SNR=2.4
YKA Yellowknife Ar 62.15 340 P **P 19 40 28.1 +0.3**
0.4nm,0.6s,mb3.6,baz=135,slow=6.8,SNR=6.7
YKA Yellowknife Ar 62.15 340 P **P 19 40 28.1 +0.3**
TORD Torodi Ar. Bea 75.53 78 P **P 19 41 52.5 +0.7**
0.2nm,0.4s,mb3.2,baz=282,slow=6.8,SNR=4.3
ASAR Alice Springs 147.80 236 PKPbc PKPbc 19 49 53.3 +1.3
0.3nm,0.6s,baz=114,slow=3.5,SNR=6.3
WRA Warramunga Arr 148.86 243 PKPbc PKPbc 19 49 56.4 +1.5
0.3nm,0.7s,baz=277,slow=0.6,SNR=5.5

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*ISCJB **09** 19:34:24.3±1.8, 16°.3N±0°.1×91°.00W±0°.09, h0km±14km, mb3.9/3, MS3.0/3, Error ellipse: s-maj=26.9km s-min=10.7km az=24.2*
*IDC **09** 19:34:26.1±1.2, 16°.40N×90°.84W, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/21, mbtmp3.8/4, ML3.2/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/37, Error ellipse: s-maj=23.8km s-min=11.8km az=57.0*
ISC 09 19:34:26.7±1.9, 16°.2N±0°.2×91°.00W±0°.09, h3km±14km, n9, σ1°69/8, mb3.9/3, MS3.0/3, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.33**	**157**	Pg	**Pg**	**19 34 52.2**	**+0.1**
	27nm,0.3s,baz=325,slow=12,SNR=336						
APG				Lg		19 35 12.1	
	357nm,0.3s,baz=158,slow=17,SNR=33						
CMIG	**Matias Romero**	**3.82**	**283**	Pn	**Pn**	**19 35 28.4**	**+2.0**
	0.9nm,0.3s,baz=107,slow=8.4,SNR=5.7						
CMIG				Pg	**Pg**	**19 35 39.0**	**-0.8**
	1.4nm,0.3s,baz=104,slow=13,SNR=9.7						
CMIG				Sn	**Sn**	**19 36 10.9**	**-0.9**
	6.0nm,0.3s,baz=197,slow=4.9,SNR=12						
CMIG				Lg		19 36 29.0	
	4.4nm,0.3s,baz=159,slow=19,SNR=5.0						
CMIG				LR	LR	19 37 26.3	
	comp=Z,218nm,21.6s,baz=15,slow=46						
TXAR	**Lajitas Array**	**17.48**	**320**	P	**Pn**	**19 38 32.8**	**+1.2**
	0.0nm,0.3s,baz=142,slow=13,SNR=11						
TKL	**Tuckaleechee C**	**20.40**	**17**	LR	LR	19 47 12.2	
	comp=Z,54nm,20.6s,MS2.9,baz=55,slow=38						
SDV	**Santo Domingo**	**21.17**	**108**	P	**P**	**19 39 13.0**	**-0.3**
	7.4nm,0.8s,mb4.1,baz=291,slow=6.8,SNR=6.6						
SADO	**Sadowa**	**30.16**	**17**	LR	LR	19 53 07.1	
	comp=Z,35nm,18.9s,MS3.0,baz=101,slow=37						
NVAR	**Mina Array Bea**	**32.61**	**318**	P	**P**	**19 41 00.3**	**+0.8**
	1.4nm,0.9s,mb3.9,baz=126,slow=10,SNR=2.0						
YKA	**Yellowknife Ar**	**49.10**	**346**	P	**P**	**19 43 12.8**	**-2.3**
	0.6nm,0.6s,mb3.8,baz=144,slow=7.7,SNR=11						
NOA	**NORSAR Array B**	**81.74**	**29**	LR	LR	20 21 04.2	
	comp=Z,9.5nm,19.5s,MS3.2,baz=0.0,slow=34						

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*ISCJB **09** 19:39:06.8±0.3, 6°.76N±0°.03×72°.89W±0°.03, h173km±3km, mb4.5/77, Error ellipse: s-maj=5.9km s-min=4.5km az=146.8*
*IDC **09** 19:39:06.6±0.6, 6°.79N×72°.94W, h154km±6km, mb3.9/19, mb1 4.1/24, mb1mx4.0/30, mbtmp4.0/24, Error ellipse: s-maj=10.8km s-min=9.4km az=89.0*
*NEIC **09** 19:39:07.0±0.5, 6°.68N×72°.95W, h166km±4km, mb4.7/70, Error ellipse: s-maj=5.4km s-min=4.9km az=60.0*
NEIC Felt at Giron.
*FUNV **09** 19:39:09.2, 6°.91N×73°.03W, h170km, MW4.8*
ISC 09 19:39:07.7±0.3, 6.76N±0°.03×72.90W±0°.03, h163km±3km, n429, σ0°62/432, mb4.5/77, 167C-132D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.25**	**28**	⇑*i*P	**Pn**	**19 39 36.6**	**+0.8**
CAPV				*e*S	**Sn**	**19 39 57.1**	**-0.4**
ROSC	**El Rosal**	**2.36**	**217**	P	**Pn**	**19 39 48.2**	**+0.4**
	376nm,0.3s,baz=99,slow=18,SNR=550						
ROSC				S	**Sn**	**19 40 18.4**	**-0.4**
	258nm,0.3s,baz=79,slow=20,SNR=6.9						
ROSC	**El Rosal**	**2.36**	**217**	*e*Pn	**Pn**	**19 39 48.1**	**+0.2**
ROSC				*e*Sn	**Sn**	**19 40 14.8**	**-4.1**
SOCV	**Socops**	**2.53**	**53**	⇑*i*P	**Pn**	**19 39 51.4**	**+1.5**
SOCV				*e*S	**Sn**	**19 40 22.5**	**0.0**
VIGV	**El Vigia**	**2.57**	**36**	⇑*i*P	**Pn**	**19 39 51.0**	**+0.7**
VIGV				*e*S	**Sn**	**19 40 22.0**	**-1.4**
SDV	**Santo Domingo**	**3.09**	**47**	P	**Pn**	**19 39 57.8**	**+1.1**
SDV				S	**Sn**	**19 40 34.2**	**-0.5**
	193nm,0.3s,baz=289,slow=16,SNR=12						
SDV	**Santo Domingo**	**3.09**	**47**	⇑*i*Pn	**Pn**	**19 39 57.8**	**+1.2**
SDV				*e*Sn	**Sn**	**19 40 34.3**	**-0.4**
ELOV	**Elorza**	**3.40**	**86**	⇑*i*P	**Pn**	**19 40 02.8**	**+2.2**
ELOV				*e*S	**Sn**	**19 40 42.0**	**+0.2**
VIRV	**Villa del Rosa**	**3.75**	**7**	*e*P	**Pn**	**19 40 03.4**	**-1.8**
VIRV				*e*S	**Sn**	**19 40 43.9**	**-6.0**
QARV	**Quebrada Arrib**	**4.16**	**34**	⇑*i*P	**Pn**	**19 40 10.9**	**+0.6**
QARV				*e*S	**Sn**	**19 40 54.4**	**-4.8**
SANV	**Sanarito**	**4.31**	**50**	⇑*i*P	**Pn**	**19 40 12.8**	**+0.5**
CURV	**Curarigua**	**4.35**	**42**	⇑*i*P	**Pn**	**19 40 13.3**	**+0.5**
DABV	**Dabajuro**	**4.71**	**28**	⇑*i*P	**Pn**	**19 40 17.5**	**0.0**
TEPV	**Terepaima**	**4.86**	**49**	⇑*i*P	**Pn**	**19 40 20.0**	**+0.5**
SIQV	**Siquisique**	**4.93**	**38**	⇑*i*P	**Pn**	**19 40 20.3**	**-0.1**
SIQV				*e*S	**Sn**	**19 41 12.2**	**-5.2**
BAUV	**El Baul**	**5.28**	**65**	⇑*i*P	**Pn**	**19 40 24.9**	**-0.2**
MAPV	**Macapo**	**5.36**	**55**	⇑*i*P	**Pn**	**19 40 26.3**	**+0.3**
JACV	**Jacura**	**5.89**	**43**	*e*P	**Pn**	**19 40 31.9**	**-1.2**
IMOV	**Isla Los Monje**	**5.91**	**19**	*e*P	**Pn**	**19 40 31.7**	**-1.6**
MONV	**Montecano**	**5.92**	**29**	⇓*i*P	**Pn**	**19 40 32.4**	**-1.0**
TURV	**Turiamo**	**6.21**	**53**	⇑*e*P	**Pn**	**19 40 36.6**	**-0.6**
CAOV	**Caicara del Or**	**6.56**	**85**	⇑*i*P	**Pn**	**19 40 42.0**	**+0.1**
MERV	**Las Mercedes**	**7.00**	**69**	⇑*i*P	**Pn**	**19 40 47.4**	**-0.3**
FUNV	**FUNVISIS**	**7.06**	**58**	⇑*i*P	**Pn**	**19 40 48.4**	**-0.2**
BCIP	**Isla Barro Col**	**7.27**	**290**	*e*Pn	**Pn**	**19 40 45.7**	**-5.7**
	80nm,0.9s						
BCIP				*e*Sn	**Sn**	**19 42 07.4**	**-5.6**
BIRV	**Birongo**	**7.53**	**60**	⇑*i*P	**Pn**	**19 40 54.5**	**-0.3**
CUPV	**Cœpira**	**7.76**	**65**	⇑*i*P	**Pn**	**19 40 57.7**	**-0.2**
OTAV	**Otavalo**	**8.52**	**221**	*e*Pn	**Pn**	**19 41 05.6**	**-2.3**
	32nm,0.6s						
OTAV				*e*Sn	**Sn**	**19 42 41.7**	**-1.3**
PCRV	**Puerto La Cruz**	**8.85**	**67**	P	**Pn**	**19 41 12.2**	**-0.2**
	6.9nm,0.3s,baz=150,slow=5.2,SNR=21						
PCRV	**Puerto La Cruz**	**8.85**	**67**	*e*P	**Pn**	**19 41 13.1**	**+0.7**
GUNV	**Guanoco**	**10.42**	**70**	⇑*i*P	**Pn**	**19 41 32.9**	**-0.1**
HOJ	**Hope**	**11.79**	**342**	⇑*e*P	**Pn**	**19 41 52.2**	**+1.3**
GWJ	**Greenwich**	**11.85**	**342**	⇑*e*P	**Pn**	**19 41 50.6**	**-1.1**
STH	**Stony Hill**	**11.88**	**342**	⇑*e*P	**Pn**	**19 41 52.2**	**+0.1**
STH				*e*S	**Sn**	**19 43 49.9**	**-14**
MCJ	**Malvern**	**12.04**	**338**	⇓*i*P	**Pn**	**19 41 54.8**	**+0.7**
SDDR	**Presa de Saban**	**12.25**	**7**	*e*Pn	**Pn**	**19 41 56.9**	**0.0**
	30nm,0.7s						
SDDR				*e*Sn	**Sn**	**19 44 05.8**	**-6.8**
MTDJ	**Mount Denham**	**12.26**	**339**	*e*Pn	**Pn**	**19 41 57.7**	**+0.7**
	129nm,0.7s						
MTDJ				*e*Sn	**Sn**	**19 44 02.5**	**-10**
GRGR	**Grenville**	**12.31**	**63**	*e*Pn	**Pn**	**19 42 01.3**	**+3.6**
JTS	**JuntasAbangare**	**12.42**	**287**	P	**Pn**	**19 41 58.3**	**-0.8**
	1.6nm,0.3s,baz=91,slow=8.0,SNR=7.4						
JTS	**JuntasAbangare**	**12.42**	**287**	*e*Pn	**Pn**	**19 41 57.9**	**-1.2**
	14nm,0.6s						
SJG	**San Juan**	**13.07**	**30**	P	**Pn**	**19 42 07.5**	**+0.2**
	7.1nm,0.3s,baz=210,slow=14,SNR=3.3						
SJG	**San Juan**	**13.07**	**30**	Pn	**Pn**	**19 42 03.0**	**-4.3**
SJG				P		19 42 07.5	
SJG				*e*Sn	**Sn**	**19 44 27.9**	**-4.3**
GTBY	**Guantanamo Bay**	**13.27**	**351**	*e*Pn	**Pn**	**19 42 11.1**	**+1.3**
	70nm,0.6s						
RCC	**Rio Carpintero**	**13.44**	**349**	*e*P	**Pn**	**19 42 13.0**	**+1.0**
LMGC	**Las Mercedes**	**13.81**	**344**	*e*P	**Pn**	**19 42 18.7**	**+2.0**
	baz=115						
LMGC				*e*S	Sn	19 44 29.0	-21
	comp=N,31nm,1.0s						
LMGC				*e*			
	comp=E,23nm,1.5s						
FDF	**Fort de France**	**14.00**	**55**	*e*Pn	**Pn**	**19 42 19.1**	**0.0**
	comp=E,110nm,1.0s						
ATAH	**Atahualpa**	**14.72**	**202**	P	**Pn**	**19 42 30.0**	**+1.8**
	comp=E,0.3nm,0.3s,baz=29,slow=10,SNR=2.7						
ATAH				S	**Sn**	**19 45 21.5**	**+9.4**
	comp=E,0.9nm,0.3s,baz=137,slow=10,SNR=4.8						
PAYG	**Puerto Ayora**	**18.85**	**248**	*e*P	**P**	**19 43 14.5**	**-0.9**
	comp=E,46nm,0.9s						
LPAZ	**La Paz**	**23.38**	**168**	P	**P**	**19 44 01.0**	**-0.8**
	comp=E,0.8nm,0.3s,mb3.6,baz=15,slow=12,SNR=3.0						
LPAZ				pP		19 44 34.1	
	comp=E,13nm,0.7s,baz=342,slow=13,SNR=14						
LPAZ	**La Paz**	**23.38**	**168**	*e*P	**P**	**19 43 58.2**	**-3.6**
	comp=E,13nm,0.7s,mb4.5						
LPAZ				*e*		19 44 33.2	
CMIG	**Matias Romero**	**23.80**	**298**	P	**P**	**19 44 04.7**	**-1.1**
	comp=E,1.0nm,0.3s,mb3.8,baz=36,slow=19,SNR=3.0						
SIV	**San Ignacio**	**25.46**	**153**	P	**P**	**19 44 21.1**	**+0.5**
	comp=E,1.0nm,0.7s,mb3.5,baz=288,slow=9.9,SNR=3.3						
SIV				pP	pP	19 44 52.1	-2.2
	comp=E,3.9nm,0.7s,baz=325,slow=10,SNR=7.3						
LRAL	**Lakeview Retre**	**29.24**	**335**	*e*P	**P**	**19 44 54.6**	**+0.3**
	comp=E,11nm,0.9s,mb4.6						
LVC	**Limon Verde**	**29.45**	**172**	P	**P**	**19 44 50.0**	**-6.2**
VBMS	**Vicksburg**	**30.19**	**329**	*e*P	**P**	**19 45 03.2**	**+0.5**
TKL	**Tuckaleechee C**	**30.45**	**342**	P	**P**	**19 45 02.9**	**-2.0**
	comp=E,4.0nm,0.5s,mb4.5,baz=162,slow=19,SNR=4.6						
TKL				sP	sP	19 45 55.4	-2.6
	comp=E,8.1nm,0.5s,baz=323,slow=20,SNR=3.5						
TZTN	**Tazewell**	**31.20**	**343**	*e*P	**P**	**19 45 11.9**	**+0.4**
	comp=E,94nm,0.9s,mb5.5						
PLAL	**Pickwick Lake**	**31.37**	**336**	*e*P	**P**	**19 45 12.8**	**-0.3**
	comp=E,24nm,0.8s,mb5.0						
WVT	**Waverly**	**32.27**	**337**	*e*P	**P**	**19 45 20.1**	**-0.8**
	comp=E,47nm,0.9s,mb5.2						
MIAR	**Mount Ida**	**33.59**	**328**	*e*P	**P**	**19 45 30.6**	**-1.8**
	comp=E,4.1nm,0.7s,mb4.3						
WCI	**Wyandotte Cave**	**33.60**	**341**	*e*P	**P**	**19 45 32.0**	**-0.4**
	comp=E,16nm,0.6s,mb4.9						
USIN	**University of**	**33.83**	**339**	*e*P	**P**	**19 45 34.3**	**-0.1**
	comp=E,68nm,0.9s,mb5.4						
SIUC	**Southern Illin**	**34.20**	**337**	*e*P	**P**	**19 45 37.1**	**-0.5**
	comp=E,62nm,0.9s,mb5.3						
ACSO	**Alum Creek Sta**	**34.53**	**346**	*e*P	**P**	**19 45 39.2**	**-1.2**
	comp=E,34nm,1.0s,mb4.9						
OLIL	**Olney**	**34.67**	**339**	*e*P	**P**	**19 45 41.5**	**-0.1**
	comp=E,35nm,0.8s,mb5.0						
FVM	**French Village**	**34.92**	**335**	*e*P	**P**	**19 45 43.5**	**-0.2**
	comp=E,62nm,1.0s,mb5.2						
628A	**Black Gap, Mar**	**36.17**	**312**	⇓P	**P**	**19 45 53.7**	**-0.9**
	baz=36,SNR=7.7						
528A	**Cox Ranch, San**	**36.47**	**313**	⇓P	**P**	**19 45 56.2**	**-0.9**
	baz=37,SNR=6.4						
627A	**Terlingua Ranc**	**36.52**	**312**	⇑P	**P**	**19 45 57.0**	**-0.5**
	baz=37,SNR=14						
WMOK	**Wichita Mounta**	**36.66**	**323**	*e*P	**P**	**19 45 56.7**	**-1.9**
	comp=E,8.3nm,0.7s,mb4.5						
TXAR	**Lajitas Array**	**36.67**	**312**	P	**P**	**19 45 58.4**	**-0.4**
	comp=E,4.0nm,0.7s,mb4.2,baz=128,slow=9.0,SNR=57						
TXAR				PcP	PcP	19 48 19.5	+1.3
	comp=E,1.6nm,0.8s,baz=139,slow=5.2,SNR=7.6						
428A	**Kincaid Ranch,**	**36.71**	**314**	⇑P	**P**	**19 45 58.8**	**-0.3**
	baz=37,SNR=11						
527A	**Woodward Ranch**	**37.06**	**313**	⇓P	**P**	**19 46 01.8**	**-0.3**
	baz=37,SNR=13						
626A	**Big Bend Ranch**	**37.13**	**312**	⇓P	**P**	**19 46 01.8**	**-0.8**
	baz=37,SNR=6.8						
328A	**Wristen Ranch,**	**37.17**	**315**	⇑P	**P**	**19 46 02.0**	**-1.0**
	baz=37,SNR=8.2						
427A	**Hayter Ranch,**	**37.29**	**314**	⇓P	**P**	**19 46 03.1**	**-0.9**
	baz=38,SNR=15						
526A	**Mary Lane Ranc**	**37.36**	**312**	⇓P	**P**	**19 46 04.1**	**-0.5**
	baz=38,SNR=6.5						
426A	**McDonald Obser**	**37.64**	**313**	⇓P	**P**	**19 46 06.5**	**-0.5**
	baz=38,SNR=19						
SADO	**Sadowa**	**38.25**	**353**	P	**P**	**19 46 12.4**	**+0.5**
	comp=E,13nm,0.7s,mb4.7,baz=204,slow=7.5,SNR=9.8						
425A	**Indio Mountain**	**38.40**	**313**	⇑P	**P**	**19 46 12.8**	**-0.5**
	baz=39,SNR=11						
AMTX	**Amarillo**	**38.54**	**321**	*e*P	**P**	**19 46 13.9**	**-0.5**
	comp=E,10nm,0.5s,mb4.7						
Z27A	**Tatum**	**38.57**	**317**	⇑P	**P**	**19 46 13.8**	**-1.0**
	baz=39,SNR=44						
KSU1	**Kansas State U**	**38.65**	**330**	*e*P	**P**	**19 46 13.5**	**-1.7**
	comp=E,20nm,0.9s,mb4.7						
MSTX	**Muleshoe**	**38.67**	**319**	⇓P	**P**	**19 46 14.6**	**-1.0**
	baz=39,SNR=7.1						
325A	**Bean Ranch, Si**	**38.70**	**313**	⇑P	**P**	**19 46 15.2**	**-0.6**
	baz=39,SNR=7.1						
Y27A	**Causey**	**38.88**	**318**	⇓P	**P**	**19 46 16.3**	**-1.0**
	baz=39,SNR=6.6						
225A	**Deer Hill, Car**	**38.99**	**315**	⇓P	**P**	**19 46 18.1**	**-0.1**
	baz=39,SNR=7.4						
Z26A	**Caprock**	**39.06**	**317**	⇓P	**P**	**19 46 18.3**	**-0.6**
	baz=39,SNR=24						
324A	**Moseley Ranch,**	**39.11**	**313**	⇑P	**P**	**19 46 18.6**	**-0.7**
	baz=39,SNR=15						
JFWS	**Jewell Farm**	**39.13**	**340**	*e*P	**P**	**19 46 18.3**	**-0.9**
	comp=E,72nm,0.9s,mb5.3						
MNTX	**Cornudas Mount**	**39.17**	**314**	*e*P	**P**	**19 46 19.1**	**-0.7**
	comp=E,8.3nm,0.7s,mb4.5						
MNTX				*e*PcP	PcP	19 48 25.0	-0.9
125A	**Gardner Draw,**	**39.18**	**315**	⇑P	**P**	**19 46 19.3**	**-0.5**
	baz=39,SNR=13						
X27A	**F and S Farms,**	**39.30**	**319**	⇓P	**P**	**19 46 20.2**	**-0.5**
	baz=40						
SCIA	**State Center**	**39.37**	**336**	*e*P	**P**	**19 46 20.4**	**-0.8**
	comp=E,19nm,0.5s,mb5.0						
224A	**Corundas Mount**	**39.47**	**314**	⇓P	**P**	**19 46 22.4**	**+0.1**
	baz=40,SNR=39						
Z25A	**Roswell**	**39.58**	**316**	⇑P	**P**	**19 46 23.1**	**+0.1**
	baz=40,SNR=10						
X26A	**CR and CF Fran**	**39.71**	**318**	⇓P	**P**	**19 46 23.8**	**-0.3**
	baz=40,SNR=9.9						
124A	**Stringfield Ra**	**39.77**	**315**	⇑P	**P**	**19 46 24.7**	**0.0**
	baz=40,SNR=7.9						
Y25A	**Mesa, Roswell**	**39.93**	**317**	⇓P	**P**	**19 46 26.1**	**+0.2**
	baz=40,SNR=9.6						
X25A	**Clemmons Ranch**	**40.26**	**318**	⇑P	**P**	**19 46 28.9**	**+0.3**
	baz=40						
Y24A	**Capitan**	**40.44**	**316**	⇓P	**P**	**19 46 30.5**	**+0.4**
	baz=41,SNR=20						
W25A	**X Bar L Ranch,**	**40.53**	**319**	⇑P	**P**	**19 46 30.9**	**0.0**
	baz=41,SNR=11						
222A	**Williams Famil**	**40.63**	**313**	⇓P	**P**	**19 46 31.7**	**0.0**
	baz=41						
X24A	**Lazy VL Ranch,**	**40.80**	**317**	⇑P	**P**	**19 46 33.4**	**+0.3**
	baz=41						
Y23A	**Lovelace Mesa,**	**40.86**	**316**	⇑P	**P**	**19 46 34.0**	**+0.3**
	baz=41,SNR=7.6						
221A	**Mesquite Ranch**	**41.08**	**312**	⇑P	**P**	**19 46 36.4**	**+1.0**
	baz=41,SNR=6.2						
Z22A	**Elephant Butte**	**41.13**	**314**	⇓P	**P**	**19 46 35.9**	**+0.1**
	baz=41						
320A	**Kipp Ranch, An**	**41.30**	**311**	⇑P	**P**	**19 46 37.8**	**+0.5**
	baz=42						
121A	**Cookes Peak, D**	**41.34**	**313**	⇑P	**P**	**19 46 38.3**	**+0.7**
	baz=42						
220A	**Playas Peak, P**	**41.58**	**312**	⇑P	**P**	**19 46 40.2**	**+0.7**
	baz=42,SNR=9.1						
W23A	**Werner Place,**	**41.62**	**317**	⇑P	**P**	**19 46 40.2**	**+0.4**
	baz=42						
COWI	**Conover**	**41.63**	**343**	*e*P	**P**	**19 46 39.5**	**-0.2**
	comp=E,31nm,1.1s,mb4.8						
ANMO	**Albuquerque**	**41.71**	**317**	P	**P**	**19 46 40.4**	**-0.1**
	comp=E,2.5nm,0.7s,mb3.9,baz=138,slow=13,SNR=5.1						
ANMO	**Albuquerque**	**41.71**	**317**	*e*P	**P**	**19 46 40.0**	**-0.6**
	comp=E,3.1nm,0.8s,mb4.0						
319A	**Douglas**	**41.89**	**311**	⇑P	**P**	**19 46 42.2**	**+0.2**
	baz=42						
120A	**U Bar Ranch, L**	**41.97**	**312**	⇑P	**P**	**19 46 43.5**	**+0.8**
	baz=42,SNR=8.7						
219A	**White Tail Can**	**42.16**	**311**	⇓P	**P**	**19 46 44.2**	**-0.1**
	baz=42						
Z20A	**Nine Sixteen R**	**42.22**	**313**	⇓P	**P**	**19 46 45.3**	**+0.6**
	baz=42						
ECSD	**EROS Data Cent**	**42.30**	**334**	*e*P	**P**	**19 46 43.2**	**-1.9**
	comp=E,16nm,0.9s,mb4.7						
X21A	**Alamocita Cree**	**42.34**	**315**	⇑P	**P**	**19 46 46.4**	**+0.7**
	baz=43,SNR=9.8						
318A	**Bisbee**	**42.45**	**310**	⇑P	**P**	**19 46 46.8**	**+0.2**
	baz=43,SNR=6.2						
Y20A	**Horse Springs,**	**42.48**	**314**	⇑P	**P**	**19 46 47.4**	**+0.6**
	baz=43,SNR=6.4						
119A	**Ashpeak Ranch,**	**42.57**	**312**	⇑P	**P**	**19 46 48.5**	**+1.0**
	baz=43						
SDCO	**Great Sand Dun**	**42.73**	**321**	*e*P	**P**	**19 46 49.1**	**+0.4**
	comp=E,7.8nm,0.9s,mb4.3						
218A	**Dragoon**	**42.74**	**311**	⇓P	**P**	**19 46 49.3**	**+0.3**
	baz=43						
X20A	**Quemado**	**42.89**	**315**	⇑P	**P**	**19 46 51.1**	**+1.0**
	baz=43,SNR=6.7						
V21A	**Milan**	**42.99**	**317**	⇑P	**P**	**19 46 51.5**	**+0.6**
	baz=43						
118A	**Homack Ranch,**	**43.00**	**312**	⇑P	**P**	**19 46 51.4**	**+0.4**
	baz=43,SNR=13						
Y19A	**Nutrioso**	**43.13**	**314**	⇑P	**P**	**19 46 53.0**	**+1.0**
	baz=43						
T22A	**Edith**	**43.19**	**319**	⇓P	**P**	**19 46 53.0**	**+0.6**
	baz=43						
W20A	**Ramah**	**43.20**	**316**	⇑P	**P**	**19 46 52.9**	**+0.3**
	baz=43						
217A	**Green Valley**	**43.23**	**310**	⇓P	**P**	**19 46 52.4**	**-0.4**
	baz=43						
X19A	**St. Johns**	**43.39**	**314**	⇓P	**P**	**19 46 54.7**	**+0.6**
	baz=44,SNR=7.0						
117A	**Oracle**	**43.54**	**311**	⇓P	**P**	**19 46 55.4**	**0.0**
	baz=44						
V20A	**Brimhall**	**43.55**	**317**	⇓P	**P**	**19 46 55.2**	**-0.1**
	baz=44						
Y18A	**Canyon Day Jun**	**43.60**	**313**	⇑P	**P**	**19 46 56.2**	**+0.4**
	baz=44						
Z17A	**San Carlos Hig**	**43.69**	**312**	⇑P	**P**	**19 46 56.7**	**+0.2**
	baz=44						
R22A	**Saguache, Gunn**	**43.81**	**321**	⇑P	**P**	**19 46 58.4**	**+1.0**
	baz=44						
W19A	**Sanders**	**43.81**	**315**	⇑P	**P**	**19 46 58.0**	**+0.6**
	baz=44,SNR=9.0						
X18A	**Snowflake**	**43.91**	**314**	⇑P	**P**	**19 46 59.2**	**+0.9**
	baz=44						
EYMN	**Ely**	**44.00**	**342**	⇓*i*P	**P**	**19 46 58.0**	**-0.7**
	comp=E,34nm,0.6s,mb5.2						
W18A	**Petrified Fore**	**44.06**	**315**	⇓P	**P**	**19 46 60.0**	**+0.5**
	baz=44						
ISCO	**Idaho Springs**	**44.09**	**323**	⇓*i*P	**P**	**19 46 60.0**	**+0.4**
	comp=E,12nm,1.0s,mb4.5						
S21A	**Coal Bank Pass**	**44.14**	**319**	⇑P	**P**	**19 47 00.2**	**+0.1**
	baz=44,SNR=6.9						
Y17A	**Roosevelt**	**44.15**	**313**	⇓P	**P**	**19 47 00.6**	**+0.4**
	baz=44						
116A	**Eloy**	**44.26**	**311**	⇓P	**P**	**19 47 00.6**	**-0.4**
	baz=44						
Q22A	**Crested Butte,**	**44.29**	**321**	⇑P	**P**	**19 47 01.7**	**+0.5**
	baz=44,SNR=6.9						
MVCO	**Mesa Verde**	**44.35**	**318**	⇓P	**P**	**19 47 01.8**	**+0.1**
	baz=45						
MVCO	**Mesa Verde**	**44.35**	**318**	*e*P	**P**	**19 47 01.5**	**-0.2**
	comp=E,17nm,1.3s,mb4.5						
R21A	**Cimarron**	**44.40**	**320**	⇑P	**P**	**19 47 03.0**	**+0.9**
	baz=45						
T19A	**Beclabito**	**44.48**	**318**	⇓P	**P**	**19 47 02.8**	**0.0**
	baz=45						
V18A	**Ganado**	**44.51**	**316**	⇑P	**P**	**19 47 02.9**	**0.0**
	baz=45						
SMCO	**Snowmass**	**44.52**	**322**	*e*P	**P**	**19 47 03.7**	**+0.6**
	comp=E,14nm,0.7s,mb4.7						
Y16A	**Circle Bar Ran**	**44.70**	**312**	⇑P	**P**	**19 47 05.1**	**+0.5**
	baz=45,SNR=6.9						
115A	**Sonoran Desert**	**44.72**	**311**	⇑P	**P**	**19 47 05.0**	**+0.3**
	baz=45						
R20A	**Redvale**	**44.82**	**320**	⇓P	**P**	**19 47 06.2**	**+0.7**
	baz=45						
214A	**Organ Pipe Nat**	**44.84**	**309**	⇓P	**P**	**19 47 05.7**	**+0.1**
	baz=45						
U18A	**Rough Rock, Ch**	**44.84**	**317**	⇑P	**P**	**19 47 05.6**	**0.0**
	baz=45						
X16A	**Lo Mia Camp, P**	**44.93**	**313**	⇑P	**P**	**19 47 06.6**	**+0.3**
	baz=45						
V17A	**Tonalea, Kykot**	**45.06**	**315**	⇑P	**P**	**19 47 07.7**	**+0.3**
	baz=45,SNR=13						
S19A	**Harvey Farm, M**	**45.07**	**319**	⇓P	**P**	**19 47 07.0**	**-0.4**
	baz=45						
Q20A	**Ridgley Place,**	**45.22**	**320**	⇓P	**P**	**19 47 08.9**	**+0.3**
	baz=45,SNR=9.1						
N22A	**Wattenberg Ran**	**45.22**	**324**	⇑P

M18A **Lyman** 47.76 322 ⇓P P 19 47 28.0 -0.3
baz=48,SNR=5.9
K19A **Absolon Red Bu** 47.88 324 ⇓P P 19 47 29.0 -0.2
baz=48,SNR=5.2
DAU **Daniels Canyon** 47.92 320 *e*P P 19 47 29.9 +0.4
comp=E,26nm,1.1s,mb4.8
T13A **Saint George** 47.94 315 ⇑P P 19 47 30.5 +0.8
baz=48
N17A **Moffit Pass** 47.95 321 ⇓P P 19 47 30.2 +0.4
baz=48,SNR=7.0
O16A **Springville** 47.96 320 ⇑P P 19 47 29.9 0.0
baz=48,SNR=5.5
MONP **Monument Peak** 48.00 309 ⇑P P 19 47 30.5 +0.2
baz=48
V12A **Nelson** 48.01 313 ⇑P P 19 47 30.4 +0.1
baz=48
L18A **Fontenelle, Gr** 48.04 323 ⇑P P 19 47 30.5 +0.1
baz=48,SNR=13
U12A **Valley of Fire** 48.11 314 ⇑P P 19 47 31.5 +0.4
baz=48
BELC **Belle Mtn.** 48.12 310 ⇑P P 19 47 31.0 -0.2
baz=48
S13A **Holt Ranch, En** 48.17 316 ⇑P P 19 47 32.4 +0.8
baz=48,SNR=8.1
SCHQ **Schefferville** 48.19 5 P P 19 47 32.0 +0.7
comp=E,16nm,0.8s,mb4.7,baz=188,slow=6.5,SNR=16
SCHQ **Schefferville** 48.19 5 *e*P P 19 47 31.3 0.0
comp=E,20nm,0.8s,mb4.8
BW06 **Boulder Array** 48.26 324 ⇑P P 19 47 31.7 -0.4
baz=48,SNR=12
PDAR **Pinedale Array** 48.26 324 P P 19 47 31.7 -0.4
comp=E,3.9nm,0.6s,mb4.2,baz=125,slow=8.6,SNR=38
PDAR PcP PcP 19 48 55.0 -1.5
comp=E,0.4nm,0.4s,baz=124,slow=5.9,SNR=2.5
PDAR ScP ScP 19 52 37.0 +1.1
comp=E,0.4nm,0.8s,baz=133,slow=4.0,SNR=3.4
N16A **Rees Ranch, Co** 48.30 321 ⇑P P 19 47 33.2 +0.8
baz=48
K18A **Toltan Ranch,** 48.46 323 ⇑P P 19 47 34.1 +0.4
baz=49
Q14A **Sevier Lake (B** 48.48 318 ⇓P P 19 47 34.7 +0.8
baz=49,SNR=18
V11A **Goodsprings** 48.48 313 ⇑P P 19 47 34.2 +0.2
baz=49
R13A **O'Grain Ranch,** 48.54 316 ⇑P P 19 47 34.9 +0.6
baz=49
L17A **Cokeville** 48.64 322 ⇓P P 19 47 34.7 -0.3
baz=49,SNR=14
P14A **Drum Mountains** 48.65 318 ⇓P P 19 47 35.7 +0.5
baz=49,SNR=5.1
M16A **Huntsville** 48.66 321 ⇓P P 19 47 34.9 -0.3
baz=49
HWUT **Hardware Ranch** 48.78 321 *e*P P 19 47 35.4 -0.8
comp=E,7.1nm,0.7s,mb4.4
J18A **Kendall Valley** 48.80 324 ⇑P P 19 47 36.0 -0.2
baz=49,SNR=17
DUG **Dugway** 48.80 319 ⇓P P 19 47 37.0 +0.7
baz=49
L16A **Fish Haven** 48.94 322 ⇓P P 19 47 36.9 -0.3
baz=49,SNR=7.2
Q13A **Wheeler Ranch,** 48.96 317 ⇓P P 19 47 38.0 +0.5
baz=49,SNR=11
I18A **Diamond G Ranc** 48.98 325 ⇓P P 19 47 37.4 -0.2
baz=49,SNR=6.2
K17A **Gardner Place,** 49.05 323 ⇓P P 19 47 38.4 +0.3
baz=49
R12A **Pony Springs,** 49.05 316 ⇑P P 19 47 38.8 +0.5
baz=49,SNR=6.4
SHOC **Shoshone** 49.13 312 ⇑P P 19 47 38.9 0.0
baz=49
P13A **Bates Ranch, G** 49.21 318 ⇑P P 19 47 40.1 +0.6
baz=49,SNR=13
M15A **Larsen Ranch,** 49.26 321 ⇓P P 19 47 39.3 -0.4
baz=50
GSC **Goldstone** 49.27 312 ⇓P P 19 47 40.2 +0.3
baz=50
J17A **Brown Place, J** 49.29 324 ⇓P P 19 47 40.1 +0.1
baz=50,SNR=14
DGMT **Dagmar** 49.30 333 ⇓P P 19 47 40.2 +0.2
baz=50,SNR=12
DGMT **Dagmar** 49.30 333 *e*P P 19 47 40.2 +0.2
comp=E,53nm,0.6s,mb5.3
BGU **Big Grassy Mou** 49.33 320 *e*P P 19 47 39.9 -0.4
comp=E,15nm,0.9s,mb4.6
BGU *e* pP 19 48 17.5 +0.4
REDW **Red Top Meadow** 49.37 324 *e*P P 19 47 40.2 -0.4
comp=E,23nm,1.0s,mb4.8
LOHW **Long Hollow** 49.38 324 *e*P P 19 47 40.6 0.0
comp=E,7.5nm,0.6s,mb4.5
N14A **Grayback Hills** 49.39 320 ⇑P P 19 47 40.7 -0.1
baz=50,SNR=5.0
TPAW **Teton Pass** 49.51 324 *e*P P 19 47 41.4 -0.2
comp=E,6.4nm,0.6s,mb4.4
L15A **Malad City** 49.52 321 ⇓P P 19 47 41.1 -0.6
baz=50,SNR=10
Q12A **Willow Creek R** 49.55 317 ⇓P P 19 47 42.4 +0.4
baz=50,SNR=7.0
RLMT **Red Lodge** 49.55 327 ⇑P P 19 47 42.0 +0.1
baz=50
RLMT **Red Lodge** 49.55 327 *e*P P 19 47 41.1 -0.8
comp=E,3.9nm,0.6s,mb4.2
HVU **Hansel Valley** 49.63 321 *e*P P 19 47 42.0 -0.6
comp=E,4.1nm,0.6s,mb4.2
RRI2 **Red Ridge** 49.64 323 *e*P P 19 47 42.7 +0.1
comp=E,15nm,0.6s,mb4.8
R11A **Troy Canyon, C** 49.74 316 ⇑P P 19 47 43.7 +0.2
baz=50,SNR=8.0
IMW **Indian Meadow** 49.74 324 *e*P P 19 47 43.2 -0.1
comp=E,5.9nm,0.5s,mb4.5
J16A **Bone** 49.77 323 ⇑P P 19 47 43.7 +0.1
baz=50,SNR=9.3
FURC **Furnace Creek,** 49.80 313 ⇑P P 19 47 43.9 -0.1
baz=50
P12A **McGill** 49.82 317 ⇑P P 19 47 44.5 +0.5
baz=50,SNR=5.5
G18A **Lazy EL Ranch,** 49.84 327 ⇓P P 19 47 43.7 -0.4
baz=50,SNR=7.7
EDW2 **Edwards Air Fo** 49.98 311 ⇓P P 19 47 44.8 -0.6
baz=50
LRMC **Laurel Mountai** 50.00 311 ⇓P P 19 47 45.3 -0.2
baz=50
Q11A **Duckwater** 50.02 316 ⇑P P 19 47 45.7 +0.2
baz=50,SNR=6.1
I16A **Newdale** 50.05 324 ⇑P P 19 47 46.4 +0.8
baz=50
N13A **Wendover, West** 50.05 319 ⇑P P 19 47 46.3 +0.5
baz=50
N13A **Wendover, West** 50.05 319 *e*P P 19 47 45.4 -0.4
comp=E,8.9nm,0.9s,mb4.4
L14A **Malta** 50.06 321 ⇑P P 19 47 45.2 -0.6
baz=50,SNR=5.5
MPMC **Manual Prospec** 50.09 312 ⇓P P 19 47 46.0 -0.1
baz=50
O12A **Currie** 50.10 318 ⇓P P 19 47 46.5 +0.3
baz=50
GCMT **Greycliff** 50.19 327 *e*P P 19 47 46.6 -0.1
comp=E,10nm,0.9s,mb4.5
R10A **Warm Springs** 50.21 315 ⇓P P 19 47 47.5 +0.5
baz=50
S10A **Tonopah Range,** 50.25 315 ⇓P P 19 47 47.7 +0.4
baz=50,SNR=6.8
M13A **Montello** 50.29 320 ⇑P P 19 47 47.3 -0.2
baz=50,SNR=8.2
M13A **Montello** 50.29 320 *e*P P 19 47 47.2 -0.4
comp=E,19nm,1.1s,mb4.7
F18A **Big Timber** 50.29 327 ⇑P P 19 47 47.5 0.0
baz=50,SNR=14
K14A **Jones Ranch, D** 50.30 322 ⇑P P 19 47 47.4 -0.2
baz=50
H16A **Russell Place,** 50.40 325 ⇓P P 19 47 48.9 +0.5
baz=51,SNR=7.2
G17A **Pierce Place,** 50.49 326 ⇑P P 19 47 49.9 +1.0
baz=51
Q10A **Clear Creek Ra** 50.53 316 ⇑P P 19 47 49.7 +0.4
baz=51
L13A **Double Diamond** 50.53 321 ⇓P P 19 47 49.4 0.0
baz=51
QLMT **Earthquake Lak** 50.58 325 *e*P P 19 47 50.6 +1.0
comp=E,4.7nm,0.8s,mb4.2
N12A **Clover Valley,** 50.59 319 ⇑P P 19 47 49.9 +0.1
baz=51
O11A **Cowboy Ranch,** 50.64 318 ⇓P P 19 47 50.3 +0.1
baz=51,SNR=6.4
M12A **Wells** 50.80 319 ⇑P P 19 47 51.0 -0.3
baz=51,SNR=5.7
F17A **Fitzpatrick Pl** 50.81 327 ⇓P P 19 47 51.6 +0.3
baz=51,SNR=5.7
E18A **Harlowton** 50.82 328 ⇓P P 19 47 51.5 +0.1
baz=51,SNR=7.1
P10A **Eureka** 50.94 317 ⇑P P 19 47 53.5 +1.0
baz=51
G16A **Moss Hill, Enn** 51.03 325 ⇑P P 19 47 53.4 +0.4
baz=51,SNR=12
H15A **Lima** 51.16 324 ⇑P P 19 47 55.0 +1.0
baz=51,SNR=8.8
BOZ **Bozeman (W)** 51.19 326 ⇓P P 19 47 54.1 -0.1
baz=51,SNR=11
BOZ **Bozeman (W)** 51.19 326 *e*P P 19 47 53.5 -0.6
comp=E,6.0nm,0.9s,mb4.2
I14A **Mackay** 51.24 323 ⇑P P 19 47 55.3 +0.7
baz=52
E17A **Martinsdale** 51.26 327 ⇑P P 19 47 54.8 +0.1
baz=52,SNR=11
F16A **Kennard Place,** 51.27 326 ⇑P P 19 47 54.7 -0.1
baz=52
M11A **Holland Ranch,** 51.38 319 ⇑P P 19 47 55.5 -0.1
baz=52,SNR=6.4
G15A **Dillon** 51.39 325 ⇓P P 19 47 55.9 +0.3
baz=52,SNR=6.0
K12A **Draper Farm, C** 51.43 321 ⇓P P 19 47 56.6 +0.6
baz=52
DLMT **Dillon** 51.56 325 *e*P P 19 47 56.9 0.0
comp=E,11nm,1.3s,mb4.3
H14A **Leadore** 51.58 324 ⇑P P 19 47 58.0 +0.9
baz=52
D17A **Six Diamond Ra** 51.60 328 ⇓P P 19 47 57.1 -0.1
baz=52,SNR=11
HLID **Hailey** 51.62 322 ⇑P P 19 47 57.3 -0.1
baz=52,SNR=9.3
HLID **Hailey** 51.62 322 *e*P P 19 47 57.4 -0.1
comp=E,6.3nm,0.8s,mb4.3
I13A **Wildhorse Cree** 51.63 323 ⇑P P 19 47 57.7 +0.2
baz=52,SNR=16
EGMT **Eagleton** 51.67 329 ⇓P P 19 47 57.6 -0.1
baz=52,SNR=7.0
NVAR **Mina Array Bea** 51.68 315 P P 19 47 58.4 +0.4
comp=E,2.4nm,0.7s,mb4.0,baz=123,slow=6.9,SNR=17
NVAR PcP PcP 19 49 09.9 +0.6
comp=E,1.4nm,0.6s,baz=128,slow=4.4,SNR=4.8
L11A **Cat Creek Ranc** 51.72 320 ⇑P P 19 47 58.4 +0.1
baz=52,SNR=13
E16A **East Helena** 51.75 327 ⇑P P 19 47 58.1 -0.2
baz=52,SNR=6.4
LRM **Limekiln Ridge** 51.75 325 *e*P P 19 47 58.3 -0.1
comp=E,26nm,0.6s,mb5.0
F15A **Butte** 51.79 325 ⇓P P 19 47 58.6 0.0
baz=52,SNR=7.0
J12A **Stokes Ranch,** 51.87 321 ⇑P P 19 47 59.2 -0.1
baz=52
B18A **Beardsley Farm** 51.93 329 ⇑P P 19 47 59.7 +0.1
baz=52,SNR=18
HRY **Holter Researc** 51.94 327 *e*P P 19 47 59.8 +0.1
comp=E,7.9nm,0.5s,mb4.6
C17A **Wharram Farm,** 51.94 328 ⇓P P 19 47 59.4 -0.4
baz=52,SNR=7.9
H13A **Challis** 52.07 323 ⇓P P 19 48 00.6 -0.2
baz=52,SNR=6.7
L10A **Juniper Basin** 52.14 319 ⇑P P 19 48 01.3 0.0
baz=52,SNR=16
I12A **Atlanta** 52.18 322 ⇑P P 19 48 01.5 -0.1
baz=52,SNR=13
K11A **Parker Ranch,** 52.21 320 ⇓P P 19 48 01.6 -0.2
baz=52,SNR=5.2
E15A **Deer Lodge** 52.22 326 ⇑P P 19 48 01.7 -0.1
baz=52,SNR=8.1
A18A **Metzger Ranch,** 52.31 330 ⇑P P 19 48 02.2 -0.2
baz=53,SNR=7.9
G13A **Cobalt** 52.35 324 ⇑P P 19 48 02.5 -0.3
baz=53,SNR=11
B17A **L&G Farms, Che** 52.38 329 ⇑P P 19 48 02.7 -0.2
baz=53
MFID **Camas Ranch** 52.41 321 ⇓P P 19 48 03.2 -0.1
baz=53,SNR=9.0
H12A **Diamond D Ranc** 52.42 323 ⇑P P 19 48 03.3 -0.1
baz=53,SNR=10
D15A **Lincoln** 52.52 327 ⇓P P 19 48 04.2 +0.2
baz=53,SNR=7.0
C16A **Fuhringer Ranc** 52.57 328 ⇓P P 19 48 04.2 -0.1
baz=53
E14A **Clinton** 52.69 326 ⇓P P 19 48 05.0 -0.2
baz=53,SNR=6.1
K10A **MacKenzie Ranc** 52.74 320 ⇓P P 19 48 05.7 0.0
baz=53,SNR=10
F13A **Darby** 52.80 324 ⇑P P 19 48 05.7 -0.4
baz=53,SNR=11
B16A **M & M Farms, S** 52.93 328 ⇓P P 19 48 06.4 -0.6
baz=53,SNR=6.2
C15A **Salmond Ranch,** 53.01 327 ⇓P P 19 48 07.5 0.0
baz=53,SNR=6.8
G12A **Big Creek, Yel** 53.02 323 ⇓P P 19 48 07.5 -0.2
baz=53
D14A **Greenough** 53.08 326 ⇑P P 19 48 08.4 +0.2
baz=53
E13A **Victor** 53.09 325 ⇓P P 19 48 08.7 +0.5
baz=53
H11A **Donnelly** 53.20 323 ⇑P P 19 48 09.1 +0.1
baz=53
A16A **West Butte Ran** 53.21 329 ⇑P P 19 48 08.9 -0.1
baz=54,SNR=6.1
FFC **Flin Flon** 53.22 339 *e*P P 19 48 08.0 -1.0
comp=E,3.1nm,0.4s,mb4.4
B15A **Bradely Ranch,** 53.31 328 ⇓P P 19 48 09.7 -0.1
baz=54
F12A **Elk City** 53.32 324 ⇑P P 19 48 09.6 -0.3
baz=54,SNR=9.5
J09A **Fry Pan Ranch,** 53.59 320 ⇑P P 19 48 11.6 -0.3
baz=54,SNR=5.9
D13A **Huson** 53.62 326 ⇓P P 19 48 11.9 -0.1
baz=54,SNR=7.0
WVOR **Wild Horse Val** 53.72 319 *e*P P 19 48 12.2 -0.6
comp=E,9.1nm,0.9s,mb4.5
G11A **Walters Elk Ra** 53.73 323 ⇓P P 19 48 12.2 -0.7
baz=54
A15A **Johnson Ranch,** 53.81 328 ⇓P P 19 48 13.1 -0.3
baz=54,SNR=7.3
I09A **Lost Marbles R** 53.89 321 ⇓P P 19 48 13.3 -0.8
baz=54
JTMT **Jette** 53.90 326 *e*P P 19 48 14.1 0.0
comp=E,6.4nm,0.9s,mb4.3
F11A **Grangeville** 53.92 324 ⇓P P 19 48 13.5 -0.8
baz=54,SNR=6.4
C13A **Hot Springs** 54.02 326 ⇓P P 19 48 15.1 +0.2
baz=54,SNR=7.1
A14A **Double T Ranch** 54.17 328 ⇓P P 19 48 15.6 -0.4
baz=54
E11A **Bogner Ranch,** 54.21 324 ⇑P P 19 48 15.5 -0.8
baz=54,SNR=8.6
BSMT **Bassoo Peak** 54.24 326 *e*P P 19 48 16.8 +0.3
comp=E,10.0nm,1.1s,mb4.5
B13A **Whitefish** 54.37 327 ⇓P P 19 48 17.3 -0.2
baz=55
FCC **Fort Churchill** 54.38 347 *e*P P 19 48 16.3 -1.1
comp=E,0.7nm,1.1s
WALA **Waterton Lakes** 54.48 328 *e*P P 19 48 17.0 -1.3
comp=E,0.1nm,1.0s
C12B **Nagegli Ranch,** 54.54 326 ⇑P P 19 48 18.9 +0.2
baz=55,SNR=5.5
G09A **Cove** 54.57 322 ⇓P P 19 48 18.7 -0.3
baz=55
F10A **Beach Ranch, E** 54.60 323 ⇓P P 19 48 18.7 -0.5
baz=55,SNR=8.6
D11A **Klaveano Farm,** 54.66 325 ⇑P P 19 48 18.9 -0.6
baz=55,SNR=5.1
H08A **Prairie City** 54.74 321 ⇓P P 19 48 19.5 -0.7
baz=55,SNR=8.1
E10A **Myers Farm, Un** 54.80 324 ⇓P P 19 48 20.4 -0.2
baz=55
I07A **Izee** 55.05 320 ⇑P P 19 48 22.4 -0.1
baz=55,SNR=12
LNOR **Lincton Mounta** 55.18 323 *e*P P 19 48 23.0 -0.3
comp=E,2.3nm,0.5s,mb4.2
D10A **Wagner Farm, O** 55.20 324 ⇑P P 19 48 23.0 -0.5
baz=55
G08A **Pilot Rock** 55.30 322 ⇑P P 19 48 24.0 -0.2
baz=56,SNR=21
A12A **Yaak River Ran** 55.33 327 ⇑P P 19 48 24.9 +0.5
baz=56
E09A **Wood Farm, Sta** 55.43 323 ⇓P P 19 48 24.9 -0.2
baz=56
F08A **Pendleton** 55.44 322 ⇑P P 19 48 24.8 -0.4
baz=56
B11A **Sandpoint** 55.44 326 ⇑P P 19 48 24.8 -0.4
baz=56
A11A **Hall Mountain,** 55.73 327 ⇓P P 19 48 27.4 +0.1
baz=56,SNR=6.2
NEW **Newport** 55.77 326 *e*P P 19 48 26.6 -0.9
YBH **Yreka Blue Hor** 56.13 316 P P 19 48 28.5 -1.8
comp=E,2.9nm,0.5s,mb4.4,baz=113,slow=3.8,SNR=13
YBH **Yreka Blue Hor** 56.13 316 *e*P P 19 48 28.2 -2.0
comp=E,3.1nm,0.5s,mb4.4
D08A **Wollman Farm,** 56.16 324 ⇑P P 19 48 30.1 -0.2
baz=56
C09A **Chrisman Ranch** 56.17 325 ⇑P P 19 48 30.2 -0.2
baz=56
G06A **Carlson Farm,** 56.31 321 ⇓P P 19 48 31.7 +0.3
baz=56
B09A **Rice** 56.43 325 ⇑P P 19 48 31.9 -0.3
baz=57
C08A **Higginbotham F** 56.61 324 ⇑P P 19 48 33.4 0.0
baz=57
EDM **Edmonton** 56.78 332 *e*P P 19 48 33.5 -1.1
D07A **Quincy** 56.85 323 ⇑P P 19 48 35.5 +0.4
baz=57
A09A **Danville** 56.97 326 ⇑P P 19 48 36.0 0.0
baz=57
H04A **Detroit Lake** 57.04 320 ⇑P P 19 48 36.4 -0.2
baz=57,SNR=7.4
B08A **Colville Reser** 57.07 325 ⇑P P 19 48 36.1 -0.6
baz=57,SNR=6.6
E06A **Yakima** 57.14 322 ⇑P P 19 48 37.5 +0.3
baz=57
C07A **Waterville** 57.15 324 ⇓P P 19 48 37.7 +0.4
baz=57
ETW **Entiat** 57.27 324 *e*P P 19 48 37.8 -0.3
comp=E,6.9nm,0.7s,mb4.6
A08A **Turner Farm, O** 57.34 325 ⇓P P 19 48 38.4 -0.1
baz=58
D06A **Cle Elum** 57.37 323 ⇑P P 19 48 39.5 +0.6
baz=58
G04A **Mulino** 57.46 320 ⇑P P 19 48 40.0 +0.5
baz=58
A07A **Ashnola River,** 58.02 325 ⇑P P 19 48 43.5 +0.1
baz=58,SNR=8.6
F03A **Seaside** 58.46 321 ⇓P P 19 48 47.1 +0.7
baz=59
E03A **Lebam** 58.73 321 ⇓P P 19 48 48.5 +0.2
baz=59
NLWA **Neilton Lookou** 59.29 322 ⇓P P 19 48 52.7 +0.6
baz=60
EFI **East Falkland** 59.58 169 P P 19 48 50.4 -3.5
YKA **Yellowknife Ar** 63.40 340 P P 19 49 18.9 -0.5
comp=E,14nm,0.5s,mb5.0,baz=132,slow=6.7,SNR=295
YKA **Yellowknife Ar** 63.40 340 P P 19 49 18.9 -0.5
DLBC **Dease Lake** 67.48 331 *e*P P 19 49 45.6 -0.2
DBIC **Dimbokro** 67.52 86 P P 19 49 47.1 +0.2
comp=E,2.3nm,0.4s,mb4.2,baz=260,slow=10.0,SNR=11
SUMG **Summit** 69.01 11 *e*P P 19 49 55.2 +0.2
comp=E,38nm,1.1s,mb5.0
RES **Resolute Bay** 69.06 354 *e*P P 19 49 54.5 -0.8
comp=E,3.4nm,1.0s,mb4.0
INK **Inuvik** 73.16 340 ⇓*i*P P 19 50 19.6 -0.5
comp=E,2.7nm,0.5s,mb4.2
TOA0 **Torodi Ar. Sit** 73.54 78 P P 19 50 21.5 -1.8
TORD **Torodi Ar. Bea** 73.54 78 P P 19 50 22.6 -0.7
comp=E,0.5nm,0.3s,mb3.7,baz=286,slow=6.5,SNR=15
NB2 **NORSAR Subarra** 81.28 29 P P 19 51 06.5 +1.1
comp=Z,0.8nm,0.5s,mb3.6,baz=266,slow=5.3
NOA **NORSAR Array B** 81.28 29 P P 19 51 06.5 +1.1
comp=Z,0.8nm,0.5s,mb3.6,baz=267,slow=5.4,SNR=6.3
GERES **GERESS Array B** 82.73 42 P P 19 51 13.8 +0.6
comp=Z,0.6nm,0.6s,mb3.5,baz=264,slow=5.0,SNR=4.7
ARCES **ARCESS Array B** 86.66 20 P P 19 51 32.4 0.0
comp=Z,2.6nm,0.9s,mb4.1,baz=352,slow=3.7,SNR=8.9
ARCES **ARCESS Array B** 86.66 20 P P 19 51 32.4 0.0
FINES **FINESS Array B** 88.39 28 P P 19 51 41.0 +0.1
comp=Z,1.6nm,0.8s,mb3.9,baz=276,slow=3.8,SNR=4.6
FINES **FINESS Array B** 88.39 28 P P 19 51 41.0 +0.1
ZALV **Zalesovo Beam** 116.68 15 PKP PKPdf 19 57 32.1 -0.3
comp=Z,0.9nm,0.4s,baz=208,slow=4.5,SNR=5.0
KURK **Kurchatov** 117.69 20 PKP PKPdf 19 57 34.3 -0.2
comp=Z,0.5nm,0.3s,baz=320,slow=2.6,SNR=1.9
MKAR **Makanchi Array** 122.31 20 PKP PKPdf 19 57 43.1 -0.4
comp=Z,0.7nm,0.4s,baz=292,slow=2.7,SNR=24
SONM **Songino Array** 125.64 1 PKP PKPdf 19 57 50.4 +0.6
comp=Z,0.6nm,0.5s,baz=254,slow=0.3,SNR=9.3
WMQ **Urumqi** 126.68 17 *e*PKP PKPdf 19 57 51.2 -0.7
HHC **Hu-ho-hao-te** 132.45 355 *e*PKP PKPdf 19 58 02.1 -0.9
HHC sPKP 19 59 01.4
HHC PP PP 20 00 31.7 +5.0
HHC PKS 20 01 36.1
HHC SKS SKSdf 20 04 55.6 -3.6
HHC SKKS SKKSac 20 07 04.9 -3.0
HHC SS SS 20 17 55.6 +3.8
HHC AMB AMB
comp=Z,80nm,6.2s
HHC LR LR
comp=N,100nm,18.9s
HHC LR LR
comp=E,110nm,22.7s
HHC LR LR
comp=Z,120nm,20.5s
BJI **Beijing** 132.69 351 PKP PKPdf 19 58 01.8 -1.7
GTA **Gaotai** 133.57 8 *e*PKP PKPdf 19 58 06.3 +1.2
GTA sPKP 19 59 05.5
LZH **Lanzhou** 137.28 4 *e*PKP PKPdf 19 58 10.0 -2.1
LZH sPKP 19 59 08.0
CD2 **Chengdu** 142.41 5 PKP PKPdf 19 58 20.0 -1.6
GYA **Guiyang** 146.98 1 *e*PKPbc PKPdf 19 58 24.8 -4.8
GYA PKPab PKPab 19 58 31.6 -1.9
GYA pPKP pPKPdf 19 59 11.9 -0.8
GYA sPKP 19 59 30.0
GYA PP PP 20 01 57.5 +1.8
GYA AMB AMB
comp=Z,70nm,8.0s
KMI **Kunming** 148.03 7 PKPbc PKPdf 19 58 27.0 -4.4
ASAR **Alice Springs** 149.25 234 PKP PKPdf 19 58 33.5 +0.1
comp=Z,2.4nm,0.5s,baz=121,slow=3.4,SNR=29
ASAR PKPbc PKPbc 19 58 37.0 -0.9
comp=Z,2.4nm,0.5s,baz=118,slow=3.4,SNR=59
ASAR pPKPbc pPKPbc 19 59 16.4 -4.2
comp=Z,1.5nm,0.8s,baz=124,slow=3.0,SNR=2.5
WRA **Warramunga Arr** 150.50 241 PKP PKPdf 19 58 35.9 +0.5
comp=Z,3.4nm,0.7s,baz=107,slow=2.4,SNR=14
WRA PKPbc PKPbc 19 58 40.4 -0.5
comp=Z,3.1nm,0.6s,baz=108,slow=2.6,SNR=57
CMAR **Chiang Mai Arr** 153.69 18 PKP PKPdf 19 58 41.2 +1.0
comp=Z,0.4nm,0.6s,baz=302,slow=1.4,SNR=3.8
CMAR PKPbc PKPbc 19 58 48.5 +0.4
comp=Z,1.9nm,0.5s,baz=323,slow=3.3,SNR=24

MAN 09 19:41:44, 13°.02N×124°.55E, h8km, mb4.4, ML3.3, MS3.2, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.52**	**167**	*e*P	Pg	19 41 58.5	+4.3
CNP				*e*S	Sg	19 42 04.7	+3.8
PVCP	**Virac**	**0.69**	**326**	*e*P	Pg	19 41 57.9	+0.7
PVCP				*e*S	Sg	19 42 02.9	-3.3
MMPH	**Masbate**	**1.12**	**234**	⇑*i*P	Pg	19 42 05.1	-0.3
MMPH				*i* S	Sg	19 42 19.1	-0.8
AUQP	**San Andres**	**1.85**	**280**	*e*P	Pn	19 42 19.6	+3.6
AUQP				*e*S	Sn	19 42 35.7	-3.9
GQP	**Guinayangan**	**2.22**	**293**	⇑*e*P	Pn	19 42 23.1	+1.9
GQP				*i* S	Sn	19 42 53.0	+4.2
RCP	**Roxas**	**2.28**	**231**	⇑*e*P	Pn	19 42 22.9	+0.9
RCP				*e*S	Sn	19 42 56.0	+5.7
BOAC	**Boac**	**2.67**	**280**	*e*P	Pn	19 42 32.5	+5.2
POLP	**Polillo Island**	**3.05**	**304**	*e*P	Pn	19 42 37.0	+4.5
GUIM	**Jordan**	**3.06**	**219**	*e*P	Pn	19 42 34.8	+2.1
BALP	**Baler**	**3.95**	**314**	*e*P	Pn	19 42 45.3	+0.4
CAUP	**Cauayan**	**4.70**	**326**	*e*P	Pn	19 42 57.3	+2.0

*ISCJB **09** 20:08:04.6±0.4, 43°.72N±0°.04×105°.23W±0°.05, h0km, mb3.9/6, Error ellipse: s-maj=5.5km s-min=4.7km az=149.2*

*NEIC **09** 20:08:06.3±0.2, 43°.73N×105°.25W, h0km, ML3.2, Error ellipse: s-maj=4.0km s-min=3.3km az=144.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **09** 20:08:07.0±0.8, 44°.04N×105°.77W, h0km, mb3.8/7, mb1 3.8/11, mb1mx3.7/27, mbtmp3.7/11, ML3.4/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/39, Error ellipse: s-maj=23.1km s-min=8.2km az=143.0*

ISC 09 20:08:06.3±0.3, 43°.74N±0°.04×105°.22W±0°.05, h0km, n53, σ0°86/51, mb3.9/6, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**66**	*e*Pg	**Pg**	**20 08 25.0**	**+0.8**
PHWY	**Pilot Hill**	**2.44**	**184**	*e*Pn	**Pn**	**20 08 47.4**	**0.0**
RWWY	**Rawlins**	**2.52**	**216**	*e*Pn	**Pn**	**20 08 49.0**	**+0.6**
LAO	**LASA Array**	**3.03**	**347**	*e*Pn	**Pn**	**20 08 55.5**	**0.0**
RLMT	**Red Lodge**	**3.21**	**297**	*e*Pn	**Pn**	**20 08 57.7**	**-0.2**
PDAR	**Pinedale Array**	**3.31**	**254**	Pn	**Pn**	**20 08 58.9**	**-0.4**
	3.9nm,0.3s,baz=74,slow=16,SNR=73						
PDAR				Lg		20 09 41.7	
	7.8nm,0.3s,baz=220,slow=40,SNR=2.7						
OGNE	**Ogallala**	**3.66**	**139**	*e*Pn	**Pn**	**20 09 05.8**	**+1.7**
GCMT	**Greycliff**	**3.77**	**304**	*e*Pn	**Pn**	**20 09 05.8**	**+0.2**
LKWY	**Lake**	**3.81**	**284**	*e*Pn	**Pn**	**20 09 06.9**	**+0.6**
LOHW	**Long Hollow**	**3.91**	**270**	*e*Pn	**Pn**	**20 09 07.6**	**+0.1**
ISCO	**Idaho Springs**	**3.95**	**184**	*e*Pn	**Pn**	**20 09 08.5**	**+0.4**
SNOW	**Snow King Moun**	**4.03**	**268**	*e*Pn	**Pn**	**20 09 11.6**	**+2.5**
YNR	**Norris Junctio**	**4.04**	**286**	*e*Pn	**Pn**	**20 09 15.1**	**+5.7**
YFT	**Old Faithful**	**4.10**	**282**	Pn	**Pn**	**20 09 09.7**	**-0.5**
REDW	**Red Top Meadow**	**4.11**	**267**	*e*Pn	**Pn**	**20 09 10.2**	**0.0**
IMW	**Indian Meadow**	**4.14**	**274**	*e*Pn	**Pn**	**20 09 12.1**	**+1.4**
TPAW	**Teton Pass**	**4.17**	**269**	*e*Pn	**Pn**	**20 09 10.9**	**-0.2**
YMR	**Madison River**	**4.23**	**285**	Pn	**Pn**	**20 09 15.8**	**+3.8**
AHID	**Auburn Hatcher**	**4.40**	**259**	Pn	**Pn**	**20 09 19.5**	**+5.2**
RRI2	**Red Ridge**	**4.45**	**267**	*e*Pn	**Pn**	**20 09 14.7**	**-0.3**
DGMT	**Dagmar**	**4.78**	**8**	*e*Pn	**Pn**	**20 09 21.1**	**+1.6**
HWUT	**Hardware Ranch**	**5.14**	**248**	*e*Pn	**Pn**	**20 09 23.9**	**-0.6**
	14nm,0.5s						
EGMT	**Eagleton**	**5.32**	**325**	*e*Pn	**Pn**	**20 09 26.7**	**-0.2**
	22nm,0.5s						
DLMT	**Dillon**	**5.51**	**290**	*e*Pn	**Pn**	**20 09 30.8**	**+1.2**
	3.5nm,0.6s						
LRM	**Limekiln Ridge**	**5.55**	**295**	*e*Pn	**Pn**	**20 09 30.1**	**+0.1**
	14nm,0.4s						
MCMT	**McKenzie Canyo**	**5.58**	**284**	*e*Pn	**Pn**	**20 09 33.7**	**+3.2**
	2.0nm,0.5s						
DAU	**Daniels Canyon**	**5.59**	**236**	*e*Pn	**Pn**	**20 09 29.7**	**-0.8**
	13nm,0.5s						
JLU	**Jordanelle**	**5.59**	**238**	*e*Pn	**Pn**	**20 09 29.8**	**-0.8**
	7.1nm,0.6s						
HVU	**Hansel Valley**	**5.89**	**253**	*e*Pn	**Pn**	**20 09 33.8**	**-1.1**
	8.6nm,0.8s						
SDCO	**Great Sand Dun**	**5.99**	**182**	*e*Pn	**Pn**	**20 09 36.8**	**+0.6**
	3.6nm,0.6s						
SRU	**San Rafael**	**6.11**	**223**	*e*Pn	**Pn**	**20 09 37.0**	**-0.7**
	18nm,0.5s						
ECSD	**EROS Data Cent**	**6.24**	**87**	*e*Pn	**Pn**	**20 09 40.3**	**+0.8**
	7.7nm,0.5s						
CBKS	**Cedar Bluff**	**6.43**	**138**	*e*Pn	**Pn**	**20 09 41.5**	**-0.6**
	30nm,0.8s						
HLID	**Hailey**	**6.67**	**272**	*e*Pn	**Pn**	**20 09 46.9**	**+1.4**
	0.8nm,0.5s						
DUG	**Dugway**	**6.67**	**241**	*e*Pn	**Pn**	**20 09 44.8**	**-0.7**
	6.9nm,0.5s						
MSU	**Marysvale**	**7.40**	**227**	*e*Pn	**Pn**	**20 09 55.2**	**-0.4**
	7.0nm,0.7s						
N12A	**Clover Valley,**	**7.83**	**252**	*e*Pn	**Pn**	**20 10 00.7**	**-0.7**
	4.7nm,0.6s						
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**20 10 04.4**	**+0.6**
	0.2nm,0.3s,baz=67,slow=14,SNR=4.6						
ELK				Lg		20 12 16.7	
	0.1nm,0.3s,baz=176,slow=18,SNR=2.4						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**20 10 18.1**	**-0.9**
	1.0nm,0.3s,baz=230,slow=13,SNR=8.8						
ULM				Pg	Pn	20 10 53.7	+35
	0.5nm,0.3s,baz=231,slow=16,SNR=2.3						
ULM				Lg		20 12 50.1	
	0.2nm,0.3s,baz=139,slow=19,SNR=1.7						
WUAZ	**Wupatki**	**9.48**	**212**	*e*Pn	**Pn**	**20 10 23.6**	**-0.5**
	30nm,1.2s						
FFC	**Flin Flon**	**11.19**	**10**	*e*Pn	**Pn**	**20 10 46.0**	**-1.4**
	1.7nm,0.6s						
YBH	**Yreka Blue Hor**	**13.01**	**267**	LR	LR	20 16 27.7	
	comp=Z,31nm,19.0s,baz=40,slow=40						
TXAR	**Lajitas Array**	**14.43**	**175**	Pn	**Pn**	**20 11 38.9**	**+7.1**
TXAR				Pg	Pn	20 12 29.9	+58
TXAR				Lg		20 15 43.2	
TXAR	**Lajitas Array**	**14.43**	**175**	Pn	**Pn**	**20 11 38.9**	**+7.2**
	0.1nm,0.3s,baz=349,slow=11,SNR=4.5						
TXAR				Pg	Pn	20 12 29.9	+58
	0.1nm,0.3s,baz=8.0,slow=14,SNR=2.9						
TXAR				Lg		20 15 43.2	
	0.0nm,0.3s,baz=8.9,slow=14,SNR=3.0						
BBB	**Bella Bella**	**17.44**	**307**	LR	LR	20 19 11.3	
	comp=Z,48nm,19.3s,baz=10.0,slow=39						
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**Pn**	**20 12 36.0**	**-0.6**
	0.1nm,0.3s,baz=154,slow=11,SNR=4.7						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**20 18 22.8**	**-0.8**
	2.7nm,0.8s,baz=358,slow=6.1,SNR=9.7						
FINES	**FINESS Array B**	**68.02**	**23**	P	**P**	**20 19 06.7**	**-0.2**
	0.7nm,0.6s,mb4.1,baz=337,slow=8.3,SNR=3.6						
AKASG	**Malin Array Be**	**77.94**	**28**	P	**P**	**20 20 05.3**	**-0.5**
	0.3nm,0.3s,mb3.8,baz=322,slow=5.3,SNR=2.5						
ZALV	**Zalesovo Beam**	**82.31**	**354**	P	**P**	**20 20 28.4**	**-1.0**
	0.4nm,0.4s,mb3.9,baz=352,slow=6.1,SNR=3.7						
BVAR	**Borovoye Array**	**83.54**	**3**	P	**P**	**20 20 35.6**	**-0.1**
	0.2nm,0.2s,mb3.9,baz=343,slow=4.5,SNR=2.7						
SONM	**Songino Array**	**84.65**	**339**	P	**P**	**20 20 41.8**	**+0.2**
	0.3nm,0.5s,mb3.8,baz=353,slow=5.7,SNR=2.8						
MKAR	**Makanchi Array**	**89.61**	**355**	P	**P**	**20 21 04.8**	**-0.8**
	0.5nm,0.7s,mb3.8,baz=352,slow=2.5,SNR=4.4						

*ISK **09** 20:24:49.2, 38°.35N×38°.88E, h5km, MD3.1*
*ISCJB **09** 20:24:50.5±0.5, 38°.34N±0°.03×38°.89E±0°.03, h1km±6km, Error ellipse: s-maj=5.8km s-min=3.7km az=163.1*
*CSEM **09** 20:24:50.5±0.1, 38°.36N×38°.88E, h2km, MD3.1, Error ellipse: s-maj=3.7km s-min=2.6km az=162.0*
*DDA **09** 20:24:50.3, 38°.36N×38°.88E, h7km±4km, Md3.2*
ISC 09 20:24:51.1±0.4, 38°.35N±0°.03×38°.89E±0°.03, h4km±6km, n35, σ0°69/46, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.17**	**27**	⇓*i*Pg	**Pg**	**20 24 54.5**	**+0.1**
ELZG				*i* Sg	**Sg**	**20 24 57.3**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.33**	**85**	PG	**Pg**	**20 24 56.8**	**-0.6**
SVRC				*e*SG	**Sg**	**20 25 02.4**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.33**	**85**	*i* Pg	**Pg**	**20 24 56.8**	**-0.7**
SVRC				*e*Sg	**Sg**	**20 25 02.4**	**+0.7**
MALT	**Malatya**	**0.36**	**265**	PG	**Pg**	**20 24 57.2**	**-1.0**
MALT				*e*SG	**Sg**	**20 25 03.6**	**+0.7**
MALT	**Malatya**	**0.36**	**265**	*i* Pg	**Pg**	**20 24 57.2**	**-0.9**
MALT				*e*Sg	**Sg**	**20 25 03.6**	**+0.7**
MYA	**Malataya**	**0.37**	**267**	*e*PG	**Pg**	**20 24 57.4**	**-0.8**
MYA	**Malataya**	**0.37**	**267**	*e*Pg	**Pg**	**20 24 57.4**	**-0.7**
PTK	**Pertek**	**0.67**	**36**	*e*PG	**Pg**	**20 25 03.3**	**-0.7**
PTK	**Pertek**	**0.67**	**36**	*e*Pg	**Pg**	**20 25 03.3**	**-0.7**
AKCD	**Akcadag**	**0.76**	**266**	⇑*i*P	**Pg**	**20 25 04.7**	**-1.0**
AKCD				*i* S	**Sg**	**20 25 15.6**	**0.0**
AKCD	**Akcadag**	**0.76**	**266**	*i* P	**Pg**	**20 25 04.7**	**-1.0**
AKCD				*i* S	**Sg**	**20 25 15.6**	**0.0**
URFA	**Urfa**	**0.91**	**183**	*e*PG	**Pg**	**20 25 07.9**	**-0.6**
URFA	**Urfa**	**0.91**	**183**	*e*Pg	**Pg**	**20 25 07.9**	**-0.6**
ATAB	**Bozova**	**0.99**	**208**	*e*P	**Pg**	**20 25 10.7**	**+0.5**
ATAB				*e*S	**Sg**	**20 25 24.1**	**+1.0**
ATAB	**Bozova**	**0.99**	**208**	*e*P	**Pg**	**20 25 10.7**	**+0.5**
ATAB				*e*S	**Sg**	**20 25 24.1**	**+1.0**
DARE	**Darende-Malaty**	**1.04**	**306**	*e*PN	**Pg**	**20 25 11.9**	**+0.8**
DARE	**Darende-Malaty**	**1.04**	**306**	*e*Pn	**Pg**	**20 25 11.9**	**+0.8**
DIYA	**Diyarbakir**	**1.06**	**113**	⇑*i*P	**Pg**	**20 25 11.2**	**-0.2**
DIYA				*i* S	**Sg**	**20 25 25.7**	**+0.5**
DIYA	**Diyarbakir**	**1.06**	**113**	*i* P	**Pg**	**20 25 11.2**	**-0.2**
DIYA				*i* S	**Sg**	**20 25 25.7**	**+0.5**
DIY	**Diyarbakir**	**1.15**	**113**	*e*PN	**Pg**	**20 25 12.7**	**-0.4**
DIY	**Diyarbakir**	**1.15**	**113**	*e*Pn	**Pg**	**20 25 12.7**	**-0.4**
EZC	**Erzincan**	**1.45**	**14**	*e*PN	**Pn**	**20 25 17.6**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.75**	**282**	*e*PN	**Pn**	**20 25 24.5**	**+2.2**
GAZ	**Gaziantep**	**1.77**	**229**	*e*PN	**Pn**	**20 25 22.1**	**-0.5**
GAZ	**Gaziantep**	**1.77**	**229**	*e*Pn	**Pn**	**20 25 22.1**	**-0.5**
KMRS	**Kahramanmaras**	**1.78**	**242**	*e*PN	**Pn**	**20 25 22.5**	**-0.3**
KMRS	**Kahramanmaras**	**1.78**	**242**	*e*Pn	**Pn**	**20 25 22.5**	**-0.2**
SVSK	**Karacayir**	**2.15**	**317**	*e*PN	**Pn**	**20 25 27.6**	**-0.2**
SVSK	**Karacayir**	**2.15**	**317**	*e*Pn	**Pn**	**20 25 27.6**	**-0.1**
GUMT	**Gumushane**	**2.16**	**12**	*e*PN	**Pn**	**20 25 27.9**	**0.0**
GUMT	**Gumushane**	**2.16**	**12**	*e*Pn	**Pn**	**20 25 27.9**	**0.0**
EZM	**Erzurum**	**2.47**	**50**	*e*PN	**Pn**	**20 25 32.2**	**0.0**
ESPY	**Espiye-Giresun**	**2.57**	**357**	*e*PN	**Pn**	**20 25 33.7**	**+0.2**
ESPY	**Espiye-Giresun**	**2.57**	**357**	*e*Pn	**Pn**	**20 25 33.7**	**+0.2**
KOZT	**Kozan**	**2.57**	**251**	*e*PN	**Pn**	**20 25 33.4**	**-0.2**

*ISCJB **09** 20:31:06.5±2.4, 6°.9S±0°.1×126°.9E±0°.2, h390km±31km, mb3.3/7, Error ellipse: s-maj=32.4km s-min=10.8km az=152.0*
*NEIC **09** 20:31:07.8±3.6, 6°.86S×126°.82E, h385km±48km, mb3.8/2, Error ellipse: s-maj=22.6km s-min=18.4km az=198.0*
*IDC **09** 20:31:08.5±5.3, 6°.88S×126°.74E, h391km±69km, mb3.0/7, mb1 3.1/10, mb1mx3.0/17, mbtmp3.0/10, Error ellipse: s-maj=41.6km s-min=27.7km az=62.0*
ISC 09 20:31:10.7±2.3, 7°.0S±0°.1×126°.9E±0°.2, h424km±34km, n14, σ0°68/16, mb3.3/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.10**	**186**	P	**P**	**20 33 40.2**	**+0.2**
	0.2nm,0.3s,baz=25,slow=12,SNR=14						
WRAB	**Tennant Creek**	**14.77**	**151**	*e*P	**P**	**20 34 20.1**	**+0.1**
	3.4nm,0.9s						
WRA	**Warramunga Arr**	**14.77**	**151**	P	**P**	**20 34 20.1**	**+0.1**
	0.5nm,0.3s,baz=324,slow=12,SNR=9.4						
WRA				S	**S**	**20 36 56.0**	**-0.6**
	0.1nm,0.3s,baz=308,slow=26,SNR=2.0						
WB2	**Warramunga Arr**	**14.78**	**151**	*e*P	**P**	**20 34 19.7**	**-0.3**
WB2				*e*S	**S**	**20 36 56.2**	**-0.5**
MBWA	**Marble Bar**	**15.68**	**205**	*e*P	**P**	**20 34 29.3**	**-0.4**
	4.3nm,0.8s						
ASAR	**Alice Springs**	**17.90**	**159**	P	**P**	**20 34 54.0**	**+0.8**
	1.1nm,0.3s,baz=336,slow=11,SNR=64						
STKA	**Stephens Creek**	**28.32**	**153**	P	**P**	**20 36 29.4**	**+1.4**
	0.9nm,0.5s,mb3.4,baz=332,slow=12,SNR=4.1						
STKA	**Stephens Creek**	**28.32**	**153**	P	**P**	**20 36 29.0**	**+0.9**
	0.2nm,0.6s,mb2.6						
MJAR	**Matsushiro Arr**	**44.60**	**13**	P	**P**	**20 38 42.0**	**-1.4**
	0.6nm,0.5s,mb3.2,baz=185,slow=8.5,SNR=2.2						
SONM	**Songino Array**	**57.51**	**344**	P	**P**	**20 40 18.0**	**+0.3**
	0.2nm,0.5s,mb2.7,baz=149,slow=7.6,SNR=2.7						
PETK	**Petropavlovsk-**	**65.34**	**20**	P	**P**	**20 41 10.6**	**+1.3**
	1.1nm,0.7s,mb3.6,baz=161,slow=6.5,SNR=4.9						
MKAR	**Makanchi Array**	**66.55**	**328**	P	**P**	**20 41 17.1**	**+0.1**
	0.3nm,0.4s,mb3.3,baz=132,slow=7.8,SNR=7.2						
ZALV	**Zalesovo Beam**	**70.23**	**335**	P	**P**	**20 41 38.7**	**-0.7**
	0.8nm,0.4s,mb3.6,baz=108,slow=4.8,SNR=4.6						
KURK	**Kurchatov**	**70.92**	**330**	P	**P**	**20 41 43.2**	**-0.3**
	0.7nm,0.5s,mb3.5,baz=133,slow=5.0,SNR=7.2						

*BJI **09** 20:36:54.3, 5°.10S×102°.59E, h95km, mB4.9/23, mb5.0/46*
*MOS **09** 20:36:55.6±1.0, 4°.23S×102°.84E, h50km, mb5.2/40, Error ellipse: s-maj=11.9km s-min=5.4km az=115.1*
*ISCJB **09** 20:36:57.9±0.4, 4°.48S±0°.03×102°.57E±0°.03, h75km±3km, mb5.0/107, Error ellipse: s-maj=6.2km s-min=3.3km az=39.7*
*DJA **09** 20:36:58, 4°.63S×102°.49E, h47km, mb4.9/32*
*IDC **09** 20:36:58.2±1.9, 4°.31S×102°.67E, h59km±15km, mb4.6/24, mb1 4.7/25, mb1mx4.6/28, mbtmp4.6/25, MS3.6/11, Ms1 3.6/11, ms1mx3.3/23, Error ellipse: s-maj=23.9km s-min=9.8km az=47.0*
*NEIC **09** 20:37:00.3±1.0, 4°.33S×102°.69E, h81km±8km, mb4.9/40, Error ellipse: s-maj=8.4km s-min=4.6km az=50.0*
ISC 09 20:36:59.5±0.3, 4°.45S±0°.03×102°.61E±0°.03, h74km±2km, h95km±2.3km: pP-P, n307, σ1°04/310, mb5.0/107, 38C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.35**	**75**	P	**Pn**	**20 37 09.3**	**-2.2**
MNAI				S	**Sn**	**20 37 17.7**	**-2.7**
KSI	**Kapahiang**	**0.80**	**359**	P	**Pn**	**20 37 14.2**	**-1.7**
LHSI	**Lahat**	**1.10**	**56**	P	**Pn**	**20 37 21.6**	**+2.1**
LHSI				S	**Sn**	**20 37 35.8**	**+1.4**
LWLI	**Liwa**	**1.55**	**111**	P	**Pn**	**20 37 24.7**	**-0.6**
MDSI	**Maura Dua**	**1.56**	**91**	P	**Pn**	**20 37 24.9**	**-0.5**
MDSI				S	**Sn**	**20 37 45.7**	**+0.6**
KASI	**Kota Agung**	**2.16**	**120**	P	**Pn**	**20 37 32.7**	**-0.7**
KASI				S	**Sn**	**20 37 57.2**	**-2.1**
KLI	**Kotabumi**	**2.27**	**100**	P	**Pn**	**20 37 35.0**	**0.0**
KLI				S	**Sn**	**20 38 00.6**	**-1.5**
PMBI	**Palembang**	**2.63**	**55**	P	**Pn**	**20 37 39.8**	**-0.1**
PPSI	**Pulau Pagai**	**3.09**	**303**	P	**Pn**	**20 37 45.9**	**-0.2**
RBSI	**Rajabasa**	**3.41**	**114**	P	**Pn**	**20 37 51.8**	**+1.4**
SDSI	**Sungai Dareh**	**3.69**	**341**	P	**Pn**	**20 37 54.8**	**+0.6**
CGJI	**Cibinong**	**3.74**	**125**	P	**Pn**	**20 37 53.9**	**-1.0**
PDSI	**Padang**	**4.12**	**329**	P	**Pn**	**20 38 00.1**	**0.0**
TNG	**Tangerang**	**4.37**	**113**	P	**Pn**	**20 38 03.3**	**-0.1**
PPI	**Padang Panjang**	**4.54**	**331**	P	**Pn**	**20 38 06.7**	**+0.8**
SISI	**Saibi**	**4.69**	**311**	P	**Pn**	**20 38 07.1**	**-0.8**
BKNI	**Bangkinang**	**5.00**	**342**	P	**Pn**	**20 38 13.1**	**+1.0**
	326nm,0.9s,7μm2.6nm						
TPI	**Tanjungpandan**	**5.31**	**72**	P	**Pn**	**20 38 16.4**	**+0.1**
	54nm,0.6s,991nm0.6nm						
MNSI	**Mandailing Nat**	**6.03**	**330**	P	**Pn**	**20 38 25.1**	**-1.1**
	102nm,0.7s,2μm0.6nm						
MYKOM	**Kota Tinggi**	**6.32**	**11**	P	**Pn**	**20 38 31.5**	**+1.3**
MYKOM	**Kota Tinggi**	**6.32**	**11**	P	**Pn**	**20 38 31.2**	**+1.0**
	90nm,0.8s,2μm0.4nm						
KGM	**Kluang**	**6.46**	**6**	P	**Pn**	**20 38 33.6**	**+1.5**
XMIS	**Christmas Isla**	**6.70**	**153**	*e*P	**Pn**	**20 38 27.9**	**-7.5**
XMIS				*e*S	**Sn**	**20 39 35.0**	**-15**
XMIS	**Christmas Isla**	**6.70**	**153**	P	**Pn**	**20 38 30.4**	**-5.0**
	206nm,1.3s,8μm1.2nm						
GSI	**Gunungsitoli**	**7.62**	**319**	P	**Pn**	**20 38 46.3**	**-1.6**
	148nm,0.6s,0.6nm						
FRIM	**Kepong**	**7.70**	**353**	P	**Pn**	**20 38 50.4**	**+1.4**
PSI	**Prapat**	**8.09**	**333**	P	**Pn**	**20 38 51.4**	**-3.0**
	2.2nm,0.3s,baz=65,slow=21,SNR=8.1						
PSI				LR	LR	20 42 36.6	
	comp=Z,205nm,19.8s,baz=36,slow=43						
UGM	**Wanagama**	**8.58**	**114**	P	**Pn**	**20 39 01.3**	**+0.2**
	194nm,1.8s						
IPM	**Ipoh**	**9.01**	**350**	P	**Pn**	**20 39 10.5**	**+3.5**
IPM	**Ipoh**	**9.01**	**350**	P	**Pn**	**20 39 10.0**	**+3.0**
	38nm,0.7s						
PCJI	**Pacitan**	**9.29**	**114**	P	**Pn**	**20 39 10.7**	**0.0**
	89nm,1.5s						
SJI	**Sawahan**	**9.67**	**110**	P	**Pn**	**20 39 16.5**	**+0.6**
	44nm,1.1s						
KSM	**Kuching**	**9.69**	**53**	P	**Pn**	**20 39 17.5**	**+1.4**
KSM	**Kuching**	**9.69**	**53**	*e*Pn	**Pn**	**20 39 16.8**	**+0.6**
	37nm,1.2s						
KSM	**Kuching**	**9.69**	**53**	P	**Pn**	**20 39 17.3**	**+1.2**
	24nm,1.2s						
KTGM	**Kuala Trenggan**	**9.73**	**3**	P	**Pn**	**20 39 20.2**	**+3.4**
PWJI	**Pagerwojo**	**9.80**	**112**	P	**Pn**	**20 39 18.5**	**+0.8**
	49nm,1.2s						
KULM	**Kulim**	**9.87**	**349**	P	**Pn**	**20 39 22.2**	**+3.5**
KULM	**Kulim**	**9.87**	**349**	*e*Pn	**Pn**	**20 39 18.1**	**-0.6**
STKI	**Sintang**	**9.93**	**63**	P	**Pn**	**20 39 23.1**	**+3.6**
	63nm,0.9s,8μm						
GMJI	**Gumukmas**	**11.41**	**110**	P	**Pn**	**20 39 41.0**	**+1.3**
	36nm,1.6s						
SBUM	**Sibu**	**11.80**	**55**	P	**Pn**	**20 39 49.1**	**+4.1**
SBUM	**Sibu**	**11.80**	**55**	P	**Pn**	**20 39 47.2**	**+2.2**
	16nm,0.8s						
BSI	**Banda Aceh**	**12.29**	**323**	P	**Pn**	**20 39 47.4**	**-4.3**
	42nm,0.6s						
SRBI	**Singaraja**	**13.03**	**107**	P	**Pn**	**20 40 00.8**	**-1.0**
	68nm,0.8s						
KHKI	**Kahang-Kahang**	**13.48**	**107**	P	**Pn**	**20 40 07.2**	**-0.5**
	40nm,1.5s						
KBKI	**Kotabaru**	**13.57**	**86**	P	**Pn**	**20 40 18.2**	**+9.3**
KAPI	**Kappang**	**17.09**	**93**	LR	LR	20 47 06.9	
	comp=Z,176nm,21.9s,baz=284,slow=36						
KKM	**Kota Kinabalu**	**17.12**	**53**	P	**Pn**	**20 40 58.5**	**+4.3**
KKM	**Kota Kinabalu**	**17.12**	**53**	*e*Pn	**Pn**	**20 40 55.4**	**+1.2**
	32nm,1.0s						
KKM	**Kota Kinabalu**	**17.12**	**53**	P	**Pn**	**20 40 58.4**	**+4.2**
	35nm,1.6s						
TTSI	**Tana Toraja**	**17.23**	**86**	P	**Pn**	**20 40 58.7**	**+3.2**
	31nm,1.4s						
PCI	**Palu**	**17.56**	**79**	P	**Pn**	**20 41 02.7**	**+3.1**
	2.3nm,0.6s,44nm						
SDKM	**Sandakan**	**17.68**	**56**	P	**Pn**	**20 41 04.0**	**+3.0**
KDM	**Kudat**	**18.14**	**52**	P	**Pn**	**20 41 10.1**	**+3.5**
WSI	**Waingapu**	**18.30**	**107**	P	**Pn**	**20 41 08.7**	**+0.2**
	193nm,0.7s,3μm						
APSI	**Ampana**	**19.34**	**80**	P	**Pn**	**20 41 21.4**	**+0.5**
	136nm,0.9s,1μm						
MRSI	**Marisa**	**19.92**	**76**	P	**Pn**	**20 41 26.9**	**-0.9**
	80nm,0.7s,761nm						
KDI	**Kendari**	**19.96**	**89**	P	**Pn**	**20 41 28.1**	**-0.1**
	48nm,0.8s						
LUWI	**Luwuk**	**20.42**	**81**	P	**P**	**20 41 32.8**	**+1.9**
	107nm,1.0s						
CM31	**Chiang Mai Arr**	**23.05**	**351**	*e*P	**P**	**20 41 57.4**	**-1.4**
	29nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**23.05**	**351**	P	**P**	**20 41 57.6**	**-1.2**
CMAR						20 45 47.3	
CMAR	**Chiang Mai Arr**	**23.05**	**351**	P	**P**	**20 41 57.6**	**-1.2**
	27nm,0.7s,mb4.7,baz=184,slow=8.9,SNR=147						
CMAR				PcP	PcP	20 45 47.3	+1.3
	2.6nm,0.7s,baz=210,slow=3.2,SNR=11						
CMAR				LR	LR	20 51 00.8	
	comp=Z,148nm,19.7s,baz=1.0,slow=37						
CHTO	**Chiang Mai**	**23.40**	**351**	⇑*i*P	**P**	**20 42 00.5**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**23.40**	**351**	⇑*i*P	**P**	**20 42 00.5**	**-1.5**
	comp=Z,16nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**23.40**	**351**	P	**P**	**20 42 01.5**	**-0.5**
	comp=Z,34nm,1.2s,mb4.5						
MBWA	**Marble Bar**	**23.50**	**136**	*e*P	**P**	**20 42 03.5**	**+0.6**
	comp=Z,41nm,1.4s,mb4.6						
QIZ	**Qiongzhong**	**24.40**	**17**	P	**P**	**20 42 18.0**	**+6.9**
QIZ				*e*S	**S**	**20 46 43.9**	**+18**
QIZ				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.2						
QIZ	**Qiongzhong**	**24.40**	**17**	P	**P**	**20 42 11.4**	**+0.3**
	comp=Z,25nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**26.29**	**123**	⇑*i*P	**P**	**20 42 28.1**	**-0.2**
	comp=Z,27nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**26.29**	**123**	P	**P**	**20 42 28.3**	**-0.1**
	comp=Z,19nm,0.9s,mb4.5,baz=306,slow=6.8,SNR=59						
FITZ	**Fitzroy Crossi**	**26.29**	**123**	*e*P	**P**	**20 42 28.0**	**-0.3**
	comp=Z,15nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**26.29**	**123**	P	**P**	**20 42 28.4**	**+0.1**
	comp=Z,42nm,0.8s,mb4.9						
KMI	**Kunming**	**29.40**	**0**	P	**P**	**20 42 57.4**	**+1.5**
KMI				pP	pP	20 43 19.9	+6.4
KMI				sP	sP	20 43 31.6	+9.5
KMI				PP	PP	20 43 58.3	-5.4
KMI				S	**S**	**20 47 44.2**	**-0.4**
KMI				sS	sS	20 48 23.0	+8.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
KMI				pmax	pmax		
	comp=Z,39nm,4.3s						
KMI				LR	LR		
	comp=N,140nm,16.9s						
KMI				LR	LR		
	comp=E,170nm,18.2s						
KMI				LR	LR		
	comp=Z,170nm,17.3s						
GYA	**Guiyang**	**30.98**	**7**	⇑*i*P	**P**	**20 43 11.0**	**+1.1**
GYA				PP	PP	20 44 17.9	-3.3
GYA				S	**S**	**20 48 08.7**	**-0.6**
GYA				sS	sS	20 48 47.6	+8.1
GYA				ScP	ScP	20 49 38.9	-2.2
GYA				PcS	PcS	20 49 48.7	-0.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,540nm,14.9s						
GYA				LR	LR		
	comp=E,480nm,15.4s						
GYA				LR	LR		
	comp=Z,570

XAN LR LR
comp=N,93nm,15.7s
XAN LR LR
comp=Z,45nm,16.1s
NJ2 Nanjing 39.45 22 *e*P **P 20 44 23.6 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
AGRA Agra 39.50 324 *e*P **P 20 44 22.7 -0.3**
AGRA AMb AMB 20 44 28.1
comp=Z,39nm,0.5s,mb5.5
LZH Lanzhou 40.34 2 *e*P **P 20 44 30.0 +0.1**
LZH pP pP 20 44 52.5 +4.5
LZH sP sP 20 45 05.0 +8.5
LZH PP PP 20 46 11.1 +6.9
LZH *e*S **S 20 50 31.3 -1.1**
LZH sS sS 20 51 09.3 +6.0
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,87nm,5.7s
SONA Sohna 40.76 324 *e*P **P 20 44 33.4 -0.1**
SONA AMb AMB 20 44 34.9
comp=Z,42nm,0.9s,mb5.3
BISR Bishrakh 40.80 325 *e*P **P 20 44 34.1 +0.3**
AYAN Aya Nagar 40.91 325 *e*P **P 20 44 34.7 -0.1**
AYAN AMb AMB 20 44 35.7
comp=Z,34nm,0.6s,mb5.3
NDI New Delhi 41.01 325 *e*P **P 20 44 33.0 -2.6**
COEN Coen 41.08 106 P **P 20 44 34.7 -1.6**
comp=Z,59nm,1.9s,mb5.1
JOSI Joshimath 41.20 329 *e*P **P 20 44 37.4 +0.3**
KHET Khetri 41.39 323 *e*P **P 20 44 38.6 -0.1**
KHET AMb AMB 20 44 40.0
comp=Z,18nm,0.9s,mb4.9
SMLA Simla 42.91 327 *e*P **P 20 44 49.6 -1.4**
SMLA AMb AMB 20 44 52.3
comp=Z,45nm,1.1s,mb5.1
GTA Gaotai 43.72 357 P **P 20 44 57.7 +0.3**
GTA pP pP 20 45 19.8 +4.2
GTA sP sP 20 45 31.8 +7.7
GTA PcP PcP 20 46 44.0 +0.8
GTA S **S 20 51 20.5 -1.6**
GTA sS sS 20 51 59.7 +6.4
GTA pmax pmax
comp=Z,15nm,1.2s,mb4.6
GTA pmax pmax
comp=Z,42nm,5.1s
GTA LR LR
comp=N,110nm,17.1s
GTA LR LR
comp=E,82nm,16.2s
GTA LR LR
comp=Z,170nm,20.4s
THN Thein Dam 44.70 327 *e*P **P 20 45 04.0 -1.4**
CTA Charters Tower 45.21 114 *e*P **P 20 45 09.8 +0.2**
comp=Z,22nm,0.8s,mb5.0
CTA Charters Tower 45.21 114 P **P 20 45 10.2 +0.6**
comp=Z,26nm,0.7s,mb5.1,baz=287,slow=9.2,SNR=22
CTAO Charters Tower 45.21 114⇑ *i*P **P 20 45 09.7 +0.1**
CTAO pmax pmax
comp=Z,30nm,0.8s,mb5.1
CTAO Charters Tower 45.21 114⇑ *i*P **P 20 45 09.7 +0.1**
comp=Z,30nm,0.8s,mb5.1
CTAO Charters Tower 45.21 114 P **P 20 45 09.8 +0.2**
comp=Z,40nm,0.9s,mb5.2
STKA Stephens Creek 45.58 131 *e*P **P 20 45 13.0 +0.6**
STKA *e* 20 46 49.9
STKA pmax pmax
comp=Z,5.0nm,0.5s
STKA Stephens Creek 45.58 131⇑ *i*P **P 20 45 13.3 +0.9**
comp=Z,20nm,0.5s,mb5.1
STKA Stephens Creek 45.58 131 P **P 20 45 13.3 +0.9**
comp=Z,25nm,0.6s,mb5.2,baz=306,slow=7.5,SNR=152
STKA PcP PcP 20 46 50.6 +0.8
comp=Z,3.6nm,0.4s,baz=339,slow=6.2,SNR=2.0
STKA LR LR 21 03 43.3
comp=Z,72nm,20.3s,baz=204,slow=35
STKA Stephens Creek 45.58 131 *e*P **P 20 45 13.0 +0.7**
comp=Z,4.8nm,0.5s,mb4.5
STKA *e*PcP PcP 20 46 49.9 +0.1
GUMO Guam 45.61 66 *e*P **P 20 45 09.3 -3.5**
GUMO pmax pmax
comp=Z,65nm,0.8s,mb5.4
GUMO Guam 45.61 66 *e*P **P 20 45 09.3 -3.5**
comp=Z,65nm,0.8s,mb5.4
GUMO Guam 45.61 66 P **P 20 45 15.6 +2.8**
HHC Hu-ho-hao-te 45.82 9⇓ P **P 20 45 15.3 +1.2**
HHC pP pP 20 45 38.5 +6.1
HHC sP sP 20 45 49.8 +8.9
HHC PcP PcP 20 46 51.2 +0.8
HHC PP PP 20 47 05.0 +2.2
HHC ScP ScP 20 50 34.5 -2.5
HHC PcS PcS 20 50 44.2 -0.4
HHC S **S 20 51 51.9 -0.6**
HHC sS sS 20 52 32.6 +8.8
HHC ScS ScS 20 54 58.8 -4.1
HHC SS SS 20 55 10.5 -7.7
HHC pmax pmax
comp=Z,33nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,72nm,6.7s
HHC LR LR
comp=N,130nm,13.7s
HHC LR LR
comp=E,130nm,14.9s
HHC LR LR
comp=Z,140nm,15.9s
BJT Baijiatuau 45.98 14 P **P 20 45 14.9 -0.4**
BJI Beijing 46.00 14 P **P 20 45 15.8 +0.3**
BJI S **S 20 51 57.2 +2.1**
BJI pmax pmax
comp=Z,23nm,0.6s,mb5.1
BJI pmax pmax
comp=Z,81nm,5.1s
BJI LR LR
comp=N,140nm,18.6s
BJI LR LR
comp=E,78nm,21.4s
BJI LR LR
comp=Z,98nm,20.5s
KSRS Korea Array 47.89 27 P **P 20 45 29.8 -0.4**
comp=Z,6.6nm,0.8s,mb4.5,baz=226,slow=7.8,SNR=13
KSRS LR LR 21 06 28.1
comp=Z,44nm,20.6s,baz=215,slow=37
WMQ Urumqi 49.90 346 *e*P **P 20 45 46.1 +0.6**
WMQ pmax pmax
comp=Z,42nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,110nm,4.0s
WMQ Urumqi 49.90 346 P **P 20 45 46.0 +0.5**
WMQ pmax pmax
comp=Z,42nm,1.0s,mb5.3
KBL Kabul 50.04 323 *e*P **P 20 45 46.1 -0.7**
KBL pmax pmax
comp=Z,11nm,1.0s,mb4.7
KBL Kabul 50.04 323 *e*P **P 20 45 46.1 -0.6**
comp=Z,11nm,1.0s,mb4.8
KSH Kashi 50.17 333 *e*P **P 20 45 46.3 -1.4**
KSH pP pP 20 46 09.1 +2.8
KSH sP sP 20 46 20.4 +5.7
KSH PcP PcP 20 47 05.2 -0.8
KSH PP PP 20 47 43.3 -0.4
KSH ScP ScP 20 50 50.5 -5.0
KSH PcS PcS 20 51 01.1 -2.0
KSH S **S 20 52 53.5 -0.6**
KSH ScS ScS 20 55 24.7 -7.3
KSH pmax pmax
comp=Z,21nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,60nm,4.8s
KSH LR LR
comp=N,84nm,4.5s
KSH LR LR
comp=E,75nm,6.4s
SONM Songino Array 52.17 3 P **P 20 46 03.2 +0.7**
SONM 20 47 13.4
SONM Songino Array 52.17 3 P **P 20 46 03.2 +0.7**
comp=E,34nm,0.7s,mb5.5,baz=184,slow=9.0,SNR=292
SONM PcP PcP 20 47 13.4 +0.2
comp=E,3.6nm,0.4s,baz=191,slow=4.2,SNR=17
SONM LR LR 21 09 05.1
comp=E,56nm,20.3s,baz=173,slow=37
CN2 Changchun 52.26 21 *e*P **P 20 46 02.5 -0.7**
CN2 *e*pP pP 20 46 26.0 +4.1
CN2 *e*sP sP 20 46 37.3 +7.0
CN2 *e*S **S 20 53 23.6 +0.9**
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,19.0s
KZA Kyzart 52.58 334 P **P 20 46 06.8 +1.2**
SNR=5.6
MAJO Matsushiro 52.61 36 *e*P **P 20 46 04.2 -1.8**
MAJO pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
MAJO Matsushiro 52.61 36 *e*P **P 20 46 04.2 -1.8**
comp=Z,5.9nm,0.6s,mb4.8
MAT Matsushiro 52.61 36 P **P 20 46 04.5 -1.5**
MJAR Matsushiro Arr 52.62 36 P **P 20 46 04.3 -1.7**
comp=Z,4.1nm,0.6s,mb4.7,baz=218,slow=7.6,SNR=17
ARMA Armidale 52.87 125 *e*P **P 20 46 09.3 +1.3**
UCH Uchtor 53.02 334 P **P 20 46 09.4 +0.6**
SNR=13
UCH Uchtor 53.02 334 *e*P **P 20 46 08.4 -0.4**
UCH pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
UCH Uchtor 53.02 334 *e*P **P 20 46 08.4 -0.5**
comp=Z,6.0nm,0.7s,mb4.7
TKM2 Tokmak 2 53.12 335 P **P 20 46 09.8 +0.2**
SNR=36
TKM2 Tokmak 2 53.12 335 *e*P **P 20 46 09.3 -0.3**
TKM2 pmax pmax
comp=Z,33nm,0.7s,mb5.5
TKM2 Tokmak 2 53.12 335 *e*P **P 20 46 09.3 -0.3**
comp=Z,33nm,0.7s,mb5.5
KBK Karagaybulak 53.18 335 P **P 20 46 10.7 +0.7**
SNR=12
AML Almayashu 53.30 333 P **P 20 46 10.9 0.0**
SNR=21
AML Almayashu 53.30 333 *e*P **P 20 46 10.8 -0.1**
AML pmax pmax
comp=Z,17nm,0.8s,mb5.1
AML Almayashu 53.30 333 *e*P **P 20 46 10.8 -0.1**
comp=Z,17nm,0.8s,mb5.1
AAK Ala-Archa 53.35 334 P **P 20 46 11.7 +0.4**
SNR=5.9
AAK Ala-Archa 53.35 334 *ce*P **P 20 46 10.7 -0.6**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
AAK Ala-Archa 53.35 334 P **P 20 46 11.5 +0.2**
comp=Z,2.6nm,0.6s,mb4.5,baz=146,slow=3.9,SNR=7.0
AAK Ala-Archa 53.35 334 *e*P **P 20 46 11.2 -0.1**
comp=Z,9.1nm,0.9s,mb4.8
FRU Bishkek 53.46 335 *i*P **P 20 46 14.0 +1.9**
CHMS Chumysh 53.54 335 P **P 20 46 12.4 -0.3**
SNR=7.4
EKS2 Erkin-Say 53.69 334 P **P 20 46 14.2 +0.5**
SNR=46
EKS2 Erkin-Say 53.69 334 *e*P **P 20 46 13.9 +0.2**
EKS2 pmax pmax
comp=Z,35nm,0.8s,mb5.4
EKS2 Erkin-Say 53.69 334 *e*P **P 20 46 13.9 +0.2**
comp=Z,35nm,0.8s,mb5.4
USP Ospenovka 53.86 335 P **P 20 46 15.1 +0.1**
SNR=5.8
MK31 Makanchi Array 54.10 343⇑ *i*P **P 20 46 16.0 -0.7**
MKAR Makanchi Array 54.10 343 P **P 20 46 16.1 -0.6**
comp=Z,21nm,0.5s,mb5.4,baz=151,slow=8.6,SNR=172
MKAR LR LR 21 12 11.4
comp=Z,31nm,22.0s,baz=173,slow=39
MDJ Mudanjiang 54.51 23 P **P 20 46 16.6 -3.1**
MDJ PcP PcP 20 47 20.2 -2.0
MDJ PP PP 20 48 26.0 +3.2
MDJ ScP ScP 20 51 10.5 -3.7
MDJ PcS PcS 20 51 17.1 -4.6
MDJ S **S 20 53 52.9 -0.3**
MDJ SS SS 20 57 41.0 +4.1
MDJ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MDJ pmax pmax
comp=Z,82nm,5.4s
MDJ Mudanjiang 54.51 23 *e*P **P 20 46 18.5 -1.1**
comp=Z,9.4nm,0.9s,mb4.8
ZAK Zakamensk 54.62 1 *e*P **P 20 46 20.3 -0.1**
ZAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
HIA Hailar 55.54 14 *e*P **P 20 46 25.1 -1.9**
HIA pmax pmax
comp=Z,10.0nm,0.7s
HIA Hailar 55.54 14 *e*P **P 20 46 25.1 -1.9**
comp=Z,9.6nm,0.7s,mb4.9
MOY Mondy 55.92 359 *e*P **P 20 46 30.0 +0.3**
TLY Talaya 55.92 1 *e*P **P 20 46 30.3 +0.6**
TLY pmax pmax
comp=Z,22nm,0.9s,mb5.2
TLY Talaya 55.92 1 *e*P **P 20 46 30.2 +0.5**
comp=Z,18nm,0.8s,mb5.2
KURK Kurchatov 58.70 342 *c i*P **P 20 46 48.9 -0.4**
KURK pmax pmax
comp=Z,31nm,0.7s,mb5.5
KURK Kurchatov 58.70 342 P **P 20 46 48.0 -1.3**
comp=Z,21nm,0.7s,mb5.3,baz=161,slow=6.5,SNR=97
KURK PcP PcP 20 47 38.5 0.0
comp=Z,2.1nm,0.5s,baz=162,slow=3.4,SNR=3.7
KURK Kurchatov 58.70 342⇑ *i*P **P 20 46 48.5 -0.8**
comp=Z,31nm,0.8s,mb5.4
KLR Kul'dur 59.16 22 *e*P **P 20 46 48.0 -4.5**
HABR Khabarovsk 59.84 24 *e*P **P 20 46 53.6 -3.6**
HABR *e**PP pP 20 47 03.4 -13
HABR *e* 20 47 40.2
HABR *e*S **S 20 55 01.8 -1.3**
HABR *e* 20 55 14.2
HABR *e**SS sS 20 55 18.0 -18
HABR *e* 20 56 40.4
HABR *e*SS SS 20 58 57.9 -2.8
HABR MLR MLR
comp=Z,25nm,18.0s
ZAA0 Zalesovo Array 60.07 348⇑ *i*P **P 20 46 57.6 -1.1**
ZALV Zalesovo Beam 60.07 348 P **P 20 46 57.8 -0.9**
comp=Z,53nm,0.5s,mb5.8,baz=166,slow=5.5,SNR=230
ZALV LR LR 21 16 06.9
comp=Z,59nm,19.4s,baz=126,slow=39
NVS Novosibirsk 61.24 347 *e*P **P 20 47 04.9 -1.7**
NVS *e*S **S 20 55 10.9 -10**
NVS pmax pmax
comp=Z,13nm,0.8s,mb5.0
NVS pmax pmax
comp=N,12nm,1.0s
NVS pmax pmax
comp=E,5.0nm,0.6s
NVS smax
comp=N,5.0nm,1.3s
NVS smax
comp=E,16nm,2.4s
CASY Casey 61.96 176 *e*P **P 20 47 10.7 -0.6**
YSS Yuzh-Sakhalins 62.23 30 *e*P **P 20 47 12.6 -0.8**
YSS pmax pmax
comp=Z,16nm,0.8s,mb5.1
YSS Yuzh-Sakhalins 62.23 30 *e*P **P 20 47 12.6 -0.9**
comp=Z,16nm,0.8s,mb5.1
KBD Kabd 62.37 306 *e*P **P 20 47 15.3 +0.6**
KBD AMb AMB 20 47 16.1
comp=Z,22nm,0.9s,mb5.2
RDF Al-Radifah 62.39 306 *e*P **P 20 47 16.1 +1.2**
RDF AMb AMB 20 47 17.4
comp=Z,56nm,1.0s,mb5.5
UMR Umm Al-Rimmam 62.50 307 *e*P **P 20 47 16.2 +0.6**
UMR AMb AMB 20 47 17.0
comp=Z,80nm,0.6s,mb5.8
BOD Bodaibo 62.75 7 *e*P **P 20 47 15.4 -1.2**
BOD pmax pmax
comp=Z,16nm,0.8s,mb5.0
MIB Mutribah 62.90 307 *e*P **P 20 47 18.7 +0.5**
MIB AMb AMB 20 47 20.0
comp=Z,41nm,1.2s,mb5.2
BVAR Borovoye Array 63.38 339 P **P 20 47 19.8 -1.2**
comp=Z,12nm,0.5s,mb5.0,baz=134,slow=8.5,SNR=99
BVAR LR LR 21 15 36.8
comp=Z,46nm,21.5s,baz=323,slow=37
BRVK Borovoye 63.45 339 *c i*P **P 20 47 20.4 -1.0**
BRVK pmax pmax
comp=Z,13nm,0.8s,mb4.9
BRVK Borovoye 63.45 339⇑ *i*P **P 20 47 20.2 -1.2**
comp=Z,14nm,0.8s,mb4.9
ABKAR Akbulak array 65.03 331⇑ *i*P **P 20 47 30.9 -0.9**
AKTK Aktyubinsk 66.75 331 P **P 20 47 42.0 -0.9**
AKTO Aktyubinsk 66.75 331 P **P 20 47 42.0 -0.9**
comp=Z,3.0nm,0.4s,mb4.4,baz=118,slow=7.7,SNR=12
MAW Mawson 68.59 195 P **P 20 47 55.9 +1.7**
MAW Mawson 68.59 195 LR LR 21 11 59.9
comp=Z,99nm,20.6s,baz=283,slow=31
GNI Garni 69.09 316 *ce*P **P 20 47 58.7 +0.9**
GNI pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 69.09 316 P **P 20 47 57.9 +0.1**
comp=Z,6.2nm,0.9s,mb4.4
YAK Yakutsk 69.48 13 *e*P **P 20 47 57.9 -1.8**
YAK pmax pmax
comp=Z,33nm,1.0s,mb5.1
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK Yakutsk 69.48 13 *e*P **P 20 47 57.8 -1.9**
comp=E,18nm,0.6s,mb5.1
SVE Sverdlovsk 69.94 337⇑ *e*P **P 20 48 02.8 +0.2**
SVE *e* pP 20 48 25.9 +3.7
SVE *e*S S 20 57 10.3 +3.5
SVE *e* 20 58 03.8
SVE pmax pmax
comp=Z,27nm,0.9s,mb5.1
ARU Arti 70.49 336⇑ *i*P **P 20 48 05.3 -0.7**
ARU pmax pmax
comp=Z,20nm,1.1s,mb4.9
ARU Arti 70.49 336⇑ *i*P **P 20 48 05.2 -0.8**
comp=Z,20nm,1.1s,mb4.9
ZEI Tsey 70.79 318 *e*P **P 20 48 08.5 +0.4**
ZEI pmax pmax
comp=Z,13nm,1.0s,mb4.7
KIV Kislovodsk 72.09 319 *be*P **P 20 48 16.9 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
KIV Kislovodsk 72.09 319 *e*P **P 20 48 15.9 -0.1**
comp=Z,5.3nm,0.7s,mb4.5
ASF Jabal al Asfar 72.13 306 P **P 20 48 17.8 +1.3**
comp=Z,9.2nm,0.8s,mb4.6,baz=98,slow=11,SNR=16
MALT Malatya 72.91 312 *e*P **P 20 48 21.6 +0.7**
MALT pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
MALT Malatya 72.91 312 *e*P **P 20 48 21.6 +0.6**
comp=Z,1.4nm,0.6s,mb4.0
EIL Elat 73.03 303 P **P 20 48 22.3 +0.4**
comp=Z,16nm,0.9s,mb4.9,baz=124,slow=0.1,SNR=10
SOKR Solikamsk 73.30 338 *e*P **P 20 48 20.1 -2.7**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
PETK Petropavlovsk- 73.59 31 P **P 20 48 23.9 -0.7**
comp=Z,2.4nm,0.7s,mb4.0,baz=244,slow=1.4,SNR=3.7
LBTB Lobatse 76.37 245 *e*P **P 20 48 40.7 -0.6**
BR131 Keskin Array S 76.89 312⇑ *i*P **P 20 48 43.6 -0.3**
comp=Z,4.5nm,0.6s,mb4.4
BRTR Keskin Array B 76.89 312 *i*P **P 20 48 43.7 -0.2**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
BRTR Keskin Array B 76.89 312 P **P 20 48 43.4 -0.5**
comp=Z,6.2nm,0.7s,mb4.5,baz=139,slow=6.9,SNR=38
SEY Seymchan 76.94 21 *c i*P **P 20 48 43.4 -0.2**
VORD Divnogorie 77.09 325 *e*P **P 20 48 43.8 -1.0**
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,9.0nm,0.5s
VSR Storozhevoye 77.27 325 *e*P **P 20 48 45.4 -0.3**
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,0.6s
TIXI Tiksi 77.87 8 *e*P **P 20 48 46.6 -2.1**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
TIXI Tiksi 77.87 8 *e*P **P 20 48 46.6 -2.0**
comp=Z,4.5nm,0.6s,mb4.4
SIM Simferopol' 78.16 318 *e*P **P 20 48 51.8 +1.0**
SIM pmax pmax
comp=Z,15nm,0.6s,mb4.9
OBN Obninsk 80.24 328⇓ *e*P **P 20 49 02.4 +0.4**
OBN *e* pP 20 49 23.1 +1.1
OBN pmax pmax
comp=Z,19nm,0.6s,mb5.1
SBA Scott Base 80.36 169 P **P 20 49 03.8 +1.5**
KLMR Klimovskoe 81.16 334 *e*P **P 20 49 05.9 -0.8**
KLMR pmax pmax
comp=Z,16nm,1.4s,mb4.7
APE Apeiranthos 82.42 308⇑ P **P 20 49 13.6 -0.3**
APE Apeiranthos 82.42 308⇑ *i*P **P 20 49 13.6 -0.3**
AKASG Malin Array Be 83.01 322 P **P 20 49 15.6 -1.0**
comp=Z,4.4nm,0.6s,mb4.4,baz=87,slow=5.1,SNR=16
AKBB Malin Array Si 83.01 322 *e*P **P 20 49 15.9 -0.7**
KIEV Kiev 83.02 322 *e*P **P 20 49 15.7 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
KIEV Kiev 83.02 322 *e*P **P 20 49 15.7 -1.0**
comp=Z,4.7nm,0.8s,mb4.4
VRI Vrincioaia 83.41 317⇑ P **P 20 49 20.0 +1.2**
VRI Vrincioaia 83.41 317⇑ *i*P **P 20 49 20.0 +1.2**
MLR Muntele Rosu 83.86 316⇓ P **P 20 49 21.9 +0.7**
MLR Muntele Rosu 83.86 316⇓ *i*P **P 20 49 21.9 +0.7**
BILL Bilibino 84.55 20 P **P 20 49 24.0 -0.2**
BILL pmax pmax
comp=Z,9.0nm,2.5s,mb4.3
BURAR Bucovina Array 84.81 318⇑ P **P 20 49 27.3 +1.4**
BURAR Bucovina Array 84.81 318⇑ *i*P **P 20 49 27.3 +1.4**
BUR08 Bucovina Ar. S 84.83 318 *e*P **P 20 49 26.9 +0.9**
JOF Joensuu 85.54 334 *e*P **P 20 49 27.8 -1.4**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
JOF Joensuu 85.54 334 *ep* **P 20 49 27.8 -1.4**
comp=Z,5.5nm,0.6s,mb4.7
IDID Didziasalis 85.65 326 *e*P **P 20 49 30.5 +0.6**
IZAR Zarasai 86.03 327 *e*P **P 20 49 32.1 +0.3**
ISAL Salakas 86.05 326 *e*P **P 20 49 32.2 +0.3**
BZS Buzias 86.87 316⇑ P **P 20 49 36.6 +0.5**
BZS Buzias 86.87 316⇑ *i*P **P 20 49 36.6 +0.5**
KOLS Kolonicke sedl 87.00 319 *e*P **P 20 49 37.7 +1.0**
KOLS pmax pmax
comp=Z,15nm,0.9s,mb4.9
KOLS Kolonicke sedl 87.00 319 *e*P **P 20 49 37.7 +1.0**
comp=Z,15nm,0.9s,mb4.9
KOLS Kolonicke sedl 87.00 319 *e*P **P 20 49 37.7 +1.0**
SUW Suwalki 87.38 324 *e*P **P 20 49 38.1 -0.3**
SUW pmax pmax
comp=Z,39nm,1.0s,mb5.3
SUW Suwalki 87.38 324 *e*P **P 20 49 38.1 -0.3**
comp=Z,39nm,1.0s,mb5.3
FINES FINESS Array B 87.48 332 P **P 20 49 38.6 -0.2**
comp=Z,4.8nm,0.4s,mb4.7,baz=104,slow=4.2,SNR=67
FINES PKiKP PKiKP 20 54 43.0 +0.8
comp=Z,1.0nm,0.8s,baz=134,slow=4.0,SNR=3.5
KAF Kangasniemi 87.54 333 *e*P **P 20 49 38.4 -0.6**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
KAF Kangasniemi 87.54 333 *ep* **P 20 49 38.4 -0.6**
comp=Z,9.8nm,0.5s,mb5.1
STHS Stebnicka Huta 87.75 320 *e*P **P 20 49 41.8 +1.5**
STHS pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
STHS Stebnicka Huta 87.75 320 *e*P **P 20 49 41.8 +1.5**
comp=Z,7.8nm,0.8s,mb4.8
STHS Stebnicka Huta 87.75 320 *e*P **P 20 49 41.8 +1.5**
KECS Kecovo 88.09 319 *e*P **P 20 49 42.4 +0.5**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KECS Kecovo 88.09 319 *e*P **P 20 49 42.4 +0.5**
comp=Z,3.2nm,0.9s,mb4.3
KECS Kecovo 88.09 319 *e*P **P 20 49 42.4 +0.5**
NIE Niedzica 88.35 320 *e*P **P 20 49 44.1 +1.0**
PKSM Moragy 89.01 316⇓ P **P 20 49 46.8 +0.5**
PKSM Moragy 89.01 316⇓ *i*P **P 20 49 46.8 +0.5**
VYHS Vyhne 89.18 319 *e*P **P 20 49 47.6 +0.6**
VYHS Vyhne 89.18 319 *e*P **P 20 49 47.6 +0.6**
KEV Kevo 89.20 340 *e*P **P 20 49 46.4 -0.3**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 89.20 340 *ep* **P 20 49 46.4 -0.3**
comp=Z,6.3nm,0.7s,mb4.8
ARCES ARCESS Array B 89.65 340 P **P 20 49 48.9 +0.1**

comp=Z,1.5nm,0.3s,mb4.6,baz=106,slow=5.3,SNR=35
MORC Moravsky Berou 90.18 320 *eP* **P 20 49 52.1 +0.4**
comp=Z,7.3nm,1.0s,mb4.8
MORC Moravsky Berou 90.18 320 ⇑*iP* **P 20 49 52.8 +1.1**
GOLS Golise 91.08 316 *iP* **P 20 49 57.1 +1.2**
DOBS Dobrina 91.20 316 *iP* **P 20 49 57.5 +1.0**
BOJS Bojanci 91.29 315 *iP* **P 20 49 57.9 +0.9**
LJU Ljubljana 91.84 316 *iP* **P 20 50 00.6 +1.1**
BRG Berggiesshubel 92.58 321 *eP* **P 20 50 03.6 +0.8**
comp=Z,3.8nm,0.8s,mb4.8
BRG Berggiesshubel 92.58 321 *eP* **P 20 50 03.6 +0.8**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
GERES GERESS Array B 92.60 319 P **P 20 50 03.4 +0.5**
comp=Z,0.9nm,0.6s,mb4.3,baz=104,slow=2.8,SNR=11
GERES PP PP 20 53 45.9 +0.5
comp=Z,0.4nm,0.8s,baz=124,slow=2.4,SNR=3.7
GERES GERESS Array B 92.60 319 P **P 20 50 03.4 +0.5**
GERES PP PP 20 53 45.9 +0.5
NB2 NORSAR Subarra 94.54 331 P **P 20 50 11.1 -0.5**
comp=Z,0.2nm,0.7s,mb3.7,baz=95,slow=5.3
NOA NORSAR Array B 94.54 331 P **P 20 50 10.9 -0.7**
comp=Z,1.3nm,0.7s,mb4.5,baz=93,slow=4.6,SNR=5.8
YKA Yellowknife Ar 115.91 18 PKP PKPdf 20 55 32.2 -1.2
comp=Z,0.2nm,0.5s,baz=310,slow=2.5,SNR=5.3
SCHQ Schefferville 129.05 352 PKP PKPdf 20 55 59.3 +0.4
comp=Z,3.5nm,0.8s,baz=256,slow=8.3,SNR=5.2
NVAR Mina Array Bea 129.75 42 PKP PKPdf 20 56 02.2 +1.5
comp=Z,0.9nm,0.6s,baz=263,slow=3.6,SNR=4.6
NVAR Mina Array Bea 129.75 42 PKP PKPdf 20 56 02.2 +1.5
ULM Lac du Bonnet 131.77 16 PKP PKPdf 20 56 04.1 -0.1
comp=Z,1.8nm,0.6s,baz=315,slow=1.0,SNR=5.1
ULM Lac du Bonnet 131.77 16 PKP PKPdf 20 56 04.1 -0.1
PDAR Pinedale Array 132.35 32 SKPbc SKPbc 20 59 28.9 +3.0
comp=Z,0.8nm,0.8s,baz=26,slow=3.8,SNR=5.7
WMOK Wichita Mounta 143.93 31 *e*PKIKP PKPdf 20 56 23.6 -3.4
FVM French Village 144.57 18 *e*PKIKP PKPdf 20 56 25.8 -2.2
TXAR Lajitas Array 144.91 42 PKP PKPdf 20 56 28.5 -0.3
comp=Z,14nm,0.8s,baz=277,slow=1.3,SNR=130
TXAR SKPbc SKPbc 21 00 03.4 +1.5
comp=Z,0.3nm,0.5s,baz=233,slow=2.7,SNR=4.6
SIUC Southern Illin 145.17 17 *e*PKPdf PKPdf 20 56 28.0 -1.0
USIN University of 145.35 14 *e*PKPdf PKPdf 20 56 28.8 -0.6
WCI Wyandotte Cave 145.41 12 *e*PKIKP PKPdf 20 56 28.9 -0.5
MIAR Mount Ida 146.50 25 *e*PKP2 PKPab 20 56 32.4 -1.5
JCT Junction City 146.58 37 *e*PKP2 PKPab 20 56 33.2 -1.1
TKL Tuckaleechee C 148.39 10 *e*PKP2 PKPbc 20 56 37.4 -0.6
CPCT Cooper Cave 148.46 11 *e*PKPbc PKPbc 20 56 37.6 -0.6
CPCT *e*PKPab PKPab 20 56 40.7 -0.9
GOGA Godfrey 150.64 10 *e*PKIKP PKPbc 20 56 42.6 -1.1
GOGA *e* 20 56 49.5

NNC ***09*** *20:39:55.4±4.2, 38°.84N×70°.16E, h8km±16km, mb4.3, mpv3.9, Error ellipse: s-maj=30.5km s-min=14.1km az=172.0*
ISC 09 20:40:00.1±2.9, 39°.2N±0°.2×70°.0E±0°.1, h10km, n11, σ1§08/13, 4C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK01	**Karatay Array**	**3.92**	**5**	⇑Pn	**Pn**	**20 41 01.1**	**+0.8**
	6.0nm,0.2s,baz=185,slow=13						
KK01				⇑Pg	**Pg**	**20 41 12.7**	**-2.5**
	8.4nm,0.2s,baz=192,slow=18						
KK01				⇓Lg		20 42 13.2	
	18nm,0.7s,baz=184,slow=30						
AML	**Almayashu**	**4.06**	**43**	P	**Pn**	**20 41 01.9**	**-0.3**
	SNR=13						
EKS2	**Erkin-Say**	**4.49**	**38**	P	**Pn**	**20 41 09.2**	**+1.0**
	SNR=11						
UCH	**Uchtor**	**4.57**	**47**	P	**Pn**	**20 41 05.3**	**-4.0**
	SNR=15						
AAK	**Ala-Archa**	**4.83**	**43**	P	**Pn**	**20 41 14.0**	**+1.2**
	SNR=17						
KZA	**Kyzart**	**4.92**	**53**	P	**Pn**	**20 41 09.5**	**-4.6**
	SNR=9.2						
KBK	**Karagaybulak**	**5.10**	**46**	P	**Pn**	**20 41 16.9**	**+0.4**
	SNR=20						
CHMS	**Chumysh**	**5.22**	**42**	P	**Pn**	**20 41 17.1**	**-1.2**
	SNR=10						
TKM2	**Tokmak 2**	**5.63**	**47**	⇓Pn	**Pn**	**20 41 22.5**	**-1.3**
	3.0nm,0.3s						
TKM2				⇓Sn	**Sn**	**20 42 29.0**	**+0.5**
	9.3nm,0.9s						
TKM2				⇑Lg		20 42 58.3	
	12nm,1.1s						
TKM2	**Tokmak 2**	**5.63**	**47**	P	**Pn**	**20 41 23.0**	**-0.8**
	SNR=9.5						
AB31	**Akbulak array**	**12.36**	**328**	⇑P	**Pn**	**20 42 56.2**	**+0.2**
	2.3nm,0.5s,baz=148,slow=12,SNR=80						

ISK ***09*** *20:58:13.9, 37°.32N×30°.19E, h5km, MD3.0*
ISCJB ***09*** *20:58:15.4±0.5, 37°.33N±0°.03×30°.18E±0°.04, h10km, Error ellipse: s-maj=5.3km s-min=4.2km az=144.0*
CSEM ***09*** *20:58:15.3±0.2, 37°.33N×30°.18E, h10km, MD2.8, Error ellipse: s-maj=6.1km s-min=4.4km az=155.0*
DDA ***09*** *20:58:16.6, 37°.31N×30°.23E, h7km±6km, Md2.8*
ISC 09 20:58:16.0±0.5, 37°.35N±0°.04×30°.19E±0°.04, h4km±9km, n23, σ1§08/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.34**	**71**	PG	**Pg**	**20 58 21.8**	**-0.8**
BCK				*e*SG	**Sg**	**20 58 27.9**	**+1.0**
BCK	**Bucak**	**0.34**	**71**	*i* Pg	**Pg**	**20 58 21.8**	**-0.7**
BCK				*e*Sg	**Sg**	**20 58 27.9**	**+1.0**
KORT	**Korkueli**	**0.37**	**160**	*i* P	**Pg**	**20 58 22.9**	**-0.3**
KORT				*i* S	**Sg**	**20 58 28.8**	**+0.7**
KORT	**Korkueli**	**0.37**	**160**	*i* P	**Pg**	**20 58 22.9**	**-0.3**
KORT				*i* S	**Sg**	**20 58 28.8**	**+0.8**
GOLH	**Golhisar**	**0.52**	**257**	*e*P	**Pg**	**20 58 26.1**	**+0.2**
GOLH				*e*S	**Sg**	**20 58 35.6**	**+3.0**
GOLH	**Golhisar**	**0.52**	**257**	*e*P	**Pg**	**20 58 26.1**	**+0.2**
ISP	**Isparta**	**0.55**	**27**	*e*PG	**Pg**	**20 58 26.2**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.59**	**251**	*e*PG	**Pg**	**20 58 26.4**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.59**	**251**	*e*Pg	**Pg**	**20 58 26.5**	**-0.8**
ELL	**Elmali**	**0.64**	**201**	*e*PG	**Pg**	**20 58 26.9**	**-1.5**
ELL	**Elmali**	**0.64**	**201**	*e*Pg	**Pg**	**20 58 26.9**	**-1.5**
SUTC	**Sutluce-Ispart**	**0.66**	**79**	*e*PG	**Pg**	**20 58 28.0**	**-0.6**
SUTC	**Sutluce-Ispart**	**0.66**	**79**	*e*Pg	**Pg**	**20 58 28.0**	**-0.6**
DNZL	**Cakiroluk**	**0.97**	**291**	*e*P	**Pg**	**20 58 34.9**	**+0.2**
DNZL				*e*S	**Sg**	**20 58 51.8**	**+4.6**
DNZL	**Cakiroluk**	**0.97**	**291**	*e*P	**Pg**	**20 58 34.9**	**+0.3**
KHL	**Karahalli**	**1.10**	**332**	*e*PN	**Pg**	**20 58 36.3**	**-0.9**
KHL	**Karahalli**	**1.10**	**332**	*e*Pn	**Pg**	**20 58 36.3**	**-0.9**
FETY	**Fethiye**	**1.14**	**231**	*e*PN	**Pg**	**20 58 36.1**	**-1.8**
FETY	**Fethiye**	**1.14**	**231**	*e*Pn	**Pg**	**20 58 36.1**	**-1.8**
AKAS	**Kas**	**1.21**	**203**	*e*P	**Pg**	**20 58 42.1**	**+2.9**
AKAS				*e*S	**Sg**	**20 59 00.1**	**+5.1**
BOLV	**Bolvadin**	**1.49**	**24**	*e*P	**Pg**	**20 58 45.7**	**+1.1**
BOLV				*e*S	**Sn**	**20 59 03.8**	**+0.3**
HDMB	**Hadim**	**1.87**	**101**	*e*PN	**Pn**	**20 58 48.7**	**-0.1**
HDMB	**Hadim**	**1.87**	**101**	*e*Pn	**Pn**	**20 58 48.7**	**-0.2**

BJI ***09*** *21:23:12.4, 8°.70S×119°.00E, h84km, mB5.0/24, mb5.0/44, Ms4.6/20, Ms7 4.3/18*
MOS ***09*** *21:23:13.5±1.1, 8°.49S×119°.12E, h105km, mb4.9/29, Error ellipse: s-maj=14.2km s-min=6.5km az=119.2*
NEIC ***09*** *21:23:15.5±0.8, 8°.66S×119°.02E, h111km±7km, mb4.7/33, Error ellipse: s-maj=9.1km s-min=4.7km az=61.0*
NEIC Felt at Sumbawa Besar, Sumbawa.
ISCJB ***09*** *21:23:16.3±0.3, 8°.83S±0°.03×119°.01E±0°.03, h142km±3km, mb4.7/78, Error ellipse: s-maj=6.1km s-min=3.6km az=26.4*
IDC ***09*** *21:23:17.3±0.8, 8°.60S×119°.05E, h124km±7km, mb4.4/19, mb1 4.4/21, mb1mx4.4/22, mbtmp4.4/21, MS3.4/4, Ms1 3.3/4, ms1mx3.0/31, Error ellipse: s-maj=15.4km s-min=8.4km az=75.0*
DJA ***09*** *21:23:18, 8°.89S×118°.94E, h109km, mb4.9/29*
ISC 09 21:23:17.5±0.3, 8°.84S±0°.04×119°.01E±0°.03, h137km±3km, h96km±3.7km; pP-P, n241, σ1§13/224, mb4.7/77, 11C-4D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.52**	**123**	P	**Pn**	**21 23 45.2**	**-1.0**
WSI				S	**Sn**	**21 24 07.2**	**-1.0**
KHKI	**Kahang-Kahang**	**3.39**	**278**	P	**Pn**	**21 24 08.4**	**-1.1**
KHKI				S	**Sn**	**21 24 48.2**	**-1.5**
KHKI	**Kahang-Kahang**	**3.39**	**278**	P	**Pn**	**21 24 08.3**	**-1.2**
DNP	**Denpasar**	**3.76**	**272**	P	**Pn**	**21 24 14.8**	**+0.6**
DNP				S	**Sn**	**21 24 58.4**	**+0.2**
DNP	**Denpasar**	**3.76**	**272**	P	**Pn**	**21 24 15.0**	**+0.8**
IGBI	**Denpasar**	**3.81**	**270**	P	**Pn**	**21 24 14.8**	**-0.2**
IGBI				S	**Sn**	**21 24 59.5**	**-0.1**
IGBI	**Denpasar**	**3.81**	**270**	P	**Pn**	**21 24 14.8**	**-0.2**
SRBI	**Singaraja**	**3.83**	**281**	P	**Pn**	**21 24 15.2**	**0.0**
SRBI				S	**Sn**	**21 24 58.4**	**-1.5**
SRBI	**Singaraja**	**3.83**	**281**	P	**Pn**	**21 24 14.3**	**-0.9**
KAPI	**Kappang**	**3.88**	**11**	P	**Pn**	**21 24 13.4**	**-2.4**
	64nm,0.3s,baz=193,slow=8.6,SNR=807						
KAPI				S	**Sn**	**21 24 54.9**	**-6.1**
	22nm,0.3s,baz=264,slow=24,SNR=11						
KAPI				LR	LR	21 25 31.9	
	comp=Z,480nm,21.0s,baz=62,slow=37						
NBBI	**Negara**	**4.36**	**276**	P	**Pn**	**21 24 21.2**	**-1.0**
NBBI				S	**Sn**	**21 25 11.7**	**-0.8**
NBBI	**Negara**	**4.36**	**276**	P	**Pn**	**21 24 21.2**	**-1.0**
ABJI	**Asem Bagus**	**4.84**	**282**	P	**Pn**	**21 24 31.0**	**+2.5**
GMJI	**Gumukmas**	**5.53**	**275**	P	**Pn**	**21 24 35.9**	**-1.9**
	150nm,0.6s,6μm1.6nm						
GMJI	**Gumukmas**	**5.53**	**275**	P	**Pn**	**21 24 35.9**	**-1.9**
	150nm,0.6s,6μm						
TTSI	**Tana Toraja**	**5.82**	**8**	P	**Pn**	**21 24 43.1**	**+1.4**
	266nm,0.9s,2μm0.7nm						
TTSI	**Tana Toraja**	**5.82**	**8**	P	**Pn**	**21 24 43.1**	**+1.4**
	266nm,0.9s,2μm						
KDI	**Kendari**	**6.04**	**37**	P	**Pn**	**21 24 45.2**	**+0.5**
	179nm,1.2s,2μm0.7nm						
KDI	**Kendari**	**6.04**	**37**	P	**Pn**	**21 24 45.0**	**+0.3**
	180nm,1.2s,2μm						
GRJI	**Gresik**	**6.74**	**286**	P	**Pn**	**21 24 55.6**	**+1.5**
	186nm,1.4s						
BBKI	**Banjar Baru**	**6.76**	**322**	P	**Pn**	**21 24 54.3**	**-0.1**
	140nm,1.2s,0.5nm						
PWJI	**Pagerwojo**	**7.17**	**276**	P	**Pn**	**21 25 00.2**	**+0.3**
	114nm,0.5s,3μm1.0nm						
PWJI				S	**Sn**	**21 26 21.4**	**+1.4**
	114nm,0.5s,3μm1.0nm						
PWJI	**Pagerwojo**	**7.17**	**276**	P	**Pn**	**21 24 58.3**	**-1.6**
	76nm,0.6s,3μm1.0nm						
SJI	**Sawahan**	**7.25**	**278**	P	**Pn**	**21 25 04.2**	**+3.3**
	89nm,0.8s,3μm1.2nm						
SJI	**Sawahan**	**7.25**	**278**	P	**Pn**	**21 25 04.2**	**+3.3**
	89nm,0.8s,3μm						
NGJI	**Ngawi**	**7.61**	**281**	P	**Pn**	**21 25 09.5**	**+3.7**
	61nm,0.9s,0.6nm						
NGJI	**Ngawi**	**7.61**	**281**	P	**Pn**	**21 25 06.4**	**+0.6**
	58nm,0.7s						
PCJI	**Pacitan**	**7.77**	**274**	P	**Pn**	**21 25 08.6**	**+0.7**
	112nm,1.1s						
PCJI				S	**Sn**	**21 26 29.4**	**-5.1**
	112nm,1.1s						
PCJI	**Pacitan**	**7.77**	**274**	P	**Pn**	**21 25 08.4**	**+0.5**
	112nm,1.1s						
APSI	**Ampana**	**8.31**	**19**	P	**Pn**	**21 25 16.4**	**+1.2**
	130nm,0.9s,1μm						
APSI	**Ampana**	**8.31**	**19**	P	**Pn**	**21 25 16.1**	**+0.9**
	130nm,0.9s						
UGM	**Wanagama**	**8.44**	**276**	P	**Pn**	**21 25 17.9**	**+0.9**
	163nm,1.5s						
UGM	**Wanagama**	**8.44**	**276**	P	**Pn**	**21 25 17.6**	**+0.6**
LUWI	**Luwuk**	**8.61**	**26**	P	**Pn**	**21 25 20.2**	**+1.0**
	147nm,1.1s,1μm						
MRSI	**Marisa**	**9.71**	**18**	P	**Pn**	**21 25 35.8**	**+1.9**
	131nm,1.0s,1μm						
NLAI	**Namlea**	**9.79**	**56**	P	**Pn**	**21 25 39.0**	**+4.1**
	254nm,0.8s,2μm						
AAI	**Ambon**	**10.47**	**61**	P	**Pn**	**21 25 47.6**	**+3.5**
	104nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.23**	**146**	*e*P	**Pn**	**21 25 53.2**	**-0.9**
	21nm,0.6s						
FITZ				*e*S	**Sn**	**21 27 47.5**	**-11**
FITZ	**Fitzroy Crossi**	**11.23**	**146**	P	**Pn**	**21 25 53.5**	**-0.6**
	0.8nm,0.3s,baz=334,slow=6.0,SNR=35						
FITZ				S	**Sn**	**21 27 53.2**	**-4.9**
	3.7nm,0.3s,baz=193,slow=16,SNR=14						
FITZ				LR	LR	21 30 30.0	
	comp=Z,170nm,21.0s,baz=314,slow=38						
FITZ	**Fitzroy Crossi**	**11.23**	**146**	*e*Pn	**Pn**	**21 25 53.4**	**-0.8**
	20nm,0.8s						
FITZ				*e*Sn	**Sn**	**21 27 51.2**	**-7.0**
FITZ	**Fitzroy Crossi**	**11.23**	**146**	P	**Pn**	**21 25 53.9**	**-0.2**
	44nm,0.9s						
STKI	**Sintang**	**11.60**	**319**	P	**Pn**	**21 26 01.4**	**+2.4**
	25nm,1.4s						
MBWA	**Marble Bar**	**12.26**	**177**	*e*Pn	**Pn**	**21 26 06.6**	**-1.0**
	14nm,0.5s						
MBWA				*e*Sn	**Sn**	**21 28 11.1**	**-12**
KSM	**Kuching**	**13.42**	**319**	*e*Pn	**Pn**	**21 26 22.7**	**+0.1**
KSM				*e*		21 26 30.3	
KAKA	**Kakadu**	**13.74**	**107**	*e*P	**Pn**	**21 26 24.0**	**-2.8**
	57nm,0.5s						
KAKA				*e*S	**Sn**	**21 28 45.5**	**-13**
KAKA	**Kakadu**	**13.74**	**107**	*e*Pn	**Pn**	**21 26 23.9**	**-2.9**
	154nm,0.5s						
KAKA				*e*Sn	**Sn**	**21 28 48.5**	**-10**
KAKA	**Kakadu**	**13.74**	**107**	P	**Pn**	**21 26 24.7**	**-2.1**
	142nm,0.6s,1μm						
MDSI	**Maura Dua**	**15.35**	**285**	P	**Pn**	**21 26 49.9**	**+2.9**
	12nm,0.4s						
KSI	**Kapahiang**	**17.11**	**287**	P	**Pn**	**21 27 10.0**	**+1.5**
	75nm,0.6s						
WRA	**Warramunga Arr**	**18.48**	**128**	P	**P**	**21 27 23.6**	**+0.5**
	1.1nm,0.3s,baz=302,slow=13,SNR=65						
WRA				S	**S**	**21 30 43.8**	**-3.2**
	2.1nm,0.3s,baz=304,slow=24,SNR=8.1						
WRAB	**Tennant Creek**	**18.48**	**128**	*e*P	**P**	**21 27 25.2**	**+2.1**
WRAB				*e*S	**S**	**21 30 42.2**	**-4.8**
WRAB				pmax	pmax		
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**18.48**	**128**	*e*P	**P**	**21 27 25.2**	**+2.2**
	comp=Z,22nm,0.9s						
WRAB				*e*S	**S**	**21 30 42.2**	**-4.8**
WRAB	**Tennant Creek**	**18.48**	**128**	P	**P**	**21 27 26.9**	**+3.8**
	comp=Z,32nm,1.0s						
WB2	**Warramunga Arr**	**18.49**	**128**	*e*P	**P**	**21 27 24.1**	**+1.0**
WB2				*e*S	**S**	**21 30 40.5**	**-6.6**
ASAR	**Alice Springs**	**20.51**	**138**	P	**P**	**21 27 46.6**	**+1.7**
ASAR				S	**S**	**21 31 26.3**	**-0.6**
ASAR	**Alice Springs**	**20.51**	**138**	P	**P**	**21 27 46.5**	**+1.6**
	comp=Z,9.1nm,0.8s,baz=328,slow=12,SNR=33						
ASAR				S	**S**	**21 31 26.2**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=306,slow=21,SNR=3.4						
ASAR				ScP	ScP	21 35 16.8	+1.7
	comp=Z,7.1nm,1.1s,baz=315,slow=2.4,SNR=7.4						
TGY	**Tagaytay City**	**22.88**	**5**	P	**P**	**21 28 09.1**	**-0.4**
	comp=Z,266nm,0.3s,baz=103,slow=16,SNR=6.2						
PSI	**Prapat**	**23.12**	**299**	P	**P**	**21 28 11.2**	**-0.5**
	comp=Z,7.4nm,0.4s,mb4.5,baz=158,slow=10,SNR=7.8						
FORT	**Forrest**	**23.40**	**160**	*e*P	**P**	**21 28 14.8**	**+0.7**
	comp=Z,13nm,0.7s,mb4.5						
FORT	**Forrest**	**23.40**	**160**	*e*P	**P**	**21 28 16.6**	**+2.4**
	comp=Z,12nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	**24.02**	**184**	*e*P	**P**	**21 28 22.7**	**+3.0**
NWAO				pmax	pmax		
	comp=Z,22nm,0.9s						
NWAO	**Narrogin (SRO)**	**24.02**	**184**	P	**P**	**21 28 23.1**	**+3.3**
	comp=Z,21nm,0.8s,mb4.7,baz=4.4,slow=9.6,SNR=9.2						
NWAO	**Narrogin (SRO)**	**24.02**	**184**	*e*P	**P**	**21 28 22.7**	**+3.0**
	comp=Z,22nm,0.9s,mb4.7						
COEN	**Coen**	**24.22**	**104**	*e*P	**P**	**21 28 23.0**	**+1.2**
	comp=Z,332nm,0.8s						
COEN	**Coen**	**24.22**	**104**	P	**P**	**21 28 24.7**	**+2.9**
	comp=Z,216nm,0.8s,mb5.7						
CTA	**Charters Tower**	**28.60**	**116**	P	**P**	**21 29 01.7**	**+0.6**
CTA				*PP	pP	21 29 29.3	-1.0
CTA	**Charters Tower**	**28.60**	**116**	P	**P**	**21 29 01.6**	**+0.6**
	comp=Z,5.2nm,0.7s,mb4.4,baz=283,slow=11,SNR=4.3						
CTA				pP	pP	21 29 29.3	-1.0
	comp=Z,9.9nm,0.9s,baz=268,slow=10.0,SNR=4.3						
CTA				LR	LR	21 41 53.8	
	comp=Z,50nm,20.1s,baz=50,slow=39						
CTA	**Charters Tower**	**28.60**	**116**	P	**P**	**21 29 01.6**	**+0.6**
CTA				pP	pP	21 29 29.3	-1.0
CTA				LR	LR	21 41 53.8	
CTAO	**Charters Tower**	**28.60**	**116**	*e*P	**P**	**21 29 02.6**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
CTAO	**Charters Tower**	**28.60**	**116**	*e*P	**P**	**21 29 02.6**	**+1.6**
	comp=Z,7.5nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**31.07**	**141**	*e*P	**P**	**21 29 24.8**	**+2.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**31.07**	**141**	⇑*iP*	**P**	**21 29 25.0**	**+2.3**
	comp=Z,3.3nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**31.07**	**141**	P	**P**	**21 29 25.2**	**+2.5**
	comp=Z,6.7nm,0.8s,mb4.4,baz=321,slow=9.0,SNR=19						
STKA				PcP	PcP	21 32 17.2	+2.0
	comp=Z,4.7nm,0.7s,baz=329,slow=6.9,SNR=3.5						
STKA				ScP	ScP	21 35 47.6	+2.1
	comp=Z,5.1nm,0.9s,baz=334,slow=4.9,SNR=6.7						
STKA				LR	LR	21 42 33.6	
	comp=Z,85nm,19.0s,baz=231,slow=37						
STKA	**Stephens Creek**	**31.07**	**141**	*e*P	**P**	**21 29 24.8**	**+2.1**
	comp=Z,1.3nm,0.7s,mb3.8						
CM31	**Chiang Mai Arr**	**33.59**	**324**	*e*P	**P**	**21 29 45.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**33.59**	**324**	P	**P**	**21 29 45.6**	**+0.9**
	comp=Z,3.8nm,0.4s,mb4.5,baz=158,slow=7.2,SNR=33						
CMAR				PcP	PcP	21 32 24.4	+2.2
	comp=Z,4.3nm,0.8s,baz=173,slow=2.8,SNR=16						
CHTO	**Chiang Mai**	**33.87**	**324**	*e*P	**P**	**21 29 45.9**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,17nm,1.8s,mb4.5						
CHTO	**Chiang Mai**	**33.87**	**324**	*e*P	**P**	**21 29 45.9**	**-1.3**
	comp=Z,18nm,1.8s,mb4.5						
GYA	**Guiyang**	**37.08**	**341**	⇑*iP*	**P**	**21 30 14.8**	**+0.2**
GYA				pP	pP	21 30 36.4	-8.2
GYA				sP	sP	21 30 47.6	-13
GYA				PP	PP	21 31 44.2	+2.1
GYA				S	**S**	**21 35 54.0**	**+3.4**
GYA				ScP	ScP	21 36 12.0	+5.2
GYA				PcS	PcS	21 36 21.8	+0.9
GYA				sS	sS	21 36 31.2	-12
GYA				SS	SS	21 38 28.6	-10
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,590nm,15.7s						
GYA				LR	LR		
	comp=E,540nm,16.0s						
GYA				LR	LR		
	comp=Z,480nm,16.2s						
ARMA	**Armidale**	**37.25**	**130**	*e*P	**P**	**21 30 20.2**	**+4.1**
KMI	**Kunming**	**37.30**	**335**	P	**P**	**21 30 17.7**	**+1.3**
KMI				pP	pP	21 30 37.4	-9.1
KMI				sP	sP	21 30 49.4	-13
KMI				PP	PP	21 31 45.1	+0.7
KMI				S	**S**	**21 35 57.1**	**+3.2**
KMI				sS	sS	21 36 34.5	-12
KMI				SS	SS	21 38 34.2	-9.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb3.9						
KMI				pmax	pmax		
	comp=Z,120nm,5.1s						
KMI				LR	LR		
	comp=N,130nm,17.0s						
KMI				LR	LR		
	comp=E,100nm,15.8s						
KMI				LR	LR		
	comp=Z,83nm,13.9s						
ENH	**Enshi**	**39.95**	**347**	*e*P	**P**	**21 30 38.4**	**-0.1**
	comp=Z,16nm,0.8s,mb4.7						
NJ2	**Nanjing**	**40.66**	**360**	*e*P	**P**	**21 30 42.9**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9						
CD2	**Chengdu**	**42.15**	**340**	P	**P**	**21 30 58.0**	**+1.5**
CD2				pP	pP	21 31 18.6	-8.5
CD2				sP	sP	21 31 29.0	-14
CD2				PP	PP	21 32 40.0	+3.0
CD2				S	**S**	**21 37 12.4**	**+6.3**
CD2				sS	sS	21 37 46.5	-13
CD2				SS	SS	21 40 15.5	-4.1
CD2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.0						
CD2				pmax	pmax		
	comp=Z,170nm,6.0s						
CD2				LR	LR		
	comp=N,190nm,7.7s						
CD2				LR	LR		
	comp=Z,130nm,6.5s						
XAN	**Xi'an**	**43.71**	**348**	P	**P**	**21 31 08.8**	**-0.2**
XAN				pP	pP	21 31 30.2	-10
XAN				sP	sP	21 31 40.7	-14
XAN				PP	PP	21 32 52.2	-1.4
XAN				S	**S**	**21 37 32.6**	**+3.8**
XAN				sS	sS	21 38 10.0	-12
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
XAN				pmax	pmax		
	comp=Z,12nm,4.7s						
LSA	**Lhasa**	**46.77**	**326**	*e*P	**P**	**21 31 34.5**	**+1.3**
LSA				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.8						
LSA	**Lhasa**	**46.77**	**326**	*e*P	**P**	**21 31 34.5**	**+1.3**
	comp=Z,25nm,1.1s,mb4.8						
KSRS	**Korea Array**	**46.80**	**10**	P	**P**	**21 31 32.9**	**-0.5**
	comp=Z,15nm,1.0s,mb4.6,baz=182,slow=8.2,SNR=26						
KSRS				pP	pP	21 32 01.5	-3.0
	comp=Z,3.4nm,0.9s,baz=185,slow=8.6,SNR=2.9						
ODAN	**Odare**	**46.91**	**320**	*e*P	**P**	**21 31 34.7**	**+0.3**
LZH	**Lanzhou**	**46.92**	**343**	*e*P	**P**	**21 31 35.0**	**+0.7**
LZH				pP	pP	21 31 59.0	-6.4
LZH				sP	sP	21 32 08.5	-12
LZH				PP	PP	21 33 27.0	+0.8
LZH				*e*S	**S**	**21 38 12.1**	**-2.8**
LZH				sS	sS	21

HHC LR LR
comp=Z,76nm,14.3s
KOLN Koldanda 49.99 318 *eP* **P 21 31 57.0 -0.9**
comp=Z,15nm,0.5s,mb4.9
PYUN Piuthan 50.61 318 *eP* **P 21 32 02.1 -0.5**
comp=Z,11nm,0.4s,mb4.8
GTA Gaotai 51.21 341 P **P 21 32 08.0 +1.1**
GTA pP pP 21 32 31.7 -6.8
GTA sP sP 21 32 41.2 -13
GTA PcP PcP 21 33 22.4 +2.1
GTA S **S 21 39 19.1 +4.3**
GTA SS SS 21 42 55.4 +3.1
GTA pmax pmax
comp=Z,13nm,1.4s,mb4.4
GTA pmax pmax
comp=Z,100nm,4.5s
GTA LR LR
comp=N,78nm,17.1s
GTA LR LR
comp=E,76nm,15.3s
GTA LR LR
comp=Z,58nm,18.6s
CN2 Changchun 52.72 6 *eP* **P 21 32 17.6 -0.4**
CN2 *e*pP pP 21 32 36.2 -14
CN2 *e*S **S 21 39 41.1 +5.8**
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,22.0s
CN2 LR LR
comp=E,200nm,22.0s
CN2 LR LR
comp=Z,200nm,21.0s
MDJ Mudanjiang 54.06 9 P **P 21 32 27.4 -0.4**
MDJ pP pP 21 32 51.7 -8.1
MDJ sP sP 21 33 02.1 -13
MDJ PcP PcP 21 33 30.8 -0.2
MDJ PP PP 21 34 28.0 -2.9
MDJ ScP ScP 21 37 18.6 +2.2
MDJ PcS PcS 21 37 34.2 +3.9
MDJ S **S 21 39 56.1 +2.6**
MDJ ScS ScS 21 42 06.3 +2.9
MDJ SS SS 21 43 41.4 +4.2
MDJ pmax pmax
comp=Z,27nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,28nm,4.5s
ULN Ulaanbaatar 57.45 350 *eP* **P 21 32 51.9 +0.1**
ULN pmax pmax
comp=Z,34nm,1.1s,mb5.1
ULN Ulaanbaatar 57.45 350 *e*Pn **P 21 32 51.9 +0.1**
comp=Z,34nm,1.1s,mb5.1
SONM Songino Array 57.53 350 P **P 21 32 52.7 +0.3**
comp=Z,15nm,0.6s,mb5.0,baz=168,slow=7.9,SNR=109
SONM ScP ScP 21 37 33.2 +1.7
comp=Z,0.6nm,0.8s,baz=162,slow=3.3,SNR=4.4
CASY Casey 57.65 184 *eP* **P 21 32 55.9 +2.9**
comp=Z,4.3nm,1.0s,mb4.2
HABR Khabarovsk 58.80 12 *eP* **P 21 32 59.8 -1.4**
HABR *e**PP pP 21 33 21.4 -12
HABR *e* 21 33 46.0
HABR S **S 21 40 55.9 +0.2**
HABR *e* 21 42 36.7
HABR *e*SS SS 21 44 48.2 -3.4
HABR pmax pmax
comp=N,10.0nm,1.4s
HABR pmax pmax
comp=Z,18nm,1.2s,mb4.8
HABR pmax pmax
comp=E,11nm,1.3s
HABR MLR MLR
comp=Z,9μm,18.0s
WMQ Urumqi 59.62 334 *eP* **P 21 33 07.4 +0.4**
WMQ pmax pmax
comp=Z,29nm,1.0s,mb5.1
ZAK Zakamensk 60.55 349⇑ *iP* **P 21 33 18.1 +4.9**
ZAK pmax pmax
comp=Z,11nm,1.2s,mb4.6
TLY Talaya 61.72 349 *eP* **P 21 33 21.5 +0.5**
TLY pmax pmax
comp=Z,23nm,1.1s,mb4.9
TLY Talaya 61.72 349 *eP* **P 21 33 21.0 -0.1**
comp=Z,23nm,1.1s,mb4.9
MOY Mondy 62.24 347 *eP* **P 21 33 24.9 +0.4**
KSH Kashi 62.48 323 P **P 21 33 25.7 -0.7**
KSH pP pP 21 33 49.0 -10
KSH sP sP 21 34 00.1 -14
KSH PcP PcP 21 34 04.0 -0.4
KSH PP PP 21 35 44.6 -1.1
KSH ScP ScP 21 37 55.2 +1.4
KSH PcS PcS 21 38 06.0 -1.8
KSH S **S 21 41 40.5 -2.5**
KSH sS sS 21 42 22.4 -17
KSH pmax pmax
comp=Z,14nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,79nm,5.1s
KSH LR LR
comp=N,73nm,5.5s
KSH LR LR
comp=E,96nm,5.7s
KBL Kabul 63.99 315 *eP* **P 21 33 35.3 -1.1**
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
KBL Kabul 63.99 315 *eP* **P 21 33 35.3 -1.1**
comp=Z,9.4nm,0.8s,mb4.7
MK31 Makanchi Array 64.32 333 *eP* **P 21 33 38.2 -0.1**
MKAR Makanchi Array 64.32 333 P **P 21 33 38.1 -0.2**
comp=Z,18nm,0.6s,mb5.0,baz=148,slow=7.6,SNR=143
KZA Kyzart 64.57 325 P **P 21 33 40.8 +0.7**
SNR=18
TKM2 Tokmak 2 64.93 326 P **P 21 33 42.3 0.0**
SNR=7.9
TKM2 Tokmak 2 64.93 326 *eP* **P 21 33 41.7 -0.7**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TKM2 Tokmak 2 64.93 326 *eP* **P 21 33 41.7 -0.7**
comp=Z,7.5nm,1.0s,mb4.5
UCH Uchtor 65.08 325 P **P 21 33 43.4 0.0**
SNR=6.4
UCH Uchtor 65.08 325 *eP* **P 21 33 43.3 -0.1**
UCH pmax pmax
comp=Z,12nm,1.4s,mb4.5
UCH Uchtor 65.08 325 *eP* **P 21 33 43.3 -0.1**
comp=Z,12nm,1.4s,mb4.5
KBK Karagaybulak 65.11 326 P **P 21 33 44.1 +0.5**
SNR=12
AAK Ala-Archa 65.35 325 P **P 21 33 45.5 +0.3**
SNR=12
AAK Ala-Archa 65.35 325*c iP* **P 21 33 44.5 -0.6**
AAK pmax pmax
comp=Z,12nm,1.7s,mb4.5
AAK Ala-Archa 65.35 325 *eP* **P 21 33 44.9 -0.2**
comp=Z,22nm,1.3s,mb4.8
AAK *e*PcP PcP 21 34 17.7 +1.5
AAK Ala-Archa 65.35 325 P **P 21 33 45.5 +0.4**
comp=Z,3.1nm,1.1s,mb4.0
AML Almayashu 65.49 324 P **P 21 33 46.5 +0.5**
SNR=22
AML Almayashu 65.49 324 *eP* **P 21 33 46.2 +0.2**
AML *e* pP 21 34 18.6 -0.5
AML pmax pmax
comp=Z,28nm,1.1s,mb5.0
AML Almayashu 65.49 324 *eP* **P 21 33 46.2 +0.2**
comp=Z,28nm,1.1s,mb5.0
AML *e*PcP PcP 21 34 18.6 +1.9
USP Ospenovka 65.76 326 P **P 21 33 47.4 -0.4**
SNR=8.8
EKS2 Erkin-Say 65.78 325 P **P 21 33 48.0 +0.2**
SNR=24
EKS2 Erkin-Say 65.78 325 *eP* **P 21 33 47.6 -0.3**
EKS2 *e* pP 21 34 18.2 -2.8
EKS2 pmax pmax
comp=Z,19nm,1.0s,mb4.9
EKS2 Erkin-Say 65.78 325 *eP* **P 21 33 47.6 -0.3**
comp=Z,19nm,1.0s,mb4.9
EKS2 *e*PcP PcP 21 34 18.2 +0.3
BOD Bodaibo 66.56 357⇓ *iP* **P 21 33 52.1 -0.4**
BOD pmax pmax
comp=Z,35nm,0.8s,mb5.2
KURK Kurchatov 68.86 334*c iP* **P 21 34 06.7 -0.4**
KURK pmax pmax
comp=Z,39nm,1.7s,mb4.9
KURK Kurchatov 68.86 334 *eP* **P 21 34 06.8 -0.3**
comp=Z,26nm,1.1s,mb4.9
ZAA0 Zalesovo Array 68.90 339 *eP* **P 21 34 06.1 -1.2**
ZALV Zalesovo Beam 68.90 339 P **P 21 34 06.2 -1.0**
comp=Z,14nm,0.4s,mb5.1,baz=141,slow=4.4,SNR=85
ZALV Zalesovo Beam 68.90 339 P **P 21 34 06.2 -1.0**
MAW Mawson 69.38 200 P **P 21 34 13.0 +2.9**
comp=Z,1.4nm,0.3s,mb4.2,baz=18,slow=5.0,SNR=4.7
MAW Mawson 69.38 200 *eP* **P 21 34 13.7 +3.6**
comp=Z,2.0nm,1.3s,mb3.7
PETK Petropavlovsk- 69.93 24 P **P 21 34 13.2 -0.4**
comp=Z,14nm,0.8s,mb4.7,baz=200,slow=5.0,SNR=15
NVS Novosibirsk 70.17 339⇑ *iP* **P 21 34 13.3 -1.7**
NVS pmax pmax
comp=N,11nm,1.1s
NVS pmax pmax
comp=E,9.0nm,1.1s
NVS pmax pmax
comp=Z,20nm,1.1s,mb4.8
PET Petropavlovsk 70.25 24 *eP* **P 21 34 15.6 0.0**
YAK Yakutsk 71.15 5 *eP* **P 21 34 19.8 -1.0**
YAK pmax pmax
comp=Z,16nm,0.7s,mb4.9
YAK Yakutsk 71.15 5 *eP* **P 21 34 19.8 -1.0**
comp=Z,16nm,0.7s,mb4.9
BVAR Borovoye Array 74.16 332 P **P 21 34 38.4 -0.4**
comp=Z,5.1nm,0.7s,mb4.3,baz=126,slow=7.5,SNR=35
BRVK Borovoye 74.23 332*ce*P **P 21 34 38.0 -1.2**
BRVK pmax pmax
comp=Z,14nm,1.2s,mb4.6
BRVK Borovoye 74.23 332 *eP* **P 21 34 38.9 -0.4**
comp=Z,14nm,1.2s,mb4.5
SEY Seymchan 76.01 15*de*P **P 21 34 49.8 +0.6**
ABKAR Akbulak array 77.44 325 *eP* **P 21 34 56.8 -0.7**
comp=Z,7.9nm,0.6s,mb4.5
KBD Kabd 78.30 302 *eP* **P 21 35 02.5 -0.3**
RDF Al-Radifah 78.34 302 *eP* **P 21 35 02.6 -0.4**
RDF AMb AMB 21 35 03.8
comp=Z,28nm,0.6s,mb5.0
UMR Umm Al-Rimmam 78.39 303 *eP* **P 21 35 02.4 -0.8**
UMR AMb AMB 21 35 03.4
comp=Z,19nm,0.9s,mb4.8
TIXI Tiksi 80.59 3 *eP* **P 21 35 13.2 -1.0**
TIXI pmax pmax
comp=Z,13nm,0.9s,mb4.6
TIXI Tiksi 80.59 3 *eP* **P 21 35 13.1 -1.1**
comp=Z,10nm,0.9s,mb4.5
SVE Sverdlovsk 80.95 332⇓ *eP* **P 21 35 15.5 -0.9**
SVE pmax pmax
comp=Z,14nm,1.1s,mb4.5
KMBO Kilima Mbogo 81.68 270*ce*P **P 21 35 24.2 +2.9**
KMBO pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 81.68 270 P **P 21 35 23.1 +1.8**
comp=Z,6.7nm,1.1s,mb4.2,baz=44,slow=4.8,SNR=8.0
KMBO Kilima Mbogo 81.68 270 *eP* **P 21 35 23.3 +2.0**
comp=Z,8.2nm,1.1s,mb4.3
ARU Arti 81.73 331*c iP* **P 21 35 19.2 -1.4**
ARU 21 38 24.2
ARU S S 21 45 23.3 +1.4
ARU SS SS 21 50 44.5 +1.6
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.2
ARU Arti 81.73 331 *eP* **P 21 35 19.4 -1.2**
BILL Bilibino 83.64 16 P **P 21 35 30.0 -0.2**
BILL pmax pmax
comp=Z,3.0nm,1.3s,mb3.9
GNI Garni 83.84 312*de*P **P 21 35 32.5 +0.6**
GNI pmax pmax
comp=Z,18nm,1.5s
GNI Garni 83.84 312 *eP* **P 21 35 33.1 +1.2**
comp=Z,9.2nm,0.8s,mb4.6
ZEI Tsey 85.20 314 *eP* **P 21 35 38.8 +0.2**
ZEI pmax pmax
comp=Z,28nm,1.3s,mb4.8
MALT Malatya 88.11 309 *eP* **P 21 35 53.7 +0.8**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
MALT Malatya 88.11 309 *eP* **P 21 35 53.7 +0.9**
comp=Z,1.8nm,0.6s,mb4.1
MALT Malatya 88.11 309 P **P 21 35 54.2 +1.3**
comp=Z,3.9nm,1.2s,comp=Z,314nm,mb4.1
LSZ Lusaka 88.49 255 *eP* **P 21 35 57.8 +2.6**
LSZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
LSZ Lusaka 88.49 255 *eP* **P 21 35 57.8 +2.7**
comp=Z,10nm,1.2s,mb4.5
VORD Divnogorie 90.39 322 *eP* **P 21 36 02.7 -0.5**
VORD pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
VORD pmax pmax
comp=N,9.0nm,0.7s
VORD pmax pmax
comp=E,5.0nm,0.4s
VSR Storozhevoye 90.52 322 *eP* **P 21 36 03.2 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,3.0nm,0.7s
VSR pmax pmax
comp=E,9.0nm,1.0s
BR131 Keskin Array S 92.04 310 *eP* **P 21 36 10.8 -0.4**
comp=E,1.6nm,0.7s,mb4.2
BRTR Keskin Array B 92.04 310 P **P 21 36 11.1 -0.1**
comp=E,2.4nm,0.9s,mb4.2,baz=130,slow=5.2,SNR=10
KLMR Klimovskoe 92.57 331 *eP* **P 21 36 10.9 -2.2**
KLMR pmax pmax
comp=Z,12nm,1.5s,mb4.8
OBN Obninsk 92.88 325⇑ *eP* **P 21 36 14.9 +0.2**
OBN pmax pmax
comp=Z,14nm,1.7s,mb4.8
AKASG Malin Array Be 96.63 320*ce*P **P 21 36 30.8 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 96.63 320 P **P 21 36 31.2 -0.7**
comp=Z,0.5nm,0.4s,mb4.2,baz=96,slow=3.5,SNR=7.2
COLD Coldfoot 98.40 23 *eP* **P 21 36 39.2 -0.2**
comp=Z,1.8nm,0.6s,mb4.7
FINES FINESS Array B 99.10 331 P **P 21 36 41.7 -1.1**
comp=Z,1.2nm,0.7s,mb4.4,baz=38,slow=3.4,SNR=6.8
FINES PKiKP PKiKP 21 41 13.1 +0.8
comp=Z,0.9nm,0.7s,baz=214,slow=0.7,SNR=4.9
FINES FINESS Array B 99.10 331 P **P 21 36 41.7 -1.1**
ARCES ARCESS Array B 99.45 339 P Pdif 21 36 43.1 -1.5
comp=Z,1.2nm,0.6s,baz=84,slow=5.6,SNR=10
ARCES PKiKP PKiKP 21 41 13.7 +1.0
comp=Z,1.8nm,0.8s,baz=113,slow=1.2,SNR=8.6
NOA NORSAR Array B 106.28 331 Pdiff Pdif 21 37 13.8 -1.1
comp=Z,0.3nm,0.7s,baz=175,slow=8.5,SNR=2.1
CLL Collm 106.85 321 *ePP* PP 21 41 42.0 -2.9
YKA Yellowknife Ar 114.05 24 PKiKP PKiKP 21 41 40.3 +0.3
comp=Z,0.4nm,0.3s,baz=313,slow=1.8,SNR=10
TOA0 Torodi Ar. Sit 118.44 280 *e*PKPdf PKPdf 21 41 50.5 +0.6
TORD Torodi Ar. Bea 118.44 280 PKP PKPdf 21 41 50.9 +1.1
comp=Z,2.5nm,0.5s,baz=46,slow=2.1,SNR=46
TORD pPKP pPKPdf 21 42 24.1 -2.3
comp=Z,0.5nm,0.6s,baz=80,slow=1.4,SNR=2.8
TORD Torodi Ar. Bea 118.44 280 PKP PKPdf 21 41 50.9 +1.0
TORD pPKP pPKPdf 21 42 24.1 -2.3
NVAR Mina Array Bea 120.92 50 PKP PKPdf 21 41 56.0 +2.0
comp=Z,0.9nm,0.7s,baz=257,slow=2.6,SNR=2.4
HLID Hailey 122.21 44 *e*PKPdf PKPdf 21 41 58.7 +2.4
BOZ Bozeman (W) 123.27 40 *e*PKiKP PKPdf 21 42 00.2 +1.9
EGMT Eagleton 123.41 37 *e*PKPdf PKPdf 21 41 59.8 +1.3
FFC Flin Flon 123.86 27 *e*PKiKP PKPdf 21 42 00.0 +0.9
FCC Fort Churchill 124.18 20 *e*PKiKP PKPdf 21 41 59.9 +0.3
DBIC Dimbokro 124.38 272 PKP PKPdf 21 42 01.9 +0.5
comp=Z,3.7nm,0.9s,baz=352,slow=6.0,SNR=4.4
DUG Dugway 124.48 47 *e*PKiKP PKPdf 21 42 02.9 +2.1
TPAW Teton Pass 124.58 43 *e*PKPdf PKPdf 21 42 03.0 +2.1
SNOW Snow King Moun 124.72 43 *e*PKPdf PKPdf 21 42 03.3 +2.2
LOHW Long Hollow 124.76 42 *e*PKPdf PKPdf 21 42 03.2 +2.0
HWUT Hardware Ranch 124.87 45 *e*PKPdf PKPdf 21 42 03.2 +1.7
GLA Glamis 124.94 56 *e*PKiKP PKPdf 21 42 06.5 +4.6
BW06 Boulder Array 125.80 43 *e*PKPdf PKPdf 21 42 04.8 +1.6
PDAR Pinedale Array 125.80 43 PKP PKPdf 21 42 04.6 +1.4
comp=Z,14nm,1.1s,baz=267,slow=2.5,SNR=4.5
RSSD Black Hills 128.77 39 *e*PKiKP PKPdf 21 42 10.0 +1.1
ULM Lac du Bonnet 129.61 28 PKP PKPdf 21 42 11.2 +1.0
comp=Z,0.6nm,0.3s,baz=7.5,slow=2.6,SNR=3.3
ULM Lac du Bonnet 129.61 28 *e*PKPdf PKPdf 21 42 11.4 +1.2
PLCA Paso Flores 129.89 171 *e*PKPdf PKPdf 21 42 13.2 +2.0
comp=Z,1.5nm,0.7s,baz=235,slow=7.8,SNR=2.8
PLCA Paso Flores 129.89 171 *e*PKPdf PKPdf 21 42 14.0 +2.8
MNTX Cornudas Mount 132.99 55 *e*PKPdf PKPdf 21 42 19.5 +2.2
TRQA Tornquist 133.34 179 *e*PKPdf PKPdf 21 42 20.7 +3.0
SCHQ Schefferville 133.90 5 PKP PKPdf 21 42 19.7 +1.5
comp=Z,1.2nm,0.3s,baz=22,slow=3.7,SNR=7.0
TXAR Lajitas Array 135.15 57 PKhKP 21 42 13.4
comp=Z,0.2nm,0.6s,baz=107,slow=1.3,SNR=3.8
TXAR PKP PKPdf 21 42 23.2 +1.8
comp=Z,0.3nm,0.6s,baz=132,slow=1.9,SNR=4.4
WVT Waverly 143.47 38 *e*PKiKP PKPdf 21 42 33.9 -2.4
PLAL Pickwick Lake 144.07 40 *e*PKPpre 21 42 35.0
CPUP Villa Florida 144.86 186 PKPbc PKPdf 21 42 41.5 +2.4
comp=Z,2.0nm,0.4s,baz=169,slow=2.1,SNR=16
CPUP Villa Florida 144.86 186 PKPbc PKPdf 21 42 41.5 +2.4
SSPA Standing Stone 144.96 23 *e*PKPdf PKPdf 21 42 38.4 -0.4
MCWV Mont Chateau 144.99 26 *e*PKPdf PKPdf 21 42 38.8 -0.1
SWET Sewanee 145.23 37 *e*PKPdf PKPdf 21 42 38.9 -0.5
TZTN Tazewell 145.64 33 *e*PKPbc PKPbc 21 42 40.8 +0.2
LRAL Lakeview Retre 146.00 41 *e*PKPbc PKPbc 21 42 42.1 +0.3
CMIG Matias Romero 146.02 73 PKPbc PKPbc 21 42 44.0 +1.7
comp=Z,22nm,0.8s,baz=290,slow=3.9,SNR=14
CMIG Matias Romero 146.02 73 PKPbc PKPbc 21 42 44.0 +1.7
TKL Tuckaleechee C 146.17 34 *e*PKP2 PKPab 21 42 42.7 -0.4
LVC Limon Verde 147.79 166 PKPbc PKPbc 21 42 49.9 +2.8
comp=Z,10nm,0.7s,baz=214,slow=2.0,SNR=5.7
LVC Limon Verde 147.79 166 *e*PKPbc PKPbc 21 42 50.5 +3.3
GOGA Godfrey 147.95 37 *e*PKP2 PKPab 21 42 47.8 -2.3
APG El Apazote 150.54 75 PKPbc PKPbc 21 42 55.4 +1.2
comp=Z,8.4nm,0.9s,baz=187,slow=0.5,SNR=4.3
LPAZ La Paz 154.05 164 PKPbc PKPbc 21 43 05.3 +3.4
comp=Z,3.0nm,0.8s,baz=169,slow=4.5,SNR=4.5
LPAZ La Paz 154.05 164 *e*PKPbc PKPbc 21 43 05.6 +3.6
OTAV Otavalo 160.63 115 *e*PKPdf PKPdf 21 43 05.3 +3.1

IDC ***09*** *21:35:49.7±6.5,2°.84S×75°.43W,h137km±71km,mb3.4/5, mb1 3.7/8,mb1mx3.4/20,mbtmp3.5/8, Error ellipse: s-maj=59.8km s-min=19.0km az=31.0*
ISCJB ***09*** *21:35:50.1±1.5,2°.89S±0°.08×75°.4W±0°.1,h159km±18km, mb3.5/6, Error ellipse: s-maj=22.4km s-min=12.0km az=159.6*
NEIC ***09*** *21:35:50.1±1.4,2°.80S×75°.29W,h138km±16km,mb3.9/2, Error ellipse: s-maj=26.4km s-min=9.4km az=60.0*
ISC 09 21:35:50.9±1.5,2°.83S±0°.09×75°.3W±0°.1,h146km±18km, n18,σ0°.78/17,mb3.5/6,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**4.35**	**314**	*e*Pn	**Pn**	**21 36 55.9**	**+0.3**
ATAH	**Atahualpa**	**5.14**	**216**	P	**Pn**	**21 37 06.7**	**+0.5**
10nm,0.3s,baz=20,slow=8.6,SNR=31							
ATAH				S	**Sn**	**21 38 04.4**	**-0.4**
5.3nm,0.3s,baz=249,slow=23,SNR=7.4							
NNA	**Nana**	**9.22**	**189**	P	**Pn**	**21 38 00.5**	**-0.1**
5.5nm,0.3s,baz=355,slow=6.6,SNR=8.5							
NNA				S	**Sn**	**21 39 33.4**	**-10**
10nm,0.3s,baz=227,slow=16,SNR=8.7							
LPAZ	**La Paz**	**15.14**	**153**	P	**Pn**	**21 39 14.4**	**-2.9**
0.2nm,0.3s,baz=348,slow=9.3,SNR=5.2							
LPAZ	**La Paz**	**15.14**	**153**	*e*Pn	**Pn**	**21 39 15.8**	**-1.6**
LPAZ				*e*P		21 39 18.9	
SIV	**San Ignacio**	**19.20**	**134**	P	**P**	**21 40 04.2**	**+0.7**
0.7nm,0.3s,baz=296,slow=12,SNR=6.6							
LVC	**Limon Verde**	**20.64**	**163**	P	**P**	**21 40 22.5**	**+3.5**
7.0nm,0.5s,baz=348,slow=8.7,SNR=10							
LVC	**Limon Verde**	**20.64**	**163**	*e*P	**P**	**21 40 22.8**	**+3.7**
1.9nm,0.4s							
TRQA	**Tornquist**	**37.14**	**162**	*e*P	**P**	**21 42 48.7**	**+1.2**
2.3nm,0.9s,mb3.8							
PDAR	**Pinedale Array**	**54.89**	**330**	P	**P**	**21 45 06.1**	**-0.2**
0.5nm,0.9s,mb3.3,baz=157,slow=4.9,SNR=3.1							
NVAR	**Mina Array Bea**	**57.06**	**320**	P	**P**	**21 45 21.6**	**-0.3**
0.3nm,0.3s,mb3.6,baz=128,slow=8.2,SNR=2.5							
DBIC	**Dimbokro**	**70.99**	**82**	P	**P**	**21 46 52.8**	**-0.6**
3.5nm,0.8s,mb4.2,baz=239,slow=6.0,SNR=3.7							
YKA	**Yellowknife Ar**	**71.60**	**342**	P	**P**	**21 46 55.7**	**-0.3**
0.2nm,0.3s,mb3.3,baz=135,slow=6.2,SNR=4.0							
YKA				pP	pP	21 47 32.9	+1.4
0.3nm,0.6s,baz=139,slow=5.9,SNR=6.2							
TOA0	**Torodi Ar. Sit**	**78.05**	**76**	*e*P	**P**	**21 47 34.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**78.05**	**76**	P	**P**	**21 47 34.3**	**+0.2**
0.2nm,0.4s,mb3.1,baz=286,slow=5.9,SNR=10							
ZALV	**Zalesovo Beam**	**126.50**	**14**	PKP	PKPdf	21 54 37.6	+1.0
0.6nm,0.4s,baz=273,slow=2.7,SNR=3.8							
ASAR	**Alice Springs**	**141.21**	**226**	PKhKP		21 54 58.4	
0.2nm,0.4s,baz=121,slow=4.4,SNR=3.5							
WRA	**Warramunga Arr**	**143.10**	**231**	PKhKP		21 55 04.3	
0.3nm,0.4s,baz=117,slow=3.0,SNR=11							

BGS ***09*** *21:51:25.8±1.9, 11°.20N×142°.72E,h80km±999km,MS6.3, mb6.1(NEIC)*
MOS ***09*** *21:51:26.9±1.0, 12°.51N×143°.14E,h63km,mb6.4/87, MS6.3/107,Error ellipse: s-maj=7.4km s-min=4.7km az=102.6*
BJI ***09*** *21:51:26.3, 12°.39N×143°.47E,h74km,mB6.6/50,mb6.1/61, Ms6.6/76,Ms7 6.4/59*
ISCJB ***09*** *21:51:30.0±0.1, 12°.51N±0°.02×143°.22E±0°.01,h88km, mb6.1/321,Error ellipse: s-maj=2.9km s-min=2.0km az=179.8*
NEIC ***09*** *21:51:29.7±0.1, 12°.52N×143°.18E,h76km,mb6.1/235, ME6.8,MW6.6,MW6.7,Error ellipse: s-maj=3.6km s-min=3.3km az=143.0,Moment Tensor Solution. s102 Moment tensor: Scale 10^19Nm; Mrr-0.70; Mθθ-0.35; Mφφ 1.06; Mrθ 0.67; Mrφ 0.01; Mθφ 0.11; Best double couple: M0 1.10000×10^19 NP1:φs 330.00000°,δ52.00000°, λ-140.00000°. NP2:φs 212.00000°,δ60.00000°, λ-46.00000°. Principal axes: T 1.0700, Plg4.0000°, Azm272.0000°; N 0.1500, Plg37.0000°, Azm6.0000°; P -1.2200, Plg52.0000°, Azm176.0000°; Broadband fault plane solution: P waves. NP1:φs 213.00000°,δ71.00000°, λ-21.00000°. NP2:φs 310.00000°,δ70.00000°, λ-160.00000°. Principal axes: T Plg1.0000°, Azm262.0000°; N Plg0.0000°, Azm0.0000°; P Plg28.0000°, Azm171.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Barrigada, Hagatna, Santa Rita, Tamuning and Yigo. Felt at Agat. Felt [III] on Saipan and also felt on Tinian, Northern Mariana Islands.
GCMT ***09*** *21:51:29.7±0.1, 12°.36N×143°.28E,h83km,MW6.8/118, Moment Tensor Solution. s118,c313; s114,c552; Duration: 58s Moment tensor: Scale 10^19Nm; Mrr-0.79±.01; Mθθ-0.85±.01; Mφφ 1.64±.01; Mrθ 0.87±.01; Mrφ 0.03±.01; Mθφ 0.08±.01; Best double couple: M0 1.66700×10^19 NP1:φs 325.00000°,δ59.00000°, λ-147.00000°. NP2:φs 216.00000°,δ62.00000°, λ-36.00000°. Principal axes: T 1.6440, Plg2.0000°, Azm271.0000°; N 0.0480, Plg46.0000°, Azm4.0000°; P -1.6900, Plg44.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
IDC ***09*** *21:51:31.7±0.5, 12°.54N×143°.24E,h93km±3km,mb5.8/22, mb1 5.9/22,mb1mx5.9/22,mbtmp5.8/22,MS6.2/30, Ms1 6.2/30,ms1mx6.0/39 Error ellipse: s-maj=7.6km s-min=7.0km az=154.0*
DJA ***09*** *21:51:32, 12°.50N×143°.34E,h95km,Mw6.8/65*
ISC 09 21:51:31.6±0.1, 12°.53N±0°.02×143°.27E±0°.01,h89km, h89km±1.7km:pP-P,n1710,σ0±85/1135,mb6.1/320, 260C-262D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.88**	**56**	P	**Pn**	**21 52 01.9**	**-0.3**
GUMO				S	**Sn**	**21 52 27.2**	**+1.6**
GUMO	**Guam**	**1.88**	**56**	P	**Pn**	**21 52 01.9**	**-0.3**
13μm,0.3s,baz=200,slow=2.8,SNR=1766							
GUMO				S	**Sn**	**21 52 27.2**	**+1.6**
21μm,0.3s,baz=1.3,slow=18,SNR=8.9							
GUMO	**Guam**	**1.88**	**56**	*e*Pn	**Pn**	**21 52 02.4**	**+0.1**
GUMO				*e*Sn	**Sn**	**21 52 26.6**	**+1.1**
CBIJ	**Chichi jima**	**14.53**	**356**	P	**Pn**	**21 54 54.9**	**+2.2**
46nm,0.3s,baz=183,slow=8.9,SNR=18							
CBIJ				S	**Sn**	**21 57 35.0**	**+2.2**
9.5nm,0.3s,baz=299,slow=16,SNR=1.5							
CBIJ				ScP	ScP	22 03 25.9	-1.2
3.6nm,0.3s,baz=328,slow=20,SNR=3.6							
CBIJ				ScS	ScS	22 07 05.3	+0.4
2.8nm,0.3s,baz=234,slow=24,SNR=10.0							
MATI	**Mati**	**17.65**	**253**	*e*P	**Pn**	**21 55 33.5**	**+1.6**
PLP	**Palo**	**17.95**	**268**⇓	*e*P	**Pn**	**21 55 36.0**	**+0.6**

CNP Catarman 18.16 272 eP Pn 21 55 41.1 +3.1
DAV Davao City (W) 18.25 254 P Pn 21 55 40.9 +1.9
106nm,0.3s,baz=235,slow=3.0,SNR=43
DAV S S 21 59 03.3 +0.9
55nm,0.3s,baz=246,slow=17,SNR=2.2
DAV LR LR 22 01 59.4
comp=Z,72µm,18.1s,baz=239,slow=34
DAV ScS ScS 22 07 17.5 +1.6
40nm,0.3s,baz=42,slow=5.2,SNR=3.2
DAV Davao City (W) 18.25 254 ePn Pn 21 55 40.8 +1.7
10µm,1.7s
DAV Davao City (W) 18.25 254 P Pn 21 55 40.7 +1.6
SNR=78
DAV P 21 55 40.7
SNR=78
DAV Davao City (W) 18.25 254⇑eP Pn 21 55 38.3 -0.7
OCLP Ormoc 18.32 267 eP Pn 21 55 46.5 +6.5
BUKP Musuan 18.50 257 eP Pn 21 55 42.7 +0.7
PVCP Virac 18.65 275 eP Pn 21 55 45.9 +2.1
CGP Cagayan de Oro 18.70 259⇓eP Pn 21 55 45.6 +1.2
KCP Kidapawan 18.73 255⇓eP Pn 21 55 48.1 +3.3
LLP Lapu-Lapu 19.04 265⇑eP Pn 21 55 46.7 -1.8
GSPH General Santos 19.17 252 eP Pn 21 55 47.3 -2.7
TBP Tagbilaran 19.25 264 eP Pn 21 55 49.0 -1.9
SNPH Sibulan 19.92 263 eP Pn 21 56 00.1 +1.3
DCPH Dipolog City 19.96 261⇑eP Pn 21 55 56.5 -2.8
JOW Kunigami 20.01 318 P P 21 55 59.6 +2.4
70nm,0.3s,baz=146,slow=10,SNR=64
JOW S S 21 59 36.6 -0.8
0.6nm,0.3s,baz=135,slow=14,SNR=1.7
JOW ScP ScP 22 03 37.0 -1.5
1.8nm,0.3s,baz=116,slow=11,SNR=5.9
JOW ScS ScS 22 07 19.9 -1.2
1.2nm,0.3s,baz=258,slow=27,SNR=3.8
JOW Kunigami 20.01 318 P P 21 55 59.6 +2.4
JOW S S 21 59 36.6 -0.8
JOW ScP ScP 22 03 37.0 -1.5
JOW ScS ScS 22 07 19.9 -1.2
AUQP San Andres 20.09 275 eP P 21 56 02.7 +4.6
RCP Roxas 20.09 269⇑eP P 21 55 58.0 -0.2
PAGZ Pagadian 20.11 259 eP P 21 55 59.4 +1.0
GQP Guinayangan 20.31 276 eP P 21 55 58.5 -2.1
GUIM Jordan 20.34 267 eP P 21 56 03.9 +2.9
PALP Palanan 20.64 285 eP P 21 56 07.1 +3.0
JHJ Hachijo jima 2 20.74 352 P P 21 56 05.8 +0.8
373nm,0.3s,baz=218,slow=14,SNR=15
JHJ S S 21 59 57.7 +6.1
254nm,0.8s,baz=244,slow=21,SNR=2.0
OTRP Odiongan 20.75 272 eP P 21 56 09.8 +4.5
POLP Polilio Island 20.84 278 eP P 21 56 08.9 +2.7
BOAC Boac 20.89 275 eP P 21 56 10.2 +3.3
IPIL Ipil 20.90 259 eP P 21 56 07.7 +0.7
MMPI Merauke 21.05 188 P P 21 56 10.6 +2.0
CAUP Cauayan 21.19 285 eP P 21 56 14.0 +4.0
SGCP Mt. Cagua 21.22 288 eP P 21 56 13.7 +3.4
BALP Baler 21.27 281 eP P 21 56 12.7 +1.9
CVP Callao Caves 21.32 287 eP P 21 56 15.0 +3.6
SJMP San Jose 21.62 272 eP P 21 56 18.9 +4.2
TGY Tagaytay City 21.78 277 P P 21 56 17.4 +1.0
TGY S S 22 00 13.9 +1.6
TGY Tagaytay City 21.78 277 P P 21 56 17.4 +1.0
2µm,0.6s,mb6.7,baz=138,slow=5.2,SNR=25
TGY S S 22 00 13.9 +1.5
274nm,0.4s,baz=138,slow=20,SNR=2.6
TGY ScP ScP 22 03 41.8 -1.1
167nm,0.3s,baz=193,slow=8.2,SNR=5.2
TGY Tagaytay City 21.78 277 P P 21 56 17.4 +1.0
TGY S S 22 00 13.9 +1.5
TGY ScP ScP 22 03 41.8 -1.1
CUYO Cuyo Island 21.85 268 eP P 21 56 18.4 +1.3
BBP Basco 21.87 294 eP P 21 56 20.1 +2.8
APYP Conner 21.89 287 eP P 21 56 20.7 +3.2
AAI Ambon 22.00 224 P P 21 56 18.7 +0.1
BCPH Baguio City Da 22.29 283⇓eP P 21 56 22.3 +0.6
ABRA Dolores 22.35 286 eP P 21 56 25.2 +2.8
LUBP Lubang 22.45 276 eP P 21 56 24.9 +1.5
BUSP Coron 22.55 271 eP P 21 56 26.5 +2.1
SCZP Santa Cruz 22.87 281 eP P 21 56 29.2 +1.4
BOLP Bolinao 22.93 282 eP P 21 56 32.0 +3.6
JNU Nakatsue 23.42 333 P P 21 56 33.6 +0.9
WAKE Wake Island 23.46 70 eP P 21 56 32.7 -0.5
6µm,1.7s,mb6.6
WAKE LR LR
comp=Z,59µm,22.0s
TWG Pinlang 23.46 299 eP P 21 56 32.8 -0.4
comp=Z,920nm,1.3s,mb6.0
YULB Yu-li 23.49 300 eP P 21 56 32.7 -0.8
comp=Z,1µm,1.1s,mb6.1
NACB Ninganchiao 23.56 302 eP P 21 56 33.1 -1.0
comp=Z,3µm,1.8s,mb6.3
SSLB Suanglung 23.93 301 eP P 21 56 36.9 -0.6
comp=Z,786nm,0.8s,mb6.1
SSLB eScP ScP 22 03 46.9 -1.6
YHNB Yeheng 23.96 303 eP P 21 56 36.8 -1.0
comp=Z,396nm,0.8s,mb5.8
YHNB eScP ScP 22 03 48.9 +0.3
YHNB LR LR
comp=Z,68µm,20.0s
TATO Taipei 24.01 304 eP P 21 56 38.0 -0.2
comp=Z,697nm,1.2s,mb5.9
TATO LR LR
comp=Z,88µm,20.0s
TPUB Ta-pu 24.02 300 eP P 21 56 36.8 -1.5
comp=Z,735nm,0.9s,mb6.0
TPUB eScP ScP 22 03 47.3 -1.4
KWAJ Kwajalein Atol 24.21 96 eP P 21 56 40.9 +0.8
comp=Z,955nm,1.1s,mb6.0
KWAJ ePcP PcP 22 00 18.5 -0.2
PPR Puerto Princes 24.22 266⇑iP P 21 56 40.3 +0.1
MJAR Matsushiro Arr 24.34 350 P P 21 56 40.3 -0.7
MJAR *PP 21 57 01.1
MJAR 22 00 18.2
MJAR 22 07 42.6
MJAR Matsushiro Arr 24.34 350 P P 21 56 40.3 -0.7
comp=Z,145nm,0.7s,mb5.4,baz=170,slow=10,SNR=123
MJAR pP 21 57 01.1
comp=Z,49nm,0.7s,baz=225,slow=57,SNR=5.4
MJAR PcP PcP 22 00 18.1 -0.4
comp=Z,34nm,0.7s,baz=188,slow=3.7,SNR=7.1
MJAR ScP ScP 22 03 48.6 -0.7
comp=Z,71nm,1.0s,baz=187,slow=3.1,SNR=20
MJAR LR LR 22 06 00.8
comp=Z,40µm,18.4s,baz=160,slow=36
MJAR ScS ScS 22 07 42.6 +5.7
comp=Z,13nm,1.2s,baz=329,slow=19,SNR=5.8
MJAR P3KPbc 22 29 52.6
comp=Z,0.8nm,0.4s,baz=335,slow=5.5,SNR=5.0
MJAR Matsushiro Arr 24.34 350 P P 21 56 40.3 -0.7
MJAR pP 21 57 01.1
MJAR PcP PcP 22 00 18.1 -0.4
MJAR ScP ScP 22 03 48.6 -0.7
MJAR LR LR 22 06 00.8
MJAR ScS ScS 22 07 42.6 +5.7
MAJO Matsushiro 24.34 350 eP P 21 56 39.9 -1.1
comp=Z,4µm,2.0s,mb6.4
MAJO ePcP PcP 22 00 18.4 -0.1
MAJO eScP ScP 22 03 48.6 -0.7
MAJO LR LR
comp=Z,30µm,19.0s
MAT Matsushiro 24.34 350 P P 21 56 39.2 -1.8
MAT S S 22 00 51.6 -2.4
BATP Bataraza 25.29 264 eP P 21 56 52.1 +2.2
COEN Coen 26.32 180 eP P 21 56 58.8 -0.3
comp=Z,4µm,0.7s,mb6.9
COEN eScP ScP 22 03 54.6 -0.7
QZH Quanzhou 26.37 301⇑iP P 21 56 59.9 +0.3
QZH PP 21 57 44.6
QZH S S 22 01 25.0 -1.5
QZH ScS ScS 22 07 47.3 +1.5
QZH pmax pmax
comp=Z,960nm,1.4s,mb6.0
QZH pmax pmax
comp=Z,16µm,9.2s
QZH LR LR
comp=N,98µm,13.6s
QZH LR LR
comp=E,42µm,11.7s
QZH LR LR
comp=Z,158µm,21.4s
SDKM Sandakan 26.62 257 P P 21 57 03.1 +1.2
KDM Kudat 26.63 260 P P 21 57 04.1 +2.0
KAKA Kakadu 27.28 204 eP P 21 57 05.1 -2.7
comp=Z,411nm,0.6s,mb6.1
KAKA Kakadu 27.28 204 eP P 21 57 05.2 -2.5
comp=Z,2µm,1.0s,mb6.7
KKM Kota Kinabalu 27.45 259 P P 21 57 11.5 +2.1
KKM Kota Kinabalu 27.45 259 eP P 21 57 10.8 +1.4
comp=Z,264nm,1.1s,mb5.7
KKM eScP ScP 22 03 59.9 +1.1
KKM LR LR
comp=Z,57µm,21.0s
KKM Kota Kinabalu 27.45 259 P PcS 22 04 14.8 +6.6
comp=Z,84nm,1.9s
SSE Sheshan 27.50 316 P P 21 57 10.0 +0.4
SSE pP pP 21 57 29.7 -0.2
SSE sP sP 21 57 40.9 +0.6
SSE S S 22 01 39.9 -4.2
SSE sS sS 22 02 15.4 -3.9
SSE pmax pmax
comp=Z,180nm,1.3s,mb5.4
SSE pmax pmax
comp=Z,6µm,10.0s
SSE LR LR
comp=N,86µm,19.5s
SSE LR LR
comp=E,95µm,19.5s
SSE LR LR
comp=Z,48µm,18.6s
KSRS Korea Array 28.36 334 P P 21 57 17.0 -0.3
KSRS *PP pP 21 57 38.6 +1.0
KSRS 22 00 28.4
KSRS S S 22 01 52.9 -4.7
KSRS pmax pmax
comp=Z,55nm,0.7s,mb5.2
KSRS Korea Array 28.36 334 P P 21 57 16.9 -0.3
comp=Z,55nm,0.7s,mb5.2,baz=154,slow=8.9,SNR=63
KSRS pP pP 21 57 38.6 +1.0
comp=Z,163nm,1.2s,baz=145,slow=9.6,SNR=6.0
KSRS PcP PcP 22 00 28.4 +0.4
comp=Z,64nm,1.2s,baz=161,slow=3.8,SNR=5.6
KSRS S S 22 01 52.9 -4.7
comp=Z,7.4nm,1.0s,baz=168,slow=6.1,SNR=2.6
KSRS ScP ScP 22 03 59.7 -1.5
comp=Z,76nm,1.1s,baz=164,slow=3.1,SNR=16
KSRS P3KPbc 22 29 33.0
comp=Z,3.6nm,0.9s,baz=333,slow=3.9,SNR=7.4
INCN Inchon 28.96 332 eP P 21 57 23.0 +0.4
comp=Z,1µm,1.9s,mb6.2
INCN eScP ScP 22 04 02.1 -0.9
INCN LR LR
comp=Z,46µm,22.0s
INCN Inchon 28.96 332 P P 21 57 23.9 +1.3
SNR=18
INCN P 21 57 23.9
SNR=18
KAPI Kappang 29.15 235 P P 21 57 23.5 -1.1
comp=Z,2µm,0.9s,mb6.7,SNR=32
KAPI Kappang 29.15 235 eP P 21 57 23.1 -1.5
comp=Z,258nm,0.9s,mb5.9
KAPI eScP ScP 22 04 04.4 +0.3
KAPI LR LR
comp=Z,56µm,21.0s
HKC Hong Kong Obse 29.36 293⇑iP P 21 57 28.0 +1.7
HKC i S S 22 02 12.0 -1.6
ERM Erimo 29.37 360 P P 21 57 27.6 +1.4
comp=Z,376nm,0.7s,mb6.1,SNR=18
ERM Erimo 29.37 360d iP P 21 57 27.1 +0.9
ERM Erimo 29.37 360 eP P 21 57 26.8 +0.6
comp=Z,772nm,1.5s,mb6.1
ERM eScP ScP 22 04 05.3 +1.1
ERM LR LR
comp=Z,56µm,20.0s
NJ2 Nanjing 29.67 315 eP P 21 57 30.5 +1.6
NJ2 pP pP 21 57 48.1 -1.2
NJ2 sP sP 21 57 57.0 -2.7
NJ2 PP PP 21 58 29.1 -8.3
NJ2 S S 22 02 20.5 +2.3
NJ2 sS sS 22 02 53.0 -0.4
NJ2 SS SS 22 04 00.0 -28
NJ2 pmax pmax
comp=Z,460nm,1.0s,mb6.1
NJ2 pmax pmax
comp=Z,6µm,10.1s
NJ2 LR LR
comp=N,108µm,21.6s
NJ2 LR LR
comp=E,92µm,17.4s
NJ2 LR LR
comp=Z,86µm,25.5s
GZH Guangzhou 30.30 294 P P 21 57 33.0 -1.6
GZH S S 22 02 32.9 +4.6
GZH LR LR
comp=N,100µm,22.1s
GZH LR LR
comp=E,39µm,18.5s
GZH LR LR
comp=Z,105µm,31.2s
BTM Bintulu 31.27 255 P P 21 57 45.4 +2.1
YUK Yuzh-Kuril'sk 31.47 4 eP P 21 57 45.0 +0.4
YUK i pP 21 58 05.9 +0.8
YUK PPP 21 58 51.8
YUK pmax pmax
comp=Z,250nm,0.5s,mb6.2
YUK pmax pmax
comp=N,210nm,0.4s
YUK pmax pmax
comp=E,140nm,0.4s
ASAJ Asahikawa 31.48 359 S S 22 02 50.0 +3.7
comp=E,8.4nm,0.8s,baz=252,slow=30,SNR=2.3
ASAJ ScP ScP 22 04 11.4 +0.3
comp=E,216nm,1.1s,baz=244,slow=14,SNR=14
ASAJ LR LR 22 10 45.6
comp=E,30µm,20.4s,baz=188,slow=37
ASAJ Asahikawa 31.48 359 P P 21 57 46.0 +1.3
VLA Vladivostok 32.03 344 eP P 21 57 48.9 -0.6
VLA ePPP 21 59 04.0
VLA e 22 00 37.4
VLA eS S 22 02 56.0 +1.2
VLA pmax pmax
comp=Z,573nm,2.0s,mb6.0
VLA MLR MLR
comp=Z,23µm,16.0s
WHN Wuhan 32.17 308 ⇓P P 21 57 51.4 +0.4
WHN pP pP 21 58 07.1 -4.4
WHN sP sP 21 58 15.3 -6.6
WHN PP PP 21 58 59.6 -5.7
WHN S S 22 02 59.2 +1.7
WHN pmax pmax
comp=Z,650nm,1.2s,mb6.2
WHN pmax pmax
comp=Z,9µm,4.0s
WHN LR LR
comp=N,57µm,12.5s
WHN LR LR
comp=E,8µm,9.5s
WHN LR LR
comp=Z,64µm,16.9s
SBUM Sibu 32.33 254 P P 21 57 53.3 +0.8
CTA Charters Tower 32.55 175 eP P 21 57 53.8 -0.5
comp=Z,254nm,1.6s,mb5.8
CTAO Charters Tower 32.55 175 eP P 21 57 54.0 -0.3
comp=Z,2µm,1.8s,mb6.7
CTAO LR LR
comp=Z,30µm,21.0s
QIZ Qiongzhong 32.77 286 P P 21 57 57.2 +0.9
QIZ pP pP 21 58 17.4 +0.6
QIZ sP sP 21 58 27.5 +0.3
QIZ pmax pmax
comp=Z,150nm,0.8s,mb5.9
QIZ pmax pmax
comp=Z,6µm,8.7s
QIZ LR LR
comp=N,60µm,23.7s
QIZ LR LR
comp=Z,90µm,27.7s
QIZ Qiongzhong 32.77 286 eP P 21 57 55.7 -0.7
comp=Z,160nm,0.9s,mb5.8
QIZ LR LR
comp=Z,67µm,22.0s
TIA Tai'an 33.31 320 ⇑P P 21 58 01.2 +0.4
TIA S S 22 03 15.0 +0.1
TIA pmax pmax
comp=Z,140nm,0.6s,mb6.0
TIA pmax pmax
comp=Z,7µm,5.0s
TIA LR LR
comp=N,50µm,13.0s
TIA LR LR
comp=E,48µm,13.0s
WRAB Tennant Creek 33.43 195 P P 21 58 00.0 -2.0
comp=E,6µm,0.6s
WRAB Tennant Creek 33.43 195 eP P 21 58 00.6 -1.4
comp=E,648nm,0.7s,mb6.6
WRAB LR LR
comp=Z,37µm,21.0s
WB2 Warramunga Arr 33.44 195 eP P 21 58 00.8 -1.3
WRA Warramunga Arr 33.44 195 P P 21 58 00.5 -1.6
WRA *PP pP 21 58 23.1 +0.4
WRA 22 00 41.3
WRA 22 08 19.9
WRA Warramunga Arr 33.44 195 P P 21 58 00.5 -1.7
comp=Z,454nm,0.6s,mb6.5,baz=19,slow=9.5,SNR=159
WRA pP pP 21 58 23.1 +0.4
comp=Z,51nm,0.6s,baz=18,slow=9.1,SNR=1.3
WRA PcP PcP 22 00 41.3 -0.3
comp=Z,39nm,1.0s,baz=0.1,slow=2.7,SNR=4.8
WRA ScP ScP 22 04 19.1 +0.8
comp=Z,55nm,1.1s,baz=13,slow=3.6,SNR=8.0
WRA ScS ScS 22 08 19.9 +0.4
comp=Z,12nm,1.2s,baz=346,slow=5.2,SNR=5.6
WRA LR LR 22 12 38.6
comp=Z,27µm,18.7s,baz=10.0,slow=38
WRA P3KPbc 22 29 14.3
comp=Z,1.6nm,0.7s,baz=205,slow=4.0,SNR=9.5
WRA Warramunga Arr 33.44 195 P P 21 58 00.5 -1.7
WRA pP pP 21 58 23.1 +0.4
WRA PcP PcP 22 00 41.3 -0.3
WRA ScP ScP 22 04 19.1 +0.8
WRA ScS ScS 22 08 19.9 +0.4
WRA LR LR 22 12 38.6
WRA e 22 29 14.3
SNY Shenyang 33.86 333 ⇑P P 21 58 05.8 +0.2
SNY pmax pmax
comp=Z,140nm,0.8s,mb5.8
SNY pmax pmax
comp=Z,6µm,4.7s
SNY LR LR
comp=N,89µm,19.8s
SNY LR LR
comp=E,74µm,18.6s
SNY LR LR
comp=Z,77µm,28.8s
MDJ Mudanjiang 34.05 342 P P 21 58 08.0 +0.8
MDJ pP pP 21 58 26.0 -1.7
MDJ sP sP 21 58 36.9 -1.2
MDJ PP PP 21 59 25.9 0.0
MDJ PcP PcP 22 00 43.5 +0.5
MDJ S S 22 03 28.4 +2.2
MDJ ScP ScP 22 04 21.5 +1.5
MDJ PcS PcS 22 04 31.3 +2.3
MDJ ScS ScS 22 08 22.1 +0.1
MDJ pmax pmax
comp=Z,150nm,1.4s,mb5.6
MDJ pmax pmax
comp=Z,3µm,8.6s
MDJ LR LR
comp=N,48µm,36.3s
MDJ LR LR
comp=E,42µm,21.0s
MDJ LR LR
comp=Z,54µm,27.3s
MDJ Mudanjiang 34.05 342 eP P 21 58 07.8 +0.6
comp=Z,220nm,1.2s,mb5.9
MDJ eScP ScP 22 04 19.1 -0.9
MDJ LR LR
comp=Z,42µm,19.0s
YSS Yuzh-Sakhalins 34.31 359αeP P 21 58 08.4 -1.0
YSS e pP 21 58 27.0 -3.0
YSS e 21 59 23.0
YSS ePPP 21 59 42.0
YSS eS S 22 03 27.0 -3.2
YSS eSS SS 22 05 38.0 -24
YSS eSSS 22 06 08.0
YSS pmax pmax
comp=Z,2µm,9.0s
YSS MLR MLR
comp=N,24µm,17.0s
YSS MLR MLR
comp=Z,3µm,17.0s
YSS MLR MLR
comp=E,15µm,18.0s
YSS Yuzh-Sakhalins 34.31 359 eP P 21 58 08.6 -0.8
comp=E,536nm,1.5s,mb6.2
YSS eScP ScP 22 04 20.4 -0.5
YSS LR LR
comp=Z,9µm,19.0s
KHKI Kahang-Kahang 34.44 234 P P 21 58 10.3 -0.6
KSM Kuching 34.45 254 P P 21 58 10.7 -0.3
KSM Kuching 34.45 254 eP P 21 58 09.6 -1.5
comp=Z,359nm,0.9s,mb6.2
KSM ePcP PcP 22 00 44.9 +0.1
KSM eScP ScP 22 04 22.6 +0.5
KSM LR LR
comp=Z,20µm,20.0s
CN2 Changchun 34.73 337 eP P 21 58 13.6 +0.6
CN2 epP pP 21 58 35.9 +2.2
CN2 PP PP 21 59 33.9 +0.5
CN2 eS S 22 03 41.8 +5.1
CN2 pmax pmax
comp=Z,80nm,1.5s,mb5.3
CN2 LR LR
comp=N,21µm,16.0s
CN2 LR LR
comp=E,21µm,16.0s
CN2 LR LR
comp=Z,25µm,19.0s
FITZ Fitzroy Crossi 35.06 210 eP P 21 58 15.0 -1.1
comp=Z,595nm,1.0s,mb6.4
FITZ eS S 22 03 15.3 -27
FITZ Fitzroy Crossi 35.06 210 eP P 21 58 15.1 -1.0
comp=Z,0.3nm,0.3s
FITZ ePcP PcP 22 00 48.0 +1.7
ENH Enshi 35.88 305 eP P 21 58 22.9 -0.2
comp=Z,664nm,1.1s,mb6.5
ENH eS S 22 03 52.5 -2.1
ENH LR LR
comp=Z,41µm,19.0s
BJT Baijiatuau 36.33 324 eP P 21 58 26.5 -0.3
BJT pmax pmax
comp=Z,462nm,0.6s
BJT MLR MLR
comp=Z,44µm,20.0s
BJT Baijiatuau 36.33 324 eP P 21 58 26.5 -0.3
comp=Z,462nm,0.6s,mb6.6
BJT LR LR
comp=Z,44µm,20.0s
BJI Beijing 36.34 324 P P 21 58 26.6 -0.2
BJI pP pP 21 58 44.9 -2.7
BJI sP sP 21 58 54.8 -3.1
BJI S S 22 04 00.7 -0.7
BJI sS sS 22 04 39.2 +2.1
BJI pmax pmax
comp=Z,280nm,1.0s,mb6.2
BJI pmax pmax
comp=Z,8µm,5.9s
BJI LR LR
comp=N,48µm,32.1s
BJI LR LR
comp=E,43µm,25.6s
BJI LR LR
comp=Z,98µm,37.4s
HABR Khabarovsk 36.48 351 i P P 21 58 28.6 +0.7
HABR e*SP pP 21 58 41.8 -6.9
HABR ePPP 22 00 07.0
HABR e 22 00 51.1
HABR eS S 22 04 09.6 +6.3
HABR e 22 04 39.0
HABR eSS SS 22 06 40.2 -6.0
HABR eSSS 22 06 57.9
HABR e 22 08 40.1
HABR pmax pmax
comp=Z,1µm,2.6s,mb6.4
HABR pmax pmax
comp=N,178nm,2.6s
HABR pmax pmax
comp=Z,393nm,2.2s,mb6.0
HABR pmax pmax
comp=E,109nm,2.2s
HABR MLR MLR
comp=E,24µm,16.0s
HABR MLR MLR
comp=Z,17µm,18.0s
HABR MLR MLR
comp=N,14µm,18.0s
GYA Guiyang 37.03 297⇑iP P 21 58 32.8 -0.2

GYA			pP	pP	21 58 53.4	-0.4
GYA			sP	sP	21 59 05.6	+1.6
GYA			PP	PP	22 00 01.2	+2.2
GYA			PcP	PcP	22 00 55.7	+3.5
GYA			S	**S**	**22 04 11.0**	**-1.4**
GYA			ScP	ScP	22 04 31.2	-0.1
GYA			PcS	PcS	22 04 40.8	+0.2
GYA			sS	sS	22 04 48.9	+0.7
GYA			SS	SS	22 06 45.0	-12
GYA			pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6					
GYA			pmax	pmax		
	comp=Z,12μm,5.4s					
GYA			LR	LR		
	comp=N,54μm,18.0s					
GYA			LR	LR		
	comp=E,43μm,18.2s					
GYA			LR	LR		
	comp=Z,48μm,19.4s					
ASAR	**Alice Springs**	**37.12 194**	P	**P**	**21 58 33.2**	**-0.4**
ASAR			*PP	pP	21 58 56.1	+1.7
ASAR					22 00 01.5	
ASAR					22 00 53.2	
ASAR					22 08 38.9	
ASAR	**Alice Springs**	**37.12 194**	P	**P**	**21 58 33.1**	**-0.5**
	comp=Z,256nm,0.6s,mb6.3,baz=22,slow=12,SNR=631					
ASAR			pP	pP	21 58 56.0	+1.6
	comp=Z,58nm,0.7s,baz=26,slow=15,SNR=2.6					
ASAR			PP	PP	22 00 01.5	+1.4
	comp=Z,120nm,0.9s,baz=18,slow=9.6,SNR=3.7					
ASAR			PcP	PcP	22 00 53.2	+0.8
	comp=Z,70nm,0.6s,baz=39,slow=2.2,SNR=7.4					
ASAR			ScP	ScP	22 04 32.6	+1.1
	comp=Z,22nm,1.1s,baz=19,slow=4.7,SNR=5.3					
ASAR			ScS	ScS	22 08 38.9	-0.5
	comp=Z,32nm,1.4s,baz=312,slow=3.7,SNR=5.6					
ASAR			P3KPbc		22 28 57.6	
	comp=Z,0.5nm,0.6s,baz=190,slow=3.9,SNR=6.6					
ASAR	**Alice Springs**	**37.12 194**	P	**P**	**21 58 33.1**	**-0.5**
ASAR			pP	pP	21 58 56.0	+1.6
ASAR			PP	PP	22 00 01.5	+1.4
ASAR			PcP	PcP	22 00 53.2	+0.8
ASAR			ScP	ScP	22 04 32.6	+1.1
ASAR			ScS	ScS	22 08 38.9	-0.5
ASAR			*e*		22 28 57.6	
TIY	**Taiyuan**	**37.22 318**	*e*P	**P**	**21 58 36.3**	**+1.9**
TIY			pmax	pmax		
	comp=Z,450nm,0.8s,mb6.5					
TIY			pmax	pmax		
	comp=Z,6μm,3.6s					
TIY			LR	LR		
	comp=N,66μm,14.8s					
TIY			LR	LR		
	comp=E,26μm,14.2s					
TIY			LR	LR		
	comp=Z,28μm,14.0s					
KLR	**Kul'dur**	**37.81 348**	*e*P	**P**	**21 58 34.2**	**-5.0**
KLR			*e*	pP	21 58 56.2	-3.8
KLR			*e*		22 07 09.0	
KLR			pmax	pmax		
	comp=E,960nm,2.8s					
KLR			pmax	pmax		
	comp=Z,2μm,2.8s,mb6.5					
KLR			pmax	pmax		
	comp=Z,5μm,10.0s					
KLR			MLR	MLR		
	comp=E,15μm,12.0s					
KLR			MLR	MLR		
	comp=Z,30μm,12.0s					
XAN	**Xi'an**	**37.85 310**	P	**P**	**21 58 39.4**	**-0.4**
XAN			pP	pP	21 58 58.5	-2.1
XAN			sP	sP	21 59 08.0	-2.9
XAN			PP	PP	22 00 07.3	-0.6
XAN			S	**S**	**22 04 25.2**	**+0.6**
XAN			sS	sS	22 04 58.4	-2.0
XAN			pmax	pmax		
	comp=Z,55nm,1.5s,mb5.2					
XAN			pmax	pmax		
	comp=Z,2μm,10.4s					
XAN			LR	LR		
	comp=N,56μm,18.5s					
XAN			LR	LR		
	comp=E,25μm,21.8s					
XAN			LR	LR		
	comp=E,17μm,30.1s					
EIDS	**Eidsvold**	**38.43 169**	*e*P	**P**	**21 58 43.8**	**-0.9**
	comp=E,3μm,2.1s,mb6.7					
EIDS			*e*ScP	ScP	22 04 36.3	-0.1
KKTK	**Khon Kaen**	**39.30 281**	P	**P**	**21 58 51.5**	**-0.7**
	comp=E,1μm,0.9s,mb6.7					
SKR	**Severo-Kuril's**	**39.47 13**	*e*P	**P**	**21 58 48.0**	**-5.0**
SKR			*e*S	**S**	**22 04 48.0**	**-0.4**
SKR			pmax	pmax		
	comp=N,640nm,1.5s					
SKR			pmax	pmax		
	comp=E,800nm,1.5s					
SKR			pmax	pmax		
	comp=Z,960nm,1.5s,mb6.4					
SKR			pmax	pmax		
	comp=N,9μm,16.0s					
SKR			pmax	pmax		
	comp=E,7μm,16.0s					
SKR			pmax	pmax		
	comp=Z,14μm,16.0s					
SKR			smax			
	comp=N,24μm,14.0s					
SKR			smax			
	comp=E,27μm,10.0s					
SKR			MLR	MLR		
	comp=N,21μm,18.0s					
SKR			MLR	MLR		
	comp=Z,31μm,18.0s					
SKR			MLR	MLR		
	comp=E,27μm,14.0s					
HHC	**Hu-ho-hao-te**	**39.58 321**	⇑P	**P**	**21 58 55.3**	**+1.1**
HHC			pP	pP	21 59 13.6	-1.5
HHC			sP	sP	21 59 22.5	-2.9
HHC			PP	PP	22 00 32.5	+5.8
HHC			ScP	ScP	22 04 42.9	+2.2
HHC			S	**S**	**22 04 52.8**	**+2.4**
HHC			sS	sS	22 05 23.0	-3.5
HHC			SS	SS	22 07 43.5	-5.2
HHC			ScS	ScS	22 08 54.2	+1.0
HHC			pmax	pmax		
	comp=Z,260nm,1.3s,mb5.9					
HHC			pmax	pmax		
	comp=Z,9μm,6.8s					
HHC			LR	LR		
	comp=N,28μm,14.9s					
HHC			LR	LR		
	comp=E,25μm,15.9s					
HHC			LR	LR		
	comp=Z,43μm,17.2s					
MIDW	**Midway**	**39.86 61**	*e*P	**P**	**21 58 56.8**	**+0.1**
	comp=Z,1μm,1.3s,mb6.5					
MIDW			LR	LR		
	comp=Z,12μm,19.0s					
KMI	**Kunming**	**40.19 294**	P	**P**	**21 59 00.6**	**+1.1**
KMI			pP	pP	21 59 21.9	+1.4
KMI			PP	PP	22 00 36.4	+2.8
KMI			ScP	ScP	22 04 45.0	+1.6
KMI			S	**S**	**22 04 58.2**	**-1.8**
KMI			sS	sS	22 05 35.7	-0.4
KMI			pmax	pmax		
	comp=Z,290nm,1.4s,mb5.9					
KMI			pmax	pmax		
	comp=Z,7μm,8.2s					
KMI			LR	LR		
	comp=N,34μm,18.8s					
KMI			LR	LR		
	comp=E,31μm,23.6s					
KMI			LR	LR		
	comp=Z,60μm,27.4s					
KTGM	**Kuala Trenggan**	**40.24 263**	P	**P**	**21 59 01.6**	**+1.6**
BTO	**Baotou**	**40.40 320**	*e*P	**P**	**21 59 01.3**	**+0.4**
MYKOM	**Kota Tinggi**	**40.47 258**	P	**P**	**21 59 02.2**	**+0.3**
MBWA	**Marble Bar**	**40.69 215**	*e*P	**P**	**21 59 02.8**	**-0.7**
	comp=Z,672nm,1.2s,mb6.3					
MBWA			*e*ScP	ScP	22 04 45.2	-0.1
MBWA			LR	LR		
	comp=Z,36μm,21.0s					
MBWA	**Marble Bar**	**40.69 215**	P	**P**	**21 59 03.3**	**-0.1**
	SNR=52					
MBWA			P		21 59 03.3	
	SNR=52					

CD2	**Chengdu**	**40.73 303**	⇑*i*P	**P**	**21 59 03.7**	**-0.1**
CD2			pP	pP	21 59 23.8	-1.1
CD2			sP	sP	21 59 28.5	-6.6
CD2			pmax	pmax		
	comp=Z,1μm,0.9s,mb6.8					
CD2			pmax	pmax		
	comp=Z,8μm,11.0s					
CD2			LR	LR		
	comp=N,54μm,16.7s					
CD2			LR	LR		
	comp=Z,53μm,20.8s					
KGM	**Kluang**	**40.91 258**	P	**P**	**21 59 05.9**	**+0.4**
NOUC	**Port Laguerre**	**41.17 147**	*e*P	**P**	**21 59 07.7**	**+0.3**
DZM	**Mont Dzumac**	**41.22 146**	*e*P	**P**	**21 59 08.8**	**+0.9**
	comp=Z,8μm,1.4s,mb7.3					
DZM			*e*S	**S**	**22 05 20.5**	**+5.3**
	comp=Z,49μm,27.4s					
DZM			*e*LQ		22 08 50.9	
	comp=Z,131μm,37.1s					
DZM			*e*LR	LR	22 10 35.2	
	comp=Z,143μm,34.0s					
FUNA	**Funafuti**	**41.38 119**	*e*P	**P**	**21 59 10.4**	**+1.1**
	comp=Z,2μm,1.3s,mb6.7					
FUNA			LR	LR		
	comp=Z,29μm,22.0s					
LASL	**Noumea**	**41.41 146**	*e*P	**P**	**21 59 08.9**	**-0.5**
ONTRN	**Noumea**	**41.42 147**	*e*P	**P**	**21 59 09.7**	**+0.2**
HIA	**Hailar**	**41.46 337**	*e*P	**P**	**21 59 10.0**	**+0.5**
HIA			pmax	pmax		
	comp=Z,207nm,0.7s					
HIA			MLR	MLR		
	comp=Z,34μm,20.0s					
HIA	**Hailar**	**41.46 337**	*e*P	**P**	**21 59 09.9**	**+0.5**
	comp=Z,207nm,0.7s,mb6.1					
HIA			*e*ScP	ScP	22 04 45.9	-1.9
HIA			LR	LR		
	comp=Z,34μm,20.0s					
PLUM	**Mont Dore**	**41.49 146**	*e*P	**P**	**21 59 10.4**	**+0.4**
BAYA	**Yate Dam**	**41.53 146**	*e*P	**P**	**21 59 12.3**	**+1.9**
NST	**Nakhon Sawan**	**41.90 280**	P	**P**	**21 59 14.0**	**+0.5**
	comp=Z,158nm,0.7s,mb5.8					
PEA0B	**Petropavlovsk-**	**42.09 13**	*e*P	**P**	**21 59 14.6**	**+0.1**
PEA0B			*e*ScP	ScP	22 04 49.5	-0.8
PETK	**Petropavlovsk-**	**42.09 13**	P	**P**	**21 59 15.4**	**+0.9**
PETK			*PP	pP	21 59 36.4	+0.7
PETK	**Petropavlovsk-**	**42.09 13**	P	**P**	**21 59 15.4**	**+0.9**
	comp=Z,9.1nm,0.6s,mb4.7,baz=130,slow=7.6,SNR=44					
PETK			pP	pP	21 59 36.4	+0.7
	comp=Z,33nm,0.8s,baz=157,slow=6.4,SNR=6.2					
PETK			ScP	ScP	22 04 49.5	-0.8
	comp=Z,74nm,1.1s,baz=169,slow=1.5,SNR=9.3					
PETK			LR	LR	22 18 23.4	
	comp=Z,24μm,18.0s,baz=195,slow=36					
PETK			PKPPKP		22 31 18.5	
	comp=Z,1.0nm,0.5s,baz=42,slow=29,SNR=4.8					
PETK	**Petropavlovsk-**	**42.09 13**	P	**P**	**21 59 15.4**	**+0.9**
PETK			pP	pP	21 59 36.4	+0.7
PETK			ScP	ScP	22 04 49.5	-0.8
PETK			LR	LR	22 18 23.4	
PETK			P'P'		22 31 18.5	
FRIM	**Kepong**	**42.21 261**	P	**P**	**21 59 16.3**	**+0.1**
PET	**Petropavlovsk**	**42.23 14**	*c i*P	**P**	**21 59 15.1**	**-0.5**
PET			*e**PP	pP	21 59 33.5	-3.3
PET			*e*		22 01 07.4	
PET			*e*S	**S**	**22 05 24.2**	**-5.1**
PET			pmax	pmax		
	comp=Z,25nm,1.1s,mb4.9					
PET			pmax	pmax		
	comp=Z,3μm,14.8s					
PET			pmax	pmax		
	comp=Z,3μm,13.1s					
PET			MLR	MLR		
	comp=Z,14μm,21.0s					
PET			MLR	MLR		
	comp=Z,14μm,19.0s					
PET	**Petropavlovsk**	**42.23 14**	*e*P	**P**	**21 59 15.8**	**+0.2**
	comp=Z,261nm,1.3s,mb5.8					
PET			*e*ScP	ScP	22 04 49.8	-1.1
PET			LR	LR		
	comp=Z,14μm,20.0s					
CHRT	**Chiangrai**	**42.29 286**	⇑P	**P**	**21 59 17.5**	**+0.8**
	comp=Z,1μm,1.0s,mb6.7					
NNT	**Nongplab**	**42.45 275**	P	**P**	**21 59 19.4**	**+1.3**
IPM	**Ipoh**	**42.48 263**	P	**P**	**21 59 19.9**	**+1.5**
IPM	**Ipoh**	**42.48 263**	P	ScP	22 04 54.5	+1.8
LZH	**Lanzhou**	**42.49 310**	P	**P**	**21 59 18.8**	**+0.7**
LZH			pP	pP	21 59 33.4	-5.8
LZH			sP	sP	21 59 42.0	-7.4
LZH			PP	PP	22 00 57.1	-1.1
LZH			S	**S**	**22 05 34.1**	**+0.4**
LZH			sS	sS	22 06 05.2	-4.8
LZH			SS	SS	22 08 39.0	-7.3
LZH			pmax	pmax		
	comp=Z,3μm,1.7s,mb6.8					
LZH			pmax	pmax		
	comp=Z,6μm,4.0s					
LZH			LR	LR		
	comp=N,50μm,14.7s					
LZH			LR	LR		
	comp=Z,53μm,18.2s					
KULM	**Kulim**	**42.66 264**	P	**P**	**21 59 21.9**	**+2.1**
KULM	**Kulim**	**42.66 264**	*e*P	**P**	**21 59 20.7**	**+0.9**
	comp=Z,362nm,1.0s,mb6.1					
KULM			*e*ScP	ScP	22 04 53.3	-0.1
KULM			LR	LR		
	comp=Z,34μm,21.0s					
CM31	**Chiang Mai Arr**	**43.03 284**	*e*P	**P**	**21 59 23.1**	**+0.4**
	comp=Z,210nm,0.8s,mb5.9					
CM31			LR	LR		
	comp=Z,22μm,22.0s					
CMAR	**Chiang Mai Arr**	**43.03 284**	P	**P**	**21 59 23.1**	**+0.4**
CMAR			S	**S**	**22 05 42.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**43.03 284**	P	**P**	**21 59 23.1**	**+0.4**
	comp=Z,201nm,0.8s,mb5.9,baz=88,slow=5.6,SNR=119					
CMAR			S	**S**	**22 05 42.7**	**+0.6**
	comp=Z,4.8nm,1.0s,baz=48,slow=3.8,SNR=3.1					
CMAR			LR	LR	22 16 09.2	
	comp=Z,25μm,18.0s,baz=87,slow=34					
CMAR			PKPPKP		22 31 11.4	
	comp=Z,1.0nm,0.3s,baz=280,slow=8.1,SNR=4.0					
CMAR	**Chiang Mai Arr**	**43.03 284**	P	**P**	**21 59 23.1**	**+0.4**
CMAR			S	**S**	**22 05 42.7**	**+0.6**
CMAR			LR	LR	22 16 09.2	
CMAR			P'P'		22 31 11.4	
CHG	**Chiang Mai**	**43.04 284**	⇑P	**P**	**21 59 23.9**	**+1.1**
	comp=Z,114nm,1.2s,mb5.5					
CHTO	**Chiang Mai**	**43.04 284**	*e*P	**P**	**21 59 22.9**	**+0.1**
	comp=Z,96nm,1.1s,mb5.4					
CHTO			*e*ScP	ScP	22 04 55.4	+0.5
CHTO			LR	LR		
	comp=Z,22μm,19.0s					
CHTO	**Chiang Mai**	**43.04 284**	P	**P**	**21 59 24.9**	**+2.1**
	SNR=27					
CHTO			P		21 59 24.9	
	SNR=27					
ARMA	**Armidale**	**43.45 169**	*e*P	**P**	**21 59 24.9**	**-0.9**
ARMA			*e*SCP	ScP	22 04 56.6	+0.5
ARMA	**Armidale**	**43.45 169**	*e*P	**P**	**21 59 25.2**	**-0.6**
	comp=Z,127nm,0.6s,mb5.8					
ARMA			*e*ScP	ScP	22 04 56.8	+0.6
XMIS	**Christmas Isla**	**43.79 240**	*e*P	**P**	**21 59 26.9**	**-2.0**
	comp=Z,464nm,0.9s,mb6.2					
STKA	**Stephens Creek**	**44.18 182**	*e*P	**P**	**21 59 29.5**	**-2.1**
	comp=Z,143nm,0.6s,mb5.9					
STKA			*e*SCP	ScP	22 04 58.5	-0.6
STKA	**Stephens Creek**	**44.18 182**	P	**P**	**21 59 30.0**	**-1.6**
	comp=Z,164nm,0.6s,mb5.9,baz=353,slow=7.5,SNR=141					
STKA			LR	LR	22 17 45.2	
	comp=Z,45μm,21.8s,baz=335,slow=36					
STKA	**Stephens Creek**	**44.18 182**	*e*P	**P**	**21 59 29.8**	**-1.9**
	comp=Z,0.4nm,1.4s					
PSI	**Prapat**	**44.93 261**	LR	LR	22 17 18.7	
	comp=Z,23μm,21.8s,baz=87,slow=34					
FORT	**Forrest**	**45.47 198**	*e*P	**P**	**21 59 41.4**	**-0.5**
	comp=Z,704nm,1.0s,mb6.3					
FORT	**Forrest**	**45.47 198**	*e*P	**P**	**21 59 41.4**	**-0.6**
	comp=Z,1μm,1.1s,mb6.6					
FORT			*e*PP	PP	22 01 29.8	-0.4
MSVF	**Nonsavu**	**45.65 130**	PFAKE		22 00 00.0	+16
MSVF			LR	LR		
	comp=Z,9.0nm,21.0s					
JOHN	**Johnston Islan**	**45.79 79**	PFAKE		22 00 00.0	+15
JOHN			LR	LR		
	comp=Z,18μm,20.0s					
CIT	**Chita**	**46.09 335**	*e*P	**P**	**21 59 47.2**	**+0.7**

CIT			*e*		22 00 02.2	
CIT			*e*	pP	22 00 10.6	+2.7
CIT			pmax	pmax		
	comp=Z,2μm,2.4s,mb6.4					
NRGR	**Nerungri**	**46.29 346**	*i* P	**P**	**21 59 49.3**	**+1.3**
NRGR			S	**S**	**22 06 24.4**	**-3.8**
NRGR			smax			
	comp=E,23nm,0.4s					
ULN	**Ulaanbaatar**	**46.38 327**	*e*P	**P**	**21 59 48.9**	**0.0**
ULN			pmax	pmax		
	comp=Z,1μm,1.8s,mb6.3					
ULN	**Ulaanbaatar**	**46.38 327**	*e*P	**P**	**21 59 48.9**	**0.0**
	comp=Z,1μm,1.8s,mb6.3					
ULN			*e*ScP	ScP	22 05 06.7	-1.3
CLNS	**Chul'man**	**46.41 346**	*e*P	**P**	**21 59 49.6**	**+0.6**
CLNS			*e**PP	pP	22 00 05.3	-5.2
CLNS			*e*		22 01 21.5	
CLNS			*e*		22 01 38.4	
CLNS			*e*PPP		22 02 23.0	
CLNS			*e*S	**S**	**22 06 33.7**	**+3.8**
CLNS			*e*SS	SS	22 09 42.1	-15
CLNS			pmax	pmax		
	comp=N,66nm,1.3s					
CLNS			pmax	pmax		
	comp=Z,129nm,0.9s,mb5.7					
CLNS			pmax	pmax		
	comp=E,30nm,0.8s					
CLNS			pmax	pmax		
	comp=N,96nm,1.3s					
CLNS			pmax	pmax		
	comp=E,39nm,0.9s					
CLNS			pmax	pmax		
	comp=Z,98nm,1.3s,mb5.4					
CLNS			smax			
	comp=N,11μm,11.5s					
CLNS			smax			
	comp=E,4μm,11.1s					
CLNS			MLR	MLR		
	comp=E,9μm,12.0s					
CLNS			MLR	MLR		
	comp=N,8μm,14.0s					
CLNS			MLR	MLR		
	comp=Z,11μm,14.0s					
RIV	**Riverview**	**46.71 171**	*e*P	**P**	**21 59 50.9**	**-0.7**
RIV			*e*SCP	ScP	22 05 12.0	+2.5
SONM	**Songino Array**	**46.72 326**	P	**P**	**21 59 51.5**	**0.0**
SONM			*PP	pP	22 00 14.4	+1.4
SONM			S	**S**	**22 06 32.9**	**-1.6**
SONM	**Songino Array**	**46.72 326**	P	**P**	**21 59 51.5**	**0.0**
	comp=Z,82nm,0.7s,mb5.6,baz=142,slow=9.8,SNR=192					
SONM			pP	pP	22 00 14.4	+1.4
	comp=Z,98nm,0.9s,baz=146,slow=5.5,SNR=5.4					
SONM			ScP	ScP	22 05 08.3	-1.1
	comp=Z,28nm,1.1s,baz=151,slow=4.0,SNR=4.7					
SONM			S	**S**	**22 06 32.9**	**-1.7**
	comp=Z,4.9nm,1.2s,baz=97,slow=15,SNR=1.8					
SONM			LR	LR	22 20 21.3	
	comp=Z,54μm,19.8s,baz=121,slow=37					
SONM			PKPPKP		22 31 07.5	
	comp=Z,1.0nm,0.9s,baz=318,slow=2.0,SNR=5.1					
SONM			PKP2ab		22 32 14.7	
	comp=Z,2.3nm,0.9s,baz=328,slow=5.3,SNR=4.3					
SONM	**Songino Array**	**46.72 326**	P	**P**	**21 59 51.5**	**0.0**
SONM			pP	pP	22 00 14.4	+1.4
SONM			ScP	ScP	22 05 08.3	-1.1
SONM			S	**S**	**22 06 32.9**	**-1.7**
SONM			LR	LR	22 20 21.3	
SONM			P'P'		22 31 07.5	
SONM			P'P'ab		22 32 14.7	
GTA	**Gaotai**	**46.73 313**	⇑P	**P**	**21 59 52.1**	**+0.4**
GTA			pP	pP	22 00 14.6	+1.4
GTA			sP	sP	22 00 25.1	+1.8
GTA			PP	PP	22 01 43.1	+0.3
GTA			ScP	ScP	22 05 09.0	-0.6
GTA			S	**S**	**22 06 34.6**	**-0.3**
GTA			sS	sS	22 07 09.1	-2.6
GTA			ScS	ScS	22 09 36.9	-0.9
GTA			SS	SS	22 09 54.4	-7.9
GTA			pmax	pmax		
	comp=Z,450nm,1.5s,mb6.0					
GTA			pmax	pmax		
	comp=Z,6μm,10.2s					
GTA			LR	LR		
	comp=N,119μm,21.9s					
GTA			LR	LR		
	comp=E,69μm,19.8s					
GTA			LR	LR		
	comp=Z,46μm,21.9s					
SMY	**Shemya**	**47.08 25**	*e*P	**P**	**21 59 54.9**	**+0.7**
CAN	**Canberra**	**47.90 174**	⇓*i*P	**P**	**22 00 00.2**	**-0.6**
CAN			pmax	pmax		
	comp=Z,125nm,0.7s,mb5.8					
CAN			MLR	MLR		
	comp=Z,30μm,19.0s					
CAN	**Canberra**	**47.90 174**	⇓*i*P	**P**	**22 00 00.2**	**-0.5**
	comp=Z,125nm,0.7s,mb5.8					
CAN			*e*ScP	ScP	22 05 14.0	-0.4
CAN			LR	LR		
	comp=Z,30μm,19.0s					
CNB	**Canberra Magne**	**47.93 173**	*e*P	**P**	**21 59 59.8**	**-1.2**
IMP	**Imphal**	**48.06 292**	*i* P	**P**	**22 00 02.0**	**-0.4**
IMP			*ex*	x	22 05 15.0	
ZAK	**Zakamensk**	**49.86 327**	*e*P	**P**	**22 00 16.7**	**+1.0**
ZAK			*e*		22 07 15.4	
ZAK			pmax	pmax		
	comp=Z,412nm,1.7s,mb6.1					
TOO	**Toolangi**	**49.88 178**	*e*P	**P**	**22 00 16.1**	**+0.2**
SHL	**Shillong**	**49.98 293**	*i* P	**P**	**22 00 17.0**	**0.0**
SHL			*e*S	**S**	**22 07 22.0**	**+0.7**
BOD	**Bodaibo**	**50.36 340**	*e*P	**P**	**22 00 18.7**	**-0.6**
BOD			*e*		22 09 59.9	
BOD			pmax	pmax		
	comp=Z,445nm,1.8s,mb6.1					
YAK	**Yakutsk**	**50.39 352**	*d i*P	**P**	**22 00 19.3**	**-0.1**
YAK			*e**PP	pP	22 00 41.3	+0.1
YAK			*e*		22 01 36.7	
YAK			*e*		22 02 14.9	
YAK			*e*PPP		22 03 12.0	
YAK			*e*S	**S**	**22 07 23.5**	**-2.2**
YAK			*e*		22 09 56.1	
YAK			*e*SS	SS	22 10 58.1	-2.3
YAK			*e*SSS		22 12 32.8	
YAK			pmax	pmax		
	comp=Z,412nm,0.9s,mb6.4					
YAK			pmax	pmax		
	comp=E,17nm,0.6s					
YAK			pmax	pmax		
	comp=N,62nm,1.1s					
YAK			pmax	pmax		
	comp=Z,205nm,1.3s,mb5.9					
YAK			pmax	pmax		
	comp=N,661nm,5.0s					
YAK			pmax	pmax		
	comp=E,465nm,3.5s					
YAK			smax			
	comp=E,1μm,2.2s					
YAK			smax			
	comp=N,319nm,1.8s					
YAK	**Yakutsk**	**50.39 352**	*e*P	**P**	**22 00 18.4**	**-1.0**
	comp=N,489nm,0.8s,mb6.5					
YAK			*e*ScP	ScP	22 05 23.5	-1.2
YAK			LR	LR		
	comp=Z,22μm,21.0s					
TLY	**Talaya**	**50.43 329**	P	**P**	**22 00 21.2**	**+1.3**
	comp=Z,1μm,1.0s,mb6.8,SNR=50					
TLY	**Talaya**	**50.43 329**	*e*P	**P**	**22 00 20.7**	**+0.8**
TLY			*e*	pP	22 00 42.8	+1.1
TLY			*e*		22 02 15.4	
TLY			*e*S	**S**	**22 07 20.1**	**-6.6**
TLY			*e*PS		22 07 28.7	
TLY			*e*		22 10 04.8	
TLY			pmax	pmax		
	comp=Z,312nm,1.1s,mb6.2					
TLY			MLR	MLR		
	comp=Z,26μm,17.0s					
TLY	**Talaya**	**50.43 329**	*e*P	**P**	**22 00 20.1**	**+0.2**
	comp=Z,250nm,1.1s,mb6.1					
TLY			*e*ScP	ScP	22 05 25.0	-0.1
TLY			*e*S	**S**	**22 07 30.7**	**+4.0**
TLY			LR	LR		
	comp=Z,22μm,19.0s					
TLY	**Talaya**	**50.43 329**	P	**P**	**22 00 20.5**	**+0.5**
	SNR=131					
TLY			P		22 00 20.5	
	SNR=131					

AGT	**Agartala**	**50.44 291**	*ex*	**P**	**22 00 17.0 -3.5**
AGT			*ex*	x	22 00 49.0
IRK	**Irkutsk**	**50.46 330**	*eP*	**P**	**22 00 20.8 +0.7**
IRK			*e*	pP	22 00 43.7 +1.8
IRK			*eS*	**S**	**22 07 28.9 +1.9**
IRK			pmax	pmax	
	comp=Z,651nm,2.4s,mb6.1				
SEY	**Seymchan**	**50.75 5**	*d iP*	**P**	**22 00 21.4 -0.7**
LSA	**Lhasa**	**51.10 298**	P	**P**	**22 00 26.3 +1.0**
LSA			PP	PP	22 02 27.4 +4.6
LSA			S	**S**	**22 07 37.9 +1.3**
LSA			LR	LR	
	comp=N,30μm,49.5s				
LSA			LR	LR	
	comp=Z,34μm,45.9s				
LSA	**Lhasa**	**51.10 298**	*eP*	**P**	**22 00 26.2 +0.9**
LSA			*eS*	**S**	**22 07 37.7 +1.1**
LSA			pmax	pmax	
	comp=Z,376nm,0.8s,mb6.5				
LSA			MLR	MLR	
	comp=Z,14μm,21.0s				
LSA	**Lhasa**	**51.10 298**	*eP*	**P**	**22 00 26.2 +0.8**
	comp=Z,376nm,0.8s,mb6.5				
LSA			*e*ScP	ScP	22 05 29.0 +0.5
LSA			*eS*	**S**	**22 07 37.7 +1.1**
LSA			LR	LR	
	comp=Z,14μm,21.0s				
NWAO	**Narrogin (SRO)**	**51.59 208**	*eP*	**P**	**22 00 28.4 -0.4**
NWAO			pmax	pmax	
	comp=Z,684nm,1.4s				
NWAO			MLR	MLR	
	comp=Z,23μm,19.0s				
NWAO	**Narrogin (SRO)**	**51.59 208**	*eP*	**P**	**22 00 28.4 -0.5**
	comp=Z,684nm,1.4s,mb6.5				
NWAO			*e*ScP	ScP	22 05 29.7 -0.6
NWAO			LR	LR	
	comp=Z,23μm,19.0s				
NWAO	**Narrogin (SRO)**	**51.59 208**	P	**P**	**22 00 28.8 -0.1**
	SNR=27				
NWAO			P		22 00 28.8
	SNR=27				
AFI	**Afiamalu**	**51.72 119**	*eP*	**P**	**22 00 30.6 +0.5**
AFI			*eS*	**S**	**22 07 47.2 +1.8**
AFI			pmax	pmax	
	comp=Z,1μm,1.5s,mb6.7				
AFI			MLR	MLR	
	comp=Z,25μm,20.0s				
AFI	**Afiamalu**	**51.72 119**	S	**S**	**22 07 45.3 -0.2**
	comp=Z,6.3nm,0.2s,baz=279,slow=24,SNR=3.5				
AFI			LR	LR	22 18 24.1
	comp=Z,26μm,20.0s,baz=295,slow=31				
AFI	**Afiamalu**	**51.72 119**	*eP*	**P**	**22 00 30.6 +0.5**
	comp=Z,1μm,1.5s,mb6.7				
AFI			*e*ScP	ScP	22 05 31.6 +0.3
AFI			*eS*	**S**	**22 07 47.2 +1.7**
AFI			LR	LR	
	comp=Z,25μm,20.0s				
MOY	**Mondy**	**51.78 328**	*eP*	**P**	**22 00 31.7 +1.7**
MOY			pmax	pmax	
	comp=Z,768nm,2.8s,mb6.2				
COCO	**West Island**	**52.21 244**	P	**P**	**22 00 37.0 +3.2**
COCO			pmax	pmax	
	comp=Z,600nm,0.8s,mb6.7				
COCO	**West Island**	**52.21 244**	PFAKE		22 00 40.0 +6.2
COCO			LR	LR	
	comp=Z,11μm,20.0s				
COCO	**West Island**	**52.21 244**	P	**P**	**22 00 35.0 +1.3**
	SNR=8.3				
COCO			P		22 00 35.0
	SNR=8.3				
CAL	**Calcutta**	**53.07 289**	*eP*	**P**	**22 00 39.1 -1.0**
CAL			*ex*	x	22 04 07.3
SLGI	**Shiliguri**	**53.18 294**	*eP*	**P**	**22 00 40.2 -0.6**
TAPN	**Taplejung**	**53.86 295**	*eP*	**P**	**22 00 45.4 -0.4**
	comp=Z,804nm,0.9s,mb6.8				
ODAN	**Odare**	**54.11 294**	*eP*	**P**	**22 00 47.1 -0.5**
MOO	**Moorlands**	**54.82 176**	*eP*	**P**	**22 00 52.4 +0.1**
RAMN	**Ramite**	**54.82 294**	*eP*	**P**	**22 00 52.4 -0.4**
	comp=Z,706nm,0.6s,mb6.9				
JIRN	**Jiri**	**55.23 295**	*eP*	**P**	**22 00 55.6 -0.1**
	comp=Z,764nm,0.6s,mb6.9				
TAU	**Tasmania Unive**	**55.29 176**	P	**P**	**22 00 56.7 +1.0**
	comp=Z,1μm,0.7s,mb7.0,SNR=10.0				
TAU	**Tasmania Unive**	**55.29 176**	*eP*	**P**	**22 00 55.4 -0.3**
TAU			pmax	pmax	
	comp=Z,845nm,1.7s,mb6.5				
TAU			MLR	MLR	
	comp=Z,20μm,19.0s				
TAU	**Tasmania Unive**	**55.29 176**	*eP*	**P**	**22 00 55.4 -0.3**
	comp=Z,844nm,1.7s,mb6.5				
TAU			LR	LR	
	comp=Z,20μm,19.0s				
NIKO	**Nikolski**	**55.41 33**	*eP*	**P**	**22 00 55.1 -1.4**
	comp=Z,448nm,1.1s,mb6.4				
OUZ	**Omahuta**	**55.51 150**	*eP*	**P**	**22 01 00.1 +2.7**
	comp=Z,2μm,1.3s,mb7.0				
GUN	**Gumba**	**55.52 295**	*eP*	**P**	**22 00 57.6 -0.2**
	comp=Z,2μm,0.8s,mb7.1				
PKI	**Pulchoki**	**55.91 295**	*eP*	**P**	**22 00 59.8 -0.8**
	comp=Z,1μm,1.0s,mb6.8				
PKIN	**Phulchoki**	**55.92 295**	*eP*	**P**	**22 00 59.6 -1.1**
PKIN	**Phulchoki**	**55.92 295**	*eP*	**P**	**22 01 00.8 +0.1**
	comp=Z,693nm,0.7s,mb6.8				
RAO	**Raoul Island**	**55.94 139**	P	**P**	**22 01 00.7 0.0**
RAO	**Raoul Island**	**55.94 139**	P	**P**	**22 01 00.6 0.0**
	comp=Z,722nm,0.8s,mb6.8,baz=97,slow=23,SNR=3.5				
RAO			LR	LR	22 21 02.5
	comp=Z,22μm,20.5s,baz=148,slow=32				
RAO	**Raoul Island**	**55.94 139**	P	**P**	**22 01 00.7 0.0**
RAO			LR	LR	22 21 02.5
KKN	**Kakani**	**56.04 295**	*eP*	**P**	**22 01 00.9 -0.6**
	comp=Z,1μm,0.9s,mb6.9				
DMN	**Daman**	**56.18 295**	*eP*	**P**	**22 01 03.0 +0.5**
	comp=Z,1μm,1.0s,mb6.9				
KIP	**Kipapa**	**56.59 73**	*i* P	**P**	**22 01 06.0 +0.5**
KIP	**Kipapa**	**56.59 73**	*eP*	**P**	**22 01 05.8 +0.3**
	comp=Z,114nm,0.8s,mb6.0				
KIP			LR	LR	
	comp=Z,11μm,19.0s				
GKN	**Gorkha**	**56.62 295**	*eP*	**P**	**22 01 04.8 -0.8**
WMQ	**Urumqi**	**56.74 314**	P	**P**	**22 01 06.8 +0.6**
WMQ			sP	sP	22 01 34.4 -3.9
WMQ			PcP	PcP	22 02 05.2 +4.0
WMQ			PP	PP	22 03 15.7 +2.5
WMQ			S	**S**	**22 08 51.6 -0.7**
WMQ			sS	sS	22 09 25.1 -5.1
WMQ			ScS	ScS	22 10 44.8 -2.4
WMQ			SS	SS	22 12 42.3 +0.9
WMQ			pmax	pmax	
	comp=Z,690nm,1.1s,mb6.6				
WMQ			pmax	pmax	
	comp=Z,4μm,4.5s				
WMQ			LR	LR	
	comp=N,92μm,20.0s				
WMQ			LR	LR	
	comp=E,11μm,20.0s				
WMQ			LR	LR	
	comp=Z,36μm,27.0s				
UNV	**Unalaska Valle**	**57.06 33**	*eP*	**P**	**22 01 08.3 +0.1**
	comp=Z,93nm,0.5s,mb6.1				
BILL	**Bilibino**	**57.46 10**	*j iP*	**P**	**22 01 10.4 -0.5**
BILL			*j* *PP	pP	22 01 33.2 +0.1
BILL			*j* S	**S**	**22 08 58.0 -3.0**
BILL			*j*		22 09 22.2
BILL			pmax	pmax	
	comp=Z,175nm,2.2s,mb5.7				
BILL			MLR	MLR	
	comp=Z,15μm,16.0s				
BILL	**Bilibino**	**57.46 10**	*eP*	**P**	**22 01 09.6 -1.3**
	comp=Z,222nm,0.9s,mb6.2				
BILL			LR	LR	
	comp=Z,18μm,22.0s				
KOLN	**Koldanda**	**57.52 295**	*eP*	**P**	**22 01 11.4 -0.6**
	comp=Z,740nm,0.7s,mb6.8				
AKUT	**Akutan**	**57.57 33**	*eP*	**P**	**22 01 11.3 -0.6**
	comp=Z,289nm,1.1s,mb6.2				
VIS	**Vishakhapatnam**	**57.90 283**	*i* P	**P**	**22 01 16.9 +2.1**
VIS			*ex*	x	22 01 21.0
	comp=Z,312nm,2.2s				
VIS			*i* S	**S**	**22 09 10.2 +2.0**
PYUN	**Piuthan**	**58.08 295**	*eP*	**P**	**22 01 15.2 -0.7**
	comp=Z,1μm,1.1s,mb6.8				
KHU	**Kahuku**	**58.92 75**	*eP*	**P**	**22 01 25.8 +3.9**
POHA	**Pohakuloa**	**58.97 74**	*eP*	**P**	**22 01 23.1 +0.8**
	comp=Z,218nm,1.0s,mb6.1				
POHA			LR	LR	
	comp=Z,19μm,22.0s				
STCH	**Steam Cracks**	**59.37 75**	*eP*	**P**	**22 01 25.9 +0.9**
XMAS	**Kiritimati**	**59.60 95**	*eP*	**P**	**22 01 26.6 -0.1**
	comp=Z,480nm,1.3s,mb6.4				
XMAS			LR	LR	
	comp=Z,31μm,20.0s				
URZ	**Urewera**	**59.63 149**	S	**S**	**22 09 29.1 -0.8**
	comp=Z,7.3nm,0.8s,baz=59,slow=19,SNR=2.4				
URZ			LR	LR	22 22 59.3
	comp=Z,16μm,21.9s,baz=331,slow=32				
URZ	**Urewera**	**59.63 149**	*eP*	**P**	**22 01 25.9 -0.5**
	comp=Z,1μm,1.4s,mb6.7				
TIXI	**Tiksi**	**59.73 355**	*eP*	**P**	**22 01 25.3 -1.2**
TIXI			*e*		22 03 40.2
TIXI			*eS*	**S**	**22 09 28.1 -2.2**
TIXI			pmax	pmax	
	comp=Z,78nm,1.0s,mb5.7				
TIXI			MLR	MLR	
	comp=Z,12μm,14.0s				
TIXI	**Tiksi**	**59.73 355**	*eP*	**P**	**22 01 25.1 -1.5**
	comp=Z,102nm,1.1s,mb5.8				
TIXI			LR	LR	
	comp=Z,17μm,21.0s				
GAMB	**Gambell**	**60.02 21**	*eP*	**P**	**22 01 29.0 +0.4**
	comp=Z,157nm,1.2s,mb5.9				
PTH	**Pithoragarh**	**60.57 297**	*eP*	**P**	**22 01 33.0 0.0**
PTH			*eS*	**S**	**22 09 41.0 -1.4**
JBP	**Jabalpur**	**60.77 290⇑**	*eP*	**P**	**22 01 34.4 -0.1**
JBP			*eS*	**S**	**22 09 44.7 -0.4**
SDPT	**Sand Point**	**60.87 33**	*eP*	**P**	**22 01 34.0 -0.6**
	comp=Z,156nm,0.7s,mb6.2				
SNZO	**South Karori**	**60.93 153**	*eP*	**P**	**22 01 34.3 -0.8**
	comp=Z,274nm,0.6s,mb6.5				
SNZO			LR	LR	
	comp=Z,15μm,20.0s				
JOSI	**Joshimath**	**61.17 298**	*eP*	**P**	**22 01 38.1 +1.0**
MK31	**Makanchi Array**	**61.17 317**	*eP*	**P**	**22 01 36.3 -0.5**
MKAR	**Makanchi Array**	**61.17 317**	P	**P**	**22 01 36.5 -0.3**
MKAR			*PP	pP	22 02 00.2 +1.0
MKAR			S	**S**	**22 09 49.7 +0.2**
MKAR	**Makanchi Array**	**61.17 317**	P	**P**	**22 01 36.5 -0.3**
	comp=Z,165nm,0.9s,mb6.1,baz=100,slow=7.6,SNR=178				
MKAR			pP	pP	22 02 00.2 +1.0
	comp=Z,40nm,0.8s,baz=124,slow=6.5,SNR=1.6				
MKAR			S	**S**	**22 09 49.7 +0.2**
	comp=Z,3.3nm,0.9s,baz=92,slow=4.1,SNR=3.5				
MKAR			PKPPKP		22 30 49.1
	comp=Z,1.7nm,1.0s,baz=292,slow=3.8,SNR=5.3				
MKAR	**Makanchi Array**	**61.17 317**	P	**P**	**22 01 36.5 -0.3**
MKAR			pP	pP	22 02 00.2 +1.0
MKAR			S	**S**	**22 09 49.7 +0.2**
MKAR			P'P'		22 30 49.1
KHZ	**Kahutara**	**61.34 155**	*eP*	**P**	**22 01 36.5 -1.4**
	comp=Z,395nm,0.9s,mb6.4				
RPZ	**Rata Peaks**	**61.45 157**	S	**S**	**22 09 54.0 +1.1**
	comp=Z,1.5nm,0.3s,baz=217,slow=13,SNR=1.7				
RPZ			LR	LR	22 23 58.9
	comp=Z,23μm,21.8s,baz=325,slow=32				
RPZ	**Rata Peaks**	**61.45 157**	*eP*	**P**	**22 01 37.6 -1.0**
	comp=Z,1μm,1.1s,mb6.9				
ZAA0	**Zalesovo Array**	**61.58 325**	*eP*	**P**	**22 01 38.1 -1.3**
ZALV	**Zalesovo Beam**	**61.58 325**	P	**P**	**22 01 38.3 -1.1**
ZALV			*PP	pP	22 02 01.4 -0.5
ZALV					22 02 21.2
ZALV			S	**S**	**22 09 56.1 +1.7**
ZALV					22 11 21.3
ZALV	**Zalesovo Beam**	**61.58 325**	P	**P**	**22 01 38.2 -1.2**
	comp=Z,182nm,0.6s,mb6.3,baz=110,slow=7.5,SNR=197				
ZALV			pP	pP	22 02 01.4 -0.5
	comp=Z,25nm,0.5s,baz=89,slow=9.0,SNR=1.2				
ZALV			PcP	PcP	22 02 21.1 +0.9
	comp=Z,70nm,0.6s,baz=126,slow=5.8,SNR=6.5				
ZALV			S	**S**	**22 09 56.1 +1.7**
	comp=Z,2.7nm,0.8s,baz=123,slow=11,SNR=4.0				
ZALV			ScS	ScS	22 11 21.3 -1.3
	comp=Z,9.6nm,1.1s,baz=45,slow=4.4,SNR=5.0				
ZALV			LR	LR	22 27 26.3
	comp=Z,23μm,19.9s,baz=113,slow=35				
ZALV			PKPPKP		22 30 53.7
	comp=Z,9.4nm,1.0s,baz=294,slow=2.8,SNR=7.2				
ZALV	**Zalesovo Beam**	**61.58 325**	P	**P**	**22 01 38.2 -1.2**
ZALV			pP	pP	22 02 01.4 -0.5
ZALV			PcP	PcP	22 02 21.1 +0.9
ZALV			S	**S**	**22 09 56.1 +1.7**
ZALV			ScS	ScS	22 11 21.3 -1.3
ZALV			LR	LR	22 27 26.3
ZALV			P'P'		22 30 53.7
NGP	**Nagpur**	**61.72 287**	*i* x	**P**	**22 01 37.9 -3.0**
NGP			*ex*	x	22 01 41.0
	comp=Z,351nm,1.1s				
NGP			*i* x	x	22 09 52.6
PALK	**Pallekele**	**61.74 272**	P	**P**	**22 01 42.1 +0.9**
	comp=Z,561nm,0.9s,mb6.6,SNR=6.5				
PALK	**Pallekele**	**61.74 272**	*eP*	**P**	**22 01 41.8 +0.6**
PALK			pmax	pmax	
	comp=Z,518nm,1.7s,mb6.3				
PALK	**Pallekele**	**61.74 272**	*eP*	**P**	**22 01 41.8 +0.6**
	comp=Z,518nm,1.7s,mb6.3				
PALK	**Pallekele**	**61.74 272**	P	**P**	**22 01 43.6 +2.4**
	SNR=7.9				
PALK			P		22 01 43.6
	SNR=7.9				
CHGN	**Chignik**	**62.30 32**	*eP*	**P**	**22 01 43.2 -0.9**
TNA	**Tin City**	**62.38 21**	*eP*	**P**	**22 01 44.7 +0.2**
	comp=Z,108nm,0.9s,mb5.9				
ODZ	**Otahua Downs**	**62.44 158**	*eP*	**P**	**22 01 44.7 -0.5**
	comp=Z,411nm,1.4s,mb6.3				
HYB	**Hyderabad**	**62.46 283**	*i* P	**P**	**22 01 45.5 -0.4**
	comp=Z,300nm,1.0s,mb6.3				
HYB			*e*pP	pP	22 02 05.0 -3.4
HYB			*e*sP	sP	22 02 14.0 -4.3
HYB			*e*PcP	PcP	22 02 25.5 +0.9
HYB			*e*		22 04 05.0
HYB			*e*ScP	ScP	22 06 18.0 -0.7
HYB			*eS*	**S**	**22 10 04.0 -2.6**
HYB			*e*ScS	ScS	22 11 28.0 -2.6
HYB			*e*SS	SS	22 14 16.0 +3.9
HYB			*e*PKPPKP		22 30 51.0
DDI	**Dehra Dun**	**62.46 298**	*eP*	**P**	**22 01 45.2 -0.6**
DDI			*eS*	**S**	**22 10 04.9 -1.4**
AGRA	**Agra**	**62.54 294**	*eP*	**P**	**22 01 45.6 -0.8**
AGRA			AMb	AMB	22 01 48.8
	comp=Z,917nm,0.9s,mb6.7				
NVS	**Novosibirsk**	**62.74 326⇑**	*i iP*	**P**	**22 01 48.3 +1.2**
NVS			*e*	pP	22 02 10.7 +1.0
NVS			*eS*	**S**	**22 10 08.5 -0.5**
NVS			*e*		22 11 28.6
NVS			pmax	pmax	
	comp=Z,693nm,2.2s,mb6.2				
NVS			pmax	pmax	
	comp=N,312nm,1.5s				
NVS			pmax	pmax	
	comp=E,688nm,1.5s				
NVS			smax		
	comp=N,391nm,2.7s				
NVS			smax		
	comp=E,1μm,2.7s				
BISR	**Bishrakh**	**62.98 296**	*eP*	**P**	**22 01 48.9 -0.4**
BISR			AMb	AMB	22 01 51.8
	comp=Z,727nm,1.3s,mb6.5				
NDI	**New Delhi**	**63.18 296**	*eP*	**P**	**22 01 49.0 -1.6**
NDI			*ex*	x	22 10 10.0
SMLA	**Simla**	**63.24 299**	*i* P	**P**	**22 01 49.1 -1.9**
AYAN	**Aya Nagar**	**63.26 296**	*eP*	**P**	**22 01 50.6 -0.4**
AYAN			AMb	AMB	22 01 53.5
	comp=Z,255nm,1.0s,mb6.1				
SONA	**Sohna**	**63.30 295**	*eP*	**P**	**22 01 51.0 -0.4**
SONA			AMb	AMB	22 01 56.3
	comp=Z,402nm,1.4s,mb6.2				
SDNR	**Sundarnagar**	**63.42 299**	*ex*	**P**	**22 01 53.5 +1.4**
SDNR			*eS*	**S**	**22 10 20.1 +1.8**
KKR	**Kurukshetra**	**63.53 297**	*eP*	**P**	**22 01 53.0 +0.1**
KKR			AMb	AMB	22 01 56.4
	comp=Z,1μm,1.0s,mb6.7				
RTK	**Rohtak**	**63.88 296**	*ex*	x	22 01 46.2
RTK			AMb	AMB	22 01 49.8
	comp=Z,1μm,0.8s,mb6.8				
BHK	**Bhakra**	**63.89 299**	*eP*	**P**	**22 01 53.8 -1.4**
BHK			*ex*	x	22 02 29.8
LATR	**Latur**	**64.26 285**	*eP*	**P**	**22 01 57.0 -0.8**
AAA	**Alma-Ata**	**64.30 312**	*i* P	**P**	**22 02 00.0 +2.4**
AAA			*i* S	**S**	**22 10 29.7 +1.0**
AAA			pmax	pmax	
	comp=Z,6μm,4.3s				
AAA			smax		
	comp=E,17μm,13.4s				
AAA			MLR	MLR	
	comp=Z,32μm,16.0s				
KURK	**Kurchatov**	**64.39 320**	P	**P**	**22 01 57.1 -1.0**
	comp=Z,7μm,0.8s,mb7.5				
KURK	**Kurchatov**	**64.39 320**	*eP*	**P**	**22 01 57.2 -0.9**
KURK			*eS*	**S**	**22 10 28.6 -1.0**
KURK			pmax	pmax	
	comp=Z,1μm,0.9s,mb6.7				
KURK			MLR	MLR	
	comp=Z,28μm,20.0s				
KURK	**Kurchatov**	**64.39 320**	S	**S**	**22 10 29.0 -0.6**
	comp=Z,7.1nm,1.1s,baz=104,slow=20,SNR=5.3				
KURK			LR	LR	22 28 14.4
	comp=Z,29μm,19.5s,baz=110,slow=34				
KURK			PKPPKP		22 30 40.7
	comp=Z,1.6nm,0.9s,baz=290,slow=2.5,SNR=5.0				
KURK	**Kurchatov**	**64.39 320**	*eP*	**P**	**22 01 57.1 -0.9**
	comp=Z,1μm,0.9s,mb6.7				
KURK			*eS*	**S**	**22 10 28.6 -1.0**
KURK			LR	LR	
	comp=Z,28μm,20.0s				
KURK	**Kurchatov**	**64.39 320**	P	**P**	**22 01 57.9 -0.2**
	SNR=424				
KURK			P		22 01 57.9
	SNR=424				
KHET	**Khetri**	**64.42 295**	*eP*	**P**	**22 01 58.1 -0.6**
KHET			AMb	AMB	22 02 01.3
	comp=Z,499nm,1.2s,mb6.2				
THN	**Thein Dam**	**64.51 300**	*eP*	**P**	**22 01 57.1 -2.1**
THN			*ex*	x	22 10 21.2
KSH	**Kashi**	**64.65 308⇑**	*i iP*	**P**	**22 02 03.8 +3.8**
KSH			*e*pP	pP	22 02 21.1 -1.5
KSH			*e*sP	sP	22 02 30.1 -2.4
KSH			*e*PcP	PcP	22 02 35.2 +2.1
KSH			*e*PP	PP	22 04 26.1 +3.0
KSH			*e*ScP		22 06 29.1
KSH			*e*PcS		22 06 37.1
KSH			*eS*	**S**	**22 10 35.0 +1.8**
KSH			sS	sS	22 11 07.1 -4.7
KSH			*e*ScS	ScS	22 11 45.1 -1.4
KSH			pmax	pmax	
	comp=Z,3μm,3.7s				
KSH			LR	LR	
	comp=N,31μm,16.8s				
KSH			LR	LR	
	comp=E,22μm,14.3s				
ULHL	**Ulahol**	**64.69 311**	P	**P**	**22 02 00.1 -0.1**
	SNR=21				
RAR	**Rarotonga**	**65.22 121**	*eP*	**P**	**22 02 05.1 +1.2**
RAR			pmax	pmax	
	comp=Z,630nm,1.6s				
RAR			MLR	MLR	
	comp=Z,11μm,21.0s				
RAR	**Rarotonga**	**65.22 121**	*eP*	**P**	**22 02 05.1 +1.2**
	comp=Z,630nm,1.6s,mb6.2				
RAR			LR	LR	
	comp=Z,11μm,21.0s				
TKM2	**Tokmak 2**	**65.24 312**	P	**P**	**22 02 03.9 +0.1**
	SNR=181				
TKM2	**Tokmak 2**	**65.24 312**	*eP*	**P**	**22 02 03.6 -0.2**
TKM2			pmax	pmax	
	comp=Z,46nm,0.4s,mb5.7				
TKM2			MLR	MLR	
	comp=Z,20μm,19.0s				
TKM2	**Tokmak 2**	**65.24 312**	*eP*	**P**	**22 02 03.6 -0.1**
	comp=Z,46nm,0.4s,mb5.7				
TKM2			LR	LR	
	comp=Z,20μm,19.0s				
OHAK	**Old Harbor**	**65.27 32**	*eP*	**P**	**22 02 03.6 -0.1**
	comp=Z,184nm,1.0s,mb5.9				
SVW2	**Sparrevohn**	**65.34 28**	*eP*	**P**	**22 02 04.8 +0.8**
KZA	**Kyzart**	**65.41 311**	P	**P**	**22 02 05.7 +0.8**
	SNR=441				
KBK	**Karagaybulak**	**65.69 311**	P	**P**	**22 02 06.4 -0.3**
	SNR=236				
TTA	**Tatalina**	**65.78 26**	*eP*	**P**	**22 02 06.5 -0.4**
KDAK	**Kodiak Island**	**65.79 32**	P	**P**	**22 02 07.0 0.0**
	comp=Z,772nm,1.4s,mb6.3,SNR=15				
KDAK	**Kodiak Island**	**65.79 32**	*eP*	**P**	**22 02 07.1 +0.1**
KDAK			pmax	pmax	
	comp=Z,229nm,1.3s,mb5.8				
KDAK			MLR	MLR	
	comp=Z,26μm,21.0s				
KDAK	**Kodiak Island**	**65.79 32**	S	S	22 10 44.4 -2.1
	comp=Z,20nm,1.0s,baz=348,slow=13,SNR=2.2				
KDAK			LR	LR	22 26 36.9
	comp=Z,30μm,21.8s,baz=251,slow=32				
KDAK	**Kodiak Island**	**65.79 32**	*eP*	**P**	**22 02 07.1 +0.1**
	comp=Z,229nm,1.3s,mb5.8				
KDAK			LR	LR	
	comp=Z,26μm,21.0s				
CHMS	**Chumysh**	**65.86 312**	P	**P**	**22 02 07.4 -0.4**
	SNR=183				
FRU	**Bishkek**	**65.95 311⇑**	*i iP*	**P**	**22 02 09.0 +0.7**
FRU			*i*	pP	22 02 36.0 +5.0
FRU			*i* S	S	22 10 50.0 +1.0
FRU			*i*		22 11 55.0
FRU			pmax	pmax	
	comp=Z,920nm,2.0s,mb6.3				
FRU			MLR	MLR	
	comp=Z,35μm,16.0s				
UCH	**Uchtor**	**65.97 311**	P	**P**	**22 02 09.1 +0.6**
	SNR=365				
UCH	**Uchtor**	**65.97 311**	*eP*	**P**	**22 02 09.1 +0.6**
	comp=Z,783nm,1.4s,mb6.3				
UCH			LR	LR	
	comp=Z,22μm,20.0s				
AAK	**Ala-Archa**	**66.02 311**	P	**P**	**22 02 08.6 -0.2**
	comp=Z,771nm,1.1s,mb6.5,SNR=40				
AAK	**Ala-Archa**	**66.02 311**	P	**P**	**22 02 11.6 +2.8**
	SNR=116				
AAK	**Ala-Archa**	**66.02 311**	*eP*	**P**	**22 02 08.4 -0.4**
AAK			*eS*	S	22 10 50.6 +0.8
AAK			pmax	pmax	
	comp=Z,123nm,1.0s,mb5.7				
AAK			MLR	MLR	
	comp=Z,21μm,20.0s				
AAK	**Ala-Archa**	**66.02 311**	S	S	22 10 49.1 -0.7
	comp=Z,0.4nm,0.3s,baz=310,slow=20,SNR=1.7				
AAK	**Ala-Archa**	**66.02 311**	*eP*	**P**	**22 02 08.4 -0.4**
	comp=Z,122nm,1.0s,mb5.7				
AAK			*eS*	S	22 10 50.6 +0.7
AAK			LR	LR	
	comp=Z,21μm,20.0s				
AAK	**Ala-Archa**	**66.02 311**	P	**P**	**22 02 10.1 +1.3**
	SNR=92				
AAK			P		22 02 10.1
	SNR=92				
USP	**Ospenovka**	**66.07 312**	P	**P**	**22 02 08.8 -0.3**
	SNR=110				
RSO	**Redoubt South**	**66.45 29**	*eP*	**P**	**22 02 10.2 -1.0**
EKS2	**Erkin-Say**	**66.55 311**	P	**P**	**22 02 15.0 +2.9**
	SNR=176				
EKS2	**Erkin-Say**	**66.55 311**	*eP*	**P**	**22 02 11.8 -0.4**
	comp=Z,131nm,0.9s,mb5.8				
EKS2			LR	LR	
	comp=Z,26μm,22.0s				
AML	**Almayashu**	**66.57 311**	P	**P**	**22 02 13.0 +0.7**
	SNR=239				
AML	**Almayashu**	**66.57 311**	*eP*	**P**	**22 02 12.6 +0.3**
	comp=Z,783nm,1.4s,mb6.3				
AML			LR	LR	
	comp=Z,27μm,22.0s				
KAD	**Karad**	**66.62 284**	*eP*	**P**	**22 02 13.7 +0.6**
KAD			AMb	AMB	22 02 16.2
	comp=Z,466nm,1.0s,mb6.3				
POO	**Poona**	**66.81 285**	*eP*	**P**	**22 02 14.0 -0.3**
GOA	**Goa**	**67.18 282⇓**	*i iP*	**P**	**22 02 16.6 0.0**
GOA			*i* S	S	22 11 02.0 -2.6
PPLA	**Purkeypile**	**67.43 27**	*eP*	**P**	**22 02 17.1 -0.3**
	comp=Z,264nm,1.1s,mb6.0				
CHUM	**Lake Minchumin**	**67.67 26**	*eP*	**P**	**22 02 19.0 +0.2**
	comp=Z,38nm,0.7s,mb5.3				
SEW	**Seward**	**67.95 30**	*eP*	**P**	**22 02 20.3 -0.4**
	comp=Z,427nm,1.1s,mb6.2				
BHV	**Bhavnagar**	**68.09 289**	*eP*	**P**	**22 02 23.2 +1.0**
KTH	**Kantishna Hill**	**68.17 26**	*eP*	**P**	**22 02 21.4 -0.6**
	comp=Z,11nm,1.0s,mb4.7				
BPAW	**Bear Paw Mtn.**	**68.30 26**	*eP*	**P**	**22 02 21.9 -0.9**
	comp=Z,64nm,1.0s,mb5.4				
TRF	**Thorofare Moun**	**68.41 26**	*eP*	**P**	**22 02 22.1 -1.4**
	comp=Z,

PMR **Palmer** 68.45 28 *e*P P 22 02 23.4 -0.4
comp=Z,224nm,0.8s,mb6.0
MCK **McKinley** 69.07 26 *e*P P 22 02 26.9 -0.7
MCK pmax pmax
comp=Z,315nm,1.2s,mb6.0
MCK **McKinley** 69.07 26 *e*P P 22 02 26.9 -0.7
comp=Z,315nm,1.2s,mb6.0
COLD **Coldfoot** 69.52 22 *e*P P 22 02 31.0 +0.7
comp=Z,33nm,1.4s,mb5.0
BVAR **Borovoye Array** 69.79 322 P P 22 02 31.5 -0.7
BVAR *PP pP 22 02 54.2 -0.9
BVAR S S 22 11 36.9 +2.5
BVAR **Borovoye Array** 69.79 322 P P 22 02 31.5 -0.7
comp=Z,228nm,0.5s,mb6.2,baz=106,slow=7.3,SNR=263
BVAR pP pP 22 02 54.2 -1.0
comp=Z,48nm,0.6s,baz=101,slow=7.7,SNR=2.0
BVAR S S 22 11 36.9 +2.5
comp=Z,3.0nm,0.5s,baz=106,slow=7.3,SNR=11
BVAR PKPPKP 22 30 41.1
comp=Z,8.7nm,1.1s,baz=284,slow=6.0,SNR=10
BVAR LR LR 22 34 53.9
comp=Z,36μm,18.8s,baz=97,slow=37
BVAR **Borovoye Array** 69.79 322 P P 22 02 31.5 -0.7
BVAR pP pP 22 02 54.2 -1.0
BVAR S S 22 11 36.9 +2.5
BVAR P'P' 22 30 41.1
BVAR LR LR 22 34 53.9
COLA **College** 69.81 25 *e*P P 22 02 30.8 -1.3
COLA pmax pmax
comp=Z,172nm,1.0s,mb5.8
COLA MLR MLR
comp=Z,21μm,20.0s
COLA **College** 69.81 25 *e*P P 22 02 30.8 -1.3
comp=Z,172nm,1.0s,mb5.8
COLA LR LR
comp=Z,21μm,20.0s
BRVK **Borovoye** 69.86 322 P P 22 02 33.6 +1.0
comp=Z,3μm,0.7s,mb7.2,SNR=91
BRVK **Borovoye** 69.86 322 *c i*P P 22 02 31.8 -0.8
BRVK pmax pmax
comp=Z,1μm,2.1s,mb6.4
BRVK **Borovoye** 69.86 322 PFAKE 22 02 40.0 +7.4
BRVK LR LR
comp=Z,43μm,21.0s
BRVK **Borovoye** 69.86 322 P P 22 02 32.1 -0.5
SNR=229
BRVK P 22 02 32.1
SNR=229
DIV **Divide** 69.94 29 *e*P P 22 02 32.6 -0.4
comp=Z,202nm,0.8s,mb6.0
KBL **Kabul** 70.07 302 *e*P P 22 02 33.3 -1.0
KBL *e*S S 22 11 31.9 -6.5
KBL pmax pmax
comp=Z,637nm,1.1s,mb6.4
KBL **Kabul** 70.07 302 *e*P P 22 02 33.3 -1.0
comp=Z,637nm,1.1s,mb6.4
KBL *e*S S 22 11 31.9 -6.5
BHJ **Bhuj** 70.24 290 *e*P P 22 02 35.9 +0.3
BHJ AMb AMB 22 02 39.8
comp=Z,590nm,1.1s,mb6.3
PAX **Paxson** 70.42 27 *e*P P 22 02 35.2 -0.7
PAX pmax pmax
comp=Z,87nm,0.8s,mb5.6
PAX **Paxson** 70.42 27 *e*P P 22 02 35.2 -0.7
comp=Z,87nm,0.8s,mb5.6
BMRM **Bremner River** 70.47 30 *e*P P 22 02 36.0 -0.2
comp=Z,532nm,1.1s,mb6.3
MENT **Mentasta** 71.21 28 *e*P P 22 02 40.9 +0.2
EGAK **Eagle** 72.60 26 *e*P P 22 02 48.6 -0.3
comp=Z,216nm,0.9s,mb6.0
EGAK LR LR
comp=Z,13μm,20.0s
PPT **Papeete** 72.73 113 *e*P P 22 02 53.1 +2.5
comp=Z,554nm,1.4s,mb6.2
PPT **Papeete** 72.73 113 *e*PP PP 22 05 40.0 +6.4
comp=Z,2μm,28.2s
PPT *e*S S 22 12 16.7 +7.3
comp=Z,45μm,26.0s
PPT *e*SS SS 22 16 50.8 -0.3
comp=Z,14μm,24.5s
PPT *e*LQ 22 22 13.0
comp=Z,33μm,24.0s
PPT *e*LR LR 22 24 48.8
comp=Z,106μm,32.2s
PPT **Papeete** 72.73 113 P P 22 02 53.3 +2.7
PPT S S 22 12 13.4 +4.0
PPT **Papeete** 72.73 113 P P 22 02 53.3 +2.7
comp=Z,112nm,0.6s,mb5.9,baz=269,slow=4.7,SNR=24
PPT S S 22 12 13.3 +3.9
comp=Z,7.8nm,0.3s,baz=133,slow=20,SNR=3.5
PPT LR LR 22 28 33.1
comp=Z,15μm,21.1s,baz=282,slow=30
PPT **Papeete** 72.73 113 P P 22 02 53.3 +2.7
PPT S S 22 12 13.3 +3.9
PPT LR LR 22 28 33.0
PAE **Paea** 72.75 113 *e*P P 22 02 53.1 +2.4
comp=Z,122nm,1.1s,mb5.6
PAE **Paea** 72.75 113 *e*P P 22 02 53.1 +2.4
PAE pmax pmax
comp=Z,122nm,1.1s,mb5.6
PNL **Peninsula** 72.88 31 *e*P P 22 02 50.8 +0.1
comp=Z,217nm,0.8s,mb6.0
TIAR **Tiarei** 72.93 113 *e*P P 22 02 54.3 +2.5
comp=Z,834nm,1.0s,mb6.5
DGAR **Diego Garcia** 73.10 258 *e*P P 22 02 49.9 -3.0
DGAR pmax pmax
comp=Z,461nm,1.2s,mb6.2
DGAR MLR MLR
comp=Z,12μm,22.0s
DGAR **Diego Garcia** 73.10 258 *e*P P 22 02 49.9 -3.0
comp=Z,461nm,1.2s,mb6.2
DGAR LR LR
comp=Z,12μm,22.0s
DAWY **Dawson** 73.28 27 *e*P P 22 02 53.0 0.0
PMOR **Pomariorio Ree** 73.43 110 *e*P P 22 02 56.6 +1.9
comp=Z,938nm,1.2s,mb6.5
MEH **Mehetia** 74.19 113 *e*P P 22 03 01.5 +2.4
comp=Z,1μm,1.3s,mb6.4
SIT **Sitka** 74.92 34 *e*P P 22 03 03.6 +1.0
SIT pmax pmax
comp=Z,140nm,1.5s,mb5.5
SIT **Sitka** 74.92 34 *e*P P 22 03 03.6 +1.0
comp=Z,140nm,1.5s,mb5.5
SKAG **Skagway** 74.94 32 *e*P P 22 03 03.2 +0.5
comp=Z,256nm,1.0s,mb5.9
SVE **Sverdlovsk** 75.58 326⇑*e*P P 22 03 06.3 -0.2
SVE *e* pP 22 03 30.7 +1.0
SVE *e*S S 22 12 38.0 -2.2
SVE *e* 22 13 13.4
SVE pmax pmax
comp=Z,507nm,1.0s,mb6.2
INK **Inuvik** 75.94 22 *e*P P 22 03 07.4 -0.9
INK pmax pmax
comp=Z,1.0nm,0.3s
INK **Inuvik** 75.94 22 S S 22 12 43.0 -0.6
comp=Z,6.2nm,1.0s,baz=46,slow=32,SNR=12
INK PKKPbc PKKPbc 22 22 27.3 +0.7
comp=Z,2.2nm,0.9s,baz=124,slow=5.3,SNR=3.8
INK **Inuvik** 75.94 22 *e*P P 22 03 07.4 -0.9
comp=Z,1.2nm,0.3s
CRAG **Craig** 76.17 36 *e*P P 22 03 10.9 +1.0
comp=Z,122nm,1.1s,mb5.5
ABKAR **Akbulak array** 76.28 318 *e*P P 22 03 09.1 -1.5
comp=Z,14nm,0.8s,mb4.8
ARU **Arti** 76.74 325 P P 22 03 13.4 +0.3
comp=Z,2μm,1.1s,mb6.8,SNR=75
ARU **Arti** 76.74 325 *c i*P P 22 03 13.2 +0.1
ARU *e* pP 22 03 32.5 -3.8
ARU *e* 22 06 12.8
ARU PPP 22 07 55.0
ARU *e*S S 22 12 53.7 +0.8
ARU SS SS 22 17 55.6 +5.5
ARU pmax pmax
comp=Z,581nm,1.2s,mb6.2
ARU pmax pmax
comp=Z,876nm,8.7s
ARU MLR MLR
comp=Z,21μm,19.0s
ARU **Arti** 76.74 325 *e*P P 22 03 11.7 -1.4
comp=Z,404nm,1.0s,mb6.1
ARU LR LR
comp=Z,22μm,21.0s
AKTO **Aktyubinsk** 77.44 319 S S 22 13 00.1 -0.5
comp=Z,11nm,1.1s,baz=273,slow=22,SNR=15
SOKR **Solikamsk** 77.52 329 *c i*P P 22 03 18.5 +1.2
SOKR 22 06 21.3
SOKR S S 22 12 59.3 -1.9
SOKR pmax pmax
comp=Z,580nm,1.5s,mb6.1
SOKR MLR MLR
comp=Z,12μm,12.0s
DLBC **Dease Lake** 77.71 33 *e*P P 22 03 18.2 -0.2
ABKT **Ailbek** 78.62 307 P P 22 03 24.6 +0.7
comp=Z,2μm,1.0s,mb7.0,SNR=66
TAOE **Nuku Hiva Isla** 79.00 102 *e*PP PP 22 06 35.5 +8.9
comp=Z,3μm,26.4s
TAOE *e*S S 22 13 22.2 +3.6
comp=Z,21μm,28.0s
TAOE *e*LQ 22 24 23.2
comp=Z,23μm,26.4s
TAOE *e*LR LR 22 27 30.0
comp=Z,58μm,34.0s
DRV **Dumont d'Urvil** 79.01 181 P P 22 03 27.0 +1.7
DRV **Dumont d'Urvil** 79.01 181 PP PP 22 06 32.0 +6.4
DRV S S 22 13 15.0 -1.6
DRV L 22 24 00.0
DRV R 22 30 00.0
WBK **Wadi Bani Khal** 80.09 291 P P 22 03 32.7 +0.5
SNR=52
BIDO **Bidbid** 80.70 292 P P 22 03 35.1 -0.4
SNR=276
SMDO **Samad** 80.85 292 P P 22 03 35.9 -0.4
SNR=58
JMDO **Jabal Madar** 80.92 291 P P 22 03 36.2 -0.5
SNR=33
HOQ **Hoqain** 81.43 292 P P 22 03 38.4 -0.9
SNR=279
BSY **Bisya** 81.68 291 P P 22 03 40.3 -0.3
SNR=46
BANOM **Banah** 81.94 295 P P 22 03 42.9 +0.9
SNR=42
ARQ **Araqi** 82.19 292 P P 22 03 42.9 -0.4
SNR=205
CASY **Casey** 82.23 193 *e*P P 22 03 41.7 -0.8
CASY *e* 22 06 46.5
CASY *e*S S 22 13 47.4 -2.8
CASY **Casey** 82.23 193 *e*P P 22 03 41.9 -0.6
comp=Z,1μm,1.9s,mb6.4
CASY LR LR
comp=Z,15μm,19.0s
HATD **Hatta, Dubai** 82.28 294 P P 22 03 43.3 -0.4
SNR=96
ASHO **Ashiyiah** 82.37 294 P P 22 03 43.7 -0.6
SNR=125
NAZ **Nazwa, Dubai** 82.67 294 P P 22 03 45.4 -0.4
SNR=83
FAQ **Al Faqa, Dubai** 82.77 294 P P 22 03 45.8 -0.5
SNR=39
NLWA **Neilton Lookou** 82.82 43 ⇓P P 22 03 46.6 +0.5
baz=83,SNR=88
NLWA ⇑S S 22 13 56.3 -0.9
baz=83
NLWA **Neilton Lookou** 82.82 43 *e*P P 22 03 46.6 +0.5
comp=Z,295nm,1.0s,mb6.1
NLWA LR LR
comp=Z,19μm,22.0s
PGC **Sidney** 82.86 42 *e*P P 22 03 47.1 +0.8
comp=Z,12nm,0.9s,mb4.7
ASUD **Al Ashush, Dub** 83.03 294 P P 22 03 47.9 +0.2
SNR=47
E03A **Lebam** 83.18 44 ⇑P P 22 03 48.2 +0.2
baz=83,SNR=52
E03A ⇓S S 22 13 59.4 -1.5
baz=83
F03A **Seaside** 83.30 45 ⇑P P 22 03 48.4 -0.2
baz=83,SNR=47
HEBO **Mount Hebo** 83.31 45 *e*P P 22 03 49.5 +0.9
comp=Z,165nm,0.9s,mb5.9
GNW **Green Mountain** 83.48 43 *e*P P 22 03 49.9 +0.4
comp=Z,66nm,0.8s,mb5.5
A05A **Maple Falls** 83.68 41 ⇑P P 22 03 50.3 -0.2
baz=84,SNR=15
COR **Corvallis** 83.74 46 *e*P P 22 03 52.1 +1.2
COR pmax pmax
comp=Z,308nm,1.2s,mb6.0
COR MLR MLR
comp=Z,20μm,22.0s
COR **Corvallis** 83.74 46 *e*P P 22 03 52.1 +1.2
comp=Z,308nm,1.2s,mb6.0
COR LR LR
comp=Z,20μm,22.0s
JCW **Jim Creek** 83.95 42 *e*P P 22 03 51.7 -0.1
F04A **Amboy** 84.08 44 ⇑P P 22 03 52.5 -0.1
baz=84,SNR=32
D05A **Enumclaw** 84.11 43 ⇑P P 22 03 52.8 +0.1
baz=84,SNR=41
RPW **Rockport** 84.16 42 *e*P P 22 03 52.4 -0.5
comp=Z,47nm,0.7s,mb5.4
B06A **Marblemount** 84.17 42 ⇓P P 22 03 52.8 -0.2
baz=84,SNR=29
G04A **Mulino** 84.19 45 ⇑P P 22 03 53.1 0.0
baz=84,SNR=18
LON **Longmire** 84.33 44 *e*P P 22 03 53.8 0.0
LON pmax pmax
comp=Z,100nm,1.2s,mb5.5
LON **Longmire** 84.33 44 *e*P P 22 03 53.8 0.0
comp=Z,100nm,1.2s,mb5.5
ALE **Alert** 84.37 3 P P 22 03 53.6 +0.1
comp=Z,627nm,1.0s,mb6.4,SNR=42
HUMO **Hull Mountain** 84.38 48 *e*P P 22 03 54.8 +0.6
comp=Z,174nm,1.1s,mb5.8
HUMO LR LR
comp=Z,14μm,20.0s
H04A **Detroit Lake** 84.50 46 ⇓P P 22 03 54.5 -0.3
baz=84,SNR=53
YKA **Yellowknife Ar** 84.51 27 P P 22 03 53.6 -0.8
YKA **Yellowknife Ar** 84.51 27 P P 22 03 53.6 -0.8
comp=Z,92nm,0.6s,mb5.9,baz=286,slow=5.2,SNR=344
YKA PKiKP PKiKP 22 09 05.6 -1.9
comp=Z,1.6nm,0.6s,baz=300,slow=1.6,SNR=6.4
YKA S S 22 14 08.9 -4.7
comp=Z,4.2nm,1.0s,baz=285,slow=9.5,SNR=5.2
YKA PKKPbc PKKPbc 22 22 05.1 -2.0
comp=Z,1.1nm,0.6s,baz=112,slow=2.2,SNR=9.9
YKA PKPPKP 22 30 09.2
comp=Z,1.4nm,0.9s,baz=120,slow=1.6,SNR=4.5
YKA LR LR 22 38 15.5
comp=Z,2μm,22.0s,baz=30,slow=33
YKA **Yellowknife Ar** 84.51 27 P P 22 03 53.6 -0.8
C06A **Tall Timber Ra** 84.68 42 ⇓P P 22 03 55.2 -0.4
baz=85,SNR=7.6
HOOD **Mount Hood Mea** 84.74 45 *e*P P 22 03 56.9 +0.9
comp=Z,267nm,1.0s,mb6.1
YBH **Yreka Blue Hor** 84.74 49 *e*P P 22 03 57.0 +1.0
YBH pmax pmax
comp=Z,131nm,1.1s
YBH MLR MLR
comp=Z,9μm,19.0s
YBH **Yreka Blue Hor** 84.74 49 S S 22 14 13.6 -3.1
comp=Z,3.0nm,0.8s,baz=208,slow=19,SNR=11
YBH LR LR 22 37 54.3
comp=Z,8μm,19.2s,baz=278,slow=33
YBH **Yreka Blue Hor** 84.74 49 *e*P P 22 03 57.0 +0.9
comp=Z,131nm,1.1s,mb5.8
YBH LR LR
comp=Z,9μm,19.0s
A07A **Ashnola River,** 84.76 41 ⇑P P 22 03 55.7 -0.3
baz=85,SNR=132
SPB4 **Spitsbergen Ar** 84.84 350 *e*P P 22 03 56.1 +0.3
D06A **Cle Elum** 84.88 43 ⇓P P 22 03 56.3 -0.2
baz=85,SNR=64
E06A **Yakima** 84.93 44 ⇑P P 22 03 56.7 -0.2
baz=85,SNR=106
KBS **Kingsbay** 85.02 352 *c e*P P 22 03 57.7 +1.0
KBS pmax pmax
comp=Z,208nm,1.2s,mb5.9
KBS **Kingsbay** 85.02 352 *e*P P 22 03 57.0 +0.3
comp=Z,74nm,0.8s,mb5.7
KBS LR LR
comp=Z,7μm,20.0s
HOPS **Hopland** 85.04 51 *e*P P 22 03 58.4 +0.8
comp=Z,190nm,1.3s,mb5.9
HOPS LR LR
comp=Z,10μm,20.0s
B07A **Winthrop** 85.07 42 ⇓P P 22 03 57.0 -0.5
baz=85,SNR=92
WDC **Whiskeytown Da** 85.11 50 *e*P P 22 03 58.4 +0.5
WDC pmax pmax
comp=Z,60nm,0.9s,mb5.5
WDC MLR MLR
comp=Z,10μm,20.0s
WDC **Whiskeytown Da** 85.11 50 *e*P P 22 03 58.4 +0.5
comp=Z,60nm,0.9s,mb5.5
WDC LR LR
comp=Z,10μm,20.0s
ETW **Entiat** 85.12 42 *e*P P 22 03 57.6 -0.2
comp=Z,130nm,0.9s,mb5.9
C07A **Waterville** 85.28 42 ⇓P P 22 03 58.1 -0.5
baz=85,SNR=59
LVZ **Lovozero** 85.32 339 P P 22 03 58.5 +0.1
comp=Z,2μm,0.9s,mb7.0,SNR=40
LVZ **Lovozero** 85.32 339 *c i*P P 22 03 58.7 +0.3
LVZ pmax pmax
comp=Z,300nm,0.8s,mb6.3
LVZ **Lovozero** 85.32 339 PFAKE 22 04 10.0 +12
LVZ LR LR
comp=Z,12μm,21.0s
MCCM **Marconi Confer** 85.36 52 PFAKE 22 04 10.0 +11
MCCM LR LR
comp=Z,8μm,19.0s
RBK **Rabkut** 85.43 287 P P 22 03 59.5 -0.5
SNR=42
D07A **Quincy** 85.45 43 ⇓P P 22 03 59.1 -0.4
baz=85,SNR=33
G06A **Carlson Farm,** 85.46 45 ⇑P P 22 03 59.0 -0.5
baz=85,SNR=24
A08A **Turner Farm, O** 85.50 41 ⇓P P 22 03 59.4 -0.3
baz=86,SNR=138
B08A **Colville Reser** 85.60 42 ⇑P P 22 03 59.9 -0.2
baz=86,SNR=121
E07A **Sunnyside** 85.68 43 ⇓P P 22 04 00.3 -0.4
baz=86,SNR=21
HSP **Hornsund** 85.71 350 *e*P P 22 04 01.7 +1.5
MAK **Makhachkala** 85.73 313 *d i*P P 22 04 03.1 +2.2
MAK *e* 22 04 17.1
MAK *e*PPP 22 09 19.4
MAK *i* S SKSac 22 14 15.9 -2.7
MAK pmax pmax
comp=N,96nm,1.0s
MAK pmax pmax
comp=Z,170nm,0.9s,mb6.0
MAK pmax pmax
comp=E,153nm,1.1s
MAK pmax pmax
comp=Z,2μm,3.5s
MAK MLR MLR
comp=N,22μm,20.0s
MAK MLR MLR
comp=Z,22μm,18.0s
MAK MLR MLR
comp=E,37μm,20.0s
KLMR **Klimovskoe** 85.73 332 *e*P P 22 03 57.9 -2.7
KLMR *e* 22 07 23.4
KLMR *e*S SKSac 22 14 11.9 -6.0
KLMR *e*SS SS 22 20 10.8 +7.3
KLMR pmax pmax
comp=Z,309nm,1.3s,mb6.1
WHFO **Wadi Hawf** 85.75 287 P P 22 04 00.4 -1.1
SNR=41
F07A **Phinny Hill Vi** 85.79 44 ⇑P P 22 04 00.8 -0.4
baz=86,SNR=18
K05A **Summer Lake** 85.84 47 ⇑P P 22 04 01.0 -0.5
baz=86,SNR=73
APA **Apatity** 85.89 339⇑*i*P P 22 04 01.0 -0.2
APA *i* pP 22 04 22.0 -2.9
APA *i* 22 14 13.0
APA *e*S S 22 14 35.0 +8.0
APA *i* SSS 22 23 43.0
APA pmax pmax
comp=Z,1μm,3.4s
RSW **Rattlesnake Hi** 85.90 44 *e*P P 22 04 02.4 +0.7
comp=Z,72nm,0.7s,mb5.7
C08A **Higginbotham F** 85.93 42 ⇑P P 22 04 01.4 -0.4
baz=86,SNR=156
A09A **Danville** 85.93 41 ⇓P P 22 04 01.5 -0.3
baz=86,SNR=171
RES **Resolute Bay** 85.93 13 *e*P P 22 04 00.7 -0.6
RES pmax pmax
comp=Z,137nm,1.0s,mb5.8
RES **Resolute Bay** 85.93 13 LR LR 22 43 22.7
comp=Z,7μm,21.2s,baz=300,slow=36
RES **Resolute Bay** 85.93 13 *e*P P 22 04 00.7 -0.6
comp=Z,137nm,1.0s,mb5.8
HAWA **Hanford** 85.94 44 *e*P P 22 04 02.2 +0.3
comp=Z,112nm,0.7s,mb5.9
HAWA LR LR
comp=Z,21μm,22.0s
D08A **Wollman Farm,** 86.19 43 ⇑P P 22 04 02.8 -0.3
baz=86,SNR=65
OD2 **Odessa Site #2** 86.24 42 *e*P P 22 04 03.3 -0.1
comp=Z,139nm,1.1s,mb5.8
ABTO **Aybut** 86.31 287 P P 22 04 03.9 -0.4
SNR=100
B09A **Rice** 86.35 41 ⇓P P 22 04 03.8 -0.1
baz=86,SNR=134
C09A **Chrisman Ranch** 86.43 42 ⇑P P 22 04 03.8 -0.4
baz=86,SNR=54
MOD **Modoc** 86.46 48 *e*P P 22 04 04.3 -0.2
comp=Z,285nm,1.5s,mb6.0
MOD LR LR
comp=Z,11μm,22.0s
I07A **Izee** 86.51 46 ⇓P P 22 04 04.2 -0.5
baz=86,SNR=92
A10A **Northport** 86.58 41 ⇓P P 22 04 04.7 -0.3
baz=86,SNR=19
D09A **Jones Farm, Ri** 86.59 43 ⇓P P 22 04 04.7 -0.4
baz=87,SNR=89
F08A **Pendleton** 86.59 44 ⇑P P 22 04 04.8 -0.3
baz=87,SNR=100
G08A **Pilot Rock** 86.59 44 ⇓P P 22 04 04.7 -0.4
baz=87,SNR=112
SAO **San Andreas Ge** 86.78 53 *e*P P 22 04 06.5 +0.3
SAO pmax pmax
comp=Z,59nm,1.0s,mb5.5
SAO MLR MLR
comp=Z,6μm,19.0s
SAO **San Andreas Ge** 86.78 53 *e*P P 22 04 06.5 +0.2
comp=Z,60nm,1.0s,mb5.5
SAO LR LR
comp=Z,6μm,19.0s
E09A **Wood Farm, Sta** 86.84 43 ⇓P P 22 04 05.7 -0.6
baz=87,SNR=52
BEKR **Beckwourth** 86.89 50 ⇑P P 22 04 06.3 -0.4
baz=87,SNR=77
LNOR **Lincton Mounta** 86.91 44 *e*P P 22 04 06.8 +0.2
LNOR pmax pmax
comp=Z,41nm,1.0s,mb5.3
LNOR **Lincton Mounta** 86.91 44 *e*P P 22 04 06.8 +0.1
comp=Z,41nm,1.0s,mb5.3
B10A **Chitwood Farm,** 86.98 41 ⇑P P 22 04 06.5 -0.5
baz=87,SNR=22
H08A **Prairie City** 86.98 45 ⇑P P 22 04 06.8 -0.3
baz=87,SNR=72
MIR **Mirnyy** 87.00 198 *d i*P P 22 04 05.0 -1.5
MIR *i* pP 22 04 29.0 -1.2
MIR *i* 22 07 27.0
MIR *e*S SKSac 22 14 25.0 -0.2
MIR pmax pmax
comp=E,2μm,12.0s
MIR smax
comp=E,11μm,10.0s
KEV **Kevo** 87.04 342 *e*P P 22 04 05.3 -1.5
KEV pmax pmax
comp=Z,196nm,0.8s,mb6.1
KEV MLR MLR
comp=Z,13μm,19.0s
KEV **Kevo** 87.04 342 *e*P P 22 04 05.3 -1.4
comp=Z,196nm,0.8s,mb6.1
KEV LR LR
comp=Z,13μm,19.0s
KEV **Kevo** 87.04 342 *e*p P 22 04 04.2 -2.6
comp=Z,108nm,0.6s,mb6.0
C10A **Spilker Farm,** 87.05 42 ⇑P P 22 04 06.9 -0.4
baz=87,SNR=16
NEW **Newport** 87.05 41 *e*P P 22 04 06.9 -0.4
NEW pmax pmax
comp=Z,186nm,0.9s
NEW MLR MLR
comp=Z,28μm,22.0s
NEW **Newport** 87.05 41 *e*P P 22 04 06.9 -0.4
comp=Z,186nm,0.9s,mb6.0
NEW LR LR
comp=Z,28μm,22.0s
F09A **S2 Ranch, Elgi** 87.20 44 ⇓P P 22 04 07.7 -0.4
baz=87,SNR=28
D10A **Wagner Farm, O** 87.27 42 ⇑P P 22 04 07.7 -0.7
baz=87,SNR=32
CMB **Columbia Colle** 87.31 52 *e*P P 22 04 09.2 +0.4
CMB pmax pmax
comp=Z,114nm,1.2s,mb5.7

CMB MLR MLR
comp=Z,8μm,21.0s
CMB Columbia Colle 87.31 52 *e*P **P 22 04 09.2 +0.4**
comp=Z,114nm,1.2s,mb5.7
CMB LR LR
comp=Z,8μm,21.0s
A11A Hall Mountain, 87.35 40 ⇑P **P 22 04 08.7 0.0**
baz=87,SNR=104
G09A Cove 87.40 44 ⇓P **P 22 04 09.0 -0.1**
baz=87,SNR=122
J08A Circle Bar Ran 87.41 46 ⇑P **P 22 04 09.1 0.0**
baz=87,SNR=112
WCN Washoe City 87.48 50 ⇓P **P 22 04 09.2 -0.3**
baz=88,SNR=9.9
B11A Sandpoint 87.49 41 ⇓P **P 22 04 09.3 -0.1**
baz=87,SNR=73
WVOR Wild Horse Val 87.53 47 *e*P **P 22 04 09.9 +0.2**
WVOR pmax pmax
comp=Z,295nm,1.5s,mb6.1
WVOR MLR MLR
comp=Z,11μm,19.0s
WVOR Wild Horse Val 87.53 47 *e*P **P 22 04 09.9 +0.1**
comp=Z,295nm,1.5s,mb6.1
WVOR LR LR
comp=Z,11μm,19.0s
E10A Myers Farm, Un 87.53 43 ⇓P **P 22 04 09.7 0.0**
baz=88,SNR=28
F10A Beach Ranch, E 87.59 44 ⇓P **P 22 04 09.9 0.0**
baz=88,SNR=42
ARCES ARCESS Array B 87.60 342 P **P 22 04 07.6 -1.9**
ARCES *PP pP 22 04 32.9 -0.4
ARCES ARCESS Array B 87.60 342 P **P 22 04 07.5 -1.9**
comp=Z,185nm,0.8s,mb6.2,baz=81,slow=7.6,SNR=213
ARCES pP pP 22 04 32.9 -0.3
comp=Z,46nm,0.8s,baz=60,slow=7.2,SNR=2.1
ARCES PKiKP PKiKP 22 09 12.9 +0.5
comp=Z,4.3nm,0.8s,baz=90,slow=0.6,SNR=5.4
ARCES S SKSac 22 14 26.2 -2.9
comp=Z,3.4nm,1.0s,baz=219,slow=25,SNR=2.3
ARCES PKKPbc PKKPbc 22 21 58.3 -1.7
comp=Z,3.7nm,0.8s,baz=247,slow=2.8,SNR=5.7
ARCES LR LR 22 45 22.0
comp=Z,18μm,19.4s,baz=64,slow=37
ARCES ARCESS Array B 87.60 342 P **P 22 04 07.5 -1.9**
ARCES pP pP 22 04 32.9 -0.3
ARE0 ARCESS Array S 87.60 342 *e*P **P 22 04 08.4 -1.1**
H09A Durkee 87.64 45 ⇓P **P 22 04 10.2 0.0**
baz=88,SNR=25
I09A Lost Marbles R 87.77 46 ⇓P **P 22 04 10.9 +0.1**
baz=88,SNR=54
A12A Yaak River Ran 87.81 40 ⇑P **P 22 04 11.1 +0.2**
baz=88,SNR=17
BMO Blue Mountains 87.84 45 *e*P **P 22 04 10.6 -0.5**
BMO pmax pmax
comp=Z,255nm,1.1s,mb6.2
BMO MLR MLR
comp=Z,18μm,21.0s
BMO Blue Mountains 87.84 45 *e*P **P 22 04 10.6 -0.5**
comp=Z,255nm,1.1s,mb6.2
BMO LR LR
comp=Z,18μm,21.0s
D11A Klaveano Farm, 87.89 42 ⇑P **P 22 04 11.2 -0.2**
baz=88,SNR=34
EDM Edmonton 87.92 36 *e*P **P 22 04 10.6 -0.7**
J09A Fry Pan Ranch, 87.92 46 ⇑P **P 22 04 11.4 -0.2**
baz=88,SNR=245
B12A Libby 87.98 41 ⇑P **P 22 04 11.5 -0.2**
baz=88,SNR=29
MTA Mtatsminda 87.99 312 P **P 22 04 11.3 -0.6**
TBLG Delisi 88.02 312 P **P 22 04 12.0 -0.1**
TBLG Delisi 88.02 312 P **P 22 04 12.0 -0.1**
E11A Bogner Ranch, 88.17 43 ⇓P **P 22 04 12.4 -0.3**
baz=88,SNR=82
SMMC Simmler 88.26 54 ⇑P **P 22 04 13.0 -0.4**
baz=88,SNR=18
C12B Naegeli Ranch, 88.27 42 ⇑P **P 22 04 12.9 -0.2**
baz=88,SNR=18
F11A Grangeville 88.34 43 ⇓P **P 22 04 12.8 -0.7**
baz=88,SNR=47
MOS Moscow 88.34 327 *e*P **P 22 04 06.8 -6.5**
MOS *e* 22 07 41.6
MOS *i*S SKSac 22 14 30.4 -3.7
MOS *e* 22 14 48.2
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.6
MOS pmax pmax
comp=Z,605nm,1.1s,mb6.5
MOS MLR MLR
comp=E,18μm,22.0s
MOS MLR MLR
comp=N,15μm,17.0s
MOS MLR MLR
comp=Z,26μm,20.0s
ZEI Tsey 88.35 313 *e*P **P 22 04 12.0 -1.6**
ZEI pmax pmax
comp=Z,87nm,0.9s,mb5.8
ZEI pmax pmax
comp=E,90nm,1.0s
ZEI pmax pmax
comp=N,57nm,0.9s
I10A Payette 88.39 45 ⇓P **P 22 04 13.4 -0.3**
baz=88,SNR=30
G11A Walters Elk Ra 88.40 44 ⇓P **P 22 04 13.3 -0.5**
baz=88,SNR=182
GOR Gori 88.41 313 P **P 22 04 14.0 +0.2**
GNI Garni 88.42 311*c i*P **P 22 04 13.7 -0.3**
GNI pmax pmax
comp=Z,281nm,2.4s
GNI MLR MLR
comp=Z,11μm,20.0s
GNI Garni 88.42 311 *e*P **P 22 04 13.5 -0.5**
comp=Z,109nm,1.0s,mb5.8
GNI LR LR
comp=Z,12μm,20.0s
GNI Garni 88.42 311 P **P 22 04 15.4 +1.4**
SNR=27
GNI P 22 04 15.4
SNR=27
KEH Kehvi 88.45 313 P **P 22 04 14.3 +0.3**
PKM Peak Mountain 88.50 55 ⇑P **P 22 04 14.7 +0.2**
baz=88,SNR=38
JOF Joensuu 88.59 335 *e*P **P 22 04 11.2 -3.1**
JOF pmax pmax
comp=Z,240nm,0.7s,mb6.3
JOF Joensuu 88.59 335 *ep* **P 22 04 11.2 -3.1**
comp=Z,240nm,0.7s,mb6.3
J10A Berg Farm, Mel 88.59 46 ⇓P **P 22 04 14.6 -0.2**
baz=89,SNR=12
MLAC Mammoth Lakes 88.59 52 ⇑P **P 22 04 14.9 0.0**
baz=89
RCTC Rector, Farmer 88.61 53 ⇓P **P 22 04 14.8 -0.2**
baz=89
UMR Umm Al-Rimmam 88.65 300 *e*P **P 22 04 14.6 -0.8**
UMR AMb AMB 22 04 18.5
comp=Z,463nm,1.0s,mb6.5
QRN Al-Qurain 88.67 299 *e*P **P 22 04 14.3 -1.1**
QRN AMb AMB 22 04 19.1
comp=Z,520nm,1.0s,mb6.5
BSMT Bassoo Peak 88.67 41 *e*P **P 22 04 15.1 +0.1**
comp=Z,465nm,1.5s,mb6.3
PAF Port-aux-Franc 88.68 219 PFAKE 22 04 30.0 +15
PAF LR LR
comp=Z,10μm,20.0s
SBC Santa Barbara 88.70 55 ⇓P **P 22 04 15.1 -0.4**
baz=89
K10A MacKenzie Ranc 88.70 47 ⇓P **P 22 04 15.2 -0.1**
baz=89,SNR=233
ONI Oni 88.71 313 P **P 22 04 15.1 -0.2**
B13A Whitefish 88.72 41 ⇑P **P 22 04 15.2 0.0**
baz=89,SNR=34
KBD Kabd 88.76 299 *e*P **P 22 04 15.0 -0.8**
KBD AMb AMB 22 04 19.5
comp=Z,227nm,0.9s,mb6.2
H11A Donnelly 88.76 44 ⇑P **P 22 04 15.1 -0.4**
baz=89,SNR=244
VOR Voronezh 88.78 323⇓*i*P **P 22 04 14.0 -1.4**
VOR *e*S S 22 14 50.0 -5.4
VOR pmax pmax
comp=Z,700nm,1.0s,mb6.7
NVAR Mina Array Bea 88.80 51 P **P 22 04 16.5 +0.7**
comp=Z,74nm,0.7s,mb5.9,baz=266,slow=5.7,SNR=262
NVAR PKPPKP 22 30 04.6
comp=Z,0.3nm,0.3s,baz=147,slow=3.0,SNR=3.6
NVAR Mina Array Bea 88.80 51 P **P 22 04 16.5 +0.7**
NVAR P'P' 22 30 04.6
MSEY Mahe Island 88.84 265 *e*P **P 22 04 15.5 -1.0**
MSEY pmax pmax
comp=Z,54nm,1.0s,mb5.5
MSEY MLR MLR
comp=Z,7μm,21.0s
MSEY Mahe Island 88.84 265 *e*P **P 22 04 15.5 -1.0**
comp=Z,54nm,1.0s,mb5.5
MSEY LR LR
comp=Z,7μm,21.0s
VES Vestal, Richgr 88.85 54 ⇓P **P 22 04 15.5 -0.6**
baz=89,SNR=14
C13A Hot Springs 88.86 41 ⇑P **P 22 04 15.5 -0.4**
baz=89,SNR=39
WALA Waterton Lakes 88.86 40 *e*P **P 22 04 16.6 +0.7**
comp=Z,8.8nm,1.6s
BSC Santa Cruz Isl 88.87 56 ⇑P **P 22 04 15.6 -0.7**
baz=89
KIV Kislovodsk 88.88 315 P **P 22 04 16.5 +0.5**
comp=Z,462nm,0.9s,mb6.5,SNR=17
KIV Kislovodsk 88.88 315*κ i*P **P 22 04 14.4 -1.6**
KIV *i* *PP pP 22 04 37.7 -2.2
KIV *i* 22 14 35.6
KIV *i* *SS S 22 14 54.7 -1.9
KIV *i* 22 15 54.4
KIV *e* 22 24 25.5
KIV pmax pmax
comp=Z,160nm,1.9s,mb5.7
KIV MLR MLR
comp=Z,16μm,18.0s
KIV Kislovodsk 88.88 315 *e*P **P 22 04 14.4 -1.7**
comp=Z,68nm,0.8s,mb5.7
KIV LR LR
comp=Z,20μm,21.0s
KIV Kislovodsk 88.88 315 P **P 22 04 16.8 +0.7**
SNR=21
KIV P 22 04 16.8
SNR=21
MIB Mutribah 88.91 300 *e*P **P 22 04 15.3 -1.2**
MIB AMb AMB 22 04 20.3
comp=Z,632nm,1.0s,mb6.6
RDF Al-Radifah 88.94 299 *e*P **P 22 04 15.9 -0.8**
RDF AMb AMB 22 04 21.2
comp=Z,359nm,1.0s,mb6.4
VSR Storozhevoye 88.97 322 *e*P **P 22 04 14.1 -2.2**
VSR *e**SP PcP 22 04 27.5 +10
VSR *e* 22 07 42.0
VSR *e*S SKSac 22 14 33.4 -4.6
VSR *e*PS SP 22 15 57.6 -3.4
VSR pmax pmax
comp=Z,60nm,0.6s,mb5.8
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,40nm,0.8s
VSR pmax pmax
comp=Z,490nm,3.1s
VSR pmax pmax
comp=N,400nm,3.2s
VSR pmax pmax
comp=E,430nm,2.8s
VSR smax
comp=E,2μm,3.9s
VSR smax
comp=Z,350nm,4.0s
VSR smax
comp=N,820nm,3.0s
VSR MLR MLR
comp=N,4μm,17.0s
VSR MLR MLR
comp=Z,17μm,17.0s
VSR MLR MLR
comp=E,10μm,16.0s
VORD Divnogorie 88.97 322 *e*P **P 22 04 14.5 -1.8**
VORD *e**SP PcP 22 04 27.3 +10
VORD *e*S SKSac 22 14 33.1 -4.9
VORD *e*PS SP 22 15 57.4 -3.7
VORD pmax pmax
comp=Z,230nm,0.8s,mb6.3
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,40nm,0.6s
VORD smax
comp=E,2μm,4.8s
VORD smax
comp=Z,330nm,3.8s
VORD smax
comp=N,570nm,3.7s
F12A Elk City 88.98 43 ⇑P **P 22 04 16.1 -0.3**
baz=89,SNR=67
I11A Placerville 89.03 45 ⇓P **P 22 04 16.4 -0.4**
baz=89,SNR=49
JTMT Jette 89.03 41 *e*P **P 22 04 16.3 -0.4**
comp=N,107nm,1.5s,mb5.7
BMN Battle Mountai 89.08 49 *e*P **P 22 04 17.7 +0.6**
BMN pmax pmax
comp=Z,181nm,1.4s,mb5.9
BMN MLR MLR
comp=Z,9μm,19.0s
BMN Battle Mountai 89.08 49 *e*P **P 22 04 17.7 +0.6**
comp=Z,181nm,1.4s,mb5.9
BMN LR LR
comp=Z,9μm,19.0s
D13A Huson 89.11 42 ⇑P **P 22 04 16.5 -0.6**
baz=89,SNR=21
OBN Obninsk 89.13 327 P **P 22 04 16.0 -1.0**
comp=Z,2μm,1.0s,mb7.2,SNR=17
OBN Obninsk 89.13 327*α i*P **P 22 04 15.6 -1.4**
OBN *i* *PP pP 22 04 40.0 -0.8
OBN *e* 22 07 56.0
OBN *i* 22 14 34.9
OBN *i*S S 22 14 54.9 -3.5
OBN *i* 22 16 00.7
OBN *i* PPS 22 16 40.2
OBN *i* SS SS 22 20 50.3 -2.9
OBN pmax pmax
comp=Z,553nm,1.2s,mb6.5
OBN MLR MLR
comp=Z,16μm,17.0s
OBN Obninsk 89.13 327 *e*P **P 22 04 15.5 -1.4**
comp=Z,449nm,1.0s,mb6.5
OBN LR LR
comp=Z,21μm,20.0s
SNCC San Nicolas Is 89.14 56 ⇑P **P 22 04 16.9 -0.7**
baz=89
SNCC San Nicolas Is 89.14 56 *e*P **P 22 04 17.9 +0.4**
comp=Z,108nm,0.9s,mb5.9
YBMT Yellow Bay 89.17 41 *e*P **P 22 04 17.0 -0.3**
comp=Z,91nm,1.3s,mb5.7
L10A Juniper Basin 89.18 47 ⇓P **P 22 04 17.2 -0.3**
baz=89,SNR=105
A14A Double T Ranch 89.20 40 ⇓P **P 22 04 17.1 -0.4**
baz=89,SNR=71
TIN Tinemaha 89.21 52 ⇓P **P 22 04 17.4 -0.4**
baz=89
ARVC Arvin 89.23 54 ⇓P **P 22 04 17.4 -0.6**
baz=89
ARVC ⇑S S 22 14 59.4 -0.9
baz=89
MFID Camas Ranch 89.26 46 ⇑P **P 22 04 17.7 -0.2**
baz=89,SNR=37
M10A I.L. Ranch, Tu 89.28 48 ⇑P **P 22 04 18.3 +0.3**
baz=89,SNR=18
SWMT Swartz Lake 89.28 41 *e*P **P 22 04 17.9 0.0**
comp=Z,55nm,1.3s,mb5.4
K11A Parker Ranch, 89.29 46 ⇑P **P 22 04 18.0 0.0**
baz=89,SNR=66
BLG Laguna Peak 89.30 55 ⇑P **P 22 04 18.3 0.0**
baz=89
ISA Isabella 89.38 54 ⇓P **P 22 04 18.5 -0.1**
baz=89,SNR=16
ISA Isabella 89.38 54 *e*P **P 22 04 18.6 0.0**
ISA pmax pmax
comp=Z,152nm,1.5s,mb5.8
ISA Isabella 89.38 54 *e*P **P 22 04 18.6 0.0**
comp=Z,152nm,1.5s,mb5.8
OSI Osito Adit 89.45 55 ⇑P **P 22 04 18.5 -0.4**
baz=89
TRO Tromso 89.48 343 *e* **P 22 04 17.8 -0.6**
TRO Tromso 89.48 343 *e*P **P 22 04 17.8 -0.5**
TRO Tromso 89.48 343 *e*P **P 22 04 17.8 -0.6**
E13A Victor 89.48 42 ⇓P **P 22 04 17.7 -1.1**
baz=89,SNR=14
CWC Cottonwood Cre 89.48 53 ⇑P **P 22 04 18.3 -0.8**
baz=90,SNR=11
N10A Dunphy 89.53 48 ⇓P **P 22 04 18.7 -0.5**
baz=90
MSO Missoula 89.53 42 *e*P **P 22 04 18.7 -0.3**
comp=Z,26nm,1.1s,mb5.3
MSO LR LR
comp=Z,15μm,22.0s
F13A Darby 89.58 43 ⇓P **P 22 04 18.5 -0.9**
baz=90,SNR=42
H12A Diamond D Ranc 89.60 44 ⇓P **P 22 04 18.7 -0.7**
baz=90,SNR=49
A15A Johnson Ranch, 89.63 40 ⇑P **P 22 04 18.6 -0.8**
baz=90,SNR=45
I12A Atlanta 89.63 45 ⇓P **P 22 04 19.0 -0.6**
baz=90,SNR=74
O10A Cortez Mining, 89.65 49 ⇑P **P 22 04 18.4 -1.3**
baz=90,SNR=23
L11A Cat Creek Ranc 89.66 47 ⇑P **P 22 04 19.0 -0.8**
baz=90,SNR=77
SLMT Seeley Lake 89.69 42 *e*P **P 22 04 19.8 0.0**
comp=Z,54nm,1.0s,mb5.6
TPH Tonopah 89.71 51 PFAKE 22 04 30.0 +10
TPH LR LR
comp=Z,9μm,21.0s
D14A Greenough 89.73 42 ⇑P **P 22 04 19.2 -0.8**
baz=90,SNR=7.6
J12A Stokes Ranch, 89.81 46 ⇓P **P 22 04 20.0 -0.5**
baz=90,SNR=22
M11A Holland Ranch, 89.84 48 ⇑P **P 22 04 20.7 +0.1**
baz=90,SNR=37
DECC Green Verdugo 89.86 55 ⇓P **P 22 04 20.4 -0.4**
baz=90
G13A Cobalt 89.86 44 ⇓P **P 22 04 20.3 -0.3**
baz=90,SNR=221
P10A Eureka 89.86 49 ⇑P **P 22 04 20.6 -0.2**
baz=90,SNR=10
GRAC Grapevine Rang 89.89 52 ⇓P **P 22 04 20.9 -0.1**
baz=90,SNR=8.4
DAC Darwin (Calif) 89.91 53 PFAKE 22 04 30.0 +8.9
DAC LR LR
comp=Z,10μm,20.0s
CHMT Chamberlain Mo 89.95 42 *e*P **P 22 04 19.9 -1.1**
comp=Z,86nm,1.6s,mb5.6
EDW2 Edwards Air Fo 89.96 54 ⇓P **P 22 04 20.8 -0.6**
baz=90
PASC Pasadena Art C 89.99 55 *e*P **P 22 04 22.1 +0.6**
comp=Z,994nm,1.6s,mb6.7
H13A Challis 90.01 44 ⇑P **P 22 04 20.8 -0.5**
baz=90,SNR=98
SCI San Clemente I 90.01 56 ⇓P **P 22 04 20.9 -0.7**
baz=90
CIS Catalina Islan 90.01 56 ⇑P **P 22 04 21.1 -0.5**
baz=90,SNR=8.3
FMP Fort Macarthur 90.02 56 ⇑P **P 22 04 21.7 0.0**
baz=90
LRMC Laurel Mountai 90.04 54 ⇓P **P 22 04 21.8 +0.1**
baz=90,SNR=14
MPMC Manual Prospec 90.05 53 ⇑P **P 22 04 21.9 +0.2**
baz=90,SNR=77
N11A Elko Archery C 90.06 48 ⇑P **P 22 04 21.9 +0.2**
baz=90
MWC Mount Wilson 90.08 55 *e*P **P 22 04 22.7 +0.8**
MWC pmax pmax
comp=Z,586nm,1.7s,mb6.4
MWC Mount Wilson 90.08 55 *e*P **P 22 04 22.7 +0.8**
comp=Z,586nm,1.7s,mb6.4
C15A Salmond Ranch, 90.09 41 ⇑P **P 22 04 20.9 -0.8**
baz=90,SNR=58
Q10A Clear Creek Ra 90.13 50 ⇓P **P 22 04 22.1 +0.1**
baz=90,SNR=19
K12A Draper Farm, C 90.13 46 ⇓P **P 22 04 22.2 +0.2**
baz=90,SNR=35
L12A House Creek Ra 90.19 47 ⇑P **P 22 04 22.6 +0.3**
baz=90,SNR=18
HLID Hailey 90.20 45 ⇑P **P 22 04 22.6 +0.4**
baz=90,SNR=106
HLID Hailey 90.20 45 *e*P **P 22 04 22.9 +0.7**
comp=Z,75nm,1.0s,mb5.8
HLID LR LR
comp=Z,20μm,22.0s
F14A Wisdom 90.22 43 ⇓P **P 22 04 22.0 -0.3**
baz=90
DAG Danmarks Havn 90.23 356⇑*e*P **P 22 04 20.6 -1.1**
DAG pmax pmax
comp=Z,22nm,0.8s,mb5.3
DAG Danmarks Havn 90.23 356⇑*i*P **P 22 04 20.6 -1.1**
comp=Z,22nm,0.8s,mb5.3
S10A Tonopah Range, 90.23 51 ⇑P **P 22 04 22.7 +0.2**
baz=90,SNR=119
I13A Wildhorse Cree 90.30 45 ⇑P **P 22 04 22.7 0.0**
baz=90,SNR=83
O11A Cowboy Ranch, 90.31 49 ⇑P **P 22 04 22.8 -0.1**
baz=90,SNR=48
G14A Jackson 90.33 43 ⇓P **P 22 04 22.0 -0.9**
baz=90,SNR=13
A16A West Butte Ran 90.34 40 ⇑P **P 22 04 22.1 -0.7**
baz=90,SNR=31
R10A Warm Springs 90.35 51 ⇓P **P 22 04 23.6 +0.5**
baz=90,SNR=17
D15A Lincoln 90.39 42 ⇓P **P 22 04 22.5 -0.6**
baz=90,SNR=21
PUL Pulkovo 90.39 332*de*P **P 22 04 22.2 -0.6**
PUL pmax pmax
comp=Z,583nm,1.2s,mb6.6
PUL MLR MLR
comp=Z,16μm,17.0s
P11A Circle Ranch, 90.41 49 ⇓P **P 22 04 23.1 -0.2**
baz=90,SNR=22
FURC Furnace Creek, 90.42 53 ⇑P **P 22 04 23.6 +0.2**
baz=90,SNR=37
ELK Elko 90.44 48 *e*P **P 22 04 24.0 +0.6**
ELK pmax pmax
comp=Z,176nm,1.2s
ELK MLR MLR
comp=Z,13μm,19.0s
ELK Elko 90.44 48 S SKSac 22 14 44.1 -2.9
ELK LR LR 22 43 13.5
comp=Z,11μm,19.0s,baz=327,slow=34
ELK Elko 90.44 48 *e*P **P 22 04 24.0 +0.6**
comp=Z,176nm,1.2s,mb6.1
ELK LR LR
comp=Z,13μm,19.0s
B16A M & M Farms, S 90.45 40 ⇓P **P 22 04 22.8 -0.6**
baz=90,SNR=26
M12A Wells 90.48 47 ⇑P **P 22 04 24.1 +0.5**
baz=90,SNR=40
BHD Baghdad 90.50 304 *e*P **P 22 04 23.0 -0.9**
BHD *e*S S 22 15 12.0 0.0
E15A Deer Lodge 90.50 42 ⇓P **P 22 04 23.7 +0.1**
baz=90,SNR=112
N12A Clover Valley, 90.56 48 ⇓P **P 22 04 24.0 +0.1**
baz=90,SNR=38
N12A Clover Valley, 90.56 48 *e*P **P 22 04 24.6 +0.7**
comp=Z,209nm,1.3s,mb6.1
H14A Leadore 90.59 44 ⇓P **P 22 04 24.0 0.0**
baz=90,SNR=93
C16A Fuhringer Ranc 90.63 41 ⇑P **P 22 04 23.5 -0.7**
baz=91,SNR=14
MSL Mosul 90.66 307 *e*P **P 22 04 24.0 -0.6**
MSL *e*S S 22 15 14.0 +0.6
Q11A Duckwater 90.68 50 ⇑P **P 22 04 24.5 -0.1**
baz=91,SNR=50
K13A Stover Farm, H 90.70 46 ⇑P **P 22 04 25.0 +0.4**
baz=91,SNR=11
RRX Edison Barstow 90.75 54 ⇑P **P 22 04 25.2 +0.2**
baz=91
I14A Mackay 90.75 45 ⇓P **P 22 04 25.2 +0.4**
baz=91,SNR=24
GSC Goldstone 90.79 54 ⇑P **P 22 04 25.2 0.0**
baz=91,SNR=57
GSC Goldstone 90.79 54 *e*P **P 22 04 25.9 +0.7**
GSC pmax pmax
comp=Z,205nm,1.3s,mb6.1
GSC Goldstone 90.79 54 *e*P **P 22 04 25.9 +0.7**
comp=Z,205nm,1.3s,mb6.1
F15A Butte 90.79 43 ⇑P **P 22 04 25.1 +0.1**
baz=91,SNR=62
LRM Limekiln Ridge 90.82 43 *e*P **P 22 04 25.1 0.0**
comp=Z,229nm,0.7s,mb6.4
U10A Ash Meadows, A 90.85 53 ⇓P **P 22 04 25.7 +0.3**
baz=91,SNR=32
R11A Troy Canyon, C 90.88 50 ⇓P **P 22 04 25.7 +0.2**
baz=91,SNR=43
DLMT Dillon 90.88 43 *e*P **P 22 04 25.4 0.0**
comp=Z,46nm,0.9s,mb5.6
MCMT McKenzie Canyo 90.88 44 *e*P **P 22 04 25.6 +0.2**
comp=Z,17nm,0.8s,mb5.2
MUKL Al Mukalla 90.93 285 *e*P **P 22 04 26.5 +0.3**
MURC Murrieta 90.93 55 ⇓P **P 22 04 25.8 -0.1**
baz=91
HRY Holter Researc 90.94 42 *e*P **P 22 04 26.0 +0.3**
comp=Z,91nm,0.7s,mb6.0
O12A Currie 90.94 48 ⇓P **P 22 04 25.5 -0.2**

baz=91,SNR=17
S11A Rachel 90.95 51 ⇑P P 22 04 25.8 -0.1
baz=91,SNR=10
L13A Double Diamond 90.97 47 ⇓P P 22 04 26.5 +0.6
baz=91,SNR=15
BBRC Big Bear Sol-O 90.98 55 ⇓P P 22 04 26.1 0.0
baz=91
G15A Dillon 91.01 43 ⇑P P 22 04 25.4 -0.6
baz=91,SNR=49
D16A Dana Ranch, Ca 91.02 41 ⇑P P 22 04 26.1 +0.1
baz=91
KAF Kangasniemi 91.03 335 *e*P **P 22 04 22.0 -3.7**
KAF pmax pmax
comp=Z,168nm,0.8s,mb6.2
KAF Kangasniemi 91.03 335 *e*p **P 22 04 22.0 -3.7**
comp=Z,168nm,0.8s,mb6.2
SHOC Shoshone 91.03 53 ⇑P P 22 04 25.8 -0.5
baz=91,SNR=9.7
M13A Montello 91.03 47 ⇑P P 22 04 26.1 -0.1
baz=91,SNR=33
M13A Montello 91.03 47 *e*P **P 22 04 26.8 +0.6**
comp=Z,108nm,1.2s,mb5.8
SOC Sochi 91.04 315 *e*P **P 22 04 24.1 -2.1**
SOC *e* 22 04 39.4
SOC *e* 22 07 57.1
SOC *e*S SKSac 22 14 47.7 -2.6
SOC *e**SS S 22 15 10.8 -5.8
SOC *e*PS SP 22 16 23.0 -1.4
SOC pmax pmax
comp=Z,53nm,0.8s,mb5.7
SOC pmax pmax
comp=Z,223nm,5.8s
SOC MLR MLR
comp=Z,15µm,20.0s
P12A McGill 91.06 49 ⇑P P 22 04 25.9 -0.4
baz=91,SNR=24
B17A L&G Farms, Che 91.07 40 ⇓P P 22 04 25.7 -0.4
baz=91,SNR=30
H15A Lima 91.08 44 ⇑P P 22 04 26.6 +0.2
baz=91,SNR=60
E16A East Helena 91.10 42 ⇑P P 22 04 26.8 +0.4
baz=91,SNR=52
N13A Wendover, West 91.16 48 ⇑P P 22 04 26.2 -0.5
baz=91
N13A Wendover, West 91.16 48 *e*P **P 22 04 27.1 +0.4**
comp=Z,106nm,1.1s,mb5.9
109C Camp Elliot, M 91.20 56 ⇓P P 22 04 26.8 -0.3
baz=91,SNR=7.7
SBA Scott Base 91.20 175 *e*P **P 22 04 27.1 +1.0**
SBA pmax pmax
comp=Z,819nm,1.9s,mb6.5
SBA MLR MLR
comp=Z,9µm,22.0s
SBA Scott Base 91.20 175 *e*P **P 22 04 27.1 +1.0**
comp=Z,819nm,1.9s,mb6.5
SBA LR LR
comp=Z,9µm,22.0s
Q12A Willow Creek R 91.24 50 ⇑P P 22 04 27.1 -0.1
baz=91,SNR=30
HEC Hector,Ludlow 91.29 54 ⇓P P 22 04 27.2 -0.3
baz=91,SNR=31
C17A Wharram Farm, 91.32 41 ⇓P P 22 04 26.7 -0.6
baz=91,SNR=51
K14A Jones Ranch, D 91.37 46 ⇓P P 22 04 27.8 +0.1
baz=91,SNR=15
F16A Kennard Place, 91.38 43 ⇓P P 22 04 27.4 -0.3
baz=91,SNR=29
I15A Monteview 91.39 44 ⇓P P 22 04 28.3 +0.5
baz=91,SNR=9.6
BOZ Bozeman (W) 91.42 43 ⇓P P 22 04 27.9 0.0
baz=91
BOZ Bozeman (W) 91.42 43 *e*P **P 22 04 27.9 0.0**
BOZ pmax pmax
comp=Z,92nm,1.4s,mb5.7
BOZ MLR MLR
comp=Z,17µm,22.0s
BOZ Bozeman (W) 91.42 43 *e*P **P 22 04 27.9 0.0**
comp=Z,92nm,1.4s,mb5.7
BOZ LR LR
comp=Z,17µm,22.0s
A18A Metzger Ranch, 91.44 39 ⇑P P 22 04 27.7 -0.2
baz=91,SNR=31
TUQ Turquoise Moun 91.44 53 ⇑P P 22 04 28.3 +0.1
baz=91,SNR=44
G16A Moss Hill, Enn 91.45 43 ⇓P P 22 04 28.5 +0.5
baz=91,SNR=135
FINES FINESS Array B 91.45 335 P **P 22 04 25.0 -2.7**
FINES FINESS Array B 91.45 335 P **P 22 04 25.0 -2.6**
comp=Z,132nm,0.4s,mb6.4,baz=64,slow=4.4,SNR=223
FINES PKKP PKKPbc 22 21 46.0 -4.2
comp=Z,5.6nm,1.0s,baz=323,slow=1.0,SNR=4.0
FINES LR LR 22 47 58.5
comp=Z,21µm,19.4s,baz=68,slow=37
FINES FINESS Array B 91.45 335 P **P 22 04 25.0 -2.6**
FINES PKKP PKKPbc 22 21 46.0 -4.2
FINES LR LR 22 47 58.5
L14A Malta 91.49 46 ⇑P P 22 04 28.6 +0.3
baz=91,SNR=60
PFO Pinyon Flat Ob 91.53 55 P **P 22 04 29.0 +0.3**
comp=Z,364nm,1.1s,mb6.5,SNR=14
PFO Pinyon Flat Ob 91.53 55 ⇑P P 22 04 28.8 +0.1
baz=92,SNR=26
PFO Pinyon Flat Ob 91.53 55 *e*P **P 22 04 29.0 +0.3**
PFO pmax pmax
comp=Z,282nm,1.4s,mb6.3
PFO MLR MLR
comp=Z,4µm,22.0s
PFO Pinyon Flat Ob 91.53 55 *e*P **P 22 04 29.0 +0.4**
comp=Z,282nm,1.4s,mb6.3
PFO LR LR
comp=Z,4µm,22.0s
D17A Six Diamond Ra 91.53 41 ⇑P P 22 04 28.3 0.0
baz=92,SNR=96
O13A Hicks Ranch, I 91.54 48 ⇑P P 22 04 28.0 -0.5
baz=92
U11A Corn Creek 91.58 52 ⇓P P 22 04 29.6 +0.7
baz=92,SNR=8.0
BAR Barrett 91.61 56 *e*P **P 22 04 29.0 0.0**
comp=Z,462nm,1.7s,mb6.4
R12A Pony Springs, 91.62 50 ⇓P P 22 04 29.3 +0.3
baz=92,SNR=20
S12A Delamar Landin 91.65 51 ⇑P P 22 04 30.1 +1.0
baz=92,SNR=13
E17A Martinsdale 91.66 42 ⇓P P 22 04 29.0 +0.1
baz=92,SNR=46
B18A Beardsley Farm 91.67 40 ⇓P P 22 04 28.6 -0.3
baz=92,SNR=11
V11A Goodsprings 91.71 53 ⇓P P 22 04 29.9 +0.4
baz=92,SNR=5.3
P13A Bates Ranch, G 91.72 49 ⇑P P 22 04 29.6 +0.2
baz=92
MONP Monument Peak 91.75 56 ⇓P P 22 04 30.0 +0.2
baz=92,SNR=35
K15A Arbon 91.78 46 ⇑P P 22 04 30.2 +0.6
baz=92,SNR=12
BELC Belle Mtn. 91.78 55 ⇓P P 22 04 30.2 +0.4
baz=92,SNR=39
EGMT Eagleton 91.81 40 ⇓P P 22 04 29.6 0.0
baz=92,SNR=12
EGMT Eagleton 91.81 40 *e*P **P 22 04 29.8 +0.1**
comp=Z,63nm,1.1s,mb5.8
EGMT LR LR
comp=Z,27µm,22.0s
QLMT Earthquake Lak 91.83 43 *e*P **P 22 04 30.9 +1.1**
comp=Z,66nm,0.9s,mb5.9
GMRC Granite Mounta 91.83 54 ⇓P P 22 04 30.2 +0.1
baz=92
Q13A Wheeler Ranch, 91.87 50 ⇑P P 22 04 30.2 0.0
baz=92
N14A Grayback Hills 91.89 48 ⇓P P 22 04 30.5 +0.3
baz=92,SNR=9.3
HVU Hansel Valley 91.90 47 *e*P **P 22 04 30.9 +0.7**
HVU pmax pmax
comp=Z,294nm,1.7s,mb6.2
HVU Hansel Valley 91.90 47 *e*P **P 22 04 30.9 +0.7**
comp=Z,294nm,1.7s,mb6.2
F17A Fitzpatrick Pl 91.98 42 ⇑P P 22 04 30.7 +0.2
baz=92,SNR=52
BGU Big Grassy Mou 91.98 47 *e*P **P 22 04 30.9 +0.3**
comp=Z,38nm,1.2s,mb5.5
H16A Russell Place, 92.00 43 ⇓P P 22 04 31.2 +0.6
baz=92,SNR=112
T12A Moapa 92.01 52 ⇑P P 22 04 31.2 +0.4
baz=92
DVTC Desert V Tower 92.08 56 ⇑P P 22 04 31.3 +0.1
baz=92,SNR=6.0
D18A Linhart Farms, 92.08 41 ⇑P P 22 04 30.6 -0.3
baz=92,SNR=12

L15A Malad City 92.10 46 ⇓P P 22 04 30.9 -0.2
baz=92,SNR=31
I16A Newdale 92.11 44 ⇓P P 22 04 31.7 +0.6
baz=92,SNR=27
G17A Pierce Place, 92.12 43 ⇑P P 22 04 31.8 +0.6
baz=92,SNR=30
R13A O'Grain Ranch, 92.14 50 ⇓P P 22 04 32.0 +0.6
baz=92,SNR=11
RER Riviere de l'E 92.17 249 PFAKE 22 04 40.0 +8.2
RER LR LR
comp=Z,4µm,19.0s
LDFC Landfair 92.18 54 *e*P **P 22 04 32.6 +1.0**
comp=Z,326nm,1.1s,mb6.5
ANN Anapa 92.19 317 *e*P **P 22 04 30.2 -1.3**
ANN *e**PP pP 22 04 55.5 +0.2
ANN *e* 22 08 10.8
ANN *e* 22 14 55.1
ANN *e* 22 15 20.0
ANN *e*PS PS 22 16 38.6 -10
ANN *e*SS SS 22 21 46.3 +8.3
ANN pmax pmax
comp=Z,212nm,1.0s,mb6.3
ANN MLR MLR
comp=N,9µm,20.0s
ANN MLR MLR
comp=E,18µm,20.0s
ANN MLR MLR
comp=Z,15µm,20.0s
V12A Nelson 92.19 53 ⇑P P 22 04 32.1 +0.4
baz=92,SNR=38
YMR Madison River 92.20 43 *e*P **P 22 04 33.0 +1.5**
comp=Z,157nm,0.8s,mb6.3
J16A Bone 92.23 45 ⇑P P 22 04 32.6 +0.9
baz=92,SNR=90
U12A Valley of Fire 92.23 52 ⇓P P 22 04 32.2 +0.4
baz=92
E18A Harlowton 92.23 41 ⇓P P 22 04 32.1 +0.5
baz=92,SNR=77
M15A Larsen Ranch, 92.23 47 ⇑P P 22 04 31.5 -0.3
baz=92,SNR=20
SWSC Sam W. Stewart 92.24 56 ⇓P P 22 04 31.6 -0.3
baz=92
SPUT South Promonto 92.28 47 *e*P **P 22 04 32.4 +0.5**
comp=Z,220nm,1.6s,mb6.1
W12A Cal Nev Ari 92.31 53 ⇓P P 22 04 32.2 0.0
baz=92
BC3 Big Chuckw Mtn 92.32 55 ⇑P P 22 04 32.5 +0.2
baz=92,SNR=36
YFT Old Faithful 92.36 44 *e*P **P 22 04 34.8 +2.6**
comp=Z,98nm,0.8s,mb6.1
N15A Stansbury Isla 92.36 47 ⇑P P 22 04 31.5 -0.8
baz=92
DUG Dugway 92.37 48 ⇓P P 22 04 32.6 +0.2
baz=92
DUG Dugway 92.37 48 *e*P **P 22 04 32.7 +0.3**
DUG pmax pmax
comp=Z,90nm,1.2s,mb5.9
DUG MLR MLR
comp=Z,11µm,20.0s
DUG Dugway 92.37 48 *e*P **P 22 04 32.7 +0.3**
comp=Z,90nm,1.2s,mb5.9
DUG LR LR
comp=Z,11µm,20.0s
YNR Norris Junctio 92.37 43 *e*P **P 22 04 34.6 +2.3**
comp=Z,305nm,1.2s,mb6.4
P14A Drum Mountains 92.38 49 ⇓P P 22 04 32.4 0.0
baz=92,SNR=18
K16A Soda Springs 92.39 45 ⇓P P 22 04 33.0 +0.6
baz=92,SNR=28
RRI2 Red Ridge 92.40 45 *e*P **P 22 04 33.5 +1.1**
comp=Z,82nm,0.8s,mb6.0
S13A Holt Ranch, En 92.40 51 ⇓P P 22 04 33.2 +0.6
baz=92,SNR=8.9
Q14A Sevier Lake (B 92.41 49 ⇓P P 22 04 33.0 +0.4
baz=92,SNR=27
DCID1 Drake Creek 92.41 44 *e*P **P 22 04 32.8 +0.3**
comp=Z,59nm,0.8s,mb5.9
IRM Iron Mountain 92.41 54 ⇓P P 22 04 32.7 0.0
baz=92
IMW Indian Meadow 92.48 44 *e*P **P 22 04 34.0 +1.2**
comp=Z,82nm,0.9s,mb6.0
T13A Saint George 92.54 51 ⇑P P 22 04 33.8 +0.6
baz=92,SNR=27
H17A Grant Village 92.55 44 ⇓P P 22 04 34.5 +1.3
baz=92,SNR=103
F18A Big Timber 92.59 42 ⇑P P 22 04 33.4 +0.1
baz=92,SNR=78
O15A The Old Anders 92.59 48 ⇑P P 22 04 33.3 -0.1
baz=93
TPAW Teton Pass 92.61 45 *e*P **P 22 04 34.2 +0.8**
comp=Z,154nm,1.5s,mb6.1
LKWY Lake 92.61 43 *e*P **P 22 04 35.8 +2.4**
LKWY pmax pmax
comp=Z,148nm,1.1s,mb6.2
LKWY MLR MLR
comp=Z,18µm,20.0s
LKWY Lake 92.61 43 *e*P **P 22 04 35.8 +2.4**
comp=Z,148nm,1.1s,mb6.2
LKWY LR LR
comp=Z,18µm,20.0s
VSU Vasula 92.63 332 *c i*P **P 22 04 32.3 -0.9**
VSU pmax pmax
comp=Z,265nm,0.8s,mb6.6
VSU MLR MLR
comp=Z,15µm,17.0s
VSU Vasula 92.63 332 P **P 22 04 31.8 -1.4**
ARUT Antelope Range 92.66 51 *e*P **P 22 04 34.9 +1.1**
ARUT pmax pmax
comp=Z,67nm,1.0s,mb5.9
ARUT Antelope Range 92.66 51 *e*P **P 22 04 34.9 +1.2**
comp=Z,67nm,1.0s,mb5.9
NEE2 Needles Airpor 92.66 54 ⇓P P 22 04 33.7 -0.2
baz=93,SNR=5.8
GCMT Greycliff 92.67 42 *e*P **P 22 04 33.8 +0.2**
comp=Z,56nm,0.8s,mb6.0
U13A Pakoon Wash 92.68 52 ⇓P P 22 04 34.3 +0.4
baz=93,SNR=35
I17A Pilgrim Ck. 92.72 44 ⇓P P 22 04 34.7 +0.8
baz=93,SNR=28
REDW Red Top Meadow 92.72 45 *e*P **P 22 04 34.6 +0.7**
comp=Z,291nm,0.5s,mb6.9
NOQ North Oquirrh 92.73 47 *e*P **P 22 04 34.7 +0.7**
AHID Auburn Hatcher 92.75 45 *e*P **P 22 04 34.5 +0.5**
comp=Z,66nm,0.9s,mb6.0
AHID LR LR
comp=Z,13µm,21.0s
SNOW Snow King Moun 92.75 44 *e*P **P 22 04 34.8 +0.8**
comp=Z,78nm,1.3s,mb5.9
L16A Fish Haven 92.77 46 ⇓P P 22 04 34.5 +0.3
baz=93,SNR=59
CCUT Cedar City 92.79 51 *e*P **P 22 04 35.4 +1.0**
comp=Z,147nm,1.6s,mb6.1
LOHW Long Hollow 92.80 44 *e*P **P 22 04 35.0 +0.6**
comp=Z,22nm,0.7s,mb5.6
HWUT Hardware Ranch 92.81 46 *e*P **P 22 04 34.4 0.0**
comp=Z,82nm,1.1s,mb6.0
HWUT LR LR
comp=Z,15µm,20.0s
J17A Brown Place, J 92.81 45 ⇓P P 22 04 34.8 +0.5
baz=93,SNR=24
R14A James Farms, M 92.81 50 ⇑P P 22 04 34.5 0.0
baz=93
V13A Grand Canyon W 92.83 52 ⇓P P 22 04 35.2 +0.5
baz=93,SNR=24
M16A Huntsville 92.86 47 ⇓P P 22 04 34.6 0.0
baz=93,SNR=7.1
S14A Cedar City 92.87 50 ⇑P P 22 04 35.0 +0.3
baz=93
K17A Gardner Place, 92.88 45 ⇑P P 22 04 34.6 -0.1
baz=93
G18A Lazy EL Ranch, 92.90 42 ⇑P P 22 04 34.9 +0.2
baz=93,SNR=59
P15A Leamington 92.96 49 ⇑P P 22 04 35.0 -0.2
baz=93
NLU North Lily Min 92.98 48 *e*P **P 22 04 35.4 +0.2**
comp=Z,23nm,0.9s,mb5.5
GLA Glamis 92.99 55 ⇑P P 22 04 35.5 +0.1
baz=93
GLA Glamis 92.99 55 *e*P **P 22 04 35.5 +0.1**
GLA pmax pmax
comp=Z,72nm,0.7s,mb6.1
GLA Glamis 92.99 55 *e*P **P 22 04 35.5 0.0**
comp=Z,72nm,0.7s,mb6.1
Y12C Blythe 93.03 55 ⇑P P 22 04 35.8 +0.2
baz=93,SNR=15
Q15A Fillmore 93.07 49 ⇓P P 22 04 35.3 -0.3
baz=93
L17A Cokeville 93.13 46 ⇓P P 22 04 35.7 -0.1

baz=93,SNR=18
W13A Hualapai Mount 93.14 53 ⇓P P 22 04 36.4 +0.4
baz=93,SNR=17
N16A Rees Ranch, Co 93.14 47 ⇑P P 22 04 35.6 -0.3
baz=93,SNR=6.2
T14A Hurricane 93.15 51 ⇓P P 22 04 36.3 +0.2
baz=93,SNR=12
RLMT Red Lodge 93.17 43 *e*P **P 22 04 36.4 +0.5**
comp=Z,114nm,0.8s,mb6.2
RLMT LR LR
comp=Z,3µm,21.0s
PDMCI Parker Dam,Lak 93.17 54 ⇑P P 22 04 36.6 +0.4
baz=93,SNR=11
JLU Jordanelle 93.22 47 *e*P **P 22 04 36.7 +0.3**
comp=Z,174nm,1.5s,mb6.2
U14A Mt Trumbull 93.28 52 ⇓P P 22 04 37.2 +0.5
baz=93,SNR=18
I18A Diamond G Ranc 93.31 44 ⇓P P 22 04 37.1 +0.4
baz=93,SNR=48
O16A Springville 93.32 48 ⇑P P 22 04 37.0 +0.3
baz=93,SNR=8.7
X13A Yucca 93.33 54 ⇓P P 22 04 37.2 +0.2
baz=93,SNR=24
J18A Kendall Valley 93.34 45 ⇓P P 22 04 37.0 +0.2
baz=93,SNR=127
112A Yuma 93.34 56 ⇑P P 22 04 37.3 +0.2
baz=93
MVU Marysvale 93.35 50 PFAKE 22 04 50.0 +13
MVU LR LR
comp=Z,9µm,20.0s
MSU Marysvale 93.38 50 *e*P **P 22 04 37.7 +0.6**
MSU pmax pmax
comp=Z,46nm,1.2s,mb5.7
MSU Marysvale 93.38 50 *e*P **P 22 04 37.7 +0.6**
comp=Z,46nm,1.2s,mb5.7
R15A Junction 93.40 50 ⇓P P 22 04 37.3 +0.1
baz=93,SNR=6.4
P16A Fountain Green 93.40 48 ⇑P P 22 04 36.9 -0.3
baz=93
DAU Daniels Canyon 93.43 47 *e*P **P 22 04 39.1 +1.8**
DAU pmax pmax
comp=Z,84nm,1.4s,mb5.9
DAU Daniels Canyon 93.43 47 *e*P **P 22 04 39.1 +1.8**
comp=Z,84nm,1.4s,mb5.9
M17A Scullys Gap (B 93.49 46 ⇑P P 22 04 37.8 +0.3
baz=93,SNR=8.8
S15A Panguitch 93.50 50 ⇓P P 22 04 37.6 0.0
baz=94
K18A Toltan Ranch, 93.53 45 ⇓P P 22 04 38.2 +0.6
baz=94,SNR=21
FFC Flin Flon 93.53 32 P **P 22 04 37.5 +0.1**
comp=Z,545nm,0.9s,mb6.9,SNR=61
FFC Flin Flon 93.53 32 *e*P **P 22 04 36.8 -0.6**
FFC pmax pmax
comp=Z,75nm,0.8s,mb6.1
FFC MLR MLR
comp=Z,12µm,22.0s
FFC Flin Flon 93.53 32 *e*P **P 22 04 36.8 -0.6**
comp=Z,75nm,0.8s,mb6.1
FFC LR LR
comp=Z,12µm,22.0s
N17A Moffit Pass 93.55 47 ⇑P P 22 04 38.8 +1.0
baz=94,SNR=10
Y13A Salome 93.56 54 ⇑P P 22 04 38.3 +0.2
baz=94,SNR=30
V14A Boquillas Ranc 93.58 52 ⇓P P 22 04 38.9 +0.8
baz=94,SNR=38
MALT Malatya 93.65 310 *e*P **P 22 04 37.4 -1.0**
comp=Z,293nm,1.8s,mb6.3
MALT LR LR
comp=Z,15µm,22.0s
MALT Malatya 93.65 310 *i*P **P 22 04 37.4 -0.9**
T15A Red Dirt Ranch 93.70 51 ⇑P P 22 04 39.1 +0.5
baz=94,SNR=11
W14A Seligman 93.73 53 ⇑P P 22 04 39.5 +0.8
baz=94,SNR=20
L18A Fontenelle, Gr 93.78 46 ⇓P P 22 04 39.4 +0.6
baz=94,SNR=10
BW06 Boulder Array 93.81 45 ⇓P P 22 04 38.7 -0.3
baz=94
BW06 Boulder Array 93.81 45 *e*P **P 22 04 39.0 0.0**
comp=Z,46nm,1.4s,mb5.6
BW06 LR LR
comp=Z,13µm,21.0s
PDAR Pinedale Array 93.81 45 P **P 22 04 38.9 -0.1**
comp=Z,7.1nm,0.7s,mb5.1,baz=247,slow=2.3,SNR=42
PDAR PKKP PKKPbc 22 21 43.2 -0.2
comp=Z,1.2nm,0.9s,baz=94,slow=2.5,SNR=4.4
PDAR PKPPKP 22 29 51.5
comp=Z,0.6nm,1.0s,baz=119,slow=1.9,SNR=4.6
PDAR LR LR 22 49 43.4
comp=Z,6µm,18.0s,baz=298,slow=37
PDAR Pinedale Array 93.81 45 P **P 22 04 38.9 -0.1**
PDAR PKKP PKKPbc 22 21 43.2 -0.2
PDAR P'P' 22 29 51.5
PDAR LR LR 22 49 43.4
TMUT Trail Mountain 93.83 49 *e*P **P 22 04 39.3 +0.2**
comp=Z,117nm,1.4s,mb6.0
O17A Robinson Place 93.87 48 ⇓P P 22 04 39.6 +0.3
baz=94,SNR=30
Z13A Yuma Proving G 93.89 55 ⇓P P 22 04 39.7 +0.2
baz=94,SNR=68
113A Mohawk Valley, 93.93 55 ⇓P P 22 04 39.9 +0.2
baz=94,SNR=15
M18A Lyman 93.93 46 ⇓P P 22 04 39.5 0.0
baz=94,SNR=13
U15A North Rim 93.96 52 ⇓P P 22 04 40.3 +0.5
baz=94,SNR=26
MICGM Minsk 93.96 328 *e*P **P 22 04 37.0 -2.4**
R16A Teasdale 93.97 50 ⇑P P 22 04 40.3 +0.5
baz=94,SNR=11
MNK Minsk 93.98 328 *e*P **P 22 04 37.0 -2.5**
MNK *e*PPP 22 10 30.0
MNK *e* 22 15 00.0
MNK *e*S S 22 15 36.0 -6.3
MNK *e*SSS 22 25 44.0
MNK pmax pmax
comp=Z,730nm,1.0s,mb7.0
MNK smax
comp=E,12µm,8.0s
MNK MLR MLR
comp=E,25µm,16.0s
MNK MLR MLR
comp=Z,47µm,18.0s
MNK MLR MLR
comp=N,14µm,16.0s
Q16A Castle Valley 93.99 49 ⇓P P 22 04 40.1 +0.2
baz=94,SNR=12
X14A Yava 94.11 54 ⇓P P 22 04 41.3 +0.8
baz=94,SNR=31
P17A Butcher Ranch, 94.12 48 ⇓P P 22 04 40.5 +0.1
baz=94,SNR=8.3
IDID Didziasalis 94.15 329 *e*P **P 22 04 40.1 -0.2**
Y14A Wickenburg 94.18 54 ⇑P P 22 04 41.1 +0.2
baz=94
IZAR Zarasai 94.19 330 *e*P **P 22 04 40.5 +0.1**
L19A Farson 94.19 45 ⇓P P 22 04 40.7 0.0
baz=94,SNR=33
V15A Kaibab Nationa 94.24 52 ⇓P P 22 04 41.7 +0.6
baz=94,SNR=18
K19A Absolon Red Bu 94.28 45 ⇓P P 22 04 40.5 -0.6
baz=94,SNR=42
NACGM Naroch 94.33 329 *e*P **P 22 04 38.0 -3.1**
ISAL Salakas 94.33 330 *e*P **P 22 04 40.6 -0.5**
SIM Simferopol' 94.34 318 *e*P **P 22 04 40.4 -1.0**
SIM *i* 22 08 31.0
SIM *i* 22 15 07.0
SIM *i*S S 22 15 41.0 -4.8
SIM *i*PS PS 22 17 01.0 -11
SIM pmax pmax
comp=Z,95nm,0.7s,mb6.2
SIM MLR MLR
comp=Z,24µm,22.4s
N18A Larsen Ranch, 94.37 47 ⇑P P 22 04 41.5 0.0
baz=94,SNR=11
W15A Williams 94.37 53 ⇑P P 22 04 42.3 +0.6
baz=94
O18A Roosevelt 94.37 47 ⇓P P 22 04 41.7 +0.1
baz=94,SNR=5.7
T16A Glen Canyon Da 94.37 51 ⇑P P 22 04 41.6 -0.1
baz=94
SRU San Rafael 94.40 49 ⇑P P 22 04 41.7 -0.1
baz=94
SRU San Rafael 94.40 49 *e*P **P 22 04 42.3 +0.6**
SRU pmax pmax
comp=Z,22nm,0.7s,mb5.6
SRU San Rafael 94.40 49 *e*P **P 22 04 42.2 +0.5**

comp=Z,22nm,0.7s,mb5.6
Z14A Wintersburg 94.40 55 ⇑P **P 22 04 42.2 +0.3**
baz=94,SNR=15
P18A Preston Nutter 94.42 48 ⇓P **P 22 04 41.9 +0.1**
baz=94
R17A Hanksville Air 94.49 49 ⇑P **P 22 04 41.8 -0.4**
baz=94
LAO LASA Array 94.54 40 *e*P **P 22 04 42.4 +0.2**
comp=Z,164nm,0.9s,mb6.5
LAO LR LR
comp=Z,23µm,22.0s
M19A Rock Springs 94.54 46 ⇑P **P 22 04 42.6 +0.2**
baz=94
X15A Humboldt 94.61 53 ⇑P **P 22 04 43.2 +0.3**
baz=95,SNR=36
114A Black Gap (USA 94.64 55 ⇑P **P 22 04 43.2 +0.2**
baz=95,SNR=9.3
Q18A Rafter H Ranch 94.69 48 ⇓P **P 22 04 42.4 -0.7**
baz=95,SNR=13
K20A Yellowstone Ra 94.69 45 ⇑P **P 22 04 42.8 -0.2**
baz=95,SNR=50
S17A Black Ridge (B 94.69 50 ⇑P **P 22 04 43.2 +0.1**
baz=95,SNR=7.0
Y15A Casa Rosa Ranc 94.71 54 ⇑P **P 22 04 43.0 -0.3**
baz=95,SNR=34
N19A John Jarvie Ra 94.75 46 ⇓P **P 22 04 43.4 +0.1**
baz=95
T17A Navajo Res., N 94.90 51 ⇑P **P 22 04 44.0 -0.1**
baz=95,SNR=12
L20A Wamsutter 94.93 45 ⇑P **P 22 04 43.9 -0.2**
baz=95,SNR=13
U16A Tuba City 94.94 51 ⇑P **P 22 04 44.3 0.0**
baz=95
214A Organ Pipe Nat 94.94 56 ⇓P **P 22 04 44.4 0.0**
baz=95
WUAZ Wupatki 94.95 52 ⇑P **P 22 04 44.7 +0.3**
baz=95
WUAZ Wupatki 94.95 52 *e*P **P 22 04 45.5 +1.1**
comp=Z,74nm,1.2s,mb6.0
WUAZ LR LR
comp=Z,9µm,22.0s
AKASG Malin Array Be 94.97 324 P **P 22 04 43.3 -0.8**
AKASG 22 08 31.0
AKASG S SKSac 22 15 10.8 -0.9
AKASG Malin Array Be 94.97 324 P **P 22 04 43.2 -0.8**
comp=Z,3.3nm,0.4s,mb5.1,baz=53,slow=4.5,SNR=13
AKASG PP PP 22 08 31.0 -2.9
comp=Z,8.0nm,0.9s,baz=54,slow=8.7,SNR=4.1
AKASG S SKSac 22 15 10.8 -0.9
comp=Z,0.2nm,0.3s,baz=40,slow=7.5,SNR=6.5
AKASG PKKP PKKPbc 22 21 38.5 -2.2
comp=Z,2.4nm,0.5s,baz=257,slow=3.0,SNR=9.8
AKASG PKPPKP 22 29 51.5
comp=Z,0.2nm,0.2s,baz=278,slow=2.5,SNR=4.4
AKASG LR LR 22 50 17.2
comp=Z,21µm,20.0s,baz=50,slow=37
AKASG Malin Array Be 94.97 324 P **P 22 04 43.2 -0.8**
AKASG PP PP 22 08 31.0 -2.9
AKASG S SKSac 22 15 10.8 -0.9
AKASG PKKP PKKPbc 22 21 38.5 -2.2
AKASG P'P' 22 29 51.5
AKASG LR LR 22 50 17.2
AKBB Malin Array Si 94.97 324 *e*P **P 22 04 43.4 -0.7**
W16A Flagstaff 94.97 53 ⇓P **P 22 04 45.1 +0.6**
baz=95
KIEV Kiev 94.98 324 *e*P **P 22 04 43.1 -1.0**
KIEV pmax pmax
comp=Z,96nm,1.6s,mb6.0
KIEV MLR MLR
comp=Z,22µm,20.0s
KIEV Kiev 94.98 324 *e*P **P 22 04 43.1 -1.0**
comp=Z,96nm,1.6s,mb6.0
KIEV LR LR
comp=Z,22µm,20.0s
O19A Miners Draw (B 95.00 47 ⇑P **P 22 04 43.8 -0.7**
baz=95
Z15A Gila River Ind 95.05 54 ⇑P **P 22 04 44.5 -0.4**
baz=95
DGMT Dagmar 95.06 38 ⇓P **P 22 04 44.0 -0.6**
baz=95
DGMT Dagmar 95.06 38 *e*P **P 22 04 43.8 -0.7**
comp=Z,55nm,0.8s,mb6.0
DGMT LR LR
comp=Z,33µm,22.0s
SUMG Summit 95.08 1 *e*P **P 22 04 45.4 +1.2**
comp=Z,20nm,0.9s,mb5.5
R18A Canyonlands Na 95.11 49 ⇓P **P 22 04 44.1 -1.0**
baz=95
U17A Shonto 95.14 51 ⇑P **P 22 04 45.5 +0.3**
baz=95,SNR=8.8
115A Sonoran Desert 95.18 55 ⇓P **P 22 04 45.5 0.0**
baz=95,SNR=6.9
FCC Fort Churchill 95.20 26 *e*P **P 22 04 44.0 -0.9**
FCC pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
FCC Fort Churchill 95.20 26 *e*P **P 22 04 44.0 -1.0**
comp=Z,2.6nm,0.9s,mb4.7
M20A Sweetwater, Wa 95.23 46 ⇑P **P 22 04 45.4 -0.1**
baz=95,SNR=18
X16A Lo Mia Camp, P 95.26 53 ⇑P **P 22 04 45.2 -0.6**
baz=95
S18A Hurst Farm, Bl 95.27 50 ⇓P **P 22 04 45.2 -0.5**
baz=95
P19A Cripple Cowboy 95.34 48 ⇓P **P 22 04 45.8 -0.2**
baz=95,SNR=43
V17A Tonalea, Kykot 95.37 52 ⇓P **P 22 04 46.6 +0.3**
baz=95,SNR=19
Y16A Circle Bar Ran 95.40 54 ⇓P **P 22 04 46.8 +0.3**
baz=95,SNR=35
N20A Spence Gulch, 95.41 46 ⇑P **P 22 04 45.6 -0.8**
baz=95
T18A Mexican Hat 95.55 50 ⇑P **P 22 04 47.0 -0.1**
baz=96,SNR=9.6
R19A Curley Farm, L 95.61 49 ⇓P **P 22 04 46.5 -0.8**
baz=96,SNR=9.8
W17A Winslow 95.61 52 ⇓P **P 22 04 46.7 -0.7**
baz=96
L21A Rawlins 95.62 45 ⇓P **P 22 04 46.7 -0.5**
baz=96,SNR=17
Z16A Peralta Trail, 95.62 54 ⇑P **P 22 04 47.2 -0.3**
baz=96,SNR=7.5
116A Eloy 95.65 55 ⇑P **P 22 04 47.2 -0.5**
baz=96
O20A White River Ci 95.69 47 ⇑P **P 22 04 47.2 -0.4**
baz=96
M21A Separation Pea 95.76 45 ⇓P **P 22 04 47.1 -0.8**
baz=96
X17A Forest Lakes 95.78 53 ⇓P **P 22 04 47.7 -0.4**
baz=96
U18A Rough Rock, Ch 95.80 51 ⇑P **P 22 04 47.8 -0.4**
baz=96
P20A De Beque 95.81 48 ⇓P **P 22 04 47.5 -0.7**
baz=96
S19A Harvey Farm, M 95.89 49 ⇓P **P 22 04 48.5 -0.1**
baz=96,SNR=5.2
Y17A Roosevelt 95.96 54 ⇑P **P 22 04 48.8 -0.2**
baz=96,SNR=11
N21A Black Mountain 95.97 46 ⇑P **P 22 04 47.9 -1.0**
baz=96
V18A Ganado 96.00 52 ⇓P **P 22 04 48.3 -0.9**
baz=96
216A Three Points, 96.02 56 ⇓P **P 22 04 48.4 -0.9**
baz=96
Q20A Ridgley Place, 96.08 48 ⇓P **P 22 04 48.9 -0.6**
baz=96,SNR=19
O21A Pagoda 96.20 47 ⇓P **P 22 04 49.5 -0.4**
baz=96
R20A Redvale 96.29 49 ⇑P **P 22 04 50.7 +0.3**
baz=96
T19A Beclabito 96.30 50 ⇓P **P 22 04 49.7 -0.7**
baz=96,SNR=23
U19A Dine' College, 96.35 51 ⇓P **P 22 04 50.8 +0.1**
baz=96
W18A Petrified Fore 96.35 52 ⇓P **P 22 04 50.7 0.0**
baz=96
M22A Cedar Creek Ra 96.37 45 ⇑P **P 22 04 50.5 -0.1**
baz=96,SNR=10
X18A Snowflake 96.38 53 ⇓P **P 22 04 51.6 +0.7**
baz=96
Z17A San Carlos Hig 96.39 54 ⇓P **P 22 04 51.6 +0.7**
baz=96
117A Oracle 96.41 55 ⇓P **P 22 04 51.5 +0.4**
baz=96
TUC Tucson 96.46 55 *e*P **P 22 04 52.1 +0.8**
TUC pmax pmax
comp=Z,100nm,1.6s,mb6.0
TUC MLR MLR
comp=Z,11µm,20.0s
TUC Tucson 96.46 55 *e*P **P 22 04 52.1 +0.7**
comp=Z,100nm,1.6s,mb6.0
TUC LR LR
comp=Z,11µm,20.0s
MVCO Mesa Verde 96.56 50 ⇓P **P 22 04 51.6 0.0**
baz=96
MVCO Mesa Verde 96.56 50 *e*P **P 22 04 52.5 +0.9**
comp=Z,88nm,1.4s,mb6.0
MVCO LR LR
comp=Z,10µm,20.0s
SCO Scoresbysund 96.56 355 ⇑*i*P **P 22 04 50.9 0.0**
SCO *e*S SKSac 22 15 21.2 +1.8
SCO pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
SCO MLR MLR
comp=Z,7µm,19.0s
SCO Scoresbysund 96.56 355 ⇑*i*P **P 22 04 50.9 0.0**
comp=Z,9.9nm,1.0s,mb5.2
SCO *i* PP PP 22 09 05.7 +20
SCO *e*S SKSac 22 15 21.2 +1.8
SCO
comp=Z,7µm,19.0s
Y18A Canyon Day Jun 96.57 53 ⇑P **P 22 04 51.9 +0.1**
baz=96
SUW Suwalki 96.60 329 *e*P **P 22 04 50.3 -1.1**
SUW *e* 22 09 10.4
SUW *e*SKSac SKSac 22 15 18.3 -1.8
SUW *e*S S 22 15 59.0 -5.9
SUW *e*SP SP 22 17 23.6 -1.3
SUW *e* 22 18 03.5
SUW LMZ 22 47 01.2
comp=Z,25µm,25.0s
SUW Suwalki 96.60 329 *e*P **P 22 04 50.3 -1.1**
SUW *e* 22 15 18.3
SUW *e*S S 22 15 59.0 -6.0
SUW *e*SP SP 22 17 23.6 -1.3
SUW *e* 22 18 03.5
SUW MLR MLR
comp=Z,25µm,25.0s
SUW Suwalki 96.60 329 *e*P **P 22 04 50.0 -1.4**
comp=Z,116nm,0.8s,mb6.4
217A Green Valley 96.61 56 ⇑P **P 22 04 52.2 +0.2**
baz=97
W19A Sanders 96.62 52 ⇑P **P 22 04 52.2 +0.2**
baz=97
Q21A Lamborn Mesa, 96.64 48 ⇑P **P 22 04 52.1 +0.1**
baz=97,SNR=6.4
BR131 Keskin Array S 96.64 313 *e*P **P 22 04 49.6 -2.4**
comp=Z,25nm,0.9s,mb5.7
BR131 LR LR
comp=Z,5µm,20.0s
BRTR Keskin Array B 96.65 313 P **P 22 04 50.3 -1.7**
BRTR 22 08 47.7
BRTR Keskin Array B 96.65 313 P **P 22 04 50.3 -1.7**
comp=Z,22nm,0.8s,mb5.6,baz=100,slow=3.0,SNR=51
BRTR PP PP 22 08 47.7 +0.5
comp=Z,10nm,1.0s,baz=97,slow=5.3,SNR=4.3
BRTR Keskin Array B 96.65 313 P **P 22 04 50.3 -1.7**
BRTR PP PP 22 08 47.7 +0.5
V19A Window Rock 96.67 51 ⇓P **P 22 04 52.3 +0.1**
baz=97,SNR=6.6
N22A Wattenberg Ran 96.70 46 ⇓P **P 22 04 52.5 +0.3**
baz=97,SNR=10
Z18A Geronimo 96.80 54 ⇓P **P 22 04 53.1 +0.2**
baz=97
R21A Cimarron 96.83 48 ⇑P **P 22 04 52.7 -0.2**
baz=97,SNR=25
U20A Newcomb 96.84 51 ⇑P **P 22 04 53.2 +0.2**
baz=97
KIS Kishinev 96.86 321 *e*P **P 22 04 49.0 -3.8**
KIS Kishinev 96.86 321 *e*PP x 22 07 48.0
KIS Kishinev 96.86 321 *e*PPP PKiKP 22 09 40.0 +11
KIS *i* S SKSac 22 15 18.0 -3.8
comp=Z,1µm,2.0s
KIS Kishinev 96.86 321 *e*P **P 22 04 49.0 -3.8**
KIS *i* S SKSac 22 15 18.0 -3.8
KIS *i* PS S 22 16 00.0 -7.5
KIS smax
comp=N,1µm,2.8s
KIS smax
comp=E,500nm,2.4s
KIS smax
comp=N,4µm,16.0s
KIS smax
comp=E,5µm,16.0s
KIS MLR MLR
comp=N,2µm,22.0s
KIS MLR MLR
comp=Z,22µm,22.0s
KIS MLR MLR
comp=Z,23µm,23.0s
HWQ Hawqa 96.88 307 *e*P **P 22 04 52.5 -0.7**
S21A Coal Bank Pass 96.92 49 ⇓P **P 22 04 53.9 +0.7**
baz=97
X19A St. Johns 96.93 53 ⇓P **P 22 04 53.8 +0.4**
baz=97
SMCO Snowmass 96.95 47 *e*P **P 22 04 53.9 +0.6**
comp=Z,25nm,1.0s,mb5.6
RSSD Black Hills 97.00 42 *e*P **P 22 04 53.1 -0.4**
RSSD pmax pmax
comp=Z,22nm,0.9s,mb5.6
RSSD MLR MLR
comp=Z,10µm,20.0s
RSSD Black Hills 97.00 42 *e*P **P 22 04 53.1 -0.3**
comp=Z,22nm,0.9s,mb5.6
RSSD LR LR
comp=Z,10µm,20.0s
118A Homack Ranch, 97.00 54 ⇓P **P 22 04 54.0 +0.2**
baz=97
V20A Brimhall 97.08 51 ⇓P **P 22 04 54.1 +0.1**
baz=97
Q22A Crested Butte, 97.11 48 ⇑P **P 22 04 53.9 -0.2**
baz=97
Y19A Nutrioso 97.12 53 ⇑P **P 22 04 54.5 +0.2**
baz=97
HFA0 Hagfors New Ar 97.16 337 P **P 22 04 50.0 -3.8**
218A Dragoon 97.17 55 ⇓P **P 22 04 54.6 0.0**
baz=97
PHWY Pilot Hill 97.19 45 *e*P **P 22 04 55.0 +0.6**
comp=Z,45nm,1.4s,mb5.7
BHL Bhannes 97.24 307 *e*P **P 22 04 54.0 -0.8**
W20A Ramah 97.30 52 ⇑P **P 22 04 54.9 -0.1**
baz=97
Z19A T-Link Ranch, 97.34 54 ⇑P **P 22 04 55.7 +0.5**
baz=97
318A Bisbee 97.39 56 ⇑P **P 22 04 55.7 +0.2**
baz=97
R22A Saguache, Gunn 97.47 48 ⇓P **P 22 04 55.5 -0.2**
baz=97
NB2 NORSAR Subarra 97.47 339 P **P 22 04 52.6 -2.6**
comp=Z,57nm,0.7s,mb6.1,baz=49,slow=4.6
NOA NORSAR Array B 97.47 339 P **P 22 04 54.3 -0.9**
NOA 22 08 51.4
NOA S SKSac 22 15 20.8 -3.6
NOA NORSAR Array B 97.47 339 P **P 22 04 54.3 -0.9**
comp=Z,38nm,0.8s,mb5.9,baz=47,slow=5.5,SNR=139
NOA PP PP 22 08 51.4 -1.3
comp=Z,6.5nm,0.8s,baz=46,slow=7.8,SNR=7.5
NOA S SKSac 22 15 20.8 -3.6
comp=Z,0.7nm,0.8s,baz=94,slow=13,SNR=2.0
NOA PKKPbc PKKPbc 22 21 31.6 -2.7
comp=Z,2.3nm,0.9s,baz=218,slow=2.9,SNR=6.0
NOA LR LR 22 54 23.1
comp=Z,9µm,19.3s,baz=40,slow=39
NOA NORSAR Array B 97.47 339 P **P 22 04 54.3 -0.9**
NOA PP PP 22 08 51.4 -1.3
NOA S SKSac 22 15 20.8 -3.6
NOA PKKPbc PKKPbc 22 21 31.6 -2.7
NOA LR LR 22 54 23.1
119A Ashpeak Ranch, 97.49 54 ⇓P **P 22 04 56.1 +0.2**
baz=98
X20A Quemado 97.50 52 ⇓P **P 22 04 56.5 +0.5**
baz=98
IAS Iasi 97.54 322 P **P 22 04 55.8 -0.1**
TLCR 97.67 319 ⇓P **P 22 04 56.1 -0.4**
TLCR 97.67 319 ⇓*i*P **P 22 04 56.1 -0.4**
ISCO Idaho Springs 97.68 46 *e*P **P 22 04 57.3 +0.6**
ISCO pmax pmax
comp=Z,18nm,1.3s,mb5.4
ISCO MLR MLR
comp=Z,17µm,22.0s
ISCO Idaho Springs 97.68 46 *e*P **P 22 04 57.3 +0.7**
comp=Z,18nm,1.3s,mb5.5
ISCO LR LR
comp=Z,17µm,22.0s
V21A Milan 97.71 51 ⇑P **P 22 04 57.1 +0.2**
baz=98
V21A ⇑P 22 04 57.1
baz=98
NAO01 NORSAR Array S 97.72 339 *e*P **P 22 04 54.9 -1.4**
comp=Z,34nm,0.7s,mb6.0
NAO01 LR LR
comp=Z,13µm,21.0s
219A White Tail Can 97.79 55 ⇓P **P 22 04 57.5 +0.2**
baz=98
T22A Edith 97.81 49 ⇑P **P 22 04 57.4 0.0**
baz=98
Y20A Horse Springs, 97.82 53 ⇓P **P 22 04 57.6 +0.2**
baz=98
MAW Mawson 97.86 202 P **P 22 04 57.0 +0.3**
MAW 22 08 58.2
MAW S SKSac 22 15 23.0 -2.8
MAW pmax pmax
comp=Z,17nm,0.6s
MAW pmax pmax
comp=Z,19nm,0.9s
MAW smax
comp=N,1.0nm,0.7s
MAW MLR MLR
comp=Z,10µm,19.7s
MAW Mawson 97.86 202 *e*P **P 22 04 56.2 -0.5**
comp=Z,21nm,1.4s,mb5.5
MAW *e* 22 08 52.5
MAW *e*S SKSac 22 15 27.1 +1.3
MAW Mawson 97.86 202 P **P 22 04 57.0 +0.3**
comp=Z,17nm,0.6s,mb5.7,baz=68,slow=6.4,SNR=27
MAW PP PP 22 08 58.2 +2.0
comp=Z,19nm,0.9s,baz=72,slow=11,SNR=6.2
MAW S SKSac 22 15 23.0 -2.8
comp=Z,1.1nm,0.7s,baz=341,slow=10,SNR=2.0
MAW PKKPbc PKKPbc 22 21 33.0 -1.0
comp=Z,3.5nm,0.7s,baz=268,slow=10,SNR=5.6
MAW LR LR 22 46 49.8
comp=Z,10µm,19.7s,baz=63,slow=34
MAW Mawson 97.86 202 *e*P **P 22 04 55.2 -1.4**
comp=Z,35nm,1.6s,mb5.6
MAW *e*PP PP 22 08 58.0 +1.8
MAW LR LR
comp=Z,18µm,21.0s
Z20A Nine Sixteen R 97.93 54 ⇓P **P 22 04 58.2 +0.3**
baz=98
W21A San Fidel 97.95 51 ⇓P **P 22 04 57.3 -0.7**
baz=98
319A Douglas 97.98 55 ⇑P **P 22 04 58.3 +0.1**
baz=98
X21A Alamocita Cree 98.09 52 ⇑P **P 22 04 59.0 +0.4**
baz=98
120A U Bar Ranch, L 98.10 54 ⇑P **P 22 04 59.3 +0.6**
baz=98
TIRR Tirgusor 98.25 319 P **P 22 04 58.8 -0.3**
TIRR Tirgusor 98.25 319 *e*P **P 22 04 57.6 -1.5**
comp=Z,13nm,0.8s,mb5.5
TIRR Tirgusor 98.25 319 ⇓*i*P **P 22 04 58.2 -0.9**
LVV L'vov 98.32 325 *e*P **P 22 04 58.9 -0.4**
LVV *i* 22 09 03.7
LVV *i* 22 15 23.3
LVV *e*S S 22 16 21.1 +1.3
LVV *i* SS SS 22 23 16.7 +12
LVV MLR MLR
comp=N,10µm,22.0s
LVV MLR MLR
comp=E,17µm,22.0s
LVV MLR MLR
comp=Z,22µm,22.0s
Y21A Point of Rocks 98.33 53 ⇑P **P 22 05 00.1 +0.4**
baz=98
220A Playas Peak, P 98.40 55 ⇓P **P 22 05 00.6 +0.5**
baz=98
HARR Harsova 98.45 319 ⇑*i*P **P 22 05 00.0 0.0**
W22A Albuquerque 98.56 51 ⇓P **P 22 05 01.3 +0.6**
baz=98
SDCO Great Sand Dun 98.57 48 *e*P **P 22 05 00.7 +0.1**
comp=Z,6.7nm,0.7s,mb5.3
SDCO LR LR
comp=Z,12µm,21.0s
Z21A St. Cloud Mine 98.58 53 ⇓P **P 22 05 01.4 +0.5**
baz=99
320A Kipp Ranch, An 98.60 55 ⇓P **P 22 05 01.6 +0.7**
baz=99
WAR Warsaw 98.65 328 *e*P **P 22 05 01.5 +0.8**
WAR *e*SKSac SKSac 22 15 31.2 +0.6
WAR *e*SP SP 22 17 46.5 -0.7
WAR LMZ 22 49 43.1
comp=Z,23µm,22.4s
WAR Warsaw 98.65 328 *e*P **P 22 05 01.5 +0.8**
WAR *e* 22 15 31.2
WAR *e*SP SP 22 17 46.5 -0.7
WAR MLR MLR
comp=Z,23µm,22.4s
CSS Prodhromos 98.65 309 *e*P **P 22 04 58.9 -2.3**
comp=Z,37nm,0.8s,mb6.0
CSS LR LR
comp=Z,10µm,21.0s
CSS Prodhromos 98.65 309 P **P 22 04 59.7 -1.4**
VRI Vrincioaia 98.66 321 P **P 22 05 01.4 +0.4**
VRI Vrincioaia 98.66 321 ⇑*i*P **P 22 04 59.2 -1.7**
PLOR Plostina 98.72 321 P **P 22 05 01.6 +0.4**
PLOR Plostina 98.72 321 ⇑*i*P **P 22 05 00.9 -0.3**
BUR08 Bucovina Ar. S 98.73 323 *e*P **P 22 04 59.5 -1.7**
BUR01 Bucovina Ar. S 98.74 323 P **P 22 05 02.5 +1.3**
BURAR Bucovina Array 98.74 323 P **P 22 05 02.5 +1.3**
BURAR Bucovina Array 98.74 323 ⇑*i*P **P 22 05 00.9 -0.3**
PSN Preselentsi 98.74 318 *i* P **P 22 04 59.9 -1.4**
121A Cookes Peak, D 98.77 54 ⇑P **P 22 05 01.8 +0.1**
baz=99
Y22D IRIS PASSCAL I 98.89 52 ⇑P **P 22 05 02.6 +0.4**
baz=99
Y22A Socorro 98.91 52 ⇑P **P 22 05 02.7 +0.4**
baz=99
ANMO Albuquerque 98.92 51 *e*P **P 22 05 02.9 +0.6**
ANMO pmax pmax
comp=Z,29nm,1.4s
ANMO MLR MLR
comp=Z,7µm,22.0s
ANMO Albuquerque 98.92 51 LR LR 22 43 32.0
comp=Z,5µm,20.1s,baz=157,slow=32
ANMO Albuquerque 98.92 51 *e*P **P 22 05 02.9 +0.6**
comp=Z,29nm,1.4s,mb5.6
ANMO LR LR
comp=Z,7µm,22.0s
221A Mesquite Ranch 98.96 54 ⇑P **P 22 05 03.2 +0.7**
baz=99
ULM Lac du Bonnet 98.99 34 P **P 22 05 01.0 -1.3**
comp=Z,27nm,0.7s,mb5.9,baz=308,slow=5.2,SNR=37
ULM S SKSac 22 15 27.5 -5.0
comp=Z,1.5nm,0.6s,baz=261,slow=20,SNR=2.9
ULM LR LR 22 48 55.4
comp=Z,12µm,20.0s,baz=318,slow=35
ULM Lac du Bonnet 98.99 34 *e*P **P 22 05 01.0 -1.3**
comp=Z,27nm,0.8s,mb5.8
ULM LR LR
comp=Z,16µm,20.0s
KONO Kongsberg 99.02 338 *e*P **P 22 05 00.9 -1.3**
KONO pmax pmax
comp=Z,15nm,0.8s,mb5.6
KONO MLR MLR
comp=Z,20µm,20.0s
KONO Kongsberg 99.02 338 *e*P **P 22 05 00.9 -1.2**
comp=Z,15nm,0.8s,mb5.6
KONO LR LR
comp=Z,20µm,20.0s
W23A Werner Place, 99.08 51 ⇓P **P 22 05 03.4 +0.4**
baz=99
BNM Barren Site 99.09 52 *e*P **P 22 05 03.7 +0.6**
comp=Z,55nm,1.8s,mb5.8
ISR Istrita 99.13 320 ⇓P **P 22 05 03.5 +0.5**
ISR Istrita 99.13 320 ⇓*i*P **P 22 05 03.5 +0.5**
KWP Kalwaria Pacla 99.15 325 *e*P **P 22 05 01.8 -1.2**
KWP *e* 22 07 48.0
KWP *e*SKSac SKSac 22 15 33.5 +0.2
KWP *e*S S 22 16 24.8 -2.0
KWP *e*SP SP 22 17 50.3 -2.5
KWP LMZ 22 50 06.4
comp=Z,30µm,22.1s
KWP Kalwaria Pacla 99.15 325 *e*P **P 22 05 01.8 -1.2**
KWP *e* 22 15 33.5
KWP *e*S S 22 16 24.8 -2.1
KWP *e*SP SP 22 17 50.3 -2.5
KWP MLR MLR
comp=Z,30µm,22.1s
KWP Kalwaria Pacla 99.15 325 *e*P **P 22 05 01.7 -1.3**
comp=Z,153nm,1.1s,mb6.4

KWP LR LR
comp=Z,30µm,22.0s
KWP Kalwaria Pacla 99.15 325 ⇑*i*P **P 22 05 02.8 -0.2**
Z22A Elephant Butte 99.16 53 ⇓P **P 22 05 03.6 +0.2**
baz=99
KZIT Kziot 99.28 304 P **P 22 05 04.7 +0.7**
MLR Muntele Rosu 99.33 321 ⇑*i*P **P 22 05 03.2 -0.7**
122A Conniff Cattle 99.33 54 ⇓P **P 22 05 04.6 +0.4**
baz=99
222A Williams Famil 99.47 54 ⇓P Pdif 22 05 05.0 +0.8
baz=99
PRD Provadia 99.47 318 *i* P Pdif 22 05 03.4 -0.9
Y23A Lovelace Mesa, 99.61 52 ⇓P Pdif 22 05 05.9 +1.0
baz=100
ABPO Ambohimpanom 99.61 253 *e*P Pdif 22 05 03.8 -1.1
ABPO pmax pmax
comp=Z,40nm,1.2s,mb5.9
ABPO MLR MLR
comp=Z,5µm,21.0s
ABPO Ambohimpanom 99.61 253 *e*Pdif Pdif 22 05 03.8 -1.2
comp=Z,40nm,1.2s
ABPO LR LR
comp=Z,5µm,21.0s
ISP Isparta 99.63 312 P Pdif 22 05 04.6 -0.4
ISP Isparta 99.63 312 *e*Pdif Pdif 22 05 04.3 -0.7
comp=Z,9.5nm,0.8s
ISP LR LR
comp=Z,9µm,20.0s
ISP Isparta 99.63 312 ⇓*i*P Pdif 22 05 03.8 -1.2
OGNE Ogallala 99.69 44 PFAKE 22 05 20.0 +15
OGNE LR LR
comp=Z,15µm,21.0s
BMR Baia Mare 99.72 323 P Pdif 22 05 07.4 +2.0
BMR Baia Mare 99.72 323 ⇓*i*P Pdif 22 05 07.0 +1.6
KOLS Kolonicke sedl 99.76 325 *e*P Pdif 22 05 04.7 -0.9
KOLS *e* 22 09 13.5
KOLS pmax pmax
comp=Z,20nm,1.2s,mb5.6
KOLS Kolonicke sedl 99.76 325 *e*P Pdif 22 05 04.7 -0.9
comp=Z,20nm,1.2s
KOLS *e*PP PP 22 09 13.5 +2.9
KOLS Kolonicke sedl 99.76 325 PDIF Pdif 22 05 04.7 -0.9
KOLS *e*PP PP 22 09 13.5 +2.9
X24A Lazy VL Ranch, 99.85 51 ⇑P Pdif 22 05 06.5 +0.6
baz=100
BSD Bornholm Skovb 99.89 333 ⇑*i*P Pdif 22 05 05.0 -1.1
BSD *e*S SKSac 22 15 36.5 -0.2
BSD pmax pmax
comp=Z,23nm,0.8s,mb5.9
BSD MLR MLR
comp=Z,12µm,20.0s
BSD Bornholm Skovb 99.89 333 ⇑*i*P Pdif 22 05 05.0 -1.1
comp=Z,23nm,0.8s
BSD *e*PP PKiKP 22 09 33.6 -0.3
BSD *e*S SKSac 22 15 36.5 -0.2
BSD
comp=Z,12µm,20.0s
VOIR 99.90 321 ⇓P Pdif 22 05 06.4 +0.2
VOIR 99.90 321 ⇓*i*P Pdif 22 05 06.4 +0.2
UZH Uzhgorod 99.91 325 ⇓*i*P Pdif 22 05 06.3 0.0
UZH *e* 22 05 31.8
UZH *e* 22 09 09.8
UZH *e* 22 15 34.4
UZH *e*S Sdif 22 16 28.4 -4.6
GKP Gorka Klasztor 99.94 330 *e*P Pdif 22 05 06.8 +0.4
GKP *e* 22 08 01.9
GKP *e* 22 09 36.5
GKP *e*SKSac SKSac 22 15 35.5 -1.5
GKP *e*S Sdif 22 16 30.3 -2.9
GKP *e*SP SP 22 18 00.8 -0.3
GKP LMZ 22 53 45.9
comp=Z,25µm,20.8s
GKP Gorka Klasztor 99.94 330 *e*P Pdif 22 05 06.8 +0.4
GKP *e* 22 15 35.5
GKP *e*S Sdif 22 16 30.3 -3.0
GKP *e*SP SP 22 18 00.7 -0.3
GKP MLR MLR
comp=Z,25µm,20.8s
GKP Gorka Klasztor 99.94 330 P Pdif 22 05 07.6 +1.2
AGMN Agassiz Refuge 100.03 36 *e*Pdif Pdif 22 05 07.6 +0.9
comp=Z,12nm,0.7s
AGMN LR LR
comp=Z,26µm,20.0s
TRPA Tarpa 100.03 324 ⇓*i*P Pdif 22 05 06.7 -0.1
223A Chaparral, Ant 100.03 54 ⇓P Pdif 22 05 07.3 +0.5
baz=100
SFJD Kangerlussuaq 100.04 5 ⇑*i*P Pdif 22 05 05.7 -1.1
SFJD pmax pmax
comp=Z,6.0nm,0.9s
SFJD Kangerlussuaq 100.04 5 PFAKE 22 05 20.0 +13
SFJD LR LR
comp=Z,10µm,22.0s
SFJD Kangerlussuaq 100.04 5 ⇑*i*P Pdif 22 05 05.7 -1.1
comp=Z,6.4nm,0.9s
SFJD *i* PP PKiKP 22 09 32.2 -1.7
STHS Stebnicka Huta 100.07 326 *e*P Pdif 22 05 07.8 +0.8
STHS pmax pmax
comp=Z,18nm,1.1s
STHS Stebnicka Huta 100.07 326 *e*P Pdif 22 05 07.8 +0.8
comp=Z,18nm,1.1s
STHS Stebnicka Huta 100.07 326 PDIF Pdif 22 05 07.8 +0.8
Y24A Capitan 100.09 52 ⇑P Pdif 22 05 07.8 +0.7
baz=100
W25A X Bar L Ranch, 100.33 50 ⇓P Pdif 22 05 09.1 +1.0
baz=100
OJC Ojcow 100.41 327 *e*P Pdif 22 05 07.2 -1.3
OJC *e*PKiKP PKiKP 22 09 38.0 +3.0
OJC *e*SKSac SKSac 22 15 38.8 -0.7
OJC *e*SS SS 22 23 33.8 +0.3
OJC L 22 47 46.9
comp=Z,14nm,22.3s
OJC Ojcow 100.41 327 P Pdif 22 05 08.1 -0.4
OJC Ojcow 100.41 327 P Pdif 22 05 08.1 -0.4
X25A Clemmons Rancht 100.45 51 ⇓P Pdif 22 05 09.8 +1.1
baz=100
124A Stringfield Ra 100.54 53 ⇓P Pdif 22 05 09.8 +0.7
baz=100
NIE Niedzica 100.58 326 P Pdif 22 05 09.5 +0.3
COP Copenhagen 100.60 334 ⇑*i*P Pdif 22 05 08.4 -0.9
COP pmax pmax
comp=Z,12nm,0.7s
COP Copenhagen 100.60 334 ⇑*i*P Pdif 22 05 08.4 -0.9
comp=Z,12nm,0.7s
COP *e*PP PKiKP 22 09 40.9 +5.7
DRGR 100.63 323 P Pdif 22 05 10.5 +1.0
DRGR 100.63 323 ⇑*i*P Pdif 22 05 09.5 0.0
DESE Dese 100.63 284 *e*P Pdif 22 05 11.0 +1.5
DESE S SKSac 22 15 43.7 +1.8
Y25A Mesa, Roswell 100.66 52 ⇓P Pdif 22 05 10.2 +0.6
baz=101
224A Corundas Mount 100.72 54 ⇓P Pdif 22 05 10.6 +0.7
baz=101
Z25A Roswell 100.89 52 ⇓P Pdif 22 05 11.9 +1.3
baz=101
RGN Rugen 100.96 333 *e*Pdif Pdif 22 05 11.3 +0.4
comp=Z,27nm,0.8s
MNTX Cornudas Mount 100.97 54 *e*Pdif Pdif 22 05 12.0 +1.0
comp=Z,20nm,1.1s
MNTX LR LR
comp=Z,6µm,20.0s
324A Moseley Ranch, 100.99 54 ⇓P Pdif 22 05 12.2 +1.2
baz=101
KECS Kecovo 101.00 325 *e*P Pdif 22 05 12.4 +1.3
KECS pmax pmax
comp=Z,16nm,1.0s
KECS Kecovo 101.00 325 *e*P Pdif 22 05 12.4 +1.3
comp=Z,16nm,1.0s
KECS Kecovo 101.00 325 PDIF Pdif 22 05 12.4 +1.3
X26A CR and CF Fran 101.08 51 ⇓P Pdif 22 05 12.4 +1.0
baz=101
125A Gardner Draw, 101.18 53 ⇑P Pdif 22 05 12.6 +0.7
baz=101
225A Deer Hill, Car 101.26 53 ⇓P Pdif 22 05 13.4 +1.2
baz=101
GZR Gura Zlata 101.31 322 P Pdif 22 05 13.3 +0.8
RAC Raciborz 101.34 327 *e*P Pdif 22 05 12.4 -0.2
RAC *e* 22 09 27.2
RAC *e* 22 15 44.3
RAC MLR MLR
comp=E,21µm,22.0s
RAC MLR MLR
comp=N,16µm,17.0s
RAC MLR MLR
comp=Z,17µm,18.0s
MUD Monsted U'grnd 101.42 336 ⇑*i*P Pdif 22 05 11.7 -1.2
MUD pmax pmax
comp=Z,15nm,0.9s
MUD Monsted U'grnd 101.42 336 ⇑*i*P Pdif 22 05 11.7 -1.2
comp=Z,15nm,0.9s
325A Bean Ranch, Si 101.42 54 ⇑P Pdif 22 05 14.1 +1.2
baz=101
Z26A Caprock 101.46 52 ⇑P Pdif 22 05 13.7 +0.6
baz=101
OKC Ostrava-Krasne 101.50 327 *e*P Pdif 22 05 12.9 -0.4
OKC *e* 22 15 45.1
OKC *e* 22 18 16.2
OKC MLR MLR
comp=Z,21µm,17.6s
OKC Ostrava-Krasne 101.50 327 P Pdif 22 05 14.2 +0.9
OKC Ostrava-Krasne 101.50 327 *e*PDIFF Pdif 22 05 12.9 -0.4
OKC *e*SKS 22 15 45.1
OKC *e*SP SP 22 18 16.2 -1.7
OKC *e*PKKP PKKPbc 22 21 47.7 +25
OKC AMS AMS 22 52 50.0
comp=Z,21µm,17.6s
GDL2 Guadalupe Moun 101.58 53 *e*Pdif Pdif 22 05 16.3 +2.6
comp=Z,9.1nm,1.2s
X27A F and S Farms, 101.58 50 ⇓P Pdif 22 05 15.1 +1.4
baz=102
425A Indio Mountain 101.63 55 ⇓P Pdif 22 05 15.1 +1.2
baz=102
PSZ Piszkesteto 101.64 325 P Pdif 22 05 15.0 +1.0
PSZ Piszkesteto 101.64 325 *e*Pdif Pdif 22 05 14.3 +0.3
comp=Z,91nm,1.7s
PSZ LR LR
comp=Z,20µm,20.0s
PSZ Piszkesteto 101.64 325 ⇑*e*P Pdif 22 05 14.1 +0.1
PSZ Piszkesteto 101.64 325 ⇑*i*P Pdif 22 05 13.2 -0.8
RDO Rodhopi 101.64 317 P Pdif 22 05 13.1 -0.9
PLD Plovdiv 101.74 318 P Pdif 22 05 14.0 -0.4
226A Malaga, Loving 101.84 53 ⇓P Pdif 22 05 15.8 +1.0
baz=102
Y27A Causey 101.84 51 ⇑P Pdif 22 05 16.1 +1.3
baz=102
MORC Moravsky Berou 101.86 327 P Pdif 22 05 16.6 +1.7
MORC Moravsky Berou 101.86 327 *e*Pdif Pdif 22 05 14.2 -0.7
comp=Z,26nm,0.9s
MORC Moravsky Berou 101.86 327 ⇑*i*P Pdif 22 05 15.1 +0.2
KSP Ksiaz 101.87 329 *e*P Pdif 22 05 15.1 +0.1
KSP *e*SKSac SKSac 22 15 45.5 -1.0
KSP *e*S Sdif 22 16 47.4 -2.0
KSP *e*SP SP 22 18 18.7 -3.0
KSP LMZ 22 53 21.6
comp=Z,40µm,19.0s
KSP Ksiaz 101.87 329 *e*P Pdif 22 05 15.1 +0.1
KSP *e* 22 09 21.3
KSP *e* 22 15 42.0
KSP *e*SP SP 22 18 18.2 -3.4
KSP *e*SS SS 22 23 57.0 +3.4
KSP MLR MLR
comp=Z,46µm,19.0s
PGB Panagyurishte 101.87 319 *i* P Pdif 22 05 17.9 +2.9
BZS Buzias 101.89 322 P Pdif 22 05 15.6 +0.5
BZS Buzias 101.89 322 ⇑*i*P Pdif 22 05 14.4 -0.7
VYHS Vyhne 101.91 326 *e*P Pdif 22 05 14.7 -0.4
VYHS pmax pmax
comp=Z,44nm,1.1s
VYHS Vyhne 101.91 326 *e*P Pdif 22 05 14.7 -0.4
comp=Z,44nm,1.1s
VYHS *e*PP PP 22 09 46.2 +19
VYHS Vyhne 101.91 326 PDIF Pdif 22 05 14.7 -0.4
VYHS *e* 22 09 46.2
RZN Rozhen 101.93 318 *i* P Pdif 22 05 14.4 -0.8
ECSD EROS Data Cent 101.93 40 *e*Pdif Pdif 22 05 15.7 +0.5
comp=Z,12nm,1.1s
ECSD LR LR
comp=Z,17µm,22.0s
PRK Paraskevi 102.03 315 P Pdif 22 05 15.0 -0.7
Z27A Tatum 102.03 52 ⇑P Pdif 22 05 16.2 +0.5
baz=102
BORG Borgarnes 102.07 353 PFAKE 22 05 30.0 +14
BORG LR LR
comp=Z,6µm,20.0s
KOLL Kolacno 102.09 326 *e*P Pdif 22 05 16.3 +0.3
KOLL *e* 22 09 29.9
KOLL Kolacno 102.09 326 PDIF Pdif 22 05 16.3 +0.3
KOLL *e*PP PP 22 09 29.9 +1.7
MSTX Muleshoe 102.11 51 ⇑P Pdif 22 05 17.4 +1.4
baz=102
DPC Dobruska-Polom 102.15 328 *e*P Pdif 22 05 15.8 -0.4
DPC *e* 22 15 48.2
DPC *e* 22 18 22.3
DPC MLR MLR
comp=Z,14µm,21.2s
DPC Dobruska-Polom 102.15 328 P Pdif 22 05 16.6 +0.4
DPC Dobruska-Polom 102.15 328 *e*PDIFF Pdif 22 05 15.8 -0.4
DPC *e*pP 22 05 41.5
DPC *e*x x 22 08 26.2
DPC *e*SKS 22 15 48.2
DPC *e*SP SP 22 18 22.3 -2.4
DPC *e*PKKP PKKPbc 22 21 42.6 +22
DPC AMS AMS 22 51 40.0
comp=Z,14µm,21.2s
127A Arkansas Junct 102.18 52 ⇓P Pdif 22 05 17.6 +1.3
baz=102
LRW Lerwick 102.18 343 *e*P Pdif 22 05 16.3 0.0
LRW *e* 22 08 31.4
LRW AMS AMS 22 42 37.4
comp=Z,16µm,45.3s
LRW Lerwick 102.18 343 P Pdif 22 05 16.3 0.0
LRW 22 08 31.4
LRW AMS AMS 22 42 37.4
comp=Z,16µm,45.3s
WAL1 Walls 102.21 343 *e*P Pdif 22 05 15.9 -0.6
WAL1 Walls 102.21 343 P Pdif 22 05 15.9 -0.6
UPC Upice 102.21 329 *e*PDIFF Pdif 22 05 16.4 -0.1
UPC *e*PKKP PKKPbc 22 21 43.5 +23
CBKS Cedar Bluff 102.22 45 PFAKE 22 05 30.0 +13
CBKS LR LR
comp=Z,11µm,19.0s
326A Caldwell Ranch 102.23 54 ⇓P Pdif 22 05 17.3 +0.7
baz=102
BUD Budapest 102.37 325 ⇑*e*P Pdif 22 05 17.3 +0.1
QSPA South Pole Qui 102.38 180 PKKPbc PKKPbc 22 21 17.5 -3.8
comp=Z,12nm,0.9s,baz=201,slow=2.3,SNR=11
QSPA South Pole Qui 102.38 180 PFAKE 22 05 30.0 +13
QSPA LR LR
comp=Z,9µm,21.0s
426A McDonald Obser 102.44 54 ⇓P Pdif 22 05 18.8 +1.3
baz=102
VTS Vitosha 102.46 319 P Pdif 22 05 18.0 +0.4
VTS Vitosha 102.46 319 P Pdif 22 05 17.2 -0.4
VTS Vitosha 102.46 319 *i* P Pdif 22 05 17.3 -0.3
227A Bennet, Jal 102.49 53 ⇑P Pdif 22 05 19.3 +1.6
baz=102
AMTX Amarillo 102.55 50 *e*Pdif Pdif 22 05 19.5 +1.5
comp=Z,13nm,0.8s
AMTX LR LR
comp=Z,6µm,19.0s
327A Balmorhea Ranc 102.59 54 ⇑P Pdif 22 05 19.7 +1.6
baz=103
526A Mary Lane Ranc 102.62 55 ⇓P Pdif 22 05 19.9 +1.6
baz=103
MMB Musomiste 102.62 318 *i* P Pdif 22 05 15.0 -3.3
VRAC Vranov 102.63 327 P Pdif 22 05 19.8 +1.4
VRAC Vranov 102.63 327 ⇑*i*P Pdif 22 05 18.8 +0.4
SMOL Smolenice 102.66 326 *e*P Pdif 22 05 19.0 +0.5
SMOL Smolenice 102.66 326 PDIF Pdif 22 05 19.0 +0.5
EYMN Ely 102.66 34 *e*Pdif Pdif 22 05 17.8 -0.7
comp=Z,11nm,0.9s
EYMN LR LR
comp=Z,14µm,20.0s
BSEG Bad Segeberg 102.68 334 *e*Pdiff Pdif 22 05 18.4 -0.2
BSEG *e*SKSac SKSac 22 15 47.3 -2.9
BSEG *e*PS PS 22 18 24.8 -17
BSEG Bad Segeberg 102.68 334 *e*P Pdif 22 05 18.4 -0.2
BSEG *e* 22 15 47.3
BSEG Bad Segeberg 102.68 334 *e*Pdif Pdif 22 05 18.4 -0.2
BSEG *e*SKSac SKSac 22 15 47.3 -2.9
BSEG *e*PS PS 22 18 24.8 -17
626A Big Bend Ranch 102.78 56 ⇓P Pdif 22 05 20.5 +1.5
baz=103
427A Hayter Ranch, 102.86 54 ⇑P Pdif 22 05 20.4 +1.0
baz=103
KKB Krupnik 102.91 319 *i* P Pdif 22 05 18.5 -1.1
PVCC Panska Ves 102.93 329 *e*P Pdif 22 05 19.5 -0.2
PVCC *e* 22 15 51.6
PVCC *e* 22 18 30.7
PVCC MLR MLR
comp=Z,16µm,17.1s
PVCC Panska Ves 102.93 329 P Pdif 22 05 20.5 +0.8
PVCC Panska Ves 102.93 329 *e*PDIFF Pdif 22 05 19.5 -0.2
PVCC *e*x x 22 08 28.9
PVCC *e*SKS 22 15 51.6
PVCC *e*SP SP 22 18 30.7 -2.1
PVCC AMS AMS 22 53 50.0
comp=Z,16µm,17.1s
SRS Serrai 102.94 318 P Pdif 22 05 18.6 -1.2
527A Woodward Rancht 102.97 55 ⇑P Pdif 22 05 21.3 +1.4
baz=103
BRG Berggiesshubel 103.02 330 *i* PDIF Pdif 22 05 19.8 -0.3
comp=Z,2.0nm,0.8s
BRG *i* 22 05 20.9
comp=Z,23nm,0.8s
BRG *e* 22 07 19.0
BRG *i* 22 08 30.2
comp=Z,18nm,1.1s
BRG PP PP 22 09 41.0 +6.0
BRG *i* 22 15 14.8
comp=Z,3.7nm,1.3s
BRG *i* 22 15 54.0
BRG *i* 22 18 29.0
BRG SKKP 22 24 31.0
BRG
comp=N,24µm,22.7s
BRG
comp=E,14µm,30.0s
BRG
comp=Z,26µm,19.1s
BRG Berggiesshubel 103.02 330 *i* P Pdif 22 05 19.8 -0.3
BRG 22 09 41.0
BRG *i* 22 15 54.0
BRG *i* 22 18 29.0
BRG pmax pmax
comp=Z,1.0nm,0.8s
BRG pmax pmax
comp=Z,2.0nm,1.3s
BRG MLR MLR
comp=N,14µm,22.7s
BRG MLR MLR
comp=Z,16µm,19.1s
328A Wristen Ranch, 103.12 53 ⇑P Pdif 22 05 21.7 +1.1
baz=103
CLL Collm 103.20 331 *e*Pdiff Pdif 22 05 20.6 -0.3
CLL *e*pPdiff 22 05 45.6
CLL *e*SKSac SKSac 22 15 48.7 -4.0
CLL *e*PS PS 22 18 28.5 -19
CLL Collm 103.20 331 *i* P Pdif 22 05 20.6 -0.3
CLL *e* 22 15 51.0
CLL *e*S Sdif 22 16 57.0 -3.4
CLL pmax pmax
comp=Z,11nm,0.9s
CLL MLR MLR
comp=Z,25µm,20.5s
CLL Collm 103.20 331 *i* Pdif Pdif 22 05 20.6 -0.3
comp=Z,32nm,0.9s
CLL *i* 22 08 31.2
CLL *i* PP PP 22 09 59.1 +23
CLL *e*SKS 22 15 51.0
CLL *e*Sdif Sdif 22 16 57.0 -3.4
CLL *e*PKKP PKKPbc 22 21 17.0 -0.8
CLL *e*SKKP 22 24 53.0
CLL *e*P'P' 22 29 21.0
CLL LR LR
comp=Z,25µm,20.5s
CLL Collm 103.20 331 *i* Pdif Pdif 22 05 20.6 -0.3
comp=Z,32nm,0.9s
CLL *e* 22 05 45.0
CLL *i* 22 08 31.2
comp=Z,51nm,1.7s
CLL *i* 22 08 36.7
CLL *e* 22 08 52.0
CLL *e*(PP) 22 09 26.0
CLL *i* PPmax 22 09 59.1
comp=Z,228nm,2.1s
CLL *i* 22 10 04.4
CLL *e*PPP 22 11 51.0
CLL *e*sPPP 22 12 13.0
CLL *e*SKSac SKSac 22 15 51.0 -1.7
CLL *e*SKKSac SKKSac 22 16 34.0 +0.1
CLL *e*Sdif Sdif 22 16 57.0 -3.4
CLL *i* SP SP 22 18 33.1 -2.5
CLL *e*SPP 22 19 28.0
CLL *e*PKKPbc PKKPbc 22 21 17.0 -0.8
CLL *i* pPKKPbc 22 21 39.4
comp=Z,52nm,1.9s
CLL *e* 22 22 06.0
CLL *e*sSS 22 24 48.0
CLL *e*SKKPdf 22 24 53.0
CLL *i* PcPP 22 25 34.6
CLL *e*sSSS 22 28 49.0
CLL *e*PPPrev 22 29 21.0
comp=Z,176nm,3.1s
CLL *e* 22 34 26.0
CLL LmH 22 47 00.0
comp=N,38µm,20.7s
CLL LmH 22 47 00.0
comp=E,29µm,21.1s
CLL LmV 22 55 00.0
comp=Z,25µm,20.5s
TREC Trest 103.22 328 *e*P Pdif 22 05 21.1 +0.1
TREC *e* 22 15 53.3
TREC *e* 22 18 35.7
TREC MLR MLR
comp=Z,23µm,22.6s
TREC Trest 103.22 328 *e*PDIFF Pdif 22 05 21.1 +0.1
TREC *e*pP 22 05 45.9
TREC *e*x x 22 08 28.8
TREC *e*SKS 22 15 53.3
TREC *e*SP SP 22 18 35.7 -0.3
TREC *e*PKKP PKKPbc 22 21 37.4 +20
TREC AMS AMS 22 52 00.0
comp=Z,23µm,22.6s
BARS Barje 103.23 320 P Pdif 22 05 21.9 +0.9
TXAR Lajitas Array 103.24 56 P Pdif 22 05 22.2 +1.1
TXAR Lajitas Array 103.24 56 Pdiff Pdif 22 05 22.2 +1.2
comp=Z,2.3nm,0.8s,baz=234,slow=3.1,SNR=18
TXAR PKiKP PKiKP 22 09 34.2 -6.5
comp=Z,3.5nm,0.9s,baz=284,slow=4.1,SNR=4.2
TXAR S SKSac 22 15 49.2 -4.6
comp=Z,0.5nm,0.8s,baz=90,slow=6.3,SNR=2.3
TXAR PKKPbc PKKPbc 22 21 16.1 -0.8
comp=Z,2.5nm,0.9s,baz=131,slow=5.1,SNR=7.0
TXAR PKPPKP 22 29 36.3
comp=Z,1.0nm,1.0s,baz=126,slow=3.6,SNR=5.7
TXAR Lajitas Array 103.24 56 Pdif Pdif 22 05 22.2 +1.2
PRU Pruhonice 103.28 329 *e*P Pdif 22 05 22.1 +0.9
PRU *e* 22 09 36.5
PRU *e* 22 15 52.9
PRU *e* 22 18 35.3
PRU MLR MLR
comp=Z,18µm,16.8s
PRU Pruhonice 103.28 329 *e*PDIFF Pdif 22 05 22.1 +0.9
PRU *e*sP 22 05 52.2
PRU *e*x x 22 08 22.3
PRU *e*PP PP 22 09 36.5 -0.4
PRU *e*SKS 22 15 52.9
PRU *e*SP SP 22 18 35.3 -1.2
PRU *e*PKKP PKKPbc 22 21 37.7 +20
PRU AMS AMS 22 54 00.0
comp=Z,18µm,16.8s
PRA Prague 103.28 329 ⇑PDIFF Pdif 22 05 22.0 +0.8
PRA pP 22 05 47.0
PRA PP PP 22 09 41.0 +4.1
PRA SKS 22 15 52.0
PRA SP SP 22 18 29.0 -7.6
PKSM Moragy 103.31 324 P Pdif 22 05 22.4 +1.0
PKSM Moragy 103.31 324 ⇑*i*P Pdif 22 05 21.3 -0.1
GRUS Gruza 103.35 321 P Pdif 22 05 22.5 +0.9
PLG Polygyros 103.41 317 P Pdif 22 05 20.9 -0.9
627A Terlingua Ranc 103.42 55 ⇑P Pdif 22 05 23.0 +1.2
baz=103
428A Kincaid Ranch, 103.48 54 ⇓P Pdif 22 05 23.6 +1.4
baz=103
VAY Valandovo 103.51 318 P Pdif 22 05 22.1 -0.2
VAY Valandovo 103.51 318 P Pdif 22 05 22.1 -0.2
VAY Valandovo 103.51 318 ⇓*i*Pdi Pdif 22 05 22.2 -0.1
APE Apeiranthos 103.54 313 ⇑P Pdif 22 05 21.0 -1.4
APE Apeiranthos 103.54 313 ⇑*i*P Pdif 22 05 21.0 -1.4
STIP Stip 103.57 319 ⇓*e*Pdi Pdif 22 05 22.6 0.0
528A Cox Ranch, San 103.62 55 ⇓P Pdif 22 05 23.9 +1.1
baz=104

NRDL	**Niedersach Rie**	**103.76**	**333**	*e*Pdiff	Pdif	22 05 23.6	+0.2
NRDL				*e*SKSac	SKSac	22 15 51.7	-3.6
NRDL				*e*PS	PS	22 18 35.3	-18
628A	**Black Gap, Mar**	**103.81**	**55**	⇓P	Pdif	22 05 24.9	+1.3
	baz=104						
CONA	**Conrad Observa**	**103.85**	**327**	⇑*i* Pdiff	Pdif	22 05 23.4	-0.4
	comp=Z,87nm,0.9s,SNR=62						
SKO	**Skopje**	**103.91**	**319**	⇓*e*Pdi	Pdif	22 05 25.8	+1.8
SKO	**Skopje**	**103.91**	**319**	P	Pdif	22 05 24.7	+0.7
TANN	**Tannenbergstha**	**104.04**	**330**	*e*Pdiff	Pdif	22 05 24.7	+0.1
TANN				*e*SKSac	SKSac	22 15 54.0	-2.6
TANN				*e*PS	PS	22 18 37.7	-18
CLZ	**Clausthal**	**104.08**	**332**	*e*Pdiff	Pdif	22 05 25.3	+0.5
CLZ				*e*SKSac	SKSac	22 15 53.9	-2.9
CLZ				*e*PS	PS	22 18 38.3	-18
CLZ	**Clausthal**	**104.08**	**332**	*e*P	Pdif	22 05 25.3	+0.5
CLZ				*e*		22 15 53.9	
CLZ	**Clausthal**	**104.08**	**332**	*e*Pdif	Pdif	22 05 25.3	+0.5
CLZ				*e*SKSac	SKSac	22 15 53.9	-2.9
CLZ				*e*PS	PS	22 18 38.3	-18
BBLS	**Lazići**	**104.16**	**322**	P	Pdif	22 05 27.0	+1.8
NKC	**Novy Kostel**	**104.16**	**330**	*e*P	Pdif	22 05 24.9	-0.3
NKC				*e*		22 15 57.9	
NKC				*e*		22 18 42.4	
NKC				MLR	MLR		
	comp=Z,20µm,17.8s						
NKC	**Novy Kostel**	**104.16**	**330**	*e*PDIFF	Pdif	22 05 24.9	-0.3
NKC				*ex*	x	22 08 27.4	
NKC				*e*SKS		22 15 57.9	
NKC				*e*SP	SP	22 18 42.4	-3.4
NKC				*e*PKKP	PKKPbc	22 21 35.8	+21
NKC				AMS	AMS	22 53 10.0	
	comp=Z,20µm,17.8s						
LIT	**Litokhoron**	**104.18**	**317**	P	Pdif	22 05 24.3	-0.9
KSU1	**Kansas State U**	**104.24**	**44**	PFAKE		22 05 40.0	+15
KSU1				LR	LR		
	comp=Z,11µm,21.0s						
ORE	**Reay**	**104.24**	**343**	*e*P	Pdif	22 05 25.8	+0.3
ORE	**Reay**	**104.24**	**343**	P	Pdif	22 05 25.8	+0.3
MOX	**Moxa**	**104.30**	**331**	*e*PDIFF	Pdif	22 05 25.1	-0.7
MOX				*e*		22 08 38.8	
MOX				*e*		22 09 44.2	
MOX				*e*SKS		22 16 00.0	
MOX							
	comp=Z,15µm,21.0s						
MOX	**Moxa**	**104.30**	**331**	*e*Pdiff	Pdif	22 05 25.9	+0.1
MOX				*e*SKSac	SKSac	22 15 54.7	-3.1
MOX				*e*PS	PS	22 18 40.3	-18
MOX	**Moxa**	**104.30**	**331**	*e*P	Pdif	22 05 25.1	-0.7
MOX				*e*		22 09 44.2	
MOX				*e*		22 16 00.0	
MOX				MLR	MLR		
	comp=Z,2µm,21.0s						
MOX	**Moxa**	**104.30**	**331**	*e*Pdif	Pdif	22 05 25.1	-0.7
MOX				*e*		22 08 38.8	
MOX				*e*		22 09 44.2	
MOX				*e*SKS		22 16 00.0	
MOX				LR	LR		
	comp=Z,15µm,21.0s						
KHC	**Kasperske Hory**	**104.30**	**329**	*e*P	Pdif	22 05 25.9	+0.1
KHC				*e*		22 15 58.0	
KHC				MLR	MLR		
	comp=Z,18µm,21.1s						
KHC	**Kasperske Hory**	**104.30**	**329**	*e*Pdif	Pdif	22 05 25.8	0.0
	comp=Z,13nm,1.0s						
KHC	**Kasperske Hory**	**104.30**	**329**	*e*PDIFF	Pdif	22 05 25.9	+0.1
KHC				*ex*	x	22 05 30.0	
KHC				*e*pP		22 05 55.8	
KHC				*ex*	x	22 08 35.2	
KHC				*ex*	x	22 08 52.0	
KHC				*ex*	x	22 09 04.0	
KHC				*ex*	x	22 09 36.0	
KHC				*ex*	x	22 10 17.5	
KHC				*e*SKS		22 15 58.0	
KHC				*e*SP	SP	22 18 41.7	-5.6
KHC				*e*PKKP	PKKPbc	22 21 33.0	+19
KHC				AMS	AMS	22 53 00.0	
	comp=Z,18µm,21.1s						
KRUS	**Krusevo**	**104.34**	**319**	⇓*i* Pdi	Pdif	22 05 25.8	-0.2
GEC2	**GERESS Array S**	**104.42**	**328**	*e*Pdiff	Pdif	22 05 26.4	+0.1
GEC2				*e*SKSac	SKSac	22 15 55.4	-3.1
GEC2				*e*PS	PS	22 18 41.9	-18
GEC2	**GERESS Array S**	**104.42**	**328**	*e*P	Pdif	22 05 26.4	+0.1
GEC2				*e*		22 15 55.4	
GEC2	**GERESS Array S**	**104.42**	**328**	*e*Pdif	Pdif	22 05 26.4	+0.1
GEC2				*e*SKSac	SKSac	22 15 55.4	-3.1
GEC2				*e*PS	PS	22 18 41.9	-18
GERES	**GERESS Array B**	**104.42**	**328**	P	Pdif	22 05 25.9	-0.4
GERES	**GERESS Array B**	**104.42**	**328**	Pdiff	Pdif	22 05 25.9	-0.4
	comp=Z,6.9nm,0.8s,baz=51,slow=3.9,SNR=59						
GERES				PKiKP	PKiKP	22 09 35.6	-6.7
	comp=Z,1.7nm,0.7s,baz=52,slow=5.2,SNR=2.7						
GERES				S	SKSac	22 15 56.6	-1.9
	comp=Z,0.2nm,0.6s,baz=21,slow=38,SNR=2.3						
GERES				PKKPbc	PKKPbc	22 21 12.4	-1.7
	comp=Z,3.0nm,0.9s,baz=192,slow=2.6,SNR=21						
GERES				PKPPKP		22 29 34.3	
	comp=Z,0.4nm,0.8s,baz=122,slow=2.0,SNR=5.6						
GERES	**GERESS Array B**	**104.42**	**328**	Pdif	Pdif	22 05 25.9	-0.4
ARSA	**Arzberg**	**104.44**	**326**	⇑*i* Pdiff	Pdif	22 05 27.0	+0.6
	comp=Z,50nm,0.9s,SNR=27						
LAST	**Lasithi**	**104.44**	**312**	P	Pdif	22 05 25.8	-0.6
BCI	**Bajram Curri**	**104.57**	**320**	*e*PN	Pdif	22 05 27.0	0.0
ROTZ	**Rotzenmuhle**	**104.58**	**330**	*e*Pdiff	Pdif	22 05 27.6	+0.6
ROTZ				*e*pPdiff		22 05 52.7	
ROTZ				*e*SKSac	SKSac	22 15 57.4	-1.8
ROTZ				*e*PS	PS	22 18 43.6	-18
WET	**Wettzell**	**104.65**	**329**	*e*Pdiff	Pdif	22 05 27.7	+0.4
WET				*e*SKSac	SKSac	22 15 57.0	-2.5
WET				*e*PS	PS	22 18 44.2	-18
WET	**Wettzell**	**104.65**	**329**	*e*P	Pdif	22 05 27.7	+0.4
WET				*e*		22 15 57.0	
WET	**Wettzell**	**104.65**	**329**	*e*Pdif	Pdif	22 05 27.7	+0.4
WET				*e*SKSac	SKSac	22 15 57.0	-2.5
WET				*e*PS	PS	22 18 44.2	-18
MOA	**Molln**	**104.75**	**327**	*i* Pdiff	Pdif	22 05 28.9	+1.1
	SNR=20						
WMOK	**Wichita Mounta**	**104.76**	**49**	*e*P	Pdif	22 05 28.6	+0.8
WMOK				pmax	pmax		
	comp=Z,21nm,1.4s						
WMOK				MLR	MLR		
	comp=Z,10µm,22.0s						
WMOK	**Wichita Mounta**	**104.76**	**49**	*e*Pdif	Pdif	22 05 28.6	+0.7
	comp=Z,21nm,1.4s						
WMOK				LR	LR		
	comp=Z,10µm,22.0s						
OHR	**Ohrid**	**104.77**	**319**	⇓*i* Pdi	Pdif	22 05 27.6	-0.2
PUK	**Puka**	**104.85**	**320**	*e*PN	Pdif	22 05 28.5	+0.3
MVH1	**Achvaich**	**104.89**	**343**	*e*P	Pdif	22 05 27.9	-0.4
MVH1	**Achvaich**	**104.89**	**343**	P	Pdif	22 05 27.9	-0.4
MCD	**Coleburn Disti**	**104.90**	**342**	*e*P	Pdif	22 05 27.7	-0.7
MCD	**Coleburn Disti**	**104.90**	**342**	P	Pdif	22 05 27.7	-0.7
IBBN	**Ibbenburen**	**104.92**	**334**	*e*Pdiff	Pdif	22 05 28.6	0.0
IBBN				*e*SKSac	SKSac	22 15 57.1	-3.5
IBBN				*e*PS	PS	22 18 47.1	-18
UBBA	**Unterbreizbach**	**104.94**	**331**	*e*Pdiff	Pdif	22 05 28.9	+0.3
UBBA				*e*pPdiff		22 05 53.4	
UBBA				*e*SKSac	SKSac	22 15 57.8	-2.9
UBBA				*e*PS	PS	22 18 47.0	-18
SIVA	**Sivas**	**105.00**	**312**	P	Pdif	22 05 27.9	-1.0
SCIA	**State Center**	**105.02**	**40**	PFAKE		22 09 50.0	+6.3
SCIA				LR	LR		
	comp=Z,15µm,21.0s						
SISC	**Sisak**	**105.03**	**324**	P	Pdif	22 05 29.6	+0.5
SISC	**Sisak**	**105.03**	**324**	*i* P	Pdif	22 05 29.6	+0.5
WIT	**Witteveen**	**105.03**	**334**	*e*Pdif	Pdif	22 05 35.9	+6.9
WIT	**Witteveen**	**105.03**	**334**	*e*PP	PP	22 09 50.4	+0.6
	comp=Z,484nm,2.4s						
WIT	**Witteveen**	**105.03**	**334**	*ex*	x	22 10 13.1	
COWI	**Conover**	**105.05**	**35**	PFAKE		22 09 50.0	+6.4
COWI				LR	LR		
	comp=Z,17µm,20.0s						
SOKA	**Soboth**	**105.06**	**326**	⇑*i* Pdiff	Pdif	22 05 28.6	-0.5
	comp=Z,52nm,1.2s						
GRA1	**Grafenberg Arr**	**105.12**	**330**	*e*Pdif	Pdif	22 05 29.9	+0.5
GRA1				*e*SKSac	SKSac	22 15 59.1	-2.5
GRA1				*e*PS	PS	22 18 48.7	-18
GRF	**Grafenberg Arr**	**105.12**	**330**	*e*Pdiff	Pdif	22 05 29.9	+0.5
GRF				*e*pPdiff		22 05 55.1	
GRF				*e*SKSac	SKSac	22 15 59.1	-2.5
GRF				*e*PS	PS	22 18 48.7	-18
GRF	**Grafenberg Arr**	**105.12**	**330**	*e*P	Pdif	22 05 29.9	+0.5
GRF				*e*		22 15 59.1	
TIR	**Tirane**	**105.24**	**319**	PFAKE		22 10 00.0	+16
TIR				LR	LR		
	comp=Z,19µm,21.0s						
TIR	**Tirane**	**105.24**	**319**	P	Pdif	22 05 29.9	-0.1
CRES	**Cresnjev**	**105.33**	**325**	P	Pdif	22 05 31.5	+1.1
MDO	**Dochfour**	**105.34**	**343**	*e*P	Pdif	22 05 30.6	+0.1
MDO	**Dochfour**	**105.34**	**343**	P	Pdif	22 05 30.6	+0.1
EFP	**Efpalio**	**105.41**	**316**	P	Pdif	22 05 29.3	-1.4
OBKA	**Obir**	**105.42**	**326**	*i* Pdiff	Pdif	22 05 32.1	+1.4
	SNR=18						
PDKS	**Podkum**	**105.45**	**325**	*e*Pdiff	Pdif	22 05 30.4	-0.5
PDKS				*e*		22 08 35.0	
PDKS				*e*PP	PP	22 09 55.7	+2.5
PDKS				*e*		22 14 03.2	
PDKS				*e*		22 14 21.5	
PDKS				*e*		22 16 07.4	
PDKS				*e*		22 18 60.0	
PDKS				*e*		22 29 06.3	
PDKS	**Podkum**	**105.45**	**325**	*e*Pdif	Pdif	22 05 30.4	-0.5
PDKS				*e*		22 08 35.0	
PDKS				*e*PP	PP	22 09 55.7	+2.5
PDKS				*e*		22 14 03.2	
PDKS				*e*		22 14 21.5	
PDKS				*e*		22 16 07.4	
PDKS				*e*		22 18 60.0	
PDKS				*e*		22 29 06.3	
LAKA	**Lakka**	**105.45**	**316**	P	Pdif	22 05 29.9	-1.0
KARN	**Karanos**	**105.47**	**312**	P	Pdif	22 05 30.3	-0.7
KAC	**Achnashellach**	**105.57**	**343**	*e*P	Pdif	22 05 31.6	+0.2
KAC	**Achnashellach**	**105.57**	**343**	P	Pdif	22 05 31.6	+0.2
WTSB	**Winterswijk**	**105.58**	**334**	*e*Pdif	Pdif	22 05 38.3	+6.8
WTSB	**Winterswijk**	**105.58**	**334**	*ex*	x	22 08 43.5	
WTSB	**Winterswijk**	**105.58**	**334**	*e*PP	PP	22 09 53.5	-0.4
	comp=Z,199nm,2.4s						
WTSB	**Winterswijk**	**105.58**	**334**	*ex*	x	22 10 16.1	
RJOB	**Jochberg**	**105.59**	**328**	*e*Pdiff	Pdif	22 05 32.1	+0.6
RJOB				*e*SKSac	SKSac	22 15 59.4	-4.4
RJOB				*e*PS	PS	22 18 54.7	-18
GVD	**Gavdhos**	**105.60**	**312**	*e*PKP	PKiKP	22 09 43.7	-1.2
GVD				*e*PP	PP	22 09 52.7	-2.2
BOJS	**Bojanci**	**105.64**	**325**	*e*Pdiff	Pdif	22 05 31.5	-0.3
BOJS				*e*PP	PP	22 09 57.4	+2.8
BOJS				*e*		22 10 19.9	
BOJS				*e*		22 14 25.0	
BOJS				*e*SKSac	SKSac	22 16 01.0	-3.1
BOJS				*e*SKKSac	SKKSac	22 16 47.5	-3.9
BOJS				*e*		22 29 04.9	
BOJS				*e*		22 29 39.1	
BOJS	**Bojanci**	**105.64**	**325**	*e*Pdif	Pdif	22 05 31.5	-0.3
BOJS				*e*PP	PP	22 09 57.4	+2.8
BOJS				*e*		22 10 19.9	
BOJS				*e*		22 14 25.0	
BOJS				*e*SKSac	SKSac	22 16 01.0	-3.1
BOJS				*e*SKKSac	SKKSac	22 16 47.5	-3.9
BOJS				*e*		22 29 04.9	
BOJS				*e*		22 29 39.1	
KBA	**Koelnbreinsper**	**105.72**	**327**	*i* Pdiff	Pdif	22 05 32.8	+0.7
	SNR=12						
LJU	**Ljubljana**	**105.72**	**326**	*e*P	Pdif	22 05 32.5	+0.4
LJU				*e*		22 09 57.5	
LJU				*e*		22 16 03.0	
LJU				*e*		22 16 48.0	
LJU	**Ljubljana**	**105.72**	**326**	*e*Pdiff	Pdif	22 05 32.5	+0.4
LJU				*e*PP	PP	22 09 57.5	+2.3
LJU				*e*SKSac	SKSac	22 16 03.0	-1.4
LJU				*e*SKKSac	SKKSac	22 16 48.0	-3.9
LJU	**Ljubljana**	**105.72**	**326**	*e*Pdif	Pdif	22 05 32.5	+0.4
LJU				*e*PP	PP	22 09 57.5	+2.3
LJU				*e*SKSac	SKSac	22 16 03.0	-1.4
LJU				*e*SKKSac	SKKSac	22 16 48.0	-3.9
STON	**Ston**	**105.75**	**322**	P	Pdif	22 05 25.5	-6.7
STON	**Ston**	**105.75**	**322**	*i* P	Pdif	22 05 25.5	-6.7
BUG	**Bochum--Univer**	**105.75**	**333**	*e*Pdiff	Pdif	22 05 32.0	-0.2
BUG				*e*SKSac	SKSac	22 16 01.7	-2.6
BUG				*e*PS	PS	22 18 55.2	-18
KPL	**Plockton**	**105.80**	**343**	*e*P	Pdif	22 05 32.4	0.0
KPL				*e*		22 09 15.0	
KPL				AMS	AMS	22 43 30.6	
	comp=Z,14µm,42.6s						
KPL	**Plockton**	**105.80**	**343**	P	Pdif	22 05 32.4	0.0
KPL				*e*		22 09 15.0	
KPL				AMS	AMS	22 43 30.6	
	comp=Z,14µm,42.6s						
MYKA	**Terra Mystica**	**105.84**	**327**	⇑*i* Pdiff	Pdif	22 05 31.5	-1.2
	comp=Z,19nm,0.9s						
JCT	**Junction City**	**105.84**	**53**	*e*P	Pdif	22 05 33.7	+1.1
JCT				pmax	pmax		
	comp=Z,12nm,1.0s						
JCT				MLR	MLR		
	comp=Z,10µm,20.0s						
JCT	**Junction City**	**105.84**	**53**	*e*Pdif	Pdif	22 05 33.7	+1.1
	comp=Z,12nm,1.0s						
JCT				*e*PKP	PKiKP	22 09 45.5	0.0
JCT				LR	LR		
	comp=Z,10µm,20.0s						
KMBO	**Kilima Mbogo**	**105.87**	**272**	P	Pdif	22 05 33.5	+0.7
KMBO						22 09 55.3	
KMBO				S	SKSac	22 16 08.3	+2.0
KMBO				MLR	MLR		
	comp=Z,8µm,21.0s						
KMBO	**Kilima Mbogo**	**105.87**	**272**	Pdiff	Pdif	22 05 33.5	+0.7
	comp=Z,3.8nm,1.1s,baz=52,slow=7.7,SNR=5.6						
KMBO				PP	PP	22 09 55.2	-2.6
	comp=Z,2.5nm,0.9s,baz=47,slow=12,SNR=3.9						
KMBO				S	SKSac	22 16 08.3	+2.0
	comp=Z,0.6nm,0.8s,baz=15,slow=22,SNR=7.4						
KMBO	**Kilima Mbogo**	**105.87**	**272**	Pdif	Pdif	22 05 33.5	+0.7
KMBO				*e*PKP	PKiKP	22 09 45.0	-1.1
KMBO				PP	PP	22 09 55.2	-2.6
KMBO				S	SKSac	22 16 08.3	+2.0
KMBO				LR	LR		
	comp=Z,8µm,21.0s						
IGT	**Igoumenitsa**	**105.90**	**318**	P	Pdif	22 05 32.2	-0.7
SRN	**Sarande**	**105.93**	**318**	*e*PN	Pdif	22 05 27.5	-5.5
CEY	**Cerknica**	**105.96**	**325**	P	Pdif	22 05 33.0	-0.2
ITM	**Ithomi**	**106.02**	**315**	P	Pdif	22 05 31.8	-1.6
CADS	**Cadrg**	**106.04**	**326**	*e*Pdiff	Pdif	22 05 31.0	-2.5
CADS				*e*		22 05 52.3	
CADS				*e*SKSac	SKSac	22 16 00.5	-5.3
CADS				*e*		22 29 06.9	
CADS				*e*		22 29 35.5	
CADS	**Cadrg**	**106.04**	**326**	*e*Pdif	Pdif	22 05 31.0	-2.5
CADS				*e*		22 05 52.3	
CADS				*e*SKSac	SKSac	22 16 00.5	-5.3
CADS				*e*		22 29 06.9	
CADS				*e*		22 29 35.5	
JAVS	**Javornik**	**106.07**	**326**	*e*PP	PP	22 09 59.5	+1.8
JAVS				*e*		22 10 21.3	
JAVS				*e*SKSac	SKSac	22 16 03.0	-3.0
JAVS				*e*SKKSac	SKKSac	22 16 49.5	-4.8
VOY	**Vojsko**	**106.08**	**326**	*e*Pdiff	Pdif	22 05 32.9	-0.8
VOY				*e*		22 05 34.3	
VOY				*e*		22 05 40.4	
VOY				*e*		22 06 00.8	
VOY				*e*SKSac	SKSac	22 16 04.0	-2.0
VOY	**Vojsko**	**106.08**	**326**	*e*Pdif	Pdif	22 05 32.9	-0.8
VOY				*e*		22 05 34.3	
VOY				*e*		22 05 40.4	
VOY				*e*		22 06 00.8	
VOY				*e*SKSac	SKSac	22 16 04.0	-2.0
TNS	**Taunus Mts**	**106.08**	**332**	*e*Pdiff	Pdif	22 05 34.1	+0.4
TNS				*e*SKSac	SKSac	22 16 04.1	-1.7
TNS				*e*PS	PS	22 18 59.1	-18
TNS	**Taunus Mts**	**106.08**	**332**	*e*P	Pdif	22 05 34.1	+0.4
TNS				*e*		22 16 04.1	
TNS	**Taunus Mts**	**106.08**	**332**	*e*Pdif	Pdif	22 05 34.1	+0.4
TNS				*e*SKSac	SKSac	22 16 04.1	-1.7
TNS				*e*PS	PS	22 18 59.1	-18
FUR	**Furstenfeldbru**	**106.09**	**329**	*e*Pdiff	Pdif	22 05 34.3	+0.6
FUR				*e*SKSac	SKSac	22 16 01.8	-4.2
FUR				*e*PS	PS	22 18 59.1	-18
FUR	**Furstenfeldbru**	**106.09**	**329**	*e*P	Pdif	22 05 34.3	+0.6
FUR				*e*		22 16 01.8	
FUR	**Furstenfeldbru**	**106.09**	**329**	*e*Pdif	Pdif	22 05 34.3	+0.6
FUR				*e*SKSac	SKSac	22 16 01.8	-4.2
FUR				*e*PS	PS	22 18 59.1	-18
KAR1	**Arisaig**	**106.21**	**343**	*e*P	Pdif	22 05 34.4	+0.1
KAR1	**Arisaig**	**106.21**	**343**	P	Pdif	22 05 34.4	+0.1
JFWS	**Jewell Farm**	**106.28**	**38**	PFAKE		22 10 00.0	+14
JFWS				LR	LR		
	comp=Z,29µm,22.0s						
TOD	**Tromm**	**106.33**	**331**	*e*P	PP	22 10 00.2	+0.7
TRI	**Trieste**	**106.35**	**326**	*e*P	Pdif	22 05 33.3	-1.6
TRI				pmax	pmax		
	comp=Z,29nm,0.9s						
TRI				MLR	MLR		
	comp=Z,16µm,20.0s						
TRI	**Trieste**	**106.35**	**326**	*e*Pdif	Pdif	22 05 33.3	-1.6
	comp=Z,30nm,0.9s						
TRI				LR	LR		
	comp=Z,16µm,20.0s						
ABTA	**Abfaltersbach**	**106.37**	**327**	*i* Pdiff	Pdif	22 05 35.7	+0.7
	SNR=9.1						
EAB	**Aberfoyle**	**106.39**	**342**	*e*P	Pdif	22 05 35.2	+0.2
EAB	**Aberfoyle**	**106.39**	**342**	P	Pdif	22 05 35.2	+0.2
EAU	**Auchinoon**	**106.40**	**341**	*e*P	Pdif	22 05 35.2	+0.1
EAU	**Auchinoon**	**106.40**	**341**	P	Pdif	22 05 35.2	+0.1
NVLJ	**Novalja**	**106.43**	**324**	P	Pdif	22 05 34.4	-0.8
NVLJ	**Novalja**	**106.43**	**324**	*i* P	Pdif	22 05 34.4	-0.8
STU	**Stuttgart**	**106.72**	**330**	*e*Pdiff	Pdif	22 05 36.6	+0.1
STU				*e*SKSac	SKSac	22 16 05.6	-3.1
STU				*e*PS	PS	22 19 04.7	-19
STU	**Stuttgart**	**106.72**	**330**	*e*P	Pdif	22 05 37.2	+0.7
STU	**Stuttgart**	**106.72**	**330**	*e*Pdif	Pdif	22 05 37.2	+0.6
ABH	**Alteburg**	**106.73**	**332**	*e*P	PKiKP	22 09 43.4	-3.2
ESK	**Eskdalemuir**	**106.76**	**341**	*e*P	Pdif	22 05 36.2	-0.5
ESK				*e*		22 09 58.3	
ESK				AMS	AMS	22 49 00.5	
	comp=Z,17µm,30.0s						
ESK	**Eskdalemuir**	**106.76**	**341**	P	Pdif	22 05 36.2	-0.5
ESK				*e*		22 09 58.3	
ESK				AMS	AMS	22 49 00.5	
	comp=Z,17µm,30.0s						
ESK	**Eskdalemuir**	**106.76**	**341**	PFAKE		22 10 00.0	+14
ESK				LR	LR		
	comp=Z,12µm,19.0s						
HGN	**Heimansgroeve**	**106.83**	**333**	*e*Pdif	Pdif	22 05 43.0	+6.0
HGN	**Heimansgroeve**	**106.83**	**333**	*e*PP	PP	22 10 02.8	-0.2
	comp=Z,145nm,2.4s						
HGN	**Heimansgroeve**	**106.83**	**333**	*ex*	x	22 10 25.9	
HGN	**Heimansgroeve**	**106.83**	**333**	*e*SKS	SKSac	22 16 03.7	-5.4
HGN	**Heimansgroeve**	**106.83**	**333**	*e*SKSP	SP	22 19 04.9	-8.4
HGN	**Heimansgroeve**	**106.83**	**333**	*e*SS	SS	22 24 57.4	-3.8
ECK	**Cauldkaine Hil**	**106.85**	**341**	*e*P	Pdif	22 05 37.2	+0.1
ECK	**Cauldkaine Hil**	**106.85**	**341**	P	Pdif	22 05 37.2	+0.1
MEM	**Membach**	**106.91**	**333**	P	Pdif	22 05 42.4	+5.0
MEM				PP	PP	22 10 04.6	+0.9
MEM				PKKPdf	PKKPdf	22 21 21.8	+3.8
BEBN	**Eben Emael**	**106.92**	**333**	PP	PP	22 10 05.3	+1.6
BEBN				PKKPdf	PKKPdf	22 21 22.2	+4.2
RUP	**Ruppelstein**	**107.08**	**332**	*e*P	PKiKP	22 09 41.7	-5.5
LANF	**Langenberg**	**107.24**	**331**	*e*P	PKiKP	22 09 44.5	-3.1
LANF	**Langenberg**	**107.24**	**331**	*e*P	PKiKP	22 09 44.5	-3.1
BCLA	**Clavier**	**107.35**	**333**	PP	PP	22 10 07.7	+0.8
BCLA				PKKPdf	PKKPdf	22 21 19.4	+2.3
BFO	**Black Forest**	**107.44**	**330**	*e*Pdiff	Pdif	22 05 39.7	0.0
BFO				*e*SKSac	SKSac	22 16 08.5	-3.4
BFO				*e*PS	PS	22 19 11.9	-19
BFO	**Black Forest**	**107.44**	**330**	*e*P	Pdif	22 05 39.7	0.0
BFO				*e*		22 16 08.5	
BFO				MLR	MLR		
	comp=Z,18µm,19.0s						
BFO	**Black Forest**	**107.44**	**330**	*e*Pdif	Pdif	22 05 39.7	0.0
BFO				*e*SKSac	SKSac	22 16 08.5	-3.4
BFO				*e*PS	PS	22 19 11.9	-19
BFO				LR	LR		
	comp=Z,18µm,19.0s						
UCC	**Uccle**	**107.48**	**334**	PP	PP	22 10 09.1	+1.3
UCC				PKKPbc	PKKPbc	22 21 06.7	+2.0
UCC				PKKPdf	PKKPdf	22 21 19.1	+2.1
WLF	**Walferdange**	**107.52**	**332**	P	Pdif	22 05 41.2	+1.2
	comp=Z,20nm,2.0s						
WLF				PP	PP	22 10 09.2	+1.1
WLF				PKKPdf	PKKPdf	22 21 18.9	+2.0
WLF	**Walferdange**	**107.52**	**332**	*e*Pdiff	Pdif	22 05 40.9	+0.8
WLF				*ep*Pdiff		22 06 05.3	
WLF				*e*SKSac	SKSac	22 16 10.9	-1.3
WLF				*e*PS	PS	22 19 13.5	-18
WLF	**Walferdange**	**107.52**	**332**	*e*P	Pdif	22 05 41.2	+1.1
WLF				pmax	pmax		
	comp=Z,37nm,1.6s						
WLF				MLR	MLR		
	comp=Z,19µm,21.0s						
WLF	**Walferdange**	**107.52**	**332**	*e*Pdif	Pdif	22 05 41.1	+1.1
	comp=Z,37nm,1.6s						
WLF				LR	LR		
	comp=Z,19µm,21.0s						
XDE	**Dent Fell**	**107.53**	**340**	*e*P	Pdif	22 05 40.2	+0.1
XDE	**Dent Fell**	**107.53**	**340**	P	Pdif	22 05 40.2	+0.1
GAL1	**Galloway**	**107.62**	**341**	*e*P	Pdif	22 05 40.3	-0.3
GAL1				*e*		22 09 55.5	
GAL1				AMS	AMS	22 47 18.7	
	comp=Z,13µm,32.7s						
GAL1	**Galloway**	**107.62**	**341**	P	Pdif	22 05 40.3

MENF	Mencas	108.59	335	eP	PKiKP	22 09 43.5	-6.5
HAU	Haudompre	108.61	331	eP	Pdif	22 05 45.2	+0.2
	comp=Z,20nm,1.2s						
HAU				eMLR	MLR		
	comp=Z,12μm,21.5s						
HAU	Haudompre	108.61	331	eP	Pdif	22 05 45.2	+0.2
HAU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HAU				MLR	MLR		
	comp=Z,12μm,21.5s						
HAU	Haudompre	108.61	331	eP	Pdif	22 05 45.2	+0.2
	comp=Z,9.9nm,1.2s						
HAU				LR	LR		
	comp=Z,12μm,21.5s						
AQU	L'Aquila	108.62	323	ePdif	Pdif	22 05 46.6	+1.6
	comp=Z,17nm,1.2s						
AQU				LR	LR		
	comp=Z,18μm,21.0s						
AQU	L'Aquila	108.62	323	i P	Pdif	22 05 46.9	+1.9
MIAR	Mount Ida	108.62	47	PFAKE		22 10 00.0	+9.4
MIAR				LR	LR		
	comp=Z,11μm,20.0s						
THEF	They Montfort	108.63	331	eP	PKiKP	22 09 44.7	-5.5
THEF	They Montfort	108.63	331	eP	PKiKP	22 09 44.7	-5.5
VMG	Vicchio	108.67	325	P	Pdif	22 05 48.0	+2.8
VVLD	Villa Vallelon	108.78	323	P	Pdif	22 05 46.4	+0.7
PTQR	Pietraquaria	108.82	323	P	Pdif	22 05 47.0	+1.1
FIAM	Fiamignano	108.84	323	P	Pdif	22 05 46.8	+0.9
WLF1	Llynfaes	108.84	340	eP	Pdif	22 05 45.3	-0.7
WLF1	Llynfaes	108.84	340	P	Pdif	22 05 45.3	-0.7
LOMF	Lomont	108.85	330	eP	PKiKP	22 09 45.6	-5.0
LOMF	Lomont	108.85	330	eP	PKiKP	22 09 45.6	-5.0
MEZF	Maizieres J'vi	108.86	332	eP	Pdif	22 05 46.9	+0.8
HLM1	Long Mynd	108.96	339	eP	Pdif	22 05 46.2	-0.3
HLM1	Long Mynd	108.96	339	P	Pdif	22 05 46.2	-0.3
DMUB	Kingscourt	109.12	342	eP	PP	22 10 14.1	-5.4
HKT	Hockley	109.16	52	PFAKE		22 10 00.0	+8.3
HKT				LR	LR		
	comp=Z,12μm,20.0s						
VLC	Villacollemand	109.18	326	PFAKE		22 10 00.0	+8.7
VLC				LR	LR		
	comp=Z,17μm,20.0s						
NATX	Nacogdoches	109.20	50	PFAKE		22 10 00.0	+8.3
NATX				LR	LR		
	comp=Z,9μm,19.0s						
CEL	Celeste	109.49	318	ePdif	Pdif	22 05 50.3	+1.4
CEL				LR	LR		
	comp=Z,9μm,21.0s						
DCN	Croghan	109.71	342	eP	PP	22 10 18.1	-5.7
CABF	La Chapelle	109.73	330	eP	Pdif	22 05 50.4	+0.5
OLIL	Olney	110.03	41	ePKP	PKiKP	22 09 52.6	-0.5
LPL	La Plagne	110.18	329	eP	Pdif	22 05 52.7	+0.8
	comp=Z,18nm,1.1s						
LPG	La Plagne	110.19	329	eP	Pdif	22 05 52.7	+0.8
	comp=Z,15nm,0.8s						
LOR	Lormes	110.31	332	eP	Pdif	22 05 51.0	-1.5
	comp=Z,52nm,1.8s						
LOR				eMLR	MLR		
	comp=Z,13μm,22.5s						
LOR	Lormes	110.31	332	eP	Pdif	22 05 51.0	-1.5
LOR				LR	LR		
	comp=Z,13μm,22.5s						
AAM	Ann Arbor	110.50	35	PFAKE		22 10 10.0	+16
AAM				LR	LR		
	comp=Z,29μm,20.0s						
BNI	Bardonecchia	110.53	329	ePKIKP	PKiKP	22 09 53.9	0.0
BNI				e		22 10 28.3	
BNI				MLR	MLR		
	comp=Z,22μm,19.0s						
SSF	Saint Saulge	110.63	332	eP	Pdif	22 05 54.3	+0.4
MBDF	Montbardon	110.71	328	eP	Pdif	22 05 54.5	+0.2
	comp=Z,19nm,1.1s						
SMF	Signal de Mont	110.78	331	eP	Pdif	22 05 54.5	-0.1
	comp=Z,16nm,0.9s						
HTL	Hartland	110.78	339	e	PP	22 10 26.9	-4.7
HTL				e		22 44 33.4	
HTL				AMS	AMS	22 51 32.5	
	comp=Z,13μm,32.1s						
HTL	Hartland	110.78	339		PP	22 10 26.9	-4.7
HTL						22 44 33.4	
HTL				AMS	AMS	22 51 32.5	
	comp=Z,13μm,32.1s						
SAOF	Saorge	110.82	327	eP	PKiKP	22 09 56.0	+1.6
SAOF	Saorge	110.82	327	ePKIKP	PKiKP	22 09 56.0	+1.6
SAOF	Saorge	110.82	327	eP	PKiKP	22 09 56.0	+1.6
AUTN	L'Aution	110.88	327	eP	PKiKP	22 10 02.9	+8.3
AUTN	L'Aution	110.88	327	ePKIKP	PKiKP	22 10 02.9	+8.3
AUTN	L'Aution	110.88	327	eP	PKiKP	22 10 02.9	+8.3
AVF	Avril sur Loir	110.90	332	eP	Pdif	22 05 55.6	+0.5
	comp=Z,13nm,1.0s						
TOUF	Mont Tournerai	110.96	328	eP	PP	22 10 35.2	+2.0
SBF	Sospel	110.96	327	eP	Pdif	22 05 55.8	+0.4
	comp=Z,142nm,1.5s						
RPN	Rapa Nui	110.98	114	PFAKE		22 10 10.0	+15
RPN				LR	LR		
	comp=Z,12μm,20.0s						
LUCF	Luceram	110.99	327	eP	PKiKP	22 09 54.7	-0.1
PGF	Pioggiola	111.00	325	eP	Pdif	22 05 57.1	+1.5
	comp=Z,23nm,0.6s						
DYA	Yadsworthy	111.05	338	e	PKiKP	22 09 47.8	-6.8
DYA				AMS	AMS	22 54 29.6	
	comp=Z,16μm,25.9s						
DYA	Yadsworthy	111.05	338		PKiKP	22 09 47.8	-6.8
DYA				AMS	AMS	22 54 29.6	
	comp=Z,16μm,25.9s						
LDF	La Druitiere	111.05	335	eP	Pdif	22 05 56.3	+0.5
	comp=Z,112nm,1.9s						
MVIF	Mont Vial	111.09	328	eP	PP	22 10 35.2	+1.0
BGF	Bois d'Agland	111.30	332	eP	Pdif	22 05 57.2	+0.3
SSB	Saint Sauveur	111.44	330	PFAKE		22 10 10.0	+14
SSB				LR	LR		
	comp=Z,10μm,22.0s						
WCI	Wyandotte Cave	111.47	40	ePKIKP	PKiKP	22 09 55.3	-0.6
WCI				MLR	MLR		
	comp=Z,9μm,20.0s						
GRR	Gorron	111.51	335	eP	Pdif	22 05 58.1	+0.3
OXF	Oxford	111.55	45	PFAKE		22 10 10.0	+14
OXF				LR	LR		
	comp=Z,14μm,22.0s						
VIVF	Saint-Julien-l	111.68	330	eP	Pdif	22 05 59.1	+0.5
	comp=Z,49nm,1.7s						
WVT	Waverly	111.71	43	ePKIKP	PKiKP	22 09 55.2	-1.2
WVT				MLR	MLR		
	comp=Z,10μm,22.0s						
WDD	Wield Dalam	111.75	317	PFAKE		22 10 10.0	+14
WDD				LR	LR		
	comp=Z,8μm,22.0s						
TCF	Toulx Ste Croi	111.80	332	eP	Pdif	22 05 59.9	+0.8
	comp=Z,65nm,1.9s						
LMR	La Mourre	111.81	327	eP	Pdif	22 05 59.3	+0.1
VAL	Valentia	111.82	343	eP	Pdif	22 06 24.7	+25
VAL				ePP	PP	22 10 38.8	-0.2
SMRF	Simiane la Rot	111.85	328	eP	Pdif	22 05 59.5	+0.2
	comp=Z,50nm,1.4s						
VBMS	Vicksburg	112.00	48	PFAKE		22 10 10.0	+13
VBMS				LR	LR		
	comp=Z,12μm,20.0s						
PLAL	Pickwick Lake	112.20	44	ePKP	PKiKP	22 09 56.0	-1.4
PLAL				LR	LR		
	comp=Z,12μm,22.0s						
ACSO	Alum Creek Sta	112.23	37	ePKP	PKiKP	22 09 56.4	-0.8
ACSO				eSKPdf	SKPdf	22 13 26.1	+1.2
ACSO				LR	LR		
	comp=Z,40μm,21.0s						
SGMF	Saint Gilles	112.31	336	eP	Pdif	22 06 02.2	+0.8
	comp=Z,49nm,1.4s						
MFF	Saint Martin d	112.61	334	eP	Pdif	22 06 04.1	+1.4
LASF	Ste Croix	112.64	329	eP	Pdif	22 06 04.4	+1.5
	comp=Z,64nm,1.6s						
ERPA	Erie	112.65	34	PFAKE		22 10 10.0	+12
ERPA				LR	LR		
	comp=Z,16μm,21.0s						
VSL	Villasalto	112.78	323	PFAKE		22 10 10.0	+12
VSL				LR	LR		
	comp=Z,9μm,19.0s						
QUIF	Quistinic	112.82	336	eP	Pdif	22 06 04.6	+1.0
	comp=Z,137nm,1.9s						
CAF	Calviac	112.89	331	eP	Pdif	22 06 05.4	+1.5
	comp=Z,53nm,1.7s						
LFF	La Frestale	113.49	332	eP	Pdif	22 06 07.8	+1.2
	comp=Z,102nm,1.7s						
LONY	Lake Ozonia	113.56	29	PFAKE		22 10 10.0	+10
LONY				LR	LR		
	comp=Z,12μm,22.0s						
LRAL	Lakeview Retre	114.04	45	ePKP	PKiKP	22 10 00.1	-0.8
LRAL				eSKPdf	SKPdf	22 13 28.4	-0.2
LRAL				LR	LR		
	comp=Z,11μm,20.0s						
NCB	Newcomb	114.22	29	ePKP	PKiKP	22 10 00.8	-0.1
NCB				eSKPdf	SKPdf	22 13 28.8	+0.2
NCB				LR	LR		
	comp=Z,12μm,21.0s						
TZTN	Tazewell	114.23	40	ePKP	PKiKP	22 10 01.0	-0.2
TZTN				eSKPdf	SKPdf	22 13 30.8	+2.0
MCWV	Mont Chateau	114.41	35	PFAKE		22 10 10.0	+8.6
MCWV				LR	LR		
	comp=Z,42μm,22.0s						
TKL	Tuckaleechee C	114.64	41	ePKIKP	PKiKP	22 10 01.4	-0.6
TKL				e		22 13 30.8	
BINY	Binghamton	114.68	31	PFAKE		22 10 10.0	+8.1
BINY				LR	LR		
	comp=Z,9μm,20.0s						
SSPA	Standing Stone	114.82	33	ePKP	PKiKP	22 10 02.0	-0.2
SSPA				eSKPdf	SKPdf	22 13 29.8	0.0
SSPA				LR	LR		
	comp=Z,16μm,22.0s						
LBNH	Lisbon	115.07	27	PFAKE		22 10 10.0	+7.5
LBNH				LR	LR		
	comp=Z,7μm,20.0s						
BRAL	Brewton	115.14	47	PFAKE		22 10 10.0	+6.9
BRAL				LR	LR		
	comp=Z,12μm,22.0s						
KEST	Kesra	115.20	320	PKP	PKPdf	22 10 03.5	+0.4
	comp=Z,2.2nm,0.6s,baz=211,slow=1.3,SNR=11						
KEST				PKKPab	PKKPab	22 20 45.6	+0.1
	comp=Z,2.6nm,0.8s,baz=93,slow=15,SNR=5.3						
PKME	Peaks-Kenny Pk	115.38	25	ePKPdf	PKPdf	22 10 02.4	-0.7
PKME				LR	LR		
	comp=Z,8μm,20.0s						
CMIG	Matias Romero	115.46	64	PKP	PKPdf	22 10 04.2	+0.2
	comp=Z,8.7nm,0.7s,baz=259,slow=1.3,SNR=13						
CMIG	Matias Romero	115.46	64	PKP	PKPdf	22 10 04.2	+0.2
ELN	Prospectdale	115.51	38	ePKPdf	PKPdf	22 10 00.9	-2.7
ELN				eSKPdf	SKPdf	22 13 31.5	+0.2
BLA	Blacksburg	115.72	38	ePKPdf	PKPdf	22 10 02.6	-1.4
BLA				eSKPdf	SKPdf	22 13 30.9	-0.8
BLA				LR	LR		
	comp=Z,28μm,22.0s						
GOGA	Godfrey	116.21	43	ePKIKP	PKPdf	22 10 04.4	-0.7
GOGA				MLR	MLR		
	comp=Z,9μm,20.0s						
CBN	Corbin	116.81	35	PFAKE		22 10 20.0	+14
CBN				LR	LR		
	comp=Z,40μm,22.0s						
JSC	Jenkinsville	117.10	41	ePKIKP	PKPdf	22 10 05.9	-0.9
LSZ	Lusaka	117.12	259	PKKPbc	PKKPbc	22 20 34.2	+2.5
	comp=Z,8.9nm,1.1s,baz=276,slow=1.5,SNR=3.9						
LSZ	Lusaka	117.12	259	ePKPdf	PKPdf	22 10 06.6	-0.6
LSZ				eSKPdf	SKPdf	22 13 35.7	+0.9
LSZ				LR	LR		
	comp=Z,7μm,21.0s						
COW	Cow Castle Cre	118.04	41	ePKPdf	PKPdf	22 10 09.6	+1.0
NHSC	New Hope	118.55	41	PFAKE		22 10 20.0	+10
NHSC				LR	LR		
	comp=Z,16μm,22.0s						
CNNC	Cliffs of the	118.56	38	PFAKE		22 10 20.0	+10
CNNC				LR	LR		
	comp=Z,34μm,22.0s						
VNA2	Neumayer--Watz	118.91	191	ePdiff	Pdif	22 06 34.4	+3.7
VNA2				e		22 06 59.3	
VNA2				e		22 10 08.5	
VNA2				e		22 10 38.6	
VNA2				e		22 20 25.0	
VNA3	Neumayer Olymp	119.03	190	ePdiff	Pdif	22 06 35.0	+3.7
VNA3				e		22 10 08.8	
VNA3				e		22 10 38.8	
VNA3				e		22 20 24.7	
PBRG	Braganca	119.28	335	ePKPdf	PKPdf	22 10 13.5	+2.8
PBRG				i P		22 14 36.7	
ESDC	Sonseca Array	119.78	331	PKP	PKPdf	22 10 10.0	-1.8
	comp=Z,3.2nm,0.7s,baz=36,slow=1.6,SNR=10						
ESDC				PP	PP	22 11 34.3	-0.8
	comp=Z,3.7nm,0.7s,baz=33,slow=7.5,SNR=5.6						
ESDC				PKKPab	PKKPab	22 20 24.6	-0.9
	comp=Z,7.8nm,0.7s,baz=238,slow=3.7,SNR=16						
ESDC	Sonseca Array	119.78	331	PKP	PKPdf	22 10 10.0	-1.8
ESDC				PP	PP	22 11 34.3	-0.8
ESDC				PKKPab	PKKPab	22 20 24.6	-0.9
ESLA	Sonseca Array	119.78	331	PFAKE		22 10 20.0	+8.2
ESLA				LR	LR		
	comp=Z,37μm,19.0s						
PCAB	Cabril	119.89	335	ePKPdf	PKPdf	22 10 13.3	+1.4
PCAB	Cabril	119.89	335	ePP	PP	22 11 59.9	+24
MVO	Moncorvo	119.94	334	ePKPdf	PKPdf	22 10 12.6	+0.6
MVO	Moncorvo	119.94	334	ePP	PP	22 11 59.3	+23
MVO				i P		22 14 41.2	
MVO				eSKS	SKKSdf	22 28 25.9	+28
MVO				eLQ		22 44 11.8	
MVO				eLR	LR	22 49 47.5	
	comp=Z,9μm,20.0s						
PAB	San Pablo	120.06	331	ePKIKP	PKPdf	22 10 13.9	+1.6
PAB				MLR	MLR		
	comp=Z,9μm,20.0s						
PVRL	Vila Real	120.13	335	ePKPdf	PKPdf	22 10 12.8	+0.4
PVRL	Vila Real	120.13	335	ePP	PP	22 12 01.0	+24
PVRL				i P		22 14 44.5	
LBTB	Lobatse	120.14	248	ePKIKP	PKPdf	22 10 12.6	-0.2
LBTB				MLR	MLR		
	comp=Z,5μm,21.0s						
LBTB	Lobatse	120.14	248	PKKPbc	PKKPbc	22 20 24.7	+3.7
	comp=Z,5.1nm,0.9s,baz=240,slow=5.2,SNR=4.6						
APG	El Apazote	120.19	64	PKP	PKPdf	22 10 12.8	-0.4
APG				S	SKSac	22 16 59.6	-3.2
	comp=Z,2.1nm,0.2s,baz=13,slow=20,SNR=18						
BOSA	Boshof	120.39	244	ePKIKP	PKPdf	22 10 13.5	+0.3
BOSA				MLR	MLR		
	comp=Z,5μm,20.0s						
PTO	Porto	120.61	336	ePKPdf	PKPdf	22 10 14.6	+1.3
PVIS	Viseu	120.67	335	ePKPdf	PKPdf	22 10 15.8	+2.4
PVIS	Viseu	120.67	335	ePP	PP	22 12 04.4	+23
MTE	Manteigas	120.79	334	ePKPdf	PKPdf	22 10 14.4	+0.7
MTE	Manteigas	120.79	334	ePP	PP	22 12 03.9	+22
MTE				i P		22 14 48.6	
MTE				eSKS	SP	22 22 04.7	+41
MTE				eLQ		22 43 56.9	
MTE				eLR	LR	22 50 04.9	
	comp=Z,12μm,22.0s						
MTE	Manteigas	120.79	334	ePKPdf	PKPdf	22 10 14.0	+0.4
MTE				LR	LR		
	comp=Z,12μm,22.0s						
DWPF	Disney	120.81	46	PFAKE		22 10 30.0	+16
DWPF				LR	LR		
	comp=Z,8μm,22.0s						
PCBR	Castelo Branco	121.22	334	ePKPdf	PKPdf	22 10 15.4	+0.9
PCBR	Castelo Branco	121.22	334	ePP	PP	22 12 08.9	+24
PMRV	Marv??o	121.53	334	ePKPdf	PKPdf	22 10 15.4	+0.3
PMRV	Marv??o	121.53	334	ePP	PP	22 12 06.0	+19
PMRV				i P		22 14 54.9	
PMRV				eSKS	SP	22 21 36.3	+5.9
PMRV				eLR	LR	22 51 12.9	
	comp=Z,9μm,18.0s						
PTOM	Tomar	121.81	334	ePKPdf	PKPdf	22 10 16.1	+0.4
PTOM	Tomar	121.81	334	ePP	PP	22 12 12.4	+24
PESTR	Estremoz	122.08	333	ePKPdf	PKPdf	22 10 18.9	+2.7
PESTR	Estremoz	122.08	333	ePP	PP	22 12 11.6	+21
PESTR				i P		22 15 00.1	
PESTR				eSKS	SP	22 21 40.8	+5.5
PESTR				eLR	LR	22 51 04.0	
	comp=Z,9μm,20.0s						
PBAR	Barrancos	122.40	332	ePKPdf	PKPdf	22 10 19.6	+2.8
PBAR	Barrancos	122.40	332	ePP	PP	22 12 14.4	+21
PBAR				i P		22 15 02.1	
PBAR				eSKS	SP	22 21 38.7	+0.5
PBAR				eLR	LR	22 51 09.1	
	comp=Z,12μm,20.0s						
EVO	Evora	122.54	333	ePKPdf	PKPdf	22 10 19.4	+2.3
EVO	Evora	122.54	333	ePP	PP	22 12 14.5	+21
EVO				i P		22 15 02.2	
PMAFR	Mafra	122.73	335	ePP	PP	22 12 14.8	+20
PMAFR				i P		22 15 01.7	
PMAFR				eSKS	SP	22 21 40.5	-0.5
PMAFR				eLR	LR	22 50 52.7	
	comp=Z,11μm,20.0s						
LIS	Lisbon	122.87	334	ePP	PP	22 11 55.1	-0.9
LIS				eSS	SS	22 28 33.2	+1.3
LIS				AMS	AMS	22 59 56.0	
	comp=E,16μm,18.7s						
PBEJ	Beja	122.89	333	ePKPdf	PKPdf	22 10 20.7	+2.9
PCVE	Castro Verde	123.30	333	ePKPdf	PKPdf	22 10 21.5	+2.9
PCVE	Castro Verde	123.30	333	ePP	PP	22 12 20.6	+22
PCVE				i P		22 14 59.7	
PCVE				eSKS	SP	22 21 43.0	-3.1
PCVE				eLQ		22 45 00.8	
PCVE				eLR	LR	22 51 11.3	
	comp=E,13μm,20.0s						
PVAQ	Vaqueiros	123.34	332	ePKPdf	PKPdf	22 10 23.3	+4.6
PVAQ	Vaqueiros	123.34	332	ePP	PP	22 12 20.9	+22
PVAQ				i P		22 14 59.3	
PVAQ				eSKS	SP	22 21 42.5	-4.0
PVAQ				eLR	LR	22 51 25.8	
	comp=E,11μm,20.0s						
TGUH	Tegucigalpa,Un	123.38	64	ePKPdf	PKPdf	22 10 19.7	+0.4
TGUH				LR	LR		
	comp=Z,6μm,22.0s						
SFS	San Fernando	123.40	331	PFAKE		22 10 30.0	+11
SFS				LR	LR		
	comp=Z,29μm,22.0s						
PBDV	Barranco-do-Ve	123.57	333	ePKPdf	PKPdf	22 10 21.0	+1.9
PBDV	Barranco-do-Ve	123.57	333	ePP	PP	22 12 22.0	+21
PBDV				i P		22 15 00.6	
PBDV				eSKS	SP	22 21 45.9	-2.6
PBDV				eLR	LR	22 51 11.4	
	comp=Z,12μm,20.0s						
MORF	Marmelete	123.84	333	ePKPdf	PKPdf	22 10 22.2	+2.6
MORF	Marmelete	123.84	333	ePP	PP	22 12 22.9	+20
MORF				i P		22 15 13.3	
MORF				eSKS	SP	22 21 46.7	-4.2
MORF				eLR	LR	22 54 45.5	
	comp=Z,12μm,20.0s						
SUR	Sutherland	123.94	239	ePKPdf	PKPdf	22 10 20.4	+0.5
SUR				LR	LR		
	comp=Z,6μm,21.0s						
PFVI	Vila Bisbo	124.06	333	ePKPdf	PKPdf	22 10 24.9	+4.8
PFVI	Vila Bisbo	124.06	333	ePP	PP	22 12 25.7	+22
PFVI				i P		22 15 15.0	
PFVI				eSKS	SP	22 22 38.2	+45
PFVI				eLR	LR	22 51 55.5	
	comp=Z,11μm,20.0s						
PMSA	Palmer Station	124.51	166	PFAKE		22 10 30.0	+10
PMSA				LR	LR		
	comp=Z,6μm,20.0s						
PAYG	Puerto Ayora	125.64	82	PFAKE		22 10 40.0	+16
PAYG				LR	LR		
	comp=Z,7μm,21.0s						
RTC	Rabat Centre	125.70	329	PFAKE		22 10 30.0	+6.7
RTC				LR	LR		
	comp=Z,6μm,20.0s						
JTS	JuntasAbangare	127.02	67	ePKIKP	PKPdf	22 10 24.6	-1.7
JTS				MLR	MLR		
	comp=Z,6μm,22.0s						
JTS	JuntasAbangare	127.02	67	SKP		22 13 39.6	
	comp=Z,22nm,1.1s,baz=298,slow=11,SNR=3.7						
TSUM	Tsumeb	127.50	255	ePKPdf	PKPdf	22 10 26.4	-0.6
TSUM				LR	LR		
	comp=Z,5μm,22.0s						
BBSR	BB Station	127.95	30	PFAKE		22 10 40.0	+12
BBSR				LR	LR		
	comp=Z,7μm,20.0s						
ADH	Angra Heroismo	128.31	351	ePP	PP	22 12 47.7	+16
ADH				eP		22 13 39.8	
PMAN	Manadas	128.47	351	ePP	PP	22 12 38.5	+5.6
PCED	Cedros	128.56	352	ePP	PP	22 12 31.0	-2.4
PICO	Pico	128.65	352	eP		22 14 01.8	
PSET	Sete Cidades	128.86	349	eP		22 13 43.1	
GRON	Grota Negra	128.88	349	ePP	PP	22 12 39.9	+4.3
CMLA	Cha da Macela	128.88	349	ePP	PP	22 12 41.7	+6.1
CMLA				eP		22 13 46.1	
CMLA				eLQ		22 44 46.4	
CMLA				eLR	LR	22 52 50.9	
CMLA	Cha da Macela	128.88	349	PFAKE		22 10 40.0	+11
CMLA				LR	LR		
	comp=Z,5μm,20.0s						
PDA	Ponta Delgada	128.92	349	ePP	PP	22 13 00.0	+24
MTDJ	Mount Denham	129.46	54	PFAKE		22 10 40.0	+9.1
MTDJ				LR	LR		
	comp=Z,7μm,22.0s						
PSMA	Santa Maria	129.54	348	ePP	PP	22 12 45.5	+5.6
GTBY	Guantanamo Bay	130.33	50	PFAKE		22 10 40.0	+7.5
GTBY				LR	LR		
	comp=Z,8μm,21.0s						
PMPS	Porto Santo	130.66	337	i P	SKPbc	22 13 49.5	+0.8
USHA	Ushuaia	131.03	156	SKPbc	SKPbc	22 13 48.3	-1.0
	comp=Z,33nm,1.1s,baz=220,slow=5.0,SNR=9.3						
USHA				SKKPbc		22 23 22.7	
	comp=Z,23nm,1.0s,baz=37,slow=3.9,SNR=5.3						
PMAR	Madeira	131.18	338	i P	SKPbc	22 13 51.8	+1.1
BCIP	Isla Barro Col	132.06	65	ePKPdf	PKPdf	22 10 35.5	-0.4
BCIP				LR	LR		
	comp=Z,5μm,22.0s						
GRTK	Grand Turk	132.20	45	PFAKE		22 10 50.0	+14
GRTK				LR	LR		
	comp=Z,8μm,21.0s						
SDDR	Presa de Saban	133.74	48	ePKPpre		22 10 34.5	
SDDR				LR	LR		
	comp=Z,7μm,20.0s						
TOA0	Torodi Ar. Sit	134.14	302	ePKPpre		22 10 30.5	
TOA0				ePKPdf	PKPdf	22 10 40.0	+0.2
TOA0				ePP	PP	22 13 09.6	-1.5
TOA0				eSKPbc	SKPbc	22 13 58.0	-3.4
TORD	Torodi Ar. Bea	134.14	302	PKhKP		22 10 24.4	
	comp=Z,1.8nm,0.5s,baz=56,slow=2.1,SNR=33						
TORD				PKP	PKPdf	22 10 39.5	-0.3
	comp=Z,9.9nm,0.7s,baz=33,slow=1.4,SNR=14						
TORD				PP	PP	22 13 10.9	-0.2
	comp=Z,31nm,1.0s,baz=53,slow=5.2,SNR=8.7						
TORD				SKPbc	SKPbc	22 14 00.3	-1.1
	comp=Z,23nm,0.8s,baz=48,slow=1.6,SNR=5.9						
TORD				SKKPbc		22 23 06.8	
	comp=Z,6.5nm,1.1s,baz=239,slow=5.6,SNR=4.3						
TORD	Torodi Ar. Bea	134.14	302	PKP		22 10 24.4	
TORD				PKP	PKPdf	22 10 39.5	-0.3
TORD				PP	PP	22 13 10.9	-0.2
TORD				SKPbc	SKPbc	22 14 00.3	-1.1
TORD				SKKPbc		22 23 06.8	
OTAV	Otavalo	136.72	76	ePKPpre		22 10 40.4	
OTAV				ePKPdf	PKPdf	22 10 45.7	+1.0
OTAV				eSKPbc	SKPbc	22 14 11.1	+1.6
OTAV				LR	LR		
	comp=Z,8μm,20.0s						
EFI	East Falkland	137.31	160	PFAKE		22 11 00.0	+15
EFI				LR	LR		
	comp=Z,6μm,22.0s						
CRPR	Cabo Rojo, PR	137.35	45	ePKPpre		22 10 37.4	
CRPR				ePKPdf	PKPdf	22 10 45.3	-0.4
CRPR				eSKPbc	SKPbc	22 14 10.9	-0.4
ICM	Isla Caja Muer	137.83	45	ePKPpre		22 10 42.

SDV eSKPbc SKPbc 22 14 19.9 +0.6
SDV LR LR
comp=Z,2μm,21.0s
NNA Nana 140.83 94 PKP PKPdf 22 10 49.6 -2.5
comp=Z,18nm,0.5s,baz=332,slow=3.9,SNR=4.8
NNA Nana 140.83 94 ePKPpre 22 10 48.8
NNA ePKPdf PKPdf 22 10 51.7 -0.4
NNA LR LR
comp=Z,6μm,22.0s
ANWB Willy Bob 141.11 40 PFAKE 22 11 00.0 +7.4
ANWB LR LR
comp=Z,10μm,22.0s
LZG Guadaloupe-1 142.25 42 eP PKPdf 22 10 48.5 -6.1
SCG Saint Claude 142.40 42 eP PKPdf 22 10 51.6 -3.2
HMG Houelmont 142.42 42 eP PKPdf 22 10 50.9 -4.1
PHG Guadaloupe-2 142.43 42 eP PKPdf 22 10 51.9 -3.0
TBG Guadaloupe-3 142.55 42 eP PKPdf 22 10 50.1 -5.0
DEG La Desirade 142.59 41 eP PKPdf 22 10 49.8 -5.5
CLCH Cerro Calan 142.84 130⇓iP PKPdf 22 10 51.0 -4.2
LMEL Las Melosas 142.89 130⇓iP PKPdf 22 10 50.9 -4.4
LMEL Las Melosas 142.89 130⇓iP PKPdf 22 10 50.9 -4.4
DBIC Dimbokro 143.01 299 ePKIKP PKPdf 22 10 52.2 -3.9
DBIC MLR MLR
comp=Z,5μm,20.0s
DBIC Dimbokro 143.01 299 PKhKP 22 10 51.7
comp=Z,38nm,0.4s,baz=41,slow=3.9,SNR=65
DBIC SKPbc SKPbc 22 14 25.6 -0.8
comp=Z,38nm,1.0s,baz=360,slow=3.8,SNR=3.9
DBIC SKKPbc 22 22 38.5
comp=Z,18nm,1.1s,baz=209,slow=2.9,SNR=4.5
DBIC Dimbokro 143.01 299 ePKPdf PKPdf 22 10 52.2 -3.9
DBIC eSKP 22 14 22.7
DBIC LR LR
comp=Z,5μm,20.0s
FCH Farellones 143.05 130⇓iP 22 10 41.2
KIC Kosan Boka 143.07 299 ePKP1 PKPdf 22 10 52.0 -4.2
comp=Z,449nm,1.1s
KIC Kosan Boka 143.07 299 eP PKPdf 22 10 52.0 -4.2
TIC Toumodi 143.17 299 ePKP1 PKPdf 22 10 52.3 -4.0
comp=Z,226nm,0.8s
TIC Toumodi 143.17 299 ePKIKP PKPdf 22 10 52.3 -4.0
TIC Toumodi 143.17 299 eP PKPdf 22 10 52.3 -4.0
LIC Lamto 143.39 299 ePKIKP PKPdf 22 10 52.3 -4.4
comp=Z,309nm,0.6s
LIC eMLR MLR
comp=Z,7μm,22.5s
LIC Lamto 143.39 299 ePKP1 PKPdf 22 10 53.0 -3.7
comp=Z,882nm,1.1s
LIC Lamto 143.39 299 ePKPdf PKPdf 22 10 52.3 -4.4
LIC LR LR
comp=Z,4μm,22.5s
CMCH Combarbala 143.39 126⇓iP PKPdf 22 10 53.9 -2.3
CMCH Combarbala 143.39 126⇓iP PKPdf 22 10 53.9 -2.3
FDF Fort de France 143.69 42 ePKPdf PKPdf 22 10 55.3 -1.9
FDF eSKPbc SKPbc 22 14 27.2 -0.8
FDF LR LR
comp=Z,16μm,22.0s
FDF Fort de France 143.69 42 eP PKPdf 22 10 55.4 -1.7
BIM Bigot 143.90 43 eP PKPdf 22 10 56.1 -1.4
TLL Tololo Astrono 143.93 125⇓iPKIKP PKPdf 22 10 55.5 -1.7
TLL Tololo Astrono 143.93 125⇓iP PKPdf 22 10 55.5 -1.7
TLL Tololo Astrono 143.93 125⇓iP PKPdf 22 10 55.5 -1.7
MVM Montagne Vaucl 143.99 42 eP PKPdf 22 10 56.0 -1.7
PCRV Puerto La Cruz 144.27 52 PKP PKPdf 22 10 56.5 -1.7
comp=Z,29nm,0.4s,baz=290,slow=3.1,SNR=14
PCRV SKPbc SKPbc 22 14 29.6 +0.1
comp=Z,25nm,1.0s,baz=16,slow=6.3,SNR=4.0
PCRV Puerto La Cruz 144.27 52 PKP PKPdf 22 10 56.5 -1.7
PCRV SKPbc SKPbc 22 14 29.6 +0.1
LCO Las Campanas 144.43 123 ePKPdf PKPdf 22 10 57.8 -0.3
LCO eSKPbc SKPbc 22 14 30.6 +1.2
LCO LR LR
comp=Z,9μm,21.0s
LCO Las Campanas 144.43 123⇓iP PKPdf 22 10 57.0 -1.1
LCO ⇓iP 22 10 57.5
GRW Mount Saint Ca 145.16 46 eP PKPbc 22 11 00.5 +1.0
GRW Mount Saint Ca 145.16 46 eP PKPbc 22 11 00.5 +1.0
GRGR Grenville 145.19 46 ePKPbc PKPbc 22 10 57.0 -2.6
GRGR LR LR
comp=Z,8μm,21.0s
CFAA Coronel Fontan 145.37 128 PKPbc PKPbc 22 10 59.4 -0.3
comp=Z,12nm,0.5s,baz=240,slow=2.9,SNR=122
CFAA SKPbc SKPbc 22 14 32.9 +1.4
comp=Z,4.2nm,0.8s,baz=264,slow=2.9,SNR=3.7
CFAA Coronel Fontan 145.37 128 PKPbc PKPbc 22 10 59.4 -0.3
CFAA SKPbc SKPbc 22 14 32.9 +1.4
BBGH Gun Hill 145.90 42 ePKPbc PKPbc 22 11 03.6 +1.9
BBGH LR LR
comp=Z,17μm,22.0s
TRQA Tornquist 146.05 143 ePKPdf PKPdf 22 11 00.5 -0.2
TRQA ePKPbc PKPbc 22 11 01.7 +0.1
TRQA ePP PP 22 14 22.0 -1.4
TRQA LR LR
comp=Z,8μm,21.0s
TCE Chacachacare 146.09 48 eP PKPdf 22 11 01.1 -0.3
TCE Chacachacare 146.09 48 eP PKPdf 22 11 01.1 -0.3
TRN Trinidad (W) 146.38 48 ePKP2 PKPab 22 11 02.1 -2.1
TRN Trinidad (W) 146.38 48 eP PKPdf 22 11 02.1 +0.3
TPR Prospect 146.46 46 eP PKPdf 22 11 02.6 +0.6
TPR Prospect 146.46 46 eP PKPdf 22 11 02.6 +0.6
TPR Prospect 146.46 46 e pPKPdf 22 11 26.2 -0.7
BOT Bacolet 146.52 46 eP PKPdf 22 11 03.2 +1.1
BOT Bacolet 146.52 46 eP PKPdf 22 11 03.2 +1.1
TPP Pointe-a-Pierr 146.57 48 ePKP2 PKPab 22 11 03.9 -1.0
TPP Pointe-a-Pierr 146.57 48 eP PKPdf 22 11 03.9 +1.7
TBH Brigand Hill 146.73 48 ePKP2 PKPab 22 11 03.9 -1.6
TBH Brigand Hill 146.73 48 eP PKPdf 22 11 03.9 +1.5
LVC Limon Verde 147.79 113 PKPbc PKPbc 22 11 06.9 0.0
comp=Z,91nm,0.9s,baz=267,slow=4.1,SNR=38
LVC Limon Verde 147.79 113 ePKPdf PKPdf 22 11 05.1 +1.2
LVC ePKPbc PKPbc 22 11 06.4 -0.5
LVC ePKPab PKPab 22 11 08.8 -0.8
LVC LR LR
comp=Z,14μm,21.0s
LPAZ La Paz 149.38 101 PKPbc PKPbc 22 11 09.3 -1.9
comp=Z,100nm,0.9s,baz=337,slow=1.7,SNR=113
LPAZ SKKPbc 22 22 12.7
comp=Z,3.2nm,0.9s,baz=58,slow=5.7,SNR=4.0
LPAZ La Paz 149.38 101 ePKPdf PKPdf 22 11 08.2 +1.5
LPAZ ePKPbc PKPbc 22 11 12.2 +1.1
LPAZ LR LR
comp=Z,6μm,21.0s
SHEL Horse Pasture 149.79 260 ePKP2 PKPbc 22 11 11.8 -0.4
SHEL MLR MLR
comp=Z,5μm,19.0s
LPA La Plata 150.58 143 dePKP PKPdf 22 11 07.0 -1.1
comp=Z,681nm,0.8s
LPA La Plata 150.58 143 dePKP PKPab 22 11 19.8 -0.7
LPA epPKP pPKPdf 22 11 28.0 -5.0
LPA epPKP pPKPdf 22 11 32.0 -1.0
LPA ePP PP 22 14 50.0 +0.2
LPA eSKKS SKKSac 22 21 34.0 +0.9
SIV San Ignacio 156.17 101 PKP PKPdf 22 11 17.5 +0.9
comp=Z,52nm,1.1s,baz=221,slow=1.8,SNR=55
SIV San Ignacio 156.17 101 PKP PKPdf 22 11 17.5 +0.9
CPUP Villa Florida 156.27 128 ePKIKP PKPdf 22 11 16.1 -0.4
CPUP MLR MLR
comp=Z,1μm,20.0s
CPUP Villa Florida 156.27 128 PKP PKPdf 22 11 18.5 +2.0
comp=Z,2.0nm,0.4s,baz=269,slow=1.2,SNR=13
CPUP PKPab PKPab 22 11 46.0 +1.1
comp=Z,49nm,0.6s,baz=233,slow=5.0,SNR=20
CPUP Villa Florida 156.27 128 ePKPdf PKPdf 22 11 16.1 -0.4
CPUP ePKPab PKPab 22 11 45.8 +0.9
CPUP LR LR
comp=Z,1μm,20.0s
SPB Sao Paulo 165.03 139 ePKPdf PKPdf 22 11 26.1 0.0
SPB ePKPab PKPab 22 12 23.7 +0.6
SPB LR LR
comp=Z,7μm,22.0s
CAM4 Nova Friburgo 168.76 151⇑iP PKPdf 22 11 29.8 +0.9
CAM4 i 22 11 41.5
CAM4 i 22 11 55.6
CAM4 i 22 12 20.5
CAM4 i 22 12 40.0
CAM4 i 22 12 42.5
CAM4 i 22 12 52.8
CAM4 i 22 12 59.2
CAM4 i 22 13 26.9
CAM4 i 22 13 34.6
CAM4 i 22 16 28.9
RCBR Riachuelo 173.29 353 ePKPdf PKPdf 22 11 31.2 -0.3
RCBR ePKPab PKPab 22 13 00.5 +0.9
RCBR LR LR
comp=Z,8μm,21.0s

IDC 09 21:52:12.7±1.5, 17°52.52S×69°21.W, h160km±9km, mb3.8/2, mb1 3.7/4, mb1mx3.4/17, mbtmp3.7/4, Error ellipse: s-maj=34.2km s-min=11.1km az=102.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.60**	**40**	P	Pn	21 52 46.0	+1.9
LPAZ	3.7nm,0.3s,baz=230,slow=6.4,SNR=75			S	Sn	21 53 09.3	+1.1
LVC	**Limon Verde**	**5.07**	**177**	P	Pn	21 53 29.0	+1.7
LVC	0.7nm,0.3s,baz=305,slow=10,SNR=8.9			S	Sn	21 54 25.4	-0.1
SIV	**San Ignacio**	**7.95**	**80**	P	Pn	21 54 05.6	+0.2
ULM	**Lac du Bonnet**	**71.46**	**342**	P	P	22 03 15.2	-0.3
TORD	**Torodi Ar. Bea**	**76.33**	**71**	P	P	22 03 44.8	+0.2

*ISCJB **09** 22:00:36.4±2.4, 12°52N±0°08×143°1E±0°2, h85km±23km, mb4.4/13, Error ellipse: s-maj=29.8km s-min=13.2km az=7.6*
*NEIC **09** 22:00:37.4±1.6, 12°57N×143°10E, h80km±15km, mb4.5/3, Error ellipse: s-maj=21.1km s-min=9.9km az=95.0*
*IDC **09** 22:00:37.1±2.6, 12°56N×143°06E, h75km±24km, mb4.2/10, mb1 4.4/11, mb1mx4.1/25, mbtmp4.3/11, Error ellipse: s-maj=25.3km s-min=14.5km az=101.0*

ISC 09 22:00:38.1±2.2, 12°56N±0°08×143°1E±0°2, h86km±21km, n19, σ0°83/16, mb4.4/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.99**	**59**	P	**Pn**	**22 01 09.4**	**-0.6**
GUMO	582nm,0.3s,SNR=31			S	**Sn**	**22 01 34.7**	**+0.4**
COEN	**Coen**	**26.35**	**180**	eP	**P**	**22 06 07.8**	**+1.6**
CTAO	**Charters Tower**	**32.59**	**175**	eP	**P**	**22 07 00.7**	**-0.8**
WRAB	**Tennant Creek**	**33.42**	**195**	eP	**P**	**22 07 08.8**	**+0.1**
WRA	**Warramunga Arr**	**33.44**	**195**	P	**P**	**22 07 08.8**	**0.0**
ASAR	**Alice Springs**	**37.12**	**194**	P	**P**	**22 07 41.1**	**+0.7**
ASAR	7.5nm,0.5s,mb4.9,baz=22,slow=12,SNR=25			PcP	PcP	22 10 00.1	+0.9
STKA	**Stephens Creek**	**44.21**	**182**	P	**P**	**22 08 37.1**	**-1.6**
SONM	**Songino Array**	**46.61**	**326**	P	**P**	**22 08 57.6**	**+0.1**
RPZ	**Rata Peaks**	**61.53**	**157**	P	**P**	**22 10 46.1**	**+0.1**
KURK	**Kurchatov**	**64.28**	**320**	P	**P**	**22 11 05.4**	**+1.2**
YKA	**Yellowknife Ar**	**84.55**	**27**	P	**P**	**22 13 01.5**	**0.0**
ARCES	**ARCESS Array B**	**87.53**	**342**	P	**P**	**22 13 15.5**	**-0.5**
NVAR	**Mina Array Bea**	**88.89**	**51**	P	**P**	**22 13 23.8**	**+0.6**
FINES	**FINESS Array B**	**91.36**	**335**	P	**P**	**22 13 32.8**	**-1.3**
PLCA	**Paso Flores**	**139.29**	**140**	PKP	PKPdf	22 19 56.7	+1.2
PLCA	**Paso Flores**	**139.29**	**140**	PKP	PKPdf	22 19 56.7	+1.2
CFAA	**Coronel Fontan**	**145.50**	**128**	PKPbc	PKPbc	22 20 07.5	+0.5
LPAZ	**La Paz**	**149.53**	**101**	PKPbc	PKPbc	22 20 20.0	+1.6

*ISK **09** 22:30:17.2, 34°40N×29°42E, h30km, ML3.9*
*ISCJB **09** 22:30:19.6±0.2, 34°53N±0°02×29°42E±0°02, h33km, Error ellipse: s-maj=3.1km s-min=2.5km az=140.5*
*HLW **09** 22:30:21.7, 34°53N×29°49E, h33km±28km, Ml3.6*
*CSEM **09** 22:30:21.8±0.1, 34°55N×29°40E, h40km, MD3.9, Error ellipse: s-maj=4.1km s-min=2.2km az=66.0*
*THE **09** 22:30:23.6, 34°57N×29°37E, h54km±3km, ML4.1/2, Error ellipse: s-maj=3.8km s-min=1.0km az=117.0*
*GII **09** 22:30:24.8±0.0, 34°20N×29°90E, h1km±1km, Md3.2/1*
*DDA **09** 22:30:29.4, 35°37N×29°28E, h15km±1km, Md3.9*

ISC 09 22:30:21.6±0.2, 34°56N±0°02×29°42E±0°02, h35km, n130, σ0°90/162, 2C-2D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**1.59**	**5**	eP	**Pn**	**22 30 53.5**	**+6.3**
AKAS	**Kas**	**1.68**	**5**	⇑iP	**Pn**	**22 30 49.3**	**+0.9**
AKAS				i S	**Sn**	**22 31 03.2**	**-5.4**
AKAS	**Kas**	**1.68**	**5**	i P	**Pn**	**22 30 49.3**	**+0.9**
AKAS				i S	**Sn**	**22 31 03.2**	**-5.5**
ARG	**Arkhangelos**	**1.96**	**328**	eP	**Pn**	**22 30 53.0**	**+0.7**
ARG	**Arkhangelos**	**1.96**	**328**	P	**Pn**	**22 30 52.8**	**+0.5**
ARG				S	**Sn**	**22 31 15.6**	**0.0**
ARG	**Arkhangelos**	**1.96**	**328**	P	**Pn**	**22 30 52.8**	**+0.5**
ARG				S	**Sn**	**22 31 15.6**	**0.0**
FETY	**Fethiye**	**2.09**	**353**	ePN	**Pn**	**22 30 53.2**	**-0.8**
FETY	**Fethiye**	**2.09**	**353**	ePn	**Pn**	**22 30 53.2**	**-0.9**
KARP	**Karpathos**	**2.10**	**299**	eP	**Pn**	**22 30 55.5**	**+1.3**
ELL	**Elmali**	**2.22**	**10**	ePN	**Pn**	**22 30 55.5**	**-0.4**
ELL	**Elmali**	**2.22**	**10**	ePn	**Pn**	**22 30 55.5**	**-0.4**
TURN	**Turunc**	**2.40**	**344**	⇓iP	**Pn**	**22 30 59.4**	**+1.1**
TURN				eS	**Sn**	**22 31 23.0**	**-3.5**
TURN	**Turunc**	**2.40**	**344**	i P	**Pn**	**22 30 59.4**	**+1.0**
TURN				eS	**Sn**	**22 31 23.0**	**-3.5**
ANTB	**Antalya**	**2.54**	**23**	ePN	**Pn**	**22 30 59.5**	**-0.7**
GLHS	**Glhisar (BURDU**	**2.59**	**1**	ePN	**Pn**	**22 31 00.5**	**-0.5**
GLHS	**Glhisar (BURDU**	**2.59**	**1**	ePn	**Pn**	**22 31 00.5**	**-0.5**
GOLH	**Golhisar**	**2.67**	**2**	⇓iP	**Pn**	**22 31 04.3**	**+2.2**
GOLH				eS	**Sn**	**22 31 29.6**	**-3.6**
GOLH	**Golhisar**	**2.67**	**2**	i P	**Pn**	**22 31 04.3**	**+2.2**
GOLH				eS	**Sn**	**22 31 29.6**	**-3.6**
ZKR	**Zakros**	**2.69**	**283**	P	**Pn**	**22 31 02.8**	**+0.5**
ZKR				S	**Sn**	**22 31 33.4**	**-0.3**
ZKR	**Zakros**	**2.69**	**283**	P	**Pn**	**22 31 02.8**	**+0.5**
ZKR				S	**Sn**	**22 31 33.4**	**-0.3**
YER	**Yerkesik**	**2.73**	**341**	ePN	**Pn**	**22 31 02.6**	**-0.3**
YER	**Yerkesik**	**2.73**	**341**	ePn	**Pn**	**22 31 02.6**	**-0.3**
LEF	**Lefka**	**2.91**	**78**	ePN	**Pn**	**22 31 02.3**	**-3.1**
LEF				eSN	**Sn**	**22 31 35.6**	**-3.5**
MLSB	**Milas**	**3.04**	**334**	ePN	**Pn**	**22 31 06.9**	**-0.2**
MLSB	**Milas**	**3.04**	**334**	ePn	**Pn**	**22 31 06.9**	**-0.2**
BCK	**Bucak**	**3.04**	**18**	ePN	**Pn**	**22 31 07.1**	**-0.1**
BCK	**Bucak**	**3.04**	**18**	ePn	**Pn**	**22 31 07.1**	**-0.1**
DNZL	**Cakiroluk**	**3.14**	**355**	eP	**Pn**	**22 31 09.6**	**+1.1**
DNZL				eS	**Sn**	**22 31 40.7**	**-3.9**
DNZL	**Cakiroluk**	**3.14**	**355**	eP	**Pn**	**22 31 09.6**	**+1.1**
DNZL				eS	**Sn**	**22 31 40.7**	**-4.0**
SUTC	**Sutluce-Ispart**	**3.18**	**23**	ePN	**Pn**	**22 31 08.5**	**-0.6**
DENT	**Denizli**	**3.20**	**355**	ePN	**Pn**	**22 31 09.3**	**-0.1**
DENT	**Denizli**	**3.20**	**355**	ePn	**Pn**	**22 31 09.3**	**-0.1**
NPS	**Neapolis**	**3.20**	**284**	eP	**Pn**	**22 31 11.0**	**+1.6**
CSS	**Prodhromos**	**3.25**	**82**	P	**Pn**	**22 31 11.0**	**+1.0**
CSS				S	**Sn**	**22 31 48.3**	**+0.9**
LAST	**Lasithi**	**3.29**	**282**	P	**Pn**	**22 31 11.6**	**+1.0**
LAST				S	**Sn**	**22 31 48.4**	**-0.2**
LAST	**Lasithi**	**3.29**	**282**	P	**Pn**	**22 31 11.6**	**+1.0**
LAST				S	**Sn**	**22 31 48.4**	**-0.2**
AYDN	**Tasoluk**	**3.33**	**339**	⇑iP	**Pn**	**22 31 12.3**	**+1.2**
AYDN				eS	**Sn**	**22 31 46.4**	**-3.1**
AYDN	**Tasoluk**	**3.33**	**339**	i P	**Pn**	**22 31 12.4**	**+1.2**
ISP	**Isparta**	**3.37**	**15**	ePN	**Pn**	**22 31 11.9**	**+0.2**
ISP	**Isparta**	**3.37**	**15**	P	**Pn**	**22 31 14.2**	**+2.4**
ISP				S	**Sn**	**22 31 52.2**	**+1.6**
LFK	**Lefkose**	**3.46**	**77**	ePN	**Pn**	**22 31 11.2**	**-1.7**
HDMB	**Hadim**	**3.46**	**45**	ePN	**Pn**	**22 31 12.0**	**-0.9**
GCAM	**G?zelcaml?**	**3.60**	**331**	eP	**Pn**	**22 31 15.2**	**+0.4**
GCAM				eS	**Sn**	**22 31 54.2**	**-1.8**
GCAM	**G?zelcaml?**	**3.60**	**331**	eP	**Pn**	**22 31 15.2**	**+0.4**
THR1	**Thera Island**	**3.70**	**300**	P	**Pn**	**22 31 16.3**	**+0.1**
THR1	**Thera Island**	**3.70**	**300**	P	**Pn**	**22 31 16.3**	**+0.1**
KHL	**Karahalli**	**3.75**	**1**	ePN	**Pn**	**22 31 17.2**	**+0.2**
KHL	**Karahalli**	**3.75**	**1**	ePn	**Pn**	**22 31 17.2**	**+0.2**
THR3	**Thira Island,**	**3.76**	**301**	P	**Pn**	**22 31 17.2**	**+0.1**
THR3	**Thira Island,**	**3.76**	**301**	P	**Pn**	**22 31 17.2**	**+0.1**
SMG	**Samos**	**3.77**	**327**	eP	**Pn**	**22 31 17.5**	**+0.3**
THR4	**Thira Island,**	**3.79**	**301**	P	**Pn**	**22 31 17.6**	**+0.2**
THR4	**Thira Island,**	**3.79**	**301**	P	**Pn**	**22 31 17.6**	**+0.2**
SIVA	**Sivas**	**3.82**	**278**	P	**Pn**	**22 31 19.1**	**+1.2**
SIVA				S	**Sn**	**22 32 00.7**	**-0.8**
SIVA	**Sivas**	**3.82**	**278**	P	**Pn**	**22 31 19.1**	**+1.2**
SIVA				S	**Sn**	**22 32 00.7**	**-0.8**
IKL	**Isikli**	**3.87**	**63**	ePN	**Pn**	**22 31 17.7**	**-0.8**
HMAT	**Matruh**	**3.97**	**210**	P	**Pn**	**22 31 20.7**	**+0.7**
HMAT	baz=212			AMP		22 32 00.0	
HMAT	comp=N,100μm,0.3s,logA/T=5.5,baz=212			S	**Sn**	**22 32 02.4**	**-2.9**
HMAT	**Matruh**	**3.97**	**210**	P	**Pn**	**22 31 20.7**	**+0.7**
HMAT				S	**Sn**	**22 32 02.4**	**-2.9**
KULA	**Kula-Manisa**	**3.99**	**351**	ePN	**Pn**	**22 31 20.1**	**-0.2**
KULA	**Kula-Manisa**	**3.99**	**351**	ePn	**Pn**	**22 31 20.1**	**-0.1**
APE	**Apeiranthos**	**4.03**	**310**	eP	**Pn**	**22 31 21.0**	**+0.3**
APE	**Apeiranthos**	**4.03**	**310**	P	**Pn**	**22 31 21.0**	**+0.3**
APE	**Apeiranthos**	**4.03**	**310**	P	**Pn**	**22 31 21.0**	**+0.3**
SHUT	**Suhut-Afyon**	**4.09**	**13**	ePN	**Pn**	**22 31 21.5**	**-0.1**
SHUT	**Suhut-Afyon**	**4.09**	**13**	ePn	**Pn**	**22 31 21.5**	**0.0**
KONT	**Konya--Tatoy**	**4.13**	**34**	ePN	**Pn**	**22 31 21.6**	**-0.5**
IZM	**Izmir**	**4.20**	**336**	ePN	**Pn**	**22 31 23.4**	**+0.3**
IZM	**Izmir**	**4.20**	**336**	ePn	**Pn**	**22 31 23.4**	**+0.3**
BLCB	**Balcova**	**4.27**	**334**	P	**Pn**	**22 31 24.5**	**+0.5**
BLCB	**Balcova**	**4.27**	**334**	P	**Pn**	**22 31 24.5**	**+0.5**
LADK	**Ladik-KONYA**	**4.34**	**32**	ePN	**Pn**	**22 31 25.3**	**+0.2**
GVD	**Gavdhos**	**4.40**	**275**	eP	**Pn**	**22 31 26.5**	**+0.7**
GVD	**Gavdhos**	**4.40**	**275**	P	**Pn**	**22 31 26.3**	**+0.5**
GVD				S	**Sn**	**22 32 15.0**	**-0.8**
GVD	**Gavdhos**	**4.40**	**275**	P	**Pn**	**22 31 26.3**	**+0.5**
GVD				S	**Sn**	**22 32 15.0**	**-0.8**
AKS	**Akhisar**	**4.50**	**344**	ePN	**Pn**	**22 31 26.9**	**-0.3**
AKS	**Akhisar**	**4.50**	**344**	ePn	**Pn**	**22 31 26.9**	**-0.3**
KARN	**Karanos**	**4.59**	**282**	P	**Pn**	**22 31 29.2**	**+0.7**
KARN				S	**Sn**	**22 32 19.2**	**-1.4**
KARN	**Karanos**	**4.59**	**282**	P	**Pn**	**22 31 29.2**	**+0.7**
KARN				S	**Sn**	**22 32 19.2**	**-1.4**
SLUM		**4.67**	**230**	P	**Pn**	**22 31 29.9**	**+0.2**
SLUM	baz=232	**4.67**	**230**	P	**Pn**	**22 31 29.9**	**+0.3**
MERS	**Mersin**	**4.75**	**60**	ePN	**Pn**	**22 31 30.0**	**-0.6**
HMYD	**Mayadein**	**4.89**	**166**	P	**Pn**	**22 31 32.3**	**-0.4**
HMYD	baz=166 **Mayadein**	**4.89**	**166**	P	**Pn**	**22 31 32.3**	**-0.4**
SQR		**4.90**	**162**	P	**Pn**	**22 31 32.7**	**-0.1**
SQR	baz=162	**4.90**	**162**	P	**Pn**	**22 31 32.7**	**-0.1**
HNAT	**Natroun**	**5.02**	**168**	P	**Pn**	**22 31 34.2**	**-0.2**
HNAT	baz=168 **Natroun**	**5.02**	**168**	P	**Pn**	**22 31 34.2**	**-0.2**
KOT	**Kottamia**	**5.05**	**155**	P	**Pn**	**22 31 34.9**	**0.0**
KOT	baz=155 **Kottamia**	**5.05**	**155**	P	**Pn**	**22 31 34.9**	**+0.1**
AYT	**Al 'Ayyat**	**5.06**	**163**	P	**Pn**	**22 31 35.2**	**+0.2**
AYT	baz=163 **Al 'Ayyat**	**5.06**	**163**	P	**Pn**	**22 31 35.2**	**+0.2**
DST	**Dursunbey**	**5.07**	**353**	ePN	**Pn**	**22 31 35.8**	**+0.7**
DST	**Dursunbey**	**5.07**	**353**	ePn	**Pn**	**22 31 35.8**	**+0.7**
ESKT	**Eskisehir**	**5.08**	**13**	ePN	**Pn**	**22 31 36.3**	**+1.1**
ESKT	**Eskisehir**	**5.08**	**13**	ePn	**Pn**	**22 31 36.3**	**+1.1**
RSH		**5.10**	**134**	P	**Pn**	**22 31 35.3**	**-0.3**
HHAG	**Hagoal**	**5.13**	**153**	P	**Pn**	**22 31 36.0**	**+0.2**
HHAG	baz=153			AMP		22 32 00.0	
HHAG	comp=N,100μm,0.1s,logA/T=6.0,baz=153			S	**Sn**	**22 32 27.7**	**-6.1**
HHAG	**Hagoal**	**5.13**	**153**	P	**Pn**	**22 31 36.0**	**+0.1**
HHAG	baz=153			S	**Sn**	**22 32 27.7**	**-6.1**
HRSH	**Kfar Ka'horesh**	**5.23**	**109**	P	**Pn**	**22 31 35.3**	**-2.0**
HSAF	baz=133 **As Saff**	**5.25**	**159**	P	**Pn**	**22 31 37.5**	**-0.1**
HSAF	baz=159 **As Saff**	**5.25**	**159**	P	**Pn**	**22 31 37.5**	**-0.1**
KARA	**Karaisali**	**5.31**	**58**	ePN	**Pn**	**22 31 39.0**	**+0.6**
GLL	**Jalalah**	**5.34**	**158**	P	**Pn**	**22 31 38.9**	**+0.1**
GLL	baz=158 **Jalalah**	**5.34**	**158**	P	**Pn**	**22 31 38.9**	**+0.1**
SUZ		**5.53**	**147**	P	**Pn**	**22 31 41.3**	**0.0**
SUZ	baz=147	**5.53**	**147**	P	**Pn**	**22 31 41.3**	**-0.1**
HBNS	**Bani Suwayf**	**5.80**	**164**	P	**Pn**	**22 31 45.4**	**+0.2**
HBNS	baz=164 **Bani Suwayf**	**5.80**	**164**	P	**Pn**	**22 31 45.3**	**+0.2**
DID	**Didima**	**5.80**	**302**	P	**Pn**	**22 31 45.7**	**+0.5**
DID				S	**Sn**	**22 32 49.3**	**-1.2**
DID	**Didima**	**5.80**	**302**	P	**Pn**	**22 31 45.7**	**+0.5**
ZAF		**5.90**	**152**	P	**Pn**	**22 31 46.9**	**+0.4**
ZAF	baz=152	**5.90**	**152**	P	**Pn**	**22 31 46.9**	**+0.4**
ZNM		**5.95**	**149**	P	**Pn**	**22 31 47.4**	**+0.3**
ZNM	baz=149	**5.95**	**149**	P	**Pn**	**22 31 47.4**	**+0.3**
HNKL	**Nakhl**	**6.02**	**139**	P	**Pn**	**22 31 47.8**	**-0.4**
HNKL	baz=139 **Nakhl**	**6.02**	**139**	P	**Pn**	**22 31 47.8**	**-0.4**
AWBH		**6.24**	**184**	P	**Pn**	**22 31 51.1**	**0.0**
AWBH	baz=185	**6.24**	**184**	P	**Pn**	**22 31 51.1**	**0.0**
VLX	**Vlachokerasia**	**6.36**	**298**	P	**Pn**	**22 31 52.3**	**-0.4**
VLX				S	**Sn**	**22 33 00.8**	**-3.3**
VLX	**Vlachokerasia**	**6.36**	**298**	P	**Pn**	**22 31 52.3**	**-0.4**
VLX				S	**Sn**	**22 33 00.8**	**-3.3**
ITM	**Ithomi**	**6.62**	**295**	P	**Pn**	**22 31 56.0**	**-0.3**
ITM	**Ithomi**	**6.62**	**295**	P	**Pn**	**22 31 56.0**	**-0.3**
GUR	**Goura**	**6.63**	**303**	P	**Pn**	**22 31 56.3**	**-0.2**
GUR	**Goura**	**6.63**	**303**	P	**Pn**	**22 31 56.3**	**-0.2**
HDHB	**Dhahab**	**7.32**	**141**	P	**Pn**	**22 32 05.7**	**-0.3**
HDHB	baz=141 **Dhahab**	**7.32**	**141**	P	**Pn**	**22 32 05.7**	**-0.3**
HFRF	**Wahat Farafira**	**7.45**	**188**	P	**Pn**	**22 32 08.1**	**+0.3**
HFRF	baz=189 **Wahat Farafira**	**7.45**	**188**	P	**Pn**	**22 32 08.1**	**+0.3**
HSFG		**8.87**	**153**	P	**Pn**	**22 32 27.8**	**+0.6**
HSFG	baz=153	**8.87**	**153**	P	**Pn**	**22 32 27.8**	**+0.6**

*BJI **09** 22:38:04.8, 33°41N×116°34W, h11km, mb4.9/3, Ms7 4.5/1*
*ISCJB **09** 22:38:06.7±0.4, 33°41N±0°02×116°38W±0°01, h11km±3km, Error ellipse: s-maj=2.8km s-min=1.9km az=18.9*
*NEIC **09** 22:38:07.9, 33°45N×116°46W, h2km, ML4.1 (PAS), After PAS.*
NEIC Felt [IV] at Borrego Springs and Coachella; [III] at Alpine, Anza, Cathedral City, El Cajon, Idyllwild, Indian Wells, Indio, La Mesa, La Quinta, Palm Desert, Palm Springs, Rancho Mirage, Ramona, Redlands, San Diego and Solana Beach; [II] at Aliso Viejo, Carlsbad, Chula Vista, Escondido, Hemet, Julian, La Jolla, Lakeside, Poway, San Marcos, Santee, Spring Valley, Temecula and Vista. Also felt at Aguanga, Beaumont, Bonsall, Calimesa, Coronado, Del Mar, Descanso, El Centro, Encinitas, Fallbrook, Irvine, Jamul, Lake Arrowhead, Lemon Grove, Menifee, Moreno Valley, Mountain Center, Murrieta, Nuevo, Oceanside, Rancho Santa Margarita, Riverside, San Jacinto, Santa Ysabel, Thermal, Thousand Palms, Winchester and Yorba Linda.

**ISC 09 22:38:07.4±0.3,

BELC				⇓S	Sg	22 38 29.7	+0.5
	baz=0.7						
MURC	**Murrieta**	**0.68**	**285**	⇓P	Pg	22 38 20.1	-0.4
	baz=0.6						
MURC				⇑S	Sg	22 38 29.1	-0.3
	baz=0.6						
SWSC	**Sam W. Stewart**	**0.71**	**133**	P	Pg	22 38 21.8	+0.7
	baz=0.8,SNR=1000						
SWSC				⇓S	Sg	22 38 32.0	+1.7
	baz=0.8						
BAR	**Barrett**	**0.77**	**196**	*e*Pg	Pg	22 38 22.2	-0.1
BAR				*e*Sg	Sg	22 38 32.5	+0.2
109C	**Camp Elliot, M**	**0.79**	**227**	⇓P	Pg	22 38 22.4	-0.1
	baz=0.8						
109C				⇑S	Sg	22 38 32.5	-0.4
	baz=0.8						
DVTC	**Desert V Tower**	**0.81**	**161**	⇓P	Pg	22 38 23.8	+0.8
	baz=0.8,SNR=398						
DVTC				⇓S	Sg	22 38 34.9	+1.4
	baz=0.8						
BC3	**Big Chuckw Mtn**	**0.83**	**74**	⇑P	Pg	22 38 23.9	+0.4
	baz=0.8						
BC3				⇑S	Sg	22 38 35.5	+1.2
	baz=0.8						
BBRC	**Big Bear Sol-O**	**0.94**	**333**	P	Pg	22 38 25.0	-0.4
	baz=0.9,SNR=292						
BBRC				⇓S	Sg	22 38 37.2	-0.4
	baz=0.9						
GLA	**Glamis**	**1.38**	**105**	⇑P	Pn	22 38 31.6	-1.1
	baz=1.4,SNR=63						
GLA				⇓S	Sb	22 38 49.4	-1.6
	baz=1.4						
GLA	**Glamis**	**1.38**	**105**	*e*Pn	Pn	22 38 31.3	-1.4
GLA				*e*Sg	Sg	22 38 49.5	-2.3
GMRC	**Granite Mounta**	**1.49**	**25**	P	Pn	22 38 33.7	-0.6
	baz=1.5,SNR=428						
GMRC				⇑Sb	Sb	22 38 54.6	+0.5
	baz=1.5						
RRX	**Edison Barstow**	**1.53**	**342**	⇓Pb	Pb	22 38 35.6	-0.3
	baz=1.5,SNR=179						
RRX				⇓Sb	Sb	22 38 55.3	0.0
	baz=1.5						
MWC	**Mount Wilson**	**1.58**	**301**	*e*Pn	Pn	22 38 35.2	-0.3
MWC				*e*Sn	Sn	22 38 55.9	-0.2
FMP	**Fort Macarthur**	**1.59**	**281**	⇑P	Pn	22 38 35.3	-0.4
	baz=1.6,SNR=31						
Y12C	**Blythe**	**1.61**	**78**	⇑P	Pn	22 38 34.9	-1.0
	baz=1.6,SNR=89						
Y12C				⇓Sb	Sb	22 38 58.7	+1.0
	baz=1.6						
PASC	**Pasadena Art C**	**1.65**	**297**	*e*Pn	Pn	22 38 36.5	+0.1
PASC				*e*Sn	Sn	22 38 57.2	-0.6
CIS	**Catalina Islan**	**1.66**	**270**	⇑P	Pn	22 38 35.8	-0.8
	baz=1.6						
CIS				⇓Sb	Sb	22 38 59.3	+0.2
	baz=1.6						
112A	**Yuma**	**1.78**	**119**	⇑S	Sn	22 38 59.9	-1.0
	baz=1.8						
DECC	**Green Verdugo**	**1.79**	**298**	⇓Pb	Pb	22 38 39.4	-1.0
	baz=1.8,SNR=33						
DECC				⇑Sb	Sb	22 39 02.9	0.0
	baz=1.8						
SCI	**San Clemente I**	**1.84**	**257**	⇑P	Pn	22 38 38.8	-0.3
	baz=1.8						
EDW2	**Edwards Air Fo**	**1.95**	**318**	⇑Sb	Sb	22 39 07.6	+0.1
	baz=1.9						
LDFC	**Landfair**	**1.97**	**33**	*e*Pn	Pn	22 38 40.9	0.0
LDFC				*e*Pg	Pg	22 38 44.8	-0.4
LDFC				*e*Sn	Sn	22 39 06.5	+0.9
LDFC				*e*Sg	Sg	22 39 10.6	-0.2
NEE2	**Needles Airpor**	**2.00**	**48**	⇓P	Pn	22 38 41.2	-0.1
	baz=2.0,SNR=39						
NEE2				⇑Sb	Sb	22 39 10.1	+1.2
	baz=2.0						
TUQ	**Turquoise Moun**	**2.05**	**11**	⇓P	Pn	22 38 41.4	-0.5
	baz=2.0						
PDMCI	**Parker Dam,Lak**	**2.08**	**65**	⇑S	Sn	22 39 06.7	-1.8
	baz=2.1						
Y13A	**Salome**	**2.19**	**79**	⇑P	Pn	22 38 43.2	-0.8
	baz=2.2,SNR=25						
Y13A				⇑S	Sn	22 39 09.3	-1.8
	baz=2.2						
OSI	**Osito Adit**	**2.25**	**302**	⇓Sb	Sb	22 39 16.5	+0.3
	baz=2.2						
OSI	**Osito Adit**	**2.25**	**302**	*e*Pn	Pn	22 38 44.2	-0.6
OSI				*e*Pg	Pg	22 38 47.9	-2.7
OSI				*e*Sg	Sg	22 39 16.6	-3.2
LRMC	**Laurel Mountai**	**2.30**	**333**	⇓P	Pn	22 38 44.9	-0.5
	baz=2.3,SNR=15						
BLG	**Laguna Peak**	**2.31**	**288**	⇑P	Pn	22 38 44.8	-0.8
	baz=2.3,SNR=17						
BLG				⇓Sb	Sb	22 39 18.2	+0.4
	baz=2.3						
113A	**Mohawk Valley,**	**2.32**	**106**	⇑P	Pn	22 38 44.8	-0.8
	baz=2.3,SNR=12						
Z13A	**Yuma Proving G**	**2.32**	**95**	P	Pn	22 38 44.7	-1.0
	baz=2.3,SNR=75						
Z13A				⇓S	Sn	22 39 12.8	-1.5
	baz=2.3						
X13A	**Yucca**	**2.44**	**61**	⇓P	Pn	22 38 47.1	-0.2
	baz=2.4,SNR=58						
SHOC	**Shoshone**	**2.47**	**3**	⇓P	Pn	22 38 47.4	-0.3
	baz=2.4						
V11A	**Goodsprings**	**2.54**	**18**	⇑P	Pn	22 38 48.7	0.0
	baz=2.5,SNR=12						
SNCC	**San Nicolas Is**	**2.61**	**267**	⇑P	Pn	22 38 49.1	-0.6
	baz=2.6						
ARVC	**Arvin**	**2.62**	**311**	⇑Sb	Sb	22 39 27.6	+0.8
	baz=2.6						
V12A	**Nelson**	**2.63**	**29**	⇓P	Pn	22 38 49.8	-0.2
	baz=2.6						
W13A	**Hualapai Mount**	**2.68**	**51**	⇑P	Pn	22 38 50.6	0.0
	baz=2.7,SNR=45						
W13A				⇓Sb	Sb	22 39 31.3	+2.9
	baz=2.7						
BSC	**Santa Cruz Isl**	**2.74**	**283**	⇑P	Pn	22 38 50.9	-0.6
	baz=2.7,SNR=12						
MPMC	**Manual Prospec**	**2.77**	**342**	⇑P	Pn	22 38 51.5	-0.4
	baz=2.7,SNR=28						
ISA	**Isabella**	**2.81**	**323**	⇓P	Pn	22 38 51.8	-0.5
	baz=2.8						
ISA				⇓Sb	Sb	22 39 34.1	+2.0
	baz=2.8						
ISA	**Isabella**	**2.81**	**323**	*e*Pn	Pn	22 38 52.2	-0.2
ISA				*e*Pg	Pg	22 38 58.3	-2.8
ISA				*e*Sn	Sn	22 39 26.7	+0.4
ISA				*e*Sg	Sg	22 39 32.6	-4.9
Y14A	**Wickenburg**	**2.89**	**79**	⇑P	Pn	22 38 53.1	-0.3
	baz=2.9,SNR=26						
Z14A	**Wintersburg**	**2.90**	**90**	⇓P	Pn	22 38 53.1	-0.5
	baz=2.9,SNR=27						
U10A	**Ash Meadows, A**	**2.99**	**1**	⇓P	Pn	22 38 54.8	-0.1
	baz=3.0,SNR=15						
114A	**Black Gap (USA**	**3.04**	**102**	⇑P	Pn	22 38 55.0	-0.6
	baz=3.1,SNR=72						
114A				⇓S	Sn	22 39 31.0	-1.0
	baz=3.1						
U11A	**Corn Creek**	**3.11**	**16**	P	Pn	22 38 57.0	+0.5
	baz=3.1,SNR=17						
X14A	**Yava**	**3.11**	**69**	P	Pn	22 38 56.9	+0.3
	baz=3.1,SNR=72						
X14A				⇑S	Sn	22 39 32.9	-0.8
	baz=3.1						
V13A	**Grand Canyon W**	**3.14**	**39**	⇑P	Pn	22 38 57.4	+0.4
	baz=3.1,SNR=22						
PKM	**Peak Mountain**	**3.18**	**298**	⇓P	Pn	22 38 57.8	+0.3
	baz=3.1,SNR=20						
W14A	**Seligman**	**3.28**	**56**	⇓P	Pn	22 38 59.6	+0.7
	baz=3.3,SNR=9.1						
214A	**Organ Pipe Nat**	**3.37**	**115**	⇓P	Pn	22 39 00.2	+0.1
	baz=3.4						
U12A	**Valley of Fire**	**3.37**	**27**	P	Pn	22 39 00.4	+0.2
	baz=3.4,SNR=24						
Y15A	**Casa Rosa Ranc**	**3.44**	**80**	P	Pn	22 39 01.2	+0.1
	baz=3.5,SNR=91						
Y15A				⇑S	Sn	22 39 40.9	-1.1
	baz=3.5						
V14A	**Boquillas Ranc**	**3.51**	**50**	⇓P	Pn	22 39 02.3	+0.3
	baz=3.5,SNR=118						
Z15A	**Gila River Ind**	**3.56**	**91**	⇑S	Sn	22 39 43.6	-1.4
	baz=3.6						
115A	**Sonoran Desert**	**3.59**	**100**	⇑P	Pn	22 39 03.0	-0.1
	baz=3.6,SNR=24						
115A				⇓S	Sn	22 39 44.7	-0.8
	baz=3.6						
U13A	**Pakoon Wash**	**3.60**	**33**	⇓P	Pn	22 39 03.7	+0.4
	baz=3.6						
X15A	**Humboldt**	**3.63**	**72**	⇓P	Pn	22 39 04.1	+0.4
	baz=3.6						
X15A				⇑S	Sn	22 39 45.4	-1.2
	baz=3.6						
GRAC	**Grapevine Rang**	**3.65**	**348**	⇓P	Pn	22 39 04.5	+0.6
	baz=3.6						
W15A	**Williams**	**3.85**	**62**	⇓P	Pn	22 39 07.8	+1.0
	baz=3.9,SNR=9.6						
U14A	**Mt Trumbull**	**4.00**	**41**	⇓P	Pn	22 39 09.6	+0.9
	baz=4.0,SNR=7.9						
T13A	**Saint George**	**4.13**	**29**	⇑P	Pn	22 39 11.2	+0.6
	baz=4.1						
Y16A	**Circle Bar Ran**	**4.14**	**82**	P	Pn	22 39 10.9	+0.2
	baz=4.2,SNR=37						
Z16A	**Peralta Trail,**	**4.17**	**90**	⇑P	Pn	22 39 10.6	-0.6
	baz=4.2						
Z16A				⇓S	Sn	22 39 58.5	-1.5
	baz=4.2						
V15A	**Kaibab Nationa**	**4.24**	**54**	⇓P	Pn	22 39 13.2	+1.3
	baz=4.2,SNR=82						
X16A	**Lo Mia Camp, P**	**4.25**	**75**	⇓P	Pn	22 39 12.9	+0.6
	baz=4.3						
S12A	**Delamar Landin**	**4.37**	**17**	⇑P	Pn	22 39 14.9	+1.1
	baz=4.3						
W16A	**Flagstaff**	**4.37**	**66**	⇑P	Pn	22 39 14.8	+0.9
	baz=4.4						
S10A	**Tonopah Range,**	**4.49**	**358**	⇓P	Pn	22 39 16.4	+0.9
	baz=4.5						
U15A	**North Rim**	**4.52**	**47**	⇑P	Pn	22 39 17.0	+1.0
	baz=4.5,SNR=12						
T14A	**Hurricane**	**4.54**	**36**	P	Pn	22 39 17.3	+1.2
	baz=4.5,SNR=12						
S13A	**Holt Ranch, En**	**4.64**	**26**	⇓P	Pn	22 39 18.5	+1.0
	baz=4.6						
WUAZ	**Wupatki**	**4.66**	**62**	⇑P	Pn	22 39 19.0	+1.2
	baz=4.7,SNR=10						
WUAZ	**Wupatki**	**4.66**	**62**	*e*Pn	Pn	22 39 19.8	+2.0
Y17A	**Roosevelt**	**4.66**	**85**	⇑P	Pn	22 39 17.6	-0.2
	baz=4.7,SNR=52						
TPH	**Tonopah**	**4.69**	**352**	*e*Pg	Pg	22 39 28.1	-9.1
X17A	**Forest Lakes**	**4.75**	**77**	⇑P	Pn	22 39 19.9	+0.8
	baz=4.8						
CCUT	**Cedar City**	**4.81**	**30**	*e*Pn	Pn	22 39 20.6	+0.7
CCUT				*e*Pg	Pg	22 39 37.2	-2.3
CCUT				*e*Sg	Sg	22 40 37.4	-4.4
TUC	**Tucson**	**4.87**	**102**	*e*Pn	Pn	22 39 20.5	-0.2
TUC				*e*Pg	Pg	22 39 40.6	0.0
T15A	**Red Dirt Ranch**	**4.87**	**42**	⇑P	Pn	22 39 22.0	+1.2
	baz=4.9,SNR=5.2						
Z17A	**San Carlos Hig**	**4.97**	**90**	⇓P	Pn	22 39 22.5	+0.4
	baz=5.0						
ARUT	**Antelope Range**	**4.98**	**28**	*e*Pn	Pn	22 39 22.8	+0.5
ARUT				*e*Pg	Pg	22 39 40.2	-2.6
ARUT				*e*Sg	Sg	22 40 43.2	-4.1
V17A	**Tonalea, Kykot**	**5.13**	**63**	⇑P	Pn	22 39 25.6	+1.3
	baz=5.1,SNR=30						
R13A	**O'Grain Ranch,**	**5.14**	**22**	⇑P	Pn	22 39 26.0	+1.5
	baz=5.1						
Y18A	**Canyon Day Jun**	**5.34**	**84**	⇑P	Pn	22 39 27.6	+0.5
	baz=5.3						
118A	**Homack Ranch,**	**5.47**	**96**	⇓P	Pn	22 39 28.9	-0.1
	baz=5.5,SNR=9.1						
218A	**Dragoon**	**5.56**	**103**	⇑P	Pn	22 39 30.9	+0.7
	baz=5.6,SNR=11						
CMB	**Columbia Colle**	**5.62**	**326**	*e*Pn	Pn	22 39 32.4	+1.4
	9.2nm,0.8s						
CMB				*e*Pb	Pb	22 39 44.6	-1.0
CMB				*e*Pg	Pg	22 39 52.2	-2.8
CMB				*e*Sg	Sg	22 40 57.9	-10
318A	**Bisbee**	**5.78**	**108**	⇑P	Pn	22 39 33.5	+0.2
	baz=5.8,SNR=17						
Z19A	**T-Link Ranch,**	**5.98**	**89**	⇓P	Pn	22 39 36.8	+0.8
	baz=6.0						
Y19A	**Nutrioso**	**5.99**	**83**	⇓P	Pn	22 39 37.2	+1.1
	baz=6.0						
119A	**Ashpeak Ranch,**	**6.00**	**94**	⇑P	Pn	22 39 36.9	+0.6
	baz=6.0						
Q14A	**Sevier Lake (B**	**6.10**	**24**	⇓P	Pn	22 39 38.7	+1.1
	baz=6.1						
MSU	**Marysvale**	**6.13**	**33**	*e*Pn	Pn	22 39 41.9	+3.8
	13nm,0.6s						
MSU				*e*Pg	Pg	22 40 01.0	-3.7
MSU				*e*Sg	Sg	22 41 20.4	-3.7
DUG	**Dugway**	**7.35**	**22**	*e*Pn	Pn	22 39 56.3	+1.5
	17nm,1.0s						
DUG				*e*Pg	Pg	22 40 23.7	-4.3
DUG				*e*Sg	Sg	22 41 56.2	-7.0
MVCO	**Mesa Verde**	**7.49**	**58**	*e*Pn	Pn	22 39 56.1	-0.6
	16nm,0.7s						
MVCO				*e*Pg	Pg	22 40 25.8	-5.0
MVCO				*e*Sg	Sg	22 42 04.4	-3.4
HHC	**Hu-ho-hao-te**	**93.87**	**326**	*e*P	P	22 51 26.7	+1.5
HHC				PP	PP	22 55 14.9	+5.0
HHC				SKS		23 02 00.9	
HHC				S	S	23 02 35.5	+0.4
HHC				SS	SS	23 08 56.6	+4.1
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				LR	LR		
	comp=Z,190nm,20.7s						

*IDC **09** 22:59:20.5±11.0, 36°27′N×142°01′E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, MS3.8/1, Ms1 3.8/1, ms1mx3.5/33, Error ellipse: s-maj=271.5km s-min=51.9km az=166.0*

*ISCJB **09** 22:59:21.5±1.7, 36°18′N±0°06×142°09′E±0°10, h22km±11km, mb3.8/6, Error ellipse: s-maj=13.5km s-min=9.0km az=15.8*

*NEIC **09** 22:59:21.1±3.5, 35°10′N×141°90′E, h35km, mb4.1/4, Error ellipse: s-maj=80.8km s-min=21.7km az=174.0*

*JMA **09** 22:59:23.4±0.3, 36°19′N×141°94′E, h64km, M3.2*

ISC 09 22:59:20.8±1.8, 36°16′N±0°06×142°07′E±0°09, h7km±9km, n20, σ0°68/24, mb3.8/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.08**	**245**	P	**Pg**	**22 59 41.8**	**+0.3**
CHOJ				S	**Sg**	**22 59 55.8**	**+0.2**
JHO	**Hitachi**	**1.29**	**291**	P	**Pn**	**22 59 43.9**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.39**	**313**	P	**Pn**	**22 59 45.5**	**-1.0**
JFK	**Kawauchi**	**1.54**	**322**	P	**Pn**	**22 59 48.1**	**-0.5**
BSO1	**Boso 1**	**1.75**	**211**	P	**Pn**	**22 59 51.4**	**-0.1**
BSO1				S	**Sn**	**23 00 13.5**	**-0.5**
JFT	**Otama**	**1.94**	**315**	P	**Pn**	**22 59 54.5**	**+0.4**
JMM	**Marumori**	**1.98**	**329**	P	**Pn**	**22 59 54.4**	**-0.4**
JAG	**Ashikaga**	**2.13**	**278**	P	**Pn**	**22 59 55.8**	**-0.9**
JFY	**Yanaizu**	**2.27**	**304**	P	**Pn**	**22 59 59.1**	**+0.4**
MJAR	**Matsushiro Arr**	**3.14**	**278**	Pn	**Pn**	**23 00 10.3**	**-0.4**
	4.1nm,0.3s,baz=318,slow=24,SNR=30						
MJAR				Sn	**Sn**	**23 00 48.0**	**-0.4**
	2.1nm,0.3s,baz=85,slow=15,SNR=5.2						
MJAR				LR	LR	23 00 51.3	
	comp=Z,1μm,18.4s,baz=35,slow=30						
MAJO	**Matsushiro**	**3.14**	**278**	*e*Pn	**Pn**	**23 00 11.2**	**+0.5**
MAT	**Matsushiro**	**3.14**	**278**	P	**Pn**	**23 00 11.4**	**+0.8**
MAT				S	**Sn**	**23 00 49.0**	**+0.6**
SONM	**Songino Array**	**28.71**	**305**	P	**P**	**23 05 18.8**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=110,slow=8.7,SNR=4.9						
BILL	**Bilibino**	**34.72**	**16**	*e*P	**P**	**23 06 16.7**	**+5.7**
	1.6nm,0.3s,mb4.4						
MK31	**Makanchi Array**	**45.03**	**303**	*e*P	**P**	**23 07 39.0**	**+2.0**
MKAR	**Makanchi Array**	**45.03**	**303**	P	**P**	**23 07 36.9**	**0.0**
	0.3nm,0.5s,mb3.4,baz=91,slow=8.6,SNR=6.4						
KURK	**Kurchatov**	**46.89**	**309**	P	**P**	**23 07 51.9**	**+0.4**
	0.7nm,0.5s,mb3.8,baz=82,slow=7.5,SNR=4.3						
KURK	**Kurchatov**	**46.89**	**309**	*e*P	**P**	**23 07 51.1**	**-0.4**
	1.8nm,0.8s,mb4.0						
BRVK	**Borovoye**	**51.61**	**313**	*e*P	**P**	**23 08 28.0**	**+0.4**
	1.5nm,0.8s,mb4.0						
ABKAR	**Akbulak array**	**58.91**	**311**	*e*P	**P**	**23 09 20.1**	**-0.2**
	0.3nm,0.6s,mb3.5						

*ISCJB **09** 22:59:32.9±0.3, 35°86′N±0°02×117°02′W±0°03, h10km, Error ellipse: s-maj=3.1km s-min=2.8km az=11.5*

*NEIC **09** 22:59:33.3, 35°90′N×117°02′W, h2km, ML3.4(PAS), After PAS.*

ISC 09 22:59:33.1±0.3, 35°88′N±0°02×116°98′W±0°02, h10km, n47, σ1°11/67, 14C-24D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPMC	**Manual Prospec**	**0.45**	**293**	⇑P	**Pg**	**22 59 41.5**	**-0.4**
	baz=0.4						
MPMC				⇓S	**Sg**	**22 59 47.3**	**-0.6**
	baz=0.4						
SHOC	**Shoshone**	**0.57**	**88**	⇑P	**Pg**	**22 59 44.9**	**+0.8**
	baz=0.6,SNR=145						
FURC	**Furnace Creek,**	**0.59**	**9**	⇓P	**Pg**	**22 59 44.7**	**+0.1**
	baz=0.6,SNR=120						
FURC				⇓S	**Sg**	**22 59 53.2**	**+0.8**
	baz=0.6						
GSC	**Goldstone**	**0.60**	**166**	⇑P	**Pg**	**22 59 45.2**	**+0.5**
	baz=0.6,SNR=78						
GSC	**Goldstone**	**0.60**	**166**	*e*Pg	**Pg**	**22 59 45.0**	**+0.3**
GSC				*e*Sg	**Sg**	**22 59 52.9**	**+0.3**
LRMC	**Laurel Mountai**	**0.71**	**235**	P	**Pg**	**22 59 46.5**	**-0.3**
	baz=0.7,SNR=202						
LRMC				⇓S	**Sg**	**22 59 55.9**	**-0.1**
	baz=0.7						
U10A	**Ash Meadows, A**	**0.75**	**44**	⇓P	**Pg**	**22 59 48.1**	**+0.5**
	baz=0.8,SNR=281						
TUQ	**Turquoise Moun**	**0.97**	**117**	⇑P	**Pg**	**22 59 52.2**	**+0.4**
	baz=1.0,SNR=156						
RRX	**Edison Barstow**	**1.00**	**181**	⇑P	**Pg**	**22 59 52.6**	**+0.2**
	baz=1.0,SNR=53						
GRAC	**Grapevine Rang**	**1.16**	**344**	⇓P	**Pb**	**22 59 54.9**	**-0.3**
	baz=1.1						
GRAC				⇑S	**Sb**	**23 00 10.6**	**+0.3**
	baz=1.1						
HEC	**Hector,Ludlow**	**1.18**	**153**	⇓P	**Pb**	**22 59 55.6**	**0.0**
	baz=1.2,SNR=36						
ISA	**Isabella**	**1.24**	**260**	⇑P	**Pn**	**22 59 55.8**	**-0.6**
	baz=1.2						
ISA	**Isabella**	**1.24**	**260**	*e*Pg	**Pg**	**22 59 55.6**	**-1.2**
ISA				*e*Sg	**Sg**	**23 00 11.2**	**-1.7**
V11A	**Goodsprings**	**1.26**	**92**	⇑P	**Pn**	**22 59 57.0**	**+0.3**
	baz=1.3,SNR=148						
EDW2	**Edwards Air Fo**	**1.30**	**220**	P	**Pn**	**22 59 56.9**	**-0.4**
	baz=1.3,SNR=104						
U11A	**Corn Creek**	**1.40**	**67**	⇓P	**Pn**	**22 59 59.2**	**+0.5**
	baz=1.4,SNR=172						
GMRC	**Granite Mounta**	**1.54**	**135**	⇑P	**Pn**	**23 00 00.3**	**-0.3**
	baz=1.6,SNR=160						
ARVC	**Arvin**	**1.69**	**244**	⇓P	**Pn**	**23 00 02.8**	**+0.2**
	baz=1.7,SNR=7.6						
V12A	**Nelson**	**1.74**	**95**	⇓P	**Pn**	**23 00 03.8**	**+0.5**
	baz=1.8,SNR=99						
MWC	**Mount Wilson**	**1.88**	**208**	*e*Pg	**Pg**	**23 00 08.5**	**-0.6**
MWC				*e*Sn	**Sn**	**23 00 29.9**	**+0.9**
OSI	**Osito Adit**	**1.91**	**229**	⇑Sb	**Sb**	**23 00 34.7**	**+2.8**
	baz=1.9						
DECC	**Green Verdugo**	**1.97**	**215**	⇑Sb	**Sb**	**23 00 36.3**	**+2.6**
	baz=2.0						
PASC	**Pasadena Art C**	**1.98**	**210**	*e*Pn	**Pn**	**23 00 06.2**	**-0.3**
PASC				*e*Sn	**Sn**	**23 00 31.3**	**-0.1**
S11A	**Rachel**	**2.02**	**29**	⇓Sb	**Sb**	**23 00 38.4**	**+3.4**
	baz=2.0						
BELC	**Belle Mtn.**	**2.04**	**157**	⇓P	**Pn**	**23 00 07.8**	**+0.2**
	baz=2.1,SNR=103						
S10A	**Tonopah Range,**	**2.06**	**8**	⇓P	**Pn**	**23 00 08.2**	**+0.5**
	baz=2.0,SNR=19						
S10A				⇓Sb	**Sb**	**23 00 39.5**	**+3.3**
	baz=2.0						
TPH	**Tonopah**	**2.19**	**355**	*e*Pn	**Pn**	**23 00 05.4**	**-4.3**
IRM	**Iron Mountain**	**2.28**	**138**	⇓P	**Pn**	**23 00 10.7**	**-0.2**
	baz=2.3,SNR=12						
MURC	**Murrieta**	**2.29**	**185**	⇓S	**Sn**	**23 00 39.9**	**+0.8**
	baz=2.3						
PFO	**Pinyon Flat Ob**	**2.31**	**169**	⇑P	**Pn**	**23 00 11.6**	**+0.4**
	baz=2.3,SNR=12						
PFO				⇓S	**Sn**	**23 00 40.7**	**+1.1**
	baz=2.3						
PFO	**Pinyon Flat Ob**	**2.31**	**169**	*e*Pn	**Pn**	**23 00 11.4**	**+0.2**
PFO				*e*Pg	**Pg**	**23 00 16.6**	**-0.8**
PFO				*e*Sn	**Sn**	**23 00 40.4**	**+0.7**
PFO				*e*Sg	**Sg**	**23 00 45.9**	**-1.5**
V13A	**Grand Canyon W**	**2.43**	**90**	⇓P	**Pn**	**23 00 13.7**	**+0.8**
	baz=2.5,SNR=6.8						
U13A	**Pakoon Wash**	**2.50**	**77**	⇓P	**Pn**	**23 00 14.5**	**+0.8**
	baz=2.5						
W13A	**Hualapai Mount**	**2.64**	**106**	⇓P	**Pn**	**23 00 16.5**	**+0.7**
	baz=2.7						
T13A	**Saint George**	**2.72**	**65**	⇑P	**Pn**	**23 00 18.2**	**+1.4**
	baz=2.7						
X13A	**Yucca**	**2.88**	**116**	⇓P	**Pn**	**23 00 19.7**	**+0.6**
	baz=2.9,SNR=14						
Y12C	**Blythe**	**2.94**	**136**	⇓P	**Pn**	**23 00 20.0**	**+0.2**
	baz=3.0,SNR=5.6						
V14A	**Boquillas Ranc**	**3.16**	**93**	⇓P	**Pn**	**23 00 24.2**	**+1.3**
	baz=3.2,SNR=6.8						
BAR	**Barrett**	**3.21**	**175**	*e*Pn	**Pn**	**23 00 24.5**	**+1.0**
BAR				*e*Pg	**Pg**	**23 00 31.9**	**-2.7**
BAR				*e*Sg	**Sg**	**23 01 12.8**	**-3.3**
GLA	**Glamis**	**3.34**	**147**	*e*Pn	**Pn**	**23 00 26.7**	**+1.4**
GLA				*e*Pg	**Pg**	**23 00 35.2**	**-1.9**
GLA				*e*Sg	**Sg**	**23 01 20.7**	**+0.4**
CCUT	**Cedar City**	**3.35**	**59**	*e*Pg	**Pg**	**23 00 35.7**	**-1.6**
ARUT	**Antelope Range**	**3.42**	**55**	*e*Pg	**Pg**	**23 00 37.0**	**-1.5**
ARUT				*e*Sg	**Sg**	**23 01 20.7**	**-2.1**
CMB	**Columbia Colle**	**3.47**	**309**	*e*Pg	**Pg**	**23 00 34.0**	**-5.6**
CMB				*e*Sg	**Sg**	**23 01 18.5**	**-6.1**
X14A	**Yava**	**3.63**	**112**	⇑P	**Pn**	**23 00 30.6**	**+1.2**
	baz=3.7						
Z13A	**Yuma Proving G**	**3.83**	**133**

comp=E,5.3nm,1.0s,baz=187,slow=12,SNR=24
MK31 ||Sn **Sn** **23 14 23.1 -5.8**
comp=E,3.2nm,0.8s,baz=178,slow=25,SNR=4.1
MK31 Makanchi Array 11.09 2 *e*Pn **Pn** **23 12 25.1 +0.1**
MKAR Makanchi Array 11.09 2 Pn **Pn** **23 12 24.5 -0.5**
comp=E,0.4nm,0.3s,baz=187,slow=14,SNR=19
MKAR Sn **Sn** **23 14 28.6 -0.4**
comp=E,0.2nm,0.3s,baz=185,slow=26,SNR=4.0
KK01 Karatay Array 11.35 314 ||Pn **Pn** **23 12 32.4 +3.8**
comp=E,0.7nm,0.7s
KK01 ⇑Pg Pn 23 13 13.5 +45
comp=E,1.4nm,0.8s
KK01 ⇑Lg 23 15 41.4
comp=E,4.6nm,1.1s
KURK Kurchatov 15.16 353 Pn **Pn** **23 13 16.2 -4.3**
comp=E,0.1nm,0.3s,baz=172,slow=14,SNR=4.4
KURK Kurchatov 15.16 353 *e*P **Pn** **23 13 22.1 +1.6**
comp=E,2.5nm,0.8s
ZALV Zalesovo Beam 18.38 6 P **Pn** **23 14 01.5 +0.4**
comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=3.6
BVAR Borovoye Array 19.06 339 P **Pn** **23 14 07.5 -1.9**
comp=E,0.1nm,0.3s,baz=128,slow=9.7,SNR=4.4
BRVK Borovoye 19.12 339 *e*P **Pn** **23 14 09.8 -0.3**
comp=E,3.8nm,1.0s
ABKAR Akbulak array 20.87 317 *e*P **P** **23 14 28.5 0.0**
comp=E,2.1nm,0.9s
SONM Songino Array 21.97 49 P **P** **23 14 41.5 +1.2**
comp=E,2.8nm,1.1s,mb3.6,baz=245,slow=10,SNR=13
AKTK Aktyubinsk 22.56 318 P **P** **23 14 47.6 +1.1**
AKTO Aktyubinsk 22.56 318 P **P** **23 14 47.6 +1.1**
comp=E,1.5nm,0.7s,mb3.5,baz=131,slow=13,SNR=3.3
BRTR Keskin Array B 37.84 291 P **P** **23 17 03.5 +0.4**
comp=E,1.4nm,1.0s,mb3.6,baz=95,slow=7.6,SNR=4.7
FINES FINESS Array B 43.06 325 P **P** **23 17 45.2 -0.9**
comp=E,1.2nm,0.8s,mb3.7,baz=103,slow=8.6,SNR=4.2
NOA NORSAR Array B 50.19 323 P **P** **23 18 41.4 -0.6**
comp=E,0.8nm,0.9s,mb3.7,baz=86,slow=7.4,SNR=2.2
GERES GERESS Array B 50.35 307 P **P** **23 18 44.4 +1.0**
comp=E,0.8nm,0.9s,mb3.7,baz=75,slow=7.1,SNR=5.4
PETK Petropavlovsk- 54.42 46 P **P** **23 19 11.3 -2.2**
comp=E,1.9nm,0.8s,mb4.1,baz=292,slow=9.2,SNR=3.6
TORD Torodi Ar. Bea 74.36 275 P **P** **23 21 22.5 -2.2**
comp=E,0.5nm,0.7s,mb3.6,baz=49,slow=4.5,SNR=4.2
ASAR Alice Springs 77.00 132 P **P** **23 21 37.3 -2.2**
comp=E,0.7nm,0.7s,mb3.7,baz=316,slow=6.4,SNR=4.4
YKA Yellowknife Ar 81.27 8 P **P** **23 22 00.6 -1.7**
comp=E,0.3nm,0.8s,mb3.3,baz=344,slow=5.4,SNR=4.2
YKA Yellowknife Ar 81.27 8 P **P** **23 22 00.6 -1.7**
PDAR Pinedale Array 101.23 8 P Pdif 23 23 35.4 -1.9
comp=E,0.4nm,0.9s,baz=94,slow=4.5,SNR=3.9

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*NOU **09** 23:10:53.7±0.4, 18.°97S×169.°13E, h30km, MD2.9, ML4.2*
*SZGRF **09** 23:10:54.6, 19.°80S×169.°83E, h138km, Vanuatu Islands*
*ISCJB **09** 23:10:55.2±1.0, 19.°34S±0.°07×169.°08E±0.°05, h140km±8km, mb4.6/39, Error ellipse: s-maj=11.6km s-min=8.2km az=164.6*
*DJA **09** 23:10:55, 19.°36S×169.°17E, h125km, mb5.1/8*
*IDC **09** 23:10:56.2±0.7, 19.°31S×169.°12E, h138km±5km, mb4.4/16, mb1 4.5/17, mb1mx4.5/20, mbtmp4.4/17, Error ellipse: s-maj=14.3km s-min=12.3km az=128.0*
*NEIC **09** 23:10:57.3±1.3, 19.°35S×169.°13E, h148km±12km, mb4.8/29, Error ellipse: s-maj=9.6km s-min=7.0km az=179.0*
*LDG **09** 23:11:00.8±0.2, 19.°35S×168.°28E, h170km, Mb4.1/2, Error ellipse: s-maj=24.5km s-min=4.3km az=113.0*
ISC 09 23:10:56.2±0.9, 19.°34S±0.°07×169.°10E±0.°05, h136km±8km, n139, σ0.977/70, mb4.6/39, 1C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.48**	**216**	*e*P	**Pn**	**23 11 48.8**	**-0.5**
BAYA				*e*S	**Sn**	**23 12 30.0**	**+0.6**
DZM	**Mont Dzumac**	**3.68**	**222**	*e*P	**Pn**	**23 11 51.7**	**-0.2**
DZM				*e*S	**Sn**	**23 12 34.6**	**+0.3**
DZM				AMP		23 12 36.2	
	comp=Z,7μm,7.2s						
DZM	**Mont Dzumac**	**3.68**	**222**	*e*Pn	**Pn**	**23 11 52.1**	**+0.2**
DZM				*e*Sn	**Sn**	**23 12 35.8**	**+1.5**
LASL	**Noumea**	**3.74**	**219**	*e*P	**Pn**	**23 11 52.6**	**-0.1**
LASL				*e*S	**Sn**	**23 12 35.8**	**+0.1**
LASL				AMP		23 12 39.8	
	comp=Z,1μm,0.9s						
NORM	**Noumea**	**3.77**	**220**	*e*P	**Pn**	**23 11 53.0**	**-0.1**
NORM				*e*S	**Sn**	**23 12 36.9**	**+0.4**
NORM				AMP		23 12 38.3	
	comp=Z,1μm,0.0s						
NOUC	**Port Laguerre**	**3.79**	**223**	*e*P	**Pn**	**23 11 53.5**	**+0.2**
NOUC				*e*S	**Sn**	**23 12 37.8**	**+0.9**
NOUC				AMP		23 12 42.6	
	comp=Z,369nm,5.4s						
OUZ	**Omahuta**	**16.31**	**167**	*e*P	**Pn**	**23 14 38.0**	**+0.7**
	comp=Z,65nm,0.7s						
EIDS	**Eidsvold**	**17.70**	**247**	*e*P	**Pn**	**23 14 55.7**	**+1.4**
	comp=Z,30nm,0.5s						
AFI	**Afiamalu**	**19.10**	**76**	P	**P**	**23 15 09.1**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=53,slow=8.6,SNR=7.3						
ARMA	**Armidale**	**19.28**	**232**	*e*P	**P**	**23 15 12.8**	**+2.4**
ARMA	**Armidale**	**19.28**	**232**	*e*P	**P**	**23 15 13.0**	**+2.6**
	comp=Z,34nm,1.2s						
URZ	**Urewera**	**20.10**	**161**	P	**P**	**23 15 19.7**	**+0.5**
	comp=Z,115nm,0.6s,baz=316,slow=4.4,SNR=82						
URZ	**Urewera**	**20.10**	**161**	*e*P	**P**	**23 15 19.9**	**+0.7**
	comp=Z,129nm,0.6s						
CTA	**Charters Tower**	**21.52**	**264**	*e*P	**P**	**23 15 35.6**	**+1.1**
	comp=Z,26nm,0.9s,mb4.7						
CTA	**Charters Tower**	**21.52**	**264**	P	**P**	**23 15 36.1**	**+1.6**
	comp=Z,25nm,0.6s,mb4.8,baz=90,slow=11,SNR=28						
CTAO	**Charters Tower**	**21.52**	**264**	*e*P	**P**	**23 15 35.9**	**+1.4**
	comp=Z,41nm,0.9s,mb4.9						
KHZ	**Kahutara**	**23.31**	**172**	*e*P	**P**	**23 15 50.5**	**-1.4**
	comp=Z,84nm,0.7s,mb5.3						
CNB	**Canberra Magne**	**23.61**	**224**	*e*P	**P**	**23 15 55.8**	**+1.1**
CNB				*e*		23 16 27.7	
CAN	**Canberra**	**23.85**	**224**	*e*P	**P**	**23 15 57.7**	**+0.8**
	comp=Z,10nm,0.7s,mb4.5						
RPZ	**Rata Peaks**	**24.36**	**177**	P	**P**	**23 16 01.7**	**+0.2**
	comp=Z,30nm,0.5s,mb5.1,baz=294,slow=1.6,SNR=13						
COEN	**Coen**	**25.39**	**278**	*e*P	**P**	**23 16 12.7**	**+1.6**
	comp=Z,193nm,1.0s,mb5.6						
STKA	**Stephens Creek**	**27.68**	**238**	*e*P	**P**	**23 16 32.1**	**+0.6**
	comp=Z,19nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**27.68**	**238**	P	**P**	**23 16 32.2**	**+0.8**
	comp=Z,21nm,0.6s,mb5.1,baz=63,slow=8.4,SNR=86						
STKA				PcP	PcP	23 19 45.5	+0.3
	comp=Z,5.1nm,0.6s,baz=94,slow=4.2,SNR=7.3						
WB2	**Warramunga Arr**	**32.70**	**263**	*e*P	**P**	**23 17 14.8**	**-1.1**
WRAB	**Tennant Creek**	**32.70**	**263**	*e*P	**P**	**23 17 14.8**	**-1.1**
	comp=Z,7.9nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**32.71**	**263**	P	**P**	**23 17 15.0**	**-1.0**
	comp=Z,8.5nm,0.5s,mb4.8,baz=88,slow=8.5,SNR=29						
WRA				PP	PP	23 18 36.4	+3.8
	comp=Z,3.3nm,1.0s,baz=88,slow=10,SNR=5.4						
WRA				PcP	PcP	23 19 58.1	-0.4
	comp=Z,0.9nm,0.5s,baz=91,slow=3.4,SNR=3.9						
ASAR	**Alice Springs**	**32.97**	**256**	P	**P**	**23 17 17.5**	**-0.7**
	comp=Z,61nm,0.6s,mb5.5,baz=84,slow=8.8,SNR=786						
ASAR				S	**S**	**23 22 24.8**	**-1.8**
	comp=Z,1.6nm,0.9s,baz=86,slow=17,SNR=6.0						
ASAR				ScP	ScP	23 23 31.1	+0.2
	comp=Z,1.3nm,0.7s,baz=99,slow=4.0,SNR=11						
KAKA	**Kakadu**	**35.79**	**275**	||*i*P	**P**	**23 17 41.6**	**-1.0**
	comp=Z,18nm,0.5s,mb5.0						
KAKA	**Kakadu**	**35.79**	**275**	*e*P	**P**	**23 17 41.5**	**-1.1**
	comp=Z,49nm,0.5s,mb5.4						
FORT	**Forrest**	**38.69**	**245**	*e*P	**P**	**23 18 06.8**	**-0.1**
	comp=Z,22nm,0.6s,mb5.0						
FORT	**Forrest**	**38.69**	**245**	*e*P	**P**	**23 18 06.7**	**-0.2**
	comp=Z,29nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.10**	**264**	||*i*P	**P**	**23 18 27.5**	**+0.5**
	comp=Z,70nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**41.10**	**264**	*e*P	**P**	**23 18 27.5**	**+0.6**
	comp=Z,49nm,0.8s,mb5.2						
MBWA	**Marble Bar**	**46.20**	**259**	*e*P	**P**	**23 19 07.7**	**0.0**
	comp=Z,24nm,0.4s,mb5.2						
KAPI	**Kappang**	**50.10**	**280**	*e*P	**P**	**23 19 37.5**	**-0.3**
	comp=Z,16nm,0.6s,mb4.8						
SBA	**Scott Base**	**58.56**	**181**	*e*P	**P**	**23 20 38.7**	**+0.6**
	comp=Z,34nm,0.8s,mb5.2						
CASY	**Casey**	**59.98**	**203**	*e*P	**P**	**23 20 47.3**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.3						
KSM	**Kuching**	**61.27**	**283**	*e*P	**P**	**23 20 56.9**	**-0.6**
	comp=Z,11nm,0.7s,mb4.8						
MJAR	**Matsushiro Arr**	**62.78**	**332**	P	**P**	**23 21 06.6**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.0,baz=170,slow=8.6,SNR=4.6						
QSPA	**South Pole Qui**	**70.71**	**180**	P	**P**	**23 21 56.7**	**-0.1**
	comp=Z,37nm,0.7s,mb5.2,baz=235,slow=5.8						
PETK	**Petropavlovsk-**	**72.82**	**353**	P	**P**	**23 22 09.3**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.1,baz=137,slow=5.8,SNR=12						
MAW	**Mawson**	**78.29**	**202**	*e*P	**P**	**23 22 41.2**	**+0.5**
	comp=Z,7.6nm,0.9s,mb4.3						
MAW	**Mawson**	**78.29**	**202**	P	**P**	**23 22 41.2**	**+0.5**
	comp=Z,8.6nm,0.7s,mb4.5,baz=113,slow=8.9,SNR=15						
CMAR	**Chiang Mai Arr**	**78.42**	**294**	P	**P**	**23 22 43.5**	**+1.2**
	comp=Z,2.0nm,0.5s,mb4.0,baz=127,slow=4.4,SNR=11						
CMAR				pP	pP	23 23 17.6	+1.3
	comp=Z,0.8nm,0.3s,baz=133,slow=4.2,SNR=3.1						
CHTO	**Chiang Mai**	**78.57**	**295**	*e*P	**P**	**23 22 44.1**	**+1.0**
	comp=Z,4.8nm,0.9s,mb4.1						
PMSA	**Palmer Station**	**86.86**	**160**	*e*P	**P**	**23 23 23.9**	**-1.3**
	comp=Z,72nm,1.2s,mb5.4						
BILL	**Bilibino**	**87.15**	**359**	*e*P	**P**	**23 23 25.7**	**-0.6**
SONM	**Songino Array**	**87.22**	**323**	P	**P**	**23 23 27.4**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=153,slow=5.8,SNR=10						
SONM				pP	pP	23 24 01.8	+0.1
	comp=Z,2.3nm,0.8s,baz=143,slow=4.3,SNR=7.4						
YBH	**Yreka Blue Hor**	**87.46**	**44**	P	**P**	**23 23 28.4**	**0.0**
	comp=Z,5.5nm,0.8s,mb4.4,baz=182,slow=5.7,SNR=12						
NVAR	**Mina Array Bea**	**88.97**	**49**	P	**P**	**23 23 35.9**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.4,baz=230,slow=8.0,SNR=12						
MOD	**Modoc**	**89.13**	**45**	*e*P	**P**	**23 23 36.3**	**+0.1**
	comp=Z,15nm,1.2s,mb4.8						
WVOR	**Wild Horse Val**	**90.48**	**45**	*e*P	**P**	**23 23 42.5**	**0.0**
	comp=Z,11nm,1.1s,mb4.7						
CCUT	**Cedar City**	**92.17**	**51**	*e*P	**P**	**23 23 50.7**	**+0.2**
	comp=Z,9.0nm,1.5s,mb4.6						
TUC	**Tucson**	**92.17**	**57**	*e*P	**P**	**23 23 51.0**	**+0.3**
	comp=Z,8.9nm,1.3s,mb4.6						
DUG	**Dugway**	**93.57**	**49**	*e*P	**P**	**23 23 56.0**	**-0.9**
	comp=Z,2.1nm,0.9s,mb4.3						
HLID	**Hailey**	**93.77**	**45**	*e*P	**P**	**23 23 58.0**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.7						
HWUT	**Hardware Ranch**	**94.98**	**48**	*e*P	**P**	**23 24 02.4**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.3						
MNTX	**Cornudas Mount**	**96.27**	**59**	*e*P	**P**	**23 24 09.4**	**0.0**
BOZ	**Bozeman (W)**	**96.39**	**44**	*e*P	**P**	**23 24 09.6**	**0.0**
	comp=Z,2.3nm,1.1s,mb4.4						
ANMO	**Albuquerque**	**96.47**	**55**	*e*P	**P**	**23 24 10.0**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.4						
BW06	**Boulder Array**	**96.78**	**47**	*e*P	**P**	**23 24 10.8**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.3						
PDAR	**Pinedale Array**	**96.78**	**47**	P	**P**	**23 24 11.8**	**+0.3**
	comp=Z,0.4nm,0.8s,mb3.8,baz=251,slow=4.5,SNR=4.8						
TXAR	**Lajitas Array**	**96.93**	**61**	P	**P**	**23 24 12.4**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.9,baz=218,slow=6.1,SNR=5.5						
YKA	**Yellowknife Ar**	**100.82**	**27**	P	Pdif	23 24 28.3	-1.2
	comp=Z,0.9nm,0.6s,baz=254,slow=4.6,SNR=13						
YKA				pP		23 25 03.3	
	comp=Z,0.8nm,1.0s,baz=251,slow=4.4,SNR=4.7						
YKA	**Yellowknife Ar**	**100.82**	**27**	P	Pdif	23 24 28.3	-1.2
YKA				pP		23 25 03.3	
MKAR	**Makanchi Array**	**101.72**	**316**	P	Pdif	23 24 34.4	+0.9
	comp=Z,0.3nm,0.6s,baz=112,slow=5.8,SNR=4.4						
MKAR				pP		23 25 08.2	
	comp=Z,0.5nm,0.7s,baz=120,slow=4.8,SNR=4.0						
BVAR	**Borovoye Array**	**110.41**	**320**	PKiKP	PKiKP	23 29 10.9	-1.1
	comp=Z,0.3nm,0.4s,baz=146,slow=2.8,SNR=4.9						
ARU	**Arti**	**117.24**	**324**	*e*PKPdf	PKPdf	23 29 23.7	-1.3
ARCES	**ARCESS Array B**	**125.13**	**345**	PKP	PKPdf	23 29 38.1	-1.7
	comp=Z,2.3nm,0.5s,baz=71,slow=2.1,SNR=15						
FINES	**FINESS Array B**	**130.63**	**338**	PKhKP		23 29 44.3	
	comp=Z,0.7nm,0.8s,baz=64,slow=4.4,SNR=4.8						
FINES				PKP	PKPdf	23 29 48.9	-1.5
	comp=Z,1.5nm,0.9s,baz=48,slow=2.8,SNR=3.9						
FINES				SKPbc	SKPbc	23 33 00.2	-1.6
	comp=Z,3.4nm,0.7s,baz=66,slow=3.7,SNR=13						
FINES	**FINESS Array B**	**130.63**	**338**	PKP		23 29 44.3	
FINES				PKP	PKPdf	23 29 49.0	-1.5
FINES				SKPbc	SKPbc	23 33 00.2	-1.6
MALT	**Malatya**	**133.42**	**305**	*e*PKPdf	PKPdf	23 29 57.9	+1.4
AKASG	**Malin Array Be**	**135.50**	**324**	PKP	PKPdf	23 29 58.2	-1.8
	comp=Z,0.3nm,0.3s,baz=53,slow=1.2,SNR=2.9						
AKASG				SKPbc	SKPbc	23 33 16.3	-2.4
	comp=Z,0.5nm,0.4s,baz=52,slow=4.3,SNR=4.5						
NOA	**NORSAR Array B**	**135.51**	**345**	PKP	PKPdf	23 29 59.5	-0.1
	comp=Z,0.6nm,0.6s,baz=29,slow=2.0,SNR=3.3						
PSZ	**Piszkesteto**	**142.11**	**326**	*e*PKPdf	PKPdf	23 30 12.2	+0.1
CLL	**Collm**	**142.95**	**335**	*e*PKPbc	PKPdf	23 30 09.8	-3.7
CLL	**Collm**	**142.95**	**335**	*e*PKPdf	PKPdf	23 30 10.0	-3.5
CLL				*ep*PKPdf	pPKPdf	23 30 50.0	0.0
CLL				*e*SKPbc	SKPbc	23 33 39.0	-0.2
PRU	**Pruhonice**	**143.31**	**332**	*e*PKP	PKPdf	23 30 13.2	-1.0
TANN	**Tannenbergstha**	**143.86**	**335**	*e*PKPbc	PKPdf	23 30 12.8	-2.4
TANN				*ep*PKPbc		23 30 49.4	
NKC	**Novy Kostel**	**144.01**	**334**	*e*PKP	PKPdf	23 30 13.7	-1.7
MOX	**Moxa**	**144.02**	**335**	*e*PKP	PKPdf	23 30 13.4	-2.0
MOX				*e*		23 30 49.9	
MOX	**Moxa**	**144.02**	**335**	*e*PKPbc	PKPdf	23 30 13.2	-2.2
KHC	**Kasperske Hory**	**144.36**	**332**	*e*PKPdf	PKPdf	23 30 14.6	-1.4
ROTZ	**Rotzenmuhle**	**144.47**	**334**	*e*PKPbc	PKPdf	23 30 15.2	-1.0
UBBA	**Unterbreizbach**	**144.49**	**337**	*e*PKPbc	PKPdf	23 30 14.9	-1.3
UBBA				*ep*PKPbc		23 30 51.1	
GEC2	**GERESS Array S**	**144.52**	**332**	*e*PKPbc	PKPdf	23 30 15.2	-1.1
GEC2				*ep*PKPbc		23 30 51.7	
GERES	**GERESS Array B**	**144.52**	**332**	PKP	PKPdf	23 30 14.9	-1.4
	comp=Z,4.4nm,0.6s,baz=34,slow=4.5,SNR=58						
GERES				pPKP	pPKPdf	23 30 51.2	-1.5
	comp=Z,2.0nm,0.8s,baz=46,slow=3.9,SNR=5.2						
GERES				SKPbc	SKPbc	23 33 41.9	-1.0
	comp=Z,0.6nm,0.9s,baz=64,slow=4.5,SNR=3.9						
WET	**Wettzell**	**144.66**	**333**	*e*PKPbc	PKPdf	23 30 15.8	-0.8
RCBR	**Riachuelo**	**144.91**	**133**	*e*PKPdf	PKPdf	23 30 15.7	-2.5
BUG	**Bochum--Univer**	**144.91**	**340**	*ep*PKPbc	pPKPdf	23 30 52.5	-0.9
GRA1	**Grafenberg Arr**	**144.93**	**335**	*e*PKPbc	PKPdf	23 30 16.6	-0.4
GRF	**Grafenberg Arr**	**144.93**	**335**	*e*PKPbc	PKPdf	23 30 16.6	-0.4
GVD	**Gavdhos**	**145.44**	**304**	*e*PKPbc	PKPbc	23 30 18.1	-0.5
TNS	**Taunus Mts**	**145.55**	**338**	*ep*PKPbc	pPKPbc	23 30 54.8	+0.5
RJOB	**Jochberg**	**145.75**	**331**	*e*PKPbc	PKPbc	23 30 19.1	-0.1
RJOB				*ep*PKPbc	pPKPbc	23 30 55.3	+0.3
HGN	**Heimansgroeve**	**145.92**	**341**	*e*P	pPKPdf	23 30 54.2	-0.9
	comp=Z,12nm,1.7s						
MEM	**Membach**	**146.03**	**341**	PKPbc	PKPbc	23 30 19.7	-0.2
MEM				APKP		23 30 56.9	
FUR	**Furstenfeldbru**	**146.09**	**333**	*e*PKPbc	PKPbc	23 30 20.2	0.0
FUR				*ep*PKPbc	pPKPbc	23 30 56.4	+0.3
UCC	**Uccle**	**146.36**	**342**	PKPbc	PKPbc	23 30 20.3	-0.6
UCC				APKP		23 30 56.9	
BCLA	**Clavier**	**146.42**	**341**	APKP	pPKPdf	23 30 58.7	+2.7
STU	**Stuttgart**	**146.46**	**336**	*e*PKPbc	PKPbc	23 30 21.2	-0.1
STU				*ep*PKPbc	pPKPbc	23 30 57.4	+0.2
WLF	**Walferdange**	**146.81**	**340**	APKP	pPKPdf	23 30 58.1	+1.4
WLF	**Walferdange**	**146.81**	**340**	PKPbc	PKPbc	23 30 22.3	+0.1
WLF	**Walferdange**	**146.81**	**340**	*e*PKPbc	PKPbc	23 30 22.7	+0.5
WLF				*ep*PKPbc	pPKPbc	23 30 59.1	+0.9
WLF	**Walferdange**	**146.81**	**340**	*e*PKPbc	PKPbc	23 30 22.3	+0.1
WLF				*ep*PKPdf	pPKPdf	23 30 58.1	+1.4
GIVF	**Givet**	**146.84**	**341**	*e*PKP1	PKPbc	23 30 22.1	-0.2
DOU	**Dourbes**	**146.92**	**342**	PKPbc	PKPbc	23 30 22.1	-0.4
DOU				APKP		23 30 57.5	
BAIF	**Baives**	**147.06**	**342**	*e*PKP1	PKPbc	23 30 22.8	-0.1
	comp=Z,10nm,0.7s						
BFO	**Black Forest**	**147.16**	**336**	*e*PKPbc	PKPbc	23 30 22.9	-0.3
BFO				*ep*PKPbc	pPKPbc	23 30 59.3	0.0
CDF	**Champ du Feu**	**147.48**	**337**	*e*PKP1	PKPbc	23 30 23.9	-0.2
	comp=Z,10nm,0.6s						
HINF	**Hinteralfeld**	**148.14**	**337**	*e*PKP1	PKPbc	23 30 25.4	-0.5
	comp=Z,3.8nm,0.6s						
HAU	**Haudompre**	**148.16**	**338**	*e*PKP1	PKPbc	23 30 25.6	-0.3
	comp=Z,8.9nm,0.6s						
MEZF	**Maizieres J'vi**	**148.18**	**340**	*e*PKP1	PKPbc	23 30 26.1	+0.1
	comp=Z,13nm,0.6s						
TIP	**Timpagrande**	**149.00**	**316**	*e*PKPbc	PKPbc	23 30 28.1	-0.3
AQU	**L'Aquila**	**149.19**	**323**	*e*PKPbc	PKPbc	23 30 28.8	+0.1
CABF	**La Chapelle**	**149.43**	**337**	*e*PKP1	PKPbc	23 30 29.4	+0.2
	comp=Z,12nm,0.6s						
FLN	**La Foliniere**	**149.47**	**346**	*e*PKP1	PKPbc	23 30 28.4	-0.8
	comp=Z,9.5nm,0.5s						
LDF	**La Druitiere**	**149.54**	**346**	*e*PKP1	PKPbc	23 30 28.6	-0.8
LOR	**Lormes**	**149.65**	**340** ||*i*PKP1	PKPbc	23 30 29.3	-0.4
	comp=Z,9.3nm,0.6s						
GRR	**Gorron**	**149.90**	**347**	*e*PKP1	PKPbc	23 30 29.7	-0.6
	comp=Z,7.3nm,0.5s						
SSF	**Saint Saulge**	**149.94**	**340**	*e*PKP1	PKPbc	23 30 30.1	-0.3
	comp=Z,6.7nm,0.5s						
LPL	**La Plagne**	**150.09**	**335**	*e*PKP1	PKPbc	23 30 31.1	+0.3
	comp=Z,6.2nm,0.6s						
LPG	**La Plagne**	**150.10**	**335**	*e*PKP1	PKPbc	23 30 31.2	+0.3
	comp=Z,15nm,0.8s						
SMF	**Signal de Mont**	**150.20**	**339**	*e*PKP1	PKPbc	23 30 30.5	-0.6
AVF	**Avril sur Loir**	**150.23**	**340**	*e*PKP1	PKPbc	23 30 30.4	-0.7
	comp=Z,2.0nm,0.5s						
SGMF	**Saint Gilles**	**150.38**	**349**	*e*PKP1	PKPbc	23 30 30.6	-0.8
	comp=Z,2.6nm,0.4s						
ROSF	**Rostrenen**	**150.42**	**350**	*e*PKP1	PKPbc	23 30 30.4	-1.1
BNI	**Bardonecchia**	**150.49**	**334**	*e*PKPbc	PKPbc	23 30 31.8	0.0
BGF	**Bois d'Agland**	**150.60**	**340**	*e*PKP1	PKPbc	23 30 31.5	-0.5
	comp=Z,7.7nm,0.6s						
MBDF	**Montbardon**	**150.72**	**334**	*e*PKP1	PKPbc	23 30 31.9	-0.5
	comp=Z,8.1nm,0.7s						
ORIF	**Oris-en-Rattie**	**150.93**	**335**	*e*PKP1	PKPbc	23 30 32.7	-0.1
	comp=Z,18nm,0.7s						
TCF	**Toulx Ste Croi**	**151.04**	**341**	*e*PKP1	PKPbc	23 30 32.5	-0.5
	comp=Z,5.4nm,0.6s						
SBF	**Sospel**	**151.12**	**332**	*e*PKP1	PKPbc	23 30 32.5	-0.8
	comp=Z,11nm,0.5s						
PGF	**Pioggiola**	**151.39**	**328**	*e*PKP1	PKPbc	23 30 33.6	-0.4
	comp=Z,29nm,0.7s						
MFF	**Saint Martin d**	**151.41**	**344**	*e*PKP1	PKPbc	23 30 33.2	-0.7
	comp=Z,6.9nm,0.6s						
VIVF	**Saint-Julien-l**	**151.44**	**336**	*e*PKP1	PKPbc	23 30 33.7	-0.3
	comp=Z,3.1nm,0.5s						
RJF	**Les Rejaudoux**	**152.13**	**341**	*e*PKP1	PKPbc	23 30 34.3	-1.3
LFF	**La Frestale**	**152.70**	**342**	*e*PKP1	PKPbc	23 30 36.3	-0.6
	comp=Z,5.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**166.43**	**245**	PKP	PKPdf	23 30 44.6	-1.5
	comp=Z,1.3nm,1.0s,baz=61,slow=1.0,SNR=6.2						

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*ISCJB **09** 23:18:07.4±0.9, 31.°80S±0.°08×180.°0W±0.°1, h339km±9km, mb3.9/15, Error ellipse: s-maj=18.2km s-min=11.3km az=26.5*
*NEIC **09** 23:18:08.1±0.7, 31.°76S×179.°89W, h346km±6km, mb4.0/4, Error ellipse: s-maj=11.8km s-min=9.1km az=122.0*
*IDC **09** 23:18:08.5±1.2, 31.°68S×179.°96W, h342km±11km, mb3.6/10, mb1 3.8/13, mb1mx3.7/19, mbtmp3.7/13, Error ellipse: s-maj=15.8km s-min=13.2km az=103.0*
ISC 09 23:18:08.2±0.8, 31.°78S±0.°08×179.°9W±0.°1, h334km±9km, n67, σ1.901/27, mb3.9/15, 3C-1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.07**	**35**	P	**Pn**	**23 19 07.6**	**+0.6**
	112nm,0.3s,baz=72,slow=19,SNR=2.7						
RAO				S	**S**	**23 19 47.8**	**-6.4**
	218nm,0.3s,baz=234,slow=23,SNR=3.6						
URZ	**Urewera**	**6.90**	**200**	P	**Pn**	**23 19 48.6**	**-0.3**
	7.5nm,0.3s,baz=305,slow=4.0,SNR=32						
URZ				S	**S**	**23 21 10.7**	**0.0**
	44nm,0.3s,baz=270,sl

TORD PKPab PKPab 23 38 15.4 -0.3
comp=Z,0.4nm,0.6s,baz=197,slow=2.1,SNR=3.3
SSF Saint Saulge 164.51 351 *e*PKP2 PKPab 23 38 27.2 -1.5
comp=Z,9.0nm,1.0s
AVF Avril sur Loir 164.80 351 *e*PKP2 PKPab 23 38 28.3 -1.6
SMF Signal de Mont 164.87 350 *e*PKP2 PKPab 23 38 28.8 -1.5

IDC 09 23:21:34.4±1.6, 18°.59S×176°.45W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=46.8km s-min=43.0km az=30.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.34**	**260**	P	P	23 30 02.3	-0.3
	0.5nm,0.3s,baz=97,slow=8.3,SNR=2.5						
ASAR	**Alice Springs**	**46.40**	**255**	P	P	23 30 03.4	+0.4
	0.8nm,0.5s,baz=86,slow=8.4,SNR=6.1						
QSPA	**South Pole Qui**	**71.47**	**180**	P	P	23 32 56.7	+0.5
	0.6nm,0.6s,baz=337,slow=15,SNR=5.3						
BRTR	**Keskin Array B**	**146.58**	**315**	PKPbc	PKPbc	23 41 16.2	-1.8
	0.4nm,0.4s,baz=121,slow=4.8,SNR=3.8						
GERES	**GERESS Array B**	**148.72**	**347**	PKPbc	PKPbc	23 41 24.0	+0.4
	0.5nm,0.6s,baz=26,slow=3.4,SNR=6.7						

*ISCJB **09** 23:27:02.7±0.5, 40°.00N±0°.03×38°.58E±0°.04, h10km, Error ellipse: s-maj=4.4km s-min=4.0km az=17.5*
*ISK **09** 23:27:02.5, 40°.00N×38°.61E, h12km, MD2.9*
*CSEM **09** 23:27:02.7±0.2, 39°.98N×38°.58E, h2km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.7km az=91.0*
*DDA **09** 23:27:02.3, 40°.00N×38°.55E, h7km±4km, Md3.0*
ISC 09 23:27:03.1±0.7, 39°.99N±0°.03×38°.57E±0°.04, h6km±8km, n23, σ0s55/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.65**	**111**	*e*PG	**Pg**	**23 27 15.1**	**-0.5**
EZC				*e*SG	**Sg**	**23 27 24.4**	**+0.3**
GUMT	**Gumushane**	**0.84**	**56**	*e*PG	**Pg**	**23 27 18.9**	**-0.3**
GUMT				*e*SG	**Sg**	**23 27 30.2**	**+0.1**
GUMT	**Gumushane**	**0.84**	**56**	*e*Pg	**Pg**	**23 27 18.9**	**-0.3**
GUMT				*e*Sg	**Sg**	**23 27 30.3**	**+0.2**
ESPY	**Espiye-Giresun**	**0.93**	**8**	*e*PG	**Pg**	**23 27 20.9**	**0.0**
ESPY	**Espiye-Giresun**	**0.93**	**8**	*e*Pg	**Pg**	**23 27 20.9**	**0.0**
GRSN	**GIRESUNGRSN**	**0.96**	**346**	*e*P	**Pg**	**23 27 21.4**	**0.0**
GRSN				*e*S	**Sg**	**23 27 33.6**	**-0.3**
GRSN	**GIRESUNGRSN**	**0.96**	**346**	*e*P	**Pg**	**23 27 21.4**	**0.0**
GRSN				*e*S	**Sg**	**23 27 33.6**	**-0.3**
SVSK	**Karacayir**	**1.21**	**267**	*e*PN	**Pn**	**23 27 25.7**	**-0.8**
SVSK	**Karacayir**	**1.21**	**267**	*e*Pn	**Pn**	**23 27 25.7**	**-0.8**
PTK	**Pertek**	**1.27**	**150**	*e*PN	**Pn**	**23 27 26.5**	**-0.9**
PTK	**Pertek**	**1.27**	**150**	*e*Pn	**Pn**	**23 27 26.5**	**-0.9**
MACK	**Trabzon**	**1.32**	**44**	*e*P	**Pn**	**23 27 27.6**	**-0.4**
MACK				*e*S	**Sg**	**23 27 46.1**	**+0.6**
MACK	**Trabzon**	**1.32**	**44**	*e*P	**Pn**	**23 27 27.6**	**-0.4**
MACK				*e*S	**Sg**	**23 27 46.1**	**+0.6**
ERBA	**Erbaa**	**1.54**	**297**	*e*P	**Pn**	**23 27 31.8**	**+0.6**
ERBA				*e*S	**Sg**	**23 27 52.8**	**+0.1**
ERBA	**Erbaa**	**1.54**	**297**	*e*P	**Pn**	**23 27 31.8**	**+0.7**
ERBA				*e*S	**Sg**	**23 27 52.8**	**+0.1**
MYA	**Malataya**	**1.67**	**184**	*e*PN	**Pn**	**23 27 32.5**	**-0.3**
MYA	**Malataya**	**1.67**	**184**	*e*Pn	**Pn**	**23 27 32.5**	**-0.3**
MALT	**Malatya**	**1.68**	**184**	*e*PN	**Pn**	**23 27 33.5**	**+0.5**
MALT	**Malatya**	**1.68**	**184**	*e*Pn	**Pn**	**23 27 33.5**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.71**	**160**	*e*PN	**Pn**	**23 27 33.3**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.71**	**160**	*e*Pn	**Pn**	**23 27 33.3**	**-0.1**
AKCD	**Akcadag**	**1.77**	**197**	*e*P	**Pn**	**23 27 35.7**	**+1.5**
AKCD				*e*S	**Sg**	**23 27 59.8**	**-0.1**
AKCD	**Akcadag**	**1.77**	**197**	*e*P	**Pn**	**23 27 35.7**	**+1.5**
AKCD				*e*S	**Sg**	**23 27 59.8**	**-0.1**

*SZGRF **09** 23:31:57.5, 48°.18N×156°.82E, h33km, mb4.9, East of Kuril Islands, Russia*
*BJI **09** 23:32:11.2, 49°.29N×154°.88E, h108km, mB5.3/18, mb4.8/45*
*MOS **09** 23:32:16.6±1.1, 49°.44N×154°.20E, h122km, mb4.7/58, Error ellipse: s-maj=7.4km s-min=4.3km az=80.0*
*ISCJB **09** 23:32:16.3±0.1, 49°.36N±0°.02×154°.18E±0°.02, h120km, mb4.8/241, Error ellipse: s-maj=3.3km s-min=1.6km az=155.0*
*IDC **09** 23:32:17.7±0.4, 49°.43N×154°.15E, h119km±3km, mb4.4/22, mb1 4.6/24, mb1mx4.6/25, mbtmp4.4/24, Error ellipse: s-maj=11.7km s-min=9.2km az=142.0*
*NEIC **09** 23:32:17.8±0.1, 49°.38N×154°.12E, mb4.9/158, Error ellipse: s-maj=4.1km s-min=2.4km az=164.0*
*KRSC **09** 23:32:17.1±0.6, 49°.07N×155°.51E, h171km±70km, ML5.1*
*BGS **09** 23:32:33.3±1.8, 51°.47N×149°.50E, h118km, mb4.7*
ISC 09 23:32:18.5±0.1, 49°.42N±0°.02×154°.10E±0°.02, h122km, h122km±1.1km; pP-P, n922, σ0s79/956, mb4.8/241, 261C-192D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.82**	**45**	*e*PN	**Pn**	**23 32 46.0**	**-3.8**
SKR				*e*S	**Sn**	**23 33 10.0**	**-3.7**
SKR				pmax	pmax		
	comp=N,410nm,0.4s						
SKR				pmax	pmax		
	comp=Z,490nm,0.4s						
SKR				pmax	pmax		
	comp=E,140nm,0.2s						
SKR				pmax	pmax		
	comp=N,2μm,2.0s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				smax			
	comp=N,4μm,4.0s						
SKR				smax			
	comp=E,15μm,4.0s						
SKR				smax			
	comp=N,3μm,0.4s						
SKR				smax			
	comp=E,2μm,0.2s						
MIPR	**Malaya Ipel'ka**	**3.33**	**29**	*i* P	**Pn**	**23 33 09.3**	**+0.3**
MIPR				*i* S	**Sn**	**23 33 47.6**	**-0.5**
GRL	**Gorelyy**	**4.02**	**37**	*e*P	**Pn**	**23 33 18.6**	**+0.3**
GRL				*i* S	**Sn**	**23 34 02.1**	**-2.5**
RUS	**Russkaya**	**4.12**	**41**	*i* P	**Pn**	**23 33 17.2**	**-2.3**
RUS				*i* S	**Sn**	**23 34 02.5**	**-4.4**
PEA0B	**Petropavlovsk-**	**4.33**	**30**	*e*Pn	**Pn**	**23 33 23.1**	**+0.7**
PETK	**Petropavlovsk-**	**4.33**	**30**	PN	**Pn**	**23 33 22.5**	**+0.1**
PETK				pmax	pmax		
	comp=Z,16nm,0.3s						
PETK	**Petropavlovsk-**	**4.33**	**30**	P	**Pn**	**23 33 22.5**	**+0.1**
	comp=Z,16nm,0.3s,baz=187,slow=12,SNR=221						
PET	**Petropavlovsk**	**4.61**	**37**	*c i*PN	**Pn**	**23 33 25.1**	**-1.0**
PET				*e*S	**Sn**	**23 34 16.2**	**-2.5**
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				smax			
	comp=N,10μm,1.5s						
PET				smax			
	comp=N,833nm,0.6s						
PET	**Petropavlovsk**	**4.61**	**37**	*e*P	**Pn**	**23 33 25.7**	**-0.4**
PET				*i* S	**Sn**	**23 34 16.5**	**-2.2**
PET	**Petropavlovsk**	**4.61**	**37**	*e*Pn	**Pn**	**23 33 25.1**	**-1.0**
PET				*e*Sn	**Sn**	**23 34 16.6**	**-2.1**
INSR	**Institute**	**4.62**	**36**	P	**Pn**	**23 33 26.0**	**-0.3**
INSR				*i* S	**Sn**	**23 34 16.8**	**-2.2**
SDLR	**Sedlovina**	**4.90**	**36**	*i* P	**Pn**	**23 33 29.6**	**-0.3**
SDLR				*i* S	**Sn**	**23 34 23.3**	**-2.2**
GNL	**Ganaly**	**4.91**	**28**	*i* P	**Pn**	**23 33 31.1**	**+1.0**
SPN	**Mys Shipunski**	**5.24**	**43**	*i* P	**Pn**	**23 33 31.7**	**-2.8**
SPN				*i* S	**Sn**	**23 34 26.5**	**-7.3**
KII	**Karymskiy**	**5.70**	**34**	*e*P	**Pn**	**23 33 40.5**	**-0.2**
KII				*e*S	**Sn**	**23 34 41.4**	**-3.4**
KUR	**Kuril'sk**	**5.95**	**228**	*e*PN	**Pn**	**23 33 46.0**	**+1.8**
KUR				*e*S	**Sn**	**23 34 55.0**	**+4.0**
KUR				pmax	pmax		
	comp=N,60nm,0.7s						
KUR				pmax	pmax		
	comp=E,60nm,0.7s						
KUR				pmax	pmax		
	comp=Z,200nm,0.7s						
KUR				smax			
	comp=N,180nm,0.8s						
KUR				smax			
	comp=E,250nm,0.8s						
MKZ	**Mys Kozlova**	**6.98**	**40**	*i* P	**Pn**	**23 33 54.5**	**-3.5**
MKZ				*i* S	**Sn**	**23 35 06.4**	**-9.4**
KMNR	**Kamenistaya**	**7.37**	**28**	*i* P	**Pn**	**23 34 03.5**	**+0.2**
KOZ	**Kozyrevsk**	**7.52**	**26**	P	**Pn**	**23 34 05.5**	**+0.2**
KOZR	**Kozyr**	**7.53**	**26**	PN	**Pn**	**23 34 05.5**	**0.0**
KPT	**Kopyto**	**7.54**	**27**	*e*P	**Pn**	**23 34 05.3**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**7.67**	**29**	*i* P	**Pn**	**23 34 07.4**	**+0.1**
SRDR	**Sredinnyy**	**7.70**	**24**	*e*P	**Pn**	**23 34 08.1**	**+0.3**
ZLN	**Zelenaya**	**7.76**	**29**	*e*P	**Pn**	**23 34 09.1**	**+0.5**
ZLN				*e*S	**Sn**	**23 35 31.7**	**-3.0**
YUK	**Yuzh-Kuril'sk**	**7.80**	**230**	*e*PN	**Pn**	**23 34 08.8**	**-0.5**
YUK				*e*S	**Sn**	**23 35 34.5**	**-1.4**
YUK				pmax	pmax		
	comp=Z,340nm,0.4s						
YUK				pmax	pmax		
	comp=N,180nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
YUK				smax			
	comp=N,140nm,0.5s						
KRSR	**Krestovskiy**	**7.86**	**27**	P	**Pn**	**23 34 09.6**	**-0.3**
UGL	**Uglegorsk**	**7.88**	**272**	*e*PN	**Pn**	**23 34 15.0**	**+4.8**
UGL				pmax	pmax		
	comp=Z,190nm,0.8s						
UGL				pmax	pmax		
	comp=E,900nm,4.0s						
KLY	**Klyuchi**	**7.96**	**27**	*i* P	**Pn**	**23 34 11.6**	**+0.3**
KLY				*i* S	**Sn**	**23 35 35.8**	**-3.8**
YSS	**Yuzh-Sakhalins**	**7.97**	**256**	||*i*PN	**Pn**	**23 34 15.0**	**+3.5**
YSS				*e*S	**Sn**	**23 35 45.0**	**+5.2**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax			
	comp=N,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.97**	**256**	*e*Pn	**Pn**	**23 34 15.7**	**+4.2**
	comp=N,79nm,1.1s						
JRA	**Rausu**	**8.25**	**232**	P	**Pn**	**23 34 15.5**	**+0.3**
NEM2	**Nemuro 2**	**8.36**	**227**	P	**Pn**	**23 34 13.5**	**-3.3**
NEM2				*e*S	**Sn**	**23 35 42.3**	**-7.0**
SRKR	**Sorokina**	**8.41**	**28**	*e*P	**Pn**	**23 34 16.6**	**-0.7**
KBTR	**Krutoberegovo**	**8.61**	**34**	*e*P	**Pn**	**23 34 16.9**	**-3.1**
KBTR				*i* S	**Sn**	**23 35 44.1**	**-11**
JNK	**Nakash**	**8.70**	**231**	P	**Pn**	**23 34 21.2**	**-0.2**
JNK				*e*S	**Sn**	**23 35 55.4**	**-2.3**
JTKR	**Abashiri--Toko**	**8.87**	**236**	P	**Pn**	**23 34 24.6**	**+1.0**
JAK	**Akkeshi**	**9.14**	**229**	P	**Pn**	**23 34 24.1**	**-3.2**
JAK				*e*S	**Sn**	**23 36 01.5**	**-6.8**
JMP	**Maruseppu**	**9.14**	**238**	P	**Pn**	**23 34 29.2**	**+1.9**
BKI	**Bering**	**9.30**	**47**	*i* P	**Pn**	**23 34 24.5**	**-4.8**
BKI				*i* S	**Sn**	**23 35 57.0**	**-15**
JAR	**Ashorobuto**	**9.40**	**233**	P	**Pn**	**23 34 31.5**	**+0.7**
JAR				*e*S	**Sn**	**23 36 13.6**	**-0.9**
ASAJ	**Asahikawa**	**9.50**	**240**	P	**Pn**	**23 34 35.6**	**+3.5**
ASAJ	**Asahikawa**	**9.50**	**240**	PN	**Pn**	**23 34 34.0**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	**Asahikawa**	**9.50**	**240**	P	**Pn**	**23 34 34.0**	**+1.9**
	comp=Z,3.5nm,0.3s,baz=67,slow=13,SNR=41						
JKK2	**Kamakawa 2**	**9.57**	**239**	P	**Pn**	**23 34 35.4**	**+2.4**
JCH	**Churui**	**10.09**	**232**	P	**Pn**	**23 34 37.0**	**-3.1**
JCH				*e*S	**Sn**	**23 36 23.4**	**-7.9**
JAB	**Ashibetsu**	**10.10**	**239**	P	**Pn**	**23 34 43.5**	**+3.4**
JFR	**Furan**	**10.12**	**236**	P	**Pn**	**23 34 40.8**	**+0.4**
JBT2	**Biratori 2**	**10.50**	**235**	P	**Pn**	**23 34 44.2**	**-1.3**
JEM	**Erimo**	**10.63**	**230**	P	**Pn**	**23 34 44.5**	**-2.8**
JEM				*e*S	**Sn**	**23 36 36.0**	**-8.4**
ERM	**Erimo**	**10.63**	**230**	*c i*PN	**Pn**	**23 34 45.1**	**-2.2**
ERM	**Erimo**	**10.63**	**230**	*e*Pn	**Pn**	**23 34 45.8**	**-1.5**
ERM				*e*Sn	**Sn**	**23 36 35.5**	**-8.9**
JNBK	**Urakawa-nobuka**	**10.65**	**232**	P	**Pn**	**23 34 43.5**	**-4.0**
JNBK				*e*S	**Sn**	**23 36 35.3**	**-9.4**
JNB	**Noboribetsu**	**11.43**	**238**	P	**Pn**	**23 34 56.3**	**-1.6**
JNB				*e*S	**Sn**	**23 37 00.1**	**-3.6**
JKB	**Kayabe**	**11.83**	**235**	P	**Pn**	**23 34 59.7**	**-3.5**
JKB				*e*S	**Sn**	**23 37 03.5**	**-10**
JSH	**Shimam**	**11.87**	**241**	P	**Pn**	**23 35 03.7**	**0.0**
JYM2	**Yakumo 2**	**12.03**	**238**	P	**Pn**	**23 35 03.8**	**-2.0**
JSR	**Shiriuchi**	**12.41**	**236**	P	**Pn**	**23 35 07.1**	**-3.7**
JOSM	**Okushiri--Mats**	**12.56**	**240**	P	**Pn**	**23 35 11.5**	**-1.2**
HABR	**Khabarovsk**	**12.56**	**273**	*d i*PN	**Pn**	**23 35 17.3**	**+4.7**
HABR				S	**Sn**	**23 37 37.6**	**+6.8**
HABR				pmax	pmax		
	comp=Z,186nm,1.5s						
HABR				pmax	pmax		
	comp=E,112nm,1.0s						
HABR				pmax	pmax		
	comp=N,31nm,1.0s						
HABR				MLR	MLR		
	comp=Z,295nm,15.0s						
JTM	**Tenmabayashi**	**12.60**	**232**	P	**Pn**	**23 35 08.0**	**-5.3**
JTM				*e*S	**Sn**	**23 37 18.3**	**-14**
JANG	**Nango**	**12.68**	**229**	P	**Pn**	**23 35 08.4**	**-6.0**
JANG				*e*S	**Sn**	**23 37 18.6**	**-15**
JTH	**Tanohata**	**12.85**	**227**	*e*S	**Sn**	**23 37 22.6**	**-15**
SEY	**Seymchan**	**13.58**	**357**	*de*P	**Pn**	**23 35 26.9**	**+1.1**
OFUJ	**Ofunato**	**13.62**	**225**	P	**Pn**	**23 35 20.7**	**-5.8**
OFUJ				*e*S	**Sn**	**23 37 41.5**	**-15**
JRG	**Rokugo**	**13.87**	**229**	P	**Pn**	**23 35 25.1**	**-4.6**
JRG				*e*S	**Sn**	**23 37 51.0**	**-12**
JIO	**Ouri**	**14.27**	**225**	P	**Pn**	**23 35 29.1**	**-5.7**
JIO				*e*S	**Sn**	**23 37 57.4**	**-15**
KLR	**Kul'dur**	**14.57**	**278**	*e*P	**Pn**	**23 35 38.5**	**0.0**
KLR				pmax	pmax		
	comp=E,280nm,1.6s						
KLR				pmax	pmax		
	comp=Z,220nm,1.6s						
JYA	**Atsumi**	**14.94**	**229**	P	**Pn**	**23 35 39.3**	**-4.0**
VLA	**Vladivostok**	**16.56**	**256**	*e*P	**Pn**	**23 36 01.5**	**-1.8**
VLA				pmax	pmax		
	comp=Z,54nm,1.5s						
MAJO	**Matsushiro**	**17.29**	**228**	*e*P	**Pn**	**23 36 11.2**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MAJO	**Matsushiro**	**17.29**	**228**	*e*P	**Pn**	**23 36 11.2**	**-1.0**
	comp=Z,23nm,0.8s						
MAT	**Matsushiro**	**17.29**	**228**	P	**Pn**	**23 36 11.0**	**-1.2**
MJAR	**Matsushiro Arr**	**17.29**	**228**	P	**Pn**	**23 36 11.5**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**17.29**	**228**	P	**Pn**	**23 36 11.5**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=27,slow=11,SNR=22						
MDJ	**Mudanjiang**	**17.35**	**263**	P	**Pn**	**23 36 12.8**	**-0.1**
MDJ				pP	pP	23 36 32.4	-1.8
MDJ				sP	sP	23 36 47.7	-2.0
MDJ				S	**S**	**23 39 25.3**	**-0.7**
MDJ				PcP	PcP	23 40 49.7	+2.3
MDJ				ScP	ScP	23 44 12.8	+2.0
MDJ				PcS	PcS	23 44 23.9	+0.4
MDJ				ScS	ScS	23 47 54.0	+3.3
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ	**Mudanjiang**	**17.35**	**263**	*e*P	**Pn**	**23 36 12.3**	**-0.6**
	comp=Z,130nm,1.3s						
YAK	**Yakutsk**	**18.52**	**322**	*d i*P	**P**	**23 36 26.3**	**+1.3**
YAK				*e*S	**S**	**23 39 52.3**	**+2.7**
YAK				pmax	pmax		
	comp=Z,227nm,1.2s						
YAK				pmax	pmax		
	comp=N,98nm,1.3s						
YAK				pmax	pmax		
	comp=E,173nm,1.4s						
YAK				smax			
	comp=N,201nm,1.6s						
YAK				smax			
	comp=E,58nm,1.6s						
YAK	**Yakutsk**	**18.52**	**322**	*e*P	**P**	**23 36 26.7**	**+1.7**
	comp=E,989nm,1.8s						
CLNS	**Chul'man**	**18.92**	**304**	*e*P	**P**	**23 36 33.7**	**+4.3**
CLNS				pmax	pmax		
	comp=Z,154nm,1.0s						
CLNS				pmax	pmax		
	comp=E,88nm,1.0s						
CLNS				pmax	pmax		
	comp=N,71nm,1.1s						
CLNS				MLR	MLR		
	comp=E,365nm,13.0s						
CLNS				MLR	MLR		
	comp=Z,740nm,15.0s						
CLNS				MLR	MLR		
	comp=N,285nm,13.0s						
NRGR	**Nerungri**	**18.98**	**304**	*e*P	**P**	**23 36 34.9**	**+4.8**
BILL	**Bilibino**	**19.64**	**14**	κ*e*P	**P**	**23 36 35.7**	**-1.5**
BILL				*e*S	**S**	**23 40 12.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL	**Bilibino**	**19.64**	**14**	*e*P	**P**	**23 36 35.1**	**-2.0**
	comp=Z,18nm,0.7s						
CN2	**Changchun**	**20.39**	**265**	*e*P	**P**	**23 36 44.0**	**-1.5**
CN2				*e*pP		23 37 04.8	
CN2				*e*sP	sP	23 37 19.5	-3.6
CN2				*e*S	**S**	**23 40 20.4**	**-6.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,21.0s						
CN2				LR	LR		
	comp=E,700nm,21.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
HIA	**Hailar**	**22.27**	**283**	*e*P	**P**	**23 37 05.5**	**+0.1**
	comp=Z,15nm,0.6s,mb4.5						
KSRS	**Korea Array**	**22.33**	**248**	P	**P**	**23 37 07.6**	**+1.5**
KSRS						23 40 56.3	
KSRS				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.3						
KSRS	**Korea Array**	**22.33**	**248**	P	**P**	**23 37 07.6**	**+1.5**
	comp=Z,11nm,0.7s,mb4.3,baz=43,slow=10,SNR=27						
KSRS				PcP	PcP	23 40 56.2	-0.4
	comp=Z,2.0nm,0.8s,baz=70,slow=1.5,SNR=5.1						
BOD	**Bodaibo**	**24.89**	**305**	*e*P	**P**	**23 37 29.0**	**-0.5**
BOD				*e*		23 37 59.3	
BOD				*e*		23 48 14.3	
BOD				pmax	pmax		
	comp=Z,43nm,1.3s,mb4.7						
TIXI	**Tiksi**	**25.12**	**341**	*d i*P	**P**	**23 37 30.3**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.7						
TIXI	**Tiksi**	**25.12**	**341**	*e*P	**P**	**23 37 30.6**	**-0.9**
	comp=Z,18nm,0.5s,mb4.8						
TNA	**Tin City**	**25.47**	**37**	*e*P	**P**	**23 37 34.6**	**0.0**
	comp=Z,25nm,0.8s,mb4.7						
BJI	**Beijing**	**28.26**	**265**	P	**P**	**23 38 01.5**	**+1.6**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.2						
TTA	**Tatalina**	**30.02**	**44**	*e*P	**P**	**23 38 14.4**	**-0.8**
TTA	**Tatalina**	**30.02**	**44**	*e*P	**P**	**23 38 14.9**	**-0.3**
HHC	**Hu-ho-hao-te**	**30.85**	**270**	⇑P	**P**	**23 38 23.8**	**+1.0**
HHC				pP	pP	23 38 48.7	-0.7
HHC				sP	sP	23 39 01.5	-2.0
HHC				PP	PP	23 39 29.7	-4.9
HHC				PcP	PcP	23 41 20.0	+3.4
HHC				S	**S**	**23 43 18.7**	**+1.3**
HHC				sS	sS	23 44 00.1	-3.8
HHC				ScP	ScP	23 44 50.5	+2.7
HHC				PcS	PcS	23 45 01.6	+1.0
HHC				ScS	ScS	23 48 45.8	+1.1
HHC				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,420nm,7.1s						
HHC				LR	LR		
	comp=N,640nm,15.3s						
HHC				LR	LR		
	comp=E,750nm,15.3s						
HHC				LR	LR		
	comp=Z,910nm,17.7s						
SONM	**Songino Array**	**31.16**	**286**	P	**P**	**23 38 25.5**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.7,baz=76,slow=8.1,SNR=8.1						
SONM				pP	pP	23 38 54.4	+2.4
	comp=Z,1.2nm,0.7s,baz=64,slow=10,SNR=2.6						
SONM				PcP	PcP	23 41 16.9	-0.4
	comp=Z,5.1nm,0.8s,baz=95,slow=1.9,SNR=16						
SONM				ScP	ScP	23 44 48.6	-0.1
	comp=Z,1.0nm,0.7s,baz=113,slow=2.2,SNR=5.8						
NJ2	**Nanjing**	**31.47**	**250**	*e*P	**P**	**23 38 30.1**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
TLY	**Talaya**	**31.62**	**294**	*e*P	**P**	**23 38 30.3**	**+0.9**
TLY				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
TLY	**Talaya**	**31.62**	**294**	*e*P	**P**	**23 38 30.1**	**+0.6**
	comp=Z,11nm,0.6s,mb4.8						
CHUM	**Lake Minchumin**	**31.72**	**43**	*e*P	**P**	**23 38 30.0**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6						
PPLA	**Purkeypile**	**31.77**	**45**	*e*P	**P**	**23 38 30.5**	**-0.1**
	comp=Z,103nm,1.7s,mb5.3						
ZAK	**Zakamensk**	**32.23**	**291**	*e*P	**P**	**23 38 35.7**	**+0.9**
ZAK				*e*	pP	23 39 03.7	+2.3
ZAK				*e*		23 41 21.3	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
BPAW	**Bear Paw Mtn.**	**32.31**	**42**	*e*P	**P**	**23 38 34.7**	**-0.6**
	comp=Z,13nm,1.0s,mb4.6						
KTH	**Kantishna Hill**	**32.34**	**43**	*e*P	**P**	**23 38 35.1**	**-0.5**
	comp=Z,68nm,1.3s,mb5.2						
TRF	**Thorofare Moun**	**32.62**	**43**	*e*P	**P**	**23 38 37.2**	**-0.8**
	comp=Z,25nm,1.0s,mb5.0						
COLD	**Coldfoot**	**32.78**	**36**	*e*P	**P**	**23 38 38.8**	**-0.6**
	comp=Z,21nm,0.9s,mb5.0						
MCK	**McKinley**	**33.22**	**43**	*e*P	**P**	**23 38 42.9**	**-0.3**
MCK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
MCK	**McKinley**	**33.22**	**43**	*e*P	**P**	**23 38 42.9**	**-0.4**
	comp=Z,25nm,1.0s,mb5.0						
COLA	**College**	**33.66**	**41**	*e*P	**P**	**23 38 46.4**	**-0.6**
	comp=Z,31nm,0.9s,mb5.1						
WHN	**Wuhan**	**35.30**	**253**	P	**P**	**23 39 01.5**	**0.0**
MENT	**Mentasta**	**35.63**	**44**	*e*P	**P**	**23 39 03.6**	**-0.3**
XAN	**Xi'an**	**36.46**	**262**	P	**P**	**23 39 11.3**	**-0.1**
XAN				pP	pP	23 39 37.2	-1.3
XAN				sP	sP	23 39 49.2	-3.2
XAN				PP	PP	23 40 36.3	-0.4
XAN				S	**S**	**23 44 45.1**	**+1.0**
XAN				sS	sS	23 45 28.7	-2.5
XAN				SS	SS	23 47 26.8	-0.3
XAN				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
EGAK	**Eagle**	**36

comp=Z,15nm,0.8s,baz=67,slow=3.0,SNR=22
ZALV ScP ScP 23 45 27.4 +0.1
comp=Z,1.8nm,0.8s,baz=64,slow=6.8,SNR=7.5
CD2 Chengdu 41.81 263 P P 23 39 54.6 -1.3
CD2 pP pP 23 40 23.0 -0.5
CD2 sP sP 23 40 37.6 +0.2
CD2 PP PP 23 41 36.3 +1.4
CD2 S **S 23 46 01.6 -2.6**
CD2 sS sS 23 46 51.5 -0.6
CD2 pmax pmax
comp=Z,20nm,1.1s,mb4.8
CD2 pmax pmax
comp=Z,820nm,10.3s
CD2 LR LR
comp=N,540nm,15.5s
CD2 LR LR
comp=Z,670nm,15.5s
NVS Novosibirsk 42.13 305 *e*P **P 23 39 58.1 -0.1**
NVS *e* pP 23 40 26.4 +0.5
NVS *e* 23 41 42.5
NVS *e* 23 49 45.2
NVS pmax pmax
comp=N,5.0nm,0.4s
NVS pmax pmax
comp=E,11nm,0.4s
NVS pmax pmax
comp=Z,15nm,0.4s,mb5.1
GYA Guiyang 42.98 256 ⇓*i*P **P 23 40 05.4 0.0**
GYA pP pP 23 40 33.0 -0.1
GYA sP sP 23 40 47.8 +0.9
GYA PP PP 23 41 50.0 +2.6
GYA PcP PcP 23 41 55.0 +1.4
GYA ScP ScP 23 45 34.4 +1.3
GYA PcS PcS 23 45 46.9 +0.7
GYA S **S 23 46 21.7 +0.3**
GYA sS sS 23 47 09.5 +0.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,590nm,17.6s
GYA LR LR
comp=E,480nm,17.2s
GYA LR LR
comp=Z,510nm,18.0s
DLBC Dease Lake 43.29 48 *e*P **P 23 40 09.0 +1.5**
WMQ Urumqi 44.62 289 P **P 23 40 19.3 +1.0**
WMQ pmax pmax
comp=Z,18nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,570nm,10.0s
MK31 Makanchi Array 46.34 296 *e*P **P 23 40 31.6 -0.2**
MK31 *e* pP 23 41 04.0 +4.0
MK31 *e*PcP PcP 23 42 04.7 -0.1
MK31 *e*ScP ScP 23 45 47.0 +0.4
MKAR Makanchi Array 46.34 296 P **P 23 40 31.6 -0.3**
comp=Z,10nm,0.7s,mb4.7,baz=70,slow=6.3,SNR=77
MKAR pP pP 23 41 01.6 +1.7
comp=Z,8.4nm,0.6s,baz=65,slow=6.8,SNR=8.7
MKAR PcP PcP 23 42 05.0 +0.1
comp=Z,8.0nm,0.8s,baz=60,slow=3.3,SNR=5.7
MKAR ScP ScP 23 45 46.7 +0.1
comp=Z,1.4nm,0.9s,baz=49,slow=3.7,SNR=5.9
MKAR Makanchi Array 46.34 296 P **P 23 40 31.6 -0.3**
MKAR pP pP 23 41 01.6 +1.7
MKAR PcP PcP 23 42 05.0 +0.1
MKAR ScP ScP 23 45 46.7 +0.1
KMI Kunming 46.41 258 P **P 23 40 32.0 -0.6**
KMI pP pP 23 41 00.2 -0.6
KMI sP sP 23 41 13.8 -0.6
KMI pmax pmax
comp=Z,12nm,0.9s,mb4.6
KURK Kurchatov 46.47 302*d i*P **P 23 40 32.5 -0.3**
KURK pmax pmax
comp=Z,32nm,1.0s,mb5.0
KURK Kurchatov 46.47 302 *e*P **P 23 40 32.1 -0.7**
comp=Z,44nm,0.8s,mb5.2
KURK *e*pP pP 23 41 04.5 +3.6
KURK *e*PcP PcP 23 42 05.5 +0.2
RES Resolute Bay 48.10 19 *e*P **P 23 40 44.8 -0.3**
RES pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
RES Resolute Bay 48.10 19 *e*P **P 23 40 44.8 -0.2**
comp=Z,9.5nm,0.6s,mb4.8
RES *e*PcP PcP 23 42 12.1 +1.4
YKA Yellowknife Ar 48.41 38 P **P 23 40 47.2 -0.4**
YKA *PP pP 23 41 14.7 -1.2
YKA pmax pmax
comp=Z,6.0nm,0.6s
YKA Yellowknife Ar 48.41 38 P **P 23 40 47.2 -0.4**
comp=Z,6.2nm,0.6s,mb4.6,baz=299,slow=7.3,SNR=55
YKA pP pP 23 41 14.7 -1.1
comp=Z,3.0nm,0.6s,baz=298,slow=7.2,SNR=4.2
YKA Yellowknife Ar 48.41 38 P **P 23 40 47.2 -0.4**
YKA pP pP 23 41 14.7 -1.1
BVAR Borovoye Array 49.70 308 P **P 23 40 57.3 -0.3**
comp=Z,18nm,0.6s,mb5.2,baz=61,slow=7.8,SNR=138
BVAR pP pP 23 41 29.3 +3.3
comp=Z,16nm,0.6s,baz=55,slow=8.4,SNR=10
BVAR PcP PcP 23 42 16.9 +0.1
comp=Z,8.6nm,0.7s,baz=68,slow=3.4,SNR=7.1
BVAR ScP ScP 23 45 59.8 -0.9
comp=Z,1.4nm,0.8s,baz=46,slow=4.3,SNR=4.1
BRVK Borovoye 49.74 308*d i*P **P 23 40 57.8 -0.1**
BRVK pmax pmax
comp=Z,20nm,0.6s,mb5.2
BRVK Borovoye 49.74 308 *e*P **P 23 40 57.5 -0.3**
comp=Z,30nm,0.8s,mb5.3
BRVK *e*pP pP 23 41 30.5 +4.2
BRVK *e*PcP PcP 23 42 17.1 +0.1
SPB4 Spitsbergen Ar 50.11 350 *e*P **P 23 40 58.6 -1.7**
LSA Lhasa 50.82 272 P **P 23 41 08.4 +2.1**
LSA Lhasa 50.82 272 *e*P **P 23 41 07.2 +0.9**
comp=Z,29nm,1.1s,mb5.2
NLWA Neilton Lookou 51.90 59 ⇓P **P 23 41 13.8 -0.3**
baz=52
NLWA Neilton Lookou 51.90 59 *e*P **P 23 41 13.7 -0.4**
comp=Z,12nm,0.9s,mb4.9
SVE Sverdlovsk 52.34 316 *e*P **P 23 41 17.4 +0.1**
SVE pmax pmax
comp=Z,31nm,0.8s,mb5.4
TKM2 Tokmak 2 52.45 295 P **P 23 41 19.3 +1.1**
SNR=6.2
TKM2 Tokmak 2 52.45 295 *e*P **P 23 41 18.4 +0.2**
comp=Z,3.1nm,0.6s,mb4.5
TKM2 *e*pP pP 23 41 48.7 +1.8
TKM2 *e*PcP PcP 23 42 27.8 +0.5
JCW Jim Creek 52.51 57 *e*P **P 23 41 17.8 -0.8**
E03A Lebam 52.55 60 ⇑P **P 23 41 18.5 -0.4**
baz=52
B06A Marblemount 52.57 56 ⇑P **P 23 41 18.6 -0.4**
baz=52
A07A Ashnola River, 52.86 55 ⇓P **P 23 41 20.3 -0.8**
baz=53,SNR=5.3
USP Ospenovka 52.89 296 P **P 23 41 21.9 +0.4**
SNR=15
F03A Seaside 52.91 60 ⇑P **P 23 41 21.3 -0.3**
baz=53
KBK Karagaybulak 52.99 295 P **P 23 41 22.7 +0.5**
SNR=5.4
FRU Bishkek 53.08 295 *e*P **P 23 41 24.0 +1.1**
FRU *i* pP 23 41 54.0 +2.4
SHL Shillong 53.13 267 *e*P **P 23 41 25.0 +1.5**
KZA Kyzart 53.16 294 P **P 23 41 25.2 +1.8**
SNR=7.6
AAK Ala-Archa 53.27 295 P **P 23 41 24.7 +0.4**
SNR=7.5
AAK Ala-Archa 53.27 295*d i*P **P 23 41 24.8 +0.5**
AAK pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
AAK Ala-Archa 53.27 295 *e*P **P 23 41 24.5 +0.2**
comp=Z,56nm,1.9s,mb5.3
AAK *e*pP pP 23 41 54.0 +0.9
B07A Winthrop 53.34 56 ⇓P **P 23 41 24.3 -0.4**
baz=53
CHTO Chiang Mai 53.40 256 *e*P **P 23 41 25.9 +0.4**
CHTO pmax pmax
comp=Z,36nm,1.1s,mb5.3
CHTO Chiang Mai 53.40 256 *e*P **P 23 41 25.9 +0.5**
comp=Z,36nm,1.1s,mb5.3
A08A Turner Farm, O 53.51 55 ⇑P **P 23 41 25.3 -0.6**
baz=53
ARU Arti 53.51 317 *e*P **P 23 41 24.8 -1.0**
ARU pmax pmax
comp=Z,43nm,0.7s,mb5.6
ARU Arti 53.51 317 *e*P **P 23 41 24.8 -1.0**
comp=Z,43nm,0.7s,mb5.6
ARU *e*pP pP 23 41 57.6 +3.0
F04A Amboy 53.56 60 ⇓P **P 23 41 26.0 -0.3**
baz=53
CM31 Chiang Mai Arr 53.66 255 *e*P **P 23 41 28.6 +1.1**
comp=Z,18nm,0.8s,mb5.2
CMAR Chiang Mai Arr 53.66 255 P **P 23 41 28.6 +1.2**
comp=Z,12nm,0.8s,mb5.0,baz=32,slow=6.8,SNR=52
CMAR PcP PcP 23 42 33.4 +1.2
comp=Z,3.6nm,0.8s,baz=7.2,slow=2.5,SNR=5.1
CMAR ScP ScP 23 46 18.7 +0.3
comp=Z,1.0nm,0.3s,baz=2.9,slow=3.6,SNR=5.9
EKS2 Erkin-Say 53.68 296 P **P 23 41 28.3 +1.0**
SNR=12
EKS2 Erkin-Say 53.68 296 *e*P **P 23 41 27.8 +0.6**
comp=Z,10nm,0.8s,mb4.9
EKS2 *e*pP pP 23 41 56.4 +0.4
EKS2 *e*PcP PcP 23 42 32.6 +0.7
D06A Cle Elum 53.69 57 ⇓P **P 23 41 26.8 -0.4**
baz=54
ETW Entiat 53.73 57 *e*P **P 23 41 27.3 -0.2**
ETW *e*pP pP 23 41 54.5 -1.9
B08A Colville Reser 53.82 56 ⇑P **P 23 41 27.1 -1.1**
baz=54,SNR=6.0
C07A Waterville 53.82 57 ⇓P **P 23 41 27.6 -0.7**
baz=54
A09A Danville 53.86 55 ⇓P **P 23 41 27.8 -0.7**
baz=54,SNR=7.7
E06A Yakima 54.00 58 ⇓P **P 23 41 29.1 -0.4**
baz=54
DAG Danmarks Havn 54.01 358 *e*P **P 23 41 27.0 -2.2**
DAG Danmarks Havn 54.01 358 *i* P **P 23 41 27.0 -2.2**
EDM Edmonton 54.02 48 *e*P **P 23 41 29.4 -0.1**
EDM *e**PP pP 23 41 57.5 -0.9
EDM Edmonton 54.02 48 *e*P **P 23 41 28.5 -1.1**
EDM *e*pP pP 23 41 57.1 -1.3
D07A Quincy 54.17 57 ⇓P **P 23 41 30.2 -0.6**
baz=54
KSH Kashi 54.27 291 *e*P **P 23 41 36.2 +4.6**
KSH *e*pP pP 23 42 02.1 +1.6
KSH *e*sP sP 23 42 15.1 +1.1
KSH *e*PP PP 23 43 41.1 +6.7
KSH *e*ScP ScP 23 46 24.1 +3.3
KSH *e*PcS PcS 23 46 36.4 +2.6
KSH *e*S **S 23 49 03.1 +3.5**
KSH *e*ScS ScS 23 51 10.1 +1.6
KSH pmax pmax
comp=Z,310nm,10.3s
KSH LR LR
comp=N,260nm,10.0s
KSH LR LR
comp=E,310nm,11.7s
C08A Higginbotham F 54.32 56 ⇓P **P 23 41 30.9 -0.9**
baz=54
B09A Rice 54.42 55 ⇓P **P 23 41 32.1 -0.4**
baz=54
H04A Detroit Lake 54.43 61 ⇑P **P 23 41 32.7 0.0**
baz=54
C09A Chrisman Ranch 54.73 56 ⇓P **P 23 41 34.1 -0.7**
baz=54
OD2 Odessa Site #2 54.74 56 *e*P **P 23 41 34.2 -0.6**
OD2 *e*pP pP 23 42 01.7 -2.0
D08A Wollman Farm, 54.82 57 ⇑P **P 23 41 34.9 -0.6**
baz=55
F07A Phinny Hill Vi 54.97 58 ⇓P **P 23 41 36.4 -0.2**
baz=55
G06A Carlson Farm, 54.98 59 ⇑P **P 23 41 36.7 +0.1**
baz=55
A11A Hall Mountain, 55.05 54 ⇓P **P 23 41 37.2 +0.2**
baz=55
KEV Kevo 55.05 340 *e*P **P 23 41 34.7 -2.1**
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KEV Kevo 55.05 340 *e*p **P 23 41 34.7 -2.1**
comp=Z,1.8nm,0.5s,mb4.4
NEW Newport 55.06 55 *e*P **P 23 41 36.7 -0.5**
NEW *e**PP pP 23 42 05.2 -0.9
NEW pmax pmax
comp=Z,12nm,1.2s
NEW Newport 55.06 55 *e*P **P 23 41 36.7 -0.5**
comp=Z,12nm,1.3s,mb4.8
NEW *e*pP pP 23 42 05.2 -0.9
HUMO Hull Mountain 55.25 63 *e*P **P 23 41 39.2 +0.6**
comp=Z,13nm,1.3s,mb4.8
GUN Gumba 55.45 274 *e*P **P 23 41 41.3 +1.0**
comp=Z,21nm,0.5s,mb5.4
ARCES ARCESS Array B 55.55 341 P **P 23 41 39.2 -1.2**
ARCES 23 42 38.7
ARCES pmax pmax
comp=Z,4.0nm,0.5s
ARCES ARCESS Array B 55.55 341 P **P 23 41 39.2 -1.2**
comp=Z,3.9nm,0.5s,mb4.7,baz=35,slow=6.9,SNR=29
ARCES PcP PcP 23 42 38.7 +0.1
comp=Z,3.7nm,0.7s,baz=26,slow=5.8,SNR=4.2
ARCES ARCESS Array B 55.55 341 P **P 23 41 39.2 -1.2**
ARCES PcP PcP 23 42 38.7 +0.1
E09A Wood Farm, Sta 55.58 57 ⇓P **P 23 41 40.6 -0.3**
baz=55
RAMN Ramite 55.63 272 *e*P **P 23 41 42.9 +1.3**
F08A Pendleton 55.67 58 ⇓P **P 23 41 41.8 +0.2**
baz=56
D10A Wagner Farm, O 55.72 56 ⇓P **P 23 41 41.2 -0.7**
baz=56
KHMM Horse Mountain 55.87 65 *e*P **P 23 41 44.7 +1.6**
comp=Z,48nm,1.3s,mb5.4
G08A Pilot Rock 55.88 58 ⇓P **P 23 41 42.6 -0.4**
baz=56
KKN Kakani 55.92 274 *e*P **P 23 41 44.7 +1.1**
comp=Z,26nm,0.6s,mb5.4
YBH Yreka Blue Hor 55.94 64 P **P 23 41 44.1 +0.6**
YBH *e**PP pP 23 42 12.4 -0.2
YBH pmax pmax
comp=Z,24nm,1.4s
YBH Yreka Blue Hor 55.94 64 *e*P **P 23 41 43.8 +0.3**
comp=Z,24nm,1.4s,mb5.0
YBH *e*pP pP 23 42 12.4 -0.2
YBH *e*sP sP 23 42 22.5 -3.5
PKI Pulchoki 55.99 274 *e*P **P 23 41 45.1 +1.0**
comp=Z,13nm,0.6s,mb5.2
PKIN Phulchoki 55.99 274 *e*P **P 23 41 45.1 +1.0**
PKIN Phulchoki 55.99 274 *e*P **P 23 41 45.2 +1.1**
comp=Z,35nm,0.8s,mb5.4
A13A Flathead Natio 56.08 53 ⇓P **P 23 41 44.1 -0.3**
baz=56
DMN Daman 56.16 274 *e*P **P 23 41 46.6 +1.3**
comp=Z,70nm,0.9s,mb5.7
GKN Gorkha 56.20 275 *e*P **P 23 41 46.4 +0.8**
comp=Z,18nm,0.5s,mb5.4
D11A Klaveano Farm, 56.23 55 ⇓P **P 23 41 44.5 -1.1**
baz=56
WALA Waterton Lakes 56.26 52 *e*P **P 23 41 44.9 -0.8**
comp=Z,0.5nm,1.1s,mb3.5
WALA *e*pP pP 23 42 13.6 -1.2
C12B Naegeli Ranch, 56.28 54 ⇓P **P 23 41 45.7 -0.2**
baz=56
I07A Izee 56.32 60 ⇑P **P 23 41 46.1 -0.2**
baz=56
K05A Summer Lake 56.37 62 ⇓P **P 23 41 47.2 +0.6**
baz=56
B13A Whitefish 56.40 53 ⇑P **P 23 41 46.3 -0.4**
baz=56,SNR=5.9
H08A Prairie City 56.52 59 ⇓P **P 23 41 47.9 +0.3**
baz=56
G09A Cove 56.54 58 ⇑P **P 23 41 47.2 -0.5**
baz=56
BSMT Bassoo Peak 56.55 54 *e*P **P 23 41 48.2 +0.4**
BSMT *e*pP pP 23 42 16.4 -0.5
A14A Double T Ranch 56.57 52 ⇑P **P 23 41 47.3 -0.6**
baz=56
E11A Bogner Ranch, 56.73 56 ⇑P **P 23 41 48.2 -0.8**
baz=56
WDC Whiskeytown Da 56.76 65 *e*P **P 23 41 49.6 +0.2**
WDC pmax pmax
comp=Z,17nm,1.2s,mb5.0
WDC Whiskeytown Da 56.76 65 *e*P **P 23 41 49.6 +0.2**
comp=Z,17nm,1.3s,mb4.9
C13A Hot Springs 56.77 54 ⇑P **P 23 41 49.4 0.0**
baz=56
A15A Johnson Ranch, 56.92 52 ⇓P **P 23 41 49.5 -0.8**
baz=57
YBMT Yellow Bay 56.95 53 *e*P **P 23 41 50.9 +0.3**
YBMT *e*pP pP 23 42 19.3 -0.4
H09A Durkee 56.99 58 ⇓P **P 23 41 51.1 +0.2**
baz=57
KOLN Koldanda 57.03 275 *e*P **P 23 41 52.4 +0.9**
comp=Z,14nm,0.6s,mb5.2
E12A Beaver Dam Sad 57.03 56 ⇓P **P 23 41 51.0 -0.2**
baz=57
F11A Grangeville 57.05 56 ⇑P **P 23 41 51.2 -0.2**
baz=57
BMO Blue Mountains 57.07 58 *e*P **P 23 41 51.4 -0.1**
comp=Z,14nm,1.4s,mb4.8
BMO *e*pP pP 23 42 19.7 -0.9
C14A Swan Lake 57.15 53 ⇑P **P 23 41 51.8 -0.2**
baz=57
SWMT Swartz Lake 57.18 54 *e*P **P 23 41 51.9 -0.3**
D13A Huson 57.20 54 ⇑P **P 23 41 52.2 -0.2**
baz=57
ABKAR Akbulak array 57.24 309 *e*P **P 23 41 52.0 -0.6**
comp=Z,18nm,0.4s,mb5.4
ABKAR *e*pP pP 23 42 25.0 +3.2
G11A Walters Elk Ra 57.30 57 ⇓P **P 23 41 52.8 -0.3**
baz=57
J08A Circle Bar Ran 57.36 60 ⇓P **P 23 41 53.5 0.0**
baz=57
I09A Lost Marbles R 57.38 59 ⇓P **P 23 41 53.7 0.0**
baz=57
B15A Bradely Ranch, 57.42 52 ⇓P **P 23 41 53.5 -0.5**
baz=57
A16A West Butte Ran 57.52 51 ⇓P **P 23 41 54.2 -0.4**
baz=57
H10A Noah's Angus R 57.54 58 ⇑P **P 23 41 54.5 -0.3**
baz=57
SLMT Seeley Lake 57.62 54 *e*P **P 23 41 54.6 -0.7**
SLMT *e*pP pP 23 42 23.2 -1.3
F12A Elk City 57.62 56 ⇓P **P 23 41 55.2 -0.2**
baz=57
MSO Missoula 57.65 54 *e*P **P 23 41 55.6 +0.1**
comp=Z,9.6nm,1.1s,mb4.7
MSO *e*pP pP 23 42 23.3 -1.4
D14A Greenough 57.71 54 ⇑P **P 23 41 55.9 -0.1**
baz=58
C15A Salmond Ranch, 57.74 53 ⇑P **P 23 41 56.6 +0.4**
baz=58
E13A Victor 57.76 55 ⇓P **P 23 41 56.0 -0.3**
baz=58
J09A Fry Pan Ranch, 57.77 60 ⇓P **P 23 41 56.8 +0.3**
baz=58
B16A M & M Farms, S 57.80 52 ⇓P **P 23 41 55.8 -0.7**
baz=58
I10A Payette 57.83 58 ⇑P **P 23 41 57.3 +0.5**
baz=58
WVOR Wild Horse Val 57.85 61 *e*P **P 23 41 56.9 -0.1**
comp=Z,7.5nm,0.9s,mb4.7
WVOR *e*pP pP 23 42 25.3 -0.9
H11A Donnelly 57.88 57 ⇓P **P 23 41 56.8 -0.3**
baz=58,SNR=9.4
CHMT Chamberlain Mo 57.95 54 *e*P **P 23 41 57.5 -0.2**
CHMT *e*pP pP 23 42 25.9 -0.9
G12A Big Creek, Yel 57.98 57 ⇓P **P 23 41 57.6 -0.3**
baz=58
SUMG Summit 57.99 4 *e*P **P 23 41 56.7 -0.9**
comp=Z,19nm,0.5s,mb5.4
F13A Darby 58.10 55 ⇓P **P 23 41 58.4 -0.3**
baz=58
E14A Clinton 58.15 54 ⇑P **P 23 41 58.9 -0.1**
baz=58
C16A Fuhringer Ranc 58.17 52 ⇓P **P 23 41 58.9 -0.2**
baz=58
KLMR Klimovskoe 58.17 328 *e*P **P 23 41 56.3 -2.7**
KLMR pmax pmax
comp=Z,69nm,1.5s,mb5.5
D15A Lincoln 58.26 53 ⇓P **P 23 41 59.8 0.0**
baz=58
FFC Flin Flon 58.29 41 *e*P **P 23 41 59.9 +0.1**
comp=Z,5.9nm,0.5s,mb4.9
FFC *e*pP pP 23 42 27.4 -1.7
B17A L&G Farms, Che 58.34 51 ⇑P **P 23 41 59.9 -0.5**
baz=58
I11A Placerville 58.41 58 ⇓P **P 23 42 00.7 -0.2**
baz=58
A18A Metzger Ranch, 58.42 50 ⇑P **P 23 42 00.1 -0.7**
baz=58
BEKR Beckwourth 58.50 64 ⇓P **P 23 42 01.2 -0.3**
baz=58
E15A Deer Lodge 58.59 54 ⇑P **P 23 42 01.8 -0.3**
baz=58
G13A Cobalt 58.60 56 ⇓P **P 23 42 02.2 +0.1**
baz=58
H12A Diamond D Ranc 58.61 57 ⇑P **P 23 42 02.4 +0.2**
baz=58
K10A MacKenzie Ranc 58.63 60 ⇑P **P 23 42 02.8 +0.3**
baz=58
FCC Fort Churchill 58.68 34 *e*P **P 23 42 01.9 -0.6**
FCC pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
FCC Fort Churchill 58.68 34 *e*P **P 23 42 01.9 -0.7**
comp=Z,0.7nm,1.0s,mb3.6
D16A Dana Ranch, Ca 58.77 53 ⇑P **P 23 42 03.4 0.0**
baz=58
C17A Wharram Farm, 58.79 52 ⇓P **P 23 42 03.2 -0.2**
baz=59
B18A Beardsley Farm 58.80 51 ⇑P **P 23 42 03.2 -0.2**
baz=59
MFID Camas Ranch 58.80 58 ⇓P **P 23 42 03.7 +0.1**
baz=59
DDI Dehra Dun 58.89 281 *ex* x 23 42 01.0
H13A Challis 58.93 57 ⇑P **P 23 42 04.4 -0.1**
baz=59
I12A Atlanta 58.95 58 ⇑P **P 23 42 04.5 0.0**
baz=59
E16A East Helena 59.03 53 ⇑P **P 23 42 05.3 +0.2**
baz=59
F15A Butte 59.05 54 ⇑P **P 23 42 05.4 +0.2**
baz=59
EGMT Eagleton 59.05 51 ⇑P **P 23 42 05.1 -0.1**
baz=59
EGMT Eagleton 59.05 51 *e*P **P 23 42 05.3 0.0**
comp=Z,59nm,1.9s,mb5.3
LRM Limekiln Ridge 59.08 54 *e*P **P 23 42 05.2 -0.3**
LRM *e*pP pP 23 42 34.7 -0.1
K11A Parker Ranch, 59.11 59 ⇓P **P 23 42 05.8 +0.1**
baz=59
D17A Six Diamond Ra 59.14 52 ⇓P **P 23 42 06.2 +0.3**
baz=59
PAHR Pah Rah Range 59.17 64 *e*P **P 23 42 06.5 +0.2**
comp=Z,30nm,1.3s,mb5.2
WCN Washoe City 59.22 64 ⇑P **P 23 42 07.0 +0.4**
baz=59
JOF Joensuu 59.24 333 *e*P **P 23 42 04.7 -1.6**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
JOF Joensuu 59.24 333 *e*p **P 23 42 04.7 -1.6**
comp=Z,6.5nm,0.5s,mb4.9
DLMT Dillon 59.30 55 *e*P **P 23 42 07.2 +0.2**
comp=Z,116nm,2.8s,mb5.4
L10A Juniper Basin 59.31 60 ⇓P **P 23 42 07.4 +0.2**
baz=59
J12A Stokes Ranch, 59.32 58 ⇑P **P 23 42 07.1 -0.1**
baz=59,SNR=5.3
H14A Leadore 59.38 56 ⇓P **P 23 42 07.4 -0.2**
baz=59
I13A Wildhorse Cree 59.43 57 ⇓P **P 23 42 08.5 +0.6**
baz=59
G15A Dillon 59.49 55 ⇑P **P 23 42 08.5 +0.2**
baz=59
HLID Hailey 59.49 58 ⇑P **P 23 42 08.7 +0.3**
baz=59
HLID Hailey 59.49 58 *e*P **P 23 42 08.4 +0.1**
HLID *e*pP pP 23 42 31.0 -6.7
E17A Martinsdale 59.50 53 ⇓P **P 23 42 08.9 +0.5**
baz=59
MCMT McKenzie Canyo 59.52 56 *e*P **P 23 42 08.2 -0.4**
comp=Z,3.2nm,0.9s,mb4.3
MCMT *e*pP pP 23 42 36.7 -1.2
F16A Kennard Place, 59.55 54 ⇑P **P 23 42 09.1 +0.4**
baz=59
D18A Linhart Farms, 59.57 52 ⇑P **P 23 42 09.1 +0.3**
baz=59
BOZ Bozeman (W) 59.63 54 ⇑P **P 23 42 09.7 +0.4**
baz=59,SNR=21
BOZ Bozeman (W) 59.63 54 *e*P **P 23 42 09.7 +0.4**
BOZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BOZ Bozeman (W) 59.63 54 *e*P **P 23 42 09.7 +0.4**
comp=Z,8.7nm,0.8s,mb4.8
BOZ *e*pP pP 23 42 37.9 -0.7
M10A I.L. Ranch, Tu 59.63 60 ⇑P **P 23 42 10.0 +0.6**
baz=59
L11A Cat Creek Ranc 59.66 59 ⇓P **P 23 42 10.0 +0.5**
baz=59

CMB **Columbia Colle** 59.67 66 eP P 23 42 09.6 -0.1
CMB pmax pmax
comp=Z,13nm,1.1s,mb4.9
CMB **Columbia Colle** 59.67 66 eP P 23 42 09.6 -0.1
comp=Z,13nm,1.1s,mb4.9
J13A **Cove Ranch, Pi** 59.73 58 ⇑P P 23 42 10.3 +0.3
baz=60,SNR=5.8
H15A **Lima** 59.77 56 ⇓P P 23 42 10.3 +0.1
baz=60
I14A **Mackay** 59.78 57 ⇓P P 23 42 10.6 +0.3
baz=60,SNR=5.3
G16A **Moss Hill, Enn** 59.81 55 ⇓P P 23 42 10.6 0.0
baz=60,SNR=5.1
K12A **Draper Farm, C** 59.83 59 ⇑P P 23 42 10.8 +0.1
baz=60
E18A **Harlowton** 59.93 52 ⇑P P 23 42 11.4 +0.2
baz=60
WAKR **Walker** 59.93 65 eP P 23 42 11.9 +0.5
WAKR epP pP 23 42 40.2 -0.6
BMN **Battle Mountai** 59.96 62 eP P 23 42 12.1 +0.5
BMN e pP 23 42 40.8 -0.2
BMN pmax pmax
comp=Z,21nm,1.2s,mb5.0
BMN **Battle Mountai** 59.96 62 eP P 23 42 12.1 +0.6
comp=Z,20nm,1.2s,mb5.0
BMN epP pP 23 42 40.3 -0.7
F17A **Fitzpatrick Pl** 59.98 53 ⇓P P 23 42 12.0 +0.4
baz=60
L12A **House Creek Ra** 60.09 59 ⇓P P 23 42 12.7 +0.2
baz=60
M11A **Holland Ranch,** 60.12 60 ⇓P P 23 42 13.2 +0.5
baz=60
QLMT **Earthquake Lak** 60.28 55 eP P 23 42 14.4 +0.7
QLMT epP pP 23 42 42.8 -0.3
G17A **Pierce Place,** 60.32 54 ⇓P P 23 42 14.6 +0.7
baz=60
H16A **Russell Place,** 60.46 55 ⇑P P 23 42 15.5 +0.6
baz=60
O10A **Cortez Mining,** 60.46 62 ⇓P P 23 42 15.5 +0.5
baz=60
F18A **Big Timber** 60.47 53 ⇑P P 23 42 15.5 +0.5
baz=60
GCMT **Greycliff** 60.57 53 eP P 23 42 16.0 +0.3
comp=Z,17nm,1.4s,mb4.9
GCMT epP pP 23 42 44.7 -0.4
KSM **Kuching** 60.62 233 eP P 23 42 17.3 +1.0
M12A **Wells** 60.62 60 ⇓P P 23 42 17.0 +0.9
baz=60
NVAR **Mina Array Bea** 60.65 64 P P 23 42 16.6 +0.3
comp=Z,6.2nm,0.7s,mb4.8,baz=294,slow=7.0,SNR=32
NVAR pP pP 23 42 44.7 -1.0
comp=Z,5.1nm,0.8s,baz=290,slow=7.4,SNR=7.2
L13A **Double Diamond** 60.72 59 ⇑P P 23 42 17.6 +0.8
baz=60
YNR **Norris Junctio** 60.75 54 eP P 23 42 18.5 +1.6
comp=Z,20nm,1.3s,mb5.0
K14A **Jones Ranch, D** 60.84 58 ⇑P P 23 42 18.3 +0.7
baz=61
YFT **Old Faithful** 60.85 55 eP P 23 42 20.1 +2.6
comp=Z,18nm,1.0s,mb5.1
YFT epP pP 23 42 48.9 +1.8
I16A **Newdale** 60.88 56 ⇑P P 23 42 18.5 +0.7
baz=61
ELK **Elko** 60.88 60 eP P 23 42 18.0 +0.1
comp=Z,5.1nm,0.6s,mb4.7
N12A **Clover Valley,** 60.93 60 ⇑P P 23 42 18.3 +0.1
baz=61,SNR=7.1
N12A **Clover Valley,** 60.93 60 eP P 23 42 19.0 +0.8
comp=Z,4.2nm,0.5s,mb4.7
N12A epP pP 23 42 47.4 -0.3
P10A **Eureka** 60.93 62 ⇑P P 23 42 18.8 +0.6
baz=61
G18A **Lazy EL Ranch,** 60.94 53 ⇓P P 23 42 18.2 0.0
baz=61
LKWY **Lake** 61.00 54 eP P 23 42 21.3 +2.7
LKWY pmax pmax
comp=Z,11nm,0.9s,mb4.9
LKWY **Lake** 61.00 54 eP P 23 42 21.3 +2.7
comp=Z,11nm,0.8s,mb4.9
H17A **Grant Village** 61.02 55 ⇓P P 23 42 20.6 +1.9
baz=61,SNR=6.3
O11A **Cowboy Ranch,** 61.05 61 ⇓P P 23 42 19.4 +0.4
baz=61
M13A **Montello** 61.08 59 ⇓P P 23 42 19.9 +0.7
baz=61
K15A **Arbon** 61.11 57 ⇓P P 23 42 20.4 +1.1
baz=61
L14A **Malta** 61.15 58 ⇓P P 23 42 20.2 +0.6
baz=61
IMW **Indian Meadow** 61.16 55 epP pP 23 42 49.4 +0.2
J16A **Bone** 61.22 56 ⇑P P 23 42 21.0 +0.9
baz=61
RLMT **Red Lodge** 61.23 53 ⇑P P 23 42 20.8 +0.6
baz=61,SNR=13
RLMT **Red Lodge** 61.23 53 eP P 23 42 21.1 +1.0
KAF **Kangasniemi** 61.30 335 eP P 23 42 18.4 -1.9
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF **Kangasniemi** 61.30 335 ep P 23 42 18.4 -1.9
comp=Z,5.6nm,0.6s,mb4.8
RRI2 **Red Ridge** 61.32 56 eP P 23 42 21.1 +0.3
comp=Z,15nm,0.8s,mb5.1
RRI2 epP pP 23 42 50.2 -0.1
I17A **Pilgrim Ck.** 61.34 55 ⇓P P 23 42 22.3 +1.4
baz=61
P11A **Circle Ranch,** 61.38 62 ⇓P P 23 42 21.9 +0.6
baz=61
N13A **Wendover, West** 61.40 60 ⇑P P 23 42 21.7 +0.4
baz=61
TPAW **Teton Pass** 61.43 56 eP P 23 42 23.0 +1.5
comp=Z,17nm,0.9s,mb5.1
M14A **Sheep Mountain** 61.44 59 ⇑P P 23 42 21.6 0.0
baz=61
O12A **Currie** 61.48 61 ⇓P P 23 42 22.4 +0.5
baz=61
Q10A **Clear Creek Ra** 61.50 63 ⇓P P 23 42 22.2 +0.2
baz=61
K16A **Soda Springs** 61.52 57 ⇓P P 23 42 23.2 +1.1
baz=61
LOHW **Long Hollow** 61.53 55 eP P 23 42 22.7 +0.5
comp=Z,40nm,1.7s,mb5.2
LOHW epP pP 23 42 51.5 -0.3
LOHW epP pP 23 42 52.1 +0.4
SNOW **Snow King Moun** 61.55 56 eP P 23 42 22.6 +0.3
comp=Z,6.4nm,0.7s,mb4.8
REDW **Red Top Meadow** 61.57 56 eP P 23 42 23.6 +1.1
comp=Z,22nm,1.1s,mb5.1
REDW epP pP 23 42 52.0 0.0
HVU **Hansel Valley** 61.58 58 eP P 23 42 23.3 +0.8
HVU e*PP pP 23 42 48.1 -3.9
HVU pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
HVU **Hansel Valley** 61.58 58 eP P 23 42 23.3 +0.8
comp=Z,7.9nm,0.7s,mb4.8
HVU epP pP 23 42 48.1 -3.9
J17A **Brown Place, J** 61.64 56 ⇓P P 23 42 23.6 +0.7
baz=61
L15A **Malad City** 61.64 58 ⇓P P 23 42 23.3 +0.3
baz=61,SNR=7.5
KBL **Kabul** 61.71 291 eP P 23 42 23.2 -0.3
KBL pmax pmax
comp=Z,31nm,1.3s,mb5.2
KBL **Kabul** 61.71 291 eP P 23 42 22.7 -0.9
comp=Z,31nm,1.4s,mb5.2
KBL epP pP 23 42 55.6 +2.5
I18A **Diamond G Ranc** 61.89 55 ⇑P P 23 42 25.2 +0.6
baz=62
VES **Vestal, Richgr** 61.91 67 ⇓P P 23 42 24.3 -0.5
baz=62
FINES **FINESS Array B** 61.91 335 P P 23 42 23.1 -1.3
FINES pmax pmax
comp=Z,9.0nm,0.6s
FINES **FINESS Array B** 61.91 335 P P 23 42 23.1 -1.3
comp=Z,8.5nm,0.6s,mb5.0,baz=36,slow=7.9,SNR=58
R10A **Warm Springs** 61.91 63 ⇓P P 23 42 24.9 0.0
baz=62
Q11A **Duckwater** 61.91 62 ⇑P P 23 42 24.6 -0.2
baz=62
P12A **McGill** 61.92 61 ⇑P P 23 42 25.0 +0.1
baz=62
N14A **Grayback Hills** 61.97 59 ⇑P P 23 42 25.5 +0.4
baz=62
M15A **Larsen Ranch,** 61.97 58 ⇑P P 23 42 25.3 +0.1
baz=62
S10A **Tonopah Range,** 61.99 64 ⇓P P 23 42 25.1 -0.2
baz=62
SPUT **South Promonto** 62.08 58 eP P 23 42 25.4 -0.4
comp=Z,14nm,1.0s,mb5.0
CWC **Cottonwood Cre** 62.11 66 ⇑P P 23 42 26.6 +0.5
baz=62
J18A **Kendall Valley** 62.12 55 ⇑P P 23 42 26.4 +0.3
baz=62
GRAC **Grapevine Rang** 62.15 65 ⇑P P 23 42 26.7 +0.2
baz=62
L16A **Fish Haven** 62.16 57 ⇑P P 23 42 27.0 +0.6
baz=62,SNR=7.0
Q12A **Willow Creek R** 62.26 62 ⇓P P 23 42 27.3 +0.2
baz=62
R11A **Troy Canyon, C** 62.29 63 ⇑P P 23 42 27.1 -0.2
baz=62,SNR=5.7
HWUT **Hardware Ranch** 62.36 58 eP P 23 42 28.1 +0.3
comp=Z,12nm,0.8s,mb5.0
ISA **Isabella** 62.40 67 ⇑P P 23 42 27.3 -0.8
baz=62
SFJD **Kangerlussuaq** 62.41 11 i P P 23 42 25.9 -1.8
SFJD pmax pmax
comp=Z,46nm,0.8s,mb5.6
SFJD **Kangerlussuaq** 62.41 11 eP P 23 42 26.8 -0.9
comp=Z,45nm,0.8s,mb5.5
SFJD **Kangerlussuaq** 62.41 11 i P P 23 42 25.9 -1.8
comp=Z,46nm,0.8s,mb5.5
P13A **Bates Ranch, G** 62.44 61 ⇓P P 23 42 28.5 +0.1
baz=62
K18A **Toltan Ranch,** 62.49 56 ⇓P P 23 42 29.2 +0.6
baz=62
DAC **Darwin (Calif)** 62.51 66 eP P 23 42 26.3 -2.5
DAC pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
M16A **Huntsville** 62.52 58 ⇑P P 23 42 29.0 +0.1
baz=62
DUG **Dugway** 62.62 59 ⇑P P 23 42 29.7 +0.1
baz=62
DUG **Dugway** 62.62 59 eP P 23 42 29.7 +0.2
comp=Z,19nm,1.1s,mb4.9
BW06 **Boulder Array** 62.67 55 ⇑P P 23 42 29.8 +0.1
baz=62,SNR=26
BW06 **Boulder Array** 62.67 55 eP P 23 42 29.7 0.0
PDAR **Pinedale Array** 62.67 55 P P 23 42 29.6 -0.1
comp=Z,11nm,0.8s,mb4.8,baz=310,slow=2.1,SNR=89
PDAR pP pP 23 42 58.2 -1.2
comp=Z,8.8nm,0.9s,baz=309,slow=2.8,SNR=8.1
S11A **Rachel** 62.67 63 ⇓P P 23 42 30.2 +0.3
baz=62
MPMC **Manual Prospec** 62.72 66 ⇑P P 23 42 30.3 +0.1
baz=62
Q13A **Wheeler Ranch,** 62.78 61 ⇓P P 23 42 30.7 +0.2
baz=63
FURC **Furnace Creek,** 62.81 65 ⇓P P 23 42 30.7 -0.2
baz=63
KULM **Kulim** 62.83 244 eP P 23 42 32.0 +0.9
comp=Z,20nm,1.1s,mb5.0
R12A **Pony Springs,** 62.87 62 ⇓P P 23 42 31.2 0.0
baz=63
P14A **Drum Mountains** 62.89 60 ⇑P P 23 42 31.6 +0.3
baz=63
N16A **Rees Ranch, Co** 62.92 58 ⇓P P 23 42 31.9 +0.4
baz=63
M17A **Scullys Gap (B** 62.95 57 ⇓P P 23 42 31.6 0.0
baz=63
LRMC **Laurel Mountai** 62.99 66 ⇑P P 23 42 31.8 -0.2
baz=63
K19A **Absolon Red Bu** 63.01 55 ⇓P P 23 42 31.5 -0.5
baz=63
JLU **Jordanelle** 63.11 58 eP P 23 42 33.4 +0.7
comp=Z,18nm,0.7s,mb5.1
U10A **Ash Meadows, A** 63.16 65 ⇓P P 23 42 33.5 +0.3
baz=63
Q14A **Sevier Lake (B** 63.18 61 ⇑P P 23 42 33.5 +0.3
baz=63
NLU **North Lily Min** 63.20 59 eP P 23 42 34.0 +0.6
comp=Z,22nm,0.9s,mb5.1
EDW2 **Edwards Air Fo** 63.22 67 ⇑P P 23 42 33.3 -0.3
baz=63
S12A **Delamar Landin** 63.22 63 ⇓P P 23 42 33.8 +0.3
baz=63
N17A **Moffit Pass** 63.22 58 ⇑P P 23 42 33.7 +0.2
baz=63
T11A **Corn Creek, Al** 63.25 63 ⇑P P 23 42 33.7 -0.1
baz=63
M18A **Lyman** 63.31 57 ⇓P P 23 42 34.1 +0.1
baz=63
R13A **O'Grain Ranch,** 63.34 62 ⇓P P 23 42 34.3 0.0
baz=63
DAU **Daniels Canyon** 63.35 58 eP P 23 42 35.1 +0.8
P15A **Leamington** 63.35 60 ⇑P P 23 42 34.4 0.0
baz=63
O16A **Springville** 63.35 59 ⇑P P 23 42 34.8 +0.5
baz=63
K20A **Yellowstone Ra** 63.39 55 ⇑P P 23 42 34.3 -0.3
baz=63
OBN **Obninsk** 63.49 325 ⇓ eP P 23 42 34.8 -0.2
OBN e*PP pP 23 43 03.7 -1.0
OBN e pP 23 43 07.6 +2.9
OBN pmax pmax
comp=Z,43nm,2.1s,mb5.0
OBN MLR MLR
comp=Z,700nm,19.0s
SHOC **Shoshone** 63.54 65 ⇓P P 23 42 35.0 -0.6
baz=63
MWC **Mount Wilson** 63.62 68 eP P 23 42 36.1 -0.1
MWC pmax pmax
comp=Z,31nm,1.3s,mb5.0
MWC **Mount Wilson** 63.62 68 eP P 23 42 36.1 -0.2
comp=Z,31nm,1.4s,mb4.9
GSC **Goldstone** 63.64 66 ⇑P P 23 42 36.1 -0.3
baz=63
GSC **Goldstone** 63.64 66 eP P 23 42 36.1 -0.2
GSC pmax pmax
comp=Z,12nm,1.0s,mb4.7
GSC **Goldstone** 63.64 66 eP P 23 42 36.1 -0.2
comp=Z,12nm,1.0s,mb4.7
Q15A **Fillmore** 63.68 60 ⇓P P 23 42 37.0 +0.4
baz=64
U11A **Corn Creek** 63.71 64 ⇓P P 23 42 37.1 +0.3
baz=64
O17A **Robinson Place** 63.78 58 ⇑P P 23 42 37.7 +0.5
baz=64
SHPR **Sheep Range** 63.79 64 eP P 23 42 37.3 0.0
SHPR epP pP 23 43 06.5 -0.5
S13A **Holt Ranch, En** 63.81 62 ⇑P P 23 42 37.7 +0.3
baz=64
N18A **Larsen Ranch,** 63.83 57 ⇑P P 23 42 37.4 -0.1
baz=64
L20A **Wamsutter** 63.84 55 ⇓P P 23 42 37.9 +0.3
baz=64
TUQ **Turquoise Moun** 64.07 65 ⇓P P 23 42 38.9 -0.3
baz=64
V11A **Goodsprings** 64.09 65 ⇑P P 23 42 39.5 +0.2
baz=64
ULM **Lac du Bonnet** 64.09 42 P P 23 42 38.6 -0.3
comp=Z,4.2nm,0.6s,mb4.5,baz=313,slow=5.7,SNR=10
ULM **Lac du Bonnet** 64.09 42 eP P 23 42 38.0 -1.0
comp=Z,4.0nm,0.6s,mb4.4
CCUT **Cedar City** 64.12 62 epP pP 23 43 08.6 -0.6
MSU **Marysvale** 64.13 60 eP P 23 42 40.0 +0.5
MSU **Marysvale** 64.13 60 eP P 23 42 39.4 -0.1
MSU epP pP 23 43 01.1 -8.2
O18A **Roosevelt** 64.14 58 ⇓P P 23 42 40.3 +0.7
baz=64
N19A **John Jarvie Ra** 64.16 57 ⇓P P 23 42 39.4 -0.3
baz=64
T13A **Saint George** 64.17 63 ⇓P P 23 42 40.1 +0.3
baz=64
U12A **Valley of Fire** 64.20 64 ⇑P P 23 42 39.9 0.0
baz=64
HEC **Hector,Ludlow** 64.25 66 ⇑P P 23 42 40.3 0.0
baz=64
P17A **Butcher Ranch,** 64.28 59 ⇓P P 23 42 40.8 +0.4
baz=64
M20A **Sweetwater, Wa** 64.29 56 ⇓P P 23 42 40.7 +0.2
baz=64
L21A **Rawlins** 64.39 55 ⇓P P 23 42 41.4 +0.2
baz=64
Q16A **Castle Valley** 64.42 60 ⇓P P 23 42 42.0 +0.6
baz=64
P18A **Preston Nutter** 64.45 58 ⇑P P 23 42 41.9 +0.4
baz=64
V12A **Nelson** 64.50 64 ⇓P P 23 42 42.4 +0.5
baz=64
U13A **Pakoon Wash** 64.55 63 ⇑P P 23 42 42.3 +0.1
baz=64,SNR=6.4
O19A **Miners Draw (B** 64.61 57 ⇑P P 23 42 42.8 +0.2
baz=64
S15A **Panguitch** 64.61 61 ⇑P P 23 42 43.3 +0.7
baz=64
T14A **Hurricane** 64.61 62 ⇓P P 23 42 43.1 +0.4
baz=64
RSSD **Black Hills** 64.62 51 eP P 23 42 42.4 -0.1
comp=Z,6.4nm,0.6s,mb4.6
RSSD epP pP 23 43 10.6 -1.8
M21A **Separation Pea** 64.65 55 ⇑P P 23 42 42.8 0.0
baz=64
SRU **San Rafael** 64.65 59 ⇓P P 23 42 42.5 -0.4
baz=64,SNR=8.6
SRU **San Rafael** 64.65 59 eP P 23 42 43.3 +0.4
SRU pmax pmax
comp=Z,23nm,0.9s,mb5.0
SRU **San Rafael** 64.65 59 eP P 23 42 43.3 +0.4
comp=Z,23nm,0.9s,mb5.0
GMRC **Granite Mounta** 64.68 66 ⇑P P 23 42 42.7 -0.4
baz=64,SNR=6.9
R16A **Teasdale** 64.69 60 ⇓P P 23 42 43.2 +0.1
baz=64,SNR=5.2
N20A **Spence Gulch,** 64.70 56 ⇓P P 23 42 43.6 +0.5
baz=64
KAKA **Kakadu** 64.74 203 eP P 23 42 41.8 -1.8
comp=Z,15nm,0.6s,mb5.0
KAKA **Kakadu** 64.74 203 eP P 23 42 41.4 -2.1
comp=Z,35nm,0.7s,mb5.3
Q18A **Rafter H Ranch** 64.88 59 ⇓P P 23 42 44.1 -0.2
baz=65
V13A **Grand Canyon W** 64.93 64 ⇓P P 23 42 44.9 +0.2
baz=65,SNR=6.1
U14A **Mt Trumbull** 65.00 63 ⇓P P 23 42 45.6 +0.4
baz=65
BELC **Belle Mtn.** 65.02 66 ⇑P P 23 42 44.8 -0.5
baz=65
R17A **Hanksville Air** 65.03 60 ⇓P P 23 42 45.5 +0.2
baz=65
T15A **Red Dirt Ranch** 65.05 62 ⇓P P 23 42 45.9 +0.4
baz=65
P19A **Cripple Cowboy** 65.15 58 ⇑P P 23 42 46.2 +0.1
baz=65
N21A **Black Mountain** 65.16 56 ⇓P P 23 42 46.5 +0.4
baz=65
M22A **Cedar Creek Ra** 65.20 55 ⇑P P 23 42 46.8 +0.5
baz=65
O20A **White River Ci** 65.20 57 ⇓P P 23 42 46.6 +0.2
baz=65
IRM **Iron Mountain** 65.41 66 ⇑P P 23 42 47.9 0.0
baz=65
VSR **Storozhevoye** 65.44 321 eP P 23 42 47.0 -0.8
VSR pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
W13A **Hualapai Mount** 65.51 64 ⇓P P 23 42 48.6 +0.1
baz=65
R18A **Canyonlands Na** 65.51 59 ⇑P P 23 42 48.5 0.0
baz=65
U15A **North Rim** 65.51 62 ⇓P P 23 42 49.0 +0.6
baz=65
S17A **Black Ridge (B** 65.52 60 ⇓P P 23 42 48.7 +0.2
baz=65
MONP **Monument Peak** 65.53 68 ⇓P P 23 42 48.2 -0.5
baz=65
P20A **De Beque** 65.56 57 ⇑P P 23 42 48.9 +0.1
baz=65
O21A **Pagoda** 65.57 56 ⇓P P 23 42 49.0 +0.2
baz=65
BC3 **Big Chuckw Mtn** 65.58 66 ⇑P P 23 42 48.4 -0.6
baz=65
V14A **Boquillas Ranc** 65.59 63 ⇓P P 23 42 49.2 +0.2
baz=65,SNR=6.2
N22A **Wattenberg Ran** 65.70 55 ⇑P P 23 42 50.1 +0.5
baz=66
X13A **Yucca** 65.89 65 ⇑P P 23 42 50.8 -0.1
baz=66
W14A **Seligman** 65.90 64 ⇓P P 23 42 51.2 +0.2
baz=66,SNR=7.1
PDMCI **Parker Dam,Lak** 65.91 65 ⇓P P 23 42 50.7 -0.4
baz=66
NB2 **NORSAR Subarra** 65.92 341 P P 23 42 49.4 -1.2
comp=Z,4.1nm,0.6s,mb4.4,baz=24,slow=6.5
NOA **NORSAR Array B** 65.92 341 P P 23 42 49.5 -1.1
NOA pP 23 43 19.2 -1.3
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA **NORSAR Array B** 65.92 341 P P 23 42 49.5 -1.1
comp=Z,4.0nm,0.6s,mb4.4,baz=25,slow=6.5,SNR=28
NOA PcP PcP 23 43 19.2 -1.3
comp=Z,1.2nm,0.6s,baz=28,slow=3.3,SNR=3.8
R19A **Curley Farm, L** 65.93 59 ⇓P P 23 42 50.8 -0.3
baz=66
S18A **Hurst Farm, Bl** 65.94 60 ⇓P P 23 42 51.2 0.0
baz=66
T17A **Navajo Res., N** 65.97 61 ⇓P P 23 42 51.1 -0.3
baz=66
Q20A **Ridgley Place,** 66.00 58 ⇓P P 23 42 51.5 -0.1
baz=66
V15A **Kaibab Nationa** 66.00 63 ⇑P P 23 42 51.8 +0.2
baz=66
Y12C **Blythe** 66.07 66 ⇑P P 23 42 52.0 -0.1
baz=66
NAO01 **NORSAR Array S** 66.16 341 eP P 23 42 51.8 -0.4
U17A **Shonto** 66.33 61 ⇓P P 23 42 53.7 +0.1
baz=66
GLA **Glamis** 66.38 66 ⇑P P 23 42 54.0 -0.1
baz=66
U16A **Tuba City** 66.38 62 ⇑P P 23 42 54.6 +0.6
baz=66
S19A **Harvey Farm, M** 66.39 59 ⇑P P 23 42 54.2 +0.2
baz=66
T18A **Mexican Hat** 66.40 60 ⇓P P 23 42 53.4 -0.7
baz=66
W15A **Williams** 66.40 63 ⇑P P 23 42 54.9 +0.7
baz=66
Y13A **Salome** 66.44 65 ⇓P P 23 42 54.3 -0.1
baz=66
Q21A **Lamborn Mesa,** 66.48 57 ⇓P P 23 42 55.0 +0.4
baz=66
R20A **Redvale** 66.50 58 ⇓P P 23 42 55.1 +0.4
baz=66
X14A **Yava** 66.53 64 ⇓P P 23 42 55.4 +0.4
baz=66
SMCO **Snowmass** 66.57 57 eP P 23 42 55.6 +0.4
comp=Z,9.5nm,0.8s,mb4.7
WUAZ **Wupatki** 66.68 62 ⇑P P 23 42 56.4 +0.5
baz=66
WUAZ **Wupatki** 66.68 62 eP P 23 42 56.5 +0.5
ISAL **Salakas** 66.73 331 eP P 23 42 55.3 -0.6
IDID **Didziasalis** 66.75 330 eP P 23 42 55.2 -0.8
R21A **Cimarron** 66.83 58 ⇓P P 23 42 57.2 +0.4
baz=67
Q22A **Crested Butte,** 66.83 57 ⇑P P 23 42 57.0 +0.1
baz=67
Y14A **Wickenburg** 66.84 65 ⇓P P 23 42 56.7 -0.2
baz=67
ISCO **Idaho Springs** 66.86 56 eP P 23 42 58.0 +1.0
ISCO e pP 23 43 26.8 -0.2
ISCO **Idaho Springs** 66.86 56 eP P 23 42 58.0 +0.9
comp=Z,15nm,1.0s,mb4.8
ISCO epP pP 23 43 26.6 -0.4
W16A **Flagstaff** 66.89 63 ⇑P P 23 42 57.7 +0.5
baz=67
X15A **Humboldt** 66.90 64 ⇑P P 23 42 57.5 +0.1
baz=67,SNR=5.4
U18A **Rough Rock, Ch** 66.91 61 ⇓P P 23 42 57.7 +0.3
baz=67
V17A **Tonalea, Kykot** 66.94 62 ⇑P P 23 42 58.3 +0.7
baz=67
Z13A **Yuma Proving G** 66.97 66 ⇑P P 23 42 57.8 0.0
baz=67
NACGM **Naroch** 67.08 330 e P 23 42 55.0 -3.1
T19A **Beclabito** 67.09 60 ⇑P P 23 42 58.6 +0.1
baz=67
MVCO **Mesa Verde** 67.12 59 ⇑P P 23 42 58.6 -0.1
baz=67,SNR=6.5
MVCO **Mesa Verde** 67.12 59 eP P 23 42 59.0 +0.3
comp=Z,12nm,0.8s,mb4.8
S21A **Coal Bank Pass** 67.20 58 ⇓P P 23 42 60.0 +0.8
baz=67
113A **Mohawk Valley,** 67.21 66 ⇑P P 23 42 58.7 -0.6
baz=67
Y15A **Casa Rosa Ranc** 67.22 64 ⇓P P 23 42 59.9 +0.5
baz=67
R22A **Saguache, Gunn** 67.36 57 ⇑P P 23 43 01.1 +0.9
baz=67
V18A **Ganado** 67.37 61 ⇑P P 23 43 00.8 +0.4
baz=67
U19A **Dine' College,** 67.37 60 ⇑P P 23 43 00.7 +0.4

baz=67
X16A Lo Mia Camp, P 67.42 63 ⇑P P 23 43 00.7 +0.1
baz=67,SNR=5.6
HYB Hyderabad 67.61 271 *i* P **P 23 43 02.5 +0.5**
EYMN Ely 67.72 41 *eP* **P 23 43 01.2 -1.0**
comp=Z,5.1nm,0.7s,mb4.5
EYMN *epP* pP 23 43 30.6 -1.7
114A Black Gap (USA 67.75 65 ⇓P P 23 43 02.6 -0.1
baz=68,SNR=5.2
Y16A Circle Bar Ran 67.78 64 ⇑P P 23 43 03.5 +0.6
baz=68
W18A Petrified Fore 67.91 62 ⇑P P 23 43 04.3 +0.6
baz=68
W19A Sanders 68.11 61 ⇓P P 23 43 05.5 +0.6
baz=68
V20A Brimhall 68.14 60 ⇓P P 23 43 05.1 -0.1
baz=68
T22A Edith 68.15 58 ⇓P P 23 43 05.7 +0.5
baz=68
115A Sonoran Desert 68.17 65 ⇓P P 23 43 05.1 -0.2
baz=68,SNR=5.0
Z16A Peralta Trail, 68.19 64 ⇓P P 23 43 05.4 -0.1
baz=68
X18A Snowflake 68.20 62 ⇑P P 23 43 05.8 +0.2
baz=68
Y17A Roosevelt 68.28 63 ⇓P P 23 43 06.3 +0.2
baz=68
214A Organ Pipe Nat 68.35 66 ⇑P P 23 43 06.3 -0.2
baz=68,SNR=5.2
ECSD EROS Data Cent 68.58 47 *eP* **P 23 43 06.8 -1.0**
comp=Z,14nm,1.0s,mb4.8
ECSD *epP* pP 23 43 36.0 -1.8
116A Eloy 68.58 65 ⇑P P 23 43 08.1 +0.2
baz=68
W20A Ramah 68.61 61 ⇓P P 23 43 07.9 -0.2
baz=68,SNR=7.1
V21A Milan 68.61 60 ⇓P P 23 43 08.1 +0.1
baz=68
X19A St. Johns 68.66 62 ⇓P P 23 43 08.8 +0.5
baz=68,SNR=7.1
Y18A Canyon Day Jun 68.69 63 ⇓P P 23 43 08.8 +0.2
baz=68,SNR=5.7
Z17A San Carlos Hig 68.78 63 ⇓P P 23 43 09.4 +0.3
baz=69
Y19A Nutrioso 69.01 62 ⇓P P 23 43 11.1 +0.5
baz=69
216A Three Points, 69.12 65 ⇑P P 23 43 11.3 0.0
baz=69
117A Oracle 69.14 64 ⇑P P 23 43 11.3 -0.1
baz=69
TUC Tucson 69.30 64 *eP* **P 23 43 12.3 0.0**
comp=Z,6.7nm,1.1s,mb4.4
KIV Kislovodsk 69.41 314⇑ *eP* **P 23 43 13.3 +0.4**
KIV pmax pmax
comp=Z,18nm,1.2s,mb4.8
KIV MLR MLR
comp=Z,300nm,17.0s
KIV Kislovodsk 69.41 314 *eP* **P 23 43 13.6 +0.8**
comp=Z,19nm,1.0s,mb4.9
Z19A T-Link Ranch, 69.48 63 ⇑P P 23 43 13.9 +0.4
baz=69
X21A Alamocita Cree 69.50 61 ⇑P P 23 43 13.5 -0.1
baz=69,SNR=15
CTAO Charters Tower 69.54 188 *eP* **P 23 43 12.4 -1.4**
comp=Z,12nm,1.0s,mb4.7
118A Homack Ranch, 69.54 64 ⇑P P 23 43 13.6 -0.3
baz=69,SNR=7.3
Y20A Horse Springs, 69.55 62 ⇑P P 23 43 14.0 +0.1
baz=69,SNR=6.8
217A Green Valley 69.67 65 ⇓P P 23 43 15.1 +0.4
baz=70
AKASG Malin Array Be 69.70 326 P **P 23 43 13.2 -1.3**
AKASG 23 43 35.4
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG Malin Array Be 69.70 326 P **P 23 43 13.2 -1.3**
comp=Z,10nm,0.6s,mb4.8,baz=32,slow=6.3,SNR=33
AKASG PcP PcP 23 43 35.4 -1.1
comp=Z,0.7nm,0.4s,baz=36,slow=4.5,SNR=4.0
AKASG Malin Array Be 69.70 326 P **P 23 43 13.2 -1.3**
AKASG PcP PcP 23 43 35.4 -1.1
AKBB Malin Array Si 69.70 326 *eP* **P 23 43 12.8 -1.7**
KIEV Kiev 69.71 326 *eP* **P 23 43 12.9 -1.7**
comp=Z,12nm,0.6s,mb4.9
ZEI Tsey 69.74 313 *eP* **P 23 43 10.9 -4.0**
ZEI pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
119A Ashpeak Ranch, 69.84 63 ⇑P P 23 43 16.1 +0.4
baz=70
Y21A Point of Rocks 69.88 61 ⇓P P 23 43 16.7 +0.7
baz=70
ANMO Albuquerque 69.89 60 *eP* **P 23 43 15.8 -0.2**
X22A Bernardo 69.90 60 ⇓P P 23 43 16.9 +0.8
baz=70
LAZ Ladron 69.91 60 *eP* **P 23 43 16.3 +0.3**
comp=Z,8.7nm,1.2s,mb4.5
W23A Werner Place, 69.91 59 ⇑P P 23 43 16.5 +0.4
baz=70
218A Dragoon 69.98 64 ⇑P P 23 43 16.9 +0.4
baz=70,SNR=7.1
Z20A Nine Sixteen R 70.00 62 ⇓P P 23 43 17.1 +0.4
baz=70
X23A Hourglass Bar 70.31 60 ⇓P P 23 43 19.2 +0.7
baz=70
120A U Bar Ranch, L 70.39 63 ⇑P P 23 43 19.4 +0.4
baz=70,SNR=8.4
Z21A St. Cloud Mine 70.39 62 ⇑P P 23 43 19.5 +0.5
baz=70,SNR=5.2
318A Bisbee 70.40 64 ⇓P P 23 43 19.2 +0.1
baz=70,SNR=8.7
219A White Tail Can 70.42 64 ⇓P P 23 43 19.1 -0.1
baz=70,SNR=6.5
SCHQ Schefferville 70.60 24 P **P 23 43 19.5 -0.4**
comp=Z,14nm,0.6s,mb5.0,baz=338,slow=6.2,SNR=26
SCHQ Schefferville 70.60 24 *eP* **P 23 43 19.7 -0.2**
comp=Z,14nm,0.6s,mb5.0
CBKS Cedar Bluff 70.69 53 *eP* **P 23 43 19.8 -1.0**
W25A X Bar L Ranch, 70.81 58 ⇑P P 23 43 21.5 -0.1
baz=71,SNR=9.9
Z22A Elephant Butte 70.84 61 ⇑P P 23 43 22.2 +0.5
baz=71
319A Douglas 70.86 64 ⇓P P 23 43 21.8 -0.1
baz=71,SNR=13
Y23A Lovelace Mesa, 70.86 60 ⇑P P 23 43 21.8 -0.1
baz=71,SNR=11
121A Cookes Peak, D 70.89 62 ⇓P P 23 43 22.2 +0.1
baz=71,SNR=6.8
220A Playas Peak, P 70.92 63 ⇓P P 23 43 22.0 -0.2
baz=71,SNR=6.1
X25A Clemmons Ranch 71.21 59 ⇓P P 23 43 23.9 -0.1
baz=71,SNR=6.2
Y24A Capitan 71.22 60 ⇓P P 23 43 23.8 -0.2
baz=71,SNR=9.9
122A Conniff Cattle 71.22 62 ⇑P P 23 43 24.4 +0.4
baz=71
WRAB Tennant Creek 71.23 200 *eP* **P 23 43 23.0 -1.0**
comp=Z,22nm,1.4s,mb4.8
WRAB *epP* pP 23 43 53.1 -1.3
WB2 Warramunga Arr 71.24 200 *eP* **P 23 43 23.1 -1.0**
WB2 *ePcP* PcP 23 43 42.8 -0.5
WB2 *epP* pP 23 43 53.0 -1.4
WRA Warramunga Arr 71.25 200 P **P 23 43 22.9 -1.2**
WRA 23 43 42.9
WRA *PP pP 23 43 52.4 -2.0
WRA pmax pmax
comp=Z,6.0nm,0.8s
WRA Warramunga Arr 71.25 200 P **P 23 43 22.9 -1.3**
comp=Z,5.7nm,0.8s,mb4.5,baz=15,slow=6.4,SNR=14
WRA PcP PcP 23 43 42.9 -0.4
comp=Z,2.2nm,0.8s,baz=11,slow=4.7,SNR=7.5
WRA pP pP 23 43 52.4 -2.1
comp=Z,7.8nm,0.9s,baz=19,slow=6.8,SNR=8.1
221A Mesquite Ranch 71.28 63 ⇑P P 23 43 24.8 +0.4
baz=71
GNI Garni 71.31 310 *eP* **P 23 43 25.8 +1.4**
comp=Z,41nm,1.4s,mb5.1
Y25A Mesa, Roswell 71.64 59 ⇓P P 23 43 26.6 +0.1
baz=71,SNR=10
X26A CR and CF Fran 71.67 58 ⇓P P 23 43 26.8 +0.1
baz=71,SNR=5.6
FITZ Fitzroy Crossi 71.80 208 *eP* **P 23 43 27.4 -0.1**
comp=Z,9.3nm,0.6s,mb4.8
FITZ Fitzroy Crossi 71.80 208 *eP* **P 23 43 27.3 -0.2**
comp=Z,4.1nm,0.6s,mb4.4
X27A F and S Farms, 71.99 58 ⇑P P 23 43 28.8 +0.2
baz=72
MDO Dochfour 72.03 348⇑ *eP* **P 23 43 27.6 -0.9**

Z25A Roswell 72.10 60 ⇑P P 23 43 29.5 +0.2
baz=72
124A Stringfield Ra 72.11 61 ⇑P P 23 43 29.5 +0.1
baz=72,SNR=5.1
Y26A Elida 72.12 59 ⇑P P 23 43 29.2 -0.3
baz=72
LVV L'vov 72.26 329 *eP* **P 23 43 30.1 +0.1**
KPL Plockton 72.30 349 *eP* **P 23 43 29.3 -0.8**
KPL AMb AMB 23 43 30.9
comp=Z,16nm,2.9s,mb4.3
KSB Sheil Bridge 72.40 348 *eP* **P 23 43 29.9 -0.7**
Z26A Caprock 72.52 59 ⇓P P 23 43 31.6 -0.2
baz=72,SNR=12
Y27A Causey 72.52 58 ⇑P P 23 43 31.5 -0.3
baz=72,SNR=12
224A Corundas Mount 72.53 61 ⇓P P 23 43 31.2 -0.6
baz=72,SNR=7.8
125A Gardner Draw, 72.59 60 ⇓P P 23 43 31.9 -0.4
baz=72
AMTX Amarillo 72.59 57 *eP* **P 23 43 31.9 -0.3**
comp=Z,13nm,1.0s,mb4.7
BSEG Bad Segeberg 72.59 339 *eP* **P 23 43 32.8 +0.9**
comp=Z,6.0nm,1.1s,mb4.3
BSEG Bad Segeberg 72.59 339 *eP* **P 23 43 32.8 +0.9**
BSEG pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
MSTX Muleshoe 72.67 58 ⇓P P 23 43 32.0 -0.7
baz=72,SNR=5.9
KAR1 Arisaig 72.73 349 *eP* **P 23 43 32.0 -0.6**
KWP Kalwaria Pacla 72.87 329 *eP* **P 23 43 34.1 +0.5**
KWP Kalwaria Pacla 72.87 329 *eP* **P 23 43 33.6 +0.1**
comp=Z,40nm,0.9s,mb5.2
KWP Kalwaria Pacla 72.87 329⇓ *iP* **P 23 43 34.1 +0.5**
MNTX Cornudas Mount 72.89 61 *eP* **P 23 43 33.5 -0.5**
comp=Z,10nm,1.4s,mb4.5
MNTX *epP* pP 23 44 03.1 -1.2
225A Deer Hill, Car 72.90 61 ⇓P P 23 43 34.1 0.0
baz=73
KIS Kishinev 72.91 324 *eP* **P 23 43 36.0 +2.1**
Z27A Tatum 72.91 59 ⇑P P 23 43 33.7 -0.4
baz=73,SNR=19
GDL2 Guadalupe Moun 73.09 60 *eP* **P 23 43 35.3 +0.1**
EAB Aberfoyle 73.24 348 *eP* **P 23 43 34.1 -1.6**
ESY Stoneypath 73.25 347 *eP* **P 23 43 33.8 -1.9**
OJC Ojcow 73.30 331 *eP* **P 23 43 36.8 +0.7**
226A Malaga, Loving 73.35 60 ⇓P P 23 43 36.3 -0.4
baz=73,SNR=7.4
325A Bean Ranch, Si 73.36 61 ⇑P P 23 43 36.3 -0.5
baz=73,SNR=7.6
STHS Stebnicka Huta 73.54 330 *eP* **P 23 43 37.9 +0.4**
STHS pmax pmax
comp=Z,11nm,0.7s,mb4.7
STHS Stebnicka Huta 73.54 330 *eP* **P 23 43 37.9 +0.4**
comp=Z,11nm,0.7s,mb4.7
STHS Stebnicka Huta 73.54 330 *eP* **P 23 43 37.9 +0.4**
KOLS Kolonicke sedl 73.61 329 *eP* **P 23 43 38.4 +0.4**
KOLS pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
KOLS Kolonicke sedl 73.61 329 *eP* **P 23 43 38.4 +0.4**
comp=Z,7.3nm,0.8s,mb4.5
KOLS Kolonicke sedl 73.61 329 *eP* **P 23 43 38.4 +0.4**
PGBU Glenifferbraes 73.63 348 *eP* **P 23 43 37.0 -1.0**
PGBU AMb AMB 23 43 38.7
comp=Z,27nm,1.3s,mb4.8
BUR08 Bucovina Ar. S 73.70 327 *eP* **P 23 43 37.9 -0.7**
PALK Pallekele 73.72 262 *eP* **P 23 43 39.5 +0.4**
comp=Z,26nm,1.0s,mb4.9
BUR01 Bucovina Ar. S 73.72 327 P **P 23 43 39.2 +0.6**
BURAR Bucovina Array 73.72 327⇑ P **P 23 43 37.8 -0.8**
BURAR Bucovina Array 73.72 327⇑ *iP* **P 23 43 37.8 -0.8**
425A Indio Mountain 73.79 62 ⇓P P 23 43 39.1 -0.2
baz=74,SNR=12
KSP Ksiaz 73.81 334 *eP* **P 23 43 39.7 +0.6**
NIE Niedzica 73.84 331 *eP* **P 23 43 40.5 +1.2**
ESK Eskdalemuir 73.92 347 *eP* **P 23 43 38.8 -0.8**
ESK AMb AMB 23 43 50.1
comp=Z,19nm,2.5s,mb4.4
ESK Eskdalemuir 73.92 347 *eP* **P 23 43 38.9 -0.8**
comp=Z,5.5nm,0.6s,mb4.5
NRDL Niedersach Rie 73.97 338 *eP* **P 23 43 40.2 +0.2**
comp=Z,6.0nm,0.8s,mb4.4
326A Caldwell Ranch 73.97 61 ⇑P P 23 43 39.9 -0.5
baz=74,SNR=7.3
ECK Cauldkaine Hil 74.04 347 *eP* **P 23 43 39.5 -0.8**
TRPA Tarpa 74.22 329⇑ *iP* **P 23 43 41.3 -0.2**
WMOK Wichita Mounta 74.27 55 *eP* **P 23 43 41.6 -0.4**
WMOK *e* pP 23 44 11.3 -1.2
WMOK Wichita Mounta 74.27 55 *eP* **P 23 43 41.6 -0.4**
comp=Z,17nm,1.1s,mb4.7
WMOK *epP* pP 23 44 11.0 -1.6
CLL Collm 74.31 336 *eP* **P 23 43 42.3 +0.3**
comp=Z,17nm,1.1s,mb4.7
CLL Collm 74.31 336 *i P* **P 23 43 40.8 -1.2**
CLL pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
CLL Collm 74.31 336 *i P* **P 23 43 40.8 -1.2**
comp=Z,17nm,1.1s,mb4.7
CLL *i* 23 43 42.2
CLL Collm 74.31 336 *i P* **P 23 43 40.8 -1.2**
CLL ⇑ *iP*max 23 43 42.2
comp=Z,17nm,1.1s
MORC Moravsky Berou 74.39 332 P **P 23 43 43.6 +1.2**
MORC Moravsky Berou 74.39 332 *eP* **P 23 43 41.8 -0.6**
comp=Z,22nm,0.8s,mb4.9
MORC Moravsky Berou 74.39 332⇓ *iP* **P 23 43 41.9 -0.5**
TLCR 74.42 323⇑ P **P 23 43 42.5 -0.2**
TLCR 74.42 323⇑ *iP* **P 23 43 42.5 -0.2**
426A McDonald Obser 74.42 61 ⇓P P 23 43 42.4 -0.6
baz=74,SNR=6.5
BRG Berggiesshubel 74.44 335 *eP* **P 23 43 43.0 +0.3**
comp=Z,14nm,1.3s,mb4.5
BRG Berggiesshubel 74.44 335 *eP* **P 23 43 43.0 +0.2**
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
CLZ Clausthal 74.50 338 *eP* **P 23 43 43.2 +0.1**
comp=Z,20nm,1.2s,mb4.7
CLZ Clausthal 74.50 338 *eP* **P 23 43 43.2 +0.1**
CLZ pmax pmax
comp=Z,20nm,1.2s,mb4.7
GAL1 Galloway 74.58 347 *eP* **P 23 43 42.3 -1.2**
GAL1 AMb AMB 23 43 44.7
comp=Z,17nm,1.6s,mb4.5
328A Wristen Ranch, 74.58 60 ⇑P P 23 43 43.5 -0.4
baz=74,SNR=14
KECS Kecovo 74.60 330 *eP* **P 23 43 44.3 +0.6**
KECS Kecovo 74.60 330 *eP* **P 23 43 44.3 +0.6**
427A Hayter Ranch, 74.65 61 ⇑P P 23 43 43.4 -0.9
baz=74,SNR=5.2
VRI Vrincioaia 74.65 325⇑ *iP* **P 23 43 45.0 +1.0**
PLOR Plostina 74.69 325 ⇑P P 23 43 44.1 -0.2
PLOR Plostina 74.69 325⇑ *iP* **P 23 43 44.1 -0.2**
XDE Dent Fell 74.75 347⇑ *eP* **P 23 43 44.0 -0.5**
526A Mary Lane Ranc 74.84 62 ⇑P P 23 43 45.5 0.0
baz=75,SNR=13
ASAR Alice Springs 74.94 199 P **P 23 43 45.5 -0.3**
ASAR *PP pP 23 44 15.3 -1.1
ASAR pmax pmax
comp=Z,7.0nm,0.6s
ASAR Alice Springs 74.94 199 P **P 23 43 45.5 -0.3**
comp=Z,7.1nm,0.6s,mb4.6,baz=11,slow=5.2,SNR=104
ASAR pP pP 23 44 15.2 -1.1
comp=Z,2.6nm,0.8s,baz=14,slow=5.7,SNR=3.9
527A Woodward Ranch 75.05 61 ⇓P P 23 43 46.2 -0.5
baz=75,SNR=5.3
VRAC Vranov 75.09 333 P **P 23 43 48.0 +1.5**
VRAC Vranov 75.09 333⇑ *iP* **P 23 43 46.7 +0.2**
VYHS Vyhne 75.12 331 *eP* **P 23 43 46.0 -0.7**
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
VYHS Vyhne 75.12 331 *eP* **P 23 43 46.0 -0.7**
comp=Z,8.4nm,1.1s,mb4.4
VYHS Vyhne 75.12 331 *eP* **P 23 43 46.0 -0.7**
428A Kincaid Ranch, 75.14 60 ⇑P P 23 43 47.3 +0.1
baz=75,SNR=7.4
HARR Harsova 75.18 323 ⇑P P 23 43 46.3 -0.8
HARR Harsova 75.18 323⇑ *iP* **P 23 43 46.3 -0.8**
KOLL Kolacno 75.18 331 *eP* **P 23 43 47.5 +0.5**
KOLL Kolacno 75.18 331 *eP* **P 23 43 47.5 +0.5**
626A Big Bend Ranch 75.20 62 ⇑P P 23 43 47.0 -0.5
baz=75,SNR=14
WTSB Winterswijk 75.23 340 *eP* **P 23 43 47.5 +0.2**
comp=Z,14nm,0.9s,mb4.7
MLR Muntele Rosu 75.26 325 ⇓P P 23 43 46.6 -0.9
MLR Muntele Rosu 75.26 325⇓ *iP* **P 23 43 46.6 -0.9**
TANN Tannenbergstha 75.26 336 *eP* **P 23 43 47.7 +0.2**

comp=Z,19nm,1.8s,mb4.5
MOX Moxa 75.28 336 *eP* **P 23 43 47.6 0.0**
MOX Moxa 75.28 336 *eP* **P 23 43 47.7 +0.1**
comp=Z,11nm,1.3s,mb4.4
PSZ Piszkesteto 75.28 330 *eP* **P 23 43 48.7 +1.1**
comp=Z,14nm,1.4s,mb4.5
LHO Holmfirth 75.42 345 *eP* **P 23 43 46.4 -2.0**
UBBA Unterbreizbach 75.53 337 *eP* **P 23 43 49.1 +0.1**
comp=Z,26nm,1.7s,mb4.7
SMOL Smolenice 75.54 332 *eP* **P 23 43 50.1 +1.0**
SMOL Smolenice 75.54 332 *eP* **P 23 43 50.1 +1.0**
TXAR Lajitas Array 75.63 62 P **P 23 43 49.4 -0.5**
TXAR *PP pP 23 44 18.9 -1.6
TXAR pmax pmax
comp=Z,8.0nm,0.5s
TXAR Lajitas Array 75.63 62 P **P 23 43 49.4 -0.5**
comp=Z,7.8nm,0.5s,mb4.7,baz=298,slow=4.4,SNR=141
TXAR pP pP 23 44 18.9 -1.6
comp=Z,4.8nm,0.7s,baz=297,slow=4.6,SNR=5.4
VOIR 75.64 326 P **P 23 43 50.2 +0.5**
VOIR 75.64 326⇑ *iP* **P 23 43 49.8 +0.1**
627A Terlingua Ranc 75.70 61 ⇓P P 23 43 49.9 -0.5
baz=76,SNR=12
MALT Malatya 75.82 313 P **P 23 43 52.9 +2.0**
MALT Malatya 75.82 313⇓ *iP* **P 23 43 51.1 +0.2**
ROTZ Rotzenmuhle 75.92 336 *eP* **P 23 43 51.6 +0.4**
comp=Z,15nm,1.4s,mb4.5
628A Black Gap, Mar 75.96 61 ⇑P P 23 43 51.1 -0.7
baz=76,SNR=5.9
CWF Charnwood Fore 76.11 345 *eP* **P 23 43 51.4 -0.9**
CWF AMb AMB 23 43 52.9
comp=Z,19nm,1.6s,mb4.6
KHC Kasperske Hory 76.12 335 *eP* **P 23 43 51.9 -0.5**
comp=Z,12nm,0.7s,mb4.7
KHC Kasperske Hory 76.12 335 *eP* **P 23 43 52.0 -0.4**
KHC *ex* x 23 43 56.9
GRA1 Grafenberg Arr 76.25 336 *eP* **P 23 43 53.2 +0.1**
comp=Z,23nm,1.0s,mb4.9
GRF Grafenberg Arr 76.25 336 *eP* **P 23 43 53.2 +0.1**
comp=Z,23nm,1.0s,mb4.9
GRF Grafenberg Arr 76.25 336 *eP* **P 23 43 53.2 +0.1**
GRF pmax pmax
comp=Z,23nm,1.0s,mb4.9
WET Wettzell 76.30 335 *eP* **P 23 43 53.6 +0.2**
comp=Z,14nm,1.1s,mb4.6
WET Wettzell 76.30 335 *eP* **P 23 43 53.6 +0.2**
WET pmax pmax
comp=Z,14nm,1.1s,mb4.6
GEC2 GERESS Array S 76.34 334 *eP* **P 23 43 54.0 +0.4**
comp=Z,7.0nm,1.1s,mb4.3
GEC2 GERESS Array S 76.34 334 *eP* **P 23 43 54.0 +0.4**
GEC2 pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
GERES GERESS Array B 76.34 334 P **P 23 43 52.6 -1.0**
GERES pmax pmax
comp=Z,3.0nm,0.6s
GERES GERESS Array B 76.34 334 P **P 23 43 52.6 -1.0**
comp=Z,3.4nm,0.6s,mb4.3,baz=37,slow=5.6,SNR=32
DSB Dublin 76.39 348 *eP* **P 23 43 53.5 -0.4**
comp=Z,12nm,0.7s,mb4.7
TNS Taunus Mts 76.47 338 *eP* **P 23 43 54.2 -0.1**
comp=Z,27nm,1.3s,mb4.8
TNS Taunus Mts 76.47 338 *eP* **P 23 43 54.2 -0.1**
TNS pmax pmax
comp=Z,27nm,1.3s,mb4.8
CONA Conrad Observa 76.54 333 *i P* **P 23 43 56.5 +1.8**
SNR=9.4
HGN Heimansgroeve 76.55 340 *eP* **P 23 43 55.0 +0.2**
comp=Z,14nm,0.9s,mb4.7
MEM Membach 76.68 340 P **P 23 43 55.3 -0.2**
comp=Z,9.6nm,0.9s,mb4.5
BZS Buzias 76.71 328 P **P 23 43 56.6 +0.8**
BZS Buzias 76.71 328⇑ *iP* **P 23 43 55.1 -0.7**
BR131 Keskin Array S 76.89 317 *eP* **P 23 43 56.8 -0.1**
comp=Z,2.1nm,0.5s,mb4.1
BRTR Keskin Array B 76.89 317 P **P 23 43 56.2 -0.7**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 76.89 317 P **P 23 43 56.2 -0.7**
comp=Z,4.0nm,0.7s,mb4.2,baz=67,slow=2.0,SNR=15
JCT Junction City 76.95 58 *eP* **P 23 43 56.4 -0.9**
comp=Z,38nm,1.4s,mb4.9
BCLA Clavier 77.01 340 P **P 23 43 56.9 -0.5**
comp=Z,8.0nm,1.0s,mb4.4
MIAR Mount Ida 77.14 52 *eP* **P 23 43 57.9 -0.5**
ARSA Arzberg 77.25 332 *i P* **P 23 44 00.2 +1.4**
SNR=6.0
SWN1 Swindon 77.37 345 *eP* **P 23 43 58.8 -0.6**
SWN1 AMb AMB 23 44 00.6
comp=Z,98nm,0.8s,mb5.6
GIVF Givet 77.42 340⇑ *iP* **P 23 43 59.8 +0.2**
WOL Wolverton 77.46 344 *eP* **P 23 43 59.5 -0.4**
WOL AMb AMB 23 44 00.5
comp=Z,38nm,0.7s,mb5.2
DOU Dourbes 77.47 340 P **P 23 44 00.2 +0.2**
WLF Walferdange 77.53 339 *eP* **P 23 44 01.9 +1.6**
comp=Z,7.7nm,0.9s,mb4.4
MENF Mencas 77.55 342⇑ *eP* **P 23 44 00.7 +0.3**
BAIF Baives 77.59 341⇑ *iP* **P 23 44 00.9 +0.3**
comp=Z,11nm,0.8s,mb4.4
BAIF Baives 77.59 341⇑ *iP* **P 23 44 00.9 +0.3**
comp=Z,5.7nm,0.8s,mb4.3
RJOB Jochberg 77.60 334 *eP* **P 23 44 01.6 +0.9**
comp=Z,7.0nm,0.9s,mb4.4
STU Stuttgart 77.62 337 *eP* **P 23 44 00.8 0.0**
comp=Z,9.0nm,0.7s,mb4.6
FUR Furstenfeldbru 77.63 336 *eP* **P 23 44 01.0 +0.1**
comp=Z,34nm,1.4s,mb4.9
FUR Furstenfeldbru 77.63 336 *eP* **P 23 44 01.0 +0.1**
FUR pmax pmax
comp=Z,34nm,1.4s,mb4.9
WCI Wyandotte Cave 77.73 44 *eP* **P 23 44 01.1 -0.6**
comp=Z,11nm,0.8s,mb4.6
LANF Langenberg 77.78 338⇑ *eP* **P 23 44 02.0 +0.3**
UMR Umm Al-Rimmam 77.81 301 *eP* **P 23 44 02.1 -0.1**
UMR AMb AMB 23 44 03.0
comp=Z,60nm,0.6s,mb5.5
MIB Mutribah 77.83 302 *eP* **P 23 44 02.1 -0.2**
MIB AMb AMB 23 44 03.2
comp=Z,91nm,0.6s,mb5.7
SOKA Soboth 77.91 333⇑ *iP* **P 23 44 02.6 +0.1**
comp=Z,15nm,0.7s,mb4.8
KBA Koelnbreinsper 78.05 334 *i P* **P 23 44 04.0 +0.8**
SNR=47
KBD Kabd 78.11 301 *eP* **P 23 44 04.2 +0.3**
KBD AMb AMB 23 44 04.9
comp=Z,36nm,0.5s,mb5.4
HEX Exmoor 78.13 346⇑ *eP* **P 23 44 03.6 +0.1**
OBKA Obir 78.21 333 *i P* **P 23 44 05.4 +1.3**
SNR=9.1
BFO Black Forest 78.25 337 *eP* **P 23 44 04.1 -0.2**
comp=Z,8.0nm,1.0s,mb4.4
BFO Black Forest 78.25 337 *eP* **P 23 44 04.1 -0.2**
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
HTL Hartland 78.31 346 *eP* **P 23 44 04.0 -0.5**
HTL AMb AMB 23 44 14.2
comp=Z,24nm,2.2s,mb4.5
QRN Al-Qurain 78.32 301 *eP* **P 23 44 05.0 0.0**
QRN AMb AMB 23 44 06.0
comp=Z,53nm,0.4s,mb5.6
WTTA Wattenberg 78.36 335 *i P* **P 23 44 06.3 +1.4**
SNR=14
MYKA Terra Mystica 78.37 333⇑ *iP* **P 23 44 05.4 +0.4**
comp=Z,11nm,0.8s,mb4.6
RDF Al-Radifah 78.38 301 *eP* **P 23 44 06.1 +0.8**
RDF AMb AMB 23 44 07.2
comp=Z,66nm,0.5s,mb5.6
MOTA Moosalm 78.43 335 *i P* **P 23 44 06.6 +1.3**
SNR=12
CDF Champ du Feu 78.43 338⇑ *iP* **P 23 44 05.7 +0.4**
comp=Z,16nm,0.8s,mb4.5
CDF Champ du Feu 78.43 338⇑ *iP* **P 23 44 05.7 +0.4**
comp=Z,8.2nm,0.8s,mb4.5
DIVS Divibare 78.60 328 P **P 23 44 05.4 -0.9**
ECH Echery 78.64 338⇑ *eP* **P 23 44 06.8 +0.3**
ECH Echery 78.64 338 *eP* **P 23 44 06.2 -0.3**
comp=Z,6.4nm,0.8s,mb4.5
WVT Waverly 78.72 47 *eP* **P 23 44 06.6 -0.4**
comp=Z,3.2nm,0.6s,mb4.3
FELD Feldberg im Sc 78.75 337⇑ *eP* **P 23 44 07.4 +0.3**
NATX Nacogdoches 78.75 54 *eP* **P 23 44 07.5 +0.2**
VTS Vitosha 78.76 325 P **P 23 44 05.7 -1.5**
DYA Yadsworthy 78.76 346 *eP* **P 23 44 06.2 -0.8**
DYA AMb AMB 23 44 07.8
comp=Z,38nm,1.0s,mb5.2

DAVA	Damuels	78.81	336	⇑iP	P	23 44 08.4 +1.0
	comp=Z,20nm,0.8s,mb5.0					
FETA	Feichten	78.83	335	iP	P	23 44 08.6 +1.1
	SNR=8.4					
MEZF	Maizieres J'vi	78.87	340	⇑iP	P	23 44 08.3 +0.6
	comp=Z,21nm,0.6s,mb4.8					
MEZF	Maizieres J'vi	78.87	340	⇑iP	P	23 44 08.3 +0.6
	comp=Z,21nm,0.6s,mb5.2					
THEF	They Montfort	78.92	339	⇑eP	P	23 44 08.3 +0.4
MOF	Molkenrain	78.99	338	⇑eP	P	23 44 08.5 +0.1
HAU	Haudompre	79.04	339	⇑iP	P	23 44 08.8 +0.2
	comp=Z,16nm,0.7s,mb4.7					
HAU	Haudompre	79.04	339	⇑iP	P	23 44 08.8 +0.2
	comp=Z,7.8nm,0.7s,mb4.7					
HINF	Hinteralfeld	79.09	338	⇑iP	P	23 44 08.2 -0.7
	comp=Z,9.3nm,0.8s,mb4.4					
HINF	Hinteralfeld	79.09	338	⇑iP	P	23 44 08.2 -0.7
	comp=Z,4.7nm,0.8s,mb4.4					
ARMA	Armidale	79.50	182	eP	P	23 44 11.4 +0.3
HKT	Hockley	79.54	56	eP	P	23 44 10.9 -0.7
	comp=Z,5.2nm,1.1s,mb4.3					
JSA	Saint Aubin	79.67	344	eP	P	23 44 11.4 -0.6
JSA				AMb	AMB	23 44 12.9
	comp=Z,33nm,0.9s,mb5.2					
FLN	La Foliniere	79.78	343	⇑iP	P	23 44 12.7 +0.1
	comp=Z,54nm,0.9s,mb5.1					
FLN	La Foliniere	79.78	343	⇑iP	P	23 44 12.7 +0.1
	comp=Z,27nm,0.9s,mb5.1					
LDF	La Druitiere	79.87	343	⇑iP	P	23 44 13.2 +0.1
	comp=Z,20nm,0.7s,mb4.7					
LDF	La Druitiere	79.87	343	⇑iP	P	23 44 13.2 +0.1
	comp=Z,9.8nm,0.7s,mb4.8					
VAY	Valandovo	80.10	325	eP	P	23 44 14.2 -0.3
GRR	Gorron	80.21	343	⇑iP	P	23 44 15.3 +0.4
	comp=Z,56nm,0.7s,mb5.2					
GRR				epP	pP	23 44 47.7 +1.9
GRR	Gorron	80.21	343	⇑iP	P	23 44 15.3 +0.4
	comp=Z,28nm,0.7s,mb5.2					
GRR				epP	pP	23 44 47.7 +1.9
LOR	Lormes	80.31	340	⇑iP	P	23 44 15.7 +0.2
	comp=Z,35nm,0.8s,mb4.9					
LOR	Lormes	80.31	340	⇑iP	P	23 44 15.7 +0.2
	comp=Z,18nm,0.8s,mb4.9					
CABF	La Chapelle	80.40	338	⇑iP	P	23 44 16.6 +0.6
	comp=Z,23nm,0.9s,mb4.7					
CABF	La Chapelle	80.40	338	⇑iP	P	23 44 16.6 +0.6
	comp=Z,12nm,0.9s,mb4.7					
KRUS	Krusevo	80.54	326	eP	P	23 44 15.8 -1.1
SSF	Saint Saulge	80.58	340	⇑iP	P	23 44 17.2 +0.3
	comp=Z,19nm,0.9s,mb4.6					
SSF				epP	pP	23 44 49.7 +1.8
SSF	Saint Saulge	80.58	340	⇑iP	P	23 44 17.2 +0.3
	comp=Z,9.6nm,0.9s,mb4.6					
SSF				epP	pP	23 44 49.7 +1.8
SGMF	Saint Gilles	80.64	344	⇑iP	P	23 44 17.7 +0.4
	comp=Z,69nm,0.8s,mb5.2					
SGMF	Saint Gilles	80.64	344	⇑iP	P	23 44 17.7 +0.4
	comp=Z,35nm,0.8s,mb5.2					
ROSF	Rostrenen	80.69	345	⇑iP	P	23 44 18.0 +0.5
	comp=Z,110nm,0.9s,mb5.4					
ROSF	Rostrenen	80.69	345	⇑iP	P	23 44 18.0 +0.5
	comp=Z,55nm,0.9s,mb5.4					
AVF	Avril sur Loir	80.87	340	⇑iP	P	23 44 18.9 +0.4
	comp=Z,33nm,0.7s,mb4.9					
AVF	Avril sur Loir	80.87	340	⇑iP	P	23 44 18.9 +0.4
	comp=Z,16nm,0.7s,mb5.0					
SMF	Signal de Mont	80.90	340	⇑iP	P	23 44 19.0 +0.4
	comp=Z,62nm,0.9s,mb5.2					
SMF	Signal de Mont	80.90	340	⇑iP	P	23 44 19.0 +0.4
	comp=Z,31nm,0.9s,mb5.1					
OHR	Ohrid	80.93	326	eP	P	23 44 17.9 -1.0
CMSA	Cobar Meteorol	80.94	187	eP	P	23 44 18.3 -0.5
QUIF	Quistinic	81.08	345	⇑iP	P	23 44 19.8 +0.2
	comp=Z,41nm,1.1s,mb4.9					
QUIF	Quistinic	81.08	345	⇑iP	P	23 44 19.8 +0.2
	comp=Z,21nm,1.1s,mb4.9					
BGF	Bois d'Agland	81.20	340	⇑iP	P	23 44 20.7 +0.5
	comp=Z,10nm,0.6s,mb4.5					
BGF	Bois d'Agland	81.20	340	⇑iP	P	23 44 20.7 +0.5
	comp=Z,5.1nm,0.6s,mb4.5					
LPL	La Plagne	81.27	337	⇑iP	P	23 44 22.0 +1.4
	comp=Z,49nm,0.8s,mb5.1					
LPL	La Plagne	81.27	337	⇑iP	P	23 44 22.0 +1.4
	comp=Z,24nm,0.8s,mb5.1					
LPG	La Plagne	81.28	337	⇑iP	P	23 44 22.2 +1.5
	comp=Z,56nm,0.9s,mb5.1					
LPG	La Plagne	81.28	337	⇑iP	P	23 44 22.2 +1.5
	comp=Z,28nm,0.9s,mb5.1					
TCF	Toulx Ste Croi	81.60	341	⇑iP	P	23 44 22.9 +0.6
	comp=Z,19nm,0.8s,mb4.7					
TCF	Toulx Ste Croi	81.60	341	⇑iP	P	23 44 22.9 +0.6
	comp=Z,9.6nm,0.8s,mb4.7					
AGO	Saint Agoulin	81.62	340	⇑eP	P	23 44 23.4 +0.9
STKA	Stephens Creek	81.69	191	eP	P	23 44 21.9 -0.9
	comp=Z,3.4nm,1.0s,mb4.1					
STKA	Stephens Creek	81.69	191	P	P	23 44 21.5 -1.3
	comp=Z,3.9nm,0.9s,mb4.2,baz=358,slow=7.1,SNR=8.7					
STKA	Stephens Creek	81.69	191	eP	P	23 44 21.8 -0.9
	comp=Z,1.1nm,1.0s,mb3.6					
BNI	Bardonecchia	81.72	337	eP	P	23 44 24.0 +1.0
	comp=Z,12nm,0.8s,mb4.8					
MFF	Saint Martin d	81.78	342	⇑iP	P	23 44 23.9 +0.6
	comp=Z,24nm,0.7s,mb4.8					
MFF	Saint Martin d	81.78	342	⇑iP	P	23 44 23.9 +0.6
	comp=Z,12nm,0.7s,mb4.8					
PYM	Petit Puy Mans	81.93	340	⇑eP	P	23 44 25.0 +0.9
MBDF	Montbardon	82.00	337	⇑iP	P	23 44 25.1 +0.6
	comp=Z,26nm,0.8s,mb4.8					
MBDF	Montbardon	82.00	337	⇑iP	P	23 44 25.1 +0.6
	comp=Z,13nm,0.8s,mb4.8					
SSB	Saint Sauveur	82.03	339	eP	P	23 44 25.0 +0.4
	comp=Z,15nm,0.7s,mb4.9					
ORIF	Oris-en-Rattie	82.04	338	⇑iP	P	23 44 25.8 +1.1
	comp=Z,42nm,0.7s,mb5.1					
ORIF	Oris-en-Rattie	82.04	338	⇑iP	P	23 44 25.8 +1.1
	comp=Z,21nm,0.7s,mb5.1					
AQU	L'Aquila	82.32	332	eP	P	23 44 27.2 +1.0
	comp=Z,13nm,0.7s,mb4.9					
AQU	L'Aquila	82.32	332	⇑iP	P	23 44 27.1 +0.9
LBL	Lubilhac	82.37	340	⇑eP	P	23 44 27.4 +1.0
VIVF	Saint-Julien-l	82.39	339	⇑iP	P	23 44 27.4 +0.9
	comp=Z,9.6nm,0.7s,mb4.5					
VIVF	Saint-Julien-l	82.39	339	⇑iP	P	23 44 27.4 +0.9
	comp=Z,4.8nm,0.7s,mb4.4					
IGT	Igoumenitsa	82.49	326	P	P	23 44 25.5 -1.6
RJF	Les Rejaudoux	82.68	341	⇑iP	P	23 44 28.7 +0.7
	comp=Z,40nm,0.8s,mb5.0					
RJF	Les Rejaudoux	82.68	341	⇑iP	P	23 44 28.7 +0.7
	comp=Z,20nm,0.8s,mb5.0					
EFP	Efpalio	82.86	324	P	P	23 44 28.4 -0.7
CAF	Calviac	82.92	340	⇑iP	P	23 44 30.4 +1.1
	comp=Z,61nm,0.9s,mb5.1					
CAF	Calviac	82.92	340	⇑iP	P	23 44 30.4 +1.1
	comp=Z,30nm,0.9s,mb5.1					
SMRF	Simiane la Rot	83.00	338	⇑iP	P	23 44 31.0 +1.3
	comp=Z,43nm,1.0s,mb4.9					
SMRF	Simiane la Rot	83.00	338	⇑iP	P	23 44 31.0 +1.3
	comp=Z,43nm,1.0s,mb5.2					
FRF	La Foret Royal	83.12	337	⇑iP	P	23 44 30.9 +0.6
	comp=Z,7.3nm,0.6s,mb4.4					
FRF	La Foret Royal	83.12	337	⇑iP	P	23 44 30.9 +0.6
	comp=Z,3.7nm,0.6s,mb4.4					
GUR	Goura	83.12	324	P	P	23 44 28.2 -2.2
FORT	Forrest	83.14	202	eP	P	23 44 30.0 -0.3
	comp=Z,33nm,0.6s,mb5.3					
FORT	Forrest	83.14	202	eP	P	23 44 29.7 -0.6
	comp=Z,33nm,0.6s,mb5.3					
FORT				epP	pP	23 45 00.7 -0.7
DID	Didima	83.15	323	P	P	23 44 27.9 -2.7
LFF	La Frestale	83.19	341	⇑iP	P	23 44 31.4 +0.7
	comp=Z,89nm,1.0s,mb5.2					
LFF				epP	pP	23 45 06.1 +4.3
LFF	La Frestale	83.19	341	⇑iP	P	23 44 31.4 +0.7
	comp=Z,45nm,1.0s,mb5.2					
LFF				epP	pP	23 45 06.1 +4.3
LHS	Liberty Hill	83.31	43	eP	P	23 44 34.8 +3.3
LASF	Ste Croix	83.32	339	⇑iP	P	23 44 31.6 +0.3
	comp=Z,42nm,1.2s,mb4.8					
LMR	La Mourre	83.37	337	⇑iP	P	23 44 32.1 +0.5
	comp=Z,61nm,0.9s,mb5.1					
LMR	La Mourre	83.37	337	⇑iP	P	23 44 32.1 +0.5
	comp=Z,30nm,0.9s,mb5.1					
YNG	Young	83.50	185	eP	P	23 44 31.3 -0.7
	comp=Z,3.2nm,0.7s,mb4.3					
VLS	Valsamata	83.58	325	P	P	23 44 31.8 -1.0
VLX	Vlachokerasia	83.60	323	P	P	23 44 31.5 -1.4
ITM	Ithomi	83.94	323	P	P	23 44 32.2 -2.4
ZKR	Zakros	83.98	319	P	P	23 44 32.4 -2.5
TIP	Timpagrande	84.08	328	eP	P	23 44 35.2 -0.1
	comp=Z,22nm,0.8s,mb5.0					
LAST	Lasithi	84.25	320	P	P	23 44 35.3 -0.9
MTLF	Montolieu	84.40	340	⇑iP	P	23 44 37.3 +0.5
	comp=Z,14nm,0.8s,mb4.6					
MTLF				epP	pP	23 45 11.6 +3.6
MTLF	Montolieu	84.40	340	⇑iP	P	23 44 37.3 +0.5
	comp=Z,6.9nm,0.8s,mb4.5					
MTLF				epP	pP	23 45 11.6 +3.6
SIVA	Sivas	84.66	320	P	P	23 44 36.2 -2.1
EPF	Esparros	85.10	341	⇑iP	P	23 44 39.8 -0.6
	comp=Z,15nm,0.6s,mb4.8					
EPF	Esparros	85.10	341	⇑iP	P	23 44 39.8 -0.6
	comp=Z,7.5nm,0.6s,mb4.8					
GVD	Gavdhos	85.11	321	eP	P	23 44 39.3 -1.3
	comp=Z,36nm,0.8s,mb5.3					
SJPF	Ste Jean	85.35	342	⇑iP	P	23 44 41.8 +0.2
	comp=Z,14nm,0.9s,mb4.6					
SJPF	Ste Jean	85.35	342	⇑iP	P	23 44 41.8 +0.2
	comp=Z,7.1nm,0.9s,mb4.6					
ETSF	Etsaut	85.42	342	⇑iP	P	23 44 42.2 +0.3
	comp=Z,16nm,0.7s,mb4.8					
ETSF	Etsaut	85.42	342	⇑iP	P	23 44 42.2 +0.3
	comp=Z,8.1nm,0.7s,mb4.8					
TOO	Toolangi	86.94	187	eP	P	23 44 48.9 -0.2
PBRG	Braganca	87.61	346	eP	P	23 44 51.9 -0.7
	comp=Z,23nm,1.9s,mb4.9					
PVRL	Vila Real	88.28	346	eP	P	23 44 55.3 -0.5
	comp=Z,18nm,1.5s,mb4.9					
MVO	Moncorvo	88.28	346	eP	P	23 44 55.5 -0.3
	comp=Z,17nm,1.5s,mb4.8					
PVIS	Viseu	88.86	346	eP	P	23 45 01.7 +3.2
	comp=Z,26nm,1.6s,mb5.0					
ESDC	Sonseca Array	89.20	343	P	P	23 44 59.4 -0.8
	comp=Z,6.5nm,0.7s,mb4.8,baz=5.2,slow=3.9,SNR=26					
KEST	Kesra	89.64	332	P	P	23 45 02.7 +0.4
	comp=Z,7.0nm,0.6s,mb5.0,baz=278,slow=1.4,SNR=45					
PCBR	Castelo Branco	89.65	346	eP	P	23 45 01.7 -0.6
	comp=Z,20nm,1.8s,mb5.0					
EVO	Evora	91.01	346	eP	P	23 45 11.0 +2.4
PVAQ	Vaqueiros	92.07	346	eP	P	23 45 13.3 -0.2
	comp=Z,28nm,1.6s,mb5.2					
TORD	Torodi Ar. Bea	113.12	331	PKiKP	PKiKP	23 50 41.1 -0.4
	comp=Z,0.4nm,0.5s,baz=19,slow=1.4,SNR=6.4					
TORD				PP	PP	23 51 28.4 -3.3
	comp=Z,2.5nm,1.2s,baz=2.3,slow=7.4,SNR=4.3					
TORD				PKKPbc	PKKPbc	00 01 32.6 +7.0
	comp=Z,0.7nm,0.8s,baz=211,slow=2.3,SNR=3.5					
DBIC	Dimbokro	121.20	335	PKIKP	PKPdf	23 50 55.8 -1.3
DBIC				pmax	pmax	
	comp=Z,3.0nm,0.8s					
DBIC	Dimbokro	121.20	335	PKP	PKPdf	23 50 55.8 -1.3
	comp=Z,3.3nm,0.8s,baz=86,slow=7.1,SNR=5.4					
BOSA	Boshof	136.13	279	ePKPdf	PKPdf	23 51 24.6 -0.3
CPUP	Villa Florida	146.53	58	PKPbc	PKPbc	23 51 43.8 -1.5
	comp=Z,1.7nm,0.5s,baz=334,slow=2.9,SNR=10					
CPUP				pPKPbc	pPKPbc	23 52 15.7 -2.1
	comp=Z,1.2nm,0.5s,baz=343,slow=3.5,SNR=2.8					
CPUP	Villa Florida	146.53	58	ePKPbc	PKPbc	23 51 44.5 -0.8
PLCA	Paso Flores	147.71	92	PKPbc	PKPbc	23 51 47.2 -0.8
	comp=Z,8.8nm,0.8s,baz=277,slow=4.0,SNR=18					
PLCA				pPKPbc	pPKPbc	23 52 19.6 -1.1
	comp=Z,3.1nm,0.7s,baz=274,slow=4.3,SNR=2.6					
PLCA	Paso Flores	147.71	92	ePKPbc	PKPbc	23 51 47.6 -0.5
TRQA	Tornquist	151.83	80	ePKPbc	PKPbc	23 51 57.1 -1.1

NEIC ***09*** *23:39:50.7±4.8, 23°.74N×122°.40E, h10km, Error ellipse: s-maj=55.1km s-min=16.3km az=86.0*
ISCJB ***09*** *23:39:59.7±0.3, 23°.88N±0°.02×121°.84E±0°.02, h40km±7km, Error ellipse: s-maj=3.3km s-min=2.2km az=42.0*
TAP ***09*** *23:39:59.2, 23°.89N×121°.81E, h42km±1km, ML3.5, C*
JMA ***09*** *23:39:59.8±0.2, 24°.05N×121°.83E, h83km, M2.8*

ISC 09 23:40:00.2±0.3, 23°.89N±0°.02×121°.83E±0°.02, h38km±7km, n62, g0°93/112, 3C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.22	295	eP	Pn	23 40 07.7	+0.2
	baz=294						
HWA				eS	Sn	23 40 13.7	+1.2
	baz=294						
TWD	Chiawan	0.29	313	iP	Pn	23 40 07.9	-0.2
	baz=314						
TWD				S	Sn	23 40 14.2	+0.5
	baz=314						
NACB	Ninganchiao	0.36	324	ePg	Pn	23 40 08.0	-1.0
NACB				eSg	Sn	23 40 15.3	+0.2
ESL	Shilin	0.36	259	P	Pn	23 40 08.6	-0.5
	baz=256						
ESL				S	Sn	23 40 15.0	-0.3
	baz=256						
ENA	Nanau	0.55	352	P	Pn	23 40 10.9	-0.6
	baz=353						
ENA				S	Sn	23 40 19.4	-0.1
	baz=353						
WHF	Hehuan Shan	0.57	297	⇑iP	Pn	23 40 11.2	-0.7
	baz=296						
WHF				eS	Sn	23 40 19.5	-0.6
	baz=296						
EHY	Hungye	0.59	231	⇓iP	Pn	23 40 10.9	-1.2
	baz=229						
EHY				eS	Sn	23 40 19.3	-1.3
	baz=229						
YULB	Yu-li	0.69	225	ePn	Pn	23 40 11.6	-1.8
NNS	Nan Shan	0.69	323	⇑iP	Pn	23 40 12.7	-0.7
	baz=324						
NNS				S	Sn	23 40 22.8	-0.2
	baz=324						
TWT	Tachien	0.70	302	P	Pn	23 40 13.2	-0.4
	baz=300						
TWT				eS	Sn	23 40 22.6	-0.5
	baz=300						
TWF1	Yuli	0.72	223	eP	Pn	23 40 12.6	-1.2
	baz=220						
TWC	Suao	0.72	2	P	Pn	23 40 13.8	-0.2
	baz=3.0						
TWC				S	Sn	23 40 24.2	+0.4
	baz=3.0						
SSLB	Suanglung	0.80	263	ePn	Pn	23 40 13.6	-1.4
SSLB				eSn	Sn	23 40 24.1	-1.7
TWE	Neicheng	0.84	350	P	Pn	23 40 15.2	-0.4
	baz=351						
TWE				eS	Sn	23 40 26.6	-0.2
	baz=351						
SMLT	Sun Moon Lake	0.85	270	eP	Pn	23 40 15.1	-0.5
	baz=269						
SMLT				eS	Sn	23 40 25.9	-0.9
	baz=269						
YHNB	Yeheng	0.88	332	ePn	Pn	23 40 15.2	-0.9
YHNB				eSn	Sn	23 40 27.1	-0.6
TYC	Yuchr	0.89	271	eP	Pn	23 40 15.6	-0.5
	baz=270						
TYC				eS	Sn	23 40 27.0	-0.8
	baz=270						
CHKT	Chengkung	0.89	208	eP	Pn	23 40 15.0	-1.2
	baz=207						
CHKT				eS	Sn	23 40 26.6	-1.2
	baz=207						
YUS	Yu-Shan	0.89	244	iP	Pn	23 40 16.1	-0.1
	baz=242						
YUS				S	Sn	23 40 28.0	+0.1
	baz=242						
NSK	Sanguang	0.90	332	⇑iP	Pn	23 40 15.7	-0.6
	baz=332						
NSK				eS	Sn	23 40 27.1	-1.0
	baz=332						
ALS	Alishan	1.01	248	eP	Pn	23 40 17.8	-0.1
	baz=247						
ALS				eS	Sn	23 40 32.1	+1.4
	baz=247						
ELDTW	Lidau	1.01	227	eP	Pn	23 40 16.6	-1.3
	baz=225						
ELDTW				eS	Sn	23 40 29.4	-1.5
	baz=225						
WNT	Mingjian	1.04	270	eP	Pn	23 40 18.6	+0.3
	baz=269						
WNT				eS	Sn	23 40 32.2	+0.5
	baz=269						
NSTT	Nanjuang	1.06	315	P	Pn	23 40 18.7	+0.2
	baz=315						
NSTT				eS	Sn	23 40 31.9	-0.2
	baz=315						
TWQ1	Liyutan	1.07	296	eP	Pn	23 40 18.5	-0.2
	baz=295						
TWQ1				S	Sn	23 40 32.4	+0.2
	baz=295						
TCU	Taichung	1.08	284	eP	Pn	23 40 19.3	+0.4
	baz=283						
TCU				eS	Sn	23 40 33.4	+0.7
	baz=283						
CHN5	Tsauling	1.09	255	eP	Pn	23 40 18.6	-0.3
	baz=254						
CHN5				S	Sn	23 40 34.1	+1.3
	baz=254						
NSY	Sanyi	1.11	299	eP	Pn	23 40 19.2	0.0
	baz=298						
NSY				eS	Sn	23 40 33.8	+0.6
	baz=298						
TWA	Mucha	1.11	349	eP	Pn	23 40 18.7	-0.6
	baz=349						
TWA				eS	Sn	23 40 33.4	0.0
	baz=349						
TWB1	Santiao Chiao	1.13	8	eP	Pn	23 40 19.3	-0.2
	baz=8.0						
TWB1				eS	Sn	23 40 33.9	+0.1
	baz=8.0						
WGK	Gukeng	1.17	261	eP	Pn	23 40 21.0	+0.9
	baz=259						
WGK				eS	Sn	23 40 36.6	+1.7
	baz=259						
NWF	Wu-fen Shan	1.18	358	eP	Pn	23 40 20.8	+0.6
	baz=358						
NWF				S	Sn	23 40 36.0	+0.9
	baz=358						
TAP1	Taipei	1.18	347	eS	Sn	23 40 35.3	+0.2
	baz=346						
HSN	Hsinchu	1.20	320	eS	Sn	23 40 37.0	+1.4
	baz=321						
STYT	Tauyuan	1.22	234	eP	Pn	23 40 20.6	-0.1
	baz=232						
STYT				eS	Sn	23 40 36.2	+0.3
	baz=232						
YOJ	Yonaguni jima	1.23	62	P	Pn	23 40 21.1	+0.3
YOJ				eS	Sn	23 40 36.8	+0.6
NCU	National Centr	1.23	332	eS	Sn	23 40 36.4	+0.1
	baz=332						
TPUB	Ta-pu	1.24	242	ePn	Pn	23 40 20.5	-0.5
TPUB				eSn	Sn	23 40 37.2	+0.6
CHN4	Tsaushan	1.25	245	eP	Pn	23 40 21.5	+0.4
	baz=244						
CHN4				eS	Sn	23 40 37.7	+1.0
	baz=244						
TWG	Pinlang	1.27	213	ePn	Pn	23 40 18.7	-2.7
TWG				eSn	Sn	23 40 33.3	-3.9
TWG	Pinlang	1.27	213	eP	Pn	23 40 19.4	-2.0
	baz=212						
TWG				eS	Sn	23 40 35.6	-1.5
	baz=212						
TWS1	Kuangyinshan	1.27	343	eP	Pn	23 40 21.4	+0.1
	baz=343						
TWS1				eS	Sn	23 40 37.2	0.0
	baz=343						
WTP	Ta-pu	1.28	240	eP	Pn	23 40 21.7	+0.1
	baz=239						
WTP				eS	Sn	23 40 38.7	+1.2
	baz=239						
CHN2	Minshiung	1.29	254	eS	Sn	23 40 39.7	+2.0
	baz=253						
CHY	Chiayi	1.34	254	eS	Sn	23 40 39.8	+0.8
	baz=252						
TWK	Hsinying	1.37	244	eP	Pn	23 40 23.3	+0.5
	baz=242						
TWK				eS	Sn	23 40 40.5	+0.8
	baz=242						
CHN1	Nanshi	1.38	240	eP	Pn	23 40 23.2	+0.2
	baz=239						
CHN1				eS	Sn	23 40 41.0	+1.1
	baz=239						
SGST	Jiashian	1.39	235	eP	Pn	23 40 23.5	+0.4
	baz=234						
SGST				eS	Sn	23 40 42.0	+1.7
	baz=234						
WTCT	Ta-ch'eng	1.41	269	eS	Sn	23 40 41.8	+1.0
	baz=268						
ECL	Taimali	1.51	212	eP	Pn	23 40 22.5	-2.2
	baz=211						
ECL				eS	Sn	23 40 41.9	-1.3
	baz=211						
SSD	Sandimen	1.58	224	eP	Pn	23 40 25.7	0.0
	baz=223						
SSD				eS	Sn	23 40 46.6	+1.7
	baz=223						
SCLT	Jiali	1.66	245	eS	Sn	23 40 48.2	+1.4
	baz=244						
TWM1	Shoushan	1.67	231	eP	Pn	23 40 28.6	+1.7
	baz=230						
EAST	Anshuo	1.74	211	eP	Pn	23 40 26.2	-1.8
	baz=210						
EAST				eS	Sn	23 40 51.7	+2.7
	baz=210						
IRIF	Iriomote-Funau	1.80	75	P	Pn	23 40 28.9	+0.2
IRIF				eS	Sn	23 40 51.1	+0.8
HATJ	Hateruma jima	1.82	84	eS	Sn	23 40 51.6	+0.8
LAY	Lan-yu	1.85	188	eP	Pn	23 40 29.2	-0.3
	baz=187						
SCZT	Fangliau	1.87	217	eP	Pn	23 40 29.9	+0.2
	baz=215						
SCZT				eS	Sn	23 40 54.0	+1.9
	baz=215						
JKRS	Kuro-shima	2.03	80	P	Pn	23 40 32.4	+0.6
JKRS				eS	Sn	23 40 57.5	+1.5
PNG	Penghu	2.10	262	eP	Pn	23 40 31.8	-1.1
	baz=261						
PNG				eS	Sn	23 40 55.9	-1.9
	baz=261						
JIJ	Ishigaki jima	2.17	77	P	Pn	23 40 33.6	-0.2
JIJ				eS	Sn	23 40 59.5	0.0
JTJ	Tarama	2.73	73	P	Pn	23 40 41.6	+0.1
JTJ				eS	Sn	23 41 13.7	+0.4

ISCJB ***10*** *00:00:01.1±0.7, 37°.75N±0°.04×37°.24E±0°.04, h7km±6km, Error ellipse: s-maj=8.1km s-min=4.2km az=143.4*
ISK ***10*** *00:00:01.0, 37°.67N×37°.27E, h7km, MD3.1*
CSEM ***10*** *00:00:01.1±0.2, 37°.75N×37°.25E, h5km, MD3.1, Error ellipse: s-maj=4.2km s-min=2.7km az=134.0*
DDA ***10*** *00:00:01.1, 37°.72N×37°.31E, h10km±1km, Md3.1*

ISC 10 00:00:01.6±0.6, 37°.73N±0°.04×37°.24E±0°.04, h9km±6km, n21, g0°82/32, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.35	230	ePG	Pg	00 00 08.5	-0.1
KMRS				eSG	Sg	00 00 13.3	+0.1
KMRS	Kahramanmaras	0.35	230	ePg	Pg	00 00 08.5	0

λ91.00000°. NP2:φs197.00000°, δ18.00000°, λ87.00000°.
BJI **10** 00:00:48.6, 41.38N×142.71E, h52km, mB5.1/28, mb4.9/48, Ms4.4/33, Ms7 4.3/30
MOS **10** 00:00:50.8±0.9, 41.47N×142.00E, h40km, mb5.1/84, Error ellipse: s-maj=7.7km s-min=4.2km az=108.2
ISCJB **10** 00:00:53.7±0.1, 41.46N±0.02×142.06E±0.02, h66km, mb4.7/200, Error ellipse: s-maj=3.1km s-min=2.2km az=137.9
IDC **10** 00:00:53.8±1.7, 41.42N×142.07E, h56km±15km, mb4.4/26, mb1 4.5/29, mb1mx4.5/31, mbtmp4.4/29, MS4.1/5, Ms1 4.1/5, ms1mx3.7/32, Error ellipse: s-maj=14.0km s-min=9.0km az=103.0
JMA **10** 00:00:53.9±0.1, 41.46N×142.08E, h62km±2km, M4.8 Broadband fault plane solution: P waves. NP1: φs202.00000°, δ14.00000°, λ90.00000°. NP2:φs22.00000°, δ76.00000°, λ90.00000°. Principal axes: T Plg59.0000°, Azm292.0000°; N Plg0.0000°, Azm22.0000°; P Plg31.0000°, Azm112.0000°;
JMA Felt III J1.
NEIC **10** 00:00:55.5±0.1, 41.46N×141.98E, mb4.9/118, MW4.9(NIED) Error ellipse: s-maj=3.8km s-min=2.8km az=146.0
NEIC Felt [III] at Misawa, Honshu. Recorded [3 JMA] in Aomori and [2 JMA] in Iwate. Also recorded [2 JMA] in southwestern and south-central Hokkaido.
SZGRF **10** 00:01:00.9, 42.40N×141.81E, h76km, mb4.8, Hokkaido, Japan, region
ISC 10 00:00:55.6±0.1, 41.47N±0.02×142.03E±0.03, h68km, h68km±1.2km:pP-P, n478, σ0.93/510, mb4.7/200, 69C-24D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
JOT	**Ohata**	**0.74**	**263**	⇓P		**Pn**	**00 01 09.3**	**-1.5**
JOT				eS		**Sn**	**00 01 20.8**	**-1.3**
JKB	**Kayabe**	**0.85**	**299**	⇓P		**Pn**	**00 01 10.5**	**-1.6**
JKB				eS		**Sn**	**00 01 23.4**	**-1.0**
JNBK	**Urakawa-nobuka**	**0.97**	**34**	⇓P		**Pn**	**00 01 11.2**	**-2.4**
JNBK				eS		**Sn**	**00 01 25.5**	**-1.4**
JTM	**Tenmabayashi**	**1.00**	**227**	⇓P		**Pn**	**00 01 12.6**	**-1.3**
JTM				eS		**Sn**	**00 01 25.9**	**-1.7**
JEM	**Erimo**	**1.00**	**57**	P		**Pn**	**00 01 11.6**	**-2.4**
JEM				eS		**Sn**	**00 01 25.4**	**-2.3**
JANG	**Nango**	**1.17**	**200**	⇓P		**Pn**	**00 01 14.0**	**-2.1**
JANG				eS		**Sn**	**00 01 28.7**	**-2.6**
JSR	**Shiriuchi**	**1.21**	**273**	⇓P		**Pn**	**00 01 15.7**	**-0.9**
JNB	**Noboribetsu**	**1.24**	**324**	⇓P		**Pn**	**00 01 15.3**	**-1.7**
JNB				eS		**Sn**	**00 01 32.6**	**-0.5**
JBT2	**Biratori 2**	**1.33**	**11**	⇓P		**Pn**	**00 01 16.9**	**-1.3**
JBT2				eS		**Sn**	**00 01 35.0**	**-0.1**
JYM2	**Yakumo 2**	**1.40**	**298**	⇓P		**Pn**	**00 01 18.6**	**-0.5**
JYM2				eS		**Sn**	**00 01 37.2**	**+0.4**
JEW	**Eniwo**	**1.43**	**343**	⇓P		**Pn**	**00 01 18.6**	**-0.9**
JEW				eS		**Sn**	**00 01 37.0**	**-0.6**
JCH	**Churui**	**1.51**	**41**	P		**Pn**	**00 01 19.3**	**-1.3**
JCH				eS		**Sn**	**00 01 38.1**	**-1.4**
JAH	**Hinai**	**1.66**	**220**	⇓P		**Pn**	**00 01 21.6**	**-1.0**
JFR	**Furan**	**1.74**	**14**	⇓P		**Pn**	**00 01 22.4**	**-1.2**
JOSM	**Okushiri--Mats**	**2.01**	**289**	P		**Pn**	**00 01 25.9**	**-1.3**
JOM	**Ohasama**	**2.08**	**196**	P		**Pn**	**00 01 26.6**	**-1.6**
JOM				eS		**Sn**	**00 01 52.8**	**-0.2**
ASAJ	**Asahikawa**	**2.67**	**9**	P		**Pn**	**00 01 36.1**	**-0.2**
ASAJ				S		**Sn**	**00 02 07.2**	**-0.3**
ASAJ				pmax		pmax		
	comp=Z,129nm,0.3s							
ASAJ				smax				
	comp=N,52nm,0.3s							
ASAJ	**Asahikawa**	**2.67**	**9**	P		**Pn**	**00 01 36.1**	**-0.2**
	comp=N,129nm,0.3s,baz=224,slow=11,SNR=126							
ASAJ				S		**Sn**	**00 02 07.2**	**-0.4**
	comp=N,52nm,0.3s,baz=60,slow=19,SNR=6.2							
YUK	**Yuzh-Kuril'sk**	**3.81**	**46**	*i* P		**Pn**	**00 01 49.0**	**-2.7**
YUK				*i* S		**Sn**	**00 02 29.5**	**-5.7**
YUK				pmax		pmax		
	comp=Z,530nm,0.4s							
YUK				pmax		pmax		
	comp=E,440nm,0.8s							
YUK				pmax		pmax		
	comp=Z,3μm,2.0s							
YUK				pmax		pmax		
	comp=E,2μm,1.4s							
YUK				pmax		pmax		
	comp=N,2μm,1.6s							
YUK				smax				
	comp=E,11μm,0.5s							
YUK				smax				
	comp=N,8μm,0.6s							
YUK				smax				
	comp=N,7μm,0.5s							
YUK				smax				
	comp=E,8μm,0.5s							
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	⇑*i*P		**Pn**	**00 02 14.8**	**-0.1**
YSS				eS		**Sn**	**00 03 17.2**	**+0.5**
YSS				pmax		pmax		
	comp=Z,70nm,1.1s							
YSS				smax				
	comp=N,70nm,0.9s							
YSS				MLR		MLR		
	comp=Z,1μm,18.0s							
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	*e*Pn		**Pn**	**00 02 15.1**	**+0.2**
KUR	**Kuril'sk**	**5.68**	**47**	*e*P		**Pn**	**00 02 15.0**	**-2.2**
KUR				eS		**Sn**	**00 03 17.0**	**-4.0**
KUR				pmax		pmax		
	comp=N,240nm,0.9s							
KUR				pmax		pmax		
	comp=E,180nm,0.9s							
KUR				pmax		pmax		
	comp=Z,740nm,0.9s							
KUR				smax				
	comp=N,3μm,2.4s							
KUR				smax				
	comp=E,3μm,2.4s							
KUR				smax				
	comp=N,800nm,0.8s							
KUR				smax				
	comp=E,520nm,0.8s							
MAJO	**Matsushiro**	**5.75**	**212**	*e*P		**Pn**	**00 02 19.4**	**+1.1**
MAT	**Matsushiro**	**5.75**	**212**	P		**Pn**	**00 02 18.9**	**+0.6**
MAT				eS		**Sn**	**00 03 23.7**	**+0.8**
MJAR	**Matsushiro Arr**	**5.75**	**212**	P		**Pn**	**00 02 19.2**	**+0.9**
	comp=E,8.3nm,0.3s,baz=322,slow=18,SNR=41							
MJAR				LR		LR	00 04 55.7	
	comp=E,1μm,20.8s,baz=20,slow=42							
MJAR	**Matsushiro Arr**	**5.75**	**212**	P		**Pn**	**00 02 19.2**	**+0.9**
MJAR				LR		LR	00 04 55.6	
UGL	**Uglegorsk**	**7.61**	**0**	P		Px	00 02 56.5	
UGL				pmax		pmax		
	comp=Z,41nm,0.7s							
UGL				MLR		MLR		
	comp=N,500nm,20.0s							
UGL				MLR		MLR		
	comp=E,2μm,20.0s							
VLA	**Vladivostok**	**7.69**	**286**	*e*P		**Pn**	**00 02 45.5**	**+0.7**
VLA				eS		**Sn**	**00 04 07.5**	**-2.9**
VLA				pmax		pmax		
	comp=Z,37nm,0.5s							
VLA				MLR		MLR		
	comp=Z,1μm,15.3s							
JHJ	**Hachijo jima 2**	**8.53**	**193**	P		**Pn**	**00 02 53.5**	**-2.8**
	comp=Z,20nm,0.3s,baz=37,slow=16,SNR=2.8							
JHJ				S		**Sn**	**00 04 26.1**	**-4.9**
	comp=Z,24nm,0.3s,baz=70,slow=16,SNR=2.7							
HABR	**Khabarovsk**	**8.57**	**327**	*ce*P		**Pn**	**00 02 57.9**	**+1.2**
HABR				eS		**Sn**	**00 04 31.9**	**+0.2**
HABR				pmax		pmax		
	comp=E,26nm,1.6s							
HABR				pmax		pmax		
	comp=Z,59nm,1.7s							
HABR				pmax		pmax		
	comp=N,28nm,1.6s							
HABR				MLR		MLR		
	comp=Z,749nm,13.0s							
MDJ	**Mudanjiang**	**9.63**	**293**	P		**Pn**	**00 03 13.7**	**+2.4**
MDJ				sP			00 03 33.7	
MDJ				S		**Sn**	**00 04 59.4**	**+1.6**
MDJ				ScP		ScP	00 12 43.8	-3.7
MDJ				PcS		PcS	00 12 54.4	-0.3
MDJ				pmax		pmax		
	comp=Z,43nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,240nm,13.8s							
MDJ				LR		LR		
	comp=N,640nm,20.7s							
MDJ				LR		LR		
	comp=E,1μm,20.7s							
MDJ				LR		LR		
	comp=Z,1μm,19.4s							
KLR	**Kul'dur**	**10.60**	**321**	*e*P		**Pn**	**00 03 21.8**	**-2.6**
KSRS	**Korea Array**	**11.62**	**254**	P		**Pn**	**00 03 41.6**	**+3.2**
KSRS				S		**Sn**	**00 05 50.8**	**+4.5**
KSRS				pmax		pmax		
	comp=Z,12nm,0.3s							
KSRS				smax				
	comp=N,3.0nm,0.3s							
KSRS				MLR		MLR		
	comp=Z,863nm,18.7s							
KSRS	**Korea Array**	**11.62**	**254**	P		**Pn**	**00 03 41.6**	**+3.2**
	comp=Z,12nm,0.3s,baz=64,slow=14,SNR=73							
KSRS				S		**Sn**	**00 05 50.8**	**+4.5**
	comp=Z,2.8nm,0.3s,baz=67,slow=24,SNR=17							
KSRS				LR		LR	00 07 52.9	
	comp=Z,863nm,18.7s,baz=13,slow=36							
CN2	**Changchun**	**12.43**	**286**	*e*P		**Pn**	**00 03 51.8**	**+2.3**
CN2				*ep*P			00 04 01.1	
CN2				*es*P			00 04 10.3	
CN2				*e*S		**Sn**	**00 06 09.1**	**+3.0**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,600nm,17.0s							
CN2				LR		LR		
	comp=E,900nm,17.0s							
CN2				LR		LR		
	comp=Z,1μm,17.0s							
SNY	**Shenyang**	**13.81**	**278**	P		**Pn**	**00 04 15.2**	**+7.3**
SNY				S		Sn	00 07 09.7	+30
SNY				pmax		pmax		
	comp=Z,19nm,1.5s							
SNY				LR		LR		
	comp=N,490nm,12.3s							
SNY				LR		LR		
	comp=E,550nm,17.1s							
SNY				LR		LR		
	comp=Z,760nm,14.7s							
CBIJ	**Chichi jima**	**14.34**	**179**	P		**Pn**	**00 04 10.1**	**-5.0**
	comp=Z,6.0nm,0.3s,baz=49,slow=19,SNR=3.1							
CBIJ				LR		LR	00 09 38.1	
	comp=Z,613nm,18.2s,baz=83,slow=37							
PEA0B	**Petropavlovsk-**	**15.72**	**37**	*e*Pn		**Pn**	**00 04 29.3**	**-3.3**
PETK	**Petropavlovsk-**	**15.72**	**37**	P		**Pn**	**00 04 28.9**	**-3.6**
	comp=Z,0.5nm,0.3s,baz=216,slow=7.9,SNR=10							
DL2	**Dalian**	**15.80**	**267**	P		**Pn**	**00 04 35.8**	**+2.1**
DL2				pmax		pmax		
	comp=Z,20nm,0.8s							
JOW	**Kunigami**	**18.48**	**222**	P		**Pn**	**00 05 05.5**	**-1.3**
	comp=Z,4.9nm,0.3s,baz=41,slow=11,SNR=3.9							
JOW				LR		LR	00 12 38.8	
	comp=Z,660nm,20.2s,baz=206,slow=38							
CLNS	**Chul'man**	**18.94**	**330**	*e*P		**Pn**	**00 05 11.3**	**-0.8**
CLNS				*e*S		**S**	**00 08 41.1**	**-1.0**
CLNS				pmax		pmax		
	comp=Z,20nm,0.8s							
CLNS				pmax		pmax		
	comp=N,11nm,0.8s							
CLNS				pmax		pmax		
	comp=E,6.0nm,0.8s							
CLNS				smax				
	comp=N,184nm,13.2s							
CLNS				smax				
	comp=E,224nm,13.1s							
BJI	**Beijing**	**19.62**	**274**	P		**Pn**	**00 05 17.9**	**-2.4**
BJI				S		**S**	**00 08 53.2**	**-2.8**
BJI				pmax		pmax		
	comp=Z,72nm,0.8s							
BJI				pmax		pmax		
	comp=Z,120nm,4.5s							
BJI				LR		LR		
	comp=N,830nm,16.6s							
BJI				LR		LR		
	comp=E,650nm,26.0s							
BJI				LR		LR		
	comp=Z,1μm,30.8s							
BJT	**Baijiatuau**	**19.63**	**274**	*e*P		**Pn**	**00 05 17.7**	**-2.7**
BJT				pmax		pmax		
	comp=Z,32nm,0.4s							
BJT	**Baijiatuau**	**19.63**	**274**	*e*P		**Pn**	**00 05 17.7**	**-2.7**
	comp=Z,32nm,0.4s							
NJ2	**Nanjing**	**20.76**	**251**	*e*P		**P**	**00 05 34.4**	**+3.7**
NJ2				LR		LR		
	comp=N,1μm,32.3s							
NJ2				LR		LR		
	comp=E,5μm,21.9s							
NJ2				LR		LR		
	comp=Z,1μm,25.5s							
YAK	**Yakutsk**	**21.89**	**344**	*e*P		**P**	**00 05 38.2**	**-4.3**
YAK				*e**PP			00 05 56.6	
YAK				*e*S		**S**	**00 09 31.1**	**-9.0**
YAK				*e*			00 09 36.2	
YAK				pmax		pmax		
	comp=E,5.0nm,1.0s							
YAK				pmax		pmax		
	comp=Z,25nm,0.9s,mb4.5							
YAK				pmax		pmax		
	comp=N,12nm,1.2s							
YAK				smax				
	comp=N,167nm,2.4s							
YAK				smax				
	comp=E,63nm,2.2s							
YAK	**Yakutsk**	**21.89**	**344**	*e*P		**P**	**00 05 38.8**	**-3.7**
	comp=E,36nm,0.6s,mb4.9							
SEY	**Seymchan**	**22.35**	**12**	*c i*P		**P**	**00 05 44.7**	**-2.7**
HHC	**Hu-ho-hao-te**	**22.89**	**279**	*e*P		**P**	**00 05 52.7**	**-0.7**
HHC				pP			00 06 07.0	
HHC				sP		sP	00 06 14.6	-1.9
HHC				PP			00 06 24.2	
HHC				S		**S**	**00 09 53.8**	**-4.0**
HHC				sS		sS	00 10 17.5	-6.6
HHC				ScP		ScP	00 13 16.5	+3.2
HHC				PcS		PcS	00 13 21.4	+0.9
HHC				pmax		pmax		
	comp=Z,20nm,1.0s,mb4.4							
HHC				pmax		pmax		
	comp=Z,290nm,5.9s							
HHC				LR		LR		
	comp=N,420nm,12.7s							
HHC				LR		LR		
	comp=E,570nm,13.7s							
HHC				LR		LR		
	comp=Z,740nm,15.2s							
BOD	**Bodaibo**	**24.17**	**322**	*e*P		**P**	**00 06 02.8**	**-2.3**
BOD				*e*			00 06 21.7	
BOD				pmax		pmax		
	comp=Z,13nm,0.9s,mb4.3							
WHN	**Wuhan**	**24.80**	**253**	P		**P**	**00 06 10.5**	**-0.6**
YULB	**Yu-li**	**25.02**	**230**	*e*P		**P**	**00 06 12.2**	**-0.9**
	comp=Z,10.0nm,0.4s,mb4.6							
SONM	**Songino Array**	**25.97**	**296**	P		**P**	**00 06 21.1**	**-0.4**
	comp=Z,9.0nm,0.5s,mb4.4,baz=87,slow=7.9,SNR=76							
XAN	**Xi'an**	**27.09**	**265**	P		**P**	**00 06 30.8**	**-0.9**
XAN				pP		pP	00 06 45.1	-2.9
XAN				sP		sP	00 06 53.2	-2.8
XAN				S		**S**	**00 11 06.0**	**+1.1**
XAN				sS		sS	00 11 31.9	-0.9
XAN				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.1							
XAN				LR		LR		
	comp=N,88nm,16.3s							
XAN				LR		LR		
	comp=E,86nm,16.0s							
XAN				LR		LR		
	comp=Z,95nm,17.6s							
TLY	**Talaya**	**27.99**	**305**	*e*P		**P**	**00 06 39.5**	**-0.1**
TLY				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.2							
TLY	**Talaya**	**27.99**	**305**	*e*P		**P**	**00 06 39.8**	**+0.2**
	comp=Z,21nm,1.4s,mb4.5							
TLY	**Talaya**	**27.99**	**305**	P		**P**	**00 06 40.0**	**+0.4**
	SNR=6.7							
TLY				P			00 06 40.0	
	SNR=6.7							
ZAK	**Zakamensk**	**28.11**	**302**	*e*P		**P**	**00 06 40.4**	**-0.3**
ZAK				pmax		pmax		
	comp=Z,7.0nm,1.5s,mb4.0							
ENH	**Enshi**	**28.48**	**257**	*e*P		**P**	**00 06 43.0**	**-1.2**
	comp=Z,22nm,0.6s,mb4.9							
MOY	**Mondy**	**29.63**	**304**	*e*P		**P**	**00 06 54.3**	**+0.1**
MOY				pmax		pmax		
	comp=Z,34nm,2.6s,mb4.5							
BILL	**Bilibino**	**29.65**	**18**	*e*P		**P**	**00 06 53.3**	**-0.8**
BILL				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.2							
BILL	**Bilibino**	**29.65**	**18**	*e*P		**P**	**00 06 52.8**	**-1.3**
	comp=Z,3.7nm,0.6s,mb4.2							
LZH	**Lanzhou**	**30.08**	**272**	*e*P		**P**	**00 07 03.5**	**+5.2**
LZH				pP		pP	00 07 17.0	+2.3
LZH				sP		sP	00 07 22.5	-0.2
LZH				PP		PP	00 08 04.0	-3.1
LZH				*e*S		**S**	**00 11 55.0**	**+3.2**
LZH				sS		sS	00 12 25.1	+5.2
LZH				*e*SS		SS	00 13 37.0	-25
LZH				pmax		pmax		
	comp=Z,25nm,1.0s,mb4.8							
LZH				pmax		pmax		
	comp=Z,120nm,7.5s							
LZH				LR		LR		
	comp=E,510nm,13.5s							
LZH				LR		LR		
	comp=Z,1μm,16.2s							
GTA	**Gaotai**	**31.97**	**281**	P		**P**	**00 07 14.5**	**-0.4**
GTA				PcP		PcP	00 10 04.5	+1.1
GTA				S		**S**	**00 12 23.6**	**+2.3**
GTA				SS		SS	00 14 19.4	-21
GTA				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.4							
GTA				pmax		pmax		
	comp=Z,220nm,7.4s							
GTA				LR		LR		
	comp=N,350nm,20.2s							
GTA				LR		LR		
	comp=E,530nm,19.6s							
GTA				LR		LR		
	comp=Z,750nm,20.5s							
CD2	**Chengdu**	**32.40**	**263**	P		**P**	**00 07 17.3**	**-1.5**
CD2				pP		pP	00 07 35.1	-0.1
CD2				sP		sP	00 07 44.3	+1.1
CD2				PP		PP	00 08 27.2	-5.8
CD2				S		**S**	**00 12 24.4**	**-3.8**
CD2				sS		sS	00 12 54.6	-1.8
CD2				pmax		pmax		
	comp=Z,20nm,0.7s,mb5.0							
CD2				pmax		pmax		
	comp=Z,210nm,4.3s							
CD2				LR		LR		
	comp=N,630nm,19.6s							
CD2				LR		LR		
	comp=Z,760nm,27.4s							
GYA	**Guiyang**	**32.68**	**254**	⇓*i*P		**P**	**00 07 22.1**	**+0.9**
GYA				pP		pP	00 07 40.0	+2.3
GYA				PP		PP	00 08 33.4	-2.7
GYA				PcP		PcP	00 10 08.7	+3.1
GYA				S		**S**	**00 12 32.8**	**+0.2**
GYA				sS		sS	00 13 01.6	+0.9
GYA				ScP		ScP	00 13 44.5	+1.1
GYA				PcS		PcS	00 13 51.9	+0.9
GYA				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.0							
GYA				pmax		pmax		
	comp=Z,120nm,4.8s							
GYA				LR		LR		
	comp=N,640nm,15.8s							
GYA				LR		LR		
	comp=E,570nm,16.0s							
GYA				LR		LR		
	comp=Z,670nm,16.2s							
KMI	**Kunming**	**36.31**	**256**	P		**P**	**00 07 52.7**	**+0.1**
KMI				pP		pP	00 08 08.9	-0.4
KMI				sP		sP	00 08 16.5	-0.7
KMI				PP		PP	00 09 17.8	+1.5
KMI				S		**S**	**00 13 28.8**	**+0.2**
KMI				sS		sS	00 13 57.9	+0.9
KMI				pmax		pmax		
	comp=Z,13nm,1.0s,mb4.8							
KMI				pmax		pmax		
	comp=Z,200nm,7.7s							
KMI				LR		LR		
	comp=N,180nm,22.7s							
KMI				LR		LR		
	comp=E,270nm,21.4s							
KMI				LR		LR		
	comp=Z,640nm,24.0s							
ZAA0	**Zalesovo Array**	**39.40**	**308**	*e*P		**P**	**00 08 17.8**	**-0.6**
ZALV	**Zalesovo Beam**	**39.40**	**308**	P		**P**	**00 08 18.1**	**-0.3**
	comp=Z,29nm,0.8s,mb5.2,baz=88,slow=7.9,SNR=70							
ZALV				PcP		PcP	00 10 25.3	+0.2
	comp=Z,3.6nm,0.4s,baz=96,slow=3.3,SNR=4.0							
WMQ	**Urumqi**	**39.43**	**292**	*e*P		**P**	**00 08 20.3**	**+1.6**
TTA	**Tatalina**	**41.56**	**37**	*e*P		**P**	**00 08 36.6**	**+0.6**
MK31	**Makanchi Array**	**42.31**	**298**	*e*P		**P**	**00 08 42.3**	**0.0**
MKAR	**Makanchi Array**	**42.31**	**298**	P		**P**	**00 08 42.2**	**-0.1**
	comp=Z,16nm,0.8s,mb4.8,baz=92,slow=9.7,SNR=117							
MKAR				PcP		PcP	00 10 34.6	-0.1
	comp=Z,1.3nm,0.5s,baz=75,slow=4.0,SNR=5.6							
MKAR	**Makanchi Array**	**42.31**	**298**	P		**P**	**00 08 42.2**	**-0.1**
MKAR				PcP		PcP	00 10 34.6	-0.1
LSA	**Lhasa**	**42.46**	**271**	P		**P**	**00 08 45.2**	**+1.4**
LSA	**Lhasa**	**42.46**	**271**	*e*P		**P**	**00 08 45.9**	**+2.1**
LSA				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.7							
LSA	**Lhasa**	**42.46**	**271**	*e*P		**P**	**00 08 45.9**	**+2.2**
	comp=Z,9.3nm,0.6s,mb4.7							
CHTO	**Chiang Mai**	**43.00**	**252**	*e*P		**P**	**00 08 48.8**	**+0.6**
CHTO				pmax		pmax		
	comp=Z,16nm,0.6s,mb4.9							
CHTO	**Chiang Mai**	**43.00**	**252**	*e*P		**P**	**00 08 48.8**	**+0.5**
	comp=Z,16nm,0.6s,mb4.9							
CHUM	**Lake Minchumin**	**43.22**	**36**	*e*P		**P**	**00 08 50.2**	**+0.8**
	comp=Z,30nm,1.3s,mb4.9							
CMAR	**Chiang Mai Arr**	**43.23**	**251**	P		**P**	**00 08 50.5**	**+0.4**
	comp=Z,3.4nm,0.4s,mb4.4,baz=43,slow=7.7,SNR=17							
CMAR				PcP		PcP	00 10 38.4	+0.1
	comp=Z,1.9nm,0.9s,baz=20,slow=2.9,SNR=4.7							
PPLA	**Purkeypile**	**43.31**	**38**	*e*P		**P**	**00 08 51.7**	**+1.6**
	comp=Z,41nm,1.4s,mb5.0							
KDAK	**Kodiak Island**	**43.55**	**45**	P		**P**	**00 08 52.9**	**+0.7**
	comp=Z,7.1nm,0.7s,mb4.5,baz=275,slow=2.1,SNR=5.7							
KURK	**Kurchatov**	**43.69**	**305**	*c i*P		**P**	**00 08 52.9**	**-0.5**
KURK				pmax		pmax		
	comp=Z,24nm,0.7s,mb5.0							
KURK	**Kurchatov**	**43.69**	**305**	*e*P		**P**	**00 08 53.0**	**-0.4**
	comp=Z,25nm,0.6s,mb5.1							
KURK	**Kurchatov**	**43.69**	**305**	P		**P**	**00 08 53.5**	**+0.1**
	SNR=9.9							
KURK				P			00 08 53.5	
	SNR=9.9							
BPAW	**Bear Paw Mtn.**	**43.80**	**36**	*e*P		**P**	**00 08 54.5**	**+0.4**
	comp=Z,10nm,1.1s,mb4.5							
KTH	**Kantishna Hill**	**43.85**	**37**	*e*P		**P**	**00 08 55.4**	**+0.8**
	comp=Z,75nm,1.6s,mb5.2							
COLD	**Coldfoot**	**44.08**	**31**	*e*P		**P**	**00 08 55.7**	**-0.6**
	comp=Z,4.6nm,0.9s,mb4.2							
SHL	**Shillong**	**44.10**	**265**	*e*P		**P**	**00 08 57.0**	**0.0**
TRF	**Thorofare Moun**	**44.14**	**37**	*e*P		**P**	**00 08 57.1**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.5							
COLA	**College**	**45.11**	**35**	*e*P		**P**	**00 09 05.0**	**+0.5**
COLA				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.6							
COLA	**College**	**45.11**	**35**	*e*P		**P**	**00 09 05.0**	**+0.4**
	comp=Z,11nm,0.8s,mb4.6							
RAMN	**Ramite**	**47.31**	**270**	*e*P		**P**	**00 09 22.6**	**+0.3**
	comp=Z,48nm,0.2s,mb5.8							
GUN	**Gumba**	**47.34**	**272**	*e*P		**P**	**00 09 23.1**	**+0.6**
	comp=Z,152nm,0.4s,mb6.1							
KKN	**Kakani**	**47.85**	**272**	*e*P		**P**	**00 09 26.8**	**+0.3**
	comp=Z,83nm,0.8s,mb5.6							
PKI	**Pulchoki**	**47.87**	**272**	*e*P		**P**	**00 09 27.7**	**+1.0**
	comp=Z,29nm,0.5s,mb5.3							
PKIN	**Phulchoki**	**47.88**	**272**	*e*P		**P**	**00 09 26.7**	**0.0**
	comp=Z,85nm,0.7s,mb5.7							
PKIN	**Phulchoki**	**47.88**	**272**	*e*P		**P**	**00 09 27.8**	**+1.1**
	comp=Z,34nm,0.5s,mb5.4							
EGAK	**Eagle**	**47.97**	**34**	*e*P		**P**	**00 09 27.0**	**+0.1**
	comp=Z,41nm,1.8s,mb5.0							
BVAR	**Borovoye Array**	**48.03**	**310**	P		**P**	**00 09 27.5**

TKM2 Tokmak 2 48.06 295 *eP* **P 00 09 28.7 +0.8**
comp=Z,30nm,0.5s,mb5.4
BRVK Borovoye 48.08 310*c iP* **P 00 09 28.3 +0.4**
BRVK pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
BRVK Borovoye 48.08 310 *eP* **P 00 09 28.1 +0.2**
comp=Z,10nm,0.6s,mb4.8
BRVK Borovoye 48.08 310 P **P 00 09 28.4 +0.5**
SNR=6.0
BRVK P 00 09 28.4
SNR=6.0
DMN Daman 48.08 272 *eP* **P 00 09 28.7 +0.4**
comp=Z,33nm,0.6s,mb5.3
GKN Gorkha 48.23 273 *eP* **P 00 09 29.5 +0.1**
comp=Z,58nm,0.6s,mb5.5
KBK Karagaybulak 48.60 295 P **P 00 09 32.7 +0.6**
SNR=38
KZA Kyzart 48.62 294 P **P 00 09 33.8 +1.6**
SNR=19
USP Ospenovka 48.67 296 P **P 00 09 32.3 -0.3**
SNR=17
FRU Bishkek 48.76 295 *eP* **P 00 09 33.0 -0.3**
FRU *e* pP 00 09 45.0 -5.6
FRU pmax pmax
comp=Z,30nm,2.0s,mb4.9
AAK Ala-Archa 48.92 295 P **P 00 09 34.9 +0.3**
SNR=11
AAK Ala-Archa 48.92 295*c iP* **P 00 09 34.5 0.0**
AAK pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
AAK Ala-Archa 48.92 295 *eP* **P 00 09 34.8 +0.2**
comp=Z,8.6nm,0.5s,mb4.9
KSM Kuching 49.02 224 *eP* **P 00 09 34.9 -0.6**
comp=Z,8.8nm,0.6s,mb4.9
UCH Uchtor 49.06 295 *eP* **P 00 09 37.4 +1.8**
UCH pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
UCH Uchtor 49.06 295 *eP* **P 00 09 37.4 +1.8**
comp=Z,4.8nm,0.8s,mb4.5
KOLN Koldanda 49.13 273 *eP* **P 00 09 36.6 +0.3**
comp=Z,43nm,0.6s,mb5.6
KSH Kashi 49.15 291 *eP* **P 00 09 40.5 +4.1**
KSH *ep*P pP 00 09 49.5 -4.2
KSH *e*PcP PcP 00 11 04.5 +5.7
KSH *e*PP PP 00 11 33.5 +3.1
KSH *e*PcS PcS 00 14 58.6 +3.4
KSH *e*S **S 00 16 39.9 +3.3**
KSH *e*ScS ScS 00 19 26.5 +4.7
KSH pmax pmax
comp=Z,190nm,6.2s
KSH LR LR
comp=N,100nm,5.2s
KSH LR LR
comp=E,320nm,11.6s
EKS2 Erkin-Say 49.40 296 P **P 00 09 38.2 +0.1**
SNR=17
EKS2 Erkin-Say 49.40 296 *eP* **P 00 09 38.1 0.0**
EKS2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
EKS2 Erkin-Say 49.40 296 *eP* **P 00 09 38.1 0.0**
comp=Z,9.3nm,0.6s,mb4.9
PYUN Piuthan 49.41 274 *eP* **P 00 09 38.9 +0.5**
comp=Z,41nm,0.5s,mb5.6
AML Almayashu 49.66 295 P **P 00 09 41.2 +1.1**
SNR=13
AML Almayashu 49.66 295 *eP* **P 00 09 40.8 +0.6**
AML pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
AML Almayashu 49.66 295 *eP* **P 00 09 40.8 +0.6**
comp=Z,8.7nm,0.4s,mb5.0
INK Inuvik 50.25 29 *eP* **P 00 09 44.5 +0.3**
INK pmax pmax
comp=Z,14nm,0.6s
INK Inuvik 50.25 29 *eP* **P 00 09 44.5 +0.3**
comp=Z,14nm,0.6s,mb5.1
HYT Haines Junctio 50.50 39 *eP* **P 00 09 48.2 +2.0**
KAPI Kappang 50.54 209 P **P 00 09 46.2 -0.9**
comp=Z,5.3nm,0.5s,mb4.9,baz=34,slow=3.6,SNR=8.3
KULM Kulim 51.54 237 *eP* **P 00 09 55.1 +0.4**
comp=Z,26nm,0.9s,mb5.2
SMLA Simla 52.19 281 *i* P **P 00 09 58.1 -1.2**
SVE Sverdlovsk 52.20 317⇓*eP* **P 00 09 59.4 +0.4**
SVE pmax pmax
comp=Z,16nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,904nm,19.0s
SOKR Solikamsk 53.16 321 *eP* **P 00 10 05.5 -0.5**
SOKR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ARU Arti 53.41 317*c iP* **P 00 10 07.6 -0.3**
ARU *e**PP pP 00 10 25.0 -0.4
ARU *e* 00 12 07.3
ARU S **S 00 17 35.9 +1.2**
ARU SS SS 00 21 15.9 +1.0
ARU pmax pmax
comp=Z,37nm,2.5s,mb5.0
ARU Arti 53.41 317 *eP* **P 00 10 07.2 -0.7**
comp=Z,65nm,1.9s,mb5.3
PSI Prapat 54.55 237 P **P 00 10 17.0 +0.2**
comp=Z,7.9nm,0.5s,mb5.0,baz=358,slow=6.9,SNR=6.0
COEN Coen 55.16 179 *eP* **P 00 10 21.5 +0.5**
ABKAR Akbulak array 55.52 308 *eP* **P 00 10 23.0 -0.2**
comp=Z,16nm,0.5s,mb5.3
NGP Nagpur 56.27 269 *eP* **P 00 10 28.7 -0.4**
BHPL Bhopal 56.27 272 *eP* **P 00 10 27.9 -1.2**
BHPL *eP* 00 10 28.9
BHPL AMb AMB 00 10 31.2
comp=Z,14nm,1.4s,mb4.8
BHPL AMb AMB 00 10 33.6
comp=Z,7.8nm,0.5s,mb5.0
KBL Kabul 56.37 289 *eP* **P 00 10 28.6 -1.0**
KBL pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KBL Kabul 56.37 289 *eP* **P 00 10 28.6 -1.0**
comp=Z,9.8nm,0.7s,mb5.0
RES Resolute Bay 58.19 15 *eP* **P 00 10 41.2 -0.7**
RES pmax pmax
comp=Z,13nm,0.6s,mb5.1
RES Resolute Bay 58.19 15 *eP* **P 00 10 41.2 -0.7**
comp=Z,13nm,0.6s,mb5.1
HYB Hyderabad 58.89 266 *i* P **P 00 10 47.5 0.0**
KEV Kevo 59.48 339 *eP* **P 00 10 50.5 -0.3**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 59.48 339 *ep* **P 00 10 50.5 -0.3**
comp=Z,4.4nm,0.6s,mb4.7
YKA Yellowknife Ar 59.76 32 P **P 00 10 52.4 -0.4**
comp=Z,1.0nm,0.4s,mb4.2,baz=303,slow=6.5,SNR=27
YKA Yellowknife Ar 59.76 32 P **P 00 10 52.4 -0.4**
ARCES ARCESS Array B 60.03 339 P **P 00 10 55.0 +0.4**
comp=Z,2.0nm,0.6s,mb4.3,baz=56,slow=7.5,SNR=12
KLMR Klimovskoe 60.29 327 *eP* **P 00 10 54.9 -1.6**
KLMR pmax pmax
comp=Z,27nm,1.5s,mb5.1
MDRS Chennai 60.37 261 *ex* x 00 12 40.4
FITZ Fitzroy Crossi 61.19 198 P **P 00 11 02.1 -0.9**
comp=Z,0.8nm,0.3s,mb4.2,baz=17,slow=8.1,SNR=8.5
CTA Charters Tower 61.37 175 P **P 00 11 02.0 -2.3**
comp=Z,2.0nm,0.3s,mb4.6,baz=323,slow=10,SNR=3.4
CTAO Charters Tower 61.37 175 *eP* **P 00 11 05.7 +1.5**
CTAO pmax pmax
comp=Z,18nm,1.2s,mb5.0
CTAO Charters Tower 61.37 175 *eP* **P 00 11 05.7 +1.4**
comp=Z,18nm,1.2s,mb5.0
DAG Danmarks Havn 61.40 355⇓*iP* **P 00 11 03.3 -0.5**
DAG pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
DAG Danmarks Havn 61.40 355⇓*iP* **P 00 11 03.3 -0.5**
comp=Z,3.5nm,0.5s,mb4.7
WRAB Tennant Creek 61.51 188 *eP* **P 00 11 04.0 -1.1**
WRAB pmax pmax
comp=Z,24nm,1.5s,mb5.0
WRAB Tennant Creek 61.51 188 *eP* **P 00 11 04.0 -1.1**
comp=Z,24nm,1.5s,mb5.0
WB2 Warramunga Arr 61.51 188 *eP* **P 00 11 03.9 -1.3**
WRA Warramunga Arr 61.52 188 P **P 00 11 04.0 -1.2**
comp=Z,9.7nm,0.4s,mb5.2,baz=6.2,slow=6.9,SNR=35
POO Poona 61.74 270 *eP* **P 00 11 06.5 -0.5**
POO AMb AMB 00 11 07.5
comp=Z,17nm,0.4s,mb5.4
BHJ Bhuj 62.08 277 *eP* **P 00 11 09.7 +0.5**
BHJ AMb AMB 00 11 12.9
comp=Z,77nm,1.5s,mb5.5
KAD Karad 62.24 269 *eP* **P 00 11 10.2 -0.1**
KAD AMb AMB 00 11 11.9
comp=Z,35nm,0.7s,mb5.5

JOF Joensuu 62.30 331 *eP* **P 00 11 08.5 -1.5**
JOF pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
JOF Joensuu 62.30 331 *ep* **P 00 11 08.5 -1.5**
comp=Z,9.8nm,0.5s,mb5.1
NLWA Neilton Lookou 63.41 49 *eP* **P 00 11 17.6 -0.1**
comp=Z,169nm,2.8s,mb5.5
NLWA *ep*P pP 00 11 37.2 +1.5
MOS Moscow 64.00 322 *eP* **P 00 11 20.8 -0.6**
JCW Jim Creek 64.06 48 *eP* **P 00 11 22.3 +0.3**
JCW *ep*P pP 00 11 41.3 +1.4
KAF Kangasniemi 64.60 332 *eP* **P 00 11 23.5 -1.7**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
KAF Kangasniemi 64.60 332 *ep* **P 00 11 23.5 -1.7**
comp=Z,7.4nm,0.6s,mb4.7
OBN Obninsk 64.86 322⇑*iP* **P 00 11 26.6 -0.4**
OBN *e* 00 13 49.6
OBN pmax pmax
comp=Z,24nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,300nm,18.0s
LON Longmire 64.94 49 *eP* **P 00 11 29.2 +1.5**
LON *e**PP pP 00 11 46.6 +0.9
LON pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
LON Longmire 64.94 49 *eP* **P 00 11 29.2 +1.5**
comp=Z,7.5nm,1.2s,mb4.4
LON *ep*P pP 00 11 46.6 +0.8
FINES FINESS Array B 65.13 332 P **P 00 11 28.1 -0.6**
comp=Z,18nm,0.6s,mb5.1,baz=51,slow=7.1,SNR=133
ASAR Alice Springs 65.24 188 P **P 00 11 29.2 -0.6**
comp=Z,4.8nm,0.6s,mb4.5,baz=0.1,slow=5.7,SNR=64
ETW Entiat 65.28 48 *eP* **P 00 11 30.3 +0.4**
ETW *ep*P pP 00 11 49.1 +1.1
VSR Storozhevoye 65.94 318 *eP* **P 00 11 34.1 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
VORD Divnogorie 66.03 318 *eP* **P 00 11 33.8 -0.8**
VORD pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,20nm,0.6s
SUMG Summit 66.25 0 *eP* **P 00 11 36.6 +0.9**
SUMG pmax pmax
comp=Z,14nm,0.7s
SUMG Summit 66.25 0 *eP* **P 00 11 36.6 +0.9**
comp=Z,14nm,0.7s,mb4.9
OD2 Odessa Site #2 66.30 47 *eP* **P 00 11 38.3 +1.9**
OD2 *ep*P pP 00 11 55.1 +0.6
NEW Newport 66.65 46 *eP* **P 00 11 39.0 +0.3**
NEW *e**PP pP 00 11 57.3 +0.5
NEW pmax pmax
comp=Z,40nm,2.0s
NEW Newport 66.65 46 *eP* **P 00 11 39.0 +0.3**
comp=Z,40nm,2.0s,mb4.9
NEW *ep*P pP 00 11 57.3 +0.6
YBH Yreka Blue Hor 67.30 54 *eP* **P 00 11 41.8 -1.1**
YBH *e**PP pP 00 12 01.8 +0.8
YBH pmax pmax
comp=Z,4.0nm,0.8s
YBH Yreka Blue Hor 67.30 54 *eP* **P 00 11 41.8 -1.1**
comp=Z,4.0nm,0.8s,mb4.3
YBH *ep*P pP 00 12 01.8 +0.8
LNOR Lincton Mounta 67.44 48 *eP* **P 00 11 46.6 +2.9**
LNOR *e**PP pP 00 12 03.5 +1.6
WDC Whiskeytown Da 68.08 55 *eP* **P 00 11 51.3 +3.5**
WDC *e**PP pP 00 12 06.4 +0.4
WDC pmax pmax
comp=Z,46nm,2.0s,mb5.0
WDC Whiskeytown Da 68.08 55 *eP* **P 00 11 51.3 +3.5**
comp=Z,46nm,2.0s,mb5.0
WDC *ep*P pP 00 12 06.4 +0.4
BSMT Bassoo Peak 68.15 45 *eP* **P 00 11 49.2 +1.1**
BSMT *ep*P pP 00 12 07.5 +1.2
KIV Kislovodsk 68.39 310*c iP* **P 00 11 50.5 +0.8**
KIV pmax pmax
comp=Z,46nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,400nm,18.0s
KIV Kislovodsk 68.39 310 *eP* **P 00 11 50.9 +1.2**
comp=Z,239nm,2.1s,mb5.7
KIV Kislovodsk 68.39 310 P **P 00 11 50.8 +1.1**
SNR=12
KIV P 00 11 50.8
SNR=12
ZEI Tsey 68.40 308 *eP* **P 00 11 48.7 -1.1**
ZEI pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
JTMT Jette 68.48 45 *eP* **P 00 11 50.2 0.0**
comp=Z,76nm,2.5s,mb5.1
JTMT *ep*P pP 00 12 09.5 +1.1
MTA Mtatsminda 68.51 307 P **P 00 11 50.9 +0.3**
TBLG Delisi 68.52 307 P **P 00 11 51.2 +0.6**
BMO Blue Mountains 68.60 49 *eP* **P 00 11 50.9 -0.2**
comp=Z,34nm,1.8s,mb4.9
BMO *ep*P pP 00 12 07.6 -1.6
KEH Kehvi 68.66 308 P **P 00 11 52.6 +1.2**
GOR Gori 68.75 308 P **P 00 11 53.2 +1.2**
ONI Oni 68.77 308 P **P 00 11 53.5 +1.3**
SWMT Swartz Lake 68.78 45 *eP* **P 00 11 52.2 +0.2**
comp=Z,31nm,1.8s,mb4.8
SWMT *ep*P pP 00 12 11.2 +1.0
IDID Didziasalis 69.03 326 *eP* **P 00 11 53.4 -0.1**
ISAL Salakas 69.11 327 *eP* **P 00 11 54.1 +0.1**
SLMT Seeley Lake 69.21 45 *eP* **P 00 11 55.1 +0.3**
SLMT *ep*P pP 00 12 13.7 +0.7
MSO Missoula 69.23 45 *eP* **P 00 11 55.1 +0.2**
comp=Z,7.1nm,1.5s,mb4.3
MSO *ep*P pP 00 12 13.3 +0.2
NACGM Naroch 69.30 326 *e* **P 00 11 52.0 -3.2**
WVOR Wild Horse Val 69.31 51 *eP* **P 00 11 55.8 +0.3**
WVOR *e**PP pP 00 12 14.1 +0.4
WVOR pmax pmax
comp=Z,35nm,1.8s,mb4.9
WVOR Wild Horse Val 69.31 51 *eP* **P 00 11 55.8 +0.3**
comp=Z,35nm,1.8s,mb4.9
WVOR *ep*P pP 00 12 14.1 +0.4
GNI Garni 69.47 306*ceP* **P 00 11 57.9 +1.4**
GNI pmax pmax
comp=Z,24nm,1.2s
GNI Garni 69.47 306 *eP* **P 00 11 56.6 +0.1**
comp=Z,50nm,1.5s,mb5.1
FFC Flin Flon 69.73 34 *eP* **P 00 11 57.7 -0.1**
FFC *e**PP pP 00 12 17.1 +1.0
FFC pmax pmax
comp=Z,21nm,1.4s,mb4.8
FFC Flin Flon 69.73 34 *eP* **P 00 11 57.6 -0.2**
comp=Z,21nm,1.4s,mb4.8
FFC *ep*P pP 00 12 17.1 +1.0
NB2 NORSAR Subarra 70.29 337 P **P 00 12 00.7 -0.4**
comp=Z,30nm,1.2s,mb5.0,baz=36,slow=6.5
NOA NORSAR Array B 70.29 337 P **P 00 12 00.7 -0.4**
comp=Z,6.1nm,0.5s,mb4.7,baz=37,slow=6.1,SNR=42
NOA LR LR 00 46 02.2
comp=Z,178nm,19.2s,baz=225,slow=38
NAO01 NORSAR Array S 70.54 337 *eP* **P 00 12 01.9 -0.8**
comp=Z,3.4nm,0.4s,mb4.5
EGMT Eagleton 70.65 43 *eP* **P 00 12 04.0 +0.4**
comp=Z,16nm,1.3s,mb4.7
EGMT *ep*P pP 00 12 22.4 +0.6
LRM Limekiln Ridge 70.67 46 *eP* **P 00 12 03.9 +0.1**
LRM *ep*P pP 00 12 22.9 +0.9
ANN Anapa 70.82 313 *eP* **P 00 12 03.9 -0.8**
ANN pmax pmax
comp=Z,62nm,1.3s,mb5.3
DLMT Dillon 70.89 46 *eP* **P 00 12 05.7 +0.7**
comp=Z,114nm,2.5s,mb5.3
DLMT *ep*P pP 00 12 21.0 -2.3
CMB Columbia Colle 70.94 56 *eP* **P 00 12 05.7 +0.2**
CMB *e**PP pP 00 12 24.3 +0.5
CMB pmax pmax
comp=Z,98nm,2.5s,mb5.2
CMB Columbia Colle 70.94 56 *eP* **P 00 12 05.7 +0.2**
comp=Z,98nm,2.5s,mb5.2
CMB *ep*P pP 00 12 24.3 +0.4
HLID Hailey 71.03 48 *eP* **P 00 12 06.2 +0.3**
comp=Z,2.8nm,1.1s,mb4.0
HLID *ep*P pP 00 12 23.7 -0.6

HATD Hatta, Dubai 71.08 287 P **P 00 12 07.1 +0.5**
SNR=8.4
AKASG Malin Array Be 71.10 322 P **P 00 12 05.8 -0.5**
comp=Z,9.9nm,0.4s,mb5.0,baz=44,slow=5.9,SNR=51
AKBB Malin Array Si 71.10 322 *eP* **P 00 12 05.5 -0.7**
KIEV Kiev 71.11 322 *eP* **P 00 12 05.5 -0.8**
KIEV pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
KIEV Kiev 71.11 322 *eP* **P 00 12 05.5 -0.8**
comp=Z,10nm,0.6s,mb4.8
ASHO Ashiyiah 71.22 287 P **P 00 12 08.3 +1.0**
SNR=6.6
BOZ Bozeman (W) 71.22 45 *eP* **P 00 12 07.9 +0.8**
BOZ *e**PP pP 00 12 25.7 +0.3
BOZ pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
BOZ Bozeman (W) 71.22 45 *eP* **P 00 12 07.9 +0.8**
comp=Z,10nm,1.4s,mb4.5
BOZ *ep*P pP 00 12 25.6 +0.3
NAZ Nazwa, Dubai 71.31 287 P **P 00 12 09.4 +1.5**
SNR=5.5
BMN Battle Mountai 71.38 52 *eP* **P 00 12 08.9 +0.8**
BMN *e**PP pP 00 12 26.5 +0.1
BMN pmax pmax
comp=Z,17nm,1.4s,mb4.7
BMN Battle Mountai 71.38 52 *eP* **P 00 12 08.9 +0.8**
comp=Z,17nm,1.4s,mb4.7
BMN *ep*P pP 00 12 26.4 0.0
SUW Suwalki 71.42 327 *eP* **P 00 12 07.5 -0.6**
SUW pmax pmax
comp=Z,17nm,0.4s,mb5.2
SUW Suwalki 71.42 327 *eP* **P 00 12 07.5 -0.6**
comp=Z,17nm,0.4s,mb5.2
SFJD Kangerlussuaq 71.43 5 *eP* **P 00 12 07.3 -0.6**
SFJD Kangerlussuaq 71.43 5 *iP* **P 00 12 07.3 -0.6**
ARQ Araqi 71.70 285 P **P 00 12 10.8 +0.4**
SNR=6.2
ASUD Al Ashush, Dub 71.78 287 P **P 00 12 11.3 +0.6**
SNR=5.0
NVAR Mina Array Bea 71.98 55 P **P 00 12 12.4 +0.7**
comp=Z,1.5nm,0.6s,mb4.0,baz=290,slow=6.3,SNR=9.1
GCMT Greycliff 72.17 44 *eP* **P 00 12 13.9 +1.2**
comp=Z,14nm,1.5s,mb4.6
GCMT *ep*P pP 00 12 32.9 +1.8
N12A Clover Valley, 72.40 51 *eP* **P 00 12 14.9 +0.7**
SIM Simferopol' 72.52 315 *eP* **P 00 12 16.1 +1.2**
SIM *e* 00 14 57.0
SIM pmax pmax
comp=Z,400nm,19.0s
SIM MLR MLR
comp=Z,400nm,19.0s
RLMT Red Lodge 72.82 45 *eP* **P 00 12 17.5 +0.8**
comp=Z,46nm,2.3s,mb4.9
STKA Stephens Creek 72.99 180 P **P 00 12 16.6 -0.9**
comp=Z,3.2nm,0.6s,mb4.3,baz=329,slow=7.1,SNR=8.3
STKA Stephens Creek 72.99 180 *eP* **P 00 12 18.7 +1.1**
FORT Forrest 73.04 193 *eP* **P 00 12 18.1 +0.2**
comp=Z,10nm,0.7s,mb4.8
LOHW Long Hollow 73.11 46 *eP* **P 00 12 20.0 +1.6**
comp=Z,3.8nm,1.1s,mb4.1
LOHW *ep*P pP 00 12 38.1 +1.4
BGU Big Grassy Mou 73.52 50 *eP* **P 00 12 21.2 +0.4**
BSD Bornholm Skovb 73.77 332⇑*iP* **P 00 12 21.4 -0.7**
BSD pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BSD Bornholm Skovb 73.77 332⇑*iP* **P 00 12 21.4 -0.7**
comp=Z,6.8nm,0.8s,mb4.4
HWUT Hardware Ranch 73.90 48 *eP* **P 00 12 23.5 +0.4**
comp=Z,3.6nm,0.7s,mb4.2
HWUT *ep*P pP 00 12 41.7 +0.2
UMR Umm Al-Rimmam 74.07 295 *eP* **P 00 12 23.5 -0.8**
UMR AMb AMB 00 12 24.9
comp=Z,48nm,0.5s,mb5.5
LVV L'vov 74.09 324 *eP* **P 00 12 23.7 -0.3**
DUG Dugway 74.12 50 *eP* **P 00 12 24.4 0.0**
DUG *e**PP pP 00 12 43.3 +0.5
DUG pmax pmax
comp=Z,16nm,1.5s,mb4.5
DUG Dugway 74.12 50 *eP* **P 00 12 24.4 0.0**
comp=Z,16nm,1.5s,mb4.5
DUG *ep*P pP 00 12 43.2 +0.5
MIB Mutribah 74.17 296 *eP* **P 00 12 24.0 -0.8**
MIB AMb AMB 00 12 25.8
comp=Z,53nm,0.7s,mb5.4
COP Copenhagen 74.19 333 *i* P **P 00 12 24.2 -0.3**
COP pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
COP Copenhagen 74.19 333 *i* P **P 00 12 24.2 -0.3**
comp=Z,4.4nm,0.7s,mb4.3
BW06 Boulder Array 74.24 47 *eP* **P 00 12 25.4 +0.4**
comp=Z,6.7nm,0.9s,mb4.4
PDAR Pinedale Array 74.24 47 P **P 00 12 24.9 -0.1**
comp=Z,2.6nm,0.6s,mb4.1,baz=284,slow=2.4,SNR=32
GKP Gorka Klasztor 74.34 329 *eP* **P 00 12 25.6 +0.2**
QRN Al-Qurain 74.44 295 *eP* **P 00 12 25.9 -0.4**
MALT Malatya 74.44 307 *eP* **P 00 12 27.2 +1.0**
MALT pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
MALT Malatya 74.44 307 *eP* **P 00 12 27.2 +0.9**
comp=Z,3.9nm,0.5s,mb4.4
MALT Malatya 74.44 307⇑*iP* **P 00 12 25.6 -0.6**
MUD Monsted U'grnd 74.64 335 *iP* **P 00 12 26.3 -0.7**
MUD pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
MUD Monsted U'grnd 74.64 335 *iP* **P 00 12 26.3 -0.7**
comp=Z,4.4nm,0.7s,mb4.3
RGN Rugen 74.79 332 *eP* **P 00 12 28.4 +0.4**
comp=Z,20nm,1.0s,mb4.8
KWP Kalwaria Pacla 74.81 324 *eP* **P 00 12 29.1 +0.8**
KWP Kalwaria Pacla 74.81 324 *eP* **P 00 12 28.5 +0.3**
comp=Z,11nm,0.6s,mb4.8
KWP Kalwaria Pacla 74.81 324⇑*iP* **P 00 12 28.8 +0.6**
BUR08 Bucovina Ar. S 75.13 321 *eP* **P 00 12 30.2 +0.1**
SHPR Sheep Range 75.14 54 *eP* **P 00 12 31.4 +1.1**
SHPR *ep*P pP 00 12 47.1 -1.6
BURAR Bucovina Array 75.14 321 ⇓P **P 00 12 30.6 +0.5**
BURAR Bucovina Array 75.14 321 ⇓*iP* **P 00 12 30.6 +0.5**
KOLS Kolonicke sedl 75.52 324 *eP* **P 00 12 31.6 -0.7**
KOLS pmax pmax
comp=Z,33nm,2.4s,mb4.6
KOLS Kolonicke sedl 75.52 324 *eP* **P 00 12 31.6 -0.7**
comp=Z,33nm,2.4s,mb4.6
KOLS Kolonicke sedl 75.52 324 *eP* **P 00 12 31.6 -0.7**
CCUT Cedar City 75.54 53 *eP* **P 00 12 34.7 +2.1**
comp=Z,82nm,2.9s,mb5.0
CCUT *ep*P pP 00 12 52.0 +1.0
MSU Marysvale 75.60 51 *eP* **P 00 12 33.8 +0.9**
MSU *e**PP pP 00 12 51.7 +0.3
STHS Stebnicka Huta 75.62 325 *eP* **P 00 12 33.9 +1.1**
STHS pmax pmax
comp=Z,12nm,1.6s,mb4.4
STHS Stebnicka Huta 75.62 325 *eP* **P 00 12 33.9 +1.1**
comp=Z,12nm,1.6s,mb4.4
STHS Stebnicka Huta 75.62 325 *eP* **P 00 12 33.9 +1.1**
OJC Ojcow 75.63 326 *eP* **P 00 12 33.3 +0.4**
VRI Vrincioaia 75.67 319⇑P **P 00 12 33.5 +0.3**
VRI Vrincioaia 75.67 319⇑*iP* **P 00 12 33.5 +0.3**
UZH Uzhgorod 75.74 324 *eP* **P 00 12 33.0 -0.5**
NIE Niedzica 76.02 325 *eP* **P 00 12 36.0 +0.9**
RSSD Black Hills 76.22 43 *eP* **P 00 12 35.7 -0.7**
RSSD pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
RSSD Black Hills 76.22 43 *eP* **P 00 12 35.7 -0.7**
comp=Z,1.5nm,0.9s,mb3.7
RUE Ruedersdorf 76.27 330 *eP* **P 00 12 36.6 +0.1**
comp=Z,13nm,0.5s,mb4.9
BR131 Keskin Array S 76.28 311 *eP* **P 00 12 37.5 +0.6**
comp=Z,3.6nm,0.6s,mb4.3
BRTR Keskin Array B 76.28 311 P **P 00 12 37.2 +0.4**
comp=Z,4.7nm,0.6s,mb4.4,baz=82,slow=3.8,SNR=38
MLR Muntele Rosu 76.32 319⇑P **P 00 12 37.3 +0.4**
MLR Muntele Rosu 76.32 319⇑*iP* **P 00 12 37.3 +0.4**
BSEG Bad Segeberg 76.33 333 *eP* **P 00 12 36.7 -0.1**
comp=Z,10.0nm,0.9s,mb4.5
KSP Ksiaz 76.59 328 *eP* **P 00 12 38.8 +0.5**
KECS Kecovo 76.65 324 *eP* **P 00 12 38.8 +0.1**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KECS Kecovo 76.65 324 *eP* **P 00 12 38.8 +0.1**
comp=Z,1.5nm,0.8s,mb3.8
KECS Kecovo 76.65 324 *eP* **P 00 12 38.8 +0.1**
VOIR 76.79 320⇑*iP* **P 00 12 40.9 +1.3**
MORC Moravsky Berou 76.91 327 *eP* **P 00 12 40.3 +0.2**
MORC Moravsky Berou 76.91 327⇓*iP* **P 00 12 40.9 +0.8**
PSZ Piszkesteto 77.33 324 *eP* **P 00 12 43.6 +1.1**

PSZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
PSZ Piszkesteto 77.33 324 *eP* **P 00 12 43.6 +1.1**
comp=Z,7.7nm,0.8s,mb4.5
PSZ Piszkesteto 77.33 324⇑*eP* **P 00 12 43.2 +0.7**
PSZ Piszkesteto 77.33 324⇑*iP* **P 00 12 43.1 +0.6**
VYHS Vyhne 77.35 325 *eP* **P 00 12 42.6 -0.1**
VYHS pmax pmax
comp=Z,12nm,1.8s,mb4.3
VYHS Vyhne 77.35 325 *eP* **P 00 12 42.6 -0.1**
comp=Z,12nm,1.8s,mb4.3
VYHS Vyhne 77.35 325 *eP* **P 00 12 42.6 -0.1**
BRG Berggiesshubel 77.48 329 *eP* **P 00 12 43.4 +0.1**
comp=Z,3.5nm,0.8s,mb4.1
BRG Berggiesshubel 77.48 329 *eP* **P 00 12 43.4 +0.1**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
CLL Collm 77.49 330 *eP* **P 00 12 43.3 -0.1**
comp=Z,9.0nm,1.0s,mb4.5
CLL *ep*P pP 00 13 03.5 +1.6
CLL Collm 77.49 330⇑*iP* **P 00 12 43.3 -0.1**
CLL *i* pP 00 13 03.8 +1.9
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CLL Collm 77.49 330⇑*iP* **P 00 12 43.3 -0.1**
comp=Z,9.0nm,1.0s,mb4.5
CLL *i* pP 00 13 03.8 +1.9
CLL Collm 77.49 330⇑*iP* **P 00 12 43.3 -0.1**
comp=Z,9.0nm,1.0s,mb4.5
CLL *i* pP pP 00 13 03.8 +1.9
NRDL Niedersach Rie 77.58 332 *eP* **P 00 12 43.3 -0.5**
comp=Z,8.0nm,1.2s,mb4.3
VRAC Vranov 77.67 327 ⇓*P* **P 00 12 45.0 +0.6**
VRAC Vranov 77.67 327 ⇓*iP* **P 00 12 45.0 +0.6**
GZR Gura Zlata 77.91 321 ⇑*P* **P 00 12 46.1 +0.3**
GZR Gura Zlata 77.91 321 ⇑*iP* **P 00 12 46.1 +0.3**
CLZ Clausthal 78.02 332 *eP* **P 00 12 46.0 -0.3**
comp=Z,12nm,0.9s,mb4.6
CLZ Clausthal 78.02 332 *eP* **P 00 12 46.0 -0.3**
CLZ pmax pmax
comp=Z,12nm,0.9s,mb4.6
BZS Buzias 78.29 322 ⇑*P* **P 00 12 48.1 +0.2**
BZS Buzias 78.29 322 ⇑*iP* **P 00 12 48.1 +0.2**
TANN Tannenbergstha 78.42 330 *eP* **P 00 12 48.5 0.0**
comp=Z,5.0nm,1.2s,mb4.1
IBBN Ibbenburen 78.54 333 *eP* **P 00 12 49.2 0.0**
comp=Z,10.0nm,0.9s,mb4.7
MOX Moxa 78.55 330 *eP* **P 00 12 49.1 -0.1**
comp=Z,5.0nm,1.1s,mb4.3
UBBA Unterbreizbach 79.00 331 *eP* **P 00 12 51.2 -0.5**
comp=Z,9.0nm,1.2s,mb4.5
KHC Kasperske Hory 79.02 328 *eP* **P 00 12 51.9 +0.1**
comp=Z,9.8nm,0.9s,mb4.6
ROTZ Rotzenmuhle 79.04 330 *eP* **P 00 12 52.2 +0.3**
comp=Z,7.0nm,1.2s,mb4.4
CSNA Conrad Observa 79.05 326⇑*iP* **P 00 12 52.9 +0.8**
comp=Z,5.8nm,0.8s,mb4.5
ESK Eskdalemuir 79.14 341 *eP* **P 00 12 52.1 -0.3**
ESK pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
ESK Eskdalemuir 79.14 341 *eP* **P 00 12 52.1 -0.3**
comp=Z,4.5nm,0.7s,mb4.4
GEC2 GERESS Array S 79.20 328 *eP* **P 00 12 52.7 -0.1**
comp=Z,2.0nm,0.6s,mb4.1
GEC2 GERESS Array S 79.20 328 *eP* **P 00 12 52.7 -0.1**
GEC2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
GERES GERESS Array B 79.20 328 P **P 00 12 52.6 -0.2**
comp=Z,2.7nm,0.6s,mb4.2,baz=35,slow=5.7,SNR=26
WET Wettzell 79.28 329 *eP* **P 00 12 53.1 -0.2**
comp=Z,5.0nm,0.9s,mb4.3
WET Wettzell 79.28 329 *eP* **P 00 12 53.1 -0.2**
WET pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
BUG Bochum--Univer 79.44 333 *eP* **P 00 12 54.3 +0.2**
comp=Z,7.0nm,0.6s,mb4.7
GRA1 Grafenberg Arr 79.47 330 *eP* **P 00 12 54.4 +0.1**
comp=Z,18nm,1.1s,mb4.8
GRF Grafenberg Arr 79.47 330 *eP* **P 00 12 54.4 +0.1**
comp=Z,18nm,1.1s,mb4.8
GRF Grafenberg Arr 79.47 330 *eP* **P 00 12 54.4 +0.1**
GRF pmax pmax
comp=Z,18nm,1.1s,mb4.8
GRF Grafenberg Arr 79.47 330 *eP* **P 00 12 54.4 +0.1**
GRF pmax pmax
comp=Z,18nm,1.1s,mb4.8
CSS Prodhromos 79.72 308 *eP* **P 00 12 55.5 -0.4**
comp=Z,15nm,0.6s,mb5.0
MOA Molln 79.77 327 ⇓*iP* **P 00 12 56.7 +0.7**
comp=Z,3.7nm,0.8s,mb4.2
TNS Taunus Mts 80.05 332 *eP* **P 00 12 57.4 0.0**
comp=Z,10.0nm,0.9s,mb4.7
TNS Taunus Mts 80.05 332 *eP* **P 00 12 57.4 0.0**
TNS pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
ECSD EROS Data Cent 80.15 39 *eP* **P 00 12 57.7 -0.4**
comp=Z,136nm,2.8s,mb5.3
SOKA Soboth 80.38 326 ⇓*iP* **P 00 12 59.5 +0.3**
comp=Z,26nm,1.1s,mb5.0
RJOB Jochberg 80.45 328 *eP* **P 00 13 00.0 +0.4**
comp=Z,12nm,0.9s,mb4.7
TUC Tucson 80.62 55 *eP* **P 00 13 01.7 +0.9**
TUC pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
TUC Tucson 80.62 55 *eP* **P 00 13 01.7 +0.8**
comp=Z,2.1nm,0.8s,mb4.0
FUR Furstenfeldbru 80.70 329 *eP* **P 00 13 01.2 +0.3**
comp=Z,12nm,0.8s,mb4.8
FUR Furstenfeldbru 80.70 329 *eP* **P 00 13 01.2 +0.3**
FUR pmax pmax
comp=Z,12nm,0.8s,mb4.8
OBKA Obir 80.72 326 *iP* **P 00 13 01.4 +0.3**
SNR=10
KBA Koelnbreinsper 80.76 327 *iP* **P 00 13 02.3 +1.0**
SNR=9.9
SCHQ Schefferville 80.95 16 P **P 00 13 01.9 -0.2**
comp=Z,1.7nm,0.4s,mb4.3,baz=6.2,slow=6.7,SNR=10
SCHQ Schefferville 80.95 16 P **P 00 13 01.9 -0.2**
STU Stuttgart 80.98 331 *eP* **P 00 13 02.6 +0.2**
comp=Z,14nm,0.9s,mb4.8
STU *ep*P pP 00 13 23.0 +1.9
STU Stuttgart 80.98 331 *eP* **P 00 13 02.6 +0.2**
STU pmax pmax
comp=Z,12nm,0.7s,mb4.8
STU Stuttgart 80.98 331 *eP* **P 00 13 02.6 +0.1**
comp=Z,12nm,0.7s,mb4.8
MYKA Terra Mystica 81.00 327⇑*iP* **P 00 13 02.3 -0.2**
comp=Z,7.8nm,0.8s,mb4.6
WATA Walderalm 81.26 328 *iP* **P 00 13 04.6 +0.7**
SNR=5.9
WTTA Wattenberg 81.29 328 *iP* **P 00 13 04.7 +0.6**
SNR=7.4
WLF Walferdange 81.32 333 *eP* **P 00 13 05.1 +0.9**
WLF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
WLF Walferdange 81.32 333 *eP* **P 00 13 05.0 +0.8**
comp=Z,5.2nm,0.8s,mb4.4
ANMO Albuquerque 81.38 51 *eP* **P 00 13 05.1 +0.3**
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO Albuquerque 81.38 51 *eP* **P 00 13 05.1 +0.2**
comp=Z,1.8nm,1.1s,mb3.8
MOTA Moosalm 81.44 329 *iP* **P 00 13 05.8 +0.9**
SNR=8.4
RETA Reutte 81.45 329⇑*iP* **P 00 13 05.4 +0.4**
comp=Z,6.9nm,0.6s,mb4.6
BAIF Baives 81.64 334 *eP* **P 00 13 05.4 -0.5**
KRUS Krusevo 81.67 319 *eP* **P 00 13 06.1 -0.1**
BFO Black Forest 81.67 331 *eP* **P 00 13 07.1 +1.0**
comp=Z,11nm,1.1s,mb4.6
BFO Black Forest 81.67 331 *eP* **P 00 13 07.1 +1.0**
BFO pmax pmax
comp=Z,11nm,1.1s,mb4.6
FETA Feichten 81.85 329⇑*iP* **P 00 13 07.5 +0.4**
comp=Z,9.6nm,1.1s,mb4.5
DAVA Damuels 81.96 329⇑*iP* **P 00 13 07.8 +0.1**
comp=Z,9.8nm,0.8s,mb4.7
CDF Champ du Feu 81.98 331 *eP* **P 00 13 07.6 -0.1**
HINF Hinteralfeld 82.64 331 *eP* **P 00 13 10.6 -0.6**
comp=Z,3.9nm,0.7s,mb4.0
HINF Hinteralfeld 82.64 331 *eP* **P 00 13 10.6 -0.6**
HINF pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
HINF Hinteralfeld 82.64 331 *eP* **P 00 13 10.6 -0.6**
comp=Z,2.0nm,0.7s,mb4.1
HAU Haudompre 82.66 332⇑*iP* **P 00 13 11.6 +0.3**
comp=Z,8.4nm,0.8s,mb4.3
HAU Haudompre 82.66 332⇑*iP* **P 00 13 11.6 +0.3**
HAU pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
HAU Haudompre 82.66 332⇑*iP* **P 00 13 11.6 +0.3**
comp=Z,4.2nm,0.8s,mb4.3
LOR Lormes 84.16 333⇑*iP* **P 00 13 18.7 -0.3**
comp=Z,20nm,0.9s,mb4.6
LOR Lormes 84.16 333⇑*iP* **P 00 13 18.7 -0.3**
LOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
LOR Lormes 84.16 333⇑*iP* **P 00 13 18.7 -0.3**
comp=Z,9.9nm,0.9s,mb4.6
FLN La Foliniere 84.25 336 *eP* **P 00 13 18.1 -1.3**
comp=Z,8.1nm,0.6s,mb4.4
FLN La Foliniere 84.25 336 *eP* **P 00 13 18.1 -1.3**
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
FLN La Foliniere 84.25 336 *eP* **P 00 13 18.1 -1.3**
comp=Z,4.1nm,0.6s,mb4.4
LDF La Druitiere 84.30 336 *eP* **P 00 13 19.1 -0.5**
comp=Z,16nm,0.8s,mb4.6
LDF La Druitiere 84.30 336 *eP* **P 00 13 19.1 -0.5**
LDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
LDF La Druitiere 84.30 336 *eP* **P 00 13 19.1 -0.5**
comp=Z,7.8nm,0.8s,mb4.6
MNTX Cornudas Mount 84.32 52 *eP* **P 00 13 20.4 +0.3**
comp=Z,4.2nm,1.1s,mb4.2
MNTX *ep*P pP 00 13 36.8 -2.0
SSF Saint Saulge 84.46 333⇑*iP* **P 00 13 20.2 -0.3**
comp=Z,18nm,1.0s,mb4.5
SSF Saint Saulge 84.46 333⇑*iP* **P 00 13 20.2 -0.3**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
SSF Saint Saulge 84.46 333⇑*iP* **P 00 13 20.2 -0.3**
comp=Z,8.8nm,1.0s,mb4.5
AQU L'Aquila 84.54 324 *eP* **P 00 13 21.8 +0.8**
AQU pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
AQU L'Aquila 84.54 324 *eP* **P 00 13 21.8 +0.8**
comp=Z,9.0nm,0.4s,mb5.0
AQU L'Aquila 84.54 324 ⇓*iP* **P 00 13 22.1 +1.1**
GDL2 Guadalupe Moun 84.56 51 *eP* **P 00 13 21.4 +0.1**
LPL La Plagne 84.63 330 *eP* **P 00 13 21.9 +0.5**
comp=Z,15nm,0.5s,mb4.8
LPL La Plagne 84.63 330 *eP* **P 00 13 21.9 +0.5**
LPL pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
LPL La Plagne 84.63 330 *eP* **P 00 13 21.9 +0.5**
comp=Z,7.6nm,0.5s,mb4.9
LPG La Plagne 84.64 330⇑*iP* **P 00 13 22.0 +0.6**
comp=Z,28nm,0.6s,mb5.0
LPG La Plagne 84.64 330⇑*iP* **P 00 13 22.0 +0.6**
LPG pmax pmax
comp=Z,14nm,0.6s,mb5.1
LPG La Plagne 84.64 330⇑*iP* **P 00 13 22.0 +0.6**
comp=Z,14nm,0.6s,mb5.1
GRR Gorron 84.70 336 *eP* **P 00 13 21.5 -0.2**
comp=Z,14nm,0.7s,mb4.7
GRR Gorron 84.70 336 *eP* **P 00 13 21.5 -0.2**
GRR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
GRR Gorron 84.70 336 *eP* **P 00 13 21.5 -0.2**
comp=Z,7.1nm,0.7s,mb4.7
SMF Signal de Mont 84.70 333 *eP* **P 00 13 21.6 -0.1**
comp=Z,16nm,0.8s,mb4.7
SMF Signal de Mont 84.70 333 *eP* **P 00 13 21.6 -0.1**
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SMF Signal de Mont 84.70 333 *eP* **P 00 13 21.6 -0.1**
comp=Z,8.2nm,0.8s,mb4.7
AVF Avril sur Loir 84.75 333⇑*iP* **P 00 13 21.9 -0.1**
comp=Z,14nm,0.5s,mb4.9
AVF Avril sur Loir 84.75 333⇑*iP* **P 00 13 21.9 -0.1**
AVF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
AVF Avril sur Loir 84.75 333⇑*iP* **P 00 13 21.9 -0.1**
comp=Z,7.3nm,0.5s,mb4.9
BNI Bardonecchia 85.04 330 *eP* **P 00 13 23.4 -0.1**
BNI pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BNI Bardonecchia 85.04 330 *eP* **P 00 13 23.4 -0.1**
comp=Z,3.8nm,0.6s,mb4.5
GVD Gavdhos 85.09 313 *eP* **P 00 13 23.7 -0.2**
comp=Z,30nm,0.7s,mb5.3
BGF Bois d'Agland 85.12 333 *eP* **P 00 13 23.7 -0.1**
comp=Z,21nm,1.0s,mb4.7
BGF Bois d'Agland 85.12 333 *eP* **P 00 13 23.7 -0.1**
BGF pmax pmax
comp=Z,11nm,1.0s,mb4.7
BGF Bois d'Agland 85.12 333 *eP* **P 00 13 23.7 -0.1**
comp=Z,10nm,1.0s,mb4.7
MBDF Montbardon 85.28 330⇑*iP* **P 00 13 24.4 -0.3**
comp=Z,21nm,0.7s,mb4.9
MBDF Montbardon 85.28 330⇑*iP* **P 00 13 24.4 -0.3**
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MBDF Montbardon 85.28 330⇑*iP* **P 00 13 24.4 -0.3**
comp=Z,10nm,0.7s,mb4.9
SGMF Saint Gilles 85.33 337 *eP* **P 00 13 24.9 +0.1**
ORIF Oris-en-Rattie 85.46 330⇑*iP* **P 00 13 25.8 +0.3**
comp=Z,21nm,0.7s,mb4.9
ORIF Oris-en-Rattie 85.46 330⇑*iP* **P 00 13 25.8 +0.3**
ORIF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 85.46 330⇑*iP* **P 00 13 25.8 +0.3**
comp=Z,10nm,0.7s,mb4.9
ROSF Rostrenen 85.46 338 *eP* **P 00 13 25.7 +0.2**
comp=Z,15nm,0.7s,mb4.8
ROSF Rostrenen 85.46 338 *eP* **P 00 13 25.7 +0.2**
ROSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ROSF Rostrenen 85.46 338 *eP* **P 00 13 25.7 +0.2**
comp=Z,7.3nm,0.7s,mb4.7
TIP Timpagrande 85.54 320 *eP* **P 00 13 26.2 +0.1**
comp=Z,6.2nm,1.0s,mb4.5
TCF Toulx Ste Croi 85.57 333 *eP* **P 00 13 26.3 +0.2**
SSB Saint Sauveur 85.64 331 *eP* **P 00 13 26.1 -0.3**
SSB pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SSB Saint Sauveur 85.64 331 *eP* **P 00 13 26.1 -0.4**
comp=Z,5.5nm,0.7s,mb4.6
QUIF Quistinic 85.81 337 *eP* **P 00 13 27.2 0.0**
comp=Z,14nm,0.6s,mb4.8
QUIF Quistinic 85.81 337 *eP* **P 00 13 27.2 0.0**
QUIF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
QUIF Quistinic 85.81 337 *eP* **P 00 13 27.2 0.0**
comp=Z,7.0nm,0.6s,mb4.8
WMOK Wichita Mounta 85.85 46 *eP* **P 00 13 27.5 -0.2**
WMOK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
WMOK Wichita Mounta 85.85 46 *eP* **P 00 13 27.5 -0.2**
comp=Z,3.8nm,1.0s,mb4.3
VIVF Saint-Julien-l 85.95 331⇑*iP* **P 00 13 28.1 +0.1**
comp=Z,10nm,0.6s,mb4.6
VIVF Saint-Julien-l 85.95 331⇑*iP* **P 00 13 28.1 +0.1**
VIVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
VIVF Saint-Julien-l 85.95 331⇑*iP* **P 00 13 28.1 +0.1**
comp=Z,5.2nm,0.6s,mb4.6
MFF Saint Martin d 86.07 335⇑*iP* **P 00 13 28.9 +0.4**
comp=Z,12nm,0.7s,mb4.7
MFF Saint Martin d 86.07 335⇑*iP* **P 00 13 28.9 +0.4**
MFF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MFF Saint Martin d 86.07 335⇑*iP* **P 00 13 28.9 +0.4**
comp=Z,6.2nm,0.7s,mb4.7
FRF La Foret Royal 86.32 329 *eP* **P 00 13 30.2 +0.4**
SMRF Simiane la Rot 86.37 330 *eP* **P 00 13 30.3 +0.2**
LMR La Mourre 86.57 329 *eP* **P 00 13 31.3 +0.2**
RJF Les Rejaudoux 86.67 333⇑*iP* **P 00 13 31.8 +0.3**
comp=Z,12nm,0.6s,mb4.7
RJF Les Rejaudoux 86.67 333⇑*iP* **P 00 13 31.8 +0.3**
RJF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
RJF Les Rejaudoux 86.67 333⇑*iP* **P 00 13 31.8 +0.3**
comp=Z,5.9nm,0.6s,mb4.7
CAF Calviac 86.81 333⇑*iP* **P 00 13 33.0 +0.8**
comp=Z,34nm,0.7s,mb5.1
CAF Calviac 86.81 333⇑*iP* **P 00 13 33.0 +0.8**
CAF pmax pmax
comp=Z,17nm,0.7s,mb5.1
CAF Calviac 86.81 333⇑*iP* **P 00 13 33.0 +0.8**
comp=Z,17nm,0.7s,mb5.1
LASF Ste Croix 86.92 331 *eP* **P 00 13 33.9 +1.1**
comp=Z,23nm,1.1s,mb4.7
TXAR Lajitas Array 87.05 53 P **P 00 13 33.5 -0.2**
comp=Z,0.8nm,0.6s,mb3.8,baz=295,slow=3.3,SNR=11
LFF La Frestale 87.25 334 *eP* **P 00 13 35.0 +0.7**
comp=Z,38nm,0.8s,mb5.1
LFF La Frestale 87.25 334 *eP* **P 00 13 35.0 +0.7**
LFF pmax pmax
comp=Z,19nm,0.8s,mb5.1
LFF La Frestale 87.25 334 *eP* **P 00 13 35.0 +0.7**
comp=Z,19nm,0.8s,mb5.1
ETSF Etsaut 89.49 333⇑*iP* **P 00 13 45.8 +0.8**
comp=Z,11nm,0.7s,mb4.7
ETSF Etsaut 89.49 333⇑*iP* **P 00 13 45.8 +0.8**
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ETSF Etsaut 89.49 333⇑*iP* **P 00 13 45.8 +0.8**
comp=Z,5.6nm,0.7s,mb4.7
KEST Kesra 91.77 323 P **P 00 13 55.4 -0.3**
comp=Z,3.1nm,0.9s,mb4.5,baz=170,slow=16,SNR=8.5
ESDC Sonseca Array 93.51 334 P **P 00 14 03.5 -0.2**
comp=Z,1.6nm,0.6s,mb4.5,baz=20,slow=4.3,SNR=8.4
ESDC Sonseca Array 93.51 334 P **P 00 14 03.5 -0.2**
LHS Liberty Hill 94.79 34 *eP* **P 00 14 10.5 +0.9**
LHS *e**PP pP 00 14 28.2 -0.4
TORD Torodi Ar. Bea 114.48 317 PKP PKiKP 00 19 27.0 -1.1
comp=Z,0.1nm,0.3s,baz=18,slow=1.6,SNR=2.5
VNA2 Neumayer--Watz 146.70 198 *e*PKPdf PKPdf 00 20 27.9 +1.4
VNA2 *e* 00 20 47.7
VNA3 Neumayer Olymp 146.96 196 *e*PKPdf PKPdf 00 20 28.0 +1.1
VNA3 *e* 00 20 51.8

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*ISCJB **10** 00:08:09.6±1.3, 36°.15N±0°.05×21°.95E±0°.07, h1km±8km,*
Error ellipse: s-maj=10.5km s-min=8.0km az=145.4
*ATH **10** 00:08:09.1, 36°.13N×21°.93E, h5km, MD3.4/5*
*NEIC **10** 00:08:09.3, 36°.14N×21°.93E, h5km, MD3.5(ATH), After ATH.*
*CSEM **10** 00:08:10.7±0.5, 36°.20N×22°.02E, h2km, MD3.5, Error ellipse: s-maj=10.7km s-min=6.8km az=46.0*
*THE **10** 00:08:11.4, 36°.24N×21°.98E, h0km±2km, ML3.4/3, Error ellipse: s-maj=3.5km s-min=1.4km az=243.0*
ISC 10 00:08:09.7±1.5, **36°.15N**±0°.05×**21°.93E**±0°.08, **h0**km±7km,
n32, σ0**59**/**44**, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.91**	**81**	*e*PB	**Pg**	**00 08 27.0**	**-0.2**
KYTH	**Kithira**	**0.91**	**81**	*e*Pb	**Pg**	**00 08 27.0**	**-0.2**
VLI	**Veliai**	**0.99**	**55**	*e*PG	**Pg**	**00 08 28.3**	**-0.5**
VLI				*e*SB	**Sg**	**00 08 42.7**	**+1.0**
VLI	**Veliai**	**0.99**	**55**	*e*Pg	**Pg**	**00 08 28.3**	**-0.5**
VLI				*e*Sb	**Sg**	**00 08 42.7**	**+1.0**
ITM	**Ithomi**	**1.03**	**0**	*e*PG	**Pg**	**00 08 28.9**	**-0.6**
ITM				*e*SB	**Sb**	**00 08 44.3**	**-0.1**
ITM	**Ithomi**	**1.03**	**0**	P	**Pg**	**00 08 28.8**	**-0.7**
ITM				S	**Sg**	**00 08 43.4**	**+0.6**
ITM	**Ithomi**	**1.03**	**0**	*e*Pg	**Pg**	**00 08 28.9**	**-0.6**
ITM				S	**Sg**	**00 08 43.4**	**+0.6**
ITM				*e*Sb	**Sb**	**00 08 44.3**	**-0.1**
VLX	**Vlachokerasia**	**1.27**	**17**	P	**Pg**	**00 08 33.0**	**-1.1**
VLX				S	**Sg**	**00 08 50.7**	**+0.1**
VLX	**Vlachokerasia**	**1.27**	**17**	P	**Pg**	**00 08 33.0**	**-1.1**
VLX				S	**Sg**	**00 08 50.7**	**+0.1**
DID	**Didima**	**1.71**	**37**	P	**Pn**	**00 08 40.8**	**0.0**
DID				S	**Sn**	**00 09 03.0**	**-0.4**
DID	**Didima**	**1.71**	**37**	P	**Pn**	**00 08 40.8**	**0.0**
DID				S	**Sn**	**00 09 03.0**	**-0.4**
KARN	**Karanos**	**1.78**	**114**	P	**Pn**	**00 08 41.8**	**0.0**
KARN	**Karanos**	**1.78**	**114**	P	**Pn**	**00 08 41.8**	**0.0**
GUR	**Goura**	**1.81**	**10**	*e*PN	**Pb**	**00 08 43.5**	**-0.3**
GUR	**Goura**	**1.81**	**10**	P	**Pn**	**00 08 42.0**	**-0.2**
GUR	**Goura**	**1.81**	**10**	P	**Pn**	**00 08 42.0**	**-0.2**
GUR	**Goura**	**1.81**	**10**	*e*Pn	**Pb**	**00 08 43.5**	**-0.3**
LTK	**Loutraki**	**2.05**	**24**	*e*PG	**Pb**	**00 08 47.7**	**-0.1**
LTK	**Loutraki**	**2.05**	**24**	P	**Pn**	**00 08 45.9**	**+0.5**
LTK	**Loutraki**	**2.05**	**24**	P	**Pn**	**00 08 45.9**	**+0.5**
LTK	**Loutraki**	**2.05**	**24**	*e*Pg	**Pb**	**00 08 47.7**	**-0.1**
LAKA	**Lakka**	**2.09**	**1**	P	**Pn**	**00 08 47.3**	**+1.4**
LAKA				S	**Sn**	**00 09 11.9**	**-0.7**
LAKA	**Lakka**	**2.09**	**1**	P	**Pn**	**00 08 47.3**	**+1.4**
LAKA				S	**Sn**	**00 09 11.9**	**-0.7**
TRIZ	**Trizonia**	**2.21**	**3**	P	**Pb**	**00 08 50.6**	**0.0**
TRIZ	**Trizonia**	**2.21**	**3**	P	**Pb**	**00 08 50.6**	**0.0**
EFP	**Efpalio**	**2.27**	**360**	P	**Pb**	**00 08 51.2**	**-0.4**
EFP	**Efpalio**	**2.27**	**360**	P	**Pb**	**00 08 51.2**	**-0.4**
VLS	**Valsamata**	**2.29**	**333**	P	**Pn**	**00 08 49.1**	**+0.4**
VLS	**Valsamata**	**2.29**	**333**	P	**Pn**	**00 08 49.1**	**+0.4**
LKR	**Lokris**	**2.64**	**19**	P	**Pn**	**00 08 53.1**	**-0.4**
LKR	**Lokris**	**2.64**	**19**	P	**Pn**	**00 08 53.1**	**-0.4**
EVR	**Evrytania**	**2.76**	**358**	*e*Pg	**Pb**	**00 09 01.0**	**+1.0**

IDC 10 00:14:50.9±14.0, **5°.62S**×**128°.71E**, **h171**km±154km,
mb2.8/1, **mb1 3.4**/4, **mb1mx3.1**/17, **mbtmp3.2**/4, **ML3.9**/3,
Error ellipse: s-maj=96.9km s-min=48.8km az=38.0,
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.77**	**193**	P	Pn	00 17 46.4	+0.1
	0.5nm,0.3s,baz=19,slow=11,SNR=23						
FITZ				S	Sn	00 20 11.3	+3.2
	0.2nm,0.3s,baz=6.0,slow=19,SNR=2.7						
WRA	**Warramunga Arr**	**15.26**	**159**	P	Pn	00 18 18.7	+1.2
	0.6nm,0.3s,baz=336,slow=12,SNR=10.0						
WRA				S	S	00 20 54.3	-13
	0.1nm,0.3s,baz=337,slow=21,SNR=3.8						
ASAR	**Alice Springs**	**18.63**	**165**	P	P	00 18 54.6	-0.9
	0.2nm,0.3s,baz=343,slow=12,SNR=18						
ASAR				S	S	00 22 00.7	-18
	0.2nm,0.3s,baz=347,slow=20,SNR=9.1						
MKAR	**Makanchi Array**	**66.37**	**327**	P	P	00 25 21.5	+0.2
	0.1nm,0.4s,baz=118,slow=8.7,SNR=4.9						

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*IDC **10** 00:20:17.7±11.0, 31°.27N×142°.66E, h0km, mb3.5/2,*
mb1 3.7/3, mb1mx3.3/22, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=429.4km s-min=143.6km az=22.0
*JMA **10** 00:21:32.4±0.1, 33°.84N×137°.28E, h360km, M2.9*
*ISCJB **10** 00:21:33.8±1.1, 34°.1N±0°.1×137°.3E±0°.1, h349km±8km,*
mb2.8/2, Error ellipse: s-maj=23.1km s-min=10.1km az=152.2
ISC 10 00:21:35.0±1.1, **34°.1N**±0°.1×**137°.3E**±0°.1, **h342**km±8km, **n18**,
σ1**21**/**24**, **mb2.8**/2, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.60**	**300**	P	**Pn**	**00 22 19.8**	**+0.3**
JKN2	**Miekihoku**	**0.90**	**280**	P	**Pn**	**00 22 19.1**	**-0.3**
JWY	**Kouya**	**1.45**	**275**	P	**Pn**	**00 22 21.6**	**-0.4**
JOD2	**Odawara 2**	**1.85**	**51**	P	**Pn**	**00 22 25.8**	**+1.4**
JWT	**Wachi**	**1.99**	**307**	P	**Pn**	**00 22 25.3**	**-0.1**
JRY	**Ryogami san**	**2.31**	**33**	P	**Pn**	**00 22 30.1**	**+2.4**
JRY				*e*S	**S**	**00 23 12.9**	**+2.8**
JHU	**Hanno**	**2.37**	**42**	P	**Pn**	**00 22 29.8**	**+1.6**
JHU				*e*S	**S**	**00 23 12.1**	**+1.1**
JAI	**Aioi**	**2.42**	**264**	P	**Pn**	**00 22 27.1**	**-1.6**
MAT	**Matsushiro**	**2.54**	**16**	P	**Pn**	**00 22 28.3**	**-1.3**
BSO4	**Boso 4**	**2.63**	**69**	P	**Pn**	**00 22 31.3**	**+0.9**
BSO3	**Boso 3**	**2.71**	**74**	P	**Pn**	**00 22 31.1**	**0.0**
BSO3				*e*S	**S**	**00 23 14.7**	**-1.5**
JAG	**Ashikaga**	**2.90**	**36**	P	**Pn**	**00 22 33.6**	**+0.9**
JAG				*e*S	**S**	**00 23 19.5**	**+0.4**
JYT	**Yasato**	**3.16**	**47**	P	**Pn**	**00 22 34.7**	**-0.4**
JYT				*e*S	**S**	**00 23 22.1**	**-1.4**
JHO	**Hitachi**	**3.64**	**46**	P	**Pn**	**00 22 40.2**	**+0.4**
JHO				*e*S	**S**	**00 23 29.8**	**-2.2**
JFK	**Kawauchi**	**4.35**	**40**	*e*S	**S**	**00 23 43.9**	**-1.3**
KSRS	**Korea Array**	**8.35**	**296**	Pn	**Pn**	**00 23 32.7**	**-0.5**
	0.4nm,0.3s,baz=110,slow=12,SNR=8.3						
SONM	**Songino Array**	**26.89**	**310**	P	**P**	**00 26 47.0**	**+1.4**
	0.3nm,0.3s,mb3.0,baz=108,slow=9.5,SNR=3.9						
MKAR	**Makanchi Array**	**42.94**	**304**	P	**P**	**00 28 60.0**	**-1.2**
	0.3nm,0.5s,mb2.7,baz=95,slow=8.5,SNR=6.7						

IDC 10 00:26:08.4±2.7, **17°.99S**×**173°.87W**, **h0**km, **mb3.8**/5,
mb1 4.2/5, **mb1mx3.9**/17, **mbtmp3.8**/5, **Error ellipse:**
s-maj=213.5km s-min=24.6km az=155.0, Tonga Islands

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

WRA	Warramunga Arr	48.86	259	P	P	00 34 56.3	+0.1
	0.5nm,0.3s,baz=97,slow=7.6,SNR=4.0						
ASAR	Alice Springs	48.93	254	P	P	00 34 56.4	-0.2
	4.9nm,0.8s,baz=89,slow=8.0,SNR=39						
NVAR	Mina Array Bea	76.55	42	P	P	00 38 01.5	+1.0
	0.9nm,0.6s,baz=217,slow=7.1,SNR=3.8						
TXAR	Lajitas Array	82.42	56	P	P	00 38 33.4	+0.6
	0.3nm,0.9s,baz=240,slow=5.1,SNR=3.2						
PDAR	Pinedale Array	84.48	42	P	P	00 38 42.0	-1.1
	0.4nm,0.7s,baz=216,slow=4.5,SNR=4.2						
BRTR	Keskin Array B	147.83	318	PKPbc	PKPbc	00 45 55.4	-0.1
	0.6nm,0.9s,baz=143,slow=3.1,SNR=3.3						

*ISCJB **10** 00:31:02.3±1.7,37°.0N±0°.4×135°.4E±0°.2, h374km±26km, mb2.7/2, Error ellipse: s-maj=58.6km s-min=24.0km az=163.7*
*IDC **10** 00:31:02.7±2.1,36°.93N×135°.37E, h368km±29km, mb2.5/2, mb1 2.7/4, mb1mx2.5/27, mbtmp2.7/4, Error ellipse: s-maj=64.7km s-min=28.6km az=164.0*

ISC 10 00:31:03.1±1.7,37°.0N±0°.4×135°.4E±0°.2, h370km±26km, n6, σ0$14/6, mb2.7/2, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	Matsushiro	2.33	100	P	Pn	00 31 58.6	+0.1
MJAR	Matsushiro Arr	2.33	100	P	Pn	00 31 58.4	-0.1
	2.1nm,0.3s,baz=281,slow=9.8,SNR=37						
KSRS	Korea Array	5.96	277	P	Pn	00 32 34.0	0.0
	0.6nm,0.3s,baz=99,slow=12,SNR=25						
ASAJ	Asahikawa	9.00	35	P	Pn	00 33 09.1	0.0
	16nm,0.3s,baz=227,slow=12,SNR=43						
SONM	Songino Array	23.84	306	P	P	00 35 44.2	-0.1
	0.4nm,0.7s,mb2.8,baz=115,slow=10,SNR=3.7						
MKAR	Makanchi Array	40.02	301	P	P	00 38 03.6	+0.1
	0.2nm,0.5s,mb2.6,baz=96,slow=8.5,SNR=3.6						

*NEIC **10** 00:31:50.9±10.0, 39°.05N×142°.09E, h35km, mb3.9/3, Error ellipse: s-maj=203.0km s-min=12.7km az=109.0*
NEIC Recorded [1 JMA] in Iwate and Miyagi.
*IDC **10** 00:31:50.5±9.0, 39°.33N×141°.44E, h0km, mb3.7/2, mb1 3.6/3, mb1mx3.3/24, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=168.5km s-min=35.1km az=106.0*
*ISCJB **10** 00:31:53.2±0.9, 38°.76N±0°.04×141°.8E±0°.1, h69km±4km, mb3.8/5, Error ellipse: s-maj=13.7km s-min=6.5km az=16.6*
*JMA **10** 00:31:54.3, 38°.75N×141°.79E, h61km±1km, M3.7*
JMA Felt I J1.

ISC 10 00:31:54.1±0.9, 38°.76N±0°.04×141°.8E±0°.1, h62km±4km, n19, σ0$65/30, mb3.8/5, 5C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.34	338	⇑P	Pn	00 32 05.0	+0.3
OFUJ				S	Sn	00 32 12.5	0.0
JIO	Ouri	0.49	231	⇑P	Pn	00 32 05.9	-0.1
JIO				S	Sn	00 32 14.1	-0.7
JMK	Ichinoseki	0.52	292	⇑P	Pn	00 32 06.3	0.0
JMK				S	Sn	00 32 15.0	-0.3
JOM	Ohasama	0.83	330	⇑P	Pn	00 32 10.2	+0.2
JOM				eS	Sn	00 32 22.0	+0.3
JOU	Okura	1.00	247	⇓P	Pn	00 32 11.9	-0.2
JOU				eS	Sn	00 32 25.1	-0.4
JYK	Kaneyama	1.16	278	⇓P	Pn	00 32 14.3	0.0
JYK				eS	Sn	00 32 29.3	-0.1
JMM	Marumori	1.21	223	P	Pn	00 32 14.3	-0.6
JMM				eS	Sn	00 32 29.7	-0.8
JYS	Shiratake	1.49	249	⇓P	Pn	00 32 18.8	+0.2
JYS				eS	Sn	00 32 37.1	0.0
JFK	Kawauchi	1.58	209	⇑P	Pn	00 32 19.8	-0.1
JFK				eS	Sn	00 32 38.8	-0.6
MAJO	Matsushiro	3.63	234	ePn	Pn	00 32 48.9	+1.2
MAT	Matsushiro	3.63	234	P	Pn	00 32 50.1	+2.3
MAT				S	Sn	00 33 29.8	+0.4
MJAR	Matsushiro Arr	3.63	234	Pn	Pn	00 32 49.6	+1.8
	2.0nm,0.3s,baz=40,slow=12,SNR=6.7						
MJAR				Sn	Sn	00 33 36.9	+7.6
	0.4nm,0.3s,baz=75,slow=29,SNR=4.0						
ZALV	Zalesovo Beam	41.02	311	P	P	00 39 30.5	-0.4
	0.4nm,0.4s,mb3.5,baz=82,slow=10,SNR=3.2						
MK31	Makanchi Array	43.51	301	eP	P	00 39 51.0	-0.1
MKAR	Makanchi Array	43.51	301	P	P	00 39 50.7	-0.4
	1.0nm,0.7s,mb3.6,baz=90,slow=9.6,SNR=11						
MKAR	Makanchi Array	43.51	301	P	P	00 39 50.7	-0.4
KURK	Kurchatov	45.15	307	eP	P	00 40 03.7	-0.5
	2.2nm,0.8s,mb4.0						
TKM2	Tokmak 2	49.12	297	eP	P	00 40 35.2	-0.1
	1.0nm,0.7s,mb4.0						
ABKAR	Akbulak array	57.09	309	eP	P	00 41 33.2	-0.5
	0.6nm,0.7s,mb3.7						

*NNC **10** 00:45:43.6±1.4, 44°.21N×84°.19E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=9.5km s-min=7.0km az=144.0*

BJI 10 00:45:41.1, 44°.30N×84°.04E, h12km, ML2.7/5, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	2.68	99	Pg	Pg	00 46 31.7	-0.7
WMQ				Sg	Sg	00 46 58.5	-8.6
WMQ				smax			
	comp=N,39nm,0.5s						
WMQ				smax			
	comp=E,32nm,0.5s						
MK31	Makanchi Array	2.78	334	⇓Pn	Pn	00 46 31.2	+5.8
	comp=E,2.7nm,0.3s,baz=153,slow=14,SNR=70						
MK31				⇑Sn	Sn	00 47 08.0	+9.1
	comp=E,4.8nm,0.3s,baz=148,slow=29						
MK31				⇑Lg		00 47 15.6	
	comp=E,7.5nm,0.3s,baz=151,slow=26						
TKM2	Tokmak 2	6.28	260	⇑Lg		00 49 04.8	
	comp=E,2.9nm,0.5s						
KURBB	Kurchatov Arra	7.34	331	⇓Lg		00 49 40.0	
	comp=E,2.4nm,0.7s						
KURK	Kurchatov	7.39	332	⇓Lg		00 49 43.2	
	comp=E,5.0nm,0.6s						

*ISCJB **10** 00:46:41.7±0.7, 10°.35N±0°.02×62°.29W±0°.02, h15km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=4.9*
*FUNV **10** 00:46:42.4, 10°.40N×62°.21W, h18km, MW3.7*
*TRN **10** 00:46:43.0, 10°.46N×62°.17W, h3km, MD3.6*
*NEIC **10** 00:46:43.6, 10°.47N×62°.14W, h3km, MD3.6(TRN), After TRN.*

ISC 10 00:46:41.6±0.4, 10°.35N±0°.02×62°.28W±0°.02, h11km±3km, n42, σ1$07/77, 6C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.30	11	eP	Pg	00 46 48.0	+0.3
GUIV				eS	Sg	00 46 52.0	+0.2
ALNG	Atlantic LNG	0.61	106	eP	Pg	00 46 54.3	+0.9
ALNG				eS	Sg	00 47 01.8	+0.3
ALNG	Atlantic LNG	0.61	106	eP	Pg	00 46 54.3	+0.9
ALNG				eS	Sg	00 47 01.8	+0.3
TCE	Chacachacare	0.63	56	⇑eP	Pg	00 46 52.2	-1.6
TCE				eS	Sg	00 46 59.6	-2.4
TCE	Chacachacare	0.63	56	⇑eP	Pg	00 46 52.2	-1.6
TCE				eS	Sg	00 46 59.6	-2.4
BUAY	Buenos Aires	0.64	112	eP	Pg	00 46 55.1	+1.2
BUAY				eS	Sg	00 47 03.8	+1.5
BUAY	Buenos Aires	0.64	112	eP	Pg	00 46 55.1	+1.2
BUAY				eS	Sg	00 47 03.8	+1.5
GUNV	Guanoco	0.67	254	eP	Pg	00 46 55.7	+1.0
GUNV				eS	Sg	00 47 07.3	+3.8
SIPA	Siparia	0.79	105	eP	Pg	00 46 56.8	-0.1
SIPA				eS	Sg	00 47 07.6	+0.4
SIPA	Siparia	0.79	105	eP	Pg	00 46 56.8	-0.1
SIPA				eS	Sg	00 47 07.6	+0.4
TPP	Pointe-a-Pierr	0.82	92	eP	Pg	00 46 56.4	-1.0
TPP				eS	Sg	00 47 06.9	-1.3
TPP	Pointe-a-Pierr	0.82	92	eP	Pg	00 46 56.4	-1.0
TPP				eS	Sg	00 47 06.9	-1.3
TRN	Trinidad (W)	0.92	71	⇑eP	Pg	00 46 56.7	-2.5
TRN				eS	Sg	00 47 10.3	-0.9
TRN	Trinidad (W)	0.92	71	⇑eP	Pg	00 46 56.7	-2.5
TRN				eS	Sg	00 47 10.3	-0.9
CRUV	Carupano	0.99	289	⇓iP	Pg	00 47 00.5	-0.2
CRUV				eS	Sg	00 47 13.8	+0.2
TBH	Brigand Hill	1.21	83	eP	Pn	00 47 03.5	-0.9
TBH	Brigand Hill	1.21	83	eP	Pn	00 47 03.5	-0.9
TBH				eS	Sb	00 47 19.1	-1.0
ITEV	Isla Los Testi	1.30	320	⇓eP	Pn	00 47 05.3	-0.5
ITEV				eS	Sb	00 47 21.9	-1.0
ORIV	Oritupano	1.69	221	eS	Sn	00 47 33.6	+1.0
TPR	Prospect	1.70	61	⇑eP	Pn	00 47 10.9	-0.3
TPR				eS	Sn	00 47 33.5	+0.5
TPR	Prospect	1.70	61	⇑eP	Pn	00 47 10.9	-0.3
TPR				eS	Sn	00 47 33.5	+0.5
BOT	Bacolet	1.74	62	eP	Pn	00 47 13.2	+1.4
BOT	Bacolet	1.74	62	eP	Pn	00 47 13.2	+1.4
GRGR	Grenville	1.88	19	ePn	Pn	00 47 12.4	-1.3
GRGR				eSn	Sn	00 47 37.0	-0.4
GRW	Mount Saint Ca	1.90	19	eP	Pn	00 47 14.8	+0.8
GRW				eS	Sn	00 47 38.3	+0.4
GRW	Mount Saint Ca	1.90	19	eP	Pn	00 47 14.8	+0.8
GRW				eS	Sn	00 47 38.3	+0.4
TOSP	Speyside	1.96	61	eP	Pn	00 47 14.8	0.0
TOSP				eS	Sn	00 47 39.5	+0.1
GRHS	Sauteurs	1.97	19	eP	Pn	00 47 16.4	+1.5
GRHS				eS	Sn	00 47 39.5	-0.1
GRHS	Sauteurs	1.97	19	eP	Pn	00 47 16.4	+1.5
GRHS				eS	Sn	00 47 39.5	-0.1
GRSS	Sisters	2.05	19	eP	Pn	00 47 17.4	+1.3
GRSS				eS	Sn	00 47 42.3	+0.7
GRSS	Sisters	2.05	19	eP	Pn	00 47 17.4	+1.3
GRSS				eS	Sn	00 47 42.3	+0.7
RIOV	Rio Grande	2.31	168	eP	Pn	00 47 19.5	-0.2
RIOV				eS	Sn	00 47 47.0	-1.2
PCRV	Puerto La Cruz	2.32	266	eP	Pn	00 47 20.0	+0.2
PCRV				eS	Sn	00 47 47.2	-1.1
IBAV	Isla La Blanqu	2.69	303	eP	Pn	00 47 24.9	+0.1
IBAV				eS	Sn	00 47 55.6	-1.7
SVB	Belmont	3.08	19	eP	Pn	00 47 32.8	+2.6
SVB				eS	Sn	00 48 11.9	+4.9
SVB	Belmont	3.08	19	eP	Pn	00 47 32.8	+2.6
SVB				eS	Sn	00 48 06.2	-0.8
MCLT	Moule a Chique	3.59	21	eP	Pn	00 47 39.0	+1.8
MCLT				eS	Sn	00 48 21.5	+1.8
MCLT	Moule a Chique	3.59	21	eP	Pn	00 47 39.0	+1.8
MCLT				eS	Sn	00 48 18.4	-1.3
MERV	Las Mercedes	4.10	255	eP	Pn	00 47 44.1	-0.2
MERV				eS	Sn	00 48 30.3	-2.0
BIM	Bigot	4.31	16	eP	Pn	00 47 47.6	+0.5
MVM	Montagne Vaucl	4.39	18	eP	Pn	00 47 49.4	+1.1
FDF	Fort de France	4.50	14	eP	Pn	00 47 50.1	+0.4

*IDC **10** 00:48:12.5±2.4, 12°.15N×143°.73E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/22, mbtmp3.9/6, Error ellipse: s-maj=62.1km s-min=27.1km az=157.0*
*NEIC **10** 00:48:19.1±1.9, 12°.39N×143°.71E, h35km, mb4.0/4, Error ellipse: s-maj=52.2km s-min=17.5km az=168.0*

ISC 10 00:48:13.1±6.9, 12°.2N±0°.3×143°.7E±0°.2, h2km±42km, n11, σ0$86/12, mb3.9/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.83	39	Pn	Pn	00 48 45.4	-0.2
	44nm,0.3s,baz=203,slow=4.5,SNR=12						
GUMO				Sn	Sn	00 49 09.4	+0.1
	28nm,0.3s,baz=22,slow=23,SNR=9.0						
SONM	Songino Array	47.25	326	P	P	00 56 48.1	+0.5
	0.4nm,0.5s,mb3.6,baz=145,slow=7.4,SNR=3.7						
MKAR	Makanchi Array	61.72	317	P	P	00 58 33.6	+0.7
	0.2nm,0.5s,mb3.5,baz=91,slow=7.3,SNR=3.9						
KURK	Kurchatov	64.93	320	eP	P	00 58 54.4	+0.2
	1.7nm,0.8s,mb4.1						
BVAR	Borovoye Array	70.33	322	P	P	00 59 28.6	+0.4
	1.7nm,0.4s,mb4.4,baz=102,slow=7.5,SNR=15						
BRVK	Borovoye	70.40	322	eP	P	00 59 28.8	+0.2
	1.8nm,0.5s,mb4.3						
ABKAR	Akbulak array	76.82	318	eP	P	01 00 05.9	-0.5
	0.6nm,0.6s,mb3.7						
YKA	Yellowknife Ar	84.65	27	P	P	01 00 46.9	-1.2
	0.4nm,0.6s,mb3.8,baz=289,slow=5.4,SNR=8.1						
RES	Resolute Bay	86.19	13	eP	P	01 00 55.9	+0.2
	0.5nm,0.6s,mb3.9						
NVAR	Mina Array Bea	88.71	51	P	P	01 01 10.1	+1.6
	0.3nm,0.3s,mb4.0,baz=262,slow=4.5,SNR=2.6						
FINES	FINESS Array B	91.96	335	P	P	01 01 21.1	-2.1
	0.5nm,0.5s,mb4.1,baz=76,slow=8.0,SNR=6.5						

*ISCJB **10** 00:54:38.4±0.5, 50°.11N±0°.03×18°.39E±0°.03, h0km, Error ellipse: s-maj=4.3km s-min=2.8km az=12.4*
*IPEC **10** 00:54:40.3±0.2, 50°.05N×18°.47E, h4km±2km, ML1.9/4, Error ellipse: s-maj=2.0km s-min=1.1km az=163.0*
*CSEM **10** 00:54:40.0±0.2, 50°.05N×18°.45E, h1km, ML2.8/4, Error ellipse: s-maj=4.3km s-min=2.5km az=2.0*
*WAR **10** 00:54:40.2, 50°.05N×18°.44E*
*PRU **10** 00:54:41.2, 50°.05N×18°.35E, h0km*

ISC 10 00:54:39.8±0.5, 50°.06N±0°.03×18°.40E±0°.03, h0km, n28, σ1$21/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.14	279	ePg	Pg	00 54 44.1	+1.7
RAC				eSg	Sg	00 54 47.5	+3.4
OKC	Ostrava-Krasne	0.28	216	ePG	Pg	00 54 46.3	+1.2
OKC				eSG	Sg	00 54 49.5	+0.8
	comp=Z,67nm,0.5s						
OKC	Ostrava-Krasne	0.28	216	ePg	Pg	00 54 46.2	+1.1
	baz=45						
MORC	Moravsky Berou	0.62	243	ePg	Pg	00 54 52.4	+0.6
	baz=65						
MORC				eSg	Sg	00 55 01.5	+1.7
	comp=Z,24nm,0.2s,baz=65						
OJC	Ojcow	0.91	80	ePg	Pg	00 54 57.2	-0.1
OJC				eSg	Sg	00 55 09.6	+0.5
OJC	Ojcow	0.91	80	ePg	Pg	00 54 57.1	-0.2
	baz=259						
OJC				eSg	Sg	00 55 09.6	+0.5
JAVC	Velka Javorina	1.30	202	ePg	Pg	00 55 05.6	+1.0
	baz=23						
JAVC				eSg	Sg	00 55 24.5	+3.1
	comp=Z,14nm,0.5s						
DPC	Dobruska-Polom	1.37	283	ePG	Pg	00 55 06.1	+0.1
DPC				eSG	Sg	00 55 24.6	+0.9
	comp=Z,24nm,0.6s						
DPC	Dobruska-Polom	1.37	283	ePg	Pg	00 55 06.0	0.0
	baz=102						
DPC				eSg	Sg	00 55 25.0	+1.3
	baz=102						
NIE	Niedzica	1.40	117	ePg	Pg	00 55 06.1	-0.5
NIE				eSg	Sg	00 55 25.5	+0.8
NIE	Niedzica	1.40	117	ePg	Pg	00 55 06.1	-0.5
NIE				eSg	Sg	00 55 25.5	+0.8
VRAC	Vranov	1.40	238	ePg	Pg	00 55 06.4	-0.1
	baz=58						
VRAC				eSg	Sg	00 55 24.9	+0.3
	comp=Z,15nm,0.2s,baz=58						
KOLL	Kolacno	1.49	180	ePN	Pn	00 55 07.4	-0.3
KOLL				eSN	Sn	00 55 27.9	+0.1
KOLL	Kolacno	1.49	180	ePn	Pn	00 55 07.4	-0.3
KOLL				eSn	Sn	00 55 27.9	+0.1
UPC	Upice	1.60	287	ePG	Pg	00 55 10.2	-0.2
UPC				eSG	Sg	00 55 31.6	+0.5
VYHS	Vyhne	1.60	170	ePN	Pn	00 55 08.7	-0.5
VYHS				eSN	Sn	00 55 30.3	-0.2
VYHS	Vyhne	1.60	170	ePn	Pn	00 55 08.7	-0.5
VYHS				eSn	Sn	00 55 30.3	-0.2
KRUC	Moravsky	1.65	233	ePn	Pn	00 55 10.3	+0.4
	baz=53						
KRUC				eSg	Sg	00 55 32.6	-0.1
	comp=Z,7.0nm,0.2s,baz=53						
SMOL	Smolenice	1.68	203	eSN	Sn	00 55 31.2	-1.3
SMOL	Smolenice	1.68	203	eSn	Sn	00 55 31.2	-1.3
STHS	Stebnicka Huta	1.95	108	ePN	Pn	00 55 16.8	+2.6
STHS				eSN	Sn	00 55 45.9	+6.5
STHS	Stebnicka Huta	1.95	108	ePn	Pn	00 55 16.8	+2.6
TREC	Trest	2.04	249	ePG	Pg	00 55 16.7	-2.2
KECS	Kecovo	2.09	138	ePN	Pn	00 55 14.4	-1.6
KECS				eSN	Sn	00 55 40.8	-1.9
PRU	Pruhonice	2.49	270	ePG	Pg	00 55 26.2	-1.3
PRU				eSG	Sg	00 55 58.5	-1.3
	comp=Z,3.9nm,0.3s						
BRG	Berggiesshubel	2.96	288	PG	Pg	00 55 36.2	-0.3
BRG				SG	Sg	00 56 14.7	-0.2
KHC	Kasperske Hory	3.27	255	ePN	Pn	00 55 32.7	+0.4
KHC				ePG	Pg	00 55 39.8	-2.7
KHC				eSG	Sg	00 56 22.4	-2.5
	comp=Z,3.7nm,0.3s						
CLL	Collm	3.65	292	ePg	Pg	00 55 51.0	+1.2
CLL				eSg	Sg	00 56 34.0	-3.1

*IDC **10** 01:01:49.4±8.3, 36°.26N×71°.18E, h169km±73km, mb3.0/4, mb1 3.0/6, mb1mx2.8/25, mbtmp2.9/6, Error ellipse: s-maj=64.9km s-min=38.8km az=141.0*
*ISCJB **10** 01:01:53.9±0.8, 36°.78N±0°.07×70°.9E±0°.1, h190km±9km, mb3.2/4, Error ellipse: s-maj=19.2km s-min=7.9km az=30.6*
*NEIC **10** 01:01:54.2±0.9, 36°.63N×71°.06E, h197km±9km, mb3.6/4, Error ellipse: s-maj=24.5km s-min=8.9km az=127.0*
*NNC **10** 01:01:58.7±9.6, 37°.10N×70°.98E, h200km±119km, mb2.3, mpv3.4, Error ellipse: s-maj=93.8km s-min=45.3km az=7.0*

ISC 10 01:01:54.7±0.8, 36.76N±0°.08×70.9E±0°.1, h187km±9km, n18, σ1$06/22, mb3.2/4, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.69	215	ePn	Pn	01 02 40.4	+0.3
KBL				eSn	Sn	01 03 14.8	-0.5
KSH	Kashi	4.84	54	ePn	Pn	01 03 01.8	-4.9
KSH				Sn	Sn	01 03 51.5	-12
KSH				smax			
	comp=N,17nm,0.7s						
KSH				smax			
	comp=E,19nm,0.6s						
AML	Almayashu	5.78	21	ePn	Pn	01 03 19.6	+0.8
	comp=E,13nm,0.4s						
UCH	Uchtor	6.13	26	ePn	Pn	01 03 24.4	+1.0
	comp=E,2.7nm,0.4s						
KK09	Karatay Array	6.36	357	⇓P	Pn	01 03 27.6	+1.2
	comp=E,0.8nm,0.3s,baz=173,slow=12						
KK09				⇑S	Sn	01 04 36.5	-2.5
	comp=E,4.0nm,0.8s,baz=180,slow=23						
AAK	Ala-Archa	6.48	24	ePn	Pn	01 03 28.7	+0.7
TKM2	Tokmak 2	7.13	29	⇑P	Pn	01 03 35.5	-0.9
	comp=E,3.9nm,0.8s						
TKM2				⇑S	Sn	01 04 53.7	-3.2
	comp=E,2.7nm,0.9s						
TKM2	Tokmak 2	7.13	29	ePn	Pn	01 03 36.9	+0.4
	comp=E,2.4nm,0.5s						
MKAR	Makanchi Array	13.12	37	P	Pn	01 04 53.2	-0.7
	comp=E,0.1nm,0.3s,baz=233,slow=12,SNR=3.2						
AB31	Akbulak array	14.83	331	⇑P	Pn	01 05 14.1	-1.1
	comp=E,0.6nm,0.6s,baz=141,slow=12,SNR=9.5						
ABKAR	Akbulak array	14.83	331	eP	Pn	01 05 15.4	+0.3
	comp=E,0.5nm,0.5s						
KURK	Kurchatov	15.01	19	eP	Pn	01 05 18.0	+0.7
	comp=E,0.7nm,0.4s						
BVAR	Borovoye Array	16.27	359	P	Pn	01 05 33.0	+0.3
	comp=E,0.1nm,0.3s,baz=182,slow=10.0,SNR=4.0						
AKTO	Aktyubinsk	16.52	330	⇓P	Pn	01 05 36.3	+0.6
	comp=E,0.2nm,0.6s						
FINES	FINESS Array B	37.23	326	P	P	01 08 48.9	+1.1
	comp=E,0.9nm,0.7s,mb3.5,baz=119,slow=11,SNR=4.1						
NOA	NORSAR Array B	44.14	323	P	P	01 09 44.8	+0.6
	comp=E,0.6nm,0.7s,mb3.4,baz=96,slow=7.7,SNR=3.4						
TORD	Torodi Ar. Bea	65.66	268	P	P	01 12 17.1	-2.0
	comp=E,0.4nm,0.9s,mb3.2,baz=51,slow=6.0,SNR=2.3						
YKA	Yellowknife Ar	80.99	3	P	P	01 13 47.3	-0.6
	comp=E,0.1nm,0.4s,mb2.8,baz=356,slow=4.9,SNR=4.8						

TRN 10 01:20:05.9, 17°.01N×61°.37W, h3km, MD3.2, M3.5(FDF), 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	Boggy Peak	0.47	275	⇑iP	Pg	01 20 18.2	+3.2
BPA				eS	Sg	01 20 27.0	+5.9
LZG	Guadaloupe-1	0.95	205	eP	Pg	01 20 28.3	+4.1
BCG	Bois Riant Cap	0.95	195	eP	Pg	01 20 28.1	+3.9
SCG	Saint Claude	1.02	197	eP	Pg	01 20 29.5	+4.0
PHG	Guadaloupe-2	1.02	195	eP	Pg	01 20 29.3	+3.7
HMG	Houelmont	1.07	198	eP	Pg	01 20 30.6	+4.1
MGG	Marie-Galante	1.09	178	eP	Pg	01 20 29.8	+3.1
TBG	Guadaloupe-3	1.18	193	eP	Pg	01 20 31.8	+3.2

MAN 10 01:31:02, 8°.80N×126°.63E, h1km, mb4.4, ML3.3, MS3.1, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.66	203	⇓iP	Pg	01 31 15.9	+1.2
BIPH				iS	Sg	01 31 19.1	-4.2
BUTP	Butuan	1.01	280	eP	Pg	01 31 22.5	+1.1
BUTP				eS	Sg	01 31 33.6	-0.8
BUKP	Musuan	1.80	240	eP	Pn	01 31 35.9	+1.7
BUKP				eS	Sn	01 31 57.5	-0.1
MATI	Mati	1.87	191	eP	Pn	01 31 35.8	+0.6
MATI				eS	Sn	01 31 57.3	-2.2
CGP	Cagayan de Oro	1.94	260	⇑iP	Pn	01 31 37.6	+1.5
CGP				iS	Sn	01 32 02.5	+1.3
TBP	Tagbilaran	2.87	288	eP	Pn	01 31 49.9	+0.9
TBP				eS	Sn	01 32 20.6	-3.5
LLP	Lapu-Lapu	3.03	300	⇓iP	Pn	01 31 53.5	+2.4
LLP	Lapu-Lapu	3.03	300	⇑iP	Pg	01 32 02.2	+2.1
LLP				eS	Sn	01 32 28.9	+0.9
PAGZ	Pagadian	3.35	254	eP	Pn	01 31 58.5	+3.0
SNPH	Sibulan	3.39	279	⇓eP	Pn	01 31 57.9	+1.8
SNPH				iS	Sn	01 32 38.4	+1.4

*ISCJB **10** 01:49:51.8±0.7, 2°.1S±0°.1×68°.0E±0°.1, h10km, mb4.2/22, Error ellipse: s-maj=17.8km s-min=14.4km az=43.0*
*IDC **10** 01:49:52.0±0.8, 2°.08S×68°.05E, h0km, mb4.0/13, mb1 4.1/13, mb1mx3.9/25, mbtmp4.0/13, MS4.1/1, Ms1 4.1/1, ms1mx2.9/33, Error ellipse: s-maj=23.2km s-min=20.0km az=41.0*
*NEIC **10** 01:49:53.4±0.5, 2°.18S×68°.00E, h10km, mb4.5/10, Error ellipse: s-maj=14.3km s-min=13.1km az=64.0*

ISC 10 01:49:53.7±0.7, 2°.2S±0°.1×68°.0E±0°.1, h10km, n33, σ0$99/26, mb4.2/22, Carlsberg Ridge

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

WRAB Tennant Creek 67.06 111 *eP* **P 02 00 48.0 +0.2**
3.5nm,0.7s,mb4.5
ASAR Alice Springs 67.11 115 P **P 02 00 48.3 +0.2**
1.1nm,0.7s,mb4.0,baz=287,slow=6.2,SNR=15
KSRS Korea Array 67.92 48 P **P 02 00 52.4 -0.5**
0.5nm,0.3s,mb4.0,baz=234,slow=7.4,SNR=3.1
NOA NORSAR Array B 76.48 335 P **P 02 01 43.5 0.0**
1.0nm,0.9s,mb3.7,baz=115,slow=6.1,SNR=2.7
YKA Yellowknife Ar 119.77 1 PKP PKPdf 02 08 42.3 -1.6
0.3nm,0.9s,baz=359,slow=2.0,SNR=4.7
PDAR Pinedale Array 139.50 357 PKP PKPdf 02 09 20.8 -1.1
0.3nm,0.7s,baz=35,slow=5.4,SNR=4.0
HWUT Hardware Ranch 140.72 359 *e*PKPdf PKPdf 02 09 23.3 -0.8
WMOK Wichita Mounta 145.32 341 *e*PKPbc PKPbc 02 09 31.9 -0.3
OTAV Otavalo 146.40 267 *e*PKPbc PKPbc 02 09 36.5 +0.3
MNTX Cornudas Mount 149.96 349 *e*PKPbc PKPbc 02 09 45.5 +0.4
TXAR Lajitas Array 151.83 344 PKPbc PKPbc 02 09 49.8 +0.3
0.9nm,0.8s,baz=52,slow=2.1,SNR=11

IDC 10 02:07:39.5±8.4, 2°22N×126°64E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/19, mbtmp3.9/4, MS3.8/2, Ms1 3.8/2, ms1mx2.9/31, Error ellipse: s-maj=134.2km s-min=97.9km az=142.0, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.22**	**183**	P	P	02 12 16.5	+0.3
	2.0nm,0.7s,baz=9.9,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**23.29**	**161**	P	P	02 12 49.6	+0.5
	7.8nm,0.8s,baz=340,slow=11,SNR=24						
JOW	**Kunigami**	**24.52**	**4**	LR	LR	02 20 40.0	
	comp=Z,2μm,21.2s,baz=276,slow=32						
ASAR	**Alice Springs**	**26.68**	**165**	P	P	02 13 20.3	-0.2
	0.5nm,0.6s,baz=343,slow=7.3,SNR=13						
KSRS	**Korea Array**	**35.08**	**2**	LR	LR	02 29 43.7	
	comp=Z,28nm,20.8s,baz=15,slow=38						
STKA	**Stephens Creek**	**36.76**	**158**	P	P	02 14 48.6	-0.3
	2.2nm,0.7s,baz=329,slow=9.2,SNR=6.7						

*ISCJB **10** 02:10:51.6±1.1, 37°47N±0°04×20°54E±0°05, h3km±5km, Error ellipse: s-maj=8.1km s-min=4.9km az=137.6*
*CSEM **10** 02:10:52.4±0.5, 37°49N×20°54E, h10km, MD3.5, Error ellipse: s-maj=10.4km s-min=4.5km az=40.0*
*THE **10** 02:10:53.8, 37°49N×20°66E, h1km±1km, ML3.5/3, Error ellipse: s-maj=1.8km s-min=0.6km az=233.0*
*NEIC **10** 02:10:54.6, 37°59N×20°69E, h19km, MD3.5(ATH), After ATH.*
*ATH **10** 02:10:54.6, 37°59N×20°69E, h19km±2km, MD3.5/6*
ISC 10 02:10:52.3±1.0, 37°46N±0°04×20°57E±0°05, h3km±4km, n45, σ0s90/71, 2C, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.67**	**15**	P	**Pg**	**02 11 05.2**	**0.0**
KFL				S	**Sg**	**02 11 14.7**	**+0.8**
VLS	**Valsamata**	**0.72**	**1**	*e*PN	**Pg**	**02 11 06.4**	**+0.4**
VLS				*e*SN	**Sg**	**02 11 15.7**	**+0.4**
VLS	**Valsamata**	**0.72**	**1**	P	**Pg**	**02 11 06.4**	**+0.4**
VLS				S	**Sg**	**02 11 16.6**	**+1.3**
VLS	**Valsamata**	**0.72**	**1**	P	**Pg**	**02 11 06.4**	**+0.4**
VLS				*e*Sn	**Sg**	**02 11 15.7**	**+0.4**
VLS				S	**Sg**	**02 11 16.6**	**+1.3**
RLS	**Riolos of Patr**	**0.93**	**50**	*e*PN	**Pg**	**02 11 09.0**	**-1.1**
RLS				*e*SN	**Sg**	**02 11 20.7**	**-1.5**
PYL	**PYLOS**	**1.09**	**121**	P	**Pg**	**02 11 13.3**	**0.0**
PYL	**PYLOS**	**1.09**	**121**	P	**Pg**	**02 11 13.3**	**0.0**
ITM	**Ithomi**	**1.12**	**104**	P	**Pg**	**02 11 13.2**	**-0.5**
ITM				S	**Sg**	**02 11 28.9**	**+0.7**
ITM	**Ithomi**	**1.12**	**104**	P	**Pg**	**02 11 13.2**	**-0.5**
ITM				S	**Sg**	**02 11 28.9**	**+0.7**
UPR	**University Cam**	**1.27**	**49**	P	**Pg**	**02 11 16.3**	**-0.3**
UPR	**University Cam**	**1.27**	**49**	P	**Pg**	**02 11 16.3**	**-0.3**
LAKA	**Lakka**	**1.36**	**55**	P	**Pn**	**02 11 17.3**	**-0.9**
LAKA				S	**Sg**	**02 11 36.3**	**+0.3**
LAKA	**Lakka**	**1.36**	**55**	P	**Pn**	**02 11 17.3**	**-0.9**
LAKA				S	**Sg**	**02 11 36.3**	**+0.3**
EFP	**Efpalio**	**1.43**	**47**	*e*PN	**Pn**	**02 11 18.6**	**-0.6**
EFP	**Efpalio**	**1.43**	**47**	P	**Pn**	**02 11 17.2**	**-2.0**
EFP	**Efpalio**	**1.43**	**47**	P	**Pn**	**02 11 17.2**	**-2.0**
EFP	**Efpalio**	**1.43**	**47**	*e*Pn	**Pn**	**02 11 18.6**	**-0.6**
VLX	**Vlachokerasia**	**1.45**	**93**	P	**Pn**	**02 11 18.5**	**-0.9**
VLX				S	**Sb**	**02 11 38.8**	**+0.1**
VLX	**Vlachokerasia**	**1.45**	**93**	P	**Pn**	**02 11 18.5**	**-0.9**
VLX				S	**Sb**	**02 11 38.8**	**+0.1**
GUR	**Goura**	**1.48**	**71**	P	**Pn**	**02 11 19.3**	**-0.6**
GUR				S	**Sn**	**02 11 39.7**	**-0.2**
GUR	**Goura**	**1.48**	**71**	P	**Pn**	**02 11 19.3**	**-0.6**
GUR				S	**Sn**	**02 11 39.7**	**-0.2**
EVR	**Evrytania**	**1.75**	**34**	*e*PN	**Pn**	**02 11 23.7**	**+0.1**
EVR	**Evrytania**	**1.75**	**34**	*e*Pn	**Pn**	**02 11 23.7**	**+0.1**
LTK	**Loutraki**	**1.98**	**73**	P	**Pn**	**02 11 27.1**	**+0.3**
LTK				S	**Sn**	**02 11 52.1**	**0.0**
LTK	**Loutraki**	**1.98**	**73**	P	**Pn**	**02 11 27.1**	**+0.3**
LTK				S	**Sn**	**02 11 52.1**	**0.0**
IGT	**Igoumenitsa**	**2.08**	**355**	P	**Pn**	**02 11 28.5**	**+0.4**
IGT				S	**Sn**	**02 11 55.6**	**+1.1**
IGT	**Igoumenitsa**	**2.08**	**355**	P	**Pn**	**02 11 28.5**	**+0.4**
IGT				S	**Sn**	**02 11 55.6**	**+1.1**
AGG	**Agios Georgios**	**2.09**	**41**	P	**Pn**	**02 11 30.0**	**+1.8**
AGG	**Agios Georgios**	**2.09**	**41**	P	**Pn**	**02 11 30.0**	**+1.8**
DID	**Didima**	**2.12**	**88**	P	**Pn**	**02 11 28.7**	**0.0**
DID				S	**Sn**	**02 11 55.6**	**0.0**
DID	**Didima**	**2.12**	**88**	P	**Pn**	**02 11 28.7**	**0.0**
DID				S	**Sn**	**02 11 55.6**	**0.0**
LKR	**Lokris**	**2.26**	**57**	*e*PN	**Pn**	**02 11 31.1**	**+0.5**
LKR	**Lokris**	**2.26**	**57**	P	**Pn**	**02 11 31.2**	**+0.6**
LKR	**Lokris**	**2.26**	**57**	*e*Pn	**Pn**	**02 11 31.1**	**+0.5**
KYTH	**Kithira**	**2.30**	**120**	*e*PN	**Pn**	**02 11 33.8**	**+2.6**
KEK	**Kerkira**	**2.33**	**345**	P	**Pn**	**02 11 32.8**	**+1.3**
KEK	**Kerkira**	**2.33**	**345**	P	**Pn**	**02 11 32.8**	**+1.3**
THL	**Klokotos Trika**	**2.39**	**28**	P	**Pn**	**02 11 33.1**	**+0.8**
THL				S	**Sn**	**02 12 02.8**	**+0.7**
THL	**Klokotos Trika**	**2.39**	**28**	P	**Pn**	**02 11 33.1**	**+0.8**
THL				S	**Sn**	**02 12 02.8**	**+0.7**
KRUS	**Krusevo**	**3.94**	**7**	*e*Pn	**Pn**	**02 11 53.1**	**-0.6**
KRUS				*e*Sg	**Sn**	**02 12 39.7**	**-0.7**
KRUS	**Krusevo**	**3.94**	**7**	*e*Pn	**Pn**	**02 11 53.1**	**-0.6**
STON	**Ston**	**5.83**	**339**	*e*Pn	**Pn**	**02 12 19.0**	**-0.7**
STON				Sn	**Sn**	**02 13 22.8**	**-4.3**
STON	**Ston**	**5.83**	**339**	*e*Pn	**Pn**	**02 12 18.9**	**-0.8**
NVLJ	**Novalja**	**8.30**	**331**	⇑*i*Pn	**Pn**	**02 12 53.0**	**-0.6**
NVLJ				Sn	**Sn**	**02 14 24.8**	**-3.0**
NVLJ	**Novalja**	**8.30**	**331**	⇑*i*Pn	**Pn**	**02 12 53.0**	**-0.5**
NVLJ				Sn	**Sn**	**02 14 24.8**	**-2.9**

*NEIC **10** 02:18:47.9±1.9, 23°28N×142°57E, h63km±16km, mb4.5/11, Error ellipse: s-maj=11.8km s-min=7.0km az=80.0*
*ISCJB **10** 02:18:50.5±1.7, 23°25N±0°07×142°4E±0°1, h99km±14km, mb4.3/22, Error ellipse: s-maj=20.0km s-min=12.1km az=173.1*
*IDC **10** 02:18:52.1±2.0, 23°27N×142°49E, h99km±18km, mb3.9/12, mb1 4.0/13, mb1mx3.8/25, mbtmp3.9/13, Error ellipse: s-maj=23.4km s-min=11.9km az=85.0*
ISC 10 02:18:52.1±1.6, 23°27N±0°07×142°5E±0°1, h99km±13km, n34, σ0s92/31, mb4.3/22, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.82**	**356**	P	**Pn**	**02 19 50.6**	**+1.7**
	97nm,0.3s,baz=197,slow=6.7,SNR=54						
CBIJ				S	**Sn**	**02 20 32.6**	**-0.2**
	159nm,0.3s,baz=270,slow=20,SNR=25						
MJAR	**Matsushiro Arr**	**13.74**	**345**	P	**Pn**	**02 21 59.5**	**-3.0**
	1.9nm,0.3s,baz=159,slow=12,SNR=12						
MAT	**Matsushiro**	**13.74**	**345**	P	**Pn**	**02 21 59.9**	**-2.7**
KSRS	**Korea Array**	**18.89**	**322**	P	**Pn**	**02 23 07.4**	**+1.1**
	0.8nm,0.3s,baz=135,slow=12,SNR=24						
HIA	**Hailar**	**31.54**	**331**	*eP*	**P**	**02 25 03.6**	**-1.0**
	4.1nm,0.5s,mb4.4						
SONM	**Songino Array**	**37.73**	**320**	P	**P**	**02 25 58.2**	**+0.1**
	0.5nm,0.4s,mb3.7,baz=126,slow=7.3,SNR=4.9						
WRAB	**Tennant Creek**	**43.67**	**191**	*eP*	**P**	**02 26 46.9**	**-0.2**
	7.8nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**43.68**	**191**	P	**P**	**02 26 47.4**	**+0.3**
	3.8nm,0.4s,mb4.5,baz=9.5,slow=8.1,SNR=26						
FITZ	**Fitzroy Crossi**	**44.29**	**203**	P	**P**	**02 26 51.6**	**-0.5**
	2.1nm,0.9s,mb3.8,baz=37,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**47.39**	**191**	P	**P**	**02 27 16.0**	**-0.4**
	1.0nm,0.5s,mb3.8,baz=16,slow=12,SNR=22						
ZALV	**Zalesovo Beam**	**52.59**	**321**	P	**P**	**02 27 54.6**	**-0.8**
	1.4nm,0.3s,mb4.4,baz=98,slow=9.3,SNR=3.3						
MK31	**Makanchi Array**	**53.17**	**312**	*eP*	**P**	**02 27 59.7**	**-0.2**
MKAR	**Makanchi Array**	**53.17**	**312**	P	**P**	**02 28 00.3**	**+0.5**
	1.8nm,0.5s,mb4.4,baz=98,slow=8.0,SNR=26						
MKAR	**Makanchi Array**	**53.17**	**312**	P	**P**	**02 28 00.3**	**+0.5**
STKA	**Stephens Creek**	**54.84**	**181**	P	**P**	**02 28 11.7**	**-0.3**
	1.7nm,0.4s,mb4.4,baz=9.0,slow=7.9,SNR=7.6						
KURK	**Kurchatov**	**55.90**	**316**	P	**P**	**02 28 20.1**	**+0.6**
	14nm,0.7s,mb5.1,baz=93,slow=7.7,SNR=21						
KURK	**Kurchatov**	**55.90**	**316**	*eP*	**P**	**02 28 19.2**	**-0.2**
	5.2nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**57.89**	**307**	*eP*	**P**	**02 28 35.0**	**+1.3**
	1.9nm,0.5s,mb4.4						
UCH	**Uchtor**	**58.73**	**306**	*eP*	**P**	**02 28 40.7**	**+1.2**
	1.9nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**61.07**	**319**	P	**P**	**02 28 55.9**	**+0.5**
	11nm,0.5s,mb5.2,baz=93,slow=7.9,SNR=68						
BRVK	**Borovoye**	**61.13**	**319**	*eP*	**P**	**02 28 56.0**	**+0.2**
	11nm,0.7s,mb5.0						
ARU	**Arti**	**67.63**	**323**	*eP*	**P**	**02 29 38.0**	**0.0**
	3.6nm,0.5s,mb4.5						
ABKAR	**Akbulak array**	**67.98**	**316**	*eP*	**P**	**02 29 40.0**	**-0.4**
	0.8nm,0.3s,mb4.0						
YKA	**Yellowknife Ar**	**75.37**	**28**	P	**P**	**02 30 24.6**	**+0.1**
	0.5nm,0.5s,mb3.5,baz=292,slow=5.9,SNR=14						
YKA	**Yellowknife Ar**	**75.37**	**28**	P	**P**	**02 30 24.6**	**+0.1**
FINES	**FINESS Array B**	**81.50**	**334**	P	**P**	**02 30 57.0**	**-1.2**
	1.0nm,0.5s,mb3.9,baz=68,slow=4.9,SNR=9.5						
NVAR	**Mina Array Bea**	**82.67**	**51**	P	**P**	**02 31 05.6**	**+0.8**
	0.7nm,0.7s,mb3.6,baz=270,slow=5.4,SNR=3.8						
DUG	**Dugway**	**85.77**	**48**	*eP*	**P**	**02 31 21.0**	**+0.5**
	2.3nm,0.6s,mb4.3						
SDCO	**Great Sand Dun**	**91.93**	**47**	*eP*	**P**	**02 31 50.5**	**+0.8**
	0.8nm,0.6s,mb4.1						
ANMO	**Albuquerque**	**92.71**	**50**	*eP*	**P**	**02 31 52.2**	**-1.1**
	2.2nm,1.0s,mb4.4						
PLCA	**Paso Flores**	**147.26**	**130**	PKPbc	PKPbc	02 38 24.0	0.0
	1.1nm,0.6s,baz=224,slow=3.1,SNR=4.7						
PLCA	**Paso Flores**	**147.26**	**130**	PKPbc	PKPbc	02 38 24.0	0.0
LPAZ	**La Paz**	**150.40**	**82**	PKPbc	PKPbc	02 38 33.0	+0.3
	2.3nm,0.6s,baz=315,slow=2.9,SNR=11						
LPAZ	**La Paz**	**150.40**	**82**	PKPbc	PKPbc	02 38 33.0	+0.3

*ISCJB **10** 02:33:47.4±0.3, 53°43N±0°03×108°25E±0°03, h10km, mb3.5/5, Error ellipse: s-maj=4.0km s-min=2.2km az=148.4*
*IDC **10** 02:33:47.0±1.1, 53°52N×107°97E, h0km, mb3.4/4, mb1 3.6/8, mb1mx3.4/29, mbtmp3.4/8, ML3.3/3, Error ellipse: s-maj=24.0km s-min=19.6km az=94.0*
*NEIC **10** 02:33:48.8±0.6, 53°59N×108°03E, h10km, mb3.8/3, Error ellipse: s-maj=10.7km s-min=9.4km az=145.0*
*BYKL **10** 02:33:49.4±0.3, 53°49N×108°03E, h8km±6km, FELT I=III MSK at Onguren*
*MOS **10** 02:33:50.5±1.2, 53°49N×107°79E, h21km, mb4.6/1, Error ellipse: s-maj=15.0km s-min=9.9km az=66.1*
MOS Felt (II) at Onguryeny.
ISC 10 02:33:48.8±0.2, 53°49N±0°02×108°16E±0°03, h10km, n52, σ1s38/99, mb3.5/5, 10C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGRR	**Ongureny**	**0.37**	**295**	⇑*i*PG	**Pg**	**02 33 56.1**	**0.0**
OGRR				*e*		02 34 00.7	
OGRR				pmax	pmax		
	comp=Z,5μm,0.2s						
OGRR				smax			
	comp=N,15μm,0.1s						
OGRR	**Ongureny**	**0.37**	**295**	⇑*i*Pg	**Pg**	**02 33 56.1**	**0.0**
OGRR				*i* Sg	**Sg**	**02 34 00.7**	**-0.3**
OGRR				Pmax			
	comp=N,5μm,0.1s						
OGRR				Smax			
	comp=N,9μm,0.2s						
MXMB	**Maximikha**	**0.42**	**122**	⇓*i*Pg	**Pg**	**02 33 57.9**	**+1.0**
	comp=N,292nm,0.4s						
MXMB				⇑*i*Pg	**Pg**	**02 33 57.9**	**+1.0**
	comp=N,730nm,0.4s						
MXMB				⇑*i*Pg	**Pg**	**02 33 57.9**	**+1.0**
	comp=N,2μm,0.4s						
MXMB				*e*Sg	**Sg**	**02 34 04.2**	**+1.7**
MXMB				*e*		02 34 10.6	
MXMB				Pmax			
	comp=N,2μm,0.3s						
MXMB				max			
	comp=N,4μm,0.3s						
SYVR	**Suvo**	**1.11**	**80**	*e*PN	**Pg**	**02 34 09.9**	**-0.2**
SYVR				pmax	pmax		
	comp=Z,222nm,0.4s						
SYVR	**Suvo**	**1.11**	**80**	⇑*i*Pg	**Pg**	**02 34 10.0**	**-0.1**
	comp=Z,29nm,0.8s						
SYVR				⇑*i*Pg	**Pg**	**02 34 10.0**	**-0.1**
	comp=Z,119nm,0.8s						
SYVR				⇑*i*Pg	**Pg**	**02 34 10.0**	**-0.1**
	comp=Z,126nm,0.8s						
SYVR				*e*Sg	**Sg**	**02 34 25.5**	**+0.9**
SYVR				Pmax			
	comp=Z,212nm,0.5s						
SYVR				Smax			
	comp=Z,1μm,0.5s						
TRG	**Tyrgan**	**1.31**	**237**	*e*PG	**Pn**	**02 34 11.8**	**-1.3**
TRG				*e*		02 34 28.8	
TRG				pmax	pmax		
	comp=Z,238nm,0.2s						
TRG				smax			
	comp=E,3μm,0.2s						
TRG	**Tyrgan**	**1.31**	**237**	⇓*i*Pg	**Pn**	**02 34 11.8**	**-1.3**
TRG				*e*Pb	**Pb**	**02 34 12.6**	**-0.9**
TRG				*e*Sg	**Sg**	**02 34 28.9**	**-2.0**
TRG				max			
	comp=E,212nm,0.3s						
TRG				max			
	comp=E,3μm,0.2s						
UUDB	**Ulan-Yde**	**1.65**	**191**	*e*Pg	**Pg**	**02 34 18.6**	**-1.8**
UUDB				*e*Sg	**Sg**	**02 34 41.0**	**-0.8**
UUDB				Pmax			
	comp=E,255nm,0.7s						
UUDB				Smax			
	comp=E,1μm,0.5s						
FFNB	**Fofonovo**	**1.67**	**211**	*e*Pn	**Pn**	**02 34 18.5**	**+0.4**
FFNB				*e*Pg	**Pg**	**02 34 18.7**	**-2.1**
FFNB				*e*Sg	**Sg**	**02 34 40.9**	**-1.6**
FFNB				Pmax			
	comp=E,1μm,0.2s						
FFNB				Smax			
	comp=E,4μm,0.3s						
YLYR	**Ulyunkhan**	**2.25**	**51**	*e*PN	**Pb**	**02 34 30.2**	**+0.7**
YLYR				*e*		02 34 59.6	
YLYR				pmax	pmax		
	comp=Z,117nm,0.4s						
YLYR				smax			
	comp=E,332nm,0.6s						
YLYR	**Ulyunkhan**	**2.25**	**51**	⇓*i*Pn	**Pn**	**02 34 27.3**	**+1.3**
YLYR				*e*Pg	**Pg**	**02 34 30.4**	**-1.5**
YLYR				*e*Sg	**Sg**	**02 34 59.8**	**-1.2**
YLYR				Pmax			
	comp=E,143nm,0.8s						
YLYR				Smax			
	comp=E,331nm,0.4s						
NIZ	**Nizh Angarsk**	**2.43**	**19**	*e*PN	**Pb**	**02 34 32.1**	**-0.5**
NIZ				*e*		02 35 03.4	
NIZ				pmax	pmax		
	comp=Z,84nm,0.4s						
NIZ				smax			
	comp=N,481nm,0.9s						
NIZ	**Nizh Angarsk**	**2.43**	**19**	*e*Pn	**Pn**	**02 34 30.1**	**+1.6**
NIZ				*e*Pg	**Pg**	**02 34 32.2**	**-3.2**
NIZ				*e*Sn	**Sn**	**02 35 00.0**	**+1.7**
NIZ				*e*Sg	**Sg**	**02 35 03.5**	**-3.3**
NIZ				Pmax			
	comp=N,85nm,0.3s						
NIZ				Smax			
	comp=N,476nm,0.4s						
LSTR	**Listvyanka**	**2.59**	**233**	⇑*i*Pn	**Pn**	**02 34 31.4**	**+0.7**
	comp=N,52nm,0.6s						
LSTR				⇑*i*Pn	**Pn**	**02 34 31.4**	**+0.7**
	comp=N,80nm,0.6s						
LSTR				⇓*i*Pn	**Pn**	**02 34 31.4**	**+0.7**
	comp=N,75nm,0.6s						
LSTR				max		02 34 31.9	
	comp=N,128nm,0.3s						
LSTR				*e*Sg	**Sb**	**02 35 06.1**	**-1.1**
LSTR				Smax			
	comp=N,641nm,0.4s						
IRK	**Irkutsk**	**2.66**	**244**	*e*PN	**Pn**	**02 34 31.8**	**+0.1**
IRK				*e*		02 35 08.1	
IRK				pmax	pmax		
	comp=Z,83nm,0.1s						
IRK				smax			
	comp=N,4μm,0.4s						
IRK	**Irkutsk**	**2.66**	**244**	*e*Pg	**Pb**	**02 34 37.1**	**+0.6**
IRK				*e*Sn	**Sn**	**02 35 04.0**	**0.0**
IRK				*e*Sg	**Sb**	**02 35 09.2**	**0.0**
IRK				*e*		02 35 11.4	
IRK				Pmax			
	comp=N,199nm,0.4s						
IRK				max			
	comp=N,4μm,0.4s						
KMO	**Kumora**	**2.98**	**35**	*e*PN	**Pb**	**02 34 44.1**	**+2.1**
KMO				*e*		02 35 20.5	
KMO				pmax	pmax		
	comp=Z,66nm,0.4s						
KMO				smax			
	comp=N,374nm,1.2s						
KMO	**Kumora**	**2.98**	**35**	*e*PN	**Pn**	**02 34 37.2**	**+1.1**
KMO				*e*		02 34 41.0	
KMO				*e*Sg	**Sg**	**02 35 22.5**	**-2.1**
KMO				max			
	comp=N,199nm,1.1s						
KMO				Smax			
	comp=N,374nm,1.3s						
TLY	**Talaya**	**3.29**	**239**	*e*PN	**Pn**	**02 34 40.5**	**+0.1**
TLY				*e*		02 34 46.9	
TLY				*e*		02 35 27.5	
TLY				pmax	pmax		
	comp=Z,40nm,0.3s						
TLY				smax			
	comp=N,210nm,0.3s						
TLY	**Talaya**	**3.29**	**239**	*e*Pn	**Pn**	**02 34 40.5**	**+0.1**
TLY				*e*Pg	**Pb**	**02 34 46.2**	**-1.0**
TLY				*e*		02 35 19.9	
TLY				*e*Sg	**Sb**	**02 35 27.6**	**+0.3**
TLY				Pmax			
	comp=N,87nm,0.7s						
TLY				Smax			
	comp=N,609nm,0.7s						
TLY	**Talaya**	**3.29**	**239**	*e*Pn	**Pn**	**02 34 40.5**	**+0.2**
TLY				*e*Pg	**Pg**	**02 34 50.6**	**-1.2**
TLY				*e*Sg	**Sb**	**02 35 28.1**	**+0.7**
YOA	**Uoyan**	**3.36**	**36**	*e*	**Pb**	**02 34 51.7**	**+3.3**
YOA				*e*Sg	**Sg**	**02 35 34.3**	**-2.3**
YOA				max			
	comp=N,127nm,0.3s						
YOA				Smax			
	comp=N,684nm,1.2s						
CIT	**Chita**	**3.59**	**112**	*e*PN	**Pb**	**02 34 53.8**	**+1.5**
CIT				*e*		02 35 43.8	
CIT				pmax	pmax		
	comp=Z,181nm,0.1s						
CIT				smax			
	comp=E,682nm,0.6s						
CIT	**Chita**	**3.59**	**112**	*e*Pn	**Pn**	**02 34 47.5**	**+3.1**
CIT				*e*Pg	**Pg**	**02 34 56.1**	**-1.4**
CIT				*e*Sg	**Sg**	**02 35 43.7**	**-0.3**
CIT				Pmax			
	comp=E,210nm,0.2s						
CIT				Smax			
	comp=E,689nm,0.9s						
UKT	**Uakit**	**3.77**	**56**	*e*Pn	**Pn**	**02 34 49.3**	**+2.4**
UKT				*e*Pg	**Pg**	**02 34 59.7**	**-1.2**
UKT				*e*Sg	**Sg**	**02 35 49.4**	**-0.3**
UKT				Pmax			
	comp=E,64nm,1.0s						
UKT				Smax			
	comp=E,176nm,1.1s						
ARS	**Arshan**	**3.82**	**248**	*e*	**Pn**	**02 34 49.4**	**+1.8**
ARS				*e*Pg	**Pb**	**02 34 56.3**	**0.0**
ARS				*e*		02 35 33.5	
ARS				*e*Sg	**Sb**	**02 35 44.0**	**+1.4**
ARS				Pmax			
	comp=E,203nm,0.6s						
ARS				Smax			
	comp=E,2μm,0.6s						
ZAK	**Zakamensk**	**4.33**	**226**	⇓*i*Pn	**Pn**	**02 34 55.9**	**+1.3**
ZAK				*e*		02 35 10.1	
ZAK				*e*Sg	**Sg**	**02 36 03.1**	**-4.7**
ZAK				max			
	comp=E,18nm,0.8s						
ZAK				Smax			
	comp=E,100nm,0.7s						
MOY	**Mondy**	**4.73**	**250**	*e*PN	**Pn**	**02 35 02.6**	**+2.5**
MOY				*e*		02 35 10.9	
MOY				*e*S	**Sn**	**02 35 56.4**	**+1.4**
MOY				*e*		02 36 11.0	
MOY				pmax	pmax		
	comp=Z,21nm,0.4s						
MOY				pmax	pmax		
	comp=N,769nm,0.6s						
MOY	**Mondy**	**4.73**	**250**	*e*	**Pn**	**02 35 02.5**	**+2.4**
MOY				*e*Pg	**Pb**	**02 35 11.5**	**-0.3**
MOY				*e*		02 35 56.5	
MOY				*e*Sg	**Sb**	**02 36 12.0**	**+3.2**
MOY				Pmax			
	comp=N,61nm,0.8s						
MOY				Smax			
	comp=N,769nm,0.8s						
ORL	**Orlik**	**5.13**	**263**	⇑*i*Pn	**Pn**	**02 35 07.9**	**+2.3**
ORL				*e*Sn	**Sn**	**02 36 05.2**	**+0.5**
ORL				*e*Sg	**Sg**	**02 36 27.5**	**-5.8**
ORL				max			
	comp=N,58nm,0.4s						
ORL				Smax			
	comp=N,419nm,1.2s						
NLYR	**Nelyaty**	**5.29**	**52**	*e*PN	**Pb**	**02 35 23.4**	**+2.2**
NLYR				*e*		02 36 35.8	
NLYR				pmax	pmax		
	comp=Z,22nm,1.3s						
NLYR				smax			
	comp=N,166nm,1.4s						
NLYR	**Nelyaty**	**5.29**	**52**	*e*	**Pn**	**02 35 14.0**	**+6.3**
NLYR				*e*Pg	**Pg**	**02 35 27.5**	**-2.4**
NLYR				*e*Sg	**Sg**	**02 36 36.5**	**-1.8**
NLYR				Pmax			
	comp=N,21nm,1.0s						
NLYR				Smax			
	comp=N,167nm,1.4s						
BOD	**Bodaibo**	**5.46**	**35**	*e*PN	**Pb**	**02 35 25.7**	**+1.6**
BOD				pmax	pmax		
	comp=Z,12nm,0.2s						
BOD	**Bodaibo**	**5.46**	**35**	*e*	**Pn**	**02 35 15.1**	**+5.0**
BOD				*e*		02 35 30.8	
BOD				*e*Sg	**Sg**	**02 36 37.9**	**-6.0**
BOD				max			
	comp=Z,13nm,0.4s						
BOD				Smax	

ZALV Lg 02 40 53.3
comp=N,0.3nm,0.3s,baz=80,slow=21,SNR=8.2
MK31 Makanchi Array 17.82 258 *e*P **Pn 02 37 56.4 -0.2**
MKAR Makanchi Array 17.82 258 Pn **Pn 02 37 51.5 -5.1**
comp=N,0.2nm,0.3s,baz=52,slow=16,SNR=4.5
MKAR Lg 02 43 07.7
baz=64,slow=28,SNR=2.4
KURK Kurchatov 18.30 273 P **Pn 02 38 01.8 -0.6**
comp=N,0.1nm,0.3s,baz=73,slow=12,SNR=3.9
KURK Lg 02 43 24.0
comp=N,0.0nm,0.3s,baz=75,slow=29,SNR=3.3
KURK Kurchatov 18.30 273 *e*P **Pn 02 38 00.5 -1.9**
comp=N,2.5nm,0.8s
KURK Lg 02 43 24.0
TIXI Tiksi 20.35 19 *e*P **P 02 38 24.4 -0.5**
comp=N,3.6nm,0.7s
BVAR Borovoye Array 22.43 284 P **P 02 38 47.3 -0.1**
BVAR pmax pmax
comp=Z,10.0nm,0.5s
BVAR Borovoye Array 22.43 284 P **P 02 38 47.3 -0.1**
comp=Z,1.0nm,0.5s,mb3.5,baz=74,slow=12,SNR=2.8
BRVK Borovoye 22.48 284 *e*P **P 02 38 52.1 +4.1**
comp=Z,5.5nm,0.9s,mb4.0
SEY Seymchan 24.65 50 *i*P **P 02 39 12.4 +3.3**
YKA Yellowknife Ar 59.58 21 P **P 02 43 51.4 -0.6**
comp=Z,0.3nm,1.0s,mb3.3,baz=334,slow=7.5,SNR=2.9
WRA Warramunga Arr 76.54 155 P **P 02 45 39.3 +0.3**
comp=Z,0.4nm,0.7s,mb3.5,baz=344,slow=5.9,SNR=2.3
ASAR Alice Springs 80.01 156 P **P 02 45 58.7 +0.7**
comp=Z,0.2nm,0.3s,mb3.5,baz=357,slow=5.0,SNR=4.6

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*ISCJB **10** 02:45:13.8±0.6, 13°.48N±0°.05×91°.46W±0°.03, h43km±7km, mb3.9/11, Error ellipse: s-maj=8.9km s-min=3.2km az=22.8*
*IDC **10** 02:45:15.4±4.2, 13°.60N×91°.10W, h34km±29km, mb3.6/6, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/26, Error ellipse: s-maj=32.7km s-min=20.1km az=44.0*
*NEIC **10** 02:45:15.2±1.2, 13°.49N×91°.30W, h36km±11km, mb3.9/6, MD4.4(MEX), Error ellipse: s-maj=21.6km s-min=9.9km az=203.0*
*CASC **10** 02:45:16.1±2.0, 13°.61N×91°.17W, h7km±10km, MD4.1, mb3.9(NEIC)*
*MEX **10** 02:45:17.9±0.8, 13°.65N×91°.48W, h86km±19km, MD4.4*
ISC 10 02:45:15.8±0.5, 13°.56N±0°.05×91°.40W±0°.03, h40km±7km, n63, σ1°.15/87, mb3.9/11, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.79**	**343**	*e*P	**Pn**	**02 45 32.1**	**+1.6**
FUG	**Fuego 3**	**1.04**	**32**	*e*P	**Pn**	**02 45 33.8**	**-0.1**
IXG	**Ixpaco**	**1.11**	**56**	*e*P	**Pn**	**02 45 34.0**	**-0.9**
FG6		**1.12**	**27**	*e*P	**Pn**	**02 45 35.0**	**0.0**
FG6				*e*S	**Sn**	**02 45 48.3**	**-0.9**
PCG	**Pacaya**	**1.14**	**43**	*e*P	**Pn**	**02 45 35.1**	**-0.1**
TP2	**Tecpan 2**	**1.27**	**17**	*e*P	**Pn**	**02 45 38.2**	**+1.1**
TP2				*e*S	**Sn**	**02 45 54.8**	**+1.7**
NBG	**Las Nubes**	**1.45**	**45**	*e*P	**Pn**	**02 45 40.3**	**+0.7**
THIG		**1.58**	**328**	*i*P	**Pn**	**02 45 41.7**	**+0.3**
THIG				*i*S	**Sn**	**02 46 00.5**	**-0.1**
APG	**El Apazote**	**1.70**	**32**	Pg	**Pn**	**02 45 43.8**	**+0.8**
	106nm,0.3s,baz=192,slow=10.0,SNR=1.1						
APG				Lg		02 46 05.8	
	115nm,0.3s,baz=131,slow=20,SNR=13						
RTR	**El Retiro**	**1.74**	**79**	*e*P	**Pn**	**02 45 42.7**	**-0.9**
SBLS	**San Blas**	**1.75**	**81**	*e*P	**Pn**	**02 45 42.4**	**-1.4**
RBDL	**Robledal**	**1.76**	**71**	*e*P	**Pn**	**02 45 42.9**	**-0.9**
SNJE	**San Jose**	**1.77**	**80**	*e*P	**Pn**	**02 45 42.8**	**-1.3**
BOQS	**Boqueron**	**2.07**	**85**	*e*P	**Pn**	**02 45 47.1**	**-1.0**
BOQS				*e*S	**Sn**	**02 46 14.1**	**+1.4**
MTO2	**Montecristo 2**	**2.15**	**67**	*e*P	**Pn**	**02 45 48.7**	**-0.5**
MRL	**Marmol**	**2.24**	**48**	*e*P	**Pn**	**02 45 51.7**	**+1.3**
LFRS	**El Faro**	**2.28**	**88**	*e*P	**Pn**	**02 45 50.2**	**-0.7**
LFRS				*e*S	**Sn**	**02 46 17.5**	**-0.3**
LBRS	**Las Brisas**	**2.30**	**85**	*e*P	**Pn**	**02 45 50.7**	**-0.5**
SNVI	**San Vicente**	**2.49**	**88**	*e*P	**Pn**	**02 45 53.8**	**-0.2**
SNVI				*e*S	**Sn**	**02 46 23.5**	**+0.4**
PCIG		**2.77**	**321**	*i*P	**Pn**	**02 45 57.0**	**-0.7**
PCIG				*i*S	**Sn**	**02 46 29.7**	**-0.1**
CCIG	**Comitan**	**2.80**	**345**	*i*P	**Pn**	**02 45 58.6**	**+0.5**
CCIG				*i*S	**Sn**	**02 46 29.6**	**-1.1**
CCIG	**Comitan**	**2.80**	**345**	*i*P	**Pn**	**02 45 58.6**	**+0.5**
CCIG				*i*S	**Sn**	**02 46 29.6**	**-1.1**
VSM	**San Miguel**	**3.05**	**92**	*e*P	**Pn**	**02 46 03.0**	**+1.5**
BLLM	**Bellamira**	**3.08**	**92**	*e*P	**Pn**	**02 46 02.4**	**+0.4**
CAHU	**Cacacuatique**	**3.11**	**86**	*e*P	**Pn**	**02 46 01.7**	**-0.7**
CNCH	**Conchagua**	**3.48**	**94**	*e*P	**Pn**	**02 46 07.4**	**-0.1**
CNCH				*e*S	**Sn**	**02 46 47.9**	**+0.4**
TGIG		**3.61**	**333**	*i*P	**Pn**	**02 46 10.2**	**+1.0**
TGIG				*i*S	**Sn**	**02 46 48.0**	**-2.6**
TGUH	**Tegucigalpa,Un**	**4.04**	**82**	*e*Pn	**Pn**	**02 46 15.5**	**+0.3**
CMIG	**Matias Romero**	**4.86**	**317**	Pn	**Pn**	**02 46 27.4**	**+0.9**
	3.1nm,0.3s,baz=134,slow=11,SNR=25						
CMIG				Sn	**Sn**	**02 47 20.9**	**-0.6**
	4.7nm,0.3s,baz=94,slow=19,SNR=5.0						
CMIG				LR	LR	02 48 36.3	
	comp=Z,122nm,21.5s,baz=343,slow=40						
CMIG	**Matias Romero**	**4.86**	**317**	*e*P	**Pn**	**02 46 25.5**	**-1.0**
CMIG				*i*S	**Sn**	**02 47 20.0**	**-1.5**
HUIG	**Huatulco**	**5.06**	**296**	*e*P	**Pn**	**02 46 30.3**	**+1.2**
HUIG				*i*S	**Sn**	**02 47 24.6**	**-1.7**
HUIG	**Huatulco**	**5.06**	**296**	*e*P	**Pn**	**02 46 30.3**	**+1.2**
HUIG				*i*S	**Sn**	**02 47 24.6**	**-1.7**
OXX	**Oaxaca**	**6.21**	**305**	*e*P	**Pn**	**02 46 46.0**	**+0.9**
OXX				*i*S	**Sn**	**02 47 54.3**	**-0.6**
OXX	**Oaxaca**	**6.21**	**305**	*e*P	**Pn**	**02 46 46.0**	**+0.9**
OXX				*i*S	**Sn**	**02 47 54.3**	**-0.6**
VHO	**Vista Hermosa**	**6.22**	**305**	*i*P	**Pn**	**02 46 46.2**	**+1.1**
VHO				*i*S	**Sn**	**02 47 54.4**	**-0.5**
VHO	**Vista Hermosa**	**6.22**	**305**	*i*P	**Pn**	**02 46 46.2**	**+1.1**
VHO				*i*S	**Sn**	**02 47 54.4**	**-0.5**
PNIG	**Pinotepa**	**7.08**	**294**	*e*P	**Pn**	**02 46 57.6**	**+0.6**
PNIG				*i*S	**Sn**	**02 48 15.5**	**-0.8**
PNIG	**Pinotepa**	**7.08**	**294**	*e*P	**Pn**	**02 46 57.6**	**+0.6**
PNIG				*i*S	**Sn**	**02 48 15.5**	**-0.8**
JTS	**JuntasAbangare**	**7.10**	**117**	Pn	**Pn**	**02 46 58.6**	**+1.4**
	1.0nm,0.3s,baz=295,slow=17,SNR=3.9						
JTS				Lg		02 48 39.2	
	baz=162,slow=17,SNR=3.6						
JTS	**JuntasAbangare**	**7.10**	**117**	*e*Pn	**Pn**	**02 46 57.9**	**+0.7**
	33nm,0.8s						
JTS				Lg		02 48 39.2	
UTMO	**Huajuapan**	**7.49**	**305**	*e*P	**Pn**	**02 47 02.8**	**+0.3**
UTMO				*i*S	**Sn**	**02 48 21.9**	**-4.3**
TPIG	**Tehuac#an**	**7.50**	**311**	*e*S	**Sn**	**02 48 24.7**	**-1.7**
PPM	**Popocatepetl**	**8.84**	**309**	*i*P	**Pn**	**02 47 21.3**	**+0.3**
PPM				*i*S	**Sn**	**02 49 01.7**	**+2.3**
PPM	**Popocatepetl**	**8.84**	**309**	*i*P	**Pn**	**02 47 21.3**	**+0.3**
PPM				*i*S	**Sn**	**02 49 01.7**	**+2.3**
IIO	**Organos**	**9.23**	**312**	*e*P	**Pn**	**02 47 32.9**	**+6.4**
IIO				*i*S	**Sn**	**02 49 06.0**	**-3.0**
IIO	**Organos**	**9.23**	**312**	*e*P	**Pn**	**02 47 32.9**	**+6.4**
IIO				*i*S	**Sn**	**02 49 06.0**	**-3.0**
TXAR	**Lajitas Array**	**19.38**	**326**	P	**Pn**	**02 49 41.7**	**+2.0**
	0.2nm,0.3s,baz=153,slow=12,SNR=26						
TXAR				LR	LR	02 58 17.7	
	comp=Z,47nm,21.6s,baz=185,slow=40						
TXAR	**Lajitas Array**	**19.38**	**326**	P	**Pn**	**02 49 41.7**	**+2.0**
TXAR				LR	LR	02 58 17.7	
SDV	**Santo Domingo**	**20.89**	**101**	P	**P**	**02 49 52.6**	**-2.3**
	2.9nm,0.7s,baz=280,slow=10,SNR=4.6						
MNTX	**Cornudas Mount**	**22.15**	**327**	*e*P	**P**	**02 50 10.2**	**+1.9**
	5.4nm,1.0s,mb3.9						
TKL	**Tuckaleechee C**	**23.05**	**16**	P	**P**	**02 50 16.2**	**-1.5**
	2.2nm,0.7s,mb3.7,baz=206,slow=16,SNR=3.2						
AMTX	**Amarillo**	**23.18**	**338**	*e*P	**P**	**02 50 19.5**	**+0.4**
	5.5nm,0.6s,mb4.2						
ANMO	**Albuquerque**	**25.28**	**330**	P	**P**	**02 50 40.3**	**+1.9**
	0.7nm,0.6s,mb3.4,baz=124,slow=7.3,SNR=3.8						
ANMO	**Albuquerque**	**25.28**	**330**	*e*P	**P**	**02 50 40.5**	**+2.1**
	1.1nm,0.5s,mb3.6						
TUC	**Tucson**	**25.75**	**320**	*e*P	**P**	**02 50 42.4**	**-0.3**
	1.5nm,0.8s,mb3.6						
M13A	**Montello**	**34.07**	**329**	*e*P	**P**	**02 51 58.8**	**+2.4**
	2.6nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**34.38**	**321**	P	**P**	**02 52 04.1**	**+5.0**
	2.0nm,0.8s,mb4.1,baz=128,slow=8.8,SNR=9.7						
HLID	**Hailey**	**35.84**	**331**	*e*P	**P**	**02 52 15.0**	**+3.4**
	0.8nm,0.7s,mb3.8						
SIV	**San Ignacio**	**41.97**	**133**	P	**P**	**02 53 01.8**	**-1.4**
	1.3nm,1.0s,mb3.5,baz=324,slow=8.7,SNR=3.8						
SCHQ	**Schefferville**	**45.44**	**20**	P	**P**	**02 53 28.4**	**-2.2**
	3.0nm,0.8s,mb4.2,baz=220,slow=9.5,SNR=3.5						
YKA	**Yellowknife Ar**	**51.59**	**346**	P	**P**	**02 54 17.3**	**-0.5**
	0.4nm,0.6s,mb3.5,baz=148,slow=7.4,SNR=16						
YKA				PcP	PcP	02 55 31.2	0.0
	0.1nm,0.6s,baz=144,slow=4.0,SNR=4.2						
ZAA0	**Zalesovo Array**	**112.69**	**2**	*e*P	PKiKP	03 03 47.8	-0.2
CMAR	**Chiang Mai Arr**	**146.59**	**342**	PKPbc	PKPbc	03 04 54.7	+0.8
	1.2nm,0.4s,baz=344,slow=3.4,SNR=6.0						

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*IDC **10** 03:22:20.3±0.8, 23°.32S×170°.65E, h0km, mb4.4/10, mb1 4.6/11, mb1mx4.4/17, mbtmp4.4/11, ML2.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/26, Error ellipse: s-maj=26.0km s-min=19.7km az=151.0*
*LDG **10** 03:22:23.8±0.3, 22°.35S×170°.77E, h10km, Mb4.7/2, Ms4.4/1, Error ellipse: s-maj=36.6km s-min=5.9km az=174.0*
*ISCJB **10** 03:22:23.1±2.6, 23°.29S±0°.10×170°.5E±0°.1, h33km±19km, mb4.6/20, Error ellipse: s-maj=17.6km s-min=15.8km az=155.6*
*NOU **10** 03:22:24.5±1.3, 20°.03S×170°.13E, h30km, MD3.0, ML2.9*
*NEIC **10** 03:22:25.3±0.3, 23°.34S×170°.59E, mb4.7/10, Error ellipse: s-maj=11.9km s-min=7.0km az=160.0*
*SZGRF **10** 03:22:25.0, 23°.67S×171°.06E, h32km, Southeast of Loyalty Islands*
ISC 10 03:22:24.6±4.2, 23°.26S±0°.09×170°.50E±0°.07, h23km±29km, h34km±.3km; pP-P, n102, σ0°.80/37, mb4.6/20, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.51**	**288**	*e*S	**Sn**	**03 23 58.3**	**-0.3**
DZM	**Mont Dzumac**	**3.92**	**287**	*e*P	**Pn**	**03 23 23.1**	**-0.3**
DZM				*e*S	**Sn**	**03 24 05.0**	**-3.8**
DZM				AMP		03 24 17.1	
	comp=Z,1μm,5.5s						
DZM	**Mont Dzumac**	**3.92**	**287**	*e*Pn	**Pn**	**03 23 23.6**	**+0.1**
DZM				*e*Sn	**Sn**	**03 24 08.0**	**-0.8**
NOUC	**Port Laguerre**	**4.04**	**286**	*e*P	**Pn**	**03 23 24.9**	**-0.2**
NOUC				*e*S	**Sn**	**03 24 11.0**	**-0.6**
NOUC				AMP		03 24 20.8	
	comp=Z,51nm,3.3s						
URZ	**Urewera**	**15.99**	**161**	LR	LR	03 30 29.0	
	comp=Z,186nm,18.0s,baz=335,slow=31						
AFI	**Afiamalu**	**19.19**	**64**	P	**Pn**	**03 26 44.0**	**-3.8**
	comp=Z,1.3nm,0.3s,baz=28,slow=17,SNR=5.1						
RPZ	**Rata Peaks**	**20.41**	**179**	LR	LR	03 33 27.5	
	comp=Z,147nm,21.2s,baz=179,slow=33						
CAN	**Canberra**	**22.22**	**232**	*e*P	**P**	**03 27 18.4**	**-1.1**
	comp=Z,13nm,0.9s,mb4.4						
CTA	**Charters Tower**	**22.74**	**273**	P	**P**	**03 27 25.9**	**+0.8**
	comp=Z,5.7nm,1.0s,mb4.0,baz=97,slow=12,SNR=3.5						
CTAO	**Charters Tower**	**22.74**	**273**	*e*P	**P**	**03 27 26.4**	**+1.2**
	comp=Z,6.5nm,0.7s,mb4.2						
CMSA	**Cobar Meteorol**	**23.48**	**244**	*e*P	**P**	**03 27 34.0**	**+1.1**
CMSA				*e*		03 27 43.2	
MTSU	**Mount Surprise**	**25.00**	**277**	*e*P	**P**	**03 27 48.1**	**+1.3**
	comp=Z,30nm,0.6s,mb5.0						
MTSU				*e*		03 27 57.5	
TOO	**Toolangi**	**25.75**	**231**	*e*P	**P**	**03 27 55.0**	**+1.5**
TOO				*e*		03 28 04.4	
STKA	**Stephens Creek**	**26.96**	**245**	*e*P	**P**	**03 28 05.1**	**+0.6**
	comp=Z,2.3nm,0.6s,mb3.9						
STKA				*e*		03 28 14.6	
STKA	**Stephens Creek**	**26.96**	**245**	P	**P**	**03 28 05.3**	**+0.9**
	comp=Z,3.2nm,0.6s,mb4.0,baz=91,slow=11,SNR=15						
COEN	**Coen**	**27.45**	**285**	*e*P	**P**	**03 28 10.0**	**+0.9**
	comp=Z,125nm,0.8s,mb5.5						
ASAR	**Alice Springs**	**33.51**	**262**	P	**P**	**03 29 02.7**	**+0.2**
	comp=Z,6.8nm,0.8s,mb4.6,baz=96,slow=9.9,SNR=49						
WRAB	**Tennant Creek**	**33.72**	**269**	*e*P	**P**	**03 29 03.3**	**-1.1**
	comp=Z,2.4nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**33.73**	**269**	P	**P**	**03 29 03.5**	**-0.9**
	comp=Z,1.4nm,0.4s,mb4.3,baz=98,slow=8.4,SNR=20						
FORT	**Forrest**	**38.36**	**249**	*e*P	**P**	**03 29 44.0**	**0.0**
	comp=Z,14nm,0.6s,mb4.9						
FORT				*e*		03 29 53.4	
FORT	**Forrest**	**38.36**	**249**	*e*P	**P**	**03 29 43.8**	**-0.2**
	comp=Z,23nm,0.6s,mb5.1						
FORT				*ep*P	pP	03 29 53.6	+2.5
FITZ	**Fitzroy Crossi**	**42.16**	**268**	↓*i*P	**P**	**03 30 15.9**	**+0.3**
	comp=Z,25nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**42.16**	**268**	*e*P	**P**	**03 30 15.8**	**+0.2**
	comp=Z,16nm,0.9s,mb4.7						
MBWA	**Marble Bar**	**46.85**	**262**	*e*P	**P**	**03 30 52.7**	**-0.4**
	comp=Z,8.2nm,0.5s,mb4.9						
CASY	**Casey**	**56.95**	**205**	*e*P	**P**	**03 32 06.8**	**-0.9**
	comp=Z,4.4nm,0.8s,mb4.5						
CASY				*ep*P	pP	03 32 16.5	+1.5
KSM	**Kuching**	**63.44**	**284**	*e*P	**P**	**03 32 53.1**	**+0.1**
	comp=Z,8.3nm,0.8s,mb4.9						
QSPA	**South Pole Qui**	**66.82**	**180**	P	**P**	**03 33 13.4**	**-0.5**
	comp=Z,5.9nm,1.0s,mb4.6,baz=19,slow=3.4,SNR=11						
MAW	**Mawson**	**75.17**	**202**	P	**P**	**03 34 04.1**	**-0.7**
	comp=Z,5.1nm,0.8s,mb4.5,baz=101,slow=8.0,SNR=8.3						
PETK	**Petropavlovsk-**	**76.85**	**352**	P	**P**	**03 34 14.7**	**+0.4**
	comp=Z,5.1nm,0.8s,mb4.5,baz=138,slow=9.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**81.22**	**294**	P	**P**	**03 34 38.9**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.1,baz=148,slow=3.7,SNR=6.1						
VNA3	**Neumayer Olymp**	**85.76**	**180**	*e*	**P**	**03 35 09.5**	**+8.0**
VNA2	**Neumayer--Watz**	**86.07**	**181**	*e*	**P**	**03 35 11.2**	**+8.2**
NVAR	**Mina Array Bea**	**90.59**	**48**	P	**P**	**03 35 24.1**	**-0.9**
	comp=Z,0.5nm,0.5s,mb4.1,baz=218,slow=9.3,SNR=3.5						
ULN	**Ulaanbaatar**	**90.77**	**323**	*e*P	**P**	**03 35 26.4**	**+0.9**
	comp=Z,2.7nm,0.9s,mb4.6						
ULN				*ep*P	pP	03 35 36.7	+3.4
BILL	**Bilibino**	**91.08**	**358**	*e*P	**P**	**03 35 26.2**	**-0.4**
SONM	**Songino Array**	**91.11**	**323**	P	**P**	**03 35 28.3**	**+1.1**
	comp=Z,3.0nm,1.1s,mb4.5,baz=135,slow=4.7,SNR=10						
ARCES	**ARCESS Array B**	**129.23**	**345**	PKP	PKPdf	03 41 29.4	-0.8
	comp=Z,3.2nm,0.7s,baz=90,slow=1.2,SNR=8.7						
FINES	**FINESS Array B**	**134.73**	**337**	PKP	PKPdf	03 41 40.0	-0.8
	comp=Z,1.8nm,0.9s,baz=75,slow=8.3,SNR=4.3						
NOA	**NORSAR Array B**	**139.61**	**345**	PKP	PKPdf	03 41 47.9	-1.9
	comp=Z,0.6nm,0.7s,baz=29,slow=2.0,SNR=2.8						
KOLS	**Kolonicke sedl**	**144.17**	**324**	*e*P	PKPdf	03 41 57.6	-0.7
KOLS	**Kolonicke sedl**	**144.17**	**324**	*e*PKP	PKPdf	03 41 57.6	-0.7
KECS	**Kecovo**	**145.40**	**324**	*e*P	PKPbc	03 42 01.5	+1.1
KECS				*e*		03 42 11.2	
KECS	**Kecovo**	**145.40**	**324**	*e*PKP	PKPdf	03 42 01.5	+1.0
KECS				*e*		03 42 11.2	
OKC	**Ostrava-Krasne**	**145.76**	**328**	*e*PKP	PKPdf	03 42 01.6	+0.6
OKC				*ep*PKP	pPKPdf	03 42 10.9	+2.0
BSEG	**Bad Segeberg**	**145.92**	**339**	*e*PKPbc	PKPbc	03 42 01.6	-0.2
PSZ	**Piszkesteto**	**146.05**	**324**	*e*PKPbc	PKPbc	03 42 01.3	-1.2
MORC	**Moravsky Berou**	**146.09**	**328**	*e*PKPbc	PKPbc	03 42 02.8	+0.3
VYHS	**Vyhne**	**146.26**	**325**	*e*P	PKPbc	03 42 03.6	+0.5
VYHS				*e*		03 42 13.7	
VYHS	**Vyhne**	**146.26**	**325**	*e*PKP	PKPbc	03 42 03.6	+0.5
VYHS				*e*		03 42 13.7	
DPC	**Dobruska-Polom**	**146.28**	**330**	*e*PKP	PKPbc	03 42 03.7	+0.6
UPC	**Upice**	**146.32**	**330**	*e*PKP	PKPbc	03 42 03.8	+0.6
UPC				*ep*PKP	pPKPdf	03 42 13.4	+3.6
PVCC	**Panska Ves**	**146.95**	**331**	*e*PKP	PKPbc	03 42 05.5	+0.5
PVCC				*ep*PKP	pPKPdf	03 42 15.4	+4.5
BRG	**Berggiesshubel**	**146.97**	**332**	*e*P	PKPdf	03 42 05.2	+2.1
CLL	**Collm**	**147.03**	**334**	*e*PKPbc	PKPbc	03 42 05.3	+0.1
CLL	**Collm**	**147.03**	**334**	*e*PKPbc	PKPbc	03 42 05.0	-0.2
	comp=Z,6.0nm,1.1s						
CLL				*ep*PKPbc	pPKPbc	03 42 15.0	+2.0
PRU	**Pruhonice**	**147.35**	**331**	*e*PKP	PKPbc	03 42 06.6	+0.5
PRU				*ep*PKP	pPKPdf	03 42 16.5	+4.9
TREC	**Trest**	**147.41**	**329**	*e*PKP	PKPbc	03 42 06.6	+0.3
TREC				*ep*PKP	pPKPdf	03 42 16.3	+4.6
CLZ	**Clausthal**	**147.62**	**337**	*e*PKPbc	PKPbc	03 42 07.2	+0.4
CLZ				*ep*PKPbc	pPKPbc	03 42 16.9	+2.3
TANN	**Tannenbergstha**	**147.93**	**333**	*e*PKPbc	PKPbc	03 42 07.8	+0.1
TANN				*ep*PKPbc	pPKPbc	03 42 17.7	+2.2
NKC	**Novy Kostel**	**148.08**	**333**	*e*PKP	PKPbc	03 42 08.1	0.0
NKC				*ep*PKP	pPKPdf	03 42 17.2	+4.4
MOX	**Moxa**	**148.10**	**334**	*e*PKPbc	PKPbc	03 42 07.6	-0.5
IBBN	**Ibbenburen**	**148.12**	**340**	*e*PKPbc	PKPbc	03 42 08.3	+0.2
KHC	**Kasperske Hory**	**148.41**	**331**	*e*PKPdf	PKPdf	03 42 04.8	-0.7
KHC				*e*PKPbc	PKPbc	03 42 09.2	+0.2
KHC	**Kasperske Hory**	**148.41**	**331**	*e*PKP	PKPdf	03 42 04.7	-0.8
KHC				*ex*	x	03 42 09.4	
KHC				*ep*PKP	pPKPdf	03 42 19.0	+5.6
ROTZ	**Rotzenmuhle**	**148.53**	**333**	*e*PKPbc	PKPbc	03 42 09.5	+0.2
ROTZ				*ep*PKPbc	pPKPbc	03 42 19.9	+2.8
GEC2	**GERESS Array S**	**148.56**	**330**	*e*PKPbc	PKPbc	03 42 09.6	+0.2
GERES	**GERESS Array B**	**148.56**	**330**	PKPbc	PKPbc	03 42 09.6	+0.2
	comp=Z,3.8nm,0.8s,baz=45,slow=2.1,SNR=31						
UBBA	**Unterbreizbach**	**148.59**	**336**	*e*PKPbc	PKPbc	03 42 09.6	+0.2
GVD	**Gavdhos**	**148.59**	**299**	*e*PKPbc	PKPbc	03 42 09.3	-0.6
WET	**Wettzell**	**148.71**	**331**	*e*PKPbc	PKPbc	03 42 10.2	+0.4
WET				*ep*PKPbc	pPKPbc	03 42 19.8	+2.2
GRA1	**Grafenberg Arr**	**149.00**	**333**	*e*PKPbc	PKPbc	03 42 10.8	+0.3
GRF	**Grafenberg Arr**	**149.00**	**333**	*e*PKPbc	PKPbc	03 42 10.8	+0.3
TNS	**Taunus Mts**	**149.65**	**337**	*e*PKPbc	PKPbc	03 42 12.5	+0.4
TNS				*ep*PKPbc	pPKPbc	03 42 22.0	+2.1
RJOB	**Jochberg**	**149.77**	**329**	*e*PKPbc	PKPbc	03 42 12.4	-0.1
MEM	**Membach**	**150.14**	**340**	PKP	PKPbc	03 42 13.4	+0.2
MEM				E		03 42 22.9	
FUR	**Furstenfeldbru**	**150.15**	**331**	*e*PKPbc	PKPbc	03 42 13.8	+0.4
FUR				*ep*PKPbc	pPKPbc	03 42 23.2	+2.0
UCC	**Uccle**	**150.47**	**342**	PKP	PKPbc	03 42 14.5	+0.5
UCC				E		03 42 24.4	
BCLA	**Clavier**	**150.53**	**341**	PKP	PKPbc	03 42 13.2	-1.0
STU	**Stuttgart**	**150.54**	**334**	*e*PKPbc	PKPbc	03 42 14.4	+0.1
STU	**Stuttgart**	**150.54**	**334**	*e*PKPbc	PKPbc	03 42 14.3	0.0
WLF	**Walferdange**	**150.91**	**339**	PKP	PKPbc	03 42 15.9	+0.7
WLF				E		03 42 25.3	
WLF	**Walferdange**	**150.91**	**339**	*e*PKPbc	PKPbc	03 42 15.7	+0.6
WLF	**Walferdange**	**150.91**	**339**	*e*PKPdf	PKPdf	03 42 08.9	-0.6
WLF				*e*PKPbc	PKPbc	03 42 15.5	+0.4
GIVF	**Givet**	**150.95**	**341**	*e*PKP1	PKPbc	03 42 15.4	+0.2
	comp=Z,16nm,0.7s						
DOU	**Dourbes**	**151.03**	**341**	PKP	PKPbc	03 42 15.3	-0.1
DOU				E		03 42 25.2	
BAIF	**Baives**	**151.17**	**342**	*e*PKP1	PKPbc	03 42 15.9	+0.2
BFO	**Black Forest**	**151.24**	**335**	*e*PKPbc	PKPbc	03 42 15.4	-0.6
BFO				*ep*PKPbc	pPKPbc	03 42 25.1	+1.3
BFO	**Black Forest**	**151.24**	**335**	*e*PKPdf	PKPdf	03 42 09.4	-0.6
BFO				*e*PKPbc	PKPbc	03 42 15.4	-0.6
BFO				*e*PKPbc	PKPbc	03 42 15.4	-0.5
BFO				*ep*PKPbc	pPKPbc	03 42 25.1	+1.3
BFO				*e*PKPab	PKPab	03 42 25.1	+1.3
CDF	**Champ du Feu**	**151.58**	**336**	*e*PKP1	PKPbc	03 42 16.7	0.0
	comp=Z,20nm,1.1s						
HINF	**Hinteralfeld**	**152.23**	**336**	*e*PKP1	PKPbc	03 42 17.1	-1.1
HAU	**Haudompre**	**152.26**	**337**	*e*PKP1	PKPbc	03 42 17.3	-1.0
	comp=Z,13nm,1.0s						
MEZF	**Maizieres J'vi**	**152.28**	**339**	*e*PKP1	PKPbc	03 42 18.6	+0.3
	comp=Z,22nm,0.9s						
CABF	**La Chapelle**	**153.52**	**335**	*e*PKP1	PKPbc	03 42 21.4	+0.3
FLN	**La Foliniere**	**153.56**	**347**	*e*PKP1	PKPbc	03 42 20.6	-0.5
	comp=Z,5.5nm,0.7s						
LOR	**Lormes**	**153.75**	**339**	*e*PKP1	PKPbc	03 42 21.5	-0.1
	comp=Z,3.4nm,0.7s						
SSF	**Saint Saulge**	**154.05**	**339**	*e*PKP1	PKPbc

*ISCJB **10** 04:07:17.4±0.4, 37°.59N±0°.02×23°.46E±0°.02, h10km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=24.3*
*CSEM **10** 04:07:17.9±0.1, 37°.59N×23°.43E, h10km, ML3.3, Error ellipse: s-maj=3.0km s-min=2.9km az=81.0*
*ATH **10** 04:07:17.3, 37°.59N×23°.48E, h27km, MD3.5/9, ML3.3*
*NEIC **10** 04:07:17.3, 37°.59N×23°.48E, h27km, ML3.3(ATH), After ATH.*
*THE **10** 04:07:17.6, 37°.58N×23°.46E, h6km, ML3.8/5, Error ellipse: s-maj=0.9km s-min=0.5km az=293.0*

ISC 10 04:07:18.2±0.4, 37°.60N±0°.02×23°.45E±0°.02, h9km±2km, n84, σ0=85/118, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	**Nisos Aigina**	**0.17**	**12**	*e*PB	**Pg**	**04 07 22.8**	**+1.1**
NAIG	**Nisos Aigina**	**0.17**	**12**	*e*Pb	**Pg**	**04 07 22.8**	**+1.1**
DID	**Didima**	**0.19**	**242**	P	**Pg**	**04 07 21.6**	**-0.5**
DID				S	**Sg**	**04 07 24.6**	**-0.2**
DID	**Didima**	**0.19**	**242**	P	**Pg**	**04 07 21.6**	**-0.5**
DID				S	**Sg**	**04 07 24.6**	**-0.2**
VLY	**Voula,Athens**	**0.38**	**47**	P	**Pg**	**04 07 25.7**	**+0.1**
VLY	**Voula,Athens**	**0.38**	**47**	P	**Pg**	**04 07 25.7**	**+0.1**
ATH	**Athens Observa**	**0.43**	**30**	*e*PB	**Pg**	**04 07 26.5**	**-0.1**
ATH				*e*SB	**Sg**	**04 07 33.4**	**+1.0**
ATH	**Athens Observa**	**0.43**	**30**	*e*Pb	**Pg**	**04 07 26.5**	**-0.1**
ATH				*e*Sb	**Sg**	**04 07 33.4**	**+1.0**
ATHU	**Athens Univers**	**0.46**	**36**	P	**Pg**	**04 07 26.7**	**-0.4**
ATHU				S	**Sg**	**04 07 33.4**	**+0.3**
ATHU	**Athens Univers**	**0.46**	**36**	P	**Pg**	**04 07 26.7**	**-0.4**
ATHU				S	**Sg**	**04 07 33.4**	**+0.3**
PTL	**Penteli**	**0.56**	**36**	*e*PN	**Pg**	**04 07 28.6**	**-0.4**
PTL				*e*SN	**Sg**	**04 07 36.4**	**0.0**
PTL	**Penteli**	**0.56**	**36**	*e*Pn	**Pg**	**04 07 28.6**	**-0.4**
LTK	**Loutraki**	**0.57**	**318**	P	**Pg**	**04 07 28.7**	**-0.5**
LTK				S	**Sg**	**04 07 37.2**	**+0.5**
LTK	**Loutraki**	**0.57**	**318**	P	**Pg**	**04 07 28.7**	**-0.5**
LTK				S	**Sg**	**04 07 37.2**	**+0.5**
VLX	**Vlachokerasia**	**0.88**	**255**	P	**Pg**	**04 07 34.1**	**-1.0**
VLX				S	**Sg**	**04 07 47.1**	**+0.6**
VLX	**Vlachokerasia**	**0.88**	**255**	P	**Pg**	**04 07 34.1**	**-1.0**
VLX				S	**Sg**	**04 07 47.1**	**+0.6**
GUR	**Goura**	**0.94**	**292**	P	**Pg**	**04 07 35.2**	**-1.0**
GUR				S	**Sg**	**04 07 49.4**	**+1.0**
GUR	**Goura**	**0.94**	**292**	P	**Pg**	**04 07 35.2**	**-1.0**
GUR				S	**Sg**	**04 07 49.4**	**+1.0**
VLI	**Veliai**	**0.97**	**205**	*e*PN	**Pg**	**04 07 35.7**	**-1.0**
VLI				*e*SN	**Sg**	**04 07 50.0**	**+0.7**
VLI	**Veliai**	**0.97**	**205**	*e*Pn	**Pg**	**04 07 35.7**	**-1.0**
VLI				*e*Sn	**Sg**	**04 07 50.0**	**+0.7**
LKR	**Lokris**	**1.11**	**342**	*e*PN	**Pg**	**04 07 38.5**	**-1.0**
LKR	**Lokris**	**1.11**	**342**	P	**Pg**	**04 07 38.3**	**-1.2**
LKR				S	**Sg**	**04 07 54.8**	**+0.9**
LKR	**Lokris**	**1.11**	**342**	P	**Pg**	**04 07 38.3**	**-1.2**
LKR				S	**Sg**	**04 07 54.8**	**+0.9**
ITM	**Ithomi**	**1.28**	**251**	*e*PN	**Pn**	**04 07 41.5**	**-0.6**
ITM	**Ithomi**	**1.28**	**251**	P	**Pn**	**04 07 41.3**	**-0.8**
ITM				S	**Sb**	**04 07 59.8**	**+0.9**
ITM	**Ithomi**	**1.28**	**251**	*e*Pn	**Pn**	**04 07 41.5**	**-0.6**
ITM				S	**Sb**	**04 07 59.8**	**+0.9**
LAKA	**Lakka**	**1.33**	**299**	P	**Pn**	**04 07 42.2**	**-0.6**
LAKA				S	**Sb**	**04 08 01.0**	**+0.8**
LAKA	**Lakka**	**1.33**	**299**	P	**Pn**	**04 07 42.2**	**-0.6**
LAKA				S	**Sb**	**04 08 01.0**	**+0.8**
KYTH	**Kithira**	**1.35**	**194**	*e*PN	**Pn**	**04 07 42.4**	**-0.7**
KYTH	**Kithira**	**1.35**	**194**	*e*Pn	**Pn**	**04 07 42.4**	**-0.7**
EFP	**Efpalio**	**1.47**	**305**	S	**Sn**	**04 08 04.1**	**0.0**
EFP	**Efpalio**	**1.47**	**305**	S	**Sn**	**04 08 04.1**	**0.0**
AGG	**Agios Georgios**	**1.67**	**329**	P	**Pn**	**04 07 47.0**	**-0.5**
AGG				S	**Sn**	**04 08 09.3**	**+0.2**
AGG	**Agios Georgios**	**1.67**	**329**	P	**Pn**	**04 07 47.0**	**-0.5**
AGG				S	**Sn**	**04 08 09.3**	**+0.2**
NEO	**Neokhori**	**1.72**	**354**	P	**Pn**	**04 07 48.0**	**-0.2**
NEO	**Neokhori**	**1.72**	**354**	P	**Pn**	**04 07 48.0**	**-0.2**
APE	**Apeiranthos**	**1.74**	**107**	*e*PN	**Pn**	**04 07 47.5**	**-1.0**
APE	**Apeiranthos**	**1.74**	**107**	P	**Pn**	**04 07 47.5**	**-1.0**
APE	**Apeiranthos**	**1.74**	**107**	P	**Pn**	**04 07 47.5**	**-1.0**
EVR	**Evrytania**	**1.84**	**316**	*e*PN	**Pn**	**04 07 50.0**	**+0.1**
EVR	**Evrytania**	**1.84**	**316**	*e*Pn	**Pn**	**04 07 50.0**	**+0.1**
KFL	**Anninata**	**2.17**	**284**	P	**Pn**	**04 07 56.7**	**+2.4**
KARN	**Karanos**	**2.22**	**170**	P	**Pn**	**04 07 54.5**	**-0.6**
KARN				S	**Sn**	**04 08 21.6**	**-1.0**
KARN	**Karanos**	**2.22**	**170**	P	**Pn**	**04 07 54.5**	**-0.6**
KARN				S	**Sn**	**04 08 21.6**	**-1.0**
THL	**Klokotos Trika**	**2.26**	**331**	P	**Pn**	**04 07 55.5**	**-0.2**
THL				S	**Sn**	**04 08 23.6**	**0.0**
THL	**Klokotos Trika**	**2.26**	**331**	P	**Pn**	**04 07 55.5**	**-0.2**
THL				S	**Sn**	**04 08 23.6**	**0.0**
VLS	**Valsamata**	**2.33**	**285**	P	**Pn**	**04 07 56.5**	**-0.1**
VLS	**Valsamata**	**2.33**	**285**	P	**Pn**	**04 07 56.5**	**-0.1**
PAIG	**Paliouri**	**2.33**	**4**	P	**Pn**	**04 07 55.6**	**-1.0**
PAIG				S	**Sn**	**04 08 27.1**	**+1.7**
PAIG	**Paliouri**	**2.33**	**4**	P	**Pn**	**04 07 55.6**	**-1.0**
PAIG				S	**Sn**	**04 08 27.1**	**+1.7**
URLA	**Izmir**	**2.60**	**72**	*i* P	**Pn**	**04 08 00.3**	**0.0**
URLA	**Izmir**	**2.60**	**72**	*i* P	**Pn**	**04 08 00.3**	**0.0**
LIT	**Litokhoron**	**2.61**	**344**	P	**Pn**	**04 08 00.1**	**-0.3**
LIT	**Litokhoron**	**2.61**	**344**	P	**Pn**	**04 08 00.1**	**-0.3**
LIA	**Limnos Island**	**2.67**	**30**	P	**Pg**	**04 08 08.8**	**-0.5**
LIA	**Limnos Island**	**2.67**	**30**	P	**Pn**	**04 08 00.3**	**-1.0**
LIA	**Limnos Island**	**2.67**	**30**	P	**Pn**	**04 08 00.3**	**-1.0**
SMG	**Samos**	**2.69**	**87**	P	**Pn**	**04 08 01.3**	**-0.3**
SMG	**Samos**	**2.69**	**87**	P	**Pn**	**04 08 01.3**	**-0.3**
OUR	**Ouranopolis**	**2.77**	**9**	P	**Pn**	**04 08 01.4**	**-1.2**
OUR	**Ouranopolis**	**2.77**	**9**	P	**Pn**	**04 08 01.4**	**-1.2**
PLG	**Polygyros**	**2.77**	**0**	P	**Pn**	**04 08 03.2**	**+0.5**
PLG	**Polygyros**	**2.77**	**0**	P	**Pn**	**04 08 02.0**	**-0.7**
PLG	**Polygyros**	**2.77**	**0**	P	**Pn**	**04 08 03.2**	**+0.5**
GVD	**Gavdhos**	**2.80**	**169**	*e*Pn	**Pn**	**04 08 04.5**	**+1.5**
GVD	**Gavdhos**	**2.80**	**169**	P	**Pn**	**04 08 05.1**	**+2.1**
GVD	**Gavdhos**	**2.80**	**169**	*e*Pn	**Pn**	**04 08 04.5**	**+1.5**
GVD	**Gavdhos**	**2.80**	**169**	P	**Pn**	**04 08 05.1**	**+2.1**
SIVA	**Sivas**	**2.80**	**156**	P	**Pn**	**04 08 05.5**	**+2.5**
SIVA				S	**Sn**	**04 08 36.8**	**-0.1**
SIVA	**Sivas**	**2.80**	**156**	P	**Pn**	**04 08 05.5**	**+2.5**
SIVA				S	**Sn**	**04 08 36.8**	**-0.1**
LAST	**Lasithi**	**2.93**	**145**	P	**Pn**	**04 08 04.3**	**-0.6**
LAST				S	**Sn**	**04 08 40.8**	**+0.6**
LAST	**Lasithi**	**2.93**	**145**	P	**Pn**	**04 08 04.3**	**-0.6**
LAST				S	**Sn**	**04 08 40.8**	**+0.6**
AYVA	**Ayvalik**	**3.07**	**55**	*i* P	**Pn**	**04 08 06.9**	**+0.2**
AYVA	**Ayvalik**	**3.07**	**55**	*i* P	**Pn**	**04 08 06.9**	**+0.2**
ZKR	**Zakros**	**3.34**	**137**	P	**Pn**	**04 08 12.4**	**+2.0**
ZKR	**Zakros**	**3.34**	**137**	P	**Pn**	**04 08 12.4**	**+2.0**
SRS	**Serrai**	**3.52**	**2**	P	**Pn**	**04 08 12.8**	**-0.1**
SRS	**Serrai**	**3.52**	**2**	P	**Pn**	**04 08 12.8**	**-0.1**
BALY	**Balya**	**3.91**	**55**	*i* P	**Pn**	**04 08 19.1**	**+0.9**
BALY	**Balya**	**3.91**	**55**	*i* P	**Pn**	**04 08 19.1**	**+0.9**
KRUS	**Krusevo**	**4.13**	**336**	*e*Pn	**Pn**	**04 08 20.6**	**-0.8**
KRUS				*e*Sg	**Sn**	**04 09 08.6**	**-1.2**
KRUS	**Krusevo**	**4.13**	**336**	*e*Pn	**Pn**	**04 08 20.5**	**-0.9**
MANT	**Manisa**	**4.13**	**76**	*i* P	**Pn**	**04 08 22.1**	**+0.8**
MANT	**Manisa**	**4.13**	**76**	*i* P	**Pn**	**04 08 22.1**	**+0.7**

*ISCJB **10** 04:09:39.2±0.9, 22°.18S±0°.05×68°.5W±0°.1, h120km±9km, mb3.5/2, Error ellipse: s-maj=17.5km s-min=8.9km az=0.1*
*NEIC **10** 04:09:39.6, 22°.14S×68°.53W, h113km, MG3.5(GUC), After GUC.*
*IDC **10** 04:09:39.0±0.9, 22°.42S×68°.42W, h115km±17km, mb3.3/2, mb1 3.2/4, mb1mx3.1/15, mbtmp3.0/4, Error ellipse: s-maj=54.3km s-min=26.5km az=86.0*
*GUC **10** 04:09:39.6±0.5, 22°.14S×68°.53W, h113km±7km, ML3.5*

ISC 10 04:09:40.0±0.9, 22°.19S±0°.05×68°.5W±0°.1, h117km±9km, n14, σ0=63/22, mb3.5/2, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.57**	**222**	P	**Pn**	**04 09 58.4**	**+0.3**
	36nm,0.3s,baz=45,slow=10.0,SNR=800						
LVC				S	**Sn**	**04 10 11.2**	**-0.5**
	392nm,0.3s,baz=266,slow=19,SNR=256						
LVC	**Limon Verde**	**0.57**	**222**	P	**Pn**	**04 09 58.4**	**+0.3**
LVC				S	**Sn**	**04 10 11.2**	**-0.5**
PB04	**Plate Boundary**	**0.92**	**265**	⇑*i* P	**Pn**	**04 10 07.4**	**+6.4**
PB04				*i* S	**Sn**	**04 10 28.5**	**+12**
PB04				AML	AML	04 10 30.8	
	comp=E,861nm,0.1s						
PECH	**Pedro de Valdi**	**1.17**	**249**	⇓*i* P	**Pn**	**04 10 03.6**	**+0.1**
PECH				*i* S	**Sn**	**04 10 21.2**	**0.0**
PECH				AML	AML	04 10 22.9	
	comp=E,2μm,0.2s						
MACH	**Maria Elena**	**1.17**	**269**	⇑*i* P	**Pn**	**04 10 03.5**	**0.0**
MACH				*i* S	**Sn**	**04 10 21.4**	**+0.1**
MECH	**Mejillones**	**2.02**	**243**	*e*P	**Pn**	**04 10 13.7**	**+0.1**
MECH				*e*S	**Sn**	**04 10 39.5**	**+0.2**
MECH				AML	AML	04 10 48.4	
	comp=E,582nm,0.4s						
HMBC	**Humberston**	**2.30**	**325**	⇑*i* P	**Pn**	**04 10 16.6**	**-0.5**
HMBC				*i* S	**Sn**	**04 10 45.3**	**-0.3**
HMBC				AML	AML	04 10 49.8	
	comp=E,199nm,1.1s						
ANCH	**Antofagasta**	**2.31**	**229**	*e*P	**Pn**	**04 10 17.2**	**0.0**
PSGC	**Pisagua**	**2.99**	**329**	*e*P	**Pn**	**04 10 25.9**	**-0.2**
PSGC				*i* S	**Sn**	**04 11 01.4**	**-0.3**
PSGC				AML	AML	04 11 09.0	
	comp=N,71nm,0.6s						
LPAZ	**La Paz**	**5.88**	**3**	P	**Pn**	**04 11 07.7**	**+2.9**
	comp=N,0.7nm,0.3s,baz=162,slow=5.6,SNR=22						
CFAA	**Coronel Fontan**	**9.38**	**179**	P	**Pn**	**04 11 48.0**	**-4.3**
	comp=N,0.0nm,0.3s,baz=0.0,slow=16,SNR=7.8						
TORD	**Torodi Ar. Bea**	**77.22**	**70**	P	**P**	**04 21 20.9**	**-0.9**
	comp=N,0.4nm,0.5s,mb3.4,baz=260,slow=5.0,SNR=13						
YKA	**Yellowknife Ar**	**91.96**	**340**	P	**P**	**04 22 35.3**	**+0.4**
	comp=N,0.2nm,0.6s,mb3.5,baz=139,slow=4.1,SNR=6.4						
YKA	**Yellowknife Ar**	**91.96**	**340**	P	**P**	**04 22 35.3**	**+0.4**

IDC 10 04:13:12.5±4.2, 12°.57N×143°.37E, h107km±42km, mb3.5/4, mb1 3.8/4, mb1mx3.3/22, mbtmp3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/21, Error ellipse: s-maj=81.0km s-min=20.0km az=110.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.78**	**55**	P	Pn	04 13 42.8	+0.3
	117nm,0.3s,baz=190,slow=5.1,SNR=48						
GUMO				S	Sn	04 14 05.6	+0.2
	199nm,0.3s,baz=42,slow=21,SNR=15						
CTA	**Charters Tower**	**32.57**	**175**	LR	LR	04 32 12.7	
	comp=Z,95nm,21.7s,baz=226,slow=35						
WRA	**Warramunga Arr**	**33.51**	**196**	P	P	04 19 41.6	-0.2
	2.5nm,0.5s,baz=19,slow=9.7,SNR=29						
ASAR	**Alice Springs**	**37.18**	**194**	P	P	04 20 13.5	+0.2
	1.1nm,0.5s,baz=20,slow=12,SNR=32						
YKA	**Yellowknife Ar**	**84.43**	**27**	P	P	04 25 33.6	+0.7
	0.1nm,0.5s,baz=286,slow=5.1,SNR=4.4						
FINES	**FINESS Array B**	**91.46**	**335**	P	P	04 26 05.6	-1.0
	0.4nm,0.4s,baz=47,slow=8.6,SNR=3.7						

*NIED **10** 04:27:00, 36°.20N×141°.80E, h17km, Mw4.2 Best double couple: M0=2.24000×10^15 NP1:φ=17.00000°, δ=69.00000°, λ=84.00000°. NP2:φ=214.00000°, δ=22.00000°, λ=106.00000°.*
*IDC **10** 04:27:28.1±0.6, 36°.08N×141°.74E, h0km, mb4.0/19, mb1 4.2/21, mb1mx4.2/27, mbtmp4.1/21, ML4.2/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/35, Error ellipse: s-maj=17.7km s-min=15.9km az=100.0*
*ISCJB **10** 04:27:30.0±1.0, 36°.21N±0°.03×141°.94E±0°.05, h24km±6km, mb4.3/44, MS3.6/10, Error ellipse: s-maj=6.9km s-min=5.5km az=26.6*
*BJI **10** 04:27:30.3, 35°.81N×141°.95E, h41km, mB4.6/5, mb4.6/16, Ms3.9/3, Ms7 3.7/3*
*JMA **10** 04:27:31.1±0.2, 36°.21N×141°.84E, h64km±5km, M4.4*
JMA Felt I J1.
*MOS **10** 04:27:31.4±1.1, 36°.21N×141°.86E, h33km, mb4.6/24, Error ellipse: s-maj=10.5km s-min=6.6km az=113.5*
*NEIC **10** 04:27:33.9±0.9, 36°.05N×141°.76E, h40km±7km, mb4.6/17, MW4.2(NIED), Error ellipse: s-maj=6.0km s-min=5.5km az=142.0*
NEIC Recorded [1 JMA] in Tochigi.

ISC 10 04:27:29.4±1.1, 36°.17N±0°.03×141°.91E±0°.05, h8km±6km, h34km±1.4km: pP-P, n105, σ0=96/113, mb4.3/44, MS3.6/10, 7C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.97**	**241**	P	**Pg**	**04 27 48.8**	**+0.7**
CHOJ				S	**Sg**	**04 28 02.4**	**+1.7**
JHO	**Hitachi**	**1.17**	**292**	P	**Pg**	**04 27 50.3**	**-1.5**
JHO				S	**Sg**	**04 28 06.1**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.29**	**316**	P	**Pn**	**04 27 52.2**	**-1.5**
JFK	**Kawauchi**	**1.45**	**325**	⇓P	**Pn**	**04 27 54.8**	**-1.2**
BSO1	**Boso 1**	**1.70**	**207**	P	**Pn**	**04 27 59.3**	**0.0**
BSO1				S	**Sn**	**04 28 21.6**	**+0.4**
BSO3	**Boso 3**	**1.78**	**220**	P	**Pn**	**04 28 00.5**	**0.0**
JFT	**Otama**	**1.84**	**317**	P	**Pn**	**04 28 01.3**	**0.0**
JMM	**Marumori**	**1.91**	**332**	⇑P	**Pn**	**04 28 01.8**	**-0.5**
JAG	**Ashikaga**	**2.00**	**278**	P	**Pn**	**04 28 02.5**	**-1.0**
JFY	**Yanaizu**	**2.16**	**305**	P	**Pn**	**04 28 05.8**	**+0.2**
JRY	**Ryogami san**	**2.44**	**267**	P	**Pn**	**04 28 09.0**	**-0.6**
JOD2	**Odawara 2**	**2.47**	**249**	P	**Pn**	**04 28 10.1**	**+0.2**
JNS	**Sasagawa**	**2.65**	**309**	P	**Pn**	**04 28 13.2**	**+0.8**
JYN	**Shimob**	**2.82**	**257**	P	**Pn**	**04 28 15.5**	**+0.8**
MJAR	**Matsushiro Arr**	**3.01**	**278**	Pn	**Pn**	**04 28 17.9**	**+0.5**
	57nm,0.3s,baz=145,slow=27,SNR=304						
MJAR				Sn	**Sn**	**04 28 54.3**	**+0.6**
	19nm,0.3s,baz=134,slow=18,SNR=6.6						
MAJO	**Matsushiro**	**3.01**	**278**	*e*P	**Pn**	**04 28 18.0**	**+0.6**
MAT	**Matsushiro**	**3.01**	**278**	P	**Pn**	**04 28 18.3**	**+0.9**
MAT				S	**Sn**	**04 28 55.1**	**+1.4**
JHJ	**Hachijo jima 2**	**3.52**	**211**	Pn	**Pn**	**04 28 26.4**	**+2.0**
	58nm,0.3s,baz=257,slow=23,SNR=7.5						
JHJ				Sn	**Sn**	**04 29 02.6**	**-3.5**
	133nm,0.3s,baz=331,slow=22,SNR=10.0						
JHJ				LR	LR	04 29 11.7	
	comp=Z,512nm,21.1s,baz=79,slow=31						
ERM	**Erimo**	**5.91**	**9**	*i* P	**Pn**	**04 28 55.8**	**-1.5**
ASAJ	**Asahikawa**	**7.95**	**4**	P	**Pn**	**04 29 25.7**	**+0.5**
ASAJ						04 30 49.9	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.95**	**4**	Pn	**Pn**	**04 29 25.7**	**+0.5**
	comp=N,2.8nm,0.3s,baz=231,slow=12,SNR=6.0						
ASAJ				Sn	**Sn**	**04 30 49.9**	**-5.5**
	comp=N,0.6nm,0.3s,baz=72,slow=20,SNR=2.9						
CBIJ	**Chichi jima**	**9.05**	**178**	Pn	**Pn**	**04 29 38.0**	**-2.5**
	comp=N,9.7nm,0.3s,baz=275,slow=22,SNR=8.8						
CBIJ				Sn	**Sn**	**04 31 13.9**	**-8.7**
	comp=N,11nm,0.3s,baz=294,slow=20,SNR=4.5						
YSS	**Yuzh-Sakhalins**	**10.79**	**3**	⇑*e*P	**Pn**	**04 30 04.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
KSRS	**Korea Array**	**11.29**	**281**	Pn	**Pn**	**04 30 14.1**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=92,slow=13,SNR=8.9						
KSRS				LR	LR	04 34 25.4	
	comp=Z,176nm,20.2s,baz=6.5,slow=37						
MDJ	**Mudanjiang**	**12.61**	**316**	P	**Pn**	**04 30 32.3**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,39nm,3.9s						
PETK	**Petropavlovsk-**	**20.24**	**28**	P	**P**	**04 32 06.7**	**+1.8**
	comp=Z,2.1nm,0.7s,baz=224,slow=12,SNR=2.9						
YAK	**Yakutsk**	**27.00**	**347**	*e*P	**P**	**04 33 10.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,165nm,16.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,168nm,16.0s						
YAK	**Yakutsk**	**27.00**	**347**	*e*P	**P**	**04 33 11.7**	**+0.3**
	comp=N,17nm,0.5s,mb4.8						
XAN	**Xi'an**	**27.00**	**275**	P	**P**	**04 33 10.7**	**-1.1**
XAN				pP	pP	04 33 18.3	+4.2
XAN				S	**S**	**04 37 48.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
XAN				pmax	pmax		
	comp=Z,38nm,11.4s						
XAN				LR	LR		
	comp=N,87nm,13.8s						
XAN				LR	LR		
	comp=Z,45nm,15.8s,MS3.1						
ENH	**Enshi**	**27.67**	**267**	*e*P	**P**	**04 33 16.5**	**-1.4**
	comp=Z,17nm,0.6s,mb4.8						
BOD	**Bodaibo**	**28.47**	**328**	*e*P	**P**	**04 33 22.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
SONM	**Songino Array**	**28.60**	**305**	P	**P**	**04 33 25.9**	**-0.1**
	comp=Z,4.7nm,0.6s,mb4.4,baz=105,slow=8.5,SNR=27						
SONM				LR	LR	04 45 28.6	
	comp=Z,117nm,18.4s,MS3.5,baz=359,slow=38						
ZAK	**Zakamensk**	**31.12**	**309**	⇑*i* P	**P**	**04 33 48.1**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
TLY	**Talaya**	**31.20**	**312**	*e*P	**P**	**04 33 49.5**	**+0.6**
TLY				*e*		04 34 01.2	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,164nm,16.0s,MS3.8						
GTA	**Gaotai**	**33.21**	**289**	*e*P	**P**	**04 34 07.5**	**+0.8**
GTA				pP	pP	04 34 15.9	+6.9
GTA				sP	sP	04 34 20.2	+10
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
CMAR	**Chiang Mai Arr**	**41.67**	**257**	P	**P**	**04 35 17.1**	**-1.5**
	comp=Z,0.6nm,0.3s,mb3.8,baz=61,slow=5.9,SNR=4.6						
CMAR				LR	LR	04 55 37.1	
	comp=Z,47nm,19.1s,MS3.4,baz=205,slow=41						
ZAA0	**Zalesovo Array**	**42.79**	**313**	*e*P	**P**	**04 35 27.0**	**-0.3**
ZAA0				*e*pP	pP	04 35 37.5	+7.8
ZALV	**Zalesovo Beam**	**42.79**	**313**	P	**P**	**04 35 27.2**	**-0.1**
ZALV						04 37 18.2	
ZALV	**Zalesovo Beam**	**42.79**	**313**	P	**P**	**04 35 27.2**	**-0.1**
	comp=Z,6.0nm,0.8s,mb4.4,baz=85,slow=6.9,SNR=18						
ZALV				PcP	PcP	04 37 18.2	-0.3
	comp=Z,1.2nm,0.4s,baz=64,slow=3.4,SNR=3.5						
ZALV				LR	LR	04 54 10.3	
	comp=Z,79nm,18.2s,MS3.6,baz=76,slow=38						
NVS	**Novosibirsk**	**43.72**	**314**	*e*P	**P**	**04 35 34.2**	**-0.7**
NVS				pmax	pmax		
	comp=E,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
NVS				pmax	pmax		
	comp=N,2.0nm,0.8s						
MK31	**Makanchi Array**	**44.92**	**303**	*e*P	**P**	**04 35 44.4**	**-0.1**
MK31				*e**PP	pP	04 35 54.7	+7.8
MKAR	**Makanchi Array**	**44.92**	**303**	*i* P	**P**	**04 35 44.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**44.92**	**303**	P	**P**	**04 35 44.1**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.3,baz=95,slow=7.3,SNR=24						
MKAR				LR	LR	04 55 41.3	
	comp=Z,68nm,18.2s,MS3.6,baz=172,slow=38						
KURK	**Kurchatov**	**46.78**	**309**	*ce*P	**P**	**04 35 58.6**	**-0.6**
KURK				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
KURK	**Kurchatov**	**46.78**	**309**	*e*P	**P**	**04 35 58.7**	**-0.4**
	comp=Z,8.1nm,0.5s,mb4.9						
KURK				*e*pP	pP	04 36 08.6	+7.0
TKM2	**Tokmak 2**	**50.39**	**299**	*e*P	**P**	**04 36 28.0**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
TKM2	**Tokmak 2**	**50.39**	**299**	*e*P	**P**	**04 36 27.9**	**+0.8**
	comp=Z,4.8nm,0.5s,mb4.8						
AAK	**Ala-Archa**	**51.25**	**299**	*e*P	**P**	**04 36 33.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**51.25**	**299**	*e*P	**P**	**04 36 33.6**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3						
UCH	**Uchtor**	**51.36**	**299**	*e*P	**P**	**04 36 35.0**	**+0.6**
UCH				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
UCH	**Uchtor**	**51.36**	**299**	*e*P	**P**	**04 36 35.0**	**+0.6**
	comp=Z,2.4nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**51.45**	**313**	P	**P**	**04 36 34.5**	**-0.4**
BVAR						04 37 49.4	
BVAR	**Borovoye Array**	**51.45**	**313**	P	**P**	**04 36 34.5**	**-0.4**
	comp=Z,1.4nm,0.5s,mb4.2,baz=87,slow=7.6,SNR=10						
BVAR				PcP	PcP	04 37 49.4	+0.1
	comp=Z,1.5nm,0.6s,baz=91,slow=5.7,SNR=3.9						
BV

NVAR Mina Array Bea 75.19 53 P **P 04 39 13.7 +1.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=289,slow=8.3,SNR=3.1
AKASG Malin Array Be 75.22 323 *ce*P **P 04 39 12.1 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 75.22 323 P **P 04 39 11.9 -0.5**
comp=Z,1.6nm,0.4s,mb4.3,baz=47,slow=5.9,SNR=7.1
AKBB Malin Array Si 75.22 323 *e*P **P 04 39 11.9 -0.5**
KIEV Kiev 75.23 323 *e*P **P 04 39 11.9 -0.6**
KIEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KIEV Kiev 75.23 323 *e*P **P 04 39 11.8 -0.7**
comp=Z,4.4nm,0.7s,mb4.5
PDAR Pinedale Array 77.98 46 P **P 04 39 29.2 +1.0**
comp=Z,0.5nm,0.7s,mb3.6,baz=299,slow=1.5,SNR=4.1
BUR08 Bucovina Ar. S 79.22 322 *e*P **P 04 39 35.3 +0.3**
BRTR Keskin Array B 79.72 312 *ce*P **P 04 39 38.5 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 79.72 312 P **P 04 39 38.5 +0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=95,slow=3.3,SNR=6.8
CLL Collm 82.04 330 *e*P **P 04 39 50.0 0.0**
CLL Collm 82.04 330 *e*P **P 04 39 50.0 0.0**
GERES GERESS Array B 83.65 329 P **P 04 39 57.8 -0.6**
comp=Z,0.7nm,0.7s,mb3.9,baz=57,slow=4.9,SNR=5.0
GERES LR LR 05 20 52.0
comp=Z,48nm,19.4s,MS3.9,baz=65,slow=38
WMOK Wichita Mounta 89.59 46 *e*P **P 04 40 28.4 +0.6**
WMOK pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
WMOK Wichita Mounta 89.59 46 *e*P **P 04 40 28.4 +0.6**
comp=Z,4.9nm,1.1s,mb4.8
TXAR Lajitas Array 90.33 53 P **P 04 40 32.8 +1.5**
comp=Z,0.3nm,0.8s,mb3.7,baz=302,slow=3.8,SNR=4.9
LPAZ La Paz 146.77 61 PKPbc PKPbc 04 47 13.5 +1.0
comp=Z,1.1nm,0.6s,baz=262,slow=5.0,SNR=8.7
LPAZ La Paz 146.77 61 PKPbc PKPbc 04 47 13.5 +1.0

*IDC **10** 04:54:10.9±0.6, 5°.32S×131°.49E, h0km, mb4.4/12, mb1 4.6/15, mb1mx4.5/19, mbtmp4.5/15, ML4.9/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/25, Error ellipse: s-maj=29.2km s-min=13.4km az=75.0*
*ISCJB **10** 04:54:17.8±0.7, 5°.59S±0°.03×131°.57E±0°.06, h73km±7km, mb4.3/24, Error ellipse: s-maj=10.3km s-min=4.8km az=158.8*
*NEIC **10** 04:54:18.0±1.2, 5°.34S×131°.52E, h50km±11km, mb4.5/15, Error ellipse: s-maj=9.6km s-min=6.2km az=63.0*
*DJA **10** 04:54:21, 5°.44S×131°.55E, h116km, mb4.8/13*
ISC 10 04:54:19.4±0.6, 5°.58S±0°.04×131°.56E±0°.06, h70km±6km, n75, σ1°.24/71, mb4.3/24, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.17**	**93**	P	**Pn**	**04 54 46.3**	**+6.3**
TLE				S	**Sn**	**04 55 05.6**	**+10**
MSAI	**Masohi**	**3.44**	**310**	P	**Pn**	**04 55 11.0**	**+0.5**
MSAI				S	**Sn**	**04 55 46.1**	**-4.0**
AAI	**Ambon**	**3.85**	**299**	P	**Pn**	**04 55 17.0**	**+0.9**
SWI	**Sorong**	**4.69**	**356**	P	**Pn**	**04 55 26.2**	**-1.5**
SWI				S	**Sn**	**04 56 12.9**	**-8.0**
NLAI	**Namlea**	**5.02**	**297**	P	**Pn**	**04 55 34.1**	**+1.9**
LBMI	**Labuha**	**6.37**	**320**	P	**Pn**	**04 55 50.0**	**-0.6**
	1μm,1.1s,3.6nm						
LBMI				S	**Sn**	**04 56 54.5**	**-7.4**
	1μm,1.1s,3.6nm						
KAKA	**Kakadu**	**7.14**	**173**	↓*i*P	**Pn**	**04 56 03.0**	**+1.8**
	267nm,0.3s						
KAKA				*e*S	**Sn**	**04 57 19.8**	**-1.1**
KAKA	**Kakadu**	**7.14**	**173**	*e*Pn	**Pn**	**04 56 03.0**	**+1.8**
	365nm,0.3s						
KAKA				*e*Sn	**Sn**	**04 57 19.6**	**-1.3**
KAKA	**Kakadu**	**7.14**	**173**	P	**Pn**	**04 56 03.3**	**+2.1**
	511nm,0.7s,2.9nm						
SMPI	**Sarmi**	**7.97**	**64**	P	**Pn**	**04 56 13.6**	**+1.0**
	38nm,0.9s,0.2nm						
KDI	**Kendari**	**9.05**	**280**	P	**Pn**	**04 56 31.1**	**+3.7**
	26nm,1.0s						
LUWI	**Luwuk**	**9.86**	**297**	P	**Pn**	**04 56 39.3**	**+0.9**
	93nm,1.2s,1μm						
APSI	**Ampana**	**10.93**	**295**	P	**Pn**	**04 56 53.9**	**+0.9**
	65nm,0.8s						
MRSI	**Marisa**	**11.33**	**302**	P	**Pn**	**04 56 58.0**	**-0.5**
	47nm,1.0s						
KAPI	**Kappang**	**11.77**	**272**	Pn	**Pn**	**04 57 10.3**	**+5.8**
	0.8nm,0.3s,baz=88,slow=12,SNR=5.9						
FITZ	**Fitzroy Crossi**	**13.73**	**204**	*e*P	**Pn**	**04 57 29.7**	**-1.2**
	26nm,0.3s						
FITZ				*e*S	**Sn**	**04 59 52.5**	**-9.3**
FITZ	**Fitzroy Crossi**	**13.73**	**204**	Pn	**Pn**	**04 57 29.1**	**-1.7**
	5.7nm,0.3s,baz=36,slow=10,SNR=134						
FITZ				Sn	**Sn**	**04 59 54.2**	**-7.6**
	5.3nm,0.3s,baz=212,slow=16,SNR=12						
FITZ	**Fitzroy Crossi**	**13.73**	**204**	P	**Pn**	**04 57 29.9**	**-1.0**
	56nm,0.8s						
COEN	**Coen**	**14.15**	**127**	*e*Pn	**Pn**	**04 57 37.2**	**+0.8**
	262nm,0.8s						
COEN	**Coen**	**14.15**	**127**	P	**Pn**	**04 57 36.9**	**+0.5**
	122nm,0.9s						
WRAB	**Tennant Creek**	**14.53**	**169**	*e*Pn	**Pn**	**04 57 40.2**	**-1.2**
	36nm,0.6s						
WRAB				*e*Sn	**Sn**	**05 00 18.9**	**-2.2**
WRAB	**Tennant Creek**	**14.53**	**169**	P	**Pn**	**04 57 40.3**	**-1.0**
	64nm,0.8s						
WRA	**Warramunga Arr**	**14.53**	**170**	Pn	**Pn**	**04 57 40.2**	**-1.2**
	4.4nm,0.3s,baz=355,slow=13,SNR=129						
WRA				Sn	**Sn**	**05 00 16.2**	**-5.1**
	5.1nm,0.3s,baz=346,slow=23,SNR=6.9						
WB2	**Warramunga Arr**	**14.53**	**169**	*e*Pn	**Pn**	**04 57 40.2**	**-1.3**
WB2				*e*Sn	**Sn**	**05 00 17.4**	**-4.0**
ASAR	**Alice Springs**	**18.12**	**173**	P	**Pn**	**04 58 28.1**	**+1.7**
	5.8nm,0.3s,baz=353,slow=9.4,SNR=275						
ASAR				S	**S**	**05 01 40.9**	**-8.2**
	0.6nm,0.3s,baz=351,slow=24,SNR=5.0						
GMJI	**Gumukmas**	**18.18**	**261**	P	**Pn**	**04 58 24.9**	**-2.3**
	41nm,1.5s						
MBWA	**Marble Bar**	**19.27**	**215**	*e*P	**Pn**	**04 58 40.8**	**+0.6**
	38nm,1.2s						
MBWA	**Marble Bar**	**19.27**	**215**	P	**Pn**	**04 58 40.0**	**-0.2**
	31nm,1.2s						
CTA	**Charters Tower**	**20.30**	**137**	*e*P	**P**	**04 58 55.1**	**+5.4**
	17nm,0.9s						
CTA	**Charters Tower**	**20.30**	**137**	P	**P**	**04 58 52.0**	**+2.3**
	2.4nm,0.5s,baz=266,slow=24,SNR=3.0						
CTAO	**Charters Tower**	**20.30**	**137**	*e*P	**P**	**04 58 53.1**	**+3.4**
	20nm,0.8s						
CTAO	**Charters Tower**	**20.30**	**137**	P	**P**	**04 58 49.8**	**+0.1**
FORT	**Forrest**	**25.28**	**187**	*e*P	**P**	**04 59 42.1**	**+2.8**
	44nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**27.80**	**161**	*e*P	**P**	**05 00 04.8**	**+2.9**
	2.0nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**27.80**	**161**	P	**P**	**05 00 04.8**	**+2.9**
	2.2nm,0.6s,mb3.8,baz=336,slow=8.4,SNR=6.4						
STKA				LR	LR	05 12 51.8	
	comp=Z,83nm,20.7s,baz=31,slow=40						
NWAO	**Narrogin (SRO)**	**30.31**	**204**	P	**P**	**05 00 26.2**	**+2.0**
	6.4nm,0.7s,mb4.3,baz=29,slow=7.9,SNR=4.7						
CMAR	**Chiang Mai Arr**	**40.06**	**307**	P	**P**	**05 01 47.9**	**-0.2**
	1.0nm,0.3s,mb4.1,baz=137,slow=7.5,SNR=8.3						
MJAR	**Matsushiro Arr**	**42.36**	**8**	P	**P**	**05 02 04.8**	**-1.9**
	1.6nm,0.5s,mb4.0,baz=182,slow=8.1,SNR=5.5						
MJAR				LR	LR	05 16 59.5	
	comp=Z,77nm,19.2s,baz=55,slow=32						
RPZ	**Rata Peaks**	**51.43**	**144**	P	**P**	**05 03 21.0**	**+3.6**
	11nm,0.8s,mb4.9,baz=350,slow=11,SNR=2.9						
SONM	**Songino Array**	**57.62**	**340**	P	**P**	**05 04 01.7**	**-0.4**
	1.7nm,0.8s,mb4.1,baz=157,slow=6.6,SNR=10.0						
PETK	**Petropavlovsk-**	**62.50**	**17**	P	**P**	**05 04 35.6**	**+0.2**
	4.3nm,0.7s,mb4.5,baz=150,slow=3.3,SNR=5.3						
MK31	**Makanchi Array**	**67.91**	**326**	*e*P	**P**	**05 05 10.2**	**-0.4**
MKAR	**Makanchi Array**	**67.91**	**326**	P	**P**	**05 05 10.4**	**-0.2**
	2.6nm,0.3s,mb4.6,baz=118,slow=8.1,SNR=45						
TKM2	**Tokmak 2**	**69.90**	**320**	*e*P	**P**	**05 05 22.3**	**-0.7**
	4.0nm,0.7s,mb4.4						
UCH	**Uchtor**	**70.28**	**319**	*e*P	**P**	**05 05 26.2**	**+0.9**
	5.9nm,1.4s,mb4.2						
AAK	**Ala-Archa**	**70.48**	**319**	*e*P	**P**	**05 05 27.1**	**+0.5**
	2.4nm,0.5s,mb4.3						
AML	**Almayashu**	**70.78**	**318**	*e*P	**P**	**05 05 28.4**	**0.0**
	5.0nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**70.96**	**319**	*e*P	**P**	**05 05 29.8**	**+0.3**
	1.2nm,0.8s,mb3.8						
ZAA0	**Zalesovo Array**	**71.02**	**333**	*e*P	**P**	**05 05 28.4**	**-1.2**
ZALV	**Zalesovo Beam**	**71.02**	**333**	P	**P**	**05 05 28.3**	**-1.3**
	2.0nm,0.5s,mb4.2,baz=117,slow=5.6,SNR=11						
KBL	**Kabul**	**71.05**	**309**	*e*P	**P**	**05 05 30.0**	**-0.2**
	4.8nm,0.8s,mb4.4						
KURK	**Kurchatov**	**72.13**	**328**	*e*P	**P**	**05 05 36.0**	**-0.4**
	5.6nm,1.1s,mb4.3						
MAW	**Mawson**	**76.83**	**202**	P	**P**	**05 06 05.3**	**+1.9**
	3.1nm,1.0s,mb4.0,baz=88,slow=6.0,SNR=3.6						
BVAR	**Borovoye Array**	**77.70**	**327**	P	**P**	**05 06 07.7**	**-0.8**
	2.1nm,0.7s,mb4.0,baz=140,slow=5.8,SNR=9.8						
BRVK	**Borovoye**	**77.78**	**327**	*e*P	**P**	**05 06 07.9**	**-0.9**
	4.1nm,0.8s,mb4.2						
ABKAR	**Akbulak array**	**82.37**	**321**	*e*P	**P**	**05 06 32.7**	**-1.0**
	1.7nm,0.8s,mb3.9						
QSPA	**South Pole Qui**	**84.39**	**180**	*e*P	**P**	**05 06 45.0**	**+1.4**
	6.0nm,0.8s,mb4.5						
TTA	**Tatalina**	**87.04**	**26**	*e*P	**P**	**05 06 57.6**	**+0.7**
	10.0nm,1.2s,mb4.6						
KMBO	**Kilima Mbogo**	**94.18**	**268**	*e*P	**P**	**05 07 32.2**	**+0.8**
	1.3nm,0.4s,mb4.6						
YKA	**Yellowknife Ar**	**105.80**	**26**	PKiKP	PKiKP	05 12 34.3	-0.4
	0.3nm,0.6s,baz=292,slow=1.7,SNR=12						
PDAR	**Pinedale Array**	**114.79**	**45**	PKP	PKiKP	05 12 52.9	+0.6
	0.4nm,0.8s,baz=8.7,slow=2.0,SNR=3.7						
FCC	**Fort Churchill**	**116.42**	**25**	*e*PKPdf	PKPdf	05 12 54.3	-0.6
ESK	**Eskdalemuir**	**118.68**	**332**	*e*PKPdf	PKPdf	05 13 02.5	+3.2
ANMO	**Albuquerque**	**119.21**	**53**	*e*PKPdf	PKPdf	05 13 02.5	+1.5
MNTX	**Cornudas Mount**	**120.88**	**56**	*e*PKPdf	PKPdf	05 13 04.9	+0.6
TXAR	**Lajitas Array**	**122.87**	**59**	PKP	PKPdf	05 13 08.9	+0.7
	0.3nm,0.6s,baz=261,slow=1.5,SNR=6.0						
JCT	**Junction City**	**125.82**	**56**	*e*PKPdf	PKPdf	05 13 14.6	+0.7
NATX	**Nacogdoches**	**129.58**	**53**	*e*PKPdf	PKPdf	05 13 21.9	+0.9
TORD	**Torodi Ar. Bea**	**130.04**	**282**	PKP	PKPdf	05 13 22.2	0.0
	1.8nm,0.8s,baz=63,slow=1.7,SNR=10						
WVT	**Waverly**	**132.80**	**44**	*e*PKPdf	PKPdf	05 13 28.0	+1.0
TRQA	**Tornquist**	**134.80**	**165**	*e*PKPdf	PKPdf	05 13 32.5	+1.8
CPUP	**Villa Florida**	**147.13**	**165**	PKPbc	PKPbc	05 13 56.5	+1.2
	2.9nm,0.6s,baz=131,slow=1.3,SNR=10						
CPUP	**Villa Florida**	**147.13**	**165**	*e*PKPdf	PKPdf	05 13 54.6	+1.5
CPUP				PKPbc	PKPbc	05 13 56.5	+1.2
LPAZ	**La Paz**	**150.82**	**138**	PKPbc	PKPbc	05 14 07.3	+2.4
	4.8nm,0.9s,baz=125,slow=1.8,SNR=15						
LPAZ	**La Paz**	**150.82**	**138**	*e*PKPdf	PKPdf	05 14 01.6	+2.3
LPAZ				PKPbc	PKPbc	05 14 07.3	+2.4

IDC 10 05:13:58.6±1.7, 8°.45S×126°.18E, h0km, mb3.6/2, mb1 3.5/4, mb1mx3.4/15, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=145.4km s-min=28.2km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.89**	**146**	Pn	Pn	05 17 14.8	-2.1
	0.1nm,0.3s,baz=319,slow=14,SNR=4.7						
WRA				Sn	Sn	05 19 49.7	-2.3
	0.1nm,0.3s,baz=329,slow=24,SNR=7.0						
ASAR	**Alice Springs**	**16.85**	**155**	Pn	Pn	05 17 57.6	+1.6
	0.1nm,0.3s,baz=331,slow=11,SNR=12						
STKA	**Stephens Creek**	**27.37**	**151**	P	P	05 19 45.8	+0.1
	0.4nm,0.4s,baz=328,slow=16,SNR=2.9						
MKAR	**Makanchi Array**	**67.43**	**329**	P	P	05 24 56.0	+0.1
	0.4nm,0.8s,baz=123,slow=5.3,SNR=3.7						

*ISCJB **10** 05:18:29.7±1.0, 16°.2S±0°.1×176°.0W±0°.1, h330km±11km, mb3.9/17, Error ellipse: s-maj=27.5km s-min=12.5km az=143.6*
*NEIC **10** 05:18:31.3±1.1, 16°.24S×175°.95W, h332km±11km, mb4.3/7, Error ellipse: s-maj=19.8km s-min=9.2km az=144.0*
*IDC **10** 05:18:31.3±2.1, 15°.70S×176°.31W, h317km±23km, mb3.4/10, mb1 3.6/11, mb1mx3.5/19, mbtmp3.4/11, Error ellipse: s-maj=31.7km s-min=13.0km az=142.0*
ISC 10 05:18:30.4±1.1, 16°.2S±0°.1×176°.0W±0°.1, h322km±11km, n36, σ0°.79/25, mb3.9/17, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.65**	**61**	P	**Pn**	**05 19 46.6**	**+1.6**
	8.7nm,0.3s,baz=189,slow=3.9,SNR=9.8						
AFI				S	**S**	**05 20 43.3**	**-1.6**
	5.1nm,0.3s,baz=313,slow=19,SNR=3.5						
AFI	**Afiamalu**	**4.65**	**61**	*e*Pn	**Pn**	**05 19 46.3**	**+1.4**
AFI				*e*S	**S**	**05 20 44.3**	**-0.7**
URZ	**Urewera**	**22.80**	**194**	P	**P**	**05 23 12.1**	**+6.3**
	3.5nm,0.3s,mb4.1,baz=52,slow=12,SNR=5.6						
URZ				S	**S**	**05 27 06.4**	**+16**
	7.0nm,0.7s,baz=86,slow=20,SNR=5.9						
STKA	**Stephens Creek**	**41.49**	**240**	P	**P**	**05 25 47.9**	**+0.9**
	0.7nm,0.3s,mb3.4,baz=75,slow=11,SNR=3.3						
WB2	**Warramunga Arr**	**47.24**	**258**	*e*P	**P**	**05 26 32.1**	**-0.2**
WRAB	**Tennant Creek**	**47.24**	**258**	*e*P	**P**	**05 26 31.9**	**-0.4**
	5.1nm,1.1s,mb3.7						
WRA	**Warramunga Arr**	**47.25**	**258**	P	**P**	**05 26 31.4**	**-1.0**
	0.4nm,0.3s,mb3.1,baz=80,slow=6.2,SNR=30						
ASAR	**Alice Springs**	**47.51**	**253**	P	**P**	**05 26 33.9**	**-0.4**
	4.2nm,0.5s,mb3.9,baz=88,slow=7.9,SNR=63						
KAKA	**Kakadu**	**49.97**	**267**	*e*P	**P**	**05 26 56.0**	**+3.0**
MBWA	**Marble Bar**	**60.76**	**255**	*e*P	**P**	**05 28 08.9**	**-0.4**
	27nm,1.6s,mb4.4						
SBA	**Scott Base**	**62.26**	**184**	*e*P	**P**	**05 28 18.6**	**+0.3**
	2.1nm,0.7s,mb3.8						
PETK	**Petropavlovsk-**	**72.67**	**344**	P	**P**	**05 29 22.8**	**-0.4**
	3.5nm,0.7s,mb4.2,baz=100,slow=9.3,SNR=6.1						
PETK	**Petropavlovsk-**	**72.67**	**344**	P	**P**	**05 29 22.8**	**-0.5**
QSPA	**South Pole Qui**	**73.84**	**180**	*e*P	**P**	**05 29 29.0**	**-0.7**
	36nm,2.0s,mb4.8						
YBH	**Yreka Blue Hor**	**75.75**	**38**	P	**P**	**05 29 42.1**	**+1.0**
	0.6nm,0.4s,mb3.7,baz=270,slow=1.0,SNR=5.3						
NVAR	**Mina Array Bea**	**76.59**	**43**	P	**P**	**05 29 46.3**	**+0.4**
	1.3nm,1.0s,mb3.6,baz=225,slow=11,SNR=5.5						
MCK	**McKinley**	**82.39**	**12**	*e*P	**P**	**05 30 16.0**	**-0.4**
	8.0nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**83.12**	**57**	P	**P**	**05 30 21.1**	**+0.2**
	0.3nm,0.7s,mb3.2,baz=229,slow=8.4,SNR=3.6						
COLA	**College**	**83.63**	**12**	*e*P	**P**	**05 30 22.6**	**-0.1**
	4.6nm,0.6s,mb4.5						
PDAR	**Pinedale Array**	**84.53**	**43**	P	**P**	**05 30 27.3**	**-0.4**
	0.3nm,0.5s,mb3.4,baz=196,slow=2.3,SNR=3.6						
BILL	**Bilibino**	**85.00**	**353**	*e*P	**P**	**05 30 29.9**	**+0.5**
	2.4nm,0.7s,mb4.1						
YKA	**Yellowknife Ar**	**91.83**	**24**	P	**P**	**05 31 01.5**	**-0.2**
	0.4nm,0.8s,mb3.4,baz=238,slow=4.7,SNR=8.3						
STHS	**Stebnicka Huta**	**144.04**	**341**	*e*PKP	PKPdf	05 37 27.2	-0.5
CLL	**Collm**	**144.25**	**350**	↑*i*PKPdf	PKPdf	05 37 26.5	-1.5
	comp=Z,6.0nm,0.8s						
BRTR	**Keskin Array B**	**145.16**	**318**	PKP	PKPdf	05 37 30.5	+0.5
	comp=Z,3.1nm,0.8s,baz=120,slow=3.5,SNR=12						
VYHS	**Vyhne**	**145.59**	**342**	*e*PKP	PKPdf	05 37 32.1	+1.7
BAIF	**Baives**	**146.24**	**360**	*e*PKP1	PKPbc	05 37 32.9	-0.2
GERES	**GERESS Array B**	**146.50**	**348**	PKPbc	PKPbc	05 37 34.1	+0.1
	comp=Z,0.3nm,0.4s,baz=45,slow=4.3,SNR=3.6						
FLN	**La Foliniere**	**147.32**	**6**	*e*PKP1	PKPbc	05 37 35.9	-0.3
	comp=Z,17nm,0.8s						
LDF	**La Druitiere**	**147.52**	**5**	*e*PKP1	PKPbc	05 37 36.1	-0.6
	comp=Z,9.7nm,0.8s						
GRR	**Gorron**	**147.66**	**6**	*e*PKP1	PKPbc	05 37 36.9	-0.2
CDF	**Champ du Feu**	**147.77**	**356**	*e*PKP1	PKPbc	05 37 37.2	-0.2
HAU	**Haudompre**	**148.23**	**357**	*e*PKP1	PKPbc	05 37 38.2	-0.4
HINF	**Hinteralfeld**	**148.39**	**356**	*e*PKP1	PKPbc	05 37 38.4	-0.6
SSF	**Saint Saulge**	**149.23**	**1**	*e*PKP1	PKPbc	05 37 40.8	-0.3
	comp=Z,2.8nm,0.7s						
CABF	**La Chapelle**	**149.64**	**357**	*e*PKP1	PKPbc	05 37 42.3	+0.2
	comp=Z,11nm,0.9s						

*IDC **10** 05:32:36.1±1.1, 9°.02S×123°.16E, h0km, mb4.1/3, mb1 4.1/6, mb1mx3.8/17, mbtmp4.0/6, ML3.9/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/24, Error ellipse: s-maj=104.3km s-min=22.6km az=64.0*
*ISCJB **10** 05:32:44.6±1.3, 9°.44S±0°.06×123°.32E±0°.08, h106km±16km, mb4.0/4, Error ellipse: s-maj=14.4km s-min=8.3km az=146.8*
*NEIC **10** 05:32:45.6±1.1, 9°.31S×123°.30E, h87km±13km, mb4.1/2, Error ellipse: s-maj=19.4km s-min=9.3km az=54.0*
ISC 10 05:32:45.6±1.1, 9°.44S±0°.07×123°.30E±0°.08, h95km±15km, n14, σ1°.05/20, mb4.0/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.64**	**321**	*e*Pn	**Pn**	**05 34 06.1**	**-0.8**
KAPI				*e*Sn	**Sn**	**05 35 02.3**	**-8.1**
FITZ	**Fitzroy Crossi**	**8.90**	**165**	Pn	**Pn**	**05 34 53.3**	**+2.0**
	0.6nm,0.3s,baz=11,slow=9.8,SNR=27						
FITZ				Sn	**Sn**	**05 36 29.2**	**-0.7**
	3.4nm,0.3s,baz=206,slow=6.3,SNR=14						
FITZ	**Fitzroy Crossi**	**8.90**	**165**	*e*Pn	**Pn**	**05 34 53.0**	**+1.6**
FITZ				*e*Sn	**Sn**	**05 36 29.2**	**-0.7**
KAKA	**Kakadu**	**9.54**	**111**	*e*Pn	**Pn**	**05 35 00.9**	**+0.8**
KAKA				*e*Sn	**Sn**	**05 36 43.9**	**-1.6**
MBWA	**Marble Bar**	**12.14**	**196**	Pn	**Pn**	**05 35 37.0**	**+1.6**
MBWA				*e*Sn	**Sn**	**05 37 45.8**	**-3.1**
WRA	**Warramunga Arr**	**14.92**	**136**	Pn	**Pn**	**05 36 12.0**	**+0.4**
	0.5nm,0.3s,baz=313,slow=13,SNR=13						
WRA				Sn	**Sn**	**05 38 49.5**	**-6.7**
	0.9nm,0.3s,baz=314,slow=25,SNR=8.3						
WRAB	**Tennant Creek**	**14.92**	**136**	*e*P	**Pn**	**05 36 12.2**	**+0.6**
	6.9nm,0.9s						
ASAR	**Alice Springs**	**17.40**	**146**	P	**Pn**	**05 36 46.5**	**+4.2**
	0.6nm,0.3s,baz=318,slow=12,SNR=31						
ASAR				S	**S**	**05 39 50.1**	**-6.6**
	0.3nm,0.3s,baz=319,slow=22,SNR=13						
SONM	**Songino Array**	**58.97**	**347**	P	**P**	**05 42 35.2**	**+0.2**
	0.6nm,0.7s,mb3.8,baz=167,slow=6.8,SNR=4.7						
SONM				LR	LR	06 07 59.7	
	comp=Z,43nm,18.2s,baz=136,slow=36						
MK31	**Makanchi Array**	**66.85**	**331**	*e*P	**P**	**05 43 26.9**	**-0.4**
MKAR	**Makanchi Array**	**66.85**	**331**	P	**P**	**05 43 27.5**	**+0.2**
	2.2nm,0.6s,mb4.2,baz=140,slow=7.3,SNR=33						
AAK	**Ala-Archa**	**68.31**	**323**	*e*P	**P**	**05 43 36.8**	**+0.2**
	1.6nm,0.5s,mb4.1						
ZALV	**Zalesovo Beam**	**71.03**	**337**	P	**P**	**05 43 52.4**	**-0.7**
	1.1nm,0.5s,mb4.0,baz=130,slow=4.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**122.72**	**280**	PKP	PKPdf	05 51 33.8	+2.4
	0.6nm,0.5s,baz=50,slow=2.1,SNR=9.0						

IDC 10 05:43:50.2±1.4, 25°.01N×141°.29E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=50.6km s-min=27.8km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.19**	**189**	P	P	05 52 08.9	-0.1
	1.2nm,0.3s,baz=7.7,slow=8.7,SNR=37						
MKAR	**Makanchi Array**	**51.21**	**311**	P	P	05 52 56.2	+0.9
	0.1nm,0.4s,baz=80,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**59.05**	**318**	P	P	05 53 51.2	-0.6
	0.6nm,0.4s,baz=112,slow=6.5,SNR=3.2						
YKA	**Yellowknife Ar**	**74.36**	**28**	P	P	05 55 29.3	-0.1
	0.3nm,0.7s,baz=298,slow=5.6,SNR=4.4						

*ISCJB **10** 05:51:54.2±0.5, 0°.08N±0°.05×123°.77E±0°.04, h135km±6km, mb4.2/17, Error ellipse: s-maj=8.1km s-min=5.9km az=22.8*
*DJA **10** 05:51:54, 0°.04N×123°.79E, h144km, MLv4.9/7*
*IDC **10** 05:51:54.9±2.8, 0°.07N×123°.54E, h122km±25km, mb3.9/14, mb1 4.0/15, mb1mx3.9/21, mbtmp3.9/15, Error ellipse: s-maj=29.6km s-min=11.2km az=70.0*
*NEIC **10** 05:52:00.6±2.4, 0°.10S×123°.32E, h187km±22km, mb4.7/7, Error ellipse: s-maj=23.7km s-min=11.2km az=61.0*
ISC 10 05:51:55.2±0.5, 0°.06N±0°.05×123°.77E±0°.04, h128km±5km, n46, σ1°.17/50, mb4.2/17, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.48**	**222**	P	**Pn**	**05 52 22.1**	**-0.9**
LUWI				S	**Sn**	**05 52 48.2**	**+4.0**
MRSI	**Marisa**	**1.87**	**283**	P	**Pn**	**05 52 27.1**	**-0.5**
APSI	**Ampana**	**2.33**	**245**	P	**Pn**	**05 52 33.1**	**-0.1**
LBMI	**Labuha**	**3.80**	**101**	P	**Pn**	**05 52 53.7**	**+1.4**
LBMI				S	**Sn**	**05 53 35.7**	**-0.8**
MPSI	**Mapaga**	**3.88**	**274**	S	**Sn**	**05 53 40.3**	**+1.9**
PCI	**Palu**	**4.05**	**256**	P	**Pn**	**05 52 59.2**	**+3.6**
KDI	**Kendari**	**4.16**	**196**	P	**Pn**	**05 52 56.0**	**-1.1**
NLAI	**Namlea**	**4.67**	**135**	P	**Pn**	**05 53 04.9**	**+0.9**
NLAI				S	**Sn**	**05 53 55.8**	**-1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.07**	**222**	Pn	Pn	05 54 33.2	+0.6
	0.9nm,0.4s,baz=44,slow=11,SNR=80						
MK31				⇑Sn	Sn	05 55 33.2	+1.5
	2.9nm,0.4s						
MK31				⇑Lg		05 55 52.7	
	6.4nm,0.5s,baz=41,slow=27,SNR=6.4						
KURK	**Kurchatov**	**5.48**	**274**	⇑Pn	Pn	05 54 38.0	-0.3
	2.0nm,0.5s						
KURK				⇑Sn	Sn	05 55 41.8	-0.3
	3.9nm,0.7s						
KURK				⇓Lg		05 56 09.6	
	8.9nm,0.7s						
KURBB	**Kurchatov Arra**	**5.55**	**273**	⇑Pn	Pn	05 54 39.1	0.0
	0.8nm,0.4s						
KURBB				⇑Sn	Sn	05 55 45.6	+2.0
	0.7nm,0.5s						
KURBB				⇓Lg		05 56 17.6	
	3.9nm,0.6s						

*DMN **10** 05:58:46.9±0.5, 27°.26N×93°.29E, h10km, Ml4.6/6, Error ellipse: s-maj=98.9km s-min=9.2km az=4.0*
*IDC **10** 05:58:47.6±0.6, 27°.59N×92°.72E, h0km, mb4.0/16, mb1 4.2/17, mb1mx4.1/27, mbtmp4.0/17, ML4.4/1, Error ellipse: s-maj=30.3km s-min=13.0km az=55.0*
*LDG **10** 05:58:48.6±0.4, 27°.72N×92°.51E, h10km, Mb4.4/11, Ms4.4/2, Error ellipse: s-maj=17.0km s-min=6.7km az=153.0*
*MOS **10** 05:58:50.6±1.0, 27°.51N×92°.79E, h33km, mb4.5/15, Error ellipse: s-maj=17.2km s-min=7.1km az=118.0*
*BJI **10** 05:58:53.1, 27°.64N×92°.78E, h50km, mB4.8/15, mb4.4/26, ML3.9/4, Ms3.9/16, Ms7 3.6/12*
*ISCJB **10** 05:58:54.6±0.5, 27°.48N±0°.04×92°.68E±0°.02, h68km±5km, mb4.1/40, Error ellipse: s-maj=6.6km s-min=3.5km az=178.7*
*NEIC **10** 05:58:56.5±0.8, 27°.62N×92°.76E, h68km±7km, mb4.3/16, Error ellipse: s-maj=9.7km s-min=5.3km az=224.0*
ISC 10 05:58:56.9±0.4, 27°.53N±0°.04×92°.70E±0°.03, h71km±4km, n110, σ1$07/122, mb4.1/40, 4C, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.09**	**201**	*e*P	Pn	05 59 29.5	-0.2
SHL				*e*S	Sn	05 59 56.5	+1.8
LSA	**Lhasa**	**2.56**	**328**	P	Pn	05 59 35.4	-0.6
LSA				S	Sn	06 00 06.2	+0.1
LSA				smax			
	comp=E,550nm,1.0s						
LSA	**Lhasa**	**2.56**	**328**	*e*Pn	Pn	05 59 35.5	-0.6
LSA				*e*S	Sn	06 00 07.1	+1.0
TURI	**Tura**	**2.90**	**228**	*e*x	x	06 00 03.0	
TURI				*e*x	x	06 00 05.4	
IMP	**Imphal**	**2.95**	**158**	*i* x	Pn	05 59 39.0	-2.4
IMP				*e*x	x	06 00 06.0	
TAPN	**Taplejung**	**4.44**	**269**	*e*Sn	Sn	06 00 54.4	+2.3
	comp=E,126nm,0.3s						
GUN	**Gumba**	**6.06**	**275**	*e*Pn	Pn	06 00 22.4	-1.4
GUN				*e*Sn	Sn	06 01 32.8	+1.0
	comp=E,147nm,0.4s						
PKI	**Pulchoki**	**6.47**	**272**	*e*Pn	Pn	06 00 27.4	-2.1
PKI				*e*Sn	Sn	06 01 43.2	+1.2
	comp=E,80nm,0.4s						
PKIN	**Phulchoki**	**6.49**	**272**	*e*Pn	Pn	06 00 27.3	-2.4
PKIN				*e*Sn	Sn	06 01 42.9	+0.7
	comp=E,86nm,0.4s						
KKN	**Kakani**	**6.59**	**274**	*e*Pn	Pn	06 00 29.6	-1.5
KKN				*e*Sn	Sn	06 01 45.2	+0.5
	comp=E,113nm,0.4s						
DMN	**Daman**	**6.74**	**272**	*e*Pn	Pn	06 00 31.4	-1.8
DMN				*e*Sn	Sn	06 01 48.4	-0.1
	comp=E,86nm,0.4s						
KMI	**Kunming**	**9.32**	**103**	P	Pn	06 01 06.8	-1.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CD2	**Chengdu**	**10.23**	**68**	P	Pn	06 01 22.2	+1.4
CD2				sP		06 01 31.9	
CD2				S	Sn	06 03 16.0	+2.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,110nm,4.9s						
CD2				LR	LR		
	comp=N,450nm,8.9s						
CD2				LR	LR		
	comp=Z,240nm,7.7s						
CM31	**Chiang Mai Arr**	**10.70**	**146**	*e*Pn	Pn	06 01 27.4	+0.1
CMAR	**Chiang Mai Arr**	**10.70**	**146**	Pn	Pn	06 01 22.9	-4.4
	comp=Z,0.8nm,0.3s,baz=327,slow=14,SNR=8.7						
GYA	**Guiyang**	**12.50**	**92**	*e*P	Pn	06 01 51.0	-0.8
GYA				pP		06 02 02.4	
GYA				S	Sn	06 04 10.6	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				LR	LR		
	comp=N,340nm,10.2s						
GYA				LR	LR		
	comp=E,260nm,9.4s						
GYA				LR	LR		
	comp=Z,280nm,11.8s						
LZH	**Lanzhou**	**12.74**	**45**	*e*P	Pn	06 01 56.0	+1.0
LZH				pP		06 02 05.5	
LZH				*e*PP		06 02 07.8	
LZH				*e*S	Sn	06 04 17.0	+2.0
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,4.0s						
LZH				LR	LR		
	comp=N,500nm,8.5s						
LZH				LR	LR		
	comp=Z,570nm,11.3s						
GTA	**Gaotai**	**13.25**	**25**	*e*P	Pn	06 01 57.6	-4.2
GTA				pP		06 02 06.7	
GTA				sP		06 02 15.9	
GTA				S	Sn	06 04 19.6	-7.6
GTA				sS		06 04 36.0	
GTA				SS		06 04 38.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,82nm,4.2s						
GTA				LR	LR		
	comp=N,88nm,16.3s						
GTA				LR	LR		
	comp=E,110nm,15.5s						
ENH	**Enshi**	**14.96**	**75**	*e*Pn	Pn	06 02 24.1	-0.1
XAN	**Xi'an**	**15.37**	**61**	P	Pn	06 02 28.2	-1.3
XAN				S	S	06 05 17.5	-13
WMQ	**Urumqi**	**16.75**	**347**	P	Pn	06 02 48.2	+1.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,74nm,6.4s						
WMQ				LR	LR		
	comp=N,58nm,21.0s						
WMQ				LR	LR		
	comp=E,110nm,25.0s						
WHN	**Wuhan**	**19.16**	**76**	P	Pn	06 03 12.5	-3.7
HHC	**Hu-ho-hao-te**	**20.44**	**45**	*e*P	P	06 03 30.3	+2.0
HHC				pP		06 03 44.0	
HHC				PP		06 03 53.3	
HHC				S	S	06 07 11.4	-1.8
HHC				sS	sS	06 07 30.6	-6.8
HHC				PcP	PcP	06 07 40.9	+3.0
HHC				ScP	ScP	06 11 11.0	+2.8
HHC				PcS	PcS	06 11 17.5	+2.0
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,6.1s						
HHC				LR	LR		
	comp=N,190nm,13.1s						
HHC				LR	LR		
	comp=E,580nm,16.1s						
HHC				LR	LR		
	comp=Z,110nm,10.8s						
TKM2	**Tokmak 2**	**20.70**	**322**	*e*P	P	06 03 31.4	+0.3
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TKM2	**Tokmak 2**	**20.70**	**322**	*e*P	P	06 03 31.4	+0.3
	comp=Z,10nm,0.9s						
UCH	**Uchtor**	**20.86**	**319**	*e*P	P	06 03 33.2	+0.4
UCH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
UCH	**Uchtor**	**20.86**	**319**	*e*P	P	06 03 33.2	+0.4
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**20.91**	**340**	*e*P	P	06 03 31.1	-2.2
MKAR	**Makanchi Array**	**20.91**	**340**	*c*e*P	P	06 03 34.7	+1.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**20.91**	**340**	P	P	06 03 31.2	-2.1
	comp=Z,3.0nm,0.6s,baz=146,slow=11,SNR=12						
AAK	**Ala-Archa**	**21.12**	**320**	*e*P	P	06 03 35.8	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
AAK	**Ala-Archa**	**21.12**	**320**	P	P	06 03 35.3	-0.4
	comp=Z,1.8nm,0.4s,mb3.7,baz=137,slow=7.1,SNR=6.0						
AAK	**Ala-Archa**	**21.12**	**320**	*e*P	P	06 03 35.8	0.0
	comp=Z,4.3nm,0.8s,mb3.8						
AML	**Almayashu**	**21.28**	**318**	*e*P	P	06 03 38.2	+0.8
AML				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
AML	**Almayashu**	**21.28**	**318**	*e*P	P	06 03 38.2	+0.8
	comp=Z,7.9nm,1.0s,mb4.0						
KBL	**Kabul**	**21.42**	**295**	*e*P	P	06 03 39.4	+0.5
KBL				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
KBL	**Kabul**	**21.42**	**295**	*e*P	P	06 03 39.4	+0.4
	comp=Z,20nm,0.6s,mb4.6						
EKS2	**Erkin-Say**	**21.55**	**319**	*e*P	P	06 03 40.7	+0.4
EKS2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**21.55**	**319**	*e*P	P	06 03 40.7	+0.4
	comp=Z,9.9nm,0.8s,mb4.2						
SONM	**Songino Array**	**22.92**	**24**	P	P	06 03 52.6	-2.1
	comp=Z,1.6nm,0.6s,mb3.5,baz=206,slow=12,SNR=14						
BJI	**Beijing**	**23.08**	**51**	P	P	06 03 51.6	-4.8
BJI				S	S	06 07 58.6	-3.2
BJI				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.4						
BJI				LR	LR		
	comp=N,180nm,16.3s						
BJI				LR	LR		
	comp=E,83nm,20.8s						
NJ2	**Nanjing**	**23.12**	**72**	*e*P	P	06 03 57.2	+0.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb4.7						
ZAK	**Zakamensk**	**24.21**	**17**	*e*P	P	06 04 06.4	-0.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.5						
TLY	**Talaya**	**25.49**	**16**	*e*P	P	06 04 20.3	+2.0
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
KURK	**Kurchatov**	**25.51**	**339**	*c*e*P	P	06 04 18.4	-0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
KURK	**Kurchatov**	**25.51**	**339**	P	P	06 04 17.4	-1.1
	comp=Z,4.6nm,0.7s,mb4.0,baz=150,slow=9.8,SNR=18						
KURK	**Kurchatov**	**25.51**	**339**	*e*P	P	06 04 16.9	-1.5
	comp=Z,4.9nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**27.03**	**350**	P	P	06 04 31.4	-0.6
	comp=Z,1.6nm,0.5s,mb3.8,baz=166,slow=8.1,SNR=8.8						
BVAR	**Borovoye Array**	**30.38**	**333**	P	P	06 05 00.7	-1.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=119,slow=9.6,SNR=3.5						
CN2	**Changchun**	**30.92**	**50**	*e*P	P	06 05 08.2	+1.5
ABKAR	**Akbulak array**	**33.21**	**320**	*e*P	P	06 05 26.3	-0.5
	comp=Z,3.9nm,0.6s,mb4.4						
MDJ	**Mudanjiang**	**34.00**	**50**	P	P	06 05 33.0	-0.7
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,87nm,6.0s						
ZEI	**Tsey**	**42.12**	**304**	*e*P	P	06 06 41.0	-1.0
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
GOF	**Gofitskoye**	**42.97**	**308**	*e*P	P	06 06 44.2	-4.7
TIXI	**Tiksi**	**48.46**	**14**	*e*P	P	06 07 29.9	-1.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.8s,mb4.0						
BRTR	**Keskin Array B**	**49.85**	**300**	*c*e*P	P	06 07 43.9	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**49.85**	**300**	P	P	06 07 43.4	+0.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=92,slow=7.4,SNR=5.9						
AKASG	**Malin Array Be**	**52.63**	**314**	P	P	06 08 02.1	-1.3
	comp=Z,0.8nm,0.4s,mb4.1,baz=79,slow=6.4,SNR=3.8						
FINES	**FINESS Array B**	**55.08**	**327**	P	P	06 08 20.0	-1.1
	comp=Z,1.8nm,0.8s,mb4.2,baz=85,slow=6.5,SNR=5.9						
BUR08	**Bucovina Ar. S**	**55.35**	**311**	*e*P	P	06 08 23.4	+0.1
BILL	**Bilibino**	**58.64**	**25**	*c*i P	P	06 08 46.5	+0.3
BILL				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.6						
BILL	**Bilibino**	**58.64**	**25**	*e*P	P	06 08 46.6	+0.4
	comp=Z,3.2nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**62.06**	**135**	P	P	06 09 10.7	+0.5
	comp=Z,3.6nm,0.6s,mb4.6,baz=318,slow=7.9,SNR=70						
WB2	**Warramunga Arr**	**62.07**	**135**	*e*P	P	06 09 09.9	-0.3
NB2	**NORSAR Subarra**	**62.25**	**327**	P	P	06 09 09.9	-1.0
	comp=Z,1.6nm,0.7s,mb4.2,baz=82,slow=6.5						
NOA	**NORSAR Array B**	**62.25**	**327**	P	P	06 09 10.2	-0.8
	comp=Z,1.9nm,0.7s,mb4.3,baz=83,slow=6.7,SNR=12						
GERES	**GERESS Array B**	**62.80**	**313**	P	P	06 09 15.0	+0.2
	comp=Z,1.8nm,0.5s,mb4.2,baz=72,slow=5.7,SNR=10						
ASAR	**Alice Springs**	**64.59**	**138**	P	P	06 09 27.9	+1.1
	comp=Z,2.9nm,0.5s,mb4.3,baz=323,slow=6.6,SNR=39						
CDF	**Champ du Feu**	**67.04**	**314**	*e*P	P	06 09 42.2	-0.2
	comp=Z,7.3nm,0.9s,mb4.2						
PGF	**Pioggiola**	**67.56**	**307**	*e*P	P	06 09 44.9	-0.8
HAU	**Haudompre**	**67.75**	**314**	*e*P	P	06 09 47.5	+0.6
GIVF	**Givet**	**68.11**	**316**	*e*P	P	06 09 49.7	+0.7
LPG	**La Plagne**	**68.23**	**311**	*e*P	P	06 09 50.4	+0.5
	comp=Z,4.0nm,0.7s,mb4.1						
LPL	**La Plagne**	**68.23**	**311**	*e*P	P	06 09 50.4	+0.5
CABF	**La Chapelle**	**68.33**	**312**	*e*P	P	06 09 52.0	+1.5
MEZF	**Maizieres J'vi**	**68.44**	**314**	*e*P	P	06 09 51.2	+0.1
	comp=Z,3.9nm,0.4s,mb4.3						
MEZF	**Maizieres J'vi**	**68.44**	**314**	*e*P	P	06 09 51.2	+0.1
	comp=Z,3.9nm,0.4s,mb4.6						
MBDF	**Montbardon**	**68.45**	**310**	*e*P	P	06 09 52.1	+0.8
FRF	**La Foret Royal**	**68.89**	**309**	*e*P	P	06 09 54.7	+0.6
SMRF	**Simiane la Rot**	**69.50**	**310**	*e*P	P	06 09 57.9	+0.1
LOR	**Lormes**	**69.58**	**313**	*e*P	P	06 09 57.8	-0.4
SMF	**Signal de Mont**	**69.79**	**313**	*e*P	P	06 09 59.3	-0.3
	comp=Z,5.8nm,0.7s,mb4.2						
SMF	**Signal de Mont**	**69.79**	**313**	*e*P	P	06 09 59.3	-0.3
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
SMF	**Signal de Mont**	**69.79**	**313**	*e*P	P	06 09 59.3	-0.3
	comp=Z,2.9nm,0.7s,mb4.2						
VIVF	**Saint-Julien-l**	**69.83**	**311**	*e*P	P	06 09 59.6	-0.2
SSF	**Saint Saulge**	**69.88**	**313**	*e*P	P	06 09 59.8	-0.3
AVF	**Avril sur Loir**	**70.06**	**313**	*e*P	P	06 10 01.0	-0.2
TCF	**Toulx Ste Croi**	**70.98**	**313**	*e*P	P	06 10 07.0	+0.2
	comp=Z,6.9nm,0.8s,mb4.2						
CAF	**Calviac**	**71.55**	**312**	*e*P	P	06 10 10.7	+0.5
	comp=Z,3.0nm,0.6s,mb4.0						
LDF	**La Druitiere**	**71.65**	**316**	*e*P	P	06 10 10.5	-0.3
	comp=Z,11nm,0.8s,mb4.4						
RJF	**Les Rejaudoux**	**71.78**	**312**	*e*P	P	06 10 12.2	+0.6
	comp=Z,3.4nm,0.6s,mb4.0						
FLN	**La Foliniere**	**71.82**	**316**	*e*P	P	06 10 11.5	-0.3
GRR	**Gorron**	**72.19**	**316**	*e*P	P	06 10 13.8	-0.2
MFF	**Saint Martin d**	**72.39**	**314**	*e*P	P	06 10 15.0	-0.2
ROSF	**Rostrenen**	**73.69**	**316**	*e*P	P	06 10 23.1	+0.2
	comp=Z,12nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**75.22**	**138**	*e*P	P	06 10 30.2	-1.7
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	**Stephens Creek**	**75.22**	**138**	P	P	06 10 32.2	+0.3
	comp=Z,2.6nm,0.9s,mb4.0,baz=238,slow=4.1,SNR=3.4						
STKA	**Stephens Creek**	**75.22**	**138**	*e*P	P	06 10 30.2	-1.7
	comp=Z,0.7nm,1.0s,mb3.4						
LSZ	**Lusaka**	**75.62**	**244**	*e*P	P	06 10 35.7	+1.2
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LSZ	**Lusaka**	**75.62**	**244**	*e*P	P	06 10 35.7	+1.2
	comp=Z,3.2nm,0.6s,mb4.2						
BPAW	**Bear Paw Mtn.**	**76.11**	**24**	*e*P	P	06 10 37.0	+0.5
	comp=Z,3.6nm,0.8s,mb4.2						
COLA	**College**	**76.74**	**22**	*e*P	P	06 10 40.5	+0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
COLA	**College**	**76.74**	**22**	*e*P	P	06 10 40.5	+0.4
	comp=Z,3.4nm,0.8s,mb4.1						
INK	**Inuvik**	**78.56**	**16**	*e*P	P	06 10 50.1	-0.1
INK				pmax	pmax		
	comp=Z,13nm,1.7s						
INK	**Inuvik**	**78.56**	**16**	*e*P	P	06 10 50.0	-0.1
	comp=Z,13nm,1.7s,mb4.5						
TORD	**Torodi Ar. Bea**	**84.91**	**282**	P	P	06 11 25.5	+1.0
	comp=Z,2.0nm,0.8s,mb4.1,baz=62,slow=5.1,SNR=11						
YKA	**Yellowknife Ar**	**87.66**	**12**	P	P	06 11 36.9	-0.2
	comp=Z,0.2nm,0.4s,mb3.5,baz=335,slow=5.2,SNR=6.9						
YKA	**Yellowknife Ar**	**87.66**	**12**	P	P	06 11 36.9	-0.2
TXAR	**Lajitas Array**	**121.33**	**17**	PKP	PKPdf	06 17 42.1	-0.1
	comp=Z,0.2nm,0.7s,baz=4.3,slow=3.6,SNR=3.7						
CPUP	**Villa Florida**	**153.28**	**266**	PKPbc	PKPbc	06 18 46.8	-0.4
	comp=Z,0.9nm,0.7s,baz=27,slow=4.5,SNR=3.6						

*ISCJB **10** 06:15:43.5±1.2, 51°.5S±0°.1×139°.5E±0°.6, h10km, mb4.2/5, Error ellipse: s-maj=55.6km s-min=13.3km az=6.1*
*IDC **10** 06:15:43.8±1.1, 51°.47S×140°.24E, h0km, mb4.1/3, mb1 4.2/4, mb1mx4.0/11, mbtmp4.1/4, Error ellipse: s-maj=77.7km s-min=22.0km az=86.0*
*NEIC **10** 06:15:45.2±0.7, 51°.49S×139°.90E, h10km, mb4.7/3, Error ellipse: s-maj=33.8km s-min=10.9km az=93.0*
ISC 10 06:15:45.2±1.2, 51°.49S±0°.09×139°.8E±0°.6, h10km, n17, σ0$88/11, mb4.2/5, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**19.64**	**5**	*e*P	Pn	06 20 16.3	+1.1
	3.5nm,0.8s						
STKA	**Stephens Creek**	**19.64**	**5**	P	Pn	06 20 15.4	+0.2
	0.1nm,0.3s,baz=162,slow=19,SNR=8.9						
STKA	**Stephens Creek**	**19.64**	**5**	*e*P	Pn	06 20 15.3	+0.1
	1.0nm,0.9s						
CASY	**Casey**	**20.87**	**214**	*e*P	P	06 20 26.0	-1.0
CASY	**Casey**	**20.87**	**214**	*e*P	P	06 20 27.1	+0.1
	18nm,1.3s						
FORT	**Forrest**	**22.45**	**333**	*e*P	P	06 20 46.6	+2.4
	15nm,0.8s,mb4.5						
FORT	**Forrest**	**22.45**	**333**	*e*P	P	06 20 44.7	+0.6
	34nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**28.15**	**348**	P	P	06 21 37.4	-0.1
	1.8nm,1.1s,mb3.6,baz=168,slow=9.2,SNR=7.8						
WRA	**Warramunga Arr**	**31.77**	**350**	P	P	06 22 09.2	-0.4
	3.3nm,0.8s,mb4.2,baz=174,slow=7.6,SNR=17						
WRAB	**Tennant Creek**	**31.78**	**350**	*e*P	P	06 22 08.3	-1.3
	17nm,1.4s,mb4.7						
QSPA	**South Pole Qui**	**38.63**	**180**	P	P	06 23 08.5	+0.6
	2.4nm,1.0s,mb3.9,baz=8.4,slow=5.6,SNR=4.9						
TXAR	**Lajitas Array**	**128.62**	**90**	PKP	PKPdf	06 34 51.4	-0.7
	0.2nm,0.9s,baz=228,slow=2.3,SNR=2.6						
GEC2	**GERESS Array S**	**146.03**	**287**	*e*PKPdf	PKPdf	06 35 23.8	+0.4
GERES	**GERESS Array B**	**146.03**	**287**	PKPbc	PKPbc	06 35 24.5	+0.3
	0.9nm,0.6s,baz=132,slow=1.5,SNR=5.3						
BRG	**Berggiesshubel**	**146.71**	**291**	*e*P	PKPbc	06 35 28.2	+2.0
	2.7nm,0.9s						
BRG				*e*		06 37 12.8	
	3.8nm,0.9s						
BRG				*e*		06 39 35.8	
	4.5nm,0.9s						
CLL	**Collm**	**147.42**	**291**	*e*PKPdf	PKPdf	06 35 27.0	+1.3
CLL				*e*		06 35 50.0	
DAVOX	**Davos/Dischmat**	**147.43**	**282**	PKPbc	PKPbc	06 35 29.8	+1.4
	2.0nm,0.8s,baz=102,slow=9.3,SNR=2.6						

*IDC **10** 06:17:30.7±0.8, 51°.45S×138°.96E, h0km, mb4.1/5, mb1 4.2/6, mb1mx4.0/13, mbtmp4.1/6, ML3.5/1, MS4.5/8, Ms1 4.5/8, ms1mx4.2/13, Error ellipse: s-maj=32.7km s-min=22.3km az=81.0*
*ISCJB **10** 06:17:31.4±0.7, 51°.43S±0°.08×139°.0E±0°.2, h10km, mb4.4/7, MS4.3/7, Error ellipse: s-maj=21.3km s-min=11.7km az=2.5*
*NEIC **10** 06:17:32.5±0.4, 51°.46S×139°.13E, h10km, mb4.7/5, Error ellipse: s-maj=18.0km s-min=11.1km az=92.0*
*GCMT **10** 06:17:32.5±0.2, 51°.55S×139°.43E, h12km, MW5.1/82, Moment Tensor Solution. s33,c42; s82,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.73±.14; $M_{\theta\theta}$5.62±.12; $M_{\phi\phi}$0.11±.16; $M_{r\theta}$0.37±.46; $M_{\theta\phi}$0.10±.12; $M_{\phi r}$1.25±.66; Best double couple: $M_0$5.81600×10^{16} NP1:ϕ_s100.00000°, δ44.00000°, λ-73.00000°. NP2: ϕ_s258.00000°, δ48.00000°, λ-105.00000°. Principal axes: T 5.6360, Plg2.0000°, Azm359.0000°; N 0.3650, Plg11.0000°, Azm268.0000°; P -5.9970, Plg78.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **10** 06:17:42.4, 51°.85S×138°.35E, h33km, Western Indian-Antarctic Ridge*
ISC 10 06:17:33.3±0.7, 51°.41S±0°.08×139°.1E±0°.2, h10km, n53, σ1$04/17, mb4.4/7, MS4.3/7, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARPS	**Mount Arapiles**	**14.77**	**9**	*e*P	Pn	06 21 04.9	+2.9
	167nm,1.5s						
STKA	**Stephens Creek**	**19.60**	**6**	*e*P	Pn	06 22 03.5	+0.6
	10nm,1.1s						
STKA	**Stephens Creek**	**19.60**	**6**	P	Pn	06 22 01.7	-1.2
	0.1nm,0.3s,baz=147,slow=10.0,SNR=2.8						
STKA				LR	LR	06 28 51.8	
	comp=Z,2μm,18.1s,baz=172,slow=35						
STKA	**Stephens Creek**	**19.60**	**6**	*e*P	Pn	06 22 02.8	-0.1
	11nm,1.4s						
CASY	**Casey**	**20.70**	**213**	*e*P	P	06 22 13.8	+0.5
CASY	**Casey**	**20.70**	**213**	*e*P	P	06 22 13.6	+0.3
	267nm,2.2s						
FORT	**Forrest**	**22.19**	**334**	*e*P	P	06 22 28.7	-0.8
	24nm,0.8s,mb4.7						
RPZ	**Rata Peaks**	**22.74**	**83**	P	P	06 22 34.8	-0.4
	13nm,1.0s,mb4.3,baz=131,slow=9.3,SNR=2.3						
RPZ				LR	LR	06 29 26.8	
	comp=Z,667nm,20.4s,MS4.1,baz=91,slow=31						
NWAO	**Narrogin (SRO)**	**24.43**	**311**	LR	LR	06 30 22.6	
	comp=Z,1μm,19.0s,MS4.4,baz=321,slow=32						
ASAR	**Alice Springs**	**27.99**	**350**	P	P	06 23 23.5	-0.7
	0.6nm,0.8s,mb3.3,baz=163,slow=9.7,SNR=3.3						
URZ	**Urewera**	**29.62**	**79**	LR	LR	06

WCI	Wyandotte Cave	145.75	95	*e*PKPdf	PKPdf	06 37 09.0	-2.4
KHC	Kasperske Hory	145.79	288	*e*PKPdf	PKPdf	06 37 11.8	+0.7
ULM	Lac du Bonnet	145.93	70	PKPbc	PKPbc	06 37 11.0	-1.0
	comp=Z,1.0nm,0.7s,baz=173,slow=16,SNR=2.1						
TANN	Tannenbergstha	146.97	290	*e*PKPbc	PKPab	06 37 21.3	+4.7
WERN	Wernitzgruen	146.98	289	*e*PKPbc	PKPab	06 37 21.4	+4.8
DAVOX	Davos/Dischmat	147.00	282	PKPbc	PKPbc	06 37 13.5	-1.8
	comp=Z,2.9nm,0.8s,baz=144,slow=8.7,SNR=2.5						
CLL	Collm	147.00	291	*e*PKPdf	PKPab	06 37 15.0	-1.7
CLL				*e*		06 37 21.0	
	comp=Z,12nm,1.6s						
CLL				*i*		06 37 37.3	
	comp=Z,21nm,1.6s						
CLL				LmV		06 58 00.0	
	comp=Z,100nm,21.8s						
GUNZ	Gunzen	147.03	290	*e*PKPbc	PKPab	06 37 21.6	+4.8
WERD	Werda	147.08	290	*e*PKPbc	PKPab	06 37 21.1	+4.1
GRF	Grafenberg Arr	147.43	288	*e*PKPbc	PKPab	06 37 21.9	+3.5
GRFO	Grafenberg	147.43	288	*e*PKPbc	PKPab	06 37 22.8	+4.4
MOX	Moxa	147.56	290	*e*PKPbc	PKPab	06 37 22.6	+3.7
MBDF	Montbardon	147.94	277	*e*PKIKP	PKPab	06 37 21.9	+1.3
BFO	Black Forest	148.62	284	*e*PKPbc	PKPab	06 37 25.6	+2.4
CLZ	Clausthal	148.72	291	*e*PKPbc	PKPab	06 37 25.8	+2.2
HINF	Hinteralfeld	149.30	282	*e*PKIKP	PKPab	06 37 20.9	-5.1
VIVF	Saint-Julien-l	149.31	276	*e*PKIKP	PKPab	06 37 21.6	-4.6
LOR	Lormes	150.91	280	*e*PKIKP	PKPab	06 37 24.8	-7.9
	comp=Z,20nm,1.3s						
AVF	Avril sur Loir	151.02	278	*e*PKIKP	PKPab	06 37 24.9	-8.3
SSF	Saint Saulge	151.04	279	*e*PKIKP	PKPab	06 37 25.3	-7.9
	comp=Z,30nm,1.3s						
ESDC	Sonseca Array	151.91	260	PKPbc	PKPbc	06 37 25.9	-1.9
	comp=Z,0.2nm,0.3s,baz=97,slow=3.1,SNR=2.8						

*ISCJB **10** 06:19:52.3±0.5, 51°.47S±0°.06×139°.3E±0°.2, h10km, mb4.5/9, Error ellipse: s-maj=15.6km s-min=9.1km az=0.1*
*IDC **10** 06:19:53.2±0.7, 51°.48S×139°.32E, h0km, mb4.4/5, mb1 4.5/6, mb1mx4.3/13, mbtmp4.4/6, ML4.1/1, Error ellipse: s-maj=32.1km s-min=20.1km az=81.0*
*NEIC **10** 06:19:54.3±0.4, 51°.50S×139°.37E, h10km, mb4.7/6, Error ellipse: s-maj=12.9km s-min=9.5km az=80.0*
*SZGRF **10** 06:19:54.4, 52°.625×140°.94E, h33km, West of Macquarie Island*

ISC 10 06:19:54.4±0.5, 51°.47S±0°.06×139°.4E±0°.2, h10km, n64, σ0°.94/24, mb4.5/9, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	Toolangi	14.56	20	*e*P	Pn	06 23 28.5	+8.2
ARPS	Mount Arapiles	14.80	8	*e*P	Pn	06 23 25.8	+2.2
	28nm,0.9s						
BBOO	Buckleboo	18.80	351	*e*P	Pn	06 24 11.0	-3.4
	6.7nm,1.1s						
STKA	Stephens Creek	19.64	6	*e*P	Pn	06 24 24.3	-0.2
	8.3nm,0.9s						
STKA	Stephens Creek	19.64	6	P	Pn	06 24 24.2	-0.3
	0.3nm,0.3s,baz=179,slow=8.9,SNR=6.0						
STKA	Stephens Creek	19.64	6	*e*P	Pn	06 24 24.0	-0.5
	2.7nm,0.9s						
CMSA	Cobar Meteorol	20.46	16	*e*P	P	06 24 31.6	-0.3
CASY	Casey	20.74	213	*e*P	P	06 24 34.9	+0.2
CASY	Casey	20.74	213	*e*P	P	06 24 35.2	+0.5
	21nm,1.1s						
ODZ	Otahua Downs	21.68	85	*e*P	P	06 24 44.4	-0.7
	40nm,1.4s,mb4.7						
FORT	Forrest	22.30	334	*e*P	P	06 24 53.1	+1.3
	34nm,0.8s,mb4.8						
FORT	Forrest	22.30	334	*e*P	P	06 24 52.8	+0.9
	35nm,0.8s,mb4.8						
RPZ	Rata Peaks	22.60	82	P	P	06 24 55.4	+0.5
	17nm,0.9s,mb4.5,baz=213,slow=9.2,SNR=4.0						
ASAR	Alice Springs	28.07	349	P	P	06 25 46.3	+0.3
	2.8nm,1.0s,mb3.9,baz=174,slow=9.5,SNR=6.1						
ASAR				PcP	PcP	06 29 00.1	-0.3
	1.0nm,0.9s,baz=176,slow=1.5,SNR=5.2						
WB2	Warramunga Arr	31.71	351	*e*P	P	06 26 17.2	-1.0
WRA	Warramunga Arr	31.71	351	P	P	06 26 18.2	0.0
	6.9nm,0.8s,mb4.5,baz=174,slow=7.4,SNR=10						
WRA				PcP	PcP	06 29 09.4	-0.3
	1.5nm,0.9s,baz=174,slow=2.6,SNR=4.6						
WRAB	Tennant Creek	31.72	351	*e*P	P	06 26 17.8	-0.4
	9.6nm,0.8s,mb4.7						
MBWA	Marble Bar	33.91	326	*e*P	P	06 26 35.7	-1.7
	3.1nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	35.02	337	P	P	06 26 47.5	+0.4
	3.1nm,0.9s,mb4.2,baz=161,slow=10,SNR=4.1						
QSPA	South Pole Qui	38.65	180	P	P	06 27 18.3	+0.9
	8.2nm,1.0s,mb4.4,baz=337,slow=5.8,SNR=6.9						
QSPA	South Pole Qui	38.65	180	*e*P	P	06 27 15.7	-1.7
	23nm,1.3s,mb4.7						
KAKA	Kakadu	39.06	349	*e*P	P	06 27 21.8	+0.4
VNA2	Neumayer--Watz	55.61	193	*e*	P	06 29 30.0	+0.4
VNA3	Neumayer Olymp	55.62	192	*e*	P	06 29 29.8	+0.2
NVAR	Mina Array Bea	126.01	72	PKP	PKPdf	06 38 56.1	0.0
	0.3nm,0.4s,baz=212,slow=3.2,SNR=3.2						
TORD	Torodi Ar. Bea	128.81	237	PKP	PKPdf	06 38 59.9	-2.3
	0.8nm,1.0s,baz=153,slow=1.0,SNR=3.1						
BRTR	Keskin Array B	128.86	288	PP	PP	06 41 17.1	+8.0
	0.3nm,0.5s,baz=123,slow=9.0,SNR=3.7						
TXAR	Lajitas Array	128.90	90	PKP	PKPdf	06 39 02.7	+0.8
	0.7nm,0.9s,baz=197,slow=3.9,SNR=6.5						
TXAR	Lajitas Array	128.90	90	PKP	PKPdf	06 39 02.7	+0.8
YKA	Yellowknife Ar	140.47	45	PKhKP		06 39 16.0	
	0.2nm,0.7s,baz=240,slow=3.9,SNR=3.5						
FINES	FINESS Array B	143.42	312	PKP	PKPdf	06 39 28.9	+1.2
	2.9nm,1.0s,baz=126,slow=2.4,SNR=2.9						
WCI	Wyandotte Cave	145.60	94	*e*PKPdf	PKPdf	06 39 31.3	-0.9
GEC2	GERESS Array S	145.75	287	*e*PKPbc	PKPbc	06 39 33.3	+0.6
GEC2	GERESS Array S	145.75	287	*e*PKPdf	PKPdf	06 39 32.5	+0.4
GERES	GERESS Array B	145.75	287	PKPbc	PKPbc	06 39 32.7	0.0
	3.5nm,1.0s,baz=145,slow=2.8,SNR=7.2						
RJOB	Jochberg	145.81	285	*e*PKPbc	PKPbc	06 39 32.4	-0.5
ULM	Lac du Bonnet	145.81	70	PKPbc	PKPbc	06 39 33.0	+0.3
	3.2nm,0.8s,baz=225,slow=3.1,SNR=4.4						
KHC	Kasperske Hory	145.95	288	*e*PKPdf	PKPdf	06 39 33.4	+0.9
WET	Wettzell	146.37	288	*e*PKPbc	PKPbc	06 39 35.2	+0.7
SPITS	Spitsbergen Ar	146.48	342	PKPbc	PKPbc	06 39 34.8	+0.7
	14nm,0.9s,baz=50,slow=6.6,SNR=4.4						
ROTZ	Rotzenmuhle	147.03	288	*e*PKPbc	PKPbc	06 39 37.1	+0.7
TANN	Tannenbergstha	147.13	289	*e*PKPbc	PKPbc	06 39 38.3	+1.7
DAVOX	Davos/Dischmat	147.15	282	PKPbc	PKPbc	06 39 37.7	+0.8
	4.1nm,0.8s,baz=108,slow=12,SNR=4.1						
CLL	Collm	147.15	291	*e*PKPbc	PKPbc	06 39 37.1	+0.4
CLL	Collm	147.15	291	*e*PKPdf	PKPbc	06 39 37.0	+0.3
	comp=Z,12nm,1.6s						
WERD	Werda	147.24	289	*e*PKPbc	PKPbc	06 39 37.8	+0.9
GRF	Grafenberg Arr	147.58	288	*e*PKPbc	PKPbc	06 39 38.7	+0.8
MOX	Moxa	147.72	289	*e*PKPbc	PKPbc	06 39 38.9	+0.7
RGN	Rugen	148.05	297	*e*PKPbc	PKPbc	06 39 39.3	+0.3
MBDF	Montbardon	148.10	277	*e*PKIKP	PKPab	06 39 44.4	+2.1
	comp=Z,36nm,1.4s						
UBBA	Unterbreizbach	148.74	289	*e*PKPbc	PKPbc	06 39 41.9	+1.0
BFO	Black Forest	148.77	284	*e*PKPbc	PKPbc	06 39 40.8	-0.3
CLZ	Clausthal	148.88	291	*e*PKPbc	PKPbc	06 39 41.7	+0.5
HINF	Hinteralfeld	149.46	282	*e*PKIKP	PKPbc	06 39 42.7	-0.1
VIVF	Saint-Julien-l	149.46	276	*e*PKIKP	PKPbc	06 39 43.8	+0.9
BSEG	Bad Segeberg	149.56	295	*e*PKPbc	PKPbc	06 39 43.7	+0.8
HAU	Haudompre	149.84	282	*e*PKIKP	PKPbc	06 39 44.2	+0.5
NOA	NORSAR Array B	150.41	309	PKPbc	PKPbc	06 39 44.8	+0.1
	comp=Z,2.0nm,0.9s,baz=90,slow=2.3,SNR=3.2						
IBBN	Ibbenburen	150.56	291	*e*PKPbc	PKPbc	06 39 45.5	+0.2
BUG	Bochum--Univer	150.57	289	*e*PKPbc	PKPbc	06 39 46.2	+0.8
LOR	Lormes	151.06	279	*e*PKIKP	PKPbc	06 39 47.1	+0.4
AVF	Avril sur Loir	151.17	278	*e*PKIKP	PKPbc	06 39 47.4	+0.4
SSF	Saint Saulge	151.19	279	*e*PKIKP	PKPbc	06 39 47.7	+0.7
	comp=Z,14nm,1.0s						
ESDC	Sonseca Array	152.04	260	PKPbc	PKPbc	06 39 50.2	+1.1
	comp=Z,0.7nm,0.5s,baz=28,slow=38,SNR=3.7						

IDC 10 06:25:14.4±1.7, 7°.38S×68°.10E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/25, mbtmp3.8/7, MS3.3/2, Ms1 3.3/2, ms1mx2.8/35, Error ellipse: s-maj=64.7km s-min=24.0km az=52.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	31.36	280	LR	LR	06 41 54.2	
	comp=Z,87nm,19.1s,baz=101,slow=32						
ATD	Arta Tunnel	31.36	307	LR	LR	06 41 50.0	
	comp=Z,34nm,19.6s,baz=149,slow=32						
MKAR	Makanchi Array	55.39	12	P	P	06 34 49.8	-0.5
	0.2nm,0.5s,baz=201,slow=7.7,SNR=3.0						
BRTR	Keskin Array B	56.66	329	P	P	06 34 59.9	+0.3
	0.4nm,0.5s,baz=130,slow=4.5,SNR=3.1						
AKTO	Aktyubinsk	58.24	352	P	P	06 35 09.5	-0.9
	1.2nm,0.7s,baz=196,slow=7.4						
KURK	Kurchatov	58.57	8	P	P	06 35 11.8	-1.0
	0.4nm,0.2s,baz=203,slow=6.8,SNR=3.6						
SONM	Songino Array	64.52	28	P	P	06 35 54.2	+1.2
	1.4nm,1.0s,baz=216,slow=6.4,SNR=5.9						
ASAR	Alice Springs	64.94	113	P	P	06 35 56.4	0.0
	1.1nm,1.0s,baz=281,slow=5.2,SNR=6.9						
WRA	Warramunga Arr	65.22	108	P	P	06 35 58.0	-0.3
	1.6nm,0.9s,baz=277,slow=5.8,SNR=7.4						
YKA	Yellowknife Ar	124.96	2	PKP	PKPdf	06 44 15.4	-0.8
	0.2nm,0.8s,baz=349,slow=1.7,SNR=5.6						
NVAR	Mina Array Bea	148.55	10	PKPbc	PKPbc	06 45 04.9	+1.2
	0.8nm,0.8s,baz=273,slow=1.7,SNR=6.9						
TXAR	Lajitas Array	156.82	341	PKPab	PKPab	06 45 41.9	0.0
	0.4nm,0.9s,baz=15,slow=3.7,SNR=3.2						

IDC 10 06:35:14.4±2.1, 19°.98S×168°.04E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/15, mbtmp3.8/5, Error ellipse: s-maj=111.4km s-min=31.5km az=156.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.42	206	*e*S	Sn	06 36 16.1	-10
NOUC	Port Laguerre	2.66	217	*e*P	Pn	06 35 55.4	-3.3
NOUC				*e*S	Sn	06 36 24.1	-7.5
STKA	Stephens Creek	26.50	238	P	P	06 40 53.2	-0.4
	1.1nm,0.7s,baz=84,slow=5.7,SNR=2.8						
WRA	Warramunga Arr	31.64	264	P	P	06 41 39.4	-0.2
	0.3nm,0.4s,baz=90,slow=8.5,SNR=6.0						
ASAR	Alice Springs	31.86	257	P	P	06 41 41.7	+0.3
	1.5nm,0.6s,baz=89,slow=8.9,SNR=27						
FITZ	Fitzroy Crossi	40.05	265	P	P	06 42 51.7	0.0
	1.6nm,0.8s,baz=114,slow=12,SNR=2.3						
NVAR	Mina Array Bea	90.14	49	P	P	06 48 17.0	+0.4
	0.6nm,0.6s,baz=229,slow=8.2,SNR=4.9						

*IDC **10** 06:35:49.5±0.6, 33°.00N×76°.07E, h0km, mb4.2/18, mb1 4.3/21, mb1mx4.2/28, mbtmp4.2/21, ML3.9/3, MS3.3/6, Ms1 3.3/6, ms1mx2.8/40, Error ellipse: s-maj=17.8km s-min=13.4km az=44.0*
*NDI **10** 06:35:49.3±3.7, 33°.47N×76°.19E, h45km, ML4.4, mb4.4(NEIC)*
*BJI **10** 06:35:50.8, 32°.93N×75°.53E, h52km, mB4.6/15, mb4.4/21, ML4.3/4, Ms4.2/10, Ms7 3.8/10*
*LDG **10** 06:35:51.5±0.1, 33°.01N×76°.17E, h33km, Mb4.4/15, Error ellipse: s-maj=8.5km s-min=4.1km az=42.0*
*ISCJB **10** 06:35:53.0±0.4, 33°.07N±0°.02×76°.19E±0°.03, h38km±4km, mb4.3/50, MS3.5/10, Error ellipse: s-maj=4.9km s-min=3.3km az=145.6*
*MOS **10** 06:35:53.0±0.9, 33°.05N×76°.05E, h33km, mb4.6/25, Error ellipse: s-maj=10.5km s-min=5.1km az=109.9*
*NEIC **10** 06:35:55.9±1.2, 33°.06N×76°.12E, h45km±9km, mb4.4/25, Error ellipse: s-maj=10.0km s-min=7.4km az=174.0*
*NNC **10** 06:36:03.7±4.2, 33°.60N×76°.07E, h85km±33km, mb3.6, Error ellipse: s-maj=31.9km s-min=30.0km az=133.0*

ISC 10 06:35:55.1±0.3, 33°.03N±0°.02×76°.19E±0°.03, h40km±4km, n172, σ1°.08/200, mb4.3/50, MS3.5/10, 14C-6D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	0.71	214	*ex*	Pn	06 36 03.1	-5.6
THN				*e*S	Sn	06 36 22.9	+4.4
JMU	Jammu	1.13	254	*ex*	Pn	06 36 11.5	-2.9
JMU				*e*S	Sn	06 36 28.0	-0.7
SRNI	Srinagar	1.55	314	*e*P	Pn	06 36 10.0	-10
SRNI				*ex*	x	06 36 24.0	
BHK	Bhakra	1.62	173	*ex*	Pn	06 36 19.8	-1.3
BHK				*ex*	Sn	06 36 41.0	+0.3
SDNR	Sundarnagar	1.66	156	*e*P	Pn	06 36 23.1	+1.4
SDNR				*e*S	Sn	06 36 44.5	+2.7
SMLA	Simla	2.07	156	*i* P	Pn	06 36 28.1	+0.8
SMLA				*i* S	Sn	06 36 53.7	+1.8
SMLA				*ex*	x	06 36 58.7	
	comp=N,26μm,0.3s						
SMLA				*ex*	x	06 37 00.3	
	comp=E,20μm,0.4s						
CHCP	Chirah Chowk	2.53	285	⇓P	Pn	06 36 35.3	+1.7
CHCP				S	Sn	06 37 04.0	+0.8
DDI	Dehra Dun	3.13	149	*ex*	x	06 36 50.8	
DDI				*ex*	x	06 37 34.5	
CEP	Cherat	3.67	284	⇓P	Pn	06 36 49.3	0.0
JOSI	Joshimath	3.78	130	*ex*	Pn	06 36 52.9	+2.0
JOSI				*e*S	Sn	06 37 33.2	-0.9
JOSI				AML	AML	06 37 47.3	
	comp=N,1μm,1.0s						
NDI	New Delhi	4.42	168	*e*P	Px	06 37 10.0	
NDI				*e*S	Sn	06 38 04.0	+14
AYAN	Aya Nagar	4.60	170	*e*P	Pn	06 37 01.9	-0.3
AYAN				*e*S	Sn	06 37 53.8	-0.5
AYAN				AML	AML	06 38 18.0	
	comp=Z,170nm,0.6s						
SONA	Sohna	4.83	171	*e*P	Pn	06 37 06.1	+0.9
SONA				*e*S	Sn	06 37 58.3	-1.5
PTH	Pithoragarh	4.89	134	*ex*	x	06 37 16.0	
PTH				*ex*	x	06 39 56.0	
KHET	Khetri	4.95	184	*e*P	Pn	06 37 06.2	-0.7
KHET				*e*S	Sn	06 38 03.6	+0.8
AGRA	Agra	5.97	165	*e*P	Pn	06 37 20.2	-0.8
AGRA				*ex*	Sn	06 38 24.5	-3.7
AGRA				AML	AML	06 38 28.4	
	comp=E,209nm,0.5s						
AGRA				AML	AML	06 38 28.8	
	comp=N,236nm,0.2s						
KBL	Kabul	6.14	286	*e*P	Pn	06 37 22.5	-0.7
KBL				pmax	pmax		
	comp=Z,34nm,0.6s						
KBL	Kabul	6.14	286	*e*Pn	Pn	06 37 22.5	-0.7
	comp=Z,34nm,0.6s						
KSH	Kashi	6.48	359	P	Pn	06 37 27.2	-0.6
KSH				S	Sn	06 38 35.0	-5.4
KSH				smax			
	comp=N,230nm,0.3s						
KSH				smax			
	comp=E,290nm,0.4s						
AJM	Ajmer	6.66	192	*e*P	Pn	06 37 30.6	+0.2
AJM				*e*S	Sn	06 38 42.1	-3.1
KZA	Kyzart	9.06	356	P	Pn	06 38 04.8	+1.5
SNR=41							
UCH	Uchtor	9.28	352	P	Pn	06 38 07.6	+1.4
SNR=35							
UCH	Uchtor	9.28	352	*e*P	Pn	06 38 07.3	+1.1
UCH				*e*		06 39 45.5	
UCH				pmax	pmax		
	comp=Z,24nm,0.6s						
UCH	Uchtor	9.28	352	*e*Pn	Pn	06 38 07.3	+1.1
	comp=Z,24nm,0.6s						
UCH				*e*Sn	Sn	06 39 45.5	-3.8
AML	Almayashu	9.30	348	P	Pn	06 38 07.2	+0.7
SNR=39							
AML	Almayashu	9.30	348	*e*P	Pn	06 38 06.9	+0.4
AML				*e*		06 39 44.8	
AML				pmax	pmax		
	comp=Z,27nm,0.5s						
AML	Almayashu	9.30	348	*e*Pn	Pn	06 38 06.8	+0.3
	comp=Z,27nm,0.5s						
AML				*e*Sn	Sn	06 39 44.8	-4.9
DMN	Daman	9.41	123	*e*Pn	Pn	06 38 07.4	-0.7
DMN				*e*Sn	Sn	06 39 51.9	-0.7
	comp=Z,82nm,0.5s						
KKN	Kakani	9.43	121	*e*Pn	Pn	06 38 07.8	-0.5
PKIN	Phulchoki	9.63	122	*e*Pn	Pn	06 38 10.4	-0.8
PKIN				*e*Sn	Sn	06 39 56.1	-2.0
	comp=Z,76nm,0.4s						
PKI	Pulchoki	9.65	122	*e*Pn	Pn	06 38 10.6	-0.8
PKI				*e*Sn	Sn	06 39 57.6	-0.8
	comp=Z,84nm,0.5s						
KBK	Karagaybulak	9.66	355	P	Pn	06 38 13.2	+1.7
SNR=8.6							
AAK	Ala-Archa	9.68	353	P	Pn	06 38 13.1	+1.4
SNR=12							
AAK	Ala-Archa	9.68	353	*c i*P	Pn	06 38 12.9	+1.1
AAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AAK	Ala-Archa	9.68	353	Pn	Pn	06 38 13.0	+1.3
	comp=Z,0.0nm,0.3s,baz=149,slow=8.2,SNR=29						
AAK				Sn	Sn	06 39 54.8	-4.4
	comp=Z,0.0nm,0.3s,baz=169,slow=16,SNR=3.5						
AAK				LR	LR	06 42 11.1	
	comp=Z,83nm,18.3s,baz=106,slow=39						
AAK	Ala-Archa	9.68	353	*e*Pn	Pn	06 38 12.5	+0.7
	comp=Z,12nm,0.6s						
GUN	Gumba	9.79	119	*e*Pn	Pn	06 38 13.2	-0.2
GUN				*e*Sn	Sn	06 40 01.6	-0.4
	comp=Z,42nm,0.4s						
EKS2	Erkin-Say	9.80	349	*e*P	Pn	06 38 15.3	+1.9
EKS2				*e*		06 40 00.4	
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
EKS2	Erkin-Say	9.80	349	*e*Pn	Pn	06 38 15.3	+1.9
	comp=Z,5.3nm,0.5s						
EKS2				*e*Sn	Sn	06 40 00.4	-1.7
TKM2	Tokmak 2	9.89	357	⇓P	Pn	06 38 16.0	+1.4
	comp=Z,5.0nm,0.5s						
TKM2				⇓S	Sn	06 40 00.0	-4.2
	comp=Z,14nm,0.7s						
TKM2	Tokmak 2	9.89	357	P	Pn	06 38 16.3	+1.7
SNR=8.8							
TKM2	Tokmak 2	9.89	357	*e*P	Pn	06 38 15.8	+1.2
TKM2				*e*		06 39 57.1	
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.4s						
TKM2	Tokmak 2	9.89	357	*e*Pn	Pn	06 38 15.8	+1.2
	comp=Z,7.9nm,0.4s						
TKM2				*e*Sn	Sn	06 39 57.1	-7.1
KK02	Karatay Array	11.01	338	⇑P	Pn	06 38 28.3	-1.5
	comp=Z,4.0nm,0.3s,baz=155,slow=13						
KK02				⇑S	Sn	06 40 27.3	-4.2
	comp=Z,30nm,0.5s,baz=154,slow=23						
WMQ	Urumqi	14.04	37	*e*P	Pn	06 39 13.4	+2.2
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MK31	Makanchi Array	14.52	17	⇑P	Pn	06 39 18.5	+0.8
	comp=Z,0.8nm,0.3s						
MK31				⇑S	Sn	06 41 51.8	-5.4
	comp=Z,3.1nm,0.5s,baz=203,slow=24,SNR=8.8						
MK31	Makanchi Array	14.52	17	*e*Pn	Pn	06 39 17.8	+0.1
MK31				*e*Sn	Sn	06 41 52.8	-4.5
MKAR	Makanchi Array	14.52	17	*i* P	Pn	06 39 18.1	+0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	14.52	17	Pn	Pn	06 39 16.7	-1.1
	comp=Z,1.2nm,0.3s,baz=204,slow=13,SNR=22						
MKAR				Sn	Sn	06 41 52.6	-4.6
	comp=Z,1.5nm,0.3s,baz=204,slow=24,SNR=7.8						
HYB	Hyderabad	15.69	172	*i* P	Pn	06 39 40.0	+6.7
HYB				*e*S	S	06 42 33.0	-6.8
KURBB	Kurchatov Arra	17.67	5	⇑P	Pn	06 39 55.3	-2.6
	comp=Z,0.9nm,0.8s						
KURK	Kurchatov	17.77	5	⇑P	Pn	06 39 54.8	-4.3
	comp=Z,5.8nm,0.8s						
KURK	Kurchatov	17.77	5	*i* P	Pn	06 39 58.8	-0.3
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	17.77	5	Pn	Pn	06 39 55.1	-4.0
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=9.2						
KURK	Kurchatov	17.77	5	*e*P	Pn	06 39 56.6	-2.5
	comp=Z,5.8nm,0.6s						
VOSK	Vostochnaya	20.04	351	⇓P	P	06 40 24.3	-0.1
	comp=Z,3.8nm,0.7s						
GTA	Gaotai	20.07	65	*e*P	P	06 40 33.5	+8.6
GTA				pP		06 40 42.7	
GTA				sP	sP	06 40 48.3	+8.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,91nm,5.1s						
GTA				LR	LR		
	comp=N,110nm,16.5s,MS3.5						
GTA				LR	LR		
	comp=E,170nm,17.4s,MS3.5						
GTA				LR	LR		
	comp=Z,95nm,16.8s,MS3.2						
AB31	Akbulak array	20.24	328	⇑P	P	06 40 26.3	-0.4
	comp=Z,4.4nm,0.6s,baz=134,slow=11,SNR=86						
AB31				⇑S	S	06 44 00.7	-11
	comp=Z,0.8nm,0.5s,baz=152,slow=24,SNR=3.0						
ABKAR	Akbulak array	20.24	328	*e*P	P	06 40 25.9	-0.8
	comp=Z,5.7nm,0.5s						
BVA0	Borovoye Array	20.42	350	P	P	06 40 28.4	-0.2
	comp=Z,0.9nm,0.5s,baz=158,slow=12,SNR=30						
BVAR	Borovoye Array	20.42	350	P	P	06 40 28.6	+0.1
	comp=Z,4.7nm,0.4s,baz=160,slow=9.8,SNR=30						
BVAR				LR	LR	06 49 27.4	
	comp=Z,30nm,18.5s,MS2.7,baz=315,slow=40						
BRVK	Borovoye	20.47	350	*c i*P	P	06 40 29.0	-0.1
BRVK				pmax	pmax		
	comp=Z,21nm,1.2s						
BRVK	Borovoye	20.47	350	*e*P	P	06 40 29.4	+0.3
	comp=Z,13nm,0.7s						
ZAA0	Zalesovo Array	21.80	14	*e*P	P

comp=Z,11nm,1.0s,mb4.3
ARU Arti 26.38 338 *e*P P **06 41 27.4 +0.1**
comp=Z,5.0nm,0.6s,mb4.2
SONM Songino Array 27.12 48 P P **06 41 36.2 +2.0**
comp=Z,1.1nm,0.6s,mb3.6,baz=244,slow=8.9,SNR=8.2
GYA Guiyang 27.20 96 *e*P P **06 41 35.2 +0.2**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
HHC Hu-ho-hao-te 29.18 64 *e*P P **06 41 54.1 +1.5**
HHC pP pP 06 42 03.5 -0.1
HHC PP PP 06 42 49.2 -10
HHC PcP PcP 06 45 01.7 +2.5
HHC S **S** **06 46 42.9 +0.7**
HHC ScP ScP 06 48 38.1 +0.5
HHC PcS PcS 06 48 43.0 +1.0
HHC pmax pmax
comp=Z,15nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,100nm,6.3s
HHC LR LR
comp=N,180nm,15.5s,MS4.2
HHC LR LR
comp=E,390nm,14.5s,MS4.2
HHC LR LR
comp=Z,110nm,11.2s,MS3.7
BJI Beijing 32.67 66 P P **06 42 20.4 -3.0**
BJI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BJI pmax pmax
comp=Z,110nm,3.7s
ASF Jabal al Asfar 32.98 279 LR LR 06 57 58.6
comp=Z,57nm,19.2s,MS3.3,baz=134,slow=40
BR131 Keskin Array S 34.65 293 *e*P P **06 42 41.4 +0.8**
comp=Z,0.7nm,0.6s,mb3.8
BRTR Keskin Array B 34.65 293 P P **06 42 41.1 +0.6**
comp=Z,2.7nm,1.0s,mb4.1,baz=104,slow=9.0,SNR=11
EIL Elat 35.22 276 LR LR 06 59 37.9
comp=Z,60nm,19.0s,MS3.4,baz=55,slow=41
OBN Obninsk 35.34 321⇑ *e*P P **06 42 45.8 -0.5**
OBN pmax pmax
comp=Z,17nm,0.6s,mb5.2
AKASG Malin Array Be 38.44 312 P P **06 43 11.2 -1.6**
comp=Z,3.9nm,0.4s,mb4.5,baz=79,slow=7.1,SNR=16
CN2 Changchun 39.54 60 *e*P P **06 43 23.2 +1.2**
MLR Muntele Rosu 40.23 303⇑ *i*P P **06 43 29.2 +1.5**
BURAR Bucovina Array 40.77 306⇑ *i*P P **06 43 31.4 -0.7**
JOF Joensuu 40.99 331 *e*P P **06 43 33.7 -0.1**
JOF pmax pmax
comp=Z,9.0nm,0.5s,mb4.7
JOF Joensuu 40.99 331 *e*p P **06 43 33.7 -0.1**
comp=Z,9.0nm,0.5s,mb4.7
MDJ Mudanjiang 42.49 58 P P **06 43 46.2 -0.1**
MDJ S **S** **06 50 04.0 -1.5**
MDJ pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
MDJ pmax pmax
comp=Z,36nm,4.4s
MDJ LR LR
comp=N,42nm,18.3s,MS3.5
MDJ LR LR
comp=E,39nm,22.9s,MS3.5
MDJ LR LR
comp=Z,38nm,25.5s,MS3.2
FINES FINESS Array B 42.73 327 P P **06 43 48.0 +0.1**
comp=Z,2.6nm,0.5s,mb4.2,baz=116,slow=10,SNR=19
KAF Kangasniemi 42.84 328 *e*P P **06 43 48.7 -0.1**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KAF Kangasniemi 42.84 328 *e*p P **06 43 48.7 -0.1**
comp=Z,1.9nm,0.6s,mb4.0
MORC Moravsky Berou 45.86 310 *e*P P **06 44 13.2 0.0**
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MORC Moravsky Berou 45.86 310 *e*P P **06 44 13.2 0.0**
comp=Z,4.2nm,0.8s,mb4.4
ARCES ARCESS Array B 45.97 338 P P **06 44 14.5 +0.7**
comp=Z,3.3nm,0.6s,mb4.4,baz=108,slow=6.7,SNR=15
BRG Berggiesshubel 48.12 311 *e*P P **06 44 31.0 +0.2**
comp=Z,4.3nm,0.8s,mb4.5
BRG Berggiesshubel 48.12 311 *e*P P **06 44 31.0 +0.2**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
GERES GERESS Array B 48.42 308 P P **06 44 32.5 -0.6**
comp=Z,1.0nm,0.7s,mb4.0,baz=70,slow=6.4,SNR=3.2
CLL Collm 48.69 312 *e*P P **06 44 35.0 -0.1**
CLL *e* 06 45 13.0
CLL Collm 48.69 312 *e*P P **06 44 35.0 -0.1**
NB2 NORSAR Subarra 49.70 325 P P **06 44 42.3 -0.4**
comp=Z,4.2nm,0.7s,mb4.6,baz=94,slow=7.9
NOA NORSAR Array B 49.70 325 P P **06 44 42.4 -0.3**
comp=Z,3.5nm,0.7s,mb4.5,baz=96,slow=7.5,SNR=16
KMBO Kilima Mbogo 50.00 235 P P **06 44 47.2 +1.5**
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 50.00 235 P P **06 44 47.1 +1.5**
comp=Z,3.8nm,1.0s,mb4.4,baz=32,slow=12,SNR=5.1
KMBO Kilima Mbogo 50.00 235 *e*P P **06 44 46.9 +1.3**
comp=Z,5.4nm,1.0s,mb4.5
PGF Pioggiola 52.69 301 *e*P P **06 45 04.8 -0.6**
CDF Champ du Feu 52.71 309 *e*P P **06 45 05.3 -0.2**
HINF Hinteralfeld 53.09 308 *e*P P **06 45 07.7 -0.6**
comp=Z,3.7nm,0.5s,mb4.2
HINF Hinteralfeld 53.09 308 *e*P P **06 45 07.7 -0.6**
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HINF Hinteralfeld 53.09 308 *e*P P **06 45 07.7 -0.6**
comp=Z,1.9nm,0.5s,mb4.3
HAU Haudompre 53.39 308 *e*P P **06 45 10.0 -0.5**
comp=Z,3.8nm,0.6s,mb4.2
HAU Haudompre 53.39 308 *e*P P **06 45 10.0 -0.5**
HAU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HAU Haudompre 53.39 308 *e*P P **06 45 10.0 -0.5**
comp=Z,1.9nm,0.6s,mb4.2
LPG La Plagne 53.62 305 *e*P P **06 45 12.5 +0.3**
comp=Z,5.2nm,0.5s,mb4.4
LPG La Plagne 53.62 305 *e*P P **06 45 12.5 +0.3**
LPG pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LPG La Plagne 53.62 305 *e*P P **06 45 12.5 +0.3**
comp=Z,2.6nm,0.5s,mb4.4
LPL La Plagne 53.63 305 *e*P P **06 45 12.5 +0.2**
comp=Z,8.9nm,0.5s,mb4.6
LPL La Plagne 53.63 305 *e*P P **06 45 12.5 +0.2**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LPL La Plagne 53.63 305 *e*P P **06 45 12.5 +0.2**
comp=Z,4.4nm,0.5s,mb4.6
MBDF Montbardon 53.77 304 *e*P P **06 45 15.2 +1.8**
comp=Z,6.1nm,0.6s,mb4.4
MBDF Montbardon 53.77 304 *e*P P **06 45 15.2 +1.8**
MBDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MBDF Montbardon 53.77 304 *e*P P **06 45 15.2 +1.8**
comp=Z,3.0nm,0.6s,mb4.4
KEST Kesra 54.26 293 P P **06 45 17.1 +0.1**
comp=Z,2.2nm,0.6s,mb4.2,baz=38,slow=24,SNR=6.4
BAIF Baives 54.39 311 *e*P P **06 45 18.0 +0.2**
SEY Seymchan 54.96 33 *e*P P **06 45 23.5 +1.8**
SMF Signal de Mont 55.34 307 *e*P P **06 45 24.2 -0.5**
comp=Z,4.8nm,0.6s,mb4.4
SMF Signal de Mont 55.34 307 *e*P P **06 45 24.2 -0.5**
SMF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
SMF Signal de Mont 55.34 307 *e*P P **06 45 24.2 -0.5**
comp=Z,2.4nm,0.6s,mb4.4
SSF Saint Saulge 55.47 308 *e*P P **06 45 24.9 -0.7**
comp=Z,3.2nm,0.6s,mb4.2
SSF Saint Saulge 55.47 308 *e*P P **06 45 24.9 -0.7**
SSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
SSF Saint Saulge 55.47 308 *e*P P **06 45 24.9 -0.7**
comp=Z,1.6nm,0.6s,mb4.2
AVF Avril sur Loir 55.63 307 *e*P P **06 45 26.3 -0.5**
comp=Z,6.1nm,0.7s,mb4.5
AVF Avril sur Loir 55.63 307 *e*P P **06 45 26.3 -0.5**
AVF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
AVF Avril sur Loir 55.63 307 *e*P P **06 45 26.3 -0.5**
comp=Z,3.0nm,0.6s,mb4.5
TCF Toulx Ste Croi 56.52 307 *e*P P **06 45 33.0 -0.2**
comp=Z,6.7nm,0.8s,mb4.5
TCF Toulx Ste Croi 56.52 307 *e*P P **06 45 33.0 -0.2**
TCF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TCF Toulx Ste Croi 56.52 307 *e*P P **06 45 33.0 -0.2**
comp=Z,3.3nm,0.8s,mb4.4
CAF Calviac 56.97 305 *e*P P **06 45 36.5 +0.1**
MFF Saint Martin d 58.01 308 *e*P P **06 45 43.1 -0.6**
comp=Z,2.2nm,0.5s,mb4.1
MFF Saint Martin d 58.01 308 *e*P P **06 45 43.1 -0.6**
MFF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
MFF Saint Martin d 58.01 308 *e*P P **06 45 43.1 -0.6**
comp=Z,1.1nm,0.5s,mb4.1
ETSF Etsaut 59.37 304 *e*P P **06 45 53.5 +0.3**
comp=Z,6.4nm,0.6s,mb4.5
ETSF Etsaut 59.37 304 *e*P P **06 45 53.5 +0.3**
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ETSF Etsaut 59.37 304 *e*P P **06 45 53.5 +0.3**
comp=Z,3.2nm,0.6s,mb4.5
PETK Petropavlovsk- 59.50 44 LR LR 07 15 23.3
comp=Z,104nm,20.4s,MS4.0,baz=185,slow=40
ROSF Rostrenen 59.56 310 *e*P P **06 45 54.1 -0.3**
comp=Z,6.2nm,0.5s,mb4.6
ROSF Rostrenen 59.56 310 *e*P P **06 45 54.1 -0.3**
ROSF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ROSF Rostrenen 59.56 310 *e*P P **06 45 54.1 -0.3**
comp=Z,3.1nm,0.5s,mb4.6
QUIF Quistinic 59.62 310 *e*P P **06 45 54.1 -0.7**
comp=Z,6.0nm,0.5s,mb4.6
QUIF Quistinic 59.62 310 *e*P P **06 45 54.1 -0.7**
QUIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
QUIF Quistinic 59.62 310 *e*P P **06 45 54.1 -0.7**
comp=Z,3.0nm,0.5s,mb4.6
ESDC Sonseca Array 62.88 301 P P **06 46 16.6 -0.4**
comp=Z,0.6nm,0.4s,mb4.1,baz=54,slow=6.8,SNR=4.1
SUMG Summit 65.69 343 *e*P P **06 46 36.4 +1.5**
SUMG pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 65.69 343 *e*P P **06 46 36.4 +1.6**
comp=Z,11nm,0.9s,mb4.9
TOA0 Torodi Ar. Sit 70.04 273 *e*P P **06 47 01.3 -1.9**
TORD Torodi Ar. Bea 70.04 273 P P **06 47 01.5 -1.7**
comp=Z,2.6nm,0.5s,mb4.4,baz=52,slow=5.6,SNR=40
RES Resolute Bay 72.40 358 *e*P P **06 47 17.2 +0.7**
RES pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
RES Resolute Bay 72.40 358 *e*P P **06 47 17.2 +0.8**
comp=Z,0.7nm,0.5s,mb3.9
WRA Warramunga Arr 76.52 125 P P **06 47 41.4 +0.2**
comp=Z,0.8nm,0.5s,mb3.9,baz=327,slow=5.7,SNR=16
COLA College 76.54 18 *e*P P **06 47 41.7 +1.0**
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
COLA College 76.54 18 *e*P P **06 47 41.7 +1.0**
comp=Z,3.5nm,0.7s,mb4.4
INK Inuvik 76.57 11 *e*P P **06 47 41.2 +0.5**
INK pmax pmax
comp=Z,6.0nm,1.4s
INK Inuvik 76.57 11 *e*P P **06 47 41.2 +0.5**
comp=Z,6.3nm,1.4s,mb4.3
ASAR Alice Springs 78.76 128 P P **06 47 54.0 +0.5**
comp=Z,0.3nm,0.5s,mb3.5,baz=311,slow=5.4,SNR=6.6
YKA Yellowknife Ar 84.42 5 P P **06 48 23.2 +0.3**
comp=Z,0.7nm,0.5s,mb4.1,baz=344,slow=5.1,SNR=32
YKA LR LR 07 32 31.9
comp=Z,12nm,18.0s,MS3.3,baz=90,slow=40
TXAR Lajitas Array 117.98 360 PKP PKPdf 06 54 38.5 +0.8
comp=Z,0.2nm,0.5s,baz=226,slow=0.6,SNR=7.6
PLCA Paso Flores 152.43 244 PKPbc PKPbc 06 55 47.8 +1.2
comp=Z,0.9nm,0.4s,baz=90,slow=1.0,SNR=3.9

TAP 10 06:52:45.4, 24°.83N×122°.00E, h110km, ML3.5, 2D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=358	**0.18**	**356**	*e*P	Pn	06 53 00.9	+0.2
TWB1	baz=358			*e*S	Sn	06 53 11.7	-0.6
TWC	**Suao** baz=206	**0.26**	**213**	*i* P	Pn	06 53 01.2	+0.3
TWC	baz=206			*e*S	Sn	06 53 12.5	-0.1
NWF	**Wu-fen Shan** baz=314	**0.32**	**320**	*e*P	Pn	06 53 01.8	+0.6
TWE	**Neicheng** baz=250	**0.32**	**251**	P	Pn	06 53 02.1	+0.9
TWE	baz=250			*e*S	Sn	06 53 14.5	+1.4
TWA	**Mucha** baz=294	**0.41**	**292**	*e*P	Pn	06 53 02.3	+0.7
TWA	baz=294			*e*S	Sn	06 53 15.0	+1.1
ENA	**Nanau** baz=202	**0.46**	**211**	P	Pn	06 53 02.9	+0.9
ENA	baz=202			*e*S	Sn	06 53 15.7	+1.2
TWY	**Chenhua** baz=321	**0.58**	**321**	*e*P	Pn	06 53 03.4	+0.7
TWS1	**Kuangyinshan** baz=300	**0.60**	**297**	P	Pn	06 53 03.6	+0.7
TWS1	baz=300			*e*S	Sn	06 53 17.1	+1.0
NSK	**Sanguang** baz=255	**0.61**	**256**	*i* P	Pn	06 53 03.1	+0.2
NSK	baz=255			*e*S	Sn	06 53 15.9	-0.3
NNS	**Nan Shan** baz=240	**0.69**	**236**	*e*P	Pn	06 53 04.4	+0.8
NNS	baz=240			*e*S	Sn	06 53 18.4	+1.0
TWD	**Chiawan** baz=213	**0.83**	**207**	*e*P	Pn	06 53 04.9	0.0
TWD	baz=213			*e*S	Sn	06 53 19.4	-0.2
NSTT	**Nanjuang** baz=252	**0.93**	**258**	*e*P	Pn	06 53 06.2	+0.3
NSTT	baz=252			*e*S	Sn	06 53 21.4	+0.1
TWT	**Tachien** baz=238	**0.94**	**233**	⇓P	Pn	06 53 07.3	+1.4
TWT	baz=238			*e*S	Sn	06 53 23.3	+1.7
WHF	**Hehuan Shan** baz=218	**0.95**	**225**	⇓*i*P	Pn	06 53 07.2	+1.1
WHF	baz=218			*e*S	Sn	06 53 23.2	+1.5
ESL	**Shilin** baz=212	**1.13**	**207**	*e*P	Pn	06 53 08.6	+0.6
NSY	**Sanyi** baz=251	**1.20**	**250**	*e*P	Pn	06 53 09.5	+0.7
TWQ1	**Liyutan** baz=248	**1.22**	**247**	*e*P	Pn	06 53 09.3	+0.5
SMLT	**Sun Moon Lake** baz=231	**1.38**	**227**	P	Pn	06 53 11.7	+1.0
SMLT	baz=231			S	Sn	06 53 32.2	+2.2
TYC	**Yuchr** baz=236	**1.39**	**229**	*e*P	Pn	06 53 11.8	+0.9
EHY	**Hungye** baz=196	**1.45**	**206**	*e*P	Pn	06 53 12.7	+1.1
EHY	baz=196			*e*S	Sn	06 53 30.9	-0.6
WNT	**Mingjian** baz=240	**1.53**	**232**	*e*P	Pn	06 53 13.6	+1.1
TWF1	**Yuli** baz=200	**1.60**	**204**	*e*P	Pn	06 53 13.1	-0.3
TWF1	baz=200			*e*S	Sn	06 53 34.5	-0.2
YUS	**Yu-Shan** baz=225	**1.64**	**216**	*e*P	Pn	06 53 15.9	+2.1
ALS	**Alishan** baz=226	**1.71**	**220**	P	Pn	06 53 15.9	+1.3
ALS	baz=226			*e*S	Sn	06 53 38.7	+1.7
CHN5	**Tsauling** baz=226	**1.72**	**225**	*e*P	Pn	06 53 15.9	+1.1
CHKT	**Chengkung** baz=199	**1.81**	**199**	*e*P	Pn	06 53 17.3	+1.3
ELDTW	**Lidau** baz=202	**1.86**	**209**	*e*P	Pn	06 53 16.9	+0.3
CHN4	**Tsaushan** baz=222	**1.95**	**222**	*e*P	Pn	06 53 18.8	+1.1
STYT	**Tauyuan** baz=208	**2.01**	**215**	*e*P	Pn	06 53 19.2	+0.8
WTP	**Ta-pu** baz=220	**2.02**	**219**	*e*P	Pn	06 53 19.5	+0.8
CHN1	**Nanshi** baz=220	**2.12**	**220**	*e*P	Pn	06 53 21.4	+1.5
SGST	**Jiashian** baz=226	**2.17**	**217**	*e*P	Pn	06 53 21.6	+1.1

DDA ***10*** *07:07:03.8, 39°.36N×40°.72E, h9km±4km, Md3.0*
ISCJB ***10*** *07:07:04.4±0.5, 39°.45N±0°.04×40°.63E±0°.06, h10km, Error ellipse: s-maj=7.0km s-min=4.0km az=33.9*
ISK ***10*** *07:07:04.3, 39°.49N×40°.59E, h7km, MD3.0*
CSEM ***10*** *07:07:05.3±0.2, 39°.47N×40°.50E, h10km, MD3.0, Error ellipse: s-maj=5.2km s-min=3.6km az=109.0*
ISC 10 07:07:04.5±0.7, 39°.41N±0°.04×40°.63E±0°.06, h2km±6km, n20, σ1°08/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.54**	**192**	*e*PG	**Pg**	**07 07 16.8**	**+2.0**
BINT				*e*SG	**Sg**	**07 07 25.7**	**+3.9**
BINT	**Bingol**	**0.54**	**192**	*e*Pg	**Pg**	**07 07 16.8**	**+2.0**
BINT				*e*Sg	**Sg**	**07 07 25.7**	**+3.9**
EZM	**Erzurum**	**0.75**	**48**	*e*PG	**Pg**	**07 07 18.5**	**-0.4**
EZM				*e*SG	**Sg**	**07 07 29.6**	**+0.9**
ERZM	**Erzurum**	**0.76**	**48**	*i* P	**Pg**	**07 07 18.2**	**-0.7**
ERZM	**Erzurum**	**0.76**	**48**	*i* P	**Pg**	**07 07 18.2**	**-0.8**
EZC	**Erzincan**	**1.05**	**290**	*e*PG	**Pg**	**07 07 23.7**	**-0.8**
PTK	**Pertek**	**1.09**	**242**	*e*PN	**Pg**	**07 07 25.8**	**+0.4**
PTK	**Pertek**	**1.09**	**242**	*e*Pn	**Pg**	**07 07 25.8**	**+0.4**
HOMI	**Horasan**	**1.17**	**57**	*i* P	**Pg**	**07 07 25.7**	**-1.2**
HOMI				*i* S	**Sg**	**07 07 42.0**	**-0.2**
GUMT	**Gumushane**	**1.38**	**320**	*e*PN	**Pn**	**07 07 29.5**	**-1.2**
GUMT	**Gumushane**	**1.38**	**320**	*e*Pn	**Pn**	**07 07 29.5**	**-1.2**
BEST	**Besiri**	**1.59**	**161**	*i* P	**Pn**	**07 07 33.4**	**-0.3**
BEST				*i* S	**Sn**	**07 07 53.5**	**-1.4**
DDEM	**Demirkent**	**1.71**	**30**	*i* P	**Pn**	**07 07 36.1**	**+0.8**
DDEM				*i* S	**Sn**	**07 07 59.5**	**+1.6**
DDEM	**Demirkent**	**1.71**	**30**	*i* P	**Pn**	**07 07 36.1**	**+0.7**
DDEM				*i* S	**Sn**	**07 07 59.5**	**+1.6**
DBAD	**Bademkaya**	**1.81**	**27**	*i* P	**Pn**	**07 07 36.2**	**-0.4**
DBAD				*i* S	**Sn**	**07 08 02.6**	**+2.5**
DBAD	**Bademkaya**	**1.81**	**27**	*i* P	**Pn**	**07 07 36.2**	**-0.4**
DBAD				*i* S	**Sn**	**07 08 02.6**	**+2.5**
AGRB	**Hanur-Agry**	**1.83**	**84**	*e*PN	**Pn**	**07 07 36.5**	**-0.5**
AGRB	**Hanur-Agry**	**1.83**	**84**	*e*Pn	**Pn**	**07 07 36.5**	**-0.5**
BCA	**Borcka**	**2.17**	**20**	*e*PN	**Pn**	**07 07 41.2**	**-0.4**
BCA	**Borcka**	**2.17**	**20**	*e*Pn	**Pn**	**07 07 41.2**	**-0.5**

CSEM ***10*** *08:02:37.5±0.3, 38°.00N×26°.15E, h2km, ML3.2/1, Error ellipse: s-maj=5.8km s-min=4.7km az=68.0*
THE ***10*** *08:02:37.8, 38°.00N×26°.23E, h4km±1km, ML3.2/1, Error ellipse: s-maj=1.9km s-min=0.6km az=128.0*
DDA ***10*** *08:02:38.6, 38°.01N×26°.27E, h6km±3km, Md3.1*
ISC 10 08:02:37.7±0.9, 37°.99N±0°.04×26°.15E±0°.05, h3km±12km, n14, σ0°77/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.81**	**60**	P	**Pg**	**08 02 52.3**	**-0.8**
BLCB				S	**Sg**	**08 03 03.1**	**-0.4**
BLCB	**Balcova**	**0.81**	**60**	P	**Pg**	**08 02 52.3**	**-0.8**
BLCB				S	**Sg**	**08 03 03.1**	**-0.4**
GCAM	**G?zelcaml?**	**0.91**	**108**	*i* P	**Pg**	**08 02 54.6**	**-0.4**
GCAM				*i* S	**Sg**	**08 03 08.2**	**+1.5**
GCAM	**G?zelcaml?**	**0.91**	**108**	*i* P	**Pg**	**08 02 54.6**	**-0.4**
GCAM				*i* S	**Sg**	**08 03 08.2**	**+1.5**
APE	**Apeiranthos**	**1.04**	**208**	P	**Pg**	**08 02 58.0**	**+0.3**
APE	**Apeiranthos**	**1.04**	**208**	P	**Pg**	**08 02 58.0**	**+0.3**
SIGR	**SIGRI**	**1.24**	**349**	P	**Pg**	**08 03 00.6**	**-0.8**
SIGR				S	**Sg**	**08 03 18.7**	**+1.2**
SIGR	**SIGRI**	**1.24**	**349**	P	**Pg**	**08 03 00.6**	**-0.8**
SIGR				S	**Sg**	**08 03 18.7**	**+1.2**
PRK	**Paraskevi**	**1.26**	**4**	P	**Pg**	**08 03 00.7**	**-1.1**
PRK				S	**Sg**	**08 03 18.7**	**+0.6**
PRK	**Paraskevi**	**1.26**	**4**	P	**Pg**	**08 03 00.7**	**-1.1**
PRK				S	**Sg**	**08 03 18.7**	**+0.6**
AYDN	**Tasoluk**	**1.41**	**103**	*i* P	**Pn**	**08 03 03.5**	**-0.6**
AYDN				*i* S	**Sg**	**08 03 22.7**	**-0.2**
AYDN	**Tasoluk**	**1.41**	**103**	*i* P	**Pn**	**08 03 03.5**	**-0.7**
AYDN				*i* S	**Sg**	**08 03 22.7**	**-0.2**
AKHS	**Akhisar**	**1.58**	**55**	*i* P	**Pn**	**08 03 07.2**	**+0.7**
AKHS				*i* S	**Sg**	**08 03 28.5**	**+0.2**
AKHS	**Akhisar**	**1.58**	**55**	*i* P	**Pn**	**08 03 07.2**	**+0.7**
AKHS				*i* S	**Sg**	**08 03 28.5**	**+0.1**

SKO ***10*** *08:20:29.5, 39°.88N×20°.20E, h39km*
ATH ***10*** *08:20:31.4, 40°.28N×20°.47E, h5km, MD3.1/3*
ISCJB ***10*** *08:20:33.7±0.7, 40°.10N±0°.03×20°.41E±0°.05, h2km±9km, Error ellipse: s-maj=7.2km s-min=4.2km az=23.3*
CSEM ***10*** *08:20:33.8±0.3, 40°.09N×20°.38E, h15km, ML3.0/2, Error ellipse: s-maj=6.6km s-min=4.3km az=123.0*
THE ***10*** *08:20:34.0, 40°.08N×20°.45E, h0km±2km, ML3.0/2, Error ellipse: s-maj=2.6km s-min=0.5km az=301.0*
ISC 10 08:20:34.5±0.6, 40°.09N±0°.03×20°.42E±0°.05, h11km±7km, n22, σ1°06/38, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.54**	**142**	*e*PG	**Pg**	**08 20 44.4**	**-0.7**
JAN				*e*SB	**Sg**	**08 20 53.3**	**+1.0**
JAN	**Janina**	**0.54**	**142**	*e*Pg	**Pg**	**08 20 44.4**	**-0.7**
JAN				*e*Sb	**Sg**	**08 20 53.3**	**+1.0**
IGT	**Igoumenitsa**	**0.56**	**187**	P	**Pg**	**08 20 44.8**	**-0.5**
IGT				S	**Sg**	**08 20 53.0**	**+0.3**
IGT	**Igoumenitsa**	**0.56**	**187**	P	**Pg**	**08 20 44.8**	**-0.5**
IGT				S	**Sg**	**08 20 53.0**	**+0.3**
KEK	**Kerkira**	**0.60**	**232**	*e*PB	**Pg**	**08 20 45.2**	**-1.0**
KEK				*e*SB	**Sg**	**08 20 57.0**	**+2.8**
KEK	**Kerkira**	**0.60**	**232**	P	**Pg**	**08 20 45.4**	**-0.8**
KEK	**Kerkira**	**0.60**	**232**	*e*Pb	**Pg**	**08 20 45.2**	**-1.0**
KEK	**Kerkira**	**0.60**	**232**	P	**Pg**	**08 20 45.4**	**-0.8**
KEK				*e*Sb	**Sg**	**08 20 57.0**	**+2.8**
FNA	**Florina**	**1.01**	**46**	P	**Pg**	**08 20 53.2**	**-0.8**
FNA				S	**Sg**	**08 21 07.7**	**+0.6**
FNA	**Florina**	**1.01**	**46**	P	**Pg**	**08 20 53.2**	**-0.8**
FNA				S	**Sg**	**08 21 07.7**	**+0.6**
KZN	**Kozani**	**1.06**	**78**	P	**Pg**	**08 20 53.5**	**-1.4**
KZN				S	**Sg**	**08 21 09.0**	**+0.3**
KZN	**Kozani**	**1.06**	**78**	P	**Pg**	**08 20 53.5**	**-1.4**
KZN				S	**Sg**	**08 21 09.0**	**+0.3**
OHR	**Ohrid**	**1.06**	**16**	*e*Pn	**Pg**	**08 20 54.0**	**-1.0**
OHR				*e*Sg	**Sg**	**08 21 11.4**	**+2.6**
OHR	**Ohrid**	**1.06**	**16**	*e*Pn	**Pg**	**08 20 53.9**	**-1.1**
OHR				*e*Sg	**Sg**	**08 21 11.4**	**+2.6**
THL	**Klokotos Trika**	**1.34**	**112**	*e*PB	**Pb**	**08 20 58.0**	**-1.5**
THL	**Klokotos Trika**	**1.34**	**112**	P	**Pn**	**08 20 58.7**	**-0.3**
THL				S	**Sb**	**08 21 17.8**	**+1.2**
THL	**Klokotos Trika**	**1.34**	**112**	*e*Pb	**Pb**	**08 20 58.0**	**-1.5**
THL	**Klokotos Trika**	**1.34**	**112**	P	**Pn**	**08 20 58.7**	**-0.3**
THL				S	**Sb**	**08 21 17.8**	**+1.2**
KRUS	**Krusevo**	**1.43**	**26**	*e*Pn	**Pn**	**08 21 00.6**	**+0.2**
KRUS				*e*Sg	**Sg**	**08 21 20.6**	**+0.1**
KRUS	**Krusevo**	**1.43**	**26**	*e*Pn	**Pn**	**08 21 00.5**	**+0.2**
KRUS				*e*Sg	**Sg**	**08 21 20.6**	**+0.1**
VLS	**Valsamata**	**1.91**	**176**	P	**Pn**	**08 21 07.4**	**+0.5**
VLS	**Valsamata**	**1.91**	**176**	P	**Pn**	**08 21 07.4**	**+0.5**

IDC 10 08:23:34.6±2.0, 34°.31S×179°.25W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/17, mbtmp3.9/4, ML3.8/1, MS3.4/1, Ms1 3.3/1, ms1mx2.6/30, Error ellipse: s-maj=42.4km s-min=32.9km az=83.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 3.7nm,0.3s,baz=1.4,slow=2.2,SNR=16	**4.91**	**216**	Pn	Pn	08 24 49.2	-0.4
URZ	3.1nm,0.3s,baz=152,slow=22,SNR=5.8			Sn	Sn	08 25 46.6	-0.6
STKA	**Stephens Creek** comp=Z,72nm,21.2s,baz=158,slow=34	**32.76**	**263**	LR	LR	08 42 23.1	
ASAR	**Alice Springs** 1.9nm,0.7s,baz=113,slow=7.3,SNR=30	**42.01**	**272**	P	P	08 31 28.2	+0.5
WRA	**Warramunga Arr** 1.0nm,0.8s,baz=118,slow=7.6,SNR=15	**43.35**	**277**	P	P	08 31 38.3	-0.3
QSPA	**South Pole Qui** 1.2nm,0.9s,baz=20,slow=11,SNR=3.7	**55.81**	**180**	P	P	08 33 13.6	+0.7
FINES	**FINESS Array B** 0.9nm,0.7s,baz=98,slow=5.8,SNR=4.1	**148.38**	**337**	PKPbc	PKPbc	08 43 21.0	-1.1

*IDC **10** 08:35:01.8±1.3, 6°.41S×103°.63E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.1/21, mbtmp4.1/12, Error ellipse: s-maj=55.1km s-min=14.6km az=52.0*
*NEIC **10** 08:35:05.7±0.9, 6°.69S×103°.40E, h35km, mb4.3/6, Error ellipse: s-maj=48.1km s-min=9.1km az=55.0*
*ISCJB **10** 08:35:06.6±1.3, 6°.49S±0°.07×103°.60E±0°.08, h53km±11km, mb4.2/17, Error ellipse: s-maj=16.4km s-min=7.2km az=137.5*
*DJA **10** 08:35:07, 6°.41S×103°.73E, h12km, MLv4.2/11*
ISC 10 08:35:06.6±2.4, 6°.53S±0°.05×103°.58E±0°.06, h34km±17km, n32, σ0s87/35, mb4.2/17, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.36	43	P	Pn	08 35 27.3	-1.8
LWLI	Liwa	1.58	18	P	Pn	08 35 32.0	-0.2
LWLI				S	Sn	08 35 51.5	+0.1
BLSI	Bandar Lampung	2.02	55	P	Pn	08 35 37.9	-0.4
KLI	Kotabumi	2.09	38	P	Pn	08 35 39.4	+0.2
KLI				S	Sn	08 36 04.4	+0.3
CGJI	Cibinong	2.10	92	P	Pn	08 35 38.6	-0.8
CGJI				S	Sn	08 36 05.2	+0.7
MDSI	Maura Dua	2.12	16	P	Pn	08 35 39.8	+0.2
MNAI	Manna	2.24	344	P	Pn	08 35 42.0	+0.7
RBSI	Rajabasa	2.26	73	P	Pn	08 35 40.9	-0.7
KSI	Kapahiang	3.02	341	P	Pn	08 35 53.5	+1.4
DBJI	Dramaga	3.15	91	P	Pn	08 35 57.2	+3.3
CBJI	Citeko	3.26	88	P	Pn	08 35 57.5	+2.2
XMIS	Christmas Isla	4.43	153	ePn	Pn	08 36 07.5	-4.0
XMIS				eSn	Sn	08 36 54.7	-7.2
MBWA	Marble Bar	21.36	135	eP	P	08 39 51.3	+0.2
	7.2nm,1.0s,mb4.0						
FITZ	Fitzroy Crossi	24.40	120	P	P	08 40 20.8	-1.2
	0.8nm,0.6s,mb3.3,baz=286,slow=7.9,SNR=3.6						
CMAR	Chiang Mai Arr	25.25	350	P	P	08 40 27.5	-2.2
	3.7nm,0.6s,mb4.1,baz=181,slow=8.7,SNR=14						
WRA	Warramunga Arr	32.70	117	P	P	08 41 36.1	0.0
	2.2nm,0.6s,mb4.3,baz=287,slow=12,SNR=26						
WRAB	Tennant Creek	32.71	117	eP	P	08 41 36.3	+0.1
	3.4nm,0.7s,mb4.4						
ASAR	Alice Springs	33.75	124	P	P	08 41 45.6	+0.4
	1.6nm,0.9s,mb4.0,baz=304,slow=7.6,SNR=16						
STKA	Stephens Creek	43.51	130	P	P	08 43 08.0	+1.0
	3.1nm,0.5s,mb4.3,baz=308,slow=7.6,SNR=13						
STKA	Stephens Creek	43.51	130	eP	P	08 43 07.6	+0.6
	0.6nm,0.6s,mb3.5						
KSRS	Korea Array	49.31	26	P	P	08 43 51.8	-0.7
	1.3nm,0.7s,mb4.1,baz=222,slow=8.6,SNR=5.7						
SONM	Songino Array	54.19	2	P	P	08 44 28.5	-0.1
	2.7nm,0.8s,mb4.2,baz=178,slow=9.3,SNR=19						
TKM2	Tokmak 2	55.40	335	eP	P	08 44 38.1	+0.6
	3.2nm,0.6s,mb4.5						
EKS2	Erkin-Say	55.96	334	eP	P	08 44 41.8	+0.3
	3.9nm,0.8s,mb4.5						
MKAR	Makanchi Array	56.36	343	P	P	08 44 44.2	-0.1
	1.5nm,0.6s,mb4.2,baz=147,slow=8.2,SNR=14						
MKAR	Makanchi Array	56.36	343	P	P	08 44 44.2	-0.1
ZALV	Zalesovo Beam	62.29	348	P	P	08 45 25.0	-0.2
	1.5nm,0.4s,mb4.5,baz=134,slow=4.3,SNR=8.9						
BVAR	Borovoye Array	65.65	339	P	P	08 45 47.2	-0.1
	3.1nm,0.7s,mb4.5,baz=144,slow=11,SNR=7.8						
ABKAR	Akbulak array	67.30	331	eP	P	08 45 57.9	-0.1
	1.4nm,0.4s,mb4.3						
AKASG	Malin Array Be	85.22	322	P	P	08 47 39.5	-0.2
	0.5nm,0.4s,mb4.0,baz=87,slow=4.0,SNR=4.0						
FINES	FINESS Array B	89.75	332	P	P	08 48 02.0	+0.7
	0.8nm,0.5s,mb4.3,baz=104,slow=8.0,SNR=4.6						
TXAR	Lajitas Array	145.73	45	PKPbc	PKPbc	08 54 43.5	+0.8
	2.7nm,0.7s,baz=305,slow=1.1,SNR=42						

*IDC **10** 08:43:08.5±2.6, 44°.08N×129°.97W, h0km, mb3.4/4, mb1 3.7/6, mb1mx3.5/26, mbtmp3.4/6, ML3.1/2, MS3.0/6, Ms1 3.0/6, ms1mx2.6/30, Error ellipse: s-maj=56.3km s-min=29.2km az=59.0*
*NEIC **10** 08:43:11.0±1.5, 44°.19N×129°.78W, h10km, ML3.3, Error ellipse: s-maj=20.6km s-min=13.7km az=80.0*
ISC 10 08:43:14.3±1.7, 44°.18N±0°.09×129°.3W±0°.2, h10km, n19, σ1s47/16, mb3.3/3, MS3.1/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	Corvallis	4.33	83	ePn	Pn	08 44 18.8	-1.4
HUMO	Hull Mountain	4.90	107	ePn	Pn	08 44 28.1	+0.2
HUMO				eSn	Sn	08 45 22.2	-2.5
NLWA	Neilton Lookou	4.99	48	ePn	Pn	08 44 28.9	-0.2
YBH	Yreka Blue Hor	5.44	114	Pn	Pn	08 44 37.8	+2.5
	0.2nm,0.3s,baz=267,slow=7.1,SNR=6.8						
YBH				Sn	Sn	08 45 34.9	-3.0
	0.1nm,0.3s,baz=76,slow=4.2,SNR=2.0						
YBH				LR	LR	08 46 32.1	
	comp=Z,85nm,20.8s,baz=284,slow=35						
GNW	Green Mountain	5.66	51	ePn	Pn	08 44 38.0	-0.3
LON	Longmire	5.88	61	ePn	Pn	08 44 41.0	-0.4
	5.4nm,0.9s						
RPW	Rockport	6.89	49	ePn	Pn	08 44 56.2	+1.1
BBB	Bella Bella	8.05	5	LR	LR	08 47 46.0	
	comp=Z,90nm,19.3s,baz=257,slow=34						
NVAR	Mina Array Bea	10.09	121	Pn	Pn	08 45 40.9	+1.8
	0.1nm,0.3s,baz=280,slow=11,SNR=5.3						
HLID	Hailey	10.79	88	ePn	Pn	08 45 51.5	+2.9
	3.2nm,1.0s						
BOZ	Bozeman (W)	12.63	77	ePn	Pn	08 46 15.9	+2.0
DLBC	Dease Lake	14.28	359	LR	LR	08 51 49.6	
	comp=Z,24nm,19.7s,baz=0.4,slow=36						
YKA	Yellowknife Ar	20.25	20	P	P	08 47 48.4	-0.9
	1.4nm,1.1s,baz=208,slow=10,SNR=3.7						
ULM	Lac du Bonnet	23.38	63	P	P	08 48 22.7	-0.3
	0.8nm,0.5s,mb3.4,baz=295,slow=11,SNR=3.2						
ULM				LR	LR	08 57 33.7	
	comp=Z,41nm,18.2s,MS2.9,baz=350,slow=36						
TXAR	Lajitas Array	25.21	117	P	P	08 48 38.5	-1.6
	0.4nm,0.9s,mb3.0,baz=340,slow=4.2,SNR=3.4						
TKL	Tuckaleechee C	35.57	88	LR	LR	09 05 13.3	
	comp=Z,58nm,20.0s,MS3.3,baz=351,slow=37						
SCHQ	Schefferville	40.65	52	LR	LR	09 07 03.6	
	comp=Z,31nm,20.0s,MS3.2,baz=264,slow=35						
LPAZ	La Paz	81.99	122	P	P	08 55 33.5	-1.0
	0.7nm,0.8s,mb3.6,baz=329,slow=5.9,SNR=4.5						
LBTB	Lobatse	152.04	55	PKPbc	PKPbc	09 03 06.5	-3.3
	2.4nm,0.9s,baz=0.0,slow=2.0,SNR=1.9						

*ISCJB **10** 08:59:19.4±0.4, 58°.96S±0°.07×25°.2W±0°.1, h10km, mb4.3/17, MS4.2/9, Error ellipse: s-maj=11.6km s-min=8.4km az=136.3*
*IDC **10** 08:59:25.5±2.6, 58°.93S×25°.40W, h39km±21km, mb4.2/12, mb1 4.2/12, mb1mx4.1/18, mbtmp4.1/12, MS4.2/10, Ms1 4.2/10, ms1mx4.0/20, Error ellipse: s-maj=20.1km s-min=15.9km az=35.0*
*NEIC **10** 08:59:26.4±0.2, 58°.93S×25°.28W, mb4.5/12, Error ellipse: s-maj=10.7km s-min=7.9km az=190.0*
ISC 10 08:59:21.3±0.4, 58°.97S±0°.07×25°.3W±0°.1, h10km, (h46km±2.4km:pP-P), n56, σ0s79/27, mb4.3/17, MS4.2/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.69	156	e	Pn	09 02 34.9	-0.3
VNA3	Neumayer Olymp	13.88	159	e	Pn	09 02 37.3	-0.5
VNA2	Neumayer--Watz	14.09	156	e	Pn	09 02 39.9	-0.7
PMSA	Palmer Station	18.93	236	LR	LR	09 09 07.1	
	comp=Z,350nm,19.6s,baz=84,slow=31						
EFI	East Falkland	19.87	277	eP	Pn	09 03 53.8	-0.1
	34nm,0.9s						
USHA	Ushuaia	23.61	261	P	P	09 04 32.9	+0.7
	10nm,0.9s,mb4.3,baz=108,slow=14,SNR=4.9						
USHA				LR	LR	09 11 37.4	
	comp=Z,1μm,20.1s,MS4.3,baz=50,slow=31						
QSPA	South Pole Qui	31.27	180	P	P	09 05 42.4	+1.8
	4.2nm,0.6s,mb4.4,baz=200,slow=4.5,SNR=38						
QSPA	South Pole Qui	31.27	180	eP	P	09 05 41.9	+1.3
	6.4nm,0.8s,mb4.5						
QSPA				epP	pP	09 05 54.3	+11
TRQA	Tornquist	31.47	295	eP	P	09 05 44.0	+1.3
	14nm,0.9s,mb4.8						
TRQA				epP	pP	09 05 56.4	+11
PLCA	Paso Flores	33.59	283	P	P	09 06 00.5	-0.8
	3.7nm,1.0s,mb4.3,baz=162,slow=6.6,SNR=5.4						
PLCA				LR	LR	09 20 23.1	
	comp=Z,273nm,19.1s,MS4.0,baz=274,slow=38						
PLCA	Paso Flores	33.59	283	eP	P	09 06 01.2	-0.1
	4.8nm,0.9s,mb4.4						
PLCA				epP	pP	09 06 12.4	+8.0
PLCA				LR	LR	09 20 23.1	
MAW	Mawson	37.20	141	P	P	09 06 32.4	+0.4
	4.8nm,0.9s,mb4.3,baz=256,slow=3.4,SNR=7.0						
MAW				LR	LR	09 20 16.2	
	comp=Z,559nm,18.2s,MS4.4,baz=244,slow=34						
MAW	Mawson	37.20	141	eP	P	09 06 32.4	+0.3
	0.9nm,0.7s,mb3.7						
MAW				LR	LR	09 20 16.2	
CPUP	Villa Florida	39.52	312	P	P	09 06 50.1	-1.9
	0.4nm,0.3s,mb3.6,baz=132,slow=14,SNR=3.0						
CPUP				LR	LR	09 20 57.7	
	comp=Z,148nm,18.8s,MS3.9,baz=144,slow=33						
CFAA	Coronel Fontan	39.69	294	P	P	09 06 52.9	-0.5
	1.3nm,0.7s,mb3.8,baz=157,slow=9.8,SNR=14						
SBA	Scott Base	43.23	184	eP	P	09 07 22.9	+1.0
	5.5nm,1.1s,mb4.2						
BOSA	Boshof	45.81	71	eP	P	09 07 43.0	-0.1
	7.8nm,0.9s,mb4.6						
LBTB	Lobatse	48.98	69	P	P	09 08 07.9	+0.1
	4.3nm,0.8s,mb4.5,baz=251,slow=9.9,SNR=5.7						
LBTB	Lobatse	48.98	69	eP	P	09 08 07.5	-0.3
	4.6nm,0.8s,mb4.6						
LBTB				epP	pP	09 08 22.4	+11
TSUM	Tsumeb	50.32	57	eP	P	09 08 18.7	+0.7
	5.4nm,1.1s,mb4.5						
LPAZ	La Paz	52.91	305	P	P	09 08 37.2	-0.1
	1.3nm,0.6s,mb4.0,baz=153,slow=7.2,SNR=7.2						
LPAZ	La Paz	52.91	305	eP	P	09 08 37.2	-0.2
	2.7nm,0.7s,mb4.3						
LPAZ				epP	pP	09 08 51.2	+11
LSZ	Lusaka	58.56	65	eP	P	09 09 18.0	+0.1
	3.2nm,0.8s,mb4.4						
ATAH	Atahualpa	65.66	299	LR	LR	09 35 38.4	
	comp=Z,170nm,21.3s,MS4.2,baz=57,slow=33						
DBIC	Dimbokro	67.45	22	P	P	09 10 17.2	+0.2
	4.6nm,0.7s,mb4.6,baz=190,slow=4.2,SNR=5.7						
ROSC	El Rosal	74.55	309	LR	LR	09 43 49.8	
	comp=Z,175nm,20.1s,MS4.3,baz=27,slow=36						
TORD	Torodi Ar. Bea	75.14	27	P	P	09 11 03.9	+0.5
	14nm,0.5s,mb5.1,baz=199,slow=6.2,SNR=169						
KMBO	Kilima Mbogo	75.19	67	LR	LR	09 40 59.9	
	comp=Z,277nm,19.1s,MS4.6,baz=215,slow=33						
STKA	Stephens Creek	88.83	169	P	P	09 12 15.2	-0.1
	2.1nm,0.8s,mb4.5,baz=159,slow=3.7,SNR=8.4						
STKA				LR	LR	09 49 11.6	
	comp=Z,281nm,18.2s,MS4.7,baz=27,slow=34						
STKA	Stephens Creek	88.83	169	eP	P	09 12 14.6	-0.7
	0.5nm,0.8s,mb3.9						
STKA				LR	LR	09 49 11.6	
PPT	Papeete	91.25	232	eLR	LR	09 41 43.6	
	74nm,23.0s,baz=138						
TAOE	Nuku Hiva Isla	94.85	244	eLR	LR	09 43 25.8	
	198nm,26.3s						
ASAR	Alice Springs	95.88	161	P	P	09 12 46.6	-1.3
	1.0nm,0.8s,mb4.3,baz=176,slow=3.9,SNR=11						
ESDC	Sonseca Array	99.87	17	LR	LR	09 52 58.3	
	comp=Z,37nm,18.5s,MS3.9,baz=20,slow=32						
PDAR	Pinedale Array	122.73	299	PKP	PKPdf	09 18 15.8	-0.5
	0.5nm,0.5s,baz=129,slow=4.7,SNR=8.1						
HWUT	Hardware Ranch	122.73	297	ePKPdf	PKPdf	09 18 15.4	-0.9
NOA	NORSAR Array B	123.00	20	PKP	PKPdf	09 18 15.5	-0.6
	1.0nm,0.8s,baz=199,slow=1.9,SNR=3.2						
ULM	Lac du Bonnet	123.05	314	PKP	PKPdf	09 18 15.3	-1.3
	2.7nm,0.7s,baz=10,slow=0.6,SNR=6.7						
NVAR	Mina Array Bea	123.43	290	PKP	PKPdf	09 18 18.4	+0.7
	0.9nm,0.8s,baz=135,slow=3.5,SNR=6.3						
BORG	Borgarnes	123.44	2	PKP	PKPdf	09 18 17.0	+0.1
	25nm,1.1s,baz=119,slow=4.4,SNR=3.1						
ELK	Elko	123.77	294	PKP	PKPdf	09 18 19.0	+0.6
	0.4nm,0.5s,baz=202,slow=8.6,SNR=4.7						
FINES	FINESS Array B	126.49	28	PKP	PKPdf	09 18 21.7	-1.1
	0.7nm,0.5s,baz=141,slow=1.9,SNR=10						
ABKAR	Akbulak array	128.16	56	ePKPdf	PKPdf	09 18 25.7	-0.8
AKTK	Aktyubinsk	128.24	54	PKP	PKPdf	09 18 25.4	-1.1
AKTO	Aktyubinsk	128.24	54	PKP	PKPdf	09 18 25.4	-1.1
	1.6nm,0.8s,baz=203,slow=3.0,SNR=7.4						
ARCES	ARCESS Array B	133.28	22	PKP	PKPdf	09 18 35.4	-0.2
	2.3nm,0.8s,baz=248,slow=1.3,SNR=5.5						
MKAR	Makanchi Array	136.80	73	PKP	PKPdf	09 18 42.8	0.0
	0.2nm,0.4s,baz=248,slow=1.3,SNR=4.6						
YKA	Yellowknife Ar	139.01	315	PKP	PKPdf	09 18 45.8	-0.6
	3.4nm,0.6s,baz=129,slow=2.3,SNR=48						
YKA				SKPbc	SKPbc	09 22 16.3	-4.7
	1.4nm,0.9s,baz=128,slow=2.2,SNR=7.5						
YKA	Yellowknife Ar	139.01	315	PKP	PKPdf	09 18 45.8	-0.6
YKA				SKPbc	SKPbc	09 22 16.3	-4.7
ZALV	Zalesovo Beam	142.67	66	PKhKP		09 18 50.5	
	1.0nm,0.5s,baz=241,slow=8.7,SNR=3.9						
INK	Inuvik	148.69	317	ePKPbc	PKPbc	09 19 05.6	-1.3
DAWY	Dawson	149.46	308	ePKPbc	PKPbc	09 19 07.8	-1.1
SONM	Songino Array	149.78	90	PKPbc	PKPbc	09 19 10.1	-0.2
	3.1nm,0.8s,baz=214,slow=2.8,SNR=18						
MENT	Mentasta	150.87	304	ePKPbc	PKPbc	09 19 12.3	-0.1
COLA	College	153.20	307	ePKPdf	PKPdf	09 19 11.7	+1.6
COLA				ePKPbc	PKPbc	09 19 16.8	-0.8
BPAW	Bear Paw Mtn.	154.32	305	ePKPbc	PKPbc	09 19 19.4	-0.7

*UPP **10** 09:02:32.0, 55°.59N×20°.81E, h0km, ML2.5, Suspected Mining explosion.*
*HEL **10** 09:02:33.3±0.5, 55°.71N×20°.69E, h0km, ML2.6, ML2.5(NAO), ML2.5(UPP), Explosion*
*ISCJB **10** 09:02:34.5±1.3, 55°.97N±0°.08×20°.7E±0°.1, h0km, Error ellipse: s-maj=13.8km s-min=5.6km az=147.8*
*CSEM **10** 09:02:34.1±0.7, 55°.81N×20°.68E, h1km, ML2.4, Error ellipse: s-maj=16.9km s-min=6.4km az=150.0, Mining explosion.*
*BER **10** 09:02:36.6±2.3, 55°.92N×20°.55E, h0km±12km, ML2.5(NAO)*
*IDC **10** 09:02:37.2±2.6, 56°.04N×20°.52E, h0km, mb1 3.4/4, mb1mx3.1/24, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=25.6km s-min=13.4km az=175.0*
*NAO **10** 09:02:38.8±2.8, 56°.15N×20°.63E, ML2.5*
ISC 10 09:02:34.6±1.2, 55°.86N±0°.08×20°.7E±0°.1, h0km, n47, σ0s87/66, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	1.99	26	eP	Pn	09 03 09.9	+0.4
	SNR=50						
GOTU	Gotland	2.16	329	eP	Pn	09 03 13.1	+1.3
GOTU	Gotland	2.16	329	P	Pn	09 03 13.1	+1.3
ASPU	Aespoe	2.73	307	eP	Pn	09 03 20.4	+0.8
ASPU	Aespoe	2.73	307	P	Pn	09 03 20.4	+0.7
OSKU	Oskarshamn	2.86	300	eP	Pn	09 03 21.8	+0.4
OSKU	Oskarshamn	2.86	300	P	Pn	09 03 21.7	+0.3
VSTU	Vaestervik	2.90	310	eP	Pn	09 03 23.0	+1.0
VSTU	Vaestervik	2.90	310	P	Pn	09 03 22.9	+0.9
MTSE	Matsula	3.34	30	eP	Pn	09 03 28.4	+0.4
MTSE				eS	Sn	09 04 09.0	+0.8
MTSE	Matsula	3.34	30	P	Pn	09 03 28.3	+0.3
MTSE				S	Sn	09 04 09.0	+0.7
BSD	Bornholm Skovb	3.35	260	iP	Pn	09 03 26.5	-1.7
BSD				i		09 03 34.0	
BSD				iS	Sn	09 04 19.8	+11
BSD	Bornholm Skovb	3.35	260	iP	Pn	09 03 26.5	-1.7
	SNR=49						
VXJU	Vaexsjoe	3.35	291	eP	Pn	09 03 27.7	-0.5
VXJU	Vaexsjoe	3.35	291	P	Pn	09 03 27.7	-0.5
NYNU	Nynaeshamn	3.46	337	eP	Pn	09 03 30.7	+1.0
NYNU	Nynaeshamn	3.46	337	P	Pn	09 03 30.7	+1.0
DEL	Delary	3.84	282	eP	Pn	09 03 34.1	-0.9
NRTU	Norrtaelje	3.98	345	eP	Pn	09 03 37.6	+0.8
NRTU	Norrtaelje	3.98	345	P	Pn	09 03 37.5	+0.7
VSU	Vasula	4.21	49	Lg		09 04 46.2	
VSU	Vasula	4.21	49	eSG	Sg	09 04 46.2	-3.7
AAL	Aland	4.35	356	eP	Pn	09 03 42.2	+0.4
AAL				eS	Sn	09 04 32.6	-0.5
AAL	Aland	4.35	356	P	Pn	09 03 42.2	+0.4
AAL				S	Sn	09 04 32.5	-0.6
FLYU	Flymyra	4.53	342	eP	Pn	09 03 44.5	+0.2
FLYU	Flymyra	4.53	342	P	Pn	09 03 44.5	+0.2
GRAU	Graesoe	4.63	347	eP	Pn	09 03 46.3	+0.6
GRAU	Graesoe	4.63	347	P	Pn	09 03 46.3	+0.6
MEF	Metsahovi	4.80	23	eP	Pn	09 03 49.1	+1.1
MEF				eS	Sn	09 04 44.2	-0.1
MEF				MSN		09 04 49.8	
	comp=Z,2.4nm,0.2s						
MEF	Metsahovi	4.80	23	P	Pn	09 03 49.1	+1.0
MEF				S	Sn	09 04 44.2	-0.1
	comp=Z,2.4nm,0.2s						
RAF	Rauma	5.21	6	eP	Pn	09 03 53.6	-0.1
RAF				eS	Sn	09 04 53.6	-0.9
RAF				MSN		09 04 55.7	
	comp=Z,2.8nm,0.2s						
RAF	Rauma	5.21	6	eP	Pn	09 03 54.0	+0.3
	SNR=49						
RAF				eS	Sn	09 04 53.6	-0.8
	SNR=49						
PVF	Pernaja	5.45	28	eP	Pn	09 03 56.4	-0.5
PVF				eS	Sn	09 04 59.2	-0.9
PVF	Pernaja	5.45	28	P	Pn	09 03 56.3	-0.6
PVF				S	Sn	09 04 59.2	-1.0
HFS	Hagfors	5.66	322	Pn	Pn	09 04 00.1	+0.2
	baz=134,slow=10						
HFS				Sn	Sn	09 05 01.0	-4.5
	baz=141,slow=28						
HFS				Lg		09 05 27.8	
	baz=133,slow=28						
HFS	Hagfors	5.66	322	Pn	Pn	09 03 59.3	-0.5
	comp=Z,0.9nm,0.3s,baz=141,slow=13,SNR=42						
HFS				Sn	Sn	09 05 05.2	-0.3
	comp=Z,0.5nm,0.3s,baz=127,slow=30,SNR=3.6						
HFS				Lg		09 05 27.1	
	comp=Z,0.8nm,0.3s,baz=142,slow=31,SNR=4.1						
HFS	Hagfors	5.66	322	eP	Pn	09 04 00.1	+0.2
HFS				eS	Sn	09 05 01.0	-4.5
HFS				eSG	Sg	09 05 27.8	-8.5
HFS	Hagfors	5.66	322	P	Pn	09 04 00.0	+0.1
FIA0	FINESS Array S	6.27	25	Pn	Pn	09 04 08.1	-0.2
	baz=207,slow=12						
FIA0				Sn	Sn	09 05 17.3	-3.2
	baz=208,slow=22						
FIA0				Lg		09 05 48.8	
	baz=212,slow=28						
FIA0	FINESS Array S	6.27	25	eP	Pn	09 04 08.0	-0.3
FIA0				eS	Sn	09 05 20.1	-0.5
FIA0				MSN		09 05 22.6	
	comp=Z,1.1nm,0.2s						
FIA0	FINESS Array S	6.27	25	P	Pn	09 04 07.9	-0.4
FIA0				S	Sn	09 05 20.0	-0.6
	comp=Z,1.1nm,0.2s						
FINES	FINESS Array B	6.27	25	Pn	Pn	09 04 07.7	-0.6
	comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=19						
FINES				Sn	Sn	09 05 20.4	-0.2
	comp=Z,0.5nm,0.3s,baz=209,slow=22,SNR=5.2						
FINES				Lg		09 05 49.9	
	comp=Z,0.4nm,0.3s,baz=224,slow=21,SNR=3.6						
NB2	NORSAR Subarra	7.17	320	Pn	Pn	09 04 18.6	-2.1
	baz=139,slow=14						
NB2	NORSAR Subarra	7.17	320	eP	Pn	09 04 18.6	-2.1
NB2	NORSAR Subarra	7.17	320	P	Pn	09 04 18.5	-2.1
NOA	NORSAR Array B	7.17	320	Pn	Pn	09 04 17.6	-3.1
	comp=Z,0.3nm,0.3s,baz=146,slow=11,SNR=6.2						
NOA				Sn	Sn	09 05 36.0	-6.6
	comp=Z,0.2nm,0.3s,baz=177,slow=16,SNR=2.5						
NOA				Lg		09 06 15.7	
	comp=Z,0.4nm,0.3s,baz=111,slow=13,SNR=4.2						
ARCES	ARCESS Array B	13.90	7	Pn	Pn	09 05 48.0	-4.6
	comp=Z,0.1nm,0.3s,baz=195,slow=17,SNR=2.7						

IDC 10 09:08:25.8±7.3, 24°.16N×109°.42W, h0km, mb1 3.3/3, mb1mx3.2/21, mbtmp2.8/3, ML3.4/3, Error ellipse: s-maj=89.5km s-min=33.8km az=166.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	7.28	44	Pn	Pn	09 10 14.9	+1.5
	0.0nm,0.3s,baz=223,slow=16,SNR=3.9						
TXAR				Pg	Pg	09 10 48.4	+3.1
	0.1nm,0.3s,baz=244,slow=17,SNR=7.2						
TXAR				Sn	Sn	09 11 32.2	-4.6
	0.1nm,0.3s,baz=217,slow=32,SNR=3.0						
TXAR				Lg		09 12 14.8	
	0.2nm,0.3s,baz=218,slow=30,SNR=5.5						
NVAR	Mina Array Bea	16.11	334	Pn	Pn	09 12 16.3	+2.6
	0.1nm,0.3s,baz=168,slow=13,SNR=3.8						
PDAR	Pinedale Array	18.56	360	P	Pn	09 12 44.7	+0.5
	0.1nm,0.3s,baz=173,slow=15,SNR=3.0						

*ISCJB **10** 09:13:54.9±0.7, 38°.17N±0°.02×26°.56E±0°.04, h4km±5km, Error ellipse: s-maj=5.1km s-min=3.5km az=159.7*
*ATH **10** 09:13:54.7, 38°.17N×26°.63E, h35km±13km, MD3.4/3*
*DDA **10** 09:13:55.1, 38°.18N×26°.64E, h7km±4km, Md3.1*
*THE **10** 09:13:55.9, 38°.16N×26°.84E, h30km±6km, ML3.6/3, Error ellipse: s-maj=8.8km s-min=0.9km az=96.0*
*CSEM **10** 09:13:55.4±0.2, 38°.18N×26°.56E, h2km, MD3.1, Error ellipse: s-maj=5.2km s-min=3.8km az=57.0*
*ISK **10** 09:13:57.8, 38°.28N×26°.71E, h10km, MD3.0*
ISC 10 09:13:55.4±0.5, 38°.19N±0°.02×26°.56E±0°.04, h3km±4km, n49, σ1s12/73, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.18	10	iP	Pg	09 13 58.8	0.0
URLA				iS	Sg	09 14 02.0	+0.

LPK	Lapseki	2.19	4	*e*Pn	Pn	09 14 33.6	+0.9
KHL	Karahalli	2.34	86	*e*PN	Pn	09 14 35.9	+1.1
KHL	Karahalli	2.34	86	*e*Pn	Pn	09 14 35.9	+1.1
BNT	Bandirma	2.41	26	*e*PN	Pn	09 14 36.8	+1.0
BNT	Bandirma	2.41	26	*e*Pn	Pn	09 14 36.8	+1.0
RKY	Sarkoy-Tekirda	2.54	11	*e*PN	Pn	09 14 38.6	+1.0
RKY	Sarkoy-Tekirda	2.54	11	*e*Pn	Pn	09 14 38.6	+1.0

IDC 10 09:22:14.8±27.0, 20°76S×173°28W, h0km, mb4.4/4, mb1 4.5/4, mb1mx3.9/18, mbtmp4.4/4, MS4.0/2, Ms1 4.0/2, ms1mx3.1/26, Error ellipse: s-maj=500.0km s-min=149.5km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	9.44	206	LR	LR	09 27 28.6	
	comp=Z,915nm,18.3s,baz=301,slow=33						
ARMA	Armidale	32.97	246	*e*P	P	09 28 52.1	+0.7
CNB	Canberra Magne	35.79	238	*e*P	P	09 29 17.7	+1.9
CTA	Charters Tower	37.86	264	P	P	09 29 34.0	+0.4
	3.5nm,0.4s,baz=86,slow=9.8,SNR=8.6						
TOO	Toolangi	39.36	236	*e*P	P	09 29 46.4	+0.4
STKA	Stephens Creek	41.67	245	P	P	09 30 05.2	0.0
	1.5nm,0.4s,baz=81,slow=7.3,SNR=8.7						
ASAR	Alice Springs	48.76	256	P	P	09 31 01.4	-0.3
	2.4nm,0.7s,baz=98,slow=7.3,SNR=37						
WRA	Warramunga Arr	48.94	261	P	P	09 31 02.8	-0.3
	2.1nm,0.3s,baz=99,slow=8.5,SNR=250						
KAKA	Kakadu	52.40	270	*e*P	P	09 31 30.1	+0.8
	6.6nm,0.9s						
FITZ	Fitzroy Crossi	57.37	261	*e*P	P	09 32 06.6	+1.3
	4.9nm,1.0s						
JTS	JuntasAbangare	92.04	80	LR	LR	10 04 41.2	
	comp=Z,66nm,20.6s,baz=29,slow=28						

*IDC **10** 09:29:04.4±1.7, 19°71S×167°94E, h0km, mb3.9/6, mb1 4.2/6, mb1mx4.0/15, mbtmp3.9/6, MS3.5/3, Ms1 3.5/3, ms1mx3.2/17, Error ellipse: s-maj=76.8km s-min=24.2km az=151.0*
*ISCJB **10** 09:29:06.9±1.2, 20°4S±0°1×168°1E±0°2, h33km, mb3.9/5, MS3.4/3, Error ellipse: s-maj=30.4km s-min=11.1km az=33.1*
*NOU **10** 09:29:07.6±0.3, 20°39S×168°16E, h30km, MD2.7, ML3.5*
ISC 10 09:29:07.4±5.0, 20°5S±0°2×168°2E±0°2, h23km±38km, n12, σ0s81/10, mb3.9/5, MS3.4/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	2.03	216	*e*P	Pn	09 29 39.9	-0.3
DZM	Mont Dzumac	2.24	226	*e*P	Pn	09 29 42.8	-0.3
DZM				AMP		09 30 25.1	
	comp=Z,2μm,3.6s						
NOUC	Port Laguerre	2.36	227	*e*P	Pn	09 29 44.9	+0.2
NOUC				*e*S	Sn	09 30 12.5	-0.4
NOUC				AMP		09 30 28.1	
	comp=Z,96nm,1.7s						
AFI	Afiamalu	20.24	74	LR	LR	09 39 59.4	
	comp=Z,80nm,21.9s,MS3.0,baz=62,slow=32						
CTA	Charters Tower	20.56	267	P	P	09 33 44.8	+0.1
	comp=Z,0.8nm,0.3s,baz=89,slow=14,SNR=2.6						
CTA				LR	LR	09 40 37.0	
	comp=Z,98nm,18.9s,MS3.2,baz=51,slow=34						
STKA	Stephens Creek	26.33	239	P	P	09 34 43.5	+1.9
	comp=Z,1.5nm,0.5s,mb3.8,baz=88,slow=9.8,SNR=8.2						
WRA	Warramunga Arr	31.72	265	P	P	09 35 28.9	-0.8
	comp=Z,0.5nm,0.6s,mb3.5,baz=92,slow=8.5,SNR=17						
ASAR	Alice Springs	31.86	258	P	P	09 35 31.4	+0.4
	comp=Z,3.3nm,0.6s,mb3.8,baz=86,slow=8.9,SNR=65						
SONM	Songino Array	87.63	324	P	P	09 41 50.1	-3.7
	comp=Z,0.4nm,0.6s,mb3.8,baz=150,slow=6.1,SNR=2.5						
SONM				LR	LR	10 17 49.4	
	comp=Z,57nm,18.9s,MS4.0,baz=80,slow=34						
NVAR	Mina Array Bea	90.39	49	P	P	09 42 06.8	-0.1
	comp=Z,0.9nm,0.7s,mb4.2,baz=227,slow=9.0,SNR=7.3						
YKA	Yellowknife Ar	102.25	28	P	Pdif	09 42 58.4	-2.2
	comp=Z,0.2nm,0.7s,baz=254,slow=4.4,SNR=3.2						
GERES	GERESS Array B	145.11	330	PKP	PKPdf	09 48 42.7	-0.1
	comp=Z,0.5nm,0.3s,baz=48,slow=1.5,SNR=2.3						

*IDC **10** 09:29:26.7±9.3, 37°66N×142°49E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=193.3km s-min=38.9km az=7.0*
*JMA **10** 09:29:31.6±0.2, 37°47N×142°22E, h34km±4km, M3.3*
*ISCJB **10** 09:29:32.3±1.3, 37°46N±0°07×142°22E±0°09, h44km±17km, mb3.7/2, Error ellipse: s-maj=13.7km s-min=9.6km az=35.5*
ISC 10 09:29:33.0±2.3, 37°47N±0°06×142°19E±0°08, h32km±21km, n16, σ0s79/25, mb3.7/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.05	265	P	Pn	09 29 50.6	-0.9
JFK				S	Sn	09 30 04.2	-0.9
ONAJ	Iwakimizuishiy	1.17	252	P	Pn	09 29 52.2	-1.0
ONAJ				S	Sn	09 30 07.1	-0.9
JMM	Marumori	1.18	290	P	Pn	09 29 52.5	-0.8
JMM				S	Sn	09 30 07.3	-0.9
JIO	Ouri	1.19	326	P	Pn	09 29 52.4	-1.0
JFT	Otama	1.48	272	P	Pn	09 29 57.7	+0.3
JFT				S	Sn	09 30 16.4	+0.8
JOU	Okura	1.50	307	P	Pn	09 29 57.7	0.0
JOU				S	Sn	09 30 17.1	+0.9
JMK	Ichinoseki	1.67	333	P	Pn	09 29 59.5	-0.5
JYS	Shirataka	1.84	295	P	Pn	09 30 03.6	+1.2
JYS				S	Sn	09 30 24.3	-0.3
JFY	Yanaizu	1.98	269	P	Pn	09 30 04.9	+0.6
JFY				S	Sn	09 30 29.1	+1.1
JYK	Kaneyama	2.04	316	P	Pn	09 30 05.5	+0.4
JOM	Ohasama	2.12	341	P	Pn	09 30 06.2	0.0
JAG	Ashikaga	2.43	245	P	Pn	09 30 10.5	0.0
MJAR	Matsushiro Arr	3.32	255	Pn	Pn	09 30 23.7	+1.0
	1.7nm,0.3s,baz=68,slow=9.1,SNR=14						
MJAR				Sn	Sn	09 31 06.4	+5.3
	0.9nm,0.3s,baz=39,slow=33,SNR=3.9						
MAT	Matsushiro	3.32	255	P	Pn	09 30 26.3	+3.6
MAT				*e*S	Sn	09 31 08.0	+6.9
WRA	Warramunga Arr	57.58	189	P	P	09 39 19.7	0.0
	0.8nm,0.8s,mb3.8,baz=7.8,slow=7.2,SNR=10.0						
ASAR	Alice Springs	61.31	189	P	P	09 39 45.5	+0.2
	0.3nm,0.6s,mb3.6,baz=12,slow=6.1,SNR=4.8						

*DDA **10** 09:35:25.8, 38°20N×26°65E, h13km±2km, Md3.3*
*CSEM **10** 09:35:25.6±0.2, 38°16N×26°51E, h2km, MD3.3, Error ellipse: s-maj=4.8km s-min=3.9km az=72.0*
*ISCJB **10** 09:35:25.8±0.6, 38°16N±0°02×26°57E±0°03, h5km±4km, Error ellipse: s-maj=4.2km s-min=3.0km az=159.2*
*ATH **10** 09:35:25.6, 38°13N×26°55E, h37km±9km, MD3.6/3*
*THE **10** 09:35:26.1, 38°22N×26°62E, h2km±4km, ML3.6/4, Error ellipse: s-maj=4.8km s-min=1.0km az=57.0*
*ISK **10** 09:35:27.4, 38°17N×26°71E, h5km, ML3.4*
ISC 10 09:35:26.3±0.5, 38°18N±0°02×26°58E±0°03, h1km±3km, n99, σ1s33/129, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.18	4	*i*P	Pg	09 35 29.5	-0.3
URLA				*i*S	Sg	09 35 32.8	+0.6
URLA	Izmir	0.18	4	*i*P	Pg	09 35 29.5	-0.3
URLA				*i*S	Sg	09 35 32.8	+0.6
BLCB	Balcova	0.42	60	*e*PG	Pg	09 35 33.8	-0.5
BLCB				*e*SG	Sg	09 35 39.1	-0.6
BLCB	Balcova	0.42	60	P	Pg	09 35 33.6	-0.7
BLCB				S	Sg	09 35 38.9	-0.8
BLCB	Balcova	0.42	60	*e*Pg	Pg	09 35 33.8	-0.5
BLCB				*e*Sg	Sg	09 35 39.1	-0.6
SMG	Samos	0.51	157	*e*PB	Pg	09 35 36.3	+0.3
SMG				*e*SB	Sg	09 35 44.4	+1.8
SMG	Samos	0.51	157	*e*Pb	Pg	09 35 36.3	+0.3
SMG				*e*Sb	Sg	09 35 44.4	+1.8
IZM	Izmir	0.58	67	*e*PG	Pg	09 35 38.4	+1.0
IZM				*e*SG	Sg	09 35 45.7	+0.8
GCAM	G?zelcaml?	0.70	132	*i*P	Pg	09 35 39.4	-0.4
GCAM				*i*S	Sg	09 35 48.8	-0.1
GCAM	G?zelcaml?	0.70	132	*i*P	Pg	09 35 39.3	-0.4
GCAM				*i*S	Sg	09 35 48.8	0.0
PRK	Paraskevi	1.09	347	*e*PN	Pn	09 35 46.4	-2.4
PRK				*e*SN	Sn	09 36 02.2	-2.3
PRK	Paraskevi	1.09	347	P	Pg	09 35 46.0	-1.3
PRK				S	Sg	09 36 01.4	-0.1
PRK	Paraskevi	1.09	347	P	Pg	09 35 46.0	-1.3
PRK				S	Sg	09 36 01.4	-0.1
PRK	Paraskevi	1.09	347	*e*Pn	Pn	09 35 46.4	-2.4
PRK				S	Sg	09 36 01.4	-0.1
PRK				*e*Sn	Sn	09 36 02.2	-2.3
AYDN	Tasoluk	1.15	116	*i*P	Pg	09 35 46.8	-1.5
AYDN				*i*S	Sg	09 36 02.1	-1.1
AYDN	Tasoluk	1.15	116	*i*P	Pg	09 35 46.8	-1.5
AYDN				*i*S	Sg	09 36 02.1	-1.1
SIGR	SIGRI	1.18	331	P	Pg	09 35 48.0	-0.9
SIGR				S	Sg	09 36 03.8	-0.4
SIGR	SIGRI	1.18	331	P	Pg	09 35 48.0	-0.9
SIGR				S	Sg	09 36 03.8	-0.4
AKHS	Akhisar	1.19	54	*i*P	Pg	09 35 47.5	-1.7
AKHS				*i*S	Sg	09 36 03.0	-1.6
AKHS	Akhisar	1.19	54	*i*P	Pg	09 35 47.5	-1.7
AKHS				*i*S	Sg	09 36 03.0	-1.7
AKS	Akhisar	1.19	54	*e*PN	Pn	09 35 48.6	-1.5
AKS				*e*SN	Sn	09 36 05.0	-2.0
AKS	Akhisar	1.19	54	*e*Pn	Pn	09 35 48.6	-1.5
AKS				*e*Sn	Sn	09 36 05.0	-2.0
MLSB	Milas	1.29	133	*e*PN	Pn	09 35 51.2	-0.2
MLSB				*e*SN	Sn	09 36 08.1	-1.4
MLSB	Milas	1.29	133	*e*Pn	Pn	09 35 51.2	-0.3
MLSB				*e*Sn	Sn	09 36 08.1	-1.3
APE	Apeiranthos	1.39	217	*e*PN	Pn	09 35 49.7	-3.0
APE	Apeiranthos	1.39	217	P	Pn	09 35 50.5	-2.2
APE				S	Sg	09 36 12.4	+1.6
APE	Apeiranthos	1.39	217	*e*Pn	Pn	09 35 49.7	-3.0
APE	Apeiranthos	1.39	217	P	Pn	09 35 50.5	-2.2
APE				S	Sg	09 36 12.4	+1.6
DAT	Datca	1.65	151	*e*PN	Pn	09 35 56.5	+0.2
DAT	Datca	1.65	151	*e*Pn	Pn	09 35 56.5	+0.1
EZN	Ezine	1.66	353	*e*PN	Pn	09 35 58.3	+1.8
EZN	Ezine	1.66	353	*e*Pn	Pn	09 35 58.3	+1.8
KULA	Kula-Manisa	1.67	78	*e*PN	Pn	09 35 57.0	+0.3
KULA				*e*SN	Sn	09 36 17.7	-1.0
KULA	Kula-Manisa	1.67	78	*e*Pn	Pn	09 35 57.0	+0.3
KULA				*e*Sn	Sn	09 36 17.7	-1.0
YER	Yerkesik	1.71	127	*e*PN	Pn	09 35 57.0	-0.1
YER	Yerkesik	1.71	127	*e*Pn	Pn	09 35 57.0	-0.1
BALY	Balya	1.76	27	*i*P	Pn	09 35 55.9	-2.0
BALY				*i*S	Sn	09 36 19.2	-1.7
BALY	Balya	1.76	27	*i*P	Pn	09 35 55.9	-2.0
BALY				*i*S	Sn	09 36 19.2	-1.7
BALB	Balikesir	1.78	34	*e*PN	Pn	09 35 58.8	+0.7
BALB	Balikesir	1.78	34	*e*Pn	Pn	09 35 58.8	+0.6
DENT	Denizli	1.98	102	*e*PN	Pn	09 36 01.1	+0.2
DENT	Denizli	1.98	102	*e*Pn	Pn	09 36 01.1	+0.1
THR5	Thira Island,	2.01	210	P	Pn	09 35 59.3	-2.1
THR5	Thira Island,	2.01	210	P	Pn	09 35 59.3	-2.1
LIA	Limnos Island	2.03	328	P	Pn	09 36 00.3	-1.4
LIA	Limnos Island	2.03	328	P	Pn	09 36 00.3	-1.4
GADA	Gvkgeada	2.08	345	*e*PN	Pn	09 36 04.4	+2.1
GADA	Gvkgeada	2.08	345	*e*Pn	Pn	09 36 04.4	+2.1
LOS	Limnos	2.11	327	P	Pn	09 36 01.9	-0.8
LOS	Limnos	2.11	327	P	Pn	09 36 01.9	-0.8
DST	Dursunbey	2.14	48	*e*PN	Pn	09 36 03.4	+0.3
DST	Dursunbey	2.14	48	*e*Pn	Pn	09 36 03.4	+0.2
LPK	Lapseki	2.20	4	*e*PN	Pn	09 36 05.7	+1.8
LPK	Lapseki	2.20	4	*e*Pn	Pn	09 36 05.7	+1.8
ARG	Arkhangelos	2.31	147	P	Pn	09 36 04.5	-1.0
ARG	Arkhangelos	2.31	147	P	Pn	09 36 04.5	-1.0
KHL	Karahalli	2.32	85	*e*PN	Pn	09 36 06.2	+0.6
KHL	Karahalli	2.32	85	*e*Pn	Pn	09 36 06.2	+0.6
BNT	Bandirma	2.41	25	*e*PN	Pn	09 36 07.6	+0.7
KCT	Karacabey	2.50	33	*e*PN	Pn	09 36 08.9	+0.9
KCT	Karacabey	2.50	33	*e*Pn	Pn	09 36 09.0	+0.9
FETY	Fethiye	2.52	127	*e*PN	Pn	09 36 08.5	+0.2
FETY	Fethiye	2.52	127	*e*Pn	Pn	09 36 08.5	+0.2
GLHS	Glhisar (BURDU	2.53	113	*e*PN	Pn	09 36 08.9	+0.5
GLHS	Glhisar (BURDU	2.53	113	*e*Pn	Pn	09 36 09.0	+0.5
RKY	Sarkoy-Tekirda	2.55	10	*e*PN	Pn	09 36 10.3	+1.6
RKY	Sarkoy-Tekirda	2.55	10	*e*Pn	Pn	09 36 10.3	+1.5
ENEZ	Enez	2.58	353	*e*PN	Pn	09 36 10.8	+1.6
ENEZ	Enez	2.58	353	*e*Pn	Pn	09 36 10.8	+1.7
DID	Didima	2.73	257	P	Pn	09 36 10.3	-0.9
DID	Didima	2.73	257	P	Pn	09 36 10.3	-0.9
ALN	Alexandroupoli	2.75	352	P	Pn	09 36 10.0	-1.5
ALN	Alexandroupoli	2.75	352	P	Pn	09 36 10.0	-1.5
ALT	Altintas	2.90	71	*e*PN	Pn	09 36 14.5	+0.9
ALT	Altintas	2.90	71	*e*Pn	Pn	09 36 14.5	+0.9
GEMT	Gemlik	3.03	41	*e*PN	Pn	09 36 16.8	+1.4
GEMT	Gemlik	3.03	41	*e*Pn	Pn	09 36 16.8	+1.4
ZKR	Zakros	3.07	186	P	Pn	09 36 14.7	-1.2
ZKR	Zakros	3.07	186	P	Pn	09 36 14.7	-1.2
RDO	Rodhopi	3.07	345	P	Pn	09 36 14.8	-1.2
RDO	Rodhopi	3.07	345	P	Pn	09 36 14.8	-1.2
YLV	Yalova	3.22	41	*e*PN	Pn	09 36 19.7	+1.7
YLV	Yalova	3.22	41	*e*Pn	Pn	09 36 19.7	+1.7
SLVT	Silivri	3.30	22	*e*PN	Pn	09 36 20.9	+1.9
SLVT	Silivri	3.30	22	*e*Pn	Pn	09 36 20.9	+1.9
CTKS	Kestanelik-??a	3.40	25	*e*PN	Pn	09 36 22.8	+2.3
CTKS	Kestanelik-??a	3.40	25	*e*Pn	Pn	09 36 22.8	+2.4
CTYL	Yal??k??y-??at	3.55	21	*e*PN	Pn	09 36 25.1	+2.6
CTYL	Yal??k??y-??at	3.55	21	*e*Pn	Pn	09 36 25.1	+2.6
KLYT	Kilyos	3.61	31	*e*PN	Pn	09 36 25.1	+1.7
KLYT	Kilyos	3.61	31	*e*Pn	Pn	09 36 25.1	+1.8
EDRB	Edirne	3.67	2	*e*PN	Pn	09 36 27.3	+3.2
EDRB	Edirne	3.67	2	*e*Pn	Pn	09 36 27.3	+3.2
GULT	Gulveren	3.79	52	*e*PN	Pn	09 36 26.9	+1.0
GULT	Gulveren	3.79	52	*e*Pn	Pn	09 36 26.9	+1.1
SVRH	Sivrihisar-ESK	4.06	70	*e*PN	Pn	09 36 31.0	+1.5
SVRH	Sivrihisar-ESK	4.06	70	*e*Pn	Pn	09 36 31.0	+1.4
HDMB	Hadim	4.84	103	*e*PN	Pn	09 36 42.5	+2.2
HDMB	Hadim	4.84	103	*e*Pn	Pn	09 36 42.5	+2.2

IDC 10 09:53:20.7±4.0, 25°19N×109°69W, h0km, mb3.3/1, mb1 3.7/6, mb1mx3.6/23, mbtmp3.4/6, ML3.4/5, MS2.8/1, Ms1 2.8/1, ms1mx2.4/16, Error ellipse: s-maj=49.8km s-min=23.9km az=167.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.76	51	Pn	Pn	09 55 00.9	-0.2
	0.3nm,0.3s,baz=233,slow=13,SNR=24						
TXAR				Pg	Pg	09 55 28.1	-2.2
	0.2nm,0.3s,baz=232,slow=14,SNR=4.4						
TXAR				Sn	Sn	09 56 17.5	-1.4
	0.2nm,0.3s,baz=231,slow=32,SNR=4.3						
TXAR				Lg		09 56 54.6	
	0.5nm,0.3s,baz=232,slow=34,SNR=4.5						
ANMO	Albuquerque	10.12	15	Pn	Pn	09 55 49.2	+2.0
	0.1nm,0.3s,baz=198,slow=11,SNR=7.8						
ANMO				Lg		09 58 40.8	
	0.1nm,0.3s,baz=193,slow=19,SNR=3.0						
NVAR	Mina Array Bea	15.08	333	Pn	Pn	09 56 57.8	+2.8
	0.1nm,0.3s,baz=181,slow=8.1,SNR=3.7						
ELK	Elko	16.19	345	Pn	Pn	09 57 11.7	+2.2
	0.1nm,0.3s,baz=182,slow=9.9,SNR=3.1						
PDAR	Pinedale Array	17.53	0	P	Pn	09 57 27.6	+1.2
	0.1nm,0.3s,baz=161,slow=9.4,SNR=13						
TKL	Tuckaleechee C	24.59	59	LR	LR	10 08 23.5	
	comp=Z,22nm,19.8s,baz=346,slow=37						
YKA	Yellowknife Ar	37.44	356	P	P	10 00 35.3	0.0
	0.3nm,0.7s,baz=175,slow=8.3,SNR=5.4						

IDC 10 10:03:48.0±3.6, 59°22S×24°99W, h0km, mb4.6/1, mb1 4.6/1, mb1mx3.7/13, mbtmp4.6/1, MS3.7/2, Ms1 3.6/2, ms1mx3.3/16, Error ellipse: s-maj=213.6km s-min=76.1km az=96.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	33.79	283	LR	LR	10 22 08.7	
	comp=Z,98nm,18.4s,baz=207,slow=33						
MAW	Mawson	36.92	140	LR	LR	10 23 53.6	
	comp=Z,107nm,19.0s,baz=42,slow=33						
TORD	Torodi Ar. Bea	75.29	27	P	P	10 15 32.7	+0.1
	2.9nm,0.5s,baz=196,slow=6.6,SNR=67						
MKAR	Makanchi Array	136.73	73	PKP	PKPdf	10 23 10.4	-0.7
	0.3nm,0.7s,baz=114,slow=3.5,SNR=2.9						
YKA	Yellowknife Ar	139.28	315	PKP	PKPdf	10 23 14.9	-0.3
	0.9nm,0.6s,baz=128,slow=2.4,SNR=16						
SONM	Songino Array	149.64	90	PKPbc	PKPbc	10 23 38.2	-0.1
	0.4nm,0.7s,baz=211,slow=4.5,SNR=2.4						

*IDC **10** 10:34:37.9±1.4, 7°06S×127°97E, h0km, mb3.8/3, mb1 4.2/6, mb1mx3.9/17, mbtmp4.0/6, ML4.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/24, Error ellipse: s-maj=91.5km s-min=21.8km az=69.0*
*NEIC **10** 10:34:50.4±2.8, 7°55S×127°53E, h108km±29km, mb4.1/1, Error ellipse: s-maj=34.4km s-min=22.4km az=61.0*
ISC 10 10:34:53.0±2.1, 7.78S±0°10×127°7E±0°1, h139km±22km, n10, σ1s29/16, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.76	137	*e*Pn	Pn	10 36 31.5	+1.7
	358nm,0.4s						
KAKA				*e*Sn	Sn	10 37 43.1	-2.4
FITZ	Fitzroy Crossi	10.45	191	Pn	Pn	10 37 20.1	+0.8
	2.2nm,0.3s,baz=34,slow=10,SNR=52						
FITZ				Sn	Sn	10 39 13.8	-1.0
	1.6nm,0.3s,baz=122,slow=18,SNR=4.4						
FITZ				LR	LR	10 41 49.3	
	comp=Z,90nm,20.6s,baz=88,slow=38						
WRAB	Tennant Creek	13.69	153	*e*Pn	Pn	10 38 02.5	+1.1
	8.3nm,0.6s						
WRAB				*e*Sn	Sn	10 40 28.1	-4.8
WRA	Warramunga Arr	13.69	153	Pn	Pn	10 38 01.3	-0.2
	2.0nm,0.3s,baz=326,slow=13,SNR=63						
WRA				Sn	Sn	10 40 27.4	-5.5
	0.7nm,0.3s,baz=321,slow=24,SNR=5.2						
WB2	Warramunga Arr	13.70	153	*e*Pn	Pn	10 38 02.2	+0.7
WB2				*e*Sn	Sn	10 40 27.3	-5.7
ASAR	Alice Springs	16.88	160	P	Pn	10 38 44.9	+3.9
	1.0nm,0.3s,baz=337,slow=11,SNR=69						
ASAR				S	S	10 41 48.9	0.0
	0.2nm,0.3s,baz=320,slow=22,SNR=4.3						
STKA	Stephens Creek	27.24	154	P	P	10 40 27.2	+3.1
	0.6nm,0.4s,mb3.6,baz=315,slow=8.8,SNR=2.9						
MKAR	Makanchi Array	67.66	328	P	P	10 45 33.8	-1.2
	0.3nm,0.6s,mb3.2,baz=120,slow=8.5,SNR=4.0						
KURK	Kurchatov	72.02	330	P	P	10 46 00.8	-0.8
	0.7nm,0.5s,mb3.7,baz=136,slow=5.1,SNR=4.2						
KURK	Kurchatov	72.02	330	P	P	10 46 00.8	-0.8

IDC 10 10:37:24.9±42.0, 53°59S×139°11E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/11, mbtmp3.7/3, MS3.8/1, Ms1 3.7/1, ms1mx3.0/14, Error ellipse: s-maj=782.5km s-min=165.6km az=143.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	21.77	6	P	P	10 42 17.9	-0.1
	2.8nm,0.9s,baz=158,slow=12,SNR=4.4						
ASAR	Alice Springs	30.14	350	P	P	10 43 36.4	+0.1
	0.2nm,0.4s,baz=179,slow=7.4,SNR=2.3						
WRA	Warramunga Arr	33.78	352	P	P	10 44 08.4	+0.1
	1.2nm,0.8s,baz=176,slow=7.7,SNR=4.3						
MAW	Mawson	37.26	218	LR	LR	10 58 54.3	
	comp=Z,130nm,18.8s,baz=127,slow=35						

*ISCJB **10** 10:48:20.2±0.2, 22°28S±0°03×68°54W±0°04, h114km, mb4.7/77, Error ellipse: s-maj=5.0km s-min=4.4km az=2.3*
*IDC **10** 10:48:20.2±0.4, 22°42S×68°67W, h107km±3km, mb4.4/9, mb1 4.4/14, mb1mx4.3/18, mbtmp4.2/14, Error ellipse: s-maj=14.6km s-min=11.0km az=91.0*
*GUC **10** 10:48:20.0±0.8, 22°17S×68°71W, h118km±9km, ML4.9*
*NEIC **10** 10:48:21.1±0.2, 22°31S×68°43W, mb4.8/72, Error ellipse: s-maj=7.1km s-min=5.0km az=67.0*
*BJI **10** 10:48:24.0, 22°30S×68°40W, h114km, mB5.0/10*
ISC 10 10:48:21.9±0.2, 22°35S±0°03×68°53W±0°04, h116km, h116km±.8km: pP-P, n499, σ0s73/487, mb4.7/77, 179C-177D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.44	234	P	Pn	10 48 37.8	-1.3
	2μm,0.3s,baz=44,slow=6.9						
LVC				S	Sn	10 48 49.3	-2.8
	4μm,0.3s,baz=299,slow=22,SNR=144						
PB04	Plate Boundary	0.89	275	⇑*i*P	Pn	10 48 46.5	+3.9
PB04				*i*S	Sn	10 49 06.1	+7.9
PB04				AML	AML	10 49 12.4	
	comp=N,13μm,0.5s						
PECH	Pedro de Valdi	1.09	257	⇑*i*P	Pn	10 48 42.7	-1.8
PECH				*i*S	Sn	10 48 59.4	-2.3
PECH				AML	AML	10 48 59.8	
	comp=N,37μm,0.2s						
MACH	Maria Elena	1.15	278	⇑*i*P	Pn	10 48 42.5	-2.6
MACH				*i*S	Sn	10 48 59.6	-3.2
PB01	Plate Boundary	1.58	325	⇑*i*P	Pn	10 48 46.3	-3.7
PB01				*i*S	Sn	10 49 05.5	-6.0
PB01				AML	AML	10 49 07.4	
	comp=E,25μm,0.6s						
MECH	Mejillones	1.93	247	⇑*i*P

628A Black Gap, Mar 61.24 326 ⇑P P 10 58 24.3 -0.5
baz=62,SNR=25
627A Terlingua Ranc 61.48 325 ⇑P P 10 58 25.3 -1.0
baz=62,SNR=15
TXAR Lajitas Array 61.53 325 P P 10 58 25.6 -1.1
comp=E,2.9nm,0.6s,mb4.5,baz=151,slow=8.7,SNR=37
TXAR pP pP 10 58 53.1 -1.8
comp=E,1.9nm,0.7s,baz=148,slow=9.7,SNR=5.1
528A Cox Ranch, San 61.73 326 ⇓P P 10 58 26.8 -1.2
baz=62,SNR=16
626A Big Bend Ranch 61.95 325 ⇑P P 10 58 29.1 -0.4
baz=62,SNR=33
428A Kincaid Ranch, 62.13 327 ⇑P P 10 58 29.7 -0.9
baz=62,SNR=10
527A Woodward Ranch 62.14 326 ⇓P P 10 58 29.8 -1.0
baz=62,SNR=23
526A Mary Lane Ranc 62.33 325 ⇑P P 10 58 31.5 -0.5
baz=63,SNR=23
427A Hayter Ranch, 62.60 326 ⇓P P 10 58 32.8 -1.0
baz=63,SNR=13
328A Wristen Ranch, 62.72 327 ⇓P P 10 58 33.5 -1.1
baz=63,SNR=12
426A McDonald Obser 62.78 326 ⇓P P 10 58 34.4 -0.6
baz=63,SNR=14
327A Balmorhea Ranc 63.06 327 ⇓P P 10 58 35.8 -1.0
baz=63
326A Caldwell Ranch 63.27 326 ⇓P P 10 58 37.3 -0.9
baz=64,SNR=5.8
425A Indio Mountain 63.37 325 ⇑P P 10 58 38.2 -0.7
baz=64,SNR=34
FVM French Village 63.45 341 eP P 10 58 37.1 -2.1
comp=E,17nm,0.8s,mb5.0
227A Bennet, Jal 63.47 327 ⇑P P 10 58 38.7 -0.8
baz=64,SNR=10
325A Bean Ranch, Si 63.82 326 ⇑P P 10 58 41.0 -0.9
baz=64,SNR=50
226A Malaga, Loving 63.92 327 ⇑P P 10 58 42.1 -0.4
baz=64,SNR=15
127A Arkansas Junct 64.04 328 ⇓P P 10 58 41.9 -1.3
baz=64
324A Moseley Ranch, 64.15 325 ⇑P P 10 58 42.4 -1.6
baz=64,SNR=24
GDL2 Guadalupe Moun 64.17 327 eP P 10 58 43.9 -0.2
MNTX Cornudas Mount 64.30 325 eP P 10 58 43.3 -1.7
comp=E,13nm,1.2s,mb4.6
225A Deer Hill, Car 64.33 326 ⇓P P 10 58 44.2 -0.9
baz=65,SNR=13
Z27A Tatum 64.49 328 ⇑P P 10 58 44.7 -1.4
baz=65,SNR=19
CPRX Cap Rock 64.58 327 eP P 10 58 45.9 -0.9
comp=E,6.1nm,0.8s,mb4.5
224A Corundas Mount 64.67 326 ⇓P P 10 58 46.0 -1.4
baz=65,SNR=23
125A Gardner Draw, 64.68 327 ⇑P P 10 58 46.1 -1.4
baz=65,SNR=12
MSTX Muleshoe 64.81 329 ⇑P P 10 58 46.8 -1.4
baz=65,SNR=23
Z26A Caprock 64.83 328 ⇓P P 10 58 47.3 -1.1
baz=65,SNR=13
Y27A Causey 64.92 329 ⇓P P 10 58 47.5 -1.5
baz=65,SNR=16
AMTX Amarillo 65.05 330 eP P 10 58 48.2 -1.6
comp=E,30nm,1.4s,mb4.9
124A Stringfield Ra 65.12 326 ⇓P P 10 58 49.5 -0.8
baz=65,SNR=19
Z25A Roswell 65.20 327 ⇑P P 10 58 49.6 -1.3
baz=65,SNR=16
Y26A Elida 65.28 328 ⇑P P 10 58 50.5 -0.7
baz=66
X27A F and S Farms, 65.51 329 ⇑P P 10 58 51.4 -1.3
baz=66,SNR=5.2
222A Williams Famil 65.53 324 ⇑P P 10 58 52.9 0.0
baz=66,SNR=6.9
Y25A Mesa, Roswell 65.71 327 ⇑P P 10 58 52.7 -1.4
baz=66,SNR=13
320A Kipp Ranch, An 65.72 323 ⇑P P 10 58 54.2 0.0
baz=66,SNR=6.4
X26A CR and CF Fran 65.78 328 ⇑P P 10 58 53.4 -1.1
baz=66,SNR=11
221A Mesquite Ranch 65.82 324 ⇓P P 10 58 55.1 +0.3
baz=66
MAIT Maitri 65.88 159 eP P 10 58 56.6 +1.9
MAIT eE 10 59 04.7
122A Conniff Cattle 65.93 325 ⇑P P 10 58 55.8 +0.3
baz=66
Y24A Capitan 66.08 327 ⇑P P 10 58 56.6 +0.2
baz=66
220A Playas Peak, P 66.15 323 ⇓P P 10 58 56.9 0.0
baz=66,SNR=13
319A Douglas 66.18 322 ⇑P P 10 58 57.3 +0.2
baz=66,SNR=15
121A Cookes Peak, D 66.22 324 ⇑P P 10 58 57.8 +0.4
baz=66,SNR=8.9
Z22A Elephant Butte 66.34 325 ⇑P P 10 58 58.4 +0.3
baz=67,SNR=44
Y23A Lovelace Mesa, 66.40 326 ⇓P P 10 58 58.1 -0.4
baz=67,SNR=10
X24A Lazy VL Ranch, 66.59 327 ⇑P P 10 58 58.9 -0.7
baz=67
318A Bisbee 66.63 322 ⇑P P 10 59 00.1 +0.1
baz=67,SNR=12
W25A X Bar L Ranch, 66.63 328 ⇑P P 10 58 58.9 -1.0
baz=67,SNR=18
219A White Tail Can 66.63 323 ⇓P P 10 58 59.9 -0.1
baz=67,SNR=9.5
120A U Bar Ranch, L 66.70 324 ⇑P P 10 59 00.6 +0.2
baz=67,SNR=9.4
Z21A St. Cloud Mine 66.76 325 ⇓P P 10 59 01.3 +0.5
baz=67,SNR=17
BNM Barren Site 66.87 326 eP P 10 59 01.5 +0.1
comp=E,12nm,1.0s,mb4.7
Y22A Socorro 66.88 326 ⇑P P 10 59 01.5 +0.1
baz=67,SNR=10
Y22D IRIS PASSCAL I 66.96 326 ⇓P P 10 59 02.1 +0.1
baz=67
X23A Hourglass Bar 66.98 327 ⇑P P 10 59 02.1 -0.1
baz=67
LPM Los Pinos Moun 67.00 326 eP P 10 59 02.3 +0.1
218A Dragoon 67.06 322 ⇓P P 10 59 02.9 +0.2
baz=67,SNR=14
LENM Lemitar 67.06 326 eP P 10 59 01.8 -0.8
Z20A Nine Sixteen R 67.11 324 ⇓P P 10 59 03.5 +0.6
baz=67,SNR=15
119A Ashpeak Ranch, 67.23 323 ⇑P P 10 59 04.0 +0.3
baz=68
Y21A Point of Rocks 67.30 325 ⇑P P 10 59 04.9 +0.7
baz=68,SNR=32
LAZ Ladron 67.33 326 eP P 10 59 04.5 +0.1
comp=E,14nm,1.5s,mb4.6
X22A Bernardo 67.34 326 ⇓P P 10 59 05.2 +0.8
baz=68
217A Green Valley 67.35 322 ⇓P P 10 59 04.7 +0.2
baz=68,SNR=12
ANMO Albuquerque 67.41 327 eP P 10 59 04.8 -0.1
comp=E,18nm,0.8s,mb5.0
W23A Werner Place, 67.42 327 ⇑P P 10 59 04.8 0.0
baz=68,SNR=16
118A Homack Ranch, 67.51 323 ⇑P P 10 59 05.7 +0.2
baz=68,SNR=10
CBKS Cedar Bluff 67.51 334 eP P 10 59 04.6 -0.8
comp=E,42nm,0.7s,mb5.4
Y20A Horse Springs, 67.60 325 ⇑P P 10 59 06.5 +0.5
baz=68,SNR=13
Z19A T-Link Ranch, 67.61 324 ⇓P P 10 59 06.7 +0.6
baz=68
X21A Alamocita Cree 67.70 326 ⇑P P 10 59 07.2 +0.5
baz=68,SNR=26
W22A Albuquerque 67.71 327 ⇓P P 10 59 07.2 +0.5
baz=68,SNR=18
TUC Tucson 67.72 322 eP P 10 59 06.5 -0.3
comp=E,13nm,1.2s,mb4.6
QSPA South Pole Qui 67.84 180 eP P 10 59 08.0 +1.0
comp=E,16nm,0.6s,mb5.0
Z18A Geronimo 67.88 323 ⇑P P 10 59 08.0 +0.1
baz=68
216A Three Points, 67.88 321 ⇓P P 10 59 08.2 +0.3
baz=68,SNR=14
117A Oracle 67.89 322 ⇑P P 10 59 08.2 +0.2
baz=68,SNR=19
Y19A Nutrioso 68.11 324 ⇓P P 10 59 10.1 +0.9
baz=68,SNR=28
W21A San Fidel 68.14 326 ⇓P P 10 59 09.7 +0.3
baz=68,SNR=7.9
X20A Quemado 68.15 325 ⇓P P 10 59 10.1 +0.6
baz=68,SNR=16
LIC Lamto 68.29 73 eP P 10 59 09.6 -1.2
comp=E,29nm,0.6s,mb5.3
Y18A Canyon Day Jun 68.39 324 ⇑P P 10 59 11.2 +0.2
baz=69,SNR=8.5
116A Eloy 68.44 322 ⇑P P 10 59 11.6 +0.3
baz=69
X19A St. Johns 68.48 325 ⇓P P 10 59 12.0 +0.4
baz=69
TIC Toumodi 68.48 73 eP P 10 59 11.1 -1.0
comp=E,6.9nm,0.2s,mb5.1
W20A Ramah 68.59 326 ⇓P P 10 59 12.6 +0.3
baz=69,SNR=23
KIC Kosan Boka 68.60 73 eP P 10 59 11.9 -0.9
comp=E,23nm,0.4s,mb5.3
DBIC Dimbokro 68.64 73 P P 10 59 12.2 -0.8
comp=E,8.1nm,0.4s,mb4.9,baz=220,slow=5.0,SNR=19
DBIC Dimbokro 68.64 73 eP P 10 59 12.1 -1.0
comp=E,36nm,1.3s,mb5.0
214A Organ Pipe Nat 68.64 320 ⇑P P 10 59 13.0 +0.4
baz=69,SNR=6.8
V21A Milan 68.67 327 ⇓P P 10 59 13.1 +0.4
baz=69,SNR=6.1
Y17A Roosevelt 68.78 323 ⇑P P 10 59 13.9 +0.5
baz=69,SNR=18
115A Sonoran Desert 68.84 321 ⇓P P 10 59 14.0 +0.2
baz=69
Z16A Peralta Trail, 68.85 322 ⇓P P 10 59 14.1 +0.2
baz=69,SNR=7.9
X18A Snowflake 68.91 324 ⇑P P 10 59 14.8 +0.5
baz=69
W19A Sanders 69.05 325 ⇓P P 10 59 15.6 +0.5
baz=69
V20A Brimhall 69.09 326 ⇑P P 10 59 15.5 +0.2
baz=69,SNR=11
SDCO Great Sand Dun 69.16 329 eP P 10 59 15.7 0.0
comp=E,22nm,0.9s,mb5.0
X17A Forest Lakes 69.24 323 ⇓P P 10 59 17.2 +0.9
baz=70,SNR=18
W18A Petrified Fore 69.24 325 ⇓P P 10 59 16.6 +0.4
baz=70
T22A Edith 69.25 328 ⇓P P 10 59 16.7 +0.4
baz=70,SNR=13
114A Black Gap (USA 69.25 321 ⇓P P 10 59 16.7 +0.3
baz=70
Y16A Circle Bar Ran 69.27 323 ⇑P P 10 59 17.0 +0.5
baz=70,SNR=11
V19A Window Rock 69.33 326 ⇑P P 10 59 17.2 +0.4
baz=70,SNR=18
U20A Newcomb 69.57 326 ⇓P P 10 59 18.2 0.0
baz=70,SNR=5.8
X16A Lo Mia Camp, P 69.65 323 ⇓P P 10 59 19.4 +0.6
baz=70,SNR=16
Z14A Wintersburg 69.73 321 ⇑P P 10 59 19.5 +0.2
baz=70
W17A Winslow 69.74 324 ⇓P P 10 59 19.7 +0.4
baz=70
113A Mohawk Valley, 69.79 320 ⇑P P 10 59 19.8 +0.1
baz=70
V18A Ganado 69.80 325 ⇑P P 10 59 19.7 0.0
baz=70,SNR=9.2
Y15A Casa Rosa Ranc 69.81 322 ⇓P P 10 59 20.0 +0.2
baz=70,SNR=15
U19A Dine' College, 69.86 326 ⇑P P 10 59 19.6 -0.4
baz=70,SNR=8.5
Z13A Yuma Proving G 70.03 321 ⇑P P 10 59 21.3 +0.2
baz=70
112A Yuma 70.11 320 ⇓P P 10 59 21.7 +0.1
baz=70
R22A Saguache, Gunn 70.14 329 ⇑P P 10 59 22.0 +0.3
baz=70,SNR=7.4
X15A Humboldt 70.14 323 ⇑P P 10 59 22.3 +0.4
baz=70,SNR=19
T19A Beclabito 70.17 326 ⇓P P 10 59 21.8 -0.1
baz=70,SNR=16
Y14A Wickenburg 70.18 322 ⇓P P 10 59 22.1 +0.1
baz=70,SNR=8.0
V17A Tonalea, Kykot 70.19 324 ⇑P P 10 59 22.5 +0.4
baz=70,SNR=26
S21A Coal Bank Pass 70.20 328 ⇑P P 10 59 22.3 +0.2
baz=70,SNR=14
MVCO Mesa Verde 70.20 327 ⇓P P 10 59 22.3 +0.2
baz=70,SNR=13
MVCO Mesa Verde 70.20 327 eP P 10 59 22.2 +0.1
comp=E,45nm,1.2s,mb5.2
U18A Rough Rock, Ch 70.30 326 ⇑P P 10 59 23.2 +0.4
baz=70,SNR=22
WUAZ Wupatki 70.43 324 ⇑P P 10 59 24.1 +0.6
baz=71,SNR=10
WUAZ Wupatki 70.43 324 eP P 10 59 24.1 +0.6
comp=E,23nm,0.9s,mb5.0
X14A Yava 70.50 322 ⇑P P 10 59 24.4 +0.4
baz=71,SNR=6.6
Y13A Salome 70.57 321 ⇓P P 10 59 24.7 +0.3
baz=71,SNR=11
GLA Glamis 70.61 320 ⇑P P 10 59 24.8 +0.1
baz=71
R21A Cimarron 70.63 328 ⇑P P 10 59 25.1 +0.4
baz=71,SNR=9.9
W15A Williams 70.67 323 ⇑P P 10 59 25.7 +0.7
baz=71,SNR=6.4
Q22A Crested Butte, 70.72 329 ⇑P P 10 59 25.5 +0.3
baz=71,SNR=10
U16A Tuba City 70.76 325 ⇓P P 10 59 26.0 +0.5
baz=71,SNR=14
T18A Mexican Hat 70.85 326 ⇑P P 10 59 26.0 -0.1
baz=71,SNR=27
U17A Shonto 70.85 325 ⇑P P 10 59 26.7 +0.6
baz=71,SNR=16
ISCO Idaho Springs 70.86 331 eP P 10 59 26.0 0.0
comp=E,20nm,1.2s,mb4.8
R20A Redvale 70.90 328 ⇑P P 10 59 27.0 +0.7
baz=71,SNR=28
Y12C Blythe 70.93 321 ⇓P P 10 59 27.0 +0.4
baz=71
S19A Harvey Farm, M 70.94 327 ⇓P P 10 59 26.5 -0.1
baz=71,SNR=8.8
Q21A Lamborn Mesa, 71.01 329 ⇓P P 10 59 27.2 +0.2
baz=71,SNR=6.9
V15A Kaibab Nationa 71.09 324 ⇑P P 10 59 28.3 +0.8
baz=71,SNR=18
X13A Yucca 71.13 322 ⇑P P 10 59 28.1 +0.3
baz=71,SNR=8.1
W14A Seligman 71.15 323 ⇑P P 10 59 28.7 +0.8
baz=71,SNR=9.4
T17A Navajo Res., N 71.23 325 ⇑P P 10 59 29.2 +0.9
baz=72,SNR=18
S18A Hurst Farm, Bl 71.33 326 ⇓P P 10 59 29.6 +0.7
baz=72,SNR=26
BC3 Big Chuckw Mtn 71.41 320 ⇑P P 10 59 29.8 +0.3
baz=72,SNR=6.7
R19A Curley Farm, L 71.42 327 ⇓P P 10 59 29.4 0.0
baz=72,SNR=15
Q20A Ridgley Place, 71.45 328 ⇑P P 10 59 29.4 -0.2
baz=72,SNR=5.9
V14A Boquillas Ranc 71.47 323 ⇓P P 10 59 30.7 +0.9
baz=72,SNR=17
W13A Hualapai Mount 71.52 322 ⇑P P 10 59 30.9 +0.8
baz=72,SNR=6.8
IRM Iron Mountain 71.58 321 ⇓P P 10 59 30.8 +0.3
baz=72,SNR=6.5
T16A Glen Canyon Da 71.59 325 ⇑P P 10 59 31.1 +0.7
baz=72
U15A North Rim 71.60 324 ⇓P P 10 59 31.6 +1.0
baz=72,SNR=21
NEE2 Needles Airpor 71.70 321 ⇑P P 10 59 31.4 +0.1
baz=72
S17A Black Ridge (B 71.71 326 ⇑P P 10 59 31.7 +0.5
baz=72
R18A Canyonlands Na 71.81 327 ⇑P P 10 59 31.7 -0.1
baz=72,SNR=12
P20A De Beque 71.93 329 ⇓P P 10 59 32.7 +0.3
baz=72,SNR=8.5
BELC Belle Mtn. 71.98 320 ⇓P P 10 59 33.4 +0.5
baz=72
N22A Wattenberg Ran 72.05 331 ⇑P P 10 59 33.7 +0.5
baz=72,SNR=10
O21A Pagoda 72.05 330 ⇑P P 10 59 33.8 +0.6
baz=72
U14A Mt Trumbull 72.08 323 ⇑P P 10 59 34.4 +0.9
baz=72,SNR=22
T15A Red Dirt Ranch 72.08 324 ⇓P P 10 59 34.3 +0.9
baz=72,SNR=22
V13A Grand Canyon W 72.12 323 ⇑P P 10 59 34.3 +0.6
baz=72,SNR=13
W12A Cal Nev Ari 72.23 322 ⇓P P 10 59 34.6 +0.2
baz=72
R17A Hanksville Air 72.25 326 ⇓P P 10 59 34.7 +0.3
baz=72,SNR=40
P19A Cripple Cowboy 72.32 328 ⇓P P 10 59 35.3 +0.5
baz=72,SNR=54
GMRC Granite Mounta 72.32 321 ⇑P P 10 59 35.6 +0.6
baz=73,SNR=5.9
O20A White River Ci 72.35 329 ⇓P P 10 59 35.2 +0.3
baz=73,SNR=24
MURC Murrieta 72.42 319 ⇓P P 10 59 35.6 +0.1
baz=73
Q18A Rafter H Ranch 72.48 327 ⇓P P 10 59 35.9 +0.2
baz=73,SNR=8.3
T14A Hurricane 72.50 324 ⇓P P 10 59 36.7 +0.8
baz=73,SNR=13
N21A Black Mountain 72.50 330 ⇓P P 10 59 36.5 +0.7
baz=73
U13A Pakoon Wash 72.51 323 ⇓P P 10 59 36.7 +0.7
baz=73,SNR=5.4
V12A Nelson 72.52 322 ⇓P P 10 59 36.4 +0.3
baz=73
R16A Teasdale 72.55 326 ⇓P P 10 59 36.7 +0.5
baz=73,SNR=5.2
S15A Panguitch 72.56 325 ⇑P P 10 59 36.9 +0.6
baz=73
M22A Cedar Creek Ra 72.59 331 ⇑P P 10 59 36.6 +0.2
baz=73,SNR=8.7
SRU San Rafael 72.68 327 ⇑P P 10 59 37.0 +0.1
baz=73,SNR=26
SRU San Rafael 72.68 327 eP P 10 59 37.1 +0.2
comp=E,22nm,0.8s,mb5.0
U12A Valley of Fire 72.85 323 ⇑P P 10 59 38.6 +0.6
baz=73,SNR=6.0
Q16A Castle Valley 72.86 326 ⇓P P 10 59 38.4 +0.4
baz=73,SNR=12
O19A Miners Draw (B 72.90 329 ⇑P P 10 59 38.4 +0.1
baz=73,SNR=20
N20A Spence Gulch, 72.91 330 ⇓P P 10 59 38.4 +0.2
baz=73,SNR=7.7
R15A Junction 72.91 325 ⇓P P 10 59 38.8 +0.5
baz=73,SNR=9.1
T13A Saint George 72.92 323 ⇓P P 10 59 39.2 +0.8
baz=73
V11A Goodsprings 72.93 322 ⇑P P 10 59 38.8 +0.3
baz=73
TUQ Turquoise Moun 72.93 321 ⇑P P 10 59 39.0 +0.5
baz=73
P18A Preston Nutter 72.93 327 ⇓P P 10 59 39.1 +0.7
baz=73
CCUT Cedar City 73.00 324 eP P 10 59 40.0 +1.1
comp=E,18nm,0.9s,mb4.9
CIS Catalina Islan 73.03 318 ⇓P P 10 59 39.2 0.0
baz=73
S14A Cedar City 73.05 324 ⇑P P 10 59 39.9 +0.7
baz=73,SNR=5.3
P17A Butcher Ranch, 73.06 327 ⇓P P 10 59 39.4 +0.2
baz=73,SNR=16
MSU Marysvale 73.08 326 eP P 10 59 40.0 +0.7
RWWY Rawlins 73.10 331 eP P 10 59 39.9 +0.5
comp=E,19nm,0.9s,mb4.9
M21A Separation Pea 73.10 331 ⇑P P 10 59 39.6 +0.2
baz=73,SNR=14
FMP Fort Macarthur 73.17 318 ⇑P P 10 59 40.2 +0.2
baz=73
SHPR Sheep Range 73.25 322 eP P 10 59 41.3 +1.0
S13A Holt Ranch, En 73.30 324 ⇑P P 10 59 41.6 +0.9
baz=74,SNR=18
O18A Roosevelt 73.31 328 ⇑P P 10 59 40.9 +0.3
baz=74,SNR=9.3
N19A John Jarvie Ra 73.39 329 ⇓P P 10 59 41.0 -0.1
baz=74,SNR=7.4
L21A Rawlins 73.39 331 ⇓P P 10 59 40.9 -0.1
baz=74,SNR=41
M20A Sweetwater, Wa 73.39 330 ⇑P P 10 59 41.2 +0.1
baz=74,SNR=8.6
Q15A Fillmore 73.55 326 ⇓P P 10 59 42.5 +0.4
baz=74,SNR=10
O17A Robinson Place 73.61 328 ⇓P P 10 59 43.1 +0.7
baz=74,SNR=26
SNCC San Nicolas Is 73.63 317 ⇓P P 10 59 42.7 0.0
baz=74
P16A Fountain Green 73.63 327 ⇑P P 10 59 43.2 +0.7
baz=74
N18A Larsen Ranch, 73.69 329 ⇑P P 10 59 43.1 +0.3
baz=74,SNR=5.3
RSSD Black Hills 73.72 334 eP P 10 59 42.5 -0.4
comp=E,10nm,0.8s,mb4.6
EDW2 Edwards Air Fo 73.77 319 ⇓P P 10 59 43.5 0.0
baz=74
R13A O'Grain Ranch, 73.79 324 ⇓P P 10 59 44.4 +0.9
baz=74,SNR=7.3
T11A Corn Creek, Al 73.81 323 ⇓P P 10 59 44.4 +0.7
baz=74,SNR=13
M19A Rock Springs 73.85 329 ⇓P P 10 59 43.6 -0.2
baz=74
U10A Ash Meadows, A 73.86 322 ⇓P P 10 59 44.6 +0.7
baz=74
S12A Delamar Landin 73.86 323 ⇓P P 10 59 44.7 +0.8
baz=74
L20A Wamsutter 73.87 330 ⇑P P 10 59 44.0 +0.1
baz=74,SNR=18
P15A Leamington 73.92 326 ⇑P P 10 59 44.6 +0.4
baz=74
MPU Maple Canyon 73.92 327 eP P 10 59 44.7 +0.4
comp=E,15nm,1.0s,mb4.7
O16A Springville 74.00 327 ⇓P P 10 59 45.1 +0.4
baz=74,SNR=10.0
Q14A Sevier Lake (B 74.01 325 ⇑P P 10 59 45.5 +0.7
baz=74,SNR=17
DAU Daniels Canyon 74.03 327 eP P 10 59 45.9 +1.0
NLU North Lily Min 74.10 327 eP P 10 59 44.9 -0.3
comp=E,17nm,1.4s,mb4.6
M18A Lyman 74.23 329 ⇑P P 10 59 45.6 -0.3
baz=74,SNR=8.7
N17A Moffit Pass 74.23 328 ⇓P P 10 59 46.6 +0.6
baz=74,SNR=19
JLU Jordanelle 74.27 327 eP P 10 59 46.1 -0.1
comp=E,14nm,1.1s,mb4.6
MPMC Manual Prospec 74.28 321 ⇑P P 10 59 46.5 +0.1
baz=74
P14A Drum Mountains 74.34 326 ⇑P P 10 59 47.6 +0.9
baz=75,SNR=17
K20A Yellowstone Ra 74.38 331 ⇑P P 10 59 46.4 -0.4
baz=75,SNR=13
Q13A Wheeler Ranch, 74.38 325 ⇓P P 10 59 47.5 +0.6
baz=75,SNR=14
S11A Rachel 74.39 323 ⇑P P 10 59 48.0 +1.0
baz=75
L19A Farson 74.41 330 ⇑P P 10 59 47.2 +0.2
baz=75,SNR=19
AGMN Agassiz Refuge 74.47 341 eP P 10 59 45.7 -1.5
comp=E,2.0nm,0.5s,mb4.1
N16A Rees Ranch, Co 74.48 328 ⇑P P 10 59 47.9 +0.4
baz=75,SNR=5.7
L18A Fontenelle, Gr 74.59 329 ⇑P P 10 59 48.2 +0.1
baz=75,SNR=24
ISA Isabella 74.59 320 ⇓P P 10 59 48.7 +0.5
baz=75,SNR=6.4
ISA Isabella 74.59 320 eP P 10 59 48.5 +0.3
comp=E,7.7nm,0.9s,mb4.4
DUG Dugway 74.66 326 ⇑P P 10 59 48.9 +0.4
baz=75,SNR=12
DUG Dugway 74.66 326 eP P 10 59 48.6 +0.1
comp=E,12nm,1.1s,mb4.5
K19A Absolon Red Bu 74.74 330 ⇓P P 10 59 48.5 -0.4
baz=75,SNR=12
P13A Bates Ranch, G 74.74 325 ⇑P P 10 59 49.7 +0.7
baz=75,SNR=9.0
R11A Troy Canyon, C 74.80 323 ⇑P P 10 59 49.9 +0.6
baz=75,SNR=9.8
Q12A Willow Creek R 74.88 324 ⇑P P 10 59 50.2 +0.4
baz=75
PKM Peak Mountain 74.90 318 ⇓P P 10 59 50.6 +0.6
baz=75
M16A Huntsville 74.90 328 ⇑P P 10 59 49.9 0.0
baz=75
BW06 Boulder Array 75.02 330 ⇓P P 10 59 50.3 -0.2
baz=75
BW06 Boulder Array 75.02 330 eP P 10 59 50.0 -0.5
comp=E,22nm,1.8s,mb4.6
PDAR Pinedale Array 75.02 330 P P 10 59 49.4 -1.1
comp=E,2.2nm,0.7s,mb4.0,baz=145,slow=5.4,SNR=18
PDAR pP pP 11 00 18.9 -1.0
comp=E,1.2nm,0.6s,baz=120,slow=8.3,SNR=3.6
S10A Tonopah Range, 75.06 322 ⇑P P 10 59 51.3 +0.5
baz=75,SNR=9.3
VES Vestal, Richgr 75.08 320 ⇓P P 10 59 51.4 +0.3
baz=75
HWUT Hardware Ranch 75.09 328 eP P 10 59 50.8 -0.1
comp=E,13nm,1.0s,mb4.6
L17A Cokeville 75.13 329 ⇓P P 10 59 50.7 -0.5
baz=75
K18A Toltan Ranch, 75.15 330 ⇓P P 10 59 51.7 +0.4
baz=75,SNR=24
R10A Warm Springs 75.15 323 ⇑P P 10 59 52.4 +1.0

baz=75,SNR=9.1
Q11A Duckwater 75.19 324 ⇓P **P 10 59 52.0 +0.4**
baz=75,SNR=9.0
P12A McGill 75.23 325 ⇑P **P 10 59 52.3 +0.5**
baz=76
SMMC Simmler 75.28 319 ⇑P **P 10 59 52.8 +0.6**
baz=76
L16A Fish Haven 75.33 328 ⇑P **P 10 59 52.4 0.0**
baz=76,SNR=5.8
N14A Grayback Hills 75.34 327 ⇑P **P 10 59 52.5 +0.1**
baz=76
M15A Larsen Ranch, 75.42 327 ⇓P **P 10 59 52.6 -0.3**
baz=76
J18A Kendall Valley 75.58 330 ⇑P **P 10 59 53.5 -0.2**
baz=76,SNR=30
Q10A Clear Creek Ra 75.58 323 ⇓P **P 10 59 54.6 +0.8**
baz=76,SNR=6.2
K17A Gardner Place, 75.65 329 ⇑P **P 10 59 54.0 -0.1**
baz=76,SNR=15
O12A Currie 75.72 325 ⇑P **P 10 59 54.9 +0.4**
baz=76,SNR=9.9
AHID Auburn Hatcher 75.75 329 *eP* **P 10 59 54.6 0.0**
comp=E,26nm,0.9s,mb5.0
P11A Circle Ranch, 75.75 324 ⇑P **P 10 59 55.1 +0.4**
baz=76
L15A Malad City 75.79 328 ⇑P **P 10 59 54.7 -0.3**
baz=76,SNR=18
HVU Hansel Valley 75.82 327 *eP* **P 10 59 54.8 -0.3**
comp=E,9.9nm,0.9s,mb4.5
N13A Wendover, West 75.86 326 ⇑P **P 10 59 55.3 0.0**
baz=76
N13A Wendover, West 75.86 326 *eP* **P 10 59 55.4 0.0**
comp=E,6.6nm,0.8s,mb4.4
I18A Diamond G Ranc 75.87 330 ⇑P **P 10 59 55.6 +0.3**
baz=76,SNR=19
M14A Sheep Mountain 75.90 327 ⇓P **P 10 59 55.5 0.0**
baz=76,SNR=8.6
J17A Brown Place, J 76.02 330 ⇓P **P 10 59 56.5 +0.3**
baz=76,SNR=19
K16A Soda Springs 76.03 329 ⇓P **P 10 59 56.7 +0.5**
baz=76,SNR=26
REDW Red Top Meadow 76.08 330 *eP* **P 10 59 56.3 -0.3**
comp=E,13nm,0.9s,mb4.7
O11A Cowboy Ranch, 76.11 325 ⇓P **P 10 59 57.2 +0.4**
baz=76
SNOW Snow King Moun 76.12 330 *eP* **P 10 59 57.0 +0.2**
comp=E,15nm,0.8s,mb4.8
LOHW Long Hollow 76.16 330 *eP* **P 10 59 56.8 -0.2**
comp=E,12nm,1.0s,mb4.6
P10A Eureka 76.18 324 ⇑P **P 10 59 58.0 +0.8**
baz=76,SNR=5.6
TPAW Teton Pass 76.23 330 *eP* **P 10 59 57.6 +0.2**
comp=E,13nm,0.8s,mb4.7
ULM Lac du Bonnet 76.23 342 P **P 10 59 55.5 -1.8**
comp=E,4.4nm,0.5s,mb4.5,baz=151,slow=6.6,SNR=16
ULM Lac du Bonnet 76.23 342 P **P 10 59 55.5 -1.8**
L14A Malta 76.24 327 ⇓P **P 10 59 57.1 -0.3**
baz=76,SNR=14
RRI2 Red Ridge 76.29 329 *eP* **P 10 59 58.1 +0.4**
comp=E,22nm,1.0s,mb4.8
N12A Clover Valley, 76.30 325 ⇓P **P 10 59 57.7 -0.1**
baz=76
N12A Clover Valley, 76.30 325 *eP* **P 10 59 57.8 0.0**
comp=E,14nm,1.6s,mb4.5
K15A Arbon 76.37 328 ⇑P **P 10 59 58.3 +0.1**
baz=77,SNR=7.8
J16A Bone 76.38 329 ⇑P **P 10 59 58.3 +0.1**
baz=77,SNR=6.2
NVAR Mina Array Bea 76.38 322 P **P 10 59 58.7 +0.3**
comp=E,2.2nm,0.8s,mb3.9,baz=157,slow=7.1,SNR=17
NVAR pP pP 11 00 26.9 -0.8
comp=E,1.1nm,0.6s,baz=166,slow=9.0,SNR=4.1
I17A Pilgrim Ck. 76.38 330 ⇓P **P 10 59 59.1 +0.9**
baz=77,SNR=12
DCID1 Drake Creek 76.42 330 *eP* **P 10 59 59.3 +0.8**
comp=E,17nm,1.0s,mb4.7
IMW Indian Meadow 76.53 330 *eP* **P 10 59 59.5 +0.4**
comp=E,15nm,0.9s,mb4.7
L13A Double Diamond 76.63 327 ⇑P **P 11 00 00.0 +0.4**
baz=77,SNR=16
M12A Wells 76.64 326 ⇓P **P 10 59 59.6 -0.2**
baz=77,SNR=8.4
O10A Cortez Mining, 76.67 324 ⇓P **P 11 00 00.1 +0.2**
baz=77
RLMT Red Lodge 76.73 332 ⇓P **P 11 00 00.3 +0.1**
baz=77,SNR=13
RLMT Red Lodge 76.73 332 *eP* **P 11 00 00.2 +0.1**
comp=E,28nm,1.4s,mb4.8
H17A Grant Village 76.75 330 ⇑P **P 11 00 01.7 +1.4**
baz=77,SNR=5.8
I16A Newdale 76.77 330 ⇓P **P 11 00 00.7 +0.2**
baz=77,SNR=12
LKWY Lake 76.80 331 *eP* **P 11 00 02.2 +1.6**
comp=E,12nm,0.9s,mb4.6
SCHQ Schefferville 76.88 1 P **P 10 59 59.4 -1.4**
comp=E,4.1nm,0.7s,mb4.3,baz=189,slow=5.1,SNR=8.9
YFT Old Faithful 76.91 330 *eP* **P 11 00 01.6 +0.3**
comp=E,12nm,1.0s,mb4.6
G18A Lazy EL Ranch, 77.01 332 ⇓P **P 11 00 01.7 -0.1**
baz=77,SNR=17
M11A Holland Ranch, 77.11 325 ⇓P **P 11 00 02.8 +0.4**
baz=77,SNR=12
K13A Stover Farm, H 77.11 327 ⇓P **P 11 00 02.7 +0.3**
baz=77,SNR=8.8
YMR Madison River 77.14 330 *eP* **P 11 00 03.8 +1.3**
comp=E,43nm,1.3s,mb5.0
L12A House Creek Ra 77.22 326 ⇑P **P 11 00 03.5 +0.5**
baz=78,SNR=12
H16A Russell Place, 77.30 330 ⇑P **P 11 00 04.1 +0.7**
baz=78,SNR=14
TOA0 Torodi Ar. Sit 77.31 70 *eP* **P 11 00 03.1 -1.0**
TOA0 *ep*P pP 11 00 32.6 -1.0
TORD Torodi Ar. Bea 77.31 70 P **P 11 00 03.1 -1.0**
comp=E,19nm,0.5s,mb5.1,baz=262,slow=5.4,SNR=94
TORD pP pP 11 00 32.8 -0.8
comp=E,8.1nm,0.6s,baz=250,slow=5.4,SNR=3.7
I15A Monteview 77.34 329 ⇑P **P 11 00 04.4 +0.8**
baz=78,SNR=16
DGMT Dagmar 77.39 337 ⇑P **P 11 00 03.8 0.0**
baz=78,SNR=6.1
DGMT Dagmar 77.39 337 *eP* **P 11 00 03.5 -0.3**
comp=E,22nm,0.9s,mb4.9
DGMT *ep*P pP 11 00 33.2 0.0
DGMT *es*P sP 11 00 46.1 +0.4
QLMT Earthquake Lak 77.47 330 *eP* **P 11 00 04.7 +0.4**
K12A Draper Farm, C 77.52 327 ⇓P **P 11 00 05.2 +0.6**
baz=78,SNR=23
F18A Big Timber 77.54 332 ⇑P **P 11 00 04.7 0.0**
baz=78,SNR=18
G17A Pierce Place, 77.54 331 ⇓P **P 11 00 05.3 +0.6**
baz=78
M10A I.L. Ranch, Tu 77.56 325 ⇓P **P 11 00 05.3 +0.4**
baz=78
L11A Cat Creek Ranc 77.61 326 ⇑P **P 11 00 05.5 +0.3**
baz=78,SNR=10
J13A Cove Ranch, Pi 77.71 328 ⇑P **P 11 00 06.1 +0.4**
baz=78,SNR=11
I14A Mackay 77.75 329 ⇓P **P 11 00 06.6 +0.7**
baz=78,SNR=16
WCN Washoe City 77.80 322 ⇑P **P 11 00 06.7 +0.4**
baz=78
H15A Lima 77.88 329 ⇓P **P 11 00 07.1 +0.5**
baz=78
L10A Juniper Basin 77.92 326 ⇑P **P 11 00 07.2 +0.3**
baz=78,SNR=20
HLID Hailey 77.95 328 ⇑P **P 11 00 07.6 +0.6**
baz=78,SNR=36
HLID Hailey 77.95 328 *eP* **P 11 00 07.6 +0.6**
comp=E,20nm,1.0s,mb4.8
HLID *ep*P pP 11 00 37.2 +0.7
HLID *es*P sP 11 00 50.1 +1.1
G16A Moss Hill, Enn 77.95 330 ⇓P **P 11 00 07.1 +0.1**
baz=78,SNR=5.2
F17A Fitzpatrick Pl 77.95 331 ⇑P **P 11 00 07.3 +0.3**
baz=78,SNR=13
I13A Wildhorse Cree 78.06 328 ⇑P **P 11 00 08.3 +0.7**
baz=78,SNR=15
J12A Stokes Ranch, 78.06 327 ⇓P **P 11 00 08.0 +0.4**
baz=78,SNR=22
MCMT McKenzie Canyo 78.13 329 *eP* **P 11 00 08.6 +0.6**
comp=E,7.9nm,1.0s,mb4.4
MCMT *ep*P pP 11 00 38.2 +0.7
E18A Harlowton 78.14 332 ⇓P **P 11 00 08.0 0.0**
baz=78,SNR=5.8
BOZ Bozeman (W) 78.19 331 ⇑P **P 11 00 07.9 -0.4**
baz=78,SNR=7.2
BOZ Bozeman (W) 78.19 331 *eP* **P 11 00 07.8 -0.5**
comp=E,9.4nm,1.3s,mb4.4
K11A Parker Ranch, 78.19 326 ⇑P **P 11 00 08.6 +0.3**
baz=78,SNR=9.6
G15A Dillon 78.22 330 ⇓P **P 11 00 08.5 +0.1**
baz=78,SNR=13
H14A Leadore 78.22 329 ⇓P **P 11 00 09.0 +0.5**
baz=78,SNR=10
F16A Kennard Place, 78.29 331 ⇓P **P 11 00 08.8 0.0**
baz=78
DLMT Dillon 78.42 330 *eP* **P 11 00 09.6 0.0**
comp=E,22nm,1.4s,mb4.7
E17A Martinsdale 78.47 332 ⇓P **P 11 00 09.9 +0.1**
baz=79,SNR=9.3
I12A Atlanta 78.47 328 ⇑P **P 11 00 10.4 +0.5**
baz=79,SNR=12
BEKR Beckwourth 78.53 322 ⇑P **P 11 00 10.6 +0.4**
baz=79
MFID Camas Ranch 78.55 327 ⇓P **P 11 00 10.7 +0.4**
baz=79,SNR=13
D18A Linhart Farms, 78.58 333 ⇑P **P 11 00 10.2 -0.2**
baz=79
H13A Challis 78.61 329 ⇑P **P 11 00 11.2 +0.6**
baz=79,SNR=27
K10A MacKenzie Ranc 78.63 326 ⇑P **P 11 00 10.9 +0.1**
baz=79,SNR=12
LRM Limekiln Ridge 78.70 330 *eP* **P 11 00 11.3 +0.2**
F15A Butte 78.73 330 ⇓P **P 11 00 11.4 +0.2**
baz=79,SNR=8.5
E16A East Helena 78.89 331 ⇑P **P 11 00 12.1 0.0**
baz=79,SNR=5.8
H12A Diamond D Ranc 78.89 328 ⇓P **P 11 00 12.5 +0.4**
baz=79,SNR=10
D17A Six Diamond Ra 78.93 332 ⇑P **P 11 00 12.2 -0.1**
baz=79
I11A Placerville 78.97 327 ⇓P **P 11 00 12.3 -0.3**
baz=79
G13A Cobalt 78.99 329 ⇓P **P 11 00 13.4 +0.7**
baz=79,SNR=45
HRY Holter Researc 79.09 331 *eP* **P 11 00 13.5 +0.3**
F14A Wisdom 79.11 330 ⇑P **P 11 00 14.0 +0.7**
baz=79
D16A Dana Ranch, Ca 79.21 332 ⇓P **P 11 00 14.3 +0.4**
baz=79,SNR=22
EGMT Eagleton 79.21 333 ⇓P **P 11 00 13.2 -0.7**
baz=79
EGMT Eagleton 79.21 333 *eP* **P 11 00 13.2 -0.7**
comp=E,25nm,1.7s,mb4.8
E15A Deer Lodge 79.24 331 ⇓P **P 11 00 14.1 +0.1**
baz=80,SNR=11
WVOR Wild Horse Val 79.32 325 *eP* **P 11 00 14.3 -0.3**
comp=E,3.1nm,1.1s,mb4.0
C17A Wharram Farm, 79.33 332 ⇓P **P 11 00 13.9 -0.6**
baz=80,SNR=7.5
TSUM Tsumeb 79.46 106 *eP* **P 11 00 16.0 0.0**
comp=E,16nm,1.3s,mb4.7
B18A Beardsley Farm 79.51 333 ⇓P **P 11 00 15.0 -0.4**
baz=80,SNR=5.2
F13A Darby 79.55 329 ⇓P **P 11 00 16.0 +0.3**
baz=80,SNR=27
H11A Donnelly 79.57 328 ⇓P **P 11 00 15.6 -0.2**
baz=80,SNR=6.7
E14A Clinton 79.62 330 ⇓P **P 11 00 16.5 +0.4**
baz=80,SNR=6.1
D15A Lincoln 79.65 331 ⇓P **P 11 00 16.6 +0.4**
baz=80,SNR=6.8
B17A L&G Farms, Che 79.86 333 ⇓P **P 11 00 16.7 -0.6**
baz=80
MOD Modoc 79.86 323 *eP* **P 11 00 17.8 +0.3**
J08A Circle Bar Ran 79.87 325 ⇑P **P 11 00 17.6 0.0**
baz=80,SNR=7.3
CHMT Chamberlain Mo 79.89 331 *eP* **P 11 00 17.9 +0.4**
comp=E,7.6nm,1.8s,mb4.2
C16A Fuhringer Ranc 79.89 332 ⇑P **P 11 00 17.0 -0.5**
baz=80,SNR=11
A18A Metzger Ranch, 79.95 334 ⇑P **P 11 00 16.9 -0.9**
baz=80,SNR=6.0
F12A Elk City 79.96 329 ⇑P **P 11 00 17.8 -0.1**
baz=80,SNR=6.3
E13A Victor 79.96 330 ⇑P **P 11 00 18.2 +0.3**
baz=80,SNR=14
D14A Greenough 80.12 331 ⇓P **P 11 00 18.8 0.0**
baz=80,SNR=5.0
MSO Missoula 80.14 330 *eP* **P 11 00 19.4 +0.5**
comp=E,3.4nm,0.9s,mb4.2
G11A Walters Elk Ra 80.19 328 ⇓P **P 11 00 19.3 0.0**
baz=80,SNR=16
SLMT Seeley Lake 80.24 331 *eP* **P 11 00 19.8 +0.4**
C15A Salmond Ranch, 80.25 332 ⇓P **P 11 00 19.6 +0.2**
baz=80,SNR=15
WDC Whiskeytown Da 80.25 321 *eP* **P 11 00 18.4 -1.3**
comp=E,7.1nm,0.7s,mb4.6
BMO Blue Mountains 80.32 327 *eP* **P 11 00 19.9 0.0**
comp=E,12nm,1.0s,mb4.7
H09A Durkee 80.37 327 ⇑P **P 11 00 20.2 +0.1**
baz=81
F11A Grangeville 80.49 328 ⇑P **P 11 00 20.3 -0.4**
baz=81,SNR=13
D13A Huson 80.57 330 ⇓P **P 11 00 21.2 +0.1**
baz=81,SNR=10
E12A Beaver Dam Sad 80.59 329 ⇑P **P 11 00 21.0 -0.3**
baz=81
B15A Bradely Ranch, 80.63 332 ⇓P **P 11 00 20.6 -0.9**
baz=81,SNR=7.5
SWMT Swartz Lake 80.67 331 *eP* **P 11 00 22.1 +0.4**
A16A West Butte Ran 80.70 333 ⇑P **P 11 00 21.4 -0.5**
baz=81,SNR=19
K05A Summer Lake 80.74 324 ⇑P **P 11 00 22.6 +0.4**
baz=81,SNR=10
C14A Swan Lake 80.75 331 ⇑P **P 11 00 22.2 +0.1**
baz=81
H08A Prairie City 80.78 326 ⇓P **P 11 00 22.5 +0.2**
baz=81
E11A Bogner Ranch, 80.86 329 ⇓P **P 11 00 22.0 -0.7**
baz=81,SNR=5.6
G09A Cove 80.86 327 ⇓P **P 11 00 23.0 +0.2**
baz=81,SNR=26
I07A Izee 80.91 325 ⇑P **P 11 00 23.4 +0.3**
baz=81,SNR=12
D12A Red Ives Fores 80.95 330 ⇑P **P 11 00 23.1 -0.1**
baz=81
JTMT Jette 80.97 331 *eP* **P 11 00 23.4 +0.1**
C13A Hot Springs 81.06 330 ⇓P **P 11 00 23.7 0.0**
baz=81,SNR=7.3
F10A Beach Ranch, E 81.08 328 ⇓P **P 11 00 23.9 0.0**
baz=81,SNR=7.1
YBH Yreka Blue Hor 81.10 322 *eP* **P 11 00 22.7 -1.4**
comp=E,3.1nm,0.8s,mb4.2
KHMM Horse Mountain 81.13 321 *eP* **P 11 00 23.7 -0.6**
comp=E,26nm,1.5s,mb4.8
BSMT Bassoo Peak 81.28 331 *eP* **P 11 00 24.8 -0.1**
E10A Myers Farm, Un 81.38 328 ⇑P **P 11 00 25.4 -0.1**
baz=82,SNR=9.5
D11A Klaveeano Farm, 81.41 329 ⇑P **P 11 00 25.2 -0.4**
baz=82
G08A Pilot Rock 81.46 327 ⇑P **P 11 00 25.9 -0.1**
baz=82
C12B Naegeli Ranch, 81.49 330 ⇓P **P 11 00 25.9 -0.1**
baz=82
A14A Double T Ranch 81.50 332 ⇓P **P 11 00 25.6 -0.4**
baz=82
B13A Whitefish 81.52 331 ⇓P **P 11 00 25.9 -0.3**
baz=82,SNR=8.2
WALA Waterton Lakes 81.78 332 *eP* **P 11 00 26.5 -1.0**
comp=E,0.4nm,1.1s
D10A Wagner Farm, O 81.87 329 ⇓P **P 11 00 27.2 -0.8**
baz=82,SNR=6.9
A13A Flathead Natio 81.91 331 ⇓P **P 11 00 28.2 0.0**
baz=82
B12A Libby 82.10 331 ⇓P **P 11 00 29.1 -0.1**
baz=82,SNR=5.4
G06A Carlson Farm, 82.29 326 ⇓P **P 11 00 29.9 -0.4**
baz=82
D09A Jones Farm, Ri 82.37 328 ⇓P **P 11 00 30.4 -0.3**
baz=83
C10A Spilker Farm, 82.43 329 ⇓P **P 11 00 30.6 -0.3**
baz=83
B11A Sandpoint 82.43 330 ⇑P **P 11 00 30.5 -0.4**
baz=83
A12A Yaak River Ran 82.47 331 ⇓P **P 11 00 31.0 -0.1**
baz=83
D08A Wollman Farm, 82.67 328 ⇑P **P 11 00 31.8 -0.4**
baz=83
E07A Sunnyside 82.79 327 ⇑P **P 11 00 32.9 +0.1**
baz=83
OD2 Odessa Site #2 82.80 328 *eP* **P 11 00 32.6 -0.3**
C09A Chrisman Ranch 82.88 329 ⇓P **P 11 00 32.9 -0.3**
baz=83,SNR=8.1
B09A Rice 83.25 329 ⇑P **P 11 00 34.9 -0.3**
baz=84
D07A Quincy 83.28 328 ⇑P **P 11 00 35.2 -0.1**
baz=84
E06A Yakima 83.35 327 ⇓P **P 11 00 35.8 +0.1**
baz=84
MAW Mawson 83.42 163 P **P 11 00 36.8 +0.9**
comp=E,4.0nm,0.6s,mb4.5,baz=219,slow=7.0,SNR=11
FCC Fort Churchill 83.54 347 *eP* **P 11 00 35.4 -1.0**
comp=E,0.2nm,0.8s
C07A Waterville 83.67 328 ⇓P **P 11 00 37.1 -0.3**
baz=84,SNR=8.9
F04A Amboy 83.69 325 ⇓P **P 11 00 37.1 -0.4**
baz=84
D06A Cle Elum 83.72 327 ⇓P **P 11 00 37.4 -0.2**
baz=84
ETW Entiat 83.74 328 *eP* **P 11 00 37.6 -0.1**
B08A Colville Reser 83.77 329 ⇓P **P 11 00 37.2 -0.6**
baz=84
A08A Turner Farm, O 84.16 329 ⇑P **P 11 00 39.2 -0.5**
baz=84,SNR=6.5
B07A Winthrop 84.22 328 ⇓P **P 11 00 39.2 -0.9**
baz=84,SNR=5.6
D05A Enumclaw 84.30 327 ⇓P **P 11 00 40.3 -0.3**
baz=84
EDM Edmonton 84.68 335 *eP* **P 11 00 40.8 -1.5**
A07A Ashnola River, 84.75 329 ⇓P **P 11 00 42.6 -0.2**
baz=85
CASY Casey 91.64 180 *eP* **P 11 01 16.1 +0.6**
comp=E,34nm,1.9s,mb5.3
YKA Yellowknife Ar 92.11 340 P **P 11 01 16.5 -1.0**
comp=E,4.0nm,0.7s,mb4.8,baz=133,slow=4.6,SNR=48
YKA pP pP 11 01 45.7 -1.9
comp=E,3.7nm,0.7s,baz=136,slow=4.6,SNR=10
YKA Yellowknife Ar 92.11 340 P **P 11 01 16.5 -1.0**
YKA pP pP 11 01 45.7 -2.0
ASAR Alice Springs 129.32 207 PKP PKPdf 11 07 17.2 -0.1
comp=E,3.1nm,0.9s,baz=131,slow=1.8,SNR=24
ASAR pPKP pPKPdf 11 07 47.5 -1.4
comp=E,0.8nm,0.6s,baz=117,slow=1.7,SNR=3.7
ABKAR Akbulak array 131.53 43 *e*PKPdf PKPdf 11 07 21.1 +0.6
WRA Warramunga Arr 132.40 210 PKP PKPdf 11 07 22.9 -0.3
comp=E,3.1nm,0.9s,baz=159,slow=1.8,SNR=26
WRA pPKP pPKPdf 11 07 51.5 -3.2
comp=E,0.7nm,0.5s,baz=158,slow=1.8,SNR=1.9
ZALV Zalesovo Beam 142.57 26 PKP PKPdf 11 07 40.7 -0.1
comp=E,3.1nm,0.6s,baz=295,slow=1.3,SNR=9.2
ZALV Zalesovo Beam 142.57 26 PKP PKPdf 11 07 40.7 -0.1
KSH Kashi 145.35 52 *e*PKPbc PKPbc 11 07 46.6 +0.4
KSH *e*PKS 11 11 20.1
KSH AMB AMB
comp=Z,64nm,5.5s
KSH LR LR
comp=N,130nm,6.0s
KSH LR LR
comp=E,95nm,7.1s
MK31 Makanchi Array 146.10 37 *e*PKPbc PKPbc 11 07 47.9 -0.4
MKAR Makanchi Array 146.10 37 PKPbc PKPbc 11 07 47.8 -0.5
comp=E,7.2nm,0.8s,baz=298,slow=2.6,SNR=38
MKAR pPKPbc pPKPbc 11 08 18.2 -1.2
comp=E,2.0nm,0.7s,baz=327,slow=3.3,SNR=3.3
ASAJ Asahikawa 146.42 318 PKPbc PKPbc 11 07 48.8 -0.5
comp=E,16nm,0.8s,baz=284,slow=2.4,SNR=15
WMQ Urumqi 150.94 37 *e*PKPbc PKPdf 11 07 53.8 -1.3
MJAR Matsushiro Arr 152.87 307 PKPbc PKPbc 11 08 05.0 -0.5
comp=E,2.9nm,0.8s,baz=104,slow=1.5,SNR=7.4
SONM Songino Array 154.25 8 PKP PKPdf 11 07 59.8 0.0
comp=E,1.5nm,0.8s,baz=340,slow=0.9,SNR=8.6
SONM PKPbc PKPbc 11 08 07.1 -1.0
comp=E,2.6nm,0.9s,baz=290,slow=0.7,SNR=9.0
KSRS Korea Array 159.32 320 PKPab PKPab 11 08 44.2 -0.4
comp=E,2.2nm,0.8s,baz=55,slow=5.8,SNR=6.9
GTA Gaotai 160.30 28 *e*PKP PKPdf 11 08 09.5 +1.8
GTA pPKP pPKPdf 11 08 36.5 -2.9
GTA sPKP 11 08 48.8
HHC Hu-ho-hao-te 161.56 360 *e*PKP PKPdf 11 08 09.7 +0.7
HHC pPKP pPKPdf 11 08 36.6 -4.2
HHC PKS 11 11 41.8
HHC PP PP 11 12 41.0 +4.0
HHC SKS SKSdf 11 15 03.6 +0.3
HHC SKKS SKKSac 11 19 18.2 +3.1
HHC SS SS 11 32 46.9 +3.2
HHC AMB AMB
comp=Z,82nm,7.0s
HHC LR LR
comp=N,140nm,21.2s
HHC LR LR
comp=E,110nm,19.1s
HHC LR LR
comp=Z,120nm,22.2s
BJI Beijing 161.92 348 PKP PKPdf 11 08 08.7 -0.7
LZH Lanzhou 164.79 24 *e*PKP PKPdf 11 08 13.5 +1.2
LZH pPKP pPKPdf 11 08 40.7 -3.3
LZH LR LR
comp=E,120nm,18.2s
LZH LR LR
comp=Z,160nm,20.3s
CMAR Chiang Mai Arr 167.63 106 PKP PKPdf 11 08 14.9 -0.1
comp=Z,0.4nm,0.3s,baz=252,slow=2.4,SNR=4.2
NJ2 Nanjing 168.32 327 *e*PKP PKPdf 11 08 16.4 +1.3
CD2 Chengdu 169.04 37 PKP PKPdf 11 08 16.0 +0.4
KMI Kunming 171.54 69 PKP PKPdf 11 08 15.1 -2.1
GYA Guiyang 174.01 46 *e*PKP PKPdf 11 08 16.8 -1.4
GYA pPKP pPKPdf 11 08 49.2 -0.7
GYA sPKP 11 09 01.4
GYA PKPab PKPab 11 09 49.6 -0.1
GYA PKS 11 11 47.2
GYA PP PP 11 13 42.0 +0.4
GYA SKKS SKKSac 11 20 15.6 -2.0
GYA AMB AMB
comp=Z,110nm,7.9s
GYA LR LR
comp=N,130nm,20.4s
GYA LR LR
comp=E,110nm,21.8s
GYA LR LR
comp=Z,120nm,21.4s

IDC 10 11:06:41.4±2.8, 1°.04S×133°.51E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=136.8km s-min=26.1km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.80**	**178**	P	Pn	11 11 02.2	-0.8
	0.2nm,0.3s,baz=357,slow=11,SNR=11						
ASAR	**Alice Springs**	**22.49**	**179**	P	P	11 11 43.0	+0.5
	0.6nm,0.7s,baz=1.0,slow=11,SNR=13						
MKAR	**Makanchi Array**	**65.34**	**324**	P	P	11 17 25.6	0.0
	0.2nm,0.6s,baz=116,slow=4.0,SNR=2.5						

*DDA **10** 11:11:57.8, 38°.20N×26°.66E, h7km±2km, Md3.0*
*ISCJB **10** 11:11:57.8±0.6, 38°.20N±0°.02×26°.57E±0°.04, h4km±4km, Error ellipse: s-maj=4.8km s-min=3.3km az=167.0*
*ATH **10** 11:11:57.8, 38°.17N×26°.44E, h4km, MD3.4/3*
*THE **10** 11:11:58.8, 38°.18N×26°.70E, h19km±7km, ML3.7/3, Error ellipse: s-maj=9.1km s-min=1.3km az=103.0*
*CSEM **10** 11:11:58.1±0.2, 38°.20N×26°.56E, h2km, MD3.0, Error ellipse: s-maj=5.3km s-min=3.9km az=69.0*
*ISK **10** 11:12:00.0, 38°.28N×26°.68E, h8km, MD3.0*

ISC 10 11:11:58.0±0.5, 38°.19N±0°.02×26°.56E±0°.04, h2km±4km, n53, σ1°15/82, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.17**	**11**	*i* P	**Pg**	**11 12 01.3**	**0.0**
URLA				*i* S	**Sg**	**11 12 04.8**	**+1.3**
URLA	**Izmir**	**0.17**	**11**	*i* P	**Pg**	**11 12 01.3**	**0.0**
URLA				*i* S	**Sg**	**11 12 04.8**	**+1.3**
BLCB	**Balcova**	**0.43**	**63**	PG	**Pg**	**11 12 06.0**	**-0.2**
BLCB				*e*SG	**Sg**	**11 12 11.3**	**-0.4**
BLCB	**Balcova**	**0.43**	**63**	P	**Pg**	**11 12 05.7**	**-0.5**
BLCB				S	**Sg**	**11 12 10.9**	**-0.8**
BLCB	**Balcova**	**0.43**	**63**	P	**Pg**	**11 12 05.7**	**-0.5**
BLCB	**Balcova**	**0.43**	**63**	*i* Pg	**Pg**	**11 12 06.0**	**-0.2**
BLCB				S	**Sg**	**11 12 10.9**	**-0.8**
SMG	**Samos**	**0.53**	**155**	*e*PG	**Pg**	**11 12 08.3**	**+0.2**
SMG				*e*SG	**Sg**	**11 12 16.1**	**+1.1**
SMG	**Samos**	**0.53**	**155**	*e*Pg	**Pg**	**11 12 08.3**	**+0.2**
SMG				*e*Sg	**Sg**	**11 12 16.1**	**+1.1**
IZM	**Izmir**	**0.59**	**70**	PG	**Pg**	**11 12 10.5**	**+1.2**
GCAM	**G?zelcaml?**	**0.73**	**132**	*i* P	**Pg**	**11 12 10.8**	**-1.0**
GCAM				*i* S	**Sg**	**11 12 20.6**	**-0.7**

GCAM	**G?zelcaml?**	**0.73**	**132**	*i* P	**Pg**	**11 12 10.8**	**-1.1**
GCAM				*i* S	**Sg**	**11 12 20.6**	**-0.7**
PRK	**Paraskevi**	**1.07**	**348**	*e*PG	**Pg**	**11 12 18.5**	**-0.1**
PRK				*e*SG	**Sg**	**11 12 33.0**	**+0.5**
PRK	**Paraskevi**	**1.07**	**348**	P	**Pg**	**11 12 18.5**	**-0.1**
PRK				S	**Sg**	**11 12 33.3**	**+0.8**
PRK	**Paraskevi**	**1.07**	**348**	P	**Pg**	**11 12 18.5**	**-0.1**
PRK				*e*Sg	**Sg**	**11 12 33.0**	**+0.5**
PRK				S	**Sg**	**11 12 33.3**	**+0.8**
SIGR	**SIGRI**	**1.16**	**332**	P	**Pg**	**11 12 20.1**	**0.0**
SIGR				S	**Sg**	**11 12 35.8**	**+0.7**
SIGR	**SIGRI**	**1.16**	**332**	P	**Pg**	**11 12 20.1**	**0.0**
SIGR				S	**Sg**	**11 12 35.8**	**+0.7**
AYDN	**Tasoluk**	**1.17**	**116**	*i* P	**Pg**	**11 12 18.9**	**-1.6**
AYDN				*i* S	**Sg**	**11 12 34.5**	**-1.2**
AYDN	**Tasoluk**	**1.17**	**116**	*i* P	**Pg**	**11 12 18.9**	**-1.5**
AYDN				*i* S	**Sg**	**11 12 34.5**	**-1.2**
AKHS	**Akhisar**	**1.20**	**55**	*i* P	**Pg**	**11 12 19.1**	**-1.8**
AKHS				*i* S	**Sg**	**11 12 35.7**	**-0.8**
AKHS	**Akhisar**	**1.20**	**55**	*i* P	**Pg**	**11 12 19.1**	**-1.9**
AKHS				*i* S	**Sg**	**11 12 35.7**	**-0.9**
AKS	**Akhisar**	**1.20**	**55**	*e*PG	**Pg**	**11 12 21.0**	**+0.1**
AKS				*e*SG	**Sg**	**11 12 36.3**	**-0.2**
AKS	**Akhisar**	**1.20**	**55**	*e*Pg	**Pg**	**11 12 21.0**	**0.0**
AKS				*e*Sg	**Sg**	**11 12 36.3**	**-0.2**
MLSB	**Milas**	**1.32**	**132**	*e*PN	**Pn**	**11 12 25.2**	**+1.8**
MLSB	**Milas**	**1.32**	**132**	*e*Pn	**Pn**	**11 12 25.2**	**+1.8**
APE	**Apeiranthos**	**1.39**	**216**	*e*PB	**Pn**	**11 12 22.6**	**-1.7**
APE	**Apeiranthos**	**1.39**	**216**	P	**Pn**	**11 12 22.6**	**-1.7**
APE				S	**Sb**	**11 12 41.4**	**-1.3**
APE	**Apeiranthos**	**1.39**	**216**	P	**Pn**	**11 12 22.6**	**-1.7**
APE				S	**Sb**	**11 12 41.4**	**-1.3**
EZN	**Ezine**	**1.64**	**354**	*e*PN	**Pn**	**11 12 28.9**	**+1.1**
EZN	**Ezine**	**1.64**	**354**	*e*Pn	**Pn**	**11 12 28.9**	**+1.1**
DAT	**Datca**	**1.67**	**151**	*e*PN	**Pn**	**11 12 30.3**	**+2.0**
DAT	**Datca**	**1.67**	**151**	*e*Pn	**Pn**	**11 12 30.3**	**+2.1**
KULA	**Kula-Manisa**	**1.69**	**78**	*e*PN	**Pn**	**11 12 28.9**	**+0.5**
KULA	**Kula-Manisa**	**1.69**	**78**	*e*Pn	**Pn**	**11 12 28.9**	**+0.5**
YER	**Yerkesik**	**1.73**	**127**	*e*PN	**Pn**	**11 12 31.2**	**+2.2**
YER	**Yerkesik**	**1.73**	**127**	*e*Pn	**Pn**	**11 12 31.2**	**+2.2**
BALY	**Balya**	**1.75**	**28**	*i* P	**Pn**	**11 12 29.2**	**-0.2**
BALY				*i* S	**Sn**	**11 12 51.6**	**-0.7**
BALY	**Balya**	**1.75**	**28**	*i* P	**Pn**	**11 12 29.2**	**-0.2**
BALY				*i* S	**Sn**	**11 12 51.6**	**-0.7**
BALB	**Balikesir**	**1.78**	**35**	*e*PN	**Pn**	**11 12 29.8**	**+0.1**
BALB	**Balikesir**	**1.78**	**35**	*e*Pn	**Pn**	**11 12 29.8**	**+0.1**
LIA	**Limnos Island**	**2.01**	**328**	P	**Pn**	**11 12 32.6**	**-0.3**
LIA				S	**Sn**	**11 12 56.3**	**-2.3**
LIA	**Limnos Island**	**2.01**	**328**	P	**Pn**	**11 12 32.6**	**-0.3**
LIA				S	**Sn**	**11 12 56.3**	**-2.3**
THR5	**Thira Island,**	**2.02**	**209**	P	**Pn**	**11 12 33.1**	**+0.1**
THR5	**Thira Island,**	**2.02**	**209**	P	**Pn**	**11 12 33.1**	**+0.1**
GADA	**Gvkgeada**	**2.06**	**346**	*e*PN	**Pn**	**11 12 35.3**	**+1.8**
GADA	**Gvkgeada**	**2.06**	**346**	*e*Pn	**Pn**	**11 12 35.3**	**+1.7**
DST	**Dursunbey**	**2.15**	**48**	*e*PN	**Pn**	**11 12 35.8**	**+1.0**
DST	**Dursunbey**	**2.15**	**48**	*e*Pn	**Pn**	**11 12 35.8**	**+1.1**
KHL	**Karahalli**	**2.34**	**86**	*e*PN	**Pn**	**11 12 39.0**	**+1.6**
KHL	**Karahalli**	**2.34**	**86**	*e*Pn	**Pn**	**11 12 39.0**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.54**	**11**	*e*PN	**Pn**	**11 12 41.3**	**+1.2**
RKY	**Sarkoy-Tekirda**	**2.54**	**11**	*e*Pn	**Pn**	**11 12 41.3**	**+1.2**
ALN	**Alexandroupoli**	**2.73**	**352**	P	**Pn**	**11 12 41.7**	**-1.1**
ALN				S	**Sn**	**11 13 14.1**	**-2.2**
ALN	**Alexandroupoli**	**2.73**	**352**	P	**Pn**	**11 12 41.7**	**-1.1**
ALN				S	**Sn**	**11 13 14.1**	**-2.2**

*ISCJB **10** 11:43:31.4±0.7, 5°.47S±0°.04×76°.62W±0°.06, h124km±7km, mb4.4/38, Error ellipse: s-maj=10.9km s-min=6.8km az=163.5*
*NEIC **10** 11:43:31.9±0.2, 5°.48S×76°.62W, mb4.5/24, Error ellipse: s-maj=9.1km s-min=4.4km az=70.0*
*IDC **10** 11:43:31.9±0.5, 5°.48S×76°.64W, h115km±4km, mb3.9/13, mb1 4.0/20, mb1mx4.0/26, mbtmp3.9/20, MS3.0/3, Ms1 3.0/3, ms1mx2.6/36, Error ellipse: s-maj=10.1km s-min=7.6km az=107.0*
*BJI **10** 11:43:37.8, 5°.50S×76°.60W, h114km, mB5.2/2*
ISC 10 11:43:33.0±0.7, 5°.46S±0°.04×76°.58W±0°.06, h121km±7km, h115km±1.8km:pP-P, n83, σ0°72/59, mb4.4/38, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.37**	**230**	P	**Pn**	**11 44 11.7**	**+0.4**
	270nm,0.3s,baz=33,slow=7.5,SNR=1687						
ATAH				S	**Sn**	**11 44 40.3**	**-0.3**
	204nm,0.3s,baz=314,slow=21,SNR=11						
ATAH				LR	LR	11 44 50.6	
	comp=Z,278nm,21.6s,baz=326,slow=33						
OTAV	**Otavalo**	**5.96**	**342**	*e*Pn	**Pn**	**11 44 59.4**	**+0.4**
	50nm,0.8s						
NNA	**Nana**	**6.49**	**182**	P	**Pn**	**11 45 05.0**	**-1.2**
	25nm,0.3s,baz=354,slow=11,SNR=37						
NNA				S	**Sn**	**11 46 11.8**	**-7.1**
	54nm,0.3s,baz=267,slow=17,SNR=10						
ROSC	**El Rosal**	**10.49**	**12**	P	**Pn**	**11 46 00.3**	**+0.1**
	0.9nm,0.3s,baz=157,slow=7.7,SNR=2.8						
LPAZ	**La Paz**	**13.58**	**143**	P	**Pn**	**11 46 40.3**	**-0.5**
	0.1nm,0.3s,baz=336,slow=12,SNR=3.8						
SDV	**Santo Domingo**	**15.43**	**23**	P	**Pn**	**11 47 04.2**	**-0.1**
	6.8nm,0.3s,baz=261,slow=7.3,SNR=27						
SDV				LR	LR	11 52 51.0	
	comp=Z,40nm,21.5s,baz=168,slow=36						
SIV	**San Ignacio**	**18.46**	**126**	P	**P**	**11 47 39.2**	**-0.4**
	0.5nm,0.3s,baz=304,slow=13,SNR=5.3						
LVC	**Limon Verde**	**18.59**	**157**	P	**P**	**11 47 42.1**	**+1.2**
	0.7nm,0.3s,baz=316,slow=4.1,SNR=5.6						
LVC	**Limon Verde**	**18.59**	**157**	P	**P**	**11 47 42.1**	**+1.2**
PCRV	**Puerto La Cruz**	**19.56**	**37**	P	**P**	**11 47 52.8**	**+1.2**
	3.0nm,0.3s,baz=203,slow=3.4,SNR=12						
APG	**El Apazote**	**24.55**	**326**	P	**P**	**11 48 42.6**	**+0.9**
	3.8nm,0.7s,mb4.0,baz=126,slow=6.9,SNR=7.0						
SJG	**San Juan**	**25.58**	**23**	P	**P**	**11 48 50.2**	**-0.7**
	26nm,0.4s,mb5.0,baz=185,slow=3.0,SNR=4.2						
CFAA	**Coronel Fontan**	**27.16**	**164**	P	**P**	**11 49 05.5**	**+0.5**
	0.2nm,0.4s,baz=330,slow=13,SNR=3.0						
CPUP	**Villa Florida**	**27.73**	**141**	P	**P**	**11 49 10.2**	**0.0**
	0.5nm,0.3s,mb3.5,baz=291,slow=11,SNR=5.0						
CPUP				pP	pP	11 49 33.9	-2.6
	2.5nm,0.7s,baz=307,slow=9.3,SNR=4.1						
PLCA	**Paso Flores**	**35.53**	**172**	P	**P**	**11 50 18.4**	**0.0**
	2.7nm,0.5s,mb4.5,baz=343,slow=11,SNR=12						
PLCA				PcP	PcP	11 52 44.6	-0.3
	1.4nm,0.6s,baz=360,slow=4.1,SNR=4.2						
TXAR	**Lajitas Array**	**43.29**	**325**	P	**P**	**11 51 23.2**	**+0.4**
	1.5nm,0.6s,mb3.9,baz=148,slow=9.0,SNR=29						
TXAR				pP	pP	11 51 49.8	-0.8
	0.4nm,0.6s,baz=148,slow=8.4,SNR=2.7						
TXAR				PcP	PcP	11 53 09.6	-0.2
	0.7nm,0.8s,baz=151,slow=8.0,SNR=4.4						
TXAR				ScP	ScP	11 56 48.2	-1.8
	0.1nm,0.6s,baz=31,slow=2.9,SNR=3.4						
CLNB	**Carlsbad**	**45.63**	**327**	*e*P	**P**	**11 51 41.9**	**+0.5**
	0.6nm,0.6s,mb3.5						
GDL2	**Guadalupe Moun**	**45.85**	**327**	*e*P	**P**	**11 51 44.3**	**+1.2**
	2.8nm,0.9s,mb4.0						
CPRX	**Cap Rock**	**46.22**	**328**	*e*P	**P**	**11 51 47.1**	**+1.2**
	14nm,0.9s,mb4.7						
ANMO	**Albuquerque**	**49.07**	**327**	P	**P**	**11 52 08.6**	**+0.6**
	6.5nm,0.8s,mb4.6,baz=147,slow=10.0,SNR=36						
ANMO				pP	pP	11 52 35.0	-1.3
	3.0nm,0.9s,baz=138,slow=9.6,SNR=3.6						
SDCO	**Great Sand Dun**	**50.72**	**330**	*e*P	**P**	**11 52 20.8**	**+0.4**
	11nm,1.3s,mb4.7						
SDCO				*e*pP	pP	11 52 46.9	-2.0
ECSD	**EROS Data Cent**	**52.20**	**342**	*e*P	**P**	**11 52 29.9**	**-1.4**
	3.6nm,1.1s,mb4.3						
WUAZ	**Wupatki**	**52.25**	**324**	*e*P	**P**	**11 52 32.8**	**+0.9**
	5.2nm,0.9s,mb4.6						
AGMN	**Agassiz Refuge**	**56.14**	**345**	*e*P	**P**	**11 52 58.5**	**-1.3**
	2.8nm,0.7s,mb4.4						
DUG	**Dugway**	**56.34**	**327**	*e*P	**P**	**11 53 01.4**	**0.0**
	7.3nm,1.2s,mb4.6						
PDAR	**Pinedale Array**	**56.56**	**331**	P	**P**	**11 53 02.5**	**-0.4**
	1.1nm,0.7s,mb4.0,baz=123,slow=7.9,SNR=7.9						
PDAR				PcP	PcP	11 53 57.1	-0.9
	1.3nm,0.8s,baz=147,slow=5.7,SNR=4.8						
HWUT	**Hardware Ranch**	**56.69**	**329**	*e*P	**P**	**11 53 04.1**	**+0.2**
	2.8nm,0.6s,mb4.5						
HWUT				*e*PcP	PcP	11 53 58.5	-0.1
BGU	**Big Grassy Mou**	**56.97**	**328**	*e*P	**P**	**11 53 05.5**	**-0.3**
	7.2nm,1.2s,mb4.6						
LOHW	**Long Hollow**	**57.70**	**331**	*e*P	**P**	**11 53 10.5**	**-0.4**
	2.5nm,1.0s,mb4.2						
RRI2	**Red Ridge**	**57.85**	**331**	*e*P	**P**	**11 53 11.9**	**0.0**
	5.1nm,0.8s,mb4.6						
RRI2				*e*pP	pP	11 53 41.7	+0.6
M13A	**Montello**	**57.88**	**327**	*e*P	**P**	**11 53 11.7**	**-0.6**
	2.1nm,0.6s,mb4.3						
M13A				*e*PcP	PcP	11 54 03.3	0.0
ULM	**Lac du Bonnet**	**57.94**	**346**	P	**P**	**11 53 10.7**	**-1.8**
	2.9nm,0.7s,mb4.4,baz=166,slow=9.3,SNR=7.4						
ULM				pP	pP	11 53 39.7	-1.9
	8.2nm,0.8s,baz=154,slow=7.0,SNR=11						
ULM	**Lac du Bonnet**	**57.94**	**346**	P	**P**	**11 53 10.7**	**-1.8**
ULM				pP	pP	11 53 39.7	-1.9
NVAR	**Mina Array Bea**	**58.33**	**322**	P	**P**	**11 53 15.7**	**+0.3**
	2.2nm,0.6s,mb4.3,baz=123,slow=7.3,SNR=18						
MCMT	**McKenzie Canyo**	**59.69**	**331**	*e*P	**P**	**11 53 25.7**	**+1.1**
	1.0nm,0.9s,mb3.9						
BOZ	**Bozeman (W)**	**59.71**	**332**	*e*P	**P**	**11 53 24.6**	**-0.3**
	4.7nm,1.1s,mb4.4						
SCHQ	**Schefferville**	**60.62**	**6**	P	**P**	**11 53 29.9**	**-0.8**
	1.2nm,0.5s,mb4.2,baz=203,slow=7.8,SNR=3.6						
SCHQ				pP	pP	11 53 57.1	-3.0
	2.7nm,0.6s,baz=244,slow=4.0,SNR=4.7						
SCHQ				LR	LR	12 19 36.9	
	comp=Z,22nm,20.8s,baz=134,slow=36						
MSO	**Missoula**	**61.67**	**332**	*e*P	**P**	**11 53 38.2**	**+0.1**
	5.9nm,1.1s,mb4.5						
YBH	**Yreka Blue Hor**	**63.02**	**323**	P	**P**	**11 53 45.7**	**-1.4**
	1.6nm,0.8s,mb4.0,baz=74,slow=4.3,SNR=7.3						
DBIC	**Dimbokro**	**72.59**	**81**	P	**P**	**11 54 47.9**	**+0.2**
	2.8nm,0.7s,mb4.2,baz=160,slow=8.6,SNR=4.9						
DBIC				pP	pP	11 55 17.3	-0.7
	6.0nm,0.6s,baz=240,slow=4.7,SNR=4.5						
YKA	**Yellowknife Ar**	**73.72**	**343**	P	**P**	**11 54 52.5**	**-0.8**
	3.6nm,0.7s,mb4.2,baz=140,slow=6.2,SNR=53						
YKA				pP	pP	11 55 22.2	-1.5
	2.3nm,0.5s,baz=140,slow=5.7,SNR=9.7						
YKA	**Yellowknife Ar**	**73.72**	**343**	P	**P**	**11 54 52.5**	**-0.8**
YKA				pP	pP	11 55 22.2	-1.5
VNA3	**Neumayer Olymp**	**77.54**	**162**	*e*	**P**	**11 55 15.1**	**0.0**
VNA3				*e*		11 55 34.5	
VNA3				*e*	pP	11 55 41.5	-4.2
VNA1	**Neumayer--Stat**	**77.78**	**162**	*e*	**P**	**11 55 17.5**	**+1.1**
VNA2	**Neumayer--Watz**	**78.14**	**162**	*e*	**P**	**11 55 18.4**	**0.0**
VNA2				*e*		11 55 37.2	
VNA2				*e*	pP	11 55 45.1	-3.9
VNA2				*e*		11 55 59.2	
TORD	**Torodi Ar. Bea**	**79.88**	**76**	P	**P**	**11 55 28.7**	**-0.2**
	1.4nm,0.3s,mb4.2,baz=276,slow=5.8,SNR=48						
TORD				pP	pP	11 55 58.4	-1.3
	2.9nm,0.6s,baz=292,slow=6.1,SNR=7.0						
TORD	**Torodi Ar. Bea**	**79.88**	**76**	P	**P**	**11 55 28.7**	**-0.2**
TORD				pP	pP	11 55 58.4	-1.3
SUMG	**Summit**	**81.61**	**11**	*e*P	**P**	**11 55 37.6**	**+0.6**
	5.4nm,0.8s,mb4.4						
INK	**Inuvik**	**83.44**	**342**	*e*P	**P**	**11 55 46.0**	**-0.6**
	7.8nm,1.0s,mb4.5						
INK				*e*pP	pP	11 56 16.5	-1.1
SCO	**Scoresbysund**	**83.99**	**16**	*i* P	**P**	**11 55 50.3**	**+1.0**
	7.1nm,1.1s,mb4.4						
QSPA	**South Pole Qui**	**84.63**	**180**	*e*P	**P**	**11 55 52.7**	**+0.2**
	4.9nm,1.0s,mb4.4						
QSPA				*e*pP	pP	11 56 21.2	-2.3
MFF	**Saint Martin d**	**84.69**	**42**	*e*P	pP	11 56 24.5	+0.1
	12nm,0.8s						
LFF	**La Frestale**	**84.91**	**44**	*e*P	pP	11 56 25.6	0.0
	39nm,0.9s						
FLN	**La Foliniere**	**84.98**	**40**	*e*P	pP	11 56 26.0	+0.1
	16nm,0.9s						
LDF	**La Druitiere**	**85.17**	**40**	*e*P	pP	11 56 26.8	0.0
	17nm,1.1s						
RJF	**Les Rejaudoux**	**85.53**	**44**	*e*P	pP	11 56 28.5	-0.2
	18nm,0.9s						
CAF	**Calviac**	**85.83**	**44**	*e*P	pP	11 56 30.2	0.0
	7.3nm,0.7s						
KTH	**Kantishna Hill**	**87.95**	**334**	*e*P	**P**	**11 56 08.5**	**-0.4**
	8.9nm,0.9s,mb4.8						
KTH				*e*pP	pP	11 56 37.5	-2.7
RSO	**Redoubt South**	**87.95**	**331**	*e*P	**P**	**11 56 08.8**	**-0.1**
BPAW	**Bear Paw Mtn.**	**88.13**	**335**	*e*P	**P**	**11 56 08.8**	**-0.9**
	11nm,0.8s,mb5.0						
DAG	**Danmarks Havn**	**88.29**	**11**	*i* P	**P**	**11 56 10.0**	**-0.3**
PPLA	**Purkeypile**	**88.32**	**334**	*e*P	**P**	**11 56 10.1**	**-0.5**
	31nm,1.3s,mb5.2						
COLD	**Coldfoot**	**88.73**	**338**	*e*P	**P**	**11 56 13.2**	**+0.8**
	2.4nm,0.8s,mb4.3						
FRF	**La Foret Royal**	**88.83**	**46**	*e*P	pP	11 56 44.5	-0.3
	26nm,0.8s						
CABF	**La Chapelle**	**88.90**	**43**	*e*P	pP	11 56 44.8	-0.3
	8.1nm,0.8s						
LPG	**La Plagne**	**89.19**	**44**	*e*P	pP	11 56 47.1	+0.6
	16nm,1.1s						
CDF	**Champ du Feu**	**89.97**	**41**	*e*P	pP	11 56 49.6	-0.5
	8.5nm,0.8s						
ABKAR	**Akbulak array**	**123.00**	**33**	*e*PKPdf	PKPdf	12 02 15.3	+0.1
BVAR	**Borovoye Array**	**125.41**	**24**	PKP	PKPdf	12 02 19.3	-0.3
	1.1nm,0.6s,baz=253,slow=4.4,SNR=5.9						
STKA	**Stephens Creek**	**128.04**	**222**	PKP	PKPdf	12 02 23.8	-1.6
	1.2nm,0.7s,baz=20,slow=1.8,SNR=4.4						
ZAA0	**Zalesovo Array**	**129.34**	**14**	*e*PKPdf	PKPdf	12 02 26.5	-0.6
ZALV	**Zalesovo Beam**	**129.34**	**14**	PKP	PKPdf	12 02 26.7	-0.4
	4.3nm,0.7s,baz=299,slow=3.1,SNR=16						
ZALV	**Zalesovo Beam**	**129.34**	**14**	PKP	PKPdf	12 02 26.7	-0.4
MKAR	**Makanchi Array**	**134.96**	**20**	PKP	PKPdf	12 02 37.5	-0.5
	1.1nm,0.5s,baz=299,slow=3.0,SNR=12						
SONM	**Songino Array**	**137.70**	**357**	PKP	PKPdf	12 02 42.7	-0.3
	0.8nm,0.7s,baz=328,slow=1.1,SNR=4.3						
ASAR	**Alice Springs**	**138.50**	**225**	PKhKP		12 02 33.3	
	0.4nm,0.5s,baz=140,slow=3.1,SNR=9.5						
ASAR				PKP	PKPdf	12 02 43.6	-1.6
	1.1nm,0.8s,baz=122,slow=1.9,SNR=11						
ASAR	**Alice Springs**	**138.50**	**225**	PKP	PKPdf	12 02 43.6	-1.6
WRA	**Warramunga Arr**	**140.49**	**229**	PKhKP		12 02 41.3	
	1.0nm,0.7s,baz=128,slow=2.5,SNR=18						
KSRS	**Korea Array**	**141.09**	**328**	PKP	PKPdf	12 02 47.5	-2.0
	1.8nm,0.7s,baz=352,slow=1.2,SNR=6.2						
GTA	**Gaotai**	**146.04**	**5**	*e*PKPbc	PKPbc	12 02 58.9	-0.2
FITZ	**Fitzroy Crossi**	**147.93**	**223**	*e*PKPbc	PKPbc	12 03 03.9	-1.1
FITZ				*e*PKPab	PKPab	12 03 07.4	-0.5
MBWA	**Marble Bar**	**149.08**	**211**	*e*PKPdf	PKPdf	12 03 02.3	-1.4
MBWA				*e*PKPbc	PKPbc	12 03 06.1	-1.8
LZH	**Lanzhou**	**149.52**	**359**	*e*PKPbc	PKPbc	12 03 09.0	+0.4
LZH				AMB	AMB		
	comp=Z,79nm,4.5s						

MAN 10 11:58:39, 10°.94N×124°.69E, h0km, mb4.3, ML3.2, MS3.0, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.14**	**324**	*e*P	Pg	11 58 43.5	+1.8
OCLP				*e*S	Sg	11 58 47.8	+4.2
PLP	**Palo**	**0.36**	**51⇓**	*e*P	Pg	11 58 45.6	-0.3
PLP				*i* S	Sg	11 58 49.0	-1.6
LLP	**Lapu-Lapu**	**0.94**	**229⇓**	*e*P	Pg	11 58 57.5	+0.4
LLP				*e*S	Sg	11 59 11.8	+2.5
BESP	**Borongan**	**0.98**	**48**	*e*P	Pg	11 58 56.4	-1.6
TBP	**Tagbilaran**	**1.48**	**214**	*e*P	Pn	11 59 09.0	+2.1
TBP				*e*S	Sg	11 59 26.5	-0.2
CNP	**Catarman**	**1.57**	**359**	*e*P	Pn	11 59 08.0	-0.1
RCP	**Roxas**	**2.01**	**288⇓**	*e*P	Pn	11 59 15.2	+1.0
RCP				*e*S	Sn	11 59 40.9	+0.8

IDC 10 11:59:16.2±2.3, 4°.29N×94°.34E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/23, mbtmp3.5/6, ML4.0/1, Error ellipse: s-maj=87.4km s-min=22.6km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.79**	**17**	Pn	Pn	12 02 48.7	+2.0
	0.2nm,0.3s,baz=209,slow=9.9,SNR=5.8						
MKAR	**Makanchi Array**	**43.61**	**348**	P	P	12 07 21.5	-0.7
	0.4nm,0.4s,baz=169,slow=6.9,SNR=4.9						
SONM	**Songino Array**	**44.61**	**12**	P	P	12 07 29.8	-0.4
	0.2nm,0.4s,baz=193,slow=9.2,SNR=3.0						
WRA	**Warramunga Arr**	**46.09**	**123**	P	P	12 07 42.0	-0.4
	0.6nm,0.8s,baz=303,slow=9.2,SNR=5.6						
ASAR	**Alice Springs**	**47.53**	**128**	P	P	12 07 54.0	+0.4
	0.2nm,0.9s,baz=293,slow=8.0,SNR=4.5						
BVAR	**Borovoye Array**	**52.43**	**342**	P	P	12 08 31.1	+0.7
	0.9nm,0.6s,baz=120,slow=8.5,SNR=3.5						

*IDC **10** 12:12:30.8±5.5, 2°.85S×140°.86E, h22km±34km, mb4.0/9, mb1 4.2/10, mb1mx4.0/16, mbtmp4.1/10, ML4.8/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/19, Error ellipse: s-maj=28.8km s-min=13.3km az=-90.0*
*BJI **10** 12:12:31.4, 2°.80S×140°.60E, h35km, mB5.0/2, mb4.4/3, Ms7 4.5/1*
*NEIC **10** 12:12:33.5±0.7, 2°.83S×140°.61E, h35km, mb4.5/4, Error ellipse: s-maj=19.0km s-min=9.3km az=90.0*
NEIC Felt [IV] at Jayapura and [III] at Sentani.
*ISCJB **10** 12:12:35.6±1.5, 3°.00S±0°.04×140°.60E±0°.09, h75km±13km, mb4.1/11, Error ellipse: s-maj=15.7km s-min=7.3km az=175.5*
*DJA **10** 12:12:39, 3°.21S×140°.11E, h10km, mb4.7/3*
ISC 10 12:12:35.1±1.4, 2°.92S±0°.06×140°.70E±0°.09, h53km±13km, n34, σ1°26/35, mb4.2/12, MS3.5/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**2.19**	**295**	P	**Pn**	**12 13 09.3**	**+0.2**
SMPI				S	**Sn**	**12 13 35.8**	**+0.8**
COEN	**Coen**	**11.24**	**168**	*e*Pn	**Pn**	**12 15 13.8**	**+0.7**
KAKA	**Kakadu**	**12.71**	**220**	*e*Pn	**Pn**	**12 15 31.2**	**-2.0**
	56nm,0.5s						
KAKA				*e*S	**Sn**	**12 17 49.2**	**-4.0**
KAKA	**Kakadu**	**12.71**	**220**	P	**Pn**	**12 15 30.8**	**-2.4**
	44nm,0.5s,575nm						
KAKA				S	**Sn**	**12 17 51.0**	**-2.2**
	44nm,0.5s,575nm						
CTA	**Charters Tower**	**17.91**	**163**	LR	LR	12 23 22.5	
	comp=Z,136nm,18.7s,baz=243,slow=36						
WRAB	**Tennant Creek**	**18.01**	**200**	*e*Pn	**Pn**	**12 16 41.0**	**-0.8**
	9.4nm,0.5s						
WRAB				*e*S	**Sn**	**12 19 51.5**	**-10**
WRAB	**Tennant Creek**	**18.01**	**200**	P	**Pn**	**12 16 42.4**	**+0.6**
	18nm,0.7s						
WRAB				S	**S**	**12 20 09.4**	**+3.8**
	18nm,0.7s						
WB2	**Warramunga Arr**	**18.02**	**200**	*e*Pn	**Pn**	**12 16 41.3**	**-0.5**
WB2				*e*S	**Sn**	**12 19 54.8**	**-7.4**
WRA	**Warramunga Arr**	**18.02**	**200**	P	**Pn**	**12 16 42.6**	**+0.7**
	2.9nm,0.3s,baz=21,slow=12,SNR=87						
WRA				S	**Sn**	**12 19 54.9**	**-7.3**
	0.2nm,0.3s,baz=19,slow=23,SNR=5.9						
FITZ	**Fitzroy Crossi**	**21.11**	**223**	*e*P	**P**	**12 17 15.9**	**+0.4**
	15nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**21.11**	**223**	P	**P**	**12 17 16.1**	**+0.6**
	7.3nm,0.8s,mb4.0,baz=47,slow=7.5,SNR=10						
FITZ				S	**S**	**12 21 07.2**	**-0.3**
	4.2nm,0.7s,baz=208,slow=12,SNR=5.5						
FITZ				LR	LR	12 26 55.6	
	comp=Z,110nm,19.9s,MS3.2,baz=14,slow=41						
FITZ	**Fitzroy Crossi**	**21.11**	**223**	P	**P**	**12 17 18.5**	**+3.0**
FITZ				S	**S**	**12 21 10.2**	**+2.7**
ASAR	**Alice Springs**	**21.65**	**197**	P	**P**	**12 17 21.2**	**+0.1**
	2.5nm,0.6s,mb3.8,baz=26,slow=10,SNR=39						
ASAR				S	**S**	**12 21 21.9**	**+3.9**
	1.2nm,1.0s,baz=10.0,slow=27,SNR=4.4						
EIDS	**Eidsvold**	**24.46**	**157**	*e*P	**P**	**12 17 51.0**	**+1.8**
EIDS	**Eidsvold**	**24.46**	**157**	*e*P	**P**	**12 17 50.7**	**+1.5**
	32nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**28.82**	**178**	P	**P**	**12 18 26.1**	**-2.3**

TRF Thorofare Moun 17.48 38 *eP* **Pn 12 25 35.5 +0.7**
comp=Z,15nm,0.9s
BPAW Bear Paw Mtn. 17.58 35 *eP* **Pn 12 25 36.3 +0.3**
comp=Z,37nm,1.0s
MCK McKinley 18.14 38 *eP* **Pn 12 25 41.1 -1.8**
MCK pmax pmax
comp=Z,16nm,0.8s
MCK McKinley 18.14 38 *eP* **Pn 12 25 41.1 -1.9**
comp=Z,16nm,0.8s
DIV Divide 18.40 47 P **Pn 12 25 45.7 -0.3**
BMRM Bremner River 18.89 48 *eP* **Pn 12 25 49.3 -2.7**
comp=Z,25nm,1.2s
BILL Bilibino 19.07 338 ⇓*i*P **Pn 12 25 53.9 -0.1**
BILL pmax pmax
comp=Z,13nm,0.8s
BILL MLR MLR
comp=Z,200nm,18.0s
BILL Bilibino 19.07 338 *eP* **Pn 12 25 53.6 -0.5**
comp=Z,55nm,1.2s
COLA College 19.14 36 *eP* **Pn 12 25 53.3 -1.6**
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLA College 19.14 36 *eP* **Pn 12 25 53.3 -1.6**
comp=Z,9.5nm,0.8s
COLD Coldfoot 19.77 28 *eP* **Pn 12 26 00.9 -1.5**
comp=Z,20nm,0.9s
MENT Mentasta 19.92 43 *eP* **Pn 12 26 04.3 +0.1**
SEY Seymchan 21.04 316 *eP* **P 12 26 14.1 -0.2**
EGAK Eagle 21.65 40 *eP* **P 12 26 19.7 -1.2**
comp=Z,66nm,0.8s,mb4.1
DAWY Dawson 22.13 42 *eP* **P 12 26 24.7 -1.2**
SKAG Skagway 23.20 55 *eP* **P 12 26 37.6 +0.3**
SIT Sitka 23.21 61 *eP* **P 12 26 36.9 -0.5**
INK Inuvik 25.78 34 P **P 12 26 57.8 -2.9**
INK 12 30 28.6
INK Inuvik 25.78 34 P **P 12 26 57.8 -2.9**
comp=Z,2.5nm,0.7s,mb3.9,baz=257,slow=9.0,SNR=17
INK PcP PcP 12 30 28.6 -0.4
comp=Z,0.9nm,0.7s,baz=288,slow=3.2,SNR=4.3
INK LR LR 12 38 17.7
comp=Z,174nm,18.3s,MS3.6,baz=241,slow=39
DLBC Dease Lake 25.96 57 P **P 12 27 02.2 -0.3**
comp=Z,5.9nm,0.8s,mb4.2,baz=296,slow=12,SNR=12
YSS Yuzh-Sakhalins 28.06 278 *eP* **P 12 27 17.5 -3.9**
BBB Bella Bella 28.21 70 LR LR 12 36 02.7
comp=Z,83nm,19.4s,MS3.3,baz=255,slow=31
ASAJ Asahikawa 29.48 273 P **P 12 27 34.4 +0.4**
ASAJ pmax pmax
comp=Z,5.0nm,0.8s
ASAJ MLR MLR
comp=Z,61nm,18.8s
ASAJ Asahikawa 29.48 273 P **P 12 27 34.4 +0.3**
comp=Z,5.4nm,0.8s,mb4.3,baz=248,slow=11,SNR=4.3
ASAJ LR LR 12 40 32.7
comp=Z,61nm,18.8s,MS3.2,baz=357,slow=39
ERM Erimo 30.22 269 ⇑*i*P **P 12 27 41.7 +1.1**
TIXI Tiksi 31.90 330 P pP 12 28 10.3 +2.5
HABR Khabarovsk 32.13 285 *eP* **P 12 27 56.0 -1.4**
HABR *e**PP pP 12 28 10.1 0.0
HABR *e* 12 29 03.1
HABR *e* 12 30 43.8
HABR S **S 12 33 05.0 -1.2**
HABR *e*SS SS 12 35 01.4 -24
HABR *e* 12 38 20.8
HABR pmax pmax
comp=Z,14nm,0.8s,mb4.8
HABR pmax pmax
comp=E,12nm,0.9s
HABR pmax pmax
comp=N,9.0nm,0.9s
HABR MLR MLR
comp=Z,59nm,18.0s,MS3.3
YKA Yellowknife Ar 33.12 47 P **P 12 28 04.5 -1.3**
YKA 12 30 47.4
YKA Yellowknife Ar 33.12 47 P **P 12 28 04.4 -1.4**
comp=Z,0.2nm,0.4s,mb3.4,baz=283,slow=7.4,SNR=7.1
YKA PcP PcP 12 30 47.4 -0.4
comp=Z,0.8nm,0.7s,baz=286,slow=2.9,SNR=8.3
YKA LR LR 12 43 23.5
comp=Z,26nm,18.8s,MS3.0,baz=125,slow=40
KLR Kul'dur 33.80 288 *eP* **P 12 28 06.7 -5.2**
RSW Rattlesnake Hi 35.62 76 *eP* **P 12 28 29.1 +1.5**
comp=Z,7.2nm,0.7s,mb4.7
HAWA Hanford 35.65 76 *eP* **P 12 28 29.5 +1.6**
comp=Z,9.1nm,0.8s,mb4.8
YBH Yreka Blue Hor 36.11 85 P **P 12 28 31.8 -0.1**
comp=Z,0.6nm,0.7s,mb3.6,baz=270,slow=8.1,SNR=4.2
NEW Newport 36.22 72 *eP* **P 12 28 32.8 0.0**
NEW pmax pmax
comp=Z,7.0nm,0.7s
NEW Newport 36.22 72 *eP* **P 12 28 32.8 0.0**
comp=Z,7.2nm,0.7s,mb4.7
EDM Edmonton 36.31 63 *eP* **P 12 28 33.8 +0.4**
MJAR Matsushiro Arr 36.55 265 P **P 12 28 35.8 +0.1**
comp=Z,0.4nm,0.8s,mb3.3,baz=177,slow=4.9,SNR=3.7
MDJ Mudanjiang 37.27 282 P **P 12 28 39.4 -2.3**
MDJ PP PP 12 30 04.3 -2.9
MDJ S **S 12 34 32.1 +6.7**
MDJ pmax pmax
comp=Z,12nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,83nm,5.5s
MDJ LR LR
comp=N,38nm,20.3s,MS3.6
MDJ LR LR
comp=E,99nm,19.4s,MS3.6
MDJ LR LR
comp=Z,110nm,19.4s,MS3.7
MOD Modoc 37.51 83 *eP* **P 12 28 45.0 +1.2**
comp=Z,3.0nm,0.8s,mb4.1
BSMT Bassoo Peak 37.80 71 *eP* **P 12 28 47.0 +0.9**
comp=Z,5.0nm,0.7s,mb4.3
JTMT Jette 38.15 71 P **P 12 28 49.0 -0.1**
comp=Z,4.0nm,0.9s,mb4.2
WVOR Wild Horse Val 38.25 81 *eP* **P 12 28 49.4 -0.6**
WVOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
WVOR Wild Horse Val 38.25 81 *eP* **P 12 28 49.4 -0.6**
comp=Z,3.2nm,0.7s,mb4.2
YBMT Yellow Bay 38.25 71 *eP* **P 12 28 50.5 +0.6**
comp=Z,3.0nm,0.6s,mb4.2
SWMT Swartz Lake 38.43 71 P **P 12 28 54.2 +2.7**
comp=Z,2.3nm,0.8s,mb4.0
RES Resolute Bay 38.46 25 P **P 12 28 50.0 -1.5**
comp=Z,0.5nm,0.5s,mb3.5,baz=246,slow=12,SNR=6.6
RES PcP PcP 12 31 03.7 +0.3
comp=Z,1.8nm,0.7s,baz=356,slow=0.9,SNR=6.6
RES Resolute Bay 38.46 25 *eP* **P 12 28 51.9 +0.4**
RES PcP PcP 12 31 03.7 +0.3
MSO Missoula 38.80 72 *eP* **P 12 28 55.4 +0.8**
comp=Z,9.0nm,1.2s,mb4.4
SLMT Seeley Lake 38.86 72 *eP* **P 12 28 55.6 +0.6**
comp=Z,18nm,1.4s,mb4.6
CHMT Chamberlain Mo 39.17 72 *eP* **P 12 28 57.4 -0.2**
comp=Z,2.4nm,0.6s,mb4.1
BOD Bodaibo 40.10 308 *eP* **P 12 29 01.6 -3.7**
BOD pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
HRY Holter Researc 40.11 71 *eP* **P 12 29 05.5 0.0**
comp=Z,1.9nm,0.6s,mb4.0
HLID Hailey 40.22 77 *eP* **P 12 29 07.3 +0.9**
comp=Z,4.7nm,1.1s,mb4.1
CN2 Changchun 40.23 283 *eP* **P 12 29 01.2 -5.3**
MCMT McKenzie Canyo 40.49 74 *eP* **P 12 29 08.7 +0.1**
comp=Z,3.3nm,0.6s,mb4.2
EGMT Eagleton 40.67 69 *eP* **P 12 29 10.3 +0.2**
comp=Z,8.6nm,0.6s,mb4.6
NVAR Mina Array Bea 40.78 86 P **P 12 29 09.9 -1.3**
comp=Z,0.8nm,0.8s,mb3.4,baz=290,slow=8.4,SNR=5.5
NVAR Mina Array Bea 40.78 86 P **P 12 29 09.8 -1.3**
FFC Flin Flon 41.79 56 *eP* **P 12 29 18.8 -0.4**
FFC pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
FFC Flin Flon 41.79 56 *eP* **P 12 29 18.8 -0.4**
comp=Z,6.7nm,0.8s,mb4.3
IMW Indian Meadow 42.14 75 *eP* **P 12 29 23.7 +1.5**
comp=Z,5.9nm,1.1s,mb4.1
RRI2 Red Ridge 42.22 75 *eP* **P 12 29 24.6 +1.8**
comp=Z,6.3nm,0.8s,mb4.3
KSRS Korea Array 42.40 274 P **P 12 29 23.7 -0.7**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,33nm,18.3s,MS3.3
KSRS Korea Array 42.40 274 P **P 12 29 23.7 -0.7**
comp=Z,3.1nm,0.9s,mb3.9,baz=63,slow=8.3,SNR=8.5
KSRS LR LR 12 46 31.7
comp=Z,33nm,18.3s,MS3.3,baz=50,slow=35
RLMT Red Lodge 42.47 72 *eP* **P 12 29 26.3 +1.4**
comp=Z,20nm,1.2s,mb4.6
SNY Shenyang 42.47 282 ⇑P **P 12 29 24.5 -0.4**
SNY pmax pmax
comp=Z,30nm,1.1s,mb4.8
SNY LR LR
comp=N,230nm,18.6s,MS4.2
SNY LR LR
comp=E,160nm,19.2s,MS4.2
SNY LR LR
comp=Z,180nm,17.4s,MS4.0
DUG Dugway 43.12 80 *eP* **P 12 29 30.2 0.0**
DUG pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
DUG Dugway 43.12 80 *eP* **P 12 29 30.2 -0.1**
comp=Z,6.8nm,1.1s,mb4.3
PDAR Pinedale Array 43.61 75 P **P 12 29 33.4 -0.8**
comp=Z,2.0nm,0.7s,mb4.0,baz=316,slow=6.2,SNR=13
DAU Daniels Canyon 43.95 79 *eP* **P 12 29 38.3 +1.4**
DAU pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
DAU Daniels Canyon 43.95 79 *eP* **P 12 29 38.3 +1.5**
comp=Z,9.3nm,0.9s,mb4.5
MSU Marysvale 44.53 82 *eP* **P 12 29 42.2 +0.6**
MSU pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
MSU Marysvale 44.53 82 *eP* **P 12 29 42.2 +0.6**
comp=Z,3.0nm,0.9s,mb4.1
ULM Lac du Bonnet 47.27 59 P **P 12 30 01.1 -1.8**
comp=Z,2.6nm,0.5s,mb4.4,baz=305,slow=7.4,SNR=8.4
ULM LR LR 12 49 12.9
comp=Z,84nm,19.1s,MS3.7,baz=354,slow=35
BJI Beijing 48.04 285 P **P 12 29 58.6 -10**
BJI S **S 12 36 59.8 -3.7**
BJI pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BJI pmax pmax
comp=Z,97nm,6.3s
BJI LR LR
comp=N,160nm,24.9s,MS4.0
BJI LR LR
comp=E,120nm,23.8s,MS4.0
BJI LR LR
comp=Z,120nm,23.0s,MS3.8
TLY Talaya 48.30 304 *eP* **P 12 30 11.3 +0.4**
TLY pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,81nm,16.0s,MS3.8
AGMN Agassiz Refuge 48.37 61 *eP* **P 12 30 10.8 -0.7**
comp=Z,4.3nm,0.4s,mb4.8
ULN Ulaanbaatar 48.66 298 *eP* **P 12 30 13.4 -0.3**
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ULN Ulaanbaatar 48.66 298 *eP* **P 12 30 13.4 -0.3**
comp=Z,4.3nm,0.9s,mb4.5
SONM Songino Array 49.04 299 P **P 12 30 16.2 -0.4**
comp=Z,3.1nm,0.9s,mb4.3,baz=50,slow=8.9,SNR=12
SONM LR LR 12 52 29.1
comp=Z,106nm,18.5s,MS3.9,baz=329,slow=38
ZAK Zakamensk 49.23 303 ⇑*i*P **P 12 30 18.1 +0.1**
ZAK *e* 12 31 40.2
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
MOY Mondy 49.67 306 *eP* **P 12 30 21.5 +0.1**
ECSD EROS Data Cent 50.66 66 *eP* **P 12 30 28.4 -0.6**
comp=Z,4.9nm,0.7s,mb4.5
EYMN Ely 50.95 59 *eP* **P 12 30 30.6 -0.5**
comp=Z,8.4nm,0.9s,mb4.7
NJ2 Nanjing 51.57 275 *eP* **P 12 30 32.1 -3.9**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
TXAR Lajitas Array 55.89 85 P **P 12 31 06.8 -0.7**
comp=Z,0.6nm,0.7s,mb3.7,baz=297,slow=4.6,SNR=8.5
TXAR Lajitas Array 55.89 85 P **P 12 31 06.8 -0.7**
XAN Xi'an 56.34 284 P **P 12 31 04.9 -5.8**
XAN pP pP 12 31 18.7 -5.6
XAN sP sP 12 31 24.7 -5.2
XAN PP PP 12 33 10.8 -5.5
XAN S **S 12 38 52.3 -5.0**
XAN sS sS 12 39 16.0 -4.0
XAN SS SS 12 42 41.2 -3.1
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
XAN pmax pmax
comp=Z,14nm,4.5s
LZH Lanzhou 57.98 289 *eP* **P 12 31 18.2 -4.1**
LZH pP pP 12 31 34.5 -1.4
LZH *e*PP PP 12 33 29.5 -1.3
LZH pmax pmax
comp=Z,18nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,87nm,4.5s
LZH LR LR
comp=E,400nm,16.2s
LZH LR LR
comp=Z,520nm,18.0s,MS4.7
KEV Kevo 58.04 351 *eP* **P 12 31 21.3 -0.9**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 58.04 351 *ep* **P 12 31 21.3 -0.9**
comp=Z,1.2nm,0.4s,mb4.3
GTA Gaotai 58.06 294 *eP* **P 12 31 23.0 +0.2**
GTA pP pP 12 31 39.0 +2.6
GTA sP sP 12 31 46.0 +4.0
GTA PP PP 12 33 32.7 +1.3
GTA S **S 12 39 14.5 -5.4**
GTA sS sS 12 39 42.1 -0.6
GTA SS SS 12 43 07.2 -3.9
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
GTA pmax pmax
comp=Z,29nm,5.1s
GTA LR LR
comp=N,170nm,16.4s,MS4.4
GTA LR LR
comp=E,140nm,15.5s,MS4.4
GTA LR LR
comp=Z,100nm,17.3s,MS4.0
SCHQ Schefferville 58.14 41 P **P 12 31 21.6 -1.5**
comp=Z,3.7nm,0.8s,mb4.5,baz=329,slow=8.8,SNR=6.4
SCHQ LR LR 12 58 52.6
comp=Z,102nm,20.2s,MS3.9,baz=139,slow=39
ARCES ARCESS Array B 58.39 352 P **P 12 31 22.9 -1.7**
ARCES 12 32 13.3
ARCES ARCESS Array B 58.39 352 P **P 12 31 22.9 -1.8**
comp=Z,6.0nm,0.8s,mb4.7,baz=20,slow=8.2,SNR=7.1
ARCES PcP PcP 12 32 13.3 -1.6
comp=Z,6.6nm,0.8s,baz=43,slow=4.1,SNR=5.7
ARCES LR LR 12 57 29.3
comp=Z,125nm,18.4s,MS4.1,baz=48,slow=37
MIAR Mount Ida 58.45 73 *eP* **P 12 31 25.7 +0.1**
MIAR pmax pmax
comp=Z,15nm,1.0s,mb5.0
MIAR Mount Ida 58.45 73 *eP* **P 12 31 25.7 +0.1**
comp=Z,15nm,1.0s,mb5.0
KURK Kurchatov 60.89 316 *ceP* **P 12 31 41.4 -0.7**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
PLAL Pickwick Lake 61.40 69 *eP* **P 12 31 44.3 -1.5**
comp=Z,7.4nm,0.7s,mb4.9
MK31 Makanchi Array 62.08 311 *eP* **P 12 31 49.1 -1.1**
MKAR Makanchi Array 62.08 311 P **P 12 31 49.0 -1.2**
comp=Z,1.4nm,0.5s,mb4.3,baz=54,slow=6.2,SNR=12
BVAR Borovoye Array 62.53 322 P **P 12 31 52.8 -0.3**
comp=Z,3.3nm,0.5s,mb4.7,baz=50,slow=6.1,SNR=17
BVAR PcP PcP 12 32 32.3 +0.4
comp=Z,5.8nm,0.6s,baz=60,slow=3.6,SNR=12
BRVK Borovoye 62.55 322 *d i*P **P 12 31 53.6 +0.4**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GYA Guiyang 63.05 279 *eP* **P 12 31 51.8 -5.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 63.90 330 P **P 12 32 02.7 +0.6**
JOF Joensuu 64.12 347 *eP* **P 12 32 01.4 -2.1**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 64.12 347 *ep* **P 12 32 01.4 -2.1**
comp=Z,2.6nm,0.6s,mb4.4
AFI Afiamalu 65.19 177 LR LR 12 54 38.7
comp=Z,47nm,20.2s,MS3.7,baz=8.5,slow=30
KAF Kangasniemi 65.53 349 *eP* **P 12 32 10.4 -2.2**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KAF Kangasniemi 65.53 349 *ep* **P 12 32 10.4 -2.2**
comp=Z,4.2nm,0.7s,mb4.6
FINES FINESS Array B 66.21 349 P **P 12 32 15.6 -1.5**
comp=Z,2.4nm,0.8s,mb4.3,baz=40,slow=6.2,SNR=9.6
FINES PcP PcP 12 32 47.0 +0.2
comp=Z,2.1nm,0.6s,baz=42,slow=4.6,SNR=7.5
KMI Kunming 66.44 281 P **P 12 32 13.8 -5.2**
KMI pP pP 12 32 28.9 -4.0
KMI sP sP 12 32 35.8 -2.7
KMI PP PP 12 34 43.0 -2.5
KMI S S 12 40 58.8 -6.8
KMI sS sS 12 41 24.9 -3.9
KMI SS SS 12 45 16.8 -5.7
KMI pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,91nm,3.2s
KMI LR LR
comp=N,130nm,15.1s,MS4.5
KMI LR LR
comp=E,140nm,11.6s,MS4.5
KMI LR LR
comp=Z,140nm,14.2s,MS4.3
KMI Kunming 66.44 281 P **P 12 32 23.8 +4.8**
KMI pP pP 12 32 31.2 -1.7
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
NOA NORSAR Array B 67.71 357 P **P 12 32 25.5 -1.0**
comp=Z,4.6nm,0.9s,mb4.5,baz=1.9,slow=6.3,SNR=16
NOA LR LR 13 02 15.4
comp=Z,31nm,18.0s,MS3.6,baz=245,slow=36
AAK Ala-Archa 68.86 312 *ceP* **P 12 32 34.7 +0.6**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
AAK Ala-Archa 68.86 312 *eP* **P 12 32 34.4 +0.4**
comp=Z,2.6nm,0.6s,mb4.3
VSU Vasula 69.04 348 *c i*P **P 12 32 34.0 -0.9**
VSU pmax pmax
comp=Z,15nm,0.9s,mb4.9
EKS2 Erkin-Say 69.17 313 *eP* **P 12 32 36.8 +0.8**
EKS2 *e**PP pP 12 32 49.8 -0.1
EKS2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
EKS2 Erkin-Say 69.17 313 *eP* **P 12 32 36.8 +0.9**
comp=Z,3.3nm,0.7s,mb4.4
EKS2 *e*pP pP 12 32 49.8 -0.1
ABKAR Akbulak array 69.45 325 *eP* **P 12 32 37.2 -0.4**
comp=Z,3.9nm,0.8s,mb4.4
AML Almayashu 69.63 313 *eP* **P 12 32 40.3 +1.5**
AML pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
AML Almayashu 69.63 313 *eP* **P 12 32 40.3 +1.5**
comp=Z,3.1nm,0.6s,mb4.4
LSA Lhasa 69.98 293 P **P 12 32 43.1 +1.9**
LSA Lhasa 69.98 293 *eP* **P 12 32 43.4 +2.2**
LSA pmax pmax
comp=Z,19nm,0.8s,mb5.1
LSA Lhasa 69.98 293 *eP* **P 12 32 43.4 +2.2**
comp=Z,19nm,0.8s,mb5.1
SHL Shillong 72.65 289 *eP* **P 12 32 56.8 -0.5**
TAPN Taplejung 73.73 293 *eP* **P 12 33 04.6 +0.9**
CMAR Chiang Mai Arr 73.74 279 P **P 12 33 03.8 -0.1**
comp=Z,2.5nm,0.8s,mb4.2,baz=25,slow=6.8,SNR=10
VSR Storozhevoye 73.78 339 *eP* **P 12 33 02.8 -0.8**
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.3s
GUN Gumba 74.34 295 *eP* **P 12 33 08.1 +0.8**
comp=E,79nm,0.8s,mb5.7
RAMN Ramite 74.67 294 *eP* **P 12 33 09.8 +0.6**
KKN Kakani 74.78 295 *eP* **P 12 33 10.5 +0.7**
comp=E,33nm,0.9s,mb5.3
BSEG Bad Segeberg 74.85 357 *eP* **P 12 33 10.4 +0.7**
comp=Z,15nm,0.8s,mb5.0
PKI Pulchoki 74.87 295 *eP* **P 12 33 10.8 +0.5**
comp=Z,41nm,0.9s,mb5.3
PKIN Phulchoki 74.87 295 *eP* **P 12 33 10.7 +0.4**
comp=Z,11nm,0.6s,mb5.0
PKIN Phulchoki 74.87 295 *eP* **P 12 33 10.8 +0.5**
comp=Z,31nm,0.8s,mb5.3
DMN Daman 75.01 295 *eP* **P 12 33 12.0 +0.9**
comp=Z,37nm,0.9s,mb5.3
AKASG Malin Array Be 76.21 345 *ceP* **P 12 33 16.5 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 76.21 345 P **P 12 33 16.0 -1.6**
comp=Z,1.5nm,0.5s,mb4.2,baz=16,slow=5.3,SNR=7.9
AKASG LR LR 13 09 30.1
comp=Z,89nm,19.0s,MS4.1,baz=25,slow=38
NRDL Niedersach Rie 76.30 357 *eP* **P 12 33 17.9 -0.1**
comp=Z,6.0nm,0.9s,mb4.5
IBBN Ibbenburen 76.54 359 *eP* **P 12 33 19.7 +0.3**
comp=Z,19nm,0.8s,mb5.1
CLZ Clausthal 76.94 357 *eP* **P 12 33 22.1 +0.4**
comp=Z,13nm,0.9s,mb4.9
CLZ Clausthal 76.94 357 *eP* **P 12 33 22.1 +0.4**
CLZ pmax pmax
comp=Z,13nm,0.9s,mb4.9
CLL Collm 77.36 355 *eP* **P 12 33 23.6 -0.5**
comp=Z,7.0nm,0.8s,mb4.6
CLL Collm 77.36 355 *i* P **P 12 33 23.6 -0.5**
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 77.36 355 *i* P **P 12 33 23.6 -0.5**
comp=Z,8.0nm,0.8s,mb4.7
CLL *e*(sP) sP 12 33 44.0 +0.3
CLL Collm 77.36 355 *i* P **P 12 33 23.6 -0.5**
comp=Z,8.0nm,0.8s,mb4.7
CLL *e*(sP) sP 12 33 44.0 +0.3
BRG Berggiesshubel 77.75 355 *eP* **P 12 33 26.0 -0.2**
comp=Z,7.0nm,1.0s,mb4.5
BRG Berggiesshubel 77.75 355 *eP* **P 12 33 26.0 -0.2**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MOX Moxa 78.09 356 *eP* **P 12 33 28.3 +0.2**
comp=Z,9.0nm,1.0s,mb4.7
DPC Dobruska-Polom 78.11 353 *eP* **P 12 33 27.9 -0.3**
DPC *e*pP pP 12 33 41.8 -0.6
KWP Kalwaria Pacla 78.19 349 ⇑⇑P **P 12 33 29.1 +0.4**
KWP Kalwaria Pacla 78.19 349 ⇑*i*P **P 12 33 29.1 +0.4**
NKC Novy Kostel 78.46 356 *eP* **P 12 33 30.7 +0.5**
NKC *e*pP pP 12 33 43.3 -1.1
TNS Taunus Mts 78.61 358 *eP* **P 12 33 31.1 +0.1**
comp=Z,20nm,0.9s,mb5.0
TNS Taunus Mts 78.61 358 *eP* **P 12 33 31.1 +0.1**
TNS pmax pmax
comp=Z,20nm,0.9s,mb5.0
GIVF Givet 78.76 1 *eP* **P 12 33 31.9 +0.1**
GIVF Givet 78.76 1 *eP* **P 12 33 31.9 +0.1**
GIVF Givet 78.76 1 *eP* **P 12 33 31.9 +0.1**
BAIF Baives 78.80 1 *eP* **P 12 33 32.3 +0.3**
comp=Z,18nm,0.9s,mb4.7
BAIF Baives 78.80 1 *eP* **P 12 33 32.3 +0.3**
BAIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BAIF Baives 78.80 1 *eP* **P 12 33 32.3 +0.3**
comp=Z,8.8nm,0.9s,mb4.7
GRA1 Grafenberg Arr 79.06 356 *eP* **P 12 33 34.0 +0.5**
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 79.06 356 *eP* **P 12 33 34.0 +0.5**
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 79.06 356 *eP* **P 12 33 34.0 +0.5**
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 79.06 356 *eP* **P 12 33 34.0 +0.5**
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.0
VRAC Vranov 79.12 353 ⇓⇓P **P 12 33 33.1 -0.7**
VRAC Vranov 79.12 353 ⇓⇓*i*P **P 12 33 33.1 -0.7**
WLF Walferdange 79.20 360 *eP* **P 12 33 35.3 +1.1**
comp=Z,12nm,0.8s,mb4.9
KHC Kasperske Hory 79.50 355 *eP* **P 12 33 36.4 +0.5**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KHC Kasperske Hory 79.50 355 *eP* **P 12 33 36.4 +0.5**
comp=Z,3.1nm,0.8s,mb4.3
KHC Kasperske Hory 79.50 355 *eP* **P 12 33 36.2 +0.3**
KHC *e*pP pP 12 33 49.0 -1.1
GEC2 GERESS Array S 79.78 355 *eP* **P 12 33 37.4 0.0**
comp=Z,4.0nm,0.9s,mb4.3
GEC2 GERESS Array S 79.78 355 *eP* **P 12 33 37.4 0.0**
GEC2 pmax pmax

comp=Z,4.0nm,0.9s,mb4.3
GERES **GERESS Array B 79.78 355** P **P 12 33 37.4 0.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=29,slow=6.4,SNR=10.0
BUR08 **Bucovina Ar. S 79.80 347** *e*P **P 12 33 37.5 -0.1**
FLN **La Foliniere 79.97 4** *e*P **P 12 33 38.2 -0.2**
comp=Z,15nm,0.9s,mb4.6
FLN **La Foliniere 79.97 4** *e*P **P 12 33 38.2 -0.2**
FLN pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
FLN **La Foliniere 79.97 4** *e*P **P 12 33 38.2 -0.2**
comp=Z,7.6nm,0.9s,mb4.6
STU **Stuttgart 80.05 358** *e*P **P 12 33 39.1 +0.2**
comp=Z,11nm,0.7s,mb4.9
LDF **La Druitiere 80.15 4** *e*P **P 12 33 39.0 -0.4**
comp=Z,25nm,0.9s,mb4.8
LDF **La Druitiere 80.15 4** *e*P **P 12 33 39.0 -0.4**
LDF pmax pmax
comp=Z,12nm,0.9s,mb4.8
LDF **La Druitiere 80.15 4** *e*P **P 12 33 39.0 -0.4**
comp=Z,12nm,0.9s,mb4.8
ROSF **Rostrenen 80.24 6** *e*P **P 12 33 39.7 -0.2**
ROSF **Rostrenen 80.24 6** *e*P **P 12 33 39.7 -0.2**
ROSF **Rostrenen 80.24 6** *e*P **P 12 33 39.7 -0.2**
GRR **Gorron 80.32 4** *e*P **P 12 33 40.2 -0.1**
comp=Z,31nm,1.0s,mb4.9
GRR **Gorron 80.32 4** *e*P **P 12 33 40.2 -0.1**
GRR pmax pmax
comp=Z,15nm,1.0s,mb4.9
GRR **Gorron 80.32 4** *e*P **P 12 33 40.2 -0.1**
comp=Z,15nm,1.0s,mb4.9
MEZF **Maizieres J'vi 80.36 0** *e*P **P 12 33 40.9 +0.3**
comp=Z,25nm,1.0s,mb4.8
SGMF **Saint Gilles 80.36 6** *e*P **P 12 33 40.5 -0.1**
SGMF **Saint Gilles 80.36 6** *e*P **P 12 33 40.5 -0.1**
SGMF **Saint Gilles 80.36 6** *e*P **P 12 33 40.5 -0.1**
CDF **Champ du Feu 80.44 359** *e*P **P 12 33 41.1 +0.1**
comp=Z,16nm,0.8s,mb4.7
HAU **Haudompre 80.86 360** *e*P **P 12 33 43.3 +0.1**
comp=Z,24nm,0.9s,mb4.8
RJOB **Jochberg 80.94 355** *e*P **P 12 33 43.6 -0.1**
comp=Z,4.0nm,0.9s,mb4.3
HINF **Hinteralfeld 81.04 359** *e*P **P 12 33 44.1 -0.1**
comp=Z,9.7nm,0.7s,mb4.5
KBA **Koelnbreinsper 81.56 355**⇓*i*P **P 12 33 47.7 +0.7**
comp=Z,14nm,1.1s,mb4.8
LOR **Lormes 81.58 1** *e*P **P 12 33 47.2 +0.1**
comp=Z,23nm,0.9s,mb4.8
LOR **Lormes 81.58 1** *e*P **P 12 33 47.2 +0.1**
LOR pmax pmax
comp=Z,11nm,0.9s,mb4.8
LOR **Lormes 81.58 1** *e*P **P 12 33 47.2 +0.1**
comp=Z,11nm,0.9s,mb4.8
FETA **Feichten 81.75 356**⇑*i*P **P 12 33 49.1 +1.1**
comp=Z,4.3nm,0.8s,mb4.4
SSF **Saint Saulge 81.79 1**⇑*i*P **P 12 33 48.4 +0.2**
comp=Z,21nm,0.8s,mb4.8
SSF **Saint Saulge 81.79 1**⇑*i*P **P 12 33 48.4 +0.2**
SSF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SSF **Saint Saulge 81.79 1**⇑*i*P **P 12 33 48.4 +0.2**
comp=Z,10nm,0.8s,mb4.8
MLR **Muntele Rosu 81.80 346**⇑P **P 12 33 50.1 +1.9**
MLR **Muntele Rosu 81.80 346**⇑*i*P **P 12 33 50.1 +1.9**
SOKA **Soboth 81.85 353**⇑*i*P **P 12 33 48.4 -0.1**
comp=Z,7.2nm,1.0s,mb4.5
VOIR **81.98 346**⇑P **P 12 33 51.5 +2.3**
VOIR **81.98 346**⇑*i*P **P 12 33 51.5 +2.3**
AVF **Avril sur Loir 82.06 2**⇑*i*P **P 12 33 49.6 0.0**
comp=Z,22nm,0.9s,mb4.8
MFF **Saint Martin d 82.14 4** *e*P **P 12 33 50.2 +0.2**
comp=Z,40nm,1.0s,mb5.0
MFF **Saint Martin d 82.14 4** *e*P **P 12 33 50.2 +0.2**
MFF pmax pmax
comp=Z,20nm,1.0s,mb5.0
MFF **Saint Martin d 82.14 4** *e*P **P 12 33 50.2 +0.2**
comp=Z,20nm,1.0s,mb5.0
SMF **Signal de Mont 82.21 1** *e*P **P 12 33 50.5 +0.1**
comp=Z,29nm,0.9s,mb4.9
CABF **La Chapelle 82.25 360** *e*P **P 12 33 51.2 +0.6**
comp=Z,38nm,1.0s,mb5.0
CABF **La Chapelle 82.25 360** *e*P **P 12 33 51.2 +0.6**
CABF pmax pmax
comp=Z,19nm,1.0s,mb5.0
CABF **La Chapelle 82.25 360** *e*P **P 12 33 51.2 +0.6**
comp=Z,19nm,1.0s,mb5.0
BGF **Bois d'Agland 82.28 2** *e*P **P 12 33 50.9 +0.1**
comp=Z,22nm,1.0s,mb4.7
GZR **Gura Zlata 82.34 348**⇑P **P 12 33 51.4 +0.3**
GZR **Gura Zlata 82.34 348**⇑*i*P **P 12 33 51.4 +0.3**
TIRR **Tirgusor 82.39 344**⇑P **P 12 33 52.3 +0.9**
TIRR **Tirgusor 82.39 344**⇑*i*P **P 12 33 52.3 +0.9**
TCF **Toulx Ste Croi 82.53 2** *e*P **P 12 33 52.1 0.0**
comp=Z,28nm,1.1s,mb4.9
TCF **Toulx Ste Croi 82.53 2** *e*P **P 12 33 52.1 0.0**
TCF pmax pmax
comp=Z,14nm,1.1s,mb4.9
TCF **Toulx Ste Croi 82.53 2** *e*P **P 12 33 52.1 0.0**
comp=Z,14nm,1.1s,mb4.9
RJF **Les Rejaudoux 83.50 3** *e*P **P 12 33 58.4 +1.3**
comp=Z,16nm,1.0s,mb4.7
LFF **La Frestale 83.83 3** *e*P **P 12 33 59.1 +0.3**
comp=Z,39nm,1.1s,mb5.2
LFF **La Frestale 83.83 3** *e*P **P 12 33 59.1 +0.3**
LFF pmax pmax
comp=Z,20nm,1.1s,mb5.2
LFF **La Frestale 83.83 3** *e*P **P 12 33 59.1 +0.3**
comp=Z,20nm,1.1s,mb5.2
CAF **Calviac 83.89 3** *e*P **P 12 33 59.5 +0.4**
comp=Z,19nm,0.9s,mb4.9
ORIF **Oris-en-Rattie 83.95 360** *e*P **P 12 34 00.5 +1.1**
WRA **Warramunga Arr 84.09 229** P **P 12 33 58.6 -1.7**
comp=Z,0.8nm,0.6s,mb4.0,baz=32,slow=5.7,SNR=11
MBDF **Montbardon 84.13 359** *e*P **P 12 34 01.5 +1.1**
comp=Z,18nm,1.0s,mb4.8
MBDF **Montbardon 84.13 359** *e*P **P 12 34 01.5 +1.1**
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
MBDF **Montbardon 84.13 359** *e*P **P 12 34 01.5 +1.1**
comp=Z,8.9nm,1.0s,mb4.8
LASF **Ste Croix 84.78 1** *e*P **P 12 34 04.3 +0.7**
SMRF **Simiane la Rot 84.89 0** *e*P **P 12 34 05.5 +1.3**
comp=Z,33nm,1.0s,mb5.1
FRF **La Foret Royal 85.30 359** *e*P **P 12 34 05.6 -0.7**
comp=Z,29nm,0.9s,mb5.1
FRF **La Foret Royal 85.30 359** *e*P **P 12 34 05.6 -0.7**
FRF pmax pmax
comp=Z,15nm,0.9s,mb5.1
FRF **La Foret Royal 85.30 359** *e*P **P 12 34 05.6 -0.7**
comp=Z,15nm,0.9s,mb5.1
SJPF **Ste Jean 85.56 5** *e*P **P 12 34 07.2 -0.4**
SJPF **Ste Jean 85.56 5** *e*P **P 12 34 07.2 -0.4**
SJPF **Ste Jean 85.56 5** *e*P **P 12 34 07.2 -0.4**
ETSF **Etsaut 85.81 5** *e*P **P 12 34 10.3 +1.5**
ETSF **Etsaut 85.81 5** *e*P **P 12 34 10.3 +1.5**
ETSF **Etsaut 85.81 5** *e*P **P 12 34 10.3 +1.5**
BR131 **Keskin Array S 85.90 339** *e*P **P 12 34 09.0 -0.3**
comp=Z,1.3nm,0.8s,mb4.2
BRTR **Keskin Array B 85.90 339** *ce*P **P 12 34 09.5 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR **Keskin Array B 85.90 339** P **P 12 34 08.8 -0.5**
comp=Z,1.5nm,0.9s,mb4.2,baz=45,slow=2.6,SNR=8.1
BRTR LR LR 13 18 10.1
comp=Z,29nm,18.4s,MS3.7,baz=200,slow=40
PGF **Pioggiola 86.27 358** *e*P **P 12 34 11.1 0.0**
comp=Z,54nm,1.2s,mb5.3
PGF **Pioggiola 86.27 358** *e*P **P 12 34 11.1 0.0**
PGF pmax pmax
comp=Z,27nm,1.2s,mb5.3
PGF **Pioggiola 86.27 358** *e*P **P 12 34 11.1 0.0**
comp=Z,27nm,1.2s,mb5.3
FITZ **Fitzroy Crossi 86.78 236** P **P 12 34 13.4 -0.3**
comp=Z,1.6nm,0.8s,mb4.3,baz=78,slow=9.3,SNR=5.2
ASAR **Alice Springs 87.52 226** P **P 12 34 16.2 -1.0**
comp=Z,0.7nm,0.6s,mb4.0,baz=24,slow=5.1,SNR=13
POO **Poona 88.47 298** *e*P **P 12 34 20.0 -2.1**
ESDC **Sonseca Array 88.80 7** P **P 12 34 22.5 -0.8**
comp=Z,1.6nm,0.6s,mb4.5,baz=351,slow=5.5,SNR=8.7
TSUM **Tsumeb 146.41 339** *e*PKPdf PKPdf 12 41 09.1 +0.1
TSUM *e*pPKPdf pPKPdf 12 41 24.2 +0.2
MAW **Mawson 148.29 218** PKPbc PKPbc 12 41 15.4 +1.3
comp=Z,3.6nm,1.0s,baz=194,slow=4.2,SNR=4.5
LBTB **Lobatse 149.45 322** *e*PKP2 PKPbc 12 41 18.6 +0.2

IGQ 10 12:36:12.5,0°.93S×79°.19W,h118km±4km,Mb4.1,Ms3.9,
10C-19,Error ellipse: s-maj=1.6km s-min=1.6km az=18.5,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMI	**Rancho Maria**	**0.73**	**70**	⇓P	Pn	12 36 32.8	+0.9
NAS2	**Nasa**	**0.77**	**69**	⇓P	Pn	12 36 33.3	+1.1
MOV1	**Cotopaxi Vol s**	**0.78**	**74**	⇑P	Pn	12 36 33.1	+0.9
IGUA	**Igualata**	**0.79**	**136**	⇑P	Pn	12 36 33.2	+0.9
PISA	**Pisayambo**	**0.81**	**99**	⇑P	Pn	12 36 33.3	+0.7
PISA	**Pisayambo**	**0.81**	**99**	⇑S	Sn	12 36 48.9	+1.1
VC1	**Cotopaxi 1**	**0.83**	**70**	⇓P	Pn	12 36 33.7	+0.9
PITA	**Cotopaxi Volc**	**0.84**	**64**	⇓P	Pn	12 36 33.6	+0.8
TAMB	**Tambo**	**0.85**	**74**	⇓P	Pn	12 36 33.8	+0.9
BIL2	**Estacion Bilba**	**0.86**	**128**	⇑P	Pn	12 36 33.9	+0.9
JUI6	**Juive**	**0.87**	**125**	⇓P	Pn	12 36 33.3	+0.2
RUN5	**Runtun**	**0.91**	**123**	P	Pn	12 36 33.4	0.0
RETU	**Refugio**	**0.91**	**125**	⇑S	Sn	12 36 50.5	+1.2
RETU	**Refugio**	**0.91**	**125**	⇑P	Pn	12 36 34.2	+0.7
JUA2	**San Juan 2**	**0.92**	**40**	⇓P	Pn	12 36 34.2	+0.7
ARRY	**Arrayan**	**0.93**	**128**	⇓P	Pn	12 36 33.9	+0.2
ULBA	**Ulba**	**0.94**	**124**	P	Pn	12 36 34.0	+0.3
ULBA	**Ulba**	**0.94**	**124**	S	Sn	12 36 49.9	+0.1
TERV	**Terraza Guagua**	**0.95**	**38**	⇓S	Sn	12 36 51.6	+1.7
TERV	**Terraza Guagua**	**0.95**	**38**	⇓P	Pn	12 36 34.7	+0.9
PATA	**Patacocha**	**0.95**	**127**	⇓P	Pn	12 36 34.3	+0.5
GGP	**Refugio Guagua**	**0.95**	**39**	⇓P	Pn	12 36 34.7	+0.8
PINO	**Pino**	**0.96**	**37**	⇓P	Pn	12 36 34.7	+0.8
RIOE	**Riobamba**	**0.99**	**146**	⇓P	Pn	12 36 35.5	+1.2
YANA	**Yana**	**1.01**	**38**	⇓P	Pn	12 36 35.1	+0.6
YANA	**Yana**	**1.01**	**38**	⇓S	Sn	12 36 51.8	+0.7
ANTI	**Antisana**	**1.13**	**65**	⇓P	Pn	12 36 36.8	+1.1
JAMA	**Jama**	**1.21**	**303**	⇑P	Pn	12 36 35.5	-1.0
CAYR	**Refugio Cayamb**	**1.51**	**52**	P	Pn	12 36 41.7	+1.9
CHIS	**Cerro-Chispas-**	**1.54**	**265**	⇓P	Pn	12 36 39.8	-0.5
CHIS	**Cerro-Chispas-**	**1.54**	**265**	⇓S	Sn	12 37 02.9	+1.5
CAYA	**Cayambe**	**1.55**	**50**	⇑P	Pn	12 36 42.0	+1.6
MACE	**Macas**	**1.65**	**143**	P	Pn	12 36 42.9	+1.3
CHAR	**Charly**	**1.73**	**61**	P	Pn	12 36 44.5	+2.0
LAV3	**Lava3-Reventad**	**1.76**	**62**	⇑P	Pn	12 36 44.2	+1.3
CONE	**Cono NE Rev Vo**	**1.76**	**61**	P	Pn	12 36 44.5	+1.6

*IDC **10** 12:56:33.5±1.8,2°.73S×138°.47E,h0km,mb4.0/6, mb1 4.1/8,mb1mx3.9/14,mbtmp4.0/8,ML3.9/2,MS3.2/3, Ms1 3.2/3,ms1mx2.8/21,Error ellipse: s-maj=61.0km s-min=13.7km az=87.0*
*NEIC **10** 12:56:39.1±0.9,2°.73S×138°.40E,h35km,mb4.3/2,Error ellipse: s-maj=28.9km s-min=9.5km az=87.0*
ISC 10 12:56:41.4±2.1,2°.78S±0°.08×138°.1E±0°.2,h49km±19km, n13,σ0°.86/17,mb3.9/7,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.36**	**209**	*e*Pn	**Pn**	**12 59 20.7**	**-0.5**
	40nm,0.6s						
KAKA				*e*Sn	**Sn**	**13 01 32.6**	**+5.9**
WRAB	**Tennant Creek**	**17.45**	**192**	*e*Pn	**Pn**	**13 00 41.0**	**-0.3**
	8.8nm,0.6s						
WRAB				*e*Sn	**Sn**	**13 03 55.9**	**+1.1**
WB2	**Warramunga Arr**	**17.46**	**192**	*e*Pn	**Pn**	**13 00 41.4**	**0.0**
WRA	**Warramunga Arr**	**17.46**	**192**	P	**Pn**	**13 00 40.0**	**-1.5**
	0.5nm,0.3s,baz=8.7,slow=12,SNR=25						
WRA				S	**S**	**13 03 51.5**	**-10**
	0.1nm,0.3s,baz=5.2,slow=23,SNR=4.8						
WRA				LR	LR	13 06 40.8	
	comp=Z,64nm,18.9s,baz=290,slow=34						
CTA	**Charters Tower**	**18.95**	**156**	LR	LR	13 07 22.5	
	comp=Z,54nm,19.2s,baz=170,slow=34						
FITZ	**Fitzroy Crossi**	**19.54**	**218**	P	**Pn**	**13 01 07.2**	**+0.5**
	0.2nm,0.3s,baz=68,slow=20,SNR=6.8						
FITZ				S	**S**	**13 04 42.3**	**-0.9**
	0.0nm,0.3s,baz=80,slow=14,SNR=2.0						
ASAR	**Alice Springs**	**21.17**	**191**	P	**P**	**13 01 23.3**	**+0.7**
	4.3nm,0.8s,mb3.9,baz=20,slow=11,SNR=47						
ASAR				S	**S**	**13 05 18.9**	**+3.6**
	2.5nm,0.9s,baz=16,slow=24,SNR=8.2						
STKA	**Stephens Creek**	**29.13**	**174**	P	**P**	**13 02 37.5**	**-0.2**
	0.9nm,0.7s,mb3.6,baz=322,slow=9.5,SNR=4.0						
STKA				LR	LR	13 14 56.7	
	comp=Z,76nm,20.0s,baz=202,slow=38						
CMAR	**Chiang Mai Arr**	**43.97**	**300**	P	**P**	**13 04 45.8**	**+1.7**
	1.1nm,0.6s,mb3.8,baz=117,slow=5.4,SNR=8.1						
MKAR	**Makanchi Array**	**69.48**	**323**	P	**P**	**13 07 44.2**	**-0.5**
	0.7nm,0.7s,mb3.7,baz=126,slow=7.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**71.70**	**330**	P	**P**	**13 07 57.0**	**-1.0**
	0.6nm,0.4s,mb3.9,baz=99,slow=7.4,SNR=2.8						
BVAR	**Borovoye Array**	**79.03**	**325**	P	**P**	**13 08 40.6**	**+0.4**
	1.9nm,0.7s,mb4.1,baz=100,slow=7.7,SNR=6.3						
QSPA	**South Pole Qui**	**87.17**	**180**	*e*P	**P**	**13 09 22.1**	**+0.4**
	4.4nm,1.1s,mb4.6						

*ISCJB **10** 13:24:31.1±0.5,50°.00N±0°.02×78°.60E±0°.06,h10km,Error ellipse: s-maj=5.8km s-min=2.9km az=172.1*
*IDC **10** 13:24:31.8±0.8,50°.06N×78°.82E,h0km,mb1 3.3/4, mb1mx3.1/27,mbtmp3.3/4,ML3.1/4,Error ellipse: s-maj=11.9km s-min=5.8km az=63.0*
*NNC **10** 13:24:31.1±0.6,50°.03N×78°.86E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=9.7km s-min=3.1km az=71.0*
*NEIC **10** 13:24:33.3±0.8,50°.05N×78°.63E,h10km,Error ellipse: s-maj=13.3km s-min=8.6km az=85.0*
ISC 10 13:24:31.9±0.4,50°.03N±0°.02×78°.80E±0°.07,h10km,n36, σ0°.95/64,38C-16D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR10	**Kurchatov Arra**	**0.53**	**339**	⇑P	**Pg**	**13 24 41.5**	**-0.7**
KUR10				⇑S	**Sg**	**13 24 50.0**	**+0.8**
KUR09	**Kurchatov Arra**	**0.55**	**340**	⇑P	**Pg**	**13 24 41.9**	**-0.7**
KUR09				⇑S	**Sg**	**13 24 50.2**	**+0.5**
KUR08	**Kurchatov Arra**	**0.57**	**341**	⇑P	**Pg**	**13 24 42.3**	**-0.6**
KUR08				⇓S	**Sg**	**13 24 50.6**	**+0.3**
KUR11	**Kurchatov Arra**	**0.58**	**353**	⇑P	**Pg**	**13 24 42.4**	**-0.7**
KUR11				⇑S	**Sg**	**13 24 50.5**	**-0.2**
KUR07	**Kurchatov Arra**	**0.58**	**342**	⇑P	**Pg**	**13 24 42.7**	**-0.5**
KUR07				⇑S	**Sg**	**13 24 51.4**	**+0.5**
KUR12	**Kurchatov Arra**	**0.58**	**351**	⇑P	**Pg**	**13 24 42.6**	**-0.7**
KUR12				⇑S	**Sg**	**13 24 50.8**	**-0.1**
KUR13	**Kurchatov Arra**	**0.59**	**349**	⇑P	**Pg**	**13 24 42.8**	**-0.6**
KUR13				⇑S	**Sg**	**13 24 51.1**	**0.0**
KUR14	**Kurchatov Arra**	**0.60**	**347**	⇑P	**Pg**	**13 24 42.9**	**-0.6**
KUR14				⇑S	**Sg**	**13 24 51.7**	**+0.3**
KUR06	**Kurchatov Arra**	**0.60**	**343**	⇑P	**Pg**	**13 24 43.0**	**-0.6**
KUR06				⇓S	**Sg**	**13 24 51.9**	**+0.5**
KUR15	**Kurchatov Arra**	**0.61**	**345**	⇑P	**Pg**	**13 24 43.1**	**-0.6**
KUR15				⇓S	**Sg**	**13 24 52.0**	**+0.3**
KURBB	**Kurchatov Arra**	**0.62**	**344**	⇑P	**Pg**	**13 24 43.4**	**-0.5**
	9.1nm,0.3s						
KURBB				⇓S	**Sg**	**13 24 52.9**	**+0.9**
	48nm,0.5s						
KUR16	**Kurchatov Arra**	**0.63**	**342**	⇑P	**Pg**	**13 24 43.4**	**-0.7**
KUR16				⇓S	**Sg**	**13 24 52.3**	**0.0**
KUR05	**Kurchatov Arra**	**0.64**	**345**	⇑P	**Pg**	**13 24 43.6**	**-0.6**
KUR05				⇓S	**Sg**	**13 24 52.5**	**-0.1**
KUR17	**Kurchatov Arra**	**0.64**	**341**	⇓P	**Pg**	**13 24 43.8**	**-0.5**
KUR17				⇑S	**Sg**	**13 24 53.1**	**+0.5**
KUR18	**Kurchatov Arra**	**0.65**	**339**	⇑P	**Pg**	**13 24 44.1**	**-0.4**
KUR18				⇓S	**Sg**	**13 24 54.2**	**+1.2**
KUR04	**Kurchatov Arra**	**0.65**	**345**	⇑P	**Pg**	**13 24 43.9**	**-0.7**
KUR04				⇑S	**Sg**	**13 24 53.4**	**+0.2**
KUR19	**Kurchatov Arra**	**0.66**	**338**	⇓P	**Pg**	**13 24 44.4**	**-0.3**
KUR19				⇑S	**Sg**	**13 24 55.7**	**+2.3**
KUR03	**Kurchatov Arra**	**0.67**	**346**	⇑P	**Pg**	**13 24 44.2**	**-0.7**
KUR03				⇓S	**Sg**	**13 24 53.7**	**-0.1**
KUR20	**Kurchatov Arra**	**0.67**	**336**	⇑P	**Pg**	**13 24 43.7**	**-1.2**
KUR20				⇓S	**Sg**	**13 24 56.8**	**+3.1**
KUR02	**Kurchatov Arra**	**0.69**	**347**	⇑P	**Pg**	**13 24 44.6**	**-0.7**
KUR02				⇑S	**Sg**	**13 24 54.2**	**-0.1**
KURK	**Kurchatov**	**0.70**	**350**	⇓P	**Pg**	**13 24 44.8**	**-0.5**
	25nm,0.4s						
KURK				⇑S	**Sg**	**13 24 55.0**	**+0.6**
	18nm,0.4s						
KURK	**Kurchatov**	**0.70**	**350**	Pg	**Pg**	**13 24 42.2**	**-3.2**
	9.6nm,0.3s,baz=169,slow=19,SNR=218						
KURK				Lg		13 24 52.6	
	13nm,0.3s,baz=161,slow=34,SNR=36						
KURK	**Kurchatov**	**0.70**	**350**	*e*P	**Pg**	**13 24 44.5**	**-0.9**
KURK				*e*S	**Sg**	**13 24 54.3**	**-0.1**
KUR01	**Kurchatov Arra**	**0.71**	**348**	⇑P	**Pg**	**13 24 45.0**	**-0.6**
KUR01				⇓S	**Sg**	**13 24 54.8**	**-0.1**
MK31	**Makanchi Array**	**3.98**	**143**	⇓Pn	**Pn**	**13 25 35.5**	**+2.5**
	1.0nm,0.5s,baz=327,slow=15,SNR=21						
MK31				⇑Pg	**Pb**	**13 25 43.9**	**+1.7**
	4.2nm,0.5s,baz=330,slow=16,SNR=9.3						
MK31				⇓Lg		13 26 38.2	
	22nm,0.6s,baz=328,slow=24,SNR=27						
MK31	**Makanchi Array**	**3.98**	**143**	*e*Pn	**Pn**	**13 25 35.3**	**+2.3**
MK31				*e*S	**Sg**	**13 26 37.7**	**-2.1**
MKAR	**Makanchi Array**	**3.98**	**143**	Pn	**Pn**	**13 25 35.1**	**+2.2**
	0.9nm,0.3s,baz=322,slow=9.9,SNR=57						
MKAR				Pg	**Pb**	**13 25 41.7**	**-0.5**
	1.8nm,0.3s,baz=331,slow=14,SNR=32						
MKAR				Lg		13 26 36.6	
	4.3nm,0.3s,baz=338,slow=22,SNR=11						
ZAA0	**Zalesovo Array**	**5.40**	**41**	*e*Pn	**Pn**	**13 25 55.7**	**+3.2**
ZALV	**Zalesovo Beam**	**5.40**	**41**	Pn	**Pn**	**13 25 55.1**	**+2.7**
	2.5nm,0.3s,baz=237,slow=14,SNR=20						
ZALV				Lg		13 27 21.8	
	0.7nm,0.3s,baz=230,slow=23,SNR=3.5						
VOSK	**Vostochnaya**	**5.59**	**302**	⇑Pn	**Pn**	**13 25 53.2**	**-1.9**
	0.5nm,0.4s						
VOSK				⇑Sn	**Sn**	**13 26 59.0**	**-0.3**
	4.4nm,0.7s						
BVA0	**Borovoye Array**	**6.05**	**303**	⇑Pn	**Pn**	**13 26 00.9**	**-0.4**
	0.2nm,0.6s,baz=112,slow=14,SNR=4.0						
BVA0				Sn	**Sn**	**13 27 11.0**	**+0.5**
	0.4nm,0.5s,baz=110,slow=22,SNR=7.3						
BVA0				⇑Lg		13 27 43.1	
	1.1nm,0.6s,baz=117,slow=30,SNR=4.8						
BVAR	**Borovoye Array**	**6.05**	**303**	Pn	**Pn**	**13 26 02.0**	**+0.7**
	0.4nm,0.3s,baz=113,slow=13,SNR=6.2						
BVAR				Sn	**Sn**	**13 27 10.8**	**+0.4**
	1.2nm,0.3s,baz=110,slow=21,SNR=6.0						
BVAR				Lg		13 27 40.2	
	1.1nm,0.3s,baz=112,slow=24,SNR=3.7						
TKM2	**Tokmak 2**	**7.45**	**198**	⇓Pn	**Pn**	**13 26 27.7**	**+7.2**
	0.4nm,0.3s						
TKM2				⇑Lg		13 28 28.9	
	8.0nm,0.7s						
AAK	**Ala-Archa**	**7.97**	**204**	Pn	**Pn**	**13 26 29.2**	**+1.4**
	0.0nm,0.3s,baz=23,slow=1.7,SNR=4.9						
AAK				Lg		13 28 42.0	
	0.0nm,0.3s,baz=345,slow=5.1,SNR=4.7						
AAK	**Ala-Archa**	**7.97**	**204**	*e*Pn	**Pn**	**13 26 28.9**	**+1.1**
	1.0nm,0.9s						
KK09	**Karatay Array**	**8.96**	**223**	⇑Lg		13 29 19.1	
	2.1nm,0.5s						

*CSEM **10** 13:27:56.9±0.3,38°.15N×26°.55E,h5km,MD2.7,Error ellipse: s-maj=5.9km s-min=4.6km az=47.0*
*ISCJB **10** 13:27:57.1±1.1,38°.16N±0°.04×26°.58E±0°.05,h6km±6km, Error ellipse: s-maj=8.1km s-min=5.4km az=43.1*
*THE **10** 13:27:58.0,38°.15N×26°.76E,h24km±8km,ML2.9/1,Error ellipse: s-maj=11.3km s-min=0.9km az=101.0*
*DDA **10** 13:27:58.2,38°.21N×26°.68E,h7km±3km,Md2.7*
ISC 10 13:27:57.1±0.9,38°.16N±0°.04×26°.57E±0°.05,h6km±6km, n16,σ0°.71/30,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.21**	**6**	*i*P	**Pg**	**13 28 01.4**	**+0.3**
URLA				*i*S	**Sg**	**13 28 04.4**	**+0.4**
URLA	**Izmir**	**0.21**	**6**	*i*P	**Pg**	**13 28 01.5**	**+0.3**
URLA				*i*S	**Sg**	**13 28 04.4**	**+0.4**
BLCB	**Balcova**	**0.44**	**58**	P	**Pg**	**13 28 05.0**	**-0.6**
BLCB				S	**Sg**	**13 28 10.7**	**-0.6**
BLCB	**Balcova**	**0.44**	**58**	P	**Pg**	**13 28 05.0**	**-0.6**
BLCB				S	**Sg**	**13 28 10.7**	**-0.6**
PRK	**Paraskevi**	**1.11**	**348**	P	**Pg**	**13 28 18.1**	**-0.4**
PRK				S	**Sg**	**13 28 32.9**	**0.0**
PRK	**Paraskevi**	**1.11**	**348**	P	**Pg**	**13 28 18.1**	**-0.4**
PRK				S	**Sg**	**13 28 32.9**	**0.0**
AYDN	**Tasoluk**	**1.15**	**115**	*i*P	**Pg**	**13 28 19.6**	**+0.4**
AYDN				*i*S	**Sg**	**13 28 34.0**	**-0.1**
AYDN	**Tasoluk**	**1.15**	**115**	*i*P	**Pg**	**13 28 19.6**	**+0.5**
AYDN				*i*S	**Sg**	**13 28 34.0**	**0.0**
SIGR	**SIGRI**	**1.19**	**332**	P	**Pg**	**13 28 19.7**	**-0.3**
SIGR				S	**Sg**	**13 28 35.5**	**+0.1**
SIGR	**SIGRI**	**1.19**	**332**	P	**Pg**	**13 28 19.7**	**-0.3**
SIGR				S	**Sg**	**13 28 35.5**	**+0.1**
APE	**Apeiranthos**	**1.36**	**218**	P	**Pn**	**13 28 21.7**	**-0.9**
APE	**Apeiranthos**	**1.36**	**218**	P	**Pn**	**13 28 21.7**	**-0.9**
MANT	**Manisa**	**1.60**	**77**	*e*P	**Pn**	**13 28 27.7**	**+1.8**
MANT				*i*S	**Sn**	**13 28 46.3**	**-0.6**
MANT	**Manisa**	**1.60**	**77**	*e*P	**Pn**	**13 28 27.7**	**+1.8**
MANT				*i*S	**Sn**	**13 28 46.3**	**-0.6**
BALY	**Balya**	**1.78**	**27**	*e*P	**Pn**	**13 28 29.7**	**+1.3**
BALY				*i*S	**Sn**	**13 28 50.7**	**-0.7**
BALY	**Balya**	**1.78**	**27**	*e*P	**Pn**	**13 28 29.7**	**+1.3**
BALY				*i*S	**Sn**	**13 28 50.7**	**-0.7**

*ISCJB **10** 13:30:59.2±0.3,12°.91N±0°.04×88°.05W±0°.04,h96km±2km, mb4.0/15,Error ellipse: s-maj=9.2km s-min=3.1km az=38.9*
*IDC **10** 13:30:59.5±0.9,13°.02N×87°.84W,h90km±8km,mb3.6/9, mb1 3.8/13,mb1mx3.6/27,mbtmp3.6/13,MS3.0/3, Ms1 3.0/3,ms1mx2.6/31,Error ellipse: s-maj=31.3km s-min=10.1km az=48.0*
*NEIC **10** 13:31:00.3±1.1,12°.85N×88°.02W,h102km±10km,mb4.2/9, Error ellipse: s-maj=16.0km s-min=9.5km az=49.0*
*CASC **10** 13:31:00.7±1.6,12°.88N×88°.05W,h73km±9

comp=N,16nm,0.3s,baz=292,slow=20,SNR=3.6
JTS JuntasAbangare 3.99 130 *e*Pn **Pn 13 31 59.4 +0.3**
JTS S **Sn 13 32 42.7 -2.1**
JTS *e*Sn **Sn 13 32 43.7 -1.1**
JTS JuntasAbangare 3.99 130 *e*P **Pn 13 31 59.5 +0.4**
JCR Jicaral 4.18 136 *e*P **Pn 13 32 02.1 +0.5**
CGA2 Cerro Gallo 2 4.53 129 *e*P **Pn 13 32 08.6 +2.2**
PRS1 Puriscal 4.67 128 *e*P **Pn 13 32 11.3 +3.0**
LAJ Bijagual 4.89 128 *e*P **Pn 13 32 09.9 -1.4**
QCR Quepos 5.14 132 *e*P **Pn 13 32 15.7 +1.0**
URSC Urasca 5.18 126 *e*P **Pn 13 32 19.1 +3.9**
BAR1 5.90 128 *e*P **Pn 13 32 27.0 +1.9**
CMIG Matias Romero 7.81 303 P **Pn 13 32 51.0 -0.1**
comp=N,0.6nm,0.3s,baz=119,slow=9.4,SNR=13
CMIG S **Sn 13 34 10.8 -7.0**
comp=N,0.2nm,0.3s,baz=39,slow=9.5,SNR=1.8
CMIG LR LR 13 36 24.8
comp=N,94nm,21.9s,baz=171,slow=41
MTDJ Mount Denham 11.42 61 *e*Pn **Pn 13 33 41.6 +1.4**
comp=N,51nm,0.8s
SDV Santo Domingo 17.55 101 P **Pn 13 34 57.6 -1.5**
comp=N,0.7nm,0.3s,baz=300,slow=7.7,SNR=11
SDV LR LR 13 41 51.1
comp=N,55nm,20.9s,baz=332,slow=38
SDV Santo Domingo 17.55 101 P **Pn 13 34 57.6 -1.5**
SDV *e*P 13 34 59.0
SDV LR LR 13 41 51.1
LRAL Lakeview Retre 20.05 3 *e*P **P 13 35 28.3 +2.3**
comp=N,14nm,1.1s
JCT Junction City 20.59 330 *e*P **P 13 35 32.9 +1.0**
comp=N,4.8nm,0.6s
GOGA Godfrey 20.83 11 *e*P **P 13 35 35.6 +1.2**
comp=N,9.4nm,0.6s
TXAR Lajitas Array 21.86 321 P **P 13 35 46.0 +0.5**
comp=N,3.8nm,0.7s,mb3.8,baz=140,slow=8.3,SNR=46
TXAR ScP ScP 13 43 10.5 -0.7
comp=N,0.4nm,0.6s,baz=148,slow=5.3,SNR=6.4
MIAR Mount Ida 22.12 348 *e*P **P 13 35 47.8 -0.4**
comp=N,16nm,1.0s,mb4.3
JSC Jenkinsville 22.15 15 *e*P **P 13 35 49.1 +0.6**
TKL Tuckaleechee C 22.98 9 P **P 13 35 56.6 -0.4**
comp=N,11nm,0.9s,mb4.2,baz=186,slow=11,SNR=7.6
PCRV Puerto La Cruz 23.09 94 LR LR 13 44 21.2
comp=N,57nm,20.6s,baz=291,slow=35
EYMN Ely 35.05 356 *e*P **P 13 37 41.1 -3.0**
comp=N,2.8nm,0.7s,mb4.2
PDAR Pinedale Array 35.10 332 P **P 13 37 44.4 -0.2**
comp=N,0.3nm,0.5s,mb3.3,baz=119,slow=11,SNR=5.5
REDW Red Top Meadow 36.16 331 *e*P **P 13 37 53.8 +0.1**
comp=N,7.5nm,1.1s,mb4.5
REDW *e* pP 13 38 15.5 +0.9
NVAR Mina Array Bea 36.98 319 P **P 13 38 02.5 +1.7**
comp=N,0.2nm,0.5s,mb3.3,baz=123,slow=6.6,SNR=4.0
NVAR Mina Array Bea 36.98 319 P **P 13 38 02.5 +1.7**
ULM Lac du Bonnet 37.78 352 P **P 13 38 04.3 -3.0**
comp=N,2.1nm,0.6s,mb4.2,baz=177,slow=7.8,SNR=7.2
ULM pP pP 13 38 26.8 -1.7
comp=N,2.4nm,0.9s,baz=170,slow=7.7,SNR=2.8
ULM Lac du Bonnet 37.78 352 P **P 13 38 04.3 -3.0**
ULM pP pP 13 38 26.8 -1.7
MCMT McKenzie Canyo 38.21 331 *e*P **P 13 38 12.2 +1.2**
comp=N,2.1nm,0.9s,mb4.0
BOZ Bozeman (W) 38.28 333 *e*P **P 13 38 11.7 +0.1**
comp=N,2.2nm,1.1s,mb3.9
SIV San Ignacio 39.19 136 P **P 13 38 18.5 -1.1**
comp=N,0.7nm,0.5s,mb3.8,baz=329,slow=11,SNR=3.6
SIV pP pP 13 38 38.7 -2.0
comp=N,0.9nm,0.7s,baz=266,slow=11,SNR=2.3
SCHQ Schefferville 45.01 17 P **P 13 39 04.5 -1.8**
comp=N,2.7nm,0.5s,mb4.2,baz=202,slow=4.2,SNR=12
YKA Yellowknife Ar 53.02 345 P **P 13 40 05.6 -1.8**
comp=N,0.6nm,0.6s,mb3.8,baz=148,slow=6.4,SNR=16
YKA pP pP 13 40 29.2 -0.3
comp=N,0.6nm,0.7s,baz=138,slow=8.0,SNR=5.5
YKA Yellowknife Ar 53.02 345 P **P 13 40 05.6 -1.8**
YKA pP pP 13 40 29.2 -0.3
PLCA Paso Flores 55.78 164 *e*P **P 13 40 25.7 -2.0**
comp=N,46nm,2.3s,mb5.1
INK Inuvik 62.60 343 P **P 13 41 12.8 -1.6**
comp=N,0.8nm,1.0s,mb3.6,baz=61,slow=4.6,SNR=3.5
ASAR Alice Springs 138.90 249 PKP PKPdf 13 50 16.9 +0.1
comp=N,0.7nm,0.9s,baz=94,slow=2.8,SNR=4.3

NIED ***10*** *13:32:00, 24.°10N×144.°20E, h8km, Mw4.9 Best double couple: M0:2.14000×10¹⁶ NP1:ϕs216.00000°, δ88.00000°, λ-123.00000°. NP2:ϕs123.00000°, δ33.00000°, λ-4.00000°.*
IDC ***10*** *13:32:44.2±0.4, 23.°38N×143.°28E, h0km, mb4.5/21, mb1 4.7/24, mb1mx4.6/29, mbtmp4.5/24, ML4.6/3, MS4.5/28, Ms1 4.5/28, ms1mx4.4/37, Error ellipse: s-maj=18.3km s-min=11.5km az=75.0*
ISCJB ***10*** *13:32:48.4±0.2, 23.°51N±0.°03×143.°29E±0.°04, h33km, mb4.8/125, MS4.5/55, Error ellipse: s-maj=4.8km s-min=3.9km az=160.2*
GCMT ***10*** *13:32:49.8±0.2, 23.°49N×143.°44E, h27km, MW5.1/81, Moment Tensor Solution. s38,c58; s81,c126; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.77±.20; Mθθ1.14±.13; Mϕϕ-4.91±.14; Mrθ-0.64±.22; Mϕθ2.35±.09; Mϕr3.29±.25; Best double couple: M0:5.82300×10¹⁶ NP1:ϕs150.00000°, δ28.00000°, λ73.00000°. NP2: ϕs349.00000°, δ63.00000°, λ99.00000°. Principal axes: T 4.8820, Plg71.0000°, Azm278.0000°; N 1.8820, Plg8.0000°, Azm165.0000°; P -6.7650, Plg18.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***10*** *13:32:49.7±1.0, 23.°76N×143.°23E, h33km, mb5.1/44, MS4.5/12 Error ellipse: s-maj=11.2km s-min=6.1km az=113.8*
NEIC ***10*** *13:32:49.8±0.2, 23.°37N×143.°28E, h35km, mb4.8/67, MW4.8(NIED), Error ellipse: s-maj=5.7km s-min=5.1km az=106.0*
BJI ***10*** *13:32:49.9, 23.°71N×143.°22E, h31km, mB5.0/32, mb4.9/46, Ms4.6/45, MS7 4.4/44*
JMA ***10*** *13:32:52.1±0.2, 24.°12N×144.°24E, h83km, M4.7*
DJA ***10*** *13:33:13, 23.°60N×143.°60E, h273km, mb4.8/17*
ISC 10 13:32:46.6±1.0, 23.°50N±0.°03×143.°31E±0.°04, h10km±6km, h35km±1.0km: pP-P, n265, σ1§22/271, mb4.8/125, MS4.5/55, 10C-3D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.28**	**342**	P	**Pn**	**13 33 40.0**	**+1.9**
JHHJ				*e*S	**Sn**	**13 34 17.3**	**+0.1**
CBIJ	**Chichi jima**	**3.72**	**344**	P	**Pn**	**13 33 45.3**	**+1.1**
CBIJ				S	**Sn**	**13 34 26.4**	**-1.7**
CBIJ	**Chichi jima**	**3.72**	**344**	Pn	**Pn**	**13 33 44.0**	**-0.2**
	71nm,0.3s,baz=255,slow=3.7,SNR=25						
CBIJ				Sn	**Sn**	**13 34 26.3**	**-1.8**
	146nm,0.3s,baz=109,slow=23,SNR=12						
GUMO	**Guam**	**9.97**	**171**	*e*P	**Pn**	**13 35 07.8**	**-2.1**
GUMO				pmax	pmax		
	comp=Z,252nm,1.1s						
GUMO	**Guam**	**9.97**	**171**	*e*Pn	**Pn**	**13 35 07.8**	**-2.1**
	comp=Z,252nm,1.1s						
JHJ	**Hachijo jima 2**	**10.07**	**343**	LR	LR	13 38 48.7	
	comp=Z,2μm,21.1s,baz=184,slow=36						
BSO1	**Boso 1**	**11.30**	**350**	P	**Pn**	**13 35 28.4**	**+0.3**
BSO3	**Boso 3**	**11.53**	**348**	P	**Pn**	**13 35 31.0**	**-0.2**
BSO4	**Boso 4**	**11.74**	**348**	P	**Pn**	**13 35 34.8**	**+0.7**
BSO4				*e*S	**Sn**	**13 37 41.0**	**-4.2**
JOD2	**Odawara 2**	**12.29**	**344**	P	**Pn**	**13 35 40.2**	**-1.4**
JNY	**Yasuok**	**12.73**	**339**	P	**Pn**	**13 35 47.4**	**-0.3**
JHU	**Hanno**	**12.80**	**345**	P	**Pn**	**13 35 47.5**	**-1.1**
JAM	**Amami Oshima**	**13.26**	**295**	P	**Pn**	**13 35 59.8**	**+4.8**
JHO	**Hitachi**	**13.28**	**350**	P	**Pn**	**13 35 53.8**	**-1.4**
JAG	**Ashikaga**	**13.31**	**346**	P	**Pn**	**13 35 53.6**	**-2.0**
JNG	**Nsakai**	**13.63**	**342**	P	**Pn**	**13 35 58.8**	**-1.2**
MJAR	**Matsushiro Arr**	**13.72**	**342**	Pn	**Pn**	**13 35 59.8**	**-1.5**
	comp=Z,2.4nm,0.3s,baz=155,slow=10,SNR=30						
MAJO	**Matsushiro**	**13.73**	**342**	*e*P	**Pn**	**13 35 59.3**	**-2.0**
MAT	**Matsushiro**	**13.73**	**342**	P	**Pn**	**13 35 59.3**	**-2.0**
JOW	**Kunigami**	**14.02**	**287**	P	Px	13 36 16.6	
JOW	**Kunigami**	**14.02**	**287**	LR	LR	13 41 03.6	
	comp=Z,3μm,19.0s,baz=103,slow=36						
JHK	**Hiroka**	**14.19**	**346**	P	**Pn**	**13 36 05.0**	**-2.6**
JMM	**Marumori**	**14.48**	**352**	P	**Pn**	**13 36 09.5**	**-2.1**
JMM				S	**Sn**	**13 38 40.5**	**-12**
JHS	**Saijyo**	**14.50**	**325**	P	**Pn**	**13 36 12.8**	**+1.0**
JMK	**Ichinoseki**	**15.51**	**354**	P	**Pn**	**13 36 23.9**	**-1.4**
JMK				S	**Sn**	**13 39 04.1**	**-13**
JRG	**Rokugo**	**16.01**	**352**	P	**Pn**	**13 36 30.3**	**-1.6**
JRG				S	**Sn**	**13 39 19.6**	**-10**
ERM	**Erimo**	**18.46**	**360**	*i* P	**Pn**	**13 37 04.5**	**+2.0**
ERM				pmax	pmax		
	comp=Z,38nm,1.2s						
ERM	**Erimo**	**18.46**	**360**	*e*P	**Pn**	**13 37 02.3**	**-0.2**
	comp=Z,106nm,1.4s						
KSRS	**Korea Array**	**19.18**	**320**	P	**Pn**	**13 37 10.5**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=137,slow=12,SNR=39						
KSRS				LR	LR	13 44 27.0	
	comp=Z,1μm,18.6s,baz=131,slow=36						
KS15	**Wonju Array Si**	**19.20**	**320**	*e*P	**Pn**	**13 37 10.5**	**-0.9**
YHNB	**Yeheng**	**20.06**	**278**	*e*P	**P**	**13 37 20.9**	**+0.7**
	comp=Z,34nm,0.8s						
SSLB	**Suanglung**	**20.48**	**275**	*e*P	**P**	**13 37 28.3**	**+3.6**
	comp=Z,78nm,1.1s						
ASAJ	**Asahikawa**	**20.57**	**359**	P	**P**	**13 37 27.4**	**+1.9**
	comp=Z,12nm,0.6s,baz=218,slow=11,SNR=15						
ASAJ				LR	LR	13 45 15.5	
	comp=Z,698nm,20.2s,MS4.0,baz=199,slow=36						
SSE	**Sheshan**	**21.05**	**296**	P	**P**	**13 37 32.1**	**+1.4**
SSE				sP	sP	13 37 44.3	+9.3
SSE				S	**S**	**13 41 25.7**	**+0.6**
SSE				pmax	pmax		
	comp=Z,43nm,0.8s,mb4.8						
SSE				pmax	pmax		
	comp=Z,180nm,4.5s						
SSE				LR	LR		
	comp=N,560nm,20.8s,MS4.0						
SSE				LR	LR		
	comp=E,250nm,21.3s,MS4.0						
SSE				LR	LR		
	comp=Z,570nm,19.0s,MS4.0						
VLA	**Vladivostok**	**21.73**	**337**	*e*P	**P**	**13 37 36.7**	**-1.3**
VLA				*e*S	**S**	**13 41 42.0**	**+3.7**
VLA				pmax	pmax		
	comp=Z,43nm,1.0s,mb4.8						
VLA				MLR	MLR		
	comp=Z,1μm,17.8s,MS4.4						
NJ2	**Nanjing**	**23.22**	**297**	*e*P	**P**	**13 37 51.7**	**-2.2**
NJ2				pP		13 38 00.9	
NJ2				sP	sP	13 38 05.0	+6.8
NJ2				PP		13 38 22.3	
NJ2				S	**S**	**13 41 54.0**	**-12**
NJ2				sS	sS	13 42 09.0	-1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				pmax	pmax		
	comp=Z,230nm,4.1s						
NJ2				LR	LR		
	comp=N,930nm,23.3s						
NJ2				LR	LR		
	comp=E,820nm,17.6s						
NJ2				LR	LR		
	comp=Z,1μm,21.6s,MS4.3						
YSS	**Yuzh-Sakhalins**	**23.41**	**359⇑**	*e*P	**P**	**13 37 57.0**	**+1.3**
YSS				*e*S	**S**	**13 42 08.0**	**-0.5**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
YSS				pmax	pmax		
	comp=Z,300nm,4.0s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	**23.41**	**359**	*e*P	**P**	**13 37 57.1**	**+1.3**
	comp=Z,33nm,0.8s,mb4.8						
DAV	**Davao City (W)**	**23.60**	**229**	LR	LR	13 44 59.4	
	comp=Z,2μm,20.9s,MS4.5,baz=184,slow=31						
MDJ	**Mudanjiang**	**23.87**	**335**	P	**P**	**13 38 00.3**	**+0.1**
MDJ				pP		13 38 09.9	
MDJ				sP	sP	13 38 13.7	+9.1
MDJ				S	**S**	**13 42 14.6**	**-1.5**
MDJ				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,170nm,6.1s						
MDJ				LR	LR		
	comp=N,1μm,20.3s,MS4.4						
MDJ				LR	LR		
	comp=E,570nm,20.3s,MS4.4						
MDJ				LR	LR		
	comp=Z,2μm,19.3s,MS4.5						
MDJ	**Mudanjiang**	**23.87**	**335**	*e*P	**P**	**13 38 00.4**	**+0.2**
	comp=Z,29nm,0.9s,mb4.7						
SNY	**Shenyang**	**24.60**	**323**	⇓P	**P**	**13 38 06.2**	**-0.7**
SNY				S	**S**	**13 42 25.8**	**-2.1**
SNY				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.1						
SNY				LR	LR		
	comp=N,380nm,15.3s,MS4.4						
SNY				LR	LR		
	comp=E,900nm,15.6s,MS4.4						
SNY				LR	LR		
	comp=Z,670nm,18.0s,MS4.2						
CN2	**Changchun**	**25.02**	**328**	*e*P	**P**	**13 38 11.3**	**+0.6**
CN2				*e*pP	pP	13 38 20.6	+6.8
CN2				*e*S	**S**	**13 42 31.8**	**-2.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,17.0s,MS4.4						
CN2				LR	LR		
	comp=E,800nm,17.0s,MS4.4						
CN2				LR	LR		
	comp=Z,800nm,17.0s,MS4.3						
TIA	**Tai'an**	**25.91**	**305**	⇓P	**P**	**13 38 18.8**	**-0.1**
WHN	**Wuhan**	**26.69**	**292**	P	**P**	**13 38 27.5**	**+1.5**
KLR	**Kul'dur**	**27.25**	**343**	*e*P	**P**	**13 38 27.7**	**-3.1**
KLR				pmax	pmax		
	comp=E,24nm,0.9s						
KLR				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.0						
KLR				MLR	MLR		
	comp=E,900nm,16.0s						
KLR				MLR	MLR		
	comp=Z,1μm,16.0s,MS4.5						
BJI	**Beijing**	**28.20**	**312**	P	**P**	**13 38 40.6**	**+1.2**
BJI				S	**S**	**13 43 26.0**	**+0.9**
BJI				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.6						
BJI				pmax	pmax		
	comp=Z,110nm,4.1s						
BJI				LR	LR		
	comp=N,660nm,15.8s,MS4.5						
BJI				LR	LR		
	comp=E,710nm,17.5s,MS4.5						
BJI				LR	LR		
	comp=Z,560nm,27.7s						
ENH	**Enshi**	**30.84**	**290**	*e*P	**P**	**13 39 01.8**	**-1.1**
	comp=Z,5.7nm,0.3s,mb4.9						
QIZ	**Qiongzhong**	**31.46**	**268**	P	**P**	**13 39 12.1**	**+3.6**
QIZ				S	**S**	**13 44 23.0**	**+6.4**
QIZ				pmax	pmax		
	comp=Z,380nm,3.8s						
QIZ				LR	LR		
	comp=N,430nm,18.8s,MS4.2						
QIZ				LR	LR		
	comp=E,400nm,21.4s,MS4.2						
QIZ				LR	LR		
	comp=Z,830nm,20.2s,MS4.4						
QIZ	**Qiongzhong**	**31.46**	**268**	*e*P	**P**	**13 39 05.7**	**-2.8**
	comp=Z,1.3nm,0.3s,mb4.2						
PETK	**Petropavlovsk-**	**31.52**	**17**	LR	LR	13 50 00.7	
	comp=Z,445nm,21.5s,MS4.1,baz=293,slow=33						
PET	**Petropavlovsk**	**31.70**	**18**	*e*P	**P**	**13 39 11.8**	**+1.5**
PET				*e*S	**S**	**13 44 19.3**	**-0.4**
PET				pmax	pmax		
	comp=Z,100nm,16.3s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.0						
HHC	**Hu-ho-hao-te**	**31.73**	**311**	*e*P	**P**	**13 39 13.6**	**+3.0**
HHC				pP	pP	13 39 23.2	+9.4
HHC				sP	sP	13 39 27.2	+12
HHC				PP	PP	13 40 19.3	-3.0
HHC				PcP	PcP	13 42 03.7	+1.6
HHC				S	**S**	**13 44 20.6**	**+0.2**
HHC				sS	sS	13 44 37.0	+11
HHC				ScP	ScP	13 45 45.2	-0.4
HHC				PcS	PcS	13 45 48.3	+1.7
HHC				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,77nm,7.8s						
HHC				LR	LR		
	comp=N,400nm,17.5s,MS4.4						
HHC				LR	LR		
	comp=E,520nm,18.0s,MS4.4						
HHC				LR	LR		
	comp=Z,670nm,17.1s,MS4.4						
XAN	**Xi'an**	**31.79**	**297**	P	**P**	**13 39 11.3**	**0.0**
XAN				pP	pP	13 39 20.4	+6.0
XAN				sP	sP	13 39 24.8	+9.1
XAN				S	**S**	**13 44 21.5**	**0.0**
XAN				sS	sS	13 44 36.5	+10
XAN				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.9						
XAN				pmax	pmax		
	comp=Z,43nm,8.7s						
XAN				LR	LR		
	comp=N,410nm,19.4s,MS4.1						
XAN				LR	LR		
	comp=E,160nm,19.9s,MS4.1						
XAN				LR	LR		
	comp=Z,110nm,21.3s,MS3.5						
GYA	**Guiyang**	**33.28**	**283**	P	**P**	**13 39 26.2**	**+1.8**
GYA				pP	pP	13 39 35.7	+8.1
GYA				sP	sP	13 39 42.1	+13
GYA				PP	PP	13 40 38.6	-1.1
GYA				S	**S**	**13 44 43.0**	**-1.9**
GYA				sS	sS	13 45 01.2	+11
GYA				ScP	ScP	13 45 48.3	-2.9
GYA				SS	SS	13 46 47.6	-21
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,540nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=E,520nm,17.6s,MS4.5						
GYA				LR	LR		
	comp=Z,640nm,17.0s,MS4.4						
NRGR	**Nerungri**	**35.80**	**342**	*e*P	**P**	**13 39 47.4**	**+1.6**
NRGR				S	**S**	**13 45 25.4**	**+2.4**
NRGR				smax			
	comp=N,7.0nm,0.3s						
CD2	**Chengdu**	**35.80**	**291**	P	**P**	**13 39 48.1**	**+1.9**
CD2				pP	pP	13 39 57.8	+8.4
CD2				sP	sP	13 40 01.7	+11
CD2				PP	PP	13 41 09.6	+2.1
CD2				S	**S**	**13 45 22.5**	**-1.2**
CD2				sS	sS	13 45 38.6	+10
CD2				SS	SS	13 47 44.4	-15
CD2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
CD2				pmax	pmax		
	comp=Z,260nm,5.3s						
CD2				LR	LR		
	comp=N,1μm,16.6s						
CD2				LR	LR		
	comp=Z,1μm,16.1s,MS4.7						
LZH	**Lanzhou**	**36.24**	**299**	*e*P	**P**	**13 39 49.0**	**-0.9**
LZH				pP	pP	13 39 58.7	+5.7
LZH				sP	sP	13 40 02.8	+8.5
LZH				PP	PP	13 41 12.0	-0.3
LZH				*e*S	**S**	**13 45 27.2**	**-3.1**
LZH				sS	sS	13 45 42.1	+6.6
LZH				*e*SS	SS	13 47 51.9	-16
LZH				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
LZH				pmax	pmax		
	comp=Z,150nm,6.3s						
LZH				LR	LR		
	comp=E,620nm,13.7s						
LZH				LR	LR		
	comp=Z,930nm,15.6s,MS4.7						
KMI	**Kunming**	**36.91**	**281**	P	**P**	**13 39 57.7**	**+1.9**
KMI				pP	pP	13 40 09.9	+11
KMI				sP	sP	13 40 15.9	+16
KMI				PP	PP	13 41 23.5	+3.6
KMI				S	**S**	**13 45 38.3**	**-2.5**
KMI				sS	sS	13 45 59.4	+13
KMI				SS	SS	13 48 09.1	-13
KMI				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.6						
KMI				pmax	pmax		
	comp=Z,150nm,5.3s						
KMI				LR	LR		
	comp=N,290nm,18.8s,MS4.3						
KMI				LR	LR		
	comp=E,420nm,22.9s,MS4.3						
KMI				LR	LR		
	comp=Z,520nm,22.9s,MS4.3						
COEN	**Coen**	**37.23**	**180**	*e*P	**P**	**13 39 58.7**	**+0.3**
	comp=Z,78nm,0.6s,mb5.7						
KAKA	**Kakadu**	**37.53**	**198**	*e*P	**P**	**13 39 58.9**	**-2.0**
	comp=Z,6.9nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**37.67**	**319**	*e*P	**P**	**13 40 02.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.6						
ULN	**Ulaanbaatar**	**37.67**	**319**	*e*P	**P**	**13 40 02.1**	**+0.2**
	comp=Z,16nm,1.3s,mb4.6						
SONM	**Songino Array**	**38.05**	**319**	P	**P**	**13 40 05.1**	**0.0**
	comp=Z,2.5nm,0.6s,mb4.1,baz=124,slow=8.4,SNR=16						
SONM				LR	LR	13 56 37.0	
	comp=Z,987nm,18.6s,MS4.7,baz=119,slow=38						
YAK	**Yakutsk**	**39.62**	**350**	*e*P	**P**	**13 40 17.4**	**-0.7**
YAK				*e**PP	pP	13 40 27.2	+6.0
YAK				*e*		13 41 50.9	
YAK				*e*		13 42 24.5	
YAK				*e*S	**S**	**13 46 15.3**	**-5.5**
YAK				*e*SS	SS	13 49 04.1	-12
YAK				*e*SSS		13 49 42.9	
YAK				*e*		13 50 15.5	
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
YAK				smax			
	comp=E,43nm,2.5s						
YAK				smax			
	comp=N,44nm,2.8s						
YAK				MLR	MLR		
	comp=Z,969nm,20.0s,MS4.6						
YAK				MLR	MLR		
	comp=E,159nm,17.0s,MS4.6						
YAK				MLR	MLR		
	comp=N,751nm,21.0s,MS4.6						
YAK	**Yakutsk**	**39.62**	**350**	*e*P	**P**	**13 40 18.8**	**+0.8**
	comp=N,34nm,0.9s,mb5.1						
SEY	**Seymchan**	**39.89**	**6⇑**	*i*P	**P**	**13 40 22.0**	**+1.7**
GTA	**Gaotai**	**39.95**	**304**	*e*P	**P**	**13 40 24.1**	**+3.0**
GTA				pP	pP	13 40 34.0	+10
GTA				sP	sP	13 40 38.1	+13
GTA				PP	PP	13 42 01.5	+8.6
GTA				S	**S**	**13 46 29.2**	**+2.8**
GTA				pmax	pmax		
	comp=Z,160nm,7.7s						
GTA				LR	LR		
	comp=N,430nm,17.8s,MS4.5						
GTA				LR	LR		
	comp=E,340nm,17.0s,MS4.5						
GTA				LR	LR		
	comp=Z,440nm,18.1s,MS4.3						
BOD	**Bodaibo**	**40.24**	**336**	*e*P	**P**	**13 40 23.2**	**-0.1**
BOD				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
ZAK	**Zakamensk**	**41.01**	**321⇑**	*i*P	**P**	**13 40 28.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
TLY	**Talaya**	**41.39**	**323**	*e*P	**P**	**13 40 34.1**	**+1.3**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
TLY				MLR	MLR		
	comp=Z,529nm,18.0s,MS4.5						
CHTO	**Chiang Mai**	**41.52**	**272**	*e*P	**P**	**13 40 34.3**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
CHTO	**Chiang Mai**	**41.52**	**272**	*e*P	**P**	**13 40 34.2**	**-0.1**
	comp=Z,8.7nm,0.9s,mb4.4						
CM31	**Chiang Mai Arr**	**41.61**	**272**	*e*P	**P**	**13 40 36.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**41.61**	**272**	P	**P**	**13 40 35.5**	**+0.5**
	comp=Z,4.5nm,0.6s,mb4.3,baz=62,slow=7.5,SNR=28						

CMAR LR LR 13 56 58.0
comp=Z,581nm,19.0s,MS4.5,baz=292,slow=35
MOY Mondy 42.87 322 *eP* **P 13 40 44.8 -0.1**
CTA Charters Tower 43.42 176 *eP* **P 13 40 49.2 -0.4**
comp=Z,6.2nm,0.6s,mb4.5
CTAO Charters Tower 43.42 176 *eP* **P 13 40 47.9 -1.7**
CTAO pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
CTAO Charters Tower 43.42 176 *eP* **P 13 40 47.9 -1.7**
comp=Z,6.7nm,0.6s,mb4.5
WRAB Tennant Creek 44.04 192 P **P 13 40 53.0 -1.7**
comp=Z,206nm,0.5s,mb6.1,SNR=32
WRAB Tennant Creek 44.04 192 *eP* **P 13 40 52.9 -1.8**
WRAB pmax pmax
comp=Z,16nm,0.5s,mb5.0
WRAB Tennant Creek 44.04 192 *eP* **P 13 40 52.9 -1.8**
comp=Z,16nm,0.5s,mb5.0
WB2 Warramunga Arr 44.05 192 *eP* **P 13 40 53.4 -1.3**
WRA Warramunga Arr 44.05 192 P **P 13 40 52.1 -2.7**
WRA 13 42 39.7
WRA Warramunga Arr 44.05 192 P **P 13 40 52.0 -2.7**
comp=Z,11nm,0.5s,mb4.8,baz=9.0,slow=7.7,SNR=274
WRA PcP PcP 13 42 39.7 -0.5
comp=Z,4.0nm,0.5s,baz=5.4,slow=3.8,SNR=7.8
WRA LR LR 13 58 26.9
comp=Z,310nm,20.7s,MS4.2,baz=350,slow=35
FITZ Fitzroy Crossi 44.80 204 *eP* **P 13 41 00.2 -0.6**
comp=Z,24nm,0.9s,mb5.0
FITZ Fitzroy Crossi 44.80 204 *eP* **P 13 40 59.4 -1.4**
comp=Z,18nm,0.9s,mb4.9
LSA Lhasa 46.73 289 P **P 13 41 19.3 +3.2**
LSA S **S 13 47 54.2 -12**
LSA LR LR
comp=E,400nm,23.1s
LSA LR LR
comp=Z,520nm,16.6s
LSA Lhasa 46.73 289 *eP* **P 13 41 18.5 +2.4**
LSA pmax pmax
comp=Z,18nm,0.8s,mb5.0
LSA Lhasa 46.73 289 *eP* **P 13 41 18.4 +2.4**
comp=Z,18nm,0.8s,mb5.0
BILL Bilibino 46.74 12⇑ *eP* **P 13 41 17.0 +1.5**
BILL *eS* **S 13 48 11.9 +6.9**
BILL pmax pmax
comp=Z,12nm,1.1s,mb4.7
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.1
BILL Bilibino 46.74 12 *eP* **P 13 41 16.5 +1.0**
comp=Z,12nm,1.0s,mb4.8
ASAR Alice Springs 47.77 192 P **P 13 41 22.7 -1.3**
comp=Z,4.4nm,0.6s,mb4.7,baz=16,slow=12,SNR=113
ASAR PcP PcP 13 42 52.0 -1.1
comp=Z,1.5nm,0.8s,baz=22,slow=3.7,SNR=3.3
TIXI Tiksi 48.88 354 *eP* **P 13 41 32.2 +0.1**
TIXI *eS* **S 13 48 34.1 -1.2**
TIXI *e* 13 51 17.7
TIXI pmax pmax
comp=Z,15nm,1.2s,mb4.9
TIXI MLR MLR
comp=Z,444nm,16.0s,MS4.5
TIXI Tiksi 48.88 354 *eP* **P 13 41 32.7 +0.6**
WMQ Urumqi 49.55 308 *eP* **P 13 41 38.6 +1.0**
WMQ sP sP 13 41 52.7 +11
WMQ S **S 13 48 43.3 -2.2**
WMQ sS sS 13 49 01.2 +10
WMQ ScS ScS 13 51 25.1 -4.5
WMQ SS SS 13 52 10.8 -6.5
WMQ pmax pmax
comp=Z,20nm,1.0s,mb5.1
WMQ pmax pmax
comp=Z,96nm,3.2s
WMQ LR LR
comp=N,270nm,18.0s
WMQ LR LR
comp=E,340nm,24.0s
WMQ LR LR
comp=Z,430nm,21.0s,MS4.4
MBWA Marble Bar 49.98 209 *eP* **P 13 41 40.6 -0.5**
MBWA Marble Bar 49.98 209 *eP* **P 13 41 40.3 -0.8**
comp=Z,8.6nm,0.9s,mb4.8
DZM Mont Dzumac 50.58 152 *e*LR LR 13 56 13.5
comp=Z,1μm,23.9s
RAMN Ramite 51.06 286 *eP* **P 13 41 50.6 +1.2**
comp=Z,68nm,0.8s,mb5.6
GUN Gumba 51.54 288 *eP* **P 13 41 54.3 +1.4**
comp=Z,39nm,0.6s,mb5.5
PKI Pulchoki 52.01 287 *eP* **P 13 41 57.3 +0.9**
comp=Z,22nm,0.7s,mb5.2
PKIN Phulchoki 52.02 287 *eP* **P 13 41 57.2 +0.7**
PKIN Phulchoki 52.02 287 *eP* **P 13 41 57.5 +1.0**
comp=Z,26nm,0.6s,mb5.3
KKN Kakani 52.08 288 *eP* **P 13 41 58.0 +1.0**
comp=Z,20nm,0.6s,mb5.2
DMN Daman 52.27 288 *eP* **P 13 41 59.4 +1.0**
comp=Z,28nm,0.7s,mb5.3
ZAA0 Zalesovo Array 52.89 321 *eP* **P 13 42 02.0 -0.5**
ZALV Zalesovo Beam 52.89 321 P **P 13 42 01.8 -0.8**
comp=Z,4.7nm,0.5s,mb4.7,baz=102,slow=7.2,SNR=21
ZALV LR LR 14 05 48.0
comp=Z,265nm,18.1s,MS4.3,baz=84,slow=38
MKAR Makanchi Array 53.58 312 P **P 13 42 08.4 +0.7**
comp=Z,7.0nm,0.7s,mb4.7,baz=97,slow=8.7,SNR=67
MKAR LR LR 14 07 05.5
comp=Z,318nm,18.1s,MS4.4,baz=278,slow=38
NVS Novosibirsk 53.96 322 *i* P **P 13 42 09.1 -1.3**
NVS pmax pmax
comp=N,12nm,1.7s
NVS pmax pmax
comp=E,29nm,1.7s
NVS pmax pmax
comp=Z,32nm,1.7s,mb5.0
ARMA Armidale 54.20 171 *eP* **P 13 42 12.6 +0.3**
STKA Stephens Creek 55.09 182 *eP* **P 13 42 17.7 -1.0**
comp=Z,12nm,0.6s,mb5.1
STKA Stephens Creek 55.09 182 P **P 13 42 17.9 -0.9**
comp=Z,8.6nm,0.5s,mb5.0,baz=358,slow=9.6,SNR=21
STKA LR LR 14 06 19.6
comp=Z,327nm,19.8s,MS4.4,baz=139,slow=37
FORT Forrest 55.92 196 *eP* **P 13 42 23.2 -1.5**
comp=Z,19nm,0.5s,mb5.4
FORT Forrest 55.92 196 *eP* **P 13 42 23.0 -1.7**
comp=Z,29nm,0.8s,mb5.4
KURK Kurchatov 56.25 316 P **P 13 42 27.0 0.0**
comp=Z,242nm,1.1s,mb6.1,SNR=21
KURK Kurchatov 56.25 316 *c i* P **P 13 42 26.8 -0.2**
KURK pmax pmax
comp=Z,48nm,1.0s,mb5.5
KURK Kurchatov 56.25 316 LR LR 14 07 57.3
comp=Z,700nm,18.8s,MS4.8,baz=85,slow=38
KURK Kurchatov 56.25 316 *eP* **P 13 42 26.4 -0.6**
comp=Z,41nm,0.9s,mb5.5
KDAK Kodiak Island 56.66 35 LR LR 14 03 06.6
comp=Z,621nm,21.5s,MS4.7,baz=254,slow=32
AFI Afiamalu 57.55 126 LR LR 14 03 11.4
comp=Z,368nm,18.9s,MS4.5,baz=306,slow=32
PPLA Purkeypile 57.76 29 *eP* **P 13 42 38.3 +0.8**
comp=Z,32nm,1.5s,mb5.1
CHUM Lake Minchumin 57.91 28 *eP* **P 13 42 39.3 +0.8**
comp=Z,8.5nm,1.0s,mb4.7
KSH Kashi 58.34 303 P **P 13 42 46.3 +4.3**
KSH pmax pmax
comp=Z,130nm,1.4s,mb5.8
TKM2 Tokmak 2 58.35 307 P **P 13 42 43.4 +1.4**
SNR=19
TKM2 Tokmak 2 58.35 307 *eP* **P 13 42 42.7 +0.7**
TKM2 pmax pmax
comp=Z,27nm,1.0s,mb5.2
TKM2 Tokmak 2 58.35 307 *eP* **P 13 42 42.7 +0.7**
comp=Z,27nm,1.0s,mb5.2
BPAW Bear Paw Mtn. 58.53 28 *eP* **P 13 42 43.7 +0.9**
comp=Z,27nm,1.5s,mb5.1
KZA Kyzart 58.66 306 P **P 13 42 46.8 +2.6**
SNR=23
TRF Thorofare Moun 58.71 29 *eP* **P 13 42 44.4 +0.2**
comp=Z,24nm,1.2s,mb5.1
CNB Canberra Magne 58.77 174 *eP* Px 13 42 58.1
KBK Karagaybulak 58.84 307 P **P 13 42 47.2 +1.8**
SNR=19
PMR Palmer 58.95 31 *eP* **P 13 42 46.0 +0.2**
PMR pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
PMR Palmer 58.95 31 *eP* **P 13 42 46.0 +0.2**
comp=Z,5.6nm,0.7s,mb4.7
CHMS Chumysh 58.96 307 P **P 13 42 47.1 +0.9**
SNR=9.4
FRU Bishkek 59.07 307 *eP* **P 13 42 48.5 +1.5**
FRU pmax pmax
comp=Z,60nm,1.8s,mb5.3
USP Ospenovka 59.13 307 P **P 13 42 48.6 +1.3**
SNR=9.8
AAK Ala-Archa 59.18 307 P **P 13 42 49.6 +1.8**
comp=Z,98nm,0.8s,mb5.9,SNR=6.8
AAK Ala-Archa 59.18 307 P **P 13 42 48.9 +1.2**
SNR=12
AAK Ala-Archa 59.18 307 *eP* **P 13 42 48.8 +1.1**
UCH Uchtor 59.20 306 P **P 13 42 50.0 +2.1**
SNR=53
UCH Uchtor 59.20 306 *eP* **P 13 42 49.6 +1.7**
UCH pmax pmax
comp=Z,38nm,0.9s,mb5.4
UCH Uchtor 59.20 306 *eP* **P 13 42 49.6 +1.7**
comp=Z,38nm,0.9s,mb5.4
MCK McKinley 59.35 29 *eP* **P 13 42 48.9 +0.3**
MCK pmax pmax
comp=Z,20nm,1.2s,mb5.0
MCK McKinley 59.35 29 *eP* **P 13 42 48.9 +0.3**
comp=Z,20nm,1.2s,mb5.0
EKS2 Erkin-Say 59.70 307 P **P 13 42 52.5 +1.1**
SNR=18
EKS2 Erkin-Say 59.70 307 *eP* **P 13 42 52.0 +0.6**
EKS2 pmax pmax
comp=Z,18nm,0.9s,mb5.1
EKS2 Erkin-Say 59.70 307 *eP* **P 13 42 52.0 +0.6**
comp=Z,18nm,0.9s,mb5.1
AML Almayashu 59.81 306 P **P 13 42 54.1 +2.0**
SNR=42
AML Almayashu 59.81 306 *eP* **P 13 42 53.8 +1.6**
AML pmax pmax
comp=Z,41nm,0.9s,mb5.5
AML Almayashu 59.81 306 *eP* **P 13 42 53.8 +1.6**
comp=Z,41nm,0.9s,mb5.5
COLA College 60.00 27 *eP* **P 13 42 51.9 -1.1**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
COLA College 60.00 27 *eP* **P 13 42 51.9 -1.1**
comp=Z,3.8nm,0.8s,mb4.5
HYB Hyderabad 60.55 277 *i* P **P 13 43 04.0 +6.4**
TOO Toolangi 60.78 178 *eP* **P 13 42 58.7 +0.1**
BVAR Borovoye Array 61.39 319 P **P 13 43 03.0 +0.2**
comp=Z,66nm,0.8s,mb5.8,baz=93,slow=7.8,SNR=205
BVAR LR LR 14 11 35.5
comp=Z,342nm,18.6s,MS4.5,baz=83,slow=38
BRVK Borovoye 61.45 319 P **P 13 43 03.7 +0.6**
comp=Z,518nm,1.0s,SNR=28
BRVK Borovoye 61.45 319 *c i* P **P 13 43 03.4 +0.3**
BRVK pmax pmax
comp=Z,94nm,1.0s,mb5.9
BRVK Borovoye 61.45 319⇑ *eP* **P 13 43 03.3 +0.2**
comp=Z,83nm,0.9s,mb5.9
MENT Mentasta 61.60 30 *eP* **P 13 43 08.8 +4.9**
DAWY Dawson 63.59 29 *eP* **P 13 43 18.6 +1.5**
KBL Kabul 64.58 298 *eP* **P 13 43 24.8 +0.5**
KBL pmax pmax
comp=Z,76nm,0.9s,mb5.7
KBL Kabul 64.58 298 *eP* **P 13 43 24.8 +0.6**
comp=Z,76nm,0.9s,mb5.7
INK Inuvik 65.88 24 P **P 13 43 32.4 +0.3**
comp=Z,2.2nm,0.5s,mb4.4,baz=277,slow=5.8,SNR=19
INK Inuvik 65.88 24 P **P 13 43 32.4 +0.3**
SVE Sverdlovsk 66.70 324⇑ *eP* **P 13 43 38.2 +0.7**
SVE pmax pmax
comp=Z,43nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,523nm,19.0s,MS4.8
ARU Arti 67.89 323 *d i* P **P 13 43 43.6 -1.5**
ARU *e* 13 44 07.1
ARU *e* 13 46 15.6
ARU S S 13 52 40.9 -2.6
ARU SS SS 13 56 59.6 -5.1
ARU pmax pmax
comp=Z,57nm,1.0s,mb5.6
ARU Arti 67.89 323 *eP* **P 13 43 43.4 -1.7**
comp=Z,41nm,0.8s,mb5.5
SOKR Solikamsk 68.31 327 *eP* **P 13 43 45.9 -1.8**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,430nm,18.0s,MS4.7
ABKAR Akbulak array 68.35 316 *eP* **P 13 43 47.6 -0.5**
comp=Z,14nm,0.6s,mb5.2
DLBC Dease Lake 68.57 34 LR LR 14 12 31.9
comp=Z,245nm,18.7s,MS4.5,baz=170,slow=35
URZ Urewera 69.14 152 P **P 13 43 50.9 -2.2**
comp=Z,9.7nm,1.1s,mb4.7,baz=283,slow=14,SNR=2.9
URZ LR LR 14 08 56.6
comp=Z,394nm,19.5s,MS4.7,baz=149,slow=32
AKTO Aktyubinsk 69.33 317 LR LR 14 16 35.7
comp=Z,409nm,18.8s,MS4.7,baz=268,slow=38
RPZ Rata Peaks 71.57 159 P **P 13 44 04.9 -2.9**
comp=Z,13nm,1.1s,mb4.8,baz=173,slow=8.1,SNR=3.6
YKA Yellowknife Ar 74.82 28 P **P 13 44 26.7 -0.1**
comp=Z,1.8nm,0.6s,mb4.2,baz=291,slow=5.8,SNR=37
YKA LR LR 14 16 28.4
comp=Z,28nm,21.0s,MS3.5,baz=350,slow=35
RES Resolute Bay 75.30 14 *eP* **P 13 44 29.6 +0.1**
RES pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
RES Resolute Bay 75.30 14 *eP* **P 13 44 29.6 +0.1**
comp=Z,5.5nm,0.8s,mb4.5
APA Apatity 75.75 338⇑ *eP* **P 13 44 32.0 -0.1**
APA *i* 13 44 47.2
APA MLR MLR
comp=Z,2μm,18.0s,MS5.4
KEV Kevo 76.70 341 *eP* **P 13 44 35.9 -1.6**
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KEV Kevo 76.70 341 *ep* **P 13 44 35.9 -1.6**
comp=Z,7.7nm,0.7s,mb4.7
HUMO Hull Mountain 77.10 49 *eP* **P 13 44 35.4 -4.8**
comp=Z,5.8nm,1.1s,mb4.4
PPT Papeete 77.19 116 *e*LR LR 14 08 22.1
comp=Z,274nm,24.2s
ARCES ARCESS Array B 77.26 341 P **P 13 44 39.7 -1.0**
comp=Z,18nm,0.9s,mb5.0,baz=73,slow=8.1,SNR=12
ARCES LR LR 14 23 23.0
comp=Z,813nm,18.5s,MS5.1,baz=53,slow=39
ARCES ARCESS Array B 77.26 341 P **P 13 44 39.7 -1.0**
ARCES LR LR 14 23 23.0
YBH Yreka Blue Hor 77.57 50 *eP* **P 13 44 43.5 +0.6**
YBH pmax pmax
comp=Z,10.0nm,1.3s
YBH Yreka Blue Hor 77.57 50 *eP* **P 13 44 43.5 +0.6**
comp=Z,9.5nm,1.3s,mb4.6
JOF Joensuu 78.75 334 *eP* **P 13 44 48.0 -1.0**
JOF pmax pmax
comp=Z,23nm,0.6s,mb5.3
JOF Joensuu 78.75 334 *ep* **P 13 44 48.0 -1.0**
comp=Z,23nm,0.6s,mb5.3
NEW Newport 78.87 42 *eP* **P 13 44 49.4 -0.6**
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 78.87 42 *eP* **P 13 44 49.4 -0.6**
comp=Z,7.3nm,1.0s,mb4.6
MOS Moscow 79.25 326 *eP* **P 13 44 51.7 -0.2**
OBN Obninsk 80.06 326⇑ *eP* **P 13 44 56.3 -0.1**
OBN *i* 13 45 14.5
OBN *eS* S 13 54 59.9 -0.7
OBN pmax pmax
comp=Z,21nm,1.5s,mb4.8
OBN MLR MLR
comp=Z,600nm,18.0s,MS5.0
BMO Blue Mountains 80.08 45 *eP* **P 13 44 56.0 -0.7**
BMO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BMO Blue Mountains 80.08 45 *eP* **P 13 44 56.0 -0.7**
comp=Z,7.8nm,1.0s,mb4.6
WVOR Wild Horse Val 80.13 48 *eP* **P 13 44 57.2 +0.2**
WVOR pmax pmax
comp=Z,12nm,1.3s,mb4.7
WVOR Wild Horse Val 80.13 48 *eP* **P 13 44 57.2 +0.2**
comp=Z,12nm,1.3s,mb4.7
VSR Storozhevoye 80.38 322 *eP* **P 13 44 58.5 +0.4**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,5.0nm,0.4s
VORD Divnogorie 80.41 322 *eP* **P 13 44 58.7 +0.4**
VORD pmax pmax
comp=Z,3.0nm,0.3s,mb4.7
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,9.0nm,0.4s
BSMT Bassoo Peak 80.47 42 *eP* **P 13 44 59.9 +1.2**
comp=E,6.3nm,1.0s,mb4.5
CMB Columbia Colle 80.58 53 *eP* **P 13 44 59.4 -0.1**
CMB pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CMB Columbia Colle 80.58 53 *eP* **P 13 44 59.4 -0.1**
comp=Z,7.7nm,0.8s,mb4.7
GOF Gofitskoye 80.58 315 *eP* **P 13 44 57.0 -2.4**
JTMT Jette 80.83 42 *eP* **P 13 45 01.2 +0.6**
comp=Z,7.4nm,1.1s,mb4.5
ZEI Tsey 80.93 313 *eP* **P 13 45 01.6 +0.3**
ZEI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
YBMT Yellow Bay 80.94 42 *eP* **P 13 45 01.4 +0.2**
comp=Z,6.6nm,1.0s,mb4.5
SWMT Swartz Lake 81.10 42 *eP* **P 13 45 01.6 -0.5**
comp=Z,2.4nm,0.9s,mb4.1
KAF Kangasniemi 81.15 335 *eP* **P 13 45 00.4 -1.6**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KAF Kangasniemi 81.15 335 *ep* **P 13 45 00.4 -1.6**
comp=Z,4.4nm,0.6s,mb4.6
KIV Kislovodsk 81.26 314 *eP* **P 13 45 03.7 +0.7**
KIV pmax pmax
comp=Z,12nm,0.7s,mb4.9
KIV MLR MLR
comp=Z,300nm,18.0s,MS4.7
KIV Kislovodsk 81.26 314 *eP* **P 13 45 04.2 +1.2**
comp=Z,11nm,0.7s,mb4.9
TAOE Nuku Hiva Isla 81.34 104 *e*LR LR 14 10 24.9
comp=Z,313nm,26.0s
SLMT Seeley Lake 81.52 42 *eP* **P 13 45 04.8 +0.4**
comp=Z,9.6nm,1.1s,mb4.6
FINES FINESS Array B 81.61 334 P **P 13 45 03.2 -1.3**
comp=Z,3.7nm,0.5s,mb4.6,baz=58,slow=5.5,SNR=30
FINES LR LR 14 24 19.7
comp=Z,214nm,19.0s,MS4.5,baz=192,slow=38
NVAR Mina Array Bea 81.94 52 P **P 13 45 07.2 +0.5**
comp=Z,1.1nm,0.7s,mb3.9,baz=284,slow=5.2,SNR=11
HLID Hailey 82.51 46 *eP* **P 13 45 11.0 +1.4**
comp=Z,5.0nm,1.1s,mb4.5
HRY Holter Researc 82.78 42 *eP* **P 13 45 08.6 -2.3**
comp=Z,3.2nm,0.6s,mb4.5
LRM Limekiln Ridge 82.79 43 *eP* **P 13 45 10.8 -0.2**
comp=Z,36nm,0.9s,mb5.4
DLMT Dillon 82.90 44 *eP* **P 13 45 14.5 +2.9**
comp=Z,2.9nm,0.8s,mb4.4
MCMT McKenzie Canyo 82.98 44 *eP* **P 13 45 11.8 -0.1**
comp=Z,1.2nm,0.9s,mb3.9
VSU Vasula 83.03 332 *eP* **P 13 45 08.4 -3.6**
VSU pmax pmax
comp=Z,47nm,2.5s,mb5.1
BOZ Bozeman (W) 83.38 43 *eP* **P 13 45 14.5 +0.4**
BOZ pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
BOZ Bozeman (W) 83.38 43 *eP* **P 13 45 14.5 +0.5**
comp=Z,2.9nm,1.1s,mb4.2
M13A Montello 83.62 48 *eP* **P 13 45 15.1 -0.3**
comp=Z,4.2nm,0.9s,mb4.6
FFC Flin Flon 84.24 32 P **P 13 45 18.4 +0.1**
comp=Z,50nm,1.2s,mb5.5,SNR=5.6
FFC Flin Flon 84.24 32 *eP* **P 13 45 18.5 +0.2**
FFC pmax pmax
comp=Z,13nm,1.0s,mb5.0
FFC Flin Flon 84.24 32 *eP* **P 13 45 18.5 +0.2**
comp=Z,13nm,1.0s,mb5.0
YMR Madison River 84.25 44 *eP* **P 13 45 20.8 +2.3**
comp=Z,7.9nm,0.8s,mb4.9
ANN Anapa 84.28 317 *eP* **P 13 45 27.6 +8.9**
ANN pmax pmax
comp=Z,30nm,1.0s,mb5.4
IMW Indian Meadow 84.62 44 *eP* **P 13 45 22.5 +2.1**
comp=Z,4.7nm,0.9s,mb4.6
RRI2 Red Ridge 84.62 45 *eP* **P 13 45 20.7 +0.2**
comp=Z,6.1nm,1.1s,mb4.6
REDW Red Top Meadow 84.92 45 *eP* **P 13 45 21.4 -0.6**
comp=Z,7.5nm,1.4s,mb4.6
DUG Dugway 85.05 48 *eP* **P 13 45 22.6 -0.1**
DUG pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
DUG Dugway 85.05 48 *eP* **P 13 45 22.6 -0.1**
comp=Z,5.0nm,0.7s,mb4.8
RLMT Red Lodge 85.10 43 *eP* **P 13 45 23.5 +0.7**
comp=Z,9.3nm,0.9s,mb4.9
HWUT Hardware Ranch 85.26 47 *eP* **P 13 45 23.2 -0.5**
comp=Z,7.1nm,1.1s,mb4.7
JLU Jordanelle 85.80 47 *eP* **P 13 45 26.8 +0.4**
comp=Z,4.1nm,0.3s,mb5.1
DAU Daniels Canyon 86.02 48 *eP* **P 13 45 27.6 +0.1**
DAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
DAU Daniels Canyon 86.02 48 *eP* **P 13 45 27.6 +0.1**
comp=Z,4.2nm,0.7s,mb4.8
PDAR Pinedale Array 86.04 45 P **P 13 45 27.6 +0.1**
comp=Z,0.5nm,0.6s,mb3.9,baz=273,slow=1.7,SNR=5.4
PDAR LR LR 14 18 14.7
comp=Z,269nm,19.7s,MS4.7,baz=305,slow=32
AKASG Malin Array Be 86.12 324 P **P 13 45 26.2 -1.6**
comp=Z,1.8nm,0.6s,mb4.5,baz=52,slow=5.0,SNR=7.1
AKASG LR LR 14 26 36.9
comp=Z,412nm,21.1s,MS4.8,baz=70,slow=38
AKASG Malin Array Be 86.12 324 P **P 13 45 26.2 -1.6**
AKASG LR LR 14 26 36.9
MSU Marysvale 86.25 50 *eP* **P 13 45 29.3 +0.6**
MSU pmax pmax
comp=Z,26nm,1.8s,mb5.2
MSU Marysvale 86.25 50 *eP* **P 13 45 29.3 +0.6**
comp=Z,26nm,1.8s,mb5.2
SRU San Rafael 87.12 48 *eP* **P 13 45 32.9 0.0**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SRU San Rafael 87.12 48 *eP* **P 13 45 32.9 -0.1**
comp=Z,4.6nm,0.8s,mb4.8
NB2 NORSAR Subarra 87.32 339 P **P 13 45 32.0 -1.4**
comp=Z,9.7nm,1.2s,mb4.9,baz=43,slow=5.3
NOA NORSAR Array B 87.32 339 P **P 13 45 32.4 -1.0**
comp=Z,2.2nm,0.8s,mb4.5,baz=49,slow=4.8,SNR=6.7
NOA PP PP 13 48 56.9 0.0
comp=Z,2.2nm,0.9s,baz=46,slow=7.8,SNR=4.7
NOA NORSAR Array B 87.32 339 P **P 13 45 32.4 -1.0**
NOA PP PP 13 48 56.9 0.0
BR131 Keskin Array S 89.20 313 *eP* **P 13 45 42.4 -0.4**
comp=Z,3.3nm,0.8s,mb4.7
BRTR Keskin Array B 89.20 313 P **P 13 45 42.4 -0.4**
comp=Z,3.0nm,0.8s,mb4.7,baz=109,slow=3.3,SNR=12
BRTR LR LR 14 29 58.7
comp=Z,126nm,20.1s,MS4.3,baz=38,slow=38
ULM Lac du Bonnet 89.88 33 LR LR 14 23 37.1
comp=Z,151nm,19.9s,MS4.4,baz=334,slow=34
BUR08 Bucovina Ar. S 90.03 323 *eP* **P 13 45 46.1 -0.4**
KWP Kalwaria Pacla 90.15 326 *eP* **P 13 45 46.5 -0.6**
KWP pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
KWP Kalwaria Pacla 90.15 326 *eP* **P 13 45 46.5 -0.5**
comp=Z,10.0nm,0.8s,mb5.2
ANMO Albuquerque 91.99 50 P **P 13 45 57.0 +1.1**
comp=Z,1.6nm,0.8s,mb4.4,baz=323,slow=2.0,SNR=6.5
CLL Collm 93.68 331 *eP* Px 13 46 14.0
CLL MLR MLR
comp=Z,300nm,19.6s,MS4.8
CLL Collm 93.68 331 *eP* Px 13 46 14.0
CLL Lm 13 31 00.0
comp=N,200nm,19.3s
CLL Lm 13 31 00.0
comp=E,200nm,21.5s
CLL Lm 13 31 00.0
comp=Z,300nm,19.6s
CLL *e*PP PP 13 49 50.0 +2.5
CLL Collm 93.68 331 *e*PP PP 13 49 45.0 -2.5
CLL LmV 13 31 00.0
comp=Z,300nm,19.6s
GERES GERESS Array B 95.11 329 LR LR 14 32 19.2
comp=Z,239nm,19.9s,MS4.7,baz=288,slow=38
TXAR Lajitas Array 96.91 54 P **P 13 46 20.1 +1.6**
comp=Z,0.1nm,0.4s,mb3.6,baz=293,slow=6.4,SNR=4.9
TXAR LR LR 14 23 35.0
comp=Z,208nm,21.3s,MS4.6,baz=335,slow=31
SCHQ Schefferville 97.81 17 LR LR 14 32 50.3
comp=Z,145nm,18.6s,MS4.5,baz=325,slow=37
TORD Torodi Ar. Bea 127.69 310 PKP PKPdf 13 51 51.4 -1.7
comp=Z,0.5nm,0.6s,baz=17,slow=4.5,SNR=4.3
TORD PP PP 13 53 49.8 -3.9
comp=Z,1.2nm,1.0s,baz=18,slow=6.7,SNR=3.5
PLCA Paso Flores 146.83 129 PKPbc PKPbc 13 52 29.1 0.0
comp=Z,5.1nm,0.7s,baz=210,slow=4.3,SNR=13

PLCA	**Paso Flores**	**146.83**	**129**	*e*PKPdf	PKPdf	13 52 27.5	+0.2
PLCA				PKPbc	PKPbc	13 52 29.1	0.0
LPAZ	**La Paz**	**149.62**	**82**	PKPbc	PKPbc	13 52 38.0	+0.9
	comp=Z,4.8nm,0.8s,baz=319,slow=2.8,SNR=10						

IDC 10 13:40:14.7±2.0, 15°.74S×174°.92W, h250km±58km, mb3.6/2, mb1 3.8/3, mb1mx3.2/17, mbtmp3.6/3, Error ellipse: s-maj=299.9km s-min=30.5km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.54**	**60**	P	Pn	13 41 14.8	+1.5
	14nm,0.3s,baz=270,slow=4.0,SNR=35						
AFI				S	S	13 41 59.7	0.0
	23nm,0.3s,baz=92,slow=21,SNR=10						
WRA	**Warramunga Arr**	**48.34**	**257**	P	P	13 48 31.1	-0.6
	1.1nm,0.4s,baz=94,slow=6.8,SNR=16						
ASAR	**Alice Springs**	**48.61**	**252**	P	P	13 48 34.0	+0.3
	2.6nm,0.4s,baz=89,slow=7.6,SNR=58						
BRTR	**Keskin Array B**	**145.48**	**319**	PKPbc	PKPbc	13 59 23.3	-0.5
	1.0nm,0.7s,baz=55,slow=3.1,SNR=7.1						

NIED ***10*** *13:49:00, 23°.80N×144°.00E, h8km, Mw4.5 Best double couple: M0:6.21000×10^15 NP1:φs=267.00000°, δ72.00000°, λ-106.00000°. NP2:φs=129.00000°, δ24.00000°, λ-50.00000°.*

ISCJB ***10*** *13:49:18.6±1.2, 23°.50N±0°.03×143°.38E±0°.06, h4km±8km, mb4.6/66, MS4.0/15, Error ellipse: s-maj=10.0km s-min=5.7km az=172.9*

IDC ***10*** *13:49:19.7±0.5, 23°.48N×143°.31E, h0km, mb4.2/21, mb1 4.3/24, mb1mx4.3/30, mbtmp4.2/24, ML4.0/3, MS4.0/8, Ms1 4.0/8, ms1mx3.6/39, Error ellipse: s-maj=18.6km s-min=12.4km az=77.0*

MOS ***10*** *13:49:22.7±1.0, 23°.48N×143°.33E, h33km, mb4.9/24, Error ellipse: s-maj=13.9km s-min=6.8km az=110.4*

BJI ***10*** *13:49:22.0, 23°.44N×143°.55E, h34km, mB5.0/23, mb4.7/38, Ms4.3/27, Ms7 4.1/26*

NEIC ***10*** *13:49:24.9±0.3, 23°.44N×143°.27E, h35km, mb4.7/22, MW4.5(NIED), Error ellipse: s-maj=8.8km s-min=6.1km az=85.0*

JMA ***10*** *13:49:25.3±0.1, 23°.83N×143°.96E, h90km±4km, M4.5*

ISC 10 13:49:21.8±1.5, 23°.51N±0°.03×143°.40E±0°.06, h13km±9km, h35km±.4km; pP-P, n144, σ1.9 27/155, mb4.6/66, MS4.0/15, 6C-1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.30**	**341**	P	**Pn**	**13 50 14.8**	**+1.6**
JHHJ				*e*S	**Sn**	**13 50 52.4**	**+0.1**
CBIJ	**Chichi jima**	**3.74**	**343**	P	**Pn**	**13 50 20.5**	**+1.3**
CBIJ				S	**Sn**	**13 51 02.3**	**-0.8**
CBIJ	**Chichi jima**	**3.74**	**343**	Pn	**Pn**	**13 50 20.7**	**+1.5**
	18nm,0.3s,baz=136,slow=15,SNR=9.8						
CBIJ				Sn	**Sn**	**13 51 01.7**	**-1.4**
	69nm,0.3s,baz=122,slow=22,SNR=17						
GUMO	**Guam**	**9.96**	**172**	LR	LR	13 55 06.0	
	comp=Z,421nm,20.5s,baz=80,slow=35						
JOD2	**Odawara 2**	**12.30**	**343**	P	**Pn**	**13 52 17.1**	**+0.4**
JHU	**Hanno**	**12.81**	**345**	P	**Pn**	**13 52 22.3**	**-1.3**
JHU				*e*S	**Sn**	**13 54 37.7**	**-8.4**
JRY	**Ryogami san**	**13.06**	**344**	P	**Pn**	**13 52 25.9**	**-1.1**
JRY				*e*S	**Sn**	**13 54 45.2**	**-7.0**
JTO	**Tosashimizu**	**13.19**	**317**	P	**Pn**	**13 52 32.5**	**+3.7**
JAM	**Amami Oshima**	**13.33**	**294**	P	**Pn**	**13 52 34.9**	**+4.1**
JNG	**Nsakai**	**13.65**	**342**	P	**Pn**	**13 52 34.1**	**-0.9**
MJAR	**Matsushiro Arr**	**13.74**	**342**	Pn	**Pn**	**13 52 34.0**	**-2.3**
	0.5nm,0.3s,baz=160,slow=11,SNR=9.1						
MAJO	**Matsushiro**	**13.74**	**342**	*e*P	**Pn**	**13 52 35.6**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAJO	**Matsushiro**	**13.74**	**342**	*e*Pn	**Pn**	**13 52 35.6**	**-0.7**
	comp=Z,6.1nm,0.6s						
MAT	**Matsushiro**	**13.74**	**342**	P	**Pn**	**13 52 33.8**	**-2.6**
MAT				*e*S	**Sn**	**13 55 04.5**	**-4.4**
JOW	**Kunigami**	**14.09**	**287**	LR	LR	13 57 30.3	
	comp=Z,902nm,21.0s,baz=98,slow=35						
JHK	**Hiroka**	**14.21**	**346**	P	**Pn**	**13 52 40.3**	**-2.4**
JMM	**Marumori**	**14.49**	**352**	*e*S	**Sn**	**13 55 16.0**	**-11**
ERM	**Erimo**	**18.46**	**359**	*e*P	**Pn**	**13 53 35.4**	**-1.9**
KSRS	**Korea Array**	**19.23**	**320**	P	**Pn**	**13 53 45.2**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=137,slow=11,SNR=23						
KSRS				LR	LR	14 00 52.4	
	comp=Z,410nm,18.4s,baz=148,slow=36						
KS15	**Wonju Array Si**	**19.24**	**320**	*e*P	**Pn**	**13 53 44.9**	**-2.0**
YHNB	**Yeheng**	**20.14**	**278**	*e*P	**P**	**13 53 55.0**	**-0.7**
	comp=Z,48nm,1.1s						
ASAJ	**Asahikawa**	**20.57**	**358**	P	**P**	**13 54 01.5**	**+1.3**
	comp=Z,5.2nm,0.8s,baz=242,slow=14,SNR=5.2						
VLA	**Vladivostok**	**21.76**	**337**	*e*P	**P**	**13 54 13.2**	**+0.2**
VLA				*e*S	**S**	**13 58 08.8**	**-4.5**
VLA				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.4						
VLA				MLR	MLR		
	comp=Z,500nm,19.7s,MS3.9						
NJ2	**Nanjing**	**23.29**	**297**	*e*P	**P**	**13 54 30.7**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
YSS	**Yuzh-Sakhalins**	**23.40**	**359**	*e*P	**P**	**13 54 35.0**	**+4.6**
YSS	**Yuzh-Sakhalins**	**23.40**	**359**	*e*P	**P**	**13 54 31.6**	**+1.2**
DAV	**Davao City (W)**	**23.67**	**229**	LR	LR	14 02 18.0	
	comp=Z,430nm,18.1s,MS4.0,baz=359,slow=33						
MDJ	**Mudanjiang**	**23.90**	**335**	P	**P**	**13 54 35.4**	**+0.2**
MDJ				pP		13 54 44.1	
MDJ				sP	sP	13 54 48.0	+7.1
MDJ				S	**S**	**13 58 46.4**	**-4.6**
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,180nm,9.0s						
MDJ				LR	LR		
	comp=N,360nm,18.6s,MS3.9						
MDJ				LR	LR		
	comp=E,170nm,18.6s,MS3.9						
MDJ				LR	LR		
	comp=Z,430nm,18.0s,MS4.0						
MDJ	**Mudanjiang**	**23.90**	**335**	*e*P	**P**	**13 54 34.4**	**-0.8**
	comp=Z,12nm,0.9s,mb4.3						
CN2	**Changchun**	**25.06**	**328**	*e*P	**P**	**13 54 48.2**	**+2.4**
CN2				*e*pP	pP	13 54 57.5	+7.7
CN2				*e*S	**S**	**13 59 07.3**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.0						
WHN	**Wuhan**	**26.76**	**292**	P	**P**	**13 55 03.1**	**+1.7**
KLR	**Kul'dur**	**27.27**	**343**	*e*P	**P**	**13 55 03.0**	**-2.7**
BJI	**Beijing**	**28.26**	**312**	P	**P**	**13 55 14.9**	**+0.2**
BJI				S	**S**	**13 59 59.2**	**-1.1**
BJI				pmax	pmax		
	comp=Z,21nm,0.5s,mb5.0						
BJI				pmax	pmax		
	comp=Z,250nm,4.5s						
BJI				LR	LR		
	comp=N,200nm,20.0s						
BJI				LR	LR		
	comp=E,240nm,14.7s						
BJI				LR	LR		
	comp=Z,210nm,20.9s,MS3.7						
HHC	**Hu-ho-hao-te**	**31.79**	**311**	*e*P	**P**	**13 55 47.8**	**+1.9**
HHC				pP	pP	13 55 57.5	+7.5
HHC				sP	sP	13 56 01.3	+10
HHC				PP	PP	13 56 53.2	-4.5
HHC				PcP	PcP	13 58 38.3	+1.3
HHC				S	**S**	**14 00 54.7**	**-1.0**
HHC				sS	sS	14 01 10.2	+7.8
HHC				ScP	ScP	14 02 18.8	-1.3
HHC				PcS	PcS	14 02 22.8	+1.4
HHC				SS	SS	14 02 46.6	-25
HHC				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,100nm,7.0s						
HHC				LR	LR		
	comp=N,180nm,14.2s,MS4.2						
HHC				LR	LR		
	comp=E,290nm,14.8s,MS4.2						
HHC				LR	LR		
	comp=Z,210nm,15.1s,MS3.9						
GYA	**Guiyang**	**33.36**	**283**	P	**P**	**13 56 01.0**	**+1.2**
GYA				pP	pP	13 56 11.0	+7.0
GYA				sP	sP	13 56 16.7	+11
GYA				PP	PP	13 57 12.7	-2.6
GYA				PcP	PcP	13 58 42.6	+1.0
GYA				S	**S**	**14 01 16.5**	**-4.0**
GYA				sS	sS	14 01 34.2	+6.9
GYA				ScP	ScP	14 02 23.8	-2.0
GYA				SS	SS	14 03 19.0	-25
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,15.8s,MS4.4						
GYA				LR	LR		
	comp=E,430nm,16.0s,MS4.4						
GYA				LR	LR		
	comp=Z,540nm,16.4s,MS4.3						
LZH	**Lanzhou**	**36.31**	**299**	*e*P	**P**	**13 56 25.6**	**+0.4**
LZH				pP	pP	13 56 35.3	+6.0
LZH				sP	sP	13 56 39.4	+8.4
LZH				*e*PP	PP	13 57 48.5	+0.7
LZH				*e*S	**S**	**14 02 02.0**	**-3.7**
LZH				sS	sS	14 02 17.7	+5.2
LZH				*e*SS	SS	14 04 26.4	-18
LZH				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
LZH				pmax	pmax		
	comp=Z,150nm,6.3s						
LZH				LR	LR		
	comp=N,590nm,13.5s						
LZH				LR	LR		
	comp=Z,840nm,16.2s,MS4.6						
KMI	**Kunming**	**36.99**	**281**	P	**P**	**13 56 32.1**	**+0.9**
KMI				pP	pP	13 56 41.5	+6.2
KMI				sP	sP	13 56 46.2	+9.2
KMI				PP	PP	13 57 57.8	+2.3
KMI				S	**S**	**14 02 13.2**	**-3.2**
KMI				SS	SS	14 04 41.6	-17
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
KMI				pmax	pmax		
	comp=Z,200nm,5.7s						
KMI				LR	LR		
	comp=N,140nm,17.3s,MS4.2						
KMI				LR	LR		
	comp=E,270nm,16.9s,MS4.2						
KMI				LR	LR		
	comp=Z,230nm,19.6s,MS4.0						
ULN	**Ulaanbaatar**	**37.71**	**319**	*e*P	**P**	**13 56 35.6**	**-1.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**37.71**	**319**	*e*P	**P**	**13 56 35.6**	**-1.3**
	comp=Z,2.3nm,0.8s,mb4.0						
SONM	**Songino Array**	**38.09**	**319**	P	**P**	**13 56 39.7**	**-0.5**
	comp=Z,1.4nm,0.7s,mb3.8,baz=116,slow=5.8,SNR=7.4						
SONM				LR	LR	14 12 04.8	
	comp=Z,266nm,19.7s,MS4.1,baz=84,slow=36						
YAK	**Yakutsk**	**39.63**	**350**	*e*P	**P**	**13 56 53.4**	**+0.6**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
YAK	**Yakutsk**	**39.63**	**350**	*e*P	**P**	**13 56 53.4**	**+0.6**
	comp=Z,13nm,0.8s,mb4.7						
GTA	**Gaotai**	**40.01**	**304**	*e*P	**P**	**13 56 59.5**	**+3.1**
GTA				pP	pP	13 57 09.3	+8.7
GTA				sP	sP	13 57 13.3	+11
GTA				S	**S**	**14 03 03.9**	**+2.2**
GTA				sS	sS	14 03 20.1	+12
GTA				SS	SS	14 05 57.0	-1.8
GTA				pmax	pmax		
	comp=Z,340nm,3.9s						
GTA				LR	LR		
	comp=N,190nm,17.7s,MS4.2						
GTA				LR	LR		
	comp=E,200nm,17.7s,MS4.2						
GTA				LR	LR		
	comp=Z,230nm,18.0s,MS4.1						
BOD	**Bodaibo**	**40.27**	**336**	*e*P	**P**	**13 56 57.9**	**-0.3**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
ZAK	**Zakamensk**	**41.05**	**321**	*e*P	**P**	**13 56 57.9**	**-6.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
TLY	**Talaya**	**41.43**	**323**	*e*P	**P**	**13 57 10.4**	**+2.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
CHTO	**Chiang Mai**	**41.60**	**272**	*e*P	**P**	**13 57 09.5**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
CHTO	**Chiang Mai**	**41.60**	**272**	*e*P	**P**	**13 57 09.5**	**-0.3**
	comp=Z,6.2nm,0.9s,mb4.2						
CM31	**Chiang Mai Arr**	**41.69**	**272**	*e*P	**P**	**13 57 08.6**	**-1.9**
CMAR	**Chiang Mai Arr**	**41.69**	**272**	P	**P**	**13 57 11.1**	**+0.6**
	comp=Z,2.3nm,0.7s,mb3.9,baz=61,slow=7.7,SNR=18						
CMAR				LR	LR	14 16 03.7	
	comp=Z,180nm,18.2s,MS4.0,baz=104,slow=38						
CTA	**Charters Tower**	**43.42**	**176**	P	**P**	**13 57 24.4**	**0.0**
	comp=Z,2.9nm,0.7s,mb4.1,baz=349,slow=15,SNR=4.4						
CTAO	**Charters Tower**	**43.42**	**176**	*e*P	**P**	**13 57 24.6**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**43.42**	**176**	*e*P	**P**	**13 57 24.6**	**+0.3**
	comp=Z,5.9nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	**44.07**	**192**	*e*P	**P**	**13 57 28.8**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
WRAB	**Tennant Creek**	**44.07**	**192**	*e*P	**P**	**13 57 28.8**	**-0.8**
	comp=Z,13nm,0.7s,mb4.8						
WB2	**Warramunga Arr**	**44.08**	**192**	*e*P	**P**	**13 57 28.5**	**-1.1**
WRA	**Warramunga Arr**	**44.08**	**192**	P	**P**	**13 57 29.1**	**-0.6**
	comp=Z,4.4nm,0.6s,mb4.4,baz=15,slow=8.1,SNR=72						
WRA				PcP	PcP	13 59 14.7	-0.3
	comp=Z,3.5nm,0.8s,baz=3.9,slow=3.4,SNR=7.8						
FITZ	**Fitzroy Crossi**	**44.84**	**204**	*e*P	**P**	**13 57 35.1**	**-0.8**
	comp=Z,4.7nm,0.6s,mb4.5						
BILL	**Bilibino**	**46.72**	**12⇑**	*i*P	**P**	**13 57 52.0**	**+1.9**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BILL	**Bilibino**	**46.72**	**12**	*e*P	**P**	**13 57 51.7**	**+1.7**
	comp=Z,5.5nm,1.1s,mb4.4						
LSA	**Lhasa**	**46.81**	**289**	P	**P**	**13 57 53.4**	**+2.0**
LSA	**Lhasa**	**46.81**	**289**	*e*P	**P**	**13 57 51.6**	**+0.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**46.81**	**289**	*e*P	**P**	**13 57 51.6**	**+0.3**
	comp=Z,5.6nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**47.79**	**192**	P	**P**	**13 57 58.0**	**-0.9**
	comp=Z,1.5nm,0.6s,mb4.2,baz=16,slow=11,SNR=22						
TIXI	**Tiksi**	**48.88**	**354**	*e*P	**P**	**13 58 06.6**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
TIXI	**Tiksi**	**48.88**	**354**	*e*P	**P**	**13 58 07.7**	**+0.9**
	comp=Z,3.9nm,1.0s,mb4.4						
WMQ	**Urumqi**	**49.61**	**308**	P	**P**	**13 58 13.6**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,140nm,5.0s						
WMQ				LR	LR		
	comp=N,78nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=E,100nm,21.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,110nm,20.0s,MS3.9						
MBWA	**Marble Bar**	**50.02**	**209**	*e*P	**P**	**13 58 14.4**	**-1.7**
	comp=Z,4.9nm,0.8s,mb4.6						
GUN	**Gumba**	**51.62**	**288**	*e*P	**P**	**13 58 29.7**	**+1.5**
	comp=Z,17nm,0.5s,mb5.2						
PKI	**Pulchoki**	**52.08**	**287**	*e*P	**P**	**13 58 32.5**	**+0.8**
PKIN	**Phulchoki**	**52.09**	**287**	*e*P	**P**	**13 58 32.3**	**+0.5**
	comp=Z,7.0nm,0.5s,mb4.8						
PKIN	**Phulchoki**	**52.09**	**287**	*e*P	**P**	**13 58 32.4**	**+0.6**
	comp=Z,14nm,0.6s,mb5.1						
KKN	**Kakani**	**52.16**	**288**	*e*P	**P**	**13 58 32.4**	**+0.1**
	comp=Z,4.2nm,0.3s,mb4.8						
DMN	**Daman**	**52.34**	**288**	*e*P	**P**	**13 58 34.5**	**+0.9**
	comp=Z,6.8nm,0.5s,mb4.8						
ZAA0	**Zalesovo Array**	**52.93**	**321**	*e*P	**P**	**13 58 37.0**	**-0.6**
ZALV	**Zalesovo Beam**	**52.93**	**321**	P	**P**	**13 58 36.8**	**-0.7**
	comp=Z,2.5nm,0.6s,mb4.3,baz=100,slow=6.7,SNR=6.5						
ZALV				LR	LR	14 21 25.1	
	comp=Z,99nm,20.6s,MS3.9,baz=70,slow=36						
MK31	**Makanchi Array**	**53.64**	**312**	*e*P	**P**	**13 58 42.5**	**-0.4**
MKAR	**Makanchi Array**	**53.64**	**312**	*e*P	**P**	**13 58 43.2**	**+0.3**
MKAR				*e**PP	pP	13 59 00.9	+14
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**53.64**	**312**	P	**P**	**13 58 42.0**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.4,baz=98,slow=8.3,SNR=40						
NVS	**Novosibirsk**	**54.01**	**322**	*i* P	**P**	**13 58 45.3**	**-0.1**
STKA	**Stephens Creek**	**55.10**	**182**	*e*P	**P**	**13 58 52.5**	**-1.0**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**55.10**	**182**	P	**P**	**13 58 53.1**	**-0.4**
	comp=Z,2.3nm,0.4s,mb4.5,baz=4.5,slow=7.1,SNR=8.8						
STKA	**Stephens Creek**	**55.10**	**182**	*e*P	**P**	**13 58 52.5**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.2						
KURK	**Kurchatov**	**56.30**	**316**	*c i*P	**P**	**13 59 02.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
KURK	**Kurchatov**	**56.30**	**316**	P	**P**	**13 59 02.1**	**0.0**
	comp=Z,19nm,0.8s,mb5.2,baz=92,slow=7.7,SNR=50						
KURK	**Kurchatov**	**56.30**	**316**	*e*P	**P**	**13 59 02.0**	**-0.1**
COCO	**West Island**	**57.73**	**237**	*e*P	**P**	**13 59 11.2**	**-1.5**
KSH	**Kashi**	**58.41**	**303**	*e*P	**P**	**13 59 21.4**	**+4.3**
KSH				*e*pP	pP	13 59 31.6	+10
KSH				*e*sP	sP	13 59 35.5	+12
KSH				*e*PcP	PcP	14 00 11.6	+3.7
KSH				*e*PP	PP	14 01 32.6	+6.3
KSH				*e*ScP	ScP	14 04 07.6	-0.4
KSH				*e*S	**S**	**14 07 20.1**	**+0.3**
KSH				*e*sS	sS	14 07 36.6	+10
KSH				*e*ScS	ScS	14 09 04.6	-2.2
KSH				*e*SS	SS	14 11 13.5	+1.6
KSH				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
KSH				LR	LR		
	comp=N,84nm,5.4s						
KSH				LR	LR		
	comp=E,87nm,4.7s						
TKM2	**Tokmak 2**	**58.41**	**307**	P	**P**	**13 59 19.1**	**+1.9**
	SNR=10						
TKM2	**Tokmak 2**	**58.41**	**307**	*e*P	**P**	**13 59 18.6**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
TKM2	**Tokmak 2**	**58.41**	**307**	*e*P	**P**	**13 59 18.6**	**+1.5**
	comp=Z,11nm,0.9s,mb4.9						
KZA	**Kyzart**	**58.73**	**306**	P	**P**	**13 59 22.1**	**+2.7**
	SNR=9.9						
KBK	**Karagaybulak**	**58.90**	**307**	P	**P**	**13 59 22.4**	**+1.9**
	SNR=6.4						
AAK	**Ala-Archa**	**59.24**	**307**	P	**P**	**13 59 24.2**	**+1.3**
	SNR=5.8						
AAK	**Ala-Archa**	**59.24**	**307**	*c i*P	**P**	**13 59 23.8**	**+0.9**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
AAK	**Ala-Archa**	**59.24**	**307**	P	**P**	**13 59 23.9**	**+1.0**
	comp=Z,3.5nm,0.7s,mb4.5,baz=124,slow=5.8,SNR=13						
UCH	**Uchtor**	**59.26**	**306**	P	**P**	**13 59 25.1**	**+2.1**
	SNR=21						
UCH	**Uchtor**	**59.26**	**306**	*e*P	**P**	**13 59 25.2**	**+2.2**
UCH				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
UCH	**Uchtor**	**59.26**	**306**	*e*P	**P**	**13 59 25.2**	**+2.1**
	comp=Z,12nm,0.7s,mb5.0						
EKS2	**Erkin-Say**	**59.77**	**307**	P	**P**	**13 59 28.1**	**+1.6**
	SNR=6.3						
AML	**Almayashu**	**59.88**	**306**	P	**P**	**13 59 29.5**	**+2.2**
	SNR=27						
AML	**Almayashu**	**59.88**	**306**	*e*P	**P**	**13 59 29.0**	**+1.7**
AML				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
AML	**Almayashu**	**59.88**	**306**	*e*P	**P**	**13 59 29.0**	**+1.7**
	comp=Z,18nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**61.42**	**205**	*e*P	**P**	**13 59 34.7**	**-3.1**
NWAO				pmax	pmax		
	comp=Z,16nm,1.1s						
NWAO	**Narrogin (SRO)**	**61.42**	**205**	*e*P	**P**	**13 59 34.7**	**-3.1**
	comp=Z,16nm,1.1s,mb5.1						
BVAR	**Borovoye Array**	**61.44**	**319**	P	**P**	**13 59 38.2**	**+0.4**
	comp=Z,29nm,0.7s,mb5.5,baz=93,slow=7.9,SNR=155						
BRVK	**Borovoye**	**61.50**	**319**	*c i*P	**P**	**13 59 38.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.5						
BRVK	**Borovoye**	**61.50**	**319**	*e*P	**P**	**13 59 38.7**	**+0.5**
KBL	**Kabul**	**64.65**	**298**	*e*P	**P**	**14 00 00.1**	**+0.7**
KBL				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
KBL	**Kabul**	**64.65**	**298**	*e*P	**P**	**14 00 00.1**	**+0.7**
	comp=Z,39nm,0.9s,mb5.4						
INK	**Inuvik**	**65.84**	**24**	P	**P**	**14 00 07.6**	**+1.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=289,slow=4.5,SNR=11						
INK	**Inuvik**	**65.84**	**24**	P	**P**	**14 00 07.6**	**+1.0**
SVE	**Sverdlovsk**	**66.74**	**324⇓**	*e*P	**P**	**14 00 13.1**	**+0.6**
SVE				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
ARU	**Arti**	**67.94**	**323**	*c i*P	**P**	**14 00 20.1**	**0.0**
ARU				*e*		14 02 48.6	
ARU				S	S	14 09 18.2	-0.2
ARU				SS	SS	14 13 32.3	-7.5
ARU				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
ARU	**Arti**	**67.94**	**323**	*e*P	**P**	**14 00 20.4**	**+0.3**
ABKAR	**Akbulak array**	**68.40**	**316**	*e*P	**P**	**14 00 22.8**	**-0.3**
	comp=Z,7.6nm,0.6s,mb4.9						
YKA	**Yellowknife Ar**	**74.77**	**28**	P	**P**	**14 01 02.2**	**+1.0**
	comp=Z,1.7nm,0.8s,mb4.0,baz=293,slow=5.6,SNR=17						
YKA	**Yellowknife Ar**	**74.77**	**28**	P	**P**	**14 01 02.2**	**+1.0**
RES	**Resolute Bay**	**75.28**	**14**	*e*P	**P**	**14 01 05.4**	**+1.4**
KEV	**Kevo**	**76.72**	**341**	*e*P	**P**	**14 01 08.2**	**-4.1**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
KEV	**Kevo**	**76.72**	**341**	*e*p	**P**	**14 01 08.2**	**-4.1**
	comp=Z,6.5nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**77.28**	**341**	P	**P**	**14 01 14.7**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.6,baz=63,slow=8.3,SNR=6.5						
YBH	**Yreka Blue Hor**	**77.50**	**50**	P	**P**	**14 01 16.3**	**-0.9**
	comp=Z,1.0nm,0

comp=Z,1.6nm,0.6s,baz=291,slow=5.7,SNR=6.0
LPAZ La Paz 149.54 82 PKPbc PKPbc 14 09 12.9 +1.3
comp=Z,2.0nm,0.7s,baz=22,slow=8.7,SNR=9.2

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*IDC **10** 14:02:20.8±0.5,23°.46N×143°.34E, h0km, mb4.2/19, mb1 4.3/22, mb1mx4.3/30, mbtmp4.2/22, ML4.1/3, MS3.8/5, Ms1 3.8/5, ms1mx3.3/41, Error ellipse: s-maj=19.8km s-min=12.2km az=79.0*
*BJI **10** 14:02:21.1,23°.12N×143°.92E, h36km, mB4.9/21, mb4.6/29, Ms4.4/16, Ms7 4.1/18*
*MOS **10** 14:02:24.0±0.8,23°.43N×143°.23E, h33km, mb4.5/13, Error ellipse: s-maj=16.1km s-min=7.0km az=103.2*
*NEIC **10** 14:02:25.9±0.3,23°.41N×143°.28E, h35km, mb4.8/17, Error ellipse: s-maj=10.9km s-min=6.8km az=82.0*
*JMA **10** 14:02:25.6±0.2,23°.84N×144°.07E, h84km, M4.5*
ISC 10 14:02:22.1±1.3,23°.52N±0°.03×143°.46E±0°.06, h8km±7km, h35km±.8km:pP-P,n118,σ1§30/128, mb4.4/51, MS3.9/12, 6C, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.31**	**340**	P	**Pn**	**14 03 15.7**	**+1.4**
JHHJ				*e*S	**Sn**	**14 03 53.6**	**-0.2**
CBIJ	**Chichi jima**	**3.74**	**342**	P	**Pn**	**14 03 21.1**	**+0.9**
CBIJ				*e*S	**Sn**	**14 04 02.5**	**-2.0**
CBIJ	**Chichi jima**	**3.74**	**342**	Pn	**Pn**	**14 03 21.1**	**+0.9**
	28nm,0.3s,baz=106,slow=22,SNR=12						
CBIJ				Sn	**Sn**	**14 04 02.6**	**-1.9**
	109nm,0.3s,baz=98,slow=23,SNR=13						
JOD2	**Odawara 2**	**12.30**	**343**	P	**Pn**	**14 05 17.7**	**0.0**
JOD2				*e*S	**Sn**	**14 07 30.0**	**-5.1**
JHU	**Hanno**	**12.81**	**345**	P	**Pn**	**14 05 23.2**	**-1.4**
JHU				*e*S	**Sn**	**14 07 39.1**	**-8.4**
JRY	**Ryogami san**	**13.06**	**343**	P	**Pn**	**14 05 26.6**	**-1.5**
JRY				*e*S	**Sn**	**14 07 48.0**	**-5.7**
JHO	**Hitachi**	**13.28**	**350**	P	**Pn**	**14 05 29.7**	**-1.4**
JHO				*e*S	**Sn**	**14 07 48.5**	**-11**
JAG	**Ashikaga**	**13.32**	**346**	P	**Pn**	**14 05 29.2**	**-2.4**
JAG				*e*S	**Sn**	**14 07 47.5**	**-12**
JNG	**Nsakai**	**13.65**	**341**	P	**Pn**	**14 05 35.5**	**-0.6**
MJAR	**Matsushiro Arr**	**13.75**	**342**	Pn	**Pn**	**14 05 37.3**	**-0.1**
	0.6nm,0.3s,baz=159,slow=10,SNR=14						
MAJO	**Matsushiro**	**13.75**	**342**	*e*P	**Pn**	**14 05 38.2**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
MAJO	**Matsushiro**	**13.75**	**342**	*e*Pn	**Pn**	**14 05 38.2**	**+0.8**
	comp=Z,13nm,1.0s						
MAT	**Matsushiro**	**13.75**	**342**	P	**Pn**	**14 05 38.1**	**+0.7**
MAT	**Matsushiro**	**13.75**	**342**	P	**Pn**	**14 05 38.5**	**+1.1**
JFK	**Kawauchi**	**13.98**	**351**	P	**Pn**	**14 05 39.9**	**-0.7**
JOW	**Kunigami**	**14.14**	**287**	LR	LR	14 10 40.2	
	comp=Z,291nm,19.4s,baz=294,slow=36						
JFT	**Otama**	**14.21**	**350**	P	**Pn**	**14 05 43.0**	**-0.7**
JMM	**Marumori**	**14.48**	**352**	P	**Pn**	**14 05 46.0**	**-1.4**
JMM				*e*S	**Sn**	**14 08 16.6**	**-12**
ERM	**Erimo**	**18.45**	**359**	*e*P	**Pn**	**14 06 40.3**	**+2.1**
KSRS	**Korea Array**	**19.25**	**320**	P	**Pn**	**14 06 46.1**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=132,slow=11,SNR=12						
KS15	**Wonju Array Si**	**19.27**	**320**	*e*P	**Pn**	**14 06 46.4**	**-1.7**
YULB	**Yu-li**	**20.33**	**274**	*e*P	**P**	**14 07 02.3**	**+3.3**
	comp=Z,20nm,0.3s						
ASAJ	**Asahikawa**	**20.56**	**358**	P	**P**	**14 07 03.5**	**+2.2**
	comp=Z,4.9nm,0.8s,baz=201,slow=14,SNR=4.5						
SSLB	**Suanglung**	**20.61**	**275**	*e*P	**P**	**14 07 03.1**	**+1.1**
	comp=Z,26nm,0.3s						
NJ2	**Nanjing**	**23.33**	**297**	*e*P	**P**	**14 07 33.4**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.7						
DAV	**Davao City (W)**	**23.72**	**229**	LR	LR	14 15 29.3	
	comp=Z,282nm,20.2s,MS3.7,baz=32,slow=33						
MDJ	**Mudanjiang**	**23.91**	**335**	P	**P**	**14 07 38.0**	**+1.6**
MDJ				pP		14 07 47.2	
MDJ				S	**S**	**14 11 53.1**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8						
MDJ				pmax	pmax		
	comp=Z,57nm,6.0s						
MDJ				LR	LR		
	comp=Z,76nm,19.9s,MS3.2						
MDJ	**Mudanjiang**	**23.91**	**335**	P	**P**	**14 07 37.3**	**+0.8**
	comp=Z,2.9nm,0.5s,mb4.0						
CN2	**Changchun**	**25.08**	**328**	*e*P	**P**	**14 07 51.0**	**+3.9**
CN2				*e*pP	pP	14 08 00.3	+11
CN2				*e*S	**S**	**14 12 11.5**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS4.1						
CN2				LR	LR		
	comp=E,300nm,12.0s,MS4.1						
CN2				LR	LR		
	comp=Z,400nm,13.0s,MS4.1						
HABR	**Khabarovsk**	**25.78**	**347**	*e*P	**P**	**14 07 53.1**	**-0.3**
HABR				*e**SP	sP	14 08 06.3	+10
HABR				*e*PPP		14 08 38.7	
HABR				*e*		14 11 20.3	
HABR				S	**S**	**14 12 21.4**	**-1.4**
HABR				*e**SS	sS	14 12 37.3	+11
HABR				*e*SS		14 13 19.2	
HABR				*e*		14 18 47.0	
HABR				pmax	pmax		
	comp=N,12nm,1.5s						
HABR				pmax	pmax		
	comp=E,14nm,1.8s						
HABR				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.3						
HABR				MLR	MLR		
	comp=Z,133nm,14.0s,MS3.6						
KLR	**Kul'dur**	**27.27**	**343**	*e*P	**P**	**14 08 04.0**	**-2.9**
BJI	**Beijing**	**28.29**	**312**	P	**P**	**14 08 18.4**	**+2.3**
BJI				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6						
BJI				pmax	pmax		
	comp=Z,240nm,5.1s						
PETK	**Petropavlovsk-**	**31.46**	**17**	LR	LR	14 19 44.7	
	comp=Z,118nm,19.4s,MS3.6,baz=200,slow=33						
HHC	**Hu-ho-hao-te**	**31.82**	**311**	*e*P	**P**	**14 08 50.6**	**+3.3**
HHC				pP	pP	14 09 00.5	+11
HHC				sP	sP	14 09 04.2	+14
HHC				PP	PP	14 09 57.2	-1.9
HHC				PcP	PcP	14 11 40.6	+2.3
HHC				S	**S**	**14 13 59.5**	**+1.6**
HHC				sS	sS	14 14 15.2	+13
HHC				ScP	ScP	14 15 19.8	-2.4
HHC				PcS	PcS	14 15 23.9	+1.1
HHC				SS	SS	14 15 51.6	-23
HHC				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,160nm,7.9s						
HHC				LR	LR		
	comp=N,180nm,10.8s,MS4.2						
HHC				LR	LR		
	comp=E,200nm,10.2s,MS4.2						
HHC				LR	LR		
	comp=Z,220nm,14.7s,MS4.0						
XAN	**Xi'an**	**31.90**	**297**	P	**P**	**14 08 50.1**	**+2.0**
XAN				pP	pP	14 08 58.9	+8.4
XAN				sP	sP	14 09 02.8	+11
XAN				S	**S**	**14 14 00.3**	**+0.9**
XAN				sS	sS	14 14 15.3	+12
XAN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
XAN				pmax	pmax		
	comp=Z,43nm,5.9s						
GYA	**Guiyang**	**33.41**	**283**	P	**P**	**14 09 03.2**	**+1.8**
GYA				pP	pP	14 09 14.3	+11
GYA				sP	sP	14 09 19.8	+15
GYA				PP	PP	14 10 16.0	-1.0
GYA				PcP	PcP	14 11 45.7	+2.7
GYA				S	**S**	**14 14 22.3**	**-0.7**
GYA				sS	sS	14 14 39.0	+12
GYA				ScP	ScP	14 15 26.0	-1.9
GYA				SS	SS	14 16 26.5	-20
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=N,490nm,15.9s,MS4.4						
GYA				LR	LR		
	comp=E,430nm,16.2s,MS4.4						
GYA				LR	LR		
	comp=Z,540nm,16.6s,MS4.3						
CD2	**Chengdu**	**35.92**	**291**	P	**P**	**14 09 26.0**	**+2.9**
CD2				pP	pP	14 09 35.7	+10
CD2				sP	sP	14 09 39.5	+13
CD2				PP	PP	14 10 48.2	+3.5
CD2				S	**S**	**14 15 01.8**	**+0.1**
CD2				sS	sS	14 15 17.6	+12
CD2				SS	SS	14 17 25.6	-12
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
CD2				pmax	pmax		
	comp=Z,190nm,4.6s						
CD2				LR	LR		
	comp=Z,230nm,8.3s						
LZH	**Lanzhou**	**36.34**	**299**	*e*P	**P**	**14 09 32.0**	**+5.3**
LZH				pP	pP	14 09 41.8	+13
LZH				sP	sP	14 09 45.7	+16
LZH				*e*PP	PP	14 10 55.9	+6.6
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,110nm,5.1s						
LZH				LR	LR		
	comp=E,450nm,13.5s						
LZH				LR	LR		
	comp=Z,670nm,17.3s,MS4.5						
KMI	**Kunming**	**37.04**	**281**	P	**P**	**14 09 35.5**	**+2.7**
KMI				pP	pP	14 09 45.3	+10
KMI				sP	sP	14 09 49.4	+13
KMI				PP	PP	14 11 01.8	+4.7
KMI				S	**S**	**14 15 18.9**	**0.0**
KMI				sS	sS	14 15 35.1	+12
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
KMI				pmax	pmax		
	comp=Z,85nm,5.8s						
KMI				LR	LR		
	comp=N,310nm,9.3s						
KMI				LR	LR		
	comp=E,180nm,9.7s						
KMI				LR	LR		
	comp=Z,200nm,13.9s,MS4.1						
SONM	**Songino Array**	**38.12**	**319**	P	**P**	**14 09 41.9**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.7,baz=127,slow=7.2,SNR=6.3						
YAK	**Yakutsk**	**39.62**	**350**	*e*P	**P**	**14 09 54.2**	**+0.2**
YAK				*e**PP	pP	14 10 03.8	+7.4
YAK				*e*		14 11 57.3	
YAK				*e*S	**S**	**14 15 55.2**	**-1.9**
YAK				*e**SS	sS	14 16 16.0	+15
YAK				*e*SSS		14 19 25.5	
YAK				*e*		14 19 58.2	
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.4s						
YAK				smax			
	comp=N,36nm,3.1s						
YAK				smax			
	comp=E,32nm,3.8s						
YAK				MLR	MLR		
	comp=Z,119nm,19.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,76nm,21.0s						
SEY	**Seymchan**	**39.85**	**6**	*e*P	**P**	**14 09 57.5**	**+1.6**
BOD	**Bodaibo**	**40.28**	**336**	*e*P	**P**	**14 09 58.3**	**-1.2**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
ZAK	**Zakamensk**	**41.08**	**321**	*e*P	**P**	**14 10 06.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
TLY	**Talaya**	**41.45**	**323**	*e*P	**P**	**14 10 14.1**	**+4.8**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.0						
TLY	**Talaya**	**41.45**	**323**	*e*P	**P**	**14 10 13.8**	**+4.5**
	comp=Z,7.2nm,0.7s,mb4.4						
CMAR	**Chiang Mai Arr**	**41.74**	**272**	P	**P**	**14 10 12.0**	**-0.1**
	comp=Z,1.3nm,0.7s,mb3.7,baz=62,slow=7.9,SNR=10						
CMAR				LR	LR	14 26 12.7	
	comp=Z,132nm,19.6s,MS3.8,baz=137,slow=34						
CTA	**Charters Tower**	**43.43**	**176**	*e*P	**P**	**14 10 25.4**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.2						
CTA				*e*		14 10 38.1	
CTA	**Charters Tower**	**43.43**	**176**	P	**P**	**14 10 25.2**	**-0.4**
	comp=Z,2.7nm,0.6s,mb4.1,baz=15,slow=14,SNR=6.2						
CTAO	**Charters Tower**	**43.43**	**176**	*e*P	**P**	**14 10 21.9**	**-3.7**
WRAB	**Tennant Creek**	**44.09**	**192**	*e*P	**P**	**14 10 30.1**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**44.09**	**192**	*e*P	**P**	**14 10 30.1**	**-0.9**
	comp=Z,12nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**44.10**	**192**	*e*P	**P**	**14 10 29.9**	**-1.2**
WRA	**Warramunga Arr**	**44.10**	**192**	P	**P**	**14 10 29.9**	**-1.2**
	comp=Z,6.1nm,0.5s,mb4.6,baz=17,slow=9.6,SNR=88						
WRA				PcP	PcP	14 12 16.3	0.0
	comp=Z,3.6nm,0.7s,baz=2.3,slow=3.2,SNR=11						
FITZ	**Fitzroy Crossi**	**44.88**	**204**	*e*P	**P**	**14 10 36.6**	**-0.7**
	comp=Z,12nm,0.8s,mb4.8						
FITZ				*e*		14 10 49.3	
FITZ	**Fitzroy Crossi**	**44.88**	**204**	*e*P	**P**	**14 10 35.9**	**-1.4**
	comp=Z,9.0nm,1.0s,mb4.5						
BILL	**Bilibino**	**46.69**	**12**	*e*P	**P**	**14 10 52.0**	**+0.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BILL	**Bilibino**	**46.69**	**12**	*e*P	**P**	**14 10 52.0**	**+0.9**
	comp=Z,2.5nm,0.9s,mb4.1						
LSA	**Lhasa**	**46.85**	**289**	P	**P**	**14 10 54.3**	**+1.4**
ASAR	**Alice Springs**	**47.81**	**192**	P	**P**	**14 10 59.0**	**-1.3**
	comp=Z,2.2nm,0.6s,mb4.4,baz=15,slow=12,SNR=36						
ASAR				PcP	PcP	14 12 29.4	+0.3
	comp=Z,0.8nm,0.7s,baz=14,slow=2.4,SNR=5.5						
TIXI	**Tiksi**	**48.87**	**354**	*e*P	**P**	**14 11 08.1**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
WMQ	**Urumqi**	**49.64**	**308**	*e*P	**P**	**14 11 17.9**	**+3.6**
MBWA	**Marble Bar**	**50.06**	**209**	*e*P	**P**	**14 11 13.7**	**-3.9**
	comp=Z,9.6nm,1.0s,mb4.8						
ZALV	**Zalesovo Beam**	**52.96**	**321**	P	**P**	**14 11 38.0**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.2,baz=110,slow=7.0,SNR=7.6						
MKAR	**Makanchi Array**	**53.67**	**312**	*c e*P	**P**	**14 11 44.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**53.67**	**312**	P	**P**	**14 11 44.1**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=92,slow=8.6,SNR=8.0						
STKA	**Stephens Creek**	**55.11**	**182**	*e*P	**P**	**14 11 53.5**	**-1.4**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**55.11**	**182**	*e*P	**P**	**14 11 54.0**	**-0.9**
	comp=Z,4.2nm,0.6s,mb4.7						
STKA				*e*		14 12 06.9	
STKA	**Stephens Creek**	**55.11**	**182**	P	**P**	**14 11 54.1**	**-0.8**
	comp=Z,5.1nm,0.6s,mb4.8,baz=353,slow=7.0,SNR=16						
STKA	**Stephens Creek**	**55.11**	**182**	*e*P	**P**	**14 11 53.5**	**-1.4**
	comp=Z,2.5nm,0.8s,mb4.3						
FORT	**Forrest**	**55.97**	**196**	*e*P	**P**	**14 12 00.1**	**-1.0**
	comp=Z,11nm,0.7s,mb5.0						
KURK	**Kurchatov**	**56.33**	**316**	*i*P	**P**	**14 12 03.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KURK	**Kurchatov**	**56.33**	**316**	P	**P**	**14 12 03.6**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.6,baz=93,slow=7.5,SNR=16						
KURK	**Kurchatov**	**56.33**	**316**	*e*P	**P**	**14 12 03.0**	**-0.5**
	comp=Z,3.8nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**59.27**	**307**	*e*P	**P**	**14 12 24.1**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
BVAR	**Borovoye Array**	**61.47**	**319**	P	**P**	**14 12 39.3**	**+0.1**
	comp=Z,6.8nm,0.6s,mb5.0,baz=91,slow=7.9,SNR=36						
BRVK	**Borovoye**	**61.53**	**319**	*c i*P	**P**	**14 12 39.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
BRVK	**Borovoye**	**61.53**	**319**	*e*P	**P**	**14 12 38.4**	**-1.2**
	comp=Z,12nm,1.1s,mb4.9						
KBL	**Kabul**	**64.69**	**298**	*e*P	**P**	**14 13 01.7**	**+0.8**
KBL				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
KBL	**Kabul**	**64.69**	**298**	*e*P	**P**	**14 13 01.7**	**+0.8**
	comp=Z,18nm,0.9s,mb5.1						
INK	**Inuvik**	**65.81**	**24**	P	**P**	**14 13 07.8**	**+0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=303,slow=7.2,SNR=8.2						
INK	**Inuvik**	**65.81**	**24**	P	**P**	**14 13 07.8**	**+0.3**
TAU	**Tasmania Unive**	**66.19**	**177**	*e*P	**P**	**14 13 09.3**	**-0.9**
TAU				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.3						
TAU	**Tasmania Unive**	**66.19**	**177**	*e*P	**P**	**14 13 09.3**	**-1.0**
	comp=Z,39nm,1.3s,mb5.3						
SVE	**Sverdlovsk**	**66.76**	**324**	*i e*P	**P**	**14 13 14.4**	**+0.5**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ARU	**Arti**	**67.96**	**323**	*c i*P	**P**	**14 13 21.2**	**-0.3**
ARU						14 15 49.3	
ARU				S	S	14 22 19.9	-0.6
ARU				SS	SS	14 26 39.5	-2.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
ARU	**Arti**	**67.96**	**323**	*e*P	**P**	**14 13 18.8**	**-2.7**
	comp=Z,19nm,1.3s,mb5.0						
ABKAR	**Akbulak array**	**68.43**	**316**	*e*P	**P**	**14 13 23.7**	**-0.9**
	comp=Z,3.1nm,0.5s,mb4.6						
AKTK	**Aktyubinsk**	**69.41**	**317**	P	**P**	**14 13 29.9**	**-0.7**
AKTO	**Aktyubinsk**	**69.41**	**317**	P	**P**	**14 13 29.9**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=93,slow=12,SNR=4.0						
YKA	**Yellowknife Ar**	**74.74**	**28**	P	**P**	**14 14 03.1**	**+0.8**
	comp=Z,1.3nm,0.6s,mb4.0,baz=290,slow=5.8,SNR=18						
RES	**Resolute Bay**	**75.25**	**14**	*e*P	**P**	**14 14 06.5**	**+1.4**
RES				pmax	pmax		
	comp=Z,59nm,2.5s,mb5.1						
RES	**Resolute Bay**	**75.25**	**14**	*e*P	**P**	**14 14 06.5**	**+1.4**
	comp=Z,59nm,2.5s,mb5.1						
APA	**Apatity**	**75.78**	**338**	*i e*P	**P**	**14 14 11.0**	**+2.7**
APA				MLR	MLR		
	comp=Z,2μm,23.0s						
ARCES	**ARCESS Array B**	**77.28**	**341**	P	**P**	**14 14 16.7**	**-0.1**
	comp=Z,4.3nm,0.9s,mb4.4,baz=64,slow=8.2,SNR=4.8						
ARCES	**ARCESS Array B**	**77.28**	**341**	P	**P**	**14 14 16.7**	**-0.1**
YBH	**Yreka Blue Hor**	**77.45**	**50**	*e*P	**P**	**14 14 19.9**	**+1.7**
JOF	**Joensuu**	**78.79**	**334**	*e*P	**P**	**14 14 24.3**	**-0.9**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.0						
JOF	**Joensuu**	**78.79**	**334**	*e*p	**P**	**14 14 24.3**	**-0.9**
	comp=Z,8.3nm,0.4s,mb5.0						
CMB	**Columbia Colle**	**80.46**	**53**	*e*P	**P**	**14 14 36.0**	**+1.2**
CMB				pmax	pmax		
	comp=Z,109nm,1.2s						
CMB	**Columbia Colle**	**80.46**	**53**	*e*P	**P**	**14 14 36.0**	**+1.2**
	comp=Z,109nm,1.2s						
ZEI	**Tsey**	**81.01**	**313**	*e*P	**P**	**14 14 36.5**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KAF	**Kangasniemi**	**81.19**	**335**	*e*P	**P**	**14 14 36.6**	**-1.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KAF	**Kangasniemi**	**81.19**	**335**	*e*p	**P**	**14 14 36.6**	**-1.6**
	comp=Z,1.8nm,0.7s,mb4.1						
FINES	**FINESS Array B**	**81.66**	**334**	P	**P**	**14 14 38.9**	**-1.8**
	comp=Z,1.3nm,0.4s,mb4.3,baz=63,slow=4.8,SNR=31						
FINES	**FINESS Array B**	**81.66**	**334**	P	**P**	**14 14 38.9**	**-1.8**
NVAR	**Mina Array Bea**	**81.82**	**52**	P	**P**	**14 14 43.1**	**+1.0**
	comp=Z,1.6nm,1.0s,mb3.9,baz=294,slow=6.3,SNR=7.2						
ELK	**Elko**	**83.03**	**49**	LR	LR	14 46 06.5	
	comp=Z,61nm,20.0s,MS4.0,baz=92,slow=32						
FFC	**Flin Flon**	**84.16**	**32**	*e*P	**P**	**14 14 55.4**	**+1.6**
HWUT	**Hardware Ranch**	**85.15**	**47**	*e*P	**P**	**14 15 01.0**	**+1.9**
PDAR	**Pinedale Array**	**85.93**	**45**	P	**P**	**14 15 03.6**	**+0.7**
	comp=Z,0.4nm,0.9s,mb3.6,baz=305,slow=5.2,SNR=3.4						
NB2	**NORSAR Subarra**	**87.35**	**339**	P	**P**	**14 15 07.2**	**-2.3**
	comp=Z,2.0nm,1.1s,mb4.3,baz=44,slow=5.6						
BR131	**Keskin Array S**	**89.28**	**313**	*e*P	**P**	**14 15 14.1**	**-5.1**
TXAR	**Lajitas Array**	**96.79**	**54**	P	**P**	**14 15 53.7**	**-0.3**
	comp=Z,0.1nm,0.6s,mb3.4,baz=198,slow=1.8,SNR=2.7						
TORD	**Torodi Ar. Bea**	**127.78**	**310**	PKP	PKPdf	14 21 27.4	-1.8
	comp=Z,0.2nm,0.4s,baz=17,slow=1.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**127.78**	**310**	PKP	PKPdf	14 21 27.4	-1.8
PLCA	**Paso Flores**	**146.74**	**129**	PKPbc	PKPbc	14 22 04.8	-0.1
	comp=Z,2.5nm,0.8s,baz=223,slow=5.2,SNR=6.5						
LPAZ	**La Paz**	**149.49**	**82**	PKPbc	PKPbc	14 22 14.8	+2.0
	comp=Z,1.8nm,0.7s,baz=290,slow=3.2,SNR=8.3						

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*ISCJB **10** 14:06:39.4±0.6,35°.77N±0°.06×81°.67E±0°.08, h10km, mb3.6/7, Error ellipse: s-maj=10.0km s-min=8.9km az=146.5*
*BJI **10** 14:06:39.5,35°.55N×81°.68E, h18km, mb3.5/1, ML3.6/6, Ms3.5/1, Ms7 3.1/1*
*IDC **10** 14:06:39.1±0.9,35°.64N×81°.65E, h0km, mb3.5/6, mb1 3.6/10, mb1mx3.5/27, mbtmp3.5/10, ML3.2/4, Error ellipse: s-maj=27.0km s-min=16.8km az=54.0*
*NEIC **10** 14:06:41.2±1.8,35°.67N×81°.67E, h10km, mb3.2/1, Error ellipse: s-maj=26.1km s-min=13.5km az=152.0*
ISC 10 14:06:41.2±0.6,35°.70N±0°.06×81°.70E±0°.08, h10km, n22, σ1§08/23, mb3.6/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.93**	**312**	*e*Pn	**Pn**	**14 08 08.9**	**-0.2**
KSH				smax			
	comp=N,41nm,0.8s						
KSH				smax			
	comp=E,59nm,0.8s						
KSH	**Kashi**	**5.93**	**312**	Pn	**Pn**	**14 08 07.8**	**-1.3**
KSH				Sn	**Sn**	**14 09 11.1**	**-6.0**
UCH	**Uchtor**	**8.59**	**322**	*e*Pn	**Pn**	**14 08 47.3**	**+1.7**
	comp=E,4.2nm,0.6s						
AAK	**Ala-Archa**	**8.90**	**323**	Pg	Px	14 09 21.1	
	comp=E,0.0nm,0.3s,baz=130,slow=14,SNR=8.4						
AAK				Lg		14 11 21.6	
	comp=E,0.0nm,0.3s,baz=235,slow=22,SNR=6.0						
AML	**Almayashu**	**8.95**	**318**	*e*Pn	**Pn**	**14 08 52.0**	**+1.5**
	comp=E,6.0nm,0.7s						
KBL	**Kabul**	**10.43**	**267**	*e*Pn	**Pn**	**14 09 11.6**	**+0.7**
	comp=E,4.9nm,0.5s						
MK31	**Makanchi Array**	**11.10**	**2**	*e*Pn	**Pn**	**14 09 20.6**	**+0.7**
MK31				*e*Sn	**Sn**	**14 11 22.6**	**-1.3**
MKAR	**Makanchi Array**	**11.10**	**2**	Pn	**Pn**	**14 09 20.6**	**+0.8**
	comp=E,0.3nm,0.3s,baz=180,slow=12,SNR=17						
**G

TTN				*i* S		**Sb**	**14 13 03.9**	**+0.4**
	baz=252							
TWG	**Pinlang**	**0.54**	**266**	*i* P		**Pb**	**14 12 57.3**	**-0.5**
TWG				*i* S		**Sb**	**14 13 05.0**	**-0.1**
	baz=262							
TWF1	**Yuli**	**0.59**	**326**	⇓*i* P		**Pb**	**14 12 58.5**	**-0.1**
TWF1	baz=329			*i* S		**Sb**	**14 13 06.5**	**0.0**
ELDTW	**Lidau**	**0.67**	**299**	P		**Pb**	**14 12 59.6**	**-0.4**
ELDTW	baz=299			S		**Sb**	**14 13 08.8**	**-0.1**
ECL	**Taimali**	**0.70**	**248**	P		**Pb**	**14 12 60.0**	**-0.5**
ECL	baz=243			S		**Sb**	**14 13 09.7**	**0.0**
EHY	**Hungye**	**0.71**	**334**	⇓*i* P		**Pb**	**14 13 00.5**	**-0.2**
EHY	baz=338			S		**Sb**	**14 13 10.1**	**+0.1**
LAY	**Lan-yu**	**0.83**	**187**	*e* P		**Pb**	**14 13 01.2**	**-1.4**
STYT	baz=182 **Tauyuan**	**0.88**	**290**	*e* P		**Pb**	**14 13 04.6**	**+1.0**
STYT	baz=289			S		**Sb**	**14 13 14.9**	**0.0**
EAST	**Anshuo**	**0.89**	**237**	P		**Pb**	**14 13 03.0**	**-0.7**
EAST	baz=233			*e*S		**Sb**	**14 13 14.9**	**-0.1**
YUS	**Yu-Shan**	**0.90**	**314**	⇓*i* P		**Pb**	**14 13 04.0**	**+0.2**
YUS	baz=315			S		**Sb**	**14 13 16.2**	**+0.7**
SSD	**Sandimen**	**0.95**	**263**	P		**Pb**	**14 13 04.2**	**-0.6**
SSD	baz=261			S		**Sb**	**14 13 17.1**	**+0.1**
ESL	**Shilin**	**0.97**	**348**	*i* P		**Pb**	**14 13 04.4**	**-0.7**
ESL	baz=351			*e*S		**Sb**	**14 13 16.7**	**-0.7**
SGST	**Jiashian**	**1.01**	**283**	*e* P		**Pb**	**14 13 05.2**	**-0.6**
SGST	baz=281			*e*S		**Sb**	**14 13 18.5**	**-0.2**
ALS	**Alishan**	**1.01**	**310**	⇓*i* P		**Pb**	**14 13 06.2**	**+0.3**
ALS	baz=310			S		**Sb**	**14 13 18.2**	**-0.5**
WTP	**Ta-pu**	**1.03**	**292**	*e* P		**Pn**	**14 13 07.2**	**+1.0**
WTP	baz=291			*e*S		**Sb**	**14 13 19.2**	**0.0**
SCZT	**Fangliau**	**1.07**	**243**	*e* P		**Pn**	**14 13 06.8**	**0.0**
SCZT	baz=240			*e*S		**Sb**	**14 13 20.6**	**+0.1**
CHN1	**Nanshi**	**1.09**	**287**	*e* P		**Pn**	**14 13 08.3**	**+1.4**
CHN1	baz=286			*e*S		**Sb**	**14 13 20.7**	**-0.2**
CHN4	**Tsaushan**	**1.09**	**297**	*e* P		**Pn**	**14 13 07.4**	**+0.4**
CHN4	baz=296			*e*S		**Sb**	**14 13 20.4**	**-0.6**
HWA	**Hwalien**	**1.11**	**358**	*e* P		**Pn**	**14 13 07.0**	**-0.3**
HWA				*e*S		**Sb**	**14 13 22.1**	**+0.6**
TWM1	**Shoushan**	**1.14**	**268**	*e* P		**Pn**	**14 13 07.5**	**-0.1**
TWM1	baz=266			*e*S		**Sb**	**14 13 21.9**	**-0.4**
TWK	**Hsinying**	**1.15**	**291**	*e* P		**Pn**	**14 13 09.9**	**+2.1**
TWK	baz=290			*e*S		**Sb**	**14 13 21.5**	**-1.1**
CHN5	**Tsauling**	**1.16**	**309**	P		**Pn**	**14 13 09.1**	**+1.2**
CHN5	baz=309			*e*S		**Sb**	**14 13 24.8**	**+1.9**
HEN	**Hengchun**	**1.20**	**225**	*e* P		**Pn**	**14 13 08.8**	**+0.3**
HEN	baz=221			*e*S		**Sn**	**14 13 24.1**	**-0.2**
CHN3	**Shinhua**	**1.21**	**280**	*e* P		**Pn**	**14 13 10.1**	**+1.5**
TWD	**Chiawan**	**1.21**	**357**	*e* P		**Pn**	**14 13 08.2**	**-0.5**
TWD				*e*S		**Sn**	**14 13 24.6**	**+0.2**
SMLT	**Sun Moon Lake**	**1.23**	**326**	⇑*i* P		**Pn**	**14 13 09.4**	**+0.5**
SMLT	baz=327			*e*S		**Sn**	**14 13 24.0**	**-0.8**
TYC	**Yuchr**	**1.27**	**325**	*e* P		**Pn**	**14 13 09.1**	**-0.3**
TYC	baz=326			*e*S		**Sn**	**14 13 25.3**	**-0.5**
CHN2	**Minshiung**	**1.27**	**302**	*e* P		**Pn**	**14 13 09.4**	**-0.1**
CHN2	baz=301			*e*S		**Sn**	**14 13 25.2**	**-0.7**
CHY	**Chiayi**	**1.30**	**299**	*e* P		**Pn**	**14 13 09.9**	**0.0**
CHY	baz=299			*e*S		**Sn**	**14 13 25.9**	**-0.6**
WGK	**Gukeng**	**1.30**	**309**	*e* P		**Pn**	**14 13 09.5**	**-0.3**
WGK	baz=310			*e*S		**Sn**	**14 13 26.4**	**-0.1**
WHF	**Hehuan Shan**	**1.32**	**344**	⇓*i* P		**Pn**	**14 13 10.2**	**0.0**
WHF	baz=346			*e*S		**Sn**	**14 13 26.7**	**-0.6**
WNT	**Mingjian**	**1.35**	**319**	*e* P		**Pn**	**14 13 10.4**	**-0.1**
WNT	baz=319			*e*S		**Sn**	**14 13 27.1**	**-0.7**
CHN8	**Yiju**	**1.41**	**290**	*e* P		**Pn**	**14 13 11.4**	**-0.1**
CHN8	baz=289			*e*S		**Sn**	**14 13 28.8**	**-0.6**
TWT	**Tachien**	**1.45**	**342**	P		**Pn**	**14 13 12.5**	**+0.6**
TWT	baz=343			*e*S		**Sn**	**14 13 30.0**	**-0.4**
ENA	**Nanau**	**1.56**	**3**	*e* P		**Pn**	**14 13 13.4**	**0.0**
ENA	baz=5.0			*e*S		**Sn**	**14 13 33.2**	**+0.2**
NNS	**Nan Shan**	**1.59**	**351**	*e* P		**Pn**	**14 13 14.6**	**+0.7**
NNS	baz=352			*e*S		**Sn**	**14 13 34.0**	**+0.2**
TWQ1	**Liyutan**	**1.68**	**331**	*e* P		**Pn**	**14 13 16.2**	**+1.1**
TWQ1	baz=332			*e*S		**Sn**	**14 13 35.3**	**-0.8**
TWC	**Suao**	**1.75**	**6**	*e* P		**Pn**	**14 13 16.7**	**+0.6**
TWC	baz=7.0			*e*S		**Sn**	**14 13 37.6**	**0.0**
NSY	**Sanyi**	**1.75**	**332**	*e* P		**Pn**	**14 13 16.0**	**0.0**
NSY	baz=333			*e*S		**Sn**	**14 13 37.0**	**-0.7**
NSK	**Sanguang**	**1.82**	**351**	*e* P		**Pn**	**14 13 17.6**	**+0.5**
NSK	baz=353			*e*S		**Sn**	**14 13 39.5**	**-0.1**
TWE	**Neicheng**	**1.85**	**0**	*e* P		**Pn**	**14 13 18.2**	**+0.8**
TWE	baz=2.0			*e*S		**Sn**	**14 13 40.5**	**+0.3**
NSTT	**Nanjuang**	**1.86**	**341**	*e* P		**Pn**	**14 13 18.2**	**+0.6**
NSTT	baz=342			*e*S		**Sn**	**14 13 41.0**	**+0.6**
YOJ	**Yonaguni jima**	**2.02**	**38**	P		**Pn**	**14 13 21.1**	**+1.3**
YOJ				*e*S		**Sn**	**14 13 45.0**	**+0.6**
NWF	**Wu-fen Shan**	**2.20**	**3**	*e* P		**Pn**	**14 13 22.8**	**+0.5**
NWF	baz=4.0			*e*S		**Sn**	**14 13 48.4**	**-0.5**
HATJ	**Hateruma jima**	**2.30**	**59**	P		**Pn**	**14 13 23.8**	**+0.1**
HATJ				*e*S		**Sn**	**14 13 49.7**	**-1.7**
IRIF	**Iriomote-Funau**	**2.40**	**52**	P		**Pn**	**14 13 25.7**	**+0.7**
IRIF				*e*S		**Sn**	**14 13 53.7**	**-0.1**
JKRS	**Kuro-shima**	**2.56**	**57**	P		**Pn**	**14 13 27.7**	**+0.5**
JKRS				*e*S		**Sn**	**14 13 56.7**	**-1.0**
JIJ	**Ishigaki jima**	**2.73**	**56**	P		**Pn**	**14 13 30.0**	**+0.5**
JIJ				*e*S		**Sn**	**14 14 00.4**	**-1.5**
JTJ	**Tarama**	**3.31**	**57**	P		**Pn**	**14 13 38.3**	**+0.8**
JTJ				*e*S		**Sn**	**14 14 14.8**	**-1.3**

DJA 10 14:16:21.9±3.43S×113.87E, h60km, MLv3.3/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.22**	**340**	P	Pn	14 16 42.0	0.0
GMJI				S	Sn	14 16 58.6	+0.9
NBBI	**Negara**	**1.29**	**35**	P	Pn	14 16 43.2	+0.3
NBBI				S	Sn	14 17 00.9	+1.7
IGBI	**Denpasar**	**1.40**	**64**	P	Pn	14 16 43.8	-0.5
DNP	**Denpasar**	**1.52**	**61**	S	Sn	14 17 05.9	+1.1
ABJI	**Asem Bagus**	**1.66**	**13**	P	Pn	14 16 50.2	+2.3
SRBI	**Singaraja**	**1.88**	**45**	P	Pn	14 16 51.2	+0.3
KHKI	**Kahang-Kahang**	**2.02**	**58**	P	Pn	14 16 52.4	-0.3
KMMI	**Kalianget**	**2.37**	**2**	P	Pn	14 16 52.3	-5.2
PWJI	**Pagerwojo**	**2.48**	**304**	P	Pn	14 17 00.5	+1.5
PWJI				S	Sn	14 17 28.5	+0.4

IDC 10 14:26:26.7±4.1, 3.57S×150.68E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=137.3km s-min=37.4km az=108.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.78**	**223**	P	P	14 31 30.6	-0.3
	0.9nm,0.6s,baz=50,slow=10,SNR=14						
ASAR	**Alice Springs**	**25.73**	**218**	P	P	14 31 59.8	+0.8
	0.3nm,0.3s,baz=54,slow=8.8,SNR=7.2						
BVAR	**Borovoye Array**	**87.00**	**323**	P	P	14 39 13.5	-0.4
	0.4nm,0.4s,baz=84,slow=5.9,SNR=3.7						

*NEIC **10** 14:27:11.1±0.8, 26.96S×174.87W, h35km, mb4.5/4, Error ellipse: s-maj=19.1km s-min=10.5km az=133.0*
*IDC **10** 14:27:11.8±0.8, 26.59S×175.59W, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.2/17, mbtmp4.2/9, ML4.9/1, MS3.9/13, Ms1 4.0/13, ms1mx3.7/23, Error ellipse: s-maj=33.0km s-min=18.6km az=158.0*
*ISCJB **10** 14:27:14.8±0.7, 26.53S±0.10×175.6W±0.1, h33km, mb4.2/10, MS4.0/13, Error ellipse: s-maj=17.6km s-min=10.4km az=43.3*
ISC 10 14:27:16.5±0.7, 26.6S±0.1×175.6W±0.1, h35km, n37, σ0.87/25, mb4.2/10, MS4.0/13, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.39**	**217**	Pn	Pn	**14 28 06.4**	**-0.6**
	107nm,0.3s,baz=110,slow=22,SNR=2.8						
RAO				Sn	Sn	**14 28 47.5**	**+1.5**
	377nm,0.3s,baz=88,slow=24,SNR=7.1						
RAO	**Raoul Island**	**3.39**	**217**	*e*Pn	Pn	**14 28 03.9**	**-3.1**
RAO				*e*Sn	Sn	**14 28 46.7**	**+0.7**
AFI	**Afiamalu**	**13.07**	**17**	Pn	Pn	**14 30 14.7**	**-5.0**
	4.0nm,0.3s,baz=51,slow=20,SNR=6.8						
AFI				Sn	Sx	14 32 30.0	
	1.5nm,0.3s,baz=225,slow=23,SNR=4.7						
AFI	**Afiamalu**	**13.07**	**17**	*e*Pn	Pn	**14 30 15.6**	**-4.2**
	12nm,0.4s						
AFI				*e*Sn	Sx	14 32 29.1	
URZ	**Urewera**	**13.20**	**206**	Pn	Pn	**14 30 12.9**	**-8.6**
	0.3nm,0.3s,baz=333,slow=4.5,SNR=2.4						
URZ				Sn	Sx	14 32 36.0	
	4.3nm,0.3s,baz=174,slow=17,SNR=15						
RAR	**Rarotonga**	**15.40**	**73**	*e*Pn	Pn	**14 30 40.9**	**-10**
	13nm,0.5s						
RAR				*e*Sn	Sx	14 33 24.8	
KHZ	**Kahutara**	**18.17**	**207**	*e*Pn	Pn	**14 31 19.5**	**-6.4**
KHZ				*e*Sn	Sx	14 34 29.1	
EIDS	**Eidsvold**	**29.95**	**265**	*e*P	P	**14 33 21.2**	**-0.3**
	17nm,1.4s,mb4.6						
CTA	**Charters Tower**	**35.54**	**272**	P	P	**14 34 10.5**	**+0.1**
	3.8nm,0.6s,mb4.5,baz=104,slow=9.5,SNR=10						
CTA				LR	LR	14 46 26.2	
	comp=Z,168nm,21.4s,MS3.8,baz=57,slow=32						
CTA	**Charters Tower**	**35.54**	**272**	P	P	**14 34 10.5**	**+0.1**
CTA				LR	LR	14 46 26.2	
CTAO	**Charters Tower**	**35.54**	**272**	*e*P	P	**14 34 11.3**	**+0.8**
	3.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**37.57**	**252**	P	P	**14 34 28.0**	**+0.3**
	1.2nm,0.8s,mb3.7,baz=97,slow=9.4,SNR=2.9						
STKA				LR	LR	14 47 16.3	
	comp=Z,188nm,21.1s,MS3.9,baz=29,slow=32						
STKA	**Stephens Creek**	**37.57**	**252**	P	P	**14 34 27.7**	**+0.1**
	0.2nm,0.5s,mb3.1						
ASAR	**Alice Springs**	**45.60**	**262**	P	P	**14 35 33.6**	**+0.1**
	1.0nm,0.5s,mb4.0,baz=91,slow=7.2,SNR=17						
ASAR				PcP	PcP	14 37 14.1	+2.5
	0.4nm,0.5s,baz=130,slow=4.2,SNR=4.4						
WRAB	**Tennant Creek**	**46.25**	**267**	*e*P	P	**14 35 38.7**	**0.0**
	4.1nm,0.8s,mb4.4						
WRAB				*e*pP	pP	14 35 50.8	+1.8
WRA	**Warramunga Arr**	**46.25**	**267**	P	P	**14 35 38.2**	**-0.5**
	2.7nm,0.6s,mb4.4,baz=105,slow=8.4,SNR=35						
FITZ	**Fitzroy Crossi**	**54.63**	**266**	P	P	**14 36 42.7**	**+0.6**
	2.1nm,1.1s,mb4.1,baz=123,slow=9.5,SNR=3.2						
FITZ				LR	LR	15 00 48.8	
	comp=Z,90nm,19.2s,MS3.9,baz=359,slow=37						
FITZ	**Fitzroy Crossi**	**54.63**	**266**	*e*P	P	**14 36 40.1**	**-2.0**
	2.4nm,0.7s,mb4.3						
GUMO	**Guam**	**55.41**	**311**	LR	LR	14 55 56.7	
	comp=Z,108nm,19.6s,MS3.9,baz=87,slow=31						
NWAO	**Narrogin (SRO)**	**57.82**	**246**	LR	LR	15 02 19.8	
	comp=Z,144nm,19.3s,MS4.1,baz=72,slow=36						
RPN	**Rapa Nui**	**58.45**	**107**	LR	LR	14 55 35.5	
	comp=Z,128nm,19.9s,MS4.0,baz=138,slow=29						
KAPI	**Kappang**	**65.14**	**277**	LR	LR	15 02 31.7	
	comp=Z,170nm,18.4s,MS4.3,baz=159,slow=32						
VNA3	**Neumayer Olymp**	**81.97**	**175**	*e*	P	**14 39 31.6**	**-0.7**
VNA2	**Neumayer--Watz**	**82.44**	**176**	*e*	P	**14 39 34.8**	**+0.1**
KSRS	**Korea Array**	**82.86**	**318**	LR	LR	15 09 17.4	
	comp=Z,56nm,20.8s,MS3.9,baz=157,slow=30						
PLCA	**Paso Flores**	**83.54**	**132**	P	P	**14 39 40.1**	**-0.9**
	1.7nm,0.8s,mb4.2,baz=263,slow=1.1,SNR=3.5						
PLCA				LR	LR	15 09 15.6	
	comp=Z,118nm,19.9s,MS4.3,baz=36,slow=30						
NVAR	**Mina Array Bea**	**83.97**	**42**	P	P	**14 39 44.4**	**+1.4**
	1.1nm,0.9s,mb4.0,baz=219,slow=6.6,SNR=6.0						
TXAR	**Lajitas Array**	**88.50**	**56**	P	P	**14 40 06.5**	**+1.0**
	1.6nm,1.0s,mb4.3,baz=205,slow=5.5,SNR=12						
TXAR				LR	LR	15 13 23.8	
	comp=Z,38nm,19.1s,MS3.8,baz=240,slow=31						
PDAR	**Pinedale Array**	**91.88**	**42**	LR	LR	15 12 39.6	
	comp=Z,51nm,19.3s,MS4.0,baz=350,slow=30						
CMAR	**Chiang Mai Arr**	**94.18**	**288**	LR	LR	15 20 17.1	
	comp=Z,52nm,18.1s,MS4.0,baz=185,slow=34						
LPAZ	**La Paz**	**97.70**	**112**	LR	LR	15 13 58.9	
	comp=Z,75nm,21.1s,MS4.2,baz=126,slow=29						
MKAR	**Makanchi Array**	**116.89**	**311**	PKP	PKPdf	14 45 57.9	+0.7
	0.2nm,0.6s,baz=186,slow=2.8,SNR=3.5						
FINES	**FINESS Array B**	**142.18**	**343**	PKhKP		14 46 41.7	
	1.4nm,1.0s,baz=66,slow=4.7,SNR=3.9						
NOA	**NORSAR Array B**	**145.21**	**354**	PKPbc	PKPbc	14 46 51.5	+2.0
	6.3nm,1.0s,baz=6.1,slow=2.4,SNR=8.1						
AKASG	**Malin Array Be**	**149.34**	**328**	PKPbc	PKPbc	14 47 01.5	+0.2
	0.7nm,0.4s,baz=43,slow=3.1,SNR=5.0						
BRTR	**Keskin Array B**	**152.37**	**306**	PKPbc	PKPbc	14 47 09.6	+0.8
	0.2nm,0.4s,baz=88,slow=7.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**166.42**	**169**	PKPab	PKPab	14 48 21.9	+1.6
	0.3nm,0.6s,baz=183,slow=2.9,SNR=4.3						

*IDC **10** 14:38:22.6±1.8, 17.35N×84.71W, h0km, mb3.3/4, mb1 3.9/6, mb1mx3.6/23, mbtmp3.6/6, ML4.0/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/24, Error ellipse: s-maj=54.7km s-min=24.1km az=67.0*
*NEIC **10** 14:38:23.8±0.8, 17.30N×84.77W, h10km, mb3.7/5, Error ellipse: s-maj=20.5km s-min=10.9km az=67.0*
*ISCJB **10** 14:38:26.2±2.3, 17.3N±0.1×84.6W±0.1, h50km±28km, mb3.6/7, MS3.3/2, Error ellipse: s-maj=23.2km s-min=13.5km az=144.5*
*CASC **10** 14:38:36.3±1.4, 16.61N×85.18W, h0km±71km, ML3.6, mb3.7(NEIC)*
ISC 10 14:38:26.6±3.8, 17.42N±0.06×84.6W±0.1, h31km±32km, n19, σ0.85/20, mb3.6/7, MS3.3/2, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**4.24**	**218**	*e*Pn	Pn	**14 39 24.0**	**-5.1**
TGUH				*e*Sn	Sn	**14 40 10.2**	**-7.4**
TGUH	**Tegucigalpa,Un**	**4.24**	**218**	*e*P	Pn	**14 39 28.4**	**-0.7**
CAHU	**Cacacuatique**	**5.05**	**225**	*e*P	Pn	**14 39 40.4**	**+0.2**
BOAB	**BOACO BROADBAN**	**5.05**	**192**	*e*P	Pn	**14 39 41.2**	**+0.9**
BOAB				*e*S	Sn	**14 40 31.3**	**-6.4**
CRIN	**San Cristobal**	**5.27**	**207**	*e*P	Pn	**14 39 44.1**	**+0.9**
CNGN	**Cerro Negro**	**5.31**	**203**	*e*P	Pn	**14 39 43.6**	**-0.2**
JTS	**JuntasAbangare**	**7.10**	**183**	Pn	Pn	**14 40 08.4**	**0.0**
	0.8nm,0.3s,baz=319,slow=18,SNR=2.6						
JTS				Sn	Sn	**14 41 27.5**	**-0.6**
	1.3nm,0.3s,baz=113,slow=23,SNR=5.7						
CMIG	**Matias Romero**	**9.86**	**270**	LR	LR	14 44 34.0	
	comp=Z,175nm,21.6s,baz=4.9,slow=38						
SDV	**Santo Domingo**	**15.99**	**120**	Pn	Pn	**14 42 08.3**	**-1.1**
	0.5nm,0.3s,baz=0.0,slow=11,SNR=4.4						
SDV				LR	LR	14 47 25.7	
	comp=Z,87nm,21.5s,baz=355,slow=34						
SDV	**Santo Domingo**	**15.99**	**120**	*e*Pn	Pn	**14 42 09.2**	**-0.2**
	7.1nm,0.9s						
HKT	**Hockley**	**16.17**	**322**	*e*Pn	Pn	**14 42 11.6**	**0.0**
	8.2nm,1.1s						
TXAR	**Lajitas Array**	**21.13**	**308**	P	P	**14 43 08.4**	**-0.6**
	3.0nm,1.0s,mb3.6,baz=134,slow=9.1,SNR=12						
TXAR				LR	LR	14 54 52.3	
	comp=Z,53nm,18.2s,MS3.0,baz=235,slow=47						
GDL2	**Guadalupe Moun**	**23.17**	**313**	*e*P	P	**14 43 28.8**	**-1.9**
	0.9nm,0.5s,mb3.5						
PDAR	**Pinedale Array**	**33.02**	**325**	P	P	**14 44 58.6**	**-0.3**
	0.4nm,0.8s,mb3.4,baz=129,slow=12,SNR=3.7						
REDW	**Red Top Meadow**	**34.12**	**325**	*e*P	P	**14 45 09.1**	**+0.5**
	10nm,1.5s,mb4.5						
NVAR	**Mina Array Bea**	**36.13**	**312**	P	P	**14 45 25.8**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=129,slow=9.8,SNR=3.5						
MCMT	**McKenzie Canyo**	**36.17**	**325**	*e*P	P	**14 45 26.6**	**+0.4**
	0.4nm,0.6s,mb3.5						
SCHQ	**Schefferville**	**39.75**	**16**	LR	LR	15 02 21.7	
	comp=Z,83nm,18.8s,MS3.6,baz=79,slow=36						
YKA	**Yellowknife Ar**	**49.66**	**342**	P	P	**14 47 17.6**	**+2.4**
	0.1nm,0.4s,mb3.2,baz=138,slow=8.8,SNR=2.2						

*ATH **10** 14:39:26.8, 34.70N×23.62E, h56km±5km, MD3.2/3*
*NEIC **10** 14:39:26.8, 34.70N×23.62E, h56km, MD3.2(ATH), After ATH.*
*HLW **10** 14:39:26.9, 34.84N×23.42E, h33km±26km, Md3.3*
*ISCJB **10** 14:39:27.9±1.1, 34.69N±0.07×23.7E±0.2, h58km±15km, Error ellipse: s-maj=22.4km s-min=9.0km az=161.1*
*CSEM **10** 14:39:29.1±0.4, 34.77N×23.68E, h46km±9km, MD3.2, Error ellipse: s-maj=18.6km s-min=7.8km az=71.0*
ISC 10 14:39:28.7±1.0, 34.71N±0.06×23.6E±0.2, h50km±20km, n16, σ1.03/26, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.40**	**71**	*e*P	Pn	**14 39 37.8**	**-1.0**
GVD				*e*S	Sn	**14 39 46.5**	**+0.5**
GVD	**Gavdhos**	**0.40**	**71**	*e*P	Pn	**14 39 37.8**	**-1.0**
GVD				*e*S	Sn	**14 39 46.5**	**+0.5**
KARN	**Karanos**	**0.73**	**19**	*e*P	Pn	**14 39 41.7**	**-1.1**
KARN				*e*S	Sn	**14 39 52.9**	**-0.1**
KARN	**Karanos**	**0.73**	**19**	*e*P	Pn	**14 39 41.7**	**-1.1**
KARN				*e*S	Sn	**14 39 52.9**	**-0.1**
VAM	**Vamos**	**0.84**	**34**	*e*P	Pn	**14 39 44.0**	**-0.2**
VAM				*e*S	Sn	**14 39 56.5**	**+0.9**
VAM	**Vamos**	**0.84**	**34**	*e*P	Pn	**14 39 44.0**	**-0.2**
VAM				*e*S	Sn	**14 39 56.5**	**+0.9**
KYTH	**Kithira**	**1.64**	**343**	*e*P	Pn	**14 39 55.0**	**-0.1**
KYTH	**Kithira**	**1.64**	**343**	*e*P	Pn	**14 39 55.0**	**-0.1**
XRY	**Khrisi**	**1.71**	**84**	*e*P	Pn	**14 39 55.4**	**-0.6**
XRY	**Khrisi**	**1.71**	**84**	*e*P	Pn	**14 39 55.4**	**-0.6**
SLUM		**3.47**	**157**	P	Pn	**14 40 21.8**	**+1.6**
	baz=155						
SLUM		**3.47**	**157**	P	Pn	**14 40 21.8**	**+1.6**
HMAT	**Matruh**	**4.64**	**140**	P	Pn	**14 40 37.6**	**+1.4**
	baz=139						
HMAT				S	Sn	**14 41 28.2**	**-0.5**
	baz=139						
HMAT	**Matruh**	**4.64**	**140**	P	Pn	**14 40 37.6**	**+1.4**
HMAT				S	Sn	**14 41 28.2**	**-0.5**
SWA2		**5.67**	**164**	P	Pn	**14 40 51.4**	**+1.1**
	baz=162						
SWA2				S	Sn	**14 41 51.7**	**-2.4**
	baz=162						
SWA2		**5.67**	**164**	P	Pn	**14 40 51.4**	**+1.1**
SWA2				S	Sn	**14 41 51.7**	**-2.4**

*NEIC **10** 14:49:53.0±0.8, 4.52N×94.85E, h35km, mb4.4/6, Error ellipse: s-maj=23.3km s-min=11.4km az=45.0*
*ISCJB **10** 14:49:58.0±1.1, 4.91N±0.08×95.16E±0.08, h81km±8km, mb4.0/17, Error ellipse: s-maj=16.8km s-min=8.7km az=40.4*
*IDC **10** 14:49:58.9±8.0, 4.82N×95.04E, h75km±70km, mb3.8/13, mb1 3.9/14, mb1mx3.7/26, mbtmp3.8/14, ML4.2/1, Error ellipse: s-maj=47.0km s-min=15.1km az=53.0*
*DJA **10** 14:50:01, 4.88N×95.28E, h30km, MLv4.1/3*
ISC 10 14:50:00.3±1.5, 4.89N±0.08×95.2E±0.1, h87km±13km, n28, σ0.98/30, mb4.0/17, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.61**	**8**	P	Sn	**14 50 23.1**	**-4.0**
BSI				S	Sn	**14 50 23.1**	**-4.0**
LHMI	**Lhok Sumawe**	**1.76**	**79**	P	Pn	**14 50 29.4**	**+0.1**
LHMI				S	Sn	**14 50 50.0**	**-1.3**
GSI	**Gunungsitoli**	**4.27**	**146**	P	Pn	**14 51 03.3**	**+0.3**
KULM	**Kulim**	**5.43**	**86**	*e*Pn	Pn	**14 51 18.3**	**-0.6**
	7.6nm,0.7s						
KULM				*e*Sn	Sn	**14 52 21.2**	**+1.2**
IPM	**Ipoh**	**5.81**	**94**	P	Pn	**14 51 24.2**	**+0.2**
CM31	**Chiang Mai Arr**	**13.97**	**15**	*e*Pn	Pn	**14 53 19.1**	**+4.7**
	3.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.97**	**15**	P	Pn	**14 53 16.8**	**+2.3**
	0.3nm,0.3s,baz=208,slow=11,SNR=29						
KSM	**Kuching**	**15.45**	**102**	*e*Pn	Pn	**14 53 29.7**	**-3.8**
	8.6nm,1.0s						
QIZ	**Qiongzhong**	**20.03**	**44**	*e*P	P	**14 54 23.4**	**-3.0**
	64nm,1.4s						
MBWA	**Marble Bar**	**35.33**	**138**	*e*P	P	**14 56 43.2**	**-4.3**
	10nm,1.3s,mb4.5						
AML	**Almayashu**	**41.74**	**336**	*e*P	P	**14 57 41.8**	**+0.9**
	5.8nm,0.6s,mb4.5						
AAK	**Ala-Archa**	**41.85**	**337**	P	P	**14 57 43.3**	**+1.5**
	1.1nm,0.6s,mb3.8,baz=21,slow=7.2,SNR=4.8						
MK31	**Makanchi Array**	**43.22**	**347**	*e*P	P	**14 57 52.4**	**-0.4**
MKAR	**Makanchi Array**	**43.22**	**347**	P	P	**14 57 52.8**	**0.0**
	2.6nm,0.7s,mb4.1,baz=161,slow=7.7,SNR=26						
SONM	**Songino Array**	**43.85**	**11**	P	P	**14 57 58.0**	**+0.1**
	0.4nm,0.6s,mb3.3,baz=185,slow=7.2,SNR=3.1						
SONM				PcP	PcP	14 59 44.1	+1.4
	0.4nm,0.6s,baz=180,slow=4.9,SNR=2.8						
KSRS	**Korea Array**	**44.07**	**38**	P	P	**14 58 00.4**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=228,slow=6.2,SNR=3.1						
WRA	**Warramunga Arr**	**45.70**	**124**	P	P	**

ISK 10 15:07:55.0, 38.10N×32.63E, h5km, MD2.8
ISCJB 10 15:07:56.1±0.5, 38.12N±0.03×32.66E±0.04, h7km±8km, Error ellipse: s-maj=5.9km s-min=4.7km az=34.4
CSEM 10 15:07:56.7±0.3, 38.12N×32.61E, h2km, MD2.8, Error ellipse: s-maj=7.8km s-min=6.0km az=176.0
ISC 10 15:07:56.7±0.5, 38.11N±0.03×32.65E±0.04, h8km±8km, n19, σ1§16/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADK	**Ladik-KONYA**	**0.24**	**291**	*e*PG	**Pg**	**15 08 00.5**	**-1.0**
LADK				*e*SG	**Sg**	15 08 05.0	**+0.2**
LADK	**Ladik-KONYA**	**0.24**	**291**	*e*Pg	**Pg**	**15 08 00.5**	**-1.0**
LADK				*e*Sg	**Sg**	15 08 05.0	**+0.3**
KONT	**Konya--Tatoy**	**0.28**	**234**	*e*PG	**Pg**	**15 08 01.3**	**-1.0**
KONT				*e*SG	**Sg**	15 08 06.1	**0.0**
KONT	**Konya--Tatoy**	**0.28**	**234**	*e*Pg	**Pg**	**15 08 01.3**	**-1.0**
KONT				*e*Sg	**Sg**	15 08 06.1	**0.0**
KDHN	**Kadinhani**	**0.58**	**314**	*i* P	**Pg**	**15 08 07.2**	**-0.8**
KDHN				*i* S	**Sg**	15 08 16.9	**+1.3**
KDHN	**Kadinhani**	**0.58**	**314**	*i* P	**Pg**	**15 08 07.2**	**-0.8**
KDHN				*i* S	**Sg**	15 08 16.9	**+1.3**
SULT	**Sultanhani-AKS**	**0.69**	**83**	*e*PG	**Pg**	**15 08 09.9**	**0.0**
SULT				*e*SG	**Sg**	15 08 20.6	**+1.7**
SULT	**Sultanhani-AKS**	**0.69**	**83**	*e*Pg	**Pg**	**15 08 09.9**	**0.0**
SULT				*e*Sg	**Sg**	15 08 20.6	**+1.7**
KIZT	**Kizilcal**	**0.97**	**322**	*e*PG	**Pg**	**15 08 14.4**	**-1.0**
KIZT	**Kizilcal**	**0.97**	**322**	*e*Pg	**Pg**	**15 08 14.5**	**-0.9**
HDMB	**Hadim**	**1.16**	**187**	*e*PN	**Pg**	**15 08 17.5**	**-1.3**
SUTC	**Sutluce-Ispart**	**1.45**	**245**	*e*PN	**Pn**	**15 08 23.2**	**0.0**
SUTC	**Sutluce-Ispart**	**1.45**	**245**	*e*Pn	**Pn**	**15 08 23.3**	**0.0**
BOLV	**Bolvadin**	**1.47**	**295**	*e*P	**Pg**	**15 08 25.3**	**+0.5**
BOLV				*e*S	**Sg**	15 08 46.4	**+2.6**
BOLV	**Bolvadin**	**1.47**	**295**	*e*P	**Pg**	**15 08 25.3**	**+0.5**
BOLV				*e*S	**Sg**	15 08 46.4	**+2.6**
ERMK	**Ermenek**	**1.48**	**172**	*e*P	**Pg**	**15 08 25.2**	**+0.1**
ERMK				*e*S	**Sg**	15 08 47.4	**+3.0**
ERMK	**Ermenek**	**1.48**	**172**	*e*P	**Pg**	**15 08 25.2**	**0.0**
ERMK				*e*S	**Sg**	15 08 47.4	**+3.0**
CDAG	**Cicekdag**	**2.02**	**41**	*e*P	**Pg**	**15 08 33.4**	**-2.0**
CDAG				*e*S	**Sn**	15 08 56.6	**+0.1**
CDAG	**Cicekdag**	**2.02**	**41**	*e*P	**Pg**	**15 08 33.4**	**-2.0**
CDAG				*e*S	**Sn**	15 08 56.6	**+0.1**

HLW 10 15:23:38.2, 33.86N×28.05E, h33km±32km, Md3.7, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMAT	**Matruh**	**2.87**	**197**	P	Pn	15 24 22.5	+0.9
	baz=197						
HMAT				S	Sn	15 24 52.3	-2.8
	baz=197						
SLUM		**3.36**	**226**	P	Pn	15 24 28.2	-0.2
	baz=227						
KOT	**Kottamia**	**5.07**	**140**	P	Pn	15 24 52.6	+0.8
	baz=139						
SWA2		**5.11**	**206**	P	Pn	15 24 52.6	+0.2
	baz=207						
SWA2				S	Sn	15 25 45.5	-4.7
	baz=207						
HSAF	**As Saff**	**5.17**	**144**	P	Pn	15 24 54.0	+0.7
	baz=143						
HHAG	**Hagoal**	**5.20**	**137**	P	Pn	15 24 54.1	+0.5
	baz=137						
GLL	**Jalalah**	**5.28**	**143**	P	Pn	15 24 55.2	+0.4
	baz=142						
AMAG	**Maghara**	**5.42**	**125**	P	Pn	15 24 56.9	+0.2
	baz=124						
AWBH		**5.57**	**172**	P	Pn	15 24 59.1	+0.4
	baz=172						
SUZ		**5.71**	**133**	P	Pn	15 25 01.3	+0.7
	baz=133						
HNKL	**Nakhl**	**6.38**	**126**	P	Pn	15 25 10.4	+0.5
	baz=126						
HFRF	**Wahat Farafira**	**6.69**	**178**	P	Pn	15 25 14.4	+0.3
	baz=178						
HKAT	**Jabal Katrina**	**7.36**	**135**	P	Pn	15 25 23.4	+0.1
	baz=134						

IDC 10 15:31:54.7±4.4, 29.23N×142.99E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=143.7km s-min=21.8km az=79.0
ISCJB 10 15:31:57.8±2.5, 29.30N±0.06×142.7E±0.4, h30km±23km, mb3.8/5, Error ellipse: s-maj=54.8km s-min=7.6km az=174.1
NEIC 10 15:31:58.8±5.5, 29.34N×143.24E, h35km, MG3.8(JMA), Error ellipse: s-maj=211.0km s-min=17.7km az=74.0
JMA 10 15:31:58.9±0.1, 29.13N×142.66E, h107km, M3.5
ISC 10 15:32:00.4±2.6, 29.24N±0.06×142.6E±0.4, h32km±25km, n16, σ1§08/21, mb3.8/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.16**	**190**	P	**Pn**	**15 32 33.1**	**-1.1**
CBIJ				*e*S	**Sn**	15 32 58.9	**-1.0**
CBIJ	**Chichi jima**	**2.16**	**190**	Pn	**Pn**	**15 32 33.5**	**-0.7**
	3.9nm,0.3s,baz=15,slow=20,SNR=3.9						
CBIJ				Sn	**Sn**	**15 32 55.6**	**-4.3**
	16nm,0.3s,baz=292,slow=23,SNR=5.3						
JOD2	**Odawara 2**	**6.71**	**335**	P	**Pn**	**15 33 38.3**	**+1.7**
JHU	**Hanno**	**7.17**	**338**	P	**Pn**	**15 33 43.4**	**+0.4**
JHU				*e*S	**Sn**	15 35 02.0	**-1.3**
JYT	**Yasato**	**7.26**	**344**	P	**Pn**	**15 33 45.1**	**+0.8**
JYT				*e*S	**Sn**	15 35 05.4	**-0.2**
JRY	**Ryogami san**	**7.45**	**336**	P	**Pn**	**15 33 47.8**	**+1.0**
JRY				*e*S	**Sn**	15 35 07.6	**-2.5**
JHO	**Hitachi**	**7.55**	**347**	P	**Pn**	**15 33 47.9**	**-0.3**
JHO				*e*S	Sx	15 35 08.0	
JAG	**Ashikaga**	**7.64**	**341**	P	**Pn**	**15 33 48.7**	**-0.8**
JAG				*e*S	Sx	15 35 11.2	
MJAR	**Matsushiro Arr**	**8.17**	**334**	Pn	**Pn**	**15 33 56.5**	**-0.2**
	1.0nm,0.3s,baz=158,slow=12,SNR=16						
JFK	**Kawauchi**	**8.24**	**350**	P	**Pn**	**15 33 56.2**	**-1.4**
JFK				*e*S	Sx	15 35 24.2	
KSRS	**Korea Array**	**14.74**	**308**	Pn	**Pn**	**15 35 32.0**	**+5.4**
	0.1nm,0.3s,baz=116,slow=11,SNR=5.2						
SONM	**Songino Array**	**33.46**	**314**	P	**P**	**15 38 37.5**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=97,slow=10,SNR=2.6						
ZALV	**Zalesovo Beam**	**48.13**	**318**	P	**P**	**15 40 38.5**	**+1.3**
	0.5nm,0.4s,mb3.9,baz=88,slow=9.0,SNR=3.4						
MKAR	**Makanchi Array**	**49.42**	**308**	P	**P**	**15 40 47.9**	**+0.7**
	0.3nm,0.4s,mb3.7,baz=99,slow=7.4,SNR=6.6						
WRA	**Warramunga Arr**	**49.53**	**190**	P	**P**	**15 40 47.5**	**-0.8**
	0.4nm,0.4s,mb3.8,baz=8.3,slow=8.0,SNR=5.3						
BVAR	**Borovoye Array**	**56.73**	**317**	P	**P**	**15 41 42.1**	**+1.1**
	1.0nm,0.5s,mb4.1,baz=87,slow=9.1,SNR=6.2						

DJA 10 15:31:56, 3.97N×128.32E, h30km, MLv4.7/4
NEIC 10 15:31:58.0±0.6, 3.30N×128.33E, h35km, mb4.0/2, Error ellipse: s-maj=15.6km s-min=8.0km az=67.0
ISCJB 10 15:32:06.2±1.9, 3.07N±0.09×127.8E±0.1, h120km±16km, mb3.8/9, Error ellipse: s-maj=26.0km s-min=9.7km az=150.3
IDC 10 15:32:09.2±6.2, 2.92N×127.78E, h128km±58km, mb3.5/8, mb1 3.7/9, mb1mx3.5/22, mbtmp3.6/9, Error ellipse: s-maj=45.7km s-min=13.6km az=65.0
ISC 10 15:32:08.9±1.9, 3.0N±0.1×127.8E±0.1, h128km±17km, n21, σ0§94/23, mb3.8/9, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.38**	**288**	P	**Pn**	**15 32 41.0**	**-6.5**
SGSI				S	**Sn**	15 33 13.3	**-3.8**
LBMI	**Labuha**	**3.58**	**185**	P	**Pn**	**15 33 04.0**	**+0.8**
LBMI				S	**Sn**	15 34 01.6	**+16**
NLAI	**Namlea**	**6.19**	**186**	P	**Pn**	**15 33 38.6**	**+0.5**
	37nm,0.9s,819nm0.2nm						
MRSI	**Marisa**	**6.35**	**247**	P	**Pn**	**15 33 40.9**	**+0.7**
	183nm,0.6s						
LUWI	**Luwuk**	**6.40**	**232**	P	**Pn**	**15 33 48.0**	**+7.1**
APSI	**Ampana**	**7.25**	**238**	P	**Pn**	**15 33 52.8**	**+0.5**
KDI	**Kendari**	**8.60**	**217**	P	**Pn**	**15 34 09.3**	**-1.3**
KAPI	**Kappang**	**11.28**	**225**	P	**Pn**	**15 34 45.6**	**-0.9**
	1.3nm,0.3s,baz=4.8,slow=12,SNR=5.2						
FITZ	**Fitzroy Crossi**	**21.03**	**186**	P	**P**	**15 36 43.0**	**+0.3**
	1.3nm,0.4s,mb3.6,baz=3.8,slow=10,SNR=16						
WRAB	**Tennant Creek**	**23.64**	**164**	*e*P	**P**	**15 37 08.3**	**-0.3**
	6.6nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**23.65**	**164**	P	**P**	**15 37 08.4**	**-0.3**
	5.4nm,0.6s,mb4.1,baz=345,slow=11,SNR=24						
WB2	**Warramunga Arr**	**23.65**	**164**	*e*P	**P**	**15 37 08.1**	**-0.6**
ASAR	**Alice Springs**	**27.12**	**168**	P	**P**	**15 37 40.3**	**+0.2**
	1.1nm,0.6s,mb3.6,baz=352,slow=7.7,SNR=41						
ASAR				PcP	PcP	15 40 58.5	+0.7
	0.6nm,0.6s,baz=352,slow=2.6,SNR=6.4						
CMAR	**Chiang Mai Arr**	**32.18**	**301**	P	**P**	**15 38 26.1**	**+1.2**
	0.7nm,0.7s,mb3.5,baz=127,slow=7.7,SNR=7.0						
COCO	**West Island**	**34.25**	**243**	*e*P	**P**	**15 38 45.7**	**+2.8**
	138nm,0.8s						
KSRS	**Korea Array**	**34.33**	**0**	P	**P**	**15 38 44.5**	**+1.2**
	0.5nm,0.6s,mb3.5,baz=177,slow=9.2,SNR=4.7						
STKA	**Stephens Creek**	**37.04**	**160**	P	**P**	**15 39 05.9**	**-0.6**
	3.0nm,0.3s,mb4.6,baz=339,slow=8.4,SNR=19						
STKA	**Stephens Creek**	**37.04**	**160**	*e*P	**P**	**15 39 05.7**	**-0.8**
	0.6nm,0.5s,mb3.8						
MK31	**Makanchi Array**	**58.79**	**325**	*e*P	**P**	**15 41 52.4**	**-1.3**
MKAR	**Makanchi Array**	**58.79**	**325**	P	**P**	**15 41 53.5**	**-0.2**
	0.9nm,0.5s,mb4.1,baz=119,slow=8.4,SNR=11						
BVAR	**Borovoye Array**	**68.54**	**327**	P	**P**	**15 42 56.9**	**-0.7**
	0.4nm,0.5s,mb3.5,baz=158,slow=4.7,SNR=3.3						

ISCJB 10 15:37:03.5±6.3, 23.4N±0.1×143.3E±0.4, h16km±46km, mb3.5/7, Error ellipse: s-maj=54.4km s-min=17.2km az=176.0
IDC 10 15:37:03.1±1.1, 23.43N×143.35E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, ML3.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/37, Error ellipse: s-maj=48.2km s-min=19.8km az=85.0
NEIC 10 15:37:07.8±0.8, 23.39N×143.31E, h35km, mb3.5/2, Error ellipse: s-maj=36.8km s-min=10.3km az=83.0
ISC 10 15:37:03.8±9.0, 23.4N±0.1×143.3E±0.4, h6km±57km, n12, σ0§54/11, mb3.5/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.84**	**345**	Pn	**Pn**	**15 38 03.5**	**0.0**
	7.0nm,0.3s,baz=285,slow=20,SNR=4.5						
CBIJ				LR	LR	15 38 56.0	
	comp=Z,232nm,20.9s,baz=140,slow=30						
MAJO	**Matsushiro**	**13.85**	**343**	P	**Pn**	**15 40 20.6**	**0.0**
	2.3nm,0.6s						
KSRS	**Korea Array**	**19.28**	**320**	LR	LR	15 48 46.4	
	comp=Z,27nm,18.9s,baz=220,slow=36						
WRAB	**Tennant Creek**	**43.93**	**192**	*e*P	**P**	**15 45 11.4**	**-0.2**
	1.3nm,0.8s,mb3.7						
WB2	**Warramunga Arr**	**43.94**	**192**	*e*P	**P**	**15 45 10.9**	**-0.8**
WRA	**Warramunga Arr**	**43.94**	**192**	P	**P**	**15 45 12.8**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=7.7,slow=8.3,SNR=7.7						
ASAR	**Alice Springs**	**47.65**	**192**	P	**P**	**15 45 40.8**	**-0.2**
	0.1nm,0.6s,mb3.0,baz=14,slow=8.6,SNR=4.3						
MKAR	**Makanchi Array**	**53.67**	**312**	P	**P**	**15 46 26.1**	**-0.2**
	0.3nm,0.7s,mb3.3,baz=110,slow=8.1,SNR=3.4						
STKA	**Stephens Creek**	**54.97**	**182**	P	**P**	**15 46 36.7**	**+1.0**
	1.5nm,1.0s,mb4.0,baz=354,slow=10,SNR=2.6						
STKA	**Stephens Creek**	**54.97**	**182**	*e*P	**P**	**15 46 34.9**	**-0.9**
	0.2nm,0.8s,mb3.2						
BVAR	**Borovoye Array**	**61.49**	**319**	P	**P**	**15 47 21.5**	**+0.3**
	2.5nm,0.7s,mb4.5,baz=89,slow=8.5,SNR=13						
YKA	**Yellowknife Ar**	**74.92**	**28**	P	**P**	**15 48 45.3**	**0.0**
	0.2nm,0.6s,mb3.2,baz=291,slow=5.9,SNR=3.5						

NSSP 10 16:15:08.4, 38.18N×46.55E, h5km, Ms2.9
ISCJB 10 16:15:09.5±0.5, 38.12N±0.03×46.40E±0.05, h33km, Error ellipse: s-maj=5.8km s-min=3.9km az=148.1
TEH 10 16:15:10.7, 38.09N×46.42E, h15km
ISC 10 16:15:09.7±0.5, 38.16N±0.04×46.44E±0.05, h21km±7km, n13, σ1§05/24, 8C-5D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IFTB	**Fath-abad**	**0.14**	**195**	*e*Pg	**Pb**	**16 15 13.8**	**-0.4**
IFTB				*e*Sg	**Sb**	16 15 16.7	**-0.6**
ITBZ	**Tabriz**	**0.24**	**288⇑**	*e*Pg	**Pb**	**16 15 15.5**	**-0.1**
ITBZ				*e*Sg	**Sb**	16 15 19.6	**0.0**
ITBZ				*e*		16 15 20.3	
	comp=Z,70μm,0.1s						
IHRS	**Heris**	**0.50**	**71⇓**	*e*Pg	**Pb**	**16 15 21.2**	**+1.4**
IHRS				*e*		16 15 21.4	
	comp=Z,19μm,0.1s						
IBST	**Bostanabad**	**0.58**	**142⇑**	*e*Pg	**Pb**	**16 15 20.8**	**-0.3**
IBST				*e*Sg	**Sb**	16 15 28.2	**-0.7**
IBST				*e*		16 15 32.8	
	comp=Z,6μm,0.1s						
IAZR	**Azarshahr**	**0.60**	**218**	*e*Pg	**Pb**	**16 15 21.1**	**-0.4**
IAZR				*e*		16 15 30.8	
	comp=Z,22μm,0.1s						
ISHB	**Shabestar**	**0.66**	**281⇑**	*e*Pg	**Pb**	**16 15 22.9**	**+0.3**
ISHB				*e*Sg	**Sb**	16 15 32.0	**+0.7**
ISHB				*e*		16 15 33.1	
	comp=Z,47μm,0.2s						
MGRZ	**Megri**	**0.76**	**348⇑**	*i*P	**Pb**	**16 15 22.2**	**-2.0**
MGRZ				⇓*i*S	**Sb**	16 15 33.9	**-0.3**
IMRD	**Marand**	**0.80**	**314**	*e*Pg	**Pb**	**16 15 25.8**	**+0.8**
IMRD				*e*Sg	**Sb**	16 15 37.9	**+2.5**
IMRD				*e*		16 15 39.6	
	comp=Z,25μm,0.1s						
ISRB	**Sarab**	**1.02**	**109**	*e*Pg	**Pn**	**16 15 29.8**	**+1.0**
ISRB				*e*Sg	**Sb**	16 15 43.0	**+1.3**
ISRB				*e*		16 15 48.6	
	comp=Z,8μm,0.2s						
EGVZ	**Egvard**	**1.07**	**4⇑**	*i*P	**Pn**	**16 15 28.2**	**-1.3**
EGVZ				⇑*i*S	**Sb**	16 15 42.5	**-0.7**
XTNZ	**Xhotanan**	**1.12**	**357⇑**	*i*P	**Pn**	**16 15 28.5**	**-1.7**
XTNZ				⇑*i*S	**Sb**	16 15 44.9	**+0.4**
STKZ		**1.67**	**8⇓**	*i*P	**Pn**	**16 15 41.3**	**+3.6**
STKZ				⇓*i*S	**Sn**	16 16 04.8	**+6.3**
VADZ	**Vardenis**	**2.08**	**345**	*e*P	**Pn**	**16 15 51.0**	**+7.6**
VADZ				⇓*e*S	**Sn**	16 16 19.0	**+10**

DJA 10 16:15:32, 14.60S×167.79E, h26km, mb5.2/9
NOU 10 16:15:43.6±1.4, 14.46S×166.78E, h30km, MD3.8, ML4.0
ISCJB 10 16:15:45.5±0.2, 14.86S±0.03×167.31E±0.05, h149km, mb4.6/60, Error ellipse: s-maj=6.3km s-min=4.2km az=4.4
NEIC 10 16:15:45.9±1.5, 14.81S×167.33E, h135km±13km, mb4.8/29, Error ellipse: s-maj=10.7km s-min=7.3km az=161.0
GCMT 10 16:15:45.8±0.4, 14.91S×167.11E, h146km±4km, MW5.0/56, Moment Tensor Solution. s20,c23; s56,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.93±.14; $M_{\theta\theta}$-0.31±.18; $M_{\phi\phi}$-1.62±.17; $M_{r\theta}$-1.48±.12; $M_{\phi\phi}$2.24±.15; $M_{\phi r}$-1.11±.12; Best double couple: $M_0$3.41000×10^{16} NP1:ϕ_s176.00000°, δ58.00000°, λ141.00000°. NP2: ϕ_s290.00000°, δ58.00000°, λ39.00000°. Principal axes: T 3.5190, Plg49.0000°, Azm143.0000°; N -0.2230, Plg41.0000°, Azm323.0000°; P -3.3000, Plg0.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
MOS 10 16:15:45.5±1.6, 14.77S×167.22E, h137km, mb5.0/14 Error ellipse: s-maj=11.3km s-min=10.1km az=177.6
IDC 10 16:15:46.6±0.5, 14.84S×167.33E, h145km±3km, mb4.3/21, mb1 4.4/21, mb1mx4.4/21, mbtmp4.3/21, MS3.8/2, Ms1 3.8/2, ms1mx3.0/27, Error ellipse: s-maj=11.8km s-min=10.7km az=123.0
BJI 10 16:15:48.6, 14.23S×167.27E, h150km, mB4.9/22, mb4.7/33
LDG 10 16:15:48.0±0.3, 14.80S×166.79E, h150km, Mb4.8/4, Error ellipse: s-maj=47.2km s-min=11.2km az=85.0
ISC 10 16:15:47.2±0.2, 14.88S±0.03×167.36E±0.05, h151km, h151km±2.1km: pP-P, n204, σ1§12/133, mb4.6/60, 20C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.21**	**187**	*e*Pn	**Pn**	**16 17 31.1**	**+1.0**
	45nm,0.2s						
DZM				*e*Sn	**Sn**	16 18 48.6	**-2.2**
	81nm,0.3s						
DZM	**Mont Dzumac**	**7.21**	**187**	*e*P	**Pn**	**16 17 30.2**	**+0.1**
DZM				*e*S	**Sn**	16 18 49.7	**-1.1**
DZM				AMP		16 18 55.2	
	comp=Z,676nm,4.1s						
DZM	**Mont Dzumac**	**7.21**	**187**	*e*Pn	**Pn**	**16 17 30.1**	**0.0**
	comp=Z,130nm,1.1s						
DZM				*e*Sn	**Sn**	16 18 49.2	**-1.6**
BAYA	**Yate Dam**	**7.25**	**183**	*e*S	**Sn**	**16 18 52.2**	**+0.3**
NOUC	**Port Laguerre**	**7.26**	**188**	*e*P	**Pn**	**16 17 30.9**	**+0.2**
NOUC				*e*S	**Sn**	16 18 50.7	**-1.2**
NOUC				AMP		16 18 55.2	
	comp=Z,61nm,2.2s						
NORM	**Noumea**	**7.36**	**186**	*e*P	**Pn**	**16 17 33.7**	**+1.6**
FUNA	**Funafuti**	**13.19**	**63**	*e*Pn	**Pn**	**16 18 48.8**	**-0.2**
	comp=Z,115nm,1.4s						
EIDS	**Eidsvold**	**18.49**	**233**	*e*P	**P**	**16 19 54.1**	**+2.3**
	comp=Z,53nm,0.7s						
AFI	**Afiamalu**	**20.23**	**90**	*e*P	**P**	**16 20 10.1**	**-0.7**
AFI				pmax	pmax		
	comp=Z,43nm,0.9s						
AFI	**Afiamalu**	**20.23**	**90**	P	**P**	**16 20 12.1**	**+1.3**
	comp=Z,34nm,0.8s,baz=291,slow=6.2,SNR=13						
AFI	**Afiamalu**	**20.23**	**90**	*e*P	**P**	**16 20 10.1**	**-0.6**
	comp=Z,43nm,0.9s						
CTA	**Charters Tower**	**20.78**	**253**	*e*P	**P**	**16 20 17.5**	**+0.9**
	comp=Z,16nm,0.8s						
CTA	**Charters Tower**	**20.78**	**253**	P	**P**	**16 20 17.6**	**+1.1**
	comp=Z,27nm,0.9s,baz=77,slow=14,SNR=21						
CTA				PcP	PcP	16 24 19.6	-0.1
	comp=Z,4.4nm,1.0s,baz=6.3,slow=9.2,SNR=3.3						
CTAO	**Charters Tower**	**20.78**	**253**	*e*P	**P**	**16 20 17.3**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,23nm,0.8s						
CTAO	**Charters Tower**	**20.78**	**253**	*e*P	**P**	**16 20 17.3**	**+0.7**
	comp=Z,23nm,0.8s						
ARMA	**Armidale**	**21.17**	**220**	*e*P	**P**	**16 20 22.6**	**+1.9**
ARMA				*e*S	**S**	16 24 13.2	**+5.6**
ARMA	**Armidale**	**21.17**	**220**	*e*P	**P**	**16 20 22.3**	**+1.6**
	comp=Z,34nm,1.0s,mb4.6						
RIV	**Riverview**	**23.89**	**215**	*e*P	**P**	**16 20 48.5**	**+1.5**
URZ	**Urewera**	**24.84**	**161**	P	**P**	**16 20 55.7**	**+0.2**
	comp=Z,12nm,0.4s,mb4.8,baz=254,slow=1.6,SNR=21						
URZ				LR	LR	16 29 02.3	
	comp=Z,456nm,19.5s,baz=61,slow=32						
URZ	**Urewera**	**24.84**	**161**	*e*P	**P**	**16 20 54.4**	**-1.2**
	comp=Z,71nm,1.3s,mb5.0						
CNB	**Canberra Magne**	**25.99**	**215**	*e*P	**P**	**16 21 07.0**	**+1.0**
SNZO	**South Karori**	**27.10**	**168**	*e*P	**P**	**16 21 15.0**	**-0.9**
	comp=Z,8.5nm,0.5s,mb4.6						
RPZ	**Rata Peaks**	**28.92**	**174**	P	**P**	**16 21 32.0**	**0.0**
	comp=Z,34nm,0.5s,mb5.3,baz=359,slow=1.6,SNR=30						
RPZ	**Rata Peaks**	**28.92**	**174**	*e*P	**P**	**16 21 31.5**	**-0.5**
	comp=Z,68nm,0.9s,mb5.4						
STKA	**Stephens Creek**	**28.96**	**230**	*e*P	**P**	**16 21 33.6**	**+1.0**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STKA	**Stephens Creek**	**28.96**	**230**	*e*P	**P**	**16 21 33.7**	**+1.1**
	comp=Z,21nm,0.4s,mb5.2						
STKA				*e*pP	pP	16 22 12.9	+8.5
STKA				*e*PCP	PcP	16 24 37.6	-0.1
STKA	**Stephens Creek**	**28.96**	**230**	P	**P**	**16 21 33.8**	**+1.2**
	comp=Z,25nm,0.4s,mb5.3,baz=51,slow=8.4,SNR=172						
STKA				PcP	PcP	16 24 37.7	0.0
	comp=Z,10nm,0.7s,baz=71,slow=1.9,SNR=8.1						
STKA				ScP	ScP	16 28 06.2	+0.9
	comp=Z,3.0nm,1.0s,baz=106,slow=3.2,SNR=3.7						
STKA	**Stephens Creek**	**28.96**	**230**	*e*P	**P**	**16 21 33.6**	**+1.1**
	comp=Z,6.0nm,0.5s,mb4.6						
TOO	**Toolangi**	**29.79**	**217**	*e*P	**P**	**16 21 40.5**	**+0.8**
WB2	**Warramunga Arr**	**31.86**	**256**	*e*P	**P**	**16 21 56.8**	**-1.5**
WRAB	**Tennant Creek**	**31.86**	**256**	*e*P	**P**	**16 21 57.2**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
WRAB	**Tennant Creek**	**31.86**	**256**	*e*P	**P**	**16 21 57.2**	**-1.1**
	comp=Z,3.2nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**31.88**	**256**	P	**P**	**16 21 57.3**	**-1.0**
	comp=Z,2.3nm,0.5s,mb4.2,baz=85,slow=9.0,SNR=64						
WRA				pP	pP	16 22 30.7	+0.3
	comp=Z,4.8nm,0.8s,baz=84,slow=8.4,SNR=6.8						
WRA				PcP	PcP	16 24 45.2	-0.4
	comp=Z,4.8nm,0.9s,baz=82,slow=2.9,SNR=10.0						
WRA				S	**S**	**16 26 54.6**	**-3.5**
	comp=Z,1.0nm,0.9s,baz=86,slow=14,SNR=4.7						
WRA				PKiKP	PKiKP	16 32 11.8	-2.2
	comp=Z,0.6nm,0.5s,baz=21,slow=0.4,SNR=11						
WRA	**Warramunga Arr**	**31.88**	**256**	P	**P**	**16 21 57.3**	**-1.0**
WRA				pP	pP	16 22 30.7	+0.3
WRA				PcP	PcP	16 24 45.2	-0.4
WRA				S	**S**	**16 26 54.6**	**-3.5**
MOO	**Moorlands**	**32.50**	**208**	*e*P	**P**	**16 22 04.5**	**+1.0**
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**16 22 04.7**	**-0.8**
ASAR				*PP	pP	16 22 35.1	-2.6
ASAR						16 24 47.3	
ASAR				S	**S**	**16 27 07.4**	**-3.6**
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**16 22 04.7**	**-0.8**
	comp=Z,6.2nm,0.4s,mb4.7,baz=74,slow=9.4,SNR=99						
ASAR				pP	pP	16 22 35.0	-2.6
	comp=Z,4.6nm,0.9s,baz=73,slow=9.3,SNR=2.4						
ASAR				PcP	PcP	16 24 47.2	-0.5
	comp=Z,5.0nm,0.8s,baz=82,slow=3.0,SNR=12						
ASAR				S	**S**	**16 27 07.4**	**-3.6**
	comp=Z,1.5nm,

KSRS Korea Array 63.91 326 P **P** **16 26 03.8 -0.2**
comp=Z,2.5nm,0.9s,mb4.1,baz=144,slow=8.2,SNR=8.4
KSRS pP pP 16 26 38.4 -1.6
comp=Z,2.0nm,0.9s,baz=146,slow=6.5,SNR=3.8
NJ2 Nanjing 65.84 316 *e*P **P** **16 26 18.7 +2.0**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.1
PETK Petropavlovsk- 68.21 354 P **P** **16 26 31.1 -0.1**
comp=Z,7.3nm,0.8s,mb4.4,baz=144,slow=7.7,SNR=8.3
PETK LR LR 16 57 10.3
comp=Z,25nm,18.1s,baz=308,slow=36
MDJ Mudanjiang 68.45 332 P **P** **16 26 33.1 +0.3**
MDJ pP pP 16 27 07.6 -1.6
MDJ PP PP 16 29 05.6 -0.5
MDJ S S 16 35 22.8 +0.5
MDJ pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,76nm,8.1s
MDJ LR LR
comp=N,33nm,22.5s
MDJ LR LR
comp=E,30nm,19.3s
MDJ LR LR
comp=Z,29nm,21.8s
HABR Khabarovsk 69.30 338 *de*P **P** **16 26 36.0 -2.0**
HABR *e**PP pP 16 27 12.2 -2.3
HABR *e* 16 29 11.1
HABR *e*S S 16 35 29.9 -2.3
HABR *e*SS SS 16 40 00.0 -2.6
HABR pmax pmax
comp=Z,14nm,1.5s,mb4.5
HABR pmax pmax
comp=N,14nm,1.8s
HABR pmax pmax
comp=E,4.0nm,0.8s
HABR MLR MLR
comp=Z,27nm,19.0s
CN2 Changchun 69.81 329 *e*P **P** **16 26 41.9 +0.6**
CN2 *e*pP pP 16 27 20.6 +2.8
CN2 *e*S S 16 35 37.7 -0.7
CN2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,400nm,16.0s
KLR Kul'dur 71.17 336 *e*P **P** **16 26 45.3 -4.1**
ENH Enshi 71.53 309 *e*P **P** **16 26 51.3 -0.7**
comp=Z,14nm,0.9s,mb4.7
GYA Guiyang 71.87 305⇓*i*P **P** **16 26 55.0 +0.9**
GYA PcP PcP 16 27 13.0 +1.0
GYA pP pP 16 27 36.2 +5.4
GYA sP sP 16 27 52.8 +5.8
GYA PP PP 16 29 40.0 +4.1
GYA S S 16 36 02.8 -0.1
GYA SKS 16 36 39.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,110nm,5.7s
BJI Beijing 72.43 321 P **P** **16 26 57.0 -0.1**
BJI pP pP 16 27 31.3 -2.6
BJI S S 16 36 08.2 -0.5
BJI pmax pmax
comp=Z,17nm,0.8s,mb4.8
BJI pmax pmax
comp=Z,79nm,4.7s
XAN Xi'an 73.85 313 P **P** **16 27 05.6 0.0**
XAN pP pP 16 27 45.2 +2.7
XAN sP sP 16 28 02.6 +4.0
XAN PP PP 16 29 53.4 +0.8
XAN S S 16 36 26.3 +1.3
XAN pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
XAN pmax pmax
comp=Z,17nm,4.8s
KMI Kunming 74.46 302 P **P** **16 27 10.8 +1.5**
KMI pP pP 16 27 46.3 0.0
KMI sP sP 16 28 04.0 +1.6
KMI PP PP 16 30 01.5 +3.6
KMI S S 16 36 32.3 +0.2
KMI sS sS 16 37 38.9 +2.9
KMI pmax pmax
comp=Z,15nm,1.1s,mb4.6
KMI pmax pmax
comp=Z,94nm,4.7s
KMI LR LR
comp=N,240nm,10.3s
KMI LR LR
comp=E,150nm,11.1s
KMI LR LR
comp=Z,190nm,14.3s
CM31 Chiang Mai Arr 75.09 294 *e*P **P** **16 27 13.8 +0.8**
comp=Z,6.0nm,0.7s,mb4.3
CMAR Chiang Mai Arr 75.09 294 P **P** **16 27 14.2 +1.1**
comp=Z,6.3nm,0.8s,mb4.3,baz=130,slow=4.5,SNR=32
CMAR pP pP 16 27 48.2 -1.9
comp=Z,4.3nm,1.0s,baz=119,slow=3.8,SNR=3.8
CHTO Chiang Mai 75.22 294 *e*P **P** **16 27 14.6 +0.8**
HHC Hu-ho-hao-te 75.75 320 *e*P **P** **16 27 18.5 +2.1**
HHC PcP PcP 16 27 30.4 +2.1
HHC pP pP 16 27 58.0 +4.6
HHC sP sP 16 28 15.3 +5.8
HHC PP PP 16 30 13.2 +4.6
HHC S S 16 36 47.2 +1.4
HHC SKS 16 37 09.3
HHC pmax pmax
comp=Z,11nm,1.0s,mb4.4
HHC pmax pmax
comp=Z,110nm,6.1s
HHC LR LR
comp=N,180nm,17.5s
HHC LR LR
comp=E,170nm,15.7s
HHC LR LR
comp=Z,96nm,17.8s
CD2 Chengdu 76.17 308 P **P** **16 27 21.2 +2.3**
CD2 pP pP 16 28 00.6 +4.5
CD2 sP sP 16 28 17.9 +5.8
CD2 PP PP 16 30 16.5 +4.2
CD2 S S 16 36 51.2 +0.4
CD2 SKS 16 37 12.2
CD2 pmax pmax
comp=Z,20nm,0.6s,mb4.9
CD2 pmax pmax
comp=Z,230nm,4.7s
SEY Seymchan 78.44 353⇑*i*P **P** **16 27 30.6 -0.2**
LZH Lanzhou 78.48 312 P **P** **16 27 32.5 +0.8**
LZH pP pP 16 28 08.7 -0.3
LZH sP sP 16 28 25.4 +0.3
LZH PP PP 16 30 34.6 +3.1
LZH pmax pmax
comp=Z,19nm,1.4s,mb4.5
LZH pmax pmax
comp=Z,89nm,4.3s
LZH LR LR
comp=E,220nm,16.5s
LZH LR LR
comp=Z,300nm,19.2s
MAW Mawson 81.78 202 P **P** **16 27 49.1 +0.2**
comp=Z,7.7nm,0.7s,mb4.5,baz=116,slow=5.0,SNR=12
MAW Mawson 81.78 202 *e*P **P** **16 27 49.2 +0.3**
YAK Yakutsk 82.19 343 *c i*P **P** **16 27 50.7 -0.2**
YAK *e* pP 16 28 25.7 -2.9
YAK pmax pmax
comp=Z,30nm,0.9s,mb4.9
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK Yakutsk 82.19 343 *e*P **P** **16 27 50.5 -0.4**
comp=N,55nm,1.1s,mb5.1
ULN Ulaanbaatar 82.31 324 *e*P **P** **16 27 51.4 -0.4**
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
ULN Ulaanbaatar 82.31 324 *e*P **P** **16 27 51.4 -0.4**
comp=Z,7.3nm,0.8s,mb4.4
SONM Songino Array 82.67 324 P **P** **16 27 54.2 +0.5**
comp=Z,3.7nm,0.7s,mb4.2,baz=146,slow=5.7,SNR=29
SONM pP pP 16 28 30.2 -1.1
comp=Z,1.4nm,0.8s,baz=130,slow=5.2,SNR=2.4
BILL Bilibino 82.69 360 *c i*P **P** **16 27 52.7 -0.7**
BILL *e**PP pP 16 28 30.1 -1.0
BILL pmax pmax
comp=Z,17nm,1.6s,mb4.5
BILL Bilibino 82.69 360 *e*P **P** **16 27 52.0 -1.4**
comp=Z,11nm,1.1s,mb4.5
GTA Gaotai 82.83 314 P **P** **16 27 56.0 +1.2**
GTA pP pP 16 28 36.7 +4.2
GTA sP sP 16 28 53.2 +4.8
GTA SKS 16 37 59.0
GTA S S 16 38 03.2 +2.6
GTA pmax pmax
comp=Z,11nm,1.2s,mb4.5
GTA pmax pmax
comp=Z,68nm,4.2s
GTA LR LR
comp=N,76nm,16.2s
GTA LR LR
comp=E,76nm,17.4s
GTA LR LR
comp=Z,84nm,16.5s
BOD Bodaibo 84.64 334 *e*P **P** **16 28 00.7 -2.8**
BOD pmax pmax
comp=Z,7.0nm,1.5s,mb4.2
LSA Lhasa 85.71 302 P **P** **16 28 10.1 +0.6**
LSA Lhasa 85.71 302 *e*P **P** **16 28 10.2 +0.7**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
LSA Lhasa 85.71 302 *e*P **P** **16 28 10.2 +0.6**
comp=Z,4.7nm,0.6s,mb4.4
ZAK Zakamensk 85.72 325 *e*P **P** **16 28 09.0 -0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
NVAR Mina Array Bea 87.30 49 P **P** **16 28 16.4 -0.7**
comp=Z,0.8nm,0.8s,mb3.6,baz=236,slow=6.5,SNR=5.3
NVAR pP pP 16 28 54.7 -0.4
comp=Z,0.7nm,0.7s,baz=223,slow=8.6,SNR=2.6
SYO Syowa Base 88.59 197⇓*e*P **P** **16 28 20.0 -2.7**
GUN Gumba 89.54 299 *e*P **P** **16 28 28.0 +0.1**
comp=Z,32nm,1.0s,mb5.2
PKI Pulchoki 89.84 298 *e*P **P** **16 28 29.1 -0.2**
comp=Z,25nm,0.8s,mb5.2
PKIN Phulchoki 89.86 298 *e*P **P** **16 28 28.9 -0.5**
comp=Z,14nm,0.7s,mb5.0
PKIN Phulchoki 89.86 298 *e*P **P** **16 28 28.9 -0.5**
comp=Z,17nm,0.8s,mb5.0
KKN Kakani 90.02 299 *e*P **P** **16 28 29.9 -0.2**
comp=Z,3.3nm,0.3s,mb4.7
DMN Daman 90.11 298 *e*P **P** **16 28 30.5 -0.1**
comp=Z,36nm,1.0s,mb5.2
TIXI Tiksi 90.13 349 *e*P **P** **16 28 28.9 -0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TIXI Tiksi 90.13 349 *e*P **P** **16 28 28.4 -1.2**
comp=Z,4.8nm,1.0s,mb4.4
M13A Montello 91.29 48 *e*P **P** **16 28 35.9 +0.2**
comp=Z,1.3nm,0.6s,mb4.1
WMQ Urumqi 92.89 315 *e*P **P** **16 28 44.5 +1.5**
NVL N'lazarevskaya 92.92 188 *e*P **P** **16 28 39.1 -3.6**
NVL pmax pmax
comp=Z,12nm,0.7s,mb5.1
VNA3 Neumayer Olymp 94.07 181 *e*P **P** **16 28 45.7 -2.3**
VNA2 Neumayer--Watz 94.34 182 *e*P **P** **16 28 47.2 -2.1**
VNA1 Neumayer--Stat 94.64 181 *e*P **P** **16 28 49.0 -1.6**
PDAR Pinedale Array 94.98 47 PKKPbc PKKPbc 16 45 45.5 -3.5
comp=Z,0.4nm,0.8s,baz=57,slow=5.5,SNR=3.9
LPM Los Pinos Moun 95.02 56 *e*P **P** **16 28 51.3 -1.8**
TXAR Lajitas Array 96.27 61 P **P** **16 29 00.5 +1.7**
comp=Z,0.4nm,0.7s,mb3.9,baz=250,slow=3.7,SNR=3.6
TXAR Lajitas Array 96.27 61 P **P** **16 29 00.5 +1.7**
MK31 Makanchi Array 97.37 316 *e*P **P** **16 29 03.5 +0.1**
MKAR Makanchi Array 97.37 316 P **P** **16 29 02.8 -0.6**
comp=Z,4.4nm,0.7s,mb4.9,baz=102,slow=5.4,SNR=32
MKAR PKiKP PKiKP 16 33 36.0 -1.6
comp=Z,0.3nm,0.6s,baz=111,slow=2.7,SNR=2.7
ZAA0 Zalesovo Array 97.56 324 *e*P **P** **16 29 02.9 -1.2**
ZALV Zalesovo Beam 97.56 324 P **P** **16 29 03.1 -0.9**
comp=Z,3.2nm,0.7s,mb4.9,baz=115,slow=4.9,SNR=18
ZALV pP pP 16 29 41.2 -1.3
comp=Z,1.0nm,0.6s,baz=107,slow=4.8,SNR=1.9
YKA Yellowknife Ar 97.64 27 P **P** **16 29 02.8 -1.4**
YKA *PP pP 16 29 41.7 -0.9
YKA Yellowknife Ar 97.64 27 P **P** **16 29 02.8 -1.4**
comp=Z,0.6nm,0.8s,mb4.1,baz=253,slow=4.5,SNR=8.9
YKA pP pP 16 29 41.7 -0.8
comp=Z,1.1nm,1.1s,baz=249,slow=3.8,SNR=3.4
YKA PKKPbc PKKPbc 16 45 38.6 -4.0
comp=Z,0.5nm,0.7s,baz=74,slow=2.5,SNR=7.7
YKA Yellowknife Ar 97.64 27 P **P** **16 29 02.8 -1.4**
YKA pP pP 16 29 41.7 -0.8
YKA PKKPbc PKKPbc 16 45 38.6 -4.0
PLCA Paso Flores 102.97 139 PKKP PKKPbc 16 45 31.7 +5.5
comp=Z,0.9nm,0.7s,baz=306,slow=4.7,SNR=3.6
KEV Kevo 119.89 345 *e*pkp PKPdf 16 34 18.4 -0.6
ARCES ARCESS Array B 120.42 345 PKP PKPdf 16 34 19.4 -0.7
comp=Z,3.6nm,0.4s,baz=75,slow=2.1,SNR=27
ARE0 ARCESS Array S 120.42 345 *e*PKPdf PKPdf 16 34 19.1 -0.9
SCHQ Schefferville 122.37 34 PKKPab PKKPab 16 44 19.4 -0.3
comp=Z,2.0nm,0.5s,baz=80,slow=5.4,SNR=5.9
JOF Joensuu 123.05 338 *e*pkp PKPdf 16 34 23.5 -1.8
BOSA Boshof 123.32 220 PKP PKPdf 16 34 27.1 +0.2
comp=Z,3.2nm,0.7s,baz=84,slow=1.4,SNR=4.6
KAF Kangasniemi 125.36 339 *e*pkp PKPdf 16 34 28.2 -1.5
FINES FINESS Array B 125.89 338 PKPdf 16 34 30.2 -0.6
FINES FINESS Array B 125.89 338 PKP PKPdf 16 34 30.2 -0.5
comp=Z,1.9nm,0.7s,baz=12,slow=2.5,SNR=16
FINES FINESS Array B 125.89 338 PKP PKPdf 16 34 30.2 -0.5
NB2 NORSAR Subarra 130.79 345 PKPdf PKPdf 16 34 40.2 +0.1
comp=Z,2.1nm,0.9s,baz=31,slow=1.9
NOA NORSAR Array B 130.79 345 PKP PKPdf 16 34 40.3 +0.2
comp=Z,0.9nm,0.6s,baz=33,slow=2.0,SNR=5.3
NOA SKPbc SKPbc 16 37 51.9 +1.7
comp=Z,3.2nm,0.9s,baz=30,slow=3.2,SNR=7.6
NOA NORSAR Array B 130.79 345 PKP PKPdf 16 34 40.3 +0.2
NOA SKPbc SKPbc 16 37 51.9 +1.7
HFS Hagfors 130.89 343 PKP PKPdf 16 34 40.2 -0.2
comp=Z,1.7nm,0.7s,baz=64,slow=9.8,SNR=6.0
HFS SKPbc SKPbc 16 37 52.8 +2.2
comp=Z,1.4nm,0.7s,baz=104,slow=4.6,SNR=3.5
AKASG Malin Array Be 130.91 326 PKP PKPdf 16 34 39.3 -1.4
comp=Z,0.5nm,0.3s,baz=52,slow=3.2,SNR=6.6
AKASG SKPbc SKPbc 16 37 50.3 -0.7
comp=Z,1.2nm,0.7s,baz=46,slow=4.4,SNR=6.0
BRTR Keskin Array B 132.67 311 PKP PKPdf 16 34 44.0 -0.3
comp=Z,0.7nm,0.6s,baz=125,slow=3.9,SNR=4.8
BRG Berggiesshubel 138.18 335 *e*P PKPdf 16 34 56.5 +2.2
comp=Z,1.8nm,0.8s
BRG Berggiesshubel 138.18 335 *e*PKIKP PKPdf 16 34 56.5 +2.3
BRG pmax pmax
comp=Z,1.0nm,0.8s
CLL Collm 138.22 336 *e*PKPdf PKPdf 16 34 56.0 +1.7
EKA Eskdalemuir Ar 138.97 352 PKhKP 16 34 46.3
comp=Z,0.3nm,0.6s,baz=2.9,slow=2.8,SNR=3.4
EKA PKP PKPdf 16 34 55.0 -0.5
comp=Z,0.7nm,0.5s,baz=10,slow=2.7,SNR=6.8
GERES GERESS Array B 139.81 333 PKhKP 16 34 52.0
comp=Z,0.5nm,0.5s,baz=39,slow=3.8,SNR=3.4
GERES PKP PKPdf 16 34 59.2 +1.9
comp=Z,0.9nm,0.8s,baz=90,slow=2.7,SNR=3.6
GERES pPKP pPKPdf 16 35 37.2 -0.1
comp=Z,0.9nm,0.7s,baz=132,slow=1.5,SNR=2.7
IDI Anoyia 140.72 308 PKhKP 16 34 49.8
comp=Z,2.0nm,0.4s,baz=235,slow=12,SNR=6.2
CDF Champ du Feu 142.74 338 *e*PKP1 PKPdf 16 34 58.6 -4.0
comp=Z,6.5nm,0.5s
FELD Feldberg im Sc 142.92 337 PKP PKPdf 16 34 59.9 -3.0
DAVOS Davos 143.04 334 PKIKP PKPdf 16 35 00.8 -2.3
DAVOX Davos/Dischmat 143.05 334 PKP PKPdf 16 35 00.8 -2.4
comp=Z,7.8nm,0.4s,baz=341,slow=3.4,SNR=16
HINF Hinteralfeld 143.40 338 *e*PKP1 PKPdf 16 35 00.2 -3.5
comp=Z,4.5nm,0.5s
HAU Haudompre 143.42 338 *e*PKP1 PKPdf 16 35 00.8 -3.0
MEZF Maizieres J'vi 143.44 340 *e*PKP1 PKPdf 16 35 01.2 -2.6
LOMF Lomont 143.80 337 PKP PKPdf 16 35 02.7 -1.8
AQU L'Aquila 144.61 326 *e*PKIKP PKPdf 16 35 05.2 -0.8
TIP Timpagrande 144.62 319 *e*PKPdf PKPdf 16 35 04.8 -1.4
CABF La Chapelle 144.69 337 *e*PKP1 PKPdf 16 35 06.0 0.0
comp=Z,82nm,0.8s
FLN La Foliniere 144.76 346⇑*i*PKP1 PKPdf 16 35 05.0 -1.1
comp=Z,36nm,0.6s
LDF La Druitiere 144.83 346⇑*i*PKP1 PKPdf 16 35 05.2 -1.0
comp=Z,31nm,0.7s
LOR Lormes 144.90 340⇑*i*PKP1 PKPdf 16 35 06.2 -0.2
comp=Z,77nm,0.9s
GRR Gorron 145.20 346⇑*i*PKP1 PKPbc 16 35 06.8 0.0
comp=Z,66nm,0.6s
SSF Saint Saulge 145.20 341⇑*i*PKP1 PKPbc 16 35 07.3 +0.5
comp=Z,225nm,1.0s
LPL La Plagne 145.36 336⇑*i*PKP1 PKPbc 16 35 08.2 +0.8
comp=Z,71nm,0.9s
LPG La Plagne 145.37 336⇑*i*PKP1 PKPbc 16 35 08.3 +0.9
comp=Z,67nm,0.8s
SMF Signal de Mont 145.46 340 *e*PKP1 PKPbc 16 35 07.9 +0.3
comp=Z,158nm,1.2s
AVF Avril sur Loir 145.49 340 *e*PKP1 PKPbc 16 35 07.7 0.0
comp=Z,99nm,1.3s
SGMF Saint Gilles 145.69 348⇑*i*PKP1 PKPbc 16 35 08.3 0.0
comp=Z,153nm,1.1s
ROSF Rostrenen 145.75 349 *e*PKP1 PKPbc 16 35 08.5 0.0
comp=Z,117nm,1.1s
BNI Bardonecchia 145.77 335 *e*PKP2 PKPab 16 35 09.1 -0.1
BGF Bois d'Agland 145.86 341 *e*PKP1 PKPbc 16 35 09.1 +0.2
comp=Z,62nm,0.7s
MBDF Montbardon 146.00 335⇑*i*PKP1 PKPbc 16 35 09.4 0.0
comp=Z,20nm,0.6s
PLDF La Plantade 146.12 339 PKP PKPbc 16 35 10.4 +0.7
QUIF Quistinic 146.13 349 *e*PKP1 PKPbc 16 35 09.4 -0.2
comp=Z,18nm,0.7s
ORIF Oris-en-Rattie 146.19 336⇑*i*PKP1 PKPbc 16 35 10.4 +0.5
comp=Z,71nm,0.7s
AGO Saint Agoulin 146.21 340 PKP PKPbc 16 35 10.4 +0.5
SAOF Saorge 146.26 333 PKP PKPbc 16 35 10.0 -0.2
TCF Toulx Ste Croi 146.30 341⇑*i*PKP1 PKPbc 16 35 10.4 +0.2
AUTN L'Aution 146.31 333 PKP PKPbc 16 35 10.5 +0.2
TOUF Mont Tournerai 146.37 334 PKP PKPbc 16 35 10.7 +0.2
SSB Saint Sauveur 146.40 338 PKP PKPbc 16 35 10.9 +0.4
SBF Sospel 146.41 333 *e*PKP1 PKPbc 16 35 10.4 -0.2
comp=Z,124nm,1.0s
LUCF Luceram 146.43 333 PKP PKPbc 16 35 10.5 -0.2
MVIF Mont Vial 146.51 334 PKP PKPbc 16 35 10.9 0.0
PYM Petit Puy Mans 146.52 340 PKP PKPbc 16 35 11.5 +0.7
MFF Saint Martin d 146.69 344⇑*i*PKP1 PKPbc 16 35 11.4 +0.1
comp=Z,108nm,0.9s
VIVF Saint-Julien-l 146.71 337 *e*PKP1 PKPbc 16 35 11.6 +0.2
PGF Pioggiola 146.72 330 *e*PKP1 PKPbc 16 35 11.5 0.0
LBI Lubilhac 146.89 339 PKP PKPbc 16 35 12.9 +1.0
FRF La Foret Royal 147.00 334 *e*PKP1 PKPbc 16 35 12.1 -0.2
SMRF Simiane la Rot 147.10 335⇑*i*PKP1 PKPbc 16 35 13.0 +0.5
comp=Z,25nm,0.8s
LMR La Mourre 147.24 334 *e*PKP1 PKPbc 16 35 12.8 -0.2
RJF Les Rejaudoux 147.40 341 *e*PKP1 PKPbc 16 35 13.6 +0.3
comp=Z,23nm,0.5s
CAF Calviac 147.56 340 *e*PKP1 PKPbc 16 35 14.1 +0.3
comp=Z,20nm,0.8s
LASF Ste Croix 147.68 337 *e*PKP1 PKPbc 16 35 14.5 +0.4
comp=Z,45nm,0.9s
LFF La Frestale 147.96 342⇑*i*PKP1 PKPbc 16 35 15.1 +0.3
comp=Z,52nm,0.7s
MTLF Montolieu 148.91 339⇑*i*PKP1 PKPbc 16 35 17.5 +0.2
comp=Z,28nm,0.7s
SJPF Ste Jean 150.20 343 *e*PKP1 PKPbc 16 35 21.0 +0.5
comp=Z,20nm,0.8s
ETSF Etsaut 150.21 342⇑*i*PKP1 PKPbc 16 35 21.2 +0.7
comp=Z,41nm,0.9s
KEST Kesra 151.38 321 PKPbc PKPbc 16 35 23.9 +0.3
comp=Z,4.4nm,0.6s,baz=142,slow=0.3,SNR=16
TORD Torodi Ar. Bea 165.98 265 PKP PKPdf 16 35 34.0 -1.1
comp=Z,2.8nm,0.8s,baz=108,slow=0.9,SNR=14
TORD PKPab PKPab 16 36 35.3 -0.8
comp=Z,4.2nm,0.8s,baz=97,slow=3.9,SNR=17
TORD Torodi Ar. Bea 165.98 265 PKP PKPdf 16 35 34.0 -1.1
TORD PKPab PKPab 16 36 35.3 -0.8
DBIC Dimbokro 168.82 224 PKP PKPdf 16 35 36.0 -1.2
comp=Z,3.2nm,0.6s,baz=301,slow=2.4,SNR=5.2
DBIC PKPab PKPab 16 36 47.9 -0.6
comp=Z,5.6nm,1.0s,baz=91,slow=3.3,SNR=3.5
DBIC Dimbokro 168.82 224 PKP PKPdf 16 35 36.0 -1.2
DBIC PKPab PKPab 16 36 47.9 -0.6

NIED ***10*** *16:20:00,40.˚40N×142.˚10E,h44km,Mw3.6 Best double couple: M0 3.31000×10^14 NP1:φ0=26.00000°,δ62.00000°,λ112.00000°. NP2:φ0=166.00000°,δ35.00000°,λ55.00000°.*
ISCJB ***10*** *16:20:26.3±0.6,40.˚36N±0.˚04×142.˚09E±0.˚08,h63km±5km, mb3.6/7, Error ellipse: s-maj=10.2km s-min=5.7km az=16.1*
NEIC ***10*** *16:20:27.6,40.˚35N×142.˚08E,h50km,mb3.9/1, After JMA.*
JMA ***10*** *16:20:27.6±0.1,40.˚35N×142.˚08E,h50km±1km,M3.7*
JMA Felt II J1.
IDC ***10*** *16:20:28.1±2.2,40.˚36N×142.˚26E,h71km±22km,mb3.3/6, mb1 3.4/8,mb1mx3.2/25,mbtmp3.3/8, Error ellipse: s-maj=36.6km s-min=14.5km az=91.0*

ISC 10 16:20:27.3±0.6, 40.˚36N±0.˚04×142.˚08E±0.˚08, h55km±5km, n20, σ0=90/28, mb3.6/7, 2C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.43**	**272**	⇓P	**Pn**	**16 20 38.0**	**-0.2**
JTH	**Tanohata**	**0.45**	**201**	⇑P	**Pn**	**16 20 38.2**	**-0.2**
JTH				S	**Sn**	**16 20 45.6**	**-0.8**
JKZ	**Kuzumaki**	**0.68**	**237**	⇓P	**Pn**	**16 20 41.4**	**+0.3**
JKZ				S	**Sn**	**16 20 51.0**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.81**	**194**	⇑P	**Pn**	**16 20 42.6**	**-0.1**
MIYJ				S	**Sn**	**16 20 53.4**	**-0.5**
JTM	**Tenmabayashi**	**0.88**	**299**	⇓P	**Pn**	**16 20 43.3**	**-0.3**
JTM				S	**Sn**	**16 20 54.6**	**-0.9**
JOM	**Ohasama**	**1.07**	**215**	P	**Pn**	**16 20 46.5**	**+0.4**
JOM				S	**Sn**	**16 20 59.7**	**-0.4**
JAH	**Hinai**	**1.12**	**262**	⇓P	**Pn**	**16 20 47.0**	**+0.3**
JAH				S	**Sn**	**16 21 01.3**	**+0.2**
JOT	**Ohata**	**1.28**	**323**	⇓P	**Pn**	**16 20 48.7**	**-0.3**
ERM	**Erimo**	**1.84**	**26**	*e*P	**Pn**	**16 20 57.7**	**+1.1**
ERM				*e*Sn	**Sn**	**16 21 17.1**	**-1.6**
ASAJ	**Asahikawa**	**3.77**	**6**	P	**Pn**	**16 21 24.2**	**+1.3**
	2.5nm,0.3s,baz=210,slow=11,SNR=26						
ASAJ				S	**Sn**	**16 22 06.9**	**+0.8**
	0.9nm,0.3s,baz=270,slow=20,SNR=5.8						
MAJO	**Matsushiro**	**4.87**	**220**	*e*Pn	**Pn**	**16 21 40.0**	**+1.9**
MJAR	**Matsushiro Arr**	**4.87**	**220**	P	**Pn**	**16 21 40.4**	**+2.4**
	0.5nm,0.3s,baz=30,slow=13,SNR=16						
MJAR	**Matsushiro Arr**	**4.87**	**220**	P	**Pn**	**16 21 40.4**	**+2.4**
ZALV	**Zalesovo Beam**	**40.13**	**310**	P	**P**	**16 27 57.6**	**+0.2**
	1.0nm,0.5s,mb3.8,baz=85,slow=7.7,SNR=6.2						
MKAR	**Makanchi Array**	**42.87**	**299**	P	**P**	**16 28 20.2**	**+0.3**
	0.7nm,0.7s,mb3.5,baz=87,slow=9.1,SNR=8.5						
KURK	**Kurchatov**	**44.36**	**306**	*e*P	**P**	**16 28 31.5**	**-0.3**
	1.8nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**48.77**	**310**	P	**P**	**16 29 05.0**	**-1.3**
	0.4nm,0.5s,mb3.7,baz=67,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**60.42**	**188**	P	**P**	**16 30 29.0**	**-2.0**
	0.4nm,0.9s,mb3.4,baz=3.6,slow=7.0,SNR=2.9						
ASAR	**Alice Springs**	**64.15**	**188**	P	**P**	**16 30 56.0**	**+0.1**
	0.2nm,0.8s,mb3.2,baz=12,slow=9.6,SNR=3.6						
FINES	**FINESS Array B**	**66.12**	**332**	P	**P**	**16 31 08.5**	**+0.1**
	1.8nm,0.9s,mb4.1,baz=46,slow=8.1,SNR=2.8						

MAN 10 16:20:44,10.˚93N×124.˚79E,h3km,mb4.7,ML3.7,MS3.7, 1C-3D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.22**	**304**	*e*P	Pg	16 20 49.6	+1.4
PLP	**Palo**	**0.30**	**38**	⇓*e*P	Pg	16 20 51.3	+1.6
PLP				*i* S	Sg	16 20 55.7	+2.1
MSLP	**Maasin**	**0.79**	**175**	*e*P	Pg	16 21 00.9	+1.7
MSLP				*e*S	Sg	16 21 14.5	+4.9
BESP	**Borongan**	**0.92**	**43**	*e*P	Pg	16 21 01.8	+0.2
LLP	**Lapu-Lapu**	**1.02**	**233**	⇓*e*P	Pg	16 21 03.3	-0.2
LLP				*e*S	Sg	16 21 18.0	+1.3
TBP	**Tagbilaran**	**1.54**	**217**	*e*P	Pn	16 21 13.1	+0.8
TBP				*e*S	Sn	16 21 30.6	-2.2
CNP	**Cataman**	**1.58**	**355**	*e*P	Pn	16 21 12.9	0.0
RCP	**Roxas**	**2.10**	**288**	⇑*e*P	Pn	16 21 20.9	+0.7
RCP				*e*S	Sn	16 21 47.5	+0.7
GUIM	**Jordan**	**2.19**	**262**	*e*P	Pn	16 21 21.8	+0.6
SNPH	**Sibulan**	**2.20**	**224**	⇓*e*P	Pn	16 21 22.2	+0.8
SNPH				*e*S	Sn	16 22 03.4	+14
PVCP	**Virac**	**2.72**	**347**	*e*P	Pn	16 21 30.2	+1.5
BUKP	**Musuan**	**3.04**	**175**	*e*P	Pn	16 21 35.8	+2.7
SJMP	**San Jose**	**3.91**	**293**	*e*P	Pn	16 21 00.8	-44

IDC ***10*** *16:23:35.6±0.8, 19.˚29S×173.˚68W,h0km,mb4.2/10, mb1 4.4/11,mb1mx4.2/22,mbtmp4.2/11,ML2.1/1,MS3.5/1,*

Ms1 3.5/1, ms1mx2.8/23, Error ellipse: s-maj=32.4km s-min=18.2km az=141.0
*ISCJB **10** 16:23:37.7±0.7, 19°.06S±0°.09×173°.7W±0°.2, h33km, mb4.2/12, Error ellipse: s-maj=24.3km s-min=8.1km az=28.0*
*NEIC **10** 16:23:40.7±0.7, 19°.18S×173°.75W, h35km, mb4.8/3, Error ellipse: s-maj=24.5km s-min=12.6km az=131.0*
ISC 10 16:23:40.4±0.7, 19°.06S±0°.09×173°.8W±0°.1, h35km, n25, σ1§26/23, mb4.2/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.46**	**21**	Pn	**Pn**	**16 24 59.0**	**-0.3**
	3.6nm,0.3s,baz=96,slow=14,SNR=15						
AFI				Sn	**Sn**	**16 25 59.2**	**-1.6**
	2.5nm,0.3s,baz=162,slow=20,SNR=2.5						
AFI				T		16 31 01.6	
	3.0nm,0.3s,baz=70,slow=15,SNR=7.5						
AFI	**Afiamalu**	**5.46**	**21**	Pn	**Pn**	**16 24 59.0**	**-0.3**
AFI				Sn	**Sn**	**16 25 59.2**	**-1.6**
RAR	**Rarotonga**	**13.30**	**102**	*e*Pn	**Pn**	**16 26 31.4**	**-15**
PPT	**Papeete**	**23.00**	**90**	LR	LR	16 35 25.8	
	comp=Z,106nm,18.6s,baz=219,slow=31						
KHZ	**Kahutara**	**25.66**	**202**	*e*P	**P**	**16 29 04.9**	**-2.0**
	49nm,0.5s,mb5.3						
RPZ	**Rata Peaks**	**27.70**	**204**	P	**P**	**16 29 25.7**	**+0.4**
	5.4nm,0.4s,mb4.5,baz=350,slow=7.0,SNR=4.7						
CTA	**Charters Tower**	**37.64**	**262**	*e*P	**P**	**16 30 53.6**	**+1.3**
	5.4nm,0.7s,mb4.4						
CTA	**Charters Tower**	**37.64**	**262**	P	**P**	**16 30 51.6**	**-0.7**
	7.8nm,0.7s,mb4.5,baz=110,slow=13,SNR=9.3						
CTAO	**Charters Tower**	**37.64**	**262**	*e*P	**P**	**16 30 52.8**	**+0.5**
	14nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**42.01**	**243**	*e*P	**P**	**16 31 28.6**	**+0.1**
	1.3nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**42.01**	**243**	P	**P**	**16 31 28.2**	**-0.4**
	1.3nm,0.5s,mb3.8,baz=94,slow=12,SNR=6.0						
STKA	**Stephens Creek**	**42.01**	**243**	P	**P**	**16 31 28.2**	**-0.4**
ASAR	**Alice Springs**	**48.75**	**255**	P	**P**	**16 32 22.4**	**+0.4**
	8.3nm,1.0s,mb4.7,baz=99,slow=7.7,SNR=59						
WRAB	**Tennant Creek**	**48.77**	**260**	*e*P	**P**	**16 32 20.8**	**-1.4**
	2.0nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**48.78**	**260**	P	**P**	**16 32 22.6**	**+0.3**
	1.7nm,0.4s,mb4.4,baz=97,slow=7.7,SNR=55						
FITZ	**Fitzroy Crossi**	**57.20**	**260**	*e*P	**P**	**16 33 25.8**	**+1.3**
	5.3nm,0.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**57.20**	**260**	P	**P**	**16 33 25.8**	**+1.3**
	2.9nm,0.5s,mb4.5,baz=120,slow=6.0,SNR=22						
QSPA	**South Pole Qui**	**71.01**	**180**	P	**P**	**16 34 52.3**	**-1.8**
	1.3nm,0.9s,mb3.9,baz=86,slow=5.3,SNR=6.8						
NVAR	**Mina Array Bea**	**77.26**	**42**	P	**P**	**16 35 33.0**	**+1.8**
	1.0nm,0.9s,mb3.7,baz=225,slow=8.9,SNR=4.3						
NVAR	**Mina Array Bea**	**77.26**	**42**	P	**P**	**16 35 33.0**	**+1.8**
TXAR	**Lajitas Array**	**82.92**	**56**	P	**P**	**16 36 03.6**	**+1.6**
	0.6nm,0.9s,mb3.6,baz=199,slow=9.6,SNR=3.2						
YKA	**Yellowknife Ar**	**93.56**	**24**	P	**P**	**16 36 53.8**	**+1.5**
	0.1nm,0.5s,mb3.5,baz=236,slow=4.4,SNR=4.2						
CLL	**Collm**	**147.38**	**352**	*e*PKPbc	PKPbc	16 43 22.0	+1.7
BR131	**Keskin Array S**	**148.68**	**317**	*e*PKPbc	PKPbc	16 43 25.6	+1.5
BRTR	**Keskin Array B**	**148.68**	**317**	PKPbc	PKPbc	16 43 27.3	+3.2
	1.7nm,0.7s,baz=150,slow=1.0,SNR=7.1						

*IDC **10** 16:25:33.7±26.0, 10°.25N×125°.92E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.6/21, mbtmp3.8/4, Error ellipse: s-maj=563.7km s-min=186.6km az=126.0*
*MAN **10** 16:25:42, 10°.96N×124°.73E, h1km, mb5.4, ML4.4, MS4.4*
MAN INTENSITY IV - ALBUERA LEYTE.
*ISCJB **10** 16:25:44.4±0.8, 11°.02N±0°.03×124°.77E±0°.04, h15km±6km, mb4.1/8, Error ellipse: s-maj=6.6km s-min=4.6km az=10.7*
*NEIC **10** 16:25:46.4±0.7, 10°.88N×125°.00E, h35km, mb4.3/4, Error ellipse: s-maj=82.6km s-min=10.2km az=68.0*
NEIC Felt [IV PIVS] at Albuera and [III PIVS] at Ormoc.
ISC 10 16:25:43.9±0.6, 10°.98N±0°.03×124°.74E±0°.04, h4km±4km, n29, σ0§94/40, mb4.1/8, 3C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.15**	**298**	*e*P	**Pg**	**16 25 47.8**	**+1.0**
PLP	**Palo**	**0.30**	**52**	⇓*e*P	**Pg**	**16 25 49.7**	**0.0**
PLP				*i* S	**Sg**	**16 25 54.5**	**+0.9**
MSLP	**Maasin**	**0.85**	**172**	*e*P	**Pg**	**16 25 59.6**	**-0.7**
MSLP				*e*S	**Sg**	**16 26 12.0**	**+0.7**
BESP	**Borongan**	**0.92**	**48**	*e*P	**Pg**	**16 26 00.3**	**-1.3**
LLP	**Lapu-Lapu**	**1.01**	**229**	⇓*e*P	**Pg**	**16 26 01.6**	**-1.7**
LLP				*e*S	**Sg**	**16 26 16.4**	**0.0**
CNP	**Catarman**	**1.52**	**357**	*e*P	**Pn**	**16 26 11.2**	**-0.7**
CNP				*e*S	**Sn**	**16 26 33.0**	**+0.7**
TBP	**Tagbilaran**	**1.55**	**214**	*e*P	**Pn**	**16 26 11.2**	**-1.1**
TBP				*e*S	**Sn**	**16 26 32.4**	**-0.5**
RCP	**Roxas**	**2.04**	**287**	⇑*e*P	**Pn**	**16 26 19.2**	**+0.1**
RCP				*e*S	**Sn**	**16 26 45.8**	**+0.7**
GUIM	**Jordan**	**2.14**	**261**	*e*P	**Pn**	**16 26 20.4**	**-0.1**
GUIM				*e*S	**Sn**	**16 26 39.9**	**-7.7**
BUTP	**Butuan**	**2.18**	**156**	*e*P	**Pn**	**16 26 22.2**	**+1.2**
SNPH	**Sibulan**	**2.20**	**222**	⇓*e*P	**Pn**	**16 26 21.3**	**0.0**
SNPH				*e*S	**Sg**	**16 27 02.0**	**+7.2**
CGP	**Cagayan de Oro**	**2.51**	**181**	⇑*i*P	**Pn**	**16 26 24.9**	**-0.7**
CGP				*i* S	**Sn**	**16 26 58.4**	**+1.7**
PVCP	**Virac**	**2.66**	**348**	*e*P	**Pn**	**16 26 29.4**	**+1.7**
PVCP				*e*S	**Sn**	**16 26 54.5**	**-6.0**
DCPH	**Dipolog City**	**2.75**	**210**	⇑*e*P	**Pn**	**16 26 30.4**	**+1.6**
BUKP	**Musuan**	**3.10**	**174**	*e*P	**Pn**	**16 26 34.6**	**+0.9**
BUKP				*e*S	**Sn**	**16 27 05.6**	**-5.6**
PAGZ	**Pagadian**	**3.39**	**203**	*e*P	**Pn**	**16 26 37.8**	**+0.1**
CUYO	**Cuyo Island**	**3.66**	**268**	*e*P	**Pn**	**16 26 40.9**	**-0.5**
SJMP	**San Jose**	**3.84**	**293**	*e*P	**Pn**	**16 26 45.2**	**+1.3**
BUSP	**Coron**	**4.57**	**283**	*e*P	**Pn**	**16 26 54.1**	**+0.2**
KAKA	**Kakadu**	**24.75**	**162**	*e*P	**P**	**16 31 02.8**	**-4.0**
	25nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**32.14**	**163**	*e*P	**P**	**16 32 09.6**	**-3.2**
	2.7nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**39.66**	**341**	*e*P	**P**	**16 33 17.1**	**+0.1**
	1.4nm,0.8s,mb3.7						
SONM	**Songino Array**	**39.84**	**341**	P	**P**	**16 33 17.8**	**-0.7**
	0.9nm,0.8s,mb3.5,baz=163,slow=8.6,SNR=3.6						
MK31	**Makanchi Array**	**50.56**	**323**	*e*P	**P**	**16 34 43.3**	**-0.3**
MKAR	**Makanchi Array**	**50.56**	**323**	P	**P**	**16 34 43.7**	**0.0**
	1.7nm,0.9s,mb4.0,baz=133,slow=8.4,SNR=8.6						
MKAR	**Makanchi Array**	**50.56**	**323**	P	**P**	**16 34 43.7**	**0.0**
ZALV	**Zalesovo Beam**	**53.29**	**332**	P	**P**	**16 35 02.7**	**-1.2**
	0.6nm,0.4s,mb3.8,baz=108,slow=9.3,SNR=3.2						
KURK	**Kurchatov**	**54.64**	**326**	*e*P	**P**	**16 35 13.3**	**-0.5**
	5.8nm,0.9s,mb4.6						
BVAR	**Borovoye Array**	**60.23**	**326**	P	**P**	**16 35 52.2**	**-1.1**
	1.3nm,0.9s,mb4.0,baz=111,slow=8.1,SNR=5.2						

*ISCJB **10** 16:27:36.2±1.2, 39°.57S±0°.10×176°.7E±0°.2, h33km, mb4.0/8, Error ellipse: s-maj=24.8km s-min=11.7km az=21.4*
*NEIC **10** 16:27:36.6, 39°.60S×177°.19E, h33km, mb4.1/4, ML4.5(WEL), After WEL.*
NEIC Felt at Clive, Havelock North and Napier.
*IDC **10** 16:27:36.7±3.5, 39°.37S×177°.03E, h33km±28km, mb3.9/6, mb1 4.1/6, mb1mx3.9/15, mbtmp3.9/6, Error ellipse: s-maj=33.4km s-min=27.5km az=39.0*
ISC 10 16:27:39.2±1.4, 39°.62S±0°.10×176°.6E±0°.2, h35km, n17, σ0§94/14, mb4.0/8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.43**	**18**	Pg	**Pn**	**16 27 57.9**	**-4.7**
	166nm,0.3s,baz=222,slow=6.0,SNR=630						
URZ				Lg		16 28 13.7	
	215nm,0.3s,baz=336,slow=20,SNR=28						
SNZO	**South Karori**	**2.20**	**219**	*e*Pn	**Pn**	**16 28 13.7**	**+0.6**
RPZ	**Rata Peaks**	**5.80**	**223**	Pn	**Pn**	**16 29 01.7**	**-0.9**
	1.2nm,0.3s,baz=353,slow=20,SNR=9.8						
RPZ				Sn	**Sn**	**16 30 07.5**	**-0.4**
	6.5nm,0.3s,baz=335,slow=19,SNR=25						
STKA	**Stephens Creek**	**29.27**	**274**	P	**P**	**16 33 39.7**	**+1.8**
	1.8nm,0.7s,mb3.9,baz=116,slow=11,SNR=4.6						
STKA	**Stephens Creek**	**29.27**	**274**	*e*P	**P**	**16 33 39.1**	**+1.2**
	0.5nm,0.9s,mb3.2						
CTAO	**Charters Tower**	**32.47**	**298**	*e*P	**P**	**16 34 07.5**	**+1.2**
	1.4nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**39.25**	**281**	P	**P**	**16 35 04.7**	**+0.4**
	4.1nm,0.7s,mb4.2,baz=131,slow=9.3,SNR=31						
WRAB	**Tennant Creek**	**41.10**	**286**	*e*P	**P**	**16 35 19.1**	**-0.6**
	3.1nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**41.10**	**286**	P	**P**	**16 35 19.6**	**-0.1**
	2.9nm,0.6s,mb4.1,baz=124,slow=7.5,SNR=35						
FITZ	**Fitzroy Crossi**	**48.75**	**281**	P	**P**	**16 36 20.7**	**+0.2**
	1.4nm,0.5s,mb4.2,baz=87,slow=14,SNR=6.3						
FITZ	**Fitzroy Crossi**	**48.75**	**281**	*e*P	**P**	**16 36 19.2**	**-1.3**
	1.5nm,0.6s,mb4.2						
QSPA	**South Pole Qui**	**50.50**	**180**	P	**P**	**16 36 34.0**	**+0.9**
	1.3nm,0.9s,mb3.8,baz=301,slow=7.0,SNR=3.9						
CMAR	**Chiang Mai Arr**	**92.44**	**292**	P	**P**	**16 40 44.9**	**-1.6**
	0.4nm,0.7s,mb3.9,baz=134,slow=2.6,SNR=3.8						
ARCES	**ARCESS Array B**	**146.34**	**342**	PKPbc	PKPbc	16 47 11.8	-3.2
	4.2nm,0.6s,baz=30,slow=3.4,SNR=12						
ARCES				pPKPbc	pPKPbc	16 47 22.9	-3.4
	3.0nm,0.6s,baz=46,slow=3.5,SNR=6.9						
FINES	**FINESS Array B**	**151.64**	**330**	PKPbc	PKPbc	16 47 25.4	-3.3
	0.7nm,0.5s,baz=29,slow=4.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**153.24**	**191**	PKPbc	PKPbc	16 47 31.6	-2.1
	0.4nm,0.7s,baz=158,slow=3.3,SNR=3.4						
TORD				pPKPbc	pPKPbc	16 47 44.2	-0.9
	1.2nm,0.8s,baz=168,slow=2.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**153.24**	**191**	PKPbc	PKPbc	16 47 31.6	-2.1
TORD				pPKPbc	pPKPbc	16 47 44.2	-0.9

*IDC **10** 16:33:03.3±1.7, 35°.90N×10°.76W, h0km, mb3.7/6, mb1 3.9/9, mb1mx3.6/31, mbtmp3.9/9, ML5.0/2, MS3.2/4, Ms1 3.3/4, ms1mx2.7/43, Error ellipse: s-maj=44.6km s-min=19.6km az=96.0*
*NEIC **10** 16:33:04.9±0.3, 35°.91N×10°.82W, h10km, mb4.0/1, Error ellipse: s-maj=4.9km s-min=3.3km az=119.0*
*LDG **10** 16:33:06.9±0.3, 36°.06N×10°.50W, h20km, Ml4.4/12, Error ellipse: s-maj=6.8km s-min=5.5km az=134.0*
*INMG **10** 16:33:07.2±2.4, 35°.97N×10°.80W, h20km±10km, MD3.4, ML4.1, Error ellipse: s-maj=4.4km s-min=2.6km az=119.0*
*CSEM **10** 16:33:09.5±0.2, 35°.97N×10°.55W, h30km, ML4.1, ML5.1/10, Error ellipse: s-maj=4.5km s-min=3.0km az=84.0*
*MDD **10** 16:33:09.1±0.5, 35°.96N×10°.76W, h40km, mb5.0/31, Error ellipse: s-maj=5.6km s-min=3.6km az=111.0, PRIMO*
*SFS **10** 16:33:09.0, 36°.00N×10°.70W, h30km, ML5.0*
*IGIL **10** 16:33:10.2, 36°.00N×10°.75W, h30km, ML4.2*
*CNRM **10** 16:33:10.7, 35°.86N×10°.60W, h30km, MD4.0*
ISC 10 16:33:08.4±0.3, 36°.03N±0°.02×10°.36W±0°.03, h10km, n444, σ1§53/777, mb3.8/6, MS3.3/3, 25C-14D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.65**	**48**	*i* Pn	**Pn**	**16 33 39.7**	**+2.2**
PFVI				*e*Sn	**Sn**	**16 34 00.2**	**+1.5**
PFVI				A		16 34 01.3	
	2μm,0.4s						
MORF	**Marmelete**	**1.87**	**47**	*i* Pn	**Pn**	**16 33 42.7**	**+2.2**
MORF				*e*Sn	**Sn**	**16 34 05.2**	**+1.0**
MORF				A		16 34 08.3	
	2μm,0.3s						
MORF	**Marmelete**	**1.87**	**47**	P	**Pn**	**16 33 42.6**	**+2.2**
MORF				S	**Sn**	**16 34 05.5**	**+1.3**
MORF	**Marmelete**	**1.87**	**47**	P	**Pn**	**16 33 42.6**	**+2.2**
MORF				S	**Sn**	**16 34 05.5**	**+1.3**
PTEO	**Sao Teotonio**	**2.00**	**40**	*i* Pn	**Pn**	**16 33 44.2**	**+1.9**
PTEO				*e*Sn	**Sn**	**16 34 08.2**	**+0.8**
PTEO				A		16 34 14.7	
	572nm,0.4s						
PTEO	**Sao Teotonio**	**2.00**	**40**	⇑P	**Pn**	**16 33 44.2**	**+1.9**
PTEO				S	**Sn**	**16 34 08.2**	**+0.8**
	286nm,0.4s						
PTEO	**Sao Teotonio**	**2.00**	**40**	⇑P	**Pn**	**16 33 44.2**	**+1.9**
PTEO				S	**Sn**	**16 34 08.2**	**+0.8**
	286nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.30**	**57**	*i* Pn	**Pn**	**16 33 48.9**	**+2.6**
PBDV				*e*Sn	**Sn**	**16 34 16.0**	**+1.4**
PBDV				A		16 34 22.6	
	379nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.30**	**57**	⇑P	**Pn**	**16 33 48.9**	**+2.6**
PBDV				S	**Sn**	**16 34 16.0**	**+1.4**
	379nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.30**	**57**	⇑P	**Pn**	**16 33 48.9**	**+2.6**
PBDV				S	**Sn**	**16 34 16.0**	**+1.4**
	379nm,0.3s						
PCVE	**Castro Verde**	**2.45**	**49**	*i* Pn	**Pn**	**16 33 51.2**	**+2.7**
PCVE				*e*Sn	**Sn**	**16 34 19.9**	**+1.4**
PCVE				A		16 34 22.1	
	1μm,0.4s						
PCVE	**Castro Verde**	**2.45**	**49**	⇑P	**Pn**	**16 33 51.2**	**+2.7**
PCVE				S	**Sn**	**16 34 19.9**	**+1.4**
	1μm,0.4s						
PCVE	**Castro Verde**	**2.45**	**49**	⇑P	**Pn**	**16 33 51.2**	**+2.7**
PCVE				S	**Sn**	**16 34 19.9**	**+1.4**
	1μm,0.4s						
PVAQ	**Vaqueiros**	**2.52**	**56**	*i* Pn	**Pn**	**16 33 51.9**	**+2.4**
PVAQ				*e*Sn	**Sn**	**16 34 21.4**	**+1.1**
PVAQ				A		16 34 23.6	
	522nm,0.1s						
PVAQ	**Vaqueiros**	**2.52**	**56**	⇑P	**Pn**	**16 33 51.9**	**+2.4**
PVAQ				S	**Sn**	**16 34 21.4**	**+1.1**
	522nm,0.1s						
PVAQ	**Vaqueiros**	**2.52**	**56**	⇑P	**Pn**	**16 33 51.9**	**+2.4**
PVAQ				S	**Sn**	**16 34 21.4**	**+1.1**
	522nm,0.1s						
EGRO	**El Granado**	**2.75**	**56**	⇑P	**Pn**	**16 33 54.9**	**+2.3**
EGRO				S	**Sn**	**16 34 27.1**	**+1.2**
EGRO	**El Granado**	**2.75**	**56**	S	**Sn**	**16 34 27.1**	**+1.2**
	804nm,0.2s,SNR=22						
EGRO	**El Granado**	**2.75**	**56**	S	**Sn**	**16 34 27.1**	**+1.2**
	804nm,0.2s,SNR=22						
EGRO	**El Granado**	**2.75**	**56**	P	**Pn**	**16 33 54.9**	**+2.3**
	80nm,0.2s,SNR=18						
EGRO				S	**Sn**	**16 34 27.1**	**+1.2**
	804nm,0.2s,SNR=22						
PBEJ	**Beja**	**2.82**	**44**	*e*Pn	**Pn**	**16 33 55.1**	**+1.6**
PBEJ				*e*Sn	**Sn**	**16 34 27.6**	**+0.1**
PBEJ				A		16 34 30.2	
	280nm,0.2s						
PBEJ	**Beja**	**2.82**	**44**	P	**Pn**	**16 33 55.1**	**+1.6**
PBEJ				S	**Sn**	**16 34 27.6**	**+0.1**
	140nm,0.2s						
PBEJ	**Beja**	**2.82**	**44**	P	**Pn**	**16 33 55.1**	**+1.6**
PBEJ				S	**Sn**	**16 34 27.6**	**+0.1**
	140nm,0.2s						
PBEJ	**Beja**	**2.82**	**44**	*e*Pn	**Pn**	**16 33 55.1**	**+1.6**
PBEJ				*e*Sn	**Sn**	**16 34 27.6**	**+0.1**
	280nm,0.2s						
ERIP	**Rio Piedras**	**2.83**	**61**	P	**Pn**	**16 33 56.1**	**+2.4**
ERIP				S	**Sn**	**16 34 28.7**	**+0.9**
ERIP	**Rio Piedras**	**2.83**	**61**	S	**Sn**	**16 34 28.7**	**+0.9**
	493nm,0.1s,SNR=7.9						
ERIP	**Rio Piedras**	**2.83**	**61**	S	**Sn**	**16 34 28.7**	**+0.9**
	493nm,0.1s,SNR=7.9						
ERIP	**Rio Piedras**	**2.83**	**61**	P	**Pn**	**16 33 56.1**	**+2.4**
	110nm,0.1s,SNR=7.9						
ERIP				S	**Sn**	**16 34 28.7**	**+0.9**
	493nm,0.1s,SNR=7.9						
LIS	**Lisbon**	**2.85**	**19**	*e*P	**Pn**	**16 33 54.3**	**+0.4**
LIS				*e*S	**Sn**	**16 34 26.9**	**-1.3**
LIS				*e*S	**Sn**	**16 34 26.9**	**-1.3**
LIS				AML	AML	16 34 27.9	
	comp=E,732nm,0.1s						
LIS	**Lisbon**	**2.85**	**19**	P	**Pn**	**16 33 54.3**	**+0.4**
LIS				S	**Sn**	**16 34 26.9**	**-1.3**
LIS	**Lisbon**	**2.85**	**19**	P	**Pn**	**16 33 54.3**	**+0.4**
LIS				S	**Sn**	**16 34 26.9**	**-1.3**
INMG	**Instituto de M**	**2.91**	**19**	*e*Sn	**Sn**	**16 34 30.2**	**+0.4**
INMG	**Instituto de M**	**2.91**	**19**	S	**Sn**	**16 34 30.2**	**+0.4**
INMG	**Instituto de M**	**2.91**	**19**	S	**Sn**	**16 34 30.2**	**+0.4**
INMG	**Instituto de M**	**2.91**	**19**	*e*Sn	**Sn**	**16 34 30.2**	**+0.4**
MOE	**Montemor**	**2.96**	**32**	*e*Pn	**Pn**	**16 33 57.3**	**+1.9**
MOE				*e*Sn	**Sn**	**16 34 30.7**	**-0.3**
MOE	**Montemor**	**2.96**	**32**	*e*Pn	**Pn**	**16 33 57.3**	**+1.9**
MOE				*e*Sn	**Sn**	**16 34 30.7**	**-0.3**
PMAFR	**Mafra**	**3.04**	**16**	*e*Pn	**Pn**	**16 33 56.8**	**+0.2**
PMAFR				*e*Sn	**Sn**	**16 34 31.1**	**-1.9**
PMAFR				A		16 34 34.7	
	comp=E,825nm,0.2s						
PMAFR	**Mafra**	**3.04**	**16**	*e*Pn	**Pn**	**16 33 56.8**	**+0.2**
EVO	**Evora**	**3.12**	**36**	*e*Pn	**Pn**	**16 33 59.1**	**+1.5**
EVO				*e*Sn	**Sn**	**16 34 34.3**	**-0.6**
EVO				A		16 34 35.1	
	comp=E,1μm,0.1s						
EVO	**Evora**	**3.12**	**36**	P	**Pn**	**16 33 59.1**	**+1.5**
EVO				S	**Sn**	**16 34 34.3**	**-0.6**
	comp=E,1μm,0.1s						
EVO	**Evora**	**3.12**	**36**	P	**Pn**	**16 33 59.1**	**+1.5**
EVO				S	**Sn**	**16 34 34.3**	**-0.6**
	comp=E,1μm,0.1s						
EVO	**Evora**	**3.12**	**36**	*e*Pn	**Pn**	**16 33 59.1**	**+1.5**
EVO				*e*Sn	**Sn**	**16 34 34.3**	**-0.6**
	comp=E,1μm,0.1s						
SFS	**San Fernando**	**3.38**	**81**	P	**Pn**	**16 34 05.0**	**+3.8**
SFS				S	**Sn**	**16 34 45.8**	**+4.4**
SFS	**San Fernando**	**3.38**	**81**	P	**Pn**	**16 34 05.0**	**+3.8**
SFS				S	**Sn**	**16 34 45.8**	**+4.4**
SFS	**San Fernando**	**3.38**	**81**	*e*P	**Pn**	**16 34 05.1**	**+3.8**
SFS				*e*S	**Sn**	**16 34 45.8**	**+4.3**
PBAR	**Barrancos**	**3.41**	**50**	*e*Pn	**Pn**	**16 34 03.7**	**+2.1**
PBAR				*e*Sn	**Sn**	**16 34 42.1**	**0.0**
PBAR				A		16 34 44.0	
	comp=E,327nm,0.4s						
PBAR	**Barrancos**	**3.41**	**50**	P	**Pn**	**16 34 03.7**	**+2.1**
PBAR				S	**Sn**	**16 34 42.1**	**0.0**
	comp=E,327nm,0.4s						
PBAR	**Barrancos**	**3.41**	**50**	P	**Pn**	**16 34 03.7**	**+2.1**
PBAR				S	**Sn**	**16 34 42.1**	**0.0**
	comp=E,327nm,0.4s						
PBAR	**Barrancos**	**3.41**	**50**	*e*Pn	**Pn**	**16 34 03.7**	**+2.1**
PBAR				*e*Sn	**Sn**	**16 34 42.1**	**0.0**
	comp=E,327nm,0.4s						
ALMR	**Almeirim**	**3.42**	**24**	*e*P	**Pn**	**16 34 02.5**	**+0.7**
ALMR				*e*S	**Sn**	**16 34 40.9**	**-1.6**
ALMR				*e*S	**Sn**	**16 34 40.9**	**-1.6**
ALMR				AML	AML	16 34 41.4	
	comp=E,200nm,0.2s						
ALMR	**Almeirim**	**3.42**	**24**	P	**Pn**	**16 34 02.5**	**+0.7**
ALMR				S	**Sn**	**16 34 40.9**	**-1.6**
ALMR	**Almeirim**	**3.42**	**24**	P	**Pn**	**16 34 02.5**	**+0.7**
ALMR				S	**Sn**	**16 34 40.9**	**-1.6**
EMIN	**Mina Concepcio**	**3.42**	**58**	⇑P	**Pn**	**16 34 03.8**	**+1.9**
EMIN				S	**Sn**	**16 34 42.9**	**+0.4**
EMIN	**Mina Concepcio**	**3.42**	**58**	S	**Sn**	**16 34 42.9**	**+0.4**
	comp=E,112nm,0.3s,SNR=10						
EMIN	**Mina Concepcio**	**3.42**	**58**	S	**Sn**	**16 34 42.9**	**+0.4**
	comp=E,112nm,0.3s,SNR=10						
EMIN	**Mina Concepcio**	**3.42**	**58**	P	**Pn**	**16 34 03.8**	**+2.0**
	comp=E,30nm,0.1s,SNR=18						
EMIN				S	**Sn**	**16 34 42.9**	**+0.4**
	comp=E,112nm,0.3s,SNR=10						
CNIL	**Conil**	**3.50**	**83**	P	**Pn**	**16 34 06.0**	**+3.2**
CNIL				S	**Sn**	**16 34 45.0**	**+0.8**
CNIL	**Conil**	**3.50**	**83**	P	**Pn**	**16 34 06.0**	**+3.2**
CNIL				S	**Sn**	**16 34 45.0**	**+0.8**
CNIL	**Conil**	**3.50**	**83**	*e*P	**Pn**	**16 34 06.0**	**+3.2**
CNIL				*e*S	**Sn**	**16 34 45.0**	**+0.8**
RTC	**Rabat Centre**	**3.52**	**124**	*e*Pn	**Pn**	**16 34 03.8**	**+0.7**
RTC				*e*Sn	**Sn**	**16 34 40.7**	**-4.2**
RTC	**Rabat Centre**	**3.52**	**124**	P	**Pn**	**16 34 03.5**	**+0.3**
RTC				S	**Sn**	**16 34 42.0**	**-2.9**
RTC	**Rabat Centre**	**3.52**	**124**	P	**Pn**	**16 34 03.5**	**+0.3**
RTC				S	**Sn**	**16 34 42.0**	**-2.9**
RTC	**Rabat Centre**	**3.52**	**124**	*i* P	**Pn**	**16 34 03.5**	**+0.3**
RTC	**Rabat Centre**	**3.52**	**124**	*e*Pn	**Pn**	**16 34 03.8**	**+0.6**
RTC				*e*Sn	**Sn**	**16 34 40.7**	**-4.2**
RTC				*i* S	**Sn**	**16 34 42.0**	**-2.9**
PESTR	**Estremoz**	**3.59**	**37**	*e*Pn	**Pn**	**16 34 05.2**	**+1.1**
PESTR				*e*Sn	**Sn**	**16 34 45.3**	**-1.2**
PESTR				A		16 34 47.4	
	comp=E,203nm,0.3s						
PESTR	**Estremoz**	**3.59**	**37**	P	**Pn**	**16 34 05.2**	**+1.1**
PESTR				S	**Sn**	**16 34 45.3**	**-1.2**
	comp=E,203nm,0.3s						
PESTR	**Estremoz**	**3.59**	**37**	P	**Pn**	**16 34 05.2**	**+1.1**
PESTR				S	**Sn**	**16 34 45.3**	**-1.2**
	comp=E,203nm,0.3s						
PESTR	**Estremoz**	**3.59**	**37**	*e*Pn	**Pn**	**16 34 05.2**	**+1.1**
PESTR				*e*Sn	**Sn**	**16 34 45.3**	**-1.2**
	comp=E,203nm,0.3s						
GIBL	**Gibalbin**	**3.63**	**76**	P	**Pn**	**16 34 07.0**	**+2.4**
GIBL				S	**Sn**	**16 34 46.

PCBR **Castelo Branco 4.43 30** *e*Pn Pn 16 34 17.1 +1.4
EMIJ **Mijas 4.54 82** P Pn 16 34 18.9 +1.7
EMIJ S Sn 16 35 10.2 +0.2
EMIJ Mijas 4.54 82 P Pn 16 34 18.9 +1.7
comp=E,24nm,0.2s,SNR=30
EMIJ S Sn 16 35 10.2 +0.2
comp=E,88nm,0.3s,SNR=5.0
EMIJ Mijas 4.54 82 P Pn 16 34 18.9 +1.7
comp=E,24nm,0.2s,SNR=30
EMIJ S Sn 16 35 10.2 +0.2
comp=E,88nm,0.3s,SNR=5.0
EMIJ Mijas 4.54 82 P Pn 16 34 18.9 +1.7
comp=E,24nm,0.2s,SNR=30
EMIJ S Sn 16 35 10.2 +0.2
comp=E,88nm,0.3s,SNR=5.0
CIA Chichaoua 4.65 163 P Pn 16 34 17.0 -1.7
CIA S Sn 16 35 06.0 -6.7
CIA Chichaoua 4.65 163 P Pn 16 34 17.0 -1.7
CIA S Sn 16 35 06.0 -6.7
CIA Chichaoua 4.65 163 *i* P Pn 16 34 17.0 -1.7
EMAL Malaga-Limoner 4.84 80 P Pn 16 34 31.4 +10
EMAL S Sn 16 35 25.5 +8.2
EMAL Malaga-Limoner 4.84 80 P Pn 16 34 31.4 +10
comp=E,33nm,0.2s,SNR=7.9
EMAL S Sn 16 35 25.5 +8.2
comp=E,78nm,0.3s,SNR=7.9
EMAL Malaga-Limoner 4.84 80 P Pn 16 34 31.4 +10
comp=E,33nm,0.2s,SNR=7.9
EMAL S Sn 16 35 25.5 +8.2
comp=E,78nm,0.3s,SNR=7.9
EMAL Malaga-Limoner 4.84 80 *e*P Pn 16 34 23.6 +2.3
EMAL *e*S Sn 16 35 18.1 +0.8
MTE Manteigas 4.89 26 *e*Pn Pn 16 34 22.6 +0.6
MTE *e*Sn Sn 16 35 15.3 -3.3
MTE A 16 35 20.5
comp=E,189nm,0.8s
MTE Manteigas 4.89 26 *e*Pn Pn 16 34 21.4 -0.6
MTE *e*Sn Sn 16 35 14.7 -3.9
MTE Manteigas 4.89 26 *e*Pn Pn 16 34 22.6 +0.6
MTE *e*Sn Sn 16 35 14.7 -3.9
KIB El Ksiba 4.96 133 P Pn 16 34 23.0 0.0
KIB S Sn 16 35 16.0 -4.5
KIB El Ksiba 4.96 133 P Pn 16 34 23.0 0.0
KIB S Sn 16 35 16.0 -4.5
KIB El Ksiba 4.96 133 *i* P Pn 16 34 23.0 0.0
KIB *i* S Sn 16 35 16.0 -4.5
MIF Mishlifen 4.97 120 P Pn 16 34 24.0 +1.0
MIF S Sn 16 35 20.0 -0.5
MIF Mishlifen 4.97 120 P Pn 16 34 24.0 +1.0
MIF S Sn 16 35 20.0 -0.5
MIF Mishlifen 4.97 120 *i* P Pn 16 34 24.0 +1.0
MIF *i* S Sn 16 35 20.0 -0.5
TZC Tazercounte 5.03 139 P Pn 16 34 23.5 -0.4
TZC S Sn 16 35 17.0 -5.1
TZC Tazercounte 5.03 139 P Pn 16 34 23.5 -0.4
TZC S Sn 16 35 17.0 -5.1
TZC Tazercounte 5.03 139 *i* P Pn 16 34 23.5 -0.4
TZC *i* S Sn 16 35 17.0 -5.1
PVIS Viseu 5.06 22 *e*Pn Pn 16 34 24.8 +0.5
PVIS *e*Sn Sn 16 35 19.3 -3.5
PVIS A 16 35 23.8
comp=E,113nm,0.4s
PVIS Viseu 5.06 22 P Pn 16 34 24.8 +0.5
PVIS S Sn 16 35 19.3 -3.5
comp=E,56nm,0.4s
PVIS Viseu 5.06 22 P Pn 16 34 24.8 +0.5
PVIS S Sn 16 35 19.3 -3.5
comp=E,56nm,0.4s
PVIS Viseu 5.06 22 *e*Pn Pn 16 34 24.8 +0.5
EADA Adamuz 5.09 64 P Pn 16 34 26.8 +2.1
EADA S Sn 16 35 22.7 -0.8
EADA Adamuz 5.09 64 P Pn 16 34 26.8 +2.1
comp=E,112nm,0.2s,SNR=18
EADA S Sn 16 35 22.7 -0.8
comp=E,222nm,0.4s,SNR=4.9
EADA Adamuz 5.09 64 P Pn 16 34 26.8 +2.1
comp=E,112nm,0.2s,SNR=18
EADA S Sn 16 35 22.7 -0.8
comp=E,222nm,0.4s,SNR=4.9
EADA Adamuz 5.09 64 P Pn 16 34 26.8 +2.1
comp=E,112nm,0.2s,SNR=18
EADA S Sn 16 35 22.7 -0.8
comp=E,222nm,0.4s,SNR=4.9
ELOJ Sierra Loja 5.12 76 P Pn 16 34 27.6 +2.5
ELOJ S Sn 16 35 25.0 +0.8
ELOJ Sierra Loja 5.12 76 ⇑P Pn 16 34 27.7 +2.6
comp=E,30nm,0.2s,SNR=18
ELOJ S Sn 16 35 25.0 +0.8
comp=E,50nm,0.4s,SNR=5.1
ELOJ Sierra Loja 5.12 76 ⇑P Pn 16 34 27.7 +2.6
comp=E,30nm,0.2s,SNR=18
ELOJ S Sn 16 35 25.0 +0.8
comp=E,50nm,0.4s,SNR=5.1
ELOJ Sierra Loja 5.12 76 P Pn 16 34 27.6 +2.5
ELOJ S Sn 16 35 25.0 +0.8
comp=E,50nm,0.4s,SNR=5.1
ELUQ Luque 5.12 71 ⇑P Pn 16 34 27.1 +2.0
ELUQ S Sn 16 35 24.9 +0.6
ELUQ Luque 5.12 71 ⇑P Pn 16 34 27.1 +2.0
comp=E,44nm,0.2s,SNR=18
ELUQ S Sn 16 35 24.9 +0.6
comp=E,82nm,0.2s,SNR=7.9
ELUQ Luque 5.12 71 ⇑P Pn 16 34 27.1 +2.0
comp=E,44nm,0.2s,SNR=18
ELUQ S Sn 16 35 24.9 +0.6
comp=E,82nm,0.2s,SNR=7.9
ELUQ Luque 5.12 71 P Pn 16 34 27.1 +2.0
comp=E,44nm,0.2s,SNR=18
ELUQ S Sn 16 35 24.9 +0.6
comp=E,82nm,0.2s,SNR=7.9
OUK Oukaimeden 5.24 156 P Pn 16 34 25.0 -1.8
OUK S Sn 16 35 21.0 -6.2
OUK Oukaimeden 5.24 156 P Pn 16 34 25.0 -1.8
OUK S Sn 16 35 21.0 -6.2
OUK Oukaimeden 5.24 156 *i* P Pn 16 34 25.0 -1.8
OUK *i* S Sn 16 35 21.0 -6.2
PTO Porto 5.28 15 *e*Pn Pn 16 34 27.1 -0.3
PTO *e*Sn Sn 16 35 23.7 -4.6
PTO A 16 35 38.8
comp=E,138nm,0.1s
PTO Porto 5.28 15 P Pn 16 34 27.1 -0.3
PTO S Sn 16 35 23.7 -4.6
comp=E,69nm,0.1s
PTO Porto 5.28 15 P Pn 16 34 27.1 -0.3
PTO S Sn 16 35 23.7 -4.6
comp=E,69nm,0.1s
PTO Porto 5.28 15 *e*Pn Pn 16 34 27.1 -0.3
MPAL Palemas 5.29 97 P Pn 16 34 30.0 +2.6
MPAL S Sn 16 35 29.0 +0.6
MPAL Palemas 5.29 97 P Pn 16 34 30.0 +2.6
MPAL S Sn 16 35 29.0 +0.6
MPAL Palemas 5.29 97 *i* P Pn 16 34 30.0 +2.6
MPAL *i* S Sn 16 35 29.0 +0.6
CZD Col de Zad 5.31 123 P Pn 16 34 29.0 +1.3
CZD S Sn 16 35 27.0 -1.9
CZD Col de Zad 5.31 123 P Pn 16 34 29.0 +1.3
CZD S Sn 16 35 27.0 -1.9
CZD Col de Zad 5.31 123 *i* P Pn 16 34 29.0 +1.3
CZD *i* S Sn 16 35 27.0 -1.9
ERON Agron 5.37 77 P Pn 16 34 31.1 +2.6
ERON S Sn 16 35 31.2 +0.9
ERON Agron 5.37 77 P Pn 16 34 31.1 +2.5
comp=E,63nm,0.4s,SNR=7.9
ERON S Sn 16 35 31.2 +0.9
comp=E,24nm,0.3s,SNR=7.9
ERON Agron 5.37 77 P Pn 16 34 31.1 +2.5
comp=E,63nm,0.4s,SNR=7.9
ERON S Sn 16 35 31.2 +0.9
comp=E,24nm,0.3s,SNR=7.9
ERON Agron 5.37 77 P Pn 16 34 31.1 +2.6
comp=E,63nm,0.4s,SNR=7.9
ERON S Sn 16 35 31.2 +0.8
comp=E,24nm,0.3s,SNR=7.9
TZK Tazeka 5.42 109 P Pn 16 34 30.0 +0.7
TZK S Sn 16 35 29.0 -2.7
TZK Tazeka 5.42 109 P Pn 16 34 30.0 +0.7
TZK S Sn 16 35 29.0 -2.7
TZK Tazeka 5.42 109 *i* P Pn 16 34 30.0 +0.7
TOU Touzarine 5.49 99 P Pn 16 34 31.5 +1.3
TOU S Sn 16 35 33.0 -0.5
TOU Touzarine 5.49 99 P Pn 16 34 31.5 +1.3
TOU S Sn 16 35 33.0 -0.5
TOU Touzarine 5.49 99 *i* P Pn 16 34 31.5 +1.3
TOU *i* S Sn 16 35 33.0 -0.5

EGUA Guajares 5.53 80 P Pn 16 34 32.6 +1.8
EGUA S Sn 16 35 34.7 +0.2
EGUA Guajares 5.53 80 P Pn 16 34 32.6 +1.8
comp=E,39nm,0.3s,SNR=7.9
EGUA S Sn 16 35 34.7 +0.2
comp=E,326nm,0.7s,SNR=7.9
EGUA Guajares 5.53 80 P Pn 16 34 32.6 +1.8
comp=E,39nm,0.3s,SNR=7.9
EGUA S Sn 16 35 34.7 +0.2
comp=E,326nm,0.7s,SNR=7.9
EGUA Guajares 5.53 80 P Pn 16 34 32.6 +1.8
comp=E,39nm,0.3s,SNR=7.9
EGUA S Sn 16 35 34.7 +0.2
comp=E,326nm,0.7s,SNR=7.9
ECOG Cogollos-Vega 5.60 75 ⇓P Pn 16 34 34.4 +2.7
ECOG S Sn 16 35 36.8 +0.7
ECOG Cogollos-Vega 5.60 75 ⇓P Pn 16 34 34.4 +2.7
comp=E,115nm,0.5s,SNR=18
ECOG S Sn 16 35 36.8 +0.7
comp=E,38nm,0.2s
ECOG Cogollos-Vega 5.60 75 ⇓P Pn 16 34 34.4 +2.7
comp=E,115nm,0.5s,SNR=18
ECOG S Sn 16 35 36.8 +0.7
comp=E,38nm,0.2s
ECOG Cogollos-Vega 5.60 75 P Pn 16 34 34.4 +2.7
comp=E,115nm,0.5s,SNR=18
ECOG S Sn 16 35 36.8 +0.7
comp=E,38nm,0.2s
PVRL Vila Real 5.63 21 *e*Pn Pn 16 34 32.6 +0.5
PVRL *e*Sn Sn 16 35 31.9 -4.9
PVRL A 16 35 36.3
comp=E,252nm,0.3s
PVRL Vila Real 5.63 21 P Pn 16 34 32.6 +0.5
PVRL S Sn 16 35 31.9 -4.9
comp=E,126nm,0.3s
PVRL Vila Real 5.63 21 P Pn 16 34 32.6 +0.5
PVRL S Sn 16 35 31.9 -4.9
comp=E,126nm,0.3s
PVRL Vila Real 5.63 21 *e*Pn Pn 16 34 32.6 +0.5
AFS Agadir Fac de 5.64 172 P Pn 16 34 31.0 -1.3
AFS S Sn 16 35 30.0 -7.2
AFS Agadir Fac de 5.64 172 P Pn 16 34 31.0 -1.3
AFS S Sn 16 35 30.0 -7.2
AFS Agadir Fac de 5.64 172 *i* P Pn 16 34 31.0 -1.3
EBAN Banos Encina 5.67 66 ⇓P Pn 16 34 34.3 +1.6
EBAN S Sn 16 35 35.4 -2.4
EBAN Banos Encina 5.67 66 ⇓P Pn 16 34 34.3 +1.6
comp=E,66nm,0.2s,SNR=18
EBAN S Sn 16 35 35.3 -2.4
comp=E,72nm,0.4s,SNR=10
EBAN Banos Encina 5.67 66 ⇓P Pn 16 34 34.3 +1.6
comp=E,66nm,0.2s,SNR=18
EBAN S Sn 16 35 35.3 -2.4
comp=E,72nm,0.4s,SNR=10
EBAN Banos Encina 5.67 66 P Pn 16 34 34.3 +1.6
comp=E,66nm,0.2s,SNR=18
EQUE Quentar 5.69 76 ⇑P Pn 16 34 35.6 +2.7
comp=E,55nm,0.3s,SNR=18
EQUE S Sn 16 35 38.4 +0.2
comp=E,50nm,0.3s,SNR=4.9
EQUE Quentar 5.69 76 ⇑P Pn 16 34 35.6 +2.7
comp=E,55nm,0.3s,SNR=18
EQUE S Sn 16 35 38.4 +0.2
comp=E,50nm,0.3s,SNR=4.9
EQUE Quentar 5.69 76 P Pn 16 34 35.6 +2.7
comp=E,55nm,0.3s,SNR=18
EQUE S Sn 16 35 38.4 +0.2
comp=E,50nm,0.3s,SNR=4.9
MDT Midelt 5.73 122 Pn Pn 16 34 34.0 +0.5
comp=E,11nm,0.3s,baz=314,slow=11,SNR=217
MDT Sn Sn 16 35 34.5 -4.7
comp=E,63nm,0.3s,baz=186,slow=19,SNR=29
MDT Midelt 5.73 122 Pn Pn 16 34 34.0 +0.5
MVO Moncorvo 5.75 26 *e*Pn Pn 16 34 34.2 +0.4
MVO *e*Sn Sn 16 35 35.7 -4.1
MVO A 16 35 39.9
comp=E,260nm,0.3s
MVO Moncorvo 5.75 26 *e*Pn Pn 16 34 34.2 +0.4
PMPS Porto Santo 5.75 241 *e*Pn Pn 16 34 26.6 -7.3
PMPS *e*Sn Sn 16 35 23.9 -16
PMPS A 16 35 25.4
comp=E,126nm,0.2s
PMPS Porto Santo 5.75 241 P Pn 16 34 26.6 -7.3
PMPS S Sn 16 35 23.9 -16
comp=E,63nm,0.2s
PMPS Porto Santo 5.75 241 P Pn 16 34 26.6 -7.3
PMPS S Sn 16 35 23.9 -16
comp=E,63nm,0.2s
PAB San Pablo 5.91 52 *e*Pn Pn 16 34 36.8 +0.7
PAB *e*Sn Sn 16 35 43.2 -0.6
PAB San Pablo 5.91 52 *e*Pn Pn 16 34 36.8 +0.8
PAB *e*Sn Sn 16 35 43.2 -0.6
EALB Alboran 5.94 89 P Pn 16 34 36.5 +0.1
EALB S Sn 16 35 45.4 +0.9
EALB Alboran 5.94 89 P Pn 16 34 36.5 +0.1
EALB S Sn 16 35 45.4 +0.9
PCAB Cabril 5.96 17 *e*Pn Pn 16 34 36.8 +0.2
PCAB *e*Sn Sn 16 35 39.8 -5.0
PCAB A 16 35 43.4
comp=E,70nm,0.3s
PCAB Cabril 5.96 17 P Pn 16 34 36.8 +0.2
PCAB S Sn 16 35 39.8 -5.0
comp=E,35nm,0.3s
PCAB Cabril 5.96 17 P Pn 16 34 36.8 +0.2
PCAB S Sn 16 35 39.8 -5.0
comp=E,35nm,0.3s
PCAB Cabril 5.96 17 *e*Pn Pn 16 34 36.8 +0.2
EMEL Melilla 6.07 95 S Sn 16 35 46.8 -0.9
comp=E,185nm,0.3s,SNR=7.9
EMEL Melilla 6.07 95 S Sn 16 35 46.8 -0.9
comp=E,185nm,0.3s,SNR=7.9
EMLI Melilla 6.07 95 S Sn 16 35 46.8 -1.0
comp=E,185nm,0.3s,SNR=7.9
EBER Berja 6.08 80 P Pn 16 34 40.5 +2.2
EBER S Sn 16 35 48.0 +0.1
EBER Berja 6.08 80 P Pn 16 34 40.5 +2.2
comp=E,11nm,0.2s,SNR=31
EBER S Sn 16 35 48.0 +0.1
comp=E,68nm,0.5s,SNR=6.6
EBER Berja 6.08 80 P Pn 16 34 40.5 +2.2
comp=E,11nm,0.2s,SNR=31
EBER S Sn 16 35 48.0 +0.1
comp=E,68nm,0.5s,SNR=6.6
EBER Berja 6.08 80 P Pn 16 34 40.5 +2.2
comp=E,11nm,0.2s,SNR=31
EBER S Sn 16 35 48.0 +0.1
comp=E,68nm,0.5s,SNR=6.6
ELOB Lobios 6.10 16 P Pn 16 34 38.3 -0.3
ELOB S Sn 16 35 43.0 -5.4
ELOB Lobios 6.10 16 P Pn 16 34 38.3 -0.3
comp=E,12nm,0.3s,SNR=26
ELOB S Sn 16 35 43.0 -5.4
comp=E,194nm,0.4s,SNR=5.0
ELOB Lobios 6.10 16 P Pn 16 34 38.3 -0.3
comp=E,12nm,0.3s,SNR=26
ELOB S Sn 16 35 43.0 -5.4
comp=E,194nm,0.4s,SNR=5.0
ELOB Lobios 6.10 16 P Pn 16 34 38.3 -0.2
comp=E,12nm,0.3s,SNR=26
EQES Quesada 6.10 71 ⇓P Pn 16 34 40.4 +1.8
EQES S Sn 16 35 48.4 0.0
EQES Quesada 6.10 71 ⇓P Pn 16 34 40.4 +1.8
comp=E,12nm,0.2s,SNR=18
EQES S Sn 16 35 48.4 0.0
comp=E,64nm,0.3s,SNR=9.0
EQES Quesada 6.10 71 ⇓P Pn 16 34 40.4 +1.8
comp=E,12nm,0.2s,SNR=18
EQES S Sn 16 35 48.4 0.0
comp=E,64nm,0.3s,SNR=9.0
EQES Quesada 6.10 71 P Pn 16 34 40.4 +1.8
comp=E,12nm,0.2s,SNR=18
EQES S Sn 16 35 48.4 0.0
comp=E,64nm,0.3s,SNR=9.0
YBT Youssef Ben Ta 6.19 174 P Pn 16 34 38.0 -1.9
YBT S Sn 16 35 40.0 -11
YBT Youssef Ben Ta 6.19 174 P Pn 16 34 38.0 -1.9
YBT S Sn 16 35 40.0 -11
ESDC Sonseca Array 6.23 52 Pn Pn 16 34 41.4 +1.0
comp=E,17nm,0.3s,baz=238,slow=14,SNR=112
ESDC Sn Sn 16 35 50.9 -0.7
comp=E,50nm,0.3s,baz=240,slow=24,SNR=56
ESDC Sonseca Array 6.23 52 P Pn 16 34 41.5 +1.1
ESDC S Sn 16 35 50.3 -1.3
ESDC Sonseca Array 6.23 52 P Pn 16 34 41.5 +1.1
comp=E,16nm,0.2s,baz=235,slow=13,SNR=151
ESDC S Sn 16 35 50.3 -1.3

comp=E,125nm,0.2s,baz=241,slow=24,SNR=61
ESDC Sonseca Array 6.23 52 P Pn 16 34 41.5 +1.1
comp=E,16nm,0.2s,baz=235,slow=13,SNR=151
ESDC S Sn 16 35 50.3 -1.3
comp=E,125nm,0.2s,baz=241,slow=24,SNR=61
ESDC Sonseca Array 6.23 52 P Pn 16 34 41.5 +1.1
comp=E,16nm,0.2s,slow=13,SNR=151
ESDC S Sn 16 35 50.3 -1.3
comp=E,125nm,0.2s,slow=24,SNR=61
ESLA Sonseca Array 6.23 52 *e*Pn Pn 16 34 41.0 +0.6
ESLA *e*Sn Sn 16 35 50.4 -1.2
ESLA Sonseca Array 6.23 52 *e*Pn Pn 16 34 41.0 +0.6
ESLA *e*Sn Sn 16 35 50.4 -1.2
EZAM Zamans 6.25 11 ⇑P Pn 16 34 40.2 -0.4
EZAM S Sn 16 35 46.2 -5.8
EZAM Zamans 6.25 11 ⇑P Pn 16 34 40.2 -0.4
comp=E,9.5nm,0.1s,SNR=18
EZAM S Sn 16 35 46.2 -5.8
comp=E,140nm,0.3s,SNR=7.9
EZAM Zamans 6.25 11 ⇑P Pn 16 34 40.2 -0.4
comp=E,9.5nm,0.1s,SNR=18
EZAM S Sn 16 35 46.2 -5.8
comp=E,140nm,0.3s,SNR=7.9
EZAM Zamans 6.25 11 P Pn 16 34 40.2 -0.4
comp=E,9.5nm,0.1s,SNR=18
ZAI Zaio 6.30 97 P Pn 16 34 42.5 +1.2
ZAI S Sn 16 35 51.0 -2.3
ZAI Zaio 6.30 97 P Pn 16 34 42.5 +1.2
ZAI S Sn 16 35 51.0 -2.3
ZAI Zaio 6.30 97 *i* P Pn 16 34 42.5 +1.2
ZAI *i* S Sn 16 35 51.0 -2.3
PMAR Madeira 6.34 241 *e*Pn Pn 16 34 34.8 -7.2
PMAR *e*Sn Sn 16 35 34.6 -20
PMAR A 16 35 42.0
comp=E,168nm,0.2s
PMAR Madeira 6.34 241 P Pn 16 34 34.8 -7.2
PMAR S Sn 16 35 34.6 -20
comp=E,84nm,0.2s
PMAR Madeira 6.34 241 P Pn 16 34 34.8 -7.2
PMAR S Sn 16 35 34.6 -20
comp=E,84nm,0.2s
ZFT Errachidia 6.38 127 P Pn 16 34 44.0 +1.5
ZFT S Sn 16 35 53.0 -2.4
ZFT Errachidia 6.38 127 P Pn 16 34 44.0 +1.5
ZFT S Sn 16 35 53.0 -2.4
ZFT Errachidia 6.38 127 *i* P Pn 16 34 44.0 +1.5
ZFT *i* S Sn 16 35 53.0 -2.4
FUL Funchal 6.38 240 *e*Pn Pn 16 34 35.3 -7.2
FUL *e*Sn Sn 16 35 37.7 -18
FUL A 16 35 41.8
comp=E,216nm,0.2s
FUL Funchal 6.38 240 P Pn 16 34 35.3 -7.2
FUL S Sn 16 35 37.7 -18
comp=E,108nm,0.2s
FUL Funchal 6.38 240 P Pn 16 34 35.3 -7.2
FUL S Sn 16 35 37.7 -18
comp=E,108nm,0.2s
PBRG Braganca 6.42 25 *e*Pn Pn 16 34 43.4 +0.5
PBRG *e*Sn Sn 16 35 51.9 -4.3
PBRG A 16 35 54.0
comp=E,88nm,0.3s
PBRG Braganca 6.42 25 P Pn 16 34 43.4 +0.5
PBRG S Sn 16 35 51.9 -4.3
comp=E,44nm,0.3s
PBRG Braganca 6.42 25 P Pn 16 34 43.4 +0.5
PBRG S Sn 16 35 51.9 -4.3
comp=E,44nm,0.3s
PBRG Braganca 6.42 25 *e*Pn Pn 16 34 43.4 +0.5
EHUE Huescar 6.47 72 P Pn 16 34 45.3 +1.6
EHUE S Sn 16 35 56.6 -0.9
EHUE Huescar 6.47 72 P Pn 16 34 45.3 +1.6
comp=E,18nm,0.2s,SNR=7.9
EHUE S Sn 16 35 56.6 -0.9
comp=E,24nm,0.2s,SNR=7.9
EHUE Huescar 6.47 72 P Pn 16 34 45.3 +1.6
comp=E,18nm,0.2s,SNR=7.9
EHUE S Sn 16 35 56.6 -0.9
comp=E,24nm,0.2s,SNR=7.9
EHUE Huescar 6.47 72 P Pn 16 34 45.3 +1.6
comp=E,18nm,0.2s,SNR=7.9
EHUE S Sn 16 35 56.6 -0.9
comp=E,24nm,0.2s,SNR=7.9
ECAL Calabor 6.54 24 P Pn 16 34 44.8 +0.2
ECAL S Sn 16 35 54.9 -4.4
ECAL Calabor 6.54 24 P Pn 16 34 44.8 +0.2
comp=E,4.8nm,0.1s,SNR=12
ECAL S Sn 16 35 54.9 -4.4
comp=E,327nm,0.4s,SNR=11
ECAL Calabor 6.54 24 P Pn 16 34 44.8 +0.2
comp=E,4.8nm,0.1s,SNR=12
ECAL S Sn 16 35 54.9 -4.4
comp=E,327nm,0.4s,SNR=11
ECAL Calabor 6.54 24 P Pn 16 34 44.8 +0.2
comp=E,4.8nm,0.1s,SNR=12
ENIJ Nijar 6.63 79 P Pn 16 34 47.8 +1.9
ENIJ S Sn 16 36 00.6 -0.9
ENIJ Nijar 6.63 79 P Pn 16 34 47.8 +1.9
comp=E,19nm,0.3s,SNR=11
ENIJ S Sn 16 36 00.6 -0.9
comp=E,9.5nm,0.4s
ENIJ Nijar 6.63 79 P Pn 16 34 47.8 +1.9
comp=E,19nm,0.3s,SNR=11
ENIJ S Sn 16 36 00.6 -0.9
comp=E,9.5nm,0.4s
ENIJ Nijar 6.63 79 P Pn 16 34 47.8 +1.9
comp=E,19nm,0.3s,SNR=11
ENIJ S Sn 16 36 00.6 -0.9
comp=E,9.5nm,0.4s
GUD Guadarrama 6.71 45 P Pn 16 34 47.6 +0.7
GUD S Sn 16 36 00.8 -2.5
GUD Guadarrama 6.71 45 P Pn 16 34 47.6 +0.7
comp=E,22nm,0.2s,SNR=7.9
GUD S Sn 16 36 00.8 -2.5
comp=E,75nm,0.2s,SNR=7.9
GUD Guadarrama 6.71 45 P Pn 16 34 47.6 +0.7
comp=E,22nm,0.2s,SNR=7.9
GUD S Sn 16 36 00.8 -2.5
comp=E,75nm,0.2s,SNR=7.9
GUD Guadarrama 6.71 45 P Pn 16 34 47.6 +0.7
comp=E,22nm,0.2s,SNR=7.9
EVIA Vianos 6.78 65 P Pn 16 34 49.3 +1.4
EVIA S Sn 16 36 03.3 -1.8
EVIA Vianos 6.78 65 P Pn 16 34 49.3 +1.4
comp=E,8.0nm,0.1s,SNR=39
EVIA S Sn 16 36 03.3 -1.8
comp=E,53nm,0.2s,SNR=20
EVIA Vianos 6.78 65 P Pn 16 34 49.3 +1.4
comp=E,8.0nm,0.1s,SNR=39
EVIA S Sn 16 36 03.3 -1.8
comp=E,53nm,0.2s,SNR=20
EVIA Vianos 6.78 65 P Pn 16 34 49.3 +1.4
comp=E,8.0nm,0.1s,SNR=39
ERUA La Rua 6.83 20 P Pn 16 34 48.5 0.0
ERUA S Sn 16 36 01.2 -5.1
ERUA La Rua 6.83 20 P Pn 16 34 48.5 0.0
comp=E,24nm,0.1s,SNR=7.9
ERUA S Sn 16 36 01.2 -5.1
comp=E,42nm,0.2s,SNR=7.9
ERUA La Rua 6.83 20 P Pn 16 34 48.5 0.0
comp=E,24nm,0.1s,SNR=7.9
ERUA S Sn 16 36 01.2 -5.1
comp=E,42nm,0.2s,SNR=7.9
ERUA La Rua 6.83 20 P Pn 16 34 48.5 0.0
comp=E,24nm,0.1s,SNR=7.9
STS Santiago 6.99 11 P Pn 16 34 49.9 -0.9
STS S Sn 16 36 03.5 -6.8
STS Santiago 6.99 11 P Pn 16 34 49.9 -0.9
comp=E,12nm,0.2s,SNR=9.9
STS S Sn 16 36 03.5 -6.8
comp=E,30nm,0.2s,SNR=7.3
STS Santiago 6.99 11 P Pn 16 34 49.9 -0.9
comp=E,12nm,0.2s,SNR=9.9
STS S Sn 16 36 03.5 -6.8
comp=E,30nm,0.2s,SNR=7.3
STS Santiago 6.99 11 P Pn 16 34 49.9 -0.9
comp=E,12nm,0.2s,SNR=9.9
EMAZ Mazaricos 6.99 8 P Pn 16 34 49.7 -1.1
EMAZ S Sn 16 36 02.7 -7.7
EMAZ Mazaricos 6.99 8 P Pn 16 34 49.7 -1.1
comp=E,18nm,0.2s,SNR=36
EMAZ S Sn 16 36 02.7 -7.7
comp=E,108nm,0.2s,SNR=13
EMAZ Mazaricos 6.99 8 P Pn 16 34 49.7 -1.1
comp=E,18nm,0.2s,SNR=36
EMAZ S Sn 16 36 02.7 -7.7
comp=E,108nm,0.2s,SNR=13

EMAZ Mazaricos 6.99 8 P Pn 16 34 49.7 -1.1
comp=E,18nm,0.2s,SNR=36
EFAM Famara 7.38 202 P Pn 16 34 52.2 -4.1
EFAM S Sn 16 36 04.5 -16
EFAM Famara 7.38 202 P Pn 16 34 52.2 -4.1
comp=E,3.0nm,0.2s,SNR=7.9
EFAM S Sn 16 36 04.5 -16
comp=E,81nm,0.4s,SNR=13
EFAM Famara 7.38 202 P Pn 16 34 52.2 -4.1
comp=E,3.0nm,0.2s,SNR=7.9
EFAM S Sn 16 36 04.5 -16
comp=E,81nm,0.4s,SNR=13
ETOB Tobarra 7.49 67 ⇓P Pn 16 34 59.1 +1.4
ETOB S Sn 16 36 20.0 -2.6
ETOB Tobarra 7.49 67 ⇓P Pn 16 34 59.1 +1.4
comp=E,12nm,0.2s,SNR=18
ETOB S Sn 16 36 20.0 -2.6
comp=E,39nm,0.2s,SNR=8.6
ETOB Tobarra 7.49 67 ⇓P Pn 16 34 59.1 +1.4
comp=E,12nm,0.2s,SNR=18
ETOB S Sn 16 36 20.0 -2.6
comp=E,39nm,0.2s,SNR=8.6
ETOB Tobarra 7.49 67 P Pn 16 34 59.1 +1.5
comp=E,12nm,0.2s,SNR=18
EMUR La Murta 7.52 73 P Pn 16 34 59.8 +1.7
EMUR S Sn 16 36 22.2 -1.2
EMUR La Murta 7.52 73 P Pn 16 34 59.8 +1.7
comp=E,14nm,0.4s,SNR=14
EMUR S Sn 16 36 22.2 -1.2
comp=E,36nm,0.6s
EMUR La Murta 7.52 73 P Pn 16 34 59.8 +1.7
comp=E,14nm,0.4s,SNR=14
EMUR S Sn 16 36 22.2 -1.2
comp=E,36nm,0.6s
EMUR La Murta 7.52 73 P Pn 16 34 59.8 +1.7
comp=E,14nm,0.4s,SNR=14
EMUR S Sn 16 36 22.2 -1.2
comp=E,36nm,0.6s
CART Cartagena 7.66 76 Pn Pn 16 35 00.2 +0.1
CART Cartagena 7.66 76 Pn Pn 16 35 00.2 +0.1
EPON Pontenova 7.70 18 P Pn 16 35 00.4 -0.1
EPON S Sn 16 36 21.7 -6.0
EPON Pontenova 7.70 18 P Pn 16 35 00.4 -0.1
comp=E,2.9nm,0.1s,SNR=21
EPON S Sn 16 36 21.7 -6.0
comp=E,38nm,0.3s,SNR=6.0
EPON Pontenova 7.70 18 P Pn 16 35 00.4 -0.1
comp=E,2.9nm,0.1s,SNR=21
EPON S Sn 16 36 21.7 -6.0
comp=E,38nm,0.3s,SNR=6.0
EPON Pontenova 7.70 18 P Pn 16 35 00.4 -0.1
comp=E,2.9nm,0.1s,SNR=21
ETOR Torete 8.08 51 P Pn 16 35 07.4 +1.7
ETOR S Sn 16 36 34.2 -3.0
ETOR Torete 8.08 51 P Pn 16 35 07.4 +1.7
comp=E,55nm,0.3s,SNR=55
ETOR S Sn 16 36 34.2 -3.0
comp=E,172nm,0.4s,SNR=5.1
ETOR Torete 8.08 51 P Pn 16 35 07.4 +1.7
comp=E,55nm,0.3s,SNR=55
ETOR S Sn 16 36 34.2 -3.0
comp=E,172nm,0.4s,SNR=5.1
ETOR Torete 8.08 51 P Pn 16 35 07.4 +1.6
comp=E,55nm,0.3s,SNR=55
CFTV Fuerteventura 8.22 204 P Pn 16 35 02.0 -5.8
CFTV S Sn 16 36 25.3 -15
CFTV Fuerteventura 8.22 204 P Pn 16 35 02.0 -5.8
comp=E,0.9nm,0.2s,SNR=7.9
CFTV S Sn 16 36 25.3 -15
comp=E,13nm,0.2s,SNR=14
CFTV Fuerteventura 8.22 204 P Pn 16 35 02.0 -5.8
comp=E,0.9nm,0.2s,SNR=7.9
CFTV S Sn 16 36 25.3 -15
comp=E,13nm,0.2s,SNR=14
ECHE Chera 8.24 62 P Pn 16 35 10.0 +2.1
ECHE S Sn 16 36 38.5 -2.5
ECHE Chera 8.24 62 P Pn 16 35 10.0 +2.1
comp=E,8.1nm,0.4s,SNR=17
ECHE S Sn 16 36 38.5 -2.5
comp=E,13nm,0.4s
ECHE Chera 8.24 62 P Pn 16 35 10.0 +2.1
comp=E,8.1nm,0.4s,SNR=17
ECHE S Sn 16 36 38.5 -2.5
comp=E,13nm,0.4s
ECHE Chera 8.24 62 P Pn 16 35 10.0 +2.1
comp=E,8.1nm,0.4s,SNR=17
EARI Arriondas 8.27 27 P Pn 16 35 09.4 +1.0
EARI S Sn 16 36 36.4 -5.4
EARI Arriondas 8.27 27 P Pn 16 35 09.4 +1.0
comp=E,1.6nm,0.2s,SNR=6.3
EARI S Sn 16 36 36.4 -5.4
comp=E,30nm,0.5s,SNR=6.0
EARI Arriondas 8.27 27 P Pn 16 35 09.4 +1.0
comp=E,1.6nm,0.2s,SNR=6.3
EARI S Sn 16 36 36.4 -5.4
comp=E,30nm,0.5s,SNR=6.0
EARI Arriondas 8.27 27 P Pn 16 35 09.4 +1.0
comp=E,1.6nm,0.2s,SNR=6.3
EBEN Beniarda 8.50 69 P Pn 16 35 12.9 +1.4
EBEN S Sn 16 36 44.9 -2.5
EBEN Beniarda 8.50 69 P Pn 16 35 12.9 +1.4
comp=E,1.3nm,0.1s,SNR=18
EBEN S Sn 16 36 44.9 -2.5
comp=E,8.0nm,0.3s,SNR=5.6
EBEN Beniarda 8.50 69 P Pn 16 35 12.9 +1.4
comp=E,1.3nm,0.1s,SNR=18
EBEN S Sn 16 36 44.9 -2.5
comp=E,8.0nm,0.3s,SNR=5.6
EBEN Beniarda 8.50 69 P Pn 16 35 12.9 +1.4
comp=E,1.3nm,0.1s,SNR=18
EMOS Mosqueruela 8.90 58 P Pn 16 35 19.6 +2.5
EMOS S Sn 16 36 55.1 -2.3
EMOS Mosqueruela 8.90 58 P Pn 16 35 19.6 +2.5
comp=E,10nm,0.3s,SNR=30
EMOS S Sn 16 36 55.1 -2.3
comp=E,61nm,0.5s,SNR=6.7
EMOS Mosqueruela 8.90 58 P Pn 16 35 19.6 +2.5
comp=E,10nm,0.3s,SNR=30
EMOS S Sn 16 36 55.1 -2.3
comp=E,61nm,0.5s,SNR=6.7
EMOS Mosqueruela 8.90 58 P Pn 16 35 19.6 +2.6
comp=E,10nm,0.3s,SNR=30
ECRI Cripan 8.95 40 P Pn 16 35 19.1 +1.5
ECRI S Sn 16 36 55.3 -3.2
ECRI Cripan 8.95 40 P Pn 16 35 19.1 +1.5
comp=E,1.9nm,0.2s,SNR=7.9
ECRI S Sn 16 36 55.3 -3.2
comp=E,9.9nm,0.2s,SNR=7.9
ECRI Cripan 8.95 40 P Pn 16 35 19.1 +1.5
comp=E,1.9nm,0.2s,SNR=7.9
ECRI S Sn 16 36 55.3 -3.2
comp=E,9.9nm,0.2s,SNR=7.9
ECRI Cripan 8.95 40 P Pn 16 35 19.1 +1.4
comp=E,1.9nm,0.2s,SNR=7.9
ELAN Lanestosa 8.95 34 P Pn 16 35 18.7 +1.0
ELAN S Sn 16 36 54.4 -4.3
ELAN Lanestosa 8.95 34 P Pn 16 35 18.7 +1.0
comp=E,1.4nm,0.2s,SNR=9.0
ELAN S Sn 16 36 53.7 -4.9
comp=E,10nm,0.2s,SNR=6.4
ELAN Lanestosa 8.95 34 P Pn 16 35 18.7 +1.0
comp=E,1.4nm,0.2s,SNR=9.0
ELAN S Sn 16 36 53.7 -4.9
comp=E,10nm,0.2s,SNR=6.4
ELAN Lanestosa 8.95 34 P Pn 16 35 18.7 +1.0
comp=E,1.4nm,0.2s,SNR=9.0
EBAJ Bajamar 9.02 216 P Pn 16 35 09.3 -9.4
EBAJ S Sn 16 36 42.5 -18
EBAJ Bajamar 9.02 216 P Pn 16 35 09.3 -9.4
comp=E,2.4nm,0.3s,SNR=7.9
EBAJ S Sn 16 36 41.7 -19
comp=E,19nm,0.2s,SNR=7.9
EBAJ Bajamar 9.02 216 P Pn 16 35 09.3 -9.4
comp=E,2.4nm,0.3s,SNR=7.9
EBAJ S Sn 16 36 41.7 -19
comp=E,19nm,0.2s,SNR=7.9
EOSO Osorio 9.07 210 P Pn 16 35 17.4 -2.1
EOSO S Sn 16 36 50.6 -11
EOSO Osorio 9.07 210 S Sn 16 36 43.7 -18
comp=E,28nm,0.3s,SNR=5.6
EOSO Osorio 9.07 210 S Sn 16 36 43.7 -18
comp=E,28nm,0.3s,SNR=5.6
EOSO Osorio 9.07 210 P Pn 16 35 17.4 -2.1
CCAN Las Canadas 9.41 216 P Pn 16 35 15.5 -8.6
CCAN S Sn 16 36 51.0 -19
CCAN Las Canadas 9.41 216 P Pn 16 35 15.5 -8.6
comp=E,0.6nm,0.2s,SNR=7.9
CCAN S Sn 16 36 51.0 -19
comp=E,2.0nm,0.2s,SNR=6.6
CCAN Las Canadas 9.41 216 P Pn 16 35 15.5 -8.6
comp=E,0.6nm,0.2s,SNR=7.9
CCAN S Sn 16 36 51.0 -19
comp=E,2.0nm,0.2s,SNR=6.6
CHIO Chio 9.50 217 S Sn 16 36 51.4 -21
comp=E,38nm,0.2s,SNR=5.2
CHIO Chio 9.50 217 S Sn 16 36 51.4 -21
comp=E,38nm,0.2s,SNR=5.2
EARA Aranguren 9.56 43 P Pn 16 35 27.8 +1.7
comp=E,18nm,0.7s,SNR=4.0
EARA S Sn 16 37 09.3 -4.2
comp=E,23nm,0.3s,SNR=7.9
EARA Aranguren 9.56 43 P Pn 16 35 27.8 +1.7
comp=E,18nm,0.7s,SNR=4.0
EARA S Sn 16 37 09.3 -4.2
comp=E,23nm,0.3s,SNR=7.9
EARA Aranguren 9.56 43 P Pn 16 35 27.8 +1.8
comp=E,18nm,0.7s,SNR=4.0
ESAC San Caprasio 9.57 51 P Pn 16 35 27.8 +1.6
ESAC S Sn 16 37 11.1 -2.8
ESAC San Caprasio 9.57 51 P Pn 16 35 27.8 +1.6
comp=E,7.8nm,0.2s,SNR=5.4
ESAC S Sn 16 37 11.1 -2.8
comp=E,98nm,0.4s,SNR=4.9
ESAC San Caprasio 9.57 51 P Pn 16 35 27.8 +1.6
comp=E,7.8nm,0.2s,SNR=5.4
ESAC S Sn 16 37 11.1 -2.8
comp=E,98nm,0.4s,SNR=4.9
ESAC San Caprasio 9.57 51 P Pn 16 35 27.8 +1.6
comp=E,7.8nm,0.2s,SNR=5.4
IUNC Unciti 9.59 43 P Pn 16 35 28.0 +1.5
comp=E,1.0nm,0.2s,SNR=4.8
IUNC S Sn 16 37 11.1 -3.2
comp=E,24nm,0.4s,SNR=7.0
IUNC Unciti 9.59 43 P Pn 16 35 28.0 +1.5
comp=E,1.0nm,0.2s,SNR=4.8
IUNC S Sn 16 37 11.1 -3.2
comp=E,24nm,0.4s,SNR=7.0
IUNC Unciti 9.59 43 P Pn 16 35 28.0 +1.5
comp=E,1.0nm,0.2s,SNR=4.8
IUSE Utxeti 9.69 42 S Sn 16 37 11.5 -5.3
comp=E,6.0nm,0.4s,SNR=7.9
IUSE Utxeti 9.69 42 S Sn 16 37 11.5 -5.3
comp=E,6.0nm,0.4s,SNR=7.9
ERTA Horta de San J 9.71 56 P Pn 16 35 19.7 -8.5
ERTA S Sn 16 37 14.8 -2.5
ERTA Horta de San J 9.71 56 P Pn 16 35 30.7 +2.5
comp=E,38nm,0.9s,SNR=7.9
ERTA S Sn 16 37 14.3 -3.0
comp=E,14nm,0.4s,SNR=7.9
ERTA Horta de San J 9.71 56 P Pn 16 35 30.7 +2.5
comp=E,38nm,0.9s,SNR=7.9
ERTA S Sn 16 37 14.3 -3.0
comp=E,14nm,0.4s,SNR=7.9
ERTA Horta de San J 9.71 56 P Pn 16 35 30.7 +2.5
comp=E,38nm,0.9s,SNR=7.9
EHIG Higuera 9.76 222 S Sn 16 36 59.3 -19
comp=E,32nm,0.2s,SNR=7.9
EHIG Higuera 9.76 222 S Sn 16 36 59.3 -19
comp=E,32nm,0.2s,SNR=7.9
EIBI Ibiza 9.76 69 P Pn 16 35 30.5 +1.7
comp=E,26nm,0.5s
EIBI S Sn 16 37 15.1 -3.4
EIBI Ibiza 9.76 69 P Pn 16 35 30.5 +1.6
comp=E,26nm,0.5s,SNR=7.9
EIBI S Sn 16 37 15.1 -3.4
comp=E,10nm,0.3s,SNR=7.9
EIBI Ibiza 9.76 69 P Pn 16 35 30.5 +1.6
comp=E,26nm,0.5s,SNR=7.9
EIBI S Sn 16 37 15.1 -3.4
comp=E,10nm,0.3s,SNR=7.9
EIBI Ibiza 9.76 69 P Pn 16 35 30.5 +1.7
comp=E,26nm,0.5s,SNR=7.9
EORO Oroz-Betelu 9.79 43 P Pn 16 35 30.9 +1.7
comp=E,31nm,0.7s,SNR=10
EORO S Sn 16 37 13.8 -5.3
comp=E,36nm,0.4s,SNR=5.6
EORO Oroz-Betelu 9.79 43 P Pn 16 35 30.9 +1.7
comp=E,31nm,0.7s,SNR=10
EORO S Sn 16 37 13.8 -5.3
comp=E,36nm,0.4s,SNR=5.6
EORO Oroz-Betelu 9.79 43 P Pn 16 35 30.9 +1.7
comp=E,31nm,0.7s,SNR=10
ELIZ Elizondo 9.85 41 P Pn 16 35 31.8 +1.7
comp=E,2.7nm,0.3s
ELIZ S Sn 16 37 15.5 -5.2
ELIZ Elizondo 9.85 41 P Pn 16 35 31.8 +1.7
comp=E,2.7nm,0.3s,SNR=11
ELIZ S Sn 16 37 15.5 -5.2
comp=E,6.5nm,0.2s
ELIZ Elizondo 9.85 41 P Pn 16 35 31.8 +1.7
comp=E,2.7nm,0.3s,SNR=11
ELIZ S Sn 16 37 15.5 -5.2
comp=E,6.5nm,0.2s
ELIZ Elizondo 9.85 41 P Pn 16 35 31.8 +1.7
comp=E,2.7nm,0.3s,SNR=11
EALK Alkurruntz 9.90 41 P Pn 16 35 31.8 +1.1
comp=E,3.5nm,0.3s
EALK S Sn 16 37 16.6 -5.3
EALK Alkurruntz 9.90 41 P Pn 16 35 31.8 +1.1
comp=E,3.5nm,0.3s,SNR=8.0
EALK S Sn 16 37 16.6 -5.3
comp=E,64nm,0.6s,SNR=6.1
EALK Alkurruntz 9.90 41 P Pn 16 35 31.8 +1.1
comp=E,3.5nm,0.3s,SNR=8.0
EALK S Sn 16 37 16.6 -5.3
comp=E,64nm,0.6s,SNR=6.1
EALK Alkurruntz 9.90 41 P Pn 16 35 31.8 +1.1
comp=E,3.5nm,0.3s,SNR=8.0
SJPF Ste Jean 9.98 42 eP Pn 16 35 33.6 +1.8
SJPF eSn Sn 16 37 13.3 -11
comp=E,36nm,0.6s
SJPF Ste Jean 9.98 42 P Pn 16 35 33.6 +1.8
SJPF S Sn 16 37 13.3 -11
comp=E,18nm,0.6s
SJPF Ste Jean 9.98 42 P Pn 16 35 33.6 +1.8
SJPF S Sn 16 37 13.3 -11
comp=E,18nm,0.6s
SJPF Ste Jean 9.98 42 eP Pn 16 35 33.6 +1.8
ETSF Etsaut 10.21 45 eP Pn 16 35 36.7 +1.7
ETSF eSn Sn 16 37 18.9 -11
comp=E,18nm,0.3s
ETSF Etsaut 10.21 45 P Pn 16 35 36.7 +1.7
ETSF S Sn 16 37 18.9 -11
comp=E,8.9nm,0.3s
ETSF Etsaut 10.21 45 P Pn 16 35 36.7 +1.7
ETSF S Sn 16 37 18.9 -11
comp=E,8.9nm,0.3s
ETSF Etsaut 10.21 45 eP Pn 16 35 36.7 +1.7
EPOB Poblet 10.39 56 P Pn 16 35 34.2 -3.3
EPOB S Sn 16 37 29.9 -4.1
EPOB Poblet 10.39 56 P Pn 16 35 39.1 +1.6
comp=E,3.5nm,0.3s,SNR=7.9
EPOB S Sn 16 37 29.9 -4.1
comp=E,3.4nm,0.3s,SNR=7.9
EPOB Poblet 10.39 56 P Pn 16 35 39.1 +1.6
comp=E,3.5nm,0.3s,SNR=7.9
EPOB S Sn 16 37 29.9 -4.1
comp=E,3.4nm,0.3s,SNR=7.9
EPOB Poblet 10.39 56 P Pn 16 35 39.1 +1.6
comp=E,3.5nm,0.3s,SNR=7.9
EBIE Bielsa 10.49 48 P Pn 16 35 40.6 +1.7
comp=E,3.6nm,0.4s
EBIE S Sn 16 37 31.8 -4.7
EBIE Bielsa 10.49 48 P Pn 16 35 40.6 +1.7
comp=E,3.6nm,0.4s,SNR=9.4
EBIE S Sn 16 37 31.8 -4.7
comp=E,38nm,0.6s,SNR=10
EBIE Bielsa 10.49 48 P Pn 16 35 40.6 +1.7
comp=E,3.6nm,0.4s,SNR=9.4
EBIE S Sn 16 37 31.8 -4.7
comp=E,38nm,0.6s,SNR=10
EBIE Bielsa 10.49 48 P Pn 16 35 40.6 +1.7
comp=E,3.6nm,0.4s,SNR=9.4
CHIE El Hierro 10.50 220 S Sn 16 37 19.6 -17
comp=E,4.0nm,0.3s,SNR=7.9
CHIE El Hierro 10.50 220 S Sn 16 37 19.6 -17
comp=E,4.0nm,0.3s,SNR=7.9
EPF Esparros 10.82 46 eP Pn 16 35 44.7 +1.5
EPF eSn Sn 16 37 33.4 -11
comp=E,37nm,0.4s
EPF Esparros 10.82 46 P Pn 16 35 44.7 +1.5
EPF S Sn 16 37 33.4 -11
comp=E,19nm,0.4s
EPF Esparros 10.82 46 P Pn 16 35 44.7 +1.5
EPF S Sn 16 37 33.4 -11
comp=E,19nm,0.4s
EPF Esparros 10.82 46 eP Pn 16 35 44.7 +1.5
ETOS Mallorca 11.05 66 P Pn 16 35 48.5 +2.0
comp=E,103nm,1.1s
ETOS S Sn 16 37 45.8 -4.3
ETOS Mallorca 11.05 66 P Pn 16 35 48.5 +2.0
comp=E,103nm,1.1s,SNR=7.9
ETOS S Sn 16 37 45.8 -4.3
comp=E,1.5nm,0.2s,SNR=7.9
ETOS Mallorca 11.05 66 P Pn 16 35 48.5 +2.0
comp=E,103nm,1.1s,SNR=7.9
ETOS S Sn 16 37 45.8 -4.3
comp=E,1.5nm,0.2s,SNR=7.9
ETOS Mallorca 11.05 66 P Pn 16 35 48.5 +2.0
comp=E,103nm,1.1s,SNR=7.9
MTLF Montolieu 12.12 49 ePn Pn 16 35 56.7 -4.4
MTLF eSn Sn 16 38 04.2 -12
comp=E,7.7nm,0.5s
MTLF Montolieu 12.12 49 P Pn 16 35 56.7 -4.4
MTLF S Sn 16 38 04.2 -12
comp=E,3.8nm,0.5s
MTLF Montolieu 12.12 49 P Pn 16 35 56.7 -4.4
MTLF S Sn 16 38 04.2 -12
comp=E,3.8nm,0.5s
LFF La Frestale 12.26 40 ePn Pn 16 35 58.5 -4.5
LFF eSn Sn 16 38 07.5 -12
comp=E,31nm,0.8s
LFF La Frestale 12.26 40 P Pn 16 35 58.5 -4.5
LFF S Sn 16 38 07.5 -12
comp=E,16nm,0.8s
LFF La Frestale 12.26 40 P Pn 16 35 58.5 -4.5
LFF S Sn 16 38 07.5 -12
comp=E,16nm,0.8s
RJF Les Rejaudoux 12.91 41 ePn Pn 16 36 07.2 -4.7
RJF eSn Sn 16 38 23.0 -13
comp=E,7.7nm,0.4s
RJF Les Rejaudoux 12.91 41 P Pn 16 36 07.2 -4.7
RJF S Sn 16 38 23.0 -13
comp=E,3.8nm,0.4s
RJF Les Rejaudoux 12.91 41 P Pn 16 36 07.2 -4.7
RJF S Sn 16 38 23.0 -13
comp=E,3.8nm,0.4s
CAF Calviac 12.96 43 ePn Pn 16 36 08.0 -4.6
CAF eSn Sn 16 38 24.1 -13
comp=E,24nm,0.9s
CAF Calviac 12.96 43 P Pn 16 36 08.0 -4.6
CAF S Sn 16 38 24.1 -13
comp=E,12nm,0.9s
CAF Calviac 12.96 43 P Pn 16 36 08.0 -4.6
CAF S Sn 16 38 24.1 -13
comp=E,12nm,0.9s
ROSF Rostrenen 13.36 21 eSn Sn 16 38 33.0 -14
comp=E,9.7nm,0.6s
ROSF Rostrenen 13.36 21 S Sn 16 38 33.0 -14
comp=E,4.8nm,0.6s
ROSF Rostrenen 13.36 21 S Sn 16 38 33.0 -14
comp=E,4.8nm,0.6s
SGMF Saint Gilles 13.51 23 eSn Sn 16 38 36.5 -14
comp=E,11nm,0.7s
SGMF Saint Gilles 13.51 23 S Sn 16 38 36.5 -14
comp=E,5.4nm,0.7s
SGMF Saint Gilles 13.51 23 S Sn 16 38 36.5 -14
comp=E,5.4nm,0.7s
TCF Toulx Ste Croi 13.93 39 ePn Pn 16 36 21.2 -4.6
TCF eSn Sn 16 38 47.4 -13
comp=E,18nm,0.8s
TCF Toulx Ste Croi 13.93 39 P Pn 16 36 21.2 -4.6
TCF S Sn 16 38 47.4 -13
comp=E,9.2nm,0.8s
TCF Toulx Ste Croi 13.93 39 P Pn 16 36 21.2 -4.6
TCF S Sn 16 38 47.4 -13
comp=E,9.2nm,0.8s
BGF Bois d'Agland 14.44 39 eSn Sn 16 38 59.6 -13
comp=E,20nm,0.4s
BGF Bois d'Agland 14.44 39 S Sn 16 38 59.6 -13
comp=E,10nm,0.4s
BGF Bois d'Agland 14.44 39 S Sn 16 38 59.6 -13
comp=E,10nm,0.4s
KEST Kesra 15.98 85 Pn Pn 16 36 53.0 -0.3
comp=E,0.1nm,0.3s,baz=270,slow=9.1,SNR=2.3
DAVOX Davos/Dischmat 18.54 48 LR LR 16 44 12.6
comp=E,40nm,18.9s,baz=81,slow=36
ESK Eskdalemuir 19.91 12 eP Pn 16 37 22.3 -19
EKA Eskdalemuir Ar 19.93 12 P Pn 16 37 39.5 -2.3
comp=E,1.0nm,0.7s,baz=181,slow=9.1,SNR=2.7
EKA Eskdalemuir Ar 19.93 12 P Pn 16 37 39.5 -2.3
GERES GERESS Array B 21.78 47 P P 16 37 60.0 -0.3
comp=E,1.1nm,0.7s,mb3.4,baz=241,slow=13,SNR=3.0
GERES GERESS Array B 21.78 47 P P 16 38 00.0 -0.2
BBTS Babate 21.99 196 LR LR 16 46 51.8
comp=E,66nm,19.2s,MS3.1,baz=305,slow=38
TORD Torodi Ar. Bea 25.23 152 P P 16 38 31.4 -3.1
comp=E,1.8nm,0.9s,mb3.6,baz=334,slow=9.0,SNR=7.2
HFS Hagfors 28.66 25 LR LR 16 49 20.4
comp=E,35nm,19.9s,MS3.0,baz=29,slow=34
DBIC Dimbokro 29.65 169 P P 16 39 10.2 -4.1
comp=E,1.0nm,0.4s,mb3.9,baz=346,slow=4.2,SNR=2.9
DBIC Dimbokro 29.65 169 P P 16 39 10.2 -4.0
FINES FINESS Array B 34.21 30 P P 16 39 52.9 -1.0
comp=E,0.8nm,0.6s,mb3.8,baz=220,slow=7.4,SNR=5.4
SUMG Summit 39.30 347 P P 16 40 34.3 -2.7
comp=E,3.2nm,0.9s,mb4.0
SUMG Summit 39.30 347 P P 16 40 34.3 -2.7
comp=E,3.2nm,0.9s,mb4.0
MKAR Makanchi Array 66.44 48 P P 16 43 55.6 -2.2
comp=E,3.0nm,1.3s,mb4.2,baz=318,slow=1.6,SNR=3.6
LPAZ La Paz 75.41 237 LR LR 17 12 06.2
comp=E,50nm,20.4s,MS3.8,baz=109,slow=31
WRA Warramunga Arr 145.17 72 PKPbc PKPbc 16 52 43.0 -3.1
comp=E,0.4nm,0.6s,baz=321,slow=2.8,SNR=9.1
WRA Warramunga Arr 145.17 72 PKPbc PKPbc 16 52 43.0 -3.2
ASAR Alice Springs 146.82 78 PKPbc PKPbc 16 52 48.0 -3.1
comp=E,0.2nm,0.8s,baz=292,slow=3.4,SNR=4.3
ASAR Alice Springs 146.82 78 PKPbc PKPbc 16 52 48.0 -3.1

NIED ***10*** *16:35:00, 24°10N×126°10E, h20^{km}, Mw3.9 Best double couple: $M_0$8.15000×10^{14} NP1:ϕ_s59.00000°, δ72.00000°, λ91.00000°. NP2:ϕ_s235.00000°, δ18.00000°, λ86.00000°.*
IDC ***10*** *16:35:19.9±0.9, 24°16N×125°95E, h0^{km}, mb3.6/10, mb1 3.7/11, mb1mx3.6/23, mbtmp3.6/11, ML3.0/1, Error ellipse: s-maj=35.7km s-min=18.4km az=70.0*
ISCJB ***10*** *16:35:21.3±1.5, 24°14N±0°05×126°17E±0°04, h29^{km}±10^{km}, mb3.5/10, Error ellipse: s-maj=9.4km s-min=6.0km az=159.9*
JMA ***10*** *16:35:22.0±0.2, 24°13N×126°12E, h66^{km}, M3.6*
NEIC ***10*** *16:35:24.3±0.7, 24°21N×126°02E, h35^{km}, MG3.6(JMA), Error ellipse: s-maj=14.2km s-min=12.4km az=108.0*
ISC 10 16:35:22.6±1.5, **24°17N**±0°06×**126°12E**±0°05, **h24**^{km}±10^{km}, **n23**, σ**0^{s}96**/31, **mb3.5**/10, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.88**	**312**	P	**Pb**	**16 35 39.2**	**+0.1**
JOGS				eS	**Sb**	**16 35 52.1**	**+1.7**
JMJ	**Miyako jima 2**	**0.99**	**310**	P	**Pn**	**16 35 41.0**	**+0.1**
JMJ				eS	**Sb**	**16 35 54.2**	**+0.6**
JTJ	**Tarama**	**1.38**	**290**	P	**Pn**	**16 35 45.6**	**-0.6**
JTJ				eS	**Sn**	**16 36 02.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.81**	**276**	P	**Pn**	**16 35 51.6**	**-0.7**
JKRS	**Kuro-shima**	**1.93**	**272**	P	**Pn**	**16 35 53.2**	**-0.6**
JKRS				eS	**Sn**	**16 36 16.9**	**-0.4**
HATJ	**Hateruma jima**	**2.12**	**267**	P	**Pn**	**16 35 55.4**	**-1.1**
IRIF	**Iriomote-Funau**	**2.19**	**275**	P	**Pn**	**16 35 56.7**	**-0.7**
JKE	**Kume jima 2**	**2.23**	**16**	P	**Pn**	**16 35 57.8**	**-0.1**
JKE				eS	**Sn**	**16 36 24.2**	**-0.5**
JOW	**Kunigami**	**3.29**	**36**	P	**Pn**	**16 36 13.1**	**+0.6**
JOW				eS	**Sn**	**16 36 49.4**	**-1.4**
JOW	**Kunigami**	**3.29**	**36**	Pn	**Pn**	**16 36 12.9**	**+0.4**
	2.6nm,0.3s,baz=119,slow=23,SNR=5.1						
JOW				Sn	**Sn**	**16 36 49.9**	**-0.9**
	9.7nm,0.3s,baz=101,slow=19,SNR=4.8						
JTK	**Tokunoshima**	**4.41**	**35**	P	**Pn**	**16 36 27.5**	**-0.4**
JMZ	**Minamidaito 2**	**4.91**	**69**	P	**Pn**	**16 36 33.0**	**-1.8**
JMZ				eS	**Sn**	**16 37 24.5**	**-6.4**
TPUB	**Ta-pu**	**5.11**	**261**	ePn	**Pn**	**16 36 36.3**	**-1.2**
	36nm,0.5s						
SONM	**Songino Array**	**28.34**	**331**	P	**P**	**16 41 14.0**	**-0.4**
	0.3nm,0.5s,mb3.2,baz=141,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**41.53**	**314**	P	**P**	**16 43 07.9**	**0.0**
	0.5nm,0.4s,mb3.5,baz=116,slow=9.2,SNR=9.5						
ZALV	**Zalesovo Beam**	**42.77**	**325**	P	**P**	**16 43 17.6**	**-0.4**
	0.5nm,0.3s,mb3.7,baz=111,slow=8.3,SNR=3.8						

WRA	Warramunga Arr	44.57	169	P	P	16 43 33.5	+0.8
	0.4nm,0.7s,mb3.3,baz=348,slow=8.8,SNR=7.4						
ASAR	Alice Springs	48.15	170	P	P	16 44 01.8	+1.0
	0.2nm,0.6s,mb3.4,baz=355,slow=6.8,SNR=7.8						
BVAR	Borovoye Array	50.57	320	P	P	16 44 19.9	+0.9
	0.3nm,0.3s,mb3.7,baz=108,slow=12,SNR=2.4						
FINES	FINESS Array B	73.71	330	P	P	16 46 55.5	+1.5
	2.7nm,1.1s,mb4.1,baz=58,slow=6.3,SNR=6.6						
BRTR	Keskin Array B	76.78	308	P	P	16 47 13.6	+1.4
	0.4nm,0.6s,mb3.5,baz=74,slow=4.4,SNR=5.0						
NOA	NORSAR Array B	80.30	333	P	P	16 47 32.3	+1.1
	0.6nm,0.6s,mb3.7,baz=55,slow=5.4,SNR=2.4						
YKA	Yellowknife Ar	81.18	24	P	P	16 47 38.6	+2.7
	0.1nm,0.5s,mb3.0,baz=301,slow=5.6,SNR=3.2						

*ISCJB **10** 16:38:35.5±1.0,55°.80N±0°.07×20°.83E±0°.08, h0km, Error ellipse: s-maj=10.6km s-min=4.8km az=149.3*
*HEL **10** 16:38:37.1±0.5,55°.72N×20°.66E, h0km, ML2.5, ML2.2(NAO), ML2.5(UPP), Explosion*
*UPP **10** 16:38:37.2,55°.69N×20°.64E, h0km, ML2.5, Suspected Mining explosion.*
*CSEM **10** 16:38:38.0±0.7,55°.84N×20°.70E, h1km, ML2.5, Error ellipse: s-maj=15.2km s-min=5.6km az=160.0, Mining explosion.*
*IDC **10** 16:38:39.2±2.7,55°.94N×20°.76E, h0km, mb1 3.4/4, mb1mx3.1/25, mbtmp3.4/4, ML3.0/4, Error ellipse: s-maj=26.7km s-min=14.1km az=171.0*
*BER **10** 16:38:40.6±3.6,55°.94N×20°.37E, h0km±22km, ML2.2(NAO)*
*NAO **10** 16:38:41.3±2.9,56°.08N×20°.53E, ML2.2*

ISC 10 16:38:37.1±0.9, 55°.78N±0°.06×20°.73E±0°.08, h0km, n51, σ1°.04/70, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	2.04	24	eP		Pn		16 39 13.9	+1.2
	SNR=50								
GOTU	Gotland	2.25	329	eP		Pn		16 39 16.5	+1.0
GOTU	Gotland	2.25	329	P		Pn		16 39 16.5	+1.0
BYXU	Byxelkrok	2.56	308	eP		Pn		16 39 20.5	+0.7
BYXU	Byxelkrok	2.56	308	P		Pn		16 39 20.4	+0.6
ASPU	Aespoe	2.81	307	eP		Pn		16 39 23.9	+0.6
ASPU	Aespoe	2.81	307	P		Pn		16 39 23.8	+0.5
OSKU	Oskarshamn	2.93	301	eP		Pn		16 39 25.1	+0.2
OSKU	Oskarshamn	2.93	301	P		Pn		16 39 25.1	+0.2
VSTU	Vaestervik	2.98	311	eP		Pn		16 39 26.4	+0.8
VSTU	Vaestervik	2.98	311	P		Pn		16 39 26.4	+0.8
BSD	Bornholm Skovb	3.38	261	i P		Pn		16 39 29.9	-1.2
BSD				i				16 39 37.8	
BSD				i LG				16 40 22.7	
BSD	Bornholm Skovb	3.38	261	i P		Pn		16 39 30.0	-1.1
	SNR=105								
MTSE	Matsula	3.38	28	eP		Pn		16 39 32.8	+1.7
MTSE				eS		Sn		16 40 12.5	+0.6
MTSE	Matsula	3.38	28	P		Pn		16 39 32.8	+1.7
VXJU	Vaexsjoe	3.42	292	eP		Pn		16 39 31.2	-0.4
VXJU	Vaexsjoe	3.42	292	P		Pn		16 39 31.2	-0.4
NYNU	Nynaeshamn	3.55	337	eP		Pn		16 39 33.8	+0.3
NYNU	Nynaeshamn	3.55	337	P		Pn		16 39 33.7	+0.3
DEL	Delary	3.90	283	eP		Pn		16 39 37.5	-0.7
NRTU	Norrtaelje	4.06	345	eP		Pn		16 39 41.4	+0.9
NRTU	Norrtaelje	4.06	345	P		Pn		16 39 41.3	+0.8
ESKU	Eskilstuna	4.17	328	eP		Pn		16 39 41.8	-0.1
ESKU	Eskilstuna	4.17	328	P		Pn		16 39 41.8	-0.2
VSU	Vasula	4.23	48	eP		Pn		16 39 41.7	-1.1
	SNR=49								
AAL	Aland	4.42	355	eP		Pn		16 39 46.4	+1.0
AAL				eS		Sn		16 40 37.2	-0.4
AAL	Aland	4.42	355	P		Pn		16 39 46.3	+0.9
AAL				S		Sn		16 40 37.2	-0.4
COP	Copenhagen	4.69	272	i P		Pn		16 39 48.0	-1.1
COP				i				16 39 49.4	
COP	Copenhagen	4.69	272	i P		Pn		16 39 48.0	-1.1
	SNR=101								
MEF	Metsahovi	4.86	22	eP		Pn		16 39 53.0	+1.7
MEF				eS		Sn		16 40 47.3	-0.9
MEF				MSN				16 40 54.9	
	comp=Z,2.3nm,0.2s								
MEF	Metsahovi	4.86	22	P		Pn		16 39 53.0	+1.7
MEF				S		Sn		16 40 47.2	-1.0
	comp=Z,2.3nm,0.2s								
RAF	Rauma	5.28	5	eP		Pn		16 39 57.4	+0.2
RAF				eS		Sn		16 40 56.8	-1.9
RAF				MSN				16 41 02.4	
	comp=Z,2.6nm,0.2s								
RAF	Rauma	5.28	5	P		Pn		16 39 57.4	+0.2
RAF				S		Sn		16 40 56.8	-1.9
	comp=Z,2.6nm,0.2s								
PVF	Pernaja	5.49	28	eP		Pn		16 40 00.6	+0.6
PVF				eS		Sn		16 41 03.4	-0.4
PVF				MSN				16 41 10.4	
	comp=Z,1.0nm,0.2s								
PVF	Pernaja	5.49	28	P		Pn		16 40 00.6	+0.5
PVF				S		Sn		16 41 03.4	-0.5
	comp=Z,1.0nm,0.2s								
HFS	Hagfors	5.75	322	Pn		Pn		16 40 02.8	-0.7
	baz=136,slow=14								
HFS				Sn		Sn		16 41 03.0	-7.1
	baz=138,slow=28								
HFS				Lg				16 41 29.5	
	baz=143,slow=28								
HFS	Hagfors	5.75	322	Pn		Pn		16 40 03.1	-0.5
	comp=Z,0.8nm,0.3s,baz=134,slow=13,SNR=28								
HFS				Sn		Sn		16 41 07.2	-2.9
	comp=Z,0.5nm,0.3s,baz=128,slow=33,SNR=3.7								
HFS				Lg				16 41 32.3	
	comp=Z,0.9nm,0.3s,baz=140,slow=29,SNR=5.2								
HFS	Hagfors	5.75	322	eP		Pn		16 40 02.8	-0.7
HFS				e				16 41 03.0	
HFS				eSB		Sb		16 41 29.5	+2.0
HFS	Hagfors	5.75	322	P		Pn		16 40 02.8	-0.8
VJF	Virojoki	5.98	34	eP		Pn		16 40 07.0	+0.3
VJF				eS		Sn		16 41 15.4	-0.5
VJF				MSN				16 41 19.3	
	comp=Z,0.6nm,0.1s								
VJF	Virojoki	5.98	34	P		Pn		16 40 07.0	+0.2
VJF				S		Sn		16 41 15.3	-0.6
	comp=Z,0.6nm,0.1s								
FIA0	FINESS Array S	6.33	24	Pn		Pn		16 40 11.7	+0.2
	baz=202,slow=12								
FIA0				Sn		Sn		16 41 21.7	-2.7
	baz=191,slow=22								
FIA0				Lg				16 41 53.7	
	baz=215,slow=28								
FIA0	FINESS Array S	6.33	24	eP		Pn		16 40 12.1	+0.6
FIA0				eS		Sn		16 41 23.6	-0.8
FIA0				MSN				16 41 26.2	
	comp=Z,0.9nm,0.1s								
FIA0	FINESS Array S	6.33	24	Pn		Pn		16 40 11.7	+0.2
	baz=202,slow=12,SNR=8.2								
FIA0	FINESS Array S	6.33	24	P		Pn		16 40 12.1	+0.6
FIA0				Sn		Sn		16 41 21.7	-2.6
	baz=191,slow=21								
FIA0				S		Sn		16 41 23.5	-0.8
	comp=Z,0.9nm,0.1s								
FINES	FINESS Array B	6.33	24	Pn		Pn		16 40 10.1	-1.4
	comp=Z,0.5nm,0.3s,baz=215,slow=12,SNR=27								
FINES				Sn		Sn		16 41 22.8	-1.5
	comp=Z,0.3nm,0.3s,baz=215,slow=24,SNR=3.3								
FINES				Lg				16 41 53.6	
	comp=Z,0.4nm,0.3s,baz=211,slow=26,SNR=4.2								
NB2	NORSAR Subarra	7.26	320	Pn		Pn		16 40 22.2	-2.1
	baz=136,slow=14								
NB2	NORSAR Subarra	7.26	320	eP		Pn		16 40 22.2	-2.1
NB2	NORSAR Subarra	7.26	320	Pn		Pn		16 40 22.2	-2.1
	baz=136,slow=13,SNR=3.8								
NOA	NORSAR Array B	7.26	320	Pn		Pn		16 40 22.3	-2.0
	comp=Z,0.3nm,0.3s,baz=143,slow=11,SNR=4.6								
NOA				Lg				16 42 17.6	
	comp=Z,0.4nm,0.3s,baz=234,slow=20,SNR=3.5								
ARCES	ARCESS Array B	13.97	7	Pn		Pn		16 41 51.7	-4.3
	comp=Z,0.2nm,0.3s,baz=192,slow=13,SNR=2.5								

*IDC **10** 16:54:17.3±1.6,24°.14S×66°.80W, h181km±19km, mb3.2/2, mb1 3.4/5, mb1mx3.2/17, mbtmp3.2/5, Error ellipse: s-maj=29.0km s-min=18.9km az=88.0*
*ISCJB **10** 16:54:18.0±0.7,24°.05S±0°.05×67°.2W±0°.1, h218km±15km, mb3.2/2, Error ellipse: s-maj=18.5km s-min=7.8km az=2.0*
*GUC **10** 16:54:19.1±0.7,23°.89S×67°.36W, h229km±23km, ML4.2*
*NEIC **10** 16:54:19.1,23°.89S×67°.36W, h229km, mb3.5/2, After GUC.*

ISC 10 16:54:19.0±0.8, 24°.01S±0°.05×67°.1W±0°.1, h208km±14km, n22, σ0°.96/18, mb3.2/2, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.15	310	P		Pn		16 55 00.9	+1.2
	22nm,0.3s,baz=120,slow=6.5,SNR=482								
LVC				S				16 55 33.3	
	33nm,0.3s,baz=280,slow=21,SNR=22								
LVC	Limon Verde	2.15	310	⇑iPn		Pn		16 55 00.9	+1.2
LVC				eS				16 55 30.4	
PECH	Pedro de Valdi	2.73	301	⇑iP		Pn		16 55 06.8	+0.8
PECH				i S				16 55 43.0	
PECH				AML		AML		16 55 48.6	
	comp=E,513nm,0.2s								
PB04	Plate Boundary	2.78	308	⇑iP		Pn		16 55 12.9	+6.4
PB04				eS				16 55 53.4	
PB04				AML		AML		16 55 57.7	
	comp=N,289nm,0.3s								
MACH	Maria Elena	3.02	306	eS				16 55 49.4	
ANCH	Antofagasta	3.02	276	⇑iP		Pn		16 55 09.8	+0.5
ANCH				i S				16 55 48.3	
MECH	Mejillones	3.18	286	⇑iP		Pn		16 55 12.1	+0.9
MECH				eS				16 55 51.3	
MECH				AML		AML		16 56 01.7	
	comp=N,219nm,0.4s								
TOCH	Tocopilla	3.41	303	i S				16 55 56.2	
TOCH				AML		AML		16 55 58.8	
	comp=E,258nm,0.1s								
PB01	Plate Boundary	3.67	323	⇑iP		Pn		16 55 17.6	+0.5
PB01				eS				16 56 02.2	
PB01				AML		AML		16 56 04.3	
	comp=E,182nm,0.2s								
PSGC	Pisagua	5.20	327	eP		Pn		16 55 35.8	-0.4
PSGC				eS				16 56 35.5	
MNMC	Miæe Miæ	5.37	334	eP		Pn		16 55 38.9	+0.5
MNMC				eS				16 56 40.9	
LCO	Las Campanas	5.92	212	Pn		Pn		16 55 45.1	-0.2
LCO				eS				16 56 47.8	
CFAA	Coronel Fontan	7.62	187	P		Pn		16 56 03.7	-3.6
	comp=E,0.0nm,0.3s,baz=21,slow=14,SNR=12								
LPAZ	La Paz	7.74	353	P		Pn		16 56 10.8	+1.8
	comp=E,0.5nm,0.3s,baz=152,slow=8.6,SNR=10								
LPAZ				S				16 57 36.4	
	baz=60,slow=20,SNR=2.2								
LPAZ	La Paz	7.74	353	ePn		Pn		16 56 09.3	+0.3
	comp=E,2.1nm,0.6s								
SIV	San Ignacio	9.80	37	P		Pn		16 56 35.4	-0.3
	comp=E,0.2nm,0.3s,baz=236,slow=15,SNR=3.0								
TRQA	Tornquist	14.67	164	ePn		Pn		16 57 35.9	-0.9
	comp=E,1.2nm,0.4s								
TORD	Torodi Ar. Bea	76.68	69	P		P		17 05 46.5	-0.9
	comp=E,0.3nm,0.6s,mb3.1,baz=236,slow=4.9,SNR=2.4								
YKA	Yellowknife Ar	94.10	340	P		P		17 07 15.2	+2.1
	comp=E,0.2nm,0.5s,mb3.4,baz=133,slow=4.5,SNR=6.0								
YKA	Yellowknife Ar	94.10	340	P		P		17 07 15.2	+2.1
MKAR	Makanchi Array	146.61	39	PKPbc		PKPbc		17 13 38.0	+2.1
	comp=E,0.3nm,0.4s,baz=314,slow=2.7,SNR=6.6								
MKAR	Makanchi Array	146.61	39	PKPbc		PKPbc		17 13 38.0	+2.1

IDC 10 16:59:02.2±3.1, 8°.92S×156°.87E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/16, mbtmp3.6/4, MS3.4/2, Ms1 3.4/2, ms1mx2.9/21, Error ellipse: s-maj=84.3km s-min=36.6km az=109.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.12	222	LR		LR	LR	17 07 11.0	
	comp=Z,70nm,21.9s,baz=228,slow=32								
WRA	Warramunga Arr	24.38	241	P		P		17 04 20.9	-1.4
	1.6nm,0.6s,baz=68,slow=9.4,SNR=22								
ASAR	Alice Springs	26.41	234	P		P		17 04 42.6	+1.9
	0.7nm,0.9s,baz=68,slow=10,SNR=6.5								
STKA	Stephens Creek	26.89	210	P		P		17 04 44.4	-0.6
	0.8nm,0.6s,baz=32,slow=13,SNR=2.8								
NWAO	Narrogin (SRO)	43.67	231	LR		LR		17 22 57.3	
	comp=Z,108nm,22.0s,baz=347,slow=33								
MKAR	Makanchi Array	86.07	318	P		P		17 11 45.2	+0.3
	0.3nm,0.7s,baz=97,slow=5.3,SNR=2.8								

IDC 10 17:03:44.1±3.6, 5°.66S×147°.00E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.4/16, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=105.7km s-min=44.5km az=112.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.79	220	P		Pn		17 08 04.6	-1.0
	0.2nm,0.3s,baz=42,slow=12,SNR=16								
ASAR	Alice Springs	21.90	214	P		P		17 08 38.0	-0.9
	0.9nm,0.5s,baz=46,slow=9.1,SNR=42								
FITZ	Fitzroy Crossi	24.25	238	P		P		17 09 04.5	+1.5
	1.6nm,0.5s,baz=81,slow=10.0,SNR=12								
TORD	Torodi Ar. Bea	145.00	285	PKPbc		PKPbc		17 23 22.6	-1.2
	0.3nm,0.8s,baz=67,slow=4.2,SNR=2.5								

*CSEM **10** 17:08:30.9±0.3,36°.97N×29°.19E, h10km, MD2.7, Error ellipse: s-maj=7.7km s-min=3.9km az=111.0*
*DDA **10** 17:08:30.3,37°.01N×29°.11E, h8km±1km, Md2.7*
*ISK **10** 17:08:30.0,36°.97N×29°.18E, h11km, MD2.7*
*ISCJB **10** 17:08:31.2±0.7,36°.95N±0°.03×29°.21E±0°.06, h10km, Error ellipse: s-maj=6.8km s-min=4.3km az=14.6*

ISC 10 17:08:31.7±0.7, 36°.95N±0°.03×29°.22E±0°.06, h10km, n12, σ0°.92/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	47	ePG		Pg		17 08 36.8	-1.0
GLHS				eSG		Sg		17 08 41.7	-0.3
GLHS	Glhisar (BURDU	0.31	47	ePg		Pg		17 08 36.8	-1.0
GLHS				eSg		Sg		17 08 41.7	-0.3
FETY	Fethiye	0.33	199	ePG		Pg		17 08 37.4	-0.8
FETY				eSG		Sg		17 08 42.7	+0.1
FETY	Fethiye	0.33	199	ePg		Pg		17 08 37.4	-0.8
FETY				eSg		Sg		17 08 42.7	+0.1
GOLH	Golhisar	0.40	43	i P		Pg		17 08 38.6	-1.0
GOLH				i S		Sg		17 08 45.4	+0.5
GOLH	Golhisar	0.40	43	i P		Pg		17 08 38.6	-1.0
GOLH				i S		Sg		17 08 45.4	+0.5
ELL	Elmali	0.59	109	ePG		Pg		17 08 42.5	-0.6
ELL				eSG		Sg		17 08 51.9	+1.0
ELL	Elmali	0.59	109	ePg		Pg		17 08 42.5	-0.6
ELL				eSg		Sg		17 08 51.9	+1.1
DNZL	Cakiroluk	0.76	350	eP		Pg		17 08 48.7	+2.4
DNZL				i S		Sg		17 08 56.0	-0.2
DNZL	Cakiroluk	0.76	350	eP		Pg		17 08 48.7	+2.4
DNZL				i S		Sg		17 08 56.0	-0.1
AKAS	Kas	0.78	156	i P		Pg		17 08 47.2	+0.5
AKAS	Kas	0.78	156	i P		Pg		17 08 47.2	+0.5

IDC 10 17:19:20.6±2.0, 6°.57S×129°.82E, h0km, mb4.2/1, mb1 4.0/4, mb1mx3.6/17, mbtmp3.9/4, ML3.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/23, Error ellipse: s-maj=80.7km s-min=26.7km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.16	199	Pn		Pn		17 22 17.0	+1.8
	1.0nm,0.3s,baz=30,slow=10,SNR=52								
FITZ				Sn		Sn		17 24 19.8	-12
	0.6nm,0.3s,baz=84,slow=18,SNR=4.0								
WRA	Warramunga Arr	14.00	162	Pn		Pn		17 22 39.6	-0.7
	0.6nm,0.3s,baz=340,slow=14,SNR=25								
WRA				Sn		Sn		17 25 04.0	-12
	0.9nm,0.3s,baz=329,slow=22,SNR=12								
ASAR	Alice Springs	17.44	167	P		Pn		17 23 24.5	-0.9
	0.2nm,0.3s,baz=341,slow=8.8,SNR=26								
ASAR				S		Sn		17 26 30.5	-10
	0.3nm,0.3s,baz=356,slow=27,SNR=8.6								
CTA	Charters Tower	20.86	132	LR		LR		17 31 48.6	
	comp=Z,46nm,19.5s,baz=50,slow=36								
MKAR	Makanchi Array	67.77	327	P		P		17 30 20.2	+0.1
	0.9nm,0.4s,baz=125,slow=7.5,SNR=25								

IDC 10 17:35:41.7±2.0, 4°.16N×124°.44E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=201.9km s-min=25.9km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.86	158	P		P		17 41 15.6	+0.4
	0.2nm,0.3s,baz=338,slow=9.6,SNR=5.7								
ASAR	Alice Springs	29.16	162	P		P		17 41 44.5	-0.3
	0.1nm,0.4s,baz=336,slow=7.4,SNR=8.0								
MKAR	Makanchi Array	55.91	326	P		P		17 45 21.5	0.0
	0.2nm,0.4s,baz=132,slow=7.3,SNR=6.9								

IDC 10 17:38:12.5±4.2, 12°.65N×143°.17E, h87km±37km, mb3.6/5, mb1 3.9/5, mb1mx3.3/22, mbtmp3.6/5, Error ellipse: s-maj=63.7km s-min=17.6km az=116.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.90	60	P		Pn		17 38 44.3	+1.1
	36nm,0.3s,baz=18,slow=22,SNR=11								
GUMO				S		Sn		17 39 06.9	+0.2
	50nm,0.3s,baz=35,slow=22,SNR=10								
WRA	Warramunga Arr	33.53	195	P		P		17 44 43.7	-0.3
	1.2nm,0.6s,baz=19,slow=9.7,SNR=18								
ASAR	Alice Springs	37.22	194	P		P		17 45 15.4	-0.2
	0.8nm,0.4s,baz=20,slow=12,SNR=39								
ASAR				PcP		PcP		17 47 34.6	+0.8
	0.2nm,0.6s,baz=38,slow=2.8,SNR=4.9								
YKA	Yellowknife Ar	84.45	27	P		P		17 50 35.2	-0.1
	0.2nm,0.5s,baz=282,slow=4.9,SNR=3.2								
NVAR	Mina Array Bea	88.79	51	P		P		17 50 58.0	+1.0
	0.4nm,0.6s,baz=264,slow=5.8,SNR=4.0								
FINES	FINESS Array B	91.30	335	P		P		17 51 07.2	-1.0
	2.9nm,1.0s,baz=57,slow=7.0,SNR=5.0								

*ISCJB **10** 18:24:00.9±0.1,43°.45N±0°.02×145°.77E±0°.02, h85km, mb5.1/343, Error ellipse: s-maj=2.5km s-min=1.5km az=159.3*
*BJI **10** 18:24:00.9,43°.59N×145°.74E, h87km, mB5.1/27, mb5.1/56, Ms4.4/38, Ms7 4.2/40*
*NIED **10** 18:24:00,43°.40N×145°.80E, h89km, Mw5.2 Best double couple: M_0:6.96000×10^16 NP1:ϕ_s=258.00000°, δ64.00000°, λ-98.00000°. NP2:ϕ_s95.00000°, δ27.00000°, λ-75.00000°.*
*SZGRF **10** 18:24:01.2,44°.27N×145°.99E, h90km, mb5.3, Hokkaido, Japan, region*
*DJA **10** 18:24:02,43°.56N×145°.84E, h76km, mb5.5/31*
*GCMT **10** 18:24:02.4±0.2,43°.51N×145°.84E, h86km±1km, MW5.2/86, Moment Tensor Solution. s67,c104; s86,c162; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}-5.22±.15; $M_{\theta\theta}$6.15±.16; $M_{\phi\phi}$-0.93±.15; $M_{r\theta}$4.18±.11; $M_{\theta\phi}$0.84±.14; $M_{\phi r}$1.94±.10; Best double couple: $M_0$7.38200×10^16 NP1:ϕ_s98.00000°, δ28.00000°, λ-65.00000°. NP2: ϕ_s251.00000°, δ65.00000°, λ-102.00000°. Principal axes: T 7.7510, Plg19.0000°, Azm350.0000°; N -0.7470, Plg11.0000°, Azm256.0000°; P -7.0130, Plg68.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **10** 18:24:02.6±0.4,43°.54N×145°.83E, h89km±3km, mb4.8/25, mb1 4.9/30, mb1mx4.9/31, mbtmp4.8/30, MS4.0/23, Ms1 4.0/23, ms1mx3.9/37 Error ellipse: s-maj=9.4km s-min=7.2km az=178.0*
*NEIC **10** 18:24:02.4±0.1,43°.53N×145°.72E, mb5.1/230, MW5.2(NIED), Error ellipse: s-maj=3.4km s-min=2.3km az=158.0*
NEIC Felt at Misawa, Honshu. Recorded [4 JMA] in eastern Hokkaido and [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate, Honshu.
*SKHL **10** 18:24:02.5±0.3,43°.44N×145°.76E, h99km±7km, mb6.0/7, mbh6.1/3, Ms4.6/3, msh5.8/8*
*MOS **10** 18:24:02.6±1.1,43°.53N×145°.69E, h100km, mb5.3/39, MS4.0/18, Error ellipse: s-maj=8.9km s-min=4.7km az=112.7*
MOS Felt (III) at Yuzhno-Kuril'sk.
*JMA **10** 18:24:03.3±0.1,43°.42N×145°.84E, h88km±1km, M5.1 Broadband fault plane solution: P waves. NP1: ϕ_s83.00000°, δ26.00000°, λ-76.00000°. NP2:ϕ_s248.00000°, δ65.00000°, λ-97.00000°. Principal axes: T Plg20.0000°, Azm343.0000°; N Plg6.0000°, Azm251.0000°; P Plg69.0000°, Azm145.0000°;*
JMA Felt IV J1.
*BGS **10** 18:24:06.3±1.4,44°.21N×144°.90E, h80km, mb5.1*

ISC 10 18:24:02.8±0.1, 43°.48N±0°.02×145°.74E±0°.02, h87km, h87km±.4km: pP-P, n1227, σ0°.80/1270, mb5.1/343, 336C-197D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.11	179	⇓P		Pn		18 24 15.8	+0.6
NEM2				eS		Sn		18 24 24.8	+0.5
YUK	Yuzh-Kuril'sk	0.57	9	i PN		Pn		18 24 18.2	+0.4
YUK				i S		Sn		18 24 29.8	+0.9
YUK				pmax		pmax			
	comp=Z,78μm,0.7s								
YUK				pmax		pmax			
	comp=N,106μm,0.8s								
YUK				pmax		pmax			
	comp=E,40μm,1.1s								
YUK				pmax		pmax			
	comp=Z,100μm,0.2s								
YUK				pmax		pmax			
	comp=N,100μm,0.5s								
YUK				pmax		pmax			
	comp=E,100μm,0.5s								
YUK				smax					
	comp=E,149μm,1.2s								
YUK				smax					
	comp=N,74μm,0.6s								
YUK	Yuzh-Kuril'sk	0.57	9	⇓iP		Pn		18 24 18.2	+0.4
YUK				⇓iP				18 24 18.2	
YUK				AMB		AMB		18 24 19.5	
	comp=N,78μm,0.7s								
YUK				AMB		AMB		18 24 19.5	
	comp=N,106μm,0.8s								
YUK				AMB		AMB		18 24 19.5	
	comp=N,40μm,1.1s								
YUK				i S		Sn		18 24 29.8	+0.9
YUK				A				18 24 31.5	
	comp=N,149μm,1.2s								
YUK				A				18 24 31.5	
	comp=N,74μm,0.6s								
JRA	Rausu	0.64	316	⇓P		Pn		18 24 19.9	+1.4
JRA				eS		Sn		18 24 32.6	+2.4
JNK

KUR smax
comp=E,4μm,0.6s
KUR Kuril'sk 2.33 40⇑*i*P Pn 18 24 39.8 +0.6
KUR ⇓*i*P 18 24 39.8
KUR AMB AMB 18 24 41.0
comp=E,590nm,0.6s
KUR AMB AMB 18 24 41.0
comp=E,440nm,0.6s
KUR AMB AMB 18 24 41.0
comp=E,3μm,0.6s
KUR AMB AMB 18 24 41.0
comp=E,11μm,1.0s
KUR AMB AMB 18 24 41.0
comp=E,6μm,1.0s
KUR AMB AMB 18 24 41.0
comp=E,5μm,1.0s
KUR *e*S **Sn 18 25 08.0 +0.9**
KUR A 18 25 08.6
comp=E,50μm,2.0s
KUR A 18 25 08.6
comp=E,25μm,2.0s
KUR A 18 25 09.0
comp=E,80μm,2.0s
KUR A 18 25 09.0
comp=E,38μm,2.0s
KUR A 18 25 14.5
comp=E,8μm,0.6s
KUR A 18 25 14.5
comp=E,4μm,0.6s
ASAJ Asahikawa 2.36 287 PN **Pn 18 24 42.1 +2.4**
ASAJ S **Sn 18 25 11.0 +3.1**
ASAJ pmax pmax
comp=Z,335nm,0.3s
ASAJ smax
comp=N,369nm,0.3s
ASAJ MLR MLR
comp=Z,4μm,20.0s
ASAJ Asahikawa 2.36 287 P **Pn 18 24 42.0 +2.4**
comp=Z,335nm,0.3s,baz=111,slow=10,SNR=2920
ASAJ S **Sn 18 25 10.9 +3.0**
comp=Z,369nm,0.3s,baz=62,slow=12,SNR=8.6
ASAJ LR LR 18 25 49.6
comp=Z,4μm,20.0s,baz=155,slow=44
ERM Erimo 2.40 233 Pn **Pn 18 24 42.2 +2.1**
comp=Z,15μm,0.4s
ERM Erimo 2.40 233*d i*PN **Pn 18 24 42.5 +2.4**
ERM Erimo 2.40 233 *e*Pn **Pn 18 24 40.9 +0.8**
ERM *e*Sn **Sn 18 25 03.6 -5.1**
JSE Soyaes 2.71 304 ⇑P **Pn 18 24 46.0 +1.7**
JWK2 Keihoku 3.31 305 ⇑P **Pn 18 24 55.4 +3.0**
YSS Yuzh-Sakhalins 4.07 330*α i*PN **Pn 18 25 03.3 +0.7**
YSS *i* S **Sn 18 25 48.0 -1.0**
YSS pmax pmax
comp=Z,2μm,1.2s
YSS pmax pmax
comp=N,3μm,4.0s
YSS pmax pmax
comp=Z,3μm,4.0s
YSS smax
comp=E,8μm,2.0s
YSS smax
comp=Z,9μm,2.0s
YSS smax
comp=Z,5μm,1.2s
YSS MLR MLR
comp=Z,4μm,12.0s
YSS MLR MLR
comp=N,4μm,9.0s
YSS Yuzh-Sakhalins 4.07 330 *e*Pn **Pn 18 25 03.5 +0.9**
YSS *e*Sn **Sn 18 25 50.1 +1.1**
YSS Yuzh-Sakhalins 4.07 330⇑*i*P **Pn 18 25 03.3 +0.7**
YSS ⇑*i*P 18 25 03.3
YSS AMB AMB 18 25 07.0
comp=N,2μm,1.2s
YSS AMB AMB 18 25 07.0
comp=N,3μm,4.0s
YSS AMB AMB 18 25 07.0
comp=N,3μm,4.0s
YSS *i* S **Sn 18 25 48.0 -1.0**
YSS A 18 25 52.0
comp=N,9μm,2.0s
YSS A 18 25 52.0
comp=N,8μm,2.0s
YSS A 18 25 53.0
comp=N,5μm,1.2s
YSS AMS AMS 18 26 34.0
comp=N,4μm,9.0s
YSS AMS AMS 18 26 34.0
comp=N,4μm,12.0s
JANG Nango 4.42 227 P **Pn 18 25 06.3 -1.1**
JKZ Kuzumaki 4.80 225 ⇑P **Pn 18 25 11.8 -0.8**
UGL Uglegorsk 6.16 337⇑*i*PN **Pn 18 25 33.0 +2.0**
UGL *e*S **Sn 18 26 43.0 +3.1**
UGL pmax pmax
comp=Z,3μm,0.9s
UGL pmax pmax
comp=N,1μm,1.0s
UGL pmax pmax
comp=E,2μm,0.9s
UGL pmax pmax
comp=N,5μm,4.0s
UGL pmax pmax
comp=E,4μm,1.0s
UGL smax
comp=N,2μm,1.4s
UGL smax
comp=E,510nm,1.2s
UGL smax
comp=N,6μm,3.0s
UGL smax
comp=E,3μm,4.0s
UGL MLR MLR
comp=N,1μm,16.0s
UGL MLR MLR
comp=E,2μm,16.0s
UGL Uglegorsk 6.16 337⇑*i*P **Pn 18 25 33.0 +2.0**
UGL ⇑*i*P 18 25 33.0
UGL AMB AMB 18 25 35.0
comp=E,1μm,1.0s
UGL AMB AMB 18 25 35.0
comp=E,2μm,0.9s
UGL AMB AMB 18 25 35.0
comp=E,3μm,0.9s
UGL AMB AMB 18 25 35.0
comp=E,5μm,4.0s
UGL AMB AMB 18 25 35.0
comp=E,4μm,1.0s
UGL *e*S **Sn 18 26 43.0 +3.1**
UGL A 18 26 53.0
comp=E,6μm,3.5s
UGL A 18 26 53.0
comp=E,3μm,3.5s
UGL A 18 26 53.0
comp=E,2μm,1.3s
UGL A 18 26 53.0
comp=E,510nm,1.3s
UGL AMS AMS 18 28 21.0
comp=E,1μm,16.0s
UGL AMS AMS 18 28 21.0
comp=E,2μm,16.0s
TEY Ternei 6.74 287 *e*P **Pn 18 25 40.0 +0.9**
TEY AMB AMB 18 25 40.8
comp=E,60nm,1.0s
TEY AMB AMB 18 25 40.8
comp=E,65nm,1.0s
TEY AMB AMB 18 25 41.6
comp=E,500nm,1.2s
TEY AMB AMB 18 25 41.6
comp=E,800nm,1.2s
TEY *e*S **Sn 18 26 56.0 +1.7**
TEY A 18 26 58.6
comp=E,2μm,6.0s
JAW Awa shima 7.02 227 ⇑P **Pn 18 25 42.8 0.0**
JAW S **Sn 18 26 57.2 -3.9**
JNS Sasagawa 7.47 223 P **Pn 18 25 49.3 +0.4**
JNS S **Sn 18 27 08.8 -3.2**
JSD Sado 7.86 229 P **Pn 18 25 54.5 +0.3**
JSD S **Sn 18 27 15.8 -5.7**
JSB Shiboa 7.88 216 P **Pn 18 25 54.1 -0.4**
JHO Hitachi 7.92 212 P **Pn 18 25 52.1 -3.0**
JHO S **Sn 18 27 17.0 -6.1**
JIZZ Izumozaki 7.99 224 P **Pn 18 25 57.2 +1.1**
JIZZ S **Sn 18 27 22.6 -2.3**
JHK Hiroka 8.06 222 P **Pn 18 25 56.7 -0.4**
JHK S **Sn 18 27 22.1 -4.4**
JKT Katashina 8.34 219 P **Pn 18 26 00.7 -0.2**

JAG Ashikaga 8.53 217 P **Pn 18 26 02.1 -1.4**
JAG S **Sn 18 27 35.3 -2.8**
JJN Nakama 8.60 225 P **Pn 18 26 04.9 +0.5**
JJN S **Sn 18 27 37.2 -2.5**
HABR Khabarovsk 8.96 308*c i*PN **Pn 18 26 11.7 +2.5**
HABR *e*S **Sn 18 27 51.1 +2.7**
HABR pmax pmax
comp=Z,701nm,1.9s
HABR pmax pmax
comp=N,241nm,1.8s
HABR pmax pmax
comp=E,531nm,1.7s
HABR MLR MLR
comp=Z,739nm,15.0s
MAJO Matsushiro 9.02 222 *e*Pn **Pn 18 26 08.8 -1.2**
comp=Z,62nm,0.6s
MAT Matsushiro 9.02 222 P **Pn 18 26 09.2 -0.9**
MAT S **Sn 18 27 47.6 -2.2**
MAT Matsushiro 9.02 222 P **Pn 18 26 09.3 -0.8**
MAT S **Sn 18 27 50.0 +0.2**
MJAR Matsushiro Arr 9.02 222 P **Pn 18 26 09.3 -0.7**
comp=Z,4.6nm,0.3s,baz=36,slow=12,SNR=100
MJAR S **Sn 18 27 48.5 -1.3**
comp=Z,2.1nm,0.3s,baz=20,slow=26,SNR=6.0
MJAR LR LR 18 30 18.9
comp=Z,880nm,20.7s,baz=45,slow=41
JRY Ryogami san 9.12 218 P **Pn 18 26 11.5 0.0**
JRY S **Sn 18 27 46.4 -5.9**
JNG Nsakai 9.18 222 P **Pn 18 26 12.1 -0.1**
JNG S **Sn 18 27 51.1 -2.6**
BSO2 Boso 2 9.53 206 S **Sn 18 27 57.6 -4.8**
BSO1 Boso 1 9.55 204 S **Sn 18 27 57.5 -5.4**
JYN Shimob 9.71 217 P **Pn 18 26 18.9 -0.6**
JGN Niukaw 9.71 225 P **Pn 18 26 19.7 +0.2**
JGN S **Sn 18 28 04.4 -2.4**
SKR Severo-Kuril's 10.10 41 *e*PN **Pn 18 26 20.4 -4.3**
SKR pmax pmax
comp=Z,80nm,0.5s
SKR pmax pmax
comp=Z,2μm,2.0s
SKR MLR MLR
comp=N,2μm,18.0s
SKR MLR MLR
comp=Z,3μm,18.0s
SKR Severo-Kuril's 10.10 41 *e*P **Pn 18 26 20.4 -4.3**
SKR AMB AMB 18 26 23.5
comp=Z,80nm,0.5s
SKR AMB AMB 18 26 28.0
comp=Z,2μm,2.0s
SKR *e*S **Sn 18 28 10.0 -6.0**
SKR A 18 28 13.5
comp=Z,220nm,1.0s
SKR A 18 28 13.5
comp=Z,180nm,1.0s
SKR A 18 28 14.0
comp=Z,2μm,4.0s
SKR AMS AMS 18 29 42.0
comp=Z,3μm,18.0s
SKR AMS AMS 18 29 42.0
comp=Z,2μm,18.0s
VLA Vladivostok 10.10 273 *e*PN **Pn 18 26 24.5 -0.3**
VLA *e*S **Sn 18 28 19.0 +2.7**
VLA pmax pmax
comp=Z,46nm,1.0s
JNY Yasuok 10.14 220 P **Pn 18 26 23.9 -1.4**
JNY S **Sn 18 28 11.1 -6.0**
JIZS Izushimoda 10.24 214 S **Sn 18 28 12.8 -6.8**
NKL Nikolayevsk 10.25 343 *i* P **Pn 18 26 22.5 -4.2**
NKL AMB AMB 18 26 24.0
comp=Z,330nm,1.1s
NKL AMB AMB 18 26 24.0
comp=Z,110nm,1.1s
NKL AMB AMB 18 26 24.0
comp=Z,540nm,1.1s
NKL AMB AMB 18 26 24.0
comp=Z,2μm,4.0s
NKL AMB AMB 18 26 24.0
comp=Z,1μm,4.0s
NKL AMB AMB 18 26 24.0
comp=Z,2μm,4.0s
NKL *e*S **Sn 18 28 18.0 -1.6**
NKL A 18 28 26.0
comp=Z,500nm,9.0s
OKH Okha 10.25 351 *e*P **Pn 18 26 27.8 +1.0**
OKH ⇑*i*P 18 26 27.8
OKH AMB AMB 18 26 28.0
comp=Z,2μm,5.0s
OKH AMB AMB 18 26 28.0
comp=Z,2μm,6.0s
OKH AMB AMB 18 26 28.0
comp=Z,3μm,4.4s
OKH AMB AMB 18 26 28.2
comp=Z,500nm,1.0s
OKH A 18 28 31.8
comp=Z,2μm,11.0s
OKH A 18 28 31.8
comp=Z,1μm,7.0s
OKH AMS AMS 18 31 35.8
comp=Z,2μm,16.0s
OKH AMS AMS 18 31 35.8
comp=Z,2μm,16.0s
OKH AMS AMS 18 31 35.8
comp=Z,2μm,16.0s
JGM Miyama 10.42 225 S **Sn 18 28 23.3 -0.8**
JFM Mihama 10.94 227 P **Pn 18 26 36.3 +0.1**
JFM S **Sn 18 28 36.3 -0.4**
KLR Kul'dur 11.24 306 *e*PN **Pn 18 26 36.0 -4.3**
KLR *e* 18 28 48.0
KLR pmax pmax
comp=E,220nm,1.8s
KLR pmax pmax
comp=Z,150nm,1.8s
KLR MLR MLR
comp=E,2μm,12.0s
KLR MLR MLR
comp=Z,3μm,12.0s
JHJ Hachijo jima 2 11.34 206 S **Sn 18 28 37.1 -10**
comp=Z,80nm,0.3s,baz=22,slow=24,SNR=5.8
MDJ Mudanjiang 11.68 281 P **Pn 18 26 46.2 -0.1**
MDJ sP 18 27 14.3
MDJ S **Sn 18 28 54.1 -0.5**
MDJ PcP PcP 18 32 27.8 -0.7
MDJ ScP ScP 18 35 52.8 -0.4
MDJ ScS ScS 18 39 29.3 +0.6
MDJ pmax pmax
comp=Z,45nm,1.1s
MDJ pmax pmax
comp=Z,210nm,6.8s
MDJ LR LR
comp=N,630nm,35.4s
MDJ LR LR
comp=E,860nm,34.4s
MDJ LR LR
comp=Z,860nm,34.4s
MDJ Mudanjiang 11.68 281⇑*i*Pn **Pn 18 26 46.0 -0.3**
comp=Z,45nm,1.0s
PEA0B Petropavlovsk- 12.48 35 *e*Pn **Pn 18 26 54.4 -2.6**
PETK Petropavlovsk- 12.48 35 PN **Pn 18 26 55.1 -1.9**
PETK pmax pmax
comp=Z,4.0nm,0.3s
PETK MLR MLR
comp=Z,102nm,18.6s
PETK Petropavlovsk- 12.48 35 P **Pn 18 26 55.1 -1.9**
comp=Z,3.7nm,0.3s,baz=218,slow=6.8,SNR=74
PETK LR LR 18 32 02.0
comp=Z,102nm,18.6s,baz=83,slow=39
PET Petropavlovsk 12.84 37 *e*PN **Pn 18 27 04.3 +2.6**
PET *e*S **Sn 18 29 26.6 +4.0**
PET pmax pmax
comp=Z,20nm,0.9s
PET pmax pmax
comp=Z,200nm,11.2s
PET MLR MLR
comp=Z,500nm,20.0s
PET MLR MLR
comp=Z,700nm,19.0s
PET Petropavlovsk 12.84 37 *e*Pn **Pn 18 27 02.4 +0.7**
CN2 Changchun 14.70 278⇑*i*P **Pn 18 27 24.0 -2.1**
CN2 *e*pP 18 27 37.5
CN2 *e*sP sP 18 27 51.9 -5.7
CN2 *e*S **Sn 18 30 03.8 -4.0**
CN2 pmax pmax
comp=Z,40nm,1.1s
CN2 pmax pmax
comp=Z,200nm,3.0s

CN2 LR LR
comp=N,800nm,11.0s
CN2 LR LR
comp=E,500nm,11.0s
CN2 LR LR
comp=Z,500nm,15.0s
KSRS Korea Array 14.82 252 P **Pn 18 27 27.5 -0.2**
comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=14
KSRS PcP PcP 18 32 33.1 +0.6
comp=Z,0.4nm,0.3s,baz=30,slow=1.8,SNR=14
KSRS ScP ScP 18 35 59.1 +0.7
comp=Z,0.1nm,0.3s,baz=40,slow=1.3,SNR=18
INCN Inchon 15.71 254 *e*Pn **Pn 18 27 38.4 -0.6**
ZEA Zeya 15.92 317 *e*P **Pn 18 27 36.4 -5.0**
ZEA AMB AMB 18 27 38.9
comp=Z,46nm,1.4s
ZEA AMB AMB 18 27 38.9
comp=Z,29nm,1.2s
ZEA AMB AMB 18 27 41.0
comp=Z,600nm,5.0s
ZEA AMB AMB 18 27 41.0
comp=Z,300nm,5.0s
ZEA A 18 30 39.0
comp=Z,600nm,6.0s
ZEA A 18 30 39.0
comp=Z,700nm,6.0s
ZEA A 18 30 39.0
comp=Z,500nm,8.0s
SNY Shenyang 16.38 272 ⇓P **Pn 18 27 50.0 +2.7**
SNY S **S 18 30 51.3 -4.2**
SNY pmax pmax
comp=Z,59nm,0.8s
SNY LR LR
comp=N,220nm,13.2s
SNY LR LR
comp=E,310nm,12.9s
SNY LR LR
comp=Z,320nm,11.4s
CBIJ Chichi jima 16.59 191 P **Pn 18 27 49.6 -0.4**
comp=Z,15nm,0.3s,baz=299,slow=20,SNR=4.9
CBIJ S **S 18 30 42.4 -18**
comp=Z,12nm,0.3s,baz=270,slow=20,SNR=4.1
DL2 Dalian 18.69 264 P **Pn 18 28 14.2 -1.1**
DL2 pP pP 18 28 30.1 -0.8
DL2 S **S 18 31 41.6 -0.6**
DL2 pmax pmax
comp=Z,50nm,1.1s
DL2 pmax pmax
comp=Z,70nm,6.9s
NRGR Nerungri 18.77 322 *e*P **Pn 18 28 13.4 -2.7**
NRGR S **S 18 31 29.5 -14**
NRGR smax
comp=E,46nm,0.6s
CLNS Chul'man 18.80 323 *e*P **Pn 18 28 13.4 -3.0**
CLNS *e*S **S 18 31 39.2 -4.8**
CLNS pmax pmax
comp=Z,24nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.6s
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS smax
comp=N,37nm,1.3s
CLNS smax
comp=E,25nm,1.1s
CLNS MLR MLR
comp=N,248nm,14.0s
CLNS MLR MLR
comp=Z,444nm,16.0s
CLNS MLR MLR
comp=E,191nm,12.0s
HIA Hailar 18.80 297⇑*i*P **Pn 18 28 12.4 -4.2**
comp=E,56nm,0.7s
SEY Seymchan 19.87 9⇑*i*P **Pn 18 28 23.8 -5.3**
YAK Yakutsk 20.86 339 *e*P **P 18 28 33.8 -3.5**
YAK *e**PP 18 29 02.5
YAK *e*S **S 18 32 10.1 -15**
YAK *e**SS sS 18 33 01.7 +8.4
YAK *e* 18 39 49.8
YAK pmax pmax
comp=Z,53nm,1.1s
YAK pmax pmax
comp=E,44nm,1.5s
YAK pmax pmax
comp=N,42nm,1.1s
YAK smax
comp=E,377nm,2.5s
YAK smax
comp=N,427nm,2.2s
YAK Yakutsk 20.86 339 *e*P **P 18 28 32.8 -4.5**
comp=N,96nm,0.8s
YAK *e*S **S 18 32 13.6 -11**
SMY Shemya 20.96 54 *e*P **P 18 28 39.2 +0.7**
comp=N,176nm,1.1s
JOW Kunigami 21.83 226 P **P 18 28 49.5 +1.5**
comp=N,206nm,1.1s,mb5.4,baz=27,slow=9.6,SNR=9.9
JOW LR LR 18 38 22.0
comp=N,398nm,19.4s,baz=120,slow=39
BJI Beijing 22.27 271 P **P 18 28 51.8 -0.7**
BJI pP 18 29 08.3
BJI sP sP 18 29 18.0 -2.8
BJI S **S 18 32 50.7 -1.0**
BJI sS sS 18 33 22.4 +0.8
BJI pmax pmax
comp=Z,150nm,0.9s,mb5.3
BJI pmax pmax
comp=Z,250nm,4.2s
BJI LR LR
comp=N,550nm,20.8s
BJI LR LR
comp=E,370nm,22.5s
BJI LR LR
comp=Z,520nm,29.0s
BJT Baijiatuau 22.28 271⇑*e*P **P 18 28 50.9 -1.7**
comp=Z,108nm,0.8s,mb5.2
TIA Tai'an 23.06 261 ⇑P **P 18 29 08.0 +7.3**
CIT Chita 23.11 303 *e*P **P 18 28 56.2 -4.8**
CIT *e* 18 33 08.4
NJ2 Nanjing 24.02 251 *e*P **P 18 29 10.6 +1.2**
NJ2 pP 18 29 27.7
NJ2 sP sP 18 29 37.0 -2.2
NJ2 PP 18 29 47.9
NJ2 S **S 18 33 18.0 -2.2**
NJ2 sS sS 18 33 48.0 -6.1
NJ2 pmax pmax
comp=Z,50nm,1.0s,mb4.8
NJ2 pmax pmax
comp=Z,540nm,6.1s
NJ2 LR LR
comp=N,650nm,15.2s
NJ2 LR LR
comp=E,460nm,19.6s
NJ2 LR LR
comp=Z,470nm,13.5s
BOD Bodaibo 24.43 317 *e*P **P 18 29 07.5 -5.4**
BOD pmax pmax
comp=Z,22nm,1.1s,mb4.4
HHC Hu-ho-hao-te 25.37 276 ⇓P **P 18 29 24.1 +2.5**
HHC pP pP 18 29 41.0 -0.3
HHC sP sP 18 29 50.2 -1.3
HHC PP 18 30 05.7
HHC S **S 18 33 42.6 +1.0**
HHC sS sS 18 34 12.0 -3.8
HHC ScP ScP 18 36 26.5 +3.4
HHC PcS PcS 18 36 34.1 +1.8
HHC pmax pmax
comp=Z,63nm,1.3s,mb4.9
HHC pmax pmax
comp=Z,130nm,5.6s
HHC LR LR
comp=N,370nm,11.0s
HHC LR LR
comp=E,310nm,10.8s
HHC LR LR
comp=Z,280nm,14.5s
BTO Baotou 26.56 276 *e*P **P 18 29 32.6 +0.2**
BILL Bilibino 26.91 17⇑*i*P **P 18 29 31.4 -3.9**
BILL *e* 18 30 21.9
BILL *e* 18 32 54.0
BILL *e*S **S 18 34 01.3 -4.2**
BILL pmax pmax
comp=Z,22nm,1.6s,mb4.4
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 26.91 17 *e*P **P 18 29 31.1 -4.2**
comp=Z,8.4nm,0.6s,mb4.5

BILL *e*PcP PcP 18 32 54.2 -0.7
BILL *e*S **S** **18 34 10.8 +5.3**
ULN Ulaanbaatar 27.19 293⇑ *i*P **P** **18 29 38.1 +0.2**
comp=Z,181nm,1.1s,mb5.5
ULN *e*S **S** **18 34 09.0 -1.2**
ULN Ulaanbaatar 27.19 293 P **P** **18 29 38.6 +0.7**
SNR=84
ULN P 18 29 38.6
SNR=84
ULN Ulaanbaatar 27.19 293 P **P** **18 29 38.6 +0.7**
SNR=84
ULN P 18 29 38.6
SNR=84
ULN Ulaanbaatar 27.19 293 P **P** **18 29 38.6 +0.7**
SNR=84
ULN P 18 29 38.6
SNR=84
ULN Ulaanbaatar 27.19 293 P **P** **18 29 38.6 +0.7**
SNR=84
ULN P 18 29 38.6
SNR=84
YHNB Yeheng 27.39 235 P **P** **18 29 41.4 +1.5**
comp=Z,113nm,1.4s,mb5.2
SONM Songino Array 27.63 293 P **P** **18 29 42.4 +0.5**
SONM 18 32 56.2
SONM MLR MLR
comp=Z,420nm,18.1s
SONM Songino Array 27.63 293 P **P** **18 29 42.4 +0.4**
comp=Z,124nm,0.8s,mb5.5,baz=85,slow=8.6,SNR=531
SONM PcP PcP 18 32 56.2 -0.8
comp=Z,3.4nm,0.8s,baz=127,slow=3.3,SNR=3.2
SONM ScP ScP 18 36 28.8 -0.8
comp=Z,4.5nm,0.8s,baz=123,slow=2.2,SNR=11
SONM LR LR 18 41 23.7
comp=Z,420nm,18.1s,baz=105,slow=38
WHN Wuhan 28.02 253 P **P** **18 29 45.5 0.0**
WHN S **S** **18 34 22.7 -0.8**
WHN LR LR
comp=Z,680nm,12.5s
IRK Irkutsk 28.83 302 *e*P **P** **18 29 49.9 -2.6**
IRK pmax pmax
comp=Z,20nm,1.3s,mb4.6
TLY Talaya 29.21 301 *e*P **P** **18 29 54.8 -1.1**
TLY *e* 18 30 51.7
TLY *e*S **S** **18 34 44.8 +2.9**
TLY pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
TLY MLR MLR
comp=Z,325nm,15.0s
TLY Talaya 29.21 301 *e*P **P** **18 29 55.6 -0.3**
comp=Z,7.4nm,0.8s,mb4.4
TIXI Tiksi 29.43 349 *e*P **P** **18 29 52.0 -5.6**
TIXI *e*S **S** **18 34 41.8 -3.1**
TIXI *e**SS sS 18 35 21.9 +2.5
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
TIXI MLR MLR
comp=Z,221nm,14.0s
TIXI Tiksi 29.43 349⇑ *i*P **P** **18 29 51.9 -5.7**
comp=Z,25nm,1.3s,mb4.7
TIXI *e* 18 30 29.4
ZAK Zakamensk 29.48 299 *e*P **P** **18 29 58.5 +0.2**
ZAK *e* 18 31 04.1
ZAK pmax pmax
comp=Z,22nm,1.4s,mb4.6
GUMO Guam 29.79 182 LR LR 18 39 49.5
comp=Z,248nm,19.9s,baz=1.7,slow=32
XAN Xi'an 30.01 264 P **P** **18 30 02.7 -0.5**
XAN pP pP 18 30 21.3 -1.8
XAN sP sP 18 30 30.9 -2.3
XAN S **S** **18 34 55.4 +0.6**
XAN sS sS 18 35 28.2 -1.1
XAN pmax pmax
comp=Z,28nm,5.8s
MOY Mondy 30.86 301 *e*P **P** **18 30 10.0 -0.5**
MOY pmax pmax
comp=Z,36nm,2.6s,mb4.6
ENH Enshi 31.60 258 *e*P **P** **18 30 17.0 -0.2**
comp=Z,30nm,0.8s,mb5.1
LZH Lanzhou 32.76 271 *e*P **P** **18 30 28.0 +0.7**
LZH pP pP 18 30 50.1 +2.8
LZH sP sP 18 31 01.8 +4.4
LZH PP PP 18 31 40.2 -2.5
LZH *e*S **S** **18 35 36.5 -1.1**
LZH sS sS 18 36 15.0 +2.8
LZH SS SS 18 37 40.3 -21
LZH pmax pmax
comp=Z,31nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,200nm,4.9s
LZH LR LR
comp=N,1μm,13.4s
LZH LR LR
comp=Z,2μm,17.2s
TNA Tin City 33.64 33 *e*P **P** **18 30 33.8 -0.8**
comp=Z,17nm,0.8s,mb4.9
GTA Gaotai 34.33 279 P **P** **18 30 41.8 +0.9**
GTA pP pP 18 31 02.9 +1.9
GTA sP sP 18 31 12.0 +0.9
GTA PcP PcP 18 33 16.0 +1.0
GTA S **S** **18 36 03.8 +1.9**
GTA sS sS 18 36 38.9 +2.3
GTA ScP ScP 18 36 52.5 +0.4
GTA PcS PcS 18 37 02.3 +1.0
GTA ScS ScS 18 40 53.1 -1.6
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
GTA pmax pmax
comp=Z,68nm,6.6s
GTA LR LR
comp=N,220nm,14.1s
GTA LR LR
comp=E,260nm,14.4s
GTA LR LR
comp=Z,230nm,15.9s
CD2 Chengdu 35.36 263 P **P** **18 30 50.6 +0.8**
CD2 pP pP 18 31 10.9 +0.9
CD2 sP sP 18 31 20.8 +0.7
CD2 PP PP 18 32 11.6 +0.1
CD2 S **S** **18 36 17.4 -0.4**
CD2 sS sS 18 36 52.4 -0.2
CD2 SS SS 18 38 39.6 -15
CD2 pmax pmax
comp=Z,50nm,0.5s,mb5.6
CD2 pmax pmax
comp=Z,200nm,5.4s
CD2 LR LR
comp=N,310nm,8.3s
CD2 LR LR
comp=Z,280nm,11.9s
GYA Guiyang 35.86 255 P **P** **18 30 55.0 +0.8**
GYA pP pP 18 31 15.0 +0.6
GYA PP PP 18 32 20.4 +3.2
GYA PcP PcP 18 33 21.0 +1.3
GYA S **S** **18 36 26.8 +1.2**
GYA ScP ScP 18 36 58.3 +0.5
GYA sS sS 18 37 01.2 +0.7
GYA PcS PcS 18 37 07.0 -0.3
GYA SS SS 18 38 51.9 -13
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,790nm,15.6s
GYA LR LR
comp=E,630nm,16.4s
GYA LR LR
comp=Z,840nm,16.8s
TTA Tatalina 38.29 39⇑ *e*P **P** **18 31 13.7 -0.5**
comp=Z,26nm,1.0s,mb5.0
SVW2 Sparrevohn 38.45 42 *e*P **P** **18 31 16.2 +0.5**
KMI Kunming 39.46 257 P **P** **18 31 25.1 +0.6**
KMI pP pP 18 31 45.3 +0.3
KMI sP sP 18 31 54.9 -0.1
KMI PP PP 18 32 59.7 +3.1
KMI PcP PcP 18 33 31.9 +1.1
KMI S **S** **18 37 19.8 -0.2**
KMI sS sS 18 37 54.9 -0.3
KMI SS SS 18 40 08.6 -8.8
KMI pmax pmax
comp=Z,32nm,1.1s,mb5.1
KMI pmax pmax
comp=Z,75nm,3.1s
KMI LR LR
comp=N,220nm,19.1s
KMI LR LR
comp=E,220nm,17.4s
KMI LR LR
comp=Z,200nm,17.4s
RSO Redoubt South 39.86 43 *e*P **P** **18 31 28.4 +1.0**
CHUM Lake Minchumin 39.98 37⇑ *i*P **P** **18 31 28.3 0.0**
comp=Z,29nm,0.9s,mb5.1
CHUM *e*PcP PcP 18 33 31.5 -0.2
CHUM *e*ScP ScP 18 37 11.7 -1.0
PPLA Purkeypile 40.04 39⇑ *e*P **P** **18 31 29.9 +1.0**
comp=Z,162nm,1.4s,mb5.7
PPLA *e*PcP PcP 18 33 28.9 -3.1
KDAK Kodiak Island 40.19 47 P **P** **18 31 29.0 -1.1**
comp=Z,295nm,0.9s,mb6.1,SNR=9.1
KDAK Kodiak Island 40.19 47 P **P** **18 31 29.4 -0.7**
KDAK pmax pmax
comp=Z,33nm,0.8s,mb5.2
KDAK Kodiak Island 40.19 47 P **P** **18 31 29.4 -0.7**
comp=Z,33nm,0.8s,mb5.2,baz=261,slow=4.5,SNR=26
ZAA0 Zalesovo Array 40.35 307 *e*P **P** **18 31 29.5 -2.0**
ZAA0 *e*PcP PcP 18 33 32.3 -0.8
ZAA0 *e*ScP ScP 18 37 13.1 -1.3
ZALV Zalesovo Beam 40.35 307 P **P** **18 31 29.4 -2.2**
comp=Z,10.0nm,0.3s,mb5.1,baz=86,slow=7.6,SNR=64
ZALV PcP PcP 18 33 32.9 -0.2
comp=Z,12nm,0.6s,baz=105,slow=2.9,SNR=8.7
ZALV ScP ScP 18 37 13.4 -1.0
comp=Z,3.2nm,0.7s,baz=96,slow=3.0,SNR=5.5
ZALV LR LR 18 50 21.2
comp=Z,160nm,18.0s,baz=297,slow=39
BPAW Bear Paw Mtn. 40.56 37⇑ *i*P **P** **18 31 33.2 0.0**
comp=Z,35nm,1.1s,mb5.1
BPAW *e*PcP PcP 18 33 33.1 -0.5
KTH Kantishna Hill 40.60 38 *e*P **P** **18 31 34.2 +0.8**
comp=Z,78nm,1.1s,mb5.5
TRF Thorofare Moun 40.89 38 *e*P **P** **18 31 35.5 -0.3**
comp=Z,19nm,0.8s,mb5.0
COLD Coldfoot 40.93 32 *e*P **P** **18 31 35.1 -1.1**
comp=Z,9.5nm,0.5s,mb4.9
NVS Novosibirsk 41.09 309 *e*P **P** **18 31 35.9 -1.7**
NVS *i*S **S** **18 37 37.8 -5.9**
NVS *i*SS ScS 18 41 29.8 -2.9
NVS pmax pmax
comp=Z,51nm,1.4s,mb5.2
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,48nm,1.2s
NVS smax
comp=N,27nm,1.7s
NVS smax
comp=E,29nm,1.7s
WMQ Urumqi 41.24 291 P **P** **18 31 39.6 +0.6**
WMQ sP sP 18 32 07.9 -1.7
WMQ PP PP 18 33 18.6 +3.0
WMQ PcP PcP 18 33 36.8 +0.6
WMQ S **S** **18 37 47.0 +0.8**
WMQ sS sS 18 38 18.5 -3.1
WMQ SS SS 18 40 49.1 -3.2
WMQ ScS ScS 18 41 34.3 +0.3
WMQ pmax pmax
comp=Z,190nm,1.2s,mb5.8
WMQ pmax pmax
comp=Z,360nm,3.0s
WMQ LR LR
comp=N,120nm,16.0s
WMQ LR LR
comp=E,300nm,16.0s
WMQ LR LR
comp=Z,340nm,16.0s
MCK McKinley 41.48 38 *e*P **P** **18 31 40.5 -0.2**
comp=Z,22nm,0.9s,mb5.0
MCK *e*PcP PcP 18 33 36.3 -0.4
PMR Palmer 41.54 41 *e*P **P** **18 31 40.6 -0.6**
comp=Z,14nm,0.8s,mb4.7
COLA College 41.90 36⇑ *i*P **P** **18 31 44.0 0.0**
comp=Z,112nm,0.9s,mb5.6
DIV Divide 43.20 41 *e*P **P** **18 31 54.1 -0.6**
comp=Z,57nm,1.2s,mb5.2
BMRM Bremner River 43.78 41⇑ *e*P **P** **18 31 59.6 +0.3**
comp=Z,43nm,1.0s,mb5.1
BMRM *e*PcP PcP 18 33 44.4 0.0
MK31 Makanchi Array 43.80 297 *e*P **P** **18 31 59.5 -0.3**
MKAR Makanchi Array 43.80 297 *i*P **P** **18 31 59.5 -0.2**
MKAR pmax pmax
comp=Z,116nm,0.7s
MKAR Makanchi Array 43.80 297 P **P** **18 31 59.6 -0.1**
comp=Z,116nm,0.8s,mb5.7,baz=84,slow=7.9,SNR=574
MKAR ScP ScP 18 37 27.3 -1.0
comp=Z,3.4nm,0.8s,baz=52,slow=2.2,SNR=5.1
MKAR S **S** **18 38 22.3 -1.4**
comp=Z,2.3nm,0.9s,baz=78,slow=18,SNR=4.5
MKAR LR LR 18 51 03.6
comp=Z,331nm,20.2s,baz=68,slow=37
MENT Mentasta 43.90 38 *e*P **P** **18 32 00.4 +0.2**
EGAK Eagle 44.76 36⇑ *i*P **P** **18 32 06.0 -1.0**
comp=Z,126nm,1.3s,mb5.5
KURK Kurchatov 44.83 304 P **P** **18 32 07.5 -0.4**
comp=Z,620nm,0.6s,mb6.5,SNR=87
KURK Kurchatov 44.83 304*c* *i*P **P** **18 32 07.1 -0.8**
KURK pmax pmax
comp=Z,157nm,1.4s,mb5.5
KURK Kurchatov 44.83 304 LR LR 18 50 12.7
comp=Z,91nm,20.4s,baz=80,slow=35
KURK Kurchatov 44.83 304⇑ *i*P **P** **18 32 06.8 -1.0**
comp=Z,67nm,0.8s,mb5.4
KURK *e*pP pP 18 32 28.3 -0.4
KURK Kurchatov 44.83 304 P **P** **18 32 06.7 -1.2**
SNR=43
KURK P 18 32 06.7
SNR=43
KURK Kurchatov 44.83 304 P **P** **18 32 06.7 -1.2**
SNR=43
KURK P 18 32 06.7
SNR=43
KURK Kurchatov 44.83 304 P **P** **18 32 06.7 -1.2**
SNR=43
KURK P 18 32 06.7
SNR=43
KURK Kurchatov 44.83 304 P **P** **18 32 06.7 -1.2**
SNR=43
KURK P 18 32 06.7
SNR=43
CHRT Chiangrai 44.93 253 ⇑P **P** **18 32 01.0 -8.0**
comp=Z,342nm,0.9s,mb6.1
LSA Lhasa 45.17 271 P **P** **18 32 12.5 +1.7**
LSA Lhasa 45.17 271 *e*P **P** **18 32 12.4 +1.5**
comp=Z,17nm,1.0s,mb4.7
KKTK Khon Kaen 45.29 247 ⇓P **P** **18 32 12.0 +0.2**
comp=Z,556nm,0.5s,mb6.5
SDKM Sandakan 45.30 222 P **P** **18 32 12.6 +0.6**
KKM Kota Kinabalu 45.44 223 P **P** **18 32 14.1 +1.1**
comp=Z,30nm,1.0s,mb5.0
DAWY Dawson 45.63 36 *e*P **P** **18 32 13.7 -0.3**
DAWY *e*pP pP 18 32 32.7 -2.1
DAWY *e*PcP PcP 18 33 49.5 -1.2
CHG Chiang Mai 46.22 253 ⇓P **P** **18 32 19.6 +0.4**
comp=Z,26nm,1.0s,mb4.9
CHTO Chiang Mai 46.22 253 *e*P **P** **18 32 19.4 +0.2**
comp=Z,54nm,1.4s,mb5.1
CHTO *e*pP pP 18 32 40.7 +0.5
CHTO *e*PcP PcP 18 33 52.6 -0.9
CHTO Chiang Mai 46.22 253 P **P** **18 32 20.3 +1.1**
SNR=5.2
CHTO P 18 32 20.3
SNR=5.2
CHTO Chiang Mai 46.22 253 P **P** **18 32 20.3 +1.1**
SNR=5.2
CHTO P 18 32 20.3
SNR=5.2
CHTO Chiang Mai 46.22 253 P **P** **18 32 20.3 +1.1**
SNR=5.2
CHTO P 18 32 20.3
SNR=5.2
CHTO Chiang Mai 46.22 253 P **P** **18 32 20.3 +1.1**
SNR=5.2
CHTO P 18 32 20.3
SNR=5.2
CM31 Chiang Mai Arr 46.47 253 *e*P **P** **18 32 21.2 +0.1**
comp=Z,4.6nm,0.6s,mb4.4
CM31 *e*pP pP 18 32 42.8 +0.7
CMAR Chiang Mai Arr 46.47 253 P **P** **18 32 21.8 +0.7**
comp=Z,6.1nm,0.8s,mb4.4,baz=41,slow=7.5,SNR=50
CMAR pP pP 18 32 43.6 +1.5
comp=Z,3.1nm,0.6s,baz=43,slow=7.0,SNR=4.7
CMAR PcP PcP 18 33 55.4 +1.0
comp=Z,4.7nm,0.8s,baz=12,slow=3.2,SNR=9.1
CMAR ScP ScP 18 37 39.9 +0.1
comp=Z,1.4nm,0.9s,baz=20,slow=3.7,SNR=5.3
CMAR LR LR 18 53 07.3
comp=Z,119nm,18.5s,baz=20,slow=38
SHL Shillong 46.99 266 *e*P **P** **18 32 25.0 -0.2**
INK Inuvik 47.16 30⇑ *e*P **P** **18 32 25.5 -0.4**
comp=Z,23nm,0.8s,mb5.0
BVAR Borovoye Array 48.88 309 P **P** **18 32 38.3 -1.1**
BVAR 18 34 02.5
BVAR S **S** **18 39 32.3 -3.9**
BVAR pmax pmax
comp=Z,14nm,0.4s
BVAR smax
comp=N,1.0nm,0.9s
BVAR MLR MLR
comp=Z,164nm,20.8s
BVAR Borovoye Array 48.88 309 P **P** **18 32 38.3 -1.1**
comp=Z,14nm,0.4s,mb5.2,baz=81,slow=9.6,SNR=126
BVAR PcP PcP 18 34 02.5 0.0
comp=Z,5.4nm,0.6s,baz=90,slow=4.3,SNR=2.8
BVAR ScP ScP 18 37 48.1 -1.3
comp=Z,3.3nm,0.8s,baz=169,slow=2.3,SNR=4.7
BVAR S **S** **18 39 32.3 -3.9**
comp=Z,1.4nm,0.9s,baz=142,slow=12,SNR=2.6
BVAR LR LR 18 54 19.1
comp=Z,164nm,20.8s,baz=70,slow=37
BRVK Borovoye 48.93 309 P **P** **18 32 39.0 -0.7**
comp=Z,246nm,0.9s,mb6.1,SNR=21
BRVK Borovoye 48.93 309*c* *i*P **P** **18 32 39.1 -0.6**
BRVK pmax pmax
comp=Z,64nm,1.3s,mb5.4
BRVK Borovoye 48.93 309⇑ *i*P **P** **18 32 38.0 -1.7**
comp=Z,33nm,0.8s,mb5.3
BRVK Borovoye 48.93 309 P **P** **18 32 39.3 -0.4**
SNR=19
BRVK P 18 32 39.3
SNR=19
BRVK Borovoye 48.93 309 P **P** **18 32 39.3 -0.4**
SNR=19
BRVK P 18 32 39.3
SNR=19
BRVK Borovoye 48.93 309 P **P** **18 32 39.3 -0.4**
SNR=19
BRVK P 18 32 39.3
SNR=19
BRVK P 18 32 39.3
SNR=19
BRVK P 18 32 39.3
SNR=19
BRVK Borovoye 48.93 309 P **P** **18 32 39.3 -0.4**
SNR=19
BRVK P 18 32 39.3
SNR=19
TAPN Taplejung 48.99 271 *e*P **P** **18 32 42.0 +1.4**
comp=Z,63nm,1.0s,mb5.5
BTM Bintulu 49.46 225 P **P** **18 32 44.7 +0.5**
ODAN Odare 49.51 270 *e*P **P** **18 32 45.5 +1.0**
comp=Z,20nm,0.6s,mb5.2
ULHL Ulahol 49.57 294 P **P** **18 32 45.7 +1.0**
SNR=29
TKM2 Tokmak 2 49.70 295 P **P** **18 32 46.6 +0.9**
SNR=142
TKM2 Tokmak 2 49.70 295⇑ *i*P **P** **18 32 46.3 +0.6**
comp=Z,129nm,0.9s,mb5.9
TKM2 *e*pP pP 18 33 08.3 +1.4
TKM2 *e*S **S** **18 39 48.4 +0.6**
JIRN Jiri 49.92 272 *e*P **P** **18 32 49.0 +1.4**
comp=Z,88nm,0.9s,mb5.7
GUN Gumba 50.01 273 *e*P **P** **18 32 49.2 +0.9**
comp=Z,107nm,0.8s,mb5.8
RAMN Ramite 50.03 271 *e*P **P** **18 32 49.0 +0.5**
comp=Z,71nm,0.6s,mb5.8
CHMS Chumysh 50.22 295 P **P** **18 32 50.2 +0.6**
SNR=18
KBK Karagaybulak 50.24 295 P **P** **18 32 50.5 +0.7**
SNR=116
USP Ospenovka 50.27 296 P **P** **18 32 50.3 +0.3**
SNR=74
KZA Kyzart 50.30 294 P **P** **18 32 51.9 +1.6**
SNR=126
FRU Bishkek 50.38 295 *e*P **P** **18 32 51.0 +0.1**
FRU *i* pP 18 33 13.0 +0.9
FRU pmax pmax
comp=Z,133nm,1.8s,mb5.6
KKN Kakani 50.51 273 *e*P **P** **18 32 53.1 +1.0**
comp=Z,105nm,1.0s,mb5.8
PKI Pulchoki 50.54 273 *e*P **P** **18 32 53.1 +0.8**
comp=Z,100nm,1.1s,mb5.8
SBUM Sibu 50.54 226 P **P** **18 32 53.4 +1.0**
PKIN Phulchoki 50.55 273 *e*P **P** **18 32 53.1 +0.8**
PKIN Phulchoki 50.55 273 *e*P **P** **18 32 53.3 +1.0**
comp=Z,54nm,0.7s,mb5.7
AAK Ala-Archa 50.55 295 P **P** **18 32 52.3 +0.1**
comp=Z,215nm,0.6s,mb6.3,SNR=34
AAK Ala-Archa 50.55 295 P **P** **18 32 52.6 +0.4**
SNR=8.6
AAK Ala-Archa 50.55 295*c* *i*P **P** **18 32 52.3 +0.1**
AAK pmax pmax
comp=Z,30nm,1.2s,mb5.2
AAK Ala-Archa 50.55 295 *e*P **P** **18 32 52.1 -0.1**
comp=Z,31nm,0.8s,mb5.4
AAK *e*pP pP 18 33 13.8 +0.3
AAK *e*S **S** **18 39 57.5 -2.2**
AAK Ala-Archa 50.55 295 P **P** **18 32 52.7 +0.5**
SNR=29
AAK P 18 32 52.7
SNR=29
AAK Ala-Archa 50.55 295 P **P** **18 32 52.7 +0.5**
SNR=29
AAK P 18 32 52.7
SNR=29
AAK Ala-Archa 50.55 295 P **P** **18 32 52.7 +0.5**
SNR=29
AAK P 18 32 52.7
SNR=29
AAK P 18 32 52.7
SNR=29
AAK P 18 32 52.7
SNR=29
AAK Ala-Archa 50.55 295 P **P** **18 32 52.7 +0.5**
SNR=29
AAK P 18 32 52.7
SNR=29
UCH Uchtor 50.72 295 P **P** **18 32 54.3 +0.8**
SNR=15
UCH Uchtor 50.72 295 *e*P **P** **18 32 54.0 +0.6**
comp=Z,16nm,1.0s,mb5.0
UCH *e*pP pP 18 33 17.0 +2.3
DMN Daman 50.74 273 *e*P **P** **18 32 54.5 +0.7**
comp=Z,92nm,1.0s,mb5.8
KSH Kashi 51.01 291 *e*P **P** **18 32 59.5 +3.9**
KSH *e*pP pP 18 33 18.1 +1.2
KSH *e*sP sP 18 33 27.1 +0.4
KSH *e*PcP PcP 18 34 14.1 +3.6
KSH *e*PP PP 18 34 58.1 +5.4
KSH *e*ScP ScP 18 38 02.3 +3.5
KSH *e*PcS PcS 18 38 09.5 +1.4
KSH *e*S **S** **18 40 09.7 +3.6**
KSH *e*ScS ScS 18 42 39.1 +1.5
KSH *e*SS SS 18 43 46.4 +4.8
KSH pmax pmax
comp=Z,130nm,2.4s,mb5.5
KSH LR LR
comp=N,240nm,5.3s
KSH LR LR
comp=E,260nm,6.0s
EKS2 Erkin-Say 51.01 296 P **P** **18 32 56.0 +0.4**
SNR=65
EKS2 Erkin-Say 51.01 296⇑ *i*P **P** **18 32 55.7 +0.1**
comp=E,44nm,0.8s,mb5.5
EKS2 *e*pP pP 18 33 17.1 +0.2
AML Almayashu 51.31 295 P **P** **18 32 59.0 +1.1**
SNR=56
AML Almayashu 51.31 295 *e*P **P** **18 32 58.4 +0.6**
comp=E,48nm,0.9s,mb5.5
AML *e*pP pP 18 33 19.0 -0.2
DLBC Dease Lake 51.57 42 *e*P **P** **18 33 00.3 +0.7**
DLBC *e*pP pP 18 33 21.3 +0.4
KSM Kuching 52.38 227 P **P** **18 33 08.0 +1.9**
KSM Kuching 52.38 227⇓ *i*P **P** **18 33 06.8 +0.7**
comp=E,81nm,0.9s,mb5.8
SVE Sverdlovsk 52.64 316⇑ *e*P **P** **18 33 06.8 -0.7**
SVE pmax pmax
comp=Z,125nm,0.9s,mb5.9
SOKR Solikamsk 53.35 321*c* *i*P **P** **18 33 11.8 -0.9**

SOKR pmax pmax
comp=Z,110nm,0.9s,mb5.9
SOKR MLR MLR
comp=Z,280nm,18.0s
KTGM Kuala Trenggan 53.36 237 P P 18 33 13.5 +0.1
ALE Alert 53.47 4 P P 18 33 10.0 -3.3
comp=Z,82nm,1.3s,mb5.6,SNR=11
KAPI Kappang 53.67 213 *eP* **P 18 33 14.3 -1.3**
comp=Z,21nm,0.9s,mb5.2
ARU Arti 53.84 317 P **P 18 33 15.5 -0.8**
comp=Z,805nm,0.6s,SNR=40
ARU Arti 53.84 317 *d iP* **P 18 33 15.7 -0.6**
ARU *PP pP 18 33 39.1 +1.3
ARU 18 34 19.1
ARU *e* 18 35 15.9
ARU S **S 18 40 43.4 -0.9**
ARU SS SS 18 44 26.0 +0.3
ARU SSS 18 46 27.9
ARU pmax pmax
comp=Z,228nm,1.7s,mb5.9
ARU Arti 53.84 317 *eP* **P 18 33 15.0 -1.3**
comp=Z,70nm,0.6s,mb5.9
POHA Pohakuloa 54.10 96 P **P 18 33 18.5 -0.2**
comp=Z,182nm,1.1s,mb6.0
SPB4 Spitsbergen Ar 54.86 349 *eP* **P 18 33 21.4 -2.0**
KULM Kulim 54.93 240 P **P 18 33 26.1 +1.3**
KULM Kulim 54.93 240 *eP* **P 18 33 25.7 +0.9**
comp=Z,87nm,1.1s,mb5.7
KULM *epP* pP 18 33 47.9 +1.6
IPM Ipoh 55.32 239 P **P 18 33 28.2 +0.6**
RES Resolute Bay 55.52 16 *eP* **P 18 33 26.1 -2.1**
comp=Z,246nm,0.8s,mb6.3
MYKOM Kota Tinggi 55.74 234 P **P 18 33 32.2 +1.6**
KGM Kluang 55.87 235 P **P 18 33 33.3 +1.8**
FRIM Kepong 55.92 237 P **P 18 33 33.5 +1.6**
ABKAR Akbulak array 56.44 308⇑ *iP* **P 18 33 34.8 -0.2**
comp=Z,54nm,0.4s,mb5.9
ABKAR *epP* pP 18 33 57.7 +1.0
ABKAR *eS* **S 18 41 17.6 -1.5**
YKA Yellowknife Ar 56.60 33 P **P 18 33 34.8 -1.2**
YKA S **S 18 41 28.4 +7.5**
YKA pmax pmax
comp=Z,24nm,0.9s
YKA MLR MLR
comp=Z,10.0nm,21.9s
YKA Yellowknife Ar 56.60 33 P **P 18 33 34.8 -1.2**
comp=Z,24nm,0.9s,mb5.2,baz=301,slow=6.8,SNR=155
YKA ScP ScP 18 38 20.2 -2.6
comp=Z,1.3nm,0.9s,baz=296,slow=4.3,SNR=4.5
YKA S **S 18 41 28.4 +7.6**
comp=Z,1.2nm,1.1s,baz=297,slow=15,SNR=4.9
YKA LR LR 18 57 09.7
comp=Z,9.7nm,21.9s,baz=170,slow=35
YKA Yellowknife Ar 56.60 33 P **P 18 33 34.9 -1.2**
YKA ScP ScP 18 38 20.2 -2.6
YKA S **S 18 41 28.4 +7.6**
YKA LR LR 18 57 09.7
AKTO Aktyubinsk 56.94 310 LR LR 19 00 24.0
comp=Z,181nm,20.6s,baz=241,slow=38
COEN Coen 57.20 183 *eP* **P 18 33 41.2 +0.5**
comp=Z,518nm,1.1s,mb6.5
COEN *epP* pP 18 34 03.6 +1.2
KAKA Kakadu 57.22 195 *eP* **P 18 33 39.6 -1.3**
comp=Z,63nm,1.6s,mb5.4
KAKA Kakadu 57.22 195 *eP* **P 18 33 39.4 -1.6**
comp=Z,62nm,0.8s,mb5.7
KAKA *esP* sP 18 34 11.1 -1.2
APA Apatity 58.20 335⇓ *eP* **P 18 33 45.6 -1.6**
APA pmax pmax
comp=Z,46nm,1.0s,mb5.5
KBL Kabul 58.32 289 *eP* **P 18 33 47.5 -1.1**
comp=Z,40nm,1.0s,mb5.4
KBL *epP* pP 18 34 09.7 -0.6
KBL *esP* sP 18 34 20.5 +0.5
KEV Kevo 58.61 339 *eP* **P 18 33 48.0 -2.0**
KEV pmax pmax
comp=Z,27nm,0.7s,mb5.4
KEV Kevo 58.61 339 *ep* **P 18 33 48.0 -2.0**
comp=Z,27nm,0.7s,mb5.4
ARCES ARCESS Array B 59.15 339 P **P 18 33 53.2 -0.5**
ARCES pmax pmax
comp=Z,11nm,0.8s
ARCES MLR MLR
comp=Z,200nm,18.2s
ARCES ARCESS Array B 59.15 339 P **P 18 33 53.1 -0.6**
comp=Z,11nm,0.8s,mb5.0,baz=42,slow=7.8,SNR=35
ARCES LR LR 19 05 30.1
comp=Z,200nm,18.2s,baz=104,slow=42
ARE0 ARCESS Array S 59.15 339 *eP* **P 18 33 52.7 -1.0**
DAG Danmarks Havn 59.62 356⇑ *iP* **P 18 33 55.0 -2.0**
DAG pmax pmax
comp=Z,32nm,0.9s,mb5.3
DAG Danmarks Havn 59.62 356⇑ *iP* **P 18 33 55.0 -2.0**
comp=Z,32nm,0.9s,mb5.3
NLWA Neilton Lookou 60.02 52 *eP* **P 18 33 59.5 -0.6**
comp=Z,13nm,0.7s,mb5.1
NLWA *epP* pP 18 34 21.5 -0.5
E03A Lebam 60.66 52 ⇑P **P 18 34 04.7 +0.2**
baz=60
JCW Jim Creek 60.68 50 *eP* **P 18 34 04.6 0.0**
JCW *epP* pP 18 34 25.6 -0.8
TRO Tromso 60.69 341 *eP* **P 18 34 02.9 -1.4**
RPW Rockport 60.77 50 *eP* **P 18 34 04.8 -0.3**
comp=Z,2.0nm,0.7s,mb4.3
RPW *epP* pP 18 34 25.9 -1.2
A07A Ashnola River, 61.06 49 ⇓P **P 18 34 07.0 -0.1**
baz=61,SNR=12
C06A Tall Timber Ra 61.41 50 ⇓P **P 18 34 08.7 -0.8**
baz=61
B07A Winthrop 61.53 49 ⇑P **P 18 34 10.5 +0.2**
baz=61,SNR=9.4
LON Longmire 61.55 51 *eP* **P 18 34 10.4 -0.1**
comp=Z,13nm,1.2s,mb4.8
F04A Amboy 61.66 52 ⇑P **P 18 34 11.4 +0.2**
baz=61,SNR=6.4
A08A Turner Farm, O 61.72 48 ⇓P **P 18 34 11.4 -0.2**
baz=62,SNR=17
HYB Hyderabad 61.74 268 *i P* **P 18 34 11.5 -0.7**
HYB *epP* pP 18 34 35.0 +0.9
HYB *ePcP* PcP 18 34 52.0 -0.7
D06A Cle Elum 61.85 51 ⇓P **P 18 34 12.5 +0.1**
baz=62,SNR=6.7
JOF Joensuu 61.85 332 *eP* **P 18 34 09.5 -2.7**
JOF pmax pmax
comp=Z,98nm,0.7s,mb6.0
JOF Joensuu 61.85 332 *ep* **P 18 34 09.5 -2.7**
comp=Z,98nm,0.7s,mb6.0
ETW Entiat 61.90 50 *eP* **P 18 34 12.6 -0.2**
comp=Z,32nm,1.2s,mb5.2
ETW *epP* pP 18 34 34.1 -0.6
C07A Waterville 62.00 50 ⇑P **P 18 34 13.1 -0.3**
baz=62,SNR=6.5
B08A Colville Reser 62.02 49 ⇓P **P 18 34 13.4 -0.2**
baz=62,SNR=13
A09A Danville 62.08 48 ⇑P **P 18 34 14.0 0.0**
baz=62,SNR=21
E06A Yakima 62.14 51 ⇓P **P 18 34 14.8 +0.4**
baz=62,SNR=7.6
EDM Edmonton 62.29 42 *eP* **P 18 34 15.2 -0.1**
HOOD Mount Hood Mea 62.45 53 *eP* **P 18 34 17.4 +0.8**
comp=Z,151nm,1.3s,mb5.9
A10A Northport 62.63 47 ⇑P **P 18 34 17.2 -0.4**
baz=62
B09A Rice 62.63 48 ⇑P **P 18 34 17.6 -0.1**
baz=62,SNR=7.3
E07A Sunnyside 62.77 51 ⇑P **P 18 34 18.2 -0.4**
baz=62
OD2 Odessa Site #2 62.92 49 *eP* **P 18 34 19.3 -0.3**
comp=Z,8.9nm,0.9s,mb4.7
OD2 *epP* pP 18 34 40.5 -1.1
C09A Chrisman Ranch 62.92 49 ⇓P **P 18 34 19.3 -0.3**
baz=63,SNR=7.8
D08A Wollman Farm, 63.00 50 ⇑P **P 18 34 19.9 -0.3**
baz=63,SNR=7.3
RSW Rattlesnake Hi 63.01 51 *eP* **P 18 34 20.5 +0.3**
comp=Z,7.2nm,0.7s,mb4.7
RSW *epP* pP 18 34 39.0 -3.3
HAWA Hanford 63.05 51 *eP* **P 18 34 20.0 -0.5**
comp=Z,26nm,1.2s,mb5.0
HAWA *epP* pP 18 34 41.4 -1.1
F07A Phinny Hill Vi 63.11 51 ⇓P **P 18 34 21.3 +0.4**
baz=63,SNR=7.7
B10A Chitwood Farm, 63.20 48 ⇓P **P 18 34 21.1 -0.4**
baz=63
HUMO Hull Mountain 63.24 56 *eP* **P 18 34 21.5 -0.3**
comp=Z,4.0nm,0.7s,mb4.5

CTA Charters Tower 63.25 179 P **P 18 34 22.1 +0.2**
CTA pmax pmax
comp=Z,18nm,1.0s
CTA MLR MLR
comp=Z,121nm,21.9s
CTA Charters Tower 63.25 179 *eP* **P 18 34 21.7 -0.2**
comp=Z,16nm,1.1s,mb4.9
CTA Charters Tower 63.25 179 P **P 18 34 22.1 +0.1**
comp=Z,18nm,1.0s,mb5.0,baz=0.4,slow=9.0,SNR=6.9
CTA LR LR 18 57 09.4
comp=Z,121nm,21.9s,baz=155,slow=31
CTAO Charters Tower 63.25 179 *eP* **P 18 34 21.3 -0.6**
CTAO *epP* pP 18 34 44.5 +0.5
E08A Dider Farm, El 63.25 50 ⇓P **P 18 34 21.7 -0.2**
baz=63
A11A Hall Mountain, 63.28 47 ⇓P **P 18 34 22.6 +0.7**
baz=63,SNR=15
NEW Newport 63.28 48 *eP* **P 18 34 21.6 -0.4**
comp=Z,36nm,1.2s,mb5.2
NEW *epP* pP 18 34 42.9 -1.1
D09A Jones Farm, Ri 63.34 50 ⇑P **P 18 34 22.0 -0.4**
baz=63
C10A Spilker Farm, 63.44 48 ⇓P **P 18 34 22.7 -0.4**
baz=63
B11A Sandpoint 63.59 47 ⇑P **P 18 34 24.2 +0.2**
baz=63
ABKT Ailbek 63.67 298 P **P 18 34 24.3 -0.4**
comp=Z,190nm,1.0s,mb5.9,SNR=15
A12A Yaak River Ran 63.67 47 ⇑P **P 18 34 24.6 +0.1**
baz=63
E09A Wood Farm, Sta 63.75 50 ⇑P **P 18 34 25.1 0.0**
baz=64,SNR=8.9
YBH Yreka Blue Hor 63.90 56 *eP* **P 18 34 26.6 +0.4**
comp=Z,22nm,1.2s,mb4.9
YBH *e* 18 34 33.2
YBH *epP* pP 18 34 47.5 -0.8
D10A Wagner Farm, O 63.91 49 ⇑P **P 18 34 25.6 -0.5**
baz=64
WRAB Tennant Creek 63.95 192 P **P 18 34 26.6 0.0**
comp=Z,399nm,1.2s,mb6.1,SNR=20
WRAB Tennant Creek 63.95 192 *eP* **P 18 34 25.4 -1.2**
comp=Z,154nm,1.4s,mb5.6
WRAB *esP* sP 18 34 57.5 -0.7
WB2 Warramunga Arr 63.96 192 *eP* **P 18 34 25.7 -0.9**
WB2 *ePcP* PcP 18 35 00.2 -1.2
WRA Warramunga Arr 63.97 192 P **P 18 34 25.8 -0.9**
WRA pmax pmax
comp=Z,68nm,1.2s
WRA Warramunga Arr 63.97 192 P **P 18 34 25.8 -0.9**
comp=Z,68nm,1.2s,mb5.3,baz=15,slow=7.1,SNR=107
FITZ Fitzroy Crossi 63.99 201 *eP* **P 18 34 27.0 +0.1**
comp=Z,64nm,0.9s,mb5.5
FITZ Fitzroy Crossi 63.99 201 LR LR 18 59 43.2
comp=Z,73nm,21.7s,baz=19,slow=33
FITZ Fitzroy Crossi 63.99 201 *eP* **P 18 34 27.0 +0.1**
comp=Z,45nm,1.0s,mb5.2
FITZ *ePcP* PcP 18 34 59.5 -2.1
G08A Pilot Rock 64.02 51 ⇓P **P 18 34 26.9 0.0**
baz=64,SNR=5.8
LNOR Lincton Mounta 64.05 51 *eP* **P 18 34 27.3 +0.2**
comp=Z,2.9nm,0.7s,mb4.2
MOS Moscow 64.06 323 *eP* **P 18 34 23.6 -3.4**
MOS *e*PP pP 18 34 44.0 -5.1
MOS *eS* **S 18 42 51.3 -5.1**
MOS pmax pmax
comp=Z,300nm,1.5s,mb5.9
MOS pmax pmax
comp=Z,210nm,1.3s,mb5.8
KAF Kangasniemi 64.10 333 *eP* **P 18 34 24.2 -2.9**
KAF pmax pmax
comp=Z,90nm,0.6s,mb5.8
KAF Kangasniemi 64.10 333 *ep* **P 18 34 24.2 -2.9**
comp=Z,90nm,0.6s,mb5.8
SUMG Summit 64.22 ⇑*eP* **P 18 34 27.8 0.0**
comp=Z,143nm,0.9s,mb5.8
A13A Flathead Natio 64.32 46 ⇑P **P 18 34 28.9 0.0**
baz=64
PUL Pulkovo 64.33 330⇓ *eP* **P 18 34 28.5 -0.2**
PUL pmax pmax
comp=Z,260nm,1.0s,mb6.0
E10A Myers Farm, Un 64.34 50 ⇑P **P 18 34 29.1 +0.1**
baz=64,SNR=10
F09A S2 Ranch, Elgi 64.36 51 ⇓P **P 18 34 29.1 0.0**
baz=64
K05A Summer Lake 64.41 55 ⇑P **P 18 34 30.2 +0.7**
baz=64,SNR=15
I07A Izee 64.42 53 ⇑P **P 18 34 29.6 +0.1**
baz=64,SNR=7.3
D11A Klaveano Farm, 64.43 49 ⇓P **P 18 34 29.1 -0.5**
baz=64,SNR=8.5
MOR8 Moi Rana 64.45 340 *eP* **P 18 34 27.0 -2.4**
MOR8 AMb AMB 18 34 28.1
comp=Z,120nm,0.8s,mb5.8
MOR8 Moi Rana 64.45 340 *eP* **P 18 34 27.0 -2.4**
comp=Z,120nm,0.8s,mb5.8
POO Poona 64.45 272 *eP* **P 18 34 27.0 -3.1**
C12B Naegeli Ranch, 64.50 48 ⇑P **P 18 34 30.0 0.0**
baz=64
WALA Waterton Lakes 64.51 46 *eP* **P 18 34 30.1 0.0**
comp=Z,0.7nm,1.0s
WALA *epP* pP 18 34 50.3 -1.8
WALA *esP* sP 18 35 00.4 -1.3
F10A Beach Ranch, E 64.58 50 ⇑P **P 18 34 30.2 -0.4**
baz=64
B13A Whitefish 64.64 47 ⇓P **P 18 34 31.2 +0.4**
baz=64,SNR=19
H08A Prairie City 64.64 52 ⇓P **P 18 34 31.3 +0.3**
baz=64,SNR=12
FINES FINESS Array B 64.65 332 P **P 18 34 29.8 -0.9**
FINES pmax pmax
comp=Z,250nm,0.7s
FINES FINESS Array B 64.65 332 P **P 18 34 29.8 -0.9**
comp=Z,250nm,0.7s,mb6.1,baz=42,slow=7.8,SNR=841
STOK Stokkvaagen 64.67 341 *eP* **P 18 34 29.8 -1.0**
WDC Whiskeytown Da 64.68 57 *eP* **P 18 34 31.0 -0.3**
comp=Z,23nm,1.1s,mb4.9
G09A Cove 64.69 51 ⇓P **P 18 34 31.4 +0.1**
baz=64,SNR=7.1
BSMT Bassoo Peak 64.78 47 *eP* **P 18 34 32.4 +0.6**
comp=Z,10.0nm,0.7s,mb4.8
A14A Double T Ranch 64.82 46 ⇑P **P 18 34 31.9 -0.1**
baz=64,SNR=13
E11A Bogner Ranch, 64.92 49 ⇑P **P 18 34 32.4 -0.3**
baz=65,SNR=12
OBN Obninsk 64.93 323 P **P 18 34 31.6 -1.0**
comp=Z,976nm,0.9s,mb6.6,SNR=10
OBN Obninsk 64.93 323 *c iP* **P 18 34 31.7 -0.9**
OBN *e* 18 36 55.6
OBN *eS* **S 18 43 04.7 -2.4**
OBN pmax pmax
comp=Z,293nm,1.4s,mb5.9
OBN MLR MLR
comp=Z,200nm,15.0s
OBN Obninsk 64.93 323 *eP* **P 18 34 31.6 -1.1**
D12A Red Ives Fores 64.96 48 ⇑P **P 18 34 32.9 -0.2**
baz=65
C13A Hot Springs 65.00 47 ⇑P **P 18 34 33.3 0.0**
baz=65,SNR=11
JTMT Jette 65.12 47 *eP* **P 18 34 34.4 +0.4**
comp=Z,8.0nm,0.7s,mb4.7
JTMT *epP* pP 18 34 55.5 -0.6
H09A Durkee 65.13 51 ⇑P **P 18 34 34.4 +0.2**
baz=65
A15A Johnson Ranch, 65.17 45 ⇑P **P 18 34 33.8 -0.5**
baz=65,SNR=9.2
YBMT Yellow Bay 65.19 47 *eP* **P 18 34 35.1 +0.6**
comp=Z,21nm,1.2s,mb4.8
YBMT *epP* pP 18 34 53.8 -2.8
BMO Blue Mountains 65.22 51 *eP* **P 18 34 34.4 -0.3**
comp=Z,14nm,1.2s,mb4.7
F11A Grangeville 65.23 50 ⇓P **P 18 34 34.6 -0.2**
baz=65,SNR=17
MOD Modoc 65.25 55 *eP* **P 18 34 34.8 -0.2**
comp=Z,23nm,1.2s,mb4.9
MOD *epP* pP 18 34 55.0 -2.1
MOD *esP* sP 18 35 05.1 -1.6
SWMT Swartz Lake 65.41 47 *eP* **P 18 34 35.7 -0.2**
comp=Z,17nm,0.7s,mb5.0
SWMT *e* 18 34 42.1
SWMT *epP* pP 18 34 57.4 -0.7
D13A Huson 65.42 48 ⇓P **P 18 34 35.9 -0.1**
baz=65,SNR=17
J08A Circle Bar Ran 65.45 53 ⇑P **P 18 34 36.6 +0.4**
baz=65,SNR=15
G11A Walters Elk Ra 65.47 50 ⇓P **P 18 34 36.2 -0.1**
baz=65,SNR=23
I09A Lost Marbles R 65.50 52 ⇑P **P 18 34 36.8 +0.3**

baz=65,SNR=9.7
B15A Bradely Ranch, 65.67 46 ⇑P **P 18 34 37.5 -0.1**
baz=65,SNR=20
A16A West Butte Ran 65.78 45 ⇑P **P 18 34 37.7 -0.5**
baz=66,SNR=7.9
F12A Elk City 65.81 49 ⇓P **P 18 34 38.6 +0.1**
baz=66,SNR=21
SLMT Seeley Lake 65.85 47 *eP* **P 18 34 38.8 0.0**
comp=Z,31nm,0.9s,mb5.1
SLMT *epP* pP 18 35 00.1 -0.8
MSO Missoula 65.86 48 *eP* **P 18 34 38.9 +0.1**
comp=Z,21nm,1.3s,mb4.8
MSO *epP* pP 18 35 00.4 -0.6
J09A Fry Pan Ranch, 65.87 53 ⇑P **P 18 34 39.2 +0.3**
baz=66,SNR=19
WVOR Wild Horse Val 65.92 54 *eP* **P 18 34 39.1 -0.1**
comp=Z,16nm,1.0s,mb4.8
WVOR pP pP 18 35 00.4 -1.0
VOR Voronezh 65.92 319 *eP* **P 18 34 37.0 -2.1**
VOR pmax pmax
comp=Z,240nm,1.0s,mb6.0
I10A Payette 65.97 51 ⇓P **P 18 34 39.6 +0.1**
baz=66,SNR=5.2
E13A Victor 65.97 48 ⇓P **P 18 34 39.4 -0.1**
baz=66,SNR=6.8
C15A Salmond Ranch, 65.99 46 ⇑P **P 18 34 40.0 +0.5**
baz=66,SNR=35
SCO Scoresbysund 66.00 356 *i P* **P 18 34 38.3 -1.0**
SCO pmax pmax
comp=Z,18nm,1.0s,mb4.9
SCO Scoresbysund 66.00 356 *i P* **P 18 34 38.3 -1.0**
comp=Z,18nm,1.0s,mb4.9
H11A Donnelly 66.04 51 ⇑P **P 18 34 39.6 -0.4**
baz=66,SNR=9.6
B16A M & M Farms, S 66.06 45 ⇓P **P 18 34 39.7 -0.3**
baz=66,SNR=8.3
G12A Big Creek, Yel 66.16 50 ⇓P **P 18 34 40.2 -0.5**
baz=66
CHMT Chamberlain Mo 66.18 47 *eP* **P 18 34 40.9 0.0**
comp=Z,6.7nm,0.9s,mb4.5
CHMT *epP* pP 18 35 02.9 -0.1
VSR Storozhevoye 66.27 319 *c iP* **P 18 34 40.6 -0.8**
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.4
VSR pmax pmax
comp=N,40nm,0.7s
VSR pmax pmax
comp=E,30nm,0.7s
F13A Darby 66.30 49 ⇑P **P 18 34 41.2 -0.5**
baz=66,SNR=8.6
E14A Clinton 66.36 48 ⇑P **P 18 34 42.0 0.0**
baz=66,SNR=8.8
NSS Namsos 66.40 340 *eP* **P 18 34 39.7 -2.3**
C16A Fuhringer Ranc 66.42 46 ⇑P **P 18 34 42.4 +0.1**
baz=66,SNR=30
BEKR Beckwourth 66.45 57 ⇑P **P 18 34 42.2 -0.5**
baz=66
D15A Lincoln 66.49 47 ⇑P **P 18 34 42.8 0.0**
baz=66,SNR=8.7
FFC Flin Flon 66.53 36 P **P 18 34 43.8 +0.9**
comp=E,128nm,1.1s,mb5.7,SNR=10
FFC Flin Flon 66.53 36 *eP* **P 18 34 42.5 -0.4**
comp=E,20nm,0.9s,mb5.0
I11A Placerville 66.56 51 ⇑P **P 18 34 43.2 -0.1**
baz=66
VSU Vasula 66.57 330 *c iP* **P 18 34 42.4 -0.7**
VSU pmax pmax
comp=Z,353nm,1.0s,mb6.2
B17A L&G Farms, Che 66.60 45 ⇓P **P 18 34 43.3 -0.2**
baz=66,SNR=9.8
A18A Metzger Ranch, 66.69 44 ⇑P **P 18 34 43.9 -0.2**
baz=66,SNR=11
K10A MacKenzie Ranc 66.73 53 ⇑P **P 18 34 44.6 +0.1**
baz=66,SNR=20
FCC Fort Churchill 66.77 29 *eP* **P 18 34 43.3 -1.1**
comp=Z,0.5nm,0.5s,mb3.6
FCC *epP* pP 18 35 05.3 -1.3
H12A Diamond D Ranc 66.78 50 ⇑P **P 18 34 44.6 -0.1**
baz=66,SNR=11
G13A Cobalt 66.79 49 ⇑P **P 18 34 44.1 -0.6**
baz=66,SNR=16
F14A Wisdom 66.81 48 ⇓P **P 18 34 44.2 -0.6**
baz=66
E15A Deer Lodge 66.82 47 ⇑P **P 18 34 44.8 -0.2**
baz=66,SNR=12
MFID Camas Ranch 66.94 52 ⇓P **P 18 34 45.8 0.0**
baz=67,SNR=8.1
PALK Pallekele 66.98 258 P **P 18 34 46.1 -0.3**
comp=Z,28nm,1.0s,mb5.0
C17A Wharram Farm, 67.04 46 ⇑P **P 18 34 46.1 -0.2**
baz=67,SNR=13
B18A Beardsley Farm 67.06 44 ⇓P **P 18 34 46.5 +0.1**
baz=67,SNR=18
HRY Holter Researc 67.07 47 *eP* **P 18 34 46.9 +0.4**
comp=Z,15nm,0.7s,mb4.9
HRY *epP* pP 18 35 07.9 -0.9
I12A Atlanta 67.10 51 ⇑P **P 18 34 46.8 +0.1**
baz=67,SNR=35
H13A Challis 67.11 50 ⇑P **P 18 34 46.6 -0.1**
baz=67,SNR=23
WCN Washoe City 67.16 57 ⇑P **P 18 34 47.6 +0.4**
baz=67,SNR=7.9
K11A Parker Ranch, 67.22 52 ⇓P **P 18 34 47.6 0.0**
baz=67,SNR=8.6
E16A East Helena 67.26 47 ⇑P **P 18 34 48.2 +0.5**
baz=67,SNR=7.9
F15A Butte 67.27 48 ⇓P **P 18 34 48.1 +0.4**
baz=67,SNR=25
LRM Limekiln Ridge 67.30 48 *eP* **P 18 34 47.9 -0.1**
comp=Z,142nm,0.9s,mb5.8
LRM *epP* pP 18 35 09.2 -1.0
EGMT Eagleton 67.31 45 ⇑P **P 18 34 47.9 -0.1**
baz=67,SNR=17
EGMT Eagleton 67.31 45 *eP* **P 18 34 47.8 -0.3**
comp=Z,41nm,1.1s,mb5.2
EGMT *epP* pP 18 35 09.8 -0.4
D17A Six Diamond Ra 67.39 46 ⇓P **P 18 34 48.5 0.0**
baz=67,SNR=13
L10A Juniper Basin 67.40 53 ⇑P **P 18 34 49.0 +0.3**
baz=67,SNR=12
J12A Stokes Ranch, 67.46 51 ⇑P **P 18 34 49.3 +0.3**
baz=67,SNR=11
DLMT Dillon 67.51 48 *eP* **P 18 34 49.6 +0.3**
comp=Z,37nm,1.2s,mb5.1
DLMT *epP* pP 18 35 11.0 -0.6
CMB Columbia Colle 67.55 58 *eP* **P 18 34 49.6 -0.1**
comp=Z,28nm,1.2s,mb5.0
CMB *epP* pP 18 35 10.9 -1.1
I13A Wildhorse Cree 67.59 50 ⇑P **P 18 34 50.3 +0.4**
baz=67,SNR=20
HLID Hailey 67.65 51 ⇓P **P 18 34 50.4 +0.2**
baz=67,SNR=16
HLID Hailey 67.65 51 *eP* **P 18 34 50.3 +0.1**
comp=Z,15nm,1.2s,mb4.7
HLID *epP* pP 18 35 12.6 +0.1
ASAR Alice Springs 67.69 192 P **P 18 34 50.6 +0.1**
ASAR pmax pmax
comp=Z,28nm,1.0s
ASAR pmax pmax
comp=Z,2.0nm,1.0s
ASAR Alice Springs 67.69 192 P **P 18 34 50.5 0.0**
comp=Z,28nm,1.0s,mb5.0,baz=8.9,slow=5.2,SNR=110
ASAR PKP2bc 19 03 13.4
comp=Z,1.6nm,1.0s,baz=165,slow=4.3,SNR=6.3
ASAR Alice Springs 67.69 192 P **P 18 34 50.5 0.0**
ASAR ⇑*e* 19 03 13.4
G15A Dillon 67.70 48 ⇓P **P 18 34 50.6 +0.1**
baz=67,SNR=30
M10A I.L. Ranch, Tu 67.71 54 ⇑P **P 18 34 51.2 +0.6**
baz=68,SNR=10
MCMT McKenzie Canyo 67.72 49 *eP* **P 18 34 50.4 -0.2**
comp=Z,2.5nm,0.9s,mb4.0
MCMT *epP* pP 18 35 12.2 -0.7
E17A Martinsdale 67.74 47 ⇑P **P 18 34 51.2 +0.5**
baz=68,SNR=26
L11A Cat Creek Ranc 67.76 53 ⇓P **P 18 34 51.5 +0.5**
baz=68,SNR=30
F16A Kennard Place, 67.77 48 ⇑P **P 18 34 51.1 +0.2**
baz=68,SNR=5.5
D18A Linhart Farms, 67.82 45 ⇑P **P 18 34 51.3 0.0**
baz=68,SNR=5.8
BOZ Bozeman (W) 67.86 48 ⇑P **P 18 34 51.9 +0.4**
baz=68,SNR=23
BOZ Bozeman (W) 67.86 48 *eP* **P 18 34 51.7 +0.3**
comp=Z,16nm,0.6s,mb5.0
BOZ *epP* pP 18 35 12.1 -1.6
J13A Cove Ranch, Pi 67.89 51 ⇓P **P 18 34 52.2 +0.4**

baz=68,SNR=15
DZM Mont Dzumac 67.94 159 *e*LR LR 18 55 33.4
comp=Z,544nm,34.4s
I14A Mackay 67.95 50 ⇓P **P 18 34 52.6 +0.5**
baz=68,SNR=13
K12A Draper Farm, C 67.95 52 ⇑P **P 18 34 52.3 +0.2**
baz=68,SNR=9.5
BMN Battle Mountai 67.99 55 *e*P **P 18 34 52.6 +0.2**
comp=Z,25nm,1.2s,mb4.9
BMN *e*pP pP 18 35 14.2 -0.5
G16A Moss Hill, Enn 68.03 48 ⇓P **P 18 34 52.9 +0.3**
baz=68,SNR=27
E18A Harlowton 68.17 46 ⇑P **P 18 34 53.8 +0.3**
baz=68
L12A House Creek Ra 68.20 52 ⇑P **P 18 34 54.0 +0.3**
baz=68,SNR=5.2
M11A Holland Ranch, 68.20 53 ⇓P **P 18 34 54.4 +0.7**
baz=68,SNR=13
F17A Fitzpatrick Pl 68.21 47 ⇓P **P 18 34 53.9 +0.2**
baz=68,SNR=12
N10A Dunphy 68.23 54 ⇓P **P 18 34 54.2 +0.3**
baz=68
K13A Stover Farm, H 68.41 51 ⇑P **P 18 34 55.0 0.0**
baz=68
QLMT Earthquake Lak 68.49 48 *e*P **P 18 34 55.8 +0.4**
comp=Z,6.0nm,0.7s,mb4.5
QLMT *e* 18 35 02.4
O10A Cortez Mining, 68.50 55 ⇑P **P 18 34 56.4 +0.8**
baz=68
G17A Pierce Place, 68.54 47 ⇑P **P 18 34 56.3 +0.5**
baz=68,SNR=9.3
NVAR Mina Array Bea 68.59 57 P **P 18 34 56.6 +0.4**
comp=Z,21nm,0.9s,mb5.0,baz=287,slow=6.4,SNR=106
NVAR pP pP 18 35 18.0 -0.5
comp=Z,10nm,0.7s,baz=293,slow=6.4,SNR=6.0
NVAR PKPPKP 19 03 06.7
comp=Z,1.0nm,1.0s,baz=161,slow=5.7,SNR=4.6
NVAR Mina Array Bea 68.59 57 P **P 18 34 56.6 +0.4**
NVAR pP pP 18 35 18.0 -0.5
NVAR P'P' 19 03 06.7
MBWA Marble Bar 68.61 206 *e*P **P 18 34 56.0 -0.3**
H16A Russell Place, 68.67 48 ⇑P **P 18 34 56.9 +0.3**
baz=68,SNR=14
EIDS Eidsvold 68.68 175 *e*P **P 18 34 57.0 +0.3**
comp=Z,12nm,1.0s,mb4.7
F18A Big Timber 68.71 47 ⇓P **P 18 34 57.1 +0.3**
baz=68,SNR=20
M12A Wells 68.72 53 ⇓P **P 18 34 57.6 +0.6**
baz=68,SNR=22
IZAR Zarasai 68.72 328 *e*P **P 18 34 56.3 -0.5**
GCMT Greycliff 68.81 47 *e*P **P 18 34 57.9 +0.5**
comp=Z,25nm,1.2s,mb4.9
YMR Madison River 68.85 48 *e*P **P 18 34 58.4 +0.8**
comp=Z,19nm,0.8s,mb5.0
YMR *e*pP pP 18 35 20.1 +0.1
L13A Double Diamond 68.85 52 ⇑P **P 18 34 58.5 +0.8**
baz=69,SNR=8.9
IDID Didziasalis 68.85 328 *e*P **P 18 34 57.2 -0.3**
ISAL Salakas 68.90 328 *e*P **P 18 34 57.6 -0.3**
P10A Eureka 68.95 55 ⇓P **P 18 34 59.1 +0.7**
baz=69,SNR=7.0
ELK Elko 68.96 54 P **P 18 34 59.1 +0.7**
YNR Norris Junctio 68.97 48 *e*P **P 18 34 59.9 +1.4**
comp=Z,26nm,1.2s,mb4.9
K14A Jones Ranch, D 69.00 51 ⇓P **P 18 34 59.3 +0.7**
baz=69,SNR=13
MICGM Minsk 69.00 326 *e*P **P 18 34 56.0 -2.4**
N12A Clover Valley, 69.01 53 ⇑P **P 18 34 59.4 +0.6**
baz=69,SNR=14
N12A Clover Valley, 69.01 53 *e*P **P 18 34 58.9 +0.2**
comp=Z,26nm,1.1s,mb5.0
MNK Minsk 69.01 326 *e*P **P 18 34 56.0 -2.5**
MNK pmax pmax
comp=Z,500nm,1.0s,mb6.3
YFT Old Faithful 69.06 48 *e*P **P 18 35 01.0 +2.0**
comp=Z,24nm,1.0s,mb5.0
I16A Newdale 69.08 49 ⇑P **P 18 35 00.1 +0.9**
baz=69,SNR=16
O11A Cowboy Ranch, 69.11 54 ⇓P **P 18 34 59.8 +0.5**
baz=69,SNR=9.6
NACGM Naroch 69.14 327 *e*P **P 18 34 56.0 -3.3**
SFJD Kangerlussuaq 69.15 7⇑*i*P **P 18 34 58.1 -1.1**
SFJD pmax pmax
comp=Z,39nm,0.9s,mb5.2
SFJD Kangerlussuaq 69.15 7 *e*P **P 18 34 58.0 -1.1**
comp=Z,76nm,1.1s,mb5.4
SFJD Kangerlussuaq 69.15 7⇑*i*P **P 18 34 58.1 -1.1**
comp=Z,39nm,0.9s,mb5.2
G18A Lazy EL Ranch, 69.17 47 ⇑P **P 18 34 59.6 -0.1**
baz=69
KIV Kislovodsk 69.18 311 P **P 18 35 00.7 +0.9**
comp=Z,1μm,0.9s,SNR=49
KIV Kislovodsk 69.18 311⇑*i*P **P 18 35 00.4 +0.6**
KIV *i* pP 18 35 23.3 +1.2
KIV *e*S S 18 43 56.8 -1.7
KIV pmax pmax
comp=Z,256nm,0.9s,mb6.0
KIV Kislovodsk 69.18 311 *e*P **P 18 35 00.5 +0.8**
comp=Z,188nm,0.9s,mb5.9
KIV Kislovodsk 69.18 311 P **P 18 35 00.6 +0.9**
SNR=44
KIV P 18 35 00.6
SNR=44
KIV Kislovodsk 69.18 311 P **P 18 35 00.6 +0.9**
SNR=44
KIV P 18 35 00.6
SNR=44
KIV Kislovodsk 69.18 311 P **P 18 35 00.6 +0.9**
SNR=44
KIV P 18 35 00.6
SNR=44
KIV P 18 35 00.6
SNR=44
KIV P 18 35 00.6
SNR=44
KIV Kislovodsk 69.18 311 P **P 18 35 00.6 +0.9**
SNR=44
KIV P 18 35 00.6
SNR=44
M13A Montello 69.19 52 ⇑P **P 18 35 00.2 +0.3**
baz=69,SNR=18
M13A Montello 69.19 52 *e*P **P 18 35 00.0 +0.1**
comp=Z,20nm,1.1s,mb4.9
DOMB Dombas 69.20 340 *e*P **P 18 34 58.7 -0.9**
DOMB AMb AMB 18 34 59.9
comp=Z,110nm,1.0s,mb5.6
DOMB Dombas 69.20 340 *e*P **P 18 34 58.7 -0.9**
comp=Z,110nm,1.0s,mb5.6
LKWY Lake 69.22 48 *e*P **P 18 35 01.7 +1.7**
comp=Z,14nm,1.0s,mb4.7
LKWY *e*pP pP 18 35 21.5 -0.9
H17A Grant Village 69.24 48 ⇓P **P 18 35 02.1 +2.0**
baz=69,SNR=16
K15A Arbon 69.27 51 ⇓P **P 18 35 01.2 +0.9**
baz=69,SNR=8.3
ZEI Tsey 69.28 310 *e*P **P 18 35 00.2 -0.2**
ZEI pmax pmax
comp=Z,62nm,0.8s,mb5.5
L14A Malta 69.29 51 ⇑P **P 18 35 01.0 +0.5**
baz=69,SNR=15
RCTC Rector, Farmer 69.34 59 ⇑P **P 18 35 00.8 -0.1**
baz=69
IMW Indian Meadow 69.36 49 *e*P **P 18 35 01.6 +0.7**
comp=Z,27nm,1.1s,mb5.0
IMW *e*pP pP 18 35 22.8 -0.5
J16A Bone 69.40 50 ⇑P **P 18 35 02.1 +0.9**
baz=69,SNR=28
P11A Circle Ranch, 69.42 55 ⇓P **P 18 35 01.6 +0.3**
baz=69
DCID1 Drake Creek 69.43 49 *e*P **P 18 35 01.8 +0.5**
comp=Z,65nm,1.1s,mb5.4
RLMT Red Lodge 69.46 47 ⇑P **P 18 35 02.0 +0.5**
baz=69,SNR=19
RLMT Red Lodge 69.46 47 *e*P **P 18 35 01.4 -0.1**
comp=Z,47nm,1.4s,mb5.1
RLMT *e*pP pP 18 35 23.1 -0.7
MTA Mtatsminda 69.47 308 P **P 18 35 02.4 +0.9**
TBLG Delisi 69.47 308 *i* P **P 18 35 02.9 +1.3**
TBLG Delisi 69.47 308 P **P 18 35 02.9 +1.3**
TPH Tonopah 69.47 57 *e*P **P 18 34 53.1 -8.6**
comp=Z,42nm,1.0s,mb5.2
NB2 NORSAR Subarra 69.48 338 P **P 18 35 00.5 -0.8**
comp=Z,156nm,0.8s,mb5.9,baz=34,slow=6.2
NOA NORSAR Array B 69.48 338 P **P 18 35 00.5 -0.8**
NOA pmax pmax
comp=Z,115nm,0.8s
NOA MLR MLR
comp=Z,74nm,18.2s
NOA NORSAR Array B 69.48 338 P **P 18 35 00.5 -0.9**
comp=Z,115nm,0.8s,mb5.8,baz=34,slow=6.1,SNR=356
NOA LR LR 19 11 08.0
comp=Z,74nm,18.2s,baz=25,slow=41
NOA NORSAR Array B 69.48 338 P **P 18 35 00.5 -0.9**
NOA LR LR 19 11 08.0
N13A Wendover, West 69.49 53 ⇑P **P 18 35 02.1 +0.4**
baz=69,SNR=5.6
N13A Wendover, West 69.49 53 *e*P **P 18 35 02.2 +0.5**
comp=Z,19nm,0.8s,mb5.0
Q10A Clear Creek Ra 69.50 56 ⇓P **P 18 35 01.8 0.0**
baz=69,SNR=15
SMMC Simmler 69.50 61 ⇑P **P 18 35 02.2 +0.3**
baz=69
RRI2 Red Ridge 69.51 49 *e*P **P 18 35 02.7 +0.9**
comp=Z,49nm,1.1s,mb5.2
I17A Pilgrim Ck. 69.55 49 ⇑P **P 18 35 03.5 +1.5**
baz=69,SNR=17
O12A Currie 69.56 54 ⇑P **P 18 35 02.3 +0.2**
baz=69,SNR=20
KEH Kehvi 69.56 309 P **P 18 35 05.4 +3.2**
M14A Sheep Mountain 69.57 52 ⇓P **P 18 35 02.6 +0.4**
baz=69,SNR=15
TPAW Teton Pass 69.62 49 *e*P **P 18 35 03.3 +0.8**
comp=Z,57nm,1.3s,mb5.2
ONI Oni 69.64 310 P **P 18 35 04.0 +1.3**
GOR Gori 69.67 309 P **P 18 35 03.9 +1.1**
K16A Soda Springs 69.70 50 ⇓P **P 18 35 03.7 +0.7**
baz=69,SNR=26
HVU Hansel Valley 69.72 51 *e*P **P 18 35 03.1 0.0**
comp=Z,16nm,1.0s,mb4.8
HVU *e*pP pP 18 35 23.8 -1.7
LOHW Long Hollow 69.73 49 *e*P **P 18 35 03.6 +0.4**
comp=Z,29nm,1.3s,mb5.0
NAO01 NORSAR Array S 69.74 338 *e*P **P 18 35 01.9 -1.0**
comp=Z,79nm,0.8s,mb5.6
VES Vestal, Richgr 69.74 60 ⇑P **P 18 35 02.7 -0.7**
baz=70,SNR=5.1
SNOW Snow King Moun 69.75 49 *e*P **P 18 35 03.9 +0.7**
comp=Z,31nm,1.1s,mb5.1
REDW Red Top Meadow 69.76 49 *e*P **P 18 35 03.8 +0.5**
comp=Z,41nm,1.3s,mb5.1
DGMT Dagmar 69.79 42 ⇓P **P 18 35 03.0 -0.4**
baz=70,SNR=6.0
DGMT Dagmar 69.79 42 *e*P **P 18 35 02.5 -0.9**
comp=Z,36nm,0.7s,mb5.3
DGMT *e*pP pP 18 35 24.5 -1.3
L15A Malad City 69.79 51 ⇑P **P 18 35 03.9 +0.3**
baz=70,SNR=9.6
J17A Brown Place, J 69.84 49 ⇑P **P 18 35 04.5 +0.7**
baz=70,SNR=16
PKM Peak Mountain 69.87 61 ⇑P **P 18 35 04.5 +0.3**
baz=70,SNR=5.3
R10A Warm Springs 69.90 56 ⇑P **P 18 35 04.2 -0.1**
baz=70
Q11A Duckwater 69.93 55 ⇑P **P 18 35 04.5 0.0**
baz=70,SNR=12
S10A Tonopah Range, 69.95 57 ⇑P **P 18 35 04.7 +0.1**
baz=70,SNR=22
P12A McGill 69.97 54 ⇓P **P 18 35 05.0 +0.3**
baz=70,SNR=13
LAO LASA Array 70.00 44 *e*P **P 18 35 04.5 -0.2**
comp=Z,42nm,1.3s,mb5.1
LAO *e*pP pP 18 35 25.8 -1.3
GRAC Grapevine Rang 70.07 58 ⇑P **P 18 35 05.6 +0.3**
baz=70,SNR=13
N14A Grayback Hills 70.08 52 ⇓P **P 18 35 05.6 +0.2**
baz=70,SNR=17
I18A Diamond G Ranc 70.10 48 ⇓P **P 18 35 06.3 +0.9**
baz=70,SNR=8.3
M15A Larsen Ranch, 70.11 51 ⇓P **P 18 35 05.7 +0.1**
baz=70,SNR=28
BGU Big Grassy Mou 70.13 52 *e*P **P 18 35 06.0 +0.4**
comp=Z,7.0nm,1.0s,mb4.5
SPUT South Promonto 70.21 52 *e*P **P 18 35 06.3 +0.2**
comp=Z,27nm,1.3s,mb4.9
SPUT *e*pP pP 18 35 28.8 +0.3
ISA Isabella 70.23 59 ⇓P **P 18 35 05.4 -1.0**
baz=70,SNR=7.5
ISA Isabella 70.23 59 *e*P **P 18 35 05.5 -0.9**
comp=Z,14nm,1.1s,mb4.7
R11A Troy Canyon, C 70.29 56 ⇑P **P 18 35 06.8 +0.1**
baz=70,SNR=26
Q12A Willow Creek R 70.30 55 ⇑P **P 18 35 06.7 +0.1**
baz=70
J18A Kendall Valley 70.32 49 ⇓P **P 18 35 07.0 +0.2**
baz=70,SNR=15
L16A Fish Haven 70.32 51 ⇑P **P 18 35 07.0 +0.2**
baz=70,SNR=14
ARVC Arvin 70.35 60 ⇑P **P 18 35 06.4 -0.8**
baz=70
N15A Stansbury Isla 70.44 52 ⇓P **P 18 35 07.8 +0.3**
baz=70,SNR=5.8
GNI Garni 70.50 307*c i*P **P 18 35 08.8 +0.9**
GNI pmax pmax
comp=Z,85nm,1.7s
GNI Garni 70.50 307 *e*P **P 18 35 09.4 +1.5**
comp=Z,32nm,0.8s,mb5.2
GNI Garni 70.50 307 P **P 18 35 10.4 +2.5**
SNR=5.8
GNI P 18 35 10.4
SNR=5.8
GNI Garni 70.50 307 P **P 18 35 10.4 +2.5**
SNR=5.8
GNI P 18 35 10.4
SNR=5.8
P13A Bates Ranch, G 70.51 54 ⇑P **P 18 35 08.3 +0.3**
baz=70,SNR=8.6
HWUT Hardware Ranch 70.52 51 *e*P **P 18 35 08.2 +0.2**
comp=Z,26nm,1.1s,mb5.0
OSL Oslo 70.54 338 *e*P **P 18 35 06.5 -1.3**
OSL AMB AMB 18 35 08.1
comp=Z,93nm,1.1s,mb5.5
OSL Oslo 70.54 338 *e*P **P 18 35 07.5 -0.4**
BSC Santa Cruz Isl 70.56 61 ⇑P **P 18 35 08.1 -0.4**
baz=70
L17A Cokeville 70.58 50 ⇑P **P 18 35 08.5 +0.1**
baz=70,SNR=5.1
MPMC Manual Prospec 70.59 59 ⇓P **P 18 35 08.6 +0.1**
baz=70,SNR=28
S11A Rachel 70.65 56 ⇓P **P 18 35 09.2 +0.3**
baz=70
M16A Huntsville 70.67 51 ⇓P **P 18 35 09.0 0.0**
baz=70
K18A Toltan Ranch, 70.69 49 ⇑P **P 18 35 09.7 +0.7**
baz=70,SNR=6.5
FURC Furnace Creek, 70.72 58 ⇓P **P 18 35 09.4 +0.1**
baz=70,SNR=32
DUG Dugway 70.73 53 ⇑P **P 18 35 09.6 +0.2**
baz=70,SNR=28
DUG Dugway 70.73 53 *e*P **P 18 35 09.3 0.0**
comp=Z,32nm,1.1s,mb5.1
OSI Osito Adit 70.75 60 ⇓P **P 18 35 09.3 -0.2**
baz=70
OSI Osito Adit 70.75 60 *e*P **P 18 35 09.8 +0.3**
comp=Z,9.4nm,0.4s,mb5.0
OSI *e*pP pP 18 35 31.8 -0.2
Q13A Wheeler Ranch, 70.83 54 ⇑P **P 18 35 10.4 +0.5**
baz=71,SNR=22
LRMC Laurel Mountai 70.84 59 ⇑P **P 18 35 10.0 -0.1**
baz=71
BLG Laguna Peak 70.85 61 ⇑P **P 18 35 09.8 -0.4**
baz=71
BW06 Boulder Array 70.87 49 ⇑P **P 18 35 10.0 -0.1**
baz=71,SNR=24
BW06 Boulder Array 70.87 49 *e*P **P 18 35 09.4 -0.7**
comp=Z,30nm,1.1s,mb5.0
BW06 *e*pP pP 18 35 15.9 -17
PDAR Pinedale Array 70.87 49 P **P 18 35 10.0 -0.1**
comp=Z,12nm,0.7s,mb4.9,baz=263,slow=1.9,SNR=101
PDAR pP pP 18 35 32.0 -0.5
comp=Z,5.2nm,0.6s,baz=301,slow=0.9,SNR=4.0
PDAR PKP2ab 19 02 58.9
comp=Z,0.7nm,1.0s,baz=100,slow=3.6,SNR=4.8
O15A The Old Anders 70.87 52 ⇑P **P 18 35 10.2 0.0**
baz=71
P14A Drum Mountains 70.97 53 ⇓P **P 18 35 11.1 +0.3**
baz=71,SNR=22
SOC Sochi 71.04 312⇑*i*P **P 18 35 10.2 -0.9**
SOC *e**PP pP 18 35 33.8 +0.2
SOC *e*S S 18 44 14.3 -5.9
SOC *e**SS sS 18 45 01.7 +3.1
SOC *e*SS SS 18 48 51.3 -2.8
SOC pmax pmax
comp=Z,46nm,0.8s,mb5.4
EDW2 Edwards Air Fo 71.04 60 ⇑P **P 18 35 11.2 0.0**
baz=71,SNR=12
N16A Rees Ranch, Co 71.06 51 ⇓P **P 18 35 11.6 +0.2**
baz=71,SNR=6.3
U10A Ash Meadows, A 71.08 58 ⇑P **P 18 35 12.1 +0.6**
baz=71
KONO Kongsberg 71.09 338 *e*P **P 18 35 10.2 -0.9**
comp=Z,30nm,0.9s,mb5.1
M17A Scullys Gap (B 71.11 51 ⇑P **P 18 35 11.5 -0.1**
baz=71,SNR=5.7
L18A Fontenelle, Gr 71.16 50 ⇑P **P 18 35 11.9 0.0**
baz=71,SNR=20
AKASG Malin Array Be 71.19 323 P **P 18 35 11.2 -0.7**
AKASG *PP pP 18 35 33.5 -0.9
AKASG pmax pmax
comp=Z,30nm,0.5s
AKASG MLR MLR
comp=Z,180nm,20.7s
AKASG Malin Array Be 71.19 323 P **P 18 35 11.2 -0.8**
comp=Z,30nm,0.5s,mb5.4,baz=40,slow=6.0,SNR=211
AKASG pP pP 18 35 33.5 -0.8
comp=Z,7.2nm,0.5s,baz=42,slow=6.5,SNR=4.0
AKASG LR LR 19 08 55.8
comp=Z,180nm,20.7s,baz=90,slow=38
AKBB Malin Array Si 71.19 323 *e*P **P 18 35 11.0 -0.9**
AKBB *e*pP pP 18 35 31.9 -2.5
SUW Suwalki 71.20 328 *e*P **P 18 35 11.2 -0.7**
SUW *e* pP 18 35 34.0 -0.4
SUW Suwalki 71.20 328 *e*P **P 18 35 11.2 -0.7**
SUW *e* pP 18 35 34.0 -0.4
SUW Suwalki 71.20 328 *e*P **P 18 35 10.9 -1.0**
comp=Z,139nm,1.3s,mb5.6
S12A Delamar Landin 71.21 56 ⇑P **P 18 35 12.8 +0.6**
baz=71,SNR=18
K19A Absolon Red Bu 71.22 49 ⇑P **P 18 35 11.6 -0.6**
baz=71,SNR=11
T11A Corn Creek, Al 71.23 56 ⇑P **P 18 35 12.4 0.0**
baz=71,SNR=29
DECC Green Verdugo 71.23 60 ⇑P **P 18 35 12.2 -0.3**
baz=71
JLU Jordanelle 71.24 52 *e*P **P 18 35 12.3 -0.1**
comp=Z,34nm,1.3s,mb5.0
JLU *e*pP pP 18 35 34.6 -0.3
Q14A Sevier Lake (B 71.25 54 ⇓P **P 18 35 12.8 +0.3**
baz=71,SNR=30
NLU North Lily Min 71.31 52 *e*P **P 18 35 11.4 -1.5**
comp=Z,20nm,1.0s,mb4.9
NLU *e*pP pP 18 35 35.9 +0.6
R13A O'Grain Ranch, 71.37 55 ⇓P **P 18 35 13.3 +0.1**
baz=71,SNR=12
N17A Moffit Pass 71.37 51 ⇓P **P 18 35 13.4 +0.2**
baz=71,SNR=17
ANN Anapa 71.42 315 *e*P **P 18 35 13.7 +0.3**
ANN *e**PP pP 18 35 36.0 +0.1
ANN *e*S S 18 44 22.7 -1.9
ANN pmax pmax
comp=Z,121nm,1.4s,mb5.5
L19A Farson 71.42 49 ⇓P **P 18 35 13.4 0.0**
baz=71,SNR=10
ARTV Artvin 71.42 309 *i* P **P 18 35 13.2 -0.3**
P15A Leamington 71.45 53 ⇑P **P 18 35 13.8 +0.1**
baz=71,SNR=11
SHOC Shoshone 71.45 58 ⇓P **P 18 35 13.5 -0.3**
baz=71
O16A Springville 71.47 52 ⇓P **P 18 35 14.1 +0.3**
baz=71,SNR=16
M18A Lyman 71.48 50 ⇑P **P 18 35 13.8 0.0**
baz=71,SNR=5.2
DAU Daniels Canyon 71.48 52 *e*P **P 18 35 14.6 +0.8**
comp=Z,32nm,1.2s,mb5.0
DAGI Agilar 71.50 309 *i* P **P 18 35 15.0 +1.0**
GSC Goldstone 71.51 59 ⇓P **P 18 35 13.9 -0.2**
baz=71,SNR=9.5
GSC Goldstone 71.51 59 *e*P **P 18 35 12.9 -1.2**
comp=Z,16nm,1.1s,mb4.8
MPU Maple Canyon 71.53 52 *e*P **P 18 35 14.7 +0.5**
comp=Z,26nm,1.1s,mb5.0
MPU *e*pP pP 18 35 35.7 -0.9
K20A Yellowstone Ra 71.60 48 ⇑P **P 18 35 14.0 -0.6**
baz=71,SNR=6.0
BORG Borgarnes 71.64 354 *e*P **P 18 35 14.6 +0.3**
comp=Z,115nm,1.0s,mb5.7
DBAD Bademkaya 71.67 309 *i* P **P 18 35 15.7 +0.8**
CIS Catalina Islan 71.73 61 ⇓P **P 18 35 14.5 -1.0**
baz=72
Q15A Fillmore 71.77 53 ⇓P **P 18 35 15.7 +0.1**
baz=72,SNR=7.8
P16A Fountain Green 71.78 53 ⇑P **P 18 35 15.8 +0.2**
baz=72
S13A Holt Ranch, En 71.82 55 ⇓P **P 18 35 16.2 +0.3**
baz=72,SNR=15
R14A James Farms, M 71.85 54 ⇓P **P 18 35 16.3 +0.2**
baz=72
O17A Robinson Place 71.92 52 ⇓P **P 18 35 17.0 +0.5**
baz=72,SNR=13
M19A Rock Springs 71.93 50 ⇓P **P 18 35 16.3 -0.2**
baz=72
TUQ Turquoise Moun 71.97 58 ⇑P **P 18 35 16.7 -0.1**
baz=72,SNR=11
N18A Larsen Ranch, 72.00 50 ⇓P **P 18 35 16.5 -0.5**
baz=72,SNR=5.9
V11A Goodsprings 72.01 58 ⇓P **P 18 35 17.2 +0.1**
baz=72,SNR=8.8
L20A Wamsutter 72.05 49 ⇓P **P 18 35 17.3 +0.1**
baz=72,SNR=7.2
BBRC Big Bear Sol-O 72.11 60 ⇓P **P 18 35 17.5 -0.2**
baz=72
HEC Hector,Ludlow 72.11 59 ⇓P **P 18 35 17.3 -0.4**
baz=72
S14A Cedar City 72.12 55 ⇑P **P 18 35 17.8 +0.1**
baz=72
CCUT Cedar City 72.14 55 *e*P **P 18 35 18.0 +0.2**
comp=Z,23nm,1.2s,mb4.9
CCUT *e*pP pP 18 35 40.5 +0.1
T13A Saint George 72.16 56 ⇑P **P 18 35 18.6 +0.6**
baz=72,SNR=27
U12A Valley of Fire 72.17 57 ⇓P **P 18 35 18.4 +0.3**
baz=72,SNR=6.2
MSU Marysvale 72.21 54 *e*P **P 18 35 18.7 +0.5**
comp=Z,25nm,1.4s,mb4.9
TMUT Trail Mountain 72.25 53 *e*P **P 18 35 18.5 0.0**
comp=Z,22nm,1.1s,mb4.9
O18A Roosevelt 72.29 51 ⇑P **P 18 35 19.1 +0.4**
baz=72,SNR=9.8
N19A John Jarvie Ra 72.33 50 ⇓P **P 18 35 18.6 -0.3**
baz=72,SNR=7.7
ULM Lac du Bonnet 72.33 36 P **P 18 35 17.6 -1.1**
comp=Z,6.2nm,0.6s,mb4.6,baz=313,slow=6.6,SNR=12
ULM pP pP 18 35 39.9 -1.4
comp=Z,5.8nm,0.6s,baz=311,slow=7.8,SNR=6.1
ULM LR LR 19 08 02.1
comp=Z,80nm,18.7s,baz=346,slow=36
ULM Lac du Bonnet 72.33 36 *e*P **P 18 35 16.3 -2.5**
comp=Z,5.2nm,0.6s,mb4.5
ULM *e*pP pP 18 35 39.3 -2.0
R15A Junction 72.35 54 ⇓P **P 18 35 19.5 +0.4**
baz=72
MURC Murrieta 72.37 60 ⇑P **P 18 35 18.9 -0.3**
baz=72
P17A Butcher Ranch, 72.40 52 ⇑P **P 18 35 19.4 +0.1**
baz=72,SNR=17
V12A Nelson 72.44 57 ⇑P **P 18 35 20.0 +0.4**
baz=72,SNR=8.3
M20A Sweetwater, Wa 72.48 49 ⇑P **P 18 35 19.9 +0.1**
baz=72,SNR=8.8
Q16A Castle Valley 72.52 53 ⇑P **P 18 35 20.4 +0.3**
baz=72,SNR=16
U13A Pakoon Wash 72.53 56 ⇑P **P 18 35 20.7 +0.5**
baz=72,SNR=48
GMRC Granite Mounta 72.56 59 ⇑P **P 18 35 20.5 +0.1**
baz=72,SNR=12
P18A Preston Nutter 72.58 52 ⇓P **P 18 35 21.0 +0.6**
baz=72,SNR=11
ERZM Erzurum 72.60 309 *i* P **P 18 35 22.5 +1.9**
L21A Rawlins 72.60 48 ⇑P **P 18 35 20.4 -0.1**
baz=72,SNR=20
T14A Hurricane 72.63 55 ⇑P **P 18 35 21.1 +0.3**
baz=72,SNR=14
S15A Panguitch 72.65 54 ⇓P **P 18 35 21.6 +0.7**
baz=72,SNR=7.5
LDFC Landfair 72.71 58 *e*P **P 18 35 21.5 +0.2**
comp=Z,78nm,1.1s,mb5.5
W12A Cal Nev Ari 72.71 58 ⇑P **P 18 35 21.0 -0.3**
baz=72
R16A Teasdale 72.77 53 ⇓P **P 18 35 22.4 +0.8**
baz=72,SNR=18
O19A Miners Draw (B 72.77 51 ⇑P **P 18 35 21.2 -0.3**
baz=72,SNR=11

SRU	**San Rafael**	**72.77**	**52**	⇑P		**P**	**18 35 21.8**	**+0.2**
	baz=72,SNR=23							
SRU	**San Rafael**	**72.77**	**52**	*e*P		**P**	**18 35 21.4**	**-0.2**
	comp=Z,35nm,1.1s,mb5.1							
SRU				*e*PcP	PcP		18 35 38.7	+0.3
SRU				*e*pP	pP		18 35 42.1	-1.9
PFO	**Pinyon Flat Ob**	**72.83**	**60**	⇓P		**P**	**18 35 21.7**	**-0.3**
	baz=73,SNR=6.5							
PFO	**Pinyon Flat Ob**	**72.83**	**60**	*e*P		**P**	**18 35 21.9**	**-0.1**
	comp=Z,16nm,1.1s,mb4.8							
M21A	**Separation Pea**	**72.85**	**49**	⇓P		**P**	**18 35 21.7**	**-0.3**
	baz=73,SNR=15							
BELC	**Belle Mtn.**	**72.86**	**59**	⇓P		**P**	**18 35 21.6**	**-0.6**
	baz=73,SNR=6.5							
RWWY	**Rawlins**	**72.88**	**49**	*e*P		**P**	**18 35 21.9**	**-0.3**
	comp=Z,28nm,1.0s,mb5.0							
RWWY				*e*pP	pP		18 35 44.1	-0.6
RSSD	**Black Hills**	**72.88**	**45**	*e*P		**P**	**18 35 21.6**	**-0.5**
	comp=Z,11nm,0.8s,mb4.7							
RSSD				*e*pP	pP		18 35 42.6	-2.1
N20A	**Spence Gulch,**	**72.88**	**50**	⇑P		**P**	**18 35 22.7**	**+0.5**
	baz=73,SNR=34							
V13A	**Grand Canyon W**	**72.89**	**57**	⇓P		**P**	**18 35 22.6**	**+0.3**
	baz=73,SNR=25							
U14A	**Mt Trumbull**	**73.00**	**56**	⇑P		**P**	**18 35 23.5**	**+0.6**
	baz=73,SNR=34							
SIM	**Simferopol'**	**73.01**	**316**	*c*e*P		**P**	**18 35 23.7**	**+0.8**
SIM				*e**PP	pP		18 35 46.0	+0.6
SIM				*e*S	S		18 44 42.0	-0.8
SIM				pmax	pmax			
	comp=Z,3.0nm,0.3s,mb4.6							
SIM				MLR	MLR			
	comp=Z,90nm,16.0s							
T15A	**Red Dirt Ranch**	**73.08**	**55**	⇑P		**P**	**18 35 23.7**	**+0.3**
	baz=73,SNR=6.5							
HOQ	**Hoqain**	**73.08**	**287**	P		**P**	**18 35 24.9**	**+1.2**
	SNR=6.5							
HOQ	**Hoqain**	**73.08**	**287**	P		**P**	**18 35 24.9**	**+1.2**
	SNR=6.5							
HOQ	**Hoqain**	**73.08**	**287**	P		**P**	**18 35 24.9**	**+1.2**
	SNR=6.5							
HOQ				P			18 35 24.9	
	SNR=6.5							
HOQ	**Hoqain**	**73.08**	**287**	P		**P**	**18 35 24.9**	**+1.2**
	SNR=6.5							
R17A	**Hanksville Air**	**73.12**	**53**	⇑P		**P**	**18 35 23.6**	**0.0**
	baz=73,SNR=13							
NEE2	**Needles Airpor**	**73.21**	**58**	⇑P		**P**	**18 35 23.9**	**-0.4**
	baz=73							
LRW	**Lerwick**	**73.25**	**343**	⇑*e*P		**P**	**18 35 22.9**	**-1.1**
LRW				AMb	AMB		18 35 26.4	
	comp=Z,44nm,1.0s,mb5.3							
BSD	**Bornholm Skovb**	**73.28**	**333**	⇑*i*P		**P**	**18 35 23.3**	**-1.0**
BSD				*i*	pP		18 35 47.7	+0.9
BSD				pmax	pmax			
	comp=Z,32nm,0.9s,mb5.2							
BSD	**Bornholm Skovb**	**73.28**	**333**	⇑*i*P		**P**	**18 35 23.3**	**-1.0**
	comp=Z,32nm,0.9s,mb5.2							
BSD				*i*	pP		18 35 47.7	+0.9
IRM	**Iron Mountain**	**73.29**	**59**	⇓P		**P**	**18 35 24.8**	**+0.1**
	baz=73,SNR=17							
P19A	**Cripple Cowboy**	**73.30**	**51**	⇓P		**P**	**18 35 24.5**	**-0.2**
	baz=73,SNR=20							
BAR	**Barrett**	**73.30**	**61**	*e*P		**P**	**18 35 24.4**	**-0.4**
	comp=Z,4.8nm,0.7s,mb4.4							
BAR				*e*pP	pP		18 35 44.7	-2.7
MONP	**Monument Peak**	**73.32**	**60**	⇑P		**P**	**18 35 24.5**	**-0.5**
	baz=73							
N21A	**Black Mountain**	**73.35**	**49**	⇑P		**P**	**18 35 24.9**	**-0.1**
	baz=73,SNR=6.3							
O20A	**White River Ci**	**73.37**	**50**	⇑P		**P**	**18 35 24.8**	**-0.3**
	baz=73,SNR=8.4							
BC3	**Big Chuckw Mtn**	**73.43**	**59**	⇓P		**P**	**18 35 25.2**	**-0.4**
	baz=73,SNR=12							
W13A	**Hualapai Mount**	**73.45**	**57**	⇑P		**P**	**18 35 25.9**	**+0.2**
	baz=73,SNR=14							
U15A	**North Rim**	**73.53**	**55**	⇓P		**P**	**18 35 26.9**	**+0.8**
	baz=73,SNR=30							
V14A	**Boquillas Ranc**	**73.57**	**56**	⇓P		**P**	**18 35 26.9**	**+0.6**
	baz=73,SNR=42							
S17A	**Black Ridge (B**	**73.60**	**54**	⇑P		**P**	**18 35 26.4**	**-0.1**
	baz=73,SNR=11							
COP	**Copenhagen**	**73.61**	**335**	⇑*i*P		**P**	**18 35 25.9**	**-0.3**
COP				*i*	pP		18 35 49.6	+0.9
COP				pmax	pmax			
	comp=Z,21nm,0.8s,mb4.9							
COP	**Copenhagen**	**73.61**	**335**	⇑*i*P		**P**	**18 35 25.9**	**-0.3**
	comp=Z,21nm,0.8s,mb4.9							
COP				*i*	pP		18 35 49.6	+0.9
R18A	**Canyonlands Na**	**73.62**	**53**	⇓P		**P**	**18 35 25.9**	**-0.7**
	baz=73,SNR=18							
T16A	**Glen Canyon Da**	**73.62**	**54**	⇓P		**P**	**18 35 25.8**	**-0.8**
	baz=73							
DVTC	**Desert V Tower**	**73.68**	**60**	⇓P		**P**	**18 35 26.6**	**-0.4**
	baz=74,SNR=5.7							
SWSC	**Sam W. Stewart**	**73.69**	**60**	⇑P		**P**	**18 35 26.5**	**-0.6**
	baz=74							
BSY	**Bisya**	**73.70**	**286**	P		**P**	**18 35 28.4**	**+1.1**
	SNR=7.0							
BSY	**Bisya**	**73.70**	**286**	P		**P**	**18 35 28.4**	**+1.1**
	SNR=7.0							
BSY	**Bisya**	**73.70**	**286**	P		**P**	**18 35 28.4**	**+1.1**
	SNR=7.0							
BSY				P			18 35 28.4	
	SNR=7.0							
BSY	**Bisya**	**73.70**	**286**	P		**P**	**18 35 28.4**	**+1.1**
	SNR=7.0							
P20A	**De Beque**	**73.72**	**51**	⇑P		**P**	**18 35 26.6**	**-0.6**
	baz=73,SNR=5.0							
ARMA	**Armidale**	**73.73**	**175**	*e*P		**P**	**18 35 28.1**	**+1.1**
ARMA	**Armidale**	**73.73**	**175**	*e*P		**P**	**18 35 28.0**	**+1.0**
	comp=Z,49nm,1.2s,mb5.1							
ARMA				*e*pP	pP		18 35 49.5	-0.2
ASUD	**Al Ashush, Dub**	**73.78**	**289**	P		**P**	**18 35 28.9**	**+1.2**
	SNR=5.9							
ASUD	**Al Ashush, Dub**	**73.78**	**289**	P		**P**	**18 35 28.9**	**+1.2**
	SNR=5.9							
AGMN	**Agassiz Refuge**	**73.79**	**38**	*e*P		**P**	**18 35 26.1**	**-1.3**
	comp=Z,19nm,1.0s,mb4.8							
AGMN				*e*pP	pP		18 35 48.3	-1.7
PDMCI	**Parker Dam,Lak**	**73.82**	**58**	⇑P		**P**	**18 35 27.5**	**-0.3**
	baz=74							
W14A	**Seligman**	**73.86**	**57**	⇓P		**P**	**18 35 28.4**	**+0.3**
	baz=74,SNR=33							
N22A	**Wattenberg Ran**	**73.90**	**49**	⇓P		**P**	**18 35 28.2**	**0.0**
	baz=74,SNR=5.9							
MUD	**Monsted U'grnd**	**73.94**	**337**	*i* P		**P**	**18 35 27.5**	**-0.6**
MUD				pmax	pmax			
	comp=Z,20nm,0.8s,mb4.9							
MUD	**Monsted U'grnd**	**73.94**	**337**	*i* P		**P**	**18 35 27.5**	**-0.6**
	comp=Z,20nm,0.8s,mb4.9							
MSL	**Mosul**	**73.94**	**305**	*e*P		**P**	**18 35 31.0**	**+2.5**
MSL				*e*S	S		18 44 51.0	-2.5
Y12C	**Blythe**	**73.95**	**59**	⇑P		**P**	**18 35 28.6**	**+0.1**
	baz=74,SNR=8.5							
GKP	**Gorka Klasztor**	**73.98**	**331**	*e*P		**P**	**18 35 28.0**	**-0.4**
GKP				*e*	pP		18 35 51.0	0.0
V15A	**Kaibab Nationa**	**74.00**	**56**	⇓P		**P**	**18 35 29.4**	**+0.5**
	baz=74,SNR=13							
T17A	**Navajo Res., N**	**74.03**	**54**	⇑P		**P**	**18 35 29.5**	**+0.6**
	baz=74,SNR=5.8							
S18A	**Hurst Farm, Bl**	**74.03**	**53**	⇓P		**P**	**18 35 28.7**	**-0.3**
	baz=74,SNR=18							
R19A	**Curley Farm, L**	**74.05**	**52**	⇑P		**P**	**18 35 28.9**	**-0.2**
	baz=74,SNR=7.7							
LVV	**L'vov**	**74.07**	**325**	*e*P		**P**	**18 35 28.7**	**-0.3**
LVV				*e*	pP		18 35 51.5	-0.1
KIS	**Kishinev**	**74.08**	**321**	*i* UNK			18 35 26.5	
KIS				XM			18 35 28.0	
	comp=Z,200nm,1.3s							
KIS	**Kishinev**	**74.08**	**321**	*α i*P		**P**	**18 35 26.5**	**-2.6**
KIS				*i*	pP		18 35 47.0	-4.7
KIS				*i*			18 35 54.9	
KIS				*i*			18 35 58.0	
KIS				pmax	pmax			
	comp=Z,180nm,1.3s,mb5.6							
Q20A	**Ridgley Place,**	**74.15**	**51**	⇓P		**P**	**18 35 29.4**	**-0.2**
	baz=74,SNR=5.7							
GLA	**Glamis**	**74.22**	**59**	⇓P		**P**	**18 35 30.3**	**+0.1**
	baz=74,SNR=6.7							
GLA	**Glamis**	**74.22**	**59**	*e*P		**P**	**18 35 30.4**	**+0.3**
	comp=Z,22nm,1.2s,mb4.8							
RGN	**Rugen**	**74.27**	**333**	*e*P		**P**	**18 35 30.2**	**+0.1**
	comp=Z,119nm,1.5s,mb5.4							
RGN	**Rugen**	**74.27**	**333**	*e*P		**P**	**18 35 30.0**	**-0.1**
	comp=Z,63nm,1.3s,mb5.2							
RGN				*e*pP	pP		18 35 52.5	-0.1
W15A	**Williams**	**74.38**	**56**	⇓P		**P**	**18 35 31.6**	**+0.6**
	baz=74,SNR=6.0							
U17A	**Shonto**	**74.38**	**54**	⇓P		**P**	**18 35 31.2**	**+0.1**
	baz=74,SNR=6.0							
U16A	**Tuba City**	**74.41**	**55**	⇓P		**P**	**18 35 32.0**	**+0.8**
	baz=74,SNR=36							
X14A	**Yava**	**74.47**	**57**	⇑P		**P**	**18 35 32.1**	**+0.5**
	baz=74,SNR=32							
T18A	**Mexican Hat**	**74.48**	**53**	⇑P		**P**	**18 35 31.0**	**-0.6**
	baz=74,SNR=16							
S19A	**Harvey Farm, M**	**74.49**	**53**	⇓P		**P**	**18 35 31.5**	**-0.2**
	baz=74,SNR=13							
R20A	**Redvale**	**74.63**	**52**	⇑P		**P**	**18 35 32.6**	**+0.1**
	baz=74,SNR=9.2							
ERBA	**Erbaa**	**74.63**	**312**	*i* P		**P**	**18 35 33.4**	**+1.0**
Q21A	**Lamborn Mesa,**	**74.64**	**51**	⇓P		**P**	**18 35 32.6**	**+0.1**
	baz=74,SNR=8.7							
WUAZ	**Wupatki**	**74.69**	**56**	⇓P		**P**	**18 35 33.3**	**+0.4**
	baz=74,SNR=8.2							
WUAZ	**Wupatki**	**74.69**	**56**	*e*P		**P**	**18 35 33.5**	**+0.6**
	comp=Z,18nm,1.0s,mb4.8							
Y14A	**Wickenburg**	**74.76**	**58**	⇑P		**P**	**18 35 33.3**	**0.0**
	baz=74,SNR=21							
KWP	**Kalwaria Pacla**	**74.76**	**326**	*e*P		**P**	**18 35 33.6**	**+0.6**
KWP				*e*	pP		18 35 56.6	+1.0
KWP	**Kalwaria Pacla**	**74.76**	**326**	*e*P		**P**	**18 35 33.0**	**0.0**
	comp=Z,198nm,1.1s,mb5.8							
KWP				*e*pP	pP		18 35 55.0	-0.6
KWP	**Kalwaria Pacla**	**74.76**	**326**	⇑*i*P		**P**	**18 35 33.5**	**+0.5**
Z13A	**Yuma Proving G**	**74.85**	**59**	⇑P		**P**	**18 35 33.8**	**0.0**
	baz=75,SNR=22							
X15A	**Humboldt**	**74.86**	**57**	⇓P		**P**	**18 35 34.4**	**+0.6**
	baz=75,SNR=23							
W16A	**Flagstaff**	**74.88**	**56**	⇑P		**P**	**18 35 34.6**	**+0.6**
	baz=75							
V17A	**Tonalea, Kykot**	**74.97**	**55**	⇑P		**P**	**18 35 35.1**	**+0.7**
	baz=75,SNR=39							
U18A	**Rough Rock, Ch**	**74.97**	**54**	⇑P		**P**	**18 35 34.8**	**+0.3**
	baz=75,SNR=14							
R21A	**Cimarron**	**74.97**	**51**	⇑P		**P**	**18 35 35.0**	**+0.5**
	baz=75,SNR=18							
Q22A	**Crested Butte,**	**74.99**	**50**	⇓P		**P**	**18 35 34.7**	**+0.1**
	baz=75,SNR=18							
ISCO	**Idaho Springs**	**75.06**	**49**	*e*P		**P**	**18 35 35.0**	**+0.1**
	comp=Z,22nm,1.2s,mb4.8							
ISCO				*e*pP	pP		18 35 58.4	+0.8
113A	**Mohawk Valley,**	**75.07**	**59**	⇓P		**P**	**18 35 34.8**	**-0.3**
	baz=75,SNR=6.4							
STKA	**Stephens Creek**	**75.08**	**184**	*e*P		**P**	**18 35 35.1**	**+0.3**
	comp=Z,20nm,0.9s,mb4.9							
STKA	**Stephens Creek**	**75.08**	**184**	P		**P**	**18 35 35.0**	**+0.2**
	comp=Z,29nm,1.0s,mb5.0,baz=349,slow=7.1,SNR=36							
STKA				LR	LR		19 07 06.6	
	comp=Z,109nm,18.7s,baz=24,slow=34							
STKA	**Stephens Creek**	**75.08**	**184**	*e*P		**P**	**18 35 35.1**	**+0.2**
	comp=Z,7.9nm,1.1s,mb4.4							
Y15A	**Casa Rosa Ranc**	**75.16**	**57**	⇑P		**P**	**18 35 36.0**	**+0.4**
	baz=75,SNR=12							
Z14A	**Wintersburg**	**75.18**	**58**	⇑P		**P**	**18 35 35.6**	**-0.1**
	baz=75,SNR=5.3							
T19A	**Beclabito**	**75.19**	**53**	⇑P		**P**	**18 35 35.7**	**0.0**
	baz=75,SNR=8.0							
MVCO	**Mesa Verde**	**75.23**	**53**	⇓P		**P**	**18 35 36.2**	**+0.2**
	baz=75,SNR=8.0							
MVCO	**Mesa Verde**	**75.23**	**53**	*e*P		**P**	**18 35 35.3**	**-0.6**
	comp=Z,28nm,1.3s,mb4.8							
BUR08	**Bucovina Ar. S**	**75.23**	**323**	*e*P		**P**	**18 35 35.6**	**-0.1**
BUR08				*e*pP	pP		18 35 57.0	-1.4
ORE	**Reay**	**75.23**	**344**	*e*P		**P**	**18 35 33.9**	**-1.6**
BURAR	**Bucovina Array**	**75.25**	**323**	P		**P**	**18 35 36.5**	**+0.6**
BURAR	**Bucovina Array**	**75.25**	**323**	⇓*i*P		**P**	**18 35 36.2**	**+0.4**
S21A	**Coal Bank Pass**	**75.33**	**52**	⇓P		**P**	**18 35 37.3**	**+0.9**
	baz=75,SNR=24							
MALT	**Malatya**	**75.35**	**309**	*e*P		**P**	**18 35 37.5**	**+0.9**
	comp=Z,11nm,0.8s,mb4.6							
MALT	**Malatya**	**75.35**	**309**	⇑*i*P		**P**	**18 35 38.1**	**+1.5**
W17A	**Winslow**	**75.38**	**55**	⇑P		**P**	**18 35 37.2**	**+0.4**
	baz=75							
X16A	**Lo Mia Camp, P**	**75.39**	**56**	⇓P		**P**	**18 35 37.4**	**+0.5**
	baz=75,SNR=22							
V18A	**Ganado**	**75.42**	**55**	⇓P		**P**	**18 35 37.3**	**+0.3**
	baz=75,SNR=11							
TLCR		**75.43**	**319**	⇓P		**P**	**18 35 37.2**	**+0.3**
TLCR		**75.43**	**319**	⇓*i*P		**P**	**18 35 37.2**	**+0.3**
U19A	**Dine' College,**	**75.45**	**54**	⇑P		**P**	**18 35 37.4**	**+0.2**
	baz=75,SNR=15							
OJC	**Ojcow**	**75.47**	**328**	*e*P		**P**	**18 35 37.1**	**+0.1**
KOLS	**Kolonicke sedl**	**75.48**	**325**	*e*P		**P**	**18 35 36.7**	**-0.5**
KOLS				pmax	pmax			
	comp=Z,27nm,1.1s,mb4.9							
KOLS	**Kolonicke sedl**	**75.48**	**325**	*e*P		**P**	**18 35 36.7**	**-0.5**
	comp=Z,26nm,1.1s,mb4.9							
KOLS	**Kolonicke sedl**	**75.48**	**325**	*e*P		**P**	**18 35 36.7**	**-0.5**
R22A	**Saguache, Gunn**	**75.52**	**51**	⇑P		**P**	**18 35 38.6**	**+1.0**
	baz=75,SNR=9.3							
STHS	**Stebnicka Huta**	**75.53**	**326**	*e*P		**P**	**18 35 38.4**	**+1.0**
STHS				pmax	pmax			
	comp=Z,36nm,0.8s,mb5.2							
STHS	**Stebnicka Huta**	**75.53**	**326**	*e*P		**P**	**18 35 38.4**	**+1.0**
	comp=Z,36nm,0.8s,mb5.2							
STHS	**Stebnicka Huta**	**75.53**	**326**	*e*P		**P**	**18 35 38.4**	**+1.0**
114A	**Black Gap (USA**	**75.63**	**59**	⇓P		**P**	**18 35 38.7**	**+0.4**
	baz=75							
FORT	**Forrest**	**75.65**	**196**	*e*P		**P**	**18 35 38.3**	**+0.2**
	comp=Z,136nm,0.7s,mb5.8							
FORT	**Forrest**	**75.65**	**196**	*e*P		**P**	**18 35 38.1**	**0.0**
	comp=Z,162nm,0.8s,mb5.8							
AKCD	**Akcadag**	**75.65**	**309**	*i* P		**P**	**18 35 38.7**	**+0.4**
UZH	**Uzhgorod**	**75.71**	**325**	⇓*i*P		**P**	**18 35 37.0**	**-1.5**
UZH				*e*			18 35 54.0	
UZH				*e*			18 38 26.5	
UZH				*e*S	S		18 45 06.0	-6.8
UZH				*e*			18 45 36.0	
UZH				*e*			18 45 46.0	
MIB	**Mutribah**	**75.72**	**297**	*e*P		**P**	**18 35 38.3**	**-0.6**
MIB				AMb	AMB		18 35 40.8	
	comp=Z,37nm,0.9s,mb5.1							
CTKT	**Corum**	**75.73**	**313**	*i* P		**P**	**18 35 39.2**	**+0.5**
Y16A	**Circle Bar Ran**	**75.73**	**57**	⇓P		**P**	**18 35 39.6**	**+0.7**
	baz=76,SNR=14							
BSEG	**Bad Segeberg**	**75.74**	**335**	*e*P		**P**	**18 35 38.5**	**0.0**
	comp=Z,49nm,0.9s,mb5.2							
BSEG	**Bad Segeberg**	**75.74**	**335**	*e*P		**P**	**18 35 38.5**	**0.0**
BSEG				pmax	pmax			
	comp=Z,49nm,0.9s,mb5.2							
BALT	**Daday**	**75.82**	**314**	*i* P		**P**	**18 35 39.7**	**+0.5**
X17A	**Forest Lakes**	**75.83**	**56**	⇑P		**P**	**18 35 40.4**	**+1.0**
	baz=76,SNR=8.5							
RUE	**Ruedersdorf**	**75.84**	**332**	*e*P		**P**	**18 35 39.0**	**-0.1**
	comp=Z,74nm,1.4s,mb5.2							
RUE				*e*pP	pP		18 36 02.5	+0.7
VRI	**Vrincioaia**	**75.89**	**321**	P		**P**	**18 35 39.9**	**+0.4**
VRI	**Vrincioaia**	**75.89**	**321**	⇓*i*P		**P**	**18 35 39.8**	**+0.2**
MVH1	**Achvaich**	**75.90**	**344**	⇑*e*P		**P**	**18 35 38.5**	**-0.8**
NIE	**Niedzica**	**75.90**	**327**	*e*P		**P**	**18 35 40.2**	**+0.7**
NIE				*e*	pP		18 36 03.6	+1.4
V19A	**Window Rock**	**75.94**	**54**	⇓P		**P**	**18 35 40.5**	**+0.5**
	baz=76							
PLOR	**Plostina**	**75.94**	**321**	⇑P		**P**	**18 35 40.7**	**+0.9**
PLOR	**Plostina**	**75.94**	**321**	⇑*i*P		**P**	**18 35 40.7**	**+0.9**
W18A	**Petrified Fore**	**75.94**	**55**	⇑P		**P**	**18 35 40.4**	**+0.4**
	baz=76							
BMR	**Baia Mare**	**75.95**	**324**	P		**P**	**18 35 40.8**	**+1.0**
EYMN	**Ely**	**75.96**	**36**	*e*P		**P**	**18 35 38.5**	**-1.4**
	comp=Z,16nm,0.8s,mb4.8							
EYMN				*e*pP	pP		18 36 00.8	-1.8
MCD	**Coleburn Disti**	**76.02**	**343**	⇑*e*P		**P**	**18 35 39.3**	**-0.8**
QRN	**Al-Qurain**	**76.06**	**296**	*e*P		**P**	**18 35 39.6**	**-1.1**
QRN				AMb	AMB		18 35 42.9	
	comp=Z,64nm,1.1s,mb5.3							
115A	**Sonoran Desert**	**76.07**	**58**	⇑P		**P**	**18 35 41.0**	**+0.2**
	baz=76,SNR=6.6							
Z16A	**Peralta Trail,**	**76.13**	**57**	⇑P		**P**	**18 35 41.2**	**+0.1**
	baz=76,SNR=7.2							
TIRR	**Tirgusor**	**76.16**	**319**	*e*P		**P**	**18 35 40.3**	**-0.8**
	comp=Z,42nm,1.4s,mb5.0							
TIRR				*e*pP	pP		18 36 03.9	+0.1
TIRR	**Tirgusor**	**76.16**	**319**	⇑*i*P		**P**	**18 35 41.2**	**+0.1**
RDF	**Al-Radifah**	**76.17**	**297**	*e*P		**P**	**18 35 40.3**	**-1.2**
RDF				AMb	AMB		18 35 45.8	
	comp=Z,77nm,1.5s,mb5.2							
RAC	**Raciborz**	**76.20**	**328**	*e*P		**P**	**18 35 41.6**	**+0.4**
MME1	**Meikle Cairn**	**76.21**	**343**	⇑*e*P		**P**	**18 35 40.2**	**-1.0**
214A	**Organ Pipe Nat**	**76.22**	**59**	⇑P		**P**	**18 35 41.5**	**-0.2**
	baz=76,SNR=6.0							
HARR	**Harsova**	**76.22**	**319**	⇑P		**P**	**18 35 41.7**	**+0.3**
HARR	**Harsova**	**76.22**	**319**	⇑*i*P		**P**	**18 35 41.7**	**+0.3**
X18A	**Snowflake**	**76.22**	**55**	⇑P		**P**	**18 35 42.0**	**+0.4**
	baz=76							
V20A	**Brimhall**	**76.22**	**54**	⇑P		**P**	**18 35 41.6**	**0.0**
	baz=76							
Y17A	**Roosevelt**	**76.25**	**57**	⇓P		**P**	**18 35 42.2**	**+0.4**
	baz=76,SNR=11							
HLG	**Helgoland**	**76.27**	**336**	*e*P		**P**	**18 35 41.4**	**-0.1**
	comp=Z,63nm,1.1s,mb5.3							
T22A	**Edith**	**76.28**	**52**	⇑P		**P**	**18 35 42.1**	**+0.2**
	baz=76							
KSP	**Ksiaz**	**76.29**	**330**	*e*P		**P**	**18 35 42.0**	**+0.3**
KSP				*e*	pP		18 36 05.1	+0.7
KSP	**Ksiaz**	**76.29**	**330**	*e*P		**P**	**18 35 41.9**	**+0.2**
KSP				*e**PP	pP		18 36 04.9	+0.5
MDO	**Dochfour**	**76.38**	**344**	⇑*e*P		**P**	**18 35 41.4**	**-0.7**
116A	**Eloy**	**76.49**	**58**	⇑P		**P**	**18 35 43.4**	**+0.2**
	baz=76,SNR=7.1							
GZT	**Gaziantep**	**76.51**	**309**	*i* P		**P**	**18 35 44.6**	**+1.4**
KAC	**Achnashellach**	**76.51**	**344**	⇑*e*P		**P**	**18 35 42.2**	**-0.6**
MLR	**Muntele Rosu**	**76.53**	**321**	P		**P**	**18 35 44.2**	**+1.0**
MLR	**Muntele Rosu**	**76.53**	**321**	⇓*i*P		**P**	**18 35 43.7**	**+0.5**
SDCO	**Great Sand Dun**	**76.57**	**51**	*e*P		**P**	**18 35 43.7**	**+0.2**
	comp=Z,14nm,1.2s,mb4.6							
SDCO				*e*pP	pP		18 36 05.1	-1.1
KECS	**Kecovo**	**76.57**	**326**	*e*P		**P**	**18 35 43.3**	**0.0**
KECS				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.4							
KECS	**Kecovo**	**76.57**	**326**	*e*P		**P**	**18 35 43.3**	**0.0**
	comp=Z,9.6nm,1.2s,mb4.4							
KECS				*e*PP	pP		18 36 06.5	+0.4
KECS	**Kecovo**	**76.57**	**326**	*e*P		**P**	**18 35 43.3**	**0.0**
KECS				*e*pP	pP		18 36 06.5	+0.4
CDAG	**Cicekdag**	**76.67**	**312**	*i* P		**P**	**18 35 43.5**	**-0.5**
W20A	**Ramah**	**76.67**	**54**	⇑P		**P**	**18 35 44.1**	**0.0**
	baz=76							
X19A	**St. Johns**	**76.68**	**55**	⇑P		**P**	**18 35 44.8**	**+0.6**
	baz=76,SNR=24							
Y18A	**Canyon Day Jun**	**76.68**	**56**	⇑P		**P**	**18 35 44.9**	**+0.7**
	baz=76,SNR=20							
MORC	**Moravsky Berou**	**76.69**	**328**	P		**P**	**18 35 44.3**	**+0.3**
MORC	**Moravsky Berou**	**76.69**	**328**	*e*P		**P**	**18 35 44.0**	**0.0**
	comp=Z,38nm,0.9s,mb5.1							
MORC				*e*pP	pP		18 36 07.4	+0.6
MORC	**Moravsky Berou**	**76.69**	**328**	⇓*i*P		**P**	**18 35 44.7**	**+0.7**
V21A	**Milan**	**76.70**	**53**	⇓P		**P**	**18 35 44.6**	**+0.3**
	baz=76,SNR=7.1							
KPL	**Plockton**	**76.73**	**345**	⇑*e*P		**P**	**18 35 43.4**	**-0.7**
KPL				AMb	AMB		18 35 44.9	
	comp=Z,43nm,1.0s,mb5.1							
Z17A	**San Carlos Hig**	**76.75**	**57**	⇑P		**P**	**18 35 45.0**	**+0.4**
	baz=76							
KSB	**Sheil Bridge**	**76.81**	**344**	⇑*e*P		**P**	**18 35 44.0**	**-0.5**
PSN	**Preselentsi**	**76.85**	**319**	*e*P		**P**	**18 35 45.3**	**+0.3**
ECSD	**EROS Data Cent**	**76.86**	**41**	*e*P		**P**	**18 35 43.9**	**-1.1**
	comp=Z,37nm,1.2s,mb5.0							
ECSD				*e*pP	pP		18 36 05.6	-2.1
DRGR		**76.97**	**324**	P		**P**	**18 35 46.2**	**+0.6**
DRGR		**76.97**	**324**	⇓*i*P		**P**	**18 35 46.4**	**+0.8**
VOIR		**76.98**	**322**	P		**P**	**18 35 46.6**	**+0.9**
VOIR		**76.98**	**322**	⇑

PRU AMS AMS 19 07 00.0
comp=Z,300nm,32.6s
EAU Auchinoon 77.67 343⇑eP P 18 35 48.8 -0.5
WIT Witteveen 77.82 336⇑eP P 18 35 50.8 +0.6
comp=Z,174nm,1.5s,mb5.6
WIT Witteveen 77.82 336 *ex* **P 18 35 55.9 +5.6**
comp=Z,140nm,1.4s,mb5.5
WIT Witteveen 77.82 336⇓ipP pP 18 36 14.5 +1.4
comp=Z,213nm,1.2s
119A Ashpeak Ranch, 77.82 56 ⇑P P 18 35 51.2 +0.5
baz=78,SNR=10
TREC Trest 77.86 329 *eP* **P 18 35 50.7 +0.2**
TREC e*PP pP 18 36 13.8 +0.5
TREC MLR MLR
comp=Z,300nm,27.8s
TREC Trest 77.86 329⇑eP P 18 35 50.7 +0.2
TREC epP pP 18 36 13.8 +0.5
TREC AMS AMS 19 07 00.0
comp=Z,300nm,27.8s
218A Dragoon 77.92 57 ⇑P P 18 35 51.7 +0.5
baz=78,SNR=34
Y21A Point of Rocks 77.93 54 ⇓P P 18 35 52.2 +1.0
baz=78,SNR=12
IBBN Ibbenburen 77.93 335 *eP* **P 18 35 50.6 -0.3**
comp=Z,45nm,1.0s,mb5.2
BUD Budapest 77.96 326⇑eP P 18 35 51.5 +0.4
LAZ Ladron 77.97 54 *eP* **P 18 35 52.1 +0.7**
comp=Z,13nm,1.3s,mb4.5
ANMO Albuquerque 77.99 53 *eP* **P 18 35 52.2 +0.7**
comp=Z,30nm,1.7s,mb4.8
ANMO epP pP 18 36 14.9 +0.6
Z20A Nine Sixteen R 78.01 56 ⇓P P 18 35 52.3 +0.7
baz=78,SNR=30
TANN Tannenbergstha 78.02 332 *eP* **P 18 35 51.3 -0.1**
comp=Z,32nm,1.7s,mb4.8
GZR Gura Zlata 78.03 323 P P 18 35 51.7 +0.1
GZR Gura Zlata 78.03 323⇓iP **P 18 35 51.6 0.0**
WERD Werda 78.04 332 *eP* **P 18 35 51.4 -0.1**
comp=Z,54nm,2.0s,mb4.9
WERD epP pP 18 36 15.0 +0.7
GUNZ Gunzen 78.11 332 *eP* **P 18 35 51.8 -0.1**
comp=Z,14nm,0.9s,mb4.7
ESK Eskdalemuir 78.11 342 P P 18 35 51.8 0.0
comp=Z,212nm,0.7s,mb6.0,SNR=11
ESK Eskdalemuir 78.11 342⇑eP P 18 35 51.5 -0.3
ESK AMb AMB 18 35 52.6
comp=Z,33nm,1.0s,mb5.0
ESK Eskdalemuir 78.11 342 *eP* **P 18 35 51.3 -0.5**
comp=Z,25nm,0.8s,mb5.0
ESK epP pP 18 36 14.4 -0.2
MOX Moxa 78.11 332 *eP* **P 18 35 51.3 -0.6**
comp=Z,61nm,1.9s,mb5.0
MOX *e* pP 18 36 15.1 +0.4
MOX Moxa 78.11 332 *eP* **P 18 35 51.7 -0.2**
comp=Z,12nm,0.8s,mb4.7
MOX epP pP 18 36 15.0 +0.3
MOX Moxa 78.11 332 *eP* **P 18 35 51.3 -0.6**
MOX *e* pP 18 36 15.1 +0.4
MOX pmax pmax
comp=Z,15nm,1.9s,mb4.4
GULE Gulek 78.12 310 *iP* **P 18 35 53.0 +0.8**
WERN Wernitzgruen 78.15 332 *eP* **P 18 35 52.1 0.0**
comp=Z,11nm,0.7s,mb4.7
WERN epP pP 18 36 15.8 +0.9
SCHQ Schefferville 78.22 19 P P 18 35 52.1 -0.3
comp=Z,10nm,0.6s,mb4.7,baz=352,slow=7.1,SNR=17
SCHQ pP pP 18 36 15.2 0.0
comp=Z,12nm,0.7s,baz=358,slow=7.6,SNR=6.2
SCHQ LR LR 19 11 59.7
comp=Z,179nm,19.8s,baz=87,slow=37
SCHQ Schefferville 78.22 19 *eP* **P 18 35 51.5 -0.9**
comp=Z,27nm,1.1s,mb4.9
SCHQ epP pP 18 36 15.1 -0.1
ECK Cauldkaine Hil 78.22 342⇑eP P 18 35 51.9 -0.5
SZH Strazhica 78.24 320 *eP* **P 18 35 52.5 -0.2**
XAL Allendale 78.31 342 *eP* **P 18 35 52.1 -0.8**
BZS Buzias 78.36 324 ⇓P P 18 35 53.4 0.0
BZS Buzias 78.36 324⇓iP **P 18 35 53.4 0.0**
120A U Bar Ranch, L 78.38 56 ⇓P P 18 35 54.5 +0.8
baz=78,SNR=18
219A White Tail Can 78.38 57 ⇑P P 18 35 54.3 +0.5
baz=78,SNR=42
Y22A Socorro 78.40 54 ⇑P P 18 35 54.2 +0.4
baz=78
X23A Hourglass Bar 78.40 53 ⇑P P 18 35 54.2 +0.3
baz=78
COWI Conover 78.41 36 *eP* **P 18 35 52.0 -1.6**
comp=Z,14nm,0.6s,mb4.9
COWI epP pP 18 36 14.3 -2.1
Z21A St. Cloud Mine 78.42 55 ⇑P P 18 35 54.8 +0.9
baz=78,SNR=33
BNM Barren Site 78.45 54 *eP* **P 18 35 54.5 +0.4**
comp=Z,12nm,1.0s,mb4.6
CAN Canberra 78.48 177 *eP* **P 18 35 54.9 +1.0**
comp=Z,46nm,1.3s,mb5.0
CNB Canberra Magne 78.48 177 *eP* **P 18 35 54.6 +0.7**
UBBA Unterbreizbach 78.50 333 *eP* **P 18 35 53.8 -0.3**
comp=Z,9.0nm,0.8s,mb4.7
WTSB Winterswijk 78.52 336⇑iP **P 18 35 53.5 -0.6**
comp=Z,42nm,0.8s,mb5.3
WTSB Winterswijk 78.52 336 *ex* x 18 35 58.7
comp=Z,21nm,0.7s
WTSB Winterswijk 78.52 336⇓ipP pP 18 36 17.3 +0.4
comp=Z,55nm,1.4s
ROTZ Rotzenmuhle 78.65 331 *eP* **P 18 35 55.3 +0.4**
comp=Z,17nm,1.2s,mb4.8
KHC Kasperske Hory 78.70 330⇑iP **P 18 35 55.1 -0.1**
KHC e*PP pP 18 36 18.4 +0.4
KHC *e* 18 36 35.0
KHC MLR MLR
comp=Z,400nm,29.5s
KHC Kasperske Hory 78.70 330 *eP* **P 18 35 55.0 -0.1**
comp=Z,30nm,0.7s,mb5.2
KHC epP pP 18 36 18.5 +0.5
KHC Kasperske Hory 78.70 330⇑iP **P 18 35 55.1 -0.1**
KHC epP pP 18 36 18.4 +0.4
KHC *ex* x 18 36 35.0
KHC AMS AMS 19 07 40.0
comp=Z,400nm,29.5s
319A Douglas 78.80 57 ⇓P P 18 35 56.4 +0.3
baz=79,SNR=47
BUG Bochum--Univer 78.84 335 *eP* **P 18 35 55.5 -0.4**
comp=Z,55nm,1.5s,mb5.2
BUG epP pP 18 36 19.0 +0.3
CONA Conrad Observa 78.84 328 *iP* **P 18 35 56.7 +0.7**
SNR=15
GAL1 Galloway 78.85 343⇑eP P 18 35 54.6 -1.3
GAL1 AMb AMB 18 35 56.0
comp=Z,41nm,1.0s,mb5.2
X24A Lazy VL Ranch, 78.85 53 ⇑P P 18 35 56.8 +0.5
baz=79
Z22A Elephant Butte 78.88 55 ⇓P P 18 35 56.8 +0.3
baz=79,SNR=14
220A Playas Peak, P 78.89 57 ⇓P P 18 35 57.1 +0.6
baz=79,SNR=25
GEC2 GERESS Array S 78.89 330 *eP* **P 18 35 56.1 -0.1**
comp=Z,11nm,1.1s,mb4.6
GEC2 epP pP 18 36 19.6 +0.5
GEC2 GERESS Array S 78.89 330 *eP* **P 18 35 56.1 -0.1**
GEC2 e*PP pP 18 36 19.6 +0.5
GEC2 pmax pmax
comp=Z,11nm,1.1s,mb4.6
GEC2 GERESS Array S 78.89 330 *eP* **P 18 35 55.7 -0.6**
comp=Z,2µm,0.7s
GEC2 epP pP 18 36 19.2 +0.2
GERES GERESS Array B 78.89 330 P P 18 35 55.7 -0.5
GERES *PP pP 18 36 19.2 +0.1
GERES pmax pmax
comp=Z,3.0nm,0.5s
GERES MLR MLR
comp=Z,194nm,18.8s
GERES GERESS Array B 78.89 330 P P 18 35 55.7 -0.6
comp=Z,2.7nm,0.5s,mb4.3,baz=35,slow=5.7,SNR=29
GERES pP pP 18 36 19.2 +0.1
comp=Z,7.5nm,0.7s,baz=29,slow=5.7,SNR=9.4
GERES LR LR 19 13 49.9
comp=Z,194nm,18.8s,baz=196,slow=38
121A Cookes Peak, D 78.90 56 ⇓P P 18 35 57.2 +0.7
baz=79,SNR=17
WET Wettzell 78.94 331 *eP* **P 18 35 56.8 +0.3**
comp=Z,40nm,1.4s,mb5.1
WET epP pP 18 36 20.0 +0.7
WET Wettzell 78.94 331 *eP* **P 18 35 56.8 +0.3**
WET e*PP pP 18 36 20.0 +0.7
WET pmax pmax
comp=Z,40nm,1.4s,mb5.1

Y23A Lovelace Mesa, 78.94 54 ⇑P P 18 35 57.2 +0.4
baz=79,SNR=23
W25A X Bar L Ranch, 78.95 52 ⇓P P 18 35 57.1 +0.3
baz=79,SNR=16
GRA1 Grafenberg Arr 79.06 332 *eP* **P 18 35 57.4 +0.3**
comp=Z,33nm,0.8s,mb5.2
GRA1 epP pP 18 36 20.8 +0.9
GRF Grafenberg Arr 79.06 332 *eP* **P 18 35 57.4 +0.3**
comp=Z,33nm,0.8s,mb5.2
GRF epP pP 18 36 20.8 +0.9
GRF Grafenberg Arr 79.06 332 *eP* **P 18 35 57.4 +0.3**
GRF e*PP pP 18 36 20.8 +0.9
GRF pmax pmax
comp=Z,33nm,0.8s,mb5.2
PKSM Moragy 79.14 326 P P 18 35 57.7 +0.1
PKSM Moragy 79.14 326⇑iP **P 18 35 56.9 -0.7**
122A Conniff Cattle 79.25 55 ⇑P P 18 35 59.2 +0.7
baz=79,SNR=5.7
221A Mesquite Ranch 79.27 56 ⇑P P 18 35 58.9 +0.3
baz=79
320A Kipp Ranch, An 79.29 57 ⇓P P 18 35 59.1 +0.4
baz=79,SNR=12
Y24A Capitan 79.31 53 ⇓P P 18 35 59.0 +0.2
baz=79,SNR=11
DIM Dimitrovgrad 79.36 319 *eP* **P 18 35 59.6 +0.7**
LHO Holmfirth 79.44 341⇑eP P 18 35 58.4 -0.7
MOA Molln 79.51 329 *iP* **P 18 36 00.1 +0.4**
SNR=6.8
TNS Taunus Mts 79.52 334 *eP* **P 18 35 59.5 -0.1**
comp=Z,19nm,0.8s,mb5.0
TNS epP pP 18 36 23.2 +0.7
TNS Taunus Mts 79.52 334 *eP* **P 18 35 59.5 -0.1**
TNS e*PP pP 18 36 23.2 +0.7
TNS pmax pmax
comp=Z,19nm,0.8s,mb5.0
TNS Taunus Mts 79.52 334 *eP* **P 18 35 59.5 -0.1**
comp=Z,19nm,0.8s,mb5.0
TNS epP pP 18 36 23.2 +0.7
ARSA Arzberg 79.53 328 *iP* **P 18 36 00.4 +0.6**
SNR=8.9
222A Williams Famil 79.61 56 ⇓P P 18 36 00.5 0.0
baz=79
PGB Panagyurishte 79.61 320 *eP* **P 18 36 00.8 +0.5**
GDZ Gediz 79.64 315 *iP* **P 18 36 00.7 +0.2**
Y25A Mesa, Roswell 79.74 53 ⇑P P 18 36 00.9 -0.3
baz=80
X26A CR and CF Fran 79.80 52 ⇓P P 18 36 01.4 0.0
baz=80
HGN Heimansgroeve 79.84 335⇑iP **P 18 36 00.8 -0.6**
comp=Z,29nm,1.9s,mb4.8
HGN Heimansgroeve 79.84 335 *ex* x 18 36 05.9
comp=Z,20nm,1.4s
HGN Heimansgroeve 79.84 335⇓ipP pP 18 36 24.5 +0.3
comp=Z,38nm,1.5s
SCIA State Center 79.87 41 *eP* **P 18 35 59.6 -2.1**
comp=Z,138nm,1.3s,mb5.6
SCIA epP pP 18 36 23.0 -1.5
BEBN Eben Emael 79.89 336 P P 18 36 01.4 -0.2
TOD Tromm 79.94 333 *eP* **P 18 36 01.6 -0.3**
MEM Membach 79.95 335 P P 18 36 01.3 -0.6
comp=Z,20nm,1.2s,mb4.8
MEM AP pP 18 36 25.3 +0.4
VTS Vitosha 80.03 321 P P 18 36 03.0 +0.5
VTS Vitosha 80.03 321 P P 18 36 03.1 +0.6
VTS Vitosha 80.03 321 *eP* **P 18 36 02.7 +0.2**
CWF Charnwood Fore 80.05 340⇑eP P 18 36 01.5 -0.9
CWF AMb AMB 18 36 03.3
comp=Z,19nm,1.2s,mb4.8
RDO Rodhopi 80.05 318 P P 18 36 03.0 +0.3
223A Chaparral, Ant 80.08 55 ⇓P P 18 36 02.9 -0.1
baz=80
ABH Alteburg 80.11 334 *eP* **P 18 36 02.0 -0.8**
RJOB Jochberg 80.15 330 *eP* **P 18 36 03.5 +0.4**
comp=Z,18nm,1.0s,mb4.9
124A Stringfield Ra 80.17 54 ⇑P P 18 36 03.6 +0.2
baz=80,SNR=7.1
Z25A Roswell 80.19 53 ⇑P P 18 36 03.6 +0.1
baz=80,SNR=9.5
SOKA Soboth 80.20 328⇑iP **P 18 36 03.2 -0.2**
comp=Z,29nm,1.0s,mb5.1
PERS Pernice 80.20 328 *iP* **P 18 36 03.5 +0.1**
PERS *i* pP 18 36 27.2 +1.0
Y26A Elida 80.24 52 ⇑P P 18 36 03.6 -0.3
baz=80
WLF1 Llynfaes 80.25 342 *eP* **P 18 36 02.7 -0.8**
WLF1 AMb AMB 18 36 04.3
comp=Z,72nm,1.6s,mb5.2
DIVS Divibare 80.27 324 P P 18 36 03.5 -0.3
UCC Uccle 80.28 336 P P 18 36 03.4 -0.3
comp=Z,22nm,1.7s,mb4.7
UCC AP pP 18 36 27.1 +0.6
BCLA Clavier 80.33 336 P P 18 36 03.6 -0.4
comp=Z,19nm,1.4s,mb4.7
BCLA AP pP 18 36 27.2 +0.3
FUR Furstenfeldbru 80.33 331 *eP* **P 18 36 04.2 +0.1**
comp=Z,54nm,1.3s,mb5.2
FUR epP pP 18 36 27.9 +1.0
FUR Furstenfeldbru 80.33 331 *eP* **P 18 36 04.2 +0.1**
FUR e*PP pP 18 36 27.9 +1.0
FUR pmax pmax
comp=Z,54nm,1.3s,mb5.2
NWAO Narrogin (SRO) 80.38 204 P P 18 36 04.5 +0.2
NWAO pmax pmax
comp=Z,48nm,0.9s
NWAO Narrogin (SRO) 80.38 204 P P 18 36 04.5 +0.2
comp=Z,48nm,0.9s,mb5.3,baz=30,slow=6.3,SNR=14
NWAO Narrogin (SRO) 80.38 204 *eP* **P 18 36 04.3 0.0**
comp=Z,52nm,1.0s,mb5.3
KBA Koelnbreinsper 80.50 329 *iP* **P 18 36 05.6 +0.6**
SNR=19
OBKA Obir 80.52 328 *iP* **P 18 36 05.2 +0.1**
SNR=11
STU Stuttgart 80.53 333 *eP* **P 18 36 04.9 -0.2**
comp=Z,17nm,0.9s,mb4.9
STU Stuttgart 80.53 333 *eP* **P 18 36 04.6 -0.5**
comp=Z,19nm,0.8s,mb5.0
STU epP pP 18 36 27.4 -0.6
SNF Seneffe 80.56 336 P P 18 36 04.2 -1.0
comp=Z,18nm,1.6s,mb4.7
SNF AP pP 18 36 28.4 +0.4
MMB Musomiste 80.57 320 *eP* **P 18 36 05.4 0.0**
224A Corundas Mount 80.57 55 ⇑P P 18 36 05.7 +0.1
baz=80,SNR=17
Z26A Caprock 80.62 53 ⇑P P 18 36 05.9 0.0
baz=80,SNR=23
HLM1 Long Mynd 80.62 341⇑eP P 18 36 04.4 -1.2
Y27A Causey 80.65 52 ⇓P P 18 36 05.7 -0.3
baz=80,SNR=7.7
KKB Krupnik 80.65 320 *eP* **P 18 36 06.0 +0.1**
125A Gardner Draw, 80.67 54 ⇓P P 18 36 06.1 0.0
baz=80,SNR=18
TOO Toolangi 80.67 180 *eP* **P 18 36 06.5 +0.8**
DSB Dublin 80.72 343 *eP* **P 18 36 04.8 -1.2**
comp=Z,28nm,1.2s,mb5.0
DSB epP pP 18 36 28.0 -0.9
WLF Walferdange 80.74 335 P P 18 36 07.3 +1.1
comp=Z,15nm,1.7s,mb4.5
WLF AP pP 18 36 29.5 +0.5
WLF Walferdange 80.74 335 *eP* **P 18 36 06.5 +0.3**
comp=Z,22nm,1.4s,mb4.8
GIVF Givet 80.76 336 *eP* **P 18 36 05.6 -0.7**
GIVF epP pP 18 36 28.3 -0.9
MYKA Terra Mystica 80.77 329⇓iP **P 18 36 05.7 -0.7**
comp=Z,13nm,0.8s,mb4.8
LANF Langenberg 80.81 333 *eP* **P 18 36 06.1 -0.5**
MSTX Muleshoe 80.81 52 ⇓P P 18 36 06.8 -0.1
baz=80
DOU Dourbes 80.83 336 P P 18 36 06.2 -0.5
comp=Z,12nm,1.8s,mb4.4
DOU AP pP 18 36 28.8 -0.8
CPRX Cap Rock 80.86 53 *eP* **P 18 36 07.0 -0.1**
comp=Z,8.3nm,1.1s,mb4.5
WATA Walderalm 80.93 330 *iP* **P 18 36 07.6 +0.4**
SNR=9.9
225A Deer Hill, Car 80.96 54 ⇓P P 18 36 07.7 0.0
baz=81,SNR=9.3
WTTA Wattenberg 80.97 330 *iP* **P 18 36 07.8 +0.3**
SNR=10
BAIF Baives 80.98 336 *eP* **P 18 36 06.9 -0.6**
comp=Z,16nm,0.9s,mb4.5
BAIF Baives 80.98 336 *eP* **P 18 36 06.9 -0.6**
comp=Z,7.8nm,0.9s,mb4.5
SRS Serrai 81.00 320 P P 18 36 07.5 -0.2
Z27A Tatum 81.03 52 ⇑P P 18 36 07.7 -0.4
baz=81,SNR=40
324A Moseley Ranch, 81.05 55 ⇑P P 18 36 07.9 -0.3

baz=81,SNR=9.5
BOJS Bojanci 81.08 327 *iP* **P 18 36 07.7 -0.4**
BOJS *i* pP 18 36 31.1 +0.1
MOTA Moosalm 81.09 331 *iP* **P 18 36 08.2 +0.1**
SNR=32
RETA Reutte 81.09 331 *iP* **P 18 36 08.0 -0.1**
SNR=8.7
HTR Trewern Hill 81.12 341⇑eP P 18 36 07.8 -0.4
PLE Pljevlja 81.14 323⇑iP **P 18 36 09.3 +0.8**
PLE Pljevlja 81.14 323⇑iP **P 18 36 09.4 +0.9**
GDL2 Guadalupe Moun 81.17 54 *eP* **P 18 36 08.5 -0.3**
comp=Z,22nm,1.1s,mb4.9
GDL2 epP pP 18 36 31.1 -0.7
VOY Vojsko 81.17 328 *eP* **P 18 36 09.4 +0.8**
VOY *e* pP 18 36 31.3 -0.2
VOY *e* 18 36 54.4
STIP Stip 81.20 321 *eP* **P 18 36 08.2 -0.6**
BFO Black Forest 81.20 333 P P 18 36 08.2 -0.5
comp=Z,76nm,1.2s,mb5.4,SNR=7.4
BFO Black Forest 81.20 333 *eP* **P 18 36 08.0 -0.7**
comp=Z,22nm,1.3s,mb4.8
BFO epP pP 18 36 31.7 +0.1
BFO Black Forest 81.20 333 *eP* **P 18 36 08.0 -0.7**
BFO e*PP pP 18 36 31.7 +0.1
BFO pmax pmax
comp=Z,22nm,1.3s,mb4.8
BFO Black Forest 81.20 333 *eP* **P 18 36 08.0 -0.6**
comp=Z,43nm,1.4s,mb5.1
BFO epP pP 18 36 31.4 -0.2
CEY Cerknica 81.21 328 *iP* **P 18 36 07.8 -1.0**
CEY *i* pP 18 36 31.5 -0.2
JAVS Javornik 81.22 328 *iP* **P 18 36 07.8 -1.1**
JAVS *i* pP 18 36 31.4 -0.3
SPAK Spaichingen-Ko 81.25 332 *eP* **P 18 36 08.5 -0.4**
IVA Berane 81.29 323⇑iP **P 18 36 09.8 +0.5**
IVA Berane 81.29 323⇑iP **P 18 36 09.9 +0.6**
SWN1 Swindon 81.29 340 *eP* **P 18 36 08.5 -0.6**
SWN1 AMb AMB 18 36 09.8
comp=Z,105nm,1.0s,mb5.6
GLMI Grayling 81.31 34 *eP* **P 18 36 08.4 -0.9**
comp=Z,41nm,0.7s,mb5.4
GLMI epP pP 18 36 31.1 -1.1
VAY Valandovo 81.32 320 *eP* **P 18 36 09.3 -0.1**
VAY Valandovo 81.32 320 P P 18 36 09.1 -0.3
SKO Skopje 81.32 321 *eP* **P 18 36 10.5 +1.1**
WOL Wolverton 81.33 340⇑eP P 18 36 09.2 -0.1
WOL AMb AMB 18 36 09.5
comp=Z,47nm,0.8s,mb5.4
325A Bean Ranch, Si 81.41 55 ⇓P P 18 36 10.2 +0.1
baz=81,SNR=9.8
CLNB Carlsbad 81.41 53 *eP* **P 18 36 08.1 -2.0**
comp=Z,3.2nm,0.8s,mb4.2
127A Arkansas Junct 81.41 53 ⇓P P 18 36 09.0 -1.1
baz=81
226A Malaga, Loving 81.42 54 ⇑P P 18 36 10.0 -0.1
baz=81,SNR=18
HGH Gray Hill 81.42 341⇑eP P 18 36 09.3 -0.5
UPM Unac-Piva 81.46 324⇑iP **P 18 36 09.6 -0.5**
CDF Champ du Feu 81.48 333 *eP* **P 18 36 09.8 -0.3**
comp=Z,35nm,0.8s,mb4.9
CDF epP pP 18 36 32.5 -0.6
CDF Champ du Feu 81.48 333 *eP* **P 18 36 09.8 -0.3**
comp=Z,18nm,0.8s,mb4.9
CDF epP pP 18 36 32.5 -0.6
PVY Plav 81.48 323⇑iP **P 18 36 10.3 0.0**
PVY Plav 81.48 323⇑iP **P 18 36 10.4 +0.1**
FETA Feichten 81.50 331⇑iP **P 18 36 10.3 0.0**
comp=Z,14nm,1.0s,mb4.7
DAVA Damuels 81.58 331 *iP* **P 18 36 10.7 0.0**
SNR=5.8
ECH Echery 81.69 333 *eP* **P 18 36 10.5 -0.7**
ECH Echery 81.69 333 *eP* **P 18 36 10.3 -1.0**
comp=Z,21nm,0.9s,mb5.0
ECH epP pP 18 36 33.6 -0.6
FELD Feldberg im Sc 81.71 333 *eP* **P 18 36 10.9 -0.4**
NKY Niksic 81.73 323⇑iP **P 18 36 09.5 -2.1**
NKY Niksic 81.73 323⇑iP **P 18 36 09.6 -2.0**
425A Indio Mountain 81.82 55 ⇓P P 18 36 12.2 0.0
baz=82,SNR=28
BRY Bratogost 81.86 324⇑iP **P 18 36 11.6 -0.6**
BRY Bratogost 81.86 324⇑iP **P 18 36 11.7 -0.6**
PAIG Paliouri 81.89 319 P P 18 36 11.5 -1.0
KRUS Krusevo 81.89 321 *eP* **P 18 36 12.2 -0.2**
TTG Podgorica 81.93 323⇑iP **P 18 36 11.4 -1.2**
TTG Podgorica 81.93 323⇑iP **P 18 36 11.5 -1.1**
227A Bennet, Jal 81.93 53 ⇓P P 18 36 12.4 -0.4
baz=82
MOF Molkenrain 82.02 333 *eP* **P 18 36 12.2 -0.8**
326A Caldwell Ranch 82.03 54 ⇑P P 18 36 13.2 -0.1
baz=82,SNR=16
THEF They Montfort 82.06 334 *eP* **P 18 36 12.4 -0.8**
MEZF Maizieres J'vi 82.11 335 *eP* **P 18 36 13.2 -0.2**
comp=Z,30nm,0.7s,mb4.9
MEZF epP pP 18 36 36.0 -0.4
MEZF Maizieres J'vi 82.11 335 *eP* **P 18 36 13.2 -0.2**
comp=Z,30nm,0.7s,mb5.2
MEZF epP pP 18 36 36.0 -0.4
HAU Haudompre 82.13 334 *eP* **P 18 36 12.9 -0.7**
comp=Z,14nm,0.8s,mb4.6
HAU eMLR MLR
comp=Z,128nm,21.2s
HAU Haudompre 82.13 334 *eP* **P 18 36 12.9 -0.7**
comp=Z,7.3nm,0.8s,mb4.6
HAU LR LR
comp=Z,130nm,21.3s
HINF Hinteralfeld 82.14 333 *eP* **P 18 36 12.8 -0.8**
comp=Z,13nm,0.7s,mb4.6
HINF Hinteralfeld 82.14 333 *eP* **P 18 36 12.8 -0.8**
comp=Z,6.7nm,0.7s,mb4.6
BUM Brajici-Budva 82.19 323⇑iP **P 18 36 13.6 -0.4**
BUM Brajici-Budva 82.19 323⇑iP **P 18 36 13.7 -0.3**
BBS Basel-Blauen 82.23 333 *eP* **P 18 36 13.5 -0.6**
HCY Herceg Novi 82.25 324⇑iP **P 18 36 13.9 -0.4**
HCY Herceg Novi 82.25 324⇑iP **P 18 36 13.9 -0.3**
327A Balmorhea Ranc 82.28 54 ⇓P P 18 36 14.5 -0.1
baz=82
FNA Florina 82.30 321 P P 18 36 14.3 -0.3
OHR Ohrid 82.30 321 *eP* **P 18 36 13.8 -0.8**
ULC Ulcinj 82.31 323⇑iP **P 18 36 13.4 -1.2**
ULC Ulcinj 82.31 323⇑iP **P 18 36 13.4 -1.2**
426A McDonald Obser 82.47 55 ⇓P P 18 36 15.5 -0.2
baz=82,SNR=9.2
WMOK Wichita Mounta 82.47 49 *eP* **P 18 36 14.9 -0.7**
comp=Z,22nm,1.1s,mb4.9
TIR Tirane 82.53 322 *eP* **P 18 36 16.1 +0.3**
comp=Z,32nm,0.6s,mb5.3
TIR epP pP 18 36 39.4 +0.6
LOMF Lomont 82.55 333 *eP* **P 18 36 15.0 -0.8**
328A Wristen Ranch, 82.67 53 ⇓P P 18 36 16.7 0.0
baz=82
427A Hayter Ranch, 82.71 54 ⇑P P 18 36 16.7 -0.2
baz=82,SNR=16
HDIL Hopedale 82.75 39 *eP* **P 18 36 15.5 -1.5**
HDIL epP pP 18 36 38.7 -1.2
DYA Yadsworthy 82.81 341⇑eP P 18 36 16.4 -0.6
DYA AMb AMB 18 36 23.1
comp=Z,40nm,1.3s,mb5.1
526A Mary Lane Ranc 82.87 55 ⇑P P 18 36 17.8 0.0
baz=83,SNR=30
527A Woodward Ranch 83.10 55 ⇓P P 18 36 18.8 -0.1
baz=83,SNR=9.2
626A Big Bend Ranch 83.21 55 ⇑P P 18 36 19.2 -0.3
baz=83,SNR=38
428A Kincaid Ranch, 83.22 54 ⇑P P 18 36 19.9 +0.3
baz=83,SNR=27
CABF La Chapelle 83.45 333 *eP* **P 18 36 20.1 -0.3**
comp=Z,25nm,1.0s,mb4.7
CABF La Chapelle 83.45 333 *eP* **P 18 36 20.1 -0.3**
comp=Z,13nm,1.0s,mb4.7
FLN La Foliniere 83.47 338 *eP* **P 18 36 19.9 -0.6**
comp=Z,17nm,0.6s,mb4.7
FLN epP pP 18 36 42.7 -0.8
FLN eMLR MLR
comp=Z,96nm,17.0s
FLN La Foliniere 83.47 338 *eP* **P 18 36 19.9 -0.6**
comp=Z,8.4nm,0.6s,mb4.8
FLN epP pP 18 36 42.7 -0.8
FLN LR LR
comp=Z,100nm,17.0s
KARP Karpathos 83.52 314 P P 18 36 21.6 +0.6
LDF La Druitiere 83.53 338 *eP* **P 18 36 20.2 -0.6**
comp=Z,3.6nm,0.4s,mb4.3
LDF La Druitiere 83.53 338 *eP* **P 18 36 20.2 -0.6**
comp=Z,1.8nm,0.4s,mb4.2
LOR Lormes 83.57 335 *eP* **P 18 36 20.5 -0.5**

LOR *e*pP pP 18 36 43.2 -0.9
LOR *e*MLR MLR
comp=Z,160nm,22.5s
LOR Lormes 83.57 335 *e*P **P 18 36 20.5 -0.5**
comp=Z,11nm,0.7s,mb4.8
LOR *e*pP pP 18 36 43.2 -0.9
LOR LR LR
comp=Z,160nm,22.5s
528A Cox Ranch, San 83.57 54 ⇑P **P 18 36 21.7 +0.3**
baz=83,SNR=11
TXAR Lajitas Array 83.65 55 P **P 18 36 21.7 -0.1**
TXAR *PP pP 18 36 44.6 -0.2
TXAR pmax pmax
comp=Z,27nm,0.9s
TXAR Lajitas Array 83.65 55 P **P 18 36 21.7 -0.1**
comp=Z,27nm,0.8s,mb5.1,baz=296,slow=3.9,SNR=199
TXAR pP pP 18 36 44.6 -0.2
comp=Z,6.5nm,0.6s,baz=308,slow=4.4,SNR=5.4
627A Terlingua Ranc 83.73 55 ⇓P **P 18 36 22.0 -0.2**
baz=84
SLM Saint Louis 83.84 41 *e*P **P 18 36 21.5 -1.0**
comp=Z,46nm,1.3s,mb5.2
SLM *e*pP pP 18 36 43.1 -2.5
SSF Saint Saulge 83.86 335 *e*P **P 18 36 22.0 -0.5**
comp=Z,21nm,0.8s,mb4.7
SSF Saint Saulge 83.86 335 *e*P **P 18 36 22.0 -0.5**
comp=Z,11nm,0.8s,mb4.7
GRR Gorron 83.92 338 *e*P **P 18 36 22.5 -0.3**
comp=Z,8.6nm,0.4s,mb4.6
GRR Gorron 83.92 338 *e*P **P 18 36 22.5 -0.3**
comp=Z,4.3nm,0.4s,mb4.6
628A Black Gap, Mar 84.01 55 ⇑P **P 18 36 23.4 -0.2**
baz=84
SMF Signal de Mont 84.13 335 *e*P **P 18 36 23.5 -0.4**
comp=Z,72nm,1.0s,mb5.2
SMF Signal de Mont 84.13 335 *e*P **P 18 36 23.5 -0.4**
comp=Z,36nm,1.0s,mb5.2
AVF Avril sur Loir 84.15 335 *e*P **P 18 36 23.7 -0.3**
comp=Z,63nm,1.0s,mb5.1
AVF *e*pP pP 18 36 46.4 -0.7
AVF Avril sur Loir 84.15 335 *e*P **P 18 36 23.7 -0.3**
comp=Z,32nm,1.0s,mb5.1
AVF *e*pP pP 18 36 46.4 -0.7
LPL La Plagne 84.19 332 *e*P **P 18 36 24.5 +0.3**
comp=Z,38nm,0.9s,mb4.9
LPL *e*pP pP 18 36 47.2 -0.1
LPL La Plagne 84.19 332 *e*P **P 18 36 24.5 +0.3**
comp=Z,19nm,0.9s,mb4.9
LPL *e*pP pP 18 36 47.2 -0.1
LPG La Plagne 84.20 332 *e*P **P 18 36 24.7 +0.4**
comp=Z,30nm,0.8s,mb4.9
LPG La Plagne 84.20 332 *e*P **P 18 36 24.7 +0.4**
comp=Z,15nm,0.8s,mb4.9
ZKR Zakros 84.35 314 P **P 18 36 25.1 -0.1**
AQU L'Aquila 84.45 327 *e*P **P 18 36 25.2 -0.4**
comp=Z,82nm,1.4s,mb5.4
SGMF Saint Gilles 84.49 339 *e*P **P 18 36 25.6 -0.1**
BGF Bois d'Agland 84.52 335 *e*P **P 18 36 26.1 +0.3**
comp=Z,16nm,0.8s,mb4.7
BGF Bois d'Agland 84.52 335 *e*P **P 18 36 26.1 +0.3**
comp=Z,7.8nm,0.8s,mb4.7
ROSF Rostrenen 84.59 340 *e*P **P 18 36 26.4 +0.2**
comp=Z,69nm,0.8s,mb5.3
ROSF *e*pP pP 18 36 49.1 -0.2
ROSF Rostrenen 84.59 340 *e*P **P 18 36 26.4 +0.2**
comp=Z,34nm,0.8s,mb5.3
ROSF *e*pP pP 18 36 49.1 -0.2
BNI Bardonecchia 84.62 332 *e*P **P 18 36 25.3 -1.1**
comp=Z,14nm,0.9s,mb4.9
LAST Lasithi 84.70 315 P **P 18 36 27.1 +0.1**
VLS Valsamata 84.74 320 P **P 18 36 28.0 +0.9**
VLS Valsamata 84.74 320 P **P 18 36 28.3 +1.2**
PPT Papeete 84.76 120 *e*S S 18 47 00.0 +12
comp=Z,87nm,26.2s
PPT *e*LR LR 19 02 58.9
comp=Z,844nm,32.8s,baz=316
PPT Papeete 84.76 120 LR LR 19 04 54.4
comp=Z,137nm,21.1s,baz=341,slow=29
OLIL Olney 84.76 39 *e*P **P 18 36 26.5 -0.8**
comp=Z,29nm,1.0s,mb5.2
OLIL *e*pP pP 18 36 49.0 -1.3
PLDF La Plantade 84.80 335 *e*P **P 18 36 28.3 +1.0**
BST Brest 84.82 340 *e*P **P 18 36 27.9 +0.6**
MBDF Montbardon 84.87 332 *e*P **P 18 36 27.2 -0.5**
comp=Z,17nm,0.6s,mb4.8
MBDF Montbardon 84.87 332 *e*P **P 18 36 27.2 -0.5**
comp=Z,8.4nm,0.6s,mb4.8
ITM Ithomi 84.89 318 P **P 18 36 27.9 0.0**
IDI Anoyia 84.90 315 P **P 18 36 28.0 0.0**
TCF Toulx Ste Croi 84.95 336 ⇑*i*P **P 18 36 27.9 -0.1**
comp=Z,12nm,0.8s,mb4.6
TCF *e*pP pP 18 36 50.7 -0.4
TCF Toulx Ste Croi 84.95 336 ⇑*i*P **P 18 36 27.9 -0.1**
comp=Z,6.2nm,0.8s,mb4.6
TCF *e*pP pP 18 36 50.7 -0.4
QUIF Quistinic 84.96 340 *e*P **P 18 36 27.9 -0.1**
comp=Z,33nm,0.8s,mb5.0
QUIF Quistinic 84.96 340 *e*P **P 18 36 27.9 -0.1**
comp=Z,16nm,0.8s,mb5.0
ORIF Oris-en-Rattie 85.01 333 *e*P **P 18 36 28.4 +0.1**
comp=Z,32nm,1.0s,mb4.9
ORIF *e*MLR MLR
comp=Z,199nm,22.0s
ORIF Oris-en-Rattie 85.01 333 *e*P **P 18 36 28.4 +0.1**
comp=Z,16nm,1.0s,mb4.9
SIUC Southern Illin 85.06 41 *e*P **P 18 36 27.7 -1.0**
comp=Z,29nm,0.8s,mb5.3
SIUC *e*pP pP 18 36 49.7 -2.1
JCT Junction City 85.08 52 *e*P **P 18 36 28.4 -0.6**
comp=Z,38nm,0.9s,mb5.3
JCT *e*pP pP 18 36 50.3 -1.8
SSB Saint Sauveur 85.13 334 *e*P **P 18 36 26.8 -2.1**
comp=Z,7.5nm,0.9s,mb4.6
SSB *e*pP pP 18 36 50.9 -1.2
SIVA Sivas 85.15 315 P **P 18 36 30.8 +1.5**
SIVA Sivas 85.15 315 P **P 18 36 29.4 +0.1**
VAM Vamos 85.16 316 P **P 18 36 30.2 +0.9**
PYM Petit Puy Mans 85.19 335 *e*P **P 18 36 30.2 +1.0**
KARN Karanos 85.31 316 P **P 18 36 31.4 +1.4**
MFF Saint Martin d 85.36 337 *e*P **P 18 36 30.1 +0.1**
comp=Z,39nm,1.0s,mb5.0
MFF *e*pP pP 18 36 53.0 -0.2
MFF Saint Martin d 85.36 337 *e*P **P 18 36 30.1 +0.1**
comp=Z,20nm,1.0s,mb5.0
MFF *e*pP pP 18 36 53.0 -0.2
MIAR Mount Ida 85.39 45 *e*P **P 18 36 30.2 -0.3**
comp=Z,43nm,1.0s,mb5.3
MIAR *e*pP pP 18 36 53.0 -0.6
SBF Sospel 85.40 331 *e*P **P 18 36 29.5 -0.8**
comp=Z,29nm,0.7s,mb5.0
SBF Sospel 85.40 331 *e*P **P 18 36 29.5 -0.8**
comp=Z,15nm,0.7s,mb5.0
VIVF Saint-Julien-l 85.46 333 *e*P **P 18 36 30.6 0.0**
comp=Z,18nm,0.8s,mb4.8
VIVF *e*pP pP 18 36 53.5 -0.2
VIVF Saint-Julien-l 85.46 333 *e*P **P 18 36 30.6 0.0**
comp=Z,9.3nm,0.8s,mb4.8
VIVF *e*pP pP 18 36 53.5 -0.2
MOO Moorlands 85.54 179 *e*P **P 18 36 31.9 +1.2**
TIP Timpagrande 85.67 323 *e*P **P 18 36 30.3 -1.5**
comp=Z,34nm,1.2s,mb5.2
TIP *e*pP pP 18 36 55.1 +0.2
SMRF Simiane la Rot 85.94 332 *e*P **P 18 36 33.2 +0.2**
PGF Pioggiola 85.98 329 *e*P **P 18 36 32.4 -0.8**
comp=Z,19nm,0.8s,mb4.8
PGF Pioggiola 85.98 329 *e*P **P 18 36 32.4 -0.8**
comp=Z,9.4nm,0.8s,mb4.8
WCI Wyandotte Cave 86.00 38 P **P 18 36 31.8 -1.6**
comp=Z,15nm,0.7s,mb5.0
WCI *e*pP pP 18 36 55.6 -0.9
TAU Tasmania Unive 86.01 179 *e*P **P 18 36 33.8 +0.8**
RJF Les Rejaudoux 86.05 336 *e*P **P 18 36 33.6 +0.1**
comp=Z,21nm,0.9s,mb4.8
RJF *e*pP pP 18 36 56.5 -0.1
RJF *e*MLR MLR
comp=Z,103nm,22.8s
RJF Les Rejaudoux 86.05 336 *e*P **P 18 36 33.6 +0.1**
comp=Z,11nm,0.9s,mb4.8
RJF *e*pP pP 18 36 56.5 -0.1
RJF LR LR
comp=Z,100nm,22.8s
HBAR Harrisburg 86.08 43 *e*P **P 18 36 34.0 +0.2**
GLAT Glass 86.18 42 *e*P **P 18 36 34.2 -0.1**
LMR La Mourre 86.19 331 *e*P **P 18 36 33.7 -0.5**
comp=Z,58nm,1.0s,mb5.2
LMR *e*pP pP 18 36 56.6 -0.8
LMR La Mourre 86.19 331 *e*P **P 18 36 33.7 -0.5**
comp=Z,29nm,1.0s,mb5.2
LMR *e*pP pP 18 36 56.6 -0.8
CAF Calviac 86.22 335 *e*P **P 18 36 35.0 +0.6**
comp=Z,44nm,0.9s,mb5.1
CAF Calviac 86.22 335 *e*P **P 18 36 35.0 +0.6**
comp=Z,22nm,0.9s,mb5.1
LASF Ste Croix 86.42 334 *e*P **P 18 36 34.9 -0.5**
comp=Z,27nm,1.1s,mb4.8
LASF *e*pP pP 18 36 58.6 +0.1
LFF La Frestale 86.61 336 *e*P **P 18 36 36.7 +0.4**
comp=Z,122nm,1.3s,mb5.4
LFF La Frestale 86.61 336 *e*P **P 18 36 36.7 +0.4**
comp=Z,61nm,1.3s,mb5.4
NATX Nacogdoches 86.97 48 *e*P **P 18 36 38.7 +0.4**
comp=Z,69nm,1.1s,mb5.5
WVT Waverly 86.99 41 *e*P **P 18 36 37.3 -1.0**
comp=Z,19nm,1.0s,mb5.0
WVT *e*pP pP 18 36 59.3 -2.2
SSPA Standing Stone 87.49 32 *e*P **P 18 36 39.7 -1.0**
comp=Z,19nm,1.2s,mb4.9
SSPA *e*pP pP 18 37 02.5 -1.4
OXF Oxford 87.53 43 *e*P **P 18 36 40.4 -0.6**
comp=Z,83nm,1.1s,mb5.7
MTLF Montolieu 87.61 334 *e*P **P 18 36 41.5 +0.4**
comp=Z,92nm,1.4s,mb5.3
MTLF Montolieu 87.61 334 *e*P **P 18 36 41.5 +0.4**
comp=Z,46nm,1.4s,mb5.3
PLAL Pickwick Lake 87.80 42 *e*P **P 18 36 40.5 -1.7**
comp=Z,22nm,0.4s,mb5.5
EPF Esparros 88.47 335 *e*P **P 18 36 45.6 +0.4**
EPF *e*pP pP 18 37 09.5 +1.1
TZTN Tazewell 88.62 38 *e*P **P 18 36 45.6 -0.4**
SJPF Ste Jean 88.86 336 *e*P **P 18 36 46.7 -0.3**
ETSF Etsaut 88.86 336 *e*P **P 18 36 47.3 +0.3**
CPCT Cooper Cave 89.09 39 *e*P **P 18 36 47.4 -0.9**
CPCT *e*pP pP 18 37 09.9 -1.7
TKL Tuckaleechee C 89.26 38 *e*P **P 18 36 48.5 -0.5**
TKL *e*pP pP 18 37 10.8 -1.5
RPZ Rata Peaks 89.71 162 P **P 18 36 53.8 +3.2**
comp=Z,14nm,0.8s,mb5.2,baz=95,slow=2.5,SNR=4.3
KEST Kesra 91.74 326 P **P 18 37 00.9 +0.3**
comp=Z,1.7nm,0.8s,mb4.3,baz=253,slow=3.6,SNR=4.3
KEST pP pP 18 37 23.6 -0.3
comp=Z,3.4nm,0.8s,baz=354,slow=1.0,SNR=4.0
ESDC Sonseca Array 92.82 337 P **P 18 37 05.3 -0.2**
comp=Z,1.1nm,0.5s,mb4.4,baz=16,slow=4.1,SNR=8.8
ESDC pP pP 18 37 28.1 -0.8
comp=Z,2.4nm,0.7s,baz=18,slow=4.2,SNR=5.3
ESDC LR LR 19 27 38.8
comp=Z,50nm,18.4s,baz=30,slow=41
TORD Torodi Ar. Bea 114.78 321 PKP PKiKP 18 42 31.9 -1.6
comp=Z,0.7nm,0.4s,baz=13,slow=2.1,SNR=14
TORD pPKP 18 42 56.2
comp=Z,0.7nm,0.4s,baz=17,slow=2.0,SNR=3.5
TORD PP PP 18 43 18.3 -13
comp=Z,2.5nm,1.1s,baz=25,slow=3.9,SNR=4.9
TORD PKKPbc PKKPbc 18 53 10.9 +1.8
comp=Z,1.0nm,0.7s,baz=215,slow=1.4,SNR=5.0
TORD Torodi Ar. Bea 114.78 321 PKP PKiKP 18 42 31.9 -1.6
TORD pPKP 18 42 56.2
TORD PP PP 18 43 18.3 -13
TORD PKKPbc PKKPbc 18 53 10.9 +1.8
SBA Scott Base 121.74 175 *e*PKPdf PKPdf 18 42 45.3 +0.3
DBIC Dimbokro 123.43 324 PKP PKPdf 18 42 48.4 -1.8
comp=Z,2.5nm,0.6s,baz=337,slow=5.2,SNR=4.1
DBIC pPKP pPKPdf 18 43 12.8 -1.7
comp=Z,2.6nm,0.5s,baz=327,slow=4.1,SNR=3.0
DBIC PP PP 18 44 26.8 -4.4
comp=Z,6.8nm,0.9s,baz=2.5,slow=9.2,SNR=5.7
MAW Mawson 126.77 208 PKIKP PKPdf 18 42 54.3 -0.5
MAW pmax pmax
comp=Z,9.0nm,1.0s
MAW Mawson 126.77 208 *e*P PKPdf 18 42 55.1 +0.3
comp=Z,7.2nm,0.9s
MAW Mawson 126.77 208 PKP PKPdf 18 42 54.3 -0.6
comp=Z,9.1nm,1.0s,baz=350,slow=3.8,SNR=8.7
MAW Mawson 126.77 208 *e*PKPdf PKPdf 18 42 54.4 -0.5
BOSA Boshof 130.64 267 PKP PKPdf 18 43 04.1 +0.7
comp=Z,3.8nm,0.9s,baz=267,slow=4.6,SNR=3.9
BOSA SKPbc SKPbc 18 46 16.8 -2.5
comp=Z,2.8nm,0.8s,baz=31,slow=5.9,SNR=3.4
NNA Nana 131.76 63 *e*PKPdf PKPdf 18 43 06.0 0.0
LPAZ La Paz 140.50 57 PKhKP 18 43 17.7
comp=Z,2.8nm,0.6s,baz=267,slow=2.9,SNR=6.2
LPAZ PKP PKPdf 18 43 22.8 +0.7
comp=Z,7.4nm,1.0s,baz=37,slow=4.4,SNR=14
LPAZ SKPbc SKPbc 18 46 49.7 -0.8
comp=Z,1.9nm,0.9s,baz=352,slow=7.1,SNR=5.3
LPAZ La Paz 140.50 57 *e*PKPpre 18 43 17.3
LPAZ *e*PKPdf PKPdf 18 43 22.1 -0.1
LPAZ PKP PKPdf 18 43 22.8 +0.7
LPAZ *e*SKP 18 46 48.9
LPAZ SKPbc SKPbc 18 46 49.7 -0.8
NVL N'lazarevskaya 144.50 204 *i* PKHKP 18 43 21.2
NVL pmax pmax
comp=Z,81nm,1.0s
MAIT Maitri 144.53 204 *e*PKPdif PKPdf 18 43 26.8 -0.8
LVC Limon Verde 144.63 65 *e*PKPdf PKPdf 18 43 28.8 -0.5
LCO Las Campanas 147.54 76 *e*PKPbc PKPbc 18 43 37.3 +0.5
TLL Tololo Astrono 148.14 78 ⇓*i*P PKPdf 18 43 38.5 +3.5
VNA2 Neumayer--Watz 149.43 197 *e*PKPdf PKPdf 18 43 34.6 -1.2
VNA2 *e* 18 43 39.4
VNA2 *e* 18 43 44.2
VNA2 *e* 18 44 03.9
VNA2 *e* 18 47 13.3
VNA3 Neumayer Olymp 149.64 195 *e*PKPdf PKPdf 18 43 34.9 -1.2
VNA3 *e* 18 43 39.7
VNA3 *e* 18 43 45.4
VNA3 *e* 18 44 06.1
VNA3 *e* 18 47 14.5
VNA1 Neumayer--Stat 149.82 197 *e*PKPdf PKPdf 18 43 36.1 -0.3
VNA1 *e* 18 43 41.1
VNA1 *e* 18 43 46.3
VNA1 *e* 18 44 07.3
VNA1 *e* 18 47 17.4
FCH Farellones 150.21 82 ⇓*i*P PKPbc 18 43 45.0 +1.6
LMEL Las Melosas 150.53 83 *e*P PKPbc 18 43 44.5 +0.3
PLCA Paso Flores 153.07 97 PKP PKPdf 18 43 41.5 -0.8
comp=Z,7.4nm,1.1s,baz=40,slow=3.0,SNR=10
PLCA PKPbc PKPbc 18 43 50.1 +0.4
comp=Z,19nm,0.9s,baz=264,slow=3.1,SNR=30
PLCA PKPab PKPab 18 44 02.6 +1.0
comp=Z,7.1nm,0.9s,baz=256,slow=4.6,SNR=5.2
PLCA Paso Flores 153.07 97 *e*PKPdf PKPdf 18 43 41.0 -1.2
PLCA *e*PKPbc PKPbc 18 43 49.6 -0.1
CPUP Villa Florida 154.63 55 PKIKP PKPbc 18 43 52.7 -0.8
CPUP 18 44 08.0
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP pmax pmax
comp=Z,5.0nm,0.6s
CPUP Villa Florida 154.63 55 PKPbc PKPbc 18 43 52.7 -0.8
comp=Z,1.1nm,0.5s,baz=349,slow=1.8,SNR=5.1
CPUP PKPab PKPab 18 44 08.0 -0.5
comp=Z,5.0nm,0.6s,baz=300,slow=4.4,SNR=12

ISCJB ***10*** *18:42:19.6*±*1.4, 20°.3S*±*0°.1*×*177°.80W*±*0°.10, h463km*±*18km, mb4.1/19, Error ellipse: s-maj=18.7km s-min=12.8km az=154.6*
NEIC ***10*** *18:42:21.0*±*1.1, 20°.27S*×*177°.60W, h487km*±*12km, mb4.3/11, Error ellipse: s-maj=18.6km s-min=10.5km az=143.0*
IDC ***10*** *18:42:21.3*±*2.1, 20°.38S*×*177°.67W, h478km*±*22km, mb3.6/9, mb1 3.8/11, mb1mx3.6/19, mbtmp3.6/11, Error ellipse: s-maj=23.2km s-min=14.4km az=152.0*
SZGRF ***10*** *18:42:38.9, 15°.25S*×*176°.41W, h510km, Fiji Islands region*
ISC 10 18:42:20.8±**1.4, 20°.4S**±**0°.1**×**177°.73W**±**0°.10, h465km**±**18km, n79,** σ**1**§**02/35, mb4.1/19, 6C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.58**	**42**	P	**P**	**18 44 22.6**	**-0.2**
	3.7nm,0.3s,baz=21,slow=9.8,SNR=8.0						
AFI	**Afiamalu**	**8.58**	**42**	*e*P	**P**	**18 44 22.2**	**-0.6**
URZ	**Urewera**	**18.38**	**193**	P	**P**	**18 46 04.6**	**-1.7**
	1.2nm,0.3s,baz=90,slow=9.1,SNR=4.8						
EIDS	**Eidsvold**	**29.12**	**254**	P	**P**	**18 47 42.7**	**-0.1**
	5.4nm,0.7s,mb4.1						
ARMA	**Armidale**	**29.35**	**244**	*e*P	**P**	**18 47 46.1**	**+1.5**
CNB	**Canberra Magne**	**32.51**	**236**	*e*P	**P**	**18 48 13.8**	**+2.0**
CTA	**Charters Tower**	**33.75**	**264**	*e*P	**P**	**18 48 23.2**	**+0.6**
	14nm,0.3s,mb4.9						
CTA	**Charters Tower**	**33.75**	**264**	P	**P**	**18 48 23.2**	**+0.6**
	20nm,0.3s,mb5.0,baz=92,slow=10,SNR=44						
CTAO	**Charters Tower**	**33.75**	**264**	*e*P	**P**	**18 48 23.0**	**+0.4**
	23nm,0.4s,mb5.0						
TOO	**Toolangi**	**36.18**	**234**	*e*P	**P**	**18 48 44.0**	**+1.3**
TAU	**Tasmania Unive**	**36.89**	**225**	*e*P	**P**	**18 48 49.6**	**+1.0**
	13nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**38.07**	**244**	*e*P	**P**	**18 48 59.3**	**+0.9**
	2.6nm,0.8s,mb3.7						
STKA	**Stephens Creek**	**38.07**	**244**	P	**P**	**18 48 59.0**	**+0.6**
	2.8nm,0.4s,mb4.0,baz=318,slow=22,SNR=7.4						
STKA	**Stephens Creek**	**38.07**	**244**	*e*P	**P**	**18 48 58.8**	**+0.4**
	2.4nm,1.2s,mb3.5						
ASAR	**Alice Springs**	**44.79**	**257**	P	**P**	**18 49 52.1**	**0.0**
	17nm,0.7s,mb4.6,baz=98,slow=7.9,SNR=215						
ASAR				PcP	PcP	18 51 23.6	-1.0
	3.6nm,0.7s,baz=106,slow=3.6,SNR=11						
WB2	**Warramunga Arr**	**44.86**	**262**	*e*P	**P**	**18 49 51.8**	**-0.9**
WRAB	**Tennant Creek**	**44.86**	**262**	*e*P	**P**	**18 49 51.8**	**-0.8**
	3.6nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**44.87**	**262**	P	**P**	**18 49 52.0**	**-0.8**
	3.7nm,0.3s,mb4.3,baz=96,slow=7.8,SNR=150						
WRA				PcP	PcP	18 51 24.2	-0.7
	2.7nm,0.9s,baz=93,slow=3.3,SNR=6.3						
KAKA	**Kakadu**	**48.22**	**271**	*e*P	**P**	**18 50 16.9**	**-1.4**
	4.9nm,0.2s,mb4.5						
KAKA	**Kakadu**	**48.22**	**271**	*e*P	**P**	**18 50 16.2**	**-2.1**
	50nm,0.7s,mb5.0						
FORT	**Forrest**	**49.58**	**246**	*e*P	**P**	**18 50 27.9**	**-0.3**
	15nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.29**	**262**	*e*P	**P**	**18 50 55.0**	**-0.4**
	5.9nm,0.4s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.29**	**262**	P	**P**	**18 50 55.6**	**+0.1**
	3.7nm,0.5s,mb4.0,baz=132,slow=4.5,SNR=28						
SBA	**Scott Base**	**58.02**	**184**	*e*P	**P**	**18 51 30.3**	**+2.8**
	3.7nm,0.7s,mb3.8						
MBWA	**Marble Bar**	**58.13**	**257**	*e*P	**P**	**18 51 28.1**	**-1.0**
	12nm,0.7s,mb4.3						
NWAO	**Narrogin (SRO)**	**58.65**	**243**	*e*P	**P**	**18 51 32.2**	**-0.4**
	37nm,1.3s,mb4.6						
CASY	**Casey**	**64.19**	**205**	*e*P	**P**	**18 52 08.3**	**0.0**
	2.8nm,0.5s,mb4.0						
KSM	**Kuching**	**73.64**	**278**	*e*P	**P**	**18 53 06.4**	**-0.1**
	10nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**80.76**	**43**	P	**P**	**18 53 45.5**	**+0.7**
	0.5nm,0.8s,mb3.1,baz=225,slow=7.3,SNR=4.1						
MAW	**Mawson**	**81.77**	**200**	P	**P**	**18 53 49.6**	**0.0**
	1.2nm,0.5s,mb3.7,baz=140,slow=7.5,SNR=7.4						
TXAR	**Lajitas Array**	**86.77**	**57**	P	**P**	**18 54 16.2**	**+1.3**
	0.2nm,0.8s,mb2.9,baz=212,slow=6.9,SNR=3.8						
VNA3	**Neumayer Olymp**	**88.26**	**176**	*e*	**P**	**18 54 19.9**	**-1.3**
VNA3				*e*		18 57 13.1	
VNA2	**Neumayer--Watz**	**88.70**	**177**	*e*	**P**	**18 54 22.4**	**-0.9**
VNA2				*e*		18 57 15.5	
VNA1	**Neumayer--Stat**	**88.93**	**177**	*e*	**P**	**18 54 23.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**90.31**	**289**	P	**P**	**18 54 32.6**	**+1.0**
	2.6nm,0.9s,mb4.1,baz=121,slow=3.1,SNR=13						
ZALV	**Zalesovo Beam**	**110.55**	**321**	PKiKP	PKiKP	18 59 56.6	-2.6
	0.2nm,0.3s,baz=101,slow=3.2,SNR=3.6						
MK31	**Makanchi Array**	**111.29**	**313**	*e*PKPdf	PKiKP	18 59 58.5	-2.4
MKAR	**Makanchi Array**	**111.29**	**313**	PKiKP	PKiKP	18 59 58.8	-2.1
	0.6nm,0.6s,baz=228,slow=0.4,SNR=7.3						
KURK	**Kurchatov**	**114.07**	**317**	PKP	PKiKP	19 00 04.1	-2.0
	0.9nm,0.7s,baz=96,slow=1.8,SNR=5.1						
KURK	**Kurchatov**	**114.07**	**317**	PKP	PKiKP	19 00 04.1	-2.0
BVAR	**Borovoye Array**	**119.14**	**320**	PKP	PKPdf	19 00 14.0	-1.7
	1.9nm,0.6s,baz=168,slow=1.0,SNR=7.8						
BOSA	**Boshof**	**126.48**	**205**	PKP	PKPdf	19 00 30.3	-0.4
	1.6nm,1.0s,baz=316,slow=17,SNR=3.2						
FINES	**FINESS Array B**	**135.72**	**344**	PKhKP		19 00 43.0	
	1.3nm,0.8s,baz=64,slow=4.4,SNR=7.1						
AKASG	**Malin Array Be**	**143.02**	**331**	PKhKP		19 00 56.4	
	3.9nm,0.5s,baz=41,slow=4.1,SNR=28						
MALT	**Malatya**	**144.05**	**308**	⇓*i*P	PKPdf	19 01 01.9	-0.9
ASF	**Jabal al Asfar**	**146.94**	**298**	PKPbc	PKPbc	19 01 09.9	-0.8
	4.0nm,0.7s,baz=99,slow=4.6,SNR=7.5						
BR131	**Keskin Array S**	**146.94**	**313**	*e*PKPbc	PKPbc	19 01 09.2	-1.2
BRTR	**Keskin Array B**	**146.94**	**313**	PKPbc	PKPbc	19 01 09.2	-1.3
	2.9nm,0.6s,baz=137,slow=5.1,SNR=20						
BUR08	**Bucovina Ar. S**	**147.06**	**331**	*e*PKPbc	PKPbc	19 01 09.9	-0.7
BURAR	**Bucovina Array**	**147.07**	**331**	⇑*i*P	PKPbc	19 01 10.1	-0.5
VRI	**Vrincioaia**	**147.59**	**327**	⇑*i*P	PKPbc	19 01 11.0	-1.0
IBBN	**Ibbenburen**	**147.84**	**354**	*e*pPKPbc	pPKPbc	19 03 09.9	+7.3
CLL	**Collm**	**147.99**	**347**	*e*PKPbc	PKPbc	19 01 11.5	-1.3
CLL	**Collm**	**147.99**	**347**	⇓*i*PKPbc	PKPbc	19 01 11.6	-1.2
	comp=Z,7.0nm,0.6s						
UPC	**Upice**	**148.02**	**343**	*e*PKPbc	PKPbc	19 01 12.4	-0.5
DPC	**Dobruska-Polom**	**148.08**	**343**	*e*PKPbc	PKPbc	19 01 12.5	-0.6
MLR	**Muntele Rosu**	**148.25**	**328**	⇑*i*P	PKPbc	19 01 13.0	-0.7
PVCC	**Panska Ves**	**148.37**	**345**	*e*PKPbc	PKPbc	19 01 13.3	-0.5
BUG	**Bochum--Univer**	**148.74**	**354**	*e*pPKPbc	pPKPbc	19 03 12.6	+7.5
PRU	**Pruhonice**	**148.88**	**345**	*e*PKPbc	PKPbc	19 01 14.8	-0.3
MOX	**Moxa**	**148.90**	**348**	*e*PKPbc	PKPbc	19 01 14.3	-0.8
PLN	**Plauen**	**148.94**	**348**	*e*pPKPbc	PKPbc	19 01 14.3	-0.9
TANN	**Tannenbergstha**	**148.95**	**347**	*e*PKPbc	PKPbc	19 01 14.6	-0.6
WERD	**Werda**	**148.95**	**348**	*e*pPKPbc	PKPbc	19 01 14.3	-0.9
GUNZ	**Gunzen**	**149.02**	**347**	*e*pPKPbc	PKPbc	19 01 14.5	-0.9
NKC	**Novy Kostel**	**149.12**	**347**	*e*PKPbc	PKPbc	19 01 14.8	-0.9
TREC	**Trest**	**149.26**	**343**	*e*PKPbc	PKPbc	19 01 15.4	-0.6
TNS	**Taunus Mts**	**149.81**	**352**	*e*pPKPbc	pPKPbc	19 03 16.5	+8.6
GRA1	**Grafenberg Arr**	**149.88**	**348**	*e*PKPbc	PKPbc	19 01 17.7	+0.2
GRF	**Grafenberg Arr**	**149.88**	**348**	*e*PKPbc	PKPbc	19 01 17.7	+0.2
GRF	**Grafenberg Arr**	**149.88**	**348**	*e*PKP	PKPbc	19 01 17.7	+0.2
KHC	**Kasperske Hory**	**149.91**	**345**	*e*PKPbc	PKPbc	19 01 16.6	-1.0
GERES	**GERESS Array B**	**150.14**	**345**	PKPbc	PKPbc	19 01 16.6	-1.5
	comp=Z,1.9nm,0.8s,baz=64,slow=3.1,SNR=11						
BZS	**Buzias**	**150.20**	**332**	⇑*i*P	PKPbc	19 01 17.4	-1.0
WLF	**Walferdange**	**150.60**	**355**	*e*PKPbc	PKPbc	19 01 18.5	-0.7
PKSM	**Moragy**	**150.94**	**336**	⇑*i*P	PKPdf	19 01 16.6	+2.7
RJOB	**Jochberg**	**151.40**	**345**	*e*pPKPbc	pPKPbc	19 03 22.2	+10
BFO	**Black Forest**	**151.68**	**351**	*e*pPKPbc	pPKPbc	19 03 21.5	+9.0
TORD	**Torodi Ar. Bea**	**172.80**	**176**	PKP	PKPdf	19 01 34.6	-1.9
	comp=Z,0.8nm,0.8s,baz=353,slow=1.0,SNR=4.3						
TORD				PKPab	PKPab	19 03 05.2	-0.4
	comp=Z,0.7nm,0.9s,baz=184,slow=3.9,SNR=5.1						

BJI ***10*** *18:43:20.9, 51°.88N*×*91°.63E, h12km, mB4.7/18, mb4.3/25, ML4.9/4, Ms4.3/18, Ms7 4.0/18*
ISCJB ***10*** *18:43:21.6*±*0.7, 51°.74N*±*0°.03*×*91°.82E*±*0°.04, h7km*±*4km, mb4.2/43, MS3.7/9, Error ellipse: s-maj=4.8km s-min=3.8km az=16.1*
MOS ***10*** *18:43:23.8*±*1.6, 51°.80N*×*91°.84E, h11km, mb4.5/15, Error ellipse: s-maj=11.8km s-min=8.2km az=133.2*
NEIC ***10*** *18:43:23.1*±*0.5, 51°.74N*×*91°.99E, h10km, mb4.5/18, Error ellipse: s-maj=8.6km s-min=7.5km az=153.0*
ASRS ***10*** *18:43:25.2*±*0.9, 51°.77N*×*91°.94E, h15km, Ms4.1/4*
IDC ***10*** *18:43:27.4*±*0.8, 51°.92N*×*91°.66E, h23km*±*3km, mb3.8/16, mb1 4.0/21, mb1mx3.9/31, mbtmp3.8/21, ML4.1/4, MS3.7/4, Ms

ELT *e* 18 45 22.1
ELT Yel'tsovka 3.78 296 *e*Pn **Pn 18 44 24.0 +2.0**
ELT *e*Pg **Pg 18 44 32.4 -3.2**
ELT *e*Sg **Sg 18 45 22.1 -2.5**
UKR Ust'-Kan 4.55 263 *e*Sg **Sg 18 45 48.4 -0.7**
ZAA0 Zalesovo Array 4.83 300 *e*Pn **Pn 18 44 37.1 +0.8**
ZAA0 *e*Sg **Sg 18 45 52.9 -5.3**
ZALV Zalesovo Beam 4.83 300 *e*PN **Pn 18 44 37.4 +1.1**
ZALV pmax pmax
comp=Z,13nm,0.3s
ZALV Zalesovo Beam 4.83 300 Pn **Pn 18 44 37.5 +1.1**
comp=Z,13nm,0.3s,baz=116,slow=13,SNR=115
ZALV Pg **Pg 18 44 50.0 -5.7**
comp=Z,43nm,0.3s,baz=108,slow=11,SNR=68
ZALV Lg 18 45 52.0
comp=Z,49nm,0.3s,baz=113,slow=25,SNR=5.4
MOY Mondy 5.65 87 *e*PN **Pb 18 45 00.3 -1.7**
MOY *e* 18 46 13.3
MOY pmax pmax
comp=Z,115nm,0.8s
MOY pmax pmax
comp=N,3μm,1.5s
NVS Novosibirsk 6.06 304 *e*PN **Pn 18 44 54.0 +0.9**
NVS *i* 18 45 12.0
NVS Novosibirsk 6.06 304 *e*Pn **Pn 18 44 54.0 +0.9**
NVS *e*Pg **Pg 18 45 12.0 -7.1**
NVS *e*Sg **Sg 18 46 33.5 -4.0**
TLY Talaya 7.29 86 *e*P **Pb 18 45 31.6 +1.6**
TLY pmax pmax
comp=Z,32nm,0.7s
ZAK Zakamensk 7.29 96 *e*P **Pn 18 45 10.0 -0.1**
IRK Irkutsk 7.65 81 *e*P **Pb 18 45 35.8 -0.3**
IRK pmax pmax
comp=Z,125nm,0.1s
MK31 Makanchi Array 8.01 236 ⇑Pn **Pn 18 45 21.1 +1.2**
comp=Z,34nm,0.6s,baz=62,slow=12
MK31 ⇓Lg 18 47 36.3
comp=Z,138nm,0.7s,baz=44,slow=30
MK31 Makanchi Array 8.01 236 *e*Pn **Pn 18 45 21.2 +1.2**
MK31 *e*Sg Sg 18 47 35.8 -4.2
MKAR Makanchi Array 8.01 236 Pn **Pn 18 45 21.6 +1.7**
comp=Z,1.9nm,0.3s,baz=62,slow=11,SNR=157
MKAR Lg 18 47 38.9
comp=Z,9.3nm,0.3s,baz=49,slow=24,SNR=5.1
MKAR Makanchi Array 8.01 236 Pn **Pn 18 45 21.6 +1.7**
MKAR Lg 18 47 38.9
KURK Kurchatov 8.41 268 ⇓Pn **Pn 18 45 26.7 +1.3**
comp=Z,38nm,0.7s
KURK ⇓Lg 18 47 43.4
comp=Z,1μm,1.1s
KURK Kurchatov 8.41 268 *c i*P **Pn 18 45 26.7 +1.3**
KURK Kurchatov 8.41 268 Pn **Pn 18 45 27.8 +2.4**
comp=Z,0.8nm,0.3s,baz=77,slow=16,SNR=70
KURK Lg 18 47 47.8
comp=Z,3.6nm,0.3s,baz=333,slow=21,SNR=5.1
KURK Kurchatov 8.41 268 *e*Pn **Pn 18 45 26.1 +0.6**
comp=Z,18nm,0.7s
KURK *e*Sn **Sn 18 47 12.0 +11**
WMQ Urumqi 8.42 201 P **Pn 18 45 27.0 +1.4**
WMQ S **Sn 18 46 57.1 -3.8**
WMQ pmax pmax
comp=Z,16nm,1.0s
WMQ smax
comp=N,360nm,0.8s
WMQ smax
comp=E,600nm,1.0s
WMQ LR LR
comp=N,250nm,20.0s
WMQ LR LR
comp=E,500nm,21.0s
WMQ LR LR
comp=Z,340nm,16.0s
KURBB Kurchatov Arra 8.48 268 ⇑Pn **Pn 18 45 27.9 +1.4**
comp=Z,6.1nm,0.5s,baz=77,slow=15
KURBB ⇑Lg 18 47 43.8
comp=Z,82nm,0.9s,baz=81,slow=29
SONM Songino Array 10.15 107 Pn **Pn 18 45 51.2 +1.9**
comp=Z,0.1nm,0.3s,baz=300,slow=12,SNR=5.2
VOSK Vostochnaya 12.87 283 ⇑Pn **Pn 18 46 25.5 -0.9**
comp=Z,4.1nm,0.5s
VOSK ⇓Sn **Sn 18 48 40.7 -9.0**
comp=Z,101nm,1.1s
BVA0 Borovoye Array 13.21 284 Pn **Pn 18 46 29.8 -1.2**
comp=Z,1.4nm,0.6s,baz=76,slow=15,SNR=15
BVA0 ⇓Sn **Sn 18 48 51.2 -6.8**
comp=Z,3.9nm,0.7s,baz=79,slow=22,SNR=5.1
BVAR Borovoye Array 13.21 284 *e*P **Pn 18 46 29.6 -1.4**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 13.21 284 Pn **Pn 18 46 29.7 -1.3**
comp=Z,0.8nm,0.3s,baz=106,slow=12,SNR=22
BVAR Sn **Sn 18 48 52.8 -5.2**
comp=Z,1.8nm,0.3s,baz=90,slow=22,SNR=6.5
KNDC Almaty 13.21 236 ⇓Lg 18 50 17.8
comp=Z,136nm,1.1s
BRVK Borovoye 13.27 284 ⇑*i*P **Pn 18 46 31.2 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 13.27 284 *e*Pn **Pn 18 46 30.8 -1.1**
comp=Z,16nm,0.7s
BRVK *e*Sn **Sn 18 48 46.9 -13**
GTA Gaotai 13.51 153 *e*P **Pn 18 46 39.5 +4.3**
GTA pP 18 46 43.1
GTA sP 18 46 46.5
GTA S **Sn 18 49 13.5 +8.0**
GTA sS 18 49 18.4
GTA SS 18 49 29.1
GTA pmax pmax
comp=Z,4.0nm,1.6s
GTA pmax pmax
comp=Z,220nm,4.2s
GTA LR LR
comp=N,410nm,13.7s
GTA LR LR
comp=E,890nm,12.8s
GTA LR LR
comp=Z,500nm,14.9s
BOD Bodaibo 14.09 56 *e*P **Pn 18 46 39.8 -3.2**
BOD pmax pmax
comp=Z,8.0nm,0.9s
TKM2 Tokmak 2 14.13 238 ⇑Pn **Pn 18 46 46.3 +2.7**
comp=Z,6.2nm,0.7s
TKM2 ⇓Lg 18 50 45.0
comp=Z,64nm,1.0s
TKM2 Tokmak 2 14.13 238 *e*Pn **Pn 18 46 43.3 -0.3**
comp=Z,7.2nm,0.6s
AAK Ala-Archa 14.91 239 ⇑*i*P **Pn 18 46 54.0 -0.3**
AAK Ala-Archa 14.91 239 Pn **Pn 18 46 54.1 -0.2**
comp=Z,0.0nm,0.3s,baz=0.0,slow=10,SNR=3.3
AAK Lg 18 51 14.0
comp=Z,0.0nm,0.3s,baz=246,slow=18,SNR=4.2
AAK Ala-Archa 14.91 239 *e*Pn **Pn 18 46 53.5 -0.8**
comp=Z,6.2nm,0.8s
UCH Uchtor 15.18 238 *e*Pn **Pn 18 46 58.5 +0.5**
comp=Z,9.4nm,0.8s
EKS2 Erkin-Say 15.28 241 *e*Pn **Pn 18 46 57.7 -1.5**
comp=Z,13nm,0.7s
KK09 Karatay Array 16.81 248 ⇑Pn **Pn 18 47 16.6 -2.3**
comp=Z,13nm,0.8s,baz=48,slow=13
HHC Hu-ho-hao-te 17.35 121 *e*P **Pn 18 47 24.8 -1.0**
HHC pP pP 18 47 28.6 -0.3
HHC sP sP 18 47 32.0 +2.3
HHC PP 18 47 39.4
HHC S **Sn 18 50 36.7 -2.3**
HHC SS 18 50 58.6
HHC PcP PcP 18 52 07.9 +0.3
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,100nm,5.9s
HHC LR LR
comp=N,480nm,8.3s
HHC LR LR
comp=E,370nm,8.0s
HHC LR LR
comp=Z,550nm,9.6s
LZH Lanzhou 17.82 147 *e*P **Pn 18 47 31.5 -0.1**
LZH pP pP 18 47 34.0 -0.1
LZH *e*PP 18 47 46.3
LZH *e*S **Sn 18 50 48.5 -1.8**
LZH *e*SS 18 51 09.6
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,97nm,4.1s
LZH LR LR
comp=N,490nm,9.0s
LZH LR LR
comp=Z,640nm,11.5s
SVE Sverdlovsk 18.85 298 *e*P **Pn 18 47 43.0 -1.0**
SVE pmax pmax
comp=Z,17nm,1.1s
SVE MLR MLR
comp=Z,232nm,11.0s
ARU Arti 19.99 297 *d i*P **Pn 18 47 56.2 -1.5**
ARU S **Sn 18 51 41.0 -1.4**
ARU pmax pmax
comp=Z,13nm,1.0s
ARU Arti 19.99 297 *e*P **Pn 18 47 56.4 -1.3**
comp=Z,12nm,0.9s
ARU *e*S **Sn 18 51 33.8 -8.6**
AB31 Akbulak array 20.40 276 ⇓P **P 18 48 01.1 +0.6**
comp=Z,3.9nm,0.6s,baz=72,slow=11,SNR=40
BJI Beijing 20.44 115 P **P 18 48 06.2 +5.2**
BJI S **S 18 51 57.5 +7.4**
BJI pmax pmax
comp=Z,60nm,1.0s
BJI pmax pmax
comp=Z,100nm,4.5s
BJI LR LR
comp=N,660nm,13.7s,MS4.3
BJI LR LR
comp=E,710nm,13.1s,MS4.3
BJI LR LR
comp=Z,79nm,16.9s,MS3.1
BJT Baijiatuau 20.45 115 *e*P **P 18 48 00.6 -0.6**
comp=Z,22nm,0.6s
SOKR Solikamsk 21.09 306 ⇓*i*P **P 18 48 07.0 -0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
AKTK Aktyubinsk 21.23 280 P **P 18 48 09.9 +0.5**
AKTO Aktyubinsk 21.23 280 ⇑P **P 18 48 09.6 +0.2**
comp=Z,3.2nm,1.4s,mb3.5
AKTO Aktyubinsk 21.23 280 P **P 18 48 09.9 +0.5**
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
AKTO Aktyubinsk 21.23 280 P **P 18 48 09.9 +0.5**
comp=Z,4.7nm,0.6s,mb4.0,baz=85,slow=11,SNR=16
LSA Lhasa 22.03 182 P **P 18 48 19.5 +1.3**
LSA Lhasa 22.03 182 *e*P **P 18 48 17.4 -0.8**
comp=Z,13nm,0.9s,mb4.4
CD2 Chengdu 22.58 153 P **P 18 48 24.3 +0.2**
CD2 pP 18 48 28.1
CD2 sP sP 18 48 30.3 +3.7
CD2 PP 18 48 52.5
CD2 S **S 18 52 27.3 -4.8**
CD2 SS 18 53 07.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
CD2 pmax pmax
comp=Z,270nm,8.8s
CD2 LR LR
comp=N,720nm,5.9s
CD2 LR LR
comp=Z,390nm,9.5s
YAK Yakutsk 22.72 48 *e*P **P 18 48 31.2 +5.9**
YAK *e* 18 48 55.9
YAK pmax pmax
comp=Z,19nm,1.1s,mb4.4
YAK pmax pmax
comp=E,14nm,1.2s
YAK pmax pmax
comp=N,20nm,1.0s
YAK Yakutsk 22.72 48 *e*P **P 18 48 20.9 -4.3**
comp=N,24nm,0.7s,mb4.7
CN2 Changchun 23.73 96 *e*P **P 18 48 34.1 -1.8**
KBL Kabul 23.80 233 *e*P **P 18 48 33.2 -3.4**
comp=N,8.8nm,0.9s,mb4.2
GUN Gumba 24.23 193 *e*P **P 18 48 40.3 -0.3**
comp=N,22nm,0.6s,mb4.8
KKN Kakani 24.44 194 *e*P **P 18 48 42.4 -0.1**
comp=N,24nm,0.7s,mb4.7
PKIN Phulchoki 24.63 194 *e*P **P 18 48 44.4 +0.2**
comp=N,21nm,0.7s,mb4.8
PKIN Phulchoki 24.63 194 *e*P **P 18 48 44.4 +0.2**
comp=N,12nm,0.6s,mb4.6
PKI Pulchoki 24.64 194 *e*P **P 18 48 44.5 +0.2**
comp=N,30nm,0.8s,mb4.9
DMN Daman 24.65 195 *e*P **P 18 48 44.9 +0.5**
comp=N,22nm,0.8s,mb4.7
ENH Enshi 25.09 142 *e*P **P 18 48 49.6 +1.2**
comp=N,8.1nm,0.6s,mb4.4
TIXI Tiksi 25.81 26 *e*P **P 18 48 55.5 +1.0**
TIXI pmax pmax
comp=Z,12nm,1.0s,mb4.4
TIXI MLR MLR
comp=Z,322nm,14.0s,MS4.0
TIXI Tiksi 25.81 26 *e*P **P 18 48 53.9 -0.6**
comp=Z,6.9nm,0.6s,mb4.4
MDJ Mudanjiang 25.89 91 P **P 18 48 53.7 -1.8**
MDJ S **S 18 53 23.7 -1.9**
MDJ pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
MDJ pmax pmax
comp=Z,77nm,4.3s
MDJ LR LR
comp=N,280nm,18.1s,MS3.9
MDJ LR LR
comp=E,170nm,19.9s,MS3.9
MDJ LR LR
comp=Z,62nm,19.9s,MS3.1
HABR Khabarovsk 27.56 80 *e*P **P 18 49 11.6 +1.1**
HABR *e**SP sP 18 49 22.6 +9.4
HABR *e* 18 49 57.8
HABR PPP 18 50 05.9
HABR *e* 18 52 27.6
HABR S **S 18 53 53.5 +1.6**
HABR *e**SS sS 18 54 05.4 +10
HABR *e*SS 18 55 07.8
HABR *e*SSS 18 55 22.2
HABR *e* 18 59 58.6
HABR MLR MLR
comp=Z,52nm,17.0s,MS3.2
GYA Guiyang 27.62 151 P **P 18 49 11.2 0.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
NJ2 Nanjing 27.84 125 *e*P **P 18 49 12.7 -0.5**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
KMI Kunming 27.84 159 P **P 18 49 14.4 +1.2**
KMI pP pP 18 49 17.3 +2.2
KMI sP sP 18 49 18.4 +2.6
KMI PP 18 50 03.4
KMI S **S 18 53 56.0 -0.6**
KMI SS 18 55 15.7
KMI pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
KMI pmax pmax
comp=Z,92nm,4.3s
KMI LR LR
comp=N,220nm,12.1s,MS4.0
KMI LR LR
comp=E,220nm,15.5s,MS4.0
KMI LR LR
comp=Z,210nm,17.2s,MS3.8
VLA Vladivostok 28.08 92 ⇑*i*P **P 18 49 17.0 +1.7**
VLA pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
JOF Joensuu 33.27 313 *e*P **P 18 49 55.4 -5.4**
JOF Joensuu 33.27 313 *ep* **P 18 49 55.4 -5.4**
CHTO Chiang Mai 33.33 168 P **P 18 50 01.3 -0.4**
CMAR Chiang Mai Arr 33.68 168 P **P 18 50 08.1 +3.3**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CMAR MLR MLR
comp=Z,66nm,21.2s
CMAR Chiang Mai Arr 33.68 168 P **P 18 50 08.1 +3.3**
comp=Z,0.5nm,0.8s,mb3.5,baz=357,slow=10,SNR=5.6
CMAR LR LR 19 04 30.3
comp=Z,66nm,21.2s,MS3.3,baz=190,slow=37
GNI Garni 34.21 269 *e*P **P 18 50 01.8 -7.5**
comp=Z,22nm,1.4s,mb4.9
ARCES ARCESS Array B 34.84 326 P **P 18 50 14.4 0.0**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 34.84 326 P **P 18 50 14.3 -0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=67,slow=9.1,SNR=4.9
KAF Kangasniemi 35.71 313 *e*P **P 18 50 17.7 -4.2**
KAF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KAF Kangasniemi 35.71 313 *ep* **P 18 50 17.7 -4.2**
comp=Z,1.1nm,0.6s,mb4.0
FINES FINESS Array B 35.98 312 P **P 18 50 24.2 -0.1**
FINES *PP pP 18 50 32.6 +6.4
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 35.98 312 P **P 18 50 24.2 -0.1**
comp=Z,1.3nm,0.6s,mb4.0,baz=69,slow=10,SNR=7.3
FINES pP pP 18 50 32.6 +6.4
comp=Z,2.6nm,0.7s,baz=28,slow=8.6,SNR=4.8
SPITS Spitsbergen Ar 37.02 341 P **P 18 50 32.5 -0.5**
SPITS *PP pP 18 50 39.6 +4.7
SPITS *SP sP 18 50 42.1 +6.5
SPITS pmax pmax
comp=Z,9.0nm,1.0s
SPITS MLR MLR
comp=Z,152nm,19.0s
SPITS Spitsbergen Ar 37.02 341 P **P 18 50 32.5 -0.5**
comp=Z,8.7nm,1.0s,mb4.6,baz=131,slow=5.9,SNR=3.3
SPITS pP pP 18 50 39.6 +4.7
comp=Z,7.3nm,0.6s,baz=114,slow=8.7,SNR=4.9
SPITS sP sP 18 50 42.1 +6.5
comp=Z,7.6nm,0.6s,baz=106,slow=10,SNR=4.9
SPITS LR LR 19 09 36.7
comp=Z,152nm,19.0s,MS3.8,baz=10.0,slow=43
AKASG Malin Array Be 38.20 294 P **P 18 50 42.5 -0.7**
AKASG *PP pP 18 50 49.8 +4.7
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 38.20 294 P **P 18 50 42.5 -0.8**
comp=Z,1.0nm,0.6s,mb3.7,baz=58,slow=9.1,SNR=3.3
AKASG pP pP 18 50 49.8 +4.7
comp=Z,1.2nm,0.5s,baz=59,slow=8.5,SNR=7.0
MALT Malatya 39.23 272 *e*P **P 18 50 51.9 -0.2**
BR131 Keskin Array S 41.35 277 *e*P **P 18 51 10.1 +0.6**
comp=Z,1.3nm,0.6s,mb3.7
BRTR Keskin Array B 41.35 277 P **P 18 51 10.5 +0.9**
BRTR *PP pP 18 51 18.1 +6.6
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 41.35 277 P **P 18 51 10.5 +0.9**
comp=Z,1.4nm,0.7s,mb3.7,baz=84,slow=7.4,SNR=12
BRTR pP pP 18 51 18.1 +6.6
comp=Z,1.4nm,0.8s,baz=72,slow=8.3,SNR=6.7
BUR08 Bucovina Ar. S 41.99 292 *e*P **P 18 51 13.4 -1.4**
NB2 NORSAR Subarra 42.85 315 P **P 18 51 21.0 -0.6**
comp=Z,0.9nm,0.6s,mb3.7,baz=78,slow=7.9
NOA NORSAR Array B 42.85 315 P **P 18 51 21.0 -0.6**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 42.85 315 P **P 18 51 21.0 -0.6**
comp=Z,1.2nm,0.6s,mb3.8,baz=64,slow=7.9,SNR=5.4
ASF Jabal al Asfar 44.16 266 LR LR 19 11 30.5
comp=Z,58nm,21.2s,MS3.5,baz=256,slow=38
MORC Moravsky Berou 45.18 298 P **P 18 51 37.4 -2.9**
comp=Z,3.2nm,1.2s,mb4.0
CLL Collm 46.78 302 *i* P **P 18 51 52.8 -0.2**
comp=Z,6.0nm,1.0s,mb4.5
CLL *e*pP pP 18 51 58.0 +3.1
CLL Collm 46.78 302 *i* P **P 18 51 52.8 -0.2**
comp=Z,6.0nm,1.0s,mb4.5
CLL *e*(pP) pP 18 51 58.0 +3.1
CLL *e* 18 52 02.0
GERES GERESS Array B 47.78 299 P **P 18 51 60.0 -0.9**
comp=Z,0.4nm,0.4s,mb3.8,baz=39,slow=8.6,SNR=4.8
GRA1 Grafenberg Arr 48.63 301 *e*P **P 18 52 08.5 +1.1**
GRF Grafenberg Arr 48.63 301 *e*P **P 18 52 08.5 +1.1**
CDF Champ du Feu 51.48 302 *e*P **P 18 52 30.1 +1.1**
LPL La Plagne 53.58 299 *e*P **P 18 52 46.5 +1.9**
LPG La Plagne 53.58 299 *e*P **P 18 52 47.1 +2.5**
comp=Z,5.6nm,0.9s,mb4.2
LPG La Plagne 53.58 299 *e*P **P 18 52 47.1 +2.5**
comp=Z,2.8nm,0.9s,mb4.2
MBDF Montbardon 54.07 299 *e*P **P 18 52 50.5 +2.3**
comp=Z,13nm,0.7s,mb4.7
MBDF Montbardon 54.07 299 *e*P **P 18 52 50.5 +2.3**
comp=Z,6.6nm,0.7s,mb4.7
SMF Signal de Mont 54.40 302 *e*P **P 18 52 51.4 +0.8**
INK Inuvik 55.61 19 *e*P **P 18 52 58.4 -0.6**
comp=Z,8.1nm,1.0s,mb4.7
KEST Kesra 58.61 289 P **P 18 53 20.3 -0.5**
comp=Z,1.1nm,0.9s,mb3.9,baz=27,slow=6.8,SNR=2.6
ESDC Sonseca Array 63.33 301 P **P 18 53 53.1 +0.4**
comp=Z,1.0nm,0.5s,mb4.2,baz=43,slow=6.8,SNR=8.3
YKA Yellowknife Ar 64.19 13 P **P 18 53 57.0 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 64.19 13 P **P 18 53 57.0 -1.0**
comp=Z,0.5nm,0.7s,mb3.7,baz=338,slow=7.1,SNR=8.5
YKA Yellowknife Ar 64.19 13 P **P 18 53 57.0 -1.0**
ULM Lac du Bonnet 78.17 5 P **P 18 55 20.3 -2.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=341,slow=8.4,SNR=3.9
ULM Lac du Bonnet 78.17 5 P **P 18 55 20.3 -2.5**
BSMT Bassoo Peak 78.18 18 *e*P **P 18 55 23.8 +0.8**
comp=Z,9.2nm,1.4s,mb4.5
JTMT Jette 78.38 18 *e*P **P 18 55 23.8 -0.2**
comp=Z,1.7nm,0.8s,mb4.0
TORD Torodi Ar. Bea 79.94 278 P **P 18 55 32.5 -0.6**
comp=Z,1.0nm,0.9s,mb3.7,baz=35,slow=5.7,SNR=6.1
TORD pP pP 18 55 40.4 +5.3
comp=Z,1.0nm,0.7s,baz=24,slow=5.3,SNR=5.1
TORD LR LR 19 40 23.3
comp=Z,64nm,18.5s,MS4.0,baz=255,slow=43
TORD Torodi Ar. Bea 79.94 278 P **P 18 55 32.5 -0.6**
TORD pP pP 18 55 40.4 +5.3
TORD LR LR 19 40 23.3
WRA Warramunga Arr 80.43 140 P **P 18 55 38.9 +3.4**
WRA pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 80.43 140 P **P 18 55 38.9 +3.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=343,slow=6.0,SNR=12
ASAR Alice Springs 83.62 142 P **P 18 55 56.5 +4.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 83.62 142 P **P 18 55 56.5 +4.3**
comp=Z,0.6nm,0.6s,mb3.9,baz=341,slow=5.1,SNR=7.9
PDAR Pinedale Array 84.04 16 P **P 18 55 56.9 +2.6**
comp=Z,0.3nm,0.5s,mb3.7,baz=22,slow=1.0,SNR=2.6
CPUP Villa Florida 145.59 306 PKIKP PKPbc 19 03 00.6 -1.6
CPUP pmax pmax
comp=Z,1.0nm,0.4s
CPUP Villa Florida 145.59 306 PKPbc PKPbc 19 03 00.6 -1.7
comp=Z,0.5nm,0.4s,baz=54,slow=4.3,SNR=4.7

ISCJB ***10*** *18:43:44.2±1.7, 17°.02S±0°.08×174°.3W±0°.1, h98km±17km, mb4.2/15, Error ellipse: s-maj=18.3km s-min=12.8km az=20.9*
IDC ***10*** *18:43:44.6±2.9, 17°.13S×174°.14W, h90km±26km, mb4.0/12, mb1 4.2/13, mb1mx4.1/21, mbtmp4.1/13, Error ellipse: s-maj=27.9km s-min=14.1km az=125.0*
NEIC ***10*** *18:43:45.6±1.3, 16°.98S×174°.27W, h98km±12km, mb4.5/4, Error ellipse: s-maj=14.7km s-min=9.9km az=124.0*
ISC 10 18:43:44.4±1.6, 16°.96S±0°.08×174°.3W±0°.1, h83km±17km, n64, σ1°.21/24, mb4.2/15, 5C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Time ISC	Res
AFI	**Afiamalu**	**3.87**	**39**	P	**Pn**	**18 44 42.9**		**+1.2**
	170nm,0.3s,baz=50,slow=1.6,SNR=164							
AFI				S	**Sn**	**18 45 23.9**		**-2.2**
	137nm,0.3s,baz=63,slow=21,SNR=9.7							
RAR	**Rarotonga**	**14.34**	**109**	*e*P	**Pn**	**18 47 04.8**		**+1.3**
	26nm,1.0s							
URZ	**Urewera**	**22.53**	**198**	P	**P**	**18 48 35.9**		**-1.5**
	43nm,0.6s,mb4.9,baz=284,slow=1.7,SNR=23							
URZ				S	**S**	**18 52 29.1**		**-9.5**
	8.5nm,0.9s,baz=18,slow=20,SNR=1.9							
RPZ	**Rata Peaks**	**29.43**	**202**	P	**P**	**18 49 39.6**		**-0.5**
	16nm,0.8s,mb4.7,baz=45,slow=2.9,SNR=2.3							
RPZ	**Rata Peaks**	**29.43**	**202**	P	**P**	**18 49 39.6**		**-0.5**
EIDS	**Eidsvold**	**33.30**	**250**	P	**P**	**18 50 16.2**		**+1.8**
	9.2nm,1.0s,mb4.6							
STKA	**Stephens Creek**	**42.54**	**241**	P	**P**	**18 51 31.4**		**-0.7**
	4.1nm,0.9s,mb4.2,baz=106,slow=7.4,SNR=5.9							
STKA	**Stephens Creek**	**42.54**	**241**	*e*P	**P**	**18 51 31.4**		**-0.7**
	1.2nm,1.0s,mb3.6							
WRA	**Warramunga Arr**	**48.69**	**258**	P	**P**	**18 52 19.5**		**-1.3**
	1.0nm,0.7s,mb3.9,baz=94,slow=7.0,SNR=5.5							
ASAR	**Alice Springs**	**48.85**	**253**	P	**P**	**18 52 21.5**		**-0.4**
	5.0nm,0.7s,mb4.6,baz=86,slow=8.5,SNR=16							
ASAR				S	**S**	**18 59 11.2**		**-8.2**
	0.4nm,0.8s,baz=87,slow=16,SNR=3.4							
SBA	**Scott Base**	**61.64**	**184**	*e*P	**P**	**18 53 53.4**		**+0.4**
	2.8nm,0.7s,mb4.4							
MJAR	**Matsushiro Arr**	**69.59**	**321**	P	**P**	**18 54 44.9**		**+0.1**
	0.9nm,0.6s,mb3.8,baz=43,slow=0.8,SNR=5.5							

MAJO	**Matsushiro**	**69.60**	**321**	*eP*	**P**	**18 54 43.7**	**-1.1**
	10nm,1.0s,mb4.6						
ASAJ	**Asahikawa**	**72.42**	**329**	P	**P**	**18 55 03.6**	**+1.9**
	6.0nm,0.8s,mb4.5,baz=172,slow=7.6,SNR=3.7						
PETK	**Petropavlovsk-**	**73.86**	**343**	P	**P**	**18 55 10.9**	**+0.9**
	8.9nm,0.7s,mb4.6,baz=103,slow=9.2,SNR=18						
NVAR	**Mina Array Bea**	**76.04**	**42**	P	**P**	**18 55 23.1**	**+0.1**
	1.7nm,0.8s,mb3.9,baz=231,slow=9.2,SNR=11						
CN2	**Changchun**	**81.75**	**321**	*eP*	**P**	**18 55 49.3**	**-4.7**
PDAR	**Pinedale Array**	**83.98**	**42**	P	**P**	**18 56 04.8**	**-0.7**
	1.3nm,0.9s,mb3.8,baz=201,slow=4.8,SNR=5.4						
PDAR	**Pinedale Array**	**83.98**	**42**	P	**P**	**18 56 04.8**	**-0.7**
YKA	**Yellowknife Ar**	**91.85**	**24**	P	**P**	**18 56 41.5**	**-1.4**
	0.2nm,0.5s,mb3.6,baz=240,slow=4.7,SNR=3.9						
CMAR	**Chiang Mai Arr**	**92.31**	**288**	P	**P**	**18 56 48.0**	**+1.9**
	0.3nm,0.7s,mb3.6,baz=120,slow=3.2,SNR=4.0						
BVAR	**Borovoye Array**	**118.59**	**322**	PKP	PKPdf	19 02 21.3	-1.2
	1.0nm,0.6s,baz=132,slow=2.1,SNR=5.6						
AKASG	**Malin Array Be**	**141.43**	**336**	PKP	PKPdf	19 03 04.6	-1.1
	0.2nm,0.4s,baz=39,slow=3.8,SNR=3.5						
KMBO	**Kilima Mbogo**	**144.09**	**243**	PKP	PKPdf	19 03 09.9	-1.7
	1.5nm,0.6s,baz=56,slow=11,SNR=5.7						
MALT	**Malatya**	**144.35**	**313**	*eP*	PKPdf	19 03 10.4	-0.9
MALT	**Malatya**	**144.35**	**313**	⇑*iP*	PKPdf	19 03 08.3	-3.0
CLL	**Collm**	**145.25**	**352**	⇑*iPKPbc*	PKPbc	19 03 11.4	-0.8
	comp=Z,9.0nm,0.9s						
CLL				*i* PKiKP	PKiKP	19 03 14.3	-2.0
	comp=Z,4.0nm,0.7s						
STHS	**Stebnicka Huta**	**145.27**	**342**	*e*PKP	PKPdf	19 03 13.3	+0.8
BUR08	**Bucovina Ar. S**	**145.46**	**337**	*e*PKPdf	PKPdf	19 03 13.3	+0.4
BURAR	**Bucovina Array**	**145.48**	**337**	⇑*iP*	PKPdf	19 03 13.8	+0.9
TIRR	**Tirgusor**	**146.59**	**330**	⇓*iP*	PKPdf	19 03 11.7	-3.2
VYHS	**Vyhne**	**146.77**	**344**	*e*PKP	PKPdf	19 03 16.4	+1.3
BR131	**Keskin Array S**	**146.80**	**319**	*e*PKPbc	PKPbc	19 03 17.2	-0.1
BRTR	**Keskin Array B**	**146.80**	**319**	PKPbc	PKPbc	19 03 17.4	+0.1
	comp=Z,2.7nm,0.8s,baz=127,slow=2.9,SNR=15						
MLR	**Muntele Rosu**	**146.91**	**334**	⇑*iP*	PKPbc	19 03 18.1	+0.7
BAIF	**Baives**	**146.96**	**2**	*e*PKP1	PKPbc	19 03 16.1	-1.3
	comp=Z,8.2nm,0.9s						
VOIR		**147.33**	**334**	⇓*iP*	PKPbc	19 03 18.4	-0.2
GERES	**GERESS Array B**	**147.54**	**350**	PKPbc	PKPbc	19 03 18.8	-0.3
	comp=Z,1.8nm,0.9s,baz=56,slow=3.4,SNR=6.9						
ROSF	**Rostrenen**	**147.85**	**11**	*e*PKP1	PKPbc	19 03 18.7	-1.2
	comp=Z,8.8nm,0.8s						
FLN	**La Foliniere**	**147.88**	**8**	*e*PKP1	PKPbc	19 03 19.1	-0.9
	comp=Z,13nm,0.7s						
SGMF	**Saint Gilles**	**148.06**	**10**	*e*PKP1	PKPbc	19 03 19.4	-1.1
	comp=Z,14nm,0.9s						
LDF	**La Druitiere**	**148.09**	**7**	*e*PKP1	PKPbc	19 03 19.5	-1.0
	comp=Z,14nm,0.9s						
GRR	**Gorron**	**148.20**	**8**	*e*PKP1	PKPbc	19 03 20.1	-0.7
	comp=Z,18nm,0.8s						
QUIF	**Quistinic**	**148.28**	**11**	*e*PKP1	PKPbc	19 03 20.0	-1.0
BZS	**Buzias**	**148.49**	**338**	⇑*iP*	PKPbc	19 03 21.3	-0.4
MEZF	**Maizieres J'vi**	**148.54**	**1**	*e*PKP1	PKPbc	19 03 21.5	-0.2
CDF	**Champ du Feu**	**148.61**	**358**	*e*PKP1	PKPbc	19 03 21.5	-0.4
	comp=Z,9.0nm,0.8s						
HAU	**Haudompre**	**149.04**	**359**	*e*PKP1	PKPbc	19 03 22.6	-0.4
HINF	**Hinteralfeld**	**149.22**	**359**	*e*PKP1	PKPbc	19 03 22.7	-0.7
	comp=Z,3.3nm,0.6s						
LOR	**Lormes**	**149.74**	**3**	*e*PKP1	PKPbc	19 03 24.3	-0.4
	comp=Z,9.1nm,0.8s						
SSF	**Saint Saulge**	**149.93**	**3**	*e*PKP1	PKPbc	19 03 24.9	-0.3
	comp=Z,26nm,1.1s						
MFF	**Saint Martin d**	**150.04**	**8**	*e*PKP1	PKPbc	19 03 24.7	-0.8
	comp=Z,4.6nm,0.6s						
AVF	**Avril sur Loir**	**150.19**	**3**	*e*PKP1	PKPbc	19 03 25.1	-0.7
	comp=Z,7.8nm,0.8s						
SMF	**Signal de Mont**	**150.36**	**3**	*e*PKP1	PKPbc	19 03 25.6	-0.7
BGF	**Bois d'Agland**	**150.39**	**4**	*e*PKP1	PKPbc	19 03 25.8	-0.5
	comp=Z,11nm,0.7s						
CABF	**La Chapelle**	**150.43**	**359**	*e*PKP1	PKPbc	19 03 26.6	+0.2
	comp=Z,21nm,0.9s						
TCF	**Toulx Ste Croi**	**150.61**	**5**	*e*PKP1	PKPbc	19 03 26.1	-0.8
	comp=Z,7.0nm,0.7s						
LPL	**La Plagne**	**151.52**	**359**	*e*PKP1	PKPbc	19 03 29.5	+0.5
	comp=Z,5.7nm,0.8s						
LPG	**La Plagne**	**151.54**	**358**	*e*PKP1	PKPbc	19 03 29.7	+0.7
LFF	**La Frestale**	**151.79**	**8**	*e*PKP1	PKPbc	19 03 28.8	-0.9
ORIF	**Oris-en-Rattie**	**152.13**	**360**	*e*PKP1	PKPbc	19 03 31.1	+0.7
MBDF	**Montbardon**	**152.31**	**358**	*e*PKP1	PKPbc	19 03 31.3	+0.5
	comp=Z,5.8nm,0.8s						
SMRF	**Simiane la Rot**	**153.07**	**0**	*e*PKP1	PKPbc	19 03 32.6	+0.1
	comp=Z,35nm,1.2s						
TORD	**Torodi Ar. Bea**	**174.56**	**134**	PKP	PKPdf	19 03 43.5	-2.0
	comp=Z,0.9nm,1.0s,baz=242,slow=2.8,SNR=3.3						

NIED ***10*** *19:13:00,46°.80N×153°.00E,h41km,Mw4.3 Best double couple: M₀2.82000×10¹⁵ NP1:φs133.00000°,δ87.00000°, λ-24.00000°. NP2:φs224.00000°,δ66.00000°, λ-177.00000°.*

SKHL ***10*** *19:13:00.6±0.5,46°.87N×153°.22E,h99km±20km,mb5.1/6, Ms3.8/1,msh5.9/2*

BJI ***10*** *19:13:01.0,47°.05N×152°.82E,h64km,mB4.8/17,mb4.4/24, Ms4.3/16,Ms7 4.0/17*

ISCJB ***10*** *19:13:01.9±0.5,47°.02N±0°.04×152°.69E±0°.03,h60km±5km, mb4.3/71,Error ellipse: s-maj=7.4km s-min=3.2km az=160.3*

NEIC ***10*** *19:13:02.6±0.9,47°.01N×152°.66E,h55km±7km,mb4.4/45, Error ellipse: s-maj=8.4km s-min=4.7km az=148.0*

MOS ***10*** *19:13:02.3±1.1,47°.02N×152°.80E,h67km,mb4.3/14,Error ellipse: s-maj=9.8km s-min=7.6km az=90.1*

IDC ***10*** *19:13:03.6±0.6,47°.02N×152°.66E,h60km±5km,mb3.8/21, mb1 4.0/22,mb1mx4.0/28,mbtmp3.8/22,MS3.2/5, Ms1 3.2/5,ms1mx2.8/38,Error ellipse: s-maj=15.1km s-min=10.9km az=150.0*

ISC 10 19:13:04.5±0.4,47°.07N±0°.04×152°.63E±0°.04,h66km±4km, h62km±.7km:pP-P,n357,σ0°75/373,mb4.2/71,66C-104D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.79**	**243**	PN	**Pn**	**19 14 00.5**	**+0.1**
KUR				*e*S	**Sn**	**19 14 45.0**	**+1.4**
KUR				pmax	pmax		
	comp=Z,320nm,1.0s						
KUR				smax			
	comp=N,2μm,1.6s						
KUR				smax			
	comp=E,2μm,1.6s						
KUR				smax			
	comp=E,610μm,0.5s						
KUR				smax			
	comp=E,290nm,0.5s						
KUR	**Kuril'sk**	**3.79**	**243**	*e*P	**Pn**	**19 14 00.5**	**+0.1**
KUR				AMB	AMB	19 14 02.5	
	comp=E,320nm,1.0s						
KUR				*e*S	**Sn**	**19 14 45.0**	**+1.4**
KUR				A		19 14 49.4	
	comp=E,2μm,1.6s						
KUR				A		19 14 49.4	
	comp=E,2μm,1.6s						
KUR				A		19 15 07.5	
	comp=E,610nm,0.5s						
KUR				A		19 15 07.5	
	comp=E,290nm,0.5s						
SKR	**Severo-Kuril's**	**4.29**	**31**	*e*PN	**Pn**	**19 14 04.0**	**-3.2**
SKR				*e*S	**Sn**	**19 14 52.0**	**-3.9**
SKR				pmax	pmax		
	comp=Z,60nm,0.8s						
SKR				pmax	pmax		
	comp=N,50nm,0.3s						
SKR				smax			
	comp=N,200nm,0.3s						
SKR				smax			
	comp=E,210nm,0.3s						
SKR	**Severo-Kuril's**	**4.29**	**31**	*e*P	**Pn**	**19 14 04.0**	**-3.2**
SKR				AMB	AMB	19 14 06.0	
	comp=E,50nm,0.3s						
SKR				AMB	AMB	19 14 06.0	
	comp=E,60nm,0.8s						
SKR				*e*S	**Sn**	**19 14 52.0**	**-3.9**
SKR				A		19 14 57.0	
	comp=E,200nm,0.2s						
SKR				A		19 14 57.0	
	comp=E,210nm,0.2s						
SKR				A		19 14 57.0	
	comp=E,50nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.64**	**240**	*e*PN	**Pn**	**19 14 26.5**	**+0.8**
YUK				*e*S	**Sn**	**19 15 30.8**	**+1.8**
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				smax			
	comp=N,410nm,0.8s						
YUK				smax			
	comp=E,320nm,0.7s						
YUK				smax			
	comp=N,2μm,2.0s						
YUK				smax			
	comp=E,2μm,0.9s						
YUK	**Yuzh-Kuril'sk**	**5.64**	**240**	*e*P	**Pn**	**19 14 26.5**	**+0.8**
YUK				AMB	AMB	19 14 27.0	
	comp=E,180nm,0.3s						
YUK				*e*S	**Sn**	**19 15 30.8**	**+1.8**
YUK				A		19 15 34.2	
	comp=E,320nm,0.7s						
YUK				A		19 15 34.2	
	comp=E,410nm,0.8s						
YUK				A		19 15 53.1	
	comp=E,2μm,0.9s						
YUK				A		19 15 53.1	
	comp=E,2μm,2.0s						
NEM2	**Nemuro 2**	**6.11**	**235**	P	**Pn**	**19 14 30.0**	**-2.2**
NEM2				*e*S	**Sn**	**19 15 35.6**	**-5.0**
JRA	**Rausu**	**6.13**	**242**	P	**Pn**	**19 14 33.6**	**+1.1**
JNK	**Nakash**	**6.57**	**241**	P	**Pn**	**19 14 38.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.75**	**273**	⇑*e*PN	**Pn**	**19 14 43.8**	**+2.9**
YSS				*e*S	**Sn**	**19 16 01.4**	**+5.0**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				smax			
	comp=E,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.75**	**273**	*e*Pn	**Pn**	**19 14 43.6**	**+2.6**
	comp=Z,40nm,0.9s						
YSS	**Yuzh-Sakhalins**	**6.75**	**273**	⇑*e*P	**Pn**	**19 14 43.8**	**+2.9**
YSS				AMB	AMB	19 14 46.0	
	comp=Z,40nm,1.0s						
YSS				*e*S	**Sn**	**19 16 01.4**	**+5.0**
YSS				A		19 16 03.0	
	comp=Z,30nm,0.7s						
YSS				AMS	AMS	19 17 42.0	
	comp=Z,500nm,15.0s						
JTKR	**Abashiri--Toko**	**6.87**	**246**	P	**Pn**	**19 14 43.9**	**+1.4**
PEA0B	**Petropavlovsk-**	**6.87**	**26**	*e*Pn	**Pn**	**19 14 42.1**	**-0.4**
PETK	**Petropavlovsk-**	**6.87**	**26**	P	**Pn**	**19 14 43.1**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=176,slow=12,SNR=20						
PETK				LR	LR	19 17 30.8	
	comp=Z,92nm,21.4s,baz=210,slow=39						
JAK	**Akkeshi**	**6.94**	**237**	P	**Pn**	**19 14 41.4**	**-2.1**
JAK				*e*S	**Sn**	**19 15 56.4**	**-4.5**
PET	**Petropavlovsk**	**7.11**	**31**	*e*PN	**Pn**	**19 14 50.1**	**+4.3**
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET	**Petropavlovsk**	**7.11**	**31**	*e*Pn	**Pn**	**19 14 38.1**	**-7.6**
JMP	**Maruseppu**	**7.19**	**248**	P	**Pn**	**19 14 49.5**	**+2.6**
JAR	**Ashorobuto**	**7.31**	**242**	P	**Pn**	**19 14 48.8**	**+0.3**
UGL	**Uglegorsk**	**7.36**	**290**	*e*P	**Pn**	**19 14 53.0**	**+3.8**
UGL				AMB	AMB	19 14 54.5	
	comp=Z,110nm,0.8s						
JOB	**Onbets**	**7.50**	**239**	P	**Pn**	**19 14 50.0**	**-1.1**
ASAJ	**Asahikawa**	**7.63**	**251**	P	**Pn**	**19 14 55.9**	**+3.0**
ASAJ	**Asahikawa**	**7.63**	**251**	PN	**Pn**	**19 14 56.0**	**+3.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,89nm,18.3s						
ASAJ	**Asahikawa**	**7.63**	**251**	P	**Pn**	**19 14 56.0**	**+3.0**
	comp=Z,2.4nm,0.3s,baz=72,slow=14,SNR=20						
ASAJ				LR	LR	19 18 07.7	
	comp=Z,89nm,18.3s,baz=74,slow=40						
JKK2	**Kamakawa 2**	**7.65**	**249**	P	**Pn**	**19 14 55.3**	**+2.2**
JWK2	**Keihoku**	**7.65**	**261**	P	**Pn**	**19 14 58.6**	**+5.4**
JCH	**Churui**	**7.95**	**239**	P	**Pn**	**19 14 55.7**	**-1.6**
JCH				*e*S	**Sn**	**19 16 21.2**	**-4.4**
JAB	**Ashibetsu**	**8.16**	**248**	P	**Pn**	**19 15 02.4**	**+2.3**
ERM	**Erimo**	**8.44**	**237**	*d iPN*	**Pn**	**19 15 04.9**	**+0.9**
ERM	**Erimo**	**8.44**	**237**	*e*Pn	**Pn**	**19 15 03.0**	**-1.1**
	comp=Z,45nm,0.6s						
ERM				*e*Sn	**Sn**	**19 16 40.4**	**+2.7**
JEM	**Erimo**	**8.44**	**237**	P	**Pn**	**19 15 02.8**	**-1.2**
JNBK	**Urakawa-nobuka**	**8.51**	**239**	P	**Pn**	**19 15 02.8**	**-2.1**
JNB	**Noboribetsu**	**9.44**	**245**	P	**Pn**	**19 15 17.4**	**-0.2**
JKB	**Kayabe**	**9.77**	**242**	P	**Pn**	**19 15 19.8**	**-2.4**
NKL	**Nikolayevsk**	**9.79**	**313**	*e*P	**Pn**	**19 15 22.0**	**-0.4**
NKL				AMB	AMB	19 15 24.0	
	comp=Z,50nm,1.2s						
NKL				AMB	AMB	19 15 24.0	
	comp=Z,60nm,1.2s						
NKL				AMB	AMB	19 15 24.0	
	comp=Z,70nm,1.2s						
NKL				*e*L		19 18 12.0	
NKL				AMS	AMS	19 20 22.0	
	comp=Z,300nm,14.0s						
NKL				AMS	AMS	19 20 22.0	
	comp=Z,500nm,14.0s						
JYM2	**Yakumo 2**	**10.04**	**245**	P	**Pn**	**19 15 24.8**	**-1.1**
JTM	**Tenmabayashi**	**10.43**	**237**	P	**Pn**	**19 15 27.9**	**-3.3**
JANG	**Nango**	**10.46**	**234**	P	**Pn**	**19 15 27.0**	**-4.5**
JANG				*e*S	**Sn**	**19 17 16.0**	**-11**
JRG	**Rokugo**	**11.62**	**233**	P	**Pn**	**19 15 43.5**	**-4.0**
KLR	**Kul'dur**	**14.11**	**286**	*e*P	**Pn**	**19 16 22.0**	**+1.2**
MAJO	**Matsushiro**	**15.02**	**231**	*e*Pn	**Pn**	**19 16 28.8**	**-4.0**
	comp=Z,11nm,0.8s						
MAT	**Matsushiro**	**15.02**	**231**	P	**Pn**	**19 16 29.4**	**-3.4**
MJAR	**Matsushiro Arr**	**15.02**	**231**	P	**Pn**	**19 16 29.3**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=5.2						
VLA	**Vladivostok**	**15.16**	**262**	*i* P	**Pn**	**19 16 35.4**	**+0.8**
MDJ	**Mudanjiang**	**16.23**	**270**	P	**Pn**	**19 16 46.7**	**-1.5**
MDJ				pP	pP	19 17 01.1	-2.7
MDJ				sP	sP	19 17 09.3	-2.9
MDJ				S	**S**	**19 19 45.3**	**-11**
MDJ				ScP	ScP	19 25 07.6	+0.4
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,53nm,6.5s						
MDJ				LR	LR		
	comp=Z,100nm,27.2s						
CN2	**Changchun**	**19.32**	**270**	*e*P	**Pn**	**19 17 25.5**	**-0.2**
YAK	**Yakutsk**	**19.88**	**327**	*e*P	**Pn**	**19 17 32.4**	**+0.2**
YAK				*e*S	**S**	**19 21 15.2**	**+5.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax			
	comp=N,38nm,3.1s						
YAK				smax			
	comp=E,11nm,1.3s						
YAK	**Yakutsk**	**19.88**	**327**	*e*P	**Pn**	**19 17 25.6**	**-6.5**
	comp=E,10nm,0.6s						
KSRS	**Korea Array**	**20.58**	**251**	P	**P**	**19 17 38.7**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,32nm,20.0s						
KSRS	**Korea Array**	**20.58**	**251**	P	**P**	**19 17 38.6**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=53,slow=11,SNR=12						
KSRS				LR	LR	19 24 58.4	
	comp=Z,32nm,20.0s,baz=185,slow=35						
BILL	**Bilibino**	**22.16**	**14**	*e*P	**P**	**19 17 54.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,12nm,2.8s,mb3.7						
BILL	**Bilibino**	**22.16**	**14**	*e*P	**P**	**19 17 50.6**	**-3.9**
	comp=Z,6.4nm,1.3s,mb3.8						
BOD	**Bodaibo**	**25.53**	**309**	*e*P	**P**	**19 18 22.8**	**-3.8**
BJI	**Beijing**	**27.15**	**268**	P	**P**	**19 18 41.9**	**+0.5**
BJI				S	**S**	**19 23 07.5**	**-7.5**
BJI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3						
BJI				pmax	pmax		
	comp=Z,140nm,8.0s						
BJI				LR	LR		
	comp=N,280nm,12.3s						
BJI				LR	LR		
	comp=E,280nm,12.9s						
BJI				LR	LR		
	comp=Z,210nm,16.4s						
NJ2	**Nanjing**	**29.78**	**252**	*e*P	**P**	**19 19 06.4**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
HHC	**Hu-ho-hao-te**	**29.94**	**273**	*e*P	**P**	**19 19 06.0**	**-0.2**
HHC				pP	pP	19 19 20.1	-2.1
HHC				sP	sP	19 19 28.6	-1.3
HHC				PP	PP	19 20 04.9	-10
HHC				PcP	PcP	19 22 08.4	+1.2
HHC				S	**S**	**19 23 58.1**	**-0.8**
HHC				sS	sS	19 24 20.6	-5.6
HHC				SS	SS	19 25 35.3	-33
HHC				ScP	ScP	19 25 44.2	+0.9
HHC				PcS	PcS	19 25 51.3	+0.8
HHC				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=N,290nm,11.8s						
HHC				LR	LR		
	comp=E,280nm,10.7s						
HHC				LR	LR		
	comp=Z,340nm,11.7s						
ULN	**Ulaanbaatar**	**30.48**	**289**	*e*P	**P**	**19 19 10.5**	**-0.3**
	comp=Z,3.0nm,0.9s,mb3.9						
ULN				*e*		19 19 17.5	
SONM	**Songino Array**	**30.92**	**289**	P	**P**	**19 19 14.4**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,121nm,19.0s						
SONM	**Songino Array**	**30.92**	**289**	P	**P**	**19 19 14.4**	**-0.3**
	comp=Z,0.5nm,0.8s,mb3.3,baz=66,slow=12,SNR=4.3						
SONM				LR	LR	19 32 49.1	
	comp=Z,121nm,19.0s,baz=90,slow=38						
GUMO	**Guam**	**34.00**	**194**	LR	LR	19 32 38.4	
	comp=Z,76nm,20.4s,baz=48,slow=35						
XAN	**Xi'an**	**35.22**	**264**	P	**P**	**19 19 51.3**	**-1.0**
XAN				PP	PP	19 21 11.9	-1.2
XAN				S	**S**	**19 25 20.3**	**-0.6**
XAN				sS	sS	19 25 46.4	-2.1
XAN				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.6						
XAN				pmax	pmax		
	comp=Z,24nm,5.6s						
COLD	**Coldfoot**	**35.26**	**35**	*e*P	**P**	**19 19 51.2**	**-1.1**
	comp=Z,3.2nm,0.9s,mb4.2						
COLD				*e*	pP	19 20 07.7	-0.7
PMR	**Palmer**	**35.60**	**44**	P	**P**	**19 19 54.8**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.4						
MCK	**McKinley**	**35.62**	**41**	P	**P**	**19 19 55.2**	**-0.3**
	comp=Z,6.3nm,1.0s,mb4.5						
COLA	**College**	**36.10**	**39**	*e*P	**P**	**19 19 59.1**	**-0.3**
	comp=Z,4.1nm,0.8s,mb4.4						
LZH	**Lanzhou**	**37.55**	**271**	*e*P	**P**	**19 20 11.2**	**-0.9**
LZH				pP	pP	19 20 26.5	-1.9
LZH				sP	sP	19 20 33.6	-2.5
LZH				*e*PP	PP	19 21 40.3	+1.5
LZH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
LZH				pmax	pmax		
	comp=Z,47nm,4.6s						
LZH				LR	LR		
	comp=E,300nm,13.4s						
LZH				LR	LR		
	comp=Z,410nm,17.5s						
GTA	**Gaotai**	**38.60**	**278**	*e*P	**P**	**19 20 20.8**	**-0.1**
GTA				pP	pP	19 20 36.0	-1.2
GTA				sP	sP	19 20 43.2	-1.7
GTA				PP	PP	19 21 54.0	+3.8
GTA				S	**S**	**19 26 12.1**	**-0.1**
GTA				sS	sS	19 26 38.6	-1.4
GTA				SS	SS	19 28 56.1	-8.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
GTA				pmax	pmax		
	comp=Z,69nm,4.5s						
GTA				LR	LR		
	comp=N,200nm,16.7s						
GTA				LR	LR		
	comp=E,180nm,13.4s						
GTA				LR	LR		
	comp=Z,170nm,15.2s						
EGAK	**Eagle**	**38.96**	**39**	*e*P	**P**	**19 20 22.5**	**-1.1**
	comp=Z,4.6nm,1.0s,mb4.3						
CD2	**Chengdu**	**40.58**	**264**	P	**P**	**19 20 37.5**	**0.0**
CD2				pP	pP	19 20 52.8	-1.1
CD2				sP	sP	19 21 00.0	-1.6
CD2				PP	PP	19 22 15.5	+3.6
CD2				S	**S**	**19 26 42.0**	**0.0**
CD2				sS	sS	19 27 09.3	-0.7
CD2				SS	SS	19 29 40.5	-3.5
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,190nm,5.5s						
CD2				LR	LR		
	comp=N,520nm,10.7s						
CD2				LR	LR		
	comp=E,540nm,10.1s						
GYA	**Guiyang**	**41.46**	**257**	P	**P**	**19 20 45.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
INK	**Inuvik**	**41.56**	**33**	P	**P**	**19 20 45.6**	**+0.5**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**41.56**	**33**	P	**P**	**19 20 45.5**	**+0.5**
	comp=Z,5.1nm,0.8s,mb4.3,baz=283,slow=7.5,SNR=21						
INK	**Inuvik**	**41.56**	**33**	*e*P	**P**	**19 20 45.3**	**+0.2**
	comp=Z,5.8nm,0.9s,mb4.3						
ZALV	**Zalesovo Beam**	**42.16**	**305**	P	**P**	**19 20 49.3**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.5,baz=104,slow=6.1,SNR=2.8						
ZALV				PcP	PcP	19 22 42.8	-0.5
	comp=Z,3.3nm,0.8s,baz=79,slow=3.2,SNR=11						
WMQ	**Urumqi**	**44.51**	**291**	*e*P	**P**	**19 21 09.7**	**+0.6**
WMQ				LR	LR		
	comp=N,100nm,17.0s						
WMQ				LR	LR		
	comp=E,55nm,21.0s						
WMQ				LR	LR		
	comp=Z,110nm,18.0s						
KMI	**Kunming**	**44.98**	**259**	P	**P**	**19 21 13.0**	**-0.1**
KMI				pP	pP	19 21 29.0	-0.8
KMI				sP	sP	19 21 35.9	-1.5
KMI				PP	PP	19 23 00.5	+1.3
KMI				S	**S**	**19 27 46.7**	**0.0**
KMI				sS	sS	19 28 14.7	-0.3
KMI				SS	SS	19 31 00.4	-10
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
KMI				pmax	pmax		
	comp=Z,46nm,4.0s						
KMI				LR	LR		
	comp=N,180nm,13.1s						
KMI				LR	LR	

YKA *PP pP 19 22 13.8 -1.3
YKA 19 23 13.4
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 50.87 37 P P 19 21 58.2 +0.1
comp=Z,1.1nm,0.7s,mb4.0,baz=296,slow=7.1,SNR=10
YKA pP pP 19 22 13.8 -1.3
comp=Z,2.8nm,0.8s,baz=298,slow=7.5,SNR=16
YKA PcP PcP 19 23 13.4 -0.3
comp=Z,0.8nm,0.6s,baz=302,slow=3.5,SNR=6.8
YKA Yellowknife Ar 50.87 37 P P 19 21 58.2 +0.1
YKA pP pP 19 22 13.8 -1.3
YKA PcP PcP 19 23 13.4 -0.3
CHTO Chiang Mai 51.87 256 *eP* **P 19 22 06.4 +0.2**
comp=Z,5.3nm,1.0s,mb4.5
CM31 Chiang Mai Arr 52.13 256 *eP* **P 19 22 08.4 +0.4**
CMAR Chiang Mai Arr 52.13 256 P P 19 22 09.3 +1.2
CMAR pmax pmax
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 52.13 256 P P 19 22 09.2 +1.2
comp=Z,2.7nm,0.7s,mb4.4,baz=37,slow=7.2,SNR=24
AAK Ala-Archa 53.40 296 ⇑*iP* **P 19 22 18.0 +0.8**
AAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.9
AAK Ala-Archa 53.40 296 P P 19 22 18.6 +1.4
comp=Z,1.1nm,0.6s,mb4.0,baz=98,slow=3.7,SNR=4.2
AAK Ala-Archa 53.40 296 P P 19 22 15.6 -1.6
AAK P 19 22 18.6
EKS2 Erkin-Say 53.83 296 *eP* **P 19 22 20.4 +0.1**
comp=Z,2.9nm,0.9s,mb4.3
ARU Arti 54.56 317 P P 19 22 25.4 0.0
comp=Z,6.6nm,1.1s,mb4.6
A07A Ashnola River, 55.02 53 ⇓P **P 19 22 28.4 -0.5**
baz=55
A08A Turner Farm, O 55.68 53 ⇓P **P 19 22 33.5 -0.1**
baz=55
B08A Colville Reser 55.98 54 ⇓P **P 19 22 35.5 -0.3**
baz=56
A09A Danville 56.04 53 ⇓P **P 19 22 36.0 -0.2**
baz=56
HOOD Mount Hood Mea 56.41 58 *eP* **P 19 22 34.1 -4.7**
comp=Z,82nm,1.0s
ABKAR Akbulak array 57.97 309 *eP* **P 19 22 48.9 -1.0**
G08A Pilot Rock 57.97 56 ⇓P **P 19 22 49.4 -0.5**
baz=58
A13A Flathead Natio 58.30 51 ⇑P **P 19 22 52.1 0.0**
baz=58
K05A Summer Lake 58.38 60 ⇓P **P 19 22 53.5 +0.8**
baz=58
I07A Izee 58.38 58 ⇑P **P 19 22 52.4 -0.4**
baz=58
KSM Kuching 58.41 232 P P 19 22 52.7 -0.6
comp=Z,6.2nm,1.0s,mb4.6
H08A Prairie City 58.59 57 ⇑P **P 19 22 54.7 +0.5**
baz=58
B13A Whitefish 58.61 51 ⇑P **P 19 22 54.7 +0.4**
baz=58
A14A Double T Ranch 58.80 50 ⇓P **P 19 22 55.2 -0.4**
baz=58
C13A Hot Springs 58.97 52 ⇓P **P 19 22 56.9 +0.1**
baz=59
A15A Johnson Ranch, 59.16 50 ⇓P **P 19 22 57.8 -0.3**
baz=59
D13A Huson 59.39 52 ⇑P **P 19 22 59.2 -0.5**
baz=59
J08A Circle Bar Ran 59.41 58 ⇑P **P 19 23 00.2 +0.3**
baz=59
G11A Walters Elk Ra 59.42 55 ⇓P **P 19 23 00.0 +0.1**
baz=59
B15A Bradely Ranch, 59.66 50 ⇓P **P 19 23 01.3 -0.3**
baz=59
F12A Elk City 59.77 54 ⇓P **P 19 23 02.6 +0.3**
baz=60
A16A West Butte Ran 59.77 49 ⇑P **P 19 23 02.4 +0.1**
baz=60
SLMT Seeley Lake 59.82 52 *eP* **P 19 23 02.6 -0.1**
comp=Z,9.1nm,1.3s,mb4.7
J09A Fry Pan Ranch, 59.83 58 ⇓P **P 19 23 02.9 +0.1**
baz=60
WVOR Wild Horse Val 59.88 59 P P 19 22 59.4 -3.8
comp=Z,5.0nm,0.9s,mb4.5
E13A Victor 59.94 53 ⇓P **P 19 23 03.5 0.0**
baz=60
C15A Salmond Ranch, 59.97 51 ⇑P **P 19 23 04.5 +0.9**
baz=60,SNR=12
H11A Donnelly 59.99 55 ⇓P **P 19 23 03.7 -0.2**
baz=60
B16A M & M Farms, S 60.05 50 ⇓P **P 19 23 04.0 -0.1**
baz=60
G12A Big Creek, Yel 60.12 55 ⇑P **P 19 23 04.6 -0.2**
baz=60
F13A Darby 60.26 54 ⇓P **P 19 23 05.6 -0.1**
baz=60
E14A Clinton 60.33 53 ⇓P **P 19 23 06.1 -0.1**
baz=60
C16A Fuhringer Ranc 60.41 50 ⇑P **P 19 23 06.6 0.0**
baz=60
SUMG Summit 60.41 4 *eP* **P 19 23 06.0 -0.2**
comp=Z,22nm,0.9s,mb5.2
BEKR Beckwourth 60.44 62 ⇑P **P 19 23 07.1 +0.1**
baz=60
D15A Lincoln 60.47 52 ⇓P **P 19 23 07.0 -0.1**
baz=60
B17A L&G Farms, Che 60.59 50 ⇓P **P 19 23 07.7 -0.3**
baz=60
A18A Metzger Ranch, 60.69 49 ⇓P **P 19 23 08.0 -0.5**
baz=60
K10A MacKenzie Ranc 60.69 58 ⇑P **P 19 23 08.8 +0.2**
baz=60
FFC Flin Flon 60.71 40 *eP* **P 19 23 08.2 -0.4**
FFC *e* pP 19 23 24.0 -2.0
G13A Cobalt 60.75 54 ⇓P **P 19 23 09.0 0.0**
baz=60,SNR=5.4
E15A Deer Lodge 60.79 52 ⇓P **P 19 23 09.4 +0.2**
baz=60
JOF Joensuu 60.91 333 *eP* **P 19 23 11.2 +1.4**
JOF Joensuu 60.91 333 *ep* **P 19 23 11.2 +1.4**
C17A Wharram Farm, 61.03 50 ⇓P **P 19 23 10.9 0.0**
baz=61
I12A Atlanta 61.05 56 ⇓P **P 19 23 11.3 +0.2**
baz=61
B18A Beardsley Farm 61.06 49 ⇑P **P 19 23 11.0 0.0**
baz=61
H13A Challis 61.06 55 ⇓P **P 19 23 11.5 +0.3**
baz=61
FCC Fort Churchill 61.18 33 *eP* **P 19 23 10.8 -0.9**
comp=Z,0.1nm,0.7s
F15A Butte 61.23 53 ⇑P **P 19 23 12.4 +0.1**
baz=61,SNR=7.4
LRM Limekiln Ridge 61.27 53 *eP* **P 19 23 12.3 -0.2**
comp=Z,17nm,0.9s,mb5.1
LRM *e* pP 19 23 28.2 -1.8
EGMT Eagleton 61.31 49 ⇑P **P 19 23 12.6 -0.1**
baz=61
L10A Juniper Basin 61.36 58 ⇓P **P 19 23 13.5 +0.3**
baz=61
D17A Six Diamond Ra 61.37 51 ⇓P **P 19 23 13.6 +0.4**
baz=61
J12A Stokes Ranch, 61.41 56 ⇓P **P 19 23 13.7 +0.1**
baz=61
H14A Leadore 61.52 54 ⇓P **P 19 23 14.1 -0.2**
baz=61
I13A Wildhorse Cree 61.55 55 ⇓P **P 19 23 15.1 +0.6**
baz=61
HLID Hailey 61.60 56 ⇑P **P 19 23 15.2 +0.4**
baz=61
HLID Hailey 61.60 56 P P 19 23 13.2 -1.6
comp=Z,4.5nm,1.2s,mb4.4
KBL Kabul 61.64 291 P P 19 23 13.7 -1.5
comp=Z,2.4nm,0.8s,mb4.3
G15A Dillon 61.66 53 ⇑P **P 19 23 15.6 +0.4**
baz=61
M10A I.L. Ranch, Tu 61.67 59 ⇓P **P 19 23 15.9 +0.6**
baz=61
E17A Martinsdale 61.72 51 ⇓P **P 19 23 16.3 +0.7**
baz=61,SNR=6.3
L11A Cat Creek Ranc 61.72 58 ⇓P **P 19 23 16.3 +0.7**
baz=62
F16A Kennard Place, 61.74 52 ⇓P **P 19 23 15.9 +0.2**
baz=62
BOZ Bozeman (W) 61.82 52 ⇑P **P 19 23 16.7 +0.4**
baz=62
J13A Cove Ranch, Pi 61.84 56 ⇓P **P 19 23 16.9 +0.5**
baz=62
K12A Draper Farm, C 61.91 57 ⇓P **P 19 23 17.4 +0.5**
baz=62
I14A Mackay 61.91 55 ⇓P **P 19 23 17.4 +0.5**
baz=62
G16A Moss Hill, Enn 61.99 53 ⇓P **P 19 23 18.0 +0.6**
baz=62
F17A Fitzpatrick Pl 62.18 52 ⇓P **P 19 23 19.2 +0.5**
baz=62
NVAR Mina Array Bea 62.58 62 P P 19 23 21.8 +0.4
comp=Z,0.8nm,0.6s,mb3.9,baz=299,slow=7.3,SNR=9.7
NVAR pP pP 19 23 37.7 -1.2
comp=Z,1.1nm,0.8s,baz=282,slow=7.2,SNR=5.1
NVAR Mina Array Bea 62.58 62 P P 19 23 21.8 +0.4
NVAR pP pP 19 23 37.7 -1.2
H16A Russell Place, 62.63 53 ⇓P **P 19 23 22.0 +0.3**
baz=62
M12A Wells 62.68 58 ⇓P **P 19 23 22.4 +0.3**
baz=62
F18A Big Timber 62.69 51 ⇑P **P 19 23 22.3 +0.3**
baz=62
K14A Jones Ranch, D 62.95 56 ⇑P **P 19 23 24.4 +0.5**
baz=63
KAF Kangasniemi 63.02 335 *eP* **P 19 23 22.9 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KAF Kangasniemi 63.02 335 *ep* **P 19 23 22.9 -1.1**
comp=Z,2.5nm,0.7s,mb4.2
O11A Cowboy Ranch, 63.07 59 ⇓P **P 19 23 25.0 +0.3**
baz=63
G18A Lazy EL Ranch, 63.15 52 ⇓P **P 19 23 25.0 -0.1**
baz=63
M13A Montello 63.15 57 ⇓P **P 19 23 25.1 -0.1**
baz=63
H17A Grant Village 63.20 53 ⇓P **P 19 23 26.8 +1.3**
baz=63
K15A Arbon 63.23 55 ⇓P **P 19 23 26.5 +0.9**
baz=63
L14A Malta 63.24 56 ⇓P **P 19 23 26.7 +0.9**
baz=63
J16A Bone 63.36 54 ⇑P **P 19 23 27.5 +1.0**
baz=63,SNR=5.5
RLMT Red Lodge 63.43 52 ⇓P **P 19 23 27.7 +0.7**
baz=63
RRI2 Red Ridge 63.47 54 *eP* **P 19 23 28.1 +0.8**
comp=Z,7.5nm,0.8s,mb4.7
O12A Currie 63.52 59 ⇓P **P 19 23 28.2 +0.6**
baz=63
M14A Sheep Mountain 63.53 57 ⇑P **P 19 23 27.7 0.0**
baz=63
TPAW Teton Pass 63.58 54 *eP* **P 19 23 28.6 +0.6**
comp=Z,2.3nm,0.7s,mb4.1
FINES FINESS Array B 63.61 334 P P 19 23 27.8 -0.1
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES FINESS Array B 63.61 334 P P 19 23 27.8 -0.1
comp=Z,2.9nm,0.4s,mb4.5,baz=33,slow=7.3,SNR=36
L15A Malad City 63.75 56 ⇑P **P 19 23 29.5 +0.4**
baz=64
R10A Warm Springs 63.88 61 ⇑P **P 19 23 30.0 0.0**
baz=64
S10A Tonopah Range, 63.94 62 ⇑P **P 19 23 30.6 +0.2**
baz=64
M15A Larsen Ranch, 64.06 56 ⇓P **P 19 23 31.4 +0.2**
baz=64,SNR=5.9
R11A Troy Canyon, C 64.26 61 ⇓P **P 19 23 32.5 -0.1**
baz=64
HWUT Hardware Ranch 64.47 56 *eP* **P 19 23 32.9 -0.9**
comp=Z,3.7nm,1.1s,mb4.1
MPMC Manual Prospec 64.60 64 ⇓P **P 19 23 34.1 -0.8**
baz=64
DUG Dugway 64.69 58 ⇓P **P 19 23 35.5 +0.2**
baz=64,SNR=5.3
DUG Dugway 64.69 58 *eP* **P 19 23 35.3 0.0**
comp=Z,2.5nm,1.0s,mb4.0
FURC Furnace Creek, 64.72 63 ⇑P **P 19 23 35.5 0.0**
baz=64
Q13A Wheeler Ranch, 64.80 59 ⇑P **P 19 23 36.0 0.0**
baz=65,SNR=5.1
BW06 Boulder Array 64.83 54 ⇓P **P 19 23 36.2 0.0**
baz=65,SNR=5.6
BW06 Boulder Array 64.83 54 *eP* **P 19 23 35.6 -0.6**
comp=Z,3.3nm,0.8s,mb4.2
PDAR Pinedale Array 64.83 54 P P 19 23 36.2 +0.1
comp=Z,2.7nm,0.8s,mb4.2,baz=321,slow=2.7,SNR=17
PDAR pP pP 19 23 52.8 -1.0
comp=Z,1.0nm,0.8s,baz=321,slow=1.9,SNR=2.8
P14A Drum Mountains 64.93 58 ⇓P **P 19 23 37.0 +0.1**
baz=65
EDW2 Edwards Air Fo 65.07 65 ⇓P **P 19 23 37.5 -0.4**
baz=65
L18A Fontenelle, Gr 65.12 55 ⇑P **P 19 23 38.1 0.0**
baz=65
K19A Absolon Red Bu 65.18 53 ⇓P **P 19 23 38.0 -0.4**
baz=65
T11A Corn Creek, Al 65.21 61 ⇓P **P 19 23 38.8 0.0**
baz=65
Q14A Sevier Lake (B 65.21 59 ⇑P **P 19 23 38.7 0.0**
baz=65
N17A Moffit Pass 65.32 56 ⇑P **P 19 23 39.6 +0.2**
baz=65
O16A Springville 65.43 57 ⇑P **P 19 23 40.4 +0.3**
baz=65
K20A Yellowstone Ra 65.57 53 ⇓P **P 19 23 40.4 -0.5**
baz=65
S13A Holt Ranch, En 65.80 60 ⇑P **P 19 23 42.7 +0.1**
baz=66
O17A Robinson Place 65.88 56 ⇑P **P 19 23 43.2 +0.2**
baz=66
V11A Goodsprings 66.01 63 ⇑P **P 19 23 44.2 +0.3**
baz=66
T13A Saint George 66.14 61 ⇓P **P 19 23 45.1 +0.4**
baz=66
O18A Roosevelt 66.24 56 ⇓P **P 19 23 45.6 +0.3**
baz=66
N19A John Jarvie Ra 66.29 55 ⇑P **P 19 23 45.0 -0.6**
baz=66
V12A Nelson 66.43 62 ⇓P **P 19 23 47.3 +0.7**
baz=66
M20A Sweetwater, Wa 66.44 54 ⇑P **P 19 23 46.9 +0.4**
baz=66
ULM Lac du Bonnet 66.50 41 P P 19 23 45.5 -1.3
comp=Z,1.1nm,0.5s,mb3.9,baz=297,slow=8.5,SNR=3.0
ULM Lac du Bonnet 66.50 41 P P 19 23 45.5 -1.3
U13A Pakoon Wash 66.51 61 ⇓P **P 19 23 47.2 +0.1**
baz=66
P18A Preston Nutter 66.54 57 ⇓P **P 19 23 47.3 +0.1**
baz=66
L21A Rawlins 66.57 53 ⇓P **P 19 23 47.4 0.0**
baz=66
GMRC Granite Mounta 66.57 64 ⇑P **P 19 23 47.2 -0.3**
baz=66
SRU San Rafael 66.72 57 ⇓P **P 19 23 48.5 +0.1**
baz=66,SNR=5.1
SRU San Rafael 66.72 57 *eP* **P 19 23 48.0 -0.4**
comp=Z,4.1nm,0.8s,mb4.3
R16A Teasdale 66.73 58 ⇓P **P 19 23 49.3 +0.9**
baz=66
M21A Separation Pea 66.81 53 ⇑P **P 19 23 48.9 0.0**
baz=66
N20A Spence Gulch, 66.84 55 ⇓P **P 19 23 49.5 +0.4**
baz=67
RSSD Black Hills 66.87 50 *eP* **P 19 23 48.6 -0.7**
Q18A Rafter H Ranch 66.95 57 ⇓P **P 19 23 49.8 -0.1**
baz=67
U14A Mt Trumbull 66.98 61 ⇑P **P 19 23 50.4 +0.3**
baz=67
R17A Hanksville Air 67.08 58 ⇓P **P 19 23 50.3 -0.4**
baz=67
P19A Cripple Cowboy 67.25 56 ⇑P **P 19 23 51.7 -0.1**
baz=67
U15A North Rim 67.50 60 ⇑P **P 19 23 53.5 +0.2**
baz=67
V14A Boquillas Ranc 67.55 62 ⇑P **P 19 23 53.5 -0.2**
baz=67
S17A Black Ridge (B 67.56 59 ⇓P **P 19 23 53.9 +0.1**
baz=67
R18A Canyonlands Na 67.58 57 ⇓P **P 19 23 53.4 -0.4**
baz=67
NB2 NORSAR Subarra 67.82 341 P P 19 23 54.7 -0.3
comp=Z,6.1nm,0.6s,mb4.6,baz=30,slow=6.5
NOA NORSAR Array B 67.82 341 P P 19 23 55.1 +0.1
NOA pmax pmax
comp=Z,6.0nm,0.7s
NOA NORSAR Array B 67.82 341 P P 19 23 55.0 +0.1
comp=Z,5.6nm,0.7s,mb4.5,baz=27,slow=6.3,SNR=20
W14A Seligman 67.84 62 ⇑P **P 19 23 56.2 +0.6**
baz=68
S18A Hurst Farm, Bl 67.99 58 ⇓P **P 19 23 56.1 -0.4**
baz=68
Q20A Ridgley Place, 68.10 56 ⇓P **P 19 23 56.6 -0.6**
baz=68
T18A Mexican Hat 68.44 58 ⇓P **P 19 23 58.4 -0.9**
baz=68
S19A Harvey Farm, M 68.45 58 ⇑P **P 19 23 59.2 -0.1**
baz=68
AFI Afiamalu 68.56 143 *eP* **P 19 24 03.8 +3.7**
comp=Z,68nm,0.5s
R20A Redvale 68.58 57 ⇓P **P 19 24 00.2 +0.1**
baz=68
Q21A Lamborn Mesa, 68.59 56 ⇓P **P 19 24 00.0 -0.2**
baz=68
WRAB Tennant Creek 68.69 198 P P 19 24 01.4 +0.6
comp=Z,4.0nm,1.1s,mb4.2
WRA Warramunga Arr 68.70 198 P P 19 23 59.4 -1.5
WRA *PP pP 19 24 16.6 -2.1
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 68.70 198 P P 19 23 59.4 -1.5
comp=Z,0.6nm,0.5s,mb3.7,baz=15,slow=6.7,SNR=7.5
WRA pP pP 19 24 16.6 -2.0
comp=Z,0.7nm,0.7s,baz=14,slow=6.6,SNR=3.2
X15A Humboldt 68.85 62 ⇓P **P 19 24 02.2 +0.3**
baz=69
Z13A Yuma Proving G 68.86 64 ⇑P **P 19 24 01.9 -0.1**
baz=69
R21A Cimarron 68.93 56 ⇑P **P 19 24 02.7 +0.4**
baz=69
V17A Tonalea, Kykot 68.94 60 ⇓P **P 19 24 02.9 +0.5**
baz=69,SNR=6.8
Q22A Crested Butte, 68.95 55 ⇓P **P 19 24 02.8 +0.4**
baz=69
Z14A Wintersburg 69.19 63 ⇓P **P 19 24 03.6 -0.4**
baz=69
MVCO Mesa Verde 69.19 58 ⇑P **P 19 24 03.7 -0.3**
baz=69
S21A Coal Bank Pass 69.28 57 ⇓P **P 19 24 05.0 +0.5**
baz=69
X16A Lo Mia Camp, P 69.37 61 ⇓P **P 19 24 05.5 +0.3**
baz=69
V18A Ganado 69.38 60 ⇓P **P 19 24 05.6 +0.4**
baz=69
U19A Dine' College, 69.41 59 ⇑P **P 19 24 05.3 0.0**
baz=69
AKASG Malin Array Be 71.10 326 *eP* **P 19 24 14.6 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 71.10 326 P P 19 24 14.5 -0.8
comp=Z,3.8nm,0.4s,mb4.6,baz=33,slow=6.3,SNR=18
AKASG Malin Array Be 71.10 326 P P 19 24 14.5 -0.9
ANMO Albuquerque 71.94 58 P P 19 24 20.8 +0.1
Z20A Nine Sixteen R 71.98 61 ⇓P **P 19 24 21.4 +0.4**
baz=72
120A U Bar Ranch, L 72.36 61 ⇓P **P 19 24 23.4 +0.1**
baz=72
219A White Tail Can 72.37 62 ⇓P **P 19 24 23.6 +0.3**
baz=72
Z21A St. Cloud Mine 72.39 60 ⇑P **P 19 24 24.2 +0.7**
baz=72
ASAR Alice Springs 72.40 198 *eP* **P 19 24 23.2 -0.2**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 72.40 198 P P 19 24 23.2 -0.1
comp=Z,1.2nm,0.7s,mb3.8,baz=12,slow=5.2,SNR=20
ASAR pP pP 19 24 39.6 -1.6
comp=Z,0.6nm,0.5s,baz=8.3,slow=5.5,SNR=4.4
319A Douglas 72.79 62 ⇑P **P 19 24 26.0 +0.2**
baz=73
Z22A Elephant Butte 72.85 60 ⇑P **P 19 24 26.4 +0.2**
baz=73
121A Cookes Peak, D 72.87 61 ⇓P **P 19 24 26.2 -0.1**
baz=73
220A Playas Peak, P 72.87 62 ⇓P **P 19 24 26.2 -0.1**
baz=73
Y23A Lovelace Mesa, 72.90 59 ⇓P **P 19 24 26.4 -0.1**
baz=73
Y25A Mesa, Roswell 73.70 58 ⇓P **P 19 24 30.9 -0.2**
baz=74
Z26A Caprock 74.58 58 ⇓P **P 19 24 36.1 -0.2**
baz=74
Y27A Causey 74.61 57 ⇓P **P 19 24 36.0 -0.5**
baz=74
125A Gardner Draw, 74.63 59 ⇑P **P 19 24 36.5 0.0**
baz=74
OJC Ojcow 74.88 331 *eP* **P 19 24 37.7 0.0**
Z27A Tatum 74.99 57 ⇓P **P 19 24 37.8 -0.8**
baz=75
STHS Stebnicka Huta 75.08 330 *eP* **P 19 24 39.9 +1.0**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
STHS Stebnicka Huta 75.08 330 *eP* **P 19 24 39.9 +1.0**
comp=Z,2.4nm,0.7s,mb4.0
STHS Stebnicka Huta 75.08 330 *eP* **P 19 24 39.8 +0.9**
BUR08 Bucovina Ar. S 75.12 326 *eP* **P 19 24 39.0 -0.2**
BURAR Bucovina Array 75.14 326 ⇑*iP* **P 19 24 39.5 +0.2**
BURAR Bucovina Array 75.14 326 ⇑*iP* **P 19 24 39.5 +0.2**
226A Malaga, Loving 75.38 59 ⇑P **P 19 24 40.9 0.0**
baz=75
MORC Moravsky Berou 76.01 332 *eP* **P 19 24 41.8 -2.3**
comp=Z,2.2nm,0.9s,mb3.9
MORC Moravsky Berou 76.01 332 ⇑*iP* **P 19 24 42.1 -2.1**
CLL Collm 76.04 335 ⇓*iP* **P 19 24 43.9 -0.4**
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
CLL Collm 76.04 335 ⇓*iP* **P 19 24 43.9 -0.4**
comp=Z,6.0nm,0.9s,mb4.3
CLL Collm 76.04 335 ⇓*iP* **P 19 24 43.9 -0.4**
comp=Z,6.0nm,0.9s,mb4.3
KECS Kecovo 76.13 329 *eP* **P 19 24 44.0 -0.9**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
KECS Kecovo 76.13 329 *eP* **P 19 24 44.0 -0.9**
comp=Z,2.8nm,1.1s,mb3.9
KECS Kecovo 76.13 329 *eP* **P 19 24 44.0 -0.9**
MLR Muntele Rosu 76.62 325 ⇑P **P 19 24 49.3 +1.6**
MLR Muntele Rosu 76.62 325 ⇑*iP* **P 19 24 49.3 +1.6**
328A Wristen Ranch, 76.63 58 ⇓P **P 19 24 47.3 -0.7**
baz=76
VYHS Vyhne 76.69 330 *eP* **P 19 24 48.0 -0.1**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
VYHS Vyhne 76.69 330 *eP* **P 19 24 48.0 -0.1**
comp=Z,2.6nm,1.2s,mb3.8
VYHS Vyhne 76.69 330 *eP* **P 19 24 48.0 -0.1**
MALT Malatya 76.70 312 *eP* **P 19 24 49.2 +0.9**
comp=Z,3.2nm,0.7s,mb4.2
MALT Malatya 76.70 312 ⇑*iP* **P 19 24 49.9 +1.6**
526A Mary Lane Ranc 76.84 60 ⇓P **P 19 24 48.3 -1.0**
baz=77
VOIR 77.01 325 ⇑P **P 19 24 50.9 +1.0**
VOIR 77.01 325 ⇑*iP* **P 19 24 50.8 +0.9**
428A Kincaid Ranch, 77.18 59 ⇓P **P 19 24 50.5 -0.6**
baz=77
626A Big Bend Ranch 77.19 60 ⇑P **P 19 24 50.6 -0.6**
baz=77
528A Cox Ranch, San 77.54 59 ⇓P **P 19 24 52.9 -0.2**
baz=77
TXAR Lajitas Array 77.62 60 P P 19 24 53.4 -0.2
TXAR *PP pP 19 25 09.7 -2.0
TXAR pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 77.62 60 P P 19 24 53.4 -0.3
comp=Z,2.3nm,0.8s,mb4.0,baz=281,slow=4.4,SNR=13
TXAR pP pP 19 25 09.7 -1.9
comp=Z,1.3nm,0.6s,baz=297,slow=4.6,SNR=5.6
627A Terlingua Ranc 77.70 60 ⇑P **P 19 24 53.7 -0.3**
baz=78
BR131 Keskin Array S 77.93 316 *eP* **P 19 24 55.8 +0.6**
comp=Z,1.5nm,0.8s,mb3.8
BRTR Keskin Array B 77.93 316 *eP* **P 19 24 56.2 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 77.93 316 P P 19 24 56.2 +1.1
comp=Z,1.7nm,0.8s,mb3.8,baz=71,slow=4.6,SNR=14
GERES GERESS Array B 78.03 334 P P 19 24 55.5 0.0
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 78.03 334 P P 19 24 55.5 0.0
comp=Z,0.9nm,0.5s,mb3.7,baz=28,slow=6.0,SNR=5.7
MEM Membach 78.53 339 P P 19 24 58.7 +0.4
BCLA Clavier 78.88 339 P P 19 25 00.3 +0.1
STKA Stephens Creek 79.20 190 P P 19 25 00.5 -1.4
BAIF Baives 79.48 340 *eP* **P 19 25 03.1 -0.3**
CDF Champ du Feu 80.24 337 *eP* **P 19 25 07.4 -0.2**
comp=Z,3.6nm,0.6s,mb4.1
CDF Champ du Feu 80.24 337 *eP* **P 19 25 07.4 -0.2**
comp=Z,1.8nm,0.6s,mb4.1
MEZF Maizieres J'vi 80.72 339 *eP* **P 19 25 10.2 0.0**
comp=Z,15nm,0.8s,mb4.6
MEZF Maizieres J'vi 80.72 339 *eP* **P 19 25 10.2 0.0**

comp=Z,15nm,0.8s,mb4.9
LOR Lormes 82.17 339 *e*P P 19 25 17.6 -0.2
comp=Z,8.0nm,0.7s,mb4.4
LOR Lormes 82.17 339 *e*P P 19 25 17.6 -0.2
comp=Z,4.0nm,0.7s,mb4.4
SSF Saint Saulge 82.44 339 *e*P P 19 25 19.0 -0.3
comp=Z,8.3nm,0.9s,mb4.2
SSF Saint Saulge 82.44 339 *e*P P 19 25 19.0 -0.3
comp=Z,4.2nm,0.9s,mb4.3
SGMF Saint Gilles 82.63 344 *e*P P 19 25 19.9 -0.4
ROSF Rostrenen 82.69 344 *e*P P 19 25 20.4 -0.2
AVF Avril sur Loir 82.73 339 *e*P P 19 25 20.6 -0.2
comp=Z,6.1nm,0.7s,mb4.2
AVF Avril sur Loir 82.73 339 *e*P P 19 25 20.6 -0.2
comp=Z,3.0nm,0.7s,mb4.2
SMF Signal de Mont 82.75 339 *e*P P 19 25 20.8 -0.1
comp=Z,26nm,1.2s,mb4.6
SMF Signal de Mont 82.75 339 *e*P P 19 25 20.8 -0.1
comp=Z,13nm,1.2s,mb4.6
LPL La Plagne 83.05 337 *e*P P 19 25 22.9 +0.4
comp=Z,4.9nm,0.7s,mb4.1
LPL La Plagne 83.05 337 *e*P P 19 25 22.9 +0.4
comp=Z,2.5nm,0.7s,mb4.2
LPG La Plagne 83.06 337 *e*P P 19 25 23.0 +0.5
comp=Z,3.8nm,0.7s,mb4.0
LPG La Plagne 83.06 337 *e*P P 19 25 23.0 +0.5
comp=Z,1.9nm,0.7s,mb4.0
TCF Toulx Ste Croi 83.48 340 *e*P P 19 25 24.7 0.0
comp=Z,9.6nm,1.0s,mb4.3
TCF Toulx Ste Croi 83.48 340 *e*P P 19 25 24.7 0.0
comp=Z,4.8nm,1.0s,mb4.3
VIVF Saint-Julien-l 84.21 338 *e*P P 19 25 28.6 +0.2
comp=Z,6.6nm,0.8s,mb4.2
VIVF Saint-Julien-l 84.21 338 *e*P P 19 25 28.6 +0.2
comp=Z,3.3nm,0.8s,mb4.2
PLCA Paso Flores 148.56 94 PKPbc PKPbc 19 32 42.8 -0.5
comp=Z,2.5nm,0.8s,baz=225,slow=3.2,SNR=6.6
CPUP Villa Florida 148.59 59 PKPbc PKPbc 19 32 43.1 -0.7
comp=Z,0.3nm,0.3s,baz=100,slow=1.7,SNR=6.0
VNA2 Neumayer--Watz 154.22 195 *e*PKPdf PKPab 19 33 08.4 -1.3
VNA3 Neumayer Olymp 154.33 193 *e*PKPdf PKPab 19 33 07.8 -2.3

NIED ***10*** *19:18:00, 24.°00N×122.°50E, h29km, Mw4.0 Best double couple: M0=1.22000×10^15 NP1:φs=246.00000°, δ84.00000°, λ-63.00000°. NP2:φs=347.00000°, δ28.00000°, λ-167.00000°.*
IDC ***10*** *19:18:48.4±0.7, 24.°15N×122.°75E, h0km, mb4.0/14, mb1 4.1/14, mb1mx4.0/26, mbtmp4.0/14, Error ellipse: s-maj=37.4km s-min=14.7km az=64.0*
BJI ***10*** *19:18:52.8, 24.°08N×122.°43E, h18km, mB4.5/3, mb4.0/4, ML3.8/2, Ms4.3/1, Ms7 4.0/1*
TAP ***10*** *19:18:52.7, 23.°95N×122.°53E, h28km, ML4.4, D*
ISCJB ***10*** *19:18:52.1±0.4, 23.°88N±0.°02×122.°59E±0.°02, h23km±3km, mb4.1/22, Error ellipse: s-maj=3.1km s-min=2.3km az=154.5*
NEIC ***10*** *19:18:53.3, 24.°01N×122.°51E, h31km, mb4.3/9, After JMA.*
JMA ***10*** *19:18:53.3±0.4, 24.°01N×122.°50E, h31km, M3.6*
ISC 10 19:18:51.9±0.6, 23.°91N±0.°02×122.°57E±0.°02, h14km±4km, n106, σ19/18/172, mb4.1/22, 6C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**36**	P	**Pg**	**19 19 05.8**	**+0.6**
YOJ				S	**Sg**	**19 19 14.5**	**+0.2**
HWA	**Hwalien**	**0.88**	**275**	P	**Pb**	**19 19 08.4**	**-0.5**
HWA	baz=260			*e*S	**Sb**	**19 19 18.8**	**-1.8**
TWD	**Chiawan**	**0.91**	**281**	P	**Pb**	**19 19 08.3**	**-1.0**
TWD	baz=279			S	**Sb**	**19 19 19.9**	**-1.3**
ENA	**Nanau**	**0.92**	**305**	⇑*i*P	**Pb**	**19 19 09.0**	**-0.5**
ENA	baz=313			*e*S	**Sb**	**19 19 21.3**	**-0.2**
TWC	**Suao**	**0.96**	**317**	⇑*i*P	**Pb**	**19 19 09.5**	**-0.7**
TWC	baz=317			*e*S	**Sb**	**19 19 22.4**	**-0.4**
ESL	**Shilin**	**1.04**	**265**	*i* P	**Pb**	**19 19 10.2**	**-1.5**
ESL	baz=263			*e*S	**Sb**	**19 19 21.0**	**-4.2**
ILA	**Ilan**	**1.14**	**319**	P	**Pb**	**19 19 13.1**	**-0.1**
ILA	baz=308			*e*S	**Sb**	**19 19 28.4**	**+0.5**
HATJ	**Hateruma jima**	**1.14**	**82**	P	**Pb**	**19 19 13.8**	**+0.4**
HATJ				*e*S	**Sb**	**19 19 30.0**	**+1.9**
IRIF	**Iriomote-Funau**	**1.15**	**68**	P	**Pb**	**19 19 14.3**	**+0.9**
IRIF				S	**Sb**	**19 19 29.6**	**+1.4**
TWE	**Neicheng**	**1.15**	**315**	*i* P	**Pn**	**19 19 13.1**	**-0.5**
TWE	baz=315			*e*S	**Sb**	**19 19 28.5**	**+0.1**
EHY	**Hungye**	**1.21**	**251**	⇓*i*P	**Pn**	**19 19 13.2**	**-1.1**
EHY	baz=257			*e*S	**Sb**	**19 19 28.9**	**-1.1**
NNS	**Nan Shan**	**1.21**	**296**	⇓*i*P	**Pn**	**19 19 13.7**	**-0.7**
NNS	baz=285			S	**Sb**	**19 19 29.3**	**-0.9**
WHF	**Hehuan Shan**	**1.21**	**281**	⇓*i*P	**Pn**	**19 19 13.5**	**-0.9**
WHF	baz=269			S	**Sb**	**19 19 29.5**	**-0.7**
TWB1	**Santiao Chiao**	**1.22**	**334**	P	**Pn**	**19 19 13.8**	**-0.6**
TWB1	baz=351			*e*S	**Sb**	**19 19 31.2**	**+1.0**
YULB	**Yu-li**	**1.27**	**246**	*e*Pn	**Pn**	**19 19 14.1**	**-1.1**
YULB				*e*Sn	**Sn**	**19 19 26.7**	**-5.4**
TWF1	**Yuli**	**1.29**	**245**	⇑*i*P	**Pn**	**19 19 14.3**	**-1.1**
TWF1	baz=243			S	**Sb**	**19 19 30.6**	**-1.7**
TWT	**Tachien**	**1.32**	**285**	P	**Pn**	**19 19 15.8**	**-0.1**
TWT	baz=273			*e*S	**Sb**	**19 19 32.5**	**-0.6**
YHNB	**Yeheng**	**1.33**	**305**	*e*Pn	**Pn**	**19 19 15.2**	**-0.8**
NSK	**Sanguang**	**1.34**	**305**	⇓*i*P	**Pn**	**19 19 15.8**	**-0.3**
NSK	baz=291			*e*S	**Sn**	**19 19 33.9**	**0.0**
JKRS	**Kuro-shima**	**1.36**	**76**	P	**Pn**	**19 19 17.2**	**+0.8**
NWF	**Wu-fen Shan**	**1.36**	**328**	⇓*i*P	**Pn**	**19 19 16.1**	**-0.4**
NWF	baz=329			S	**Sn**	**19 19 35.3**	**+1.0**
CHKT	**Chengkung**	**1.36**	**234**	*e*P	**Pn**	**19 19 14.8**	**-1.7**
CHKT	baz=221			*e*S	**Sn**	**19 19 30.8**	**-3.5**
TWA	**Mucha**	**1.39**	**320**	⇓*i*P	**Pn**	**19 19 16.9**	**0.0**
TWA	baz=321			S	**Sn**	**19 19 35.7**	**+0.6**
TATO	**Taipei**	**1.45**	**317**	*e*Pn	**Pn**	**19 19 17.3**	**-0.3**
TAP1	**Taipei**	**1.47**	**320**	P	**Pn**	**19 19 17.7**	**-0.3**
TAP1	baz=321			*e*S	**Sn**	**19 19 38.2**	**+1.1**
SSLB	**Suanglung**	**1.48**	**266**	*e*Pn	**Pn**	**19 19 16.7**	**-1.4**
SSLB				*e*Sn	**Sn**	**19 19 35.2**	**-2.1**
JIJ	**Ishigaki jima**	**1.51**	**72**	P	**Pn**	**19 19 18.6**	**+0.1**
JIJ				S	**Sn**	**19 19 37.8**	**-0.1**
SMLT	**Sun Moon Lake**	**1.53**	**269**	P	**Pn**	**19 19 18.5**	**-0.2**
SMLT	baz=269			*e*S	**Sn**	**19 19 37.9**	**-0.5**
YUS	**Yu-Shan**	**1.54**	**255**	⇓*i*P	**Pn**	**19 19 18.9**	**+0.1**
YUS	baz=253			*e*S	**Sn**	**19 19 37.0**	**-1.6**
TYC	**Yuchr**	**1.56**	**270**	⇓*i*P	**Pn**	**19 19 18.9**	**-0.4**
TYC	baz=269			*e*S	**Sn**	**19 19 39.4**	**+0.1**
TWS1	**Kuangyinshan**	**1.58**	**319**	*i* P	**Pn**	**19 19 19.4**	**-0.1**
TWS1	baz=337			*e*S	**Sn**	**19 19 40.7**	**+0.9**
ELDTW	**Lidau**	**1.59**	**244**	⇑*i*P	**Pn**	**19 19 18.6**	**-1.0**
ELDTW	baz=242			*e*S	**Sn**	**19 19 37.0**	**-3.0**
NSTT	**Nanjuang**	**1.60**	**297**	⇓*i*P	**Pn**	**19 19 20.4**	**+0.6**
NSTT	baz=297			S	**Sn**	**19 19 39.9**	**-0.3**
TWY	**Chenhua**	**1.62**	**327**	*e*P	**Pn**	**19 19 21.2**	**+1.1**
NCU	**National Centr**	**1.64**	**310**	*e*P	**Pn**	**19 19 20.3**	**0.0**
NCU	baz=311			*e*S	**Sn**	**19 19 42.6**	**+1.3**
ALS	**Alishan**	**1.66**	**257**	⇓*i*P	**Pn**	**19 19 20.9**	**+0.3**
ALS	baz=256			*e*S	**Sn**	**19 19 41.1**	**-0.6**
TWQ1	**Liyutan**	**1.70**	**285**	⇓*i*P	**Pn**	**19 19 22.1**	**+1.1**
TWQ1	baz=285			S	**Sn**	**19 19 43.6**	**+1.0**
HSN	**Hsinchu**	**1.71**	**302**	*e*P	**Pn**	**19 19 21.5**	**+0.3**
HSN	baz=303			*e*S	**Sn**	**19 19 43.5**	**+0.6**
WNT	**Mingjian**	**1.72**	**269**	*e*P	**Pn**	**19 19 22.4**	**+1.0**
WNT	baz=269			*e*S	**Sn**	**19 19 43.7**	**+0.5**
NSY	**Sanyi**	**1.73**	**287**	P	**Pn**	**19 19 22.6**	**+1.2**
NSY	baz=287			*e*S	**Sn**	**19 19 45.0**	**+1.8**
TTN	**Taitung**	**1.74**	**229**	*e*P	**Pn**	**19 19 20.7**	**-0.9**
TTN	baz=228			*e*S	**Sn**	**19 19 41.1**	**-2.5**
TCU	**Taichung**	**1.75**	**278**	*i* P	**Pn**	**19 19 23.0**	**+1.3**
TCU	baz=278			*e*S	**Sn**	**19 19 45.1**	**+1.3**
TWG	**Pinlang**	**1.75**	**232**	*e*Pn	**Pn**	**19 19 20.1**	**-1.7**
TWG	**Pinlang**	**1.75**	**232**	P	**Pn**	**19 19 20.5**	**-1.3**
TWG	baz=242			*e*S	**Sn**	**19 19 41.1**	**-2.8**
CHN5	**Tsauling**	**1.76**	**260**	*i* P	**Pn**	**19 19 22.5**	**+0.6**
CHN5	baz=260			S	**Sn**	**19 19 44.6**	**+0.5**
PCYT	**Pengchaiyu**	**1.77**	**345**	*e*P	**Pn**	**19 19 21.9**	**-0.2**
STYT	**Tauyuan**	**1.82**	**246**	*e*P	**Pn**	**19 19 23.4**	**+0.7**
STYT	baz=246			S	**Sn**	**19 19 45.0**	**-0.6**
WGK	**Gukeng**	**1.85**	**264**	P	**Pn**	**19 19 24.1**	**+1.0**
WGK	baz=263			*e*S	**Sn**	**19 19 47.1**	**+0.7**
TPUB	**Ta-pu**	**1.88**	**252**	*e*Pn	**Pn**	**19 19 24.2**	**+0.7**
TPUB				*e*Sn	**Sn**	**19 19 47.0**	**0.0**
CHN4	**Tsaushan**	**1.89**	**253**	P	**Pn**	**19 19 25.2**	**+1.5**
CHN4	baz=253			S	**Sn**	**19 19 48.9**	**+1.5**
WTP	**Ta-pu**	**1.91**	**250**	*i* P	**Pn**	**19 19 24.6**	**+0.6**
WTP	baz=241			*e*S	**Sn**	**19 19 48.5**	**+0.7**
CHN2	**Minshiung**	**1.95**	**259**	*e*P	**Pn**	**19 19 26.3**	**+1.7**
CHN2	baz=259			*e*S	**Sn**	**19 19 51.1**	**+2.2**
ECL	**Taimali**	**1.98**	**229**	*i* P	**Pn**	**19 19 23.5**	**-1.4**
ECL	baz=228			*e*S	**Sn**	**19 19 46.0**	**-3.4**
SGST	**Jiashian**	**2.00**	**246**	P	**Pn**	**19 19 26.4**	**+1.2**
SGST	baz=237			*e*S	**Sn**	**19 19 51.5**	**+1.5**
CHN1	**Nanshi**	**2.00**	**249**	*i* P	**Pn**	**19 19 26.5**	**+1.2**
CHN1	baz=249			*e*S	**Sn**	**19 19 50.9**	**+0.7**
CHY	**Chiayi**	**2.01**	**259**	P	**Pn**	**19 19 26.8**	**+1.5**
CHY	baz=258			*e*S	**Sn**	**19 19 51.0**	**+0.8**
TWK	**Hsinying**	**2.01**	**252**	*e*P	**Pn**	**19 19 26.6**	**+1.3**
TWK	baz=251			*e*S	**Sn**	**19 19 51.9**	**+1.6**
JTJ	**Tarama**	**2.08**	**69**	P	**Pn**	**19 19 26.9**	**+0.6**
LAY	**Lan-yu**	**2.08**	**207**	*e*P	**Pn**	**19 19 23.9**	**-2.4**
LAY	baz=206			*e*S	**Sn**	**19 19 48.9**	**-3.2**
WTCT	**Ta-ch'eng**	**2.09**	**269**	P	**Pn**	**19 19 27.6**	**+1.1**
WTCT	baz=269			*e*S	**Sn**	**19 19 53.6**	**+1.3**
SSD	**Sandimen**	**2.12**	**237**	*e*P	**Pn**	**19 19 27.4**	**+0.5**
SSD	baz=231			*e*S	**Sn**	**19 19 53.9**	**+0.9**
TAW	**Tawu**	**2.18**	**225**	*e*P	**Pn**	**19 19 28.0**	**+0.3**
TAW	baz=235			*e*S	**Sn**	**19 19 55.0**	**+0.6**
CHN3	**Shinhua**	**2.18**	**248**	*e*P	**Pn**	**19 19 29.9**	**+2.1**
CHN3	baz=248			*e*S	**Sn**	**19 19 57.6**	**+3.0**
EAST	**Anshuo**	**2.19**	**227**	⇑*i*P	**Pn**	**19 19 26.9**	**-0.9**
CHN8	**Yiju**	**2.23**	**256**	P	**Pn**	**19 19 29.4**	**+0.9**
CHN8	baz=256			*e*S	**Sn**	**19 19 56.5**	**+0.7**
SGLT	**Jiouru**	**2.24**	**239**	*e*P	**Pn**	**19 19 31.7**	**+3.1**
SGLT	baz=238			*e*S	**Sn**	**19 19 57.3**	**+1.3**
TWM1	**Shoushan**	**2.25**	**242**	*e*P	**Pn**	**19 19 30.7**	**+2.1**
TWM1	baz=232			*e*S	**Sn**	**19 19 57.0**	**+0.9**
SCLT	**Jiali**	**2.30**	**252**	*e*P	**Pn**	**19 19 30.5**	**+1.2**
SCLT	baz=252			*e*S	**Sn**	**19 19 58.4**	**+1.0**
TAI1	**Yung-k'ang**	**2.31**	**249**	*e*P	**Pn**	**19 19 31.5**	**+2.0**
TAI1	baz=248			*e*S	**Sn**	**19 19 58.5**	**+0.7**
SCZT	**Fangliau**	**2.35**	**230**	*e*P	**Pn**	**19 19 30.3**	**+0.2**
SCZT	baz=222			*e*S	**Sn**	**19 19 59.2**	**+0.4**
TSEB	**Hengchuen, Pin**	**2.52**	**218**	*e*P	**Pn**	**19 19 33.5**	**+1.1**
TSEB	baz=219			*e*S	**Sn**	**19 20 03.5**	**+0.6**
HEN	**Hengchun**	**2.54**	**222**	*e*P	**Pn**	**19 19 33.6**	**+1.0**
HEN	baz=222			*e*S	**Sn**	**19 20 03.1**	**-0.1**
TWP	**Hsiaoliuchiu**	**2.56**	**233**	*e*P	**Pn**	**19 19 36.4**	**+3.5**
JMJ	**Miyako jima 2**	**2.65**	**69**	*e*S	**Sn**	**19 20 07.3**	**+1.3**
PNG	**Penghu**	**2.78**	**264**	*e*P	**Pn**	**19 19 36.2**	**+0.2**
PNG	baz=263			*e*S	**Sn**	**19 20 07.8**	**-1.5**
QZH	**Quanzhou**	**3.77**	**287**	⇑Pn	**Pn**	**19 19 49.3**	**-0.2**
QZH				Sn	**Sn**	**19 20 30.1**	**-3.6**
QZH	comp=N,310nm,0.2s			smax			
QZH	comp=E,340nm,0.4s			smax			
KS15	**Wonju Array Si**	**14.24**	**17**	*e*Pn	**Pn**	**19 22 14.5**	**+1.4**
SONM	**Songino Array**	**27.12**	**336**	P	**P**	**19 24 31.3**	**-3.0**
	comp=E,3.5nm,0.8s,mb3.9,baz=132,slow=9.1,SNR=23						
MK31	**Makanchi Array**	**39.42**	**316**	*e*P	**P**	**19 26 19.6**	**-1.7**
MK31				*e*PcP	PcP	19 28 27.2	-2.0
MKAR	**Makanchi Array**	**39.42**	**316**	P	**P**	**19 26 19.8**	**-1.5**
	comp=E,1.0nm,0.3s,mb4.0,baz=110,slow=8.3,SNR=44						
MKAR				PcP	PcP	19 28 27.5	-1.7
	comp=E,0.4nm,0.5s,baz=152,slow=3.6,SNR=3.6						
ZAA0	**Zalesovo Array**	**41.17**	**327**	*e*P	**P**	**19 26 32.2**	**-3.4**
ZALV	**Zalesovo Beam**	**41.17**	**327**	P	**P**	**19 26 32.8**	**-2.8**
	comp=E,1.6nm,0.4s,mb4.0,baz=111,slow=7.7,SNR=9.4						
ZALV				PcP	PcP	19 28 31.4	-3.3
	comp=E,0.6nm,0.6s,baz=153,slow=4.5,SNR=2.9						
TKM2	**Tokmak 2**	**42.93**	**308**	*e*P	**P**	**19 26 50.0**	**-0.2**
	comp=E,4.4nm,0.8s,mb4.2						
KURK	**Kurchatov**	**43.12**	**320**	P	**P**	**19 26 49.8**	**-1.8**
	comp=E,0.7nm,0.4s,mb3.8,baz=110,slow=9.8,SNR=12						
UCH	**Uchtor**	**43.60**	**307**	*e*P	**P**	**19 26 55.9**	**+0.3**
	comp=E,8.5nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**43.68**	**307**	P	**P**	**19 26 56.7**	**+0.5**
	comp=E,0.8nm,0.5s,mb3.7,baz=131,slow=11,SNR=3.7						
AAK	**Ala-Archa**	**43.68**	**307**	*e*P	**P**	**19 26 56.1**	**-0.1**
	comp=E,0.9nm,0.6s,mb3.7						
AML	**Almayashu**	**44.18**	**306**	*e*P	**P**	**19 27 00.8**	**+0.5**
	comp=E,7.8nm,1.1s,mb4.3						
WRAB	**Tennant Creek**	**45.06**	**164**	*e*P	**P**	**19 27 06.9**	**-0.5**
	comp=E,2.2nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**45.07**	**164**	P	**P**	**19 27 07.2**	**-0.3**
	comp=E,2.9nm,0.6s,mb4.3,baz=346,slow=8.8,SNR=46						
WB2	**Warramunga Arr**	**45.07**	**164**	*e*P	**P**	**19 27 06.8**	**-0.7**
KBL	**Kabul**	**47.42**	**296**	*e*P	**P**	**19 27 26.1**	**+0.1**
	comp=E,2.0nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**48.55**	**166**	P	**P**	**19 27 35.1**	**+0.4**
	comp=E,1.3nm,0.5s,mb4.2,baz=348,slow=7.8,SNR=75						
BVAR	**Borovoye Array**	**48.69**	**321**	P	**P**	**19 27 33.6**	**-1.9**
	comp=E,1.4nm,0.5s,mb4.2,baz=110,slow=8.1,SNR=16						
BRVK	**Borovoye**	**48.76**	**321**	*e*P	**P**	**19 27 34.0**	**-2.0**
ABKAR	**Akbulak array**	**54.54**	**314**	*e*P	**P**	**19 28 17.8**	**-1.6**
	comp=E,1.8nm,0.5s,mb4.4						
ARU	**Arti**	**56.09**	**323**	*e*P	**P**	**19 28 27.9**	**-2.4**
	comp=E,3.1nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**58.38**	**161**	P	**P**	**19 28 47.4**	**+0.6**
	comp=E,1.5nm,0.8s,mb4.1,baz=341,slow=7.9,SNR=3.1						
STKA	**Stephens Creek**	**58.38**	**161**	P	**P**	**19 28 46.4**	**-0.4**
	comp=E,0.7nm,0.7s,mb3.8						
JOF	**Joensuu**	**69.57**	**331**	*e*p	**P**	**19 29 57.6**	**-2.4**
	comp=E,1.1nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**72.32**	**330**	P	**P**	**19 30 15.1**	**-1.7**
	comp=E,0.8nm,0.4s,mb4.0,baz=49,slow=5.2,SNR=16						
INK	**Inuvik**	**73.01**	**22**	P	**P**	**19 30 18.6**	**-2.2**
	comp=E,0.9nm,0.8s,mb3.8,baz=222,slow=6.2,SNR=4.9						
BRTR	**Keskin Array B**	**74.35**	**307**	P	**P**	**19 30 28.4**	**-0.8**
	comp=E,1.3nm,0.9s,mb3.9,baz=90,slow=6.2,SNR=7.3						
NOA	**NORSAR Array B**	**79.06**	**333**	P	**P**	**19 30 53.2**	**-2.2**
	comp=E,0.2nm,0.3s,mb3.5,baz=70,slow=5.2,SNR=3.0						
YKA	**Yellowknife Ar**	**82.73**	**23**	P	**P**	**19 31 12.7**	**-2.3**
	comp=E,0.8nm,0.6s,mb3.9,baz=312,slow=5.0,SNR=17						
YKA	**Yellowknife Ar**	**82.73**	**23**	P	**P**	**19 31 12.7**	**-2.3**

NIED ***10*** *19:19:00, 32.°00N×131.°00E, h8km, Mw4.1 Best double couple: M0=1.88000×10^15 NP1:φs=99.00000°, δ72.00000°, λ-60.00000°. NP2:φs=217.00000°, δ35.00000°, λ-147.00000°.*
IDC ***10*** *19:19:09.9±0.9, 32.°01N×130.°84E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.8/29, mbtmp3.8/10, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.6/36, Error ellipse: s-maj=24.9km s-min=18.6km az=71.0*
ISCJB ***10*** *19:19:11.1±0.5, 31.°96N±0.°04×130.°97E±0.°05, h18km±4km, mb3.9/8, MS3.3/2, Error ellipse: s-maj=8.3km s-min=6.2km az=140.8*
JMA ***10*** *19:19:11.8, 31.°97N×130.°96E, h8km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs=244.00000°, δ31.00000°, λ-113.00000°. NP2: φs=91.00000°, δ62.00000°, λ-77.00000°. Principal axes: T Plg16.0000°, Azm171.0000°; N Plg12.0000°, Azm264.0000°; P Plg70.0000°, Azm29.0000°;*
JMA Felt IV J1.
NEIC ***10*** *19:19:14.1±2.9, 32.°01N×130.°88E, h27km±23km, mb4.1/4 Error ellipse: s-maj=13.0km s-min=11.0km az=118.0*
NEIC Recorded [4 JMA] in Miyazaki and [2 JMA] in Kagoshima and Kumamoto.
ISC 10 19:19:11.8±0.5, 31.°97N±0.°04×130.°95E±0.°05, h11km±3km, n25, σ0.°80/27, mb3.9/8, MS3.3/2, 5C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTZ	**Takazaki**	**0.13**	**119**	⇑P	**Pg**	**19 19 14.5**	**-0.4**
JTZ				S	**Sg**	**19 19 16.7**	**-0.4**
JZO	**Okuchi**	**0.35**	**300**	⇑P	**Pg**	**19 19 18.6**	**-0.1**
JZO				S	**Sg**	**19 19 23.7**	**+0.3**
JNAR	**Kushima--Naru**	**0.51**	**148**	⇑P	**Pg**	**19 19 22.0**	**+0.2**
JTSN	**Tsuno**	**0.55**	**59**	⇓P	**Pg**	**19 19 22.1**	**-0.3**
JIU2	**Izumi 2**	**0.59**	**348**	⇑P	**Pg**	**19 19 23.4**	**+0.1**
JIU2				S	**Sg**	**19 19 31.4**	**+0.3**
JSU	**Suzuyama**	**0.62**	**223**	⇑P	**Pg**	**19 19 24.0**	**+0.1**
JOW	**Kunigami**	**5.62**	**205**	Pn	**Pn**	**19 20 36.6**	**+1.3**
KSRS	**Korea Array**	**6.02**	**336**	Pn	**Pn**	**19 20 41.3**	**+0.6**
	12nm,0.3s,baz=82,slow=11,SNR=6.3						
KSRS				Lg		19 22 15.9	
	0.3nm,0.3s,baz=153,slow=15,SNR=4.8						
KS15	**Wonju Array Si**	**6.02**	**336**	*e*Pn	**Pn**	**19 20 39.0**	**-1.8**
KS15				*e*Sg	**Sg**	**19 22 18.2**	**-6.8**
MAJO	**Matsushiro**	**7.54**	**51**	*e*Pn	**Pn**	**19 21 01.5**	**-0.1**
MJAR	**Matsushiro Arr**	**7.54**	**51**	Pn	**Pn**	**19 21 03.9**	**+2.2**
	1.1nm,0.3s,baz=154,slow=28,SNR=15						
	0.8nm,0.3s,baz=299,slow=23,SNR=18						
MJAR				LR	LR	19 23 33.6	
	comp=Z,64nm,21.8s,baz=225,slow=35						
ENH	**Enshi**	**18.46**	**270**	*e*P	**Pn**	**19 23 31.6**	**+4.0**
	13nm,1.1s						
HIA	**Hailar**	**19.23**	**337**	*e*P	**Pn**	**19 23 37.0**	**+0.2**
	7.8nm,0.8s						
ULN	**Ulaanbaatar**	**24.11**	**318**	*e*P	**P**	**19 24 28.2**	**+0.8**
	7.8nm,0.8s,mb4.2						
DAV	**Davao City (W)**	**25.27**	**193**	LR	LR	19 33 17.1	
	comp=Z,121nm,20.8s,MS3.4,baz=235,slow=34						
PETK	**Petropavlovsk-**	**28.61**	**35**	LR	LR	19 36 07.2	
	comp=Z,50nm,18.4s,MS3.1,baz=49,slow=36						
MKAR	**Makanchi Array**	**39.78**	**306**	P	**P**	**19 26 43.1**	**-1.5**
	1.5nm,0.8s,mb3.8,baz=101,slow=9.3,SNR=6.1						
KURK	**Kurchatov**	**42.54**	**312**	P	**P**	**19 27 06.9**	**-0.3**
	2.4nm,0.8s,mb4.0,baz=98,slow=8.8,SNR=11						
KURK	**Kurchatov**	**42.54**	**312**	*e*P	**P**	**19 27 06.6**	**-0.7**
	3.3nm,0.9s,mb4.1						
BVAR	**Borovoye Array**	**47.77**	**315**	P	**P**	**19 27 48.0**	**-0.8**
	2.2nm,0.8s,mb4.3,baz=99,slow=7.7,SNR=7.8						
ASAR	**Alice Springs**	**55.39**	**177**	P	**P**	**19 28 45.4**	**-0.6**
	0.4nm,0.7s,mb3.6,baz=16,slow=7.0,SNR=2.5						
ASAR	**Alice Springs**	**55.39**	**177**	P	**P**	**19 28 45.4**	**-0.6**
YKA	**Yellowknife Ar**	**72.34**	**26**	P	**P**	**19 30 36.8**	**-0.4**
	0.5nm,0.8s,mb3.5,baz=308,slow=5.8,SNR=6.8						
NVAR	**Mina Array Bea**	**84.86**	**48**	P	**P**	**19 31 47.3**	**+0.6**
	0.5nm,0.6s,mb3.8,baz=311,slow=4.5,SNR=4.8						
PDAR	**Pinedale Array**	**87.23**	**40**	P	**P**	**19 31 58.4**	**+0.1**
	0.7nm,0.7s,mb4.0,baz=338,slow=1.6,SNR=6.2						

ISCJB ***10*** *19:23:37.8±0.7, 38.°42N±0.°03×20.°47E±0.°05, h10km±5km, Error ellipse: s-maj=7.6km s-min=4.1km az=144.0*
CSEM ***10*** *19:23:38.5±0.4, 38.°34N×20.°45E, h20km, MD3.4, Error ellipse: s-maj=8.9km s-min=4.7km az=46.0*
THE ***10*** *19:23:38.6, 38.°46N×20.°59E, h1km±1km, ML3.5/6, Error ellipse: s-maj=1.3km s-min=0.4km az=250.0*
NEIC ***10*** *19:23:38.0, 38.°39N×20.°49E, h21km, MD3.4(ATH), After ATH.*
ATH ***10*** *19:23:38.0, 38.°39N×20.°49E, h21km±1km, MD3.4/3*
ISC 10 19:23:38.4±0.7, 38.°41N±0.°05×20.°48E±0.°06, h11km±6km, n57, σ1.°00/85, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.25**	**160**	*e*PB	**Pg**	**19 23 43.7**	**+0.1**
VLS				*e*SB	**Sg**	**19 23 48.7**	**+1.7**
VLS	**Valsamata**	**0.25**	**160**	P	**Pg**	**19 23 43.7**	**+0.1**
VLS				S	**Sg**	**19 23 48.2**	**+1.2**
VLS	**Valsamata**	**0.25**	**160**	P	**Pg**	**19 23 43.7**	**+0.1**
VLS				S	**Sg**	**19 23 48.2**	**+1.2**
VLS				*e*Sb	**Sg**	**19 23 48.7**	**+1.7**
KFL	**Anninata**	**0.39**	**141**	P	**Pg**	**19 23 45.8**	**-0.3**
KFL				S	**Sg**	**19 23 51.5**	**+0.3**
RLS	**Riolos of Patr**	**0.85**	**114**	*e*PN	**Pg**	**19 23 54.0**	**-0.8**
RLS				*e*SN	**Sg**	**19 24 06.5**	**+0.5**
RLS	**Riolos of Patr**	**0.85**	**114**	*e*Pn	**Pg**	**19 23 54.0**	**-0.8**

RLS				*e*Sn		**Sg**	**19 24 06.5**	**+0.5**
EFP	**Efpalio**	**1.12**	**89**	*e*PB		**Pb**	**19 23 58.1**	**-1.6**
EFP	**Efpalio**	**1.12**	**89**	P		**Pb**	**19 23 57.9**	**-1.8**
EFP				S		**Sb**	**19 24 13.5**	**-0.7**
EFP	**Efpalio**	**1.12**	**89**	*e*Pb		**Pb**	**19 23 58.1**	**-1.6**
EFP				S		**Sb**	**19 24 13.5**	**-0.7**
IGT	**Igoumenitsa**	**1.12**	**354**	P		**Pb**	**19 23 58.5**	**-1.3**
IGT				S		**Sb**	**19 24 15.0**	**+0.6**
IGT	**Igoumenitsa**	**1.12**	**354**	P		**Pb**	**19 23 58.5**	**-1.3**
IGT				S		**Sb**	**19 24 15.0**	**+0.6**
EVR	**Evrytania**	**1.15**	**64**	*e*PB		**Pb**	**19 23 59.2**	**-1.1**
EVR				*e*SN		**Sn**	**19 24 16.6**	**+0.4**
EVR	**Evrytania**	**1.15**	**64**	*e*Pb		**Pb**	**19 23 59.2**	**-1.1**
EVR				*e*Sn		**Sn**	**19 24 16.6**	**+0.4**
LAKA	**Lakka**	**1.19**	**98**	P		**Pn**	**19 23 59.3**	**-1.6**
LAKA				S		**Sb**	**19 24 15.5**	**-0.8**
LAKA	**Lakka**	**1.19**	**98**	P		**Pn**	**19 23 59.3**	**-1.6**
LAKA				S		**Sb**	**19 24 15.5**	**-0.8**
JAN	**Janina**	**1.27**	**13**	*e*PN		**Pn**	**19 24 02.6**	**+0.5**
JAN	**Janina**	**1.27**	**13**	*e*Pn		**Pn**	**19 24 02.6**	**+0.5**
KEK	**Kerkira**	**1.40**	**338**	*e*PN		**Pn**	**19 24 04.8**	**+0.9**
KEK	**Kerkira**	**1.40**	**338**	P		**Pn**	**19 24 04.3**	**+0.4**
KEK	**Kerkira**	**1.40**	**338**	P		**Pn**	**19 24 04.3**	**+0.4**
KEK	**Kerkira**	**1.40**	**338**	*e*Pn		**Pn**	**19 24 04.8**	**+0.9**
GUR	**Goura**	**1.54**	**107**	*e*PN		**Pn**	**19 24 05.6**	**-0.2**
GUR	**Goura**	**1.54**	**107**	P		**Pn**	**19 24 05.5**	**-0.3**
GUR				S		**Sn**	**19 24 26.0**	**+0.3**
GUR	**Goura**	**1.54**	**107**	*e*Pn		**Pn**	**19 24 05.6**	**-0.2**
GUR				S		**Sn**	**19 24 26.0**	**+0.3**
AGG	**Agios Georgios**	**1.57**	**67**	*e*PN		**Pn**	**19 24 06.4**	**+0.3**
AGG	**Agios Georgios**	**1.57**	**67**	P		**Pn**	**19 24 05.7**	**-0.4**
AGG				S		**Sn**	**19 24 26.0**	**-0.4**
AGG	**Agios Georgios**	**1.57**	**67**	P		**Pn**	**19 24 05.7**	**-0.4**
AGG	**Agios Georgios**	**1.57**	**67**	*e*Pn		**Pn**	**19 24 06.4**	**+0.3**
AGG				S		**Sn**	**19 24 26.0**	**-0.4**
THL	**Klokotos Trika**	**1.66**	**46**	*e*PN		**Pn**	**19 24 08.0**	**+0.6**
THL	**Klokotos Trika**	**1.66**	**46**	P		**Pn**	**19 24 06.6**	**-0.8**
THL				S		**Sn**	**19 24 28.7**	**+0.1**
THL	**Klokotos Trika**	**1.66**	**46**	P		**Pn**	**19 24 06.6**	**-0.8**
THL	**Klokotos Trika**	**1.66**	**46**	*e*Pn		**Pn**	**19 24 08.0**	**+0.6**
THL				S		**Sn**	**19 24 28.7**	**+0.1**
ITM	**Ithomi**	**1.68**	**137**	P		**Pn**	**19 24 10.5**	**+2.8**
ITM	**Ithomi**	**1.68**	**137**	P		**Pn**	**19 24 10.5**	**+2.8**
VLX	**Vlachokerasia**	**1.83**	**124**	P		**Pn**	**19 24 08.7**	**-1.0**
VLX	**Vlachokerasia**	**1.83**	**124**	P		**Pn**	**19 24 08.7**	**-1.0**
LKR	**Lokris**	**1.99**	**82**	*e*PN		**Pn**	**19 24 12.9**	**+1.0**
LKR	**Lokris**	**1.99**	**82**	*e*Pn		**Pn**	**19 24 12.9**	**+1.0**
LTK	**Loutraki**	**2.00**	**100**	P		**Pn**	**19 24 12.0**	**0.0**
LTK	**Loutraki**	**2.00**	**100**	P		**Pn**	**19 24 12.0**	**0.0**
KZN	**Kozani**	**2.14**	**27**	P		**Pn**	**19 24 14.7**	**+0.7**
KZN	**Kozani**	**2.14**	**27**	P		**Pn**	**19 24 14.7**	**+0.7**
LIT	**Litokhoron**	**2.30**	**42**	P		**Pn**	**19 24 16.8**	**+0.7**
LIT	**Litokhoron**	**2.30**	**42**	P		**Pn**	**19 24 16.8**	**+0.7**
XOR	**Xorichti**	**2.32**	**65**	P		**Pn**	**19 24 18.4**	**+1.9**
XOR	**Xorichti**	**2.32**	**65**	P		**Pn**	**19 24 18.4**	**+1.9**
DID	**Didima**	**2.36**	**112**	*e*PB		**Pb**	**19 24 18.6**	**-2.2**
DID	**Didima**	**2.36**	**112**	P		**Pn**	**19 24 17.2**	**+0.2**
DID				S		**Sn**	**19 24 47.0**	**+1.1**
DID	**Didima**	**2.36**	**112**	P		**Pn**	**19 24 17.2**	**+0.2**
DID				S		**Sn**	**19 24 47.0**	**+1.1**
FNA	**Florina**	**2.47**	**16**	P		**Pn**	**19 24 19.2**	**+0.7**
FNA				S		**Sn**	**19 24 49.7**	**+1.1**
FNA	**Florina**	**2.47**	**16**	P		**Pn**	**19 24 19.2**	**+0.7**
FNA				S		**Sn**	**19 24 49.7**	**+1.1**
KRUS	**Krusevo**	**3.01**	**11**	*e*Pn		**Pn**	**19 24 26.7**	**+0.7**
KRUS				*e*Sg		**Sn**	**19 25 02.5**	**+0.5**
KRUS	**Krusevo**	**3.01**	**11**	*e*Pn		**Pn**	**19 24 26.7**	**+0.7**
STON	**Ston**	**4.93**	**335**	*i* Pn		**Pn**	**19 24 51.4**	**-1.0**
STON				Sn		**Sn**	**19 25 44.8**	**-4.6**
STON	**Ston**	**4.93**	**335**	*i* Pn		**Pn**	**19 24 51.4**	**-0.9**
NVLJ	**Novalja**	**7.45**	**327**	*e*Pn		**Pn**	**19 25 26.2**	**-0.7**
NVLJ				Sn		**Sn**	**19 26 48.0**	**-3.3**
NVLJ	**Novalja**	**7.45**	**327**	*e*Pn		**Pn**	**19 25 26.2**	**-0.7**

CSEM ***10*** *19:29:25.4±2.4, 38.°04N×20.°02E, h15km, MD3.3, Error ellipse: s-maj=69.3km s-min=16.7km az=28.0*
NEIC ***10*** *19:29:29.0, 38.°41N×20.°33E, h8km, MD3.3(ATH), After ATH.*
ATH ***10*** *19:29:29.0, 38.°41N×20.°33E, h8km, MD3.3/4*
ISC 10 19:29:27.8±2.7, 38.°4N±0.3×20.°2E±0.3, h2km±30km, n10, σ1§33/14, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.39**	**122**	*e*PB	**Pg**	**19 29 35.5**	**+0.2**
VLS				*e*SB	**Sg**	**19 29 40.6**	**+0.3**
VLS	**Valsamata**	**0.39**	**122**	*e*Pb	**Pg**	**19 29 35.5**	**+0.2**
VLS				*e*Sb	**Sg**	**19 29 40.6**	**+0.3**
RLS	**Riolos of Patr**	**1.07**	**107**	*e*PB	**Pg**	**19 29 45.9**	**-2.4**
RLS	**Riolos of Patr**	**1.07**	**107**	*e*Pb	**Pg**	**19 29 45.9**	**-2.4**
KEK	**Kerkira**	**1.35**	**348**	*e*PB	**Pb**	**19 29 54.7**	**+0.8**
KEK	**Kerkira**	**1.35**	**348**	*e*Pb	**Pb**	**19 29 54.7**	**+0.8**
THL	**Klokotos Trika**	**1.86**	**50**	*e*PN	**Pn**	**19 30 01.8**	**+1.2**
THL	**Klokotos Trika**	**1.86**	**50**	*e*Pn	**Pn**	**19 30 01.8**	**+1.2**
STON	**Ston**	**4.86**	**338**	*e*Pn	**Pn**	**19 30 42.7**	**+0.9**
STON				Sn	**Sn**	**19 31 36.3**	**-2.3**
STON	**Ston**	**4.86**	**338**	*e*Pn	**Pn**	**19 30 42.7**	**+0.9**
STON				Sn	**Sn**	**19 31 36.3**	**-2.3**

IDC ***10*** *19:31:27.6±1.1, 36.°48S×179.°51W, h32km±5km, mb4.3/8, mb1 4.4/9, mb1mx4.2/17, mbtmp4.3/9, ML3.5/1, Error ellipse: s-maj=23.3km s-min=20.0km az=152.0*
ISCJB ***10*** *19:31:29.7±3.3, 36.°9S±0.2×179.°6W±0.2, h69km±25km, mb4.5/13, Error ellipse: s-maj=33.8km s-min=18.5km az=41.1*
NEIC ***10*** *19:31:29.5±2.9, 36.°80S×179.°52W, h56km±23km, mb4.7/4, Error ellipse: s-maj=24.3km s-min=15.5km az=220.0*
ISC 10 19:31:30.0±3.3, 36.°8S±0.2×179.°5W±0.2, h58km±25km, h32km±1.4km; pP-P, n39, σ1§01/26, mb4.5/13, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.03**	**241**	Pn	**Pn**	**19 32 15.4**	**-0.1**
URZ	5.9nm,0.3s,baz=140,slow=6.9,SNR=28			Sn	**Sn**	**19 32 54.7**	**+4.2**
RPZ	32nm,0.3s,baz=301,slow=23,SNR=23 **Rata Peaks**	**9.95**	**223**	Sn	**Sn**	**19 35 33.7**	**-6.6**
STKA	2.3nm,0.8s,mb4.1 **Stephens Creek**	**32.31**	**267**	*e*P	**P**	**19 37 55.5**	**+2.0**
STKA	2.9nm,0.7s,mb4.2,baz=107,slow=14,SNR=8.7 **Stephens Creek**	**32.31**	**267**	P	**P**	**19 37 55.1**	**+1.6**
STKA	0.7nm,0.8s,mb3.5 **Stephens Creek**	**32.31**	**267**	*e*P	**P**	**19 37 54.9**	**+1.4**
CTA	6.2nm,0.9s,mb4.5 **Charters Tower**	**34.16**	**290**	*e*P	**P**	**19 38 08.3**	**-1.3**
CTA	6.4nm,0.9s,mb4.5,baz=130,slow=11,SNR=4.4 **Charters Tower**	**34.16**	**290**	P	**P**	**19 38 10.5**	**+0.8**
CTAO	17nm,1.1s,mb4.9 **Charters Tower**	**34.16**	**290**	P	**P**	**19 38 08.1**	**-1.5**
ASAR	11nm,0.8s,mb4.6,baz=119,slow=7.9,SNR=114 **Alice Springs**	**41.92**	**275**	P	**P**	**19 39 15.2**	**+0.2**
ASAR	8.9nm,0.8s,baz=119,slow=7.9,SNR=15			pP	pP	19 39 24.4	-5.5
ASAR	0.8nm,0.8s,baz=123,slow=4.1,SNR=3.5			PcP	PcP	19 41 09.7	+0.1
ASAR	**Alice Springs**	**41.92**	**275**	P	**P**	**19 39 15.2**	**+0.2**
ASAR				pP	pP	19 39 24.4	-5.5
ASAR				PcP	PcP	19 41 09.7	+0.1
WB2	**Warramunga Arr**	**43.48**	**280**	*e*P	**P**	**19 39 27.5**	**-0.1**
WB2				*e*		19 39 37.2	
WRAB	**Tennant Creek**	**43.48**	**280**	*e*P	**P**	**19 39 27.7**	**+0.1**
WRAB	6.8nm,0.6s,mb4.5			*e*		19 39 37.3	
WRA	**Warramunga Arr**	**43.48**	**280**	P	**P**	**19 39 27.2**	**-0.4**
WRA	6.4nm,0.4s,mb4.7,baz=120,slow=7.7,SNR=133			pP	pP	19 39 37.2	-5.5
WRA	6.2nm,0.6s,baz=120,slow=7.7,SNR=14			PcP	PcP	19 41 15.3	+0.5
WRA	1.9nm,0.8s,baz=122,slow=3.2,SNR=6.8			pPcP		19 41 25.0	
FITZ	1.3nm,0.7s,baz=127,slow=3.1,SNR=4.6 **Fitzroy Crossi**	**51.39**	**276**	*e*P	**P**	**19 40 29.3**	**+0.2**
QSPA	6.1nm,1.1s,mb4.4 **South Pole Qui**	**53.30**	**180**	P	**P**	**19 40 46.5**	**+4.1**
MBWA	6.8nm,0.9s,mb4.6,baz=26,slow=2.3,SNR=35 **Marble Bar**	**54.53**	**269**	*e*P	**P**	**19 40 51.4**	**-0.7**
	7.7nm,0.6s,mb4.9						

MAW	**Mawson**	**65.87**	**202**	P	**P**	**19 42 08.6**	**-0.4**
	0.9nm,0.9s,mb3.8						
PMSA	**Palmer Station**	**66.97**	**155**	*e*P	**P**	**19 42 14.1**	**-1.9**
	73nm,1.0s,mb5.7						
VNA3	**Neumayer Olymp**	**72.00**	**177**	*e*	**P**	**19 42 47.7**	**+0.8**
VNA2	**Neumayer--Watz**	**72.41**	**177**	*e*	**P**	**19 42 50.5**	**+1.1**
	baz=185,slow=4.8						
VNA2				*e*		19 42 59.9	
VNA1	**Neumayer--Stat**	**72.65**	**177**	*e*	**P**	**19 42 46.5**	**-4.4**
KSM	**Kuching**	**75.10**	**283**	P	**P**	**19 43 03.4**	**-2.7**
PETK	**Petropavlovsk-**	**91.72**	**347**	P	**P**	**19 44 30.7**	**+0.3**
	5.2nm,0.8s,mb4.9,baz=114,slow=7.2,SNR=9.2						
PETK				pP	pP	19 44 40.2	-6.8
	3.2nm,0.6s,baz=129,slow=6.7,SNR=3.9						
NVAR	**Mina Array Bea**	**93.79**	**44**	P	**P**	**19 44 41.0**	**+0.5**
	0.5nm,0.7s,mb4.0,baz=209,slow=7.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	**94.33**	**290**	P	**P**	**19 44 44.2**	**+0.9**
	0.4nm,0.7s,mb3.9,baz=163,slow=4.2,SNR=3.4						
BVAR	**Borovoye Array**	**129.94**	**312**	PKP	PKPdf	19 50 32.6	+0.3
	0.6nm,0.5s,baz=77,slow=1.5,SNR=6.7						
KEV	**Kevo**	**144.03**	**345**	*e*pkp	PKPdf	19 51 05.1	+7.3
ARCES	**ARCESS Array B**	**144.52**	**345**	PKP	PKPdf	19 50 57.8	-0.8
	3.0nm,0.9s,baz=341,slow=2.6,SNR=4.1						
JOF	**Joensuu**	**147.76**	**334**	*e*pkp	PKPdf	19 51 06.2	+1.9
	3.1nm,0.5s						
DBIC	**Dimbokro**	**149.60**	**170**	PKPbc	PKPbc	19 51 14.8	+1.4
	3.1nm,0.8s,baz=105,slow=19,SNR=3.1						
KAF	**Kangasniemi**	**150.02**	**336**	*e*pkp	PKPdf	19 51 11.9	+3.9
	2.9nm,0.5s						
FINES	**FINESS Array B**	**150.58**	**335**	PKPbc	PKPbc	19 51 14.3	0.0
	3.9nm,0.8s,baz=32,slow=3.8,SNR=13						
BRTR	**Keskin Array B**	**153.88**	**287**	PKPbc	PKPbc	19 51 22.4	0.0
	1.0nm,0.8s,baz=101,slow=3.9,SNR=6.9						
BRTR				PKPab	PKPab	19 51 35.1	-0.7
	1.0nm,0.8s,baz=151,slow=6.1,SNR=5.6						
NOA	**NORSAR Array B**	**154.82**	**348**	PKPab	PKPab	19 51 38.3	-0.8
	1.1nm,0.8s,baz=26,slow=4.0,SNR=3.7						
NOA				pPKPab	pPKPab	19 51 47.7	-8.1
	0.2nm,0.4s,baz=26,slow=4.3,SNR=3.5						
NOA	**NORSAR Array B**	**154.82**	**348**	PKPab	PKPab	19 51 38.3	-0.8
NOA				pPKPab	pPKPab	19 51 47.7	-8.1
AKASG	**Malin Array Be**	**155.21**	**313**	PKPab	PKPab	19 51 40.2	-1.0
	2.2nm,0.7s,baz=53,slow=3.9,SNR=11						
AKASG				pPKPab	pPKPab	19 51 49.5	-8.3
	0.5nm,0.3s,baz=53,slow=3.2,SNR=3.6						
AKASG	**Malin Array Be**	**155.21**	**313**	PKPab	PKPab	19 51 40.2	-1.0
AKASG				pPKPab	pPKPab	19 51 49.5	-8.3
TORD	**Torodi Ar. Bea**	**156.40**	**183**	PKPab	PKPab	19 51 48.1	+1.1
	0.3nm,0.5s,baz=171,slow=3.2,SNR=4.2						
GERES	**GERESS Array B**	**164.58**	**325**	PKPab	PKPab	19 52 21.0	-0.9
	0.3nm,0.4s,baz=29,slow=6.2,SNR=3.6						

SZGRF ***10*** *19:41:55.6, 22.°71N×122.°69E, h33km, mb5.5, MS5.9, Taiwan region*
BJI ***10*** *19:41:56.2, 23.°89N×122.°79E, h17km, mB5.4/40, mb5.1/57, ML5.2/6, Ms5.8/73, Ms7 5.7/59*
NEIC ***10*** *19:41:59.3±1.7, 24.°04N×122.°58E, h16km±10km, mb5.4/169, MS5.5/79, MW5.5, Error ellipse: s-maj=3.7km s-min=3.6km az=154.0, Moment Tensor Solution. s79 Moment tensor: Scale 10^{17}Nm; M_{rr}1.29; $M_{\theta\theta}$-1.49; $M_{\phi\phi}$0.20; $M_{r\theta}$1.74; $M_{\theta\phi}$0.58; $M_{\phi r}$1.14; Best double couple: M_o2.60000×10^{17} NP1:ϕ_s312.00000°, δ29.00000°, λ147.00000°. NP2:ϕ_s72.00000°, δ75.00000°, λ65.00000°. Principal axes: T 2.7600, Plg53.0000°, Azm311.0000°; N -0.4400, Plg24.0000°, Azm78.0000°; P -2.3300, Plg25.0000°, Azm180.0000°;*
NEIC Felt [III] at Taipei. Felt at Chang-hua, Chung-ho, Hsin-chu, Hsin-tien, I-lan, Lo-tung, Pan-ch'iao and T'ai-chung. Recorded [3 TAP] in I-lan; [2 TAP] in Chang-hua, Hua-lien, Nan-t'ou, T'ai-chung, T'ai-pei and T'ai-tung; [1 TAP] in Chia-i, Miao-li and P'eng-hu. Recorded [2 JMA] on Ishigaki-jima, Iriomote-jima and Yonaguni-jima, Ryukyu Islands.
GCMT ***10*** *19:41:59.3±0.1, 23.°89N×122.°52E, h24km, MW5.7/93, Moment Tensor Solution. s87,c172; s93,c226; Duration: 1§8 Moment tensor: Scale 10^{17}Nm; M_{rr}1.31±.04; $M_{\theta\theta}$-2.03±.03; $M_{\phi\phi}$0.72±.03; $M_{r\theta}$2.61±.05; $M_{\theta\phi}$-0.26±.02; $M_{\phi r}$1.84±.05; Best double couple: M_o3.66300×10^{17} NP1:ϕ_s296.00000°, δ21.00000°, λ147.00000°. NP2:ϕ_s57.00000°, δ78.00000°, λ72.00000°. Principal axes: T 3.5680, Plg53.0000°, Azm306.0000°; N 0.1910, Plg18.0000°, Azm61.0000°; P -3.7580, Plg31.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
JMA ***10*** *19:42:00.3±0.2, 23.°95N×122.°43E, h32km, M5.9*
JMA Felt II J1.
NIED ***10*** *19:42:00, 24.°00N×122.°40E, h44km, Mw5.8 Best double couple: M_o5.57000×10^{17} NP1:ϕ_s61.00000°, δ85.00000°, λ71.00000°. NP2:ϕ_s318.00000°, δ20.00000°, λ166.00000°.*
TAP ***10*** *19:42:01.0, 23.°95N×122.°53E, h25km, ML5.6, C*
ISCJB ***10*** *19:42:02.0±0.2, 23.°95N±0.°01×122.°54E±0.°01, h45km±1km, mb5.3/256, MS5.5/153, Error ellipse: s-maj=2.3km s-min=1.7km az=160.2*
IDC ***10*** *19:42:02.0±1.8, 24.°14N×122.°61E, h32km±12km, mb4.9/26, mb1 4.9/29, mb1mx4.9/31, mbtmp4.8/29, ML4.5/3, MS5.3/26, Ms1 5.3/26, ms1mx5.3/29, Error ellipse: s-maj=14.2km s-min=10.6km az=68.0*
MOS ***10*** *19:42:02.1±0.8, 24.°42N×122.°51E, h33km, mb5.6/103, MS5.6/58, Error ellipse: s-maj=7.4km s-min=4.0km az=117.5*
DJA ***10*** *19:42:05, 24.°22N×122.°66E, h52km, mb5.5/25*
ISC 10 19:42:03.1±0.2, 24.°00N±0.°01×122.°53E±0.°01, h41km±1km, h37km±3.8km; pP-P, n1039, σ1§02/1030, mb5.3/256, MS5.5/153, 153C-131D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**44**	P	**Pn**	**19 42 14.2**	**-1.5**
YOJ				S	**Sn**	**19 42 24.0**	**-0.6**
YOJ	**Yonaguni jima**	**0.63**	**44**	⇓*i*P	**Pn**	**19 42 14.4**	**-1.3**
	baz=48						
YOJ				*e*S	**Sn**	**19 42 23.1**	**-1.5**
	baz=48						
EHP	**Heping Village**	**0.78**	**293**	*e*P	**Pn**	**19 42 16.4**	**-1.3**
	baz=296						
ENA	**Nanau**	**0.84**	**301**	⇑*i*P	**Pn**	**19 42 17.4**	**-1.0**
	baz=313						
ENA				*e*S	**Sn**	**19 42 30.3**	**+0.8**
	baz=313						
HWA	**Hwalien**	**0.85**	**268**	P	**Pn**	**19 42 17.0**	**-1.6**
	baz=258						
TWD	**Chiawan**	**0.86**	**275**	⇓*i*P	**Pn**	**19 42 17.0**	**-1.7**
	baz=279						
TWD				*e*S	**Sn**	**19 42 29.8**	**-0.3**
	baz=279						
TWC	**Suao**	**0.87**	**314**	⇑*i*P	**Pn**	**19 42 17.9**	**-0.9**
	baz=317						
ESF	**Shoufeng Towns**	**0.95**	**262**	*e*P	**Pn**	**19 42 18.0**	**-1.9**
	baz=266						
TEGC	**Jichi Village**	**0.95**	**252**	*e*P	**Pn**	**19 42 19.1**	**-0.9**
	baz=256						
ESL	**Shilin**	**1.02**	**260**	⇓*i*P	**Pn**	**19 42 18.6**	**-2.4**
	baz=263						
ILA	**Ilan**	**1.04**	**317**	*e*P	**Pn**	**19 42 21.4**	**+0.1**
	baz=308						
ILA				*e*S	**Sn**	**19 42 38.6**	**+4.0**
	baz=308						
TWE	**Neicheng**	**1.06**	**312**	⇓*i*P	**Pn**	**19 42 21.7**	**+0.1**
	baz=315						
TWE				*e*S	**Sn**	**19 42 38.0**	**+2.9**
	baz=315						
TWB1	**Santiao Chiao**	**1.12**	**334**	⇓P	**Pn**	**19 42 22.2**	**-0.1**
	baz=335						
NNS	**Nan Shan**	**1.14**	**293**	⇓*i*P	**Pn**	**19 42 22.2**	**-0.4**
	baz=283						
NNS				*e*S	**Sn**	**19 42 39.7**	**+2.6**
	baz=283						
IRIF	**Iriomote-Funau**	**1.14**	**73**	P	**Pn**	**19 42 22.3**	**-0.3**
IRIF				S	**Sn**	**19 42 38.2**	**+1.1**
WHF	**Hehuan Shan**	**1.17**	**277**	⇓*i*P	**Pn**	**19 42 21.9**	**-1.0**
	baz=267						
HATJ	**Hateruma jima**	**1.17**	**87**	P	**Pn**	**19 42 22.1**	**-0.8**
HATJ				S	**Sn**	**19 42 37.7**	**+0.1**
EHY	**Hungye**	**1.21**	**246**	⇓*i*P	**Pn**	**19 42 21.6**	**-1.9**
	baz=258						
EHY				*e*S	**Sn**	**19 42 37.6**	**-1.2**
	baz=258						

YHNB	**Yeheng**	**1.25**	**302**	*e*Pn	**Pn**	**19 42 23.7**	**-0.3**
NSK	**Sanguang**	**1.26**	**302**	⇓*i*P	**Pn**	**19 42 24.2**	**0.0**
	baz=290						
TWT	**Tachien**	**1.26**	**282**	⇓*i*P	**Pn**	**19 42 24.0**	**-0.3**
	baz=273						
NWF	**Wu-fen Shan**	**1.26**	**327**	P	**Pn**	**19 42 24.4**	**+0.2**
	baz=329						
YULB	**Yu-li**	**1.28**	**242**	*e*Pn	**Pn**	**19 42 22.5**	**-2.1**
YULB				*e*Sn	**Sn**	**19 42 38.2**	**-2.3**
TWA	**Mucha**	**1.30**	**319**	⇓P	**Pn**	**19 42 25.1**	**+0.3**
	baz=321						
TWA				*e*S	**Sn**	**19 42 44.0**	**+3.0**
	baz=321						
TWF1	**Yuli**	**1.30**	**240**	P	**Pn**	**19 42 22.9**	**-1.9**
	baz=243						
TWF1				*e*S	**Sn**	**19 42 37.0**	**-4.0**
	baz=243						
TATQ	**Taipei**	**1.36**	**316**	*e*Pn	**Pn**	**19 42 25.7**	**+0.1**
JKRS	**Kuro-shima**	**1.37**	**80**	P	**Pn**	**19 42 25.5**	**-0.2**
JKRS				*e*S	**Sn**	**19 42 44.6**	**+1.9**
TAP1	**Taipei**	**1.38**	**319**	⇓P	**Pn**	**19 42 26.2**	**+0.3**
	baz=320						
CHKT	**Chengkung**	**1.40**	**230**	⇑P	**Pn**	**19 42 23.3**	**-2.8**
	baz=220						
CHKT				*e*S	**Sn**	**19 42 38.9**	**-4.4**
	baz=220						
SSLB	**Suanglung**	**1.46**	**262**	*e*Pn	**Pn**	**19 42 25.4**	**-1.6**
TWS1	**Kuangyinshan**	**1.49**	**317**	⇓P	**Pn**	**19 42 27.9**	**+0.5**
	baz=337						
TWS1				*e*S	**Sn**	**19 42 50.7**	**+5.1**
	baz=337						
SMLT	**Sun Moon Lake**	**1.50**	**266**	⇓*i*P	**Pn**	**19 42 26.8**	**-0.6**
	baz=258						
JIJ	**Ishigaki jima**	**1.52**	**76**	P	**Pn**	**19 42 27.0**	**-0.7**
JIJ				S	**Sn**	**19 42 46.6**	**+0.4**
TWY	**Chenhua**	**1.52**	**326**	*e*P	**Pn**	**19 42 28.3**	**+0.4**
	baz=327						
NSTT	**Nanjuang**	**1.53**	**294**	⇓*i*P	**Pn**	**19 42 28.9**	**+1.0**
	baz=296						
TYC	**Yuchr**	**1.53**	**267**	⇓*i*P	**Pn**	**19 42 27.3**	**-0.7**
	baz=269						
TYC				*e*S	**Sn**	**19 42 47.7**	**+1.0**
	baz=269						
YUS	**Yu-Shan**	**1.53**	**251**	⇓*i*P	**Pn**	**19 42 27.3**	**-0.7**
	baz=253						
NCU	**National Centr**	**1.56**	**308**	P	**Pn**	**19 42 28.7**	**+0.4**
	baz=310						
ELDTW	**Lidau**	**1.61**	**240**	⇑P	**Pn**	**19 42 27.0**	**-2.0**
	baz=242						
HSN	**Hsinchu**	**1.63**	**300**	*e*P	**Pn**	**19 42 29.6**	**+0.3**
	baz=302						
TWQ1	**Liyutan**	**1.64**	**282**	⇓*i*P	**Pn**	**19 42 30.6**	**+1.1**
	baz=285						
TWQ1				*e*S	**Sn**	**19 42 53.1**	**+3.8**
	baz=285						
ALS	**Alishan**	**1.66**	**253**	⇓*i*P	**Pn**	**19 42 29.4**	**-0.3**
	baz=245						
NSY	**Sanyi**	**1.67**	**285**	⇓*i*P	**Pn**	**19 42 31.1**	**+1.3**
	baz=287						
NSY				*e*S	**Sn**	**19 42 53.8**	**+3.8**
	baz=287						
PCYT	**Pengchaiyu**	**1.67**	**346**	*e*P	**Pn**	**19 42 30.3**	**+0.4**
	baz=346						
WNT	**Mingjian**	**1.69**	**266**	⇓P	**Pn**	**19 42 30.8**	**+0.6**
	baz=268						
TCU	**Taichung**	**1.70**	**275**	⇓P	**Pn**	**19 42 31.5**	**+1.2**
	baz=278						
TCU				*e*S	**Sn**	**19 42 53.1**	**+2.2**
	baz=278						
CHN5	**Tsauling**	**1.74**	**257**	⇓*i*P	**Pn**	**19 42 31.1**	**+0.2**
	baz=259						
TTN	**Taitung**	**1.78**	**226**	*e*P	**Pn**	**19 42 28.8**	**-2.6**
	baz=228						
TTN				*e*S	**Sn**	**19 42 49.4**	**-3.3**
	baz=228						
TWG	**Pinlang**	**1.78**	**229**	*e*Pn	**Pn**	**19 42 28.4**	**-3.0**
TWG	**Pinlang**	**1.78**	**229**	⇑*i*P	**Pn**	**19 42 29.0**	**-2.4**
	baz=243						
TWG				*e*S	**Sn**	**19 42 49.5**	**-3.3**
	baz=243						
STYT	**Tauyuan**	**1.83**	**243**	P	**Pn**	**19 42 31.4**	**-0.7**
	baz=234						
WGK	**Gukeng**	**1.83**	**260**	*e*P	**Pn**	**19 42 32.3**	**+0.3**
	baz=262						
TPUB	**Ta-pu**	**1.88**	**249**	*e*Pn	**Pn**	**19 42 32.4**	**-0.3**
CHN4	**Tsaushan**	**1.89**	**250**	⇓*i*P	**Pn**	**19 42 33.2**	**+0.3**
	baz=252						
CHN4				*e*S	**Sn**	**19 42 57.6**	**+2.1**
	baz=252						
WTP	**Ta-pu**	**1.91**	**247**	⇓*

PNG *e*S **Sn** **19 43 16.5 -0.5**
baz=263
QZH Quanzhou 3.71 285⇑*i*Pn **Pn** **19 42 57.7 -0.2**
QZH Sn **Sn** **19 43 39.1 -1.2**
QZH smax
comp=N,7μm,0.8s
QZH smax
comp=E,6μm,0.8s
QZH LR LR
comp=N,70μm,10.7s
QZH LR LR
comp=E,123μm,12.1s
QZH LR LR
comp=Z,160μm,14.0s
JKE Kume jima 2 4.50 58 P **Pn** **19 43 08.4 -0.3**
JKE *e*S **Sn** **19 44 01.3 +1.6**
JAGN Aguni-jima 4.98 58 P **Pn** **19 43 16.1 +0.7**
JAGN *e*S **Sn** **19 44 12.3 +0.6**
NAH1 Naha 5.17 64 *e*S **Sn** **19 44 18.7 +2.5**
JJT2 Tamagusuku 2 5.19 65 P **Pn** **19 43 17.5 -0.7**
SGCP Mt. Cagua 5.75 185 *e*P **Pn** **19 43 25.9 -0.1**
JIH Iheya 5.76 57 P **Pn** **19 43 25.0 -1.1**
JIH *e*S **Sn** **19 44 32.4 +1.4**
JOW Kunigami 5.91 60 P **Pn** **19 43 26.3 -1.8**
JOW Kunigami 5.91 60 Pn **Pn** **19 43 26.5 -1.6**
comp=Z,30nm,0.3s,baz=177,slow=7.7,SNR=24
JOW Sn **Sn** **19 44 33.8 -0.8**
comp=Z,11nm,0.3s,baz=119,slow=19,SNR=2.2
JOW Kunigami 5.91 60 Pn **Pn** **19 43 26.5 -1.6**
JOW Sn **Sn** **19 44 33.8 -0.8**
JOW Kunigami 5.91 60 *e*P **Pn** **19 43 26.5 -1.6**
baz=62
APYP Conner 6.23 191 *e*P **Pn** **19 43 31.3 -1.2**
CVP Callao Caves 6.30 186 *e*P **Pn** **19 43 31.6 -1.9**
CVP *e*S **Sn** **19 44 39.1 -5.2**
ABRA Dolores 6.55 195 *e*P **Pn** **19 43 36.4 -0.5**
JTK Tokunoshima 6.90 56 P **Pn** **19 43 39.3 -2.4**
JTK *e*S **Sn** **19 44 57.1 -1.8**
PALP Palanan 6.91 181 *e*P **Pn** **19 43 41.6 -0.2**
CAUP Cauayan 7.05 186 *e*P **Pn** **19 43 45.3 +1.5**
SSE Sheshan 7.17 351 P **Pn** **19 43 45.0 -0.3**
SSE S **Sn** **19 45 15.4 +10**
SSE LR LR
comp=N,39μm,13.9s
SSE LR LR
comp=E,5μm,13.9s
SSE LR LR
comp=Z,51μm,15.2s
JAM Amami Oshima 7.72 54 P **Pn** **19 43 49.9 -3.1**
HKC Hong Kong Obse 7.87 259 P **Pn** **19 43 54.0 -1.1**
JMZ Minamidaito 2 8.09 75 P **Pn** **19 43 53.1 -5.0**
BALP Baler 8.27 186 *e*P **Pn** **19 44 02.1 +1.6**
GZH Guangzhou 8.48 266 Pg **Pn** **19 43 58.2 -5.2**
GZH Sg **Sn** **19 45 23.6 -14**
GZH smax
comp=N,1μm,1.4s
GZH smax
comp=E,750nm,1.1s
SCZP Santa Cruz 8.55 197 *e*P **Pn** **19 44 04.4 0.0**
NJ2 Nanjing 8.65 339 *e*P **Pn** **19 44 05.5 -0.2**
NJ2 pP 19 44 08.6
NJ2 sP 19 44 11.5
NJ2 S **Sn** **19 45 45.0 +3.1**
NJ2 pmax pmax
comp=Z,90nm,0.6s
NJ2 pmax pmax
comp=Z,140nm,3.5s
NJ2 smax
comp=N,1μm,1.0s
NJ2 smax
comp=E,2μm,1.0s
NJ2 LR LR
comp=N,53μm,12.0s
NJ2 LR LR
comp=E,40μm,13.1s
NJ2 LR LR
comp=Z,74μm,11.8s
POLP Polilio Island 9.24 184 *e*P **Pn** **19 44 16.5 +2.6**
WHN Wuhan 9.76 314⇑⇑P **Pn** **19 44 20.3 -0.7**
WHN S **Sn** **19 46 14.2 +4.9**
WHN LR LR
comp=N,53μm,10.9s
WHN LR LR
comp=E,68μm,15.7s
WHN LR LR
comp=Z,101μm,14.6s
TGY Tagaytay City 9.96 189 Pn **Pn** **19 44 26.6 +2.9**
comp=Z,14nm,0.3s,baz=112,slow=19,SNR=6.1
TGY LR LR 19 48 12.1
comp=Z,64nm,19.6s,baz=188,slow=37
GQP Guinayangan 10.04 180⇓*e*P **Pn** **19 44 24.9 +0.1**
GQP *e*S **Sn** **19 46 08.9 -7.4**
LUBP Lubang 10.44 192 *e*P **Pn** **19 44 32.0 +1.7**
PVCP Virac 10.46 171 *e*P **Pn** **19 44 29.1 -1.5**
SJMP San Jose 11.56 187 *e*P **Pn** **19 44 49.5 +3.9**
CNP Cataman 11.61 170 *e*P **Pn** **19 44 47.4 +1.1**
BUSP Coron 12.14 191 *e*P **Pn** **19 44 53.7 +0.2**
QIZ Qiongzhong 12.80 250 P **Pn** **19 45 05.8 +3.2**
QIZ sP 19 45 13.1
QIZ S **Sn** **19 47 27.2 +3.4**
QIZ sS 19 47 33.6
QIZ pmax pmax
comp=Z,63nm,2.0s
QIZ pmax pmax
comp=Z,630nm,8.6s
QIZ LR LR
comp=N,12μm,16.0s
QIZ LR LR
comp=Z,8μm,15.9s
TIA Tai'an 13.03 340 P **Pn** **19 45 07.0 +1.4**
TIA pmax pmax
comp=Z,670nm,6.0s
TIA LR LR
comp=N,36μm,13.0s
TIA LR LR
comp=E,21μm,13.0s
ENH Enshi 13.18 301⇑*e*Pn **Pn** **19 45 07.8 +0.1**
comp=E,58nm,0.9s
LLP Lapu-Lapu 13.68 174⇓*e*P **Pn** **19 45 12.4 -2.2**
INCN Inchon 13.89 14 *e*Pn **Pn** **19 45 20.4 +3.1**
comp=E,361nm,1.1s
KS15 Wonju Array Si 14.16 18 *e*Pn **Pn** **19 45 23.6 +2.6**
KSRS Korea Array 14.18 18 Pn **Pn** **19 45 23.1 +1.7**
comp=E,2.6nm,0.3s,baz=197,slow=12,SNR=72
KSRS LR LR 19 51 14.6
comp=E,20μm,19.7s,baz=337,slow=39
TBP Tagbilaran 14.29 175 *e*P **Pn** **19 45 13.4 -10**
GYA Guiyang 14.57 283⇑*i*P **Pn** **19 45 25.8 -0.8**
GYA PP 19 45 37.6
GYA S **Sn** **19 48 09.2 +2.4**
GYA SS 19 48 25.6
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,140nm,4.6s
GYA LR LR
comp=N,39μm,15.2s
GYA LR LR
comp=E,28μm,15.8s
GYA LR LR
comp=Z,37μm,15.0s
PPR Puerto Princes 14.61 195⇑*i*P **Pn** **19 45 35.3 +8.1**
DL2 Dalian 14.88 357 P **Pn** **19 45 33.0 +2.4**
DL2 S **Sn** **19 48 18.9 +4.7**
DL2 pmax pmax
comp=Z,30nm,1.3s
DL2 pmax pmax
comp=Z,1μm,11.4s
DL2 LR LR
comp=N,14μm,13.7s
DL2 LR LR
comp=E,4μm,12.8s
DL2 LR LR
comp=Z,17μm,13.3s
XAN Xi'an 15.53 313 P **Pn** **19 45 37.3 -1.9**
XAN S **S** **19 48 31.0 -13**
XAN PcP PcP 19 50 39.1 -0.8
XAN pmax pmax
comp=Z,490nm,12.2s
XAN LR LR
comp=N,9μm,14.8s
XAN LR LR
comp=E,8μm,15.7s
XAN LR LR
comp=Z,10μm,14.8s

BATP Bataraza 15.78 197 *e*P **Pn** **19 45 47.9 +5.4**
PAGZ Pagadian 16.09 177 *e*P **Pn** **19 45 49.2 +2.8**
IPIL Ipil 16.12 180 *e*P **Pn** **19 45 49.1 +2.2**
TIY Taiyuan 16.17 330 *e*P **Pn** **19 45 49.1 +1.8**
TIY PP 19 46 04.9
TIY pmax pmax
comp=Z,3μm,12.9s
TIY LR LR
comp=N,42μm,12.7s
TIY LR LR
comp=E,19μm,14.2s
TIY LR LR
comp=Z,42μm,14.7s
BUKP Musuan 16.21 171 *e*P **Pn** **19 45 48.8 +0.7**
BJT Baijiatuau 16.85 343 *e*P **Pn** **19 45 57.9 +2.1**
BJT pmax pmax
comp=Z,113nm,1.0s
BJT Baijiatuau 16.85 343 *e*Pn **Pn** **19 45 57.9 +2.1**
comp=Z,113nm,1.0s
BJI Beijing 16.86 343 P **Pn** **19 45 58.2 +2.1**
BJI S **S** **19 49 03.7 -7.8**
BJI pmax pmax
comp=Z,77nm,1.2s
BJI pmax pmax
comp=Z,4μm,11.1s
BJI LR LR
comp=N,26μm,14.9s
BJI LR LR
comp=E,10μm,15.9s
BJI LR LR
comp=Z,14μm,23.6s
DAV Davao City (W) 17.09 170 LR LR 19 52 33.3
comp=Z,11μm,19.6s,baz=356,slow=37
JHJ Hachijo jima 2 17.65 55 LR LR 19 53 40.4
comp=Z,5μm,18.2s,baz=119,slow=40
SNY Shenyang 17.80 3⇑⇑P **Pn** **19 46 08.8 +1.2**
SNY S **S** **19 49 28.9 -1.5**
SNY pmax pmax
comp=Z,79nm,0.7s
SNY LR LR
comp=N,18μm,14.4s
SNY LR LR
comp=E,10μm,17.1s
SNY LR LR
comp=Z,23μm,16.1s
CBIJ Chichi jima 18.00 76 LR LR 19 52 15.3
comp=Z,8μm,21.6s,baz=283,slow=34
CD2 Chengdu 18.01 297⇑*i*P **Pn** **19 46 10.5 +0.1**
CD2 pP pP 19 46 14.0 -6.6
CD2 PP 19 46 25.3
CD2 S **S** **19 49 26.0 -9.0**
CD2 SS 19 49 50.2
CD2 pmax pmax
comp=Z,200nm,1.0s
CD2 pmax pmax
comp=Z,4μm,11.6s
CD2 LR LR
comp=N,30μm,15.5s
CD2 LR LR
comp=Z,40μm,15.0s
KMI Kunming 18.04 278 P **Pn** **19 46 11.0 +0.3**
KMI pP pP 19 46 15.2 -5.7
KMI sP sP 19 46 17.3 -8.8
KMI PP 19 46 26.1
KMI S **S** **19 49 29.5 -6.1**
KMI sS sS 19 49 42.5 -9.1
KMI SS 19 49 52.6
KMI pmax pmax
comp=Z,14nm,1.1s
KMI pmax pmax
comp=Z,2μm,9.9s
KMI LR LR
comp=N,9μm,13.0s
KMI LR LR
comp=E,24μm,13.6s
KMI LR LR
comp=Z,28μm,12.7s
MAJO Matsushiro 18.39 44 *e*P **Pn** **19 46 13.6 -1.3**
MAJO pmax pmax
comp=Z,28nm,0.9s
MAJO Matsushiro 18.39 44 *e*P **Pn** **19 46 13.6 -1.4**
comp=Z,28nm,0.9s
MAT Matsushiro 18.39 44 P **Pn** **19 46 14.0 -0.9**
MAT S **S** **19 49 36.0 -6.6**
MJAR Matsushiro Arr 18.39 44 P **Pn** **19 46 13.6 -1.4**
comp=Z,0.3nm,0.3s,baz=246,slow=11,SNR=14
KKM Kota Kinabalu 18.86 200 *e*P **Pn** **19 46 17.8 -3.0**
comp=Z,213nm,1.3s
HHC Hu-ho-hao-te 19.15 334⇑⇑P **Pn** **19 46 24.9 +0.9**
HHC pP pP 19 46 28.5 -4.5
HHC sP sP 19 46 32.6 -5.6
HHC PP 19 46 42.8
HHC S **S** **19 49 55.9 -1.9**
HHC sS sS 19 50 02.5 -11
HHC SS 19 50 22.3
HHC PcP PcP 19 50 49.2 +3.6
HHC pmax pmax
comp=Z,74nm,1.2s
HHC pmax pmax
comp=Z,3μm,7.5s
HHC LR LR
comp=N,32μm,14.1s
HHC LR LR
comp=E,20μm,14.6s
HHC LR LR
comp=Z,38μm,14.1s
BTO Baotou 19.61 331 *e*P **Pn** **19 46 28.1 -1.4**
BTO S **S** **19 50 02.2 -4.7**
BTO LR LR
comp=N,16μm,13.7s
BTO LR LR
comp=E,6μm,13.5s
CN2 Changchun 19.89 6 *e*P **Pn** **19 46 30.3 -2.5**
CN2 *e*sP sP 19 46 37.3 -9.0
CN2 *e*S **S** **19 50 09.5 -3.1**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,29μm,14.0s
CN2 LR LR
comp=E,7μm,14.0s
CN2 LR LR
comp=Z,31μm,15.0s
LZH Lanzhou 20.13 311⇑⇑P **P** **19 46 35.8 +2.2**
LZH pP 19 46 44.5
LZH sP sP 19 46 49.0 +0.1
LZH PP 19 46 55.9
LZH S **S** **19 50 16.0 -1.4**
LZH sS sS 19 50 29.1 -4.5
LZH SS 19 50 45.0
LZH pmax pmax
comp=Z,780nm,1.1s
LZH pmax pmax
comp=Z,2μm,8.3s
LZH LR LR
comp=E,25μm,15.6s
LZH LR LR
comp=Z,37μm,16.5s,MS5.8
VLA Vladivostok 20.57 20 *e*P **P** **19 46 37.8 -0.5**
VLA pmax pmax
comp=Z,31nm,1.0s
VLA MLR MLR
comp=Z,11μm,13.4s,MS5.4
MDJ Mudanjiang 21.36 14 P **P** **19 46 45.5 -1.3**
MDJ pP 19 46 47.4
MDJ S **S** **19 50 39.7 -1.8**
MDJ ScP ScP 19 54 25.3 +2.0
MDJ PcS PcS 19 54 26.8 -0.8
MDJ pmax pmax
comp=Z,37nm,1.2s,mb4.6
MDJ LR LR
comp=N,18μm,15.9s,MS5.7
MDJ LR LR
comp=E,11μm,14.0s,MS5.7
MDJ LR LR
comp=Z,23μm,15.1s,MS5.7
MDJ Mudanjiang 21.36 14 *e*P **P** **19 46 44.6 -2.2**
comp=Z,102nm,1.2s,mb5.0
CHG Chiang Mai 22.55 261⇑⇑P **P** **19 47 02.0 +2.3**
comp=Z,52nm,1.0s,mb4.9
CHTO Chiang Mai 22.55 261 *e*P **P** **19 46 59.8 +0.1**
CHTO pmax pmax
comp=Z,56nm,1.1s,mb4.9

CHTO Chiang Mai 22.55 261 *e*P **P** **19 46 59.8 +0.1**
comp=Z,56nm,1.1s,mb4.9
CHTO Chiang Mai 22.55 261⇑⇑P **P** **19 47 01.7 +2.0**
SNR=9.2
CHTO ⇑⇑P 19 47 01.7
SNR=9.2
NST Nakhon Sawan 22.62 253 P **P** **19 47 02.0 +1.5**
CM31 Chiang Mai Arr 22.66 260 *e*P **P** **19 47 00.7 -0.2**
comp=Z,23nm,0.8s,mb4.7
CM31 LR LR
comp=Z,1μm,22.0s,MS4.3
CMAR Chiang Mai Arr 22.66 260 P **P** **19 47 02.0 +1.1**
CMAR 19 50 53.4
CMAR Chiang Mai Arr 22.66 260 P **P** **19 47 02.0 +1.1**
comp=Z,17nm,1.0s,mb4.5,baz=65,slow=7.3,SNR=59
CMAR PcP PcP 19 50 53.4 +0.7
comp=Z,3.2nm,1.0s,baz=352,slow=1.7,SNR=4.5
CMAR ScP ScP 19 54 28.8 +1.6
comp=Z,1.3nm,0.9s,baz=1.2,slow=3.9,SNR=4.7
CMAR LR LR 19 56 35.3
comp=Z,4μm,18.1s,MS4.9,baz=74,slow=38
GUMO Guam 23.51 112 P **P** **19 47 11.2 +1.5**
GUMO MLR MLR
comp=Z,8μm,19.0s,MS5.2
GUMO Guam 23.51 112 LR LR 19 55 59.0
comp=Z,7μm,18.2s,MS5.2,baz=123,slow=36
NNT Nongplab 24.40 246 P **P** **19 47 19.8 +2.0**
GTA Gaotai 24.59 314⇑⇑P **P** **19 47 19.6 +0.3**
GTA pP 19 47 23.9
GTA sP sP 19 47 26.6 -8.8
GTA PcP PcP 19 50 58.2 +1.8
GTA S **S** **19 51 40.1 +2.5**
GTA sS sS 19 51 47.1 -9.0
GTA SS 19 52 39.3
GTA ScP ScP 19 54 34.3 +2.3
GTA PcS PcS 19 54 36.0 -0.3
GTA pmax pmax
comp=Z,53nm,1.2s,mb5.0
GTA pmax pmax
comp=Z,1μm,6.6s
GTA LR LR
comp=N,9μm,12.9s,MS5.7
GTA LR LR
comp=E,16μm,14.7s,MS5.7
GTA LR LR
comp=Z,21μm,14.7s,MS5.8
ERM Erimo 24.83 39 P **P** **19 47 18.8 -2.6**
comp=Z,198nm,0.7s,mb5.8,SNR=8.1
ERM Erimo 24.83 39*d*⇑*i*P **P** **19 47 18.3 -3.1**
ERM pmax pmax
comp=Z,14nm,0.6s,mb4.7
ERM MLR MLR
comp=Z,6μm,18.0s,MS5.2
ERM Erimo 24.83 39 *e*P **P** **19 47 17.0 -4.4**
comp=Z,19nm,0.6s,mb4.8
HIA Hailar 25.31 356 *e*P **P** **19 47 23.2 -2.5**
HIA pmax pmax
comp=Z,95nm,1.2s
HIA Hailar 25.31 356 *e*P **P** **19 47 23.2 -2.5**
comp=Z,95nm,1.2s,mb5.2
KSM Kuching 25.33 210 *e*P **P** **19 47 25.0 -1.2**
comp=Z,144nm,1.4s,mb5.3
ASAJ Asahikawa 25.93 34 P **P** **19 47 29.1 -2.3**
comp=Z,18nm,0.7s,mb4.7,baz=205,slow=8.6,SNR=28
ASAJ LR LR 19 57 34.8
comp=Z,8μm,21.9s,MS5.2,baz=239,slow=36
KLR Kul'dur 26.20 14 *e*P **P** **19 47 29.0 -4.8**
KLR pmax pmax
comp=E,38nm,1.4s
KLR pmax pmax
comp=Z,72nm,1.4s,mb5.0
KLR MLR MLR
comp=N,16μm,13.0s
KLR MLR MLR
comp=Z,36μm,13.0s,MS6.1
HABR Khabarovsk 26.36 19 *e*P **P** **19 47 31.7 -3.5**
HABR *e**PP pP 19 47 41.4 -5.0
HABR *e**SP sP 19 47 45.5 -5.8
HABR *e* 19 48 11.4
HABR *e*PPP 19 48 19.7
HABR *e* 19 50 57.2
HABR *e*S **S** **19 52 02.4 -3.0**
HABR *e**SS sS 19 52 19.0 -5.1
HABR pmax pmax
comp=Z,16nm,1.0s,mb4.5
HABR pmax pmax
comp=N,11nm,1.0s
HABR pmax pmax
comp=E,25nm,1.8s
HABR MLR MLR
comp=Z,10μm,17.0s,MS5.4
HABR MLR MLR
comp=N,9μm,18.0s,MS5.5
HABR MLR MLR
comp=E,8μm,14.0s,MS5.5
ULN Ulaanbaatar 26.81 337 *e*P **P** **19 47 38.0 -1.3**
ULN *e* 19 51 01.2
ULN pmax pmax
comp=Z,61nm,1.1s,mb5.0
ULN Ulaanbaatar 26.81 337 *e*P **P** **19 47 38.0 -1.2**
comp=Z,61nm,1.1s,mb5.0
ULN *e*PcP PcP 19 51 01.2 -0.1
ULN *e*ScP ScP 19 54 38.5 +0.4
ULN Ulaanbaatar 26.81 337⇑⇑P **P** **19 47 38.6 -0.7**
SNR=17
ULN ⇑⇑P 19 47 38.6
SNR=17
SONM Songino Array 27.02 336 P **P** **19 47 40.5 -0.7**
SONM 19 51 01.8
SONM Songino Array 27.02 336 P **P** **19 47 40.5 -0.7**
comp=Z,83nm,1.1s,mb5.2,baz=151,slow=8.3,SNR=122
SONM PcP PcP 19 51 01.8 +0.1
comp=Z,4.3nm,0.6s,baz=178,slow=3.4,SNR=7.4
SONM ScP ScP 19 54 40.1 +1.3
comp=Z,8.4nm,1.2s,baz=156,slow=2.8,SNR=10.0
SONM LR LR 19 59 38.3
comp=Z,22μm,19.6s,MS5.7,baz=221,slow=39
SHL Shillong 27.84 280 *e*P **P** **19 47 49.0 +0.2**
SHL *e*x x 19 54 44.0
YSS Yuzh-Sakhalins 28.05 30 *e*P **P** **19 47 51.0 +0.6**
YSS *e* 19 48 34.0
YSS *e*PPP 19 48 56.0
YSS *e*S **S** **19 52 33.0 +0.9**
YSS pmax pmax
comp=Z,60nm,1.1s,mb5.1
YSS Yuzh-Sakhalins 28.05 30 *e*P **P** **19 47 47.6 -2.8**
comp=Z,58nm,1.1s,mb5.1
YSS *e*PcP PcP 19 51 04.6 +0.3
KULM Kulim 28.10 232 *e*P **P** **19 47 51.9 +0.7**
comp=Z,35nm,1.3s,mb4.8
KULM LR LR
comp=Z,4μm,19.0s,MS5.0
LSA Lhasa 28.51 288 P **P** **19 47 56.7 +1.9**
LSA S **S** **19 52 48.5 +8.7**
LSA LR LR
comp=Z,18μm,17.1s,MS5.7
LSA Lhasa 28.51 288⇑⇑*i*P **P** **19 47 56.6 +1.8**
LSA pmax pmax
comp=Z,29nm,0.7s,mb5.1
LSA Lhasa 28.51 288⇑⇑*i*P **P** **19 47 56.5 +1.8**
comp=Z,30nm,0.7s,mb5.1
KAPI Kappang 28.97 186 LR LR 19 59 22.7
comp=Z,3μm,21.8s,MS4.8,baz=13,slow=36
ZAK Zakamensk 30.29 335 *e*P **P** **19 48 08.8 -1.4**
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.5
TLY Talaya 31.21 337 P **P** **19 48 17.6 -0.7**
comp=Z,174nm,1.2s,mb5.8,SNR=13
TLY Talaya 31.21 337*c*⇑*i*P **P** **19 48 17.4 -0.9**
TLY *e* 19 49 20.6
TLY pmax pmax
comp=Z,41nm,1.0s,mb5.2
TLY MLR MLR
comp=Z,18μm,15.0s,MS5.8
TLY Talaya 31.21 337 *e*P **P** **19 48 17.0 -1.3**
comp=Z,36nm,0.9s,mb5.2
TLY *e*PcP PcP 19 51 12.4 +0.1
TLY Talaya 31.21 337 P **P** **19 48 17.8 -0.5**
SNR=7.4
TLY P 19 48 17.8
SNR=7.4
CAL Calcutta 31.41 274 *e*x pP 19 48 30.8 -0.9
CAL *e*x x 19 52 06.0
IRK Irkutsk 31.46 338 *e*P **P** **19 48 16.9 -3.6**
IRK *e* pP 19 48 29.4 -2.4
IRK *e* 19 51 13.4

IRK pmax pmax
comp=Z,45nm,1.3s,mb5.1
MOY Mondy 32.19 335 *e*P **P** **19 48 26.3 -0.7**
MOY pmax pmax
comp=Z,41nm,1.6s,mb5.0
CLNS Chul'man 32.84 2 *e*P **P** **19 48 37.4 +4.8**
CLNS *e**PP pP 19 48 51.8 +7.9
CLNS *e* 19 49 44.3
CLNS *e*PPP 19 50 01.2
CLNS *e* 19 51 15.6
CLNS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CLNS pmax pmax
comp=N,4.0nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS MLR MLR
comp=E,4μm,15.0s,MS5.7
CLNS MLR MLR
comp=N,10μm,13.0s,MS5.7
CLNS MLR MLR
comp=Z,12μm,14.0s,MS5.8
GUN Gumba 33.10 285 *e*P **P** **19 48 36.5 +1.2**
comp=Z,102nm,0.9s,mb5.8
PKI Pulchoki 33.53 284 *e*P **P** **19 48 39.6 +0.6**
comp=Z,88nm,1.2s,mb5.6
PKIN Phulchoki 33.54 284 *e*P **P** **19 48 39.5 +0.4**
comp=Z,29nm,0.6s,mb5.4
PKIN Phulchoki 33.54 284 *e*P **P** **19 48 39.5 +0.4**
KKN Kakani 33.64 285 *e*P **P** **19 48 40.5 +0.6**
comp=Z,121nm,1.2s,mb5.7
DMN Daman 33.80 284 *e*P **P** **19 48 41.9 +0.6**
comp=Z,107nm,1.2s,mb5.7
BOD Bodaibo 34.34 352 *e*P **P** **19 48 38.5 -7.1**
BOD pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
WMQ Urumqi 34.67 313 P **P** **19 48 49.3 +0.6**
WMQ S **S** **19 54 17.3 +1.7**
WMQ SS SS 19 56 29.1 -18
WMQ ScS ScS 19 59 10.9 +3.7
WMQ pmax pmax
comp=Z,68nm,1.2s,mb5.5
WMQ pmax pmax
comp=Z,350nm,6.5s
WMQ LR LR
comp=N,7μm,14.0s,MS5.8
WMQ LR LR
comp=E,8μm,12.0s,MS5.8
WMQ LR LR
comp=Z,4μm,15.0s,MS5.3
SKR Severo-Kuril's 37.18 36 *e*P **P** **19 49 05.8 -4.2**
SKR *e* 19 49 23.5
SKR *e* 19 54 54.0
SKR S **S** **19 55 10.0 +16**
SKR *e*SS SS 19 57 44.0 +6.4
SKR pmax pmax
comp=E,40nm,0.5s
SKR pmax pmax
comp=Z,40nm,0.5s,mb5.5
SKR MLR MLR
comp=N,3μm,16.0s
SKR MLR MLR
comp=Z,4μm,16.0s,MS5.3
KAKA Kakadu 37.75 164 *e*P **P** **19 49 12.3 -2.9**
comp=Z,30nm,0.7s,mb5.1
KAKA Kakadu 37.75 164 *e*P **P** **19 49 11.9 -3.3**
comp=Z,104nm,0.8s,mb5.6
PTH Pithoragarh 38.02 288 *e*P **P** **19 49 19.0 +1.5**
YAK Yakutsk 38.32 5*c i*P **P** **19 49 16.7 -2.8**
YAK *e**PP pP 19 49 27.5 -3.5
YAK *e* 19 50 41.1
YAK *e* 19 51 31.8
YAK *e*S **S** **19 55 01.6 -9.2**
YAK *e**SS sS 19 55 18.6 -11
YAK *e*SS SS 19 57 45.6 -15
YAK *e* 19 59 23.4
YAK pmax pmax
comp=Z,87nm,1.0s,mb5.4
YAK pmax pmax
comp=N,58nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,21nm,1.1s,mb4.8
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,11nm,1.2s
YAK smax
comp=N,174nm,5.8s
YAK smax
comp=E,95nm,5.8s
YAK MLR MLR
comp=Z,5μm,12.0s,MS5.5
YAK MLR MLR
comp=N,4μm,13.0s,MS5.5
YAK MLR MLR
comp=E,1μm,12.0s,MS5.5
YAK Yakutsk 38.32 5 *e*P **P** **19 49 16.5 -3.1**
comp=E,74nm,0.8s,mb5.5
JOSI Joshimath 38.57 289 *e*P **P** **19 49 22.8 +0.7**
MK31 Makanchi Array 39.33 316 *e*P **P** **19 49 27.7 -0.5**
MKAR Makanchi Array 39.33 316 P **P** **19 49 28.1 -0.1**
MKAR 19 51 35.4
MKAR 19 55 21.9
MKAR Makanchi Array 39.33 316 P **P** **19 49 28.1 -0.1**
comp=E,28nm,0.6s,mb5.2,baz=108,slow=9.0,SNR=247
MKAR PcP PcP 19 51 35.4 -0.7
comp=E,5.6nm,0.6s,baz=130,slow=3.3,SNR=4.0
MKAR ScP ScP 19 55 21.9 +0.4
comp=E,4.5nm,0.9s,baz=94,slow=5.1,SNR=7.4
MKAR LR LR 20 07 08.2
comp=E,8μm,18.0s,MS5.6,baz=103,slow=38
PEA0B Petropavlovsk- 39.34 33 P **P** **19 49 24.8 -3.3**
PETK Petropavlovsk- 39.34 33 P **P** **19 49 25.9 -2.2**
comp=E,2.3nm,0.6s,mb4.1,baz=220,slow=6.2,SNR=13
PETK LR LR 20 05 51.4
comp=E,2μm,19.6s,MS5.0,baz=228,slow=36
PETK Petropavlovsk- 39.34 33 P **P** **19 49 25.9 -2.2**
PETK LR LR 20 05 51.4
PET Petropavlovsk 39.77 34 *e*P **P** **19 49 32.4 +0.6**
PET *e*S **S** **19 55 33.1 +0.2**
PET *e*SS SS 19 58 19.4 -10
PET pmax pmax
comp=Z,30nm,1.5s,mb4.8
PET pmax pmax
comp=Z,300nm,18.4s
PET MLR MLR
comp=Z,3μm,21.0s,MS5.1
PET Petropavlovsk 39.77 34 P **P** **19 49 28.0 -3.8**
DDI Dehra Dun 39.87 289 *e*P **P** **19 49 33.5 +0.5**
DDI *ex* x 19 50 01.0
AGRA Agra 40.18 284 *e*P **P** **19 49 35.2 -0.4**
AGRA AMb AMB 19 49 38.1
comp=Z,56nm,0.2s,mb5.9
BISR Bishrakh 40.51 286 *e*P **P** **19 49 38.3 +0.1**
NDI New Delhi 40.69 287 *ex* x 19 49 37.0
SDNR Sundarnagar 40.77 291 *ex* x 19 49 42.5
AYAN Aya Nagar 40.79 286 *e*P **P** **19 49 40.1 -0.4**
AYAN AMb AMB 19 49 44.0
comp=Z,58nm,1.1s,mb5.1
SONA Sohna 40.84 286 *e*P **P** **19 49 40.8 -0.2**
SONA AMb AMB 19 49 44.7
comp=Z,82nm,0.7s,mb5.5
ZAA0 Zalesovo Array 41.07 327 *e*P **P** **19 49 40.8 -1.7**
ZAA0 *e*ScP ScP 19 55 22.9 -5.2
ZALV Zalesovo Beam 41.07 327 P **P** **19 49 40.9 -1.6**
ZALV 19 51 41.2
ZALV Zalesovo Beam 41.07 327 P **P** **19 49 40.9 -1.6**
comp=Z,41nm,0.5s,mb5.3,baz=113,slow=8.0,SNR=160
ZALV PcP PcP 19 51 41.2 -0.4
comp=Z,4.1nm,0.4s,baz=99,slow=4.9,SNR=5.8
ZALV ScP ScP 19 55 27.7 -0.5
comp=Z,5.6nm,1.1s,baz=107,slow=5.1,SNR=4.6
ZALV LR LR 20 09 16.2
comp=Z,2μm,19.6s,MS4.9,baz=126,slow=40
ZALV Zalesovo Beam 41.07 327 P **P** **19 49 40.9 -1.6**
ZALV PcP PcP 19 51 41.2 -0.4
ZALV ScP ScP 19 55 27.7 -0.5
ZALV LR LR 20 09 16.2
RTK Rohtak 41.37 287 *ex* x 19 49 37.6
RTK AMb AMB 19 49 41.0
comp=Z,173nm,0.9s,mb5.7
HYB Hyderabad 41.53 269 *i* P **P** **19 49 48.0 +1.3**
THN Thein Dam 41.83 292 *e*P **P** **19 49 48.1 -0.9**
AAA Alma-Ata 41.95 309 *e*P **P** **19 49 52.1 +2.2**
AAA pmax pmax
comp=Z,500nm,8.5s
AAA MLR MLR
comp=Z,8μm,14.0s,MS5.7
FITZ Fitzroy Crossi 41.96 176⇓*i*P **P** **19 49 48.5 -1.6**
comp=Z,67nm,1.2s,mb5.2
FITZ Fitzroy Crossi 41.96 176 *e*P **P** **19 49 48.5 -1.6**
comp=Z,114nm,1.5s,mb5.3
KHET Khetri 41.98 286 *e*P **P** **19 49 50.1 -0.3**
KHET AMb AMB 19 49 53.5
comp=Z,29nm,0.8s,mb5.0
KSH Kashi 42.03 303⇑*e*P **P** **19 49 54.6 +4.0**
KSH *e*pP pP 19 49 59.2 -2.9
KSH *e*sP sP 19 50 01.7 -5.3
KSH *e*PP PP 19 51 35.6 +7.3
KSH *e*PcP PcP 19 51 47.2 +2.1
KSH *e*ScP ScP 19 55 36.2 +3.9
KSH *e*PcS PcS 19 55 37.4 +0.7
KSH *e*S **S** **19 56 15.1 +8.3**
KSH *e*sS sS 19 56 22.2 -3.8
KSH *e*SS SS 19 59 17.7 +2.7
KSH *e*ScS ScS 19 59 52.6 +2.9
KSH pmax pmax
comp=Z,170nm,1.5s,mb5.5
KSH LR LR
comp=N,4μm,15.2s,MS5.8
KSH LR LR
comp=E,8μm,15.9s,MS5.8
KSH Kashi 42.03 303⇑*i*P **P** **19 49 54.8 +4.2**
KSH S **S** **19 56 14.6 +7.8**
KSH LR LR
comp=N,4μm,14.9s,MS5.8
KSH LR LR
comp=E,10μm,17.7s,MS5.8
ULHL Ulahol 42.25 307 P **P** **19 49 54.2 +1.9**
SNR=7.5
NVS Novosibirsk 42.32 327 *i* P **P** **19 49 50.8 -1.9**
NVS pmax pmax
comp=N,33nm,1.5s
NVS pmax pmax
comp=E,42nm,1.5s
NVS pmax pmax
comp=Z,48nm,1.5s,mb4.9
COEN Coen 42.78 150 *e*P **P** **19 49 57.4 +0.5**
comp=Z,534nm,1.1s,mb6.2
TKM2 Tokmak 2 42.84 308 P **P** **19 49 58.8 +1.6**
SNR=188
TKM2 Tokmak 2 42.84 308 *e*P **P** **19 49 58.5 +1.3**
TKM2 pmax pmax
comp=Z,171nm,1.0s,mb5.7
TKM2 Tokmak 2 42.84 308 *e*P **P** **19 49 58.5 +1.4**
comp=Z,171nm,1.0s,mb5.7
KZA Kyzart 42.95 307 P **P** **19 50 00.5 +2.4**
SNR=189
KURK Kurchatov 43.02 320 P **P** **19 49 57.8 -0.7**
comp=Z,323nm,0.9s,mb6.0,SNR=69
KURK Kurchatov 43.02 320*ce*P **P** **19 49 57.7 -0.8**
KURK pmax pmax
comp=Z,78nm,1.1s,mb5.3
KURK MLR MLR
comp=Z,5μm,15.0s,MS5.5
KURK Kurchatov 43.02 320 *e*P **P** **19 49 57.5 -1.0**
comp=Z,50nm,1.1s,mb5.2
KURK LR LR
comp=Z,2μm,19.0s,MS5.0
KURK Kurchatov 43.02 320 ⇓P **P** **19 49 57.8 -0.7**
SNR=43
KURK ⇓P 19 49 57.8
SNR=43
AJM Ajmer 43.19 284 *e*P **P** **19 50 00.0 -0.2**
KBK Karagaybulak 43.27 307 P **P** **19 50 02.4 +1.8**
SNR=91
CHMS Chumysh 43.47 308 P **P** **19 50 03.3 +1.1**
SNR=92
UCH Uchtor 43.51 307 P **P** **19 50 05.1 +2.5**
SNR=318
UCH Uchtor 43.51 307 *e*P **P** **19 50 04.5 +2.0**
comp=Z,282nm,1.1s,mb5.9
UCH *e*ScP ScP 19 55 41.8 +3.5
FRU Bishkek 43.54 308⇑*i*P **P** **19 50 04.0 +1.2**
FRU pmax pmax
comp=Z,185nm,1.4s,mb5.6
AAK Ala-Archa 43.59 307 P **P** **19 50 04.9 +1.7**
comp=Z,342nm,1.1s,mb6.0,SNR=54
AAK Ala-Archa 43.59 307 P **P** **19 50 04.7 +1.5**
SNR=66
AAK Ala-Archa 43.59 307*ce*P **P** **19 50 04.4 +1.2**
AAK pmax pmax
comp=Z,47nm,1.2s,mb5.1
AAK MLR MLR
comp=Z,6μm,18.0s,MS5.5
AAK Ala-Archa 43.59 307 *e*P **P** **19 50 04.3 +1.1**
comp=Z,65nm,1.0s,mb5.3
USP Ospenovka 43.70 308 P **P** **19 50 04.9 +0.8**
SNR=26
SEY Seymchan 43.73 19*c i*P **P** **19 50 03.5 -0.5**
COCO West Island 43.87 218 PFAKE 19 50 20.0 +14
COCO LR LR
comp=Z,1μm,19.0s,MS4.8
AML Almayashu 44.10 306 P **P** **19 50 09.5 +2.2**
SNR=145
AML Almayashu 44.10 306⇑*i*P **P** **19 50 09.0 +1.7**
comp=Z,170nm,1.0s,mb5.7
AML *e*ScP ScP 19 55 42.7 +2.1
EKS2 Erkin-Say 44.12 307 P **P** **19 50 08.8 +1.4**
SNR=69
EKS2 Erkin-Say 44.12 307 *e*P **P** **19 50 08.3 +0.9**
comp=Z,39nm,0.9s,mb5.1
EKS2 *e*ScP ScP 19 55 40.1 -0.6
MBWA Marble Bar 44.97 184 *e*P **P** **19 50 12.4 -1.9**
comp=Z,23nm,0.8s,mb5.0
MBWA *e* pP 19 50 25.6 -0.4
MBWA LR LR
comp=Z,2μm,22.0s,MS4.9
WRAB Tennant Creek 45.16 164 P **P** **19 50 15.0 -0.9**
comp=Z,374nm,0.8s,mb6.3,SNR=26
WRAB Tennant Creek 45.16 164⇓*i*P **P** **19 50 15.3 -0.6**
WRAB pmax pmax
comp=Z,95nm,0.9s,mb5.6
WRAB Tennant Creek 45.16 164⇓*i*P **P** **19 50 15.3 -0.6**
comp=Z,95nm,0.9s,mb5.6
WRA Warramunga Arr 45.17 164 P **P** **19 50 15.6 -0.4**
comp=Z,41nm,0.6s,mb5.4,baz=346,slow=8.8,SNR=361
WRA LR LR 20 09 08.6
comp=Z,2μm,21.6s,MS5.0,baz=0.0,slow=36
WRA PKPPKP 20 21 34.2
comp=Z,0.4nm,0.7s,baz=115,slow=2.1,SNR=5.2
WB2 Warramunga Arr 45.17 164⇓*i*P **P** **19 50 15.4 -0.6**
POO Poona 45.52 273⇓*i*P **P** **19 50 17.0 -1.9**
comp=Z,30nm,1.0s,mb5.2
KBL Kabul 47.35 296⇑*i*P **P** **19 50 34.1 +1.0**
KBL *e* 19 52 29.4
KBL pmax pmax
comp=Z,266nm,1.4s,mb6.0
KBL Kabul 47.35 296⇑*i*P **P** **19 50 34.1 +1.0**
comp=Z,266nm,1.4s,mb6.0
KBL *e*PP PP 19 52 29.4 +5.0
KBL *e*ScP ScP 19 55 56.9 +2.6
TIXI Tiksi 47.81 3 *e*P **P** **19 50 33.2 -2.9**
TIXI *e* 19 52 26.0
TIXI *e*S **S** **19 57 25.3 -4.3**
TIXI *e* 20 00 24.1
TIXI pmax pmax
comp=Z,37nm,1.1s,mb5.3
TIXI MLR MLR
comp=Z,20μm,17.0s,MS6.2
TIXI Tiksi 47.81 3⇑*i*P **P** **19 50 33.0 -3.1**
comp=Z,45nm,1.1s,mb5.4
BVAR Borovoye Array 48.59 321 P **P** **19 50 41.3 -1.1**
BVAR 19 52 07.1
BVAR Borovoye Array 48.59 321 P **P** **19 50 41.3 -1.1**
comp=Z,15nm,0.6s,mb5.2,baz=106,slow=8.1,SNR=114
BVAR PcP PcP 19 52 07.1 -0.5
comp=Z,5.5nm,0.5s,baz=100,slow=3.3,SNR=4.9
BVAR ScP ScP 19 55 59.0 -0.1
comp=Z,23nm,1.2s,baz=117,slow=5.2,SNR=11
BVAR LR LR 20 13 38.5
comp=Z,3μm,18.6s,MS5.4,baz=105,slow=39
BVAR Borovoye Array 48.59 321 P **P** **19 50 41.3 -1.1**
BVAR PcP PcP 19 52 07.1 -0.5
BVAR ScP ScP 19 55 59.0 -0.1
BVAR LR LR 20 13 38.5
ASAR Alice Springs 48.65 166 P **P** **19 50 43.5 +0.4**
comp=Z,15nm,0.5s,mb5.3,baz=346,slow=7.3,SNR=617
ASAR ScP ScP 19 55 59.6 -0.1
comp=Z,1.3nm,0.9s,baz=350,slow=3.8,SNR=3.9
ASAR PKPPKP 20 21 25.3
comp=Z,0.8nm,1.0s,baz=107,slow=5.0,SNR=3.5
BRVK Borovoye 48.66 321 P **P** **19 50 42.5 -0.4**
comp=Z,189nm,0.7s,mb6.2,SNR=26
BRVK Borovoye 48.66 321⇑*i*P **P** **19 50 42.0 -0.9**
BRVK *e* 19 52 05.4
BRVK pmax pmax
comp=Z,29nm,0.8s,mb5.4
BRVK MLR MLR
comp=Z,4μm,19.0s,MS5.4
BRVK Borovoye 48.66 321⇑*i*P **P** **19 50 42.0 -0.9**
comp=Z,29nm,0.8s,mb5.4
BRVK *e*PcP PcP 19 52 05.3 -2.4
BRVK *e*ScP ScP 19 55 59.2 -0.2
BRVK LR LR
comp=Z,4μm,19.0s,MS5.4
BRVK Borovoye 48.66 321 ⇑P **P** **19 50 42.5 -0.5**
SNR=19
BRVK ⇑P 19 50 42.5
SNR=19
CTA Charters Tower 49.55 150 *e*P **P** **19 50 50.2 +0.2**
comp=Z,16nm,0.9s,mb5.1
CTA Charters Tower 49.55 150 P **P** **19 50 49.7 -0.3**
comp=Z,27nm,1.1s,mb5.2,baz=321,slow=8.2,SNR=7.8
CTA Charters Tower 49.55 150 P **P** **19 50 49.7 -0.3**
CTAO Charters Tower 49.55 150 *e*P **P** **19 50 50.8 +0.8**
CTAO pmax pmax
comp=Z,26nm,0.9s,mb5.3
CTAO Charters Tower 49.55 150 *e*P **P** **19 50 50.8 +0.8**
comp=Z,26nm,0.9s,mb5.3
BILL Bilibino 51.44 19⇑*i*P **P** **19 51 03.8 +0.1**
BILL *e* 19 52 15.1
BILL *e*S **S** **19 58 19.0 -1.4**
BILL pmax pmax
comp=Z,14nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,5μm,17.0s,MS5.6
BILL Bilibino 51.44 19 *e*P **P** **19 51 00.3 -3.4**
comp=Z,8.0nm,0.8s,mb4.7
MIDW Midway 53.66 72 PFAKE 19 51 30.0 +9.2
MIDW LR LR
comp=Z,1μm,19.0s,MS5.0
ABKAR Akbulak array 54.45 314⇑*e*P **P** **19 51 25.9 -0.3**
comp=Z,18nm,0.5s,mb5.2
ABKAR *e*ScP ScP 19 56 23.0 -1.5
FORT Forrest 54.73 174 *e*P **P** **19 51 28.6 +0.3**
comp=Z,170nm,1.4s,mb5.9
FORT Forrest 54.73 174 *e*P **P** **19 51 28.0 -0.4**
comp=Z,298nm,1.1s,mb6.2
SVE Sverdlovsk 54.92 324⇓*e*P **P** **19 51 28.7 -0.8**
SVE *e* 19 53 36.5
SVE *e*S **S** **19 59 00.2 -7.8**
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.5
SVE MLR MLR
comp=Z,8μm,15.0s,MS5.9
ABKT Ailbek 55.95 301 P **P** **19 51 38.6 +1.4**
comp=Z,950nm,1.0s,mb6.8
ARU Arti 55.99 323 P **P** **19 51 36.2 -1.0**
comp=Z,223nm,0.7s,mb6.3,SNR=22
ARU Arti 55.99 323*c i*P **P** **19 51 36.0 -1.2**
ARU S **S** **19 59 23.9 +1.5**
ARU SS SS 20 03 04.5 -4.0
ARU pmax pmax
comp=Z,55nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,3μm,16.0s,MS5.5
ARU Arti 55.99 323⇑*i*P **P** **19 51 35.8 -1.4**
comp=Z,41nm,0.8s,mb5.5
ARU LR LR
comp=Z,4μm,21.0s,MS5.5
EIDS Eidsvold 56.33 149 *e*P **P** **19 51 39.9 -0.1**
comp=Z,16nm,0.6s,mb5.2
NWAO Narrogin (SRO) 56.84 185 P **P** **19 51 43.6 +0.2**
NWAO pmax pmax
comp=Z,55nm,1.4s
NWAO Narrogin (SRO) 56.84 185 P **P** **19 51 43.6 +0.2**
comp=Z,55nm,1.4s,mb5.4
SOKR Solikamsk 57.35 327*d i*P **P** **19 51 46.1 -0.7**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
DGAR Diego Garcia 57.98 244 PFAKE 19 52 00.0 +8.1
DGAR LR LR
comp=Z,1μm,22.0s,MS5.0
STKA Stephens Creek 58.48 161 *e*P **P** **19 51 55.2 +0.2**
comp=Z,72nm,0.7s,mb5.8
STKA Stephens Creek 58.48 161 P **P** **19 51 55.7 +0.7**
comp=Z,18nm,0.8s,mb5.2,baz=342,slow=7.5,SNR=37
STKA LR LR 20 17 42.3
comp=Z,2μm,20.1s,MS5.3,baz=342,slow=36
STKA Stephens Creek 58.48 161⇓*e*P **P** **19 51 55.0 0.0**
comp=Z,18nm,0.7s,mb5.2
SMDO Samad 58.64 283 ⇑P **P** **19 51 57.1 +0.7**
SNR=5.1
JMDO Jabal Madar 58.77 282 P **P** **19 51 57.6 +0.2**
SNR=5.2
HOQ Hoqain 59.16 284 ⇓P **P** **19 52 00.9 +0.8**
SNR=11
BSY Bisya 59.48 283 ⇓P **P** **19 52 03.3 +1.0**
SNR=9.8
ARQ Araqi 59.93 284 ⇓P **P** **19 52 06.3 +0.9**
SNR=7.5
ASHO Ashiyiah 59.99 286 ⇑P **P** **19 52 06.9 +1.1**
SNR=6.7
NAZ Nazwa, Dubai 60.27 286 ⇓P **P** **19 52 08.8 +1.2**
SNR=12
FAQ Al Faqa, Dubai 60.39 286 ⇓P **P** **19 52 09.3 +0.7**
SNR=9.1
ASUD Al Ashush, Dub 60.65 286 ⇓P **P** **19 52 11.6 +1.3**
SNR=8.0
ARMA Armidale 60.89 151 *e*P **P** **19 52 13.4 +1.8**
ARMA Armidale 60.89 151 *e*P **P** **19 52 11.6 0.0**
comp=Z,27nm,0.8s,mb5.4
DZM Mont Dzumac 62.61 134 *e*S **S** **20 00 43.7 -5.0**
comp=Z,5μm,27.6s
DZM *e*SS SS 20 04 51.2 -2.9
comp=Z,2μm,24.1s
DZM *e*LR LR 20 10 59.8
comp=Z,11μm,24.9s,baz=288
MAK Makhachkala 63.38 308 *e*P **P** **19 52 29.1 +0.8**
MAK *i* 19 54 46.5
MAK *e*S **S** **20 01 07.2 +9.3**
MAK *e*SS SS 20 05 09.3 +4.5
MAK pmax pmax
comp=Z,204nm,1.5s,mb6.0
MAK MLR MLR
comp=Z,3μm,15.0s,MS5.5
JOHN Johnston Islan 63.59 83 PFAKE 19 52 40.0 +10
JOHN LR LR
comp=Z,2μm,20.0s,MS5.3
RIV Riverview 63.64 154 *e*P **P** **19 52 32.7 +2.8**
FUNA Funafuti 64.06 113 PFAKE 19 52 40.0 +6.8
FUNA LR LR
comp=Z,3μm,20.0s,MS5.5
CAN Canberra 64.11 156 *e*P **P** **19 52 33.8 +0.8**
CAN pmax pmax
comp=Z,23nm,0.8s,mb5.3
CAN MLR MLR
comp=Z,2μm,19.0s,MS5.3
CAN Canberra 64.11 156 *e*P **P** **19 52 33.8 +0.8**
comp=Z,23nm,0.8s,mb5.2
CAN LR LR
comp=Z,2μm,19.0s,MS5.3
CNB Canberra Magne 64.24 156 *e*P **P** **19 52 35.4 +1.5**
TOO Toolangi 64.94 160 *e*P **P** **19 52 39.3 +0.9**
TTA Tatalina 65.05 30 *e*P **P** **19 52 39.3 +0.4**
TTA pmax pmax
comp=Z,28nm,1.0s,mb5.2
TTA Tatalina 65.05 30 *e*P **P** **19 52 39.3 +0.4**
comp=Z,28nm,1.0s,mb5.2
SVW2 Sparrevohn 65.40 32 *e*P **P** **19 52 40.4 -0.8**
MTA Mtatsminda 65.58 307 P **P** **19 52 43.6 +0.9**
TBLG Delisi 65.61 307 *i* P **P** **19 52 45.3 +2.4**
TBLG Delisi 65.61 307 P **P** **19 52 45.3 +2.4**
GNI Garni 65.92 305⇑*i*P **P** **19 52 46.1 +1.2**
GNI pmax pmax
comp=Z,87nm,1.1s
GNI Garni 65.92 305⇑*i*P **P** **19 52 46.0 +1.1**
comp=Z,87nm,1.1s,mb5.7

GNI	**Garni**	**65.92**	**305**	⇑P	**P**	**19 52 46.7 +1.8**
	SNR=17					
GNI				⇑P		19 52 46.7
	SNR=17					
UMR	**Umm Al-Rimmam**	**65.97**	**293**	*e*P	**P**	**19 52 45.3 -0.1**
UMR				AMb	AMB	19 52 47.9
	comp=Z,107nm,1.4s,mb5.7					
GOR	**Gori**	**66.02**	**307**	P	**P**	**19 52 46.8 +1.2**
ZEI	**Tsey**	**66.02**	**308**	*e*P	**P**	**19 52 45.2 -0.3**
ZEI				pmax	pmax	
	comp=Z,66nm,1.4s,mb5.5					
KEH	**Kehvi**	**66.08**	**307**	P	**P**	**19 52 48.2 +2.2**
KBD	**Kabd**	**66.09**	**293**	*e*P	**P**	**19 52 46.2 0.0**
KBD				AMb	AMB	19 52 48.2
	comp=Z,67nm,1.2s,mb5.5					
MIB	**Mutribah**	**66.22**	**293**	*e*P	**P**	**19 52 46.8 -0.3**
MIB				AMb	AMB	19 52 59.2
	comp=Z,125nm,0.9s,mb6.0					
RDF	**Al-Radifah**	**66.27**	**292**	*e*P	**P**	**19 52 47.7 +0.3**
RDF				AMb	AMB	19 52 50.4
	comp=Z,152nm,1.6s,mb5.8					
ONI	**Oni**	**66.38**	**308**	P	**P**	**19 52 49.2 +1.4**
CHUM	**Lake Minchumin**	**66.61**	**29**⇓	*e*P	**P**	**19 52 49.5 +0.5**
	comp=Z,21nm,0.8s,mb5.2					
KIV	**Kislovodsk**	**66.66**	**309**	P	**P**	**19 52 50.1 +0.5**
	comp=Z,566nm,1.0s,mb6.5,SNR=37					
KIV	**Kislovodsk**	**66.66**	**309***c*	*i*P	**P**	**19 52 49.9 +0.3**
KIV				*i*	pP	19 52 58.7 -3.0
KIV				*i*		19 53 05.2
KIV				*e*		19 55 22.6
KIV				*i*S	S	20 01 43.9 +5.7
KIV				*e*SS	SS	20 06 01.0 +5.2
KIV				pmax	pmax	
	comp=Z,112nm,1.0s,mb5.8					
KIV	**Kislovodsk**	**66.66**	**309**⇑	*i*P	**P**	**19 52 50.2 +0.7**
	comp=Z,90nm,0.9s,mb5.8					
KIV				LR	LR	
	comp=Z,4μm,19.0s,MS5.6					
KIV	**Kislovodsk**	**66.66**	**309**	⇓P	**P**	**19 52 50.5 +0.9**
	SNR=24					
KIV				⇓P		19 52 50.5
	SNR=24					
PPLA	**Purkeypile**	**66.80**	**30**⇓	*e*P	**P**	**19 52 50.7 +0.6**
	comp=Z,19nm,0.8s,mb5.2					
DYDN	**Diyadin**	**66.84**	**304**	*i*P	**P**	**19 52 51.8 +1.0**
RSO	**Redoubt South**	**66.85**	**32**	*e*P	**P**	**19 52 51.0 +0.5**
DIGO	**Kars**	**66.89**	**305**	*i*P	**P**	**19 52 51.9 +0.8**
COLD	**Coldfoot**	**67.07**	**25**	*e*P	**P**	**19 52 51.9 +0.1**
	comp=Z,13nm,1.1s,mb4.9					
BPAW	**Bear Paw Mtn.**	**67.17**	**28**⇓	*i*P	**P**	**19 52 52.9 +0.4**
	comp=Z,41nm,1.3s,mb5.3					
LVZ	**Lovozero**	**67.22**	**336**	PFAKE		19 53 00.0 +7.3
LVZ				LR	LR	
	comp=Z,4μm,22.0s,MS5.6					
KTH	**Kantishna Hill**	**67.27**	**29**	*e*P	**P**	**19 52 53.6 +0.5**
	comp=Z,13nm,0.8s,mb5.0					
KDAK	**Kodiak Island**	**67.34**	**35**	*e*P	**P**	**19 52 52.2 -1.5**
KDAK				pmax	pmax	
	comp=Z,46nm,1.0s,mb5.5					
KDAK				MLR	MLR	
	comp=Z,1μm,21.0s,MS5.1					
KDAK	**Kodiak Island**	**67.34**	**35**	P	**P**	**19 52 53.3 -0.4**
	comp=Z,27nm,0.8s,mb5.3,baz=321,slow=3.3,SNR=17					
KDAK	**Kodiak Island**	**67.34**	**35**	*e*P	**P**	**19 52 52.2 -1.4**
	comp=Z,46nm,1.0s,mb5.5					
KDAK				LR	LR	
	comp=Z,1μm,21.0s,MS5.1					
TRF	**Thorofare Moun**	**67.57**	**29**	*e*P	**P**	**19 52 54.6 -0.4**
	comp=Z,20nm,1.0s,mb5.1					
VORD	**Divnogorie**	**67.58**	**317**	*e*P	**P**	**19 52 54.7 -0.6**
VORD				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.1					
VORD				pmax	pmax	
	comp=N,20nm,0.7s					
VORD				pmax	pmax	
	comp=E,40nm,0.7s					
VORD				MLR	MLR	
	comp=Z,1μm,12.0s,MS5.4					
VORD				MLR	MLR	
	comp=N,630nm,17.0s,MS5.3					
VORD				MLR	MLR	
	comp=E,1μm,16.0s,MS5.3					
VSR	**Storozhevoye**	**67.61**	**317**	*e*P	**P**	**19 52 54.8 -0.7**
VSR				pmax	pmax	
	comp=Z,30nm,1.1s,mb5.2					
VSR				pmax	pmax	
	comp=N,10.0nm,0.9s					
VSR				pmax	pmax	
	comp=E,20nm,0.8s					
VSR				MLR	MLR	
	comp=Z,2μm,14.0s,MS5.6					
VSR				MLR	MLR	
	comp=N,960nm,17.0s,MS5.3					
VSR				MLR	MLR	
	comp=E,1μm,15.0s,MS5.3					
MOS	**Moscow**	**67.70**	**322**	*e*P	**P**	**19 52 52.6 -3.3**
APA	**Apatity**	**67.74**	**336**⇑	*e*P	**P**	**19 52 55.5 -0.5**
APA				*e*S	S	20 01 54.0 +3.6
APA				pmax	pmax	
	comp=Z,52nm,1.0s,mb5.5					
APA				MLR	MLR	
	comp=Z,9μm,17.0s,MS6.1					
DAGI	**Agillar**	**67.82**	**306**	*i*P	**P**	**19 52 57.6 +0.6**
DBOC	**Borcka**	**67.94**	**307**	*i*P	**P**	**19 52 57.8 0.0**
DDEM	**Demirkent**	**67.98**	**306**	*i*P	**P**	**19 52 57.4 -0.6**
DBAD	**Bademkaya**	**68.00**	**306**	*i*P	**P**	**19 52 57.7 -0.4**
MSL	**Mosul**	**68.01**	**301**	*e*P	**P**	**19 53 01.0 +2.7**
HOMI	**Horasan**	**68.06**	**305**	*i*P	**P**	**19 52 58.0 -0.6**
MCK	**McKinley**	**68.12**	**29**	*e*P	**P**	**19 52 57.4 -1.1**
MCK				pmax	pmax	
	comp=Z,42nm,1.2s,mb5.3					
MCK	**McKinley**	**68.12**	**29**	*e*P	**P**	**19 52 57.4 -1.1**
	comp=Z,42nm,1.2s,mb5.3					
COLA	**College**	**68.38**	**27**	P	**P**	**19 52 58.9 -1.2**
COLA				pmax	pmax	
	comp=Z,18nm,0.9s,mb5.1					
COLA	**College**	**68.38**	**27**	P	**P**	**19 52 58.9 -1.2**
	comp=Z,18nm,0.9s,mb5.1					
OBN	**Obninsk**	**68.40**	**322***c*	*i*P	**P**	**19 52 58.8 -1.6**
OBN				*i*		19 53 23.9
OBN				*e*		19 55 34.9
OBN				*i*S	S	20 02 04.8 +6.0
OBN				pmax	pmax	
	comp=Z,50nm,1.3s,mb5.4					
OBN				MLR	MLR	
	comp=Z,5μm,22.0s,MS5.7					
OBN	**Obninsk**	**68.40**	**322**	*e*P	**P**	**19 52 59.5 -0.9**
	comp=Z,62nm,1.3s,mb5.5					
PMR	**Palmer**	**68.41**	**31**	*e*P	**P**	**19 52 59.0 -1.3**
PMR				pmax	pmax	
	comp=Z,13nm,0.7s,mb5.1					
PMR	**Palmer**	**68.41**	**31**	*e*P	**P**	**19 52 59.0 -1.3**
	comp=Z,13nm,0.7s,mb5.1					
ERZM	**Erzurum**	**68.50**	**305**	*i*P	**P**	**19 53 02.6 +1.3**
SOC	**Sochi**	**68.84**	**309**	*i*P	**P**	**19 53 02.8 -0.5**
SOC				*e**PP	pP	19 53 11.4 -4.1
SOC				*e*		19 55 35.3
SOC				*e*PPP		19 57 16.1
SOC				*i*S	S	20 02 03.2 -1.1
SOC				*e**SS	sS	20 02 34.1 +9.5
SOC				*e*SS	SS	20 06 26.6 -3.0
SOC				pmax	pmax	
	comp=Z,53nm,1.0s,mb5.4					
SOC				pmax	pmax	
	comp=Z,235nm,6.3s					
SOC				MLR	MLR	
	comp=Z,4μm,20.0s,MS5.6					
BEST	**Besiri**	**69.06**	**303**	*i*P	**P**	**19 53 05.7 +0.9**
KOPT	**Kop Dagi**	**69.12**	**306**	*i*P	**P**	**19 53 03.2 -2.0**
JOF	**Joensuu**	**69.47**	**331**	*e*P	**P**	**19 53 05.7 -1.2**
JOF				pmax	pmax	
	comp=Z,11nm,0.4s,mb5.1					
JOF	**Joensuu**	**69.47**	**331**	*e*p	**P**	**19 53 05.7 -1.2**
	comp=Z,11nm,0.4s,mb5.1					
KEV	**Kevo**	**69.60**	**338**	*e*P	**P**	**19 53 05.7 -1.9**
KEV				pmax	pmax	
	comp=Z,11nm,0.6s,mb5.0					
KEV	**Kevo**	**69.60**	**338**	PFAKE		19 53 20.0 +12
KEV				LR	LR	
	comp=Z,5μm,19.0s,MS5.8					
KEV	**Kevo**	**69.60**	**338**	*e*p	**P**	**19 53 05.7 -1.9**
	comp=Z,11nm,0.6s,mb5.0					
SPB4	**Spitsbergen Ar**	**69.92**	**348**	*e*P	**P**	**19 53 08.8 -0.7**
DIV	**Divide**	**70.09**	**31**	*e*P	**P**	**19 53 10.7 -0.1**
	comp=Z,41nm,1.0s,mb5.3					
ANN	**Anapa**	**70.14**	**311**	*e*P	**P**	**19 53 10.8 -0.6**
ANN				*e*S	S	20 02 21.5 +1.9
ANN				pmax	pmax	
	comp=Z,130nm,1.3s,mb5.7					
ANN				MLR	MLR	
	comp=N,515nm,16.0s,MS5.3					
ANN				MLR	MLR	
	comp=E,1μm,16.0s,MS5.3					
ANN				MLR	MLR	
	comp=Z,2μm,16.0s,MS5.5					
ARCES	**ARCESS Array B**	**70.17**	**338**	P	**P**	**19 53 10.4 -0.6**
	comp=Z,9.3nm,0.8s,mb4.8,baz=74,slow=7.3,SNR=14					
TAU	**Tasmania Unive**	**70.39**	**161**	P	**P**	**19 53 13.7 +1.0**
KBS	**Kingsbay**	**70.45**	**349**	*e*P	**P**	**19 53 15.3 +2.6**
KBS				*e*S	S	20 02 25.4 +3.2
KBS				*e*SS	SS	20 07 08.8 +16
KBS				AMS	AMS	20 27 38.4
	comp=Z,5μm,20.1s,MS5.8					
KBS	**Kingsbay**	**70.45**	**349***d*	*i*P	**P**	**19 53 10.4 -2.3**
KBS				pmax	pmax	
	comp=Z,48nm,1.2s,mb5.3					
KBS				MLR	MLR	
	comp=Z,7μm,20.0s,MS5.9					
KBS	**Kingsbay**	**70.45**	**349**	PFAKE		19 53 20.0 +7.3
KBS				LR	LR	
	comp=Z,6μm,19.0s,MS5.9					
GRSN	**GIRESUNGRSN**	**70.53**	**307**	*i*P	**P**	**19 53 08.4 -5.4**
BJO	**Bjornoya**	**70.56**	**344**	AMS	AMS	20 30 39.0
	comp=Z,6μm,14.3s,MS6.0					
MENT	**Mentasta**	**70.59**	**29**	P	**P**	**19 53 14.2 +0.4**
ELZG	**Elazig**	**70.64**	**304**	*i*P	**P**	**19 53 15.7 +1.2**
PUL	**Pulkovo**	**70.67**	**328**	*e*P	**P**	**19 53 14.0 -0.3**
PUL				pmax	pmax	
	comp=Z,71nm,1.0s,mb5.5					
PUL				MLR	MLR	
	comp=Z,7μm,22.0s,MS5.8					
BMRM	**Bremner River**	**70.68**	**31**	*e*P	**P**	**19 53 13.4 -1.0**
	comp=Z,33nm,1.1s,mb5.2					
MALT	**Malatya**	**71.12**	**304**⇑	*i*P	**P**	**19 53 18.3 +0.9**
MALT				pmax	pmax	
	comp=Z,77nm,0.9s,mb5.6					
MALT	**Malatya**	**71.12**	**304**⇑	*i*P	**P**	**19 53 18.3 +0.9**
	comp=Z,77nm,0.9s,mb5.6					
MALT	**Malatya**	**71.12**	**304**⇑	*i*P	**P**	**19 53 18.8 +1.4**
MSEY	**Mahe Island**	**71.17**	**256**	PFAKE		19 53 30.0 +12
MSEY				LR	LR	
	comp=Z,1μm,22.0s,MS5.1					
EGAK	**Eagle**	**71.19**	**27**	*e*P	**P**	**19 53 17.5 +0.2**
	comp=Z,14nm,0.8s,mb4.9					
ERBA	**Erbaa**	**71.71**	**307**	*i*P	**P**	**19 53 19.4 -1.6**
KAF	**Kangasniemi**	**71.92**	**331**	*e*P	**P**	**19 53 19.5 -2.3**
KAF				pmax	pmax	
	comp=Z,4.0nm,0.5s,mb4.6					
KAF	**Kangasniemi**	**71.92**	**331**	*e*p	**P**	**19 53 19.5 -2.3**
	comp=Z,4.4nm,0.5s,mb4.6					
GZT	**Gaziantep**	**72.04**	**303**	*i*P	**P**	**19 53 23.0 -0.1**
DAWY	**Dawson**	**72.14**	**27**⇓	*i*P	**P**	**19 53 23.2 +0.1**
FINES	**FINESS Array B**	**72.22**	**330**	P	**P**	**19 53 22.9 -0.7**
	comp=Z,8.9nm,0.3s,mb5.1,baz=59,slow=5.6,SNR=44					
FINES				LR	LR	20 28 30.2
	comp=Z,11μm,18.6s,MS6.2,baz=76,slow=39					
TRO	**Tromso**	**72.33**	**339**	*e*P	**P**	**19 53 24.4 +0.3**
TRO				*e*S	S	20 02 47.1 +3.0
KIP	**Kipapa**	**72.37**	**74**	PFAKE		19 53 40.0 +15
KIP				LR	LR	
	comp=Z,3μm,20.0s,MS5.6					
SIM	**Simferopol'**	**72.38**	**312***ce*	P	**P**	**19 53 25.5 +0.6**
SIM				*e*S	S	20 02 50.0 +4.5
SIM				pmax	pmax	
	comp=Z,33nm,0.9s,mb5.3					
SIM				pmax	pmax	
	comp=Z,250nm,17.0s					
SIM				MLR	MLR	
	comp=Z,900nm,20.0s,MS5.0					
KUZU	**Kuzuini**	**72.58**	**303**	*i*P	**P**	**19 53 26.8 +0.5**
VSU	**Vasula**	**72.81**	**327***c*	*i*P	**P**	**19 53 26.8 -0.4**
VSU				pmax	pmax	
	comp=Z,71nm,1.2s,mb5.5					
VSU				MLR	MLR	
	comp=Z,10μm,19.0s,MS6.1					
INK	**Inuvik**	**72.93**	**22**	*e*P	**P**	**19 53 26.7 -1.0**
INK				pmax	pmax	
	comp=Z,26nm,1.0s					
INK	**Inuvik**	**72.93**	**22**	*e*P	**P**	**19 53 26.7 -1.0**
	comp=Z,26nm,1.0s,mb5.1					
CTKT	**Corum**	**73.16**	**307**	*i*P	**P**	**19 53 29.4 -0.2**
CDAG	**Cicekdag**	**73.76**	**306**	*i*P	**P**	**19 53 31.1 -2.0**
IDID	**Didziasalis**	**73.79**	**324**	*e*P	**P**	**19 53 32.7 -0.3**
AKASG	**Malin Array Be**	**73.82**	**319**	P	**P**	**19 53 32.0 -1.2**
	comp=Z,6.7nm,0.5s,mb4.8,baz=61,slow=5.9,SNR=33					
AKASG				LR	LR	20 29 13.9
	comp=Z,3μm,19.4s,MS5.5,baz=75,slow=38					
AKBB	**Malin Array Si**	**73.82**	**319**⇑	*i*P	**P**	**19 53 31.9 -1.4**
BALT	**Daday**	**73.89**	**309**	*i*P	**P**	**19 53 34.0 +0.1**
NACGM	**Naroch**	**73.90**	**323**	*e*	**P**	**19 53 31.0 -2.7**
ISAL	**Salakas**	**74.04**	**324**	*e*P	**P**	**19 53 34.3 -0.2**
GULE	**Gulek**	**74.18**	**304**	*i*P	**P**	**19 53 36.3 +0.6**
BR131	**Keskin Array S**	**74.27**	**307**⇑	*i*P	**P**	**19 53 36.0 -0.1**
	comp=Z,67nm,1.0s,mb5.5					
BR131				LR	LR	
	comp=Z,951nm,22.0s,MS5.0					
BRTR	**Keskin Array B**	**74.27**	**307**	P	**P**	**19 53 36.3 +0.2**
	comp=Z,68nm,1.1s,mb5.5,baz=96,slow=4.3,SNR=126					
BRTR				LR	LR	20 32 29.7
	comp=Z,1μm,18.9s,MS5.2,baz=193,slow=41					
AFI	**Afiamalu**	**74.40**	**113**	PFAKE		19 53 50.0 +13
AFI				LR	LR	
	comp=Z,2μm,21.0s,MS5.3					
KIS	**Kishinev**	**75.26**	**315**	*e*P	**P**	**19 53 38.0 -3.7**
KIS				*e*S	S	20 03 13.0 -4.9
KIS				*e*L		20 23 28.0
KIS				LRM		20 30 28.0
	comp=Z,3μm,18.0s					
KIS	**Kishinev**	**75.26**	**315**	*e*P	**P**	**19 53 38.0 -3.7**
KIS				*e*S	S	20 03 13.0 -4.9
KIS				MLR	MLR	
	comp=N,2μm,18.0s,MS5.6					
KIS				MLR	MLR	
	comp=E,2μm,18.0s,MS5.6					
KIS				MLR	MLR	
	comp=Z,3μm,18.0s,MS5.6					
KIS				MLR	MLR	
	comp=Z,3μm,18.0s					
MOR8	**Moi Rana**	**75.27**	**336**	*e*P	**P**	**19 53 39.6 -1.8**
SKAG	**Skagway**	**75.55**	**31**⇑	*i*P	**P**	**19 53 43.3 +0.1**
	comp=Z,67nm,1.2s,mb5.4					
KDHN	**Kadinhani**	**75.78**	**306**	*i*P	**P**	**19 53 40.8 -4.1**
TLCR		**75.87**	**313**	⇓P	**P**	**19 53 44.9 -0.4**
TLCR		**75.87**	**313**	⇓*i*P	**P**	**19 53 44.9 -0.4**
HENT	**Hendek**	**75.90**	**309**	*i*P	**P**	**19 53 44.2 -1.3**
CSS	**Prodhromos**	**76.04**	**302**	*e*P	**P**	**19 53 46.0 -0.4**
	comp=Z,53nm,0.8s,mb5.5					
CSS	**Prodhromos**	**76.04**	**302**	P	**P**	**19 53 46.3 -0.1**
SUW	**Suwalki**	**76.18**	**323**	*e*P	**P**	**19 53 46.8 -0.1**
SUW	**Suwalki**	**76.18**	**323**	*e*P	**P**	**19 53 46.2 -0.6**
SUW				pmax	pmax	
	comp=Z,131nm,1.1s,mb5.8					
SUW	**Suwalki**	**76.18**	**323**	*e*P	**P**	**19 53 46.2 -0.6**
	comp=Z,131nm,1.1s,mb5.8					
TIRR	**Tirgusor**	**76.39**	**313**	*e*P	**P**	**19 53 47.5 -0.7**
TIRR				pmax	pmax	
	comp=Z,22nm,1.2s,mb5.0					
TIRR	**Tirgusor**	**76.39**	**313**	*e*P	**P**	**19 53 47.5 -0.8**
	comp=Z,22nm,1.2s,mb5.0					
TIRR	**Tirgusor**	**76.39**	**313**	⇓*i*P	**P**	**19 53 48.1 -0.1**
SIT	**Sitka**	**76.49**	**33**	*e*P	**P**	**19 53 48.7 +0.2**
SIT				pmax	pmax	
	comp=Z,91nm,1.0s,mb5.7					
SIT	**Sitka**	**76.49**	**33**	*e*P	**P**	**19 53 48.6 +0.1**
	comp=Z,91nm,1.0s,mb5.7					
BORA	**Eskisehir**	**76.54**	**308**	*i*P	**P**	**19 53 48.6 -0.5**
HARR	**Harsova**	**76.63**	**313**	⇓P	**P**	**19 53 49.8 +0.2**
HARR	**Harsova**	**76.63**	**313**	⇓*i*P	**P**	**19 53 49.8 +0.2**
DAG	**Danmarks Havn**	**76.73**	**351**	⇓*i*P	**P**	**19 53 48.9 -0.7**
DAG				pmax	pmax	
	comp=Z,8.0nm,1.1s,mb4.6					
DAG	**Danmarks Havn**	**76.73**	**351**	⇓*i*P	**P**	**19 53 48.9 -0.7**
	comp=Z,7.6nm,1.1s,mb4.5					
PSN	**Preselentsi**	**76.81**	**312**	*e*P	**P**	**19 53 49.7 -0.9**
NSS	**Namsos**	**76.95**	**335**	AMS	AMS	20 31 56.5
	comp=Z,4μm,18.7s,MS5.8					
VRI	**Vrincioaia**	**77.01**	**314**	P	**P**	**19 53 52.5 +0.8**
VRI	**Vrincioaia**	**77.01**	**314**	⇓*i*P	**P**	**19 53 52.2 +0.5**
ISP	**Isparta**	**77.20**	**306**⇑	*i*P	**P**	**19 53 52.1 -0.8**
ISP				pmax	pmax	
	comp=Z,116nm,1.3s,mb5.7					
ISP	**Isparta**	**77.20**	**306**⇑	*i*P	**P**	**19 53 52.0 -0.9**
	comp=Z,116nm,1.3s,mb5.7					
ISP	**Isparta**	**77.20**	**306**	P	**P**	**19 53 52.2 -0.7**
LVV	**L'vov**	**77.25**	**319**	*e*P	**P**	**19 53 53.1 +0.1**
LVV				*e*S	S	20 03 41.9 +2.2
LVV				MLR	MLR	
	comp=N,1μm,20.0s,MS5.3					
LVV				MLR	MLR	
	comp=E,1μm,20.0s,MS5.3					
LVV				MLR	MLR	
	comp=Z,2μm,20.0s,MS5.4					
BUR08	**Bucovina Ar. S**	**77.34**	**317**⇑	*i*P	**P**	**19 53 52.8 -0.7**
BUR01	**Bucovina Ar. S**	**77.34**	**317**	P	**P**	**19 53 54.2 +0.7**
BURAR	**Bucovina Array**	**77.34**	**317**	⇑P	**P**	**19 53 53.3 -0.2**
BURAR	**Bucovina Array**	**77.34**	**317**⇑	*i*P	**P**	**19 53 53.3 -0.2**
GDZ	**Gediz**	**77.52**	**307**	*i*P	**P**	**19 53 54.0 -0.7**
KORT	**Korkueli**	**77.61**	**305**	*i*P	**P**	**19 53 53.9 -1.4**
MLR	**Muntele Rosu**	**77.66**	**314**	P	**P**	**19 53 55.8 +0.5**
MLR	**Muntele Rosu**	**77.66**	**314**⇑	*i*P	**P**	**19 53 55.3 0.0**
GOLH	**Golhisar**	**78.12**	**305**	*i*P	**P**	**19 53 55.8 -2.3**
KWP	**Kalwaria Pacla**	**78.12**	**319**	*e*P	**P**	**19 53 57.9 +0.1**
KWP	**Kalwaria Pacla**	**78.12**	**319**	PFAKE		19 54 10.0 +12
KWP				LR	LR	
	comp=Z,2μm,22.0s,MS5.5					
CRAG	**Craig**	**78.26**	**34**	*e*P	**P**	**19 53 58.6 +0.1**
	comp=Z,81nm,1.2s,mb5.5					
DNZL	**Cakiroluk**	**78.34**	**306**	*i*P	**P**	**19 53 57.2 -2.0**
BMR	**Baia Mare**	**78.40**	**317**	P	**P**	**19 54 00.5 +1.1**
MANT	**Manisa**	**78.41**	**307**	*i*P	**P**	**19 53 59.3 -0.3**
DLBC	**Dease Lake**	**78.47**	**31**⇑	*e*P	**P**	**19 54 00.3 +0.7**
SZH	**Strazhica**	**78.49**	**312**	*e*P	**P**	**19 53 58.9 -1.1**
BALY	**Balya**	**78.63**	**308**	*i*P	**P**	**19 53 57.8 -3.1**
RES	**Resolute Bay**	**78.64**	**9**	*e*P	**P**	**19 53 58.2 -2.0**
RES				pmax	pmax	
	comp=Z,15nm,1.1s,mb4.8					
RES	**Resolute Bay**	**78.64**	**9**	*e*P	**P**	**19 53 58.2 -2.0**
	comp=Z,15nm,1.1s,mb4.8					
KOLS	**Kolonicke sedl**	**78.66**	**319**	*e*P	**P**	**19 54 00.2 -0.6**
KOLS				pmax	pmax	
	comp=Z,13nm,1.5s,mb4.6					
KOLS	**Kolonicke sedl**	**78.66**	**319**	*e*P	**P**	**19 54 00.2 -0.6**
	comp=Z,13nm,1.5s,mb4.6					
KOLS	**Kolonicke sedl**	**78.66**	**319**	*e*P	**P**	**19 54 00.2 -0.6**
UZH	**Uzhgorod**	**78.77**	**318**	*e*P	**P**	**19 54 00.0 -1.4**
UZH				*i*		19 54 08.0
UZH				*i*		19 54 19.0
UZH				*e*		19 57 03.0
UZH				*e*		19 58 54.0
UZH				*e*S	S	20 03 55.0 -1.0
UZH				*e*		20 04 14.0
UZH				MLR	MLR	
	comp=N,1μm,16.0s,MS5.6					
UZH				MLR	MLR	
	comp=E,2μm,16.0s,MS5.6					
UZH				MLR	MLR	
	comp=Z,1μm,16.0s,MS5.3					
NOA	**NORSAR Array B**	**78.96**	**332**	P	**P**	**19 54 00.8 -1.4**
	comp=Z,28nm,1.1s,mb5.1,baz=58,slow=5.6,SNR=45					
NOA				LR	LR	20 32 33.7
	comp=Z,6μm,19.1s,MS5.9,baz=70,slow=38					
NOA	**NORSAR Array B**	**78.96**	**332**	P	**P**	**19 54 00.8 -1.4**
NOA				LR	LR	20 32 33.7
STHS	**Stebnicka Huta**	**79.08**	**319**	*e*P	**P**	**19 54 04.0 +0.9**
STHS				pmax	pmax	
	comp=Z,12nm,1.2s,mb4.7					
STHS	**Stebnicka Huta**	**79.08**	**319**	*e*P	**P**	**19 54 04.0 +0.9**
	comp=Z,12nm,1.2s,mb4.7					
STHS	**Stebnicka Huta**	**79.08**	**319**	*e*P	**P**	**19 54 04.0 +0.9**
NAO01	**NORSAR Array S**	**79.19**	**332**	*e*P	**P**	**19 54 02.7 -0.8**
	comp=Z,22nm,1.0s,mb5.0					
AYDN	**Tasoluk**	**79.21**	**306**	*i*P	**P**	**19 54 04.9 +0.8**
DRGR		**79.24**	**316**	P	**P**	**19 54 04.0 0.0**
DRGR		**79.24**	**316**⇑	*i*P	**P**	**19 54 04.5 +0.5**
ALN	**Alexandroupoli**	**79.31**	**310**	P	**P**	**19 54 03.9 -0.6**
JMIC	**Jan Mayen**	**79.32**	**345**	*e*P	**P**	**19 54 06.9 +2.9**
JMIC				AMS	AMS	20 33 02.5
	comp=Z,3μm,18.8s,MS5.6					
RDO	**Rodhopi**	**79.57**	**310**	P	**P**	**19 54 05.3 -0.6**
OJC	**Ojcow**	**79.60**	**320**	*e*P	**P**	**19 54 05.9 0.0**
OJC				*e*PP	PP	19 57 10.5 +4.0
OJC				*e*S	S	20 04 06.7 +1.9
OJC				*e*SS	SS	20 09 26.1 +13
OJC				L		20 33 36.5
	comp=Z,2.0nm,18.3s					
OJC	**Ojcow**	**79.60**	**320**	*e*P	**P**	**19 54 05.9 0.0**
OJC				*e*		19 57 10.5
OJC				*e*S	S	20 04 06.7 +1.9
OJC				MLR	MLR	
	comp=Z,2μm,18.3s,MS5.5					
NIE	**Niedzica**	**79.63**	**320**	*e*P	**P**	**19 54 06.9 +0.8**
MOL	**Molde**	**79.65**	**335**	AMS	AMS	20 33 08.7
	comp=Z,7μm,16.4s,MS6.1					
OSL	**Oslo**	**79.72**	**332**	*e*P	**P**	**19 54 06.0 -0.4**
GZR	**Gura Zlata**	**79.76**	**315**	P	**P**	**19 54 07.3 +0.4**
PLD	**Plovdiv**	**79.78**	**311**	P	**P**	**19 54 06.8 -0.2**
KECS	**Kecovo**	**79.92**	**319**	*e*P	**P**	**19 54 08.2 +0.5**
KECS				pmax	pmax	
	comp=Z,16nm,1.4s,mb4.8					
KECS	**Kecovo**	**79.92**	**319**	*e*P	**P**	**19 54 08.2 +0.5**
	comp=Z,16nm,1.4s,mb4.8					
KECS	**Kecovo**	**79.92**	**319**	*e*P	**P**	**19 54 08.2 +0.5**
PGB	**Panagyurishte**	**79.97**	**312**	*e*P	**P**	**19 54 07.8 -0.3**
BSD	**Bornholm Skovb**	**80.09**	**326**	*i*P	**P**	**19 54 07.5 -1.0**
BSD				pmax	pmax	
	comp=Z,24nm,1.1s,mb5.0					
BSD				MLR	MLR	
	comp=Z,7μm,18.0s,MS6.1					
BSD	**Bornholm Skovb**	**80.09**	**326**	*i*P	**P**	**19 54 07.5 -1.0**
	comp=Z,24nm,1.1s,mb5.0					
BSD						
	comp=Z,7μm,18.0s					
URZ	**Urew

MORC Moravsky Berou 81.10 321 *e*P **P 19 54 13.8 -0.2**
MORC pmax pmax
comp=Z,21nm,1.2s,mb4.9
MORC Moravsky Berou 81.10 321 *e*P **P 19 54 13.8 -0.3**
comp=Z,21nm,1.2s,mb4.9
MORC Moravsky Berou 81.10 321⇑*i*P **P 19 54 14.3 +0.3**
KOLL Kolacno 81.13 319 *e*P **P 19 54 14.9 +0.7**
KOLL Kolacno 81.13 319 *e*P **P 19 54 14.9 +0.7**
FOO Floro 81.17 335 *e*P **P 19 54 13.7 -0.4**
FOO AMS AMS 20 34 11.1
comp=Z,9μm,13.8s,MS6.3
BUD Budapest 81.24 318⇓*e*P **P 19 54 15.3 +0.5**
KSP Ksiaz 81.33 322 *e*P **P 19 54 15.8 +0.6**
KSP Ksiaz 81.33 322⇑*e*P **P 19 54 15.2 0.0**
KSP *e* 19 57 24.2
KSP *e*S S 20 04 20.0 -2.9
KSP *e*SS SS 20 09 38.0 -0.6
KSP MLR MLR
comp=Z,9μm,19.6s,MS6.1
PAIG Paliouri 81.35 310 P **P 19 54 14.8 -0.7**
THR1 Thera Island 81.49 306 P **P 19 54 14.8 -1.5**
DPC Dobruska-Polom 81.54 322 *e*P **P 19 54 16.8 +0.5**
DPC *e*S S 20 04 27.0 +1.9
DPC AMS AMS 20 34 10.0
comp=Z,4μm,16.7s
VAY Valandovo 81.55 311 *e*P **P 19 54 15.3 -1.2**
VAY Valandovo 81.55 311 P **P 19 54 15.3 -1.3**
BER Bergen 81.75 333 *e*P **P 19 54 16.6 -0.7**
BER AMS AMS 20 34 23.9
comp=Z,11μm,15.9s,MS6.3
VRAC Vranov 81.87 321 P **P 19 54 18.8 +0.7**
VRAC Vranov 81.87 321⇑*i*P **P 19 54 18.5 +0.4**
RUE Ruedersdorf 81.94 324 *e*P **P 19 54 18.8 +0.5**
comp=Z,28nm,0.9s,mb5.2
LAST Lasithi 81.96 305 P **P 19 54 18.5 -0.3**
PKSM Moragy 82.03 317⇑*i*P **P 19 54 18.9 -0.1**
SKO Skopje 82.05 312 *e*P **P 19 54 19.6 +0.4**
DIVS Divibare 82.10 315 P **P 19 54 19.1 -0.3**
LIT Litokhoron 82.11 310 P **P 19 54 18.3 -1.2**
MUD Monsted U'grnd 82.23 329 *i*P **P 19 54 19.5 -0.3**
MUD pmax pmax
comp=Z,22nm,1.0s,mb5.0
MUD MLR MLR
comp=Z,10μm,18.0s,MS6.2
MUD Monsted U'grnd 82.23 329 *i*P **P 19 54 19.5 -0.3**
comp=Z,22nm,1.0s,mb5.0
MUD
comp=Z,10μm,18.0s
KRUS Krusevo 82.44 312 *e*P **P 19 54 19.6 -1.6**
PVCC Panska Ves 82.45 322 *e*P **P 19 54 21.4 +0.3**
PVCC MLR MLR
comp=Z,5μm,18.8s,MS5.9
PVCC Panska Ves 82.45 322 *e*P **P 19 54 21.4 +0.3**
PVCC AMS AMS 20 35 40.0
comp=Z,5μm,18.8s
SCO Scoresbysund 82.48 349 *i*P **P 19 54 20.8 -0.1**
SCO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SCO MLR MLR
comp=Z,2μm,17.0s,MS5.7
SCO Scoresbysund 82.48 349 *i*P **P 19 54 20.8 -0.1**
comp=Z,5.9nm,1.0s,mb4.5
SCO
comp=Z,3μm,17.0s
TREC Trest 82.52 321 *e*P **P 19 54 21.8 +0.4**
TREC MLR MLR
comp=Z,4μm,14.6s,MS5.9
TREC Trest 82.52 321 *e*P **P 19 54 21.8 +0.4**
TREC AMS AMS 20 34 40.0
comp=Z,4μm,14.6s
SIVA Sivas 82.52 305 P **P 19 54 21.4 -0.4**
FNA Florina 82.60 311 P **P 19 54 20.6 -1.5**
BRG Berggiesshubel 82.63 323 *e*P **P 19 54 21.6 -0.4**
comp=Z,20nm,1.8s,mb4.9
BRG *e* 19 54 24.4
comp=Z,20nm,1.2s
BRG *e* 19 54 40.8
comp=Z,14nm,1.1s
BRG PP PP 19 57 31.0 -0.5
BRG S S 20 04 37.0 +0.7
BRG *i* 20 05 31.0
BRG SS SS 20 09 58.0 +0.2
BRG
comp=N,3μm,16.0s
BRG
comp=E,3μm,14.6s
BRG
comp=Z,7μm,15.0s
BRG Berggiesshubel 82.63 323 *e*P **P 19 54 21.6 -0.4**
BRG 19 57 31.0
BRG S S 20 04 37.0 +0.7
BRG *i* 20 05 31.0
BRG SS SS 20 09 58.0 +0.2
BRG pmax pmax
comp=Z,12nm,1.8s,mb4.6
BRG MLR MLR
comp=N,2μm,16.0s,MS5.7
BRG MLR MLR
comp=E,2μm,14.6s,MS5.7
BRG MLR MLR
comp=Z,4μm,15.0s,MS5.9
YKA Yellowknife Ar 82.66 23 P **P 19 54 21.2 -0.7**
comp=Z,23nm,0.7s,mb5.3,baz=313,slow=4.9,SNR=236
YKA PKKPbc PKKPbc 20 12 53.0 +5.3
comp=Z,0.3nm,0.5s,baz=127,slow=2.4,SNR=4.0
YKA LR LR 20 38 22.4
comp=Z,106nm,18.0s,baz=55,slow=41
YKA Yellowknife Ar 82.66 23 P **P 19 54 21.2 -0.7**
YKA PKKPbc PKKPbc 20 12 53.0 +5.3
YKA LR LR 20 38 22.4
AGG Agios Georgios 82.68 309 P **P 19 54 20.4 -2.1**
PRU Pruhonice 82.72 322 *e*P **P 19 54 22.8 +0.3**
PRU MLR MLR
comp=Z,3μm,16.2s,MS5.8
PRU Pruhonice 82.72 322 *e*P **P 19 54 22.8 +0.3**
PRU *e*x x 20 04 52.3
PRU AMS AMS 20 36 00.0
comp=Z,3μm,16.2s
PRA Prague 82.75 322⇓P **P 19 54 23.0 +0.4**
PRA AMS AMS 20 34 34.0
SUMG Summit 82.81 354 *e*P **P 19 54 22.1 -0.4**
comp=Z,22nm,1.0s,mb5.1
CLL Collm 82.94 323 *e*P **P 19 54 22.7 -0.9**
comp=Z,34nm,1.4s,mb5.2
CLL Collm 82.94 323⇓*i*P **P 19 54 23.3 -0.3**
CLL *i* pP 19 54 33.4 -2.7
CLL *i* 19 54 38.4
CLL *e*S S 20 04 46.0 +6.6
CLL pmax pmax
comp=Z,35nm,1.4s,mb5.2
CLL MLR MLR
comp=Z,7μm,17.7s,MS6.1
CLL Collm 82.94 323⇓*i*P **P 19 54 23.3 -0.3**
comp=Z,35nm,1.4s,mb5.2
CLL *i* pP 19 54 33.4 -2.7
CLL *i* 19 54 38.4
CLL *e*S S 20 04 46.0 +6.6
CLL LR LR
comp=Z,7μm,17.7s,MS6.1
CLL Collm 82.94 323⇓*i*P **P 19 54 23.3 -0.3**
comp=Z,35nm,1.4s,mb5.2
CLL *i* pPcP pP 19 54 33.4 -2.7
CLL *i* 19 54 38.4
CLL *e*PP PP 19 57 33.0 -1.0
comp=Z,11nm,1.3s
CLL *e*PPP 19 59 36.0
CLL *e*S S 20 04 46.0 +6.6
CLL *e*PS 20 05 40.0
CLL *e*SS SS 20 10 06.0 +3.7
CLL *e* 20 14 36.0
CONA Conrad Observa 82.94 320 *i*P **P 19 54 24.4 +0.8**
SNR=18
BSEG Bad Segeberg 83.01 327 *e*P **P 19 54 24.4 +0.5**
comp=Z,31nm,0.6s,mb5.5
KARN Karanos 83.03 306 P **P 19 54 23.3 -1.1**
ARSA Arzberg 83.46 319 *i*P **P 19 54 26.9 +0.5**
SNR=10
TANN Tannenbergstha 83.68 323 *e*P **P 19 54 26.8 -0.6**
comp=Z,20nm,1.2s,mb5.1
KHC Kasperske Hory 83.69 321⇑*i*P **P 19 54 27.2 -0.4**
comp=Z,38nm,1.3s,mb5.4
KHC Kasperske Hory 83.69 321 *e*P **P 19 54 27.7 +0.2**
KHC *e*x x 19 54 38.3
KHC *e*S S 20 04 48.0 +0.9
KHC AMS AMS 20 36 40.0
comp=Z,3μm,16.6s
GEC2 GERESS Array S 83.76 321 *e*P **P 19 54 27.3 -0.6**
comp=Z,44nm,1.2s,mb5.5
GEC2 GERESS Array S 83.76 321 *e*P **P 19 54 27.3 -0.6**
GEC2 pmax pmax
comp=Z,44nm,1.2s,mb5.5
GERES GERESS Array B 83.76 321 P **P 19 54 28.1 +0.2**
comp=Z,22nm,1.1s,mb5.2,baz=50,slow=4.2,SNR=57
GERES LR LR 20 36 09.4
comp=Z,3μm,20.6s,MS5.7,baz=62,slow=39
NKC Novy Kostel 83.78 323 *e*P **P 19 54 28.0 +0.1**
NKC *e*S S 20 04 48.5 +0.6
NKC AMS AMS 20 36 20.0
comp=Z,4μm,15.4s
NRDL Niedersach Rie 83.87 325 *e*P **P 19 54 28.2 -0.2**
comp=Z,34nm,1.6s,mb5.2
MOA Molln 83.92 320 *i*P **P 19 54 28.6 -0.1**
SNR=13
PERS Pernice 84.00 319 *i*P **P 19 54 28.9 -0.2**
MOX Moxa 84.03 323 *e*P **P 19 54 29.5 +0.3**
comp=Z,22nm,1.4s,mb5.1
MOX *e* pP 19 54 39.0 -2.7
MOX
comp=Z,5μm,18.0s
MOX Moxa 84.03 323 *e*P **P 19 54 28.8 -0.4**
comp=Z,23nm,1.3s,mb5.2
MOX Moxa 84.03 323 *e*P **P 19 54 29.5 +0.3**
MOX *e* pP 19 54 39.0 -2.7
MOX pmax pmax
comp=Z,22nm,1.4s,mb5.1
MOX MLR MLR
comp=Z,5μm,18.0s,MS5.9
SOKA Soboth 84.03 319⇑*i*P **P 19 54 29.2 -0.1**
comp=Z,39nm,1.2s,mb5.4
CLZ Clausthal 84.07 325 *e*P **P 19 54 29.5 +0.1**
comp=Z,29nm,1.2s,mb5.3
CLZ Clausthal 84.07 325 *e*P **P 19 54 29.5 +0.1**
CLZ pmax pmax
comp=Z,29nm,1.2s,mb5.3
WET Wettzell 84.08 322 *e*P **P 19 54 29.6 +0.1**
comp=Z,27nm,1.3s,mb5.2
WET Wettzell 84.08 322 *e*P **P 19 54 29.6 +0.1**
WET pmax pmax
comp=Z,27nm,1.3s,mb5.2
ROTZ Rotzenmuhle 84.15 322 *e*P **P 19 54 29.6 -0.2**
comp=Z,42nm,1.3s,mb5.4
OBKA Obir 84.40 319 *i*P **P 19 54 31.3 +0.1**
SNR=13
BOJS Bojanci 84.46 318 *i*P **P 19 54 31.8 +0.3**
LJU Ljubljana 84.64 318 *e*P **P 19 54 32.0 -0.4**
GRA1 Grafenberg Arr 84.73 323 *e*P **P 19 54 32.5 -0.3**
comp=Z,59nm,1.3s,mb5.6
GRA1 *e*S S 20 05 06.3 +8.8
GRA1 LR LR
comp=Z,5μm,19.1s,MS5.9
GRF Grafenberg Arr 84.73 323 *e*P **P 19 54 32.5 -0.3**
comp=Z,59nm,1.3s,mb5.6
GRF *e*S S 20 05 06.3 +8.8
GRF *e*L 20 36 54.3
comp=Z,5μm,19.1s
GRF Grafenberg Arr 84.73 323 *e*P **P 19 54 32.5 -0.3**
GRF pmax pmax
comp=Z,59nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,5μm,19.1s,MS5.9
GRF Grafenberg Arr 84.73 323 *e*P **P 19 54 32.5 -0.3**
GRF pmax pmax
comp=Z,59nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,5μm,19.1s,MS5.9
UBBA Unterbreizbach 84.81 324 *e*P **P 19 54 33.7 +0.5**
comp=Z,22nm,1.5s,mb5.1
RJOB Jochberg 84.84 320 *e*P **P 19 54 32.8 -0.6**
comp=Z,35nm,1.1s,mb5.4
KBA Koelnbreinsper 84.84 320 *i*P **P 19 54 33.4 -0.1**
SNR=18
MYKA Terra Mystica 84.89 319⇑*i*P **P 19 54 32.9 -0.7**
comp=Z,15nm,1.1s,mb5.0
ABPO Ambohimpanom 84.92 247 *e*P **P 19 54 34.3 +0.1**
ABPO pmax pmax
comp=Z,18nm,0.9s,mb5.2
ABPO MLR MLR
comp=Z,810nm,21.0s,MS5.1
ABPO Ambohimpanom 84.92 247 *e*P **P 19 54 34.3 +0.1**
comp=Z,18nm,0.9s,mb5.2
ABPO LR LR
comp=Z,810nm,21.0s,MS5.1
JAVS Javornik 85.00 318 *e*P **P 19 54 33.5 -0.7**
VOY Vojsko 85.03 318 *e*P **P 19 54 33.4 -1.0**
VOY *e* 19 54 52.2
VOY *e* 19 54 57.7
IBBN Ibbenburen 85.18 326 *e*P **P 19 54 34.5 -0.5**
comp=Z,44nm,1.2s,mb5.5
WIT Witteveen 85.45 327 *e*P **P 19 54 37.2 +0.8**
comp=Z,100nm,0.7s,mb6.0
FUR Furstenfeldbru 85.50 321 *e*P **P 19 54 36.4 -0.3**
comp=Z,98nm,1.2s,mb5.8
FUR Furstenfeldbru 85.50 321 *e*P **P 19 54 36.4 -0.3**
FUR pmax pmax
comp=Z,98nm,1.2s,mb5.8
ABTA Abfaltersbach 85.50 320 *i*P **P 19 54 36.0 -0.7**
SNR=17
WATA Walderalm 85.75 320⇓*i*P **P 19 54 37.8 -0.1**
comp=Z,19nm,1.0s,mb5.3
WTTA Wattenberg 85.75 320 *i*P **P 19 54 37.9 -0.1**
SNR=9.3
WTSB Winterswijk 85.86 326⇑*e*P **P 19 54 37.8 -0.6**
comp=Z,37nm,1.3s,mb5.5
BUG Bochum-Univer 85.92 325 *e*P **P 19 54 38.0 -0.7**
comp=Z,86nm,1.2s,mb5.9
TNS Taunus Mts 85.97 324 *e*P **P 19 54 38.6 -0.4**
comp=Z,49nm,1.3s,mb5.6
TNS Taunus Mts 85.97 324 *e*P **P 19 54 38.6 -0.4**
TNS pmax pmax
comp=Z,49nm,1.3s,mb5.6
MOTA Moosalm 86.02 321 *i*PcP **P 19 54 39.4 +0.1**
SNR=11
TOD Tromm 86.11 323 *e*P **P 19 54 39.2 -0.5**
KMBO Kilima Mbogo 86.14 267 *e*P **P 19 54 41.8 +1.3**
KMBO pmax pmax
comp=Z,28nm,1.3s
KMBO MLR MLR
comp=Z,714nm,19.0s
KMBO Kilima Mbogo 86.14 267 P **P 19 54 42.1 +1.6**
comp=Z,14nm,1.0s,mb5.2,baz=31,slow=6.9,SNR=14
KMBO LR LR 20 35 07.4
comp=Z,745nm,20.2s,MS5.1,baz=275,slow=37
KMBO Kilima Mbogo 86.14 267 *e*P **P 19 54 41.8 +1.3**
comp=Z,28nm,1.3s,mb5.3
KMBO LR LR
comp=Z,714nm,19.0s,MS5.1
KMBO Kilima Mbogo 86.14 267 P **P 19 54 42.7 +2.3**
SNR=8.5
KMBO P 19 54 42.7
SNR=8.5
STU Stuttgart 86.35 323 *e*P **P 19 54 40.0 -0.9**
comp=Z,17nm,1.0s,mb5.2
STU Stuttgart 86.35 323 *e*P **P 19 54 39.0 -1.9**
STU pmax pmax
comp=Z,9.0nm,0.6s,mb5.2
STU Stuttgart 86.35 323 *e*P **P 19 54 39.0 -1.9**
comp=Z,9.0nm,0.6s,mb5.2
FETA Feichten 86.41 320 *i*PcP **P 19 54 41.3 +0.1**
SNR=10
TIP Timpagrande 86.49 311 *e*P **P 19 54 41.1 -0.6**
comp=Z,39nm,1.4s,mb5.4
ABH Alteburg 86.64 324 *e*P **P 19 54 42.7 +0.4**
PGC Sidney 86.80 37 *e*P **P 19 54 42.7 -0.4**
comp=Z,3.1nm,1.2s,mb4.4
SPAK Spaichingen-Ko 86.94 322 *e*P **P 19 54 44.4 +0.6**
HGN Heimansgroeve 87.00 325⇑*i*P **P 19 54 43.4 -0.6**
comp=Z,29nm,1.5s,mb5.3
LANF Langenberg 87.00 323 *e*P **P 19 54 44.0 -0.1**
RUP Ruppelstein 87.00 324 *e*P **P 19 54 44.0 -0.1**
MEM Membach 87.05 325 P **P 19 54 44.2 0.0**
comp=Z,15nm,1.3s,mb5.1
BFO Black Forest 87.07 322 P **P 19 54 44.5 +0.1**
comp=Z,74nm,1.2s,mb5.8,SNR=7.3
BFO Black Forest 87.07 322 *e*P **P 19 54 43.5 -0.9**
BFO pmax pmax
comp=Z,34nm,1.5s,mb5.4
BFO MLR MLR
comp=Z,4μm,20.0s,MS5.8
BFO Black Forest 87.07 322 *e*P **P 19 54 43.5 -0.9**
comp=Z,34nm,1.5s,mb5.4
BFO LR LR
comp=Z,4μm,20.0s,MS5.8
BEBN Eben Emael 87.11 325 P **P 19 54 44.4 -0.1**
AQU L'Aquila 87.17 315 *e*P **P 19 54 44.8 -0.2**
AQU pmax pmax
comp=Z,107nm,1.3s,mb5.9
AQU L'Aquila 87.17 315 *e*P **P 19 54 44.8 -0.2**
comp=Z,107nm,1.3s,mb5.9
AQU L'Aquila 87.17 315⇑*i*P **P 19 54 45.1 +0.1**
BORG Borgarnes 87.22 345 PFAKE 19 55 00.0 +15
BORG LR LR
comp=Z,5μm,19.0s,MS5.9
NLWA Neilton Lookou 87.25 39⇑P **P 19 54 45.0 -0.3**
baz=87
A05A Maple Falls 87.35 37⇓P **P 19 54 45.4 -0.4**
baz=87
FELD Feldberg im Sc 87.51 322 *e*P **P 19 54 45.7 -0.8**
WLF Walferdange 87.51 324 P **P 19 54 46.8 +0.3**
comp=Z,52nm,1.3s,mb5.6
WLF Walferdange 87.51 324 *e*P **P 19 54 46.1 -0.4**
comp=Z,88nm,1.2s,mb5.9
WLF Walferdange 87.51 324 *e*P **P 19 54 46.5 0.0**
WLF pmax pmax
comp=Z,82nm,1.1s,mb5.9
WLF Walferdange 87.51 324 *e*P **P 19 54 46.5 -0.1**
comp=Z,82nm,1.1s,mb5.9
CEL Celeste 87.52 311 *e*P **P 19 54 47.4 +0.6**
comp=Z,79nm,1.3s,mb5.8
BCLA Clavier 87.52 325 P **P 19 54 46.4 -0.2**
comp=Z,15nm,1.3s,mb5.0
CDF Champ du Feu 87.61 323 *e*P **P 19 54 46.5 -0.5**
comp=Z,110nm,1.3s,mb5.6
CDF Champ du Feu 87.61 323 *e*P **P 19 54 46.5 -0.5**
CDF pmax pmax
comp=Z,55nm,1.3s,mb5.6
CDF Champ du Feu 87.61 323 *e*P **P 19 54 46.5 -0.5**
comp=Z,55nm,1.3s,mb5.6
A06A Chilliwack 87.62 36⇑P **P 19 54 46.4 -0.6**
baz=87
GNW Green Mountain 87.75 38 *e*P **P 19 54 47.9 +0.2**
comp=Z,22nm,1.2s,mb5.3
ECH Echery 87.79 323 *e*P **P 19 54 47.0 -0.9**
ECH Echery 87.79 323 *e*P **P 19 54 46.6 -1.3**
ECH pmax pmax
comp=Z,29nm,1.3s,mb5.3
ECH MLR MLR
comp=Z,3μm,21.0s,MS5.7
ECH Echery 87.79 323 *e*P **P 19 54 46.6 -1.3**
comp=Z,29nm,1.3s,mb5.3
ECH LR LR
comp=Z,3μm,21.0s,MS5.7
UCC Uccle 87.79 326 P **P 19 54 47.6 -0.2**
comp=Z,25nm,1.4s,mb5.2
E03A Lebam 87.89 39⇑P **P 19 54 48.3 0.0**
baz=88
JCW Jim Creek 87.89 37 *e*P **P 19 54 48.9 +0.6**
B06A Marblemount 87.95 37⇑P **P 19 54 48.9 +0.3**
baz=88,SNR=8.5
GIVF Givet 87.96 325 *e*P **P 19 54 48.0 -0.6**
comp=Z,84nm,1.2s,mb5.5
GIVF Givet 87.96 325 *e*P **P 19 54 48.0 -0.6**
GIVF pmax pmax
comp=Z,42nm,1.2s,mb5.5
GIVF Givet 87.96 325 *e*P **P 19 54 48.0 -0.6**
comp=Z,42nm,1.2s,mb5.5
RPW Rockport 87.98 37 *e*P **P 19 54 48.5 -0.2**
comp=Z,12nm,1.2s,mb5.0
SNF Seneffe 88.00 326 P **P 19 54 48.5 -0.3**
comp=Z,14nm,1.4s,mb5.0
MOF Molkenrain 88.01 322 *e*P **P 19 54 48.1 -0.8**
DOU Dourbes 88.08 325 P **P 19 54 49.1 -0.1**
comp=Z,13nm,1.3s,mb5.0
HINF Hinteralfeld 88.18 323 *e*P **P 19 54 48.8 -0.9**
comp=Z,16nm,0.9s,mb5.0
HINF Hinteralfeld 88.18 323 *e*P **P 19 54 48.8 -0.9**
HINF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
HINF Hinteralfeld 88.18 323 *e*P **P 19 54 48.8 -0.9**
comp=Z,7.9nm,0.9s,mb4.9
F03A Seaside 88.22 40⇑P **P 19 54 50.2 +0.2**
baz=88
A07A Ashnola River, 88.24 36⇑P **P 19 54 50.1 +0.1**
baz=88,SNR=23
BAIF Baives 88.30 325 *e*P **P 19 54 49.7 -0.6**
comp=Z,55nm,1.2s,mb5.3
BAIF Baives 88.30 325 *e*P **P 19 54 49.7 -0.6**
BAIF pmax pmax
comp=Z,28nm,1.2s,mb5.4
BAIF Baives 88.30 325 *e*P **P 19 54 49.7 -0.6**
comp=Z,28nm,1.2s,mb5.4
HAU Haudompre 88.35 323 *e*P **P 19 54 49.6 -0.9**
comp=Z,62nm,1.2s,mb5.4
HAU *e*MLR MLR
comp=Z,3μm,18.8s,MS5.5
HAU Haudompre 88.35 323 *e*P **P 19 54 49.6 -0.9**
HAU pmax pmax
comp=Z,31nm,1.2s,mb5.4
HAU MLR MLR
comp=Z,3μm,18.8s,MS5.8
HAU Haudompre 88.35 323 *e*P **P 19 54 49.6 -0.9**
comp=Z,31nm,1.2s,mb5.4
HAU LR LR
comp=Z,3μm,18.8s,MS5.8
D05A Enumclaw 88.43 38⇑P **P 19 54 51.6 +0.7**
baz=88,SNR=12
THEF They Montfort 88.43 323 *e*P **P 19 54 50.5 -0.4**
ESK Eskdalemuir 88.48 332 P **P 19 54 50.6 -0.4**
comp=Z,91nm,0.7s,mb6.1,SNR=6.3
ESK Eskdalemuir 88.48 332 *e*P **P 19 54 49.9 -1.1**
ESK pmax pmax
comp=Z,15nm,0.9s,mb5.2
ESK MLR MLR
comp=Z,4μm,19.0s,MS5.8
ESK Eskdalemuir 88.48 332 *e*P **P 19 54 49.9 -1.1**
comp=Z,15nm,0.9s,mb5.2
ESK LR LR
comp=Z,4μm,19.0s,MS5.8
C06A Tall Timber Ra 88.62 37⇑P **P 19 54 51.5 -0.3**
baz=88
B07A Winthrop 88.73 36⇑P **P 19 54 52.8 +0.5**
baz=88,SNR=22
MEZF Maizieres J'vi 88.77 324 *e*P **P 19 54 52.2 -0.3**
comp=Z,66nm,1.1s,mb5.6
MEZF Maizieres J'vi 88.77 324 *e*P **P 19 54 52.2 -0.3**
comp=Z,66nm,1.1s,mb5.9
LON Longmire 88.78 38 *e*P **P 19 54 52.8 +0.2**
LON pmax pmax
comp=Z,28nm,1.1s,mb5.5
LON Longmire 88.78 38 *e*P **P 19 54 52.8 +0.3**
comp=Z,28nm,1.1s,mb5.5
F04A Amboy 88.89 39⇑P **P 19 54 53.6 +0.5**
baz=89,SNR=8.6
A08A Turner Farm, O 88.89 36⇓P **P 19 54 53.5 +0.4**
baz=89,SNR=26
MENF Mencas 89.05 327 *e*P **P 19 54 54.0 +0.2**
D06A Cle Elum 89.06 38⇓P **P 19 54 54.3 +0.4**
baz=89,SNR=10
ETW Entiat 89.11 37 *e*P **P 19 54 54.6 +0.5**
comp=Z,48nm,1.2s,mb5.7
COR Corvallis 89.11 41 *e*P **P 19 54 52.4 -1.8**
COR pmax pmax
comp=Z,38nm,1.1s,mb5.6
COR Corvallis 89.11 41 *e*P **P 19 54 52.4 -1.8**
comp=Z,38nm,1.1s,mb5.6
EDM Edmonton 89.16 30 *e*P **P 19 54 54.4 +0.2**
C07A Waterville 89.21 37⇓P **P 19 54 54.9 +0.3**
baz=89,SNR=13
B08A Colville Reser 89.21 36⇑P **P 19 54 55.0 +0.5**
baz=89,SNR=51
A09A Danville 89.24 35⇓P **P 19 54 55.4 +0.7**
baz=89,SNR=29
CABF La Chapelle 89.30 322 *e*P **P 19 54 54.4 -0.6**
comp=Z,24nm,1.0s,mb5.2
CABF La Chapelle 89.30 322 *e*P **P 19 54 54.4 -0.6**
CABF pmax pmax
comp=Z,12nm,1.0s,mb5.2
CABF La Chapelle 89.30 322 *e*P **P 19 54 54.4 -0.6**
comp=Z,12nm,1.0s,mb5.2
E06A Yakima 89.36 38⇓P **P 19 54 56.0 +0.6**
baz=89,SNR=17
LPG La Plagne 89.55 321 *e*P **P 19 54 56.3 +0.1**
comp=Z,48nm,0.8s,mb5.6
LPG La Plagne 89.55 321 *e*P **P 19 54 56.3 +0.1**
LPG pmax pmax
comp=Z,24nm,0.8s,mb5.6
LPG La Plagne 89.55 321 *e*P **P 19 54 56.3 +0.1**
comp=Z,24nm,0.8s,mb5.6
LPL La Plagne 89.55 321 *e*P **P 19 54 56.1 -0.1**

comp=Z,44nm,0.9s,mb5.5
LPL La Plagne 89.55 321 *e*P **P 19 54 56.1 -0.1**
LPL pmax pmax
comp=Z,22nm,0.9s,mb5.5
LPL La Plagne 89.55 321 *e*P **P 19 54 56.1 -0.1**
comp=Z,22nm,0.9s,mb5.5
C08A Higginbotham F 89.71 36 ⇓P **P 19 54 57.3 +0.4**
baz=89,SNR=14
A10A Northport 89.78 35 ⇓P **P 19 54 57.7 +0.5**
baz=90
B09A Rice 89.81 36 ⇑P **P 19 54 57.8 +0.5**
baz=90,SNR=18
PGF Pioggiola 89.84 317 *e*P **P 19 54 57.4 -0.3**
comp=Z,71nm,1.0s,mb5.6
PGF Pioggiola 89.84 317 *e*P **P 19 54 57.4 -0.3**
PGF pmax pmax
comp=Z,36nm,1.0s,mb5.7
PGF Pioggiola 89.84 317 *e*P **P 19 54 57.4 -0.3**
comp=Z,36nm,1.0s,mb5.7
BNI Bardonecchia 89.85 320 *e*P **P 19 54 57.0 -0.6**
BNI pmax pmax
comp=Z,32nm,1.1s,mb5.6
BNI Bardonecchia 89.85 320 *e*P **P 19 54 57.0 -0.6**
comp=Z,32nm,1.1s,mb5.6
BNI *e*PP PP 19 58 20.2 -10
MBDF Montbardon 89.98 320 *e*P **P 19 54 58.1 -0.1**
comp=Z,13nm,0.7s,mb5.1
MBDF Montbardon 89.98 320 *e*P **P 19 54 58.1 -0.1**
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
MBDF Montbardon 89.98 320 *e*P **P 19 54 58.1 -0.1**
comp=Z,6.7nm,0.7s,mb5.1
E07A Sunnyside 89.99 38 ⇑P **P 19 54 58.0 -0.2**
baz=90
AUTN L'Aution 90.00 319 *e*P **P 19 54 58.0 -0.4**
SBF Sospel 90.07 319 *e*P **P 19 54 57.7 -1.0**
comp=Z,75nm,0.9s,mb5.7
SBF Sospel 90.07 319 *e*P **P 19 54 57.7 -1.0**
SBF pmax pmax
comp=Z,37nm,0.9s,mb5.7
SBF Sospel 90.07 319 *e*P **P 19 54 57.7 -1.0**
comp=Z,37nm,0.9s,mb5.7
TOUF Mont Tournerai 90.10 319 *e*P **P 19 54 58.2 -0.6**
LUCF Luceram 90.11 319 *e*P **P 19 54 59.2 +0.3**
C09A Chrisman Ranch 90.12 36 ⇑P **P 19 54 59.3 +0.5**
baz=90,SNR=15
OD2 Odessa Site #2 90.12 37 *e*P **P 19 54 59.2 +0.3**
comp=Z,29nm,1.2s,mb5.5
LOR Lormes 90.15 323 *e*P **P 19 54 58.0 -1.0**
comp=Z,81nm,1.3s,mb5.6
LOR *e*MLR MLR
comp=Z,4μm,18.2s,MS5.6
LOR Lormes 90.15 323 *e*P **P 19 54 58.0 -1.0**
LOR pmax pmax
comp=Z,41nm,1.3s,mb5.6
LOR MLR MLR
comp=Z,4μm,18.3s,MS5.9
LOR Lormes 90.15 323 *e*P **P 19 54 58.0 -1.0**
comp=Z,40nm,1.3s,mb5.6
LOR LR LR
comp=Z,4μm,18.3s,MS5.9
D08A Wollman Farm, 90.21 37 ⇓P **P 19 54 59.8 +0.5**
baz=90,SNR=17
RSW Rattlesnake Hi 90.23 38 *e*P **P 19 54 59.8 +0.4**
comp=Z,26nm,1.0s,mb5.5
HAWA Hanford 90.26 38 *e*P **P 19 55 00.1 +0.6**
comp=Z,60nm,1.3s,mb5.8
G06A Carlson Farm, 90.31 39 ⇑P **P 19 55 00.4 +0.7**
baz=90,SNR=11
F07A Phinny Hill Vi 90.33 38 ⇓P **P 19 55 00.8 +0.9**
baz=90,SNR=7.1
B10A Chitwood Farm, 90.37 35 ⇓P **P 19 55 00.2 +0.2**
baz=90
ORIF Oris-en-Rattie 90.39 321 *e*P **P 19 54 59.7 -0.5**
comp=Z,24nm,0.8s,mb5.3
ORIF *e*MLR MLR
comp=Z,4μm,18.8s,MS5.6
ORIF Oris-en-Rattie 90.39 321 *e*P **P 19 54 59.7 -0.5**
ORIF pmax pmax
comp=Z,12nm,0.8s,mb5.3
ORIF Oris-en-Rattie 90.39 321 *e*P **P 19 54 59.7 -0.5**
comp=Z,12nm,0.8s,mb5.3
A11A Hall Mountain, 90.41 34 ⇓P **P 19 55 01.7 +1.5**
baz=90,SNR=33
HUMO Hull Mountain 90.42 42 *e*P **P 19 55 01.0 +0.6**
comp=Z,8.7nm,1.0s,mb5.0
HUMO LR LR
comp=Z,744nm,20.0s,MS5.1
NEW Newport 90.45 35 *e*P **P 19 55 00.8 +0.4**
NEW pmax pmax
comp=Z,56nm,1.1s
NEW Newport 90.45 35 *e*P **P 19 55 00.8 +0.5**
comp=Z,56nm,1.1s,mb5.8
CASY Casey 90.46 185 *e*P **P 19 54 59.7 0.0**
CASY Casey 90.46 185 *e*P **P 19 54 58.9 -0.8**
comp=Z,15nm,1.3s,mb5.2
SSF Saint Saulge 90.47 323 *e*P **P 19 54 59.6 -0.9**
comp=Z,52nm,1.2s,mb5.4
SSF Saint Saulge 90.47 323 *e*P **P 19 54 59.6 -0.9**
SSF pmax pmax
comp=Z,26nm,1.2s,mb5.4
SSF Saint Saulge 90.47 323 *e*P **P 19 54 59.6 -0.9**
comp=Z,26nm,1.2s,mb5.4
E08A Dider Farm, El 90.47 37 ⇑P **P 19 55 01.1 +0.6**
baz=90,SNR=11
SMF Signal de Mont 90.53 323 *e*P **P 19 55 00.0 -0.8**
comp=Z,176nm,1.3s,mb6.0
SMF Signal de Mont 90.53 323 *e*P **P 19 55 00.0 -0.8**
SMF pmax pmax
comp=Z,88nm,1.3s,mb5.9
SMF Signal de Mont 90.53 323 *e*P **P 19 55 00.0 -0.8**
comp=Z,88nm,1.3s,mb5.9
D09A Jones Farm, Ri 90.54 37 ⇓P **P 19 55 01.4 +0.6**
baz=90,SNR=7.2
C10A Spilker Farm, 90.62 36 ⇓P **P 19 55 01.5 +0.3**
baz=90
AVF Avril sur Loir 90.72 323 *e*P **P 19 55 00.8 -0.8**
comp=Z,128nm,1.3s,mb5.8
AVF Avril sur Loir 90.72 323 *e*P **P 19 55 00.8 -0.8**
AVF pmax pmax
comp=Z,64nm,1.3s,mb5.8
AVF Avril sur Loir 90.72 323 *e*P **P 19 55 00.8 -0.8**
comp=Z,64nm,1.3s,mb5.8
B11A Sandpoint 90.74 35 ⇓P **P 19 55 02.8 +1.1**
baz=90,SNR=41
A12A Yaak River Ran 90.80 34 ⇓P **P 19 55 02.9 +1.0**
baz=90,SNR=5.6
LMR La Mourre 90.93 319 *e*P **P 19 55 02.0 -0.7**
comp=Z,114nm,1.3s,mb5.8
LMR La Mourre 90.93 319 *e*P **P 19 55 02.0 -0.7**
LMR pmax pmax
comp=Z,57nm,1.3s,mb5.7
LMR La Mourre 90.93 319 *e*P **P 19 55 02.0 -0.7**
comp=Z,57nm,1.3s,mb5.7
SSB Saint Sauveur 90.95 321 *e*P **P 19 55 02.3 -0.5**
SSB Saint Sauveur 90.95 321 *e*P **P 19 55 02.0 -0.8**
SSB pmax pmax
comp=Z,23nm,1.1s,mb5.4
SSB Saint Sauveur 90.95 321 *e*P **P 19 55 02.0 -0.8**
comp=Z,23nm,1.1s,mb5.4
E09A Wood Farm, Sta 90.96 37 ⇑P **P 19 55 03.5 +0.7**
baz=91,SNR=9.7
F08A Pendleton 91.04 38 ⇓P **P 19 55 04.1 +0.9**
baz=91,SNR=9.8
YBH Yreka Blue Hor 91.06 43 *e*P **P 19 55 03.8 +0.5**
YBH pmax pmax
comp=Z,13nm,1.3s
YBH Yreka Blue Hor 91.06 43 *e*P **P 19 55 03.8 +0.4**
comp=Z,13nm,1.3s,mb5.1
PLDF La Plantade 91.06 322 *e*P **P 19 55 03.3 +0.1**
SMRF Simiane la Rot 91.11 320 *e*P **P 19 55 03.1 -0.4**
comp=Z,59nm,1.3s,mb5.5
SMRF Simiane la Rot 91.11 320 *e*P **P 19 55 03.1 -0.4**
comp=Z,59nm,1.3s,mb5.8
VIVF Saint-Julien-l 91.12 321 *e*P **P 19 55 03.0 -0.6**
comp=Z,75nm,1.3s,mb5.6
VIVF Saint-Julien-l 91.12 321 *e*P **P 19 55 03.0 -0.6**
VIVF pmax pmax
comp=Z,38nm,1.3s,mb5.6
VIVF Saint-Julien-l 91.12 321 *e*P **P 19 55 03.0 -0.6**
comp=Z,38nm,1.3s,mb5.6
BGF Bois d'Agland 91.13 323 *e*P **P 19 55 02.8 -0.8**
comp=Z,61nm,1.3s,mb5.5
BGF Bois d'Agland 91.13 323 *e*P **P 19 55 02.8 -0.8**
BGF pmax pmax
comp=Z,31nm,1.3s,mb5.5
BGF Bois d'Agland 91.13 323 *e*P **P 19 55 02.8 -0.8**
comp=Z,31nm,1.3s,mb5.5
G08A Pilot Rock 91.24 38 ⇓P **P 19 55 04.8 +0.7**
baz=91,SNR=9.5
LNOR Lincton Mounta 91.27 38 *e*P **P 19 55 05.7 +1.5**
LNOR pmax pmax
comp=Z,11nm,1.2s,mb5.1
LNOR Lincton Mounta 91.27 38 *e*P **P 19 55 05.7 +1.5**
comp=Z,11nm,1.2s,mb5.0
AGO Saint Agoulin 91.28 323 *e*P **P 19 55 04.0 -0.3**
DRV Dumont d'Urvil 91.35 173 P **P 19 55 07.0 +3.2**
DRV S SKSac 20 05 39.0 +6.7
DRV SS SS 20 11 58.0 -8.0
DRV R 20 26 00.0
A13A Flathead Natio 91.43 34 ⇑P **P 19 55 05.7 +0.8**
baz=91,SNR=16
LDF La Druitiere 91.44 326 *e*P **P 19 55 03.7 -1.2**
comp=Z,5.8nm,0.7s,mb4.7
LDF La Druitiere 91.44 326 *e*P **P 19 55 03.7 -1.2**
LDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
LDF La Druitiere 91.44 326 *e*P **P 19 55 03.7 -1.2**
comp=Z,2.9nm,0.7s,mb4.7
FLN La Foliniere 91.51 326 *e*P **P 19 55 03.8 -1.5**
comp=Z,6.6nm,0.7s,mb4.8
FLN *e*MLR MLR
comp=Z,7μm,17.5s,MS5.9
FLN La Foliniere 91.51 326 *e*P **P 19 55 03.8 -1.5**
FLN pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
FLN MLR MLR
comp=Z,7μm,17.5s,MS6.2
FLN La Foliniere 91.51 326 *e*P **P 19 55 03.8 -1.5**
comp=Z,3.3nm,0.7s,mb4.8
FLN LR LR
comp=Z,7μm,17.5s,MS6.2
PYM Petit Puy Mans 91.53 322 *e*P **P 19 55 05.2 -0.3**
E10A Myers Farm, Un 91.55 37 ⇓P **P 19 55 06.0 +0.5**
baz=91,SNR=7.0
F09A S2 Ranch, Elgi 91.58 38 ⇑P **P 19 55 06.3 +0.6**
baz=91
WALA Waterton Lakes 91.60 33 *e*P **P 19 55 06.5 +0.8**
comp=Z,2.6nm,1.2s,mb4.4
K05A Summer Lake 91.61 41 ⇑P **P 19 55 07.0 +1.2**
baz=91,SNR=14
D11A Klaveano Farm, 91.62 36 ⇑P **P 19 55 06.0 +0.2**
baz=91,SNR=15
I07A Izee 91.64 40 ⇑P **P 19 55 07.2 +1.2**
baz=91,SNR=9.2
TCF Toulx Ste Croi 91.65 323 *e*P **P 19 55 05.5 -0.5**
comp=Z,79nm,1.3s,mb5.6
TCF Toulx Ste Croi 91.65 323 *e*P **P 19 55 05.5 -0.5**
TCF pmax pmax
comp=Z,40nm,1.3s,mb5.6
TCF Toulx Ste Croi 91.65 323 *e*P **P 19 55 05.5 -0.5**
comp=Z,40nm,1.3s,mb5.6
C12B Naegeli Ranch, 91.66 35 ⇓P **P 19 55 06.3 +0.3**
baz=91
LBL Lubilhac 91.71 322 *e*P **P 19 55 06.5 +0.2**
B13A Whitefish 91.76 34 ⇓P **P 19 55 07.6 +1.1**
baz=92,SNR=38
F10A Beach Ranch, E 91.80 37 ⇓P **P 19 55 07.3 +0.6**
baz=92
WDC Whiskeytown Da 91.80 44 *e*P **P 19 55 07.6 +0.8**
WDC pmax pmax
comp=Z,12nm,1.2s,mb5.1
WDC Whiskeytown Da 91.80 44 *e*P **P 19 55 07.6 +0.8**
comp=Z,12nm,1.2s,mb5.1
H08A Prairie City 91.86 39 ⇑P **P 19 55 07.8 +0.8**
baz=92,SNR=11
A14A Double T Ranch 91.90 33 ⇑P **P 19 55 07.9 +0.8**
baz=92,SNR=67
G09A Cove 91.91 38 ⇓P **P 19 55 08.0 +0.8**
baz=92,SNR=22
BSMT Bassoo Peak 91.93 35 *e*P **P 19 55 07.5 +0.2**
comp=Z,26nm,1.2s,mb5.4
LASF Ste Croix 92.06 321 *e*P **P 19 55 06.8 -1.1**
comp=Z,52nm,1.3s,mb5.4
E11A Bogner Ranch, 92.12 36 ⇑P **P 19 55 08.5 +0.4**
baz=92,SNR=11
D12A Red Ives Fores 92.14 35 ⇑P **P 19 55 08.6 +0.4**
baz=92
FCC Fort Churchill 92.14 18 *e*P **P 19 55 06.7 -1.3**
FCC pmax pmax
comp=Z,2.0nm,1.0s,mb4.4
FCC Fort Churchill 92.14 18 *e*P **P 19 55 06.7 -1.3**
comp=Z,1.9nm,1.0s,mb4.4
C13A Hot Springs 92.15 35 ⇓P **P 19 55 09.0 +0.7**
baz=92,SNR=20
A15A Johnson Ranch, 92.24 33 ⇓P **P 19 55 08.7 0.0**
baz=92,SNR=5.8
JTMT Jette 92.26 34 *e*P **P 19 55 09.2 +0.4**
comp=Z,9.3nm,0.8s,mb5.2
YBMT Yellow Bay 92.32 34 *e*P **P 19 55 09.7 +0.7**
comp=Z,14nm,1.0s,mb5.2
HOPS Hopland 92.34 45 PFAKE 19 55 20.0 +11
HOPS LR LR
comp=Z,882nm,20.0s,MS5.2
H09A Durkee 92.35 38 ⇓P **P 19 55 10.3 +1.0**
baz=92,SNR=12
F11A Grangeville 92.44 37 ⇓P **P 19 55 09.6 0.0**
baz=92
BMO Blue Mountains 92.44 38 *e*P **P 19 55 10.2 +0.5**
BMO pmax pmax
comp=Z,12nm,0.9s,mb5.2
BMO MLR MLR
comp=Z,932nm,20.0s,MS5.2
BMO Blue Mountains 92.44 38 *e*P **P 19 55 10.2 +0.5**
comp=Z,12nm,0.9s,mb5.2
BMO LR LR
comp=Z,932nm,20.0s,MS5.2
MOD Modoc 92.44 42 *e*P **P 19 55 10.0 +0.3**
comp=Z,17nm,0.9s,mb5.4
MOD LR LR
comp=Z,793nm,20.0s,MS5.2
SWMT Swartz Lake 92.56 34 *e*P **P 19 55 10.0 -0.2**
comp=Z,24nm,1.3s,mb5.5
CAF Calviac 92.56 322 *e*P **P 19 55 10.3 +0.1**
comp=Z,146nm,1.2s,mb6.0
CAF Calviac 92.56 322 *e*P **P 19 55 10.3 +0.1**
CAF pmax pmax
comp=Z,73nm,1.2s,mb6.0
CAF Calviac 92.56 322 *e*P **P 19 55 10.3 +0.1**
comp=Z,73nm,1.2s,mb6.0
D13A Huson 92.58 35 ⇑P **P 19 55 09.8 -0.5**
baz=92
RJF Les Rejaudoux 92.64 323 *e*P **P 19 55 10.5 -0.1**
comp=Z,183nm,1.2s,mb6.1
RJF *e*MLR MLR
comp=Z,4μm,17.0s,MS5.6
RJF Les Rejaudoux 92.64 323 *e*P **P 19 55 10.5 -0.1**
RJF pmax pmax
comp=Z,91nm,1.2s,mb6.1
RJF MLR MLR
comp=Z,4μm,17.0s,MS5.9
RJF Les Rejaudoux 92.64 323 *e*P **P 19 55 10.5 -0.1**
comp=Z,91nm,1.2s,mb6.1
RJF LR LR
comp=Z,4μm,17.0s,MS5.9
J08A Circle Bar Ran 92.67 40 ⇓P **P 19 55 11.6 +0.8**
baz=92,SNR=13
G11A Walters Elk Ra 92.68 37 ⇑P **P 19 55 11.5 +0.8**
baz=92,SNR=12
MFF Saint Martin d 92.72 324 *e*P **P 19 55 10.0 -0.9**
I09A Lost Marbles R 92.73 39 ⇓P **P 19 55 11.6 +0.5**
baz=92,SNR=11
B15A Bradely Ranch, 92.76 33 ⇑P **P 19 55 11.1 +0.1**
baz=92,SNR=19
FFC Flin Flon 92.80 24 P **P 19 55 10.9 -0.2**
comp=Z,308nm,1.2s,mb6.6,SNR=40
FFC Flin Flon 92.80 24 *e*P **P 19 55 10.3 -0.8**
FFC pmax pmax
comp=Z,67nm,1.1s,mb6.0
FFC MLR MLR
comp=Z,1μm,20.0s,MS5.4
FFC Flin Flon 92.80 24 *e*P **P 19 55 10.3 -0.8**
comp=Z,67nm,1.1s,mb6.0
FFC LR LR
comp=Z,1μm,20.0s,MS5.4
A16A West Butte Ran 92.82 32 ⇑P **P 19 55 11.3 0.0**
baz=92,SNR=22
SGMF Saint Gilles 92.89 327 *e*P **P 19 55 10.4 -1.3**
comp=Z,66nm,1.3s,mb5.6
SGMF Saint Gilles 92.89 327 *e*P **P 19 55 10.4 -1.3**
SGMF pmax pmax
comp=Z,33nm,1.3s,mb5.6
SGMF Saint Gilles 92.89 327 *e*P **P 19 55 10.4 -1.3**
comp=Z,33nm,1.3s,mb5.6
MCCM Marconi Confer 92.94 46 PFAKE 19 55 20.0 +7.9
MCCM LR LR
comp=Z,516nm,21.0s,MS5.0
SLMT Seeley Lake 92.99 34 *e*P **P 19 55 12.4 +0.2**
comp=Z,30nm,1.1s,mb5.6
F12A Elk City 93.01 36 ⇓P **P 19 55 12.5 +0.2**
baz=93,SNR=11
MSO Missoula 93.03 35 *e*P **P 19 55 12.4 +0.1**
comp=Z,9.4nm,1.0s,mb5.2
C15A Salmond Ranch, 93.09 34 ⇓P **P 19 55 13.0 +0.4**
baz=93,SNR=22
J09A Fry Pan Ranch, 93.10 39 ⇓P **P 19 55 13.7 +1.0**
baz=93,SNR=28
B16A M & M Farms, S 93.12 33 ⇑P **P 19 55 13.2 +0.5**
baz=93
WVOR Wild Horse Val 93.13 41 *e*P **P 19 55 13.4 +0.5**
WVOR pmax pmax
comp=Z,20nm,1.1s,mb5.5
WVOR Wild Horse Val 93.13 41 *e*P **P 19 55 13.4 +0.5**
comp=Z,20nm,1.1s,mb5.5
E13A Victor 93.14 35 ⇓P **P 19 55 12.5 -0.4**
baz=93
I10A Payette 93.19 38 ⇓P **P 19 55 12.9 -0.3**
baz=93
ROSF Rostrenen 93.19 327 *e*P **P 19 55 11.8 -1.3**
comp=Z,45nm,1.2s,mb5.5
ROSF Rostrenen 93.19 327 *e*P **P 19 55 11.8 -1.3**
ROSF pmax pmax
comp=Z,23nm,1.2s,mb5.5
ROSF Rostrenen 93.19 327 *e*P **P 19 55 11.8 -1.3**
comp=Z,23nm,1.2s,mb5.5
H11A Donnelly 93.25 38 ⇑P **P 19 55 14.0 +0.6**
baz=93
LFF La Frestale 93.29 323 *e*P **P 19 55 13.6 0.0**
comp=Z,116nm,1.3s,mb5.8
LFF La Frestale 93.29 323 *e*P **P 19 55 13.6 0.0**
LFF pmax pmax
comp=Z,58nm,1.3s,mb5.8
LFF La Frestale 93.29 323 *e*P **P 19 55 13.6 0.0**
comp=Z,58nm,1.3s,mb5.8
KEST Kesra 93.31 311 P **P 19 55 14.6 +0.7**
comp=Z,3.4nm,0.9s,mb4.8,baz=184,slow=15,SNR=4.8
CHMT Chamberlain Mo 93.33 35 *e*P **P 19 55 13.4 -0.3**
comp=Z,8.4nm,1.2s,mb5.0
G12A Big Creek, Yel 93.37 37 ⇓P **P 19 55 13.9 0.0**
baz=93,SNR=15
QUIF Quistinic 93.42 327 *e*P **P 19 55 12.1 -2.0**
comp=Z,52nm,1.4s,mb5.5
QUIF Quistinic 93.42 327 *e*P **P 19 55 12.1 -2.0**
QUIF pmax pmax
comp=Z,26nm,1.4s,mb5.5
QUIF Quistinic 93.42 327 *e*P **P 19 55 12.1 -2.0**
comp=Z,26nm,1.4s,mb5.5
MTLF Montolieu 93.45 321 *e*P **P 19 55 14.0 -0.3**
F13A Darby 93.49 36 ⇑P **P 19 55 14.2 -0.3**
baz=93
C16A Fuhringer Ranc 93.51 33 ⇑P **P 19 55 14.5 0.0**
baz=93
E14A Clinton 93.53 35 ⇓P **P 19 55 14.7 0.0**
baz=93,SNR=11
BEKR Beckwourth 93.58 43 ⇑P **P 19 55 14.7 -0.3**
baz=93
D15A Lincoln 93.62 34 ⇑P **P 19 55 14.9 -0.2**
baz=93
B17A L&G Farms, Che 93.65 32 ⇓P **P 19 55 15.2 0.0**
baz=93,SNR=19
A18A Metzger Ranch, 93.68 32 ⇓P **P 19 55 15.2 -0.1**
baz=93,SNR=11
K10A MacKenzie Ranc 93.96 39 ⇓P **P 19 55 17.6 +0.9**
baz=94
E15A Deer Lodge 93.97 35 ⇑P **P 19 55 17.0 +0.3**
baz=94,SNR=10.0
F14A Wisdom 93.99 35 ⇓P **P 19 55 17.3 +0.6**
baz=94
G13A Cobalt 93.99 36 ⇑P **P 19 55 17.0 +0.2**
baz=94
H12A Diamond D Ranc 93.99 37 ⇑P **P 19 55 17.0 +0.2**
baz=94,SNR=13
B18A Beardsley Farm 94.08 32 ⇑P **P 19 55 17.3 +0.2**
baz=94,SNR=7.8
C17A Wharram Farm, 94.12 33 ⇓P **P 19 55 17.4 +0.1**
baz=94,SNR=5.7
D16A Dana Ranch, Ca 94.13 34 ⇓P **P 19 55 17.6 +0.2**
baz=94,SNR=11
MFID Camas Ranch 94.16 38 ⇓P **P 19 55 17.6 -0.1**
baz=94
WCN Washoe City 94.29 44 ⇓P **P 19 55 18.4 0.0**
baz=94
H13A Challis 94.31 37 ⇑P **P 19 55 18.4 +0.1**
baz=94,SNR=9.4
I12A Atlanta 94.32 38 ⇑P **P 19 55 18.5 +0.2**
baz=94
EGMT Eagleton 94.34 32 ⇓P **P 19 55 18.4 +0.1**
baz=94
EGMT Eagleton 94.34 32 *e*P **P 19 55 17.9 -0.5**
comp=Z,21nm,1.1s,mb5.5
E16A East Helena 94.39 34 ⇓P **P 19 55 19.2 +0.6**
baz=94
F15A Butte 94.43 35 ⇓P **P 19 55 19.3 +0.5**
baz=94,SNR=8.7
LRM Limekiln Ridge 94.47 35 *e*P **P 19 55 19.3 +0.3**
comp=Z,63nm,1.2s,mb5.9
D17A Six Diamond Ra 94.48 33 ⇓P **P 19 55 19.1 +0.1**
baz=94,SNR=16
CMB Columbia Colle 94.62 45 *e*P **P 19 55 19.2 -0.7**
CMB pmax pmax
comp=Z,11nm,1.0s,mb5.2
CMB MLR MLR
comp=Z,656nm,19.0s,MS5.1
CMB Columbia Colle 94.62 45 *e*P **P 19 55 19.2 -0.7**
comp=Z,11nm,1.0s,mb5.2
CMB *e* 19 55 38.8
CMB LR LR
comp=Z,656nm,19.0s,MS5.1
L10A Juniper Basin 94.62 40 ⇑P **P 19 55 20.9 +1.1**
baz=94,SNR=9.5
J12A Stokes Ranch, 94.68 38 ⇑P **P 19 55 20.6 +0.5**
baz=94
DLMT Dillon 94.69 35 *e*P **P 19 55 20.2 +0.1**
comp=Z,8.3nm,0.7s,mb5.3
EPF Esparros 94.72 321 *e*P **P 19 55 19.1 -1.1**
H14A Leadore 94.77 36 ⇑P **P 19 55 21.0 +0.7**
baz=94
I13A Wildhorse Cree 94.81 37 ⇑P **P 19 55 21.7 +1.1**
baz=94,SNR=13
E17A Martinsdale 94.86 34 ⇓P **P 19 55 21.4 +0.6**
baz=95,SNR=12
HLID Hailey 94.87 38 ⇓P **P 19 55 21.9 +1.1**
baz=95,SNR=9.4
HLID Hailey 94.87 38 *e*P **P 19 55 21.9 +1.0**
comp=Z,4.7nm,0.8s,mb5.0
G15A Dillon 94.88 36 ⇓P **P 19 55 21.4 +0.6**
baz=95,SNR=12
D18A Linhart Farms, 94.89 33 ⇓P **P 19 55 21.3 +0.5**
baz=95,SNR=5.5
MCMT McKenzie Canyo 94.91 36 *e*P **P 19 55 21.9 +0.8**
comp=Z,1.2nm,0.7s,mb4.4
F16A Kennard Place, 94.92 35 ⇑P **P 19 55 21.7 +0.7**
baz=95
M10A I.L. Ranch, Tu 94.92 40 ⇑P **P 19 55 21.8 +0.6**
baz=95
L11A Cat Creek Ranc 94.98 39 ⇓P **P 19 55 22.2 +0.8**
baz=95,SNR=12
BOZ Bozeman (W) 95.01 35 ⇓P **P 19 55 21.5 0.0**
baz=95
J13A Cove Ranch, Pi 95.11 38 ⇑P **P 19 55 22.2 +0.3**
baz=95
PPT Papeete 95.12 107 *e*PP PP 19 59 05.9 -6.8
comp=Z,77nm,27.5s
PPT *e*S S 20 06 29.1 -5.7
comp=Z,2μm,26.0s
PPT *e*SS SS 20 12 58.3 -3.6
comp=Z,869nm,27.0s
PPT *e*LR LR 20 26 02.9
comp=Z,4μm,23.2s,baz=290
PPT Papeete 95.12 107 LR LR 20 29 28.8
comp=Z,2μm,21.9s,MS5.5,baz=283,slow=30
I14A Mackay 95.17 37 ⇓P **P 19 55 22.9 +0.7**
baz=95,SNR=8.0
K12A Draper Farm, C 95.18 39 ⇑P **P 19 55 23.1 +0.8**
baz=95
BMN Battle Mountai 95.18 41 PFAKE 19 55 30.0 +7.6
BMN LR LR
comp=Z,768nm,22.0s,MS5.1
G16A Moss Hill, Enn 95.20 35 ⇑P **P 19 55 22.9 +0.5**
baz=95
E18A Harlowton 95.27 33 ⇑P **P 19 55 23.0 +0.4**
baz=95

F17A	Fitzpatrick Pl	95.34	34	⇓P		P	19 55 23.2 +0.2
	baz=95,SNR=5.4						
M11A	Holland Ranch,	95.42	40	⇑P		P	19 55 24.1 +0.6
	baz=95						
L12A	House Creek Ra	95.42	39	⇑P		P	19 55 23.8 +0.4
	baz=95						
NVAR	Mina Array Bea	95.72	44	P		P	19 55 25.5 +0.6
	comp=Z,2.7nm,0.7s,mb4.8,baz=295,slow=4.7,SNR=21						
F18A	Big Timber	95.82	34	⇑P		P	19 55 25.4 +0.3
	baz=96						
H16A	Russell Place,	95.84	35	⇓P		P	19 55 25.4 +0.1
	baz=96						
M12A	Wells	95.94	40	⇑P		P	19 55 26.1 +0.2
	baz=96						
K14A	Jones Ranch, D	96.22	38	⇓P		P	19 55 27.0 0.0
	baz=96						
N12A	Clover Valley,	96.23	40	*e*P		P	19 55 24.9 -2.2
	comp=Z,9.6nm,1.2s,mb5.1						
O11A	Cowboy Ranch,	96.31	41	⇓P		P	19 55 28.2 +0.7
	baz=96						
H17A	Grant Village	96.41	35	⇑P		P	19 55 28.9 +1.1
	baz=96						
M13A	Montello	96.42	39	*e*P		P	19 55 30.7 +2.7
	comp=Z,3.0nm,0.8s,mb4.8						
IMW	Indian Meadow	96.55	36	*e*P		P	19 55 29.0 +0.4
	comp=Z,4.0nm,1.1s,mb4.8						
RLMT	Red Lodge	96.59	34	⇑P		P	19 55 28.8 +0.1
	baz=96						
DGMT	Dagmar	96.62	29	⇑P		P	19 55 28.4 -0.4
	baz=96						
DGMT	Dagmar	96.62	29	*e*P		P	19 55 28.7 -0.1
	comp=Z,11nm,0.6s,mb5.5						
O12A	Currie	96.77	40	⇓P		P	19 55 30.2 +0.6
	baz=96						
M14A	Sheep Mountain	96.80	39	⇑P		P	19 55 30.0 +0.3
	baz=96						
LAO	LASA Array	96.99	31	PFAKE			19 55 40.0 +10
LAO				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
L15A	Malad City	97.01	38	⇑P		P	19 55 31.3 +0.7
	baz=97						
R10A	Warm Springs	97.06	43	⇑P		P	19 55 31.2 +0.3
	baz=97						
S10A	Tonopah Range,	97.10	43	⇑P		P	19 55 31.4 +0.3
	baz=97						
P12A	McGill	97.17	41	⇓P		P	19 55 31.7 +0.3
	baz=97						
ISA	Isabella	97.25	46	⇑P		P	19 55 32.3 +0.4
	baz=97						
M15A	Larsen Ranch,	97.33	38	⇑P		P	19 55 31.8 -0.3
	baz=97						
DAC	Darwin (Calif)	97.46	45	PFAKE			19 55 40.0 +7.2
DAC				LR	LR		
	comp=Z,679nm,20.0s,MS5.1						
R11A	Troy Canyon, C	97.46	42	⇓P		P	19 55 32.8 0.0
	baz=97						
J18A	Kendall Valley	97.50	36	⇑P		P	19 55 33.1 +0.3
	baz=97						
MPMC	Manual Prospec	97.66	45	⇓P		P	19 55 34.3 +0.7
	baz=97						
HWUT	Hardware Ranch	97.74	38	*e*P		P	19 55 34.8 +0.9
	comp=Z,8.3nm,1.3s,mb5.1						
PDAR	Pinedale Array	98.06	36	P		P	19 55 35.2 -0.1
	comp=Z,0.6nm,0.6s,mb4.3,baz=75,slow=2.5,SNR=5.0						
PDAR				PP	PP		19 59 32.8 -1.2
	comp=Z,0.7nm,0.9s,baz=302,slow=8.5,SNR=4.0						
PDAR				LR	LR		20 44 54.2
	comp=Z,654nm,19.7s,MS5.1,baz=346,slow=38						
T11A	Corn Creek, Al	98.38	43	⇑P		P	19 55 36.5 -0.4
	baz=98						
Q14A	Sevier Lake (B	98.46	41	⇑P		P	19 55 36.8 -0.4
	baz=98						
GSC	Goldstone	98.56	45	⇑P		P	19 55 37.6 -0.1
	baz=98						
ULM	Lac du Bonnet	98.62	24	P		P	19 55 36.4 -1.3
	comp=Z,4.5nm,0.9s,mb5.0,baz=344,slow=5.8,SNR=5.6						
ULM				LR	LR		20 44 35.4
	comp=Z,1μm,19.2s,MS5.5,baz=170,slow=38						
ULM	Lac du Bonnet	98.62	24	P		P	19 55 36.4 -1.3
ULM				LR	LR		20 44 35.4
ESDC	Sonseca Array	99.36	321	LR		LR	20 46 02.1
	comp=Z,2μm,18.7s,MS5.7,baz=20,slow=39						
ESLA	Sonseca Array	99.36	321	PFAKE			19 55 50.0 +8.8
ESLA				LR	LR		
	comp=Z,13μm,19.0s,MS6.5						
MVU	Marysvale	99.41	40	PFAKE			19 55 50.0 +8.5
MVU				LR	LR		
	comp=Z,605nm,20.0s,MS5.1						
RSSD	Black Hills	99.92	32	*e*P		Pdif	19 55 44.5 +1.0
RSSD				pmax		pmax	
	comp=Z,7.0nm,1.3s,mb4.9						
RSSD	Black Hills	99.92	32	*e*P		Pdif	19 55 44.5 +1.0
	comp=Z,6.6nm,1.3s						
LSZ	Lusaka	99.95	258	PFAKE			19 56 00.0 +16
LSZ				LR	LR		
	comp=Z,956nm,22.0s,MS5.3						
TAOE	Nuku Hiva Isla	100.20	95	*e*SS		SS	20 14 10.8 -2.6
	comp=Z,271nm,26.8s						
TAOE				*e*LR	LR		20 28 23.3
	comp=Z,1μm,22.7s						
MTE	Manteigas	100.87	323	PFAKE			19 56 00.0 +12
MTE				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
MAW	Mawson	101.34	200	PFAKE			19 56 00.0 +10
MAW				LR	LR		
	comp=Z,820nm,19.0s,MS5.3						
ECSD	EROS Data Cent	103.62	28	PFAKE			19 56 10.0 +10
ECSD				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
ANMO	Albuquerque	105.21	40	PFAKE			20 00 30.0 +8.5
ANMO				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
LBTB	Lobatse	105.68	249	PFAKE			20 00 30.0 +7.5
LBTB				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
CBKS	Cedar Bluff	106.03	33	PFAKE			20 00 30.0 +7.1
CBKS				LR	LR		
	comp=Z,2μm,22.0s,MS5.5						
KSU1	Kansas State U	107.33	31	PFAKE			20 00 40.0 +15
KSU1				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
AMTX	Amarillo	107.98	37	PFAKE			20 00 40.0 +13
AMTX				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
MNTX	Cornudas Mount	108.12	42	PFAKE			20 00 40.0 +13
MNTX				LR	LR		
	comp=Z,917nm,20.0s,MS5.3						
HDIL	Hopedale	109.27	25	PFAKE			20 00 40.0 +11
HDIL				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
NCB	Newcomb	110.64	13	PFAKE			20 00 40.0 +8.6
NCB				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
LBNH	Lisbon	110.81	11	PFAKE			20 00 40.0 +8.3
LBNH				LR	LR		
	comp=Z,3μm,19.0s,MS5.9						
TXAR	Lajitas Array	110.83	42	PKiKP	PKiKP		20 00 32.1 0.0
	comp=Z,3.6nm,1.1s,baz=122,slow=0.6,SNR=8.7						
ERPA	Erie	110.99	18	PFAKE			20 00 40.0 +7.9
ERPA				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
TORD	Torodi Ar. Bea	111.42	296	PKiKP	PKiKP		20 00 33.0 -0.6
	comp=Z,0.5nm,0.5s,baz=62,slow=1.1,SNR=6.6						
TORD				PP	PP		20 01 04.2 -10
	comp=Z,2.6nm,1.1s,baz=49,slow=4.2,SNR=5.3						
TORD				PKKPbc	PKKPbc		20 11 40.4 +13
	comp=Z,1.8nm,1.0s,baz=246,slow=4.0,SNR=4.7						
CMLA	Cha da Macela	111.61	333	PFAKE			20 00 40.0 +6.6
CMLA				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
BINY	Binghamton	111.94	15	PFAKE			20 00 50.0 +16
BINY				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
JCT	Junction City	112.30	39	*e*PKiKP	PKiKP		20 00 34.7 -0.2
MCWV	Mont Chateau	113.31	19	PFAKE			20 00 50.0 +13
MCWV				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
NATX	Nacogdoches	114.12	34	PFAKE			20 00 50.0 +12
NATX				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
CBN	Corbin	115.36	17	PFAKE			20 00 50.0 +9.4
CBN				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
LRAL	Lakeview Retre	116.68	28	PFAKE			20 00 50.0 +6.7
LRAL				LR	LR		
	comp=Z,889nm,20.0s,MS5.4						
GOGA	Godfrey	117.77	24	PFAKE			20 01 00.0 +15
GOGA				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
MAIT	Maitri	119.29	201	*e*PKPab	PKPdf		20 00 54.2 +7.2
DBIC	Dimbokro	120.33	294	PKP	PKPdf		20 00 50.5 -0.2
	comp=Z,2.0nm,0.4s,baz=182,slow=1.4,SNR=5.7						
DBIC	Dimbokro	120.33	294	PKP	PKPdf		20 00 50.5 -0.2
DBIC				LR	LR		
	comp=Z,970nm,19.0s,MS5.5						
DWPF	Disney	123.27	25	PFAKE			20 01 10.0 +14
DWPF				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
BBSR	BB Station	123.52	7	PFAKE			20 01 10.0 +14
BBSR				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
GRTK	Grand Turk	132.85	17	PFAKE			20 01 30.0 +16
GRTK				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
GTBY	Guantanamo Bay	133.07	23	PFAKE			20 01 30.0 +15
GTBY				LR	LR		
	comp=Z,1μm,21.0s,MS5.6						
MTDJ	Mount Denham	133.69	27	PFAKE			20 01 30.0 +14
MTDJ				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
JTS	JuntasAbangare	136.61	41	PFAKE			20 01 30.0 +8.3
JTS				LR	LR		
	comp=Z,847nm,20.0s,MS5.5						
ANWB	Willy Bob	138.37	6	PFAKE			20 01 40.0 +15
ANWB				LR	LR		
	comp=Z,727nm,21.0s,MS5.4						
BCIP	Isla Barro Col	140.45	36	PFAKE			20 01 40.0 +11
BCIP				LR	LR		
	comp=Z,842nm,19.0s,MS5.5						
FDF	Fort de France	141.33	6	PFAKE			20 01 40.0 +10
FDF				LR	LR		
	comp=Z,868nm,21.0s,MS5.5						
BBGH	Gun Hill	143.03	3	PFAKE			20 01 40.0 +6.7
BBGH				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
GRGR	Grenville	143.85	7	PFAKE			20 01 50.0 +15
GRGR				LR	LR		
	comp=Z,820nm,21.0s,MS5.5						
SDV	Santo Domingo	144.87	23	PKP	PKPdf		20 01 35.4 -1.2
	comp=Z,54nm,0.8s,baz=358,slow=1.3,SNR=37						
SDV	Santo Domingo	144.87	23	*e*PKPdf	PKPdf		20 01 35.0 -1.6
PCRV	Puerto La Cruz	145.32	12	PKPbc	PKPbc		20 01 35.6 -1.5
	comp=Z,46nm,0.8s,baz=334,slow=2.7,SNR=7.3						
ROSC	El Rosal	146.94	32	PKPbc	PKPbc		20 01 42.6 +0.6
	comp=Z,19nm,0.7s,baz=258,slow=22,SNR=8.5						
ROSC	El Rosal	146.94	32	*e*PKPbc	PKPbc		20 01 42.3 +0.3
USHA	Ushuaia	148.15	168	PKPbc	PKPbc		20 01 45.3 +1.2
	comp=Z,37nm,1.2s,baz=328,slow=5.5,SNR=3.6						
OTAV	Otavalo	148.46	43	*e*PKPdf	PKPdf		20 01 43.9 +1.3
RCBR	Riachuelo	152.49	308	*e*PKPbc	PKPbc		20 01 55.8 0.0
ATAH	Atahualpa	153.75	53	PKPbc	PKPbc		20 01 56.7 -1.8
	comp=Z,3.4nm,0.7s,baz=350,slow=11,SNR=2.2						
ATAH				PKPab	PKPab		20 02 12.8 +1.4
	comp=Z,7.1nm,0.7s,baz=293,slow=7.7,SNR=4.8						
LPAZ	La Paz	167.39	54	PKP	PKPdf		20 02 07.6 +2.2
	comp=Z,12nm,1.2s,baz=14,slow=2.6,SNR=16						
LPAZ				PKPab	PKPab		20 03 10.6 -0.1
	comp=Z,10nm,1.2s,baz=352,slow=8.8,SNR=3.9						
LPAZ	La Paz	167.39	54	*e*PKPdf	PKPdf		20 02 06.7 +1.3
LPAZ				*e*PKPab	PKPab		20 03 10.4 -0.3
LPAZ				LR	LR		
	comp=Z,974nm,20.0s						
LVC	Limon Verde	169.39	85	PKPdf	PKPdf		20 02 05.9 -0.7
LVC				LR	LR		
	comp=Z,1μm,21.0s						
SIV	San Ignacio	171.34	24	PKP	PKPdf		20 02 08.0 +0.2
	comp=Z,11nm,1.1s,baz=355,slow=0.9,SNR=7.4						
SIV				PKPab	PKPab		20 03 26.8 -1.1
	comp=Z,7.6nm,0.8s,baz=14,slow=3.9,SNR=6.8						
CPUP	Villa Florida	177.68	183	PFAKE			20 02 20.0 +10
CPUP				LR	LR		
	comp=Z,195nm,20.0s						

MAN 10 19:52:20,13°.33N×120°.43E,h33km,mb4.2,ML3.0,MS2.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.44	337	*e*P	Pb	19 52 32.2	+2.5
LUBP				*e*S	Sb	19 52 39.2	+2.9
SJMP	San Jose	1.09	142	*e*P	Pn	19 52 38.9	-0.1
SJMP				*e*S	Sn	19 52 54.5	+1.6
BUSP	Coron	1.33	190	*e*P	Pn	19 52 43.7	+1.4
BUSP				*e*S	Sn	19 53 05.2	+6.3
BOAC	Boac	1.39	84	*e*P	Pn	19 52 44.4	+1.3

CSEM 10 19:52:45.1,50°.56N×5°.55E,h19km,ML0.6,After UCC

UCC 10 19:52:45.1±0.3,50°.56N×5°.55E,h19km,ML0.6,3C-1D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCLA	Clavier	0.21	230	⇑P	Pg	19 52 50.4	+0.1
BCLA				S	Sg	19 52 53.7	-0.1
	comp=E,4.7nm,0.1s						
BCLA	Clavier	0.21	230	P	Pg	19 52 50.3	0.0
BCLA				S	Sg	19 52 53.6	-0.2
	comp=E,4.7nm,0.1s						
BEBN	Eben Emael	0.25	18	⇑P	Pg	19 52 51.0	0.0
BEBN				S	Sg	19 52 54.9	-0.1
BEBN	Eben Emael	0.25	18	P	Pg	19 52 51.0	0.0
BEBN				S	Sg	19 52 54.8	-0.2
MEM	Membach	0.29	79	⇓P	Pg	19 52 51.6	0.0
MEM				S	Sg	19 52 55.6	-0.4
	comp=E,4.4nm,0.2s						
MEM	Membach	0.29	79	P	Pg	19 52 51.6	0.0
MEM				S	Sg	19 52 55.6	-0.4
	comp=E,4.4nm,0.2s						
DOU	Dourbes	0.77	233	⇑P	Pb	19 52 59.7	-0.1
DOU				S	Sb	19 53 09.7	-0.1
	comp=N,2.3nm,0.2s						
DOU	Dourbes	0.77	233	P	Pb	19 52 59.6	-0.2
DOU				S	Sb	19 53 09.6	-0.2
	comp=N,2.3nm,0.2s						

ISCJB 10 20:05:58.3±0.6,21°.45S±0°.05×68°.07W±0°.08, h111km±12km,mb4.0/2,Error ellipse: s-maj=13.2km s-min=8.5km az=8.2
GUC 10 20:06:00.7±0.5,21°.47S×68°.73W,h151km±8km,ML3.9
NEIC 10 20:06:00.7,21°.47S×68°.73W,h151km,MG3.9(GUC), After GUC.
IDC 10 20:06:00.8±0.9,21°.59S×67°.88W,h109km±13km,mb3.9/2, mb1 3.5/5,mb1mx3.3/18,mbtmp3.5/5,MS2.9/1,Ms1 2.9/1, ms1mx2.4/26,Error ellipse: s-maj=33.4km s-min=14.6km az=131.0

ISC 10 20:05:59.4±0.6,21°.46S±0°.05×68°.08W±0°.07, h107km±11km,n14,σ1§06/21,mb4.0/2,3C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.37	287	⇑*i*P	Pn	20 06 24.8	+0.2
PB01				*e*S	Sn	20 06 42.9	-0.7
PB01				AML	AML	20 06 44.8	
	comp=N,4μm,0.4s						
LVC	Limon Verde	1.39	214	P	Pn	20 06 26.6	+1.9
	comp=N,20nm,0.3s,baz=7.3,slow=7.5,SNR=242						
LVC				S	Sn	20 06 46.1	+2.2
	comp=N,62nm,0.3s,baz=94,slow=22,SNR=57						
LVC	Limon Verde	1.39	214	P	Pn	20 06 26.6	+1.9
LVC				S	Sn	20 06 46.1	+2.2
PB04	Plate Boundary	1.53	238	*e*P	Pn	20 06 32.6	+6.1
PB04				*i* S	Sn	20 06 56.2	+9.2
PB04				AML	AML	20 07 00.6	
	comp=E,848nm,0.7s						
MACH	Maria Elena	1.72	244	*i* P	Pn	20 06 28.5	-0.3
MACH				*e*S	Sn	20 06 49.4	-1.7
PECH	Pedro de Valdi	1.86	232	*e*P	Pn	20 06 30.4	-0.2
PECH				*i* S	Sn	20 06 53.0	-1.3
PECH				AML	AML	20 06 54.4	
	comp=N,2μm,0.1s						
MNMC	Miæe Miæ	2.71	328	⇑*i*P	Pn	20 06 42.9	+1.2
MNMC				*i* S	Sn	20 07 14.7	+0.7
MNMC				AML	AML	20 07 16.4	
	comp=E,637nm,0.4s						
ANCH	Antofagasta	3.09	224	⇑*i*P	Pn	20 06 45.6	-1.0
LPAZ	La Paz	5.14	359	P	Pn	20 07 19.2	+5.1
	comp=E,0.5nm,0.3s,baz=245,slow=3.1,SNR=13						
SIV	San Ignacio	8.58	52	P	Pn	20 08 01.0	+0.2
	comp=E,1.1nm,0.3s,baz=248,slow=11,SNR=11						
SIV				S	Sn	20 09 34.4	-1.5
	comp=E,0.1nm,0.3s,baz=298,slow=23,SNR=6.2						
CPUP	Villa Florida	10.97	118	P	Pn	20 08 33.0	-0.2
	comp=E,0.3nm,0.3s,baz=317,slow=5.5,SNR=2.9						
CPUP				LR	LR	20 12 38.3	
	comp=E,66nm,21.2s,baz=83,slow=37						
DBIC	Dimbokro	67.98	73	P	P	20 16 48.0	+0.5
	comp=E,2.1nm,0.7s,mb4.1,baz=219,slow=9.3,SNR=3.1						
TORD	Torodi Ar. Bea	76.61	70	P	P	20 17 38.9	0.0
	comp=E,1.8nm,0.6s,mb4.0,baz=253,slow=5.4,SNR=23						
MKAR	Makanchi Array	145.14	36	PKPbc	PKPbc	20 25 24.5	+0.4
	comp=E,0.8nm,0.6s,baz=322,slow=3.7,SNR=9.8						

IDC 10 20:23:20.5±1.2,23°.68N×121°.93E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.5/24,mbtmp3.6/6,ML3.6/1,Error ellipse: s-maj=73.4km s-min=20.1km az=66.0
ISCJB 10 20:23:22.4±0.8,23°.88N±0°.02×122°.59E±0°.02,h13km±5km, mb3.6/5,Error ellipse: s-maj=3.7km s-min=2.5km az=160.0
TAP 10 20:23:23.6,23°.95N×122°.55E,h29km,ML3.9,D
JMA 10 20:23:23.9±0.3,24°.03N×122°.54E,h31km,M3.2

ISC 10 20:23:22.2±0.5,23°.91N±0°.02×122°.59E±0°.02,h10km±3km, n69,σ1§18/113,mb3.6/5,2C-6D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.67	35	P	Pg	20 23 35.9	+0.8
YOJ				S	Sg	20 23 44.2	+0.3
HWA	Hwalien	0.90	274	P	Pg	20 23 39.8	+0.2
	baz=259						
TWD	Chiawan	0.92	281	P	Pg	20 23 39.5	-0.4
TWD				*e*S	Sg	20 23 51.6	-0.4
	baz=279						
ENA	Nanau	0.93	304	⇑*i*P	Pg	20 23 40.2	+0.1
	baz=303						
TWC	Suao	0.97	316	*i* P	Pg	20 23 40.5	-0.3
TWC				*e*S	Sg	20 23 53.1	-0.3
	baz=316						
ESL	Shilin	1.06	265	⇓*i*P	Pg	20 23 41.3	-1.3
	baz=262						
HATJ	Hateruma jima	1.12	82	P	Pb	20 23 44.1	+0.4
HATJ				S	Sg	20 23 59.2	+0.9
IRIF	Iriomote-Funau	1.12	68	P	Pb	20 23 44.3	+0.6
IRIF				S	Sg	20 23 58.5	+0.1
ILA	Ilan	1.15	318	*e*P	Pb	20 23 44.2	+0.1
	baz=318						
TWE	Neicheng	1.17	314	⇓*i*P	Pb	20 23 44.1	-0.3
TWE				*e*S	Sb	20 24 00.8	+1.1
	baz=314						
TWB1	Santiao Chiao	1.22	334	P	Pn	20 23 44.1	-1.3
	baz=334						
EHY	Hungye	1.23	251	⇓*i*P	Pn	20 23 44.3	-1.1
EHY				*e*S	Sb	20 23 58.4	-3.1
	baz=249						
NNS	Nan Shan	1.23	296	*i* P	Pn	20 23 44.8	-0.6
	baz=294						
WHF	Hehuan Shan	1.23	281	⇑*i*P	Pn	20 23 44.5	-1.0
	baz=269						
WHF				*e*S	Sb	20 23 59.9	-1.7
	baz=269						
TWF1	Yuli	1.31	245	*i* P	Pn	20 23 45.3	-1.2
	baz=243						
TWF1				*e*S	Sb	20 24 01.8	-2.0
	baz=243						
TWT	Tachien	1.33	285	P	Pn	20 23 46.9	0.0
	baz=273						
TWT				*e*S	Sb	20 24 02.9	-1.7
	baz=273						
JKRS	Kuro-shima	1.34	76	P	Pn	20 23 47.2	+0.2
JKRS				*e*S	Sb	20 24 05.5	+0.9
NSK	Sanguang	1.36	304	*i* P	Pn	20 23 46.9	-0.3
	baz=290						
NSK				*e*S	Sb	20 24 04.0	-1.1
	baz=290						
NWF	Wu-fen Shan	1.37	328	P	Pn	20 23 46.9	-0.5
	baz=328						
NWF				*e*S	Sb	20 24 06.0	+0.5
	baz=328						
CHKT	Chengkung	1.38	234	P	Pn	20 23 46.1	-1.5
	baz=222						
CHKT				*e*S	Sb	20 24 02.1	-3.8
	baz=222						
TWA	Mucha	1.40	319	P	Pn	20 23 47.8	-0.1
	baz=337						
TWA				*e*S	Sn	20 24 06.5	0.0
	baz=337						
TAP1	Taipei	1.48	319	*e*P	Pn	20 23 47.7	-1.3
	baz=335						
JIJ	Ishigaki jima	1.49	72	P	Pn	20 23 48.7	-0.3
JIJ				S	Sn	20 24 07.7	-0.9
SMLT	Sun Moon Lake	1.55	269	⇓*i*P	Pn	20 23 49.6	-0.2
	baz=258						
YUS	Yu-Shan	1.56	255	*i* P	Pn	20 23 50.0	0.0
	baz=252						
TYC	Yuchr	1.58	270	*i* P	Pn	20 23 50.0	-0.4
	baz=268						
TWS1	Kuangyinshan	1.59	318	P	Pn	20 23 50.3	-0.2
	baz=334						
ELDTW	Lidau	1.61	244	⇓*i*P	Pn	20 23 49.6	-1.2
	baz=232						
NSTT	Nanjuang	1.62	297	P	Pn	20 23 51.5	+0.8
	baz=297						
NSTT				*e*S	Sn	20 24 10.9	-0.8
	baz=297						
TWY	Chenhua	1.63	327	*e*P	Pn	20 23 49.7	-1.3
	baz=326						
NCU	National Centr	1.66	310	*e*P	Pn	20 23 49.7	-1.7
	baz=309						
ALS	Alishan	1.68	257	⇓*i*P	Pn	20 23 52.0	+0.3
	baz=256						
ALS				*e*S	Sn	20 24 11.2	-2.1
	baz=256						
TWQ1	Liyutan	1.71	285	*i* P	Pn	20 23 53.2	+1.1
	baz=285						
TWQ1				*e*S	Sn	20 24 14.1	0.0
	baz=285						
NSY	Sanyi	1.74	287	P	Pn	20 23 53.8	+1.2
	baz=287						
NSY				*e*S	Sn	20 24 16.1	+1.2
	baz=287						
WNT	Mingjian	1.74	269	*e*P	Pn	20 23 53.6	+1.1
	baz=269						
WNT				*e*S	Sn	20 24 14.9	0.0
	baz=269						
TTN	Taitung	1.76	229	*e*S	Sn	20 24 12.7	-2.4
	baz=219						
TCU	Taichung	1.77	278	P	Pn	20 23 54.1	+1.3
	baz=278						
TCU				*e*S	Sn	20 24 15.9	+0.5
	baz=278						
TWG	Pinlang	1.77	232	P	Pn	20 23 51.7	-1.1
	baz=242						
TWG				*e*S	Sn	20 24 11.4	-4.0
	baz=242						
CHN5	Tsauling	1.78	260	P	Pn	20 23 52.7	-0.3
	baz=260						
CHN5				*e*S	Sn	20 24 15.9	+0.2
	baz=260						
STYT	Tauyuan	1.84	246	P	Pn	20 23 53.9	0.0
	baz=246						
STYT				*e*S	Sn	20 24 15.9	-1.3
	baz=246						
WGK	Gukeng	1.87	264	P	Pn	20 23 55.6	+1.3
	baz=263						
WGK				*e*S	Sn	20 24 19.1	+1.1
	baz=263						
CHN4	Tsa

SGST Jiashian 2.02 246 P Pn 20 23 58.3 +1.9
baz=238
SGST eS Sn 20 24 22.1 +0.5
baz=238
CHN1 Nanshi 2.02 249 P Pn 20 23 57.5 +1.1
baz=249
CHN1 eS Sn 20 24 23.8 +2.0
baz=249
CHY Chiayi 2.03 259 eP Pn 20 23 58.0 +1.6
baz=258
CHY eS Sn 20 24 23.2 +1.4
baz=258
TWK Hsinying 2.03 252 P Pn 20 23 57.8 +1.3
baz=251
TWK eS Sn 20 24 22.0 +0.1
baz=251
JTJ Tarama 2.06 69 P Pn 20 23 57.0 +0.1
JTJ eS Sn 20 24 22.2 -0.5
LAY Lan-yu 2.10 207 eP Pn 20 23 54.6 -2.8
baz=207
LAY eS Sn 20 24 19.1 -4.5
baz=207
WTCT Ta-ch'eng 2.11 269 P Pn 20 23 59.0 +1.4
baz=269
WTCT eS Sn 20 24 25.6 +1.6
baz=269
SSD Sandimen 2.14 238 P Pn 20 23 58.1 +0.2
baz=229
TAW Tawu 2.19 226 eP Pn 20 23 58.1 -0.7
baz=235
TAW eS Sn 20 24 23.1 -2.9
baz=235
CHN3 Shinhua 2.20 248 eP Pn 20 24 01.0 +2.2
baz=248
CHN3 eS Sn 20 24 29.5 +3.3
baz=248
EAST Anshuo 2.21 227 eP Pn 20 23 58.0 -0.9
baz=225
CHN8 Yiju 2.25 256 eP Pn 20 23 59.9 +0.3
baz=255
CHN8 eS Sn 20 24 27.9 +0.5
baz=255
SGLT Jiouru 2.26 239 eP Pn 20 24 02.8 +3.1
baz=238
SGLT eS Sn 20 24 30.9 +3.3
baz=238
TWM1 Shoushan 2.27 242 eP Pn 20 24 02.4 +2.6
baz=232
TWM1 eS Sn 20 24 30.4 +2.6
baz=232
SCLT Jiali 2.32 252 eP Pn 20 24 01.4 +1.0
baz=251
SCLT eS Sn 20 24 30.4 +1.4
baz=251
TAI1 Yung-k'ang 2.33 249 eS Sn 20 24 30.5 +1.0
baz=262
SCZT Fangliau 2.37 230 eP Pn 20 24 02.2 +1.0
baz=223
SCZT eS Sn 20 24 28.4 -2.0
baz=223
HEN Hengchun 2.55 222 eP Pn 20 24 05.2 +1.5
baz=222
HEN eS Sn 20 24 33.5 -1.3
baz=222
KSRS Korea Array 14.25 17 Pn Pn 20 26 49.4 +5.3
0.3nm,0.3s,baz=198,slow=12,SNR=6.4
MKAR Makanchi Array 39.43 316 P P 20 30 50.6 -1.7
0.3nm,0.4s,mb3.4,baz=111,slow=8.1,SNR=8.2
WRA Warramunga Arr 45.07 164 P P 20 31 37.7 -0.8
0.7nm,0.6s,mb3.6,baz=345,slow=8.7,SNR=6.5
ASAR Alice Springs 48.55 166 P P 20 32 05.1 -0.6
0.2nm,0.3s,mb3.6,baz=345,slow=7.3,SNR=13
BVAR Borovoye Array 48.70 321 P P 20 32 04.3 -2.4
0.2nm,0.4s,mb3.5,baz=99,slow=8.9,SNR=2.9
FINES FINESS Array B 72.33 330 P P 20 34 47.0 -0.9
2.7nm,1.1s,mb4.1,baz=49,slow=5.8,SNR=3.6

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*BJI **10** 20:25:48.7, 25.°67N×141.°10E, h259km, mB4.9/13, mb4.6/26*
*IDC **10** 20:25:49.9±0.6, 25.°78N×140.°80E, h233km±6km, mb3.7/20, mb1 3.9/26, mb1mx3.9/30, mbtmp3.8/26, Error ellipse: s-maj=11.5km s-min=8.5km az=91.0*
*ISCJB **10** 20:25:49.6±0.4, 25.°80N±0.°03×140.°81E±0.°04, h240km±3km, mb4.1/79, Error ellipse: s-maj=5.5km s-min=4.9km az=10.5*
*MOS **10** 20:25:49.1±0.8, 25.°76N×140.°69E, h240km, mb4.1/26, Error ellipse: s-maj=11.7km s-min=5.8km az=100.0*
*NEIC **10** 20:25:51.7±0.3, 25.°77N×140.°75E, mb4.2/44, Error ellipse: s-maj=7.1km s-min=5.6km az=142.0*
*JMA **10** 20:25:52.7±0.1, 25.°82N×140.°22E, h166km, M5.3*
ISC 10 20:25:50.9±0.4, **25.°84N**±0.°03×**140.°81E**±0.°04, **h236**km±3km, **h242**km±5.2km**:pP-P, n195,** σ1.s19/211, **mb4.1**/79, **3C-5D, Volcano Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JHHJ Haha-jima-NKT 1.46 57 P Pn 20 26 28.2 +0.6
JHHJ S S 20 26 55.4 -1.0
CBIJ Chichi jima 1.76 44 P Pn 20 26 31.1 +1.1
CBIJ S S 20 27 00.4 -0.4
CBIJ Chichi jima 1.76 44 P Pn 20 26 31.1 +1.1
2μm,0.3s,baz=224,slow=4.3,SNR=652
CBIJ S S 20 26 59.9 -0.9
1μm,0.3s,baz=280,slow=22,SNR=54
JHJ2 Mitsune 7.30 353 P Pn 20 27 36.2 +1.1
JHJ Hachijo jima 2 7.31 353 P Pn 20 27 36.5 +1.3
100nm,0.3s,baz=96,slow=20,SNR=14
JHJ S S 20 28 56.2 -2.8
16nm,0.3s,baz=65,slow=22,SNR=2.6
BSO1 Boso 1 8.79 1 P Pn 20 27 53.5 -0.6
BSO1 eS S 20 29 27.1 -6.3
BSO3 Boso 3 8.94 358 P Pn 20 27 55.4 -0.6
BSO3 S S 20 29 31.2 -5.7
JIZS Izushimoda 9.00 350 P Pn 20 27 58.0 +1.1
BSO4 Boso 4 9.13 358 P Pn 20 27 58.3 -0.2
JIE Ise 9.23 338 P Pn 20 28 02.4 +2.6
HMMJ Hamamatsu 2 9.37 344 P Pn 20 28 03.4 +1.8
SHZ3 Shizuoka 3 9.46 347 P Pn 20 28 04.1 +1.4
JOD2 Odawara 2 9.51 351 P Pn 20 28 03.8 +0.5
JOD2 S S 20 29 45.5 -4.8
JAI Aioi 9.65 327 P Pn 20 28 09.8 +4.6
JNY Yasuok 9.82 346 P Pn 20 28 08.3 +1.0
JYN Shimob 9.82 349 P Pn 20 28 07.7 +0.4
JAO Obara 9.88 343 P Pn 20 28 10.1 +2.1
JMN Monobe 9.90 324 P Pn 20 28 12.6 +4.3
JRY Ryogami san 10.28 351 P Pn 20 28 12.6 -0.4
JWT Wachi 10.50 335 P Pn 20 28 19.7 +3.8
JAD Aida 10.72 329 P Pn 20 28 22.4 +3.7
JHO Hitachi 10.74 359 P Pn 20 28 17.4 -1.5
JGN Niukaw 10.77 345 P Pn 20 28 19.8 +0.5
JNG Nsakai 10.79 348 P Pn 20 28 19.7 +0.2
MJAR Matsushiro Arr 10.90 349 P Pn 20 28 20.5 -0.4
2.6nm,0.3s,baz=168,slow=12,SNR=30
MJAR S S 20 30 19.8 -3.0
0.7nm,0.3s,baz=121,slow=21,SNR=2.5
MAJO Matsushiro 10.90 349 eP Pn 20 28 20.3 -0.6
MAJO pmax pmax
comp=Z,10.0nm,0.3s
MAJO Matsushiro 10.90 349 ePn Pn 20 28 20.3 -0.6
comp=Z,10nm,0.3s
MAT Matsushiro 10.90 349 P Pn 20 28 20.8 -0.1
MAT S S 20 30 21.4 -1.4
MAT Matsushiro 10.90 349 P Pn 20 28 21.6 +0.7
JKT Katashina 10.97 353 P Pn 20 28 20.1 -1.7
JKSM Kasumi 11.06 333 P Pn 20 28 26.7 +3.8
JSB Shiboa 11.12 356 P Pn 20 28 22.5 -1.2
JHS Saijyo 11.28 326 P Pn 20 28 28.5 +2.8
JOW Kunigami 11.29 278 P Pn 20 28 26.8 +1.0
comp=Z,2.8nm,0.3s,baz=114,slow=10.0,SNR=4.9
JHK Hiroka 11.47 353 P Pn 20 28 26.6 -1.5
JFK Kawauchi 11.49 0 P Pn 20 28 26.6 -1.7
JMM Marumori 11.99 360 P Pn 20 28 33.2 -1.4
JMM eS S 20 30 38.2 -10
JSD Sado 12.35 351 P Pn 20 28 36.8 -2.3
GUMO Guam 12.77 162 P Pn 20 28 42.6 -1.9
comp=Z,12nm,0.3s,baz=203,slow=23,SNR=4.0
JMK Ichinoseki 13.08 1 P Pn 20 28 47.7 -0.4
JRG Rokugo 13.52 359 P Pn 20 28 53.7 +0.2
JRG eS S 20 31 17.6 -5.9
JTM Tenmabayashi 14.91 1 P Pn 20 29 11.5 +1.1
KSRS Korea Array 15.93 320 P Pn 20 29 22.9 +0.2
KSRS pmax pmax
comp=Z,6.0nm,0.3s
KSRS Korea Array 15.93 320 P Pn 20 29 22.9 +0.2
comp=Z,5.7nm,0.3s,baz=135,slow=12,SNR=68
ERM Erimo 16.25 6c iP P 20 29 27.1 +2.0
ERM pmax pmax
comp=Z,39nm,0.9s
ERM Erimo 16.25 6 eP P 20 29 27.8 +2.6
comp=Z,33nm,0.8s
ERM eS S 20 32 20.3 -2.8
INCN Inchon 16.72 317 P P 20 29 27.8 -2.6
TATO Taipei 17.48 271 eP P 20 29 36.8 -2.0
YHNB Yeheng 17.62 270 eP P 20 29 40.5 +0.3
YULB Yu-li 17.91 266 eP P 20 29 44.2 +0.8
comp=Z,29nm,0.8s
SSLB Suanglung 18.14 268 eP P 20 29 46.3 +0.4
comp=Z,39nm,0.8s
ASAJ Asahikawa 18.29 4 P P 20 29 49.1 +1.7
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ Asahikawa 18.29 4 P P 20 29 49.0 +1.7
comp=Z,0.6nm,0.3s,baz=256,slow=27,SNR=6.5
VLA Vladivostok 18.72 339 eP P 20 29 51.5 -0.5
VLA pmax pmax
comp=Z,17nm,0.6s
NJ2 Nanjing 20.17 293 eP P 20 30 07.5 -0.1
NJ2 pmax pmax
comp=Z,30nm,0.7s
MDJ Mudanjiang 20.82 337 P P 20 30 15.6 +1.3
MDJ S S 20 33 52.9 +1.0
MDJ pmax pmax
comp=Z,11nm,1.2s
MDJ pmax pmax
comp=Z,250nm,13.2s
YSS Yuzh-Sakhalins 21.13 4 eP P 20 30 18.0 +0.5
YSS Yuzh-Sakhalins 21.13 4 eP P 20 30 17.1 -0.4
comp=Z,7.1nm,0.4s,mb4.5
CN2 Changchun 21.85 329 eP P 20 30 24.2 -0.3
TGY Tagaytay City 21.99 242 P P 20 30 26.4 +0.3
comp=Z,49nm,0.4s,baz=87,slow=8.4,SNR=3.7
HABR Khabarovsk 23.04 350 eP P 20 30 33.9 -1.4
HABR e 20 34 13.9
HABR eS S 20 34 25.2 -2.7
HABR e 20 41 11.9
HABR pmax pmax
comp=Z,25nm,1.0s,mb4.7
HABR pmax pmax
comp=E,58nm,2.5s
HABR pmax pmax
comp=N,39nm,1.9s
WHN Wuhan 23.76 287 P P 20 30 44.0 +1.9
KLR Kul'dur 24.39 346 eP P 20 30 44.3 -3.3
BJI Beijing 24.95 311 P P 20 30 52.4 -0.4
BJI pP 20 31 38.2
BJI S S 20 34 59.4 +1.0
BJI pmax pmax
comp=Z,12nm,0.5s,mb4.8
HHC Hu-ho-hao-te 28.48 309 eP P 20 31 25.4 +1.2
HHC PP PP 20 32 29.9 -3.7
HHC PcP PcP 20 34 32.1 +2.4
HHC S S 20 35 55.1 +1.1
HHC pmax pmax
comp=Z,26nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,330nm,6.7s
HHC LR LR
comp=N,320nm,15.1s
HHC LR LR
comp=E,650nm,14.7s
HHC LR LR
comp=Z,460nm,14.1s
XAN Xi'an 28.73 294 P P 20 31 26.2 -0.3
XAN pP pP 20 32 13.7 +0.3
XAN S S 20 35 57.4 -0.6
XAN pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
XAN pmax pmax
comp=Z,73nm,8.6s
PEA0B Petropavlovsk- 30.04 20 eP P 20 31 40.0 +2.3
PETK Petropavlovsk- 30.04 20 P P 20 31 39.4 +1.7
comp=Z,4.5nm,0.6s,mb4.3,baz=215,slow=4.4,SNR=16
PETK Petropavlovsk- 30.04 20 P P 20 31 39.4 +1.7
PET Petropavlovsk 30.27 22 P P 20 31 40.9 +1.1
GYA Guiyang 30.60 279 eP P 20 31 42.9 -0.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
CD2 Chengdu 32.89 287 P P 20 32 03.6 +0.7
CD2 pP pP 20 32 54.8 +4.4
CD2 sP sP 20 33 23.9 +6.2
CD2 S S 20 37 00.9 -1.9
CD2 sS sS 20 38 31.6 +3.7
CD2 SS SS 20 39 21.8 -9.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
CD2 pmax pmax
comp=Z,620nm,10.7s
LZH Lanzhou 33.13 297 P P 20 32 05.0 0.0
LZH pP pP 20 32 56.3 +3.8
LZH sP sP 20 33 25.2 +5.4
LZH PP PP 20 33 27.0 +1.9
LZH pmax pmax
comp=Z,17nm,1.1s,mb4.5
LZH pmax pmax
comp=Z,73nm,4.3s
KMI Kunming 34.29 277 P P 20 32 16.5 +1.4
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
ULN Ulaanbaatar 34.41 319 eP P 20 32 16.0 +0.2
ULN e 20 33 41.0
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
ULN Ulaanbaatar 34.41 319 eP P 20 32 16.0 +0.2
comp=Z,1.6nm,0.6s,mb3.7
ULN e 20 33 41.0
SONM Songino Array 34.79 318 P P 20 32 19.3 +0.2
comp=Z,1.2nm,0.4s,mb3.8,baz=143,slow=10,SNR=16
SONM PP PP 20 33 49.3 +6.1
comp=Z,0.7nm,0.8s,baz=131,slow=9.7,SNR=4.8
GTA Gaotai 36.77 302 eP P 20 32 36.9 +0.9
GTA pP pP 20 33 25.4 +1.1
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
YAK Yakutsk 36.95 351 eP P 20 32 35.8 -1.3
YAK pmax pmax
comp=Z,16nm,0.9s,mb4.5
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK Yakutsk 36.95 351 eP P 20 32 35.3 -1.8
comp=N,14nm,0.7s,mb4.6
BOD Bodaibo 37.19 336 eP P 20 32 37.6 -1.6
BOD pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
ZAK Zakamensk 37.76 320 eP P 20 32 43.8 -0.3
ZAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.2
SEY Seymchan 37.88 9ceP P 20 32 44.5 -0.4
CHTO Chiang Mai 39.22 268 eP P 20 32 56.3 -0.4
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
CHTO Chiang Mai 39.22 268 eP P 20 32 56.3 -0.4
comp=Z,2.2nm,0.6s,mb3.9
CM31 Chiang Mai Arr 39.34 268 eP P 20 32 57.7 0.0
comp=Z,2.3nm,0.5s,mb4.0
CMAR Chiang Mai Arr 39.34 268 P P 20 32 57.6 0.0
comp=Z,2.1nm,0.6s,mb3.9,baz=65,slow=6.4,SNR=30
KULM Kulim 43.48 249 eP P 20 33 31.4 +0.1
comp=Z,31nm,1.5s,mb4.5
LSA Lhasa 43.84 287 eP P 20 33 35.6 +1.6
LSA pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
LSA Lhasa 43.84 287 eP P 20 33 35.5 +1.6
comp=Z,2.1nm,0.5s,mb3.7
BILL Bilibino 44.95 13d iP P 20 33 43.2 +1.0
BILL pmax pmax
comp=Z,30nm,1.1s,mb4.5
BILL Bilibino 44.95 13 eP P 20 33 43.0 +0.8
comp=Z,35nm,1.0s,mb4.7
WRAB Tennant Creek 45.93 188 eP P 20 33 48.7 -1.7
WRAB e*PP pP 20 34 41.5 +0.8
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
WRAB Tennant Creek 45.93 188 eP P 20 33 48.7 -1.6
comp=Z,3.7nm,0.7s,mb3.8
WRAB epP pP 20 34 41.5 +0.9
WB2 Warramunga Arr 45.94 188 eP P 20 33 48.9 -1.5
WB2 epP pP 20 34 42.0 +1.2
WRA Warramunga Arr 45.94 188 P P 20 33 48.8 -1.7
comp=Z,3.6nm,0.5s,mb4.0,baz=10,slow=8.6,SNR=62
WRA pP pP 20 34 34.5 -6.3
comp=Z,1.4nm,0.7s,baz=10,slow=8.6,SNR=1.6
FITZ Fitzroy Crossi 46.10 200 P P 20 33 50.5 -1.2
comp=Z,1.9nm,0.7s,mb3.5,baz=20,slow=19,SNR=7.6
FITZ pP pP 20 34 37.4 -4.7
comp=Z,1.7nm,0.9s,baz=72,slow=16,SNR=1.7
NIKO Nikolski 46.13 40 P P 20 33 48.8 -2.8
TIXI Tiksi 46.34 355 eP P 20 33 51.7 -1.2
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb3.8
TIXI Tiksi 46.34 355 eP P 20 33 52.2 -0.7
comp=Z,7.9nm,1.0s,mb4.0
JOHN Johnston Islan 46.93 91 P P 20 34 01.2 +2.9
comp=Z,322nm,1.1s
UNV Unalaska Valle 47.71 40 eP P 20 34 02.4 -1.4
GUN Gumba 48.69 285 eP P 20 34 13.2 +1.5
comp=Z,35nm,0.4s,mb5.1
PKI Pulchoki 49.17 285 eP P 20 34 16.1 +0.8
comp=Z,8.7nm,0.5s,mb4.3
PKIN Phulchoki 49.18 285 eP P 20 34 15.9 +0.5
comp=Z,5.5nm,0.4s,mb4.2
KKN Kakani 49.24 285 eP P 20 34 16.6 +0.8
comp=Z,12nm,0.5s,mb4.5
DMN Daman 49.42 285 eP P 20 34 18.1 +0.9
comp=Z,12nm,0.5s,mb4.5
ZAA0 Zalesovo Array 49.64 320 eP P 20 34 17.2 -1.2
ZALV Zalesovo Beam 49.64 320 P P 20 34 17.3 -1.1
comp=Z,3.2nm,0.4s,mb4.0,baz=104,slow=7.6,SNR=17
ZALV PcP PcP 20 35 34.4 -1.6
comp=Z,0.8nm,0.5s,baz=117,slow=3.8,SNR=4.0
ZALV Zalesovo Beam 49.64 320 P P 20 34 17.3 -1.1
ZALV PcP PcP 20 35 34.4 -1.6
ASAR Alice Springs 49.66 188 P P 20 34 16.9 -2.0
comp=Z,0.4nm,0.7s,baz=13,slow=13,SNR=8.8
ASAR pP pP 20 35 06.4 -3.6
comp=Z,0.6nm,0.8s,baz=13,slow=9.1,SNR=3.1
MK31 Makanchi Array 50.33 310 eP P 20 34 23.5 -0.2
MKAR Makanchi Array 50.33 310 P P 20 34 23.9 +0.2
comp=Z,2.4nm,0.7s,mb3.7,baz=98,slow=7.6,SNR=24
SDPT Sand Point 51.46 39 eP P 20 34 32.1 +0.2
comp=Z,32nm,0.6s,mb4.9
KURK Kurchatov 52.99 315d iP P 20 34 42.9 -0.4
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
KURK Kurchatov 52.99 315 eP P 20 34 42.7 -0.6
comp=Z,6.3nm,0.9s,mb4.0
TKM2 Tokmak 2 55.13 306 P P 20 35 00.1 +1.3
SNR=6.2
TKM2 Tokmak 2 55.13 306 eP P 20 34 59.8 +0.9
TKM2 pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
TKM2 Tokmak 2 55.13 306 eP P 20 34 59.8 +0.9
comp=Z,1.9nm,0.5s,mb3.9
TTA Tatalina 55.15 30 eP P 20 35 00.1 +1.5
TTA pmax pmax
comp=Z,15nm,1.3s,mb4.4
TTA Tatalina 55.15 30 eP P 20 35 00.1 +1.5
comp=Z,15nm,1.3s,mb4.4
KZA Kyzart 55.46 305 P P 20 35 03.3 +2.1
SNR=6.8
KBK Karagaybulak 55.63 305 P P 20 35 03.4 +1.0
SNR=6.9
AAK Ala-Archa 55.97 305d iP P 20 35 05.3 +0.5
AAK e 20 37 13.2
AAK pmax pmax
comp=Z,7.0nm,3.3s
AAK Ala-Archa 55.97 305 eP P 20 35 04.9 +0.2
comp=Z,3.4nm,0.9s,mb3.9
UCH Uchtor 55.99 305 P P 20 35 06.9 +2.0
SNR=7.5
UCH Uchtor 55.99 305 eP P 20 35 06.0 +1.1
comp=Z,13nm,1.4s,mb4.3
KDAK Kodiak Island 56.10 36 P P 20 35 06.3 +0.9
comp=Z,6.9nm,0.6s,mb4.4,baz=290,slow=12,SNR=8.5
EKS2 Erkin-Say 56.49 305 eP P 20 35 08.2 -0.3
comp=Z,3.8nm,0.9s,mb3.9
AML Almayashu 56.60 305 P P 20 35 10.7 +1.4
SNR=7.4
AML Almayashu 56.60 305 eP P 20 35 10.3 +1.0
comp=Z,2.4nm,0.5s,mb4.1
STKA Stephens Creek 57.40 179 P P 20 35 13.8 -1.1
comp=Z,1.6nm,0.9s,mb3.6,baz=342,slow=10,SNR=3.0
STKA PcP PcP 20 36 06.1 +0.2
comp=Z,1.7nm,0.7s,baz=55,slow=3.8,SNR=5.1
STKA Stephens Creek 57.40 179 eP P 20 35 13.5 -1.3
BPAW Bear Paw Mtn. 57.56 29 eP P 20 35 17.0 +1.4
comp=Z,21nm,1.3s,mb4.6
TRF Thorofare Moun 57.79 30 eP P 20 35 17.8 +0.6
comp=Z,15nm,1.3s,mb4.5
BVAR Borovoye Array 58.14 318 P P 20 35 19.5 -0.3
comp=Z,4.2nm,0.5s,mb4.4,baz=92,slow=7.4,SNR=45
PMR Palmer 58.15 32 eP P 20 35 19.1 -0.6
BRVK Borovoye 58.20 318d iP P 20 35 20.0 -0.2
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
BRVK Borovoye 58.20 318 eP P 20 35 19.6 -0.6
comp=Z,4.3nm,0.9s,mb4.1
COLD Coldfoot 58.33 25 eP P 20 35 22.4 +1.6
comp=Z,7.2nm,0.9s,mb4.3
MCK McKinley 58.42 29 eP P 20 35 22.1 +0.5
MCK pmax pmax
comp=Z,14nm,0.9s,mb4.6
MCK McKinley 58.42 29 eP P 20 35 22.1 +0.6
comp=Z,14nm,0.9s,mb4.6
COLA College 59.00 28 eP P 20 35 26.8 +1.3
COLA pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
COLA College 59.00 28 eP P 20 35 26.8 +1.3
comp=Z,3.5nm,0.5s,mb4.2
BMRM Bremner River 60.32 33 eP P 20 35 35.9 +1.4
comp=Z,17nm,0.9s,mb4.7
KBL Kabul 61.48 297 eP P 20 35 42.6 -0.2
KBL pmax pmax
comp=Z,12nm,0.8s,mb4.6
KBL Kabul 61.48 297 eP P 20 35 42.6 -0.2
comp=Z,12nm,0.8s,mb4.6
EGAK Eagle 61.85 28 eP P 20 35 45.2 +0.4
comp=Z,5.3nm,0.6s,mb4.3
ARU Arti 64.66 322d iP P 20 36 02.2 -1.1
ARU 20 38 27.7
ARU S S 20 44 20.2 -3.6
ARU SS SS 20 48 33.7 -5.1
ARU pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
ARU Arti 64.66 322 eP P 20 36 01.4 -1.9
INK Inuvik 64.68 24 eP P 20 36 03.3 +0.1
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 64.68 24 eP P 20 36 03.3 +0.1
comp=Z,6.5nm,0.9s,mb4.3
ABKAR Akbulak array 65.09 314 eP P 20 36 05.4 -0.8
comp=Z,3.2nm,0.5s,mb4.2
DLBC Dease Lake 67.94 35 eP P 20 36 25.6 +1.6
RES Resolute Bay 73.56 13 eP P 20 36 57.4 -0.2
RES pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
RES Resolute Bay 73.56 13 eP P 20 36 57.4 -0.2
comp=Z,5.5nm,0.8s,mb4.2
YKA Yellowknife Ar 73.83 28 P P 20 36 59.4 +0.1
comp=Z,3.6nm,0.7s,mb4.1,baz=293,slow=5.7,SNR=39
ARCES ARCESS Array B 74.32 341 P P 20 37 01.5 -0.5
comp=Z,3.9nm,0.8s,mb4.1,baz=52,slow=8.0,SNR=6.6
JOF Joensuu 75.66 334 eP P 20 37 08.3 -1.5
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
JOF Joensuu 75.66 334 ep P 20 37 08.3 -1.5
comp=Z,1.4nm,0.4s,mb3.9
JCW Jim Creek 75.77 43 eP P 20 37 12.2 +1.6
OBN Obninsk 76.85 325⇑eP P 20 37 15.9 -0.7
OBN pmax pmax
comp=Z,27nm,2.3s,mb4.5
YBH Yreka Blue Hor 77.80 50 eP P 20 37 23.5 +1.3
YBH pmax pmax
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 77.80 50 eP P 20 37 23.5 +1.3
comp=Z,1.6nm,0.8s,mb3.7
KAF Kangasniemi 78.06 334 eP P 20 37 21.3 -1.9
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
KAF Kangasniemi 78.06 334 ep P 20 37 21.3 -1.9
comp=Z,2.8nm,0.5s,mb4.2
FINES FINESS Array B 78.52 334 P P 20 37 24.4 -1.3
comp=Z,4.6nm,0.4s,mb4.5,baz=69,slow=4.9,SNR=119
NEW Newport 78.66 42 eP P 20 37 27.5 +0.8
NEW pmax pmax

comp=Z,4.0nm,0.8s
NEW Newport 78.66 42 *e*P **P 20 37 27.5 +0.7**
comp=Z,4.2nm,0.8s,mb4.1
WALA Waterton Lakes 80.20 40 *e*P **P 20 37 34.2 -0.8**
comp=Z,0.2nm,0.8s
CMB Columbia Colle 80.97 52 *e*P **P 20 37 39.6 +0.3**
CMB pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
CMB Columbia Colle 80.97 52 *e*P **P 20 37 39.6 +0.3**
comp=Z,3.1nm,0.9s,mb3.9
SUMG Summit 81.84 360 *e*P **P 20 37 43.3 +0.1**
comp=Z,4.0nm,0.8s,mb4.1
NVAR Mina Array Bea 82.27 51 P **P 20 37 46.3 +0.2**
comp=Z,0.9nm,0.8s,mb3.5,baz=270,slow=6.1,SNR=5.7
HLID Hailey 82.50 45 *e*P **P 20 37 48.5 +1.3**
comp=Z,1.9nm,0.8s,mb3.8
AKASG Malin Array Be 82.89 323 P **P 20 37 47.5 -1.5**
comp=Z,1.5nm,0.5s,mb4.0,baz=52,slow=5.3,SNR=15
MALT Malatya 83.36 309 P **P 20 37 50.7 -1.0**
MALT pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
MALT Malatya 83.36 309 P **P 20 37 50.7 -1.0**
comp=Z,2.4nm,1.0s,mb3.9
FFC Flin Flon 83.45 31 *e*P **P 20 37 52.0 +0.2**
FFC pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
FFC Flin Flon 83.45 31 *e*P **P 20 37 52.0 +0.1**
comp=Z,5.5nm,0.7s,mb4.4
FCC Fort Churchill 84.27 25 *e*P **P 20 37 54.6 -1.3**
NB2 NORSAR Subarra 84.31 338 P **P 20 37 54.1 -1.9**
comp=Z,1.6nm,0.6s,mb3.9,baz=47,slow=4.8
NOA NORSAR Array B 84.31 338 P **P 20 37 54.4 -1.6**
comp=Z,1.0nm,0.5s,mb3.8,baz=45,slow=4.8,SNR=7.8
RRI2 Red Ridge 84.56 44 *e*P **P 20 37 57.5 -0.2**
comp=Z,2.7nm,0.8s,mb4.0
DUG Dugway 85.18 48 *e*P **P 20 38 01.4 +0.6**
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
DUG Dugway 85.18 48 *e*P **P 20 38 01.4 +0.6**
comp=Z,3.2nm,0.8s,mb4.1
HWUT Hardware Ranch 85.29 46 *e*P **P 20 38 02.1 +0.8**
comp=Z,4.3nm,1.3s,mb4.0
BRTR Keskin Array B 85.94 312 *i*P **P 20 38 04.1 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 85.94 312 P **P 20 38 02.6 -2.0**
comp=Z,0.5nm,0.7s,mb3.4,baz=92,slow=3.7,SNR=4.3
BW06 Boulder Array 85.97 44 P **P 20 38 05.5 +0.9**
PDAR Pinedale Array 85.97 44 P **P 20 38 04.3 -0.3**
comp=Z,0.5nm,0.6s,mb3.4,baz=292,slow=2.4,SNR=5.9
GERES GERESS Array B 91.93 328 P **P 20 38 30.3 -2.3**
comp=Z,0.3nm,0.5s,mb3.5,baz=23,slow=4.4,SNR=4.9
TORD Torodi Ar. Bea 124.45 309 PKP PKPdf 20 44 21.2 -1.5
comp=Z,0.4nm,0.6s,baz=12,slow=3.1,SNR=3.4
LPAZ La Paz 151.43 76 PKPbc PKPbc 20 45 17.5 +0.1
comp=Z,0.6nm,0.4s,baz=250,slow=4.5,SNR=5.1
LPAZ La Paz 151.43 76 *e*PKPbc PKPbc 20 45 16.1 -1.4

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*ISCJB **10** 20:26:30.7±1.0, 23°.93N±0°.03×122°.51E±0°.02, h6km±7km, Error ellipse: s-maj=4.6km s-min=3.0km az=166.1*
*JMA **10** 20:26:31.5±0.7, 24°.04N×122°.46E, h19km, M2.3*
*TAP **10** 20:26:33.2, 23°.99N×122°.41E, h22km, ML3.0, D*
ISC 10 20:26:30.6±0.5, 23°.93N±0°.03×122°.51E±0°.02, h4km±3km, n40, σ0s97/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**41**	*e*S	**Sg**	**20 26 52.9**	**-0.2**
TWD	**Chiawan**	**0.85**	**280**	*e*P	**Pg**	**20 26 47.9**	**+1.0**
baz=276							
ENA	**Nanau**	**0.86**	**305**	P	**Pg**	**20 26 47.7**	**+0.6**
baz=313							
TWC	**Suao**	**0.91**	**318**	P	**Pg**	**20 26 48.2**	**+0.2**
baz=320							
TWC				S	**Sg**	**20 26 59.3**	**-0.4**
baz=320							
ESL	**Shilin**	**0.99**	**263**	*e*P	**Pg**	**20 26 49.3**	**-0.4**
baz=245							
ESL				*e*S	**Sg**	**20 27 02.1**	**-0.5**
baz=245							
TWE	**Neicheng**	**1.10**	**316**	P	**Pg**	**20 26 52.0**	**+0.3**
baz=316							
TWE				S	**Sg**	**20 27 06.3**	**+0.3**
baz=316							
NNS	**Nan Shan**	**1.16**	**296**	*e*P	**Pg**	**20 26 52.8**	**0.0**
baz=294							
WHF	**Hehuan Shan**	**1.16**	**281**	P	**Pg**	**20 26 52.8**	**-0.1**
baz=264							
WHF				S	**Sg**	**20 27 07.6**	**-0.3**
baz=264							
EHY	**Hungye**	**1.17**	**249**	*e*P	**Pg**	**20 26 52.2**	**-0.9**
baz=243							
EHY				S	**Sg**	**20 27 07.2**	**-1.0**
baz=243							
TWB1	**Santiao Chiao**	**1.17**	**336**	*e*P	**Pg**	**20 26 52.1**	**-1.1**
baz=338							
IRIF	**Iriomote-Funau**	**1.18**	**70**	P	**Pg**	**20 26 53.1**	**-0.3**
IRIF				*e*S	**Sg**	**20 27 09.0**	**+0.3**
HATJ	**Hateruma jima**	**1.19**	**84**	*e*S	**Sg**	**20 27 08.9**	**0.0**
TWF1	**Yuli**	**1.25**	**243**	P	**Pg**	**20 26 54.1**	**-0.6**
baz=237							
TWF1				S	**Sg**	**20 27 09.9**	**-1.0**
baz=237							
TWT	**Tachien**	**1.26**	**285**	*e*P	**Pg**	**20 26 54.9**	**+0.1**
baz=270							
NSK	**Sanguang**	**1.29**	**305**	*i*P	**Pg**	**20 26 54.8**	**-0.5**
baz=287							
NSK				*e*S	**Sg**	**20 27 12.6**	**+0.5**
baz=287							
NWF	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**20 26 54.2**	**-1.5**
baz=332							
NWF				*e*S	**Sg**	**20 27 13.6**	**+0.7**
baz=332							
TWA	**Mucha**	**1.34**	**321**	*e*P	**Pn**	**20 26 56.4**	**+0.3**
baz=322							
TWA				S	**Sg**	**20 27 14.1**	**+0.2**
baz=322							
JKRS	**Kuro-shima**	**1.40**	**77**	P	**Pn**	**20 26 57.1**	**+0.2**
JKRS				*e*S	**Sb**	**20 27 15.5**	**-0.1**
SMLT	**Sun Moon Lake**	**1.48**	**268**	P	**Pn**	**20 26 57.5**	**-0.4**
baz=254							
SMLT				*e*S	**Sn**	**20 27 16.7**	**-0.9**
baz=254							
YUS	**Yu-Shan**	**1.50**	**253**	P	**Pn**	**20 26 57.6**	**-0.6**
baz=248							
YUS				*e*S	**Sn**	**20 27 16.3**	**-1.8**
baz=248							
TYC	**Yuchr**	**1.51**	**269**	*e*P	**Pn**	**20 26 59.6**	**+1.1**
baz=266							
TWS1	**Kuangyinshan**	**1.53**	**320**	*e*P	**Pn**	**20 26 59.6**	**+0.9**
baz=302							
NSTT	**Nanjuang**	**1.54**	**297**	*e*P	**Pn**	**20 26 59.2**	**+0.3**
baz=295							
NSTT				*e*S	**Sn**	**20 27 17.3**	**-2.0**
baz=295							
JIJ	**Ishigaki jima**	**1.55**	**74**	P	**Pn**	**20 26 58.0**	**-1.0**
JIJ				*e*S	**Sn**	**20 27 16.7**	**-2.8**
ELDTW	**Lidau**	**1.56**	**242**	*e*P	**Pn**	**20 26 58.0**	**-1.1**
baz=237							
ALS	**Alishan**	**1.62**	**255**	P	**Pn**	**20 27 00.1**	**+0.2**
baz=250							
ALS				*e*S	**Sn**	**20 27 20.0**	**-1.2**
baz=250							
TWQ1	**Liyutan**	**1.64**	**285**	*e*P	**Pn**	**20 27 01.2**	**+1.0**
baz=268							
TWQ1				*e*S	**Sn**	**20 27 20.4**	**-1.3**
baz=268							
WNT	**Mingjian**	**1.67**	**269**	*e*P	**Pn**	**20 27 02.0**	**+1.4**
baz=265							
WNT				*e*S	**Sn**	**20 27 23.9**	**+1.4**
baz=265							
CHN5	**Tsauling**	**1.71**	**259**	*e*P	**Pn**	**20 27 01.9**	**+0.7**
baz=244							
TWG	**Pinlang**	**1.72**	**230**	*e*S	**Sn**	**20 27 20.8**	**-3.0**
baz=237							
STYT	**Tauyuan**	**1.78**	**245**	*e*S	**Sn**	**20 27 24.2**	**-1.0**
baz=229							
WGK	**Gukeng**	**1.80**	**263**	*e*P	**Pn**	**20 27 02.6**	**+0.2**
baz=259							
CHN4	**Tsaushan**	**1.85**	**252**	*e*P	**Pn**	**20 27 03.9**	**+0.8**
baz=248							
WTP	**Ta-pu**	**1.87**	**249**	*e*P	**Pn**	**20 27 04.2**	**+0.9**
baz=244							
WTP				*e*S	**Sn**	**20 27 28.1**	**+0.7**
baz=244							
ECL	**Taimali**	**1.95**	**227**	*e*P	**Pn**	**20 27 03.9**	**-0.6**
baz=234							
SGST	**Jiashian**	**1.96**	**245**	*e*P	**Pn**	**20 27 06.3**	**+1.7**
baz=229							
SGST				*e*S	**Sn**	**20 27 30.7**	**+1.1**
baz=229							
CHN1	**Nanshi**	**1.96**	**248**	*e*P	**Pn**	**20 27 05.8**	**+1.1**
baz=243							
CHN1				*e*S	**Sn**	**20 27 31.1**	**+1.4**
baz=243							
TWK	**Hsinying**	**1.97**	**251**	*e*P	**Pn**	**20 27 07.1**	**+2.3**
baz=246							
TWK				*e*S	**Sn**	**20 27 29.4**	**-0.5**
baz=246							
SSD	**Sandimen**	**2.09**	**236**	*e*P	**Pn**	**20 27 08.5**	**+2.1**
baz=225							
EAST	**Anshuo**	**2.17**	**225**	*e*P	**Pn**	**20 27 08.3**	**+0.8**
baz=222							

GUC 10 20:48:55.8±1.0, 19°.98S×69°.09W, h135km±11km, ML3.8, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.80**	**248**	⇑*i*P	Pn	20 49 18.4	+0.9
HMBC				*i*S	Sn	20 49 35.0	+1.1
HMBC				AML	AML	20 49 36.4	
comp=E,1μm,0.2s							
MNMC	**Miæe Miæ**	**0.97**	**331**	⇑*i*P	Pn	20 49 19.9	+0.9
MNMC				*i*S	Sn	20 49 37.5	+1.0
MNMC				AML	AML	20 49 38.4	
comp=N,5μm,0.2s							
PB01	**Plate Boundary**	**1.12**	**199**	⇑*i*P	Pn	20 49 21.1	+0.8
PB01				*i*S	Sn	20 49 39.6	+0.7
PB01				AML	AML	20 49 41.2	
comp=N,2μm,0.4s							
MACH	**Maria Elena**	**2.29**	**196**	⇑*i*P	Pn	20 49 34.6	+1.0
MACH				*e*S	Sn	20 50 02.9	+0.3
PB04	**Plate Boundary**	**2.30**	**189**	*i*S	Sn	20 50 08.2	+5.3
PB04				AML	AML	20 50 19.0	
comp=E,289nm,0.3s							

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*BGS **10** 20:52:46.5±1.7, 34°.26N×23°.05E, h57km, mb4.8, MS4.6*
*BJI **10** 20:52:58.0, 36°.34N×21°.95E, h28km, mB5.2/31, mb5.1/51, Ms4.9/40, Ms7 4.7/36*
*HLW **10** 20:52:58.2, 36°.53N×22°.43E, h33km±35km, Ml4.9*
*SZGRF **10** 20:53:01.3, 36°.90N×22°.08E, h10km, mb4.9, MS5.0, Southern Greece*
*MOS **10** 20:53:02.0±1.4, 36°.34N×22°.25E, h33km, mb5.1/54, MS4.5/25, Error ellipse: s-maj=3.4km s-min=1.8km az=104.4*
*VIE **10** 20:53:02.8, 36°.36N×22°.27E, h29km, mb4.6, ML4.9*
*DJA **10** 20:53:02, 36°.85N×21°.77E, h26km, mb5.0/11*
*IDC **10** 20:53:03.5±1.1, 36°.41N×22°.37E, h35km±8km, mb4.6/28, mb1 4.7/38, mb1mx4.6/42, mbtmp4.6/38, ML4.4/10, MS4.5/25, Ms1 4.5/25, ms1mx4.4/37, Error ellipse: s-maj=9.1km s-min=8.6km az=20.0*
*BEO **10** 20:53:03.6±0.7, 36°.46N×21°.74E, h0km, ML5.2/11*
*ISCJB **10** 20:53:03.6±0.2, 36°.36N±0°.01×22°.19E±0°.01, h53km±1km, mb5.0/179, MS4.6/51, Error ellipse: s-maj=2.2km s-min=1.4km az=17.3*
*GCMT **10** 20:53:04.2±0.3, 36°.26N×22°.05E, h20km, MW5.4/51, Moment Tensor Solution. s51,c66; s50,c71; Duration: 1s4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.20±.03; $M_{\theta\theta}$-0.11±.02; $M_{\phi\phi}$-0.08±.02; $M_{r\theta}$1.55±.04; $M_{\theta\phi}$0.12±.01; $M_{\phi r}$-0.78±.04; Best double couple: $M_0$1.74900×10^{17} NP1:ϕ_s329.00000°, δ4.00000°, λ122.00000°. NP2: ϕ_s117.00000°, δ87.00000°, λ88.00000°. Principal axes: T 1.7450, Plg48.0000°, Azm25.0000°; N 0.0070, Plg2.0000°, Azm117.0000°; P -1.7520, Plg42.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **10** 20:53:04.2, 36°.30N×22°.24E, h57km, mb4.9/156, MD4.7(ATH), After ATH.*
NEIC Felt [IV] at Kalamata. Felt at Auliotai and Koroni. Also felt at Casarano and Mesagne, Italy.
*CSEM **10** 20:53:04.6±0.1, 36°.29N×22°.16E, h48km±1km, mb4.8/41, Ms4.4, Mw5.4, Error ellipse: s-maj=2.7km s-min=1.9km az=10.0*
*ATH **10** 20:53:04.2, 36°.30N×22°.24E, h57km±4km, MD4.7/8, ML5.1*
*PRU **10** 20:53:05.5, 36°.80N×21°.23E, h0km, M4.9*
*THE **10** 20:53:05.2, 36°.33N×22°.21E, h51km±4km, ML5.7/13, Error ellipse: s-maj=4.3km s-min=0.7km az=280.0*
*PDG **10** 20:53:06.2±0.1, 36°.54N×21°.01E, h11km±11km, MD5.4/10, ML5.4/5, Error ellipse: s-maj=129.4km s-min=35.4km az=90.0*
*UPP **10** 20:53:44.7, 38°.03N×21°.93E, h143km*
ISC 10 20:53:05.0±0.1, 36°.32N±0°.01×22°.20E±0°.01, h51km±1km, h36km±3.8km: pP-P, n1606, σ1s24/1781, mb5.0/179, MS4.6/51, 187C-45D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.68**	**93**	*e*P	**Pn**	**20 53 18.3**	**-0.2**
KYTH	**Kithira**	**0.68**	**93**	*e*P	**Pn**	**20 53 18.3**	**-0.2**
PYL	**PYLOS**	**0.68**	**328**	*e*P	**Pn**	**20 53 18.5**	**0.0**
PYL				*e*S	**Sn**	**20 53 29.4**	**+1.0**
PYL	**PYLOS**	**0.68**	**328**	P	**Pn**	**20 53 18.2**	**-0.3**
PYL				S	**Sn**	**20 53 27.9**	**-0.5**
PYL	**PYLOS**	**0.68**	**328**	*e*P	**Pn**	**20 53 18.5**	**0.0**
PYL				S	**Sn**	**20 53 27.9**	**-0.5**
VLI	**Veliai**	**0.72**	**56**	*e*P	**Pn**	**20 53 18.9**	**-0.1**
VLI				*e*S	**Sn**	**20 53 30.0**	**+0.8**
VLI	**Veliai**	**0.72**	**56**	*e*P	**Pn**	**20 53 18.9**	**-0.1**
VLI				*e*S	**Sn**	**20 53 30.0**	**+0.8**
ITM	**Ithomi**	**0.89**	**346**	*e*P	**Pn**	**20 53 21.7**	**+0.5**
ITM				*e*S	**Sn**	**20 53 35.6**	**+2.5**
ITM	**Ithomi**	**0.89**	**346**	P	**Pn**	**20 53 21.5**	**+0.3**
ITM				S	**Sn**	**20 53 33.4**	**+0.3**
ITM	**Ithomi**	**0.89**	**346**	P	**Pn**	**20 53 21.5**	**+0.3**
ITM				S	**Sn**	**20 53 33.4**	**+0.3**
VLX	**Vlachokerasia**	**1.06**	**8**	*e*P	**Pn**	**20 53 24.8**	**+1.3**
VLX				*e*S	**Sn**	**20 53 38.7**	**+1.4**
VLX	**Vlachokerasia**	**1.06**	**8**	P	**Pn**	**20 53 24.2**	**+0.7**
VLX				S	**Sn**	**20 53 37.3**	**0.0**
VLX	**Vlachokerasia**	**1.06**	**8**	P	**Pn**	**20 53 24.2**	**+0.7**
VLX				S	**Sn**	**20 53 37.3**	**0.0**
DID	**Didima**	**1.45**	**35**	*e*P	**Pn**	**20 53 29.4**	**+0.6**
DID	**Didima**	**1.45**	**35**	P	**Pn**	**20 53 29.3**	**+0.5**
DID				S	**Sn**	**20 53 47.5**	**+0.8**
DID	**Didima**	**1.45**	**35**	P	**Pn**	**20 53 29.3**	**+0.5**
DID				S	**Sn**	**20 53 47.5**	**+0.8**
GUR	**Goura**	**1.62**	**4**	*e*P	**Pn**	**20 53 33.2**	**+2.1**
GUR	**Goura**	**1.62**	**4**	P	**Pn**	**20 53 32.1**	**+1.0**
GUR	**Goura**	**1.62**	**4**	P	**Pn**	**20 53 32.1**	**+1.0**
KARN	**Karanos**	**1.67**	**123**	*e*P	**Pn**	**20 53 32.5**	**+0.7**
KARN	**Karanos**	**1.67**	**123**	P	**Pn**	**20 53 32.1**	**+0.3**
KARN				S	**Sn**	**20 53 53.1**	**+1.1**
KARN	**Karanos**	**1.67**	**123**	P	**Pn**	**20 53 32.1**	**+0.3**
KARN				S	**Sn**	**20 53 53.1**	**+1.1**
NAIG	**Nisos Aigina**	**1.77**	**35**	*e*P	**Pn**	**20 53 33.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.77**	**35**	*e*P	**Pn**	**20 53 33.6**	**+0.4**
LTK	**Loutraki**	**1.81**	**20**	*e*P	**Pn**	**20 53 34.5**	**+0.8**
LTK	**Loutraki**	**1.81**	**20**	P	**Pn**	**20 53 34.3**	**+0.6**
LTK				S	**Sn**	**20 53 55.3**	**-0.2**
LTK	**Loutraki**	**1.81**	**20**	P	**Pn**	**20 53 34.3**	**+0.6**
LTK				S	**Sn**	**20 53 55.3**	**-0.2**
RLS	**Riolos of Patr**	**1.83**	**342**	*e*P	**Pn**	**20 53 35.7**	**+1.7**
RLS	**Riolos of Patr**	**1.83**	**342**	*e*P	**Pn**	**20 53 35.7**	**+1.7**
VAM	**Vamos**	**1.86**	**119**	*e*P	**Pn**	**20 53 35.4**	**+1.0**
VAM	**Vamos**	**1.86**	**119**	*e*P	**Pn**	**20 53 35.4**	**+1.0**
LAKA	**Lakka**	**1.93**	**355**	P	**Pn**	**20 53 36.3**	**+1.0**
LAKA	**Lakka**	**1.93**	**355**	P	**Pn**	**20 53 36.3**	**+1.0**
UPR	**University Cam**	**1.99**	**351**	*e*P	**Pn**	**20 53 38.8**	**+2.6**
UPR	**University Cam**	**1.99**	**351**	P	**Pn**	**20 53 38.5**	**+2.3**
UPR	**University Cam**	**1.99**	**351**	P	**Pn**	**20 53 38.5**	**+2.3**
VLY	**Voula,Athens**	**2.00**	**39**	P	**Pn**	**20 53 36.3**	**+0.1**
VLY	**Voula,Athens**	**2.00**	**39**	P	**Pn**	**20 53 36.3**	**+0.1**
ATH	**Athens Observa**	**2.05**	**36**	*e*P	**Pn**	**20 53 37.3**	**+0.3**
ATH	**Athens Observa**	**2.05**	**36**	*e*P	**Pn**	**20 53 37.3**	**+0.3**
ATHU	**Athens Univers**	**2.08**	**37**	P	**Pn**	**20 53 37.7**	**+0.3**
ATHU	**Athens Univers**	**2.08**	**37**	P	**Pn**	**20 53 37.7**	**+0.3**
KFL	**Anninata**	**2.11**	**328**	P	**Pn**	**20 53 38.6**	**+0.8**
KFL				S	**Sn**	**20 54 04.4**	**+1.5**
EFP	**Efpalio**	**2.12**	**354**	*e*P	**Pn**	**20 53 39.8**	**+1.9**
EFP	**Efpalio**	**2.12**	**354**	P	**Pn**	**20 53 38.9**	**+1.0**
EFP	**Efpalio**	**2.12**	**354**	P	**Pn**	**20 53 38.9**	**+1.0**
GVD	**Gavdhos**	**2.13**	**133**	*e*P	**Pn**	**20 53 38.1**	**0.0**
GVD	**Gavdhos**	**2.13**	**133**	*e*P	**Pn**	**20 53 38.1**	**0.0**
PTL	**Penteli**	**2.19**	**37**	P	**Pn**	**20 53 39.6**	**+0.8**
PTL	**Penteli**	**2.19**	**37**	P	**Pn**	**20 53 39.6**	**+0.8**
VLS	**Valsamata**	**2.26**	**326**	*e*P	**Pn**	**20 53 40.3**	**+0.5**
VLS	**Valsamata**	**2.26**	**326**	P	**Pn**	**20 53 40.1**	**+0.3**
VLS				S	**Sn**	**20 54 07.2**	**+0.8**
VLS	**Valsamata**	**2.26**	**326**	P	**Pn**	**20 53 40.1**	**+0.3**
VLS				S	**Sn**	**20 54 07.2**	**+0.8**
LKR	**Lokris**	**2.42**	**15**	*e*P	**Pn**	**20 53 42.2**	**+0.2**
LKR	**Lokris**	**2.42**	**15**	P	**Pn**	**20 53 42.5**	**+0.5**
LKR				S	**Sn**	**20 54 10.3**	**-0.1**
LKR	**Lokris**	**2.42**	**15**	*e*P	**Pn**	**20 53 42.2**	**+0.2**
LKR				S	**Sn**	**20 54 10.3**	**-0.1**
IDI	**Anoyia**	**2.42**	**114**	Pn	**Pn**	**20 53 41.3**	**-0.7**
25nm,0.3s,baz=317,slow=16,SNR=155							
IDI				Pg	**Pn**	**20 53 50.8**	**+8.7**
227nm,0.3s,baz=302,slow=20,SNR=46							
IDI				Sn	**Sn**	**20 54 08.9**	**-1.5**
273nm,0.3s,baz=308,slow=23,SNR=7.0							
IDI				Lg		20 54 18.6	
611nm,0.3s,baz=25,slow=19,SNR=9.0							
IDI				LR	LR	20 54 45.0	
comp=Z,8μm,18.3s,baz=299,slow=44							
IDI	**Anoyia**	**2.42**	**114**	Pn	**Pn**	**20 53 41.3**	**-0.7**
IDI	**Anoyia**	**2.42**	**114**	Pg	**Pn**	**20 53 50.8**	**+8.8**
ATAL	**Atalanti**	**2.46**	**15**	P	**Pn**	**20 53 43.1**	**+0.5**
ATAL				S	**Sn**	**20 54 13.6**	**+2.1**
ATAL	**Atalanti**	**2.46**	**15**	P	**Pn**	**20 53 43.1**	**+0.5**
ATAL				S	**Sn**	**20 54 13.6**	**+2.1**
SIVA	**Sivas**	**2.49**	**121**	*e*P	**Pn**	**20 53 43.4**	**+0.4**
SIVA	**Sivas**	**2.49**	**121**	P	**Pn**	**20 53 43.3**	**+0.3**
SIVA	**Sivas**	**2.49**	**121**	P	**Pn**	**20 53 43.3**	**+0.3**
THR4	**Thira Island,**	**2.59**	**86**	P	**Pn**	**20 53 44.6**	**+0.3**
THR4	**Thira Island,**	**2.59**	**86**	P	**Pn**	**20 53 44.6**	**+0.3**
THR3	**Thira Island,**	**2.59**	**87**	P	**Pn**	**20 53 44.4**	**+0.1**
THR3	**Thira Island,**	**2.59**	**87**	P	**Pn**	**20 53 44.4**	**+0.1**
EVR	**Evrytania**	**2.62**	**353**	*e*P	**Pn**	**20 53 47.8**	**+3.1**
THR1	**Thera Island**	**2.64**	**88**	P	**Pn**	**20 53 45.1**	**+0.1**
THR1	**Thera Island**	**2.64**	**88**	P	**Pn**	**20 53 45.1**	**+0.1**
AGG	**Agios Georgios**	**2.70**	**2**	*e*P	**Pn**	**20 53 46.9**	**+1.0**
AGG	**Agios Georgios**	**2.70**	**2**	P	**Pn**	**20 53 46.6**	**+0.7**
AGG				S	**Sn**	**20 54 18.2**	**+0.8**
AGG	**Agios Georgios**	**2.70**	**2**	P	**Pn**	**20 53 46.6**	**+0.7**
AGG				S	**Sn**	**20 54 18.2**	**+0.8**
APE	**Apeiranthos**	**2.79**	**73**	*e*P	**Pn**	**20 53 47.2**	**+0.2**
APE	**Apeiranthos**	**2.79**	**73**	P	**Pn**	**20 53 47.1**	**+0.1**
APE				S	**Sn**	**20 54 21.2**	**+1.8**
APE	**Apeiranthos**	**2.79**	**73**	*e*P	**Pn**	**20 53 47.2**	**+0.2**
APE				S	**Sn**	**20 54 21.2**	**+1.8**
LAST	**Lasithi**	**2.91**	**112**	P	**Pn**	**20 53 48.9**	**+0.2**
LAST				S	**Sn**	**20 54 23.9**	**+1.4**
LAST	**Lasithi**	**2.91**	**112**	P	**Pn**	**20 53 48.9**	**+0.2**
LAST				S	**Sn**	**20 54 23.9**	**+1.4**
NPS	**Neapolis**	**2.97**	**110**	P	**Pn**	**20 53 50.4**	**+0.8**
NEO	**Neokhori**	**3.10**	**15**	*e*P	**Pn**	**20 53 51.4**	**+0.1**
NEO	**Neokhori**	**3.10**	**15**	*e*P	**Pn**	**20 53 51.4**	**+0.1**
XOR	**Xorichti**	**3.15**	**14**	P	**Pn**	**20 53 52.0**	**0.0**
XOR				S	**Sn**	**20 54 29.7**	**+1.4**
XOR	**Xorichti**	**3.15**	**14**	P	**Pn**	**20 53 52.0**	**0.0**
XOR				S	**Sn**	**20 54 29.7**	**+1.4**
AOS	**Alonnisos**	**3.15**	**25**	P	**Pn**	**20 53 51.7**	**-0.3**
AOS				S	**Sn**	**20 54 28.0**	**-0.3**
AOS	**Alonnisos**	**3.15**	**25**	P	**Pn**	**20 53 51.7**	**-0.3**
AOS				S	**Sn**	**20 54 28.0**	**-0.3**
THL	**Klokotos Trika**	**3.25**	**358**	*e*P	**Pn**	**20 53 54.7**	**+1.3**
THL	**Klokotos Trika**	**3.25**	**358**	P	**Pn**	**20 53 54.8**	**+1.4**
THL				S	**Sn**	**20 54 32.2**	**+1.5**
THL	**Klokotos Trika**	**3.25**	**358**	*e*P	**Pn**	**20 53 54.7**	**+1.3**
THL				S	**Sn**	**20 54 32.2**	**+1.5**
ZKR	**Zakros**	**3.48**	**109**	*e*P	**Pn**	**20 53 57.4**	**+0.8**
ZKR	**Zakros**	**3.48**	**109**	P	**Pn**	**20 53 57.0**	**+0.4**
ZKR	**Zakros**	**3.48**	**109**	P	**Pn**	**20 53 57.0**	**+0.4**
JAN	**Janina**	**3.50**	**343**	*e*P	**Pn**	**20 53 58.5**	**+1.7**
JAN	**Janina**	**3.50**	**343**	*e*P	**Pn**	**20 53 58.5**	**+1.7**
IGT	**Igoumenitsa**	**3.53**	**336**	P	**Pn**	**20 53 58.0**	**+0.7**
IGT				S	**Sn**	**20 54 38.3**	**+0.5**
IGT	**Igoumenitsa**	**3.53**	**336**	P	**Pn**	**20 53 58.0**	**+0.7**
IGT				S	**Sn**	**20 54 38.3**	**+0.5**
LIT	**Litokhoron**	**3.79**	**3**	*e*P	**Pn**	**20 54 01.4**	**+0.7**
LIT	**Litokhoron**	**3.79**	**3**	P	**Pn**	**20 54 01.8**	**+1.1**
LIT				S	**Sn**	**20 54 45.7**	**+1.7**
LIT	**Litokhoron**	**3.79**	**3**	*e*P	**Pn**	**20 54 01.4**	**+0.7**
LIT				S	**Sn**	**20 54 45.7**	**+1.7**
PAIG	**Paliouri**	**3.79**	**18**	P	**Pn**	**20 54 00.8**	**0.0**
PAIG				S	**Sn**	**20 54 45.5**	**+1.4**
PAIG	**Paliouri**	**3.79**	**18**	P	**Pn**	**20 54 00.8**	**0.0**
PAIG				S	**Sn**	**20 54 45.5**	**+1.4**
KEK	**Kerkira**	**3.88**	**332**	*e*P	**Pn**	**20 54 02.3**	**+0.2**
KEK	**Kerkira**	**3.88**	**332**	P	**Pn**	**20 54 02.4**	**+0.3**
KEK				S	**Sn**	**20 54 46.2**	**-0.2**
KEK	**Kerkira**	**3.88**	**332**	*e*P	**Pn**	**20 54 02.3**	**+0.2**
KEK				S	**Sn**	**20 54 46.2**	**-0.2**
SRN	**Sarande**	**3.96**	**335**	*e*PN	**Pn**	**20 54 04.1**	**+1.0**
SRN	**Sarande**	**3.96**	**335**	*e*Pn	**Pn**	**20 54 04.1**	**+1.0**
SMG	**Samos**	**3.97**	**68**	P	**Pn**	**20 54 04.0**	**+0.8**
SMG	**Samos**	**3.97**	**68**	P	**Pn**	**20 54 04.0**	**+0.8**
KZN	**Kozani**	**4.00**	**355**	*e*P	**Pn**	**20 54 04.8**	**+1.1**
KZN	**Kozani**	**4.00**	**355**

BIA	Bitola	4.75	352	*i* Pn	Pn	20 54 14.1	+0.2
EZN	Ezine	4.79	42	*e*P	Pn	20 54 13.4	-1.1
EZN	Ezine	4.79	42	*e*P	Pn	20 54 13.4	-1.0
ARG	Arkhangelos	4.79	89	*e*P	Pn	20 54 16.0	+1.4
ARG	Arkhangelos	4.79	89	P	Pn	20 54 15.6	+1.0
ARG				S	Sn	20 55 09.7	+0.9
ARG	Arkhangelos	4.79	89	P	Pn	20 54 15.6	+1.0
ARG				S	Sn	20 55 09.7	+0.9
GADA	Gvkgeada	4.84	36	*e*P	Pn	20 54 13.9	-1.4
GADA	Gvkgeada	4.84	36	*e*P	Pn	20 54 13.9	-1.3
OHR	Ohrid	4.91	348	P	Pn	20 54 16.0	-0.2
OHR	Ohrid	4.91	348	*i* Pn	Pn	20 54 16.4	+0.2
OHR				*e*Sg	Sn	20 55 09.8	-1.8
OHR	Ohrid	4.91	348	P	Pn	20 54 16.5	+0.3
OHR	Ohrid	4.91	348	*i* Pn	Pn	20 54 16.3	+0.1
SRS	Serrai	4.92	12	P	Pn	20 54 16.2	-0.1
SRS	Serrai	4.92	12	P	Pn	20 54 16.4	+0.1
SRS	Serrai	4.92	12	P	Pn	20 54 16.4	+0.1
YER	Yerkesik	4.96	79	*e*P	Pn	20 54 17.6	+0.7
YER	Yerkesik	4.96	79	*e*P	Pn	20 54 17.6	+0.8
VAY	Valandovo	5.01	3	P	Pn	20 54 17.0	-0.5
VAY				Pn	Pn	20 54 17.6	+0.1
VAY	Valandovo	5.01	3	*i* Pn	Pn	20 54 17.4	-0.1
VAY				*e*Sg	Sn	20 55 14.7	+0.7
VAY	Valandovo	5.01	3	P	Pn	20 54 17.9	+0.4
VAY	Valandovo	5.01	3	Pn	Pn	20 54 17.6	+0.1
VAY	Valandovo	5.01	3	P	Pn	20 54 17.9	+0.4
KRUS	Krusevo	5.10	352	*i* Pn	Pn	20 54 18.7	-0.1
KRUS				*e*Sg	Sn	20 55 14.9	-1.3
KRUS	Krusevo	5.10	352	*i* Pn	Pn	20 54 18.6	-0.1
AKHS	Akhisar	5.14	58	*i* P	Pn	20 54 16.3	-3.0
AKHS	Akhisar	5.14	58	*i* P	Pn	20 54 16.3	-3.1
AKS	Akhisar	5.14	58	*e*P	Pn	20 54 22.7	+3.3
AKS	Akhisar	5.14	58	*e*P	Pn	20 54 22.7	+3.3
TIP	Timpagrande 519nm,0.9s	5.17	305	*e*Pn	Pn	20 54 19.0	-0.7
TIP				*e*Sn	Sn	20 55 09.0	-9.1
TIP	Timpagrande 519nm,0.9s	5.17	305	*e*Pn	Pn	20 54 19.0	-0.7
TURN	Turunc	5.19	82	*i* P	Pn	20 54 16.0	-3.9
TURN	Turunc	5.19	82	*i* P	Pn	20 54 16.0	-4.0
SOI	Samo	5.21	292	P	Pn	20 54 19.6	-0.6
GRI	Girifalco	5.22	300	P	Pn	20 54 20.1	-0.4
TIR	Tirane	5.34	341	*e*Pn	Pn	20 54 22.4	+0.3
TIR				*e*Sn	Sn	20 55 21.2	-1.1
TIR	Tirane	5.34	341	*e*P	Pn	20 54 21.2	-0.9
TIR				*e*		20 55 14.7	
TIR				pmax	pmax		
	comp=Z,875nm,0.8s						
TIR	Tirane comp=Z,875nm,0.8s	5.34	341	*e*Pn	Pn	20 54 21.2	-0.9
TIR				*e*Sn	Sn	20 55 14.7	-7.6
TIR	Tirane	5.34	341	P	Pn	20 54 22.9	+0.8
TIR	Tirane	5.34	341	*e*Pn	Pn	20 54 22.4	+0.3
TIR	Tirane	5.34	341	P	Pn	20 54 22.9	+0.8
TIR				*e*Sn	Sn	20 55 21.2	-1.1
STIP	Stip	5.37	360	*e*Pn	Pn	20 54 23.3	+0.8
STIP				*e*Sg	Sn	20 55 25.6	+2.6
STIP	Stip	5.37	360	P	Pn	20 54 23.6	+1.1
STIP	Stip	5.37	360	*e*Pn	Pn	20 54 23.2	+0.7
STIP	Stip	5.37	360	P	Pn	20 54 23.6	+1.1
CEL	Celeste comp=Z,529nm,0.4s	5.38	293	*e*Pn	Pn	20 54 21.8	-0.9
CEL				*e*Sn	Sn	20 55 14.8	-8.6
CEL	Celeste comp=Z,529nm,0.4s	5.38	293	*e*Pn	Pn	20 54 21.8	-0.9
ENEZ	Enez	5.39	34	*e*P	Pn	20 54 26.2	+3.4
MMB	Musomiste	5.40	12	*i* P	Pn	20 54 22.3	-0.6
MMB	Musomiste	5.40	12	P	Pn	20 54 22.4	-0.5
LPK	Lapseki	5.41	40	*e*P	Pn	20 54 22.5	-0.5
LPK	Lapseki	5.41	40	*e*P	Pn	20 54 22.5	-0.5
SLUM				P	Pn	20 54 18.9	-4.4
	baz=154						
SLUM		5.43	152	P	Pn	20 54 18.9	-4.4
MTTG	Motta San Giov	5.46	290	P	Pn	20 54 23.0	-0.7
MTTG	Motta San Giov	5.46	290	P	Pn	20 54 23.0	-0.7
ALN	Alexandroupoli	5.48	32	P	Pn	20 54 23.9	0.0
ALN	Alexandroupoli	5.48	32	P	Pn	20 54 22.9	-1.0
ALN	Alexandroupoli	5.48	32	P	Pn	20 54 23.9	0.0
BALY	Balya	5.48	50	*i* P	Pn	20 54 23.2	-0.7
BALY	Balya	5.48	50	*i* P	Pn	20 54 23.2	-0.8
RDO	Rodhopi	5.49	27	P	Pn	20 54 23.5	-0.5
RDO	Rodhopi	5.49	27	P	Pn	20 54 23.5	-0.5
MANT	Manisa	5.51	65	*i* P	Pn	20 54 25.9	+1.4
MANT	Manisa	5.51	65	*i* P	Pn	20 54 25.9	+1.5
SCLL	Scilla	5.52	292	P	Pn	20 54 23.8	-0.7
SCLL	Scilla	5.52	292	P	Pn	20 54 23.8	-0.7
PHP	Peshkopia	5.53	346	*e*PN	Pn	20 54 18.4	-6.3
FETY	Fethiye	5.56	85	*e*P	Pn	20 54 26.2	+1.1
BALB	Balikesir	5.58	52	*e*P	Pn	20 54 29.0	+3.6
KKB	Krupnik	5.59	7	*i* P	Pn	20 54 24.8	-0.6
KKB	Krupnik	5.59	7	P	Pn	20 54 25.7	+0.3
KULA	Kula-Manisa	5.59	65	*e*P	Pn	20 54 25.2	-0.3
KULA	Kula-Manisa	5.59	65	*e*P	Pn	20 54 25.2	-0.4
LJBD	Adjabya SNR=76	5.64	198	*i* P	Pn	20 54 25.9	-0.3
DNZL	Cakiroluk	5.65	74	*i* P	Pn	20 54 29.0	+2.7
DNZL	Cakiroluk	5.65	74	*i* P	Pn	20 54 29.0	+2.7
DENT	Denizli	5.66	73	*e*P	Pn	20 54 28.1	+1.7
DENT	Denizli	5.66	73	*e*P	Pn	20 54 28.1	+1.7
AGST	Augusta-Monte	5.67	282	P	Pn	20 54 27.7	+1.1
AGST	Augusta-Monte	5.67	282	P	Pn	20 54 27.7	+1.1
SKO	Skopje	5.68	354	*e*Pn	Pn	20 54 27.5	+0.8
SKO				*e*Sn	Sn	20 55 29.9	-0.6
SKO	Skopje	5.68	354	*i* Pn	Pn	20 54 27.4	+0.7
SKO				*e*Sg	Sn	20 55 29.2	-1.3
SKO	Skopje	5.68	354	P	Pn	20 54 28.1	+1.4
SKO	Skopje	5.68	354	*e*Pn	Pn	20 54 27.5	+0.8
SKO	Skopje	5.68	354	P	Pn	20 54 28.1	+1.4
SKO				*e*Sn	Sn	20 55 29.9	-0.6
RZN	Rozhen	5.71	19	*i* P	Pn	20 54 27.5	+0.3
RZN	Rozhen	5.71	19	P	Pn	20 54 28.0	+0.8
SSY	Sortino	5.78	280	P	Pn	20 54 27.5	-0.6
SSY	Sortino	5.78	280	P	Pn	20 54 27.5	-0.6
DEMI	Demirci	5.84	60	*i* P	Pn	20 54 25.6	-3.4
RKY	Sarkoy-Tekirda	5.86	40	*e*P	Pn	20 54 29.8	+0.7
RKY	Sarkoy-Tekirda	5.86	40	*e*P	Pn	20 54 29.8	+0.6
SART	Tekirdag	5.86	40	*i* P	Pn	20 54 24.3	-4.8
KDZ	Kurdzhali	5.89	24	*i* P	Pn	20 54 28.7	-0.9
KDZ	Kurdzhali	5.89	24	P	Pn	20 54 30.0	+0.4
GLHS	Glhisar (BURDU	5.92	80	*e*P	Pn	20 54 32.9	+2.8
GLHS	Glhisar (BURDU	5.92	80	*e*P	Pn	20 54 32.9	+2.8
DURS	Dursunbey	5.95	55	*i* P	Pn	20 54 30.1	-0.3
DURS	Dursunbey	5.95	55	*i* P	Pn	20 54 30.1	-0.3
KSL	Kastellorizon	5.97	89	*e*P	Pn	20 54 31.3	+0.5
KSL	Kastellorizon	5.97	89	*e*P	Pn	20 54 31.3	+0.5
GOLH	Golhisar	5.98	79	*i* P	Pn	20 54 33.4	+2.5
GOLH	Golhisar	5.98	79	*i* P	Pn	20 54 33.4	+2.5
AKAS	Kas	5.99	89	*i* P	Pn	20 54 31.3	+0.4
PUK	Puka	5.99	343	*e*PN	Pn	20 54 30.1	-0.9
PUK	Puka	5.99	343	*e*Pn	Pn	20 54 30.1	-0.9
HMDC	Modica	6.00	278	P	Pn	20 54 30.2	-0.8
HMDC	Modica	6.00	278	P	Pn	20 54 30.2	-0.8
LTRZ	Laterza	6.01	317	P	Pn	20 54 30.3	-0.9
LTRZ	Laterza	6.01	317	P	Pn	20 54 30.3	-0.9
BNT	Bandirma	6.04	46	*e*P	Pn	20 54 33.1	+1.4
DST	Dursunbey	6.05	55	*e*P	Pn	20 54 34.4	+2.6
DST	Dursunbey	6.05	55	*e*P	Pn	20 54 34.4	+2.6
HVZN	Vizzini	6.07	280	P	Pn	20 54 30.4	-1.6
HVZN	Vizzini	6.07	280	P	Pn	20 54 30.4	-1.6
ULC	Ulcinj	6.09	339	‖ *i*Pn	Pn	20 54 31.1	-1.2
ULC				*e*Sn	Sn	20 55 34.5	-6.0
ULC	Ulcinj	6.09	339	P	Pn	20 54 31.0	-1.3
ULC	Ulcinj	6.09	339	‖ *i*Pn	Pn	20 54 31.1	-1.2
PLD	Plovdiv	6.10	18	P	Pn	20 54 34.9	+2.4
PLD	Plovdiv	6.10	18	*i* P	Pn	20 54 33.3	+0.8
PLD	Plovdiv	6.10	18	P	Pn	20 54 34.9	+2.4
KHAL	Karahalli	6.17	68	*i* P	Pn	20 54 34.3	+0.9
KHAL	Karahalli	6.17	68	*i* P	Pn	20 54 34.3	+0.9
ELL	Elmali	6.23	84	*e*P	Pn	20 54 37.6	+3.4
WDD	Wield Dalam comp=Z,401nm,0.6s	6.23	268	*e*Pn	Pn	20 54 32.7	-1.5
WDD				*e*Sn	Sn	20 55 36.7	-7.3
WDD	Wield Dalam comp=Z,401nm,0.6s	6.23	268	*e*Pn	Pn	20 54 32.7	-1.5
BCI	Bajram Curri	6.26	345	*e*PN	Pn	20 54 35.2	+0.5
BCI	Bajram Curri	6.26	345	*e*Pn	Pn	20 54 35.2	+0.5
TKR	Tekirdag	6.26	40	*e*P	Pn	20 54 36.5	+1.7
TKR	Tekirdag	6.26	40	*e*P	Pn	20 54 36.5	+1.8
DIM	Dimitrovgrad	6.29	23	*i* P	Pn	20 54 35.9	+0.9
DIM	Dimitrovgrad	6.29	23	P	Pn	20 54 36.9	+1.9
VTS	Vitosha	6.32	7	*e*Pn	Pn	20 54 36.9	+1.5
VTS	Vitosha	6.32	7	P	Pn	20 54 36.0	+0.6
VTS	Vitosha	6.32	7	P	Pn	20 54 36.8	+1.4
VTS	Vitosha	6.32	7	*i* P	Pn	20 54 35.9	+0.5
VTS	Vitosha	6.32	7	P	Pn	20 54 36.0	+0.6
VTS	Vitosha	6.32	7	*e*Pn	Pn	20 54 36.9	+1.5
VAE	Valgurnera comp=Z,8.6nm,0.3s,baz=16,slow=2.1,SNR=30	6.34	283	Pn	Pn	20 54 37.6	+1.8
VAE				Pg	Pn	20 54 53.9	+18
	comp=Z,26nm,0.3s,baz=174,slow=12,SNR=9.1						
VAE				Sn	Sn	20 55 45.7	-1.2
	comp=Z,73nm,0.3s,baz=25,slow=2.0,SNR=10						
VAE				Lg		20 56 22.7	
	comp=Z,7.8nm,0.3s,baz=116,slow=23,SNR=3.0						
VAE				LR	LR	20 57 03.4	
	comp=Z,2μm,18.6s,baz=15,slow=37						
VAE	Valgurnera	6.34	283	Pn	Pn	20 54 37.6	+1.8
RAFF	Raffo Rosso	6.35	281	P	Pn	20 54 36.0	+0.1
RAFF	Raffo Rosso	6.35	281	P	Pn	20 54 36.0	+0.1
PTRP	Pietrapertosa	6.39	313	P	Pn	20 54 35.0	-1.4
PTRP	Pietrapertosa	6.39	313	P	Pn	20 54 35.0	-1.4
GDZ	Gediz	6.41	62	*i* P	Pn	20 54 33.8	-2.8
PGB	Panagyurishte	6.41	13	*i* P	Pn	20 54 36.8	+0.1
PGB	Panagyurishte	6.41	13	P	Pn	20 54 37.2	+0.5
CRLT	Corlu	6.47	40	*e*P	Pn	20 54 39.5	+2.0
CRLT	Corlu	6.47	40	*e*P	Pn	20 54 39.5	+2.0
MGR	Morigerati	6.47	308	P	Pn	20 54 38.0	+0.4
MGR	Morigerati	6.47	308	P	Pn	20 54 38.0	+0.4
BARS	Barje	6.50	358	⇑ *i*Pn	Pn	20 54 37.9	0.0
BARS				*e*Sn	Sn	20 55 49.8	-0.9
BARS	Barje	6.50	358	⇑ *i*Pn	Pn	20 54 37.9	0.0
BARS				*e*Sn	Sn	20 55 49.8	-0.9
BUM	Brajici-Budva	6.50	338	‖ *i*Pn	Pn	20 54 36.7	-1.2
BUM				*e*Sn	Sn	20 55 44.1	-6.6
BUM	Brajici-Budva	6.50	338	P	Pn	20 54 37.0	-0.9
BUM	Brajici-Budva	6.50	338	‖ *i*Pn	Pn	20 54 36.7	-1.2
BUM	Brajici-Budva	6.50	338	P	Pn	20 54 37.0	-0.9
PVY	Plav	6.50	345	‖ *i*Pn	Pn	20 54 38.1	+0.1
PVY				*e*Sn	Sn	20 55 47.1	-3.6
PVY	Plav	6.50	345	P	Pn	20 54 38.0	0.0
PVY	Plav	6.50	345	‖ *i*Pn	Pn	20 54 38.1	+0.1
PDG	Podgorica	6.51	340	⇑ *i*Pn	Pn	20 54 36.9	-1.2
TTG	Podgorica	6.51	340	⇑ *i*Pn	Pn	20 54 36.9	-1.2
TTG				*e*Sn	Sn	20 55 45.6	-5.4
TTG	Podgorica	6.51	340	P	Pn	20 54 37.0	-1.1
TTG	Podgorica	6.51	340	P	Pn	20 54 37.0	-1.1
EDRB	Edirne	6.56	31	*e*P	Pn	20 54 33.8	-4.9
HMAT	Matruh comp=N,630μm,0.7s,logA/T=6.0,baz=143	6.62	140	AMP		20 56 00.0	
ULDT	Uludag	6.67	53	*i* P	Pn	20 54 41.4	+1.2
ULDT	Uludag	6.67	53	*i* P	Pn	20 54 41.4	+1.2
GIB	Gibilmanna	6.73	287	P	Pn	20 54 41.0	-0.2
HCY	Herceg Novi	6.76	336	⇑ *i*Pn	Pn	20 54 39.5	-2.0
HCY				*e*Sn	Sn	20 55 50.0	-7.1
HCY	Herceg Novi	6.76	336	P	Pn	20 54 39.0	-2.5
HCY	Herceg Novi	6.76	336	P	Pn	20 54 39.0	-2.5
HCY	Herceg Novi	6.76	336	⇑ *i*Pn	Pn	20 54 39.5	-2.0
BEY	Berane	6.78	346	⇑ *i*Pn	Pn	20 54 41.8	0.0
IVA	Berane	6.78	346	⇑ *i*Pn	Pn	20 54 41.8	0.0
IVA				*e*Sn	Sn	20 55 53.9	-3.7
IVA	Berane	6.78	346	P	Pn	20 54 42.0	+0.2
IVA	Berane	6.78	346	P	Pn	20 54 42.0	+0.2
SLVT	Silivri	6.79	42	*e*P	Pn	20 54 38.6	-3.4
ISP	Isparta	6.82	75	*e*P	Pn	20 54 45.2	+2.9
ISP	Isparta	6.82	75	*e*P	Pn	20 54 45.3	+3.0
ISP				pmax	pmax		
	comp=Z,154nm,0.6s						
ISP	Isparta comp=Z,154nm,0.6s	6.82	75	*e*Pn	Pn	20 54 45.3	+3.0
ISP	Isparta	6.82	75	P	Pn	20 54 44.9	+2.6
ISP	Isparta	6.82	75	P	Pn	20 54 44.9	+2.6
ISP	Isparta comp=Z,154nm,0.6s	6.82	75	*e*Pn	Pn	20 54 45.3	+3.0
BCK	Bucak	6.82	78	*e*P	Pn	20 54 39.5	-2.9
ANTB	Antalya	6.83	83	*e*P	Pn	20 54 43.4	+0.9
ANTB	Antalya	6.83	83	*e*P	Pn	20 54 43.4	+0.9
ALT	Altintas	6.85	64	*e*P	Pn	20 54 37.6	-5.1
ELBA	Catalca	6.86	43	*i* P	Pn	20 54 39.9	-3.0
GEMT	Gemlik	6.86	51	*e*P	Pn	20 54 44.3	+1.4
GEMT	Gemlik	6.86	51	*e*P	Pn	20 54 44.3	+1.4
SGO	Sicignano	6.87	310	P	Pn	20 54 43.8	+0.8
ALJA	Alia	6.90	284	P	Pn	20 54 44.1	+0.6
ALJA	Alia	6.90	284	P	Pn	20 54 44.1	+0.6
FAVR	Favara	6.91	280	P	Pn	20 54 45.0	+1.4
FAVR	Favara	6.91	280	P	Pn	20 54 45.0	+1.4
NKY	Niksic	6.94	340	‖ *i*Pn	Pn	20 54 43.2	-0.8
NKY				*e*Sn	Sn	20 55 55.6	-5.9
NKY	Niksic	6.94	340	‖ *i*Pn	Pn	20 54 43.2	-0.8
ZAPS	Zavoj	6.96	3	⇑ *i*Pn	Pn	20 54 45.6	+1.4
CTKS	Kestanelik-??a	6.96	43	*e*P	Pn	20 54 44.3	+0.1
CTKS	Kestanelik-??a	6.96	43	*e*P	Pn	20 54 44.3	+0.1
CTYL	Yal??k??y-??at	7.01	41	*e*P	Pn	20 54 47.2	+2.3
CTYL	Yal??k??y-??at	7.01	41	*e*P	Pn	20 54 47.2	+2.3
SHUT	Suhut-Afyon	7.01	69	*e*P	Pn	20 54 47.3	+2.3
SHUT	Suhut-Afyon	7.01	69	*e*P	Pn	20 54 47.3	+2.3
JMB	Yambol	7.02	28	P	Pn	20 54 46.1	+1.0
TREB	Trebinje	7.05	336	*e*Pn	Pn	20 54 43.9	-1.6
TREB				*e*Sn	Sn	20 55 57.7	-6.5
BGKT	Bogazkoy	7.07	45	*e*P	Pn	20 54 43.4	-2.4
NISS		7.08	359	⇑ *i*Pn	Pn	20 54 45.8	-0.1
NISS		7.08	359	⇑ *i*Pn	Pn	20 54 45.8	-0.1
SJES	Sjenica	7.14	347	⇑ *i*Pn	Pn	20 54 45.9	-0.9
SJES				*e*Sn	Sn	20 56 02.9	-3.6
SUTC	Sutluce-Ispart	7.15	78	*e*P	Pn	20 54 53.9	+7.0
BRY	Bratogost	7.15	338	⇑ *i*Pn	Pn	20 54 45.0	-1.9
BRY				*e*Sn	Sn	20 55 59.8	-7.0
BRY	Bratogost	7.15	338	⇑ *i*Pn	Pn	20 54 45.0	-1.9
LMSR	Misrath SNR=70	7.16	238	*i* P	Pn	20 54 44.9	-2.2
ISK	Istanbul-Kandi	7.16	46	*e*P	Pn	20 54 44.3	-2.7
ADVT	Abdulvahap	7.21	53	*e*P	Pn	20 54 52.0	+4.3
LUJL	Ujela comp=Z,730nm,1.5s,SNR=43	7.21	186	*i* P	Pn	20 54 46.6	-1.2
CSSN	Cassano Irpino	7.22	311	P	Pn	20 54 48.5	+0.7
CSSN	Cassano Irpino	7.22	311	P	Pn	20 54 48.5	+0.7
KLYT	Kilyos	7.27	45	*e*P	Pn	20 54 48.1	-0.4
KLYT	Kilyos	7.27	45	*e*P	Pn	20 54 48.1	-0.4
MSAG	Monte S. Angel	7.28	320	P	Pn	20 54 47.5	-1.1
MSAG	Monte S. Angel	7.28	320	P	Pn	20 54 47.5	-1.1
UPM	Unac-Piva	7.33	341	⇑ *i*Pn	Pn	20 54 48.5	-0.8
UPM				*e*Sn	Sn	20 56 05.0	-6.0
UPM	Unac-Piva	7.33	341	P	Pn	20 54 48.0	-1.3
UPM	Unac-Piva	7.33	341	P	Pn	20 54 48.0	-1.3
UPM	Unac-Piva	7.33	341	⇑ *i*Pn	Pn	20 54 48.5	-0.8
PLE	Pljevlja	7.33	344	⇑ *i*Pn	Pn	20 54 48.9	-0.4
PLE				*e*Sn	Sn	20 56 06.3	-4.7
PLE	Pljevlja	7.33	344	P	Pn	20 54 49.0	-0.3
PLE	Pljevlja	7.33	344	P	Pn	20 54 49.0	-0.3
FG5	Orsara di Pugl	7.34	315	P	Pn	20 54 49.6	+0.2
FG5	Orsara di Pugl	7.34	315	P	Pn	20 54 49.6	+0.2
BOLV	Bolvadin	7.36	68	*i* P	Pn	20 54 52.4	+2.7
BOLV	Bolvadin	7.36	68	*i* P	Pn	20 54 52.4	+2.7
SGRT	San Giovanni R	7.39	319	P	Pn	20 54 49.1	-1.1
SGRT	San Giovanni R	7.39	319	P	Pn	20 54 49.1	-1.1
STON	Ston	7.41	333	*i* Pn	Pn	20 54 48.4	-2.0
STON				Sn	Sn	20 56 05.2	-7.8
STON	Ston	7.41	333	*i* Pn	Pn	20 54 48.3	-2.1
MRB1	Monte Rocchett	7.41	313	P	Pn	20 54 51.5	+1.1
MRB1	Monte Rocchett	7.41	313	P	Pn	20 54 51.5	+1.1
BORA	Eskisehir	7.42	59	*i* P	Pn	20 54 50.8	+0.2
BORA	Eskisehir	7.42	59	*i* P	Pn	20 54 50.8	+0.2
RGNG	Rignano Grg	7.42	318	P	Pn	20 54 49.5	-1.1
RGNG	Rignano Grg	7.42	318	P	Pn	20 54 49.5	-1.1
SZH	Strazhica	7.51	21	*i* P	Pn	20 54 51.4	-0.4
SZH	Strazhica	7.51	21	P	Pn	20 54 49.9	-1.9
ESKT	Eskisehir	7.55	62	*e*P	Pn	20 54 49.1	-3.3
ESKT	Eskisehir	7.55	62	*i* P	Pn	20 54 54.3	+1.9
SEYT	Eskypehyr	7.55	62	*i* P	Pn	20 54 54.3	+1.9
USI	Ustica	7.55	291	P	Pn	20 54 51.2	-1.2
USI	Ustica	7.55	291	P	Pn	20 54 51.2	-1.2
PSB1	Pescosannita	7.57	313	P	Pn	20 54 52.7	+0.1
PSB1	Pescosannita	7.57	313	P	Pn	20 54 52.7	+0.1
GRUS	Gruza	7.65	352	⇑ *i*Pn	Pn	20 54 52.0	-1.7
GRUS				*e*Sn	Sn	20 56 14.9	-4.0
GRUS	Gruza	7.65	352	P	Pn	20 54 51.8	-1.9
GRUS	Gruza	7.65	352	⇑ *i*Pn	Pn	20 54 52.0	-1.7
GULT	Gulveren	7.72	55	*e*P	Pn	20 54 56.7	+2.1
GULT	Gulveren	7.72	55	*e*P	Pn	20 54 56.7	+2.0
FG2	Serracapriola	7.74	317	P	Pn	20 54 54.7	-0.3
FG2	Serracapriola	7.74	317	P	Pn	20 54 54.7	-0.3
CIGN	Sant'Elia a Pi	7.79	315	P	Pn	20 54 54.9	-0.7
CIGN	Sant'Elia a Pi	7.79	315	P	Pn	20 54 54.9	-0.7
BBLS	Lazići	7.84	345	⇑ *i*Pn	Pn	20 54 54.8	-1.5
BBLS	Lazići	7.84	345	⇑ *i*Pn	Pn	20 54 54.8	-1.5
ERC	Erice	7.86	285	P	Pn	20 54 57.7	+1.1
ERC	Erice	7.86	285	P	Pn	20 54 57.7	+1.1
SGG	Gregorio Mates	7.92	312	P	Pn	20 54 58.7	+1.2
SGG	Gregorio Mates	7.92	312	P	Pn	20 54 58.7	+1.2
DIVS	Divibare	7.95	348	⇑ *i*Pn	Pn	20 54 56.3	-1.5
DIVS				*e*Sn	Sn	20 56 19.7	-6.7
PRD	Provadia	7.96	29	*i* P	Pn	20 54 56.4	-1.5
PRD	Provadia	7.96	29	*i* P	Pn	20 54 56.4	-1.5
NEF	NEVSHA	7.96	28	P	Pn	20 54 59.1	+1.1
NEF	NEVSHA	7.96	28	P	Pn	20 54 59.1	+1.1
SVIS	Svilajnac	7.98	355	⇑ *i*Pn	Pn	20 54 56.2	-2.0
SVIS				*e*Sn	Sn	20 56 23.8	-3.1
SVIS	Svilajnac	7.98	355	P	Pn	20 54 56.5	-1.7
SVRH	Sivrihisar-ESK	8.01	64	*e*P	Pn	20 54 58.6	0.0
SVRH	Sivrihisar-ESK	8.01	64	*e*P	Pn	20 54 58.6	-0.1
TRUS	Trudelj	8.02	351	⇑ *i*Pn	Pn	20 54 56.1	-2.6
KIZT	Kizilcal	8.10	69	*e*P	Pn	20 55 01.5	+1.6
KIZT	Kizilcal	8.10	69	*e*P	Pn	20 55 01.5	+1.6
RFI	Roccamonfina	8.11	310	P	Pn	20 55 00.7	+0.7
RFI	Roccamonfina	8.11	310	P	Pn	20 55 00.7	+0.7
MIDA	Miranda	8.15	313	P	Pn	20 55 02.0	+1.4
MIDA	Miranda	8.15	313	P	Pn	20 55 02.0	+1.4
HENT	Hendek	8.17	54	*i* P	Pn	20 54 58.9	-1.9
HENT	Hendek	8.17	54	*i* P	Pn	20 54 58.9	-1.9
GAZI	Gazipasa	8.18	88	*i* P	Pn	20 54 58.7	-2.2
KDHN	Kadinhani	8.20	71	*i* P	Pn	20 55 03.7	+2.5
KDHN	Kadinhani	8.20	71	*i* P	Pn	20 55 03.7	+2.5
MDU	Mudurnu	8.20	57	*e*P	Pn	20 55 01.5	+0.2
MDU	Mudurnu	8.20	57	*e*P	Pn	20 55 01.5	+0.2
RNI2	Rionero Sannit	8.25	313	P	Pn	20 55 03.7	+1.8
RNI2	Rionero Sannit	8.25	313	P	Pn	20 55 03.7	+1.8
KONT	Konya--Tatoy	8.28	76	*e*P	Pn	20 54 59.6	-2.8
HDMB

AOI Ancona 9.78 320 P Pn 20 55 22.9 +0.1
AWBH 9.78 143 P Pn 20 55 19.2 -3.8
baz=144
AWBH 9.78 143 P Pn 20 55 19.2 -3.8
CING Cingoli 9.87 318 P Pn 20 55 24.5 +0.4
CING Cingoli 9.87 318 P Pn 20 55 24.5 +0.4
MERS Mersin 9.93 83 eP Pn 20 55 24.4 -0.5
MERS Mersin 9.93 83 eP Pn 20 55 24.4 -0.5
SNTG Esanatoglia 9.93 317 P Pn 20 55 25.7 +0.8
SNTG Esanatoglia 9.93 317 P Pn 20 55 25.7 +0.8
FYM Al Fayyum 9.94 129 S Sn 20 57 00.7 -14
baz=131
FYM AMP 20 57 00.0
comp=E,6748000µm,1.1s,logA/T=9.8,baz=131
FYM Al Fayyum 9.94 129 S Sn 20 57 00.7 -14
NVLJ Novalja 9.95 328⇑iPn Pn 20 55 25.1 0.0
NVLJ Sn Sn 20 57 07.2 -8.0
NVLJ Novalja 9.95 328⇑iPn Pn 20 55 25.1 0.0
MDB Medias 9.95 9⇑iP Pn 20 55 28.3 +3.1
AYT Al 'Ayyat 10.00 129 P Pn 20 55 21.0 -4.9
baz=130
AYT Al 'Ayyat 10.00 129 P Pn 20 55 21.0 -4.9
PLOR Plostina 10.10 18 P Pn 20 55 28.8 +1.6
PLOR Plostina 10.10 18 P Pn 20 55 28.8 +1.6
VRI Vrincioaia 10.13 18 P Pn 20 55 29.1 +1.4
VRI Vrincioaia 10.13 18⇑iP Pn 20 55 29.3 +1.6
VRI Vrincioaia 10.13 18 P Pn 20 55 29.1 +1.4
GULE Gulek 10.14 81 iP Pn 20 55 28.1 +0.4
GULE Gulek 10.14 81 iP Pn 20 55 28.1 +0.3
SISC Sisak 10.15 336 ePn Pn 20 55 26.0 -1.9
SISC Sn Sn 20 57 12.4 -7.8
SISC Sisak 10.15 336 ePn Pn 20 55 26.0 -1.9
CDAG Cicekdag 10.16 67 iP Pn 20 55 29.9 +1.8
CDAG Cicekdag 10.16 67 iP Pn 20 55 29.9 +1.8
MURB Monte Urbino 10.17 316 P Pn 20 55 30.0 +1.8
MURB Monte Urbino 10.17 316 P Pn 20 55 30.0 +1.8
ILGA Ilgaz 10.17 59 iP Pn 20 55 25.8 -2.4
TLCR 10.18 27 ⇑P Pn 20 55 29.5 +1.2
TLCR 10.18 27⇑iP Pn 20 55 29.5 +1.2
TLCR 10.18 27 P Pn 20 55 29.5 +1.2
PKSM Moragy 10.24 346 ePn Pn 20 55 26.2 -2.9
PKSM Moragy 10.24 346 P Pn 20 55 26.4 -2.7
PKSM Moragy 10.24 346⇑iP Pn 20 55 26.5 -2.6
KOT Kottamia 10.28 126 P Pn 20 55 24.6 -5.2
baz=127
KOT Kottamia 10.28 126 P Pn 20 55 24.6 -5.2
FSSB Fossombrone 10.31 318 P Pn 20 55 29.9 -0.2
FSSB Fossombrone 10.31 318 P Pn 20 55 29.9 -0.2
PIEI Pieia 10.34 317 P Pn 20 55 31.0 +0.5
PIEI Pieia 10.34 317 P Pn 20 55 31.0 +0.5
KARA Karaisali 10.36 81 eP Pn 20 55 31.1 +0.3
KARA Karaisali 10.36 81 eP Pn 20 55 31.1 +0.3
PKS2 Kecel 10.41 349⇓eP Pn 20 55 30.4 -1.0
KEST Kesra 10.42 271 Pn Pn 20 55 31.5 -0.2
comp=E,0.4nm,0.3s,baz=42,slow=7.8,SNR=20
KEST Sn Sn 20 57 24.9 -2.1
comp=E,0.4nm,0.3s,baz=57,slow=20,SNR=6.8
KEST LR LR 21 00 25.7
comp=E,706nm,19.0s,baz=31,slow=42
GLL Jalalah 10.44 127 P Pn 20 55 26.5 -5.4
baz=129
GLL Jalalah 10.44 127 P Pn 20 55 26.5 -5.4
HHAG Hagoal 10.45 125 P Pn 20 55 27.3 -4.7
baz=126
HHAG Hagoal 10.45 125 P Pn 20 55 27.3 -4.7
PESA Pesaro 10.45 320 P Pn 20 55 33.1 +1.1
PESA Pesaro 10.45 320 P Pn 20 55 33.1 +1.1
CDCA Cit' di Caste 10.46 316 P Pn 20 55 34.9 +2.8
PKS6 Bocsa 10.46 350⇑eP Pn 20 55 30.9 -1.2
DRGR 10.47 2 P Pn 20 55 32.7 +0.4
DRGR 10.47 2⇑iP Pn 20 55 32.6 +0.3
DRGR 10.47 2 P Pn 20 55 32.7 +0.4
BADI Badiali 10.48 316 P Pn 20 55 32.3 -0.2
BADI Badiali 10.48 316 P Pn 20 55 32.3 -0.2
CORM Corum 10.51 65 eP Pn 20 55 29.2 -3.7
HFRF Wahat Farafira 10.52 149 P Pn 20 55 29.5 -3.5
baz=150
HFRF Wahat Farafira 10.52 149 P Pn 20 55 29.5 -3.5
BOJS Bojanci 10.57 332 iPn Pn 20 55 32.1 -1.6
BOJS iSn Sn 20 57 21.9 -8.6
BOJS Bojanci 10.57 332 iPn Pn 20 55 32.1 -1.5
VSL Villasalto 10.61 291 ePn Pn 20 55 32.7 -1.6
comp=E,71nm,1.1s
VSL eSn Sn 20 57 26.3 -5.3
VSL Villasalto 10.61 291 ePn Pn 20 55 32.7 -1.6
comp=E,71nm,1.1s
KRTS Karatas 10.62 85 eP Pn 20 55 32.1 -2.3
RSM Repubblica di 10.65 319 P Pn 20 55 35.6 +0.9
PKSN Nyarlorinc 10.71 351⇓eP Pn 20 55 35.0 -0.6
BZK Bozkurt 10.76 55 eP Pn 20 55 38.8 +2.5
BZK Bozkurt 10.76 55 eP Pn 20 55 38.8 +2.5
CTKT Corum 10.77 63 iP Pn 20 55 38.0 +1.7
CTKT Corum 10.77 63 iP Pn 20 55 38.0 +1.6
AMAG Maghara 10.79 118 P Pn 20 55 31.8 -5.0
baz=120
AMAG Maghara 10.79 118 P Pn 20 55 31.8 -5.0
YOZ Yozgat 10.88 68 eP Pn 20 55 36.9 -1.0
YOZ Yozgat 10.88 68 eP Pn 20 55 36.9 -1.0
CEYT Ceyhan 10.91 82 eP Pn 20 55 39.7 +1.4
CEYT Ceyhan 10.91 82 eP Pn 20 55 39.7 +1.4
BEHE Becsehely 10.93 340⇑eP Pn 20 55 36.2 -2.3
SFI Santa Sofia 10.96 317 P Pn 20 55 40.8 +1.9
KOZT Kozan 10.98 80 eP Pn 20 55 36.9 -2.4
RSH 10.99 116 P Pn 20 55 34.9 -4.6
SUZ 11.01 123 P Pn 20 55 35.4 -4.3
baz=124
SUZ 11.01 123 P Pn 20 55 35.4 -4.3
CEY Cerknica 11.09 331 ePn Pn 20 55 38.9 -1.8
CEY eSn Sn 20 57 34.2 -8.8
CEY Cerknica 11.09 331 ePn Pn 20 55 38.9 -1.8
VMG Vicchio 11.16 316 P Pn 20 55 44.5 +2.8
ZAF 11.18 126 P Pn 20 55 37.5 -4.5
baz=127
ZAF 11.18 126 P Pn 20 55 37.5 -4.6
YAYL Yayladag 11.25 87 iP Pn 20 55 38.7 -4.3
BHL Bhannes 11.28 98 eP Pn 20 55 39.1 -4.3
LJU Ljubljana 11.30 332 iPn Pn 20 55 41.9 -1.6
LJU eSn Sn 20 57 39.0 -9.3
LJU Ljubljana 11.30 332 iP Pn 20 55 41.9 -1.7
SEI Scarperia 11.33 316 P Pn 20 55 47.1 +3.1
TRI Trieste 11.33 328 eP Pn 20 55 41.5 -2.6
TRI pmax pmax
comp=Z,83nm,0.7s
TRI Trieste 11.33 328 ePn Pn 20 55 41.5 -2.5
comp=Z,83nm,0.7s
TRI eSn Sn 20 57 35.3 -14
TRI eLg 20 59 39.5
JAVS Javornik 11.36 330 iPn Pn 20 55 43.4 -1.0
JAVS iSn Sn 20 57 39.6 -10
JAVS Javornik 11.36 330 iPn Pn 20 55 43.3 -1.1
BMR Baia Mare 11.39 4 P Pn 20 55 45.4 +0.5
BMR Baia Mare 11.39 4⇓iP Pn 20 55 45.8 +1.0
BMR Baia Mare 11.39 4 P Pn 20 55 45.4 +0.6
BUD Budapest 11.40 349⇑eP Pn 20 55 44.1 -0.9
BUD Budapest 11.40 349⇑eP Pn 20 55 44.1 -0.9
HWQ Hawqa 11.42 96 eP Pn 20 55 41.7 -3.6
PKSG 11.42 347⇓eP Pn 20 55 43.8 -1.5
BUR01 Bucovina Ar. S 11.51 10 P Pn 20 55 47.6 +1.2
BUR01 Bucovina Ar. S 11.51 10 P Pn 20 55 47.6 +1.1
BURAR Bucovina Array 11.51 10 P Pn 20 55 48.0 +1.5
BURAR Bucovina Array 11.51 10⇑iP Pn 20 55 47.8 +1.3
BURAR Bucovina Array 11.51 10 P Pn 20 55 48.0 +1.5
FNVD Fontana Vidola 11.53 316 P Pn 20 55 49.9 +3.2
BUR08 Bucovina Ar. S 11.54 10⇑iPn Pn 20 55 46.1 -0.7
BUR08 Bucovina Ar. S 11.54 10⇑iPn Pn 20 55 46.1 -0.7
RCY Rachaya 11.54 100 eP Pn 20 55 42.5 -4.5
VOY Vojsko 11.54 330 ePn Pn 20 55 45.4 -1.5
VOY e 20 55 46.4
VOY eSn Sn 20 57 43.3 -11
VOY Vojsko 11.54 330 ePn Pn 20 55 45.4 -1.5
PERS Pernice 11.59 335 iPn Pn 20 55 44.9 -2.6
PERS eSn Sn 20 57 44.7 -11
SOKA Soboth 11.66 335⇑iPn Pn 20 55 45.8 -2.6
SOKA ⇓iSn Sn 20 57 49.4 -7.6
PENC Penc 11.67 350⇑eP Pn 20 55 48.1 -0.5
PENC eS Sn 20 57 56.1 -1.2
OBKA Obir 11.68 333 P Pn 20 55 46.8 -2.0
OBKA Obir 11.68 333 iPn Pn 20 55 46.8 -2.0
SNR=34
OBKA ⇑iSn Sn 20 57 48.6 -9.1
OBKA Obir 11.68 333 P Pn 20 55 46.8 -2.0
SNR=34
PSZ Piszkesteto 11.72 352 ⇓P Pn 20 55 47.4 -1.9
PSZ Piszkesteto 11.72 352⇑iPn Pn 20 55 46.3 -3.0
comp=Z,104nm,1.0s
PSZ Piszkesteto 11.72 352⇓eP Pn 20 55 48.9 -0.4
PSZ eS Sn 20 57 52.9 -5.6
PSZ Piszkesteto 11.72 352⇓iP Pn 20 55 47.3 -2.0
PSZ Piszkesteto 11.72 352 P Pn 20 55 47.4 -1.9
HNKL Nakhl 11.75 119 P Pn 20 55 45.7 -4.2
baz=121
HNKL Nakhl 11.75 119 P Pn 20 55 45.7 -4.1
DRE Drenchia 11.76 330⇓eP Pn 20 55 48.0 -1.8
DRE Drenchia 11.76 330⇓eP Pn 20 55 48.0 -1.8
KIS Kishinev 11.76 23 eP Pn 20 55 50.0 +0.1
KIS eS Sn 20 57 59.0 -0.5
KIS LRM 21 00 48.0
comp=Z,4µm,16.0s
KIS Kishinev 11.76 23 eP Pn 20 55 50.0 +0.1
KIS eS Sn 20 57 59.0 -0.5
KIS MLR MLR
comp=N,3µm,16.0s
KIS MLR MLR
comp=Z,4µm,16.0s
KIS MLR MLR
comp=Z,4µm,16.0s
KIS Kishinev 11.76 23 eP Pn 20 55 50.0 +0.1
KIS eS Sn 20 57 59.0 -0.5
FKH Fakeheh 11.80 96 eP Pn 20 55 46.6 -3.8
TRPA Tarpa 11.81 1⇑eP Pn 20 55 49.5 -1.0
VLC Villacollemand 11.94 315 ePn Pn 20 55 52.8 +0.4
comp=Z,30nm,0.8s
VLC eSn Sn 20 57 58.3 -5.7
VLC Villacollemand 11.94 315 ePn Pn 20 55 52.8 +0.4
comp=Z,30nm,0.8s
GSCL Gusciola 11.94 316 P Pn 20 55 54.8 +2.4
GSCL Gusciola 11.94 316 P Pn 20 55 54.8 +2.4
PGF Pioggiola 11.95 305 eP Pn 20 55 55.4 +3.0
comp=Z,237nm,1.2s
PGF Pioggiola 11.95 305 eP Pn 20 55 55.4 +3.0
PGF pmax pmax
comp=Z,118nm,1.2s
PGF Pioggiola 11.95 305 eP Pn 20 55 55.4 +3.0
comp=Z,118nm,1.2s
BAD Bernadia 11.97 329⇑eP Pn 20 55 51.0 -1.8
BAD Bernadia 11.97 329⇑eP Pn 20 55 51.0 -1.8
KUZU Kuzuini 11.98 83 iP Pn 20 55 51.2 -1.8
KUZU Kuzuini 11.98 83 iP Pn 20 55 51.2 -1.8
ARSA Arzberg 12.00 338 P Pn 20 55 50.6 -2.6
ARSA Arzberg 12.00 338 iPn Pn 20 55 50.7 -2.5
SNR=44
ARSA ⇑iSn Sn 20 57 57.8 -7.6
GMNA Gemona 12.01 329 P Pn 20 55 52.3 -0.9
GMNA Gemona 12.01 329 P Pn 20 55 52.3 -0.9
BUA Buia 12.01 328⇓eP Pn 20 55 53.0 -0.3
BUA Buia 12.01 328⇓eP Pn 20 55 53.0 -0.3
GRB Gharib 12.02 129 P Pn 20 55 48.8 -4.7
baz=130
GRB Gharib 12.02 129 P Pn 20 55 48.8 -4.7
LSR Lussari 12.05 330⇓eP Pn 20 55 52.0 -1.8
LSR Lussari 12.05 330⇓eP Pn 20 55 52.0 -1.8
PTCC Patocco-Chiusa 12.06 329 P Pn 20 55 51.8 -2.2
PTCC Patocco-Chiusa 12.06 329 P Pn 20 55 51.8 -2.2
ERBM Eremo 12.08 316 P Pn 20 55 57.4 +3.1
MPRI Monte Prat 12.09 328⇑iP Pn 20 55 53.0 -1.3
MPRI Monte Prat 12.09 328⇑iP Pn 20 55 53.0 -1.3
MYKA Terra Mystica 12.13 331 ⇓iPn Pn 20 55 53.6 -1.3
MYKA ⇓iSn Sn 20 57 59.8 -8.8
MYKA Terra Mystica 12.13 331 Pn Pn 20 55 53.6 -1.3
LKFR Kufra 12.15 176 iP Pn 20 55 53.2 -2.1
comp=Z,185nm,1.6s,SNR=43
KECS Kecovo 12.22 355 ePn Pn 20 55 54.9 -1.3
KECS eSn Sn 20 58 05.7 -5.2
KECS Kecovo 12.22 355 ePN Pn 20 55 54.9 -1.3
PLRO Paularo 12.26 329⇑iP Pn 20 55 57.0 +0.3
PLRO Paularo 12.26 329⇑iP Pn 20 55 57.0 +0.3
UZH Uzhgorod 12.31 0⇑iP Pn 20 55 55.5 -1.8
UZH eS Sn 20 58 08.3 -4.6
UZH MLR MLR
comp=N,3µm,14.0s
UZH MLR MLR
comp=E,3µm,14.0s
UZH MLR MLR
comp=Z,2µm,14.0s
UZH Uzhgorod 12.31 0 iP Pn 20 55 55.5 -1.8
ZOU Zoufplan 12.34 329⇑eP Pn 20 55 57.0 -0.8
ZOU Zoufplan 12.34 329⇑eP Pn 20 55 57.0 -0.8
GZT Gaziantep 12.36 81 iP Pn 20 55 57.8 -0.3
HDK1 Dakhla 12.39 148 P Pn 20 55 55.4 -3.1
baz=149
HDK1 Dakhla 12.39 148 P Pn 20 55 55.4 -3.2
LGHD Ghdames 12.39 243 iP Pn 20 55 57.4 -1.2
comp=Z,98nm,1.2s,SNR=43
VYHS Vyhne 12.42 350 ePn Pn 20 55 56.0 -2.9
VYHS eSn Sn 20 57 59.0 -17
VYHS Vyhne 12.42 350 ePN Pn 20 55 56.0 -2.9
CSMI Casera Mimoias 12.44 328⇑iP Pn 20 55 58.0 -1.2
CSMI Casera Mimoias 12.44 328⇑iP Pn 20 55 58.0 -1.2
SIM Simferopol' 12.49 43 eP Pn 20 56 01.9 +2.0
SIM eS Sn 20 58 21.0 +3.5
SIM pmax pmax
comp=Z,34nm,0.7s
SIM MLR MLR
comp=Z,2µm,19.0s
SIM Simferopol' 12.49 43 eP Pn 20 56 01.9 +2.0
comp=Z,34nm,0.7s
CONA Conrad Observa 12.51 340 iPn Pn 20 55 57.8 -2.4
SNR=17
CONA ⇑iSn Sn 20 58 09.4 -8.6
TR2 12.54 126 P Pn 20 55 55.9 -4.8
baz=127
TR2 12.54 126 P Pn 20 55 55.9 -4.8
EIL Elat 12.59 118 Pn Pn 20 55 57.4 -3.9
comp=Z,1.5nm,0.3s,baz=304,slow=7.8,SNR=17
EIL Sn Sn 20 58 07.0 -13
comp=Z,7.3nm,0.3s,baz=328,slow=22,SNR=8.8
KOLS Kolonicke sedl 12.61 0 eP Pn 20 56 00.9 -0.6
KOLS Kolonicke sedl 12.61 0 ePN Pn 20 56 00.9 -0.6
KOLS Kolonicke sedl 12.61 0 eP Pn 20 56 00.9 -0.6
KBA Koelnbreinsper 12.61 331 ⇓iPn Pn 20 55 59.6 -1.9
SNR=19
KBA ⇓iSn Sn 20 58 13.9 -6.5
KBA Koelnbreinsper 12.61 331 Pn Pn 20 55 59.6 -1.9
SNR=19
HKAT Jabal Katrina 12.63 125 P Pn 20 55 57.6 -4.2
baz=126
HKAT Jabal Katrina 12.63 125 P Pn 20 55 57.6 -4.3
SMOL Smolenice 12.69 345 ePn Pn 20 56 00.6 -1.9
SMOL eSn Sn 20 58 06.7 -15
SMOL Smolenice 12.69 345 ePN Pn 20 56 00.6 -1.9
SMOL Smolenice 12.69 345 eP Pn 20 56 00.6 -1.9
ABTA Abfaltersbach 12.69 328 iPn Pn 20 56 02.1 -0.4
SNR=20
ABTA ⇓iSn Sn 20 58 11.5 -11
ABTA Abfaltersbach 12.69 328 P Pn 20 56 02.1 -0.4
SNR=20
HBST Basata 12.70 120 P Pn 20 55 58.3 -4.5
baz=121
HBST Basata 12.70 120 P Pn 20 55 58.3 -4.5
ASF Jabal al Asfar 12.85 105 Pn Pn 20 56 01.8 -3.0
comp=Z,1.1nm,0.3s,baz=170,slow=7.2,SNR=12
ASF Sn Sn 20 58 13.7 -12
comp=Z,0.6nm,0.3s,baz=109,slow=7.7,SNR=2.6
ASF ScP ScP 21 05 09.5 +3.9
comp=Z,0.1nm,0.3s,baz=23,slow=0.4,SNR=4.2
MAGA Magasa 12.85 321 P Pn 20 56 04.0 -0.8
MAGA Magasa 12.85 321 P Pn 20 56 04.0 -0.8
AKRG Al Kharijah 12.91 144 P Pn 20 56 02.7 -3.1
baz=145
HAQS Haql 12.93 120 P Pn 20 56 01.6 -4.4
HAQS Haql 12.93 120 P Pn 20 56 01.6 -4.4
MOA Molln 12.93 335 P Pn 20 56 03.9 -2.0
MOA Molln 12.93 335 iPn Pn 20 56 04.0 -1.9
SNR=34
MOA ⇑iSn Sn 20 58 21.6 -6.5
MOA Molln 12.93 335 P Pn 20 56 04.0 -1.9
SNR=34
APPI Appiano 13.06 324 P Pn 20 56 06.7 -0.9
APPI Appiano 13.06 324 P Pn 20 56 06.7 -0.9
MALT Malatya 13.08 76 eP Pn 20 56 10.4 +2.5
MALT pmax pmax
comp=Z,69nm,1.1s
MALT Malatya 13.08 76 ePn Pn 20 56 10.4 +2.5
comp=Z,69nm,1.1s
MALT Malatya 13.08 76⇑iP Pn 20 56 09.1 +1.2
MALT Malatya 13.08 76 ePn Pn 20 56 10.4 +2.5
comp=Z,69nm,1.1s
MABI Malga Bissina 13.10 322 P Pn 20 56 07.6 -0.6
MABI Malga Bissina 13.10 322 P Pn 20 56 07.6 -0.6
STHS Stebnicka Huta 13.11 357 eP Pn 20 56 09.8 +1.5
STHS Stebnicka Huta 13.11 357 ePN Pn 20 56 09.8 +1.5
STHS Stebnicka Huta 13.11 357 eP Pn 20 56 09.8 +1.5
SHRM 13.14 126 P Pn 20 56 04.4 -4.4
baz=127
SHRM 13.14 126 P Pn 20 56 04.4 -4.4
NIE Niedzica 13.17 355 eP Pn 20 56 08.2 -0.9
NIE eS Sn 20 58 34.2 +0.3
NIE Niedzica 13.17 355 eP Pn 20 56 08.2 -0.9
NIE eS Sn 20 58 34.2 +0.3
HHRG Al Ghardaqah 13.25 130 P Pn 20 56 06.3 -4.1
baz=131
HHRG Al Ghardaqah 13.25 130 P Pn 20 56 06.3 -4.1
KWP Kalwaria Pacla 13.31 1 eP Pn 20 56 11.7 +0.7
KWP Kalwaria Pacla 13.31 1⇑iPn Pn 20 56 11.4 +0.4
comp=Z,176nm,1.2s
KWP eSn Sn 20 58 37.9 +0.5
KWP Kalwaria Pacla 13.31 1⇑iP Pn 20 56 11.5 +0.4
KWP Kalwaria Pacla 13.31 1⇑iPn Pn 20 56 11.4 +0.3
comp=Z,176nm,1.2s
KWP Kalwaria Pacla 13.31 1 eP Pn 20 56 11.7 +0.6
RJOB Jochberg 13.37 332 eP Pn 20 56 10.2 -1.6
GRSN GIRESUNGRSN 13.38 65 iP Pn 20 56 10.3 -1.7
BDAS Al Bad' 13.44 122 P Pn 20 56 04.7 -8.2
BDAS Al Bad' 13.44 122 P Pn 20 56 04.7 -8.2
WTTA Wattenberg 13.46 328 iPn Pn 20 56 13.3 +0.2
SNR=46
WTTA ⇑iSn Sn 20 58 33.8 -7.3
WTTA Wattenberg 13.46 328 P Pn 20 56 13.3 +0.2
SNR=46
BRMO Bormio 13.47 323 P Pn 20 56 14.7 +1.5
BRMO Bormio 13.47 323 P Pn 20 56 14.7 +1.5
JLOS 13.52 120 P Pn 20 56 09.0 -5.0
JLOS 13.52 120 P Pn 20 56 09.0 -5.0
WATA Walderalm 13.55 328 iPn Pn 20 56 14.0 -0.3
SNR=78
WATA ⇑iSn Sn 20 58 36.0 -7.1
WATA Walderalm 13.55 328 P Pn 20 56 14.0 -0.2
SNR=78
SAOF Saorge 13.55 309 eP Pn 20 56 15.9 +1.5
SAOF Saorge 13.55 309 eP Pn 20 56 15.9 +1.5
LVV L'vov 13.56 5 eP Pn 20 56 14.0 -0.4
LVV eS Sn 20 58 43.4 -0.1
LVV MLR MLR
comp=Z,1µm,13.0s
LVV MLR MLR
comp=N,800nm,14.0s
LVV MLR MLR
comp=E,600nm,13.0s
SBF Sospel 13.57 308 eP Pn 20 56 16.5 +1.9
comp=E,172nm,1.0s
SBF Sospel 13.57 308 eP Pn 20 56 16.5 +1.9
SBF pmax pmax
comp=Z,86nm,1.0s
SBF Sospel 13.57 308 eP Pn 20 56 16.5 +1.9
comp=Z,86nm,1.0s
SBF Sospel 13.57 308 eP Pn 20 56 16.5 +1.9
comp=Z,86nm,1.0s
VRAC Vranov 13.61 344 P Pn 20 56 13.0 -2.1
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC Vranov 13.61 344 Pn Pn 20 56 13.0 -2.1
comp=Z,0.7nm,0.3s,baz=172,slow=14,SNR=18
VRAC Vranov 13.61 344 P Pn 20 56 12.4 -2.7
VRAC Vranov 13.61 344⇑iP Pn 20 56 12.4 -2.7
VRAC Vranov 13.61 344 ePn Pn 20 56 12.9 -2.2
AUTN L'Aution 13.64 309 eP Pn 20 56 20.3 +4.8
AUTN L'Aution 13.64 309 eP Pn 20 56 20.3 +4.8
LUCF Luceram 13.64 308 eP Pn 20 56 19.5 +3.9
LUCF Luceram 13.64 308 eP Pn 20 56 19.5 +3.9
FETA Feichten 13.69 325 iPn Pn 20 56 16.9 +0.8
SNR=14
FETA Feichten 13.69 325 Pn Pn 20 56 16.9 +0.7
SNR=14
MOTA Moosalm 13.76 327 iPn Pn 20 56 17.1 -0.1
SNR=130
MOTA ⇑iSn Sn 20 58 41.7 -6.6
MOTA Moosalm 13.76 327 Pn Pn 20 56 17.1 0.0
SNR=130
TOUF Mont Tournerai 13.76 309 eP Pn 20 56 20.7 +3.5
TOUF Mont Tournerai 13.76 309 eP Pn 20 56 20.7 +3.5
STV Sant Anna di V 13.83 309 P Pn 20 56 20.4 +2.3
OKC Ostrava-Krasne 13.83 349 eP Pn 20 56 15.9 -2.2
OKC eS Sn 20 58 44.0 -6.0
OKC MLR MLR
comp=Z,2µm,10.4s
OKC Ostrava-Krasne 13.83 349 eP Pn 20 56 15.9 -2.2
OKC ex x 20 56 25.7
OKC eS Sn 20 58 44.0 -6.0
OKC AMS AMS 21 02 50.0
comp=Z,2µm,10.4s
TREC Trest 13.87 341 eP Pn 20 56 16.0 -2.6
TREC eS Sn 20 58 43.2 -7.6
TREC MLR MLR
comp=Z,5µm,14.8s
TREC Trest 13.87 341 eP Pn 20 56 16.0 -2.6
TREC ex x 20 56 26.3
TREC eS Sn 20 58 43.2 -7.6
TREC AMS AMS 21 02 20.0
comp=Z,5µm,14.8s
CALN Calern 13.87 307 eP Pn 20 56 21.6 +3.0
CALN Calern 13.87 307 eP Pn 20 56 21.6 +3.0
MORC Moravsky Berou 13.87 347⇑eP Pn 20 56 15.0 -3.7
MORC pmax pmax
comp=Z,31nm,0.8s
MORC Moravsky Berou 13.87 347⇑ePn Pn 20 56 15.0 -3.6
comp=Z,31nm,0.8s
MORC eSn Sn 20 58 41.7 -9.3
DAVOX Davos/Dischmat 13.92 322 Pn Pn 20 56 20.3 +0.9
comp=Z,3.1nm,0.3s,baz=131,slow=19,SNR=26
DAVOX Sn Sn 20 58 40.4 -12
comp=Z,7.5nm,0.3s,baz=145,slow=23,SNR=6.0
DAVOX Davos/Dischmat 13.92 322 Pn Pn 20 56 20.3 +0.9
LMR La Mourre 13.93 305 eP Pn 20 56 22.7 +3.2
LMR La Mourre 13.93 305 eP Pn 20 56 22.7 +3.2
FRF La Foret Royal 13.94 306 eP Pn 20 56 22.1 +2.5
HSFG 13.94 131 P Pn 20 56 16.3 -3.5
baz=132
HSFG 13.94 131 P Pn 20 56 16.3 -3.5
GEC2 GERESS Array S 13.98 336 eP Pn 20 56 17.0 -3.2
GERES GERESS Array B 13.98 336 Pn Pn 20 56 17.9 -2.3
comp=Z,4.2nm,0.3s,baz=155,slow=14,SNR=53
GERES Sn Sn 20 58 42.9 -11
comp=Z,6.7nm,0.3s,baz=155,slow=23,SNR=13
DAVOS Davos 14.01 322 P Pn 20 56 20.3 -0.2
OJC Ojcow 14.01 354 eP Pn 20 56 18.0 -2.5
OJC ePP 20 56 27.9
OJC eS Sn 20 59 02.1 +7.9
OJC L 21 02 53.2
comp=Z,3.3nm,16.7s
RETA Reutte 14.02 326 iPn Pn 20 56 21.6 +0.9
SNR=8.3
RETA Reutte 14.02 326 Pn Pn 20 56 21.6 +0.9
SNR=8.3
KHC Kasperske Hory 14.27 336 eP Pn 20 56 20.9 -3.1
KHC eS Sn 20 58 53.0 -7.8
KHC MLR MLR
comp=Z,10µm,16.7s
KHC Kasperske Hory 14.27 336⇑iPn Pn 20 56 20.7 -3.3
comp=Z,64nm,1.0s
KHC eSn Sn 20 58 50.9 -10
KHC Kasperske Hory 14.27 336 eP Pn 20 56 20.9 -3.1
KHC ex x 20 56 30.9
KHC ex x 20 56 40.5
KHC ex x 20 57 11.5
KHC ex x 20 57 50.0
KHC eS Sn 20 58 53.0 -7.8
KHC ex x 20 58 57.5
KHC AMS AMS 21 02 30.0
comp=Z,10µm,16.7s
DAVA Damuels 14.28 324 P Pn 20 56 26.1 +2.0
DAVA Damuels 14.28 324 iPn Pn 20 56 26.1 +2.0
SNR=12
DAVA ⇑iSn Sn 20 58 54.8 -6.2
DAVA Damuels 14.28 324 Pn Pn 20 56 26.1 +2.0
SNR=12
ANN Anapa 14.34 49 eP Pn 20 56 29.1 +4.2
ANN pmax pmax
comp=Z,212nm,1.2s
ANN Anapa 14.34 49 eP Pn 20 56 29.1 +4.2

comp=Z,212nm,1.2s
DIYA Diyarbakir 14.40 78 *i* P **Pn 20 56 25.1 -0.7**
MBDF Montbardon 14.41 310 *e*P **Pn 20 56 26.2 +0.3**
comp=Z,138nm,1.0s
MBDF Montbardon 14.41 310 *e*P **Pn 20 56 26.2 +0.3**
MBDF pmax pmax
comp=Z,69nm,1.0s
MBDF Montbardon 14.41 310 *e*P **Pn 20 56 26.2 +0.3**
comp=Z,69nm,1.0s
WET Wettzell 14.52 335 *e*P **Pn 20 56 23.0 -4.2**
BNI Bardonecchia 14.63 311 *e*P **Pn 20 56 30.5 +1.7**
BNI *e* 20 59 01.0
BNI pmax pmax
comp=Z,39nm,1.3s
BNI Bardonecchia 14.63 311 *e*Pn **Pn 20 56 30.5 +1.7**
comp=Z,39nm,1.3s
BNI *e*Sn **Sn 20 59 01.0 -8.6**
BNI Bardonecchia 14.63 311 *e*Pn **Pn 20 56 30.5 +1.7**
comp=Z,39nm,1.3s
DPC Dobruska-Polom 14.66 345 *e*P **Pn 20 56 26.8 -2.3**
DPC *e*S **Sn 20 59 04.7 -5.4**
DPC MLR MLR
comp=Z,2µm,18.5s
DPC Dobruska-Polom 14.66 345 *e*P **Pn 20 56 26.8 -2.3**
DPC *e*x x 20 56 35.3
DPC *e*S **Sn 20 59 04.7 -5.4**
DPC AMS AMS 21 02 30.0
comp=Z,2µm,18.5s
PRU Pruhonice 14.75 340 *e*P **Pn 20 56 28.4 -1.9**
PRU *e*S **Sn 20 59 10.1 -2.2**
PRU MLR MLR
comp=Z,5µm,15.6s
PRU Pruhonice 14.75 340 *e*P **Pn 20 56 28.4 -1.9**
PRU *e*x x 20 56 36.1
PRU *e*S **Sn 20 59 10.1 -2.2**
PRU AMS AMS 21 02 40.0
comp=Z,5µm,15.6s
HQSR 14.82 132 P **Pn 20 56 29.2 -2.1**
baz=133
HQSR 14.82 132 P **Pn 20 56 29.2 -2.2**
SMRF Simiane la Rot 14.82 306 *e*P **Pn 20 56 32.7 +1.5**
comp=Z,49nm,1.0s
SMRF Simiane la Rot 14.82 306 *e*P **Pn 20 56 32.7 +1.5**
comp=Z,49nm,1.0s
LPG La Plagne 14.83 313 *e*P **Pn 20 56 33.0 +1.7**
comp=Z,65nm,1.0s
LPG La Plagne 14.83 313 *e*P **Pn 20 56 33.0 +1.7**
LPG pmax pmax
comp=Z,33nm,1.0s
LPG La Plagne 14.83 313 *e*P **Pn 20 56 33.0 +1.7**
comp=Z,32nm,1.0s
LPL La Plagne 14.85 313 *e*P **Pn 20 56 33.1 +1.5**
comp=Z,55nm,1.0s
LPL La Plagne 14.85 313 *e*P **Pn 20 56 33.1 +1.5**
LPL pmax pmax
comp=Z,27nm,1.0s
LPL La Plagne 14.85 313 *e*P **Pn 20 56 33.1 +1.5**
comp=Z,27nm,1.0s
PRA Prague 14.86 340 P **Pn 20 56 30.0 -1.7**
PRA *e*x x 20 56 38.0
PRA *e*x x 20 59 31.0
KOPT Kop Dagi 14.86 70 *i* P **Pn 20 56 29.1 -2.8**
UPC Upice 14.87 344 *e*P **Pn 20 56 30.6 -1.3**
UPC *e*x x 20 56 37.9
ORIF Oris-en-Rattie 15.06 310 *e*P **Pn 20 56 36.8 +2.5**
comp=Z,95nm,1.2s
ORIF *e*MLR MLR
comp=Z,814nm,20.2s
ORIF Oris-en-Rattie 15.06 310 *e*P **Pn 20 56 36.8 +2.5**
ORIF pmax pmax
comp=Z,48nm,1.2s
ORIF Oris-en-Rattie 15.06 310 *e*P **Pn 20 56 36.8 +2.5**
comp=Z,48nm,1.2s
ORIF Oris-en-Rattie 15.06 310 *e*P **Pn 20 56 36.8 +2.5**
comp=Z,48nm,1.2s
HDH Heidenheim-Cha 15.10 328 P **Pn 20 56 32.9 -1.9**
KSP Ksiaz 15.13 346 *e*P **Pn 20 56 35.9 +0.7**
KSP *e* 20 56 40.9
KSP Ksiaz 15.13 346 *e*P **Pn 20 56 34.8 -0.4**
GUT Gutenstein 15.20 325 P **Pn 20 56 36.6 +0.4**
PVCC Panska Ves 15.23 341 *e*P **Pn 20 56 34.3 -2.3**
PVCC MLR MLR
comp=Z,4µm,14.8s
PVCC Panska Ves 15.23 341 *e*P **Pn 20 56 34.3 -2.3**
PVCC *e*x x 20 56 42.7
PVCC AMS AMS 21 03 10.0
comp=Z,4µm,14.8s
AKASG Malin Array Be 15.25 17 Pn **Pn 20 56 33.9 -2.8**
comp=Z,7.7nm,0.3s,baz=206,slow=12,SNR=35
AKASG LR LR 21 03 13.0
comp=Z,3µm,21.0s,baz=200,slow=40
AKASG ScP ScP 21 05 10.7 +1.4
comp=Z,0.4nm,0.3s,baz=0.0,slow=0.0,SNR=6.6
AKBB Malin Array Si 15.25 17 *e*P **Pn 20 56 33.2 -3.5**
SOC Sochi 15.26 56 *i* P **Pn 20 56 36.4 -0.5**
SOC *e* 20 59 26.7
SOC pmax pmax
comp=Z,8.0nm,0.4s
SOC MLR MLR
comp=Z,956nm,20.0s
HADB 15.26 132 P **Pn 20 56 35.2 -1.9**
baz=133
HADB 15.26 132 P **Pn 20 56 35.2 -1.9**
ROTZ Rotzenmuhle 15.28 335 *e*P **Pn 20 56 33.8 -3.4**
BUCH Bad Urach 15.37 326 P **Pn 20 56 37.4 -1.0**
SPAK Spaichingen-Ko 15.38 324 *e*P **Pn 20 56 39.3 +0.8**
AAHD Abu Hadid 15.49 141 P **Pn 20 56 39.0 -1.1**
baz=142
AAHD Abu Hadid 15.49 141 P **Pn 20 56 39.0 -1.1**
ERZM Erzurum 15.51 71 *i* P **Pn 20 56 40.9 +0.7**
GRA1 Grafenberg Arr 15.57 333 *e*P **Pn 20 56 39.1 -1.8**
GRA1 *e*PKPbc ScP 21 05 11.7 +1.8
GRF Grafenberg Arr 15.57 333 *e*P **Pn 20 56 39.1 -1.8**
GRF *e*L 21 03 55.2
comp=Z,10µm,20.0s
BBS Basel-Blauen 15.58 320 *e*P **Pn 20 56 41.9 +0.8**
NKC Novy Kostel 15.60 336 *e*P **Pn 20 56 41.6 +0.3**
NKC MLR MLR
comp=Z,8µm,17.0s
NKC Novy Kostel 15.60 336 *e*P **Pn 20 56 41.6 +0.3**
NKC AMS AMS 21 03 30.0
comp=Z,8µm,17.0s
FELD Feldberg im Sc 15.60 322 *e*P **Pn 20 56 41.3 -0.1**
EMRS Mersa Alam 15.64 133 P **Pn 20 56 40.5 -1.6**
baz=134
EMRS Mersa Alam 15.64 133 P **Pn 20 56 40.5 -1.5**
WERN Wernitzgruen 15.67 336 *e*P **Pn 20 56 42.4 +0.2**
STU Stuttgart 15.68 327 *e*P **Pn 20 56 42.1 -0.2**
comp=Z,78nm,0.8s
STU Stuttgart 15.68 327 *e*P **Pn 20 56 41.3 -1.0**
STU pmax pmax
comp=Z,74nm,0.8s
STU Stuttgart 15.68 327 *e*Pn **Pn 20 56 41.3 -1.0**
comp=Z,74nm,0.8s
STU Stuttgart 15.68 327 *e*Pn **Pn 20 56 41.3 -1.0**
comp=Z,74nm,0.8s
KIZ Kirchzarten 15.70 322 P **Pn 20 56 42.8 +0.2**
BRG Berggiesshubel 15.71 340 *e*P **Pn 20 56 40.5 -2.3**
comp=Z,27nm,1.1s
BRG *i* 20 56 56.9
comp=Z,55nm,1.4s
BRG S **S 20 59 43.0 -5.4**
BRG
comp=N,3µm,14.1s
BRG
comp=E,2µm,10.3s
BRG
comp=Z,5µm,14.6s
BRG Berggiesshubel 15.71 340 *e*P **Pn 20 56 40.5 -2.3**
BRG S **S 20 59 43.0 -5.4**
BRG pmax pmax
comp=Z,16nm,1.1s
BRG MLR MLR
comp=N,2µm,14.1s
BRG MLR MLR
comp=E,1µm,10.3s
BRG MLR MLR
comp=Z,3µm,14.6s
GUNZ Gunzen 15.75 336 *e*P **Pn 20 56 42.9 -0.3**
comp=Z,71nm,1.3s
TANN Tannenbergstha 15.75 337 *e*P **Pn 20 56 43.2 0.0**
comp=Z,48nm,1.0s
BFO Black Forest 15.76 324 Pn **Pn 20 56 44.8 +1.5**
comp=Z,156nm,0.9s,SNR=9.1
BFO Black Forest 15.76 324 *e*P **Pn 20 56 42.3 -1.0**
comp=Z,32nm,1.0s
BFO Black Forest 15.76 324 *e*P **Pn 20 56 42.3 -1.0**
BFO pmax pmax
comp=Z,32nm,1.0s
LBG Lerchenberg 15.78 326 P **Pn 20 56 43.8 +0.2**
VIVF Saint-Julien-I 15.79 308 *e*P **Pn 20 56 45.1 +1.4**
comp=Z,70nm,1.1s
VIVF Saint-Julien-I 15.79 308 *e*P **Pn 20 56 45.1 +1.4**
VIVF pmax pmax
comp=Z,35nm,1.1s
VIVF Saint-Julien-I 15.79 308 *e*P **Pn 20 56 45.1 +1.4**
comp=Z,35nm,1.1s
VIVF Saint-Julien-I 15.79 308 *e*P **Pn 20 56 45.1 +1.4**
comp=Z,35nm,1.1s
WERD Werda 15.83 336 *e*P **Pn 20 56 44.3 +0.1**
comp=Z,49nm,1.4s
CABF La Chapelle 15.83 315 *e*P **Pn 20 56 44.5 +0.2**
comp=Z,60nm,1.0s
CABF La Chapelle 15.83 315 *e*P **Pn 20 56 44.5 +0.2**
CABF pmax pmax
comp=Z,30nm,1.0s
CABF La Chapelle 15.83 315 *e*P **Pn 20 56 44.5 +0.2**
comp=Z,30nm,1.0s
LOMF Lomont 15.87 319 *e*P **Pn 20 56 44.3 -0.4**
DBAD Bademkaya 15.93 67 *i* P **Pn 20 56 43.2 -2.4**
SIND Sindeldorf 15.94 329 P **Pn 20 56 44.3 -1.3**
HOMI Horasan 15.94 71 *i* P **Pn 20 56 40.8 -4.9**
DDEM Demirkent 15.95 67 *i* P **Pn 20 56 45.4 -0.5**
DBOC Borcka 15.98 66 *i* P **Pn 20 56 45.1 -1.1**
LIBD Limburg 15.99 322 *e*P **Pn 20 56 46.0 -0.3**
LASF Ste Croix 15.99 305 *e*P **Pn 20 56 48.9 +2.5**
comp=Z,54nm,1.2s
LASF Ste Croix 15.99 305 *e*P **Pn 20 56 48.9 +2.5**
comp=Z,27nm,1.2s
MOF Molkenrain 16.02 321 *e*P **Pn 20 56 46.2 -0.5**
SSB Saint Sauveur 16.06 309 *e*P **Pn 20 56 44.9 -2.3**
SSB pmax pmax
comp=Z,25nm,1.3s
SSB Saint Sauveur 16.06 309 *e*Pn **Pn 20 56 44.9 -2.3**
comp=Z,25nm,1.3s
DAGI Agillar 16.11 67 *i* P **Pn 20 56 40.7 -7.1**
HINF Hinteralfeld 16.15 320 *e*P **Pn 20 56 47.8 -0.5**
comp=Z,81nm,1.1s
HINF Hinteralfeld 16.15 320 *e*P **Pn 20 56 47.8 -0.5**
HINF pmax pmax
comp=Z,41nm,1.1s
HINF Hinteralfeld 16.15 320 *e*P **Pn 20 56 47.8 -0.5**
comp=Z,40nm,1.1s
HAGS Hagol 16.21 134 P **Pn 20 56 49.3 0.0**
baz=135
HAGS Hagol 16.21 134 P **Pn 20 56 49.3 0.0**
MOX Moxa 16.23 335 *e*PN **Pn 20 56 47.2 -2.0**
MOX *e*SN **Sn 20 59 36.0 -12**
MOX
comp=Z,6µm,23.0s
MOX Moxa 16.23 335 *e*P **Pn 20 56 47.2 -2.0**
comp=Z,27nm,0.9s
MOX Moxa 16.23 335 *e*Pn **Pn 20 56 47.2 -2.0**
MOX *e*Sn **Sn 20 59 36.0 -12**
MOX Moxa 16.23 335 *e*Pn **Pn 20 56 47.2 -2.0**
ECH Echery 16.25 322 *e*P **Pn 20 56 49.0 -0.6**
ECH Echery 16.25 322 *e*P **Pn 20 56 48.7 -0.9**
ECH pmax pmax
comp=Z,65nm,1.1s
ECH Echery 16.25 322 *e*Pn **Pn 20 56 48.7 -0.9**
comp=Z,65nm,1.1s
ECH *e*Sn **Sn 20 59 32.8 -16**
ECH Echery 16.25 322 *e*Pn **Pn 20 56 48.7 -0.9**
comp=Z,65nm,1.1s
CDF Champ du Feu 16.32 322 *e*P **Pn 20 56 50.2 -0.3**
comp=Z,102nm,0.9s
CDF Champ du Feu 16.32 322 *e*P **Pn 20 56 50.2 -0.3**
CDF pmax pmax
comp=Z,51nm,0.9s
CDF Champ du Feu 16.32 322 *e*P **Pn 20 56 50.2 -0.3**
comp=Z,51nm,0.9s
CLL Collm 16.37 339 *e*P **Pn 20 56 50.2 -0.8**
comp=Z,104nm,1.0s
CLL Collm 16.37 339⇓ *i*P **Pn 20 56 50.4 -0.6**
CLL pmax pmax
comp=Z,15nm,1.0s
CLL Collm 16.37 339⇓ *i*P **Pn 20 56 50.4 -0.6**
comp=Z,15nm,1.0s
CLL *i* 20 56 54.2
CLL *e* 20 57 03.0
CLL Collm 16.37 339⇓ *i*P **Pn 20 56 50.4 -0.6**
comp=Z,15nm,1.0s
CLL Lmax 20 03 53.0
CLL *i* 20 56 54.2
comp=Z,59nm,1.1s
CLL *e* 20 57 03.0
CLL *i* 20 57 05.2
CLL *i* (sPP) 20 57 20.1
SWS Schriesheim-Wi 16.43 327 P **Pn 20 56 52.6 +0.8**
SWS Schriesheim-Wi 16.43 327 P **Pn 20 56 52.6 +0.8**
LANF Langenberg 16.46 325 *e*P **Pn 20 56 51.9 -0.4**
TOD Tromm 16.47 328 *e*P **Pn 20 56 52.1 -0.3**
HAU Haudompre 16.53 320 *e*P **Pn 20 56 53.7 +0.6**
comp=Z,182nm,1.1s
HAU *e*MLR MLR
comp=Z,2µm,19.8s
HAU Haudompre 16.53 320 *e*P **Pn 20 56 53.7 +0.6**
HAU pmax pmax
comp=Z,91nm,1.1s
HAU Haudompre 16.53 320 *e*P **Pn 20 56 53.7 +0.6**
comp=Z,91nm,1.1s
HAU Haudompre 16.53 320 *e*P **Pn 20 56 53.7 +0.6**
comp=Z,91nm,1.1s
MSL Mosul 16.85 84 *e*P **Pn 20 56 58.0 +0.8**
MSL *e*S **S 21 00 03.0 -8.8**
MTLF Montolieu 16.85 301 *e*P **Pn 20 56 59.3 +2.1**
comp=Z,28nm,1.1s
MTLF Montolieu 16.85 301 *e*P **Pn 20 56 59.3 +2.1**
MTLF pmax pmax
comp=Z,14nm,1.1s
MTLF Montolieu 16.85 301 *e*P **Pn 20 56 59.3 +2.1**
comp=Z,14nm,1.1s
MTLF Montolieu 16.85 301 *e*P **Pn 20 56 59.3 +2.1**
comp=Z,14nm,1.1s
THEF They Montfort 16.86 320 *e*P **Pn 20 56 59.2 +2.0**
THEF They Montfort 16.86 320 *e*P **Pn 20 56 59.2 +2.0**
LBL Lubilhac 16.86 308 *e*P **Pn 20 56 57.4 +0.1**
LBL Lubilhac 16.86 308 *e*P **Pn 20 56 57.4 +0.1**
UBBA Unterbreizbach 16.94 333 *e*P **Pn 20 56 58.8 +0.6**
comp=Z,94nm,1.9s
PLDF La Plantade 16.96 310 *e*P **Pn 20 56 59.3 +0.8**
PLDF La Plantade 16.96 310 *e*P **Pn 20 56 59.3 +0.8**
TNS Taunus Mts 17.09 329 *e*P **Pn 20 57 00.8 +0.8**
comp=Z,166nm,1.2s
TNS Taunus Mts 17.09 329 *e*P **Pn 20 57 00.8 +0.8**
TNS pmax pmax
comp=Z,166nm,1.2s
TNS Taunus Mts 17.09 329 *e*P **Pn 20 57 00.8 +0.8**
comp=Z,166nm,1.2s
DIGO Kars 17.10 70 *i* P **Pn 20 57 00.8 +0.5**
DIGO Kars 17.10 70 *i* P **Pn 20 57 00.8 +0.5**
SMF Signal de Mont 17.15 313 *e*P **Pn 20 57 00.7 -0.2**
comp=Z,49nm,0.9s
SMF Signal de Mont 17.15 313 *e*P **Pn 20 57 00.7 -0.2**
SMF pmax pmax
comp=Z,25nm,0.9s
SMF Signal de Mont 17.15 313 *e*P **Pn 20 57 00.7 -0.2**
comp=Z,25nm,0.9s
SMF Signal de Mont 17.15 313 *e*P **Pn 20 57 00.7 -0.2**
comp=Z,25nm,0.9s
EPOB Poblet 17.19 293 P **Pn 20 57 02.5 +1.1**
comp=Z,76nm,1.4s
EPOB Poblet 17.19 293 P **Pn 20 57 02.5 +1.1**
comp=Z,76nm,1.4s
RUE Ruedersdorf 17.22 342 *e*P **Pn 20 57 02.6 +0.9**
comp=Z,186nm,1.0s
RUE Ruedersdorf 17.22 342 *e*Pn **Pn 20 57 02.0 +0.3**
comp=Z,210nm,1.1s
RUE Ruedersdorf 17.22 342 *e*Pn **Pn 20 57 02.0 +0.3**
comp=Z,210nm,1.1s
ABH Alteburg 17.23 326 *e*P **Pn 20 57 02.2 +0.5**
ABH Alteburg 17.23 326 *e*P **Pn 20 57 02.2 +0.5**
PYM Petit Puy Mans 17.24 309 *e*P **Pn 20 57 00.2 -1.7**
AGO Saint Agoulin 17.30 310 *e*P **Pn 20 57 01.3 -1.4**
GKP Gorka Klasztor 17.31 350 *e*P **Pn 20 57 02.6 -0.1**
GKP Gorka Klasztor 17.31 350 *e*P **Pn 20 57 02.7 0.0**
RUP Ruppelstein 17.32 325 *e*P **Pn 20 57 05.1 +2.2**
RUP Ruppelstein 17.32 325 *e*P **Pn 20 57 05.1 +2.2**
KIV Kislovodsk 17.40 58 *c* *i*P **Pn 20 57 04.3 +0.3**
KIV *e*S **S 21 00 17.2 -5.6**
KIV pmax pmax
comp=Z,146nm,1.2s
KIV MLR MLR
comp=Z,1µm,18.0s
KIV Kislovodsk 17.40 58⇑ *i*Pn **Pn 20 57 03.8 -0.2**
comp=Z,121nm,1.0s
KIV Kislovodsk 17.40 58 Pn **Pn 20 57 04.9 +0.9**
SNR=24
KIV Pn **Pn 20 57 04.9 +0.9**
SNR=24
KIV Kislovodsk 17.40 58 *i* P **Pn 20 57 04.3 +0.3**
comp=Z,146nm,1.2s
KIV Kislovodsk 17.40 58 Pn **Pn 20 57 04.9 +0.9**
SNR=24
HSHL Bi'r Shalatayn 17.43 135 P **Pn 20 57 05.5 +1.0**
baz=136
HSHL Bi'r Shalatayn 17.43 135 P **Pn 20 57 05.5 +1.0**
LOR Lormes 17.47 314 *e*P **Pn 20 57 04.4 -0.4**
comp=Z,67nm,1.1s
LOR *e*MLR MLR
comp=Z,684nm,22.2s
LOR Lormes 17.47 314 *e*P **Pn 20 57 04.4 -0.4**
LOR pmax pmax
comp=Z,34nm,1.1s
LOR Lormes 17.47 314 *e*P **Pn 20 57 04.4 -0.4**
comp=Z,34nm,1.1s
LOR Lormes 17.47 314 *e*P **Pn 20 57 04.4 -0.4**
comp=Z,34nm,1.1s
CAF Calviac 17.50 306 *e*P **Pn 20 57 07.2 +2.0**
comp=Z,140nm,1.3s
CAF Calviac 17.50 306 *e*P **Pn 20 57 07.2 +2.0**
CAF pmax pmax
comp=Z,70nm,1.3s
CAF Calviac 17.50 306 *e*P **Pn 20 57 07.2 +2.0**
comp=Z,70nm,1.3s
CAF Calviac 17.50 306 *e*P **Pn 20 57 07.2 +2.0**
comp=Z,70nm,1.3s
MEZF Maizieres J'vi 17.52 319 *e*P **Pn 20 57 05.6 +0.3**
comp=Z,202nm,1.1s
MEZF Maizieres J'vi 17.52 319 *e*P **Pn 20 57 05.6 +0.3**
comp=Z,202nm,1.1s
MEZF Maizieres J'vi 17.52 319 *e*P **Pn 20 57 05.6 +0.3**
comp=Z,101nm,1.1s
AVF Avril sur Loir 17.52 313 *e*P **Pn 20 57 05.2 -0.2**
comp=Z,50nm,0.9s
AVF Avril sur Loir 17.52 313 *e*P **Pn 20 57 05.2 -0.2**
AVF pmax pmax
comp=Z,25nm,0.9s
AVF Avril sur Loir 17.52 313 *e*P **Pn 20 57 05.2 -0.2**
comp=Z,25nm,0.9s
AVF Avril sur Loir 17.52 313 *e*P **Pn 20 57 05.2 -0.2**
comp=Z,25nm,0.9s
ONI Oni 17.55 63 P **Pn 20 57 06.8 +1.0**
ONI S **S 21 00 41.7 +16**
SSF Saint Saulge 17.57 313 *e*P **Pn 20 57 06.5 +0.5**
comp=Z,78nm,1.1s
SSF Saint Saulge 17.57 313 *e*P **Pn 20 57 06.5 +0.5**
SSF pmax pmax
comp=Z,39nm,1.1s
SSF Saint Saulge 17.57 313 *e*P **Pn 20 57 06.5 +0.5**
comp=Z,39nm,1.1s
SSF Saint Saulge 17.57 313 *e*P **Pn 20 57 06.5 +0.5**
comp=Z,39nm,1.1s
CLZ Clausthal 17.66 335 *e*P **Pn 20 57 07.9 +0.9**
comp=Z,139nm,1.8s
CLZ Clausthal 17.66 335 *e*P **Pn 20 57 07.9 +0.9**
CLZ pmax pmax
comp=Z,139nm,1.8s
CLZ Clausthal 17.66 335 *e*P **Pn 20 57 07.9 +0.9**
comp=Z,139nm,1.8s
ERTA Horta de San J 17.68 292 P **Pn 20 57 09.7 +2.3**
comp=Z,256nm,2.2s
ERTA Horta de San J 17.68 292 P **Pn 20 57 09.7 +2.2**
comp=Z,256nm,2.2s
BGF Bois d'Agland 17.71 311 *e*P **Pn 20 57 08.5 +0.8**
comp=Z,78nm,1.0s
BGF Bois d'Agland 17.71 311 *e*P **Pn 20 57 08.5 +0.8**
BGF pmax pmax
comp=Z,39nm,1.0s
BGF Bois d'Agland 17.71 311 *e*P **Pn 20 57 08.5 +0.8**
comp=Z,39nm,1.0s
BGF Bois d'Agland 17.71 311 *e*P **Pn 20 57 08.5 +0.8**
comp=Z,39nm,1.0s
SUW Suwalki 17.71 2 *e*P **Pn 20 57 06.6 -1.0**
SUW *e*S **S 21 00 23.4 -5.5**
SUW Suwalki 17.71 2⇓ *i*P **Pn 20 57 05.8 -1.9**
SUW pmax pmax
comp=Z,171nm,0.6s
SUW Suwalki 17.71 2⇓ *i*Pn **Pn 20 57 05.8 -1.9**
comp=Z,171nm,0.6s
SUW Suwalki 17.71 2⇓ *i*Pn **Pn 20 57 05.8 -1.9**
comp=Z,171nm,0.6s
SUW Suwalki 17.71 2 *e*P **Pn 20 57 06.6 -1.1**
WLF Walferdange 17.72 324 P **Pn 20 57 10.2 +2.4**
WLF Walferdange 17.72 324 *e*P **Pn 20 57 09.5 +1.7**
comp=Z,66nm,1.1s
WLF Walferdange 17.72 324⇑ *i*P **Pn 20 57 08.9 +1.1**
WLF pmax pmax
comp=Z,71nm,1.1s
WLF Walferdange 17.72 324⇑ *i*Pn **Pn 20 57 08.9 +1.1**
comp=Z,71nm,1.1s
WLF Walferdange 17.72 324 *i* P **Pn 20 57 08.9 +1.1**
comp=Z,71nm,1.1s
KEH Kehvi 17.84 64 P **Pn 20 57 08.3 -1.0**
GOR Gori 17.90 65 P **Pn 20 57 10.7 +0.6**
GOR S **S 21 00 45.5 +13**
ZEI Tsey 17.91 62 *e*P **Pn 20 57 10.9 +0.6**
ZEI pmax pmax
comp=Z,64nm,1.1s
ZEI Tsey 17.91 62 *e*P **Pn 20 57 10.9 +0.6**
comp=Z,64nm,1.1s
EBEN Beniarda 17.94 284 P **Pn 20 57 12.1 +1.4**
comp=Z,218nm,2.2s
EBEN Beniarda 17.94 284 P **Pn 20 57 12.1 +1.4**
comp=Z,218nm,2.2s
TCF Toulx Ste Croi 17.98 310 *e*P **Pn 20 57 12.1 +1.1**
comp=Z,134nm,1.2s
TCF Toulx Ste Croi 17.98 310 *e*P **Pn 20 57 12.1 +1.1**
TCF pmax pmax
comp=Z,67nm,1.2s
TCF Toulx Ste Croi 17.98 310 *e*P **Pn 20 57 12.1 +1.1**
comp=Z,67nm,1.2s
TCF Toulx Ste Croi 17.98 310 *e*P **Pn 20 57 12.1 +1.1**
comp=Z,67nm,1.2s
RJF Les Rejaudoux 18.01 306 *e*P **Pn 20 57 13.7 +2.3**
comp=Z,121nm,1.2s
RJF *e*MLR MLR
comp=Z,2µm,17.0s
RJF Les Rejaudoux 18.01 306 *e*P **Pn 20 57 13.7 +2.3**
RJF pmax pmax
comp=Z,61nm,1.2s
RJF Les Rejaudoux 18.01 306 *e*P **Pn 20 57 13.7 +2.3**
comp=Z,61nm,1.2s
RJF Les Rejaudoux 18.01 306 *e*P **Pn 20 57 13.7 +2.3**
comp=Z,61nm,1.2s
EPF Esparros 18.09 298 *e*P **Pn 20 57 14.6 +2.2**
comp=Z,23nm,0.9s
EPF Esparros 18.09 298 *e*P **Pn 20 57 14.6 +2.2**
EPF pmax pmax
comp=Z,12nm,0.9s
EPF Esparros 18.09 298 *e*P **Pn 20 57 14.6 +2.2**
comp=Z,12nm,0.9s
EPF Esparros 18.09 298 *e*P **Pn 20 57 14.6 +2.2**
comp=Z,12nm,0.9s
GNI Garni 18.11 71 *c* *i*P **Pn 20 57 12.5 -0.2**
GNI pmax pmax
comp=Z,169nm,1.7s
GNI Garni 18.11 71⇑ *i*P **Pn 20 57 11.8 -0.9**
comp=Z,58nm,0.7s
GNI Garni 18.11 71 Pn **Pn 20 57 12.9 +0.2**
SNR=24
GNI Pn **Pn 20 57 12.9 +0.2**
SNR=24
GNI Garni 18.11 71 *i* P **Pn 20 57 12.5 -0.2**
comp=Z,169nm,1.7s
GNI Garni 18.11 71 Pn **Pn 20 57 12.9 +0.2**
SNR=24
EBIE Bielsa 18.14 297 P **Pn 20 57 14.1 +1.0**
comp=Z,59nm,1.1s
EBIE Bielsa 18.14 297 P **Pn 20 57 14.1 +1.0**
comp=Z,59nm,1.1s
EMOS Mosqueruela 18.22 290 P **Pn 20 57 15.1 +1.0**
comp=Z,565nm,2.4s
EMOS Mosqueruela 18.22 290 P **Pn 20 57 15.1 +1.0**
comp=Z,565nm,2.4s
NRDL Niedersach Rie 18.29 336 *e*P **Pn 20 57 16.1 +1.3**
comp=Z,107nm,1.4s

TBLG	**Delisi**	**18.31**	**66**	*i* P	**Pn**	**20 57 15.7 +0.6**
TBLG	**Delisi**	**18.31**	**66**	P	**Pn**	**20 57 15.7 +0.5**
TBLG				S	**S**	**21 00 55.2 +14**
TBLG	**Delisi**	**18.31**	**66**	*i* P	**Pn**	**20 57 15.7 +0.6**
MTA	**Mtatsminda**	**18.35**	**66**	P	**Pn**	**20 57 15.7 +0.2**
MTA				S	**S**	**21 00 55.6 +14**
LFF	**La Frestale**	**18.38**	**305**	*e*P	**Pn**	**20 57 18.3 +2.3**
	comp=Z,80nm,1.2s					
LFF	**La Frestale**	**18.38**	**305**	*e*P	**Pn**	**20 57 18.3 +2.3**
LFF				pmax	pmax	
	comp=Z,40nm,1.2s					
LFF	**La Frestale**	**18.38**	**305**	*e*P	**Pn**	**20 57 18.3 +2.3**
	comp=Z,40nm,1.2s					
LFF	**La Frestale**	**18.38**	**305**	*e*P	**Pn**	**20 57 18.3 +2.3**
	comp=Z,40nm,1.2s					
MEM	**Membach**	**18.44**	**326**	P	**Pn**	**20 57 17.4 +0.9**
	comp=Z,27nm,1.2s					
MEM	**Membach**	**18.44**	**326**	P	**Pn**	**20 57 17.4 +0.8**
	comp=Z,27nm,1.2s					
BHD	**Baghdad**	**18.47**	**93**	*e*P	**Pn**	**20 57 23.0 +5.9**
BHD				*e*S	**S**	**21 00 38.0 -5.8**
BUG	**Bochum--Univer**	**18.50**	**329**	*e*P	**Pn**	**20 57 18.9 +1.6**
	comp=Z,112nm,1.4s					
ECHE	**Chera**	**18.55**	**287**	P	**Pn**	**20 57 17.7 -0.3**
ECHE				pmax	pmax	
	comp=Z,38nm,1.3s					
ECHE	**Chera**	**18.55**	**287**	P	**Pn**	**20 57 17.7 -0.3**
	comp=Z,38nm,1.3s					
ECHE	**Chera**	**18.55**	**287**	P	**Pn**	**20 57 17.7 -0.3**
	comp=Z,38nm,1.3s					
HGN	**Heimansgroeve**	**18.58**	**326⇑**	*i*P	**Pn**	**20 57 20.1 +1.8**
	comp=Z,50nm,1.2s					
HGN	**Heimansgroeve**	**18.58**	**326⇑**	*i*P	**Pn**	**20 57 20.1 +1.8**
	comp=Z,50nm,1.2s					
MNK	**Minsk**	**18.60**	**10**	*e*P	**Pn**	**20 57 13.0 -5.5**
MNK				pmax	pmax	
	comp=Z,340nm,1.0s					
MICGM	**Minsk**	**18.61**	**10**	*e*P	**Pn**	**20 57 13.0 -5.6**
BCLA	**Clavier**	**18.63**	**324**	P	**Pn**	**20 57 20.6 +1.7**
	comp=Z,45nm,1.9s					
BCLA	**Clavier**	**18.63**	**324**	P	**Pn**	**20 57 20.6 +1.7**
	comp=Z,45nm,1.9s					
GIVF	**Givet**	**18.65**	**323**	*e*P	**Pn**	**20 57 18.8 -0.3**
	comp=Z,426nm,1.3s					
GIVF	**Givet**	**18.65**	**323**	*e*P	**Pn**	**20 57 18.8 -0.3**
GIVF				pmax	pmax	
	comp=Z,213nm,1.3s					
GIVF	**Givet**	**18.65**	**323**	*e*P	**Pn**	**20 57 18.8 -0.3**
	comp=Z,213nm,1.3s					
GIVF	**Givet**	**18.65**	**323**	*e*P	**Pn**	**20 57 18.8 -0.3**
	comp=Z,213nm,1.3s					
ETSF	**Etsaut**	**18.70**	**298**	*e*P	**Pn**	**20 57 22.5 +2.8**
	comp=Z,74nm,1.0s					
ETSF	**Etsaut**	**18.70**	**298**	*e*P	**Pn**	**20 57 22.5 +2.8**
ETSF				pmax	pmax	
	comp=Z,37nm,1.0s					
ETSF	**Etsaut**	**18.70**	**298**	*e*P	**Pn**	**20 57 22.5 +2.8**
	comp=Z,37nm,1.0s					
DOU	**Dourbes**	**18.76**	**323**	P	**Pn**	**20 57 20.3 -0.1**
	comp=Z,41nm,1.1s					
DOU	**Dourbes**	**18.76**	**323**	P	**Pn**	**20 57 20.3 -0.1**
	comp=Z,41nm,1.1s					
NACGM	**Naroch**	**18.85**	**8**	*e*P	**Pn**	**20 57 16.0 -5.5**
BAIF	**Baives**	**18.92**	**322**	*e*P	**Pn**	**20 57 21.7 -0.7**
	comp=Z,64nm,0.9s					
BAIF	**Baives**	**18.92**	**322**	*e*P	**Pn**	**20 57 21.7 -0.7**
BAIF				pmax	pmax	
	comp=Z,32nm,0.9s					
BAIF	**Baives**	**18.92**	**322**	*e*P	**Pn**	**20 57 21.7 -0.7**
	comp=Z,32nm,0.9s					
BAIF	**Baives**	**18.92**	**322**	*e*P	**Pn**	**20 57 21.7 -0.7**
	comp=Z,32nm,0.9s					
IBBN	**Ibbenburen**	**18.98**	**332**	*e*P	**Pn**	**20 57 24.1 +1.1**
	comp=Z,74nm,1.4s					
ETOB	**Tobarra**	**18.98**	**284**	P	**Pn**	**20 57 23.0 -0.2**
	comp=Z,998nm,3.2s					
ETOB	**Tobarra**	**18.98**	**284**	P	**Pn**	**20 57 23.0 -0.2**
	comp=Z,998nm,3.2s					
WTSB	**Winterswijk**	**19.09**	**330⇑**	*i*P	**Pn**	**20 57 26.0 +1.6**
	comp=Z,43nm,1.9s					
WTSB	**Winterswijk**	**19.09**	**330⇑**	*i*P	**Pn**	**20 57 26.0 +1.6**
	comp=Z,43nm,1.9s					
VORD	**Divnogorie**	**19.10**	**35**	*e*P	**Pn**	**20 57 22.1 -2.4**
VORD				pmax	pmax	
	comp=N,50nm,1.4s					
VORD				pmax	pmax	
	comp=E,80nm,1.4s					
VORD				pmax	pmax	
	comp=Z,70nm,1.4s					
VORD				MLR	MLR	
	comp=Z,2μm,13.0s					
VORD				MLR	MLR	
	comp=N,420nm,8.0s					
VORD				MLR	MLR	
	comp=E,790nm,10.0s					
VORD	**Divnogorie**	**19.10**	**35**	*e*P	**Pn**	**20 57 22.1 -2.4**
	comp=E,420nm,8.0s					
SNF	**Seneffe**	**19.18**	**323**	P	**Pn**	**20 57 24.5 -1.0**
	comp=Z,38nm,1.2s					
SNF	**Seneffe**	**19.18**	**323**	P	**Pn**	**20 57 24.4 -1.0**
	comp=Z,38nm,1.2s					
VSR	**Storozhevoye**	**19.22**	**34**	*e*P	**Pn**	**20 57 22.8 -3.1**
VSR				pmax	pmax	
	comp=E,30nm,1.4s					
VSR				pmax	pmax	
	comp=Z,40nm,1.4s					
VSR				pmax	pmax	
	comp=N,20nm,1.3s					
VSR				MLR	MLR	
	comp=N,790nm,14.0s					
VSR				MLR	MLR	
	comp=Z,2μm,14.0s					
VSR				MLR	MLR	
	comp=E,1μm,13.0s					
SJPF	**Ste Jean**	**19.22**	**298**	*e*P	**Pn**	**20 57 27.2 +1.2**
	comp=E,61nm,0.7s					
SJPF	**Ste Jean**	**19.22**	**298**	*e*P	**Pn**	**20 57 27.2 +1.2**
SJPF				pmax	pmax	
	comp=Z,31nm,0.7s					
SJPF	**Ste Jean**	**19.22**	**298**	*e*P	**Pn**	**20 57 27.2 +1.2**
	comp=Z,30nm,0.7s					
SJPF	**Ste Jean**	**19.22**	**298**	*e*P	**Pn**	**20 57 27.2 +1.2**
	comp=Z,30nm,0.7s					
RGN	**Rugen**	**19.24**	**344**	*e*P	**Pn**	**20 57 25.7 -0.4**
	comp=Z,106nm,0.9s					
RGN	**Rugen**	**19.24**	**344⇑**	*i*P	**Pn**	**20 57 24.5 -1.6**
	comp=Z,69nm,0.7s					
RGN	**Rugen**	**19.24**	**344⇑**	*i*P	**Pn**	**20 57 24.5 -1.6**
	comp=Z,69nm,0.7s					
IDID	**Didziasalis**	**19.26**	**8**	*e*P	**Pn**	**20 57 23.6 -2.7**
IDID	**Didziasalis**	**19.26**	**8**	*e*P	**Pn**	**20 57 23.6 -2.7**
EALK	**Alkurruntz**	**19.45**	**298**	P	**Pn**	**20 57 27.6 -1.1**
	comp=Z,83nm,1.4s					
EALK	**Alkurruntz**	**19.45**	**298**	P	**Pn**	**20 57 27.6 -1.1**
	comp=Z,83nm,1.4s					
ISAL	**Salakas**	**19.45**	**7**	*e*P	**Pn**	**20 57 25.8 -2.8**
ISAL	**Salakas**	**19.45**	**7**	*e*P	**Pn**	**20 57 25.8 -2.8**
ELIZ	**Elizondo**	**19.45**	**298**	P	**Pn**	**20 57 28.6 -0.1**
ELIZ				pmax	pmax	
	comp=Z,81nm,1.1s					
ELIZ	**Elizondo**	**19.45**	**298**	P	**Pn**	**20 57 28.6 -0.1**
	comp=Z,80nm,1.1s					
ELIZ	**Elizondo**	**19.45**	**298**	P	**Pn**	**20 57 28.6 -0.1**
	comp=Z,80nm,1.1s					
BSD	**Bornholm Skovb**	**19.45**	**347⇑**	*i*P	**Pn**	**20 57 26.0 -2.7**
BSD				pmax	pmax	
	comp=Z,86nm,0.9s					
BSD	**Bornholm Skovb**	**19.45**	**347⇑**	*i*P	**Pn**	**20 57 26.0 -2.7**
	comp=Z,86nm,0.9s					
BSD	**Bornholm Skovb**	**19.45**	**347**	*i* P	**Pn**	**20 57 26.0 -2.7**
	comp=Z,86nm,0.9s					
BSEG	**Bad Segeberg**	**19.46**	**339**	*e*P	**Pn**	**20 57 27.8 -1.0**
	comp=Z,112nm,1.2s					
BSEG	**Bad Segeberg**	**19.46**	**339**	*e*P	**Pn**	**20 57 27.8 -1.0**
ETOR	**Torete**	**19.47**	**291**	P	**Pn**	**20 57 29.0 0.0**
ETOR				pmax	pmax	
	comp=Z,18nm,1.1s					
ETOR	**Torete**	**19.47**	**291**	P	**Pn**	**20 57 29.0 0.0**
	comp=Z,18nm,1.1s					
ETOR	**Torete**	**19.47**	**291**	P	**Pn**	**20 57 29.0 0.0**
	comp=Z,18nm,1.1s					
ENIJ	**Nijar**	**19.58**	**279**	P	**Pn**	**20 57 28.6 -1.8**
ENIJ				pmax	pmax	
	comp=Z,103nm,1.4s					
ENIJ	**Nijar**	**19.58**	**279**	P	**Pn**	**20 57 28.6 -1.8**
	comp=Z,103nm,1.4s					
ENIJ	**Nijar**	**19.58**	**279**	P	**Pn**	**20 57 28.6 -1.8**
	comp=Z,103nm,1.4s					
MFF	**Saint Martin d**	**19.58**	**309**	*e*P	**Pn**	**20 57 30.0 -0.3**
	comp=Z,82nm,1.1s					
MFF	**Saint Martin d**	**19.58**	**309**	*e*P	**Pn**	**20 57 30.0 -0.3**
MFF				pmax	pmax	
	comp=Z,41nm,1.1s					
MFF	**Saint Martin d**	**19.58**	**309**	*e*P	**Pn**	**20 57 30.0 -0.3**
	comp=Z,41nm,1.1s					
MFF	**Saint Martin d**	**19.58**	**309**	*e*P	**Pn**	**20 57 30.0 -0.3**
	comp=Z,41nm,1.1s					
VOR	**Voronezh**	**19.60**	**33**	*e*P	**Pn**	**20 57 27.0 -3.4**
VOR				pmax	pmax	
	comp=Z,240nm,1.2s					
VOR	**Voronezh**	**19.60**	**33**	*e*P	**Pn**	**20 57 27.0 -3.4**
	comp=Z,240nm,1.2s					
IZAR	**Zarasai**	**19.63**	**7**	*e*P	**Pn**	**20 57 28.2 -2.6**
IZAR	**Zarasai**	**19.63**	**7**	*e*P	**Pn**	**20 57 28.2 -2.6**
EVIA	**Vianos**	**19.73**	**284**	P	**Pn**	**20 57 31.2 -0.9**
EVIA				pmax	pmax	
	comp=Z,8.0nm,0.7s					
EVIA	**Vianos**	**19.73**	**284**	P	**Pn**	**20 57 31.2 -0.9**
	comp=Z,7.9nm,0.7s					
EVIA	**Vianos**	**19.73**	**284**	P	**Pn**	**20 57 31.2 -0.9**
	comp=Z,7.9nm,0.7s					
WIT	**Witteveen**	**19.79**	**331**	*e*P	**Pn**	**20 57 33.1 +0.4**
WIT	**Witteveen**	**19.79**	**331**	*e*P	**Pn**	**20 57 33.1 +0.4**
EHUE	**Huescar**	**19.83**	**282**	P	**Pn**	**20 57 32.3 -1.0**
EHUE				pmax	pmax	
	comp=Z,20nm,1.0s					
EHUE	**Huescar**	**19.83**	**282**	P	**Pn**	**20 57 32.3 -1.0**
	comp=Z,20nm,1.0s					
EHUE	**Huescar**	**19.83**	**282**	P	**Pn**	**20 57 32.3 -1.0**
	comp=Z,20nm,1.0s					
ECRI	**Cripan**	**20.05**	**296**	P	**P**	**20 57 35.6 +1.9**
ECRI				pmax	pmax	
	comp=Z,41nm,1.0s					
ECRI	**Cripan**	**20.05**	**296**	P	**P**	**20 57 35.6 +1.9**
	comp=Z,40nm,1.0s					
ECRI	**Cripan**	**20.05**	**296**	P	**P**	**20 57 35.6 +1.9**
	comp=Z,40nm,1.0s					
EBER	**Berja**	**20.14**	**279**	P	**P**	**20 57 33.8 -0.9**
	comp=Z,128nm,1.5s					
EBER	**Berja**	**20.14**	**279**	P	**P**	**20 57 33.8 -0.9**
	comp=Z,128nm,1.5s					
EQES	**Quesada**	**20.20**	**282**	P	**P**	**20 57 35.9 +0.5**
	comp=Z,63nm,0.9s					
EQES	**Quesada**	**20.20**	**282**	P	**P**	**20 57 35.9 +0.5**
	comp=Z,63nm,0.9s					
MENF	**Mencas**	**20.27**	**321**	*e*P	**P**	**20 57 36.0 0.0**
MENF	**Mencas**	**20.27**	**321**	*e*P	**P**	**20 57 36.0 0.0**
HLG	**Helgoland**	**20.44**	**335**	*e*P	**P**	**20 57 37.2 -0.6**
	comp=Z,143nm,0.9s					
LDF	**La Druitiere**	**20.45**	**314**	*e*P	**P**	**20 57 37.3 -0.7**
	comp=Z,115nm,0.9s					
LDF	**La Druitiere**	**20.45**	**314**	*e*P	**P**	**20 57 37.3 -0.7**
LDF				pmax	pmax	
	comp=Z,58nm,0.9s					
LDF	**La Druitiere**	**20.45**	**314**	*e*P	**P**	**20 57 37.3 -0.7**
	comp=Z,58nm,0.9s					
LDF	**La Druitiere**	**20.45**	**314**	*e*P	**P**	**20 57 37.3 -0.7**
	comp=Z,58nm,0.9s					
COP	**Copenhagen**	**20.49**	**344⇑**	*i*P	**P**	**20 57 38.6 +0.3**
COP				pmax	pmax	
	comp=Z,47nm,1.0s					
COP	**Copenhagen**	**20.49**	**344⇑**	*i*P	**P**	**20 57 38.6 +0.3**
	comp=Z,47nm,1.0s					
COP	**Copenhagen**	**20.49**	**344**	*i* P	**P**	**20 57 38.6 +0.3**
	comp=Z,47nm,1.0s					
MAK	**Makhachkala**	**20.55**	**63**	*e*P	**P**	**20 57 37.6 -1.5**
MAK				*e*		20 57 58.0
MAK				*e*S	**S**	**21 01 26.0 0.0**
MAK				*e*SS		21 01 52.6
MAK				pmax	pmax	
	comp=Z,520nm,1.4s					
MAK				MLR	MLR	
	comp=Z,848nm,14.0s,MS4.3					
MAK	**Makhachkala**	**20.55**	**63**	*e*P	**P**	**20 57 37.6 -1.5**
	comp=Z,520nm,1.4s					
ECOG	**Cogollos-Vega**	**20.64**	**280**	P	**P**	**20 57 41.4 +1.3**
ECOG				pmax	pmax	
	comp=Z,25nm,1.0s					
ECOG	**Cogollos-Vega**	**20.64**	**280**	P	**P**	**20 57 41.4 +1.2**
	comp=Z,25nm,1.0s					
ECOG	**Cogollos-Vega**	**20.64**	**280**	P	**P**	**20 57 41.4 +1.3**
	comp=Z,25nm,1.0s					
FLN	**La Foliniere**	**20.74**	**314**	*e*P	**P**	**20 57 41.7 +0.6**
	comp=Z,100nm,0.8s					
FLN				*e*MLR	MLR	
	comp=Z,1μm,18.0s,MS4.0					
FLN	**La Foliniere**	**20.74**	**314**	*e*P	**P**	**20 57 41.7 +0.6**
FLN				pmax	pmax	
	comp=Z,50nm,0.8s					
FLN				MLR	MLR	
	comp=Z,1μm,18.0s,MS4.3					
FLN	**La Foliniere**	**20.74**	**314**	*e*P	**P**	**20 57 41.7 +0.6**
	comp=Z,50nm,0.8s					
FLN				LR	LR	
	comp=Z,1μm,18.0s,MS4.3					
FLN	**La Foliniere**	**20.74**	**314**	*e*P	**P**	**20 57 41.7 +0.6**
	comp=Z,50nm,0.8s					
EBAN	**Banos Encina**	**20.75**	**283**	P	**P**	**20 57 41.2 -0.1**
EBAN				pmax	pmax	
	comp=Z,20nm,1.0s					
EBAN	**Banos Encina**	**20.75**	**283**	P	**P**	**20 57 41.2 -0.1**
	comp=Z,20nm,1.0s					
EBAN	**Banos Encina**	**20.75**	**283**	P	**P**	**20 57 41.2 -0.1**
	comp=Z,20nm,1.0s					
GRR	**Gorron**	**20.79**	**313**	*e*P	**P**	**20 57 43.1 +1.5**
GRR	**Gorron**	**20.79**	**313**	*e*P	**P**	**20 57 43.1 +1.5**
ELAN	**Lanestosa**	**20.83**	**297**	P	**P**	**20 57 42.3 +0.2**
	comp=Z,190nm,1.5s					
ELAN	**Lanestosa**	**20.83**	**297**	P	**P**	**20 57 42.3 +0.2**
	comp=Z,190nm,1.5s					
ERON	**Agron**	**20.85**	**280**	P	**P**	**20 57 42.9 +0.4**
	comp=Z,122nm,1.6s					
ERON	**Agron**	**20.85**	**280**	P	**P**	**20 57 42.9 +0.5**
	comp=Z,122nm,1.6s					
ESDC	**Sonseca Array**	**20.86**	**287**	P	**P**	**20 57 43.1 +0.6**
	comp=Z,14nm,0.9s,baz=87,slow=11,SNR=26					
ESDC	**Sonseca Array**	**20.86**	**287**	P	**P**	**20 57 42.7 +0.2**
	comp=Z,12nm,1.3s					
ESDC	**Sonseca Array**	**20.86**	**287**	P	**P**	**20 57 42.7 +0.2**
	comp=Z,12nm,1.3s					
ESLA	**Sonseca Array**	**20.86**	**287**	*e*P	**P**	**20 57 42.8 +0.3**
	comp=Z,17nm,1.1s					
ESLA	**Sonseca Array**	**20.86**	**287**	*e*P	**P**	**20 57 42.8 +0.3**
	comp=Z,17nm,1.1s					
GUD	**Guadarrama**	**21.04**	**290**	P	**P**	**20 57 45.7 +1.2**
GUD				pmax	pmax	
	comp=Z,41nm,0.8s,mb4.8					
GUD	**Guadarrama**	**21.04**	**290**	P	**P**	**20 57 45.7 +1.2**
	comp=Z,41nm,0.8s,mb4.8					
GUD	**Guadarrama**	**21.04**	**290**	P	**P**	**20 57 45.7 +1.2**
	comp=Z,41nm,0.8s,mb4.8					
ELOJ	**Sierra Loja**	**21.11**	**280**	P	**P**	**20 57 45.9 +0.6**
ELOJ				pmax	pmax	
	comp=Z,19nm,1.0s,mb4.4					
ELOJ	**Sierra Loja**	**21.11**	**280**	P	**P**	**20 57 45.9 +0.6**
	comp=Z,19nm,1.0s,mb4.4					
ELOJ	**Sierra Loja**	**21.11**	**280**	P	**P**	**20 57 45.9 +0.6**
	comp=Z,19nm,1.0s,mb4.4					
PAB	**San Pablo**	**21.16**	**287**	*e*P	**P**	**20 57 46.3 +0.6**
PAB				pmax	pmax	
	comp=Z,46nm,1.1s,mb4.7					
PAB	**San Pablo**	**21.16**	**287**	*e*P	**P**	**20 57 46.3 +0.6**
	comp=Z,46nm,1.1s,mb4.7					
PAB	**San Pablo**	**21.16**	**287**	*e*P	**P**	**20 57 46.3 +0.6**
	comp=Z,46nm,1.1s,mb4.7					
ELUQ	**Luque**	**21.17**	**281**	P	**P**	**20 57 45.3 -0.5**
ELUQ				pmax	pmax	
	comp=Z,31nm,0.7s,mb4.8					
ELUQ	**Luque**	**21.17**	**281**	P	**P**	**20 57 45.3 -0.5**
	comp=Z,31nm,0.7s,mb4.7					
ELUQ	**Luque**	**21.17**	**281**	P	**P**	**20 57 45.3 -0.5**
	comp=Z,31nm,0.7s,mb4.7					
OBN	**Obninsk**	**21.23**	**23***c*	*i*P	**P**	**20 57 44.5 -1.8**
OBN				*i*		20 57 56.4
OBN				*i* S	**S**	**21 01 37.5 -1.8**
OBN				pmax	pmax	
	comp=Z,350nm,1.2s,mb5.6					
OBN				MLR	MLR	
	comp=Z,2μm,17.0s,MS4.5					
OBN	**Obninsk**	**21.23**	**23⇑**	*i*P	**P**	**20 57 44.1 -2.2**
	comp=Z,150nm,0.6s,mb5.5					
OBN				*e*S	**S**	**21 01 34.2 -5.1**
EADA	**Adamuz**	**21.37**	**283**	P	**P**	**20 57 46.0 -2.0**
	comp=Z,131nm,1.4s,mb5.1					
EADA	**Adamuz**	**21.37**	**283**	P	**P**	**20 57 46.0 -2.0**
	comp=Z,131nm,1.4s,mb5.1					
GOTU	**Gotland**	**21.52**	**355**	P	**P**	**20 57 48.9 -0.4**
EMIJ	**Mijas**	**21.68**	**279**	P	**P**	**20 57 51.1 -0.2**
	comp=Z,67nm,1.1s,mb5.0					
EMIJ	**Mijas**	**21.68**	**279**	P	**P**	**20 57 51.1 -0.2**
	comp=Z,67nm,1.1s,mb5.0					
SGMF	**Saint Gilles**	**21.75**	**311**	*e*P	**P**	**20 57 51.8 -0.2**
	comp=Z,56nm,0.8s,mb4.7					
SGMF	**Saint Gilles**	**21.75**	**311**	*e*P	**P**	**20 57 51.8 -0.2**
SGMF				pmax	pmax	
	comp=Z,28nm,0.8s,mb4.7					
SGMF	**Saint Gilles**	**21.75**	**311**	*e*P	**P**	**20 57 51.8 -0.2**
	comp=Z,28nm,0.8s,mb4.8					
SGMF	**Saint Gilles**	**21.75**	**311**	*e*P	**P**	**20 57 51.8 -0.2**
	comp=Z,28nm,0.8s,mb4.7					
JSA	**Saint Aubin**	**21.92**	**314⇑**	*e*P	**P**	**20 57 54.2 +0.4**
JSA				AMb	AMB	20 58 00.7
	comp=Z,30nm,3.5s					
JSA	**Saint Aubin**	**21.92**	**314⇑**	*e*P	**P**	**20 57 54.2 +0.4**
	comp=Z,30nm,3.5s					
MUD	**Monsted U'grnd**	**21.98**	**340**	*i* P	**P**	**20 57 54.8 +0.4**
MUD				pmax	pmax	
	comp=Z,54nm,0.8s,mb5.0					
MUD	**Monsted U'grnd**	**21.98**	**340**	*i* P	**P**	**20 57 54.8 +0.4**
	comp=Z,54nm,0.8s,mb5.0					
MUD	**Monsted U'grnd**	**21.98**	**340**	*i* P	**P**	**20 57 54.8 +0.4**
	comp=Z,54nm,0.8s,mb5.0					
QUIF	**Quistinic**	**21.99**	**310**	*e*P	**P**	**20 57 54.6 +0.1**
	comp=Z,57nm,0.7s,mb4.8					
QUIF	**Quistinic**	**21.99**	**310**	*e*P	**P**	**20 57 54.6 +0.1**
QUIF				pmax	pmax	
	comp=Z,28nm,0.7s,mb4.8					
QUIF	**Quistinic**	**21.99**	**310**	*e*P	**P**	**20 57 54.6 +0.1**
	comp=Z,28nm,0.7s,mb4.8					
QUIF	**Quistinic**	**21.99**	**310**	*e*P	**P**	**20 57 54.6 +0.1**
	comp=Z,28nm,0.7s,mb4.8					
MOS	**Moscow**	**22.09**	**24**	*e*P	**P**	**20 57 50.4 -5.1**
MOS				*e*S	**S**	**21 01 49.9 -6.0**
MOS				*e*		21 09 05.9
MOS				pmax	pmax	
	comp=Z,800nm,1.6s,mb5.9					
MOS				pmax	pmax	
	comp=Z,492nm,1.2s,mb5.8					
EARI	**Arriondas**	**22.12**	**297**	P	**P**	**20 57 56.2 +0.3**
	comp=Z,227nm,2.5s,mb5.2					
EARI	**Arriondas**	**22.12**	**297**	P	**P**	**20 57 56.2 +0.3**
	comp=Z,227nm,2.5s,mb5.2					
ROSF	**Rostrenen**	**22.22**	**311**	*e*P	**P**	**20 57 56.9 -0.1**
	comp=Z,91nm,0.9s,mb4.9					
ROSF	**Rostrenen**	**22.22**	**311**	*e*P	**P**	**20 57 56.9 -0.1**
ROSF				pmax	pmax	
	comp=Z,46nm,0.9s,mb4.9					
ROSF	**Rostrenen**	**22.22**	**311**	*e*P	**P**	**20 57 56.9 -0.1**
	comp=Z,46nm,0.9s,mb4.9					
EJIF	**Jimena Fronter**	**22.25**	**279**	P	**P**	**20 57 59.2 +1.8**
EJIF				pmax	pmax	
	comp=Z,58nm,1.2s,mb4.9					
EJIF	**Jimena Fronter**	**22.25**	**279**	P	**P**	**20 57 59.2 +1.8**
	comp=Z,58nm,1.2s,mb4.9					
MDT	**Midelt**	**22.32**	**269**	P	**P**	**20 57 59.0 +0.7**
	comp=Z,9.7nm,0.8s,mb4.3,baz=77,slow=9.6,SNR=14					
MDT				LR	LR	21 08 18.2
	comp=Z,1μm,21.6s,MS4.2,baz=313,slow=41					
VSU	**Vasula**	**22.36**	**6***c*	*i*P	**P**	**20 57 56.7 -1.6**
VSU				pmax	pmax	
	comp=Z,279nm,1.2s,mb5.6					
UMR	**Umm Al-Rimmam**	**22.42**	**100**	*e*P	**P**	**20 57 58.1 -1.1**
UMR				AMb	AMB	20 58 01.6
	comp=Z,225nm,0.8s,mb5.7					
UMR	**Umm Al-Rimmam**	**22.42**	**100**	*e*P	**P**	**20 57 58.1 -1.2**
	comp=Z,225nm,0.8s,mb5.7					
WOL	**Wolverton**	**22.45**	**319**	*e*P	**P**	**20 58 00.6 +1.2**
WOL				AMb	AMB	20 58 01.9
	comp=Z,49nm,2.9s,mb4.4					
WOL	**Wolverton**	**22.45**	**319**	*e*P	**P**	**20 58 00.6 +1.2**
	comp=Z,49nm,2.9s,mb4.4					
ESPR	**Espera**	**22.50**	**280**	P	**P**	**20 58 00.1 +0.1**
	comp=Z,46nm,1.2s,mb4.8					
RDF	**Al-Radifah**	**22.55**	**102**	*e*P	**P**	**20 57 59.0 -1.6**
RDF				AMb	AMB	20 58 05.8
	comp=Z,38nm,0.5s,mb5.1					
RDF	**Al-Radifah**	**22.55**	**102**	*e*P	**P**	**20 57 59.0 -1.7**
	comp=Z,38nm,0.5s,mb5.1					
KBD	**Kabd**	**22.56**	**101**	*e*P	**P**	**20 57 59.2 -1.5**
KBD				AMb	AMB	20 58 03.5
	comp=Z,41nm,0.7s,mb5.0					
KBD	**Kabd**	**22.56**	**101**	*e*P	**P**	**20 57 59.2 -1.5**
	comp=Z,41nm,0.7s,mb5.0					
SWN1	**Swindon**	**22.86**	**319**	*e*P	**P**	**20 58 04.6 +0.9**
SWN1				AMb	AMB	20 58 07.7
	comp=Z,150nm,1.0s,mb5.4					
SWN1				AMS	AMS	21 09 03.3
	comp=Z,2μm,22.9s,MS4.5					
SWN1	**Swindon**	**22.86**	**319**	*e*P	**P**	**20 58 04.6 +0.9**
	comp=Z,150nm,1.0s,mb5.4					
QRN	**Al-Qurain**	**22.92**	**102**	*e*P	**P**	**20 58 02.6 -2.0**
QRN				AMb	AMB	20 58 07.4
	comp=Z,72nm,1.7s,mb4.8					
EMIN	**Mina Concepcio**	**23.05**	**282**	P	**P**	**20 58 05.6 -0.3**
	comp=Z,140nm,1.5s,mb5.2					
PBRG	**Braganca**	**23.07**	**293**	*e*P	**P**	**20 58 06.7 +0.7**
	comp=Z,44nm,1.4s,mb4.7					
PBRG	**Braganca**	**23.07**	**293**	*e*P	**P**	**20 58 06.7 +0.7**
	comp=Z,44nm,1.4s,mb4.7					
ECAL	**Calabor**	**23.07**	**293**	P	**P**	**20 58 04.6 -1.5**
	comp=Z,103nm,1.4s,mb5.1					
MVO	**Moncorvo**	**23.25**	**291**	*e*P	**P**	**20 58 08.1 +0.2**
	comp=Z,66nm,1.5s,mb4.8					
MVO				*i* P		20 58 25.3
MVO	**Moncorvo**	**23.25**	**291**	*e*P	**P**	**20 58 08.1 +0.2**
	comp=Z,66nm,1.5s,mb4.8					
EBAD	**Badajoz**	**23.25**	**285**	P	**P**	**20 58 05.8 -2.1**
	comp=Z,51

HLM1 Long Mynd 23.97 320⇑ *eP* **P 20 58 14.1 -0.2**
PBEJ Beja 23.97 283 *eP* **P 20 58 15.2 +0.7**
comp=Z,66nm,1.5s,mb4.8
PBEJ *i* P 20 58 29.3
LHO Holmfirth 24.04 323⇑ *eP* **P 20 58 14.0 -0.9**
LHO Holmfirth 24.04 323⇑ *eP* **P 20 58 14.0 -0.9**
TZC Tazercounte 24.04 268 *i P* **P 20 58 16.0 +0.8**
EVO Evora 24.04 284 *eP* **P 20 58 16.5 +1.3**
EVO *i P* 20 58 26.7
HTL Hartland 24.07 316 *eP* **P 20 58 14.6 -0.7**
HTL AMb AMB 20 58 29.0
comp=Z,43nm,1.3s,mb4.7
HTL AMS AMS 21 10 11.6
comp=Z,2μm,16.5s,MS4.8
HTL Hartland 24.07 316 *eP* **P 20 58 14.6 -0.7**
comp=Z,43nm,1.3s,mb4.7
PBDV Barranco-do-Ve 24.10 281 *eP* **P 20 58 16.3 +0.6**
comp=Z,83nm,1.8s,mb4.9
PBDV *i* P 20 58 30.3
PCVE Castro Verde 24.14 282 *eP* **P 20 58 17.0 +0.9**
comp=Z,46nm,1.7s,mb4.6
SNART Snartemo 24.15 341 *eP* **P 20 58 16.6 +0.6**
SNART AMB AMB 20 58 18.6
comp=Z,61nm,2.4s,mb4.6
HFS Hagfors 24.46 350 P **P 20 58 17.9 -0.8**
comp=Z,22nm,0.5s,mb4.9,baz=154,slow=10,SNR=110
HFS LR LR 21 09 36.2
comp=Z,834nm,18.2s,MS4.3,baz=164,slow=41
HFA0 Hagfors New Ar 24.47 350 P **P 20 58 17.0 -1.8**
KONO Kongsberg 24.74 345 *eP* **P 20 58 20.4 -0.9**
KONO pmax pmax
comp=Z,136nm,1.4s,mb5.3
KONO Kongsberg 24.74 345 *eP* **P 20 58 20.4 -0.8**
comp=Z,136nm,1.4s,mb5.3
OSL Oslo 24.77 346 *eP* **P 20 58 21.3 -0.3**
OSL Oslo 24.77 346 *eP* **P 20 58 21.3 -0.3**
SNR=51
WLF1 Llynfaes 25.16 321 *eP* **P 20 58 24.4 -0.7**
WLF1 AMb AMB 20 58 38.1
comp=Z,92nm,3.4s
WLF1 Llynfaes 25.16 321 *eP* **P 20 58 24.4 -0.7**
comp=Z,92nm,3.4s
FINES FINESS Array B 25.27 4 P **P 20 58 25.4 -0.6**
comp=Z,21nm,0.4s,mb5.0,baz=158,slow=11,SNR=388
FINES LR LR 21 09 40.3
comp=Z,4μm,18.9s,MS4.9,baz=189,slow=40
FINES FINESS Array B 25.27 4 P **P 20 58 25.4 -0.6**
FINES LR LR 21 09 40.3
XDE Dent Fell 25.38 324 *eP* **P 20 58 27.1 0.0**
XDE Dent Fell 25.38 324 *eP* **P 20 58 27.1 -0.1**
OUK Oukaimeden 25.45 267 *i P* **P 20 58 29.0 +1.0**
NAO01 NORSAR Array S 25.59 347 *eP* **P 20 58 28.3 -0.6**
comp=Z,32nm,0.6s,mb5.0
ECK Cauldkaine Hil 25.61 325⇑ *eP* **P 20 58 28.3 -0.9**
ECK Cauldkaine Hil 25.61 325⇑ *eP* **P 20 58 28.3 -0.9**
NB2 NORSAR Subarra 25.71 348 P **P 20 58 29.6 -0.5**
comp=Z,49nm,1.2s,mb4.9,baz=155,slow=9.3
NB2 NORSAR Subarra 25.71 348 P **P 20 58 29.6 -0.5**
comp=Z,49nm,1.2s,mb4.9,SNR=3.1
NOA NORSAR Array B 25.71 348 P **P 20 58 29.9 -0.2**
comp=Z,34nm,1.0s,mb4.8,baz=160,slow=9.7,SNR=35
NOA NORSAR Array B 25.71 348 P **P 20 58 29.9 -0.2**
EKA Eskdalemuir Ar 25.72 326 P **P 20 58 30.5 +0.3**
comp=Z,66nm,1.1s,mb5.1,baz=131,slow=8.5,SNR=101
ESK Eskdalemuir 25.73 326 P **P 20 58 30.9 +0.6**
comp=Z,307nm,1.0s,mb5.8,SNR=27
ESK Eskdalemuir 25.73 326⇑ *eP* **P 20 58 30.4 +0.1**
ESK AMb AMB 20 58 32.3
comp=Z,53nm,1.3s,mb4.9
ESK AMS AMS 21 10 13.4
comp=Z,2μm,25.2s,MS4.5
ESK Eskdalemuir 25.73 326 P **P 20 58 30.4 +0.1**
ESK AMb AMB 20 58 32.3
comp=Z,53nm,1.3s,mb4.9
ESK AMS AMS 21 10 13.4
comp=Z,2μm,25.2s
ESK Eskdalemuir 25.73 326 *eP* **P 20 58 30.4 +0.1**
ESK pmax pmax
comp=Z,76nm,1.0s,mb5.2
ESK Eskdalemuir 25.73 326 *eP* **P 20 58 30.4 +0.1**
comp=Z,76nm,1.0s,mb5.2
ESK Eskdalemuir 25.73 326⇑ *eP* **P 20 58 30.4 +0.1**
comp=Z,53nm,1.3s,mb4.9
GIM North Isle of 25.73 323 *eP* **P 20 58 30.4 +0.1**
GIM North Isle of 25.73 323 *eP* **P 20 58 30.4 +0.1**
ESY Stoneypath 25.84 327⇑ *eP* **P 20 58 31.3 0.0**
ESY Stoneypath 25.84 327⇑ *eP* **P 20 58 31.3 0.0**
KAF Kangasniemi 25.95 4 *eP* **P 20 58 30.0 -2.2**
KAF pmax pmax
comp=Z,24nm,0.5s,mb5.0
KAF Kangasniemi 25.95 4 *ep* **P 20 58 30.0 -2.2**
comp=Z,24nm,0.5s,mb5.0
EDI Edinburgh 26.09 327⇑ *eP* **P 20 58 33.9 +0.3**
EDI AMb AMB 20 58 37.4
comp=Z,93nm,0.9s,mb5.3
EDI AMS AMS 21 11 15.8
comp=Z,3μm,19.2s,MS4.8
EDI Edinburgh 26.09 327⇑ *eP* **P 20 58 33.9 +0.3**
comp=Z,93nm,0.9s,mb5.3
EAU Auchinoon 26.16 326⇑ *eP* **P 20 58 34.1 -0.1**
EAU Auchinoon 26.16 326⇑ *eP* **P 20 58 34.1 -0.1**
DSB Dublin 26.16 319 *eP* **P 20 58 34.4 +0.1**
comp=Z,22nm,0.9s,mb4.7
GAL1 Galloway 26.17 324⇑ *eP* **P 20 58 34.2 -0.1**
GAL1 AMb AMB 20 58 36.7
comp=Z,36nm,3.7s
GAL1 AMS AMS 21 10 49.1
comp=Z,1μm,21.4s,MS4.5
GAL1 Galloway 26.17 324⇑ *eP* **P 20 58 34.2 -0.1**
comp=Z,36nm,3.7s
EBH Black Hill 26.43 327⇑ *eP* **P 20 58 36.9 +0.2**
EBH Black Hill 26.43 327⇑ *eP* **P 20 58 36.9 +0.2**
PGBU Glenifferbraes 26.61 326 *eP* **P 20 58 38.5 +0.3**
PGBU AMb AMB 20 58 45.9
comp=Z,28nm,1.1s,mb4.7
PGBU AMS AMS 21 11 02.8
comp=Z,2μm,19.5s,MS4.6
EAB Aberfoyle 26.77 326⇑ *eP* **P 20 58 40.0 +0.4**
EAB Aberfoyle 26.77 326⇑ *eP* **P 20 58 40.0 +0.4**
MME1 Meikle Cairn 26.88 329⇑ *eP* **P 20 58 40.1 -0.6**
MME1 Meikle Cairn 26.88 329⇑ *eP* **P 20 58 40.1 -0.6**
DOMB Dombas 27.03 346 *eP* **P 20 58 43.1 +1.1**
DOMB AMB AMB 20 58 57.9
comp=Z,64nm,2.3s,mb4.7
DOMB Dombas 27.03 346 *eP* **P 20 58 43.1 +1.1**
comp=Z,64nm,2.3s,mb4.7,SNR=41
MCD Coleburn Disti 27.17 330⇑ *eP* **P 20 58 42.8 -0.5**
MCD Coleburn Disti 27.17 330⇑ *eP* **P 20 58 42.8 -0.5**
JOF Joensuu 27.22 9 *eP* **P 20 58 42.4 -1.3**
JOF pmax pmax
comp=Z,13nm,0.5s,mb4.7
JOF Joensuu 27.22 9 *ep* **P 20 58 42.4 -1.3**
comp=Z,13nm,0.5s,mb4.7
JOF Joensuu 27.22 9 *eP* **P 20 58 42.4 -1.3**
comp=Z,13nm,0.5s,mb4.7
MDO Dochfour 27.54 328⇑ *eP* **P 20 58 46.2 -0.4**
MDO Dochfour 27.54 328⇑ *eP* **P 20 58 46.2 -0.4**
MVH1 Achvaich 27.77 329 *eP* **P 20 58 48.2 -0.4**
MVH1 Achvaich 27.77 329 *eP* **P 20 58 48.2 -0.5**
KSB Sheil Bridge 27.86 327⇑ *eP* **P 20 58 49.0 -0.5**
KSB Sheil Bridge 27.86 327⇑ *eP* **P 20 58 49.0 -0.4**
KAR1 Arisaig 27.86 327⇑ *eP* **P 20 58 49.4 0.0**
KAR1 Arisaig 27.86 327⇑ *eP* **P 20 58 49.4 -0.1**
ORE Reay 28.01 331⇑ *eP* **P 20 58 51.1 +0.4**
ORE Reay 28.01 331⇑ *eP* **P 20 58 51.1 +0.3**
KPL Plockton 28.04 327⇑ *eP* **P 20 58 50.9 -0.1**
KPL AMb AMB 20 58 51.7
comp=Z,26nm,1.2s,mb4.7
KPL AMS AMS 21 12 26.1
comp=Z,3μm,18.0s,MS4.9
KPL Plockton 28.04 327⇑ *eP* **P 20 58 50.9 -0.1**
comp=Z,26nm,1.2s,mb4.7
LRW Lerwick 28.17 335⇑ *eP* **P 20 58 51.5 -0.7**
LRW AMb AMB 20 58 52.7
comp=Z,44nm,1.2s,mb5.0
LRW AMS AMS 21 12 49.1
comp=Z,1μm,16.2s,MS4.6
LRW Lerwick 28.17 335⇑ *eP* **P 20 58 51.5 -0.7**
comp=Z,44nm,1.2s,mb5.0
NSS Namsos 28.91 351 *eP* **P 20 58 59.3 +0.6**
NSS Namsos 28.91 351 *eP* **P 20 58 59.3 +0.6**
SNR=41
AKTK Aktyubinsk 29.30 50 P **P 20 59 01.0 -1.3**
AKTK ScP ScP 21 05 49.0 +3.9
AKTK LR LR 21 13 44.9
AKTO Aktyubinsk 29.30 50 P **P 20 59 01.0 -1.3**
AKTO 21 05 49.0
AKTO Aktyubinsk 29.30 50 P **P 20 59 01.0 -1.3**
comp=Z,19nm,0.5s,mb5.1,baz=266,slow=7.7,SNR=76
AKTO ScP ScP 21 05 49.0 +3.9
comp=Z,1.7nm,1.0s,baz=272,slow=16,SNR=3.9
AKTO LR LR 21 13 44.9
comp=Z,836nm,19.6s,MS4.4,baz=262,slow=43
TOA0 Torodi Ar. Sit 29.52 224 *eP* **P 20 59 04.6 +0.1**
TORD Torodi Ar. Bea 29.52 224 P **P 20 59 04.9 +0.3**
comp=Z,5.1nm,0.7s,mb4.4,baz=36,slow=9.4,SNR=63
TORD ScP ScP 21 05 48.2 +1.8
comp=Z,1.1nm,1.0s,baz=33,slow=3.3,SNR=4.6
TORD LR LR 21 12 33.4
comp=Z,984nm,18.1s,MS4.5,baz=20,slow=39
ABKAR Akbulak array 30.25 53⇑ *iP* **P 20 59 09.1 -1.6**
comp=Z,14nm,0.5s,mb4.9
ABKAR *e*ScP ScP 21 05 48.6 +0.4
FURI Furi 31.14 147 *eP* **P 20 59 22.4 +3.5**
ARU Arti 31.62 39*c iP* **P 20 59 21.2 -1.5**
ARU *e* 21 00 27.3
ARU S **S 21 04 26.4 -1.5**
ARU SS SS 21 06 12.2 -32
ARU pmax pmax
comp=Z,80nm,1.2s,mb5.4
ARU Arti 31.62 39⇑ *iP* **P 20 59 21.1 -1.6**
comp=Z,29nm,0.7s,mb5.2
APA Apatity 31.95 8⇑ *eP* pP 20 59 36.4 -2.2
APA pmax pmax
comp=Z,12nm,0.8s,mb4.8
APA MLR MLR
comp=Z,4μm,17.0s,MS5.2
SOKR Solikamsk 32.23 33*c iP* **P 20 59 27.1 -0.9**
SOKR pmax pmax
comp=Z,110nm,1.0s,mb5.6
SOKR MLR MLR
comp=Z,1μm,19.0s,MS4.5
LOF Lofoten 32.24 354 *eP* **P 20 59 30.6 +2.6**
LOF Lofoten 32.24 354 *eP* **P 20 59 30.6 +2.6**
SNR=40
KTK1 Kautokeino 32.76 1 *eP* **P 20 59 32.8 +0.2**
KTK1 Kautokeino 32.76 1 *eP* **P 20 59 32.8 +0.3**
SNR=40
SVE Sverdlovsk 32.83 39⇓ *eP* **P 20 59 32.3 -1.0**
SVE *eS* **S 21 04 53.0 +6.3**
SVE pmax pmax
comp=Z,148nm,1.1s,mb5.8
SVE MLR MLR
comp=Z,2μm,16.0s,MS4.8
ARCES ARCESS Array B 33.33 2 P **P 20 59 37.2 -0.2**
comp=Z,20nm,0.8s,mb5.1,baz=195,slow=9.8,SNR=71
ARCES LR LR 21 14 20.8
comp=Z,2μm,19.1s,MS4.8,baz=199,slow=38
ARE0 ARCESS Array S 33.33 2 *eP* **P 20 59 36.8 -0.7**
TRO Tromso 33.42 358 *eP* **P 20 59 39.6 +1.2**
TRO Tromso 33.42 358 *eP* **P 20 59 39.6 +1.3**
SNR=40
KEV Kevo 33.60 3 *eP* **P 20 59 38.3 -1.6**
KEV pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
KEV Kevo 33.60 3 *ep* **P 20 59 38.3 -1.6**
comp=Z,9.5nm,0.5s,mb5.0
BRVK Borovoye 37.27 48 P **P 21 00 11.7 +0.1**
comp=Z,310nm,0.6s,mb6.3,SNR=18
BRVK Borovoye 37.27 48*c iP* **P 21 00 11.0 -0.6**
BRVK *e* 21 01 39.1
BRVK pmax pmax
comp=Z,98nm,1.7s,mb5.4
BRVK Borovoye 37.27 48⇑ *iP* **P 21 00 10.8 -0.8**
comp=Z,29nm,0.6s,mb5.3
BRVK Borovoye 37.27 48 P **P 21 00 11.4 -0.2**
SNR=20
BRVK P 21 00 11.4
SNR=20
BVAR Borovoye Array 37.33 48 P **P 21 00 11.5 -0.6**
comp=Z,19nm,0.6s,mb5.1,baz=263,slow=6.1,SNR=138
BVAR LR LR 21 17 32.9
comp=Z,1μm,20.7s,MS4.7,baz=258,slow=40
KBL Kabul 37.93 78⇑ *iP* **P 21 00 17.5 +0.1**
KBL *eS* **S 21 06 06.1 +0.6**
KBL pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
KBL Kabul 37.93 78⇑ *iP* **P 21 00 17.5 +0.1**
comp=Z,9.8nm,0.7s,mb4.7
KBL *eS* **S 21 06 06.1 +0.6**
BORG Borgarnes 38.38 332 P **P 21 00 21.9 +1.1**
BORG pmax pmax
comp=Z,191nm,1.5s
BORG Borgarnes 38.38 332 P **P 21 00 21.9 +1.0**
comp=Z,191nm,1.5s,mb5.6
DBIC Dimbokro 38.51 227 *eP* **P 21 00 21.8 -0.6**
DBIC pmax pmax
comp=Z,25nm,0.9s
DBIC Dimbokro 38.51 227 P **P 21 00 22.8 +0.3**
comp=Z,12nm,0.7s,mb4.7,baz=19,slow=9.1,SNR=12
DBIC LR LR 21 18 20.5
comp=Z,620nm,18.4s,MS4.5,baz=12,slow=39
DBIC Dimbokro 38.51 227 *eP* **P 21 00 21.8 -0.6**
comp=Z,25nm,0.9s,mb5.0
TIC Toumodi 38.62 227 *eP* **P 21 00 23.6 +0.2**
comp=Z,64nm,1.0s,mb5.3
TIC Toumodi 38.62 227 *eP* **P 21 00 23.6 +0.2**
TIC pmax pmax
comp=Z,64nm,1.0s,mb5.3
KIC Kosan Boka 38.69 226 *eP* **P 21 00 24.2 +0.3**
comp=Z,52nm,0.9s,mb5.3
LIC Lamto 38.96 226 *eP* **P 21 00 25.7 -0.5**
comp=Z,48nm,0.8s,mb5.0
LIC Lamto 38.96 226 *eP* **P 21 00 26.6 +0.4**
comp=Z,134nm,1.2s,mb5.5
LIC Lamto 38.96 226 *eP* **P 21 00 25.7 -0.5**
comp=Z,24nm,0.8s,mb5.0
EKS2 Erkin-Say 39.80 65 P **P 21 00 33.4 +0.5**
SNR=74
EKS2 Erkin-Say 39.80 65⇑ *iP* **P 21 00 33.0 +0.1**
comp=Z,48nm,0.8s,mb5.3
KMBO Kilima Mbogo 39.80 156 *eP* **P 21 00 35.2 +2.0**
KMBO pmax pmax
comp=Z,11nm,1.3s
KMBO Kilima Mbogo 39.80 156 P **P 21 00 35.2 +2.0**
comp=Z,1.9nm,0.8s,mb3.9,baz=3.5,slow=3.3,SNR=4.6
KMBO LR LR 21 18 25.7
comp=Z,396nm,18.8s,MS4.3,baz=97,slow=38
KMBO Kilima Mbogo 39.80 156 *eP* **P 21 00 35.2 +2.0**
comp=Z,11nm,1.3s,mb4.4
AML Almayashu 39.82 65 P **P 21 00 33.3 +0.2**
SNR=35
AML Almayashu 39.82 65⇑ *iP* **P 21 00 32.9 -0.2**
comp=Z,16nm,0.6s,mb4.9
USP Ospenovka 40.23 63 P **P 21 00 35.9 -0.6**
SNR=11
AAK Ala-Archa 40.32 64 P **P 21 00 37.5 +0.2**
comp=Z,219nm,1.4s,mb5.7,SNR=32
AAK Ala-Archa 40.32 64 P **P 21 00 37.8 +0.5**
SNR=43
AAK Ala-Archa 40.32 64*c iP* **P 21 00 37.5 +0.2**
AAK pmax pmax
comp=Z,30nm,1.2s,mb4.9
AAK Ala-Archa 40.32 64⇑ *iP* **P 21 00 37.6 +0.3**
comp=Z,45nm,1.1s,mb5.1
AAK Ala-Archa 40.32 64 P **P 21 00 37.7 +0.4**
SNR=28
AAK P 21 00 37.7
SNR=28
UCH Uchtor 40.40 65 P **P 21 00 38.7 +0.7**
SNR=24
UCH Uchtor 40.40 65 *eP* **P 21 00 38.0 +0.1**
comp=Z,40nm,1.3s,mb5.0
CHMS Chumysh 40.45 64 P **P 21 00 38.4 0.0**
SNR=31
KBK Karagaybulak 40.65 64 P **P 21 00 40.5 +0.5**
SNR=35
KZA Kyzart 40.97 65 P **P 21 00 43.7 +1.1**
SNR=61
TKM2 Tokmak 2 41.08 64 P **P 21 00 43.5 0.0**
SNR=25
TKM2 Tokmak 2 41.08 64⇑ *iP* **P 21 00 43.0 -0.5**
TKM2 pmax pmax
comp=Z,20nm,0.8s,mb4.8
TKM2 Tokmak 2 41.08 64⇑ *iP* **P 21 00 43.0 -0.5**
comp=Z,20nm,0.8s,mb4.8
TKM2 *e*ScP ScP 21 06 28.8 +1.0
SCO Scoresbysund 41.40 339 *i P* **P 21 00 47.9 +2.1**
SCO pmax pmax
comp=Z,23nm,0.8s,mb4.9
SCO Scoresbysund 41.40 339 *i P* **P 21 00 47.9 +2.1**
comp=Z,23nm,0.8s,mb4.9
SCO Scoresbysund 41.40 339 *i P* **P 21 00 48.0 +2.2**
comp=Z,23nm,0.8s,mb4.9,SNR=25
ULHL Ulahol 41.66 65 P **P 21 00 49.2 +0.9**
SNR=8.2
KSH Kashi 42.02 69 *eP* **P 21 00 49.8 -1.5**
KSH *e*pP pP 21 00 57.0 -7.8
KSH *e*sP sP 21 00 59.8 -11
KSH *e*PP PP 21 02 29.5 +0.3
KSH *e*PcP PcP 21 02 47.2 +1.7
KSH *e*ScP ScP 21 06 34.1 +2.5
KSH *e*PcS PcS 21 06 37.0 -0.2
KSH *e*S **S 21 07 03.8 -2.8**
KSH *e*sS sS 21 07 16.1 -13
KSH *e*SS SS 21 10 04.1 -11
KSH *e*ScS ScS 21 10 49.1 0.0
KSH pmax pmax
comp=Z,93nm,1.7s,mb5.1
KSH LR LR
comp=N,200nm,5.6s
KSH LR LR
comp=E,170nm,6.7s
SPITS Spitsbergen Ar 42.04 358 P **P 21 00 52.0 +1.0**
comp=E,2.9nm,0.3s,mb4.3,baz=149,slow=12,SNR=79
SPB4 Spitsbergen Ar 42.04 358 *eP* **P 21 00 51.1 +0.2**
KURK Kurchatov 42.34 52 P **P 21 00 52.0 -1.7**
comp=E,187nm,0.6s,mb5.9,SNR=16
KURK Kurchatov 42.34 52*c iP* **P 21 00 52.7 -1.0**
KURK pmax pmax
comp=Z,71nm,1.7s,mb5.0
KURK Kurchatov 42.34 52 P **P 21 00 50.8 -2.9**
comp=Z,24nm,0.6s,mb5.0,baz=276,slow=8.7,SNR=79
KURK ScP ScP 21 06 33.8 +1.1
comp=Z,1.9nm,0.8s,baz=264,slow=4.8,SNR=5.1
KURK Kurchatov 42.34 52⇑ *iP* **P 21 00 52.2 -1.6**
comp=Z,4.3nm,1.3s,mb3.9
KURK Kurchatov 42.34 52 P **P 21 00 53.1 -0.6**
SNR=17
KURK P 21 00 53.1
SNR=17
DAG Danmarks Havn 44.40 348⇓ *iP* **P 21 01 10.9 +0.9**
DAG pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
DAG Danmarks Havn 44.40 348⇓ *iP* **P 21 01 10.9 +0.9**
comp=Z,5.3nm,0.6s,mb4.5
NVS Novosibirsk 44.99 46⇑ *iP* **P 21 01 14.0 -0.9**
NVS *i* 21 03 03.0
NVS *i* S **S 21 07 46.5 -3.1**
NVS *i* 21 11 06.0
NVS pmax pmax
comp=Z,148nm,1.6s,mb5.6
NVS pmax pmax
comp=N,34nm,1.3s
NVS pmax pmax
comp=E,51nm,1.2s
NVS smax
comp=N,60nm,1.8s
NVS smax
comp=E,36nm,1.8s
MK31 Makanchi Array 45.16 57⇑ *iP* **P 21 01 15.7 -0.7**
MKAR Makanchi Array 45.16 57 P **P 21 01 15.2 -1.2**
MKAR S **S 21 07 49.7 -2.6**
MKAR Makanchi Array 45.16 57 P **P 21 01 15.2 -1.3**
comp=E,24nm,0.6s,mb5.2,baz=273,slow=6.1,SNR=117
MKAR ScP ScP 21 06 44.8 +0.6
comp=E,1.0nm,0.5s,baz=261,slow=3.8,SNR=4.6
MKAR S **S 21 07 49.7 -2.6**
comp=E,2.2nm,0.9s,baz=269,slow=13,SNR=4.5
MKAR LR LR 21 23 05.5
comp=E,570nm,21.1s,MS4.5,baz=154,slow=40
SDNR Sundarnagar 45.21 79 *eP* **P 21 01 16.5 -0.5**
ZAA0 Zalesovo Array 45.96 47⇑ *iP* **P 21 01 21.2 -1.4**
ZAA0 *e*S **S 21 07 59.8 -3.8**
ZALV Zalesovo Beam 45.96 47 P **P 21 01 21.5 -1.1**
ZALV S **S 21 08 00.8 -2.8**
ZALV Zalesovo Beam 45.96 47 P **P 21 01 21.4 -1.2**
comp=E,44nm,0.6s,mb5.6,baz=271,slow=8.7,SNR=187
ZALV S **S 21 08 00.8 -2.8**
comp=E,1.6nm,0.6s,baz=264,slow=14,SNR=4.6
ZALV LR LR 21 23 20.5
comp=E,376nm,21.5s,MS4.3,baz=124,slow=40
SUMG Summit 47.04 339⇑ *eP* **P 21 01 32.4 +1.6**
comp=E,36nm,1.1s,mb5.2
SUMG *e*PP PP 21 03 13.9 -7.7
SUMG Summit 47.04 339⇑ *iP* **P 21 01 32.6 +1.8**
comp=E,23nm,1.0s,mb5.1,SNR=24
WMQ Urumqi 49.51 60 P **P 21 01 50.4 +0.1**
WMQ PcP PcP 21 03 12.1 +0.6
WMQ PP PP 21 03 44.1 -0.6
WMQ S **S 21 08 54.7 +0.5**
WMQ ScS ScS 21 11 37.8 +0.4
WMQ pmax pmax
comp=Z,51nm,1.0s,mb5.5
WMQ pmax pmax
comp=Z,350nm,4.5s
WMQ LR LR
comp=N,540nm,19.0s,MS4.8
WMQ LR LR
comp=E,870nm,21.0s,MS4.8
WMQ LR LR
comp=Z,710nm,19.0s,MS4.7
SFJD Kangerlussuaq 50.51 331 *eP* **P 21 01 57.9 +0.4**
SFJD pmax pmax
comp=Z,11nm,0.9s,mb4.8
SFJD Kangerlussuaq 50.51 331 *i P* **P 21 01 57.9 +0.4**
comp=Z,11nm,0.9s,mb4.8
SFJD Kangerlussuaq 50.51 331 *eP* **P 21 01 57.9 +0.4**
comp=Z,11nm,0.9s,mb4.8,SNR=23
LSZ Lusaka 51.62 173⇓ *eP* **P 21 02 07.7 +1.4**
LSZ pmax pmax
comp=Z,12nm,0.9s,mb4.8
LSZ Lusaka 51.62 173 P **P 21 02 07.7 +1.4**
comp=Z,15nm,0.8s,mb4.9,baz=3.9,slow=8.4,SNR=24
LSZ Lusaka 51.62 173⇓ *eP* **P 21 02 07.7 +1.4**
comp=Z,12nm,0.9s,mb4.8
HYB Hyderabad 52.94 95 *i P* **P 21 02 15.0 -1.3**
HYB *e* pP 21 02 26.0 -4.2
HYB *e*pP pP 21 02 31.0 +0.8
DMN Daman 53.26 80 *eP* **P 21 02 18.5 0.0**
comp=Z,104nm,0.5s,mb6.0
KKN Kakani 53.32 80 *eP* **P 21 02 18.6 -0.4**
comp=Z,68nm,0.6s,mb5.8
PKIN Phulchoki 53.51 80 *eP* **P 21 02 19.9 -0.4**
comp=Z,27nm,0.5s,mb5.4
PKIN Phulchoki 53.51 80 *eP* **P 21 02 20.3 0.0**
comp=Z,26nm,0.4s,mb5.5
PKI Pulchoki 53.52 80 *eP* **P 21 02 20.1 -0.3**
comp=Z,14nm,0.3s,mb5.5
GUN Gumba 53.74 80 *eP* **P 21 02 21.9 -0.2**
comp=Z,49nm,0.6s,mb5.6
TSUM Tsumeb 55.39 185 P **P 21 02 34.6 +0.7**
comp=Z,3.6nm,0.7s,mb4.5,baz=15,slow=3.5,SNR=8.1
TSUM Tsumeb 55.39 185 *eP* **P 21 02 33.6 -0.2**
comp=Z,4.5nm,0.8s,mb4.5
MOY Mondy 56.01 47 *eP* **P 21 02 38.4 +0.3**
MOY pmax pmax
comp=Z,33nm,2.8s,mb4.9
LSA Lhasa 57.11 75 P **P 21 02 47.1 +0.8**
LSA Lhasa 57.11 75 *eP* **P 21 02 46.9 +0.6**
LSA pmax pmax
comp=Z,26nm,0.8s,mb5.3
LSA Lhasa 57.11 75 *eP* **P 21 02 46.9 +0.6**
comp=Z,26nm,0.8s,mb5.3
TLY Talaya 57.58 47 *eP* **P 21 02 49.2 0.0**
TLY pmax pmax
comp=Z,37nm,1.7s,mb5.1
TLY MLR MLR
comp=Z,895nm,22.0s,MS4.8
TLY Talaya 57.58 47⇑ *iP* **P 21 02 49.3 +0.1**
comp=Z,40nm,1.5s,mb5.2
TLY *e*pP pP 21 03 02.1 -1.2
TLY Talaya 57.58 47 P **P 21 02 49.9 +0.7**
SNR=6.7
TLY P 21 02 49.9
SNR=6.7
IRK Irkutsk 57.76 46 *eP* **P 21 02 49.3 -1.2**
IRK *e* pP 21 03 03.2 -1.3
IRK pmax pmax
comp=Z,54nm,2.2s,mb5.2
ZAK Zakamensk 57.79 48⇓ *iP* **P 21 02 50.1 -0.6**
ZAK *e* pP 21 03 06.5 +1.8
ZAK pmax pmax
comp=Z,14nm,1.1s,mb4.9
GTA Gaotai 59.54 61 ⇑P **P 21 03 03.1 0.0**
GTA pP pP 21 03 10.7 -6.5
GTA sP sP 21 03 14.1 -8.9
GTA PP PP 21 05 16.7 +2.0

GTA				S	**S**	**21 11 10.2**	**+1.2**
GTA				sS	sS	21 11 22.7	-10
GTA				SS	SS	21 15 06.4	+1.9
GTA				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.9						
GTA				pmax	pmax		
	comp=Z,180nm,5.1s						
GTA				LR	LR		
	comp=N,370nm,21.4s,MS4.7						
GTA				LR	LR		
	comp=E,380nm,18.4s,MS4.7						
GTA				LR	LR		
	comp=Z,730nm,22.6s,MS4.8						
SHL	**Shillong**	**59.58**	**79**	*e*P	**P**	**21 03 02.0**	**-1.6**
SONM	**Songino Array**	**60.61**	**50**	P	**P**	**21 03 09.9**	**-0.3**
	comp=Z,8.3nm,0.8s,mb4.9,baz=280,slow=8.3,SNR=66						
SONM				ScP	ScP	21 07 52.9	+1.8
	comp=Z,0.9nm,0.7s,baz=265,slow=3.4,SNR=4.2						
SONM				LR	LR	21 34 22.5	
	comp=Z,435nm,18.8s,MS4.6,baz=296,slow=41						
SCHQ	**Schefferville**	**60.73**	**318**	*e*P	**P**	**21 03 11.9**	**+0.9**
	comp=Z,9.1nm,0.6s,mb5.1,baz=64,slow=7.2,SNR=13						
SCHQ	**Schefferville**	**60.73**	**318**	*e*P	**P**	**21 03 11.7**	**+0.7**
	comp=Z,14nm,0.7s,mb5.2						
TIXI	**Tiksi**	**60.93**	**20***c*	*i*P	**P**	**21 03 11.7**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,29nm,1.7s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.1						
TIXI	**Tiksi**	**60.93**	**20⇑**	*i*P	**P**	**21 03 11.4**	**-0.6**
	comp=Z,12nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**61.01**	**50⇑**	*i*P	**P**	**21 03 12.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
ULN	**Ulaanbaatar**	**61.01**	**50⇑**	*i*P	**P**	**21 03 12.5**	**-0.4**
	comp=Z,13nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**61.01**	**50**	P	**P**	**21 03 12.9**	**0.0**
	SNR=9.8						
ULN				P		21 03 12.9	
	SNR=9.8						
BOD	**Bodaibo**	**61.02**	**38⇓**	*i*P	**P**	**21 03 10.9**	**-2.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.7						
LBTB	**Lobatse**	**61.08**	**176**	*e*P	**P**	**21 03 14.9**	**+1.3**
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
LBTB	**Lobatse**	**61.08**	**176**	*e*P	**P**	**21 03 14.9**	**+1.3**
	comp=Z,10.0nm,1.0s,mb4.9						
RES	**Resolute Bay**	**61.92**	**344**	*e*P	**P**	**21 03 19.6**	**+0.9**
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
RES	**Resolute Bay**	**61.92**	**344**	*e*P	**P**	**21 03 19.6**	**+0.9**
	comp=Z,9.8nm,1.0s,mb4.9						
LZH	**Lanzhou**	**63.85**	**63**	⇑P	**P**	**21 03 32.5**	**+0.4**
LZH				PP	PP	21 05 55.4	+2.7
LZH				S	**S**	**21 11 56.7**	**-7.0**
LZH				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.2						
LZH				pmax	pmax		
	comp=Z,170nm,6.4s						
YAK	**Yakutsk**	**66.07**	**29**	*e*P	**P**	**21 03 44.6**	**-1.5**
YAK				*e**PP	pP	21 03 54.1	-6.3
YAK				*e*		21 04 15.2	
YAK				*e*S	S	21 12 26.6	-3.6
YAK				*e*		21 13 34.5	
YAK				*e*SSS		21 19 46.1	
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK				smax			
	comp=E,84nm,5.7s						
YAK				smax			
	comp=N,12nm,1.4s						
YAK				MLR	MLR		
	comp=Z,684nm,26.0s,MS4.7						
YAK				MLR	MLR		
	comp=N,452nm,24.0s,MS4.7						
YAK				MLR	MLR		
	comp=E,329nm,25.0s,MS4.7						
YAK	**Yakutsk**	**66.07**	**29**	*e*P	**P**	**21 03 44.5**	**-1.6**
	comp=E,13nm,0.6s,mb5.1						
CD2	**Chengdu**	**66.22**	**68**	P	**P**	**21 03 47.5**	**-0.1**
CD2				pP	pP	21 03 55.3	-6.6
CD2				sP	sP	21 03 58.5	-9.2
CD2				PP	PP	21 06 15.2	+1.6
CD2				S	S	21 12 32.2	-0.7
CD2				sS	sS	21 12 45.1	-12
CD2				SS	SS	21 16 48.6	-0.6
CD2				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.7						
CD2				pmax	pmax		
	comp=Z,340nm,5.3s						
CD2				LR	LR		
	comp=N,510nm,10.7s						
CD2				LR	LR		
	comp=Z,370nm,11.3s,MS4.8						
HHC	**Hu-ho-hao-te**	**66.99**	**56**	*e*P	**P**	**21 03 52.3**	**0.0**
HHC				pP	pP	21 04 02.8	-3.9
HHC				sP	sP	21 04 06.9	-5.6
HHC				PcP	PcP	21 04 21.2	+0.7
HHC				PP	PP	21 06 22.1	+2.1
HHC				ScP		21 08 21.0	
HHC				S	S	21 12 42.0	+0.1
HHC				sS	sS	21 12 58.0	-8.0
HHC				ScS	ScS	21 13 43.3	-2.2
HHC				SS	SS	21 17 00.6	-0.1
HHC				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
HHC				pmax	pmax		
	comp=Z,230nm,8.3s						
HHC				LR	LR		
	comp=N,390nm,16.9s,MS4.8						
HHC				LR	LR		
	comp=E,360nm,18.9s,MS4.8						
HHC				LR	LR		
	comp=Z,550nm,18.8s,MS4.8						
KMI	**Kunming**	**68.33**	**74**	P	**P**	**21 03 59.8**	**-1.3**
KMI				pP	pP	21 04 08.3	-7.1
KMI				sP	sP	21 04 11.0	-10
KMI				PcP	PcP	21 04 26.6	+0.2
KMI				PP	PP	21 06 34.3	+2.2
KMI				S	S	21 12 57.2	-1.3
KMI				sS	sS	21 13 11.3	-11
KMI				SKS		21 13 53.0	
KMI				SS	SS	21 17 23.2	+1.0
KMI				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
KMI				pmax	pmax		
	comp=Z,80nm,3.4s						
KMI				LR	LR		
	comp=N,360nm,24.0s,MS4.6						
KMI				LR	LR		
	comp=E,280nm,25.7s,MS4.6						
KMI				LR	LR		
	comp=Z,350nm,30.8s						
XAN	**Xi'an**	**68.48**	**63**	P	**P**	**21 04 01.1**	**-0.8**
XAN				pP	pP	21 04 07.6	-8.6
XAN				sP	sP	21 04 10.2	-12
XAN				PP	PP	21 06 31.5	-1.7
XAN				S	S	21 13 01.1	+1.1
XAN				sS	sS	21 13 12.2	-12
XAN				SS	SS	21 17 25.1	+1.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
XAN				pmax	pmax		
	comp=Z,32nm,4.1s						
XAN				LR	LR		
	comp=N,250nm,19.4s,MS4.5						
XAN				LR	LR		
	comp=E,190nm,21.1s,MS4.5						
XAN				LR	LR		
	comp=Z,140nm,21.6s,MS4.2						
RCBR	**Riachuelo**	**68.58**	**245**	P	**P**	**21 04 04.4**	**+1.7**
CHTO	**Chiang Mai**	**68.63**	**82⇑**	*i*P	**P**	**21 04 02.1**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CHTO	**Chiang Mai**	**68.63**	**82⇑**	*i*P	**P**	**21 04 02.1**	**-0.9**
	comp=Z,6.4nm,0.6s,mb4.7						
CHRT	**Chiangrai**	**68.74**	**81**	P	**P**	**21 04 03.5**	**-0.2**
CM31	**Chiang Mai Arr**	**68.82**	**82**	*e*P	**P**	**21 04 03.4**	**-0.8**
	comp=Z,8.1nm,0.7s,mb4.8						
CMAR	**Chiang Mai Arr**	**68.82**	**82**	P	**P**	**21 04 03.8**	**-0.4**
	comp=Z,8.3nm,0.7s,mb4.8,baz=302,slow=7.5,SNR=74						
CMAR				LR	LR	21 37 13.5	
	comp=Z,162nm,18.3s,MS4.3,baz=295,slow=39						
BJI	**Beijing**	**70.44**	**54**	P	**P**	**21 04 13.3**	**-0.6**
BJI				S	S	21 13 28.1	+5.2
BJI				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
BJI				pmax	pmax		
	comp=Z,190nm,3.5s						
BJI				LR	LR		
	comp=N,520nm,30.0s,MS4.7						
BJI				LR	LR		
	comp=E,320nm,29.3s,MS4.7						
BJI				LR	LR		
	comp=Z,750nm,33.4s,MS4.7						
GYA	**Guiyang**	**70.67**	**71**	P	**P**	**21 04 15.2**	**-0.3**
GYA				pP	pP	21 04 22.8	-7.1
GYA				sP	sP	21 04 27.9	-7.7
GYA				PcP	PcP	21 04 38.0	+1.8
GYA				PP	PP	21 06 54.2	+2.0
GYA				S	S	21 13 26.0	+0.1
GYA				SKS		21 14 11.2	
GYA				SS	SS	21 17 59.0	+0.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,560nm,18.9s,MS5.0						
GYA				LR	LR		
	comp=E,580nm,19.4s,MS5.0						
GYA				LR	LR		
	comp=Z,640nm,19.6s,MS4.9						
NST	**Nakhon Sawan**	**71.28**	**84**	P	**P**	**21 04 18.0**	**-1.3**
FCC	**Fort Churchill**	**71.53**	**330**	*e*P	**P**	**21 04 21.2**	**+1.1**
	comp=Z,0.3nm,0.8s						
BILL	**Bilibino**	**72.52**	**13***c*	*i*P	**P**	**21 04 25.8**	**-0.1**
BILL				*e*	pP	21 04 42.1	+1.7
BILL				*e*		21 07 06.1	
BILL				*e*S	S	21 13 44.8	-1.2
BILL				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
BILL	**Bilibino**	**72.52**	**13**	*e*P	**P**	**21 04 25.4**	**-0.5**
	comp=Z,22nm,1.2s,mb5.0						
SEY	**Seymchan**	**73.39**	**21⇑**	*i*P	**P**	**21 04 32.0**	**+0.9**
SEY				*e**PP	pP	21 04 46.5	+0.9
INK	**Inuvik**	**74.12**	**351**	*e*P	**P**	**21 04 35.4**	**+0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**74.12**	**351**	*e*P	**P**	**21 04 35.4**	**+0.1**
	comp=Z,5.2nm,0.6s,mb4.6						
CN2	**Changchun**	**74.18**	**47**	*e*P	**P**	**21 04 36.0**	**-0.1**
CN2				*e*sP	sP	21 04 50.3	-6.0
CN2				*e*S	S	21 14 04.8	-0.7
CN2				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,200nm,16.0s,MS4.5						
SNY	**Shenyang**	**74.18**	**50**	⇓P	**P**	**21 04 35.2**	**-0.9**
SNY				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
SNY				LR	LR		
	comp=N,430nm,20.7s,MS4.9						
SNY				LR	LR		
	comp=E,490nm,18.3s,MS4.9						
SNY				LR	LR		
	comp=Z,510nm,18.6s,MS4.8						
KLR	**Kul'dur**	**74.45**	**40**	*e*P	**P**	**21 04 33.3**	**-4.3**
ERPA	**Erie**	**74.50**	**311**	*e*P	**P**	**21 04 38.4**	**+0.4**
YKA	**Yellowknife Ar**	**75.59**	**341**	P	**P**	**21 04 44.4**	**+0.6**
	comp=Z,2.6nm,0.5s,mb4.4,baz=37,slow=5.4,SNR=44						
YKA				LR	LR	21 40 01.2	
	comp=Z,41nm,20.0s,MS3.7,baz=60,slow=37						
YKA	**Yellowknife Ar**	**75.59**	**341**	P	**P**	**21 04 44.4**	**+0.6**
YKA				LR	LR	21 40 01.2	
MDJ	**Mudanjiang**	**76.10**	**45**	P	**P**	**21 04 47.3**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,92nm,6.2s						
MDJ				LR	LR		
	comp=N,240nm,27.3s,MS4.6						
MDJ				LR	LR		
	comp=E,260nm,24.9s,MS4.6						
MDJ				LR	LR		
	comp=Z,400nm,22.6s,MS4.7						
NJ2	**Nanjing**	**76.59**	**60**	*e*P	**P**	**21 04 51.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
COLD	**Coldfoot**	**76.62**	**357**	*e*P	**P**	**21 04 50.4**	**+0.8**
	comp=Z,15nm,1.0s,mb4.9						
COWI	**Conover**	**77.35**	**318**	*e*P	**P**	**21 04 55.2**	**+1.1**
	comp=Z,13nm,0.8s,mb4.9						
EYMN	**Ely**	**77.39**	**321**	*e*P	**P**	**21 04 55.7**	**+1.4**
	comp=Z,11nm,1.2s,mb4.7						
ACSO	**Alum Creek Sta**	**77.44**	**311**	*e*P	**P**	**21 04 55.2**	**+0.4**
FFC	**Flin Flon**	**77.46**	**331**	P	**P**	**21 04 56.8**	**+2.2**
	comp=Z,111nm,0.9s,mb5.8,SNR=5.4						
FFC	**Flin Flon**	**77.46**	**331**	*e*P	**P**	**21 04 55.3**	**+0.7**
FFC				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
FFC	**Flin Flon**	**77.46**	**331**	*e*P	**P**	**21 04 55.3**	**+0.7**
	comp=Z,16nm,0.9s,mb5.0						
ULM	**Lac du Bonnet**	**77.99**	**325**	P	**P**	**21 04 58.8**	**+1.2**
	comp=Z,4.9nm,0.6s,mb4.6,baz=32,slow=2.4,SNR=8.6						
ULM				LR	LR	21 40 26.7	
	comp=Z,624nm,19.1s,MS5.0,baz=300,slow=36						
ULM	**Lac du Bonnet**	**77.99**	**325**	*e*P	**P**	**21 04 57.2**	**-0.4**
	comp=Z,12nm,0.8s,mb4.9						
VLA	**Vladivostok**	**78.33**	**45⇑**	*i*P	**P**	**21 04 59.0**	**-0.7**
VLA				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0						
EGAK	**Eagle**	**78.39**	**353**	*e*P	**P**	**21 04 58.2**	**-1.3**
	comp=Z,9.0nm,1.1s,mb4.6						
COLA	**College**	**78.84**	**356**	*e*P	**P**	**21 05 01.6**	**-0.4**
COLA				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
COLA	**College**	**78.84**	**356**	*e*P	**P**	**21 05 01.6**	**-0.4**
	comp=Z,16nm,1.4s,mb4.8						
DAWY	**Dawson**	**78.90**	**352**	*e*P	**P**	**21 05 03.4**	**+1.1**
KSRS	**Korea Array**	**79.47**	**51**	P	**P**	**21 05 06.0**	**0.0**
KSRS				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
KSRS				MLR	MLR		
	comp=Z,365nm,19.5s,MS4.7						
KSRS	**Korea Array**	**79.47**	**51**	P	**P**	**21 05 06.0**	**0.0**
	comp=Z,12nm,0.6s,mb5.0,baz=313,slow=4.5,SNR=52						
KSRS				LR	LR	21 44 47.0	
	comp=Z,365nm,19.5s,MS4.7,baz=111,slow=39						
BPAW	**Bear Paw Mtn.**	**79.78**	**357**	*e*P	**P**	**21 05 07.2**	**0.0**
	comp=Z,11nm,0.9s,mb4.8						
MCK	**McKinley**	**80.04**	**356**	*e*P	**P**	**21 05 08.5**	**-0.1**
MCK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
MCK	**McKinley**	**80.04**	**356**	*e*P	**P**	**21 05 08.5**	**-0.1**
	comp=Z,26nm,1.1s,mb5.1						
CHUM	**Lake Minchumin**	**80.04**	**358**	*e*P	**P**	**21 05 09.4**	**+0.8**
	comp=Z,34nm,1.1s,mb5.2						
KTH	**Kantishna Hill**	**80.32**	**357**	*e*P	**P**	**21 05 10.2**	**+0.1**
	comp=Z,41nm,1.5s,mb5.1						
TRF	**Thorofare Moun**	**80.39**	**357**	*e*P	**P**	**21 05 10.4**	**-0.1**
	comp=Z,11nm,0.9s,mb4.8						
MENT	**Mentasta**	**80.44**	**354**	*e*P	**P**	**21 05 12.1**	**+1.3**
PPLA	**Purkeypile**	**81.03**	**357**	*e*P	**P**	**21 05 14.9**	**+1.0**
	comp=Z,19nm,0.7s,mb5.1						
TTA	**Tatalina**	**81.08**	**359**	*e*P	**P**	**21 05 15.7**	**+1.5**
TTA				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
TTA	**Tatalina**	**81.08**	**359**	*e*P	**P**	**21 05 15.7**	**+1.5**
	comp=Z,26nm,1.3s,mb5.0						
YSS	**Yuzh-Sakhalins**	**81.47**	**37⇑**	*i*P	**P**	**21 05 16.2**	**-0.4**
YSS				*e*		21 05 24.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS	**Yuzh-Sakhalins**	**81.47**	**37**	*e*P	**P**	**21 05 16.8**	**+0.2**
	comp=Z,41nm,1.1s,mb5.3						
PMR	**Palmer**	**82.18**	**356**	*e*P	**P**	**21 05 20.0**	**0.0**
PMR				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
PMR	**Palmer**	**82.18**	**356**	*e*P	**P**	**21 05 20.0**	**0.0**
	comp=Z,34nm,1.2s,mb5.2						
BMRM	**Bremner River**	**82.46**	**354**	*e*P	**P**	**21 05 19.6**	**-1.8**
	comp=Z,26nm,1.1s,mb5.1						
SIUC	**Southern Illin**	**82.80**	**312**	*e*P	**P**	**21 05 24.6**	**+0.9**
	comp=Z,6.5nm,0.4s,mb5.0						
EDM	**Edmonton**	**82.85**	**335**	*e*P	**P**	**21 05 23.6**	**0.0**
ECSD	**EROS Data Cent**	**82.87**	**320**	*e*P	**P**	**21 05 24.6**	**+0.7**
	comp=Z,12nm,1.0s,mb4.9						
SVW2	**Sparrevohn**	**82.92**	**359**	*e*P	**P**	**21 05 25.1**	**+1.3**
PETK	**Petropavlovsk-**	**82.93**	**25**	P	**P**	**21 05 23.1**	**-1.0**
	comp=Z,3.8nm,0.8s,mb4.5,baz=27,slow=6.2,SNR=6.5						
PETK				LR	LR	21 47 38.1	
	comp=Z,229nm,18.1s,MS4.6,baz=316,slow=40						
WVT	**Waverly**	**82.98**	**310**	*e*P	**P**	**21 05 25.0**	**+0.3**
WVT				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WVT	**Waverly**	**82.98**	**310**	*e*P	**P**	**21 05 25.0**	**+0.4**
	comp=Z,4.7nm,0.8s,mb4.6						
FVM	**French Village**	**83.34**	**313**	*e*P	**P**	**21 05 27.7**	**+1.2**
FVM				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
FVM	**French Village**	**83.34**	**313**	*e*P	**P**	**21 05 27.6**	**+1.1**
	comp=Z,9.2nm,0.6s,mb5.0						
RSO	**Redoubt South**	**83.48**	**357**	*e*P	**P**	**21 05 26.9**	**+0.1**
LRAL	**Lakeview Retre**	**84.44**	**307**	*e*P	**P**	**21 05 33.6**	**+1.4**
	comp=Z,9.5nm,1.0s,mb4.9						
OXF	**Oxford**	**85.01**	**310**	*e*P	**P**	**21 05 36.0**	**+1.0**
LAO	**LASA Array**	**85.29**	**327**	*e*P	**P**	**21 05 38.1**	**+1.9**
	comp=Z,20nm,0.9s,mb5.2						
EGMT	**Eagleton**	**85.72**	**330**	*e*P	**P**	**21 05 39.6**	**+1.3**
	comp=Z,41nm,1.0s,mb5.6						
KDAK	**Kodiak Island**	**86.16**	**357**	*e*P	**P**	**21 05 41.2**	**+0.9**
KDAK				pmax	pmax		
	comp=Z,79nm,1.2s,mb5.8						
KDAK	**Kodiak Island**	**86.16**	**357**	*e*P	**P**	**21 05 41.2**	**+1.0**
	comp=Z,79nm,1.2s,mb5.8						
RSSD	**Black Hills**	**86.26**	**324**	*e*P	**P**	**21 05 43.0**	**+2.0**
MAJO	**Matsushiro**	**86.31**	**46**	*e*P	**P**	**21 05 40.8**	**-0.7**
MAT	**Matsushiro**	**86.31**	**46**	P	**P**	**21 05 41.1**	**-0.4**
MAT				S	S	21 16 29.0	+16
MJAR	**Matsushiro Arr**	**86.32**	**46**	P	**P**	**21 05 41.9**	**+0.4**
	comp=Z,3.0nm,0.7s,mb4.7,baz=313,slow=4.8,SNR=9.0						
MJAR				LR	LR	21 48 29.4	
	comp=Z,268nm,18.8s,MS4.7,baz=0.0,slow=39						
WALA	**Waterton Lakes**	**86.49**	**333**	*e*P	**P**	**21 05 42.7**	**+0.6**
	comp=Z,0.3nm,0.9s						
SDV	**Santo Domingo**	**87.07**	**279**	*e*P	**P**	**21 05 48.3**	**+2.8**
	comp=Z,11nm,0.8s,mb5.1						
SDV				*e*	pP	21 05 59.1	-1.2
GCMT	**Greycliff**	**87.47**	**329**	*e*P	**P**	**21 05 46.6**	**-0.3**
	comp=Z,2.7nm,0.7s,mb4.6						
YBMT	**Yellow Bay**	**87.52**	**332**	*e*P	**P**	**21 05 48.4**	**+1.3**
	comp=Z,7.5nm,0.8s,mb5.0						
YBMT				*e*	pP	21 06 03.0	+1.0
MIAR	**Mount Ida**	**87.53**	**312**	*e*P	**P**	**21 05 49.0**	**+1.6**
MIAR				pmax	pmax		
	comp=Z,33nm,1.5s,mb5.3						
MIAR	**Mount Ida**	**87.53**	**312**	*e*P	**P**	**21 05 49.0**	**+1.5**
	comp=Z,33nm,1.5s,mb5.3						
JTMT	**Jette**	**87.72**	**332**	*e*P	**P**	**21 05 49.3**	**+1.3**
	comp=Z,12nm,0.9s,mb5.1						
SWMT	**Swartz Lake**	**87.81**	**332**	*e*P	**P**	**21 05 49.5**	**+1.1**
	comp=Z,13nm,1.0s,mb5.1						
BSMT	**Bassoo Peak**	**87.82**	**333**	*e*P	**P**	**21 05 50.5**	**+2.0**
	comp=Z,2.8nm,0.8s,mb4.5						
RLMT	**Red Lodge**	**87.83**	**328**	*e*P	**P**	**21 05 48.0**	**-0.6**
	comp=Z,15nm,1.3s,mb5.1						
SLMT	**Seeley Lake**	**87.83**	**332**	*e*P	**P**	**21 05 49.1**	**+0.5**
	comp=Z,8.8nm,1.0s,mb4.9						
NEW	**Newport**	**88.31**	**334**	*e*P	**P**	**21 05 51.8**	**+0.9**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEW	**Newport**	**88.31**	**334**	*e*P	**P**	**21 05 51.8**	**+0.9**
	comp=Z,7.5nm,0.8s,mb5.0						
BOZ	**Bozeman (W)**	**88.40**	**330**	*e*P	**P**	**21 05 52.6**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
BOZ	**Bozeman (W)**	**88.40**	**330**	*e*P	**P**	**21 05 52.6**	**+1.3**
	comp=Z,3.2nm,0.9s,mb4.5						
SDPT	**Sand Point**	**88.67**	**2**	*e*P	**P**	**21 05 51.5**	**-0.9**
	comp=Z,23nm,0.6s,mb5.7						
IMW	**Indian Meadow**	**89.53**	**328**	*e*P	**P**	**21 05 58.5**	**+1.9**
	comp=Z,11nm,1.1s,mb5.1						
BW06	**Boulder Array**	**89.84**	**327**	*e*P	**P**	**21 05 58.8**	**+0.7**
	comp=Z,6.2nm,1.4s,mb4.8						
PDAR	**Pinedale Array**	**89.84**	**327**	P	**P**	**21 05 59.0**	**+0.8**
	comp=Z,0.9nm,0.8s,mb4.1,baz=44,slow=4.5,SNR=8.7						
PDAR				LR	LR	21 47 03.1	
	comp=Z,684nm,22.0s,MS5.0,baz=32,slow=36						
TPAW	**Teton Pass**	**89.86**	**328**	*e*P	**P**	**21 05 59.6**	**+1.4**
	comp=Z,2.3nm,0.6s,mb4.7						
RRI2	**Red Ridge**	**90.14**	**328**	*e*P	**P**	**21 06 00.6**	**+1.1**
	comp=Z,7.0nm,0.9s,mb5.0						
ISCO	**Idaho Springs**	**90.32**	**323**	*e*P	**P**	**21 06 01.2**	**+0.8**
WMOK	**Wichita Mounta**	**90.45**	**315**	P	**P**	**21 06 01.6**	**+0.4**
HWUT	**Hardware Ranch**	**91.66**	**327**	*e*P	**P**	**21 06 07.4**	**+0.8**
	comp=Z,7.6nm,0.8s,mb5.1						
SDCO	**Great Sand Dun**	**91.84**	**321**	P	**P**	**21 06 08.1**	**+0.5**
	comp=Z,1.4nm,0.9s,mb4.3						
DUG	**Dugway**	**93.35**	**327**	P	**P**	**21 06 12.5**	**-2.0**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
DUG	**Dugway**	**93.35**	**327**	P	**P**	**21 06 12.4**	**-2.0**
	comp=Z,2.5nm,0.8s,mb4.7						
TXAR	**Lajitas Array**	**97.22**	**314**	P	**P**	**21 06 33.9**	**+1.5**
	comp=Z,0.5nm,0.7s,mb4.0,baz=67,slow=5.0,SNR=4.6						
TXAR				LR	LR	21 53 33.6	
	comp=Z,260nm,18.0s,MS4.8,baz=0.0,slow=37						
WRA	**Warramunga Arr**	**119.10**	**94**	PKP	PKPdf	21 11 48.3	-0.1
	comp=Z,0.7nm,0.7s,baz=316,slow=1.3,SNR=19						
ASAR	**Alice Springs**	**120.62**	**98**	PKP	PKPdf	21 11 51.6	+0.4
	comp=Z,0.8nm,0.4s,baz=322,slow=1.5,SNR=16						
ASAR				PP	PP	21 13 26.1	+6.5
	comp=Z,1.7nm,1.1s,baz=270,slow=3.8,SNR=4.3						
STKA	**Stephens Creek**	**130.33**	**104**	PKP	PKPdf	21 12 10.2	+0.6
	comp=Z,1.2nm,0.7s,baz=28,slow=15,SNR=3.6						
STKA				SKPbc	SKPbc	21 15 29.7	+1.2
	comp=Z,2.4nm,0.7s,baz=322,slow=8.1,SNR=7.5						
STKA	**Stephens Creek**	**130.33**	**104**	PKP	PKPdf	21 12 10.2	+0.6
STKA				SKP

DID	**Didima**	**1.55**	**36**	P		**Pn**	**21 04 49.8**	**-0.2**
DID				S		**Sn**	**21 05 10.1**	**+0.8**
DID	**Didima**	**1.55**	**36**	P		**Pn**	**21 04 49.8**	**-0.2**
DID				S		**Sn**	**21 05 10.1**	**+0.8**
GUR	**Goura**	**1.69**	**7**	*e*PN		**Pn**	**21 04 53.5**	**+1.6**
GUR	**Goura**	**1.69**	**7**	P		**Pn**	**21 04 52.8**	**+0.9**
GUR	**Goura**	**1.69**	**7**	P		**Pn**	**21 04 52.8**	**+0.9**
GUR	**Goura**	**1.69**	**7**	*e*Pn		**Pn**	**21 04 53.5**	**+1.6**
KARN	**Karanos**	**1.71**	**119**	P		**Pn**	**21 04 54.7**	**+2.5**
KARN	**Karanos**	**1.71**	**119**	P		**Pn**	**21 04 54.7**	**+2.5**
LTK	**Loutraki**	**1.90**	**21**	*e*PN		**Pn**	**21 04 55.2**	**+0.4**
LTK	**Loutraki**	**1.90**	**21**	*e*Pn		**Pn**	**21 04 55.2**	**+0.4**
VLS	**Valsamata**	**2.26**	**328**	P		**Pn**	**21 05 00.3**	**+0.5**
VLS	**Valsamata**	**2.26**	**328**	P		**Pn**	**21 05 00.3**	**+0.5**
IDI	**Anoyia**	**2.47**	**112**	*e*Pn		**Pn**	**21 05 04.3**	**+1.6**
IDI	**Anoyia**	**2.47**	**112**	*e*Pn		**Pn**	**21 05 04.3**	**+1.6**
STON	**Ston**	**7.43**	**334**	*e*Pn		**Pn**	**21 06 07.8**	**-3.0**
STON				Sn		**Sn**	**21 07 25.6**	**-8.5**
STON	**Ston**	**7.43**	**334**	*e*Pn		**Pn**	**21 06 07.8**	**-2.9**
NVLJ	**Novalja**	**9.95**	**329**	⇓*i*Pn		**Pn**	**21 06 43.2**	**-2.2**
NVLJ				Sn		**Sn**	**21 08 27.1**	**-9.2**
NVLJ	**Novalja**	**9.95**	**329**	⇓*i*Pn		**Pn**	**21 06 43.2**	**-2.2**

*NEIC **10** 21:11:32.2±2.2, 23°.75N×121°.94E, h10km, MG3.5(JMA), Error ellipse: s-maj=26.3km s-min=10.0km az=105.0*
*ISCJB **10** 21:11:36.5±0.2, 23°.82N±0°.02×121°.74E±0°.02, h37km±5km, Error ellipse: s-maj=3.1km s-min=2.0km az=138.5*
*TAP **10** 21:11:36.2, 23°.85N×121°.66E, h41km, ML4.0, B*
*JMA **10** 21:11:36.6±0.2, 23°.94N×121°.71E, h73km, M3.5*
ISC 10 21:11:37.0±0.2, 23°.83N±0°.02×121°.72E±0°.02, h36km±5km, n79, σ0s95/136, 20C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=342	**0.18**	**325**	⇓*i*P	**Pn**	**21 11 43.4**	**-0.4**
HWA	baz=342			*e*S	**Sn**	**21 11 50.6**	**+2.4**
ESF	**Shoufeng Towns** baz=279	**0.19**	**282**	P	**Pn**	**21 11 43.6**	**-0.2**
ESF	baz=279			*e*S	**Sn**	**21 11 48.9**	**+0.4**
TEGC	**Jichi Village** baz=210	**0.20**	**233**	P	**Pn**	**21 11 43.7**	**-0.2**
TEGC	baz=210			*e*S	**Sn**	**21 11 49.6**	**+1.0**
ESL	**Shilin** baz=270	**0.26**	**266**	⇑*i*P	**Pn**	**21 11 43.7**	**-0.8**
ESL	baz=270			*e*S	**Sn**	**21 11 48.6**	**-1.1**
TWD	**Chiawan** baz=337	**0.27**	**336**	⇓*i*P	**Pn**	**21 11 44.0**	**-0.6**
TWD	baz=337			*i* S	**Sn**	**21 11 50.0**	**+0.1**
EHP	**Heping Village** baz=15	**0.48**	**3**	*e*P	**Pn**	**21 11 47.4**	**0.0**
EHY	**Hungye** baz=230	**0.48**	**228**	⇑*i*P	**Pn**	**21 11 46.0**	**-1.5**
EHY	baz=230			*e*S	**Sn**	**21 11 52.7**	**-2.0**
WHF	**Hehuan Shan** baz=303	**0.52**	**307**	⇑*i*P	**Pn**	**21 11 46.9**	**-1.0**
WHF	baz=303			S	**Sn**	**21 11 54.2**	**-1.3**
YULB	**Yu-li**	**0.58**	**221**	*e*Pg	**Pn**	**21 11 47.0**	**-1.8**
ENA	**Nanau** baz=15	**0.59**	**2**	⇓*i*P	**Pn**	**21 11 48.2**	**-0.8**
TWF1	**Yuli** baz=223	**0.61**	**219**	⇑P	**Pn**	**21 11 47.8**	**-1.4**
TWT	**Tachien** baz=311	**0.65**	**311**	P	**Pn**	**21 11 49.2**	**-0.5**
TWT	baz=311			*e*S	**Sn**	**21 11 57.8**	**-0.9**
NNS	**Nan Shan** baz=336	**0.68**	**333**	P	**Pn**	**21 11 49.3**	**-0.9**
NNS	baz=336			*e*S	**Sn**	**21 11 58.5**	**-1.0**
SSLB	**Suanglung**	**0.70**	**267**	*e*Pg	**Pn**	**21 11 49.1**	**-1.3**
SSLB				*e*Sg	**Sn**	**21 11 58.8**	**-1.2**
SMLT	**Sun Moon Lake** baz=275	**0.75**	**274**	⇑*i*P	**Pn**	**21 11 50.3**	**-0.7**
SMLT	baz=275			*e*S	**Sn**	**21 11 60.0**	**-1.2**
YUS	**Yu-Shan** baz=236	**0.78**	**244**	⇑*i*P	**Pn**	**21 11 51.3**	**-0.2**
YUS	baz=236			*e*S	**Sn**	**21 12 00.9**	**-1.1**
TWC	**Suao** baz=20	**0.78**	**9**	P	**Pn**	**21 11 51.5**	**-0.1**
TWC	baz=20			S	**Sn**	**21 12 02.8**	**+0.7**
TYC	**Yuchr** baz=274	**0.79**	**275**	⇑*i*P	**Pn**	**21 11 50.7**	**-0.9**
CHKT	**Chengkung** baz=188	**0.80**	**204**	*e*P	**Pn**	**21 11 50.9**	**-0.9**
CHKT	baz=188			*e*S	**Sn**	**21 12 01.9**	**-0.5**
TWE	**Neicheng** baz=353	**0.89**	**357**	⇓*i*P	**Pn**	**21 11 52.4**	**-0.6**
TWE	baz=353			*e*S	**Sn**	**21 12 05.3**	**+0.6**
YHNB	**Yeheng**	**0.89**	**340**	*e*Pg	**Pn**	**21 11 52.4**	**-0.7**
ALS	**Alishan** baz=247	**0.89**	**249**	⇑*i*P	**Pn**	**21 11 52.9**	**-0.2**
ALS	baz=247			*e*S	**Sn**	**21 12 03.9**	**-0.9**
NSK	**Sanguang** baz=341	**0.90**	**339**	⇓*i*P	**Pn**	**21 11 52.8**	**-0.4**
NSK	baz=341			S	**Sn**	**21 12 03.8**	**-1.2**
ELDTW	**Lidau** baz=217	**0.91**	**225**	⇑P	**Pn**	**21 11 51.8**	**-1.5**
ELDTW	baz=217			*e*S	**Sn**	**21 12 03.5**	**-1.6**
ILA	**Ilan** baz=356	**0.93**	**2**	*e*P	**Pn**	**21 11 53.3**	**-0.3**
WNT	**Mingjian** baz=273	**0.94**	**273**	⇑*i*P	**Pn**	**21 11 54.0**	**+0.2**
WNT	baz=273			*e*S	**Sn**	**21 12 06.4**	**+0.4**
CHN5	**Tsauling** baz=255	**0.98**	**256**	⇑*i*P	**Pn**	**21 11 54.1**	**-0.1**
CHN5	baz=255			*e*S	**Sn**	**21 12 06.6**	**-0.3**
TCU	**Taichung** baz=288	**1.00**	**289**	⇑P	**Pn**	**21 11 55.0**	**+0.4**
TCU	baz=288			*e*S	**Sn**	**21 12 08.0**	**+0.5**
TWQ1	**Liyutan** baz=301	**1.00**	**301**	⇑*i*P	**Pn**	**21 11 54.9**	**+0.3**
TWQ1	baz=301			*e*S	**Sn**	**21 12 07.8**	**+0.3**
NSTT	**Nanjuang** baz=309	**1.03**	**321**	P	**Pn**	**21 11 55.3**	**+0.3**
NSTT	baz=309			*e*S	**Sn**	**21 12 07.8**	**-0.4**
NSY	**Sanyi** baz=304	**1.05**	**304**	⇑*i*P	**Pn**	**21 11 55.5**	**+0.3**
NSY	baz=304			S	**Sn**	**21 12 09.5**	**+0.9**
WGK	**Gukeng** baz=262	**1.07**	**262**	P	**Pn**	**21 11 55.4**	**0.0**
WGK	baz=262			*e*S	**Sn**	**21 12 10.0**	**+0.9**
STYT	**Tauyuan** baz=228	**1.10**	**233**	P	**Pn**	**21 11 55.6**	**-0.4**
STYT	baz=228			*e*S	**Sn**	**21 12 10.1**	**+0.1**
TPUB	**Ta-pu**	**1.13**	**242**	*e*Pn	**Pn**	**21 11 56.1**	**-0.2**
TPUB				*e*S	**Sn**	**21 12 11.6**	**+1.0**
CHN4	**Tsaushan** baz=244	**1.14**	**245**	⇑P	**Pn**	**21 11 56.7**	**+0.3**
CHN4	baz=244			*e*S	**Sn**	**21 12 12.3**	**+1.6**
TWA	**Mucha** baz=347	**1.15**	**354**	*e*P	**Pn**	**21 11 56.3**	**-0.3**
TWA	baz=347			*e*S	**Sn**	**21 12 10.9**	**-0.3**
TATO	**Taipei**	**1.16**	**350**	*e*Pn	**Pn**	**21 11 56.7**	**0.0**
WTP	**Ta-pu** baz=239	**1.17**	**240**	⇑*i*P	**Pn**	**21 11 57.0**	**+0.2**
WTP	baz=239			*e*S	**Sn**	**21 12 12.4**	**+0.9**
TWG	**Pinlang**	**1.17**	**211**	*e*Pn	**Pn**	**21 11 54.7**	**-2.2**
TWG				*e*Sg	**Sn**	**21 12 09.0**	**-2.6**
TWG	**Pinlang** baz=194	**1.17**	**211**	*e*P	**Pn**	**21 11 54.9**	**-2.0**
TWG	baz=194			*e*S	**Sn**	**21 12 08.6**	**-2.9**
CHN2	**Minshiung** baz=255	**1.18**	**256**	*e*P	**Pn**	**21 11 57.3**	**+0.3**
CHN2	baz=255			*e*S	**Sn**	**21 12 13.1**	**+1.4**
HSN	**Hsinchu** baz=327	**1.18**	**325**	*e*P	**Pn**	**21 11 57.7**	**+0.6**
HSN	baz=327			*e*S	**Sn**	**21 12 13.6**	**+1.6**
TTN	**Taitung** baz=202	**1.19**	**206**	*e*P	**Pn**	**21 11 56.1**	**-1.1**
TWB1	**Santiao Chiao** baz=16	**1.20**	**12**	*e*P	**Pn**	**21 11 57.5**	**+0.2**
TAP1	**Taipei** baz=353	**1.22**	**352**	*e*P	**Pn**	**21 11 58.0**	**+0.5**
TAP1	baz=353			*e*S	**Sn**	**21 12 13.2**	**+0.4**
CHY	**Chiayi** baz=254	**1.23**	**255**	⇑P	**Pn**	**21 11 57.7**	**0.0**
CHY	baz=254			*e*S	**Sn**	**21 12 14.1**	**+1.0**
NCU	**National Centr** baz=336	**1.23**	**337**	*e*P	**Pn**	**21 11 57.8**	**0.0**
NCU	baz=336			*e*S	**Sn**	**21 12 14.5**	**+1.4**
NWF	**Wu-fen Shan** baz=353	**1.23**	**3**	*e*P	**Pn**	**21 11 57.6**	**-0.2**
TWK	**Hsinying** baz=244	**1.26**	**244**	*e*P	**Pn**	**21 11 57.9**	**-0.2**
TWK	baz=244			*e*S	**Sn**	**21 12 15.0**	**+1.2**
CHN1	**Nanshi** baz=238	**1.27**	**240**	⇑P	**Pn**	**21 11 58.2**	**0.0**
CHN1	baz=238			*e*S	**Sn**	**21 12 15.7**	**+1.7**
SGST	**Jiashian** baz=233	**1.28**	**235**	⇑P	**Pn**	**21 11 58.9**	**+0.5**
SGST	baz=233			*e*S	**Sn**	**21 12 16.0**	**+1.6**
TWS1	**Kuangyinshan** baz=349	**1.29**	**348**	*e*P	**Pn**	**21 11 58.5**	**-0.1**
WTCT	**Ta-ch'eng** baz=272	**1.31**	**272**	⇑P	**Pn**	**21 11 59.0**	**+0.2**
WTCT	baz=272			*e*S	**Sn**	**21 12 16.5**	**+1.4**
YOJ	**Yonaguni jima**	**1.34**	**62**	P	**Pn**	**21 11 59.3**	**+0.1**
YOJ				S	**Sn**	**21 12 16.0**	**+0.2**
YOJ	**Yonaguni jima** baz=66	**1.34**	**62**	*e*P	**Pn**	**21 11 59.1**	**-0.1**
YOJ	baz=66			*e*S	**Sn**	**21 12 15.4**	**-0.5**
ECL	**Taimali** baz=199	**1.41**	**210**	*e*P	**Pn**	**21 11 57.8**	**-2.4**
CHN3	**Shinhua** baz=239	**1.45**	**239**	*e*P	**Pn**	**21 12 01.6**	**+0.9**
CHN3	baz=239			*e*S	**Sn**	**21 12 20.6**	**+2.1**
CHN8	**Yiju** baz=251	**1.46**	**251**	P	**Pn**	**21 12 00.6**	**-0.3**
CHN8	baz=251			*e*S	**Sn**	**21 12 19.5**	**+0.7**
SSD	**Sandimen** baz=221	**1.47**	**223**	*e*P	**Pn**	**21 12 00.7**	**-0.3**
SSD	baz=221			*e*S	**Sn**	**21 12 19.8**	**+0.7**
SCLT	**Jiali** baz=246	**1.54**	**245**	*e*P	**Pn**	**21 12 00.7**	**-1.3**
SCLT	baz=246			*e*S	**Sn**	**21 12 21.7**	**+0.9**
TWM1	**Shoushan** baz=229	**1.56**	**230**	*e*P	**Pn**	**21 12 03.1**	**+0.9**
TWM1	baz=229			*e*S	**Sn**	**21 12 25.0**	**+3.9**
SGLT	**Jiouru** baz=224	**1.57**	**226**	*e*P	**Pn**	**21 12 03.7**	**+1.2**
SGLT	baz=224			*e*S	**Sn**	**21 12 25.4**	**+3.8**
TAI1	**Yung-k'ang** baz=253	**1.58**	**240**	*e*P	**Pn**	**21 12 03.2**	**+0.7**
TAI1	baz=253			*e*S	**Sn**	**21 12 23.4**	**+1.8**
EAST	**Anshuo** baz=200	**1.65**	**209**	*e*P	**Pn**	**21 12 02.6**	**-0.8**
TAW	**Tawu** baz=197	**1.65**	**207**	*e*P	**Pn**	**21 12 03.8**	**+0.3**
SCZT	**Fangliau** baz=196	**1.77**	**215**	*e*P	**Pn**	**21 12 05.4**	**+0.3**
SCZT	baz=196			*e*S	**Sn**	**21 12 28.3**	**+1.9**
LAY	**Lan-yu** baz=175	**1.79**	**185**	*e*P	**Pn**	**21 12 03.7**	**-1.8**
IRIF	**Iriomote-Funau**	**1.91**	**74**	P	**Pn**	**21 12 07.3**	**+0.2**
IRIF				S	**Sn**	**21 12 30.8**	**+0.9**
HATJ	**Hateruma jima**	**1.93**	**83**	P	**Pn**	**21 12 07.6**	**+0.3**
HATJ				S	**Sn**	**21 12 31.3**	**+1.0**
TWP	**Hsiaoliuchiu** baz=219	**1.93**	**220**	*e*P	**Pn**	**21 12 10.4**	**+3.0**
PNG	**Penghu** baz=262	**2.00**	**263**	*e*P	**Pn**	**21 12 07.1**	**-1.2**
HEN	**Hengchun** baz=197	**2.03**	**207**	*e*P	**Pn**	**21 12 10.0**	**+1.3**
JKRS	**Kuro-shima**	**2.14**	**79**	P	**Pn**	**21 12 10.8**	**+0.6**
JKRS				S	**Sn**	**21 12 36.5**	**+1.0**
JIJ	**Ishigaki jima**	**2.28**	**76**	P	**Pn**	**21 12 12.2**	**0.0**
JIJ				S	**Sn**	**21 12 38.8**	**-0.3**
JTJ	**Tarama**	**2.84**	**73**	P	**Pn**	**21 12 20.0**	**+0.1**
JTJ				*e*S	**Sn**	**21 12 53.1**	**+0.2**
QZH	**Quanzhou**	**3.06**	**292**	Pn	**Pn**	**21 12 22.1**	**-0.7**
QZH				Sn	**Sn**	**21 12 54.6**	**-3.6**
QZH	comp=N,170nm,0.3s			smax			
QZH	comp=E,100nm,0.2s			smax			
JMJ	**Miyako jima 2**	**3.41**	**73**	*e*S	**Sn**	**21 13 07.4**	**+0.5**
JOGS	**Gusukube**	**3.49**	**74**	*e*S	**Sn**	**21 13 09.6**	**+0.6**
JKE	**Kume jima 2**	**5.23**	**61**	P	**Pn**	**21 12 52.6**	**-0.1**

*ISCJB **10** 21:17:32.4±0.6, 37°.79N±0°.03×29°.42E±0°.04, h7km±5km, Error ellipse: s-maj=6.0km s-min=4.2km az=9.7*
*CSEM **10** 21:17:32.5±0.1, 37°.80N×29°.40E, h10km, MD3.1, Error ellipse: s-maj=4.2km s-min=2.6km az=88.0*
*ISK **10** 21:17:32.0, 37°.81N×29°.42E, h12km, MD2.9*
*DDA **10** 21:17:33.7, 37°.86N×29°.32E, h11km±4km, Md3.1*
ISC 10 21:17:32.9±0.5, 37°.80N±0°.02×29°.40E±0°.05, h12km±5km, n29, σ0s64/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNZL	**Cakiroluk**	**0.30**	**250**	*i* P	**Pg**	**21 17 38.9**	**-0.1**
DNZL				*i* S	**Sg**	**21 17 43.4**	**+0.3**
DNZL	**Cakiroluk**	**0.30**	**250**	*i* P	**Pg**	**21 17 38.9**	**-0.1**
DNZL				*i* S	**Sg**	**21 17 43.4**	**+0.3**
KHL	**Karahalli**	**0.54**	**10**	*e*PG	**Pg**	**21 17 42.6**	**-0.8**
KHL				*e*SG	**Sg**	**21 17 50.5**	**0.0**
KHL	**Karahalli**	**0.54**	**10**	*e*Pg	**Pg**	**21 17 42.6**	**-0.7**
KHL				*e*Sg	**Sg**	**21 17 50.5**	**+0.1**
GOLH	**Golhisar**	**0.57**	**167**	*i* P	**Pg**	**21 17 44.7**	**+0.7**
GOLH				*i* S	**Sg**	**21 17 55.3**	**+3.8**
GOLH	**Golhisar**	**0.57**	**167**	*i* P	**Pg**	**21 17 44.7**	**+0.7**
KHAL	**Karahalli**	**0.58**	**7**	*i* P	**Pg**	**21 17 43.6**	**-0.6**
KHAL				*i* S	**Sg**	**21 17 52.3**	**+0.5**
KHAL	**Karahalli**	**0.58**	**7**	*i* P	**Pg**	**21 17 43.6**	**-0.6**
KHAL				*i* S	**Sg**	**21 17 52.3**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.64**	**173**	*e*PG	**Pg**	**21 17 44.9**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.64**	**173**	*e*Pg	**Pg**	**21 17 44.9**	**-0.4**
KULA	**Kula-Manisa**	**0.93**	**321**	*e*PG	**Pg**	**21 17 50.1**	**-0.6**
KULA				*e*SG	**Sg**	**21 18 03.8**	**+1.0**
KULA	**Kula-Manisa**	**0.93**	**321**	*e*Pg	**Pg**	**21 17 50.2**	**-0.5**
KULA				*e*Sg	**Sg**	**21 18 03.8**	**+1.0**
MANT	**Manisa**	**0.96**	**316**	*i* P	**Pg**	**21 17 50.5**	**-0.9**
MANT				*i* S	**Sg**	**21 18 03.7**	**-0.3**
MANT	**Manisa**	**0.96**	**316**	*i* P	**Pg**	**21 17 50.5**	**-0.9**
MANT				*i* S	**Sg**	**21 18 03.7**	**-0.3**
ELL	**Elmali**	**1.12**	**159**	*e*PN	**Pg**	**21 17 54.8**	**+0.3**
ELL	**Elmali**	**1.12**	**159**	*e*Pn	**Pg**	**21 17 54.8**	**+0.4**
SHUT	**Suhut-Afyon**	**1.18**	**50**	*e*PN	**Pn**	**21 17 55.1**	**-0.1**
SHUT	**Suhut-Afyon**	**1.18**	**50**	*e*Pn	**Pn**	**21 17 55.1**	**-0.1**
FETY	**Fethiye**	**1.19**	**193**	*e*PN	**Pn**	**21 17 55.1**	**-0.2**
FETY	**Fethiye**	**1.19**	**193**	*e*Pn	**Pn**	**21 17 55.1**	**-0.2**
AYDN	**Tasoluk**	**1.22**	**264**	*i* P	**Pn**	**21 17 55.5**	**-0.2**
AYDN				*i* S	**Sb**	**21 18 11.2**	**-0.3**
AYDN	**Tasoluk**	**1.22**	**264**	*i* P	**Pn**	**21 17 55.5**	**-0.2**
AYDN				*i* S	**Sb**	**21 18 11.2**	**-0.3**
GDZ	**Gediz**	**1.29**	**3**	*i* P	**Pn**	**21 17 57.3**	**+0.5**
GDZ				*i* S	**Sb**	**21 18 14.5**	**+0.8**
GDZ	**Gediz**	**1.29**	**3**	*i* P	**Pn**	**21 17 57.3**	**+0.5**
GDZ				*i* S	**Sb**	**21 18 14.5**	**+0.8**
DEMI	**Demirci**	**1.36**	**337**	*i* P	**Pn**	**21 17 58.0**	**+0.3**
DEMI				*i* S	**Sb**	**21 18 16.4**	**+0.8**
DEMI	**Demirci**	**1.36**	**337**	*i* P	**Pn**	**21 17 58.0**	**+0.3**
DEMI				*i* S	**Sb**	**21 18 16.4**	**+0.8**
ALT	**Altintas**	**1.38**	**24**	*e*PN	**Pn**	**21 17 56.5**	**-1.4**
ALT	**Altintas**	**1.38**	**24**	*e*Pn	**Pn**	**21 17 56.5**	**-1.4**
AKAS	**Kas**	**1.57**	**174**	*i* P	**Pn**	**21 18 05.9**	**+5.3**
AKAS				*i* S	**Sn**	**21 18 29.9**	**+9.2**

*ISCJB **10** 21:22:52.6±1.4, 36°.15N±0°.04×142°.18E±0°.06, h20km±9km, mb3.7/13, Error ellipse: s-maj=8.7km s-min=6.4km az=16.2*
*IDC **10** 21:22:52.2±0.8, 36°.04N×141°.98E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/26, mbtmp3.7/12, ML3.7/2, Error ellipse: s-maj=21.5km s-min=18.8km az=66.0*
*JMA **10** 21:22:55.1±0.2, 36°.13N×141°.98E, h72km±4km, M3.6*
*NEIC **10** 21:22:57.4±0.6, 36°.15N×142°.00E, h35km, mb4.0/2, Error ellipse: s-maj=13.7km s-min=12.2km az=164.0*
ISC 10 21:22:53.1±1.3, 36°.14N±0°.04×142°.10E±0°.06, h9km±8km, n32, σ0s87/39, mb3.7/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.09**	**247**	P	**Pg**	**21 23 13.8**	**-0.4**
CHOJ				S	**Sg**	**21 23 28.9**	**+0.5**
JHO	**Hitachi**	**1.32**	**291**	P	**Pn**	**21 23 16.5**	**-1.2**
JFK	**Kawauchi**	**1.57**	**322**	P	**Pn**	**21 23 20.6**	**-0.5**
BSO1	**Boso 1**	**1.74**	**212**	P	**Pn**	**21 23 23.2**	**-0.3**
BSO1				S	**Sn**	**21 23 44.7**	**-1.1**
BSO3	**Boso 3**	**1.86**	**225**	P	**Pn**	**21 23 24.6**	**-0.5**
JFT	**Otama**	**1.97**	**315**	P	**Pn**	**21 23 26.9**	**+0.2**
JFT				*e*S	**Sn**	**21 23 52.1**	**+0.6**
JMM	**Marumori**	**2.02**	**329**	P	**Pn**	**21 23 27.3**	**0.0**
JAG	**Ashikaga**	**2.15**	**278**	P	**Pn**	**21 23 28.4**	**-0.8**
JFY	**Yanaizu**	**2.30**	**304**	P	**Pn**	**21 23 30.8**	**-0.4**
JFY				*e*S	**Sn**	**21 24 02.1**	**+2.5**
JKT	**Katashina**	**2.38**	**286**	P	**Pn**	**21 23 32.4**	**+0.1**
JOD2	**Odawara 2**	**2.60**	**251**	P	**Pn**	**21 23 35.4**	**+0.1**
MJAR	**Matsushiro Arr** 10nm,0.3s,baz=86,slow=10.0,SNR=164	**3.16**	**278**	Pn	**Pn**	**21 23 43.4**	**+0.3**
MJAR	5.3nm,0.3s,baz=108,slow=8.9,SNR=6.1			Sn	**Sn**	**21 24 19.7**	**-1.2**
MAJO	**Matsushiro**	**3.17**	**278**	*e*Pn	**Pn**	**21 23 43.8**	**+0.7**
MAT	**Matsushiro**	**3.17**	**278**	P	**Pn**	**21 23 43.7**	**+0.6**
MAT				S	**Sn**	**21 24 20.5**	**-0.4**
ERM	**Erimo**	**5.93**	**8**	*e*Pn	**Pn**	**21 24 19.9**	**-1.0**
ERM				*e*Sn	**Sn**	**21 25 26.4**	**-2.6**
ASAJ	**Asahikawa** 1.1nm,0.3s,baz=222,slow=8.9,SNR=8.0	**7.98**	**3**	Pn	**Pn**	**21 24 49.1**	**0.0**
ASAJ	0.7nm,0.3s,baz=317,slow=31,SNR=3.1			Sn	**Sn**	**21 26 18.1**	**-1.3**
SONM	**Songino Array** 1.5nm,0.6s,mb3.9,baz=98,slow=9.2,SNR=11	**28.75**	**305**	P	**P**	**21 28 51.2**	**+0.4**
GTA	**Gaotai**	**33.36**	**289**	*e*P	**P**	**21 29 32.0**	**+0.5**
GTA				pP	pP	21 29 37.3	+2.9
GTA				sP	sP	21 29 40.3	+4.7
GTA	comp=Z,3.0nm,0.8s,mb4.3			pmax	pmax		
ZALV	**Zalesovo Beam** comp=Z,1.1nm,0.6s,mb3.8,baz=90,slow=7.6,SNR=6.1	**42.92**	**313**	P	**P**	**21 30 52.4**	**+0.5**
MKAR	**Makanchi Array** comp=Z,1.4nm,0.7s,mb3.9,baz=96,slow=6.8,SNR=13	**45.06**	**303**	P	**P**	**21 31 09.6**	**+0.4**
KURK	**Kurchatov** comp=Z,1.3nm,0.6s,mb4.0	**46.92**	**309**	*e*P	**P**	**21 31 23.7**	**0.0**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.4s,mb3.6,baz=4.7,slow=7.4,SNR=10	**56.26**	**189**	P	**P**	**21 32 33.2**	**-0.6**
ABKAR	**Akbulak array** comp=Z,0.4nm,0.4s,mb3.8	**58.94**	**311**	*e*P	**P**	**21 32 52.6**	**+0.2**
ASAR	**Alice Springs** comp=Z,0.1nm,0.5s,mb3.1,baz=2.1,slow=7.4,SNR=3.6	**59.98**	**189**	P	**P**	**21 32 59.4**	**-0.4**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.9s,mb3.3,baz=292,slow=6.5,SNR=3.4	**64.31**	**30**	P	**P**	**21 33 30.1**	**+1.6**
FINES	**FINESS Array B** comp=Z,2.5nm,1.1s,mb4.1,baz=46,slow=5.5,SNR=4.1	**69.86**	**333**	P	**P**	**21 34 04.3**	**+0.5**
NOA	**NORSAR Array B** comp=Z,1.0nm,1.0s,mb3.7,baz=184,slow=6.2,SNR=3.1	**75.22**	**338**	P	**P**	**21 34 36.7**	**+0.9**
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,mb3.5,baz=45,slow=7.9,SNR=4.1	**75.34**	**323**	P	**P**	**21 34 36.4**	**-0.2**
AKASG	**Malin Array Be**	**75.34**	**323**	P	**P**	**21 34 36.4**	**-0.2**
PDAR	**Pinedale Array** comp=Z,0.1nm,0.3s,mb3.2,baz=64,slow=4.1,SNR=2.6	**77.90**	**46**	P	**P**	**21 34 53.3**	**+2.1**
PDAR	**Pinedale Array**	**77.90**	**46**	P	**P**	**21 34 53.3**	**+2.1**
LPAZ	**La Paz** comp=Z,0.7nm,0.6s,baz=292,slow=6.3,SNR=3.6	**146.65**	**62**	PKPbc	PKPbc	21 42 37.6	+2.0

*BJI **10** 21:27:06.5, 2°.60N×92°.96E, h35km, mB5.1/4, mb4.6/17, Ms4.5/1, Ms7 4.5/1*
*IDC **10** 21:27:09.6±0.8, 3°.42N×92°.83E, h0km, mb4.3/12, mb1 4.3/13, mb1mx4.1/23, mbtmp4.2/13, ML3.3/1, Error ellipse: s-maj=35.8km s-min=15.4km az=51.0*
*SZGRF **10** 21:27:10.2, 3°.33N×94°.14E, h33km, mb4.7, Off west coast of northern Sumatera, Indonesia*
*NEIC **10** 21:27:15.0±0.3, 3°.47N×92°.92E, h35km, mb4.7/21, Error ellipse: s-maj=8.8km s-min=6.7km az=209.0*
*ISCJB **10** 21:27:14.1±1.7, 3°.47N±0°.06×93°.07E±0°.08, h44km±16km, mb4.5/44, Error ellipse: s-maj=15.4km s-min=7.0km az=153.0*
*DJA **10** 21:27:21, 3°.55N×93°.43E, h98km, MLv4.8/4*
ISC 10 21:27:15.6±1.2, 3°.49N±0°.05×93°.02E±0°.07, h39km±11km, h33km±.7km: pP-P, n97, σ0s86/97, mb4.5/44, 3C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.02**	**49**	P	**Pn**	**21 28 00.6**	**-0.3**
BSI				S	**Sn**	**21 28 35.8**	**-0.1**
LHMI	**Lhok Sumawe**	**4.28**	**66**	P	**Pn**	**21 28 20.0**	**+1.8**
TRSI	**Tarutung**	**6.11**	**104**	P	**Pn**	**21 28 43.8**	**+0.4**
MNSI	**Mandailing Nat** 63nm,0.7s,3μm0.6nm	**7.08**	**112**	P	**Pn**	**21 28 56.8**	**+0.1**
MNSI	63nm,0.7s,3μm0.6nm			S	**Sn**	**21 30 15.3**	**-0.7**
SISI	**Saibi**	**7.72**	**128**	P	**Pn**	**21 29 09.8**	**+4.2**
KULM	**Kulim** 34nm,0.5s	**7.81**	**76**	*e*Pn	**Pn**	**21 29 07.4**	**+0.6**
KULM				*e*Sn	**Sn**	**21 30 31.2**	**-2.9**
IPM	**Ipoh** 54nm,0.9s,0.2nm	**8.04**	**83**	P	**Pn**	**21 29 10.5**	**+0.5**
PPI	**Padang Panjang** 60nm,1.2s	**8.35**	**118**	P	**Pn**	**21 29 15.0**	**+0.8**
PPI	60nm,1.2s			S	**Sn**	**21 30 45.7**	**-1.5**
PDSI	**Padang**	**8.62**	**120**	P	**Pn**	**21 29 18.8**	**+0.8**
PALK	**Pallekele**	**12.83**	**288**	*e*Pn	**Pn**	**21 30 12.3**	**-3.2**
PALK				*e*S	**Sn**	**21 32 21.0**	**-16**
CM31	**Chiang Mai Arr** 3.0nm,0.8s	**15.97**	**21**	*e*Pn	**

XAN				sP	sP	21 34 14.4	+4.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
XAN				pmax	pmax		
	comp=Z,57nm,7.7s						
LZH	**Lanzhou**	**33.94**	**16**	*eP*	**P**	**21 33 54.5**	**-0.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
GTA	**Gaotai**	**36.28**	**9**	*eP*	**P**	**21 34 16.2**	**+0.9**
GTA				pP	pP	21 34 25.3	-1.0
GTA				sP	sP	21 34 29.7	-1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KBL	**Kabul**	**38.09**	**327**	*eP*	**P**	**21 34 29.8**	**-0.9**
	comp=Z,2.3nm,0.8s,mb4.0						
ULHL	**Ulahol**	**41.40**	**341**	P	**P**	**21 34 58.5**	**+0.3**
	SNR=11						
KZA	**Kyzart**	**41.58**	**340**	P	**P**	**21 35 00.8**	**+1.1**
	SNR=7.0						
UCH	**Uchtor**	**41.97**	**339**	P	**P**	**21 35 03.5**	**+0.7**
	SNR=12						
UCH	**Uchtor**	**41.97**	**339**	*eP*	**P**	**21 35 03.5**	**+0.6**
	comp=Z,8.8nm,0.9s,mb4.4						
AML	**Almayashu**	**42.18**	**338**	P	**P**	**21 35 05.4**	**+0.9**
	SNR=18						
AML	**Almayashu**	**42.18**	**338**	*eP*	**P**	**21 35 05.4**	**+0.9**
	comp=Z,33nm,1.2s,mb4.8						
KBK	**Karagaybulak**	**42.20**	**340**	P	**P**	**21 35 05.6**	**+0.9**
	SNR=14						
TKM2	**Tokmak 2**	**42.22**	**341**	P	**P**	**21 35 05.2**	**+0.4**
	SNR=9.1						
TKM2	**Tokmak 2**	**42.22**	**341**	*eP*	**P**	**21 35 04.5**	**-0.3**
	comp=Z,6.7nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**42.33**	**340**	*eP*	**P**	**21 35 06.9**	**+1.2**
	comp=Z,4.2nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**42.61**	**339**	P	**P**	**21 35 08.7**	**+0.7**
	SNR=11						
EKS2	**Erkin-Say**	**42.61**	**339**	*eP*	**P**	**21 35 08.6**	**+0.5**
	comp=Z,6.5nm,0.8s,mb4.4						
USP	**Ospenovka**	**42.89**	**340**	P	**P**	**21 35 10.3**	**+0.1**
	SNR=7.0						
MK31	**Makanchi Array**	**44.13**	**349**	*eP*	**P**	**21 35 20.4**	**+0.1**
MKAR	**Makanchi Array**	**44.13**	**349**	P	**P**	**21 35 20.3**	**+0.1**
	comp=Z,11nm,0.9s,mb4.6,baz=168,slow=8.6,SNR=63						
MKAR				PcP	PcP	21 37 04.8	0.0
	comp=Z,3.0nm,1.1s,baz=170,slow=8.8,SNR=4.1						
SONM	**Songino Array**	**45.66**	**13**	P	**P**	**21 35 33.0**	**+0.7**
	comp=Z,3.8nm,0.9s,mb4.3,baz=190,slow=8.6,SNR=28						
SONM				PcP	PcP	21 37 11.1	+1.1
	comp=Z,1.5nm,0.9s,baz=197,slow=3.4,SNR=5.0						
WRA	**Warramunga Arr**	**46.78**	**122**	P	**P**	**21 35 42.2**	**+0.6**
	comp=Z,2.3nm,0.6s,mb4.3,baz=298,slow=8.8,SNR=17						
ASAR	**Alice Springs**	**48.10**	**126**	P	**P**	**21 35 51.9**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.9,baz=292,slow=6.6,SNR=9.2						
ASAR				PcP	PcP	21 37 20.2	+1.1
	comp=Z,0.7nm,0.7s,baz=289,slow=2.9,SNR=4.3						
KURK	**Kurchatov**	**48.60**	**348**	*eP*	**P**	**21 35 55.4**	**+0.2**
	comp=Z,12nm,1.1s,mb4.9						
ZAA0	**Zalesovo Array**	**50.75**	**354**	*eP*	**P**	**21 36 11.8**	**+0.2**
ZALV	**Zalesovo Beam**	**50.75**	**354**	P	**P**	**21 36 11.8**	**+0.3**
	comp=Z,5.2nm,0.6s,mb4.6,baz=183,slow=8.2,SNR=28						
BVAR	**Borovoye Array**	**52.79**	**343**	P	**P**	**21 36 26.3**	**-0.5**
	comp=Z,5.5nm,0.8s,mb4.6,baz=155,slow=8.2,SNR=23						
BRVK	**Borovoye**	**52.85**	**343**	*eP*	**P**	**21 36 25.9**	**-1.3**
	comp=Z,6.4nm,0.8s,mb4.6						
ABKAR	**Akbulak array**	**53.58**	**334**	*eP*	**P**	**21 36 32.0**	**-0.7**
	comp=Z,8.1nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**57.98**	**131**	P	**P**	**21 37 04.7**	**+0.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=320,slow=12,SNR=3.6						
ARU	**Arti**	**59.51**	**339**	*eP*	**P**	**21 37 13.8**	**-0.9**
	comp=Z,92nm,2.7s,mb5.3						
MALT	**Malatya**	**60.51**	**313**	*eP*	**P**	**21 37 22.6**	**+0.6**
	comp=Z,11nm,1.1s,mb4.9						
BR131	**Keskin Array S**	**64.50**	**313**	*eP*	**P**	**21 37 47.8**	**-0.8**
BR131				*epP*	pP	21 37 57.4	-2.8
BR131				*esP*	sP	21 38 02.2	-2.4
BRTR	**Keskin Array B**	**64.50**	**313**	P	**P**	**21 37 47.9**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=125,slow=7.1,SNR=16						
AKASG	**Malin Array Be**	**70.92**	**323**	P	**P**	**21 38 26.9**	**-1.9**
	comp=Z,2.2nm,0.7s,mb4.2,baz=91,slow=4.9,SNR=9.5						
VRI	**Vrincioaia**	**71.12**	**317** ⇑	*iP*	**P**	**21 38 30.6**	**+0.5**
PLOR	**Plostina**	**71.17**	**317** ⇑	*iP*	**P**	**21 38 30.8**	**+0.4**
MLR	**Muntele Rosu**	**71.55**	**317** ⇑	*iP*	**P**	**21 38 33.3**	**+0.5**
TIXI	**Tiksi**	**71.72**	**11**	*eP*	**P**	**21 38 33.1**	**-0.1**
	comp=Z,11nm,0.9s,mb4.8						
BURAR	**Bucovina Array**	**72.56**	**319**	*iP*	**P**	**21 38 39.3**	**+0.5**
BUR08	**Bucovina Ar. S**	**72.58**	**319**	*eP*	**P**	**21 38 39.2**	**+0.3**
BUR08				*epP*	pP	21 38 49.0	-1.6
BUR08				*esP*	sP	21 38 54.5	-0.6
MAW	**Mawson**	**74.04**	**192**	*eP*	**P**	**21 38 40.2**	**-6.9**
	comp=Z,3.5nm,0.5s,mb4.5						
JOF	**Joensuu**	**74.32**	**335**	*ep*	**P**	**21 38 46.0**	**-2.8**
	comp=Z,1.9nm,0.7s,mb4.1						
SUW	**Suwalki**	**75.42**	**325**	*eP*	**P**	**21 38 54.3**	**-1.0**
	comp=Z,27nm,0.9s,mb5.2						
FINES	**FINESS Array B**	**76.06**	**333**	P	**P**	**21 38 57.7**	**-1.1**
	comp=Z,3.3nm,0.8s,mb4.3,baz=11,slow=1.9,SNR=9.7						
KAF	**Kangasniemi**	**76.18**	**334**	*ep*	**P**	**21 38 57.5**	**-2.0**
	comp=Z,2.5nm,0.7s,mb4.2						
PKSM	**Moragy**	**76.70**	**317** ⇑	*iP*	**P**	**21 39 01.9**	**-0.9**
GEC2	**GERESS Array S**	**80.35**	**319**	*eP*	**P**	**21 39 23.4**	**+0.6**
	comp=Z,3μm,1.1s						
GERES	**GERESS Array B**	**80.35**	**319**	P	**P**	**21 39 23.2**	**+0.4**
	comp=Z,5.5nm,0.9s,mb4.5,baz=95,slow=5.8,SNR=30						
BRG	**Berggiesshubel**	**80.41**	**321**	*i P*	**P**	**21 39 23.3**	**+0.2**
	comp=Z,6.5nm,1.1s,mb4.5						
KHC	**Kasperske Hory**	**80.46**	**319**	*eP*	**P**	**21 39 23.0**	**-0.4**
KHC				*epP*	pP	21 39 33.5	-1.8
CLL	**Collm**	**81.05**	**321**	*eP*	**P**	**21 39 26.0**	**-0.5**
CLL	**Collm**	**81.05**	**321**	*eP*	**P**	**21 39 26.0**	**-0.5**
GRA1	**Grafenberg Arr**	**82.04**	**320**	*eP*	**P**	**21 39 31.9**	**+0.1**
	comp=Z,6.0nm,1.2s,mb4.4						
GRF	**Grafenberg Arr**	**82.04**	**320**	*eP*	**P**	**21 39 31.9**	**+0.1**
	comp=Z,6.0nm,1.2s,mb4.4						
KEST	**Kesra**	**82.84**	**305**	P	**P**	**21 39 37.2**	**+0.9**
	comp=Z,2.3nm,1.0s,mb4.2,baz=10,slow=5.5,SNR=4.4						
MBDF	**Montbardon**	**84.90**	**314**	*eP*	**P**	**21 39 46.4**	**-0.2**
LPG	**La Plagne**	**84.92**	**315**	*eP*	**P**	**21 39 47.1**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.6						
LPG	**La Plagne**	**84.92**	**315**	*eP*	**P**	**21 39 47.1**	**+0.4**
	comp=Z,5.0nm,1.0s,mb4.6						
LPL	**La Plagne**	**84.93**	**315**	*eP*	**P**	**21 39 47.1**	**+0.4**
	comp=Z,25nm,1.3s,mb4.9						
LPL	**La Plagne**	**84.93**	**315**	*eP*	**P**	**21 39 47.1**	**+0.4**
	comp=Z,13nm,1.3s,mb4.9						
HAU	**Haudompre**	**85.20**	**318**	*eP*	**P**	**21 39 47.8**	**-0.2**
MEZF	**Maizieres J'vi**	**86.06**	**318**	*eP*	**P**	**21 39 52.2**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.6						
MEZF	**Maizieres J'vi**	**86.06**	**318**	*eP*	**P**	**21 39 52.2**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.9						
GIVF	**Givet**	**86.19**	**320**	*eP*	**P**	**21 39 52.9**	**0.0**
BAIF	**Baives**	**86.59**	**320**	*eP*	**P**	**21 39 55.1**	**+0.2**
	comp=Z,8.7nm,1.0s,mb4.6						
BAIF	**Baives**	**86.59**	**320**	*eP*	**P**	**21 39 55.1**	**+0.2**
	comp=Z,4.3nm,1.0s,mb4.6						
LOR	**Lormes**	**86.89**	**317**	*eP*	**P**	**21 39 56.3**	**-0.1**
NVAR	**Mina Array Bea**	**129.22**	**32**	PKP	PKPdf	21 46 22.4	+2.2
	comp=Z,0.1nm,0.4s,baz=290,slow=3.5,SNR=3.9						
PDAR	**Pinedale Array**	**129.63**	**22**	PKP	PKPdf	21 46 21.6	+0.7
	comp=Z,0.3nm,0.8s,baz=318,slow=2.0,SNR=4.2						
CPUP	**Villa Florida**	**143.63**	**228**	PKP	PKPdf	21 46 45.2	-1.9
	comp=Z,0.3nm,0.4s,baz=150,slow=2.9,SNR=3.5						
CPUP	**Villa Florida**	**143.63**	**228**	PKP	PKPdf	21 46 45.2	-1.9
TXAR	**Lajitas Array**	**143.65**	**25**	PKP	PKPdf	21 46 46.9	-0.2
	comp=Z,0.3nm,0.6s,baz=318,slow=1.7,SNR=3.6						
TXAR	**Lajitas Array**	**143.65**	**25**	PKP	PKPdf	21 46 46.9	-0.2

TRN 10 21:30:26.2, 16°.95N×62°.34W, h3km, MD3.3, M3.6(FDF), 5C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.47**	**78** ⇑	*eP*	Pg	21 30 39.9	+4.6
BPA				*i S*	Sg	21 30 46.5	+5.1
BSK	**Brimstone Hill**	**0.62**	**310**	*eP*	Pg	21 30 41.4	+3.3
BSK				*eS*	Sg	21 30 50.1	+4.0
LZG	**Guadaloupe-1**	**0.97**	**146** ⇑	*iP*	Pg	21 30 48.6	+3.8
BCG	**Bois Riant Cap**	**1.10**	**141** ‖	*eP*	Pg	21 30 50.8	+3.4
SCG	**Saint Claude**	**1.11**	**145** ⇑	*iP*	Pg	21 30 50.9	+3.4
SCG				⇑ *eS*	Sg	21 31 07.2	+5.2
HMG	**Houelmont**	**1.14**	**147**	*eP*	Pg	21 30 51.1	+3.0
PHG	**Guadaloupe-2**	**1.15**	**144** ⇑	*iP*	Pg	21 30 51.6	+3.4
TBG	**Guadaloupe-3**	**1.28**	**148**	*eP*	Pg	21 30 53.3	+2.6

*NEIC **10** 21:39:26.5, 16°.50N×99°.26W, h16km, MD3.8(MEX), After MEX.*

MEX 10 21:39:26.5±0.9, 16°.50N×99°.26W, h16km±11km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.73**	**300**	*i P*	Pg	21 39 37.4	-3.3
ACX				*i S*	Sg	21 39 47.0	-3.4
ACX	**Acapulco**	**0.73**	**300**	*i P*	Pg	21 39 37.4	-3.3
ACX				*i S*	Sg	21 39 47.0	-3.4
PNIG	**Pinotepa**	**1.09**	**96**	*eP*	Pb	21 39 43.5	-3.5
PNIG				*i S*	Sb	21 39 56.2	-4.9
PNIG	**Pinotepa**	**1.09**	**96**	*eP*	Pb	21 39 43.5	-3.5
PNIG				*i S*	Sb	21 39 56.2	-4.9
CAIG	**El Cayaco**	**1.11**	**299**	*i P*	Pb	21 39 44.5	-2.8
CAIG				*i S*	Sb	21 39 57.0	-4.5
CAIG	**El Cayaco**	**1.11**	**299**	*i P*	Pb	21 39 44.5	-2.8
CAIG				*i S*	Sb	21 39 57.0	-4.5
PLIG	**Platanillo**	**1.89**	**353**	*eP*	Pn	21 39 55.8	-2.4
PLIG				*i S*	Sn	21 40 16.5	-5.2
PLIG	**Platanillo**	**1.89**	**353**	*eP*	Pn	21 39 55.8	-2.4
PLIG				*i S*	Sn	21 40 16.5	-5.2
UTMO	**Huajuapan**	**1.92**	**46**	*i P*	Pn	21 39 55.9	-2.6
UTMO				*i S*	Sn	21 40 17.8	-4.5
ZIIG	**Zihuatanejo**	**2.38**	**298**	*eP*	Pn	21 40 01.9	-3.0
ZIIG				*i S*	Sn	21 40 29.6	-4.1
ZIIG	**Zihuatanejo**	**2.38**	**298**	*eP*	Pn	21 40 01.9	-3.0
ZIIG				*i S*	Sn	21 40 29.6	-4.1
VHO	**Vista Hermosa**	**2.48**	**76**	*eP*	Pn	21 40 02.8	-3.5
VHO				*i S*	Sn	21 40 32.2	-4.1
VHO	**Vista Hermosa**	**2.48**	**76**	*eP*	Pn	21 40 02.8	-3.5
VHO				*i S*	Sn	21 40 32.2	-4.1
PPM	**Popocatepetl**	**2.62**	**13**	*eP*	Pn	21 40 05.4	-2.7
PPM				*i S*	Sn	21 40 34.9	-4.7
PPM	**Popocatepetl**	**2.62**	**13**	*eP*	Pn	21 40 05.4	-2.7
PPM				*i S*	Sn	21 40 34.9	-4.7
TPIG	**Tehuac#an**	**2.63**	**43**	*eP*	Pn	21 40 10.9	+2.6
TPIG				*i S*	Sn	21 40 42.7	+2.8
MZVM		**2.67**	**1**	*i P*	Pn	21 40 06.0	-2.8
MZVM				*i S*	Sn	21 40 36.1	-4.8
PTVM	**Pico Tres Padr**	**3.08**	**3**	*eP*	Pn	21 40 11.2	-3.2
PTVM				*i S*	Sn	21 40 50.5	-0.4
PTVM	**Pico Tres Padr**	**3.08**	**3**	*eP*	Pn	21 40 11.2	-3.2
PTVM				*i S*	Sn	21 40 50.5	-0.4
IIO	**Organos**	**3.11**	**9**	*eP*	Pn	21 40 13.6	-1.3
IIO				*i S*	Sn	21 40 54.2	+2.4
IIO	**Organos**	**3.11**	**9**	*eP*	Pn	21 40 13.6	-1.3
IIO				*i S*	Sn	21 40 54.2	+2.4

*NEIC **10** 21:46:30.3, 16°.63N×99°.23W, h16km, MD3.6(MEX), After MEX.*

MEX 10 21:46:30.3±0.9, 16°.63N×99°.23W, h16km±10km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.70**	**290**	*i P*	Pg	21 46 41.2	-2.8
ACX				*i S*	Sg	21 46 49.5	-3.8
ACX	**Acapulco**	**0.70**	**290**	*i P*	Pg	21 46 41.2	-2.8
ACX				*i S*	Sg	21 46 49.5	-3.8
CAIG	**El Cayaco**	**1.08**	**293**	*i P*	Pb	21 46 47.6	-3.0
CAIG				*i S*	Sb	21 46 59.9	-4.6
CAIG	**El Cayaco**	**1.08**	**293**	*i P*	Pb	21 46 47.6	-3.0
CAIG				*i S*	Sb	21 46 59.9	-4.6
PNIG	**Pinotepa**	**1.08**	**102**	*i P*	Pb	21 46 46.5	-4.1
PNIG				*i S*	Sb	21 47 00.2	-4.4
PNIG	**Pinotepa**	**1.08**	**102**	*i P*	Pb	21 46 46.5	-4.1
PNIG				*i S*	Sb	21 47 00.2	-4.4
UTMO	**Huajuapan**	**1.81**	**48**	*eP*	Pn	21 46 58.5	-2.4
UTMO				*i S*	Sn	21 47 18.1	-5.5
ZIIG	**Zihuatanejo**	**2.35**	**295**	*eP*	Pn	21 47 05.6	-2.7
ZIIG				*i S*	Sn	21 47 33.4	-3.5
ZIIG	**Zihuatanejo**	**2.35**	**295**	*eP*	Pn	21 47 05.6	-2.7
ZIIG				*i S*	Sn	21 47 33.4	-3.5
VHO	**Vista Hermosa**	**2.43**	**79**	*eP*	Pn	21 47 07.1	-2.3
VHO				*i S*	Sn	21 47 34.7	-4.1
VHO	**Vista Hermosa**	**2.43**	**79**	*eP*	Pn	21 47 07.1	-2.3
VHO				*i S*	Sn	21 47 34.7	-4.1
PPM	**Popocatepetl**	**2.50**	**13**	*eP*	Pn	21 47 07.4	-2.9
PPM				*i S*	Sn	21 47 40.9	+0.5
PPM	**Popocatepetl**	**2.50**	**13**	*eP*	Pn	21 47 07.4	-2.9
PPM				*i S*	Sn	21 47 40.9	+0.5
TPIG	**Tehuac#an**	**2.52**	**45**	*eP*	Pn	21 47 12.3	+1.7
TPIG				*i S*	Sn	21 47 36.9	-4.1
MZVM		**2.55**	**360**	*eP*	Pn	21 47 07.0	-4.0
MZVM				*i S*	Sn	21 47 36.6	-5.2
PTVM	**Pico Tres Padr**	**2.95**	**2**	*eP*	Pn	21 47 14.6	-1.9
PTVM				*i S*	Sn	21 47 48.9	-2.8
PTVM	**Pico Tres Padr**	**2.95**	**2**	*eP*	Pn	21 47 14.6	-1.9
PTVM				*i S*	Sn	21 47 48.9	-2.8
IIO	**Organos**	**2.99**	**9**	*eP*	Pn	21 47 14.8	-2.3
IIO				*i S*	Sn	21 47 55.1	+2.5
IIO	**Organos**	**2.99**	**9**	*eP*	Pn	21 47 14.8	-2.3
IIO				*i S*	Sn	21 47 55.1	+2.5

*NEIC **10** 21:48:54.3, 16°.52N×99°.29W, h18km, MD3.9(MEX), After MEX.*

MEX 10 21:48:54.3±1.1, 16°.52N×99°.29W, h18km±194km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.70**	**300**	*i P*	Pb	21 49 04.9	-3.0
ACX				*i S*	Sb	21 49 13.6	-3.7
ACX	**Acapulco**	**0.70**	**300**	*i P*	Pb	21 49 04.9	-3.0
ACX				*i S*	Sb	21 49 13.6	-3.7
CAIG	**El Cayaco**	**1.08**	**300**	*i P*	Pb	21 49 11.7	-2.7
CAIG				*i S*	Sb	21 49 24.5	-3.7
CAIG	**El Cayaco**	**1.08**	**300**	*i P*	Pb	21 49 11.7	-2.7
CAIG				*i S*	Sb	21 49 24.5	-3.7
PNIG	**Pinotepa**	**1.12**	**96**	*i P*	Pn	21 49 12.1	-3.0
PNIG				*i S*	Sb	21 49 24.3	-5.1
PNIG	**Pinotepa**	**1.12**	**96**	*i P*	Pn	21 49 12.1	-3.0
PNIG				*i S*	Sb	21 49 24.3	-5.1
PLIG	**Platanillo**	**1.88**	**354**	*i P*	Pn	21 49 22.8	-2.8
PLIG				*i S*	Sn	21 49 44.3	-4.5
PLIG	**Platanillo**	**1.88**	**354**	*i P*	Pn	21 49 22.8	-2.8
PLIG				*i S*	Sn	21 49 44.3	-4.5
UTMO	**Huajuapan**	**1.93**	**47**	*eP*	Pn	21 49 23.1	-3.2
UTMO				*i S*	Sn	21 49 45.9	-4.2
ZIIG	**Zihuatanejo**	**2.35**	**298**	*i P*	Pn	21 49 29.8	-2.2
ZIIG				*i S*	Sn	21 49 56.7	-3.7
ZIIG	**Zihuatanejo**	**2.35**	**298**	*i P*	Pn	21 49 29.8	-2.2
ZIIG				*i S*	Sn	21 49 56.7	-3.7
VHO	**Vista Hermosa**	**2.51**	**77**	*eP*	Pn	21 49 32.0	-2.2
VHO				*i S*	Sn	21 50 00.2	-4.2
VHO	**Vista Hermosa**	**2.51**	**77**	*eP*	Pn	21 49 32.0	-2.2
VHO				*i S*	Sn	21 50 00.2	-4.2
PPM	**Popocatepetl**	**2.61**	**14**	*eP*	Pn	21 49 33.2	-2.5
PPM				*i S*	Sn	21 50 04.1	-2.9
PPM	**Popocatepetl**	**2.61**	**14**	*eP*	Pn	21 49 33.2	-2.5
PPM				*i S*	Sn	21 50 04.1	-2.9
TPIG	**Tehuac#an**	**2.64**	**44**	*eP*	Pn	21 49 34.0	-2.0
TPIG				*i S*	Sn	21 50 04.8	-2.8
MZVM		**2.66**	**1**	*i P*	Pn	21 49 33.6	-2.7
MZVM				*i S*	Sn	21 50 04.7	-3.4
PTVM	**Pico Tres Padr**	**3.06**	**3**	*eP*	Pn	21 49 41.5	-0.4
PTVM				*i S*	Sn	21 50 14.0	-4.2
PTVM	**Pico Tres Padr**	**3.06**	**3**	*eP*	Pn	21 49 41.5	-0.4
PTVM				*i S*	Sn	21 50 14.0	-4.2
IIO	**Organos**	**3.10**	**10**	*eP*	Pn	21 49 40.2	-2.3
IIO				*i S*	Sn	21 50 18.1	-1.1
IIO	**Organos**	**3.10**	**10**	*eP*	Pn	21 49 40.2	-2.3
IIO				*i S*	Sn	21 50 18.1	-1.1
HUIG	**Huatulco**	**3.14**	**103**	*eP*	Pn	21 49 41.7	-1.3
HUIG				*i S*	Sn	21 50 14.6	-5.5
HUIG	**Huatulco**	**3.14**	**103**	*eP*	Pn	21 49 41.7	-1.3
HUIG				*i S*	Sn	21 50 14.6	-5.5
MOIG	**Morelia**	**3.63**	**330**	*i S*	Sn	21 50 28.9	-3.2

*ISCJB **10** 21:53:59.0±0.6, 24°.01N±0°.04×122°.53E±0°.02, h24km±5km, Error ellipse: s-maj=6.3km s-min=3.0km az=171.6*
*TAP **10** 21:53:59.6, 24°.02N×122°.51E, h23km±1km, ML2.7, D*
*JMA **10** 21:54:00.2±0.8, 24°.34N×122°.52E, h51km*

ISC 10 21:53:59.0±0.6, 24°.02N±0°.04×122°.53E±0°.02, h20km±5km, n25, σ0°.55/48, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**44**	*eS*	**Sb**	**21 54 18.9**	**-0.6**
ENA	**Nanau**	**0.83**	**300**	*eP*	**Pb**	**21 54 13.9**	**-0.8**
	baz=300						
ENA				*eS*	**Sb**	**21 54 25.6**	**+0.1**
	baz=300						
TWC	**Suao**	**0.86**	**313**	P	**Pb**	**21 54 15.1**	**-0.1**
	baz=314						
TWC				S	**Sb**	**21 54 26.2**	**-0.1**
	baz=314						
ESL	**Shilin**	**1.03**	**259**	*eP*	**Pb**	**21 54 18.4**	**+0.3**
	baz=258						
ESL				S	**Sb**	**21 54 31.2**	**+0.1**
	baz=258						
TWE	**Neicheng**	**1.06**	**312**	*eP*	**Pb**	**21 54 18.7**	**+0.1**
	baz=312						
TWE				*eS*	**Sb**	**21 54 32.6**	**+0.6**
	baz=312						
IRIF	**Iriomote-Funau**	**1.14**	**74**	P	**Pn**	**21 54 19.8**	**0.0**
IRIF				*eS*	**Sb**	**21 54 34.9**	**+0.6**
NNS	**Nan Shan**	**1.14**	**292**	P	**Pn**	**21 54 19.5**	**-0.4**
	baz=292						
NNS				S	**Sb**	**21 54 34.3**	**-0.1**
	baz=292						
HATJ	**Hateruma jima**	**1.16**	**88**	*eS*	**Sb**	**21 54 34.7**	**-0.4**
WHF	**Hehuan Shan**	**1.17**	**277**	P	**Pn**	**21 54 19.9**	**-0.3**
	baz=276						
WHF				S	**Sb**	**21 54 34.8**	**-0.4**
	baz=276						
EHY	**Hungye**	**1.22**	**246**	*eP*	**Pn**	**21 54 20.6**	**-0.4**
	baz=244						
EHY				*eS*	**Sb**	**21 54 36.4**	**-0.3**
	baz=244						
NWF	**Wu-fen Shan**	**1.25**	**327**	*eP*	**Pn**	**21 54 22.4**	**+1.0**
	baz=327						
NWF				*eS*	**Sn**	**21 54 38.8**	**+1.2**
	baz=327						
NSK	**Sanguang**	**1.26**	**302**	P	**Pn**	**21 54 21.4**	**0.0**
	baz=302						
NSK				*eS*	**Sn**	**21 54 36.6**	**-1.2**
	baz=302						
TWT	**Tachien**	**1.26**	**281**	P	**Pn**	**21 54 21.7**	**+0.2**
	baz=280						
TWT				S	**Sn**	**21 54 37.9**	**0.0**
	baz=280						
TWF1	**Yuli**	**1.31**	**240**	P	**Pn**	**21 54 21.8**	**-0.4**
	baz=239						
TWF1				*eS*	**Sn**	**21 54 39.1**	**0.0**
	baz=239						
JKRS	**Kuro-shima**	**1.36**	**80**	P	**Pn**	**21 54 23.4**	**+0.5**
JKRS				*eS*	**Sn**	**21 54 40.5**	**+0.1**
SMLT	**Sun Moon Lake**	**1.50**	**265**	*eP*	**Pn**	**21 54 25.3**	**+0.6**
	baz=264						
SMLT				*eS*	**Sn**	**21 54 43.5**	**-0.3**
	baz=264						
JIJ	**Ishigaki jima**	**1.51**	**76**	P	**Pn**	**21 54 24.8**	**-0.1**
JIJ				*eS*	**Sn**	**21 54 42.8**	**-1.2**
TYC	**Yuchr**	**1.54**	**266**	*eP*	**Pn**	**21 54 24.9**	**-0.4**
	baz=265						
TYC				*eS*	**Sn**	**21 54 44.3**	**-0.4**
	baz=265						
YUS	**Yu-Shan**	**1.54**	**250**	*eP*	**Pn**	**21 54 24.8**	**-0.6**
	baz=249						
YUS				*eS*	**Sn**	**21 54 44.3**	**-0.5**
	baz=249						
ALS	**Alishan**	**1.66**	**253**	*eP*	**Pn**	**21 54 26.6**	**-0.4**
	baz=252						
ALS				*eS*	**Sn**	**21 54 47.3**	**-0.5**
	baz=252						
CHN5	**Tsauling**	**1.75**	**257**	*eP*	**Pn**	**21 54 28.7**	**+0.5**
	baz=256						
CHN5				*eS*	**Sn**	**21 54 49.7**	**-0.3**
	baz=256						
STYT	**Tauyuan**	**1.84**	**243**	*eP*	**Pn**	**21 54 30.4**	**+1.0**
	baz=242						
STYT				*eS*	**Sn**	**21 54 52.5**	**+0.4**
	baz=242						
CHN4	**Tsaushan**	**1.90**	**250**	*eP*	**Pn**	**21 54 30.8**

SIVA	Sivas	2.53	120	*e*P		Pn	21 54 51.9 +0.3
SIVA	Sivas	2.53	120	P		Pn	21 54 51.8 +0.2
THR4	Thira Island,	2.64	86	P		Pn	21 54 52.9 -0.2
THR3	Thira Island,	2.64	87	P		Pn	21 54 52.7 -0.4
THR1	Thera Island	2.69	88	P		Pn	21 54 53.1 -0.6
AGG	Agios Georgios	2.72	3	*e*P		Pn	21 54 56.3 +2.2
AGG	Agios Georgios	2.72	3	P		Pn	21 54 54.7 +0.6
AGG				S		Sn	21 55 26.4 +0.6
APE	Apeiranthos	2.84	73	*e*P		Pn	21 54 55.1 -0.6
APE	Apeiranthos	2.84	73	P		Pn	21 54 55.2 -0.5
LAST	Lasithi	2.95	112	*e*P		Pn	21 54 56.6 -0.7
LAST	Lasithi	2.95	112	P		Pn	21 54 57.5 +0.2
NPS	Neapolis	3.02	109	*e*P		Pn	21 54 57.1 -1.1
NEO	Neokhori	3.12	16	P		Pn	21 55 00.8 +1.2
XOR	Xorichi	3.17	15	P		Pn	21 54 59.9 -0.4
AOS	Alonnisos	3.18	25	P		Pn	21 55 00.1 -0.3
THL	Klokotos Trika	3.25	358	*e*P		Pn	21 55 02.8 +1.3
THL	Klokotos Trika	3.25	358	P		Pn	21 55 02.8 +1.3
JAN	Janina	3.50	344	*e*P		Pn	21 55 06.4 +1.7
IGT	Igoumenitsa	3.52	337	P		Pn	21 55 05.7 +0.6
IGT				S		Sn	21 55 45.4 -0.1
ZKR	Zakros	3.53	108	P		Pn	21 55 06.3 +1.1
ZKR	Zakros	3.53	108	P		Pn	21 55 05.6 +0.4
LIT	Litokhoron	3.80	4	*e*P		Pn	21 55 10.0 +1.1
LIT	Litokhoron	3.80	4	P		Pn	21 55 09.8 +0.9
LIT				S		Sn	21 55 53.2 +0.9
KEK	Kerkira	3.87	332	*e*P		Pn	21 55 10.3 +0.5
KEK	Kerkira	3.87	332	P		Pn	21 55 10.2 +0.4
KZN	Kozani	4.00	356	P		Pn	21 55 14.0 +2.3
KZN	Kozani	4.00	356	P		Pn	21 55 13.1 +1.4
KZN				S		Sn	21 55 57.9 +0.6
SMG	Samos	4.02	68	*e*P		Pn	21 55 12.2 +0.3
KARP	Karpathos	4.15	99	*e*P		Pn	21 55 13.2 -0.5
PLG	Polygyros	4.19	14	*e*P		Pn	21 55 14.6 +0.3
FNA	Florina	4.51	353	P		Pn	21 55 19.3 +0.7
FNA				S		Sn	21 56 10.8 +1.1
SOH	Sokhos	4.61	12	*e*P		Pn	21 55 21.0 +1.0
BIA	Bitola	4.75	353	*e*Pn		Pn	21 55 22.3 +0.4
BIA				*e*Sg		Sn	21 56 13.5 -2.1
BIA	Bitola	4.75	353	P		Pn	21 55 22.1 +0.2
ARG	Arkhangelos	4.85	89	P		Pn	21 55 24.1 +0.9
ARG				S		Sn	21 56 18.0 0.0
OHR	Ohrid	4.91	348	*e*Pn		Pn	21 55 23.9 -0.1
OHR				*e*Sg		Sn	21 56 17.2 -2.3
SRS	Serrai	4.94	13	P		Pn	21 55 25.0 +0.5
VAY	Valandovo	5.02	4	*e*Pn		Pn	21 55 24.9 -0.7
VAY				*e*Sg		Sn	21 56 19.6 -2.6
KRUS	Krusevo	5.10	353	*i* Pn		Pn	21 55 27.2 +0.4
KRUS				*e*Sg		Sn	21 56 19.2 -5.0
TIP	Timpagrande	5.13	306	*e*Pn		Pn	21 55 28.1 +0.9
	9.4nm,0.5s						
NVR	Nevrokopi	5.21	14	P		Pn	21 55 31.4 +3.1
TIR	Tirane	5.34	341	*e*Pn		Pn	21 55 30.9 +1.0
TIR	Tirane	5.34	341	P		Pn	21 55 30.9 +1.0
CEL	Celeste	5.34	293	*e*Pn		Pn	21 55 30.1 +0.1
STIP	Stip	5.38	0	*e*Pn		Pn	21 55 31.1 +0.5
MMB	Musomiste	5.42	13	*i* P		Pn	21 55 31.3 +0.2
SLUM		5.44	151	S		Sn	21 56 25.5 -7.2
	baz=144						
KKB	Krupnik	5.60	7	*i* P		Pn	21 55 33.3 -0.3
RZN	Rozhen	5.74	20	*i* P		Pn	21 55 35.2 -0.2
KDZ	Kurdzhali	5.92	25	*i* P		Pn	21 55 36.4 -1.5
VTS	Vitosha	6.33	7	*e*Pn		Pn	21 55 45.1 +1.5
VTS	Vitosha	6.33	7	*i* P		Pn	21 55 44.6 +1.0
BARS	Barje	6.51	358	*e*Pn		Pn	21 55 46.2 +0.3
HMAT	Matruh	6.64	140	P		Pn	21 55 43.2 -4.7
	baz=135						
TREB	Trebinje	7.04	337	*e*Pn		Pn	21 55 51.7 -1.5
TREB				*e*Sn		Sn	21 57 04.1 -7.6
STON	Ston	7.39	334	*e*Pn		Pn	21 55 56.2 -1.9
STON				Sn		Sn	21 57 13.9 -6.6
GRUS	Gruza	7.65	352	*e*Pn		Pn	21 55 59.5 -2.1
BBLS	Lazići	7.83	345	*e*Pn		Pn	21 56 02.6 -1.5
BBLS				*e*Sn		Sn	21 57 23.4 -7.9
DIVS	Divibare	7.95	349	*e*Pn		Pn	21 56 04.1 -1.6
DIVS				*e*Sn		Sn	21 57 27.4 -6.8
BLY	Banja Luka	9.23	337	*e*Pn		Pn	21 56 22.3 -0.9
BLY				*e*Sn		Sn	21 57 59.5 -6.0
MLR	Muntele Rosu	9.62	16	P		Pn	21 56 31.3 +2.9
	0.1nm,0.3s,baz=184,slow=14,SNR=2.9						
BR131	Keskin Array S	9.70	66	*e*Pn		Pn	21 56 32.2 +2.6
	0.5nm,0.3s						
BRTR	Keskin Array B	9.70	66	P		Pn	21 56 31.2 +1.5
	0.2nm,0.3s,baz=250,slow=13,SNR=10						
AWBH		9.81	142	P		Pn	21 56 27.8 -3.4
	baz=138						
NVLJ	Novalja	9.93	328	*e*Pn		Pn	21 56 31.7 -1.0
NVLJ				Sn		Sn	21 58 15.1 -7.4
BOJS	Bojanci	10.56	333	*i* Pn		Pn	21 56 40.4 -0.9
BOJS				*i* Sn		Sn	21 58 31.2 -6.7
AMAG	Maghara	10.84	118	P		Pn	21 56 45.0 -0.2
	baz=116						
SKDS	Skadanscina	11.08	329	*e*Pn		Pn	21 56 46.8 -1.6
SKDS				*e*Sn		Sn	21 58 41.1 -10
LJU	Ljubljana	11.28	332	*i* Pn		Pn	21 56 51.2 0.0
LJU				*e*Sn		Sn	21 58 50.2 -5.4
JAVS	Javornik	11.34	330	*i* Pn		Pn	21 56 51.1 -0.9
JAVS				*i* Sn		Sn	21 58 47.6 -9.4
PERS	Pernice	11.58	335	*i* Pn		Pn	21 56 53.4 -1.9
PERS				*i* Sn		Sn	21 58 54.6 -8.2
SOKA	Soboth	11.64	335	⇑*i*Pn		Pn	21 56 54.3 -1.8
OBKA	Obir	11.67	333	⇓*i*Pn		Pn	21 56 55.9 -0.6
EIL	Elat	12.63	118	S		Sn	21 59 17.9 -11
	1.0nm,0.3s,baz=0.6,slow=13,SNR=5.7						
MOA	Molln	12.92	336	⇑*i*Pn		Pn	21 57 12.2 -1.3
GERES	GERESS Array B	13.97	336	P		Pn	21 57 27.4 -0.3
	0.3nm,0.3s,baz=154,slow=13,SNR=8.7						
GERES				S		Sn	21 59 57.7 -3.4
	0.2nm,0.3s,baz=155,slow=24,SNR=4.8						
HINF	Hinteralfeld	16.12	320	*e*P		Pn	21 57 50.3 -5.2
	1.5nm,0.5s						
CLL	Collm	16.36	339	*e*(PP)			21 58 13.0
NACGM	Naroch	18.87	8	*e*		Pn	21 58 24.0 -5.1
BSD	Bornholm Skovb	19.45	347	*i* P		Pn	21 58 33.8 -2.3
ESDC	Sonseca Array	20.82	287	P		P	21 58 51.2 +1.9
	0.7nm,0.7s,baz=81,slow=10,SNR=3.9						
HFS	Hagfors	24.46	350	P		P	21 59 26.0 +0.2
	0.7nm,0.3s,mb3.6,baz=137,slow=11,SNR=7.6						
FINES	FINESS Array B	25.28	4	P		P	21 59 33.2 -0.1
	1.8nm,0.5s,mb3.8,baz=158,slow=11,SNR=33						
FINES	FINESS Array B	25.28	4	P		P	21 59 33.2 -0.1
EKA	Eskdalemuir Ar	25.70	326	P		P	21 59 38.5 +1.5
	0.6nm,0.6s,mb3.3,baz=125,slow=8.1,SNR=7.0						
NB2	NORSAR Subarra	25.71	348	P		P	21 59 37.5 +0.3
	comp=Z,0.5nm,0.5s,mb3.3,baz=158,slow=11						
NOA	NORSAR Array B	25.71	348	P		P	21 59 38.2 +1.1
	comp=Z,0.4nm,0.5s,mb3.2,baz=160,slow=10,SNR=3.5						
KAF	Kangasniemi	25.96	4	*ep*		P	21 59 39.2 -0.2
	comp=Z,1.9nm,0.5s,mb3.9						
JOF	Joensuu	27.24	9	*ep*		P	21 59 49.4 -1.5
AKTK	Aktyubinsk	29.34	50	P		P	22 00 09.5 -0.3
AKTO	Aktyubinsk	29.34	50	P		P	22 00 09.5 -0.3
	comp=Z,1.5nm,0.6s,mb3.9,baz=246,slow=4.5,SNR=6.1						
TORD	Torodi Ar. Bea	29.47	224	P		P	22 00 12.1 +0.8
	comp=Z,0.4nm,0.6s,mb3.4,baz=40,slow=7.7,SNR=9.2						
ARCES	ARCESS Array B	33.34	2	P		P	22 00 44.9 +0.2
	comp=Z,2.9nm,1.0s,mb4.2,baz=191,slow=12,SNR=8.4						
KEV	Kevo	33.61	3	*ep*		P	22 00 47.8 +0.7
	comp=Z,0.5nm,0.3s,mb3.9						
BVAR	Borovoye Array	37.38	48	P		P	22 01 20.0 +0.4
	comp=Z,1.1nm,0.6s,mb3.8,baz=243,slow=6.3,SNR=4.9						
AAK	Ala-Archa	40.38	64	P		P	22 01 45.6 +0.9
	comp=Z,1.1nm,0.7s,mb3.7,baz=292,slow=3.1,SNR=4.8						
MKAR	Makanchi Array	45.21	57	P		P	22 02 23.8 -0.1
	comp=Z,1.6nm,0.3s,mb4.3,baz=268,slow=8.1,SNR=63						
ZALV	Zalesovo Beam	46.01	47	P		P	22 02 29.6 -0.4
	comp=Z,2.1nm,0.4s,mb4.4,baz=273,slow=8.0,SNR=9.8						

ISCJB ***10*** *22:01:57.7±1.2, 25°.00N±0°.05×122°.74E±0°.05, h9km±8km, mb3.6/7, Error ellipse: s-maj=8.7km s-min=6.4km az=38.0*
TAP ***10*** *22:01:57.1, 24°.93N×122°.67E, h1km±1km, ML3.5, D*
NEIC ***10*** *22:01:59.1±1.0, 24°.91N×122°.67E, h10km, Error ellipse: s-maj=15.2km s-min=12.2km az=106.0*
IDC ***10*** *22:02:15.6±5.8, 24°.75N×122°.46E, h163km±56km, mb3.3/6, mb1 3.5/7, mb1mx3.2/24, mbtmp3.3/7, MS3.1/1, Ms1 3.1/1, ms1mx2.3/22, Error ellipse: s-maj=38.5km s-min=19.1km az=65.0*
ISC 10 22:01:58.3±0.9, 24°.97N±0°.04×122°.70E±0°.05, h2km±5km, n45, σ1s15/46, mb3.6/7, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.58**	**150**	P	**Pg**	**22 02 09.6**	**+0.3**
	baz=146						
YOJ				*e*S	**Sg**	**22 02 18.9**	**+2.1**
	baz=146						
TWB1	**Santiao Chiao**	**0.64**	**274**	P	**Pg**	**22 02 11.4**	**+0.8**
	baz=277						
TWB1				*e*S	**Sg**	**22 02 20.8**	**+1.9**
	baz=277						
NWF	**Wu-fen Shan**	**0.84**	**277**	⇓*e*P	**Pg**	**22 02 14.1**	**-0.2**
	baz=279						
TWC	**Suao**	**0.85**	**245**	⇓*i*P	**Pg**	**22 02 14.2**	**-0.3**
	baz=246						
PCYT	**Pengchaiyu**	**0.87**	**320**	*e*P	**Pg**	**22 02 13.4**	**-1.5**
	baz=322						
ILA	**Ilan**	**0.88**	**257**	*e*P	**Pg**	**22 02 17.0**	**+1.8**
	baz=258						
TWE	**Neicheng**	**0.96**	**256**	P	**Pg**	**22 02 16.6**	**-0.2**
	baz=256						
TWA	**Mucha**	**1.01**	**271**	*e*P	**Pg**	**22 02 16.9**	**-0.7**
	baz=272						
ENA	**Nanau**	**1.02**	**239**	*e*P	**Pg**	**22 02 17.0**	**-0.8**
	baz=238						
TWY	**Chenhua**	**1.04**	**287**	*e*P	**Pg**	**22 02 18.5**	**+0.3**
	baz=289						
TAP1	**Taipei**	**1.07**	**274**	*e*P	**Pg**	**22 02 20.9**	**+2.2**
	baz=275						
TATO	**Taipei**	**1.09**	**271**	*e*Pg	**Pg**	**22 02 19.0**	**-0.3**
TWS1	**Kuangyinshan**	**1.17**	**277**	*e*P	**Pg**	**22 02 20.1**	**-0.6**
	baz=278						
YHNB	**Yeheng**	**1.23**	**256**	*e*Pn	**Pn**	**22 02 21.3**	**-1.2**
NSK	**Sanguang**	**1.25**	**257**	P	**Pg**	**22 02 20.9**	**-1.4**
	baz=257						
NNS	**Nan Shan**	**1.31**	**247**	*e*P	**Pg**	**22 02 22.4**	**-1.0**
	baz=247						
TWD	**Chiawan**	**1.33**	**229**	*e*P	**Pg**	**22 02 21.6**	**-2.2**
	baz=228						
WHF	**Hehuan Shan**	**1.54**	**238**	*e*P	**Pn**	**22 02 26.2**	**-0.5**
	baz=238						
TWT	**Tachien**	**1.55**	**243**	*e*P	**Pn**	**22 02 27.4**	**+0.5**
	baz=243						
NSTT	**Nanjuang**	**1.57**	**258**	*e*P	**Pn**	**22 02 26.5**	**-0.7**
	baz=258						
ESL	**Shilin**	**1.62**	**225**	P	**Pn**	**22 02 26.9**	**-0.9**
	baz=225						
NSY	**Sanyi**	**1.84**	**253**	*e*P	**Pn**	**22 02 32.4**	**+1.5**
	baz=253						
EHY	**Hungye**	**1.92**	**221**	*e*P	**Pn**	**22 02 31.1**	**-0.9**
	baz=220						
SMLT	**Sun Moon Lake**	**1.96**	**237**	*e*P	**Pn**	**22 02 33.5**	**+1.0**
	baz=236						
SSLB	**Suanglung**	**1.97**	**234**	*e*Pn	**Pn**	**22 02 33.0**	**+0.3**
TYC	**Yuchr**	**1.98**	**238**	*e*P	**Pn**	**22 02 34.0**	**+1.3**
	baz=238						
YULB	**Yu-li**	**2.02**	**219**	*e*Pn	**Pn**	**22 02 32.2**	**-1.1**
TWF1	**Yuli**	**2.05**	**219**	*e*P	**Pn**	**22 02 33.8**	**0.0**
	baz=218						
YUS	**Yu-Shan**	**2.17**	**228**	*e*P	**Pn**	**22 02 35.0**	**-0.3**
	baz=227						
ALS	**Alishan**	**2.25**	**230**	*e*P	**Pn**	**22 02 38.5**	**+2.0**
	baz=230						
CHN5	**Tsauling**	**2.29**	**234**	*e*P	**Pn**	**22 02 39.1**	**+2.1**
	baz=233						
ELDTW	**Lidau**	**2.34**	**221**	*e*P	**Pn**	**22 02 36.5**	**-1.2**
	baz=220						
TPUB	**Ta-pu**	**2.51**	**229**	*e*Pn	**Pn**	**22 02 40.5**	**+0.4**
WTP	**Ta-pu**	**2.56**	**228**	*e*P	**Pn**	**22 02 41.2**	**+0.5**
	baz=228						
CHN1	**Nanshi**	**2.66**	**229**	*e*P	**Pn**	**22 02 39.6**	**-2.5**
	baz=228						
SGST	**Jiashian**	**2.69**	**226**	*e*P	**Pn**	**22 02 43.0**	**+0.4**
	baz=225						
EAST	**Anshuo**	**3.08**	**214**	*e*P	**Pn**	**22 02 47.8**	**-0.1**
	baz=213						
KSRS	**Korea Array**	**13.22**	**18**	P	Px	22 05 21.4	
	0.1nm,0.3s,baz=190,slow=12,SNR=11						
KSRS				LR	LR	22 11 02.1	
	comp=Z,79nm,19.3s,baz=200,slow=39						
GTA	**Gaotai**	**24.04**	**312**	*e*P	**P**	**22 07 16.7**	**+2.0**
GTA				pP		22 07 20.3	
GTA				sP	sP	22 07 21.8	+6.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.4						
SONM	**Songino Array**	**26.22**	**335**	P	**P**	**22 07 35.6**	**+1.2**
	comp=Z,1.1nm,0.8s,mb3.4,baz=144,slow=9.5,SNR=6.4						
MKAR	**Makanchi Array**	**38.75**	**315**	P	**P**	**22 09 23.9**	**0.0**
	comp=Z,1.8nm,0.9s,mb3.8,baz=118,slow=9.8,SNR=12						
ZALV	**Zalesovo Beam**	**40.35**	**326**	P	**P**	**22 09 36.7**	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=120,slow=8.5,SNR=5.8						
WRA	**Warramunga Arr**	**46.05**	**165**	P	**P**	**22 10 21.8**	**-1.7**
	comp=Z,0.6nm,0.9s,mb3.5,baz=347,slow=8.2,SNR=3.8						
FINES	**FINESS Array B**	**71.47**	**330**	P	**P**	**22 13 20.4**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.8,baz=38,slow=9.6,SNR=3.6						
YKA	**Yellowknife Ar**	**81.72**	**23**	P	**P**	**22 14 16.6**	**-1.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=310,slow=5.0,SNR=10						

NNC ***10*** *22:12:59.1±2.6, 40°.87N×62°.93E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=25.9km s-min=14.3km az=32.0*
IDC ***10*** *22:13:03.1±0.8, 41°.12N×63°.07E, h0km, mb3.8/12, mb1 4.0/18, mb1mx3.8/31, mbtmp3.8/18, ML3.8/6, Error ellipse: s-maj=12.9km s-min=8.7km az=176.0*
ISCJB ***10*** *22:13:03.1±0.4, 41°.36N±0°.04×63°.28E±0°.04, h10km, mb3.9/24, Error ellipse: s-maj=6.4km s-min=4.0km az=12.4*
NEIC ***10*** *22:13:04.6±0.4, 41°.26N×63°.19E, h10km, mb4.1/11, Error ellipse: s-maj=8.6km s-min=4.5km az=182.0*
CSEM ***10*** *22:13:05.3±0.2, 41°.28N×63°.21E, h14km, mb4.2/11, Error ellipse: s-maj=7.1km s-min=4.2km az=1.0*
MOS ***10*** *22:13:06.4±1.3, 41°.35N×63°.36E, h33km, mb4.4/10, Error ellipse: s-maj=8.9km s-min=7.2km az=120.1*
ISC 10 22:13:04.8±0.3, 41°.27N±0°.04×63°.23E±0°.04, h10km, n149, σ0s99/161, mb3.9/24, 12C-9D, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**5.71**	**69**	⇓Pn	**Pn**	**22 14 30.0**	**+0.4**
	3.8nm,0.3s,baz=249,slow=11						
KK09				⇓Pg	**Pg**	**22 14 52.4**	**-1.7**
	12nm,0.5s,baz=250,slow=17						
KK09				⇑Lg		22 16 12.0	
	58nm,0.6s,baz=251,slow=27						
KK09	**Karatay Array**	**5.71**	**69**	Pn	**Pn**	**22 14 30.0**	**+0.4**
KK09				Pg	**Pg**	**22 14 52.4**	**-1.7**
KK09				Lg		22 16 12.0	
KK09	**Karatay Array**	**5.71**	**69**	Pn	**Pn**	**22 14 30.0**	**+0.4**
	3.8nm,0.3s,baz=249						
AML	**Almayashu**	**7.88**	**80**	P	**Pn**	**22 15 00.4**	**+1.0**
	SNR=15						
AML	**Almayashu**	**7.88**	**80**	*e*Pn	**Pn**	**22 15 00.2**	**+0.9**
	12nm,0.6s						
AML	**Almayashu**	**7.88**	**80**	*e*Pn	**Pn**	**22 15 00.2**	**+0.8**
	12nm,0.6s						
EKS2	**Erkin-Say**	**7.98**	**77**	P	**Pn**	**22 15 02.2**	**+1.3**
	SNR=6.4						
EKS2	**Erkin-Say**	**7.98**	**77**	*e*Pn	**Pn**	**22 15 02.0**	**+1.2**
	7.6nm,0.7s						
EKS2	**Erkin-Say**	**7.98**	**77**	*e*Pn	**Pn**	**22 15 02.0**	**+1.2**
	7.6nm,0.7s						
KBL	**Kabul**	**8.14**	**144**	*e*P	**Pn**	**22 15 03.6**	**+0.6**
KBL				*e*S	**Sn**	**22 16 32.2**	**-2.8**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KBL	**Kabul**	**8.14**	**144**	*e*Pn	**Pn**	**22 15 03.5**	**+0.6**
	comp=Z,6.3nm,0.5s						
KBL				*e*S	**Sn**	**22 16 32.2**	**-2.8**
KBL	**Kabul**	**8.14**	**144**	*e*Pn	**Pn**	**22 15 03.5**	**+0.5**
	comp=Z,6.3nm,0.5s						
AB31	**Akbulak array**	**8.31**	**345**	⇓Pn	**Pn**	**22 15 04.3**	**-1.0**
	comp=Z,0.5nm,0.2s,baz=155,slow=14,SNR=60						
AB31				⇓Lg		22 17 35.3	
	comp=Z,33nm,0.7s,baz=160,slow=27,SNR=4.2						
AB31	**Akbulak array**	**8.31**	**345**	Pn	**Pn**	**22 15 04.3**	**-1.0**
	comp=Z,0.5nm,0.2s,SNR=60						
ABKAR	**Akbulak array**	**8.31**	**345**	*e*Pn	**Pn**	**22 15 04.4**	**-0.9**
	comp=Z,6.0nm,0.5s						
ABKAR	**Akbulak array**	**8.31**	**345**	*e*Pn	**Pn**	**22 15 04.4**	**-0.9**
	comp=Z,6.0nm,0.5s						
UCH	**Uchtor**	**8.49**	**80**	P	**Pn**	**22 15 08.6**	**+0.8**
	SNR=8.2						
UCH	**Uchtor**	**8.49**	**80**	*e*Pn	**Pn**	**22 15 08.2**	**+0.4**
	comp=Z,9.6nm,0.9s						
UCH	**Uchtor**	**8.49**	**80**	*e*Pn	**Pn**	**22 15 08.2**	**+0.4**
	comp=Z,9.6nm,0.9s						

AAK	**Ala-Archa**	**8.51**	**77**	P	**Pn**	**22 15 10.2**	**+2.2**
	SNR=9.5						
AAK	**Ala-Archa**	**8.51**	**77**	⇑*e*P	**Pn**	**22 15 09.8**	**+1.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**8.51**	**77**	Pn	**Pn**	**22 15 08.9**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=229,slow=3.6,SNR=18						
AAK				Sn	**Sn**	**22 16 43.1**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=276,slow=13,SNR=2.3						
AAK				Lg		22 17 44.3	
	comp=Z,0.0nm,0.3s,baz=111,slow=10,SNR=4.9						
AAK	**Ala-Archa**	**8.51**	**77**	*e*Pn	**Pn**	**22 15 09.3**	**+1.3**
	comp=Z,5.0nm,0.4s						
AAK	**Ala-Archa**	**8.51**	**77**	*e*Pn	**Pn**	**22 15 09.3**	**+1.3**
	comp=Z,5.0nm,0.4s						
AAK	**Ala-Archa**	**8.51**	**77**	*e*P	**Pn**	**22 15 09.8**	**+1.8**
	comp=Z,4.0nm,1.0s						
FRU	**Bishkek**	**8.62**	**76**	*e*P	Px	22 15 21.0	
KBK	**Karagaybulak**	**8.84**	**77**	P	**Pn**	**22 15 14.7**	**+2.1**
	SNR=25						
KZA	**Kyzart**	**9.04**	**81**	P	**Pn**	**22 15 16.1**	**+0.9**
	SNR=11						
TKM2	**Tokmak 2**	**9.34**	**76**	⇑Pn	**Pn**	**22 15 20.4**	**+1.0**
	comp=Z,1.9nm,0.5s						
TKM2				⇑Lg		22 17 57.7	
	comp=Z,16nm,0.8s						
TKM2	**Tokmak 2**	**9.34**	**76**	*e*P	**Pn**	**22 15 19.9**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TKM2	**Tokmak 2**	**9.34**	**76**	*e*Pn	**Pn**	**22 15 19.9**	**+0.5**
	comp=Z,3.8nm,0.5s						
TKM2	**Tokmak 2**	**9.34**	**76**	*e*P	**Pn**	**22 15 19.9**	**+0.4**
	comp=Z,4.0nm,0.5s						
ULHL	**Ulahol**	**9.78**	**80**	P	**Pn**	**22 15 26.2**	**+0.8**
	SNR=5.8						
AKTK	**Aktyubinsk**	**9.86**	**340**	Pn	**Pn**	**22 15 27.0**	**+0.6**
AKTK				Sn	**Sn**	**22 17 16.4**	**-0.6**
AKTK				Lg		22 18 25.5	
AKTK	**Aktyubinsk**	**9.86**	**340**	P	**Pn**	**22 15 27.0**	**+0.6**
AKTK				S	**Sn**	**22 17 16.5**	**-0.5**
AKTO	**Aktyubinsk**	**9.86**	**340**	⇓Pn	**Pn**	**22 15 27.2**	**+0.8**
	comp=Z,0.2nm,0.3s						
AKTO				⇑Lg		22 18 22.5	
	comp=Z,1.3nm,0.6s						
AKTO	**Aktyubinsk**	**9.86**	**340**	P	**Pn**	**22 15 27.0**	**+0.6**
AKTO						22 17 16.5	
AKTO	**Aktyubinsk**	**9.86**	**340**	Pn	**Pn**	**22 15 27.0**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=165,slow=11,SNR=25						
AKTO				Sn	**Sn**	**22 17 16.4**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=188,slow=18,SNR=3.6						
AKTO				Lg		22 18 25.5	
	comp=Z,1.7nm,0.3s,baz=60,slow=13,SNR=4.5						
AKTO	**Aktyubinsk**	**9.86**	**340**	Pn	**Pn**	**22 15 27.2**	**+0.8**
	comp=Z,0.2nm,0.3s						
KSH	**Kashi**	**9.88**	**96**	Pn	**Pn**	**22 15 23.3**	**-3.5**
KSH				Sn	**Sn**	**22 17 04.4**	**-13**
KSH				smax			
	comp=N,17nm,1.0s						
KSH				smax			
	comp=E,14nm,0.9s						
CEP	**Cherat**	**10.13**	**134**	P	**Pn**	**22 15 30.0**	**-0.3**
CEP				S	**Sn**	**22 17 18.0**	**-6.0**
VOSK	**Vostochnaya**	**12.61**	**22**	⇓Pn	**Pn**	**22 16 04.1**	**+0.1**
	comp=E,2.9nm,0.5s						
VOSK	**Vostochnaya**	**12.61**	**22**	Pn	**Pn**	**22 16 04.1**	**0.0**
	comp=E,2.9nm,0.5s						
BVA0	**Borovoye Array**	**12.72**	**20**	⇑Pn	**Pn**	**22 16 04.6**	**-1.0**
	comp=E,0.3nm,0.4s,baz=188,slow=17,SNR=37						
BVA0				Sn	**Sn**	**22 18 37.7**	**+11**
	comp=E,2.1nm,0.9s,baz=204,slow=24,SNR=7.3						
BVAR	**Borovoye Array**	**12.72**	**20**	Pn	**Pn**	**22 16 04.8**	**-0.8**
	comp=E,1.2nm,0.3s,baz=236,slow=10,SNR=19						
BVAR				Sn	**Sn**	**22 18 21.0**	**-6.1**
	comp=E,2.0nm,0.3s,baz=202,slow=24,SNR=9.0						
BVAR	**Borovoye Array**	**12.72**	**20**	P	**Pn**	**22 16 04.8**	**-0.8**
BRVK	**Borovoye**	**12.72**	**20**	*ce*

KHC	Kasperske Hory	35.31 300	eP	P	22 20 01.5	+1.7
CLL	Collm	35.49 304	eP	P	22 20 01.0	-0.3
CLL			e	pP	22 20 04.0	-0.4
CLL	Collm	35.49 304	eP	P	22 20 01.0	-0.3
CLL			epP	pP	22 20 04.0	-0.4
CLL	Collm	35.49 304	eP	P	22 20 01.0	-0.3
HFS	Hagfors	35.54 319	P	P	22 20 01.7	+0.1
	comp=Z,2.1nm,0.7s,mb4.2,baz=103,slow=13,SNR=5.8					
HFS	Hagfors	35.54 319	P	P	22 20 01.7	+0.1
NB2	NORSAR Subarra	36.88 320	P	P	22 20 12.6	-0.5
	comp=Z,1.2nm,0.6s,mb3.9,baz=96,slow=9.3					
NB2	NORSAR Subarra	36.88 320	P	P	22 20 12.6	-0.5
	comp=Z,1.2nm,0.6s,mb3.9,SNR=5.2					
NOA	NORSAR Array B	36.88 320	P	P	22 20 12.5	-0.7
	comp=Z,1.3nm,0.7s,mb3.9,baz=99,slow=8.5,SNR=5.6					
NOA	NORSAR Array B	36.88 320	P	P	22 20 12.5	-0.6
CDF	Champ du Feu	39.54 300	eP	P	22 20 36.1	+0.5
	comp=Z,3.3nm,0.8s,mb3.8					
CDF	Champ du Feu	39.54 300	eP	P	22 20 36.1	+0.5
CDF			pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9					
CDF	Champ du Feu	39.54 300	eP	P	22 20 36.1	+0.5
	comp=Z,1.6nm,0.8s,mb3.8					
CDF	Champ du Feu	39.54 300	eP	P	22 20 36.1	+0.5
	comp=Z,1.6nm,0.8s,mb3.8					
LPG	La Plagne	40.54 296	eP	P	22 20 44.3	+0.3
LPG	La Plagne	40.54 296	eP	P	22 20 44.3	+0.3
LPL	La Plagne	40.55 296	eP	P	22 20 43.9	-0.2
	comp=Z,4.0nm,0.6s,mb4.0					
LPL	La Plagne	40.55 296	eP	P	22 20 43.9	-0.2
LPL			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9					
LPL	La Plagne	40.55 296	eP	P	22 20 43.9	-0.2
	comp=Z,2.0nm,0.6s,mb3.9					
LPL	La Plagne	40.55 296	eP	P	22 20 43.9	-0.2
	comp=Z,2.0nm,0.6s,mb3.9					
MBDF	Montbardon	40.73 294	eP	P	22 20 45.2	-0.4
	comp=Z,14nm,1.0s,mb4.3					
MBDF	Montbardon	40.73 294	eP	P	22 20 45.2	-0.4
MBDF			pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2					
MBDF	Montbardon	40.73 294	eP	P	22 20 45.2	-0.4
	comp=Z,7.3nm,1.0s,mb4.3					
MBDF	Montbardon	40.73 294	eP	P	22 20 45.2	-0.4
	comp=Z,7.2nm,1.0s,mb4.3					
MEZF	Maizieres J'vi	40.97 300	eP	P	22 20 48.1	+0.6
	comp=Z,9.2nm,0.8s,mb4.1					
MEZF	Maizieres J'vi	40.97 300	eP	P	22 20 48.1	+0.6
	comp=Z,9.2nm,0.8s,mb4.5					
MEZF	Maizieres J'vi	40.97 300	eP	P	22 20 48.1	+0.6
	comp=Z,9.2nm,0.8s,mb4.5					
LOR	Lormes	42.03 299	eP	P	22 20 57.2	+1.0
	comp=Z,4.6nm,0.9s,mb3.8					
LOR	Lormes	42.03 299	eP	P	22 20 57.2	+1.0
LOR			pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8					
LOR	Lormes	42.03 299	eP	P	22 20 57.2	+1.0
	comp=Z,2.3nm,0.9s,mb3.8					
LOR	Lormes	42.03 299	eP	P	22 20 57.2	+1.0
	comp=Z,2.3nm,0.9s,mb3.8					
SMF	Signal de Mont	42.20 298	eP	P	22 20 56.9	-0.7
SMF	Signal de Mont	42.20 298	eP	P	22 20 56.9	-0.7
AVF	Avril sur Loir	42.49 298	eP	P	22 20 59.5	-0.5
	comp=Z,6.0nm,0.9s,mb3.9					
AVF	Avril sur Loir	42.49 298	eP	P	22 20 59.5	-0.5
AVF			pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9					
AVF	Avril sur Loir	42.49 298	eP	P	22 20 59.5	-0.5
	comp=Z,3.0nm,0.9s,mb3.9					
AVF	Avril sur Loir	42.49 298	eP	P	22 20 59.5	-0.5
	comp=Z,3.0nm,0.9s,mb3.9					
TCF	Toulx Ste Croi	43.39 298	eP	P	22 21 07.4	+0.2
	comp=Z,11nm,1.1s,mb4.2					
TCF	Toulx Ste Croi	43.39 298	eP	P	22 21 07.4	+0.2
TCF			pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2					
TCF	Toulx Ste Croi	43.39 298	eP	P	22 21 07.4	+0.2
	comp=Z,5.5nm,1.1s,mb4.2					
TCF	Toulx Ste Croi	43.39 298	eP	P	22 21 07.4	+0.2
	comp=Z,5.5nm,1.1s,mb4.2					
TIXI	Tiksi	43.80 25	eP	P	22 21 10.7	+0.5
TIXI			pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9					
TIXI	Tiksi	43.80 25	eP	P	22 21 10.7	+0.5
	comp=Z,2.0nm,0.9s,mb3.9					
LDF	La Druitiere	44.28 302	eP	P	22 21 11.4	-3.0
	comp=Z,5.0nm,0.8s,mb4.0					
LDF	La Druitiere	44.28 302	eP	P	22 21 11.4	-3.0
LDF			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1					
LDF	La Druitiere	44.28 302	eP	P	22 21 11.4	-3.0
	comp=Z,2.5nm,0.8s,mb4.0					
EKA	Eskdalemuir Ar	44.62 312	P	P	22 21 16.6	-0.3
	comp=Z,0.6nm,0.5s,mb3.6,baz=90,slow=7.9,SNR=8.9					
EKA	Eskdalemuir Ar	44.62 312	P	P	22 21 16.7	-0.3
SGMF	Saint Gilles	45.94 302	eP	P	22 21 27.3	-0.3
SGMF	Saint Gilles	45.94 302	eP	P	22 21 27.3	-0.3
ROSF	Rostrenen	46.37 302	eP	P	22 21 30.1	-0.9
	comp=Z,37nm,1.3s,mb4.8					
ROSF	Rostrenen	46.37 302	eP	P	22 21 30.1	-0.9
ROSF			pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8					
ROSF	Rostrenen	46.37 302	eP	P	22 21 30.1	-0.9
	comp=Z,18nm,1.3s,mb4.8					
ROSF	Rostrenen	46.37 302	eP	P	22 21 30.1	-0.9
	comp=Z,18nm,1.3s,mb4.8					
TORD	Torodi Ar. Bea	60.10 261	P	P	22 23 11.1	-1.3
	comp=Z,0.9nm,0.7s,mb3.9,baz=34,slow=5.7,SNR=8.5					
YKA	Yellowknife Ar	76.57 359	P	P	22 24 55.2	+0.4
	comp=Z,0.5nm,0.6s,mb3.6,baz=356,slow=6.4,SNR=12					
YKA	Yellowknife Ar	76.57 359	P	P	22 24 55.2	+0.4
YKA	Yellowknife Ar	76.57 359	P	P	22 24 55.2	+0.3
WRA	Warramunga Arr	89.61 117	P	P	22 26 02.4	-0.4
	comp=Z,0.5nm,0.8s,mb3.9,baz=322,slow=4.6,SNR=4.2					
WRA	Warramunga Arr	89.61 117	P	P	22 26 02.4	-0.4
WRA	Warramunga Arr	89.61 117	P	P	22 26 02.4	-0.4
ASAR	Alice Springs	91.92 120	P	P	22 26 13.6	+0.1
	comp=Z,0.4nm,0.8s,mb3.8,baz=327,slow=5.0,SNR=3.6					
ASAR	Alice Springs	91.92 120	P	P	22 26 13.6	+0.1

IDC ***10*** *22:19:38.7±1.1, 49°.86S×162°.75E, h0km, mb4.5/5, mb1 4.7/7, mb1mx4.4/12, mbtmp4.5/7, ML4.4/2, MS3.8/2, Ms1 3.7/2, ms1mx3.1/19, Error ellipse: s-maj=32.8km s-min=24.6km az=18.0*

NEIC ***10*** *22:19:40.3±0.8, 49°.97S×162°.63E, h10km, mb4.3/4, Error ellipse: s-maj=18.9km s-min=11.4km az=177.0*

ISC 10 22:19:43.1±3.6, 50°.0S±0°.1×162°.74E±0°.0, h30km±26km, n30, σ1§37/29, mb4.4/8, MS3.8/2, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODZ	Otahua Downs	7.26	50	ePn	Pn	22 21 27.7	+0.6
	102nm,0.5s						
ODZ				eSn	Sn	22 22 50.1	+1.6
RPZ	Rata Peaks	8.45	46	Pn	Pn	22 21 41.9	-1.5
	4.4nm,0.3s,baz=180,slow=3.7,SNR=12						
RPZ				Sn	Sn	22 23 15.2	-2.5
	4.9nm,0.3s,baz=70,slow=20,SNR=4.4						
RPZ	Rata Peaks	8.45	46	ePn	Pn	22 21 42.3	-1.1
RPZ				Sn	Sn	22 23 15.2	-2.5
SNZO	South Karori	12.02	49	ePn	Pn	22 22 36.3	+4.0
	282nm,1.5s						
SNZO				eSn	Sn	22 24 44.6	-0.7
TAU	Tasmania Unive	12.75	298	ePn	Pn	22 22 38.6	-3.6
	36nm,0.6s						
TAU				eS	Sn	22 24 45.8	-17
MOO	Moorlands	13.12	299	eP	Pn	22 22 44.2	-3.1
URZ	Urewera	15.56	47	Pn	Pn	22 23 20.0	-0.2
	1.3nm,0.3s,baz=296,slow=7.0,SNR=8.3						
TOO	Toolangi	17.51	308	eP	Pn	22 23 46.4	+1.5
CNB	Canberra Magne	17.60	321	eP	Pn	22 23 47.1	+1.2
CAN	Canberra	17.74	320	ePn	Pn	22 23 49.3	+1.6
	23nm,0.8s						
RIV	Riverview	18.24	328	eP	Pn	22 23 56.0	+2.1
ARMA	Armidale	21.24	333	eP	P	22 24 28.2	+1.6
ARMA	Armidale	21.24	333	eP	P	22 24 28.3	+1.7
	6.4nm,0.8s,mb4.0						
STKA	Stephens Creek	23.98	311	eP	P	22 24 55.3	+0.5
	5.3nm,1.0s,mb3.9						
STKA	Stephens Creek	23.98	311	P	P	22 24 55.0	+0.2
	5.9nm,1.0s,mb4.0,baz=139,slow=10,SNR=9.0						
STKA	Stephens Creek	23.98	311	ePn	P	22 24 55.2	+0.4
ASAR	Alice Springs	34.57	309	P	P	22 26 28.6	-0.4
	10nm,0.6s,mb4.9,baz=144,slow=8.3,SNR=177						
WB2	Warramunga Arr	37.50	313	eP	P	22 26 52.5	-1.6
WRA	Warramunga Arr	37.50	313	P	P	22 26 52.9	-1.2
	16nm,0.8s,mb4.8,baz=144,slow=8.2,SNR=55						
WRAB	Tennant Creek	37.51	313	eP	P	22 26 52.8	-1.4
	20nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	43.47	303	eP	P	22 27 42.8	-0.7
	12nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	43.47	303	eP	P	22 27 43.0	-0.5
	4.8nm,0.8s,mb4.3						
MAW	Mawson	48.49	210	LR	LR	22 47 42.6	
	comp=Z,92nm,18.1s,MS3.8,baz=209,slow=35						
PLCA	Paso Flores	78.30	142	P	P	22 31 41.1	+1.1
	0.6nm,0.3s,mb3.9,baz=220,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	88.26	302	P	P	22 32 32.2	+0.8
	1.1nm,0.3s,mb4.5,baz=156,slow=3.2,SNR=8.4						
KSRS	Korea Array	92.31	333	LR	LR	23 09 12.4	
	comp=Z,35nm,19.8s,MS3.8,baz=230,slow=32						
TORD	Torodi Ar. Bea	140.14	210	PKP	PKPdf	22 39 11.2	+2.3
	1.2nm,1.1s,baz=193,slow=1.4,SNR=4.6						
MLR	Muntele Rosu	150.91	278	PKPbc	PKPbc	22 39 31.7	-0.2
	0.7nm,0.6s,baz=180,slow=7.1,SNR=3.2						
FINES	FINESS Array B	153.54	312	PKPbc	PKPbc	22 39 36.7	-0.7
	3.1nm,1.1s,baz=108,slow=6.2,SNR=5.0						
FINES	FINESS Array B	153.54	312	PKPbc	PKPbc	22 39 36.7	-0.7

BJI ***10*** *22:25:16.0, 39°.73N×51°.70E, h19km, mB4.9/21, mb4.7/31, Ms4.5/20, Ms7 4.3/17*

ISCJB ***10*** *22:25:18.0±0.8, 39°.59N±0°.02×52°.11E±0°.02, h18km±6km, mb4.5/108, MS3.7/19, Error ellipse: s-maj=3.7km s-min=2.2km az=15.1*

MOS ***10*** *22:25:19.8±1.1, 39°.66N×52°.08E, h29km, mb4.8/51, Error ellipse: s-maj=6.1km s-min=3.7km az=42.0*

TEH ***10*** *22:25:20.8, 39°.48N×52°.02E, h12km*

CSEM ***10*** *22:25:20.1±0.1, 39°.60N×52°.12E, h22km, ML4.4, Ms3.2, Error ellipse: s-maj=2.7km s-min=2.0km az=23.0*

THR ***10*** *22:25:20.0±0.8, 39°.39N×51°.89E, h15km, ML4.6*

NEIC ***10*** *22:25:20.7±1.0, 39°.57N×52°.11E, h26km±8km, mb4.6/46, Error ellipse: s-maj=3.7km s-min=2.6km az=184.0*

BGS ***10*** *22:25:22.9±1.9, 39°.59N×51°.82E, h33km, mb4.8*

IDC ***10*** *22:25:22.5±2.7, 39°.58N×52°.06E, h41km±25km, mb4.1/22, mb1 4.2/28, mb1mx4.2/32, mbtmp4.1/28, ML4.1/5, MS3.7/7, Ms1 3.7/7, ms1mx3.3/34, Error ellipse: s-maj=17.4km s-min=10.1km az=172.0*

NNC ***10*** *22:25:26.2±2.6, 40°.17N×52°.82E, h0km, mb4.5, Error ellipse: s-maj=33.2km s-min=19.8km az=97.0*

SZGRF ***10*** *22:25:42.3, 40°.73N×49°.52E, h33km, mb4.7, Eastern Caucasus*

ISC 10 22:25:20.7±0.8, 39°.59N±0°.02×52°.09E±0°.02, h23km±6km, h23km±1.2km: pP-P, n671, σ1§06/710, mb4.5/108, MS3.7/19, 63C-15D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDR	Nardaran	1.89	302	P	Pn	22 25 55.1	+3.6
	SNR=14						
NDR				S	Sn	22 26 15.8	+1.2
GOBA	Gobu	1.98	295	P	Pn	22 25 56.1	+3.3
	SNR=4.8						
GOBA				S	Sn	22 26 19.2	+2.3
ALIB	Ii-Bayraml	2.40	280	P	Pn	22 26 01.7	+3.1
	SNR=10						
ALIB				S	Sn	22 26 25.4	-1.9
SIZA	Siyzn	2.85	302	P	Pn	22 26 07.2	+2.5
	SNR=7.2						
SIZA				S	Sn	22 26 39.9	+1.5
GLBA	Ciilabad	2.88	264	P	Pn	22 26 05.1	0.0
	SNR=36						
GLBA				S	Sn	22 26 36.4	-2.7
PQL	Pirkuli	2.93	295	P	Pn	22 26 07.8	+2.0
	SNR=54						
PQL				S	Sn	22 26 42.1	+1.8
IML	Ismayilli	3.23	293	P	Pn	22 26 10.8	+1.0
	SNR=13						
IML				S	Sn	22 26 49.1	+1.6
IPRN	Peran	3.35	177	Pn	Pn	22 26 09.6	-1.9
IPRN	Peran	3.35	177	e	Sn	22 26 46.1	-4.4
	comp=Z,20μm,0.2s						
IPRN				⇑ePn	Pn	22 26 09.7	-1.8
IGLO	Ghaloghah	3.38	155	Pn	Pn	22 26 10.7	-1.2
IGLO	Ghaloghah	3.38	155	⇑ePn	Pn	22 26 10.8	-1.1
IGLO				e		22 26 50.6	
	comp=Z,25μm,0.2s						
IGLO	Ghaloghah	3.38	155	⇑ePn	Pn	22 26 10.8	-1.1
IKIA	Kiasar	3.60	159	Pn	Pn	22 26 14.7	-0.4
IKIA	Kiasar	3.60	159	ePn	Pn	22 26 14.8	-0.3
IKIA				e		22 26 59.5	
	comp=Z,7μm,0.1s						
IKIA	Kiasar	3.60	159	ePn	Pn	22 26 14.8	-0.3
CHTH	Charan	3.75	192	ePn	Pn	22 26 15.9	-1.2
CHTH	Charan	3.75	192	ePn	Pn	22 26 16.3	-0.8
THKV	Tehran--Karaj	3.79	195	ePn	Pn	22 26 16.7	-0.9
THKV				AML	AML	22 27 01.6	
	comp=N,913nm,0.6s						
THKV	Tehran--Karaj	3.79	195	ePn	Pn	22 26 16.9	-0.7
BRDA	Brd	3.83	282	P	Pn	22 26 19.4	+1.2
	SNR=19						
BRDA				S	Sn	22 27 01.2	-1.3
ISRB	Sarab	3.88	244	Pn	Pn	22 26 17.8	-1.1
ISRB	Sarab	3.88	244	ePn	Pn	22 26 17.9	-1.0
ISRB				e		22 27 04.7	
	comp=Z,4μm,0.1s						
ISRB	Sarab	3.88	244	ePn	Pn	22 26 17.9	-1.0
ISHM	Shahmirzad	3.90	165	Pn	Pn	22 26 18.9	-0.2
ISHM	Shahmirzad	3.90	165	ePn	Pn	22 26 18.9	-0.2
ISHM				e		22 27 07.1	
	comp=Z,29μm,0.1s						
ISHM	Shahmirzad	3.90	165	ePn	Pn	22 26 18.9	-0.2
DAMV	Damavand	3.95	181	ePn	Pn	22 26 19.8	-0.1
DAMV				AML	AML	22 27 05.3	
	comp=N,1μm,0.5s						
DAMV				AML	AML	22 27 05.3	
	comp=E,1μm,1.0s						
DAMV	Damavand	3.95	181	ePn	Pn	22 26 19.8	-0.1
ZNJK	Zanjan	3.96	224	ePn	Pn	22 26 18.9	-1.1
ZNJK				AML	AML	22 27 04.8	
	comp=E,934nm,1.0s						
ZNJK	Zanjan	3.96	224	ePn	Pn	22 26 18.9	-1.1
IFIR	Firoozkooh	3.98	172	Pn	Pn	22 26 19.8	-0.4
IFIR	Firoozkooh	3.98	172	ePn	Pn	22 26 19.9	-0.3
IFIR				e		22 27 08.1	
	comp=Z,13μm,0.1s						
IFIR	Firoozkooh	3.98	172	ePn	Pn	22 26 19.9	-0.3
IDMV	Damavand	4.00	181	Pn	Pn	22 26 20.5	-0.1
IDMV	Damavand	4.00	181	ePn	Pn	22 26 20.6	0.0
IDMV				e		22 27 07.8	
	comp=Z,5μm,0.2s						
IDMV	Damavand	4.00	181	ePn	Pn	22 26 20.6	0.0
IMHD	Mahdasht	4.06	197	Pn	Pn	22 26 20.8	-0.5
IMHD	Mahdasht	4.06	197	ePn	Pn	22 26 20.8	-0.5
IMHD				e		22 26 25.5	
	comp=Z,3μm,0.1s						
IMHD	Mahdasht	4.06	197	ePn	Pn	22 26 20.8	-0.5
SEKA	Sheki	4.07	295	P	Pn	22 26 22.2	+0.8
	SNR=4.7						
SEKA				S	Sn	22 27 08.7	+0.4
IHRS	Heris	4.13	254	Pn	Pn	22 26 22.3	0.0
IHRS	Heris	4.13	254	ePn	Pn	22 26 22.4	+0.1
IHRS				e		22 27 10.4	
	comp=Z,6μm,0.2s						
IR3	Iran Long-Peri	4.19	192	ePn	Pn	22 26 22.5	-0.7
ILAS	Lasjerd	4.26	170	Pn	Pn	22 26 23.9	-0.1
ILAS	Lasjerd	4.26	170	ePn	Pn	22 26 24.0	0.0
ILAS				e		22 27 17.8	
	comp=Z,8μm,0.2s						
ILAS	Lasjerd	4.26	170	ePn	Pn	22 26 24.0	0.0
IANJ	Anjílo	4.36	160	Pn	Pn	22 26 25.2	-0.3
IANJ	Anjílo	4.36	160	ePn	Pn	22 26 25.3	-0.2
IANJ				e		22 27 15.1	
	comp=Z,6μm,0.3s						
IANJ	Anjílo	4.36	160	ePn	Pn	22 26 25.3	-0.2
IBST	Bostanabad	4.48	247	Pn	Pn	22 26 26.2	-1.0
IBST	Bostanabad	4.48	247	ePn	Pn	22 26 26.3	-0.9
IBST				e		22 26 31.6	
	comp=Z,773nm,0.1s						
IRAZ	Razeghan	4.52	203	Pn	Pn	22 26 26.6	-1.0
IRAZ	Razeghan	4.52	203	ePn	Pn	22 26 26.7	-0.9
IRAZ				e		22 27 29.5	
	comp=Z,3μm,0.3s						
IRAZ	Razeghan	4.52	203	ePn	Pn	22 26 26.7	-0.9
GANJ	Ganja	4.54	285	P	Pn	22 26 27.5	-0.5
	SNR=9.6						
GANJ				S	Sn	22 27 16.9	-3.2
BJRD	Bojnurd	4.57	113	ePn	Pn	22 26 31.7	+3.4
BJRD	Bojnurd	4.57	113	ePn	Pn	22 26 30.1	+1.7
ITBZ	Tabriz	4.83	256	Pn	Pn	22 26 32.2	+0.3
ITBZ	Tabriz	4.83	256	ePn	Pn	22 26 32.2	+0.3
ITBZ				e		22 26 37.0	
	comp=Z,685nm,0.1s						
ISHV	Shirvan	4.86	113	Pn	Pn	22 26 33.4	+1.2
ISHV	Shirvan	4.86	113	ePn	Pn	22 26 33.4	+1.2
ISHV				e		22 27 37.4	
	comp=Z,8μm,0.2s						
ISHV	Shirvan	4.86	113	ePn	Pn	22 26 33.4	+1.2
IMRD	Marand	5.04	262	Pn	Pn	22 26 34.7	-0.1
IMRD	Marand	5.04	262	ePn	Pn	22 26 34.7	-0.1
IMRD				e		22 26 56.3	
	comp=Z,2μm,0.4s						
IMRD	Marand	5.04	262	ePn	Pn	22 26 34.7	-0.1
NAX	Nakhchivan	5.13	267	P	Pn	22 26 36.0	0.0
	SNR=9.8						
GHVR	GHOM	5.14	187	ePn	Pn	22 26 36.3	+0.1
GHVR	GHOM	5.14	187	ePn	Pn	22 26 35.8	-0.4
IAZR	Azarshahr	5.15	250	Pn	Pn	22 26 36.0	-0.3
IAZR	Azarshahr	5.15	250	ePn	Pn	22 26 36.0	-0.3
IAZR	Azarshahr	5.15	250	ePn	Pn	22 26 36.0	-0.3
ISHB	Shabestar	5.21	258	Pn	Pn	22 26 37.4	+0.3
ISHB	Shabestar	5.21	258	ePn	Pn	22 26 37.5	+0.4
ISHB				e		22 27 03.7	
	comp=Z,639nm,0.3s						
ISFB	Sefidab	5.23	179	Pn	Pn	22 26 36.9	-0.5
ISFB	Sefidab	5.23	179	ePn	Pn	22 26 37.0	-0.4
ISFB				e		22 26 54.1	
	comp=Z,2μm,0.3s						
ISFB	Sefidab	5.23	179	ePn	Pn	22 26 37.0	-0.4
ISFR	Sfrayin	5.29	117	Pn	Pn	22 26 39.4	+1.1
ISFR	Sfrayin	5.29	117	ePn	Pn	22 26 39.4	+1.1
ISFR	Sfrayin	5.29	117	ePn	Pn	22 26 39.4	+1.1
ASAO	Ashtian	5.29	199	ePn	Pn	22 26 37.8	-0.5
ASAO	Ashtian	5.29	199	ePn	Pn	22 26 37.8	-0.5
IEMG	Emamgholi	5.59	111	Pn	Pn	22 26 42.6	+0.3
IEMG	Emamgholi	5.59	111	ePn	Pn	22 26 42.7	+0.4
IEMG				e		22 26 49.3	
	comp=Z,4μm,0.1s						
IEMG	Emamgholi	5.59	111	ePn	Pn	22 26 42.7	+0.4
IQHU	Qucahn	5.66	114	Pn	Pn	22 26 43.8	+0.5
IQHU	Qucahn	5.66	114	ePn	Pn	22 26 43.8	+0.5
IQHU	Qucahn	5.66	114	ePn	Pn	22 26 43.8	+0.5
GNI	Garni	5.68	278c	iP	Pn	22 26 46.1	+2.5
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
GNI	Garni	5.68	278	eP	Pn	22 26 46.0	+2.4
	comp=Z,44nm,0.6s						
MAKU	Maku	5.74	270	ePn	Pn	22 26 45.0	+0.6
MAKU	Maku	5.74	270	ePn	Pn	22 26 45.0	+0.7
IKRD	Kardeh	5.79	117	Pn	Px	22 26 55.4	
IKRD	Kardeh	5.79	117	ePn	Px	22 26 55.4	
IKRD				e		22 28 08.9	
	comp=Z,2μm,0.3s						
MTA	Mtatsminda	5.93	293	P	Pn	22 26 47.8	+0.8
MTA				S	Sn	22 27 53.6	-0.7
TBLG	Delisi	5.99	293	eP	Pn	22 26 48.2	+0.4
TBLG				eS	Sn	22 27 53.6	-1.9
TBLG	Delisi	5.99	293	P	Pn	22 26 48.2	+0.5
TBLG				S	Sn	22 27 53.6	-1.9
TBLG	Delisi	5.99	293	eP	Pn	22 26 48.2	+0.4
TBLG				eS	Sn	22 27 53.6	-1.9
IAKL	Akhelmad	6.04	117	Pn	Pn	22 26 49.2	+0.6
IAKL	Akhelmad	6.04	117	ePn	Pn	22 26 49.3	+0.7
IAKL				e		22 28 03.7	
	comp=Z,3μm,0.2s						
IKLH	Kolahrood	6.27	184	Pn	Pn	22 26 51.2	-0.5
IKLH	Kolahrood	6.27	184	ePn	Pn	22 26 51.3	-0.4
IKLH				e		22 28 14.6	
	comp=Z,778nm,0.3s						
IKLH	Kolahrood	6.27	184	ePn	Pn	22 26 51.3	-0.4
IPAY	Payeh	6.29	118	Pn	Pn	22 26 52.6	+0.6
IPAY	Payeh	6.29	118	ePn	Pn	22 26 52.7	+0.7
IPAY				e		22 28 07.0	
	comp=Z,2μm,0.1s						
IPAY	Payeh	6.29	118	ePn	Pn	22 26 52.7	+0.7
GOR	Gori	6.51	294	P	Pn	22 26 49.2	-5.8
GOR				S	Sn	22 28 07.1	-1.4
IDHR	Dehrash	6.67	225	Pn	Pn	22 26 57.1	-0.1
IDHR	Dehrash	6.67	225	ePn	Pn	22 26 57.2	0.0
IDHR				e		22 28 46.3	
	comp=N,580nm,0.4s						
IDHR	Dehrash	6.67	225	ePn	Pn	22 26 57.2	0.0
IZEF	Zefreh	6.68	178	e	Sx	22 28 51.3	
	comp=Z,386nm,0.3s						
ISRO	Mashad	6.69	117	ePn	Pn	22 26 58.3	+0.9
ISRO	Mashad	6.69	117	ePn	Pn	22 26 58.3	+0.9
IMOG	Moghan	6.71	119	Pn	Pn	22 26 58.3	+0.6
IMOG	Moghan	6.71	119	ePn	Pn	22 26 58.3	+0.6
IMOG				e		22 27 16.1	
	comp=Z,1μm,0.3s						
IMOG	Moghan	6.71	119	ePn	Pn	22 26 58.3	+0.6
KEH	Kehvi	6.74	296	P	Pn	22 26 59.2	+1.0
KEH				S	Sn	22 28 11.4	-2.8
ZEI	Tsey	6.95	300	eP	Pn	22 26 56.7	-4.3
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.2s						
IMYA

comp=Z,17nm,0.6s
AKTK Aktyubinsk 11.62 19 P Pn 22 28 04.0 -1.0
AKTK S Sn 22 30 08.0 -5.9
AKTK Aktyubinsk 11.62 19 P Pn 22 28 04.0 -1.0
AKTO Aktyubinsk 11.62 19 ⇑Pn Pn 22 28 04.1 -0.9
comp=Z,4.3nm,0.7s
AKTO ⇑Sn Sn 22 30 08.7 -5.1
comp=Z,18nm,0.7s
AKTO Aktyubinsk 11.62 19 P Pn 22 28 04.0 -1.0
comp=Z,2.0nm,0.3s,baz=205,slow=11,SNR=37
AKTO S Sn 22 30 08.0 -5.9
comp=Z,6.4nm,0.3s,baz=56,slow=20,SNR=13
AKTO Aktyubinsk 11.62 19 Pn Pn 22 28 04.1 -0.9
comp=Z,4.3nm,0.7s
ANN Anapa 12.05 300 *e*P **Pn 22 28 06.1 -4.7**
ANN pmax pmax
comp=Z,18nm,1.3s
ANN MLR MLR
comp=Z,325nm,17.0s
BR131 Keskin Array S 14.22 276 *e*Pn **Pn 22 28 42.0 +1.5**
BR131 Keskin Array S 14.22 276 *e*Pn **Pn 22 28 42.0 +1.5**
BRTR Keskin Array B 14.22 276 *i* P **Pn 22 28 41.2 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,1.1s
BRTR Keskin Array B 14.22 276 P Pn 22 28 41.3 +0.8
BRTR Keskin Array B 14.22 276 P Pn 22 28 41.3 +0.8
comp=Z,0.0nm,0.3s,baz=95,slow=13,SNR=5.2
KK02 Karatay Array 14.28 70 ⇑Pn **Pn 22 28 39.1 -2.2**
comp=Z,13nm,0.9s
KK02 ⇑Sn Sn 22 31 17.8 -1.0
comp=Z,10nm,0.7s
KK02 Karatay Array 14.28 70 Pn Pn 22 28 39.1 -2.2
comp=Z,13nm,0.9s
KK02 Sn Sn 22 31 17.8 -1.0
comp=Z,10nm,0.7s
SIM Simferopol' 14.34 298 *ce*P **Pn 22 28 47.8 +5.7**
SIM pmax pmax
comp=Z,11nm,0.8s
SIM Simferopol' 14.34 298 *e*P **Pn 22 28 47.8 +5.7**
comp=Z,11nm,0.8s
ASF Jabal al Asfar 14.36 244 P Pn 22 28 49.9 +7.5
comp=Z,0.3nm,0.3s,baz=274,slow=6.7,SNR=15
KBL Kabul 14.44 105 *e*P **Pn 22 28 43.0 -0.5**
KBL Kabul 14.44 105 *e*Pn **Pn 22 28 43.0 -0.5**
VORD Divnogorie 14.48 326 *e*P **Pn 22 28 51.2 +7.2**
VORD pmax pmax
comp=Z,3.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,1.5s
VORD Divnogorie 14.48 326 *e*P **Pn 22 28 51.2 +7.2**
comp=E,10.0nm,0.9s
VSR Storozhevoye 14.72 326 *e*P **Pn 22 28 51.3 +4.0**
VSR pmax pmax
comp=Z,6.0nm,0.5s
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,1.1s
VSR Storozhevoye 14.72 326 *e*P **Pn 22 28 51.3 +4.0**
comp=E,6.0nm,0.7s
VOR Voronezh 15.09 328 P Pn 22 29 02.0 +10
VOR pmax pmax
comp=Z,140nm,1.6s
AML Almayashu 16.54 74 P Pn 22 29 18.0 +7.0
SNR=8.0
AML Almayashu 16.54 74 *e*Pn **Pn 22 29 09.4 -1.6**
comp=Z,14nm,0.6s
AML *e*S Sn 22 32 08.7 -5.1
AML Almayashu 16.54 74 *e*Pn **Pn 22 29 09.4 -1.6**
comp=Z,14nm,0.6s
EKS2 Erkin-Say 16.62 72 P Pn 22 29 16.6 +4.5
SNR=10
EKS2 Erkin-Say 16.62 72 *e*Pn **Pn 22 29 11.0 -1.0**
comp=Z,26nm,0.9s
EKS2 *e*Sn Sn 22 32 05.7 -10
EKS2 Erkin-Say 16.62 72 *e*Pn **Pn 22 29 11.0 -1.0**
comp=Z,26nm,0.9s
AAK Ala-Archa 17.15 73 P Pn 22 29 23.1 +4.4
SNR=10.0
AAK Ala-Archa 17.15 73 P Pn 22 29 19.1 +0.4
AAK pmax pmax
comp=Z,1.0nm,0.3s
AAK MLR MLR
comp=Z,328nm,19.4s
AAK Ala-Archa 17.15 73 P Pn 22 29 19.1 +0.4
comp=Z,0.0nm,0.3s,baz=224,slow=6.4,SNR=32
AAK LR LR 22 37 33.0
comp=Z,328nm,19.4s,baz=252,slow=42
AAK Ala-Archa 17.15 73 *e*Pn **Pn 22 29 18.8 +0.2**
comp=Z,22nm,1.0s
AAK *e*S Sn 22 32 36.4 +7.7
AAK Ala-Archa 17.15 73 *e*Pn **Pn 22 29 18.8 +0.1**
comp=Z,22nm,1.0s
AAK Ala-Archa 17.15 73 P Pn 22 29 19.1 +0.4
comp=Z,328nm,19.4s
AAK *e*S Sn 22 32 36.3 +7.7
UCH Uchtor 17.15 74 *e*Pn **Pn 22 29 17.8 -0.8**
comp=Z,8.5nm,0.8s
UCH *e*S Sn 22 32 22.8 -5.8
UCH Uchtor 17.15 74 *e*Pn **Pn 22 29 17.8 -0.9**
comp=Z,8.5nm,0.8s
EIL Elat 17.20 240 P Pn 22 29 21.2 +1.8
comp=Z,0.4nm,0.3s,baz=26,slow=8.9,SNR=4.6
EIL Elat 17.20 240 P Pn 22 29 21.2 +1.8
FRU Bishkek 17.25 72 *e*P **Pn 22 29 21.0 +1.1**
FRU pmax pmax
comp=Z,80nm,2.0s
FRU Bishkek 17.25 72 *e*P **Pn 22 29 21.0 +1.1**
comp=Z,80nm,2.0s
CHMS Chumysh 17.36 71 P Pn 22 29 24.1 +2.8
SNR=13
ARU Arti 17.39 12 *d i*P **Pn 22 29 19.2 -2.3**
ARU S Sn 22 32 30.1 -4.0
ARU pmax pmax
comp=Z,13nm,0.8s
ARU Arti 17.39 12 *e*Pn **Pn 22 29 19.0 -2.4**
comp=Z,49nm,0.9s
ARU *e*S Sn 22 32 25.1 -9.0
ARU Arti 17.39 12 *e*Pn **Pn 22 29 19.0 -2.5**
comp=Z,49nm,0.9s
KBK Karagaybulak 17.48 73 P Pn 22 29 24.2 +1.3
SNR=6.8
KZA Kyzart 17.69 74 P Pn 22 29 25.3 -0.1
SNR=17
TKM2 Tokmak 2 17.97 72 ⇑Pn **Pn 22 29 28.6 -0.2**
comp=Z,18nm,0.9s
TKM2 Tokmak 2 17.97 72 P Pn 22 29 28.5 -0.3
SNR=20
TKM2 Tokmak 2 17.97 72 *e*P **Pn 22 29 28.3 -0.6**
TKM2 pmax pmax
comp=Z,26nm,1.1s
TKM2 Tokmak 2 17.97 72 *e*P **Pn 22 29 28.3 -0.6**
comp=Z,26nm,1.1s
TKM2 Tokmak 2 17.97 72 *e*P **Pn 22 29 28.3 -0.6**
comp=Z,26nm,1.1s
TKM2 Tokmak 2 17.97 72 Pn **Pn 22 29 28.6 -0.3**
comp=Z,18nm,0.9s
TLCR 18.05 296 ⇑*i*P **Pn 22 29 28.8 -1.0**
TLCR 18.05 296 ⇑*i*P **Pn 22 29 28.8 -1.0**
SVE Sverdlovsk 18.14 15 *e*P **Pn 22 29 28.3 -2.5**
SVE *e*S Sn 22 32 39.4 -13
SVE pmax pmax
comp=Z,55nm,1.0s
SVE Sverdlovsk 18.14 15 *e*P **Pn 22 29 28.3 -2.5**
comp=Z,55nm,1.0s
TIRR Tirgusor 18.23 293 *e*P **Pn 22 29 30.4 -1.6**
TIRR Tirgusor 18.23 293 *e*P **Pn 22 29 30.4 -1.6**
BRVK Borovoye 18.35 37 *c i*P **Pn 22 29 31.6 -1.8**
BRVK pmax pmax
comp=Z,14nm,1.2s
BRVK Borovoye 18.35 37 *e*P **Pn 22 29 32.3 -1.0**
comp=Z,36nm,1.1s
BRVK *e*S Sn 22 32 48.1 -9.3
BRVK Borovoye 18.35 37 *i*P **Pn 22 29 31.6 -1.8**
comp=Z,14nm,1.2s
BVA0 Borovoye Array 18.38 37 ⇑Pn **Pn 22 29 32.6 -1.1**
comp=Z,3.9nm,0.7s,baz=0.0,slow=0.1,SNR=48
BVA0 ⇓Sn Sn 22 32 47.4 -11
comp=Z,5.5nm,0.8s,baz=228,slow=22,SNR=7.5
BVAR Borovoye Array 18.38 37 P Pn 22 29 33.3 -0.4
BVAR S Sn 22 32 52.3 -5.8
BVAR Borovoye Array 18.38 37 P Pn 22 29 33.3 -0.4
comp=Z,1.3nm,0.3s,baz=224,slow=12,SNR=25
BVAR S Sn 22 32 52.3 -5.8
comp=Z,1.3nm,0.3s,baz=260,slow=27,SNR=5.7
BVAR LR LR 22 38 25.6
comp=Z,433nm,19.1s,baz=236,slow=43
BVAR Borovoye Array 18.38 37 Pn **Pn 22 29 32.6 -1.1**
comp=Z,3.9nm,0.7s,SNR=48
BVAR Borovoye Array 18.38 37 P Pn 22 29 33.3 -0.4
KSH Kashi 18.41 83 *e*P **Pn 22 29 30.4 -3.9**
KSH *e*pP pP 22 29 36.4 -4.1
KSH *e*sP sP 22 29 40.4 -3.1
KSH *e*PP 22 29 45.1
KSH *e*S **Sn 22 32 46.2 -13**
KSH *e*PcP PcP 22 34 05.1 +0.9
KSH *e*ScP ScP 22 37 37.2 -0.9
KSH *e*PcS PcS 22 37 40.6 -0.2
KSH pmax pmax
comp=Z,50nm,2.8s
KSH LR LR
comp=N,130nm,5.0s
KSH LR LR
comp=E,140nm,5.1s
ULHL Ulahol 18.43 74 P Pn 22 29 38.1 +3.6
SNR=30
KIS Kishinev 18.45 301 *e*UNK **Pn 22 29 29.0 -5.6**
VOSK Vostochnaya 18.47 38 ⇑Pn **Pn 22 29 32.8 -2.0**
comp=E,20nm,0.9s
VOSK ⇑Sn **Sn 22 32 49.8 -11**
comp=E,11nm,0.7s
VOSK Vostochnaya 18.47 38 Pn Pn 22 29 32.8 -2.0
comp=E,20nm,0.9s
HARR Harsova 18.60 294 ⇑P **Pn 22 29 35.5 -1.0**
HARR Harsova 18.60 294 ⇑*i*P **Pn 22 29 35.5 -1.0**
HARR Harsova 18.60 294 P Pn 22 29 35.5 -1.0
OBN Obninsk 18.69 331 ⇑*i*P **Pn 22 29 36.6 -0.8**
OBN *e*S **Sn 22 33 02.5 -3.1**
OBN pmax pmax
comp=Z,14nm,0.7s
OBN MLR MLR
comp=Z,300nm,23.0s
OBN Obninsk 18.69 331 *i* P **Pn 22 29 36.6 -0.8**
comp=Z,14nm,0.7s
MOS Moscow 18.80 334 *e*P **Pn 22 29 33.0 -5.8**
MOS *e*S **Sn 22 33 04.7 -3.7**
AKASG Malin Array Be 19.50 312 P Pn 22 29 45.4 -1.9
comp=Z,2.7nm,0.3s,baz=119,slow=10,SNR=20
AKASG S **Sn 22 33 17.1 -8.2**
baz=115,slow=23,SNR=4.2
AKASG Malin Array Be 19.50 312 P Pn 22 29 45.3 -2.0
AKBB Malin Array Si 19.50 312 *e*P **Pn 22 29 46.0 -1.3**
AKBB Malin Array Si 19.50 312 *e*P **Pn 22 29 46.0 -1.3**
VRI Vrincioaia 19.61 297 ⇑P **Pn 22 29 47.9 -0.8**
VRI Vrincioaia 19.61 297 ⇑*i*P **Pn 22 29 47.9 -0.8**
VRI Vrincioaia 19.61 297 P Pn 22 29 47.9 -0.8
MLR Muntele Rosu 20.10 296 P P 22 29 53.1 +0.5
comp=Z,3.9nm,0.5s,baz=34,slow=6.7,SNR=15
MLR Muntele Rosu 20.10 296 ⇓*i*P **P 22 29 55.0 +2.5**
MLR Muntele Rosu 20.10 296 P P 22 29 53.1 +0.6
SOKR Solikamsk 20.22 7 *e*P **P 22 29 57.0 +3.3**
SOKR S **S 22 33 27.7 -12**
SOKR pmax pmax
comp=Z,20nm,1.2s
SOKR MLR MLR
comp=Z,140nm,19.0s,MS3.3
VOIR 20.72 295 ⇑P **P 22 30 00.0 +0.8**
VOIR 20.72 295 ⇑*i*P **P 22 30 00.0 +0.8**
VOIR 20.72 295 P P 22 30 00.0 +0.8
RZN Rozhen 20.85 285 *i* P **P 22 30 03.9 +3.2**
BURAR Bucovina Array 20.97 301 ⇑P **P 22 30 01.5 -0.5**
BURAR Bucovina Array 20.97 301 ⇑*i*P **P 22 30 01.5 -0.5**
BURAR Bucovina Array 20.97 301 ⇑*i*P **P 22 30 01.5 -0.5**
BUR08 Bucovina Ar. S 20.99 301 *e*P **P 22 30 01.8 -0.4**
BUR08 Bucovina Ar. S 20.99 301 *e*P **P 22 30 01.8 -0.4**
KURBB Kurchatov Arra 21.56 51 ⇑P **P 22 30 07.8 -0.5**
comp=Z,1.8nm,0.7s,mb3.6
KURBB Kurchatov Arra 21.56 51 P P 22 30 07.8 -0.5
comp=Z,1.8nm,0.7s,mb3.6
MMB Musomiste 21.59 284 *i* P **P 22 30 00.1 -8.6**
KURK Kurchatov 21.65 50 ⇓P **P 22 30 09.7 +0.5**
comp=Z,35nm,0.9s,mb4.8
KURK Kurchatov 21.65 50 *e*P **P 22 30 10.0 +0.8**
KURK *e*S **S 22 34 07.6 0.0**
KURK pmax pmax
comp=Z,34nm,0.9s,mb4.8
KURK Kurchatov 21.65 50 P P 22 30 07.9 -1.3
comp=Z,11nm,0.7s,mb4.4,baz=251,slow=11,SNR=38
KURK LR LR 22 39 38.2
comp=Z,265nm,21.9s,MS3.6,baz=255,slow=40
KURK Kurchatov 21.65 50 *e*P **P 22 30 10.0 +0.8**
comp=Z,34nm,0.9s,mb4.8
KURK *e*S **S 22 34 07.6 0.0**
KURK Kurchatov 21.65 50 P P 22 30 09.7 +0.5
comp=Z,35nm,0.9s,mb4.8
KURK *e*S **S 22 34 07.6 0.0**
VTS Vitosha 21.93 287 *i* P **P 22 30 04.2 -8.1**
IDI Anoyia 21.98 267 P P 22 30 13.1 +0.2
comp=Z,4.5nm,0.4s,mb4.2,baz=94,slow=6.3,SNR=17
IDI Anoyia 21.98 267 P P 22 30 13.1 +0.2
KKB Krupnik 22.06 285 *i* P **P 22 30 14.6 +0.9**
KKB Krupnik 22.06 285 *i* P **P 22 30 14.6 +0.9**
MICGM Minsk 22.08 320 *e* **P 22 30 10.0 -3.8**
MNK Minsk 22.10 320 *e*P **P 22 30 11.0 -3.0**
LVV L'vov 22.29 307 *e*P **P 22 30 15.0 -1.1**
LVV *e* 22 30 30.4
LVV *e* 22 34 17.2
LVV L'vov 22.29 307 *e*P **P 22 30 15.0 -1.1**
VAY Valandovo 22.48 284 *e*P **P 22 30 19.8 +1.6**
VAY Valandovo 22.48 284 *e*P **P 22 30 19.7 +1.5**
DRGR 22.51 298 ⇓P **P 22 30 16.9 -1.5**
DRGR 22.51 298 ⇓*i*P **P 22 30 16.9 -1.5**
DRGR 22.51 298 P P 22 30 16.9 -1.5
STIP Stip 22.74 285 *e*P **P 22 30 22.1 +1.2**
STIP Stip 22.74 285 *e*P **P 22 30 22.0 +1.1**
NISS 22.83 289 ⇓*i*P **P 22 30 21.4 -0.5**
BARS Barje 22.95 288 *i* P **P 22 30 23.9 +0.8**
KWP Kalwaria Pacla 23.07 305 *e*P **P 22 30 24.2 -0.1**
KWP pmax pmax
comp=Z,19nm,0.7s,mb4.6
KWP Kalwaria Pacla 23.07 305 *e*P **P 22 30 24.2 -0.1**
comp=Z,19nm,0.7s,mb4.6
KWP Kalwaria Pacla 23.07 305 *e*P **P 22 30 24.2 -0.1**
comp=Z,19nm,0.7s,mb4.6
MK31 Makanchi Array 23.07 62 P P 22 30 24.8 +0.4
comp=Z,27nm,0.9s,mb4.7,baz=255,slow=8.8,SNR=98
MK31 Makanchi Array 23.07 62 *e*P **P 22 30 24.7 +0.4**
MK31 Makanchi Array 23.07 62 *e*P **P 22 30 24.7 +0.4**
MKAR Makanchi Array 23.07 62 P P 22 30 25.1 +0.7
comp=Z,21nm,0.9s,mb4.6,baz=256,slow=9.0,SNR=65
MKAR Makanchi Array 23.07 62 P P 22 30 25.1 +0.8
IDID Didziasalis 23.07 321 *e*P **P 22 30 25.2 +0.9**
IDID Didziasalis 23.07 321 *e*P **P 22 30 25.2 +0.9**
UZH Uzhgorod 23.10 303 ⇑*i*P **P 22 30 26.0 +1.3**
UZH *i* 22 30 31.5
UZH Uzhgorod 23.10 303 *i* P **P 22 30 26.0 +1.3**
BZS Buzias 23.14 295 ⇑P **P 22 30 24.5 -0.6**
BZS Buzias 23.14 295 ⇑*i*P **P 22 30 24.5 -0.6**
BZS Buzias 23.14 295 P P 22 30 24.5 -0.6
DDI Dehra Dun 23.14 106 *ex* x 22 30 25.0
KOLS Kolonicke sedl 23.18 304 *e*P **P 22 30 26.0 +0.5**
KOLS Kolonicke sedl 23.18 304 *e*P **P 22 30 26.0 +0.5**
KOLS Kolonicke sedl 23.18 304 *e*P **P 22 30 26.0 +0.5**
SKO Skopje 23.27 286 *e*P **P 22 30 28.2 +1.6**
SKO Skopje 23.27 286 *e*P **P 22 30 28.1 +1.6**
SVIS Svilajnac 23.36 292 *i* P **P 22 30 28.1 +0.6**
KRUS Krusevo 23.47 284 *e*P **P 22 30 28.9 +0.3**
KRUS Krusevo 23.47 284 *e*P **P 22 30 28.8 +0.2**
ISAL Salakas 23.51 321 *e*P **P 22 30 28.7 -0.1**
ISAL Salakas 23.51 321 *e*P **P 22 30 28.7 -0.1**
IZAR Zarasai 23.55 322 *e*P **P 22 30 29.1 -0.1**
IZAR Zarasai 23.55 322 *e*P **P 22 30 29.0 -0.2**
GRUS Gruza 23.72 291 ⇑*i*P **P 22 30 31.3 +0.4**
OHR Ohrid 23.83 284 *e*P **P 22 30 24.3 -7.6**
DIVS Divibare 24.24 291 ⇓*i*P **P 22 30 36.3 +0.6**
KECS Kecovo 24.25 302 *e*P **P 22 30 35.4 -0.3**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
KECS Kecovo 24.25 302 *e*P **P 22 30 35.4 -0.3**
comp=Z,2.6nm,0.8s,mb3.7
KECS Kecovo 24.25 302 *e*P **P 22 30 35.4 -0.3**
SUW Suwalki 24.27 316 *e*P **P 22 30 35.6 -0.2**
SUW pmax pmax
comp=Z,57nm,1.1s,mb4.9
SUW Suwalki 24.27 316 *e*P **P 22 30 35.6 -0.2**
comp=Z,57nm,1.1s,mb4.9
SUW Suwalki 24.27 316 *e*P **P 22 30 35.6 -0.2**
comp=Z,57nm,1.1s,mb4.9
PVY Plav 24.31 288 ⇑*i*P **P 22 30 37.8 +1.5**
PVY Plav 24.31 288 ⇑*i*P **P 22 30 37.8 +1.5**
PVY Plav 24.31 288 ⇑*i*P **P 22 30 37.8 +1.5**
BEY Berane 24.35 288 *e*P **P 22 30 37.8 +1.1**
IVA Berane 24.35 288 *e*P **P 22 30 37.7 +1.0**
IVA Berane 24.35 288 *e*P **P 22 30 37.8 +1.1**
IVA Berane 24.35 288 *e*P **P 22 30 37.8 +1.1**
PUL Pulkovo 24.41 333 *e*P **P 22 30 37.1 +0.1**
PUL pmax pmax
comp=Z,60nm,0.6s,mb5.2
PUL Pulkovo 24.41 333 *e*P **P 22 30 37.1 +0.1**
comp=Z,60nm,0.6s,mb5.2
NIE Niedzica 24.54 304 *e*P **P 22 30 40.3 +2.0**
NIE Niedzica 24.54 304 *e*P **P 22 30 40.3 +2.0**
PSZ Piszkesteto 24.56 300 *e*P **P 22 30 40.9 +2.4**
PSZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
PSZ Piszkesteto 24.56 300 *e*P **P 22 30 40.9 +2.4**
comp=Z,7.9nm,0.8s,mb4.3
BBLS Lazići 24.67 291 ⇓*i*P **P 22 30 39.9 +0.3**
PLE Pljevlja 24.70 289 ⇑*i*P **P 22 30 40.9 +1.1**
PLE Pljevlja 24.70 289 ⇑*i*P **P 22 30 41.0 +1.2**
PLE Pljevlja 24.70 289 ⇑*i*P **P 22 30 41.0 +1.2**
PDG Podgorica 24.85 287 ⇑*i*P **P 22 30 41.7 +0.5**
TTG Podgorica 24.85 287 ⇑*i*P **P 22 30 41.6 +0.4**
TTG Podgorica 24.85 287 ⇑*i*P **P 22 30 41.6 +0.4**
TTG Podgorica 24.85 287 *i* P **P 22 30 41.7 +0.5**
ULC Ulcinj 24.90 286 ⇑*i*P **P 22 30 42.9 +1.2**
ULC Ulcinj 24.90 286 ⇑*i*P **P 22 30 43.0 +1.3**
ULC Ulcinj 24.90 286 ⇑*i*P **P 22 30 43.0 +1.3**
VSU Vasula 24.90 328 ⇑*i*P **P 22 30 41.5 0.0**
VSU pmax pmax
comp=Z,27nm,1.0s,mb4.7
VSU Vasula 24.90 328 *i* P **P 22 30 41.5 0.0**
comp=Z,27nm,1.0s,mb4.7
OJC Ojcow 25.03 306 *e*P **P 22 30 43.5 +0.7**
OJC Ojcow 25.03 306 *e*P **P 22 30 43.5 +0.7**
UPM Unac-Piva 25.06 289 ⇑*i*P **P 22 30 43.1 0.0**
UPM Unac-Piva 25.06 289 ⇑*i*P **P 22 30 43.1 +0.1**
UPM Unac-Piva 25.06 289 ⇑*i*P **P 22 30 43.2 +0.1**
BUM Brajici-Budva 25.13 287 ⇑*i*P **P 22 30 43.4 -0.3**
BUM Brajici-Budva 25.13 287 ⇑*i*P **P 22 30 43.5 -0.3**
BUM Brajici-Budva 25.13 287 ⇑*i*P **P 22 30 43.5 -0.2**
VYHS Vyhne 25.34 302 *i* P **P 22 30 46.3 +0.7**
VYHS pmax pmax
comp=Z,114nm,3.8s
VYHS Vyhne 25.34 302 *i* P **P 22 30 46.3 +0.7**
comp=Z,114nm,3.8s
VYHS Vyhne 25.34 302 *i* P **P 22 30 46.3 +0.7**
VYHS Vyhne 25.34 302 *i* P **P 22 30 46.3 +0.7**
comp=Z,114nm,3.8s
BRY Bratogost 25.34 288 ⇑*i*P **P 22 30 45.7 0.0**
BRY Bratogost 25.34 288 ⇑*i*P **P 22 30 45.7 0.0**
BRY Bratogost 25.34 288 ⇑*i*P **P 22 30 45.7 0.0**
HCY Herceg Novi 25.41 287 ⇑*i*P **P 22 30 45.8 -0.5**
HCY Herceg Novi 25.41 287 ⇑*i*P **P 22 30 45.9 -0.5**
HCY Herceg Novi 25.41 287 ⇑*i*P **P 22 30 45.8 -0.5**
NVS Novosibirsk 25.80 43 *e*P **P 22 30 49.7 0.0**
NVS pmax pmax
comp=Z,22nm,1.6s,mb4.4
NVS pmax pmax
comp=N,9.0nm,1.0s
NVS pmax pmax
comp=E,4.0nm,0.7s
NVS Novosibirsk 25.80 43 *e*P **P 22 30 49.7 0.0**
comp=E,9.0nm,1.0s,mb4.2
ZAA0 Zalesovo Array 26.34 46 *e*P **P 22 30 54.5 0.0**
ZAA0 Zalesovo Array 26.34 46 *e*P **P 22 30 54.5 0.0**
ZALV Zalesovo Beam 26.34 46 P P 22 30 54.7 +0.1
comp=E,9.8nm,0.8s,mb4.4,baz=265,slow=10,SNR=24
ZALV LR LR 22 42 42.5
comp=E,143nm,18.6s,MS3.5,baz=216,slow=40
ZALV Zalesovo Beam 26.34 46 P P 22 30 54.7 +0.1
ZALV LR LR 22 42 42.5
MORC Moravsky Berou 26.38 304 *e*P **P 22 30 54.7 -0.3**
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
MORC Moravsky Berou 26.38 304 *e*P **P 22 30 54.7 -0.2**
comp=Z,10.0nm,1.0s,mb4.3
MORC Moravsky Berou 26.38 304 *e*P **P 22 30 54.7 -0.3**
comp=Z,10.0nm,1.0s,mb4.3
JOF Joensuu 26.49 339 *e*P **P 22 30 54.2 -1.6**
JOF pmax pmax
comp=Z,21nm,0.7s,mb4.8
JOF Joensuu 26.49 339 *ep* **P 22 30 54.2 -1.6**
comp=Z,21nm,0.7s,mb4.8
JOF Joensuu 26.49 339 *e*P **P 22 30 54.2 -1.6**
comp=Z,21nm,0.7s,mb4.8
WMQ Urumqi 26.79 69 P P 22 31 00.4 +1.7
WMQ pmax pmax
comp=Z,26nm,5.0s
WMQ pmax pmax
comp=Z,69nm,3.0s
WMQ LR LR
comp=N,130nm,21.0s,MS3.5
WMQ LR LR
comp=E,88nm,21.0s,MS3.5
WMQ LR LR
comp=Z,100nm,28.0s
VRAC Vranov 26.92 303 P P 22 30 59.7 -0.2
comp=Z,0.8nm,0.5s,mb3.5,baz=106,slow=12,SNR=3.6
VRAC Vranov 26.92 303 P P 22 30 59.7 -0.1
FINES FINESS Array B 27.08 332 P P 22 31 00.8 -0.3
comp=Z,8.7nm,0.6s,mb4.5,baz=138,slow=9.9,SNR=30
FINES FINESS Array B 27.08 332 P P 22 31 00.9 -0.3
TIP Timpagrande 27.21 281 *e*P **P 22 31 04.5 +2.0**
comp=Z,4.0nm,0.7s,mb4.1
TIP Timpagrande 27.21 281 *e*P **P 22 31 04.5 +1.9**
comp=Z,4.0nm,0.7s,mb4.1
DPC Dobruska-Polom 27.25 305 *e*P **P 22 31 04.0 +1.2**
DPC *e* 22 31 16.6
DPC Dobruska-Polom 27.25 305 *e*P **P 22 31 04.0 +1.2**
DPC *ex* x 22 31 16.6
DPC Dobruska-Polom 27.25 305 *e*P **P 22 31 04.0 +1.2**
ARSA Arzberg 27.44 298 ⇑*i*P **P 22 31 05.6 +1.0**
comp=Z,7.5nm,1.1s,mb4.1
ARSA Arzberg 27.44 298 P P 22 31 05.6 +1.0
comp=Z,7.5nm,1.1s,mb4.1
KAF Kangasniemi 27.46 334 *e*P **P 22 31 03.5 -1.0**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
KAF Kangasniemi 27.46 334 *ep* **P 22 31 03.5 -1.0**
comp=Z,5.1nm,0.7s,mb4.2
KAF Kangasniemi 27.46 334 *e*P **P 22 31 03.5 -1.0**
comp=Z,5.0nm,0.7s,mb4.2
UPC Upice 27.47 305 *e*P **P 22 31 06.0 +1.2**
UPC Upice 27.47 305 *e*P **P 22 31 06.0 +1.2**
UPC Upice 27.47 305 *e*P **P 22 31 06.0 +1.2**
SOKA Soboth 27.76 297 ⇓*i*P **P 22 31 08.3 +0.9**
comp=Z,5.8nm,1.0s,mb4.2
SOKA Soboth 27.76 297 P P 22 31 08.3 +0.9
comp=Z,5.8nm,1.0s,mb4.2
PRU Pruhonice 28.33 304 *e*P **P 22 31 13.8 +1.4**
PRU Pruhonice 28.33 304 *e*P **P 22 31 13.8 +1.4**
PRU *ex* x 22 31 32.9
PRU Pruhonice 28.33 304 *e*P **P 22 31 13.8 +1.4**
PVCC Panska Ves 28.38 305 *e*P **P 22 31 13.7 +0.8**
PVCC Panska Ves 28.38 305 *e*P **P 22 31 13.7 +0.8**
PVCC *ex* x 22 31 32.5
PVCC Panska Ves 28.38 305 *e*P **P 22 31 13.7 +0.8**
GERES GERESS Array B 28.76 302 P P 22 31 17.0 +0.6
comp=Z,1.1nm,0.9s,mb3.6,baz=99,slow=8.2,SNR=5.0
GERES PcP PcP 22 34 25.6 -0.3
comp=Z,0.9nm,0.8s,baz=116,slow=6.2,SNR=4.0
GERES GERESS Array B 28.76 302 P P 22 31 17.0 +0.7
GERES GERESS Array B 28.76 302 PcP PcP 22 34 25.6 -0.3
BRG Berggiesshubel 28.82 306 *e*P **P 22 31 18.0 +1.2**
comp=Z,21nm,1.4s,mb4.7
BRG *e* 22 31 31.6
comp=Z,12nm,1.5s
BRG Berggiesshubel 28.82 306 *e*P **P 22 31 18.0 +1.1**
BRG *e* 22 31 31.6
BRG pmax pmax
comp=Z,13nm,1.4s,mb4.5
BRG Berggiesshubel 28.82 306 *e*P **P 22 31 18.0 +1.1**
comp=Z,13nm,1.4s,mb4.5
KHC Kasperske Hory 28.86 302 *e*P **P 22 31 17.4 +0.2**
KHC *e* 22 31 33.7
KHC MLR MLR
comp=Z,300nm,25.7s,MS3.8
KHC Kasperske Hory 28.86 302 *e*P **P 22 31 17.4 +0.2**
KHC *ex* x 22 31 33.7
KHC AMS AMS 22 43 50.0

comp=Z,300nm,25.7s
KHC Kasperske Hory 28.86 302 *e*P **P 22 31 17.4 +0.2**
comp=Z,300nm,25.7s
ATD Arta Tunnel 29.12 199 LR LR 22 45 29.3
comp=Z,63nm,18.3s,MS3.3,baz=29,slow=42
BSD Bornholm Skovb 29.16 315 *i* P **P 22 31 18.6 -1.2**
BSD pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
BSD Bornholm Skovb 29.16 315 *i* P **P 22 31 18.6 -1.2**
comp=Z,6.2nm,1.0s,mb4.3
BSD Bornholm Skovb 29.16 315 *i* P **P 22 31 18.6 -1.2**
comp=Z,6.0nm,1.0s,mb4.3
CLL Collm 29.47 306 *e*P **P 22 31 23.4 +0.8**
comp=Z,5.0nm,0.9s,mb4.2
CLL Collm 29.47 306⇓*i*P **P 22 31 23.4 +0.8**
CLL *e**PP pP 22 31 30.0 +0.5
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
CLL Collm 29.47 306⇓*i*P **P 22 31 23.4 +0.8**
comp=Z,5.0nm,0.9s,mb4.2
CLL *e*pP pP 22 31 30.0 +0.5
CLL Collm 29.47 306⇓*i*P **P 22 31 23.4 +0.8**
comp=Z,5.0nm,0.9s,mb4.2
CLL *e*pP pP 22 31 30.0 +0.5
CLL *e* 22 32 37.0
CLL Collm 29.47 306 *i* P **P 22 31 23.4 +0.8**
comp=Z,5.0nm,0.9s,mb4.2
CLL *e*pP pP 22 31 30.0 +0.5
DMN Daman 29.82 103 *e*P **P 22 31 27.1 +1.2**
comp=Z,23nm,0.9s,mb4.9
KKN Kakani 29.86 103 *e*P **P 22 31 27.1 +0.9**
comp=Z,3.2nm,0.5s,mb4.3
LVZ Lovozero 29.94 347 *e*P **P 22 31 26.0 -0.6**
LVZ pmax pmax
comp=Z,14nm,1.0s,mb4.7
LVZ Lovozero 29.94 347 *e*P **P 22 31 26.0 -0.6**
comp=Z,14nm,1.0s,mb4.7
PKIN Phulchoki 30.06 103 *e*P **P 22 31 28.8 +0.8**
comp=Z,11nm,0.8s,mb4.7
PKI Pulchoki 30.07 103 *e*P **P 22 31 29.1 +1.0**
comp=Z,26nm,1.0s,mb4.9
GUN Gumba 30.25 102 *e*P **P 22 31 30.6 +0.9**
comp=Z,45nm,1.0s,mb5.1
MOX Moxa 30.26 305 *e*P **P 22 31 30.8 +1.2**
comp=Z,20nm,1.7s,mb4.6
MOX Moxa 30.26 305 *e*P **P 22 31 30.7 +1.1**
comp=Z,9.0nm,1.2s,mb4.4
MOX Moxa 30.26 305 *e*P **P 22 31 30.8 +1.2**
MOX pmax pmax
comp=Z,20nm,1.7s,mb4.6
MOX Moxa 30.26 305 *e*P **P 22 31 30.8 +1.2**
comp=Z,20nm,1.7s,mb4.6
GRA1 Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
comp=Z,10.0nm,1.3s,mb4.4
GRA1 Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
comp=Z,10.0nm,1.3s,mb4.4
GRF Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
comp=Z,10.0nm,1.3s,mb4.4
GRF Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
GRF pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
GRF Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
GRF pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
GRF Grafenberg Arr 30.44 303 *e*P **P 22 31 31.7 +0.5**
comp=Z,10.0nm,1.3s,mb4.4
MOTA Moosalm 30.45 298⇓*i*P **P 22 31 30.7 -0.6**
comp=Z,8.5nm,1.3s,mb4.3
MOTA Moosalm 30.45 298 P **P 22 31 30.7 -0.6**
comp=Z,8.5nm,1.3s,mb4.3
COP Copenhagen 30.68 315 *i* P **P 22 31 34.4 +1.2**
COP pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
COP Copenhagen 30.68 315 *i* P **P 22 31 34.4 +1.2**
comp=Z,8.2nm,0.8s,mb4.6
COP Copenhagen 30.68 315 *i* P **P 22 31 34.4 +1.2**
comp=Z,8.0nm,0.8s,mb4.6
FETA Feichten 30.71 298⇑*i*P **P 22 31 33.8 +0.2**
comp=Z,7.6nm,1.2s,mb4.4
FETA Feichten 30.71 298 P **P 22 31 33.8 +0.2**
comp=Z,7.6nm,1.2s,mb4.4
CLZ Clausthal 31.17 307 *e*P **P 22 31 38.9 +1.3**
comp=Z,11nm,1.1s,mb4.6
CLZ Clausthal 31.17 307 *e*P **P 22 31 38.9 +1.3**
CLZ pmax pmax
comp=Z,11nm,1.1s,mb4.6
CLZ Clausthal 31.17 307 *e*P **P 22 31 38.9 +1.3**
comp=Z,11nm,1.1s,mb4.6
UBBA Unterbreizbach 31.30 305 *e*P **P 22 31 39.7 +0.9**
comp=Z,14nm,1.5s,mb4.6
BSEG Bad Segeberg 31.50 311 *e*P **P 22 31 41.5 +1.0**
comp=Z,21nm,1.0s,mb4.9
BSEG Bad Segeberg 31.50 311 *e*P **P 22 31 41.5 +1.0**
STU Stuttgart 31.73 301 *e*P **P 22 31 43.1 +0.5**
comp=Z,17nm,1.1s,mb4.8
HYB Hyderabad 31.87 126 *i* P **P 22 31 44.0 -0.1**
TNS Taunus Mts 32.26 304 *e*P **P 22 31 49.0 +1.8**
comp=Z,26nm,1.5s,mb4.8
TNS Taunus Mts 32.26 304 *e*P **P 22 31 49.0 +1.8**
TNS pmax pmax
comp=Z,26nm,1.5s,mb4.8
TNS Taunus Mts 32.26 304 *e*P **P 22 31 49.0 +1.8**
comp=Z,26nm,1.5s,mb4.8
MUD Monsted U'grnd 32.64 315 *i* P **P 22 31 50.1 -0.3**
MUD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MUD Monsted U'grnd 32.64 315 *i* P **P 22 31 50.1 -0.3**
comp=Z,10nm,0.9s,mb4.8
MUD Monsted U'grnd 32.64 315 *i* P **P 22 31 50.1 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
IBBN Ibbenburen 32.82 308 *e*P **P 22 31 53.5 +1.4**
comp=Z,24nm,1.2s,mb5.0
NB2 NORSAR Subarra 32.98 324 P **P 22 31 52.7 -0.7**
comp=Z,5.7nm,0.8s,mb4.5,baz=115,slow=8.6
NB2 NORSAR Subarra 32.98 324 P **P 22 31 52.7 -0.7**
comp=Z,5.7nm,0.8s,mb4.5,baz=115,slow=8.3,SNR=5.6
NOA NORSAR Array B 32.98 324 P **P 22 31 52.8 -0.6**
comp=Z,8.9nm,0.8s,mb4.7,baz=113,slow=8.2,SNR=25
NOA LR LR 22 48 07.1
comp=Z,80nm,20.2s,MS3.4,baz=90,slow=41
NOA NORSAR Array B 32.98 324 P **P 22 31 52.8 -0.6**
KEV Kevo 33.00 344 *e*P **P 22 31 53.1 -0.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KEV Kevo 33.00 344 *e*p **P 22 31 53.1 -0.4**
comp=Z,0.6nm,0.4s,mb3.9
KEV Kevo 33.00 344 *e*P **P 22 31 53.1 -0.4**
comp=Z,1.0nm,0.4s,mb4.1
CDF Champ du Feu 33.01 300 *e*P **P 22 31 52.7 -1.1**
comp=Z,9.2nm,1.0s,mb4.3
CDF Champ du Feu 33.01 300 *e*P **P 22 31 52.7 -1.1**
CDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CDF Champ du Feu 33.01 300 *e*P **P 22 31 52.7 -1.1**
comp=Z,4.6nm,1.0s,mb4.4
CDF Champ du Feu 33.01 300 *e*P **P 22 31 52.7 -1.1**
comp=Z,4.6nm,1.0s,mb4.3
NAO01 NORSAR Array S 33.06 324 *e*P **P 22 31 53.4 -0.6**
comp=Z,4.7nm,0.7s,mb4.5
NAO01 NORSAR Array S 33.06 324 *e*P **P 22 31 53.4 -0.6**
comp=Z,4.7nm,0.7s,mb4.5
ECH Echery 33.09 300 *e*P **P 22 31 54.5 0.0**
ECH pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ECH Echery 33.09 300 *e*P **P 22 31 54.5 -0.1**
comp=Z,9.8nm,1.1s,mb4.7
ECH Echery 33.09 300 *e*P **P 22 31 54.5 0.0**
comp=Z,10.0nm,1.1s,mb4.7
ARCES ARCESS Array B 33.15 343 P **P 22 31 54.9 +0.2**
comp=Z,2.8nm,0.8s,mb4.2,baz=130,slow=8.4,SNR=2.8
ARCES LR LR 22 46 45.7
comp=Z,111nm,18.2s,MS3.6,baz=195,slow=39
ARCES ARCESS Array B 33.15 343 P **P 22 31 54.9 +0.1**
SBF Sospel 33.29 292 *e*P **P 22 31 55.6 -0.7**
comp=Z,40nm,1.0s,mb5.0
SBF Sospel 33.29 292 *e*P **P 22 31 55.6 -0.7**
SBF pmax pmax
comp=Z,20nm,1.0s,mb5.0
SBF Sospel 33.29 292 *e*P **P 22 31 55.6 -0.7**
comp=Z,20nm,1.0s,mb5.0
SBF Sospel 33.29 292 *e*P **P 22 31 55.6 -0.7**
comp=Z,20nm,1.0s,mb5.0
HINF Hinteralfeld 33.32 299 *e*P **P 22 31 55.8 -0.7**
HINF Hinteralfeld 33.32 299 *e*P **P 22 31 55.8 -0.7**
LSA Lhasa 33.39 95 P **P 22 31 58.9 +1.6**
LPG La Plagne 33.57 295 *e*P **P 22 31 58.2 -0.5**
LPG La Plagne 33.57 295 *e*P **P 22 31 58.2 -0.5**
LPL La Plagne 33.58 295 *e*P **P 22 31 58.2 -0.6**
LPL La Plagne 33.58 295 *e*P **P 22 31 58.2 -0.6**
MBDF Montbardon 33.65 294 *e*P **P 22 31 58.8 -0.6**
comp=Z,23nm,0.7s,mb4.9
MBDF Montbardon 33.65 294 *e*P **P 22 31 58.8 -0.6**
MBDF pmax pmax
comp=Z,12nm,0.7s,mb4.9
MBDF Montbardon 33.65 294 *e*P **P 22 31 58.8 -0.6**
comp=Z,12nm,0.7s,mb4.9
MBDF Montbardon 33.65 294 *e*P **P 22 31 58.8 -0.6**
comp=Z,12nm,0.7s,mb4.9
HAU Haudompre 33.65 300 *e*P **P 22 31 58.4 -0.9**
comp=Z,25nm,1.0s,mb4.8
HAU *e*MLR MLR
comp=Z,44nm,19.5s,MS2.9
HAU Haudompre 33.65 300 *e*P **P 22 31 58.4 -0.9**
HAU pmax pmax
comp=Z,13nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,40nm,19.5s,MS3.1
HAU Haudompre 33.65 300 *e*P **P 22 31 58.4 -0.9**
comp=Z,13nm,1.0s,mb4.8
HAU LR LR
comp=Z,40nm,19.5s,MS3.1
HAU Haudompre 33.65 300 *e*P **P 22 31 58.4 -0.9**
comp=Z,13nm,1.0s,mb4.8
BNI Bardonecchia 33.67 294 *e*P **P 22 31 59.8 +0.2**
BNI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BNI Bardonecchia 33.67 294 *e*P **P 22 31 59.8 +0.3**
comp=Z,6.8nm,1.0s,mb4.5
BNI Bardonecchia 33.67 294 *e*P **P 22 31 59.8 +0.2**
comp=Z,7.0nm,1.0s,mb4.5
WLF Walferdange 33.73 303 P **P 22 32 02.0 +1.9**
WLF Walferdange 33.73 303 *e*P **P 22 32 01.5 +1.5**
comp=Z,15nm,1.3s,mb4.8
WLF Walferdange 33.73 303 P **P 22 32 01.9 +1.9**
MEM Membach 33.83 304 P **P 22 32 02.5 +1.6**
comp=Z,7.0nm,1.6s,mb4.3
MEM Membach 33.83 304 P **P 22 32 02.4 +1.5**
comp=Z,7.0nm,1.6s,mb4.3
FRF La Foret Royal 33.90 292 *e*P **P 22 32 01.0 -0.6**
comp=Z,57nm,1.2s,mb5.1
FRF La Foret Royal 33.90 292 *e*P **P 22 32 01.0 -0.6**
FRF pmax pmax
comp=Z,28nm,1.2s,mb5.1
FRF La Foret Royal 33.90 292 *e*P **P 22 32 01.0 -0.6**
comp=Z,28nm,1.2s,mb5.1
FRF La Foret Royal 33.90 292 *e*P **P 22 32 01.0 -0.6**
comp=Z,28nm,1.2s,mb5.1
CABF La Chapelle 33.92 297 *e*P **P 22 32 01.2 -0.5**
comp=Z,31nm,1.3s,mb4.8
CABF La Chapelle 33.92 297 *e*P **P 22 32 01.2 -0.5**
CABF pmax pmax
comp=Z,15nm,1.3s,mb4.8
CABF La Chapelle 33.92 297 *e*P **P 22 32 01.2 -0.5**
comp=Z,15nm,1.3s,mb4.8
CABF La Chapelle 33.92 297 *e*P **P 22 32 01.2 -0.5**
comp=Z,15nm,1.3s,mb4.8
LMR La Mourre 34.04 291 *e*P **P 22 32 01.8 -1.0**
LMR La Mourre 34.04 291 *e*P **P 22 32 01.8 -1.0**
MEZF Maizieres J'vi 34.49 301 *e*P **P 22 32 06.2 -0.4**
MEZF Maizieres J'vi 34.49 301 *e*P **P 22 32 06.2 -0.4**
BAIF Baives 34.98 304 *e*P **P 22 32 11.9 +1.0**
comp=Z,18nm,1.1s,mb4.6
BAIF Baives 34.98 304 *e*P **P 22 32 11.9 +1.0**
BAIF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BAIF Baives 34.98 304 *e*P **P 22 32 11.9 +1.0**
comp=Z,9.0nm,1.1s,mb4.6
BAIF Baives 34.98 304 *e*P **P 22 32 11.9 +1.0**
comp=Z,9.0nm,1.1s,mb4.6
VIVF Saint-Julien-l 35.11 294 *e*P **P 22 32 11.0 -1.0**
comp=Z,24nm,1.3s,mb4.7
VIVF Saint-Julien-l 35.11 294 *e*P **P 22 32 11.0 -1.0**
VIVF pmax pmax
comp=Z,12nm,1.3s,mb4.7
VIVF Saint-Julien-l 35.11 294 *e*P **P 22 32 11.0 -1.0**
comp=Z,12nm,1.3s,mb4.7
VIVF Saint-Julien-l 35.11 294 *e*P **P 22 32 11.0 -1.0**
comp=Z,12nm,1.3s,mb4.7
SSB Saint Sauveur 35.14 295 *e*P **P 22 32 12.2 -0.1**
SSB pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
SSB Saint Sauveur 35.14 295 *e*P **P 22 32 12.2 -0.1**
comp=Z,7.8nm,0.6s,mb4.8
SSB Saint Sauveur 35.14 295 *e*P **P 22 32 12.2 -0.1**
comp=Z,8.0nm,0.6s,mb4.8
LOR Lormes 35.38 299 *e*P **P 22 32 13.3 -1.0**
comp=Z,6.9nm,0.7s,mb4.4
LOR *e*MLR MLR
comp=Z,52nm,21.5s,MS3.0
LOR Lormes 35.38 299 *e*P **P 22 32 13.3 -1.0**
LOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
LOR MLR MLR
comp=Z,50nm,21.5s,MS3.2
LOR Lormes 35.38 299 *e*P **P 22 32 13.3 -1.0**
comp=Z,3.5nm,0.7s,mb4.4
LOR LR LR
comp=Z,50nm,21.5s,MS3.2
LOR Lormes 35.38 299 *e*P **P 22 32 13.3 -1.0**
comp=Z,3.5nm,0.7s,mb4.4
SMF Signal de Mont 35.45 298 *e*P **P 22 32 14.3 -0.7**
comp=Z,11nm,1.0s,mb4.4
SMF Signal de Mont 35.45 298 *e*P **P 22 32 14.3 -0.7**
SMF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SMF Signal de Mont 35.45 298 *e*P **P 22 32 14.3 -0.7**
comp=Z,5.6nm,1.0s,mb4.5
SMF Signal de Mont 35.45 298 *e*P **P 22 32 14.3 -0.7**
comp=Z,5.6nm,1.0s,mb4.4
SSF Saint Saulge 35.64 298 *e*P **P 22 32 15.7 -0.9**
comp=Z,15nm,1.1s,mb4.5
SSF Saint Saulge 35.64 298 *e*P **P 22 32 15.7 -0.9**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SSF Saint Saulge 35.64 298 *e*P **P 22 32 15.7 -0.9**
comp=Z,7.4nm,1.1s,mb4.5
SSF Saint Saulge 35.64 298 *e*P **P 22 32 15.7 -0.9**
comp=Z,7.4nm,1.1s,mb4.5
AVF Avril sur Loir 35.77 298 *e*P **P 22 32 17.2 -0.5**
comp=Z,33nm,1.2s,mb4.8
AVF Avril sur Loir 35.77 298 *e*P **P 22 32 17.2 -0.5**
AVF pmax pmax
comp=Z,16nm,1.2s,mb4.8
AVF Avril sur Loir 35.77 298 *e*P **P 22 32 17.2 -0.5**
comp=Z,16nm,1.2s,mb4.8
AVF Avril sur Loir 35.77 298 *e*P **P 22 32 17.2 -0.5**
comp=Z,16nm,1.2s,mb4.8
LASF Ste Croix 35.81 293 *e*P **P 22 32 17.2 -0.9**
LASF Ste Croix 35.81 293 *e*P **P 22 32 17.2 -0.9**
GTA Gaotai 36.48 75 *e*P **P 22 32 25.3 +1.4**
GTA pP pP 22 32 31.1 +0.2
GTA sP sP 22 32 34.2 +0.4
GTA S **S 22 38 06.6 +2.1**
GTA sS sS 22 38 16.7 +0.7
GTA SS SS 22 40 32.7 -11
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,72nm,4.8s
GTA LR LR
comp=N,120nm,17.8s,MS3.8
GTA LR LR
comp=E,69nm,16.7s,MS3.8
GTA LR LR
comp=Z,100nm,18.1s,MS3.6
TCF Toulx Ste Croi 36.62 297 *e*P **P 22 32 24.9 -0.1**
comp=Z,13nm,0.9s,mb4.5
TCF Toulx Ste Croi 36.62 297 *e*P **P 22 32 24.9 -0.1**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 36.62 297 *e*P **P 22 32 24.9 -0.1**
comp=Z,6.7nm,0.9s,mb4.5
TCF Toulx Ste Croi 36.62 297 *e*P **P 22 32 24.9 -0.1**
comp=Z,6.7nm,0.9s,mb4.5
CAF Calviac 36.93 295 *e*P **P 22 32 26.5 -1.1**
CAF Calviac 36.93 295 *e*P **P 22 32 26.5 -1.1**
ZAK Zakamensk 37.09 56 *e*P **P 22 32 30.1 +1.1**
ZAK *e* 22 32 43.3
ZAK *e* 22 33 55.0
ZAK *e* 22 34 49.2
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
ZAK Zakamensk 37.09 56 *e*P **P 22 32 30.1 +1.1**
comp=Z,3.0nm,1.1s,mb4.0
ZAK Zakamensk 37.09 56 *e*PcP PcP 22 34 49.2 +0.2
RJF Les Rejaudoux 37.25 296 *e*P **P 22 32 29.2 -1.1**
RJF *e*MLR MLR
comp=Z,60nm,21.0s,MS3.1
RJF Les Rejaudoux 37.25 296 *e*P **P 22 32 29.2 -1.1**
RJF LR LR
comp=Z,60nm,21.0s,MS3.4
RJF Les Rejaudoux 37.25 296 *e*P **P 22 32 29.2 -1.1**
LFF La Frestale 37.85 295 *e*P **P 22 32 35.3 -0.1**
comp=Z,26nm,0.9s,mb4.7
LFF La Frestale 37.85 295 *e*P **P 22 32 35.3 -0.1**
LFF pmax pmax
comp=Z,13nm,0.9s,mb4.7
LFF La Frestale 37.85 295 *e*P **P 22 32 35.3 -0.1**
comp=Z,13nm,0.9s,mb4.7
LFF La Frestale 37.85 295 *e*P **P 22 32 35.3 -0.1**
comp=Z,13nm,0.9s,mb4.7
LDF La Druitiere 37.91 301 *e*P **P 22 32 35.2 -0.7**
LDF La Druitiere 37.91 301 *e*P **P 22 32 35.2 -0.7**
FLN La Foliniere 38.12 302 *e*P **P 22 32 37.2 -0.5**
comp=Z,9.2nm,0.8s,mb4.2
FLN *e*MLR MLR
comp=Z,114nm,21.0s,MS3.4
FLN La Foliniere 38.12 302 *e*P **P 22 32 37.2 -0.5**
FLN pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
FLN MLR MLR
comp=Z,110nm,21.0s,MS3.6
FLN La Foliniere 38.12 302 *e*P **P 22 32 37.2 -0.5**
comp=Z,4.6nm,0.8s,mb4.3
FLN LR LR
comp=Z,110nm,21.0s,MS3.6
FLN La Foliniere 38.12 302 *e*P **P 22 32 37.2 -0.5**
comp=Z,4.6nm,0.8s,mb4.2
MFF Saint Martin d 38.18 298 *e*P **P 22 32 37.3 -0.9**
MFF Saint Martin d 38.18 298 *e*P **P 22 32 37.3 -0.9**
CWF Charnwood Fore 38.36 308 *e*P **P 22 32 38.4 -1.3**
CWF AMb AMB 22 32 38.5
comp=Z,12nm,3.0s,mb4.1
CWF Charnwood Fore 38.36 308 *e*P **P 22 32 38.4 -1.3**
comp=Z,12nm,3.0s,mb4.1
WOL Wolverton 38.38 306 *e*P **P 22 32 39.5 -0.3**
WOL AMb AMB 22 32 41.2
comp=Z,45nm,2.0s,mb4.8
WOL Wolverton 38.38 306 *e*P **P 22 32 39.5 -0.3**
comp=Z,45nm,2.0s,mb4.8
GRR Gorron 38.42 301 *e*P **P 22 32 39.5 -0.7**
comp=Z,19nm,1.0s,mb4.5
GRR Gorron 38.42 301 *e*P **P 22 32 39.5 -0.7**
GRR pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
GRR Gorron 38.42 301 *e*P **P 22 32 39.5 -0.7**
comp=Z,9.3nm,1.0s,mb4.5
GRR Gorron 38.42 301 *e*P **P 22 32 39.5 -0.7**
comp=Z,9.3nm,1.0s,mb4.5
SWN1 Swindon 38.73 306 *e*P **P 22 32 42.2 -0.5**
SWN1 AMb AMB 22 32 44.3
comp=Z,58nm,1.2s,mb5.2
SWN1 Swindon 38.73 306 *e*P **P 22 32 42.2 -0.5**
comp=Z,58nm,1.2s,mb5.2
ESY Stoneypath 39.11 313 *e*P **P 22 32 45.5 -0.4**
ESY Stoneypath 39.11 313 *e*P **P 22 32 45.5 -0.4**
HLM1 Long Mynd 39.33 308 *e*P **P 22 32 47.5 -0.2**
HLM1 Long Mynd 39.33 308 *e*P **P 22 32 47.5 -0.3**
SONM Songino Array 39.39 60 P **P 22 32 49.2 +0.9**
comp=Z,1.9nm,0.7s,mb3.9,baz=273,slow=9.0,SNR=16
SONM PcP PcP 22 34 55.6 -0.6
comp=Z,0.7nm,0.7s,baz=252,slow=2.9,SNR=3.7
SONM Songino Array 39.39 60 P **P 22 32 49.2 +0.9**
SONM Songino Array 39.39 60 PcP PcP 22 34 55.6 -0.6
ECK Cauldkaine Hil 39.40 312 *e*P **P 22 32 47.7 -0.5**
ECK Cauldkaine Hil 39.40 312 *e*P **P 22 32 47.7 -0.6**
ESK Eskdalemuir 39.44 312 *e*P **P 22 32 48.2 -0.4**
ESK AMb AMB 22 32 49.0
comp=Z,16nm,0.8s,mb4.8
ESK Eskdalemuir 39.44 312 *e*P **P 22 32 48.7 +0.1**
ESK pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ESK Eskdalemuir 39.44 312 *e*P **P 22 32 48.7 +0.1**
comp=Z,6.4nm,0.6s,mb4.5
ESK Eskdalemuir 39.44 312 *e*P **P 22 32 48.2 -0.4**
comp=Z,16nm,0.8s,mb4.8
SGMF Saint Gilles 39.56 301 *e*P **P 22 32 49.6 -0.1**
comp=Z,48nm,1.1s,mb4.8
SGMF Saint Gilles 39.56 301 *e*P **P 22 32 49.6 -0.1**
SGMF pmax pmax
comp=Z,24nm,1.1s,mb4.8
SGMF Saint Gilles 39.56 301 *e*P **P 22 32 49.6 -0.1**
comp=Z,24nm,1.1s,mb4.8
SGMF Saint Gilles 39.56 301 *e*P **P 22 32 49.6 -0.1**
comp=Z,24nm,1.1s,mb4.8
EBH Black Hill 39.62 314 *e*P **P 22 32 50.1 0.0**
EBH Black Hill 39.62 314 *e*P **P 22 32 50.1 0.0**
ULN Ulaanbaatar 39.83 59 *e*P **P 22 32 53.4 +1.4**
ULN Ulaanbaatar 39.83 59 *e*P **P 22 32 53.3 +1.3**
QUIF Quistinic 40.01 301 *e*P **P 22 32 53.1 -0.4**
comp=Z,51nm,1.3s,mb4.8
QUIF Quistinic 40.01 301 *e*P **P 22 32 53.1 -0.4**
QUIF pmax pmax
comp=Z,25nm,1.3s,mb4.8
QUIF Quistinic 40.01 301 *e*P **P 22 32 53.1 -0.4**
comp=Z,25nm,1.3s,mb4.8
QUIF Quistinic 40.01 301 *e*P **P 22 32 53.1 -0.4**
comp=Z,25nm,1.3s,mb4.8
ROSF Rostrenen 40.02 301 *e*P **P 22 32 53.4 -0.1**
comp=Z,35nm,1.0s,mb4.7
ROSF Rostrenen 40.02 301 *e*P **P 22 32 53.4 -0.1**
ROSF pmax pmax
comp=Z,17nm,1.0s,mb4.7
ROSF Rostrenen 40.02 301 *e*P **P 22 32 53.4 -0.1**
comp=Z,17nm,1.0s,mb4.7
ROSF Rostrenen 40.02 301 *e*P **P 22 32 53.4 -0.1**
comp=Z,17nm,1.0s,mb4.7
EAB Aberfoyle 40.08 314 *e*P **P 22 32 53.6 -0.4**
EAB Aberfoyle 40.08 314 *e*P **P 22 32 53.6 -0.3**
PGBU Glenifferbraes 40.16 313 *e*P **P 22 32 54.6 0.0**
PGBU AMb AMB 22 32 55.9
comp=Z,32nm,1.0s,mb5.0
WLF1 Llynfaes 40.20 309 *e*P **P 22 32 54.3 -0.7**
WLF1 AMb AMB 22 32 55.6
comp=Z,59nm,0.9s,mb5.3
WLF1 Llynfaes 40.20 309 *e*P **P 22 32 54.3 -0.7**
comp=Z,59nm,0.9s,mb5.3
GAL1 Galloway 40.31 312 *e*P **P 22 32 55.2 -0.7**
GAL1 AMb AMB 22 32 56.9
comp=Z,21nm,1.3s,mb4.7
GAL1 Galloway 40.31 312 *e*P **P 22 32 55.2 -0.7**
comp=Z,21nm,1.3s,mb4.7
LZH Lanzhou 40.56 78 *e*P **P 22 32 58.5 +0.3**
LZH pP pP 22 33 04.6 -0.7
LZH sP sP 22 33 07.4 -0.7
LZH *e*PP PP 22 34 35.3 +3.6
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.5
LZH pmax pmax
comp=Z,97nm,5.3s
LZH LR LR
comp=N,310nm,14.5s
LZH LR LR
comp=Z,420nm,18.2s,MS4.3
KAC Achnashellach 40.61 316 *e*P **P 22 32 57.8 -0.5**
KAC Achnashellach 40.61 316 *e*P **P 22 32 57.8 -0.5**
KPL Plockton 40.80 315 *e*P **P 22 32 59.3 -0.6**
KPL AMb AMB 22 33 13.9
comp=Z,26nm,2.7s,mb4.4
KPL Plockton 40.80 315 *e*P **P 22 32 59.3 -0.6**
comp=Z,26nm,2.7s,mb4.4
KBS Kingsbay 42.53 349⇑*e*P **P 22 33 14.7 +0.9**
KBS Kingsbay 42.53 349 *e*P **P 22 33 14.4 +0.6**
SNR=25
ESDC Sonseca Array 42.55 289 P **P 22 33 14.0 -0.5**
comp=Z,1.5nm,0.5s,mb4.0,baz=61,slow=8.6,SNR=15
ESDC Sonseca Array 42.55 289 P **P 22 33 14.0 -0.5**
ESLA Sonseca Array 42.55 289 *e*P **P 22 33 14.2 -0.3**
comp=Z,1.1nm,1.0s,mb3.5
ESLA Sonseca Array 42.55 289 *e*P **P 22 33 14.2 -0.3**
comp=Z,1.1nm,1.0s,mb3.5
CD2 Chengdu 42.58 85 P **P 22 33 11.6 -3.2**
CD2 pP pP 22 33 17.6 -4.3
CD2 PP PP 22 34 52.3 -1.3
CD2 S **S 22 39 29.3 -6.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,200nm,5.9s

CD2					LR	LR		
	comp=N,340nm,7.7s							
CD2					LR	LR		
	comp=Z,180nm,9.5s							
KMBO	**Kilima Mbogo**	**42.74**	**202**		P	**P**	**22 33 16.4**	**+0.2**
	comp=Z,0.4nm,0.3s,mb3.6,baz=14,slow=16,SNR=3.5							
KMBO	**Kilima Mbogo**	**42.74**	**202**		P	**P**	**22 33 16.4**	**+0.2**
BOD	**Bodaibo**	**43.04**	**44**	⇑	*i* P	**P**	**22 33 17.2**	**-1.0**
BOD					*e*		22 33 31.2	
BOD					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4							
BOD	**Bodaibo**	**43.04**	**44**	*i*	P	**P**	**22 33 17.2**	**-1.0**
	comp=Z,6.0nm,0.8s,mb4.4							
KMI	**Kunming**	**44.59**	**93**		P	**P**	**22 33 32.2**	**+1.1**
KMI					pP	pP	22 33 39.3	+1.1
KMI					sP	sP	22 33 42.1	+1.1
KMI					PP	PP	22 35 18.6	+3.4
KMI					S	**S**	**22 40 05.0**	**-0.7**
KMI					sS	sS	22 40 16.7	-0.7
KMI					SS	SS	22 43 17.2	-8.5
KMI					pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8							
KMI					pmax	pmax		
	comp=Z,110nm,4.8s							
KMI					LR	LR		
	comp=N,260nm,14.1s,MS4.4							
KMI					LR	LR		
	comp=E,170nm,15.7s,MS4.4							
KMI					LR	LR		
	comp=Z,140nm,19.6s,MS3.9							
XAN	**Xi'an**	**45.19**	**78**		P	**P**	**22 33 35.0**	**-0.8**
XAN					pP	pP	22 33 41.2	-1.7
XAN					PP	PP	22 35 20.4	-1.1
XAN					S	**S**	**22 40 13.3**	**-0.9**
XAN					sS	sS	22 40 24.0	-2.0
XAN					SS	SS	22 43 36.0	-1.1
XAN					pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9							
XAN					pmax	pmax		
	comp=Z,25nm,5.0s							
CMAR	**Chiang Mai Arr**	**45.47**	**104**		P	**P**	**22 33 37.8**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.3,baz=298,slow=7.6,SNR=12							
CMAR	**Chiang Mai Arr**	**45.47**	**104**		P	**P**	**22 33 37.8**	**-0.3**
GYA	**Guiyang**	**46.94**	**89**	*e*	P	**P**	**22 33 49.8**	**+0.2**
GYA					pP	pP	22 33 58.4	+1.7
GYA					PP	PP	22 35 40.0	0.0
GYA					ScP	ScP	22 39 15.6	+1.4
GYA					S	**S**	**22 40 39.4**	**0.0**
GYA					SS	SS	22 43 59.0	-7.2
GYA					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
GYA					LR	LR		
	comp=N,340nm,18.0s,MS4.5							
GYA					LR	LR		
	comp=E,290nm,17.8s,MS4.5							
GYA					LR	LR		
	comp=Z,380nm,17.4s,MS4.4							
BJI	**Beijing**	**48.24**	**68**		P	**P**	**22 33 51.9**	**-7.7**
BJI					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6							
BJI					pmax	pmax		
	comp=Z,120nm,4.2s							
TIXI	**Tiksi**	**48.85**	**24**	*e*	P	**P**	**22 34 04.1**	**+0.3**
TIXI					pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6							
TIXI					MLR	MLR		
	comp=Z,240nm,19.0s,MS4.2							
TIXI	**Tiksi**	**48.85**	**24**	*e*	P	**P**	**22 34 04.1**	**+0.3**
	comp=Z,240nm,19.0s							
TOA0	**Torodi Ar. Sit**	**51.44**	**254**	*e*	P	**P**	**22 34 22.6**	**-1.5**
TOA0	**Torodi Ar. Sit**	**51.44**	**254**	*e*	P	**P**	**22 34 22.6**	**-1.5**
TORD	**Torodi Ar. Bea**	**51.44**	**254**		P	**P**	**22 34 22.0**	**-2.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=48,slow=7.4,SNR=17							
TORD	**Torodi Ar. Bea**	**51.44**	**254**		P	**P**	**22 34 22.0**	**-2.1**
SUMG	**Summit**	**52.91**	**338**	*e*	P	**P**	**22 34 35.2**	**+0.8**
	comp=Z,9.7nm,1.1s,mb4.7							
SUMG	**Summit**	**52.91**	**338**	*i*	P	**P**	**22 34 35.2**	**+0.9**
	comp=Z,6.0nm,0.9s,mb4.5,SNR=23							
CN2	**Changchun**	**53.27**	**60**	*e*	P	**P**	**22 34 37.9**	**+0.5**
NJ2	**Nanjing**	**53.55**	**76**	*e*	P	**P**	**22 34 42.3**	**+2.7**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8							
MDJ	**Mudanjiang**	**55.69**	**58**		P	**P**	**22 34 53.8**	**-1.1**
MDJ					pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4							
MDJ					pmax	pmax		
	comp=Z,120nm,6.7s							
MDJ					LR	LR		
	comp=E,77nm,24.9s							
MDJ					LR	LR		
	comp=Z,120nm,24.9s,MS3.9							
KSRS	**Korea Array**	**57.67**	**66**		P	**P**	**22 35 09.3**	**+0.2**
KSRS					pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9							
KSRS	**Korea Array**	**57.67**	**66**		P	**P**	**22 35 09.2**	**+0.1**
	comp=Z,11nm,0.8s,mb5.0,baz=285,slow=6.7,SNR=35							
KSRS	**Korea Array**	**57.67**	**66**		P	**P**	**22 35 09.3**	**+0.2**
	comp=Z,11nm,0.8s,mb4.9							
VLA	**Vladivostok**	**57.83**	**58**	*e*	P	**P**	**22 35 12.5**	**+2.3**
VLA					pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9							
SEY	**Seymchan**	**59.92**	**31**	⇑	*e* P	**P**	**22 35 25.8**	**+1.5**
SEY	**Seymchan**	**59.92**	**31**	*e*	P	**P**	**22 35 25.8**	**+1.5**
DBIC	**Dimbokro**	**60.53**	**253**		P	**P**	**22 35 27.7**	**-1.5**
	comp=Z,2.8nm,0.6s,mb4.5,baz=76,slow=2.2,SNR=3.4							
DBIC	**Dimbokro**	**60.53**	**253**		P	**P**	**22 35 27.7**	**-1.6**
KIC	**Kosan Boka**	**60.66**	**253**	*e*	P	Px	22 35 48.7	
	comp=Z,17nm,0.9s							
TIC	**Toumodi**	**60.67**	**253**	*e*	P	Px	22 35 48.8	
	comp=Z,26nm,1.0s							
LIC	**Lamto**	**60.96**	**253**	*e*	P	**P**	**22 35 30.5**	**-1.6**
LIC	**Lamto**	**60.96**	**253**	*e*	P	Px	22 35 51.5	
	comp=Z,66nm,1.5s							
LIC	**Lamto**	**60.96**	**253**	*e*	P	**P**	**22 35 30.5**	**-1.6**
BILL	**Bilibino**	**62.03**	**23**	*de*	P	**P**	**22 35 39.3**	**+0.7**
BILL				*e*			22 36 20.4	
BILL					pmax	pmax		
	comp=Z,12nm,2.5s,mb4.6							
BILL					MLR	MLR		
	comp=Z,100nm,23.0s,MS3.9							
BILL	**Bilibino**	**62.03**	**23**	*e*	P	**P**	**22 35 39.3**	**+0.7**
	comp=Z,12nm,2.5s,mb4.6							
BILL	**Bilibino**	**62.03**	**23**	*e*	PcP	PcP	22 36 20.4	+1.5
	comp=Z,100nm,23.0s							
MJAR	**Matsushiro Arr**	**65.27**	**62**		P	**P**	**22 35 59.2**	**-1.3**
	comp=Z,3.8nm,1.0s,mb4.4,baz=308,slow=8.2,SNR=6.9							
MJAR	**Matsushiro Arr**	**65.27**	**62**		P	**P**	**22 35 59.2**	**-1.3**
LBTB	**Lobatse**	**68.86**	**206**	*e*	P	**P**	**22 36 23.7**	**+0.4**
LBTB					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
LBTB	**Lobatse**	**68.86**	**206**	*e*	P	**P**	**22 36 23.7**	**+0.5**
	comp=Z,5.4nm,0.8s,mb4.5							
LBTB	**Lobatse**	**68.86**	**206**	*e*	P	**P**	**22 36 23.7**	**+0.4**
	comp=Z,5.0nm,0.8s,mb4.5							
SCHQ	**Schefferville**	**72.45**	**328**		P	**P**	**22 36 44.4**	**-0.5**
	comp=Z,3.9nm,0.9s,mb4.3,baz=41,slow=11,SNR=3.3							
SCHQ	**Schefferville**	**72.45**	**328**		P	**P**	**22 36 44.3**	**-0.6**
YKA	**Yellowknife Ar**	**77.70**	**354**		P	**P**	**22 37 14.4**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=9.6,slow=5.9,SNR=31							
YKA	**Yellowknife Ar**	**77.70**	**354**		P	**P**	**22 37 14.4**	**-0.6**
YKA	**Yellowknife Ar**	**77.70**	**354**		P	**P**	**22 37 14.4**	**-0.6**
FCC	**Fort Churchill**	**78.04**	**343**	*e*	P	**P**	**22 37 17.2**	**+0.3**
	comp=Z,0.3nm,1.1s							
FCC	**Fort Churchill**	**78.04**	**343**	*e*	P	**P**	**22 37 17.2**	**+0.2**
PDAR	**Pinedale Array**	**96.36**	**347**		P	**P**	**22 38 46.7**	**-0.7**
	comp=Z,0.3nm,0.8s,mb3.8,baz=56,slow=1.6,SNR=3.2							
WRA	**Warramunga Arr**	**96.73**	**110**		P	**P**	**22 38 48.2**	**-1.2**
	comp=Z,0.3nm,0.3s,mb4.2,baz=295,slow=9.1,SNR=6.0							
WRA	**Warramunga Arr**	**96.73**	**110**		P	**P**	**22 38 48.2**	**-1.2**
PLCA	**Paso Flores**	**136.83**	**249**		PKP	PKPdf	22 44 41.8	+0.9
	comp=Z,0.5nm,0.3s,baz=102,slow=13,SNR=3.5							

CASC 10 22:45:43.8±1.6, 13°.48N×90°.34W, h30km±3km, MD3.6, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.70**	**351**	⇑ *e* P	Pb	22 45 57.8	+0.3
SBLS	**San Blas**	**0.78**	**63**	*e* P	Pn	22 45 58.7	-0.1
SBLS				*e* S	Sb	22 46 10.7	+1.6
RTR	**El Retiro**	**0.79**	**58**	*e* P	Pn	22 45 58.9	0.0
RTR				*e* S	Sb	22 46 10.1	+0.7
SNJE	**San Jose**	**0.81**	**61**	*e* P	Pn	22 45 59.0	-0.2
SNJE				*e* S	Sb	22 46 10.9	+0.9
RBDL	**Robledal**	**0.89**	**45**	⇑ *e* P	Pn	22 46 00.5	+0.2
RBDL				*e* S	Sn	22 46 13.0	+0.8
BOQS	**Boqueron**	**1.06**	**76**	*e* P	Pn	22 46 02.6	0.0
BOQS				*e* S	Sn	22 46 17.8	+1.4
FUG	**Fuego 3**	**1.08**	**333**	*e* P	Pn	22 46 02.6	-0.3
SNET	**Serv Nac Est T**	**1.09**	**79**	*e* P	Pn	22 46 03.0	-0.2
SNET				*e* S	Sn	22 46 18.4	+1.1
NBG	**Las Nubes**	**1.10**	**360**	*e* P	Pn	22 46 04.9	+1.7
NBG				*e* S	Sn	22 46 20.9	+3.4
FG6		**1.20**	**334**	*e* P	Pn	22 46 04.5	-0.1
LFU	**La Fuente**	**1.22**	**77**	*e* P	Pn	22 46 05.2	+0.4
LFRS	**El Faro**	**1.25**	**83**	*e* P	Pn	22 46 05.2	0.0
LFRS				*e* S	Sn	22 46 22.4	+1.3
LBRS	**Las Brisas**	**1.28**	**78**	*e* P	Pn	22 46 06.0	+0.2
LBRS				*e* S	Sn	22 46 23.2	+1.2
MTO2	**Montecristo 2**	**1.32**	**46**	*e* P	Pn	22 46 06.0	-0.2
MTO2				*e* S	Sn	22 46 22.8	0.0
TP2	**Tecpan 2**	**1.46**	**333**	*e* P	Pn	22 46 09.1	+1.0
TP2				*e* S	Sn	22 46 27.1	+0.9
SNVI	**San Vicente**	**1.46**	**85**	*e* P	Pn	22 46 08.2	0.0
SNVI				*e* S	Sn	22 46 27.2	+0.8
JAT	**Jato**	**1.51**	**304**	*e* P	Pn	22 46 08.4	-0.5
MRL	**Marmol**	**1.70**	**22**	*e* P	Pn	22 46 12.9	+1.5
MRL				*e* S	Sn	22 46 38.6	+6.5
VSM	**San Miguel**	**2.01**	**91**	*e* P	Pn	22 46 16.5	+0.8
VSM				*e* S	Sn	22 46 41.3	+1.5
BLLM	**Bellamira**	**2.04**	**91**	*e* P	Pn	22 46 17.0	+0.8
BLLM				*e* S	Sn	22 46 41.8	+1.1
CAHU	**Cacacuatique**	**2.09**	**82**	*e* P	Pn	22 46 16.8	0.0
CNCH	**Conchagua**	**2.44**	**94**	*e* P	Pn	22 46 22.1	+0.4
CNCH				*e* S	Sn	22 46 52.7	+2.0

*IDC **10** 22:51:12.0±1.3, 2°.09S×100°.30E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=61.7km s-min=17.6km az=55.0*
*NEIC **10** 22:51:17.5±0.9, 2°.01S×100°.46E, h35km, mb4.1/1, Error ellipse: s-maj=40.8km s-min=9.3km az=55.0*
*ISCJB **10** 22:51:19.7±0.4, 2°.00S±0°.04×100°.42E±0°.06, h74km±5km, mb3.8/8, Error ellipse: s-maj=9.8km s-min=6.1km az=154.4*
*DJA **10** 22:51:20, 2°.04S×100°.45E, h49km, MLv3.9/6*

ISC 10 22:51:20.7±0.5, 2°.00S±0°.04×100°.43E±0°.05, h64km±5km, n23, σ0s96/26, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.86**	**209**	P	**Pn**	**22 51 35.1**	**-2.1**
PPSI				S	**Sn**	**22 51 49.9**	**+0.5**
PDSI	**Padang**	**1.08**	**2**	P	**Pn**	**22 51 38.9**	**-1.1**
PDSI				S	**Sn**	**22 51 53.5**	**-0.9**
SDSI	**Sungai Dareh**	**1.46**	**43**	P	**Pn**	**22 51 45.1**	**+0.1**
SISI	**Saibi**	**1.49**	**297**	P	**Pn**	**22 51 45.4**	**0.0**
SISI				S	**Sn**	**22 52 04.4**	**+0.3**
PPI	**Padang Panjang**	**1.53**	**359**	P	**Pn**	**22 51 46.1**	**+0.1**
BKNI	**Bangkinang**	**2.39**	**15**	P	**Pn**	**22 51 58.8**	**+1.2**
KSI	**Kapahiang**	**2.72**	**127**	P	**Pn**	**22 52 03.7**	**+1.7**
MNSI	**Mandailing Nat**	**2.90**	**343**	P	**Pn**	**22 52 05.2**	**+0.6**
MNAI	**Manna**	**3.45**	**133**	P	**Pn**	**22 52 13.5**	**+1.5**
MNAI				S	**Sn**	**22 52 51.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**20.38**	**356**	P	**P**	**22 55 50.9**	**-1.5**
	1.1nm,0.3s,baz=189,slow=10,SNR=7.4						
WRA	**Warramunga Arr**	**37.63**	**121**	P	**P**	**22 58 28.7**	**-1.0**
	0.3nm,0.5s,mb3.3,baz=304,slow=9.0,SNR=3.9						
WRAB	**Tennant Creek**	**37.63**	**121**	*e* P	**P**	**22 58 28.1**	**-1.6**
	2.8nm,0.9s,mb4.0						
WB2	**Warramunga Arr**	**37.64**	**121**	*e* P	**P**	**22 58 29.2**	**-0.5**
ASAR	**Alice Springs**	**38.91**	**126**	P	**P**	**22 58 39.8**	**-0.6**
	0.7nm,0.6s,mb3.6,baz=302,slow=8.1,SNR=14						
STKA	**Stephens Creek**	**48.83**	**132**	P	**P**	**23 00 01.2**	**+1.3**
	0.4nm,0.3s,mb3.9,baz=287,slow=14,SNR=3.1						
SONM	**Songino Array**	**49.90**	**5**	P	**P**	**23 00 08.4**	**+0.7**
	0.2nm,0.4s,mb3.5,baz=194,slow=10,SNR=3.6						
MK31	**Makanchi Array**	**51.15**	**344**	*e* P	**P**	**23 00 17.9**	**+0.8**
MKAR	**Makanchi Array**	**51.15**	**344**	P	**P**	**23 00 17.4**	**+0.4**
	1.0nm,0.3s,mb4.2,baz=164,slow=9.2,SNR=21						
ZAA0	**Zalesovo Array**	**57.25**	**349**	*e* P	**P**	**23 01 01.6**	**+0.3**
ZALV	**Zalesovo Beam**	**57.25**	**349**	P	**P**	**23 01 01.7**	**+0.3**
	2.7nm,0.7s,mb4.4,baz=164,slow=6.0,SNR=17						
ZALV	**Zalesovo Beam**	**57.25**	**349**	P	**P**	**23 01 01.7**	**+0.3**
BRTR	**Keskin Array B**	**73.64**	**312**	P	**P**	**23 02 47.3**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=147,slow=8.2,SNR=3.1						
TXAR	**Lajitas Array**	**144.44**	**38**	PKP	PKPdf	23 10 50.1	-0.3
	0.4nm,0.5s,baz=228,slow=0.8,SNR=8.8						

*NEIC **10** 22:54:06.9, 16°.43N×99°.32W, h16km, MD3.8(MEX), After MEX.*

MEX 10 22:54:06.9±1.5, 16°.43N×99°.32W, h16km±16km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.72**	**307**	*i* P	Pg	22 54 19.1	-1.9
ACX				*i* S	Sg	22 54 25.9	-4.7
ACX	**Acapulco**	**0.72**	**307**	*i* P	Pg	22 54 19.1	-1.9
ACX				*i* S	Sg	22 54 25.9	-4.7
CAIG	**El Cayaco**	**1.10**	**304**	*i* P	Pb	22 54 23.8	-3.7
CAIG				*i* S	Sb	22 54 36.3	-5.3
CAIG	**El Cayaco**	**1.10**	**304**	*i* P	Pb	22 54 23.8	-3.7
CAIG				*i* S	Sb	22 54 36.3	-5.3
PNIG	**Pinotepa**	**1.14**	**92**	*i* P	Pn	22 54 24.9	-3.4
PNIG				*i* S	Sb	22 54 36.6	-6.3
PNIG	**Pinotepa**	**1.14**	**92**	*i* P	Pn	22 54 24.9	-3.4
PNIG				*i* S	Sb	22 54 36.6	-6.3
UTMO	**Huajuapan**	**2.01**	**46**	*i* P	Pn	22 54 37.3	-2.9
UTMO				*i* S	Sn	22 55 00.8	-4.2
ZIIG	**Zihuatanejo**	**2.37**	**300**	*i* P	Pn	22 54 42.9	-2.2
ZIIG				*i* S	Sn	22 55 08.5	-5.3
ZIIG	**Zihuatanejo**	**2.37**	**300**	*i* P	Pn	22 54 42.9	-2.2
ZIIG				*i* S	Sn	22 55 08.5	-5.3
VHO	**Vista Hermosa**	**2.56**	**75**	*e* P	Pn	22 54 45.5	-2.2
VHO				*i* S	Sn	22 55 12.9	-5.6
VHO	**Vista Hermosa**	**2.56**	**75**	*e* P	Pn	22 54 45.5	-2.2
VHO				*i* S	Sn	22 55 12.9	-5.6
OXX	**Oaxaca**	**2.57**	**75**	*e* P	Pn	22 54 48.8	+0.9
OXX				*i* S	Sn	22 55 14.8	-4.0
OXX	**Oaxaca**	**2.57**	**75**	*e* P	Pn	22 54 48.8	+0.9
OXX				*i* S	Sn	22 55 14.8	-4.0
PPM	**Popocatepetl**	**2.70**	**14**	*i* P	Pn	22 54 47.4	-2.3
PPM				*i* S	Sn	22 55 19.3	-2.9
PPM	**Popocatepetl**	**2.70**	**14**	*e* P	Pn	22 54 46.8	-2.9
PPM				*i* P		22 54 47.4	
PPM				*i* S	Sn	22 55 18.9	-3.3
PPM				*i* S	Sn	22 55 19.3	-2.9
MZVM		**2.75**	**2**	*i* P	Pn	22 54 48.6	-1.7
MZVM				*i* S	Sn	22 55 18.8	-4.4
PTVM	**Pico Tres Padr**	**3.15**	**3**	*e* P	Pn	22 54 54.2	-1.7
PTVM				*i* S	Sn	22 55 30.4	-2.8
PTVM	**Pico Tres Padr**	**3.15**	**3**	*e* P	Pn	22 54 54.2	-1.7
PTVM				*i* S	Sn	22 55 30.4	-2.8
HUIG	**Huatulco**	**3.15**	**102**	*e* P	Pn	22 54 52.9	-3.0
HUIG				*i* S	Sn	22 55 29.4	-3.8
HUIG	**Huatulco**	**3.15**	**102**	*e* P	Pn	22 54 52.9	-3.0
HUIG				*i* S	Sn	22 55 29.4	-3.8
IIO	**Organos**	**3.20**	**10**	*i* P	Pn	22 54 55.3	-1.2
IIO				*i* S	Sn	22 55 32.7	-1.5
IIO	**Organos**	**3.20**	**10**	*i* P	Pn	22 54 55.3	-1.2
IIO				*i* S	Sn	22 55 32.7	-1.5
CMIG	**Matias Romero**	**4.30**	**81**	*e* P	Pn	22 55 17.9	+6.2
CMIG				*i* S	Sn	22 56 06.2	+4.7
CMIG	**Matias Romero**	**4.30**	**81**	*e* P	Pn	22 55 17.9	+6.2
CMIG				*i* S	Sn	22 56 06.2	+4.7

*NEIC **10** 22:57:31.2, 16°.33N×99°.36W, h9km, MD3.6(MEX), After MEX.*

MEX 10 22:57:31.2±1.2, 16°.33N×99°.36W, h9km±18km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.75**	**315**	*i* P	Pg	22 57 43.7	-2.0
ACX				*i* S	Sg	22 57 52.8	-2.7
ACX	**Acapulco**	**0.75**	**315**	*i* P	Pg	22 57 43.7	-2.0
ACX				*i* S	Sg	22 57 52.8	-2.7
CAIG	**El Cayaco**	**1.12**	**309**	*e* P	Pg	22 57 49.5	-3.3
CAIG				*i* S	Sg	22 58 04.1	-3.3
CAIG	**El Cayaco**	**1.12**	**309**	*e* P	Pg	22 57 49.5	-3.3
CAIG				*i* S	Sg	22 58 04.1	-3.3
PNIG	**Pinotepa**	**1.19**	**87**	*e* P	Pb	22 57 50.9	-3.0
PNIG				*i* S	Sb	22 58 04.6	-4.8
PNIG	**Pinotepa**	**1.19**	**87**	*e* P	Pb	22 57 50.9	-3.0
PNIG				*i* S	Sb	22 58 04.6	-4.8
UTMO	**Huajuapan**	**2.10**	**45**	*i* P	Pn	22 58 02.9	-3.7
UTMO				*i* S	Sn	22 58 29.7	-3.3
ZIIG	**Zihuatanejo**	**2.38**	**302**	*e* P	Pn	22 58 06.5	-3.9
ZIIG				*i* S	Sn	22 58 34.2	-5.5
ZIIG	**Zihuatanejo**	**2.38**	**302**	*e* P	Pn	22 58 06.5	-3.9
ZIIG				*i* S	Sn	22 58 34.2	-5.5
VHO	**Vista Hermosa**	**2.62**	**73**	*e* P	Pn	22 58 11.7	-2.1
VHO				*i* S	Sn	22 58 42.7	-3.1
VHO	**Vista Hermosa**	**2.62**	**73**	*e* P	Pn	22 58 11.7	-2.1
VHO				*i* S	Sn	22 58 42.7	-3.1
PPM	**Popocatepetl**	**2.81**	**14**	*e* P	Pn	22 58 17.2	+0.9
PPM				*i* S	Sn	22 58 51.0	+0.7
PPM	**Popocatepetl**	**2.81**	**14**	*e* P	Pn	22 58 17.2	+0.9
PPM				*i* S	Sn	22 58 51.0	+0.7
MZVM		**2.84**	**3**	*e* P	Pn	22 58 21.0	+4.2
MZVM				*i* S	Sn	22 58 51.8	+0.6
IIO	**Organos**	**3.30**	**11**	*e* P	Pn	22 58 30.0	+7.0
IIO				*i* S	Sn	22 59 02.0	-0.3
IIO	**Organos**	**3.30**	**11**	*e* P	Pn	22 58 30.0	+7.0
IIO				*i* S	Sn	22 59 02.0	-0.3

CASC 10 23:15:54.9±2.2, 13°.01N×90°.16W, h41km±5km, MD3.5, ML2.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.98**	**32**	*e* P	Pn	23 16 12.5	+0.4
SBLS				*e* P		23 16 12.6	
SBLS				*e* S	Sn	23 16 26.1	+1.2
SNJE	**San Jose**	**1.01**	**32**	*e* P	Pn	23 16 12.3	-0.4
SNJE				*e* S	Sn	23 16 25.8	+0.1
RTR	**El Retiro**	**1.02**	**29**	*e* P	Pn	23 16 12.5	-0.2
RTR				*e* S	Sn	23 16 27.0	+1.2
BOQS	**Boqueron**	**1.12**	**50**	*e* P	Pn	23 16 14.2	+0.1
BOQS				*e* P		23 16 14.4	
BOQS				*e* S	Sn	23 16 29.1	+0.8
BOQS				*e* S	Sn	23 16 29.1	+0.8
RBDL	**Robledal**	**1.19**	**23**	*e* P	Pn	23 16 15.5	+0.4
RBDL				*e* S	Sn	23 16 31.9	+1.8
IXG	**Ixpaco**	**1.20**	**346**	*e* P	Pn	23 16 15.9	+0.7
LFRS	**El Faro**	**1.23**	**60**	*e* P	Pn	23 16 15.6	0.0
LFRS				*e* S	Sn	23 16 31.9	+0.8
LBRS	**Las Brisas**	**1.31**	**56**	*e* P	Pn	23 16 16.9	+0.2
LBRS				*e* S	Sn	23 16 33.6	+0.7
SNVI	**San Vicente**	**1.42**	**65**	*e* P	Pn	23 16 18.2	0.0
SNVI				*e* P		23 16 18.2	
SNVI				*e* S	Sn	23 16 36.1	+0.5
FUG	**Fuego 3**	**1.58**	**335**	*e* P	Pn	23 16 20.8	+0.3
FUG				*e* S	Sn	23 16 40.3	+0.7
NBG	**Las Nubes**	**1.58**	**353**	*e* P	Pn	23 16 22.8	+2.3
NBG				*e* S	Sn	23 16 43.3	+3.5
MTO2	**Montecristo 2**	**1.59**	**29**	*e* P	Pn	23 16 21.6	+1.0
MTO2				*e* S	Sn	23 16 42.7	+2.8
FG6		**1.70**	**336**	*e* P	Pn	23 16 22.6	+0.6
FG6				*e* S	Sn	23 16 42.7	+0.1
VSM	**San Miguel**	**1.88**	**77**	*e* P	Pn	23 16 25.6	+1.0
BLLM	**Bellamira**	**1.92**	**77**	*e* P	Pn	23 16 26.3	+1.2
BLLM				*e* S	Sn	23 16 49.1	+1.1
CAHU	**Cacacuatique**	**2.04**	**68**	*e* P	Pn	23 16 28.2	+1.4
CAHU				*e* P		23 16 28.2	
CNCH	**Conchagua**	**2.28**	**83**	*e* P	Pn	23 16 31.8	+1.8
CNCH				*e* S	Sn	23 16 57.8	+0.9
CNCH				AML	AML	23 17 06.8	
	comp=Z,50nm,0.4s						

*IDC **10** 23:18:12.6±1.1, 2°.47N×126°.61E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=116.1km s-min=15.6km az=70.0*
*NEIC **10** 23:18:17.6±0.6, 2°.47N×126°.71E, h35km, mb4.2/1, Error ellipse: s-maj=56.4km s-min=9.1km az=71.0*

ISC 10 23:18:17.7±0.8, 2°.5N±0°.2×126°.7E±0°.5, h35km, n12, σ0s48/12, mb3.8/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.46**	**183**	P	**P**	**23 22 52.8**	**+0.5**
	1.5nm,0.7s,baz=52,slow=6.2,SNR=5.1						
WRAB	**Tennant Creek**	**23.49**	**162**	*e* P	**P**	**23 23 24.1**	**-0.4**
	3.0nm,0.4s,mb4.1						
WRA

WRA	**Warramunga Arr**	**13.44**	**156**	Pn	**Pn**	**00 02 21.1**	**+0.2**
	0.3nm,0.3s,baz=326,slow=13,SNR=4.8						
WRA				Sn	Sx	00 04 40.0	
	1.1nm,0.3s,baz=330,slow=22,SNR=7.1						
WB2	**Warramunga Arr**	**13.45**	**156**	*e*Pn	**Pn**	**00 02 20.1**	**-0.9**
COEN	**Coen**	**15.65**	**115**	*e*Pn	**Pn**	**00 02 50.9**	**+0.5**
	23nm,0.6s						
COEN				*e*S	Sx	00 05 33.9	
MBWA	**Marble Bar**	**15.92**	**212**	*e*Pn	**Pn**	**00 02 54.0**	**+0.1**
	6.0nm,1.2s						
ASAR	**Alice Springs**	**16.73**	**163**	Pn	**Pn**	**00 03 04.5**	**+0.4**
	0.2nm,0.3s,baz=334,slow=9.7,SNR=13						
ASAR				Sn	Sx	00 06 01.1	
	0.3nm,0.3s,baz=242,slow=17,SNR=6.0						
SONM	**Songino Array**	**58.62**	**343**	P	**P**	**00 09 06.1**	**+0.9**
	0.9nm,0.7s,mb3.9,baz=174,slow=6.0,SNR=7.2						
MKAR	**Makanchi Array**	**68.00**	**328**	P	**P**	**00 10 07.2**	**-0.1**
	0.6nm,0.5s,mb3.9,baz=125,slow=7.5,SNR=8.3						
ZALV	**Zalesovo Beam**	**71.54**	**334**	P	**P**	**00 10 28.2**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=156,slow=5.0,SNR=4.5						
BVAR	**Borovoye Array**	**77.86**	**328**	P	**P**	**00 11 05.3**	**-0.3**
	0.6nm,0.5s,mb3.8,baz=128,slow=9.6,SNR=5.1						
CPUP	**Villa Florida**	**145.74**	**171**	PKPbc	PKPbc	00 18 47.7	+0.1
	0.4nm,0.4s,baz=137,slow=4.7,SNR=3.9						
CPUP	**Villa Florida**	**145.74**	**171**	PKPbc	PKPbc	00 18 47.7	0.0
LPAZ	**La Paz**	**151.04**	**145**	PKPbc	PKPbc	00 19 03.0	+1.1
	0.5nm,0.4s,baz=208,slow=2.2,SNR=4.4						

*ISCJB **11** 00:48:56.8±0.6, 40°.25N±0°.03×25°.26E±0°.04, h4km±6km, Error ellipse: s-maj=5.3km s-min=4.3km az=12.4*
*CSEM **11** 00:48:57.0±0.1, 40°.24N×25°.26E, h5km, ML2.4/2, Error ellipse: s-maj=3.6km s-min=3.2km az=112.0*
*THE **11** 00:48:57.4, 40°.23N×25°.30E, h8km±1km, ML2.4/2, Error ellipse: s-maj=1.1km s-min=0.4km az=287.0*
*DDA **11** 00:48:58.8, 40°.30N×25°.47E, h7km±6km, Md2.8*
ISC 11 00:48:57.3±0.5, 40°.24N±0°.03×25°.25E±0°.04, h9km±5km, n23, σ0°69/36, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.33**	**203**	P	**Pg**	**00 49 03.9**	**+0.2**
LOS				S	**Sg**	**00 49 08.5**	**+0.4**
LOS	**Limnos**	**0.33**	**203**	P	**Pg**	**00 49 03.9**	**+0.2**
LOS				S	**Sg**	**00 49 08.5**	**+0.4**
LIA	**Limnos Island**	**0.34**	**188**	P	**Pg**	**00 49 04.2**	**+0.2**
LIA				S	**Sg**	**00 49 08.8**	**+0.3**
LIA	**Limnos Island**	**0.34**	**188**	P	**Pg**	**00 49 04.2**	**+0.2**
LIA				S	**Sg**	**00 49 08.8**	**+0.3**
BOZC	**Bozcaada**	**0.73**	**122**	*i* P	**Pg**	**00 49 10.8**	**-0.6**
BOZC				*i* S	**Sg**	**00 49 21.4**	**+0.3**
ALN	**Alexandroupoli**	**0.90**	**42**	P	**Pg**	**00 49 14.0**	**-0.6**
ALN				S	**Sg**	**00 49 26.2**	**-0.1**
ALN	**Alexandroupoli**	**0.90**	**42**	P	**Pg**	**00 49 14.0**	**-0.6**
ALN				S	**Sg**	**00 49 26.2**	**-0.1**
RDO	**Rodhopi**	**0.94**	**14**	P	**Pg**	**00 49 14.7**	**-0.6**
RDO				S	**Sg**	**00 49 28.5**	**+1.0**
RDO	**Rodhopi**	**0.94**	**14**	P	**Pg**	**00 49 14.7**	**-0.6**
RDO				S	**Sg**	**00 49 28.5**	**+1.0**
OUR	**Ouranopolis**	**0.97**	**276**	P	**Pg**	**00 49 16.1**	**+0.1**
OUR	**Ouranopolis**	**0.97**	**276**	P	**Pg**	**00 49 16.1**	**+0.1**
PAIG	**Paliouri**	**1.24**	**256**	P	**Pn**	**00 49 20.5**	**-0.4**
PAIG	**Paliouri**	**1.24**	**256**	P	**Pn**	**00 49 20.5**	**-0.4**
PRK	**Paraskevi**	**1.27**	**141**	P	**Pn**	**00 49 20.3**	**-0.9**
PRK				S	**Sb**	**00 49 37.4**	**-0.4**
PRK	**Paraskevi**	**1.27**	**141**	P	**Pn**	**00 49 20.3**	**-0.9**
PRK				S	**Sb**	**00 49 37.4**	**-0.4**
PLG	**Polygyros**	**1.38**	**276**	P	**Pn**	**00 49 22.7**	**-0.1**
PLG	**Polygyros**	**1.38**	**276**	P	**Pn**	**00 49 22.7**	**-0.1**
SRS	**Serrai**	**1.54**	**306**	P	**Pn**	**00 49 24.9**	**0.0**
SRS	**Serrai**	**1.54**	**306**	P	**Pn**	**00 49 24.9**	**0.0**
BALY	**Balya**	**1.89**	**104**	*i* P	**Pn**	**00 49 29.0**	**-0.8**
BALY				*i* S	**Sn**	**00 49 56.1**	**+2.4**
BALY	**Balya**	**1.89**	**104**	*i* P	**Pn**	**00 49 29.0**	**-0.8**
BALY				*i* S	**Sn**	**00 49 56.2**	**+2.4**
PLD	**Plovdiv**	**1.91**	**348**	P	**Pn**	**00 49 30.7**	**+0.6**
PLD	**Plovdiv**	**1.91**	**348**	P	**Pn**	**00 49 30.7**	**+0.6**

IDC 11 01:01:53.7±4.0, 6°.17S×150°.39E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.2/15, mbtmp3.2/2, Error ellipse: s-maj=170.9km s-min=47.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.75**	**227**	P	P	01 06 36.5	+0.3
	0.6nm,0.3s,baz=52,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**23.54**	**221**	P	P	01 07 05.1	-0.8
	0.3nm,0.6s,baz=55,slow=8.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**148.40**	**285**	PKPbc	PKPbc	01 21 43.0	-0.2
	0.3nm,0.8s,baz=75,slow=2.2,SNR=5.3						

IDC 11 01:21:33.4±3.3, 36°.38S×179°.39W, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, ML2.9/1, Error ellipse: s-maj=95.8km s-min=44.1km az=145.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.37**	**235**	Pn	Pn	01 22 26.7	-0.5
	1.3nm,0.3s,baz=157,slow=20,SNR=6.8						
URZ				Sn	Sn	01 23 04.2	-3.6
	7.5nm,0.3s,baz=121,slow=23,SNR=21						
ASAR	**Alice Springs**	**42.01**	**274**	P	P	01 29 26.6	+0.1
	1.0nm,0.8s,baz=119,slow=7.8,SNR=9.0						
WRA	**Warramunga Arr**	**43.53**	**279**	P	P	01 29 38.9	0.0
	0.9nm,0.5s,baz=120,slow=7.7,SNR=3.0						
FINES	**FINESS Array B**	**150.23**	**335**	PKPbc	PKPbc	01 41 25.0	-0.4
	1.2nm,1.0s,baz=37,slow=5.6,SNR=2.6						

*ISCJB **11** 01:24:39.0±1.1, 36°.21N±0°.08×21°.4E±0°.1, h76km±19km, Error ellipse: s-maj=19.9km s-min=7.4km az=145.6*
*CSEM **11** 01:24:38.2±0.6, 36°.19N×21°.49E, h10km, ML3.8/5, Error ellipse: s-maj=14.5km s-min=7.4km az=47.0*
*ATH **11** 01:24:41.0, 36°.24N×21°.67E, h44km±11km*
*NEIC **11** 01:24:41.0, 36°.24N×21°.67E, h44km, After ATH.*
*THE **11** 01:24:42.4, 36°.27N×21°.96E, h2km±2km, ML3.8/5, Error ellipse: s-maj=3.5km s-min=0.9km az=60.0*
ISC 11 01:24:40.7±1.0, 36°.21N±0°.08×21°.5E±0°.1, h52km±41km, n65, σ1°26/72, 1C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**1.03**	**20**	*e*P	**Pn**	**01 24 59.0**	**+0.1**
ITM				*e*S	**Sn**	**01 25 12.2**	**-0.2**
ITM	**Ithomi**	**1.03**	**20**	P	**Pn**	**01 24 59.1**	**+0.2**
ITM				S	**Sn**	**01 25 12.9**	**+0.5**
ITM	**Ithomi**	**1.03**	**20**	P	**Pn**	**01 24 59.1**	**+0.2**
ITM				*e*S	**Sn**	**01 25 12.2**	**-0.2**
KYTH	**Kithira**	**1.26**	**86**	*e*P	**Pn**	**01 25 02.0**	**+0.1**
KYTH	**Kithira**	**1.26**	**86**	*e*P	**Pn**	**01 25 02.0**	**+0.1**
VLI	**Veliai**	**1.28**	**66**	*e*P	**Pn**	**01 25 01.6**	**-0.6**
VLI				*e*S	**Sn**	**01 25 16.4**	**-1.9**
VLX	**Vlachokerasia**	**1.37**	**32**	*e*P	**Pn**	**01 25 03.3**	**-0.1**
VLX				*e*S	**Sn**	**01 25 20.2**	**-0.2**
VLX	**Vlachokerasia**	**1.37**	**32**	P	**Pn**	**01 25 04.0**	**+0.6**
VLX				S	**Sn**	**01 25 20.4**	**0.0**
VLX	**Vlachokerasia**	**1.37**	**32**	*e*P	**Pn**	**01 25 03.3**	**-0.1**
VLX				S	**Sn**	**01 25 20.4**	**0.0**
RLS	**Riolos of Patr**	**1.85**	**360**	*e*P	**Pn**	**01 25 12.2**	**+2.2**
RLS	**Riolos of Patr**	**1.85**	**360**	*e*P	**Pn**	**01 25 12.2**	**+2.2**
GUR	**Goura**	**1.86**	**21**	*e*P	**Pn**	**01 25 10.0**	**-0.1**
GUR	**Goura**	**1.86**	**21**	P	**Pn**	**01 25 12.5**	**+2.4**
GUR	**Goura**	**1.86**	**21**	*e*P	**Pn**	**01 25 10.0**	**-0.1**
DID	**Didima**	**1.91**	**47**	*e*P	**Pn**	**01 25 10.3**	**-0.6**
DID	**Didima**	**1.91**	**47**	P	**Pn**	**01 25 10.4**	**-0.5**
DID	**Didima**	**1.91**	**47**	P	**Pn**	**01 25 10.4**	**-0.5**
KARN	**Karanos**	**2.14**	**111**	*e*P	**Pn**	**01 25 14.1**	**+0.2**
KARN	**Karanos**	**2.14**	**111**	P	**Pn**	**01 25 13.9**	**0.0**
KARN	**Karanos**	**2.14**	**111**	P	**Pn**	**01 25 13.9**	**0.0**
LTK	**Loutraki**	**2.17**	**33**	*e*P	**Pn**	**01 25 14.4**	**+0.1**
LTK	**Loutraki**	**2.17**	**33**	*e*P	**Pn**	**01 25 14.4**	**+0.1**
EFP	**Efpalio**	**2.24**	**9**	P	**Pn**	**01 25 18.2**	**+2.8**
VAM	**Vamos**	**2.35**	**109**	*e*P	**Pn**	**01 25 16.7**	**-0.1**
VAM	**Vamos**	**2.35**	**109**	*e*P	**Pn**	**01 25 16.7**	**-0.1**
LKR	**Lokris**	**2.72**	**26**	*e*P	**Pn**	**01 25 22.4**	**+0.5**
LKR	**Lokris**	**2.72**	**26**	*e*P	**Pn**	**01 25 22.4**	**+0.5**
AGG	**Agios Georgios**	**2.89**	**13**	*e*P	**Pn**	**01 25 25.5**	**+1.3**
AGG	**Agios Georgios**	**2.89**	**13**	P	**Pn**	**01 25 27.1**	**+2.9**
AGG	**Agios Georgios**	**2.89**	**13**	*e*P	**Pn**	**01 25 25.5**	**+1.3**
SIVA	**Sivas**	**2.96**	**113**	P	**Pn**	**01 25 25.7**	**+0.5**
SIVA	**Sivas**	**2.96**	**113**	P	**Pn**	**01 25 25.7**	**+0.5**
THL	**Klokotos Trika**	**3.38**	**7**	*e*P	**Pn**	**01 25 32.6**	**+1.7**
THL	**Klokotos Trika**	**3.38**	**7**	*e*P	**Pn**	**01 25 32.6**	**+1.7**
LAST	**Lasithi**	**3.42**	**107**	*e*P	**Pn**	**01 25 31.3**	**-0.2**
LAST	**Lasithi**	**3.42**	**107**	*e*P	**Pn**	**01 25 31.3**	**-0.2**
XOR	**Xorichti**	**3.43**	**23**	P	**Pn**	**01 25 34.3**	**+2.6**
XOR	**Xorichti**	**3.43**	**23**	P	**Pn**	**01 25 34.3**	**+2.6**
SRN	**Sarande**	**3.85**	**343**	*e*PN	**Pn**	**01 25 36.1**	**-1.3**
SRN	**Sarande**	**3.85**	**343**	*e*Pn	**Pn**	**01 25 36.1**	**-1.3**
LIT	**Litokhoron**	**3.97**	**11**	*e*P	**Pn**	**01 25 39.8**	**+0.8**
LIT	**Litokhoron**	**3.97**	**11**	*e*P	**Pn**	**01 25 39.8**	**+0.8**
TIP	**Timpagrande**	**4.78**	**310**	*e*Pn	**Pn**	**01 25 50.9**	**+0.7**
TIP	**Timpagrande**	**4.78**	**310**	*e*Pn	**Pn**	**01 25 50.9**	**+0.8**
BIA	**Bitola**	**4.81**	**359**	*e*Pn	**Pn**	**01 25 51.2**	**+0.7**
BIA	**Bitola**	**4.81**	**359**	*e*Pn	**Pn**	**01 25 51.2**	**+0.7**
SOH	**Sokhos**	**4.84**	**17**	*e*P	**Pn**	**01 25 53.1**	**+2.2**
SOH	**Sokhos**	**4.84**	**17**	*e*P	**Pn**	**01 25 53.1**	**+2.2**
OHR	**Ohrid**	**4.93**	**354**	*e*Pn	**Pn**	**01 25 51.0**	**-1.1**
OHR	**Ohrid**	**4.93**	**354**	*e*Pn	**Pn**	**01 25 51.0**	**-1.1**
KRUS	**Krusevo**	**5.16**	**358**	*e*Pn	**Pn**	**01 25 55.0**	**-0.3**
KRUS	**Krusevo**	**5.16**	**358**	*e*Pn	**Pn**	**01 25 54.9**	**-0.4**
VAY	**Valandovo**	**5.18**	**9**	*e*Pn	**Pn**	**01 25 53.5**	**-2.0**
VAY	**Valandovo**	**5.18**	**9**	*e*Pn	**Pn**	**01 25 53.5**	**-2.1**
TIR	**Tirane**	**5.29**	**347**	*e*Pn	**Pn**	**01 25 54.4**	**-2.7**
	48nm,0.5s						
TIR	**Tirane**	**5.29**	**347**	*e*Pn	**Pn**	**01 25 54.4**	**-2.7**
	48nm,0.5s						
STIP	**Stip**	**5.51**	**5**	*e*Pn	**Pn**	**01 26 00.2**	**+0.1**
STIP	**Stip**	**5.51**	**5**	*e*Pn	**Pn**	**01 26 00.2**	**+0.1**
PHP	**Peshkopia**	**5.53**	**352**	*e*PN	**Pn**	**01 25 58.4**	**-2.0**
PUK	**Puka**	**5.96**	**349**	*e*PN	**Pn**	**01 26 03.1**	**-3.2**
BCI	**Bajram Curri**	**6.25**	**350**	*e*PN	**Pn**	**01 26 08.5**	**-1.8**
BCI	**Bajram Curri**	**6.25**	**350**	*e*Pn	**Pn**	**01 26 08.5**	**-1.8**
BARS	**Barje**	**6.61**	**2**	⇑*i*Pn	**Pn**	**01 26 15.3**	**+0.1**
STON	**Ston**	**7.27**	**337**	*e*Pn	**Pn**	**01 26 18.6**	**-5.6**
NVLJ	**Novalja**	**9.75**	**331**	*e*Pn	**Pn**	**01 26 53.1**	**-5.1**

*NNC **11** 01:25:31.0±17.0, 40°.16N×72°.70E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=173.0km s-min=75.8km az=164.0*
ISC 11 01:25:22.1±3.5, 39°.2N±0°.3×72°.8E±0°.2, h35km, n8, σ0°26/8, 3C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.00**	**13**	P	**Pn**	**01 26 07.5**	**+0.4**
	SNR=33						
UCH	**Uchtor**	**3.29**	**23**	P	**Pn**	**01 26 10.9**	**-0.2**
	SNR=12						
KZA	**Kyzart**	**3.43**	**33**	P	**Pn**	**01 26 12.9**	**0.0**
	SNR=14						
AAK	**Ala-Archa**	**3.66**	**20**	P	**Pn**	**01 26 16.6**	**+0.4**
	SNR=18						
CHMS	**Chumysh**	**4.07**	**21**	P	**Pn**	**01 26 21.8**	**+0.1**
	SNR=6.3						
KK07	**Karatay Array**	**4.24**	**337**	⇑Lg		01 27 14.9	
	4.9nm,0.4s,baz=139,slow=23						
KK09	**Karatay Array**	**4.27**	**337**	⇑Pn	**Pn**	**01 26 24.3**	**-0.2**
	2.0nm,0.5s,baz=135,slow=14						
TKM2	**Tokmak 2**	**4.28**	**29**	⇓Pn	**Pn**	**01 26 24.3**	**-0.4**
	2.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**01 27 13.2**	**-0.1**
	3.1nm,0.7s						
TKM2				⇓Lg		01 27 24.9	
	7.7nm,0.6s						

*ISCJB **11** 01:25:35.8±1.4, 38°.14N±0°.05×20°.18E±0°.06, h4km±10km, mb3.6/8, Error ellipse: s-maj=9.5km s-min=6.3km az=44.6*
*CSEM **11** 01:25:36.9±0.3, 38°.14N×20°.20E, h2km, ML4.0/8, Error ellipse: s-maj=8.7km s-min=5.6km az=34.0*
*THE **11** 01:25:38.5, 38°.14N×20°.33E, h2km±3km, ML4.0/8, Error ellipse: s-maj=4.5km s-min=1.1km az=69.0*
*IDC **11** 01:25:42.7±2.5, 38°.28N×20°.34E, h61km±26km, mb3.4/8, mb1 3.4/12, mb1mx3.3/29, mbtmp3.3/12, ML3.3/3, Error ellipse: s-maj=22.5km s-min=18.9km az=81.0*
*NEIC **11** 01:25:42.1±0.7, 38°.28N×20°.26E, h55km±8km, Error ellipse: s-maj=10.4km s-min=7.4km az=217.0*
ISC 11 01:25:37.1±1.4, 38°.15N±0°.05×20°.22E±0°.06, h3km±9km, n95, σ1°10/100, mb3.6/8, 4C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.29**	**84**	P	**Pg**	**01 25 42.2**	**-0.5**
VLS				S	**Sg**	**01 25 45.5**	**-1.0**
VLS	**Valsamata**	**0.29**	**84**	P	**Pg**	**01 25 42.2**	**-0.5**
VLS				S	**Sg**	**01 25 45.5**	**-1.0**
KFL	**Anninata**	**0.45**	**95**	P	**Pg**	**01 25 45.3**	**-0.4**
KFL				S	**Sg**	**01 25 50.9**	**-0.6**
EFP	**Efpalio**	**1.35**	**78**	P	**Pn**	**01 26 02.6**	**-0.3**
EFP	**Efpalio**	**1.35**	**78**	P	**Pn**	**01 26 02.6**	**-0.3**
IGT	**Igoumenitsa**	**1.39**	**4**	P	**Pn**	**01 26 04.9**	**+1.6**
IGT	**Igoumenitsa**	**1.39**	**4**	P	**Pn**	**01 26 04.9**	**+1.6**
ITM	**Ithomi**	**1.66**	**125**	P	**Pn**	**01 26 06.7**	**-0.4**
ITM	**Ithomi**	**1.66**	**125**	P	**Pn**	**01 26 06.7**	**-0.4**
GUR	**Goura**	**1.69**	**97**	P	**Pn**	**01 26 07.3**	**-0.1**
GUR	**Goura**	**1.69**	**97**	P	**Pn**	**01 26 07.3**	**-0.1**
MEV	**Metsovon**	**1.81**	**25**	P	**Pn**	**01 26 10.1**	**+0.9**
MEV	**Metsovon**	**1.81**	**25**	P	**Pn**	**01 26 10.1**	**+0.9**
AGG	**Agios Georgios**	**1.87**	**61**	P	**Pn**	**01 26 10.2**	**+0.3**
AGG	**Agios Georgios**	**1.87**	**61**	P	**Pn**	**01 26 10.2**	**+0.3**
THL	**Klokotos Trika**	**1.99**	**44**	P	**Pn**	**01 26 12.5**	**+0.9**
THL	**Klokotos Trika**	**1.99**	**44**	P	**Pn**	**01 26 12.5**	**+0.9**
LKR	**Lokris**	**2.24**	**76**	P	**Pn**	**01 26 14.8**	**-0.2**
LKR	**Lokris**	**2.24**	**76**	P	**Pn**	**01 26 14.8**	**-0.2**
KZN	**Kozani**	**2.47**	**29**	P	**Pn**	**01 26 19.2**	**+1.0**
KZN	**Kozani**	**2.47**	**29**	P	**Pn**	**01 26 19.2**	**+1.0**
DID	**Didima**	**2.47**	**104**	P	**Pn**	**01 26 18.5**	**+0.3**
DID	**Didima**	**2.47**	**104**	P	**Pn**	**01 26 18.5**	**+0.3**
XOR	**Xorichti**	**2.62**	**61**	P	**Pn**	**01 26 20.4**	**+0.1**
XOR	**Xorichti**	**2.62**	**61**	P	**Pn**	**01 26 20.4**	**+0.1**
LIT	**Litokhoron**	**2.63**	**41**	P	**Pn**	**01 26 21.1**	**+0.7**
LIT	**Litokhoron**	**2.63**	**41**	P	**Pn**	**01 26 21.1**	**+0.7**
FNA	**Florina**	**2.78**	**18**	P	**Pn**	**01 26 23.5**	**+1.0**
FNA	**Florina**	**2.78**	**18**	P	**Pn**	**01 26 23.5**	**+1.0**
TIP	**Timpagrande**	**2.90**	**292**	*e*Pn	**Pn**	**01 26 25.8**	**+1.7**
TIP	**Timpagrande**	**2.90**	**292**	*e*Pn	**Pn**	**01 26 25.8**	**+1.7**
BIA	**Bitola**	**2.99**	**16**	P	**Pn**	**01 26 26.1**	**+0.7**
BIA	**Bitola**	**2.99**	**16**	P	**Pn**	**01 26 26.1**	**+0.7**
BIA	**Bitola**	**2.99**	**16**	*e*Sn	**Pn**	**01 26 26.8**	**+1.4**
OHR	**Ohrid**	**2.99**	**8**	P	**Pn**	**01 26 26.7**	**+1.3**
OHR	**Ohrid**	**2.99**	**8**	P	**Pn**	**01 26 26.7**	**+1.3**
OHR	**Ohrid**	**2.99**	**8**	*e*Sn	**Pn**	**01 26 27.0**	**+1.6**
TIR	**Tirane**	**3.21**	**355**	*e*Pn	**Pn**	**01 26 29.0**	**+0.7**
TIR	**Tirane**	**3.21**	**355**	P	**Pn**	**01 26 29.0**	**+0.6**
TIR	**Tirane**	**3.21**	**355**	P	**Pn**	**01 26 29.0**	**+0.6**
PAIG	**Paliouri**	**3.23**	**55**	P	**Pn**	**01 26 28.3**	**-0.3**
PAIG	**Paliouri**	**3.23**	**55**	P	**Pn**	**01 26 28.3**	**-0.3**
TAR1	**Taranto**	**3.29**	**317**	*e*Pn	**Pn**	**01 26 30.5**	**+1.0**
TAR1				*e*Sn	**Sn**	**01 27 08.0**	**-1.1**
KRUS	**Krusevo**	**3.31**	**13**	*e*Sn	**Pn**	**01 26 29.8**	**0.0**
PLG	**Polygyros**	**3.35**	**47**	P	**Pn**	**01 26 29.8**	**-0.5**
PLG	**Polygyros**	**3.35**	**47**	P	**Pn**	**01 26 29.8**	**-0.5**
SOH	**Sokhos**	**3.61**	**41**	P	**Pn**	**01 26 34.3**	**+0.5**
SOH	**Sokhos**	**3.61**	**41**	P	**Pn**	**01 26 34.3**	**+0.5**
OUR	**Ouranopolis**	**3.65**	**52**	P	**Pn**	**01 26 33.7**	**-0.7**
OUR	**Ouranopolis**	**3.65**	**52**	P	**Pn**	**01 26 33.7**	**-0.7**
VAY	**Valandovo**	**3.65**	**29**	*e*Sn	**Pn**	**01 26 35.6**	**+1.2**
STIP	**Stip**	**3.85**	**22**	P	**Pn**	**01 26 37.6**	**+0.4**
STIP	**Stip**	**3.85**	**22**	P	**Pn**	**01 26 37.6**	**+0.4**
STIP	**Stip**	**3.85**	**22**	*e*Sn	**Pn**	**01 26 37.1**	**-0.1**
KARN	**Karanos**	**4.04**	**132**	P	**Pn**	**01 26 39.9**	**+0.1**
KARN	**Karanos**	**4.04**	**132**	P	**Pn**	**01 26 39.9**	**+0.1**
IDI	**Anoyia**	**4.71**	**126**	P	**Pn**	**01 26 51.1**	**+2.1**
	baz=351,slow=18,SNR=2.0						
IDI				S	**Sn**	**01 27 39.1**	**-5.1**
	0.6nm,0.3s,baz=233,slow=20,SNR=1.8						
IDI	**Anoyia**	**4.71**	**126**	P	**Pn**	**01 26 51.1**	**+2.1**
RDO	**Rodhopi**	**5.08**	**52**	P	**Pn**	**01 26 53.6**	**-0.5**
RDO	**Rodhopi**	**5.08**	**52**	P	**Pn**	**01 26 53.6**	**-0.5**
STON	**Ston**	**5.10**	**339**	⇑*i*Pn	**Pn**	**01 26 53.2**	**-1.1**
STON				Sn	**Sn**	**01 27 48.9**	**-4.7**
STON	**Ston**	**5.10**	**339**	Sn	**Sn**	**01 27 48.9**	**-4.7**
STON	**Ston**	**5.10**	**339**	⇑*i*Pn	**Pn**	**01 26 53.2**	**-1.1**
STON	**Ston**	**5.10**	**339**	Sn	Px	01 27 15.4	
BZS	**Buzias**	**7.54**	**7**	⇓*i*P	**Pn**	**01 27 26.4**	**-1.4**
BZS	**Buzias**	**7.54**	**7**	⇓*i*P	**Pn**	**01 27 26.4**	**-1.4**
NVLJ	**Novalja**	**7.57**	**330**	*e*Pn	**Pn**	**01 27 28.2**	**-0.1**
NVLJ				Sn	**Sn**	**01 28 50.4**	**-4.1**
NVLJ	**Novalja**	**7.57**	**330**	Sn	**Sn**	**01 28 50.3**	**-4.2**
NVLJ	**Novalja**	**7.57**	**330**	*e*Pn	**Pn**	**01 27 28.2**	**0.0**
NVLJ	**Novalja**	**7.57**	**330**	Sn	Px	01 28 16.7	
MLR	**Muntele Rosu**	**8.49**	**28**	P	**Pn**	**01 27 40.7**	**-0.1**
	0.1nm,0.3s,baz=175,slow=18,SNR=2.0						
MLR	**Muntele Rosu**	**8.49**	**28**	⇓*i*P	**Pn**	**01 27 47.8**	**+7.0**
MLR	**Muntele Rosu**	**8.49**	**28**	P	**Pn**	**01 27 40.7**	**-0.1**
MDB	**Medias**	**8.56**	**20**	⇓*i*P	**Pn**	**01 27 40.7**	**-1.2**
MDB	**Medias**	**8.56**	**20**	⇓*i*P	**Pn**	**01 27 40.7**	**-1.2**
VRI	**Vrincioaia**	**9.10**	**30**	⇑*i*P	**Pn**	**01 27 51.8**	**+2.5**
VRI	**Vrincioaia**	**9.10**	**30**	⇑*i*P	**Pn**	**01 27 51.8**	**+2.5**
BRTR	**Keskin Array B**	**10.57**	**77**	P	**Pn**	**01 28 11.4**	**+1.9**
	0.0nm,0.3s,baz=261,slow=12,SNR=2.1						
BRTR	**Keskin Array B**	**10.57**	**77**	P	**Pn**	**01 28 11.4**	**+2.0**
GERES	**GERESS Array B**	**11.69**	**338**	P	**Pn**	**01 28 23.9**	**-0.7**
	0.3nm,0.3s,baz=162,slow=14,SNR=9.3						
GERES	**GERESS Array B**	**11.69**	**338**	P	**Pn**	**01 28 23.9**	**-0.7**
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**01 30 35.0**	**-1.3**
	1.5nm,0.5s,mb3.6,baz=156,slow=11,SNR=8.5						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**01 30 35.0**	**-1.3**
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P	**P**	**01 30 45.3**	**-0.8**
	0.7nm,0.8s,mb3.1,baz=137,slow=8.4,SNR=3.2						
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P	**P**	**01 30 45.3**	**-0.8**
NB2	**NORSAR Subarra**	**23.60**	**349**	P	**P**	**01 30 47.3**	**-1.7**
	comp=Z,0.6nm,0.5s,mb3.3,baz=157,slow=9.3						
NB2	**NORSAR Subarra**	**23.60**	**349**	P	**P**	**01 30 47.3**	**-1.7**
	comp=Z,0.6nm,0.5s,mb3.3,SNR=4.3						
NOA	**NORSAR Array B**	**23.60**	**349**	P	**P**	**01 30 47.6**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.3,baz=158,slow=9.1,SNR=4.4						
NOA	**NORSAR Array B**	**23.60**	**349**	P	**P**	**01 30 47.6**	**-1.4**
FINES	**FINESS Array B**	**23.61**	**7**	P	**P**	**01 30 46.0**	**-3.1**
	comp=Z,1.0nm,0.6s,mb3.4,baz=184,slow=8.0,SNR=7.2						
FINES	**FINESS Array B**	**23.61**	**7**	P	**P**	**01 30 46.0**	**-3.1**
TORD	**Torodi Ar. Bea**	**29.86**	**218**	P	**P**	**01 31 45.8**	**+0.1**
	comp=Z,0.3nm,0.8s,mb3.1,baz=37,slow=7.4,SNR=3.2						
ARCES	**ARCESS Array B**	**31.58**	**4**	P	**P**	**01 31 57.4**	**-3.0**
	comp=Z,2.2nm,0.9s,mb4.0,baz=191,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**45.52**	**58**	P	**P**	**01 33 54.5**	**-3.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=273,slow=7.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**45.89**	**48**

s-maj=18.1km s-min=13.1km az=46.0
GUC 11 02:24:47.0±1.1, 23°.80S×67°.10W, h205km±49km, ML5.1
ISC 11 02:24:44.9±0.6, 24°.02S±0°.05×66°.82W±0°.07, h186km±5km, n37, σ1§04/47, mb3.8/14, 4C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.38**	**306**	P	**Pn**	**02 25 28.9**	**+2.2**
	40nm,0.3s,baz=127,slow=7.4,SNR=374						
LVC				S	**Sn**	**02 26 00.6**	**+1.6**
	148nm,0.3s,baz=248,slow=22,SNR=53						
LVC	**Limon Verde**	**2.38**	**306**	P	**Pn**	**02 25 28.9**	**+2.2**
LVC				S	**Sn**	**02 26 00.6**	**+1.6**
PECH	**Pedro de Valdi**	**2.99**	**298**	*e*P	**Pn**	**02 25 35.0**	**+1.3**
PECH				*i* S	**Sn**	**02 26 11.5**	**-0.2**
PECH				AML	AML	02 26 12.5	
	comp=N,5μm,0.3s						
PB04	**Plate Boundary**	**3.02**	**305**	⇑*i*P	**Pn**	**02 25 40.7**	**+6.6**
PB04				*i* S	**Sn**	**02 26 21.4**	**+9.1**
MACH	**Maria Elena**	**3.26**	**303**	*e*P	**Pn**	**02 25 38.2**	**+1.1**
MACH				*i* S	**Sn**	**02 26 17.3**	**-0.4**
ANCH	**Antofagasta**	**3.31**	**275**	⇑*i*P	**Pn**	**02 25 38.5**	**+0.9**
ANCH				*i* S	**Sn**	**02 26 17.4**	**-1.3**
MECH	**Mejillones**	**3.46**	**285**	⇑*i*P	**Pn**	**02 25 40.6**	**+1.2**
MECH				*i* S	**Sn**	**02 26 21.0**	**-0.9**
MECH				AML	AML	02 26 26.1	
	comp=N,2μm,0.3s						
PB01	**Plate Boundary**	**3.86**	**320**	⇑*i*P	**Pn**	**02 25 44.9**	**+0.5**
PB01				*i* S	**Sn**	**02 26 29.7**	**-1.4**
PB01				AML	AML	02 26 33.7	
	comp=E,949nm,0.2s						
HMBC	**Humberston**	**4.69**	**322**	*e*P	**Pn**	**02 25 54.1**	**-1.0**
HMBC				*e*S	**Sn**	**02 26 46.5**	**-3.6**
PSGC	**Pisagua**	**5.37**	**324**	*e*P	**Pn**	**02 26 02.0**	**-1.9**
LCO	**Las Campanas**	**6.07**	**214**	*e*Pn	**Pn**	**02 26 11.9**	**-0.9**
LCO				*e*Sn	**Sn**	**02 27 13.2**	**-8.9**
CFAA	**Coronel Fontan**	**7.66**	**189**	P	**Pn**	**02 26 33.6**	**0.0**
	comp=E,0.3nm,0.3s,baz=14,slow=12,SNR=65						
CFAA				S	**Sn**	**02 27 53.5**	**-6.4**
	comp=E,0.4nm,0.3s,baz=278,slow=19,SNR=8.1						
CFAA	**Coronel Fontan**	**7.66**	**189**	P	**Pn**	**02 26 33.6**	**0.0**
CFAA				S	**Sn**	**02 27 53.5**	**-6.4**
LPAZ	**La Paz**	**7.79**	**351**	P	**Pn**	**02 26 36.8**	**+1.3**
	comp=E,2.3nm,0.3s,baz=178,slow=8.6,SNR=84						
LPAZ				S	**Sn**	**02 28 02.3**	**-1.0**
	comp=E,0.5nm,0.3s,baz=348,slow=8.3,SNR=6.8						
CPUP	**Villa Florida**	**8.90**	**107**	P	**Pn**	**02 26 50.3**	**+0.4**
	comp=E,0.4nm,0.3s,baz=276,slow=12,SNR=20						
SIV	**San Ignacio**	**9.64**	**35**	P	**Pn**	**02 26 59.3**	**-0.5**
	comp=E,3.3nm,0.3s,baz=217,slow=12,SNR=60						
TRQA	**Tornquist**	**14.59**	**165**	*e*Pn	**Pn**	**02 28 01.1**	**-1.5**
	comp=E,7.2nm,0.8s						
PLCA	**Paso Flores**	**16.95**	**190**	P	**Pn**	**02 28 31.1**	**-0.1**
	comp=E,0.2nm,0.3s,baz=16,slow=14,SNR=8.8						
PLCA	**Paso Flores**	**16.95**	**190**	*e*P	**Pn**	**02 28 31.0**	**-0.3**
	comp=E,3.5nm,0.7s						
WVT	**Waverly**	**63.04**	**341**	*e*P	**P**	**02 34 50.9**	**-1.3**
	comp=E,4.5nm,0.6s,mb4.5						
TXAR	**Lajitas Array**	**63.79**	**324**	P	**P**	**02 34 56.9**	**-0.4**
	comp=E,0.4nm,0.6s,mb3.4,baz=148,slow=7.6,SNR=5.4						
WCI	**Wyandotte Cave**	**64.56**	**343**	*e*P	**P**	**02 35 00.7**	**-1.4**
	comp=E,3.8nm,0.5s,mb4.5						
ANMO	**Albuquerque**	**69.66**	**326**	*e*P	**P**	**02 35 35.0**	**+0.7**
	comp=E,2.7nm,1.0s,mb3.9						
SDCO	**Great Sand Dun**	**71.39**	**328**	*e*P	**P**	**02 35 45.9**	**+1.3**
	comp=E,1.9nm,1.0s,mb3.8						
TORD	**Torodi Ar. Bea**	**76.42**	**69**	P	**P**	**02 36 13.7**	**-0.7**
	comp=E,1.1nm,0.5s,mb3.8,baz=255,slow=4.9,SNR=51						
BW06	**Boulder Array**	**77.25**	**329**	*e*P	**P**	**02 36 18.6**	**+0.3**
	comp=E,1.1nm,0.6s,mb3.7						
PDAR	**Pinedale Array**	**77.25**	**329**	P	**P**	**02 36 18.9**	**+0.5**
	comp=E,0.4nm,0.5s,mb3.3,baz=140,slow=8.1,SNR=4.8						
ULM	**Lac du Bonnet**	**78.30**	**341**	P	**P**	**02 36 23.4**	**-0.6**
	comp=E,2.5nm,0.5s,mb4.1,baz=171,slow=9.4,SNR=6.7						
ULM	**Lac du Bonnet**	**78.30**	**341**	*e*P	**P**	**02 36 23.1**	**-0.9**
	comp=E,1.8nm,0.5s,mb4.0						
LOHW	**Long Hollow**	**78.39**	**329**	*e*P	**P**	**02 36 24.8**	**+0.2**
	comp=E,1.4nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**78.66**	**321**	P	**P**	**02 36 27.6**	**+1.3**
	comp=E,0.4nm,0.7s,mb3.2,baz=133,slow=6.3,SNR=3.1						
HLID	**Hailey**	**80.20**	**327**	*e*P	**P**	**02 36 35.8**	**+1.4**
	comp=E,2.2nm,0.8s,mb3.8						
ESDC	**Sonseca Array**	**86.30**	**43**	P	**P**	**02 37 06.0**	**+0.3**
	comp=E,0.7nm,0.7s,mb3.5,baz=252,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	**94.20**	**340**	P	**P**	**02 37 41.9**	**-0.2**
	comp=E,0.9nm,0.5s,mb4.1,baz=134,slow=4.6,SNR=43						
ZALV	**Zalesovo Beam**	**143.33**	**28**	PKP	PKPdf	02 43 54.1	-2.5
	comp=E,2.2nm,0.6s,baz=299,slow=3.9,SNR=12						
MK31	**Makanchi Array**	**146.44**	**40**	*e*PKPdf	PKPdf	02 44 02.5	+0.3
MK31				*e*PKPbc	PKPbc	02 44 04.2	+0.2
MKAR	**Makanchi Array**	**146.44**	**40**	PKPbc	PKPbc	02 44 02.8	-1.1
	comp=E,3.7nm,0.7s,baz=300,slow=2.2,SNR=29						

ISCJB 11 02:34:42.6±0.3, 32°.14N±0°.02×115°.77W±0°.03, h26km±5km, Error ellipse: s-maj=5.0km s-min=3.5km az=144.0
ECX 11 02:34:43.8±0.5, 32°.14N×115°.78W, h7km, MD2.9, ML3.0
ISC 11 02:34:42.6±0.4, 32°.15N±0°.02×115°.77W±0°.03, h18km±3km, n22, σ0§53/36, 18C-9D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDX	**Rancho Dawling**	**0.27**	**214**	⇑*e*P	**Pg**	**02 34 48.3**	**-0.3**
RDX				*e*S	**Sg**	**02 34 52.0**	**-0.6**
RDX				⇑*e*		02 34 52.5	
	comp=N,3μm,0.2s						
EMX	**El Mayor**	**0.47**	**110**	⇑*e*P	**Pg**	**02 34 52.6**	**+0.4**
EMX				*e*S	**Sg**	**02 34 59.0**	**+0.3**
EMX				⇓*e*		02 35 00.6	
	comp=N,1μm,0.3s						
CPBX	**Cerro Prieto**	**0.47**	**55**	⇑*e*P	**Pg**	**02 34 52.5**	**+0.2**
RMX	**La Rumorosa**	**0.52**	**330**	⇑*e*P	**Pg**	**02 34 53.3**	**+0.2**
RMX				*e*S	**Sg**	**02 35 00.5**	**+0.2**
DVTC	**Desert V Tower**	**0.58**	**331**	P	**Pg**	**02 34 54.3**	**+0.1**
	baz=0.6,SNR=26						
DVTC				⇑S	**Sg**	**02 35 01.6**	**-0.5**
	baz=0.6						
CBX	**Cerro Bola**	**0.78**	**282**	⇑*e*P	**Pb**	**02 34 57.4**	**-0.2**
CBX				*e*S	**Sb**	**02 35 07.5**	**-0.3**
SWSC	**Sam W. Stewart**	**0.79**	**358**	⇑P	**Pb**	**02 34 58.2**	**+0.4**
	baz=0.8,SNR=26						
ECNX	**Esteban Cantu**	**0.86**	**236**	*e*P	**Pb**	**02 34 58.9**	**0.0**
ECNX				*e*P		02 34 58.1	
ECNX				*e*S	**Sb**	**02 35 08.7**	**-1.4**
ECNX				*e*S	**Sb**	**02 35 10.0**	**-0.1**
ECBX	**El Chinero**	**0.91**	**138**	⇑*e*P	**Pb**	**02 34 59.3**	**-0.5**
ECBX				*e*S	**Sb**	**02 35 12.1**	**+0.7**
PBX	**Punta Banda**	**0.91**	**244**	⇑*e*P	**Pb**	**02 34 59.7**	**-0.1**
PBX				*e*S	**Sb**	**02 35 11.5**	**0.0**
PBX				⇓*e*		02 35 12.2	
	comp=N,235nm,0.1s						
MONP	**Monument Peak**	**0.92**	**323**	⇑P	**Pb**	**02 35 00.4**	**+0.3**
	baz=0.9,SNR=47						
MONP				⇓S	**Sb**	**02 35 12.1**	**+0.2**
	baz=0.9						
112A	**Yuma**	**1.08**	**69**	⇓P	**Pb**	**02 35 02.0**	**-0.6**
	baz=1.2						
SPX	**San Pedro Mart**	**1.13**	**167**	*e*P	**Pn**	**02 35 03.8**	**+0.4**
SPX				*e*S	**Sb**	**02 35 18.7**	**+0.8**
GLA	**Glamis**	**1.20**	**41**	⇓P	**Pn**	**02 35 03.9**	**-0.5**
	baz=1.3						
GLA				⇑S	**Sb**	**02 35 19.0**	**-0.9**
	baz=1.3						
BC3	**Big Chuckw Mtn**	**1.53**	**10**	⇑P	**Pn**	**02 35 08.9**	**0.0**
	baz=1.6						
BC3				⇓S	**Sn**	**02 35 27.0**	**-1.2**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.57**	**339**	⇓P	**Pn**	**02 35 09.5**	**+0.1**
	baz=1.6						
PFO				⇑Sb	**Sb**	**02 35 32.1**	**+1.6**
	baz=1.6						
113A	**Mohawk Valley,**	**1.80**	**69**	⇑P	**Pn**	**02 35 12.7**	**0.0**
	baz=1.9						
BELC	**Belle Mtn.**	**1.86**	**354**	⇓P	**Pn**	**02 35 13.5**	**+0.1**
	baz=1.9						
MURC	**Murrieta**	**1.88**	**321**	⇑Sb	**Sb**	**02 35 40.3**	**+0.7**
	baz=1.9						
Z13A	**Yuma Proving G**	**2.06**	**59**	⇓P	**Pn**	**02 35 16.5**	**+0.2**
	baz=2.1						
114A	**Black Gap (USA**	**2.51**	**75**	⇑P	**Pn**	**02 35 22.3**	**-0.2**
	baz=2.6						
214A	**Organ Pipe Nat**	**2.52**	**94**	⇑P	**Pn**	**02 35 22.3**	**-0.2**
	baz=2.6						

IDC 11 02:38:18.7±0.7, 7°.56S×128°.46E, h0km, mb4.2/7, mb1 4.2/10, mb1mx4.0/17, mbtmp4.1/10, ML4.0/3, MS4.0/2, Ms1 4.0/2, ms1mx3.0/24, Error ellipse: s-maj=53.1km s-min=16.8km az=72.0
ISCJB 11 02:38:25.1±3.3, 7°.7S±0°.1×128°.5E±0°.1, h70km±35km, mb4.0/8, Error ellipse: s-maj=24.6km s-min=19.0km az=170.4
NEIC 11 02:38:25.1±1.6, 7°.67S×128°.49E, h48km±16km, mb4.4/2, Error ellipse: s-maj=14.3km s-min=13.1km az=47.0
ISC 11 02:38:26.3±2.5, 7°.7S±0°.1×128°.5E±0°.1, h61km±28km, n30, σ0§97/24, mb4.1/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.30**	**142**	*e*P	**Pn**	**02 39 57.8**	**+1.1**
	29nm,0.3s						
KAKA				*e*S	Sx	02 41 03.5	
KAKA	**Kakadu**	**6.30**	**142**	*e*Pn	**Pn**	**02 39 57.8**	**+1.1**
	121nm,0.7s						
KAKA				*e*Sn	Sx	02 41 03.4	
KNA	**Kununurra**	**8.00**	**178**	*e*P	**Pn**	**02 40 22.0**	**+2.1**
	23nm,0.2s						
KNA				*e*S	Sx	02 41 44.7	
FITZ	**Fitzroy Crossi**	**10.70**	**195**	*e*P	**Pn**	**02 40 56.4**	**-0.5**
	9.7nm,0.3s						
FITZ				*e*S	Sx	02 42 48.3	
FITZ	**Fitzroy Crossi**	**10.70**	**195**	Pn	**Pn**	**02 40 56.7**	**-0.2**
	1.3nm,0.3s,baz=44,slow=11,SNR=85						
FITZ				Sn	Sx	02 42 48.8	
	3.5nm,0.3s,baz=114,slow=19,SNR=8.1						
WRAB	**Tennant Creek**	**13.41**	**156**	*e*Pn	**Pn**	**02 41 32.4**	**-1.5**
WRA	**Warramunga Arr**	**13.41**	**156**	Pn	**Pn**	**02 41 32.6**	**-1.2**
	0.8nm,0.3s,baz=339,slow=13,SNR=17						
WRA				Sn	Sx	02 43 50.8	
	3.2nm,0.3s,baz=329,slow=22,SNR=11						
COEN	**Coen**	**15.68**	**115**	*e*P	**Pn**	**02 42 03.9**	**+0.3**
COEN	**Coen**	**15.68**	**115**	*e*P	**Pn**	**02 42 02.9**	**-0.7**
	52nm,0.6s						
MBWA	**Marble Bar**	**15.84**	**211**	*e*Pn	**Pn**	**02 42 05.5**	**0.0**
ASAR	**Alice Springs**	**16.69**	**163**	Pn	**Pn**	**02 42 15.8**	**-0.5**
	0.3nm,0.3s,baz=331,slow=9.2,SNR=30						
ASAR				Sn	Sx	02 45 10.7	
	0.8nm,0.3s,baz=349,slow=26,SNR=8.3						
CTA	**Charters Tower**	**21.14**	**127**	LR	LR	02 51 51.3	
	comp=Z,89nm,19.8s,baz=57,slow=38						
STKA	**Stephens Creek**	**26.96**	**155**	*e*P	**P**	**02 44 03.6**	**+1.4**
	1.1nm,0.4s,mb3.7						
STKA	**Stephens Creek**	**26.96**	**155**	P	**P**	**02 44 03.4**	**+1.2**
	1.3nm,0.4s,mb3.8,baz=322,slow=8.8,SNR=9.7						
STKA	**Stephens Creek**	**26.96**	**155**	P	**P**	**02 44 03.4**	**+1.2**
JHJ	**Hachijo jima 2**	**41.99**	**14**	LR	LR	03 02 23.3	
	comp=Z,989nm,21.8s,baz=243,slow=34						
ULN	**Ulaanbaatar**	**58.49**	**343**	*e*P	**P**	**02 48 17.0**	**+0.9**
	4.2nm,1.1s,mb4.4						
SONM	**Songino Array**	**58.66**	**343**	P	**P**	**02 48 18.4**	**+1.2**
	2.1nm,0.9s,mb4.2,baz=162,slow=7.7,SNR=12						
PETK	**Petropavlovsk-**	**65.46**	**19**	P	**P**	**02 49 02.8**	**0.0**
	1.7nm,0.7s,mb4.2,baz=187,slow=5.7,SNR=4.3						
MKAR	**Makanchi Array**	**68.02**	**328**	P	**P**	**02 49 19.0**	**-0.1**
	0.8nm,0.5s,mb4.0,baz=119,slow=5.7,SNR=7.2						
MKAR	**Makanchi Array**	**68.02**	**328**	P	**P**	**02 49 19.0**	**-0.2**
ZALV	**Zalesovo Beam**	**71.57**	**335**	P	**P**	**02 49 40.2**	**-0.6**
	0.9nm,0.5s,mb4.0,baz=143,slow=5.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**71.57**	**335**	P	**P**	**02 49 40.2**	**-0.6**
KURK	**Kurchatov**	**72.36**	**329**	P	**P**	**02 49 44.5**	**-1.1**
	3.1nm,0.8s,mb4.3,baz=128,slow=4.9,SNR=8.8						
KURK	**Kurchatov**	**72.36**	**329**	*e*P	**P**	**02 49 45.1**	**-0.5**
	3.7nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**77.88**	**328**	P	**P**	**02 50 16.5**	**-0.9**
	1.5nm,0.7s,mb4.0,baz=133,slow=10,SNR=5.4						
TORD	**Torodi Ar. Bea**	**127.49**	**281**	PKP	PKPdf	02 57 26.8	+1.3
	0.4nm,0.7s,baz=62,slow=0.8,SNR=7.1						
CPUP	**Villa Florida**	**145.69**	**171**	PKPbc	PKPbc	02 57 59.7	+0.6
	1.0nm,0.6s,baz=145,slow=4.4,SNR=5.4						
CPUP	**Villa Florida**	**145.69**	**171**	PKPbc	PKPbc	02 57 59.7	+0.6
LPAZ	**La Paz**	**151.02**	**145**	PKPbc	PKPbc	02 58 15.1	+1.6
	1.4nm,0.8s,baz=124,slow=0.5,SNR=4.5						

IDC 11 02:42:15.9±4.2, 36°.18N×70°.28E, h177km±38km, mb3.3/9, mb1 3.5/13, mb1mx3.3/27, mbtmp3.4/13, Error ellipse: s-maj=27.1km s-min=15.9km az=21.0
ISCJB 11 02:42:18.7±0.4, 36°.51N±0°.03×70°.33E±0°.05, h200km±5km, mb3.5/10, Error ellipse: s-maj=7.2km s-min=4.3km az=168.8
NEIC 11 02:42:19.6±0.7, 36°.43N×70°.41E, h206km±7km, mb4.2/3, Error ellipse: s-maj=11.8km s-min=8.6km az=121.0
NNC 11 02:42:21.2±8.9, 37°.23N×69°.96E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=73.0km s-min=59.7km az=166.0
ISC 11 02:42:19.6±0.4, 36°.53N±0°.03×70°.33E±0°.06, h189km±5km, n59, σ1§28/76, mb3.6/10, 7C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.25**	**208**	*e*Pn	**Pn**	**02 43 01.8**	**+1.8**
KBL				*e*Sn	**Sn**	**02 43 30.3**	**-1.0**
CEP	**Cherat**	**2.99**	**154**	⇑P	**Pn**	**02 43 10.8**	**+2.2**
CEP				S	**Sn**	**02 43 44.0**	**-2.8**
CHCP	**Chirah Chowk**	**3.74**	**139**	⇑Pn	**Pn**	**02 43 19.9**	**+2.1**
SARP	**Sargodha**	**4.99**	**156**	P	**Pn**	**02 43 34.0**	**+0.4**
KSH	**Kashi**	**5.36**	**55**	⇑*i*Pn	**Pn**	**02 43 35.3**	**-3.0**
KSH				Sn	**Sn**	**02 44 30.6**	**-10**
KSH				smax			
	comp=N,69nm,0.5s						
KSH				smax			
	comp=E,64nm,0.4s						
THN	**Thein Dam**	**6.04**	**131**	*e*P	**Pn**	**02 43 46.6**	**-0.6**
THN				*e*x	**Sn**	**02 44 53.7**	**-2.6**
AML	**Almayashu**	**6.17**	**24**	P	**Pn**	**02 43 50.0**	**+1.2**
	SNR=49						
AML	**Almayashu**	**6.17**	**24**	*e*Pn	**Pn**	**02 43 49.7**	**+0.9**
	comp=E,29nm,0.4s						
AML				*e*Sn	**Sn**	**02 44 55.0**	**-4.4**
UCH	**Uchtor**	**6.55**	**28**	P	**Pn**	**02 43 55.0**	**+1.3**
	SNR=48						
UCH	**Uchtor**	**6.55**	**28**	*e*Pn	**Pn**	**02 43 55.0**	**+1.2**
	comp=E,23nm,0.5s						
UCH				*e*Sn	**Sn**	**02 45 07.1**	**-1.0**
KK09	**Karatay Array**	**6.59**	**1**	⇑Pn	**Pn**	**02 43 54.4**	**+0.2**
	comp=E,6.1nm,0.4s						
KK09				⇓Sn	**Sn**	**02 44 59.4**	**-10**
	comp=E,13nm,0.5s						
KK09				⇓Lg		02 45 31.1	
	comp=E,17nm,0.5s						
EKS2	**Erkin-Say**	**6.68**	**22**	P	**Pn**	**02 43 56.6**	**+1.2**
	SNR=17						
EKS2	**Erkin-Say**	**6.68**	**22**	*e*Pn	**Pn**	**02 43 56.2**	**+0.8**
	comp=E,13nm,0.4s						
EKS2				*e*Sn	**Sn**	**02 45 09.8**	**-1.4**
KZA	**Kyzart**	**6.72**	**33**	P	**Pn**	**02 43 57.1**	**+1.1**
	SNR=22						
AAK	**Ala-Archa**	**6.89**	**27**	P	**Pn**	**02 43 59.4**	**+1.2**
	SNR=22						
AAK	**Ala-Archa**	**6.89**	**27**	P	**Pn**	**02 43 59.4**	**+1.2**
	comp=E,0.1nm,0.3s,baz=179,slow=5.3,SNR=34						
AAK				S	**Sn**	**02 45 15.0**	**-1.3**
	comp=E,0.1nm,0.3s,baz=316,slow=21,SNR=27						
AAK	**Ala-Archa**	**6.89**	**27**	P	**Pn**	**02 43 59.4**	**+1.2**
AAK				S	**Sn**	**02 45 15.0**	**-1.3**
KBK	**Karagaybulak**	**7.08**	**29**	P	**Pn**	**02 44 02.4**	**+1.7**
	SNR=7.8						
ULHL	**Ulahol**	**7.32**	**37**	P	**Pn**	**02 44 05.1**	**+1.4**
	SNR=8.7						
SDNR	**Sundarnagar**	**7.45**	**130**	*e*P	**Pn**	**02 44 05.1**	**-0.6**
SDNR				*e*x	**Sn**	**02 45 26.5**	**-3.2**
TKM2	**Tokmak 2**	**7.56**	**31**	⇑Pn	**Pn**	**02 44 07.6**	**+0.7**
	comp=E,8.7nm,0.5s						
TKM2				⇓Sn	**Sn**	**02 45 28.1**	**-4.1**
	comp=E,14nm,0.8s						
TKM2	**Tokmak 2**	**7.56**	**31**	P	**Pn**	**02 44 08.1**	**+1.1**
	SNR=6.9						
TKM2	**Tokmak 2**	**7.56**	**31**	*e*Pn	**Pn**	**02 44 07.5**	**+0.6**
	comp=E,14nm,0.6s						
TKM2				*e*Sn	**Sn**	**02 45 31.0**	**-1.2**
KHET	**Khetri**	**9.62**	**150**	*e*S	**Sn**	**02 46 13.8**	**-7.6**
JOSI	**Joshimath**	**9.73**	**125**	*e*P	**Pn**	**02 44 35.4**	**-0.1**
JOSI				*e*S	**Sn**	**02 46 16.0**	**-8.1**
JOSI				AML	AML	02 46 20.8	
	comp=E,47nm,0.4s						
JOSI				AML	AML	02 46 20.9	
	comp=N,43nm,0.1s						
JOSI				AMP		02 46 21.0	
NDI	**New Delhi**	**9.74**	**141**	*e*P	**Pn**	**02 44 38.0**	**+2.4**
NDI				*e*S	**Sn**	**02 46 15.0**	**-9.3**
SONA	**Sohna**	**10.03**	**143**	*e*P	**Pn**	**02 44 39.0**	**-0.4**
SONA				*e*S	**Sn**	**02 46 21.6**	**-10**
AGRA	**Agra**	**11.30**	**143**	*e*S	**Sn**	**02 46 52.5**	**-9.1**
AGRA				AML	AML	02 47 03.3	
	comp=E,65nm,0.4s						
AGRA				AML	AML	02 47 07.7	
	comp=N,48nm,0.4s						
MK31	**Makanchi Array**	**13.59**	**37**	*e*Pn	**Pn**	**02 45 24.4**	**-0.2**
MKAR	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**02 45 24.5**	**-0.1**
	comp=N,0.5nm,0.3s,baz=198,slow=11,SNR=13						
MKAR	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**02 45 24.5**	**-0.1**
AB31	**Akbulak array**	**14.80**	**332**	⇑Pn	**Pn**	**02 45 38.6**	**-1.0**
	comp=N,4.0nm,0.5s						
AB31				⇓Sn	**Sn**	**02 48 18.9**	**-6.0**
	comp=N,0.7nm,0.4s,baz=143,slow=24,SNR=5.6						
ABKAR	**Akbulak array**	**14.80**	**332**	*e*P	**Pn**	**02 45 38.6**	**-1.0**
	comp=N,5.2nm,0.5s						
DMN	**Daman**	**15.35**	**121**	*e*P	**Pn**	**02 45 47.2**	**+0.7**
	comp=N,7.4nm,0.3s						
KKN	**Kakani**	**15.36**	**120**	*e*P	**Pn**	**02 45 47.7**	**+1.1**
	comp=N,19nm,0.5s						
KURK	**Kurchatov**	**15.38**	**20**	P	**Pn**	**02 45 44.0**	**-2.7**
	comp=N,0.2nm,0.3s,baz=209,slow=11,SNR=8.1						
KURK	**Kurchatov**	**15.38**	**20**	*e*P	**Pn**	**02 45 45.6**	**-1.1**
PKIN	**Phulchoki**	**15.57**	**121**	*e*P	**Pn**	**02 45 51.2**	**+2.0**
	comp=N,18nm,0.4s						
PKI	**Pulchoki**	**15.58**	**121**	*e*P	**Pn**	**02 45 51.2**	**+1.9**
	comp=N,9.2nm,0.4s						
GUN	**Gumba**	**15.70**	**119**	*e*P	**Pn**	**02 45 52.2**	**+1.4**
	comp=N,23nm,0.6s						
VOSK	**Vostochnaya**	**16.20**	**1**	⇓Pn	**Pn**	**02 45 56.4**	**-0.1**
	comp=N,3.7nm,0.7s						
AKTK	**Aktyubinsk**	**16.49**	**331**	P	**Pn**	**02 46 00.1**	**+0.1**
AKTO	**Aktyubinsk**	**16.49**	**331**	⇑Pn	**Pn**	**02 45 59.6**	**-0.5**
	comp=N,3.4nm,0.9s						
AKTO	**Aktyubinsk**	**16.49**	**331**	P	**Pn**	**02 46 00.1**	**+0.1**
	comp=N,1.5nm,0.3s,baz=139,slow=9.0,SNR=48						
BVAR	**Borovoye Array**	**16.49**	**0**	P	**Pn**	**02 46 00.3**	**+0.2**
	comp=N,1.6nm,0.3s,baz=173,slow=8.8,SNR=20						
BRVK	**Borovoye**	**16.53**	**360**	*e*P	**Pn**	**02 46 01.0**	**+0.5**
	comp=N,9.8nm,0.8s						
ZAA0	**Zalesovo Array**	**20.12**	**25**	*e*P	**P**	**02 46 38.3**	**-0.3**
ZALV	**Zalesovo Beam**	**20.12**	**25**	P	**P**	**02 46 38.5**	**-0.1**
	comp=N,4.3nm,0.3s,baz=215,slow=10,SNR=19						
ARU	**Arti**	**21.43**	**342**	*e*P	**P**	**02 46 53.8**	**+1.2**
	comp=N,7.4nm,1.1s,mb3.9						
SONM	**Songino Array**	**28.76**	**56**	P	**P**	**02 48 00.0**	**+0.7**
	comp=N,0.6nm,0.8s,mb3.4,baz=256,slow=10,SNR=3.8						
JOF	**Joensuu**	**35.58**	**330**	*e*p	**P**	**02 48 58.1**	**-0.3**
	comp=N,2.0nm,0.3s,mb4.2						
FINES	**FINESS Array B**	**37.16**	**326**	P	**P**	**02 49 11.6**	**-0.2**
	comp=N,0.4nm,0.4s,mb3.4,baz=114,slow=9.2,SNR=9.6						
ARCES	**ARCESS Array B**	**40.91**	**338**	P	**P**	**02 49 43.1**	**+0.3**
	comp=N,2.8nm,0.8s,mb4.0,baz=82,slow=8.7,SNR=7.1						
NOA	**NORSAR Array B**	**44.03**	**323**	P	**P**	**02 50 07.3**	**-0.7**
	comp=N,0.5nm,0.6s,mb3.3,baz=97,slow=7.7,SNR=3.0						
NOA	**NORSAR Array B**	**44.03**	**323**	P	**P**	**02 50 07.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**65.18**	**268**	P	**P**	**02 52 38.1**	**-2.6**
	comp=N,0.3nm,0.5s,mb3.4,baz=50,slow=5.6,SNR=16						
YKA	**Yellowknife Ar**	**81.24**	**2**	P	**P**	**02 54 13.2**	**-0.7**
	comp=N,0.2nm,0.4s,mb3.1,baz=350,slow=5.3,SNR=6.4						
WRA	**Warramunga Arr**	**82.46**	**121**	P	**P**	**02 54 17.5**	**-3.4**
	comp=N,0.4nm,0.5s,mb3.3,baz=324,slow=4.8,SNR=7.0						
ASAR	**Alice Springs**	**84.71**	**124**	P	**P**	**02 54 29.6**	**-2.8**
	comp=N,0.7nm,0.6s,mb3.6,baz=311,slow=4.8,SNR=14						

*IDC 11 02:46:14.1±1.2, 41

BNDS				AML	AML	02 49 49.1	
	comp=N,263nm,0.8s						
BNDS	**Bandar-Abbas**	**1.95**	**76**	*e*Pg	**Pn**	**02 49 01.1**	**-0.3**
BANOM	**Banah**	**2.27**	**116**	Pn	**Pn**	**02 49 05.2**	**-0.6**
	SNR=26						
BANOM				Sn	**Sn**	**02 49 32.0**	**-1.8**
IBND	**Bandar-abas**	**2.28**	**77**	*e*Pn	**Pn**	**02 49 05.9**	**0.0**
IBND				*e*Pn	**Pn**	**02 49 06.1**	**+0.2**
IBND				*e*		02 49 56.8	
	comp=Z,4μm,0.2s						
IBND	**Bandar-abas**	**2.28**	**77**	*e*Pn	**Pn**	**02 49 05.9**	**0.0**
IMOK	**Mouk**	**2.40**	**331**	Pn	**Pn**	**02 49 07.5**	**-0.1**
IMOK	**Mouk**	**2.40**	**331**	*e*	**Sg**	**02 49 58.6**	**+13**
	comp=Z,5μm,0.2s						
IMOK				*e*Pn	**Pn**	**02 49 07.5**	**-0.1**
NAZ	**Nazwa, Dubai**	**2.44**	**143**	⇑P	**Pn**	**02 49 09.5**	**+1.4**
	SNR=21						
NAZ				⇑P		02 49 09.5	
	SNR=21						
NAZ	**Nazwa, Dubai**	**2.44**	**143**	P	**Pn**	**02 49 09.5**	**+1.4**
	SNR=21						
ISRV	**Sarvestan**	**2.56**	**341**	Pn	**Pn**	**02 49 10.4**	**+0.6**
ISRV				Sg	**Sg**	**02 49 51.1**	**+0.6**
ISRV	**Sarvestan**	**2.56**	**341**	*e*Pn	**Pn**	**02 49 10.4**	**+0.6**
ISRV				*e*Sg	**Sg**	**02 49 51.1**	**+0.6**
ISRV				*e*		02 49 57.0	
	comp=Z,4μm,0.4s						
ISRV	**Sarvestan**	**2.56**	**341**	*e*Pn	**Pn**	**02 49 10.4**	**+0.6**
ISRV				*e*Sg	**Sg**	**02 49 51.1**	**+0.6**
ASUD	**Al Ashush, Dub**	**2.59**	**153**	Pn	**Pn**	**02 49 12.0**	**+1.8**
	SNR=22						
HATD	**Hatta, Dubai**	**2.83**	**138**	P	**Pn**	**02 49 14.2**	**+0.6**
	SNR=6.4						
HATD				P		02 49 14.2	
	SNR=6.4						
HATD	**Hatta, Dubai**	**2.83**	**138**	P	**Pn**	**02 49 14.2**	**+0.6**
	SNR=6.4						
ASHO	**Ashiyiah**	**2.90**	**141**	⇑P	**Pn**	**02 49 15.2**	**+0.7**
	SNR=19						
ASHO				⇑P		02 49 15.2	
	SNR=19						
ASHO	**Ashiyiah**	**2.90**	**141**	P	**Pn**	**02 49 15.2**	**+0.7**
	SNR=19						
IPAR	**Pars**	**3.01**	**343**	*e*P	**Pn**	**02 49 16.5**	**+0.5**
IPAR	**Pars**	**3.01**	**343**	*e*Pn	**Pn**	**02 49 16.6**	**+0.6**
IPAR				*e*		02 49 29.8	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	**3.01**	**343**	*e*P	**Pn**	**02 49 16.5**	**+0.5**
SLWS		**3.74**	**236**	P	**Pn**	**02 49 25.8**	**-0.2**
SLWS		**3.74**	**236**	P	**Pn**	**02 49 25.8**	**-0.2**
KRBR	**Kerman**	**3.85**	**38**	Pn	**Pn**	**02 49 27.0**	**-0.6**
KRBR	**Kerman**	**3.85**	**38**	*e*Pn	**Pn**	**02 49 28.2**	**+0.6**
KRBR				AML	AML	02 50 39.8	
	comp=N,77nm,0.7s						
KRBR				AML	AML	02 50 40.5	
	comp=E,50nm,0.7s						
KRBR	**Kerman**	**3.85**	**38**	*e*Pn	**Pn**	**02 49 27.9**	**+0.3**
BTHS		**4.09**	**226**	P	**Pn**	**02 49 30.7**	**-0.2**
BTHS		**4.09**	**226**	P	**Pn**	**02 49 30.7**	**-0.2**
ARQ	**Araqi**	**4.24**	**147**	P	**Pn**	**02 49 33.6**	**+0.7**
	SNR=6.7						
ARQ				P		02 49 33.6	
	SNR=6.7						
ARQ	**Araqi**	**4.24**	**147**	P	**Pn**	**02 49 33.6**	**+0.6**
	SNR=6.7						
BOQSS		**4.32**	**257**	P	**Pn**	**02 49 34.8**	**+0.7**
IMEH	**Mehriz**	**4.45**	**6**	Pn	**Pn**	**02 49 36.5**	**+0.7**
IMEH	**Mehriz**	**4.45**	**6**	*e*Pn	**Pn**	**02 49 36.6**	**+0.8**
IMEH				*e*		02 50 36.1	
	comp=Z,339nm,0.1s						
IMEH	**Mehriz**	**4.45**	**6**	Pn	**Pn**	**02 49 36.5**	**+0.7**
IBAF	**Bafgh**	**4.81**	**16**	Pn	**Pn**	**02 49 41.4**	**+0.6**
IBAF	**Bafgh**	**4.81**	**16**	*e*Pn	**Pn**	**02 49 41.4**	**+0.6**
IBAF				*e*		02 49 42.4	
	comp=Z,400nm,0.1s						
IBAF	**Bafgh**	**4.81**	**16**	*e*Pn	**Pn**	**02 49 41.4**	**+0.6**
ISAD	**Sadrabad**	**4.96**	**356**	*e*	**Sn**	**02 50 41.2**	**+1.1**
	comp=Z,551nm,0.2s						
BSY	**Bisya**	**5.07**	**145**	P	**Pn**	**02 49 45.1**	**+0.7**
	SNR=9.3						
BSYO	**Bisya**	**5.11**	**145**	P	**Pn**	**02 49 45.1**	**+0.2**
	SNR=9.3						
ICHK	**Chekchek**	**5.29**	**3**	Pn	**Pn**	**02 49 47.6**	**+0.3**
ICHK	**Chekchek**	**5.29**	**3**	*e*Pn	**Pn**	**02 49 47.6**	**+0.3**
ICHK				*e*		02 50 11.1	
	comp=Z,280nm,0.2s						
ICHK	**Chekchek**	**5.29**	**3**	*e*Pn	**Pn**	**02 49 47.6**	**+0.3**
SMDO	**Samad**	**5.31**	**136**	⇓P	**Pn**	**02 49 48.4**	**+0.7**
	SNR=11						
SMDO	**Samad**	**5.31**	**136**	P	**Pn**	**02 49 48.4**	**+0.7**
	SNR=11						
KFJS		**5.55**	**284**	P	**Pn**	**02 49 54.7**	**+3.7**
IZEF	**Zefreh**	**6.11**	**346**	Pn	**Pn**	**02 49 57.5**	**-1.1**
IZEF	**Zefreh**	**6.11**	**346**	*e*Pn	**Pn**	**02 49 57.5**	**-1.1**
IZEF				*e*		02 49 59.7	
	comp=Z,205nm,0.2s						
IZEF	**Zefreh**	**6.11**	**346**	*e*Pn	**Pn**	**02 49 57.5**	**-1.1**
IPIR	**Pirpir**	**6.34**	**335**	*e*	**Sn**	**02 51 20.1**	**+6.0**
	comp=Z,246nm,0.2s						
IKLH	**Kolahrood**	**6.70**	**342**	Pn	**Pn**	**02 50 06.5**	**-0.2**
IKLH	**Kolahrood**	**6.70**	**342**	*e*	**Pg**	**02 50 41.5**	**+5.0**
	comp=Z,176nm,0.2s						
IKLH				*e*Pn	**Pn**	**02 50 06.6**	**-0.1**
IKOO	**Kooshah**	**6.95**	**37**	*e*Pn	**Pn**	**02 50 10.3**	**+0.1**
IKOO	**Kooshah**	**6.95**	**37**	*e*Pn	**Pn**	**02 50 10.3**	**+0.1**
LYLS		**7.89**	**233**	P	**Pn**	**02 50 21.8**	**-1.3**
ASYS		**8.65**	**276**	P	**Pn**	**02 50 32.3**	**-1.3**
BRTR	**Keskin Array B**	**21.22**	**312**	P	**P**	**02 53 14.0**	**-0.2**
	comp=Z,1.6nm,0.8s,mb3.4,baz=132,slow=13,SNR=12						
BRTR	**Keskin Array B**	**21.22**	**312**	P	**P**	**02 53 14.0**	**-0.2**
MKAR	**Makanchi Array**	**29.80**	**41**	P	**P**	**02 54 33.6**	**-1.6**
	comp=Z,0.5nm,0.7s,mb3.4,baz=223,slow=11,SNR=2.4						
MKAR	**Makanchi Array**	**29.80**	**41**	P	**P**	**02 54 33.6**	**-1.6**
ZALV	**Zalesovo Beam**	**35.22**	**32**	P	**P**	**02 55 19.9**	**-2.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=230,slow=6.8,SNR=4.1						
FINES	**FINESS Array B**	**39.27**	**339**	P	**P**	**02 55 54.9**	**-1.9**
	comp=Z,0.9nm,0.4s,mb3.8,baz=145,slow=9.3,SNR=22						
FINES	**FINESS Array B**	**39.27**	**339**	P	**P**	**02 55 54.9**	**-1.9**
YKA	**Yellowknife Ar**	**90.41**	**355**	P	**P**	**03 01 28.1**	**-1.5**
	comp=Z,0.2nm,0.5s,mb3.7,baz=3.9,slow=5.1,SNR=7.2						
YKA	**Yellowknife Ar**	**90.41**	**355**	P	**P**	**03 01 28.1**	**-1.5**

*ISCJB **11** 02:57:34.0±0.4, 22°.87N±0°.01×121°.27E±0°.02, h0km±3km, Error ellipse: s-maj=3.5km s-min=2.4km az=10.2*
*NEIC **11** 02:57:35.3±1.6, 22°.93N×121°.22E, h10km, Error ellipse: s-maj=19.8km s-min=8.0km az=122.0*
*TAP **11** 02:57:35.6, 22°.88N×121°.13E, h21km, ML3.8, B*
ISC 11 02:57:34.8±0.4, 22°.86N±0°.01×121°.26E±0°.02, h8km±3km, n54, σ0§92/97, 14C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.15**	**223**	P	**Pg**	**02 57 40.5**	**+2.6**
	baz=178						
TTN				*e*S	**Sg**	**02 57 44.4**	**+4.2**
	baz=178						
TWG	**Pinlang**	**0.18**	**256**	*e*Pg	**Pg**	**02 57 39.2**	**+0.7**
TWG				*e*Sg	**Sg**	**02 57 42.2**	**+1.3**
TWG	**Pinlang**	**0.18**	**256**	⇓*i*P	**Pg**	**02 57 39.8**	**+1.3**
	baz=216						
TWG				*i* S	**Sg**	**02 57 42.6**	**+1.6**
	baz=216						
CHKT	**Chengkung**	**0.25**	**23**	⇑*i*P	**Pg**	**02 57 42.6**	**+2.7**
	baz=56						
CHKT				S	**Sg**	**02 57 47.7**	**+4.4**
	baz=56						
ECL	**Taimali**	**0.39**	**227**	⇑P	**Pg**	**02 57 42.2**	**-0.1**
	baz=203						
ECL				*e*S	**Sg**	**02 57 47.0**	**-0.4**
	baz=203						
ELDTW	**Lidau**	**0.39**	**325**	*e*P	**Pg**	**02 57 42.5**	**+0.1**
	baz=343						
ELDTW				*e*S	**Sg**	**02 57 47.4**	**-0.3**
	baz=343						
TWF1	**Yuli**	**0.49**	**4**	⇑*i*P	**Pg**	**02 57 44.3**	**+0.1**
	baz=16						
TWF1				*e*S	**Sg**	**02 57 52.2**	**+1.6**
	baz=16						
YULB	**Yu-li**	**0.53**	**4**	*e*Pg	**Pg**	**02 57 44.6**	**-0.4**
YULB				*e*Sg	**Sg**	**02 57 51.4**	**-0.5**
STYT	**Tauyuan**	**0.55**	**303**	⇑*i*P	**Pg**	**02 57 45.0**	**-0.4**
	baz=315						
STYT				*i* S	**Sg**	**02 57 51.5**	**-1.2**
	baz=315						
SSD	**Sandimen**	**0.59**	**259**	⇓*i*P	**Pg**	**02 57 45.3**	**-0.9**
	baz=246						
SSD				S	**Sg**	**02 57 51.5**	**-2.4**
	baz=246						
TAW	**Tawu**	**0.61**	**214**	*e*P	**Pg**	**02 57 45.9**	**-0.5**
	baz=200						
TAW				*e*S	**Sg**	**02 57 53.6**	**-0.8**
	baz=200						
EAST	**Anshuo**	**0.61**	**218**	⇑*i*P	**Pg**	**02 57 46.1**	**-0.5**
	baz=201						
EAST				*e*S	**Sg**	**02 57 53.4**	**-1.1**
	baz=201						
EHY	**Hungye**	**0.64**	**5**	*e*P	**Pg**	**02 57 46.4**	**-0.8**
	baz=29						
SGST	**Jiashian**	**0.66**	**289**	⇓*i*P	**Pg**	**02 57 47.4**	**-0.1**
	baz=298						
SGST				S	**Sg**	**02 57 55.7**	**-0.4**
	baz=298						
YUS	**Yu-Shan**	**0.68**	**336**	⇑*i*P	**Pg**	**02 57 48.1**	**+0.1**
	baz=351						
YUS				*e*S	**Sg**	**02 57 56.7**	**-0.2**
	baz=351						
WTP	**Ta-pu**	**0.70**	**303**	⇑*i*P	**Pg**	**02 57 48.1**	**-0.3**
	baz=315						
WTP				S	**Sg**	**02 57 57.4**	**-0.2**
	baz=315						
SGLT	**Jiouru**	**0.72**	**259**	*e*P	**Pg**	**02 57 48.2**	**-0.5**
	baz=251						
SGLT				*e*S	**Sg**	**02 57 58.4**	**+0.3**
	baz=251						
TPUB	**Ta-pu**	**0.72**	**307**	*e*Pg	**Pg**	**02 57 48.1**	**-0.7**
TPUB				*e*Sg	**Sg**	**02 57 55.9**	**-2.3**
TPUB				*e*Sn	**Sg**	**02 57 57.8**	**-0.4**
CHN1	**Nanshi**	**0.74**	**295**	⇑*i*P	**Pg**	**02 57 49.0**	**-0.1**
	baz=306						
CHN1				S	**Sg**	**02 57 58.7**	**-0.2**
	baz=306						
ALS	**Alishan**	**0.77**	**327**	⇑*i*P	**Pg**	**02 57 49.6**	**0.0**
	baz=335						
ALS				S	**Sg**	**02 57 59.3**	**-0.3**
	baz=335						
SCZT	**Fangliau**	**0.77**	**230**	⇑*i*P	**Pg**	**02 57 49.0**	**-0.6**
	baz=220						
SCZT				S	**Sg**	**02 57 58.8**	**-0.8**
	baz=220						
TWM1	**Shoushan**	**0.77**	**267**	⇓*i*P	**Pg**	**02 57 50.3**	**+0.6**
	baz=264						
TWM1				*e*S	**Sg**	**02 58 01.6**	**+1.9**
	baz=264						
CHN4	**Tsaushan**	**0.78**	**308**	⇑*i*P	**Pg**	**02 57 49.6**	**-0.2**
	baz=314						
CHN4				S	**Sg**	**02 58 00.2**	**+0.1**
	baz=314						
TWK	**Hsinying**	**0.81**	**300**	⇑*i*P	**Pg**	**02 57 49.9**	**-0.6**
	baz=313						
TWK				*e*S	**Sg**	**02 58 00.6**	**-0.5**
	baz=313						
CHN3	**Shinhua**	**0.85**	**285**	*e*P	**Pg**	**02 57 51.6**	**+0.5**
	baz=285						
CHN3				*e*S	**Sg**	**02 58 03.9**	**+1.7**
	baz=285						
LAY	**Lan-yu**	**0.86**	**162**	*e*P	**Pg**	**02 57 51.3**	**-0.2**
	baz=153						
LAY				*e*S	**Sg**	**02 58 04.3**	**+1.6**
	baz=153						
CHN5	**Tsauling**	**0.90**	**324**	⇑*i*P	**Pg**	**02 57 51.9**	**-0.3**
	baz=331						
CHN5				*e*S	**Sg**	**02 58 05.0**	**+1.0**
	baz=331						
ESL	**Shilin**	**0.96**	**10**	*e*P	**Pg**	**02 57 52.5**	**-0.7**
	baz=32						
SSLB	**Suanglung**	**0.96**	**343**	*e*Pg	**Pg**	**02 57 52.4**	**-0.9**
SSLB				*e*Sg	**Sg**	**02 58 05.0**	**-0.7**
TWP	**Hsiaoliuchiu**	**0.98**	**238**	*e*P	**Pg**	**02 57 54.9**	**+1.4**
	baz=211						
CHN2	**Minshiung**	**0.98**	**313**	*e*P	**Pg**	**02 57 53.3**	**-0.4**
	baz=317						
CHN2				*e*S	**Sg**	**02 58 06.8**	**+0.4**
	baz=317						
HEN	**Hengchun**	**0.98**	**210**	*e*P	**Pg**	**02 57 53.8**	**+0.2**
	baz=187						
CHY	**Chiayi**	**0.99**	**310**	⇑*i*P	**Pg**	**02 57 53.6**	**-0.3**
	baz=313						
CHY				S	**Sg**	**02 58 06.8**	**0.0**
	baz=313						
TSEB	**Hengchuen, Pin**	**1.02**	**199**	*e*P	**Pg**	**02 57 53.4**	**-0.9**
	baz=180						
SCLT	**Jiali**	**1.03**	**288**	*e*P	**Pg**	**02 57 56.4**	**+1.8**
	baz=288						
WGK	**Gukeng**	**1.04**	**322**	P	**Pg**	**02 57 54.6**	**-0.2**
	baz=316						
WGK				S	**Sg**	**02 58 09.0**	**+0.7**
	baz=316						
SMLT	**Sun Moon Lake**	**1.07**	**342**	P	**Pg**	**02 57 54.7**	**-0.5**
	baz=350						
SMLT				S	**Sg**	**02 58 10.0**	**+0.9**
	baz=350						
TYC	**Yuchr**	**1.10**	**340**	P	**Pg**	**02 57 55.8**	**-0.1**
	baz=3.0						
TYC				*i* S	**Sg**	**02 58 11.1**	**+0.9**
	baz=3.0						
WNT	**Mingjian**	**1.14**	**332**	P	**Pg**	**02 57 56.6**	**-0.1**
	baz=338						
WNT				S	**Sg**	**02 58 12.1**	**+0.6**
	baz=338						
TWD	**Chiawan**	**1.25**	**14**	*e*P	**Pn**	**02 57 57.1**	**-1.4**
	baz=33						
TWD				*e*S	**Sb**	**02 58 12.8**	**-2.1**
	baz=33						
WHF	**Hehuan Shan**	**1.27**	**0**	*e*P	**Pn**	**02 57 57.4**	**-1.5**
	baz=23						
TCU	**Taichung**	**1.39**	**337**	*e*P	**Pn**	**02 58 00.9**	**+0.5**
	baz=341						
TWT	**Tachien**	**1.39**	**357**	*e*P	**Pn**	**02 57 59.6**	**-0.8**
	baz=3.0						
TWQ1	**Liyutan**	**1.54**	**343**	P	**Pn**	**02 58 03.0**	**+0.5**
	baz=349						
TWQ1				S	**Sn**	**02 58 23.7**	**+0.9**
	baz=349						
NNS	**Nan Shan**	**1.57**	**4**	*e*P	**Pn**	**02 58 04.7**	**+1.7**
	baz=11						
NSY	**Sanyi**	**1.61**	**344**	P	**Pn**	**02 58 04.6**	**+1.1**
	baz=349						
NSY				*e*S	**Sn**	**02 58 26.0**	**+1.5**
	baz=349						
NSTT	**Nanjuang**	**1.77**	**352**	*e*P	**Pn**	**02 58 06.6**	**+0.8**
	baz=358						
NSTT				*e*S	**Sn**	**02 58 28.8**	**+0.3**
	baz=358						
YHNB	**Yeheng**	**1.80**	**3**	*e*Pn	**Pn**	**02 58 05.2**	**-0.9**
YHNB				*e*Pg	**Pg**	**02 58 09.2**	**-0.1**
YHNB				*e*Sn	**Sn**	**02 58 28.4**	**-0.8**
YHNB				*e*Sg	**Sg**	**02 58 32.1**	**-0.6**
NSK	**Sanguang**	**1.81**	**3**	*e*P	**Pn**	**02 58 05.4**	**-0.7**
	baz=9.0						
TWC	**Suao**	**1.82**	**17**	*e*P	**Pn**	**02 58 06.6**	**+0.2**
	baz=38						
TWE	**Neicheng**	**1.89**	**11**	*e*P	**Pn**	**02 58 07.5**	**+0.2**
	baz=35						
TATO	**Taipei**	**2.11**	**6**	*e*Pg	**Pg**	**02 58 14.9**	**-0.4**
TATO				*e*Sn	**Sn**	**02 58 36.2**	**-0.7**
TATO				*e*Sg	**Sg**	**02 58 42.1**	**-0.6**
TWS1	**Kuangyinshan**	**2.23**	**4**	*e*P	**Pn**	**02 58 14.4**	**+2.4**
	baz=35						
NWF	**Wu-fen Shan**	**2.25**	**12**	*e*P	**Pn**	**02 58 13.3**	**+1.0**
	baz=37						

IDC 11 02:59:41.3±3.9, 2°.65S×138°.48E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/14, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=131.4km s-min=29.3km az=89.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.66**	**193**	P	Pn	03 03 48.7	-0.1
	0.2nm,0.3s,baz=13,slow=13,SNR=5.7						
FITZ	**Fitzroy Crossi**	**19.86**	**218**	P	Pn	03 04 13.9	-1.7
	0.1nm,0.3s,baz=57,slow=17,SNR=2.7						
ASAR	**Alice Springs**	**21.36**	**192**	P	P	03 04 30.6	+0.3
	1.8nm,0.7s,baz=20,slow=11,SNR=17						
MKAR	**Makanchi Array**	**69.60**	**322**	P	P	03 10 52.5	+0.1
	0.9nm,0.9s,baz=127,slow=7.8,SNR=4.4						

*ISCJB **11** 03:19:00.3±0.5, 25°.58N±0°.05×99°.93E±0°.05, h10km, mb3.6/10, MS3.3/2, Error ellipse: s-maj=7.3km s-min=6.0km az=16.0*
*IDC **11** 03:19:00.4±0.9, 25°.65N×99°.84E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.5/25, mbtmp3.7/8, ML4.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/35, Error ellipse: s-maj=41.5km s-min=14.9km az=76.0*
*BJI **11** 03:19:01.2, 25°.57N×99°.93E, h10km, ML4.1/8, Ms7 3.6/1*
*NEIC **11** 03:19:02.2±0.6, 25°.66N×99°.87E, h10km, mb3.8/3, Error ellipse: s-maj=21.3km s-min=8.3km az=81.0*
ISC 11 03:19:01.8±0.5, 25°.55N±0°.04×99°.88E±0°.05, h10km, n20, σ1§48/25, mb3.6/10, MS3.3/2, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.62**	**99**	Pg	**Pg**	**03 19 50.1**	**-1.9**
KMI				Sg	**Sg**	**03 20 26.0**	**+0.1**
KMI				smax			
	comp=N,870nm,0.9s						
KMI				smax			
	comp=E,930nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,3.8s						
KMI				LR	LR		
	comp=E,730nm,3.8s						
KMI				LR	LR		
	comp=Z,1μm,8.1s						
GYA	**Guiyang**	**6.17**	**80**	Pn	**Pn**	**03 20 35.1**	**+2.2**
CD2	**Chengdu**	**6.34**	**32**	Pn	**Pn**	**03 20 37.6**	**+2.3**
CD2				Sn	**Sn**	**03 21 48.5**	**+0.7**
CD2				Sg	**Sg**	**03 22 24.0**	**-1.4**
CD2				smax			
	comp=N,90nm,1.7s						
CD2				smax			
	comp=E,120nm,1.7s						
CD2				LR	LR		
	comp=Z,460nm,9.5s						
CHTO	**Chiang Mai**	**6.76**	**188**	*e*Pn	**Pn**	**03 20 42.8**	**+1.8**
	comp=Z,31nm,0.8s						
CHTO				*e*Pg	**Pg**	**03 21 09.5**	**-1.7**
CM31	**Chiang Mai Arr**	**7.11**	**187**	*e*Pg	**Pg**	**03 21 15.8**	**-2.2**
	comp=Z,21nm,0.5s						
CMAR	**Chiang Mai Arr**	**7.11**	**187**	Pn	**Pn**	**03 20 48.3**	**+2.4**
	comp=Z,1.0nm,0.3s,baz=5.3,slow=12,SNR=11						
CMAR				Pg	**Pg**	**03 21 12.2**	**-5.8**
	comp=Z,1.4nm,0.3s,baz=360,slow=16,SNR=29						
CMAR				Lg		03 22 48.5	
	comp=Z,1.3nm,0.3s,baz=11,slow=31,SNR=3.6						
CMAR	**Chiang Mai Arr**	**7.11**	**187**	Pn	**Pn**	**03 20 48.3**	**+2.4**
CMAR				Pg	**Pg**	**03 21 12.2**	**-5.8**
CMAR				Lg		03 22 48.5	
SHL	**Shillong**	**7.23**	**272**	*e*P	**Pn**	**03 20 50.5**	**+3.0**
SONM	**Songino Array**	**22.83**	**11**	P	**P**	**03 24 04.4**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.2,baz=191,slow=7.2,SNR=5.2						
ULN	**Ulaanbaatar**	**22.98**	**12**	*e*P	**P**	**03 24 06.5**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.5						
MK31	**Makanchi Array**	**25.41**	**331**	*e*P	**P**	**03 24 28.7**	**-0.6**
MKAR	**Makanchi Array**	**25.41**	**331**	P	**P**	**03 24 28.3**	**-1.0**
	comp=Z,2.8nm,0.9s,mb3.8,baz=134,slow=10,SNR=12						
TKM2	**Tokmak 2**	**26.38**	**317**	*e*P	**P**	**03 24 39.8**	**+1.6**
	comp=Z,1.4nm,0.7s,mb3.6						
KURK	**Kurchatov**	**29.97**	**333**	P	**P**	**03 25 08.9**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.6,baz=135,slow=10,SNR=5.7						
KURK				LR	LR	03 38 17.4	
	comp=Z,46nm,20.7s,MS3.1,baz=225,slow=39						
ZALV	**Zalesovo Beam**	**30.51**	**342**	P	**P**	**03 25 15.3**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.7,baz=160,slow=9.0,SNR=3.4						
BVAR	**Borovoye Array**	**35.24**	**329**	P	**P**	**03 25 54.8**	**-1.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=138,slow=9.7,SNR=3.8						
ABKAR	**Akbulak array**	**38.94**	**318**	*e*P	**P**	**03 26 27.0**	**-0.7**
	comp=Z,2.5nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**56.27**	**140**	P	**P**	**03 28 42.2**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.8,baz=329,slow=7.6,SNR=6.9						
ASAR	**Alice Springs**	**58.98**	**143**	P	**P**	**03 29 04.1**	**+2.4**
	comp=Z,0.3nm,0.7s,mb3.4,baz=322,slow=5.9,SNR=4.1						
GERES	**GERESS Array B**	**68.79**	**315**	LR	LR	04 01 17.3	
	comp=Z,35nm,20.3s,MS3.6,baz=27,slow=37						

*IDC **11** 03:39:46.5±4.9, 44°.04N×128°.27W, h0km, mb3.2/3, mb1 3.5/5, mb1mx3.3/26, mbtmp3.2/5, ML2.7/2, MS3.3/2, Ms1 3.2/2, ms1mx2.6/13, Error ellipse: s-maj=83.1km s-min=24.8km az=63.0*
*NEIC **11** 03:39:48.2±1.7, 44°.05N×128°.29W, h10km, mb3.8/3, Error ellipse: s-maj=22.8km s-min=9.5km az=74.0*
ISC 11 03:39:47.5±4.6, 44°.05N±0°.10×128°.3W±0°.2, h6km±29km, n20, σ0§86/20, mb3.5/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**3.47**	**69**	*e*Pn	**Pn**	**03 40 41.3**	**-0.7**
BBOR	**Butler Butte**	**4.28**	**104**	P	**Pn**	**03 40 52.7**	**-0.4**
IRO	**Indian Ridge**	**4.39**	**88**	P	**Pn**	**03 40 53.8**	**-0.8**
NLWA	**Neilton Lookou**	**4.58**	**42**	*e*Pn	**Pn**	**03 40 57.3**	**+0.1**
YBH	**Yreka Blue Hor**	**4.74**	**117**	Pn	**Pn**	**03 40 58.8**	**-0.6**
	0.2nm,0.3s,baz=209,slow=11,SNR=4.7						
YBH				Sn	**Sn**	**03 41 54.8**	**+0.2**
	0.2nm,0.3s,baz=62,slow=20,SNR=4.1						
MTMW	**Mount Mitchell**	**4.77**	**63**	P	**Pn**	**03 41 00.5**	**+0.6**
ASR	**Mount Adams--S**	**5.22**	**64**	P	**Pn**	**03 41 06.8**	**+0.9**
LON	**Longmire**	**5.33**	**57**	*e*Pn	**Pn**	**03 41 06.3**	**-1.2**
	10nm,0.9s						
OD2	**Odessa Site #2**	**7.52**	**60**	*e*Pn	**Pn**	**03 41 37.8**	**+0.2**
	2.3nm,0.9s						
NVAR	**Mina Array Bea**	**9.41**	**123**	Pn	**Pn**	**03 42 04.8**	**+1.2**
	0.0nm,0.3s,baz=284,slow=15,SNR=2.9						
DLBC	**Dease Lake**	**14.44**	**356**	LR	LR	03 48 29.4	
	comp=Z,68nm,18.4s,baz=158,slow=36						
SDCO	**Great Sand Dun**	**18.35**	**102**	*e*P	**Pn**	**03 44 04.4**	**+1.9**
	14nm,1.8s						
FFC	**Flin Flon**	**20.09**	**49**	*e*P	**P**	**03 44 22.7**	**+1.2**
	6.5nm,0.8s						
YKA	**Yellowknife

PGC ***11*** *04:03:01.5±34.0, 59°.53N×145°.48W, h10km, ML4.6/4, 183km Sse of Valdez, Ak Gulf Of Alaska*
NEIC ***11*** *04:03:03.6, 59°.70N×145°.15W, h0km, mb4.8/134, MS4.2/3, ML4.4(AEIC), ML4.8(PMR), After AEIC.*
ISCJB ***11*** *04:03:03.6±0.6, 59°.82N±0°.02×145°.19W±0°.04, h15km±4km, mb4.6/192, MS4.0/34, Error ellipse: s-maj=4.3km s-min=1.9km az=135.3*
IDC ***11*** *04:03:03.1±0.5, 59°.84N×145°.15W, h0km, mb4.4/27, mb1 4.5/31, mb1mx4.5/33, mbtmp4.4/31, ML4.0/4, MS3.9/20, Ms1 3.9/20, ms1mx3.8/34, Error ellipse: s-maj=13.6km s-min=9.1km az=19.0*
MOS ***11*** *04:03:03.3±0.8, 59°.80N×145°.23W, h14km, mb4.9/90, MS4.0/10, Error ellipse: s-maj=8.7km s-min=3.8km az=96.0*
BGS ***11*** *04:03:04.2±2.0, 59°.70N×145°.15W, h10km, mb4.7*
BJI ***11*** *04:03:05.0, 60°.54N×145°.79W, h5km, mB5.0/16, mb4.8/28, Ms4.9/14, Ms7 4.5/17*
SZGRF ***11*** *04:03:10.6, 60°.38N×145°.47W, h33km, mb5.1, Southern Alaska, United States*

ISC 11 04:03:04.1±0.5, 59°.83N±0°.02×145°.16W±0°.04, h5km±3km, h14km±3.8km; pP-P, n792, e0°.74/813, mb4.6/192, MS4.0/34, 184C-166D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MID	**Middleton Isla**	**0.72**	**237**	P	**Pg**	**04 03 17.6**	**-0.4**
MID				S	**Sg**	**04 03 29.4**	**+2.0**
EYAK	**Cordova Ski Ar**	**0.78**	**338**	P	**Pg**	**04 03 21.0**	**+1.9**
EYAK				S	**Sg**	**04 03 32.1**	**+2.8**
BMRM	**Bremner River**	**1.18**	**13**	P	**Pg**	**04 03 27.3**	**+0.6**
BMRM				S	**Sg**	**04 03 45.5**	**+3.6**
DIV	**Divide**	**1.34**	**347**	P	**Pn**	**04 03 29.6**	**+0.1**
DIV				S	**Sg**	**04 03 50.4**	**+3.3**
SEW	**Seward**	**2.18**	**279**	P	**Pn**	**04 03 39.6**	**-1.3**
SML	**Sawmill**	**2.52**	**323**	P	**Pn**	**04 03 45.8**	**+0.1**
SLKM	**Skilak Lake**	**2.62**	**287**	P	**Pn**	**04 03 46.1**	**-1.0**
PMR	**Palmer**	**2.64**	**314**	P	**Pn**	**04 03 47.5**	**+0.2**
YKU2	**Yakutat**	**2.80**	**94**	*e*Pn	**Pn**	**04 03 55.9**	**+6.4**
FIB	**Fire Island**	**2.82**	**301**	P	**Pn**	**04 03 50.2**	**+0.4**
PNL	**Peninsula**	**2.92**	**91**	P	**Pn**	**04 03 49.2**	**-2.0**
PAX	**Paxson**	**3.16**	**357**	P	**Pn**	**04 03 55.3**	**+0.9**
MENT	**Mentasta**	**3.20**	**12**	*e*P	**Pn**	**04 03 55.6**	**+0.6**
BCA3	**Beaver Creek A**	**3.63**	**25**	P	**Pn**	**04 04 01.6**	**+0.7**
SKT	**Skwentna**	**3.79**	**307**	P	**Pn**	**04 04 03.1**	**+0.1**
RSO	**Redoubt South**	**3.85**	**283**	*e*Pn	**Pn**	**04 04 02.5**	**-1.4**
DOT	**Dot Lake**	**3.87**	**7**	P	**Pn**	**04 04 05.6**	**+1.4**
HYT	**Haines Junctio**	**3.93**	**72**	*e*Pn	**Pn**	**04 04 04.4**	**-0.7**
HYT	**Haines Junctio**	**3.93**	**72**	⇑Pn	**Pn**	**04 04 04.8**	**-0.3**
MCK	**McKinley**	**4.31**	**337**	*e*Pn	**Pn**	**04 04 11.2**	**+1.0**
MCK				*e*Sg	**Sg**	**04 05 24.4**	**+2.1**
KDAK	**Kodiak Island**	**4.37**	**245**	Pn	**Pn**	**04 04 07.9**	**-3.2**
	28nm,0.3s,baz=46,slow=8.6,SNR=150						
KDAK				Sn	**Sn**	**04 04 56.3**	**-6.1**
	20nm,0.3s,baz=64,slow=21,SNR=9.4						
KDAK	**Kodiak Island**	**4.37**	**245**	*e*Pn	**Pn**	**04 04 08.2**	**-2.9**
KDAK				*e*Sn	**Sn**	**04 04 56.3**	**-6.1**
TRF	**Thorofare Moun**	**4.38**	**328**	*e*Pn	**Pn**	**04 04 11.6**	**+0.4**
TRF				*e*Pg	**Pg**	**04 04 25.4**	**-2.6**
TRF				*e*Sg	**Sg**	**04 05 26.3**	**+1.6**
PLBC	**Pleasant Camp**	**4.48**	**91**	⇓Pn	**Pn**	**04 04 10.5**	**-2.1**
PPLA	**Purkeypile**	**4.57**	**315**	*e*Pn	**Pn**	**04 04 13.2**	**-0.7**
PPLA				*e*Pg	**Pg**	**04 04 28.0**	**-3.7**
PPLA				*e*Sg	**Sg**	**04 05 22.9**	**-7.9**
KTH	**Kantishna Hill**	**4.64**	**326**	*e*Pn	**Pn**	**04 04 14.9**	**+0.2**
KTH				*e*Pg	**Pg**	**04 04 30.7**	**-2.2**
KTH				*e*Sg	**Sg**	**04 05 32.0**	**-0.9**
OHAK	**Old Harbor**	**5.00**	**242**	*e*P	**Pn**	**04 04 16.8**	**-2.9**
SKAG	**Skagway**	**5.00**	**90**	*e*Pn	**Pn**	**04 04 17.0**	**-2.7**
DAWY	**Dawson**	**5.05**	**30**	*e*Pn	**Pn**	**04 04 21.1**	**+0.8**
DAWY	**Dawson**	**5.05**	**30**	⇓Pn	**Pn**	**04 04 21.0**	**+0.7**
BPAW	**Bear Paw Mtn.**	**5.09**	**330**	*e*Pn	**Pn**	**04 04 20.9**	**-0.1**
	6μm,1.1s						
BPAW				*e*Pg	**Pg**	**04 04 39.5**	**-2.1**
BPAW				*e*Sg	**Sg**	**04 05 49.2**	**+1.8**
WHY	**Whitehorse**	**5.19**	**76**	⇑Pn	**Pn**	**04 04 20.9**	**-1.4**
COLA	**College**	**5.22**	**347**	*e*P	**Pn**	**04 04 22.3**	**-0.4**
COLA				pmax	pmax		
	comp=Z,207nm,0.9s						
COLA	**College**	**5.22**	**347**	*e*Pn	**Pn**	**04 04 22.3**	**-0.4**
	comp=Z,206nm,0.9s						
COLA				*e*Pb	**Pb**	**04 04 36.2**	**+0.5**
COLA				*e*Pg	**Pg**	**04 04 42.1**	**-1.9**
COLA				*e*Sg	**Sg**	**04 05 52.6**	**+1.2**
CHUM	**Lake Minchumin**	**5.29**	**323**	*e*Pn	**Pn**	**04 04 23.8**	**0.0**
	comp=Z,276nm,0.8s						
CHUM				*e*Pg	**Pg**	**04 04 46.7**	**+1.3**
EGAK	**Eagle**	**5.30**	**19**	*e*Pn	**Pn**	**04 04 25.0**	**+1.1**
SVW2	**Sparrevohn**	**5.31**	**288**	*e*P	**Pn**	**04 04 20.7**	**-3.3**
SIT	**Sitka**	**5.86**	**114**	*e*P	**Pn**	**04 04 27.0**	**-4.6**
SIT				pmax	pmax		
	comp=Z,44nm,0.6s						
SIT	**Sitka**	**5.86**	**114**	*e*Pn	**Pn**	**04 04 27.0**	**-4.6**
	comp=Z,44nm,0.6s						
TTA	**Tatalina**	**6.07**	**305**	*e*P	**Pn**	**04 04 33.7**	**-0.7**
COLD	**Coldfoot**	**7.76**	**345**	*e*Pn	**Pn**	**04 04 57.1**	**-0.5**
	comp=Z,56nm,0.8s						
COLD				*e*Pb	**Pb**	**04 05 15.2**	**-3.7**
CRAG	**Craig**	**7.79**	**119**	*e*Pn	**Pn**	**04 04 53.0**	**-5.0**
CHGN	**Chignik**	**7.87**	**249**	*e*Pn	**Pn**	**04 04 57.4**	**-1.7**
DLBC	**Dease Lake**	**7.91**	**94**	Pn	**Pn**	**04 04 57.9**	**-1.7**
	comp=Z,3.1nm,0.3s,baz=271,slow=10,SNR=66						
DLBC	**Dease Lake**	**7.91**	**94**	*e*Pn	**Pn**	**04 04 57.4**	**-2.2**
DLBC	**Dease Lake**	**7.91**	**94**	⇓Pn	**Pn**	**04 04 57.3**	**-2.3**
NDB	**Naden**	**8.90**	**126**	⇓Pn	**Pn**	**04 05 07.7**	**-5.5**
SDPT	**Sand Point**	**9.36**	**248**	*e*P	**Pn**	**04 05 19.5**	**-0.1**
	comp=Z,93nm,0.6s						
DIB	**Dawson Inlet,**	**9.64**	**128**	Pn	**Pn**	**04 05 17.9**	**-5.5**
DIB				T		04 14 55.3	
	SNR=3.3						
DIB	**Dawson Inlet,**	**9.64**	**128**	⇑Pn	**Pn**	**04 05 18.2**	**-5.2**
DIB				⇑Sn	**Sn**	**04 07 00.6**	**-11**
RUBB	**Prince Rupert**	**9.80**	**118**	⇑Pn	**Pn**	**04 05 20.9**	**-4.6**
MOBC	**Moresby Island**	**9.89**	**127**	⇓Pn	**Pn**	**04 05 21.7**	**-5.1**
MOBC				⇑Sn	**Sn**	**04 07 06.7**	**-11**
INK	**Inuvik**	**9.89**	**26**	Pn	**Pn**	**04 05 27.1**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=211,slow=16,SNR=35						
INK				LR	LR	04 10 08.9	
	comp=Z,539nm,19.5s,baz=199,slow=43						
INK	**Inuvik**	**9.89**	**26**	*e*Pn	**Pn**	**04 05 27.1**	**+0.3**
INK	**Inuvik**	**9.89**	**26**	⇑Pn	**Pn**	**04 05 27.0**	**+0.3**
BNB	**Barry Inlet**	**10.40**	**128**	⇑Pn	**Pn**	**04 05 28.2**	**-5.6**
BBB	**Bella Bella**	**12.20**	**121**	Pn	**Pn**	**04 05 55.2**	**-3.2**
	comp=Z,0.8nm,0.3s,baz=347,slow=9.5,SNR=5.8						
BBB				LR	LR	04 09 29.9	
	comp=Z,485nm,19.5s,baz=287,slow=32						
GAMB	**Gambell**	**13.11**	**299**	*e*Pn	**Pn**	**04 06 10.9**	**+0.3**
	comp=Z,23nm,0.9s						
YKA	**Yellowknife Ar**	**14.90**	**67**	Pn	**Pn**	**04 06 33.4**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=268,slow=13,SNR=52						
YKA	**Yellowknife Ar**	**14.90**	**67**	Pn	**Pn**	**04 06 33.4**	**-1.7**
PGC	**Sidney**	**16.82**	**122**	*e*Pn	**Pn**	**04 06 57.7**	**-2.5**
	comp=Z,9.2nm,1.5s						
A05A	**Maple Falls**	**17.16**	**119**	⇑P	**Pn**	**04 07 02.8**	**-1.5**
	baz=17						
A06A	**Chilliwack**	**17.35**	**118**	⇓P	**Pn**	**04 07 08.1**	**+1.4**
	baz=17						
RPW	**Rockport**	**17.82**	**119**	*e*P	**Pn**	**04 07 10.1**	**-2.5**
JCW	**Jim Creek**	**17.83**	**120**	*e*P	**Pn**	**04 07 12.7**	**-0.1**
A07A	**Ashnola River,**	**17.88**	**116**	⇑P	**Pn**	**04 07 13.6**	**+0.3**
	baz=18,SNR=14						
B07A	**Winthrop**	**18.43**	**117**	⇑P	**Pn**	**04 07 20.2**	**+0.1**
	baz=18,SNR=10						
A08A	**Turner Farm, O**	**18.46**	**115**	⇑P	**Pn**	**04 07 21.1**	**+0.7**
	baz=18,SNR=6.7						
D05A	**Enumclaw**	**18.58**	**123**	⇑P	**Pn**	**04 07 21.8**	**-0.1**
	baz=18						
EDM	**Edmonton**	**18.61**	**97**	*e*P	**Pn**	**04 07 20.7**	**-1.5**
NLW	**Nelson Butte**	**18.62**	**118**	P	**Pn**	**04 07 22.5**	**+0.2**
A09A	**Danville**	**18.76**	**114**	⇓P	**Pn**	**04 07 23.9**	**-0.2**
	baz=19,SNR=17						
B08A	**Colville Reser**	**18.86**	**116**	⇓P	**Pn**	**04 07 24.5**	**-0.9**
	baz=19,SNR=7.5						
F03A	**Seaside**	**18.94**	**128**	⇑P	**Pn**	**04 07 25.4**	**-0.8**
	baz=19						
ETW	**Entiat**	**18.98**	**119**	P	**Pn**	**04 07 26.5**	**-0.3**
LON	**Longmire**	**19.00**	**123**	*e*P	**Pn**	**04 07 27.1**	**+0.1**
LON				pmax	pmax		
	comp=Z,48nm,1.6s						
LON	**Longmire**	**19.00**	**123**	*e*P	**Pn**	**04 07 27.1**	**0.0**
	comp=Z,48nm,1.6s						
C07A	**Waterville**	**19.03**	**119**	⇑P	**Pn**	**04 07 26.7**	**-0.7**
	baz=19,SNR=12						
D06A	**Cle Elum**	**19.07**	**121**	⇓P	**Pn**	**04 07 27.6**	**-0.2**
	baz=19,SNR=22						
WTV	**Waterville**	**19.07**	**118**	P	**Pn**	**04 07 27.4**	**-0.5**
WPW	**White Pass**	**19.15**	**123**	P	**Pn**	**04 07 29.2**	**+0.4**
A10A	**Northport**	**19.23**	**112**	⇓P	**Pn**	**04 07 29.4**	**-0.4**
	baz=19						
B09A	**Rice**	**19.36**	**114**	⇑P	**Pn**	**04 07 30.9**	**-0.4**
	baz=19,SNR=25						
F04A	**Amboy**	**19.40**	**126**	⇑P	**Pn**	**04 07 31.2**	**-0.6**
	baz=19						
C08A	**Higginbotham F**	**19.41**	**117**	⇓P	**Pn**	**04 07 31.0**	**-1.0**
	baz=19						
E06A	**Yakima**	**19.52**	**122**	⇓P	**Pn**	**04 07 32.4**	**-0.8**
	baz=19						
C09A	**Chrisman Ranch**	**19.75**	**116**	⇓P	**Pn**	**04 07 35.0**	**-1.1**
	baz=20,SNR=14						
A11A	**Hall Mountain,**	**19.81**	**110**	⇑P	**Pn**	**04 07 35.3**	**-1.4**
	baz=20,SNR=11						
OD2	**Odessa Site #2**	**19.86**	**117**	*e*P	**Pn**	**04 07 35.4**	**-1.9**
	comp=Z,6.2nm,0.3s						
NEW	**Newport**	**19.95**	**113**	*e*P	**Pn**	**04 07 37.1**	**-1.2**
NEW				pmax	pmax		
	comp=Z,123nm,2.1s						
NEW	**Newport**	**19.95**	**113**	*e*P	**Pn**	**04 07 37.1**	**-1.2**
	comp=Z,123nm,2.1s						
D08A	**Wollman Farm,**	**20.02**	**118**	⇓P	**P**	**04 07 37.1**	**-0.4**
	baz=20,SNR=9.8						
B11A	**Sandpoint**	**20.18**	**112**	⇑P	**P**	**04 07 40.0**	**+0.8**
	baz=20						
C10A	**Spilker Farm,**	**20.18**	**114**	⇓P	**P**	**04 07 39.8**	**+0.5**
	baz=20						
RSW	**Rattlesnake Hi**	**20.23**	**120**	*e*P	**P**	**04 07 39.7**	**-0.1**
HAWA	**Hanford**	**20.26**	**120**	*e*P	**P**	**04 07 39.3**	**-0.8**
	comp=Z,136nm,2.4s						
D09A	**Jones Farm, Ri**	**20.29**	**117**	⇓P	**P**	**04 07 40.0**	**-0.4**
	baz=20,SNR=11						
E08A	**Dider Farm, El**	**20.39**	**119**	⇑P	**P**	**04 07 41.3**	**-0.2**
	baz=20						
F07A	**Phinny Hill Vi**	**20.48**	**122**	⇓P	**P**	**04 07 42.3**	**-0.2**
	baz=20						
H04A	**Detroit Lake**	**20.52**	**127**	⇑P	**P**	**04 07 42.8**	**-0.1**
	baz=20						
B12A	**Libby**	**20.52**	**110**	⇑P	**P**	**04 07 43.3**	**+0.4**
	baz=20,SNR=12						
A13A	**Flathead Natio**	**20.76**	**108**	⇓P	**P**	**04 07 45.3**	**-0.1**
	baz=21						
D10A	**Wagner Farm, O**	**20.76**	**116**	⇑P	**P**	**04 07 44.8**	**-0.8**
	baz=21,SNR=25						
E09A	**Wood Farm, Sta**	**20.78**	**118**	⇓P	**P**	**04 07 45.1**	**-0.7**
	baz=21						
WALA	**Waterton Lakes**	**20.91**	**107**	*e*P	**P**	**04 07 46.9**	**-0.3**
	comp=Z,1.7nm,1.2s						
F08A	**Pendleton**	**21.05**	**120**	⇓P	**P**	**04 07 48.4**	**-0.3**
	baz=21						
C12B	**Naegeli Ranch,**	**21.11**	**112**	⇑P	**P**	**04 07 49.3**	**-0.1**
	baz=21,SNR=23						
B13A	**Whitefish**	**21.12**	**109**	⇑P	**P**	**04 07 48.9**	**-0.5**
	baz=21,SNR=18						
D11A	**Klaveano Farm,**	**21.20**	**114**	⇓P	**P**	**04 07 49.4**	**-0.9**
	baz=21,SNR=55						
A14A	**Double T Ranch**	**21.21**	**107**	⇑P	**P**	**04 07 49.9**	**-0.5**
	baz=21,SNR=24						
LNOR	**Lincton Mounta**	**21.21**	**119**	*e*P	**P**	**04 07 50.5**	**+0.1**
KEBM	**Edson Butte**	**21.23**	**134**	*e*Pn	**P**	**04 07 52.2**	**+1.6**
	comp=Z,103nm,1.2s,mb5.0						
E10A	**Myers Farm, Un**	**21.26**	**116**	⇑P	**P**	**04 07 50.7**	**-0.3**
	baz=21						
VIPM	**Ingram Point**	**21.30**	**125**	P	**P**	**04 07 51.6**	**+0.3**
BSMT	**Bassoo Peak**	**21.34**	**111**	*e*P	**P**	**04 07 51.4**	**-0.4**
G08A	**Pilot Rock**	**21.37**	**121**	⇑P	**P**	**04 07 51.7**	**-0.4**
	baz=21,SNR=14						
A15A	**Johnson Ranch,**	**21.54**	**106**	⇓P	**P**	**04 07 53.4**	**-0.5**
	baz=22,SNR=26						
C13A	**Hot Springs**	**21.56**	**111**	⇑P	**P**	**04 07 53.3**	**-0.8**
	baz=22,SNR=15						
F10A	**Beach Ranch, E**	**21.60**	**117**	⇓P	**P**	**04 07 54.1**	**-0.5**
	baz=22						
D12A	**Red Ives Fores**	**21.65**	**113**	⇑P	**P**	**04 07 54.9**	**-0.2**
	baz=22						
JTMT	**Jette**	**21.65**	**110**	*e*P	**P**	**04 07 55.0**	**-0.1**
YBMT	**Yellow Bay**	**21.70**	**110**	*e*P	**P**	**04 07 55.5**	**-0.1**
E11A	**Bogner Ranch,**	**21.77**	**115**	⇓P	**P**	**04 07 55.4**	**-1.0**
	baz=22,SNR=26						
C14A	**Swan Lake**	**21.89**	**109**	⇑P	**P**	**04 07 57.0**	**-0.7**
	baz=22						
G09A	**Cove**	**21.89**	**119**	⇓P	**P**	**04 07 57.1**	**-0.7**
	baz=22,SNR=21						
SWMT	**Swartz Lake**	**21.95**	**110**	*e*P	**P**	**04 07 57.8**	**-0.6**
HUMO	**Hull Mountain**	**21.97**	**132**	*e*P	**P**	**04 07 59.3**	**+0.8**
	comp=Z,25nm,1.0s,mb4.6						
E12A	**Beaver Dam Sad**	**22.02**	**114**	⇓P	**P**	**04 07 58.5**	**-0.6**
	baz=22,SNR=33						
D13A	**Huson**	**22.04**	**112**	⇑P	**P**	**04 07 58.7**	**-0.6**
	baz=22,SNR=18						
B15A	**Bradely Ranch,**	**22.08**	**107**	⇓P	**P**	**04 07 58.8**	**-0.9**
	baz=22,SNR=20						
H08A	**Prairie City**	**22.11**	**122**	⇑P	**P**	**04 07 59.5**	**-0.6**
	baz=22,SNR=24						
I07A	**Izee**	**22.11**	**124**	⇑P	**P**	**04 07 59.6**	**-0.5**
	baz=22,SNR=19						
F11A	**Grangeville**	**22.15**	**116**	⇑P	**P**	**04 07 59.7**	**-0.8**
	baz=22,SNR=18						
BILL	**Bilibino**	**22.27**	**312**	*d i*P	**P**	**04 08 01.5**	**-0.1**
BILL				*i*		04 08 09.7	
BILL				*e*S	**S**	**04 12 07.3**	**+0.5**
BILL				pmax	pmax		
	comp=Z,31nm,1.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS3.7						
BILL	**Bilibino**	**22.27**	**312**	*e*P	**P**	**04 08 01.3**	**-0.3**
	comp=Z,20nm,0.9s,mb4.5						
SLMT	**Seeley Lake**	**22.39**	**110**	*e*P	**P**	**04 08 02.7**	**-0.3**
B16A	**M & M Farms, S**	**22.42**	**106**	⇓P	**P**	**04 08 02.2**	**-1.1**
	baz=22,SNR=7.5						
H09A	**Durkee**	**22.43**	**120**	⇓P	**P**	**04 08 03.4**	**-0.1**
	baz=22						
C15A	**Salmond Ranch,**	**22.43**	**108**	⇓P	**P**	**04 08 02.6**	**-0.8**
	baz=22,SNR=36						
BMO	**Blue Mountains**	**22.44**	**119**	*e*P	**P**	**04 08 03.4**	**-0.1**
	comp=Z,61nm,1.3s,mb4.9						
G11A	**Walters Elk Ra**	**22.47**	**117**	⇓P	**P**	**04 08 03.1**	**-0.8**
	baz=22,SNR=75						
MSO	**Missoula**	**22.47**	**111**	*e*P	**P**	**04 08 03.5**	**-0.4**
	comp=Z,17nm,1.1s,mb4.4						
D14A	**Greenough**	**22.49**	**110**	⇓P	**P**	**04 08 03.6**	**-0.6**
	baz=22						
E13A	**Victor**	**22.64**	**112**	⇑P	**P**	**04 08 04.8**	**-0.8**
	baz=23,SNR=17						
F12A	**Elk City**	**22.66**	**115**	⇑P	**P**	**04 08 05.5**	**-0.4**
	baz=23,SNR=59						
K05A	**Summer Lake**	**22.66**	**128**	⇑P	**P**	**04 08 06.6**	**+0.6**
	baz=23,SNR=18						
CHMT	**Chamberlain Mo**	**22.73**	**110**	*e*P	**P**	**04 08 06.2**	**-0.5**
YBH	**Yreka Blue Hor**	**22.82**	**133**	P	**P**	**04 08 08.1**	**+0.5**
	comp=Z,15nm,1.0s,mb4.4,baz=348,slow=3.1,SNR=32						
YBH	**Yreka Blue Hor**	**22.82**	**133**	*e*P	**P**	**04 08 08.0**	**+0.4**
YBH				pmax	pmax		
	comp=Z,21nm,1.1s						
YBH	**Yreka Blue Hor**	**22.82**	**133**	*e*P	**P**	**04 08 08.0**	**+0.5**
	comp=Z,21nm,1.1s,mb4.5						
C16A	**Fuhringer Ranc**	**22.83**	**107**	⇑P	**P**	**04 08 06.6**	**-1.0**
	baz=23,SNR=13						
B17A	**L&G Farms, Che**	**22.95**	**105**	⇑P	**P**	**04 08 08.2**	**-0.7**
	baz=23,SNR=16						
E14A	**Clinton**	**22.98**	**112**	⇓P	**P**	**04 08 08.5**	**-0.8**
	baz=23,SNR=9.0						
D15A	**Lincoln**	**22.99**	**109**	⇑P	**P**	**04 08 08.5**	**-0.9**
	baz=23						
F13A	**Darby**	**23.06**	**114**	⇓P	**P**	**04 08 09.3**	**-0.9**
	baz=23,SNR=21						
G12A	**Big Creek, Yel**	**23.11**	**116**	⇑P	**P**	**04 08 09.7**	**-0.9**
	baz=23						
H11A	**Donnelly**	**23.13**	**118**	⇓P	**P**	**04 08 10.2**	**-0.7**
	baz=23,SNR=12						
J08A	**Circle Bar Ran**	**23.13**	**124**	⇑P	**P**	**04 08 09.1**	**-1.8**
	baz=23						
KHMM	**Horse Mountain**	**23.19**	**135**	*e*P	**P**	**04 08 13.5**	**+2.0**
	comp=Z,46nm,1.3s,mb4.7						
B18A	**Beardsley Farm**	**23.38**	**103**	⇑P	**P**	**04 08 13.1**	**-0.4**
	baz=23						
E15A	**Deer Lodge**	**23.38**	**110**	⇓P	**P**	**04 08 12.5**	**-0.9**
	baz=23						
RES	**Resolute Bay**	**23.39**	**31**	P	**P**	**04 08 11.1**	**-2.2**
	comp=Z,6.3nm,0.6s,mb4.2,baz=253,slow=12,SNR=57						
RES				LR	LR	04 18 23.6	
	comp=Z,203nm,20.9s,MS3.6,baz=66,slow=39						
RES	**Resolute Bay**	**23.39**	**31**	*e*P	**P**	**04 08 13.4**	**0.0**
RES				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
RES	**Resolute Bay**	**23.39**	**31**	*e*P	**P**	**04 08 13.4**	**0.0**
	comp=Z,12nm,0.8s,mb4.4						
C17A	**Wharram Farm,**	**23.42**	**106**	⇑P	**P**	**04 08 12.4**	**-1.5**
	baz=23,SNR=9.8						
J09A	**Fry Pan Ranch,**	**23.45**	**122**	⇑P	**P**	**04 08 14.4**	**+0.2**
	baz=23,SNR=16						
D16A	**Dana Ranch, Ca**	**23.46**	**108**	⇓P	**P**	**04 08 14.4**	**+0.1**
	baz=23,SNR=6.7						
F14A	**Wisdom**	**23.49**	**112**	⇓P	**P**	**04 08 13.9**	**-0.7**
	baz=23,SNR=14						
FFC	**Flin Flon**	**23.55**	**83**	*e*P	**P**	**04 08 14.5**	**-0.8**
FFC				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.7						
FFC	**Flin Flon**	**23.55**	**83**	*e*P	**P**	**04 08 14.5**	**-0.8**
	comp=Z,34nm,1.0s,mb4.7						
HRY	**Holter Researc**	**23.56**	**109**	*e*P	**P**	**04 08 14.9**	**-0.5**
MOD	**Modoc**	**23.59**	**128**	*e*P	**P**	**04 08 15.9**	**+0.1**
	comp=Z,11nm,0.8s,mb4.3						
G13A	**Cobalt**	**23.63**	**115**	⇓P	**P**	**04 08 15.4**	**-0.7**
	baz=24,SNR=16						
EGMT	**Eagleton**	**23.64**	**104**	⇑P	**P**	**04 08 15.5**	**-0.6**
	baz=24,SNR=19						
EGMT	**Eagleton**	**23.64**	**104**	*e*P	**P**	**04 08 15.4**	**-0.7**
	comp=Z,20nm,0.8s,mb4.6						
E16A	**East Helena**	**23.76**	**109**	⇑P	**P**	**04 08 16.2**	**-1.0**
	baz=24,SNR=13						
H12A	**Diamond D Ranc**	**23.77**	**116**	⇓P	**P**	**04 08 16.8**	**-0.5**
	baz=24,SNR=7.2						
I11A	**Placerville**	**23.77**	**119**	⇓P	**P**	**04 08 16.8**	**-0.5**
	baz=24,SNR=14						
D17A	**Six Diamond Ra**	**23.79**	**107**	⇑P	**P**	**04 08 16.4**	**-1.1**
	baz=24						
J10A	**Berg Farm, Mel**	**23.80**	**121**	⇑P	**P**	**04 08 17.5**	**-0.2**
	baz=24						
WVOR	**Wild Horse Val**	**23.82**	**125**	*e*P	**P**	**04 08 17.7**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,43nm,1.6s,mb4.6						
WVOR	**Wild Horse Val**	**23.82**	**125**	*e*P	**P**	**04 08 17.7**	**-0.1**
	comp=Z,43nm,1.6s,mb4.6						
G14A	**Jackson**	**23.87**	**113**	⇑P	**P**	**04 08 17.3**	**-1.0**
	baz=24						
F15A	**Butte**	**23.88**	**111**	⇑P	**P**	**04 08 17.4**	**-0.9**
	baz=24,SNR=7.0						
WDC	**Whiskeytown Da**	**23.88**	**134**	*e*P	**P**	**04 08 19.3**	**+0.9**
WDC				pmax	pmax		
	comp=Z,36nm,1.0s,mb4.8						
WDC	**Whiskeytown Da**	**23.88**	**134**	*e*P	**P**	**04 08 19.3**	**+0.9**
	comp=Z,36nm,1.0s,mb4.8						
LRM	**Limekiln Ridge**	**23.91**	**111**	*e*P	**P**	**04 08 18.4**	**-0.2**
H13A	**Challis**	**24.03**	**116**	⇓P	**P**	**04 08 18.9**	**-0.7**
	baz=24,SNR=26						
DLMT	**Dillon**	**24.19**	**112**	*e*P	**P**	**04 08 20.3**	**-0.8**
	comp=Z,25nm,1.1s,mb4.6						
D18A	**Linhart Farms,**	**24.19**	**106**	⇑P	**P**	**04 08 20.6**	**-0.5**
	baz=24,SNR=9.7						
E17A	**Martinsdale**	**24.20**	**108**	⇑P	**P**	**04 08 20.5**	**-0.8**
	baz=24						
MFID	**Camas Ranch**	**24.22**	**120**	⇑P	**P**	**04 08 20.6**	**-0.9**
	baz=24						
I12A	**Atlanta**	**24.23**	**118**	⇓P	**P**	**04 08 21.2**	**-0.4**
	baz=24,SNR=19						
K10A	**MacKenzie Ranc**	**24.29**	**122**	⇑P	**P**	**04 08 21.7**	**-0.3**
	baz=24,SNR=8.2						
G15A	**Dillon**	**24.38**	**112**	⇓P	**P**	**04 08 22.5**	**-0.5**
	baz=24,SNR=24						
H14A	**Leadore**	**24.39**	**114

baz=26
M12A Wells 26.24 121 ⇑P P 04 08 40.0 +0.2
baz=26,SNR=17
K15A Arbon 26.27 116 ⇓P P 04 08 40.6 +0.5
baz=26
LAO LASA Array 26.30 102 *eP* **P 04 08 40.0 -0.4**
comp=Z,24nm,1.0s,mb4.7
RRI2 Red Ridge 26.31 114 *eP* **P 04 08 40.8 +0.4**
comp=Z,27nm,1.6s,mb4.5
TPAW Teton Pass 26.38 113 *eP* **P 04 08 41.7 +0.7**
comp=Z,32nm,1.4s,mb4.7
N11A Elko Archery C 26.38 123 ⇑P P 04 08 41.9 +0.8
baz=26
LOHW Long Hollow 26.44 112 *eP* **P 04 08 42.2 +0.6**
comp=Z,19nm,1.3s,mb4.5
L14A Malta 26.47 118 ⇓P P 04 08 42.5 +0.6
baz=26
SNOW Snow King Moun 26.49 113 *eP* **P 04 08 42.5 +0.5**
comp=Z,16nm,0.9s,mb4.5
O10A Cortez Mining, 26.50 125 ⇑P P 04 08 42.6 +0.4
baz=26
REDW Red Top Meadow 26.52 113 *eP* **P 04 08 42.1 -0.2**
comp=Z,23nm,1.3s,mb4.6
J17A Brown Place, J 26.58 113 ⇑P P 04 08 42.9 0.0
baz=26,SNR=12
K16A Soda Springs 26.59 115 ⇓P P 04 08 43.2 +0.3
baz=26
M13A Montello 26.61 120 ⇑P P 04 08 43.3 +0.2
baz=26,SNR=12
M13A Montello 26.61 120 *eP* **P 04 08 42.7 -0.4**
comp=Z,21nm,1.4s,mb4.5
N12A Clover Valley, 26.65 122 ⇑P P 04 08 43.8 +0.3
baz=27,SNR=12
N12A Clover Valley, 26.65 122 *eP* **P 04 08 44.0 +0.5**
comp=Z,24nm,1.2s,mb4.6
ELK Elko 26.65 122 P **P 04 08 44.2 +0.8**
comp=Z,7.2nm,0.7s,mb4.3,baz=314,slow=8.9,SNR=51
ELK LR LR 04 18 26.2
comp=Z,195nm,20.6s,MS3.6,baz=149,slow=35
I18A Diamond G Ranc 26.74 111 ⇑P P 04 08 44.7 +0.4
baz=27,SNR=7.7
M14A Sheep Mountain 26.85 119 ⇓P P 04 08 45.8 +0.5
baz=27,SNR=16
L15A Malad City 26.88 117 ⇑P P 04 08 45.9 +0.4
baz=27,SNR=14
HVU Hansel Valley 26.89 118 *eP* **P 04 08 46.5 +0.9**
HVU pmax pmax
comp=Z,19nm,1.1s,mb4.5
HVU Hansel Valley 26.89 118 *eP* **P 04 08 46.5 +0.9**
comp=Z,19nm,1.1s,mb4.5
CMB Columbia Colle 26.91 133 *eP* **P 04 08 45.1 -0.8**
CMB pmax pmax
comp=Z,11nm,1.1s,mb4.3
CMB Columbia Colle 26.91 133 *eP* **P 04 08 45.1 -0.8**
comp=Z,11nm,1.1s,mb4.3
O11A Cowboy Ranch, 26.98 124 ⇓P P 04 08 47.0 +0.5
baz=27,SNR=10
N13A Wendover, West 27.00 121 ⇓P P 04 08 47.3 +0.6
baz=27
N13A Wendover, West 27.00 121 *eP* **P 04 08 46.9 +0.2**
comp=Z,24nm,1.4s,mb4.5
J18A Kendall Valley 27.02 112 ⇓P P 04 08 47.2 +0.4
baz=27,SNR=10.0
O12A Currie 27.25 122 ⇑P P 04 08 49.5 +0.6
baz=27,SNR=12
M15A Larsen Ranch, 27.29 118 ⇓P P 04 08 49.0 -0.3
baz=27
L16A Fish Haven 27.30 116 ⇑P P 04 08 49.5 +0.1
baz=27
NVAR Mina Array Bea 27.36 129 P **P 04 08 50.5 +0.6**
comp=Z,2.9nm,0.7s,mb3.9,baz=310,slow=9.3,SNR=24
NVAR PcP PcP 04 12 09.6 +0.8
comp=Z,0.6nm,0.6s,baz=328,slow=3.2,SNR=4.4
P11A Circle Ranch, 27.43 125 ⇓P P 04 08 51.2 +0.7
baz=27
N14A Grayback Hills 27.45 119 ⇑P P 04 08 50.8 +0.1
baz=27,SNR=7.4
K18A Toltan Ranch, 27.46 113 ⇓P P 04 08 51.1 +0.4
baz=27
L17A Cokeville 27.49 115 ⇑P P 04 08 51.1 0.0
baz=27
HWUT Hardware Ranch 27.57 116 *eP* **P 04 08 52.0 +0.2**
comp=Z,11nm,1.3s,mb4.3
BW06 Boulder Array 27.58 112 ⇓P P 04 08 52.0 +0.1
baz=28
BW06 Boulder Array 27.58 112 *eP* **P 04 08 52.0 +0.1**
comp=Z,7.0nm,0.9s,mb4.3
PDAR Pinedale Array 27.58 112 P **P 04 08 51.5 -0.3**
comp=Z,5.4nm,1.0s,mb4.1,baz=305,slow=5.2,SNR=16
PDAR LR LR 04 20 43.5
comp=Z,225nm,18.2s,MS3.8,baz=333,slow=38
N15A Stansbury Isla 27.71 118 ⇑P P 04 08 53.3 +0.2
baz=28
M16A Huntsville 27.77 117 ⇑P P 04 08 53.7 +0.1
baz=28,SNR=10
Q10A Clear Creek Ra 27.78 126 ⇓P P 04 08 54.0 +0.3
baz=28
P12A McGill 27.85 123 ⇑P P 04 08 54.7 +0.5
baz=28
K19A Absolon Red Bu 27.87 111 ⇑P P 04 08 53.7 -0.7
baz=28,SNR=5.9
L18A Fontenelle, Gr 28.02 114 ⇑P P 04 08 55.1 -0.6
baz=28
Q11A Duckwater 28.07 125 ⇑P P 04 08 56.3 +0.1
baz=28,SNR=15
DUG Dugway 28.15 120 ⇓P P 04 08 57.1 +0.1
baz=28
DUG Dugway 28.15 120 *eP* **P 04 08 56.6 -0.4**
DUG pmax pmax
comp=Z,20nm,1.8s,mb4.5
DUG Dugway 28.15 120 *eP* **P 04 08 56.6 -0.4**
comp=Z,20nm,1.8s,mb4.5
L19A Farson 28.19 113 ⇑P P 04 08 57.2 -0.1
baz=28
K20A Yellowstone Ra 28.24 111 ⇓P P 04 08 57.4 -0.3
baz=28
P13A Bates Ranch, G 28.24 122 ⇑P P 04 08 57.0 -0.8
baz=28
Q12A Willow Creek R 28.24 124 ⇓P P 04 08 57.4 -0.4
baz=28,SNR=6.1
R10A Warm Springs 28.27 127 ⇓P P 04 08 58.0 0.0
baz=28,SNR=7.5
JLU Jordanelle 28.43 117 *eP* **P 04 09 01.2 +1.8**
comp=Z,20nm,1.5s,mb4.5
S10A Tonopah Range, 28.47 128 ⇑P P 04 08 59.4 -0.4
baz=28,SNR=10
R11A Troy Canyon, C 28.52 126 ⇑P P 04 08 59.8 -0.4
baz=28,SNR=12
P14A Drum Mountains 28.54 121 ⇑P P 04 09 00.3 -0.2
baz=28
Q13A Wheeler Ranch, 28.66 123 ⇓P P 04 09 01.7 +0.2
baz=29
DAU Daniels Canyon 28.66 117 *eP* **P 04 09 01.6 +0.1**
NLU North Lily Min 28.67 119 *eP* **P 04 09 02.0 +0.3**
comp=Z,27nm,1.7s,mb4.7
O16A Springville 28.72 118 ⇓P P 04 09 01.9 -0.1
baz=29
RCTC Rector, Farmer 28.86 133 ⇑P P 04 09 02.8 -0.5
baz=29
N18A Larsen Ranch, 28.93 115 ⇓P P 04 09 03.8 -0.1
baz=29
R12A Pony Springs, 28.94 124 ⇑P P 04 09 03.8 -0.2
baz=29
Q14A Sevier Lake (B 28.95 122 ⇓P P 04 09 04.0 0.0
baz=29
SEY Seymchan 29.04 303 ⇑*i*P P 04 09 04.5 -0.2
S11A Rachel 29.05 127 ⇑P P 04 09 05.7 +0.7
baz=29
O17A Robinson Place 29.07 117 ⇑P P 04 09 05.4 +0.2
baz=29,SNR=14
P16A Fountain Green 29.14 119 ⇑P P 04 09 06.2 +0.5
baz=29
ULM Lac du Bonnet 29.16 87 P **P 04 09 05.6 -0.2**
comp=Z,7.3nm,1.1s,mb4.3,baz=301,slow=11,SNR=8.1
ULM PcP PcP 04 12 11.6 -1.4
comp=Z,2.0nm,0.7s,baz=8.8,slow=2.5,SNR=4.7
ULM LR LR 04 21 34.9
comp=Z,642nm,18.5s,MS4.3,baz=50,slow=38
CWC Cottonwood Cre 29.18 131 ⇑P P 04 09 06.4 +0.2
baz=29
RSSD Black Hills 29.21 104 *eP* **P 04 09 06.0 -0.4**
RSSD *e* 04 12 11.8
RSSD pmax pmax
comp=Z,15nm,1.2s,mb4.6
RSSD Black Hills 29.21 104 *eP* **P 04 09 06.0 -0.4**
comp=Z,15nm,1.2s,mb4.6
RSSD *e*PcP PcP 04 12 11.8 -1.5
M20A Sweetwater, Wa 29.21 112 ⇑P P 04 09 06.4 0.0
baz=29
N19A John Jarvie Ra 29.23 114 ⇑P P 04 09 06.3 -0.2
baz=29
L21A Rawlins 29.23 111 ⇓P P 04 09 06.5 -0.1
baz=29
Q15A Fillmore 29.33 121 ⇓P P 04 09 07.4 0.0
baz=29,SNR=6.7
O18A Roosevelt 29.35 116 ⇑P P 04 09 07.8 +0.2
baz=29
S12A Delamar Landin 29.45 125 ⇑P P 04 09 08.4 -0.2
baz=29
M21A Separation Pea 29.51 111 ⇓P P 04 09 08.4 -0.6
baz=30
TMUT Trail Mountain 29.59 119 *eP* **P 04 09 12.7 +2.9**
comp=Z,12nm,1.2s,mb4.5
T11A Corn Creek, Al 29.61 126 ⇓P P 04 09 09.3 -0.7
baz=30
FURC Furnace Creek, 29.62 129 ⇑P P 04 09 10.0 -0.1
baz=30
N20A Spence Gulch, 29.70 113 ⇓P P 04 09 10.9 +0.3
baz=30,SNR=28
ISA Isabella 29.72 132 ⇑P P 04 09 11.0 +0.1
baz=30
ISA Isabella 29.72 132 *eP* **P 04 09 10.7 -0.2**
ISA pmax pmax
comp=Z,14nm,1.2s,mb4.6
ISA Isabella 29.72 132 *eP* **P 04 09 10.7 -0.3**
comp=Z,14nm,1.2s,mb4.5
O19A Miners Draw (B 29.72 115 ⇓P P 04 09 11.3 +0.4
baz=30,SNR=6.1
MPMC Manual Prospec 29.74 131 ⇑P P 04 09 10.9 -0.3
baz=30
MSU Marysvale 29.82 121 *eP* **P 04 09 12.6 +0.8**
S13A Holt Ranch, En 29.88 124 ⇓P P 04 09 13.0 +0.6
baz=30,SNR=18
PKM Peak Mountain 29.91 135 ⇑P P 04 09 13.2 +0.5
baz=30
Q16A Castle Valley 29.92 119 ⇓P P 04 09 12.8 +0.1
baz=30,SNR=13
S14A Cedar City 30.02 123 ⇓P P 04 09 14.1 +0.5
baz=30
M22A Cedar Creek Ra 30.03 110 ⇑P P 04 09 13.7 0.0
baz=30
SRU San Rafael 30.05 118 ⇓P P 04 09 14.0 +0.1
baz=30,SNR=18
SRU San Rafael 30.05 118 *eP* **P 04 09 14.6 +0.8**
SRU pmax pmax
comp=Z,22nm,1.0s,mb4.8
SRU San Rafael 30.05 118 *eP* **P 04 09 14.6 +0.7**
comp=Z,22nm,1.0s,mb4.8
N21A Black Mountain 30.10 112 ⇓P P 04 09 14.2 -0.1
baz=30,SNR=10
CCUT Cedar City 30.12 123 *eP* **P 04 09 15.3 +0.8**
comp=Z,5.9nm,0.7s,mb4.4
LRMC Laurel Mountai 30.18 132 ⇓P P 04 09 15.1 +0.1
baz=30
Q18A Rafter H Ranch 30.23 118 ⇓P P 04 09 15.3 -0.1
baz=30
O20A White River Ci 30.26 114 ⇑P P 04 09 15.9 +0.3
baz=30,SNR=9.7
R16A Teasdale 30.31 120 ⇓P P 04 09 16.6 +0.5
baz=30,SNR=11
P19A Cripple Cowboy 30.32 115 ⇑P P 04 09 16.4 +0.1
baz=30,SNR=8.0
T13A Saint George 30.34 125 ⇓P P 04 09 17.0 +0.6
baz=30,SNR=10
AGMN Agassiz Refuge 30.41 90 *eP* **P 04 09 16.5 -0.4**
comp=Z,40nm,2.1s,mb4.8
R17A Hanksville Air 30.54 119 ⇓P P 04 09 18.6 +0.5
baz=30
O21A Pagoda 30.55 113 ⇓P P 04 09 18.5 +0.3
baz=30
N22A Wattenberg Ran 30.57 111 ⇑P P 04 09 18.4 0.0
baz=30,SNR=11
EDW2 Edwards Air Fo 30.60 132 ⇓P P 04 09 18.9 +0.2
baz=30
T14A Hurricane 30.65 124 ⇑P P 04 09 19.6 +0.5
baz=31
GSC Goldstone 30.67 130 ⇑P P 04 09 19.9 +0.6
baz=31
GSC Goldstone 30.67 130 *eP* **P 04 09 19.7 +0.3**
GSC pmax pmax
comp=Z,32nm,1.4s,mb5.0
GSC Goldstone 30.67 130 *eP* **P 04 09 19.7 +0.4**
comp=Z,32nm,1.4s,mb5.0
P20A De Beque 30.70 115 ⇑P P 04 09 19.4 -0.1
baz=31,SNR=6.8
U13A Pakoon Wash 30.84 125 ⇑P P 04 09 21.4 +0.6
baz=31
TUQ Turquoise Moun 30.90 129 ⇑P P 04 09 21.8 +0.5
baz=31
R18A Canyonlands Na 30.93 118 ⇑P P 04 09 21.3 -0.3
baz=31
PET Petropavlovsk 30.95 283 *eP* **P 04 09 22.7 +1.0**
PET *eS* **S 04 14 22.4 -3.9**
PET pmax pmax
comp=Z,100nm,16.9s
PET MLR MLR
comp=Z,300nm,16.0s,MS4.0
T15A Red Dirt Ranch 30.98 123 ⇓P P 04 09 22.6 +0.5
baz=31,SNR=6.6
V12A Nelson 31.07 127 ⇓P P 04 09 23.7 +0.8
baz=31,SNR=5.4
S17A Black Ridge (B 31.15 120 ⇓P P 04 09 24.0 +0.5
baz=31,SNR=24
MWC Mount Wilson 31.16 133 *eP* **P 04 09 23.5 -0.1**
MWC pmax pmax
comp=Z,19nm,1.3s,mb4.8
MWC Mount Wilson 31.16 133 *eP* **P 04 09 23.5 -0.1**
comp=Z,19nm,1.3s,mb4.8
U14A Mt Trumbull 31.16 124 ⇓P P 04 09 24.0 +0.3
baz=31,SNR=11
Q20A Ridgley Place, 31.18 115 ⇓P P 04 09 23.7 -0.1
baz=31
R19A Curley Farm, L 31.29 117 ⇑P P 04 09 24.5 -0.3
baz=31,SNR=8.9
V13A Grand Canyon W 31.31 126 ⇓P P 04 09 25.5 +0.5
baz=31,SNR=5.6
PEA0B Petropavlovsk- 31.38 283 *eP* **P 04 09 24.3 -1.1**
PETK Petropavlovsk- 31.38 283 P **P 04 09 24.9 -0.6**
comp=Z,5.2nm,0.7s,mb4.5,baz=70,slow=11,SNR=17
PETK LR LR 04 22 58.0
comp=Z,79nm,18.2s,MS3.4,baz=82,slow=38
S18A Hurst Farm, Bl 31.46 119 ⇓P P 04 09 26.2 0.0
baz=31
U15A North Rim 31.52 123 ⇑P P 04 09 27.1 +0.2
baz=31,SNR=9.7
LDFC Landfair 31.53 128 *eP* **P 04 09 27.4 +0.5**
comp=Z,15nm,1.0s,mb4.8
GMRC Granite Mounta 31.57 129 ⇓P P 04 09 27.1 -0.2
baz=32,SNR=6.1
Q21A Lamborn Mesa, 31.61 115 ⇓P P 04 09 27.5 -0.1
baz=32
SMCO Snowmass 31.61 114 *eP* **P 04 09 28.9 +1.3**
comp=Z,62nm,2.9s,mb4.9
T17A Navajo Res., N 31.68 121 ⇓P P 04 09 27.6 -0.6
baz=32
R20A Redvale 31.77 116 ⇓P P 04 09 28.9 -0.1
baz=32,SNR=17
S19A Harvey Farm, M 31.79 118 ⇓P P 04 09 28.4 -0.8
baz=32,SNR=7.3
V14A Boquillas Ranc 31.86 125 ⇑P P 04 09 30.3 +0.5
baz=32
Q22A Crested Butte, 31.89 114 ⇑P P 04 09 29.2 -0.9
baz=32
T18A Mexican Hat 31.97 119 ⇓P P 04 09 30.4 -0.4
baz=32,SNR=16
W13A Hualapai Mount 32.00 127 ⇓P P 04 09 30.9 -0.2
baz=32
V15A Kaibab Nationa 32.09 124 ⇓P P 04 09 32.4 +0.6
baz=32,SNR=18
BELC Belle Mtn. 32.13 130 ⇓P P 04 09 32.3 +0.1
baz=32
W14A Seligman 32.23 125 ⇑P P 04 09 33.8 +0.7
baz=32,SNR=7.4
U16A Tuba City 32.26 122 ⇑P P 04 09 33.5 +0.2
baz=32
PFO Pinyon Flat Ob 32.30 131 ⇑P P 04 09 33.8 +0.1
baz=32
PFO Pinyon Flat Ob 32.30 131 *eP* **P 04 09 33.6 -0.1**
PFO pmax pmax
comp=Z,28nm,1.3s,mb4.9
PFO Pinyon Flat Ob 32.30 131 *eP* **P 04 09 33.6 -0.2**
comp=Z,28nm,1.3s,mb4.9
IRM Iron Mountain 32.32 129 ⇓P P 04 09 34.6 +0.8
baz=32
X13A Yucca 32.46 127 ⇓P P 04 09 35.5 +0.3
baz=32
S21A Coal Bank Pass 32.47 116 ⇑P P 04 09 35.6 +0.5
baz=32
R22A Saguache, Gunn 32.48 114 ⇑P P 04 09 35.6 +0.3
baz=32,SNR=5.6
MVCO Mesa Verde 32.52 118 ⇓P P 04 09 35.4 -0.2
baz=32
MVCO Mesa Verde 32.52 118 *eP* **P 04 09 35.7 +0.1**
comp=Z,27nm,1.6s,mb4.9
PDMCI Parker Dam,Lak 32.59 128 ⇓P P 04 09 36.3 +0.1
baz=32
T19A Beclabito 32.60 119 ⇓P P 04 09 36.6 +0.3
baz=32,SNR=8.9
W15A Williams 32.60 124 ⇑P P 04 09 36.9 +0.6
baz=32
BC3 Big Chuckw Mtn 32.65 130 ⇓P P 04 09 36.7 0.0
baz=32
WUAZ Wupatki 32.69 123 ⇑P P 04 09 37.7 +0.6
baz=33,SNR=18
WUAZ Wupatki 32.69 123 *eP* **P 04 09 38.0 +0.9**
comp=Z,28nm,1.1s,mb5.1
V17A Tonalea, Kykot 32.84 122 ⇓P P 04 09 38.9 +0.5
baz=33,SNR=32
EYMN Ely 32.85 87 *eP* **P 04 09 38.4 0.0**
comp=Z,22nm,0.8s,mb5.1
Y12C Blythe 32.92 129 ⇑P P 04 09 39.8 +0.6
baz=33
X14A Yava 32.95 126 ⇓P P 04 09 39.9 +0.5
baz=33,SNR=15
MONP Monument Peak 32.96 132 ⇑P P 04 09 40.3 +0.8
baz=33,SNR=8.7
U19A Dine' College, 32.97 119 ⇑P P 04 09 39.6 +0.1
baz=33
W16A Flagstaff 32.98 123 ⇑P P 04 09 40.1 +0.5
baz=33
BAR Barrett 33.05 132 *eP* **P 04 09 41.0 +0.8**
comp=Z,17nm,1.2s,mb4.8
V18A Ganado 33.14 121 ⇑P P 04 09 41.5 +0.5
baz=33,SNR=9.5
Y13A Salome 33.15 128 ⇑P P 04 09 41.2 +0.1
baz=33,SNR=8.0
ECSD EROS Data Cent 33.18 97 *eP* **P 04 09 40.6 -0.7**
comp=Z,92nm,2.5s,mb5.3
U20A Newcomb 33.20 118 ⇑P P 04 09 42.3 +0.7
baz=33
X15A Humboldt 33.21 125 ⇓P P 04 09 42.5 +0.8
baz=33,SNR=6.8
DVTC Desert V Tower 33.28 132 ⇓P P 04 09 43.1 +0.8
baz=33
W17A Winslow 33.34 122 ⇓P P 04 09 43.5 +0.7
baz=33
Y14A Wickenburg 33.37 126 ⇓P P 04 09 44.0 +1.0
baz=33
T22A Edith 33.40 116 ⇓P P 04 09 43.8 +0.5
baz=33
SDCO Great Sand Dun 33.45 113 *eP* **P 04 09 44.4 +0.6**
comp=Z,20nm,1.8s,mb4.8
X16A Lo Mia Camp, P 33.60 124 ⇑P P 04 09 45.9 +0.8
baz=34,SNR=6.4
Y15A Casa Rosa Ranc 33.63 126 ⇑P P 04 09 46.0 +0.7
baz=34,SNR=19
V20A Brimhall 33.71 119 ⇑P P 04 09 46.6 +0.6
baz=34
W18A Petrified Fore 33.73 121 ⇓P P 04 09 46.6 +0.4
baz=34
Z13A Yuma Proving G 33.75 128 ⇑P P 04 09 46.8 +0.5
baz=34,SNR=14
Z14A Wintersburg 33.89 127 ⇓P P 04 09 48.2 +0.6
baz=34
TIXI Tiksi 33.92 326 *eP* **P 04 09 46.3 -1.2**
TIXI pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TIXI MLR MLR
comp=Z,251nm,10.0s,MS4.2
TIXI Tiksi 33.92 326 *eP* **P 04 09 47.1 -0.4**
comp=Z,8.3nm,1.0s,mb4.6
X17A Forest Lakes 33.94 123 ⇑P P 04 09 48.8 +0.8
baz=34,SNR=6.7
112A Yuma 33.97 130 ⇑P P 04 09 49.4 +1.1
baz=34
Y16A Circle Bar Ran 34.05 125 ⇑P P 04 09 49.8 +0.8
baz=34
V21A Milan 34.07 118 ⇑P P 04 09 49.6 +0.4
baz=34,SNR=9.1
113A Mohawk Valley, 34.09 128 ⇓P P 04 09 49.5 +0.2
baz=34
X18A Snowflake 34.13 122 ⇑P P 04 09 50.4 +0.7
baz=34,SNR=9.1
W20A Ramah 34.26 120 ⇓P P 04 09 51.5 +0.7
baz=34,SNR=25
Z15A Gila River Ind 34.28 126 ⇑P P 04 09 51.4 +0.5
baz=34
114A Black Gap (USA 34.45 127 ⇑P P 04 09 52.9 +0.5
baz=34
Y17A Roosevelt 34.47 124 ⇑P P 04 09 53.1 +0.4
baz=34,SNR=6.7
X19A St. Johns 34.51 121 ⇑P P 04 09 53.6 +0.7
baz=34
W21A San Fidel 34.64 119 ⇓P P 04 09 54.9 +0.8
baz=35
Y18A Canyon Day Jun 34.74 123 ⇓P P 04 09 55.7 +0.7
baz=35,SNR=9.0
X20A Quemado 34.75 120 ⇓P P 04 09 55.4 +0.3
baz=35
115A Sonoran Desert 34.76 127 ⇑P P 04 09 55.9 +0.7
baz=35
Y19A Nutrioso 34.92 122 ⇑P P 04 09 57.6 +1.1
baz=35,SNR=21
Z17A San Carlos Hig 34.97 124 ⇓P P 04 09 57.9 +0.9
baz=35
116A Eloy 35.10 126 ⇓P P 04 09 58.8 +0.7
baz=35
X21A Alamocita Cree 35.15 119 ⇑P P 04 09 58.9 +0.4
baz=35,SNR=28
214A Organ Pipe Nat 35.18 128 ⇑P P 04 09 59.6 +0.8
baz=35
W23A Werner Place, 35.28 117 ⇓P P 04 10 00.5 +0.9
baz=35,SNR=11
ANMO Albuquerque 35.31 117 *eP* **P 04 10 00.6 +0.7**
ANMO pmax pmax
comp=Z,18nm,1.6s
ANMO Albuquerque 35.31 117 *eP* **P 04 10 00.6 +0.7**
comp=Z,18nm,1.6s,mb4.8
Y20A Horse Springs, 35.34 121 ⇓P P 04 10 01.1 +0.9
baz=35
LAZ Ladron 35.47 119 *eP* **P 04 10 01.6 +0.4**
comp=Z,3.9nm,1.3s,mb4.2
117A Oracle 35.49 125 ⇓P P 04 10 02.5 +1.1
baz=35,SNR=11
Y21A Point of Rocks 35.56 120 ⇑P P 04 10 03.1 +1.1
baz=36,SNR=18
216A Three Points, 35.69 126 ⇑P P 04 10 04.1 +1.0
baz=36
TUC Tucson 35.70 125 *eP* **P 04 10 03.8 +0.6**
TUC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TUC Tucson 35.70 125 *eP* **P 04 10 03.8 +0.6**
comp=Z,10nm,1.1s,mb4.7
X23A Hourglass Bar 35.74 117 ⇑P P 04 10 04.3 +0.7
baz=36
118A Homack Ranch, 35.75 124 ⇑P P 04 10 04.5 +0.8
baz=36
119A Ashpeak Ranch, 35.92 123 ⇑P P 04 10 05.8 +0.7
baz=36
Z20A Nine Sixteen R 35.93 122 ⇑P P 04 10 05.5 +0.3
baz=36
W25A X Bar L Ranch, 36.00 115 ⇓P P 04 10 06.3 +0.6
baz=36
X24A Lazy VL Ranch, 36.10 116 ⇓P P 04 10 07.4 +0.8
baz=36
217A Green Valley 36.15 125 ⇑P P 04 10 07.8 +0.7
baz=36
Z21A St. Cloud Mine 36.16 120 ⇓P P 04 10 07.9 +0.7
baz=36
Y23A Lovelace Mesa, 36.35 118 ⇑P P 04 10 09.5 +0.7
baz=36,SNR=6.4
120A U Bar Ranch, L 36.40 122 ⇑P P 04 10 10.0 +0.8
baz=36
Z22A Elephant Butte 36.52 119 ⇑P P 04 10 10.9 +0.7
baz=36,SNR=14
219A White Tail Can 36.60 123 ⇓P P 04 10 11.5 +0.6
baz=36,SNR=14
Y24A Capitan 36.63 117 ⇓P P 04 10 11.6 +0.4
baz=37,SNR=8.1
121A Cookes Peak, D 36.77 121 ⇓P P 04 10 13.2 +0.8
baz=37,SNR=8.2
318A Bisbee 36.78 125 ⇑P P 04 10 12.8 +0.3
baz=37,SNR=11
X26A CR and CF Fran 36.85 115 ⇑P P 04 10 13.7 +0.7

baz=37
Y25A Mesa, Roswell 36.97 116 ⇑P P 04 10 14.6 +0.6
baz=37,SNR=7.9
122A Conniff Cattle 36.97 120 ⇑P P 04 10 15.2 +1.1
baz=37
JFWS Jewell Farm 36.98 92 eP P 04 10 12.4 -1.7
JFWS pmax pmax
comp=Z,16nm,0.9s,mb4.8
JFWS Jewell Farm 36.98 92 eP P 04 10 12.4 -1.7
comp=Z,16nm,0.9s,mb4.9
220A Playas Peak, P 37.00 123 ⇓P P 04 10 15.0 +0.7
baz=37,SNR=19
X27A F and S Farms, 37.10 114 ⇓P P 04 10 15.6 +0.4
baz=37,SNR=5.3
319A Douglas 37.13 124 ⇓P P 04 10 16.6 +1.1
baz=37
222A Williams Famil 37.44 121 ⇓P P 04 10 18.8 +0.7
baz=37
320A Kipp Ranch, An 37.48 123 ⇑P P 04 10 19.4 +1.0
baz=37
Z25A Roswell 37.50 117 ⇑P P 04 10 18.9 +0.3
baz=37,SNR=9.6
AMTX Amarillo 37.56 112 eP P 04 10 14.9 -4.2
comp=Z,17nm,0.9s,mb4.8
124A Stringfield Ra 37.65 118 ⇓P P 04 10 20.5 +0.6
baz=38,SNR=11
Y27A Causey 37.70 114 ⇓P P 04 10 20.4 +0.2
baz=38,SNR=6.4
MSTX Muleshoe 37.81 114 ⇓P P 04 10 21.4 +0.2
baz=38
Z26A Caprock 37.84 116 ⇓P P 04 10 22.0 +0.6
baz=38
125A Gardner Draw, 38.05 117 ⇑P P 04 10 23.8 +0.6
baz=38,SNR=36
Z27A Tatum 38.15 115 ⇑P P 04 10 23.9 -0.2
baz=38,SNR=5.3
224A Corundas Mount 38.15 119 ⇓P P 04 10 24.4 +0.3
baz=38,SNR=7.8
225A Deer Hill, Car 38.44 118 ⇓P P 04 10 27.3 +0.8
baz=38,SNR=14
MNTX Cornudas Mount 38.54 119 eP P 04 10 27.7 +0.3
comp=Z,2.3nm,0.7s,mb4.0
GDL2 Guadalupe Moun 38.56 117 eP P 04 10 28.3 +0.8
YAK Yakutsk 38.63 311 eP P 04 10 26.4 -1.4
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.7
324A Moseley Ranch, 38.71 119 ⇑P P 04 10 28.8 0.0
baz=39
226A Malaga, Loving 38.80 117 ⇑P P 04 10 30.0 +0.5
baz=39
SUMG Summit 38.81 27 eP P 04 10 29.9 +0.7
SUMG pmax pmax
comp=Z,23nm,1.3s
SUMG Summit 38.81 27 eP P 04 10 29.9 +0.7
comp=Z,23nm,1.3s,mb4.7
325A Bean Ranch, Si 39.00 119 ⇑P P 04 10 31.7 +0.5
baz=39
WMOK Wichita Mounta 39.05 109 eP P 04 10 31.6 0.0
WMOK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
WMOK Wichita Mounta 39.05 109 eP P 04 10 31.6 -0.1
comp=Z,9.6nm,0.9s,mb4.5
HDIL Hopedale 39.20 94 eP P 04 10 32.1 -0.7
comp=Z,20nm,0.8s,mb4.9
227A Bennet, Jal 39.21 116 ⇑P P 04 10 33.3 +0.3
baz=39
326A Caldwell Ranch 39.49 118 ⇓P P 04 10 35.8 +0.5
baz=39,SNR=8.3
425A Indio Mountain 39.49 119 ⇑P P 04 10 35.8 +0.5
baz=39,SNR=26
DAG Danmarks Havn 39.59 17⇑iP P 04 10 35.9 +0.2
DAG pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
DAG Danmarks Havn 39.59 17⇑iP P 04 10 35.9 +0.2
comp=Z,4.2nm,0.5s,mb4.4
426A McDonald Obser 40.02 118 ⇓P P 04 10 39.9 +0.2
baz=40,SNR=15
427A Hayter Ranch, 40.14 117 ⇓P P 04 10 40.9 +0.1
baz=40,SNR=7.3
SCHQ Schefferville 40.26 61 P P 04 10 41.1 -0.4
comp=Z,5.3nm,0.7s,mb4.4,baz=310,slow=7.3,SNR=10.0
SCHQ LR LR 04 29 08.7
comp=Z,289nm,18.0s,MS4.2,baz=129,slow=39
526A Mary Lane Ranc 40.51 119 ⇑P P 04 10 44.3 +0.5
baz=40,SNR=15
428A Kincaid Ranch, 40.57 117 ⇓P P 04 10 44.8 +0.5
baz=40,SNR=8.2
FVM French Village 40.59 97 eP P 04 10 42.2 -2.2
FVM pmax pmax
comp=Z,22nm,1.2s,mb4.7
FVM French Village 40.59 97 eP P 04 10 42.2 -2.2
comp=Z,22nm,1.2s,mb4.7
527A Woodward Ranch 40.65 118 ⇓P P 04 10 44.9 0.0
baz=41,SNR=7.9
626A Big Bend Ranch 40.92 119 ⇑P P 04 10 46.7 -0.5
baz=41,SNR=14
528A Cox Ranch, San 41.00 117 ⇑P P 04 10 48.0 +0.1
baz=41,SNR=29
OLIL Olney 41.18 95 eP P 04 10 47.9 -1.3
comp=Z,20nm,0.9s,mb4.8
TXAR Lajitas Array 41.32 119 P P 04 10 51.1 +0.6
comp=Z,3.4nm,0.6s,mb4.1,baz=327,slow=6.5,SNR=58
TXAR PcP PcP 04 12 47.1 -1.7
comp=Z,0.4nm,0.6s,baz=39,slow=1.7,SNR=3.7
TXAR LR LR 04 27 47.0
comp=Z,125nm,18.9s,MS3.8,baz=315,slow=36
TXAR Lajitas Array 41.32 119 P P 04 10 51.1 +0.6
TXAR 04 12 47.1
627A Terlingua Ranc 41.34 118 ⇓P P 04 10 50.3 -0.4
baz=41,SNR=18
SIUC Southern Illin 41.40 97 eP P 04 10 53.4 +2.3
comp=Z,34nm,1.4s,mb4.8
628A Black Gap, Mar 41.53 118 ⇑P P 04 10 51.9 -0.4
baz=42,SNR=17
MIAR Mount Ida 41.73 104 eP P 04 10 53.6 -0.2
SPITS Spitsbergen Ar 41.78 6 P P 04 10 53.3 -0.4
comp=Z,7.7nm,1.0s,mb4.3,baz=22,slow=4.6,SNR=7.0
JCT Junction City 42.10 114 eP P 04 10 56.3 -0.5
JCT pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
JCT Junction City 42.10 114 eP P 04 10 56.3 -0.6
comp=Z,8.2nm,0.6s,mb4.5
WVT Waverly 43.33 97 eP P 04 11 04.9 -1.9
WVT pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
WVT Waverly 43.33 97 eP P 04 11 04.9 -1.9
comp=Z,8.1nm,1.1s,mb4.4
CLNS Chul'man 43.84 307 eP P 04 11 10.8 +0.1
CLNS e*PP pP 04 11 20.5 +8.3
CLNS e 04 12 51.0
CLNS e 04 12 57.6
CLNS ePPP 04 13 28.1
CLNS eS S 04 17 38.3 -3.4
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=Z,15nm,1.0s,mb4.7
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=N,3.0nm,1.1s
CLNS pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
CLNS smax
comp=E,61nm,10.6s
CLNS smax
comp=N,41nm,13.4s
CLNS MLR MLR
comp=Z,239nm,11.0s,MS4.4
CLNS MLR MLR
comp=N,115nm,11.0s,MS4.4
CLNS MLR MLR
comp=E,220nm,12.0s,MS4.4
ASAJ Asahikawa 44.80 283 P P 04 11 17.6 -0.9
comp=E,8.1nm,0.8s,mb4.6,baz=310,slow=7.2,SNR=5.7
KLR Kul'dur 46.25 296 eP P 04 11 24.2 -5.7
KLR MLR MLR
comp=Z,500nm,13.0s,MS4.7
JSC Jenkinsville 48.09 92 eP P 04 11 44.0 -0.5
ARCES ARCESS Array B 50.76 4 P P 04 12 03.6 -0.8
comp=Z,2.7nm,0.7s,mb4.3,baz=350,slow=6.7,SNR=5.1
ARCES PcP PcP 04 13 21.0 -0.2
comp=Z,7.1nm,1.0s,baz=0.0,slow=4.2,SNR=4.0
ARCES LR LR 04 32 43.9
comp=Z,89nm,18.7s,MS3.8,baz=67,slow=35
ARCES ARCESS Array B 50.76 4 P P 04 12 03.6 -0.7
ARCES 04 13 21.0
MAJO Matsushiro 52.72 280 eP P 04 12 18.8 -0.7
MAJO pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MAJO Matsushiro 52.72 280 eP P 04 12 18.8 -0.6
comp=Z,5.9nm,0.6s,mb4.7
MJAR Matsushiro Arr 52.72 280 P P 04 12 19.0 -0.4
comp=Z,2.7nm,1.0s,mb4.1,baz=4.0,slow=6.7,SNR=5.0
MOY Mondy 56.77 317 eP P 04 12 49.6 +1.0
MOY pmax pmax
comp=Z,29nm,2.0s,mb5.0
KSRS Korea Array 57.03 289 P P 04 12 50.7 +0.1
comp=Z,3.1nm,0.8s,mb4.4,baz=37,slow=6.7,SNR=12
JOF Joensuu 57.55 2 eP P 04 12 52.4 -1.5
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
JOF Joensuu 57.55 2 ep P 04 12 52.4 -1.5
comp=Z,2.6nm,0.5s,mb4.5
ULN Ulaanbaatar 57.72 311 eP P 04 12 55.5 +0.2
ULN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ULN Ulaanbaatar 57.72 311 eP P 04 12 55.5 +0.2
comp=Z,10nm,0.9s,mb4.9
SONM Songino Array 57.99 311 P P 04 12 58.6 +1.3
comp=Z,8.0nm,0.8s,mb4.8,baz=39,slow=7.3,SNR=42
SONM LR LR 04 39 59.2
comp=Z,194nm,19.3s,MS4.2,baz=84,slow=38
NB2 NORSAR Subarra 58.08 13 P P 04 12 57.5 -0.2
comp=Z,1.4nm,0.8s,mb4.0,baz=351,slow=6.9
NOA NORSAR Array B 58.08 13 P P 04 12 57.6 -0.1
comp=Z,2.9nm,0.8s,mb4.3,baz=348,slow=6.8,SNR=7.1
NOA LR LR 04 39 34.2
comp=Z,44nm,20.6s,MS3.6,baz=180,slow=38
KAF Kangasniemi 58.21 5 eP P 04 12 56.4 -2.2
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 58.21 5 ep P 04 12 56.4 -2.2
comp=Z,1.6nm,0.4s,mb4.4
FINES FINESS Array B 58.87 5 P P 04 13 02.4 -0.7
comp=Z,4.6nm,0.5s,mb4.8,baz=1.9,slow=8.9,SNR=64
FINES FINESS Array B 58.87 5 P P 04 13 02.4 -0.7
MCD Coleburn Disti 59.13 23 eP P 04 13 05.8 +0.7
NVS Novosibirsk 59.34 330 iP P 04 13 04.3 -2.2
SOKR Solikamsk 59.71 347⇑iP P 04 13 09.6 +0.6
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.1
ZAA0 Zalesovo Array 59.73 328 eP P 04 13 08.3 -0.9
ZALV Zalesovo Beam 59.73 328 P P 04 13 09.0 -0.2
comp=Z,2.5nm,0.5s,mb4.5,baz=28,slow=6.5,SNR=7.6
ZALV LR LR 04 41 04.4
comp=Z,97nm,20.9s,MS3.9,baz=49,slow=38
EAB Aberfoyle 60.22 24 eP P 04 13 12.6 +0.1
EBH Black Hill 60.33 23 eP P 04 13 13.2 -0.1
BJI Beijing 60.36 299 P P 04 13 13.6 -0.2
BJI PP PP 04 15 26.2 -0.1
BJI S S 04 21 28.8 +0.2
BJI SS SS 04 25 24.4 -1.0
BJI pmax pmax
comp=Z,13nm,1.9s,mb4.6
BJI LR LR
comp=N,450nm,14.8s,MS4.8
BJI LR LR
comp=E,240nm,13.9s,MS4.8
BJI LR LR
comp=Z,190nm,17.7s,MS4.3
EDI Edinburgh 60.70 23 eP P 04 13 15.6 -0.2
EAU Auchinoon 60.72 24 eP P 04 13 15.3 -0.6
ESK Eskdalemuir 61.27 24 eP P 04 13 19.2 -0.5
ESK AMb AMB 04 13 29.0
comp=Z,14nm,1.9s,mb4.8
ESK Eskdalemuir 61.27 24 eP P 04 13 19.7 0.0
ESK pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
ESK Eskdalemuir 61.27 24 eP P 04 13 19.7 0.0
comp=Z,2.5nm,0.5s,mb4.6
GAL1 Galloway 61.37 25 eP P 04 13 20.3 -0.2
GAL1 AMb AMB 04 13 23.1
comp=Z,14nm,1.9s,mb4.8
ECK Cauldkaine Hil 61.41 24 eP P 04 13 20.3 -0.4
HHC Hu-ho-hao-te 61.69 303 eP P 04 13 22.7 -0.1
HHC pP pP 04 13 27.3 +3.0
HHC sP sP 04 13 29.7 +4.8
HHC PP PP 04 15 41.2 +3.2
HHC ScP ScP 04 18 03.8 -2.4
HHC S S 04 21 43.2 -2.3
HHC sS sS 04 21 50.3 +2.2
HHC ScS ScS 04 23 09.8 -4.9
HHC SS SS 04 25 45.3 -0.8
HHC pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,100nm,5.4s
HHC LR LR
comp=N,430nm,15.2s,MS5.0
HHC LR LR
comp=E,690nm,17.6s,MS5.0
HHC LR LR
comp=Z,250nm,14.5s,MS4.5
SVE Sverdlovsk 61.91 344⇑eP P 04 13 24.1 +0.1
SVE pmax pmax
comp=Z,13nm,0.9s,mb5.1
ARU Arti 62.57 345diP P 04 13 28.0 -0.4
ARU 04 15 44.0
ARU S S 04 21 54.3 -1.9
ARU SS SS 04 25 57.4 -1.7
ARU pmax pmax
comp=Z,19nm,1.7s,mb5.0
ARU Arti 62.57 345 eP P 04 13 27.7 -0.7
comp=Z,5.0nm,0.5s,mb4.9
LHO Holmfirth 63.20 24 eP P 04 13 32.5 -0.2
BRVK Borovoye 63.91 337diP P 04 13 37.1 -0.3
BRVK pmax pmax
comp=Z,20nm,1.7s,mb4.9
BRVK Borovoye 63.91 337 eP P 04 13 36.9 -0.5
comp=Z,20nm,1.2s,mb5.0
BVAR Borovoye Array 63.93 337 P P 04 13 37.0 -0.4
comp=Z,5.4nm,0.7s,mb4.7,baz=46,slow=6.4,SNR=22
BVAR LR LR 04 44 39.7
comp=Z,116nm,19.1s,MS4.1,baz=287,slow=39
CWF Charnwood Fore 64.08 24 eP P 04 13 38.4 0.0
CWF AMb AMB 04 13 41.0
comp=Z,19nm,2.0s,mb4.8
KURK Kurchatov 64.26 331diP P 04 13 39.0 -0.7
KURK e 04 16 03.5
KURK pmax pmax
comp=Z,17nm,1.7s,mb4.8
KURK Kurchatov 64.26 331 eP P 04 13 38.6 -1.1
comp=Z,20nm,1.4s,mb5.0
BSEG Bad Segeberg 64.89 16 eP P 04 13 43.8 0.0
comp=Z,18nm,1.2s,mb5.0
HTL Hartland 65.04 26 eP P 04 13 45.0 +0.1
HTL AMb AMB 04 13 57.7
comp=Z,19nm,1.8s,mb4.8
OBN Obninsk 65.40 359⇑iP P 04 13 47.1 0.0
OBN eS S 04 22 35.4 +4.1
OBN pmax pmax
comp=Z,19nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
WOL Wolverton 65.44 24 eP P 04 13 47.3 -0.1
WOL AMb AMB 04 13 50.7
comp=Z,20nm,1.8s,mb4.9
NJ2 Nanjing 65.73 292 eP P 04 13 49.8 +0.2
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.4
IBBN Ibbenburen 66.10 18 eP P 04 13 52.0 +0.3
comp=Z,18nm,1.3s,mb4.9
NRDL Niedersach Rie 66.27 16 eP P 04 13 52.6 -0.1
comp=Z,18nm,1.2s,mb5.0
BUG Bonn-Univer 66.87 18 eP P 04 13 56.5 -0.1
comp=Z,19nm,1.3s,mb5.0
MK31 Makanchi Array 66.90 327 eP P 04 13 55.3 -1.5
MKAR Makanchi Array 66.90 327 P P 04 13 55.6 -1.2
comp=Z,2.3nm,0.8s,mb4.2,baz=35,slow=4.4,SNR=14
MKAR LR LR 04 45 38.3
comp=Z,132nm,20.8s,MS4.1,baz=359,slow=38
CLZ Clausthal 66.94 16 eP P 04 13 57.7 +0.7
comp=Z,30nm,1.4s,mb5.1
CLZ Clausthal 66.94 16 eP P 04 13 57.7 +0.7
CLZ pmax pmax
comp=Z,30nm,1.4s,mb5.1
HGN Heimansgroeve 67.30 19 eP P 04 13 59.8 +0.5
comp=Z,16nm,1.7s,mb4.8
MEM Membach 67.47 19 P P 04 14 00.7 +0.3
comp=Z,7.7nm,1.2s,mb4.6
BCLA Clavier 67.53 20 P P 04 14 00.4 -0.3
comp=Z,6.9nm,1.8s,mb4.4
GTA Gaotai 67.66 311 ⇓P P 04 14 01.8 0.0
GTA pP pP 04 14 05.4 +2.1
GTA sP sP 04 14 06.8 +2.9
GTA PP PP 04 16 33.9 +3.6
GTA S S 04 22 59.4 +0.2
GTA sS sS 04 23 07.5 +5.8
GTA pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
GTA pmax pmax
comp=Z,150nm,6.2s
GTA LR LR
comp=N,300nm,15.8s,MS4.7
GTA LR LR
comp=E,180nm,16.3s,MS4.7
GTA LR LR
comp=Z,300nm,12.8s,MS4.7
BAIF Baives 67.68 21 eP P 04 14 01.7 0.0
comp=Z,12nm,0.8s,mb4.7
BAIF Baives 67.68 21 eP P 04 14 01.7 0.0
BAIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BAIF Baives 67.68 21 eP P 04 14 01.7 0.0
comp=Z,6.2nm,0.8s,mb4.7
GIVF Givet 67.75 20 eP P 04 14 02.0 -0.2
ROSF Rostrenen 67.81 26 eP P 04 14 02.8 +0.2
CLL Collm 67.82 15 eP P 04 14 02.3 -0.3
comp=Z,118nm,3.4s
CLL Collm 67.82 15 iP P 04 14 02.3 -0.3
CLL i pP 04 14 04.0 -0.1
CLL pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CLL Collm 67.82 15 iP P 04 14 02.3 -0.3
comp=Z,6.0nm,0.7s,mb4.7
CLL i pP 04 14 04.0 -0.1
CLL Collm 67.82 15 iP P 04 14 02.3 -0.3
comp=Z,6.0nm,0.7s,mb4.7
CLL i (pP) pP 04 14 04.0 -0.1
UBBA Unterbreizbach 67.89 17 eP P 04 14 03.2 +0.2
comp=Z,41nm,2.0s,mb5.1
FLN La Foliniere 68.01 24 eP P 04 14 03.4 -0.4
FLN eMLR MLR
comp=Z,120nm,21.0s,MS3.8
FLN La Foliniere 68.01 24 eP P 04 14 03.4 -0.4
FLN LR LR
comp=Z,120nm,21.0s,MS4.1
SGMF Saint Gilles 68.05 26 eP P 04 14 04.4 +0.3
comp=Z,19nm,0.9s,mb4.8
SGMF Saint Gilles 68.05 26 eP P 04 14 04.4 +0.3
SGMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
SGMF Saint Gilles 68.05 26 eP P 04 14 04.4 +0.3
comp=Z,9.3nm,0.9s,mb4.8
QUIF Quistinic 68.23 26 eP P 04 14 05.0 -0.2
comp=Z,12nm,0.7s,mb4.7
QUIF Quistinic 68.23 26 eP P 04 14 05.0 -0.2
QUIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
QUIF Quistinic 68.23 26 eP P 04 14 05.0 -0.2
comp=Z,6.3nm,0.7s,mb4.8
TNS Taunus Mts 68.23 18 eP P 04 14 05.1 -0.1
comp=Z,17nm,1.2s,mb5.0
TNS Taunus Mts 68.23 18 eP P 04 14 05.1 -0.1
TNS pmax pmax
comp=Z,17nm,1.2s,mb5.0
LDF La Druitiere 68.25 24 eP P 04 14 04.6 -0.7
comp=Z,8.5nm,0.8s,mb4.5
LDF La Druitiere 68.25 24 eP P 04 14 04.6 -0.7
LDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LDF La Druitiere 68.25 24 eP P 04 14 04.6 -0.7
comp=Z,4.3nm,0.8s,mb4.5
MOX Moxa 68.28 16 eP P 04 14 05.7 +0.2
comp=Z,20nm,1.3s,mb5.0
MOX Moxa 68.28 16 eP P 04 14 05.7 +0.2
MOX pmax pmax
comp=Z,20nm,1.3s,mb5.0
GRR Gorron 68.29 25 eP P 04 14 05.3 -0.3
comp=Z,7.3nm,0.6s,mb4.6
GRR Gorron 68.29 25 eP P 04 14 05.3 -0.3
GRR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
GRR Gorron 68.29 25 eP P 04 14 05.3 -0.3
comp=Z,3.7nm,0.6s,mb4.6
BRG Berggiesshubel 68.36 14 eP P 04 14 05.9 -0.1
comp=Z,4.3nm,0.8s,mb4.5
BRG Berggiesshubel 68.36 14 eP P 04 14 05.9 -0.1
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
WLF Walferdange 68.40 20 P P 04 14 07.1 +0.9
comp=Z,12nm,1.7s,mb4.6
WLF Walferdange 68.40 20 eP P 04 14 07.1 +0.8
comp=Z,20nm,1.4s,mb5.0
WLF Walferdange 68.40 20 eP P 04 14 05.5 -0.8
WLF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WLF Walferdange 68.40 20 eP P 04 14 05.5 -0.8
comp=Z,4.7nm,0.7s,mb4.6
TANN Tannenbergstha 68.62 15 eP P 04 14 08.1 +0.5
comp=Z,15nm,1.4s,mb4.7
LZH Lanzhou 68.93 306 eP P 04 14 09.0 -0.8
LZH pP pP 04 14 12.3 +0.9
LZH sP sP 04 14 13.7 +1.8
LZH ePP PP 04 16 43.1 +1.7
LZH pmax pmax
comp=Z,17nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,53nm,7.6s
LZH LR LR
comp=E,280nm,16.7s
LZH LR LR
comp=Z,360nm,18.5s,MS4.6
WHN Wuhan 69.08 295 eP P 04 14 12.0 +1.2
GRA1 Grafenberg Arr 69.16 16 eP P 04 14 11.5 +0.5
comp=Z,16nm,1.3s,mb4.8
GRF Grafenberg Arr 69.16 16 eP P 04 14 11.5 +0.5
comp=Z,16nm,1.3s,mb4.8
GRF Grafenberg Arr 69.16 16 eP P 04 14 11.5 +0.5
GRF pmax pmax
comp=Z,16nm,1.3s,mb4.8
GRF Grafenberg Arr 69.16 16 eP P 04 14 11.5 +0.5
GRF pmax pmax
comp=Z,16nm,1.3s,mb4.8
ROTZ Rotzenmuhle 69.22 15 eP P 04 14 11.6 +0.2
comp=Z,8.0nm,1.1s,mb4.6
VSR Storozhevoye 69.26 357 eP P 04 14 11.3 -0.3
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,0.5s
PRU Pruhonice 69.31 14 eP P 04 14 12.5 +0.6
PRU epP pP 04 14 23.6 +10
MEZF Maizieres J'vi 69.33 21 eP P 04 14 12.0 -0.1
ABKAR Akbulak array 69.37 343 eP P 04 14 11.9 -0.4
comp=E,5.8nm,0.6s,mb4.7
VORD Divnogorie 69.50 357 eP P 04 14 11.9 -1.2
VORD pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VORD pmax pmax
comp=N,9.0nm,1.2s
VORD pmax pmax
comp=E,7.0nm,0.8s
AKASG Malin Array Be 69.73 4 P P 04 14 13.6 -0.9
comp=E,1.9nm,0.6s,mb4.2,baz=357,slow=6.3,SNR=7.7
AKASG Malin Array Be 69.73 4 P P 04 14 13.6 -0.9
STU Stuttgart 69.76 18 eP P 04 14 14.4 -0.3
comp=Z,6.0nm,0.9s,mb4.5
STU Stuttgart 69.76 18 eP P 04 14 14.5 -0.2
STU pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
STU Stuttgart 69.76 18 eP P 04 14 14.5 -0.2
comp=Z,4.6nm,0.6s,mb4.6
CDF Champ du Feu 69.80 19 eP P 04 14 15.0 0.0
MORC Moravsky Berou 69.85 12 eP P 04 14 15.4 +0.1
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MORC Moravsky Berou 69.85 12 eP P 04 14 15.3 +0.1
comp=Z,3.2nm,1.0s,mb4.2
WET Wettzell 69.92 15 eP P 04 14 16.3 +0.6
comp=Z,12nm,1.2s,mb4.7
WET Wettzell 69.92 15 eP P 04 14 16.3 +0.6
WET pmax pmax
comp=Z,12nm,1.2s,mb4.7

ECH	**Echery**	69.97	19	*e*P	P	04 14 16.1	+0.1
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ECH	**Echery**	69.97	19	*e*P	P	04 14 16.1	0.0
	comp=Z,8.4nm,1.0s,mb4.6						
KHC	**Kasperske Hory**	70.03	15	*e*P	P	04 14 16.5	+0.2
	comp=Z,14nm,1.4s,mb4.7						
KHC	**Kasperske Hory**	70.03	15	*e*P	P	04 14 16.7	+0.3
KHC				*e*pP	pP	04 14 27.8	+10
HAU	**Haudompre**	70.04	20	*e*P	P	04 14 16.2	-0.2
HAU				*e*MLR	MLR		
	comp=Z,122nm,18.8s,MS3.9						
HAU	**Haudompre**	70.04	20	*e*P	P	04 14 16.2	-0.2
HAU				LR	LR		
	comp=Z,120nm,18.8s,MS4.2						
BFO	**Black Forest**	70.05	18	*e*P	P	04 14 16.4	-0.1
	comp=Z,12nm,1.5s,mb4.6						
BFO	**Black Forest**	70.05	18	*e*P	P	04 14 16.4	-0.1
BFO				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
MFF	**Saint Martin d**	70.14	25	*e*P	P	04 14 16.4	-0.7
LOR	**Lormes**	70.30	22	*e*P	P	04 14 17.8	-0.3
	comp=Z,23nm,1.2s,mb4.7						
LOR				*e*MLR	MLR		
	comp=Z,91nm,17.5s,MS3.8						
LOR	**Lormes**	70.30	22	*e*P	P	04 14 17.8	-0.3
LOR				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
LOR				MLR	MLR		
	comp=Z,90nm,17.5s,MS4.1						
LOR	**Lormes**	70.30	22	*e*P	P	04 14 17.8	-0.3
	comp=Z,12nm,1.2s,mb4.7						
LOR				LR	LR		
	comp=Z,90nm,17.5s,MS4.1						
HINF	**Hinteralfeld**	70.31	20	*e*P	P	04 14 17.7	-0.4
	comp=Z,4.8nm,0.6s,mb4.3						
HINF	**Hinteralfeld**	70.31	20	*e*P	P	04 14 17.7	-0.4
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
HINF	**Hinteralfeld**	70.31	20	*e*P	P	04 14 17.7	-0.4
	comp=Z,2.4nm,0.6s,mb4.3						
GEC2	**GERESS Array S**	70.32	15	*e*P	P	04 14 18.3	+0.1
	comp=Z,34nm,2.3s,mb4.9						
GEC2	**GERESS Array S**	70.32	15	*e*P	P	04 14 18.3	+0.1
GEC2				pmax	pmax		
	comp=Z,34nm,2.3s,mb4.9						
GERES	**GERESS Array B**	70.32	15	P	P	04 14 18.6	+0.4
	comp=Z,1.6nm,0.6s,mb4.2,baz=348,slow=5.2,SNR=28						
GERES				LR	LR	04 47 00.3	
	comp=Z,52nm,18.3s,MS3.8,baz=306,slow=38						
SSF	**Saint Saulge**	70.43	22	*e*P	P	04 14 18.6	-0.3
	comp=Z,24nm,1.1s,mb4.8						
SSF	**Saint Saulge**	70.43	22	*e*P	P	04 14 18.6	-0.3
SSF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
SSF	**Saint Saulge**	70.43	22	*e*P	P	04 14 18.6	-0.3
	comp=Z,12nm,1.1s,mb4.7						
STHS	**Stebnicka Huta**	70.55	9	*e*P	P	04 14 20.4	+0.8
STHS				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
STHS	**Stebnicka Huta**	70.55	9	*e*P	P	04 14 20.4	+0.8
	comp=Z,4.7nm,1.5s,mb4.2						
STHS	**Stebnicka Huta**	70.55	9	*e*P	P	04 14 20.4	+0.8
FUR	**Furstenfeldbru**	70.66	16	*e*P	P	04 14 20.4	+0.2
	comp=Z,12nm,0.7s,mb4.9						
FUR	**Furstenfeldbru**	70.66	16	*e*P	P	04 14 20.4	+0.2
FUR				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
AVF	**Avril sur Loir**	70.67	22	*e*P	P	04 14 19.8	-0.5
	comp=Z,13nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	70.67	22	*e*P	P	04 14 19.8	-0.5
AVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	70.67	22	*e*P	P	04 14 19.8	-0.5
	comp=Z,6.6nm,0.9s,mb4.6						
BGF	**Bois d'Agland**	70.79	23	*e*P	P	04 14 20.7	-0.4
SMF	**Signal de Mont**	70.90	22	*e*P	P	04 14 21.1	-0.6
	comp=Z,15nm,0.9s,mb4.6						
SMF	**Signal de Mont**	70.90	22	*e*P	P	04 14 21.1	-0.6
SMF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SMF	**Signal de Mont**	70.90	22	*e*P	P	04 14 21.1	-0.6
	comp=Z,7.5nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	70.92	23	*e*P	P	04 14 21.5	-0.4
	comp=Z,34nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	70.92	23	*e*P	P	04 14 21.5	-0.4
TCF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	70.92	23	*e*P	P	04 14 21.5	-0.4
	comp=Z,17nm,1.2s,mb4.8						
VYHS	**Vyhne**	71.25	11	*e*P	P	04 14 23.2	-0.6
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb4.2						
VYHS	**Vyhne**	71.25	11	*e*P	P	04 14 23.2	-0.6
	comp=Z,6.4nm,1.8s,mb4.2						
VYHS	**Vyhne**	71.25	11	*e*P	P	04 14 23.2	-0.6
RJOB	**Jochberg**	71.29	16	*e*P	P	04 14 24.1	0.0
	comp=Z,9.0nm,1.3s,mb4.5						
CABF	**La Chapelle**	71.34	20	*e*P	P	04 14 24.5	+0.1
	comp=Z,19nm,0.9s,mb4.7						
CABF	**La Chapelle**	71.34	20	*e*P	P	04 14 24.5	+0.1
CABF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CABF	**La Chapelle**	71.34	20	*e*P	P	04 14 24.5	+0.1
	comp=Z,9.3nm,0.9s,mb4.7						
KECS	**Kecovo**	71.41	10	*e*P	P	04 14 24.8	0.0
KECS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
KECS	**Kecovo**	71.41	10	*e*P	P	04 14 24.8	0.0
	comp=Z,2.8nm,1.1s,mb4.1						
KECS	**Kecovo**	71.41	10	*e*P	P	04 14 24.8	0.0
CONA	**Conrad Observa**	71.49	13	⇓*i*P	P	04 14 25.9	+0.6
	comp=Z,12nm,1.3s,mb4.7						
WATA	**Walderalm**	71.52	16	⇑*i*P	P	04 14 26.1	+0.6
	comp=Z,9.3nm,0.9s,mb4.7						
WTTA	**Wattenberg**	71.59	16	⇑*i*P	P	04 14 26.8	+0.9
	comp=Z,20nm,1.2s,mb4.9						
RJF	**Les Rejaudoux**	71.72	24	*e*P	P	04 14 27.4	+0.7
RJF				*e*MLR	MLR		
	comp=Z,156nm,20.8s,MS4.0						
RJF	**Les Rejaudoux**	71.72	24	*e*P	P	04 14 27.4	+0.7
RJF				LR	LR		
	comp=Z,160nm,20.8s,MS4.3						
LFF	**La Frestale**	71.91	25	*e*P	P	04 14 27.7	-0.2
	comp=Z,18nm,0.6s,mb4.9						
LFF	**La Frestale**	71.91	25	*e*P	P	04 14 27.7	-0.2
LFF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
LFF	**La Frestale**	71.91	25	*e*P	P	04 14 27.7	-0.2
	comp=Z,8.8nm,0.6s,mb4.9						
PSZ	**Piszkesteto**	71.92	11	*e*P	P	04 14 27.7	-0.2
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
PSZ	**Piszkesteto**	71.92	11	*e*P	P	04 14 27.7	-0.1
	comp=Z,7.3nm,1.0s,mb4.6						
KBA	**Koelnbreinsper**	72.01	15	⇑*i*P	P	04 14 29.6	+1.2
	comp=Z,21nm,1.2s,mb4.9						
CAF	**Calviac**	72.20	24	*e*P	P	04 14 30.4	+0.8
USP	**Ospenovka**	72.22	331	P	P	04 14 29.8	+0.1
	SNR=5.5						
TKM2	**Tokmak 2**	72.27	330	P	P	04 14 30.6	+0.6
	SNR=8.6						
TKM2	**Tokmak 2**	72.27	330	*e*P	P	04 14 29.9	-0.2
TKM2				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
TKM2	**Tokmak 2**	72.27	330	*e*P	P	04 14 29.9	-0.1
	comp=Z,16nm,1.3s,mb4.8						
CHMS	**Chumysh**	72.41	330	P	P	04 14 31.1	+0.2
	SNR=5.2						
LPL	**La Plagne**	72.52	20	*e*P	P	04 14 32.3	+0.8
	comp=Z,20nm,1.1s,mb4.7						
LPL	**La Plagne**	72.52	20	*e*P	P	04 14 32.3	+0.8
LPL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
LPL	**La Plagne**	72.52	20	*e*P	P	04 14 32.3	+0.8
	comp=Z,10nm,1.1s,mb4.7						
LPG	**La Plagne**	72.54	20	*e*P	P	04 14 32.6	+1.0
	comp=Z,27nm,1.2s,mb4.7						
LPG	**La Plagne**	72.54	20	*e*P	P	04 14 32.6	+1.0
LPG				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
LPG	**La Plagne**	72.54	20	*e*P	P	04 14 32.6	+1.0
	comp=Z,13nm,1.2s,mb4.7						
FRU	**Bishkek**	72.60	330	*e*P	P	04 14 30.0	-2.0
FRU				*e*		04 14 40.0	
KBK	**Karagaybulak**	72.68	330	P	P	04 14 32.8	+0.3
	SNR=8.8						
ULHL	**Ulahol**	72.74	329	P	P	04 14 33.3	+0.5
	SNR=7.2						
VIVF	**Saint-Julien-I**	72.78	22	*e*P	P	04 14 32.9	-0.1
	comp=Z,18nm,1.0s,mb4.6						
VIVF	**Saint-Julien-I**	72.78	22	*e*P	P	04 14 32.9	-0.1
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
VIVF	**Saint-Julien-I**	72.78	22	*e*P	P	04 14 32.9	-0.1
	comp=Z,9.1nm,1.0s,mb4.7						
AAK	**Ala-Archa**	72.82	330	P	P	04 14 33.6	+0.3
	SNR=6.9						
AAK	**Ala-Archa**	72.82	330	*d*iP	P	04 14 33.5	+0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
AAK	**Ala-Archa**	72.82	330	*e*P	P	04 14 33.3	-0.1
	comp=Z,5.1nm,0.8s,mb4.5						
ORIF	**Oris-en-Rattie**	72.94	21	*e*P	P	04 14 33.0	-1.0
ORIF				*e*MLR	MLR		
	comp=Z,108nm,17.2s,MS3.9						
BNI	**Bardonecchia**	72.95	20	*e*P	P	04 14 35.1	+1.0
BNI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
BNI	**Bardonecchia**	72.95	20	*e*P	P	04 14 35.0	+1.0
	comp=Z,8.5nm,1.0s,mb4.6						
EKS2	**Erkin-Say**	72.97	331	P	P	04 14 34.0	-0.2
	SNR=15						
EKS2	**Erkin-Say**	72.97	331	*e*P	P	04 14 33.9	-0.3
EKS2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
EKS2	**Erkin-Say**	72.97	331	*e*P	P	04 14 33.9	-0.4
	comp=Z,9.7nm,0.7s,mb4.8						
KZA	**Kyzart**	73.15	330	P	P	04 14 35.8	+0.5
	SNR=5.4						
UCH	**Uchtor**	73.20	330	*e*P	P	04 14 34.8	-0.8
UCH				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
UCH	**Uchtor**	73.20	330	*e*P	P	04 14 34.8	-0.8
	comp=Z,2.5nm,0.8s,mb4.2						
SJPF	**Ste Jean**	73.22	27	*e*P	P	04 14 37.4	+1.7
MBDF	**Montbardon**	73.29	21	*e*P	P	04 14 36.9	+0.8
	comp=Z,16nm,0.9s,mb4.7						
MBDF	**Montbardon**	73.29	21	*e*P	P	04 14 36.9	+0.8
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MBDF	**Montbardon**	73.29	21	*e*P	P	04 14 36.9	+0.8
	comp=Z,7.9nm,0.9s,mb4.6						
LASF	**Ste Croix**	73.37	23	*e*P	P	04 14 36.4	-0.2
CD2	**Chengdu**	73.44	303	P	P	04 14 36.8	-0.4
CD2				pP	pP	04 14 41.5	+2.7
CD2				sP	sP	04 14 43.8	+4.5
CD2				PP	PP	04 17 22.1	+1.8
CD2				S	S	04 24 03.6	-3.3
CD2				sS	sS	04 24 11.6	+2.1
CD2				SKS		04 24 37.8	
CD2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
CD2				pmax	pmax		
	comp=Z,210nm,5.1s						
CD2				LR	LR		
	comp=Z,460nm,5.7s						
AML	**Almayashu**	73.49	331	P	P	04 14 38.3	+1.0
	SNR=14						
AML	**Almayashu**	73.49	331	*e*P	P	04 14 37.8	+0.5
AML				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
AML	**Almayashu**	73.49	331	*e*P	P	04 14 37.8	+0.5
	comp=Z,6.7nm,0.7s,mb4.7						
ETSF	**Etsaut**	73.57	26	*e*P	P	04 14 38.2	+0.4
EPF	**Esparros**	73.64	26	*e*P	P	04 14 38.1	-0.1
MTLF	**Montolieu**	73.75	24	*e*P	P	04 14 38.7	-0.1
SMRF	**Simiane la Rot**	73.80	22	*e*P	P	04 14 40.2	+1.1
	comp=Z,8.0nm,0.8s,mb4.4						
SMRF	**Simiane la Rot**	73.80	22	*e*P	P	04 14 40.2	+1.1
	comp=Z,8.0nm,0.8s,mb4.7						
SBF	**Sospel**	74.24	20	*e*P	P	04 14 42.3	+0.6
	comp=Z,36nm,0.9s,mb5.0						
SBF	**Sospel**	74.24	20	*e*P	P	04 14 42.3	+0.6
SBF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
SBF	**Sospel**	74.24	20	*e*P	P	04 14 42.3	+0.6
	comp=Z,18nm,0.9s,mb5.0						
FRF	**La Foret Royal**	74.39	21	*e*P	P	04 14 42.5	-0.1
LMR	**La Mourre**	74.59	21	*e*P	P	04 14 43.8	+0.1
	comp=Z,22nm,0.9s,mb4.8						
LMR	**La Mourre**	74.59	21	*e*P	P	04 14 43.8	+0.1
LMR				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
LMR	**La Mourre**	74.59	21	*e*P	P	04 14 43.8	+0.1
	comp=Z,11nm,0.9s,mb4.8						
SDV	**Santo Domingo**	74.59	99	*e*P	P	04 14 43.7	-0.4
	comp=Z,7.5nm,0.9s,mb4.6						
ESDC	**Sonseca Array**	75.82	30	P	P	04 14 51.6	+0.8
	comp=Z,3.7nm,0.7s,mb4.4,baz=334,slow=5.8,SNR=19						
GYA	**Guiyang**	76.04	299	P	P	04 14 52.9	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ROSC	**El Rosal**	76.24	104	P	P	04 14 54.5	+1.0
	comp=Z,1.8nm,0.4s,mb4.4,baz=81,slow=21,SNR=4.4						
ROSC				LR	LR	04 53 17.9	
	comp=Z,75nm,19.4s,MS4.0,baz=3.2,slow=40						
KIV	**Kislovodsk**	76.38	354	*e*P	P	04 14 54.3	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
KIV				MLR	MLR		
	comp=Z,45nm,19.0s,MS3.8						
PPT	**Papeete**	77.20	184	LR	LR	04 44 30.4	
	comp=Z,46nm,20.1s,MS3.8,baz=334,slow=32						
ZEI	**Tsey**	77.49	353	*e*P	P	04 15 00.5	+0.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.4						
OTAV	**Otavalo**	78.27	110	*e*P	P	04 15 04.2	-0.7
	comp=Z,2.0nm,0.6s,mb4.2						
BR131	**Keskin Array S**	80.80	1	*e*P	P	04 15 17.9	-0.5
	comp=Z,0.8nm,0.8s,mb3.7						
BRTR	**Keskin Array B**	80.80	1	P	P	04 15 18.1	-0.3
	comp=Z,1.3nm,0.8s,mb3.9,baz=10.0,slow=3.6,SNR=9.4						
BRTR				LR	LR	04 55 12.3	
	comp=Z,39nm,18.7s,MS3.8,baz=177,slow=39						
MALT	**Malatya**	82.17	357	*e*P	P	04 15 26.6	+0.9
MALT				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MALT	**Malatya**	82.17	357	*e*P	P	04 15 26.6	+0.9
	comp=Z,2.3nm,0.9s,mb4.1						
KEST	**Kesra**	82.48	21	P	P	04 15 27.0	-0.3
	comp=Z,0.8nm,0.6s,mb3.9,baz=236,slow=0.9,SNR=8.7						
SHL	**Shillong**	82.98	310	*e*P	P	04 15 29.0	-1.1
SHL				*e*x	x	04 16 44.5	
DDI	**Dehra Dun**	83.38	323	*e*x	x	04 15 31.5	
CHTO	**Chiang Mai**	86.12	301	*e*P	P	04 15 44.9	-1.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
CHTO	**Chiang Mai**	86.12	301	*e*P	P	04 15 44.9	-1.2
	comp=Z,3.7nm,0.7s,mb4.7						
CMAR	**Chiang Mai Arr**	86.44	301	P	P	04 15 47.0	-0.7
	comp=Z,7.8nm,0.8s,mb5.0,baz=6.8,slow=5.0,SNR=25						
CMAR	**Chiang Mai Arr**	86.44	301	P	P	04 15 47.0	-0.7
LPAZ	**La Paz**	97.56	109	LR	LR	05 04 49.4	
	comp=Z,67nm,18.0s,MS4.2,baz=154,slow=38						
LBTB	**Lobatse**	144.61	15	PKP	PKPdf	04 22 39.7	-1.6
	comp=Z,3.2nm,0.6s,baz=317,slow=1.5,SNR=8.3						
LBTB	**Lobatse**	144.61	15	*e*PKPdf	PKPdf	04 22 39.2	-2.1
CASY	**Casey**	147.12	226	*e*PKPbc	PKPbc	04 22 44.2	-2.2
QSPA	**South Pole Qui**	149.64	180	*e*PKPbc	PKPbc	04 22 51.0	-1.7

IDC ***11*** *04:05:54.4±0.8, 5°.13S×152°.51E, h0km, mb4.4/13, mb1 4.4/13, mb1mx4.3/19, mbtmp4.3/13, MS3.5/2, Ms1 3.5/2, ms1mx3.1/20, Error ellipse: s-maj=29.5km s-min=15.5km az=103.0*

ISCJB ***11*** *04:05:58.2±0.4, 5°.16S±0°.06×152°.52E±0°.09, h33km, mb4.5/32, Error ellipse: s-maj=13.2km s-min=8.8km az=17.8*

NEIC ***11*** *04:06:01.1±3.3, 5°.19S×152°.50E, h47km±30km, mb4.7/18, Error ellipse: s-maj=12.1km s-min=10.5km az=190.0*

DJA ***11*** *04:06:19, 5°.32S×151°.65E, h168km, mb4.6/8*

ISC 11 04:06:00.1±0.4, 5°.18S±0°.06×152°.52E±0°.09, h35km, n52, σ0°88/44, mb4.5/32, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	16.02	202	LR	LR	04 14 31.5	
	comp=Z,78nm,20.9s,baz=230,slow=32						
KAKA	**Kakadu**	21.19	248	*e*P	P	04 10 41.8	-0.9
	169nm,0.8s,mb5.4						
DZM	**Mont Dzumac**	21.53	143	*e*P	P	04 10 46.9	+0.5
	22nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	22.97	229	*e*P	P	04 11 02.6	+0.9
	5.7nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	22.98	229	*e*P	P	04 11 02.1	+0.4
WRA	**Warramunga Arr**	22.98	229	P	P	04 11 01.8	-0.1
	5.5nm,0.8s,mb4.1,baz=51,slow=10,SNR=34						
ASAR	**Alice Springs**	25.68	222	P	P	04 11 27.1	+0.1
	2.7nm,0.6s,mb3.9,baz=56,slow=8.5,SNR=30						
STKA	**Stephens Creek**	28.46	200	P	P	04 11 50.4	-1.5
	0.5nm,0.4s,mb3.5,baz=4.1,slow=14,SNR=3.0						
FITZ	**Fitzroy Crossi**	29.23	242	P	P	04 11 58.4	-0.4
	8.9nm,0.8s,mb4.5,baz=60,slow=6.6,SNR=24						
DAV	**Davao City (W)**	29.51	294	LR	LR	04 21 07.9	
	comp=Z,214nm,21.6s,baz=92,slow=31						
MBWA	**Marble Bar**	35.54	240	*e*P	P	04 12 53.5	-0.6
	8.0nm,0.6s,mb4.8						
URZ	**Urewera**	39.80	149	P	P	04 13 30.0	+0.1
	5.2nm,0.5s,mb4.5,baz=306,slow=19,SNR=4.8						
KSM	**Kuching**	42.68	278	*e*P	P	04 13 53.5	-0.4
	7.8nm,0.7s,mb4.5						
MJAR	**Matsushiro Arr**	43.61	343	P	P	04 13 58.5	-2.5
	0.9nm,0.7s,mb3.6,baz=165,slow=9.2,SNR=5.0						
KSRS	**Korea Array**	48.21	334	P	P	04 14 35.9	-1.4
	2.0nm,0.8s,mb4.2,baz=141,slow=7.6,SNR=7.7						
ASAJ	**Asahikawa**	49.88	351	P	P	04 14 49.6	-0.3
	9.0nm,0.9s,mb4.8,baz=254,slow=14,SNR=4.7						
XAN	**Xi'an**	56.70	317	P	P	04 15 39.9	-0.4
XAN				pP	pP	04 15 44.5	-6.5
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
XAN				pmax	pmax		
	comp=Z,41nm,8.1s						
PETK	**Petropavlovsk-**	58.23	4	P	P	04 15 50.5	-0.3
	comp=Z,3.1nm,0.6s,mb4.5,baz=166,slow=4.9,SNR=11						
ULN	**Ulaanbaatar**	66.17	328	*e*P	P	04 16 43.9	-0.1
	comp=Z,1.5nm,0.5s,mb4.3						
SONM	**Songino Array**	66.49	328	P	P	04 16 46.5	+0.4
	comp=Z,1.4nm,0.5s,mb4.3,baz=149,slow=5.2,SNR=7.0						
LSA	**Lhasa**	68.22	305	*e*P	P	04 16 58.8	+1.3
	comp=Z,6.8nm,0.7s,mb4.8						
BILL	**Bilibino**	73.69	5	*e*P	P	04 17 29.8	0.0
	comp=Z,5.2nm,0.6s,mb4.6						
CHUM	**Lake Minchumin**	80.13	22	*e*P	P	04 18 06.3	+0.2
	comp=Z,10nm,0.8s,mb4.8						
MK31	**Makanchi Array**	80.42	319	*e*P	P	04 18 08.3	+0.1
MKAR	**Makanchi Array**	80.42	319	P	P	04 18 09.1	+0.9
	comp=Z,1.8nm,0.5s,mb4.2,baz=118,slow=5.4,SNR=13						
MKAR	**Makanchi Array**	80.42	319	P	P	04 18 09.1	+0.9
TRF	**Thorofare Moun**	80.65	23	*e*P	P	04 18 08.8	-0.2
	comp=Z,3.7nm,0.7s,mb4.4						
MCK	**McKinley**	81.32	23	*e*P	P	04 18 11.6	-0.9
	comp=Z,8.0nm,1.0s,mb4.6						
KURK	**Kurchatov**	83.89	322	*e*P	P	04 18 25.8	-0.5
	comp=Z,3.6nm,1.0s,mb4.5						
TKM2	**Tokmak 2**	83.99	314	P	P	04 18 27.9	+0.9
	SNR=7.8						
TKM2	**Tokmak 2**	83.99	314	*e*P	P	04 18 27.0	+0.1
	comp=Z,5.1nm,0.6s,mb4.8						
KZA	**Kyzart**	84.06	313	P	P	04 18 29.4	+2.1
	SNR=16						
UCH	**Uchtor**	84.62	313	P	P	04 18 32.0	+1.8
	SNR=9.3						
UCH	**Uchtor**	84.62	313	*e*P	P	04 18 31.6	+1.4
	comp=Z,13nm,1.4s,mb4.9						
AAK	**Ala-Archa**	84.72	314	P	P	04 18 31.5	+0.9
	SNR=6.7						
AAK	**Ala-Archa**	84.72	314	*e*P	P	04 18 31.2	+0.6
	comp=Z,6.3nm,0.8s,mb4.8						
USP	**Ospenovka**	84.85	314	P	P	04 18 31.9	+0.6
	SNR=6.5						
AML	**Almayashu**	85.20	313	P	P	04 18 34.7	+1.7
	SNR=19						
AML	**Almayashu**	85.20	313	*e*P	P	04 18 34.3	+1.2
	comp=Z,16nm,0.8s,mb5.2						
EKS2	**Erkin-Say**	85.24	313	P	P	04 18 33.9	+0.7
	SNR=6.4						
EKS2	**Erkin-Say**	85.24	313	*e*P	P	04 18 33.9	+0.6
INK	**Inuvik**	88.91	21	*e*P	P	04 18 50.5	+0.1
	comp=Z,1.8nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	89.37	323	P	P	04 18 51.6	-1.4
	comp=Z,4.0nm,0.6s,mb4.9,baz=105,slow=6.1,SNR=17						
BRVK	**Borovoye**	89.44	323	*e*P	P	04 18 52.3	-1.0
	comp=Z,2.9nm,0.7s,mb4.7						
SYO	**Syowa Base**	93.22	199	⇑*e*P	P	04 19 10.0	-0.6
YKA	**Yellowknife Ar**	95.89	28	P	P	04 19 23.4	+0.6
	comp=Z,1.0nm,0.6s,mb4.4,baz=270,slow=4.9,SNR=28						
FINES	**FINESS Array B**	111.28	335	Pdiff	Pdif	04 20 29.5	-2.2
	comp=Z,1.3nm,0.9s,baz=42,slow=5.9,SNR=4.1						
FINES				PKiKP	PKiKP	04 24 29.9	-0.1
	comp=Z,1.4nm,0.9s,baz=105,slow=3.9,SNR=3.5						
NOA	**NORSAR Array B**	117.17	340	PKP	PKPdf	04

MAT Matsushiro 2.81 280 P **Pn 04 44 32.5 +1.0**
MAT *e*S **Sn 04 45 12.2 +8.1**
JHJ Hachijo jima 2 3.35 208 Pn **Pn 04 44 37.9 -1.1**
154nm,0.3s,baz=334,slow=20,SNR=8.7
JHJ Sn **Sn 04 45 15.8 -1.8**
185nm,0.3s,baz=73,slow=21,SNR=7.6
ERM Erimo 6.01 11 *c i*P **Pn 04 45 12.6 -2.9**
ERM Erimo 6.01 11 *e*Pn **Pn 04 45 12.1 -3.4**
ASAJ Asahikawa 8.03 5 Pn **Pn 04 45 40.9 -2.3**
2.6nm,0.3s,baz=212,slow=12,SNR=11
ASAJ Sn **Sn 04 47 08.2 -4.6**
0.9nm,0.3s,baz=87,slow=32,SNR=3.8
ASAJ LR LR 04 49 48.8
comp=Z,850nm,18.1s,baz=176,slow=45
ASAJ Asahikawa 8.03 5 P **Pn 04 45 40.9 -2.3**
ASAJ 04 47 08.2
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,850nm,18.1s
CBIJ Chichi jima 9.00 177 Pn **Pn 04 45 50.6 -5.9**
comp=Z,13nm,0.3s,baz=295,slow=21,SNR=3.9
CBIJ Sn **Sn 04 47 24.4 -12**
comp=Z,17nm,0.3s,baz=4.2,slow=23,SNR=3.6
VLA Vladivostok 10.27 316 *e*P **Pn 04 46 16.2 +2.4**
VLA pmax pmax
comp=Z,63nm,1.7s
VLA MLR MLR
comp=Z,400nm,12.7s
YSS Yuzh-Sakhalins 10.87 4 *e*P **Pn 04 46 19.5 -2.5**
YSS MLR MLR
comp=Z,600nm,13.0s
KSRS Korea Array 11.09 281 Pn **Pn 04 46 29.4 +4.3**
comp=Z,0.6nm,0.3s,baz=99,slow=13,SNR=24
KSRS LR LR 04 50 51.4
comp=Z,532nm,18.1s,baz=14,slow=38
KSRS Korea Array 11.09 281 P **Pn 04 46 29.4 +4.3**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,532nm,18.2s
MDJ Mudanjiang 12.51 316 P **Pn 04 46 44.5 +0.1**
MDJ S **Sn 04 48 59.5 -2.9**
MDJ PcP PcP 04 52 23.7 +1.3
MDJ ScP ScP 04 55 53.8 +0.9
MDJ ScS ScS 04 59 30.8 +1.9
MDJ pmax pmax
comp=Z,2.0nm,0.7s
MDJ pmax pmax
comp=Z,56nm,5.1s
MDJ LR LR
comp=N,570nm,18.2s
MDJ LR LR
comp=E,390nm,17.2s
MDJ LR LR
comp=Z,670nm,16.9s
MDJ Mudanjiang 12.51 316 *e*Pn **Pn 04 46 42.1 -2.3**
comp=Z,29nm,1.2s
HABR Khabarovsk 13.28 341 *e*P **Pn 04 46 51.1 -3.8**
HABR *e* 04 49 15.3
HABR pmax pmax
comp=Z,45nm,2.2s
HABR pmax pmax
comp=E,35nm,1.7s
HABR pmax pmax
comp=N,16nm,0.8s
HABR MLR MLR
comp=Z,258nm,13.0s
CN2 Changchun 14.59 307 *e*P **Pn 04 47 14.5 +1.7**
CN2 *e*S **Sn 04 49 52.5 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=E,700nm,15.0s
CN2 LR LR
comp=Z,700nm,16.0s
KLR Kul'dur 14.98 334 *e*P **Pn 04 47 25.7 +7.7**
KLR MLR MLR
comp=N,600nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s
SNY Shenyang 15.16 298 ⇑P **Pn 04 47 16.7 -3.8**
SNY pP pP 04 47 25.4 -8.5
SNY PP 04 47 29.5
SNY sP sP 04 47 32.3 -5.9
SNY S **Sn 04 50 06.5 -0.7**
SNY pmax pmax
comp=Z,9.0nm,0.3s
SNY pmax pmax
comp=Z,270nm,3.5s
SNY LR LR
comp=N,420nm,12.2s
SNY LR LR
comp=E,720nm,18.0s
SNY LR LR
comp=Z,700nm,17.4s
NJ2 Nanjing 19.30 264 *e*P **Pn 04 48 10.7 -1.5**
NJ2 pP pP 04 48 14.9 -4.8
NJ2 PP 04 48 26.7
NJ2 S **Sn 04 51 43.0 -4.5**
NJ2 sS sS 04 51 51.0 -11
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,270nm,7.5s
NJ2 LR LR
comp=N,810nm,21.0s
NJ2 LR LR
comp=E,750nm,19.3s
NJ2 LR LR
comp=Z,400nm,21.4s
PETK Petropavlovsk- 20.40 29 P **P 04 48 22.7 -0.1**
comp=Z,3.7nm,0.8s,baz=215,slow=13,SNR=4.4
WHN Wuhan 23.43 264 ⇓P **P 04 48 49.0 -6.3**
WHN pP 04 48 53.7
WHN S **S 04 52 55.7 -10**
WHN LR LR
comp=Z,1μm,14.6s,MS4.5
CLNS Chul'man 23.60 337 *e*P **P 04 48 56.7 +0.1**
CLNS *e**PP 04 49 05.6
CLNS *e* 04 49 20.2
CLNS *e* 04 52 44.8
CLNS *e*S **S 04 53 06.0 -2.4**
CLNS pmax pmax
comp=Z,15nm,0.9s,mb4.4
CLNS pmax pmax
comp=N,15nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS smax
comp=E,80nm,13.5s
CLNS smax
comp=N,91nm,12.8s
CLNS MLR MLR
comp=N,257nm,12.0s,MS4.0
CLNS MLR MLR
comp=Z,266nm,12.0s,MS3.9
CLNS MLR MLR
comp=E,148nm,13.0s,MS4.0
HHC Hu-ho-hao-te 23.95 291 *e*P **P 04 49 00.0 0.0**
HHC pP 04 49 11.5
HHC PP 04 49 34.6
HHC PcP PcP 04 52 44.6 +2.9
HHC S **S 04 53 12.0 -2.4**
HHC SS 04 54 02.4
HHC ScP ScP 04 56 17.7 +0.2
HHC PcS PcS 04 56 23.6 +2.4
HHC pmax pmax
comp=Z,15nm,1.0s,mb4.4
HHC pmax pmax
comp=Z,75nm,4.9s
HHC LR LR
comp=N,430nm,13.2s,MS4.6
HHC LR LR
comp=E,2μm,16.4s,MS4.6
HHC LR LR
comp=Z,440nm,13.1s,MS4.1
XAN Xi'an 26.79 275 P **P 04 49 25.3 -0.6**
XAN pP pP 04 49 34.1 -1.3
XAN pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
XAN pmax pmax
comp=Z,43nm,7.8s
YAK Yakutsk 27.01 348 *c e*P **P 04 49 26.4 -1.1**
YAK *e**PP pP 04 49 35.5 -1.5
YAK *e*PPP 04 50 13.9
YAK *e* 04 52 51.3
YAK *e*S **S 04 53 58.0 -4.6**
YAK *e**SS sS 04 54 15.2 -3.2
YAK *e* 05 00 20.2
YAK pmax pmax
comp=E,12nm,1.8s
YAK pmax pmax
comp=Z,24nm,0.9s,mb4.7
YAK pmax pmax
comp=N,31nm,1.8s
YAK pmax pmax
comp=Z,15nm,0.6s,mb4.7
YAK smax
comp=N,71nm,4.5s
YAK smax
comp=E,78nm,4.8s
YAK MLR MLR
comp=E,110nm,12.0s,MS4.1
YAK MLR MLR
comp=N,304nm,14.0s,MS4.1
YAK MLR MLR
comp=Z,366nm,15.0s,MS4.1
YAK Yakutsk 27.01 348 *e*P **P 04 49 27.0 -0.5**
comp=Z,40nm,0.9s,mb5.0
ENH Enshi 27.45 267 *e*P **P 04 49 30.8 -1.0**
comp=Z,46nm,0.8s,mb5.1
SEY Seymchan 27.66 11 ⇑ *i*P **P 04 49 35.5 +2.2**
ULN Ulaanbaatar 28.03 306 *e*P **P 04 49 38.6 +1.8**
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
ULN Ulaanbaatar 28.03 306 *e*P **P 04 49 38.6 +1.8**
comp=Z,8.3nm,0.8s,mb4.4
BOD Bodaibo 28.41 329 *e*P **P 04 49 39.5 -0.6**
BOD pmax pmax
comp=Z,13nm,1.1s,mb4.5
SONM Songino Array 28.46 305 P **P 04 49 41.0 +0.3**
comp=Z,11nm,0.8s,mb4.5,baz=104,slow=8.2,SNR=46
SONM LR LR 05 01 37.7
comp=Z,255nm,19.4s,MS3.8,baz=102,slow=38
LZH Lanzhou 30.42 281 *e*P **P 04 49 57.1 -1.0**
LZH pP pP 04 50 09.2 +1.5
LZH sP sP 04 50 14.5 +2.8
LZH *e*PP PP 04 50 56.3 -11
LZH pmax pmax
comp=Z,20nm,1.3s,mb4.7
LZH pmax pmax
comp=Z,51nm,4.5s
LZH LR LR
comp=E,330nm,13.2s
LZH LR LR
comp=Z,460nm,17.5s,MS4.2
ZAK Zakamensk 30.99 310 *e*P **P 04 50 03.0 0.0**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
TLY Talaya 31.08 312 *e*P **P 04 50 02.9 -0.9**
TLY *e*SS SS 04 56 56.6 -24
TLY pmax pmax
comp=Z,19nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,343nm,16.0s,MS4.1
TLY Talaya 31.08 312 *e*P **P 04 50 04.4 +0.7**
comp=Z,19nm,1.0s,mb4.9
GYA Guiyang 31.26 262 P **P 04 50 04.7 -0.9**
GYA PP PP 04 51 11.9 -4.6
GYA PcP PcP 04 53 03.8 +4.2
GYA S **S 04 55 08.6 -1.5**
GYA PcS PcS 04 56 47.3 +3.4
GYA SS SS 04 56 56.0 -28
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,80nm,4.8s
GYA LR LR
comp=N,430nm,14.5s,MS4.4
GYA LR LR
comp=E,350nm,13.9s,MS4.4
GYA LR LR
comp=Z,450nm,16.3s,MS4.2
CD2 Chengdu 31.87 272 P **P 04 50 11.1 +0.1**
CD2 pP pP 04 50 23.0 +2.4
CD2 PP PP 04 51 16.6 -6.6
CD2 S **S 04 55 15.6 -4.0**
CD2 sS sS 04 55 36.0 +0.5
CD2 SS SS 04 57 06.7 -30
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 pmax pmax
comp=Z,220nm,5.1s
CD2 LR LR
comp=N,650nm,12.5s
CD2 LR LR
comp=Z,570nm,17.8s
MOY Mondy 32.68 311 *e*P **P 04 50 17.9 +0.1**
GTA Gaotai 33.02 289 ⇑P **P 04 50 21.6 +0.6**
GTA pP pP 04 50 34.1 +3.5
GTA PP PP 04 51 32.2 -3.6
GTA S **S 04 55 34.1 -3.2**
GTA sS sS 04 55 55.1 +1.9
GTA SS SS 04 57 34.8 -25
GTA pmax pmax
comp=Z,22nm,0.9s,mb5.1
GTA pmax pmax
comp=Z,190nm,7.2s
GTA LR LR
comp=N,320nm,15.6s,MS4.3
GTA LR LR
comp=E,320nm,17.7s,MS4.3
GTA LR LR
comp=Z,370nm,18.0s,MS4.1
BILL Bilibino 34.86 16 *e*P **P 04 50 37.7 +1.1**
BILL pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
BILL MLR MLR
comp=Z,100nm,17.0s,MS3.6
KMI Kunming 35.02 263 P **P 04 50 38.1 -0.3**
KMI pP pP 04 50 52.1 +4.0
KMI PP PP 04 52 00.8 +2.7
KMI S **S 04 56 07.7 -0.7**
KMI PcS PcS 04 56 59.5 +2.5
KMI SS SS 04 58 24.7 -16
KMI pmax pmax
comp=Z,12nm,0.6s,mb5.0
KMI LR LR
comp=N,280nm,11.9s
KMI LR LR
comp=E,260nm,8.7s
KMI LR LR
comp=Z,270nm,17.4s
TIXI Tiksi 36.23 353 *e*P **P 04 50 46.2 -2.1**
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
TIXI MLR MLR
comp=Z,233nm,14.0s,MS4.1
TIXI Tiksi 36.23 353 *e*P **P 04 50 47.6 -0.7**
comp=Z,3.7nm,0.8s,mb4.4
CHTO Chiang Mai 41.25 257 *e*P **P 04 51 31.0 0.0**
CHTO pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
CHTO Chiang Mai 41.25 257 *e*P **P 04 51 31.0 0.0**
comp=Z,7.1nm,1.1s,mb4.2
WMQ Urumqi 41.43 298 *e*P **P 04 51 32.9 +0.7**
WMQ pmax pmax
comp=Z,33nm,1.3s,mb4.8
WMQ pmax pmax
comp=Z,56nm,3.0s
WMQ LR LR
comp=N,140nm,22.0s,MS3.8
WMQ LR LR
comp=E,69nm,26.0s,MS3.8
WMQ LR LR
comp=Z,130nm,19.0s
CMAR Chiang Mai Arr 41.45 257 P **P 04 51 32.2 -0.4**
comp=Z,1.2nm,0.5s,mb3.8,baz=49,slow=6.5,SNR=7.1
CMAR LR LR 05 10 52.6
comp=Z,113nm,18.5s,MS3.8,baz=260,slow=39
LSA Lhasa 42.48 276 P **P 04 51 42.0 +1.0**
ZAA0 Zalesovo Array 42.68 313 *e*P **P 04 51 42.1 -0.1**
ZALV Zalesovo Beam 42.68 313 P **P 04 51 42.5 +0.3**
comp=Z,4.6nm,0.5s,mb4.5,baz=88,slow=6.9,SNR=15
ZALV LR LR 05 10 19.5
comp=Z,126nm,19.2s,MS3.8,baz=44,slow=37
ZALV Zalesovo Beam 42.68 313 P **P 04 51 42.5 +0.3**
ZALV LR LR 05 10 19.4
NVS Novosibirsk 43.61 314 *i* P **P 04 51 49.6 -0.2**
MK31 Makanchi Array 44.77 303 *e*P **P 04 51 59.4 +0.3**
MKAR Makanchi Array 44.77 303 P **P 04 51 59.4 +0.2**
comp=Z,8.4nm,0.8s,mb4.6,baz=92,slow=8.5,SNR=41
MKAR LR LR 05 11 35.0
comp=Z,189nm,18.0s,MS4.1,baz=250,slow=37
TAPN Taplejung 46.20 275 *e*P **P 04 52 11.3 +0.6**
comp=Z,15nm,0.5s,mb5.2
KURK Kurchatov 46.65 309 P **P 04 52 14.2 +0.3**
comp=Z,7.0nm,0.6s,mb4.8,baz=84,slow=7.8,SNR=30
KURK Kurchatov 46.65 309 *c i*P **P 04 52 13.6 -0.3**
KURK pmax pmax
comp=Z,31nm,1.7s,mb5.0
KURK Kurchatov 46.65 309 *e*P **P 04 52 13.3 -0.7**
comp=Z,11nm,0.6s,mb5.0
ODAN Odare 46.66 275 *e*P **P 04 52 14.6 +0.2**
comp=Z,28nm,0.8s,mb5.3
RAMN Ramite 47.26 275 *e*P **P 04 52 19.6 +0.6**
comp=Z,91nm,0.7s
JIRN Jiri 47.29 276 *e*P **P 04 52 20.2 +0.9**
comp=Z,55nm,0.8s,mb5.5
GUN Gumba 47.44 277 *e*P **P 04 52 21.3 +0.9**
comp=Z,20nm,0.6s,mb5.2
CHUM Lake Minchumin 47.80 33 *e*P **P 04 52 22.9 +0.2**
comp=Z,8.3nm,1.0s,mb4.7
PKI Pulchoki 47.96 276 *e*P **P 04 52 24.5 +0.1**
KKN Kakani 47.97 277 *e*P **P 04 52 25.0 +0.5**
DMN Daman 48.19 277 *e*P **P 04 52 26.7 +0.5**
MCK McKinley 49.30 33 *e*P **P 04 52 34.9 +0.7**
MCK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MCK McKinley 49.30 33 *e*P **P 04 52 34.9 +0.7**
comp=Z,4.5nm,0.8s,mb4.5
COEN Coen 49.81 178 *e*P **P 04 52 43.9 +5.2**
comp=Z,40nm,0.7s,mb5.6
TKM2 Tokmak 2 50.24 299 *e*P **P 04 52 43.0 +1.3**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
TKM2 Tokmak 2 50.24 299 *e*P **P 04 52 43.0 +1.4**
comp=Z,5.9nm,0.6s,mb4.8
AAK Ala-Archa 51.10 299 P **P 04 52 47.7 -0.4**
comp=Z,1.0nm,0.4s,mb4.1,baz=146,slow=12,SNR=6.1
AAK Ala-Archa 51.10 299 *c i*P **P 04 52 48.6 +0.4**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
AAK Ala-Archa 51.10 299 *e*P **P 04 52 48.8 +0.6**
comp=Z,3.8nm,0.9s,mb4.3
UCH Uchtor 51.20 299 *e*P **P 04 52 50.1 +1.2**
comp=Z,4.4nm,0.9s,mb4.4
BVAR Borovoye Array 51.33 313 P **P 04 52 49.7 -0.1**
comp=Z,4.6nm,0.9s,mb4.4,baz=77,slow=6.7,SNR=17
BVAR LR LR 05 15 28.0
comp=Z,208nm,18.2s,MS4.2,baz=185,slow=37
BRVK Borovoye 51.39 313 *c i*P **P 04 52 50.3 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BRVK Borovoye 51.39 313 *e*P **P 04 52 50.6 +0.5**
comp=Z,8.2nm,0.8s,mb4.7
EKS2 Erkin-Say 51.59 299 *e*P **P 04 52 52.6 +0.7**
comp=Z,3.6nm,0.8s,mb4.3
AML Almayashu 51.81 299 *e*P **P 04 52 54.5 +1.0**
comp=Z,9.4nm,0.7s,mb4.8
INK Inuvik 55.13 27 P **P 04 53 16.8 -0.7**
comp=Z,1.3nm,0.6s,mb4.1,baz=266,slow=6.9,SNR=12
INK Inuvik 55.13 27 P **P 04 53 16.8 -0.6**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 55.13 27 *e*P **P 04 53 17.2 -0.2**
comp=Z,125nm,3.0s
SVE Sverdlovsk 55.96 319 ⇑ *e*P **P 04 53 24.1 +0.5**
SVE pmax pmax
comp=Z,16nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,478nm,16.0s,MS4.7
FITZ Fitzroy Crossi 56.00 198 P **P 04 53 23.4 -0.9**
comp=Z,2.1nm,0.7s,mb4.3,baz=43,slow=4.4,SNR=5.7
WRAB Tennant Creek 56.16 188 *e*P **P 04 53 28.0 +2.6**
WRAB pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WRAB Tennant Creek 56.16 188 *e*P **P 04 53 28.0 +2.7**
comp=Z,9.6nm,0.9s,mb4.8
WB2 Warramunga Arr 56.17 188 *e*P **P 04 53 23.1 -2.3**
WRA Warramunga Arr 56.17 188 P **P 04 53 23.2 -2.3**
comp=Z,4.0nm,0.8s,mb4.5,baz=7.8,slow=7.4,SNR=16
ARU Arti 57.18 319 *d i*P **P 04 53 32.2 0.0**
ARU 04 55 37.5
ARU S **S 05 01 26.3 +1.1**
ARU SS SS 05 05 11.4 -2.5
ARU pmax pmax
comp=Z,24nm,1.5s,mb5.0
ARU Arti 57.18 319 *e*P **P 04 53 32.1 -0.2**
comp=Z,15nm,1.0s,mb5.0
ABKAR Akbulak array 58.68 311 *e*P **P 04 53 42.0 -0.9**
comp=Z,2.5nm,0.4s,mb4.6
ASAR Alice Springs 59.90 188 P **P 04 53 49.5 -2.0**
comp=Z,1.0nm,0.4s,mb4.2,baz=359,slow=6.6,SNR=12
MBWA Marble Bar 60.61 204 *e*P **P 04 53 58.0 +1.6**
comp=Z,5.9nm,0.6s,mb4.9
RES Resolute Bay 63.45 14 LR LR 05 23 02.8
comp=Z,68nm,19.1s,MS3.8,baz=0.4,slow=37
RES Resolute Bay 63.45 14 *e*P **P 04 54 14.9 0.0**
RES pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
RES Resolute Bay 63.45 14 *e*P **P 04 54 14.9 0.0**
comp=Z,7.0nm,1.1s,mb4.7
YKA Yellowknife Ar 64.52 30 P **P 04 54 21.2 -0.8**
comp=Z,0.6nm,0.7s,mb3.7,baz=302,slow=6.5,SNR=8.3
ARCES ARCESS Array B 64.93 340 P **P 04 54 24.2 -0.4**
comp=Z,4.3nm,0.8s,mb4.5,baz=44,slow=12,SNR=3.7
JOF Joensuu 66.86 332 *e*P **P 04 54 36.1 -1.1**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JOF Joensuu 66.86 332 *e*p **P 04 54 36.1 -1.1**
comp=Z,4.5nm,0.6s,mb4.7
STKA Stephens Creek 67.63 180 P **P 04 54 40.3 -2.0**
comp=Z,0.7nm,0.6s,mb3.9,baz=339,slow=17,SNR=3.1
FORT Forrest 67.75 193 *e*P **P 04 54 43.3 +0.2**
comp=Z,16nm,0.8s,mb5.1
OBN Obninsk 68.95 324 *c i*P **P 04 54 49.7 -0.7**
OBN pmax pmax
comp=Z,24nm,1.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
MAK Makhachkala 69.17 308 *e*P pP 04 55 02.6 +0.3
MAK MLR MLR
comp=Z,330nm,15.0s,MS4.7
KAF Kangasniemi 69.21 333 *e*P **P 04 54 50.4 -1.5**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KAF Kangasniemi 69.21 333 *e*p **P 04 54 50.4 -1.5**
comp=Z,4.0nm,0.7s,mb4.5
FINES FINESS Array B 69.72 332 P **P 04 54 54.7 -0.3**
comp=Z,4.5nm,0.8s,mb4.5,baz=50,slow=6.0,SNR=14
FINES FINESS Array B 69.72 332 P **P 04 54 54.7 -0.3**
EDM Edmonton 69.96 38 *e*P **P 04 55 01.6 +4.9**
NEW Newport 70.67 44 *e*P **P 04 55 00.5 -0.6**
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 70.67 44 *e*P **P 04 55 00.5 -0.6**
comp=Z,5.1nm,0.9s,mb4.5
KIV Kislovodsk 71.65 311 *e*P **P 04 55 07.6 +0.5**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,109nm,20.0s,MS4.1
KIV Kislovodsk 71.65 311 *e*P **P 04 55 08.0 +0.8**
comp=Z,6.1nm,0.5s,mb4.8
BMO Blue Mountains 72.42 47 *e*P **P 04 55 12.2 +0.5**
BMO pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
BMO Blue Mountains 72.42 47 *e*P **P 04 55 12.2 +0.4**
comp=Z,1.9nm,1.0s,mb4.0
JTMT Jette 72.54 43 *e*P **P 04 55 21.3 +8.9**
SWMT Swartz Lake 72.83 43 *e*P **P 04 55 14.1 0.0**
SCO Scoresbysund 73.05 354 *i* P **P 04 55 24.6 +10**
SCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
SCO Scoresbysund 73.05 354 *i* P **P 04 55 24.6 +10**
comp=Z,5.2nm,1.0s,mb4.4

MSO	Missoula	73.25	44	eP	P	04 55 25.0	+8.3
SLMT	Seeley Lake	73.27	43	eP	P	04 55 18.8	+2.1
CMB	Columbia Colle	74.26	54	eP	P	04 55 21.8	-0.9
CMB				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
CMB	Columbia Colle	74.26	54	eP	P	04 55 21.8	-0.9
	comp=Z,5.7nm,1.3s,mb4.3						
ANN	Anapa	74.31	314	eP	P	04 55 20.2	-2.6
ANN				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
FFC	Flin Flon	74.38	33	eP	P	04 55 22.5	-0.6
FFC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
FFC	Flin Flon	74.38	33	eP	P	04 55 22.5	-0.6
	comp=Z,7.2nm,1.0s,mb4.6						
HRY	Holter Researc	74.50	43	eP	P	04 55 24.6	+0.7
LRM	Limekiln Ridge	74.68	44	eP	P	04 55 25.3	+0.3
FCC	Fort Churchill	74.75	27	eP	P	04 55 27.4	+2.3
	comp=Z,0.2nm,1.1s						
EGMT	Eagleton	74.84	41	eP	P	04 55 26.8	+0.9
	comp=Z,4.2nm,0.9s,mb4.4						
DLMT	Dillon	74.87	45	eP	P	04 55 26.4	+0.3
	comp=Z,6.8nm,1.0s,mb4.5						
NB2	NORSAR Subarra	75.11	337	P	P	04 55 26.7	-0.5
	comp=Z,1.9nm,0.7s,mb4.1,baz=39,slow=5.9						
NOA	NORSAR Array B	75.11	337	P	P	04 55 27.1	-0.1
	comp=Z,3.4nm,0.8s,mb4.3,baz=38,slow=5.7,SNR=12						
AKASG	Malin Array Be	75.14	323	P	P	04 55 26.9	-0.7
	comp=Z,2.9nm,0.6s,mb4.4,baz=46,slow=5.8,SNR=15						
AKBB	Malin Array Si	75.14	323	eP	P	04 55 26.8	-0.8
BOZ	Bozeman (W)	75.25	44	eP	P	04 55 28.6	+0.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BOZ	Bozeman (W)	75.25	44	eP	P	04 55 28.6	+0.3
	comp=Z,2.6nm,0.9s,mb4.2						
NVAR	Mina Array Bea	75.40	53	P	P	04 55 29.2	-0.1
	comp=Z,0.9nm,0.7s,mb3.8,baz=264,slow=9.0,SNR=3.2						
N12A	Clover Valley,	76.07	50	eP	P	04 55 34.7	+1.7
	comp=Z,5.1nm,1.1s,mb4.4						
M13A	Montello	76.30	49	eP	P	04 55 36.7	+2.3
	comp=Z,4.0nm,1.0s,mb4.3						
IMW	Indian Meadow	76.69	45	eP	P	04 55 37.1	+0.5
TPAW	Teton Pass	76.94	45	eP	P	04 55 40.2	+2.3
	comp=Z,2.3nm,0.9s,mb4.1						
MALT	Malatya	77.49	308	eP	P	04 55 41.8	+0.7
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MALT	Malatya	77.49	308	eP	P	04 55 41.8	+0.7
	comp=Z,3.0nm,0.9s,mb4.2						
HWUT	Hardware Ranch	77.72	47	eP	P	04 55 43.0	+0.6
	comp=Z,9.3nm,1.3s,mb4.5						
DUG	Dugway	77.82	49	eP	P	04 55 44.8	+1.9
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
DUG	Dugway	77.82	49	eP	P	04 55 44.8	+1.9
	comp=Z,6.3nm,1.1s,mb4.5						
PDAR	Pinedale Array	78.18	45	P	P	04 55 44.2	-0.7
	comp=Z,0.6nm,0.6s,mb3.7,baz=294,slow=3.0,SNR=5.1						
BSD	Bornholm Skovb	78.35	332	eP	P	04 55 50.4	+4.8
BSD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BSD	Bornholm Skovb	78.35	332	*i* P	P	04 55 50.4	+4.8
	comp=Z,4.5nm,0.9s,mb4.4						
NLU	North Lily Min	78.42	49	eP	P	04 55 55.3	+9.1
COP	Copenhagen	78.83	333	eP	P	04 55 48.8	+0.6
COP	Copenhagen	78.83	333	*i* P	P	04 55 48.8	+0.6
CCUT	Cedar City	79.07	51	eP	P	04 55 59.6	+10
BUR08	Bucovina Ar. S	79.14	322	eP	P	04 55 50.4	+0.3
BR131	Keskin Array S	79.60	312	eP	P	04 55 52.8	+0.1
	comp=Z,0.9nm,0.8s,mb3.8						
BRTR	Keskin Array B	79.60	312	P	P	04 55 53.1	+0.3
	comp=Z,1.9nm,0.9s,mb4.0,baz=108,slow=4.0,SNR=10.0						
BRTR				LR	LR	05 37 14.2	
	comp=Z,36nm,18.7s,MS3.7,baz=254,slow=40						
SRU	San Rafael	79.88	49	eP	P	04 55 54.9	+0.6
ULM	Lac du Bonnet	80.17	33	eP	P	04 55 56.2	+0.6
	comp=Z,3.1nm,0.9s,mb4.2						
CLL	Collm	81.99	330	eP	P	04 56 04.0	-1.3
CLL				eS	S	05 06 17.0	+0.1
CLL	Collm	81.99	330	eP	P	04 56 04.0	-1.3
CLL				eS	S	05 06 17.0	+0.1
KHC	Kasperske Hory	83.43	329	eP	P	04 56 13.0	+0.2
	comp=Z,5.0nm,1.2s,mb4.4						
KHC	Kasperske Hory	83.43	329	eP	P	04 56 12.6	-0.2
KHC				epP	pP	04 56 23.1	-0.2
GERES	GERESS Array B	83.59	328	P	P	04 56 13.4	-0.3
	comp=Z,0.8nm,0.8s,mb3.9,baz=46,slow=5.8,SNR=7.0						
GERES				LR	LR	05 38 21.7	
	comp=Z,90nm,18.9s,MS4.2,baz=52,slow=39						
GERES	GERESS Array B	83.59	328	P	P	04 56 13.4	-0.3
GERES				LR	LR	05 38 21.7	
SDCO	Great Sand Dun	83.78	47	eP	P	04 56 14.6	-0.3
	comp=Z,1.5nm,1.0s,mb4.1						
GRA1	Grafenberg Arr	83.96	330	eP	P	04 56 14.7	-0.8
	comp=Z,6.0nm,1.2s,mb4.6						
GRF	Grafenberg Arr	83.96	330	eP	P	04 56 14.7	-0.8
	comp=Z,6.0nm,1.2s,mb4.6						
GRF	Grafenberg Arr	83.96	330	eP	P	04 56 14.7	-0.8
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
GRF	Grafenberg Arr	83.96	330	eP	P	04 56 14.7	-0.8
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
TUC	Tucson	83.97	54	eP	P	04 56 14.9	-1.0
TUC				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.2						
TUC	Tucson	83.97	54	eP	P	04 56 14.9	-1.0
	comp=Z,2.1nm,1.1s,mb4.2						
ANMO	Albuquerque	85.04	50	eP	P	04 56 22.2	+0.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO	Albuquerque	85.04	50	eP	P	04 56 22.2	+0.9
	comp=Z,3.1nm,1.1s,mb4.3						
SCHQ	Schefferville	86.17	16	LR	LR	05 41 04.7	
	comp=Z,127nm,18.4s,MS4.3,baz=40,slow=40						
TXAR	Lajitas Array	90.54	53	P	P	04 56 47.5	-0.3
	comp=Z,0.4nm,0.7s,mb3.8,baz=282,slow=4.8,SNR=7.1						
LPAZ	La Paz	146.99	61	PKPbc	PKPbc	05 03 28.0	-0.5
	comp=Z,1.7nm,0.5s,baz=339,slow=1.8,SNR=14						
LPAZ	La Paz	146.99	61	ePKPdf	PKPbc	05 03 27.8	-0.7

*IDC **11** 04:43:41.7±1.5, 6°.14S×147°.77E, h0km, mb4.5/5, mb1 4.7/6, mb1mx4.2/16, mbtmp4.5/6, ML4.5/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/25, Error ellipse: s-maj=62.5km s-min=19.1km az=109.0*

*ISCJB **11** 04:43:48.4±3.9, 6°.1S±0°.1×147°.6E±0°.2, h70km±35km, mb4.4/7, Error ellipse: s-maj=30.2km s-min=17.7km az=5.0*

*NEIC **11** 04:43:51.3±2.4, 6°.20S×147°.62E, h80km±21km, mb4.7/4, Error ellipse: s-maj=25.6km s-min=13.9km az=105.0*

ISC 11 04:43:51.0±3.1, 6°.2S±0°.1×147°.6E±0°.2, h73km±27km, n21, σ0°82/17, mb4.4/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	Coen	8.83	209	ePn	Pn	04 45 56.6	+0.8
COEN				eSn	Sn	04 47 39.5	+5.8
CTA	Charters Tower	13.85	185	LR	LR	04 51 36.2	
	comp=Z,125nm,21.6s,baz=40,slow=34						
KAKA	Kakadu	16.26	246	eP	Pn	04 47 35.2	+0.2
	18nm,0.6s						
KAKA	Kakadu	16.26	246	eP	Pn	04 47 34.8	-0.1
	48nm,0.5s						
WRAB	Tennant Creek	18.74	222	eP	Pn	04 48 04.0	-1.2
	12nm,0.6s						
WB2	Warramunga Arr	18.74	222	eP	Pn	04 48 04.0	-1.2
WRA	Warramunga Arr	18.75	222	P	Pn	04 48 04.4	-0.9
	1.7nm,0.3s,baz=48,slow=11,SNR=62						
ASAR	Alice Springs	21.77	216	P	P	04 48 37.4	+0.6
	18nm,0.5s,mb4.7,baz=51,slow=9.2,SNR=479						
ARMA	Armidale	24.38	171	eP	P	04 49 02.6	+0.3
FITZ	Fitzroy Crossi	24.45	239	eP	P	04 49 04.2	+1.1
	76nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	24.45	239	P	P	04 49 04.4	+1.3
	40nm,0.6s,mb5.0,baz=72,slow=7.3,SNR=159						
STKA	Stephens Creek	26.14	192	eP	P	04 49 19.0	+0.7
	5.5nm,0.6s,mb4.2						
STKA	Stephens Creek	26.14	192	P	P	04 49 19.1	+0.8
	7.5nm,0.6s,mb4.3,baz=0.6,slow=8.9,SNR=22						
MBWA	Marble Bar	30.78	238	eP	P	04 50 00.5	+0.7
	7.6nm,0.7s,mb4.5						
NWAO	Narrogin (SRO)	38.76	223	LR	LR	05 08 23.3	
	comp=Z,146nm,21.3s,baz=182,slow=38						
AFI	Afiamalu	40.69	104	LR	LR	05 04 57.3	
	comp=Z,51nm,19.9s,baz=184,slow=32						
RPZ	Rata Peaks	42.67	155	LR	LR	05 06 37.6	
	comp=Z,139nm,19.1s,baz=170,slow=32						
MJAR	Matsushiro Arr	43.43	349	P	P	04 51 47.1	+0.5
	2.9nm,0.9s,mb4.0,baz=173,slow=8.2,SNR=5.5						
PETK	Petropavlovsk-	59.72	7	P	P	04 53 47.1	-0.7
	0.7nm,0.6s,mb3.9,baz=180,slow=5.9,SNR=3.4						
QSPA	South Pole Qui	83.75	180	eP	P	04 56 10.6	-0.9
	16nm,1.4s,mb4.6						
TORD	Torodi Ar. Bea	145.70	284	PKPbc	PKPbc	05 03 21.6	-1.0
	baz=69,slow=3.3						

IDC 11 04:56:27.6±4.2, 17°.94S×176°.12W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, MS4.1/1, Ms1 4.1/1, ms1mx2.8/32, Error ellipse: s-maj=185.4km s-min=50.1km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	11.38	188	LR	LR	05 02 56.0	
	comp=Z,979nm,19.4s,baz=216,slow=34						
STKA	Stephens Creek	40.53	242	P	P	05 04 09.5	+0.9
	1.4nm,0.8s,baz=95,slow=11,SNR=3.9						
WRA	Warramunga Arr	46.77	259	P	P	05 04 58.5	-0.6
	0.6nm,0.4s,baz=98,slow=6.6,SNR=24						
ASAR	Alice Springs	46.88	254	P	P	05 04 59.6	-0.2
	3.6nm,0.5s,baz=89,slow=8.9,SNR=72						
GERES	GERESS Array B	148.16	348	PKPbc	PKPbc	05 16 14.9	-0.4
	0.4nm,0.6s,baz=14,slow=5.3,SNR=3.5						

*ISCJB **11** 04:56:33.7±1.0, 10°.92N±0°.03×124°.82E±0°.04, h13km±6km, mb4.3/23, MS3.7/3, Error ellipse: s-maj=6.8km s-min=4.9km az=15.3*

*MAN **11** 04:56:33, 10°.92N×124°.76E, h0km, mb5.1, ML4.0, MS4.1*

*NEIC **11** 04:56:41.8±1.9, 11°.01N×125°.06E, h74km±18km, mb4.5/11, Error ellipse: s-maj=29.8km s-min=8.6km az=63.0*

*IDC **11** 04:56:42.0±3.7, 10°.92N×124°.82E, h71km±36km, mb3.9/11, mb1 4.0/12, mb1mx3.7/24, mbtmp3.9/12, ML4.4/1, MS3.7/6, Ms1 3.8/6, ms1mx3.4/26, Error ellipse: s-maj=32.8km s-min=13.5km az=68.0*

*BJI **11** 04:56:46.4, 11°.54N×124°.86E, h74km, mB4.9/6, mb4.6/10*

ISC 11 04:56:33.9±0.8, 10°.92N±0°.03×124°.79E±0°.04, h4km±5km, n49, σ1°08/54, mb4.3/23, MS3.7/3, 1C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	Ormoc	0.22	305	eP	Pg	04 56 37.9	-0.2
MSLP	Maasin	0.79	175	eP	Pg	04 56 49.8	+0.8
BESP	Borongan	0.93	43	eP	Pg	04 56 50.6	-1.1
LLP	Lapu-Lapu	1.01	234	⇓eP	Pg	04 56 51.8	-1.5
LLP				*i* S	Sg	04 57 06.8	+0.4
TBP	Tagbilaran	1.53	217	eP	Pn	04 57 01.7	-0.3
TBP				eS	Sn	04 57 17.3	-5.1
CNP	Catarman	1.58	355	eP	Pn	04 57 02.3	-0.5
CNP				eS	Sn	04 57 23.5	-0.2
RCP	Roxas	2.10	288	⇓eP	Pn	04 57 09.3	-0.6
RCP				eS	Sn	04 57 36.1	-0.5
GUIM	Jordan	2.18	262	eP	Pn	04 57 10.5	-0.5
GUIM				eS	Sn	04 57 37.7	-0.9
SNPH	Sibulan	2.19	224	eP	Pn	04 57 11.0	-0.1
SNPH				*i* S	Sn	04 57 47.8	+9.0
KALP	Kalibo	2.52	288	eP	Sn	04 57 41.8	-5.1
DCPH	Dipolog City	2.72	212	⇓eP	Pn	04 57 17.2	-1.3
PVCP	Virac	2.73	347	eP	Pn	04 57 19.4	+0.8
PVCP				eS	Sn	04 57 56.8	+4.8
BUKP	Musuan	3.04	175	eP	Pn	04 57 24.7	+1.9
BUKP				eS	Sn	04 57 52.2	-7.4
OTRP	Odiongan	3.07	298	eP	Pn	04 57 25.4	+2.1
PAGZ	Pagadian	3.36	205	eP	Pn	04 57 28.1	+0.9
PAGZ				eS	Sn	04 58 07.4	-0.1
DMPH	Davao City--Mi	3.88	169	⇑eP	Pn	04 57 37.9	+3.5
DAV	Davao City (W)	3.91	168	P	Pn	04 57 40.2	+5.4
	28nm,0.3s,baz=40,slow=20,SNR=3.9						
DAV				LR	LR	04 59 28.4	
	comp=Z,1μm,20.6s,baz=308,slow=43						
SJMP	San Jose	3.91	293	eP	Pn	04 57 35.9	+1.1
ENPP	El Nido	5.28	274	eP	Pn	04 57 53.7	+0.1
JOW	Kunigami	16.16	11	LR	LR	05 06 01.2	
	comp=Z,221nm,18.2s,baz=136,slow=35						
GUMO	Guam	19.80	80	LR	LR	05 07 17.2	
	comp=Z,221nm,18.8s,baz=177,slow=32						
KAKA	Kakadu	24.68	162	eP	P	05 01 55.3	-0.8
	35nm,0.7s,mb5.0						
CMAR	Chiang Mai Arr	26.08	290	P	P	05 02 11.2	+2.3
	1.0nm,0.3s,mb3.8,baz=99,slow=7.6,SNR=4.9						
KSRS	Korea Array	26.57	6	P	P	05 02 14.3	+1.2
	3.7nm,0.8s,mb3.9,baz=182,slow=10,SNR=11						
KSRS				LR	LR	05 11 45.4	
	comp=Z,100nm,19.8s,MS3.4,baz=351,slow=34						
FITZ	Fitzroy Crossi	28.85	178	LR	LR	05 16 38.5	
	comp=Z,135nm,18.1s,MS3.6,baz=352,slow=42						
LZH	Lanzhou	31.42	326	eP	P	05 02 57.3	+1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
WRA	Warramunga Arr	32.08	163	P	P	05 03 00.5	-1.7
	comp=Z,0.4nm,0.7s,mb3.4,baz=342,slow=9.3,SNR=4.4						
ASAR	Alice Springs	35.51	166	P	P	05 03 31.3	-0.7
	comp=Z,1.8nm,0.7s,mb4.1,baz=347,slow=7.2,SNR=22						
ASAR				PcP	PcP	05 06 00.6	-1.0
	comp=Z,0.4nm,0.7s,baz=351,slow=2.3,SNR=4.7						
GTA	Gaotai	36.03	326	eP	P	05 03 38.9	+2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
ULN	Ulaanbaatar	39.73	341	eP	P	05 04 08.7	+1.2
	comp=Z,6.7nm,1.0s,mb4.3						
SONM	Songino Array	39.91	341	P	P	05 04 07.6	-1.5
	comp=Z,2.8nm,1.0s,mb3.9,baz=162,slow=8.2,SNR=9.5						
STKA	Stephens Creek	45.50	160	P	P	05 04 56.0	+1.4
	comp=Z,5.3nm,0.9s,mb4.4,baz=322,slow=6.4,SNR=8.8						
MK31	Makanchi Array	50.63	323	eP	P	05 05 33.9	-0.2
MKAR	Makanchi Array	50.63	323	P	P	05 05 34.2	0.0
	comp=Z,2.6nm,0.7s,mb4.3,baz=127,slow=7.9,SNR=11						
MKAR	Makanchi Array	50.63	323	P	P	05 05 34.2	0.0
TKM2	Tokmak 2	53.19	316	eP	P	05 05 53.8	+0.4
	comp=Z,2.3nm,0.8s,mb4.2						
UCH	Uchtor	53.69	315	eP	P	05 05 58.1	+1.2
	comp=Z,6.0nm,0.9s,mb4.5						
AML	Almayashu	54.23	314	eP	P	05 06 01.6	+0.7
	comp=Z,5.6nm,0.9s,mb4.5						
EKS2	Erkin-Say	54.35	315	eP	P	05 06 01.9	+0.1
	comp=Z,4.0nm,1.0s,mb4.3						
KURK	Kurchatov	54.71	326	P	P	05 06 04.0	-0.3
	comp=Z,3.1nm,0.7s,mb4.5,baz=128,slow=7.1,SNR=11						
KURK	Kurchatov	54.71	326	eP	P	05 06 03.3	-1.0
	comp=Z,5.6nm,0.8s,mb4.7						
BVAR	Borovoye Array	60.31	326	P	P	05 06 42.4	-1.3
	comp=Z,1.6nm,0.9s,mb4.0,baz=95,slow=4.6,SNR=5.8						
BRVK	Borovoye	60.38	326	eP	P	05 06 43.9	-0.3
	comp=Z,3.8nm,0.7s,mb4.5						
ABKAR	Akbulak array	65.44	319	eP	P	05 07 17.4	-0.6
	comp=Z,5.2nm,1.1s,mb4.5						
ARU	Arti	67.89	327	eP	P	05 07 31.7	-1.8
	comp=Z,5.8nm,0.7s,mb4.7						
KDAK	Kodiak Island	76.91	33	P	P	05 08 27.5	+0.1
	comp=Z,2.9nm,0.5s,mb4.5,baz=282,slow=20,SNR=4.7						
CASY	Casey	77.71	186	eP	P	05 08 31.1	-0.3
	comp=Z,1.5nm,0.7s,mb4.0						
NOA	NORSAR Array B	91.53	333	LR	LR	05 54 09.1	
	comp=Z,81nm,18.6s,MS4.2,baz=35,slow=38						
YKA	Yellowknife Ar	93.75	24	P	P	05 09 50.1	-1.8
	comp=Z,0.4nm,0.7s,mb3.9,baz=301,slow=4.7,SNR=5.3						

*IDC **11** 04:57:02.7±15.0, 36°.91N×73°.04E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.9/3, Error ellipse: s-maj=378.4km s-min=48.5km az=109.0*

*NEIC **11** 04:57:26.9±2.7, 37°.34N×72°.21E, h173km±25km, mb3.8/2, Error ellipse: s-maj=35.6km s-min=29.5km az=144.0*

*ISCJB **11** 04:57:27.1±1.9, 37°.5N±0°.1×72°.5E±0°.2, h198km±21km, mb3.7/4, Error ellipse: s-maj=28.1km s-min=21.9km az=6.6*

ISC 11 04:57:28.1±1.9, 37°.5N±0°.1×72°.5E±0°.2, h189km±22km, n13, σ1°27/17, mb3.9/4, 2C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.39	53	⇓*i*Pn	Pn	04 58 20.2	-1.6
KSH				Sn	Sn	04 58 56.6	-7.2
KSH				smax			
	comp=N,90nm,0.3s						
KSH				smax			
	comp=E,59nm,0.3s						
AML	Almayashu	4.71	11	*e*Pn	Pn	04 58 40.1	+1.7
AML				*e*Sn	Sn	04 59 32.4	-1.3
UCH	Uchtor	4.96	18	*e*Pn	Pn	04 58 43.8	+2.1
UCH				*e*Sn	Sn	04 59 39.7	+0.1
KK09	Karatay Array	5.81	345	⇓Pn	Pn	04 58 52.9	+0.3
	comp=E,1.0nm,0.3s,baz=158,slow=12						
KK09				⇑Sn	Sn	04 59 54.8	-4.6
	comp=E,9.1nm,0.3s,baz=164,slow=22						
TKM2	Tokmak 2	5.91	23	⇑Pn	Pn	04 58 55.9	+2.0
	comp=E,2.5nm,1.0s						
TKM2				⇓Sn	Sn	05 00 00.2	-1.4
	comp=E,5.1nm,1.2s						
TKM2				⇓Lg		05 00 22.6	
	comp=E,6.0nm,1.2s						
TKM2	Tokmak 2	5.91	23	*e*Pn	Pn	04 58 55.7	+1.8
ABKAR	Akbulak array	14.85	326	*e*P	Pn	05 00 48.3	-0.4
	comp=E,0.5nm,0.5s						
CSS	Prodhromos	31.54	277	*e*P	P	05 03 30.7	-1.8
	comp=E,4.1nm,0.4s,mb4.5						
FINES	FINESS Array B	37.33	325	P	P	05 04 22.8	+0.9
	comp=E,0.6nm,0.8s,mb3.3,baz=128,slow=8.3,SNR=4.6						
FINES	FINESS Array B	37.33	325	P	P	05 04 22.8	+0.9
ARCES	ARCESS Array B	40.68	337	P	P	05 04 50.0	+0.4
	comp=E,3.6nm,0.9s,mb4.0,baz=123,slow=8.8,SNR=5.8						
TORD	Torodi Ar. Bea	66.93	269	P	P	05 08 00.0	-0.5
	comp=E,0.4nm,0.4s,mb3.6,baz=49,slow=5.5,SNR=12						
DZM	Mont Dzumac	106.10	106	eLR	LR	05 11 47.0	
	comp=E,180nm,21.7s						

*IDC **11** 05:09:49.9±15.0, 48°.33N×154°.15E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.7/5, ML2.8/1, Error ellipse: s-maj=331.9km s-min=44.3km az=147.0*

*MOS **11** 05:10:09.4±1.4, 50°.50N×152°.49E, h32km, mb4.0/2, Error ellipse: s-maj=31.9km s-min=23.3km az=85.4*

ISC 11 05:10:12.5±4.6, 50°.5N±0°.3×152°.8E±0°.5, h55km±50km, n13, σ0°77/13, mb3.7/4, 2C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.14	83	*e*PN	Pn	05 10 46.2	+0.5
PETK	Petropavlovsk-	4.04	47	Pn	Pn	05 11 10.3	-1.4
	0.3nm,0.3s,baz=175,slow=13,SNR=4.8						
PETK	Petropavlovsk-	4.04	47	*e*PN	Pn	05 11 11.3	-0.4
SEY	Seymchan	12.50	359	⇑ePN	Pn	05 13 07.8	+0.4
MKAR	Makanchi Array	45.13	294	P	P	05 18 22.3	-0.9
	0.2nm,0.5s,mb3.2,baz=77,slow=5.5,SNR=3.4						
MKAR	Makanchi Array	45.13	294	P	P	05 18 22.3	-0.9
KURK	Kurchatov	45.20	300	P	P	05 18 22.5	-1.3
	0.7nm,0.6s,mb3.7,baz=66,slow=8.8,SNR=5.5						
KURK	Kurchatov	45.20	300	⇑*e*P	P	05 18 24.9	+1.2
BVAR	Borovoye Array	48.39	307	P	P	05 18 49.1	+0.5
	0.9nm,0.5s,mb4.1,baz=44,slow=8.5,SNR=4.5						
BVAR	Borovoye Array	48.39	307	P	P	05 18 49.1	+0.5
FINES	FINESS Array B	60.60	334	P	P	05 20 17.2	+0.3
	0.6nm,0.5s,mb4.0,baz=28,slow=6.2,SNR=5.7						
FINES	FINESS Array B	60.60	334	P	P	05 20 17.2	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	68.35	325	*i* P	P	05 20 57.5	-10

IDC 11 05:20:21.3±3.0, 8°.03S×118°.13E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.3/18, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=270.0km s-min=25.8km az=51.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.66	129	P	Pn	05 24 52.1	-1.2
	0.1nm,0.3s,baz=302,slow=13,SNR=6.0						
ASAR	Alice Springs	21.69	138	P	P	05 25 13.9	+0.1
	0.5nm,0.5s,baz=314,slow=9.4,SNR=17						
MKAR	Makanchi Array	63.21	333	P	P	05 30 51.4	+0.1
	1.1nm,0.8s,baz=128,slow=8.4,SNR=7.7						

MAN 11 05:21:48, 10°.98N×124°.74E, h1km, mb4.8, ML3.7, MS3.8, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	Ormoc	0.14	300	eP	Pg	05 21 52.2	+1.4
BESP	Borongan	0.93	48	eP	Pg	05 22 06.2	+0.4
LLP	Lapu-Lapu	1.00	229	⇑eP	Pg	05 22 07.9	+0.6
LLP				*i* S	Sg	05 22 22.8	+2.5
CNP	Catarman	1.52	357	eP	Pn	05 22 17.0	+0.6
CNP				eS	Sn	05 22 38.5	+1.6
TBP	Tagbilaran	1.54	214	eP	Pn	05 22 17.3	+0.7
TBP				eS	Sn	05 22 38.5	+1.2
RCP	Roxas	2.04	287	⇓eP	Pn	05 22 25.5	+2.0
RCP				eS	Sn	05 22 51.8	+2.3
GUIM	Jordan	2.14	261	eP	Pn	05 22 27.9	+3.0
GUIM				eS	Sn	05 22 53.1	+1.0
SNPH	Sibulan

LVC	**Limon Verde**	**29.47 173**	P		**P**	**05 30 10.8**	**-0.6**
	1.4nm,0.3s,mb4.2,baz=39,slow=19,SNR=8.0						
LVC	**Limon Verde**	**29.47 173**	P		**P**	**05 30 10.8**	**-0.6**
TXAR	**Lajitas Array**	**36.66 312**	P		**P**	**05 31 13.5**	**-0.3**
	0.3nm,0.4s,mb3.2,baz=131,slow=9.5,SNR=6.8						
TXAR			PcP		PcP	05 33 32.9	-0.1
	0.1nm,0.4s,baz=118,slow=4.2,SNR=2.8						
TXAR	**Lajitas Array**	**36.66 312**	P		**P**	**05 31 13.5**	**-0.3**
TXAR			PcP		PcP	05 33 32.9	-0.2
ULM	**Lac du Bonnet**	**47.41 340**	P		**P**	**05 32 39.4**	**-1.0**
	0.7nm,0.4s,mb3.6,baz=153,slow=10.0,SNR=2.3						
SCHQ	**Schefferville**	**48.16 5**	P		**P**	**05 32 46.2**	**+0.1**
	1.6nm,0.6s,mb3.8,baz=204,slow=6.1,SNR=5.9						
SCHQ	**Schefferville**	**48.16 5**	P		**P**	**05 32 46.2**	**+0.1**
PDAR	**Pinedale Array**	**48.25 324**	P		**P**	**05 32 47.0**	**0.0**
	0.3nm,0.6s,mb3.1,baz=112,slow=6.9,SNR=2.8						
YKA	**Yellowknife Ar**	**63.38 340**	P		**P**	**05 34 34.1**	**-0.2**
	0.5nm,0.5s,mb3.6,baz=133,slow=6.6,SNR=19						
ASAR	**Alice Springs**	**149.28 234**	PKPbc		PKPbc	05 43 52.3	-0.5
	0.4nm,0.5s,baz=118,slow=3.5,SNR=10						
WRA	**Warramunga Arr**	**150.52 241**	PKPbc		PKPbc	05 43 55.4	-0.5
	0.4nm,0.4s,baz=108,slow=2.6,SNR=16						

*NEIC **11** 05:27:30.0, 32°.23S×69°.51W, h122^{km}, MD3.6(GUC), After GUC.*

GUC 11 05:27:30.0±1.5, 32°.23S×69°.51W, h122^{km}±22^{km}, MD3.6, ML3.5, 1C-3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.02**	**243**	*e*P	Pn	05 27 53.0	+0.6
JACH				*i* S	Sn	05 28 09.9	+0.6
FCH	**Farellones**	**1.27**	**211**	⇓*i*P	Pn	05 27 56.3	+1.3
FCH				*e*S	Sn	05 28 14.5	+0.5
FCH				AML	AML	05 28 15.6	
	comp=N,490nm,0.6s						
PEL	**Peldehue**	**1.34**	**227**	*e*P	Pn	05 27 56.0	+0.2
PEL				*i* S	Sn	05 28 15.8	+0.5
PEL				AML	AML	05 28 16.9	
	comp=E,1μm,0.3s						
CLCH	**Cerro Calan**	**1.45**	**216**	*e*P	Pn	05 27 57.6	+0.7
CLCH				*i* S	Sn	05 28 18.1	+0.7
CLCH				AML	AML	05 28 24.7	
	comp=N,663nm,0.4s						
PCH	**Pirque**	**1.62**	**211**	*e*P	Pn	05 27 59.4	+0.4
PCH				*i* S	Sn	05 28 22.0	+1.0
ANTU	**Antumapu**	**1.63**	**215**	*e*P	Pn	05 27 59.7	+0.6
ANTU				*e*S	Sn	05 28 22.1	+0.8
ANTU	**Antumapu**	**1.63**	**215**	*e*P	Pn	05 27 59.7	+0.6
ANTU				*e*S	Sn	05 28 22.1	+0.8
ANTU				AML	AML	05 28 25.7	
	comp=E,400nm,0.5s						
CMCH	**Combarbala**	**1.65**	**309**	⇓*i*P	Pn	05 27 59.5	+0.3
CMCH				*i* S	Sn	05 28 22.8	+1.2
CMCH	**Combarbala**	**1.65**	**309**	⇓*i*P	Pn	05 27 59.5	+0.3
CMCH				*i* S	Sn	05 28 22.8	+1.2
CMCH				AML	AML	05 28 24.9	
	comp=E,2μm,0.6s						
LMEL	**Las Melosas**	**1.71**	**200**	P	Pn	05 28 00.5	+0.5
LMEL				S	Sn	05 28 28.3	+5.4
LMEL	**Las Melosas**	**1.71**	**200**	*e*P	Pn	05 28 00.5	+0.5
LMEL				*i* S	Sn	05 28 28.3	+5.4
LMEL				AML	AML	05 28 30.9	
	comp=N,273nm,0.2s						
CHNG	**Los Chungos**	**1.72**	**281**	*e*P	Pn	05 28 00.1	0.0
CHNG				*i* S	Sn	05 28 23.1	0.0
TACH	**Talagante**	**1.86**	**220**	*i* P	Pn	05 28 02.1	+0.4
TACH				*i* S	Sn	05 28 26.2	+0.2
TLL	**Tololo Astrono**	**2.34**	**331**	*e*P	Pn	05 28 09.1	+1.3
TLL				*e*S	Sn	05 28 38.3	+1.6
TLL	**Tololo Astrono**	**2.34**	**331**	*e*P	Pn	05 28 09.1	+1.3
TLL				*e*S	Sn	05 28 38.3	+1.6
TLL				AML	AML	05 28 43.2	
	comp=E,148nm,0.5s						
LNV	**Longovilo**	**2.34**	**222**	*i* P	Pn	05 28 07.3	-0.6
LCO	**Las Campanas**	**3.37**	**342**	⇑*e*P	Pn	05 28 21.9	+0.7
LCO				*e*S	Sn	05 28 59.8	-1.0
TRQA	**Tornquist**	**8.47**	**135**	*e*Pn	Pn	05 29 27.6	-2.3
	comp=E,3.0nm,0.7s						
TRQA				*e*Sn	Sn	05 30 59.7	-4.0

*ISCJB **11** 05:42:18.0±1.0, 15°.00S±0°.09×75°.3W±0°.1, h85^{km}±11^{km}, mb3.6/7, Error ellipse: s-maj=24.7km s-min=7.1km az=148.8*

*NEIC **11** 05:42:18.6±1.0, 14°.92S×75°.33W, h76^{km}±9^{km}, Error ellipse: s-maj=17.8km s-min=7.6km az=62.0*

*IDC **11** 05:42:19.3±1.5, 14°.95S×75°.25W, h80^{km}±14^{km}, mb3.6/8, mb1 3.8/13, mb1mx3.7/20, mbtmp3.6/13, MS3.0/5, Ms1 3.0/5, ms1mx2.9/19, Error ellipse: s-maj=28.9km s-min=10.0km az=58.0*

ISC 11 05:42:19.6±0.9, 14°.94S±0°.09×75°.2W±0°.1, h84^{km}±10^{km}, n23, σ1§12/21, mb3.6/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.34**	**332**	P	**Pn**	**05 43 07.3**	**-2.3**
	28nm,0.3s,baz=135,slow=13,SNR=18						
NNA				S	**Sn**	**05 43 49.2**	**+1.0**
	58nm,0.3s,baz=218,slow=16,SNR=6.2						
LPAZ	**La Paz**	**6.96**	**102**	P	**Pn**	**05 44 00.8**	**+1.9**
	3.6nm,0.3s,baz=290,slow=10.0,SNR=107						
LPAZ				LR	LR	05 47 04.2	
	comp=Z,118nm,21.3s,baz=298,slow=41						
ATAH	**Atahualpa**	**8.49**	**338**	P	**Pn**	**05 44 21.3**	**+1.5**
	1.0nm,0.3s,baz=144,slow=7.1,SNR=6.6						
LVC	**Limon Verde**	**9.69**	**143**	P	**Pn**	**05 44 35.5**	**-0.5**
	4.0nm,0.3s,baz=311,slow=9.4,SNR=33						
LVC				S	**Sn**	**05 46 21.5**	**-1.7**
	2.8nm,0.3s,baz=80,slow=21,SNR=6.2						
LVC				LR	LR	05 48 04.1	
	comp=Z,102nm,21.6s,baz=202,slow=36						
SIV	**San Ignacio**	**13.68**	**96**	P	**Pn**	**05 45 24.9**	**-5.1**
	0.2nm,0.3s,baz=274,slow=14,SNR=8.2						
CFAA	**Coronel Fontan**	**17.77**	**160**	P	**Pn**	**05 46 22.3**	**+0.9**
	0.0nm,0.3s,baz=328,slow=10.0,SNR=10						
CFAA				LR	LR	05 52 07.3	
	comp=Z,9.4nm,21.3s,baz=318,slow=33						
ROSC	**El Rosal**	**19.69**	**3**	P	**Pn**	**05 46 43.0**	**-1.5**
	baz=109,slow=17,SNR=1.6						
CPUP	**Villa Florida**	**20.19**	**127**	P	**P**	**05 46 48.0**	**+0.5**
	2.4nm,0.8s,baz=280,slow=10,SNR=5.0						
CPUP				LR	LR	05 55 47.7	
	comp=Z,67nm,19.1s,baz=94,slow=40						
SDV	**Santo Domingo**	**24.11**	**11**	P	**P**	**05 47 26.5**	**-1.1**
	4.9nm,0.9s,mb3.8,baz=270,slow=2.1,SNR=5.4						
SDV				LR	LR	05 57 54.5	
	comp=Z,69nm,19.7s,baz=233,slow=39						
SDV	**Santo Domingo**	**24.11**	**11**	P	**P**	**05 47 26.5**	**-1.1**
SDV				LR	LR	05 57 54.5	
PLCA	**Paso Flores**	**26.01**	**172**	P	**P**	**05 47 45.6**	**+0.9**
	0.8nm,0.7s,mb3.3,baz=343,slow=9.7,SNR=5.0						
TXAR	**Lajitas Array**	**51.89**	**328**	P	**P**	**05 51 19.4**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=154,slow=9.5,SNR=9.0						
NVAR	**Mina Array Bea**	**66.68**	**324**	P	**P**	**05 53 01.0**	**-0.5**
	0.1nm,0.3s,mb3.1,baz=160,slow=4.7,SNR=3.9						
NVAR	**Mina Array Bea**	**66.68**	**324**	P	**P**	**05 53 01.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**81.07**	**74**	P	**P**	**05 54 26.6**	**+0.5**
	2.2nm,0.6s,mb4.2,baz=262,slow=5.1,SNR=14						
YKA	**Yellowknife Ar**	**83.11**	**343**	P	**P**	**05 54 35.5**	**-0.2**
	1.4nm,0.8s,mb3.8,baz=138,slow=5.3,SNR=28						
YKA	**Yellowknife Ar**	**83.11**	**343**	P	**P**	**05 54 35.5**	**-0.2**
ESDC	**Sonseca Array**	**85.59**	**47**	P	**P**	**05 54 49.6**	**+0.8**
	0.3nm,0.5s,mb3.5,baz=279,slow=4.6,SNR=3.1						
ESDC	**Sonseca Array**	**85.59**	**47**	P	**P**	**05 54 49.6**	**+0.7**
WRA	**Warramunga Arr**	**134.76**	**221**	PKP	PKPdf	06 01 29.1	-0.3
	0.4nm,0.4s,baz=130,slow=1.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**138.05**	**18**	PKP	PKPdf	06 01 35.0	+0.6
	0.7nm,0.4s,baz=258,slow=4.4,SNR=4.9						
MKAR	**Makanchi Array**	**143.11**	**26**	PKP	PKPdf	06 01 42.1	-1.8
	0.2nm,0.7s,baz=198,slow=3.6,SNR=2.9						
SONM	**Songino Array**	**147.18**	**358**	PKPbc	PKPbc	06 01 54.3	+1.1
	1.9nm,0.6s,baz=337,slow=2.0,SNR=12						

*IDC **11** 05:49:16.4±0.5, 17°.76S×173°.16W, h0^{km}, mb4.7/17, mb1 4.9/17, mb1mx4.8/20, mbtmp4.7/17, MS4.7/20, Ms1 4.7/20, ms1mx4.7/23, Error ellipse: s-maj=21.9km s-min=15.0km az=135.0*

*ISCJB **11** 05:49:20.7±0.2, 17°.78S±0°.06×173°.25W±0°.04, h37^{km}, mb5.0/116, MS4.9/184, Error ellipse: s-maj=9.5km s-min=4.4km az=149.7*

*BJI **11** 05:49:21.6, 17°.82S×173°.35W, h38^{km}, mB5.5/25, mb5.0/27, Ms5.2/24, Ms7 5.0/26*

*SZGRF **11** 05:49:22.5, 17°.74S×172°.36W, h36^{km}, mb5.1, Tonga Islands region*

*NEIC **11** 05:49:22.4±0.2, 17°.74S×173°.28W, mb5.1/86, MS5.0/157, Error ellipse: s-maj=10.3km s-min=4.9km az=139.0*

*GCMT **11** 05:49:22.5±0.1, 17°.76S×172°.64W, h16^{km}, MW5.4/97, Moment Tensor Solution. s79,c127; s97,c188; Duration: 1§2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.15±.02; $M_{\theta\theta}$0.00±.01; $M_{\phi\phi}$-1.15±.02; $M_{r\theta}$0.35±.05; $M_{\theta\phi}$-0.46±.01; $M_{\phi r}$0.93±.06; Best double couple: $M_0$1.58300×10^{17} NP1ϕ_s198.00000°, δ26.00000°, λ88.00000°. NP2ϕ_s20.00000°, δ65.00000°, λ91.00000°. Principal axes: T 1.5030, Plg70.0000°, Azm292.0000°; N 0.1600, Plg1.0000°, Azm200.0000°; P -1.6630, Plg19.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **11** 05:49:27.9±1.1, 16°.13S×172°.84W, h33^{km}, mb5.3/36, MS4.9/31 Error ellipse: s-maj=19.3km s-min=10.2km az=65.2*

*DJA **11** 05:49:40, 18°.34S×173°.77W, h159^{km}, mb5.1/17*

ISC 11 05:49:22.6±0.2, 17°.77S±0°.06×173°.26W±0°.04, h39^{km}, h39^{km}±.8^{km}: pP-P, n803, σ0§63/532, mb5.0/116, MS4.9/184, 178C-203D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.10**	**21**	Pn	**Pn**	**05 50 13.5**	**-9.3**
	18nm,0.3s,baz=248,slow=0.6,SNR=11						
AFI				Sn	**Sn**	**05 50 55.5**	**-14**
	52nm,0.3s,baz=24,slow=18,SNR=4.9						
AFI	**Afiamalu**	**4.10**	**21**	*e*Pn	**Pn**	**05 50 14.6**	**-8.2**
AFI				*e*Sn	**Sn**	**05 50 57.8**	**-12**
RAO	**Raoul Island**	**12.20**	**200**	LR	LR	05 56 16.5	
	comp=Z,1μm,20.3s,baz=280,slow=34						
RAR	**Rarotonga**	**13.17**	**107**	*e*Pn	**Pn**	**05 52 14.8**	**-12**
DZM	**Mont Dzumac**	**19.55**	**254**	*e*P	**Pn**	**05 53 52.1**	**+3.5**
	109nm,1.6s						
DZM				*e*LR	LR	05 58 24.1	
	6μm,24.2s						
DZM	**Mont Dzumac**	**19.55**	**254**	*e*P	**Pn**	**05 53 47.5**	**-1.1**
	69nm,1.1s						
URZ	**Urewera**	**22.08**	**201**	P	**P**	**05 54 13.5**	**-0.7**
	102nm,1.1s,mb5.2,baz=27,slow=6.6,SNR=21						
URZ	**Urewera**	**22.08**	**201**	*e*P	**P**	**05 54 13.6**	**-0.7**
	229nm,1.1s,mb5.5						
PAE	**Paea**	**22.55**	**93**	*e*P	**P**	**05 54 12.6**	**-6.9**
	15nm,1.2s,mb4.3						
PAE	**Paea**	**22.55**	**93**	*e*P	**P**	**05 54 12.6**	**-6.9**
PAE				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
PPT	**Papeete**	**22.57**	**93**	*e*P	**P**	**05 54 13.1**	**-6.5**
	comp=Z,59nm,1.5s,mb4.8						
PPT				*e*LQ		05 58 27.5	
	comp=Z,6μm,26.5s						
PPT				*e*LR	LR	05 59 27.9	
	comp=Z,6μm,26.2s,baz=264						
PPT	**Papeete**	**22.57**	**93**	P	**P**	**05 54 13.6**	**-6.0**
	comp=Z,17nm,1.0s,mb4.4,baz=95,slow=8.2,SNR=3.2						
PPT				LR	LR	06 00 20.2	
	comp=Z,2μm,20.4s,MS4.5,baz=261,slow=30						
TIAR	**Tiarei**	**22.79**	**93**	*e*P	**P**	**05 54 15.3**	**-6.6**
	comp=Z,75nm,1.2s,mb5.0						
TARA	**Tarawa**	**23.38**	**323**	PFAKE		05 54 40.0	+12
TARA				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
PMOR	**Pomariorio Ree**	**24.48**	**87**	*e*P	**P**	**05 54 31.8**	**-6.4**
	comp=Z,118nm,1.5s,mb5.1						
SNZO	**South Karori**	**25.64**	**201**	PFAKE		05 55 00.0	+12
SNZO				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
RPZ	**Rata Peaks**	**29.06**	**204**	P	**P**	**05 55 19.4**	**+0.3**
	comp=Z,12nm,0.9s,mb4.6,baz=155,slow=18,SNR=2.1						
RPZ	**Rata Peaks**	**29.06**	**204**	*e*P	**P**	**05 55 19.6**	**+0.5**
	comp=Z,163nm,1.2s,mb5.6						
TAOE	**Nuku Hiva Isla**	**33.37**	**79**	*e*LR	LR	06 04 22.6	
	comp=Z,3μm,27.0s,baz=253						
JOHN	**Johnston Islan**	**34.48**	**6**	PFAKE		05 56 20.0	+13
JOHN				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
CNB	**Canberra Magne**	**37.45**	**235**	*e*P	**P**	**05 56 33.4**	**+1.1**
CAN	**Canberra**	**37.74**	**235**	P	**P**	**05 56 32.8**	**-1.9**
	comp=Z,14nm,1.0s,mb4.7						
CAN				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
CTA	**Charters Tower**	**38.30**	**260**	*e*P	**P**	**05 56 38.5**	**-1.2**
	comp=Z,11nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**38.30**	**260**	*e*P	**P**	**05 56 38.0**	**-1.7**
CTAO				*e**PP	pP	05 56 49.5	-1.2
CTAO				*e**SP	sP	05 56 54.1	-1.3
CTAO				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
CTAO				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.1						
CTAO	**Charters Tower**	**38.30**	**260**	*e*P	**P**	**05 56 38.0**	**-1.7**
	comp=Z,17nm,0.9s,mb4.8						
CTAO				*e*pP	pP	05 56 49.5	-1.2
CTAO				*e*sP	sP	05 56 54.1	-1.3
CTAO				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
TOO	**Toolangi**	**41.11**	**233**	*e*P	**P**	**05 57 03.7**	**+0.9**
POHA	**Pohakuloa**	**41.16**	**26**	PFAKE		05 57 20.0	+17
POHA				LR	LR		
	comp=Z,974nm,19.0s,MS4.7						
TAU	**Tasmania Unive**	**41.70**	**225**	*e*P	**P**	**05 57 04.9**	**-2.7**
	comp=Z,114nm,1.6s,mb5.2						
TAU				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
WAKE	**Wake Island**	**41.78**	**331**	PFAKE		05 57 20.0	+12
WAKE				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
STKA	**Stephens Creek**	**43.01**	**242**	*e*P	**P**	**05 57 18.0**	**-0.4**
	comp=Z,5.9nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**43.01**	**242**	P	**P**	**05 57 18.2**	**-0.2**
	comp=Z,4.9nm,0.9s,mb4.2,baz=70,slow=9.0,SNR=8.9						
STKA				LR	LR	06 14 03.2	
	comp=Z,1μm,18.1s,MS4.8,baz=68,slow=34						
STKA	**Stephens Creek**	**43.01**	**242**	*e*P	**P**	**05 57 16.9**	**-1.6**
	comp=Z,1.9nm,0.9s,mb3.8						
STKA				*e*sP	sP	05 57 31.3	-2.9
MIDW	**Midway**	**45.89**	**355**	PFAKE		05 57 50.0	+8.7
MIDW				LR	LR		
	comp=Z,620nm,21.0s,MS4.5						
WB2	**Warramunga Arr**	**49.46**	**259**	*e*P	**P**	**05 58 08.2**	**-1.1**
WRAB	**Tennant Creek**	**49.47**	**259**	P	**P**	**05 58 07.1**	**-2.2**
	comp=Z,107nm,0.9s,mb5.9,SNR=9.3						
WRAB	**Tennant Creek**	**49.47**	**259**	*e*P	**P**	**05 58 07.3**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
WRAB				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.2						
WRAB	**Tennant Creek**	**49.47**	**259**	*e*P	**P**	**05 58 07.3**	**-2.0**
	comp=Z,14nm,0.8s,mb5.0						
WRAB				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
WRA	**Warramunga Arr**	**49.48**	**259**	P	**P**	**05 58 07.9**	**-1.5**
	comp=Z,10nm,0.8s,mb4.9,baz=97,slow=6.5,SNR=79						
WRA				LR	LR	06 17 58.5	
	comp=Z,2μm,19.1s,MS5.2,baz=100,slow=35						
ASAR	**Alice Springs**	**49.54**	**254**	P	**P**	**05 58 08.9**	**-0.9**
	comp=Z,36nm,1.0s,mb5.3,baz=85,slow=8.4,SNR=110						
ASAR				S	**S**	**06 05 13.8**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=90,slow=16,SNR=6.7						
KAKA	**Kakadu**	**52.49**	**267**	*e*P	**P**	**05 58 29.9**	**-2.2**
	comp=Z,9.9nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**57.88**	**259**	*e*P	**P**	**05 59 11.7**	**+0.7**
	comp=Z,19nm,1.5s,mb4.9						
SBA	**Scott Base**	**60.91**	**185**	*e*P	**P**	**05 59 33.0**	**+2.1**
SBA				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.6						
SBA				MLR	MLR		
	comp=Z,781nm,19.0s,MS4.9						
SBA	**Scott Base**	**60.91**	**185**	*e*P	**P**	**05 59 33.0**	**+2.1**
	comp=Z,83nm,1.8s,mb5.6						
SBA				LR	LR		
	comp=Z,781nm,19.0s,MS4.9						
MBWA	**Marble Bar**	**62.86**	**255**	*e*P	**P**	**05 59 45.0**	**+0.1**
	comp=Z,24nm,1.2s,mb5.2						
MBWA				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**63.60**	**242**	PFAKE		06 00 00.0	+10
NWAO				LR	LR		
	comp=Z,650nm,20.0s,MS4.8						
CASY	**Casey**	**68.32**	**205**	*e*P	**P**	**06 00 19.8**	**+0.4**
	comp=Z,20nm,1.1s,mb5.1						
CASY				LR	LR		
	comp=Z,589nm,19.0s,MS4.8						
ADK	**Adak**	**69.42**	**358**	PFAKE		06 00 40.0	+14
ADK				LR	LR		
	comp=Z,510nm,20.0s,MS4.8						
MJAR	**Matsushiro Arr**	**70.83**	**320**	P	**P**	**06 00 35.4**	**+0.1**
	comp=Z,3.5nm,0.9s,mb4.3,baz=158,slow=5.1,SNR=4.6						
MJAR				LR	LR	06 26 14.9	
	comp=Z,617nm,21.0s,MS4.8,baz=105,slow=31						
MAJO	**Matsushiro**	**70.84**	**320**	PFAKE		06 00 50.0	+15
MAJO				LR	LR		
	comp=Z,894nm,20.0s,MS5.0						
MAT	**Matsushiro**	**70.84**	**320**	P	**P**	**06 00 34.4**	**-1.0**
MAT				S	S	06 09 43.8	-3.9
ERM	**Erimo**	**71.82**	**327**	PFAKE		06 00 50.0	+8.8
ERM				LR	LR		
	comp=Z,695nm,19.0s,MS4.9						
QSPA	**South Pole Qui**	**72.28**	**180**	*e*P	**P**	**06 00 44.2**	**+0.7**
	comp=Z,24nm,1.2s,mb5.0						
QSPA				LR	LR		
	comp=Z,641nm,20.0s,MS4.9						
SCI	**San Clemente I**	**72.64**	**46**	⇓P	**P**	**06 00 47.4**	**+1.0**
	baz=73						
CIS	**Catalina Islan**	**72.99**	**46**	⇓P	**P**	**06 00 48.0**	**-0.4**
	baz=73						
MCCM	**Marconi Confer**	**72.99**	**39**	PFAKE		06 01 00.0	+12
MCCM				LR	LR		
	comp=Z,646nm,19.0s,MS4.9						
SAO	**San Andreas Ge**	**73.00**	**41**	PFAKE		06 01 00.0	+12
SAO				LR	LR		
	comp=Z,397nm,19.0s,MS4.7						
HOPS	**Hopland**	**73.42**	**39**	PFAKE		06 01 00.0	+9.2
HOPS				LR	LR		
	comp=Z,941nm,19.0s,MS5.1						
MURC	**Murrieta**	**73.92**	**46**	⇓P	**P**	**06 00 54.8**	**+0.9**
	baz=74						
VES	**Vestal, Richgr**	**73.96**	**43**	⇑P	**P**	**06 00 54.1**	**+0.1**
	baz=74						
MONP	**Monument Peak**	**74.06**	**47**	⇓P	**P**	**06 00 54.8**	**+0.1**
	baz=74						
EDW2	**Edwards Air Fo**	**74.12**	**45**	⇑P	**P**	**06 00 55.0**	**+0.1**
	baz=74						
ISA	**Isabella**	**74.25**	**44**	⇓P	**P**	**06 00 55.2**	**-0.5**
	baz=74						
ISA	**Isabella**	**74.25**	**44**	*e*P	**P**	**06 00 55.5**	**-0.2**
ISA				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
ISA	**Isabella**	**74.25**	**44**	*e*P	**P**	**06 00 55.5**	**-0.3**
	comp=Z,24nm,1.4s,mb4.9						
PFO	**Pinyon Flat Ob**	**74.44**	**46**	⇓P	**P**	**06 00 56.4**	**-0.5**
	baz=75						
PFO	**Pinyon Flat Ob**	**74.44**	**46**	*e*P	**P**	**06 00 56.7**	**-0.2**
PFO				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1						
PFO				MLR	MLR		
	comp=Z,172nm,19.0s,MS4.4						
PFO	**Pinyon Flat Ob**	**74.44**	**46**	*e*P	**P**	**06 00 56.7**	**-0.2**
	comp=Z,35nm,1.4s,mb5.1						
PFO				LR	LR		
	comp=Z,172nm,19.0s,MS4.4						
CMB	**Columbia Colle**	**74.45**	**41**	*e*P	**P**	**06 00 57.0**	**+0.2**
CMB				*e**PP	pP	06 01 07.3	-1.4
CMB				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CMB				MLR	MLR		
	comp=Z,338nm,21.0s,MS4.6						
CMB	**Columbia Colle**	**74.45**	**41**	*e*P	**P**	**06 00 57.0**	**+0.1**
	comp=Z,22nm,1.3s,mb4.9						
CMB				*e*pP	pP	06 01 07.3	-1.4
CMB				LR	LR		
	comp=Z,338nm,21.0s,MS4.6						
SWSC	**Sam W. Stewart**	**74.53**	**47**	⇓P	**P**	**06 00 57.1**	**-0.3**
	baz=75						
PET	**Petropavlovsk**	**74.57**	**343**	*d i*P	**P**	**06 01 01.6**	**+4.4**
PET				*e*PS		06 11 18.5	
PET				pmax	pmax		
	comp=Z,300nm,16.5s						
PET				pmax	pmax		
	comp=Z,300nm,17.8s						
PET				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,600nm,16.0s						
PET	**Petropavlovsk**	**74.57**	**343**	PFAKE		06 01 10.0	+13
PET				LR	LR		
	comp=Z,547nm,19.0s,MS4.9						
LRMC	**Laurel Mountai**	**74.67**	**44**	⇓P	**P**	**06 00 58.5**	**+0.4**
	baz=75						
WDC	**Whiskeytown Da**	**74.76**	**38**	*e*pP	pP	06 01 10.2	-0.2
WDC				LR	LR		
	comp=Z,791nm,19.0s,MS5.0						
PETK	**Petropavlovsk-**	**74.92**	**342**	P	**P**	**06 00 59.5**	**+0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=125,slow=4.9,SNR=5.2						
PETK				LR	LR	06 31 40.8	
	comp=Z,175nm,18.5s,MS4.4,baz=152,slow=34						
BELC	**Belle Mtn.**	**74.97**	**46**	⇓P	**P**	**06 00 60.0**	**0.0**
	baz=75						
MPMC	**Manual Prospec**	**75.14**	**44**	⇓P	**P**	**06 00 59.9**	**-0.9**
	baz=75,SNR=20						
GSC	**Goldstone**	**75.16**	**45**	⇑P	**P**	**06 01 00.9**	**-0.1**
	baz=75						
GSC	**Goldstone**	**75.16**	**45**	*e*P	**P**	**06 00 58.3

SHOC Shoshone 75.85 45 ⇓P P 06 01 05.1 +0.2
baz=76
Y12C Blythe 75.86 47 ⇑P P 06 01 05.0 0.0
baz=76
113A Mohawk Valley, 75.87 48 ⇓P P 06 01 04.9 -0.2
baz=76
NVAR Mina Array Bea 76.00 42 P P 06 01 04.5 -1.2
comp=Z,5.2nm,0.9s,mb4.5,baz=228,slow=8.6,SNR=19
PAHR Pah Rah Range 76.09 40 *e*P **P 06 01 06.5 +0.3**
comp=Z,36nm,1.5s,mb5.1
U10A Ash Meadows, A 76.11 44 ⇓P P 06 01 06.5 +0.1
baz=76
214A Organ Pipe Nat 76.13 50 ⇓P P 06 01 06.3 -0.3
baz=76,SNR=9.3
Z13A Yuma Proving G 76.18 48 ⇑P P 06 01 06.1 -0.8
baz=76,SNR=9.7
LDFC Landfair 76.18 46 *e*P **P 06 01 06.6 -0.2**
comp=Z,46nm,1.5s,mb5.2
Y13A Salome 76.38 48 ⇑P P 06 01 08.1 +0.1
baz=77
YHNB Yeheng 76.38 302 PFAKE 06 01 20.0 +12
YHNB LR LR
comp=Z,1μm,22.0s,MS5.2
V11A Goodsprings 76.38 45 ⇑P P 06 01 08.2 +0.2
baz=77
PDMCI Parker Dam,Lak 76.42 47 ⇓P P 06 01 08.5 +0.2
baz=77
TPH Tonopah 76.48 42 PFAKE 06 01 20.0 +12
TPH LR LR
comp=Z,358nm,19.0s,MS4.7
114A Black Gap (USA 76.49 49 ⇑P P 06 01 08.3 -0.3
baz=77
V12A Nelson 76.71 45 ⇓P P 06 01 09.9 0.0
baz=77
Z14A Wintersburg 76.77 48 ⇑P P 06 01 10.0 -0.2
baz=77
S10A Tonopah Range, 76.79 43 ⇓P P 06 01 10.5 +0.3
baz=77
X13A Yucca 76.80 47 ⇓P P 06 01 10.2 -0.1
baz=77
MOD Modoc 76.90 38 *e*P **P 06 01 10.7 -0.1**
comp=Z,12nm,1.1s,mb4.8
MOD LR LR
comp=Z,700nm,19.0s,MS5.0
SHPR Sheep Range 76.94 45 *e*P **P 06 01 11.2 +0.1**
COR Corvallis 76.95 34 PFAKE 06 01 20.0 +9.1
COR LR LR
comp=Z,878nm,20.0s,MS5.1
Y14A Wickenburg 77.03 48 ⇓P P 06 01 10.9 -0.8
baz=77,SNR=9.5
K05A Summer Lake 77.08 37 ⇑P P 06 01 11.8 +0.1
baz=77
216A Three Points, 77.14 50 ⇓P P 06 01 12.2 -0.1
baz=77,SNR=10
S11A Rachel 77.19 43 ⇑P P 06 01 12.6 +0.1
baz=77
R10A Warm Springs 77.19 43 ⇑P P 06 01 12.6 +0.1
baz=77
KDAK Kodiak Island 77.21 11 PFAKE 06 01 20.0 +7.9
KDAK LR LR
comp=Z,821nm,20.0s,MS5.0
116A Eloy 77.25 50 ⇓P P 06 01 12.8 -0.1
baz=77
T11A Corn Creek, Al 77.31 44 ⇓P P 06 01 13.1 0.0
baz=78
V13A Grand Canyon W 77.37 46 ⇓P P 06 01 13.7 +0.2
baz=78
X14A Yava 77.39 47 ⇑P P 06 01 13.8 +0.1
baz=78
Q10A Clear Creek Ra 77.44 42 ⇑P P 06 01 14.2 +0.4
baz=78
217A Green Valley 77.50 51 ⇑P P 06 01 14.3 0.0
baz=78,SNR=11
Y15A Casa Rosa Ranc 77.51 48 ⇓P P 06 01 14.2 -0.2
baz=78,SNR=19
KSM Kuching 77.54 276 *e*P **P 06 01 17.0 +2.0**
comp=Z,100nm,1.3s,mb5.6
KSM LR LR
comp=Z,328nm,22.0s,MS4.6
H04A Detroit Lake 77.61 35 ⇓P P 06 01 15.2 +0.5
baz=78
W14A Seligman 77.65 47 ⇓P P 06 01 15.2 +0.1
baz=78,SNR=11
R11A Troy Canyon, C 77.69 43 ⇑P P 06 01 15.1 -0.1
baz=78
U13A Pakoon Wash 77.69 45 ⇓P P 06 01 15.3 0.0
baz=78
TUC Tucson 77.79 50 *e*P **P 06 01 15.9 0.0**
TUC pmax pmax
comp=Z,14nm,1.1s,mb4.8
TUC MLR MLR
comp=Z,375nm,22.0s,MS4.7
TUC Tucson 77.79 50 *e*P **P 06 01 15.9 -0.1**
comp=Z,14nm,1.1s,mb4.8
TUC LR LR
comp=Z,375nm,22.0s,MS4.7
Z16A Peralta Trail, 77.84 49 ⇑P P 06 01 16.3 0.0
baz=78
BMN Battle Mountai 77.86 40 PFAKE 06 01 30.0 +14
BMN LR LR
comp=Z,583nm,19.0s,MS4.9
P10A Eureka 77.86 41 ⇓P P 06 01 16.3 +0.2
baz=78
V14A Boquillas Ranc 77.86 46 ⇓P P 06 01 16.4 +0.1
baz=78
X15A Humboldt 77.86 48 ⇓P P 06 01 16.4 +0.1
baz=78,SNR=12
Q11A Duckwater 77.93 42 ⇓P P 06 01 16.8 +0.2
baz=78,SNR=12
318A Bisbee 77.94 51 ⇓P P 06 01 16.7 -0.2
baz=78,SNR=10
KSRS Korea Array 77.94 316 P **P 06 01 18.1 +1.4**
comp=Z,9.5nm,1.1s,mb4.6,baz=136,slow=6.0,SNR=16
KSRS LR LR 06 34 10.2
comp=Z,476nm,18.2s,MS4.9,baz=119,slow=34
117A Oracle 77.95 50 ⇓P P 06 01 17.0 +0.1
baz=78,SNR=11
T13A Saint George 78.06 45 ⇑P P 06 01 17.6 +0.3
baz=78
Y16A Circle Bar Ran 78.08 49 ⇓P P 06 01 17.5 -0.1
baz=78,SNR=11
218A Dragoon 78.16 51 ⇓P P 06 01 18.1 +0.1
baz=78,SNR=11
WVOR Wild Horse Val 78.20 38 *e*P **P 06 01 17.3 -0.7**
WVOR pmax pmax
comp=Z,41nm,1.7s,mb5.1
WVOR MLR MLR
comp=Z,870nm,19.0s,MS5.1
WVOR Wild Horse Val 78.20 38 *e*P **P 06 01 17.3 -0.7**
comp=Z,41nm,1.7s,mb5.1
WVOR LR LR
comp=Z,870nm,19.0s,MS5.1
U14A Mt Trumbull 78.22 46 ⇑P P 06 01 18.7 +0.4
baz=78,SNR=16
F04A Amboy 78.31 34 ⇑P P 06 01 19.0 +0.5
baz=78
R12A Pony Springs, 78.31 43 ⇑P P 06 01 19.1 +0.3
baz=78,SNR=10
X16A Lo Mia Camp, P 78.38 48 ⇑P P 06 01 19.5 +0.3
baz=79,SNR=15
S13A Holt Ranch, En 78.40 44 ⇑P P 06 01 19.4 +0.2
baz=79
319A Douglas 78.44 52 ⇑P P 06 01 19.9 +0.3
baz=79,SNR=10
Y17A Roosevelt 78.44 49 ⇑P P 06 01 19.4 -0.1
baz=79
Z17A San Carlos Hig 78.51 49 ⇑P P 06 01 20.1 +0.1
baz=79
NLWA Neilton Lookou 78.53 32 PFAKE 06 01 30.0 +10
NLWA LR LR
comp=Z,961nm,19.0s,MS5.2
118A Homack Ranch, 78.55 50 ⇓P P 06 01 20.4 +0.2
baz=79,SNR=7.8
Q12A Willow Creek R 78.57 43 ⇑P P 06 01 20.0 -0.1
baz=79
V15A Kaibab Nationa 78.60 47 ⇑P P 06 01 20.7 +0.4
baz=79
T14A Hurricane 78.64 45 ⇑P P 06 01 20.7 +0.2
baz=79
R13A O'Grain Ranch, 78.65 44 ⇑P P 06 01 20.7 +0.1
baz=79
O11A Cowboy Ranch, 78.66 41 ⇑P P 06 01 20.8 +0.3
baz=79,SNR=8.1
CCUT Cedar City 78.71 45 *e*P **P 06 01 21.3 +0.4**
comp=Z,25nm,1.5s,mb4.9
CCUT *e*pP pP 06 01 32.9 0.0
I07A Izee 78.71 36 ⇑P P 06 01 21.1 +0.3
baz=79,SNR=7.3

VLA Vladivostok 78.75 322 P **P 06 01 21.0 0.0**
VLA MLR MLR
comp=Z,500nm,17.7s,MS4.9
219A White Tail Can 78.76 51 ⇑P P 06 01 21.8 +0.5
baz=79,SNR=10
P12A McGill 78.76 42 ⇓P P 06 01 21.4 +0.2
baz=79
X17A Forest Lakes 78.79 48 ⇓P P 06 01 21.9 +0.4
baz=79
G06A Carlson Farm, 78.81 35 ⇓P P 06 01 22.0 +0.7
baz=79
INCN Inchon 78.82 315 PFAKE 06 01 30.0 +8.5
INCN LR LR
comp=Z,785nm,20.0s,MS5.0
U15A North Rim 78.84 46 ⇓P P 06 01 22.4 +0.7
baz=79,SNR=8.9
J08A Circle Bar Ran 78.86 37 ⇓P P 06 01 22.0 +0.4
baz=79,SNR=6.8
M10A I.L. Ranch, Tu 78.91 40 ⇓P P 06 01 22.5 +0.6
baz=79,SNR=6.5
S14A Cedar City 78.95 44 ⇓P P 06 01 22.7 +0.4
baz=79
320A Kipp Ranch, An 78.99 52 ⇑P P 06 01 22.6 0.0
baz=79
WUAZ Wupatki 79.00 47 ⇑P P 06 01 22.5 0.0
baz=79
WUAZ Wupatki 79.00 47 *e*P **P 06 01 24.0 +1.4**
comp=Z,12nm,1.0s,mb4.8
WUAZ *e*pP pP 06 01 34.5 0.0
WUAZ LR LR
comp=Z,471nm,19.0s,MS4.8
Q13A Wheeler Ranch, 79.05 43 ⇑P P 06 01 23.2 +0.5
baz=79,SNR=5.8
Y18A Canyon Day Jun 79.07 49 ⇓P P 06 01 23.2 +0.3
baz=79,SNR=11
T15A Red Dirt Ranch 79.09 45 ⇓P P 06 01 23.4 +0.4
baz=79,SNR=9.8
119A Ashpeak Ranch, 79.10 50 ⇑P P 06 01 23.7 +0.5
baz=79
220A Playas Peak, P 79.26 52 ⇓P P 06 01 24.4 +0.3
baz=79,SNR=19
ELK Elko 79.27 41 PFAKE 06 01 40.0 +16
ELK LR LR
comp=Z,506nm,19.0s,MS4.9
J09A Fry Pan Ranch, 79.27 38 ⇓P P 06 01 24.0 +0.1
baz=80
L10A Juniper Basin 79.28 39 ⇑P P 06 01 24.0 +0.1
baz=80,SNR=13
O12A Currie 79.31 42 ⇓P P 06 01 24.3 +0.1
baz=80
M11A Holland Ranch, 79.32 40 ⇓P P 06 01 24.7 +0.5
baz=80,SNR=9.1
P13A Bates Ranch, G 79.32 43 ⇓P P 06 01 24.3 +0.1
baz=80
R14A James Farms, M 79.34 44 ⇓P P 06 01 25.0 +0.7
baz=80
S15A Panguitch 79.45 45 ⇑P P 06 01 25.5 +0.5
baz=80,SNR=5.9
K10A MacKenzie Ranc 79.45 39 ⇓P P 06 01 24.7 -0.2
baz=80,SNR=11
H08A Prairie City 79.45 36 ⇑P P 06 01 25.1 +0.3
baz=80
N12A Clover Valley, 79.45 41 ⇓P P 06 01 25.2 +0.3
baz=80
N12A Clover Valley, 79.45 41 *e*P **P 06 01 22.9 -2.1**
comp=Z,18nm,1.2s,mb4.9
N12A *e*PcP PcP 06 01 30.1 -2.7
N12A *e*pP pP 06 01 36.0 -0.9
V17A Tonalea, Kykot 79.46 47 ⇓P P 06 01 25.4 +0.3
baz=80
E06A Yakima 79.46 34 ⇑P P 06 01 25.4 +0.6
baz=80
120A U Bar Ranch, L 79.49 51 ⇑P P 06 01 25.5 +0.2
baz=80
U16A Tuba City 79.49 47 ⇓P P 06 01 25.6 +0.3
baz=80
X18A Snowflake 79.50 49 ⇑P P 06 01 25.5 +0.1
baz=80
Q14A Sevier Lake (B 79.55 43 ⇑P P 06 01 25.4 -0.1
baz=80,SNR=16
I09A Lost Marbles R 79.65 37 ⇑P P 06 01 25.8 -0.1
baz=80
T16A Glen Canyon Da 79.67 46 ⇑P P 06 01 26.2 0.0
baz=80
RSO Redoubt South 79.70 10 *e*P **P 06 01 25.7 -0.1**
RSO *e*pP pP 06 01 36.9 -0.8
Y19A Nutrioso 79.72 49 ⇓P P 06 01 26.8 +0.2
baz=80,SNR=13
L11A Cat Creek Ranc 79.77 40 ⇑P P 06 01 26.1 -0.4
baz=80,SNR=11
G08A Pilot Rock 79.77 36 ⇑P P 06 01 26.3 -0.2
baz=80,SNR=9.0
R15A Junction 79.79 44 ⇓P P 06 01 27.5 +0.6
baz=80
Z20A Nine Sixteen R 79.79 50 ⇓P P 06 01 26.7 -0.3
baz=80,SNR=12
M12A Wells 79.85 41 ⇓P P 06 01 27.0 -0.1
baz=80,SNR=10
221A Mesquite Ranch 79.87 52 ⇑P P 06 01 27.8 +0.4
baz=80
SVW2 Sparrevohn 79.87 9 *e*P **P 06 01 25.6 -1.0**
J10A Berg Farm, Mel 79.90 38 ⇑P P 06 01 28.1 +0.8
baz=80
X19A St. Johns 79.92 49 ⇓P P 06 01 27.8 +0.1
baz=80,SNR=11
K11A Parker Ranch, 79.95 39 ⇓P P 06 01 28.0 +0.4
baz=80,SNR=7.6
D06A Cle Elum 79.95 33 ⇑P P 06 01 28.2 +0.7
baz=80
N13A Wendover, West 79.98 41 ⇓P P 06 01 28.3 +0.5
baz=80
N13A Wendover, West 79.98 41 *e*P **P 06 01 26.2 -1.6**
comp=Z,46nm,1.5s,mb5.2
MVU Marysvale 79.99 44 PFAKE 06 01 40.0 +12
MVU LR LR
comp=Z,529nm,19.0s,MS4.9
P14A Drum Mountains 80.01 43 ⇓P P 06 01 28.0 +0.1
baz=80,SNR=12
MSU Marysvale 80.02 44 *e*P **P 06 01 28.5 +0.5**
MSU *e**PP pP 06 01 40.3 +0.3
U17A Shonto 80.05 46 ⇑P P 06 01 29.1 +0.8
baz=80
RSW Rattlesnake Hi 80.11 34 *e*P **P 06 01 27.7 -0.6**
RSW *e*PcP PcP 06 01 34.4 -1.2
RSW *e*pP pP 06 01 40.1 -0.2
121A Cookes Peak, D 80.11 51 ⇓P P 06 01 28.9 +0.2
baz=80,SNR=7.1
H09A Durkee 80.11 37 ⇑P P 06 01 29.0 +0.6
baz=80
HAWA Hanford 80.14 34 PFAKE 06 01 40.0 +12
HAWA LR LR
comp=Z,1μm,19.0s,MS5.2
Q15A Fillmore 80.14 44 ⇓P P 06 01 28.9 +0.2
baz=80
T17A Navajo Res., N 80.15 46 ⇑P P 06 01 29.4 +0.6
baz=80
F08A Pendleton 80.18 35 ⇓P P 06 01 29.4 +0.7
baz=80
W19A Sanders 80.19 48 ⇓P P 06 01 29.5 +0.4
baz=80
L12A House Creek Ra 80.20 40 ⇓P P 06 01 29.4 +0.4
baz=80
M13A Montello 80.29 41 ⇓P P 06 01 29.8 +0.4
baz=80
Y20A Horse Springs, 80.33 50 ⇑P P 06 01 30.4 +0.6
baz=80,SNR=18
R16A Teasdale 80.36 45 ⇑P P 06 01 30.0 +0.1
baz=81
HABR Khabarovsk 80.41 328 *e*P **P 06 01 29.9 0.0**
HABR *e* 06 01 35.7
HABR *e**PP pP 06 01 39.1 -2.7
HABR *e**SP sP 06 01 43.1 -3.2
HABR *e*PPP 06 06 20.2
HABR *e*SS SS 06 16 44.6 -1.3
HABR pmax pmax
comp=E,20nm,1.3s
HABR pmax pmax
comp=Z,74nm,1.7s,mb5.3
HABR pmax pmax
comp=N,38nm,2.7s
HABR MLR MLR
comp=Z,585nm,20.0s,MS4.9
G09A Cove 80.42 36 ⇓P P 06 01 30.2 +0.1
baz=81,SNR=9.1
BMO Blue Mountains 80.43 37 *e*P **P 06 01 29.8 -0.3**
comp=Z,26nm,1.5s,mb4.9
BMO LR LR

comp=Z,542nm,20.0s,MS4.9
MFID Camas Ranch 80.44 39 ⇓P P 06 01 30.4 +0.2
baz=81,SNR=7.2
E08A Dider Farm, El 80.46 35 ⇓P P 06 01 30.4 +0.2
baz=81
ETW Entiat 80.48 33 *e*P **P 06 01 29.4 -0.9**
ETW *e*PcP PcP 06 01 35.9 -1.3
ETW *e*pP pP 06 01 41.9 -0.4
S17A Black Ridge (B 80.48 46 ⇓P P 06 01 30.5 0.0
baz=81
DUG Dugway 80.50 42 ⇓P P 06 01 30.3 -0.3
baz=81,SNR=6.4
DUG Dugway 80.50 42 *e*P **P 06 01 29.9 -0.7**
DUG *e**PP pP 06 01 41.8 -0.8
DUG pmax pmax
comp=Z,11nm,1.4s,mb4.6
DUG MLR MLR
comp=Z,452nm,19.0s,MS4.8
DUG Dugway 80.50 42 *e*P **P 06 01 29.9 -0.7**
comp=Z,11nm,1.4s,mb4.6
DUG *e*pP pP 06 01 41.8 -0.8
DUG LR LR
comp=Z,452nm,19.0s,MS4.8
U18A Rough Rock, Ch 80.51 47 ⇑P P 06 01 30.5 -0.2
baz=81
P15A Leamington 80.51 43 ⇑P P 06 01 31.1 +0.4
baz=81
K12A Draper Farm, C 80.55 40 ⇑P P 06 01 31.2 +0.4
baz=81
X20A Quemado 80.55 49 ⇓P P 06 01 31.1 +0.1
baz=81,SNR=8.7
Z21A St. Cloud Mine 80.56 51 ⇑P P 06 01 31.9 +0.8
baz=81,SNR=19
N14A Grayback Hills 80.62 42 ⇓P P 06 01 31.6 +0.3
baz=81
I11A Placerville 80.66 38 ⇓P P 06 01 31.2 -0.2
baz=81,SNR=6.7
C07A Waterville 80.68 33 ⇑P P 06 01 31.9 +0.6
baz=81
V19A Window Rock 80.73 48 ⇑P P 06 01 32.0 0.0
baz=81
122A Conniff Cattle 80.77 51 ⇑P P 06 01 32.6 +0.4
baz=81
J12A Stokes Ranch, 80.78 39 ⇓P P 06 01 31.7 -0.3
baz=81,SNR=8.5
L13A Double Diamond 80.83 40 ⇓P P 06 01 32.4 +0.1
baz=81,SNR=5.7
W20A Ramah 80.83 49 ⇑P P 06 01 32.6 +0.1
baz=81,SNR=25
T18A Mexican Hat 80.86 46 ⇑P P 06 01 33.1 +0.4
baz=81,SNR=24
M14A Sheep Mountain 80.88 41 ⇓P P 06 01 32.4 -0.1
baz=81,SNR=20
D08A Wollman Farm, 80.88 34 ⇓P P 06 01 32.5 +0.1
baz=81,SNR=6.3
Y21A Point of Rocks 80.89 50 ⇑P P 06 01 33.5 +0.7
baz=81,SNR=6.9
Q16A Castle Valley 80.90 44 ⇓P P 06 01 32.9 +0.1
baz=81
U19A Dine' College, 80.91 47 ⇓P P 06 01 32.6 -0.2
baz=81,SNR=7.5
R17A Hanksville Air 80.95 45 ⇓P P 06 01 32.9 -0.1
baz=81
E09A Wood Farm, Sta 80.97 35 ⇑P P 06 01 33.3 +0.4
baz=81
MDJ Mudanjiang 80.98 323 P **P 06 01 34.3 +1.3**
MDJ pP pP 06 01 43.8 -1.2
MDJ sP sP 06 01 47.3 -2.2
MDJ S S 06 11 42.2 +3.0
MDJ sS sS 06 11 58.2 -0.9
MDJ pmax pmax
comp=Z,13nm,1.5s,mb4.6
MDJ pmax pmax
comp=Z,290nm,7.7s
MDJ LR LR
comp=N,290nm,17.7s,MS4.8
MDJ LR LR
comp=E,330nm,21.2s,MS4.8
MDJ LR LR
comp=Z,500nm,18.9s,MS4.9
MDJ Mudanjiang 80.98 323 PFAKE 06 01 40.0 +7.0
MDJ LR LR
comp=Z,676nm,20.0s,MS5.0
X21A Alamocita Cree 81.02 50 ⇓P P 06 01 33.6 +0.1
baz=81
K13A Stover Farm, H 81.06 40 ⇓P P 06 01 33.5 0.0
baz=81,SNR=7.6
Z22A Elephant Butte 81.06 51 ⇓P P 06 01 34.0 +0.3
baz=81
N15A Stansbury Isla 81.07 42 ⇑P P 06 01 33.3 -0.3
baz=81
TMUT Trail Mountain 81.07 44 *e*P **P 06 01 33.8 +0.1**
comp=Z,140nm,2.3s,mb5.5
TMUT *e*pP pP 06 01 46.0 +0.4
I12A Atlanta 81.07 38 ⇓P P 06 01 33.8 +0.2
baz=81,SNR=19
H11A Donnelly 81.08 37 ⇓P P 06 01 33.3 -0.3
baz=81,SNR=13
B07A Winthrop 81.14 33 ⇑P P 06 01 33.9 +0.1
baz=81
F10A Beach Ranch, E 81.15 36 ⇑P P 06 01 33.8 -0.1
baz=81
V20A Brimhall 81.19 48 ⇓P P 06 01 34.1 -0.2
baz=81
OD2 Odessa Site #2 81.20 34 *e*P **P 06 01 33.7 -0.5**
OD2 *e*PcP PcP 06 01 39.7 -0.6
OD2 *e*pP pP 06 01 45.6 -0.5
D09A Jones Farm, Ri 81.22 34 ⇓P P 06 01 34.0 -0.2
baz=81
L14A Malta 81.24 41 ⇑P P 06 01 34.2 -0.3
baz=81
C08A Higginbotham F 81.27 34 ⇑P P 06 01 34.1 -0.4
baz=82
T19A Beclabito 81.30 47 ⇑P P 06 01 34.7 -0.2
baz=82
SPUT South Promonto 81.34 42 *e*P **P 06 01 35.3 +0.3**
comp=Z,42nm,1.7s,mb5.1
324A Moseley Ranch, 81.34 53 ⇓P P 06 01 34.8 -0.5
baz=82,SNR=8.6
G11A Walters Elk Ra 81.35 37 ⇓P P 06 01 34.6 -0.4
baz=82,SNR=12
O16A Springville 81.36 43 ⇓P P 06 01 35.0 -0.2
baz=82
HLID Hailey 81.37 39 ⇑P P 06 01 34.9 -0.2
baz=82,SNR=14
HLID Hailey 81.37 39 *e*P **P 06 01 35.3 +0.1**
comp=Z,42nm,1.6s,mb5.1
HLID *e*PcP PcP 06 01 40.1 -1.1
HLID *e*pP pP 06 01 46.9 -0.3
HLID LR LR
comp=Z,460nm,20.0s,MS4.8
A07A Ashnola River, 81.38 32 ⇑P P 06 01 34.9 -0.1
baz=82
Y22A Socorro 81.38 50 ⇑P P 06 01 35.0 -0.4
baz=82
HVU Hansel Valley 81.39 41 *e*P **P 06 01 35.9 +0.6**
HVU pmax pmax
comp=Z,48nm,1.9s,mb5.1
HVU Hansel Valley 81.39 41 *e*P **P 06 01 35.9 +0.6**
comp=Z,48nm,1.9s,mb5.1
PMR Palmer 81.41 11 *e*P **P 06 01 34.7 -0.2**
PMR pmax pmax
comp=Z,33nm,1.2s,mb5.1
PMR Palmer 81.41 11 *e*P **P 06 01 34.6 -0.2**
comp=Z,33nm,1.2s,mb5.1
J13A Cove Ranch, Pi 81.42 39 ⇑P P 06 01 35.2 -0.2
baz=82,SNR=16
M15A Larsen Ranch, 81.42 42 ⇓P P 06 01 35.2 -0.3
baz=82,SNR=10
425A Indio Mountain 81.43 54 ⇑P P 06 01 35.3 -0.4
baz=82,SNR=10
U20A Newcomb 81.43 48 ⇓P P 06 01 35.3 -0.4
baz=82
SRU San Rafael 81.43 44 ⇓P P 06 01 35.3 -0.3
baz=82
SRU San Rafael 81.43 44 *e*P **P 06 01 35.6 0.0**
SRU *e**PP pP 06 01 46.9 -0.7
SRU pmax pmax
comp=Z,21nm,1.4s,mb4.9
SRU San Rafael 81.43 44 *e*P **P 06 01 35.6 +0.1**
comp=Z,21nm,1.4s,mb4.9
SRU *e*pP pP 06 01 46.9 -0.6
LAZ Ladron 81.47 50 *e*P **P 06 01 36.1 +0.2**
comp=Z,8.2nm,1.4s,mb4.5
LAZ *e*PcP PcP 06 01 41.3 -0.6
LAZ *e*pP pP 06 01 47.9 +0.1
B08A Colville Reser 81.48 33 ⇑P P 06 01 35.0 -0.5

baz=82,SNR=6.7
R18A Canyonlands Na 81.48 45 ⇓P P 06 01 35.6 -0.3
baz=82
MNTX Cornudas Mount 81.53 53 PFAKE 06 01 50.0 +14
MNTX LR LR
comp=Z,281nm,19.0s,MS4.6
626A Big Bend Ranch 81.55 55 ⇑P P 06 01 35.6 -0.9
baz=82,SNR=7.8
K14A Jones Ranch, D 81.56 40 ⇑P P 06 01 36.0 -0.1
baz=82
TTA Tatalina 81.57 8 *e*P **P 06 01 36.6 +0.9**
224A Corundas Mount 81.59 53 ⇓P P 06 01 36.0 -0.6
baz=82,SNR=12
JLU Jordanelle 81.60 43 *e*P **P 06 01 36.0 -0.4**
comp=Z,22nm,1.7s,mb4.8
DAU Daniels Canyon 81.63 43 *e*P **P 06 01 35.4 -1.2**
DAU *e* 06 01 41.8
DAU *e**PP pP 06 01 48.3 -0.3
DAU pmax pmax
comp=Z,24nm,1.6s,mb4.9
DAU Daniels Canyon 81.63 43 *e*P **P 06 01 35.4 -1.2**
comp=Z,24nm,1.6s,mb4.9
DAU *e*PcP PcP 06 01 41.8 -0.6
DAU *e*pP pP 06 01 48.3 -0.3
DIV Divide 81.66 13 *e*pP pP 06 01 48.3 +0.1
H12A Diamond D Ranc 81.67 38 ⇓P P 06 01 36.3 -0.4
baz=82,SNR=8.0
S19A Harvey Farm, M 81.68 46 ⇓P P 06 01 36.6 -0.3
baz=82
Q18A Rafter H Ranch 81.69 45 ⇑P P 06 01 36.5 -0.4
baz=82
C09A Chrisman Ranch 81.69 34 ⇓P P 06 01 36.3 -0.5
baz=82
325A Bean Ranch, Si 81.70 53 ⇑P P 06 01 36.5 -0.7
baz=82,SNR=10.0
F11A Grangeville 81.70 36 ⇓P P 06 01 35.9 -0.9
baz=82
NJ2 Nanjing 81.70 307 *e*P **P 06 01 36.4 -0.8**
NJ2 pP pP 06 01 49.2 0.0
NJ2 sP sP 06 01 54.6 +1.0
NJ2 PP PP 06 04 44.6 0.0
NJ2 S S 06 11 44.0 -3.2
NJ2 sS sS 06 12 04.0 -3.2
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
NJ2 pmax pmax
comp=Z,470nm,4.5s
NJ2 LR LR
comp=N,550nm,28.0s
NJ2 LR LR
comp=E,690nm,22.3s
NJ2 LR LR
comp=Z,650nm,19.6s
BNM Barren Site 81.72 50 *e*P **P 06 01 38.4 +1.1**
comp=Z,14nm,1.3s,mb4.7
BNM *e*PcP PcP 06 01 42.5 -0.5
BNM *e*pP pP 06 01 48.8 -0.5
I13A Wildhorse Cree 81.75 39 ⇑P P 06 01 36.5 -0.6
baz=82
L15A Malad City 81.75 41 ⇑P P 06 01 36.3 -0.9
baz=82
D10A Wagner Farm, O 81.77 35 ⇓P P 06 01 36.8 -0.4
baz=82
LPM Los Pinos Moun 81.80 50 *e*P **P 06 01 38.5 +0.9**
526A Mary Lane Ranc 81.80 55 ⇓P P 06 01 37.4 -0.3
baz=82,SNR=7.3
TXAR Lajitas Array 81.82 56 P **P 06 01 37.3 -0.6**
comp=Z,3.5nm,1.1s,mb4.2,baz=210,slow=7.2,SNR=16
TXAR LR LR 06 29 18.6
comp=Z,218nm,20.7s,MS4.5,baz=65,slow=29
O17A Robinson Place 81.85 43 ⇓P P 06 01 37.9 +0.1
baz=82,SNR=7.8
MVCO Mesa Verde 81.85 47 PFAKE 06 01 50.0 +12
MVCO LR LR
comp=Z,442nm,19.0s,MS4.8
M16A Huntsville 81.86 42 ⇑P P 06 01 37.9 +0.1
baz=82
R19A Curley Farm, L 81.86 46 ⇑P P 06 01 37.5 -0.4
baz=82,SNR=7.1
P18A Preston Nutter 81.88 44 ⇓P P 06 01 37.8 -0.1
baz=82
A08A Turner Farm, O 81.88 33 ⇑P P 06 01 37.9 +0.2
baz=82,SNR=9.7
124A Stringfield Ra 81.93 52 ⇑P P 06 01 38.0 -0.4
baz=82
E11A Bogner Ranch, 81.94 36 ⇑P P 06 01 37.6 -0.5
baz=82
PMSA Palmer Station 81.97 156 PFAKE 06 01 50.0 +12
PMSA LR LR
comp=Z,757nm,20.0s,MS5.0
H13A Challis 82.03 38 ⇑P P 06 01 38.5 -0.1
baz=82,SNR=10.0
K15A Arbon 82.03 41 ⇓P P 06 01 39.8 +1.1
baz=82
Y23A Lovelace Mesa, 82.04 51 ⇓P P 06 01 38.9 -0.1
baz=82
HWUT Hardware Ranch 82.06 42 *e*P **P 06 01 43.6 +4.8**
comp=Z,112nm,2.9s,mb5.3
HWUT LR LR
comp=Z,563nm,19.0s,MS5.0
627A Terlingua Ranc 82.09 56 ⇑P P 06 01 39.5 +0.2
baz=82,SNR=16
426A McDonald Obser 82.11 54 ⇑P P 06 01 39.1 -0.3
baz=82,SNR=8.9
F12A Elk City 82.13 37 ⇓P P 06 01 38.8 -0.3
baz=82
B09A Rice 82.14 33 ⇓P P 06 01 38.9 -0.2
baz=82
225A Deer Hill, Car 82.14 53 ⇓P P 06 01 39.1 -0.4
baz=82,SNR=8.1
I14A Mackay 82.15 39 ⇑P P 06 01 39.5 +0.3
baz=82
N17A Moffit Pass 82.18 43 ⇓P P 06 01 39.6 +0.2
baz=82
527A Woodward Ranch 82.21 55 ⇑P P 06 01 39.8 -0.1
baz=82
ANMO Albuquerque 82.22 50 *e*P **P 06 01 39.7 -0.1**
ANMO *e**PP pP 06 01 51.1 -0.7
ANMO pmax pmax
comp=Z,14nm,1.3s
ANMO MLR MLR
comp=Z,380nm,19.0s
ANMO Albuquerque 82.22 50 *e*P **P 06 01 39.7 -0.2**
comp=Z,14nm,1.3s,mb4.7
ANMO *e*PcP PcP 06 01 45.1 0.0
ANMO *e*pP pP 06 01 51.1 -0.8
ANMO LR LR
comp=Z,380nm,19.0s,MS4.8
A09A Danville 82.25 33 ⇑P P 06 01 39.5 -0.2
baz=82
D11A Klaveano Farm, 82.28 35 ⇑P P 06 01 39.1 -0.8
baz=82,SNR=8.5
E12A Beaver Dam Sad 82.34 36 ⇓P P 06 01 40.0 -0.2
baz=82
G13A Cobalt 82.34 38 ⇑P P 06 01 40.3 0.0
baz=82,SNR=6.0
L16A Fish Haven 82.36 42 ⇑P P 06 01 40.2 -0.2
baz=83
R20A Redvale 82.42 46 ⇓P P 06 01 40.6 -0.2
baz=83
326A Caldwell Ranch 82.44 54 ⇓P P 06 01 41.2 +0.2
baz=83
J15A Blackfoot 82.48 40 ⇑P P 06 01 41.5 +0.5
baz=83,SNR=12
628A Black Gap, Mar 82.50 56 ⇓P P 06 01 41.2 -0.3
baz=83
Y24A Capitan 82.50 51 ⇑P P 06 01 41.6 +0.3
baz=83,SNR=7.9
125A Gardner Draw, 82.51 52 ⇓P P 06 01 41.6 +0.2
baz=83
GDL2 Guadalupe Moun 82.53 53 *e*P **P 06 01 42.0 +0.5**
W23A Werner Place, 82.54 50 ⇓P P 06 01 41.7 +0.2
baz=83
M17A Scullys Gap (B 82.56 42 ⇓P P 06 01 41.7 +0.3
baz=83
S21A Coal Bank Pass 82.56 47 ⇑P P 06 01 42.0 +0.4
baz=83,SNR=10
KLR Kul'dur 82.57 327 *e*P **P 06 01 38.5 -2.8**
KLR *e*S S 06 11 51.5 -3.9
NEW Newport 82.58 34 *e*P **P 06 01 41.3 -0.1**
NEW pmax pmax
comp=Z,22nm,1.5s
NEW Newport 82.58 34 *e*P **P 06 01 41.3 -0.1**
comp=Z,22nm,1.5s,mb5.0
H14A Leadore 82.59 39 ⇑P P 06 01 41.4 -0.1
baz=83,SNR=12
226A Malaga, Loving 82.67 53 ⇓P P 06 01 42.1 -0.2
baz=83
427A Hayter Ranch, 82.68 54 ⇑P P 06 01 42.2 -0.1
baz=83
F13A Darby 82.68 37 ⇓P P 06 01 41.3 -0.7
baz=83,SNR=7.8
K16A Soda Springs 82.70 41 ⇑P P 06 01 42.6 +0.5
baz=83
P19A Cripple Cowboy 82.72 45 ⇓P P 06 01 42.0 -0.4
baz=83,SNR=6.0
Z25A Roswell 82.74 52 ⇑P P 06 01 43.1 +0.5
baz=83,SNR=10
L17A Cokeville 82.76 42 ⇑P P 06 01 42.5 +0.1
baz=83
I15A Monteview 82.78 39 ⇓P P 06 01 42.9 +0.4
baz=83
D12A Red Ives Fores 82.83 36 ⇓P P 06 01 42.3 -0.4
baz=83
Q20A Ridgley Place, 82.85 45 ⇑P P 06 01 43.0 -0.1
baz=83,SNR=16
T22A Edith 82.87 48 ⇓P P 06 01 43.2 0.0
baz=83
G14A Jackson 82.88 38 ⇓P P 06 01 43.2 +0.2
baz=83
J16A Bone 82.92 40 ⇑P P 06 01 43.1 -0.2
baz=83,SNR=10
TRF Thorofare Moun 82.92 10 P **P 06 01 41.5 -1.3**
comp=Z,15nm,1.0s,mb5.0
M18A Lyman 82.92 43 ⇓P P 06 01 43.9 +0.5
baz=83
DL2 Dalian 82.93 315 P **P 06 01 45.0 +1.6**
DL2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
DL2 pmax pmax
comp=Z,230nm,6.7s
DL2 LR LR
comp=N,180nm,13.6s,MS4.8
DL2 LR LR
comp=E,270nm,16.1s,MS4.8
DL2 LR LR
comp=Z,280nm,19.7s,MS4.6
SKAG Skagway 82.94 18 *e*P **P 06 01 42.0 -0.9**
comp=Z,52nm,1.5s,mb5.3
SKAG *e*pP pP 06 01 54.2 -0.8
N18A Larsen Ranch, 82.95 43 ⇑P P 06 01 43.7 +0.3
baz=83
O19A Miners Draw (B 82.96 44 ⇑P P 06 01 43.7 +0.1
baz=83
AHID Auburn Hatcher 82.97 41 PFAKE 06 02 00.0 +16
AHID LR LR
comp=Z,729nm,19.0s,MS5.1
CN2 Changchun 82.98 320 *e*P **P 06 01 44.9 +1.3**
CN2 *e*pP pP 06 01 55.6 0.0
CN2 *e*S S 06 12 00.9 +1.0
CN2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,18.0s,MS5.0
CN2 LR LR
comp=E,300nm,18.0s,MS5.0
CN2 LR LR
comp=Z,400nm,17.0s,MS4.9
126A Clayton Basin, 82.99 53 ⇓P P 06 01 44.2 +0.3
baz=83
MCMT McKenzie Canyo 83.01 39 *e*P **P 06 01 43.7 0.0**
comp=Z,11nm,1.3s,mb4.7
H15A Lima 83.02 39 ⇓P P 06 01 43.8 0.0
baz=83,SNR=15
Y25A Mesa, Roswell 83.05 51 ⇓P P 06 01 44.4 +0.2
baz=83
P20A De Beque 83.05 45 ⇑P P 06 01 44.3 +0.2
baz=83,SNR=12
K17A Gardner Place, 83.07 41 ⇓P P 06 01 43.9 -0.2
baz=83,SNR=9.9
R21A Cimarron 83.07 46 ⇓P P 06 01 44.7 +0.5
baz=83,SNR=10
B11A Sandpoint 83.09 34 ⇑P P 06 01 43.4 -0.6
baz=83,SNR=6.1
E13A Victor 83.14 37 ⇑P P 06 01 43.5 -0.8
baz=83,SNR=14
428A Kincaid Ranch, 83.19 55 ⇑P P 06 01 45.3 +0.4
baz=83
L18A Fontenelle, Gr 83.20 42 ⇓P P 06 01 45.0 +0.3
baz=83
N19A John Jarvie Ra 83.23 43 ⇑P P 06 01 45.3 +0.4
baz=83
Q21A Lamborn Mesa, 83.28 46 ⇑P P 06 01 45.2 -0.1
baz=84,SNR=8.9
Z26A Caprock 83.29 52 ⇓P P 06 01 45.7 +0.2
baz=84
I16A Newdale 83.32 40 ⇑P P 06 01 45.4 +0.1
baz=84,SNR=15
DCID1 Drake Creek 83.35 40 *e*P **P 06 01 46.6 +1.1**
comp=Z,25nm,1.1s,mb5.2
D13A Huson 83.35 36 ⇑P P 06 01 44.1 -1.3
baz=84,SNR=8.3
A11A Hall Mountain, 83.40 34 ⇑P P 06 01 45.5 -0.1
baz=84,SNR=6.5
G15A Dillon 83.41 38 ⇓P P 06 01 45.4 -0.4
baz=84,SNR=20
MCK McKinley 83.42 11 *e*P **P 06 01 44.9 -0.4**
MCK pmax pmax
comp=Z,36nm,1.3s,mb5.2
MCK McKinley 83.42 11 *e*P **P 06 01 44.9 -0.5**
comp=Z,36nm,1.3s,mb5.2
HYT Haines Junctio 83.43 17 *e*P **P 06 01 46.5 +1.0**
REDW Red Top Meadow 83.43 41 *e*P **P 06 01 45.9 -0.1**
comp=Z,36nm,1.4s,mb5.2
TPAW Teton Pass 83.44 40 *e*P **P 06 01 45.9 0.0**
comp=Z,36nm,1.5s,mb5.2
TPAW *e*pP pP 06 01 58.5 +0.5
DLMT Dillon 83.45 38 *e*P **P 06 01 45.8 -0.2**
comp=Z,30nm,1.4s,mb5.1
O20A White River Ci 83.47 44 ⇑P P 06 01 45.9 -0.3
baz=84,SNR=5.8
MSO Missoula 83.49 36 *e*P **P 06 01 45.3 -0.9**
comp=Z,18nm,1.4s,mb4.9
MSO LR LR
comp=Z,550nm,19.0s,MS5.0
E14A Clinton 83.52 37 ⇓P P 06 01 46.3 0.0
baz=84,SNR=12
J17A Brown Place, J 83.52 41 ⇑P P 06 01 46.7 +0.3
baz=84,SNR=7.3
B12A Libby 83.53 34 ⇓P P 06 01 46.1 -0.1
baz=84
SNOW Snow King Moun 83.55 41 *e*P **P 06 01 46.6 +0.1**
comp=Z,73nm,1.6s,mb5.6
M19A Rock Springs 83.55 43 ⇓P P 06 01 46.4 -0.1
baz=84,SNR=7.1
R22A Saguache, Gunn 83.55 47 ⇓P P 06 01 47.6 +0.9
baz=84,SNR=9.5
BSMT Bassoo Peak 83.61 35 *e*P **P 06 01 46.3 -0.4**
C13A Hot Springs 83.62 36 ⇓P P 06 01 46.1 -0.7
baz=84,SNR=9.0
IMW Indian Meadow 83.66 40 *e*P **P 06 01 47.4 +0.3**
comp=Z,18nm,1.2s,mb5.1
LOHW Long Hollow 83.72 40 *e*P **P 06 01 47.1 -0.3**
comp=Z,25nm,1.4s,mb5.2
LOHW *e*PcP PcP 06 01 52.1 +0.6
LOHW *e*pP pP 06 01 58.7 -0.7
MENT Mentasta 83.72 13 *e*P **P 06 01 46.6 -0.3**
L19A Farson 83.72 42 ⇓P P 06 01 47.2 -0.2
baz=84,SNR=12
Q22A Crested Butte, 83.75 46 ⇑P P 06 01 47.7 0.0
baz=84,SNR=15
F15A Butte 83.78 38 ⇑P P 06 01 47.1 -0.5
baz=84,SNR=6.3
LRM Limekiln Ridge 83.79 38 *e*P **P 06 01 48.3 +0.6**
N20A Spence Gulch, 83.80 44 ⇓P P 06 01 47.6 -0.3
baz=84,SNR=12
W25A X Bar L Ranch, 83.80 50 ⇓P P 06 01 47.5 -0.5
baz=84
JTMT Jette 83.82 36 *e*P **P 06 01 48.3 +0.5**
SWMT Swartz Lake 83.85 36 *e*P **P 06 01 48.2 +0.3**
G16A Moss Hill, Enn 83.85 39 ⇑P P 06 01 47.9 -0.1
baz=84,SNR=8.7
SMCO Snowmass 83.86 46 *e*P **P 06 01 49.1 +0.9**
comp=Z,48nm,1.7s,mb5.3
QLMT Earthquake Lak 83.86 39 *e*P **P 06 01 48.8 +0.7**
J18A Kendall Valley 83.87 41 ⇑P P 06 01 47.9 -0.3
baz=84,SNR=30
D14A Greenough 83.88 36 ⇑P P 06 01 47.4 -0.7
baz=84
Z27A Tatum 83.89 52 ⇑P P 06 01 48.0 -0.6
baz=84
I17A Pilgrim Ck. 83.90 40 ⇑P P 06 01 49.1 +0.8
baz=84,SNR=9.8
H16A Russell Place, 83.90 39 ⇓P P 06 01 48.6 +0.3
baz=84,SNR=25
QIZ Qiongzhong 83.92 292 P **P 06 01 48.2 -0.7**
QIZ sP sP 06 02 02.5 -2.9
QIZ PP PP 06 05 05.9 +2.8
QIZ S S 06 12 12.3 +2.0
QIZ sS sS 06 12 27.0 -3.3
QIZ pmax pmax
comp=Z,440nm,8.1s
QIZ LR LR
comp=Z,770nm,27.9s,MS4.9
QIZ Qiongzhong 83.92 292 PFAKE 06 02 00.0 +11
QIZ LR LR
comp=Z,584nm,19.0s,MS5.0
CHMT Chamberlain Mo 83.93 37 *e*P **P 06 01 48.5 +0.1**
BW06 Boulder Array 83.94 42 ⇑P P 06 01 48.0 -0.5
baz=84,SNR=12
BW06 Boulder Array 83.94 42 *e*P **P 06 01 47.9 -0.6**
comp=Z,30nm,1.5s,mb5.2
BW06 LR LR
comp=Z,284nm,19.0s,MS4.7
PDAR Pinedale Array 83.94 42 P **P 06 01 47.9 -0.7**
comp=Z,5.5nm,1.0s,mb4.7,baz=222,slow=2.0,SNR=28
PDAR LR LR 06 29 47.3
comp=Z,204nm,20.9s,MS4.5,baz=246,slow=29
SLMT Seeley Lake 83.98 36 *e*P **P 06 01 48.5 -0.2**
X26A CR and CF Fran 83.98 51 ⇑P P 06 01 48.4 -0.5
baz=84
E15A Deer Lodge 84.01 37 ⇓P P 06 01 48.1 -0.7
baz=84
YFT Old Faithful 84.02 40 *e*P **P 06 01 50.4 +1.5**
comp=Z,33nm,1.5s,mb5.2
O21A Pagoda 84.02 45 ⇓P P 06 01 48.3 -0.7
baz=84
YBMT Yellow Bay 84.04 36 *e*P **P 06 01 47.9 -1.0**
YMR Madison River 84.06 39 *e*P **P 06 01 49.6 +0.5**
comp=Z,54nm,1.3s,mb5.5
YMR *e*pP pP 06 02 01.6 +0.5
B13A Whitefish 84.08 35 ⇑P P 06 01 48.6 -0.5
baz=84
C14A Swan Lake 84.14 36 ⇓P P 06 01 49.0 -0.4
baz=84
H17A Grant Village 84.15 40 ⇓P P 06 01 50.2 +0.7
baz=84,SNR=7.4
Y27A Causey 84.17 52 ⇑P P 06 01 49.8 -0.2
baz=84
M20A Sweetwater, Wa 84.17 43 ⇓P P 06 01 50.0 +0.2
baz=84
BOZ Bozeman (W) 84.18 38 ⇑P P 06 01 49.4 -0.3
baz=84,SNR=19
BOZ Bozeman (W) 84.18 38 *e*P **P 06 01 49.0 -0.7**
BOZ pmax pmax
comp=Z,27nm,1.4s,mb5.2
BOZ MLR MLR
comp=Z,674nm,20.0s,MS5.0
BOZ Bozeman (W) 84.18 38 *e*P **P 06 01 49.0 -0.7**
comp=Z,27nm,1.4s,mb5.2
BOZ LR LR
comp=Z,674nm,20.0s,MS5.0
SDCO Great Sand Dun 84.20 48 *e*P **P 06 01 50.6 +0.6**
comp=Z,31nm,1.8s,mb5.1
SDCO LR LR
comp=Z,288nm,20.0s,MS4.7
I18A Diamond G Ranc 84.25 41 ⇓P P 06 01 50.4 +0.3
baz=84
YNR Norris Junctio 84.25 39 P **P 06 01 51.9 +1.8**
comp=Z,17nm,1.1s,mb5.1
N21A Black Mountain 84.25 44 ⇓P P 06 01 50.3 +0.1
baz=84,SNR=22
F16A Kennard Place, 84.26 38 ⇑P P 06 01 50.1 0.0
baz=84,SNR=5.3
L20A Wamsutter 84.33 43 ⇑P P 06 01 50.3 -0.3
baz=84,SNR=16
LKWY Lake 84.34 40 *e*P **P 06 01 51.9 +1.4**
LKWY pmax pmax
comp=Z,29nm,1.3s,mb5.2
LKWY MLR MLR
comp=Z,380nm,20.0s,MS4.8
LKWY Lake 84.34 40 *e*P **P 06 01 51.9 +1.4**
comp=Z,29nm,1.3s,mb5.2
LKWY LR LR
comp=Z,380nm,20.0s,MS4.8
K19A Absolon Red Bu 84.42 42 ⇓P P 06 01 50.2 -0.7
baz=85,SNR=12
D15A Lincoln 84.42 37 ⇓P P 06 01 50.3 -0.6
baz=85,SNR=11
A13A Flathead Natio 84.43 35 ⇑P P 06 01 51.2 +0.3
baz=85
MSTX Muleshoe 84.50 52 ⇑P P 06 01 51.6 -0.1
baz=85
G17A Pierce Place, 84.54 39 ⇓P P 06 01 52.0 +0.5
baz=85
X27A F and S Farms, 84.55 51 ⇑P P 06 01 51.9 +0.1
baz=85
E16A East Helena 84.63 38 ⇓P P 06 01 51.3 -0.6
baz=85,SNR=15
HRY Holter Researc 84.64 37 *e*P **P 06 01 51.7 -0.3**
K20A Yellowstone Ra 84.65 42 ⇓P P 06 01 51.9 -0.3
baz=85
COLA College 84.66 11 *e*P **P 06 01 50.9 -0.7**
COLA pmax pmax
comp=Z,49nm,1.3s,mb5.5
COLA MLR MLR
comp=Z,706nm,19.0s,MS5.1
COLA College 84.66 11 *e*P **P 06 01 50.9 -0.7**
comp=Z,49nm,1.3s,mb5.5
COLA LR LR
comp=Z,706nm,19.0s,MS5.1
M21A Separation Pea 84.77 43 ⇑P P 06 01 52.3 -0.4
baz=85,SNR=12
WALA Waterton Lakes 84.78 35 *e*P **P 06 01 52.2 -0.4**
comp=Z,1.0nm,1.4s,mb3.8
C15A Salmond Ranch, 84.78 36 ⇓P P 06 01 52.3 -0.3
baz=85,SNR=13
SEY Seymchan 84.83 345 *e*P **P 06 01 53.3 +0.7**
F17A Fitzpatrick Pl 84.89 38 ⇓P P 06 01 53.2 0.0
baz=85,SNR=9.1
RWWY Rawlins 84.91 43 *e*P **P 06 01 53.9 +0.4**
comp=Z,25nm,1.2s,mb5.2
L21A Rawlins 84.94 43 ⇓P P 06 01 52.8 -0.8
baz=85
D16A Dana Ranch, Ca 84.97 37 ⇓P P 06 01 53.3 -0.4
baz=85,SNR=12
N22A Wattenberg Ran 84.98 44 ⇑P P 06 01 53.4 -0.5
baz=85
A14A Double T Ranch 84.99 35 ⇓P P 06 01 53.0 -0.7
baz=85,SNR=14
E17A Martinsdale 85.07 38 ⇓P P 06 01 53.4 -0.8
baz=85
ISCO Idaho Springs 85.08 46 *e*P **P 06 01 58.0 +3.6**
ISCO pmax pmax
comp=Z,26nm,1.9s,mb5.0
ISCO MLR MLR
comp=Z,558nm,19.0s,MS5.0
ISCO Idaho Springs 85.08 46 *e*P **P 06 01 58.0 +3.6**
comp=Z,26nm,1.9s,mb5.0
ISCO LR LR
comp=Z,558nm,19.0s,MS5.0
B15A Bradely Ranch, 85.10 36 ⇓P P 06 01 53.4 -0.8
baz=85,SNR=13
M22A Cedar Creek Ra 85.18 44 ⇓P P 06 01 54.7 -0.1
baz=85
G18A Lazy EL Ranch, 85.24 39 ⇑P P 06 01 55.0 -0.1
baz=85
C16A Fuhringer Ranc 85.28 36 ⇑P P 06 01 54.3 -0.9
baz=86,SNR=12
RLMT Red Lodge 85.32 40 *e*P **P 06 01 49.5 -6.0**
comp=Z,14nm,0.5s,mb5.3
RLMT LR LR
comp=Z,520nm,19.0s,MS4.9
JCT Junction City 85.35 56 *e*P **P 06 01 55.2 -0.7**
JCT pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
JCT Junction City 85.35 56 *e*P **P 06 01 55.2 -0.7**
comp=Z,6.8nm,1.1s,mb4.7
A15A Johnson Ranch, 85.37 35 ⇑P P 06 01 54.9 -0.7
baz=86,SNR=19
GCMT Greycliff 85.42 39 *e*P **P 06 01 56.4 +0.5**
comp=Z,16nm,1.3s,mb5.0
GCMT *e*pP pP 06 02 07.9 -0.1
F18A Big Timber 85.45 39 ⇓P P 06 01 55.4 -0.7
baz=86
D17A Six Diamond Ra 85.53 37 ⇓P P 06 01 56.2 -0.3
baz=86,SNR=16
MAW Mawson 85.60 199 P **P 06 01 57.2 +0.7**
comp=Z,14nm,1.2s,mb5.1,baz=54,slow=4.8,SNR=5.9
MAW LR LR 06 38 54.1

comp=Z,1μm,18.1s,MS5.3,baz=115,slow=35
MAW Mawson 85.60 199 *e*P **P 06 01 56.9 +0.3**
MAW pmax pmax
comp=Z,3.0nm,1.1s
MAW Mawson 85.60 199 *e*P **P 06 01 56.9 +0.3**
comp=Z,2.5nm,1.1s,mb4.4
MAW LR LR 06 38 54.1
B16A M & M Farms, S 85.63 36 ⇓P **P 06 01 55.4 -1.5**
baz=86,SNR=7.8
DAWY Dawson 85.67 14 *e*P **P 06 01 57.1 +0.3**
E18A Harlowton 85.68 38 ⇓P **P 06 01 57.1 -0.1**
baz=86,SNR=11
AMTX Amarillo 85.71 51 PFAKE 06 02 10.0 +12
AMTX LR LR
comp=Z,389nm,19.0s,MS4.8
C17A Wharram Farm, 85.75 37 ⇓P **P 06 01 57.0 -0.5**
baz=86,SNR=20
EGAK Eagle 85.89 13 *e*P **P 06 01 57.9 +0.1**
comp=Z,28nm,1.3s,mb5.3
B17A L&G Farms, Che 86.08 36 ⇑P **P 06 01 58.4 -0.8**
baz=86
COLD Coldfoot 86.45 9 P **P 06 01 58.9 -1.7**
comp=Z,9.5nm,1.2s,mb4.9
EGMT Eagleton 86.53 37 ⇓P **P 06 02 01.1 -0.3**
baz=87
EGMT Eagleton 86.53 37 *e*P **P 06 02 01.6 +0.2**
comp=Z,37nm,1.7s,mb5.3
EGMT LR LR
comp=Z,755nm,19.0s,MS5.1
B18A Beardsley Farm 86.71 37 ⇑P **P 06 02 01.8 -0.4**
baz=87
BILL Bilibino 86.86 352 *c i*P **P 06 02 02.7 +0.2**
BILL *i* pP 06 02 13.3 -1.3
BILL *e* 06 05 19.3
BILL *e*S S 06 12 34.6 -2.7
BILL pmax pmax
comp=Z,23nm,1.6s,mb5.2
BILL Bilibino 86.86 352 *e*P **P 06 02 01.0 -1.5**
comp=Z,26nm,1.2s,mb5.3
BILL *e*pP pP 06 02 13.3 -1.3
BILL LR LR
comp=Z,565nm,22.0s,MS4.9
A18A Metzger Ranch, 86.94 36 ⇓P **P 06 02 02.8 -0.5**
baz=87
BJT Baijiatuau 87.19 314 PFAKE 06 02 20.0 +15
BJT LR LR
comp=Z,551nm,19.0s,MS5.0
BJI Beijing 87.19 314 P **P 06 02 05.6 +0.8**
BJI pP pP 06 02 15.2 -1.7
BJI sP sP 06 02 19.0 -2.3
BJI PP PP 06 05 29.5 +0.2
BJI S S 06 12 38.8 -2.9
BJI sS sS 06 13 00.3 -1.5
BJI pmax pmax
comp=Z,21nm,1.8s,mb5.1
BJI pmax pmax
comp=Z,440nm,8.3s
BJI LR LR
comp=N,390nm,16.9s,MS5.0
BJI LR LR
comp=E,350nm,16.9s,MS5.0
BJI LR LR
comp=Z,330nm,19.7s,MS4.8
WMOK Wichita Mounta 87.83 53 PFAKE 06 02 20.0 +12
WMOK LR LR
comp=Z,455nm,20.0s,MS4.9
PLCA Paso Flores 87.83 132 P **P 06 02 07.9 -0.1**
comp=Z,3.2nm,1.0s,mb4.5,baz=241,slow=4.5,SNR=4.7
PLCA LR LR 06 35 59.0
comp=Z,545nm,18.3s,MS5.0,baz=64,slow=32
PLCA Paso Flores 87.83 132 *e*P **P 06 02 08.0 0.0**
PLCA pmax pmax
comp=Z,6.0nm,1.3s
PLCA MLR MLR
comp=Z,761nm,19.0s
PLCA Paso Flores 87.83 132 *e*P **P 06 02 08.0 -0.1**
comp=Z,6.1nm,1.3s,mb4.7
PLCA LR LR
comp=Z,761nm,19.0s,MS5.1
APG El Apazote 87.85 74 LR LR 06 33 56.6
comp=Z,245nm,20.2s,MS4.6,baz=233,slow=30
KULM Kulim 87.89 276 PFAKE 06 02 20.0 +11
KULM LR LR
comp=Z,531nm,20.0s,MS5.0
LAO LASA Array 87.94 39 PFAKE 06 02 20.0 +12
LAO LR LR
comp=Z,482nm,20.0s,MS4.9
OGNE Ogallala 88.04 46 PFAKE 06 02 20.0 +11
OGNE LR LR
comp=Z,810nm,20.0s,MS5.1
RSSD Black Hills 88.11 42 *e*P **P 06 02 08.7 -0.4**
RSSD pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
RSSD MLR MLR
comp=Z,774nm,19.0s,MS5.1
RSSD Black Hills 88.11 42 *e*P **P 06 02 08.7 -0.4**
comp=Z,7.5nm,1.1s,mb4.8
RSSD LR LR
comp=Z,774nm,19.0s,MS5.1
ENH Enshi 88.30 302 *e*P **P 06 02 12.8 +2.5**
comp=Z,52nm,1.4s,mb5.6
ENH LR LR
comp=Z,541nm,20.0s,MS5.0
HKT Hockley 88.32 58 *e*P **P 06 02 10.3 -0.1**
HKT pmax pmax
comp=Z,15nm,1.6s,mb5.0
HKT MLR MLR
comp=Z,406nm,19.0s,MS4.9
HKT Hockley 88.32 58 *e*P **P 06 02 10.3 -0.1**
comp=Z,15nm,1.6s,mb5.0
HKT LR LR
comp=Z,406nm,19.0s,MS4.9
CBKS Cedar Bluff 88.75 49 PFAKE 06 02 20.0 +7.7
CBKS LR LR
comp=Z,417nm,19.0s,MS4.9
HIA Hailar 89.16 323 PFAKE 06 02 30.0 +16
HIA LR LR
comp=Z,576nm,20.0s,MS5.0
GYA Guiyang 89.27 298 P **P 06 02 18.0 +3.0**
GYA pP pP 06 02 28.6 +1.5
GYA sP sP 06 02 32.5 +1.0
GYA S S 06 13 04.6 +2.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,110nm,6.8s
GYA LR LR
comp=N,430nm,18.5s,MS5.0
GYA LR LR
comp=E,350nm,17.9s,MS5.0
GYA LR LR
comp=Z,450nm,18.3s,MS4.9
NATX Nacogdoches 89.91 57 *e*P **P 06 02 16.2 -1.7**
comp=Z,133nm,2.1s,mb5.9
NATX LR LR
comp=Z,489nm,21.0s,MS4.9
DGMT Dagmar 89.99 38 ⇓P **P 06 02 17.8 -0.1**
baz=90
DGMT Dagmar 89.99 38 *e*P **P 06 02 17.4 -0.4**
comp=Z,49nm,1.5s,mb5.6
DGMT *e*pP pP 06 02 29.3 -0.6
INK Inuvik 90.53 14 *e*P **P 06 02 20.3 +0.4**
INK pmax pmax
comp=Z,48nm,2.1s
INK Inuvik 90.53 14 *e*P **P 06 02 20.3 +0.5**
comp=Z,48nm,2.1s,mb5.5
HHC Hu-ho-hao-te 90.73 313 *e*P **P 06 02 23.6 +2.1**
HHC pP pP 06 02 33.9 +0.3
HHC sP sP 06 02 38.4 +0.4
HHC PP PP 06 06 02.3 +4.8
HHC SKS 06 12 50.7
HHC S S 06 13 15.6 +0.7
HHC sS sS 06 13 34.1 -1.0
HHC pmax pmax
comp=Z,21nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,170nm,5.9s
HHC LR LR
comp=N,440nm,19.4s,MS5.3
HHC LR LR
comp=E,960nm,20.0s,MS5.3
HHC LR LR
comp=Z,420nm,20.8s,MS4.9
EFI East Falkland 90.87 146 PFAKE 06 02 30.0 +8.0
EFI LR LR
comp=Z,533nm,20.0s,MS5.0

YAK Yakutsk 91.33 337 PFAKE 06 02 30.0 +6.3
YAK LR LR
comp=Z,221nm,20.0s,MS4.6
TEIG Tepich 91.49 69 PFAKE 06 02 40.0 +15
TEIG LR LR
comp=Z,463nm,19.0s,MS4.9
JTS JuntasAbangare 91.50 80 P **P 06 02 25.9 +0.3**
comp=Z,15nm,1.1s,mb5.3,baz=302,slow=9.4,SNR=4.5
JTS LR LR 06 38 04.2
comp=Z,585nm,18.5s,MS5.1,baz=259,slow=32
KMI Kunming 92.17 296 P **P 06 02 30.4 +1.9**
KMI pP pP 06 02 44.4 +3.8
KMI sP sP 06 02 49.5 +4.5
KMI PP PP 06 06 12.6 +3.3
KMI SKS 06 12 57.8
KMI S S 06 13 25.5 -3.1
KMI sS sS 06 13 48.6 -0.3
KMI pmax pmax
comp=Z,15nm,1.3s,mb5.2
KMI pmax pmax
comp=Z,310nm,7.2s
KMI LR LR
comp=N,270nm,17.3s,MS4.9
KMI LR LR
comp=E,300nm,16.2s,MS4.9
KMI LR LR
comp=Z,380nm,23.7s
YKA Yellowknife Ar 92.21 23 P **P 06 02 27.9 +0.1**
comp=Z,1.9nm,1.1s,mb4.3,baz=238,slow=4.0,SNR=14
NNA Nana 92.38 103 PFAKE 06 02 40.0 +10
NNA LR LR
comp=Z,377nm,20.0s,MS4.8
ECSD EROS Data Cent 92.83 45 *e*P **P 06 02 36.7 +5.5**
comp=Z,141nm,2.8s,mb5.9
ECSD LR LR
comp=Z,285nm,20.0s,MS4.7
CFAA Coronel Fontan 93.01 124 LR LR 06 37 43.4
comp=Z,74nm,18.6s,MS4.2,baz=208,slow=31
CD2 Chengdu 93.16 301 P **P 06 02 34.2 +1.3**
CD2 pP pP 06 02 44.8 -0.3
CD2 sP sP 06 02 48.7 -0.8
CD2 PP PP 06 06 14.2 -2.7
CD2 SKS 06 13 04.4
CD2 S S 06 13 35.9 -1.3
CD2 sS sS 06 13 53.2 -4.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,360nm,7.5s
CD2 LR LR
comp=N,470nm,16.1s
CD2 LR LR
comp=Z,500nm,15.5s,MS5.1
VBMS Vicksburg 93.38 57 PFAKE 06 02 50.0 +16
VBMS LR LR
comp=Z,430nm,19.0s,MS4.9
CMAR Chiang Mai Arr 93.48 288 P **P 06 02 36.1 +1.4**
comp=Z,4.4nm,1.1s,mb4.8,baz=100,slow=3.3,SNR=15
CMAR LR LR 06 40 22.5
comp=Z,376nm,18.4s,MS4.9,baz=92,slow=33
CHTO Chiang Mai 93.59 288 *e*P **P 06 02 35.7 +0.5**
CHTO pmax pmax
comp=Z,16nm,1.3s,mb5.3
CHTO MLR MLR
comp=Z,476nm,19.0s,MS5.0
CHTO Chiang Mai 93.59 288 *e*P **P 06 02 35.7 +0.6**
comp=Z,16nm,1.3s,mb5.3
CHTO LR LR
comp=Z,476nm,19.0s,MS5.0
FFC Flin Flon 94.00 33 *e*P **P 06 02 40.2 +4.0**
FFC MLR MLR
comp=Z,713nm,20.0s,MS5.1
SCIA State Center 94.53 48 PFAKE 06 02 50.0 +11
SCIA LR LR
comp=Z,501nm,20.0s,MS5.0
OTAV Otavalo 94.65 91 PFAKE 06 02 50.0 +10
OTAV LR LR
comp=Z,388nm,20.0s,MS4.9
LZH Lanzhou 94.73 306 *e*P **P 06 02 40.5 +0.4**
LZH pP pP 06 02 51.2 -1.0
LZH sP sP 06 02 55.0 -1.6
LZH PP PP 06 06 31.5 +2.4
LZH SKS 06 13 11.6
LZH *e*S S 06 13 48.3 -2.4
LZH sS sS 06 14 05.4 -5.6
LZH pmax pmax
comp=Z,18nm,1.5s,mb5.3
LZH pmax pmax
comp=Z,93nm,9.3s
LZH LR LR
comp=E,330nm,17.0s
LZH LR LR
comp=Z,410nm,19.6s,MS4.9
TRQA Tornquist 94.98 132 PFAKE 06 02 50.0 +8.7
TRQA LR LR
comp=Z,468nm,22.0s,MS4.9
OXF Oxford 94.98 56 PFAKE 06 02 50.0 +8.8
OXF LR LR
comp=Z,537nm,19.0s,MS5.0
AGMN Agassiz Refuge 94.99 41 *e*P **P 06 02 39.8 -1.2**
ULM Lac du Bonnet 95.68 39 P **P 06 02 42.1 -1.9**
comp=Z,3.3nm,1.0s,mb4.7,baz=277,slow=4.8,SNR=4.4
ULM LR LR 06 41 57.2
comp=Z,696nm,18.1s,MS5.2,baz=33,slow=33
LVC Limon Verde 95.87 116 LR LR 06 34 47.2
comp=Z,674nm,21.8s,MS5.1,baz=199,slow=28
LVC Limon Verde 95.87 116 PFAKE 06 03 00.0 +14
LVC LR LR
comp=Z,655nm,21.0s,MS5.1
ULN Ulaanbaatar 96.28 318 PFAKE 06 03 00.0 +13
ULN LR LR
comp=Z,412nm,22.0s,MS4.9
LRAL Lakeview Retre 96.45 58 PFAKE 06 03 00.0 +12
LRAL LR LR
comp=Z,308nm,19.0s,MS4.8
SONM Songino Array 96.69 318 LR LR 06 44 37.0
comp=Z,295nm,19.6s,MS4.8,baz=301,slow=34
WVT Waverly 96.70 54 PFAKE 06 03 00.0 +11
WVT LR LR
comp=Z,409nm,19.0s,MS4.9
TIXI Tiksi 97.31 344 PFAKE 06 03 00.0 +9.0
TIXI LR LR
comp=Z,317nm,22.0s,MS4.8
EYMN Ely 97.63 42 PFAKE 06 03 00.0 +7.1
EYMN LR LR
comp=Z,490nm,19.0s,MS5.0
GTA Gaotai 98.76 308 *e*P **P 06 02 59.8 +1.6**
GTA pP pP 06 03 10.5 +0.1
GTA sP sP 06 03 14.2 -0.6
GTA PP PP 06 07 05.2 +5.1
GTA SKS 06 13 34.6
GTA S S 06 14 26.2 +1.0
GTA sS sS 06 14 44.0 -1.6
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
GTA pmax pmax
comp=Z,190nm,5.9s
GTA LR LR
comp=N,270nm,21.4s,MS5.1
GTA LR LR
comp=E,500nm,19.3s,MS5.1
GTA LR LR
comp=Z,530nm,17.8s,MS5.1
LPAZ La Paz 98.87 110 LR LR 06 37 06.4
comp=Z,561nm,21.9s,MS5.0,baz=310,slow=29
LPAZ La Paz 98.87 110 PFAKE 06 03 10.0 +11
LPAZ LR LR
comp=Z,601nm,21.0s,MS5.1
GOGA Godfrey 99.40 58 PFAKE 06 03 10.0 +8.8
GOGA LR LR
comp=Z,392nm,19.0s,MS4.9
TLY Talaya 99.56 321 PFAKE 06 03 10.0 +8.4
TLY LR LR
comp=Z,399nm,20.0s,MS4.9
DWPF Disney 99.73 64 PFAKE 06 03 10.0 +7.6
DWPF LR LR
comp=Z,293nm,19.0s,MS4.8
ROSC El Rosal 99.95 88 LR LR 06 39 11.1
comp=Z,133nm,20.0s,MS4.4,baz=355,slow=30
AAM Ann Arbor 101.45 49 PFAKE 06 03 20.0 +10
AAM LR LR
comp=Z,344nm,20.0s,MS4.9
LSA Lhasa 103.32 297 PFAKE 06 03 30.0 +12
LSA LR LR
comp=Z,352nm,21.0s,MS4.9

CPUP Villa Florida 103.89 124 PFAKE 06 03 30.0 +9.1
CPUP LR LR
comp=Z,64nm,19.0s,MS4.2
SDV Santo Domingo 104.62 85 PFAKE 06 03 40.0 +16
SDV LR LR
comp=Z,150nm,19.0s,MS4.5
SSPA Standing Stone 105.35 52 PFAKE 06 07 50.0 +8.7
SSPA LR LR
comp=Z,381nm,19.0s,MS5.0
SDDR Presa de Saban 106.56 75 PFAKE 06 08 00.0 +16
SDDR LR LR
comp=Z,482nm,20.0s,MS5.0
WMQ Urumqi 108.53 311 *e*Pdif Pdif 06 03 42.4 +0.9
WMQ PP PP 06 08 16.3 +3.4
WMQ S Sdif 06 15 43.6 -2.8
WMQ AMB AMB
comp=Z,53nm,18.0s
WMQ LR LR
comp=N,120nm,22.0s
WMQ LR LR
comp=E,100nm,28.0s
WMQ LR LR
comp=Z,170nm,20.0s,MS4.6
DGAR Diego Garcia 110.48 255 PFAKE 06 08 00.0 +8.3
DGAR LR LR
comp=Z,839nm,19.0s,MS5.3
SJG San Juan 111.12 77 PFAKE 06 08 00.0 +7.3
SJG LR LR
comp=Z,411nm,19.0s,MS5.0
MK31 Makanchi Array 112.57 314 *e*PKIKP PKiKP 06 07 54.5 -0.2
MKAR Makanchi Array 112.57 314 *i* PKIKP PKiKP 06 07 58.9 +4.2
SPB Sao Paulo 113.01 126 PFAKE 06 08 10.0 +14
SPB LR LR
comp=Z,635nm,22.0s,MS5.2
SCHQ Schefferville 113.79 37 PFAKE 06 08 10.0 +13
SCHQ LR LR
comp=Z,569nm,19.0s,MS5.2
GRGR Grenville 113.98 84 PFAKE 06 08 10.0 +12
GRGR LR LR
comp=Z,169nm,20.0s,MS4.6
KURK Kurchatov 115.00 318 ⇓*i* PKIKP PKiKP 06 07 59.4 +0.2
KURK pmax pmax
comp=Z,4.0nm,1.7s
KURK MLR MLR
comp=Z,272nm,17.0s,MS4.9
KURK Kurchatov 115.00 318 PFAKE 06 08 10.0 +11
KURK LR LR
comp=Z,347nm,19.0s,MS5.0
TKM2 Tokmak 2 117.28 310 PFAKE 06 08 20.0 +16
TKM2 LR LR
comp=Z,301nm,21.0s,MS4.9
UCH Uchtor 118.09 309 PFAKE 06 08 20.0 +15
UCH LR LR
comp=Z,431nm,20.0s,MS5.1
AAK Ala-Archa 118.10 309 PFAKE 06 08 20.0 +15
AAK LR LR
comp=Z,338nm,20.0s,MS5.0
EKS2 Erkin-Say 118.62 309 PFAKE 06 08 20.0 +14
EKS2 LR LR
comp=Z,262nm,20.0s,MS4.9
AML Almayashu 118.70 309 PFAKE 06 08 20.0 +13
AML LR LR
comp=Z,351nm,21.0s,MS5.0
SFJD Kangerlussuaq 118.75 22 PFAKE 06 08 20.0 +14
SFJD LR LR
comp=Z,563nm,19.0s,MS5.2
BVAR Borovoye Array 119.82 321 PKP PKPdf 06 08 08.9 +0.5
comp=Z,2.2nm,0.8s,baz=108,slow=3.3,SNR=11
BRVK Borovoye 119.88 321 ⇓*i* PKIKP PKPdf 06 08 09.1 +0.6
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 119.88 321 PFAKE 06 08 20.0 +12
BRVK LR LR
comp=Z,401nm,20.0s,MS5.0
ARU Arti 125.41 328 *i* PKIKP PKPdf 06 08 20.2 +1.2
ARU 06 15 20.6
ARU SS SS 06 27 00.5 -4.8
ARU Arti 125.41 328 PFAKE 06 08 30.0 +11
ARU LR LR
comp=Z,388nm,20.0s,MS5.1
ABPO Ambohimpanom 125.97 229 PFAKE 06 08 30.0 +8.7
ABPO LR LR
comp=Z,490nm,19.0s,MS5.2
MSEY Mahe Island 127.00 250 PFAKE 06 08 40.0 +17
MSEY LR LR
comp=Z,487nm,20.0s,MS5.2
APA Apatity 127.37 347 ⇑*i* PKIKP PKPdf 06 08 27.3 +4.8
RCBR Riachuelo 131.82 115 PFAKE 06 08 40.0 +7.4
RCBR LR LR
comp=Z,512nm,19.0s,MS5.2
LBTB Lobatse 133.68 204 PFAKE 06 08 50.0 +14
LBTB LR LR
comp=Z,659nm,19.0s,MS5.4
FINES FINESS Array B 134.28 347 PKP PKPdf 06 08 35.2 -0.5
comp=Z,1.4nm,0.9s,baz=296,slow=17,SNR=2.7
OBN Obninsk 136.32 336 *i* PKIKP PKPdf 06 08 40.4 +0.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
ZEI Tsey 139.86 316 *i* PKIKP PKPdf 06 08 49.2 +2.6
ZEI pmax pmax
comp=Z,2.0nm,0.4s
KIV Kislovodsk 140.08 319 PFAKE 06 09 00.0 +13
KIV LR LR
comp=Z,345nm,20.0s,MS5.1
GNI Garni 140.39 312 PFAKE 06 09 00.0 +12
GNI LR LR
comp=Z,262nm,20.0s,MS5.0
LSZ Lusaka 140.94 214 PFAKE 06 09 00.0 +11
LSZ LR LR
comp=Z,471nm,19.0s,MS5.3
TSUM Tsumeb 141.74 197 PFAKE 06 09 00.0 +9.2
TSUM LR LR
comp=Z,496nm,20.0s,MS5.3
ESK Eskdalemuir 141.76 9 PFAKE 06 09 00.0 +10
ESK LR LR
comp=Z,345nm,19.0s,MS5.1
AKASG Malin Array Be 142.56 336 PKP PKPdf 06 08 49.0 -2.2
comp=Z,0.1nm,0.3s,baz=216,slow=28,SNR=4.5
KMBO Kilima Mbogo 144.57 241 PKP PKPdf 06 08 56.6 +0.7
comp=Z,14nm,1.1s,baz=94,slow=3.0,SNR=33
KMBO Kilima Mbogo 144.57 241 *e*PKPdf PKPdf 06 08 56.6 +0.7
KMBO *ep*PKPdf pPKPdf 06 09 07.3 -1.1
KMBO LR LR
comp=Z,412nm,19.0s,MS5.2
RUE Ruedersdorf 144.93 353 *e*PKPbc PKPdf 06 08 55.6 +0.3
WIT Witteveen 145.03 0 *e*P PKPbc 06 08 56.1 +1.3
comp=Z,158nm,1.0s
WIT Witteveen 145.03 0 *ex* pPKPdf 06 09 07.2 -0.7
comp=Z,123nm,1.5s
LVV L'vov 145.13 340 *e*PKHKP PKPbc 06 08 55.0 -0.3
LVV MLR MLR
comp=Z,300nm,20.0s,MS5.1
NRDL Niedersach Rie 145.25 356 *e*PKPbc PKPbc 06 08 55.9 +0.3
NRDL *ep*PKPbc pPKPbc 06 09 06.3 -1.6
IBBN Ibbenburen 145.53 359 *e*PKPbc PKPbc 06 08 56.9 +0.4
IBBN *ep*PKPbc pPKPbc 06 09 07.3 -1.6
MALT Malatya 145.60 313 *e*PKPdf PKPdf 06 08 58.3 +1.4
MALT LR LR
comp=Z,232nm,20.0s,MS5.0
MALT Malatya 145.60 313 ⇑*i P* PKPab 06 08 59.3 +1.8
KIS Kishinev 145.65 333 *e*PKP PKPdf 06 08 54.0 -2.7
KIS *e*L 07 08 32.0
KIS LRM 07 18 16.0
comp=Z,300nm,20.0s
KWP Kalwaria Pacla 145.71 341 *e*PKPbc PKPbc 06 08 58.0 +0.9
WTSB Winterswijk 145.88 360 ⇑*i P* PKPdf 06 08 57.7 +0.8
comp=Z,46nm,1.4s
WTSB Winterswijk 145.88 360 *ex* pPKPdf 06 09 08.3 -1.1
comp=Z,55nm,1.3s
CLZ Clausthal 145.89 356 *e*PKPbc PKPbc 06 08 57.9 +0.3
OJC Ojcow 145.97 345 *e*PKP PKPdf 06 08 58.8 +1.6
KSP Ksiaz 146.14 349 *e*PKP PKPdf 06 08 59.2 +1.8
CLL Collm 146.17 353 *e*PKPbc PKPbc 06 08 58.9 +0.4
CLL *ep*PKPbc pPKPbc 06 09 09.6 -1.3
CLL Collm 146.17 353 ⇑*i* PKP PKPdf 06 08 58.9 +1.4
CLL *i* pPKP pPKPdf 06 09 09.5 -0.5
CLL LR LR
comp=Z,400nm,18.1s,MS5.2
CLL Collm 146.17 353 ⇑*i* PKPbc PKPbc 06 08 58.9 +0.4
comp=Z,86nm,1.4s
CLL *e*PKiKP PKiKP 06 09 02.0 +0.3
CLL *i* pPKPbc pPKPbc 06 09 09.5 -1.4
CLL *e*SSS 06 37 06.0
LEOM Leova 146.30 333 ⇓PKP2 PKPab 06 09 01.2 +1.3
LEOM Leova 146.30 333 ⇓*i P* PKPab 06 09 01.2 +1.3

STHS	Stebnicka Huta	146.33	343	*e*PKP	PKPab	06 09 01.0	+1.2
STHS	Stebnicka Huta	146.33	343	*e*PKP	PKPab	06 09 01.0	+1.2
BUG	Bochum--Univer	146.41	359	*e*PKPbc	PKPbc	06 08 59.1	-0.1
BUG				*ep*PKPbc	pPKPbc	06 09 10.5	-1.1
KOLS	Kolonicke sedl	146.46	341	*e*PKP	PKPdf	06 08 59.8	+1.8
KOLS	Kolonicke sedl	146.46	341	*e*PKP	PKPdf	06 08 59.8	+1.8
BRG	Berggiesshubel	146.48	352	*i* PKP	PKPab	06 08 60.0	-0.4
	comp=Z,55nm,1.5s						
BRG				*i*		06 09 11.1	
	comp=Z,44nm,1.2s						
UPC	Upice	146.51	349	*e*PKP	PKPab	06 09 00.9	+0.4
UPC				*ep*PKP	pPKPdf	06 09 12.0	+1.4
BUR08	Bucovina Ar. S	146.58	337	*e*PKPbc	PKPab	06 09 01.2	+0.3
BURAR	Bucovina Array	146.60	337	⇓*i*P	PKPab	06 09 01.5	+0.5
DPC	Dobruska-Polom	146.60	349	*e*PKP	PKPab	06 09 01.3	+0.4
DPC				*ep*PKP	pPKPdf	06 09 12.8	+2.1
OKC	Ostrava-Krasne	146.72	347	*e*PKP	PKPab	06 09 01.2	-0.1
OKC				*ep*PKP	pPKPdf	06 09 13.5	+2.5
UZH	Uzhgorod	146.72	341	⇓*i*PKHKP	PKPdf	06 08 59.7	+1.2
PVCC	Panska Ves	146.73	351	*e*PKP	PKPab	06 09 01.4	+0.1
PVCC				*ep*PKP	pPKPdf	06 09 12.5	+1.6
MORC	Moravsky Berou	146.91	347	*e*PKPbc	PKPbc	06 09 01.8	+1.1
MORC	Moravsky Berou	146.91	347	⇓*i*P	PKPab	06 09 02.3	+0.2
UBBA	Unterbreizbach	146.93	356	*e*PKPbc	PKPbc	06 09 00.7	0.0
MOX	Moxa	146.97	354	*e*PKP	PKPbc	06 09 01.2	+0.4
	comp=Z,71nm,1.7s						
MOX				*e*		06 09 12.7	
MOX							
	comp=Z,200nm,19.0s						
MOX	Moxa	146.97	354	*e*PKPbc	PKPbc	06 09 01.0	+0.2
UCC	Uccle	147.00	3	PKPbc	PKPbc	06 09 01.2	+0.3
ASCN	Ascension	147.03	139	PFAKE		06 09 10.0	+10
ASCN				LR	LR		
	comp=Z,641nm,21.0s,MS5.4						
BEBN	Eben Emael	147.04	1	E	PKPab	06 09 03.2	+0.7
HGN	Heimansgroeve	147.08	1⇑	*e*P	PKPbc	06 09 01.2	0.0
	comp=Z,32nm,3.1s						
HGN	Heimansgroeve	147.08	1	*ex*	pPKPdf	06 09 10.7	-0.8
TRPA	Tarpa	147.09	340	⇑*i*P	PKPab	06 09 02.8	0.0
MENF	Mencas	147.09	5	PKP	PKPab	06 09 02.9	+0.2
WERD	Werda	147.10	353	*e*PKPbc	PKPbc	06 09 01.7	+0.5
TANN	Tannenbergstha	147.11	353	*e*PKPbc	PKPbc	06 09 01.8	+0.6
GUNZ	Gunzen	147.18	353	*e*PKPbc	PKPbc	06 09 02.0	+0.6
MEM	Membach	147.24	1	PKPbc	PKPbc	06 09 02.4	+0.8
WERN	Wernitzgruen	147.25	353	*e*PKPbc	PKPbc	06 09 02.4	+0.8
PRU	Pruhonice	147.25	351	*e*PKP	PKPab	06 09 03.3	-0.1
PRU				*ep*PKP	pPKPdf	06 09 14.5	+2.7
SNF	Seneffe	147.28	3	PKPbc	PKPbc	06 09 02.9	+1.1
NKC	Novy Kostel	147.29	353	*e*PKP	PKPbc	06 09 03.1	+1.3
NKC				*ep*PKP	pPKPdf	06 09 16.6	+4.7
KECS	Kecovo	147.39	343	*e*PKP	PKPbc	06 09 03.2	+1.1
KECS	Kecovo	147.39	343	*e*PKP	PKPbc	06 09 03.2	+1.1
BCLA	Clavier	147.41	2	PKPbc	PKPbc	06 09 03.0	+0.9
VRI	Vrincioaia	147.43	334	⇓*i*P	PKPbc	06 09 03.5	+1.2
VRAC	Vranov	147.55	348	⇓*i*P	PKPbc	06 09 04.1	+1.6
TNS	Taunus Mts	147.60	358	*e*PKPbc	PKPbc	06 09 03.0	+0.4
DOU	Dourbes	147.71	3	PKPbc	PKPbc	06 09 03.4	+0.5
GIVF	Givet	147.71	2	⇑*i*PKP1	PKPbc	06 09 03.4	+0.5
	comp=Z,118nm,1.4s						
BAIF	Baives	147.73	3	⇑*i*PKP1	PKPbc	06 09 03.7	+0.7
	comp=Z,100nm,1.4s						
TIRR	Tirgusor	147.77	330	⇓PKIKP	PKPbc	06 09 04.8	+1.5
TIRR	Tirgusor	147.77	330	⇓*i*P	PKPbc	06 09 04.8	+1.5
ROTZ	Rotzenmuhle	147.78	353	*e*PKPbc	PKPbc	06 09 03.8	+0.7
VYHS	Vyhne	147.81	345	*e*PKIKP	PKPbc	06 09 03.9	+0.7
VYHS	Vyhne	147.81	345	*e*PKP	PKPbc	06 09 03.9	+0.7
HARR	Harsova	147.82	331	⇓PKIKP	PKPbc	06 09 04.9	+1.5
HARR	Harsova	147.82	331	⇓*i*P	PKPbc	06 09 04.9	+1.5
KOLL	Kolacno	147.84	345	*e*PKIKP	PKPbc	06 09 04.5	+1.2
KOLL	Kolacno	147.84	345	*e*PKP	PKPbc	06 09 04.5	+1.2
GRA1	Grafenberg Arr	147.96	355	*e*PKPbc	PKPbc	06 09 04.4	+0.8
GRA1				LR	LR		
	comp=Z,300nm,18.0s,MS5.1						
GRF	Grafenberg Arr	147.96	355	*e*PKPbc	PKPbc	06 09 04.4	+0.8
GRF				*e*L		07 22 10.5	
	comp=Z,262nm,18.0s						
ABH	Alteburg	147.96	359	PKP	PKPbc	06 09 03.7	+0.1
BR131	Keskin Array S	148.05	319	*e*PKPbc	PKPbc	06 09 05.3	+1.1
BRTR	Keskin Array B	148.05	319	PKPbc	PKPbc	06 09 03.4	-0.8
	comp=Z,5.1nm,1.0s,baz=52,slow=2.0,SNR=12						
MLR	Muntele Rosu	148.06	334	⇑PKIKP	PKPbc	06 09 05.4	+1.4
MLR	Muntele Rosu	148.06	334	P	PKPbc	06 09 05.3	+1.3
MLR	Muntele Rosu	148.06	334	⇑*i*P	PKPbc	06 09 05.3	+1.3
PSZ	Piszkesteto	148.06	343	*e*PKPbc	PKPbc	06 09 04.9	+1.0
PSZ				LR	LR		
	comp=Z,272nm,20.0s,MS5.0						
PSZ	Piszkesteto	148.06	343	*ep*PKP	PKPab	06 09 05.5	-1.2
PSZ	Piszkesteto	148.06	343	⇑*i*P	PKPbc	06 09 04.8	+0.9
RUP	Ruppelstein	148.15	360	PKIKP	PKPbc	06 09 04.8	+0.7
WLF	Walferdange	148.18	1	PKPbc	PKPbc	06 09 05.7	+1.5
WLF	Walferdange	148.18	1	*e*PKPbc	PKPbc	06 09 05.2	+1.0
WLF	Walferdange	148.18	1	*e*PKIKP	PKPbc	06 09 05.3	+1.1
WLF				MLR	MLR		
	comp=Z,229nm,20.0s,MS5.0						
WLF	Walferdange	148.18	1	*e*PKPbc	PKPbc	06 09 05.3	+1.1
WLF				LR	LR		
	comp=Z,229nm,20.0s,MS5.0						
DRGR		148.20	339	P	PKPbc	06 09 05.4	+1.0
DRGR		148.20	339	⇓*i*P	PKPbc	06 09 05.2	+0.9
TOD	Tromm	148.20	357	PKIKP	PKPbc	06 09 04.8	+0.6
KHC	Kasperske Hory	148.23	351	*e*PKPbc	PKPbc	06 09 05.2	+0.9
KHC	Kasperske Hory	148.23	351	*e*PKP	PKPdf	06 09 02.4	+1.4
KHC				*ep*PKP	pPKPdf	06 09 18.5	+5.0
WET	Wettzell	148.31	352	*e*PKPbc	PKPbc	06 09 05.4	+0.9
VOIR		148.47	335	⇓PKIKP	PKPbc	06 09 06.7	+1.6
VOIR		148.47	335	⇓*i*P	PKPbc	06 09 06.7	+1.6
GEC2	GERESS Array S	148.50	351	*e*PKPbc	PKPbc	06 09 05.7	+0.7
GERES	GERESS Array B	148.50	351	PKPbc	PKPbc	06 09 04.8	-0.3
	comp=Z,1.0nm,0.7s,baz=48,slow=2.0,SNR=10						
FLN	La Foliniere	148.54	9	⇑*i*PKP1	PKPbc	06 09 05.1	0.0
	comp=Z,76nm,1.3s						
FLN				*e*MLR	MLR		
	comp=Z,298nm,20.0s,MS4.8						
FLN	La Foliniere	148.54	9	⇑*i*PKP	PKPbc	06 09 05.1	0.0
FLN				LR	LR		
	comp=Z,300nm,20.0s,MS5.1						
SGMF	Saint Gilles	148.66	12	*e*PKP1	PKPbc	06 09 05.5	0.0
	comp=Z,104nm,1.6s						
BUD	Budapest	148.70	344	⇓*ep*PKP	PKPbc	06 09 07.0	+1.4
LDF	La Druitiere	148.75	9	*e*PKP1	PKPbc	06 09 05.7	0.0
	comp=Z,73nm,1.4s						
GRR	Gorron	148.84	10	⇑*i*PKP1	PKPbc	06 09 06.0	+0.1
	comp=Z,112nm,1.4s						
LANF	Langenberg	148.86	359	PKP	PKPbc	06 09 06.8	+0.8
QUIF	Quistinic	148.86	13	*e*PKP1	PKPbc	06 09 05.9	-0.1
STU	Stuttgart	149.02	357	*e*PKHKP	PKPdf	06 09 04.0	+1.7
MEZF	Maizieres J'vi	149.32	2	⇑*i*PKP1	PKPbc	06 09 07.9	+0.8
	comp=Z,150nm,1.6s						
CDF	Champ du Feu	149.44	359	⇑*i*PKP1	PKPbc	06 09 08.0	+0.6
	comp=Z,127nm,1.7s						
FUR	Furstenfeldbru	149.46	354	*e*PKPbc	PKPbc	06 09 08.4	+0.9
BFO	Black Forest	149.50	358	*e*PKIKP	PKPbc	06 09 08.2	+0.6
BFO				MLR	MLR		
	comp=Z,283nm,19.0s,MS5.1						
BZS	Buzias	149.59	339	⇓PKIKP	PKPbc	06 09 09.0	+1.1
BZS	Buzias	149.59	339	⇓*i*P	PKPbc	06 09 09.0	+1.1
THEF	They Montfort	149.62	1	PKP	PKPbc	06 09 08.3	+0.4
ECH	Echery	149.63	359	PKP	PKPbc	06 09 08.1	+0.2
ECH	Echery	149.63	359	*e*PKIKP	PKPbc	06 09 08.4	+0.5
ECH				MLR	MLR		
	comp=Z,259nm,19.0s,MS5.0						
ECH	Echery	149.63	359	*e*PKPbc	PKPbc	06 09 08.4	+0.5
ECH				LR	LR		
	comp=Z,259nm,19.0s,MS5.0						
SPAK	Spaichingen-Ko	149.70	357	PKP	PKPbc	06 09 08.1	0.0
RJOB	Jochberg	149.71	352	*e*PKPbc	PKPbc	06 09 09.1	+1.0
HAU	Haudompre	149.85	1	⇑*i*PKP1	PKPbc	06 09 08.9	+0.5
	comp=Z,95nm,1.4s						
HAU				*e*MLR	MLR		
	comp=Z,238nm,17.0s,MS4.8						
HAU	Haudompre	149.85	1	⇑*i*PKP	PKPbc	06 09 08.9	+0.5
HAU				LR	LR		
	comp=Z,240nm,17.0s,MS5.1						
FELD	Feldberg im Sc	149.96	358	PKP	PKPbc	06 09 08.5	-0.2
PKSM	Moragy	149.97	343	⇓*i*P	PKPbc	06 09 09.6	+0.8
MOF	Molkenrain	150.00	359	PKP	PKPbc	06 09 08.7	-0.1
HINF	Hinteralfeld	150.04	360	⇑*i*PKP1	PKPbc	06 09 09.2	+0.3
	comp=Z,46nm,1.4s						
BBS	Basel-Blauen	150.38	359	PKP	PKPbc	06 09 09.8	+0.1
PERS	Pernice	150.40	348	*i* PKPbc	PKPbc	06 09 09.7	-0.1
LOR	Lormes	150.49	4	⇑*i*PKP1	PKPbc	06 09 10.6	+0.6
	comp=Z,98nm,1.6s						
LOR				*e*MLR	MLR		
	comp=Z,362nm,18.8s,MS4.9						
LOR	Lormes	150.49	4	⇑*i*PKP	PKPbc	06 09 10.6	+0.6
LOR				LR	LR		
	comp=Z,360nm,18.8s,MS5.2						
LOMF	Lomont	150.50	360	PKP	PKPbc	06 09 10.4	+0.4
SSF	Saint Saulge	150.67	5	⇑*i*PKP1	PKPbc	06 09 11.0	+0.6
	comp=Z,72nm,1.4s						
MFF	Saint Martin d	150.69	10	⇑*i*PKP1	PKPbc	06 09 10.6	+0.1
	comp=Z,68nm,1.4s						
CSS	Prodhromos	150.80	311	*e*PKPbc	PKPbc	06 09 12.1	+0.9
CSS				LR	LR		
	comp=Z,240nm,21.0s,MS5.0						
GOLS	Golise	150.89	347	*i* PKPbc	PKPbc	06 09 11.6	+0.6
GOLS				*e*		06 09 21.0	
AVF	Avril sur Loir	150.93	5	*e*PKP1	PKPbc	06 09 11.2	+0.1
LJU	Ljubljana	151.08	349	*i* PKPbc	PKPbc	06 09 12.1	+0.7
CRNS	Crni Vrh	151.09	349	*e*PKPbc	PKPbc	06 09 11.3	-0.2
SMF	Signal de Mont	151.11	4	*e*PKP1	PKPbc	06 09 11.7	+0.2
	comp=Z,98nm,1.7s						
BGF	Bois d'Agland	151.12	6	*e*PKP1	PKPbc	06 09 12.9	+1.4
ISP	Isparta	151.13	319	PFAKE		06 09 20.0	+14
ISP				LR	LR		
	comp=Z,243nm,20.0s,MS5.0						
CABF	La Chapelle	151.24	1	⇑*i*PKP1	PKPbc	06 09 12.8	+1.0
	comp=Z,47nm,1.3s						
TCF	Toulx Ste Croi	151.32	7	⇑*i*PKP1	PKPbc	06 09 12.3	+0.3
	comp=Z,31nm,1.3s						
BOJS	Bojanci	151.45	347	*e*PKPbc	PKPbc	06 09 13.1	+0.7
TRI	Trieste	151.54	350	PFAKE		06 09 20.0	+14
TRI				LR	LR		
	comp=Z,256nm,19.0s,MS5.0						
AGO	Saint Agoulin	151.64	5	PKP	PKPbc	06 09 14.0	+1.3
PLDF	La Plantade	151.76	5	PKP	PKPbc	06 09 14.7	+1.7
RJF	Les Rejaudoux	152.20	8	*e*PKP1	PKPbc	06 09 14.1	+0.1
	comp=Z,42nm,1.3s						
RJF				*e*MLR	MLR		
	comp=Z,329nm,20.8s,MS4.8						
RJF	Les Rejaudoux	152.20	8	*e*PKP	PKPbc	06 09 14.1	+0.1
RJF				LR	LR		
	comp=Z,330nm,20.8s,MS5.1						
LFF	La Frestale	152.45	9	*e*PKP1	PKPbc	06 09 14.8	+0.2
	comp=Z,68nm,1.5s						
SSB	Saint Sauveur	152.51	3	PFAKE		06 09 20.0	+12
SSB				LR	LR		
	comp=Z,335nm,19.0s,MS5.2						
VLC	Villacollemand	153.52	354	PFAKE		06 09 20.0	+11
VLC				LR	LR		
	comp=Z,384nm,19.0s,MS5.2						
TIR	Tirane	153.94	337	PFAKE		06 09 20.0	+10
TIR				LR	LR		
	comp=Z,334nm,21.0s,MS5.1						
ETSF	Etsaut	154.20	12	*e*PKP1	PKPbc	06 09 18.7	+0.2
	comp=Z,39nm,1.3s						
AQU	L'Aquila	154.85	348	PFAKE		06 09 20.0	+8.8
AQU				LR	LR		
	comp=Z,304nm,20.0s,MS5.1						
PAB	San Pablo	156.26	22	PFAKE		06 09 20.0	+6.8
PAB				LR	LR		
	comp=Z,223nm,19.0s,MS5.0						
ESDC	Sonseca Array	156.28	21	PKPab	PKPab	06 09 40.6	-0.6
	comp=Z,0.4nm,0.7s,baz=143,slow=28,SNR=4.6						
ESLA	Sonseca Array	156.28	21	PFAKE		06 09 20.0	+6.8
ESLA				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
TIP	Timpagrande	156.96	340	PFAKE		06 09 30.0	+16
TIP				LR	LR		
	comp=Z,374nm,19.0s,MS5.2						
CEL	Celeste	158.07	340	PFAKE		06 09 30.0	+14
CEL				LR	LR		
	comp=Z,294nm,20.0s,MS5.1						
SFS	San Fernando	158.15	29	PFAKE		06 09 30.0	+14
SFS				LR	LR		
	comp=Z,645nm,19.0s,MS5.5						
RTC	Rabat Centre	159.78	34	PFAKE		06 09 30.0	+12
RTC				LR	LR		
	comp=Z,263nm,20.0s,MS5.1						
DBIC	Dimbokro	164.19	133	PFAKE		06 09 30.0	+7.2
DBIC				LR	LR		
	comp=Z,392nm,20.0s						
TORD	Torodi Ar. Bea	173.31	133	PKP	PKPdf	06 09 27.5	-1.1
	comp=Z,1.3nm,1.0s,baz=283,slow=2.3,SNR=4.0						
TORD				PKPab	PKPab	06 10 55.9	-0.9
	comp=Z,2.0nm,0.9s,baz=267,slow=4.0,SNR=5.7						
TAM	Tamanrasset	174.88	13	PFAKE		06 09 40.0	+11
TAM				LR	LR		
	comp=Z,317nm,19.0s						

MOS 11 06:13:36.4±1.8, 51°81N×91°83E, h15km, mb3.8/1, 1D, Error ellipse: s-maj=55.4km s-min=37.5km az=80.8, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	Cheremushki	1.08	346	*i* PG	Pg	06 13 56.4	-0.8
CERR				*i*		06 14 10.3	
AKAR	Aktash	3.05	242	*e*PN	Pn	06 14 25.4	+1.4
AKAR				*e*		06 15 10.8	
ELT	Yel'tsovka	3.71	295	*e*PN	Pn	06 14 32.4	-0.7
ELT				*e*		06 14 42.5	
ELT				*e*		06 15 32.0	
ORY	Orie	3.75	30	*de*PN	Pn	06 14 32.9	-0.8
ORY				*e*		06 14 43.3	
ORY						06 15 31.9	
UKR	Ust'-Kan	4.51	262	*e*PN	Pn	06 14 58.2	+14
UKR				*e*		06 15 57.5	

IDC 11 06:23:09.4±1.2, 11°97S×78°14W, h0km, mb3.4/6, mb1 3.7/9, mb1mx3.6/18, mbtmp3.5/9, ML3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.6/17, Error ellipse: s-maj=25.4km s-min=12.5km az=25.0, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	1.27	91	Pg	Pg	06 23 33.4	-0.4
	296nm,0.3s,baz=273,slow=16,SNR=188						
NNA				Lg		06 23 51.0	
	658nm,0.3s,baz=263,slow=14,SNR=20						
ATAH	Atahualpa	4.95	357	Pn	Pn	06 24 25.0	-0.1
	8.0nm,0.3s,baz=29,slow=2.0,SNR=26						
ATAH				Pg	Pg	06 24 35.9	-8.5
	8.4nm,0.3s,baz=20,slow=5.3,SNR=15						
ATAH				Sn	Sn	06 25 22.1	-1.0
	9.7nm,0.3s,baz=324,slow=20,SNR=8.8						
ATAH				Lg		06 25 50.0	
	7.3nm,0.3s,baz=5.6,slow=18,SNR=6.7						
ATAH				LR	LR	06 25 57.0	
	comp=Z,108nm,21.9s,baz=292,slow=35						
LPAZ	La Paz	10.61	115	Pn	Pn	06 25 44.4	+1.5
	0.1nm,0.3s,baz=21,slow=14,SNR=3.0						
SIV	San Ignacio	17.04	106	Pn	Pn	06 27 09.5	+0.3
	0.1nm,0.3s,baz=273,slow=15,SNR=5.4						
CFAA	Coronel Fontan	21.57	156	P	P	06 28 00.9	+0.2
	0.3nm,0.8s,baz=334,slow=8.8,SNR=6.3						
TXAR	Lajitas Array	47.89	330	P	P	06 31 50.9	+1.4
	0.2nm,0.8s,baz=139,slow=9.9,SNR=2.7						
NVAR	Mina Array Bea	62.63	325	P	P	06 33 37.3	+1.5
	0.2nm,0.3s,baz=112,slow=5.8,SNR=2.3						
ULM	Lac du Bonnet	63.88	347	P	P	06 33 43.4	-0.4
	2.2nm,0.7s,baz=167,slow=9.6,SNR=6.8						
YKA	Yellowknife Ar	79.47	344	P	P	06 35 16.2	-1.2
	0.2nm,0.6s,baz=138,slow=5.8,SNR=4.7						
TORD	Torodi Ar. Bea	83.01	75	P	P	06 35 36.6	-0.8
	0.6nm,0.8s,baz=277,slow=4.9,SNR=2.8						

PGC 11 06:27:06.6±15.0, 65°81N×144°43W, h10km, ML3.1/2, 187km Ene of Fairbanks, Ak Alaska

NEIC 11 06:27:02.6, 65°68N×145°39W, h15km, ML2.9(AEIC), ML3.2(PMR), 7D, After AEIC., Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IL1	Eielson Array	1.11	215	P	Pb	06 27 23.3	-0.1
IL1				S	Sb	06 27 38.0	+0.3
COLA	College	1.31	233	P	Pn	06 27 26.4	+0.1
COLA				S	Sb	06 27 44.4	+0.9
BM3	Burnt Mountain	1.77	10	P	Pn	06 27 32.1	-0.5
EGAK	Eagle	2.00	115	P	Pn	06 27 37.1	+1.4
DOT	Dot Lake	2.12	164	P	Pn	06 27 39.4	+2.1
COLD	Coldfoot	2.48	311	P	Pn	06 27 43.1	+0.8
MCK	McKinley	2.48	220	*e*Pn	Pn	06 27 42.9	+0.6
PAX	Paxson	2.72	181	*e*Pg	Pg	06 27 53.2	-1.5
MENT	Mentasta	2.85	164	*e*P	Pn	06 27 47.7	+0.3
BPAW	Bear Paw Mtn.	2.87	239	P	Pn	06 27 47.0	-0.6
DAWY	Dawson	3.03	120	Pn	Pn	06 27 49.4	-0.5
DAWY				*e*Sg	Sg	06 28 36.3	-3.4
DAWY	Dawson	3.03	120	⇓Pn	Pn	06 27 49.6	-0.3
DAWY				⇓Pg	Pg	06 27 54.7	-5.9
DAWY				⇑Sg	Sg	06 28 34.0	-5.8
BCA3	Bear Creek A	3.06	148	P	Pn	06 27 50.2	0.0
TRF	Thorofare Moun	3.08	226	P	Pn	06 27 51.1	+0.5
TRF				*e*Sg	Sg	06 28 37.8	-3.6
KTH	Kantishna Hill	3.20	231	P	Pn	06 27 52.1	-0.2
KTH				*e*Sg	Sg	06 28 44.2	-1.0
IM3	Indian Mountai	3.45	279	P	Pn	06 27 55.6	0.0
CHUM	Lake Minchumin	3.47	242	P	Pn	06 27 56.7	+0.7
PPLA	Purkeypile	4.07	230	P	Pn	06 28 05.3	+1.2
PMR	Palmer	4.43	204	*e*P	Pn	06 28 12.4	+3.3
INK	Inuvik	5.35	55	*e*Pn	Pn	06 28 20.9	-0.8
	2.2nm,0.8s						
INK	Inuvik	5.35	55	⇓Pn	Pn	06 28 20.6	-1.1
INK				⇑Sn	Sn	06 29 17.9	-4.9
HYT	Haines Junctio	6.03	140	⇓Pn	Pn	06 28 32.5	+1.4
HYT				⇑Sg	Sg	06 30 10.3	-5.6
WHY	Whitehorse	6.92	132	⇓Sg	Sn	06 30 36.6	+35
DLBC	Dease Lake	10.21	128	⇓Sg	Sn	06 32 17.9	+56
CTLN	Castor Lake	12.40	82	⇓Pn	Pn	06 29 54.6	-3.7
CTLN				⇑Sn	Sn	06 32 03.6	-12

IDC 11 06:32:21.5±3.7, 66°99S×109°70E, h0km, mb4.2/4, mb1 4.3/4, mb1mx4.1/10, mbtmp4.2/4, Error ellipse: s-maj=185.8km s-min=23.9km az=105.0, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	South Pole Qui	23.09	180	P	P	06 37 28.2	0.0
	20nm,1.2s,baz=317,slow=6.1,SNR=20						
STKA	Stephens Creek	39.90	45	P	P	06 39 56.0	-0.7
	3.4nm,0.8s,baz=168,slow=6.7,SNR=8.0						
ASAR	Alice Springs	45.91	32	P	P	06 40 45.7	+0.2
	2.3nm,0.7s,baz=195,slow=6.8,SNR=37						
WRA	Warramunga Arr	49.61	31	P	P	06 41 14.2	0.0
	1.7nm,0.7s,baz=195,slow=6.9,SNR=6.1						
PDAR	Pinedale Array	147.81	119	PKPbc	PKPbc	06 52 07.4	+0.4
	0.4nm,0.6s,baz=134,slow=2.6,SNR=5.0						

NEIC 11 07:00:19.9±2.5, 5°94S×147°26E, h105km±21km, mb4.3/2, Error ellipse: s-maj=19.9km s-min=17.4km az=84.0
IDC 11 07:00:20.5±1.2, 6°09S×147°44E, h102km±7km, mb4.2/4, mb1 4.2/5, mb1mx3.7/16, mbtmp4.1/5, Error ellipse: s-maj=43.2km s-min=12.8km az=119.0

ISC 11 07:00:17.5±2.0, 6°0S±0°1×147°4E±0°1, h83km±19km, n12, σ1§03/14, mb4.3/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	8.92	207	*e*Pn	Pn	07 02 26.2	+2.5
COEN				*e*Sn	Sn	07 03 55.3	-7.2
KAKA	Kakadu	16.15	245	*e*Pn	Pn	07 03 59.6	-0.2
	59nm,0.5s						
WRAB	Tennant Creek	18.75	221	*e*P	Pn	07 04 30.1	-1.3
	5.1nm,0.7s						
WB2	Warramunga Arr	18.76	221	*e*P	Pn	07 04 30.1	-1.4
WRA	Warramunga Arr	18.77	221	P	Pn	07 04 31.4	-0.2
	0.5nm,0.3s,baz=49,slow=10,SNR=31						
WRA				pP	pP	07 04 48.5	+2.0
	0.5nm,0.3s,baz=33,slow=11,SNR=6.8						
WRA				S	S	07 07 58.9	-0.7
	0.1nm,0.3s,baz=43,slow=21,SNR=6.3						
WRA				PcP	PcP	07 08 55.9	+1.2
	0.1nm,0.3s,baz=30,slow=2.1,SNR=7.4						
EIDS	Eidsvold	19.59	170	*e*P	Pn	07 04 40.8	-0.5
ASAR	Alice Springs	21.82	215	P	P	07 05 04.2	+1.0
	13nm,0.8s,mb4.3,baz=59,slow=8.7,SNR=116						
ASAR				pP		07 05 25.0	
	1.7nm,0.6s,baz=52,slow=9.9,SNR=2.1						
ASAR				S	S	07 09 01.6	+1.8
	2.3nm,0.8s,baz=31,slow=20,SNR=9.6						
ASAR				ScP	ScP	07 12 31.4	+1.0
	2.5nm,1.1s,baz=49,slow=2.8,

ATHU	**Athens Univers**	**2.14**	**38**	P	**Pn**	**07 02 36.4**	**-0.2**
ATHU	**Athens Univers**	**2.14**	**38**	P	**Pn**	**07 02 36.4**	**-0.2**
EFP	**Efpalio**	**2.15**	**355**	*e*P	**Pn**	**07 02 40.3**	**+3.6**
EFP	**Efpalio**	**2.15**	**355**	P	**Pn**	**07 02 38.8**	**+2.1**
EFP	**Efpalio**	**2.15**	**355**	P	**Pn**	**07 02 38.8**	**+2.1**
EFP	**Efpalio**	**2.15**	**355**	*e*Pb	**Pn**	**07 02 40.3**	**+3.6**
PTL	**Penteli**	**2.25**	**38**	*e*P	**Pn**	**07 02 37.4**	**-0.6**
PTL	**Penteli**	**2.25**	**38**	*e*Pn	**Pn**	**07 02 37.4**	**-0.6**
VLS	**Valsamata**	**2.25**	**328**	*e*P	**Pn**	**07 02 39.1**	**+1.0**
VLS	**Valsamata**	**2.25**	**328**	*e*Pn	**Pn**	**07 02 39.1**	**+1.0**
IDI	**Anoyia**	**2.46**	**113**	P	**Pn**	**07 02 40.8**	**-0.2**
	1.5nm,0.3s,baz=304,slow=17,SNR=18						
IDI				S	**Sn**	**07 03 10.3**	**+0.5**
	17nm,0.3s,baz=318,slow=15,SNR=9.1						
IDI	**Anoyia**	**2.46**	**113**	P	**Pn**	**07 02 40.8**	**-0.1**
IDI				S	**Sn**	**07 03 10.3**	**+0.5**
LKR	**Lokris**	**2.46**	**16**	*e*P	**Pn**	**07 02 41.0**	**0.0**
LKR	**Lokris**	**2.46**	**16**	P	**Pn**	**07 02 41.1**	**+0.1**
LKR	**Lokris**	**2.46**	**16**	*e*Pn	**Pn**	**07 02 41.0**	**0.0**
ATAL	**Atalanti**	**2.51**	**16**	P	**Pn**	**07 02 41.5**	**-0.1**
ATAL				S	**Sn**	**07 03 11.4**	**+0.4**
ATAL	**Atalanti**	**2.51**	**16**	P	**Pn**	**07 02 41.5**	**-0.1**
ATAL				S	**Sn**	**07 03 11.4**	**+0.4**
EVR	**Evrytania**	**2.64**	**355**	*e*Pb	**Pn**	**07 02 47.6**	**+4.2**
AGG	**Agios Georgios**	**2.74**	**3**	*e*P	**Pn**	**07 02 47.2**	**+2.4**
AGG	**Agios Georgios**	**2.74**	**3**	P	**Pn**	**07 02 46.7**	**+1.9**
AGG				S	**Sn**	**07 03 18.7**	**+2.0**
AGG	**Agios Georgios**	**2.74**	**3**	P	**Pn**	**07 02 46.7**	**+1.9**
AGG	**Agios Georgios**	**2.74**	**3**	*e*Pn	**Pn**	**07 02 47.2**	**+2.4**
AGG				S	**Sn**	**07 03 18.7**	**+2.0**
APE	**Apeiranthos**	**2.85**	**73**	*e*P	**Pn**	**07 02 46.5**	**+0.2**
APE	**Apeiranthos**	**2.85**	**73**	P	**Pn**	**07 02 45.8**	**-0.5**
APE	**Apeiranthos**	**2.85**	**73**	P	**Pn**	**07 02 45.8**	**-0.5**
APE	**Apeiranthos**	**2.85**	**73**	*e*Pn	**Pn**	**07 02 46.5**	**+0.2**
LAST	**Lasithi**	**2.95**	**111**	*e*P	**Pn**	**07 02 47.9**	**+0.3**
LAST	**Lasithi**	**2.95**	**111**	P	**Pn**	**07 02 47.4**	**-0.2**
LAST	**Lasithi**	**2.95**	**111**	P	**Pn**	**07 02 47.4**	**-0.2**
LAST	**Lasithi**	**2.95**	**111**	*e*Pn	**Pn**	**07 02 47.9**	**+0.3**
NPS	**Neapolis**	**3.02**	**109**	P	**Pn**	**07 02 53.3**	**+4.8**
NEO	**Neokhori**	**3.14**	**16**	*e*P	**Pn**	**07 02 51.0**	**+0.7**
NEO	**Neokhori**	**3.14**	**16**	*e*Pn	**Pn**	**07 02 51.0**	**+0.7**
AOS	**Alonnisos**	**3.20**	**25**	P	**Pn**	**07 02 50.0**	**-1.1**
AOS	**Alonnisos**	**3.20**	**25**	P	**Pn**	**07 02 50.0**	**-1.1**
XRY	**Khrisi**	**3.23**	**115**	*e*Pb	**Pn**	**07 02 56.3**	**+4.8**
THL	**Klokotos Trika**	**3.28**	**359**	*e*P	**Pn**	**07 02 53.4**	**+1.3**
THL	**Klokotos Trika**	**3.28**	**359**	P	**Pn**	**07 02 53.3**	**+1.2**
THL	**Klokotos Trika**	**3.28**	**359**	P	**Pn**	**07 02 53.3**	**+1.2**
JAN	**Janina**	**3.52**	**344**	*e*P	**Pn**	**07 02 56.7**	**+1.3**
JAN	**Janina**	**3.52**	**344**	*e*Pn	**Pn**	**07 02 56.7**	**+1.3**
IGT	**Igoumenitsa**	**3.54**	**337**	P	**Pn**	**07 02 56.2**	**+0.5**
IGT	**Igoumenitsa**	**3.54**	**337**	P	**Pn**	**07 02 56.2**	**+0.5**
LIT	**Litokhoron**	**3.82**	**4**	*e*P	**Pn**	**07 03 00.4**	**+0.8**
LIT	**Litokhoron**	**3.82**	**4**	P	**Pn**	**07 03 00.4**	**+0.8**
LIT	**Litokhoron**	**3.82**	**4**	P	**Pn**	**07 03 00.4**	**+0.8**
KEK	**Kerkira**	**3.89**	**333**	*e*P	**Pn**	**07 03 00.5**	**+0.1**
KEK	**Kerkira**	**3.89**	**333**	P	**Pn**	**07 03 00.6**	**+0.2**
KEK	**Kerkira**	**3.89**	**333**	*e*Pn	**Pn**	**07 03 00.5**	**+0.1**
KZN	**Kozani**	**4.03**	**356**	*e*P	**Pn**	**07 03 03.6**	**+1.2**
KZN	**Kozani**	**4.03**	**356**	P	**Pn**	**07 03 03.4**	**+1.0**
KZN	**Kozani**	**4.03**	**356**	P	**Pn**	**07 03 03.4**	**+1.0**
SMG	**Samos**	**4.03**	**68**	*e*P	**Pn**	**07 03 02.7**	**+0.3**
SMG	**Samos**	**4.03**	**68**	*e*Pn	**Pn**	**07 03 02.7**	**+0.3**
KARP	**Karpathos**	**4.16**	**99**	*e*P	**Pn**	**07 03 03.5**	**-0.6**
KARP	**Karpathos**	**4.16**	**99**	*e*Pn	**Pn**	**07 03 03.5**	**-0.6**
LTBQ	**Tobruq**	**4.47**	**160**	*i* P	**Pn**	**07 03 09.2**	**+0.7**
	SNR=23						
LTBQ				*e*S	**Sn**	**07 03 57.5**	**-1.7**
	29nm,0.8s,SNR=23						
FNA	**Florina**	**4.53**	**353**	P	**Pn**	**07 03 09.8**	**+0.5**
FNA				S	**Sn**	**07 03 58.8**	**-1.8**
FNA	**Florina**	**4.53**	**353**	P	**Pn**	**07 03 09.8**	**+0.5**
FNA				S	**Sn**	**07 03 58.8**	**-1.8**
SOH	**Sokhos**	**4.63**	**12**	*e*P	**Pn**	**07 03 12.1**	**+1.4**
SOH	**Sokhos**	**4.63**	**12**	*e*Pn	**Pn**	**07 03 12.1**	**+1.4**
BIA	**Bitola**	**4.77**	**353**	*e*Pn	**Pn**	**07 03 12.7**	**+0.2**
BIA				*e*Sg	**Sn**	**07 04 05.4**	**-1.1**
BIA	**Bitola**	**4.77**	**353**	*e*Pn	**Pn**	**07 03 12.7**	**+0.2**
OHR	**Ohrid**	**4.93**	**348**	*e*Pn	**Pn**	**07 03 15.0**	**+0.3**
OHR				*e*Sg	**Sn**	**07 04 07.5**	**-2.9**
OHR	**Ohrid**	**4.93**	**348**	*e*Pn	**Pn**	**07 03 15.0**	**+0.3**
VAY	**Valandovo**	**5.04**	**4**	*e*Pn	**Pn**	**07 03 15.7**	**-0.5**
VAY				*e*Sg	**Sn**	**07 04 08.8**	**-4.4**
VAY	**Valandovo**	**5.04**	**4**	*e*Pn	**Pn**	**07 03 15.7**	**-0.6**
KRUS	**Krusevo**	**5.12**	**353**	*e*Pn	**Pn**	**07 03 17.1**	**-0.3**
KRUS				*e*Sg	**Sn**	**07 04 12.6**	**-2.6**
KRUS	**Krusevo**	**5.12**	**353**	*e*Pn	**Pn**	**07 03 17.0**	**-0.4**
NVR	**Nevrokopi**	**5.24**	**14**	P	**Pn**	**07 03 22.3**	**+3.4**
NVR	**Nevrokopi**	**5.24**	**14**	P	**Pn**	**07 03 22.3**	**+3.4**
CEL	**Celeste**	**5.34**	**294**	P	**Pn**	**07 03 21.0**	**+0.6**
CEL	**Celeste**	**5.34**	**294**	P	**Pn**	**07 03 21.0**	**+0.6**
STIP	**Stip**	**5.41**	**1**	*e*Pn	**Pn**	**07 03 21.4**	**+0.2**
STIP	**Stip**	**5.41**	**1**	*e*Pn	**Pn**	**07 03 21.3**	**+0.1**
LJBD	**Adjabya**	**5.59**	**197**	*i* P	**Pn**	**07 03 23.2**	**-0.6**
	SNR=23						
TAR1	**Taranto**	**5.69**	**320**	*e*Pn	**Pn**	**07 03 24.8**	**-0.3**
SKO	**Skopje**	**5.71**	**355**	*e*Pn	**Pn**	**07 03 24.6**	**-0.8**
SKO	**Skopje**	**5.71**	**355**	*e*Pn	**Pn**	**07 03 24.5**	**-0.8**
PUK	**Puka**	**6.01**	**344**	*i* SG	**Sn**	**07 04 42.1**	**+5.3**
PUK	**Puka**	**6.01**	**344**	*e*PG	**Sn**	**07 04 36.1**	**-0.7**
SG1	**Sgolgore (BA)**	**6.24**	**319**	*e*Pn	**Pn**	**07 03 32.2**	**-0.4**
BCI	**Bajram Curri**	**6.28**	**346**	*i* SG	**Sn**	**07 04 51.9**	**+8.4**
BCI	**Bajram Curri**	**6.28**	**346**	*e*PG	**Sn**	**07 04 41.8**	**-1.7**
BARS	**Barje**	**6.53**	**358**	⇑*i*Pn	**Pn**	**07 03 36.4**	**-0.2**
STON	**Ston**	**7.41**	**334**	*e*Pn	**Pn**	**07 03 46.7**	**-2.0**
STON				Sn	**Sn**	**07 05 03.7**	**-7.6**
STON	**Ston**	**7.41**	**334**	*e*Pn	**Pn**	**07 03 46.7**	**-2.0**
BBLS	**Lazići**	**7.86**	**345**	⇑*i*Pn	**Pn**	**07 03 53.0**	**-1.7**
DIVS	**Divibare**	**7.97**	**349**	⇑*i*Pn	**Pn**	**07 03 54.5**	**-1.9**
BRTR	**Keskin Array B**	**9.72**	**66**	P	**Pn**	**07 04 20.1**	**-0.2**
	0.1nm,0.3s,baz=254,slow=8.9,SNR=3.8						
BRTR	**Keskin Array B**	**9.72**	**66**	P	**Pn**	**07 04 20.1**	**-0.1**
NVLJ	**Novalja**	**9.95**	**329**	*e*Pn	**Pn**	**07 04 22.6**	**-0.7**
NVLJ				Sn	**Sn**	**07 06 05.3**	**-8.0**
NVLJ	**Novalja**	**9.95**	**329**	*e*Pn	**Pn**	**07 04 22.6**	**-0.7**
BOJS	**Bojanci**	**10.57**	**333**	*i* Pn	**Pn**	**07 04 30.8**	**-1.1**
BOJS				*i* Sn	**Sn**	**07 06 21.9**	**-6.8**
BOJS	**Bojanci**	**10.57**	**333**	Pn	**Pn**	**07 04 30.8**	**-1.1**
CEY	**Cerknica**	**11.09**	**331**	*i* Pn	**Pn**	**07 04 37.9**	**-1.0**
CEY				*i* Sn	**Sn**	**07 06 34.0**	**-7.2**
CEY	**Cerknica**	**11.09**	**331**	*i* Pn	**Pn**	**07 04 37.9**	**-1.0**
SKDS	**Skadanscina**	**11.10**	**329**	*i* Pn	**Pn**	**07 04 37.2**	**-1.8**
SKDS				*i* Sn	**Sn**	**07 06 32.3**	**-9.1**
ESDC	**Sonseca Array**	**20.82**	**287**	P	**P**	**07 06 41.3**	**+1.5**
	0.8nm,0.9s,baz=85,slow=9.8,SNR=3.3						
HFS	**Hagfors**	**24.48**	**350**	P	**P**	**07 07 16.2**	**-0.3**
	0.6nm,0.4s,mb3.4,baz=134,slow=11,SNR=7.1						
FINES	**FINESS Array B**	**25.31**	**4**	P	**P**	**07 07 23.1**	**-0.9**
	0.8nm,0.4s,mb3.6,baz=164,slow=12,SNR=10						
EKA	**Eskdalemuir Ar**	**25.71**	**326**	P	**P**	**07 07 29.6**	**+1.9**
	0.9nm,0.9s,mb3.3,baz=120,slow=8.0,SNR=3.8						
NOA	**NORSAR Array B**	**25.73**	**348**	P	**P**	**07 07 27.0**	**-0.8**
	1.7nm,1.0s,mb3.5,baz=158,slow=9.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**29.45**	**224**	P	**P**	**07 08 02.8**	**+1.2**
	0.3nm,0.5s,mb3.2,baz=38,slow=9.1,SNR=3.3						
ARCES	**ARCESS Array B**	**33.36**	**2**	P	**P**	**07 08 35.9**	**+0.5**
	1.3nm,0.7s,mb4.0,baz=192,slow=11,SNR=12						
BVAR	**Borovoye Array**	**37.40**	**48**	P	**P**	**07 09 08.8**	**-1.4**
	0.7nm,0.6s,mb3.6,baz=279,slow=3.8,SNR=4.4						
SPITS	**Spitsbergen Ar**	**42.07**	**358**	P	**P**	**07 09 50.1**	**+1.4**
	6.0nm,1.0s,mb4.2,baz=147,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**45.23**	**57**	P	**P**	**07 10 14.2**	**-0.3**
	0.9nm,0.3s,mb4.1,baz=274,slow=8.0,SNR=16						

MAN 11 07:12:38, 10.°97N×124.°78E, h2km, mb4.4, ML3.2, MS3.1, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.18**	**296**	*e*P	Pg	07 12 42.0	+0.4
OCLP				*e*S	Sg	07 12 47.4	+3.4
LLP	**Lapu-Lapu**	**1.03**	**231**	*e*P	Pg	07 12 58.5	+0.7
LLP				*e*S	Sg	07 13 10.6	-0.5
CNP	**Catarman**	**1.54**	**356**	*e*P	Pn	07 13 05.9	-0.5
CNP				*e*S	Sn	07 13 27.7	+0.7
TBP	**Tagbilaran**	**1.56**	**215**	*e*P	Pn	07 13 01.3	-5.5
RCP	**Roxas**	**2.08**	**287**	⇑*e*P	Pn	07 13 14.2	+0.2
RCP				*e*S	Sn	07 13 41.3	+0.9
BUKP	**Musuan**	**3.08**	**175**	*e*P	Pn	07 13 28.7	+0.9

ISCJB 11 07:15:39.2±0.5, 23.°96N±0.°03×122.°52E±0.°02, h17km±6km,
Error ellipse: s-maj=5.7km s-min=2.7km az=169.0
TAP 11 07:15:39.6, 23.°97N×122.°43E, h16km±1km, ML3.4, D
JMA 11 07:15:39.9±0.3, 24.°04N×122.°51E, h28km, M2.7
ISC 11 07:15:38.5±0.6, 23.°97N±0.°03×122.°51E±0.°02, h11km±4km, n33, σ0.°80/53, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.67**	**43**	P	**Pg**	**07 15 52.0**	**+0.5**
YOJ				*e*S	**Sg**	**07 16 00.3**	**0.0**
ENA	**Nanau**	**0.84**	**303**	P	**Pg**	**07 15 55.0**	**+0.2**
	baz=306						
ENA				*e*S	**Sg**	**07 16 05.7**	**0.0**
	baz=306						
TWD	**Chiawan**	**0.85**	**278**	*e*P	**Pg**	**07 15 54.6**	**-0.2**
	baz=278						
TWD				*e*S	**Sg**	**07 16 05.6**	**-0.3**
	baz=278						
TWC	**Suao**	**0.88**	**317**	P	**Pg**	**07 15 55.3**	**-0.2**
	baz=320						
TWC				*e*S	**Sg**	**07 16 07.0**	**0.0**
	baz=320						
ESL	**Shilin**	**1.00**	**261**	*e*P	**Pg**	**07 15 57.7**	**-0.1**
	baz=260						
ESL				*e*S	**Sg**	**07 16 09.9**	**-0.9**
	baz=260						
TWE	**Neicheng**	**1.08**	**314**	P	**Pb**	**07 15 59.3**	**+0.1**
	baz=317						
TWE				*e*S	**Sb**	**07 16 14.4**	**+1.2**
	baz=317						
NNS	**Nan Shan**	**1.14**	**295**	P	**Pb**	**07 16 00.1**	**-0.3**
	baz=296						
NNS				*e*S	**Sb**	**07 16 14.7**	**-0.4**
	baz=296						
TWB1	**Santiao Chiao**	**1.14**	**335**	*e*P	**Pb**	**07 16 00.3**	**0.0**
	baz=339						
WHF	**Hehuan Shan**	**1.15**	**279**	*i* P	**Pb**	**07 15 59.8**	**-0.7**
	baz=279						
WHF				*e*S	**Sb**	**07 16 15.1**	**-0.4**
	baz=279						
IRIF	**Iriomote-Funau**	**1.17**	**72**	P	**Pb**	**07 16 00.5**	**-0.3**
IRIF				*e*S	**Sb**	**07 16 16.3**	**+0.3**
EHY	**Hungye**	**1.18**	**247**	*e*P	**Pb**	**07 15 59.8**	**-1.3**
	baz=245						
EHY				*e*S	**Sb**	**07 16 15.7**	**-0.7**
	baz=245						
HATJ	**Hateruma jima**	**1.19**	**85**	P	**Pn**	**07 16 00.5**	**-0.6**
HATJ				*e*S	**Sb**	**07 16 16.4**	**0.0**
TWT	**Tachien**	**1.25**	**283**	P	**Pn**	**07 16 02.1**	**+0.1**
	baz=283						
TWT				*e*S	**Sb**	**07 16 18.1**	**-0.3**
	baz=283						
NSK	**Sanguang**	**1.27**	**304**	P	**Pn**	**07 16 02.0**	**-0.2**
	baz=305						
NSK				*e*S	**Sb**	**07 16 18.0**	**-0.8**
	baz=305						
TWF1	**Yuli**	**1.27**	**241**	*e*P	**Pn**	**07 16 01.3**	**-1.0**
	baz=239						
TWF1				*e*S	**Sb**	**07 16 18.2**	**-0.7**
	baz=239						
NWF	**Wu-fen Shan**	**1.29**	**329**	*e*P	**Pn**	**07 16 02.1**	**-0.3**
	baz=331						
NWF				*e*S	**Sb**	**07 16 19.3**	**0.0**
	baz=331						
JKRS	**Kuro-shima**	**1.39**	**79**	P	**Pn**	**07 16 03.8**	**-0.1**
JKRS				*e*S	**Sn**	**07 16 22.7**	**+0.3**
SMLT	**Sun Moon Lake**	**1.48**	**267**	*e*P	**Pn**	**07 16 05.6**	**+0.5**
	baz=266						
YUS	**Yu-Shan**	**1.51**	**252**	*e*P	**Pn**	**07 16 05.5**	**0.0**
	baz=250						
TYC	**Yuchr**	**1.52**	**268**	*e*P	**Pn**	**07 16 05.5**	**-0.2**
	baz=267						
NSTT	**Nanjuang**	**1.53**	**296**	*e*P	**Pn**	**07 16 06.9**	**+1.1**
	baz=296						
JIJ	**Ishigaki jima**	**1.54**	**75**	P	**Pn**	**07 16 05.2**	**-0.8**
JIJ				*e*S	**Sn**	**07 16 24.1**	**-1.9**
ELDTW	**Lidau**	**1.58**	**241**	*e*P	**Pn**	**07 16 05.3**	**-1.2**
	baz=238						
ELDTW				*e*S	**Sn**	**07 16 26.0**	**-0.8**
	baz=238						
ALS	**Alishan**	**1.63**	**254**	*e*P	**Pn**	**07 16 08.4**	**+1.2**
	baz=252						
TWQ1	**Liyutan**	**1.63**	**284**	*e*P	**Pn**	**07 16 08.5**	**+1.3**
	baz=283						
CHN5	**Tsauling**	**1.72**	**258**	*e*P	**Pn**	**07 16 09.2**	**+0.8**
	baz=256						
STYT	**Tauyuan**	**1.80**	**244**	*e*P	**Pn**	**07 16 10.1**	**+0.6**
	baz=242						
STYT				*e*S	**Sn**	**07 16 31.5**	**-0.9**
	baz=242						
CHN4	**Tsaushan**	**1.86**	**251**	*e*P	**Pn**	**07 16 12.1**	**+1.7**
	baz=249						
WTP	**Ta-pu**	**1.88**	**248**	*e*P	**Pn**	**07 16 11.7**	**+1.1**
	baz=246						
SGST	**Jiashian**	**1.98**	**244**	*e*P	**Pn**	**07 16 14.2**	**+2.3**
	baz=242						
CHN1	**Nanshi**	**1.98**	**247**	*e*P	**Pn**	**07 16 13.2**	**+1.2**
	baz=245						
JTJ	**Tarama**	**2.11**	**71**	P	**Pn**	**07 16 13.9**	**+0.1**
JTJ				*e*S	**Sn**	**07 16 39.6**	**-0.4**
EAST	**Anshuo**	**2.20**	**225**	*e*P	**Pn**	**07 16 17.1**	**+2.1**
	baz=222						

DJA 11 07:43:33, 0.°66S×123.°55E, h21km, MLv3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.87**	**244**	P	Pb	07 43 48.4	-1.0
LUWI				S	Sb	07 44 00.0	-0.5
APSI	**Ampana**	**1.92**	**263**	P	Pn	07 44 05.1	+0.7
APSI				S	Sn	07 44 29.5	+1.5
MRSI	**Marisa**	**1.97**	**305**	P	Pn	07 44 05.8	+0.7

ISCJB 11 07:51:19.8±1.3, 23.°95N±0.°04×122.°53E±0.°02, h12km±9km,
Error ellipse: s-maj=6.0km s-min=2.9km az=167.2
TAP 11 07:51:20.9, 24.°01N×122.°47E, h27km±1km, ML3.0, C
JMA 11 07:51:22.4±0.2, 24.°27N×122.°54E, h54km±5km, M2.0
ISC 11 07:51:20.1±1.1, 23.°98N±0.°04×122.°53E±0.°02, h15km±7km, n29, σ0.°93/46, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.65**	**42**	P	**Pg**	**07 51 33.5**	**+0.6**
YOJ				S	**Sg**	**07 51 41.5**	**0.0**
ENA	**Nanau**	**0.85**	**302**	*e*P	**Pb**	**07 51 36.7**	**+0.2**
	baz=301						
TWD	**Chiawan**	**0.86**	**277**	*e*P	**Pb**	**07 51 36.6**	**-0.2**
	baz=275						
TWD				S	**Sb**	**07 51 47.1**	**-0.9**
	baz=275						
TWC	**Suao**	**0.88**	**315**	P	**Pb**	**07 51 36.5**	**-0.6**
	baz=312						
TWC				*e*S	**Sb**	**07 51 48.0**	**-0.7**
	baz=312						
ESL	**Shilin**	**1.02**	**261**	*e*P	**Pb**	**07 51 39.6**	**+0.2**
	baz=246						
ESL				*e*S	**Sb**	**07 51 51.2**	**-1.4**
	baz=246						
TWE	**Neicheng**	**1.08**	**313**	*e*P	**Pb**	**07 51 40.8**	**+0.3**
	baz=314						
TWE				*e*S	**Sb**	**07 51 55.7**	**+1.4**
	baz=314						
TWB1	**Santiao Chiao**	**1.14**	**334**	*e*P	**Pn**	**07 51 42.3**	**+0.8**
	baz=335						
NNS	**Nan Shan**	**1.15**	**294**	P	**Pn**	**07 51 41.2**	**-0.5**
	baz=292						
NNS				*e*S	**Sb**	**07 51 56.2**	**-0.2**
	baz=292						
IRIF	**Iriomote-Funau**	**1.15**	**72**	P	**Pn**	**07 51 41.6**	**-0.1**
IRIF				S	**Sb**	**07 51 56.1**	**-0.4**
WHF	**Hehuan Shan**	**1.17**	**278**	P	**Pn**	**07 51 41.0**	**-0.9**
	baz=264						
WHF				*e*S	**Sb**	**07 51 56.5**	**-0.5**
	baz=264						
HATJ	**Hateruma jima**	**1.17**	**86**	P	**Pn**	**07 51 43.0**	**+1.1**
HATJ				S	**Sb**	**07 51 57.2**	**+0.2**
EHY	**Hungye**	**1.20**	**247**	*e*P	**Pn**	**07 51 41.0**	**-1.4**
	baz=244						
EHY				*e*S	**Sb**	**07 51 56.7**	**-1.3**
	baz=244						
NSK	**Sanguang**	**1.27**	**303**	P	**Pn**	**07 51 43.1**	**-0.2**
	baz=288						
NWF	**Wu-fen Shan**	**1.28**	**328**	*e*P	**Pn**	**07 51 43.0**	**-0.4**
	baz=328						
TWF1	**Yuli**	**1.29**	**241**	*i* P	**Pn**	**07 51 42.4**	**-1.2**
	baz=238						
TWF1				*e*S	**Sb**	**07 51 58.5**	**-1.9**
	baz=238						
JKRS	**Kuro-shima**	**1.38**	**79**	P	**Pn**	**07 51 44.8**	**0.0**
JKRS				S	**Sn**	**07 52 01.7**	**-1.0**
SMLT	**Sun Moon Lake**	**1.49**	**267**	*e*P	**Pn**	**07 51 46.3**	**-0.1**
	baz=255						
JIJ	**Ishigaki jima**	**1.52**	**75**	P	**Pn**	**07 51 46.6**	**-0.2**
JIJ				S	**Sn**	**07 52 05.4**	**-0.9**
YUS	**Yu-Shan**	**1.53**	**252**	P	**Pn**	**07 51 46.5**	**-0.3**
	baz=239						
TYC	**Yuchr**	**1.53**	**267**	*e*P	**Pn**	**07 51 47.5**	**+0.6**
	baz=265						
ELDTW	**Lidau**	**1.60**	**241**	*e*P	**Pn**	**07 51 46.2**	**-1.6**
	baz=238						
TWQ1	**Liyutan**	**1.65**	**283**	*e*P	**Pn**	**07 51 49.3**	**+0.8**
	baz=281						
ALS	**Alishan**	**1.65**	**254**	*e*P	**Pn**	**07 51 48.5**	**0.0**
	baz=251						
ALS				*e*S	**Sn**	**07 52 08.7**	**-0.7**
	baz=251						
CHN5	**Tsauling**	**1.74**	**258**	*e*P	**Pn**	**07 51 50.8**	**+1.0**
	baz=255						
STYT	**Tauyuan**	**1.82**	**244**	*e*P	**Pn**	**07 51 51.5**	**+0.6**
	baz=231						
CHN4	**Tsaushan**	**1.88**	**251**	*e*P	**Pn**	**07 51 54.0**	**+2.3**
	baz=248						
CHN4				*e*S	**Sn**	**07 52 17.2**	**+2.0**
	baz=248						
WTP	**Ta-pu**	**1.90**	**248**	*e*P	**Pn**	**07 51 52.6**	**+0.5**
	baz=237						
WTP				*e*S	**Sn**	**07 52 17.2**	**+1.5**
	baz=237						
SGST	**Jiashian**	**2.00**	**244**	*e*P	**Pn**	**07 51 54.7**	**+1.4**
	baz=232						
CHN1	**Nanshi**	**2.00**	**247**	*e*P	**Pn**	**07 51 54.3**	**+0.9**
	baz=244						
CHN1				*e*S	**Sn**	**07 52 19.6**	**+1.5**
	baz=244						

ISCJB 11 07:54:59.5±0.9, 23.°94N±0.°03×122.°53E±0.°02, h8km±7km,
Error ellipse: s-maj=5.3km s-min=3.2km az=172.4
TAP 11 07:55:00.8, 23.°93N×122.°44E, h2km±1km, ML3.0, D
JMA 11 07:55:02.7±0.4, 24.°17N×122.°54E, h45km, M2.1
ISC 11 07:54:59.5±0.7, 23.°95N±0.°04×122.°53E±0.°02, h7km±5km, n28, σ0.°85/45, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.67**	**40**	P	**Pg**	**07 55 13.9**	**+1.4**
YOJ				*e*S	**Sg**	**07 55 21.8**	**+0.5**
TWD	**Chiawan**	**0.87**	**279**	P	**Pg**	**07 55 16.2**	**0.0**
	baz=281						
ENA	**Nanau**	**0.87**	**304**	*e*P	**Pg**	**07 55 16.5**	**+0.3**
	baz=308						
ENA				*e*S	**Sg**	**07 55 27.5**	**+0.1**
	baz=308						
TWC	**Suao**	**0.91**	**317**	P	**Pg**	**07 55 16.9**	**-0.1**
	baz=322						
TWC				*e*S	**Sg**	**07 55 29.0**	**+0.2**
	baz=322						
ESL	**Shilin**	**1.02**	**263**	*e*P	**Pg**	**07 55 18.2**	**-0.7**
	baz=262						
TWE	**Neicheng**	**1.10**	**314**	*e*P	**Pg**	**07 55 20.9**	**+0.2**
	baz=318						
TWE				*e*S	**Sg**	**07 55 35.1**	**0.0**
	baz=318						
IRIF	**Iriomote-Funau**	**1.16**	**70**	P	**Pb**	**07 55 22.2**	**+0.4**
IRIF				*e*S	**Sg**	**07 55 35.3**	**-1.5**
HATJ	**Hateruma jima**	**1.17**	**84**	S	**Sb**	**07 55 37.8**	**+0.5**
NNS	**Nan Shan**	**1.17**	**295**	*e*P	**Pb**	**07 55 21.5**	**-0.5**
	baz=297						
NNS				*e*S	**Sb**	**07 55 36.2**	**-1.1**
	baz=297						
TWB1	**Santiao Chiao**	**1.17**	**335**	*e*P	**Pb**	**07 55 22.5**	**+0.5**
	baz=339						
WHF	**Hehuan Shan**	**1.18**	**280**	P	**Pb**	**07 55 21.5**	**-0.6**
	baz=281						
WHF				*e*S	**Sb**	**07 55 36.2**	**-1.3**
	baz=281						
TWT	**Tachien**	**1.28**	**284**	*e*P	**Pn**	**07 55 23.2**	**-0.5**
	ba

YOJ	**Yonaguni jima**	**0.61**	**33**	P	**Pb**	**08 44 58.6**	**-0.7**
YOJ				S	**Sb**	**08 45 06.3**	**-1.2**
ENA	**Nanau**	**0.96**	**300**	*e*P	**Pb**	**08 45 05.6**	**+0.4**
	baz=304						
ENA				*e*S	**Sb**	**08 45 18.3**	**+0.9**
	baz=304						
TWD	**Chiawan**	**0.97**	**278**	*e*P	**Pn**	**08 45 04.6**	**-1.0**
	baz=274						
TWC	**Suao**	**0.98**	**313**	P	**Pn**	**08 45 05.3**	**-0.5**
	baz=311						
TWC				S	**Sb**	**08 45 17.9**	**-0.3**
	baz=311						
IRIF	**Iriomote-Funau**	**1.06**	**68**	P	**Pn**	**08 45 06.7**	**-0.2**
IRIF				S	**Sb**	**08 45 20.8**	**+0.3**
HATJ	**Hateruma jima**	**1.06**	**84**	P	**Pn**	**08 45 07.5**	**+0.6**
HATJ				*e*S	**Sb**	**08 45 21.5**	**+1.0**
ESL	**Shilin**	**1.12**	**264**	*e*P	**Pn**	**08 45 07.4**	**-0.2**
	baz=259						
TWE	**Neicheng**	**1.18**	**311**	*e*P	**Pn**	**08 45 09.1**	**+0.6**
	baz=316						
TWE				*e*S	**Sn**	**08 45 25.4**	**+1.5**
	baz=316						
JKRS	**Kuro-shima**	**1.28**	**76**	P	**Pn**	**08 45 10.4**	**+0.6**
JKRS				*e*S	**Sn**	**08 45 26.7**	**+0.4**
WHF	**Hehuan Shan**	**1.28**	**279**	P	**Pn**	**08 45 09.7**	**-0.1**
	baz=276						
WHF				*e*S	**Sn**	**08 45 26.4**	**0.0**
	baz=276						
EHY	**Hungye**	**1.29**	**251**	*e*P	**Pn**	**08 45 09.9**	**-0.1**
	baz=244						
EHY				*e*S	**Sn**	**08 45 26.2**	**-0.3**
	baz=244						
TWF1	**Yuli**	**1.37**	**245**	*e*P	**Pn**	**08 45 10.9**	**-0.1**
	baz=235						
NSK	**Sanguang**	**1.38**	**302**	*e*P	**Pn**	**08 45 10.8**	**-0.4**
	baz=295						
JIJ	**Ishigaki jima**	**1.43**	**73**	P	**Pn**	**08 45 11.7**	**-0.2**
JIJ				S	**Sn**	**08 45 29.2**	**-0.8**
YUS	**Yu-Shan**	**1.62**	**254**	*e*S	**Sn**	**08 45 34.6**	**-0.1**
	baz=255						

NEIC ***11*** *08:47:51.8, 16°.67N×100°.59W, h14km, MD3.6(MEX), After MEX.*

MEX 11 08:47:51.8±1.1, 16°.67N×100°.59W, h14km±70km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.49**	**39**	*i* P	Pg	08 48 00.8	-0.6
CAIG				*i* S	Sg	08 48 06.0	-2.0
CAIG	**El Cayaco**	**0.49**	**39**	*i* P	Pg	08 48 00.8	-0.6
CAIG				*i* S	Sg	08 48 06.0	-2.0
ACX	**Acapulco**	**0.67**	**73**	*e*P	Pg	08 48 03.2	-1.8
ACX				*i* S	Sg	08 48 12.1	-1.7
ACX	**Acapulco**	**0.67**	**73**	*e*P	Pg	08 48 03.2	-1.8
ACX				*i* S	Sg	08 48 12.1	-1.7
PNIG	**Pinotepa**	**2.38**	**96**	*i* P	Pn	08 48 26.1	-4.2
PNIG				*i* S	Sn	08 48 56.0	-3.3
PNIG	**Pinotepa**	**2.38**	**96**	*i* P	Pn	08 48 26.1	-4.2
PNIG				*i* S	Sn	08 48 56.0	-3.3
MZVM		**2.82**	**27**	*e*P	Pn	08 48 34.3	-2.2
MZVM				*i* S	Sn	08 49 07.4	-3.0
UTMO	**Huajuapan**	**2.90**	**66**	*e*P	Pn	08 48 35.6	-2.1
UTMO				*i* S	Sn	08 49 07.9	-4.4
PPM	**Popocatepetl**	**3.03**	**38**	*e*P	Pn	08 48 36.8	-2.6
PPM				*i* S	Sn	08 49 13.5	-2.0
PPM	**Popocatepetl**	**3.03**	**38**	*e*P	Pn	08 48 36.8	-2.6
PPM				*i* S	Sn	08 49 13.5	-2.0

MEX 11 08:52:30.8±0.7, 18°.86N×104°.41W, h4km±6km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**0.51**	**52**	*i* P	Pg	08 52 39.9	-0.7
R15V				*i* S	Sg	08 52 47.7	+0.4
R15V				*i* S	Sg	08 52 47.9	+0.6
CJM	**Chamela**	**0.88**	**317**	*i* P	Pg	08 52 45.9	-1.8
CJM				*i* S	Sg	08 52 57.4	-1.6
EZ5V		**0.98**	**51**	*i* P	Pg	08 52 48.4	-1.3
EZ5V				*i* S	Sg	08 53 00.3	-2.2
MMIG	**Aquila**	**1.16**	**119**	*i* P	Pg	08 52 49.9	-3.1
MMIG				*i* S	Sg	08 53 04.7	-3.3
ANIG	**Ahuacatlan**	**2.19**	**357**	*e*P	Pn	08 53 06.1	-1.9
ANIG				*i* S	Sn	08 53 31.5	-4.0

MAN 11 09:01:09, 18°.45N×120°.73E, h19km, mb4.3, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.16**	**222**	⇑*i*P	Pg	09 01 15.0	+1.5
APYP	**Conner**	**0.76**	**140**	*e*P	Pb	09 01 22.6	-1.0
APYP				*e*S	Sb	09 01 32.0	-1.5
ABRA	**Dolores**	**0.79**	**181**	*e*P	Pb	09 01 24.9	+0.7
ABRA				*e*S	Sb	09 01 34.9	+0.3
CAUP	**Cauayan**	**1.82**	**145**	*e*P	Pn	09 01 39.7	+0.3
BOLP	**Bolinao**	**2.20**	**201**	*e*P	Pn	09 01 47.6	+3.1
BALP	**Baler**	**2.81**	**163**	*e*P	Pn	09 01 54.7	+1.8

CSEM ***11*** *09:01:47.2, 40°.82N×39°.79E, h26km, MD2.6, After ISK*
ISK ***11*** *09:01:47.2, 40°.82N×39°.79E, h26km, MD2.6*
ISCJB ***11*** *09:01:48.6±0.8, 40°.84N±0°.07×39°.7E±0°.1, h24km±8km, Error ellipse: s-maj=16.3km s-min=7.5km az=41.6*

ISC 11 09:01:48.7±0.8, 40°.84N±0°.07×39°.6E±0°.1, h22km±8km, n9, σ1°.22/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTUT	**Trabzon**	**0.17**	**34**	*e*PG	**Pb**	**09 01 53.0**	**-0.7**
KTUT				*e*SG	**Sb**	**09 01 57.1**	**0.0**
KTUT	**Trabzon**	**0.17**	**34**	*e*Pg	**Pb**	**09 01 53.0**	**-0.7**
KTUT				*e*Sg	**Sb**	**09 01 57.1**	**0.0**
GUMT	**Gumushane**	**0.40**	**198**	*e*PG	**Pb**	**09 01 56.8**	**-0.3**
GUMT				*e*SG	**Sb**	**09 02 03.9**	**+1.0**
GUMT	**Gumushane**	**0.40**	**198**	*e*Pg	**Pb**	**09 01 56.8**	**-0.4**
GUMT				*e*Sg	**Sb**	**09 02 03.9**	**+1.0**
ESPY	**Espiye-Giresun**	**0.69**	**276**	*e*PG	**Pb**	**09 02 03.0**	**+0.8**
ESPY	**Espiye-Giresun**	**0.69**	**276**	*e*Pg	**Pb**	**09 02 03.0**	**+0.8**
EZC	**Erzincan**	**1.11**	**191**	*e*PN	**Pn**	**09 02 07.3**	**-1.7**
DDEM	**Demirkent**	**1.60**	**88**	*i* P	**Pn**	**09 02 13.5**	**-2.3**
DAGI	**Agillar**	**1.74**	**82**	*i* P	**Pn**	**09 02 19.4**	**+1.8**
DAGI				*i* S	**Sn**	**09 02 40.1**	**+1.0**

GUC 11 09:44:36.3±0.9, 23°.63S×66°.93W, h235km±41km, ML4.1, 1C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.73**	**292**	⇓*i*P	Pn	09 45 27.5	+2.6
PECH				*i* S	S	09 46 05.8	+2.6
PECH				AML	AML	09 46 06.7	
	comp=E,163nm,0.3s						
ANCH	**Antofagasta**	**3.19**	**268**	*e*P	Pn	09 45 31.7	+1.7
ANCH				*i* S	S	09 46 12.8	+0.4
ANCH				AML	AML	09 46 17.2	
	comp=E,314nm,0.0s						
MECH	**Mejillones**	**3.28**	**279**	⇑*i*P	Pn	09 45 33.3	+2.3
MECH				*i* S	S	09 46 16.4	+2.3
MECH				AML	AML	09 46 19.5	
	comp=N,116nm,0.2s						
HMBC	**Humberston**	**4.32**	**320**	*e*P	Pn	09 45 45.0	+1.7
HMBC				*i* S	S	09 46 38.1	+1.6
PSGC	**Pisagua**	**4.99**	**323**	*i* P	Pn	09 45 52.5	+0.9
PSGC				*i* S	S	09 46 52.4	+0.9
MNMC	**Miæe Miæ**	**5.12**	**330**	*i* P	Pn	09 45 55.6	+2.4
MNMC				*i* S	S	09 46 56.8	+2.4

MOS ***11*** *09:57:52.2±1.1, 4°.29S×101°.06E, h33km, mb4.7/9, Error ellipse: s-maj=36.7km s-min=10.6km az=93.8*
IDC ***11*** *09:57:52.2±1.2, 3°.93S×101°.05E, h0km, mb4.2/12, mb1 4.4/12, mb1mx4.2/23, mbtmp4.3/12, MS3.8/3, Ms1 3.8/3, ms1mx3.1/37, Error ellipse: s-maj=42.6km s-min=14.6km az=55.0*
ISCJB ***11*** *09:57:55.3±1.0, 4°.03S±0°.07×100°.82E±0°.07, h43km±7km, mb4.4/29, MS3.9/4, Error ellipse: s-maj=15.8km s-min=4.9km az=43.9*
NEIC ***11*** *09:57:56.0±0.5, 3°.96S×101°.03E, mb4.6/12, Error ellipse: s-maj=19.9km s-min=6.2km az=58.0*
DJA ***11*** *09:57:56, 3°.97S×100°.84E, h67km, MLv4.6/8*

ISC 11 09:57:56.3±2.1, 4°.04S±0°.06×100°.82E±0°.06, h34km±14km, h26km±1.2km: pP-P, n64, σ0°.77/60, mb4.4/29, MS3.9/4, 4C, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.51**	**328**	P	**Pn**	**09 58 21.5**	**+0.6**
KSI	**Kapahiang**	**1.82**	**78**	P	**Pn**	**09 58 25.5**	**+0.3**
MNAI	**Manna**	**2.16**	**98**	P	**Pn**	**09 58 30.1**	**+0.2**
MNAI				S	**Sn**	**09 58 55.4**	**-0.1**
PDSI	**Padang**	**3.13**	**354**	P	**Pn**	**09 58 42.9**	**-0.4**
PDSI				S	**Sn**	**09 59 19.4**	**-0.1**
SDSI	**Sungai Dareh**	**3.15**	**11**	P	**Pn**	**09 58 43.7**	**+0.1**
SISI	**Saibi**	**3.20**	**327**	P	**Pn**	**09 58 43.8**	**-0.5**
SISI				S	**Sn**	**09 59 20.1**	**-1.2**
LWLI	**Liwa**	**3.38**	**107**	P	**Pn**	**09 58 46.1**	**-0.5**
MDSI	**Maura Dua**	**3.38**	**98**	P	**Pn**	**09 58 47.1**	**+0.4**
MDSI				S	**Sn**	**09 59 26.9**	**+1.2**
PPI	**Padang Panjang**	**3.59**	**353**	P	**Pn**	**09 58 49.9**	**+0.3**
KASI	**Kota Agung**	**3.95**	**112**	P	**Pn**	**09 58 54.7**	**+0.1**
KULM	**Kulim**	**9.27**	**359**	*e*Pn	**Pn**	**10 00 07.4**	**-0.3**
	34nm,1.2s						
CMAR	**Chiang Mai Arr**	**22.43**	**355**	P	**P**	**10 02 52.0**	**-0.4**
	8.0nm,0.9s,mb4.2,baz=184,slow=8.7,SNR=29						
CHTO	**Chiang Mai**	**22.79**	**355**	*e*P	**P**	**10 02 56.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
CHTO	**Chiang Mai**	**22.79**	**355**	*e*P	**P**	**10 02 56.3**	**+0.2**
	comp=Z,6.6nm,0.9s,mb4.1						
FITZ	**Fitzroy Crossi**	**28.02**	**122**	P	**P**	**10 03 43.3**	**-1.2**
	comp=Z,4.8nm,0.9s,mb4.1,baz=283,slow=3.6,SNR=6.4						
FITZ				LR	LR	10 14 28.9	
	comp=Z,118nm,21.6s,MS3.4,baz=322,slow=36						
FITZ	**Fitzroy Crossi**	**28.02**	**122**	*e*P	**P**	**10 03 43.7**	**-0.8**
	comp=Z,14nm,1.0s,mb4.5						
FITZ				*e*		10 03 59.5	
FITZ				LR	LR	10 14 28.9	
SHL	**Shillong**	**30.68**	**344**	*e*P	pP	10 04 17.0	-0.7
ENH	**Enshi**	**35.12**	**13**	*e*P	**P**	**10 04 46.0**	**-0.6**
	comp=Z,11nm,0.7s,mb4.9						
ENH				*e*pP	pP	10 04 53.6	-2.9
WRA	**Warramunga Arr**	**36.28**	**119**	P	**P**	**10 04 55.9**	**-0.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=310,slow=8.8,SNR=26						
WRAB	**Tennant Creek**	**36.29**	**119**	*e*P	**P**	**10 04 55.9**	**-1.0**
WRAB				*e**PP	pP	10 05 04.2	-2.6
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**36.29**	**119**	*e*P	**P**	**10 04 55.9**	**-1.0**
	comp=Z,5.9nm,0.7s,mb4.6						
WRAB				*e*pP	pP	10 05 04.2	-2.6
WB2	**Warramunga Arr**	**36.29**	**119**	*e*P	**P**	**10 04 56.5**	**-0.4**
WB2				*e*pP	pP	10 05 04.4	-2.4
FORT	**Forrest**	**36.97**	**139**	*e*P	**P**	**10 05 02.4**	**-0.2**
	comp=Z,17nm,1.0s,mb4.8						
ASAR	**Alice Springs**	**37.41**	**125**	P	**P**	**10 05 06.7**	**+0.3**
	comp=Z,2.7nm,1.0s,mb4.0,baz=299,slow=7.8,SNR=15						
XAN	**Xi'an**	**38.64**	**11**	P	**P**	**10 05 16.2**	**-0.4**
XAN				pP	pP	10 05 23.7	-2.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
XAN				pmax	pmax		
	comp=Z,46nm,10.8s						
LZH	**Lanzhou**	**40.02**	**4**	⇑P	**P**	**10 05 29.3**	**+1.2**
LZH				pP	pP	10 05 34.0	-4.0
LZH				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
GTA	**Gaotai**	**43.25**	**359**	*e*P	**P**	**10 06 02.2**	**+7.8**
GTA				pP	pP	10 06 07.1	+2.7
GTA				sP	sP	10 06 09.2	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
STKA	**Stephens Creek**	**47.20**	**131**	P	**P**	**10 06 26.7**	**+0.7**
	comp=Z,2.3nm,0.9s,mb4.1,baz=311,slow=8.8,SNR=6.0						
STKA	**Stephens Creek**	**47.20**	**131**	*e*P	**P**	**10 06 26.2**	**+0.2**
STKA				*e**PP	pP	10 06 33.8	-2.3
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	**Stephens Creek**	**47.20**	**131**	*e*P	**P**	**10 06 26.2**	**+0.2**
	comp=Z,1.3nm,0.9s,mb3.9						
STKA				*e*pP	pP	10 06 33.8	-2.3
KSRS	**Korea Array**	**48.38**	**29**	P	**P**	**10 06 34.0**	**-1.0**
	comp=Z,4.0nm,0.9s,mb4.4,baz=219,slow=8.5,SNR=10						
SONM	**Songino Array**	**51.89**	**5**	P	**P**	**10 07 02.7**	**+1.3**
	comp=Z,6.6nm,0.8s,mb4.6,baz=186,slow=8.9,SNR=38						
ULN	**Ulaanbaatar**	**51.98**	**5**	*e*P	**P**	**10 07 03.1**	**+1.0**
ULN				*e**PP	pP	10 07 11.1	-1.2
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**51.98**	**5**	*e*P	**P**	**10 07 03.1**	**+1.0**
	comp=Z,6.3nm,0.9s,mb4.5						
ULN				*e*pP	pP	10 07 11.1	-1.2
TKM2	**Tokmak 2**	**52.02**	**337**	*e*P	**P**	**10 07 03.4**	**+0.9**
TKM2				*e**PP	pP	10 07 12.0	-0.7
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TKM2	**Tokmak 2**	**52.02**	**337**	*e*P	**P**	**10 07 03.4**	**+0.9**
	comp=Z,7.1nm,0.9s,mb4.6						
TKM2				*e*pP	pP	10 07 12.0	-0.7
EKS2	**Erkin-Say**	**52.55**	**335**	*e*P	**P**	**10 07 07.6**	**+1.2**
EKS2				*e**PP	pP	10 07 16.2	-0.4
EKS2				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
EKS2	**Erkin-Say**	**52.55**	**335**	*e*P	**P**	**10 07 07.5**	**+1.1**
	comp=Z,6.9nm,1.0s,mb4.5						
EKS2				*e*pP	pP	10 07 16.2	-0.4
MK31	**Makanchi Array**	**53.20**	**344**	*e*P	**P**	**10 07 11.9**	**+0.7**
MK31				*e**PP	pP	10 07 19.7	-1.7
MKAR	**Makanchi Array**	**53.20**	**344**	P	**P**	**10 07 12.1**	**+0.9**
	comp=Z,6.0nm,0.8s,mb4.6,baz=153,slow=8.2,SNR=47						
MKAR	**Makanchi Array**	**53.20**	**344**	P	**P**	**10 07 12.1**	**+0.9**
MJAR	**Matsushiro Arr**	**53.36**	**38**	P	**P**	**10 07 11.1**	**-1.5**
	comp=Z,2.7nm,0.9s,mb4.2,baz=217,slow=6.7,SNR=8.0						
ZAK	**Zakamensk**	**54.25**	**2**	*e*P	**P**	**10 07 18.8**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
KURK	**Kurchatov**	**57.78**	**344**	*e*P	**P**	**10 07 44.2**	**+0.2**
KURK				*e**PP	pP	10 07 52.1	-2.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KURK	**Kurchatov**	**57.78**	**344**	*e*P	**P**	**10 07 44.2**	**+0.2**
	comp=Z,8.9nm,0.9s,mb4.8						
KURK				*e*pP	pP	10 07 52.1	-2.3
ZALV	**Zalesovo Beam**	**59.31**	**349**	P	**P**	**10 07 55.2**	**+0.5**
	comp=Z,13nm,0.9s,mb5.0,baz=170,slow=4.5,SNR=7.2						
ZALV	**Zalesovo Beam**	**59.31**	**349**	P	**P**	**10 07 55.2**	**+0.5**
KLR	**Kul'dur**	**59.47**	**23**	*e*P	**P**	**10 07 52.0**	**-3.8**
BVAR	**Borovoye Array**	**62.37**	**340**	P	**P**	**10 08 15.2**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.2,baz=148,slow=8.7,SNR=8.3						
BRVK	**Borovoye**	**62.43**	**340**	⇑*e*P	**P**	**10 08 15.6**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.3						
BRVK				MLR	MLR		
	comp=Z,62nm,16.0s,MS3.9						
BOD	**Bodaibo**	**62.57**	**8**	*e*P	**P**	**10 08 16.3**	**-0.4**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
KMBO	**Kilima Mbogo**	**63.55**	**271**	*c*e*P	sP	10 08 36.0	-2.5
KMBO				pmax	pmax		
	comp=Z,9.0nm,0.2s						
ABKAR	**Akbulak array**	**63.81**	**331**	*e*P	**P**	**10 08 24.6**	**-0.5**
	comp=Z,7.8nm,1.0s,mb4.7						
ABKAR				*e*pP	pP	10 08 32.9	-2.7
MAW	**Mawson**	**68.52**	**195**	LR	LR	10 30 35.1	
	comp=Z,75nm,21.2s,MS3.9,baz=95,slow=29						
BRTR	**Keskin Array B**	**75.30**	**313**	P	**P**	**10 09 38.0**	**+1.9**
	comp=Z,0.9nm,0.7s,mb3.8,baz=150,slow=5.1,SNR=4.5						
SEY	**Seymchan**	**77.21**	**22**	⇑*e*P	**P**	**10 09 46.6**	**+0.1**
TIXI	**Tiksi**	**77.74**	**9**	*e*P	**P**	**10 09 47.3**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
TIXI	**Tiksi**	**77.74**	**9**	*e*P	**P**	**10 09 48.0**	**-1.3**
	comp=Z,6.7nm,1.1s,mb4.5						
TIXI				*e*pP	pP	10 09 55.5	-4.5
BILL	**Bilibino**	**84.78**	**20**	*e*P	**P**	**10 10 26.6**	**-0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
FINES	**FINESS Array B**	**86.29**	**332**	LR	LR	10 55 16.8	
	comp=Z,110nm,20.2s,MS4.2,baz=360,slow=40						
WCI	**Wyandotte Cave**	**145.36**	**10**	*e*PKP2	PKPab	10 17 31.1	0.0
TXAR	**Lajitas Array**	**145.78**	**40**	PKPbc	PKPbc	10 17 33.9	+1.3
	comp=Z,6.2nm,0.9s,baz=281,slow=2.0,SNR=48						
MIAR	**Mount Ida**	**146.84**	**22**	*e*PKP2	PKPab	10 17 36.1	-0.7
JCT	**Junction City**	**147.29**	**34**	*e*PKP2	PKPab	10 17 36.2	-2.5

ISCJB ***11*** *10:17:50.4±0.2, 17°.74S±0°.02×69°.39W±0°.05, h167km, mb4.3/64, Error ellipse: s-maj=6.2km s-min=2.9km az=169.1*
NEIC ***11*** *10:17:52.0±0.2, 17°.63S×69°.27W, mb4.3/48, Error ellipse: s-maj=8.2km s-min=4.6km az=55.0*
GUC ***11*** *10:17:51.7±0.4, 17°.93S×69°.64W, h174km±3km, ML4.8*
IDC ***11*** *10:17:51.7±0.5, 17°.67S×69°.27W, h162km±4km, mb4.2/13, mb1 4.3/16, mb1mx4.2/21, mbtmp4.2/16, Error ellipse: s-maj=10.4km s-min=8.6km az=93.0*

ISC 11 10:17:52.1±0.2, 17°.80S±0°.02×69°.32W±0°.05, h169km, h169km±1.0km: pP-P, n409, σ0°.70/405, mb4.3/64, 154C-144D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**1.35**	**191**	*e*P	**Pn**	**10 18 21.3**	**-0.3**
MNMC				*i* S	**Sn**	**10 18 44.1**	**-0.5**
MNMC				AML	AML	10 18 49.2	
	comp=N,9μm,0.2s						
LPAZ	**La Paz**	**1.89**	**37**	P	**Pn**	**10 18 26.5**	**-0.7**
	comp=N,269nm,0.3s,baz=232,slow=5.8						
LPAZ				S	**Sn**	**10 18 51.4**	**-2.9**
	comp=N,32nm,0.3s,baz=85,slow=20,SNR=7.3						
LPAZ	**La Paz**	**1.89**	**37**	*e*Pn	**Pn**	**10 18 26.5**	**-0.7**
LPAZ				*e*Sn	**Sn**	**10 18 48.9**	**-5.3**
PSGC	**Pisagua**	**1.94**	**203**	⇑*i*P	**Pn**	**10 18 26.1**	**-1.6**
PSGC				*i* S	**Sn**	**10 18 52.2**	**-3.2**
PSGC				AML	AML	10 18 54.1	
	comp=E,5μm,0.4s						
HMBC	**Humberston**	**2.52**	**192**	⇑*i*P	**Pn**	**10 18 33.4**	**-1.0**
HMBC				*i* S	**Sn**	**10 19 05.5**	**-1.8**
HMBC				AML	AML	10 19 08.9	
	comp=N,3μm,0.7s						
PB01	**Plate Boundary**	**3.23**	**183**	*i* P	**Pn**	**10 18 43.0**	**-0.1**
PB01				*i* S	**Sn**	**10 19 21.6**	**-1.1**
PB01				AML	AML	10 19 22.3	
	comp=E,2μm,0.2s						
PB04	**Plate Boundary**	**4.44**	**182**	*e*P	**Pn**	**10 18 59.3**	**+0.8**
PB04				*i* S	**Sn**	**10 19 50.4**	**-0.2**
LVC	**Limon Verde**	**4.80**	**176**	P	**Pn**	**10 19 04.5**	**+1.3**
	comp=E,24nm,0.3s,baz=344,slow=9.5,SNR=234						
LVC				S	**Sn**	**10 19 58.8**	**-0.1**
	comp=E,25nm,0.3s,baz=342,slow=10,SNR=5.8						
MECH	**Mejillones**	**5.38**	**191**	⇓*i*P	**Pn**	**10 19 09.9**	**-0.9**
MECH				*i* S	**Sn**	**10 20 10.2**	**-2.4**
SIV	**San Ignacio**	**8.10**	**78**	P	**Pn**	**10 19 44.5**	**-2.1**
	comp=E,7.0nm,0.3s,baz=272,slow=14,SNR=123						
SIV				S	**Sn**	**10 21 12.8**	**-4.4**
	comp=E,4.5nm,0.3s,baz=342,slow=19,SNR=6.8						
NNA	**Nana**	**9.29**	**307**	P	**Pn**	**10 19 56.9**	**-5.5**
	comp=E,16nm,0.3s,baz=140,slow=12,SNR=21						
NNA				S	**Sn**	**10 21 33.5**	**-12**
	comp=E,24nm,0.3s,baz=214,slow=18,SNR=11						
NNA	**Nana**	**9.29**	**307**	*e*Pn	**Pn**	**10 19 57.2**	**-5.2**
NNA				*e*Sn	**Sn**	**10 21 34.4**	**-12**
CFAA	**Coronel Fontan**	**13.78**	**176**	P	**Pn**	**10 21 00.2**	**-0.1**
	comp=E,0.1nm,0.3s,baz=349,slow=12,SNR=21						
ATAH	**Atahualpa**	**13.92**	**319**	P	**Pn**	**10 21 01.4**	**-0.9**
	comp=E,1.0nm,0.3s,baz=149,slow=7.8,SNR=6.6						
CPUP	**Villa Florida**	**13.97**	**129**	P	**Pn**	**10 21 02.2**	**-0.6**
	comp=E,0.3nm,0.3s,baz=321,slow=6.5,SNR=2.5						
CPUP	**Villa Florida**	**13.97**	**129**	Pn	**Pn**	**10 21 04.3**	**+1.4**
CPUP				*e*P		10 21 10.6	
OTAV	**Otavalo**	**20.05**	**332**	*e*P	**P**	**10 22 10.8**	**-1.5**
	comp=E,8.3nm,0.8s						
TRQA	**Tornquist**	**21.18**	**164**	*e*P	**P**	**10 22 25.9**	**+1.8**
	comp=E,3.7nm,0.8s,mb3.8						
TRQA				*e*		10 23 16.1	
SPB	**Sao Paulo**	**21.26**	**109**	*e*P	**P**	**10 22 25.2**	**+0.2**
	comp=E,9.9nm,0.5s,mb4.4						
PLCA	**Paso Flores**	**22.88**	**182**	P	**P**	**10 22 42.6**	**+1.8**
	comp=E,7.7nm,0.8s,mb4.2,baz=0.6,slow=11,SNR=26						
PLCA	**Paso Flores**	**22.88**	**182**	*e*P	**P**	**10 22 43.1**	**+2.2**
	comp=E,11nm,0.9s,mb4.3						
JTS	**JuntasAbangare**	**31.90**	**330**	P	**P**	**10 24 00.7**	**-0.9**
	comp=E,3.5nm,0.4s,mb4.4,baz=237,slow=14,SNR=6.9						
APG	**El Apazote**	**38.70**	**326**	P	**P**	**10 24 59.7**	**0.0**
	comp=E,17nm,0.7s,mb4.8,baz=148,slow=6.6,SNR=26						
SWET	**Sewanee**	**55.04**	**343**	*e*P	**P**	**10 27 04.1**	**-2.0**
JCT	**Junction City**	**56.26**	**328**	*e*P	**P**	**10 27 13.8**	**-1.1**
	comp=E,10.0nm,0.8s,mb4.7						
JCT				*e*pP	pP	10 27 51.8	-2.1
WVT	**Waverly**	**56.43**	**342**	*e*P	**P**	**10 27 13.5**	**-2.5**
	comp=E,6.0nm,0.7s,mb4.5						
MIAR	**Mount Ida**	**56.94**	**336**	*e*P	**P**	**10 27 17.7**	**-1.9**
	comp=E,7.2nm,0.6s,mb4.7		

baz=62
220A Playas Peak, P 62.09 323 ⇑P P 10 27 54.6 -0.4
baz=62,SNR=6.8
KSU1 Kansas State U 62.10 336 eP P 10 27 53.1 -1.8
comp=E,11nm,0.6s,mb4.9
121A Cookes Peak, D 62.13 324 ⇑P P 10 27 55.1 -0.1
baz=62
319A Douglas 62.15 322 ⇑P P 10 27 55.1 -0.3
baz=62,SNR=10
Y23A Lovelace Mesa, 62.23 326 ⇓P P 10 27 55.6 -0.3
baz=62
W25A X Bar L Ranch, 62.39 328 ⇓P P 10 27 55.8 -1.1
baz=62
219A White Tail Can 62.59 322 ⇑P P 10 27 57.9 -0.4
baz=63,SNR=6.3
318A Bisbee 62.62 321 ⇓P P 10 27 58.3 -0.2
baz=63,SNR=12
120A U Bar Ranch, L 62.62 323 ⇓P P 10 27 58.3 -0.2
baz=63,SNR=5.6
Z21A St. Cloud Mine 62.64 324 ⇑P P 10 27 58.7 +0.1
baz=63,SNR=7.2
BNM Barren Site 62.70 326 eP P 10 27 58.6 -0.4
comp=E,1.0nm,0.6s,mb3.8
Y22A Socorro 62.72 325 ⇑P P 10 27 58.9 -0.3
baz=63
LPM Los Pinos Moun 62.83 326 eP P 10 27 59.8 0.0
Z20A Nine Sixteen R 63.02 323 ⇑P P 10 28 01.1 0.0
baz=63
Y21A Point of Rocks 63.17 325 ⇑P P 10 28 02.4 +0.3
baz=63,SNR=8.5
LAZ Ladron 63.17 325 eP P 10 28 01.8 -0.2
comp=E,1.5nm,1.0s,mb3.8
ANMO Albuquerque 63.22 326 eP P 10 28 01.7 -0.7
comp=E,5.5nm,1.3s,mb4.2
217A Green Valley 63.35 321 ⇑P P 10 28 02.9 -0.5
baz=63
JFWS Jewell Farm 63.41 343 eP P 10 28 01.4 -2.1
comp=E,5.6nm,0.6s,mb4.6
118A Homack Ranch, 63.47 322 ⇓P P 10 28 03.7 -0.3
baz=64
Y20A Horse Springs, 63.48 324 ⇓P P 10 28 04.3 +0.2
baz=64
W22A Albuquerque 63.53 326 ⇑P P 10 28 04.5 +0.1
baz=64
X21A Alamocita Cree 63.55 325 ⇓P P 10 28 04.7 +0.1
baz=64
TUC Tucson 63.71 321 eP P 10 28 05.2 -0.5
comp=E,0.8nm,0.6s,mb3.7
117A Oracle 63.87 322 ⇓P P 10 28 06.4 -0.3
baz=64,SNR=6.8
216A Three Points, 63.90 321 ⇓P P 10 28 06.8 -0.1
baz=64
W21A San Fidel 63.98 326 ⇓P P 10 28 07.1 -0.3
baz=64
Y19A Nutrioso 64.01 324 ⇑P P 10 28 07.9 +0.3
baz=64,SNR=17
X20A Quemado 64.02 325 ⇑P P 10 28 07.5 -0.2
baz=64
Y18A Canyon Day Jun 64.32 323 ⇓P P 10 28 09.6 -0.1
baz=64,SNR=5.7
X19A St. Johns 64.37 324 ⇓P P 10 28 10.3 +0.3
baz=64
116A Eloy 64.44 321 ⇓P P 10 28 10.8 +0.4
baz=64
W20A Ramah 64.45 325 ⇓P P 10 28 10.9 +0.4
baz=64
214A Organ Pipe Nat 64.69 320 ⇑P P 10 28 12.0 -0.1
baz=65,SNR=10
Y17A Roosevelt 64.73 322 ⇑P P 10 28 12.4 +0.1
baz=65,SNR=11
X18A Snowflake 64.82 324 ⇑P P 10 28 12.9 +0.1
baz=65
Z16A Peralta Trail, 64.82 322 ⇑P P 10 28 12.8 -0.1
baz=65,SNR=5.5
115A Sonoran Desert 64.85 321 ⇑P P 10 28 13.3 +0.3
baz=65
SDCO Great Sand Dun 64.89 329 eP P 10 28 13.2 -0.1
comp=E,6.5nm,0.9s,mb4.5
SDCO epP pP 10 28 53.0 -0.2
V20A Brimhall 64.93 325 ⇑P P 10 28 13.8 +0.2
baz=65
T22A Edith 65.03 327 ⇓P P 10 28 14.7 +0.6
baz=65,SNR=5.7
X17A Forest Lakes 65.17 323 ⇑P P 10 28 15.7 +0.6
baz=65,SNR=10
V19A Window Rock 65.19 325 ⇓P P 10 28 15.4 +0.2
baz=65
Z15A Gila River Ind 65.22 321 ⇓P P 10 28 15.7 +0.3
baz=65
Y16A Circle Bar Ran 65.23 322 ⇑P P 10 28 15.7 +0.2
baz=65,SNR=8.0
114A Black Gap (USA 65.28 320 ⇑P P 10 28 16.0 +0.1
baz=65,SNR=8.7
X16A Lo Mia Camp, P 65.59 322 ⇓P P 10 28 18.1 +0.3
baz=66,SNR=9.9
V18A Ganado 65.67 324 ⇓P P 10 28 18.0 -0.2
baz=66
U19A Dine' College, 65.70 325 ⇓P P 10 28 17.9 -0.6
baz=66
Z14A Wintersburg 65.75 321 ⇑P P 10 28 18.6 -0.2
baz=66
Y15A Casa Rosa Ranc 65.79 322 ⇓P P 10 28 19.1 +0.1
baz=66
113A Mohawk Valley, 65.84 320 ⇓P P 10 28 19.7 +0.2
baz=66
R22A Saguache, Gunn 65.89 328 ⇓P P 10 28 19.9 +0.2
baz=66
S21A Coal Bank Pass 65.98 327 ⇓P P 10 28 20.3 0.0
baz=66
T19A Beclabito 66.00 326 ⇓P P 10 28 20.2 -0.2
baz=66,SNR=5.5
MVCO Mesa Verde 66.01 326 ⇓P P 10 28 20.2 -0.2
baz=66,SNR=5.2
MVCO Mesa Verde 66.01 326 eP P 10 28 20.3 -0.1
comp=E,8.9nm,1.0s,mb4.5
Z13A Yuma Proving G 66.06 320 ⇓P P 10 28 20.9 0.0
baz=66
V17A Tonalea, Kykot 66.09 324 ⇓P P 10 28 21.1 +0.1
baz=66
X15A Humboldt 66.11 322 ⇓P P 10 28 21.3 +0.2
baz=66
W16A Flagstaff 66.13 323 ⇓P P 10 28 21.5 +0.3
baz=66
ECSD EROS Data Cent 66.15 339 eP P 10 28 19.4 -1.7
comp=E,20nm,1.5s,mb4.7
U18A Rough Rock, Ch 66.16 325 ⇑P P 10 28 21.2 -0.2
baz=66,SNR=5.3
Y14A Wickenburg 66.18 321 ⇓P P 10 28 21.4 -0.1
baz=66
WUAZ Wupatki 66.34 323 ⇑P P 10 28 22.8 +0.2
baz=66,SNR=6.7
WUAZ Wupatki 66.34 323 eP P 10 28 23.2 +0.7
comp=E,6.7nm,0.9s,mb4.5
R21A Cimarron 66.40 328 ⇓P P 10 28 23.0 +0.2
baz=66
Q22A Crested Butte, 66.45 329 ⇑P P 10 28 23.3 +0.1
baz=66
X14A Yava 66.48 322 ⇑P P 10 28 23.5 0.0
baz=66,SNR=5.8
ISCO Idaho Springs 66.56 330 eP P 10 28 23.8 -0.1
comp=E,2.3nm,0.9s,mb4.0
Y13A Salome 66.59 321 ⇑P P 10 28 24.2 0.0
baz=67
U16A Tuba City 66.65 324 ⇑P P 10 28 24.9 +0.3
baz=67
R20A Redvale 66.68 327 ⇓P P 10 28 24.9 +0.2
baz=67,SNR=9.8
T18A Mexican Hat 66.69 326 ⇓P P 10 28 24.2 -0.5
baz=67,SNR=8.5
U17A Shonto 66.72 325 ⇑P P 10 28 25.1 +0.1
baz=67
SMCO Snowmass 66.73 329 eP P 10 28 25.6 +0.7
comp=E,4.8nm,0.7s,mb4.4
SMCO epP pP 10 29 05.0 -0.1
S19A Harvey Farm, M 66.75 326 ⇑P P 10 28 24.8 -0.3
baz=67,SNR=9.3
Q21A Lamborn Mesa, 66.77 328 ⇑P P 10 28 25.0 -0.2
baz=67
Y12C Blythe 66.97 320 ⇓P P 10 28 26.9 +0.3
baz=67
T17A Navajo Res., N 67.09 325 ⇓P P 10 28 27.8 +0.5
baz=67,SNR=11
PDMCI Parker Dam,Lak 67.11 321 ⇓P P 10 28 27.7 +0.2
baz=67
W14A Seligman 67.11 322 ⇓P P 10 28 27.8 +0.3
baz=67,SNR=6.5
X13A Yucca 67.12 321 ⇓P P 10 28 27.7 +0.2
baz=67

S18A Hurst Farm, Bl 67.16 326 ⇑P P 10 28 28.0 +0.3
baz=67,SNR=7.7
R19A Curley Farm, L 67.22 327 ⇑P P 10 28 27.7 -0.4
baz=67
V14A Boquillas Ranc 67.42 322 ⇑P P 10 28 29.9 +0.5
baz=68,SNR=7.0
T16A Glen Canyon Da 67.47 324 ⇑P P 10 28 30.0 +0.4
baz=68
BC3 Big Chuckw Mtn 67.48 319 ⇑P P 10 28 29.9 +0.1
baz=68,SNR=5.3
W13A Hualapai Mount 67.50 321 ⇑P P 10 28 30.5 +0.5
baz=68
U15A North Rim 67.51 323 ⇑P P 10 28 30.5 +0.6
baz=68,SNR=8.8
S17A Black Ridge (B 67.55 325 ⇓P P 10 28 30.4 +0.3
baz=68
MONP Monument Peak 67.58 318 ⇓P P 10 28 30.7 +0.3
baz=68
BAR Barrett 67.60 318 eP P 10 28 30.6 0.0
comp=E,5.9nm,0.9s,mb4.3
R18A Canyonlands Na 67.62 326 ⇑P P 10 28 30.4 -0.2
baz=68
IRM Iron Mountain 67.63 320 ⇓P P 10 28 30.8 0.0
baz=68,SNR=8.6
P20A De Beque 67.68 328 ⇑P P 10 28 30.8 -0.2
baz=68
N22A Wattenberg Ran 67.74 330 ⇓P P 10 28 31.8 +0.5
baz=68
LIC Lamto 67.78 75 eP P 10 28 32.0 -0.1
comp=E,97nm,1.0s
TIC Toumodi 67.94 75 eP P 10 28 33.1 -0.1
comp=E,11nm,0.2s,mb5.2
T15A Red Dirt Ranch 67.98 324 ⇑P P 10 28 33.6 +0.7
baz=68,SNR=9.3
U14A Mt Trumbull 68.01 323 ⇑P P 10 28 33.9 +0.8
baz=68,SNR=11
BELC Belle Mtn. 68.05 319 ⇑P P 10 28 33.7 +0.3
baz=68,SNR=5.2
PFO Pinyon Flat Ob 68.07 319 ⇓P P 10 28 33.8 +0.3
baz=68
PFO Pinyon Flat Ob 68.07 319 eP P 10 28 33.8 +0.3
comp=E,7.2nm,1.1s,mb4.3
R17A Hanksville Air 68.08 326 ⇑P P 10 28 33.4 -0.1
baz=68,SNR=9.8
P19A Cripple Cowboy 68.08 328 ⇑P P 10 28 33.5 0.0
baz=68,SNR=6.3
V13A Grand Canyon W 68.08 322 ⇓P P 10 28 33.8 +0.3
baz=68,SNR=9.6
O20A White River Ci 68.09 329 ⇑P P 10 28 33.5 0.0
baz=68
KIC Kosan Boka 68.09 75 eP P 10 28 34.2 +0.1
comp=E,123nm,0.8s
DBIC Dimbokro 68.10 75 P P 10 28 34.4 +0.3
comp=E,52nm,0.8s,mb5.3,baz=228,slow=6.6,SNR=54
DBIC Dimbokro 68.10 75 eP P 10 28 34.3 +0.2
comp=E,52nm,0.8s,mb5.3
W12A Cal Nev Ari 68.23 321 ⇑P P 10 28 34.9 +0.4
baz=68,SNR=5.1
GMRC Granite Mounta 68.36 320 ⇑P P 10 28 35.6 +0.4
baz=68,SNR=8.7
R16A Teasdale 68.39 325 ⇓P P 10 28 35.7 +0.3
baz=68
T14A Hurricane 68.41 323 ⇓P P 10 28 36.0 +0.5
baz=68,SNR=9.0
S15A Panguitch 68.44 324 ⇑P P 10 28 36.0 +0.3
baz=68
U13A Pakoon Wash 68.46 322 ⇓P P 10 28 36.3 +0.4
baz=68
SRU San Rafael 68.49 327 ⇑P P 10 28 35.8 -0.1
baz=69,SNR=5.9
SRU San Rafael 68.49 327 eP P 10 28 35.7 -0.2
comp=E,3.9nm,0.8s,mb4.2
V12A Nelson 68.51 321 ⇓P P 10 28 36.5 +0.3
baz=69,SNR=8.3
MURC Murrieta 68.54 318 ⇑P P 10 28 36.5 +0.1
baz=69
N20A Spence Gulch, 68.64 329 ⇓P P 10 28 36.7 -0.1
baz=69
O19A Miners Draw (B 68.65 328 ⇓P P 10 28 36.9 -0.1
baz=69,SNR=9.1
Q16A Castle Valley 68.69 326 ⇓P P 10 28 37.4 +0.2
baz=69
P18A Preston Nutter 68.72 327 ⇑P P 10 28 37.7 +0.2
baz=69,SNR=6.3
R15A Junction 68.77 325 ⇑P P 10 28 38.0 +0.3
baz=69
M21A Separation Pea 68.80 330 ⇑P P 10 28 37.6 -0.2
baz=69
HEC Hector,Ludlow 68.80 320 ⇑P P 10 28 38.8 +0.8
baz=69
U12A Valley of Fire 68.81 322 ⇓P P 10 28 38.4 +0.3
baz=69
T13A Saint George 68.85 323 ⇑P P 10 28 38.9 +0.6
baz=69,SNR=6.4
P17A Butcher Ranch, 68.87 327 ⇓P P 10 28 38.6 +0.3
baz=69
CCUT Cedar City 68.91 324 eP P 10 28 39.3 +0.7
comp=E,7.9nm,1.1s,mb4.4
CCUT epP pP 10 29 20.8 +1.7
V11A Goodsprings 68.93 321 ⇓P P 10 28 39.1 +0.3
baz=69
MSU Marysvale 68.94 325 eP P 10 28 39.6 +0.9
MSU epP pP 10 29 18.3 -0.9
S14A Cedar City 68.95 324 ⇓P P 10 28 39.2 +0.4
baz=69
TUQ Turquoise Moun 68.96 321 ⇑P P 10 28 39.6 +0.7
baz=69
L21A Rawlins 69.08 331 ⇑P P 10 28 39.2 -0.3
baz=69,SNR=6.6
M20A Sweetwater, Wa 69.10 330 ⇑P P 10 28 39.6 -0.1
baz=69
N19A John Jarvie Ra 69.13 329 ⇓P P 10 28 39.6 -0.3
baz=69,SNR=6.1
S13A Holt Ranch, En 69.21 323 ⇓P P 10 28 41.5 +1.0
baz=69,SNR=10.0
SHPR Sheep Range 69.22 322 eP P 10 28 41.2 +0.7
RSSD Black Hills 69.32 334 eP P 10 28 41.1 +0.1
comp=E,2.1nm,0.6s,mb4.0
RSSD epP pP 10 29 20.9 -0.5
Q15A Fillmore 69.39 325 ⇑P P 10 28 42.0 +0.4
baz=70
O17A Robinson Place 69.40 327 ⇓P P 10 28 42.1 +0.5
baz=70,SNR=7.3
GSC Goldstone 69.41 320 ⇑P P 10 28 42.4 +0.6
baz=70
GSC Goldstone 69.41 320 eP P 10 28 42.3 +0.5
comp=E,8.5nm,1.3s,mb4.3
N18A Larsen Ranch, 69.44 328 ⇓P P 10 28 42.1 +0.3
baz=70
SHOC Shoshone 69.48 321 ⇑P P 10 28 42.8 +0.6
baz=70
L20A Wamsutter 69.57 330 ⇑P P 10 28 42.4 -0.2
baz=70,SNR=5.2
R13A O'Grain Ranch, 69.69 324 ⇑P P 10 28 44.4 +1.0
baz=70,SNR=5.8
T11A Corn Creek, Al 69.76 322 ⇑P P 10 28 44.5 +0.7
baz=70,SNR=9.8
S12A Delamar Landin 69.80 323 ⇓P P 10 28 44.5 +0.5
baz=70
O16A Springville 69.80 327 ⇓P P 10 28 44.7 +0.7
baz=70
U10A Ash Meadows, A 69.86 321 ⇑P P 10 28 45.3 +0.8
baz=70
EDW2 Edwards Air Fo 69.86 319 ⇓P P 10 28 44.6 +0.1
baz=70
Q14A Sevier Lake (B 69.88 325 ⇓P P 10 28 45.2 +0.7
baz=70,SNR=8.9
M18A Lyman 69.97 329 ⇓P P 10 28 44.7 -0.4
baz=70
N17A Moffit Pass 70.00 328 ⇑P P 10 28 45.6 +0.3
baz=70,SNR=7.2
JLU Jordanelle 70.06 327 eP P 10 28 46.3 +0.7
comp=E,7.9nm,1.2s,mb4.3
K20A Yellowstone Ra 70.07 330 ⇓P P 10 28 45.0 -0.6
baz=70,SNR=5.4
L19A Farson 70.13 329 ⇓P P 10 28 45.9 -0.1
baz=70,SNR=5.3
R12A Pony Springs, 70.16 324 ⇓P P 10 28 47.2 +0.9
baz=70,SNR=10
P14A Drum Mountains 70.19 325 ⇓P P 10 28 47.2 +0.8
baz=70,SNR=9.5
FURC Furnace Creek, 70.21 321 ⇑P P 10 28 47.2 +0.5
baz=70,SNR=6.6
Q13A Wheeler Ranch, 70.26 324 ⇑P P 10 28 47.3 +0.4
baz=70,SNR=5.1
N16A Rees Ranch, Co 70.27 327 ⇑P P 10 28 47.2 +0.3
baz=70
M17A Scullys Gap (B 70.31 328 ⇑P P 10 28 47.0 -0.1

baz=70
MPMC Manual Prospec 70.32 320 ⇑P P 10 28 47.3 -0.1
baz=70
L18A Fontenelle, Gr 70.33 329 ⇓P P 10 28 47.0 -0.2
baz=70,SNR=6.8
S11A Rachel 70.34 322 ⇑P P 10 28 48.1 +0.7
baz=70
K19A Absolon Red Bu 70.44 330 ⇓P P 10 28 47.2 -0.7
baz=70,SNR=5.5
DUG Dugway 70.49 326 ⇓P P 10 28 48.6 +0.4
baz=71,SNR=5.6
DUG Dugway 70.49 326 eP P 10 28 48.3 +0.1
comp=E,6.8nm,1.3s,mb4.2
P13A Bates Ranch, G 70.61 325 ⇓P P 10 28 49.8 +0.8
baz=71,SNR=7.1
ISA Isabella 70.67 319 ⇑P P 10 28 50.2 +0.7
baz=71,SNR=5.2
ISA Isabella 70.67 319 eP P 10 28 49.9 +0.5
comp=E,3.5nm,0.6s,mb4.3
ISA epP pP 10 29 29.3 -0.7
R11A Troy Canyon, C 70.73 323 ⇑P P 10 28 50.5 +0.8
baz=71,SNR=6.3
BW06 Boulder Array 70.73 330 ⇓P P 10 28 49.4 -0.2
baz=71
PDAR Pinedale Array 70.73 330 P P 10 28 48.6 -1.1
comp=E,1.6nm,1.0s,mb3.7,baz=117,slow=7.6,SNR=7.5
PDAR pP pP 10 29 30.2 -0.1
comp=E,0.6nm,0.8s,baz=117,slow=5.2,SNR=2.5
Q12A Willow Creek R 70.77 324 ⇓P P 10 28 50.7 +0.7
baz=71
HWUT Hardware Ranch 70.86 328 eP P 10 28 49.9 -0.5
comp=E,2.0nm,0.8s,mb3.9
K18A Toltan Ranch, 70.87 329 ⇑P P 10 28 50.8 +0.4
baz=71
S10A Tonopah Range, 71.02 322 ⇑P P 10 28 52.1 +0.5
baz=71,SNR=8.7
PKM Peak Mountain 71.03 318 ⇓P P 10 28 52.1 +0.5
baz=71
L16A Fish Haven 71.09 328 ⇑P P 10 28 52.1 +0.2
baz=71
R10A Warm Springs 71.10 323 ⇓P P 10 28 53.1 +1.1
baz=71,SNR=9.6
Q11A Duckwater 71.11 323 ⇑P P 10 28 52.6 +0.6
baz=71,SNR=6.9
P12A McGill 71.12 324 ⇓P P 10 28 52.7 +0.6
baz=71,SNR=5.3
N14A Grayback Hills 71.16 326 ⇑P P 10 28 52.3 +0.1
baz=71
VES Vestal, Richgr 71.17 319 ⇓P P 10 28 52.6 +0.2
baz=71
M15A Larsen Ranch, 71.21 327 ⇑P P 10 28 52.3 -0.2
baz=71,SNR=5.7
J18A Kendall Valley 71.29 330 ⇓P P 10 28 52.6 -0.4
baz=71,SNR=9.5
K17A Gardner Place, 71.38 329 ⇓P P 10 28 53.3 -0.2
baz=72
SMMC Simmler 71.41 318 ⇑P P 10 28 54.6 +0.7
baz=72
Q10A Clear Creek Ra 71.52 323 ⇑P P 10 28 55.5 +1.1
baz=72
I18A Diamond G Ranc 71.57 330 ⇑P P 10 28 54.7 +0.1
baz=72,SNR=6.2
L15A Malad City 71.57 328 ⇑P P 10 28 54.3 -0.4
baz=72,SNR=7.7
O12A Currie 71.58 325 ⇓P P 10 28 55.2 +0.4
baz=72,SNR=9.6
ULM Lac du Bonnet 71.69 342 P P 10 28 53.3 -1.9
comp=E,11nm,0.5s,mb4.9,baz=152,slow=6.3,SNR=38
ULM pP pP 10 29 33.7 -2.3
comp=E,2.9nm,0.6s,baz=123,slow=4.0,SNR=2.9
ULM Lac du Bonnet 71.69 342 eP P 10 28 53.2 -2.0
comp=E,9.7nm,0.5s,mb4.8
ULM epP pP 10 29 33.1 -2.8
M14A Sheep Mountain 71.71 327 ⇓P P 10 28 55.6 0.0
baz=72,SNR=6.1
J17A Brown Place, J 71.74 329 ⇑P P 10 28 55.8 +0.1
baz=72,SNR=5.5
K16A Soda Springs 71.78 329 ⇓P P 10 28 56.2 +0.3
baz=72,SNR=5.8
TPAW Teton Pass 71.95 329 eP P 10 28 56.5 -0.5
comp=E,5.8nm,1.3s,mb4.2
O11A Cowboy Ranch, 71.99 324 ⇓P P 10 28 57.4 +0.2
baz=72
L14A Malta 72.03 327 ⇑P P 10 28 57.5 +0.1
baz=72
I17A Pilgrim Ck. 72.09 330 ⇓P P 10 28 58.0 +0.3
baz=72
N12A Clover Valley, 72.15 325 ⇑P P 10 28 58.0 -0.2
baz=72
IMW Indian Meadow 72.25 330 eP P 10 28 58.5 -0.2
comp=E,2.8nm,0.8s,mb4.0
NVAR Mina Array Bea 72.37 322 P P 10 28 59.8 +0.3
comp=E,2.7nm,0.9s,mb4.0,baz=151,slow=6.9,SNR=17
NVAR pP pP 10 29 40.0 -0.3
comp=E,0.9nm,0.8s,baz=149,slow=7.2,SNR=2.5
QSPA South Pole Qui 72.37 180 eP P 10 29 01.6 +2.7
comp=E,4.7nm,1.0s,mb4.2
RLMT Red Lodge 72.39 332 ⇓P P 10 28 59.8 +0.3
baz=72
L13A Double Diamond 72.44 327 ⇑P P 10 28 60.0 +0.1
baz=72
M12A Wells 72.47 326 ⇓P P 10 29 00.3 +0.2
baz=72
LKWY Lake 72.49 330 eP P 10 29 01.4 +1.3
comp=E,4.8nm,1.0s,mb4.2
LKWY epP pP 10 29 40.8 -0.1
I16A Newdale 72.50 329 ⇑P P 10 29 00.6 +0.5
baz=73
J15A Blackfoot 72.61 329 ⇑P P 10 29 01.3 +0.5
baz=73
G18A Lazy EL Ranch, 72.68 331 ⇑P P 10 29 01.4 +0.2
baz=73
K13A Stover Farm, H 72.91 327 ⇓P P 10 29 02.8 +0.2
baz=73
M11A Holland Ranch, 72.96 325 ⇑P P 10 29 03.3 +0.3
baz=73,SNR=7.2
H16A Russell Place, 73.00 330 ⇑P P 10 29 03.8 +0.7
baz=73,SNR=6.0
L12A House Creek Ra 73.04 326 ⇓P P 10 29 04.1 +0.7
baz=73
I15A Monteview 73.08 329 ⇓P P 10 29 04.2 +0.6
baz=73
F18A Big Timber 73.20 332 ⇑P P 10 29 04.3 +0.1
baz=73,SNR=6.8
G17A Pierce Place, 73.22 331 ⇑P P 10 29 04.4 0.0
baz=73
K12A Draper Farm, C 73.33 327 ⇑P P 10 29 05.7 +0.7
baz=73
L11A Cat Creek Ranc 73.45 326 ⇓P P 10 29 06.3 +0.5
baz=74,SNR=5.8
J13A Cove Ranch, Pi 73.49 328 ⇑P P 10 29 06.3 +0.3
baz=74
I14A Mackay 73.50 328 ⇑P P 10 29 06.6 +0.5
baz=74,SNR=6.4
F17A Fitzpatrick Pl 73.62 331 ⇓P P 10 29 06.8 +0.1
baz=74
G16A Moss Hill, Enn 73.65 330 ⇓P P 10 29 07.4 +0.5
baz=74
HLID Hailey 73.73 328 ⇑P P 10 29 08.0 +0.6
baz=74,SNR=7.9
HLID Hailey 73.73 328 eP P 10 29 08.0 +0.6
comp=E,3.4nm,0.8s,mb4.1
L10A Juniper Basin 73.77 325 ⇓P P 10 29 08.1 +0.4
baz=74,SNR=6.2
E18A Harlowton 73.79 332 ⇑P P 10 29 07.7 0.0
baz=74,SNR=5.9
I13A Wildhorse Cree 73.83 328 ⇓P P 10 29 08.5 +0.5
baz=74,SNR=5.6
PAHR Pah Rah Range 73.83 322 eP P 10 29 09.4 +1.3
comp=E,17nm,1.0s,mb4.7
J12A Stokes Ranch, 73.86 327 ⇓P P 10 29 08.8 +0.7
baz=74
MCMT McKenzie Canyo 73.86 329 eP P 10 29 08.7 +0.5
comp=E,2.2nm,1.0s,mb3.8
BOZ Bozeman (W) 73.88 331 eP P 10 28 59.4 -8.8
comp=E,1.8nm,0.6s,mb4.0
BOZ epP pP 10 29 42.4 -6.7
G15A Dillon 73.93 330 ⇑P P 10 29 09.0 +0.5
baz=74
H14A Leadore 73.96 329 ⇑P P 10 29 09.4 +0.7
baz=74
F16A Kennard Place, 73.98 331 ⇑P P 10 29 08.7 -0.1
baz=74
K11A Parker Ranch, 74.02 326 ⇑P P 10 29 09.6 +0.6
baz=74
DLMT Dillon 74.13 330 eP P 10 29 09.6 -0.1
comp=E,1.8nm,0.7s,mb3.9
E17A Martinsdale 74.14 332 ⇑P P 10 29 09.7 0.0

baz=74,SNR=6.1
I12A Atlanta 74.26 327 ⇑P P 10 29 10.8 +0.3
baz=74
MFID Camas Ranch 74.36 327 ⇓P P 10 29 11.5 +0.5
baz=74,SNR=7.6
H13A Challis 74.36 328 ⇑P P 10 29 11.5 +0.5
baz=74,SNR=5.7
F15A Butte 74.43 330 ⇑P P 10 29 11.7 +0.3
baz=74
K10A MacKenzie Ranc 74.47 326 ⇓P P 10 29 12.0 +0.3
baz=74,SNR=5.1
BEKR Beckwourth 74.51 322 ⇑P P 10 29 12.5 +0.5
baz=75
D17A Six Diamond Ra 74.58 332 ⇓P P 10 29 12.3 0.0
baz=75,SNR=6.8
H12A Diamond D Ranc 74.65 328 ⇑P P 10 29 13.0 +0.2
baz=75
G13A Cobalt 74.73 329 ⇓P P 10 29 13.6 +0.5
baz=75,SNR=7.9
I11A Placerville 74.77 327 ⇑P P 10 29 14.1 +0.7
baz=75
F14A Wisdom 74.83 330 ⇑P P 10 29 14.3 +0.6
baz=75
EGMT Eagleton 74.84 333 ⇓P P 10 29 13.3 -0.4
baz=75,SNR=5.2
EGMT Eagleton 74.84 333 *eP* **P 10 29 13.3 -0.4**
comp=E,5.5nm,1.1s,mb4.1
D16A Dana Ranch, Ca 74.88 332 ⇑P P 10 29 14.4 +0.4
baz=75,SNR=7.8
E15A Deer Lodge 74.93 331 ⇓P P 10 29 14.6 +0.3
baz=75
C17A Wharram Farm, 74.98 332 ⇓P P 10 29 14.2 -0.3
baz=75
B18A Beardsley Farm 75.13 333 ⇑P P 10 29 15.6 +0.2
baz=75
F13A Darby 75.28 329 ⇓P P 10 29 16.5 +0.2
baz=75,SNR=6.7
E14A Clinton 75.33 330 ⇓P P 10 29 16.9 +0.4
baz=75
D15A Lincoln 75.33 331 ⇓P P 10 29 17.0 +0.5
baz=75,SNR=5.5
H11A Donnelly 75.35 328 ⇓P P 10 29 16.7 0.0
baz=75
B17A L&G Farms, Che 75.49 333 ⇑P P 10 29 17.1 -0.4
baz=76
C16A Fuhringer Ranc 75.54 332 ⇓P P 10 29 17.5 -0.3
baz=76
A18A Metzger Ranch, 75.57 334 ⇑P P 10 29 17.6 -0.2
baz=76
E13A Victor 75.68 330 ⇑P P 10 29 19.0 +0.5
baz=76,SNR=8.6
F12A Elk City 75.71 329 ⇑P P 10 29 18.7 0.0
baz=76
I09A Lost Marbles R 75.75 326 ⇑P P 10 29 19.1 +0.1
baz=76
MOD Modoc 75.79 323 *eP* **P 10 29 19.4 +0.2**
comp=E,7.6nm,1.1s,mb4.2
MOD *epP* pP 10 30 00.7 +0.3
D14A Greenough 75.82 331 ⇑P P 10 29 19.6 +0.3
baz=76
C15A Salmond Ranch, 75.91 332 ⇓P P 10 29 20.2 +0.4
baz=76,SNR=6.7
SLMT Seeley Lake 75.93 331 *eP* **P 10 29 20.1 +0.1**
comp=E,1.8nm,0.9s,mb3.7
G11A Walters Elk Ra 75.96 328 ⇓P P 10 29 20.5 +0.3
baz=76,SNR=5.0
BMO Blue Mountains 76.12 327 *eP* **P 10 29 20.9 -0.2**
comp=E,16nm,1.6s,mb4.4
F11A Grangeville 76.25 328 ⇓P P 10 29 21.7 -0.1
baz=76,SNR=5.6
D13A Huson 76.28 330 ⇓P P 10 29 21.7 -0.2
baz=76
B15A Bradely Ranch, 76.29 332 ⇑P P 10 29 21.5 -0.5
baz=76,SNR=5.1
E12A Beaver Dam Sad 76.33 329 ⇑P P 10 29 22.2 0.0
baz=76
C14A Swan Lake 76.43 331 ⇑P P 10 29 23.0 +0.3
baz=76
TOA0 Torodi Ar. Sit 76.51 71 *eP* **P 10 29 23.4 -0.5**
TOA0 *epP* pP 10 30 04.0 -1.2
TORD Torodi Ar. Bea 76.51 71 P **P 10 29 23.9 -0.1**
comp=E,28nm,0.8s,mb4.9,baz=256,slow=5.5,SNR=108
TORD pP pP 10 30 04.5 -0.6
comp=E,4.5nm,0.9s,baz=258,slow=5.0,SNR=1.7
E11A Bogner Ranch, 76.60 329 ⇓P P 10 29 23.8 0.0
baz=77
H08A Prairie City 76.61 326 ⇑P P 10 29 24.9 +1.0
baz=77
K05A Summer Lake 76.65 324 ⇓P P 10 29 24.9 +0.8
baz=77
G09A Cove 76.65 327 ⇑P P 10 29 25.1 +1.0
baz=77,SNR=8.4
D12A Red Ives Fores 76.67 330 ⇓P P 10 29 24.4 +0.3
baz=77
C13A Hot Springs 76.75 330 ⇓P P 10 29 25.0 +0.4
baz=77
I07A Izee 76.77 325 ⇑P P 10 29 25.3 +0.6
baz=77,SNR=5.7
F09A S2 Ranch, Elgi 77.01 327 ⇑P P 10 29 26.5 +0.5
baz=77
D11A Klaveano Farm, 77.15 329 ⇓P P 10 29 27.1 +0.3
baz=77
A14A Double T Ranch 77.16 332 ⇑P P 10 29 26.8 0.0
baz=77
B13A Whitefish 77.20 331 ⇑P P 10 29 27.4 +0.3
baz=77
G08A Pilot Rock 77.28 327 ⇑P P 10 29 27.9 +0.3
baz=77
A13A Flathead Natio 77.58 331 ⇓P P 10 29 29.5 +0.3
baz=78
E09A Wood Farm, Sta 77.68 328 ⇓P P 10 29 30.2 +0.5
baz=78
B12A Libby 77.79 331 ⇓P P 10 29 30.9 +0.5
baz=78
G06A Carlson Farm, 78.13 326 ⇑P P 10 29 33.4 +1.1
baz=78
D09A Jones Farm, Ri 78.13 328 ⇓P P 10 29 32.9 +0.6
baz=78
A11A Hall Mountain, 78.50 331 ⇑P P 10 29 34.4 +0.2
baz=79
C09A Chrisman Ranch 78.62 329 ⇑P P 10 29 35.3 +0.4
baz=79
FCC Fort Churchill 78.96 347 *eP* **P 10 29 35.8 -0.7**
comp=E,0.1nm,0.6s
B09A Rice 78.98 329 ⇑P P 10 29 37.0 +0.1
baz=79
C07A Waterville 79.44 328 ⇑P P 10 29 38.9 -0.5
baz=80
B08A Colville Reser 79.52 329 ⇑P P 10 29 39.9 +0.1
baz=80
F04A Amboy 79.54 325 ⇑P P 10 29 40.3 +0.3
baz=80
A09A Danville 79.57 329 ⇓P P 10 29 40.3 +0.3
baz=80
A08A Turner Farm, O 79.89 329 ⇓P P 10 29 41.9 +0.2
baz=80,SNR=5.7
B07A Winthrop 79.98 328 ⇓P P 10 29 42.1 -0.1
baz=80
D05A Enumclaw 80.11 327 ⇓P P 10 29 43.9 +0.9
baz=80
EDM Edmonton 80.27 335 *eP* **P 10 29 42.6 -1.1**
EDM *epP* pP 10 30 24.4 -0.9
A07A Ashnola River, 80.50 329 ⇓P P 10 29 45.3 +0.2
baz=80
TSUM Tsumeb 81.49 107 *eP* **P 10 29 52.7 +1.7**
comp=E,6.0nm,0.7s,mb4.3
ESDC Sonseca Array 83.49 45 P **P 10 30 01.4 +0.5**
comp=E,1.5nm,0.7s,mb3.8,baz=242,slow=6.7,SNR=6.8
TAM Tamanrasset 83.52 64 *eP* **P 10 30 02.5 +1.1**
comp=E,8.8nm,1.3s,mb4.3
YKA Yellowknife Ar 87.59 341 P **P 10 30 20.1 -0.4**
comp=E,5.1nm,0.6s,mb4.6,baz=134,slow=4.8,SNR=94
YKA pP pP 10 31 02.6 -0.2
comp=E,2.7nm,0.8s,baz=136,slow=5.0,SNR=4.5
MAW Mawson 87.97 163 P **P 10 30 24.4 +1.9**
comp=E,0.8nm,0.3s,mb4.0,baz=225,slow=5.4,SNR=8.5
MAW Mawson 87.97 163 *eP* **P 10 30 24.2 +1.8**
comp=E,0.9nm,0.7s,mb3.7
MFF Saint Martin d 89.23 40 *eP* **P 10 30 27.8 -0.8**
MTLF Montolieu 89.29 44 *eP* **P 10 30 28.4 -0.6**
comp=E,7.5nm,1.0s,mb4.3
GRR Gorron 89.62 38 *eP* **P 10 30 29.2 -1.2**
comp=E,16nm,0.9s,mb4.6
LDF La Druitiere 90.15 38 *eP* **P 10 30 31.8 -1.1**
comp=E,7.5nm,0.8s,mb4.3
DLBC Dease Lake 90.76 333 *eP* **P 10 30 35.6 +0.1**
KEST Kesra 91.39 53 P **P 10 30 39.1 +0.1**
comp=E,0.5nm,0.5s,mb3.8,baz=225,slow=18,SNR=2.9

LPL La Plagne 93.13 43 *eP* **P 10 30 47.2 +0.4**
comp=E,14nm,1.2s,mb4.6
LPG La Plagne 93.13 43 *eP* **P 10 30 47.4 +0.6**
comp=E,9.2nm,0.9s,mb4.6
STKA Stephens Creek 122.39 211 PKP PKPdf 10 36 28.2 +0.6
comp=E,1.1nm,0.6s,baz=97,slow=6.5,SNR=4.7
PETK Petropavlovsk- 129.35 325 PKP PKPdf 10 36 41.0 +0.9
comp=E,1.8nm,0.7s,baz=90,slow=7.2,SNR=3.7
BVAR Borovoye Array 132.93 32 SKPbc SKPbc 10 40 02.0 +3.1
comp=E,1.6nm,0.6s,baz=281,slow=3.8,SNR=11
ASAR Alice Springs 132.96 210 PKP PKPdf 10 36 48.8 +0.8
comp=E,0.9nm,0.6s,baz=131,slow=1.9,SNR=25
ASAR SKPbc SKPbc 10 40 02.0 +2.0
comp=E,0.8nm,0.9s,baz=151,slow=4.4,SNR=6.1
WRA Warramunga Arr 135.88 213 PKP PKPdf 10 36 53.8 +0.2
comp=E,3.7nm,0.9s,baz=149,slow=1.8,SNR=15
WRA SKPbc SKPbc 10 40 11.6 +2.1
comp=E,1.5nm,0.9s,baz=138,slow=2.8,SNR=7.5
ZALV Zalesovo Beam 138.75 23 SKPbc SKPbc 10 40 19.7 +3.0
comp=E,1.7nm,0.3s,baz=306,slow=5.0,SNR=4.9
MKAR Makanchi Array 142.81 33 PKP PKPdf 10 37 02.7 -2.6
comp=E,0.2nm,0.6s,baz=258,slow=4.3,SNR=3.1
MKAR SKPbc SKPbc 10 40 29.8 +2.3
comp=E,1.3nm,0.8s,baz=319,slow=3.4,SNR=10
WMQ Urumqi 147.62 32 *e*PKPbc PKPbc 10 37 14.3 -2.3
MJAR Matsushiro Arr 149.38 313 PKPbc PKPbc 10 37 22.0 +0.7
comp=E,2.1nm,0.5s,baz=92,slow=1.6,SNR=10
SONM Songino Array 149.84 6 PKPbc PKPbc 10 37 22.9 +0.9
comp=E,1.8nm,0.6s,baz=356,slow=1.4,SNR=12
SONM pPKPbc pPKPbc 10 38 05.1 -1.2
comp=E,2.0nm,0.9s,baz=338,slow=1.9,SNR=4.4
CN2 Changchun 151.24 337 *e*PKPbc PKPdf 10 37 19.6 +0.2
KSRS Korea Array 155.25 326 PKPbc PKPdf 10 37 35.2 +10
comp=E,1.1nm,0.7s,baz=14,slow=2.6,SNR=4.9
HHC Hu-ho-hao-te 157.02 358 *e*PKP PKPdf 10 37 27.6 0.0
HHC pPKP pPKPdf 10 38 09.6 -2.6
HHC sPKP 10 38 26.9
HHC PKS 10 41 00.6
HHC PP PP 10 41 40.4 +3.8
HHC SKS SKSdf 10 44 16.3 -1.5
HHC SKKS SKKSac 10 48 10.9 +0.6
HHC SS SS 11 01 16.8 +1.4
HHC AMB AMB
comp=Z,140nm,5.8s
HHC LR LR
comp=N,160nm,23.9s
HHC LR LR
comp=E,220nm,22.9s
HHC LR LR
comp=Z,170nm,20.4s
CD2 Chengdu 165.51 24 PKP PKPdf 10 37 36.7 -0.1
CMAR Chiang Mai Arr 168.82 85 PKPab PKPab 10 38 51.4 +0.2
comp=Z,0.9nm,0.7s,baz=285,slow=7.0,SNR=4.9
GYA Guiyang 170.62 23 *e*PKP PKPdf 10 37 39.0 -1.4
GYA pPKP pPKPdf 10 38 22.4 -2.8
GYA sPKP 10 38 39.8
GYA PKPab PKPab 10 38 57.2 -1.4
GYA PKS 10 41 10.0
GYA PP PP 10 42 48.9 +0.7
GYA AMB AMB
comp=Z,60nm,7.8s

*NEIC **11** 10:27:30.3, 18°.07N×99°.93W, h50km, MD3.8(MEX), After MEX.*
MEX 11 10:27:30.3±0.9, 18°.06N×99°.91W, h53km±10km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.51**	**49**	*i*	P		Pn	10 27 41.0	-0.9
PLIG				*i*	S		Sn	10 27 48.0	-2.2
PLIG	**Platanillo**	**0.51**	**49**	*i*	P		Pn	10 27 41.0	-0.9
PLIG				*i*	S		Sn	10 27 48.0	-2.2
CAIG	**El Cayaco**	**1.06**	**199**	*i*	P		Pn	10 27 47.9	-1.0
CAIG				*i*	S		Sn	10 28 00.6	-2.1
CAIG	**El Cayaco**	**1.06**	**199**	*i*	P		Pn	10 27 47.9	-1.0
CAIG				*i*	S		Sn	10 28 00.6	-2.1
YAIG	**Yautepec**	**1.13**	**45**	*i*	P		Pn	10 27 48.9	-0.9
YAIG				*i*	S		Sn	10 28 02.0	-2.3
YAIG	**Yautepec**	**1.13**	**45**	*i*	P		Pn	10 27 48.9	-0.9
YAIG				*i*	S		Sn	10 28 02.0	-2.3
ACX	**Acapulco**	**1.19**	**180**	*i*	P		Pn	10 27 48.8	-1.9
ACX				*i*	S		Sn	10 28 03.1	-2.7
ACX	**Acapulco**	**1.19**	**180**	*i*	P		Pn	10 27 48.8	-1.9
ACX				*i*	S		Sn	10 28 03.1	-2.7
MZVM		**1.29**	**30**	*i*	P		Pn	10 27 51.0	-1.1
MZVM				*i*	S		Sn	10 28 06.5	-1.9
UNM	**Universidad Na**	**1.44**	**29**	*i*	P		Pn	10 27 53.0	-1.1
UNM				*i*	S		Sn	10 28 10.5	-1.3
UNM	**Universidad Na**	**1.44**	**29**	*i*	P		Pn	10 27 53.0	-1.1
UNM				*i*	S		Sn	10 28 10.5	-1.3
ZIIG	**Zihuatanejo**	**1.55**	**253**	*i*	P		Pn	10 27 52.6	-2.9
ZIIG				*i*	S		Sn	10 28 11.4	-3.1
ZIIG	**Zihuatanejo**	**1.55**	**253**	*i*	P		Pn	10 27 52.6	-2.9
ZIIG				*i*	S		Sn	10 28 11.4	-3.1
PPM	**Popocatepetl**	**1.58**	**50**	*i*	P		Pn	10 27 54.9	-1.0
PPM				*i*	S		Sn	10 28 13.0	-2.2
PPM	**Popocatepetl**	**1.58**	**50**	*i*	P		Pn	10 27 54.9	-1.0
PPM				*i*	S		Sn	10 28 13.0	-2.2
PBVM	**Pinon**	**1.58**	**30**	*e*	P		Pn	10 27 53.9	-2.0
PBVM				*i*	S		Sn	10 28 12.9	-2.4
PBVM	**Pinon**	**1.58**	**30**	*e*	P		Pn	10 27 53.9	-2.0
PBVM				*i*	S		Sn	10 28 12.9	-2.4
PTVM	**Pico Tres Padr**	**1.70**	**26**	*i*	P		Pn	10 27 56.3	-1.3
PTVM				*i*	S		Sn	10 28 17.3	-0.9
PTVM	**Pico Tres Padr**	**1.70**	**26**	*i*	P		Pn	10 27 56.3	-1.3
PTVM				*i*	S		Sn	10 28 17.3	-0.9
IIO	**Organos**	**1.89**	**36**	*e*	P		Pn	10 27 58.8	-1.5
IIO				*i*	S		Sn	10 28 13.8	-9.1
IIO	**Organos**	**1.89**	**36**	*e*	P		Pn	10 27 58.8	-1.5
IIO				*i*	S		Sn	10 28 13.8	-9.1
MOIG	**Morelia**	**2.01**	**323**	*e*	P		Pn	10 27 59.8	-2.0
MOIG				*i*	S		Sn	10 28 22.7	-3.2
MOIG	**Morelia**	**2.01**	**323**	*e*	P		Pn	10 27 59.8	-2.0
MOIG				*i*	S		Sn	10 28 22.7	-3.2
UTMO	**Huajuapan**	**2.02**	**96**	*i*	P		Pn	10 28 00.6	-1.3
UTMO				*i*	S		Sn	10 28 23.2	-2.8
DEIG	**Demacu**	**2.38**	**20**	*i*	P		Pn	10 28 05.7	-1.2
PNIG	**Pinotepa**	**2.38**	**134**	*e*	P		Pn	10 28 06.3	-0.5
PNIG				*i*	S		Sn	10 28 33.8	-1.0
PNIG	**Pinotepa**	**2.38**	**134**	*e*	P		Pn	10 28 06.3	-0.5
PNIG				*i*	S		Sn	10 28 33.8	-1.0
TPIG	**Tehuac#an**	**2.45**	**81**	*i*	P		Pn	10 28 06.6	-1.2
TPIG				*i*	S		Sn	10 28 33.2	-3.3
VHO	**Vista Hermosa**	**3.19**	**107**	*i*	P		Pn	10 28 17.0	-0.9
VHO				*i*	S		Sn	10 28 53.8	-0.9
VHO	**Vista Hermosa**	**3.19**	**107**	*i*	P		Pn	10 28 17.0	-0.9
VHO				*i*	S		Sn	10 28 53.8	-0.9

*IDC **11** 10:32:46.2±1.3, 46°.75N×151°.10E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=72.4km s-min=23.4km az=95.0*
*MOS **11** 10:32:52.3±2.0, 46°.84N×152°.43E, h80km, mb3.7/4, Error ellipse: s-maj=61.6km s-min=18.8km az=69.3*
*ISCJB **11** 10:32:55.0±1.3, 46°.8N±0°.1×152°.1E±0°.2, h98km±14km, mb3.6/4, Error ellipse: s-maj=31.3km s-min=8.8km az=137.1*
ISC 11 10:32:56.3±1.2, 46°.8N±0°.1×152°.2E±0°.2, h92km±12km, n24, σ1§14/31, mb3.6/4, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.71**	**32**	*e*	P		**Pn**	**10 33 57.5**	**-7.4**
SKR					pmax		pmax		
comp=Z,40nm,0.5s									
NEM2	**Nemuro 2**	**5.67**	**235**	P			**Pn**	**10 34 16.4**	**-1.7**
NEM2				*e*	S		**Sn**	**10 35 21.5**	**-0.3**
JRA	**Rausu**	**5.71**	**243**	P			**Pn**	**10 34 20.8**	**+2.3**
JNK	**Nakash**	**6.14**	**241**	P			**Pn**	**10 34 25.3**	**+0.9**
JTKR	**Abashiri--Toko**	**6.45**	**247**	P			**Pn**	**10 34 30.9**	**+2.3**
JAK	**Akkeshi**	**6.50**	**237**	P			**Pn**	**10 34 27.9**	**-1.4**
JAK				*e*	S		**Sn**	**10 35 41.5**	**-0.5**
JAR	**Ashorobuto**	**6.88**	**243**	P			**Pn**	**10 34 35.7**	**+1.2**
JAR				*e*	S		**Sn**	**10 35 57.3**	**+6.1**
JOB	**Onbets**	**7.06**	**240**	P			**Pn**	**10 34 37.4**	**+0.4**
JOB				*e*	S		**Sn**	**10 35 57.2**	**+1.5**
JKK2	**Kamakawa 2**	**7.23**	**250**	P			**Pn**	**10 34 42.2**	**+2.9**
PETK	**Petropavlovsk-**	**7.28**	**27**	Pn			**Pn**	**10 34 38.8**	**-1.0**
comp=Z,0.3nm,0.3s,baz=170,slow=10,SNR=8.0									
JCH	**Churui**	**7.51**	**240**	P			**Pn**	**10 34 42.5**	**-0.6**
JCH				*e*	S		**Sn**	**10 36 05.9**	**-0.8**
ERM	**Erimo**	**8.01**	**237**	‖*e*	PN		**Pn**	**10 34 50.5**	**+0.7**
JNBK	**Urakawa-nobuka**	**8.08**	**240**	P			**Pn**	**10 34 50.1**	**-0.7**
JNBK				*e*	S		**Sn**	**10 36 19.8**	**-0.6**
JKB	**Kayabe**	**9.34**	**242**	P			**Pn**	**10 35 06.8**	**-1.2**
JKB				*e*	S		**Sn**	**10 36 49.7**	**-1.5**
JANG	**Nango**	**10.02**	**234**	*e*	S		**Sn**	**10 37 02.5**	**-5.2**
JOSM	**Okushiri--Mats**	**10.20**	**247**	P			**Pn**	**10 35 20.1**	**+0.4**
FINES	**FINESS Array B**	**63.73**	**334**	P			**P**	**10 43 17.4**	**-0.2**
comp=Z,0.8nm,0.4s,mb3.9,baz=37,slow=8.8,SNR=8.5									
FINES	**FINESS Array B**	**63.73**	**334**	P			**P**	**10 43 17.4**	**-0.2**
FINES					pmax		pmax		
comp=Z,1.0nm,0.4s									
NOA	**NORSAR Array B**	**67.99**	**341**	P			**P**	**10 43 45.0**	**0.0**
comp=Z,1.1nm,0.8s,mb3.8,baz=26,slow=6.3,SNR=3.3									
NOA	**NORSAR Array B**	**67.99**	**341**	P			**P**	**10 43 45.0**	**+0.1**
NOA					pmax		pmax		
comp=Z,1.0nm,0.8s									
WRA	**Warramunga Arr**	**68.33**	**198**	P			**P**	**10 43 47.2**	**-0.3**
comp=Z,0.8nm,1.1s,mb3.5,baz=13,slow=6.6,SNR=3.6									
WRA	**Warramunga Arr**	**68.33**	**198**	P			**P**	**10 43 47.2**	**-0.3**
WRA					pmax		pmax		
comp=Z,1.0nm,1.1s									
ASAR	**Alice Springs**	**72.03**	**198**	P			**P**	**10 44 10.8**	**+0.7**
comp=Z,0.3nm,0.6s,mb3.3,baz=12,slow=6.0,SNR=7.6									
ASAR	**Alice Springs**	**72.03**	**198**	*e*	P		**P**	**10 44 10.7**	**+0.7**

*SZGRF **11** 10:33:44.8, 3°.53S×28°.60E, h33km, mb4.4, Lake Tanganyika region*
*ISCJB **11** 10:34:08.6±0.4, 0°.48N±0°.06×29°.64E±0°.07, h10km, mb4.3/40, MS3.6/14, Error ellipse: s-maj=10.8km s-min=8.0km az=160.3*
*IDC **11** 10:34:08.4±0.7, 0°.50N×29°.64E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.2/31, mbtmp4.2/24, ML3.9/2, MS3.7/17, Ms1 3.7/17, ms1mx3.6/34, Error ellipse: s-maj=16.9km s-min=16.1km az=16.0*
*NEIC **11** 10:34:10.4±0.4, 0°.48N×29°.59E, h10km, mb4.4/19, Error ellipse: s-maj=10.1km s-min=7.7km az=73.0*
NEIC Felt at Komomo.
*PRU **11** 10:34:13.3, 0°.21N×27°.75E, h30km, M4.4*
ISC 11 10:34:10.5±0.4, 0°.45N±0°.06×29°.66E±0°.06, h10km, n88, σ1§05/84, mb4.3/40, MS3.6/14, 5C-5D, Zaire

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**7.75**	**102**	P			**Pn**	**10 36 03.5**	**+0.1**
1.7nm,0.3s,baz=269,slow=15,SNR=21									
KMBO					Sn		**Sn**	**10 37 28.7**	**-2.7**
9.9nm,0.3s,baz=152,slow=21,SNR=8.4									
KMBO					Lg			10 38 12.9	
22nm,0.3s,baz=186,slow=22,SNR=7.9									
KMBO					LR		LR	10 39 17.0	
comp=Z,807nm,19.0s,baz=100,slow=40									
KMBO	**Kilima Mbogo**	**7.75**	**102**	*e*	Pn		**Pn**	**10 36 03.7**	**+0.3**
KMBO					Sn		**Sn**	**10 37 28.7**	**-2.7**
KMBO					Lg			10 38 12.9	
LSZ	**Lusaka**	**15.69**	**185**	Pn			**Pn**	**10 37 52.7**	**+1.0**
0.5nm,0.3s,baz=13,slow=12,SNR=8.1									
LSZ					LR		LR	10 43 48.2	
comp=Z,663nm,18.6s,baz=327,slow=37									
LSZ	**Lusaka**	**15.69**	**185**	*e*	P		**Pn**	**10 37 52.4**	**+0.6**
5.0nm,0.5s									
LSZ					LR		LR	10 43 48.2	
ATD	**Arta Tunnel**	**17.11**	**49**	LR			LR	10 45 08.2	
comp=Z,797nm,18.1s,baz=212,slow=39									
TSUM	**Tsumeb**	**22.84**	**211**	P			**P**	**10 39 12.7**	**-1.2**
0.7nm,0.5s,mb3.4,baz=90,slow=11,SNR=2.1									
TSUM					LR		LR	10 47 38.8	
comp=Z,118nm,21.9s,MS3.3,baz=346,slow=35									
TSUM	**Tsumeb**	**22.84**	**211**	*e*	P		**P**	**10 39 13.4**	**-0.5**
6.6nm,0.8s,mb4.1									
TSUM					LR		LR	10 47 38.8	
OPO	**Ambohidratompo**	**25.57**	**139**	P			**P**	**10 39 46.4**	**+6.5**
1.4nm,1.0s,mb3.5,baz=341,slow=14,SNR=2.9									
LBTB	**Lobatse**	**25.61**	**189**	P			**P**	**10 39 44.5**	**+4.3**
4.2nm,1.0s,mb3.9,baz=18,slow=3.2,SNR=3.2									
LBTB					LR		LR	10 50 11.2	
comp=Z,307nm,19.8s,MS3.8,baz=16,slow=38									
LBTB	**Lobatse**	**25.61**	**189**	P			**P**	**10 39 44.5**	**+4.3**
LBTB					LR		LR	10 50 11.2	
ABPO	**Ambohimpanom**	**25.91**	**139**	*e*	P		**P**	**10 39 45.1**	**+2.1**
15nm,1.5s,mb4.3									
BOSA	**Boshof**	**29.20**	**188**	LR			LR	10 52 10.6	
comp=Z,411nm,18.5s,MS4.1,baz=342,slow=37									
EIL	**Elat**	**29.50**	**9**	LR			LR	10 51 25.8	
comp=Z,60nm,21.6s,MS3.2,baz=44,slow=35									
TORD	**Torodi Ar. Bea**	**30.45**	**296**	P			**P**	**10 40 22.1**	**-1.5**
1.1nm,0.5s,mb3.8,baz=104,slow=7.0,SNR=15									
ASF	**Jabal al Asfar**	**32.29**	**12**	P			**P**	**10 40 38.5**	**-1.0**
5.0nm,0.9s,mb4.3,baz=121,slow=2.6,SNR=6.8									
SUR	**Sutherland**	**33.70**	**194**	LR			LR	10 53 27.6	
comp=Z,192nm,18.5s,MS3.9,baz=262,slow=34									
IDI	**Anoyia**	**34.95**	**353**	P			**P**	**10 41 03.3**	**+0.6**
5.4nm,0.7s,mb4.6,baz=196,slow=13,SNR=4.6									
IDI					LR		LR	10 56 42.9	
comp=Z,59nm,19.0s,MS3.4,baz=83,slow=39									
DBIC	**Dimbokro**	**34.98**	**281**	P			**P**	**10 41 04.0**	**+0.7**
1.8nm,0.6s,mb4.2,baz=85,slow=13,SNR=3.3									
DBIC					LR		LR	10 54 59.3	
comp=Z,98nm,20.0s,MS3.5,baz=81,slow=36									
MALT	**Malatya**	**38.54**	**11**	*e*	P		**P**	**10 41 35.4**	**+2.1**
22nm,1.0s,mb4.8									
MALT	**Malatya**	**38.54**	**11**	⇑*i*	P		**P**	**10 41 36.0**	**+2.8**
BRTR	**Keskin Array B**	**39.26**	**5**	P			**P**	**10 41 39.7**	**+0.4**
3.0nm,0.6s,mb4.2,baz=184,slow=9.6,SNR=22									
BR131	**Keskin Array S**	**39.26**	**5**	*e*	P		**P**	**10 41 41.1**	**+1.8**
1.0nm,0.5s,mb3.8									
KEST	**Kesra**	**39.87**	**334**	LR			LR	10 58 14.9	
comp=Z,55nm,19.9s,MS3.4,baz=330,slow=36									
GNI	**Garni**	**41.84**	**17**	*e*	P		**P**	**10 42 02.5**	**+1.9**
17nm,0.9s,mb4.7									
MLR	**Muntele Rosu**	**44.98**	**356**	‖*i*	P		**P**	**10 42 26.9**	**+1.1**
VOIR		**44.99**	**355**	⇑‖*i*	P		**P**	**10 42 26.5**	**+0.6**
GZR	**Gura Zlata**	**45.17**	**353**	‖*i*	P		**P**	**10 42 28.5**	**+1.1**
PLOR	**Plostina**	**45.29**	**357**	⇑‖*i*	P		**P**	**10 42 29.3**	**+0.9**
VRI	**Vrincioaia**	**45.30**	**357**	⇑‖*i*	P		**P**	**10 42 29.4**	**+0.9**
BZS	**Buzias**	**45.54**	**352**	‖*i*	P		**P**	**10 42 31.9**	**+1.6**
PKSM	**Moragy**	**46.59**	**349**	⇑‖*i*	P		**P**	**10 42 47.2**	**+8.6**
BURAR	**Bucovina Array**	**47.14**	**356**	‖*i*	P		**P**	**10 42 44.7**	**+1.8**
BUR08	**Bucovina Ar. S**	**47.17**	**356**	*e*	P		**P**	**10 42 44.4**	**+1.3**
KECS	**Kecovo**	**48.50**	**352**	*e*	P		**P**	**10 42 54.5**	**+1.1**
5.4nm,0.9s,mb4.6									
KECS	**Kecovo**	**48.50**	**352**	*e*	P		**P**	**10 42 54.5**	**+1.1**
MBDF	**Montbardon**	**48.54**	**338**	*e*	P		**P**	**10 42 52.2**	**-1.6**
17nm,1.0s,mb4.7									
MBDF	**Montbardon**	**48.54**	**338**	*e*	P		**P**	**10 42 52.2**	**-1.6**
8.5nm,1.0s,mb4.7									
VYHS	**Vyhne**	**48.77**	**350**	*e*	P		**P**	**10 42 56.0**	**+0.5**
4.3nm,1.1s,mb4.4									
VYHS	**Vyhne**	**48.77**	**350**	*e*	P		**P**	**10 42 56.0**	**+0.5**
ORIF	**Oris-en-Rattie**	**49.04**	**338**	*e*	P		**P**	**10 42 57.8**	**+0.2**
LPG	**La Plagne**	**49.21**	**339**	*e*	P		**P**	**10 42 58.3**	**-0.6**
12nm,1.0s,mb4.6									
LPG	**La Plagne**	**49.21**	**339**	*e*	P		**P**	**

3.5nm,0.6s,mb4.2
HINF Hinteralfeld 51.17 340 *e*P **P 10 43 13.5 -0.3**
1.8nm,0.6s,mb4.2
UPC Upice 51.21 349 *e*P **P 10 43 13.6 -0.4**
GRA1 Grafenberg Arr 51.54 345 *e*P **P 10 43 15.4 -1.1**
4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 51.54 345 *e*P **P 10 43 15.4 -1.1**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 51.54 345 *e*P **P 10 43 15.4 -1.1**
comp=Z,4.0nm,1.0s,mb4.3
CDF Champ du Feu 51.55 341 *e*P **P 10 43 15.9 -0.7**
AVF Avril sur Loir 51.57 337 *e*P **P 10 43 16.6 -0.2**
TCF Toulx Ste Croi 51.62 336 *e*P **P 10 43 17.7 +0.6**
comp=Z,18nm,1.2s,mb4.6
TCF Toulx Ste Croi 51.62 336 *e*P **P 10 43 17.7 +0.6**
comp=Z,9.2nm,1.3s,mb4.5
SUW Suwalki 53.66 355 *e*P **P 10 43 31.9 -0.1**
comp=Z,47nm,1.0s,mb5.4
ABKAR Akbulak array 55.14 24 *e*P **P 10 43 43.4 +0.4**
comp=Z,1.6nm,0.8s,mb4.1
AKTK Aktyubinsk 55.34 22 P **P 10 43 43.9 -0.5**
AKTO Aktyubinsk 55.34 22 P **P 10 43 43.9 -0.5**
comp=Z,4.9nm,0.8s,mb4.6,baz=219,slow=8.5,SNR=7.0
AML Almayashu 57.32 38 *e*P **P 10 43 59.9 +1.1**
comp=Z,2.2nm,1.0s,mb4.1
AAK Ala-Archa 58.09 38 P **P 10 44 04.5 +0.4**
comp=Z,0.9nm,0.7s,mb3.9,baz=211,slow=10,SNR=3.9
FINES FINESS Array B 60.90 358 P **P 10 44 21.2 -2.0**
comp=Z,4.6nm,0.9s,mb4.6,baz=222,slow=2.6,SNR=8.0
NB2 NORSAR Subarra 62.07 350 P **P 10 44 30.7 -0.3**
comp=Z,4.3nm,0.9s,mb4.6,baz=161,slow=6.9
NOA NORSAR Array B 62.07 350 P **P 10 44 29.4 -1.6**
comp=Z,1.9nm,0.7s,mb4.3,baz=162,slow=6.3,SNR=6.4
NOA LR LR 11 12 20.7
comp=Z,20nm,20.4s,MS3.3,baz=280,slow=37
BVAR Borovoye Array 62.36 26 P **P 10 44 32.5 -0.7**
comp=Z,1.3nm,0.5s,mb4.3,baz=231,slow=7.1,SNR=8.8
BVAR LR LR 11 16 59.3
comp=Z,60nm,18.7s,MS3.8,baz=226,slow=41
KURK Kurchatov 64.95 32 P **P 10 44 49.1 -1.2**
comp=Z,2.3nm,0.7s,mb4.3,baz=240,slow=6.9,SNR=10.0
MK31 Makanchi Array 65.00 37 *e*P **P 10 44 51.2 +0.4**
MKAR Makanchi Array 65.00 37 P **P 10 44 50.7 0.0**
comp=Z,3.0nm,0.9s,mb4.3,baz=243,slow=5.3,SNR=24
MKAR LR LR 11 13 36.2
comp=Z,50nm,18.6s,MS3.7,baz=71,slow=36
MKAR Makanchi Array 65.00 37 P **P 10 44 50.7 0.0**
MKAR LR LR 11 13 36.1
ARCES ARCESS Array B 69.02 358 P **P 10 45 15.0 -0.9**
comp=Z,8.3nm,0.7s,mb4.8,baz=173,slow=5.7,SNR=39
ARCES ARCESS Array B 69.02 358 P **P 10 45 15.0 -0.9**
ZALV Zalesovo Beam 69.88 31 P **P 10 45 21.5 0.0**
comp=Z,1.5nm,0.3s,mb4.4,baz=260,slow=8.9,SNR=5.4
ZALV LR LR 11 21 02.0
comp=Z,56nm,19.3s,MS3.8,baz=211,slow=40
CMAR Chiang Mai Arr 70.23 71 P **P 10 45 23.5 -0.8**
comp=Z,0.5nm,0.3s,mb3.9,baz=274,slow=5.7,SNR=4.8
MAW Mawson 71.73 167 P **P 10 45 33.0 +0.5**
comp=Z,2.7nm,0.8s,mb4.2,baz=272,slow=4.1,SNR=5.2
SONM Songino Array 80.78 42 P **P 10 46 23.7 -0.6**
comp=Z,0.4nm,0.6s,mb3.5,baz=272,slow=6.8,SNR=3.6
SONM LR LR 11 25 41.1
comp=Z,66nm,19.3s,MS4.0,baz=97,slow=38
CPUP Villa Florida 87.50 244 LR LR 11 22 46.2
comp=Z,56nm,20.9s,MS4.0,baz=169,slow=33

NNC ***11*** *10:44:46.8±2.3, 49°.69N×87°.85E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=17.6km s-min=10.9km az=83.0*
IDC ***11*** *10:44:46.1±2.4, 49°.75N×87°.94E, h0km, mb1 3.7/4, mb1mx3.3/28, mbtmp3.7/4, ML3.6/4, Error ellipse: s-maj=22.8km s-min=12.4km az=94.0*
ISC 11 10:44:48.0±1.6, 49°.75N±0°.06×88°.0E±0°.2, h10km, n8, σ1§18/17, 7C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**4.64**	**336**	Pn	**Pn**	**10 45 58.1**	**0.0**
	2.9nm,0.3s,baz=156,slow=14,SNR=14						
ZALV				Pg	**Pb**	**10 46 09.2**	**-0.3**
	2.6nm,0.3s,baz=158,slow=17,SNR=5.7						
ZALV				Sn	**Sn**	**10 46 54.1**	**+2.1**
	3.0nm,0.3s,baz=159,slow=25,SNR=4.0						
ZALV				Lg		10 47 12.1	
	5.5nm,0.3s,baz=160,slow=26,SNR=11						
MK31	**Makanchi Array**	**4.83**	**234**	⇓Pn	**Pn**	**10 46 01.7**	**+0.9**
	0.7nm,0.2s,baz=52,slow=12,SNR=196						
MK31				⇑Pg	**Pb**	**10 46 14.2**	**+1.5**
	7.7nm,0.5s,baz=53,slow=16,SNR=26						
MK31				⇓Sn	**Sn**	**10 47 01.0**	**+4.3**
	11nm,0.6s						
MK31				⇑Lg		10 47 18.7	
	30nm,0.6s,baz=54,slow=30,SNR=6.8						
MKAR	**Makanchi Array**	**4.83**	**234**	Pn	**Pn**	**10 46 00.6**	**-0.1**
	1.7nm,0.3s,baz=53,slow=13,SNR=180						
MKAR				Pg	**Pb**	**10 46 09.0**	**-3.7**
	1.4nm,0.3s,baz=60,slow=11,SNR=15						
MKAR				Sn	**Sn**	**10 46 56.6**	**-0.1**
	4.3nm,0.3s,baz=38,slow=24,SNR=6.2						
MKAR				Lg		10 47 18.8	
	6.5nm,0.3s,baz=44,slow=26,SNR=7.1						
KURK	**Kurchatov**	**6.10**	**283**	⇑Pn	**Pn**	**10 46 16.5**	**-1.7**
	4.3nm,0.5s						
KURK				⇑Sn	**Sn**	**10 47 27.2**	**-0.8**
	30nm,0.7s						
KURK				⇓Lg		10 47 56.6	
	50nm,0.8s						
KURK	**Kurchatov**	**6.10**	**283**	Pn	**Pn**	**10 46 17.8**	**-0.4**
	0.7nm,0.3s,baz=93,slow=15,SNR=26						
KURK				Sn	**Sn**	**10 47 29.7**	**+1.8**
	1.1nm,0.3s,baz=86,slow=28,SNR=16						
KURK				Lg		10 47 56.8	
	1.0nm,0.3s,baz=92,slow=34,SNR=6.8						
KURBB	**Kurchatov Arra**	**6.15**	**282**	⇑Pn	**Pn**	**10 46 18.2**	**-0.6**
	1.1nm,0.4s,baz=93,slow=14						
KURBB				⇑Sn	**Sn**	**10 47 29.1**	**-0.1**
	2.0nm,0.4s						
KURBB				⇑Lg		10 47 58.3	
	14nm,0.7s,baz=98,slow=31						
BVAR	**Borovoye Array**	**11.48**	**293**	Pn	**Pn**	**10 47 29.4**	**-2.5**
	0.2nm,0.3s,baz=106,slow=15,SNR=2.8						
BVAR				Sn	**Sn**	**10 49 32.7**	**-7.4**
	0.6nm,0.3s,baz=102,slow=25,SNR=5.1						
SONM	**Songino Array**	**12.28**	**92**	Lg		10 51 23.4	
	0.2nm,0.3s,baz=284,slow=30,SNR=5.2						

IDC ***11*** *10:48:24.2±0.5, 28°.94S×71°.35W, h0km, mb4.7/12, mb1 4.7/15, mb1mx4.6/20, mbtmp4.6/15, ML4.4/3, MS4.0/11, Ms1 4.0/11, ms1mx3.8/21, Error ellipse: s-maj=22.3km s-min=15.2km az=61.0*
NEIC ***11*** *10:48:28.7, 28°.86S×71°.44W, h44km, mb4.7/52, MD4.9(GUC), After GUC.*
GUC ***11*** *10:48:28.7±0.7, 28°.86S×71°.44W, h44km±11km, MD4.9, ML5.0*
ISCJB ***11*** *10:48:29.9±0.6, 28°.90S±0°.03×71°.23W±0°.06, h44km±6km, mb4.6/62, MS4.0/7, Error ellipse: s-maj=8.1km s-min=5.0km az=177.9*
BJI ***11*** *10:48:29.2, 28°.14S×70°.57W, h43km, mB5.2/7, Ms5.1/8, Ms7 5.0/8*
ISC 11 10:48:31.0±0.6, 28°.90S±0°.03×71°.18W±0°.06, h39km±6km, h28km±1.1km; pP-P, n406, σ0§60/370, mb4.6/62, MS4.0/7, 148C-121D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.44**	**105**	*e*Pg	**Pn**	**10 48 41.8**	**+0.9**
LCO				*e*Sg	**Sn**	**10 48 48.2**	**+0.5**
TLL	**Tololo Astrono**	**1.30**	**165**	⇓*i*P	**Pn**	**10 48 53.3**	**+0.6**
TLL				*i* S	**Sn**	**10 49 12.2**	**+3.2**
TLL	**Tololo Astrono**	**1.30**	**165**	⇓*i*P	**Pn**	**10 48 53.3**	**+0.6**
TLL				*i* S	**Sn**	**10 49 12.2**	**+3.2**
TLL				AML	AML	10 49 17.4	
	comp=E,25μm,0.6s						
OVCH	**Ovalle**	**1.70**	**181**	⇓*i*P	**Pn**	**10 48 57.6**	**-0.6**
OVCH				*i* S	**Sn**	**10 49 18.8**	**+0.1**
CPCH	**Copiapo**	**1.70**	**26**	*i* P	**Pn**	**10 48 57.6**	**-0.7**
CPCH				*i* S	**Sn**	**10 49 20.1**	**+1.4**
CPCH	**Copiapo**	**1.70**	**26**	*i* P	**Pn**	**10 48 57.6**	**-0.7**
CPCH				*i* S	**Sn**	**10 49 20.1**	**+1.4**
CPCH				AML	AML	10 49 24.1	
	comp=E,43μm,0.1s						
CMCH	**Combarbala**	**2.27**	**176**	⇓*i*P	**Pn**	**10 49 05.5**	**-0.5**
CMCH				*i* S	**Sn**	**10 49 33.5**	**+0.7**
CHNG	**Los Chungos**	**2.98**	**185**	*e*P	**Pn**	**10 49 14.4**	**-1.5**
CFAA	**Coronel Fontan**	**3.71**	**137**	Pn	**Pn**	**10 49 29.6**	**+3.8**
	comp=E,6.7nm,0.3s,baz=314,slow=12,SNR=243						
CFAA				Sn	**Sn**	**10 50 14.0**	**+5.7**
	comp=E,6.6nm,0.3s,baz=338,slow=11,SNR=4.4						
PEL	**Peldehue**	**4.25**	**174**	*e*P	**Pn**	**10 49 33.1**	**-0.2**
PEL				*i* S	**Sn**	**10 50 21.7**	**+0.1**
LVC	**Limon Verde**	**6.59**	**19**	Pn	**Pn**	**10 50 03.1**	**-2.3**
	comp=E,2.3nm,0.3s,baz=221,slow=10,SNR=26						
LVC				Sn	**Sn**	**10 51 36.6**	**+17**
	comp=E,33nm,0.3s,baz=4.7,slow=19,SNR=7.4						
LVC				LR	LR	10 52 40.6	
	comp=E,2μm,19.1s,baz=199,slow=38						
PLCA	**Paso Flores**	**11.81**	**178**	Pn	**Pn**	**10 51 15.3**	**-1.6**
	comp=E,0.1nm,0.3s,baz=11,slow=11,SNR=4.9						
PLCA				LR	LR	10 56 15.2	
	comp=E,831nm,19.6s,baz=46,slow=40						
PLCA	**Paso Flores**	**11.81**	**178**	*e*Pn	**Pn**	**10 51 15.3**	**-1.7**
TRQA	**Tornquist**	**11.93**	**142**	*e*Pn	**Pn**	**10 51 18.7**	**+0.3**
TRQA				*e*Sn	**Sn**	**10 53 35.3**	**+5.2**
CPUP	**Villa Florida**	**12.55**	**81**	Pn	**Pn**	**10 51 26.8**	**-0.2**
	comp=E,3.6nm,0.3s,baz=250,slow=12,SNR=17						
CPUP				LR	LR	10 56 47.2	
	comp=E,711nm,20.5s,baz=248,slow=40						
CPUP	**Villa Florida**	**12.55**	**81**	*e*Pn	**Pn**	**10 51 27.4**	**+0.4**
LPAZ	**La Paz**	**12.87**	**13**	Pn	**Pn**	**10 51 25.9**	**-5.5**
	comp=E,0.4nm,0.3s,baz=194,slow=7.9,SNR=8.8						
LPAZ	**La Paz**	**12.87**	**13**	*e*Pn	**Pn**	**10 51 28.3**	**-3.1**
SIV	**San Ignacio**	**15.87**	**38**	Pn	**Pn**	**10 52 06.4**	**-5.3**
	comp=E,0.4nm,0.3s,baz=232,slow=12,SNR=9.4						
NNA	**Nana**	**17.64**	**341**	LR	LR	10 57 48.5	
	comp=E,228nm,19.8s,baz=139,slow=32						
SPB	**Sao Paulo**	**21.93**	**82**	*e*P	**P**	**10 53 23.1**	**+1.8**
	comp=E,43nm,0.8s,mb4.9						
ATAH	**Atahualpa**	**22.82**	**341**	LR	LR	11 00 37.0	
	comp=E,134nm,22.0s,MS3.3,baz=332,slow=32						
USHA	**Ushuaia**	**25.99**	**176**	P	**P**	**10 53 57.4**	**-2.5**
	comp=E,19nm,0.9s,mb4.6,baz=302,slow=9.1,SNR=9.4						
USHA				LR	LR	11 04 55.0	
	comp=E,688nm,18.1s,MS4.2,baz=339,slow=38						
OTAV	**Otavalo**	**29.80**	**345**	*e*P	**P**	**10 54 35.4**	**+1.0**
	comp=E,3.8nm,0.9s,mb4.1						
RCBR	**Riachuelo**	**40.48**	**62**	*e*P	**P**	**10 56 06.8**	**+0.5**
	comp=E,20nm,1.0s,mb4.8						
CELP	**Cerrillos**	**46.91**	**6**	*e*P	**P**	**10 56 56.1**	**-1.7**
MAIT	**Maitri**	**60.70**	**158**	*e*P	**P**	**10 58 37.9**	**-0.1**
QSPA	**South Pole Qui**	**61.32**	**180**	*e*P	**P**	**10 58 41.5**	**-0.6**
	comp=E,6.1nm,0.9s,mb4.7						
QSPA				*e*pP	pP	10 58 50.7	-2.9
JCT	**Junction City**	**65.05**	**333**	*e*P	**P**	**10 59 07.1**	**-0.3**
	comp=E,12nm,0.6s,mb5.1						
SWET	**Seanee**	**65.27**	**347**	*e*P	**P**	**10 59 07.0**	**-1.7**
628A	**Black Gap, Mar**	**65.48**	**330**	⇑P	**P**	**10 59 10.2**	**-0.1**
	baz=66						
627A	**Terlingua Ranc**	**65.68**	**329**	⇓P	**P**	**10 59 11.2**	**-0.2**
	baz=66						
TXAR	**Lajitas Array**	**65.70**	**329**	P	**P**	**10 59 11.2**	**-0.5**
	comp=E,2.4nm,0.7s,mb4.3,baz=153,slow=7.8,SNR=14						
528A	**Cox Ranch, San**	**66.02**	**330**	⇑P	**P**	**10 59 13.2**	**-0.4**
	baz=66						
626A	**Big Bend Ranch**	**66.10**	**329**	⇑P	**P**	**10 59 14.2**	**0.0**
	baz=66						
527A	**Woodward Ranch**	**66.37**	**330**	⇓P	**P**	**10 59 15.7**	**-0.2**
	baz=67						
428A	**Kincaid Ranch,**	**66.46**	**331**	⇓P	**P**	**10 59 16.1**	**-0.4**
	baz=67						
526A	**Mary Lane Ranc**	**66.51**	**329**	⇑P	**P**	**10 59 16.8**	**0.0**
	baz=67,SNR=10.0						
WVT	**Waverly**	**66.56**	**345**	*e*P	**P**	**10 59 15.4**	**-1.6**
	comp=E,13nm,1.0s,mb4.9						
MIAR	**Mount Ida**	**66.56**	**340**	*e*P	**P**	**10 59 16.1**	**-0.9**
	comp=E,12nm,1.0s,mb4.9						
MIAR				*e*pP	pP	10 59 22.5	-6.1
427A	**Hayter Ranch,**	**66.88**	**330**	⇓P	**P**	**10 59 18.6**	**-0.6**
	baz=67						
426A	**McDonald Obser**	**67.00**	**329**	⇑P	**P**	**10 59 19.8**	**-0.1**
	baz=67						
328A	**Wristen Ranch,**	**67.08**	**331**	⇓P	**P**	**10 59 19.7**	**-0.7**
	baz=67						
TAOE	**Nuku Hiva Isla**	**67.38**	**272**	*e*LR	LR	11 19 42.1	
	comp=E,91nm,25.3s						
425A	**Indio Mountain**	**67.53**	**329**	⇑P	**P**	**10 59 22.7**	**-0.6**
	baz=68						
326A	**Caldwell Ranch**	**67.53**	**330**	⇓P	**P**	**10 59 22.9**	**-0.4**
	baz=68						
227A	**Bennet, Jal**	**67.83**	**331**	⇑P	**P**	**10 59 24.8**	**-0.4**
	baz=68						
325A	**Bean Ranch, Si**	**68.02**	**329**	⇑P	**P**	**10 59 25.4**	**-0.9**
	baz=68						
226A	**Malaga, Loving**	**68.22**	**330**	⇑P	**P**	**10 59 27.0**	**-0.6**
	baz=68						
WCI	**Wyandotte Cave**	**68.26**	**347**	*e*P	**P**	**10 59 25.6**	**-2.1**
	comp=E,8.2nm,0.8s,mb4.8						
324A	**Moseley Ranch,**	**68.31**	**329**	⇓P	**P**	**10 59 26.9**	**-1.3**
	baz=68,SNR=5.8						
SIUC	**Southern Illin**	**68.39**	**345**	*e*P	**P**	**10 59 27.3**	**-1.2**
	comp=E,35nm,0.7s,mb5.5						
127A	**Arkansas Junct**	**68.43**	**331**	⇓P	**P**	**10 59 28.4**	**-0.5**
	baz=69						
GDL2	**Guadalupe Moun**	**68.46**	**330**	*e*P	**P**	**10 59 28.5**	**-0.5**
	comp=E,6.3nm,1.3s,mb4.5						
GDL2				*e*pP	pP	10 59 37.3	-3.4
MNTX	**Cornudas Mount**	**68.48**	**329**	*e*P	**P**	**10 59 27.8**	**-1.5**
	comp=E,2.9nm,0.8s,mb4.4						
126A	**Clayton Basin,**	**68.69**	**331**	⇑P	**P**	**10 59 30.4**	**-0.1**
	baz=69						
224A	**Corundas Mount**	**68.87**	**329**	⇓P	**P**	**10 59 30.5**	**-1.2**
	baz=69,SNR=6.3						
Z27A	**Tatum**	**68.92**	**332**	⇓P	**P**	**10 59 31.3**	**-0.7**
	baz=69						
FVM	**French Village**	**68.93**	**344**	*e*P	**P**	**10 59 31.0**	**-0.9**
	comp=E,41nm,0.9s,mb5.3						
CPRX	**Cap Rock**	**68.95**	**331**	*e*P	**P**	**10 59 31.6**	**-0.6**
	comp=E,3.7nm,1.0s,mb4.3						
125A	**Gardner Draw,**	**68.98**	**330**	⇑P	**P**	**10 59 31.2**	**-1.1**
	baz=69,SNR=5.3						
Z26A	**Caprock**	**69.21**	**331**	⇓P	**P**	**10 59 33.2**	**-0.5**
	baz=69,SNR=18						
MSTX	**Muleshoe**	**69.31**	**332**	⇓P	**P**	**10 59 33.5**	**-0.8**
	baz=70						
124A	**Stringfield Ra**	**69.36**	**330**	⇓P	**P**	**10 59 34.7**	**0.0**
	baz=70						
Y27A	**Causey**	**69.39**	**332**	⇓P	**P**	**10 59 34.3**	**-0.5**
	baz=70						
Z25A	**Roswell**	**69.53**	**330**	⇓P	**P**	**10 59 35.1**	**-0.6**
	baz=70						
ACSO	**Alum Creek Sta**	**69.65**	**350**	*e*P	**P**	**10 59 34.6**	**-1.7**
	comp=E,13nm,0.7s,mb5.0						
320A	**Kipp Ranch, An**	**69.66**	**326**	⇑P	**P**	**10 59 36.1**	**-0.4**
	baz=70						
AMTX	**Amarillo**	**69.67**	**334**	*e*P	**P**	**10 59 36.0**	**-0.6**
	comp=E,4.4nm,0.8s,mb4.4						
Y26A	**Elida**	**69.70**	**331**	⇓P	**P**	**10 59 36.6**	**-0.2**
	baz=70						
319A	**Douglas**	**70.06**	**326**	⇑P	**P**	**10 59 39.0**	**0.0**
	baz=70,SNR=5.4						
Y25A	**Mesa, Roswell**	**70.07**	**331**	⇑P	**P**	**10 59 38.7**	**-0.3**
	baz=70						
220A	**Playas Peak, P**	**70.12**	**327**	⇓P	**P**	**10 59 39.0**	**-0.4**
	baz=70						
X26A	**CR and CF Fran**	**70.24**	**332**	⇑P	**P**	**10 59 39.8**	**-0.3**
	baz=70						
Y24A	**Capitan**	**70.39**	**330**	⇓P	**P**	**10 59 41.3**	**+0.3**
	baz=71						
318A	**Bisbee**	**70.46**	**325**	⇑P	**P**	**10 59 41.3**	**-0.2**
	baz=71,SNR=5.2						
Z22A	**Elephant Butte**	**70.51**	**329**	⇑P	**P**	**10 59 42.1**	**+0.3**
	baz=71						
219A	**White Tail Can**	**70.55**	**326**	⇓P	**P**	**10 59 42.1**	**+0.1**
	baz=71,SNR=7.8						
Y23A	**Lovelace Mesa,**	**70.67**	**330**	⇑P	**P**	**10 59 43.0**	**+0.2**
	baz=71						
120A	**U Bar Ranch, L**	**70.70**	**327**	⇓P	**P**	**10 59 42.7**	**-0.3**
	baz=71						
Z21A	**St. Cloud Mine**	**70.88**	**328**	⇓P	**P**	**10 59 44.5**	**+0.5**
	baz=71						
218A	**Dragoon**	**70.92**	**326**	⇓P	**P**	**10 59 44.4**	**+0.1**
	baz=71,SNR=7.7						
Y22A	**Socorro**	**71.08**	**329**	⇑P	**P**	**10 59 45.3**	**+0.1**
	baz=71						
W25A	**X Bar L Ranch,**	**71.08**	**332**	⇓P	**P**	**10 59 45.1**	**0.0**
	baz=71						
HDIL	**Hopedale**	**71.12**	**346**	*e*P	**P**	**10 59 43.6**	**-1.7**
	comp=E,26nm,0.8s,mb5.2						
217A	**Green Valley**	**71.14**	**325**	⇓P	**P**	**10 59 45.5**	**-0.1**
	baz=71						
Z20A	**Nine Sixteen R**	**71.15**	**327**	⇑P	**P**	**10 59 46.0**	**+0.3**
	baz=71,SNR=6.4						
119A	**Ashpeak Ranch,**	**71.20**	**327**	⇓P	**P**	**10 59 46.2**	**+0.2**
	baz=71						
118A	**Homack Ranch,**	**71.42**	**326**	⇑P	**P**	**10 59 47.5**	**+0.2**
	baz=72						
Y21A	**Point of Rocks**	**71.46**	**329**	⇑P	**P**	**10 59 48.2**	**+0.7**
	baz=72						
216A	**Three Points,**	**71.65**	**325**	⇑P	**P**	**10 59 48.8**	**+0.1**
	baz=72						
Y20A	**Horse Springs,**	**71.70**	**328**	⇑P	**P**	**10 59 49.5**	**+0.6**
	baz=72						
117A	**Oracle**	**71.75**	**326**	⇓P	**P**	**10 59 49.4**	**+0.2**
	baz=72						
W23A	**Werner Place,**	**71.75**	**330**	⇑P	**P**	**10 59 49.8**	**+0.5**
	baz=72						
PPT	**Papeete**	**71.79**	**260**	*e*S	S	11 09 08.1	+0.2
	comp=E,63nm,27.0s						
PPT				*e*LR	LR	11 21 49.6	
	comp=E,152nm,22.0s						
X21A	**Alamocita Cree**	**71.88**	**329**	⇑P	**P**	**10 59 50.8**	**+0.8**
	baz=72						
Y19A	**Nutrioso**	**72.16**	**327**	⇑P	**P**	**10 59 52.4**	**+0.8**
	baz=72,SNR=8.3						
X20A	**Quemado**	**72.28**	**328**	⇓P	**P**	**10 59 53.0**	**+0.6**
	baz=72						
214A	**Organ Pipe Nat**	**72.31**	**324**	⇓P	**P**	**10 59 52.7**	**+0.1**
	baz=72,SNR=6.5						
W21A	**San Fidel**	**72.38**	**329**	⇑P	**P**	**10 59 53.6**	**+0.6**
	baz=73						
Y18A	**Canyon Day Jun**	**72.38**	**327**	⇑P	**P**	**10 59 53.4**	**+0.4**
	baz=73						
LIC	**Lamto**	**72.50**	**72**	*e*P	**P**	**10 59 54.0**	**-0.2**
	comp=E,45nm,0.9s,mb5.4						
X19A	**St. Johns**	**72.56**	**328**	⇑P	**P**	**10 59 54.5**	**+0.4**
	baz=73						
115A	**Sonoran Desert**	**72.60**	**325**	⇑P	**P**	**10 59 55.0**	**+0.6**
	baz=73						
MIV	**Mineville/With**	**72.65**	**358**	*e*P	**P**	**10 59 55.2**	**+0.9**
Y17A	**Roosevelt**	**72.71**	**326**	⇑P	**P**	**10 59 55.1**	**+0.1**
	baz=73,SNR=8.4						
TIC	**Toumodi**	**72.74**	**72**	*e*P	**P**	**10 59 54.8**	**-0.8**
	comp=E,7.8nm,0.2s,mb5.3						
W20A	**Ramah**	**72.77**	**329**	⇑P	**P**	**10 59 55.6**	**+0.3**
	baz=73						
KIC	**Kosan Boka**	**72.82**	**72**	*e*P	**P**	**10 59 55.0**	**-1.1**
	comp=E,41nm,1.0s,mb5.3						
DBIC	**Dimbokro**	**72.89**	**72**	P	**P**	**10 59 56.6**	**+0.1**
	comp=E,20nm,0.8s,mb5.1,baz=221,slow=5.7,SNR=21						
DBIC				LR	LR	11 28 01.4	
	comp=E,91nm,21.1s,MS4.0,baz=178,slow=32						
DBIC	**Dimbokro**	**72.89**	**72**	*e*P	**P**	**10 59 57.0**	**+0.4**
	comp=E,26nm,0.9s,mb5.2						
DBIC				*e*pP	pP	11 00 08.3	+0.1
X18A	**Snowflake**	**72.95**	**327**	⇓P	**P**	**10 59 56.8**	**+0.4**
	baz=73						
114A	**Black Gap (USA**	**72.97**	**324**	⇑P	**P**	**10 59 56.9**	**+0.4**
	baz=73						
Y16A	**Circle Bar Ran**	**73.17**	**326**	⇓P	**P**	**10 59 58.1**	**+0.5**
	baz=73						
X17A	**Forest Lakes**	**73.21**	**327**	⇓P	**P**	**10 59 58.5**	**+0.6**
	baz=73						
X16A	**Lo Mia Camp, P**	**73.58**	**326**	⇓P	**P**	**11 00 00.5**	**+0.4**
	baz=74,SNR=9.0						
JFWS	**Jewell Farm**	**73.58**	**346**	*e*P	**P**	**10 59 58.9**	**-1.0**
	comp=E,13nm,0.7s,mb5.0						
T22A	**Edith**	**73.64**	**331**	⇑P	**P**	**11 00 01.1**	**+0.7**
	baz=74						
Y15A	**Casa Rosa Ranc**	**73.65**	**325**	⇑P	**P**	**11 00 00.6**	**+0.1**
	baz=74						
SDCO	**Great Sand Dun**	**73.68**	**332**	*e*P	**P**	**11 00 00.5**	**-0.1**
	comp=E,2.7nm,0.8s,mb4.2						
SDCO				*e*pP	pP	11 00 13.0	+0.7
Z13A	**Yuma Proving G**	**73.73**	**324**	⇓P	**P**	**11 00 01.2**	**+0.2**
	baz=74						
V18A	**Ganado**	**73.91**	**328**	⇓P	**P**	**11 00 02.3**	**+0.3**
	baz=74						
Y14A	**Wickenburg**	**73.97**	**325**	⇑P	**P**	**11 00 02.7**	**+0.3**
	baz=74						
X15A	**Humboldt**	**74.03**	**326**	⇓P	**P**	**11 00 02.9**	**+0.2**
	baz=74,SNR=7.6						
U19A	**Dine' College,**	**74.06**	**329**	⇓P	**P**	**11 00 03.1**	**+0.2**
	baz=74						
W16A	**Flagstaff**	**74.17**	**327**	⇑P	**P**	**11 00 04.1**	**+0.5**
	baz=74						
V17A	**Tonalea, Kykot**	**74.24**	**327**	⇑P	**P**	**11 00 04.2**	**+0.2**
	baz=74,SNR=5.6						
Y13A	**Salome**	**74.30**	**324**	⇓P	**P**	**11 00 04.6**	**+0.3**
	baz=74						
X14A	**Yava**	**74.34**	**325**	⇑P	**P**	**11 00 04.6**	**+0.1**
	baz=74						
T19A	**Beclabito**	**74.42**	**329**	⇓P	**P**	**11 00 05.5**	**+0.6**
	baz=75,SNR=5.9						
WUAZ	**Wupatki**	**74.43**	**327**	⇑P	**P**	**11 00 05.8**	**+0.8**
	baz=75						
WUAZ	**Wupatki**	**74.43**	**327**	*e*P	**P**	**11 00 05.7**	**+0.6**
	comp=E,7.2nm,1.0s,mb4.6						
WUAZ				*e*pP	pP	11 00 14.1	-2.7
U18A	**Rough Rock, Ch**	**74.46**	**328**	⇑P	**P**	**11 00 05.9**	**+0.7**

BBRC **Big Bear Sol-O** 76.27 322 ⇑P P 11 00 15.7 +0.1
baz=76
V12A **Nelson** 76.32 325 ⇓P P 11 00 16.2 +0.3
baz=76
P20A **De Beque** 76.37 331 ⇑P P 11 00 16.3 +0.3
baz=77
HEC **Hector,Ludlow** 76.39 323 ⇑P P 11 00 16.6 +0.3
baz=77
U13A **Pakoon Wash** 76.41 326 ⇑P P 11 00 16.8 +0.4
baz=77
R17A **Hanksville Air** 76.48 329 ⇑P P 11 00 16.9 +0.1
baz=77,SNR=6.1
T14A **Hurricane** 76.50 327 ⇑P P 11 00 17.1 +0.2
baz=77,SNR=6.7
TUQ **Turquoise Moun** 76.64 324 ⇑P P 11 00 17.9 +0.2
baz=77
S15A **Panguitch** 76.64 328 ⇑P P 11 00 18.2 +0.5
baz=77,SNR=5.9
N22A **Wattenberg Ran** 76.67 333 ⇑P P 11 00 19.0 +1.2
baz=77
U12A **Valley of Fire** 76.71 325 ⇓P P 11 00 18.7 +0.6
baz=77
R16A **Teasdale** 76.72 328 ⇓P P 11 00 19.0 +0.9
baz=77
P19A **Cripple Cowboy** 76.73 331 ⇑P P 11 00 18.7 +0.6
baz=77,SNR=7.8
Q18A **Rafter H Ranch** 76.79 330 ⇓P P 11 00 19.0 +0.6
baz=77
O20A **White River Ci** 76.83 332 ⇑P P 11 00 18.9 +0.2
baz=77,SNR=9.4
T13A **Saint George** 76.86 326 ⇓P P 11 00 19.2 +0.3
baz=77
SRU **San Rafael** 76.97 330 ⇓P P 11 00 19.6 +0.2
baz=77,SNR=6.7
SRU **San Rafael** 76.97 330 eP P 11 00 19.3 -0.1
comp=E,5.1nm,0.8s,mb4.5
GSC **Goldstone** 77.00 323 ⇑P P 11 00 20.1 +0.4
baz=77
R15A **Junction** 77.03 328 ⇑P P 11 00 20.3 +0.5
baz=77
N21A **Black Mountain** 77.06 332 ⇓P P 11 00 21.3 +1.3
baz=77
S14A **Cedar City** 77.09 327 ⇓P P 11 00 20.8 +0.6
baz=77
Q16A **Castle Valley** 77.10 329 ⇑P P 11 00 20.4 +0.2
baz=77,SNR=6.0
MSU **Marysvale** 77.23 328 eP P 11 00 21.1 +0.1
comp=E,4.7nm,0.9s,mb4.4
M22A **Cedar Creek Ra** 77.24 333 ⇓P P 11 00 21.7 +0.7
baz=78
P18A **Preston Nutter** 77.27 330 ⇑P P 11 00 21.7 +0.6
baz=78,SNR=6.9
S13A **Holt Ranch, En** 77.28 326 ⇑P P 11 00 21.7 +0.4
baz=78,SNR=6.1
O19A **Miners Draw (B** 77.34 331 ⇑P P 11 00 21.9 +0.4
baz=78
P17A **Butcher Ranch,** 77.36 330 ⇑P P 11 00 21.8 +0.2
baz=78,SNR=6.9
N20A **Spence Gulch,** 77.43 332 ⇑P P 11 00 22.6 +0.5
baz=78
U10A **Ash Meadows, A** 77.61 324 ⇓P P 11 00 23.2 +0.1
baz=78
T11A **Corn Creek, Al** 77.68 325 ⇑P P 11 00 23.8 +0.3
baz=78,SNR=7.6
O18A **Roosevelt** 77.69 331 ⇑P P 11 00 24.2 +0.7
baz=78
Q15A **Fillmore** 77.72 328 ⇑P P 11 00 24.0 +0.4
baz=78
M21A **Separation Pea** 77.72 333 ⇓P P 11 00 23.8 +0.2
baz=78
RWWY **Rawlins** 77.73 333 eP P 11 00 23.5 -0.1
comp=E,15nm,0.9s,mb4.9
R13A **O'Grain Ranch,** 77.81 327 ⇑P P 11 00 24.9 +0.7
baz=78
MAW **Mawson** 77.85 164 P P 11 00 24.1 -0.1
comp=E,6.3nm,0.8s,mb4.6,baz=205,slow=7.3,SNR=9.0
MAW LR LR 11 37 31.1
comp=E,128nm,20.1s,MS4.2,baz=34,slow=38
MAW **Mawson** 77.85 164 eP P 11 00 23.3 -0.8
comp=E,1.3nm,0.8s,mb3.9
N19A **John Jarvie Ra** 77.86 331 ⇑P P 11 00 24.7 +0.3
baz=78,SNR=7.9
P16A **Fountain Green** 77.88 329 ⇓P P 11 00 25.4 +0.8
baz=78
FURC **Furnace Creek,** 77.92 324 ⇑P P 11 00 25.0 +0.2
baz=78
MPMC **Manual Prospec** 77.94 323 ⇑P P 11 00 25.2 +0.2
baz=78
O17A **Robinson Place** 77.95 330 ⇓P P 11 00 25.5 +0.5
baz=78,SNR=12
M20A **Sweetwater, Wa** 77.95 332 ⇓P P 11 00 25.5 +0.6
baz=78
L21A **Rawlins** 78.02 333 ⇑P P 11 00 25.6 +0.3
baz=78,SNR=9.8
Q14A **Sevier Lake (B** 78.12 328 ⇑P P 11 00 26.5 +0.6
baz=78,SNR=5.2
N18A **Larsen Ranch,** 78.14 331 ⇓P P 11 00 26.2 +0.3
baz=78
ISA **Isabella** 78.16 322 ⇑P P 11 00 26.3 +0.1
baz=78
ISA **Isabella** 78.16 322 eP P 11 00 26.7 +0.5
comp=E,4.3nm,0.9s,mb4.4
R12A **Pony Springs,** 78.23 326 ⇓P P 11 00 27.0 +0.4
baz=78,SNR=5.5
S11A **Rachel** 78.26 325 ⇓P P 11 00 26.8 0.0
baz=78
O16A **Springville** 78.30 330 ⇑P P 11 00 27.5 +0.7
baz=78
PKM **Peak Mountain** 78.32 321 ⇑P P 11 00 27.5 +0.4
baz=78
Q13A **Wheeler Ranch,** 78.45 327 ⇑P P 11 00 28.3 +0.6
baz=79
L20A **Wamsutter** 78.45 333 ⇓P P 11 00 28.1 +0.4
baz=79
P14A **Drum Mountains** 78.51 328 ⇑P P 11 00 28.4 +0.3
baz=79,SNR=6.3
GRAC **Grapevine Rang** 78.59 324 ⇓P P 11 00 28.8 +0.3
baz=79
JLU **Jordanelle** 78.59 330 eP P 11 00 28.3 -0.2
comp=E,4.4nm,0.7s,mb4.5
N17A **Moffit Pass** 78.61 330 ⇓P P 11 00 29.0 +0.5
baz=79,SNR=5.8
VES **Vestal, Richgr** 78.62 322 ⇓P P 11 00 29.2 +0.5
baz=79
RSSD **Black Hills** 78.64 337 eP P 11 00 28.8 +0.1
comp=E,6.2nm,0.8s,mb4.6
M18A **Lyman** 78.68 331 ⇑P P 11 00 28.9 0.0
baz=79
SMMC **Simmler** 78.72 321 ⇑P P 11 00 29.0 -0.3
baz=79
R11A **Troy Canyon, C** 78.73 326 ⇓P P 11 00 29.6 +0.3
baz=79,SNR=5.3
N16A **Rees Ranch, Co** 78.82 330 ⇓P P 11 00 30.3 +0.6
baz=79
P13A **Bates Ranch, G** 78.84 328 ⇓P P 11 00 30.6 +0.7
baz=79
DUG **Dugway** 78.88 329 ⇓P P 11 00 30.2 +0.1
baz=79,SNR=5.6
DUG **Dugway** 78.88 329 eP P 11 00 30.2 +0.2
comp=E,3.9nm,0.8s,mb4.4
S10A **Tonopah Range,** 78.90 325 ⇓P P 11 00 29.9 -0.3
baz=79
L19A **Farson** 78.94 332 ⇓P P 11 00 30.6 +0.3
baz=79,SNR=10
M17A **Scullys Gap (B** 78.97 331 ⇓P P 11 00 30.6 +0.1
baz=79
K20A **Yellowstone Ra** 79.00 333 ⇓P P 11 00 30.5 -0.2
baz=79,SNR=6.5
R10A **Warm Springs** 79.03 325 ⇑P P 11 00 31.4 +0.5
baz=79,SNR=5.8
L18A **Fontenelle, Gr** 79.08 332 ⇑P P 11 00 30.9 -0.2
baz=79,SNR=7.6
Q11A **Duckwater** 79.15 326 ⇓P P 11 00 31.6 0.0
baz=79
M16A **Huntsville** 79.25 330 ⇑P P 11 00 32.4 +0.3
baz=80
K19A **Absolon Red Bu** 79.34 333 ⇑P P 11 00 32.2 -0.3
baz=80,SNR=7.1
HWUT **Hardware Ranch** 79.47 330 eP P 11 00 33.0 -0.2
comp=E,10.0nm,0.7s,mb4.8
Q10A **Clear Creek Ra** 79.50 326 ⇓P P 11 00 33.7 +0.3
baz=80
L17A **Cokeville** 79.57 331 ⇓P P 11 00 33.3 -0.5
baz=80,SNR=6.2
N14A **Grayback Hills** 79.57 329 ⇑P P 11 00 34.0 +0.2
baz=80
BW06 **Boulder Array** 79.58 332 ⇑P P 11 00 34.1 +0.3
baz=80
BW06 **Boulder Array** 79.58 332 eP P 11 00 33.5 -0.3
comp=E,4.4nm,1.1s,mb4.3
BW06 epP pP 11 00 42.2 -3.4
PDAR **Pinedale Array** 79.58 332 P P 11 00 32.7 -1.1
comp=E,1.1nm,0.6s,mb4.0,baz=129,slow=3.8,SNR=11
K18A **Toltan Ranch,** 79.67 332 ⇑P P 11 00 34.5 +0.2
baz=80,SNR=20
M15A **Larsen Ranch,** 79.73 330 ⇑P P 11 00 34.3 -0.4
baz=80,SNR=6.3
L16A **Fish Haven** 79.74 331 ⇑P P 11 00 34.5 -0.3
baz=80,SNR=11
O12A **Currie** 79.83 328 ⇑P P 11 00 35.2 0.0
baz=80
TSUM **Tsumeb** 79.92 106 P P 11 00 36.9 +0.6
comp=E,5.8nm,0.7s,mb4.6,baz=277,slow=3.5,SNR=12
TSUM **Tsumeb** 79.92 106 eP P 11 00 37.0 +0.6
comp=E,7.7nm,0.9s,mb4.6
TSUM epP pP 11 00 46.0 -2.2
AGMN **Agassiz Refuge** 79.97 344 eP P 11 00 34.9 -0.9
comp=E,8.2nm,0.8s,mb4.7
AGMN epP pP 11 00 42.7 -4.9
K17A **Gardner Place,** 80.13 331 ⇓P P 11 00 36.6 -0.2
baz=80,SNR=8.6
HVU **Hansel Valley** 80.14 330 eP P 11 00 36.5 -0.3
comp=E,5.1nm,0.7s,mb4.6
HVU epP pP 11 00 44.1 -4.6
J18A **Kendall Valley** 80.14 332 ⇑P P 11 00 36.4 -0.4
baz=80,SNR=13
L15A **Malad City** 80.14 330 ⇓P P 11 00 36.4 -0.5
baz=80,SNR=7.0
P10A **Eureka** 80.14 326 ⇑P P 11 00 37.4 +0.4
baz=80
O11A **Cowboy Ranch,** 80.15 327 ⇓P P 11 00 37.0 0.0
baz=80,SNR=7.0
NVAR **Mina Array Bea** 80.15 324 P P 11 00 37.1 +0.1
comp=E,1.1nm,0.7s,mb3.9,baz=158,slow=6.7,SNR=13
NVAR PKKPbc PKKPbc 11 19 22.1 -0.1
comp=E,0.2nm,0.6s,baz=214,slow=1.5,SNR=3.6
M14A **Sheep Mountain** 80.17 329 ⇓P P 11 00 36.7 -0.3
baz=80
N12A **Clover Valley,** 80.42 328 ⇓P P 11 00 38.5 +0.1
baz=81
I18A **Diamond G Ranc** 80.46 333 ⇑P P 11 00 38.7 +0.2
baz=81,SNR=15
K16A **Soda Springs** 80.47 331 ⇓P P 11 00 39.3 +0.6
baz=81
J17A **Brown Place, J** 80.54 332 ⇑P P 11 00 39.7 +0.7
baz=81
L14A **Malta** 80.55 330 ⇓P P 11 00 38.8 -0.2
baz=81,SNR=7.6
SNOW **Snow King Moun** 80.64 332 eP P 11 00 39.6 +0.1
comp=E,4.4nm,0.8s,mb4.4
LOHW **Long Hollow** 80.70 332 eP P 11 00 39.5 -0.4
comp=E,3.1nm,1.0s,mb4.2
TPAW **Teton Pass** 80.75 332 eP P 11 00 39.8 -0.3
comp=E,4.1nm,0.9s,mb4.4
K15A **Arbon** 80.76 330 ⇑P P 11 00 39.8 -0.4
baz=81
M12A **Wells** 80.81 328 ⇑P P 11 00 40.4 -0.1
baz=81
L13A **Double Diamond** 80.90 329 ⇑P P 11 00 41.0 0.0
baz=81,SNR=11
K14A **Jones Ranch, D** 80.93 330 ⇑P P 11 00 41.4 +0.3
baz=81
I17A **Pilgrim Ck.** 80.95 332 ⇑P P 11 00 41.8 +0.7
baz=81
IMW **Indian Meadow** 81.08 332 eP P 11 00 40.7 -1.1
comp=E,6.7nm,1.4s,mb4.4
M11A **Holland Ranch,** 81.23 328 ⇑P P 11 00 42.8 +0.1
baz=81,SNR=8.8
I16A **Newdale** 81.29 332 ⇓P P 11 00 43.5 +0.5
baz=82
J15A **Blackfoot** 81.30 331 ⇑P P 11 00 43.3 +0.2
baz=82
LKWY **Lake** 81.41 333 eP P 11 00 44.4 +0.8
comp=E,1.5nm,0.6s,mb4.1
K13A **Stover Farm, H** 81.41 329 ⇓P P 11 00 44.0 +0.3
baz=82
RLMT **Red Lodge** 81.43 334 ⇑P P 11 00 43.8 +0.1
baz=82
L12A **House Creek Ra** 81.43 329 ⇓P P 11 00 44.2 +0.4
baz=82
LAO **LASA Array** 81.64 336 eP P 11 00 44.3 -0.5
comp=E,6.2nm,0.8s,mb4.6
LAO epP pP 11 00 53.3 -3.3
G18A **Lazy EL Ranch,** 81.70 334 ⇑P P 11 00 45.7 +0.6
baz=82
K12A **Draper Farm, C** 81.77 329 ⇑P P 11 00 45.5 -0.1
baz=82,SNR=5.8
L11A **Cat Creek Ranc** 81.79 328 ⇑P P 11 00 45.6 -0.1
baz=82,SNR=6.2
TOA0 **Torodi Ar. Sit** 81.79 70 eP P 11 00 45.8 -0.5
TOA0 epP pP 11 00 55.5 -2.6
TORD **Torodi Ar. Bea** 81.79 70 P P 11 00 46.1 -0.2
comp=E,17nm,0.8s,mb5.0,baz=260,slow=4.9,SNR=66
TORD LR LR 11 33 14.3
comp=E,96nm,20.4s,MS4.2,baz=260,slow=33
ULM **Lac du Bonnet** 81.79 344 P P 11 00 43.8 -1.7
comp=E,8.4nm,0.9s,mb4.7,baz=168,slow=5.7,SNR=16
ULM **Lac du Bonnet** 81.79 344 eP P 11 00 44.1 -1.4
comp=E,6.8nm,0.8s,mb4.6
ULM epP pP 11 00 52.5 -4.8
BOSA **Boshof** 81.80 118 P P 11 00 46.3 0.0
comp=E,8.7nm,0.5s,mb4.9,baz=247,slow=4.4,SNR=30
BOSA LR LR 11 32 19.4
comp=E,110nm,18.1s,MS4.3,baz=62,slow=32
I15A **Monteview** 81.81 331 ⇑P P 11 00 46.1 +0.4
baz=82
H16A **Russell Place,** 81.87 332 ⇓P P 11 00 46.4 +0.4
baz=82
J13A **Cove Ranch, Pi** 82.05 330 ⇓P P 11 00 47.0 0.0
baz=82,SNR=5.4
L10A **Juniper Basin** 82.05 328 ⇑P P 11 00 46.9 -0.2
baz=82,SNR=8.3
I14A **Mackay** 82.16 331 ⇓P P 11 00 47.9 +0.3
baz=82
F18A **Big Timber** 82.25 334 ⇑P P 11 00 47.5 -0.5
baz=82,SNR=7.2
HLID **Hailey** 82.28 330 ⇑P P 11 00 48.1 -0.1
baz=82,SNR=8.9
HLID **Hailey** 82.28 330 eP P 11 00 48.1 -0.1
comp=E,4.8nm,1.1s,mb4.3
HLID epP pP 11 00 56.5 -3.6
BEKR **Beckwourth** 82.29 324 ⇑P P 11 00 48.3 -0.1
baz=82
J12A **Stokes Ranch,** 82.34 329 ⇓P P 11 00 48.3 -0.2
baz=83,SNR=8.0
K11A **Parker Ranch,** 82.39 328 ⇓P P 11 00 48.4 -0.4
baz=83
I13A **Wildhorse Cree** 82.44 330 ⇓P P 11 00 49.2 +0.2
baz=83,SNR=8.2
DGMT **Dagmar** 82.50 339 ⇓P P 11 00 49.3 0.0
baz=83
DGMT **Dagmar** 82.50 339 eP P 11 00 49.4 +0.1
comp=E,16nm,0.8s,mb5.1
DGMT epP pP 11 00 58.1 -3.0
G16A **Moss Hill, Enn** 82.52 332 ⇑P P 11 00 49.3 -0.1
baz=83
F17A **Fitzpatrick Pl** 82.62 333 ⇑P P 11 00 50.5 +0.6
baz=83
MCMT **McKenzie Canyo** 82.63 332 eP P 11 00 50.0 0.0
comp=E,1.4nm,0.8s,mb4.0
MCMT epP pP 11 00 59.1 -2.7
H14A **Leadore** 82.68 331 ⇑P P 11 00 50.6 +0.4
baz=83
G15A **Dillon** 82.75 332 ⇑P P 11 00 51.0 +0.4
baz=83
K10A **MacKenzie Ranc** 82.78 328 ⇑P P 11 00 50.7 -0.2
baz=83
I12A **Atlanta** 82.79 330 ⇓P P 11 00 51.0 +0.2
baz=83
MFID **Camas Ranch** 82.80 329 ⇑P P 11 00 50.9 0.0
baz=83
E18A **Harlowton** 82.88 334 ⇓P P 11 00 51.1 -0.1
baz=83
H13A **Challis** 83.01 331 ⇑P P 11 00 51.8 -0.2
baz=83,SNR=7.3
E17A **Martinsdale** 83.16 334 ⇓P P 11 00 52.9 +0.2
baz=83
F15A **Butte** 83.30 332 ⇑P P 11 00 53.9 +0.4
baz=84
G13A **Cobalt** 83.43 331 ⇑P P 11 00 54.1 0.0
baz=84
D17A **Six Diamond Ra** 83.67 334 ⇓P P 11 00 55.2 0.0
baz=84
I10A **Payette** 83.77 329 ⇑P P 11 00 55.9 0.0
baz=84
MOD **Modoc** 83.77 325 eP P 11 00 56.0 0.0
comp=E,3.3nm,0.7s,mb4.6
MOD epP pP 11 01 04.5 -3.4
LBTB **Lobatse** 83.78 115 P P 11 00 56.7 +0.1
comp=E,14nm,0.6s,mb5.3,baz=255,slow=6.2,SNR=26
LBTB **Lobatse** 83.78 115 eP P 11 00 56.7 0.0
comp=E,15nm,0.7s,mb5.2
LBTB epP pP 11 01 05.6 -2.9
E15A **Deer Lodge** 83.84 333 ⇓P P 11 00 56.3 +0.1
baz=84
H11A **Donnelly** 83.89 330 ⇓P P 11 00 56.0 -0.5
baz=84
D16A **Dana Ranch, Ca** 83.90 334 ⇑P P 11 00 56.7 +0.2
baz=84
J08A **Circle Bar Ran** 83.98 327 ⇓P P 11 00 56.8 -0.2
baz=84,SNR=5.4
F13A **Darby** 84.02 331 ⇑P P 11 00 57.4 +0.2
baz=84
EGMT **Eagleton** 84.04 335 ⇓P P 11 00 57.2 0.0
baz=84
C17A **Wharram Farm,** 84.09 334 ⇑P P 11 00 57.2 -0.3
baz=84
I09A **Lost Marbles R** 84.11 328 ⇓P P 11 00 57.3 -0.3
baz=84
B18A **Beardsley Farm** 84.36 335 ⇑P P 11 00 58.1 -0.7
baz=85,SNR=6.2
F12A **Elk City** 84.39 331 ⇓P P 11 00 58.5 -0.6
baz=85
G11A **Walters Elk Ra** 84.55 330 ⇑P P 11 00 59.3 -0.5
baz=85,SNR=6.6
B17A **L&G Farms, Che** 84.65 335 ⇑P P 11 00 59.7 -0.5
baz=85
K05A **Summer Lake** 84.68 326 ⇑P P 11 01 00.5 0.0
baz=85
D14A **Greenough** 84.72 332 ⇓P P 11 01 00.4 -0.2
baz=85
A18A **Metzger Ranch,** 84.82 336 ⇑P P 11 01 00.5 -0.6
baz=85
F11A **Grangeville** 84.88 330 ⇓P P 11 01 01.0 -0.5
baz=85
C15A **Salmond Ranch,** 84.92 333 ⇑P P 11 01 01.3 -0.3
baz=85
H08A **Prairie City** 84.96 328 ⇑P P 11 01 01.4 -0.6
baz=85
B16A **M & M Farms, S** 85.09 334 ⇑P P 11 01 02.2 -0.3
baz=85
G09A **Cove** 85.13 329 ⇑P P 11 01 02.2 -0.6
baz=85,SNR=5.4
SWMT **Swartz Lake** 85.26 332 eP P 11 01 02.5 -0.9
B15A **Bradely Ranch,** 85.34 334 ⇓P P 11 01 03.2 -0.6
baz=86
C14A **Swan Lake** 85.37 333 ⇑P P 11 01 03.3 -0.6
baz=86
D12A **Red Ives Fores** 85.46 331 ⇓P P 11 01 03.8 -0.6
baz=86
BSMT **Bassoo Peak** 85.86 332 eP P 11 01 06.0 -0.4
comp=E,3.3nm,1.0s,mb4.5
A15A **Johnson Ranch,** 85.95 334 ⇓P P 11 01 05.8 -0.9
baz=86
A14A **Double T Ranch** 86.21 334 ⇓P P 11 01 07.3 -0.7
baz=86
WALA **Waterton Lakes** 86.47 333 eP P 11 01 08.3 -1.0
comp=E,0.2nm,1.0s,mb3.3
A13A **Flathead Natio** 86.57 333 ⇑P P 11 01 09.4 -0.4
baz=87
A11A **Hall Mountain,** 87.38 332 ⇑P P 11 01 13.3 -0.4
baz=88
FCC **Fort Churchill** 89.39 348 eP P 11 01 22.4 -0.6
comp=E,0.3nm,0.8s,mb3.7
FCC epP pP 11 01 30.9 -4.1
EDM **Edmonton** 89.62 336 eP P 11 01 22.5 -1.7
EDM epP pP 11 01 30.9 -5.2
YKA **Yellowknife Ar** 97.48 341 P P 11 01 58.4 -1.7
comp=E,0.7nm,0.7s,mb4.2,baz=139,slow=4.2,SNR=13
YKA **Yellowknife Ar** 97.48 341 P P 11 01 58.4 -1.7
KEST **Kesra** 99.33 54 LR LR 11 46 15.9
comp=E,55nm,21.2s,MS4.0,baz=186,slow=35
DZM **Mont Dzumac** 104.83 234 eLR LR 11 37 11.5
comp=E,95nm,27.5s
AKASG **Malin Array Be** 118.15 45 PKP PKPdf 11 07 12.1 -1.4
comp=E,1.3nm,0.7s,baz=269,slow=2.2,SNR=6.4
BRTR **Keskin Array B** 118.62 58 PKP PKPdf 11 07 13.8 -1.0
comp=E,1.0nm,0.7s,baz=173,slow=2.7,SNR=6.5
ASAR **Alice Springs** 122.43 207 PKP PKPdf 11 07 21.0 -1.7
comp=E,1.4nm,0.8s,baz=131,slow=2.0,SNR=20
WB2 **Warramunga Arr** 125.54 210 ePKPdf PKPdf 11 07 27.3 -1.4
WB2 epPKPdf pPKPdf 11 07 36.9 -4.2
WRA **Warramunga Arr** 125.55 210 PKP PKPdf 11 07 27.4 -1.4
comp=E,4.0nm,0.7s,baz=153,slow=1.5,SNR=58
FITZ **Fitzroy Crossi** 130.53 201 ePKPdf PKPdf 11 07 37.5 -0.8
FITZ epPKPdf pPKPdf 11 07 47.5 -3.1
PETK **Petropavlovsk-** 136.99 318 PKP PKPdf 11 07 49.2 0.0
comp=E,2.8nm,0.8s,baz=57,slow=5.5,SNR=4.1
PETK **Petropavlovsk-** 136.99 318 PKP PKPdf 11 07 49.2 0.0
ABKAR **Akbulak array** 137.82 47 ePKPdf PKPdf 11 07 50.7 -0.2
BVAR **Borovoye Array** 142.95 39 PKhKP 11 07 56.3
comp=E,0.6nm,0.4s,baz=269,slow=37,SNR=2.9
BVAR PKP PKPdf 11 08 00.9 +0.8
comp=E,2.0nm,0.7s,baz=301,slow=3.1,SNR=6.3
YAK **Yakutsk** 144.12 343 ePKPdf PKPdf 11 07 58.5 -3.3
KBL **Kabul** 145.86 70 ePKPdf PKPdf 11 08 05.8 +0.1
KURK **Kurchatov** 148.53 38 ePKPdf PKPdf 11 08 10.1 +0.5
KURK ePKPbc PKPbc 11 08 12.9 -0.4
KURK ePKPab PKPab 11 08 17.1 +0.3
EKS2 **Erkin-Say** 148.67 55 ePKPdf PKPdf 11 08 11.6 +1.4
EKS2 ePKPbc PKPbc 11 08 14.9 +1.0
AML **Almayashu** 148.74 56 P PKPbc 11 08 15.3 +1.2
SNR=8.4
AML **Almayashu** 148.74 56 ePKPdf PKPdf 11 08 11.1 +0.8
AML ePKPbc PKPbc 11 08 15.4 +1.2
USP **Ospenovka** 149.02 53 P PKPbc 11 08 15.0 +0.2
SNR=5.6
AAK **Ala-Archa** 149.19 54 P PKPbc 11 08 16.4 +1.2
SNR=12
AAK **Ala-Archa** 149.19 54 ePKPbc PKPbc 11 08 15.7 +0.4
AAK ePKPab PKPab 11 08 20.9 +1.1
CHMS **Chumysh** 149.27 54 P PKPbc 11 08 16.0 +0.6
SNR=5.3
UCH **Uchtor** 149.31 55 P PKPbc 11 08 17.2 +1.7
SNR=14
UCH **Uchtor** 149.31 55 ePKPdf PKPdf 11 08 12.7 +1.5
UCH ePKPbc PKPbc 11 08 17.1 +1.5
UCH ePKPab PKPab 11 08 20.9 +0.7
ZAA0 **Zalesovo Array** 149.46 28 ePKPdf PKPdf 11 08 10.8 -0.3
ZAA0 ePKPbc PKPbc 11 08 15.3 -0.2
ZALV **Zalesovo Beam** 149.46 28 PKP PKPdf 11 08 10.6 -0.4
comp=E,28nm,0.8s,baz=293,slow=2.0,SNR=44
ZALV PKPbc PKPbc 11 08 15.6 +0.1
comp=E,28nm,0.8s,baz=303,slow=3.4,SNR=54
KZA **Kyzart** 149.87 55 P PKPbc 11 08 17.7 +0.8
SNR=8.4
TKM2 **Tokmak 2** 149.89 53 P PKPbc 11 08 17.7 +0.7
SNR=9.2
TKM2 **Tokmak 2** 149.89 53 ePKPdf PKPdf 11 08 11.9 -0.2
TKM2 ePKPbc PKPbc 11 08 16.8 -0.1
TKM2 ePKPab PKPab 11 08 22.8 +0.1
ULHL **Ulahol** 150.54 54 P PKPbc 11 08 20.0 +1.5
SNR=6.1
MK31 **Makanchi Array** 152.67 42 ePKPbc PKPbc 11 08 22.6 -0.6
MK31 ePKPab PKPab 11 08 32.2 -1.9
MKAR **Makanchi Array** 152.67 42 PKP PKPdf 11 08 15.6 -0.6
comp=E,0.8nm,0.8s,baz=259,slow=1.2,SNR=8.6
MKAR PKPbc PKPbc 11 08 22.8 -0.4
comp=E,6.6nm,0.7s,baz=288,slow=2.4,SNR=56
MKAR PKPab PKPab 11 08 32.9 -1.2
comp=E,3.0nm,0.8s,baz=284,slow=2.0,SNR=4.8
MJAR **Matsushiro Arr** 154.19 295 PKP PKPdf 11 08 17.8 -1.0
comp=E,0.3nm,0.3s,baz=6.5,slow=11,SNR=3.3
MJAR PKPbc PKPbc 11 08 25.5 -1.4
comp=E,1.3nm,0.7s,baz=214,slow=2.0,SNR=4.1
MJAR PKPab PKPab 11 08 39.3 -1.6
comp=E,1.1nm,0.8s,baz=114,slow=31,SNR=4.1
WMQ **Urumqi** 157.49 43 ePKP PKPdf 11 08 21.9 -1.0
CN2 **Changchun** 160.04 323 ePKP PKPdf 11 08 24.4 -1.5
SONM **Songino Array** 161.00 5 PKP PKPdf 11 08 25.0 -1.8
comp=E,0.9nm,0.8s,baz=270,slow=1.0,SNR=5.3
SONM PKPab PKPab 11 09 10.3 +0.6
comp=E,1.0nm,0.7s,baz=328,slow=3.5,SNR=5.0
KSRS **Korea Array** 161.90 303 PKP PKPdf 11 08 27.4 -0.7
comp=E,1.2nm,0.9s,baz=54,slow=29,SNR=3.9
CMAR **Chiang Mai Arr** 166.23 137 PKP PKPdf 11 08 31.9 -0.7
comp=E,0.4nm,0.3s,baz=224,slow=2.5,SNR=3.4
CMAR PKPab PKPab 11 09 31.4 -2.1
comp=E,1.1nm,0.4s,baz=102,slow=14,SNR=6.2
GTA **Gaotai** 167.15 33 ePKPbc PKPdf 11 08 43.1 +10
GTA pPKP pPKPdf 11 08 53.7 +8.6
GTA sPKP 11 08 57.9

HHC	**Hu-ho-hao-te**	**167.87**	**350**	*e*PKP	PKPdf	11 08 31.6	-1.5
HHC				pPKP	pPKPdf	11 08 42.4	-3.1
HHC				sPKP		11 08 46.0	
HHC				PKS		11 12 03.5	
HHC				SKS	SKSdf	11 15 29.9	-4.0
HHC				AMB	AMB		
	comp=Z,92nm,6.2s						
HHC				LR	LR		
	comp=N,150nm,21.5s						
HHC				LR	LR		
	comp=E,190nm,21.7s						
HHC				LR	LR		
	comp=Z,110nm,20.0s						
LZH	**Lanzhou**	**171.70**	**29**	*e*PKP	PKPdf	11 08 30.5	-5.0
LZH				LR	LR		
	comp=E,140nm,18.2s						
LZH				LR	LR		
	comp=Z,180nm,20.5s						
CD2	**Chengdu**	**175.17**	**64**	PKP	PKPdf	11 08 35.2	-1.8
CD2				pPKP	pPKPdf	11 08 46.0	-3.4
CD2				sPKP		11 08 49.6	
CD2				PKS		11 12 06.0	
CD2				SKS	SKSdf	11 15 33.0	-4.2
CD2				AMB	AMB		
	comp=Z,240nm,5.7s						
CD2				LR	LR		
	comp=N,470nm,6.4s						
CD2				LR	LR		
	comp=Z,450nm,8.3s						
GYA	**Guiyang**	**176.91**	**141**	PKP	PKPdf	11 08 36.0	-1.6
GYA				pPKP	pPKPdf	11 08 44.3	-5.7
GYA				PKPab	PKPab	11 10 22.0	+1.3
GYA				PKS		11 12 06.5	
GYA				PP	PP	11 14 15.0	+1.8
GYA				SKKS	SKKSac	11 20 58.2	+1.1
GYA				SS	SS	11 35 42.1	-0.7
GYA				AMB	AMB		
	comp=Z,110nm,7.6s						
GYA				LR	LR		
	comp=N,130nm,20.5s						
GYA				LR	LR		
	comp=E,110nm,21.9s						
GYA				LR	LR		
	comp=Z,120nm,22.3s						

*MOS **11** 10:57:25.6±1.3, 43°.07N×44°.34E, h17km, mb4.6/1, Error ellipse: s-maj=8.8km s-min=6.8km az=96.6*
MOS Felt (III-IV) at Vladikavkaz.
*ISCJB **11** 10:57:26.5±0.3, 43°.05N±0°.02×44°.33E±0°.02, h5km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=29.5*
*CSEM **11** 10:57:26.5±0.2, 43°.05N×44°.33E, h2km, mb4.6, Error ellipse: s-maj=3.7km s-min=3.2km az=125.0*
ISC 11 10:57:27.0±0.3, **43°.06N**±0°.02×**44°.33E**±0°.03, **h7**km±3km, **n69**, σ1.9**13**/114, **9C-8D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNR	**Ardon**	**0.14**	**343**	⇓*i*PG	**Pg**	**10 57 29.1**	**-0.8**
ARNR				*i* S	**Sg**	**10 57 32.7**	**+0.8**
ARNR	**Ardon**	**0.14**	**343**	*i* Pg	**Pg**	**10 57 29.1**	**-0.8**
ARNR				*i* Sg	**Sg**	**10 57 32.7**	**+0.8**
KORR	**Kora**	**0.20**	**278**	⇑*i*PG	**Pg**	**10 57 30.2**	**-0.8**
KORR				*i* S	**Sg**	**10 57 34.4**	**+0.8**
KORR	**Kora**	**0.20**	**278**	*i* Pg	**Pg**	**10 57 30.2**	**-0.8**
KORR				*i* Sg	**Sg**	**10 57 34.4**	**+0.8**
VLKR	**Vladikavkaz**	**0.25**	**93**	*i* PG	**Pg**	**10 57 30.9**	**-1.1**
VLKR	**Vladikavkaz**	**0.25**	**93**	*i* Pg	**Pg**	**10 57 30.9**	**-1.1**
KMSR	**Komsomolskaya**	**0.31**	**355**	⇑*i*PG	**Pg**	**10 57 32.5**	**-0.7**
KMSR				*e*S	**Sg**	**10 57 37.8**	**+0.5**
KMSR	**Komsomolskaya**	**0.31**	**355**	*i* Pg	**Pg**	**10 57 32.5**	**-0.7**
KMSR				*e*Sg	**Sg**	**10 57 37.8**	**+0.5**
BTKR	**Batakoyurt**	**0.35**	**26**	⇓*i*PG	**Pg**	**10 57 32.9**	**-0.9**
BTKR				*i* S	**Sg**	**10 57 38.2**	**-0.2**
BTKR	**Batakoyurt**	**0.35**	**26**	*i* Pg	**Pg**	**10 57 32.9**	**-0.9**
BTKR				*i* Sg	**Sg**	**10 57 38.2**	**-0.2**
SNJR	**Sundja**	**0.35**	**88**	*e*PG	**Pg**	**10 57 34.0**	**+0.1**
SNJR				*e*S	**Sg**	**10 57 39.1**	**+0.6**
SNJR	**Sundja**	**0.35**	**88**	*e*Pg	**Pg**	**10 57 34.0**	**+0.1**
SNJR				*e*Sg	**Sg**	**10 57 39.1**	**+0.6**
ZEI	**Tsey**	**0.43**	**228**	⇑*i*PG	**Pg**	**10 57 34.2**	**-1.2**
ZEI				*i* S	**Sg**	**10 57 41.2**	**+0.2**
ZEI	**Tsey**	**0.43**	**228**	*i* Pg	**Pg**	**10 57 34.2**	**-1.2**
ZEI				*i* Sg	**Sg**	**10 57 41.2**	**+0.2**
LSNR	**Lesken**	**0.44**	**300**	⇑*i*PG	**Pg**	**10 57 34.8**	**-0.7**
LSNR				*i* S	**Sg**	**10 57 41.7**	**+0.5**
LSNR	**Lesken**	**0.44**	**300**	*i* Pg	**Pg**	**10 57 34.8**	**-0.7**
LSNR				*i* Sg	**Sg**	**10 57 41.7**	**+0.5**
DIGR	**Digorskoe uzhe**	**0.57**	**254**	⇑*i*PG	**Pg**	**10 57 37.0**	**-1.1**
DIGR				*i* S	**Sg**	**10 57 45.7**	**+0.1**
DIGR	**Digorskoe uzhe**	**0.57**	**254**	*i* Pg	**Pg**	**10 57 37.0**	**-1.1**
DIGR				*i* Sg	**Sg**	**10 57 45.7**	**+0.1**
PRTR	**Priterechnaya**	**0.69**	**357**	⇑*i*PG	**Pg**	**10 57 41.2**	**+0.8**
PRTR				*e*S	**Sg**	**10 57 51.7**	**+2.3**
PRTR	**Priterechnaya**	**0.69**	**357**	*i* Pg	**Pg**	**10 57 41.2**	**+0.8**
PRTR				*e*Sg	**Sg**	**10 57 51.7**	**+2.3**
TRKR	**Terskaya**	**0.72**	**23**	⇓*i*PG	**Pg**	**10 57 40.9**	**-0.1**
TRKR				*e*S	**Sg**	**10 57 51.2**	**+0.8**
TRKR	**Terskaya**	**0.72**	**23**	*i* Pg	**Pg**	**10 57 40.9**	**-0.1**
TRKR				*e*Sg	**Sg**	**10 57 51.2**	**+0.8**
ONI	**Oni**	**0.80**	**234**	P	**Pg**	**10 57 41.2**	**-1.2**
ONI				S	**Sg**	**10 57 53.4**	**+0.7**
ONI	**Oni**	**0.80**	**234**	Pg	**Pg**	**10 57 41.2**	**-1.2**
ONI				Sg	**Sg**	**10 57 53.4**	**+0.6**
KEH	**Kehvi**	**0.81**	**202**	P	**Pg**	**10 57 40.1**	**-2.3**
KEH				S	**Sg**	**10 57 52.4**	**-0.5**
KUBR	**Kubataba**	**1.00**	**318**	⇓*i*PG	**Pg**	**10 57 45.9**	**-0.4**
KUBR				*i* S	**Sg**	**10 58 02.4**	**+3.1**
KUBR	**Kubataba**	**1.00**	**318**	*i* Pg	**Pg**	**10 57 45.9**	**-0.4**
KUBR				*i* Sg	**Sg**	**10 58 02.4**	**+3.1**
GOR	**Gori**	**1.08**	**189**	P	**Pg**	**10 57 46.9**	**-0.9**
GOR				S	**Sg**	**10 58 03.2**	**+1.3**
GOR	**Gori**	**1.08**	**189**	Pg	**Pg**	**10 57 46.9**	**-0.9**
GOR				Sg	**Sg**	**10 58 03.2**	**+1.3**
TBLG	**Delisi**	**1.36**	**167**	*e*PG	**Pn**	**10 57 51.3**	**-1.1**
TBLG				*e*S	**Sg**	**10 58 11.7**	**+1.0**
TBLG	**Delisi**	**1.36**	**167**	P	**Pn**	**10 57 51.3**	**-1.2**
TBLG				S	**Sb**	**10 58 11.7**	**+1.3**
TBLG	**Delisi**	**1.36**	**167**	*e*Pg	**Pn**	**10 57 51.3**	**-1.1**
TBLG				*e*Sg	**Sg**	**10 58 11.7**	**+1.0**
SHAR	**Shatzhatmas**	**1.39**	**300**	⇓*i*PG	**Pn**	**10 57 51.4**	**-1.5**
SHAR				*e*S	**Sg**	**10 58 12.4**	**+0.6**
SHAR	**Shatzhatmas**	**1.39**	**300**	*i* Pg	**Pn**	**10 57 51.4**	**-1.5**
SHAR				*e*Sg	**Sg**	**10 58 12.4**	**+0.6**
MTA	**Mtatsminda**	**1.41**	**166**	P	**Pn**	**10 57 51.8**	**-1.3**
MTA				S	**Sb**	**10 58 11.3**	**-0.4**
KIV	**Kislovodsk**	**1.50**	**307**	⇓*e*PG	**Pn**	**10 57 52.2**	**-2.1**
KIV				*e*S	**Sg**	**10 58 15.1**	**0.0**
KIV	**Kislovodsk**	**1.50**	**307**	*e*Pg	**Pn**	**10 57 52.2**	**-2.1**
KIV				*e*Sg	**Sg**	**10 58 15.1**	**0.0**
DOMR	**Dombai**	**2.00**	**278**	⇓*e*PN	**Pn**	**10 58 02.1**	**+0.9**
DOMR	**Dombai**	**2.00**	**278**	*e*Pn	**Pn**	**10 58 02.1**	**+0.9**
GOF	**Gofitskoye**	**2.21**	**335**	*e*PN	**Sn**	**10 58 25.7**	**-5.9**
GOF				pmax	pmax		
	comp=Z,208nm,0.9s						
GOF	**Gofitskoye**	**2.21**	**335**	*e*Pn	**Sn**	**10 58 25.7**	**-5.9**
	comp=Z,208nm,0.9s						
MAK	**Makhachkala**	**2.33**	**91**	*e*PN	**Pn**	**10 58 05.1**	**-0.6**
MAK				*e*		10 58 36.0	
MAK				pmax	pmax		
	comp=Z,53nm,0.1s						
MAK				smax			
	comp=E,859nm,0.9s						
MAK				smax			
	comp=N,692nm,0.5s						
MAK				MLR	MLR		
	comp=Z,133nm,7.0s						
MAK	**Makhachkala**	**2.33**	**91**	*e*Pn	**Pn**	**10 58 05.1**	**-0.6**
	comp=Z,53nm,0.1s						
MAK				*e*Sn	**Sn**	**10 58 36.0**	**+1.4**
	comp=Z,133nm,7.0s						
ARTV	**Artvin**	**2.59**	**225**	*i* P	**Pn**	**10 58 11.0**	**+1.7**
ARTV	**Artvin**	**2.59**	**225**	*i* P	**Pn**	**10 58 11.0**	**+1.7**
DBOC	**Borcka**	**2.62**	**230**	*i* P	**Pn**	**10 58 10.8**	**+1.0**
DBOC	**Borcka**	**2.62**	**230**	*i* P	**Pn**	**10 58 10.8**	**+1.1**
DBOC				*i* S	**Sn**	**10 58 43.1**	**+1.3**
DAGI	**Agillar**	**2.68**	**223**	*i* P	**Pn**	**10 58 11.6**	**+1.1**
DBAD	**Bademkaya**	**2.83**	**225**	*i* P	**Pn**	**10 58 13.7**	**+1.0**
DBAD	**Bademkaya**	**2.83**	**225**	*i* P	**Pn**	**10 58 13.7**	**+1.0**
DDEM	**Demirkent**	**2.90**	**223**	*i* P	**Pn**	**10 58 14.4**	**+0.9**
DDEM	**Demirkent**	**2.90**	**223**	*i* P	**Pn**	**10 58 14.4**	**+0.8**

GNI	**Garni**	**2.92**	**174**	*i* PN	**Pn**	**10 58 18.1**	**+4.2**
GNI				*i* S	**Sb**	**10 59 00.8**	**+5.4**
GNI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
GNI				smax			
	comp=Z,66nm,0.9s						
GNI	**Garni**	**2.92**	**174**	*i* Pn	**Pn**	**10 58 18.1**	**+4.2**
	comp=Z,5.0nm,0.3s						
GNI				*i* Sb	**Sb**	**10 59 00.8**	**+5.4**
	comp=Z,66nm,0.9s						
SOC	**Sochi**	**3.41**	**280**	*e*PN	**Pn**	**10 58 24.6**	**+4.0**
SOC				*e*		10 58 29.1	
SOC				pmax	pmax		
	comp=Z,30nm,1.1s						
SOC				pmax	pmax		
	comp=Z,38nm,0.9s						
SOC	**Sochi**	**3.41**	**280**	*e*Pn	**Pn**	**10 58 24.6**	**+4.0**
	comp=Z,30nm,1.1s						
SOC	**Sochi**	**3.41**	**280**	*e*Pb	**Pb**	**10 58 29.1**	**+1.3**
	comp=Z,38nm,0.9s						
ANN	**Anapa**	**5.28**	**292**	*e*PN	**Pn**	**10 58 44.0**	**-2.3**
ANN				*e*S	**Sn**	**10 59 45.1**	**-2.3**
ANN				pmax	pmax		
	comp=Z,30nm,1.1s						
ANN	**Anapa**	**5.28**	**292**	*e*Pn	**Pn**	**10 58 44.0**	**-2.3**
	comp=Z,30nm,1.1s						
ANN				*e*Sn	**Sn**	**10 59 45.1**	**-2.3**
VSR	**Storozhevoye**	**8.89**	**338**	*e*P	**Pn**	**10 59 41.8**	**+6.0**
VSR				*e*S	**Sn**	**11 01 08.1**	**-8.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
VSR				smax			
	comp=E,10.0nm,0.6s						
VSR				smax			
	comp=Z,3.0nm,0.7s						
VSR				smax			
	comp=N,9.0nm,0.8s						
VSR	**Storozhevoye**	**8.89**	**338**	*e*P	**Pn**	**10 59 41.8**	**+6.0**
	comp=N,10.0nm,0.9s						
AKTO	**Aktyubinsk**	**11.93**	**47**	⇑Pn	**Pn**	**11 00 13.2**	**-4.1**
	comp=N,0.4nm,0.8s						
AKTO				⇑Sn	**Sn**	**11 02 24.2**	**-6.4**
	comp=N,0.5nm,0.7s						
AKTO	**Aktyubinsk**	**11.93**	**47**	Pn	**Pn**	**11 00 13.2**	**-4.2**
	comp=N,0.4nm,0.8s						
AKTO				Sn	**Sn**	**11 02 24.2**	**-6.4**
	comp=N,0.5nm,0.7s						
AB31	**Akbulak array**	**12.46**	**55**	⇓Pn	**Pn**	**11 00 20.2**	**-4.5**
	comp=N,0.5nm,0.3s,baz=237,slow=10,SNR=47						
AB31				⇑Sn	**Sn**	**11 02 33.4**	**-10**
	comp=N,1.8nm,0.6s,baz=246,slow=19,SNR=6.2						
BRVK	**Borovoye**	**19.92**	**51**	*i* P	**Pn**	**11 01 59.7**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	**Borovoye**	**19.92**	**51**	*i* P	**Pn**	**11 01 59.7**	**-1.0**
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**21.40**	**336**	*i* P	**P**	**11 02 15.1**	**+0.1**
FINES	**FINESS Array B**	**21.40**	**336**	*i* P	**P**	**11 02 15.1**	**+0.1**
KURK	**Kurchatov**	**24.48**	**60**	*i* P	**P**	**11 02 50.1**	**+3.6**

IGQ 11 11:05:36.6, 0°.01N×78°.52W, h19km±1km, **Mb4.1, Ms3.9, 9C-26D, Error ellipse: s-maj=1.1km s-min=0.6km az=35.1, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YANA	**Yana**	**0.13**	**203**	⇑P	Pg	11 05 41.0	+0.3
PINO	**Pino**	**0.18**	**209**	⇓P	Pg	11 05 42.1	+0.7
GGP	**Refugio Guagua**	**0.19**	**203**	⇑P	Pg	11 05 42.1	+0.6
TERV	**Terraza Guagua**	**0.20**	**206**	⇓P	Pg	11 05 42.2	+0.6
JUA2	**San Juan 2**	**0.23**	**202**	⇓P	Pg	11 05 42.4	+0.2
OTAV	**Otavalo**	**0.24**	**16**	⇓S	Sg	11 05 46.4	+0.3
OTAV	**Otavalo**	**0.24**	**16**	⇓P	Pg	11 05 42.8	+0.5
COTA	**Cotacachi**	**0.38**	**29**	⇓P	Pg	11 05 45.2	+0.7
CAYR	**Refugio Cayamb**	**0.51**	**89**	⇓P	Pg	11 05 47.5	+0.6
CAYA	**Cayambe**	**0.53**	**83**	⇓P	Pg	11 05 47.7	+0.4
PITA	**Cotopaxi Volc**	**0.57**	**171**	⇓P	Pb	11 05 48.5	+0.5
ANTI	**Antisana**	**0.58**	**142**	⇓P	Pb	11 05 48.1	0.0
NAS2	**Nasa**	**0.65**	**176**	⇓S	Sb	11 05 58.9	+0.9
NAS2	**Nasa**	**0.65**	**176**	⇓P	Pb	11 05 50.2	+0.9
VC1	**Cotopaxi 1**	**0.65**	**170**	⇓P	Pb	11 05 50.0	+0.5
BVC2	**Cotopaxi Volca**	**0.67**	**171**	⇓P	Pb	11 05 50.4	+0.7
BNAS	**Cotopaxi Volca**	**0.67**	**177**	⇓S	Sb	11 06 00.8	+2.1
BNAS	**Cotopaxi Volca**	**0.67**	**177**	⇓P	Pb	11 05 50.8	+1.1
BREF	**Cotopaxi Volca**	**0.67**	**173**	⇑P	Pb	11 05 50.5	+0.7
CAMI	**Rancho Maria**	**0.68**	**179**	⇓P	Pb	11 05 50.9	+1.0
COV1	**Cotopaxi Volc**	**0.69**	**165**	⇑S	Sb	11 05 59.6	+0.5
COV1	**Cotopaxi Volc**	**0.69**	**165**	⇑P	Pb	11 05 50.6	+0.6
BTAM	**Cotopaxi Volca**	**0.69**	**170**	⇓P	Pb	11 05 50.7	+0.7
TAMB	**Tambo**	**0.71**	**168**	P	Pb	11 05 51.0	+0.6
MOV1	**Cotopaxi Vol s**	**0.72**	**174**	P	Pb	11 05 51.5	+1.0
BMOR	**Cotopaxi Volca**	**0.73**	**175**	⇓S	Sb	11 06 01.6	+1.1
BMOR	**Cotopaxi Volca**	**0.73**	**175**	⇓P	Pb	11 05 51.3	+0.5
CHAR	**Charly**	**0.85**	**96**	⇓S	Sb	11 06 04.7	+0.8
CHAR	**Charly**	**0.85**	**96**	⇓P	Pb	11 05 53.5	+0.6
CONE	**Cono NE Rev Vo**	**0.88**	**95**	⇓P	Pb	11 05 53.8	+0.5
LAV3	**Lava3-Reventad**	**0.89**	**96**	⇓S	Sb	11 06 05.2	+0.2
LAV3	**Lava3-Reventad**	**0.89**	**96**	⇓P	Pb	11 05 53.9	+0.3
PISA	**Pisayambo**	**1.06**	**173**	⇓P	Pb	11 05 57.6	+1.1
BRUN	**Tungurahua Vol**	**1.42**	**176**	P	Pn	11 06 03.5	+2.0
JUI6	**Juive**	**1.42**	**178**	S	Sn	11 06 22.3	+2.7
JUI6	**Juive**	**1.42**	**178**	P	Pn	11 06 04.1	+2.6
IGUA	**Igualata**	**1.49**	**185**	S	Sn	11 06 25.1	+3.8
IGUA	**Igualata**	**1.49**	**185**	P	Pn	11 06 04.8	+2.4
BMAS	**Trigal station**	**1.50**	**178**	⇑P	Pn	11 06 04.9	+2.4
BMAS	**Trigal station**	**1.50**	**178**	⇑S	Sn	11 06 24.2	+2.6
BPAT	**Tungurahua Vol**	**1.50**	**177**	S	Sn	11 06 24.0	+2.4
BPAT	**Tungurahua Vol**	**1.50**	**177**	P	Pn	11 06 05.2	+2.7
PATA	**Patacocha**	**1.50**	**177**	S	Sn	11 06 24.8	+3.2
PATA	**Patacocha**	**1.50**	**177**	P	Pn	11 06 05.2	+2.6
ARRY	**Arrayan**	**1.50**	**178**	⇑S	Sn	11 06 23.6	+2.0
ARRY	**Arrayan**	**1.50**	**178**	⇑P	Pn	11 06 04.8	+2.2
JAMA	**Jama**	**1.71**	**261**	P	Pn	11 06 07.0	+1.6

*ISCJB **11** 11:23:51.8±1.0, 23°.87N±0°.04×122°.59E±0°.02, h2km±8km, Error ellipse: s-maj=6.2km s-min=3.1km az=164.8*
*TAP **11** 11:23:53.7, 23°.95N×122°.60E, h29km±1km, ML3.1, C*
*JMA **11** 11:23:54.7±0.3, 23°.99N×122°.60E, h22km, M2.3*
ISC 11 11:23:52.2±0.6, **23°.86N**±0°.04×**122°.59E**±0°.02, **h5**km±5km, **n29**, σ1.9**01**/44, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.71**	**32**	P	**Pg**	**11 24 06.4**	**+0.6**
YOJ				S	**Sg**	**11 24 14.3**	**-0.8**
TWD	**Chiawan**	**0.94**	**284**	P	**Pg**	**11 24 10.2**	**0.0**
	baz=278						
ENA	**Nanau**	**0.96**	**306**	P	**Pg**	**11 24 10.8**	**+0.2**
	baz=301						
ENA				*e*S	**Sg**	**11 24 24.0**	**+0.8**
	baz=301						
TWC	**Suao**	**1.01**	**318**	P	**Pg**	**11 24 11.2**	**-0.4**
	baz=313						
TWC				*e*S	**Sg**	**11 24 24.5**	**-0.1**
	baz=313						
ESL	**Shilin**	**1.06**	**268**	*e*P	**Pg**	**11 24 11.4**	**-1.2**
	baz=263						
HATJ	**Hateruma jima**	**1.13**	**80**	P	**Pg**	**11 24 14.4**	**+0.6**
HATJ				S	**Sg**	**11 24 29.7**	**+1.3**
IRIF	**Iriomote-Funau**	**1.14**	**65**	P	**Pg**	**11 24 14.6**	**+0.5**
IRIF				S	**Sg**	**11 24 28.6**	**-0.3**
TWE	**Neicheng**	**1.20**	**316**	P	**Pg**	**11 24 14.8**	**-0.5**
	baz=300						
TWE				*e*S	**Sg**	**11 24 31.1**	**+0.2**
	baz=300						
EHY	**Hungye**	**1.22**	**253**	*e*P	**Pb**	**11 24 14.9**	**-0.8**
	baz=250						
EHY				*e*S	**Sg**	**11 24 30.4**	**-1.0**
	baz=250						
WHF	**Hehuan Shan**	**1.25**	**283**	P	**Pn**	**11 24 15.2**	**-1.0**
	baz=279						
NNS	**Nan Shan**	**1.25**	**298**	*e*P	**Pn**	**11 24 15.6**	**-0.7**
	baz=294						
TWF1	**Yuli**	**1.29**	**247**	*e*P	**Pn**	**11 24 16.2**	**-0.7**
	baz=244						
TWF1				*e*S	**Sb**	**11 24 33.2**	**-0.7**
	baz=244						
JKRS	**Kuro-shima**	**1.35**	**74**	P	**Pn**	**11 24 17.7**	**0.0**
JKRS				S	**Sb**	**11 24 34.9**	**-0.6**
TWT	**Tachien**	**1.35**	**287**	*e*P	**Pn**	**11 24 17.8**	**+0.1**
	baz=272						
CHKT	**Chengkung**	**1.36**	**236**	*e*P	**Pn**	**11 24 17.3**	**-0.5**
	baz=222						
CHKT				*e*S	**Sb**	**11 24 33.0**	**-2.7**
	baz=222						
NSK	**Sanguang**	**1.39**	**306**	P	**Pn**	**11 24 17.5**	**-0.7**
	baz=289						
JIJ	**Ishigaki jima**	**1.50**	**70**	P	**Pn**	**11 24 19.7**	**-0.1**
JIJ				S	**Sn**	**11 24 38.1**	**-1.7**
YUS	**Yu-Shan**	**1.55**	**256**	*e*P	**Pn**	**11 24 20.7**	**+0.3**
	baz=253						
SMLT	**Sun Moon Lake**	**1.55**	**271**	P	**Pn**	**11 24 20.2**	**-0.2**
	baz=258						
TYC	**Yuchr**	**1.59**	**272**	P	**Pn**	**11 24 20.8**	**-0.2**
	baz=268						
ELDTW	**Lidau**	**1.59**	**245**	P	**Pn**	**11 24 20.4**	**-0.6**
	baz=232						
ALS	**Alishan**	**1.68**	**258**	P	**Pn**	**11 24 22.8**	**+0.6**
	baz=256						
ALS				*e*S	**Sn**	**11 24 43.5**	**-0.5**
	baz=256						
TWG	**Pinlang**	**1.74**	**234**	*e*P	**Pn**	**11 24 22.9**	**-0.2**
	baz=244						
TWG				*e*S	**Sn**	**11 24 43.4**	**-2.2**
	baz=244						
CHN5	**Tsauling**	**1.77**	**262**	*e*P	**Pn**	**11 24 24.5**	**+1.0**
	baz=260						
CHN5				*e*S	**Sn**	**11 24 47.1**	**+0.6**
	baz=260						
STYT	**Tauyuan**	**1.82**	**248**	*e*P	**Pn**	**11 24 26.7**	**+2.5**
	baz=235						
CHN4	**Tsaushan**	**1.90**	**255**	*e*S	**Sn**	**11 24 51.6**	**+1.9**
	baz=244						
WTP	**Ta-pu**	**1.92**	**252**	*e*P	**Pn**	**11 24 27.5**	**+2.0**
	baz=242						
WTP				*e*S	**Sn**	**11 24 51.6**	**+1.6**
	baz=242						
SGST	**Jiashian**	**2.00**	**248**	*e*P	**Pn**	**11 24 28.6**	**+1.9**
	baz=236						
CHN1	**Nanshi**	**2.01**	**251**	*e*P	**Pn**	**11 24 28.2**	**+1.4**
	baz=248						

*NEIC **11** 11:34:23.3, 16°.50N×98°.37W, h22km, MD3.5(MEX), After MEX.*
MEX 11 11:34:23.3±0.7, **16°.50N**×**98°.37W, h22**km±32km, **MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.26**	**115**	*i* P	Pb	11 34 28.5	-1.0
PNIG				*i* S	Sb	11 34 32.3	-1.4
PNIG	**Pinotepa**	**0.26**	**115**	*i* P	Pb	11 34 28.5	-1.0
PNIG				*i* S	Sb	11 34 32.3	-1.4
UTMO	**Huajuapan**	**1.43**	**22**	*i* P	Pn	11 34 45.1	-2.8
UTMO				*i* S	Sn	11 35 03.0	-3.0
ACX	**Acapulco**	**1.52**	**284**	*e*P	Pn	11 34 45.9	-3.4
ACX				*i* S	Sn	11 35 04.4	-4.0
ACX	**Acapulco**	**1.52**	**284**	*e*P	Pn	11 34 45.9	-3.4
ACX				*i* S	Sn	11 35 04.4	-4.0
VHO	**Vista Hermosa**	**1.67**	**70**	*i* P	Pn	11 34 49.6	-1.5
VHO				*i* S	Sn	11 35 08.2	-3.7
VHO	**Vista Hermosa**	**1.67**	**70**	*i* P	Pn	11 34 49.6	-1.5
VHO				*i* S	Sn	11 35 08.2	-3.7
CAIG	**El Cayaco**	**1.90**	**287**	*e*P	Pn	11 34 52.7	-1.6
CAIG				*i* S	Sn	11 35 13.7	-3.8
CAIG	**El Cayaco**	**1.90**	**287**	*e*P	Pn	11 34 52.7	-1.6
CAIG				*i* S	Sn	11 35 13.7	-3.8
PPM	**Popocatepetl**	**2.56**	**355**	*e*P	Pn	11 35 01.3	-2.2
PPM				*i* S	Sn	11 35 29.0	-5.0
PPM	**Popocatepetl**	**2.56**	**355**	*e*P	Pn	11 35 01.3	-2.2
PPM				*i* S	Sn	11 35 29.0	-5.0
MZVM		**2.80**	**343**	*e*P	Pn	11 35 05.0	-1.7
MZVM				*i* S	Sn	11 35 34.9	-4.8
IIO	**Organos**	**3.09**	**354**	*e*P	Pn	11 35 09.5	-1.3
IIO				*i* S	Sn	11 35 42.7	-4.3
IIO	**Organos**	**3.09**	**354**	*e*P	Pn	11 35 09.5	-1.3
IIO				*i* S	Sn	11 35 42.7	-4.3

IDC 11 11:41:34.5±2.4, **17°.45S**×**174°.25W, h136**km±28km, **mb3.4**/4, **mb1 3.7**/5, **mb1mx3.4**/19, **mbtmp3.5**/5, **Error ellipse: s-maj=31.9km s-min=20.8km az=124.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.25**	**34**	P	Pn	11 42 39.7	+2.0
	49nm,0.3s,baz=175,slow=1.9,SNR=139						
AFI				S	Sn	11 43 25.8	-1.0
	69nm,0.3s,baz=219,slow=22,SNR=12						
URZ	**Urewera**	**22.07**	**198**	P	P	11 46 19.3	+0.9
	7.4nm,0.4s,baz=80,slow=19,SNR=13						
URZ				S	S	11 50 12.1	-0.2
	15nm,1.2s,baz=107,slow=17,SNR=2.6						
**W

DJA 11 12:27:59,10.91S×111.07E,h30km,MLv4.0/4,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**2.70**	**2**	P	Pn	12 28 40.3	-0.1
PCJI				S	Sn	12 29 13.7	+1.6
PWJI	**Pagerwojo**	**2.96**	**14**	P	Pn	12 28 44.5	+0.5
PWJI				S	Sn	12 29 21.4	+2.9
UGM	**Wanagama**	**3.03**	**350**	P	Pn	12 28 46.7	+1.8
UGM				S	Sn	12 29 23.4	+3.2
SJI	**Sawahan**	**3.23**	**12**	P	Pn	12 28 48.5	+0.8
SJI				S	Sn	12 29 28.7	+3.5
GMJI	**Gumukmas**	**3.51**	**42**	P	Pn	12 28 52.9	+1.3

MAN 11 12:46:20,10.96N×124.79E,h6km,mb4.6,ML3.5,MS3.5,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.20**	**297**	*e*P	Pg	12 46 25.3	+1.4
OCLP				*e*S	Sg	12 46 30.1	+3.5
MSLP	**Maasin**	**0.83**	**175**	*e*P	Pg	12 46 37.0	+1.1
MSLP				*e*S	Sg	12 46 47.4	+0.8
BESP	**Borongan**	**0.90**	**45**	*e*P	Pg	12 46 37.8	+0.5
LLP	**Lapu-Lapu**	**1.03**	**232**	*e*P	Pg	12 46 39.1	-0.8
LLP				*e*S	Sg	12 46 53.5	+0.3
CNP	**Catarman**	**1.54**	**355**	*e*P	Pn	12 46 48.9	+0.8
TBP	**Tagbilaran**	**1.56**	**216**	*e*P	Pn	12 46 49.1	+0.8
TBP				*e*S	Sn	12 47 09.8	+1.0
GUIM	**Jordan**	**2.19**	**261**	*e*P	Pn	12 46 58.1	+1.1
PVCP	**Virac**	**2.69**	**347**	*e*P	Pn	12 47 03.5	-0.3

NIED ***11*** *13:08:00,36.10N×141.50E,h23km,Mw4.2 Best double couple: M₀2.45000×10¹⁵ NP1:φ=20.00000°,δ76.00000°,λ84.00000°. NP2:φ=224.00000°,δ15.00000°,λ112.00000°.*
IDC ***11*** *13:08:23.3±0.6,36.07N×141.39E,h0km,mb4.1/20, mb1 4.2/24,mb1mx4.2/30,mbtmp4.2/24,ML4.2/4,MS3.5/14, Ms1 3.6/14,ms1mx3.3/31,Error ellipse: s-maj=16.7km s-min=12.7km az=95.0*
ISCJB ***11*** *13:08:24.7±1.0,36.09N±0.03×141.60E±0.06,h24km±6km, mb4.2/37,MS3.6/15,Error ellipse: s-maj=8.1km s-min=5.1km az=20.0*
NEIC ***11*** *13:08:25.7±3.4,36.08N×141.42E,h14km±20km,mb4.7/9, MW4.2(NIED),Error ellipse: s-maj=8.9km s-min=6.7km az=133.0*
NEIC Recorded [1 JMA] in Chiba, Fukushima, Ibaraki and Tochigi.
MOS ***11*** *13:08:25.9±1.1,36.14N×141.59E,h33km,mb4.7/12,Error ellipse: s-maj=10.9km s-min=6.5km az=108.6*
JMA ***11*** *13:08:27.3±0.2,36.07N×141.40E,h45km±3km,M4.3*
JMA Felt I J1.

ISC 11 13:08:25.8±1.1,36.08N±0.03×141.50E±0.05,h16km±6km, n93,σ0°92/92,mb4.2/37,MS3.6/15,2C-10D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.65**	**234**	⇓P	**Pg**	**13 08 39.1**	**+0.6**
CHOJ				*e*S	**Sg**	**13 08 47.9**	**+0.8**
JHO	**Hitachi**	**0.92**	**305**	⇓P	**Pb**	**13 08 43.1**	**-0.3**
JYT	**Yasato**	**1.07**	**278**	⇓P	**Pb**	**13 08 44.9**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.17**	**331**	⇓P	**Pn**	**13 08 46.7**	**-0.7**
JFK	**Kawauchi**	**1.38**	**339**	⇓P	**Pn**	**13 08 49.8**	**-0.5**
BSO1	**Boso 1**	**1.49**	**197**	P	**Pn**	**13 08 51.5**	**-0.3**
BSO3	**Boso 3**	**1.51**	**213**	P	**Pn**	**13 08 52.5**	**+0.3**
JAG	**Ashikaga**	**1.69**	**282**	⇓P	**Pn**	**13 08 53.9**	**-0.8**
JFT	**Otama**	**1.71**	**327**	⇓P	**Pn**	**13 08 55.8**	**+0.9**
MJAR	**Matsushiro Arr**	**2.70**	**281**	Pn	**Pn**	**13 09 08.5**	**0.0**
	35nm,0.3s,baz=105,slow=8.2,SNR=165						
MJAR				Sn	**Sn**	**13 09 48.2**	**+7.4**
	24nm,0.3s,baz=217,slow=40,SNR=4.6						
MJAR				LR	LR	13 10 18.5	
	comp=Z,917nm,21.3s,baz=105,slow=45						
MJAR	**Matsushiro Arr**	**2.70**	**281**	P	**Pn**	**13 09 08.5**	**0.0**
MJAR						13 09 48.2	
MAJO	**Matsushiro**	**2.70**	**281**	*e*P	**Pn**	**13 09 09.1**	**+0.6**
MAT	**Matsushiro**	**2.70**	**281**	P	**Pn**	**13 09 09.0**	**+0.5**
MAT				S	**Sn**	**13 09 41.8**	**+0.9**
JHJ	**Hachijo jima 2**	**3.28**	**206**	Pn	**Pn**	**13 09 16.3**	**-0.2**
	98nm,0.3s,baz=75,slow=18,SNR=6.3						
JHJ				Sn	**Sn**	**13 09 53.7**	**-1.5**
	217nm,0.3s,baz=224,slow=23,SNR=8.7						
ERM	**Erimo**	**6.06**	**12**	*e*P	**Pn**	**13 09 54.8**	**+0.1**
ERM				*e*		13 11 02.4	
ERM				pmax	pmax		
	comp=Z,20nm,0.4s						
ERM	**Erimo**	**6.06**	**12**	*e*Pn	**Pn**	**13 09 54.8**	**+0.1**
	comp=Z,20nm,0.4s						
ERM				*e*Sn	**Sn**	**13 11 02.4**	**-1.3**
ASAJ	**Asahikawa**	**8.07**	**6**	Pn	**Pn**	**13 10 21.6**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=228,slow=12,SNR=16						
ASAJ				LR	LR	13 14 13.3	
	comp=Z,188nm,20.2s,baz=182,slow=43						
ASAJ	**Asahikawa**	**8.07**	**6**	P	**Pn**	**13 10 21.7**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,188nm,20.2s						
YUK	**Yuzh-Kuril'sk**	**8.62**	**21**	P	**Pn**	**13 10 29.3**	**-0.4**
YUK				S	**Sn**	**13 12 00.5**	**-6.0**
YUK				smax			
	comp=N,310nm,0.4s						
YUK				smax			
	comp=E,190nm,0.5s						
CBIJ	**Chichi jima**	**8.98**	**176**	Pn	**Pn**	**13 10 32.2**	**-2.6**
	comp=E,18nm,0.3s,baz=282,slow=21,SNR=5.3						
CBIJ				Sn	**Sn**	**13 12 05.0**	**-11**
	comp=E,12nm,0.3s,baz=107,slow=19,SNR=2.9						
VLA	**Vladivostok**	**10.21**	**316**	*e*P	**Pn**	**13 11 00.7**	**+9.1**
VLA				pmax	pmax		
	comp=Z,22nm,1.1s						
VLA				MLR	MLR		
	comp=Z,400nm,18.0s						
YSS	**Yuzh-Sakhalins**	**10.90**	**5**	*e*P	**Pn**	**13 11 00.0**	**-1.0**
KSRS	**Korea Array**	**10.98**	**281**	Pn	**Pn**	**13 11 06.1**	**+3.9**
	comp=Z,0.3nm,0.3s,baz=88,slow=13,SNR=6.9						
KSRS				LR	LR	13 15 14.2	
	comp=Z,188nm,19.4s,baz=256,slow=38						
HABR	**Khabarovsk**	**13.26**	**341**	*e*P	**Pn**	**13 11 32.3**	**-1.0**
HABR				*e*		13 13 59.9	
HABR				pmax	pmax		
	comp=Z,12nm,1.6s						
HABR				pmax	pmax		
	comp=N,9.0nm,1.5s						
HABR				pmax	pmax		
	comp=E,14nm,1.3s						
HABR				MLR	MLR		
	comp=Z,119nm,14.0s						
NJ2	**Nanjing**	**19.18**	**264**	*e*P	**Pn**	**13 12 50.2**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
PETK	**Petropavlovsk-**	**20.48**	**29**	P	**P**	**13 13 04.0**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=228,slow=7.6,SNR=3.2						
PETK				LR	LR	13 21 22.7	
	comp=Z,52nm,19.2s,MS2.9,baz=94,slow=38						
YAK	**Yakutsk**	**27.01**	**348**	*e*P	**P**	**13 14 06.4**	**-0.3**
YAK				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.4						
YAK				pmax	pmax		
	comp=N,13nm,1.5s						
YAK	**Yakutsk**	**27.01**	**348**	P	**P**	**13 14 04.8**	**-1.9**
	comp=N,13nm,0.5s,mb4.7						
ENH	**Enshi**	**27.34**	**267**	*e*P	**P**	**13 14 09.2**	**-0.8**
	comp=N,7.9nm,0.7s,mb4.3						
SEY	**Seymchan**	**27.71**	**11**	⇓*e*P	**P**	**13 14 17.7**	**+4.8**
BOD	**Bodaibo**	**28.38**	**329**	*e*P	**P**	**13 14 18.5**	**-0.4**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
SONM	**Songino Array**	**28.39**	**305**	P	**P**	**13 14 18.2**	**-1.0**
	comp=Z,1.6nm,0.5s,mb3.9,baz=104,slow=9.3,SNR=16						
SONM				LR	LR	13 26 01.9	
	comp=Z,115nm,20.0s,MS3.5,baz=83,slow=37						
ZAK	**Zakamensk**	**30.92**	**310**	*e*P	**P**	**13 14 41.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.7						
TLY	**Talaya**	**31.02**	**312**	*e*P	**P**	**13 14 42.8**	**+0.4**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
TLY				MLR	MLR		
	comp=Z,139nm,17.0s,MS3.7						
GTA	**Gaotai**	**32.92**	**289**	*e*P	**P**	**13 15 00.0**	**+0.7**
GTA				pP	pP	13 15 03.5	-0.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
TIXI	**Tiksi**	**36.24**	**353**	*e*P	**P**	**13 15 26.6**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TIXI	**Tiksi**	**36.24**	**353**	*e*P	**P**	**13 15 26.6**	**-1.1**
	comp=Z,2.1nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**41.34**	**256**	P	**P**	**13 16 10.2**	**-0.7**
	comp=Z,1.1nm,0.5s,mb3.7,baz=35,slow=6.4,SNR=7.7						
CMAR				LR	LR	13 33 53.8	
	comp=Z,56nm,21.4s,MS3.4,baz=200,slow=37						
ZAA0	**Zalesovo Array**	**42.61**	**313**	*e*P	**P**	**13 16 20.3**	**-0.7**
ZALV	**Zalesovo Beam**	**42.61**	**313**	P	**P**	**13 16 21.4**	**+0.5**
	comp=Z,6.6nm,0.6s,mb4.6,baz=88,slow=7.0,SNR=26						
ZALV				PcP	PcP	13 18 12.2	-0.7
	comp=Z,1.0nm,0.4s,baz=93,slow=3.0,SNR=4.5						
ZALV				LR	LR	13 34 53.9	
	comp=Z,52nm,18.1s,MS3.5,baz=42,slow=37						
ZALV	**Zalesovo Beam**	**42.61**	**313**	P	**P**	**13 16 21.4**	**+0.4**
ZALV						13 18 12.2	
ZALV	**Zalesovo Beam**	**42.61**	**313**	P	**P**	**13 16 21.4**	**+0.5**
ZALV				PcP	PcP	13 18 12.2	-0.7
ZALV				LR	LR	13 34 53.9	
NVS	**Novosibirsk**	**43.55**	**314**	*e*P	**P**	**13 16 28.5**	**-0.1**
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**44.69**	**303**	*e*P	**P**	**13 16 38.1**	**+0.3**
MKAR	**Makanchi Array**	**44.69**	**303**	P	**P**	**13 16 37.3**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.6,baz=183,slow=23,SNR=6.4						
MKAR				LR	LR	13 35 59.1	
	comp=Z,58nm,20.8s,MS3.5,baz=262,slow=37						
KURK	**Kurchatov**	**46.58**	**309**	P	**P**	**13 16 52.7**	**0.0**
	comp=Z,13nm,0.5s,mb5.1,baz=82,slow=7.7,SNR=52						
KURK				LR	LR	13 37 15.3	
	comp=Z,92nm,19.3s,MS3.8,baz=70,slow=37						
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P	**P**	**13 17 21.6**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**50.15**	**299**	*e*P	**P**	**13 17 21.6**	**+1.2**
	comp=Z,4.7nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**51.01**	**299**	LR	LR	13 40 07.9	
	comp=Z,162nm,18.8s,MS4.1,baz=73,slow=37						
AAK	**Ala-Archa**	**51.01**	**299**	⇓*e*P	**P**	**13 17 27.8**	**+1.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AAK				MLR	MLR		
	comp=Z,73nm,18.0s,MS3.7						
BVAR	**Borovoye Array**	**51.27**	**313**	P	**P**	**13 17 28.6**	**0.0**
	comp=Z,2.2nm,0.5s,mb4.3,baz=86,slow=7.6,SNR=11						
BVAR				LR	LR	13 40 02.3	
	comp=Z,65nm,19.8s,MS3.7,baz=89,slow=37						
BRVK	**Borovoye**	**51.33**	**313**	*d*P	**P**	**13 17 29.9**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BRVK				MLR	MLR		
	comp=Z,57nm,17.0s,MS3.7						
BRVK	**Borovoye**	**51.33**	**313**	*e*P	**P**	**13 17 29.4**	**+0.3**
	comp=Z,4.6nm,0.8s,mb4.5						
AML	**Almayashu**	**51.72**	**299**	*e*P	**P**	**13 17 33.5**	**+1.4**
	comp=Z,12nm,0.3s,mb5.3						
INK	**Inuvik**	**55.20**	**27**	*e*P	**P**	**13 17 58.9**	**+1.6**
SVE	**Sverdlovsk**	**55.91**	**319**	*e*P	**P**	**13 18 03.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**55.94**	**198**	P	**P**	**13 18 03.2**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.2,baz=4.8,slow=8.8,SNR=6.0						
FITZ	**Fitzroy Crossi**	**55.94**	**198**	*e*P	**P**	**13 18 02.6**	**-0.5**
WRAB	**Tennant Creek**	**56.12**	**188**	*e*P	**P**	**13 18 04.2**	**-0.2**
WB2	**Warramunga Arr**	**56.13**	**188**	P	**P**	**13 18 04.0**	**-0.5**
WRA	**Warramunga Arr**	**56.13**	**188**	P	**P**	**13 18 03.8**	**-0.6**
	comp=Z,1.0nm,0.4s,mb4.2,baz=5.7,slow=7.5,SNR=22						
ARU	**Arti**	**57.12**	**319**	*c i*P	**P**	**13 18 11.3**	**+0.1**
ARU				*e*		13 20 16.6	
ARU				S	**S**	**13 26 06.3**	**+0.9**
ARU				SS	SS	13 29 50.5	-3.3
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
ARU	**Arti**	**57.12**	**319**	*e*P	**P**	**13 18 10.8**	**-0.5**
	comp=Z,6.0nm,0.6s,mb4.8						
ABKAR	**Akbulak array**	**58.61**	**311**	*e*P	**P**	**13 18 21.5**	**-0.3**
	comp=Z,2.3nm,0.4s,mb4.6						
AKTO	**Aktyubinsk**	**59.37**	**312**	LR	LR	13 45 21.8	
	comp=Z,59nm,19.6s,MS3.7,baz=155,slow=37						
ASAR	**Alice Springs**	**59.86**	**188**	P	**P**	**13 18 30.6**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=358,slow=6.0,SNR=13						
DZM	**Mont Dzumac**	**62.47**	**154**	*e*LR	LR	13 36 24.7	
	comp=Z,73nm,23.2s						
YKA	**Yellowknife Ar**	**64.59**	**30**	P	**P**	**13 19 02.8**	**+0.9**
	comp=Z,0.4nm,0.7s,mb3.5,baz=299,slow=6.7,SNR=6.6						
ARCES	**ARCESS Array B**	**64.91**	**340**	P	**P**	**13 19 02.3**	**-1.6**
	comp=Z,2.9nm,0.9s,mb4.3,baz=58,slow=8.6,SNR=2.7						
JOF	**Joensuu**	**66.84**	**332**	*e*P	**P**	**13 19 14.9**	**-1.5**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
JOF	**Joensuu**	**66.84**	**332**	*e*p	**P**	**13 19 14.9**	**-1.5**
	comp=Z,4.3nm,0.6s,mb4.7						
KAF	**Kangasniemi**	**69.19**	**333**	*e*P	**P**	**13 19 29.0**	**-2.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KAF	**Kangasniemi**	**69.19**	**333**	*e*p	**P**	**13 19 29.0**	**-2.2**
	comp=Z,1.9nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**69.69**	**332**	P	**P**	**13 19 34.1**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.3,baz=56,slow=7.2,SNR=8.5						
KIV	**Kislovodsk**	**71.59**	**311**	*e*P	**P**	**13 19 47.1**	**+0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KIV				MLR	MLR		
	comp=Z,33nm,18.0s,MS3.6						
LRM	**Limekiln Ridge**	**74.78**	**44**	P	**P**	**13 20 07.1**	**+2.2**
	comp=Z,12nm,0.7s,mb4.9						
NB2	**NORSAR Subarra**	**75.09**	**337**	P	**P**	**13 20 06.7**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=39,slow=5.9						
NOA	**NORSAR Array B**	**75.09**	**337**	P	**P**	**13 20 06.2**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1,baz=39,slow=5.8,SNR=4.1						
NOA				LR	LR	13 54 10.9	
	comp=Z,26nm,20.6s,MS3.5,baz=220,slow=37						
AKASG	**Malin Array Be**	**75.09**	**322**	P	**P**	**13 20 06.7**	**-0.1**
	comp=Z,3.2nm,0.6s,mb4.5,baz=46,slow=6.0,SNR=20						
AKASG	**Malin Array Be**	**75.09**	**322**	*c e*P	**P**	**13 20 06.6**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**75.50**	**53**	P	**P**	**13 20 11.4**	**+2.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=307,slow=5.7,SNR=6.8						
BW06	**Boulder Array**	**78.28**	**45**	P	**P**	**13 20 26.5**	**+1.7**
PDAR	**Pinedale Array**	**78.28**	**45**	P	**P**	**13 20 25.8**	**+0.9**
	comp=Z,0.6nm,0.6s,mb3.7,baz=271,slow=2.0,SNR=7.1						
BUR08	**Bucovina Ar. S**	**79.09**	**322**	*e*P	**P**	**13 20 29.8**	**+0.5**
BRTR	**Keskin Array B**	**79.54**	**312**	P	**P**	**13 20 32.9**	**+1.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=116,slow=2.9,SNR=5.1						
ULM	**Lac du Bonnet**	**80.26**	**33**	P	**P**	**13 20 36.2**	**+0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=252,slow=3.2,SNR=3.0						
CLL	**Collm**	**81.96**	**330**	*e*pP	pP	13 20 50.0	+0.1
GERES	**GERESS Array B**	**83.56**	**328**	P	**P**	**13 20 52.0**	**-1.0**
	comp=Z,0.2nm,0.4s,mb3.6,baz=1.4,slow=4.1,SNR=2.4						
PMOR	**Pomariorio Ree**	**83.73**	**114**	*e*T		14 53 26.2	
	comp=Z,4.7nm,0.2s						
PPT	**Papeete**	**84.14**	**117**	*e*LR	LR	13 47 06.2	
	comp=Z,50nm,23.5s						
PPT	**Papeete**	**84.14**	**117**	LR	LR	13 53 12.8	
	comp=Z,35nm,20.4s,MS3.7,baz=41,slow=32						
LPAZ	**La Paz**	**147.10**	**61**	PKPbc	PKPbc	13 28 09.4	+1.1
	comp=Z,1.1nm,0.5s,baz=354,slow=3.6,SNR=7.1						
LPAZ	**La Paz**	**147.10**	**61**	*e*PKPbc	PKPbc	13 28 09.7	+1.3

MAN 11 13:25:39,7.57N×122.18E,h23km,mb4.1,ML2.9,MS2.7,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.44**	**61**	*e*P	Pb	13 25 49.2	+1.0
IPIL				*e*S	Sb	13 25 56.1	+1.6
ZMPH	**Zamboanga City**	**0.63**	**191**	⇑*i*P	Pb	13 25 52.9	+1.7
ZMPH				*i* S	Sb	13 26 03.3	+3.6
PAGZ	**Pagadian**	**1.22**	**77**	*e*P	Pn	13 26 03.3	+2.6
PAGZ				*e*S	Sn	13 26 18.0	+1.5

IDC 11 14:21:42.6±9.2,33.77S×179.17W,h63km±81km,mb3.4/2, mb1 3.7/3,mb1mx3.4/16,mbtmp3.5/3,ML3.3/1,Error ellipse: s-maj=66.4km s-min=53.5km az=2.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.40**	**213**	P	Pn	14 23 00.4	-0.1
	1.1nm,0.3s,baz=154,slow=22,SNR=9.3						
URZ				S	Sn	14 24 02.1	+0.8
	0.3nm,0.3s,baz=96,slow=22,SNR=1.9						
ASAR	**Alice Springs**	**42.06**	**271**	P	P	14 29 27.9	-0.3
	0.2nm,0.3s,baz=109,slow=7.5,SNR=6.6						
WRA	**Warramunga Arr**	**43.35**	**276**	P	P	14 29 38.9	+0.1
	1.2nm,0.4s,baz=118,slow=7.7,SNR=27						
KURK	**Kurchatov**	**122.62**	**312**	PKP	PKPdf	14 40 29.8	-0.7
	0.2nm,0.3s,baz=119,slow=1.8,SNR=2.1						
FINES	**FINESS Array B**	**147.91**	**337**	PKPbc	PKPbc	14 41 19.6	-0.2
	2.6nm,0.9s,baz=31,slow=8.4,SNR=5.3						

JMA 11 14:30:30.0±0.3,36.32N×141.94E,h19km,M2.3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.07**	**235**	*e*S	Sb	14 31 04.9	+1.4
JHO	**Hitachi**	**1.14**	**285**	P	Pn	14 30 50.4	-0.6
JHO				*e*S	Sb	14 31 07.1	+1.5
ONAJ	**Iwakimizuishiy**	**1.20**	**311**	P	Pn	14 30 52.1	+0.3
JFT	**Otama**	**1.75**	**313**	P	Pn	14 31 01.0	+1.6
JFT				*e*S	Sn	14 31 23.6	+2.4
JMM	**Marumori**	**1.79**	**330**	P	Pn	14 31 01.3	+1.4
JMM				*e*S	Sn	14 31 23.9	+1.7
JAG	**Ashikaga**	**2.01**	**274**	P	Pn	14 31 03.3	+0.4
JAG				*e*S	Sn	14 31 27.9	+0.4
MJAR	**Matsushiro Arr**	**3.02**	**275**	P	Pn	14 31 18.7	+2.0
	0.4nm,0.3s,baz=255,slow=2.9,SNR=4.3						

IDC ***11*** *14:30:40.3±4.2,36.16N×136.70E,h258km±167km, mb2.5/3,mb1 2.7/3,mb1mx2.5/25,mbtmp2.5/3,Error ellipse: s-maj=434.4km s-min=28.5km az=58.0*
ISCJB ***11*** *14:30:51.9±0.7,35.7N±0.1×135.4E±0.1,h360km±6km, mb2.5/3,Error ellipse: s-maj=20.6km s-min=13.1km az=166.5*
JMA ***11*** *14:30:52.9±0.3,35.74N×135.43E,h352km±3km,M2.8*

ISC 11 14:30:53.0±0.7,35.7N±0.1×135.5E±0.1,h352km±6km,n17, σ0°40/19,mb2.5/3,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.30**	**254**	P	**Pn**	**14 31 37.4**	**+0.2**
JWT	**Wachi**	**0.43**	**186**	P	**Pn**	**14 31 37.6**	**+0.1**
JWT				S	**S**	**14 32 11.9**	**-1.2**
JKSM	**Kasumi**	**0.66**	**259**	P	**Pn**	**14 31 37.9**	**0.0**
JKG	**Kaga**	**0.91**	**51**	P	**Pn**	**14 31 38.6**	**0.0**
JGM	**Miyama**	**1.03**	**90**	P	**Pn**	**14 31 39.3**	**+0.2**
JAO	**Obara**	**1.54**	**106**	P	**Pn**	**14 31 42.0**	**+0.4**
JIE	**Ise**	**1.67**	**142**	S	**S**	**14 32 22.7**	**+0.6**
JNY	**Yasuok**	**2.00**	**100**	P	**Pn**	**14 31 44.7**	**+0.2**
MAT	**Matsushiro**	**2.38**	**69**	P	**Pn**	**14 31 47.0**	**-0.2**
MJAR	**Matsushiro Arr**	**2.38**	**69**	S	**Pn**	**14 31 47.8**	**+0.5**
	1.5nm,0.3s,baz=269,slow=4.7,SNR=18						
JAG	**Ashikaga**	**3.32**	**76**	P	**Pn**	**14 31 55.4**	**0.0**
JAG				S	**S**	**14 32 45.3**	**-0.3**
JYO	**Yokosk**	**3.47**	**97**	*e*S	**S**	**14 32 48.5**	**+0.1**
JFY	**Yanaizu**	**3.82**	**62**	P	**Pn**	**14 31 59.9**	**-0.3**
JYT	**Yasato**	**3.88**	**81**	P	**Pn**	**14 32 00.5**	**-0.4**
MKAR	**Makanchi Array**	**40.76**	**303**	P	**P**	**14 38 01.1**	**+0.3**
	0.1nm,0.4s,mb2.4,baz=99,slow=8.8,SNR=1.7						
WRA	**Warramunga Arr**	**55.36**	**181**	P	**P**	**14 39 51.1**	**-0.5**
	0.2nm,0.5s,mb2.7,baz=359,slow=7.6,SNR=4.6						
ASAR	**Alice Springs**	**59.07**	**182**	P	**P**	**14 40 17.1**	**-0.1**
	0.2nm,0.8s,mb2.6,baz=3.6,slow=6.1,SNR=4.2						

NNC ***11*** *14:45:43.6±8.8,39.88N×74.43E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=71.1km s-min=34.2km az=162.0*

ISC 11 14:45:33.8±2.4,39.2N±0.2×75.27E±0.08,h10km,n11, σ0°96/14,3C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.65**	**56**	*e*Pg	**Pg**	**14 45 45.3**	**-1.1**
KSH				Sg	**Sg**	**14 45 54.8**	**-0.1**
KSH				smax			
	comp=N,2μm,0.3s						
KSH				smax			
	comp=E,2μm,0.3s						
KZA	**Kyzart**	**2.92**	**360**	P	**Pn**	**14 46 20.6**	**+0.3**
	SNR=19						
UCH	**Uchtor**	**3.12**	**350**	P	**Pn**	**14 46 23.6**	**+0.6**
	SNR=23						
ULHL	**Ulahol**	**3.17**	**13**	P	**Pn**	**14 46 27.3**	**+3.6**
	SNR=15						
AML	**Almayashu**	**3.21**	**339**	P	**Pn**	**14 46 23.7**	**-0.4**
	SNR=43						
KBK	**Karagaybulak**	**3.51**	**356**	P	**Pn**	**14 46 29.4**	**+1.1**
	SNR=9.3						
AAK	**Ala-Archa**	**3.52**	**351**	P	**Pn**	**14 46 29.1**	**+0.6**
	SNR=9.5						
TKM2	**Tokmak 2**	**3.77**	**4**	⇓P

CAOV Caicara del Or 6.54 84 ⇓iP Pn 14 55 11.7 -0.2
MERV Las Mercedes 6.99 69 eP Pn 14 55 17.4 -0.4
BIRV Birongo 7.53 60 ⇓iP Pn 14 55 24.3 -0.7
CUPV Cœpira 7.76 64 ⇓iP Pn 14 55 27.6 -0.4
OTAV Otavalo 8.51 221 ePn Pn 14 55 36.0 -2.0
OTAV eSn Sn 14 57 09.7 -3.2
PCRV Puerto La Cruz 8.85 67 P Pn 14 55 42.7 +0.1
5.1nm,0.3s,baz=263,slow=5.7,SNR=27
PCRV S Sn 14 57 18.8 -2.2
1.6nm,0.3s,baz=312,slow=3.7,SNR=1.2
PCRV Puerto La Cruz 8.85 67 eP Pn 14 55 43.0 +0.5
JTS JuntasAbangare 12.45 287 P Pn 14 56 30.3 +0.6
0.3nm,0.3s,baz=135,slow=20,SNR=3.5
JTS JuntasAbangare 12.45 287 ePn Pn 14 56 31.1 +1.3
SJG San Juan 13.08 30 P Pn 14 56 36.9 -0.9
11nm,0.3s,baz=204,slow=13,SNR=7.3
APG El Apazote 19.11 297 P P 14 57 46.8 -1.9
0.3nm,0.3s,baz=77,slow=10,SNR=4.3
LPAZ La Paz 23.35 168 P P 14 58 33.5 +1.3
1.2nm,0.7s,mb3.4,baz=15,slow=5.3,SNR=4.6
LPAZ pP 14 59 05.3
3.5nm,0.8s,baz=340,slow=8.6,SNR=6.4
CMIG Matias Romero 23.83 298 P P 14 58 31.8 -4.8
1.2nm,0.4s,mb3.8,baz=100,slow=12,SNR=2.0
SIV San Ignacio 25.42 153 P P 14 58 51.6 +0.6
0.3nm,0.4s,mb3.2,baz=297,slow=6.8,SNR=4.2
SIV pP pP 14 59 25.1 +1.3
2.1nm,0.7s,baz=334,slow=11,SNR=7.8
BLO Bloomington 34.56 341 eP P 15 00 11.8 +0.5
14nm,0.7s,mb4.7
FVM French Village 34.95 335 eP P 15 00 14.6 -0.1
22nm,1.2s,mb4.7
CPUP Villa Florida 36.16 156 P P 15 00 25.2 0.0
0.3nm,0.4s,mb3.3,baz=293,slow=13,SNR=1.8
628A Black Gap, Mar 36.20 312 ⇓P P 15 00 24.3 -1.2
baz=36
528A Cox Ranch, San 36.50 313 ⇑P P 15 00 26.8 -1.2
baz=37
627A Terlingua Ranc 36.55 312 ⇓P P 15 00 28.0 -0.5
baz=37,SNR=8.9
WMOK Wichita Mounta 36.69 323 eP P 15 00 27.6 -2.0
3.5nm,0.6s,mb4.2
TXAR Lajitas Array 36.70 312 P P 15 00 28.7 -1.0
2.8nm,0.6s,mb4.0,baz=126,slow=9.1,SNR=11
TXAR PcP PcP 15 02 50.1 +1.1
0.9nm,0.6s,baz=133,slow=6.8,SNR=3.9
428A Kincaid Ranch, 36.74 314 ⇑P P 15 00 29.8 -0.2
baz=37,SNR=5.3
527A Woodward Ranch 37.09 313 ⇑P P 15 00 32.8 -0.2
baz=37,SNR=7.9
626A Big Bend Ranch 37.16 312 ⇓P P 15 00 33.2 -0.4
baz=37
328A Wristen Ranch, 37.20 315 ⇑P P 15 00 32.8 -1.2
baz=37,SNR=5.7
427A Hayter Ranch, 37.32 314 ⇓P P 15 00 33.8 -1.2
baz=38,SNR=9.7
526A Mary Lane Ranc 37.39 312 ⇑P P 15 00 34.8 -0.8
baz=38
426A McDonald Obser 37.67 313 ⇑P P 15 00 37.4 -0.5
baz=38,SNR=10
425A Indio Mountain 38.43 313 ⇑P P 15 00 43.5 -0.8
baz=39,SNR=6.0
226A Malaga, Loving 38.49 315 ⇓P P 15 00 44.2 -0.6
baz=39
Z27A Tatum 38.60 317 ⇓P P 15 00 44.5 -1.2
baz=39,SNR=18
MSTX Muleshoe 38.70 319 ⇓P P 15 00 45.6 -0.9
baz=39
CPRX Cap Rock 38.88 316 eP P 15 00 47.1 -0.9
3.3nm,0.3s,mb4.4
Y27A Causey 38.91 318 ⇑P P 15 00 47.5 -0.7
baz=39
225A Deer Hill, Car 39.03 315 ⇓P P 15 00 49.0 -0.2
baz=39
Z26A Caprock 39.10 317 ⇑P P 15 00 48.9 -0.9
baz=39,SNR=12
324A Moseley Ranch, 39.14 313 ⇑P P 15 00 49.6 -0.6
baz=39,SNR=11
125A Gardner Draw, 39.22 315 ⇑P P 15 00 50.2 -0.5
baz=39,SNR=8.1
X27A F and S Farms, 39.33 319 ⇑P P 15 00 51.3 -0.4
baz=40
Y26A Elida 39.38 318 ⇑P P 15 00 51.3 -0.8
baz=40,SNR=5.2
224A Corundas Mount 39.51 314 ⇓P P 15 00 53.1 -0.1
baz=40,SNR=20
Z25A Roswell 39.61 316 ⇑P P 15 00 54.2 +0.2
baz=40,SNR=9.0
X26A CR and CF Fran 39.74 318 ⇑P P 15 00 54.6 -0.4
baz=40
Y25A Mesa, Roswell 39.96 317 ⇓P P 15 00 57.2 +0.2
baz=40
X25A Clemmons Ranch 40.29 318 ⇑P P 15 00 59.9 +0.3
baz=40
Y24A Capitan 40.47 316 ⇓P P 15 01 01.1 0.0
baz=41,SNR=10
W25A X Bar L Ranch, 40.57 319 ⇓P P 15 01 01.8 0.0
baz=41,SNR=7.1
222A Williams Famil 40.66 313 ⇑P P 15 01 02.8 +0.1
baz=41,SNR=6.3
X24A Lazy VL Ranch, 40.83 317 ⇑P P 15 01 04.5 +0.5
baz=41
Y23A Lovelace Mesa, 40.90 316 ⇓P P 15 01 05.3 +0.7
baz=41
221A Mesquite Ranch 41.11 312 ⇓P P 15 01 07.0 +0.6
baz=41
Z22A Elephant Butte 41.16 314 ⇓P P 15 01 07.4 +0.6
baz=41
320A Kipp Ranch, An 41.33 311 ⇑P P 15 01 08.6 +0.4
baz=42
220A Playas Peak, P 41.61 312 ⇓P P 15 01 10.8 +0.3
baz=42,SNR=7.8
Z21A St. Cloud Mine 41.70 314 ⇓P P 15 01 11.5 +0.3
baz=42
ANMO Albuquerque 41.74 317 eP P 15 01 12.2 +0.7
16nm,2.0s,mb4.3
LAZ Ladron 41.91 316 eP P 15 01 13.0 +0.2
3.3nm,1.0s,mb3.9
319A Douglas 41.92 311 ⇓P P 15 01 13.4 +0.4
baz=42
120A U Bar Ranch, L 42.00 312 ⇓P P 15 01 14.1 +0.4
baz=42,SNR=6.4
219A White Tail Can 42.20 311 ⇑P P 15 01 15.4 +0.2
baz=42
Z20A Nine Sixteen R 42.26 313 ⇑P P 15 01 16.1 +0.4
baz=42
ECSD EROS Data Cent 42.33 334 eP P 15 01 14.7 -1.4
113nm,3.0s
X21A Alamocita Cree 42.38 315 ⇑P P 15 01 17.0 +0.3
baz=43,SNR=7.5
318A Bisbee 42.48 310 ⇓P P 15 01 17.7 +0.2
baz=43,SNR=6.6
Y20A Horse Springs, 42.51 314 ⇑P P 15 01 18.4 +0.6
baz=43,SNR=6.7
119A Ashpeak Ranch, 42.60 312 ⇑P P 15 01 19.0 +0.5
baz=43
W21A San Fidel 42.65 316 ⇑P P 15 01 19.2 +0.4
baz=43
SDCO Great Sand Dun 42.77 321 eP P 15 01 19.9 +0.1
3.3nm,0.7s,mb4.1
218A Dragoon 42.77 311 ⇓P P 15 01 20.4 +0.5
baz=43
X20A Quemado 42.93 315 ⇓P P 15 01 21.7 +0.6
baz=43
Y19A Nutrioso 43.16 314 ⇓P P 15 01 23.8 +0.8
baz=43,SNR=6.8
T22A Edith 43.22 319 ⇑P P 15 01 24.2 +0.8
baz=43
W20A Ramah 43.24 316 ⇓P P 15 01 24.1 +0.5
baz=43
217A Green Valley 43.26 310 ⇑P P 15 01 24.0 +0.1
baz=43
X19A St. Johns 43.43 314 ⇑P P 15 01 26.0 +0.9
baz=44
117A Oracle 43.57 311 ⇑P P 15 01 26.3 0.0
baz=44
Y18A Canyon Day Jun 43.63 313 ⇑P P 15 01 27.1 +0.4
baz=44
Z17A San Carlos Hig 43.72 312 ⇓P P 15 01 28.0 +0.6
baz=44
R22A Saguache, Gunn 43.85 321 ⇑P P 15 01 29.0 +0.6
baz=44
X18A Snowflake 43.95 314 ⇓P P 15 01 29.6 +0.4
baz=44
W18A Petrified Fore 44.09 315 ⇑P P 15 01 31.0 +0.6
baz=44
ISCO Idaho Springs 44.12 323 eP P 15 01 31.2 +0.7
5.5nm,0.9s,mb4.2

S21A Coal Bank Pass 44.17 319 ⇑P P 15 01 31.7 +0.7
baz=44
116A Eloy 44.29 311 ⇓P P 15 01 32.1 +0.1
baz=44
Q22A Crested Butte, 44.33 321 ⇑P P 15 01 32.6 +0.4
baz=44,SNR=6.3
U19A Dine' College, 44.35 317 ⇓P P 15 01 32.3 -0.1
baz=44
MVCO Mesa Verde 44.38 318 ⇓P P 15 01 32.6 -0.1
baz=45
MVCO Mesa Verde 44.38 318 eP P 15 01 33.0 +0.4
9.9nm,1.4s,mb4.2
X17A Forest Lakes 44.46 313 ⇓P P 15 01 33.9 +0.6
baz=45,SNR=5.2
T19A Beclabito 44.52 318 ⇑P P 15 01 33.7 -0.1
baz=45
SMCO Snowmass 44.56 322 eP P 15 01 34.6 +0.6
33nm,2.7s,mb4.5
Y16A Circle Bar Ran 44.73 312 ⇓P P 15 01 35.7 +0.2
baz=45
115A Sonoran Desert 44.75 311 ⇑P P 15 01 35.9 +0.2
baz=45
R20A Redvale 44.86 320 ⇓P P 15 01 36.8 +0.4
baz=45,SNR=6.8
U18A Rough Rock, Ch 44.87 317 ⇓P P 15 01 36.4 -0.1
baz=45
X16A Lo Mia Camp, P 44.96 313 ⇑P P 15 01 37.5 +0.2
baz=45
V17A Tonalea, Kykot 45.09 315 ⇑P P 15 01 38.7 +0.4
baz=45,SNR=9.1
S19A Harvey Farm, M 45.10 319 ⇑P P 15 01 38.5 +0.2
baz=45
Q20A Ridgley Place, 45.25 320 ⇓P P 15 01 40.1 +0.6
baz=45,SNR=6.5
T18A Mexican Hat 45.26 317 ⇓P P 15 01 40.0 +0.4
baz=45
114A Black Gap (USA 45.27 310 ⇓P P 15 01 40.0 +0.3
baz=45,SNR=7.7
W16A Flagstaff 45.36 314 ⇑P P 15 01 40.6 +0.2
baz=46
Y15A Casa Rosa Ranc 45.40 312 ⇑P P 15 01 40.8 0.0
baz=46
WUAZ Wupatki 45.45 315 ⇑P P 15 01 41.4 +0.3
baz=46,SNR=11
WUAZ Wupatki 45.45 315 eP P 15 01 41.8 +0.6
11nm,0.9s,mb4.5
O21A Pagoda 45.49 322 ⇓P P 15 01 42.5 +1.1
baz=46
X15A Humboldt 45.57 313 ⇑P P 15 01 42.3 +0.2
baz=46
Z14A Wintersburg 45.58 311 ⇓P P 15 01 42.3 +0.1
baz=46
U16A Tuba City 45.59 315 ⇓P P 15 01 42.6 +0.3
baz=46
S18A Hurst Farm, Bl 45.64 318 ⇑P P 15 01 43.0 +0.4
baz=46
M22A Cedar Creek Ra 45.72 324 ⇑P P 15 01 43.7 +0.5
baz=46
T17A Navajo Res., N 45.81 317 ⇑P P 15 01 43.9 0.0
baz=46
N21A Black Mountain 45.86 323 ⇑P P 15 01 44.8 +0.6
baz=46
Y14A Wickenburg 45.88 312 ⇓P P 15 01 44.3 -0.2
baz=46,SNR=5.1
O20A White River Ci 45.91 322 ⇑P P 15 01 45.0 +0.3
baz=46
R18A Canyonlands Na 45.95 319 ⇑P P 15 01 44.6 -0.4
baz=46
X14A Yava 46.04 312 ⇓P P 15 01 45.8 0.0
baz=46
Z13A Yuma Proving G 46.05 310 ⇓P P 15 01 46.0 +0.2
baz=46
S17A Black Ridge (B 46.15 317 ⇑P P 15 01 46.9 +0.3
baz=46
T16A Glen Canyon Da 46.28 316 ⇑P P 15 01 48.2 +0.6
baz=46
N20A Spence Gulch, 46.35 323 ⇑P P 15 01 49.4 +1.3
baz=47
Q18A Rafter H Ranch 46.51 320 ⇓P P 15 01 49.4 +0.1
baz=47
R17A Hanksville Air 46.51 318 ⇑P P 15 01 49.2 -0.1
baz=47,SNR=6.6
L21A Rawlins 46.52 324 ⇓P P 15 01 50.3 +0.9
baz=47
W14A Seligman 46.53 313 ⇑P P 15 01 49.6 +0.1
baz=47
U15A North Rim 46.55 315 ⇓P P 15 01 50.1 +0.4
baz=47,SNR=9.2
O19A Miners Draw (B 46.55 321 ⇑P P 15 01 49.8 +0.2
baz=47
M20A Sweetwater, Wa 46.70 323 ⇓P P 15 01 51.3 +0.5
baz=47
V14A Boquillas Ranc 46.74 314 ⇓P P 15 01 52.1 +0.8
baz=47
SRU San Rafael 46.76 319 ⇓P P 15 01 51.3 0.0
baz=47,SNR=5.6
SRU San Rafael 46.76 319 eP P 15 01 51.2 -0.1
4.8nm,0.8s,mb4.2
P18A Preston Nutter 46.87 320 ⇓P P 15 01 52.8 +0.6
baz=47
T15A Red Dirt Ranch 46.91 316 ⇑P P 15 01 52.6 +0.2
baz=47
N19A John Jarvie Ra 46.94 322 ⇑P P 15 01 52.6 -0.1
baz=47
R16A Teasdale 46.95 318 ⇑P P 15 01 52.9 +0.2
baz=47,SNR=5.5
Q16A Castle Valley 47.08 319 ⇑P P 15 01 54.2 +0.4
baz=47
P17A Butcher Ranch, 47.10 320 ⇓P P 15 01 54.0 0.0
baz=47,SNR=7.5
U14A Mt Trumbull 47.17 315 ⇓P P 15 01 54.7 +0.2
baz=47,SNR=5.8
PLCA Paso Flores 47.27 178 P P 15 01 53.6 -1.5
0.7nm,0.8s,mb3.3,baz=315,slow=2.9,SNR=1.6
T14A Hurricane 47.41 315 ⇑P P 15 01 57.1 +0.6
baz=48
ULM Lac du Bonnet 47.45 340 P P 15 01 55.3 -1.1
6.1nm,0.4s,mb4.6,baz=142,slow=7.4,SNR=17
ULM Lac du Bonnet 47.45 340 eP P 15 01 55.0 -1.4
5.5nm,0.7s,mb4.3
V13A Grand Canyon W 47.48 314 ⇑P P 15 01 57.2 +0.3
baz=48
O17A Robinson Place 47.51 320 ⇓P P 15 01 57.4 +0.3
baz=48,SNR=6.6
K20A Yellowstone Ra 47.52 325 ⇓P P 15 01 57.2 +0.1
baz=48
MSU Marysvale 47.53 318 eP P 15 01 57.8 +0.5
IRM Iron Mountain 47.58 311 ⇓P P 15 01 57.7 -0.1
baz=48
U13A Pakoon Wash 47.73 314 ⇓P P 15 01 59.1 +0.3
baz=48,SNR=5.9
L19A Farson 47.77 323 ⇑P P 15 01 59.0 0.0
baz=48
M18A Lyman 47.80 322 ⇑P P 15 01 59.2 -0.1
baz=48
K19A Absolon Red Bu 47.91 324 ⇓P P 15 02 00.0 -0.1
baz=48
Q15A Fillmore 47.92 318 ⇓P P 15 02 00.4 +0.1
baz=48
DAU Daniels Canyon 47.95 320 eP P 15 02 00.8 +0.3
T13A Saint George 47.97 315 ⇓P P 15 02 00.9 +0.2
baz=48,SNR=5.4
MPU Maple Canyon 47.98 320 eP P 15 02 00.7 0.0
7.3nm,1.0s,mb4.3
N17A Moffit Pass 47.99 321 ⇑P P 15 02 00.9 +0.1
baz=48
O16A Springville 48.00 320 ⇓P P 15 02 00.8 -0.1
baz=48,SNR=5.4
V12A Nelson 48.05 313 ⇓P P 15 02 01.2 -0.1
baz=48,SNR=7.6
L18A Fontenelle, Gr 48.07 323 ⇓P P 15 02 01.5 +0.1
baz=48,SNR=8.4
U12A Valley of Fire 48.14 314 ⇑P P 15 02 01.6 -0.4
baz=48
BELC Belle Mtn. 48.15 310 ⇑P P 15 02 01.5 -0.7
baz=48
M17A Scullys Gap (B 48.19 322 ⇑P P 15 02 01.6 -0.7
baz=48,SNR=5.2
S13A Holt Ranch, En 48.21 316 ⇑P P 15 02 02.9 +0.4
baz=48,SNR=8.7
SCHQ Schefferville 48.21 5 P P 15 02 02.5 +0.3
3.9nm,0.5s,mb4.3,baz=192,slow=7.2,SNR=21
SCHQ Schefferville 48.21 5 P P 15 02 02.5 +0.3
BW06 Boulder Array 48.29 324 ⇓P P 15 02 02.6 -0.4
baz=48
BW06 Boulder Array 48.29 324 eP P 15 02 02.3 -0.8
8.5nm,1.4s,mb4.2
PDAR Pinedale Array 48.29 324 P P 15 02 02.2 -0.8

1.7nm,0.5s,mb3.9,baz=126,slow=8.6,SNR=18
PDAR PcP PcP 15 03 26.7 -0.7
0.5nm,0.7s,baz=129,slow=3.7,SNR=3.2
N16A Rees Ranch, Co 48.33 321 ⇓P P 15 02 03.5 +0.1
baz=48
K18A Toltan Ranch, 48.50 323 ⇓P P 15 02 04.9 +0.3
baz=49
Q14A Sevier Lake (B 48.51 318 ⇑P P 15 02 05.2 +0.3
baz=49,SNR=9.2
R13A O'Grain Ranch, 48.58 316 ⇑P P 15 02 05.8 +0.4
baz=49
L17A Cokeville 48.68 322 ⇑P P 15 02 05.3 -0.7
baz=49,SNR=17
P14A Drum Mountains 48.68 318 ⇓P P 15 02 06.9 +0.7
baz=49
M16A Huntsville 48.69 321 ⇑P P 15 02 06.4 +0.2
baz=49
TUQ Turquoise Moun 48.70 312 ⇓P P 15 02 06.3 0.0
baz=49
HEC Hector,Ludlow 48.75 311 ⇓P P 15 02 06.8 +0.1
baz=49
HWUT Hardware Ranch 48.82 321 eP P 15 02 06.5 -0.7
3.6nm,0.7s,mb4.1
J18A Kendall Valley 48.83 324 ⇓P P 15 02 06.6 -0.5
baz=49,SNR=7.8
DUG Dugway 48.84 319 ⇑P P 15 02 07.7 +0.4
baz=49
L16A Fish Haven 48.97 322 ⇑P P 15 02 07.7 -0.6
baz=49,SNR=21
Q13A Wheeler Ranch, 48.99 317 ⇑P P 15 02 09.1 +0.5
baz=49
R12A Pony Springs, 49.09 316 ⇓P P 15 02 09.6 +0.4
baz=49
P13A Bates Ranch, G 49.24 318 ⇑P P 15 02 10.5 +0.1
baz=49,SNR=6.8
GSC Goldstone 49.30 312 ⇓P P 15 02 11.1 +0.2
baz=50
J17A Brown Place, J 49.32 324 ⇑P P 15 02 10.7 -0.2
baz=50,SNR=7.9
DGMT Dagmar 49.34 333 ⇑P P 15 02 11.3 +0.4
baz=50
DGMT Dagmar 49.34 333 eP P 15 02 11.0 +0.1
21nm,0.5s,mb5.0
REDW Red Top Meadow 49.41 324 eP P 15 02 10.9 -0.7
6.5nm,0.6s,mb4.4
SNOW Snow King Moun 49.41 324 eP P 15 02 11.8 +0.2
7.5nm,1.0s,mb4.3
LOHW Long Hollow 49.41 324 eP P 15 02 11.6 0.0
4.0nm,0.6s,mb4.2
N14A Grayback Hills 49.42 320 ⇑P P 15 02 11.6 -0.1
baz=50,SNR=7.8
TPAW Teton Pass 49.54 324 eP P 15 02 12.7 +0.1
6.9nm,1.3s,mb4.1
L15A Malad City 49.55 321 ⇑P P 15 02 12.1 -0.5
baz=50,SNR=7.0
Q12A Willow Creek R 49.59 317 ⇑P P 15 02 13.4 +0.4
baz=50
RLMT Red Lodge 49.59 327 ⇑P P 15 02 12.9 0.0
baz=50
RRI2 Red Ridge 49.67 323 eP P 15 02 13.7 +0.2
7.1nm,0.7s,mb4.4
R11A Troy Canyon, C 49.77 316 ⇓P P 15 02 14.3 -0.1
baz=50,SNR=5.5
J16A Bone 49.80 323 ⇑P P 15 02 14.5 -0.1
baz=50,SNR=6.8
P12A McGill 49.85 317 ⇓P P 15 02 15.3 +0.3
baz=50
H17A Grant Village 49.87 325 ⇑P P 15 02 15.5 +0.5
baz=50
G18A Lazy EL Ranch, 49.87 327 ⇑P P 15 02 15.1 0.0
baz=50
M14A Sheep Mountain 49.88 320 ⇓P P 15 02 14.8 -0.3
baz=50,SNR=6.7
EDW2 Edwards Air Fo 50.02 311 ⇓P P 15 02 15.9 -0.4
baz=50
LRMC Laurel Mountai 50.03 311 ⇑P P 15 02 15.9 -0.5
baz=50
Q11A Duckwater 50.05 316 ⇑P P 15 02 16.6 +0.1
baz=50
I16A Newdale 50.08 324 ⇑P P 15 02 17.1 +0.4
baz=50
L14A Malta 50.10 321 ⇓P P 15 02 16.5 -0.3
baz=50
MPMC Manual Prospec 50.12 312 ⇓P P 15 02 17.4 +0.3
baz=50
O12A Currie 50.14 318 ⇑P P 15 02 17.2 0.0
baz=50
S10A Tonopah Range, 50.28 315 ⇑P P 15 02 18.2 0.0
baz=50,SNR=5.9
M13A Montello 50.32 320 ⇓P P 15 02 18.2 -0.3
baz=50,SNR=9.1
M13A Montello 50.32 320 eP P 15 02 18.1 -0.4
6.0nm,0.7s,mb4.3
F18A Big Timber 50.33 327 ⇓P P 15 02 18.4 0.0
baz=50,SNR=5.7
K14A Jones Ranch, D 50.34 322 ⇑P P 15 02 18.4 -0.2
baz=50
J15A Blackfoot 50.37 323 ⇓P P 15 02 18.9 +0.1
baz=51
GRAC Grapevine Rang 50.43 313 ⇑P P 15 02 19.2 -0.2
baz=51
H16A Russell Place, 50.44 325 ⇑P P 15 02 19.9 +0.6
baz=51
Q10A Clear Creek Ra 50.56 316 ⇓P P 15 02 20.7 +0.3
baz=51
N12A Clover Valley, 50.63 319 ⇓P P 15 02 21.4 +0.6
baz=51
O11A Cowboy Ranch, 50.68 318 ⇓P P 15 02 21.1 -0.1
baz=51
M12A Wells 50.83 319 ⇑P P 15 02 22.4 +0.1
baz=51
F17A Fitzpatrick Pl 50.84 327 ⇓P P 15 02 22.9 +0.6
baz=51
E18A Harlowton 50.85 328 ⇑P P 15 02 22.3 -0.1
baz=51,SNR=5.7
I14A Mackay 51.27 323 ⇑P P 15 02 25.7 +0.1
baz=52
E17A Martinsdale 51.29 327 ⇑P P 15 02 25.9 +0.3
baz=52
M11A Holland Ranch, 51.41 319 ⇓P P 15 02 26.4 -0.2
baz=52
J13A Cove Ranch, Pi 51.42 322 ⇑P P 15 02 26.7 +0.1
baz=52
G15A Dillon 51.42 325 ⇑P P 15 02 26.9 +0.3
baz=52
K12A Draper Farm, C 51.46 321 ⇑P P 15 02 27.4 +0.4
baz=52
D17A Six Diamond Ra 51.63 328 ⇑P P 15 02 28.3 +0.2
baz=52
HLID Hailey 51.65 322 ⇑P P 15 02 28.2 -0.2
baz=52,SNR=7.0
HLID Hailey 51.65 322 eP P 15 02 28.2 -0.2
2.8nm,0.8s,mb3.9
I13A Wildhorse Cree 51.66 323 ⇓P P 15 02 28.9 +0.4
baz=52,SNR=7.5
EGMT Eagleton 51.71 329 ⇑P P 15 02 28.7 0.0
baz=52
NVAR Mina Array Bea 51.71 315 P P 15 02 28.5 -0.4
1.5nm,0.7s,mb3.8,baz=120,slow=7.2,SNR=14
NVAR PcP PcP 15 03 39.8 -0.4
0.6nm,0.5s,baz=126,slow=5.0,SNR=5.3
L11A Cat Creek Ranc 51.76 320 ⇑P P 15 02 29.1 -0.1
baz=52,SNR=6.5
E16A East Helena 51.78 327 ⇑P P 15 02 29.3 0.0
baz=52
LRM Limekiln Ridge 51.78 325 eP P 15 02 29.5 +0.2
F15A Butte 51.82 325 ⇑P P 15 02 29.5 -0.1
baz=52
J12A Stokes Ranch, 51.91 321 ⇓P P 15 02 30.2 -0.1
baz=52
B18A Beardsley Farm 51.96 329 ⇑P P 15 02 30.7 +0.1
baz=52,SNR=6.9
HRY Holter Researc 51.98 327 eP P 15 02 30.9 +0.2
C17A Wharram Farm, 51.98 328 ⇓P P 15 02 30.4 -0.3
baz=52
H13A Challis 52.11 323 ⇑P P 15 02 31.5 -0.3
baz=52
L10A Juniper Basin 52.17 319 ⇓P P 15 02 32.1 -0.1
baz=52,SNR=7.9
I12A Atlanta 52.22 322 ⇓P P 15 02 32.4 -0.2
baz=52,SNR=8.3
K11A Parker Ranch, 52.24 320 ⇓P P 15 02 32.9 +0.1
baz=52
E15A Deer Lodge 52.25 326 ⇑P P 15 02 32.8 +0.1
baz=52
A18A Metzger Ranch, 52.34 330 ⇓P P 15 02 33.3 0.0
baz=53
G13A Cobalt 52.39 324 ⇑P P 15 02 33.8 0.0

	baz=53					
B17A	L&G Farms, Che	52.42 329	⇑P		P	15 02 34.1 +0.2
	baz=53					
MFID	Camas Ranch	52.45 321	⇓P		P	15 02 34.0 -0.3
	baz=53,SNR=7.3					
H12A	Diamond D Ranc	52.46 323	⇓P		P	15 02 34.2 -0.1
	baz=53,SNR=6.3					
E14A	Clinton	52.72 326	⇑P		P	15 02 36.0 -0.2
	baz=53					
K10A	MacKenzie Ranc	52.78 320	⇑P		P	15 02 36.6 -0.1
	baz=53,SNR=5.5					
I11A	Placerville	52.79 322	⇓P		P	15 02 36.4 -0.3
	baz=53					
F13A	Darby	52.84 324	⇑P		P	15 02 36.7 -0.4
	baz=53,SNR=5.2					
B16A	M & M Farms, S	52.96 328	⇓P		P	15 02 37.6 -0.3
	baz=53					
C15A	Salmond Ranch,	53.04 327	⇓P		P	15 02 38.5 0.0
	baz=53					
D14A	Greenough	53.12 326	⇓P		P	15 02 39.0 -0.1
	baz=53					
H11A	Donnelly	53.24 323	⇓P		P	15 02 39.2 -0.8
	baz=53					
F12A	Elk City	53.36 324	⇓P		P	15 02 40.9 0.0
	baz=54					
J09A	Fry Pan Ranch,	53.62 320	⇓P		P	15 02 42.6 -0.3
	baz=54					
D13A	Huson	53.65 326	⇓P		P	15 02 43.1 0.0
	baz=54					
C14A	Swan Lake	53.66 327	⇑P		P	15 02 43.1 +0.1
	baz=54,SNR=5.5					
G11A	Walters Elk Ra	53.76 323	⇓P		P	15 02 43.1 -0.7
	baz=54					
BEKR	Beckwourth	53.77 315	⇑P		P	15 02 44.0 0.0
	baz=54					
A15A	Johnson Ranch,	53.85 328	⇓P		P	15 02 44.1 -0.2
	baz=54					
E12A	Beaver Dam Sad	53.90 325	⇓P		P	15 02 44.5 -0.4
	baz=54					
I09A	Lost Marbles R	53.92 321	⇓P		P	15 02 44.6 -0.4
	baz=54					
F11A	Grangeville	53.95 324	⇑P		P	15 02 44.6 -0.7
	baz=54					
C13A	Hot Springs	54.06 326	⇓P		P	15 02 46.1 +0.2
	baz=54					
J08A	Circle Bar Ran	54.09 320	⇓P		P	15 02 45.9 -0.3
	baz=54					
D12A	Red Ives Fores	54.13 325	⇓P		P	15 02 46.1 -0.4
	baz=54					
E11A	Bogner Ranch,	54.24 324	⇑P		P	15 02 46.6 -0.7
	baz=54					
C12B	Naegeli Ranch,	54.57 326	⇑P		P	15 02 50.2 +0.5
	baz=55					
G09A	Cove	54.61 322	⇑P		P	15 02 50.1 +0.1
	baz=55					
F10A	Beach Ranch, E	54.63 323	⇓P		P	15 02 49.7 -0.5
	baz=55					
D11A	Klaveano Farm,	54.69 325	⇑P		P	15 02 49.8 -0.7
	baz=55,SNR=7.2					
H08A	Prairie City	54.77 321	⇓P		P	15 02 51.0 -0.2
	baz=55					
F09A	S2 Ranch, Elgi	54.91 323	⇑P		P	15 02 52.6 +0.5
	baz=55					
I07A	Izee	55.09 320	⇑P		P	15 02 53.2 -0.2
	baz=55					
G08A	Pilot Rock	55.33 322	⇓P		P	15 02 54.9 -0.3
	baz=56,SNR=7.5					
A12A	Yaak River Ran	55.37 327	⇑P		P	15 02 55.8 +0.4
	baz=56					
B11A	Sandpoint	55.48 326	⇓P		P	15 02 55.9 -0.2
	baz=56					
A11A	Hall Mountain,	55.77 327	⇑P		P	15 02 58.5 +0.3
	baz=56					
C09A	Chrisman Ranch	56.20 325	⇑P		P	15 03 01.3 -0.1
	baz=56					
EDM	Edmonton	56.81 332	eP		P	15 03 04.5 -1.1
H04A	Detroit Lake	57.07 320	⇑P		P	15 03 07.1 -0.4
	baz=57					
YKA	Yellowknife Ar	63.43 340	P		P	15 03 49.5 -0.9
	5.3nm,0.6s,mb4.6,baz=133,slow=6.6,SNR=141					
DBIC	Dimbokro	67.51 86	P		P	15 04 17.6 0.0
	1.8nm,0.6s,mb4.0,baz=267,slow=9.4,SNR=4.7					
DBIC			pP	pP		15 04 57.4 +2.0
	1.4nm,0.7s,baz=238,slow=4.9,SNR=1.7					
SUMG	Summit	69.03 11	eP		P	15 04 26.7 +0.8
	126nm,2.8s,mb5.2					
INK	Inuvik	73.19 340	eP		P	15 04 51.0 0.0
	19nm,1.8s,mb4.5					
TORD	Torodi Ar. Bea	73.53 78	P		P	15 04 53.3 -0.7
	0.2nm,0.5s,mb3.1,baz=297,slow=6.1,SNR=2.1					
GERES	GERESS Array B	82.73 42	P		P	15 05 44.3 +0.3
	0.3nm,0.5s,mb3.3,baz=238,slow=5.6,SNR=1.9					
ZALV	Zalesovo Beam	116.70 15	PKP	PKPdf		15 12 03.3 +0.1
	0.4nm,0.3s,baz=288,slow=2.6,SNR=3.6					
MKAR	Makanchi Array	122.33 20	PKP	PKPdf		15 12 13.6 -0.7
	0.4nm,0.4s,baz=289,slow=2.6,SNR=7.7					
MKAR	Makanchi Array	122.33 20	PKP	PKPdf		15 12 13.6 -0.7
SONM	Songino Array	125.67 1	PKP	PKPdf		15 12 20.8 +0.1
	0.3nm,0.5s,baz=303,slow=3.0,SNR=2.8					
WMQ	Urumqi	126.70 17	ePKP	PKPdf		15 12 21.6 -1.2
CN2	Changchun	127.04 343	ePKP	PKPdf		15 12 23.0 -0.4
HHC	Hu-ho-hao-te	132.48 355	ePKP	PKPdf		15 12 32.5 -1.4
HHC			sPKP			15 13 31.7
HHC			PP	PP		15 15 01.6 +4.0
HHC			PKS			15 16 07.1
HHC			SKS	SKSdf		15 19 25.5 -5.1
HHC			SKKS	SKKSac		15 21 36.3 -3.1
HHC			SS	SS		15 32 24.9 +1.5
HHC			AMB	AMB		
	comp=Z,59nm,5.2s					
HHC			LR	LR		
	comp=N,73nm,19.0s					
HHC			LR	LR		
	comp=E,150nm,18.2s					
HHC			LR	LR		
	comp=Z,140nm,20.0s					
LZH	Lanzhou	137.30 4	ePKP	PKPdf		15 12 42.5 -0.5
LZH			sPKP			15 13 41.7
LZH			LR	LR		
	comp=N,110nm,18.0s					
LZH			LR	LR		
	comp=Z,150nm,20.2s					
CD2	Chengdu	142.44 5	PKP	PKPdf		15 12 50.5 -2.0
ASAR	Alice Springs	149.25 234	PKP	PKPdf		15 13 03.9 -0.3
	comp=Z,3.7nm,0.5s,baz=116,slow=3.7,SNR=108					
ASAR			PKPbc	PKPbc		15 13 07.6 -1.0
	comp=Z,3.6nm,0.5s,baz=118,slow=3.5,SNR=40					
ASAR			pPKP	pPKPdf		15 13 47.4 +1.3
	comp=Z,0.4nm,0.4s,baz=115,slow=3.5,SNR=1.1					
ASAR			pPKPbc	pPKPbc		15 13 50.9 +0.8
	comp=Z,0.5nm,0.5s,baz=115,slow=3.8,SNR=1.9					
WB2	Warramunga Arr	150.49 241	ePKPbc	PKPbc		15 13 10.8 -0.9
WRA	Warramunga Arr	150.50 241	PKP	PKPdf		15 13 05.7 -0.5
	comp=Z,0.3nm,0.6s,baz=96,slow=2.1,SNR=9.4					
WRA			PKPbc	PKPbc		15 13 10.9 -0.9
	comp=Z,3.4nm,0.4s,baz=106,slow=2.6,SNR=30					
WRA			pPKP	pPKPdf		15 13 49.5 +1.4
	comp=Z,0.9nm,0.9s,baz=105,slow=2.9,SNR=1.4					
WRA			pPKPbc	pPKPbc		15 13 52.8 -0.5
	comp=Z,0.7nm,0.7s,baz=105,slow=2.9,SNR=1.9					
CMAR	Chiang Mai Arr	153.71 18	PKPbc	PKPbc		15 13 19.0 0.0
	comp=Z,1.0nm,0.5s,baz=318,slow=3.3,SNR=10					

*IDC **11** 15:17:51.0±14.0, 5°.66S×107°.38E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/22, mbtmp3.5/4, Error ellipse: s-maj=268.7km s-min=206.3km az=178.0*
*ISCJB **11** 15:18:19.4±0.5, 7°.5S±0°.1×108°.19E±0°.06, h145km±10km, mb3.4/3, Error ellipse: s-maj=24.8km s-min=8.1km az=9.5*
*DJA **11** 15:18:19, 7°.45S×108°.18E, h143km, MLv3.9/12*

ISC 11 15:18:20.6±0.5, 7°.5S±0°.1×108°.20E±0°.06, h136km±10km, n15, σ0s84/17, mb3.4/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	0.88	319	P	Pn	15 18 43.4	+0.4
LEM				S	Sn	15 19 01.3	+1.2
DBJI	Dramaga	1.71	303	P	Pn	15 18 51.3	-0.3
UGM	Wanagama	2.34	100	P	Pn	15 18 58.8	-0.3
CGJI	Cibinong	2.63	289	P	Pn	15 19 02.2	-0.6
CGJI				S	Sn	15 19 35.8	+0.6
PCJI	Pacitan	3.03	103	P	Pn	15 19 07.2	-0.7
SJI	Sawahan	3.55	94	P	Pn	15 19 15.0	+0.4
PWJI	Pagerwojo	3.61	99	P	Pn	15 19 15.3	-0.1
XMIS	Christmas Isla	3.88	220	P	Pn	15 19 19.0	0.0
KASI	Kota Agung	4.17	298	P	Pn	15 19 20.5	-2.2
GRJI	Gresik	4.29	82	P	Pn	15 19 25.0	+0.6
GMJI	Gumukmas	5.26	99	P	Pn	15 19 35.5	-1.7
FITZ	Fitzroy Crossi	19.99	123	P	P	15 22 43.7	+1.2
	1.3nm,0.6s,baz=304,slow=11,SNR=6.3						
WRA	Warramunga Arr	28.20	119	P	P	15 24 00.6	0.0
	0.3nm,0.4s,mb3.4,baz=308,slow=9.1,SNR=8.4						
ASAR	Alice Springs	29.44	126	P	P	15 24 12.0	+0.5
	0.4nm,0.7s,mb3.2,baz=304,slow=8.9,SNR=9.9						
STKA	Stephens Creek	39.43	132	P	P	15 25 37.8	+0.4
	0.4nm,0.4s,mb3.4,baz=304,slow=7.3,SNR=3.1						

*ATH **11** 15:21:34.3, 40°.03N×20°.41E, h17km±5km, MD3.0/4*
*NEIC **11** 15:21:34.3, 40°.03N×20°.41E, h17km, MD3.0(ATH), After ATH.*
*ISCJB **11** 15:21:36.8±0.8, 39°.68N±0°.04×20°.18E±0°.07, h10km, Error ellipse: s-maj=8.5km s-min=5.2km az=32.6*
*SKO **11** 15:21:38.7, 39°.62N×20°.34E, h0km*
*CSEM **11** 15:21:40.1±0.3, 39°.63N×20°.62E, h5km, MD3.0, Error ellipse: s-maj=10.7km s-min=5.9km az=91.0*

ISC 11 15:21:38.3±0.8, 39°.63N±0°.04×20°.36E±0°.05, h0km±12km, n13, σ0s92/21, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	Janina	0.38	85	ePN	Pg	15 21 43.5	-2.1
JAN				eSN	Sg	15 21 51.5	+1.0
JAN	Janina	0.38	85	ePn	Pg	15 21 43.5	-2.1
KEK	Kerkira	0.44	281	ePN	Pg	15 21 45.5	-1.3
KEK				eSN	Sg	15 21 53.5	+0.9
EVR	Evrytania	1.33	122	ePN	Pn	15 22 04.0	-0.1
EVR	Evrytania	1.33	122	ePn	Pn	15 22 04.0	-0.1
VLS	Valsamata	1.46	173	ePB	Pg	15 22 07.0	+0.7
VLS	Valsamata	1.46	173	ePb	Pg	15 22 07.0	+0.7
OHR	Ohrid	1.52	13	ePn	Pg	15 22 07.3	-0.1
OHR				eSg	Sg	15 22 27.9	+0.7
OHR	Ohrid	1.52	13	ePn	Pg	15 22 07.3	-0.2
OHR				eSg	Sg	15 22 27.8	+0.6
BIA	Bitola	1.57	28	ePn	Pg	15 22 08.6	+0.1
BIA				eSg	Sg	15 22 29.8	+0.9
BIA	Bitola	1.57	28	ePn	Pg	15 22 08.5	0.0
BIA				eSg	Sg	15 22 29.7	+0.8
KRUS	Krusevo	1.87	21	ePn	Pn	15 22 11.6	+0.1
KRUS				eSg	Sg	15 22 37.4	-1.0
KRUS	Krusevo	1.87	21	ePn	Pn	15 22 11.5	0.0
KRUS				eSg	Sg	15 22 37.3	-1.0

DJA 11 15:43:49, 0°.18N×119°.29E, h105km, MLv3.2/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	Palu	1.21	153	P	Pn	15 44 13.1	+1.0
PCI				S	Sn	15 44 31.0	+1.4
APSI	Ampana	2.60	115	P	Pn	15 44 30.0	+0.5
MRSI	Marisa	2.67	84	P	Pn	15 44 30.5	0.0
TTSI	Tana Toraja	3.25	171	P	Pn	15 44 38.1	-0.1
LUWI	Luwuk	3.69	109	P	Pn	15 44 45.4	+1.3
LUWI				S	Sn	15 45 27.7	+1.0
KKM	Kota Kinabalu	6.58	332	P	Pn	15 45 23.0	-0.3
	54nm,1.6s,0.3nm						
SGSI	Sangihe	7.14	61	P	Pn	15 45 31.2	+0.3

*NIED **11** 15:49:00, 46°.90N×152°.90E, h26km, Mw4.3 Best double couple: M0:2.80000×10^15 NP1:φs=123.00000°, δ=71.00000°, λ=-40.00000°. NP2:φs=229.00000°, δ=53.00000°, λ=-156.00000°.*
*SZGRF **11** 15:49:21.1, 46°.42N×153°.36E, h33km, mb4.8, Kuril Islands, Russia*
*JMA **11** 15:49:21.3±0.7, 46°.86N×152°.86E, h30km, M5.0*
*ISCJB **11** 15:49:22.8±0.3, 46°.56N±0°.05×152°.68E±0°.06, h55km, mb4.4/80, MS3.8/15, Error ellipse: s-maj=8.2km s-min=2.7km az=141.6*
*MOS **11** 15:49:23.1±0.9, 46°.75N×152°.65E, h51km, mb4.7/34, Error ellipse: s-maj=9.4km s-min=6.0km az=96.5*
*BJI **11** 15:49:23.5, 46°.46N×152°.62E, h55km, mB4.7/17, mb4.6/22, Ms4.4/10, Ms7 3.9/11*
*NEIC **11** 15:49:24.4±0.3, 46°.68N×152°.62E, mb4.5/43, Error ellipse: s-maj=8.7km s-min=4.8km az=142.0*
*IDC **11** 15:49:25.2±0.4, 46°.79N×152°.52E, h54km±3km, mb3.9/26, mb1 4.1/27, mb1mx4.1/31, mbtmp3.9/27, MS3.6/9, Ms1 3.6/9, ms1mx3.3/33, Error ellipse: s-maj=12.6km s-min=9.8km az=150.0*

ISC 11 15:49:24.8±0.3, 46°.59N±0°.05×152°.69E±0°.06, h57km, h57km±1.7km: pP-P, n236, σ1s08/247, mb4.4/80, MS3.8/15, 8C-12D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.63	250	ePN	Pn	15 50 18.5	+0.1
KUR				S	Sn	15 51 00.5	+0.6
KUR				pmax	pmax		
	comp=N,120nm,0.4s						
KUR				pmax	pmax		
	comp=E,100nm,0.4s						
KUR				pmax	pmax		
	comp=Z,180nm,0.4s						
KUR				pmax	pmax		
	comp=N,2μm,1.2s						
KUR				pmax	pmax		
	comp=E,3μm,1.2s						
KUR				smax			
	comp=N,430nm,0.7s						
KUR				smax			
	comp=E,1μm,0.7s						
SKR	Severo-Kuril's	4.69	28	ePN	Pn	15 50 28.5	-4.4
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
YUK	Yuzh-Kuril'sk	5.45	245	ePN	Pn	15 50 44.5	+1.2
YUK				eS	Sn	15 51 46.5	+1.9
YUK				pmax	pmax		
	comp=Z,220nm,0.4s						
YUK				smax			
	comp=E,410nm,0.6s						
YUK				smax			
	comp=N,660nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,2.0s						
NEM2	Nemuro 2	5.88	239	P	Pn	15 50 48.6	-0.7
NEM2				eS	Sn	15 51 54.0	-1.3
JRA	Rausu	5.96	246	P	Pn	15 50 53.2	+2.9
JNK	Nakash	6.39	245	P	Pn	15 50 57.5	+1.3
JNK				eS	Sn	15 52 09.0	+1.3
JAK	Akkeshi	6.72	241	P	Pn	15 51 00.4	-0.4
JAK				eS	Sn	15 52 13.4	-2.5
JTKR	Abashiri--Toko	6.72	250	P	Pn	15 51 03.2	+2.4
YSS	Yuzh-Sakhalins	6.83	277	ePN	Pn	15 51 04.7	+2.5
YSS				eS	Sn	15 52 19.8	+1.2
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS	Yuzh-Sakhalins	6.83	277	eP	Pn	15 51 03.9	+1.7
	comp=Z,43nm,0.8s						
JMP	Maruseppu	7.07	252	P	Pn	15 51 08.5	+3.1
JAR	Ashorobuto	7.13	246	P	Pn	15 51 07.9	+1.6
PEA0B	Petropavlovsk-	7.29	25	ePn	Pn	15 51 08.5	0.0
PETK	Petropavlovsk-	7.29	25	P	Pn	15 51 07.9	-0.5
	comp=Z,0.8nm,0.3s,baz=178,slow=11,SNR=39						
JOB	Onbets	7.30	243	P	Pn	15 51 08.9	+0.3
JOB				eS	Sn	15 52 28.8	-1.2
PET	Petropavlovsk	7.51	29	ePN	Pn	15 51 12.9	+1.4
PET				pmax	pmax		
	comp=Z,27nm,1.2s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET	Petropavlovsk	7.51	29	ePn	Pn	15 51 11.5	0.0
	comp=Z,14nm,0.5s						
ASAJ	Asahikawa	7.53	254	P	Pn	15 51 04.2	-7.5
	comp=Z,1.9nm,0.3s,baz=9.5,slow=12,SNR=22						
ASAJ				S	Sn	15 52 51.5	+16
	comp=Z,0.2nm,0.3s,baz=275,slow=15,SNR=4.5						
ASAJ				LR	LR	15 53 57.7	
	comp=Z,190nm,18.8s,baz=205,slow=36						
JCH	Churui	7.75	243	P	Pn	15 51 14.5	-0.3
JCH				eS	Sn	15 52 38.7	-2.3
JFR	Furan	7.94	248	P	Pn	15 51 20.6	+3.1
JEM	Erimo	8.22	240	P	Pn	15 51 22.5	+1.3
JEM				eS	Sn	15 52 50.2	-2.4
ERM	Erimo	8.22	240	c iPN	Pn	15 51 22.3	+1.1
ERM	Erimo	8.22	240	ePn	Pn	15 51 21.8	+0.6
	comp=Z,71nm,0.6s						
JBT2	Biratori 2	8.28	246	P	Pn	15 51 22.5	+0.4
JNBK	Urakawa-nobuka	8.31	242	P	Pn	15 51 21.9	-0.6
JNBK				eS	Sn	15 52 53.3	-1.5
JEW	Eniwo	8.83	249	P	Pn	15 51 31.7	+2.1
JNB	Noboribetsu	9.28	248	P	Pn	15 51 36.4	+0.6
JNB				eS	Sn	15 53 17.4	-1.2
JKB	Kayabe	9.59	245	P	Pn	15 51 38.6	-1.4
JKB				eS	Sn	15 53 20.7	-5.5
JYM2	Yakumo 2	9.89	248	P	Pn	15 51 44.3	+0.3
JSR	Shiriuchi	10.17	245	P	Pn	15 51 47.8	-0.1
JTM	Tenmabayashi	10.21	240	P	Pn	15 51 46.9	-1.6
JTM				eS	Sn	15 53 33.3	-8.1
JANG	Nango	10.21	237	P	Pn	15 51 45.5	-3.0
JANG				eS	Sn	15 53 33.1	-8.4
JTH	Tanohata	10.31	234	eS	Sn	15 53 33.8	-10
JOSM	Okushiri--Mats	10.48	249	P	Pn	15 51 51.9	-0.2
OFUJ	Ofunato	11.02	231	eS	Sn	15 53 52.3	-9.0
JRG	Rokugo	11.37	235	P	Pn	15 52 02.6	-1.8
JRG				eS	Sn	15 54 03.4	-6.4
HABR	Khabarovsk	12.07	285	PN	Pn	15 52 13.9	+0.1
HABR				MLR	MLR		
	comp=Z,157nm,16.0s						
KLR	Kul'dur	14.29	288	eP	Pn	15 52 45.9	+2.1
MAJO	Matsushiro	14.75	232	eP	Pn	15 52 47.5	-2.4
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s						
MAJO	Matsushiro	14.75	232	ePn	Pn	15 52 47.5	-2.4
	comp=Z,11nm,0.6s						
MJAR	Matsushiro Arr	14.75	232	P	Pn	15 52 47.9	-2.0
	comp=Z,0.3nm,0.3s,baz=35,slow=11,SNR=5.8						
MAT	Matsushiro	14.75	232	P	Pn	15 52 48.9	-1.0
MDJ	Mudanjiang	16.27	271	P	Pn	15 53 09.9	+0.5
MDJ				pP	pP	15 53 24.7	+0.9
MDJ				sP	sP	15 53 32.0	+1.0
MDJ				S	S	15 56 10.1	-8.8
MDJ				PcP	PcP	15 57 58.8	-1.3
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.3s						
MDJ				LR	LR		
	comp=Z,86nm,21.3s						
MDJ	Mudanjiang	16.27	271	eP	Pn	15 53 10.7	+1.3
	comp=Z,5.0nm,0.6s						
SEY	Seymchan	16.39	360	i P	Pn	15 53 12.9	+2.3
CN2	Changchun	19.36	272	eP	Pn	15 53 47.6	+0.5
YAK	Yakutsk	20.30	328	d iP	P	15 53 55.9	+0.3
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK	Yakutsk	20.30	328	eP	P	15 53 55.7	+0.1
	comp=Z,31nm,0.7s						
KSRS	Korea Array	20.47	252	P	P	15 53 59.0	+1.4
	comp=Z,8.1nm,0.8s,baz=56,slow=9.8,SNR=24						
KSRS				LR	LR	16 00 49.1	
	comp=Z,52nm,21.4s,MS2.9,baz=65,slow=33						
KSRS	Korea Array	20.47	252	P	P	15 53 59.0	+1.4
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,52nm,21.4s,MS2.9						
BILL	Bilibino	22.62	13	⇑eP	P	15 54 21.4	+1.1
BILL				pmax	pmax		
	comp=Z,13nm,2.5s,mb3.9						
BILL	Bilibino	22.62	13	eP	P	15 54 19.3	-1.0
	comp=Z,2.8nm,0.6s,mb3.9						
BOD	Bodaibo	25.87	310	eP	P	15 54 50.2	-0.5
BOD				e	pP	15 55 02.9	-1.9
BOD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
BOD				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
HHC	Hu-ho-hao-te	30.01	274	eP	P	15 55 29.2	+1.3
HHC				pP	pP	15 55 44.2	+2.1
HHC				sP	sP	15 55 52.0	+3.2
HHC				PP	PP	15 56 28.5	-7.8
HHC				PcP	PcP	15 58 30.5	+1.8
HHC				S	S	16 00 22.0	+0.2
HHC				sS	sS	16 00 46.3	+0.4
HHC				SS	SS	16 02 01.3	-30
HHC				ScP	ScP	16 02 06.9	+1.1
HHC				PcS	PcS	16 02 12.3	+0.2
HHC				ScS	ScS	16 05 59.3	-2.0
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,180nm,6.4s						
HHC				LR	LR		
	comp=N,250nm,10.8s						
HHC				LR	LR		
	comp=E,240nm,8.3s						
HHC				LR	LR		
	comp=Z,160nm,11.4s,MS3.9						
ULN	Ulaanbaatar	30.68	289	P	P	15 55 36.1	+2.4
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
ULN	Ulaanbaatar	30.68	289	P	P	15 55 36.1	+2.4
	comp=Z,5.8nm,1.0s,mb4.4						
SONM	Songino Array	31.11	290	P	P	15 55 37.4	-0.1
	comp=Z,1.3nm,0.9s,mb3.8,baz=60,slow=8.5,SNR=3.7						
SONM				PcP	PcP	15 58 32.1	+0.6
	comp=Z,0.2nm,0.4s,baz=91,slow=3.1,SNR=4.0						
SONM				LR	LR	16 08 38.8	
	comp=Z,99nm,20.0s,MS3.5,baz=73,slow=37						
SONM	Songino Array	31.11	290	P	P	15 55 37.4	-0.1
SONM						15 58 32.1	
ZAK	Zakamensk	32.48	295	eP	P	15 55 48.6	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
GUMO	Guam	33.54	194	P	P	15 56 01.8	+2.7
	comp=Z,36nm,0.5s,mb5.5,baz=32,slow=24,SNR=2.2						
COLA	College	36.45	38	eP	P	15 56 23.6	0.0
COLA				e	pP	15 56 38.4	+0.4
COLA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
COLA	College	36.45	38	eP	P	15 56 23.6	0.0
	comp=Z,7.2nm,1.1s,mb4.5						
COLA				e	pP	15 56 38.4	+0.4
LZH	Lanzhou	37.60	272	eP	P	15 56 35.0	+1.3
LZH				pP	pP	15 56 50.2	+2.0
LZH				sP	sP	15 56 57.5	+2.7
LZH				ePP	PP	15 58 05.3	+5.0
LZH				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
LZH				pmax	pmax		
	comp=Z,53nm,5.0s						
LZH				LR	LR		
	comp=N,340nm,13.5s						
LZH				LR	LR		
	comp=Z,400nm,17.4s,MS4.3						
GTA	Gaotai	38.71	279	eP	P	15 56 46.0	+3.0
GTA				pP	pP	15 57 01.4	+3.9
GTA				sP	sP	15 57 08.6	+4.5
GTA				PcP	PcP	15 58 56.1	+2.4
GTA				S	S	16 02 41.6	+5.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.9						
GTA				pmax	pmax		
	comp=Z,70nm,4.2s						
GTA				LR	LR		
	comp=N,97nm,14.4s,MS4.0						
GTA				LR	LR		
	comp=E,130nm,14.4s,MS4.0						
GTA				LR	LR		
	comp=Z,140nm,15.3s,MS3.9						
EGAK	Eagle	39.31	38	eP	P	15 56 47.1	-0.6
	comp=Z,7.1nm,1.0s,mb4.3						
CD2	Chengdu	40.57	265	P	P	15 56 58.5	-0.1
CD2				pP	pP	15

comp=N,560nm,6.8s
CD2 LR LR
comp=Z,410nm,7.1s
GYA Guiyang 41.39 257 *e*P **P 15 57 05.4 0.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
INK Inuvik 41.95 32 P **P 15 57 10.1 +0.6**
comp=Z,2.5nm,0.8s,mb3.9,baz=292,slow=7.8,SNR=13
INK pP pP 15 57 24.5 +0.4
comp=Z,2.6nm,0.5s,baz=287,slow=7.0,SNR=7.2
INK Inuvik 41.95 32 P **P 15 57 10.1 +0.7**
INK *PP pP 15 57 24.5 +0.5
INK pmax pmax
comp=Z,3.0nm,0.8s
INK pmax pmax
comp=Z,3.0nm,0.5s
INK Inuvik 41.95 32 *e*P **P 15 57 09.8 +0.4**
comp=Z,2.8nm,0.6s,mb4.1
ZALV Zalesovo Beam 42.47 306 P **P 15 57 11.6 -2.2**
comp=Z,1.8nm,0.4s,mb4.0,baz=66,slow=6.4,SNR=11
ZALV pP pP 15 57 28.6 +0.1
comp=Z,0.5nm,0.4s,baz=72,slow=9.3,SNR=2.3
ZALV PcP PcP 15 59 06.0 +0.4
comp=Z,2.1nm,0.8s,baz=78,slow=1.4,SNR=9.0
ZALV LR LR 16 16 11.0
comp=Z,112nm,18.1s,MS3.8,baz=71,slow=38
ZALV Zalesovo Beam 42.47 306 P **P 15 57 11.6 -2.2**
ZALV *PP pP 15 57 28.6 +0.1
ZALV 15 59 06.0
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
ZALV MLR MLR
comp=Z,112nm,18.1s,MS3.8
WMQ Urumqi 44.71 291 *e*P **P 15 57 33.8 +1.8**
DLBC Dease Lake 45.92 46 P **P 15 57 42.4 +1.1**
comp=Z,2.7nm,0.8s,mb4.2,baz=278,slow=3.2,SNR=3.8
MK31 Makanchi Array 46.76 297 *e*P **P 15 57 46.2 -1.9**
MK31 *e* 15 59 20.8
MKAR Makanchi Array 46.76 297 P **P 15 57 46.5 -1.5**
comp=Z,2.3nm,0.7s,mb4.2,baz=70,slow=6.2,SNR=28
MKAR PcP PcP 15 59 20.9 +0.4
comp=Z,1.9nm,0.7s,baz=66,slow=3.2,SNR=7.3
MKAR LR LR 16 18 35.1
comp=Z,110nm,20.1s,MS3.8,baz=28,slow=38
MKAR Makanchi Array 46.76 297 P **P 15 57 46.6 -1.5**
MKAR 15 59 20.9
KURK Kurchatov 47.21 304 P **P 15 57 50.0 -1.5**
comp=Z,3.1nm,0.7s,mb4.4,baz=70,slow=8.6,SNR=31
KURK PcP PcP 15 59 22.3 +0.3
comp=Z,1.0nm,0.7s,baz=61,slow=3.5,SNR=3.9
KURK LR LR 16 18 57.1
comp=Z,70nm,18.2s,MS3.7,baz=55,slow=38
KURK Kurchatov 47.21 304 P **P 15 57 50.0 -1.5**
KURK 15 59 22.3
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KURK MLR MLR
comp=Z,70nm,18.3s,MS3.7
KURK Kurchatov 47.21 304 *e*P **P 15 57 49.5 -2.0**
comp=Z,3.8nm,0.8s,mb4.4
LSA Lhasa 49.99 273 *e*P **P 15 58 15.4 +2.2**
LSA pmax pmax
comp=Z,14nm,0.6s,mb5.2
LSA Lhasa 49.99 273 *e*P **P 15 58 15.4 +2.2**
comp=Z,14nm,0.6s,mb5.2
BVAR Borovoye Array 50.74 309 P **P 15 58 17.5 -1.0**
comp=Z,0.9nm,0.3s,mb4.1,baz=50,slow=7.1,SNR=8.8
BVAR pP pP 15 58 30.5 -2.9
comp=Z,0.4nm,0.4s,baz=62,slow=7.7,SNR=3.5
BVAR sP sP 15 58 38.5 -1.4
comp=Z,0.8nm,0.4s,baz=76,slow=7.0,SNR=4.9
BVAR PcP PcP 15 59 35.0 +0.2
comp=Z,1.4nm,0.4s,baz=64,slow=3.4,SNR=9.4
BVAR LR LR 16 21 07.3
comp=Z,72nm,19.9s,MS3.7,baz=107,slow=38
BVAR Borovoye Array 50.74 309 P **P 15 58 17.5 -1.0**
BVAR *PP pP 15 58 30.5 -3.0
BVAR *SP sP 15 58 38.6 -1.4
BVAR 15 59 35.0
BRVK Borovoye 50.78 309⇓*e*P **P 15 58 17.9 -0.9**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
RES Resolute Bay 51.09 18 P **P 15 58 20.1 -0.7**
comp=Z,0.8nm,0.7s,mb3.8,baz=270,slow=4.0,SNR=6.5
YKA Yellowknife Ar 51.23 37 P **P 15 58 22.2 +0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=293,slow=6.9,SNR=8.5
YKA pP pP 15 58 35.0 -2.0
comp=Z,1.5nm,0.7s,baz=300,slow=7.1,SNR=11
YKA PcP PcP 15 59 36.8 +0.4
comp=Z,0.5nm,0.5s,baz=304,slow=3.7,SNR=8.9
CHTO Chiang Mai 51.80 256 *e*P **P 15 58 28.1 +1.3**
CHTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CHTO Chiang Mai 51.80 256 *e*P **P 15 58 28.1 +1.3**
comp=Z,2.5nm,0.6s,mb4.3
CMAR Chiang Mai Arr 52.05 256 P **P 15 58 30.2 +1.5**
comp=Z,2.8nm,0.8s,mb4.2,baz=34,slow=7.5,SNR=19
CMAR pP pP 15 58 43.6 -0.2
comp=Z,0.7nm,0.5s,baz=32,slow=8.4,SNR=2.7
CMAR PcP PcP 15 59 42.0 +1.7
comp=Z,0.6nm,0.6s,baz=28,slow=3.4,SNR=4.3
AAK Ala-Archa 53.65 296 P **P 15 58 40.4 +0.1**
comp=Z,1.5nm,0.7s,mb4.0,baz=72,slow=1.7,SNR=7.1
AAK Ala-Archa 53.65 296⇑*e*P **P 15 58 41.4 +1.2**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
AAK Ala-Archa 53.65 296 *e*P **P 15 58 40.4 +0.1**
comp=Z,2.3nm,0.8s,mb4.2
UCH Uchtor 53.86 296 *e*P **P 15 58 42.8 +1.1**
comp=Z,9.4nm,0.5s,mb5.0
EKS2 Erkin-Say 54.07 297 *e*P **P 15 58 42.3 -1.0**
comp=Z,2.5nm,0.8s,mb4.2
AML Almayashu 54.42 296 *e*Pn **P 15 58 37.8 -8.1**
comp=Z,11nm,0.3s,mb5.3
GUN Gumba 54.72 275 *e*P **P 15 58 49.4 +1.2**
comp=Z,15nm,0.4s,mb5.3
RAMN Ramite 54.83 273 *e*P **P 15 58 50.2 +1.1**
KKN Kakani 55.21 275 *e*P **P 15 58 53.0 +1.2**
comp=Z,35nm,0.7s,mb5.5
PKI Pulchoki 55.26 275 *e*P **P 15 58 52.6 +0.5**
comp=Z,18nm,0.6s,mb5.3
DMN Daman 55.44 275 *e*P **P 15 58 54.8 +1.3**
comp=Z,49nm,0.8s
ARCES ARCESS Array B 57.91 341 P **P 15 59 09.4 -0.9**
comp=Z,2.0nm,0.9s,mb4.2,baz=39,slow=6.4,SNR=6.4
ABKAR Akbulak array 58.31 310 *e*P **P 15 59 11.9 -1.5**
comp=Z,1.4nm,0.5s,mb4.2
SUMG Summit 60.89 4 *e*P **P 15 59 30.9 +0.1**
comp=Z,12nm,1.0s,mb5.0
JOF Joensuu 61.35 334 *e*P **P 15 59 32.2 -1.9**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
JOF Joensuu 61.35 334 *ep* **P 15 59 32.2 -1.9**
comp=Z,3.8nm,0.6s,mb4.7
FCC Fort Churchill 61.56 33 *e*P **P 15 59 35.0 -0.5**
comp=Z,0.1nm,0.7s
NVAR Mina Array Bea 62.77 62 P **P 15 59 45.2 +1.3**
comp=Z,0.6nm,0.7s,mb3.9,baz=296,slow=7.9,SNR=6.2
NVAR pP pP 15 59 59.5 +0.1
comp=Z,0.8nm,0.6s,baz=288,slow=7.2,SNR=6.7
KAF Kangasniemi 63.47 335 *e*P **P 15 59 46.1 -2.1**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
KAF Kangasniemi 63.47 335 *ep* **P 15 59 46.1 -2.1**
comp=Z,2.3nm,0.5s,mb4.6
FINES FINESS Array B 64.06 335 P **P 15 59 51.0 -1.2**
comp=Z,6.2nm,0.5s,mb4.9,baz=31,slow=7.9,SNR=59
PDAR Pinedale Array 65.08 54 P **P 15 59 59.9 +0.9**
comp=Z,1.4nm,0.8s,mb4.0,baz=328,slow=2.3,SNR=11
ULM Lac du Bonnet 66.84 41 P **P 16 00 09.9 -0.3**
comp=Z,1.9nm,0.7s,mb4.3,baz=314,slow=7.8,SNR=4.4
WRA Warramunga Arr 68.26 199 P **P 16 00 19.9 +0.4**
comp=Z,1.0nm,0.8s,mb3.9,baz=11,slow=6.6,SNR=8.2
WRA pP pP 16 00 35.3 +0.3
comp=Z,1.0nm,0.8s,baz=15,slow=6.4,SNR=4.4
NB2 NORSAR Subarra 68.29 341 P **P 16 00 18.4 -0.8**
comp=Z,6.6nm,0.6s,mb4.8,baz=27,slow=6.5
NOA NORSAR Array B 68.29 341 P **P 16 00 18.4 -0.7**
comp=Z,5.6nm,0.5s,mb4.8,baz=27,slow=6.4,SNR=21
NOA LR LR 16 33 10.3
comp=Z,27nm,20.6s,MS3.5,baz=240,slow=39

AKASG Malin Array Be 71.52 326 P **P 16 00 38.0 -1.1**
comp=Z,8.2nm,0.5s,mb4.9,baz=34,slow=6.3,SNR=26
AKASG Malin Array Be 71.52 326 *i*P **P 16 00 38.4 -0.8**
AKASG pmax pmax
comp=Z,8.0nm,0.5s
ASAR Alice Springs 71.96 198 P **P 16 00 43.7 +1.7**
comp=Z,1.3nm,0.7s,mb4.0,baz=12,slow=5.3,SNR=33
ASAR pP pP 16 00 58.9 +1.1
comp=Z,1.0nm,0.8s,baz=10,slow=5.3,SNR=5.5
OJC Ojcow 75.32 331 *e*P **P 16 01 01.1 -0.4**
STHS Stebnicka Huta 75.51 330 *e*P **P 16 01 03.3 +0.7**
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
STHS Stebnicka Huta 75.51 330 *e*P **P 16 01 03.3 +0.7**
comp=Z,5.8nm,0.8s,mb4.6
STHS Stebnicka Huta 75.51 330 *e*P **P 16 01 03.3 +0.7**
BUR08 Bucovina Ar. S 75.55 326 *e*P **P 16 01 02.7 -0.2**
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 01 02.7 -0.2**
KOLS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 01 02.7 -0.2**
comp=Z,5.4nm,0.9s,mb4.5
KOLS Kolonicke sedl 75.56 329 *e*P **P 16 01 02.7 -0.2**
BURAR Bucovina Array 75.56 326⇓*i*P **P 16 01 03.0 0.0**
TLCR 76.11 323⇑*i*P **P 16 01 06.1 0.0**
ODB Odobesti 76.35 324⇓*i*P PcP 16 01 20.0 +0.8
VRI Vrincioaia 76.41 324⇑*i*P **P 16 01 07.7 -0.1**
MORC Moravsky Berou 76.45 332 *e*P **P 16 01 07.7 -0.3**
MORC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MORC Moravsky Berou 76.45 332 *e*P **P 16 01 07.7 -0.3**
comp=Z,5.2nm,1.0s,mb4.4
MORC Moravsky Berou 76.45 332⇓*i*P **P 16 01 08.1 +0.1**
CLL Collm 76.50 335 *e*P **P 16 01 07.6 -0.6**
comp=Z,10.0nm,0.8s,mb4.8
CLL Collm 76.50 335⇓*i*P **P 16 01 07.6 -0.6**
CLL pmax pmax
comp=Z,86nm,0.8s
CLL MLR MLR
comp=Z,100nm,15.4s
CLL Collm 76.50 335⇓*i*P **P 16 01 07.6 -0.6**
comp=Z,10.0nm,0.8s,mb4.8
CLL LR LR
comp=Z,100nm,15.4s,MS4.2
CLL Collm 76.50 335⇓*i*P **P 16 01 07.6 -0.6**
comp=Z,10.0nm,0.8s,mb4.8
KECS Kecovo 76.57 330 *e*P **P 16 01 08.7 0.0**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 76.57 330 *e*P **P 16 01 08.7 0.0**
comp=Z,3.2nm,1.0s,mb4.2
KECS Kecovo 76.57 330 *e*P **P 16 01 08.7 0.0**
BRG Berggiesshubel 76.61 335 *e*(P) **P 16 01 08.5 -0.3**
comp=Z,8.2nm,1.4s,mb4.5
BRG Berggiesshubel 76.61 335 *e*P **P 16 01 08.5 -0.3**
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
CLZ Clausthal 76.75 337 *e*P **P 16 01 09.5 -0.1**
comp=Z,10.0nm,1.2s,mb4.6
CLZ Clausthal 76.75 337 *e*P **P 16 01 09.5 -0.1**
CLZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
TIRR Tirgusor 76.87 323⇓*i*P **P 16 01 10.5 +0.1**
HARR Harsova 76.88 323⇑*i*P **P 16 01 10.6 +0.1**
MLR Muntele Rosu 77.03 325⇓*i*P **P 16 01 12.2 +0.9**
VYHS Vyhne 77.13 331 *e*P **P 16 01 11.9 +0.1**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
VYHS Vyhne 77.13 331 *e*P **P 16 01 11.9 +0.1**
comp=Z,3.2nm,1.2s,mb4.1
VYHS Vyhne 77.13 331 *e*P **P 16 01 11.9 +0.1**
VRAC Vranov 77.16 332 LR LR 16 41 16.7
comp=Z,49nm,18.1s,MS3.9,baz=356,slow=40
VRAC Vranov 77.16 332⇑*i*P **P 16 01 12.4 +0.4**
MOX Moxa 77.48 336 *e*P **P 16 01 13.6 -0.2**
comp=Z,5.0nm,1.0s,mb4.4
TXAR Lajitas Array 77.83 60 P **P 16 01 16.6 +0.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=303,slow=5.1,SNR=7.3
TXAR pP pP 16 01 32.0 +0.1
comp=Z,2.5nm,0.5s,baz=302,slow=5.0,SNR=12
ROTZ Rotzenmuhle 78.10 335 *e*P **P 16 01 17.4 +0.2**
comp=Z,4.0nm,0.9s,mb4.3
KHC Kasperske Hory 78.26 334 *e*P **P 16 01 18.0 -0.1**
comp=Z,5.8nm,0.9s,mb4.5
KHC Kasperske Hory 78.26 334 *e*P **P 16 01 18.4 +0.3**
KHC *e*pP pP 16 01 33.4 -0.6
BR131 Keskin Array S 78.31 316 *e*P **P 16 01 18.9 +0.3**
comp=Z,3.8nm,0.9s,mb4.3
BRTR Keskin Array B 78.31 316 P **P 16 01 18.9 +0.3**
comp=Z,2.8nm,0.8s,mb4.2,baz=74,slow=4.6,SNR=16
BRTR Keskin Array B 78.31 316 *i*P **P 16 01 19.2 +0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
GZR Gura Zlata 78.35 327⇑*i*P **P 16 01 18.8 +0.1**
GRA1 Grafenberg Arr 78.45 336 *e*P **P 16 01 19.0 -0.1**
comp=Z,11nm,0.7s,mb4.9
GRF Grafenberg Arr 78.45 336 *e*P **P 16 01 19.0 -0.1**
comp=Z,11nm,0.7s,mb4.9
GRF Grafenberg Arr 78.45 336 *e*P **P 16 01 19.0 -0.1**
GRF pmax pmax
comp=Z,11nm,0.7s,mb4.9
GRF Grafenberg Arr 78.45 336 *e*P **P 16 01 19.1 0.0**
GRF pmax pmax
comp=Z,11nm,0.7s,mb4.9
GRF Grafenberg Arr 78.45 336 *e*P **P 16 01 19.1 0.0**
comp=Z,11nm,0.7s,mb4.9
WET Wettzell 78.46 334 *e*P **P 16 01 19.3 +0.1**
comp=Z,7.0nm,1.0s,mb4.5
WET Wettzell 78.46 334 *e*P **P 16 01 19.3 +0.1**
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GERES GERESS Array B 78.48 334 P **P 16 01 18.5 -0.8**
comp=Z,1.5nm,0.6s,mb4.1,baz=39,slow=6.4,SNR=11
BZS Buzias 78.60 327⇓*i*P **P 16 01 19.7 -0.3**
TNS Taunus Mts 78.73 337 *e*P **P 16 01 20.6 -0.1**
comp=Z,9.0nm,0.9s,mb4.7
TNS Taunus Mts 78.73 337 *e*P **P 16 01 20.6 -0.1**
TNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
STKA Stephens Creek 78.74 190 pP pP 16 01 38.0 +1.3
comp=Z,2.4nm,1.1s,baz=45,slow=5.7,SNR=3.5
MEM Membach 79.00 339 P **P 16 01 22.5 +0.3**
comp=Z,6.7nm,1.2s,mb4.5
PKSM Moragy 79.16 329⇓*i*P **P 16 01 22.4 -0.7**
BCLA Clavier 79.35 339 P **P 16 01 23.4 -0.6**
comp=Z,5.1nm,1.5s,mb4.2
GIVF Givet 79.76 340 *e*P **P 16 01 25.8 -0.5**
BAIF Baives 79.94 340 *e*P **P 16 01 26.9 -0.4**
PERS Pernice 79.98 332 *i*P **P 16 01 27.6 0.0**
BFO Black Forest 80.49 337 *e*P **P 16 01 30.3 0.0**
comp=Z,8.0nm,1.0s,mb4.6
BFO Black Forest 80.49 337 *e*P **P 16 01 30.3 0.0**
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GCIS Gornji Cirnik 80.49 331 *i*P **P 16 01 29.7 -0.6**
PDKS Podkum 80.53 332 *e*P **P 16 01 29.6 -0.9**
CDF Champ du Feu 80.70 337 *e*P **P 16 01 31.1 -0.3**
comp=Z,17nm,1.0s,mb4.7
CDF Champ du Feu 80.70 337 *e*P **P 16 01 31.1 -0.3**
CDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CDF Champ du Feu 80.70 337 *e*P **P 16 01 31.1 -0.3**
comp=Z,8.7nm,1.0s,mb4.6
ECH Echery 80.91 337 *e*P **P 16 01 32.0 -0.5**
ECH pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ECH Echery 80.91 337 *e*P **P 16 01 32.0 -0.5**
comp=Z,3.4nm,0.9s,mb4.3
MEZF Maizieres J'vi 81.19 339 *e*P **P 16 01 33.9 -0.1**
comp=Z,11nm,0.8s,mb4.6
MEZF Maizieres J'vi 81.19 339 *e*P **P 16 01 33.9 -0.1**
comp=Z,11nm,0.8s,mb4.8
PMOR Pomariorio Ree 81.21 123 *e*T 17 31 26.0
comp=Z,9.6nm,0.2s
HAU Haudompre 81.32 338 *e*P **P 16 01 34.2 -0.5**
HAU *e*MLR MLR
comp=Z,79nm,20.2s,MS3.8
HAU Haudompre 81.32 338 *e*P **P 16 01 34.2 -0.5**
HAU LR LR
comp=Z,80nm,20.3s,MS4.1
HINF Hinterlalfeld 81.36 337 *e*P **P 16 01 34.2 -0.7**
comp=Z,8.2nm,1.0s,mb4.3
HINF Hinterlalfeld 81.36 337 *e*P **P 16 01 34.2 -0.7**
HINF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
HINF Hinterlalfeld 81.36 337 *e*P **P 16 01 34.2 -0.7**
comp=Z,4.1nm,1.0s,mb4.3
LDF La Druitiere 82.29 342 *e*P **P 16 01 39.3 -0.5**
PPT Papeete 82.30 126 *e*LR LR 16 27 43.8
comp=Z,60nm,26.2s
ASF Jabal al Asfar 82.58 310 P **P 16 01 42.5 +0.9**
comp=Z,3.1nm,0.8s,mb4.4,baz=0.0,slow=3.0,SNR=4.5
LOR Lormes 82.63 339 *e*P **P 16 01 41.3 -0.3**
comp=Z,9.7nm,0.8s,mb4.6
LOR *e*MLR MLR
comp=Z,58nm,17.2s,MS3.7
LOR Lormes 82.63 339 *e*P **P 16 01 41.3 -0.3**
LOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
LOR MLR MLR
comp=Z,60nm,17.3s,MS4.0
LOR Lormes 82.63 339 *e*P **P 16 01 41.3 -0.3**
comp=Z,4.8nm,0.8s,mb4.6
LOR LR LR
comp=Z,60nm,17.3s,MS4.0
GRR Gorron 82.64 343 *e*P **P 16 01 41.3 -0.3**
comp=Z,12nm,0.9s,mb4.6
GRR Gorron 82.64 343 *e*P **P 16 01 41.3 -0.3**
GRR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
GRR Gorron 82.64 343 *e*P **P 16 01 41.3 -0.3**
comp=Z,5.9nm,0.9s,mb4.6
CABF La Chapelle 82.67 338 *e*P **P 16 01 40.8 -1.0**
SSF Saint Saulge 82.91 339 *e*P **P 16 01 42.7 -0.3**
ROSF Rostrenen 83.17 344 *e*P **P 16 01 43.8 -0.5**
AVF Avril sur Loir 83.20 339 *e*P **P 16 01 44.4 -0.1**
comp=Z,9.4nm,0.8s,mb4.5
AVF Avril sur Loir 83.20 339 *e*P **P 16 01 44.4 -0.1**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
AVF Avril sur Loir 83.20 339 *e*P **P 16 01 44.4 -0.1**
comp=Z,4.7nm,0.8s,mb4.6
SMF Signal de Mont 83.22 339 *e*P **P 16 01 44.5 -0.1**
comp=Z,37nm,1.3s,mb5.0
SMF Signal de Mont 83.22 339 *e*P **P 16 01 44.5 -0.1**
SMF pmax pmax
comp=Z,19nm,1.3s,mb5.0
SMF Signal de Mont 83.22 339 *e*P **P 16 01 44.5 -0.1**
comp=Z,18nm,1.3s,mb5.0
LPL La Plagne 83.51 337 *e*P **P 16 01 46.7 +0.6**
comp=Z,2.6nm,0.4s,mb4.4
LPL La Plagne 83.51 337 *e*P **P 16 01 46.7 +0.6**
LPL pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
LPL La Plagne 83.51 337 *e*P **P 16 01 46.7 +0.6**
comp=Z,1.3nm,0.4s,mb4.4
LPG La Plagne 83.52 337 *e*P **P 16 01 46.9 +0.7**
comp=Z,5.6nm,0.6s,mb4.6
LPG La Plagne 83.52 337 *e*P **P 16 01 46.9 +0.7**
LPG pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
LPG La Plagne 83.52 337 *e*P **P 16 01 46.9 +0.7**
comp=Z,2.8nm,0.6s,mb4.6
TCF Toulx Ste Croi 83.94 340 *e*P **P 16 01 48.4 0.0**
comp=Z,6.4nm,1.0s,mb4.4
TCF Toulx Ste Croi 83.94 340 *e*P **P 16 01 48.4 0.0**
TCF pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
TCF Toulx Ste Croi 83.94 340 *e*P **P 16 01 48.4 0.0**
comp=Z,3.2nm,1.0s,mb4.4
MBDF Montbardon 84.23 336 *e*P **P 16 01 49.8 0.0**
ORIF Oris-en-Rattie 84.29 337 *e*P **P 16 01 50.7 +0.5**
comp=Z,7.8nm,0.7s,mb4.7
ORIF *e*MLR MLR
comp=Z,50nm,19.5s,MS3.6
ORIF Oris-en-Rattie 84.29 337 *e*P **P 16 01 50.7 +0.5**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 84.29 337 *e*P **P 16 01 50.7 +0.5**
comp=Z,3.9nm,0.7s,mb4.7
VIVF Saint-Julien-l 84.67 338 *e*P **P 16 01 51.6 -0.5**
comp=Z,7.5nm,0.9s,mb4.5
VIVF Saint-Julien-l 84.67 338 *e*P **P 16 01 51.6 -0.5**
VIVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 84.67 338 *e*P **P 16 01 51.6 -0.5**
comp=Z,3.8nm,0.9s,mb4.5
IDI Anoyia 85.95 320 P **P 16 01 56.7 -2.0**
comp=Z,5.5nm,0.9s,mb4.8,baz=343,slow=11,SNR=1.4
TORD Torodi Ar. Bea 115.08 329 PKP PKiKP 16 07 58.6 -1.1
comp=Z,0.3nm,0.5s,baz=14,slow=2.0,SNR=4.3
PLCA Paso Flores 148.48 95 PKPbc PKPbc 16 09 05.7 +1.2
comp=Z,2.1nm,0.8s,baz=264,slow=6.6,SNR=5.3
PLCA pPKPbc pPKPbc 16 09 22.4 +1.2
comp=Z,2.1nm,0.7s,baz=271,slow=3.6,SNR=3.8
CPUP Villa Florida 148.80 60 PKPbc PKPbc 16 09 05.8 +0.1
comp=Z,1.9nm,0.7s,baz=313,slow=4.5,SNR=7.0
CPUP pPKP pPKPdf 16 09 17.2 -1.5
comp=Z,0.5nm,0.4s,baz=225,slow=7.1,SNR=2.2
CPUP Villa Florida 148.80 60 PKPbc PKPbc 16 09 05.8 +0.1
CPUP pPKP pPKPdf 16 09 17.2 -1.5

NNC ***11*** *15:59:31.9±8.8, 36°.62N×69°.71E, h0km, mb4.3, mpv4.6, Error ellipse: s-maj=80.7km s-min=60.8km az=156.0*
MOS ***11*** *15:59:38.5±1.0, 36°.41N×70°.16E, h214km, mb4.3/15, Error ellipse: s-maj=9.8km s-min=6.1km az=82.0*
ISCJB ***11*** *15:59:39.3±0.3, 36°.46N±0°.02×70°.17E±0°.04, h221km±3km, mb4.2/43, Error ellipse: s-maj=5.1km s-min=3.2km az=153.6*
BJI ***11*** *15:59:40.5, 36°.56N×70°.18E, h227km, mB4.8/19, mb4.6/30*
NEIC ***11*** *15:59:41.0±0.3, 36°.46N×70°.20E, mb4.5/22, Error ellipse: s-maj=7.4km s-min=6.8km az=77.0*
IDC ***11*** *15:59:41.5±0.7, 36°.43N×70°.16E, h233km±6km, mb3.7/17, mb1 3.9/22, mb1mx3.7/28, mbtmp3.8/22, Error ellipse: s-maj=10.5km s-min=9.5km az=19.0*
DJA ***11*** *15:59:41, 36°.40N×70°.30E, h210km, mb4.7/13*
ISC 11 15:59:40.2±0.3, 36°.47N±0°.02×70°.16E±0°.04, h214km±3km, h231km±2.8km:pP-P, n145, σ15/15/184, mb4.2/43, 7C-7D,

Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.13**	**206**	*i* PN	**Pn**	**16 00 22.7**	**+1.6**
KBL				*i* S	**S**	**16 00 53.7**	**+0.7**
CEP	**Cherat**	**3.01**	**151**	⇑P	**Pn**	**16 00 32.8**	**+2.1**
CEP				S	**S**	**16 01 10.0**	**-0.2**
CHCP	**Chirah Chowk**	**3.79**	**137**	⇑P	**Pn**	**16 00 42.2**	**+2.3**
SARP	**Sargodha**	**4.99**	**155**	P	**Pn**	**16 00 55.7**	**+0.8**
JMU	**Jammu**	**5.42**	**132**	*e*P	**Pn**	**16 01 00.0**	**-0.2**
	5.0nm,0.2s						
KSH	**Kashi**	**5.51**	**55**	P	**Pn**	**16 00 57.0**	**-4.3**
KSH				*es*P		16 01 42.0	
KSH				S	**S**	**16 01 55.1**	**-10**
KSH				smax			
	comp=N,720nm,0.4s						
KSH				smax			
	comp=E,580nm,0.6s						
THN	**Thein Dam**	**6.11**	**130**	*e*P	**Pn**	**16 01 09.0**	**0.0**
THN				*e*S	**S**	**16 02 16.4**	**-3.2**
DLH	**Dalhousie**	**6.19**	**128**	*e*P	**Pn**	**16 01 10.0**	**-0.1**
DLH				*ex*	**S**	**16 02 20.0**	**-1.6**
AML	**Almayashu**	**6.28**	**25**	P	**Pn**	**16 01 11.7**	**+0.6**
	SNR=188						
AML	**Almayashu**	**6.28**	**25**	*e*Pn	**Pn**	**16 01 11.6**	**+0.4**
AML				*e*S	**S**	**16 02 21.2**	**-2.2**
KK07	**Karatay Array**	**6.62**	**2**	Pn	**Pn**	**16 01 13.4**	**-2.0**
	comp=E,14nm,0.7s,baz=186,slow=13						
KK07				⇓Sn	**S**	**16 02 26.2**	**-5.0**
	comp=E,78nm,1.1s,baz=189,slow=19						
UCH	**Uchtor**	**6.67**	**29**	P	**Pn**	**16 01 16.7**	**+0.7**
	SNR=164						
UCH	**Uchtor**	**6.67**	**29**	*e*P	**Pn**	**16 01 16.7**	**+0.6**
	comp=E,94nm,0.6s						
UCH				*e*S	**S**	**16 02 17.4**	**-15**
EKS2	**Erkin-Say**	**6.79**	**23**	P	**Pn**	**16 01 18.3**	**+0.7**
	SNR=68						
EKS2	**Erkin-Say**	**6.79**	**23**	*e*P	**Pn**	**16 01 18.1**	**+0.5**
	comp=E,34nm,0.4s						
EKS2				*e*S	**S**	**16 02 29.2**	**-6.0**
KZA	**Kyzart**	**6.85**	**34**	P	**Pn**	**16 01 19.0**	**+0.6**
	SNR=150						
AAK	**Ala-Archa**	**7.01**	**27**	P	**Pn**	**16 01 21.2**	**+0.7**
	comp=E,0.3nm,0.3s,baz=180,slow=5.1,SNR=127						
AAK				S	**S**	**16 02 38.6**	**-1.8**
	comp=E,0.2nm,0.3s,baz=161,slow=17,SNR=7.5						
AAK	**Ala-Archa**	**7.01**	**27**	PN	**Pn**	**16 01 21.2**	**+0.7**
AAK				S	**S**	**16 02 38.6**	**-1.8**
AAK				pmax	pmax		
	comp=Z,15nm,0.3s						

AAK				smax			
	comp=N,10.0nm,0.3s						
AAK	**Ala-Archa**	**7.01**	**27**	*e*P	**Pn**	**16 01 21.1**	**+0.6**
	comp=N,59nm,0.6s						
AAK				*e*S	**S**	**16 02 26.3**	**-14**
KBK	**Karagaybulak**	**7.20**	**29**	P	**Pn**	**16 01 23.8**	**+0.9**
	SNR=61						
BHK	**Bhakra**	**7.24**	**132**	*e*P	**Pn**	**16 01 23.0**	**-0.7**
BHK				*e*S	**S**	**16 02 39.2**	**-6.9**
CHMS	**Chumysh**	**7.42**	**27**	P	**Pn**	**16 01 26.0**	**+0.3**
	SNR=11						
ULHL	**Ulahol**	**7.45**	**37**	P	**Pn**	**16 01 26.3**	**+0.2**
	SNR=108						
SDNR	**Sundarnagar**	**7.52**	**129**	*e*P	**Pn**	**16 01 28.1**	**+0.8**
SDNR				*e*S	**S**	**16 02 48.1**	**-4.6**
USP	**Ospenovka**	**7.56**	**25**	P	**Pn**	**16 01 27.6**	**-0.1**
	SNR=15						
TKM2	**Tokmak 2**	**7.68**	**31**	Pn	**Pn**	**16 01 29.4**	**+0.2**
	comp=N,80nm,0.8s						
TKM2				⇑Sn	**S**	**16 02 52.6**	**-3.8**
	comp=N,57nm,0.8s						
TKM2	**Tokmak 2**	**7.68**	**31**	P	**Pn**	**16 01 29.6**	**+0.4**
	SNR=110						
TKM2	**Tokmak 2**	**7.68**	**31**	*e*PN	**Pn**	**16 01 29.3**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,45nm,0.5s						
TKM2	**Tokmak 2**	**7.68**	**31**	*e*P	**Pn**	**16 01 29.3**	**+0.1**
	comp=Z,45nm,0.5s						
SMLA	**Simla**	**7.90**	**130**	*i* x	**Pn**	**16 01 28.9**	**-3.3**
SMLA				*i* S	**S**	**16 02 55.5**	**-6.1**
SMLA				*e*x	x	16 02 57.9	
	comp=E,5μm,0.4s						
SMLA				*e*x	x	16 02 58.7	
	comp=N,3μm,0.3s						
KKR	**Kurukshetra**	**8.56**	**137**	*e*P	**Pn**	**16 01 37.3**	**-3.4**
KKR				*e*S	**S**	**16 03 07.3**	**-10**
DDI	**Dehra Dun**	**9.01**	**131**	*e*P	**Pn**	**16 01 46.0**	**-0.5**
DDI				*e*x	**S**	**16 03 25.0**	**-2.8**
KHET	**Khetri**	**9.64**	**149**	*e*P	**Pn**	**16 01 54.9**	**+0.2**
KHET				*e*S	**S**	**16 03 34.5**	**-8.3**
KHET				AML	AML	16 03 39.6	
	comp=E,115nm,0.2s						
KHET				AML	AML	16 03 39.8	
	comp=N,76nm,0.3s						
VAN	**Vannovskaya**	**9.72**	**282**	⇓*i*P	**Pn**	**16 01 53.7**	**-1.9**
VAN				*e*S	**S**	**16 03 37.3**	**-7.3**
NDI	**New Delhi**	**9.78**	**141**	*e*P	**Pn**	**16 01 54.0**	**-2.5**
NDI				*e*S	**S**	**16 03 35.0**	**-11**
AYAN	**Aya Nagar**	**9.90**	**142**	*e*P	**Pn**	**16 01 57.7**	**-0.2**
AYAN				*e*S	**S**	**16 03 39.9**	**-9.1**
AYAN				AML	AML	16 03 44.1	
	comp=Z,79nm,0.3s						
AJM	**Ajmer**	**10.67**	**158**	*e*P	**Pn**	**16 02 07.4**	**-0.4**
AJM				*e*S	**S**	**16 03 56.4**	**-11**
AJM				AML	AML	16 04 54.2	
	comp=E,104nm,0.7s						
AJM				AML	AML	16 04 59.2	
	comp=N,50nm,0.0s						
PTH	**Pithoragarh**	**10.90**	**126**	*e*P	**Pn**	**16 02 10.0**	**-0.8**
PTH				*e*S	**S**	**16 04 05.6**	**-7.1**
AGRA	**Agra**	**11.34**	**142**	*e*P	**Pn**	**16 02 15.8**	**-0.5**
AGRA				*e*S	**S**	**16 04 14.1**	**-9.0**
MK31	**Makanchi Array**	**13.72**	**38**	*e*P	**Pn**	**16 02 45.8**	**-0.1**
MKAR	**Makanchi Array**	**13.72**	**38**	P	**Pn**	**16 02 45.9**	**0.0**
	comp=N,1.3nm,0.3s,baz=225,slow=14,SNR=85						
MKAR				S	**S**	**16 05 19.6**	**+1.2**
	comp=N,0.0nm,0.3s,baz=218,slow=9.2,SNR=1.3						
MKAR	**Makanchi Array**	**13.72**	**38**	P	**Pn**	**16 02 45.9**	**0.0**
MKAR				S	**S**	**16 05 19.6**	**+1.2**
AB31	**Akbulak array**	**14.79**	**333**	Pn	**Pn**	**16 02 57.4**	**-1.6**
	comp=N,5.1nm,0.5s,baz=146,slow=12,SNR=121						
ABKAR	**Akbulak array**	**14.79**	**333**	*e*P	**Pn**	**16 02 57.6**	**-1.4**
	comp=N,4.7nm,0.1s						
WMQ	**Urumqi**	**15.27**	**56**	*e*P	**Pn**	**16 03 05.6**	**+0.6**
WMQ				sP	sP	16 04 03.4	-3.1
WMQ				S	**S**	**16 05 49.7**	**-4.3**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.2s						
WMQ				LR	LR		
	comp=N,55nm,18.0s						
WMQ				LR	LR		
	comp=E,16nm,20.0s						
WMQ				LR	LR		
	comp=Z,55nm,21.0s						
KURBB	**Kurchatov Arra**	**15.38**	**20**	Pn	**Pn**	**16 03 06.2**	**0.0**
	comp=Z,0.8nm,0.6s						
DMN	**Daman**	**15.44**	**121**	*e*P	**Pn**	**16 03 07.7**	**+0.6**
	comp=Z,203nm,0.4s						
KKN	**Kakani**	**15.45**	**120**	*e*P	**Pn**	**16 03 07.6**	**+0.4**
	comp=Z,164nm,0.4s						
KURK	**Kurchatov**	**15.49**	**21**	⇓Pn	**Pn**	**16 03 07.1**	**-0.3**
	comp=Z,2.9nm,0.6s						
KURK	**Kurchatov**	**15.49**	**21**	P	**Pn**	**16 03 05.4**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=22						
KURK	**Kurchatov**	**15.49**	**21**	⇓*e*P	**Pn**	**16 03 07.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURK	**Kurchatov**	**15.49**	**21**	*e*P	**Pn**	**16 03 05.8**	**-1.6**
	comp=Z,4.1nm,0.8s						
PKIN	**Phulchoki**	**15.66**	**120**	*e*P	**Pn**	**16 03 10.5**	**+0.7**
	comp=Z,180nm,0.4s						
PKIN	**Phulchoki**	**15.66**	**120**	*e*P	**Pn**	**16 03 10.9**	**+1.1**
	comp=Z,177nm,0.3s						
PKI	**Pulchoki**	**15.67**	**120**	*e*P	**Pn**	**16 03 11.2**	**+1.3**
	comp=Z,158nm,0.4s						
GUN	**Gumba**	**15.80**	**118**	*e*P	**Pn**	**16 03 11.6**	**+0.2**
	comp=Z,100nm,0.3s						
VOSK	**Vostochnaya**	**16.26**	**2**	Pn	**Pn**	**16 03 16.0**	**-0.7**
	comp=Z,6.3nm,0.7s						
AKTK	**Aktyubinsk**	**16.48**	**332**	P	**P**	**16 03 18.9**	**+0.8**
AKTK				S	**S**	**16 06 17.2**	**-2.1**
AKTO	**Aktyubinsk**	**16.48**	**332**	⇑Pn	**Pn**	**16 03 18.6**	**-0.7**
	comp=Z,3.4nm,0.7s						
AKTO	**Aktyubinsk**	**16.48**	**332**	P	**P**	**16 03 18.9**	**+0.8**
	comp=Z,3.6nm,0.3s,baz=144,slow=10.0,SNR=59						
AKTO				S	**S**	**16 06 17.2**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=159,slow=22,SNR=1.8						
BVA0	**Borovoye Array**	**16.55**	**0**	Pn	**Pn**	**16 03 19.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=178,slow=11,SNR=34						
BVAR	**Borovoye Array**	**16.55**	**0**	P	**P**	**16 03 19.9**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=177,slow=10,SNR=25						
BVAR				S	**S**	**16 06 20.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=236,slow=39,SNR=1.7						
BRVK	**Borovoye**	**16.59**	**0**	*e*P	**P**	**16 03 20.3**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BRVK	**Borovoye**	**16.59**	**0**	*e*P	**P**	**16 03 20.3**	**+1.0**
	comp=Z,8.0nm,0.6s						
RAMN	**Ramite**	**16.89**	**120**	*e*P	**P**	**16 03 23.5**	**+0.6**
LSA	**Lhasa**	**18.82**	**105**	P	**P**	**16 03 47.2**	**+3.2**
LSA	**Lhasa**	**18.82**	**105**	*e*P	**P**	**16 03 46.8**	**+2.8**
LSA				pmax	pmax		
	comp=Z,30nm,0.6s						
LSA	**Lhasa**	**18.82**	**105**	*e*P	**P**	**16 03 46.8**	**+2.8**
	comp=Z,30nm,0.6s						
ZAA0	**Zalesovo Array**	**20.23**	**26**	*e*P	**P**	**16 03 58.4**	**-0.3**
ZALV	**Zalesovo Beam**	**20.23**	**26**	P	**P**	**16 03 58.7**	**0.0**
	comp=Z,9.4nm,0.5s,baz=218,slow=11,SNR=31						
ZALV				S	**S**	**16 07 33.6**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=210,slow=21,SNR=3.1						
ZALV	**Zalesovo Beam**	**20.23**	**26**	P	**P**	**16 03 58.7**	**0.0**
ZALV				S	**S**	**16 07 33.6**	**+0.1**
GNI	**Garni**	**20.26**	**288**	*d i*P	**P**	**16 04 01.7**	**+2.5**
GNI				pmax	pmax		
	comp=Z,59nm,1.0s						
GNI	**Garni**	**20.26**	**288**	*e*P	**P**	**16 04 01.9**	**+2.7**
	comp=Z,52nm,0.9s						
HYB	**Hyderabad**	**20.38**	**156**	*i* P	**P**	**16 04 03.0**	**+2.3**
	comp=Z,70nm,1.0s						
NVS	**Novosibirsk**	**20.46**	**22**	*i* P	**P**	**16 04 01.9**	**+0.8**
NVS				*i* S	**S**	**16 07 36.9**	**-0.9**
NVS				pmax	pmax		
	comp=Z,18nm,0.9s						
NVS				pmax	pmax		
	comp=N,9.0nm,0.6s						
NVS				smax			
	comp=N,18nm,1.5s						
NVS				smax			
	comp=E,8.0nm,1.1s						
ZEI	**Tsey**	**21.14**	**295**	*e*P	**P**	**16 04 08.4**	**0.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
SVE	**Sverdlovsk**	**21.34**	**346**	*e*P	**P**	**16 04 09.8**	**-0.7**
ARU	**Arti**	**21.45**	**342**	*d i*P	**P**	**16 04 13.0**	**+1.5**
ARU				*e*		16 04 43.7	
ARU				S	**S**	**16 07 57.0**	**+2.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
ARU	**Arti**	**21.45**	**342**	*e*P	**P**	**16 04 11.0**	**-0.6**
	comp=Z,12nm,0.8s,mb4.5						
SHL	**Shillong**	**21.51**	**114**	*ex*	**P**	**16 04 13.5**	**+0.9**
SHL				*e*S	**S**	**16 07 54.5**	**-1.9**
KIV	**Kislovodsk**	**22.20**	**298**	*e*P	**P**	**16 04 19.7**	**+0.9**
KIV				*e**PP		16 04 54.8	
KIV				*e*S	**S**	**16 08 13.4**	**+6.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
KIV				MLR	MLR		
	comp=Z,16nm,11.0s						
GTA	**Gaotai**	**23.53**	**74**	P	**P**	**16 04 33.0**	**+2.0**
GTA				pP		16 05 15.9	
GTA				sP	sP	16 05 42.6	+5.7
GTA				S	**S**	**16 08 31.0**	**+2.3**
GTA				SS		16 09 43.5	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
GTA				pmax	pmax		
	comp=Z,120nm,4.5s						
GTA				LR	LR		
	comp=N,120nm,12.5s						
GTA				LR	LR		
	comp=E,140nm,11.9s						
GTA				LR	LR		
	comp=Z,140nm,14.6s						
ANN	**Anapa**	**26.05**	**299**	*e*P	**P**	**16 04 46.6**	**-7.1**
ANN				pmax	pmax		
	comp=Z,39nm,1.4s,mb4.8						
MOY	**Mondy**	**26.61**	**45**	*e*P	**P**	**16 05 01.2**	**+2.6**
LZH	**Lanzhou**	**27.09**	**81**	P	**P**	**16 05 04.2**	**+1.2**
LZH				pP	pP	16 05 48.7	+2.9
LZH				PP	PP	16 06 01.4	-7.2
LZH				sP	sP	16 06 14.5	+3.8
LZH				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
LZH				pmax	pmax		
	comp=Z,56nm,4.7s						
ZAK	**Zakamensk**	**27.52**	**49**	*e*P	**P**	**16 05 07.5**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.7						
CD2	**Chengdu**	**28.41**	**91**	P	**P**	**16 05 16.5**	**+1.6**
CD2				pP	pP	16 06 01.1	+3.2
CD2				PP	PP	16 06 18.3	-5.1
CD2				sP	sP	16 06 27.0	+4.4
CD2				PcP	PcP	16 08 23.6	+2.1
CD2				S	**S**	**16 09 44.9**	**-1.0**
CD2				sS	sS	16 11 04.1	+1.1
CD2				SS	SS	16 11 29.6	-26
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,270nm,8.3s						
BRTR	**Keskin Array B**	**28.80**	**288**	P	**P**	**16 05 18.9**	**+0.8**
	comp=Z,0.7nm,0.6s,mb3.4,baz=105,slow=7.8,SNR=5.6						
BRTR				pP	pP	16 06 05.3	+4.1
	comp=Z,0.8nm,0.7s,baz=107,slow=8.1,SNR=2.6						
BRTR				PP	PP	16 06 23.5	-4.1
	comp=Z,0.9nm,0.9s,baz=104,slow=12,SNR=2.3						
SONM	**Songino Array**	**28.91**	**55**	P	**P**	**16 05 20.7**	**+1.7**
	comp=Z,7.6nm,0.9s,mb4.3,baz=260,slow=9.2,SNR=39						
SONM				pP	pP	16 06 10.2	+8.1
	comp=Z,1.3nm,0.7s,baz=246,slow=10,SNR=3.3						
SONM				PcP	PcP	16 08 22.0	-0.4
	comp=Z,0.4nm,0.4s,baz=224,slow=6.0,SNR=2.3						
ULN	**Ulaanbaatar**	**29.35**	**56**	*e*P	**P**	**16 05 23.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**29.35**	**56**	*e*P	**P**	**16 05 23.9**	**+0.9**
	comp=Z,5.7nm,0.8s,mb4.2						
OBN	**Obninsk**	**29.52**	**320**	*e*P	**P**	**16 05 24.8**	**+0.5**
OBN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
KMI	**Kunming**	**30.05**	**103**	P	**P**	**16 05 30.2**	**+0.8**
KMI				pP	pP	16 06 18.1	+5.5
KMI				PP	PP	16 06 38.9	-2.8
KMI				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.9						
CHTO	**Chiang Mai**	**30.81**	**117**	*e*P	**P**	**16 05 36.6**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
CHTO	**Chiang Mai**	**30.81**	**117**	*e*P	**P**	**16 05 36.6**	**+0.5**
	comp=Z,3.4nm,0.6s,mb4.2						
CM31	**Chiang Mai Arr**	**31.04**	**118**	*e*P	**P**	**16 05 38.4**	**+0.3**
	comp=Z,7.2nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**31.04**	**118**	P	**P**	**16 05 38.6**	**+0.5**
	comp=Z,5.6nm,0.8s,mb4.3,baz=296,slow=8.2,SNR=42						
CMAR				pP	pP	16 06 25.7	+4.2
	comp=Z,1.3nm,0.7s,baz=307,slow=8.7,SNR=2.3						
CMAR				PcP	PcP	16 08 27.2	-1.3
	comp=Z,1.3nm,0.8s,baz=291,slow=5.7,SNR=4.9						
CMAR	**Chiang Mai Arr**	**31.04**	**118**	P	**P**	**16 05 38.6**	**+0.5**
CMAR				pP	pP	16 06 25.7	+4.2
CMAR				PcP	PcP	16 08 27.2	-1.3
HHC	**Hu-ho-hao-te**	**32.41**	**69**	*e*P	**P**	**16 05 49.9**	**0.0**
HHC				pP	pP	16 06 35.1	+1.8
HHC				sP	sP	16 07 01.2	+3.2
HHC				PP	PP	16 07 07.3	-0.3
HHC				PcP	PcP	16 08 32.5	+0.7
HHC				S	**S**	**16 10 46.1**	**-2.0**
HHC				ScP	ScP	16 11 53.2	-1.9
HHC				sS	sS	16 12 07.2	+1.6
HHC				PcS	PcS	16 12 16.7	-0.3
HHC				SS	SS	16 13 01.8	-8.1
HHC				ScS	ScS	16 15 51.3	-3.5
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,220nm,5.7s						
HHC				LR	LR		
	comp=N,190nm,11.4s						
HHC				LR	LR		
	comp=E,310nm,13.4s						
HHC				LR	LR		
	comp=Z,250nm,15.1s						
AKASG	**Malin Array Be**	**32.44**	**309**	P	**P**	**16 05 49.7**	**-0.2**
	comp=Z,0.4nm,0.3s,mb3.4,baz=92,slow=5.8,SNR=5.1						
AKASG				PP	PP	16 07 04.3	-3.4
	comp=Z,3.2nm,0.8s,baz=87,slow=9.0,SNR=4.8						
AKASG	**Malin Array Be**	**32.44**	**309**	*ce*P	**P**	**16 05 50.2**	**+0.3**
GYA	**Guiyang**	**32.53**	**97**	⇑*i*P	**P**	**16 05 51.8**	**+0.7**
GYA				pP	pP	16 06 36.5	+1.9
GYA				sP	sP	16 07 03.2	+4.0
GYA				PP	PP	16 07 10.0	+0.8
GYA				PcP	PcP	16 08 33.8	+1.4
GYA				S	**S**	**16 10 49.4**	**-0.9**
GYA				ScP	ScP	16 11 55.2	-0.6
GYA				PcS	PcS	16 12 19.0	+1.1
GYA				ScS	ScS	16 15 52.3	-3.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
GYA				pmax	pmax		
	comp=Z,80nm,4.6s						
JOF	**Joensuu**	**35.56**	**330**	*e*P	**P**	**16 06 16.7**	**+0.1**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
JOF	**Joensuu**	**35.56**	**330**	*ep*	**P**	**16 06 16.7**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.0						
BOD	**Bodaibo**	**35.80**	**39**	*e*P	**P**	**16 06 19.2**	**+0.5**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
KWP	**Kalwaria Pacla**	**36.48**	**306**	P	**P**	**16 06 24.7**	**+0.1**
KWP				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
KWP	**Kalwaria Pacla**	**36.48**	**306**	P	**P**	**16 06 24.7**	**+0.1**
	comp=Z,7.8nm,0.6s,mb4.4						
WHN	**Wuhan**	**37.07**	**86**	P	**P**	**16 06 30.6**	**+0.7**
FINES	**FINESS Array B**	**37.13**	**326**	P	**P**	**16 06 30.2**	**+0.3**
	comp=Z,2.1nm,0.7s,mb3.8,baz=117,slow=9.7,SNR=6.6						
APA	**Apatity**	**37.40**	**338**	⇑*i*P	**P**	**16 06 32.1**	**0.0**
APA				MLR	MLR		
	comp=Z,2μm,20.0s						
ARCES	**ARCESS Array B**	**40.91**	**338**	P	**P**	**16 07 02.3**	**+1.2**
	comp=Z,3.0nm,0.7s,mb3.8,baz=121,slow=8.2,SNR=9.6						
CN2	**Changchun**	**42.22**	**62**	*e*P	**P**	**16 07 13.5**	**+1.4**
GERES	**GERESS Array B**	**42.39**	**305**	PP	PP	16 08 56.2	+0.1
	comp=Z,0.9nm,0.9s,baz=80,slow=9.7,SNR=4.0						
NB2	**NORSAR Subarra**	**43.99**	**323**	P	**P**	**16 07 25.5**	**-0.5**
	comp=Z,1.2nm,0.5s,mb3.5,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**43.99**	**323**	P	**P**	**16 07 25.6**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.3,baz=97,slow=7.6,SNR=4.6						
NOA				pP	pP	16 08 13.5	+1.8
	comp=Z,1.8nm,0.8s,baz=97,slow=8.0,SNR=2.8						
YAK	**Yakutsk**	**44.38**	**36**	*e*P	**P**	**16 07 28.7**	**-0.4**
YAK				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.7						
YAK	**Yakutsk**	**44.38**	**36**	*e*P	**P**	**16 07 28.7**	**-0.4**
	comp=Z,24nm,0.6s,mb4.7						
KSRS	**Korea Array**	**45.53**	**71**	P	**P**	**16 07 38.3**	**-0.1**
	comp=Z,3.3nm,0.4s,mb4.0,baz=275,slow=7.0,SNR=22						
KSRS	**Korea Array**	**45.53**	**71**	P	**P**	**16 07 38.3**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
KLR	**Kul'dur**	**45.71**	**54**	*e*P	**P**	**16 07 35.1**	**-4.6**
TIXI	**Tiksi**	**46.06**	**22**	*e*P	**P**	**16 07 41.9**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.0						
TIXI	**Tiksi**	**46.06**	**22**	*e*P	**P**	**16 07 41.9**	**-0.1**
	comp=Z,6.2nm,0.3s,mb4.4						
MJAR	**Matsushiro Arr**	**53.60**	**68**	P	**P**	**16 08 38.5**	**-0.8**
	comp=Z,2.9nm,0.8s,mb3.8,baz=288,slow=11,SNR=8.3						
SEY	**Seymchan**	**54.82**	**34**	⇓*e*P	**P**	**16 08 48.4**	**+0.7**
BILL	**Bilibino**	**58.93**	**26**	*e*P	**P**	**16 09 17.7**	**+1.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.1s,mb3.9						
PETK	**Petropavlovsk-**	**60.46**	**44**	P	**P**	**16 09 26.4**	**-0.7**
	comp=Z,2.0nm,0.6s,mb3.9,baz=315,slow=2.4,SNR=8.2						
PETK	**Petropavlovsk-**	**60.46**	**44**	P	**P**	**16 09 26.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**65.04**	**268**	P	**P**	**16 09 56.5**	**-1.3**
	comp=Z,1.1nm,0.5s,mb3.7,baz=51,slow=5.8,SNR=12						
TORD				pP	pP	16 10 47.5	+0.4
	comp=Z,1.4nm,0.8s,baz=45,slow=5.8,SNR=3.7						
COLD	**Coldfoot**	**72.18**	**15**	*e*P	**P**	**16 10 41.0**	**-0.1**
	comp=Z,8.3nm,1.1s,mb4.3						
INK	**Inuvik**	**74.04**	**9**	*e*P	**P**	**16 10 52.2**	**+0.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**74.04**	**9**	*e*P	**P**	**16 10 52.2**	**+0.2**
	comp=Z,4.7nm,0.6s,mb4.3						
BPAW	**Bear Paw Mtn.**	**74.63**	**17**	*e*P	**P**	**16 10 54.9**	**-0.6**
	comp=Z,5.4nm,1.0s,mb4.1						
COLA	**College**	**74.69**	**16**	*e*P	**P**	**16 10 56.1**	**+0.3**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
COLA	**College**	**74.69**	**16**	*e*P	**P**	**16 10 56.1**	**+0.3**
	comp=Z,5.5nm,0.9s,mb4.2						
TRF	**Thorofare Moun**	**75.34**	**18**	*e*P	**P**	**16 11 00.3**	**+0.8**
	comp=Z,42nm,1.9s,mb4.7						
KAKA	**Kakadu**	**76.32**	**117**	*e*P	**P**	**16 11 02.9**	**-2.9**
BOSA	**Boshof**	**77.29**	**220**	P	**P**	**16 11 09.9**	**-1.0**
	comp=Z,2.5nm,0.8s,mb3.9,baz=14,slow=4.2,SNR=3.8						
YKA	**Yellowknife Ar**	**81.30**	**2**	P	**P**	**16 11 31.8**	**-0.3**
	comp=Z,2.2nm,0.5s,mb4.0,baz=350,slow=5.4,SNR=63						
YKA				pP	pP	16 12 26.3	+2.7
	comp=Z,2.2nm,0.8s,baz=350,slow=5.4,SNR=7.1						
WRA	**Warramunga Arr**	**82.55**	**121**	P	**P**	**16 11 37.2**	**-2.1**
	comp=Z,4.5nm,0.6s,mb4.4,baz=324,slow=4.9,SNR=72						
WRAB	**Tennant Creek**	**82.56**	**121**	*e*P	**P**	**16 11 37.2**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**82.56**	**121**	*e*P	**P**	**16 11 37.2**	**-2.1**
	comp=Z,6.6nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**82.56**	**121**	*e*P	**P**	**16 11 37.2**	**-2.1**
ASAR	**Alice Springs**	**84.80**	**124**	P	**P**	**16 11 48.8**	**-1.8**
	comp=Z,4.7nm,0.6s,mb4.4,baz=312,slow=5.0,SNR=163						
ASAR				pP	pP	16 12 47.0	+4.4
	comp=Z,1.2nm,0.9s,baz=313,slow=5.1,SNR=3.1						
STKA	**Stephens Creek**	**95.32**	**126**	P	**P**	**16 12 37.5**	**-2.3**
	comp=Z,0.6nm,0.5s,mb4.0,baz=356,slow=3.2,SNR=3.8						
PLCA	**Paso Flores**	**149.18**	**250**	PKPbc	PKPbc	16 19 03.1	+0.2
	comp=Z,1.3nm,0.8s,baz=133,slow=5.9,SNR=4.1						

NIED ***11*** *16:05:00,44.°50N×151.°20E,h8km,Mw3.7 Best double couple: M0=4.37000×10^14 NP1:φs=262.00000°,δ61.00000°, λ-72.00000°. NP2:φs=48.00000°,δ33.00000°, λ-120.00000°.*

JMA 11 16:05:46.5±0.7,44.°53N×151.°16E,h30km,M4.3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.08**	**255**	P	Pn	16 06 45.7	-1.1
NEM2				*e*S	Sn	16 07 31.0	-2.5
JRA	**Rausu**	**4.38**	**264**	P	Pn	16 06 52.7	+1.8
JRA				*e*S	Sn	16 07 40.5	-0.4
JNK	**Nakash**	**4.74**	**261**	P	Pn	16 06 56.0	+0.2
JNK				*e*S	Sn	16 07 50.2	+0.5
JAK	**Akkeshi**	**4.93**	**254**	P	Pn	16 06 57.5	-0.9
JTKR	**Abashiri--Toko**	**5.24**	**266**	P	Pn	16 07 04.5	+1.8
JAR	**Ashorobuto**	**5.48**	**260**	P	Pn	16 07 06.8	+0.8
JAR				*e*S	Sn	16 08 08.5	+0.5
JOB	**Onbets**	**5.55**	**256**	P	Pn	16 07 06.4	-0.6
JOB				*e*S	Sn	16 08 08.3	-1.5
JMP	**Maruseppu**	**5.63**	**267**	P	Pn	16 07 10.3	+2.3
JCH	**Churui**	**5.98**	**254**	P	Pn	16 07 12.0	-0.9
JCH				*e*S	Sn	16 08 17.6	-2.7
JSE	**Soyaes**	**6.12**	**277**	P	Pn	16 07 18.8	+

*ISCJB **11** 16:34:04.8±0.8,26°.31S±0°.05×179°.22E±0°.05,h510km±9km, mb4.4/30,Error ellipse: s-maj=9.0km s-min=6.1km az=152.2*
*NEIC **11** 16:34:04.8±0.8,26°.27S×179°.29E,h507km±9km,mb4.6/13, Error ellipse: s-maj=11.5km s-min=8.9km az=179.0*
*IDC **11** 16:34:05.8±1.4,26°.14S×179°.26E,h515km±15km, mb3.6/11,mb1 3.9/12,mb1mx3.7/16,mbtmp3.7/12,Error ellipse: s-maj=15.8km s-min=10.0km az=161.0*

ISC 11 16:34:05.2±0.8,26°.34S±0°.06×179°.27E±0°.05,h505km±9km, h511km±1.2km:pP-P,n296,σ0°50/257,mb4.4/30,95C-108D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.82**	**140**	P	**P**	**16 35 24.7**	**+2.3**
306nm,0.3s,baz=72,slow=23,SNR=17							
RAO	**Raoul Island**	**3.82**	**140**	*e*P	**P**	**16 35 22.4**	**-0.1**
URZ	**Urewera**	**12.02**	**188**	P	**P**	**16 36 42.9**	**-0.9**
10nm,0.3s,baz=356,slow=2.3,SNR=46							
URZ				S	**S**	**16 38 53.7**	**-0.7**
2.5nm,0.3s,baz=232,slow=21,SNR=8.5							
URZ	**Urewera**	**12.02**	**188**	*e*Pn	**P**	**16 36 42.8**	**-0.9**
49nm,0.6s							
DZM	**Mont Dzumac**	**12.45**	**287**	*e*P	**P**	**16 36 48.3**	**-0.2**
DZM	**Mont Dzumac**	**12.45**	**287**	*e*P	**P**	**16 36 49.6**	**+1.1**
56nm,0.9s							
NOUC	**Port Laguerre**	**12.56**	**287**	*e*P	**P**	**16 36 49.9**	**+0.2**
AFI	**Afiamalu**	**14.95**	**36**	P	**P**	**16 37 08.2**	**-6.7**
1.1nm,0.3s,baz=284,slow=4.2,SNR=4.0							
AFI				S	**S**	**16 39 37.8**	**-14**
1.2nm,0.3s,baz=51,slow=20,SNR=3.6							
AFI	**Afiamalu**	**14.95**	**36**	P	**P**	**16 37 08.2**	**-6.7**
AFI				S	**S**	**16 39 37.8**	**-14**
KHZ	**Kahutara**	**16.71**	**195**	*e*Pn	**P**	**16 37 32.1**	**-0.7**
KHZ				*e*Sn	**S**	**16 40 19.3**	**-4.0**
RPZ	**Rata Peaks**	**18.57**	**199**	P	**P**	**16 37 50.8**	**+0.5**
2.0nm,0.3s,baz=73,slow=15,SNR=14							
RPZ	**Rata Peaks**	**18.57**	**199**	P	**P**	**16 37 50.8**	**+0.5**
EIDS	**Eidsvold**	**25.37**	**266**	*e*P	**P**	**16 38 52.3**	**+0.6**
EIDS	**Eidsvold**	**25.37**	**266**	*e*P	**P**	**16 38 52.5**	**+0.8**
25nm,1.5s,mb4.4							
CTA	**Charters Tower**	**30.92**	**275**	*e*P	**P**	**16 39 40.6**	**+0.3**
16nm,0.4s,mb4.8							
CTAO	**Charters Tower**	**30.92**	**275**	*e*P	**P**	**16 39 40.8**	**+0.5**
19nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**33.26**	**251**	*e*P	**P**	**16 40 01.1**	**+1.0**
1.0nm,0.4s,mb3.6							
STKA	**Stephens Creek**	**33.26**	**251**	P	**P**	**16 40 01.1**	**+1.0**
1.0nm,0.4s,mb3.6,baz=96,slow=11,SNR=12							
STKA				PcP	PcP	16 42 28.1	+0.3
0.8nm,0.8s,baz=24,slow=2.8,SNR=3.7							
STKA				S	**S**	**16 44 44.9**	**+0.7**
1.5nm,0.9s,baz=229,slow=22,SNR=2.9							
STKA	**Stephens Creek**	**33.26**	**251**	*e*P	**P**	**16 40 00.9**	**+0.8**
0.2nm,0.4s,mb2.9							
ASAR	**Alice Springs**	**41.04**	**264**	P	**P**	**16 41 04.3**	**+0.1**
7.3nm,0.5s,mb4.4,baz=94,slow=7.9,SNR=400							
ASAR				S	**S**	**16 46 40.7**	**+0.7**
4.1nm,0.9s,baz=100,slow=16,SNR=22							
WB2	**Warramunga Arr**	**41.63**	**269**	*e*P	**P**	**16 41 08.3**	**-0.6**
WRAB	**Tennant Creek**	**41.64**	**269**	*e*P	**P**	**16 41 08.4**	**-0.6**
18nm,1.1s,mb4.4							
WRA	**Warramunga Arr**	**41.64**	**269**	P	**P**	**16 41 08.4**	**-0.6**
8.9nm,0.4s,mb4.6,baz=103,slow=7.8,SNR=262							
WRA				S	**S**	**16 46 47.5**	**-1.3**
1.4nm,0.7s,baz=98,slow=14,SNR=7.1							
FORT	**Forrest**	**44.88**	**252**	*e*P	**P**	**16 41 33.7**	**-0.5**
18nm,0.5s,mb4.8							
KAKA	**Kakadu**	**45.93**	**278**	*e*P	**P**	**16 41 40.2**	**-2.2**
22nm,0.3s,mb5.1							
KAKA	**Kakadu**	**45.93**	**278**	*e*P	**P**	**16 41 40.2**	**-2.2**
59nm,0.5s,mb5.3							
FITZ	**Fitzroy Crossi**	**50.03**	**268**	*e*P	**P**	**16 42 12.8**	**-0.3**
21nm,0.6s,mb4.6							
QSPA	**South Pole Qui**	**63.75**	**180**	P	**P**	**16 43 48.0**	**+1.7**
4.0nm,0.7s,mb4.1,baz=29,slow=1.2,SNR=31							
QSPA	**South Pole Qui**	**63.75**	**180**	P	**P**	**16 43 48.0**	**+1.7**
MAW	**Mawson**	**75.24**	**201**	P	**P**	**16 44 56.3**	**+0.9**
2.8nm,0.6s,mb4.0,baz=146,slow=7.7,SNR=4.7							
PMSA	**Palmer Station**	**76.93**	**157**	*e*P	**P**	**16 45 05.0**	**+0.3**
PETK	**Petropavlovsk-**	**81.31**	**347**	P	**P**	**16 45 27.0**	**-0.9**
5.1nm,0.8s,mb4.1,baz=116,slow=6.9,SNR=12							
PETK	**Petropavlovsk-**	**81.31**	**347**	P	**P**	**16 45 27.0**	**-1.0**
VNA2	**Neumayer--Watz**	**82.89**	**178**	*e*P	**P**	**16 45 35.4**	**-0.5**
VNA1	**Neumayer--Stat**	**83.13**	**177**	*e*P	**P**	**16 45 36.3**	**-0.8**
SCI	**San Clemente I**	**83.52**	**48**	⇓P	**P**	**16 45 39.3**	**-0.4**
baz=84							
PKM	**Peak Mountain**	**83.84**	**46**	⇑P	**P**	**16 45 41.2**	**0.0**
baz=84							
CIS	**Catalina Islan**	**83.87**	**48**	⇓P	**P**	**16 45 41.3**	**-0.1**
baz=84							
MDJ	**Mudanjiang**	**83.93**	**327**	P	**P**	**16 45 43.3**	**+1.9**
MDJ				pmax	pmax		
comp=Z,2.0nm,0.5s,mb3.9							
MDJ				pmax	pmax		
comp=Z,120nm,5.2s							
MURC	**Murrieta**	**84.79**	**49**	⇑P	**P**	**16 45 45.7**	**-0.3**
baz=85							
VES	**Vestal, Richgr**	**84.89**	**46**	⇓P	**P**	**16 45 45.7**	**-0.7**
baz=85							
MONP	**Monument Peak**	**84.91**	**50**	⇓P	**P**	**16 45 46.8**	**+0.3**
baz=85							
DVTC	**Desert V Tower**	**84.99**	**50**	⇓P	**P**	**16 45 47.0**	**0.0**
baz=85							
EDW2	**Edwards Air Fo**	**85.03**	**47**	⇑P	**P**	**16 45 46.7**	**-0.4**
baz=85							
ISA	**Isabella**	**85.18**	**46**	⇓P	**P**	**16 45 47.6**	**-0.2**
baz=85							
ISA	**Isabella**	**85.18**	**46**	*e*P	**P**	**16 45 46.9**	**-0.9**
comp=Z,15nm,0.9s,mb4.6							
PFO	**Pinyon Flat Ob**	**85.30**	**49**	⇑P	**P**	**16 45 48.0**	**-0.5**
baz=86							
CN2	**Changchun**	**85.46**	**324**	*e*P	**P**	**16 45 48.6**	**-0.3**
CN2				*ep*P	pP	16 47 41.3	+1.2
CN2				*e*S	S	16 55 38.0	+0.4
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.5							
LRMC	**Laurel Mountai**	**85.58**	**47**	⇑P	**P**	**16 45 49.4**	**-0.3**
baz=86							
BELC	**Belle Mtn.**	**85.84**	**49**	⇓P	**P**	**16 45 51.0**	**0.0**
baz=86							
112A	**Yuma**	**85.97**	**51**	⇓P	**P**	**16 45 51.7**	**0.0**
baz=86							
BC3	**Big Chuckw Mtn**	**86.01**	**49**	⇓P	**P**	**16 45 51.3**	**-0.5**
baz=86							
GSC	**Goldstone**	**86.06**	**47**	⇓P	**P**	**16 45 51.6**	**-0.4**
baz=86							
GSC	**Goldstone**	**86.06**	**47**	*e*P	**P**	**16 45 51.9**	**-0.1**
comp=Z,8.7nm,1.1s,mb4.3							
MPMC	**Manual Prospec**	**86.06**	**46**	⇓P	**P**	**16 45 51.8**	**-0.2**
baz=86							
GLA	**Glamis**	**86.09**	**50**	⇑P	**P**	**16 45 52.5**	**+0.3**
baz=86							
HEC	**Hector,Ludlow**	**86.10**	**48**	⇓P	**P**	**16 45 52.2**	**0.0**
baz=86							
IRM	**Iron Mountain**	**86.51**	**49**	⇓P	**P**	**16 45 54.3**	**+0.1**
baz=87,SNR=5.5							
GMRC	**Granite Mounta**	**86.52**	**48**	⇓P	**P**	**16 45 54.0**	**-0.2**
baz=87							
BEKR	**Beckwourth**	**86.58**	**42**	⇓P	**P**	**16 45 54.2**	**-0.2**
baz=87							
WCN	**Washoe City**	**86.59**	**43**	⇓P	**P**	**16 45 54.9**	**+0.5**
baz=87							
113A	**Mohawk Valley,**	**86.67**	**51**	⇑P	**P**	**16 45 55.1**	**+0.1**
baz=87							
GRAC	**Grapevine Rang**	**86.69**	**46**	⇓P	**P**	**16 45 54.8**	**-0.2**
baz=87							
Y12C	**Blythe**	**86.70**	**50**	⇑P	**P**	**16 45 55.5**	**+0.4**
baz=87							
FURC	**Furnace Creek,**	**86.71**	**46**	⇓P	**P**	**16 45 54.4**	**-0.7**
baz=87							
TUQ	**Turquoise Moun**	**86.72**	**48**	⇑P	**P**	**16 45 55.0**	**-0.2**
baz=87							
SHOC	**Shoshone**	**86.76**	**47**	⇓P	**P**	**16 45 55.0**	**-0.3**
baz=87							
214A	**Organ Pipe Nat**	**86.89**	**52**	⇓P	**P**	**16 45 56.2**	**+0.1**
baz=87,SNR=5.3							
NVAR	**Mina Array Bea**	**86.96**	**44**	P	**P**	**16 45 55.9**	**-0.3**
comp=Z,3.9nm,0.7s,mb4.2,baz=222,slow=8.1,SNR=28							
Z13A	**Yuma Proving G**	**86.99**	**51**	⇓P	**P**	**16 45 56.5**	**+0.1**
baz=87,SNR=9.2							
U10A	**Ash Meadows, A**	**87.03**	**47**	⇑P	**P**	**16 45 56.7**	**+0.2**
baz=87							
PLCA	**Paso Flores**	**87.04**	**134**	P	**P**	**16 45 57.5**	**+0.8**
comp=Z,3.0nm,0.9s,mb4.0,baz=206,slow=6.9,SNR=5.3							
Y13A	**Salome**	**87.21**	**50**	⇓P	**P**	**16 45 57.8**	**+0.3**
baz=87,SNR=5.3							
PDMCI	**Parker Dam,Lak**	**87.27**	**50**	⇓P	**P**	**16 45 58.1**	**+0.3**
baz=88							
114A	**Black Gap (USA**	**87.28**	**51**	⇑P	**P**	**16 45 57.9**	**+0.1**
baz=88,SNR=7.2							
V11A	**Goodsprings**	**87.28**	**48**	⇑P	**P**	**16 45 58.2**	**+0.4**
baz=88							
GYA	**Guiyang**	**87.43**	**301**	P	**P**	**16 45 58.9**	**+0.2**
GYA				pP	pP	16 47 53.2	+2.7
GYA				sP	sP	16 48 42.3	+0.5
GYA				PP	PP	16 49 34.8	+2.0
GYA				SKS		16 55 36.9	
GYA				S	S	16 55 57.2	+0.2
GYA				sS	sS	16 59 17.0	+0.8
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.5							
Z14A	**Wintersburg**	**87.57**	**51**	⇓P	**P**	**16 45 59.4**	**+0.2**
baz=88							
V12A	**Nelson**	**87.60**	**48**	⇓P	**P**	**16 45 59.2**	**0.0**
baz=88							
X13A	**Yucca**	**87.65**	**49**	⇓P	**P**	**16 45 59.5**	**0.0**
baz=88,SNR=5.4							
115A	**Sonoran Desert**	**87.71**	**52**	⇑P	**P**	**16 46 00.1**	**+0.3**
baz=88,SNR=5.1							
S10A	**Tonopah Range,**	**87.74**	**45**	⇓P	**P**	**16 45 59.6**	**-0.2**
baz=88							
Y14A	**Wickenburg**	**87.85**	**50**	⇑P	**P**	**16 46 00.5**	**0.0**
baz=88							
216A	**Three Points,**	**87.88**	**53**	⇓P	**P**	**16 46 01.4**	**+0.7**
baz=88							
W13A	**Hualapai Mount**	**87.90**	**49**	⇓P	**P**	**16 46 00.7**	**0.0**
baz=88							
116A	**Eloy**	**88.00**	**52**	⇑P	**P**	**16 46 01.4**	**+0.2**
baz=88							
K05A	**Summer Lake**	**88.06**	**40**	⇑P	**P**	**16 46 01.5**	**+0.3**
baz=88							
R10A	**Warm Springs**	**88.14**	**45**	⇓P	**P**	**16 46 01.8**	**+0.1**
baz=88,SNR=5.2							
217A	**Green Valley**	**88.21**	**53**	⇓P	**P**	**16 46 02.9**	**+0.7**
baz=88,SNR=16							
U12A	**Valley of Fire**	**88.21**	**48**	⇑P	**P**	**16 46 02.2**	**+0.1**
baz=88							
X14A	**Yava**	**88.22**	**50**	⇓P	**P**	**16 46 02.6**	**+0.4**
baz=88							
V13A	**Grand Canyon W**	**88.25**	**48**	⇓P	**P**	**16 46 02.0**	**-0.3**
baz=88,SNR=7.4							
Y15A	**Casa Rosa Ranc**	**88.32**	**51**	⇓P	**P**	**16 46 02.8**	**+0.1**
baz=88							
Q10A	**Clear Creek Ra**	**88.39**	**45**	⇑P	**P**	**16 46 03.7**	**+0.8**
baz=89							
W14A	**Seligman**	**88.50**	**49**	⇓P	**P**	**16 46 03.7**	**+0.2**
baz=89,SNR=5.7							
H04A	**Detroit Lake**	**88.58**	**37**	⇓P	**P**	**16 46 03.6**	**0.0**
baz=89							
U13A	**Pakoon Wash**	**88.58**	**48**	⇓P	**P**	**16 46 03.9**	**+0.1**
baz=89,SNR=10							
Z16A	**Peralta Trail,**	**88.62**	**52**	⇓P	**P**	**16 46 04.7**	**+0.6**
baz=89							
318A	**Bisbee**	**88.63**	**54**	⇑P	**P**	**16 46 04.9**	**+0.8**
baz=89							
R11A	**Troy Canyon, C**	**88.63**	**46**	⇓P	**P**	**16 46 03.3**	**-0.8**
baz=89							
S12A	**Delamar Landin**	**88.68**	**46**	⇑P	**P**	**16 46 05.0**	**+0.7**
baz=89							
X15A	**Humboldt**	**88.68**	**50**	⇓P	**P**	**16 46 04.5**	**+0.1**
baz=89,SNR=6.5							
117A	**Oracle**	**88.69**	**53**	⇑P	**P**	**16 46 05.0**	**+0.6**
baz=89,SNR=5.8							
V14A	**Boquillas Ranc**	**88.72**	**49**	⇑P	**P**	**16 46 04.6**	**+0.1**
baz=89,SNR=7.6							
P10A	**Eureka**	**88.82**	**44**	⇑P	**P**	**16 46 04.8**	**0.0**
baz=89							
218A	**Dragoon**	**88.87**	**53**	⇑P	**P**	**16 46 06.0**	**+0.7**
baz=89							
Q11A	**Duckwater**	**88.88**	**45**	⇑P	**P**	**16 46 04.3**	**-0.9**
baz=89							
Y16A	**Circle Bar Ran**	**88.88**	**51**	⇓P	**P**	**16 46 05.7**	**+0.4**
baz=89,SNR=10							
T13A	**Saint George**	**88.96**	**47**	⇓P	**P**	**16 46 05.6**	**0.0**
baz=89							
E03A	**Lebam**	**89.06**	**35**	⇓P	**P**	**16 46 06.3**	**+0.5**
baz=89							
319A	**Douglas**	**89.11**	**54**	⇓P	**P**	**16 46 07.1**	**+0.7**
baz=89							
U14A	**Mt Trumbull**	**89.11**	**48**	⇑P	**P**	**16 46 06.5**	**+0.2**
baz=89,SNR=10							
WVOR	**Wild Horse Val**	**89.19**	**41**	*e*P	**P**	**16 46 06.1**	**-0.4**
comp=Z,10nm,1.1s,mb4.6							
O10A	**Cortez Mining,**	**89.19**	**44**	⇑P	**P**	**16 46 06.7**	**+0.1**
baz=89							
X16A	**Lo Mia Camp, P**	**89.20**	**51**	⇓P	**P**	**16 46 07.2**	**+0.5**
baz=89,SNR=8.8							
Y17A	**Roosevelt**	**89.22**	**52**	⇑P	**P**	**16 46 07.1**	**+0.2**
baz=89							
R12A	**Pony Springs,**	**89.25**	**46**	⇑P	**P**	**16 46 06.8**	**-0.1**
baz=90							
F04A	**Amboy**	**89.26**	**36**	⇓P	**P**	**16 46 06.1**	**-0.7**
baz=90							
S13A	**Holt Ranch, En**	**89.31**	**47**	⇓P	**P**	**16 46 07.7**	**+0.5**
baz=90							
219A	**White Tail Can**	**89.45**	**54**	⇓P	**P**	**16 46 08.2**	**+0.2**
baz=90							
W16A	**Flagstaff**	**89.50**	**50**	⇓P	**P**	**16 46 08.7**	**+0.5**
baz=90							
Q12A	**Willow Creek R**	**89.51**	**45**	⇓P	**P**	**16 46 07.9**	**-0.2**
baz=90							
T14A	**Hurricane**	**89.53**	**48**	⇑P	**P**	**16 46 08.1**	**-0.2**
baz=90							
R13A	**O'Grain Ranch,**	**89.58**	**46**	⇑P	**P**	**16 46 08.7**	**+0.3**
baz=90							
O11A	**Cowboy Ranch,**	**89.62**	**44**	⇓P	**P**	**16 46 08.3**	**-0.2**
baz=90,SNR=5.3							
320A	**Kipp Ranch, An**	**89.64**	**55**	⇓P	**P**	**16 46 09.7**	**+0.8**
baz=90							
I07A	**Izee**	**89.69**	**39**	⇑P	**P**	**16 46 08.6**	**-0.2**
baz=90,SNR=6.8							
P12A	**McGill**	**89.71**	**45**	⇑P	**P**	**16 46 08.7**	**-0.3**
baz=90							
U15A	**North Rim**	**89.71**	**49**	⇑P	**P**	**16 46 09.3**	**+0.2**
baz=90,SNR=10							
CMAR	**Chiang Mai Arr**	**89.76**	**291**	P	**P**	**16 46 10.3**	**+0.6**
comp=Z,0.5nm,0.8s,mb3.4,baz=121,slow=3.5,SNR=3.7							
G06A	**Carlson Farm,**	**89.78**	**38**	⇓P	**P**	**16 46 08.7**	**-0.4**
baz=90							
119A	**Ashpeak Ranch,**	**89.82**	**53**	⇓P	**P**	**16 46 10.0**	**+0.3**
baz=90							
Y18A	**Canyon Day Jun**	**89.84**	**52**	⇑P	**P**	**16 46 09.9**	**+0.2**
baz=90							
WUAZ	**Wupatki**	**89.84**	**50**	⇑P	**P**	**16 46 10.0**	**+0.3**
baz=90							
J08A	**Circle Bar Ran**	**89.84**	**40**	⇓P	**P**	**16 46 09.2**	**-0.3**
baz=90,SNR=7.6							
M10A	**I.L. Ranch, Tu**	**89.89**	**43**	⇑P	**P**	**16 46 09.8**	**0.0**
baz=90,SNR=8.9							
220A	**Playas Peak, P**	**89.93**	**54**	⇑P	**P**	**16 46 10.3**	**+0.1**
baz=90							
T15A	**Red Dirt Ranch**	**89.98**	**48**	⇓P	**P**	**16 46 10.3**	**0.0**
baz=90,SNR=5.7							
Q13A	**Wheeler Ranch,**	**89.98**	**46**	⇑P	**P**	**16 46 10.2**	**-0.1**
baz=90							
120A	**U Bar Ranch, L**	**90.19**	**53**	⇓P	**P**	**16 46 11.8**	**+0.4**
baz=90							
J09A	**Fry Pan Ranch,**	**90.25**	**41**	⇓P	**P**	**16 46 11.0**	**-0.4**
baz=90,SNR=8.4							
L10A	**Juniper Basin**	**90.26**	**42**	⇓P	**P**	**16 46 11.2**	**-0.3**
baz=90,SNR=12							
P13A	**Bates Ranch, G**	**90.27**	**45**	⇓P	**P**	**16 46 11.5**	**-0.1**
baz=90,SNR=6.8							
O12A	**Currie**	**90.27**	**44**	⇓P	**P**	**16 46 11.3**	**-0.2**
baz=90							
V17A	**Tonalea, Kykot**	**90.29**	**50**	⇓P	**P**	**16 46 11.6**	**-0.2**
baz=90,SNR=6.8							
M11A	**Holland Ranch,**	**90.29**	**43**	⇓P	**P**	**16 46 11.5**	**-0.1**
baz=90,SNR=6.9							
X18A	**Snowflake**	**90.29**	**51**	⇑P	**P**	**16 46 11.6**	**-0.2**
baz=90							
D05A	**Enumclaw**	**90.30**	**36**	⇓P	**P**	**16 46 11.7**	**+0.2**
baz=90							
U16A	**Tuba City**	**90.34**	**49**	⇑P	**P**	**16 46 12.6**	**+0.6**
baz=90							
S15A	**Panguitch**	**90.35**	**48**	⇑P	**P**	**16 46 12.9**	**+0.9**
baz=90							
N12A	**Clover Valley,**	**90.42**	**44**	⇑P	**P**	**16 46 11.9**	**-0.4**
baz=91,SNR=6.1							
N12A	**Clover Valley,**	**90.42**	**44**	*e*P	**P**	**16 46 12.2**	**0.0**
comp=Z,8.6nm,1.1s,mb4.5							
K10A	**MacKenzie Ranc**	**90.43**	**41**	⇑P	**P**	**16 46 11.8**	**-0.5**
baz=91,SNR=6.6							
Q14A	**Sevier Lake (B**	**90.48**	**46**	⇓P	**P**	**16 46 12.4**	**-0.1**
baz=91,SNR=7.5							
Y19A	**Nutrioso**	**90.48**	**52**	⇓P	**P**	**16 46 13.0**	**+0.3**
baz=91							
Z20A	**Nine Sixteen R**	**90.51**	**53**	⇓P	**P**	**16 46 12.9**	**0.0**
baz=91							
R15A	**Junction**	**90.70**	**47**	⇓P	**P**	**16 46 13.9**	**+0.2**
baz=91							
G08A	**Pilot Rock**	**90.74**	**38**	⇓P	**P**	**16 46 13.8**	**+0.2**
baz=91							
L11A	**Cat Creek Ranc**	**90.74**	**42**	⇑P	**P**	**16 46 13.5**	**-0.2**
baz=91,SNR=8.7							
D06A	**Cle Elum**	**90.90**	**36**	⇓P	**P**	**16 46 14.9**	**+0.6**
baz=91							
K11A	**Parker Ranch,**	**90.93**	**42**	⇑P	**P**	**16 46 14.4**	**-0.2**
baz=91,SNR=5.9							
V18A	**Ganado**	**90.93**	**50**	⇓P	**P**	**16 46 15.0**	**+0.2**
baz=91							
MSU	**Marysvale**	**90.93**	**47**	*e*P	**P**	**16 46 15.2**	**+0.5**
comp=Z,3.7nm,1.0s,mb4.3							
N13A	**Wendover, West**	**90.94**	**44**	⇑P	**P**	**16 46 14.9**	**+0.2**
baz=91							
P14A	**Drum Mountains**	**90.95**	**46**	⇓P	**P**	**16 46 14.8**	**0.0**
baz=91							
T17A	**Navajo Res., N**	**91.02**	**49**	⇓P	**P**	**16 46 15.4**	**+0.3**
baz=91							
Q15A	**Fillmore**	**91.07**	**46**	⇓P	**P**	**16 46 15.4**	**+0.1**
baz=91							
Y20A	**Horse Springs,**	**91.08**	**52**	⇓P	**P**	**16 46 15.7**	**+0.2**
baz=91							
L12A	**House Creek Ra**	**91.18**	**43**	⇑P	**P**	**16 46 16.0**	**+0.3**
baz=91							
M13A	**Montello**	**91.25**	**44**	⇓P	**P**	**16 46 15.6**	**-0.5**
baz=92,SNR=9.5							
M13A	**Montello**	**91.25**	**44**	*e*P	**P**	**16 46 15.8**	**-0.2**
comp=Z,11nm,1.0s,mb4.8							
R16A	**Teasdale**	**91.27**	**47**	⇓P	**P**	**16 46 16.3**	**+0.1**
baz=92							
Z21A	**St. Cloud Mine**	**91.28**	**53**	⇑P	**P**	**16 46 16.9**	**+0.5**
baz=91							
X20A	**Quemado**	**91.32**	**52**	⇓P	**P**	**16 46 16.7**	**+0.2**
baz=92							
S17A	**Black Ridge (B**	**91.37**	**48**	⇓P	**P**	**16 46 16.5**	**-0.2**
baz=92							
G09A	**Cove**	**91.40**	**39**	⇑P	**P**	**16 46 16.2**	**-0.5**
baz=92							
MFID	**Camas Ranch**	**91.43**	**41**	⇑P	**P**	**16 46 17.0**	**+0.2**
baz=92							
P15A	**Leamington**	**91.45**	**46**	⇓P	**P**	**16 46 17.5**	**+0.4**
baz=92							
DUG	**Dugway**	**91.45**	**45**	⇑P	**P**	**16 46 17.1**	**0.0**
baz=92							
K12A	**Draper Farm, C**	**91.53**	**42**	⇑P	**P**	**16 46 17.2**	**-0.1**
baz=92							
N14A	**Grayback Hills**	**91.58**	**45**	⇓P	**P**	**16 46 17.7**	**+0.1**
baz=92							
W20A	**Ramah**	**91.62**	**51**	⇑P	**P**	**16 46 18.4**	**+0.5**
baz=92							
HHC	**Hu-ho-hao-te**	**91.68**	**315**	*e*P	**P**	**16 46 19.5**	**+1.4**
HHC				pP	pP	16 48 13.5	+2.9
HHC				sP	sP	16 49 04.4	+2.7
HHC				PP	PP	16 50 10.6	+4.7
HHC				SKS		16 56 03.1	
HHC				S	S	16 56 36.4	+1.5
HHC				sS	sS	16 59 58.4	+1.8
HHC				SS	SS	17 03 04.3	+6.4
HHC				pmax	pmax		
comp=Z,18nm,1.1s,mb4.9							
HHC				pmax	pmax		
comp=Z,210nm,5.2s							
O15A	**The Old Anders**	**91.72**	**45**	⇓P	**P**	**16 46 18.1**	**-0.1**
baz=92							
T18A	**Mexican Hat**	**91.73**	**49**	⇓P	**P**	**16 46 18.1**	**-0.3**
baz=92							
U19A	**Dine' College,**	**91.74**	**50**	⇓P	**P**	**16 46 18.3**	**-0.2**
baz=92							
Z22A	**Elephant Butte**	**91.76**	**54**	⇓P	**P**	**16 46 19.0**	**+0.4**
baz=92							
J12A	**Stokes Ranch,**	**91.77**	**42**	⇓P	**P**	**16 46 18.2**	**-0.2**
baz=92							
X21A	**Alamocita Cree**	**91.78**	**52**	⇑P	**P**	**16 46 19.2**	**+0.6**
baz=92							
Q16A	**Castle Valley**	**91.81**	**47**	⇑P	**P**	**16 46 18.8**	**+0.1**
baz=92,SNR=5.5							
M14A	**Sheep Mountain**	**91.84**	**44**	⇓P	**P**	**16 46 18.2**	**-0.6**
baz=92,SNR=9.4							
R17A	**Hanksville Air**	**91.85**	**48**	⇓P	**P**	**16 46 18.6**	**-0.3**
baz=92							
CD2	**Chengdu**	**91.87**	**304**	P	**P**	**16 46 20.4**	**+1.2**
CD2				pP	pP	16 48 14.4	+2.6
CD2				sP	sP	16 49 04.8	+2.0
CD2				PP	PP	16 50 11.4	+3.9
CD2				SKS		16 56 04.1	
CD2				S	S	16 56 36.8	-0.2
CD2				sS	sS	16 59 59.1	+0.3
CD2				SS	SS	17 03 05.2	+4.2
CD2				pmax	pmax		
comp=Z,10.0nm,0.5

628A	Black Gap, Mar	92.94	59	⇓P	P	16 46 23.9	-0.3
	baz=93						
B09A	Rice	93.09	36	⇓P	P	16 46 23.6	-0.7
	baz=93						
F12A	Elk City	93.12	40	⇑P	P	16 46 23.8	-0.7
	baz=93						
N17A	Moffit Pass	93.12	45	⇑P	P	16 46 24.8	+0.1
	baz=93						
I14A	Mackay	93.14	42	⇑P	P	16 46 24.9	+0.3
	baz=93						
125A	Gardner Draw,	93.14	55	⇑P	P	16 46 24.9	-0.2
	baz=93						
Y24A	Capitan	93.20	54	⇑P	P	16 46 25.5	+0.3
	baz=93						
427A	Hayter Ranch,	93.20	57	⇑P	P	16 46 24.9	-0.5
	baz=93						
L16A	Fish Haven	93.32	44	⇑P	P	16 46 24.9	-0.7
	baz=94						
S21A	Coal Bank Pass	93.42	49	⇓P	P	16 46 26.3	+0.2
	baz=94						
F13A	Darby	93.67	40	⇑P	P	16 46 26.7	-0.3
	baz=94						
428A	Kincaid Ranch,	93.69	58	⇑P	P	16 46 27.3	-0.3
	baz=94						
Q20A	Ridgley Place,	93.74	48	⇑P	P	16 46 27.4	-0.1
	baz=94						
M18A	Lyman	93.87	45	⇓P	P	16 46 28.3	+0.2
	baz=94						
N18A	Larsen Ranch,	93.88	46	⇑P	P	16 46 28.1	-0.1
	baz=94						
R21A	Cimarron	93.94	49	⇓P	P	16 46 28.7	+0.2
	baz=94						
LZH	Lanzhou	94.35	308	P	P	16 46 25.0	-5.4
LZH				pP	pP	16 48 19.0	-4.2
LZH				sP	sP	16 49 09.5	-4.7
LZH				PP	PP	16 50 24.6	-2.0
LZH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,51nm,5.7s						
K18A	Toltan Ranch,	94.52	44	⇑P	P	16 46 31.3	+0.3
	baz=95						
Q22A	Crested Butte,	94.62	49	⇑P	P	16 46 31.2	-0.4
	baz=95						
N20A	Spence Gulch,	94.72	47	⇑P	P	16 46 31.7	-0.2
	baz=95						
J18A	Kendall Valley	94.84	44	⇓P	P	16 46 32.2	-0.3
	baz=95						
PDAR	Pinedale Array	94.89	44	P	P	16 46 31.4	-1.3
	comp=Z,0.7nm,0.9s,mb3.7,baz=205,slow=3.1,SNR=4.8						
L20A	Wamsutter	95.28	46	⇑P	P	16 46 34.1	-0.4
	baz=96						
KURK	Kurchatov	116.49	316	PKP	PKPdf	16 51 49.2	-1.7
	comp=Z,3.3nm,1.2s,baz=109,slow=1.9,SNR=8.7						
BOSA	Boshof	119.93	206	PKP	PKPdf	16 51 57.9	-0.5
	comp=Z,3.0nm,1.1s,baz=210,slow=8.1,SNR=3.6						
BVAR	Borovoye Array	121.81	318	PKP	PKPdf	16 51 59.9	-1.2
	comp=Z,1.9nm,0.5s,baz=133,slow=1.7,SNR=18						
SCHQ	Schefferville	124.77	40	PKP	PKPdf	16 52 07.4	+0.7
	comp=Z,4.0nm,0.9s,baz=68,slow=11,SNR=3.9						
AKTK	Aktyubinsk	129.57	315	PKP	PKPdf	16 52 15.1	-0.9
AKTO	Aktyubinsk	129.57	315	PKP	PKPdf	16 52 15.1	-0.9
	comp=Z,1.4nm,0.5s,baz=97,slow=4.7,SNR=5.9						
ARCES	ARCESS Array B	134.13	347	PKhKP		16 52 15.9	
	comp=Z,1.3nm,0.8s,baz=11,slow=1.2,SNR=4.9						
ARCES				PKP	PKPdf	16 52 21.9	-2.2
	comp=Z,6.5nm,1.1s,baz=57,slow=4.5,SNR=7.7						
FINES	FINESS Array B	140.52	340	PKhKP		16 52 27.3	
	comp=Z,1.1nm,0.5s,baz=45,slow=4.3,SNR=12						
FINES				PKP	PKPdf	16 52 34.4	-1.6
	comp=Z,1.5nm,0.6s,baz=48,slow=2.8,SNR=5.4						
FINES	FINESS Array B	140.52	340	PKP		16 52 27.3	
FINES				PKP	PKPdf	16 52 34.4	-1.6
NOA	NORSAR Array B	144.37	350	PKP	PKPdf	16 52 40.7	-2.1
	comp=Z,12nm,0.8s,baz=21,slow=2.5,SNR=30						
IZAR	Zarasai	144.76	334	eP	PKPdf	16 52 43.0	-0.6
IDID	Didziasalis	144.81	333	eP	PKPdf	16 52 43.8	+0.1
ISAL	Salakas	144.88	334	eP	PKPdf	16 52 43.6	-0.3
AKASG	Malin Array Be	146.62	325	PKPbc	PKPdf	16 52 47.4	+0.4
	comp=Z,3.2nm,0.4s,baz=46,slow=4.1,SNR=33						
BR131	Keskin Array S	148.45	304	ePKPbc	PKPbc	16 52 54.0	-0.6
BRTR	Keskin Array B	148.45	304	PKPbc	PKPbc	16 52 53.5	-1.1
	comp=Z,1.6nm,0.5s,baz=120,slow=1.8,SNR=12						
CSS	Prodhromos	149.58	295	ePKPbc	PKPbc	16 52 56.6	-0.9
TLCR		149.78	316	⇑iP	PKPbc	16 52 56.9	-0.7
BUR08	Bucovina Ar. S	150.56	323	PKPdf	PKPdf	16 52 54.7	+1.4
BUR08				ePKPbc	PKPbc	16 52 59.7	+0.3
BURAR	Bucovina Array	150.56	323	⇓iP	PKPbc	16 53 00.5	+1.1
VRI	Vrincioaia	150.70	319	⇑iP	PKPbc	16 52 59.0	-0.8
PLOR	Ploistina	150.76	319	⇓iP	PKPab	16 53 15.4	+6.1
EKA	Eskdalemuir Ar	150.98	3	PKPbc	PKPbc	16 52 58.5	-1.6
	comp=Z,1.9nm,0.5s,baz=333,slow=2.4,SNR=28						
BSEG	Bad Segeberg	151.24	346	ePKPbc	PKPbc	16 53 00.2	-0.5
MLR	Muntele Rosu	151.37	319	PKPbc	PKPbc	16 53 00.8	-0.5
	comp=Z,1.9nm,0.6s,baz=319,slow=1.7,SNR=6.4						
MLR	Muntele Rosu	151.37	319	⇓iP	PKPbc	16 53 00.4	-0.9
OJC	Ojcow	151.41	332	ePX	PKPbc	16 53 00.7	-0.5
CLL	Collm	152.96	341	ePKPbc	PKPbc	16 53 03.4	-1.2
CLL	Collm	152.96	341	⇑iPKPbc	PKPbc	16 53 03.7	-0.9
	comp=Z,8.0nm,0.8s						
CLL				⇓iPKPab	PKPab	16 53 17.3	-1.1
	comp=Z,4.0nm,0.8s						
BRG	Berggiesshubel	153.06	339	iP	PKPbc	16 53 03.2	-1.7
	comp=Z,2.8nm,0.6s						
CLZ	Clausthal	153.18	345	ePKPbc	PKPbc	16 53 04.5	-0.5
GERES	GERESS Array B	154.88	337	PKPbc	PKPdf	16 53 08.2	+8.6
	comp=Z,0.6nm,0.5s,baz=49,slow=2.1,SNR=5.0						
GERES				PKPab	PKPab	16 53 25.1	-1.5
	comp=Z,0.4nm,0.4s,baz=48,slow=1.5,SNR=5.6						
GRF	Grafenberg Arr	154.92	341	ePKPab	PKPab	16 53 26.1	-0.7
GRB3	Grafenberg Arr	155.06	340	ePKPab	PKPab	16 53 26.9	-0.5
GRB1	Grafenberg Arr	155.06	341	ePKPab	PKPab	16 53 26.9	-0.5
GRC1	Grafenberg Arr	155.46	340	ePKPab	PKPab	16 53 28.0	-1.1
GRC3	Grafenberg Arr	155.53	340	ePKPab	PKPab	16 53 28.6	-0.8
GRC2	Grafenberg Arr	155.62	340	ePKPab	PKPab	16 53 29.2	-0.6
BAIF	Baives	156.02	352	ePKP2	PKPab	16 53 29.5	-2.0
GRR	Gorron	157.99	0	ePKP2	PKPab	16 53 36.7	-3.4
SSF	Saint Saulge	159.05	352	ePKP2	PKPab	16 53 42.9	-1.8
	comp=Z,4.8nm,0.6s						
CABF	La Chapelle	159.06	347	ePKP2	PKPab	16 53 43.7	-1.1
	comp=Z,14nm,1.0s						
AVF	Avril sur Loir	159.34	352	ePKP2	PKPab	16 53 43.9	-2.1
	comp=Z,7.8nm,0.9s						
SMF	Signal de Mont	159.41	351	ePKP2	PKPab	16 53 44.5	-1.8
	comp=Z,13nm,0.9s						
ESDC	Sonseca Array	166.43	11	PKPab	PKPab	16 54 15.2	-2.2
	comp=Z,0.5nm,0.6s,baz=341,slow=3.4,SNR=4.3						
TORD	Torodi Ar. Bea	166.68	190	PKP	PKPdf	16 53 11.8	-1.2
	comp=Z,1.8nm,1.0s,baz=298,slow=0.6,SNR=6.8						
TORD				PKPab	PKPab	16 54 18.9	-0.1
	comp=Z,1.9nm,0.8s,baz=175,slow=3.8,SNR=8.2						

*NEIC **11** 16:55:20.5, 16°.09N×98°.28W, h6km, MD4.2(MEX), After MEX.*

MEX 11 16:55:20.5±1.1, 16°.09N×98°.28W, h6km±7km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.34	26	iP	Pg	16 55 25.9	-1.2
PNIG				iS	Sg	16 55 32.5	+1.0
PNIG	Pinotepa	0.34	26	iP	Pg	16 55 25.9	-1.2
PNIG				iS	Sg	16 55 32.5	+1.0
ACX	Acapulco	1.75	297	iP	Pn	16 55 48.1	-3.4
ACX				iS	Sn	16 56 09.1	-5.0
ACX	Acapulco	1.75	297	iP	Pn	16 55 48.1	-3.4
ACX				iS	Sn	16 56 09.1	-5.0
VHO	Vista Hermosa	1.78	56	eP	Pn	16 55 49.0	-2.9
VHO				iS	Sn	16 56 10.0	-4.9
VHO	Vista Hermosa	1.78	56	eP	Pn	16 55 49.0	-2.9
VHO				iS	Sn	16 56 10.0	-4.9
UTMO	Huajuapan	1.79	15	iP	Pn	16 55 49.3	-2.8
UTMO				iS	Sn	16 56 09.4	-5.8
OXX	Oaxaca	1.79	56	eP	Pn	16 55 48.5	-3.5
OXX				iS	Sn	16 56 10.0	-5.2
OXX	Oaxaca	1.79	56	eP	Pn	16 55 48.5	-3.5
OXX				iS	Sn	16 56 10.0	-5.2
HUIG	Huatulco	2.12	98	eP	Pn	16 55 53.2	-3.3
HUIG				iS	Sn	16 56 19.3	-3.9
HUIG	Huatulco	2.12	98	eP	Pn	16 55 53.2	-3.3
HUIG				iS	Sn	16 56 19.3	-3.9
CAIG	El Cayaco	2.13	297	eP	Pn	16 55 53.3	-3.4
CAIG				iS	Sn	16 56 18.6	-4.8
CAIG	El Cayaco	2.13	297	eP	Pn	16 55 53.3	-3.4
CAIG				iS	Sn	16 56 18.6	-4.8
TPIG	Tehuac#an	2.48	21	iP	Pn	16 55 59.1	-2.4
TPIG				iS	Sn	16 56 28.5	-3.6
PLIG	Platanillo	2.57	333	eP	Pn	16 56 00.8	-1.9
PLIG				iS	Sn	16 56 28.1	-6.3
PLIG	Platanillo	2.57	333	eP	Pn	16 56 00.8	-1.9
PLIG				iS	Sn	16 56 28.1	-6.3
YAIG	Yautepec	2.86	345	eP	Pn	16 56 03.9	-2.8
YAIG				iS	Sn	16 56 37.8	-3.7
YAIG	Yautepec	2.86	345	eP	Pn	16 56 03.9	-2.8
YAIG				iS	Sn	16 56 37.8	-3.7
PPM	Popocatepetl	2.98	354	eP	Pn	16 56 06.1	-2.3
PPM				iS	Sn	16 56 42.3	-2.2
PPM				iS	Sn	16 56 42.7	-1.8
PPM	Popocatepetl	2.98	354	eP	Pn	16 56 05.8	-2.6
PPM				eP		16 56 06.1	
PPM				iS	Sn	16 56 42.3	-2.2
PPM				iS	Sn	16 56 42.7	-1.8
MZVM		3.21	344	iP	Pn	16 56 13.2	+1.6
MZVM				iS	Sn	16 56 54.2	+4.0
UNM	Universidad Na	3.33	345	iS	Sn	16 56 47.7	-5.5
ZIIG	Zihuatanejo	3.40	297	eP	Pn	16 56 13.0	-1.1
ZIIG				iS	Sn	16 56 51.9	-3.0
ZIIG	Zihuatanejo	3.40	297	eP	Pn	16 56 13.0	-1.1
ZIIG				iS	Sn	16 56 51.9	-3.0
CMIG	Matias Romero	3.41	73	eP	Pn	16 56 13.9	-0.4
CMIG				iS	Sn	16 56 53.8	-1.3
CMIG	Matias Romero	3.41	73	eP	Pn	16 56 13.9	-0.4
CMIG				iS	Sn	16 56 53.8	-1.3
PBVM	Pinon	3.42	347	eP	Pn	16 56 11.9	-2.5
PBVM				iS	Sn	16 56 58.0	+2.6
PBVM	Pinon	3.42	347	eP	Pn	16 56 11.9	-2.5
PBVM				iS	Sn	16 56 58.0	+2.6
IIO	Organos	3.51	353	eP	Pn	16 56 17.7	+2.0
IIO				iS	Sn	16 56 58.4	+0.8
IIO	Organos	3.51	353	eP	Pn	16 56 17.7	+2.0
IIO				iS	Sn	16 56 58.4	+0.8
PTVM	Pico Tres Padr	3.57	347	eP	Pn	16 56 13.8	-2.7
PTVM				iS	Sn	16 57 00.0	+0.8
PTVM	Pico Tres Padr	3.57	347	eP	Pn	16 56 13.8	-2.7
PTVM				iS	Sn	16 57 00.0	+0.8
DEIG	Demacu	4.25	350	iP	Pn	16 56 24.5	-1.3
DEIG				iS	Sn	16 57 08.9	-6.9
MOIG	Morelia	4.52	323	iS	Sn	16 57 21.3	-1.1

DJA 11 16:56:49, 7°.72S×107°.57E, h77km, MLv3.9/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	0.89	3	P	Pn	16 57 06.9	+0.3
LEM				S	Sn	16 57 22.7	+3.1
DBJI	Dramaga	1.42	325	P	Pn	16 57 13.3	+0.2
DBJI				S	Sn	16 57 33.2	+1.9
CGJI	Cibinong	2.16	300	P	Pn	16 57 23.5	+0.5
CGJI				S	Sn	16 57 49.9	+0.9
UGM	Wanagama	2.93	94	P	Pn	16 57 32.5	-0.9
UGM				S	Sn	16 58 09.0	+1.4
PCJI	Pacitan	3.60	98	P	Pn	16 57 43.8	+1.3
SJI	Sawahan	4.16	90	P	Pn	16 57 50.8	+0.7
PWJI	Pagerwojo	4.21	94	P	Pn	16 57 50.6	-0.1
MDSI	Maura Dua	4.66	313	P	Pn	16 57 56.8	-0.1

*JMA **11** 17:00:00.6±0.6, 23°.95N×122°.32E, h32km, M2.2*
*ISCJB **11** 17:00:03.0±1.6, 23°.97N±0°.03×122°.51E±0°.02, h11km±13km, Error ellipse: s-maj=5.7km s-min=3.1km az=171.9*
*TAP **11** 17:00:04.0, 23°.98N×122°.44E, h21km, ML3.0, D*

ISC 11 17:00:03.4±1.6, 24°.00N±0°.04×122°.50E±0°.02, h15km±12km, n34, σ0°.83/47, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.65	45	P	Pb	17 00 15.6	-0.9
YOJ				eS	Sb	17 00 26.6	+1.3
ENA	Nanau	0.81	302	P	Pb	17 00 19.1	-0.2
	baz=304						
ENA				eS	Sb	17 00 29.8	-0.2
	baz=304						
HWA	Hwalien	0.82	268	eP	Pb	17 00 18.8	-0.5
	baz=269						
TWD	Chiawan	0.83	276	eP	Pb	17 00 18.9	-0.6
	baz=277						
TWC	Suao	0.85	316	P	Pb	17 00 19.4	-0.4
	baz=319						
TWC				eS	Sb	17 00 31.1	+0.1
	baz=319						
ESL	Shilin	1.00	259	eP	Pb	17 00 21.6	-0.7
	baz=259						
ESL				eS	Sb	17 00 34.7	-0.5
	baz=259						
TWE	Neicheng	1.04	313	eP	Pb	17 00 23.3	+0.2
	baz=316						
TWE				eS	Sb	17 00 36.7	+0.1
	baz=316						
TWB1	Santiao Chiao	1.11	335	eP	Pn	17 00 24.4	+0.1
	baz=338						
NNS	Nan Shan	1.12	293	P	Pn	17 00 24.1	-0.4
	baz=295						
NNS				eS	Sb	17 00 38.7	-0.1
	baz=295						
WHF	Hehuan Shan	1.14	277	iP	Pn	17 00 24.1	-0.7
	baz=278						
WHF				eS	Sb	17 00 39.0	-0.4
	baz=278						
IRIF	Iriomote-Funau	1.17	73	eS	Sb	17 00 41.1	+0.9
EHY	Hungye	1.19	246	eP	Pn	17 00 24.4	-1.0
	baz=244						
EHY				eS	Sb	17 00 39.5	-1.2
	baz=244						
HATJ	Hateruma jima	1.19	87	eS	Sb	17 00 39.7	-1.2
TWT	Tachien	1.24	282	eP	Pn	17 00 26.1	0.0
	baz=282						
TWT				eS	Sb	17 00 42.1	-0.1
	baz=282						
NSK	Sanguang	1.24	303	P	Pn	17 00 26.1	0.0
	baz=305						
NSK				eS	Sb	17 00 41.9	-0.4
	baz=305						
NWF	Wu-fen Shan	1.25	328	eP	Pn	17 00 26.6	+0.3
	baz=330						
TWF1	Yuli	1.28	240	eP	Pn	17 00 25.4	-1.2
	baz=238						
JKRS	Kuro-shima	1.40	80	P	Pn	17 00 28.1	-0.2
JKRS				S	Sn	17 00 47.3	+0.9
SMLT	Sun Moon Lake	1.47	266	eP	Pn	17 00 30.8	+1.5
	baz=265						
TWS1	Kuangyinshan	1.47	318	eP	Pn	17 00 29.4	0.0
	baz=320						
NSTT	Nanjuang	1.51	295	eP	Pn	17 00 30.9	+1.1
	baz=296						
TYC	Yuchr	1.51	267	eP	Pn	17 00 30.2	+0.4
	baz=266						
YUS	Yu-Shan	1.51	251	eP	Pn	17 00 29.6	-0.2
	baz=250						
YUS				eS	Sn	17 00 48.0	-1.2
	baz=250						
JIJ	Ishigaki jima	1.54	76	P	Pn	17 00 28.6	-1.7
JIJ				eS	Sn	17 00 48.5	-1.5
ELDTW	Lidau	1.58	240	eP	Pn	17 00 30.6	-0.3
	baz=238						
TWQ1	Liyutan	1.62	283	eP	Pn	17 00 31.6	+0.2
	baz=283						
ALS	Alishan	1.63	253	eP	Pn	17 00 32.7	+1.2
	baz=252						
CHN5	Tsauling	1.72	257	eP	Pn	17 00 33.5	+0.8
	baz=256						
STYT	Tauyuan	1.81	243	eP	Pn	17 00 35.0	+1.1
	baz=242						
CHN4	Tsaushan	1.87	250	eP	Pn	17 00 35.6	+0.9
	baz=249						
WTP	Ta-pu	1.89	247	eP	Pn	17 00 35.9	+0.8
	baz=246						
CHN1	Nanshi	1.98	246	eP	Pn	17 00 37.7	+1.4
	baz=245						
SGST	Jiashian	1.98	243	eP	Pn	17 00 37.0	+0.6
	baz=242						
SSD	Sandimen	2.12	234	eP	Pn	17 00 40.4	+2.1
	baz=233						

*ISCJB **11** 17:00:45.0±0.8, 30°.7N±0°.1×138°.9E±0°.2, h450km±14km, mb3.5/5, Error ellipse: s-maj=27.0km s-min=17.2km az=171.2*
*JMA **11** 17:00:46.3±0.5, 30°.92N×138°.66E, h469km, M3.4*
*IDC **11** 17:00:51.3±14.0, 30°.32N×137°.78E, h480km±134km, mb3.2/5, mb1 3.2/6, mb1mx2.7/25, mbtmp3.1/6, Error ellipse: s-maj=292.8km s-min=14.7km az=78.0*

ISC 11 17:00:46.8±0.8, 30°.9N±0°.1×139°.0E±0°.2, h463km±15km, n17, σ1°.12/26, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	4.11	23	P	P	17 02 03.6	0.0
BSO1				eS	S	17 03 06.4	+0.1
BSO3	Boso 3	4.11	17	P	P	17 02 04.8	+1.2
BSO3				eS	S	17 03 06.0	-0.3
HMMJ	Hamamatsu 2	4.13	345	P	P	17 02 04.2	+0.5
BSO4	Boso 4	4.25	15	P	P	17 02 06.1	+1.3
BSO4				eS	S	17 03 09.6	+1.1
JOD2	Odawara 2	4.38	1	P	P	17 02 05.6	-0.4
JOD2				eS	S	17 03 11.2	+0.6
JHU	Hanno	4.97	2	P	P	17 02 11.4	0.0
JHU				eS	S	17 03 18.8	-1.7
JRY	Ryogami san	5.13	359	P	P	17 02 13.8	+0.9
JYT	Yasato	5.43	10	P	P	17 02 15.7	-0.1
JYT				eS	S	17 03 26.2	-2.4
JAG	Ashikaga	5.55	3	P	P	17 02 17.0	0.0
JAG				eS	S	17 03 28.9	-1.8
JHO	Hitachi	5.87	12	P	P	17 02 20.6	+0.5
JHO				eS	S	17 03 35.5	-0.9
JFK	Kawauchi	6.66	13	P	P	17 02 30.4	+2.3
JFK				eS	S	17 03 51.0	-0.1
KSRS	Korea Array	11.30	308	P	P	17 03 17.7	-0.2
	0.1nm,0.3s,baz=130,slow=10,SNR=4.2						
WRA	Warramunga Arr	50.72	186	P	P	17 09 01.0	-1.7
	0.8nm,0.4s,mb3.4,baz=1.1,slow=8.3,SNR=25						
ASAR	Alice Springs	54.45	186	P	P	17 09 28.2	-1.2
	0.3nm,0.3s,mb3.1,baz=4.8,slow=8.3,SNR=19						
STKA	Stephens Creek	62.45	178	P	P	17 10 23.4	-0.2
	0.8nm,0.9s,mb3.1,baz=342,slow=9.6,SNR=2.9						
ARCES	ARCESS Array B	69.07	340	P	P	17 11 08.7	+4.0
	5.5nm,1.1s,mb4.0,baz=64,slow=8.4,SNR=6.0						
FINES	FINESS Array B	73.35	332	P	P	17 11 32.9	+2.9
	2.5nm,1.0s,mb3.7,baz=57,slow=5.6,SNR=7.6						

*ISCJB **11** 17:03:30.1±0.2, 58°.64N±0°.02×137°.41W±0°.05, h10km, mb3.8/21, MS3.2/3, Error ellipse: s-maj=4.0km s-min=2.6km az=142.2*
*NEIC **11** 17:03:30.1, 58°.56N×137°.26W, h8km, mb4.2/5, ML4.0(AEIC), MW4.2(PGC), After AEIC.*
*IDC **11** 17:03:30.1±0.6, 58°.65N×137°.40W, h0km, mb3.8/16, mb1 3.9/20, mb1mx3.9/32, mbtmp3.8/20, ML3.5/4, MS3.0/8, Ms1 3.0/8, ms1mx2.8/43, Error ellipse: s-maj=14.6km s-min=8.1km az=30.0*
*PGC **11** 17:03:31.8±4.3, 58°.57N×137°.14W, h1km, ML4.0/5, 125km Wsw of Haines, Ak Southeastern Alaska*

ISC 11 17:03:32.1±0.2, 58°.66N±0°.02×137°.31W±0°.04, h10km, n120, σ0°.94/136, mb3.8/21, MS3.2/3, 28C-37D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.94	31	⇓P	Pg	17 03 49.2	-0.9
PLBC				⇓S	Sg	17 04 03.2	+0.9
BESE	Bessie Mountai	1.29	92	P	Pn	17 03 53.3	-2.8
BESE				S	Sb	17 04 10.4	-2.6
SKAG	Skagway	1.30	51	P	Pn	17 03 54.9	-1.4
SKAG				S	Sb	17 04 12.7	-0.6
PNL	Peninsula	1.48	314	P	Pn	17 03 58.0	-0.7
PNL				S	Sn	17 04 19.3	+1.3
YKU2	Yakutat	1.49	306	eP	Pn	17 03 59.6	+0.8
SIT	Sitka	1.93	146	P	Pn	17 04 03.1	-1.7
SIT				S	Sn	17 04 25.3	-3.8
HYT	Haines Junctio	2.18	358	⇑Pn	Pn	17 04 10.0	+1.7
WHY	Whitehorse	2.36	31	P	Pn	17 04 10.9	+0.1
WHY				S	Sn	17 04 40.0	+0.3
WHY	Whitehorse	2.36	31	⇑Pn	Pn	17 04 11.6	+0.8
WHY				⇑Pg	Pg	17 04 14.6	-2.6
WHY				⇓Sg	Sg	17 04 46.9	-0.9
DLBC	Dease Lake	3.83	90	Pn	Pn	17 04 30.3	-0.6
	2.6nm,0.3s,baz=265,slow=10.0,SNR=46						
DLBC				Pg	Pg	17 04 38.4	-6.9
	19nm,0.3s,baz=256,slow=12,SNR=60						
DLBC				Lg		17 05 28.3	
	63nm,0.3s,baz=86,slow=17,SNR=14						
DLBC				LR	LR	17 06 05.0	
	comp=Z,213nm,22.0s,baz=122,slow=40						
DLBC	Dease Lake	3.83	90	⇓Pn	Pn	17 04 30.0	-0.9
DLBC				⇓Pg	Pg	17 04 39.2	-6.1
DLBC				⇑Sg	Sg	17 05 27.7	-7.1
CRAG	Craig	3.93	143	eP	Pn	17 04 38.2	+5.8
BMRM	Bremner River	4.35	305	P	Pn	17 04 37.7	-0.4
DIV	Divide	4.93	304	ePn	Pn	17 04 45.9	-0.2
	38nm,0.7s						
BCA3	Beaver Creek A	4.93	336	P	Pn	17 04 46.4	+0.3
NDB	Naden	5.30	151	⇓Pn	Pn	17 04 50.2	-1.0
DAWY	Dawson	5.52	350	P	Pn	17 04 55.4	+1.3
DAWY	Dawson	5.52	350	⇓Pn	Pn	17 04 55.5	+1.4
DAWY				⇓Sn	Sn	17 06 01.8	+4.3
DAWY				⇑Sg	Sg	17 06 29.5	+0.5
SML	Sawmill	6.33	305	P	Pn	17 05 04.1	-1.2
SEW	Seward	6.37	288	P	Pn	17 05 03.3	-2.5
EGAK	Eagle	6.41	345	ePn	Pn	17 05 07.0	+0.6
	46nm,0.8s						
EGAK				eSn	Sn	17 06 17.5	-1.9
PMR	Palmer	6.59	301	eP	Pn	17 05 09.2	+0.3
MCK	McKinley	7.57	317	ePn	Pn	17 05 19.1	-3.2
	18nm,0.9s						
TRF	Thorofare Moun	7.91	313	ePn	Pn	17 05 28.1	+1.2
	25nm,0.5s						
COLA	College	7.98	326	ePn	Pn	17 05 29.7	+1.8
	5.3nm,0.8s						
KDAK	Kodiak Island	8.11	270	Pn	Pn	17 05 27.2	-2.5
	3.3nm,0.3s,baz=85,slow=7.5,SNR=16

baz=18
F13A Darby 18.96 123 ⇑P Pn 17 07 53.2 -0.5
baz=19
H11A Donnelly 19.10 128 ⇑P Pn 17 07 54.9 -0.6
baz=19
E15A Deer Lodge 19.23 119 ⇓P Pn 17 07 57.4 +0.4
baz=19
YBH Yreka Blue Hor 19.28 145 LR LR 17 14 03.9
comp=Z,65nm,19.4s,baz=247,slow=33
J09A Fry Pan Ranch, 19.54 133 ⇓P Pn 17 08 00.4 -0.4
baz=19
G13A Cobalt 19.55 124 ⇓P Pn 17 08 00.7 -0.1
baz=19
LRM Limekiln Ridge 19.77 120 *e*Pn Pn 17 08 00.8 -2.7
22nm,1.1s
E17A Martinsdale 20.03 116 ⇑P P 17 08 05.6 +0.7
baz=20
I12A Atlanta 20.21 128 ⇓P P 17 08 07.3 +0.5
baz=20,SNR=6.4
MFID Camas Ranch 20.24 130 ⇑P P 17 08 08.0 +0.9
baz=20
K10A MacKenzie Ranc 20.36 132 ⇓P P 17 08 09.0 +0.5
baz=20,SNR=7.8
I13A Wildhorse Cree 20.54 126 ⇓P P 17 08 11.1 +0.7
baz=20,SNR=6.9
J12A Stokes Ranch, 20.67 129 ⇓P P 17 08 12.4 +0.5
baz=20,SNR=6.2
K11A Parker Ranch, 20.70 131 ⇑P P 17 08 12.2 +0.1
baz=20
HLID Hailey 20.70 127 ⇓P P 17 08 12.3 +0.2
baz=20
I14A Mackay 20.81 125 ⇓P P 17 08 13.5 +0.2
baz=21
J13A Cove Ranch, Pi 20.93 127 ⇑P P 17 08 14.5 -0.2
baz=21
L10A Juniper Basin 21.12 133 ⇑P P 17 08 17.1 +0.5
baz=21
K12A Draper Farm, C 21.26 129 ⇑P P 17 08 18.6 +0.4
baz=21,SNR=9.0
L11A Cat Creek Ranc 21.32 131 ⇓P P 17 08 19.4 +0.6
baz=21
M10A I.L. Ranch, Tu 21.57 134 ⇑P P 17 08 22.1 +0.6
baz=21
K13A Stover Farm, H 21.59 128 ⇓P P 17 08 22.8 +1.1
baz=22
L12A House Creek Ra 21.63 130 ⇑P P 17 08 23.2 +1.0
baz=22
RLMT Red Lodge 21.77 116 ⇓P P 17 08 24.5 +0.9
baz=22
K14A Jones Ranch, D 22.05 126 ⇓P P 17 08 28.2 +1.6
baz=22
J16A Bone 22.14 123 ⇓P P 17 08 28.8 +1.3
baz=22
M12A Wells 22.29 131 ⇓P P 17 08 30.1 +0.9
baz=22
RES Resolute Bay 22.42 28 P P 17 08 31.4 +1.0
1.6nm,0.9s,mb3.4,baz=246,slow=14,SNR=7.2
RES LR LR 17 18 38.4
comp=Z,48nm,18.1s,MS3.0,baz=316,slow=40
N12A Clover Valley, 22.72 132 ⇓P P 17 08 34.1 +0.3
baz=22
ELK Elko 22.73 132 P P 17 08 34.8 +0.8
2.5nm,0.8s,mb3.7,baz=317,slow=7.0,SNR=11
L15A Malad City 22.83 126 ⇑P P 17 08 35.5 +0.6
baz=23
M14A Sheep Mountain 22.84 128 ⇓P P 17 08 35.9 +0.8
baz=23
O11A Cowboy Ranch, 23.11 134 ⇓P P 17 08 38.3 +0.4
baz=23
O12A Currie 23.34 132 ⇓P P 17 08 40.8 +0.5
baz=23
BW06 Boulder Array 23.45 120 ⇑P P 17 08 41.8 +0.3
baz=23
PDAR Pinedale Array 23.45 120 P P 17 08 41.7 +0.2
0.8nm,0.7s,mb3.2,baz=330,slow=6.9,SNR=9.7
NVAR Mina Array Bea 23.68 140 P P 17 08 43.2 -0.4
0.5nm,0.7s,mb3.0,baz=334,slow=10.0,SNR=3.6
DUG Dugway 24.16 129 ⇑P P 17 08 49.0 +0.8
baz=24,SNR=7.8
Q11A Duckwater 24.23 135 ⇓P P 17 08 48.9 +0.1
baz=24,SNR=5.9
P13A Bates Ranch, G 24.32 132 ⇓P P 17 08 48.5 -1.1
baz=24
Q12A Willow Creek R 24.37 134 ⇑P P 17 08 48.4 -1.6
baz=24
P14A Drum Mountains 24.58 130 ⇑P P 17 08 51.6 -0.3
baz=24
R11A Troy Canyon, C 24.70 136 ⇓P P 17 08 52.6 -0.3
baz=24,SNR=6.2
S10A Tonopah Range, 24.71 138 ⇑P P 17 08 52.5 -0.6
baz=24
RSSD Black Hills 25.02 111 *e*P P 17 08 56.0 +0.1
4.2nm,1.0s,mb3.9
ULM Lac du Bonnet 25.15 91 P P 17 08 57.0 0.0
2.0nm,0.6s,mb3.8,baz=310,slow=6.8,SNR=4.3
ULM Lac du Bonnet 25.15 91 P P 17 08 57.0 0.0
N20A Spence Gulch, 25.58 121 ⇓P P 17 09 00.9 -0.1
baz=25
MSU Marysvale 25.86 130 *e*P P 17 09 03.8 +0.2
6.7nm,1.3s,mb4.0
Q16A Castle Valley 25.92 128 ⇑P P 17 09 04.2 +0.1
baz=26
N21A Black Mountain 25.97 120 ⇑P P 17 09 04.8 +0.3
baz=26
S13A Holt Ranch, En 26.01 134 ⇑P P 17 09 05.0 +0.1
baz=26
BILL Bilibino 26.02 314 *e*P P 17 09 05.3 +0.6
6.4nm,1.6s,mb3.9
SRU San Rafael 26.02 127 ⇑P P 17 09 05.1 +0.1
baz=26
MPMC Manual Prospec 26.10 141 ⇓P P 17 09 05.5 -0.2
baz=26
S14A Cedar City 26.12 133 ⇑P P 17 09 06.2 +0.3
baz=26
ISA Isabella 26.15 143 ⇑P P 17 09 05.9 -0.3
baz=26
T13A Saint George 26.49 135 ⇓P P 17 09 09.6 +0.3
baz=26
U14A Mt Trumbull 27.29 134 ⇓P P 17 09 17.3 +0.8
baz=27
V12A Nelson 27.30 137 ⇓P P 17 09 16.8 +0.2
baz=27
T18A Mexican Hat 27.97 128 ⇑P P 17 09 21.7 -0.8
baz=28
V17A Tonalea, Kykot 28.91 131 ⇓P P 17 09 30.7 -0.3
baz=29,SNR=9.3
PETK Petropavlovsk- 35.57 290 LR LR 17 25 46.0
comp=Z,22nm,19.6s,MS2.9,baz=150,slow=38
SCHQ Scheffervilla 37.21 64 LR LR 17 27 15.1
comp=Z,99nm,18.8s,MS3.6,baz=62,slow=38
CN2 Changchun 57.30 301 *e*P P 17 13 20.0 +0.5
KSRS Korea Array 61.20 295 P P 17 13 47.0 +0.3
0.8nm,0.8s,mb3.9,baz=26,slow=7.0,SNR=4.8
SONM Songino Array 61.71 317 P P 17 13 50.9 +1.0
1.0nm,0.8s,mb4.0,baz=32,slow=8.7,SNR=5.9
ZALV Zalesovo Beam 62.71 334 P P 17 13 54.5 -2.0
0.3nm,0.3s,mb3.9,baz=16,slow=6.8,SNR=4.4
BVAR Borovoye Array 66.43 342 P P 17 14 19.8 -1.1
0.5nm,0.5s,mb3.8,baz=30,slow=13,SNR=6.4
KURK Kurchatov 67.11 336 P P 17 14 24.8 -0.4
1.5nm,0.8s,mb4.1,baz=22,slow=6.3,SNR=4.1
MKAR Makanchi Array 69.96 332 P P 17 14 42.0 -1.0
0.3nm,0.7s,mb3.4,baz=13,slow=2.7,SNR=4.4
AKASG Malin Array Be 70.45 9 P P 17 14 45.2 -0.8
1.7nm,0.6s,mb4.1,baz=353,slow=6.2,SNR=13
ABKAR Akbulak array 71.52 348 *e*P P 17 14 51.9 -0.6
3.0nm,0.8s,mb4.3
ESDC Sonseca Array 74.62 36 P P 17 15 11.2 +0.1
0.1nm,0.3s,mb3.3,baz=334,slow=7.3,SNR=3.8
AAK Ala-Archa 75.67 336 P P 17 15 17.1 +0.1
0.5nm,0.2s,mb4.0,baz=224,slow=4.1,SNR=6.9
GYA Guiyang 80.08 305 *e*P P 17 15 41.0 -0.9
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BRTR Keskin Array B 81.69 7 P P 17 15 50.0 -0.2
comp=Z,0.6nm,0.7s,mb3.6,baz=347,slow=3.8,SNR=4.0
CMAR Chiang Mai Arr 90.42 308 P P 17 16 33.7 0.0
comp=Z,1.8nm,0.8s,mb4.4,baz=5.2,slow=5.8,SNR=12

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*IDC **11** 17:08:38.7±2.1,8.°28S×114.°20E,h0km,mb3.4/4,*
mb1 3.6/5,mb1mx3.4/20,mbtmp3.5/5,ML3.0/1,Error
ellipse: s-maj=131.7km s-min=22.5km az=50.0
*ISCJB **11** 17:08:43.9±0.5,8.°26S±0.°09×114.°39E±0.°05,h47km±6km,*
mb3.5/5,Error ellipse: s-maj=15.3km s-min=6.6km
az=15.7
*DJA **11** 17:08:44,8.°10S×114.°39E,h11km,MLv3.4/8*

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*NEIC **11** 17:08:47.2±4.3,7.°94S×115.°02E,h35km,mb3.5/1,Error*
ellipse: s-maj=92.2km s-min=59.1km az=45.0
ISC 11 17:08:44.3±0.7,8.°23S±0.°08×114.°39E±0.°05,h33km±5km,
n16,σ1°25/20,mb3.5/5,Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	**Negara**	**0.27**	**122**	P	**Pb**	**17 08 51.1**	**-0.5**
NBBI				S	**Sb**	**17 08 57.6**	**+1.0**
ABJI	**Asem Bagus**	**0.45**	**340**	P	**Pb**	**17 08 51.1**	**-3.0**
SRBI	**Singaraja**	**0.83**	**80**	P	**Pn**	**17 08 58.8**	**-0.8**
SRBI				S	**Sn**	**17 09 11.2**	**+0.5**
GMJI	**Gumukmas**	**0.94**	**267**	P	**Pn**	**17 09 00.0**	**-1.1**
KHKI	**Kahang-Kahang**	**1.22**	**97**	P	**Pn**	**17 09 05.6**	**+0.6**
KHKI				S	**Sn**	**17 09 22.2**	**+1.9**
KMMI	**Kalianget**	**1.24**	**340**	P	**Pn**	**17 09 04.8**	**-0.5**
GRJI	**Gresik**	**2.30**	**304**	P	**Pn**	**17 09 21.2**	**+1.3**
PWJI	**Pagerwojo**	**2.57**	**274**	P	**Pn**	**17 09 26.5**	**+2.9**
SJI	**Sawahan**	**2.64**	**280**	P	**Pn**	**17 09 26.9**	**+2.3**
FITZ	**Fitzroy Crossi**	**14.70**	**133**	Pn	**Pn**	**17 12 09.3**	**-0.7**
	0.1nm,0.3s,baz=284,slow=19,SNR=4.6						
FITZ				Sn	**Sn**	**17 14 47.9**	**-4.0**
	0.1nm,0.3s,baz=270,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**22.55**	**123**	P	**P**	**17 13 40.9**	**-0.8**
	0.3nm,0.5s,mb3.0,baz=297,slow=12,SNR=13						
WRAB	**Tennant Creek**	**22.56**	**123**	*e*P	**P**	**17 13 40.4**	**-1.4**
	1.3nm,0.8s,mb3.4						
WB2	**Warramunga Arr**	**22.56**	**123**	*e*P	**P**	**17 13 40.7**	**-1.2**
ASAR	**Alice Springs**	**24.19**	**132**	P	**P**	**17 13 58.2**	**+0.3**
	0.5nm,0.5s,mb3.2,baz=306,slow=9.0,SNR=39						
STKA	**Stephens Creek**	**34.55**	**137**	P	**P**	**17 15 30.6**	**+0.8**
	0.7nm,0.4s,mb3.9,baz=323,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**61.78**	**336**	P	**P**	**17 18 59.0**	**-0.7**
	0.4nm,0.6s,mb3.7,baz=152,slow=7.2,SNR=5.0						

MAN 11 17:11:42,15.°39N×119.°61E,h32km,mb4.1,ML3.0,MS2.7,
1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.48**	**37**	*e*P	Pb	17 11 53.1	+0.9
SCZP				*e*S	Sb	17 11 57.5	-1.8
PCPH	**Palayan**	**1.44**	**83⇑**	*e*P	Pn	17 12 06.0	+0.1
LUBP	**Lubang**	**1.76**	**159**	*e*P	Pn	17 12 10.7	+0.4
BALP	**Baler**	**1.93**	**79**	*e*P	Pn	17 12 14.1	+1.5
BALP				*e*S	Sn	17 12 27.1	-8.6

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*NIED **11** 17:17:00,36.°60N×142.°00E,h14km,Mw3.7 Best double*
couple: M0:4.26000×10^14 NP1:φs358.00000°,δ68.00000°;
λ104.00000°. NP2:φs144.00000°,δ26.00000°,λ59.00000°.
*ISCJB **11** 17:17:36.6±1.4,36.°57N±0.°04×142.°08E±0.°06,h18km±9km,*
mb3.9/8,Error ellipse: s-maj=8.1km s-min=5.9km az=7.6
*NEIC **11** 17:17:37.0,36.°61N×142.°02E,h12km,mb4.3/1,After*
JMA.
*JMA **11** 17:17:36.9±0.3,36.°61N×142.°02E,h12km±4km,M4.0*
*IDC **11** 17:17:36.3±1.0,36.°56N×142.°02E,h0km,mb3.8/9,*
mb1 3.8/11,mb1mx3.7/26,mbtmp3.8/11,ML3.5/2,Error
ellipse: s-maj=27.4km s-min=17.5km az=68.0
ISC 11 17:17:36.9±1.1,36.°60N±0.°03×141.°99E±0.°05,h5km±5km,
n29,σ0°86/39,mb3.9/8,2C,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.08**	**298**	P	**Pg**	**17 17 57.3**	**-0.3**
JHO	**Hitachi**	**1.14**	**271**	P	**Pg**	**17 17 58.2**	**-0.6**
JHO				S	**Sg**	**17 18 13.3**	**-0.3**
JFK	**Kawauchi**	**1.18**	**311**	P	**Pg**	**17 17 58.5**	**-0.9**
JFK				*e*S	**Sg**	**17 18 14.9**	**+0.2**
JMM	**Marumori**	**1.58**	**323**	⇑P	**Pn**	**17 18 04.7**	**-0.9**
JMM				*e*S	**Sn**	**17 18 25.9**	**-0.6**
JFT	**Otama**	**1.61**	**305**	P	**Pn**	**17 18 05.9**	**-0.1**
JFT				*e*S	**Sn**	**17 18 27.8**	**+0.7**
JIO	**Ouri**	**1.92**	**345**	⇑P	**Pn**	**17 18 09.7**	**-0.6**
JIO				*e*S	**Sn**	**17 18 33.5**	**-1.3**
JFY	**Yanaizu**	**2.00**	**294**	P	**Pn**	**17 18 12.3**	**+1.0**
JFY				*e*S	**Sn**	**17 18 37.7**	**+1.0**
JAG	**Ashikaga**	**2.05**	**266**	P	**Pn**	**17 18 12.0**	**-0.1**
JOU	**Okura**	**2.05**	**330**	P	**Pn**	**17 18 12.3**	**+0.2**
JOU				*e*S	**Sn**	**17 18 38.2**	**+0.1**
MJAR	**Matsushiro Arr**	**3.04**	**270**	Pn	**Pn**	**17 18 27.2**	**+1.5**
	14nm,0.3s,baz=114,slow=9.7,SNR=262						
MJAR				Sn	**Sn**	**17 19 02.3**	**-0.3**
	6.3nm,0.3s,baz=76,slow=25,SNR=6.2						
MJAR	**Matsushiro Arr**	**3.04**	**270**	Pn	**Pn**	**17 18 27.2**	**+1.5**
MJAR				Sn	**Sn**	**17 19 02.3**	**-0.3**
MAJO	**Matsushiro**	**3.04**	**270**	*e*Pn	**Pn**	**17 18 27.6**	**+1.8**
MAT	**Matsushiro**	**3.04**	**270**	P	**Pn**	**17 18 27.6**	**+1.9**
MAT				S	**Sn**	**17 19 01.0**	**-1.6**
JHJ	**Hachijo jima 2**	**3.92**	**208**	Sn	**Sn**	**17 19 22.5**	**-1.7**
	35nm,0.3s,baz=59,slow=17,SNR=3.3						
ASAJ	**Asahikawa**	**7.52**	**3**	Pn	**Pn**	**17 19 27.2**	**0.0**
	0.5nm,0.3s,baz=212,slow=4.1,SNR=4.5						
ASAJ				Sn	**Sn**	**17 20 52.4**	**-0.5**
	0.3nm,0.3s,baz=156,slow=20,SNR=2.9						
KSRS	**Korea Array**	**11.28**	**279**	Pn	**Pn**	**17 20 22.1**	**+3.4**
	0.1nm,0.3s,baz=95,slow=15,SNR=3.2						
ENH	**Enshi**	**27.76**	**266**	*e*P	**P**	**17 23 25.6**	**-1.0**
	4.7nm,0.7s,mb4.2						
SONM	**Songino Array**	**28.41**	**304**	P	**P**	**17 23 33.3**	**+1.0**
	2.1nm,0.7s,mb3.9,baz=105,slow=9.0,SNR=16						
CMAR	**Chiang Mai Arr**	**41.84**	**256**	P	**P**	**17 25 28.4**	**+0.5**
	0.3nm,0.7s,baz=46,slow=6.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**17 25 33.8**	**+0.5**
	1.2nm,0.6s,mb3.8,baz=94,slow=6.2,SNR=7.0						
CHGN	**Chignik**	**43.96**	**44**	*e*P	**P**	**17 25 45.6**	**+0.9**
MK31	**Makanchi Array**	**44.74**	**303**	*e*P	**P**	**17 25 50.9**	**-0.2**
MKAR	**Makanchi Array**	**44.74**	**303**	P	**P**	**17 25 51.1**	**0.0**
	0.7nm,0.6s,mb3.7,baz=92,slow=8.3,SNR=12						
BVAR	**Borovoye Array**	**51.20**	**313**	P	**P**	**17 26 41.0**	**0.0**
	0.6nm,0.4s,mb3.9,baz=72,slow=19,SNR=3.7						
FITZ	**Fitzroy Crossi**	**56.56**	**199**	P	**P**	**17 27 20.5**	**0.0**
	0.8nm,0.6s,mb3.9,baz=37,slow=6.6,SNR=6.5						
WRA	**Warramunga Arr**	**56.70**	**189**	P	**P**	**17 27 20.7**	**-0.8**
	0.4nm,0.5s,mb3.7,baz=5.7,slow=7.3,SNR=14						
ASAR	**Alice Springs**	**60.42**	**189**	P	**P**	**17 27 47.2**	**-0.2**
	0.2nm,0.5s,baz=12,slow=5.7,SNR=7.7						
AKASG	**Malin Array Be**	**74.92**	**323**	P	**P**	**17 29 18.8**	**+0.1**
	0.5nm,0.4s,mb3.8,baz=46,slow=6.7,SNR=5.9						
LPAZ	**La Paz**	**146.51**	**61**	PKPbc	PKPbc	17 37 21.0	+1.3
	0.4nm,0.4s,baz=34,slow=3.6,SNR=3.7						

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*IDC **11** 17:23:36.5±2.1,36.°62N×142.°17E,h0km,mb3.4/4,*
mb1 3.5/5,mb1mx3.3/24,mbtmp3.4/5,ML3.3/1,Error
ellipse: s-maj=53.7km s-min=24.4km az=51.0
*ISCJB **11** 17:23:39.2±1.0,36.°61N±0.°06×142.°15E±0.°08,h33km,*
mb3.3/4,Error ellipse: s-maj=9.8km s-min=7.9km az=8.3
*NEIC **11** 17:23:40.6,36.°63N×141.°88E,h23km,MG3.2(JMA),After*
JMA.
*JMA **11** 17:23:40.6±0.2,36.°63N×141.°88E,h23km,M3.2*
ISC 11 17:23:41.2±1.0,36.°68N±0.°06×142.°11E±0.°09,h35km,n19,
σ1°09/24,mb3.3/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.14**	**292**	P	**Pn**	**17 23 58.8**	**-1.7**
JFK	**Kawauchi**	**1.21**	**305**	P	**Pn**	**17 23 59.9**	**-1.6**
JHO	**Hitachi**	**1.24**	**267**	P	**Pn**	**17 23 59.4**	**-2.6**
JHO				*e*S	**Sn**	**17 24 13.3**	**-4.2**
JMM	**Marumori**	**1.59**	**319**	P	**Pn**	**17 24 05.9**	**-0.8**
JMM				*e*S	**Sn**	**17 24 24.9**	**-1.1**
JFT	**Otama**	**1.65**	**301**	P	**Pn**	**17 24 06.9**	**-0.7**
JIO	**Ouri**	**1.87**	**341**	P	**Pn**	**17 24 10.8**	**+0.1**
JIO				*e*S	**Sn**	**17 24 34.5**	**+1.4**
JOU	**Okura**	**2.04**	**326**	P	**Pn**	**17 24 13.7**	**+0.7**
JFY	**Yanaizu**	**2.06**	**291**	P	**Pn**	**17 24 14.2**	**+1.0**
JAG	**Ashikaga**	**2.16**	**264**	P	**Pn**	**17 24 13.6**	**-1.0**
JKT	**Katashina**	**2.30**	**273**	P	**Pn**	**17 24 16.6**	**0.0**
MJAR	**Matsushiro Arr**	**3.14**	**269**	Pn	**Pn**	**17 24 28.4**	**+0.2**
	3.4nm,0.3s,baz=98,slow=9.2,SNR=45						
MJAR				Sn	**Sn**	**17 25 05.8**	**+1.4**
	1.9nm,0.3s,baz=108,slow=25,SNR=5.8						
MAJO	**Matsushiro**	**3.15**	**269**	*e*Pn	**Pn**	**17 24 28.2**	**+0.1**
MAT	**Matsushiro**	**3.15**	**269**	P	**Pn**	**17 24 28.9**	**+0.7**
MAT				S	**Sn**	**17 25 05.9**	**+1.4**
JOW	**Kunigami**	**15.31**	**234**	Pn	**Pn**	**17 27 10.8**	**-3.8**
	8.7nm,0.3s,baz=24,slow=20,SNR=4.2						
JOW	**Kunigami**	**15.31**	**234**	Pn	**Pn**	**17 27 10.8**	**-3.8**
SONM	**Songino Array**	**28.45**	**304**	P	**P**	**17 29 33.5**	**+0.9**
	0.5nm,0.6s,mb3.3,baz=112,slow=8.4,SNR=5.3						
MKAR	**Makanchi Array**	**44.78**	**303**	P	**P**	**17 31 52.4**	**+1.2**
	0.2nm,0.6s,mb3.1,baz=82,slow=8.6,SNR=3.6						
WRA	**Warramunga Arr**	**56.79**	**189**	P	**P**	**17 33 21.9**	**+0.1**
	0.6nm,1.1s,mb3.5,baz=5.9,slow=7.4,SNR=4.8						
ASAR	**Alice Springs**	**60.52**	**189**	P	**P**	**17 33 48.2**	**+0.5**
	0.2nm,0.8s,mb3.3,baz=21,slow=8.0,SNR=4.4						

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*NIED **11** 17:28:00,36.°10N×142.°00E,h11km,Mw3.8 Best double*
couple: M0:6.14000×10^14 NP1:φs356.00000°,δ88.00000°,
λ80.00000°. NP2:φs252.00000°,δ10.00000°,λ166.00000°.
*IDC **11** 17:28:55.1±0.9,36.°00N×142.°15E,h0km,mb3.5/7,*
mb1 3.7/10,mb1mx3.5/27,mbtmp3.6/10,ML3.7/3,Error
ellipse: s-maj=23.6km s-min=18.0km az=81.0
*ISCJB **11** 17:28:56.7±1.5,36.°07N±0.°04×142.°16E±0.°06,*
h24km±11km,mb3.6/8,Error ellipse: s-maj=8.3km
s-min=6.5km az=1.7
*JMA **11** 17:28:58.6±0.2,36.°10N×142.°03E,h69km±4km,M3.6*
*NEIC **11** 17:29:00.5±0.6,35.°96N×141.°99E,h35km,MG3.6(JMA),*
Error ellipse: s-maj=16.4km s-min=11.6km az=207.0
ISC 11 17:28:57.5±1.7,36.°06N±0.°04×142.°10E±0.°06,h16km±12km,
n27,σ0°91/35,mb3.6/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.07**	**251**	P	**Pb**	**17 29 17.5**	**0.0**
CHOJ				S	**Sb**	**17 29 31.2**	**0.0**
JHO	**Hitachi**	**1.35**	**294**	P	**Pn**	**17 29 20.5**	**-1.1**
JFK	**Kawauchi**	**1.63**	**323**	P	**Pn**	**17 29 24.9**	**-0.6**
JFK				*e*S	**Sn**	**17 29 44.6**	**-1.6**
BSO1	**Boso 1**	**1.68**	**213**	P	**Pn**	**17 29 25.8**	**-0.3**
BSO1				*e*S	**Sn**	**17 29 48.1**	**+0.8**
BSO3	**Boso 3**	**1.81**	**226**	P	**Pn**	**17 29 27.6**	**-0.3**
JFT	**Otama**	**2.03**	**316**	P	**Pn**	**17 29 31.7**	**+0.8**
JFT				*e*S	**Sn**	**17 29 55.7**	**-0.2**
JMM	**Marumori**	**2.08**	**330**	P	**Pn**	**17 29 30.9**	**-0.8**
JAG	**Ashikaga**	**2.17**	**280**	P	**Pn**	**17 29 32.4**	**-0.5**
JAG				*e*S	**Sn**	**17 29 58.1**	**-1.3**
JFY	**Yanaizu**	**2.34**	**306**	P	**Pn**	**17 29 36.1**	**+0.8**
JOD2	**Odawara 2**	**2.58**	**253**	P	**Pn**	**17 29 38.6**	**+0.1**
JOD2				*e*S	**Sn**	**17 30 08.8**	**-0.7**
JRY	**Ryogami san**	**2.59**	**270**	P	**Pn**	**17 29 38.4**	**-0.3**
JYN	**Shimob**	**2.94**	**260**	P	**Pn**	**17 29 44.5**	**+1.0**
MJAR	**Matsushiro Arr**	**3.18**	**280**	Pn	**Pn**	**17 29 47.2**	**+0.5**
	5.4nm,0.3s,baz=83,slow=9.3,SNR=60						
MJAR				Sn	**Sn**	**17 30 26.7**	**+2.4**
	4.5nm,0.3s,baz=110,slow=29,SNR=6.0						
MAJO	**Matsushiro**	**3.18**	**280**	*e*Pn	**Pn**	**17 29 46.3**	**-0.5**
MAT	**Matsushiro**	**3.18**	**280**	P	**Pn**	**17 29 47.7**	**+0.9**
MAT				S	**Sn**	**17 30 25.1**	**+0.8**
JHJ	**Hachijo jima 2**	**3.50**	**214**	Pn	**Pn**	**17 29 50.9**	**-0.3**
	42nm,0.3s,baz=54,slow=19,SNR=3.4						
JHJ				Sn	**Sn**	**17 30 29.6**	**-2.7**
	22nm,0.3s,baz=107,slow=19,SNR=3.1						
ASAJ	**Asahikawa**	**8.05**	**3**	Pn	**Pn**	**17 30 52.9**	**-0.9**
	0.7nm,0.3s,baz=230,slow=22,SNR=9.5						
ASAJ				Sn	**Sn**	**17 32 20.4**	**-4.0**
	0.5nm,0.3s,baz=102,slow=19,SNR=2.8						
SONM	**Songino Array**	**28.79**	**305**	P	**P**	**17 34 56.2**	**+1.8**
	0.3nm,0.4s,mb3.3,baz=123,slow=12,SNR=3.2						
GTA	**Gaotai**	**33.38**	**289**	*e*P	**P**	**17 35 36.3**	**+1.2**
GTA				pP	pP	17 35 39.9	0.0
GTA				sP	sP	17 35 41.4	-0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ZALV	**Zalesovo Beam**	**42.98**	**313**	P	**P**	**17 36 56.1**	**+0.4**
	comp=Z,0.3nm,0.2s,mb3.6,baz=94,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**45.10**	**303**	P	**P**	**17 37 12.9**	**+0.2**
	comp=Z,0.4nm,0.8s,mb3.3,baz=90,slow=6.1,SNR=3.8						
WRA	**Warramunga Arr**	**56.18**	**189**	P	**P**	**17 38 35.9**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.7,baz=7.8,slow=7.7,SNR=21						
ASAR	**Alice Springs**	**59.91**	**189**	P	**P**	**17 39 02.5**	**-0.1**
	comp=Z,1.2nm,1.3s,mb3.8,baz=2.5,slow=6.8,SNR=9.7						
YKA	**Yellowknife Ar**	**64.37**	**30**	P	**P**	**17 39 33.0**	**+0.9**
	comp=Z,0.3nm,0.8s,mb3.4,baz=302,slow=6.3,SNR=4.1						
AKASG	**Malin Array Be**	**75.40**	**323**	P	**P**	**17 40 40.4**	**+0.2**
	comp=Z,0.2nm,0.3s,mb3.5,baz=43,slow=6.5,SNR=3.6						
LPAZ	**La Paz**	**146.69**	**62**	PKPbc	PKPbc	17 48 40.0	+1.0
	comp=Z,0.5nm,0.5s,baz=27,slow=3.3,SNR=5.4						
LPAZ	**La Paz**	**146.69**	**62**	PKPbc	PKPbc	17 48 40.0	+1.0

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*HLW **11** 17:52:20.0,34.°39N×26.°71E,h33km±33km,Ml3.8*
*ISCJB **11** 17:52:20.7±0.2,34.°24N±0.°02×26.°73E±0.°02,h63km±4km,*
mb3.7/18,Error ellipse: s-maj=3.4km s-min=3.3km
az=40.4
*CSEM **11** 17:52:22.3±0.1,34.°26N×26.°69E,h60km,mb3.7/8,Error*
ellipse: s-maj=3.1km s-min=2.8km az=18.0
*NEIC **11** 17:52:22.5,34.°44N×26.°57E,h95km,mb3.7/6,After ATH.*
*ATH **11** 17:52:22.5,34.°44N×26.°57E,h95km±6km,ML3.8*
*ISK **11** 17:52:24.1,34.°61N×27.°14E,h7km,ML3.8*
*IDC **11** 17:52:26.3±1.7,34.°56N×26.°43E,h69km±10km,mb3.5/10,*
mb1 3.6/13,mb1mx3.4/27,mbtmp3.5/13,Error ellipse:
s-maj=25.9km s-min=17.7km az=165.0
*GII **11** 17:52:27.8±0.0,33.°87N×27.°46E,h1km,Md3.5/4*
*DDA **11** 17:52:41.3,35.°88N×27.°59E,h8km±1km,Md3.5*
ISC 11 17:52:22.3±0.2,34.°25N±0.°02×26.°69E±0.°02,h56km±4km,
n227,σ0°96/260,mb3.7/18,1D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.94**	**336**	*e*P	**Pn**	**17 52 39.2**	**-0.2**
ZKR	**Zakros**	**0.94**	**336**	*e*P	**Pn**	**17 52 39.2**	**-0.2**
XRY	**Khrisi**	**1.03**	**307**	*e*P	**Pn**	**17 52 40.4**	**-0.1**
XRY	**Khrisi**	**1.03**	**307**	*e*P	**Pn**	**17 52 40.4**	**-0.1**
NPS	**Neapolis**	**1.34**	**319**	*e*P	**Pn**	**17 52 45.4**	**+0.7**
NPS	**Neapolis**	**1.34**	**319**	P	**Pn**	**17 52 45.5**	**+0.8**
NPS	**Neapolis**	**1.34**	**319**	*e*P	**Pn**	**17 52 45.4**	**+0.7**
KARP	**Karpathos**	**1.35**	**17**	*e*P	**Pn**	**17 52 45.9**	**+1.1**
KARP	**Karpathos**	**1.35**	**17**	P	**Pn**	**17 52 46.2**	**+1.4**
KARP	**Karpathos**	**1.35**	**17**	*e*P	**Pn**	**17 52 45.9**	**+1.1**
LAST	**Lasithi**	**1.35**	**313**	*e*P	**Pn**	**17 52 45.3**	**+0.5**
LAST	**Lasithi**	**1.35**	**313**	*e*P	**Pn**	**17 52 45.3**	**+0.5**
SIVA	**Sivas**	**1.73**	**297**	*e*P	**Pn**	**17 52 50.7**	**+0.8**
SIVA	**Sivas**	**1.73**	**297**	*e*P	**Pn**	**17 52 50.7**	**+0.8**
IDI	**Anoyia**	**1.81**	**305**	P

MLSB	Milas	3.16	16	ePn		Pn	17 53 09.0	-0.5
HMAT	Matruh	3.17	174	P		Pn	17 53 10.2	+0.5
	baz=174							
HMAT				AMP			17 53 00.0	
	comp=E,130μm,0.1s,logA/T=6.0,baz=174							
HMAT				S		Sn	17 53 44.7	-1.5
	baz=174							
HMAT	Matruh	3.17	174	P		Pn	17 53 10.2	+0.6
HMAT				S		Sn	17 53 44.7	-1.5
LTBQ	Tobruq	3.19	227	i P		Pn	17 53 11.2	+1.2
	SNR=24							
SMG	Samos	3.45	2	eP		Pn	17 53 12.8	-0.7
SMG	Samos	3.45	2	P		Pn	17 53 13.4	-0.1
SMG	Samos	3.45	2	eP		Pn	17 53 12.8	-0.7
AYDN	Tasoluk	3.54	16	i P		Pn	17 53 15.3	+0.6
AYDN	Tasoluk	3.54	16	i P		Pn	17 53 15.3	+0.7
KYTH	Kithira	3.61	305	eP		Pn	17 53 14.8	-0.8
KYTH	Kithira	3.61	305	eP		Pn	17 53 14.8	-0.8
ELL	Elmali	3.62	46	ePN		Pn	17 53 15.1	-0.7
ELL	Elmali	3.62	46	ePn		Pn	17 53 15.1	-0.7
GLHS	Glhisar (BURDU	3.69	37	ePN		Pn	17 53 16.3	-0.4
GLHS	Glhisar (BURDU	3.69	37	ePn		Pn	17 53 16.3	-0.5
GOLH	Golhisar	3.78	37	i P		Pn	17 53 19.8	+1.8
GOLH				i S		Sn	17 54 02.6	+1.3
GOLH	Golhisar	3.78	37	i P		Pn	17 53 19.8	+1.8
GOLH				i S		Sn	17 54 02.6	+1.3
DNZL	Cakiroluk	3.93	28	i P		Pn	17 53 20.7	+0.7
DNZL				i S		Sn	17 54 02.3	-2.4
DNZL	Cakiroluk	3.93	28	i P		Pn	17 53 20.7	+0.7
DNZL				i S		Sn	17 54 02.3	-2.5
VLI	Veliai	3.93	310	eP		Pn	17 53 18.8	-1.2
VLI	Veliai	3.93	310	P		Pn	17 53 19.4	-0.6
VLI	Veliai	3.93	310	P		Pn	17 53 19.4	-0.6
DENT	Denizli	3.98	28	ePN		Pn	17 53 20.5	-0.2
DENT	Denizli	3.98	28	ePn		Pn	17 53 20.5	-0.2
IZM	Izmir	4.16	6	ePN		Pn	17 53 24.6	+1.4
IZM	Izmir	4.16	6	ePn		Pn	17 53 24.6	+1.4
ANTB	Antalya	4.17	50	ePN		Pn	17 53 22.6	-0.8
ANTB	Antalya	4.17	50	ePn		Pn	17 53 22.6	-0.8
DID	Didima	4.29	320	eP		Pn	17 53 24.1	-0.9
DID	Didima	4.29	320	eP		Pn	17 53 24.1	-0.9
VLY	Voula,Athens	4.29	328	eP		Pn	17 53 25.4	+0.4
VLY	Voula,Athens	4.29	328	eP		Pn	17 53 25.4	+0.4
NAIG	Nisos Aigina	4.36	324	eP		Pn	17 53 26.9	+1.0
NAIG	Nisos Aigina	4.36	324	eP		Pn	17 53 26.9	+1.0
ATH	Athens Observa	4.42	328	eP		Pn	17 53 26.3	-0.5
ATH	Athens Observa	4.42	328	eP		Pn	17 53 26.3	-0.5
PTL	Penteli	4.42	330	P		Pn	17 53 27.5	+0.7
PTL	Penteli	4.42	330	P		Pn	17 53 27.5	+0.7
MANT	Manisa	4.49	19	eP		Pn	17 53 27.9	+0.2
MANT	Manisa	4.49	19	eP		Pn	17 53 28.0	+0.3
BCK	Bucak	4.50	44	ePN		Pn	17 53 27.7	-0.2
BCK	Bucak	4.50	44	ePn		Pn	17 53 27.7	-0.2
KULA	Kula-Manisa	4.54	20	ePN		Pn	17 53 28.5	+0.1
KULA	Kula-Manisa	4.54	20	ePn		Pn	17 53 28.5	+0.1
KHL	Karahalli	4.66	29	ePN		Pn	17 53 30.1	0.0
KHL	Karahalli	4.66	29	ePn		Pn	17 53 30.1	0.0
KHAL	Karahalli	4.69	28	i P		Pn	17 53 30.5	+0.1
KHAL				eS		Sn	17 54 19.1	-4.4
KHAL	Karahalli	4.69	28	i P		Pn	17 53 30.5	0.0
KHAL				eS		Sn	17 54 19.1	-4.4
ISP	Isparta	4.73	40	ePN		Pn	17 53 30.4	-0.6
SUTC	Sutluce-Ispart	4.75	46	ePN		Pn	17 53 31.4	+0.1
SUTC	Sutluce-Ispart	4.75	46	ePn		Pn	17 53 31.5	+0.2
LTK	Loutraki	4.82	322	eP		Pn	17 53 31.6	-0.6
LTK	Loutraki	4.82	322	eP		Pn	17 53 31.6	-0.6
ITM	Ithomi	4.85	308	eP		Pn	17 53 31.7	-1.0
ITM	Ithomi	4.85	308	P		Pn	17 53 33.5	+0.8
ITM	Ithomi	4.85	308	eP		Pn	17 53 31.7	-1.0
DEMI	Demirci	5.05	18	i P		Pn	17 53 35.8	+0.4
DEMI				eS		Sn	17 54 27.7	-4.7
DEMI	Demirci	5.05	18	i P		Pn	17 53 35.8	+0.4
DEMI				eS		Sn	17 54 27.7	-4.7
GUR	Goura	5.09	317	eP		Pn	17 53 34.8	-1.1
GUR	Goura	5.09	317	eP		Pn	17 53 34.8	-1.1
SWA2		5.10	192	P		Pn	17 53 36.3	+0.1
	baz=193							
SWA2		5.10	192	P		Pn	17 53 36.3	+0.1
LEF	Lefka	5.18	79	ePN		Pn	17 53 37.2	0.0
LEF				eSN		Sn	17 54 31.7	-4.0
LEF	Lefka	5.18	79	ePn		Pn	17 53 37.2	0.0
LEF				eSn		Sn	17 54 31.7	-3.9
SHUT	Suhut-Afyon	5.30	35	ePN		Pn	17 53 38.7	-0.1
SHUT	Suhut-Afyon	5.30	35	ePn		Pn	17 53 38.7	-0.1
HDMB	Hadim	5.44	59	ePN		Pn	17 53 41.3	+0.5
HDMB	Hadim	5.44	59	ePn		Pn	17 53 41.3	+0.5
CSS	Prodhromos	5.52	81	ePn		Pn	17 53 40.6	-1.2
	comp=E,12nm,0.3s							
CSS				eSn		Sn	17 54 36.8	-7.2
CSS	Prodhromos	5.52	81	ePn		Pn	17 53 40.6	-1.3
	comp=E,12nm,0.3s							
CSS				eSn		Sn	17 54 36.8	-7.2
ERMK	Ermenek	5.61	63	i P		Pn	17 53 45.2	+2.2
ERMK	Ermenek	5.61	63	i P		Pn	17 53 45.2	+2.1
HMYD	Mayadein	5.65	141	P		Pn	17 53 43.8	+0.1
	baz=141							
HMYD	Mayadein	5.65	141	P		Pn	17 53 43.8	+0.1
HNAT	Natroun	5.69	143	P		Pn	17 53 44.4	+0.2
	baz=144							
HNAT	Natroun	5.69	143	P		Pn	17 53 44.3	+0.1
LFK	Lefkose	5.72	78	ePN		Pn	17 53 45.9	+1.2
LFK	Lefkose	5.72	78	ePn		Pn	17 53 45.9	+1.3
KONT	Konya--Tatoy	5.89	50	ePN		Pn	17 53 47.2	+0.4
KONT	Konya--Tatoy	5.89	50	ePn		Pn	17 53 47.2	+0.4
LADK	Ladik-KONYA	6.05	48	ePN		Pn	17 53 49.8	+0.8
LADK	Ladik-KONYA	6.05	48	ePn		Pn	17 53 49.8	+0.8
IKL	Isikli	6.06	69	ePN		Pn	17 53 49.8	+0.6
IKL	Isikli	6.06	69	ePn		Pn	17 53 49.8	+0.6
KOT	Kottamia	6.13	133	P		Pn	17 53 49.8	-0.5
	baz=134							
KOT				AMP			17 54 00.0	
	comp=E,80μm,0.2s,logA/T=5.7,baz=134							
KOT	Kottamia	6.13	133	P		Pn	17 53 49.8	-0.5
HSAF	As Saff	6.20	137	P		Pn	17 53 51.0	-0.2
	baz=137							
HSAF	As Saff	6.20	137	P		Pn	17 53 51.0	-0.2
AWBH		6.21	162	P		Pn	17 53 51.2	-0.2
	baz=162							
AWBH		6.21	162	P		Pn	17 53 51.2	-0.1
KIZT	Kizilcal	6.23	41	ePN		Pn	17 53 52.1	+0.6
KIZT	Kizilcal	6.23	41	ePn		Pn	17 53 52.1	+0.6
EREN	Erenkoy	6.28	76	ePN		Pn	17 53 54.1	+1.9
EREN	Erenkoy	6.28	76	ePn		Pn	17 53 54.1	+1.9
HHAG	Hagoal	6.28	132	P		Pn	17 53 52.1	-0.2
	baz=132							
HHAG				AMP			17 55 00.0	
	comp=N,130μm,0.1s,logA/T=6.1,baz=132							
HHAG	Hagoal	6.28	132	P		Pn	17 53 52.1	-0.2
VLS	Valsamata	6.30	310	P		Pn	17 53 53.1	+0.6
VLS	Valsamata	6.30	310	P		Pn	17 53 53.1	+0.6
GLL	Jalalah	6.32	136	P		Pn	17 53 52.3	-0.5
	baz=137							
GLL	Jalalah	6.32	136	P		Pn	17 53 52.3	-0.5
LJBD	Adjabya	6.41	240	i P		Pn	17 53 54.2	+0.1
	SNR=23							
MERS	Mersin	6.90	66	ePN		Pn	17 54 02.1	+1.4
MERS	Mersin	6.90	66	ePn		Pn	17 54 02.1	+1.4
HFRF	Wahat Farafira	7.22	168	P		Pn	17 54 05.0	-0.1
	baz=168							
HFRF	Wahat Farafira	7.22	168	P		Pn	17 54 05.0	-0.1
BHL	Bhannes	7.45	90	ePn		Pn	17 54 07.2	-1.1
RCY	Rachaya	7.63	93	ePn		Pn	17 54 10.7	-0.1
HWQ	Hawqa	7.66	87	ePn		Pn	17 54 11.4	+0.2
BRTR	Keskin Array B	7.79	43	P		Pn	17 54 14.9	+1.9
	comp=N,0.1nm,0.3s,baz=222,slow=13,SNR=2.3							
BRTR				S		Sn	17 55 38.2	-1.5
	comp=N,0.4nm,0.3s,baz=213,slow=28,SNR=5.4							
BRTR	Keskin Array B	7.79	43	P		Pn	17 54 14.9	+2.0
BRTR				S		Sn	17 55 38.2	-1.5
KRUS	Krusevo	8.30	330	ePn		Pn	17 54 15.1	-4.8
KRUS				eSg		Sn	17 55 48.6	-3.6
ASF	Jabal al Asfar	8.80	101	P		Pn	17 54 26.3	-0.5
	comp=N,0.6nm,0.3s,baz=194,slow=4.2,SNR=4.7							
ASF				S		Sn	17 56 02.4	-2.1
	comp=N,0.6nm,0.3s,baz=90,slow=15,SNR=3.3							
HDK1	Dakhla	8.99	164	P		Pn	17 54 29.8	+0.3
	baz=164							
HDK1	Dakhla	8.99	164	P		Pn	17 54 29.8	+0.3
HHRG	Al Ghardaqah	9.17	138	P		Pn	17 54 32.1	+0.2
	baz=138							
HHRG	Al Ghardaqah	9.17	138	P		Pn	17 54 32.1	+0.2
MALT	Malatya	10.30	63	ePn		Pn	17 54 45.6	-1.7
	comp=N,2.6nm,0.6s							
MALT	Malatya	10.30	63	ePn		Pn	17 54 45.6	-1.7
	comp=N,2.6nm,0.6s							
STON	Ston	11.11	323	ePn		Pn	17 54 53.1	-5.1
STON				Sn		Sn	17 56 45.9	-15
STON	Ston	11.11	323	ePn		Pn	17 54 53.1	-5.2
STON				Sn		Sn	17 56 45.9	-15
BURAR	Bucovina Array	13.39	356	⇓i P		Pn	17 55 38.9	+9.5
NVLJ	Novalja	13.75	322	ePn		Pn	17 55 28.9	-5.3
NVLJ				Sn		Sn	17 57 50.3	-15
NVLJ	Novalja	13.75	322	ePn		Pn	17 55 28.9	-5.4
NVLJ				Sn		Sn	17 57 50.3	-15
AKASG	Malin Array Be	16.54	6	P		Pn	17 56 09.5	-0.8
	comp=N,2.1nm,0.3s,baz=190,slow=10,SNR=14							
AKASG	Malin Array Be	16.54	6	P		Pn	17 56 09.5	-0.8
GERES	GERESS Array B	17.48	330	P		Pn	17 56 21.4	-0.6
	comp=N,0.1nm,0.3s,baz=148,slow=11,SNR=4.6							
GERES				pP		pP	17 56 32.0	-2.8
	comp=N,0.2nm,0.3s,baz=141,slow=8.6,SNR=6.6							
GERES	GERESS Array B	17.48	330	P		Pn	17 56 21.4	-0.6
KHC	Kasperske Hory	17.76	331	eP		Pn	17 56 18.0	-7.4
KHC				ex		x	17 56 26.5	
MBDF	Montbardon	18.55	310	eP		Pn	17 56 35.4	+0.4
	comp=N,8.4nm,0.9s							
MBDF	Montbardon	18.55	310	eP		Pn	17 56 35.4	+0.4
	comp=N,4.2nm,0.9s							
MBDF	Montbardon	18.55	310	eP		Pn	17 56 35.4	+0.4
	comp=N,4.2nm,0.9s							
LPG	La Plagne	18.93	312	eP		Pn	17 56 40.0	+0.5
LPG	La Plagne	18.93	312	eP		Pn	17 56 40.0	+0.5
LPL	La Plagne	18.95	312	eP		Pn	17 56 40.1	+0.3
LPL	La Plagne	18.95	312	eP		Pn	17 56 40.1	+0.3
CABF	La Chapelle	19.89	315	eP		Pn	17 56 49.5	-1.4
CABF	La Chapelle	19.89	315	eP		Pn	17 56 49.5	-1.4
CDF	Champ du Feu	20.23	320	eP		P	17 56 52.6	0.0
	comp=N,3.9nm,0.5s							
CDF	Champ du Feu	20.23	320	eP		P	17 56 52.6	0.0
	comp=N,2.0nm,0.5s							
CDF	Champ du Feu	20.23	320	eP		P	17 56 52.6	0.0
	comp=N,2.0nm,0.5s							
HAU	Haudompre	20.50	318	eP		P	17 56 55.8	+0.4
HAU	Haudompre	20.50	318	eP		P	17 56 55.8	+0.4
SMF	Signal de Mont	21.26	312	eP		P	17 57 04.0	+0.4
SMF	Signal de Mont	21.26	312	eP		P	17 57 04.0	+0.4
MEZF	Maizieres J'vi	21.49	318	eP		P	17 57 06.4	+0.3
	comp=N,4.3nm,0.5s,mb3.7							
MEZF	Maizieres J'vi	21.49	318	eP		P	17 57 06.4	+0.3
	comp=N,2.2nm,0.5s,mb3.7							
LOR	Lormes	21.54	314	eP		P	17 57 05.8	-0.9
	comp=N,3.3nm,0.6s,mb3.6							
LOR	Lormes	21.54	314	eP		P	17 57 05.8	-0.9
	comp=N,1.6nm,0.6s,mb3.6							
AVF	Avril sur Loir	21.62	312	eP		P	17 57 05.0	-2.5
	comp=N,1.5nm,0.4s,mb3.4							
AVF	Avril sur Loir	21.62	312	eP		P	17 57 05.0	-2.5
	comp=N,0.8nm,0.4s,mb3.5							
AVF	Avril sur Loir	21.62	312	eP		P	17 57 05.0	-2.5
	comp=N,0.8nm,0.4s,mb3.5							
SSF	Saint Saulge	21.65	313	eP		P	17 57 07.7	-0.2
SSF	Saint Saulge	21.65	313	eP		P	17 57 07.7	-0.2
RJF	Les Rejaudoux	22.18	307	eP		P	17 57 13.6	+0.1
RJF	Les Rejaudoux	22.18	307	eP		P	17 57 13.6	+0.1
BAIF	Baives	22.83	321	eP		P	17 57 20.5	+0.2
	comp=N,3.8nm,0.4s,mb3.9							
BAIF	Baives	22.83	321	eP		P	17 57 20.5	+0.2
	comp=N,1.9nm,0.4s,mb3.9							
MFF	Saint Martin d	23.74	309	eP		P	17 57 29.3	+0.1
	comp=N,4.1nm,0.7s,mb3.7							
MFF	Saint Martin d	23.74	309	eP		P	17 57 29.3	+0.1
	comp=N,2.0nm,0.7s,mb3.7							
LDF	La Druitiere	24.53	314	eP		P	17 57 36.1	-0.2
	comp=N,1.7nm,0.3s,mb3.7							
LDF	La Druitiere	24.53	314	eP		P	17 57 36.1	-0.2
	comp=N,0.9nm,0.3s,mb3.8							
LDF	La Druitiere	24.53	314	eP		P	17 57 36.1	-0.2
	comp=N,0.9nm,0.3s,mb3.7							
FLN	La Foliniere	24.81	314	eP		P	17 57 38.8	-0.2
FLN	La Foliniere	24.81	314	eP		P	17 57 38.8	-0.2
GRR	Gorron	24.88	313	eP		P	17 57 39.7	+0.1
GRR	Gorron	24.88	313	eP		P	17 57 39.7	+0.1
SGMF	Saint Gilles	25.87	312	eP		P	17 57 48.2	-0.3
	comp=N,4.2nm,0.6s,mb3.8							
SGMF	Saint Gilles	25.87	312	eP		P	17 57 48.2	-0.3
	comp=N,2.1nm,0.6s,mb3.8							
SGMF	Saint Gilles	25.87	312	eP		P	17 57 48.2	-0.3
	comp=N,2.1nm,0.6s,mb3.8							
QUIF	Quistinic	26.13	311	eP		P	17 57 50.9	0.0
	comp=N,2.1nm,0.4s,mb3.7							
QUIF	Quistinic	26.13	311	eP		P	17 57 50.9	0.0
	comp=N,1.0nm,0.4s,mb3.7							
QUIF	Quistinic	26.13	311	eP		P	17 57 50.9	0.0
	comp=N,1.0nm,0.4s,mb3.7							
ROSF	Rostrenen	26.35	311	eP		P	17 57 52.4	-0.4
ROSF	Rostrenen	26.35	311	eP		P	17 57 52.4	-0.4
FINES	FINESS Array B	27.21	359	P		P	17 58 00.0	-0.5
	comp=N,1.1nm,0.4s,mb3.7,baz=168,slow=11,SNR=8.2							
FINES				pP		pP	17 58 16.1	+1.7
	comp=N,0.6nm,0.4s,baz=165,slow=13,SNR=1.4							
HFS	Hagfors	27.25	346	P		P	17 57 59.9	-0.9
	comp=N,2.1nm,0.4s,mb4.0,baz=137,slow=9.5,SNR=15							
HFS				pP		pP	17 58 16.9	+2.2
	comp=N,0.7nm,0.4s,baz=164,slow=7.5,SNR=1.7							
NOA	NORSAR Array B	28.60	344	P		P	17 58 11.9	-1.0
	comp=N,0.5nm,0.4s,mb3.6,baz=148,slow=12,SNR=3.0							
EKA	Eskdalemuir Ar	29.51	325	P		P	17 58 20.9	-0.1
	comp=N,0.7nm,0.4s,mb3.7,baz=130,slow=11,SNR=8.8							
TORD	Torodi Ar. Bea	30.91	233	P		P	17 58 35.5	+1.8
	comp=N,0.7nm,0.6s,mb3.7,baz=36,slow=9.5,SNR=6.1							
ARCES	ARCESS Array B	35.34	359	P		P	17 59 11.2	-0.6
	comp=N,2.2nm,0.9s,mb4.1,baz=181,slow=8.2,SNR=10.0							
MKAR	Makanchi Array	43.23	56	P		P	18 00 20.8	+3.0
	comp=N,0.4nm,0.6s,mb3.4,baz=274,slow=7.7,SNR=6.2							
ZALV	Zalesovo Beam	44.73	46	P		P	18 00 32.1	+2.4
	comp=N,1.1nm,0.3s,mb4.1,baz=267,slow=9.2,SNR=6.5							
SONM	Songino Array	59.09	51	P		P	18 02 20.4	+3.7
	comp=N,0.3nm,0.6s,mb3.5,baz=295,slow=7.0,SNR=3.5							
YKA	Yellowknife Ar	78.69	343	P		P	18 04 19.5	+1.5
	comp=N,0.2nm,0.6s,mb3.2,baz=30,slow=5.4,SNR=4.4							

BJI **11** *18:01:43.7, 33.°81S×77.°29E, h15km, mB5.0/3, mb4.7/8*
ISCJB **11** *18:01:44.4±0.6, 33.°8S±0.°1×77.°4E±0.°1, h10km, mb4.3/26, MS4.0/16, Error ellipse: s-maj=18.1km s-min=12.7km az=29.8*
IDC **11** *18:01:44.5±0.7, 33.°70S×77.°36E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.1/23, mbtmp4.1/17, MS4.0/16, Ms1 3.9/16, ms1mx3.7/31, Error ellipse: s-maj=25.4km s-min=18.7km az=40.0*
NEIC **11** *18:01:46.0±0.4, 33.°74S×77.°38E, h10km, mb4.6/7, Error ellipse: s-maj=13.5km s-min=8.3km az=212.0*
ISC 11 18:01:47.0±0.4, 33.°7S±0.°1×77.°4E±0.°1, h15km±29km, n42, σ0.56/34, mb4.3/26, MS4.0/16, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	33.15	100	LR	LR	18 17 15.5	
	comp=Z,66nm,20.5s,MS3.3,baz=292,slow=28						
MAW	Mawson	34.95	190	LR	LR	18 20 39.5	
	comp=Z,178nm,18.0s,MS3.9,baz=193,slow=32						
MBWA	Marble Bar	39.34	83	eP	P	18 09 16.2	+0.3
	13nm,1.0s,mb4.6						
BOSA	Boshof	44.52	262	LR	LR	18 24 47.6	
	comp=Z,176nm,18.7s,MS4.0,baz=115,slow=31						
KMBO	Kilima Mbogo	49.63	302	P	P	18 10 38.9	+0.7
	0.7nm,0.4s,mb4.0,baz=36,slow=23,SNR=5.4						
ASAR	Alice Springs	50.04	94	P	P	18 10 41.1	-0.1
	1.5nm,0.9s,mb4.0,baz=241,slow=6.7,SNR=12						
WRA	Warramunga Arr	52.04	90	P	P	18 10 56.5	+0.2
	7.2nm,1.2s,mb4.5,baz=242,slow=6.8,SNR=9.6						
WRAB	Tennant Creek	52.05	90	eP	P	18 10 55.3	-1.1
	19nm,1.5s,mb4.8						
STKA	Stephens Creek	53.20	107	P	P	18 11 05.3	+0.6
	2.7nm,0.9s,mb4.2,baz=220,slow=7.9,SNR=4.7						
STKA				LR	LR	18 30 13.4	
	comp=Z,109nm,20.4s,MS3.9,baz=205,slow=32						
STKA	Stephens Creek	53.20	107	eP	P	18 11 05.1	+0.4
	3.1nm,1.6s,mb4.0						
CMAR	Chiang Mai Arr	55.81	25	P	P	18 11 24.5	+0.8
	1.1nm,0.9s,mb3.9,baz=205,slow=6.3,SNR=4.8						
CMAR				LR	LR	18 30 26.4	
	comp=Z,150nm,19.4s,MS4.1,baz=14,slow=31						
QSPA	South Pole Qui	56.42	180	P	P	18 11 27.8	+0.4
	5.8nm,1.0s,mb4.6,baz=271,slow=2.2,SNR=19						
QSPA				LR	LR	18 32 18.6	
	comp=Z,76nm,18.2s,MS3.8,baz=45,slow=32						
QSPA	South Pole Qui	56.42	180	P	P	18 11 27.8	+0.4
QSPA				LR	LR	18 32 18.6	
QIZ	Qiongzhong	60.91	36	P	P	18 11 59.5	+0.2
QIZ				S	S	18 20 17.2	+0.3
CTA	Charters Tower	61.88	96	LR	LR	18 34 57.6	
	comp=Z,159nm,20.9s,MS4.2,baz=248,slow=32						
KBL	Kabul	68.36	353	eP	P	18 12 47.7	0.0
	3.5nm,0.7s,mb4.5						
LZH	Lanzhou	73.72	22	eP	P	18 13 20.0	-0.2
LZH				pP	pP	18 13 24.7	-0.4
LZH				sP	sP	18 13 27.1	+0.3
LZH				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
LZH				pmax	pmax		
	comp=Z,89nm,4.5s						
AML	Almayashu	75.57	357	eP	P	18 13 31.8	+1.1
	comp=Z,1.6nm,0.8s,mb4.0						
GTA	Gaotai	75.68	18	eP	P	18 13 32.4	+1.0
GTA				pP	pP	18 13 37.4	+1.1
GTA				sP	sP	18 13 39.4	+1.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
AAK	Ala-Archa	76.04	358	P	P	18 13 34.4	+1.0
	comp=Z,0.5nm,0.3s,mb3.9,baz=170,slow=9.4,SNR=3.6						
AAK				LR	LR	18 44 27.2	
	comp=Z,88nm,18.6s,MS4.1,baz=191,slow=34						
NJ2	Nanjing	76.20	35	eP	P	18 13 34.2	-0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
MK31	Makanchi Array	80.27	3	eP	P	18 13 55.9	-0.9
MKAR	Makanchi Array	80.27	3	P	P	18 13 55.6	-1.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=185,slow=7.1,SNR=10						
MKAR				LR	LR	18 45 59.0	
	comp=Z,89nm,20.5s,MS4.1,baz=165,slow=33						
BRTR	Keskin Array B	83.55	328	P	P	18 14 14.1	-0.2
	comp=Z,0.5nm,0.6s,mb3.8,baz=160,slow=7.9,SNR=6.3						
ABKAR	Akbulak array	84.07	349	eP	P	18 14 16.6	-0.1
	comp=Z,8.3nm,1.4s,mb4.7						
KURK	Kurchatov	84.08	1	P	P	18 14 16.1	-0.6
	comp=Z,1.2nm,0.8s,mb4.1,baz=193,slow=5.0,SNR=10						
KSRS	Korea Array	85.01	38	LR	LR	18 50 04.8	
	comp=Z,74nm,19.3s,MS4.1,baz=221,slow=34						
SONM	Songino Array	85.25	19	P	P	18 14 22.8	+0.2
	comp=Z,1.9nm,1.0s,mb4.2,baz=216,slow=4.2,SNR=12						
SONM				LR	LR	18 49 27.3	
	comp=Z,123nm,21.5s,MS4.3,baz=248,slow=34						
ULN	Ulaanbaatar	85.46	20	eP	P	18 14 23.6	-0.1
	comp=Z,12nm,1.5s,mb4.8						
AKTK	Aktyubinsk	85.53	348	P	P	18 14 24.1	+0.1
AKTO	Aktyubinsk	85.53	348	P	P	18 14 24.1	+0.1
	comp=Z,1.2nm,0.5s,mb4.4,baz=197,slow=6.7,SNR=5.0						
TORD	Torodi Ar. Bea	85.67	289	P	P	18 14 25.1	-0.4
	comp=Z,3.2nm,1.0s,mb4.5,baz=102,slow=3.2,SNR=11						
TORD				LR	LR	18 49 17.9	
	comp=Z,90nm,19.6s,MS4.2,baz=30,slow=33						
BVAR	Borovoye Array	86.61	356	P	P	18 14 29.3	+0.1
	comp=Z,0.3nm,0.5s,mb3.7,baz=151,slow=9.5,SNR=5.3						
BVAR				LR	LR	18 51 50.7	
	comp=Z,67nm,18.6s,MS4.1,baz=78,slow=35						
DBIC	Dimbokro	87.26	28	LR	LR	18 49 31.2	
	comp=Z,71nm,19.2s,MS4.1,baz=120,slow=33						
ZAA0	Zalesovo Array	87.55	4	eP	P	18 14 33.4	-0.4
ZALV	Zalesovo Beam	87.55	4	P	P	18 14 33.3	-0.5
	comp=Z,1.6nm,0.7s,mb4.4,

comp=N,0.3nm,0.3s,baz=116,slow=13,SNR=7.7
ZALV Zalesovo Beam 18.05 23 P **P 18 17 51.7 +1.1**
comp=N,0.3nm,0.3s,baz=215,slow=13,SNR=4.6
MDRS Chennai 25.59 163 *ex* **P 18 19 05.2 -1.4**
MDRS *ex* x 18 22 58.2
MDRS *ex* x 18 34 18.2
MDRS *ex* x 18 42 38.2
MDRS *ex* x 18 44 21.2

IDC 11 18:15:05.6±4.5,54°53S×131°56W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.8/14,mbtmp4.0/3,MS3.7/1,Ms1 3.7/1, ms1mx2.9/21,Error ellipse: s-maj=131.1km s-min=44.2km az=55.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**35.65**	**180**	P	P	18 22 04.9	+0.4
	1.9nm,1.0s,baz=74,slow=4.2,SNR=6.1						
PPT	**Papeete**	**39.42**	**332**	LR	LR	18 34 18.9	
	comp=Z,102nm,20.0s,baz=172,slow=29						
ASAR	**Alice Springs**	**73.62**	**252**	P	P	18 26 40.5	-0.2
	1.2nm,0.8s,baz=141,slow=7.1,SNR=17						
WRA	**Warramunga Arr**	**76.33**	**255**	P	P	18 26 56.7	+0.3
	0.8nm,0.5s,baz=142,slow=6.0,SNR=16						
SONM	**Songino Array**	**143.98**	**284**	PKP	PKPdf	18 34 40.4	-1.5
	0.8nm,0.5s,baz=143,slow=3.7,SNR=8.3						
MKAR	**Makanchi Array**	**157.37**	**264**	PKPab	PKPab	18 35 34.5	+0.5
	0.4nm,0.8s,baz=111,slow=2.7,SNR=3.9						

NEIC 11 18:16:07.8±8.7,35°71N×71°16E,h35km,Error ellipse: s-maj=108.0km s-min=27.8km az=176.0
IDC 11 18:16:21.1±6.3,36°73N×71°36E,h75km±50km,mb3.0/2, mb1 3.4/7,mb1mx3.1/28,mbtmp3.4/7,ML3.7/2,Error ellipse: s-maj=51.8km s-min=38.6km az=63.0
ISCJB 11 18:16:23.7±2.4,36°9N±0°1×71°4E±0°2,h110km±20km, mb2.9/2,Error ellipse: s-maj=24.9km s-min=19.5km az=21.1
ISC 11 18:16:24.6±2.3,36°8N±0°1×71°4E±0°2,h107km±18km,n23, σ0s98/26,mb2.9/2,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.51**	**52**	Pn	**Pn**	**18 17 28.1**	**-2.5**
KSH				Sn	**Sn**	**18 18 12.0**	**-10**
KSH				smax			
	comp=N,170nm,0.6s						
KSH				smax			
	comp=E,130nm,0.5s						
AML	**Almayashu**	**5.58**	**18**	P	**Pn**	**18 17 45.7**	**+0.6**
	SNR=23						
AML	**Almayashu**	**5.58**	**18**	*e*Pn	**Pn**	**18 17 44.5**	**-0.7**
	comp=E,19nm,0.4s						
UCH	**Uchtor**	**5.90**	**23**	P	**Pn**	**18 17 50.6**	**+1.1**
	SNR=6.8						
KZA	**Kyzart**	**6.03**	**29**	P	**Pn**	**18 17 51.8**	**+0.5**
	SNR=6.0						
EKS2	**Erkin-Say**	**6.10**	**17**	P	**Pn**	**18 17 53.5**	**+1.3**
	SNR=22						
AAK	**Ala-Archa**	**6.27**	**22**	P	**Pn**	**18 17 55.2**	**+0.8**
	SNR=9.7						
AAK	**Ala-Archa**	**6.27**	**22**	P	**Pn**	**18 17 52.9**	**-1.6**
	comp=E,0.1nm,0.3s,baz=171,slow=4.2,SNR=12						
AAK				S	**Sn**	**18 19 04.7**	**+0.1**
	comp=E,0.0nm,0.3s,baz=131,slow=20,SNR=4.7						
AAK	**Ala-Archa**	**6.27**	**22**	*e*Pn	**Pn**	**18 17 54.4**	**-0.1**
	comp=E,15nm,0.4s						
AAK				*e*Sn	**Sn**	**18 19 03.7**	**-0.9**
CHMS	**Chumysh**	**6.68**	**22**	P	**Pn**	**18 18 00.4**	**+0.4**
	SNR=5.6						
USP	**Ospenovka**	**6.85**	**20**	P	**Pn**	**18 18 03.5**	**+1.1**
	SNR=5.9						
TKM2	**Tokmak 2**	**6.89**	**27**	P	**Pn**	**18 18 03.5**	**+0.6**
	SNR=5.3						
TKM2	**Tokmak 2**	**6.89**	**27**	*e*Pn	**Pn**	**18 18 01.2**	**-1.6**
	comp=E,4.2nm,0.4s						
MKAR	**Makanchi Array**	**12.84**	**36**	P	**Pn**	**18 19 22.4**	**-0.6**
	baz=215,slow=12,SNR=1.6						
KURK	**Kurchatov**	**14.81**	**18**	P	**Pn**	**18 19 49.2**	**+0.7**
	baz=207,slow=10,SNR=2.1						
KURK	**Kurchatov**	**14.81**	**18**	P	**Pn**	**18 19 49.1**	**+0.7**
BVAR	**Borovoye Array**	**16.20**	**358**	P	**Pn**	**18 20 04.1**	**-1.5**
	comp=E,0.4nm,0.3s,baz=161,slow=11,SNR=7.9						
AKTK	**Aktyubinsk**	**16.64**	**329**	P	**Pn**	**18 20 10.6**	**-0.5**
AKTO	**Aktyubinsk**	**16.64**	**329**	P	**Pn**	**18 20 10.6**	**-0.5**
	comp=E,0.4nm,0.3s,baz=126,slow=13,SNR=7.2						
ZALV	**Zalesovo Beam**	**19.48**	**24**	P	**P**	**18 20 42.7**	**-0.2**
	comp=E,0.4nm,0.3s,baz=227,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	**19.48**	**24**	P	**P**	**18 20 42.7**	**-0.2**
YKA	**Yellowknife Ar**	**80.89**	**3**	P	**P**	**18 28 27.5**	**+1.1**
	comp=E,0.1nm,0.6s,mb2.8,baz=352,slow=5.0,SNR=3.2						
ASAR	**Alice Springs**	**84.21**	**125**	P	**P**	**18 28 44.1**	**0.0**
	comp=E,0.2nm,0.9s,mb2.9,baz=304,slow=4.8,SNR=4.6						

IDC 11 18:35:26.1±2.3,50°30N×87°37E,h0km,mb1 3.5/4, mb1mx3.2/28,mbtmp3.5/4,ML3.5/4,Error ellipse: s-maj=21.7km s-min=12.1km az=91.0
NNC 11 18:35:28.0±2.7,50°14N×87°10E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=21.4km s-min=12.3km az=69.0
NEIC 11 18:35:28.3±1.8,50°41N×87°24E,h10km,mb3.2/1,Error ellipse: s-maj=26.7km s-min=9.6km az=95.0
ISC 11 18:35:26.8±1.3,50°40N±0°04×87°5E±0°1,h10km,n12, σ1s03/22,7C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.91**	**336**	*e*Pn	**Pn**	**18 36 27.2**	**+0.4**
ZAA0				*e*Sn	**Sn**	**18 37 13.1**	**+0.3**
ZALV	**Zalesovo Beam**	**3.91**	**336**	Pn	**Pn**	**18 36 28.0**	**+1.2**
	3.4nm,0.3s,baz=158,slow=14,SNR=51						
ZALV				Pg	**Pg**	**18 36 39.8**	**-1.9**
	2.0nm,0.3s,baz=157,slow=16,SNR=9.9						
ZALV				Sn	**Sn**	**18 37 15.7**	**+3.0**
	1.9nm,0.3s,baz=159,slow=20,SNR=5.4						
ZALV				Lg		18 37 34.3	
	2.8nm,0.3s,baz=154,slow=29,SNR=8.1						
MK31	**Makanchi Array**	**4.98**	**226**	⇑Pn	**Pn**	**18 36 41.7**	**+0.2**
	2.0nm,0.5s,baz=50,slow=11,SNR=189						
MK31				⇑Pg	**Pg**	**18 36 56.1**	**-6.0**
	4.6nm,0.6s,baz=53,slow=12,SNR=6.3						
MK31				⇓Sn	**Sn**	**18 37 39.7**	**+0.7**
	2.2nm,0.4s,baz=52,slow=22,SNR=8.4						
MK31				⇓Lg		18 37 55.1	
	5.0nm,0.5s,baz=46,slow=25,SNR=3.0						
MK31	**Makanchi Array**	**4.98**	**226**	*e*Pn	**Pn**	**18 36 41.6**	**+0.1**
MK31				*e*Sn	**Sn**	**18 37 39.7**	**+0.7**
MKAR	**Makanchi Array**	**4.98**	**226**	Pn	**Pn**	**18 36 41.8**	**+0.3**
	3.2nm,0.3s,baz=40,slow=14,SNR=132						
MKAR				Sn	**Sn**	**18 37 39.5**	**+0.5**
	1.9nm,0.3s,baz=39,slow=27,SNR=9.1						
MKAR				Lg		18 38 00.4	
	3.3nm,0.3s,baz=49,slow=32,SNR=8.2						
KURK	**Kurchatov**	**5.65**	**277**	⇓Pn	**Pn**	**18 36 50.2**	**-0.5**
	1.9nm,0.6s						
KURK				⇑Sn	**Sn**	**18 37 53.5**	**-2.0**
	3.6nm,0.6s						
KURK				⇑Lg		18 38 23.6	
	11nm,0.6s						
KURK	**Kurchatov**	**5.65**	**277**	Pn	**Pn**	**18 36 51.4**	**+0.7**
	0.5nm,0.3s,baz=91,slow=14,SNR=11						
KURK				Sn	**Sn**	**18 37 57.2**	**+1.7**
	0.2nm,0.3s,baz=95,slow=25,SNR=2.8						
KURK				Lg		18 38 23.0	
	0.5nm,0.3s,baz=88,slow=29,SNR=7.3						
KURBB	**Kurchatov Arra**	**5.71**	**276**	⇑Pn	**Pn**	**18 36 51.1**	**-0.3**
	0.4nm,0.3s						
KURBB				⇑Sn	**Sn**	**18 37 57.0**	**0.0**
	0.8nm,0.3s						
KURBB				⇑Lg		18 38 23.7	
	4.8nm,0.7s						
BVAR	**Borovoye Array**	**10.92**	**291**	Pn	**Pn**	**18 38 01.3**	**-1.5**
	0.2nm,0.3s,baz=103,slow=15,SNR=6.2						
BVAR				Sn	**Sn**	**18 40 00.4**	**-4.5**
	0.2nm,0.3s,baz=102,slow=25,SNR=5.8						
BRVK	**Borovoye**	**10.98**	**291**	*e*Pn	**Pn**	**18 38 03.4**	**-0.4**
	1.2nm,0.6s						
SONM	**Songino Array**	**12.66**	**94**	Lg		18 42 11.8	
	0.1nm,0.3s,baz=282,slow=28,SNR=6.4						
NIL	**Nilore**	**19.73**	**217**	P	**Pn**	**18 39 57.0**	**-0.9**
	0.4nm,0.3s						

IDC 11 18:38:28.9±2.1,8°82S×117°09E,h0km,mb3.3/5, mb1 3.6/6,mb1mx3.4/20,mbtmp3.5/6,ML3.4/1,Error ellipse: s-maj=137.1km s-min=19.8km az=52.0
NEIC 11 18:38:35.2±0.7,8°50S×117°58E,h35km,mb3.6/1,Error ellipse: s-maj=29.0km s-min=9.3km az=60.0
ISCJB 11 18:38:44.3±0.7,9°0S±0°1×117°33E±0°09,h159km±9km, mb3.1/4,Error ellipse: s-maj=21.9km s-min=9.0km az=33.1
DJA 11 18:38:45,8°53S×117°36E,h148km,MLv3.9/6
ISC 11 18:38:45.3±0.6,9°0S±0°1×117°33E±0°09,h151km±9km, n14,σ1s12/22,mb3.1/4,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**1.82**	**291**	P	**Pn**	**18 39 17.6**	**-0.9**
KHKI				S	**Sn**	**18 39 42.1**	**-1.8**
DNP	**Denpasar**	**2.12**	**279**	P	**Pn**	**18 39 23.5**	**+1.6**
IGBI	**Denpasar**	**2.17**	**275**	P	**Pn**	**18 39 23.7**	**+1.2**
IGBI				S	**Sn**	**18 39 52.8**	**+1.8**
SRBI	**Singaraja**	**2.29**	**294**	P	**Pn**	**18 39 23.8**	**-0.1**
SRBI				S	**Sn**	**18 39 52.5**	**-1.2**
WSI	**Waingapu**	**3.00**	**103**	P	**Pn**	**18 39 33.9**	**+1.2**
GMJI	**Gumukmas**	**3.91**	**281**	P	**Pn**	**18 39 41.6**	**-2.9**
GMJI				S	**Sn**	**18 40 31.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**12.11**	**139**	Pn	**Pn**	**18 41 29.0**	**-4.0**
	0.2nm,0.3s,baz=324,slow=13,SNR=14						
FITZ				Sn	**Sn**	**18 43 35.0**	**-12**
	0.3nm,0.3s,baz=77,slow=19,SNR=6.3						
MBWA	**Marble Bar**	**12.29**	**169**	*e*Pn	**Pn**	**18 41 34.3**	**-1.0**
	2.5nm,0.4s						
MBWA				*e*Sn	**Sn**	**18 43 37.3**	**-14**
WRA	**Warramunga Arr**	**19.70**	**125**	P	**P**	**18 43 02.7**	**-0.4**
	1.9nm,0.4s,baz=300,slow=12,SNR=40						
WRA				S	**S**	**18 46 32.5**	**-4.7**
	0.2nm,0.7s,baz=293,slow=24,SNR=3.4						
WRAB	**Tennant Creek**	**19.71**	**125**	*e*P	**P**	**18 43 02.9**	**-0.2**
	2.2nm,0.6s						
ASAR	**Alice Springs**	**21.53**	**135**	P	**P**	**18 43 23.1**	**+0.5**
	0.3nm,0.6s,mb2.9,baz=309,slow=9.6,SNR=16						
ASAR				S	**S**	**18 47 22.4**	**+10**
	0.2nm,0.6s,baz=302,slow=22,SNR=4.5						
SONM	**Songino Array**	**57.43**	**351**	P	**P**	**18 48 18.1**	**+0.1**
	0.1nm,0.4s,mb3.0,baz=152,slow=6.5,SNR=2.8						
MKAR	**Makanchi Array**	**63.73**	**334**	P	**P**	**18 49 00.8**	**0.0**
	0.4nm,0.7s,mb3.4,baz=158,slow=7.2,SNR=4.4						
BVAR	**Borovoye Array**	**73.54**	**333**	P	**P**	**18 50 01.8**	**+0.4**
	0.2nm,0.4s,mb3.2,baz=145,slow=10,SNR=3.3						

ISCJB 11 18:42:25.6±0.8,47°4N±0°1×27°4W±0°1,h10km,mb3.9/18, MS3.2/13,Error ellipse: s-maj=15.9km s-min=9.0km az=17.4
IDC 11 18:42:26.0±1.0,47°32N×27°43W,h0km,mb3.7/9, mb1 3.9/11,mb1mx3.7/32,mbtmp3.7/11,ML4.3/2,MS3.3/12, Ms1 3.3/12,ms1mx3.1/38,Error ellipse: s-maj=29.5km s-min=18.7km az=15.0
CSEM 11 18:42:27.3±0.5,47°45N×27°31W,h10km,mb4.2/8,Ms2.9, Error ellipse: s-maj=20.0km s-min=11.1km az=17.0
NEIC 11 18:42:27.3±0.7,47°37N×27°34W,h10km,mb4.1/20,Error ellipse: s-maj=15.1km s-min=8.5km az=197.0
ISC 11 18:42:27.8±0.8,47°4N±0°1×27°33W±0°10,h10km,n105, σ0s88/96,mb3.9/18,MS3.2/13,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**16.16**	**78**	*e*P	**Pn**	**18 46 13.9**	**-0.9**
	20nm,1.1s						
ROSF	**Rostrenen**	**16.16**	**78**	*e*P	**Pn**	**18 46 13.9**	**-0.9**
	10.0nm,1.1s						
SGMF	**Saint Gilles**	**16.65**	**78**	*e*P	**Pn**	**18 46 21.6**	**+0.6**
	40nm,1.3s						
SGMF	**Saint Gilles**	**16.65**	**78**	*e*P	**Pn**	**18 46 21.6**	**+0.6**
	20nm,1.3s						
SGMF	**Saint Gilles**	**16.65**	**78**	*e*P	**Pn**	**18 46 21.6**	**+0.6**
	20nm,1.3s						
EKA	**Eskdalemuir Ar**	**16.99**	**53**	P	**Pn**	**18 46 25.4**	**+0.1**
	baz=250,slow=12,SNR=7.7						
EKA	**Eskdalemuir Ar**	**16.99**	**53**	P	**Pn**	**18 46 25.4**	**+0.1**
BORG	**Borgarnes**	**17.70**	**8**	*e*P	**Pn**	**18 46 33.0**	**-1.0**
	60nm,1.1s						
BORG	**Borgarnes**	**17.70**	**8**	*e*P	**Pn**	**18 46 33.0**	**-1.0**
	60nm,1.1s						
FLN	**La Foiniere**	**17.96**	**76**	*e*P	**Pn**	**18 46 38.6**	**+1.2**
	22nm,1.2s						
FLN				*e*MLR	MLR		
	comp=Z,114nm,20.8s						
FLN	**La Foiniere**	**17.96**	**76**	*e*P	**Pn**	**18 46 38.6**	**+1.2**
	comp=Z,11nm,1.2s						
FLN	**La Foiniere**	**17.96**	**76**	*e*P	**Pn**	**18 46 38.6**	**+1.2**
	comp=Z,11nm,1.2s						
LDF	**La Druitiere**	**18.22**	**76**	*e*P	**Pn**	**18 46 41.6**	**+1.1**
	comp=Z,24nm,1.3s						
LDF	**La Druitiere**	**18.22**	**76**	*e*P	**Pn**	**18 46 41.6**	**+1.1**
	comp=Z,12nm,1.3s						
LDF	**La Druitiere**	**18.22**	**76**	*e*P	**Pn**	**18 46 41.6**	**+1.1**
	comp=Z,12nm,1.3s						
MFF	**Saint Martin d**	**18.53**	**82**	*e*P	**Pn**	**18 46 43.4**	**-1.0**
	comp=Z,8.9nm,1.0s						
MFF	**Saint Martin d**	**18.53**	**82**	*e*P	**Pn**	**18 46 43.4**	**-1.0**
	comp=Z,4.4nm,1.0s						
MFF	**Saint Martin d**	**18.53**	**82**	*e*P	**Pn**	**18 46 43.4**	**-1.0**
	comp=Z,4.4nm,1.0s						
ESDC	**Sonseca Array**	**18.57**	**106**	P	**Pn**	**18 46 45.6**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=295,slow=12,SNR=19						
ESDC				LR	LR	18 51 58.2	
	comp=Z,84nm,19.9s,baz=130,slow=31						
ESDC	**Sonseca Array**	**18.57**	**106**	P	**Pn**	**18 46 45.6**	**+0.7**
ESDC				LR	LR	18 51 58.2	
ESDC	**Sonseca Array**	**18.57**	**106**	P	**Pn**	**18 46 45.6**	**+0.7**
ESLA	**Sonseca Array**	**18.57**	**106**	*e*P	**Pn**	**18 46 45.1**	**+0.2**
	comp=Z,0.3nm,0.4s						
ESLA	**Sonseca Array**	**18.57**	**106**	*e*P	**Pn**	**18 46 45.1**	**+0.2**
	comp=Z,0.3nm,0.4s						
SJPF	**Ste Jean**	**18.84**	**94**	*e*P	**Pn**	**18 46 43.6**	**-4.5**
	comp=Z,44nm,1.3s						
SJPF	**Ste Jean**	**18.84**	**94**	*e*P	**Pn**	**18 46 43.6**	**-4.5**
	comp=Z,22nm,1.3s						
SJPF	**Ste Jean**	**18.84**	**94**	*e*P	**Pn**	**18 46 43.6**	**-4.5**
	comp=Z,22nm,1.3s						
EPF	**Esparros**	**19.93**	**92**	*e*P	**Pn**	**18 46 56.7**	**-4.5**
	comp=Z,26nm,1.3s						
EPF	**Esparros**	**19.93**	**92**	*e*P	**Pn**	**18 46 56.7**	**-4.5**
	comp=Z,13nm,1.3s						
EPF	**Esparros**	**19.93**	**92**	*e*P	**Pn**	**18 46 56.7**	**-4.5**
	comp=Z,13nm,1.3s						
TCF	**Toulx Ste Croi**	**20.19**	**82**	*e*P	**P**	**18 47 01.8**	**-0.5**
	comp=Z,28nm,1.4s						
TCF	**Toulx Ste Croi**	**20.19**	**82**	*e*P	**P**	**18 47 01.8**	**-0.5**
	comp=Z,14nm,1.4s						
TCF	**Toulx Ste Croi**	**20.19**	**82**	*e*P	**P**	**18 47 01.8**	**-0.5**
	comp=Z,14nm,1.4s						
BGF	**Bois d'Agland**	**20.55**	**81**	*e*P	**P**	**18 47 05.9**	**-0.4**
BGF	**Bois d'Agland**	**20.55**	**81**	*e*P	**P**	**18 47 05.9**	**-0.4**
AVF	**Avril sur Loir**	**20.84**	**80**	*e*P	**P**	**18 47 09.1**	**-0.3**
	comp=Z,20nm,1.3s						
AVF	**Avril sur Loir**	**20.84**	**80**	*e*P	**P**	**18 47 09.1**	**-0.3**
	comp=Z,10nm,1.3s						
AVF	**Avril sur Loir**	**20.84**	**80**	*e*P	**P**	**18 47 09.1**	**-0.3**
	comp=Z,10nm,1.3s						
SSF	**Saint Saulge**	**20.88**	**79**	*e*P	**P**	**18 47 10.0**	**+0.2**
	comp=Z,34nm,1.4s						
SSF	**Saint Saulge**	**20.88**	**79**	*e*P	**P**	**18 47 10.0**	**+0.2**
	comp=Z,17nm,1.4s						
SSF	**Saint Saulge**	**20.88**	**79**	*e*P	**P**	**18 47 10.0**	**+0.2**
	comp=Z,17nm,1.4s						
BAIF	**Baives**	**20.90**	**71**	*e*P	**P**	**18 47 10.0**	**0.0**
	comp=Z,17nm,1.0s						
BAIF	**Baives**	**20.90**	**71**	*e*P	**P**	**18 47 10.0**	**0.0**
	comp=Z,8.7nm,1.0s						
BAIF	**Baives**	**20.90**	**71**	*e*P	**P**	**18 47 10.0**	**0.0**
	comp=Z,8.7nm,1.0s						
SNF	**Seneffe**	**20.91**	**70**	P	**P**	**18 47 10.4**	**+0.3**
UCC	**Uccle**	**20.94**	**69**	P	**P**	**18 47 11.3**	**+0.9**
LOR	**Lormes**	**21.07**	**79**	*e*P	**P**	**18 47 11.7**	**-0.2**
	comp=Z,10nm,0.9s,mb3.9						
LOR				*e*MLR	MLR		
	comp=Z,83nm,22.5s,MS2.8						
LOR	**Lormes**	**21.07**	**79**	*e*P	**P**	**18 47 11.7**	**-0.2**
	comp=Z,5.2nm,0.9s,mb3.9						
LOR				LR	LR		
	comp=Z,80nm,22.5s,MS3.0						
LOR	**Lormes**	**21.07**	**79**	*e*P	**P**	**18 47 11.7**	**-0.2**
	comp=Z,5.2nm,0.9s,mb3.9						
DOU	**Dourbes**	**21.14**	**71**	P	**P**	**18 47 12.7**	**+0.1**
SMF	**Signal de Mont**	**21.20**	**80**	*e*P	**P**	**18 47 13.2**	**-0.1**
	comp=Z,36nm,1.2s,mb4.3						
SMF	**Signal de Mont**	**21.20**	**80**	*e*P	**P**	**18 47 13.2**	**-0.1**
	comp=Z,18nm,1.2s,mb4.3						
SMF	**Signal de Mont**	**21.20**	**80**	*e*P	**P**	**18 47 13.2**	**-0.1**
	comp=Z,18nm,1.2s,mb4.3						
GIVF	**Givet**	**21.29**	**71**	*e*P	**P**	**18 47 14.1**	**-0.1**
	comp=Z,15nm,0.8s,mb4.0						
GIVF	**Givet**	**21.29**	**71**	*e*P	**P**	**18 47 14.1**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.1						
GIVF	**Givet**	**21.29**	**71**	*e*P	**P**	**18 47 14.1**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.0						
BCLA	**Clavier**	**21.57**	**70**	P	**P**	**18 47 15.4**	**-1.8**
MEZF	**Maizieres J'vi**	**21.64**	**75**	*e*P	**P**	**18 47 18.1**	**+0.1**
	comp=Z,36nm,1.0s,mb4.4						
MEZF	**Maizieres J'vi**	**21.64**	**75**	*e*P	**P**	**18 47 18.1**	**+0.1**
	comp=Z,36nm,1.0s,mb4.8						
MEZF	**Maizieres J'vi**	**21.64**	**75**	*e*P	**P**	**18 47 18.1**	**+0.1**
	comp=Z,18nm,1.0s,mb4.4						
MEM	**Membach**	**22.00**	**69**	P	**P**	**18 47 22.5**	**+0.7**
MDT	**Midelt**	**22.56**	**122**	LR	LR	18 54 33.4	
	comp=Z,33nm,18.8s,MS2.8,baz=98,slow=32						
HAU	**Haudompre**	**22.58**	**76**	*e*P	**P**	**18 47 27.6**	**-0.4**
HAU				*e*MLR	MLR		
	comp=Z,84nm,20.2s,MS2.9						
HAU	**Haudompre**	**22.58**	**76**	*e*P	**P**	**18 47 27.6**	**-0.4**
HAU				LR	LR		
	comp=Z,80nm,20.3s,MS3.1						
HAU	**Haudompre**	**22.58**	**76**	*e*P	**P**	**18 47 27.6**	**-0.4**
CABF	**La Chapelle**	**22.71**	**80**	*e*P	**P**	**18 47 28.5**	**-0.9**
	comp=Z,38nm,1.6s,mb4.3						
CABF	**La Chapelle**	**22.71**	**80**	*e*P	**P**	**18 47 28.5**	**-0.9**
	comp=Z,19nm,1.6s,mb4.3						
CABF	**La Chapelle**	**22.71**	**80**	*e*P	**P**	**18 47 28.5**	**-0.9**
	comp=Z,19nm,1.6s,mb4.3						
HINF	**Hinterlalfeld**	**22.95**	**76**	*e*P	**P**	**18 47 30.6**	**-1.3**
HINF	**Hinterlalfeld**	**22.95**	**76**	*e*P	**P**	**18 47 30.6**	**-1.3**
SFJD	**Kangerlussuaq**	**23.07**	**337**	LR	LR	18 54 24.3	
	comp=Z,83nm,18.1s,MS3.2,baz=317,slow=31						
CDF	**Champ du Feu**	**23.11**	**75**	*e*P	**P**	**18 47 34.0**	**+0.4**
	comp=Z,3.9nm,0.6s,mb3.7						
CDF	**Champ du Feu**	**23.11**	**75**	*e*P	**P**	**18 47 34.0**	**+0.4**
	comp=Z,2.0nm,0.6s,mb3.7						
CDF	**Champ du Feu**	**23.11**	**75**	*e*P	**P**	**18 47 34.0**	**+0.4**
	comp=Z,2.0nm,0.6s,mb3.7						
LMR	**La Mourre**	**24.01**	**87**	*e*P	**P**	**18 47 39.5**	**-3.0**
	comp=Z,50nm,1.3s,mb4.5						
LMR	**La Mourre**	**24.01**	**87**	*e*P	**P**	**18 47 39.5**	**-3.0**
	comp=Z,25nm,1.3s,mb4.5						
LMR	**La Mourre**	**24.01**	**87**	*e*P	**P**	**18 47 39.5**	**-3.0**
	comp=Z,25nm,1.3s,mb4.5						
DAVOX	**Davos/Dischmat**	**25.19**	**78**	P	**P**	**18 47 57.1**	**+3.9**
	comp=Z,2.2nm,0.8s,mb3.7,baz=282,slow=10,SNR=4.0						
DAVOX				LR	LR	18 56 23.8	
	comp=Z,61nm,20.3s,MS3.1,baz=266,slow=33						
SCHQ	**Schefferville**	**25.60**	**302**	LR	LR	18 57 04.5	
	comp=Z,99nm,18.1s,MS3.4,baz=110,slow=34						
NAO01	**NORSAR Array S**	**25.69**	**44**	P	**P**	**18 47 55.9**	**-1.7**
	comp=Z,4.0nm,0.8s,mb4.0						
NAO01	**NORSAR Array S**	**25.69**	**44**	P	**P**	**18 47 55.8**	**-1.8**
	comp=Z,4.0nm,0.8s,mb4.0						
NOA	**NORSAR Array B**	**25.89**	**44**	LR	LR	18 56 49.3	
	comp=Z,31nm,19.9s,MS2.8,baz=270,slow=33						
CLL	**Collm**	**26.33**	**66**	*e*P	**P**	**18 48 05.0**	**+1.6**
HFS	**Hagfors**	**26.90**	**47**	LR	LR	18 57 28.9	
	comp=Z,40nm,18.9s,MS3.0,baz=312,slow=33						
GERES	**GERESS Array B**	**27.20**	**72**	LR	LR	18 57 46.9	
	comp=Z,76nm,20.0s,MS3.3,baz=92,slow=34						
VRAC	**Vranov**	**28.95**	**70**	LR	LR	18 58 19.0	
	comp=Z,77nm,20.5s,MS3.3,baz=313,slow=33						
RES	**Resolute Bay**	**39.08**	**337**	P	**P**	**18 49 53.7**	**-0.7**
	comp=Z,1.0nm,0.9s,mb3.6,baz=85,slow=9.8,SNR=4.0						
RES	**Resolute Bay**	**39.08**	**337**	P	**P**	**18 49 53.7**	**-0.7**
RES	**Resolute Bay**	**39.08**	**337**	P	**P**	**18 49 53.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**41.88**	**135**	P	**P**	**18 50 17.1**	**-1.0**
	comp=Z,4.7nm,0.8s,mb4.2,baz=331,slow=7.9,SNR=23						
TORD				LR	LR	19 06 43.0	
	comp=Z,74nm,19.4s,MS3.6,baz=330,slow=35						
ULM	**Lac du Bonnet**	**43.77**	**300**	LR	LR	19 06 38.3	
	comp=Z,70nm,18.6s,MS3.6,baz=294,slow=33						
BRTR	**Keskin Array B**	**43.84**	**77**	P	**P**	**18 50 34.7**	**+0.9**
	comp=Z,0.7nm,0.8s,mb3.4,baz=305,slow=4.4,SNR=4.3						
BRTR	**Keskin Array B**	**43.84**	**77**	P	**P**	**18 50 34.7**	**+0.9**
YKA	**Yellowknife Ar**	**48.33**	**322**	PcP	PcP	18 52 34.6	-0.7
	comp=Z,0.4nm,0.8s,baz=53,slow=4.0,SNR=3.7						
AKTK	**Aktyubinsk**	**53.18**	**53**	P	**P**	**18 51 46.5**	**+0.9**

LAST	Lasithi	0.81	58	P	Pg	19 55 23.2	-0.5
KARN	Karanos	0.90	318	*e*PG	Pg	19 55 24.4	-1.1
KARN	Karanos	0.90	318	*e*Pg	Pg	19 55 24.4	-1.1
NPS	Neapolis	0.95	56	P	Pg	19 55 26.5	0.0

ISCJB ***11*** *19:56:14.9±1.2,20°.1S±0°.1×177°.7W±0°.1, h459km±16km, mb3.8/14, Error ellipse: s-maj=20.2km s-min=12.2km az=42.4*
NEIC ***11*** *19:56:16.8±1.0,20°.29S×177°.55W, h480km±11km, mb4.0/7, Error ellipse: s-maj=16.5km s-min=9.5km az=137.0*
IDC ***11*** *19:56:16.9±2.3,20°.25S×177°.64W, h470km±27km, mb3.3/8, mb1 3.5/10, mb1mx3.3/18, mbtmp3.4/10, Error ellipse: s-maj=30.6km s-min=15.6km az=138.0*

ISC 11 19:56:16.8±1.5,20°.2S±0°.1×177°.7W±0°.1,h471km±19km, n30,σ0°97/23,mb3.8/14,1C-2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.43**	**43**	P	**P**	**19 58 17.3**	**0.0**
	1.3nm,0.3s,baz=243,slow=6.8,SNR=3.1						
AFI				S	**S**	**19 59 50.3**	**-5.7**
	1.5nm,0.3s,baz=55,slow=19,SNR=3.3						
AFI	**Afiamalu**	**8.43**	**43**	P	**P**	**19 58 17.3**	**0.0**
AFI				S	**S**	**19 59 50.3**	**-5.7**
URZ	**Urewera**	**18.54**	**193**	P	**P**	**20 00 03.0**	**-0.5**
	1.4nm,0.3s,baz=186,slow=4.5,SNR=6.3						
URZ				S	**S**	**20 03 19.5**	**+11**
	0.3nm,0.3s,baz=162,slow=20,SNR=2.3						
CTAO	**Charters Tower**	**33.84**	**264**	*e*P	**P**	**20 02 19.3**	**+0.3**
	8.8nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**38.20**	**244**	P	**P**	**20 02 55.5**	**+0.4**
	0.9nm,0.7s,mb3.3,baz=114,slow=15,SNR=3.4						
STKA	**Stephens Creek**	**38.20**	**244**	*e*P	**P**	**20 02 55.6**	**+0.5**
	2.7nm,1.0s,mb3.6						
ASAR	**Alice Springs**	**44.90**	**256**	P	**P**	**20 03 48.9**	**+0.3**
	3.5nm,0.8s,mb3.8,baz=98,slow=7.8,SNR=47						
WRAB	**Tennant Creek**	**44.95**	**262**	*e*P	**P**	**20 03 48.4**	**-0.6**
	2.1nm,0.8s,mb3.6						
WRA	**Warramunga Arr**	**44.96**	**262**	P	**P**	**20 03 48.9**	**-0.1**
	0.9nm,0.3s,mb3.6,baz=96,slow=7.8,SNR=53						
GUMO	**Guam**	**49.88**	**309**	*e*P	**P**	**20 04 25.2**	**-1.0**
	41nm,0.7s,mb4.9						
SBA	**Scott Base**	**58.16**	**184**	*e*P	**P**	**20 05 27.1**	**+3.1**
	4.0nm,0.8s,mb3.8						
MJAR	**Matsushiro Arr**	**70.18**	**323**	P	**P**	**20 06 40.8**	**-0.5**
	1.3nm,0.6s,mb3.6,baz=147,slow=5.7,SNR=6.3						
ASAJ	**Asahikawa**	**73.64**	**331**	P	**P**	**20 07 03.0**	**+1.6**
	3.3nm,0.6s,mb4.0,baz=205,slow=11,SNR=4.0						
PETK	**Petropavlovsk-**	**76.09**	**345**	P	**P**	**20 07 14.7**	**-0.2**
	5.4nm,0.9s,mb4.1,baz=122,slow=11,SNR=5.8						
NVAR	**Mina Array Bea**	**80.61**	**43**	P	**P**	**20 07 40.7**	**+1.2**
	0.6nm,0.7s,mb3.2,baz=214,slow=7.5,SNR=4.0						
MAW	**Mawson**	**81.93**	**200**	*e*P	**P**	**20 07 43.4**	**-2.5**
	0.4nm,0.7s,mb3.1						
N12A	**Clover Valley,**	**84.05**	**43**	*e*P	**P**	**20 07 56.8**	**-0.2**
	7.9nm,1.1s,mb4.2						
VNA2	**Neumayer--Watz**	**88.84**	**177**	*e*	**P**	**20 08 18.9**	**-0.5**
VNA2				*e*		21 18 45.6	
VNA2				*e*		21 25 39.6	
LKWY	**Lake**	**88.90**	**41**	*e*P	**P**	**20 08 18.9**	**-1.2**
	66nm,1.2s						
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	**P**	**20 08 28.0**	**+0.7**
	1.1nm,0.8s,mb3.7,baz=117,slow=2.4,SNR=8.4						
BVAR	**Borovoye Array**	**119.08**	**320**	PKP	PKPdf	20 14 09.9	-1.2
	0.4nm,0.5s,baz=111,slow=3.8,SNR=3.5						
AKASG	**Malin Array Be**	**142.93**	**332**	PKhKP		20 14 51.9	
	1.2nm,0.3s,baz=42,slow=4.1,SNR=25						
MALT	**Malatya**	**144.02**	**308**	*e*PKPbc	PKPdf	20 14 57.7	-0.5
BR131	**Keskin Array S**	**146.89**	**313**	*e*PKPbc	PKPbc	20 15 05.2	-0.6
BRTR	**Keskin Array B**	**146.89**	**313**	PKPbc	PKPbc	20 15 05.4	-0.4
	1.2nm,0.7s,baz=138,slow=4.2,SNR=8.8						
BUR08	**Bucovina Ar. S**	**146.97**	**331**	*e*PKPbc	PKPbc	20 15 05.5	-0.2
BURAR	**Bucovina Array**	**146.98**	**331**	⇑*i*P	PKPbc	20 15 06.9	+1.1
CLL	**Collm**	**147.87**	**347**	⇓*i*PKPbc	PKPbc	20 15 07.8	-0.2
	comp=Z,4.0nm,0.6s						
CLL				*i* PKPab	PKPab	20 15 11.4	-0.7
	comp=Z,3.0nm,0.9s						
CLL				*e*		20 15 23.0	
MLR	**Muntele Rosu**	**148.17**	**328**	⇓*i*P	PKPbc	20 15 09.7	+0.8
GERES	**GERESS Array B**	**150.03**	**345**	PKPbc	PKPbc	20 15 13.2	-0.2
	comp=Z,1.2nm,0.8s,baz=11,slow=1.0,SNR=10.0						

IDC 11 20:06:57.9±3.4,7°.05S×150°.80E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.4/16,mbtmp3.6/3,Error ellipse: s-maj=117.4km s-min=45.5km az=124.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.47**	**230**	P	P	20 11 37.5	+0.1
	0.9nm,0.6s,baz=55,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**23.15**	**223**	P	P	20 12 05.6	-0.5
	0.5nm,0.4s,baz=55,slow=8.9,SNR=13						
FITZ	**Fitzroy Crossi**	**26.86**	**244**	P	P	20 12 40.3	-0.2
	0.6nm,0.3s,baz=62,slow=14,SNR=7.9						
TORD	**Torodi Ar. Bea**	**149.01**	**284**	PKPbc	PKPbc	20 26 49.0	0.0
	0.2nm,0.5s,baz=73,slow=5.3,SNR=2.8						

MAN 11 20:13:14,12°.70N×123°.68E,h15km,mb4.7,ML3.6,MS3.6, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.34**	**190**	*e*P	Pg	20 13 22.2	+1.1
MMPH				*e*S	Sg	20 13 30.5	+4.6
CNP	**Catarman**	**0.97**	**101**	*e*P	Pb	20 13 34.2	+1.6
CNP				*e*S	Sb	20 13 47.8	+2.5
PVCP	**Virac**	**1.00**	**27**	*e*P	Pb	20 13 31.8	-1.2
PVCP				*e*S	Sb	20 13 41.2	-4.9
AUQP	**San Andres**	**1.16**	**302**	*e*P	Pn	20 13 35.1	-0.6
AUQP				*e*S	Sb	20 13 52.3	+1.6
RCP	**Roxas**	**1.46**	**219**	⇓*e*P	Pn	20 13 38.9	-0.9
RCP				*e*S	Sn	20 14 00.3	+1.7
BOAC	**Boac**	**1.94**	**293**	*e*P	Pn	20 13 48.3	+1.8
POLP	**Polilio Island**	**2.63**	**320**	*e*P	Pn	20 13 57.6	+1.6

MAN 11 20:35:15,12°.56N×123°.57E,h37km,mb4.7,ML3.6,MS3.6, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.07**	**92**	*e*P	Pn	20 35 34.8	+1.4
CNP				*e*S	Sn	20 35 46.7	-0.4
AUQP	**San Andres**	**1.16**	**311**	*e*P	Pn	20 35 35.2	+0.5
PVCP	**Virac**	**1.18**	**29**	*e*P	Pn	20 35 35.7	+0.7
RCP	**Roxas**	**1.28**	**219**	⇑*e*P	Pn	20 35 36.9	+0.6
RCP				*e*S	Sn	20 35 54.8	+2.5

ISCJB ***11*** *20:55:57.4±1.2,36°.09N±0°.05×21°.98E±0°.08, h10km, Error ellipse: s-maj=10.2km s-min=6.4km az=145.2*
THE ***11*** *20:55:58.6, 36°.15N×21°.71E, h5km±1km, ML3.3/5, Error ellipse: s-maj=2.6km s-min=0.8km az=264.0*
CSEM ***11*** *20:55:59.5±0.5, 36°.23N×21°.99E, h2km, MD3.2, Error ellipse: s-maj=11.4km s-min=4.6km az=48.0*
ATH ***11*** *20:56:00.8, 36°.28N×22°.03E, h5km, MD3.2/11*
NEIC ***11*** *20:56:00.8, 36°.28N×22°.03E, h5km, MD3.2(ATH), After ATH.*

ISC 11 20:55:56.8±1.5,36°.07N±0°.06×21°.89E±0°.09,h1km±7km, n34,σ0°76/44,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.84**	**352**	*e*PB	**Pg**	**20 56 12.6**	**-0.3**
PYL	**PYLOS**	**0.84**	**352**	P	**Pg**	**20 56 12.6**	**-0.3**
PYL				S	**Sg**	**20 56 23.8**	**+0.1**
PYL	**PYLOS**	**0.84**	**352**	P	**Pg**	**20 56 12.6**	**-0.3**
PYL				S	**Sg**	**20 56 23.8**	**+0.1**
KYTH	**Kithira**	**0.95**	**77**	*e*PG	**Pg**	**20 56 15.7**	**+0.6**
KYTH	**Kithira**	**0.95**	**77**	*e*Pg	**Pg**	**20 56 15.7**	**+0.6**
VLI	**Veliai**	**1.07**	**52**	*e*PB	**Pg**	**20 56 17.8**	**+0.5**
VLI	**Veliai**	**1.07**	**52**	*e*Pb	**Pg**	**20 56 17.8**	**+0.5**
ITM	**Ithomi**	**1.11**	**2**	*e*PG	**Pg**	**20 56 17.9**	**-0.2**
ITM	**Ithomi**	**1.11**	**2**	P	**Pg**	**20 56 17.7**	**-0.4**
ITM				S	**Sg**	**20 56 33.4**	**+0.8**
ITM	**Ithomi**	**1.11**	**2**	P	**Pg**	**20 56 17.7**	**-0.4**
ITM				S	**Sg**	**20 56 33.4**	**+0.8**
VLX	**Vlachokerasia**	**1.36**	**17**	*e*PG	**Pn**	**20 56 21.9**	**-1.0**
VLX	**Vlachokerasia**	**1.36**	**17**	P	**Pg**	**20 56 22.5**	**-0.4**
VLX				S	**Sg**	**20 56 41.8**	**+1.3**
VLX	**Vlachokerasia**	**1.36**	**17**	*e*Pg	**Pn**	**20 56 21.9**	**-1.0**
VLX	**Vlachokerasia**	**1.36**	**17**	P	**Pg**	**20 56 22.5**	**-0.4**
VLX				S	**Sg**	**20 56 41.8**	**+1.3**
KARN	**Karanos**	**1.78**	**111**	P	**Pg**	**20 56 31.7**	**+0.8**
KARN	**Karanos**	**1.78**	**111**	P	**Pg**	**20 56 31.7**	**+0.8**
DID	**Didima**	**1.80**	**37**	*e*PB	**Pb**	**20 56 30.5**	**-0.1**
DID	**Didima**	**1.80**	**37**	P	**Pg**	**20 56 30.1**	**-1.2**
DID				S	**Sg**	**20 56 54.2**	**-0.4**
DID	**Didima**	**1.80**	**37**	P	**Pg**	**20 56 30.1**	**-1.2**
DID	**Didima**	**1.80**	**37**	*e*Pb	**Pb**	**20 56 30.5**	**-0.1**
DID				S	**Sg**	**20 56 54.2**	**-0.4**
GUR	**Goura**	**1.90**	**11**	*e*PG	**Pg**	**20 56 32.2**	**-1.1**
GUR	**Goura**	**1.90**	**11**	P	**Pn**	**20 56 30.5**	**+0.1**
GUR				S	**Sn**	**20 56 55.0**	**0.0**
GUR	**Goura**	**1.90**	**11**	P	**Pn**	**20 56 30.5**	**+0.1**
GUR	**Goura**	**1.90**	**11**	*e*Pg	**Pg**	**20 56 32.2**	**-1.1**
GUR				S	**Sn**	**20 56 55.0**	**0.0**
RLS	**Riolos of Patr**	**2.02**	**350**	*e*PN	**Pb**	**20 56 36.2**	**+1.9**
LTK	**Loutraki**	**2.14**	**23**	*e*PN	**Pb**	**20 56 36.7**	**+0.4**
LTK	**Loutraki**	**2.14**	**23**	P	**Pb**	**20 56 36.3**	**0.0**
LTK	**Loutraki**	**2.14**	**23**	P	**Pb**	**20 56 36.3**	**0.0**
VLY	**Voula,Athens**	**2.35**	**40**	*e*PG	**Pg**	**20 56 40.9**	**-0.9**
VLY	**Voula,Athens**	**2.35**	**40**	*e*Pg	**Pg**	**20 56 40.9**	**-0.9**
EFP	**Efpalio**	**2.36**	**0**	*e*PG	**Pg**	**20 56 41.8**	**-0.2**
EFP	**Efpalio**	**2.36**	**0**	P	**Pn**	**20 56 36.4**	**-0.2**
EFP	**Efpalio**	**2.36**	**0**	P	**Pn**	**20 56 36.4**	**-0.2**
EFP	**Efpalio**	**2.36**	**0**	*e*Pg	**Pg**	**20 56 41.8**	**-0.2**

ISCJB ***11*** *20:56:31.8±1.2,34°.9N±0°.1×80°.2E±0°.2, h10km, mb4.0/5, Error ellipse: s-maj=22.0km s-min=11.5km az=145.3*
IDC ***11*** *20:56:31.7±1.9,34°.75N×80°.03E, h0km, mb3.9/3, mb1 3.8/6, mb1mx3.6/26, mbtmp3.7/6, ML3.3/3, Error ellipse: s-maj=41.5km s-min=25.1km az=58.0*
NEIC ***11*** *20:56:37.5±0.9, 34°.90N×80°.41E, h35km, mb3.5/2, Error ellipse: s-maj=19.8km s-min=10.9km az=57.0*

ISC 11 20:56:33.1±1.3,34°.8N±0°.1×80°.1E±0°.2,h10km,n14, σ0°93/14,mb4.0/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**10.67**	**116**	*e*Pn	**Pn**	**20 59 05.8**	**-0.2**
	5.1nm,0.9s						
MK31	**Makanchi Array**	**12.08**	**7**	*e*Pn	**Pn**	**20 59 24.7**	**-0.5**
MKAR	**Makanchi Array**	**12.08**	**7**	Pn	**Pn**	**20 59 25.0**	**-0.2**
	0.2nm,0.3s,baz=184,slow=13,SNR=15						
KURK	**Kurchatov**	**15.92**	**357**	Pn	**Pn**	**21 00 13.8**	**-3.3**
	0.0nm,0.3s,baz=176,slow=12,SNR=3.4						
KURK	**Kurchatov**	**15.92**	**357**	*e*Pn	**Pn**	**21 00 17.3**	**+0.2**
	3.1nm,1.1s						
GTA	**Gaotai**	**16.39**	**68**	*e*P	**Pn**	**21 00 23.6**	**+0.4**
GTA				pP	pP	21 00 28.1	-0.7
GTA				sP	sP	21 00 30.6	+0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	**Zalesovo Beam**	**19.42**	**8**	P	**Pn**	**21 00 59.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=196,slow=14,SNR=3.7						
ZALV	**Zalesovo Beam**	**19.42**	**8**	P	**Pn**	**21 00 59.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**23.38**	**129**	P	**P**	**21 01 41.4**	**-0.8**
	comp=Z,3.2nm,0.9s,mb3.8,baz=310,slow=11,SNR=9.3						
SONM	**Songino Array**	**23.52**	**48**	P	**P**	**21 01 45.7**	**+2.3**
	comp=Z,1.6nm,0.9s,mb3.5,baz=226,slow=10,SNR=7.8						
ULN	**Ulaanbaatar**	**23.94**	**49**	*e*Pn	**P**	**21 01 47.0**	**-0.2**
	comp=Z,2.0nm,0.9s,mb3.5						
AKASG	**Malin Array Be**	**39.74**	**310**	P	**P**	**21 04 06.4**	**+0.8**
	comp=Z,5.4nm,0.7s,mb4.4,baz=93,slow=7.4,SNR=2.1						
HAU	**Haudompre**	**54.84**	**308**	*e*P	**P**	**21 06 07.8**	**+4.5**
	comp=Z,19nm,0.7s,mb4.9						
HAU	**Haudompre**	**54.84**	**308**	*e*P	**P**	**21 06 07.8**	**+4.5**
	comp=Z,9.6nm,0.7s,mb4.9						

BGS ***11*** *20:56:55.0±1.2,35°.01N×71°.67E, h200km, mb5.3*
SZGRF ***11*** *20:56:59.4,35°.57N×71°.96E, h217km, mb5.6, Pakistan*
ISCJB ***11*** *20:57:06.5±0.1,36°.39N±0°.01×70°.72E±0°.01, h213km, mb5.2/382, Error ellipse: s-maj=2.0km s-min=1.5km az=19.0*
BJI ***11*** *20:57:06.5,36°.55N×70°.68E, h211km, mB5.1/29, mb5.3/56*
MOS ***11*** *20:57:07.1±0.8,36°.41N×70°.73E, h219km, mb5.2/100, MS4.0/12, Error ellipse: s-maj=5.1km s-min=2.9km az=132.0*
DJA ***11*** *20:57:07,36°.38N×70°.80E, h198km, mb5.6/39*
NEIC ***11*** *20:57:08.3±0.1,36°.41N×70°.75E, mb5.3/207, MW5.3, Error ellipse: s-maj=3.4km s-min=2.3km az=186.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\phi\theta}$0.00; $M_{\theta r}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1: ϕ_s96.00000°, δ69.00000°, λ83.00000°. NP2:ϕ_s294.00000°, δ22.00000°, λ107.00000°. Principal axes: T 1.4000, Plg65.0000°, Azm354.0000°; N -0.2200, Plg6.0000°, Azm97.0000°; P -1.1900, Plg23.0000°, Azm190.0000°;*
NEIC Felt at Kabul. Also felt at Islamabad, Pakistan.
IDC ***11*** *20:57:08.8±0.6,36°.39N×70°.81E, h224km±5km, mb5.0/46, mb1 5.1/51, mb1mx5.1/51, mbtmp5.0/51 Error ellipse: s-maj=6.7km s-min=5.6km az=4.0*
GCMT ***11*** *20:57:08.3±0.2,36°.38N×70°.62E, h218km±1km, MW5.4/101, Moment Tensor Solution. s65,c104; s101,c205; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.10±.02; $M_{\theta\theta}$-1.02±.02; $M_{\phi\phi}$-0.08±.02; $M_{r\theta}$1.10±.02; $M_{\phi\theta}$0.10±.02; $M_{\theta r}$0.10±.02; Best double couple: $M_0$1.53300×10^{17} NP1:ϕ_s282.00000°, δ22.00000°, λ103.00000°. NP2:ϕ_s88.00000°, δ68.00000°, λ85.00000°. Principal axes: T 1.5770, Plg67.0000°, Azm349.0000°; N -0.0900, Plg5.0000°, Azm90.0000°; P -1.4900, Plg23.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NNC ***11*** *20:57:10.5±2.5,36°.77N×70°.68E, h193km±18km, mb4.8, mpv6.0 Error ellipse: s-maj=19.0km s-min=16.1km az=6.0*

ISC 11 20:57:08.2±0.1,36°.42N±0°.01×70°.75E±0°.01,h215km, h215km±1.7km;pP-P,n1246,σ0°88/1261,mb5.2/380, 407C-122D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.33**	**217**	*e*Pn	**Pn**	**20 57 49.8**	**-1.5**
KBL				*e*Sn	**S**	**20 58 21.9**	**-3.0**
CEP	**Cherat**	**2.75**	**159**	⇓P	**Pn**	**20 57 55.0**	**-0.9**
CEP				S	**S**	**20 58 32.0**	**-1.3**
CHCP	**Chirah Chowk**	**3.44**	**142**	P	**Pn**	**20 58 03.3**	**-0.5**
SRNI	**Srinagar**	**4.07**	**123**	*e*P	x	20 58 01.0	
SRNI				*e*S	x	20 58 48.0	
SARP	**Sargodha**	**4.76**	**160**	P	**Pn**	**20 58 18.7**	**-1.3**
SARP				S	**S**	**20 59 12.0**	**-4.7**
JMU	**Jammu**	**5.03**	**136**	*i* P	**Pn**	**20 58 22.0**	**-1.4**
JMU				*i* S	**S**	**20 59 15.5**	**-7.4**
KSH	**Kashi**	**5.16**	**52**	⇓*i*P	**Pn**	**20 58 19.2**	**-5.7**
KSH				sP		20 59 00.1	
KSH				S	**S**	**20 59 13.1**	**-13**
KSH				pmax	pmax		
	comp=Z,1μm,2.0s						
KSH	**Kashi**	**5.16**	**52**	Pn	**Pn**	**20 58 19.4**	**-5.5**
KSH				Sn	**S**	**20 59 14.3**	**-11**
KSH				smax			
	comp=N,3μm,0.4s						
KSH				smax			
	comp=E,4μm,1.0s						
THN	**Thein Dam**	**5.71**	**133**	*e*P	**Pn**	**20 58 30.4**	**-1.6**
THN				*e*S	**S**	**20 59 32.6**	**-5.9**
DLH	**Dalhousie**	**5.79**	**130**	*ex*	**Pn**	**20 58 32.0**	**-1.0**
DLH				*ex*	**S**	**20 59 36.0**	**-4.2**
AML	**Almayashu**	**6.15**	**21**	P	**Pn**	**20 58 36.5**	**-1.0**
	SNR=2806						
AML	**Almayashu**	**6.15**	**21**	*e*Pn	**Pn**	**20 58 36.3**	**-1.2**
	comp=E,2μm,0.5s						
AML				*e*Sn	**S**	**20 59 45.3**	**-3.2**
UCH	**Uchtor**	**6.50**	**26**	P	**Pn**	**20 58 41.1**	**-0.8**
	SNR=2655						
UCH	**Uchtor**	**6.50**	**26**	*e*Pn	**Pn**	**20 58 40.9**	**-1.0**
UCH				*e*Sn	**S**	**20 59 53.8**	**-2.7**
UCH	**Uchtor**	**6.50**	**26**	*e*Pn	**Pn**	**20 58 40.9**	**-1.0**
	comp=E,2μm,1.0s						
UCH				*e*Sn	**S**	**20 59 47.6**	**-8.9**
KZA	**Kyzart**	**6.64**	**30**	P	**Pn**	**20 58 42.6**	**-1.3**
	SNR=463						
EKS2	**Erkin-Say**	**6.66**	**20**	P	**Pn**	**20 58 43.1**	**-0.9**
	SNR=1166						
EKS2	**Erkin-Say**	**6.66**	**20**	⇓*i*Pn	**Pn**	**20 58 43.2**	**-0.9**
	comp=E,2μm,1.2s						
KK09	**Karatay Array**	**6.70**	**358**	⇓P	**Pn**	**20 58 42.9**	**-1.7**
	comp=E,173nm,0.3s						
KK09				⇑S	**S**	**20 59 55.1**	**-6.2**
	comp=E,1μm,1.0s						
AAK	**Ala-Archa**	**6.85**	**24**	P	**Pn**	**20 58 45.8**	**-0.7**
	SNR=600						
AAK	**Ala-Archa**	**6.85**	**24**	P	**Pn**	**20 58 45.7**	**-0.8**
	comp=E,2.3nm,0.3s,baz=192,slow=6.9,SNR=380						
AAK				S	**S**	**21 00 04.2**	**-0.7**
	comp=E,0.5nm,0.3s,baz=328,slow=22,SNR=7.5						
AAK				PKiKP		21 13 14.0	
	comp=E,0.0nm,0.3s,baz=144,slow=4.6,SNR=4.9						
AAK	**Ala-Archa**	**6.85**	**24**	*d* PN	**Pn**	**20 58 45.4**	**-1.1**
AAK				pmax	pmax		
	comp=Z,587nm,1.7s						
AAK	**Ala-Archa**	**6.85**	**24**	*e*Pn	**Pn**	**20 58 45.7**	**-0.8**
AAK	**Ala-Archa**	**6.85**	**24**	⇑P	**Pn**	**20 58 45.8**	**-0.7**
	SNR=533						
AAK				⇑P		20 58 45.8	
	SNR=533						
BHK	**Bhakra**	**6.86**	**135**	*e*P	**Pn**	**20 58 42.0**	**-4.7**
BHK				*ex*	x	20 59 55.2	
QUE	**Quetta**	**6.98**	**208**	*e*PN	**Pn**	**20 58 48.0**	**-0.3**
QUE				*e*S	**S**	**21 00 04.0**	**-4.0**
KBK	**Karagaybulak**	**7.03**	**26**	P	**Pn**	**20 58 48.2**	**-0.5**
	SNR=1008						
FRU	**Bishkek**	**7.07**	**24**	⇓*i*PN	**Pn**	**20 58 48.0**	**-1.3**
FRU				pmax	pmax		
	comp=Z,2μm,1.6s						
FRU				pmax	pmax		
	comp=Z,5μm,2.0s						
SDNR	**Sundarnagar**	**7.12**	**132**	*ex*	x	20 59 57.1	
ULHL	**Ulahol**	**7.21**	**34**	P	**Pn**	**20 58 50.0**	**-1.2**
	SNR=110						
CHMS	**Chumysh**	**7.26**	**24**	P	**Pn**	**20 58 50.9**	**-0.9**
	SNR=112						
USP	**Ospenovka**	**7.42**	**22**	P	**Pn**	**20 58 52.6**	**-1.3**
	SNR=157						
TKM2	**Tokmak 2**	**7.49**	**28**	⇓P	**Pn**	**20 58 54.0**	**-0.8**
	comp=Z,3μm,1.1s						
TKM2				⇓S	**S**	**21 00 14.1**	**-5.8**
	comp=Z,1μm,1.7s						
TKM2	**Tokmak 2**	**7.49**	**28**	P	**Pn**	**20 58 54.0**	**-0.8**
	SNR=1978						
TKM2	**Tokmak 2**	**7.49**	**28**	⇓*i*PN	**Pn**	**20 58 53.9**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,115nm,0.6s						
TKM2	**Tokmak 2**	**7.49**	**28**	⇓*i*Pn	**Pn**	**20 58 53.9**	**-0.9**
	comp=Z,115nm,0.6s						
TKM2				*e*Sn	**S**	**21 00 08.0**	**-12**
SMLA	**Simla**	**7.50**	**133**	*i* x	**Pn**	**20 58 49.9**	**-5.2**
SMLA				*i* S	**S**	**21 00 11.5**	**-8.9**
SMLA				*ex*	x	21 00 15.0	
	comp=E,10μm,0.2s						
SMLA				*ex*	x	21 00 15.3	
	comp=N,11μm,0.4s						
AAA	**Alma-Ata**	**8.34**	**33**	*i* PN	**Pn**	**20 59 05.0**	**-0.7**
AAA				pmax	pmax		
	comp=Z,7μm,1.7s						
DDI	**Dehra Dun**	**8.61**	**133**	⇑*i*P	**Pn**	**20 59 07.5**	**-1.9**
DDI				*e*S	**S**	**21 00 38.0**	**-8.5**
KHET	**Khetri**	**9.35**	**151**	*i* S	**S**	**21 00 54.4**	**-10**
KHET				AML	AML	21 00 58.7	
	comp=N,1μm,0.5s						
KHET				AML	AML	21 00 59.0	
	comp=E,2μm,0.7s						
NDI	**New Delhi**	**9.44**	**143**	*e*P	**Pn**	**20 59 16.0**	**-4.1**
NDI				*ex*	x	21 00 54.0	
AYAN	**Aya Nagar**	**9.57**	**144**	*e*P	**Pn**	**20 59 19.7**	**-2.0**
BISR	**Bishrakh**	**9.64**	**142**	*e*P	**Pn**	**20 59 20.6**	**-2.1**
SONA	**Sohna**	**9.74**	**145**	*e*P	**Pn**	**20 59 21.7**	**-2.3**
SONA				*e*S	**S**	**21 01 03.8**	**-10**
SONA				AML	AML	21 01 09.5	
	comp=E,1μm,0.5s						
SONA				AML	AML	21 01 09.7	
	comp=N,729nm,0.5s						
ABKT	**Ailbek**	**10.19**	**282**	Pn	**Pn**	**20 59 27.4**	**-2.3**
	comp=N,1μm,0.6s,SNR=87						
VAN	**Vannovskaya**	**10.21**	**282**	*d* P	**Pn**	**20 59 27.5**	**-2.3**
AJM	**Ajmer**	**10.45**	**160**	*e*P	**Pn**	**20 59 30.2**	**-2.8**
AJM				*e*S	**S**	**21 01 17.2**	**-13**
AJM				AML	AML	21 01 23.9	
	comp=N,786nm,0.5s						
AJM				AML	AML	21 01 45.5	
	comp=E,1μm,0.6s						
PTH	**Pithoragarh**	**10.49**	**128**	*e*P	**Pn**	**20 59 31.0**	**-2.5**
PTH				*ex*	x	21 01 08.0	
AGRA	**Agra**	**11.01**	**144**	*e*P	**Pn**	**20 59 37.6**	**-2.6**
AGRA				*e*S	**S**	**21 01 31.5**	**-12**
AGRA				AML	AML	21 01 38.6	
	comp=N,1μm,0.7s						
AGRA				AML	AML	21 01 39.2	
	comp=E,2μm,0.6s						
BHJ	**Bhuj**	**13.15**	**184**	*e*P	**Pn**	**21 00 04.6**	**-2.5**
MK31	**Makanchi Array**	**13.48

KURK pmax pmax
comp=Z,1.0nm,0.3s
KURK Kurchatov 15.38 19 *e*Pn **Pn 21 00 32.4 -1.7**
comp=Z,125nm,0.8s
KURK Kurchatov 15.38 19 ⇑P **Pn 21 00 32.5 -1.6**
SNR=84
KURK ⇑P 21 00 32.5
SNR=84
JBP Jabalpur 15.43 146 ⇓*i*P **Pn 21 00 30.9 -4.2**
JBP *i* x x 21 03 15.8
BANOM Banah 16.18 234 ⇓P **P 21 00 43.2 +0.1**
SNR=163
VOSK Vostochnaya 16.31 0 ⇓P **P 21 00 44.8 +0.6**
comp=Z,302nm,0.8s
VOSK ⇓S **S 21 03 45.4 +1.6**
comp=Z,1μm,2.3s
RAMN Ramite 16.44 121 *e*P **P 21 00 46.5 +0.4**
comp=Z,2μm,0.7s
BVA0 Borovoye Array 16.61 359 P **P 21 00 48.2 +0.6**
comp=Z,30nm,0.7s,baz=173,slow=13,SNR=1243
BVA0 ⇓S **S 21 03 47.2 -2.7**
comp=Z,101nm,1.4s,baz=171,slow=22,SNR=16
BVAR Borovoye Array 16.61 359 P **P 21 00 48.5 +0.9**
comp=Z,36nm,0.3s,baz=161,slow=9.4,SNR=416
BVAR S **S 21 03 50.5 +0.5**
baz=172,slow=24,SNR=11
BVAR PcP PcP 21 05 25.2 +0.4
comp=Z,2.1nm,0.3s,baz=210,slow=2.4,SNR=4.9
BVAR ScP ScP 21 08 36.4 -2.5
comp=Z,0.3nm,0.3s,baz=122,slow=2.3,SNR=3.5
BVAR PKiKP PKiKP 21 13 16.3 -1.3
comp=Z,1.1nm,0.3s,baz=280,slow=2.0,SNR=22
BVAR Borovoye Array 16.61 359 P **P 21 00 48.5 +0.9**
BVAR S **S 21 03 50.5 +0.6**
BVAR Borovoye Array 16.61 359 P **P 21 00 48.5 +0.9**
BVAR S **S 21 03 50.5 +0.5**
BVAR PcP PcP 21 05 25.2 +0.4
BVAR ScP ScP 21 08 36.4 -2.5
BRVK Borovoye 16.64 359*c i*P **P 21 00 48.8 +0.8**
BRVK pmax pmax
comp=Z,568nm,1.4s
BRVK Borovoye 16.64 359 *e*Pn **Pn 21 00 48.7 -0.5**
comp=Z,338nm,0.9s
BRVK Borovoye 16.64 359 ⇓P **P 21 00 49.1 +1.1**
SNR=177
BRVK ⇓P 21 00 49.1
SNR=177
AKTK Aktyubinsk 16.75 331 P **P 21 00 50.0 +0.8**
AKTK S **S 21 03 54.2 +1.4**
AKTO Aktyubinsk 16.75 331 ⇑P **P 21 00 49.4 +0.2**
comp=Z,222nm,1.0s
AKTO ⇓S **S 21 03 49.4 -3.5**
comp=Z,83nm,1.8s
AKTO Aktyubinsk 16.75 331 P **P 21 00 50.0 +0.8**
comp=Z,70nm,0.3s,baz=142,slow=9.9,SNR=2507
AKTO S **S 21 03 54.2 +1.4**
comp=Z,0.6nm,0.3s,baz=273,slow=20,SNR=8.3
NGP Nagpur 16.85 152 *e*P **P 21 00 47.1 -3.4**
NGP *e*x x 21 03 48.5
BIDO Bidbid 16.85 224 ⇑P **P 21 00 50.6 +0.1**
SNR=23
TAPN Taplejung 16.98 117 *e*P **P 21 00 54.2 +2.2**
comp=Z,616nm,0.6s
HATD Hatta, Dubai 17.06 231 ⇑P **P 21 00 53.3 +0.5**
SNR=28
WBK Wadi Bani Khal 17.14 220 ⇓P **P 21 00 54.9 +1.2**
SNR=55
ASHO Ashiyiah 17.20 231 ⇓P **P 21 00 55.0 +0.6**
SNR=85
NAZ Nazwa, Dubai 17.24 233 ⇑P **P 21 00 55.2 +0.4**
SNR=54
SMDO Samad 17.26 223 ⇑P **P 21 00 56.1 +1.0**
SNR=33
HOQ Hoqain 17.27 226 ⇓P **P 21 00 54.9 -0.3**
SNR=21
FAQ Al Faqa, Dubai 17.46 232 ⇓P **P 21 00 57.1 0.0**
SNR=36
ASUD Al Ashush, Dub 17.71 233 ⇑P **P 21 01 00.6 +0.7**
SNR=101
JMDO Jabal Madar 17.79 222 ⇓P **P 21 01 02.2 +1.4**
SNR=42
ARQ Araqi 17.92 227 ⇑P **P 21 01 03.0 +0.8**
SNR=43
BSY Bisya 17.98 224 ⇑P **P 21 01 04.2 +1.2**
SNR=68
POO Poona 18.02 170 *ex* **P 21 01 04.0 +0.7**
POO *ex* **S 21 04 23.8 +4.9**
LSA Lhasa 18.35 106 P **P 21 01 10.0 +3.2**
LSA S **S 21 04 24.6 -0.5**
LSA pmax pmax
comp=Z,190nm,0.9s
LSA LR LR
comp=N,580nm,13.1s
LSA LR LR
comp=E,400nm,13.7s
LSA LR LR
comp=Z,730nm,13.1s
LSA Lhasa 18.35 106 *e*P **P 21 01 09.3 +2.5**
LSA *e*S **S 21 04 26.9 +1.8**
LSA pmax pmax
comp=Z,177nm,0.7s
LSA Lhasa 18.35 106 *e*Pn **Pn 21 01 09.3 -0.2**
comp=Z,177nm,0.7s
LSA *e*S **S 21 04 26.9 +1.8**
LSA *e*PcP PcP 21 05 29.3 +1.2
LATR Latur 18.65 163 *ex* **P 21 01 09.5 -0.6**
MAK Makhachkala 19.02 297 *e*P **P 21 01 12.2 -1.7**
MAK *e*S **S 21 04 38.5 +0.5**
MAK pmax pmax
comp=Z,351nm,1.5s
MAK MLR MLR
comp=Z,1μm,22.0s
KAD Karad 19.27 170 *ex* **P 21 01 17.1 +0.2**
ZAA0 Zalesovo Array 20.08 25 ⇑*i*P **P 21 01 24.7 -0.3**
ZAA0 *e*pP 21 02 01.1
ZAA0 *e*S **S 21 04 57.3 -1.1**
ZALV Zalesovo Beam 20.08 25 P **P 21 01 25.1 0.0**
comp=Z,165nm,0.4s,baz=219,slow=11,SNR=546
ZALV S **S 21 04 58.1 -0.3**
comp=Z,46nm,0.8s,baz=196,slow=21,SNR=6.4
ZALV PKiKP PKiKP 21 13 16.6 -2.5
comp=Z,4.2nm,0.4s,baz=174,slow=1.3,SNR=20
ZALV Zalesovo Beam 20.08 25 P **P 21 01 25.1 0.0**
ZALV S **S 21 04 58.1 -0.3**
HYB Hyderabad 20.14 158 *i* P **P 21 01 26.5 +0.3**
comp=Z,320nm,1.0s
HYB *e*sP sP 21 02 30.0 +1.3
HYB *e*S **S 21 05 00.0 -0.4**
NVS Novosibirsk 20.33 21 ⇑*i*P **P 21 01 27.6 -0.2**
NVS *i* S **S 21 05 02.8 -0.5**
NVS pmax pmax
comp=Z,784nm,1.2s
NVS pmax pmax
comp=N,1μm,1.6s
NVS smax
comp=E,1μm,1.6s
NVS smax
comp=N,255nm,1.1s
UMR Umm Al-Rimmam 20.47 257 *e*P **P 21 01 29.5 -0.1**
UMR AMb AMB 21 01 32.8
comp=Z,1μm,1.1s
KBD Kabd 20.66 256 *e*P **P 21 01 31.5 0.0**
KBD AMb AMB 21 01 34.2
comp=Z,892nm,0.6s
MIB Mutribah 20.66 258 *e*P **P 21 01 31.6 0.0**
MIB AMb AMB 21 01 34.7
comp=Z,2μm,0.8s
GNI Garni 20.73 288 *e*P **P 21 01 34.2 +2.0**
GNI Garni 20.73 288*c i*P **P 21 01 34.1 +1.9**
GNI pmax pmax
comp=Z,306nm,1.1s
GNI Garni 20.73 288 *e*P **P 21 01 33.9 +1.7**
comp=Z,272nm,0.9s
GNI Garni 20.73 288 ⇑P **P 21 01 34.4 +2.2**
SNR=94
GNI ⇑P 21 01 34.4
SNR=94
MTA Mtatsminda 20.80 293 P **P 21 01 33.0 +0.1**
TBLG Delisi 20.84 293 P **P 21 01 34.6 +1.2**
TBLG S **S 21 05 22.2 +9.1**
RDF Al-Radifah 20.88 256 *e*P **P 21 01 34.3 +0.5**
RDF AMb AMB 21 01 37.6
comp=Z,566nm,0.7s
GOA Goa 21.02 172 ⇓*i*P **P 21 01 36.0 +0.6**
GOA *i* S **S 21 05 17.4 +1.1**
SHL Shillong 21.05 115 ⇑*i*P **P 21 01 37.0 +1.3**

SHL *e*S **S 21 05 17.0 +0.2**
GOR Gori 21.34 293 P **P 21 01 40.6 +2.0**
CLDR Caldiran 21.36 285 *e*P **P 21 01 40.0 +1.2**
KEH Kehvi 21.51 294 P **P 21 01 39.9 -0.4**
SVE Sverdlovsk 21.52 345 ⇓*e*P **P 21 01 40.6 +0.3**
SVE *e*S **S 21 05 25.6 +1.8**
SVE pmax pmax
comp=Z,634nm,1.3s,mb6.0
ZEI Tsey 21.59 295 *e*P **P 21 01 40.4 -0.8**
ZEI *e*S **S 21 05 22.3 -3.0**
ZEI pmax pmax
comp=Z,75nm,0.7s,mb5.3
ARU Arti 21.65 341 P **P 21 01 41.5 -0.1**
comp=Z,7μm,1.0s
ARU Arti 21.65 341*c i*P **P 21 01 41.8 +0.2**
ARU *e* 21 02 12.9
ARU S **S 21 05 28.5 +2.6**
ARU pmax pmax
comp=Z,1μm,1.2s,mb6.3
ARU Arti 21.65 341 *e*P **P 21 01 41.6 +0.1**
comp=Z,866nm,0.9s,mb6.3
VIS Vishakhapatnam 21.69 146 *i* P **P 21 01 38.6 -3.8**
VIS *i* x x 21 05 26.1
DIGO Kars 21.78 289 *i* P **P 21 01 44.3 +1.3**
VANB Van 21.79 284 *e*P **P 21 01 42.8 -0.3**
BHD Baghdad 21.85 270 *i* P **P 21 01 40.0 -3.7**
BHD *i* S **S 21 05 27.0 -2.6**
ONI Oni 21.89 295 P **P 21 01 45.4 +1.4**
ONI S **S 21 05 40.2 +10**
KARS Kars 22.02 289 *e*P **P 21 01 47.0 +1.9**
AGRB Hanur-Agry 22.07 287 *e*P **P 21 01 47.7 +2.1**
MSL Mosul 22.22 278 *e*P **P 21 01 47.0 -0.1**
MSL *e*S **S 21 05 40.0 +4.4**
KIV Kislovodsk 22.65 298 P **P 21 01 51.7 +0.8**
comp=Z,565nm,0.5s,mb6.3,SNR=41
KIV Kislovodsk 22.65 298*c i*P **P 21 01 51.1 +0.2**
KIV *e**PP 21 02 26.0
KIV *e*S **S 21 05 42.9 +0.5**
KIV pmax pmax
comp=Z,83nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,191nm,13.0s
KIV Kislovodsk 22.65 298 *e*P **P 21 01 50.8 -0.1**
comp=Z,160nm,0.8s,mb5.6
KIV Kislovodsk 22.65 298 ⇓P **P 21 01 51.4 +0.5**
SNR=23
KIV ⇓P 21 01 51.4
SNR=23
HOMI Horasan 22.90 288 *i* P **P 21 01 55.9 +2.7**
ARTV Artvin 22.91 291 *i* P **P 21 01 54.6 +1.3**
DAGI Agillar 22.91 291 *i* P **P 21 01 55.1 +1.8**
IMP Imphal 23.02 114 *i* x **P 21 01 57.0 +2.6**
IMP *i* x x 21 05 59.0
DDEM Demirkent 23.03 290 *i* P **P 21 01 56.0 +1.6**
GTA Gaotai 23.08 74 ⇑*i*P **P 21 01 56.7 +1.8**
GTA pP 21 02 36.2
GTA sP sP 21 03 00.7 +0.2
GTA PcP PcP 21 05 35.7 -1.3
GTA S **S 21 05 54.5 +5.0**
GTA SS 21 07 05.8
GTA ScP ScP 21 08 52.9 -1.4
GTA PcS PcS 21 09 13.1 -3.1
GTA ScS ScS 21 12 38.2 -2.2
GTA pmax pmax
comp=Z,170nm,0.8s,mb5.6
GTA pmax pmax
comp=Z,710nm,4.5s
GTA LR LR
comp=N,430nm,13.8s
GTA LR LR
comp=E,410nm,14.6s
GTA LR LR
comp=Z,390nm,13.7s
DBOC Borcka 23.11 291 *i* P **P 21 01 56.3 +1.2**
BCA Borcka 23.15 291 *e*P **P 21 01 56.0 +0.5**
ERZM Erzurum 23.32 288 *i* P **P 21 01 59.7 +2.7**
BEST Besiri 23.50 282 *i* P **P 21 02 00.6 +1.9**
WHFO Wadi Hawf 23.76 224 ⇑P **P 21 02 01.2 -0.1**
SNR=16
RBK Rabkut 23.86 222 ⇑P **P 21 02 02.1 0.0**
SNR=11
KOPT Kop Dagi 23.98 288 *i* P **P 21 02 04.5 +1.4**
BINT Bingol 24.04 285 *e*P **P 21 02 07.4 +3.8**
DIYA Diyarbakir 24.41 283 *i* P **P 21 02 08.3 +1.4**
ABTO Aybut 24.48 224 ⇓P **P 21 02 07.7 0.0**
SNR=28
MACK Trabzon 24.54 290 *i* P **P 21 02 09.4 +1.3**
SOC Sochi 24.73 296*c i*P **P 21 02 09.9 +0.1**
SOC *e**PP 21 02 51.1
SOC *e*S **S 21 06 15.1 -0.4**
SOC pmax pmax
comp=Z,38nm,0.8s,mb5.1
GUMT Gumushane 24.76 289 *e*P **P 21 02 10.9 +0.8**
MDRS Chennai 24.76 157 *e*P x 21 01 35.7
MDRS *ex* pP 21 02 42.2 -10
MDRS *e*S PcP 21 05 40.2 -0.8
MDRS *ex* x 21 06 35.2
MDRS *ex* ScP 21 08 57.2 -2.0
MDRS *ex* x 21 11 27.2
EZC Erzincan 24.87 287 *e*P **P 21 02 12.6 +1.5**
SOKR Solikamsk 24.88 343*c i*P **P 21 02 12.2 +1.3**
SOKR pmax pmax
comp=Z,640nm,1.5s,mb6.0
SOKR MLR MLR
comp=Z,650nm,21.0s
PTK Pertek 24.89 285 *e*P **P 21 02 11.5 +0.2**
SVRC Sivrice-ELAZID 25.00 284 *e*P **P 21 02 12.8 +0.5**
ESPY Espiye-Giresun 25.32 290 *e*P **P 21 02 15.0 -0.2**
VRHR Novokhopersk 25.44 314*c i*P **P 21 02 15.7 -0.4**
VRHR pmax pmax
comp=Z,80nm,0.9s,mb5.3
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.9s
GRSN GIRESUNGRSN 25.67 290 *i* P **P 21 02 18.6 +0.2**
MALT Malatya 25.69 284 *e*P **P 21 02 19.4 +0.9**
MALT Malatya 25.69 284 ⇑*i*P **P 21 02 20.4 +1.9**
MALT pmax pmax
comp=Z,74nm,1.0s,mb5.3
MALT Malatya 25.69 284 ⇑*i*P **P 21 02 20.4 +1.8**
comp=Z,74nm,1.0s,mb5.3
MALT Malatya 25.69 284 ⇑*i*P **P 21 02 20.4 +1.9**
AKCD Akcadag 26.09 284 *i* P **P 21 02 23.5 +1.4**
MOY Mondy 26.31 45 *e*P **P 21 02 25.6 +1.7**
MOY *e* 21 03 13.4
MOY pmax pmax
comp=Z,97nm,2.1s,mb5.1
ANN Anapa 26.50 299*c i*P **P 21 02 24.9 -0.8**
ANN *i* *PP pP 21 03 06.6 -1.9
ANN *i* 21 03 17.2
ANN *e*S **S 21 06 44.5 +1.1**
ANN *i* 21 08 02.2
ANN pmax pmax
comp=Z,110nm,0.8s,mb5.5
LZH Lanzhou 26.62 81 ⇑P **P 21 02 28.5 +1.6**
LZH pP pP 21 03 09.4 -0.3
LZH PP PP 21 03 22.7 -8.8
LZH sP sP 21 03 33.6 -1.1
LZH PcP PcP 21 05 46.5 +1.6
LZH S **S 21 06 46.5 +0.9**
LZH sS sS 21 07 58.4 -4.3
LZH SS SS 21 08 18.2 -29
LZH ScP ScP 21 09 05.1 +0.8
LZH ScS ScS 21 12 55.3 +0.1
LZH pmax pmax
comp=Z,72nm,1.1s,mb5.2
LZH pmax pmax
comp=Z,210nm,5.0s
VORD Divnogorie 26.75 313 *e*P **P 21 02 27.3 -0.5**
VORD pmax pmax
comp=Z,90nm,1.2s,mb5.3
VORD pmax pmax
comp=N,100nm,0.6s
VORD pmax pmax
comp=E,80nm,0.6s
VSR Storozhevoye 26.91 313*c i*P **P 21 02 28.8 -0.5**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.0
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,20nm,1.0s

VOR Voronezh 27.08 314 ⇑*i*P **P 21 02 31.0 +0.2**
VOR pmax pmax
comp=Z,300nm,1.6s,mb5.7
ZAK Zakamensk 27.20 49 ⇓*e*P **P 21 02 32.6 +0.8**
ZAK *e* pP 21 03 19.2 +4.4
ZAK *e* 21 05 45.6
ZAK pmax pmax
comp=Z,27nm,1.4s,mb4.7
TLY Talaya 27.84 46 *e*P **P 21 02 39.1 +1.6**
TLY pmax pmax
comp=Z,20nm,0.8s,mb4.8
TLY Talaya 27.84 46 *e*P **P 21 02 39.1 +1.5**
comp=Z,20nm,0.8s,mb4.8
TLY Talaya 27.84 46 ⇑P **P 21 02 39.5 +2.0**
SNR=7.0
TLY ⇑P 21 02 39.5
SNR=7.0
CD2 Chengdu 27.93 92 P **P 21 02 39.9 +1.3**
CD2 pP pP 21 03 21.2 -0.5
CD2 PP PP 21 03 39.7 -6.4
CD2 sP sP 21 03 45.0 -1.6
CD2 S **S 21 07 06.8 +0.5**
CD2 sS sS 21 08 21.7 -1.9
CD2 SS SS 21 08 50.9 -23
CD2 pmax pmax
comp=Z,140nm,0.6s,mb5.8
CD2 pmax pmax
comp=Z,280nm,5.4s
ASF Jabal al Asfar 28.20 271 P **P 21 02 42.7 +1.7**
comp=Z,13nm,0.8s,mb4.6,baz=316,slow=4.7,SNR=33
IRK Irkutsk 28.41 46 ⇑*i*P **P 21 02 43.4 +0.9**
IRK *e* pP 21 03 30.4 +4.7
IRK *e* 21 03 51.0
IRK pmax pmax
comp=Z,89nm,2.9s,mb4.9
SONM Songino Array 28.55 55 P **P 21 02 45.3 +1.4**
comp=Z,20nm,0.8s,mb4.8,baz=266,slow=9.0,SNR=70
SONM PP PP 21 03 55.1 +2.4
comp=Z,18nm,0.8s,baz=267,slow=10,SNR=8.7
SONM PcP PcP 21 05 49.5 +0.1
comp=Z,7.2nm,0.6s,baz=243,slow=4.6,SNR=10
SONM ScP ScP 21 09 08.2 -1.8
comp=Z,4.5nm,0.9s,baz=206,slow=3.7,SNR=8.5
GULE Gulek 28.70 283 *i* P **P 21 02 47.5 +2.2**
CDAG Cicekdag 28.71 288 *i* P **P 21 02 39.0 -6.4**
SIM Simferopol' 28.86 299*c i*P **P 21 02 47.2 +0.6**
SIM *e**PP pP 21 03 33.0 +3.1
SIM *e*S **S 21 07 22.4 +1.9**
SIM *e**SS sS 21 08 37.0 -1.0
SIM pmax pmax
comp=Z,29nm,0.4s,mb5.3
ULN Ulaanbaatar 28.99 55 ⇑*i*P **P 21 02 48.8 +1.1**
ULN pmax pmax
comp=Z,41nm,1.1s,mb5.0
ULN Ulaanbaatar 28.99 55 ⇑*i*P **P 21 02 48.8 +1.0**
comp=Z,41nm,1.1s,mb5.0
BR131 Keskin Array S 29.27 288 *e*P **P 21 02 51.1 +0.8**
BRTR Keskin Array B 29.27 288 P **P 21 02 51.0 +0.8**
comp=Z,27nm,0.7s,mb5.0,baz=105,slow=9.3,SNR=220
BRTR pP pP 21 03 36.4 +2.8
comp=Z,12nm,1.0s,baz=96,slow=8.1,SNR=2.1
BRTR PcP PcP 21 05 50.9 -0.6
comp=Z,8.4nm,0.6s,baz=144,slow=3.7,SNR=12
BRTR PKiKP PKiKP 21 13 22.4 -2.1
comp=Z,1.0nm,0.8s,baz=9.5,slow=1.5,SNR=4.2
BRTR Keskin Array B 29.27 288 P **P 21 02 51.0 +0.8**
BRTR pP pP 21 03 36.4 +2.8
BRTR PcP PcP 21 05 50.9 -0.6
BALT Daday 29.34 292 *i* P **P 21 02 52.0 +1.1**
KMI Kunming 29.57 103 P **P 21 02 55.2 +2.1**
KMI pP pP 21 03 36.5 0.0
KMI PP PP 21 04 00.4 -4.0
KMI PcP PcP 21 05 55.3 +2.9
KMI S **S 21 07 33.4 +1.3**
KMI sS sS 21 08 47.1 -2.5
KMI ScP ScP 21 09 12.3 -1.4
KMI SS SS 21 09 24.7 -23
KMI PcS PcS 21 09 37.6 +1.7
KMI ScS ScS 21 13 06.7 -2.3
KMI pmax pmax
comp=Z,23nm,0.7s,mb4.9
KMI LR LR
comp=Z,110nm,15.9s
MOS Moscow 29.60 321 *e*P **P 21 02 49.9 -3.1**
MOS *e**PP pP 21 03 32.5 -3.8
MOS *e* 21 03 54.5
MOS *e*S **S 21 07 27.7 -4.1**
MOS *e* 21 09 22.3
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.2
MOS pmax pmax
comp=Z,448nm,1.3s,mb5.9
OBN Obninsk 29.87 320 P **P 21 02 55.1 -0.3**
comp=Z,3μm,0.5s,SNR=35
OBN Obninsk 29.87 320*c i*P **P 21 02 55.7 +0.3**
OBN *i* *PP pP 21 03 39.3 +0.5
OBN *i* 21 04 02.7
OBN *i* S **S 21 07 35.9 -0.2**
OBN pmax pmax
comp=Z,643nm,1.4s,mb6.1
OBN Obninsk 29.87 320 *e*P **P 21 02 55.6 +0.2**
comp=Z,274nm,0.6s,mb6.1
CHRT Chiangrai 30.29 115 P **P 21 03 00.0 +0.5**
comp=Z,105nm,1.0s,mb5.4
CSS Prodhromos 30.31 279 *e*P **P 21 02 59.1 -0.3**
comp=Z,20nm,0.6s,mb4.9
CSS *e*PcP PcP 21 05 53.2 -0.9
CHG Chiang Mai 30.36 118 ⇓P **P 21 03 01.5 +1.4**
comp=Z,36nm,0.7s,mb5.1
CHTO Chiang Mai 30.36 118 *e*P **P 21 03 00.7 +0.6**
CHTO pmax pmax
comp=Z,30nm,0.9s,mb4.9
CHTO Chiang Mai 30.36 118 *e*P **P 21 03 00.7 +0.6**
comp=Z,30nm,0.9s,mb4.9
PALK Pallekele 30.40 160 *e*P **P 21 03 00.7 +0.2**
PALK pmax pmax
comp=Z,34nm,0.5s,mb5.2
PALK Pallekele 30.40 160 *e*P **P 21 03 00.7 +0.3**
comp=Z,34nm,0.5s,mb5.2
CM31 Chiang Mai Arr 30.59 118 *e*P **P 21 03 02.6 +0.5**
CMAR Chiang Mai Arr 30.59 118 P **P 21 03 02.7 +0.6**
comp=Z,48nm,0.9s,mb5.2,baz=295,slow=8.0,SNR=116
CMAR pP pP 21 03 46.5 +0.9
comp=Z,8.7nm,1.0s,baz=296,slow=8.0,SNR=1.3
CMAR PcP PcP 21 05 54.8 -0.4
comp=Z,15nm,0.9s,baz=296,slow=5.3,SNR=6.9
CMAR ScP ScP 21 09 14.9 -2.1
comp=Z,11nm,0.9s,baz=290,slow=4.6,SNR=12
CMAR PKiKP PKiKP 21 13 24.4 -1.4
comp=Z,1.4nm,0.6s,baz=274,slow=2.7,SNR=9.9
CMAR Chiang Mai Arr 30.59 118 P **P 21 03 02.7 +0.6**
CMAR *PP pP 21 03 46.5 +0.9
CMAR 21 05 54.8
CMAR Chiang Mai Arr 30.59 118 P **P 21 03 02.7 +0.6**
CMAR pP pP 21 03 46.5 +0.9
CMAR PcP PcP 21 05 54.8 -0.4
CMAR ScP ScP 21 09 14.9 -2.1
BTO Baotou 30.84 70 *e*P **P 21 03 04.3 +0.2**
XAN Xi'an 31.14 83 P **P 21 03 07.4 +0.6**
XAN pP pP 21 03 49.9 -0.4
XAN PP PP 21 04 16.6 -5.0
XAN PcP PcP 21 06 00.7 +4.3
XAN SS SS 21 09 56.7 -23
XAN pmax pmax
comp=Z,43nm,0.8s,mb5.1
XAN pmax pmax
comp=Z,49nm,6.9s
BDT Bhumibol Dam 31.44 120 P **P 21 03 11.0 +1.4**
comp=Z,56nm,1.0s,mb5.2
KLMR Klimovskoe 31.46 331 ⇑*i*P **P 21 03 09.3 +0.1**
KLMR *e*S **S 21 08 02.1 +1.4**
KLMR pmax pmax
comp=Z,596nm,1.3s,mb6.1
ISP Isparta 31.94 285 P **P 21 03 14.4 +0.6**
ISP Isparta 31.94 285 *e*P **P 21 03 13.8 0.0**
comp=Z,37nm,0.7s,mb5.0
ISP Isparta 31.94 285 ⇑*i*P **P 21 03 14.0 +0.2**
HHC Hu-ho-hao-te 31.98 69 ⇑P **P 21 03 15.8 +1.7**
HHC pP pP 21 03 58.0 +0.3
HHC sP sP 21 04 21.3 -1.2
HHC PP PP 21 04 30.1 -0.8
HHC PcP PcP 21 06 00.7 +2.1
HHC S **S 21 08 11.0 +1.7**
HHC ScP ScP 21 09 23.6 +2.2

HHC sS sS 21 09 26.0 -1.1
HHC PcS PcS 21 09 44.5 +1.0
HHC SS SS 21 10 21.4 -6.5
HHC pmax pmax
comp=Z,32nm,1.4s,mb4.7
HHC pmax pmax
comp=Z,210nm,5.7s
HHC LR LR
comp=N,450nm,10.0s
HHC LR LR
comp=E,460nm,11.3s
HHC LR LR
comp=Z,250nm,11.0s
GYA Guiyang 32.05 98⇑ iP P 21 03 15.6 +0.7
GYA pP pP 21 03 57.8 -0.7
GYA sP sP 21 04 21.4 -1.8
GYA PP PP 21 04 32.8 +0.9
GYA PcP PcP 21 05 58.6 -0.4
GYA S **S 21 08 11.1 +0.4**
GYA ScS ScS 21 13 16.9 -4.3
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,250nm,4.2s
GDZ Gediz 32.54 287 *i* P **P 21 03 19.1 +0.2**
TLCR 32.62 299 ⇓P **P 21 03 20.0 +0.4**
TLCR 32.62 299 ⇓*i*P **P 21 03 20.0 +0.4**
KIS Kishinev 32.69 302 ⇑*i*P **P 21 03 18.0 -2.1**
comp=Z,400nm,1.0s,mb5.9
KIS *i* pP pP 21 04 01.0 -2.8
KIS Kishinev 32.69 302 *e*PP PP 21 04 30.0 -8.6
KIS *e*S **S 21 08 16.0 -4.1**
KIS *es*S sS 21 09 41.0 +3.0
KIS Kishinev 32.69 302 *i* P **P 21 03 18.0 -2.1**
KIS *i* *PP pP 21 04 01.0 -2.8
KIS *e* 21 04 30.0
KIS *e* 21 04 38.0
KIS *e*S **S 21 08 16.0 -4.1**
KIS *e* 21 10 40.0
KIS pmax pmax
comp=Z,380nm,1.0s,mb5.9
KIS Kishinev 32.69 302 P **P 21 03 20.4 +0.3**
KIS Kishinev 32.69 302 ⇓*i*P **P 21 03 20.8 +0.7**
ENH Enshi 32.78 89⇑*i*P **P 21 03 21.9 +0.8**
comp=Z,105nm,0.8s,mb5.4
GOLH Golhisar 32.80 284 *i* P **P 21 03 20.6 -0.7**
AKASG Malin Array Be 32.84 309 P **P 21 03 20.8 -0.7**
comp=Z,71nm,0.4s,mb5.5,baz=79,slow=7.5,SNR=513
AKASG PP PP 21 04 39.3 -0.9
comp=Z,33nm,0.9s,baz=95,slow=12,SNR=7.0
AKASG PcP PcP 21 05 59.5 -1.3
comp=Z,10nm,0.8s,baz=80,slow=2.7,SNR=5.4
AKASG ScP ScP 21 09 22.9 -1.3
comp=Z,8.6nm,0.8s,baz=79,slow=3.5,SNR=12
AKASG PKiKP PKiKP 21 13 24.4 -2.2
comp=Z,0.3nm,0.4s,baz=90,slow=1.0,SNR=4.0
AKASG Malin Array Be 32.84 309 P **P 21 03 20.8 -0.6**
AKASG 21 04 39.3
AKASG 21 05 59.5
AKASG Malin Array Be 32.84 309 P **P 21 03 20.8 -0.7**
AKASG PP PP 21 04 39.3 -0.9
AKASG PcP PcP 21 05 59.5 -1.3
AKASG ScP ScP 21 09 22.9 -1.3
TIRR Tirgusor 32.91 297 *e*P **P 21 03 21.6 -0.5**
TIRR *e* 21 04 39.6
TIRR *e* 21 06 00.8
TIRR pmax pmax
comp=Z,67nm,1.4s,mb5.0
TIRR Tirgusor 32.91 297 *e*P **P 21 03 21.6 -0.5**
comp=Z,67nm,1.4s,mb5.0
TIRR *e*PP PP 21 04 39.6 -1.5
TIRR *e*PcP PcP 21 06 00.8 -0.3
AKAS Kas 32.97 282 *i* P **P 21 03 21.7 -1.1**
KSL Kastellorizon 33.01 282 *e*P **P 21 03 22.4 -0.7**
LEOM Leova 33.05 301 ⇑⇑P **P 21 03 23.8 +0.5**
LEOM Leova 33.05 301 ⇑⇑*i*P **P 21 03 23.8 +0.5**
PSN Preselentsi 33.09 296 *i* P **P 21 03 24.7 +1.0**
DNZL Cakiroluk 33.11 285 *i* P **P 21 03 22.9 -1.0**
CVD Cernavoda 33.19 297⇑*i*P **P 21 03 25.8 +1.3**
HARR Harsova 33.25 298 ⇑⇑P **P 21 03 25.6 +0.6**
HARR Harsova 33.25 298⇑*i*P **P 21 03 25.5 +0.5**
NST Nakhon Sawan 33.31 121 P **P 21 03 27.0 +1.2**
comp=Z,114nm,0.8s,mb5.5
IAS Iasi 33.55 302⇑*i*P **P 21 03 27.8 +0.2**
PRD Provadia 33.69 295 *i* P **P 21 03 29.8 +1.0**
VRI Vrincioaia 34.10 300 P **P 21 03 33.5 +1.2**
VRI Vrincioaia 34.10 300⇑*i*P **P 21 03 33.4 +1.1**
ARG Arkhangelos 34.14 283 *e*P **P 21 03 32.8 0.0**
ARG Arkhangelos 34.14 283 P **P 21 03 32.8 0.0**
PLOR Plostina 34.15 300 P **P 21 03 34.3 +1.5**
PLOR Plostina 34.15 300⇑*i*P **P 21 03 34.3 +1.5**
ISR Istrita 34.23 299⇑*i*P **P 21 03 36.0 +2.5**
JMB Yambol 34.34 294 P **P 21 03 36.0 +1.6**
JMB Yambol 34.34 294 *i* P **P 21 03 36.3 +1.9**
MICGM Minsk 34.42 315 *e*P **P 21 03 32.0 -3.0**
MNK Minsk 34.45 315 *e*P **P 21 03 32.5 -2.7**
MNK *e* 21 04 56.0
MNK pmax pmax
comp=N,480nm,1.4s
MNK pmax pmax
comp=Z,440nm,1.2s,mb5.9
BLCB Balcova 34.54 287 P **P 21 03 35.7 -0.5**
BUC1 Bucharest 34.62 297 ⇑⇑P **P 21 03 38.3 +1.5**
BUC1 Bucharest 34.62 297⇑*i*P **P 21 03 38.3 +1.5**
MLR Muntele Rosu 34.65 299 P **P 21 03 38.7 +1.7**
MLR Muntele Rosu 34.65 299⇑*i*P **P 21 03 39.0 +2.0**
SZH Strazhica 34.75 295 *i* P **P 21 03 38.5 +0.5**
KKTK Khon Kaen 34.76 117 ⇑⇑P **P 21 03 39.0 +0.7**
comp=Z,679nm,1.0s,mb6.1
SMG Samos 34.83 286 *e*P **P 21 03 39.2 +0.5**
PUL Pulkovo 34.87 325⇑*e*P **P 21 03 39.5 +0.8**
PUL pmax pmax
comp=Z,355nm,0.4s,mb6.2
ALN Alexandroupoli 34.91 291 *e*P **P 21 03 39.6 +0.3**
ALN Alexandroupoli 34.91 291 P **P 21 03 38.6 -0.7**
PRK Paraskevi 34.98 288 *e*P **P 21 03 40.2 +0.2**
KARP Karpathos 35.06 282 *e*P **P 21 03 40.7 0.0**
NACGM Naroch 35.13 316 *e*P **P 21 03 38.0 -3.1**
BUR01 Bucovina Ar. S 35.16 303 P **P 21 03 42.1 +0.7**
BURAR Bucovina Array 35.16 303 ⇑⇑P **P 21 03 42.2 +0.8**
BURAR Bucovina Array 35.16 303⇑*i*P **P 21 03 42.2 +0.8**
BUR08 Bucovina Ar. S 35.17 303 *e*P **P 21 03 41.6 +0.1**
IDID Didziasalis 35.26 317 *e*P **P 21 03 42.6 +0.5**
RDO Rodhopi 35.26 292 *e*P **P 21 03 42.8 +0.5**
RDO Rodhopi 35.26 292 P **P 21 03 42.7 +0.4**
KDZ Kurdzhali 35.29 293 *i* P **P 21 03 43.8 +1.3**
ATD Arta Tunnel 35.31 233 P **P 21 03 43.6 +0.6**
comp=Z,34nm,0.9s,mb4.9,baz=359,slow=4.7,SNR=11
BOD Bodaibo 35.54 39⇓*i*P **P 21 03 44.3 -0.2**
BOD *e* 21 06 07.8
BOD *e* 21 13 35.7
BOD pmax pmax
comp=Z,50nm,1.3s,mb4.9
BOD pmax pmax
comp=Z,26nm,0.7s,mb4.9
BJT Baijiatuau 35.57 70 *e*P **P 21 03 45.7 +0.7**
BJT pmax pmax
comp=Z,27nm,0.5s
BJT Baijiatuau 35.57 70 *e*P **P 21 03 45.7 +0.7**
comp=Z,27nm,0.5s,mb5.0
BJI Beijing 35.57 70 P **P 21 03 45.8 +0.8**
BJI pP pP 21 04 26.8 -2.4
BJI sP sP 21 04 49.9 -4.0
BJI PP PP 21 05 09.6 -0.9
BJI PcP PcP 21 06 09.1 +0.2
BJI S **S 21 09 05.0 +0.4**
BJI sS sS 21 10 19.2 -4.0
BJI ScS ScS 21 13 39.2 -0.2
BJI pmax pmax
comp=Z,28nm,0.8s,mb4.8
BJI pmax pmax
comp=Z,500nm,7.8s
ISAL Salakas 35.66 317 *e*P **P 21 03 46.2 +0.7**
LIA Limnos Island 35.70 290 *e*P **P 21 03 46.3 +0.2**
LIA Limnos Island 35.70 290 P **P 21 03 46.3 +0.2**
MDB Medias 35.73 300 P **P 21 03 48.3 +2.0**
MDB Medias 35.73 300⇑*i*P **P 21 03 48.4 +2.1**
PLD Plovdiv 35.76 294 P **P 21 03 46.7 +0.1**
RZN Rozhen 35.80 293 *i* P **P 21 03 48.0 +1.1**
JOF Joensuu 35.84 330 *e*P **P 21 03 46.4 -0.6**
JOF pmax pmax
comp=Z,160nm,0.4s,mb5.9
JOF Joensuu 35.84 330 *ep* **P 21 03 46.4 -0.6**
comp=Z,160nm,0.4s,mb5.9
ZKR Zakros 35.92 281 *e*P **P 21 03 48.3 +0.3**
ZKR Zakros 35.92 281 P **P 21 03 48.3 +0.3**
APE Apeiranthos 35.98 285 ⇑⇑P **P 21 03 48.9 +0.4**
APE Apeiranthos 35.98 285⇑⇑*i*P **P 21 03 48.9 +0.4**
APE Apeiranthos 35.98 285 P **P 21 03 48.8 +0.3**
LVV L'vov 36.05 307 *c i*P **P 21 03 48.7 -0.2**
LVV *e* 21 05 16.0
LVV *e*S **S 21 09 10.0 -1.6**
PGB Panagyurishte 36.11 294 *i* P **P 21 03 50.9 +1.4**
VSU Vasula 36.13 322 *c i*P **P 21 03 49.4 0.0**
VSU pmax pmax
comp=Z,437nm,1.4s,mb5.8
BMR Baia Mare 36.33 303 P **P 21 03 52.6 +1.3**
BMR Baia Mare 36.33 303⇑*i*P **P 21 03 52.5 +1.2**
NPS Neapolis 36.36 282 *e*P **P 21 03 51.7 0.0**
NVR Nevrokopi 36.48 292 *e*P **P 21 03 53.2 +0.5**
LAST Lasithi 36.49 282 *e*P **P 21 03 53.4 +0.5**
LAST Lasithi 36.49 282 P **P 21 03 53.4 +0.5**
OUR Ouranopolis 36.54 291 P **P 21 03 53.2 0.0**
WHN Wuhan 36.60 86⇑*i*P **P 21 03 54.8 +1.0**
WHN PcP PcP 21 06 11.5 -0.6
WHN S **S 21 09 17.4 -3.0**
WHN ScP ScP 21 09 36.1 -2.0
WHN pmax pmax
comp=Z,200nm,1.2s,mb5.5
SRS Serrai 36.72 292 P **P 21 03 55.0 +0.3**
DEV Deva 36.77 300 ⇓⇓P **P 21 03 56.4 +1.4**
DEV Deva 36.77 300⇓⇓*i*P **P 21 03 56.4 +1.4**
VTS Vitosha 36.81 295 P **P 21 03 56.0 +0.6**
VTS Vitosha 36.81 295 *i* P **P 21 03 56.2 +0.8**
PAIG Paliouri 36.84 290 P **P 21 03 56.1 +0.4**
DRGR 36.87 302⇑⇑*i*P **P 21 03 57.0 +1.1**
GZR Gura Zlata 36.88 299 P **P 21 03 56.4 +0.4**
GZR Gura Zlata 36.88 299⇑⇑*i*P **P 21 03 56.5 +0.5**
KWP Kalwaria Pacla 36.90 306 *e*P **P 21 03 56.9 +0.8**
KWP Kalwaria Pacla 36.90 306 *e*P **P 21 03 56.4 +0.3**
KWP *e* 21 05 24.5
KWP pmax pmax
comp=Z,205nm,0.7s,mb5.8
KWP Kalwaria Pacla 36.90 306 *e*P **P 21 03 56.4 +0.3**
comp=Z,205nm,0.7s,mb5.8
KWP *e*PP PP 21 05 24.5 -0.3
IDI Anoyia 36.92 282 P **P 21 03 55.9 -0.6**
comp=Z,66nm,0.5s,mb5.5,baz=49,slow=12,SNR=95
SOH Sokhos 36.94 292 *e*P **P 21 03 56.8 +0.2**
PLG Polygyros 36.94 291 *e*P **P 21 03 57.2 +0.6**
PLG Polygyros 36.94 291 P **P 21 03 57.2 +0.6**
KKB Krupnik 36.99 293 *i* P **P 21 03 57.6 +0.6**
SUW Suwalki 37.03 314 *i* P **P 21 03 56.9 -0.3**
SUW *e* 21 05 31.1
SUW Suwalki 37.03 314⇑*e*P **P 21 03 56.5 -0.6**
comp=Z,163nm,0.5s,mb5.8
SUW *e*PP PP 21 05 26.1 -0.1
SIVA Sivas 37.06 282 *e*P **P 21 03 57.8 +0.2**
SIVA Sivas 37.06 282 P **P 21 03 57.6 0.0**
PTL Penteli 37.06 287 *e*P **P 21 03 58.2 +0.6**
ATHU Athens Univers 37.14 287 P **P 21 03 59.3 +1.0**
UZH Uzhgorod 37.14 305⇓*i*P **P 21 03 58.2 0.0**
UZH *e* 21 05 08.2
UZH *i* *PP PP 21 05 28.8 +1.3
UZH *e*S **S 21 09 29.2 +1.1**
VLY Voula,Athens 37.16 287 *e*P **P 21 03 58.6 +0.2**
KOLS Kolonicke sedl 37.16 305 *e*P **P 21 03 58.7 +0.4**
KOLS *e* 21 05 26.8
KOLS pmax pmax
comp=Z,55nm,0.8s,mb5.1
KOLS Kolonicke sedl 37.16 305 *e*P **P 21 03 58.7 +0.4**
comp=Z,55nm,0.8s,mb5.1
KOLS *e*PP PP 21 05 26.8 -0.9
KOLS Kolonicke sedl 37.16 305 *e*P **P 21 03 58.7 +0.4**
KOLS *e*PP PP 21 05 26.8 -0.9
HORT Hortiatis 37.17 291 P **P 21 03 58.4 -0.1**
ATH Athens Observa 37.19 287 *e*P **P 21 03 59.0 +0.3**
NEO Neokhori 37.30 289 *e*P **P 21 03 59.6 0.0**
XOR Xorichti 37.31 289 P **P 21 03 59.9 +0.2**
NAIG Nisos Aigina 37.41 287 *e*P **P 21 03 59.8 -0.8**
VAM Vamos 37.43 283 *e*P **P 21 04 00.2 -0.6**
FINES FINESS Array B 37.44 326 P **P 21 04 00.9 +0.4**
comp=Z,119nm,0.5s,mb5.7,baz=119,slow=9.4,SNR=1245
FINES PP PP 21 05 27.4 -3.1
comp=Z,45nm,0.8s,baz=108,slow=12,SNR=6.8
VAY Valandovo 37.45 293 *i* P **P 21 04 00.3 -0.5**
VAY Valandovo 37.45 293 P **P 21 04 00.2 -0.6**
LVZ Lovozero 37.46 338 P **P 21 04 01.8 +1.2**
comp=Z,2μm,0.8s,mb6.6,SNR=40
LVZ Lovozero 37.46 338⇑*e*P **P 21 03 59.9 -0.7**
LVZ pmax pmax
comp=Z,331nm,1.1s,mb5.8
HIA Hailar 37.51 54 *e*P **P 21 04 02.3 +1.1**
HIA pmax pmax
comp=Z,8.0nm,0.6s
HIA Hailar 37.51 54 *e*P **P 21 04 02.3 +1.1**
comp=Z,8.5nm,0.6s,mb4.5
ATAL Atalanti 37.57 288 P **P 21 04 01.4 -0.5**
KAF Kangasniemi 37.59 327 *e*P **P 21 04 00.5 -1.2**
KAF pmax pmax
comp=Z,130nm,0.9s,mb5.5
KAF Kangasniemi 37.59 327 *ep* **P 21 04 00.5 -1.2**
comp=Z,130nm,0.9s,mb5.5
LKR Lokris 37.60 288 *e*P **P 21 04 01.9 -0.2**
LKR Lokris 37.60 288 P **P 21 04 01.8 -0.3**
APA Apatity 37.64 338⇑*i*P **P 21 04 02.7 +0.7**
APA pmax pmax
comp=Z,600nm,2.9s,mb5.6
APA MLR MLR
comp=Z,2μm,20.0s
KARN Karanos 37.66 283 *e*P **P 21 04 02.9 +0.2**
KARN Karanos 37.66 283 P **P 21 04 02.6 -0.1**
DID Didima 37.66 286 *e*P **P 21 04 00.7 -2.0**
DID Didima 37.66 286 P **P 21 04 01.0 -1.7**
GVD Gavdhos 37.68 282 *e*P **P 21 04 02.5 -0.3**
GVD Gavdhos 37.68 282 *e*P **P 21 04 01.4 -1.4**
comp=Z,398nm,0.6s,mb6.1
BZS Buzias 37.68 300 P **P 21 04 03.5 +0.8**
BZS Buzias 37.68 300⇑*i*P **P 21 04 03.6 +0.9**
LIT Litokhoron 37.71 291 *e*P **P 21 04 02.6 -0.4**
LIT Litokhoron 37.71 291 P **P 21 04 02.6 -0.4**
LTK Loutraki 37.76 287 *e*P **P 21 04 02.3 -1.2**
STHS Stebnicka Huta 37.85 306 *e*P **P 21 04 04.4 +0.4**
STHS *e* 21 05 35.0
STHS pmax pmax
comp=Z,46nm,0.7s,mb5.1
STHS Stebnicka Huta 37.85 306 *e*P **P 21 04 04.4 +0.4**
comp=Z,46nm,0.7s,mb5.1
STHS *e*PP PP 21 05 35.0 -0.1
STHS Stebnicka Huta 37.85 306 *e*P **P 21 04 04.4 +0.4**
STHS *e*PP PP 21 05 35.0 -0.1
AGG Agios Georgios 38.04 289 *e*P **P 21 04 04.6 -1.2**
AGG Agios Georgios 38.04 289 P **P 21 04 04.7 -1.1**
VLI Veliai 38.09 285 *e*P **P 21 04 03.8 -2.4**
KYTH Kithira 38.12 284 *e*P **P 21 04 05.4 -1.1**
THL Klokotos Trika 38.17 290 *e*P **P 21 04 06.2 -0.7**
THL Klokotos Trika 38.17 290 P **P 21 04 06.2 -0.7**
KZN Kozani 38.22 291 *e*P **P 21 04 07.2 0.0**
GUR Goura 38.26 287 *e*P **P 21 04 04.7 -2.9**
GUR Goura 38.26 287 P **P 21 04 07.0 -0.6**
KECS Kecovo 38.34 304 *e*P **P 21 04 08.9 +0.7**
KECS *e* 21 05 44.1
KECS pmax pmax
comp=Z,29nm,0.6s,mb5.0
KECS Kecovo 38.34 304 *e*P **P 21 04 08.9 +0.7**
comp=Z,29nm,0.6s,mb5.0
KECS *e*PP PP 21 05 44.1 +3.6
KECS Kecovo 38.34 304 *e*P **P 21 04 08.9 +0.7**
KECS *e*PP PP 21 05 44.1 +3.6
VLX Vlachokerasia 38.36 286 *e*P **P 21 04 06.9 -1.6**
QIZ Qiongzhong 38.39 106 P **P 21 04 10.1 +1.2**
QIZ S **S 21 09 42.2 -5.3**
QIZ pmax pmax
comp=Z,40nm,1.9s,mb4.6
QIZ pmax pmax
comp=Z,220nm,3.1s
QIZ LR LR
comp=N,470nm,3.8s
QIZ LR LR
comp=Z,510nm,3.7s
KRUS Krusevo 38.42 293 *i* P **P 21 04 08.5 -0.5**
FNA Florina 38.43 292 P **P 21 04 08.6 -0.4**
NIE Niedzica 38.45 306 *e*P **P 21 04 10.4 +1.3**
EVR Evrytania 38.45 289 *e*P **P 21 04 09.7 +0.4**
LAKA Lakka 38.47 288 P **P 21 04 08.2 -1.2**
EFP Efpalio 38.48 288 *e*P **P 21 04 08.5 -1.0**
EFP Efpalio 38.48 288 P **P 21 04 08.6 -0.9**
PSZ Piszkesteto 38.75 304 *e*P **P 21 04 12.6 +1.0**
PSZ pmax pmax
comp=Z,54nm,0.8s,mb5.1
PSZ Piszkesteto 38.75 304 *e*P **P 21 04 12.6 +1.0**
comp=Z,54nm,0.8s,mb5.1
PSZ Piszkesteto 38.75 304⇑*e*P **P 21 04 12.5 +0.9**
PSZ Piszkesteto 38.75 304⇑*i*P **P 21 04 12.6 +1.0**
ITM Ithomi 38.76 286 *e*P **P 21 04 10.3 -1.5**
ITM Ithomi 38.76 286 P **P 21 04 10.0 -1.8**
OJC Ojcow 38.80 307 *e*P **P 21 04 12.0 +0.1**
OJC *e*PP PP 21 05 44.1 -1.3
OHR Ohrid 38.80 293 *i* P **P 21 04 10.5 -1.7**
RLS Riolos of Patr 38.91 288 *e*P **P 21 04 11.9 -1.1**
DIVS Divibare 38.97 297 P **P 21 04 13.9 +0.5**
PYL PYLOS 38.97 286 *e*P **P 21 04 11.7 -1.9**
JAN Janina 39.03 290 *e*P **P 21 04 14.3 +0.3**
PVY Plav 39.18 295⇑⇑*i*P **P 21 04 14.8 -0.4**
PVY Plav 39.18 295⇑⇑*i*P **P 21 04 14.9 -0.3**
IVA Berane 39.19 296⇑⇑*i*P **P 21 04 16.3 +1.0**
IVA Berane 39.19 296⇑⇑*i*P **P 21 04 16.4 +1.1**
BUD Budapest 39.36 303⇑*e*P **P 21 04 17.5 +0.9**
KFL Anninata 39.41 288 P **P 21 04 15.9 -1.3**
VYHS Vyhne 39.44 304 *e*P **P 21 04 17.6 +0.3**
VYHS *e* 21 05 54.9
VYHS pmax pmax
comp=Z,35nm,1.5s,mb4.7
VYHS Vyhne 39.44 304 *e*P **P 21 04 17.6 +0.3**
comp=Z,35nm,1.5s,mb4.7
VYHS *e*PP PP 21 05 54.9 +2.5
VYHS Vyhne 39.44 304 *e*P **P 21 04 17.6 +0.3**
VYHS *e*PP PP 21 05 54.9 +2.5
IGT Igoumenitsa 39.45 290 P **P 21 04 16.1 -1.4**
PLE Pljevlja 39.49 296⇑⇑*i*P **P 21 04 19.0 +1.2**
PLE Pljevlja 39.49 296⇑⇑*i*P **P 21 04 19.1 +1.3**
VLS Valsamata 39.55 288 *e*P **P 21 04 16.6 -1.7**
VLS Valsamata 39.55 288 P **P 21 04 16.6 -1.7**
PKSM Moragy 39.71 301 ⇑⇑P **P 21 04 19.9 +0.4**
PKSM Moragy 39.71 301⇑⇑*i*P **P 21 04 19.9 +0.4**
TTG Podgorica 39.72 295⇑⇑*i*P **P 21 04 18.9 -0.8**
TTG Podgorica 39.72 295⇑⇑*i*P **P 21 04 19.0 -0.7**
ULC Ulcinj 39.80 294⇑⇑*i*P **P 21 04 19.5 -0.9**
NKY Niksic 39.85 296⇑⇑*i*P **P 21 04 20.8 0.0**
NKY Niksic 39.85 296⇑⇑*i*P **P 21 04 20.8 0.0**
OKC Ostrava-Krasne 39.86 307⇑⇑*i*P **P 21 04 21.1 +0.4**
OKC *e* 21 05 52.6
OKC *e*S **S 21 10 14.0 +5.2**
OKC Ostrava-Krasne 39.86 307⇑⇑*i*P **P 21 04 21.1 +0.4**
OKC *e*PP PP 21 05 52.6 -4.3
OKC *ex* x 21 06 55.7
OKC *e*S **S 21 10 14.0 +5.2**
OKC *e*XS sS 21 11 28.0 -0.5
UPM Unac-Piva 39.86 296⇑⇑*i*P **P 21 04 21.2 +0.4**
UPM Unac-Piva 39.86 296⇑⇑*i*P **P 21 04 21.3 +0.4**
FURI Furi 39.98 235 *e*P **P 21 04 25.2 +3.1**
FURI S PcP 21 06 25.4 +2.4
BUM Brajici-Budva 40.01 295⇑⇑*i*P **P 21 04 21.7 -0.3**
BUM Brajici-Budva 40.01 295⇑⇑*i*P **P 21 04 21.7 -0.3**
BRY Bratogost 40.17 296⇑⇑*i*P **P 21 04 23.3 -0.1**
BRY Bratogost 40.17 296⇑⇑*i*P **P 21 04 23.3 0.0**
MORC Moravsky Berou 40.25 307⇑⇑*e*P **P 21 04 24.2 +0.3**
MORC *e* 21 06 02.8
MORC pmax pmax
comp=Z,84nm,0.7s,mb5.3
MORC Moravsky Berou 40.25 307⇑⇑*e*P **P 21 04 24.2 +0.3**
comp=Z,84nm,0.7s,mb5.3
MORC *e*PP PP 21 06 02.8 +1.7
MORC Moravsky Berou 40.25 307⇑⇑*i*P **P 21 04 24.6 +0.7**
HCY Herceg Novi 40.28 295⇑⇑*i*P **P 21 04 23.5 -0.7**
HCY Herceg Novi 40.28 295⇑⇑*i*P **P 21 04 23.5 -0.7**
SMOL Smolenice 40.38 305 *e*P **P 21 04 25.6 +0.6**
SMOL *e* 21 06 01.4
SMOL Smolenice 40.38 305 *e*P **P 21 04 25.6 +0.6**
SMOL *e*PP PP 21 06 01.4 -1.1
GKP Gorka Klasztor 40.48 312 *e*P **P 21 04 26.0 +0.2**
STON Ston 40.79 296 P **P 21 04 27.7 -0.7**
STON Ston 40.79 296 *i* P **P 21 04 27.7 -0.7**
KEV Kevo 40.81 338 *e*P **P 21 04 28.2 0.0**
KEV *e* 21 06 04.3
KEV pmax pmax
comp=Z,181nm,0.8s,mb5.5
KEV Kevo 40.81 338 *e*P **P 21 04 28.1 0.0**
comp=Z,181nm,0.8s,mb5.5
KEV *e*PP PP 21 06 04.3 -2.5
VRAC Vranov 40.89 306 P **P 21 04 30.1 +0.9**
comp=Z,68nm,0.7s,mb5.2,baz=94,slow=8.7,SNR=98
VRAC pP pP 21 05 16.9 +2.5
comp=Z,10nm,1.0s,baz=32,slow=10.0,SNR=1.2
VRAC PP PP 21 06 09.9 +1.9
comp=Z,11nm,0.9s,baz=86,slow=12,SNR=4.9
VRAC Vranov 40.89 306⇑⇑*i*P **P 21 04 30.1 +1.0**
NRGR Nerungri 41.00 43 *e*P **P 21 04 31.3 +1.4**
DPC Dobruska-Polom 41.02 307⇑⇑*i*P **P 21 04 31.1 +0.9**
DPC *e* 21 06 11.4
DPC *e*S **S 21 10 27.5 +1.5**
DPC Dobruska-Polom 41.02 307⇑⇑*i*P **P 21 04 31.1 +0.9**
DPC *e*PP PP 21 06 11.4 +2.0
DPC *ex* x 21 07 06.7
DPC *e*S **S 21 10 27.5 +1.5**
DPC *e*XS sS 21 11 40.8 -5.2
KSP Ksiaz 41.03 308 *e*P **P 21 04 30.8 +0.5**
KSP Ksiaz 41.03 308⇑⇑*i*P **P 21 04 30.8 +0.5**
KSP *e* 21 06 09.0
KSP *e*SS SS 21 13 38.0 +0.9
ARCES ARCESS Array B 41.15 338 P **P 21 04 31.8 +0.8**
comp=Z,189nm,0.7s,mb5.6,baz=110,slow=7.4,SNR=586
ARCES PP PP 21 06 11.8 +1.3
comp=Z,54nm,0.9s,baz=113,slow=9.3,SNR=7.2
ARCES PKiKP PKiKP 21 13 31.6 -1.2
comp=Z,3.5nm,0.9s,baz=151,slow=1.9,SNR=6.4
ARCES ARCESS Array B 41.15 338 P **P 21 04 31.8 +0.8**
ARCES PP PP 21 06 11.8 +1.3
ARE0 ARCESS Array S 41.15 338⇑*e*P **P 21 04 31.5 +0.6**
KULM Kulim 41.37 131 P **P 21 04 34.0 +0.6**
KULM Kulim 41.37 131 *e*P **P 21 04 33.2 -0.2**
comp=Z,32nm,0.7s,mb4.9
CONA Conrad Observa 41.46 304 *i* P **P 21 04 34.4 +0.6**
comp=Z,103nm,0.8s,mb5.3,SNR=183
KTK1 Kautokeino 41.61 336 *e*P **P 21 04 34.1 -0.6**
ARSA Arzberg 41.75 303 *i* P **P 21 04 36.4 +0.3**
comp=Z,30nm,1.0s,mb4.7,SNR=24
CN2 Changchun 41.83 62 *e*P **P 21 04 37.5 +0.7**
CN2 *ep*P pP 21 05 21.5 -0.8
CN2 *e*PcP PcP 21 06 27.9 -0.6
CN2 *e*ScP ScP 21 09 56.2 -1.9
CN2 *e*S **S 21 10 38.5 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
GROS Grobnik 41.85 302⇑⇑*i*P **P 21 04 37.2 +0.3**
GROS *ep*P pP 21 05 23.6 +1.2
GROS *es*P sP 21 05 49.3 +2.5
GROS *i* PcP PcP 21 06 27.9 -0.6
SSE Sheshan 41.88 82 *e*P **P 21 04 38.9 +1.4**
SSE pmax pmax
comp=Z,54nm,1.0s,mb4.9
SSE pmax pmax
comp=Z,360nm,5.9s
BSD Bornholm Skovb 41.93 315⇑⇑*i*P **P 21 04 36.4 -1.1**
BSD *i* 21 06 16.9
BSD pmax pmax
comp=Z,73nm,0.9s,mb5.1
BSD MLR MLR
comp=Z,100nm,16.0s
BSD Bornholm Skovb 41.93 315⇑⇑*i*P **P 21 04 36.4 -1.1**
comp=Z,73nm,0.9s,mb5.1
BSD *i* 21 06 16.9
BSD
comp=Z,100nm,16.0s
PERS Pernice 42.09 302 *i* P **P 21 04 39.5 +0.6**
PERS *i* PP PP 21 06 29.0 +8.1
BOJS Bojanci 42.14 300⇑⇑*i*P **P 21 04 39.7 +0.4**
BOJS *ep*P pP 21 05 26.5 +1.7
BOJS *e*PcP PcP 21 06 29.1 -0.4
SOKA Soboth 42.14 302⇑⇑*i*P **P 21 04 39.9 +0.5**
comp=Z,94nm,0.6s,mb5.4
PRU Pruhonice 42.18 307⇑⇑*i*P **P 21 04 40.6 +1.0**
PRU *e**PP pP 21 05 26.1 +1.0
PRU *e* 21 06 18.5
PRU *e*S **S 21 10 43.2 +0.2**
PRU *e* 21 12 00.6

PRU	**Pruhonice**	**42.18 307⇑**	*i*P		**P**	**21 04 40.6 +1.0**
PRU			*e*pP		pP	21 05 26.1 +1.0
PRU			*e*PP		PP	21 06 18.5 -3.3
PRU			*e*x		x	21 07 20.6
PRU			*e*S		**S**	**21 10 43.2 +0.2**
PRU			*e*XS		sS	21 12 00.6 -2.8
TIP	**Timpagrande**	**42.23 291**	*e*P		**P**	**21 04 39.7 -0.4**
	comp=Z,173nm,1.3s,mb5.3					
IPM	**Ipoh**	**42.24 132**	P		**P**	**21 04 40.8 +0.4**
PRA	**Prague**	**42.25 307**	⇑P		**P**	**21 04 41.0 +0.8**
QZH	**Quanzhou**	**42.32 92⇑**	*i*P		**P**	**21 04 42.0 +0.9**
QZH			pmax		pmax	
	comp=Z,140nm,0.7s,mb5.5					
OBKA	**Obir**	**42.49 302**	*i* P		**P**	**21 04 42.8 +0.6**
	comp=Z,35nm,0.9s,mb4.8,SNR=29					
BRG	**Berggiesshubel**	**42.52 308⇑**	*i*P		**P**	**21 04 42.9 +0.6**
	comp=Z,91nm,0.7s,mb5.3					
BRG			*i*			21 05 49.0
BRG			*e*PP		PP	21 06 30.2 +4.9
	comp=Z,28nm,1.2s					
BRG			*e*			21 10 00.4
	comp=Z,7.0nm,1.1s					
BRG			sS		sS	21 12 11.0 +2.7
BRG			*i*			21 14 15.0
BRG						
	comp=N,382nm,20.8s					
BRG						
	comp=E,224nm,17.1s					
BRG						
	comp=Z,443nm,13.9s					
BRG	**Berggiesshubel**	**42.52 308⇑**	*i*P		**P**	**21 04 42.9 +0.6**
BRG			*e*			21 06 30.2
BRG			*i*			21 14 15.0
BRG			pmax		pmax	
	comp=Z,55nm,0.7s,mb5.1					
BRG			pmax		pmax	
	comp=Z,17nm,1.3s,mb4.3					
BRG			pmax		pmax	
	comp=Z,4.0nm,1.1s,mb3.8					
BRG			MLR		MLR	
	comp=N,229nm,20.8s					
BRG			MLR		MLR	
	comp=E,134nm,17.1s					
BRG			MLR		MLR	
	comp=Z,265nm,13.9s					
MOA	**Molln**	**42.54 304**	*i* P		**P**	**21 04 42.6 +0.1**
	comp=Z,73nm,0.7s,mb5.2,SNR=120					
NVLJ	**Novalja**	**42.55 299**	P		**P**	**21 04 41.6 -1.0**
NVLJ	**Novalja**	**42.55 299**	*i* P		**P**	**21 04 41.6 -1.0**
RUE	**Ruedersdorf**	**42.56 311**	*e*P		**P**	**21 04 42.6 -0.1**
	comp=Z,108nm,0.9s,mb5.3					
RUE			*e*PcP		PcP	21 06 26.3 -4.5
RUE	**Ruedersdorf**	**42.56 311**	*e*P		**P**	**21 04 42.1 -0.5**
	comp=Z,106nm,0.8s,mb5.3					
RUE			*e*PP		PP	21 06 25.8 -0.1
LJU	**Ljubljana**	**42.57 301⇑**	*i*P		**P**	**21 04 43.4 +0.6**
LJU			*e*pP		pP	21 05 30.0 +1.6
LJU			*e*sP		sP	21 05 55.7 +3.0
LJU			*e*PcP		PcP	21 06 30.4 -0.6
KNDS	**Knezji Dol**	**42.74 300⇑**	*i*P		**P**	**21 04 44.5 +0.3**
GEC2	**GERESS Array S**	**42.81 305**	*e*P		**P**	**21 04 45.0 +0.3**
	comp=Z,29nm,1.0s,mb4.7					
GEC2	**GERESS Array S**	**42.81 305**	*e*P		**P**	**21 04 45.0 +0.3**
GEC2			pmax		pmax	
	comp=Z,29nm,1.0s,mb4.7					
GERES	**GERESS Array B**	**42.81 305**	P		**P**	**21 04 45.0 +0.3**
	comp=Z,11nm,0.5s,mb4.6,baz=87,slow=7.1,SNR=85					
GERES			PP		PP	21 06 26.6 -2.0
	comp=Z,3.5nm,0.8s,baz=80,slow=8.3,SNR=3.7					
GERES			ScP		ScP	21 10 01.5 -0.5
	comp=Z,1.7nm,0.8s,baz=98,slow=2.7,SNR=4.1					
GERES	**GERESS Array B**	**42.81 305**	P		**P**	**21 04 45.0 +0.3**
GERES						21 06 26.6
RGN	**Rugen**	**42.83 314**	*e*P		**P**	**21 04 45.4 +0.6**
	comp=Z,270nm,0.8s,mb5.7					
RGN	**Rugen**	**42.83 314**	*e*P		**P**	**21 04 45.1 +0.4**
	comp=Z,348nm,0.9s,mb5.8					
KHC	**Kasperske Hory**	**42.87 306⇑**	*i*P		**P**	**21 04 45.4 +0.2**
KHC			*e**PP		pP	21 05 32.0 +1.2
KHC			*e*			21 06 25.8
KHC			*e*S		**S**	**21 10 54.2 +1.1**
KHC			*e*			21 12 16.2
KHC	**Kasperske Hory**	**42.87 306**	*e*P		**P**	**21 04 45.2 0.0**
	comp=Z,24nm,0.9s,mb4.6					
KHC	**Kasperske Hory**	**42.87 306⇑**	*i*P		**P**	**21 04 45.4 +0.2**
KHC			*e*x		x	21 04 49.5
KHC			*e*x		x	21 05 06.5
KHC			*e*x		x	21 05 13.0
KHC			*e*pP		pP	21 05 32.0 +1.2
KHC			*e*PP		PP	21 06 25.8 -3.4
KHC			*e*x		x	21 07 30.8
KHC			*e*S		**S**	**21 10 54.2 +1.1**
KHC			*e*XS		sS	21 12 16.2 +2.6
KTGM	**Kuala Trenggan**	**42.88 128**	P		**P**	**21 04 46.4 +0.8**
JAVS	**Javornik**	**42.91 301**	*i* P		**P**	**21 04 45.6 +0.1**
JAVS			*i* PP		PP	21 06 30.9 +1.2
VOY	**Vojsko**	**43.01 301⇑**	*e*P		**P**	**21 04 46.5 +0.2**
VOY			*e*			21 04 54.0
VOY			*e*			21 05 07.3
VOY			*e*			21 06 31.9
HFS	**Hagfors**	**43.01 322**	P		**P**	**21 04 46.1 0.0**
	comp=Z,209nm,0.6s,mb5.7,baz=104,slow=11,SNR=1159					
HFS			PP		PP	21 06 27.3 -3.1
	comp=Z,29nm,0.7s,baz=100,slow=12,SNR=3.7					
CLL	**Collm**	**43.09 309**	*e*P		**P**	**21 04 46.8 -0.1**
	comp=Z,53nm,0.9s,mb5.0					
CLL	**Collm**	**43.09 309⇑**	*i*P		**P**	**21 04 46.8 -0.1**
CLL			*e*			21 06 30.0
CLL			*e*			21 06 31.0
CLL			*e*S		**S**	**21 10 56.0 -0.2**
CLL			pmax		pmax	
	comp=Z,8.0nm,0.9s,mb4.2					
CLL	**Collm**	**43.09 309⇑**	*i*P		**P**	**21 04 46.8 -0.1**
	comp=Z,53nm,0.9s,mb5.0					
CLL			*e*PcP		PcP	21 06 30.0 -2.6
CLL			*e*PP		PP	21 06 31.0 -0.4
CLL			*e*			21 06 38.0
CLL			*e*S		**S**	**21 10 56.0 -0.2**
CLL			*e*sS		sS	21 12 13.0 -3.8
CLL	**Collm**	**43.09 309⇑**	*i*P		**P**	**21 04 46.8 -0.1**
	comp=Z,53nm,0.9s,mb5.0					
CLL			*e*			21 05 52.0
CLL			*e*(PcP)		PcP	21 06 30.0 -2.6
CLL			*e*PP		PP	21 06 31.0 -0.4
CLL			*e*			21 06 38.0
CLL			*e*			21 06 51.0
CLL			*e*			21 07 42.0
CLL			*e*S		**S**	**21 10 56.0 -0.2**
CLL			*e*sS		sS	21 12 13.0 -3.8
CLL			*e*			21 13 46.0
CLL			*e*SS		SS	21 14 12.0 -5.1
CLL			*e*			21 14 39.0
CLL			*e*SSS			21 15 48.0
CLL			*e*			21 17 18.0
CADS	**Cadrg**	**43.09 302⇑**	*i*P		**P**	**21 04 47.1 +0.1**
MYKA	**Terra Mystica**	**43.10 302⇑**	*i*P		**P**	**21 04 47.3 +0.2**
	comp=Z,25nm,0.6s,mb4.8					
CEL	**Celeste**	**43.11 290**	*e*P		**P**	**21 04 47.0 -0.3**
	comp=Z,157nm,1.1s,mb5.4					
CEL			*e*PP		PP	21 06 31.4 -0.5
TRI	**Trieste**	**43.15 301**	*e*P		**P**	**21 04 47.1 -0.3**
TRI			*e*			21 06 31.7
TRI			pmax		pmax	
	comp=Z,43nm,0.6s,mb5.1					
TRI	**Trieste**	**43.15 301**	*e*P		**P**	**21 04 47.1 -0.3**
	comp=Z,43nm,0.6s,mb5.1					
TRI			*e*PP		PP	21 06 31.7 -0.5
KBA	**Koelnbreinsper**	**43.24 303**	*i* P		**P**	**21 04 48.4 +0.2**
	comp=Z,36nm,0.5s,mb5.0,SNR=43					
TRO	**Tromso**	**43.27 336⇑**	*i*P		**P**	**21 04 48.4 +0.4**
TRO			*e*SS		SS	21 14 16.9 -2.9
WET	**Wettzell**	**43.33 306**	*e*P		**P**	**21 04 49.2 +0.4**
	comp=Z,44nm,1.7s,mb4.6					
WET			*e*pP		pP	21 05 35.6 +1.1
WET	**Wettzell**	**43.33 306**	*e*P		**P**	**21 04 49.2 +0.4**
WET			*e**PP		pP	21 05 35.6 +1.1
WET			pmax		pmax	
	comp=Z,44nm,1.7s,mb4.6					
COP	**Copenhagen**	**43.36 315⇑**	*i*P		**P**	**21 04 49.3 +0.3**
COP			*e*			21 06 31.8
COP			pmax		pmax	
	comp=Z,59nm,0.9s,mb5.0					
COP			MLR		MLR	
	comp=Z,67nm,18.0s					
COP	**Copenhagen**	**43.36 315⇑**	*i*P		**P**	**21 04 49.3 +0.3**
	comp=Z,59nm,0.9s,mb5.0					
COP			*e*			21 06 31.8
COP						
	comp=Z,60nm,18.0s					
TANN	**Tannenbergstha**	**43.49 308**	*e*P		**P**	**21 04 50.6 +0.5**
	comp=Z,45nm,1.0s,mb4.8					
RJOB	**Jochberg**	**43.53 304**	*e*P		**P**	**21 04 50.6 +0.1**
	comp=Z,50nm,0.9s,mb4.8					
WERN	**Wernitzgruen**	**43.55 308**	*e*P		**P**	**21 04 51.2 +0.6**
	comp=Z,24nm,0.9s,mb4.5					
GUNZ	**Gunzen**	**43.58 308**	*e*P		**P**	**21 04 51.3 +0.5**
	comp=Z,49nm,0.9s,mb4.8					
FRIM	**Kepong**	**43.58 132**	P		**P**	**21 04 52.0 +0.7**
WERD	**Werda**	**43.59 308**	*e*P		**P**	**21 04 51.3 +0.5**
	comp=Z,41nm,0.9s,mb4.8					
WERD			*e*PcP		PcP	21 06 34.0 -0.3
ROTZ	**Rotzenmuhle**	**43.71 307**	*e*P		**P**	**21 04 53.0 +1.2**
	comp=Z,60nm,1.1s,mb4.8					
ROTZ			*e*pP		pP	21 05 40.2 +2.6
MOR8	**Moi Rana**	**43.79 331⇑**	*i*P		**P**	**21 04 51.9 -0.4**
MOR8			AMB		AMB	21 04 52.9
	comp=Z,316nm,1.4s,mb5.5					
ABTA	**Abfaltersbach**	**43.85 302**	*i* P		**P**	**21 04 52.5 -0.6**
	comp=Z,21nm,0.6s,mb4.6,SNR=40					
STEI	**Steigen**	**43.96 333⇑**	*i*P		**P**	**21 04 54.0 +0.5**
STEI			AMB		AMB	21 04 55.0
	comp=Z,156nm,1.0s,mb5.3					
AQU	**L'Aquila**	**44.00 296**	*e*P		**P**	**21 04 54.2 -0.1**
	comp=Z,31nm,0.7s,mb4.7					
AQU	**L'Aquila**	**44.00 296⇑**	*i*P		**P**	**21 04 54.8 +0.5**
MOX	**Moxa**	**44.01 308⇑**	*i*P		**P**	**21 04 54.7 +0.5**
	comp=Z,179nm,1.8s,mb5.1					
MOX	**Moxa**	**44.01 308**	*e*P		**P**	**21 04 54.7 +0.5**
	comp=Z,49nm,0.8s,mb4.9					
MOX	**Moxa**	**44.01 308⇑**	*i*P		**P**	**21 04 54.7 +0.5**
MOX			pmax		pmax	
	comp=Z,179nm,1.8s,mb5.1					
YAK	**Yakutsk**	**44.15 35***c*	*i*P		**P**	**21 04 55.0 -0.2**
YAK			*e**PP		pP	21 05 43.6 +2.5
YAK			*e*			21 06 34.6
YAK			*e*			21 06 39.4
YAK			*e*S		**S**	**21 11 09.9 -1.4**
YAK			*e**SS		sS	21 12 28.1 -4.1
YAK			*e*			21 14 23.6
YAK			*e*SSS			21 15 45.6
YAK			pmax		pmax	
	comp=Z,58nm,0.6s,mb5.1					
YAK			pmax		pmax	
	comp=E,38nm,1.6s					
YAK			pmax		pmax	
	comp=N,9.0nm,1.1s					
YAK			pmax		pmax	
	comp=Z,28nm,0.9s,mb4.6					
YAK			smax			
	comp=N,213nm,3.3s					
YAK			smax			
	comp=E,187nm,1.8s					
YAK	**Yakutsk**	**44.15 35**	*e*P		**P**	**21 04 54.9 -0.3**
	comp=E,151nm,0.6s,mb5.5					
YAK			*e*SP			21 10 05.1
FLOS	**Flostrand**	**44.26 331**	*e*P		**P**	**21 04 56.3 +0.3**
NB2	**NORSAR Subarra**	**44.33 323**	P		**P**	**21 04 56.0 -0.6**
	comp=Z,135nm,0.6s,mb5.5,baz=97,slow=7.9					
NOA	**NORSAR Array B**	**44.33 323**	P		**P**	**21 04 56.0 -0.6**
	comp=Z,103nm,0.6s,mb5.3,baz=102,slow=7.8,SNR=450					
NOA			PP		PP	21 06 39.6 -4.7
	comp=Z,64nm,1.0s,baz=95,slow=9.9,SNR=7.5					
GRA1	**Grafenberg Arr**	**44.35 307**	*e*P		**P**	**21 04 58.1 +1.2**
	comp=Z,72nm,1.0s,mb5.0					
GRA1			*e*pP		pP	21 05 44.7 +1.8
GRF	**Grafenberg Arr**	**44.35 307**	*e*P		**P**	**21 04 58.1 +1.2**
	comp=Z,72nm,1.0s,mb5.0					
GRF			*e*pP		pP	21 05 44.7 +1.8
GRF	**Grafenberg Arr**	**44.35 307**	*e*P		**P**	**21 04 58.1 +1.2**
GRF			*e**PP		pP	21 05 44.7 +1.8
GRF			pmax		pmax	
	comp=Z,72nm,1.0s,mb5.0					
GRF	**Grafenberg Arr**	**44.35 307**	*e*P		**P**	**21 04 58.1 +1.2**
GRF			*e**PP		pP	21 05 44.7 +1.8
GRF			pmax		pmax	
	comp=Z,72nm,1.0s,mb5.0					
WTTA	**Wattenberg**	**44.38 303**	*i* P		**P**	**21 04 56.8 -0.4**
	comp=Z,50nm,0.7s,mb4.9,SNR=59					
STOK	**Stokkvaagen**	**44.39 331**	*e*P		**P**	**21 04 56.4 -0.6**
WATA	**Walderalm**	**44.41 303⇑**	*i*P		**P**	**21 04 56.7 -0.7**
	comp=Z,33nm,0.5s,mb4.9,SNR=45					
NSS	**Namsos**	**44.46 328**	*e*P		**P**	**21 04 56.2 -1.4**
NAO01	**NORSAR Array S**	**44.47 323**	*e*P		**P**	**21 04 56.9 -0.8**
	comp=Z,34nm,0.4s,mb5.0					
NAO01			*e*PP		PP	21 06 42.9 -2.9
OSL	**Oslo**	**44.48 321**	*e*P		**P**	**21 04 57.2 -0.6**
OSL			AMB		AMB	21 04 58.1
	comp=Z,104nm,0.9s,mb5.2					
OSL	**Oslo**	**44.48 321**	*i* P		**P**	**21 04 58.0 +0.2**
FUR	**Furstenfeldbru**	**44.49 305**	*e*P		**P**	**21 04 58.5 +0.4**
	comp=Z,97nm,1.1s,mb5.0					
FUR			*e*PcP		PcP	21 06 36.8 -0.6
FUR	**Furstenfeldbru**	**44.49 305**	*e*P		**P**	**21 04 58.5 +0.4**
FUR			*e*			21 06 36.8
FUR			pmax		pmax	
	comp=Z,97nm,1.1s,mb5.0					
BSEG	**Bad Segeberg**	**44.60 313**	*e*P		**P**	**21 04 59.5 +0.6**
	comp=Z,104nm,0.8s,mb5.2					
MDJ	**Mudanjiang**	**44.62 60**	P		**P**	**21 04 58.1 -1.1**
MDJ			pP		pP	21 05 41.7 -3.4
MDJ			sP		sP	21 06 04.2 -5.1
MDJ			PP		PP	21 06 45.8 -1.9
MDJ			PcS		PcS	21 10 26.8 -4.8
MDJ			S		**S**	**21 11 15.2 -3.3**
MDJ			pmax		pmax	
	comp=Z,7.0nm,0.7s,mb4.1					
MDJ			pmax		pmax	
	comp=Z,170nm,6.5s					
MDJ			LR		LR	
	comp=N,230nm,7.6s					
MDJ			LR		LR	
	comp=E,210nm,11.4s					
MDJ			LR		LR	
	comp=Z,280nm,11.4s					
LOF	**Lofoten**	**44.63 333⇑**	*i*P		**P**	**21 05 00.6 +1.8**
LOF			AMB		AMB	21 05 01.9
	comp=Z,144nm,1.3s,mb5.1					
CLZ	**Clausthal**	**44.69 310**	*e*P		**P**	**21 04 59.9 +0.3**
	comp=Z,81nm,1.1s,mb5.0					
CLZ	**Clausthal**	**44.69 310**	*e*P		**P**	**21 04 59.9 +0.3**
CLZ			pmax		pmax	
	comp=Z,81nm,1.1s,mb5.0					
YHNB	**Yeheng**	**44.69 91**	*e*P		**P**	**21 05 01.3 +1.3**
	comp=Z,74nm,0.6s,mb5.2					
MOTA	**Moosalm**	**44.72 303**	*i* P		**P**	**21 04 59.2 -0.7**
	comp=Z,56nm,0.7s,mb5.0,SNR=85					
TPUB	**Ta-pu**	**44.73 93**	*e*P		**P**	**21 05 01.2 +0.9**
	comp=Z,64nm,0.6s,mb5.1					
SSLB	**Suanglung**	**44.77 92**	*e*P		**P**	**21 05 01.8 +1.2**
	comp=Z,88nm,0.6s,mb5.3					
NRDL	**Niedersach Rie**	**44.81 311**	*e*P		**P**	**21 05 01.0 +0.5**
	comp=Z,74nm,0.9s,mb5.0					
RETA	**Reutte**	**44.93 304**	*i* P		**P**	**21 05 01.0 -0.5**
	comp=Z,15nm,0.5s,mb4.6,SNR=26					
UBBA	**Unterbreizbach**	**45.02 309**	*e*P		**P**	**21 05 02.1 -0.1**
	comp=Z,60nm,1.2s,mb4.8					
FETA	**Feichten**	**45.02 303**	*i* P		**P**	**21 05 01.7 -0.5**
	comp=Z,28nm,0.5s,mb4.9,SNR=65					
KONO	**Kongsberg**	**45.02 321**	*e*P		**P**	**21 05 02.0 -0.1**
KONO			*e*SS		SS	21 14 51.5 +2.1
KONO	**Kongsberg**	**45.02 321**	*e*P		**P**	**21 05 01.4 -0.7**
KONO			*e*			21 06 49.0
KONO			pmax		pmax	
	comp=Z,62nm,0.5s,mb5.2					
KONO	**Kongsberg**	**45.02 321**	*e*P		**P**	**21 05 01.4 -0.7**
	comp=Z,62nm,0.5s,mb5.2					
KONO			*e*PP		PP	21 06 49.0 -2.7
KSRS	**Korea Array**	**45.10 71**	P		**P**	**21 05 02.9 -0.2**
	comp=Z,13nm,0.5s,mb4.5,baz=273,slow=7.0,SNR=79					
KSRS			PcP		PcP	21 06 39.2 -0.5
	comp=Z,19nm,0.7s,baz=289,slow=3.3,SNR=18					
KSRS			ScP		ScP	21 10 09.2 -2.4
	comp=Z,12nm,1.1s,baz=288,slow=4.1,SNR=9.8					
KSRS	**Korea Array**	**45.10 71**	P		**P**	**21 05 02.9 -0.1**
KSRS						21 06 39.2
KSRS			pmax		pmax	
	comp=Z,13nm,0.5s,mb4.5					
KSRS			pmax		pmax	
	comp=Z,19nm,0.7s,mb4.5					
KSRS			pmax		pmax	
	comp=N,13nm,1.2s					
MUD	**Monsted U'grnd**	**45.19 317⇑**	*i*P		**P**	**21 05 03.8 +0.3**
MUD			*i*			21 06 53.1
MUD			pmax		pmax	
	comp=Z,43nm,1.1s,mb4.7					
MUD			MLR		MLR	
	comp=Z,200nm,20.0s					
MUD	**Monsted U'grnd**	**45.19 317⇑**	*i*P		**P**	**21 05 03.8 +0.3**
	comp=Z,43nm,1.1s,mb4.7					
MUD			*i*			21 06 53.1
MUD						
	comp=Z,200nm,20.0s					
YULB	**Yu-li**	**45.23 92**	*e*P		**P**	**21 05 06.1 +1.8**
	comp=Z,122nm,0.8s,mb5.3					
TWG	**Pinlang**	**45.32 93**	*e*P		**P**	**21 05 07.0 +2.0**
	comp=Z,312nm,0.6s,mb5.8					
KLR	**Kul'dur**	**45.36 54⇓**	*i*P		**P**	**21 05 01.4 -3.5**
KLR			*e*			21 06 35.2
KLR			*e*			21 14 39.5
KLR			pmax		pmax	
	comp=E,64nm,1.8s					
KLR			pmax		pmax	
	comp=Z,78nm,1.8s,mb4.7					
DOMB	**Dombas**	**45.45 324⇑**	*i*P		**P**	**21 05 05.2 -0.2**
DOMB			AMB		AMB	21 05 06.6
	comp=Z,138nm,1.3s,mb5.1					
DAVA	**Damuels**	**45.55 304**	*i* P		**P**	**21 05 06.3 -0.2**
	comp=Z,175nm,0.5s,mb5.7,SNR=131					
KGM	**Kluang**	**45.57 131**	P		**P**	**21 05 07.8 +0.9**
DAVOX	**Davos/Dischmat**	**45.64 303**	P		**P**	**21 05 06.8 -0.3**
	comp=Z,36nm,0.5s,mb5.0,baz=106,slow=6.4,SNR=103					
DAVOX			PcP		PcP	21 06 41.3 -0.1
	comp=Z,26nm,0.7s,baz=127,slow=3.9,SNR=8.4					
VLC	**Villacollemand**	**45.78 299**	*e*P		**P**	**21 05 07.9 -0.3**
STU	**Stuttgart**	**45.78 306**	*e*P		**P**	**21 05 08.4 +0.2**
	comp=Z,62nm,0.9s,mb4.9					
STU			*e*PcP		PcP	21 06 41.6 -0.3
STU	**Stuttgart**	**45.78 306**	*e*P		**P**	**21 05 08.3 +0.1**
STU			*e*			21 06 41.5
STU			pmax		pmax	
	comp=Z,31nm,0.6s,mb4.8					
STU	**Stuttgart**	**45.78 306**	*e*P		**P**	**21 05 08.3 +0.1**
	comp=Z,31nm,0.6s,mb4.8					
STU			*e*PcP		PcP	21 06 41.5 -0.4
TOD	**Tromm**	**45.92 307⇑**	*e*P		**P**	**21 05 09.6 +0.3**
TIXI	**Tiksi**	**45.93 22***c*	*i*P		**P**	**21 05 09.4 +0.4**
TIXI			*e**PP		pP	21 05 55.9 +0.7
TIXI			*e*			21 07 00.0
TIXI			*e*PPP			21 07 46.2
TIXI			*e*S		**S**	**21 11 36.2 -0.3**
TIXI			*e*SS		SS	21 15 06.8 +3.1
TIXI			pmax		pmax	
	comp=Z,197nm,0.8s,mb5.5					
TIXI	**Tiksi**	**45.93 22⇑**	*i*P		**P**	**21 05 09.3 +0.3**
	comp=Z,123nm,0.3s,mb5.7					
TIXI			*e*PcP		PcP	21 06 41.1 -0.9
HLG	**Helgoland**	**46.02 313**	*e*P		**P**	**21 05 10.5 +0.5**
	comp=Z,112nm,0.9s,mb5.2					
TNS	**Taunus Mts**	**46.07 308**	*e*P		**P**	**21 05 10.8 +0.4**
	comp=Z,69nm,1.1s,mb4.9					
TNS			*e*PcP		PcP	21 06 42.4 -0.5
TNS	**Taunus Mts**	**46.07 308**	*e*P		**P**	**21 05 10.8 +0.4**
TNS			*e*			21 06 42.4
TNS			pmax		pmax	
	comp=Z,69nm,1.1s,mb4.9					
MYKOM	**Kota Tinggi**	**46.07 131**	P		**P**	**21 05 11.7 +0.8**
SPAK	**Spaichingen-Ko**	**46.15 305⇑**	*e*P		**P**	**21 05 11.1 0.0**
MOL	**Molde**	**46.19 325**	*e*P		**P**	**21 05 11.6 +0.4**
SNART	**Snartemo**	**46.23 319⇑**	*i*P		**P**	**21 05 12.0 +0.4**
SNART			AMB		AMB	21 05 13.0
	comp=Z,114nm,1.3s,mb5.1					
IBBN	**Ibbenburen**	**46.26 311**	*e*P		**P**	**21 05 12.1 +0.2**
	comp=Z,119nm,0.9s,mb5.2					
BFO	**Black Forest**	**46.42 305**	*e*P		**P**	**21 05 12.8 -0.4**
	comp=Z,48nm,1.5s,mb4.6					
BFO	**Black Forest**	**46.42 305**	*e*P		**P**	**21 05 12.8 -0.4**
BFO			pmax		pmax	
	comp=Z,48nm,1.5s,mb4.6					
KTD	**Kalmit**	**46.43 307⇑**	*e*P		**P**	**21 05 13.5 +0.3**
VLA	**Vladivostok**	**46.56 62**	*i* P		**P**	**21 05 15.2 +0.9**
VLA			pmax		pmax	
	comp=Z,43nm,0.7s,mb4.9					
BLS5	**Blasjo**	**46.62 321**	*e*P		**P**	**21 05 15.2 +0.6**
BUG	**Bochum--Univer**	**46.66 310**	*e*P		**P**	**21 05 15.2 +0.2**
	comp=Z,78nm,1.0s,mb5.0					
BUG			*e*PcP		PcP	21 06 44.3 -0.6
LANF	**Langenberg**	**46.66 306⇑**	*e*P		**P**	**21 05 15.7 +0.7**
ABH	**Alteburg**	**46.69 307⇑**	*e*P		**P**	**21 05 15.7 +0.5**
FELD	**Feldberg im Sc**	**46.71 305⇑**	*e*P		**P**	**21 05 15.0 -0.4**
STR	**Strasbourg**	**46.75 306**	*e*P		**P**	**21 05 15.0 -0.7**
HYA	**Hoyanger**	**46.77 323⇑**	*i*P		**P**	**21 05 16.9 +1.2**
HYA			AMB		AMB	21 05 18.4
	comp=Z,91nm,1.2s,mb5.0					
WIT	**Witteveen**	**46.87 312⇑**	*i*P		**P**	**21 05 17.0 +0.5**
	comp=Z,214nm,1.1s,mb5.4					
WTSB	**Winterswijk**	**46.88 310⇑**	*i*P		**P**	**21 05 17.0 +0.3**
	comp=Z,118nm,1.3s,mb5.0					
RUP	**Ruppelstein**	**47.03 307⇑**	*e*P		**P**	**21 05 18.0 +0.1**
CDF	**Champ du Feu**	**47.10 306⇑**	*i*P		**P**	**21 05 17.8 -0.6**
	comp=Z,40nm,0.9s,mb4.5					
CDF	**Champ du Feu**	**47.10 306⇑**	*i*P		**P**	**21 05 17.8 -0.6**
CDF			pmax		pmax	
	comp=Z,20nm,0.9s,mb4.5					
CDF	**Champ du Feu**	**47.10 306⇑**	*i*P		**P**	**21 05 17.8 -0.6**
	comp=Z,20nm,0.9s,mb4.5					
BBS	**Basel-Blauen**	**47.11 304⇑**	*e*P		**P**	**21 05 17.8 -0.7**
PGF	**Pioggiola**	**47.13 297⇑**	*i*P		**P**	**21 05 18.0 -0.8**
	comp=Z,80nm,0.5s,mb5.0					
PGF	**Pioggiola**	**47.13 297⇑**	*i*P		**P**	**21 05 18.0 -0.8**
PGF			pmax		pmax	
	comp=Z,40nm,0.5s,mb5.0					
PGF	**Pioggiola**	**47.13 297⇑**	*i*P		**P**	**21 05 18.0 -0.8**
	comp=Z,40nm,0.5s,mb5.0					
HSP	**Hornsund**	**47.17 345**	*e*P		**P**	**21 05 20.7 +2.1**
BER	**Bergen**	**47.18 322⇑**	*i*P		**P**	**21 05 18.1 -0.8**
BER			AMB		AMB	21 05 19.1
	comp=Z,12nm,1.1s,mb4.1					
ECH	**Echery**	**47.21 305**	*e*P		**P**	**21 05 20.0 +0.7**
EGD	**Espegrend**	**47.24 322⇓**	*i*P		**P**	**21 05 18.6 -0.7**
ASK	**Askoy**	**47.25 322⇑**	*i*P		**P**	**21 05 18.6 -0.9**

BEBN E 21 05 58.5
BEBN AP pP 21 06 05.2 -4.7
HAU Haudompre 47.78 305⇑*i*P P 21 05 23.3 -0.4
comp=Z,88nm,0.8s,mb4.9
HAU Haudompre 47.78 305⇑*i*P P 21 05 23.3 -0.4
HAU pmax pmax
comp=Z,44nm,0.8s,mb4.8
HAU Haudompre 47.78 305⇑*i*P P 21 05 23.3 -0.4
comp=Z,44nm,0.8s,mb4.8
SAOF Saorge 47.81 300⇑*e*P P 21 05 24.2 +0.2
AUTN L'Aution 47.90 300⇑*e*P P 21 05 25.1 +0.5
SBF Sospel 47.92 299⇑*i*P P 21 05 24.6 -0.2
comp=Z,158nm,0.6s,mb5.2
SBF Sospel 47.92 299⇑*i*P P 21 05 24.6 -0.2
SBF pmax pmax
comp=Z,79nm,0.6s,mb5.2
SBF Sospel 47.92 299⇑*i*P P 21 05 24.6 -0.2
comp=Z,79nm,0.6s,mb5.2
THEF They Montfort 47.98 305⇑*e*P P 21 05 25.0 -0.2
LUCF Luceram 47.98 300⇑*e*P P 21 05 25.5 +0.2
REVF Revere 48.00 299⇑*e*P P 21 05 25.3 -0.1
TOUF Mont Tournerai 48.02 300⇑*e*P P 21 05 26.1 +0.5
LPG La Plagne 48.02 302⇑*i*P P 21 05 25.7 +0.1
comp=Z,171nm,0.7s,mb5.2
LPG La Plagne 48.02 302⇑*i*P P 21 05 25.7 +0.1
LPG pmax pmax
comp=Z,85nm,0.7s,mb5.2
LPG La Plagne 48.02 302⇑*i*P P 21 05 25.7 +0.1
comp=Z,85nm,0.7s,mb5.2
LPL La Plagne 48.03 302⇑*i*P P 21 05 25.7 +0.1
comp=Z,149nm,0.9s,mb5.0
LPL La Plagne 48.03 302⇑*i*P P 21 05 25.7 +0.1
LPL pmax pmax
comp=Z,74nm,0.9s,mb5.0
LPL La Plagne 48.03 302⇑*i*P P 21 05 25.7 +0.1
comp=Z,74nm,0.9s,mb5.0
BCLA Clavier 48.03 309 P P 21 05 25.7 +0.1
comp=Z,18nm,1.4s,mb4.2
MVIF Mont Vial 48.11 300⇑*e*P P 21 05 26.6 +0.3
BNI Bardonecchia 48.17 301 *e*P P 21 05 26.1 -0.6
BNI pmax pmax
comp=Z,69nm,1.0s,mb4.9
BNI Bardonecchia 48.17 301 *e*P P 21 05 26.1 -0.6
comp=Z,69nm,1.0s,mb4.9
MBDF Montbardon 48.18 301⇑*i*P P 21 05 26.2 -0.6
comp=Z,146nm,0.5s,mb5.3
MBDF Montbardon 48.18 301⇑*i*P P 21 05 26.2 -0.6
MBDF pmax pmax
comp=Z,73nm,0.5s,mb5.3
MBDF Montbardon 48.18 301⇑*i*P P 21 05 26.2 -0.6
comp=Z,73nm,0.5s,mb5.3
CABF La Chapelle 48.23 303⇑*i*P P 21 05 27.0 -0.1
comp=Z,210nm,1.0s,mb5.1
CABF La Chapelle 48.23 303⇑*i*P P 21 05 27.0 -0.1
CABF pmax pmax
comp=Z,105nm,1.0s,mb5.1
CABF La Chapelle 48.23 303⇑*i*P P 21 05 27.0 -0.1
comp=Z,105nm,1.0s,mb5.1
CALN Calern 48.33 299⇑*e*P P 21 05 28.1 +0.1
GIVF Givet 48.39 308⇑*i*P P 21 05 28.6 +0.3
comp=Z,187nm,1.3s,mb5.0
GIVF Givet 48.39 308⇑*i*P P 21 05 28.6 +0.3
GIVF pmax pmax
comp=Z,93nm,1.3s,mb5.0
GIVF Givet 48.39 308⇑*i*P P 21 05 28.6 +0.3
comp=Z,93nm,1.3s,mb5.0
DOU Dourbes 48.54 308 P P 21 05 29.8 +0.4
comp=Z,44nm,1.7s,mb4.5
DOU E 21 05 50.5
DOU E 21 05 57.0
MEZF Maizieres J'vi 48.54 306⇑*i*P P 21 05 29.5 +0.1
comp=Z,85nm,0.7s,mb4.9
MEZF Maizieres J'vi 48.54 306⇑*i*P P 21 05 29.5 +0.1
comp=Z,85nm,0.7s,mb5.2
FRF La Foret Royal 48.55 299⇑*i*P P 21 05 28.9 -0.7
comp=Z,96nm,0.6s,mb5.0
FRF La Foret Royal 48.55 299⇑*i*P P 21 05 28.9 -0.7
FRF pmax pmax
comp=Z,48nm,0.6s,mb5.0
FRF La Foret Royal 48.55 299⇑*i*P P 21 05 28.9 -0.7
comp=Z,48nm,0.6s,mb5.0
UCC Uccle 48.56 309 P P 21 05 28.9 -0.7
UCC E 21 05 49.4
KMBO Kilima Mbogo 48.62 227 P P 21 05 32.2 +1.7
comp=Z,30nm,0.6s,mb4.8,baz=35,slow=11,SNR=100
KMBO ScP ScP 21 10 25.9 -0.7
comp=Z,0.6nm,0.3s,baz=44,slow=22,SNR=3.1
KMBO Kilima Mbogo 48.62 227 P P 21 05 32.2 +1.6
KMBO ScP ScP 21 10 25.9 -0.7
KMBO Kilima Mbogo 48.62 227 P P 21 05 32.5 +2.0
SNR=11
KMBO P 21 05 32.5
SNR=11
KMBO Kilima Mbogo 48.62 227⇑*i*P P 21 05 32.1 +1.6
KMBO AMb AMB 21 05 32.8
comp=Z,519nm,0.8s,mb5.9
KBS Kingsbay 48.65 347 *e*P P 21 05 28.2 -1.7
KBS *e*SS SS 21 15 51.0 +3.6
KBS Kingsbay 48.65 347 *e*P P 21 05 30.9 +1.0
KBS pmax pmax
comp=Z,168nm,0.8s,mb5.4
KBS Kingsbay 48.65 347 *e*P P 21 05 30.9 +1.0
comp=Z,168nm,0.8s,mb5.4
SNF Seneffe 48.66 309 P P 21 05 30.5 +0.2
comp=Z,58nm,1.7s,mb4.6
SNF E 21 05 49.5
LMR La Mourre 48.70 299 *e*P P 21 05 29.8 -1.0
comp=Z,27nm,0.6s,mb4.5
LMR La Mourre 48.70 299 *e*P P 21 05 29.8 -1.0
LMR pmax pmax
comp=Z,13nm,0.6s,mb4.4
LMR La Mourre 48.70 299 *e*P P 21 05 29.8 -1.0
comp=Z,13nm,0.6s,mb4.5
ORIF Oris-en-Rattie 48.75 301⇑*i*P P 21 05 30.0 -1.1
comp=Z,30nm,0.5s,mb4.5
ORIF Oris-en-Rattie 48.75 301⇑*i*P P 21 05 30.0 -1.1
ORIF pmax pmax
comp=Z,15nm,0.5s,mb4.6
ORIF Oris-en-Rattie 48.75 301⇑*i*P P 21 05 30.0 -1.1
comp=Z,15nm,0.5s,mb4.6
BAIF Baives 48.79 308⇑*i*P P 21 05 31.5 +0.2
comp=Z,216nm,1.1s,mb5.1
BAIF Baives 48.79 308⇑*i*P P 21 05 31.5 +0.2
BAIF pmax pmax
comp=Z,108nm,1.1s,mb5.1
BAIF Baives 48.79 308⇑*i*P P 21 05 31.5 +0.2
comp=Z,108nm,1.1s,mb5.1
KEST Kesra 48.87 288 P P 21 05 32.9 +0.7
comp=Z,54nm,0.6s,mb5.1,baz=1.3,slow=1.4,SNR=587
SMRF Simiane la Rot 49.20 300⇑*i*P P 21 05 34.1 -0.4
comp=Z,36nm,0.6s,mb4.6
SMRF Simiane la Rot 49.20 300⇑*i*P P 21 05 34.1 -0.4
comp=Z,36nm,0.6s,mb4.9
OCF Saint Nazaire 49.24 301⇑*e*P P 21 05 35.1 +0.3
OG26 St.-Nazaire-De 49.24 301⇑*e*P P 21 05 35.1 +0.3
JOW Kunigami 49.28 84 P P 21 05 35.4 0.0
comp=Z,99nm,0.6s,mb5.3,baz=282,slow=8.7,SNR=8.3
BALP Baler 49.46 101 *e*P P 21 05 38.2 +1.4
LUBP Lubang 49.57 104 *e*P P 21 05 38.9 +1.2
LOR Lormes 49.58 305⇑*i*P P 21 05 36.5 -0.9
comp=Z,40nm,0.9s,mb4.5
LOR Lormes 49.58 305⇑*i*P P 21 05 36.5 -0.9
LOR pmax pmax
comp=Z,20nm,0.9s,mb4.5
LOR Lormes 49.58 305⇑*i*P P 21 05 36.5 -0.9
comp=Z,20nm,0.9s,mb4.5
SSB Saint Sauveur 49.59 302⇑*e*P P 21 05 37.5 +0.1
VIVF Saint-Julien-l 49.60 301⇑*i*P P 21 05 37.3 -0.3
comp=Z,148nm,0.7s,mb5.2
VIVF Saint-Julien-l 49.60 301⇑*i*P P 21 05 37.3 -0.3
VIVF pmax pmax
comp=Z,74nm,0.7s,mb5.1
VIVF Saint-Julien-l 49.60 301⇑*i*P P 21 05 37.3 -0.3
comp=Z,74nm,0.7s,mb5.1
SMF Signal de Mont 49.73 304⇑*i*P P 21 05 38.0 -0.5
comp=Z,117nm,0.7s,mb5.0
SMF Signal de Mont 49.73 304⇑*i*P P 21 05 38.0 -0.5
SMF pmax pmax
comp=Z,59nm,0.7s,mb5.0
SMF Signal de Mont 49.73 304⇑*i*P P 21 05 38.0 -0.5
comp=Z,59nm,0.7s,mb5.0
SSF Saint Saulge 49.86 304⇑*i*P P 21 05 38.8 -0.7
comp=Z,96nm,1.1s,mb4.8
SSF Saint Saulge 49.86 304⇑*i*P P 21 05 38.8 -0.7
SSF pmax pmax
comp=Z,48nm,1.1s,mb4.7
SSF Saint Saulge 49.86 304⇑*i*P P 21 05 38.8 -0.7
comp=Z,48nm,1.1s,mb4.7
TGY Tagaytay City 49.89 103 P P 21 05 41.9 +1.7
comp=Z,128nm,0.3s,mb5.7,baz=163,slow=0.9,SNR=4.3
MENF Mencas 49.99 309 *e*P P 21 05 36.8 -3.6
AVF Avril sur Loir 50.03 304⇑*i*P P 21 05 40.2 -0.5
comp=Z,93nm,0.7s,mb4.9
AVF Avril sur Loir 50.03 304⇑*i*P P 21 05 40.2 -0.5
AVF pmax pmax
comp=Z,46nm,0.7s,mb4.9
AVF Avril sur Loir 50.03 304⇑*i*P P 21 05 40.2 -0.5
comp=Z,46nm,0.7s,mb4.9
CMAH Djebel Manchou 50.03 290 P P 21 05 41.0 0.0
PLDF La Plantade 50.04 303⇑*e*P P 21 05 40.5 -0.4
ABSA Djebel Ababsia 50.11 290 P P 21 05 41.7 +0.2
AEU East Anglia Un 50.16 312 *e*P P 21 05 41.3 -0.4
ABA1 Baconsthorpe 50.17 312 *e*P P 21 05 41.4 -0.3
POLP Polilio Island 50.32 102 *e*P P 21 05 44.8 +1.5
AGO Saint Agoulin 50.35 303⇑*e*P P 21 05 43.2 0.0
LASF Ste Croix 50.37 301⇑*i*P P 21 05 43.4 +0.1
comp=Z,304nm,1.2s,mb5.2
BGF Bois d'Agland 50.42 304⇑*i*P P 21 05 43.0 -0.7
comp=Z,33nm,0.6s,mb4.6
BGF Bois d'Agland 50.42 304⇑*i*P P 21 05 43.0 -0.7
BGF pmax pmax
comp=Z,17nm,0.6s,mb4.5
BGF Bois d'Agland 50.42 304⇑*i*P P 21 05 43.0 -0.7
comp=Z,17nm,0.6s,mb4.5
LRW Lerwick 50.44 322⇑*i*P P 21 05 43.2 -0.4
LRW AMb AMB 21 05 43.9
comp=Z,185nm,0.9s,mb5.4
KSM Kuching 50.45 124 P P 21 05 45.1 +0.8
KSM Kuching 50.45 124 *e*P P 21 05 44.6 +0.3
comp=Z,21nm,1.0s,mb4.4
KSM *e*pP pP 21 06 30.5 -0.9
LBL Lubilhac 50.48 302⇑*e*P P 21 05 44.4 +0.2
TFO1 Folkestone 50.51 310 *e*P P 21 05 43.8 -0.5
TFO1 AMb AMB 21 05 44.8
comp=Z,223nm,1.1s,mb5.5
PYM Petit Puy Mans 50.51 303⇑*e*P P 21 05 44.2 -0.2
BUSP Coron 50.56 106 *e*P P 21 05 46.1 +0.9
CKFL Kef-Lekhel 50.64 290 P P 21 05 45.5 0.0
WAL1 Walls 50.64 322⇑*e*P P 21 05 44.7 -0.4
BATP Bataraza 50.73 111 *e*P P 21 05 47.5 +1.1
CASM Ain Smara 50.86 290 P P 21 05 46.6 -0.6
TCF Toulx Ste Croi 50.91 304⇑*i*P P 21 05 47.2 -0.2
comp=Z,327nm,1.2s,mb5.3
TCF Toulx Ste Croi 50.91 304⇑*i*P P 21 05 47.2 -0.2
TCF pmax pmax
comp=Z,164nm,1.2s,mb5.3
TCF Toulx Ste Croi 50.91 304⇑*i*P P 21 05 47.2 -0.2
comp=Z,164nm,1.2s,mb5.3
CTEI Djebel Teioual 51.00 290 P P 21 05 48.3 +0.2
SJMP San Jose 51.00 105 *e*P P 21 05 49.8 +1.3
SBUM Sibu 51.02 122 P P 21 05 49.6 +1.0
BTM Bintulu 51.09 120 P P 21 05 50.1 +1.0
DFRA Djebel Bou Aff 51.23 291 P P 21 05 49.9 0.0
KDM Kudat 51.23 113 P P 21 05 51.2 +1.1
KKM Kota Kinabalu 51.36 115 P P 21 05 52.3 +1.2
CAF Calviac 51.37 302⇑*i*P P 21 05 50.8 0.0
SJAF Saint Jean de 51.50 299⇑*e*P P 21 05 51.0 -0.8
EJON La Jonquera 51.51 299 P P 21 05 51.2 -0.6
comp=Z,56nm,1.1s,mb4.9
LRDF Laroque-de-Fa 51.61 300⇑*e*P P 21 05 52.5 -0.1
RJF Les Rejaudoux 51.64 303⇑*i*P P 21 05 52.9 +0.1
comp=Z,102nm,1.0s,mb4.9
RJF Les Rejaudoux 51.64 303⇑*i*P P 21 05 52.9 +0.1
RJF pmax pmax
comp=Z,51nm,1.0s,mb4.9
RJF Les Rejaudoux 51.64 303⇑*i*P P 21 05 52.9 +0.1
comp=Z,51nm,1.0s,mb4.9
CWF Charnwood Fore 51.66 312 *e*P P 21 05 51.8 -1.0
CKHR Kef el Ahmar 51.69 290 P P 21 05 53.5 +0.2
FILF Fillols 51.70 299⇑*e*P P 21 05 53.4 +0.1
SET Setif 51.71 291 P P 21 05 53.0 -0.4
MTLF Montolieu 51.72 300⇑*i*P P 21 05 53.1 -0.3
comp=Z,67nm,0.7s,mb4.9
MTLF Montolieu 51.72 300⇑*i*P P 21 05 53.1 -0.3
MTLF pmax pmax
comp=Z,33nm,0.7s,mb4.9
MTLF Montolieu 51.72 300⇑*i*P P 21 05 53.1 -0.3
comp=Z,33nm,0.7s,mb4.9
MME1 Meikle Cairn 51.74 318⇑*i*P P 21 05 52.7 -0.7
XAL Allendale 51.77 315 *e*P P 21 05 52.7 -0.9
ESY Stoneypath 51.80 317⇑*i*P P 21 05 53.1 -0.7
LHO Holmfirth 51.82 314⇑*e*P P 21 05 52.9 -1.0
MCD Coleburn Disti 51.85 319⇑*i*P P 21 05 54.0 -0.1
LDF La Druitiere 51.87 307⇑*i*P P 21 05 53.6 -0.8
WOL Wolverton 51.92 311⇑*e*P P 21 05 54.2 -0.5
WOL AMb AMB 21 05 55.5
comp=Z,216nm,1.5s,mb5.4
ORE Reay 51.96 320⇑*i*P P 21 05 54.7 -0.2
FLN La Foliniere 52.06 307⇑*i*P P 21 05 54.9 -0.9
EDI Edinburgh 52.11 317⇑*i*P P 21 05 55.2 -0.8
EDI AMb AMB 21 05 56.2
comp=Z,106nm,1.0s,mb5.2
AKF Akfadou 52.18 291 P P 21 05 56.4 -0.5
EKA Eskdalemuir Ar 52.21 316 P P 21 05 56.3 -0.5
comp=Z,71nm,0.9s,mb5.1,baz=88,slow=8.0,SNR=126
EKA PcP PcP 21 07 04.5 -0.7
comp=Z,5.5nm,0.5s,baz=94,slow=4.1,SNR=8.9
EKA PP PP 21 07 53.7 -3.5
comp=Z,6.4nm,0.7s,baz=89,slow=9.6,SNR=3.9
EKA ScP ScP 21 10 39.3 -2.1
comp=Z,1.5nm,0.7s,baz=91,slow=4.3,SNR=3.7
EKA Eskdalemuir Ar 52.21 316 P P 21 05 56.3 -0.5
EKA 21 07 04.5
EKA 21 07 53.7
ECK Cauldkaine Hil 52.22 316⇑*i*P P 21 05 56.0 -0.9
SWN1 Swindon 52.22 311⇑*e*P P 21 05 56.1 -0.9
SWN1 AMb AMB 21 05 57.9
comp=Z,191nm,1.0s,mb5.5
EBH Black Hill 52.23 317⇑*i*P P 21 05 56.1 -0.8
ESK Eskdalemuir 52.24 316⇑*e*P P 21 05 56.3 -0.7
ESK AMb AMB 21 05 57.0
comp=Z,86nm,1.2s,mb5.1
ESK Eskdalemuir 52.24 316 *e*P P 21 05 55.7 -1.3
ESK pmax pmax
comp=Z,115nm,1.2s,mb5.2
ESK Eskdalemuir 52.24 316 *e*P P 21 05 55.7 -1.3
comp=Z,115nm,1.2s,mb5.2
EAU Auchinoon 52.27 317⇑*i*P P 21 05 56.6 -0.7
LFF La Frestale 52.27 302⇑*i*P P 21 05 57.3 -0.1
comp=Z,59nm,0.5s,mb5.0
LFF La Frestale 52.27 302⇑*i*P P 21 05 57.3 -0.1
LFF pmax pmax
comp=Z,30nm,0.5s,mb5.0
LFF La Frestale 52.27 302⇑*i*P P 21 05 57.3 -0.1
comp=Z,30nm,0.5s,mb5.0
MVH1 Achvaich 52.28 319⇑*i*P P 21 05 56.6 -0.7
MBAR Mbarara 52.29 234 P P 21 05 57.8 -0.2
comp=Z,268nm,0.6s,mb5.8,SNR=27
SDKM Sandakan 52.35 114 P P 21 05 58.8 +0.4
GRR Gorron 52.40 307⇑*i*P P 21 05 57.3 -1.0
ETOS Mallorca 52.40 296 P P 21 05 59.2 +0.7
comp=Z,149nm,0.8s,mb5.5
MFF Saint Martin d 52.40 305⇑*i*P P 21 05 57.5 -0.9
MDO Dochfour 52.47 319⇑*i*P P 21 05 57.8 -0.8
JMIC Jan Mayen 52.58 336 P P 21 06 00.1 +0.8
comp=Z,79nm,0.7s,mb5.2,baz=32,slow=0.9,SNR=4.9
MLS Moulis 52.61 300⇑*e*P P 21 05 58.1 -1.9
EMIR Miracle 52.63 299 P P 21 06 00.2 +0.1
comp=Z,104nm,1.8s,mb5.0
HLM1 Long Mynd 52.65 312 *e*P P 21 05 59.4 -0.7
ATAF Djebel Tarf 52.67 291 P P 21 06 02.4 +1.9
EAB Aberfoyle 52.69 317⇑*i*P P 21 05 59.7 -0.7
RSC Scourie 52.72 320⇑*i*P P 21 06 00.4 -0.1
HGH Gray Hill 52.81 311⇑*i*P P 21 05 59.9 -1.3
PGBU Glenifferbraes 52.85 317⇑*e*P P 21 06 01.0 -0.5
PGBU AMb AMB 21 06 01.8
comp=Z,134nm,1.1s,mb5.3
AKET Djebel Ketaf 52.91 291 P P 21 06 02.5 +0.3
KAC Achnashellach 52.95 319⇑*i*P P 21 06 01.6 -0.5
SOFL Sornfelli, Far 52.97 325 *e*P P 21 06 02.5 +0.2
SOFL AMb AMB 21 06 04.7
comp=Z,312nm,3.2s
HTR Trewern Hill 52.98 312⇑*i*P P 21 06 01.6 -0.9
JSA Saint Aubin 53.02 308⇑*i*P P 21 06 01.6 -1.2
YSS Yuzh-Sakhalins 53.04 55*o*eP P 21 06 02.5 -0.5
YSS *e* pP 21 06 53.9 +3.3
YSS pmax pmax
comp=Z,120nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,200nm,13.0s
YSS Yuzh-Sakhalins 53.04 55 *e*P P 21 06 03.2 +0.2
comp=Z,57nm,0.6s,mb5.2
KSB Sheil Bridge 53.08 319⇑*i*P P 21 06 02.4 -0.7
EPF Esparros 53.12 300⇑*i*P P 21 06 02.3 -1.3
comp=Z,58nm,0.6s,mb4.9
EPF Esparros 53.12 300⇑*i*P P 21 06 02.3 -1.3
EPF pmax pmax
comp=Z,29nm,0.6s,mb4.9
EPF Esparros 53.12 300⇑*i*P P 21 06 02.3 -1.3
comp=Z,29nm,0.6s,mb4.9
EPOB Poblet 53.13 298 P P 21 06 01.9 -1.9
comp=Z,41nm,1.5s,mb4.6
RRR Rubha Reidh 53.15 319⇑*i*P P 21 06 03.2 -0.4
KPL Plockton 53.17 319⇑*e*P P 21 06 03.2 -0.5
KPL AMb AMB 21 06 04.0
comp=Z,127nm,0.9s,mb5.3
MAJO Matsushiro 53.17 68 *e*P P 21 06 03.3 -0.8
MAJO pmax pmax
comp=Z,17nm,0.6s,mb4.7
MAJO Matsushiro 53.17 68 *e*P P 21 06 03.3 -0.9
comp=Z,17nm,0.6s,mb4.7
MAT Matsushiro 53.17 68 P P 21 06 03.3 -0.8
MAT S S 21 13 16.6 -1.3
MJAR Matsushiro Arr 53.17 68 P P 21 06 03.8 -0.4
comp=Z,20nm,0.9s,mb4.6,baz=289,slow=9.9,SNR=44
MJAR PcP PcP 21 07 08.9 -0.4
comp=Z,8.7nm,0.7s,baz=262,slow=4.0,SNR=10
MJAR ScP ScP 21 10 43.7 -2.3
comp=Z,4.0nm,0.9s,baz=291,slow=5.3,SNR=7.0
MJAR Matsushiro Arr 53.17 68 P P 21 06 03.8 -0.4
MJAR 21 07 08.9
MJAR Matsushiro Arr 53.17 68 P P 21 06 03.8 -0.4
MJAR PcP PcP 21 07 08.9 -0.4
MJAR ScP ScP 21 10 43.7 -2.3
GAL1 Galloway 53.18 316⇑*e*P P 21 06 02.5 -1.4
GAL1 AMb AMB 21 06 04.1
comp=Z,73nm,1.2s,mb5.0
RESF Ens 53.19 300⇑*e*P P 21 06 04.4 +0.2
ADJB Djebel Djouab 53.20 291 P P 21 06 04.2 -0.2
ABA Alger-Bouzarea 53.27 292 P P 21 06 03.8 -1.1
LABF Labassere 53.30 300 *e*P P 21 06 04.2 -0.8
KAR1 Arisaig 53.35 318⇑*i*P P 21 06 04.7 -0.4
WLF1 Llynfaes 53.36 314⇑*e*P P 21 06 04.4 -0.8
WLF1 AMb AMB 21 06 05.3
comp=Z,189nm,1.3s,mb5.4
EBIE Bielsa 53.36 300 P P 21 06 05.2 -0.3
comp=Z,60nm,0.7s,mb5.1
VIEF Viey 53.38 300⇑*e*P P 21 06 05.5 -0.1
SGMF Saint Gilles 53.52 307⇑*i*P P 21 06 05.9 -0.6
EMHD Djebel Mahouad 53.55 291 P P 21 06 07.5 +0.6
HEX Exmoor 53.55 311⇑*i*P P 21 06 05.4 -1.2
RRH Rhenigidale 53.60 320⇑*i*P P 21 06 06.5 -0.4
KSK Scoval 53.70 319⇑*i*P P 21 06 07.6 0.0
EIBI Ibiza 53.73 295 P P 21 06 08.8 +0.7
comp=Z,255nm,1.0s,mb5.7
ASAJ Asahikawa 53.77 58 P P 21 06 07.5 -0.9
comp=Z,13nm,0.6s,mb4.7,baz=270,slow=8.5,SNR=29
ASAJ PcP PcP 21 07 10.6 -0.8
comp=Z,13nm,0.6s,baz=265,slow=5.1,SNR=6.2
ASAJ Asahikawa 53.77 58 P P 21 06 07.5 -0.9
ASAJ 21 07 10.6
ASAJ pmax pmax
comp=Z,13nm,0.6s
ASAJ pmax pmax
comp=Z,13nm,0.6s
ETSF Etsaut 53.78 300⇑*i*P P 21 06 08.3 -0.2
comp=Z,177nm,0.6s,mb5.5
ETSF Etsaut 53.78 300⇑*i*P P 21 06 08.3 -0.2
ETSF pmax pmax
comp=Z,88nm,0.6s,mb5.5
ETSF Etsaut 53.78 300⇑*i*P P 21 06 08.3 -0.2
comp=Z,88nm,0.6s,mb5.5
ERTA Horta de San J 53.79 298 P P 21 06 08.6 0.0
comp=Z,205nm,1.1s,mb5.6
DYA Yadsworthy 53.80 310⇑*e*P P 21 06 07.3 -1.1
DYA AMb AMB 21 06 08.2
comp=Z,68nm,1.6s,mb4.9
ROSF Rostrenen 53.96 308⇑*i*P P 21 06 09.0 -0.7
comp=Z,89nm,0.8s,mb5.0
ROSF Rostrenen 53.96 308⇑*i*P P 21 06 09.0 -0.7
ROSF pmax pmax
comp=Z,44nm,0.8s,mb5.0
ROSF Rostrenen 53.96 308⇑*i*P P 21 06 09.0 -0.7
comp=Z,44nm,0.8s,mb5.0
HTL Hartland 53.99 311 *e*P P 21 06 08.7 -1.1
HTL AMb AMB 21 06 09.6
comp=Z,50nm,1.0s,mb5.0
QUIF Quistinic 54.01 307⇑*i*P P 21 06 09.2 -0.8
ESAC San Caprasio 54.11 299 P P 21 06 10.7 -0.1
comp=Z,389nm,1.3s,mb5.8
SJPF Ste Jean 54.18 301⇑*i*P P 21 06 11.4 +0.1
comp=Z,23nm,0.5s,mb4.7
SJPF Ste Jean 54.18 301⇑*i*P P 21 06 11.4 +0.1
SJPF pmax pmax
comp=Z,12nm,0.5s,mb4.7
SJPF Ste Jean 54.18 301⇑*i*P P 21 06 11.4 +0.1
comp=Z,12nm,0.5s,mb4.7
EALK Alkurruntz 54.34 301 P P 21 06 12.8 +0.3
comp=Z,100nm,1.0s,mb5.3
ELIZ Elizondo 54.37 301 P P 21 06 12.9 +0.2
ELIZ pmax pmax
comp=Z,15nm,0.6s,mb4.7
ELIZ Elizondo 54.37 301 P P 21 06 12.9 +0.1
comp=Z,15nm,0.6s,mb4.7
DSB Dublin 54.52 314 *e*P P 21 06 12.5 -1.1
comp=Z,6.8nm,0.6s,mb4.3
DSB *e*PP PP 21 08 18.8 +0.8
EMOS Mosqueruela 54.57 297 P P 21 06 15.2 +1.0
comp=Z,176nm,1.1s,mb5.5
EBNR Beni Rached 54.59 292 P P 21 06 14.0 -0.4
SEY Seymchan 54.60 34*c* *i*P P 21 06 14.9 +0.9
DMUB Kingscourt 54.66 315⇑*i*P P 21 06 14.2 -0.4
DAG Danmarks Havn 54.76 344⇓*i*P P 21 06 15.6 +0.6
DAG pmax pmax
comp=Z,220nm,1.0s,mb5.6
DAG Danmarks Havn 54.76 344⇓*i*P P 21 06 15.6 +0.6
comp=Z,223nm,1.0s,mb5.7
ECHA Ech Chlef 54.76 292 P P 21 06 14.5 -1.1
ERM Erimo 54.84 60⇓*e*P P 21 06 16.3 +0.2
ERM Erimo 54.84 60 *e*P P 21 06 15.8 -0.3
comp=Z,21nm,0.5s,mb4.9
EBEN Beniarda 54.98 295 P P 21 06 17.4 +0.2
comp=Z,22nm,0.6s,mb4.9
DCN Croghan 55.02 314⇑*i*P P 21 06 16.8 -0.4
EANR 'Ain N'Sour 55.04 292 P P 21 06 17.5 -0.1
ETRT Tiaret 55.10 291 P P 21 06 18.0 -0.1
ECHE Chera 55.20 297 P P 21 06 19.3 +0.6
ECHE pmax pmax
comp=Z,40nm,0.5s,mb5.2
ECHE Chera 55.20 297 P P 21 06 19.3 +0.6
comp=Z,40nm,0.5s,mb5.2
ECRI Cripan 55.24 301 P P 21 06 18.9 0.0
ECRI pmax pmax
comp=Z,32nm,0.6s,mb5.0
ECRI Cripan 55.24 301 P P 21 06 18.9 0.0
comp=Z,32nm,0.6s,mb5.0
ETOR Torete 55.54 298 P P 21 06 20.8 -0.3
ETOR pmax pmax
comp=Z,32nm,0.5s,mb5.1
ETOR Torete 55.54 298 P P 21 06 20.8 -0.4
comp=Z,32nm,0.5s,mb5.1
ELAN Lanestosa 55.66 302 P P 21 06 22.0 +0.1
comp=Z,249nm,1.1s,mb5.7
ETOB Tobarra 55.97 296 P P 21 06 25.0 +0.8
comp=Z,90nm,0.8s,mb5.3
ODJA Bouhanifia 56.22 292 P P 21 06 26.0 0.0
EVIA Vianos 56.66 296 P P 21 06 29.2 +0.1
EVIA pmax pmax
comp=Z,50nm,0.6s,mb5.3
EVIA Vianos 56.66 296 P P 21 06 29.2 +0.1
comp=Z,50nm,0.6s,mb5.3
EARI Arriondas 56.85 302 P P 21 06 30.6 +0.2
comp=Z,90nm,1.0s,mb5.4
EHUE Huescar 57.05 295 P P 21 06 31.9 +0.1
EHUE pmax pmax
comp=Z,128nm,0.8s,mb5.6
EHUE Huescar 57.05 295 P P 21 06 31.9 +0.1
comp=Z,128nm,0.8s,mb5.6
SCO Scoresbysund 57.05 336 *i*P P 21 06 32.4 +1.1
SCO pmax pmax
comp=Z,27nm,0.9s,mb4.9
SCO MLR MLR
comp=Z,130nm,20.0s
SCO Scoresbysund 57.05 336 *i*P P 21 06 32.4 +1.1
comp=Z,27nm,0.9s,mb4.9

SCO
comp=Z,130nm,20.0s
GUD Guadarrama 57.09 299 P **P 21 06 32.0 -0.1**
GUD pmax pmax
comp=Z,91nm,0.8s,mb5.5
GUD Guadarrama 57.09 299 P **P 21 06 32.0 -0.1**
comp=Z,91nm,0.8s,mb5.5
ENIJ Nijar 57.09 294 P **P 21 06 32.1 0.0**
ENIJ pmax pmax
comp=Z,136nm,0.6s,mb5.8
ENIJ Nijar 57.09 294 P **P 21 06 32.1 0.0**
comp=Z,136nm,0.6s,mb5.8
ESDC Sonseca Array 57.32 298 P **P 21 06 33.2 -0.4**
comp=Z,42nm,0.6s,mb5.2,baz=60,slow=7.4,SNR=218
ESDC PKKPbc 21 28 20.5
comp=Z,0.3nm,0.3s,baz=294,slow=13,SNR=6.8
ESDC Sonseca Array 57.32 298 P **P 21 06 33.3 -0.4**
comp=Z,45nm,0.6s,mb5.3
ESLA Sonseca Array 57.32 298 *eP* **P 21 06 33.0 -0.7**
comp=Z,23nm,0.9s,mb4.8
EQES Quesada 57.40 295 P **P 21 06 34.0 -0.3**
comp=Z,114nm,0.6s,mb5.7
EBER Berja 57.62 294 P **P 21 06 35.8 -0.1**
comp=Z,157nm,0.6s,mb5.8
PAB San Pablo 57.64 298 *eP* **P 21 06 35.3 -0.6**
PAB pmax pmax
comp=Z,94nm,1.1s,mb5.3
PAB San Pablo 57.64 298 *eP* **P 21 06 35.3 -0.6**
comp=Z,94nm,1.1s,mb5.3
EBAN Banos Encina 57.78 296 P **P 21 06 36.6 -0.3**
EBAN pmax pmax
comp=Z,102nm,0.6s,mb5.6
EBAN Banos Encina 57.78 296 P **P 21 06 36.6 -0.3**
comp=Z,102nm,0.6s,mb5.6
ECOG Cogollos-Vega 57.97 295 P **P 21 06 37.5 -0.7**
ECOG pmax pmax
comp=Z,47nm,0.5s,mb5.4
ECOG Cogollos-Vega 57.97 295 P **P 21 06 37.5 -0.7**
comp=Z,47nm,0.5s,mb5.4
EGUA Guajares 58.15 295 P **P 21 06 38.3 -1.2**
EGUA pmax pmax
comp=Z,212nm,0.6s,mb6.0
EGUA Guajares 58.15 295 P **P 21 06 38.3 -1.1**
comp=Z,212nm,0.6s,mb6.0
ERON Agron 58.25 295 P **P 21 06 39.2 -1.0**
comp=Z,40nm,0.4s,mb5.4
EADA Adamuz 58.35 296 P **P 21 06 40.4 -0.4**
comp=Z,95nm,0.7s,mb5.5
ECAL Calabor 58.40 301 P **P 21 06 41.5 +0.3**
comp=Z,212nm,1.5s,mb5.5
ELOJ Sierra Loja 58.45 295 P **P 21 06 40.3 -1.3**
ELOJ pmax pmax
comp=Z,33nm,0.8s,mb5.0
ELOJ Sierra Loja 58.45 295 P **P 21 06 40.3 -1.2**
comp=Z,33nm,0.8s,mb5.0
PBRG Braganca 58.46 301 *eP* **P 21 06 41.9 +0.3**
comp=Z,49nm,1.9s,mb4.8
ERUA La Rua 58.51 302 P **P 21 06 42.0 +0.1**
ERUA pmax pmax
comp=Z,14nm,0.4s,mb4.9
ERUA La Rua 58.51 302 P **P 21 06 42.0 +0.1**
comp=Z,14nm,0.4s,mb5.0
BORG Borgarnes 58.58 330 P **P 21 06 43.5 +1.5**
comp=Z,80nm,0.7s,mb5.5,baz=92,slow=4.1,SNR=29
BORG Borgarnes 58.58 330 P **P 21 06 43.5 +1.5**
BILL Bilibino 58.77 26*c iP* **P 21 06 44.1 +0.8**
BILL *i* *PP pP 21 07 31.1 -0.7
BILL *i* 21 08 55.5
BILL *eS* **S 21 14 31.7 +0.9**
BILL pmax pmax
comp=Z,179nm,1.6s,mb5.5
BILL MLR MLR
comp=Z,100nm,14.0s
BILL Bilibino 58.77 26 *eP* **P 21 06 43.9 +0.6**
comp=Z,138nm,1.0s,mb5.5
MVO Moncorvo 58.91 300 *i* P **P 21 06 44.5 -0.1**
comp=Z,87nm,1.1s,mb5.3
ALE Alert 59.10 354 P **P 21 06 46.0 +0.6**
comp=Z,320nm,0.5s,mb6.2,SNR=19
EMIJ Mijas 59.14 295 P **P 21 06 44.3 -2.0**
comp=Z,55nm,0.6s,mb5.4
STS Santiago 59.28 303 P **P 21 06 46.6 -0.6**
PVRL Vila Real 59.34 301 *eP* **P 21 06 47.5 -0.1**
comp=Z,53nm,1.7s,mb4.9
PCAB Cabril 59.38 301 *eP* **P 21 06 48.0 +0.1**
comp=Z,118nm,1.8s,mb5.2
ABPO Ambohimpanom 59.45 206 *eP* **P 21 06 49.3 +0.8**
ABPO pmax pmax
comp=Z,60nm,1.1s,mb5.1
ABPO Ambohimpanom 59.45 206 *eP* **P 21 06 49.3 +0.9**
comp=Z,60nm,1.1s,mb5.1
EMAZ Mazaricos 59.55 303 P **P 21 06 49.0 0.0**
comp=Z,9.7nm,0.4s,mb4.8
MTE Manteigas 59.57 300 *i* P **P 21 06 49.5 +0.3**
comp=Z,169nm,1.1s,mb5.6
MTE Manteigas 59.57 300 *eP* **P 21 06 49.1 -0.1**
comp=Z,114nm,0.9s,mb5.5
EZAM Zamans 59.67 302 P **P 21 06 50.2 +0.4**
EZAM pmax pmax
comp=Z,33nm,0.6s,mb5.1
EZAM Zamans 59.67 302 P **P 21 06 50.2 +0.3**
comp=Z,33nm,0.6s,mb5.1
PVIS Viseu 59.69 300 *i* P **P 21 06 50.2 +0.2**
comp=Z,157nm,1.0s,mb5.6
EJIF Jimena Fronter 59.70 295 P **P 21 06 47.8 -2.3**
EJIF pmax pmax
comp=Z,37nm,0.8s,mb5.1
EJIF Jimena Fronter 59.70 295 P **P 21 06 47.8 -2.3**
comp=Z,37nm,0.8s,mb5.1
PCBR Castelo Branco 59.74 299 *eP* **P 21 06 50.7 +0.3**
comp=Z,62nm,0.9s,mb5.2
ESPR Espera 59.81 295 P **P 21 06 49.7 -1.2**
comp=Z,75nm,0.6s,mb5.5
PMRV Marv??o 59.85 299 *i* P **P 21 06 51.0 -0.1**
comp=Z,86nm,1.3s,mb5.2
EBAD Badajoz 59.86 298 P **P 21 06 51.0 -0.2**
comp=Z,268nm,0.9s,mb5.9
EMIN Mina Concepcio 60.02 297 P **P 21 06 51.8 -0.5**
comp=Z,105nm,0.9s,mb5.5
PBAR Barrancos 60.12 297 *i* P **P 21 06 52.8 -0.2**
comp=Z,162nm,1.2s,mb5.5
SKR Severo-Kuril's 60.17 47 *eP* **P 21 06 48.0 -5.1**
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.4
PEA0B Petropavlovsk- 60.17 44 *eP* **P 21 06 51.7 -1.3**
PETK Petropavlovsk- 60.17 44 P **P 21 06 52.5 -0.5**
comp=Z,8.7nm,0.6s,mb4.6,baz=327,slow=3.5,SNR=34
PESTR Estremoz 60.22 298 *i* P **P 21 06 53.4 -0.3**
comp=Z,108nm,1.1s,mb5.4
PESTR Estremoz 60.22 298 *e*PP PP 21 09 10.1 +1.3
PTOM Tomar 60.49 299 *i* P **P 21 06 55.6 +0.1**
comp=Z,203nm,1.0s,mb5.7
MDT Midelt 60.63 291 P **P 21 06 56.5 -0.1**
comp=Z,43nm,0.9s,mb5.1,baz=74,slow=8.3,SNR=36
EVO Evora 60.66 298 *i* P **P 21 06 56.5 -0.1**
comp=Z,125nm,1.2s,mb5.4
EGRO El Granado 60.70 297 P **P 21 06 56.1 -0.8**
comp=Z,128nm,0.9s,mb5.5
PET Petropavlovsk 60.73 44⇓*iP* **P 21 06 55.4 -1.5**
PET *e**PP pP 21 07 43.7 -2.0
PET *e**SP sP 21 08 07.1 -2.1
PET *eS* **S 21 14 54.4 -1.8**
PET *e**SS sS 21 16 22.7 +1.0
PET pmax pmax
comp=Z,40nm,1.1s,mb5.0
PET pmax pmax
comp=Z,200nm,12.9s
PET Petropavlovsk 60.73 44 *eP* **P 21 06 55.1 -1.8**
comp=Z,6.9nm,0.3s,mb4.8
PBEJ Beja 60.77 297 *i* P **P 21 06 57.3 -0.1**
comp=Z,98nm,1.0s,mb5.4
PVAQ Vaqueiros 60.93 297 *i* P **P 21 06 58.2 -0.3**
comp=Z,139nm,1.4s,mb5.4
PCVE Castro Verde 61.06 297 *eP* **P 21 06 59.6 +0.3**
comp=Z,54nm,2.0s,mb4.8
SUMG Summit 61.08 341⇑*iP* **P 21 06 59.9 +1.0**
comp=Z,230nm,0.8s,mb5.9
SUMG *e*PP PP 21 09 16.2 +0.6
PBDV Barranco-do-Ve 61.15 297 *i* P **P 21 07 00.0 +0.1**
comp=Z,200nm,1.1s,mb5.7
PMAFR Mafra 61.38 299 *i* P **P 21 07 01.4 -0.1**
comp=Z,243nm,1.0s,mb5.8
PTEO Sao Teotonio 61.59 297 *i* P **P 21 07 02.9 0.0**
comp=Z,129nm,0.7s,mb5.7
PFVI Vila Bisbo 61.84 297 *eP* **P 21 07 04.7 +0.1**
comp=Z,106nm,1.7s,mb5.2
LSZ Lusaka 65.25 226⇑*eP* **P 21 07 27.2 +0.2**
LSZ pmax pmax
comp=Z,54nm,0.6s,mb5.3
LSZ Lusaka 65.25 226⇑*eP* **P 21 07 27.2 +0.2**
comp=Z,54nm,0.6s,mb5.4
LSZ Lusaka 65.25 226 ⇑P **P 21 07 27.6 +0.6**
SNR=9.5
LSZ ⇑P 21 07 27.6
SNR=9.5
LSZ Lusaka 65.25 226⇑*iP* **P 21 07 27.3 +0.3**
TOA0 Torodi Ar. Sit 65.52 269⇑*iP* **P 21 07 26.9 -1.9**
TORD Torodi Ar. Bea 65.52 269 P **P 21 07 27.1 -1.8**
comp=Z,226nm,0.6s,mb6.0,baz=49,slow=5.9,SNR=1547
SFJD Kangerlussuaq 67.76 339 P **P 21 07 40.9 -1.3**
comp=Z,44nm,0.6s,mb5.3,baz=23,slow=6.2,SNR=28
SFJD Kangerlussuaq 67.76 339 *i* P **P 21 07 42.0 -0.2**
SFJD pmax pmax
comp=Z,68nm,0.9s,mb5.3
SFJD MLR MLR
comp=Z,100nm,18.0s
SFJD Kangerlussuaq 67.76 339 *i* P **P 21 07 42.0 -0.2**
comp=Z,68nm,0.9s,mb5.3
SFJD
comp=Z,100nm,18.0s
RES Resolute Bay 68.77 356 P **P 21 07 48.1 -0.3**
comp=Z,20nm,0.8s,mb4.8,baz=25,slow=10,SNR=83
EFAM Famara 69.11 291 P **P 21 07 50.8 -0.5**
comp=Z,160nm,0.8s,mb5.7
PMPS Porto Santo 69.19 296 *eP* **P 21 07 51.4 -0.2**
comp=Z,126nm,1.4s,mb5.4
PMAR Madeira 69.78 296 *i* P **P 21 07 55.4 +0.2**
comp=Z,271nm,1.1s,mb5.8
CFTV Fuerteventura 69.89 291 P **P 21 07 55.5 -0.5**
comp=Z,61nm,1.2s,mb5.1
MSNA Messina 69.97 220⇑*iP* **P 21 07 56.8 +0.4**
MSNA AMb AMB 21 07 59.2
comp=Z,87nm,1.7s,mb5.1
EOSO Osorio 71.18 291 P **P 21 08 03.5 -0.3**
comp=Z,133nm,0.9s,mb5.6
EBAJ Bajamar 71.53 292 P **P 21 08 05.8 -0.1**
comp=Z,124nm,1.0s,mb5.5
CCAN Las Canadas 71.89 292 P **P 21 08 10.1 +2.1**
comp=Z,21nm,0.7s,mb4.9
COLD Coldfoot 72.11 16⇑*iP* **P 21 08 08.9 +0.3**
comp=Z,122nm,0.9s,mb5.5
POGA Pongola 73.37 216⇑*iP* **P 21 08 16.7 +0.2**
POGA AMb AMB 21 08 20.7
comp=Z,188nm,1.0s,mb5.7
MBWA Marble Bar 73.62 133 *eP* **P 21 08 17.4 -0.7**
MBWA Marble Bar 73.62 133 *eP* **P 21 08 16.6 -1.4**
comp=Z,15nm,0.8s,mb4.7
SLR Silverton 73.65 219 *eP* **P 21 08 19.0 +0.8**
SLR AMb AMB 21 08 20.9
comp=Z,80nm,1.7s,mb5.1
INK Inuvik 74.02 9 P **P 21 08 20.4 +0.7**
comp=Z,130nm,0.7s,mb5.7,baz=359,slow=7.6,SNR=576
ERPM east rand prop 74.17 219⇑*iP* **P 21 08 21.4 +0.2**
ERPM AMb AMB 21 08 22.5
comp=Z,91nm,1.2s,mb5.3
TTA Tatalina 74.17 20 *eP* **P 21 08 21.2 +0.4**
TTA pmax pmax
comp=Z,152nm,1.2s,mb5.5
TTA Tatalina 74.17 20 *eP* **P 21 08 21.2 +0.4**
comp=Z,152nm,1.2s,mb5.5
CHUM Lake Minchumin 74.39 18 *eP* **P 21 08 22.3 +0.4**
comp=Z,126nm,0.7s,mb5.7
KSR Koster 74.47 220 *eP* **P 21 08 23.4 +0.5**
KSR AMb AMB 21 08 23.9
comp=Z,32nm,1.0s,mb4.9
LBTB Lobatse 74.48 222⇑*eP* **P 21 08 23.5 +0.5**
LBTB *e**PP pP 21 09 14.1 +0.2
LBTB pmax pmax
comp=Z,77nm,0.6s,mb5.5
LBTB Lobatse 74.48 222⇑*eP* **P 21 08 23.5 +0.5**
comp=Z,77nm,0.6s,mb5.5
LBTB *e*pP pP 21 09 14.1 +0.2
LBTB Lobatse 74.48 222⇑*iP* **P 21 08 23.8 +0.8**
LBTB AMb AMB 21 08 25.7
comp=Z,182nm,1.4s,mb5.5
DBIC Dimbokro 74.49 267 P **P 21 08 22.0 -1.4**
comp=Z,54nm,0.8s,mb5.2,baz=31,slow=6.8,SNR=82
DBIC Dimbokro 74.49 267⇑*iP* **P 21 08 22.0 -1.4**
KLOF Kloof 74.50 220 *eP* **P 21 08 23.6 +0.5**
KLOF AMb AMB 21 08 24.3
comp=Z,112nm,0.8s,mb5.5
BPAW Bear Paw Mtn. 74.54 18 *eP* **P 21 08 22.1 -0.8**
comp=Z,91nm,0.9s,mb5.4
KIC Kosan Boka 74.58 267⇑*iP* **P 21 08 22.6 -1.3**
comp=Z,327nm,1.1s,mb5.9
COLA College 74.61 16⇑*iP* **P 21 08 23.3 0.0**
COLA pmax pmax
comp=Z,191nm,0.8s,mb5.8
COLA College 74.61 16⇑*iP* **P 21 08 23.3 0.0**
comp=Z,191nm,0.8s,mb5.8
TIC Toumodi 74.64 267⇑*iP* **P 21 08 22.8 -1.5**
comp=Z,117nm,0.8s,mb5.5
TIC Toumodi 74.64 267⇑*iP* **P 21 08 22.8 -1.5**
TIC pmax pmax
comp=Z,117nm,0.8s,mb5.6
TSUM Tsumeb 74.71 232⇑*eP* **P 21 08 24.4 -0.1**
comp=Z,79nm,0.9s,mb5.3
TSUM Tsumeb 74.71 232⇑*iP* **P 21 08 24.9 +0.4**
LIC Lamto 74.89 267⇑*iP* **P 21 08 24.2 -1.5**
comp=Z,141nm,0.8s,mb5.4
LIC Lamto 74.89 267⇑*iP* **P 21 08 24.2 -1.5**
comp=Z,96nm,0.5s,mb5.7
FITZ Fitzroy Crossi 75.00 126⇑*iP* **P 21 08 25.5 -0.6**
comp=Z,15nm,0.4s,mb5.0
FITZ Fitzroy Crossi 75.00 126 P **P 21 08 25.7 -0.5**
comp=Z,9.3nm,0.5s,mb4.7,baz=332,slow=4.9,SNR=59
FITZ pP pP 21 09 17.4 +0.3
comp=Z,12nm,0.9s,baz=254,slow=3.0,SNR=2.3
KTH Kantishna Hill 75.01 18 *eP* **P 21 08 25.4 -0.1**
comp=Z,151nm,0.9s,mb5.6
FRB Frobisher Bay 75.08 343 P **P 21 08 25.9 -0.1**
comp=Z,42nm,0.6s,mb5.2,baz=17,slow=5.8,SNR=97
PRYS Parys 75.10 219⇑*iP* **P 21 08 26.6 +0.1**
PRYS AMb AMB 21 08 29.2
comp=Z,88nm,1.8s,mb5.1
PPLA Purkeypile 75.23 19 *eP* **P 21 08 26.6 -0.2**
comp=Z,59nm,0.7s,mb5.3
TRF Thorofare Moun 75.25 18 *eP* **P 21 08 26.5 -0.4**
comp=Z,29nm,0.7s,mb5.0
MCK McKinley 75.34 17 *eP* **P 21 08 26.4 -1.0**
MCK pmax pmax
comp=Z,70nm,0.6s,mb5.5
MCK McKinley 75.34 17 *eP* **P 21 08 26.4 -1.1**
comp=Z,70nm,0.6s,mb5.5
KNA Kununurra 75.40 122⇑*iP* **P 21 08 28.0 -0.5**
comp=Z,89nm,0.5s,mb5.7
SVW2 Sparrevohn 75.76 21 *eP* **P 21 08 30.6 +0.8**
KAKA Kakadu 75.87 118 *eP* **P 21 08 28.9 -2.3**
comp=Z,44nm,0.5s,mb5.3
KAKA Kakadu 75.87 118 *eP* **P 21 08 28.8 -2.4**
comp=Z,89nm,0.4s,mb5.8
EGAK Eagle 76.08 13⇑*iP* **P 21 08 31.8 +0.2**
comp=Z,85nm,1.0s,mb5.3
SEK Senekal 76.11 218⇑*iP* **P 21 08 32.5 +0.3**
SEK AMb AMB 21 08 33.3
comp=Z,158nm,0.9s,mb5.6
SWZ Schweizer 76.36 221⇑*iP* **P 21 08 33.8 +0.1**
SWZ AMb AMB 21 08 35.2
comp=Z,161nm,1.3s,mb5.5
PAX Paxson 76.80 16⇑*iP* **P 21 08 35.7 +0.1**
PAX pmax pmax
comp=Z,66nm,0.6s,mb5.4
PAX Paxson 76.80 16⇑*iP* **P 21 08 35.7 0.0**
comp=Z,66nm,0.6s,mb5.4
DAWY Dawson 77.05 13⇑*iP* **P 21 08 37.1 +0.1**
RSO Redoubt South 77.09 20 *eP* **P 21 08 37.3 0.0**
PMR Palmer 77.11 18 *eP* **P 21 08 36.8 -0.6**
PMR pmax pmax
comp=Z,57nm,0.7s,mb5.3
PMR Palmer 77.11 18 *eP* **P 21 08 36.8 -0.6**
comp=Z,57nm,0.7s,mb5.3
MENT Mentasta 77.21 15 *eP* **P 21 08 38.2 +0.3**
BOSA Boshof 77.55 220 P **P 21 08 40.5 +0.2**
comp=Z,96nm,0.7s,mb5.5,baz=33,slow=5.3,SNR=157
BOSA PKKPbc PKKPbc 21 27 42.1 -0.6
comp=Z,2.7nm,0.9s,baz=45,slow=16,SNR=6.1
BOSA Boshof 77.55 220⇑*iP* **P 21 08 40.5 +0.2**
BOSA AMb AMB 21 08 41.2
comp=Z,130nm,1.0s,mb5.5
MORW Morawa 77.81 140 *eP* **P 21 08 40.6 -1.1**
SEW Seward 78.30 19 *eP* **P 21 08 43.6 -0.3**
comp=Z,44nm,0.7s,mb5.2
DIV Divide 78.34 17 *eP* **P 21 08 44.5 +0.3**
comp=Z,138nm,0.7s,mb5.7
BMRM Bremner River 78.75 17 *eP* **P 21 08 46.8 +0.3**
comp=Z,160nm,1.0s,mb5.6
HVD Gariep Dam 79.04 219⇑*iP* **P 21 08 48.7 +0.3**
HVD AMb AMB 21 08 49.8
comp=Z,99nm,1.4s,mb5.2
KDAK Kodiak Island 79.35 22 P **P 21 08 50.1 +0.3**
comp=Z,144nm,0.7s,mb5.7,baz=351,slow=4.0,SNR=71
UPI Upington 79.49 223⇑*iP* **P 21 08 51.3 +0.4**
UPI AMb AMB 21 08 52.7
comp=Z,191nm,1.4s,mb5.5
OHAK Old Harbor 79.60 23 *eP* **P 21 08 51.0 -0.1**
comp=Z,65nm,0.6s,mb5.4
SOE Somerset East 80.71 217 *eP* **P 21 08 57.5 +0.3**
SOE AMb AMB 21 08 59.2
comp=Z,76nm,1.4s,mb5.1
GRM Grahamstown 80.75 216⇑*iP* **P 21 08 57.5 0.0**
GRM AMb AMB 21 09 10.3
comp=Z,139nm,1.5s,mb5.4
PNL Peninsula 81.07 15 *eP* **P 21 08 59.3 +0.4**
comp=Z,155nm,1.2s,mb5.5
YKA Yellowknife Ar 81.34 3 P **P 21 09 00.2 0.0**
comp=Z,104nm,0.5s,mb5.7,baz=350,slow=5.4,SNR=1793
YKA PKKPbc PKKPbc 21 27 29.8 -3.6
comp=Z,1.8nm,0.7s,baz=167,slow=2.4,SNR=27
YKA Yellowknife Ar 81.34 3 P **P 21 09 00.2 -0.1**
YKA pmax pmax
comp=Z,104nm,0.5s
YKA pmax pmax
comp=Z,2.0nm,0.7s
NWAO Narrogin (SRO) 81.52 142 P **P 21 09 00.2 -1.4**
comp=Z,9.9nm,0.6s,mb4.6,baz=337,slow=4.5,SNR=12
NWAO Narrogin (SRO) 81.52 142 P **P 21 09 00.2 -1.4**
SKAG Skagway 82.06 13 *eP* **P 21 09 04.7 +0.7**
comp=Z,144nm,1.0s,mb5.6
SCHQ Schefferville 82.10 337 P **P 21 09 04.2 -0.2**
comp=Z,29nm,0.6s,mb5.1,baz=36,slow=5.3,SNR=73
SCHQ PP PP 21 12 14.1 -0.6
comp=Z,4.4nm,0.6s,baz=5.3,slow=2.2,SNR=5.2
SCHQ PKKPbc PKKPbc 21 27 29.1 -2.3
comp=Z,3.4nm,0.9s,baz=224,slow=1.8,SNR=3.6
WRA Warramunga Arr 82.12 122 P **P 21 09 03.6 -1.3**
comp=Z,22nm,0.4s,mb5.1,baz=325,slow=5.0,SNR=588
WRA PKKPbc PKKPbc 21 27 32.3 +0.6
comp=Z,3.4nm,0.8s,baz=120,slow=2.3,SNR=48
WRAB Tennant Creek 82.12 122 *eP* **P 21 09 03.5 -1.4**
WRAB pmax pmax
comp=Z,32nm,0.5s,mb5.2
WRAB Tennant Creek 82.12 122 *eP* **P 21 09 03.5 -1.4**
comp=Z,32nm,0.5s,mb5.2
KOMG Komaggas 82.69 225⇑*iP* **P 21 09 08.0 +0.3**
KOMG AMb AMB 21 09 09.0
comp=Z,110nm,1.0s,mb5.5
CVNA Calvinia 82.72 222⇑*iP* **P 21 09 08.0 +0.2**
CVNA AMb AMB 21 09 09.6
comp=Z,94nm,1.3s,mb5.4
SUR Sutherland 82.86 221 *eP* **P 21 09 08.2 -0.3**
comp=Z,62nm,0.9s,mb5.3
SUR Sutherland 82.86 221⇑*iP* **P 21 09 09.5 +1.0**
SUR AMb AMB 21 09 10.2
comp=Z,78nm,0.9s,mb5.4
DLBC Dease Lake 83.92 11 P **P 21 09 13.6 0.0**
comp=Z,38nm,0.5s,mb5.4,baz=338,slow=3.9,SNR=142
FCC Fort Churchill 84.34 352 *eP* **P 21 09 15.7 0.0**
FCC pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
FCC Fort Churchill 84.34 352 *eP* **P 21 09 15.7 0.0**
comp=Z,2.6nm,1.1s,mb3.9
ASAR Alice Springs 84.37 125 P **P 21 09 15.1 -1.3**
comp=Z,22nm,0.5s,mb5.1,baz=311,slow=4.8,SNR=546
ASAR PKiKP PKiKP 21 14 27.4 -1.7
comp=Z,0.7nm,0.5s,baz=339,slow=1.4,SNR=8.9
ASAR PKKPbc PKKPbc 21 27 26.8 +0.1
comp=Z,1.4nm,0.8s,baz=123,slow=2.7,SNR=11
CER Ceres 84.42 221⇑*iP* **P 21 09 17.1 +0.7**
CER AMb AMB 21 09 24.2
comp=Z,31nm,1.3s,mb4.9
COEN Coen 84.56 112 *eP* **P 21 09 16.1 -1.4**
comp=Z,110nm,0.6s,mb5.8
FORT Forrest 85.75 133 *eP* **P 21 09 22.1 -1.0**
comp=Z,51nm,0.6s,mb5.4
FORT Forrest 85.75 133 *eP* **P 21 09 21.8 -1.2**
comp=Z,50nm,0.6s,mb5.4
EDM Edmonton 90.66 2⇑*iP* **P 21 09 46.5 +0.4**
CTA Charters Tower 90.69 114⇑*iP* **P 21 09 45.5 -1.2**
comp=Z,19nm,0.6s,mb5.2
CTAO Charters Tower 90.69 114 *eP* **P 21 09 44.6 -2.1**
CTAO pmax pmax
comp=Z,14nm,0.6s,mb5.1
CTAO Charters Tower 90.69 114 *eP* **P 21 09 44.6 -2.1**
comp=Z,14nm,0.6s,mb5.1
ULM Lac du Bonnet 92.90 351 P **P 21 09 55.8 -0.7**
comp=Z,23nm,1.0s,mb5.2,baz=8.9,slow=5.4,SNR=19
ULM PP PP 21 13 42.9 +1.9
comp=Z,4.8nm,0.8s,baz=13,slow=8.1,SNR=5.2
LONY Lake Ozonia 93.44 336 *eP* **P 21 09 58.1 -1.0**
comp=Z,11nm,0.9s,mb4.9
PNT Penticton 94.15 7 P **P 21 10 02.3 +0.1**
A06A Chilliwack 94.17 8⇑P **P 21 10 01.6 -0.7**
baz=94
A05A Maple Falls 94.20 8⇓P **P 21 10 02.0 -0.5**
baz=94
A07A Ashnola River, 94.34 7⇓P **P 21 10 03.3 +0.2**
baz=94,SNR=14
MBW Mount Baker 94.43 8 P **P 21 10 03.2 -0.4**
EYMN Ely 94.53 348 *eP* **P 21 10 03.2 -0.8**
comp=Z,55nm,1.3s,mb5.5
A08A Turner Farm, O 94.54 7⇓P **P 21 10 04.2 +0.2**
baz=94,SNR=19
A09A Danville 94.58 6⇓P **P 21 10 04.0 -0.2**
baz=94,SNR=8.5
SADO Sadowa 94.72 339 P **P 21 10 04.2 -0.7**
comp=Z,4.7nm,0.7s,mb4.8,baz=16,slow=8.7,SNR=4.6
SADO Sadowa 94.72 339 P **P 21 10 04.2 -0.7**
B06A Marblemount 94.74 8⇓P **P 21 10 04.6 -0.4**
baz=94,SNR=6.0
A11A Hall Mountain, 94.77 5⇓P **P 21 10 05.5 +0.5**
baz=94,SNR=8.6
WALA Waterton Lakes 94.80 3 *eP* **P 21 10 04.7 -0.5**
comp=Z,0.5nm,0.6s,mb3.8
RPW Rockport 94.81 8 *eP* **P 21 10 04.5 -0.8**
comp=Z,2.3nm,0.6s,mb4.5
AGMN Agassiz Refuge 94.82 351 *eP* **P 21 10 04.6 -0.7**
comp=Z,43nm,1.3s,mb5.4
A12A Yaak River Ran 94.84 4⇑P **P 21 10 05.5 +0.1**
baz=94
OBC Olympics--Boni 94.89 10 P **P 21 10 07.3 +1.6**
STKA Stephens Creek 94.90 126 *eP* **P 21 10 03.5 -2.3**
comp=Z,2.7nm,0.4s,mb4.7
STKA Stephens Creek 94.90 126 P **P 21 10 03.5 -2.4**
comp=Z,2.9nm,0.4s,mb4.7,baz=336,slow=3.7,SNR=19
STKA Stephens Creek 94.90 126 *eP* **P 21 10 03.3 -2.5**
comp=Z,0.7nm,0.5s,mb4.0
A13A Flathead Natio 94.90 3⇓P **P 21 10 05.8 +0.1**
baz=94
A14A Double T Ranch 94.91 3⇑P **P 21 10 05.6 -0.1**
baz=94
A15A Johnson Ranch, 94.93 2⇑P **P 21 10 05.8 0.0**
baz=94
B07A Winthrop 94.95 7⇑P **P 21 10 06.0 +0.1**
baz=94,SNR=12
A16A West Butte Ran 94.99 2⇓P **P 21 10 05.9 -0.2**
baz=94
JCW Jim Creek 95.01 8 P **P 21 10 06.5 +0.3**
A18A Metzger Ranch, 95.04 0⇓P **P 21 10 06.4 +0.1**
baz=95
B08A Colville Reser 95.12 7⇓P **P 21 10 06.6 -0.1**
baz=95,SNR=14
B09A Rice 95.17 6⇑P **P 21 10 07.1 +0.2**
baz=95,SNR=11
B11A Sandpoint 95.29 5⇑P **P 21 10 07.3 -0.2**
baz=95
B12A Libby 95.30 4⇓P **P 21 10 07.7 +0.2**
baz=95
B10A Chitwood Farm, 95.36 5⇑P **P 21 10 08.0 +0.2**
baz=95
DGMT Dagmar 95.37 357⇓P **P 21 10 07.8 0.0**
baz=95
DGMT Dagmar 95.37 357 *eP* **P 21 10 08.2 +0.3**
comp=Z,19nm,0.8s,mb5.3
NEW Newport 95.41 5 *eP* **P 21 10 08.1 +0.1**
NEW pmax pmax
comp=Z,23nm,1.1s
NEW Newport 95.41 5 *eP* **P 21 10 08.1 +0.1**
comp=Z,23nm,1.1s,mb5.2
B13A Whitefish 95.46 3⇓P **P 21 10 08.4 +0.2**
baz=95,SNR=8.8
GNW Green Mountain 95.52 9 *eP* **P 21 10 06.8 -1.7**

comp=Z,12nm,0.9s,mb5.1
NLWA Neilton Lookou 95.55 10 ⇑P P 21 10 09.0 +0.4
baz=95
B18A Beardsley Farm 95.57 0 ⇑P P 21 10 08.6 -0.1
baz=95
B15A Bradely Ranch, 95.60 2 ⇓P P 21 10 08.3 -0.6
baz=95,SNR=26
B17A L&G Farms, Che 95.66 1 ⇓P P 21 10 09.2 +0.1
baz=95,SNR=13
C07A Waterville 95.72 7 ⇓P P 21 10 09.4 0.0
baz=95
C08A Higginbotham F 95.72 7 ⇓P P 21 10 09.4 0.0
baz=95,SNR=5.9
C09A Chrisman Ranch 95.77 6 ⇑P P 21 10 09.9 +0.2
baz=95
EGMT Eagleton 95.94 0 ⇑P P 21 10 09.9 -0.5
baz=96,SNR=8.8
BSMT Bassoo Peak 95.97 4 P P 21 10 11.3 +0.8
D05A Enumclaw 95.99 9 ⇓P P 21 10 10.4 -0.3
baz=96
C12B Naegeli Ranch, 96.07 4 ⇑P P 21 10 11.5 +0.5
baz=96,SNR=6.2
C14A Swan Lake 96.10 3 ⇑P P 21 10 11.3 +0.2
baz=96
D06A Cle Elum 96.12 8 ⇓P P 21 10 11.2 -0.1
baz=96
C16A Fuhringer Ranc 96.13 2 ⇓P P 21 10 10.9 -0.4
baz=96
C15A Salmond Ranch, 96.13 2 ⇑P P 21 10 11.4 +0.1
baz=96
C13A Hot Springs 96.15 4 ⇓P P 21 10 11.6 +0.2
baz=96,SNR=18
C17A Wharram Farm, 96.32 1 ⇓P P 21 10 11.8 -0.4
baz=96,SNR=12
SWMT Swartz Lake 96.34 3 *e*P P 21 10 12.5 +0.3
comp=Z,3.2nm,0.5s,mb4.8
E03A Lebam 96.42 10 ⇓P P 21 10 12.6 -0.1
baz=96
LON Longmire 96.45 9 *e*P P 21 10 12.8 +0.1
LON pmax pmax
comp=Z,11nm,0.8s,mb5.1
LON Longmire 96.45 9 *e*P P 21 10 12.8 0.0
comp=Z,11nm,0.8s,mb5.1
D08A Wollman Farm, 96.45 7 ⇑P P 21 10 12.7 -0.1
baz=96
D09A Jones Farm, Ri 96.50 6 ⇑P P 21 10 13.2 +0.2
baz=96
D10A Wagner Farm, O 96.60 6 ⇓P P 21 10 13.5 0.0
baz=96
SLMT Seeley Lake 96.63 3 *e*P P 21 10 13.4 -0.1
comp=Z,18nm,0.6s,mb5.5
D11A Klaveano Farm, 96.67 5 ⇓P P 21 10 13.4 -0.4
baz=96,SNR=6.9
D12A Red Ives Fores 96.73 4 ⇓P P 21 10 14.2 +0.2
baz=96
D13A Huson 96.74 4 ⇓P P 21 10 14.1 0.0
baz=96
E06A Yakima 96.75 8 ⇓P P 21 10 14.2 0.0
baz=96
D14A Greenough 96.79 3 ⇓P P 21 10 14.0 -0.3
baz=96,SNR=7.7
D17A Six Diamond Ra 96.80 1 ⇓P P 21 10 14.4 +0.1
baz=96,SNR=25
D15A Lincoln 96.87 2 ⇓P P 21 10 14.8 +0.1
baz=96
D16A Dana Ranch, Ca 96.91 2 ⇓P P 21 10 14.6 -0.3
baz=96,SNR=7.3
CHMT Chamberlain Mo 96.97 3 *e*P P 21 10 15.0 -0.1
comp=Z,7.2nm,0.5s,mb5.2
E08A Dider Farm, El 97.00 7 ⇑P P 21 10 15.4 +0.2
baz=97
MSO Missoula 97.03 3 *e*P P 21 10 13.8 -1.6
comp=Z,7.6nm,1.0s,mb4.9
LVP Lakeview Peak 97.04 9 P P 21 10 16.4 +1.0
E09A Wood Farm, Sta 97.06 6 ⇓P P 21 10 15.8 +0.3
baz=97
F04A Amboy 97.17 9 ⇑P P 21 10 16.3 +0.3
baz=97
HRY Holter Researc 97.22 2 *e*P P 21 10 16.8 +0.6
comp=Z,8.5nm,0.6s,mb5.2
LAO LASA Array 97.23 358 *e*P P 21 10 14.3 -2.0
comp=Z,39nm,1.0s,mb5.6
E12A Beaver Dam Sad 97.35 4 ⇓P P 21 10 17.2 +0.4
baz=97
E11A Bogner Ranch, 97.37 5 ⇑P P 21 10 16.0 -0.9
baz=97,SNR=11
E18A Harlowton 97.39 0 ⇓P P 21 10 17.6 +0.5
baz=97,SNR=8.4
E16A East Helena 97.40 2 ⇓P P 21 10 17.5 +0.5
baz=97
E13A Victor 97.40 3 ⇓P P 21 10 17.0 0.0
baz=97
E14A Clinton 97.46 3 ⇓P P 21 10 17.2 -0.1
baz=97,SNR=7.0
E15A Deer Lodge 97.48 2 ⇓P P 21 10 17.4 0.0
baz=97,SNR=7.8
E17A Martinsdale 97.49 1 ⇓P P 21 10 17.8 +0.4
baz=97,SNR=8.7
F07A Phinny Hill Vi 97.50 8 ⇑P P 21 10 17.4 -0.1
baz=97
F11A Grangeville 97.84 5 ⇑P P 21 10 17.9 -1.1
baz=97,SNR=8.2
G04A Mulino 97.88 9 ⇓P P 21 10 19.2 0.0
baz=97
F12A Elk City 98.03 4 ⇓P P 21 10 19.6 -0.3
baz=98
F13A Darby 98.05 4 ⇑P P 21 10 19.8 -0.2
baz=98,SNR=8.9
F17A Fitzpatrick Pl 98.05 1 ⇓P P 21 10 20.6 +0.7
baz=98,SNR=11
F18A Big Timber 98.06 0 ⇓P P 21 10 20.3 +0.3
baz=98,SNR=7.3
F15A Butte 98.07 2 ⇓P P 21 10 19.9 -0.2
baz=98,SNR=8.3
G06A Carlson Farm, 98.08 8 ⇑P P 21 10 20.5 +0.4
baz=98
LRM Limekiln Ridge 98.09 2 *e*P P 21 10 20.3 +0.1
comp=Z,70nm,1.3s,mb5.8
F16A Kennard Place, 98.15 2 ⇓P P 21 10 20.7 +0.3
baz=98,SNR=5.8
BOZ Bozeman (W) 98.29 2 ⇓P P 21 10 21.7 +0.7
baz=98,SNR=8.7
BOZ Bozeman (W) 98.29 2 *e*P P 21 10 21.3 +0.3
BOZ pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
BOZ Bozeman (W) 98.29 2 *e*P P 21 10 21.3 +0.3
comp=Z,9.9nm,1.2s,mb5.0
G11A Walters Elk Ra 98.32 5 ⇑P P 21 10 20.6 -0.6
baz=98,SNR=5.5
G09A Cove 98.32 6 ⇓P P 21 10 21.4 +0.2
baz=98
H04A Detroit Lake 98.43 9 ⇓P P 21 10 21.8 +0.1
baz=98
G14A Jackson 98.63 3 ⇓P P 21 10 23.1 +0.6
baz=98
G15A Dillon 98.74 2 ⇓P P 21 10 23.3 +0.2
baz=98
G13A Cobalt 98.75 4 ⇑P P 21 10 22.7 -0.4
baz=98,SNR=11
H08A Prairie City 98.99 7 ⇓P Pdif 21 10 24.8 +0.5
baz=99
H11A Donnelly 99.03 5 ⇑P Pdif 21 10 24.5 +0.1
baz=99
MCMT McKenzie Canyo 99.07 3 *e*Pdif Pdif 21 10 24.3 -0.3
comp=Z,0.9nm,0.6s
H16A Russell Place, 99.24 1 ⇓P Pdif 21 10 25.3 -0.1
baz=99
H14A Leadore 99.26 3 ⇓P Pdif 21 10 26.3 +0.8
baz=99,SNR=8.3
H13A Challis 99.27 4 ⇑P Pdif 21 10 25.5 0.0
baz=99
H15A Lima 99.29 2 ⇑P Pdif 21 10 25.7 +0.1
baz=99
I07A Izee 99.34 7 ⇓P Pdif 21 10 25.9 +0.1
baz=99
ECSD EROS Data Cent 99.41 351 *e*Pdif Pdif 21 10 24.8 -1.3
comp=Z,8.8nm,0.9s
I11A Placerville 99.82 5 ⇓P Pdif 21 10 28.2 +0.2
baz=99
I14A Mackay 99.94 3 ⇓P Pdif 21 10 29.1 +0.6
baz=100
I12A Atlanta 99.99 4 ⇑P Pdif 21 10 29.1 +0.3
baz=100
J08A Circle Bar Ran 100.16 7 ⇓P Pdif 21 10 30.1 +0.6
baz=100
J09A Fry Pan Ranch, 100.24 6 ⇓P Pdif 21 10 30.4 +0.6
baz=100
HLID Hailey 100.26 4 ⇓P Pdif 21 10 30.0 +0.1
baz=100
HLID Hailey 100.26 4 *e*Pdif Pdif 21 10 29.7 -0.2
comp=Z,1.3nm,0.8s
MFID Camas Ranch 100.32 5 ⇑P Pdif 21 10 31.0 +0.8
baz=100
J13A Cove Ranch, Pi 100.44 4 ⇓P Pdif 21 10 31.5 +0.8
baz=100
J12A Stokes Ranch, 100.53 4 ⇑P Pdif 21 10 32.0 +0.8
baz=100
K10A MacKenzie Ranc 100.88 6 ⇑P Pdif 21 10 33.3 +0.6
baz=100
K11A Parker Ranch, 100.95 5 ⇓P Pdif 21 10 33.3 +0.3
baz=100
WVOR Wild Horse Val 101.06 7 *e*P Pdif 21 10 31.1 -2.4
WVOR pmax pmax
comp=Z,9.0nm,0.9s
WVOR Wild Horse Val 101.06 7 *e*Pdif Pdif 21 10 31.1 -2.3
comp=Z,9.3nm,0.9s
K19A Absolon Red Bu 101.14 360 ⇓P Pdif 21 10 34.3 +0.4
baz=101
PDAR Pinedale Array 101.19 0 P Pdif 21 10 33.1 -1.0
comp=Z,1.0nm,0.5s,baz=43,slow=3.6,SNR=11
PDAR PP PP 21 14 43.1 -1.3
comp=Z,4.1nm,1.2s,baz=348,slow=4.2,SNR=5.4
PDAR PKiKP PKiKP 21 14 57.1 -0.5
comp=Z,1.5nm,0.7s,baz=85,slow=3.7,SNR=12
PDAR PKKPbc PKKPbc 21 26 39.5 -3.6
comp=Z,0.7nm,0.6s,baz=121,slow=5.0,SNR=5.4
PDAR Pinedale Array 101.19 0 P Pdif 21 10 33.1 -1.0
PDAR PP PP 21 14 43.1 -1.3
YBH Yreka Blue Hor 101.26 10 P Pdif 21 10 34.6 +0.3
comp=Z,1.6nm,0.6s,baz=40,slow=7.2,SNR=5.9
K20A Yellowstone Ra 101.30 359 ⇓P Pdif 21 10 35.1 +0.6
baz=101
K18A Toltan Ranch, 101.32 1 ⇑P Pdif 21 10 35.7 +1.1
baz=101
K14A Jones Ranch, D 101.33 3 ⇓P Pdif 21 10 36.3 +1.6
baz=101
L11A Cat Creek Ranc 101.57 5 ⇓P Pdif 21 10 36.7 +0.9
baz=101
L10A Juniper Basin 101.61 5 ⇑P Pdif 21 10 37.1 +1.2
baz=101
L19A Farson 101.86 0 ⇓P Pdif 21 10 38.1 +1.1
baz=101
L15A Malad City 101.91 2 ⇓P Pdif 21 10 38.2 +0.9
baz=102
L18A Fontenelle, Gr 102.03 1 ⇓P Pdif 21 10 38.6 +0.8
baz=102
M10A I.L. Ranch, Tu 102.15 6 ⇑P Pdif 21 10 39.2 +0.8
baz=102
HWUT Hardware Ranch 102.33 2 *e*Pdif Pdif 21 10 39.7 +0.6
comp=Z,14nm,1.1s
M14A Sheep Mountain 102.37 3 ⇓P Pdif 21 10 40.0 +0.7
baz=102
M15A Larsen Ranch, 102.44 2 ⇓P Pdif 21 10 40.3 +0.7
baz=102
M20A Sweetwater, Wa 102.47 359 ⇓P Pdif 21 10 40.4 +0.7
baz=102,SNR=7.2
M13A Montello 102.47 4 ⇑P Pdif 21 10 40.1 +0.3
baz=102
M13A Montello 102.47 4 *e*Pdif Pdif 21 10 40.7 +1.0
comp=Z,3.0nm,0.5s
ELK Elko 103.02 5 Pdiff Pdif 21 10 42.4 +0.2
comp=Z,1.7nm,0.7s,baz=309,slow=9.2,SNR=7.9
DUG Dugway 103.69 3 *e*P Pdif 21 10 45.9 +0.7
DUG pmax pmax
comp=Z,9.0nm,1.3s
DUG Dugway 103.69 3 *e*Pdif Pdif 21 10 45.9 +0.7
comp=Z,9.4nm,1.3s
MAW Mawson 103.87 183 Pdiff Pdif 21 10 45.2 -0.8
comp=Z,2.7nm,0.6s,baz=312,slow=13,SNR=5.1
MAW PKKPbc PKKPbc 21 26 36.4 -0.2
comp=Z,3.5nm,1.0s,baz=299,slow=16,SNR=3.7
SMCO Snowmass 104.75 358 *e*Pdif Pdif 21 10 47.9 -2.0
comp=Z,8.1nm,1.2s
NVAR Mina Array Bea 105.06 7 Pdiff Pdif 21 10 51.9 +0.6
comp=Z,1.5nm,0.7s,baz=349,slow=3.9,SNR=12
NVAR PKiKP PKiKP 21 15 05.3 +0.5
comp=Z,1.3nm,0.6s,baz=344,slow=3.2,SNR=8.7
NVAR PP PP 21 15 13.6 +0.3
comp=Z,1.1nm,0.6s,baz=314,slow=1.2,SNR=3.9
NVAR PKKPbc PKKPbc 21 26 30.9 -0.8
comp=Z,1.3nm,0.7s,baz=206,slow=5.9,SNR=6.0
NVAR Mina Array Bea 105.06 7 Pdif Pdif 21 10 51.9 +0.6
NVAR PKPdf PKiKP 21 15 05.3 +0.5
NVAR PP PP 21 15 13.6 +0.3
NVAR PKKPbc PKKPbc 21 26 30.9 -0.8
ANMO Albuquerque 108.95 358 Pdiff Pdif 21 11 04.7 -3.9
comp=Z,3.8nm,1.0s,baz=68,slow=8.1,SNR=7.9
ANMO PP PP 21 15 40.1 -1.6
comp=Z,1.8nm,1.1s,baz=16,slow=2.4,SNR=5.3
ANMO Albuquerque 108.95 358 P Pdif 21 11 04.7 -3.9
ANMO 21 15 40.1
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO pmax pmax
comp=Z,2.0nm,1.1s
MNTX Cornudas Mount 112.15 356 *e*PKPdf PKiKP 21 15 17.8 -0.4
TXAR Lajitas Array 114.39 355 PKiKP PKiKP 21 15 21.2 -1.4
comp=Z,0.9nm,0.5s,baz=51,slow=3.2,SNR=13
TXAR PP PP 21 16 19.8 -0.7
comp=Z,1.7nm,0.9s,baz=15,slow=5.2,SNR=4.5
TXAR PKKPbc PKKPbc 21 26 01.0 -0.9
comp=Z,0.8nm,0.6s,baz=179,slow=5.5,SNR=6.1
TXAR Lajitas Array 114.39 355 PKPdf PKiKP 21 15 21.2 -1.4
TXAR PP PP 21 16 19.8 -0.7
TXAR PKKPbc PKKPbc 21 26 01.0 -0.9
AFI Afiamalu 120.17 85 PKP PKPdf 21 15 33.1 -0.8
comp=Z,39nm,0.7s,baz=229,slow=2.9,SNR=9.9
AFI Afiamalu 120.17 85 PKP PKPdf 21 15 33.1 -0.8
URZ Urewera 122.91 116 PKP PKPdf 21 15 35.6 -2.9
comp=Z,30nm,0.5s,baz=257,slow=2.1,SNR=24
TGUH Tegucigalpa,Un 125.68 333 *e*PKPdf PKPdf 21 15 44.1 -0.5
SBA Scott Base 126.55 165 *e*PKIKP PKPdf 21 15 44.0 -0.4
BCIP Isla Barro Col 126.89 323 *e*PKPdf PKPdf 21 15 45.6 -1.3
ROSC El Rosal 127.54 314 PKP PKPdf 21 15 48.3 +0.1
comp=Z,45nm,0.8s,baz=114,slow=6.4,SNR=26
ROSC SKPbc 21 18 46.4
comp=Z,8.8nm,0.6s,baz=122,slow=10,SNR=4.5
CPUP Villa Florida 135.01 268 PKP PKPdf 21 16 00.3 -1.5
comp=Z,20nm,0.6s,baz=43,slow=2.1,SNR=70
CPUP PP PP 21 18 36.7 -3.0
comp=Z,4.0nm,0.8s,baz=40,slow=7.3,SNR=3.0
CPUP SKPbc SKPbc 21 19 10.3 -1.7
comp=Z,5.0nm,0.9s,baz=50,slow=6.4,SNR=4.1
CPUP Villa Florida 135.01 268 PKIKP PKPdf 21 16 00.4 -1.5
CPUP 21 18 36.7
CPUP Villa Florida 135.01 268 PKP PKPdf 21 16 00.3 -1.5
CPUP PP PP 21 18 36.7 -3.0
CPUP SKPbc SKPbc 21 19 10.3 -1.7
LPAZ La Paz 138.45 288 PKP PKPdf 21 16 07.9 -0.6
comp=Z,3.0nm,0.5s,baz=60,slow=2.7,SNR=18
LPAZ PP PP 21 18 59.8 -1.2
comp=Z,2.6nm,0.8s,baz=59,slow=7.3,SNR=5.4
PAE Paea 139.87 73 *e*PKIKP PKPdf 21 16 11.7 +0.7
comp=Z,2.7nm,0.7s
LVC Limon Verde 142.57 280 *e*PKPdf PKPdf 21 16 11.0 -4.7
TRQA Tornquist 142.65 253 *e*PKPdf PKPdf 21 16 11.1 -4.4
USHA Ushuaia 146.65 223 PKPbc PKPbc 21 16 23.5 -0.2
comp=Z,30nm,0.6s,baz=80,slow=2.0,SNR=14
USHA Ushuaia 146.65 223 PKPbc PKPbc 21 16 23.5 -0.2
LCO Las Campanas 146.90 272 *e*PKPdf PKPdf 21 16 23.3 +0.2
TLL Tololo Astrono 147.42 270 ⇓*i*P PKPdf 21 16 24.6 +0.7
CMCH Combarbala 147.93 268 ⇓*i*P PKPbc 21 16 26.9 -1.1
FCH Farellones 148.03 264 ⇑*i*P PKPbc 21 16 29.2 +0.9
LMEL Las Melosas 148.11 263 ⇑*i*P PKPbc 21 16 28.2 -0.2
CLCH Cerro Calan 148.25 264 ⇑*i*P PKPbc 21 16 28.4 -0.4
PLCA Paso Flores 149.61 250 PKP PKPdf 21 16 27.2 +0.1
comp=Z,49nm,0.8s,baz=121,slow=3.7,SNR=61
PLCA PKPbc PKPbc 21 16 32.3 +0.3
comp=Z,46nm,0.8s,baz=128,slow=4.4,SNR=68
RKT Rikitea 154.13 66 *e*PKPbc PKPbc 21 16 42.7 0.0
comp=Z,59nm,1.1s

*ISCJB **11** 21:01:05.3±0.1, 47°.34N±0°.06×27°.24W±0°.03, h10km, mb4.7/44, MS4.0/21, Error ellipse: s-maj=8.2km s-min=2.4km az=13.2*
*IDC **11** 21:01:05.5±0.8, 47°.42N×27°.25W, h0km, mb4.3/10, mb1 4.4/12, mb1mx4.1/33, mbtmp4.2/12, ML4.4/2, MS3.9/19, Ms1 3.9/19, ms1mx3.6/48, Error ellipse: s-maj=33.0km s-min=14.3km az=15.0*
*BJI **11** 21:01:05.2, 47°.30N×27°.20W, h10km, mB5.3/12, mb4.8/16, Ms5.4/10, Ms7 5.0/10*
*CSEM **11** 21:01:07.2±0.1, 47°.36N×27°.24W, h10km, mb4.9/27, Error ellipse: s-maj=9.6km s-min=3.6km az=14.0*
*NEIC **11** 21:01:07.2±0.2, 47°.34N×27°.19W, h10km, mb4.7/49, Error ellipse: s-maj=9.4km s-min=3.3km az=194.0*
ISC 11 21:01:07.3±0.1, 47°.36N±0°.05×27°.18W±0°.03, h10km, (h16km±.3km:pP-P), n488, σ0°.68/469, mb4.8/44, MS4.0/21, 127C-120D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**13.58**	**102**	P	**Pn**	**21 04 18.1**	**-1.8**
	22nm,0.4s						
EMAZ				S	Sx	21 06 17.8	
EMAZ	**Mazaricos**	**13.58**	**102**	P	**Pn**	**21 04 18.0**	**-1.8**
	22nm,0.4s						
EMAZ				S	Sx	21 06 17.8	
STS	**Santiago**	**13.89**	**102**	P	**Pn**	**21 04 23.5**	**-0.5**
	6.8nm,0.4s						
STS				S	Sx	21 06 24.4	
STS	**Santiago**	**13.89**	**102**	P	**Pn**	**21 04 23.5**	**-0.6**
	6.8nm,0.4s						
STS				S	Sx	21 06 24.4	
EZAM	**Zamans**	**14.12**	**105**	P	**Pn**	**21 04 24.6**	**-2.7**
	16nm,0.4s						
EZAM				S	Sx	21 06 29.9	
EZAM	**Zamans**	**14.12**	**105**	P	**Pn**	**21 04 24.6**	**-2.7**
	16nm,0.4s						
EZAM				S	Sx	21 06 29.9	
EPON	**Pontenova**	**14.64**	**99**	P	**Pn**	**21 04 33.4**	**-1.0**
	2.9nm,0.4s						
EPON				S	Sx	21 06 39.3	
ELOB	**Lobios**	**14.67**	**105**	P	**Pn**	**21 04 32.3**	**-2.4**
	4.4nm,0.3s						
ELOB				S	Sx	21 06 46.0	
ELOB	**Lobios**	**14.67**	**105**	P	**Pn**	**21 04 32.3**	**-2.4**
	4.4nm,0.3s						
ELOB				S	Sx	21 06 46.0	
PCAB	**Cabril**	**14.77**	**105**	*e*P	**Pn**	**21 04 34.6**	**-1.5**
	33nm,1.6s						
ERUA	**La Rua**	**15.04**	**102**	P	**Pn**	**21 04 38.1**	**-1.7**
	11nm,0.6s						
ERUA	**La Rua**	**15.04**	**102**	P	**Pn**	**21 04 38.1**	**-1.6**
	11nm,0.6s						
PVIS	**Viseu**	**15.36**	**109**	*e*P	**Pn**	**21 04 41.7**	**-2.3**
	26nm,1.9s						
ECAL	**Calabor**	**15.51**	**103**	P	**Pn**	**21 04 45.2**	**-0.8**
	2.8nm,0.2s						
ECAL	**Calabor**	**15.51**	**103**	P	**Pn**	**21 04 45.2**	**-0.7**
	2.8nm,0.2s						
PBRG	**Braganca**	**15.57**	**103**	*e*P	**Pn**	**21 04 45.6**	**-1.1**
PTOM	**Tomar**	**15.64**	**113**	*e*P	**Pn**	**21 04 45.4**	**-2.3**
MVO	**Moncorvo**	**15.69**	**106**	*e*P	**Pn**	**21 04 47.3**	**-1.0**
MTE	**Manteigas**	**15.75**	**109**	*e*P	**Pn**	**21 04 47.3**	**-1.8**
	32nm,1.9s						
MTE	**Manteigas**	**15.75**	**109**	*e*Pn	**Pn**	**21 04 47.9**	**-1.3**
	20nm,1.0s						
MTE	**Manteigas**	**15.75**	**109**	*e*Pn	**Pn**	**21 04 47.8**	**-1.3**
	20nm,1.0s						
EARI	**Arriondas**	**15.96**	**97**	P	**Pn**	**21 04 50.7**	**-1.1**
	0.8nm,0.2s						
EARI	**Arriondas**	**15.96**	**97**	P	**Pn**	**21 04 50.7**	**-1.1**
	0.8nm,0.2s						
ROSF	**Rostrenen**	**16.07**	**78**	*e*P	**Pn**	**21 04 51.2**	**-2.0**
	42nm,1.1s						
ROSF	**Rostrenen**	**16.07**	**78**	*e*P	**Pn**	**21 04 51.2**	**-2.0**
	21nm,1.1s						
PCBR	**Castelo Branco**	**16.10**	**111**	*e*P	**Pn**	**21 04 54.2**	**+0.5**
	24nm,1.9s						
PMRV	**Marv??o**	**16.39**	**112**	*e*P	**Pn**	**21 05 00.2**	**+2.8**
	53nm,1.4s						
PMRV	**Marv??o**	**16.39**	**112**	*e*P	**Pn**	**21 05 00.2**	**+2.8**
	53nm,1.4s						
SGMF	**Saint Gilles**	**16.55**	**78**	*e*P	**Pn**	**21 04 56.8**	**-2.6**
	110nm,1.2s						
SGMF	**Saint Gilles**	**16.55**	**78**	*e*P	**Pn**	**21 04 56.8**	**-2.6**
	55nm,1.2s						
PESTR	**Estremoz**	**16.60**	**114**	*e*P	**Pn**	**21 05 02.8**	**+2.8**
	43nm,1.5s						
PESTR	**Estremoz**	**16.60**	**114**	*e*P	**Pn**	**21 05 02.8**	**+2.8**
	43nm,1.5s						
ESK	**Eskdalemuir**	**16.90**	**53**	*e*Pn	**Pn**	**21 05 04.9**	**+1.2**
	85nm,1.0s						
ESK	**Eskdalemuir**	**16.90**	**53**	*e*Pn	**Pn**	**21 05 04.9**	**+1.2**
	85nm,1.0s						
EKA	**Eskdalemuir Ar**	**16.93**	**53**	Pn	**Pn**	**21 05 05.2**	**+1.1**
	baz=253,slow=12,SNR=26						
EKA	**Eskdalemuir Ar**	**16.93**	**53**	Pn	**Pn**	**21 05 05.2**	**+1.1**
EBAD	**Badajoz**	**17.03**	**113**	P	**Pn**	**21 05 04.5**	**-0.9**
	1.0nm,0.2s						
ELAN	**Lanestosa**	**17.19**	**95**	P	**Pn**	**21 05 07.9**	**+0.5**
	5.3nm,0.4s						
ELAN	**Lanestosa**	**17.19**	**95**	P	**Pn**	**21 05 07.9**	**+0.5**
	5.3nm,0.4s						
EGRO	**El Granado**	**17.50**	**117**	P	**Pn**	**21 05 11.4**	**+0.1**
	16nm,0.8s						
EGRO	**El Granado**	**17.50**	**117**	P	**Pn**	**21 05 11.4**	**+0.1**
	16nm,0.8s						
GRR	**Gorron**	**17.67**	**77**	*e*P	**Pn**	**21 05 10.1**	**-3.2**
	88nm,1.5s						
GRR	**Gorron**	**17.67**	**77**	*e*P	**Pn**	**21 05 10.1**	**-3.2**
	44nm,1.5s						
BORG	**Borgarnes**	**17.72**	**8**	Pn	**Pn**	**21 05 14.9**	**+1.1**
BORG	**Borgarnes**	**17.72**	**8**	Pn	**Pn**	**21 05 14.9**	**+1.0**
GUD	**Guadarrama**	**17.84**	**104**	P	**Pn**	**21 05 17.1**	**+1.6**
	3.7nm,0.3s						
GUD	**Guadarrama**	**17.84**	**104**	P	**Pn**	**21 05 17.1**	**+1.6**
	3.7nm,0.3s						
EMIN	**Mina Concepcio**	**17.84**	**115**	P	**Pn**	**21 05 16.3**	**+0.7**
	0.4nm,0.2s						
EMIN	**Mina Concepcio**	**17.84**	**115**	P	**Pn**	**21 05 16.3**	**+0.7**
	0.4nm,0.2s						
FLN	**La Foliniere**	**17.88**	**76**	*e*P	**Pn**	**21 05 12.6**	**-3.3**
	89nm,1.1s						
FLN	**La Foliniere**	**17.88**	**76**	*e*P	**Pn**	**21 05 12.6**	**-3.3**
	44nm,1.1s						
LDF	**La Druitiere**	**18.13**	**76**	*e*P	**Pn**	**21 05 15.4**	**-3.6**
	64nm,1.3s						
LDF	**La Druitiere**	**18.13**	**76**	*e*P	**Pn**	**21 05 15.4**	**-3.6**
	32nm,1.3s						
MFF	**Saint Martin d**	**18.43**	**82**	*e*P	**Pn**	**21 05 17.6**	**-5.2**
	28nm,1.0s						
MFF	**Saint Martin d**	**18.43**	**82**	*e*P	**Pn**	**21 05 17.6**	**-5.2**
	14nm,1.0s						
ESDC	**Sonseca Array**	**18.46**	**106**	P	**Pn**	**21 05 25.0**	**+1.9**
	2.4nm,0.3s,baz=292,slow=13,SNR=34						
ESDC				LR	LR	21 11 00.9	
	comp=Z,287nm,19.2s,baz=315,slow=32						
ESDC	**Sonseca Array**	**18.46**	**106**	P	**Pn**	**21 05 25.3**	**+2.2**
	1.4nm,0.3s						
ESDC	**Sonseca Array**	**18.46**	**106**	P	**Pn**	**21 05 25.3**	**+2.2**
	1.4nm,0.3s						
ESLA	**Sonseca Array**	**18.46**	**106**	*e*P	**Pn**	**21 05 23.8**	**+0.7**
ESLA	**Sonseca Array**	**18.46**	**106**	*e*P	**Pn**	**21 05 23.8**	**+0.7**
EALK	**Alkurruntz**	**18.50**	**93**	P	**Pn**	**21 05 23.8**	**+0.2**
	1.8nm,0.4s						
EALK	**Alkurruntz**	**18.50**	**93**	P	**Pn**	**21 05 23.8**	**+0.2**
	1.8nm,0.4s						
EADA	**Adamuz**	**18.91**	**111**	P	**Pn**	**21 05 29.7**	**+1.0**
EADA	**Adamuz**	**18.91**	**111**	P	**Pn**	**21 05 29.7**	**+1.1**
ESPR	**Espera**	**18.92**	**116**	P	**Pn**	**21 05 29.9**	**+1.2**
	13nm,1.1s						
ESPR	**Espera**	**18.92**	**116**	P	**Pn**	**21 05 29.9**	**+1.2**
	13nm,1.1s						
ETOR	**Torete**	**19.15**	**101**	P	**Pn**	**21 05 33.9**	**+2.5**
	8.9nm,0.7s						
ETOR	**Torete**	**19.15**	**101**	P	**Pn**	**21 05 33.9**	**+2.5**
	8.9nm,0.7s						
LFF	**La Frestale**	**19.46**	**87**	*e*P	**Pn**	**21 05 28.1**	**-7.0**
	22nm,1.0s						
LFF	**La Frestale**	**19.46**	**87**	*e*P	**Pn**	**21 05 28.1**	**-7.0**
	11nm,1.0s						
EBIE	**Bielsa**	**19.82**	**94**	P	**Pn**	**21 05 41.6**	**+2.1**
	6.9nm,0.7s						
EVIA	**Vianos**	**19.98**	**107**	P	**Pn**	**21 05 42.5**	**+1.1**
EVIA	**Vianos**	**19.98**	**107**	P	**Pn**	**21 05 42.5**	**+1.1**
ECOG	**Cogollos-Vega**	**20.09**	**112**	P	**P**	**21 05 43.7**	**+2.8**
ECOG	**Cogollos-Vega**	**20.09**	**112**	P	**P**	**21 05 43.7**	**+2.8**
EQES	**Quesada**	**20.09**	**110**	P	**P**	**21 05 44.9**	**+4.0**
	13nm,1.1s						
EQES	**Quesada**	**20.09**	**110**	P	**P**	**21 05 44.9**	**+4.0**
	13nm,1.1s						
TCF	**Toulx Ste Croi**	**20.09**	**82**	*e*P	**P**	**21 05 42.1**	**+1.3**
TCF	**Toulx Ste Croi**	**20.09**	**82**	*e*P	**P**	**21 05 42.1**	**+1.3**
TCF	**Toulx Ste Croi**	**20.09**	**82**	*e*P	**P**	**21 05 42.1**	**+1.3**
ETOB	**Tobarra**	**20.60**	**106**	P	**P**	**21 05 53.6**	**+7.2**
	7.4nm,0.8s						
ETOB	**Tobarra**	**20.60**	**106**	P	**P**	**21 05 53.6**	**+7.2**
	7.4nm,0.8s						

ERTA Horta de San J 20.69 98 P P 21 05 53.9 +6.5
60nm,0.8s
BAIF Baives 20.81 71 eP P 21 05 49.8 +1.2
77nm,1.1s
BAIF Baives 20.81 71 eP P 21 05 49.8 +1.2
38nm,1.1s
BAIF Baives 20.81 71 eP P 21 05 49.8 +1.2
38nm,1.1s
GIVF Givet 21.20 71 eP P 21 05 53.9 +1.1
68nm,0.9s,mb4.7
GIVF Givet 21.20 71 eP P 21 05 53.9 +1.1
34nm,0.9s,mb4.7
GIVF Givet 21.20 71 eP P 21 05 53.9 +1.1
34nm,0.9s,mb4.7
MEZF Maizieres J'vi 21.55 75 eP P 21 05 57.7 +1.1
153nm,1.0s,mb5.1
MEZF Maizieres J'vi 21.55 75 eP P 21 05 57.7 +1.1
153nm,1.0s,mb5.4
MEZF Maizieres J'vi 21.55 75 eP P 21 05 57.7 +1.1
153nm,1.0s,mb5.4
HGN Heimansgroeve 21.86 69 ex P 21 06 00.1 +0.2
WTSB Winterswijk 22.34 65 ex P 21 06 03.4 -1.6
MDT Midelt 22.45 122 P P 21 06 07.5 +1.2
7.2nm,1.0s,mb4.0,baz=310,slow=10,SNR=7.0
MDT Midelt 22.45 122 P P 21 06 07.5 +1.2
SFJD Kangerlussuaq 23.15 337 LR LR 21 13 15.5
comp=Z,244nm,19.1s,MS3.7,baz=115,slow=32
DAVOX Davos/Dischmat 25.10 78 LR LR 21 15 34.6
comp=Z,245nm,18.2s,MS3.8,baz=54,slow=35
MOX Moxa 25.47 68 eP P 21 06 38.6 +3.4
48nm,1.7s,mb4.8
MOX
comp=Z,200nm,18.0s
SCHQ Schefferville 25.71 302 P P 21 06 36.3 -1.1
comp=Z,8.0nm,1.0s,mb4.2,baz=110,slow=8.1,SNR=7.1
SCHQ LR LR 21 14 30.0
comp=Z,263nm,21.0s,MS3.7,baz=283,slow=31
SCHQ Schefferville 25.71 302 P P 21 06 36.3 -1.1
SUMG Summit 25.83 352 eP P 21 06 39.8 +1.5
comp=Z,15nm,1.3s,mb4.3
SUMG Summit 25.83 352 eP P 21 06 39.8 +1.5
comp=Z,15nm,1.3s,mb4.3
NOA NORSAR Array B 25.85 44 LR LR 21 16 08.0
comp=Z,174nm,18.6s,MS3.6,baz=95,slow=35
KEST Kesra 29.44 100 LR LR 21 17 31.5
comp=Z,118nm,21.3s,MS3.5,baz=346,slow=33
FINES FINESS Array B 33.02 45 LR LR 21 20 06.0
comp=Z,322nm,20.5s,MS4.0,baz=128,slow=35
SADO Sadowa 35.60 285 LR LR 21 22 02.7
comp=Z,201nm,18.3s,MS3.9,baz=311,slow=35
AKASG Malin Array Be 36.38 63 P P 21 08 11.7 +0.3
comp=Z,2.4nm,0.7s,mb4.2,baz=284,slow=7.5,SNR=3.4
AKASG Malin Array Be 36.38 63 P P 21 08 11.7 +0.3
FCC Fort Churchill 40.11 312 eP P 21 08 42.2 -0.4
FCC Fort Churchill 40.11 312 eP P 21 08 42.2 -0.5
TORD Torodi Ar. Bea 41.78 135 P P 21 08 57.0 +0.1
comp=Z,13nm,0.8s,mb4.6,baz=331,slow=7.4,SNR=5.7
TORD LR LR 21 25 03.8
comp=Z,265nm,18.5s,MS4.2,baz=355,slow=34
EYMN Ely 42.19 296 eP P 21 08 59.7 -0.2
comp=Z,55nm,1.4s,mb5.0
EYMN Ely 42.19 296 eP P 21 08 59.7 -0.2
comp=Z,55nm,1.4s,mb5.0
BR131 Keskin Array S 43.74 77 eP P 21 09 11.3 -1.3
BR131 Keskin Array S 43.74 77 eP P 21 09 11.3 -1.3
BRTR Keskin Array B 43.74 77 P P 21 09 11.4 -1.3
comp=Z,4.9nm,1.0s,mb4.2,baz=298,slow=5.5,SNR=7.8
BRTR PcP PcP 21 10 59.5 +0.2
comp=Z,1.9nm,1.0s,baz=280,slow=2.3,SNR=4.0
BRTR LR LR 21 27 18.3
comp=Z,107nm,20.7s,MS3.7,baz=36,slow=36
BRTR Keskin Array B 43.74 77 P P 21 09 11.3 -1.3
BRTR PcP PcP 21 10 59.5 +0.2
BRTR LR LR 21 27 18.3
BRTR Keskin Array B 43.74 77 P P 21 09 11.4 -1.2
BRTR Keskin Array B 43.74 77 PcP PcP 21 10 59.5 +0.2
ULM Lac du Bonnet 43.88 300 P P 21 09 12.6 -1.0
comp=Z,8.0nm,1.1s,mb4.4,baz=67,slow=9.4,SNR=5.9
ULM LR LR 21 24 20.3
comp=Z,131nm,18.9s,MS3.9,baz=5.5,slow=32
ULM Lac du Bonnet 43.88 300 eP P 21 09 12.8 -0.8
comp=Z,56nm,1.5s,mb5.1
ULM Lac du Bonnet 43.88 300 eP P 21 09 12.8 -0.8
comp=Z,56nm,1.5s,mb5.1
AGMN Agassiz Refuge 44.69 298 eP P 21 09 20.1 0.0
comp=Z,38nm,1.3s,mb5.1
AGMN Agassiz Refuge 44.69 298 eP P 21 09 20.1 0.0
comp=Z,38nm,1.3s,mb5.1
DBIC Dimbokro 44.82 148 LR LR 21 26 04.8
comp=Z,102nm,18.2s,MS3.8,baz=226,slow=33
FFC Flin Flon 45.51 308 eP P 21 09 26.3 -0.3
comp=Z,124nm,1.4s,mb5.7
FFC Flin Flon 45.51 308 eP P 21 09 26.3 -0.3
comp=Z,124nm,1.4s,mb5.7
WVT Waverly 45.55 279 P P 21 09 25.6 -1.6
WVT Waverly 45.55 279 P P 21 09 25.6 -1.5
SDDR Presa de Saban 45.65 247 eP P 21 09 29.0 +1.0
comp=Z,28nm,1.2s,mb5.1
SDDR Presa de Saban 45.65 247 eP P 21 09 29.0 +1.0
comp=Z,28nm,1.2s,mb5.1
ECSD EROS Data Cent 47.29 293 eP P 21 09 40.9 +0.2
comp=Z,68nm,1.9s,mb5.2
ECSD EROS Data Cent 47.29 293 eP P 21 09 40.9 +0.2
comp=Z,68nm,1.9s,mb5.2
MIAR Mount Ida 50.31 281 eP P 21 10 03.4 -0.6
comp=Z,22nm,1.3s,mb5.0
MIAR Mount Ida 50.31 281 eP P 21 10 03.4 -0.6
comp=Z,22nm,1.3s,mb5.0
RSSD Black Hills 51.68 297 eP P 21 10 14.6 +0.5
RSSD Black Hills 51.68 297 eP P 21 10 14.6 +0.5
INK Inuvik 52.44 333 LR LR 21 30 33.2
comp=Z,109nm,21.2s,MS3.9,baz=130,slow=34
SDV Santo Domingo 53.11 238 eP P 21 10 25.9 +0.8
SDV Santo Domingo 53.11 238 eP P 21 10 25.9 +0.8
WMOK Wichita Mounta 53.65 284 eP P 21 10 26.7 -2.2
comp=Z,6.7nm,1.2s,mb4.5
WMOK Wichita Mounta 53.65 284 eP P 21 10 26.7 -2.2
comp=Z,6.7nm,1.2s,mb4.5
PHWY Pilot Hill 54.11 294 eP P 21 10 32.2 +0.1
comp=Z,25nm,0.8s,mb5.2
PHWY Pilot Hill 54.11 294 eP P 21 10 32.2 +0.1
comp=Z,25nm,0.8s,mb5.2
C16A Fuhringer Ranc 54.20 304 ⇑P P 21 10 32.7 0.0
baz=54
D16A Dana Ranch, Ca 54.51 303 ⇓P P 21 10 34.1 -0.9
baz=54
F17A Fitzpatrick Pl 54.63 302 ⇓P P 21 10 35.2 -0.6
baz=54
WALA Waterton Lakes 54.70 306 P P 21 10 35.7 -0.6
WALA Waterton Lakes 54.70 306 P P 21 10 35.7 -0.6
M22A Cedar Creek Ra 54.75 295 ⇑P P 21 10 36.8 0.0
baz=54
L21A Rawlins 54.91 296 ⇓P P 21 10 37.6 -0.3
baz=55,SNR=12
N22A Wattenberg Ran 55.01 294 ⇓P P 21 10 38.1 -0.7
baz=55,SNR=5.3
D15A Lincoln 55.06 304 ⇓P P 21 10 38.6 -0.3
baz=55
ISCO Idaho Springs 55.07 293 eP P 21 10 39.0 -0.1
comp=Z,7.6nm,1.1s,mb4.6
ISCO Idaho Springs 55.07 293 eP P 21 10 39.0 -0.1
comp=Z,7.6nm,1.1s,mb4.6
K20A Yellowstone Ra 55.10 297 ⇓P P 21 10 38.6 -0.7
baz=55
M21A Separation Pea 55.11 296 ⇓P P 21 10 39.5 +0.1
baz=55,SNR=16
K19A Absolon Red Bu 55.31 298 ⇑P P 21 10 40.0 -0.8
baz=55
BOZ Bozeman (W) 55.34 302 ⇑P P 21 10 40.1 -0.9
baz=55
BOZ Bozeman (W) 55.34 302 eP P 21 10 40.7 -0.3
BOZ Bozeman (W) 55.34 302 eP P 21 10 40.7 -0.3
I18A Diamond G Ranc 55.38 299 ⇑P P 21 10 40.8 -0.6
baz=55
AMTX Amarillo 55.47 286 eP P 21 10 42.3 +0.2
comp=Z,22nm,1.2s,mb5.1
AMTX Amarillo 55.47 286 eP P 21 10 42.3 +0.2
comp=Z,22nm,1.2s,mb5.1
L20A Wamsutter 55.47 297 ⇑P P 21 10 42.0 0.0
baz=55,SNR=13
E15A Deer Lodge 55.47 303 ⇑P P 21 10 40.7 -1.2
baz=55
H16A Russell Place, 55.65 301 ⇓P P 21 10 43.3 +0.1
baz=55
G16A Moss Hill, Enn 55.68 302 ⇑P P 21 10 43.4 0.0
baz=55
M20A Sweetwater, Wa 55.68 296 ⇑P P 21 10 43.6 +0.1
baz=55
N21A Black Mountain 55.70 295 ⇑P P 21 10 44.3 +0.7
baz=55,SNR=14
BW06 Boulder Array 55.77 298 ⇓P P 21 10 43.2 -0.9
baz=55,SNR=7.3
BW06 Boulder Array 55.77 298 eP P 21 10 42.9 -1.2
comp=Z,8.0nm,1.0s,mb4.7
BW06 Boulder Array 55.77 298 eP P 21 10 42.9 -1.2
comp=Z,8.0nm,1.0s,mb4.7
J18A Kendall Valley 55.79 299 ⇓P P 21 10 43.7 -0.6
baz=56,SNR=11
LOHW Long Hollow 55.90 299 eP P 21 10 45.3 +0.3
comp=Z,9.2nm,1.1s,mb4.7
LOHW Long Hollow 55.90 299 eP P 21 10 45.3 +0.2
comp=Z,9.2nm,1.1s,mb4.7
IMW Indian Meadow 55.94 300 eP P 21 10 46.2 +0.9
comp=Z,12nm,1.3s,mb4.8
IMW Indian Meadow 55.94 300 eP P 21 10 46.2 +0.9
comp=Z,12nm,1.3s,mb4.8
L19A Farson 56.03 297 ⇓P P 21 10 45.8 -0.2
baz=56
A11A Hall Mountain, 56.09 307 ⇑P P 21 10 46.1 -0.3
baz=56
G15A Dillon 56.11 302 ⇓P P 21 10 46.6 +0.1
baz=56
N20A Spence Gulch, 56.11 295 ⇓P P 21 10 47.1 +0.5
baz=56,SNR=19
J17A Brown Place, J 56.11 299 ⇓P P 21 10 46.7 +0.2
baz=56,SNR=9.7
TPAW Teton Pass 56.18 299 eP P 21 10 47.5 +0.4
comp=Z,9.1nm,1.2s,mb4.7
TPAW Teton Pass 56.18 299 eP P 21 10 47.5 +0.4
comp=Z,9.1nm,1.2s,mb4.7
REDW Red Top Meadow 56.20 299 eP P 21 10 47.2 0.0
comp=Z,17nm,1.0s,mb5.0
REDW Red Top Meadow 56.20 299 eP P 21 10 47.2 0.0
comp=Z,17nm,1.0s,mb5.0
SDCO Great Sand Dun 56.21 291 eP P 21 10 47.4 +0.1
SDCO Great Sand Dun 56.21 291 eP P 21 10 47.4 0.0
E13A Victor 56.34 304 ⇑P P 21 10 47.8 -0.4
baz=56
Q22A Crested Butte, 56.44 293 ⇓P P 21 10 49.0 +0.1
baz=56
RRI2 Red Ridge 56.48 299 eP P 21 10 49.3 +0.1
RRI2 Red Ridge 56.48 299 eP P 21 10 49.3 +0.1
K17A Gardner Place, 56.59 299 ⇓P P 21 10 49.7 -0.3
baz=56
G14A Jackson 56.62 302 ⇑P P 21 10 50.1 -0.1
baz=56
N19A John Jarvie Ra 56.63 296 ⇓P P 21 10 50.2 -0.1
baz=56,SNR=14
D12A Red Ives Fores 56.64 305 ⇑P P 21 10 50.1 -0.1
baz=56
R22A Saguache, Gunn 56.72 292 ⇑P P 21 10 51.7 +0.7
baz=56,SNR=6.2
MSTX Mushoe 56.74 286 ⇑P P 21 10 50.3 -0.8
baz=56,SNR=9.4
Q21A Lamborn Mesa, 56.87 293 ⇓P P 21 10 52.5 +0.5
baz=57,SNR=10
N18A Larsen Ranch, 56.89 296 ⇑P P 21 10 52.0 -0.1
baz=57,SNR=5.1
H14A Leadore 56.94 302 ⇑P P 21 10 52.3 -0.1
baz=57
O19A Miners Draw (B 56.95 295 ⇓P P 21 10 52.7 +0.1
baz=57,SNR=18
P20A De Beque 56.98 294 ⇓P P 21 10 52.6 -0.2
baz=57,SNR=5.5
Y27A Causey 57.05 286 ⇓P P 21 10 52.8 -0.6
baz=57
X26A CR and CF Fran 57.06 287 ⇑P P 21 10 52.9 -0.5
baz=57
W25A X Bar L Ranch, 57.07 288 ⇑P P 21 10 53.5 0.0
baz=57
R21A Cimarron 57.13 293 ⇓P P 21 10 54.2 +0.3
baz=57
E12A Beaver Dam Sad 57.13 305 ⇑P P 21 10 53.2 -0.6
baz=57
D11A Klaveano Farm, 57.19 306 ⇓P P 21 10 53.7 -0.5
baz=57
M17A Scullys Gap (B 57.20 297 ⇓P P 21 10 53.8 -0.5
baz=57
Q20A Ridgley Place, 57.25 294 ⇑P P 21 10 54.5 -0.2
baz=57,SNR=7.7
P19A Cripple Cowboy 57.26 295 ⇓P P 21 10 54.5 -0.3
baz=57
L16A Fish Haven 57.33 298 ⇑P P 21 10 55.0 -0.2
baz=57
F12A Elk City 57.34 304 ⇑P P 21 10 54.8 -0.5
baz=57
B09A Rice 57.37 308 ⇑P P 21 10 54.9 -0.5
baz=57
Z27A Tatum 57.43 285 ⇑P P 21 10 56.0 -0.1
baz=57
H13A Challis 57.48 302 ⇓P P 21 10 55.8 -0.4
baz=57
O18A Roosevelt 57.52 296 ⇑P P 21 10 56.8 +0.2
baz=57,SNR=6.9
E11A Bogner Ranch, 57.52 305 ⇑P P 21 10 55.8 -0.8
baz=57
T22A Edith 57.54 291 ⇓P P 21 10 57.5 +0.7
baz=57,SNR=6.3
K15A Arbon 57.59 299 ⇓P P 21 10 56.9 -0.2
baz=57
N17A Moffit Pass 57.61 297 ⇑P P 21 10 57.0 -0.3
baz=57
HWUT Hardware Ranch 57.66 298 eP P 21 10 57.0 -0.5
HWUT Hardware Ranch 57.66 298 eP P 21 10 57.0 -0.6
S21A Coal Bank Pass 57.71 292 ⇓P P 21 10 58.4 +0.4
baz=57,SNR=12
R20A Redvale 57.76 293 ⇑P P 21 10 58.4 0.0
baz=58
F11A Grangeville 57.77 304 ⇑P P 21 10 57.9 -0.5
baz=57
I13A Wildhorse Cree 57.78 301 ⇓P P 21 10 58.6 +0.1
baz=58,SNR=5.8
H12A Diamond D Ranc 57.83 302 ⇑P P 21 10 58.6 -0.1
baz=58
M16A Huntsville 57.87 298 ⇑P P 21 10 58.9 -0.1
baz=58
L15A Malad City 57.91 299 ⇓P P 21 10 59.1 -0.2
baz=58
127A Arkansas Junct 57.92 285 ⇑P P 21 10 59.8 +0.2
baz=58
Z26A Caprock 57.96 286 ⇓P P 21 10 60.0 +0.2
baz=58
BVAR Borovoye Array 57.98 45 LR LR 21 33 39.4
comp=Z,84nm,19.2s,MS3.9,baz=328,slow=34
O17A Robinson Place 58.01 296 ⇑P P 21 10 59.9 -0.1
baz=58,SNR=6.6
N16A Rees Ranch, Co 58.01 297 ⇑P P 21 10 59.9 -0.1
baz=58
Y25A Mesa, Roswell 58.02 287 ⇑P P 21 10 59.7 -0.5
baz=58
B08A Colville Reser 58.04 308 ⇓P P 21 10 59.6 -0.6
baz=58
P18A Preston Nutter 58.05 295 ⇑P P 21 11 00.3 -0.1
baz=58,SNR=13
K14A Jones Ranch, D 58.05 300 ⇓P P 21 11 00.2 -0.1
baz=58
G11A Walters Elk Ra 58.13 304 ⇑P P 21 11 00.5 -0.3
baz=58
J13A Cove Ranch, Pi 58.13 301 ⇑P P 21 11 01.0 +0.2
baz=58
HLID Hailey 58.17 301 ⇓P P 21 11 01.2 +0.1
baz=58
HLID Hailey 58.17 301 eP P 21 11 02.0 +0.9
HLID Hailey 58.17 301 eP P 21 11 02.0 +0.9
A07A Ashnola River, 58.18 309 ⇑P P 21 11 01.5 +0.4
baz=58
W23A Werner Place, 58.20 289 ⇑P P 21 11 01.5 0.0
baz=58
R19A Curley Farm, L 58.25 294 ⇓P P 21 11 02.0 +0.2
baz=58,SNR=15
M15A Larsen Ranch, 58.27 298 ⇓P P 21 11 01.2 -0.6
baz=58,SNR=5.7
Q18A Rafter H Ranch 58.30 295 ⇓P P 21 11 02.1 0.0
baz=58
F10A Beach Ranch, E 58.32 305 ⇓P P 21 11 01.7 -0.5
baz=58
SPUT South Promonto 58.37 298 eP P 21 11 02.4 -0.1
comp=Z,14nm,1.2s,mb4.9
SPUT South Promonto 58.37 298 eP P 21 11 02.4 -0.1
comp=Z,14nm,1.2s,mb4.9
MVCO Mesa Verde 58.43 292 ⇓P P 21 11 03.5 +0.4
baz=58
MVCO Mesa Verde 58.43 292 eP P 21 11 04.2 +1.1
MVCO Mesa Verde 58.43 292 eP P 21 11 04.2 +1.1
Z25A Roswell 58.44 286 ⇑P P 21 11 03.1 0.0
baz=58,SNR=5.7
P17A Butcher Ranch, 58.44 295 ⇓P P 21 11 03.0 -0.1
baz=58,SNR=10.0
I12A Atlanta 58.45 302 ⇓P P 21 11 03.3 +0.3
baz=58,SNR=7.2
O16A Springville 58.46 297 ⇑P P 21 11 03.5 +0.2
baz=58
Y24A Capitan 58.50 287 ⇓P P 21 11 03.4 -0.2
baz=58,SNR=5.5
ROSC El Rosal 58.50 239 LR LR 21 32 05.0
comp=Z,83nm,19.3s,MS3.9,baz=259,slow=32
S19A Harvey Farm, M 58.50 293 ⇓P P 21 11 03.4 -0.2
baz=58,SNR=11
SRU San Rafael 58.53 295 ⇓P P 21 11 03.3 -0.5
baz=58,SNR=8.9
SRU San Rafael 58.53 295 eP P 21 11 03.7 0.0
SRU San Rafael 58.53 295 eP P 21 11 03.7 0.0
X23A Hourglass Bar 58.58 288 ⇑P P 21 11 04.4 +0.3
baz=58
R18A Canyonlands Na 58.59 294 ⇑P P 21 11 04.3 +0.2
baz=58
MPU Maple Canyon 58.66 296 eP P 21 11 05.3 +0.7
MPU Maple Canyon 58.66 296 eP P 21 11 05.3 +0.7
428A Kincaid Ranch, 58.71 283 ⇑P P 21 11 04.8 -0.3
baz=58
J12A Stokes Ranch, 58.76 301 ⇓P P 21 11 05.3 +0.1
baz=58
M14A Sheep Mountain 58.79 299 ⇓P P 21 11 05.2 -0.2
baz=58
125A Gardner Draw, 58.79 286 ⇓P P 21 11 05.4 -0.2
baz=58
226A Malaga, Loving 58.80 285 ⇓P P 21 11 05.3 -0.4
baz=58,SNR=5.5
TMUT Trail Mountain 58.84 296 eP P 21 11 06.6 +0.8
TMUT Trail Mountain 58.84 296 eP P 21 11 06.6 +0.7
F09A S2 Ranch, Elgi 58.86 305 ⇑P P 21 11 05.6 -0.4
baz=58
GDL2 Guadalupe Moun 58.88 285 eP P 21 11 06.6 +0.3
GDL2 Guadalupe Moun 58.88 285 eP P 21 11 06.6 +0.3
Y23A Lovelace Mesa, 58.90 288 ⇓P P 21 11 06.2 -0.2
baz=59
P16A Fountain Green 58.92 296 ⇑P P 21 11 06.1 -0.3
baz=59
U20A Newcomb 58.96 291 ⇓P P 21 11 07.3 +0.6
baz=59,SNR=17
NLU North Lily Min 58.97 297 eP P 21 11 07.3 +0.6
NLU North Lily Min 58.97 297 eP P 21 11 07.3 +0.6
T19A Beclabito 59.00 292 ⇓P P 21 11 06.9 -0.1
baz=59,SNR=8.2
K12A Draper Farm, C 59.01 301 ⇓P P 21 11 07.0 -0.1
baz=59
Q16A Castle Valley 59.05 295 ⇓P P 21 11 07.3 0.0
baz=59,SNR=5.9
R17A Hanksville Air 59.07 295 ⇓P P 21 11 07.3 -0.2
baz=59,SNR=12
S18A Hurst Farm, Bl 59.08 293 ⇑P P 21 11 07.5 0.0
baz=59,SNR=12
N14A Grayback Hills 59.09 298 ⇑P P 21 11 07.1 -0.5
baz=59,SNR=5.1
427A Hayter Ranch, 59.11 283 ⇑P P 21 11 07.3 -0.5
baz=59
BNM Barren Site 59.13 288 eP P 21 11 08.5 +0.5
comp=Z,11nm,1.3s,mb4.7
BNM Barren Site 59.13 288 eP P 21 11 08.5 +0.5
comp=Z,11nm,1.3s,mb4.7
528A Cox Ranch, San 59.14 282 ⇓P P 21 11 07.1 -1.0
baz=59,SNR=6.4
W21A San Fidel 59.19 290 ⇑P P 21 11 08.6 +0.3
baz=59
326A Caldwell Ranch 59.19 284 ⇓P P 21 11 08.5 +0.1
baz=59
225A Deer Hill, Car 59.24 285 ⇓P P 21 11 08.4 -0.4
baz=59,SNR=6.3
DUG Dugway 59.27 297 ⇑P P 21 11 08.9 +0.1
baz=59,SNR=8.5
DUG Dugway 59.27 297 eP P 21 11 09.2 +0.4
DUG Dugway 59.27 297 eP P 21 11 09.2 +0.4
124A Stringfield Ra 59.28 286 ⇑P P 21 11 09.5 +0.4
baz=59,SNR=14
P15A Leamington 59.32 296 ⇑P P 21 11 09.0 -0.2
baz=59
T18A Mexican Hat 59.34 293 ⇑P P 21 11 09.3 0.0
baz=59
M13A Montello 59.36 299 ⇑P P 21 11 09.5 0.0
baz=59
M13A Montello 59.36 299 eP P 21 11 09.0 -0.4
comp=Z,5.1nm,1.0s,mb4.5
M13A Montello 59.36 299 eP P 21 11 09.0 -0.4
comp=Z,5.1nm,1.0s,mb4.5
U19A Dine' College, 59.45 292 ⇑P P 21 11 10.1 0.0
baz=59
Y22A Socorro 59.49 288 ⇓P P 21 11 10.7 +0.2
baz=59,SNR=9.4
R16A Teasdale 59.63 295 ⇑P P 21 11 11.7 +0.4
baz=59,SNR=5.4
426A McDonald Obser 59.64 283 ⇓P P 21 11 11.5 -0.1
baz=59,SNR=11
628A Black Gap, Mar 59.64 282 ⇑P P 21 11 11.3 -0.2
baz=59
X21A Alamocita Cree 59.70 289 ⇑P P 21 11 12.2 +0.4
baz=59,SNR=9.4
527A Woodward Ranch 59.70 283 ⇑P P 21 11 11.2 -0.7
baz=59,SNR=6.8
G08A Pilot Rock 59.70 305 ⇑P P 21 11 10.6 -1.1
baz=59
V19A Window Rock 59.70 291 ⇑P P 21 11 12.3 +0.4
baz=59
224A Corundas Mount 59.72 286 ⇓P P 21 11 12.0 -0.1
baz=59
W20A Ramah 59.73 290 ⇑P P 21 11 11.8 -0.2
baz=59
Q15A Fillmore 59.74 296 ⇑P P 21 11 12.4 +0.3
baz=59
M12A Wells 59.77 300 ⇓P P 21 11 11.9 -0.4
baz=59
U18A Rough Rock, Ch 59.78 292 ⇓P P 21 11 12.3 -0.1
baz=60,SNR=5.1
L11A Cat Creek Ranc 59.80 301 ⇓P P 21 11 12.6 +0.2
baz=60,SNR=5.5
325A Bean Ranch, Si 59.81 285 ⇓P P 21 11 12.5 -0.2
baz=60
Y21A Point of Rocks 59.90 289 ⇓P P 21 11 14.0 +0.8
baz=60,SNR=6.9
Z22A Elephant Butte 59.91 288 ⇑P P 21 11 13.4 0.0
baz=60,SNR=5.5
MSU Marysvale 59.92 295 eP P 21 11 14.0 +0.7
MSU Marysvale 59.92 295 eP P 21 11 14.0 +0.7
627A Terlingua Ranc 59.99 282 ⇑P P 21 11 13.7 -0.3
baz=60,SNR=11
T17A Navajo Res., N 60.01 293 ⇑P P 21 11 13.6 -0.4
baz=60
E06A Yakima 60.03 307 ⇓P P 21 11 12.9 -1.1
baz=60
526A Mary Lane Ranc 60.07 283 ⇓P P 21 11 14.6 +0.1
baz=60
324A Moseley Ranch, 60.10 285 ⇓P P 21 11 14.3 -0.4
baz=60
R15A Junction 60.17 295 ⇓P P 21 11 15.7 +0.7
baz=60,SNR=5.6
U17A Shonto 60.17 293 ⇓P P 21 11 15.2 +0.1
baz=60
N12A Clover Valley, 60.19 299 ⇓P P 21 11 14.9 -0.3
baz=60
425A Indio Mountain 60.19 284 ⇑P P 21 11 14.7 -0.6
baz=60,SNR=7.8
TXAR Lajitas Array 60.26 282 P P 21 11 15.2 -0.6
comp=Z,2.5nm,0.9s,mb4.2,baz=79,slow=6.7,SNR=16
TXAR Lajitas Array 60.26 282 P P 21 11 15.2 -0.6
V18A Ganado 60.27 292 ⇓P P 21 11 15.9 +0.1
baz=60
M11A Holland Ranch, 60.28 300 ⇑P P 21 11 16.6 +0.9
baz=60,SNR=5.6
Q14A Sevier Lake (B 60.29 296 ⇓P P 21 11 16.1 +0.2
baz=60,SNR=12
Z21A St. Cloud Mine 60.34 288 ⇑P P 21 11 16.8 +0.5
baz=60,SNR=6.6
ELK Elko 60.38 299 P P 21 11 16.9 +0.5
comp=Z,3.3nm,0.9s,mb4.4,baz=42,slow=5.4,SNR=7.9
ELK Elko 60.38 299 P P 21 11 17.0 +0.6
O12A Currie 60.38 298 ⇓P P 21 11 16.3 -0.2
baz=60
Y20A Horse Springs, 60.41 289 ⇓P P 21 11 17.0 +0.2
baz=60
626A Big Bend Ranch 60.42 283 ⇑P P 21 11 17.2 +0.2
baz=60
P13A Bates Ranch, G 60.45 297 ⇓P P 21 11 17.2 +0.2
baz=60,SNR=8.9
T16A Glen Canyon Da 60.46 294 ⇓P P 21 11 17.1 +0.1

	baz=60					
W18A	Petrified Fore	60.52 291	⇑P	P	21 11 17.5	0.0
	baz=60					
S15A	Panguitch	60.55 295	⇓P	P	21 11 18.1	+0.4
	baz=60					
R14A	James Farms, M	60.57 296	⇑P	P	21 11 18.1	+0.3
	baz=60					
J08A	Circle Bar Ran	60.63 303	⇑P	P	21 11 18.1	-0.1
	baz=60					
X19A	St. Johns	60.67 290	⇓P	P	21 11 18.5	0.0
	baz=60					
222A	Williams Famil	60.74 287	⇓P	P	21 11 19.0	0.0
	baz=60					
U16A	Tuba City	60.75 293	⇑P	P	21 11 19.5	+0.4
	baz=60,SNR=14					
Q13A	Wheeler Ranch,	60.77 297	⇓P	P	21 11 19.1	0.0
	baz=60					
V17A	Tonalea, Kykot	60.87 292	⇑P	P	21 11 19.9	+0.1
	baz=61,SNR=14					
121A	Cookes Peak, D	60.91 287	⇓P	P	21 11 20.3	+0.1
	baz=61,SNR=6.4					
Y19A	Nutrioso	60.95 290	⇓P	P	21 11 21.3	+0.9
	baz=61,SNR=5.4					
P12A	McGill	60.98 298	⇑P	P	21 11 20.6	+0.1
	baz=61,SNR=7.6					
T15A	Red Dirt Ranch	60.98 294	⇓P	P	21 11 20.6	0.0
	baz=61					
O11A	Cowboy Ranch,	61.01 299	⇑P	P	21 11 21.0	+0.2
	baz=61,SNR=9.0					
X18A	Snowflake	61.03 291	⇑P	P	21 11 21.2	+0.2
	baz=61					
APG	El Apazote	61.05 261	LR	LR	21 33 08.1	
	comp=Z,39nm,20.1s,MS3.5,baz=239,slow=32					
Z20A	Nine Sixteen R	61.06 289	⇑P	P	21 11 21.2	0.0
	baz=61					
Q12A	Willow Creek R	61.20 297	⇓P	P	21 11 22.3	+0.2
	baz=61					
R13A	O'Grain Ranch,	61.22 296	⇓P	P	21 11 22.3	0.0
	baz=61					
221A	Mesquite Ranch	61.24 287	⇓P	P	21 11 22.8	+0.4
	baz=61					
CCUT	Cedar City	61.25 295	eP	P	21 11 23.3	+0.9
CCUT	Cedar City	61.25 295	eP	P	21 11 23.3	+0.9
U15A	North Rim	61.30 294	⇑P	P	21 11 22.8	+0.1
	baz=61					
WUAZ	Wupatki	61.30 292	⇓P	P	21 11 23.0	+0.2
	baz=61,SNR=5.8					
WUAZ	Wupatki	61.30 292	eP	P	21 11 23.6	+0.8
WUAZ	Wupatki	61.30 292	eP	P	21 11 23.6	+0.8
Z19A	T-Link Ranch,	61.38 289	⇑P	P	21 11 23.5	+0.2
	baz=61					
T14A	Hurricane	61.39 295	⇑P	P	21 11 22.9	-0.4
	baz=61					
120A	U Bar Ranch, L	61.45 288	⇑P	P	21 11 23.8	-0.1
	baz=61					
R12A	Pony Springs,	61.52 297	⇑P	P	21 11 24.4	+0.1
	baz=61					
S13A	Holt Ranch, En	61.53 296	⇓P	P	21 11 24.8	+0.4
	baz=61,SNR=10.0					
Y18A	Canyon Day Jun	61.56 290	⇑P	P	21 11 25.0	+0.4
	baz=61					
V15A	Kaibab Nationa	61.61 293	⇑P	P	21 11 25.1	+0.2
	baz=61,SNR=6.3					
W16A	Flagstaff	61.67 292	⇓P	P	21 11 25.2	-0.1
	baz=61,SNR=5.4					
X17A	Forest Lakes	61.69 291	⇓P	P	21 11 25.8	+0.3
	baz=61					
119A	Ashpeak Ranch,	61.74 289	⇓P	P	21 11 26.0	+0.2
	baz=61					
220A	Playas Peak, P	61.79 287	⇑P	P	21 11 26.3	+0.2
	baz=62,SNR=9.1					
P10A	Eureka	61.81 299	⇓P	P	21 11 26.1	-0.1
	baz=62					
Q11A	Duckwater	61.82 298	⇓P	P	21 11 26.0	-0.2
	baz=62					
PMR	Palmer	61.84 333	eP	P	21 11 26.1	+0.1
	comp=Z,11nm,1.0s,mb4.9					
PMR	Palmer	61.84 333	eP	P	21 11 26.1	+0.1
	comp=Z,11nm,1.0s,mb4.9					
U14A	Mt Trumbull	61.85 294	⇓P	P	21 11 26.0	-0.5
	baz=62,SNR=6.2					
H04A	Detroit Lake	61.86 306	⇑P	P	21 11 25.8	-0.7
	baz=62					
T13A	Saint George	61.92 295	⇓P	P	21 11 27.3	+0.3
	baz=62,SNR=7.6					
X16A	Lo Mia Camp, P	62.04 291	⇑P	P	21 11 28.3	+0.5
	baz=62					
W15A	Williams	62.08 293	⇓P	P	21 11 28.5	+0.5
	baz=62					
R11A	Troy Canyon, C	62.10 297	⇑P	P	21 11 28.1	0.0
	baz=62					
S12A	Delamar Landin	62.12 296	⇑P	P	21 11 28.5	+0.2
	baz=62					
Y17A	Roosevelt	62.13 290	⇑P	P	21 11 28.8	+0.4
	baz=62,SNR=5.9					
219A	White Tail Can	62.20 288	⇓P	P	21 11 29.3	+0.3
	baz=62,SNR=8.2					
118A	Homack Ranch,	62.25 289	⇓P	P	21 11 29.2	-0.1
	baz=62					
Q10A	Clear Creek Ra	62.28 298	⇓P	P	21 11 29.4	0.0
	baz=62,SNR=6.3					
V14A	Boquillas Ranc	62.31 293	⇓P	P	21 11 29.8	+0.2
	baz=62					
U13A	Pakoon Wash	62.34 295	⇑P	P	21 11 29.8	0.0
	baz=62,SNR=11					
K05A	Summer Lake	62.40 304	⇑P	P	21 11 30.0	-0.1
	baz=62					
Y16A	Circle Bar Ran	62.41 291	⇓P	P	21 11 30.6	+0.2
	baz=62					
X15A	Humboldt	62.50 292	⇑P	P	21 11 31.3	+0.4
	baz=62,SNR=6.7					
CMIG	Matias Romero	62.55 266	LR	LR	21 35 26.9	
	comp=Z,166nm,19.8s,MS4.2,baz=186,slow=33					
W14A	Seligman	62.57 293	⇑P	P	21 11 31.9	+0.6
	baz=62,SNR=9.2					
R10A	Warm Springs	62.57 298	⇑P	P	21 11 31.3	0.0
	baz=62					
319A	Douglas	62.62 287	⇓P	P	21 11 32.5	+0.7
	baz=62,SNR=5.2					
S11A	Rachel	62.65 297	⇑P	P	21 11 32.0	+0.2
	baz=62					
U12A	Valley of Fire	62.69 295	⇑P	P	21 11 31.9	-0.2
	baz=62					
V13A	Grand Canyon W	62.72 294	⇓P	P	21 11 32.4	+0.1
	baz=62,SNR=6.5					
218A	Dragoon	62.73 288	⇑P	P	21 11 32.8	+0.3
	baz=62,SNR=6.8					
Z16A	Peralta Trail,	62.73 290	⇓P	P	21 11 32.5	+0.1
	baz=62					
117A	Oracle	62.79 289	⇑P	P	21 11 33.1	+0.3
	baz=62,SNR=7.8					
Y15A	Casa Rosa Ranc	62.91 292	⇑P	P	21 11 33.8	+0.2
	baz=63					
X14A	Yava	62.93 292	⇓P	P	21 11 33.9	+0.1
	baz=63					
S10A	Tonopah Range,	62.98 297	⇑P	P	21 11 33.8	-0.3
	baz=63,SNR=9.8					
TUC	Tucson	62.99 289	eP	P	21 11 34.8	+0.6
	comp=Z,6.1nm,1.1s,mb4.6					
TUC	Tucson	62.99 289	eP	P	21 11 34.8	+0.6
	comp=Z,6.1nm,1.1s,mb4.6					
SHPR	Sheep Range	63.02 295	eP	P	21 11 34.8	+0.4
SHPR	Sheep Range	63.02 295	eP	P	21 11 34.8	+0.5
318A	Bisbee	63.04 288	⇑P	P	21 11 34.6	+0.1
	baz=63					
W13A	Hualapai Mount	63.14 293	⇑P	P	21 11 35.4	+0.2
	baz=63,SNR=5.4					
V12A	Nelson	63.34 295	⇓P	P	21 11 36.5	0.0
	baz=63					
Y14A	Wickenburg	63.34 292	⇓P	P	21 11 36.4	-0.1
	baz=63					
217A	Green Valley	63.35 289	⇑P	P	21 11 36.7	+0.1
	baz=63					
116A	Eloy	63.41 290	⇑P	P	21 11 37.2	+0.2
	baz=63					
X13A	Yucca	63.44 293	⇓P	P	21 11 37.3	+0.2
	baz=63,SNR=7.2					
216A	Three Points,	63.62 289	⇑P	P	21 11 38.6	+0.2
	baz=63					
V11A	Goodsprings	63.62 295	⇓P	P	21 11 38.1	-0.2
	baz=63,SNR=6.2					
115A	Sonoran Desert	63.66 290	⇓P	P	21 11 38.7	+0.1
	baz=63					
NVAR	Mina Array Bea	63.68 299	P	P	21 11 38.6	-0.1
	comp=Z,0.8nm,0.8s,mb3.8,baz=60,slow=5.8,SNR=4.0					
NVAR	Mina Array Bea	63.68 299	P	P	21 11 38.6	0.0
Z14A	Wintersburg	63.68 291	⇓P	P	21 11 38.7	-0.1
	baz=63					
U10A	Ash Meadows, A	63.79 296	⇑P	P	21 11 39.7	+0.3
	baz=64					
PDMCI	Parker Dam,Lak	63.82 293	⇑P	P	21 11 39.8	+0.1
	baz=64					
ZALV	Zalesovo Beam	63.84 38	LR	LR	21 39 42.4	
	comp=Z,56nm,19.1s,MS3.8,baz=296,slow=36					
Y13A	Salome	63.94 292	⇓P	P	21 11 40.5	0.0
	baz=64					
WCN	Washoe City	63.97 300	⇓P	P	21 11 40.7	+0.2
	baz=64					
114A	Black Gap (USA	64.04 291	⇑P	P	21 11 41.3	+0.2
	baz=64					
GRAC	Grapevine Rang	64.05 297	⇑P	P	21 11 41.1	0.0
	baz=64					
FURC	Furnace Creek,	64.08 296	⇑P	P	21 11 41.6	+0.2
	baz=64					
Z13A	Yuma Proving G	64.23 292	⇑P	P	21 11 42.3	-0.1
	baz=64,SNR=11					
Y12C	Blythe	64.42 293	⇑P	P	21 11 43.5	-0.1
	baz=64					
GMRC	Granite Mounta	64.45 294	⇓P	P	21 11 43.9	+0.1
	baz=64,SNR=5.8					
214A	Organ Pipe Nat	64.52 290	⇓P	P	21 11 44.0	-0.2
	baz=64,SNR=5.4					
IRM	Iron Mountain	64.54 293	⇑P	P	21 11 44.2	-0.2
	baz=64					
113A	Mohawk Valley,	64.59 291	⇓P	P	21 11 44.3	-0.4
	baz=64					
OTAV	Otavalo	64.63 240	eP	P	21 11 45.1	0.0
	comp=Z,13nm,1.4s,mb4.8					
OTAV	Otavalo	64.63 240	eP	P	21 11 45.1	-0.1
	comp=Z,13nm,1.4s,mb4.8					
MPMC	Manual Prospec	64.74 296	⇑P	P	21 11 46.1	+0.5
	baz=64,SNR=15					
GSC	Goldstone	64.82 295	⇑P	P	21 11 46.5	+0.3
	baz=64,SNR=11					
GSC	Goldstone	64.82 295	eP	P	21 11 47.0	+0.8
	comp=Z,21nm,1.1s,mb5.1					
GSC	Goldstone	64.82 295	eP	P	21 11 47.0	+0.8
	comp=Z,21nm,1.1s,mb5.1					
HEC	Hector,Ludlow	64.83 295	⇑P	P	21 11 46.4	+0.1
	baz=64					
GLA	Glamis	65.07 292	⇓P	P	21 11 47.4	-0.5
	baz=65					
BELC	Belle Mtn.	65.18 294	⇑P	P	21 11 48.2	-0.3
	baz=65					
ISA	Isabella	65.60 297	⇑P	P	21 11 51.4	+0.1
	baz=65					
ISA	Isabella	65.60 297	eP	P	21 11 52.0	+0.8
	comp=Z,12nm,1.1s,mb4.8					
ISA	Isabella	65.60 297	eP	P	21 11 52.0	+0.8
	comp=Z,12nm,1.1s,mb4.8					
PFO	Pinyon Flat Ob	65.72 294	⇓P	P	21 11 52.3	+0.3
	baz=65					
PFO	Pinyon Flat Ob	65.72 294	eP	P	21 11 52.7	+0.7
PFO	Pinyon Flat Ob	65.72 294	eP	P	21 11 52.7	+0.6
EDW2	Edwards Air Fo	65.82 296	⇑P	P	21 11 52.8	+0.1
	baz=66					
DVTC	Desert V Tower	66.13 293	⇑P	P	21 11 54.7	0.0
	baz=66					
MK31	Makanchi Array	67.85 44	eP	P	21 12 06.6	+1.2
MK31	Makanchi Array	67.85 44	eP	P	21 12 06.6	+1.2
MKAR	Makanchi Array	67.85 44	LR	LR	21 41 33.8	
	comp=Z,85nm,18.4s,MS4.0,baz=119,slow=36					
WMQ	Urumqi	72.61 43	eP	P	21 12 38.5	+3.9
WMQ			pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5					
SONM	Songino Array	76.93 30	P	P	21 13 00.5	+0.9
	comp=Z,0.8nm,0.9s,mb3.6,baz=352,slow=9.0,SNR=3.7					
SONM	Songino Array	76.93 30	P	P	21 13 00.5	+0.9
HHC	Hu-ho-hao-te	84.84 30	eP	P	21 13 41.6	-0.3
HHC			pP	pP	21 13 46.5	+1.3
HHC			sP	sP	21 13 48.8	+2.4
HHC			PP	PP	21 16 59.1	+1.7
HHC			SKS		21 24 01.3	
HHC			S	S	21 24 06.8	-3.2
HHC			SS	SS	21 29 40.8	+0.2
HHC			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8					
HHC			pmax	pmax		
	comp=Z,170nm,5.4s					
HHC			LR	LR		
	comp=N,290nm,19.4s,MS5.0					
HHC			LR	LR		
	comp=E,570nm,18.8s,MS5.0					
HHC			LR	LR		
	comp=Z,220nm,16.2s,MS4.6					
CN2	Changchun	86.07 19	eP	P	21 13 47.6	-0.4
LZH	Lanzhou	86.07 38	eP	P	21 13 48.0	-0.2
LZH			pP	pP	21 13 52.8	+1.3
LZH			sP	sP	21 13 55.1	+2.4
LZH			PP	PP	21 17 09.0	+1.4
LZH			SKS		21 24 10.2	
LZH			eS	S	21 24 19.0	-3.3
LZH			eSS	SS	21 29 59.5	+0.4
LZH			pmax	pmax		
	comp=Z,15nm,1.5s,mb5.0					
LZH			pmax	pmax		
	comp=Z,93nm,8.7s					
LZH			LR	LR		
	comp=E,330nm,17.2s					
LZH			LR	LR		
	comp=Z,420nm,19.5s,MS4.8					
BJI	Beijing	87.07 27	P	P	21 13 51.9	-1.1
BJI			pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.0					
CD2	Chengdu	90.47 40	P	P	21 14 10.4	+1.2
CD2			pP	pP	21 14 14.9	+2.4
CD2			sP	sP	21 14 16.4	+2.7
CD2			SKS		21 24 39.0	
CD2			S	S	21 25 02.3	-1.9
CD2			SS	SS	21 31 04.4	+1.1
CD2			pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.4					
CD2			pmax	pmax		
	comp=Z,530nm,9.5s					
CD2			LR	LR		
	comp=N,690nm,6.5s					
CD2			LR	LR		
	comp=Z,660nm,7.1s					
KMI	Kunming	94.93 44	P	P	21 14 30.9	+1.0
KMI			pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.7					
MAJO	Matsushiro	95.46 12	eP	P	21 14 31.3	-0.8
MAJO	Matsushiro	95.46 12	eP	P	21 14 31.3	-0.8
GYA	Guiyang	95.58 41	P	P	21 14 32.8	-0.1
GYA			PP	PP	21 18 25.3	+2.2
GYA			SKS		21 25 07.6	
GYA			S	S	21 25 46.3	-3.5
GYA			SS	SS	21 32 18.2	+1.5
GYA			pmax	pmax		
	comp=Z,20nm,1.0s,mb5.5					
GYA			pmax	pmax		
	comp=Z,130nm,5.3s					
GYA			LR	LR		
	comp=N,530nm,21.5s,MS5.1					
GYA			LR	LR		
	comp=E,410nm,22.9s,MS5.1					
GYA			LR	LR		
	comp=Z,520nm,21.3s,MS5.0					
WRA	Warramunga Arr	148.79 35	PKPbc	PKPbc	21 20 53.3	-1.7
	comp=Z,2.4nm,0.9s,baz=337,slow=3.2,SNR=9.0					
WRA	Warramunga Arr	148.79 35	PKPbc	PKPbc	21 20 53.3	-1.7
ASAR	Alice Springs	151.94 39	PKPbc	PKPbc	21 21 01.5	-1.0
	comp=Z,0.9nm,0.8s,baz=337,slow=2.2,SNR=5.1					
ASAR			PKPab	PKPab	21 21 09.3	-2.3
	comp=Z,2.2nm,1.1s,baz=341,slow=2.0,SNR=4.5					
ASAR	Alice Springs	151.94 39	PKPbc	PKPbc	21 21 01.5	-1.0

TAP 11 21:04:09.5, 24°.21N×121°.83E, h8km, ML2.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.23	338	P	Pg	21 04 15.1	+0.9
	baz=339						
ENA				eS	Sg	21 04 19.0	+1.8
	baz=339						
TWD	Chiawan	0.26	239	P	Pg	21 04 15.5	+0.9
	baz=237						
TWD				eS	Sg	21 04 19.9	+1.9
	baz=237						
TWC	Suao	0.40	2	P	Pg	21 04 18.0	+0.8
	baz=3.0						
TWC				S	Sg	21 04 24.8	+2.4
	baz=3.0						
NNS	Nan Shan	0.48	298	P	Pg	21 04 19.9	+1.1
	baz=298						
NNS				S	Sg	21 04 27.3	+2.3
	baz=298						
WHF	Hehuan Shan	0.52	263	i P	Pg	21 04 20.6	+0.9
	baz=262						
WHF				eS	Sg	21 04 28.5	+2.0
	baz=262						
TWE	Neicheng	0.53	343	eP	Pg	21 04 20.9	+1.1
	baz=344						
TWE				S	Sg	21 04 28.8	+2.1
	baz=344						
ESL	Shilin	0.54	223	eP	Pg	21 04 20.3	+0.4
	baz=221						
ESL				eS	Sg	21 04 29.0	+1.9
	baz=221						
TWT	Tachien	0.60	274	eP	Pg	21 04 22.5	+1.4
	baz=273						
TWT				S	Sg	21 04 31.7	+2.7
	baz=273						
NSK	Sanguang	0.63	317	eP	Pg	21 04 22.9	+1.2
	baz=317						
NSK				eS	Sg	21 04 31.9	+1.8
	baz=317						
NWF	Wu-fen Shan	0.86	357	eP	Pg	21 04 27.7	+1.7
	baz=356						
NSTT	Nanjuang	0.87	299	eP	Pg	21 04 27.5	+1.3
	baz=298						
NSTT				eS	Sg	21 04 39.6	+2.1
	baz=298						
SMLT	Sun Moon Lake	0.92	249	eP	Pg	21 04 28.1	+0.9
	baz=248						
SMLT				S	Sg	21 04 41.3	+2.3
	baz=248						
TYC	Yuchr	0.94	251	eP	Pg	21 04 28.0	+0.3
	baz=250						
TYC				eS	Sg	21 04 41.5	+1.6
	baz=250						
TWQ1	Liyutan	0.98	278	eP	Pg	21 04 30.3	+2.0
	baz=277						
YUS	Yu-Shan	1.08	228	eP	Pg	21 04 30.6	+0.3
	baz=227						
YUS				eS	Sg	21 04 46.6	+2.2
	baz=227						
ALS	Alishan	1.17	234	eP	Pg	21 04 32.3	+0.2
	baz=233						
ALS				eS	Sg	21 04 48.7	+1.4
	baz=233						
CHN5	Tsauling	1.22	240	eP	Pb	21 04 33.9	+0.9
	baz=239						
CHN5				eS	Sb	21 04 51.8	+2.9
	baz=239						

JMA 11 21:10:12.0±0.3, 43°.89N×147°.63E, h3km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	1.47	250	P	Pn	21 10 39.3	0.0
NEM2				eS	Sb	21 10 58.8	-0.1
JRA	Rausu	1.81	272	P	Pn	21 10 44.3	+0.2
JRA				eS	Sn	21 11 07.6	0.0
JNK	Nakash	2.13	263	P	Pn	21 10 48.9	+0.4
JNK				eS	Sn	21 11 15.1	-0.3
JAK	Akkeshi	2.32	248	P	Pn	21 10 51.5	+0.5
JAK				eS	Sn	21 11 20.2	+0.3
JAR	Ashorobuto	2.87	259	P	Pn	21 11 00.0	+1.4
JAR				eS	Sn	21 11 35.3	+1.8
JOB	Onbets	2.94	252	P	Pn	21 11 01.1	+1.6
JOB				eS	Sn	21 11 36.9	+1.6
JCH	Churui	3.37	249	P	Pn	21 11 06.8	+1.3
JCH				eS	Sn	21 11 46.4	+0.5

CASC 11 21:19:00.1±2.3, 10°.63N×85°.52W, h30km±8km, MD3.7, ML2.8, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCR	Vista de Mar	0.51	192	⇑i P	Pb	21 19 09.9	-0.8
VCR				eS	Sb	21 19 18.3	+0.4
JTS	JuntasAbangare	0.65	121	eP	Pb	21 19 12.6	-0.5
JTS				eS	Sb	21 19 23.2	+1.4
SSN	San Juan del S	0.74	334	eP	Pn	21 19 14.5	0.0
JCR	Jicaral	0.87	152	⇓eP	Pn	21 19 15.0	-1.3
JCR				eS	Sn	21 19 30.3	+2.3
CONN	Concepcion	0.94	354	eP	Pn	21 19 17.2	0.0
CGA2	Cerro Gallo 2	1.20	120	eP	Pn	21 19 20.6	-0.2
CGA2				eS	Sn	21 19 36.4	+0.2
LAJ	Bijagual	1.57	119	eP	Pn	21 19 21.5	-4.5
CSAN		1.78	330	eP	Pn	21 19 29.8	+1.0
QCR	Quepos	1.79	132	eP	Pn	21 19 30.8	+1.9
BOAB	BOACO BROADBAN	.82	356	eP	Pn	21 19 28.8	-0.6
COPN	Copaltepe	1.87	326	eP	Pn	21 19 30.4	+0.4
URSC	Urasca	1.89	114	eP	Pn	21 19 30.9	+0.6
BUS	Buena Vista	2.04	121	eP	Pn	21 19 32.9	+0.5

KRSC 11 21:31:35.9±0.4, 53°.88N×157°.43E, h311km±50km, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNL	Ganaly	0.36	121	eP	Pn	21 32 16.5	+1.1
SDLR	Sedlovina	1.06	124	eP	Pn	21 32 19.3	+1.6
NLC	Nalytchevo	1.35	121	eP	Pn	21 32 20.7	+1.5
MIPR	Malaya Ipel'ka	1.66	194	eP	Pn	21 32 21.8	+0.6
SPN	Mys Shipunski	1.74	116	eP	Pn	21 32 22.3	+0.6
SPN				i S	S	21 32 57.1	-1.1
KMNR	Kamenistaya	2.48	40	P	Pn	21 32 28.7	+1.2
MKZ	Mys Kozlova	2.61	73	eP	Pn	21 32 30.1	+1.4
MKZ				i S	S	21 33 08.3	-2.6
KBTR	Krutoberegovo	3.88	51	eP	Pn	21 32 43.0	+1.8
KBTR				i S	S	21 33 32.4	-1.2

NEIC ***11*** *22:11:42.9, 35°.47N×27°.01E, h2km, MD3.2(ATH), MD3.5(ISK), After ISK.*
ATH ***11*** *22:11:43.7, 35°.36N×27°.55E, h2km, MD3.2/11*
ISK ***11*** *22:11:43.6, 35°.46N×27°.09E, h3km, MD3.4*
ISCJB ***11*** *22:11:46.9±0.9, 35°.65N±0°.05×27°.29E±0°.05, h0km±7km, Error ellipse: s-maj=9.8km s-min=4.2km az=144.9*
CSEM ***11*** *22:11:47.4±0.3, 35°.59N×27°.29E, h2km, MD3.2, Error ellipse: s-maj=11.1km s-min=4.3km az=147.0*
DDA ***11*** *22:11:49.4, 35°.89N×27°.50E, h5km±7km, Md3.3*
ISC 11 22:11:47.9±0.8, 35°.62N±0°.05×27°.28E±0°.05, h5km±6km, n50, σ1.9 03/65, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.12	233	ePG	Pg	22 11 51.2	+0.9
KARP	Karpathos	0.12	233	ePg	Pg	22 11 51.2	+0.9
ARG	Arkhangelos	0.91	49	ePB	Pg	22 12 02.0	-3.3
ZKR	Zakros	1.00	240	ePB	Pg	22 12 05.6	-1.5
ZKR	Zakros	1.00	240	ePb	Pg	22 12 05.6	-1.5
DAT	Datca	1.13	12	ePN	Pn	22 12 09.8	-0.6
DAT				eSN	Sg	22 12 28.8	+4.5
DAT	Datca	1.13	12	ePn	Pn	22 12 09.8	-0.6
DAT				eSn	Sg	22 12 28.8	+4.5
NPS	Neapolis	1.41	256	ePB	Pb	22 12 13.6	-1.0
NPS	Neapolis	1.41	256	ePb	Pb	22 12 13.6	-1.0
BODT	Bodrum	1.44	1	Pn	Pn	22 12 12.9	-1.7
BODT	Bodrum	1.44	1	Pn	Pn	22 12 12.9	-1.7
LAST	Lasithi	1.54	253	ePB	Pb	22 12 15.9	-1.0
LAST	Lasithi	1.54	253	ePb	Pb	22 12 15.9	-1.0
TURN	Turunc	1.65	40	i P	Pn	22 12 14.0	-3.4
TURN				i S	Sn	22 12 33.9	-5.1
TURN	Turunc	1.65	40	i P	Pn	22 12 14.0	-3.4
YER	Yerkesik	1.71	28	ePN	Pn	22 12 18.4	0.0
YER	Yerkesik	1.71	28	Pn	Pn	22 12 18.0	-0.4
YER				Sg	Sg	22 12 43.0	0.0
YER	Yerkesik	1.71	28	ePn	Pn	22 12 18.4	0.0
YER				Sg	Sg	22 12 43.0	0.0
MLSB	Milas	1.72	13	ePN	Pn	22 12 18.4	0.0
MLSB				eSN	Sg	22 12 43.4	+0.2
MLSB	Milas	1.72	13	Pn	Pn	22 12 17.8	-0.7
MLSB				Sg	Sg	22 12 43.8	+0.6
MLSB	Milas	1.72	13	ePn	Pn	22 12 18.4	0.0
MLSB				eSn	Sg	22 12 43.4	+0.3
MLSB				Sg	Sg	22 12 43.8	+0.7
FETY	Fethiye	1.78	55	ePN	Pn	22 12 19.4	+0.2
FETY				eSN	Sg	22 12 45.5	+0.4
FETY	Fethiye	1.78	55	ePn

FETY				*e*Sn	Sg	22 12 45.5	+0.5
AKAS	**Kas**	**1.98**	**71**	*i* P	Pn	22 12 21.2	-0.9
AKAS				*i* S	Sn	22 12 47.8	+0.5
AKAS	**Kas**	**1.98**	**71**	*i* P	Pn	22 12 21.2	-0.9
AKAS				*i* S	Sn	22 12 47.8	+0.5
APE	**Apeiranthos**	**2.02**	**316**	*e*PN	Pn	22 12 22.9	+0.3
APE	**Apeiranthos**	**2.02**	**316**	*e*Pn	Pn	22 12 22.9	+0.3
SIVA	**Sivas**	**2.11**	**254**	*e*PN	Pn	22 12 25.1	+1.3
SIVA	**Sivas**	**2.11**	**254**	*e*Pn	Pn	22 12 25.1	+1.3
SMG	**Samos**	**2.12**	**350**	*e*PN	Pn	22 12 27.2	+3.3
GLHS	**Glhisar (BURDU**	**2.36**	**49**	*e*PN	Pn	22 12 27.6	+0.4
GLHS	**Glhisar (BURDU**	**2.36**	**49**	*e*Pn	Pn	22 12 27.6	+0.4
ELL	**Elmali**	**2.41**	**61**	*e*PN	Pn	22 12 28.4	+0.5
ELL	**Elmali**	**2.41**	**61**	*e*Pn	Pn	22 12 28.4	+0.5
DNZL	**Cakiroluk**	**2.51**	**34**	*i* P	Pn	22 12 33.0	+3.8
DNZL				*i* S	Sn	22 12 57.6	-2.6
DNZL	**Cakiroluk**	**2.51**	**34**	*i* P	Pn	22 12 33.0	+3.7
DNZL				*i* S	Sn	22 12 57.6	-2.6
DENT	**Denizli**	**2.55**	**33**	*e*PN	Pn	22 12 30.1	+0.2
DENT	**Denizli**	**2.55**	**33**	*e*Pn	Pn	22 12 30.1	+0.2
KARN	**Karanos**	**2.75**	**266**	*e*PN	Pn	22 12 32.7	+0.1
KARN	**Karanos**	**2.75**	**266**	*e*Pn	Pn	22 12 32.7	+0.1
KULA	**Kula-Manisa**	**3.09**	**21**	*e*PN	Pn	22 12 37.5	+0.2
KULA	**Kula-Manisa**	**3.09**	**21**	*e*Pn	Pn	22 12 37.6	+0.3
BCK	**Bucak**	**3.24**	**54**	*e*PN	Pn	22 12 40.2	+0.9
BCK	**Bucak**	**3.24**	**54**	*e*Pn	Pn	22 12 40.2	+0.9
KHL	**Karahalli**	**3.24**	**33**	*e*PN	Pn	22 12 39.8	+0.4
KHL	**Karahalli**	**3.24**	**33**	*e*Pn	Pn	22 12 39.8	+0.4
KYTH	**Kithira**	**3.50**	**282**	*e*PN	Pn	22 12 43.8	+0.8
KYTH	**Kithira**	**3.50**	**282**	*e*Pn	Pn	22 12 43.8	+0.8
VLI	**Veliai**	**3.68**	**289**	*e*PN	Pn	22 12 46.4	+1.0
VLI	**Veliai**	**3.68**	**289**	*e*Pn	Pn	22 12 46.4	+1.0

IDC 11 22:14:05.1±1.6, 1°.85N×128°.05E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, MS3.4/1, Ms1 3.3/1, ms1mx2.4/20, Error ellipse: s-maj=134.3km s-min=22.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.52**	**164**	P	P	22 19 07.7	+1.1
	1.7nm,0.6s,baz=344,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.99**	**168**	P	P	22 19 39.6	-0.1
	0.4nm,0.6s,baz=350,slow=8.3,SNR=5.2						
STKA	**Stephens Creek**	**35.92**	**160**	P	P	22 21 06.0	-1.2
	0.9nm,0.5s,baz=323,slow=11,SNR=3.3						
STKA				LR	LR	22 36 25.5	
	comp=Z,58nm,20.0s,baz=25,slow=37						
MKAR	**Makanchi Array**	**59.84**	**325**	P	P	22 24 12.8	+0.3
	0.4nm,0.5s,baz=121,slow=8.1,SNR=7.2						
MKAR				PcP	PcP	22 24 58.9	-0.1
	0.4nm,0.7s,baz=119,slow=4.3,SNR=3.7						

ISCJB 11 22:20:53.7±1.5, 7°.11S±0°.06×130°.3E±0°.1, h137km±18km, mb3.4/2, Error ellipse: s-maj=21.3km s-min=9.1km az=165.1
NEIC 11 22:20:53.7±1.4, 7°.03S×130°.33E, h123km±18km, mb4.3/2, Error ellipse: s-maj=32.3km s-min=11.6km az=75.0
IDC 11 22:20:54.1±11.0, 7°.09S×130°.02E, h114km±122km, mb2.9/1, mb1 3.5/4, mb1mx3.2/17, mbtmp3.3/4, ML3.8/3, Error ellipse: s-maj=74.4km s-min=47.7km az=37.0
ISC 11 22:20:54.0±1.5, 7°.12S±0°.07×130°.3E±0°.1, h124km±18km, n11, σ1°.18/17, mb3.5/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.96**	**159**	*e*Pn	Pn	22 22 21.3	+1.3
	22nm,0.5s						
KAKA				*e*Sn	Sn	22 23 28.5	+1.4
FITZ	**Fitzroy Crossi**	**11.80**	**202**	P	Pn	22 23 39.7	+1.2
	1.3nm,0.3s,baz=42,slow=11,SNR=30						
FITZ				S	Sn	22 25 48.0	-0.6
	0.8nm,0.3s,baz=247,slow=9.7,SNR=5.9						
WRAB	**Tennant Creek**	**13.35**	**163**	*e*Pn	Pn	22 23 59.0	+0.4
WRAB				*e*Sn	Sn	22 26 24.2	-1.7
WRA	**Warramunga Arr**	**13.35**	**163**	P	Pn	22 23 58.7	0.0
	0.3nm,0.3s,baz=340,slow=14,SNR=24						
WRA				S	Sn	22 26 22.6	-3.4
	1.2nm,0.3s,baz=343,slow=21,SNR=11						
WB2	**Warramunga Arr**	**13.36**	**163**	*e*Pn	Pn	22 23 58.5	-0.3
WB2				*e*Sn	Sn	22 26 24.0	-2.1
DAV	**Davao City (W)**	**14.84**	**342**	*e*Pn	Pn	22 24 16.3	-1.5
ASAR	**Alice Springs**	**16.82**	**168**	P	Pn	22 24 45.6	+3.4
	0.2nm,0.3s,baz=341,slow=9.6,SNR=8.9						
ASAR				S	S	22 27 50.6	+0.8
	0.4nm,0.3s,baz=351,slow=28,SNR=9.4						
MKAR	**Makanchi Array**	**68.46**	**327**	P	P	22 31 42.7	+0.1
	0.1nm,0.4s,mb3.0,baz=114,slow=9.1,SNR=4.7						
MKAR	**Makanchi Array**	**68.46**	**327**	P	P	22 31 42.7	0.0
BRVK	**Borovoye**	**78.36**	**328**	*e*P	P	22 32 41.1	+0.5
	2.1nm,0.8s,mb3.9						
MALT	**Malatya**	**95.78**	**308**	P	P	22 34 06.4	-0.1

ISCJB 11 22:22:08.3±0.6, 39°.76N±0°.03×20°.71E±0°.03, h4km±7km, Error ellipse: s-maj=5.4km s-min=4.1km az=147.3
CSEM 11 22:22:08.6±0.2, 39°.77N×20°.71E, h2km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.3km az=149.0
ATH 11 22:22:08.5, 39°.76N×20°.66E, h15km±1km, MD3.0/7
NEIC 11 22:22:08.5, 39°.76N×20°.66E, h15km, MD3.0(ATH), After ATH.
THE 11 22:22:09.1, 39°.75N×20°.65E, h22km±1km, ML2.7/4, Error ellipse: s-maj=2.1km s-min=0.4km az=271.0
ISC 11 22:22:09.0±0.5, 39°.76N±0°.03×20°.70E±0°.04, h11km±4km, n36, σ0°.96/54, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.15**	**130**	*e*PB	Pg	22 22 12.6	+0.1
JAN	**Janina**	**0.15**	**130**	*e*Pb	Pg	22 22 12.6	+0.1
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	22 22 15.8	-0.3
IGT				S	Sg	22 22 22.0	+1.0
IGT	**Igoumenitsa**	**0.36**	**232**	P	Pg	22 22 15.8	-0.3
IGT				S	Sg	22 22 22.0	+1.0
MEV	**Metsovon**	**0.41**	**86**	P	Pg	22 22 16.8	-0.3
MEV	**Metsovon**	**0.41**	**86**	P	Pg	22 22 16.8	-0.3
KEK	**Kerkira**	**0.69**	**267**	*e*PN	Pg	22 22 21.5	-1.0
KEK	**Kerkira**	**0.69**	**267**	P	Pg	22 22 21.5	-1.0
KEK				S	Sg	22 22 31.4	-0.2
KEK	**Kerkira**	**0.69**	**267**	P	Pg	22 22 21.5	-1.0
KEK				S	Sg	22 22 31.4	-0.2
KZN	**Kozani**	**0.99**	**56**	P	Pg	22 22 27.2	-0.9
KZN				S	Sg	22 22 42.0	+1.0
KZN	**Kozani**	**0.99**	**56**	P	Pg	22 22 27.2	-0.9
KZN				S	Sg	22 22 42.0	+1.0
THL	**Klokotos Trika**	**1.03**	**100**	*e*PB	Pg	22 22 27.8	-1.1
THL	**Klokotos Trika**	**1.03**	**100**	P	Pg	22 22 27.8	-1.1
THL				S	Sg	22 22 42.7	+0.4
THL	**Klokotos Trika**	**1.03**	**100**	P	Pg	22 22 27.8	-1.1
THL				S	Sg	22 22 42.7	+0.4
FNA	**Florina**	**1.15**	**27**	P	Pb	22 22 29.8	-1.1
FNA				S	Sb	22 22 45.2	-0.6
FNA	**Florina**	**1.15**	**27**	P	Pb	22 22 29.8	-1.1
FNA				S	Sb	22 22 45.2	-0.6
EVR	**Evrytania**	**1.20**	**134**	*e*PN	Pn	22 22 32.2	+0.5
EVR	**Evrytania**	**1.20**	**134**	*e*Pn	Pn	22 22 32.2	+0.5
OHR	**Ohrid**	**1.36**	**3**	*e*Pn	Pn	22 22 35.1	+1.2
OHR	**Ohrid**	**1.36**	**3**	*e*Pn	Pn	22 22 35.0	+1.2
LIT	**Litokhoron**	**1.42**	**75**	*e*PN	Pn	22 22 35.7	+1.0
LIT	**Litokhoron**	**1.42**	**75**	P	Pn	22 22 34.0	-0.7
LIT				S	Sn	22 22 52.1	-1.3
LIT	**Litokhoron**	**1.42**	**75**	P	Pn	22 22 34.0	-0.7
LIT	**Litokhoron**	**1.42**	**75**	*e*Pn	Pn	22 22 35.7	+1.0
LIT				S	Sn	22 22 52.1	-1.3
AGG	**Agios Georgios**	**1.46**	**120**	*e*PN	Pn	22 22 36.6	+1.3
AGG	**Agios Georgios**	**1.46**	**120**	P	Pn	22 22 35.1	-0.2
AGG				S	Sn	22 22 54.4	0.0
AGG	**Agios Georgios**	**1.46**	**120**	P	Pn	22 22 35.1	-0.2
AGG	**Agios Georgios**	**1.46**	**120**	*e*Pn	Pn	22 22 36.6	+1.3
AGG				S	Sn	22 22 54.4	0.0
VLS	**Valsamata**	**1.58**	**183**	*e*PN	Pn	22 22 38.4	+1.5
VLS	**Valsamata**	**1.58**	**183**	P	Pn	22 22 36.8	-0.1
VLS				S	Sn	22 22 55.3	-2.0
VLS	**Valsamata**	**1.58**	**183**	P	Pn	22 22 36.8	-0.1
VLS	**Valsamata**	**1.58**	**183**	*e*Pn	Pn	22 22 38.4	+1.5
VLS				S	Sn	22 22 55.3	-2.0
KRUS	**Krusevo**	**1.67**	**14**	*e*Pn	Pn	22 22 39.4	+1.3
KRUS				*e*Sg	Sg	22 23 02.3	-0.3
KRUS	**Krusevo**	**1.67**	**14**	*e*Pn	Pn	22 22 39.4	+1.3
KRUS				*e*Sg	Sg	22 23 02.3	-0.3
XOR	**Xorichti**	**1.97**	**101**	P	Pn	22 22 44.1	+1.9
XOR	**Xorichti**	**1.97**	**101**	P	Pn	22 22 44.1	+1.9

HLW 11 22:22:59.4, 33°.71N×35°.63E, h10km±18km, Ml2.7
GII 11 22:23:03.8±0.9, 33°.29N×35°.44E, h1km±3km, Md2.9/9, Mm2.5/5
CSEM 11 22:23:04.3±0.1, 33°.32N×35°.41E, h8km, ML3.7, Error ellipse: s-maj=3.1km s-min=2.2km az=104.0
ISCJB 11 22:23:04.1±0.7, 33°.33N±0°.02×35°.36E±0°.03, h15km±5km, Error ellipse: s-maj=3.8km s-min=3.3km az=18.8
NSSC 11 22:23:05, 33°.27N×35°.47E, h4km±3km
GRAL 11 22:23:05.1±0.3, 33°.32N×35°.44E, h0km±2km, MD3.7
ISC 11 22:23:04.5±0.5, 33°.34N±0°.02×35°.40E±0°.03, h10km±3km, n62, σ0°.93/95, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.16**	**339**	*e*P	Pg	22 23 08.5	+0.5
MATL	**Matirih**	**0.16**	**339**	*e*P	Pg	22 23 08.5	+0.5
RCY	**Rachaya**	**0.38**	**67**	*e*P	Pg	22 23 11.9	0.0
RCY				*e*S	Sg	22 23 16.9	-0.1
RCY	**Rachaya**	**0.38**	**67**	*e*P	Pg	22 23 11.9	0.0
RCY				*e*S	Sg	22 23 16.9	-0.1
BEYL	**Beyrouth**	**0.54**	**8**	*e*P	Pg	22 23 15.2	+0.3
BEYL	**Beyrouth**	**0.54**	**8**	*e*P	Pg	22 23 15.2	+0.3
BHL	**Bhannes**	**0.60**	**20**	*e*P	Pg	22 23 15.9	-0.2
BHL				*e*S	Sg	22 23 24.1	+0.1
BHL	**Bhannes**	**0.60**	**20**	*e*P	Pg	22 23 15.9	-0.3
BHL				*e*S	Sg	22 23 24.1	0.0
QASN	**Qassioun**	**0.76**	**75**	⇑P	Pg	22 23 19.0	-0.1
QASN				⇑S	Sg	22 23 29.0	0.0
QASN	**Qassioun**	**0.76**	**75**	⇑*i*P	Pg	22 23 19.2	+0.1
QASN				⇑*i*S	Sg	22 23 29.7	+0.7
TCHB	**Talchebab**	**0.82**	**144**	⇑P	Pg	22 23 19.0	-1.3
TCHB				⇑S	Sg	22 23 29.0	-1.9
TCHB	**Talchebab**	**0.82**	**144**	⇑*i*P	Pg	22 23 19.7	-0.6
TOTH	**TOTAH**	**0.86**	**88**	⇓P	Pg	22 23 20.0	-1.0
TOTH				⇓S	Sg	22 23 32.0	-0.2
TOTH	**TOTAH**	**0.86**	**88**	⇓*i*P	Pg	22 23 20.7	-0.3
TOTH				⇓*i*S	Sg	22 23 32.1	-0.1
HWQ	**Hawqa**	**1.04**	**26**	*e*P	Pg	22 23 23.9	-0.6
HWQ				*e*S	Sg	22 23 37.8	-0.3
MARH	**Ras Al Marh**	**1.13**	**52**	⇑P	Pb	22 23 26.0	-0.2
MARH				⇑S	Sg	22 23 42.0	+1.0
MARH	**Ras Al Marh**	**1.13**	**52**	⇑*i*P	Pb	22 23 26.4	+0.2
MARH				⇑*i*S	Sg	22 23 42.9	+1.9
FKH	**Fakeheh**	**1.22**	**43**	*e*P	Pn	22 23 27.2	-0.5
FKH				*e*S	Sb	22 23 43.4	-0.2
FKH	**Fakeheh**	**1.22**	**43**	*e*P	Pn	22 23 27.2	-0.5
FKH				*e*S	Sb	22 23 43.4	-0.2
SALA	**Sala**	**1.28**	**119**	⇓P	Pn	22 23 27.0	-1.5
SALA				⇓S	Sb	22 23 43.0	-2.2
SALA	**Sala**	**1.28**	**119**	⇓*i*P	Pn	22 23 27.8	-0.7
SALA				⇓*i*S	Sb	22 23 43.5	-1.7
HAWK	**Haweek**	**1.45**	**35**	⇑P	Pn	22 23 32.0	+1.3
HAWK				⇑S	Sn	22 23 51.0	+1.2
HAWK	**Haweek**	**1.45**	**35**	⇑*i*P	Pn	22 23 32.0	+1.3
HAWK				⇑*i*S	Sn	22 23 51.2	+1.4
ZALF	**Zalf**	**1.67**	**104**	⇑P	Pn	22 23 34.0	+0.1
ZALF				⇑S	Sn	22 23 54.0	-1.4
ZALF	**Zalf**	**1.67**	**104**	⇑*i*P	Pn	22 23 34.3	+0.4
ZALF				⇑*i*S	Sn	22 23 54.6	-0.8
ROOS	**tl_alroos**	**1.78**	**62**	⇑P	Pn	22 23 37.0	+1.7
ROOS				⇑S	Sn	22 23 59.0	+1.0
ROOS	**tl_alroos**	**1.78**	**62**	⇑*i*P	Pn	22 23 37.1	+1.8
ROOS				⇑*i*S	Sn	22 23 59.6	+1.6
BIDA	**Albida**	**1.84**	**24**	⇑P	Pn	22 23 37.0	+0.9
BIDA	**Albida**	**1.84**	**24**	⇑*i*P	Pn	22 23 37.4	+1.3
LFK	**Lefkose**	**2.48**	**322**	*e*PN	Pn	22 23 44.4	-0.5
LFK				*e*SN	Sn	22 24 12.8	-2.5
LFK	**Lefkose**	**2.48**	**322**	*e*Pn	Pn	22 23 44.4	-0.5
LFK				*e*Sn	Sn	22 24 12.8	-2.5
LEF	**Lefka**	**2.74**	**311**	*e*PN	Pn	22 23 49.1	+0.6
LEF				*e*SN	Sn	22 24 20.5	-1.1
LEF	**Lefka**	**2.74**	**311**	*e*Pn	Pn	22 23 49.1	+0.6
LEF				*e*Sn	Sn	22 24 20.5	-1.1
YAYL	**Yayladag**	**2.75**	**12**	*i* P	Pn	22 23 48.9	+0.2
YAYL	**Yayladag**	**2.75**	**12**	*i* P	Pn	22 23 48.9	+0.2
YAYL				*i* S	Sn	22 24 22.4	+0.4
RSH		**2.77**	**211**	P	Pn	22 23 49.0	+0.1
HTY	**Hatay**	**2.84**	**12**	*e*PN	Pn	22 23 50.6	+0.7
HTY				*e*SN	Sn	22 24 23.3	-0.9
HTY	**Hatay**	**2.84**	**12**	*e*Pn	Pn	22 23 50.7	+0.8
HTY				*e*Sn	Sn	22 24 23.3	-1.0
KRTS	**Karatas**	**3.23**	**360**	*e*PN	Pn	22 23 55.0	-0.2
KRTS	**Karatas**	**3.23**	**360**	*e*Pn	Pn	22 23 55.0	-0.2
AMAG	**Maghara**	**3.27**	**215**	P	Pn	22 23 55.7	-0.1
	baz=215						
AMAG	**Maghara**	**3.27**	**215**	P	Pn	22 23 55.7	-0.1
HNKL	**Nakhl**	**3.61**	**200**	P	Pn	22 24 01.2	+0.7
	baz=201						
HNKL				S	Sn	22 24 44.3	+1.2
	baz=201						
HNKL				AMP		22 25 00.0	
	comp=E,20μm,0.5s,logA/T=4.6,baz=201						
HNKL	**Nakhl**	**3.61**	**200**	P	Pn	22 24 01.2	+0.7
HNKL				S	Sn	22 24 44.3	+1.2
ERMK	**Ermenek**	**3.88**	**329**	*i* P	Pn	22 24 04.4	+0.2
ERMK	**Ermenek**	**3.88**	**329**	*i* P	Pn	22 24 04.4	+0.2
ERMK				*i* S	Sn	22 24 47.3	-2.5
KARA	**Karaisali**	**3.92**	**356**	*e*PN	Pn	22 24 04.9	+0.1
KARA	**Karaisali**	**3.92**	**356**	*e*Pn	Pn	22 24 04.9	+0.1
GULE	**Gulek**	**3.97**	**353**	*i* P	Pn	22 24 06.2	+0.8
GULE	**Gulek**	**3.97**	**353**	*i* P	Pn	22 24 06.2	+0.8
GULE				*i* S	Sn	22 24 50.0	-2.1
SUZ		**4.12**	**213**	P	Pn	22 24 08.2	+0.7
	baz=213						
SUZ		**4.12**	**213**	P	Pn	22 24 08.2	+0.7
HDMB	**Hadim**	**4.33**	**327**	*e*PN	Pn	22 24 10.8	+0.3
HDMB	**Hadim**	**4.33**	**327**	*e*Pn	Pn	22 24 10.8	+0.4
ZNM		**4.50**	**209**	P	Pn	22 24 13.5	+0.7
	baz=210						
ZNM		**4.50**	**209**	P	Pn	22 24 13.5	+0.8
ZAF		**4.72**	**212**	P	Pn	22 24 16.3	+0.5
	baz=212						
ZAF		**4.72**	**212**	P	Pn	22 24 16.3	+0.5
HKAT	**Jabal Katrina**	**4.95**	**195**	P	Pn	22 24 19.2	+0.3
	baz=196						
HKAT	**Jabal Katrina**	**4.95**	**195**	P	Pn	22 24 19.2	+0.3
TR2		**5.14**	**197**	P	Pn	22 24 21.9	+0.3
	baz=198						
TR2		**5.14**	**197**	P	Pn	22 24 21.9	+0.3

IDC 11 22:35:33.3±4.3, 2°.90S×101°.41E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, Error ellipse: s-maj=178.6km s-min=25.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.33**	**120**	P	P	22 42 39.5	+0.4
	0.3nm,0.6s,baz=303,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**37.59**	**126**	P	P	22 42 49.4	-0.5
	0.3nm,0.7s,baz=292,slow=7.8,SNR=3.6						
SONM	**Songino Array**	**50.71**	**4**	P	P	22 44 35.6	+1.0
	0.6nm,0.6s,baz=187,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**52.27**	**343**	P	P	22 44 45.8	-0.6
	0.6nm,0.8s,baz=144,slow=8.4,SNR=5.0						

ISCJB 11 23:01:57.3±1.1, 16°.61N±0°.04×100°.54W±0°.04, h23km±6km, mb3.2/3, Error ellipse: s-maj=8.1km s-min=5.0km az=33.2
MEX 11 23:01:59.1±0.4, 16°.64N×100°.54W, h5km, MD4.1
NEIC 11 23:01:59.1, 16°.64N×100°.54W, h5km, MD4.1(MEX), After MEX.
IDC 11 23:02:04.0±7.9, 17°.49N×99°.83W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/21, mbtmp3.6/4, ML2.9/1, Error ellipse: s-maj=183.6km s-min=28.2km az=24.0
ISC 11 23:01:57.7±1.1, 16°.62N±0°.04×100°.56W±0°.04, h17km±4km, n37, σ1°.04/72, mb3.2/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.51**	**33**	*i* P	Pg	23 02 08.0	0.0
CAIG				*i* S	Sg	23 02 15.0	0.0
CAIG	**El Cayaco**	**0.51**	**33**	*i* P	Pg	23 02 08.0	0.0
CAIG				*i* S	Sg	23 02 15.0	0.0
ACX	**Acapulco**	**0.67**	**68**	*i* P	Pg	23 02 10.7	-0.2
ACX				*i* S	Sg	23 02 19.9	+0.2
ACX	**Acapulco**	**0.67**	**68**	*i* P	Pg	23 02 10.7	-0.2
ACX				*i* S	Sg	23 02 19.9	+0.2
ZIIG	**Zihuatanejo**	**1.31**	**319**	*i* P	Pn	23 02 20.1	-1.1
ZIIG				*i* S	Sn	23 02 37.1	-1.3
ZIIG	**Zihuatanejo**	**1.31**	**319**	*i* P	Pn	23 02 20.1	-1.1
ZIIG				*i* S	Sn	23 02 37.1	-1.3
PLIG	**Platanillo**	**2.03**	**30**	*e*P	Pn	23 02 30.4	-0.8
PLIG				*i* S	Sn	23 02 55.3	-0.9
PLIG	**Platanillo**	**2.03**	**30**	*e*P	Pn	23 02 30.4	-0.8
PLIG				*i* S	Sn	23 02 55.3	-0.9
PNIG	**Pinotepa**	**2.35**	**95**	*e*P	Pn	23 02 33.8	-1.7
PNIG				*i* S	Sn	23 03 02.2	-1.7
PNIG	**Pinotepa**	**2.35**	**95**	*e*P	Pn	23 02 33.8	-1.7
PNIG				*i* S	Sn	23 03 02.2	-1.7
MZVM		**2.85**	**26**	*i* P	Pn	23 02 42.5	0.0
MZVM				*i* S	Sn	23 03 16.3	-0.2
UTMO	**Huajuapan**	**2.90**	**65**	*i* P	Pn	23 02 42.9	-0.2
UTMO				*i* S	Sn	23 03 17.0	-0.6
PPM	**Popocatepetl**	**3.05**	**37**	*i* S	Sn	23 03 20.8	-0.6
PPM				*i* S	Sn	23 03 21.6	+0.1
PPM	**Popocatepetl**	**3.05**	**37**	*e*P	Pn	23 02 45.3	0.0
PPM				*e*P		23 02 45.3	
PPM				*i* S	Sn	23 03 20.8	-0.6
PPM				*i* S	Sn	23 03 21.6	+0.1
MOIG	**Morelia**	**3.10**	**349**	*e*P	Pn	23 02 46.0	+0.1
MOIG				*i* S	Sn	23 03 23.0	+0.5
MOIG	**Morelia**	**3.10**	**349**	*e*P	Pn	23 02 46.0	+0.1
MOIG				*i* S	Sn	23 03 23.0	+0.5
PBVM	**Pinon**	**3.14**	**26**	*e*P	Pn	23 02 49.0	+2.6
PBVM				*i* S	Sn	23 03 23.6	+0.1
PBVM	**Pinon**	**3.14**	**26**	*e*P	Pn	23 02 49.0	+2.6
PBVM				*i* S	Sn	23 03 23.6	+0.1
PTVM	**Pico Tres Padr**	**3.26**	**25**	*e*P	Pn	23 02 48.1	0.0
PTVM				*i* S	Sn	23 03 27.2	+0.6
PTVM	**Pico Tres Padr**	**3.26**	**25**	*e*P	Pn	23 02 48.1	0.0
PTVM				*i* S	Sn	23 03 27.2	+0.6
IIO	**Organos**	**3.44**	**30**	*e*P	Pn	23 02 51.4	+0.9
IIO				*i* S	Sn	23 03 31.5	+0.6
IIO	**Organos**	**3.44**	**30**	*e*P	Pn	23 02 51.4	+0.9
IIO				*i* S	Sn	23 03 31.5	+0.6
VHO	**Vista Hermosa**	**3.69**	**82**	*i* P	Pn	23 02 54.4	+0.3
VHO				*i* S	Sn	23 03 36.5	-0.7
VHO	**Vista Hermosa**	**3.69**	**82**	*i* P	Pn	23 02 54.4	+0.3
VHO				*i* S	Sn	23 03 36.5	-0.7
OXX	**Oaxaca**	**3.71**	**82**	*i* P	Pn	23 02 59.5	+5.3
OXX				*i* S	Sn	23 03 39.1	+1.6
OXX	**Oaxaca**	**3.71**	**82**	*i* P	Pn	23 02 59.5	+5.3
OXX				*i* S	Sn	23 03 39.1	+1.6
HUIG	**Huatulco**	**4.36**	**101**	*e*P	Pn	23 03 03.1	-0.1
HUIG				*i* S	Sn	23 03 55.4	+1.7
HUIG	**Huatulco**	**4.36**	**101**	*e*P	Pn	23 03 03.1	-0.1
HUIG				*i* S	Sn	23 03 55.4	+1.7
LVIG	**Laguna Verde**	**5.01**	**51**	*e*P	Pn	23 03 10.3	-1.7
LVIG				*i* S	Sn	23 04 08.3	-1.3
LVIG	**Laguna Verde**	**5.01**	**51**	*e*P	Pn	23 03 10.3	-1.7
LVIG				*i* S	Sn	23 04 08.3	-1.3
CMIG	**Matias Romero**	**5.46**	**84**	Pn	Pn	23 03 17.8	-0.6
	0.5nm,0.3s,baz=246,slow=12,SNR=4.8						
CMIG				Sn	Sn	23 04 12.2	-8.5
	0.8nm,0.3s,baz=267,slow=19,SNR=7.8						
CMIG	**Matias Romero**	**5.46**	**84**	Pn	Pn	23 03 17.8	-0.6
CMIG				Sn	Sn	23 04 12.2	-8.5
CMIG				*i* S	Sn	23 04 23.5	+2.8
CMIG	**Matias Romero**	**5.46**	**84**	*e*P	Pn	23 03 19.7	+1.4
CMIG				*i* S	Sn	23 04 23.5	+2.8
KVTX	**Kingsville**	**11.15**	**12**	Pn	Pn	23 04 38.0	+1.6
NVAR	**Mina Array Bea**	**26.73**	**328**	P	P	23 07 42.3	+5.9
	0.1nm,0.4s,mb2.7,baz=145,slow=12,SNR=6.4						
PDAR	**Pinedale Array**	**27.17**	**345**	P	P	23 07 44.4	+4.1
	0.8nm,0.8s,mb3.3,baz=148,slow=9.7,SNR=7.8						

CARO	**Carolei**	**2.03 220**	Pg	**Pg**	**23 03 49.7**	**-1.0**
CARO	**Carolei**	**2.03 220**	Pg	**Pg**	**23 03 49.7**	**-1.0**
STON	**Ston**	**2.06 356**	*e*Pn	**Pn**	**23 03 46.4**	**+0.4**
STON			Sn	**Sn**	**23 04 11.4**	**-0.1**
STON	**Ston**	**2.06 356**	*e*Pn	**Pn**	**23 03 46.4**	**+0.4**
STON			Sn	**Sn**	**23 04 11.3**	**-0.2**
KRUS	**Krusevo**	**2.58 77**	*e*Pn	**Pg**	**23 04 03.7**	**+2.4**
KRUS			*e*Sg	**Sg**	**23 04 29.0**	**-5.7**
NVLJ	**Novalja**	**4.37 330**	*e*Pn	**Pn**	**23 04 17.5**	**-0.2**
NVLJ			Sn	**Sn**	**23 05 05.8**	**-2.5**
NVLJ	**Novalja**	**4.37 330**	*e*Pn	**Pn**	**23 04 17.5**	**-0.2**
NVLJ			Sn	**Sn**	**23 05 05.8**	**-2.5**

ISCJB ***11*** *23:05:54.2±0.4,8.73S±0.05×115.35E±0.04,h148km±3km, mb3.8/18, Error ellipse: s-maj=9.1km s-min=6.3km az=23.9*
DJA ***11*** *23:05:56,8.97S×115.35E,h104km,MLv4.4/13*
NEIC ***11*** *23:05:59.6±0.9,8.54S×115.61E,h183km±9km, mb4.1/12, Error ellipse: s-maj=9.5km s-min=5.4km az=53.0*
IDC ***11*** *23:06:00.1±4.1,8.56S×115.58E,h185km±39km, mb3.5/13, mb1 3.6/14,mb1mx3.6/22,mbtmp3.5/14, Error ellipse: s-maj=37.5km s-min=12.1km az=61.0*
ISC 11 23:05:54.6±0.4,8.83S±0.05×115.38E±0.04,h140km±3km, n65,σ1$30/73,mb3.8/18,Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.23**	**312**	P	**Pn**	**23 06 13.8**	**+0.1**
KHKI	**Kahang-Kahang**	**0.51**	**26**	P	**Pn**	**23 06 14.5**	**-0.4**
KHKI				S	**Sn**	**23 06 27.6**	**-2.7**
SRBI	**Singaraja**	**0.76**	**347**	P	**Pn**	**23 06 16.6**	**+0.1**
SRBI				S	**Sn**	**23 06 31.8**	**-1.3**
NBBI	**Negara**	**0.88**	**301**	P	**Pn**	**23 06 17.2**	**-0.2**
ABJI	**Asem Bagus**	**1.53**	**312**	P	**Pn**	**23 06 24.2**	**+0.4**
GMJI	**Gumukmas**	**2.00**	**286**	P	**Pn**	**23 06 28.3**	**-0.8**
KMMI	**Kalianget**	**2.26**	**322**	P	**Pn**	**23 06 34.3**	**+2.0**
GRJI	**Gresik**	**3.45**	**303**	P	**Pn**	**23 06 48.4**	**+1.0**
PWJI	**Pagerwojo**	**3.63**	**283**	P	**Pn**	**23 06 48.4**	**-1.4**
NGJI	**Ngawi**	**4.14**	**290**	P	**Pn**	**23 06 58.8**	**+2.3**
PCJI	**Pacitan**	**4.21**	**278**	P	**Pn**	**23 06 56.1**	**-1.2**
UGM	**Wanagama**	**4.89**	**280**	P	**Pn**	**23 07 07.1**	**+0.6**
KBKI	**Kotabaru**	**5.55**	**8**	P	**Pn**	**23 07 17.3**	**+2.0**
KAPI	**Kappang**	**5.76**	**49**	P	**Pn**	**23 07 19.4**	**+1.3**
	10nm,0.3s,baz=232,slow=8.0,SNR=45						
KAPI				S	**Sn**	**23 08 23.9**	**+0.6**
	baz=128,slow=18,SNR=2.6						
XMIS	**Christmas Isla**	**9.73**	**260**	*e*P	**Pn**	**23 08 06.6**	**-4.7**
XMIS				*e*S	**Sn**	**23 09 41.3**	**-18**
KSM	**Kuching**	**11.42**	**333**	Pn	**Pn**	**23 08 35.8**	**+2.2**
MBWA	**Marble Bar**	**12.96**	**162**	*e*P	**Pn**	**23 08 50.6**	**-3.0**
MBWA				*e*S	**Sn**	**23 11 02.9**	**-14**
MBWA	**Marble Bar**	**12.96**	**162**	*e*P	**Pn**	**23 08 51.0**	**-2.6**
	20nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.57**	**134**	*e*P	**Pn**	**23 09 00.9**	**-0.7**
	16nm,0.6s						
FITZ				*e*S	**Sn**	**23 11 23.2**	**-8.5**
FITZ	**Fitzroy Crossi**	**13.57**	**134**	P	**Pn**	**23 09 01.5**	**0.0**
	2.0nm,0.3s,baz=312,slow=4.1,SNR=21						
FITZ				S	**Sn**	**23 11 24.6**	**-7.1**
	1.3nm,0.3s,baz=230,slow=9.0,SNR=6.3						
FITZ	**Fitzroy Crossi**	**13.57**	**134**	*e*P	**Pn**	**23 09 01.3**	**-0.3**
	15nm,0.9s						
KKM	**Kota Kinabalu**	**14.80**	**3**	Pn	**Pn**	**23 09 17.6**	**+0.5**
KAKA	**Kakadu**	**17.19**	**104**	*e*P	**Pn**	**23 09 48.9**	**+2.4**
	4.4nm,0.6s						
KAKA				*e*S	**S**	**23 12 41.5**	**-16**
MEEK	**Meekatharra**	**17.97**	**171**	*e*P	**Pn**	**23 10 00.0**	**+4.3**
	7.3nm,0.4s						
MEEK				*e*S	**S**	**23 13 02.0**	**-11**
COCO	**West Island**	**18.54**	**258**	*e*P	**P**	**23 10 05.1**	**+4.5**
KULM	**Kulim**	**20.31**	**313**	*e*P	**P**	**23 10 20.1**	**+0.3**
	9.6nm,0.5s						
WRA	**Warramunga Arr**	**21.40**	**123**	P	**P**	**23 10 32.2**	**+0.8**
	2.8nm,0.4s,mb3.9,baz=297,slow=12,SNR=24						
WRAB	**Tennant Creek**	**21.41**	**123**	*e*P	**P**	**23 10 32.4**	**+0.9**
	6.8nm,0.6s,mb4.2						
WRAB				*e*S	**S**	**23 14 16.7**	**-4.5**
WB2	**Warramunga Arr**	**21.41**	**123**	*e*P	**P**	**23 10 32.6**	**+1.1**
WB2				*e*S	**S**	**23 14 16.2**	**-5.0**
ASAR	**Alice Springs**	**23.06**	**132**	P	**P**	**23 10 49.7**	**+1.8**
	3.9nm,0.6s,mb4.0,baz=305,slow=9.1,SNR=52						
CMAR	**Chiang Mai Arr**	**31.60**	**329**	P	**P**	**23 12 04.7**	**+0.5**
	1.0nm,0.4s,mb3.9,baz=157,slow=7.2,SNR=9.0						
CHTO	**Chiang Mai**	**31.90**	**330**	*e*P	**P**	**23 12 07.2**	**+0.4**
	1.5nm,0.5s,mb4.0						
NACB	**Ninganchiao**	**33.36**	**10**	P	**P**	**23 12 16.6**	**-2.9**
STKA	**Stephens Creek**	**33.44**	**137**	P	**P**	**23 12 22.8**	**+2.6**
	2.3nm,0.8s,mb4.0,baz=309,slow=6.5,SNR=8.0						
STKA	**Stephens Creek**	**33.44**	**137**	*e*P	**P**	**23 12 22.4**	**+2.2**
	0.3nm,0.4s,mb3.4						
YHNB	**Yeheng**	**33.80**	**10**	P	**P**	**23 12 21.9**	**-1.5**
LSA	**Lhasa**	**44.85**	**330**	P	**P**	**23 13 55.5**	**+0.5**
ULN	**Ulaanbaatar**	**56.93**	**353**	*e*P	**P**	**23 15 23.0**	**-2.0**
	0.6nm,0.4s,mb3.8						
SONM	**Songino Array**	**56.97**	**353**	P	**P**	**23 15 25.2**	**-0.1**
	0.6nm,0.6s,mb3.6,baz=176,slow=7.3,SNR=3.5						
HIA	**Hailar**	**57.97**	**3**	P	**P**	**23 15 30.9**	**-1.4**
TLY	**Talaya**	**61.11**	**352**	P	**P**	**23 15 51.6**	**-2.1**
KBL	**Kabul**	**61.50**	**317**	*e*P	**P**	**23 15 55.0**	**-1.7**
MK31	**Makanchi Array**	**62.73**	**335**	P	**P**	**23 16 04.2**	**-0.5**
MKAR	**Makanchi Array**	**62.73**	**335**	P	**P**	**23 16 04.4**	**-0.3**
	1.3nm,0.3s,mb4.2,baz=154,slow=7.0,SNR=35						
TKM2	**Tokmak 2**	**62.97**	**328**	P	**P**	**23 16 06.0**	**-0.4**
EKS2	**Erkin-Say**	**63.76**	**327**	*e*P	**P**	**23 16 11.8**	**+0.3**
KURK	**Kurchatov**	**67.32**	**336**	P	**P**	**23 16 33.3**	**-0.9**
	0.2nm,0.4s,mb3.3,baz=148,slow=5.8,SNR=3.4						
KURK	**Kurchatov**	**67.32**	**336**	*e*P	**P**	**23 16 33.9**	**-0.3**
	0.5nm,0.5s,mb3.6						
ZALV	**Zalesovo Beam**	**67.66**	**341**	P	**P**	**23 16 35.0**	**-1.4**
	0.6nm,0.3s,mb3.8,baz=137,slow=4.3,SNR=4.3						
BVAR	**Borovoye Array**	**72.50**	**333**	P	**P**	**23 17 05.9**	**0.0**
	0.4nm,0.5s,mb3.4,baz=112,slow=9.4,SNR=3.2						
ABKAR	**Akbulak array**	**75.40**	**326**	*e*P	**P**	**23 17 22.6**	**-0.2**
	2.7nm,0.6s,mb4.0						
AKTK	**Aktyubinsk**	**77.08**	**326**	P	**P**	**23 17 31.2**	**-1.0**
AKTO	**Aktyubinsk**	**77.08**	**326**	P	**P**	**23 17 31.2**	**-1.0**
	1.1nm,0.5s,mb3.8,baz=101,slow=5.6,SNR=6.4						
KMBO	**Kilima Mbogo**	**78.10**	**271**	P	**P**	**23 17 40.4**	**+1.6**
	0.7nm,0.6s,mb3.5,baz=67,slow=2.5,SNR=4.0						
KMBO	**Kilima Mbogo**	**78.10**	**271**	*e*P	**P**	**23 17 40.2**	**+1.5**
	2.4nm,1.4s,mb3.6						
GNI	**Garni**	**81.19**	**313**	P	**P**	**23 17 55.5**	**+0.7**
LSZ	**Lusaka**	**85.03**	**255**	*e*P	**P**	**23 18 17.0**	**+1.8**
	1.5nm,0.5s,mb4.0						
MALT	**Malatya**	**85.33**	**310**	P	**P**	**23 18 16.0**	**-0.2**
BOSA	**Boshof**	**85.94**	**242**	P	**P**	**23 18 22.4**	**+2.9**
	2.2nm,0.7s,mb4.0,baz=102,slow=4.0,SNR=5.9						
BOSA	**Boshof**	**85.94**	**242**	*e*P	**P**	**23 18 22.0**	**+2.5**
	3.6nm,0.7s,mb4.2						
LBTB	**Lobatse**	**86.13**	**245**	P	**P**	**23 18 23.2**	**+2.8**
BRTR	**Keskin Array B**	**89.29**	**310**	P	**P**	**23 18 35.6**	**+0.5**
	0.5nm,0.5s,mb3.7,baz=132,slow=4.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**114.91**	**280**	PKP	PKiKP	23 24 20.1	+0.3
	0.3nm,0.7s,baz=68,slow=2.1,SNR=4.6						
ESLA	**Sonseca Array**	**118.08**	**310**	PKPdf	PKPdf	23 24 25.2	-0.1
CPUP	**Villa Florida**	**144.34**	**191**	PKP	PKPdf	23 25 15.7	+0.8
	0.7nm,0.5s,baz=91,slow=0.9,SNR=3.7						

IDC 11 23:16:58.2±6.5,8.11S×128.33E,h0km,mb4.1/1, mb1 3.7/4,mb1mx3.4/17,mbtmp3.5/4,ML3.1/3,Error ellipse: s-maj=92.1km s-min=56.7km az=128.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.27**	**194**	Pn	Pn	23 19 28.9	+2.0
	0.1nm,0.3s,baz=15,slow=14,SNR=6.3						
FITZ				Sn	Sn	23 21 22.8	0.0
	0.1nm,0.3s,baz=300,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**13.12**	**154**	Pn	Pn	23 20 07.5	+1.5
	0.1nm,0.3s,baz=324,slow=13,SNR=3.2						
WRA				Sn	Sn	23 22 29.5	-3.3
	0.2nm,0.3s,baz=329,slow=22,SNR=6.2						
ASAR	**Alice Springs**	**16.36**	**162**	Pn	Pn	23 20 49.5	+0.1
	0.1nm,0.3s,baz=345,slow=12,SNR=5.8						
ASAR				Sn	Sn	23 23 51.3	-0.5
	0.1nm,0.3s,baz=336,slow=24,SNR=3.0						
STKA	**Stephens Creek**	**26.68**	**154**	P	P	23 22 38.4	-0.7
	4.1nm,1.2s,baz=323,slow=5.1,SNR=2.4						

NSSC ***11*** *23:19:41,37.88N×44.98E,h40km*
ISK ***11*** *23:19:56.2,37.00N×43.34E,h10km,ML4.3*
CSEM ***11*** *23:19:57.9±0.1,37.18N×43.38E,h2km,mb4.2/10, Error ellipse: s-maj=4.4km s-min=3.6km az=165.0*
IDC ***11*** *23:19:57.8±0.9,37.14N×43.35E,h0km,mb3.7/12, mb1 3.9/16,mb1mx3.8/30,mbtmp3.7/16,ML3.5/4,MS3.1/3, Ms1 3.1/3,ms1mx2.6/39, Error ellipse: s-maj=21.6km s-min=13.6km az=169.0*
MOS ***11*** *23:19:57.2±1.1,37.07N×43.33E,h10km,mb4.2/11, Error ellipse: s-maj=8.0km s-min=5.2km az=107.8*
NEIC ***11*** *23:19:59.2±0.4,37.21N×43.35E,h10km,mb4.0/9, ML4.0(DDA),ML4.1(ISK), Error ellipse: s-maj=7.1km s-min=4.4km az=177.0*
DDA ***11*** *23:20:06.7,37.59N×43.07E,h2km,Ml4.0*
ISC 11 23:19:59.3±0.9,37.12N±0.02×43.33E±0.03,h10km±6km, n229,σ1$14/259,mb3.8/22,MS2.9/3,9C-12D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSL	**Mosul**	**0.73**	**194**	*e*Pb	x	23 20 24.0	
MSL				*i* Sb	x	23 20 38.0	
VANT	**Van**	**1.30**	**358**	*e*PN	**Pn**	**23 20 22.5**	**-1.1**
VANT				*e*SN	**Sn**	**23 20 42.1**	**+1.0**
VANT	**Van**	**1.30**	**358**	Pg	**Pn**	**23 20 20.9**	**-2.7**
VANB	**Van**	**1.48**	**2**	Pn	**Pn**	**23 20 24.0**	**-2.0**
VANB				Sg	**Sn**	**23 20 42.0**	**-3.4**
VANB	**Van**	**1.48**	**2**	Pn	**Pn**	**23 20 24.0**	**-2.0**
VANB				Sg	**Sn**	**23 20 42.0**	**-3.4**
TATV	**Tatvan**	**1.63**	**329**	*i* P	**Pn**	**23 20 26.1**	**-1.9**
TATV				*i* S	**Sn**	**23 20 46.6**	**-2.4**
TATV	**Tatvan**	**1.63**	**329**	*i* P	**Pn**	**23 20 26.1**	**-1.9**
TATV				*i* S	**Sn**	**23 20 46.6**	**-2.4**
BEST	**Besiri**	**1.81**	**296**	*i* P	**Pn**	**23 20 30.7**	**+0.2**
BEST	**Besiri**	**1.81**	**296**	*i* P	**Pn**	**23 20 30.7**	**+0.2**
BEST				*i* P		23 20 54.2	
BEST	**Besiri**	**1.81**	**296**	*i* P	**Pn**	**23 20 30.7**	**+0.1**
CLDR	**Caldiran**	**2.08**	**13**	*e*PN	**Pn**	**23 20 33.8**	**-0.4**
CLDR				*e*SN	**Sn**	**23 21 00.9**	**+0.8**
CLDR	**Caldiran**	**2.08**	**13**	Pn	**Pn**	**23 20 33.1**	**-1.1**
CLDR	**Caldiran**	**2.08**	**13**	Pn	**Pn**	**23 20 33.1**	**-1.1**
CLDR				*e*Sn	**Sn**	**23 21 00.9**	**+0.8**
DYDN	**Diyadin**	**2.44**	**7**	*i* P	**Pb**	**23 20 41.7**	**-1.6**
DYDN				*i* S	**Sb**	**23 21 19.6**	**+6.1**
DYDN	**Diyadin**	**2.44**	**7**	*i* P	**Pn**	**23 20 41.7**	**+2.5**
AGRB	**Hanur-Agry**	**2.47**	**354**	*e*PN	**Pn**	**23 20 39.7**	**+0.1**
AGRB	**Hanur-Agry**	**2.47**	**354**	*e*Pn	**Pn**	**23 20 39.7**	**+0.1**
DIYA	**Diyarbakir**	**2.68**	**289**	*i* P	**Pb**	**23 20 46.9**	**-0.4**
DIYA				*i* S	**Sb**	**23 21 19.5**	**-0.7**
DIYA	**Diyarbakir**	**2.68**	**289**	*i* P	**Pb**	**23 20 46.9**	**-0.4**
DIYA				*i* S	**Sb**	**23 21 19.5**	**-0.7**
BINT	**Bingol**	**2.85**	**309**	*e*PN	**Pn**	**23 20 44.4**	**-0.4**
BINT	**Bingol**	**2.85**	**309**	Pn	**Pn**	**23 20 43.4**	**-1.4**
BINT	**Bingol**	**2.85**	**309**	P	**Pn**	**23 20 43.4**	**-1.4**
BINT	**Bingol**	**2.85**	**309**	*e*Pn	**Pn**	**23 20 44.4**	**-0.4**
HOMI	**Horasan**	**3.13**	**340**	*i* P	**Pb**	**23 20 51.7**	**-3.3**
HOMI				*i* S	**Sb**	**23 21 36.0**	**+2.7**
ERZM	**Erzurum**	**3.18**	**332**	*i* P	**Pb**	**23 20 55.9**	**-0.1**
ERZM				*e*S	**Sn**	**23 21 30.2**	**+2.7**
ERZM	**Erzurum**	**3.18**	**332**	*i* P	**Pb**	**23 20 55.9**	**-0.1**
ERZM				*i* S	**Sn**	**23 21 30.2**	**+2.7**
EZM	**Erzurum**	**3.19**	**332**	*e*PN	**Pn**	**23 20 49.0**	**-0.5**
GNI	**Garni**	**3.23**	**20**	*e*PN	**Pn**	**23 20 49.9**	**-0.1**
GNI	**Garni**	**3.23**	**20**	*e*Pn	**Pn**	**23 20 50.3**	**+0.3**
GNI				*e*Sn	**Sn**	**23 21 29.8**	**+1.3**
GNI	**Garni**	**3.23**	**20**	*e*Pn	**Pn**	**23 20 49.9**	**-0.1**
GNI	**Garni**	**3.23**	**20**	*e*P	**Pn**	**23 20 50.3**	**+0.3**
GNI				*e*S	**Sn**	**23 21 29.8**	**+1.4**
SVRC	**Sivrice-ELAZID**	**3.43**	**293**	*e*PN	**Pn**	**23 20 52.4**	**-0.4**
SVRC	**Sivrice-ELAZID**	**3.43**	**293**	*e*Pn	**Pn**	**23 20 52.4**	**-0.4**
KARS	**Kars**	**3.51**	**357**	*e*PN	**Pn**	**23 20 54.1**	**+0.1**
PTK	**Pertek**	**3.58**	**301**	*e*PN	**Pn**	**23 20 54.5**	**-0.4**
PTK	**Pertek**	**3.58**	**301**	*e*Pn	**Pn**	**23 20 54.5**	**-0.4**
KOPT	**Kop Dagi**	**3.65**	**323**	*i* P	**Pb**	**23 21 04.2**	**+0.3**
KOPT				*i* S	**Sb**	**23 21 57.2**	**+9.0**
BHD	**Baghdad**	**3.93**	**167**	*e*Pn	**Pb**	**23 21 08.0**	**-0.7**
BHD				*e*Sn	**Sb**	**23 21 57.0**	**+0.7**
MALT	**Malatya**	**4.07**	**289**	*e*PN	**Pn**	**23 21 00.9**	**-0.6**
MALT	**Malatya**	**4.07**	**289**	*e*Pn	**Pn**	**23 20 59.9**	**-1.6**
MALT				*e*Pg	**Pg**	**23 21 15.9**	**-1.3**
MALT				S	**Sn**	**23 21 48.8**	**-0.4**
MALT	**Malatya**	**4.07**	**289**	*e*P	**Pn**	**23 20 59.9**	**-1.7**
MALT	**Malatya**	**4.07**	**289**	*e*Pn	**Pn**	**23 21 00.9**	**-0.7**
MALT	**Malatya**	**4.07**	**289**	*e*Pg	**Pg**	**23 21 15.9**	**-1.3**
MALT				S	**Sn**	**23 21 48.8**	**-0.4**
MYA	**Malataya**	**4.07**	**289**	*e*PN	**Pn**	**23 21 00.5**	**-1.2**
MYA	**Malataya**	**4.07**	**289**	*e*Pn	**Pn**	**23 21 00.5**	**-1.1**
EZC	**Erzincan**	**4.08**	**311**	*e*PN	**Pn**	**23 21 01.4**	**-0.4**
JHLN	**Al Jahlan**	**4.20**	**251**	⇑P	**Pn**	**23 21 04.0**	**+0.6**
JHLN				⇑S	**Sb**	**23 22 04.0**	**0.0**
JHLN	**Al Jahlan**	**4.20**	**251**	⇑*i*P	**Pn**	**23 21 04.4**	**+1.0**
SLMH	**Al Salmeh**	**4.43**	**260**	⇓P	**Pn**	**23 21 06.0**	**-0.6**
SLMH				⇓S	**Sb**	**23 22 08.0**	**-2.8**
SLMH	**Al Salmeh**	**4.43**	**260**	⇓*i*P	**Pn**	**23 21 06.8**	**+0.2**
GUMT	**Gumushane**	**4.50**	**319**	*e*PN	**Pn**	**23 21 08.5**	**+1.1**
GUMT	**Gumushane**	**4.50**	**319**	*e*Pn	**Pn**	**23 21 08.5**	**+1.1**
BCA	**Borcka**	**4.52**	**343**	*e*PN	**Pn**	**23 21 08.0**	**+0.2**
BCA	**Borcka**	**4.52**	**343**	*e*Pn	**Pn**	**23 21 08.0**	**+0.2**
MTA	**Mtatsminda**	**4.71**	**13**	P	**Pn**	**23 21 11.5**	**+1.1**
TBLG	**Delisi**	**4.74**	**13**	P	**Pn**	**23 21 12.1**	**+1.4**
TBLG	**Delisi**	**4.74**	**13**	P	**Pn**	**23 21 12.1**	**+1.3**
KTUT	**Trabzon**	**4.76**	**325**	*e*PN	**Pn**	**23 21 11.6**	**+0.5**
KTUT	**Trabzon**	**4.76**	**325**	*e*Pn	**Pn**	**23 21 11.6**	**+0.6**
GAZ	**Gaziantep**	**4.89**	**273**	*e*PN	**Pn**	**23 21 12.4**	**-0.4**
GAZ	**Gaziantep**	**4.89**	**273**	*e*Pn	**Pn**	**23 21 12.4**	**-0.5**
GOR	**Gori**	**4.90**	**7**	P	**Pb**	**23 21 27.2**	**+2.0**
KMRS	**Kahramanmaras**	**5.14**	**276**	*e*PN	**Pn**	**23 21 16.4**	**0.0**
KMRS	**Kahramanmaras**	**5.14**	**276**	*e*Pn	**Pn**	**23 21 16.4**	**+0.1**
ESPY	**Espiye-Giresun**	**5.22**	**318**	*e*PN	**Pn**	**23 21 18.2**	**+0.8**
ESPY	**Espiye-Giresun**	**5.22**	**318**	*e*Pn	**Pn**	**23 21 18.2**	**+0.8**
ONI	**Oni**	**5.47**	**1**	P	**Pn**	**23 21 23.2**	**+2.4**
SARI	**SarD1z-Kayseri**	**5.47**	**289**	*e*PN	**Pn**	**23 21 23.1**	**+2.2**
SARI	**SarD1z-Kayseri**	**5.47**	**289**	*e*Pn	**Pn**	**23 21 23.1**	**+2.2**
ZEI	**Tsey**	**5.67**	**4**	*e*P	**Pn**	**23 21 26.8**	**+3.3**
ZEI				pmax	pmax		
	comp=Z,110nm,0.9s						
SVSK	**Karacayir**	**5.70**	**301**	*e*PN	**Pn**	**23 21 24.9**	**+0.9**
SVSK	**Karacayir**	**5.70**	**301**	*e*Pn	**Pn**	**23 21 24.9**	**+0.9**
WRDH	**Warideh**	**5.81**	**256**	⇑P	**Pn**	**23 21 25.0**	**-0.5**
WRDH				⇑S	**Sb**	**23 22 42.0**	**-8.4**
WRDH	**Warideh**	**5.81**	**256**	⇑*i*P	**Pn**	**23 21 25.6**	**+0.1**
HTY	**Hatay**	**5.87**	**262**	*e*PN	**Pn**	**23 21 25.8**	**-0.6**
HTY	**Hatay**	**5.87**	**262**	*e*Pn	**Pn**	**23 21 25.8**	**-0.5**
KOZT	**Kozan**	**5.99**	**276**	*e*PN	**Pn**	**23 21 28.2**	**+0.2**
KOZT	**Kozan**	**5.99**	**276**	*e*Pn	**Pn**	**23 21 28.2**	**+0.2**
BIDA	**Albida**	**6.05**	**252**	⇓P	**Pn**	**23 21 29.0**	**+0.2**
BIDA				⇓S	**Sb**	**23 22 49.0**	**-8.3**
BIDA	**Albida**	**6.05**	**252**	⇓*i*P	**Pn**	**23 21 29.8**	**+1.0**
CEYT	**Ceyhan**	**6.07**	**271**	*e*PN	**Pn**	**23 21 28.6**	**-0.5**
CEYT	**Ceyhan**	**6.07**	**271**	*e*Pn	**Pn**	**23 21 28.6**	**-0.4**
DOMR	**Dombai**	**6.31**	**349**	⇓*e*P	**Pn**	**23 21 38.0**	**+5.7**
FKH	**Fakeheh**	**6.33**	**245**	*e*Pn	**Pn**	**23 21 35.4**	**+2.8**
HWQ	**Hawqa**	**6.64**	**247**	*e*Pn	**Pn**	**23 21 38.5**	**+1.6**
MAK	**Makhachkala**	**6.66**	**27**	*e*P	**Pn**	**23 21 39.1**	**+2.0**
MAK				MLR	MLR		
	comp=Z,331nm,11.0s						
TOTH	**TOTAH**	**6.78**	**238**	⇑P	**Pn**	**23 21 40.0**	**+1.2**
TOTH	**TOTAH**	**6.78**	**238**	⇑*i*P	**Pn**	**23 21 40.0**	**+1.2**
KIV	**Kislovodsk**	**6.85**	**356**	*e*P	**Pn**	**23 21 43.0**	**+3.2**
KIV				*e*S	**Sn**	**23 22 59.5**	**+1.7**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,43nm,10.0s						
KIV	**Kislovodsk**	**6.85**	**356**	*e*Pn	**Pn**	**23 21 39.3**	**-0.5**
	comp=Z,26nm,1.2s						
KIV	**Kislovodsk**	**6.85**	**356**	*e*Pn	**Pn**	**23 21 39.3**	**-0.5**
	comp=Z,26nm,1.2s						
KVT	**Kavak**	**6.91**	**307**	*e*PN	**Pn**	**23 21 41.3**	**+0.7**
KVT	**Kavak**	**6.91**	**307**	*e*Pn	**Pn**	**23 21 41.3**	**+0.7**
SALA	**Sala**	**6.97**	**233**	⇓P	**Pn**	**23 21 42.0**	**+0.5**
SALA	**Sala**	**6.97**	**233**	⇓*i*P	**Pn**	**23 21 43.0**	**+1.5**
SOC	**Sochi**	**7.03**	**338**	*e*P	**Pn**	**23 21 41.9**	**-0.3**
SOC				*e*		23 23 00.4	
SOC				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,102nm,9.0s						
SOC	**Sochi**	**7.03**	**338**	*e*P	**Pn**	**23 21 41.9**	**-0.3**
	comp=Z,6.0nm,0.4s						
SOC				*e*S	**Sn**	**23 23 00.4**	**-1.7**
	comp=Z,102nm,9.0s						
BHL	**Bhannes**	**7.03**	**245**	*e*Pn	**Pn**	**23 21 43.4**	**+1.1**
ASF	**Jabal al Asfar**	**7.24**	**229**	Pn	**Pn**	**23 21 46.8**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=268,slow=11,SNR=9.1						
ASF				Lg		23 23 50.3	
	comp=Z,2.6nm,0.3s,baz=97,slow=19,SNR=4.2						
MIB	**Mutribah**	**8.02**	**154**	*e*P	**Pn**	**23 21 55.9**	**0.0**
MIB				AML	AML	23 23 25.0	
	comp=Z,18nm,0.8s						
MIB	**Mutribah**	**8.02**	**154**	*e*P	**Pn**	**23 21 55.9**	**0.0**
BR131	**Keskin Array S**	**8.04**	**292**	*e*Pn	**Pn**	**23 21 55.2**	**-0.9**
	comp=Z,7.4nm,0.7s						
BR131				*e*S	**Sn**	**23 23 27.2**	**+0.1**
BR131	**Keskin Array S**	**8.04**	**292**	*e*Pn	**Pn**	**23 21 55.2**	**-0.9**
	comp=Z,7.4nm,0.7s						
BR131				*e*S	**Sn**	**23 23 27.2**	**+0.1**
BRTR	**Keskin Array B**	**8.04**	**292**	Pn	**Pn**	**23 21 55.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=117,slow=13,SNR=25						
BRTR				Pg	**Pn**	23 22 26.4	+30
	comp=Z,0.4nm,0.3s,baz=120,slow=20,SNR=13						
BRTR				Lg		23 24 19.4	
	baz=126,slow=20,SNR=2.8						
BRTR	**Keskin Array B**	**8.04**	**292**	P	**Pn**	**23 21 55.3**	**-0.8**
CSS	**Prodhromos**	**8.38**	**258**	*e*Pn	**Pn**	**23 22 00.5**	**-0.3**
CSS				*e*Sn	**Sn**	**23 23 35.7**	**+0.2**
CSS	**Prodhromos**	**8.38**	**258**	*e*Pn	**Pn**	**23 22 00.5**	**-0.3**
CSS				*e*Sn	**Sn**	**23 23 35.7**	**+0.2**
UMR	**Umm Al-Rimmam**	**8.39**	**153**	*e*P	**Pn**	**23 22 01.3**	**+0.4**
UMR				AML	AML	23 23 33.3	
	comp=Z,11nm,0.5s						
UMR	**Umm Al-Rimmam**	**8.39**	**153**	*e*P	**Pn**	**23 22 01.3**	**+0.4**
RDF	**Al-Radifah**	**8.90**	**155**	*e*P	**Pn**	**23 22 08.1**	**+0.1**
RDF				AML	AML	23 23 47.1	
	comp=Z,15nm,0.8s						
RDF	**Al-Radifah**	**8.90**	**155**	*e*P	**Pn**	**23 22 08.1**	**+0.2**
TIRR	**Tirgusor**	**13.46**	**308**	P	**Pn**	**23 23 09.9**	**-0.4**
TIRR	**Tirgusor**	**13.46**	**308**	P	**Pn**	**23 23 09.9**	**-0.4**
VORD	**Divnogorie**	**14.14**	**350**	*e*P	**Pn**	**23 23 23.7**	**+4.1**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	com

NKC	Novy Kostel	25.69	311	eP	P	23 25 30.1	+0.7
CLL	Collm	25.73	313	eP	P	23 25 29.0	-0.7
CLL				e	pP	23 25 31.0	-1.7
CLL				pmax	pmax		
	comp=Z,53nm,1.9s,mb4.8						
CLL	Collm	25.73	313	eP	P	23 25 29.0	-0.7
	comp=Z,12nm,1.9s,mb4.1						
CLL				e	pP	23 25 31.0	-1.7
CLL	Collm	25.73	313	eP	P	23 25 29.0	-0.7
	comp=Z,12nm,1.9s,mb4.1						
CLL				epP	pP	23 25 31.0	-1.7
	comp=Z,11nm,1.5s						
CLL				e		23 25 39.0	
CLL	Collm	25.73	313	eP	P	23 25 29.0	-0.7
	comp=Z,53nm,1.9s,mb4.8						
GRA1	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
	comp=Z,4.0nm,1.3s,mb3.8						
GRA1	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
	comp=Z,4.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
GRF				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
GRF				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
	comp=Z,4.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	26.28	309	eP	P	23 25 34.3	-0.4
	comp=Z,4.0nm,1.3s,mb3.8						
FINES	FINESS Array B	26.65	341	P	P	23 25 39.1	+1.2
	comp=Z,1.2nm,0.7s,mb3.6,baz=126,slow=11,SNR=1.7						
FINES	FINESS Array B	26.65	341	P	P	23 25 39.1	+1.2
KURK	Kurchatov	28.53	50	P	P	23 25 54.4	-0.4
	comp=Z,0.7nm,0.9s,mb3.4,baz=263,slow=9.0,SNR=4.1						
KURK				LR	LR	23 39 50.9	
	comp=Z,39nm,19.9s,MS3.0,baz=105,slow=42						
KURK	Kurchatov	28.53	50	P	P	23 25 54.4	-0.4
MK31	Makanchi Array	30.27	59	eP	P	23 26 09.6	-0.8
MK31	Makanchi Array	30.27	59	eP	P	23 26 09.6	-0.8
MKAR	Makanchi Array	30.27	59	P	P	23 26 09.6	-0.8
	comp=Z,0.4nm,0.7s,mb3.3,baz=246,slow=6.1,SNR=4.9						
MKAR	Makanchi Array	30.27	59	P	P	23 26 09.6	-0.8
KEV	Kevo	33.87	350	P	P	23 26 41.5	-0.2
KEV	Kevo	33.87	350	P	P	23 26 41.5	-0.2
EKA	Eskdalemuir Ar	36.14	315	P	P	23 27 00.8	-0.6
	comp=Z,0.6nm,0.6s,mb3.7,baz=110,slow=8.4,SNR=4.4						
EKA	Eskdalemuir Ar	36.14	315	P	P	23 27 00.8	-0.6
ESDC	Sonseca Array	36.82	289	P	P	23 27 07.3	-0.2
	comp=Z,0.3nm,0.5s,mb3.4,baz=65,slow=8.3,SNR=2.3						
ESDC	Sonseca Array	36.82	289	P	P	23 27 07.3	-0.1
TORD	Torodi Ar. Bea	44.13	248	P	P	23 28 06.8	-1.3
	comp=Z,1.7nm,1.2s,mb3.7,baz=52,slow=5.9,SNR=4.7						
ULN	Ulaanbaatar	46.96	56	eP	P	23 28 29.5	-0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
ULN	Ulaanbaatar	46.96	56	eP	P	23 28 29.5	-0.7
	comp=Z,4.0nm,1.3s,mb4.2						
ULN	Ulaanbaatar	46.96	56	eP	P	23 28 29.5	-0.7
	comp=Z,4.0nm,1.3s,mb4.2						
BOD	Bodaibo	49.52	42	eP	P	23 28 49.0	-0.8
BOD				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CHTO	Chiang Mai	51.67	95	P	P	23 29 06.4	-0.1
CHTO	Chiang Mai	51.67	95	P	P	23 29 06.4	-0.1
CMAR	Chiang Mai Arr	51.86	95	P	P	23 29 09.0	+1.0
	comp=Z,1.4nm,0.3s,mb4.3,baz=289,slow=8.4,SNR=3.4						
CMAR	Chiang Mai Arr	51.86	95	P	P	23 29 09.0	+1.0
HIA	Hailar	54.76	51	P	P	23 29 28.6	-0.3
HIA	Hailar	54.76	51	P	P	23 29 28.6	-0.3
KSRS	Korea Array	64.93	61	P	P	23 30 39.0	-0.1
	comp=Z,1.5nm,0.8s,mb4.1,baz=295,slow=6.5,SNR=3.3						
KSRS	Korea Array	64.93	61	P	P	23 30 39.0	0.0
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
FRB	Frobisher Bay	66.07	333	P	P	23 30 45.8	-0.1
	comp=Z,1.6nm,0.8s,mb4.1,baz=41,slow=13,SNR=4.2						
FRB	Frobisher Bay	66.07	333	P	P	23 30 45.8	-0.1
FRB	Frobisher Bay	66.07	333	P	P	23 30 45.8	-0.1
YKA	Yellowknife Ar	79.16	350	P	P	23 32 03.3	-0.5
	comp=Z,0.1nm,0.4s,mb3.1,baz=6.1,slow=5.1,SNR=4.5						
YKA	Yellowknife Ar	79.16	350	P	P	23 32 03.3	-0.5

*TAP **11** 23:41:03.9, 24°.81N×122°.01E, h8km±1km, ML3.7, D*
*ISCJB **11** 23:41:04.7±0.4, 24°.99N±0°.03×122°.08E±0°.02, h33km, Error ellipse: s-maj=4.9km s-min=3.0km az=4.8*
*JMA **11** 23:41:05.9±0.2, 24°.38N×122°.00E, h55km, M2.5*
*NEIC **11** 23:41:07.1±2.8, 24°.75N×121°.84E, h10km, Error ellipse: s-maj=33.3km s-min=10.2km az=65.0*

ISC 11 23:41:05.1±0.4, 25°.01N±0°.04×122°.07E±0°.02, h35km, n52,
σ1§49/89, 2C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.07	272	i P	Pn	23 41 08.5	-2.5
	baz=353						
TWB1				i S	Sn	23 41 11.4	-3.7
	baz=353						
NWF	Wu-fen Shan	0.27	284	⇓ i P	Pn	23 41 11.6	-1.1
	baz=312						
NWF				S	Sn	23 41 16.6	-1.3
	baz=312						
ILA	Ilan	0.38	231	eP	Pn	23 41 10.4	-3.7
	baz=259						
ILA				eS	Sn	23 41 14.7	-5.4
	baz=259						
TWC	Suao	0.44	207	⇓ i P	Pn	23 41 09.4	-5.6
	baz=216						
TWC				i S	Sn	23 41 12.5	-9.2
	baz=216						
TWE	Neicheng	0.46	232	⇑ i P	Pn	23 41 10.9	-4.3
	baz=254						
TWE				eS	Sn	23 41 16.5	-5.8
	baz=254						
TAP1	Taipei	0.50	274	⇓ i P	Pn	23 41 15.0	-0.7
	baz=285						
TAP1				S	Sn	23 41 21.6	-1.5
	baz=285						
TWY	Chenhua	0.50	302	eP	Pn	23 41 16.1	+0.3
	baz=319						
TATO	Taipei	0.53	267	eP	Pn	23 41 14.6	-1.6
TWS1	Kuangyinshan	0.60	279	eP	Pn	23 41 17.4	+0.3
	baz=297						
PCYT	Pengchaiyu	0.62	0	eP	Pn	23 41 21.1	+3.6
	baz=2.0						
ENA	Nanau	0.65	208	⇓ P	Pn	23 41 13.0	-4.8
	baz=213						
ENA				eS	Sn	23 41 18.7	-8.1
	baz=213						
YHNB	Yeheng	0.71	242	eP	Pn	23 41 15.6	-3.1
YHNB				eS	Sn	23 41 21.4	-7.0
NSK	Sanguang	0.72	243	⇑ i P	Pn	23 41 15.9	-2.9
	baz=257						
NSK				eS	Sn	23 41 24.6	-4.1
	baz=257						
NCU	National Centr	0.80	268	eP	Pn	23 41 20.7	+0.8
	baz=272						
NCU				eS	Sn	23 41 31.1	+0.5
	baz=272						
NNS	Nan Shan	0.85	229	P	Pn	23 41 17.6	-2.9
	baz=244						
NNS				eS	Sn	23 41 26.2	-5.5
	baz=244						
NACB	Ninganchiao	0.93	208	eP	Pn	23 41 18.1	-3.6
NACB				eS	Sn	23 41 26.9	-7.0
YOJ	Yonaguni jima	1.01	122	P	Pn	23 41 22.9	+0.1
YOJ				eS	Sn	23 41 35.6	-0.2
TWD	Chiawan	1.02	205	eP	Pn	23 41 19.6	-3.3
	baz=199						
TWD				eS	Sn	23 41 30.4	-5.6
	baz=199						
HSN	Hsinchu	1.02	259	eP	Pn	23 41 23.1	+0.2
	baz=263						
HSN				eS	Sn	23 41 36.1	+0.2
	baz=263						
NSTT	Nanjuang	1.04	249	P	Pn	23 41 23.3	+0.1
	baz=259						
NSTT				eS	Sn	23 41 37.7	+1.2
	baz=259						
TWT	Tachien	1.11	228	P	Pn	23 41 22.7	-1.4
	baz=229						
TWT				S	Sn	23 41 36.6	-1.6
	baz=229						
HWA	Hwalien	1.11	203	eP	Pn	23 41 20.5	-3.6
	baz=205						
WHF	Hehuan Shan	1.13	221	⇓ i P	Pn	23 41 22.5	-1.9
	baz=227						
WHF				eS	Sn	23 41 35.1	-3.5
	baz=227						
ESL	Shilin	1.32	206	eP	Pn	23 41 25.0	-2.1
	baz=209						
ESL				eS	Sn	23 41 39.8	-3.6
	baz=209						
NSY	Sanyi	1.33	244	P	Pn	23 41 28.9	+1.8
	baz=251						
NSY				eS	Sn	23 41 46.1	+2.6
	baz=251						
TWQ1	Liyutan	1.35	241	eP	Pn	23 41 28.4	+1.0
	baz=248						
TWQ1				eS	Sn	23 41 46.1	+2.0
	baz=248						
TCU	Taichung	1.53	236	eP	Pn	23 41 30.5	+0.5
	baz=233						
SMLT	Sun Moon Lake	1.54	224	eP	Pn	23 41 29.9	-0.2
	baz=230						
TYC	Yuchr	1.56	225	eP	Pn	23 41 30.4	+0.1
	baz=231						
TYC				eS	Sn	23 41 50.0	+0.7
	baz=231						
SSLB	Suanglung	1.58	220	eP	Pn	23 41 30.3	-0.4
SSLB				eS	Sn	23 41 46.6	-3.3
EHY	Hungye	1.64	205	eP	Pn	23 41 30.0	-1.5
	baz=209						
IRIF	Iriomote-Funau	1.65	114	P	Pn	23 41 32.1	+0.5
IRIF				eS	Sn	23 41 50.5	-1.1
WNT	Mingjian	1.69	229	eP	Pn	23 41 33.5	+1.3
	baz=226						
YULB	Yu-li	1.75	204	eP	Pn	23 41 33.7	+0.7
YULB				eS	Sn	23 41 53.1	-1.0
TWF1	Yuli	1.79	203	eP	Pn	23 41 34.0	+0.5
	baz=216						
TWF1				eS	Sn	23 41 55.9	+0.9
	baz=216						
YUS	Yu-Shan	1.82	214	eP	Pn	23 41 34.6	+0.7
	baz=225						
YUS				eS	Sn	23 41 58.6	+2.8
	baz=225						
ALS	Alishan	1.88	218	eP	Pn	23 41 37.0	+2.2
	baz=222						
ALS				eS	Sn	23 42 00.7	+3.4
	baz=222						
CHN5	Tsauling	1.89	222	P	Pn	23 41 37.2	+2.3
	baz=227						
CHN5				eS	Sn	23 42 00.8	+3.3
	baz=227						
JKRS	Kuro-shima	1.92	113	P	Pn	23 41 35.9	+0.5
JKRS				eS	Sn	23 41 57.7	-0.6
JIJ	Ishigaki jima	1.99	108	P	Pn	23 41 37.7	+1.4
JIJ				eS	Sn	23 42 00.1	+0.1
ELDTW	Lidau	2.05	208	eP	Pn	23 41 39.4	+2.4
	baz=200						
CHN4	Tsaushan	2.13	220	eP	Pn	23 41 40.9	+2.7
	baz=225						
CHN4				eS	Sn	23 42 07.3	+3.9
	baz=225						
TPUB	Ta-pu	2.15	218	ePn	Pn	23 41 40.0	+1.5
TPUB				eS	Sn	23 42 08.9	+5.1
STYT	Tauyuan	2.19	213	eP	Pn	23 41 39.1	+0.1
	baz=210						
STYT				eS	Sn	23 42 08.6	+3.6
	baz=210						
WTP	Ta-pu	2.20	218	eP	Pn	23 41 39.6	+0.4
	baz=208						
WTP				eS	Sn	23 42 08.7	+3.6
	baz=208						
TWK	Hsinying	2.25	220	eP	Pn	23 41 42.2	+2.3
	baz=227						
CHN1	Nanshi	2.29	218	eP	Pn	23 41 41.8	+1.3
	baz=225						
CHN1				eS	Sn	23 42 12.1	+4.6
	baz=225						
SGST	Jiashian	2.35	216	eP	Pn	23 41 42.4	+1.2
	baz=208						
TWG	Pinlang	2.36	203	ePn	Pn	23 41 41.1	-0.3
TWG				eSn	Sn	23 42 07.9	-1.2
TWG	Pinlang	2.36	203	eP	Pn	23 41 40.9	-0.4
	baz=194						
EAST	Anshuo	2.84	203	eP	Pn	23 41 49.3	+1.3
	baz=197						
SCZT	Fangliau	2.94	207	eP	Pn	23 41 52.2	+2.8
	baz=212						

*ISCJB **11** 23:46:02.8±1.0, 33°.09N±0°.09×7°.3E±0°.2, h10km, Error ellipse: s-maj=18.5km s-min=13.0km az=1.9*
*IDC **11** 23:46:03.9±2.0, 33°.04N×7°.50E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.4/29, mbtmp3.6/5, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=89.6km s-min=18.5km az=114.0*
*CRAAG **11** 23:46:28.4, 35°.01N×6°.32E, Ml3.8*
*CSEM **11** 23:46:28.4, 35°.01N×6°.32E, h0km, ML3.8, After ALG*

ISC 11 23:46:04.9±1.0, 33°.16N±0°.09×7°.3E±0°.2, h10km, n15,
σ1§05/14, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEST	Kesra	3.08	33	Pn	Pn	23 46 52.3	-1.3
	0.6nm,0.3s,baz=178,slow=6.5,SNR=60						
KEST				Lg		23 47 43.7	
	0.7nm,0.3s,baz=156,slow=20,SNR=4.2						
CASM	Ain Smara	3.16	348	P	Pn	23 46 54.5	-0.2
CASM	Ain Smara	3.16	348	P	Pn	23 46 54.5	-0.2
SET	Setif	3.41	334	P	Pn	23 46 57.0	-1.1
SET	Setif	3.41	334	P	Pn	23 46 57.0	-1.1
DFRA	Djebel Bou Aff	3.57	342	P	Pn	23 47 00.3	-0.1
DFRA	Djebel Bou Aff	3.57	342	P	Pn	23 47 00.3	-0.1
AKET	Djebel Ketaf	4.02	317	P	Pn	23 47 11.5	+5.0
AKET	Djebel Ketaf	4.02	317	P	Pn	23 47 11.5	+5.0
VAE	Valguarnera	7.25	52	Lg		23 49 55.4	
	1.2nm,0.3s,baz=18,slow=20,SNR=3.7						
DAVOX	Davos/Dischmat	13.75	8	Pn	Pn	23 49 22.5	+2.6
	0.5nm,0.3s,baz=138,slow=12,SNR=5.0						
DAVOX				LR	LR	23 55 14.4	
	comp=Z,26nm,19.8s,baz=79,slow=40						
GERES	GERESS Array B	16.40	15	Pn	Pn	23 49 56.4	+1.4
	0.1nm,0.3s,baz=201,slow=14,SNR=4.1						
MLR	Muntele Rosu	18.93	44	P	Pn	23 50 25.9	-0.5
	baz=262,slow=14						
TORD	Torodi Ar. Bea	20.56	196	P	P	23 50 44.0	+0.2
	1.1nm,0.4s,baz=9.5,slow=10,SNR=22						
MKAR	Makanchi Array	57.01	52	P	P	23 55 50.6	0.0
	0.3nm,0.7s,baz=293,slow=4.2,SNR=4.6						

*ISK **12** 00:03:59.3, 38°.13N×38°.75E, h17km, MD2.7*
*ISCJB **12** 00:04:00.2±0.6, 38°.15N±0°.04×38°.75E±0°.04, h10km, Error ellipse: s-maj=6.6km s-min=3.7km az=147.0*
*DDA **12** 00:04:00.0, 38°.12N×38°.77E, h14km±3km, Md2.7*
*CSEM **12** 00:04:01.8±0.3, 38°.40N×38°.71E, h10km, MD2.7, Error ellipse: s-maj=13.9km s-min=5.4km az=162.0*

ISC 12 00:04:00.9±0.6, 38°.20N±0°.06×38°.74E±0°.04, h16km±10km, n17, σ0§79/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.27	296	PG	Pg	00 04 06.1	-0.7
MALT				eSG	Sg	00 04 11.5	+0.6
MALT	Malatya	0.27	296	i Pg	Pg	00 04 06.1	-0.7
MALT				eSg	Sg	00 04 11.5	+0.7
MYA	Malataya	0.28	298	PG	Pg	00 04 06.6	-0.3
MYA	Malataya	0.28	298	i Pg	Pg	00 04 06.6	-0.4
ELZG	Elazig	0.36	33	i P	Pg	00 04 08.4	0.0
ELZG				i S	Sg	00 04 15.3	+1.9
ELZG	Elazig	0.36	33	i P	Pg	00 04 08.4	0.0
ELZG				i S	Sg	00 04 15.3	+2.0
SVRC	Sivrice-ELAZID	0.48	68	ePG	Pg	00 04 09.8	-0.8
SVRC				eSG	Sg	00 04 17.5	+0.4
SVRC	Sivrice-ELAZID	0.48	68	ePg	Pg	00 04 09.8	-0.8
SVRC				eSg	Sg	00 04 17.5	+0.4
AKCD	Akcadag	0.65	279	i P	Pg	00 04 13.0	-0.7
AKCD				i S	Sg	00 04 23.1	+0.7
AKCD	Akcadag	0.65	279	i P	Pg	00 04 13.0	-0.7
AKCD				i S	Sg	00 04 23.1	+0.7
PTK	Pertek	0.86	36	ePG	Pg	00 04 16.9	-0.9
PTK	Pertek	0.86	36	ePg	Pg	00 04 16.9	-0.8
DARE	Darende-Malaty	1.05	316	ePN	Pg	00 04 20.3	-1.0
DARE	Darende-Malaty	1.05	316	ePn	Pg	00 04 20.3	-1.0
GZT	Gaziantep	1.25	228	i P	Pn	00 04 24.0	+0.3
GZT				i S	Sb	00 04 41.1	+1.0
KUZU	Kuzuini	1.94	224	i P	Pg	00 04 37.6	-0.6
KUZU				i S	Sg	00 05 03.5	+0.2
KUZU	Kuzuini	1.94	224	i P	Pg	00 04 37.6	-0.6
KUZU				i S	Sg	00 05 03.5	+0.1

*ISCJB **12** 00:07:34.4±0.4, 47°.19N±0°.06×27°.26W±0°.05, h10km, mb4.0/26, MS3.2/9, Error ellipse: s-maj=8.5km s-min=5.3km az=8.9*
*CSEM **12** 00:07:34.9±0.2, 47°.27N×27°.31W, h2km, mb4.2/17, Error ellipse: s-maj=11.5km s-min=6.9km az=177.0*
*IDC **12** 00:07:35.0±0.9, 47°.24N×27°.38W, h0km, mb3.6/8, mb1 3.9/10, mb1mx3.6/32, mbtmp3.6/10, ML4.2/2, MS3.2/9, Ms1 3.2/9, ms1mx2.9/43, Error ellipse: s-maj=32.7km s-min=18.8km az=18.0*
*NEIC **12** 00:07:36.3±0.4, 47°.23N×27°.29W, h10km, mb3.9/30, Error ellipse: s-maj=9.5km s-min=5.6km az=184.0*

ISC 12 00:07:36.4±0.4, 47°.18N±0°.06×27°.24W±0°.05, h10km, n156,
σ1§10/149, mb4.0/26, MS3.2/9, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	Mazaricos	13.58	101	P	Pn	00 10 47.3	-1.7
EMAZ	Mazaricos	13.58	101	P	Pn	00 10 47.3	-1.7
STS	Santiago	13.89	101	P	Pn	00 10 52.3	-0.9
	0.6nm,0.4s						
STS				S	Sx	00 12 37.8	
STS	Santiago	13.89	101	P	Pn	00 10 52.3	-0.9
	0.6nm,0.4s						
STS				S	Sx	00 12 37.8	
EZAM	Zamans	14.12	104	P	Pn	00 10 54.4	-1.9
	16nm,0.5s						
EZAM	Zamans	14.12	104	P	Pn	00 10 54.4	-1.9
	16nm,0.5s						
EPON	Pontenova	14.66	98	P	Pn	00 11 02.9	-0.7
	1.1nm,0.2s						
ELOB	Lobios	14.66	104	P	Pn	00 11 02.4	-1.4
	1.2nm,0.2s						
ELOB	Lobios	14.66	104	P	Pn	00 11 02.4	-1.3
	1.2nm,0.2s						
PCAB	Cabril	14.76	105	eP	Pn	00 11 04.2	-0.9
	15nm,1.2s						
PVIS	Viseu	15.34	108	eP	Pn	00 11 10.9	-1.9
	19nm,1.7s						
ECAL	Calabor	15.51	102	P	Pn	00 11 14.3	-0.7
	0.8nm,0.2s						
ECAL	Calabor	15.51	102	P	Pn	00 11 14.3	-0.7
	0.8nm,0.2s						
MVO	Moncorvo	15.68	105	eP	Pn	00 11 15.8	-1.5
	14nm,1.9s						
MTE	Manteigas	15.73	108	eP	Pn	00 11 17.6	-0.4
	24nm,1.7s						
EARI	Arriondas	15.98	96	P	Pn	00 11 21.1	-0.1
	0.3nm,0.2s						
PMRV	Marv??o	16.36	111	eP	Pn	00 11 26.0	-0.1
EVO	Evora	16.50	115	eP	Pn	00 11 26.2	-1.7
	22nm,1.5s						
PESTR	Estremoz	16.57	113	eP	Pn	00 11 28.4	-0.3
SGMF	Saint Gilles	16.63	77	eP	Pn	00 11 27.9	-1.5
	38nm,1.4s						
SGMF	Saint Gilles	16.63	77	eP	Pn	00 11 27.9	-1.5
	19nm,1.4s						
SGMF	Saint Gilles	16.63	77	eP	Pn	00 11 27.9	-1.5
	19nm,1.4s						
EBAD	Badajoz	17.00	112	P	Pn	00 11 34.3	+0.2
	1.7nm,0.3s						
EBAD	Badajoz	17.00	112	P	Pn	00 11 34.3	+0.2
	1.7nm,0.3s						
ESK	Eskdalemuir	17.04	53	ePn	Pn	00 11 34.1	-0.4
	4.1nm,0.8s						
ESK	Eskdalemuir	17.04	53	ePn	Pn	00 11 34.2	-0.3
	4.1nm,0.8s						
EKA	Eskdalemuir Ar	17.07	53	P	Pn	00 11 33.6	-1.4
	baz=261,slow=11,SNR=6.1						
EKA	Eskdalemuir Ar	17.07	53	P	Pn	00 11 33.6	-1.4
EKA	Eskdalemuir Ar	17.07	53	P	Pn	00 11 33.6	-1.3
ELAN	Lanestosa	17.21	95	P	Pn	00 11 38.0	+1.2
	4.1nm,0.4s						
ELAN	Lanestosa	17.21	95	P	Pn	00 11 38.0	+1.2
	4.1nm,0.4s						
EMIN	Mina Concepcio	17.81	114	P	Pn	00 11 45.3	+1.1
	0.3nm,0.3s						
EMIN	Mina Concepcio	17.81	114	P	Pn	00 11 45.3	+1.1
	0.3nm,0.3s						
GUD	Guadarrama	17.84	103	P	Pn	00 11 47.2	+2.7
	1.5nm,0.3s						
GUD	Guadarrama	17.84	103	P	Pn	00 11 47.2	+2.7
	1.5nm,0.3s						
BORG	Borgarnes	17.90	8	Pn	Pn	00 11 43.9	-1.3
BORG	Borgarnes	17.90	8	Pn	Pn	00 11 43.9	-1.3
FLN	La Foliniere	17.96	75	eP	Pn	00 11 44.9	-1.1
	22nm,1.0s						
FLN	La Foliniere	17.96	75	eP	Pn	00 11 44.9	-1.1
	11nm,1.0s						
FLN	La Foliniere	17.96	75	eP	Pn	00 11 44.9	-1.1
	11nm,1.0s						
LDF	La Druitiere	18.21	76	eP	Pn	00 11 44.9	-4.2
ESDC	Sonseca Array	18.45	106	P	Pn	00 11 53.5	+1.3
	1.0nm,0.3s,baz=298,slow=12,SNR=13						
ESDC	Sonseca Array	18.45	106	P	Pn	00 11 55.2	+3.1
	0.7nm,0.3s						
ESDC	Sonseca Array	18.45	106	P	Pn	00 11 55.2	+3.1
	0.7nm,0.3s						
ESLA	Sonseca Array	18.45	106	eP	Pn	00 11 53.9	+1.7
	0.2nm,0.4s						
ESLA	Sonseca Array	18.45	106	eP	Pn	00 11 53.8	+1.7
	0.2nm,0.4s						
SJPF	Ste Jean	18.76	93	eP	Pn	00 11 53.9	-1.9
	19nm,1.2s						
SJPF	Ste Jean	18.76	93	eP	Pn	00 11 53.9	-1.9
	9.6nm,1.2s						
SJPF	Ste Jean	18.76	93	eP	Pn	00 11 53.9	-1.9
	9.6nm,1.2s						
ETSF	Etsaut	19.29	93	eP	Pn	00 12 01.6	-0.7
ETSF	Etsaut	19.29	93	eP	Pn	00 12 01.6	-0.7
TCF	Toulx Ste Croi	20.16	82	eP	P	00 12 11.7	+1.1
	15nm,1.2s						
TCF	Toulx Ste Croi	20.16	82	eP	P	00 12 11.7	+1.1
	7.7nm,1.2s						
TCF	Toulx Ste Croi	20.16	82	eP	P	00 12 11.7	+1.1
	7.7nm,1.2s						
BGF	Bois d'Agland	20.52	81	eP	P	00 12 15.5	+0.9
	8.2nm,0.8s						
BGF	Bois d'Agland	20.52	81	eP	P	00 12 15.5	+0.9
	4.1nm,0.8s						
BGF	Bois d'Agland	20.52	81	eP	P	00 12 15.5	+0.9
	4.1nm,0.8s						
AVF	Avril sur Loir	20.82	80	eP	P	00 12 18.6	+0.8
	24nm,1.3s						
AVF	Avril sur Loir	20.82	80	eP	P	00 12 18.6	+0.8
	12nm,1.3s						
AVF	Avril sur Loir	20.82	80	eP	P	00 12 18.6	+0.8
	12nm,1.3s						
SSF	Saint Saulge	20.86	79	eP	P	00 12 19.2	+0.9
	21nm,1.2s						
SSF	Saint Saulge	20.86	79	eP	P	00 12 19.2	+0.9
	10nm,1.2s						
SSF	Saint Saulge	20.86	79	eP	P	00 12 19.2	+0.9
	10nm,1.2s

SMF	Signal de Mont	21.17	80	eP		P	00 12 22.5 +0.8
	comp=Z,15nm,1.3s,mb4.2						
GIVF	Givet	21.30	70	eP		P	00 12 23.5 +0.5
GIVF	Givet	21.30	70	eP		P	00 12 23.5 +0.5
BCLA	Clavier	21.58	69	P		P	00 12 25.2 -0.8
	comp=Z,8.7nm,2.0s,mb3.8						
BCLA	Clavier	21.58	69	P		P	00 12 25.2 -0.8
	comp=Z,8.7nm,2.0s,mb3.8						
MEZF	Maizieres J'vi	21.63	75	eP		P	00 12 27.4 +0.8
	comp=Z,38nm,1.0s,mb4.5						
MEZF	Maizieres J'vi	21.63	75	eP		P	00 12 27.4 +0.8
	comp=Z,38nm,1.0s,mb4.8						
MEZF	Maizieres J'vi	21.63	75	eP		P	00 12 27.4 +0.8
	comp=Z,38nm,1.0s,mb4.8						
MEM	Membach	22.02	69	P		P	00 12 30.3 -0.3
	comp=Z,5.7nm,1.3s,mb3.8						
MEM	Membach	22.02	69	P		P	00 12 30.3 -0.4
	comp=Z,5.7nm,1.3s,mb3.8						
WLF	Walferdange	22.20	71	eP		P	00 12 32.4 -0.2
	comp=Z,0.9nm,0.4s,mb3.5						
WLF	Walferdange	22.20	71	eP		P	00 12 32.4 -0.2
	comp=Z,0.9nm,0.4s,mb3.5						
MDT	Midelt	22.39	122	P		P	00 12 36.6 +1.9
	comp=Z,4.7nm,1.1s,mb3.8,baz=324,slow=8.7,SNR=3.8						
MDT				LR		LR	00 19 36.4
	comp=Z,23nm,21.1s,MS2.6,baz=143,slow=32						
MDT	Midelt	22.39	122	P		P	00 12 36.6 +1.8
HAU	Haudompre	22.57	75	eP		P	00 12 37.0 +0.4
	comp=Z,11nm,1.0s,mb3.9						
HAU	Haudompre	22.57	75	eP		P	00 12 37.0 +0.4
	comp=Z,5.7nm,1.0s,mb4.0						
HAU	Haudompre	22.57	75	eP		P	00 12 37.0 +0.4
	comp=Z,5.7nm,1.0s,mb4.0						
CABF	La Chapelle	22.69	79	eP		P	00 12 39.5 +1.7
CABF	La Chapelle	22.69	79	eP		P	00 12 39.5 +1.7
HINF	Hinterlafeld	22.94	76	eP		P	00 12 41.4 +0.9
HINF	Hinterlafeld	22.94	76	eP		P	00 12 41.4 +0.9
CDF	Champ du Feu	23.11	74	eP		P	00 12 43.1 +0.8
	comp=Z,5.3nm,0.9s,mb3.7						
CDF	Champ du Feu	23.11	74	eP		P	00 12 43.1 +0.8
	comp=Z,2.7nm,0.9s,mb3.7						
CDF	Champ du Feu	23.11	74	eP		P	00 12 43.1 +0.8
	comp=Z,2.7nm,0.9s,mb3.7						
BNI	Bardonecchia	23.50	83	P		P	00 12 47.4 +0.9
BNI	Bardonecchia	23.50	83	P		P	00 12 47.4 +0.9
KONO	Kongsberg	24.89	46	eP		P	00 12 59.8 +0.8
	comp=Z,6.8nm,0.8s,mb4.2						
KONO	Kongsberg	24.89	46	eP		P	00 12 59.8 +0.8
	comp=Z,6.8nm,0.8s,mb4.2						
DAVOX	Davos/Dischmat	25.18	77	LR		LR	00 21 20.1
	comp=Z,48nm,21.5s,MS3.0,baz=265,slow=33						
SUMG	Summit	26.00	352	eP		P	00 13 06.5 -2.4
	comp=Z,4.6nm,1.0s,mb4.0						
SUMG	Summit	26.00	352	eP		P	00 13 06.5 -2.4
	comp=Z,4.6nm,1.0s,mb4.0						
NOA	NORSAR Array B	26.01	44	LR		LR	00 21 21.3
	comp=Z,22nm,19.6s,MS2.7,baz=110,slow=32						
BRG	Berggiesshubel	27.00	67	eP		P	00 13 18.6 +0.4
	comp=Z,12nm,1.7s,mb4.2						
GERES	GERESS Array B	27.21	71	P		P	00 13 22.4 +2.3
	comp=Z,0.3nm,0.7s,mb3.0,baz=295,slow=9.3,SNR=2.3						
GERES				LR		LR	00 23 28.1
	comp=Z,56nm,19.8s,MS3.1,baz=12,slow=35						
GERES	GERESS Array B	27.21	71	P		P	00 13 22.4 +2.3
GERES				LR		LR	00 23 28.1
GERES	GERESS Array B	27.21	71	P		P	00 13 22.4 +2.3
VRAC	Vranov	28.97	69	LR		LR	00 24 24.1
	comp=Z,64nm,18.1s,MS3.3,baz=286,slow=35						
MORC	Moravsky Berou	29.47	68	eP		P	00 13 40.2 0.0
MORC	Moravsky Berou	29.47	68	eP		P	00 13 40.2 0.0
SUW	Suwalki	32.14	59	eP		P	00 14 01.7 -2.0
	comp=Z,7.6nm,0.5s,mb4.8						
SUW	Suwalki	32.14	59	eP		P	00 14 01.7 -2.0
	comp=Z,7.6nm,0.5s,mb4.8						
TIP	Timpagrande	32.70	88	P		P	00 14 09.7 +0.9
TIP	Timpagrande	32.70	88	P		P	00 14 09.7 +0.9
TORD	Torodi Ar. Bea	41.68	135	P		P	00 15 25.9 +0.7
	comp=Z,1.0nm,0.7s,mb3.5,baz=332,slow=7.2,SNR=14						
TORD				LR		LR	00 32 12.5
	comp=Z,50nm,18.8s,MS3.4,baz=315,slow=35						
BR131	Keskin Array S	43.82	77	eP		P	00 15 43.2 +0.9
	comp=Z,0.2nm,0.5s,mb3.1						
BR131	Keskin Array S	43.82	77	eP		P	00 15 43.2 +0.8
	comp=Z,0.2nm,0.5s,mb3.1						
BRTR	Keskin Array B	43.82	77	P		P	00 15 42.9 +0.5
	comp=Z,0.4nm,0.8s,mb3.2,baz=284,slow=5.8,SNR=3.0						
BRTR	Keskin Array B	43.82	77	P		P	00 15 42.9 +0.5
GOGA	Godfrey	44.12	273	P		P	00 15 44.8 0.0
GOGA	Godfrey	44.12	273	P		P	00 15 44.8 0.0
CSS	Prodhromos	46.18	83	eP		P	00 16 01.0 -0.2
	comp=Z,2.6nm,0.6s,mb4.3						
CSS	Prodhromos	46.18	83	eP		P	00 16 01.0 -0.2
	comp=Z,2.6nm,0.6s,mb4.3						
ARU	Arti	50.53	46	P		P	00 16 34.4 0.0
ARU	Arti	50.53	46	P		P	00 16 34.4 0.0
SDV	Santo Domingo	52.98	238	eP		P	00 16 53.5 +0.3
	comp=Z,7.8nm,1.5s,mb4.4						
SDV	Santo Domingo	52.98	238	eP		P	00 16 53.5 +0.2
	comp=Z,7.8nm,1.5s,mb4.4						
RCBR	Riachuelo	53.33	191	eP		P	00 16 53.5 -2.2
	comp=Z,22nm,1.0s,mb5.0						
RCBR	Riachuelo	53.33	191	eP		P	00 16 53.5 -2.2
	comp=Z,22nm,1.0s,mb5.0						
PDAR	Pinedale Array	55.82	298	P		P	00 17 13.0 -0.6
	comp=Z,1.3nm,0.9s,mb4.0,baz=56,slow=8.0,SNR=9.6						
PDAR	Pinedale Array	55.82	298	P		P	00 17 13.0 -0.6
ROSC	El Rosal	58.38	239	LR		LR	00 37 46.4
	comp=Z,37nm,21.6s,MS3.5,baz=191,slow=31						
ROSC	El Rosal	58.38	239	P		P	00 17 33.6 +1.6
ROSC	El Rosal	58.38	239	P		P	00 17 33.6 +1.6
DUG	Dugway	59.31	297	eP		P	00 17 38.1 -0.1
	comp=Z,2.4nm,0.9s,mb4.2						
DUG	Dugway	59.31	297	eP		P	00 17 38.1 -0.1
	comp=Z,2.4nm,0.9s,mb4.2						
MSU	Marysvale	59.96	295	eP		P	00 17 42.0 -0.7
	comp=Z,3.1nm,0.9s,mb4.3						
MSU	Marysvale	59.96	295	eP		P	00 17 42.0 -0.7
	comp=Z,3.1nm,0.9s,mb4.3						
TXAR	Lajitas Array	60.25	282	P		P	00 17 45.0 +0.2
	comp=Z,0.6nm,0.8s,mb3.7,baz=114,slow=5.6,SNR=4.7						
TXAR				LR		LR	00 42 02.8
	comp=Z,49nm,20.2s,MS3.6,baz=185,slow=34						
TXAR	Lajitas Array	60.25	282	P		P	00 17 45.0 +0.1
JTS	JuntasAbangare	60.77	252	P		P	00 17 47.6 -0.9
JTS	JuntasAbangare	60.77	252	P		P	00 17 47.6 -0.9
ZALV	Zalesovo Beam	64.00	38	LR		LR	00 46 23.4
	comp=Z,24nm,19.8s,MS3.4,baz=302,slow=36						
MKAR	Makanchi Array	68.00	44	P		P	00 18 36.4 +0.9
	comp=Z,0.2nm,0.6s,mb3.3,baz=331,slow=4.7,SNR=3.8						
NNA	Nana	73.64	231	P		P	00 19 10.6 +0.6
NNA	Nana	73.64	231	P		P	00 19 10.6 +0.5
SONM	Songino Array	77.11	30	P		P	00 19 30.3 +0.7
	comp=Z,0.5nm,0.6s,mb3.6,baz=305,slow=5.1,SNR=3.4						
SONM	Songino Array	77.11	30	P		P	00 19 30.3 +0.7
ASAR	Alice Springs	152.10	39	PKPbc		PKPbc	00 27 31.2 -0.7
	comp=Z,0.3nm,0.8s,baz=356,slow=2.7,SNR=3.2						
ASAR	Alice Springs	152.10	39	PKPbc		PKPbc	00 27 31.2 -0.7

IDC 12 01:03:55.7±5.4, 20°.60S×177°.27W, h314km±55km, mb3.6/6, mb1 3.6/7, mb1mx3.4/19, mbtmp3.6/7, Error ellipse: s-maj=35.0km s-min=16.7km az=66.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	18.26	194	P		P	01 07 46.1 -1.1
	1.4nm,0.3s,baz=9.2,slow=15,SNR=4.8						
URZ				S		S	01 10 60.0 +0.6
	1.4nm,0.3s,baz=330,slow=18,SNR=7.3						
RPZ	Rata Peaks	25.03	200	P		P	01 08 53.1 +1.2
	7.2nm,0.7s,baz=45,slow=4.3,SNR=4.3						
CTA	Charters Tower	34.16	264	P		P	01 10 12.8 +0.6
	3.0nm,0.6s,baz=80,slow=6.1,SNR=3.1						
STKA	Stephens Creek	38.36	244	P		P	01 10 48.0 +0.5
	0.5nm,0.4s,baz=82,slow=7.1,SNR=2.9						
ASAR	Alice Springs	45.16	257	P		P	01 11 42.4 +0.1
	4.0nm,0.7s,baz=95,slow=8.3,SNR=38						
WRA	Warramunga Arr	45.26	262	P		P	01 11 41.8 -1.3
	2.0nm,0.6s,baz=96,slow=8.8,SNR=12						
QSPA	South Pole Qui	69.47	180	P		P	01 14 30.4 +0.4
	3.1nm,0.7s,baz=47,slow=3.5,SNR=12						

*NEIC **12** 01:16:41.0, 16°.91N×100°.16W, h7km, MD3.7(MEX), After MEX.*

MEX 12 01:16:40.9±0.6, 16°.91N×100°.16W, h7km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.17	323	iP		Pg	01 16 43.9 -0.5
CAIG				iS		Sg	01 16 47.1 +0.2
CAIG	El Cayaco	0.17	323	iP		Pg	01 16 43.9 -0.5
CAIG				iS		Sg	01 16 47.1 +0.2
ACX	Acapulco	0.24	100	iP		Pg	01 16 45.2 -0.4
ACX				iS		Sg	01 16 49.1 +0.3
ACX	Acapulco	0.24	100	iP		Pg	01 16 45.2 -0.4
ACX				iS		Sg	01 16 49.1 +0.3
ZIIG	Zihuatanejo	1.43	299	eP		Pn	01 17 04.2 -3.1
ZIIG				iS		Sb	01 17 21.4 -4.8
ZIIG	Zihuatanejo	1.43	299	eP		Pn	01 17 04.2 -3.1
ZIIG				iS		Sb	01 17 21.4 -4.8
PNIG	Pinotepa	2.01	104	eP		Pn	01 17 11.7 -3.6
PNIG				iS		Sn	01 17 37.4 -3.3
PNIG	Pinotepa	2.01	104	eP		Pn	01 17 11.7 -3.6
PNIG				iS		Sn	01 17 37.4 -3.3
UTMO	Huajuapan	2.43	67	iP		Pn	01 17 18.0 -3.0
UTMO				iS		Sn	01 17 46.9 -4.1
MZVM		2.44	21	eP		Pn	01 17 18.1 -3.0
MZVM				iS		Sn	01 17 45.5 -5.7
PPM	Popocatepetl	2.59	34	eP		Pn	01 17 21.1 -2.2
PPM				iS		Sn	01 17 51.9 -3.1
PPM	Popocatepetl	2.59	34	eP		Pn	01 17 21.1 -2.2
PPM				iS		Sn	01 17 51.9 -3.1
IIO	Organos	3.00	27	eP		Pn	01 17 28.4 -0.5
IIO				iS		Sn	01 18 02.4 -2.6
IIO	Organos	3.00	27	eP		Pn	01 17 28.4 -0.5
IIO				iS		Sn	01 18 02.4 -2.6

IDC 12 01:36:04.0±1.5, 52°.94S×21°.11E, h0km, mb3.7/1, mb1 3.8/1, mb1mx3.3/16, mbtmp3.7/1, MS3.3/3, Ms1 3.2/3, ms1mx3.0/19, Error ellipse: s-maj=191.5km s-min=47.2km az=27.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.55	359	LR		LR	01 47 20.7
	comp=Z,81nm,20.3s,baz=222,slow=33						
BOSA	Boshof	24.50	9	LR		LR	01 49 12.5
	comp=Z,66nm,18.5s,baz=223,slow=32						
LBTB	Lobatse	28.09	9	LR		LR	01 51 11.0
	comp=Z,55nm,21.3s,baz=298,slow=32						
ASAR	Alice Springs	84.10	122	P		P	01 48 36.9 +0.1
	0.2nm,0.3s,baz=201,slow=4.8,SNR=3.2						
PDAR	Pinedale Array	146.00	273	PKPbc		PKPbc	01 55 43.5 -1.4
	0.9nm,0.6s,baz=119,slow=5.8,SNR=7.6						
NVAR	Mina Array Bea	148.62	259	PKPbc		PKPbc	01 55 52.8 +0.5
	0.3nm,0.4s,baz=137,slow=4.5,SNR=3.9						
YKA	Yellowknife Ar	154.99	310	PKPab		PKPab	01 56 21.8 0.0
	0.3nm,0.7s,baz=81,slow=4.4,SNR=3.6						

*NIED **12** 02:21:00, 46°.80N×153°.50E, h20km, Mw5.0 Best double couple: M0 3.34000×10^16 NP1:φs 75.00000°, δ69.00000°, λ-71.00000°. NP2:φs 212.00000°, δ28.00000°, λ-130.00000°.*

*JMA **12** 02:21:38.2±0.7, 46°.76N×153°.50E, h30km, M5.1*

*IDC **12** 02:21:41.1±0.4, 46°.64N×152°.81E, h0km, mb4.6/29, mb1 4.7/32, mb1mx4.7/33, mbtmp4.6/32, ML4.2/2, MS4.4/24, Ms1 4.4/24, ms1mx4.2/35, Error ellipse: s-maj=13.7km s-min=11.0km az=139.0*

*ISCJB **12** 02:21:42.4±0.8, 46°.34N±0°.03×152°.97E±0°.02, h21km±6km, mb4.8/170, MS4.5/57, Error ellipse: s-maj=5.7km s-min=2.2km az=163.4*

*SKHL **12** 02:21:42.3±1.7, 46°.18N×153°.92E, h83km±35km, mb6.0/2, Ms4.8/6*

*MOS **12** 02:21:44.3±0.9, 46°.41N×152°.92E, h34km, mb5.0/72, MS4.6/25, Error ellipse: s-maj=8.4km s-min=5.3km az=97.7*

*GCMT **12** 02:21:46.8±0.2, 46°.58N×153°.15E, h12km, MW5.0/83, Moment Tensor Solution. s34,c50; s83,c141; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.18±.09; Mθθ 2.48±.08; Mφφ 1.70±.08; Mrθ 1.26±.28; Mφφ 1.79±.07; Mφ 0.17±.31; Best double couple: M0 4.24100×10^16 NP1:φs 44.00000°, δ38.00000°, λ-103.00000°. NP2: φs 239.00000°, δ53.00000°, λ-80.00000°. Principal axes: T 4.0670, Plg8.0000°, Azm322.0000°; N 0.3470, Plg8.0000°, Azm54.0000°; P -4.4150, Plg79.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **12** 02:21:46.8±0.2, 46°.57N×152°.75E, h35km, mb4.9/103 Error ellipse: s-maj=7.5km s-min=4.5km az=159.0*

*BJI **12** 02:21:47.6, 46°.58N×152°.64E, h30km, mB5.1/25, mb4.8/35, Ms4.8/32, Ms7 4.5/30*

*SZGRF **12** 02:21:48.4, 46°.68N×153°.02E, h33km, mb5.0, Kuril Islands, Russia*

*DJA **12** 02:21:48, 46°.64N×152°.25E, h10km, mb5.3/7*

ISC 12 02:21:46.0±0.8, 46°.47N±0°.03×152°.88E±0°.02, h30km±6km, h35km±2.1km: pP-P, n774, σ0.992/784, mb4.8/170, MS4.5/57, 172C-157D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.72	252	PN		Pn	02 22 39.6 -1.7
KUR				eS		Sn	02 23 27.0 +3.0
KUR				pmax		pmax	
	comp=N,150nm,0.5s						
KUR				pmax		pmax	
	comp=E,150nm,0.5s						
KUR				pmax		pmax	
	comp=Z,500nm,0.5s						
KUR				smax			
	comp=N,14μm,2.0s						
KUR				smax			
	comp=E,7μm,2.0s						
KUR				smax			
	comp=N,2μm,0.4s						
KUR				smax			
	comp=E,930nm,0.4s						
KUR				MLR		MLR	
	comp=N,5μm,11.0s						
KUR				MLR		MLR	
	comp=E,8μm,11.0s						
KUR				MLR		MLR	
	comp=Z,8μm,11.0s						
SKR	Severo-Kuril's	4.73	26	ePN		Pn	02 22 49.7 -5.5
SKR				pmax		pmax	
	comp=N,40nm,0.5s						
SKR				pmax		pmax	
	comp=Z,80nm,0.5s						
SKR				MLR		MLR	
	comp=E,4μm,12.0s						
SKR				MLR		MLR	
	comp=Z,4μm,12.0s						
SKR				MLR		MLR	
	comp=N,2μm,10.0s						
SKR	Severo-Kuril's	4.73	26	eP		Pn	02 22 49.7 -5.5
SKR				AMB		AMB	02 22 52.5
	comp=N,40nm,0.5s						
SKR				AMB		AMB	02 22 52.5
	comp=N,80nm,0.5s						
SKR				eS		Sn	02 23 41.5 -7.4
SKR				A			02 23 57.0
	comp=N,390nm,0.9s						
SKR				A			02 23 57.0
	comp=N,200nm,0.6s						
SKR				A			02 23 57.0
	comp=N,430nm,0.6s						
SKR				A			02 23 57.0
	comp=N,1μm,10.0s						
SKR				A			02 23 57.0
	comp=N,3μm,10.0s						
SKR				AMS		AMS	02 25 34.0
	comp=N,4μm,12.0s						
SKR				AMS		AMS	02 25 34.0
	comp=N,2μm,10.0s						
SKR				AMS		AMS	02 25 34.0
	comp=N,4μm,12.0s						
SKR				AMS		AMS	02 25 34.0
	comp=N,4μm,12.0s						
SKR				AMS		AMS	02 25 34.0
	comp=N,2μm,10.0s						
YUK	Yuzh-Kuril'sk	5.52	246	⇑iPN		Pn	02 23 09.7 +3.6
YUK				iS		Sn	02 24 14.0 +5.5
YUK				pmax		pmax	
	comp=Z,570nm,0.3s						
YUK				pmax		pmax	
	comp=Z,2μm,1.5s						
YUK				smax			
	comp=N,570nm,0.5s						
YUK				smax			
	comp=E,570nm,0.5s						
YUK				smax			
	comp=N,3μm,3.0s						
YUK				smax			
	comp=E,2μm,3.0s						
YUK				MLR		MLR	
	comp=N,5μm,11.0s						
YUK				MLR		MLR	
	comp=E,3μm,11.0s						
YUK				MLR		MLR	
	comp=Z,3μm,11.0s						
YUK	Yuzh-Kuril'sk	5.52	246	⇑iP		Pn	02 23 09.7 +3.6
YUK				AMB		AMB	02 23 12.0
	comp=Z,570nm,0.2s						
YUK				AMB		AMB	02 23 14.8
	comp=Z,2μm,1.5s						
YUK				iS		Sn	02 24 14.0 +5.5
YUK				A			02 24 18.0
	comp=Z,3μm,3.0s						
YUK				A			02 24 18.0
	comp=Z,2μm,3.0s						
YUK				A			02 24 18.0
	comp=Z,570nm,0.5s						
YUK				AMS		AMS	02 25 44.0
	comp=Z,3μm,11.0s						
YUK				AMS		AMS	02 25 44.0
	comp=Z,5μm,11.0s						
YUK				AMS		AMS	02 25 44.0
	comp=Z,3μm,11.0s						
NEM2	Nemuro 2	5.95	241	P		Pn	02 23 10.0 -1.9
NEM2				eS		Sn	02 24 17.8 -1.1
JRA	Rausu	6.04	248	P		Pn	02 23 14.7 +1.5
JNK	Nakash	6.46	246	P		Pn	02 23 19.2 +0.2
JNK				eS		Sn	02 24 35.7 +4.0
JAK	Akkeshi	6.79	242	P		Pn	02 23 21.7 -1.7
JAK				eS		Sn	02 24 38.6 -1.0
JTKR	Abashiri--Toko	6.81	252	P		Pn	02 23 25.1 +1.3
YSS	Yuzh-Sakhalins	6.98	278	ePN		Pn	02 23 31.4 +5.3
YSS				MLR		MLR	
	comp=Z,2μm,14.0s						
YSS				MLR		MLR	
	comp=N,1μm,12.0s						
YSS				MLR		MLR	
	comp=E,2μm,16.0s						
YSS	Yuzh-Sakhalins	6.98	278	ePn		Pn	02 23 27.4 +1.4
YSS	Yuzh-Sakhalins	6.98	278	eP		Pn	02 23 31.4 +5.3
YSS				A			02 24 52.0
	comp=E,80nm,0.5s						
YSS				eLQ			02 25 06.0
YSS				AMS		AMS	02 27 36.0
	comp=E,2μm,14.0s						
YSS				AMS		AMS	02 27 36.0
	comp=E,2μm,16.0s						
YSS				AMS		AMS	02 27 36.0
	comp=E,1μm,12.0s						
JMP	Maruseppu	7.16	253	P		Pn	02 23 30.7 +2.1
JAR	Ashorobuto	7.21	247	P		Pn	02 23 29.6 +0.4
JAR				eS		Sn	02 24 54.2 +4.2
PEA0B	Petropavlovsk-	7.34	23	ePn		Pn	02 23 29.9 -1.0
PEA0B				eS		Sn	02 24 57.9 +4.9
PETK	Petropavlovsk-	7.34	23	Pn		Pn	02 23 29.4 -1.5
	comp=E,3.1nm,0.3s,baz=182,slow=9.2,SNR=32						
PETK				LR		LR	02 26 25.6
	comp=E,1μm,20.5s,baz=205,slow=40						
JOB	Onbets	7.37	244	P		Pn	02 23 30.1 -1.3
JOB				eS		Sn	02 24 54.1 +0.2
PET	Petropavlovsk	7.55	28	ePN		Pn	02 23 40.4 +6.6
PET				pmax		pmax	
	comp=Z,66nm,0.8s						
PET				MLR		MLR	
	comp=Z,1μm,15.0s						
PET				MLR		MLR	
	comp=Z,2μm,16.0s						
PET	Petropavlovsk	7.55	28	ePn		Pn	02 23 37.2 +3.4
PET				eSn		Sn	02 24 57.6 -0.6
JKK2	Kamakawa 2	7.62	254	P		Pn	02 23 36.9 +2.1
ASAJ	Asahikawa	7.63	256	Pn		Pn	02 23 35.1 +0.2
	comp=Z,3.8nm,0.3s,baz=77,slow=32,SNR=7.3						
ASAJ				LR		LR	02 26 39.7
	comp=Z,1μm,20.2s,baz=354,slow=39						
ASAJ	Asahikawa	7.63	256	PN		Pn	02 23 35.1 +0.2
ASAJ				pmax		pmax	
	comp=Z,4.0nm,0.3s						
ASAJ				MLR		MLR	
	comp=Z,1μm,20.2s						
UGL	Uglegorsk	7.74	294	eP		Pn	02 23 43.3 +6.8
UGL				AMB		AMB	02 23 44.0
	comp=Z,95nm,0.6s						
UGL				eS		Sn	02 25 10.0 +7.0
UGL				A			02 25 12.7
	comp=Z,92nm,0.5s						
UGL				A			02 25 12.7
	comp=Z,110nm,0.5s						
UGL				eL			02 25 44.0
UGL				AMS		AMS	02 26 34.0
	comp=Z,4μm,14.0s						
UGL				AMS		AMS	02 26 34.0
	comp=Z,5μm,15.0s						
JCH	Churui	7.82	244	P		Pn	02 23 36.6 -1.0
JCH				eS		Sn	02 25 03.9 -1.1
JFR	Furan	8.03	249	P		Pn	02 23 43.3 +2.8
JEM	Erimo	8.28	241	P		Pn	02 23 43.4 -0.5
ERM	Erimo	8.28	241	ePn		Pn	02 23 44.1 +0.2
ERM				eSn		Sn	02 25 15.5 -0.8
JBT2	Biratori 2	8.36	248	P		Pn	02 23 45.2 +0.2
JNBK	Urakawa-nobuka	8.38	244	P		Pn	02 23 43.8 -1.5
JNBK				eS		Sn	02 25 17.4 -1.4
OKH	Okha	9.54	322	eP		Pn	02 24 09.0 +7.8
OKH				eL			02 26 30.2
OKH				AMS		AMS	02 28 38.4
	comp=Z,3μm,13.0s						
OKH				AMS		AMS	02 28 38.4
	comp=Z,3μm,14.0s						
OKH				AMS		AMS	02 28 38.4
	comp=Z,4μm,15.0s						
JKB	Kayabe	9.67	246	P		Pn	02 24 01.2 -1.7
JKB				eS		Sn	02 25 45.4 -5.0
JSH	Shimam	9.93	252	P		Pn	02 24 10.5 +4.0
JSR	Shiriuchi	10.25	246	eS		Sn	02 25 59.6 -5.0
JANG	Nango	10.27	238	P		Pn	02 24 06.8 -4.3
JANG				eS		Sn	02 25 56.8 -8.4
JTM	Tenmabayashi	10.27	241	P		Pn	02 24 08.6 -2.6
JTM				eS		Sn	02 25 59.5 -5.8
NKL	Nikolayevsk	10.33	315	eP		Pn	02 24 10.0 -1.9
NKL				AMB		AMB	02 24 15.5
	comp=Z,56nm,1.2s						
NKL				AMB		AMB	02 24 15.5
	comp=Z,110nm,1.2s						
NKL				AMB		AMB	02 24 20.0
	comp=Z,700nm,5.0s						
NKL				eL			02 26 56.0
NKL				AMS		AMS	02 29 07.0
	comp=Z,4μm,14.0s						
NKL				AMS		AMS	02 29 07.0
	comp=Z,2μm,14.0s						
NKL				AMS		AMS	02 29 07.0
	comp=Z,4μm,14.0s						
JOSM	Okushiri--Mats	10.57	250	P		Pn	02 24 13.8 -1.4
OFUJ	Ofunato	11.06	232	eS		Sn	02 26 16.1 -8.5
JRG	Rokugo	11.42	236	P		Pn	02 24 23.5 -3.4
JIO	Ouri	11.68	231	eS		Sn	02 26 31.1 -8.8
HABR	Khabarovsk	12.23	286	ePN		Pn	02 24 44.9

MJAR	**Matsushiro Arr**	**14.79 233**	Pn	**Pn**	**02 25 12.9 +0.1**
	comp=Z,0.7nm,0.3s,baz=27,slow=12,SNR=17				
MAJO	**Matsushiro**	**14.79 233**	*e*P	**Pn**	**02 25 12.8 -0.1**
MAT	**Matsushiro**	**14.79 233**	P	**Pn**	**02 25 10.4 -2.5**
JGN	**Niukaw**	**15.51 234**	P	**Pn**	**02 25 31.4 +9.0**
JGM	**Miyama**	**16.23 234**	P	**Pn**	**02 25 38.9 +7.3**
MDJ	**Mudanjiang**	**16.41 272**	P	**Pn**	**02 25 32.4 -1.5**
MDJ			S	**Sn**	**02 28 28.2 -6.8**
MDJ			ScP	ScP	02 33 59.6 +2.4
MDJ			PcS	PcS	02 34 03.3 +2.7
MDJ			ScS	ScS	02 37 38.4 +2.2
MDJ			pmax	pmax	
	comp=Z,6.0nm,0.7s				
MDJ			pmax	pmax	
	comp=Z,69nm,4.0s				
MDJ			LR	LR	
	comp=N,1μm,19.6s				
MDJ			LR	LR	
	comp=E,500nm,27.7s				
MDJ			LR	LR	
	comp=Z,1μm,13.4s				
MDJ	**Mudanjiang**	**16.41 272**	*e*Pn	**Pn**	**02 25 33.8 -0.2**
	comp=Z,22nm,0.9s				
SEY	**Seymchan**	**16.50 359⇑**	*e*P	**Pn**	**02 25 36.6 +1.7**
ZEA	**Zeya**	**17.91 303**	*e*P	**Pn**	**02 25 54.1 +1.6**
ZEA			AMB	AMB	02 25 56.6
	comp=Z,61nm,1.6s				
ZEA			AMB	AMB	02 25 56.6
	comp=Z,43nm,1.2s				
ZEA			AMB	AMB	02 25 56.6
	comp=Z,56nm,1.4s				
ZEA			AMB	AMB	02 25 59.0
	comp=Z,1μm,4.0s				
ZEA			AMB	AMB	02 25 59.0
	comp=Z,1μm,4.0s				
ZEA			*e*S	**Sn**	**02 29 17.0 +5.8**
ZEA			A		02 29 21.0
	comp=Z,500nm,6.0s				
CN2	**Changchun**	**19.50 272**	*e*P	**Pn**	**02 26 13.0 +1.1**
CN2			*e*sP	sP	02 26 26.6 +4.3
CN2			*e*S	**Sn**	**02 29 42.8 -6.9**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.6s				
CN2			pmax	pmax	
	comp=Z,200nm,3.0s				
CN2			LR	LR	
	comp=N,200nm,13.0s				
CN2			LR	LR	
	comp=E,300nm,13.0s				
CN2			LR	LR	
	comp=Z,300nm,14.0s				
CLNS	**Chul'man**	**20.08 311**	*e*P	Px	02 26 28.8
CLNS			*e**PP	pP	02 26 37.5 +13
CLNS			*e*S	**S**	**02 29 53.7 -6.9**
CLNS			*e*SS		02 30 43.7
CLNS			pmax	pmax	
	comp=Z,24nm,1.0s				
CLNS			pmax	pmax	
	comp=N,13nm,0.9s				
CLNS			pmax	pmax	
	comp=E,19nm,1.1s				
CLNS			pmax	pmax	
	comp=Z,27nm,1.4s				
CLNS			pmax	pmax	
	comp=N,29nm,1.6s				
CLNS			pmax	pmax	
	comp=E,11nm,1.0s				
CLNS			smax		
	comp=E,119nm,12.8s				
CLNS			smax		
	comp=N,70nm,10.8s				
CLNS			MLR	MLR	
	comp=N,921nm,15.0s,MS4.4				
CLNS			MLR	MLR	
	comp=Z,1μm,14.0s,MS4.5				
CLNS			MLR	MLR	
	comp=E,996nm,14.0s,MS4.4				
NRGR	**Nerungri**	**20.11 311**	*e*P	**P**	**02 26 23.6 +6.6**
YAK	**Yakutsk**	**20.47 328**	*e*P	**P**	**02 26 24.1 +3.2**
YAK			*e*		02 26 39.6
YAK			*e*S	**S**	**02 30 07.8 -0.4**
YAK			*e*		02 30 38.6
YAK			*e*		02 37 50.0
YAK			pmax	pmax	
	comp=Z,15nm,0.8s				
YAK			pmax	pmax	
	comp=E,6.0nm,1.2s				
YAK			pmax	pmax	
	comp=N,5.0nm,1.1s				
YAK			pmax	pmax	
	comp=Z,36nm,0.7s				
YAK			pmax	pmax	
	comp=N,33nm,0.9s				
YAK			pmax	pmax	
	comp=E,12nm,0.6s				
YAK			smax		
	comp=N,298nm,3.5s				
YAK			smax		
	comp=E,227nm,2.8s				
YAK			MLR	MLR	
	comp=Z,831nm,14.0s,MS4.2				
YAK			MLR	MLR	
	comp=E,540nm,12.0s,MS4.2				
YAK			MLR	MLR	
	comp=N,372nm,13.0s,MS4.2				
YAK	**Yakutsk**	**20.47 328**	*e*P	**P**	**02 26 23.9 +3.0**
	comp=N,47nm,0.7s				
KSRS	**Korea Array**	**20.56 253**	P	**P**	**02 26 22.8 +0.7**
	comp=N,15nm,0.8s,baz=60,slow=10,SNR=25				
KSRS			PcP	PcP	02 30 36.6 +4.4
	comp=N,3.8nm,1.1s,baz=57,slow=1.3,SNR=8.0				
KSRS	**Korea Array**	**20.56 253**	P	**P**	**02 26 22.8 +0.7**
KSRS					02 30 36.6
KSRS			pmax	pmax	
	comp=Z,15nm,0.8s				
INCN	**Inchon**	**21.40 255**	*e*P	**P**	**02 26 33.9 +2.8**
	comp=Z,30nm,0.8s,mb4.7				
SNY	**Shenyang**	**21.47 268**	⇓P	**P**	**02 26 36.6 +4.8**
SNY			pmax	pmax	
	comp=Z,22nm,0.5s,mb4.7				
SNY			LR	LR	
	comp=N,640nm,15.0s,MS4.3				
SNY			LR	LR	
	comp=E,900nm,17.4s,MS4.3				
SNY			LR	LR	
	comp=Z,950nm,17.4s,MS4.2				
BILL	**Bilibino**	**22.70 13⇑**	*e*P	**P**	**02 26 48.9 +4.2**
BILL			*e**PP		02 26 58.1
BILL			*e*		02 27 13.8
BILL			*e*SS		02 31 29.1
BILL			pmax	pmax	
	comp=Z,15nm,1.7s,mb4.2				
BILL			MLR	MLR	
	comp=Z,500nm,14.0s,MS4.1				
BOD	**Bodaibo**	**26.05 310**	*e*P	**P**	**02 27 16.7 +0.5**
BOD			pmax	pmax	
	comp=Z,6.0nm,1.8s,mb3.8				
BJI	**Beijing**	**27.32 270**	P	**P**	**02 27 29.1 +1.2**
BJI			S	**S**	**02 32 04.9 -0.6**
BJI			pmax	pmax	
	comp=Z,11nm,0.8s,mb4.4				
BJI			LR	LR	
	comp=N,1μm,15.8s,MS4.6				
BJI			LR	LR	
	comp=E,590nm,14.3s,MS4.6				
BJI			LR	LR	
	comp=Z,490nm,17.1s,MS4.1				
TIXI	**Tiksi**	**27.69 344**	*e*P	**P**	**02 27 34.8 +3.9**
TIXI			pmax	pmax	
	comp=Z,5.0nm,1.4s,mb4.0				
TIXI			MLR	MLR	
	comp=Z,1μm,15.0s,MS4.6				
NJ2	**Nanjing**	**29.77 253**	*e*P	**P**	**02 27 52.4 +2.7**
NJ2			pP	pP	02 28 02.5 +4.0
NJ2			sP	sP	02 28 07.2 +5.1
NJ2			PP	PP	02 28 48.9 -8.2
NJ2			S	**S**	**02 32 42.5 -1.6**
NJ2			sS	sS	02 32 58.5 0.0
NJ2			pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.7				
NJ2			pmax	pmax	
	comp=Z,320nm,3.6s				
NJ2			LR	LR	
	comp=N,1μm,23.2s,MS4.9				
NJ2			LR	LR	
	comp=E,3μm,21.3s,MS4.9				

HHC	**Hu-ho-hao-te**	**30.16 274**	*e*P	**P**	**02 27 56.3 +3.2**
HHC			pP	pP	02 28 06.0 +4.2
HHC			sP	sP	02 28 09.9 +4.4
HHC			PP	PP	02 28 54.0 -7.3
HHC			S	**S**	**02 32 50.1 0.0**
HHC			sS	sS	02 33 06.3 +1.8
HHC			SS	SS	02 34 26.1 -33
HHC			ScP	ScP	02 34 37.8 +4.2
HHC			PcS	PcS	02 34 42.1 +4.9
HHC			ScS	ScS	02 38 31.6 +2.4
HHC			pmax	pmax	
	comp=Z,17nm,1.1s,mb4.7				
HHC			pmax	pmax	
	comp=Z,270nm,7.3s				
HHC			LR	LR	
	comp=N,1μm,13.7s,MS4.8				
HHC			LR	LR	
	comp=E,1μm,16.2s,MS4.8				
HHC			LR	LR	
	comp=Z,1μm,11.2s,MS4.7				
SONM	**Songino Array**	**31.28 290**	P	**P**	**02 28 01.4 -1.5**
	comp=Z,1.3nm,0.8s,mb3.8,baz=69,slow=8.2,SNR=1.9				
SONM			LR	LR	02 41 28.7
	comp=Z,986nm,19.1s,MS4.5,baz=272,slow=38				
TLY	**Talaya**	**32.17 298**	*e*P	**P**	**02 28 19.9 +9.2**
TLY			MLR	MLR	
	comp=Z,837nm,16.0s,MS4.5				
ZAK	**Zakamensk**	**32.65 295**	*e*P	**P**	**02 28 17.4 +2.4**
ZAK			*e*		02 29 33.8
ZAK			pmax	pmax	
	comp=Z,3.0nm,1.3s,mb4.1				
TTA	**Tatalina**	**32.73 41**	*e*P	**P**	**02 28 12.7 -2.8**
TTA			pmax	pmax	
	comp=Z,26nm,1.4s,mb5.0				
TTA	**Tatalina**	**32.73 41**	*e*P	**P**	**02 28 12.7 -2.8**
	comp=Z,26nm,1.4s,mb5.0				
GUMO	**Guam**	**33.47 194**	LR	LR	02 38 11.0
	comp=Z,454nm,21.8s,MS4.2,baz=56,slow=29				
WHN	**Wuhan**	**33.71 256**	*e*P	**P**	**02 28 28.0 +3.6**
KDAK	**Kodiak Island**	**34.40 51**	P	**P**	**02 28 28.9 -1.2**
	comp=Z,27nm,0.9s,mb5.2,baz=337,slow=9.1,SNR=6.8				
KDAK			LR	LR	02 41 17.2
	comp=Z,310nm,20.2s,MS4.0,baz=90,slow=34				
BPAW	**Bear Paw Mtn.**	**35.07 39**	*e*P	**P**	**02 28 39.3 +3.5**
	comp=Z,22nm,1.4s,mb4.9				
KTH	**Kantishna Hill**	**35.08 40**	*e*P	**P**	**02 28 35.2 -0.6**
	comp=Z,61nm,1.4s,mb5.3				
XAN	**Xi'an**	**35.34 265**	P	**P**	**02 28 42.0 +3.6**
XAN			pP	pP	02 28 49.5 +2.3
XAN			pmax	pmax	
	comp=Z,8.0nm,1.4s,mb4.5				
XAN			pmax	pmax	
	comp=Z,30nm,5.5s				
MCK	**McKinley**	**35.97 40**	*e*P	**P**	**02 28 43.1 -0.4**
MCK			pmax	pmax	
	comp=Z,9.0nm,1.0s,mb4.7				
MCK	**McKinley**	**35.97 40**	*e*P	**P**	**02 28 43.1 -0.4**
	comp=Z,9.0nm,1.0s,mb4.7				
COLA	**College**	**36.45 38**	*e*P	**P**	**02 28 47.0 -0.6**
COLA			pmax	pmax	
	comp=Z,16nm,1.0s,mb4.9				
COLA	**College**	**36.45 38**	*e*P	**P**	**02 28 47.0 -0.7**
	comp=Z,16nm,1.0s,mb4.9				
LZH	**Lanzhou**	**37.74 272**	*e*P	**P**	**02 29 01.3 +2.4**
LZH			pP	pP	02 29 11.0 +3.3
LZH			sP	sP	02 29 15.1 +3.7
LZH			*e*PP	PP	02 30 29.5 +4.3
LZH			*e*S	**S**	**02 34 46.8 -0.5**
LZH			sS	sS	02 35 02.5 +0.6
LZH			*e*SS	SS	02 37 19.6 -14
LZH			pmax	pmax	
	comp=Z,25nm,1.3s,mb4.8				
LZH			pmax	pmax	
	comp=Z,93nm,4.6s				
LZH			LR	LR	
	comp=N,600nm,13.5s				
LZH			LR	LR	
	comp=Z,970nm,17.2s,MS4.7				
BMRM	**Bremner River**	**38.14 44**	*e*P	**P**	**02 29 04.7 +2.7**
	comp=Z,22nm,1.0s,mb4.8				
BMRM			*e*PcP	PcP	02 31 16.7 +0.5
GTA	**Gaotai**	**38.86 279**	*e*P	**P**	**02 29 12.7 +4.4**
GTA			pP	pP	02 29 21.8 +4.7
GTA			sP	sP	02 29 26.1 +5.3
GTA			S	**S**	**02 35 08.0 +3.8**
GTA			PcS	PcS	02 35 12.3 +4.1
GTA			sS	sS	02 35 21.4 +2.6
GTA			SS	SS	02 37 45.9 -10
GTA			pmax	pmax	
	comp=Z,4.0nm,0.8s,mb4.2				
GTA			pmax	pmax	
	comp=Z,180nm,5.9s				
GTA			LR	LR	
	comp=N,640nm,18.1s,MS4.6				
GTA			LR	LR	
	comp=E,490nm,14.9s,MS4.6				
GTA			LR	LR	
	comp=Z,250nm,16.4s,MS4.1				
EGAK	**Eagle**	**39.32 38**	*e*P	**P**	**02 29 14.1 +2.3**
	comp=Z,21nm,1.1s,mb4.8				
DAWY	**Dawson**	**40.16 39**	*e*P	**P**	**02 29 23.6 +4.8**
CD2	**Chengdu**	**40.70 265**	P	**P**	**02 29 25.5 +1.8**
CD2			pP	pP	02 29 35.3 +2.7
CD2			sP	sP	02 29 39.2 +3.0
CD2			PP	PP	02 31 02.9 +5.3
CD2			S	**S**	**02 35 31.3 -0.6**
CD2			sS	sS	02 35 47.6 +1.0
CD2			SS	SS	02 38 25.6 -7.2
CD2			pmax	pmax	
	comp=Z,50nm,1.3s,mb5.0				
CD2			pmax	pmax	
	comp=Z,230nm,4.2s				
CD2			LR	LR	
	comp=N,630nm,6.5s				
CD2			LR	LR	
	comp=Z,710nm,7.1s				
GYA	**Guiyang**	**41.50 258⇑**	*i*P	**P**	**02 29 30.6 +0.3**
GYA			pP	pP	02 29 43.2 +4.0
GYA			sP	sP	02 29 48.0 +5.2
GYA			PP	PP	02 31 11.2 +4.8
GYA			ScP	ScP	02 35 17.8 +2.6
GYA			S	**S**	**02 35 43.5 -0.4**
GYA			sS	sS	02 36 01.0 +2.4
GYA			SS	SS	02 38 42.1 -6.8
GYA			pmax	pmax	
	comp=Z,30nm,1.0s,mb4.9				
GYA			pmax	pmax	
	comp=Z,120nm,4.6s				
GYA			LR	LR	
	comp=N,630nm,16.5s,MS4.7				
GYA			LR	LR	
	comp=E,510nm,15.9s,MS4.7				
GYA			LR	LR	
	comp=Z,620nm,16.3s,MS4.6				
HYT	**Haines Junctio**	**41.58 44**	*e*P	**P**	**02 29 35.7 +5.1**
INK	**Inuvik**	**41.97 32**	P	**P**	**02 29 33.1 -0.5**
	comp=Z,14nm,0.8s,mb4.6,baz=296,slow=9.3,SNR=18				
INK	**Inuvik**	**41.97 32**	P	**P**	**02 29 33.1 -0.6**
INK			pmax	pmax	
	comp=Z,14nm,0.8s				
INK	**Inuvik**	**41.97 32**	*e*P	**P**	**02 29 33.8 +0.2**
	comp=Z,18nm,0.9s,mb4.7				
ZALV	**Zalesovo Beam**	**42.65 306**	P	**P**	**02 29 37.5 -1.8**
	comp=Z,4.1nm,0.4s,mb4.5,baz=350,slow=24,SNR=3.7				
ZALV			PcP	PcP	02 31 29.4 -1.4
	comp=Z,1.1nm,0.3s,baz=84,slow=4.5,SNR=3.1				
ZALV			LR	LR	02 48 48.3
	comp=Z,868nm,18.1s,MS4.7,baz=70,slow=38				
ZALV	**Zalesovo Beam**	**42.65 306**	P	**P**	**02 29 37.5 -1.8**
ZALV					02 31 29.4
NVS	**Novosibirsk**	**43.23 308**	*e*P	**P**	**02 29 44.9 +0.8**
QIZ	**Qiongzhong**	**44.59 247**	P	**P**	**02 29 56.6 +1.2**
QIZ			pP	pP	02 30 04.9 +0.5
QIZ			PP	PP	02 31 42.5 +2.8
QIZ			S	**S**	**02 36 30.1 +0.7**
QIZ			sS	sS	02 36 48.5 +4.4
QIZ			LR	LR	
	comp=N,360nm,25.5s				
QIZ			LR	LR	
	comp=Z,270nm,21.5s,MS4.1				
WMQ	**Urumqi**	**44.88 291**	*e*P	**P**	**02 30 00.3 +2.9**
WMQ			pP	pP	02 30 11.9 +5.5
WMQ			PcP	PcP	02 31 43.5 +4.9
WMQ			S	**S**	**02 36 33.7 +0.6**
WMQ			sS	sS	02 36 49.0 +1.2

WMQ			LR	LR	
	comp=N,890nm,19.0s,MS4.7				
WMQ			LR	LR	
	comp=E,330nm,21.0s,MS4.7				
WMQ			LR	LR	
	comp=Z,450nm,18.0s,MS4.4				
KMI	**Kunming**	**45.04 260**	P	**P**	**02 30 03.5 +4.6**
KMI			pP	pP	02 30 13.0 +5.2
KMI			sP	sP	02 30 16.7 +5.3
KMI			S	**S**	**02 36 36.1 +0.4**
KMI			sS	sS	02 36 54.4 +3.9
KMI			SS	SS	02 39 48.3 -10
KMI			pmax	pmax	
	comp=Z,22nm,1.1s,mb4.9				
KMI			LR	LR	
	comp=N,400nm,10.0s				
KMI			LR	LR	
	comp=E,380nm,8.2s				
KMI			LR	LR	
	comp=Z,350nm,8.2s				
DLBC	**Dease Lake**	**45.90 46**	*e*P	**P**	**02 30 06.5 +1.2**
MK31	**Makanchi Array**	**46.93 297**	*e*P	**P**	**02 30 12.8 -0.7**
MKAR	**Makanchi Array**	**46.93 297**	P	**P**	**02 30 12.0 -1.5**
	comp=Z,2.2nm,0.5s,mb4.4,baz=67,slow=6.1,SNR=11				
MKAR			PcP	PcP	02 31 45.5 -0.2
	comp=Z,2.5nm,0.8s,baz=59,slow=3.3,SNR=4.2				
MKAR			LR	LR	02 51 03.8
	comp=Z,1μm,18.6s,MS4.8,baz=64,slow=38				
MKAR	**Makanchi Array**	**46.93 297**	P	**P**	**02 30 12.0 -1.5**
MKAR					02 31 45.5
MKAR	**Makanchi Array**	**46.93 297**	P	**P**	**02 30 12.0 -1.5**
MKAR			PcP	PcP	02 31 45.5 -0.2
MKAR			LR	LR	02 51 03.8
KURK	**Kurchatov**	**47.39 304**	P	**P**	**02 30 15.9 -1.2**
	comp=Z,7.0nm,0.7s,mb4.7,baz=70,slow=8.2,SNR=12				
KURK			PcP	PcP	02 31 47.1 -0.1
	comp=Z,2.0nm,0.8s,baz=68,slow=3.3,SNR=6.9				
KURK	**Kurchatov**	**47.39 304**	P	**P**	**02 30 15.9 -1.1**
KURK					02 31 47.1
KURK			pmax	pmax	
	comp=Z,7.0nm,0.7s,mb4.7				
KURK	**Kurchatov**	**47.39 304**	*e*P	**P**	**02 30 16.1 -0.9**
	comp=Z,8.1nm,0.8s,mb4.7				
LSA	**Lhasa**	**50.13 273**	P	**P**	**02 30 44.6 +6.2**
LSA	**Lhasa**	**50.13 273**	*e*P	**P**	**02 30 40.5 +2.1**
LSA			pmax	pmax	
	comp=Z,16nm,0.6s,mb5.2				
LSA	**Lhasa**	**50.13 273**	*e*P	**P**	**02 30 40.5 +2.1**
	comp=Z,16nm,0.6s,mb5.2				
BVAR	**Borovoye Array**	**50.91 310**	P	**P**	**02 30 41.4 -2.6**
	comp=Z,2.2nm,0.5s,mb4.4,baz=51,slow=7.5,SNR=8.2				
BVAR			PcP	PcP	02 31 59.4 -0.7
	comp=Z,2.7nm,0.7s,baz=46,slow=4.3,SNR=7.2				
BVAR			LR	LR	02 54 06.9
	comp=Z,836nm,18.7s,MS4.8,baz=59,slow=38				
BVAR	**Borovoye Array**	**50.91 310**	P	**P**	**02 30 41.4 -2.6**
BVAR					02 31 59.4
BRVK	**Borovoye**	**50.95 310**	*ce*P	**P**	**02 30 47.4 +3.1**
BRVK			pmax	pmax	
	comp=Z,13nm,1.2s,mb4.7				
BRVK			MLR	MLR	
	comp=Z,721nm,18.0s,MS4.7				
BRVK	**Borovoye**	**50.95 310**	*e*P	**P**	**02 30 47.5 +3.2**
	comp=Z,8.2nm,0.9s,mb4.7				
RES	**Resolute Bay**	**51.15 18**	*e*P	**P**	**02 30 45.9 +0.4**
RES			pmax	pmax	
	comp=Z,9.0nm,1.1s,mb4.6				
RES	**Resolute Bay**	**51.15 18**	*e*P	**P**	**02 30 45.9 +0.4**
	comp=Z,8.5nm,1.1s,mb4.6				
YKA	**Yellowknife Ar**	**51.24 37**	P	**P**	**02 30 46.0 -0.3**
	comp=Z,8.8nm,0.8s,mb4.8,baz=296,slow=7.2,SNR=33				
YKA			PcP	PcP	02 32 00.5 -0.6
	comp=Z,0.5nm,0.4s,baz=303,slow=3.9,SNR=5.5				
YKA			LR	LR	02 55 57.2
	comp=Z,11nm,18.4s,baz=25,slow=40				
YKA	**Yellowknife Ar**	**51.24 37**	P	**P**	**02 30 46.0 -0.3**
YKA					02 32 00.5
YKA	**Yellowknife Ar**	**51.24 37**	P	**P**	**02 30 46.0 -0.3**
YKA			PcP	PcP	02 32 00.5 -0.6
YKA			LR	LR	02 55 57.2
CMAR	**Chiang Mai Arr**	**52.15 256**	P	**P**	**02 30 54.7 +1.0**
	comp=Z,12nm,0.8s,mb4.9,baz=33,slow=7.6,SNR=26				
CMAR			LR	LR	02 54 40.5
	comp=Z,203nm,18.5s,MS4.2,baz=171,slow=38				
SHL	**Shillong**	**52.21 269**	*ex*	x	02 30 51.0
SHL			x	x	02 30 55.0
FRU	**Bishkek**	**53.63 297**	*e*P	**P**	**02 31 08.0 +3.7**
AAK	**Ala-Archa**	**53.82 296**	P	**P**	**02 31 05.1 -0.5**
	comp=Z,0.7nm,0.4s,mb3.9,baz=69,slow=3.2				
AAK	**Ala-Archa**	**53.82 296**	⇓*e*P	**P**	**02 31 05.9 +0.2**
AAK			pmax	pmax	
	comp=Z,3.0nm,0.8s,mb4.3				
AAK			MLR	MLR	
	comp=Z,349nm,20.0s,MS4.4				
AAK	**Ala-Archa**	**53.82 296**	*e*P	**P**	**02 31 05.8 +0.1**
	comp=Z,6.0nm,0.8s,mb4.6				
AML	**Almayashu**	**54.59 296**	*e*P	**P**	**02 31 15.8 +4.5**
	comp=Z,3.6nm,0.8s,mb4.5				
GUN	**Gumba**	**54.87 275**	*e*P	**P**	**02 31 14.4 +0.9**
	comp=Z,33nm,0.5s,mb5.6				
ARU	**Arti**	**55.11 318**	*d i*P	**P**	**02 31 18.0 +3.2**
ARU			*e*		02 33 21.3
ARU			S	**S**	**02 39 00.6 +5.3**
ARU			SS	SS	02 42 40.5 +1.8
ARU			pmax	pmax	
	comp=Z,15nm,1.7s,mb4.8				
ARU			MLR	MLR	
	comp=Z,494nm,18.0s,MS4.6				
ARU	**Arti**	**55.11 318**	*e*P	**P**	**02 31 17.0 +2.2**
	comp=Z,13nm,1.2s,mb4.8				
A07A	**Ashnola River,**	**55.24 53**	⇓P	**P**	**02 31 16.5 +0.6**
	baz=55				
KKN	**Kakani**	**55.36 275**	*e*P	**P**	**02 31 17.8 +0.8**
PKI	**Pulchoki**	**55.41 275**	*e*P	**P**	**02 31 18.4 +1.0**
PKIN	**Phulchoki**	**55.41 275**	*e*P	**P**	**02 31 18.4 +1.0**
	comp=Z,17nm,0.4s,mb5.4				
DMN	**Daman**	**55.59 275**	*e*P	**P**	**02 31 19.5 +0.8**
	comp=Z,150nm,1.1s,mb5.9				
B07A	**Winthrop**	**55.71 54**	⇓P	**P**	**02 31 19.4 +0.1**
	baz=56				
A08A	**Turner Farm, O**	**55.90 53**	⇓P	**P**	**02 31 19.9 -0.8**
	baz=56,SNR=5.4				
ETW	**Entiat**	**56.06 55**	*e*P	**P**	**02 31 22.2 +0.4**
C07A	**Waterville**	**56.16 54**	⇓P	**P**	**02 31 22.7 +0.1**
	baz=56				
B08A	**Colville Reser**	**56.20 53**	⇑P	**P**	**02 31 22.1 -0.6**
	baz=56,SNR=6.0				
A09A	**Danville**	**56.27 52**	⇓P	**P**	**02 31 23.0 -0.3**
	baz=56				
H04A	**Detroit Lake**	**56.63 58**	⇓P	**P**	**02 31 25.8 -0.1**
	baz=56				
B09A	**Rice**	**56.82 53**	⇓P	**P**	**02 31 27.0 -0.2**
	baz=57				
C09A	**Chrisman Ranch**	**57.10 53**	⇑P	**P**	**02 31 29.0 -0.1**
	baz=57				
D08A	**Wollman Farm,**	**57.16 54**	⇓P	**P**	**02 31 29.4 -0.2**
	baz=57				
HAWA	**Hanford**	**57.20 55**	*e*P	**P**	**02 31 33.7 +3.8**
	comp=Z,16nm,1.0s,mb5.0				
G06A	**Carlson Farm,**	**57.22 57**	⇓P	**P**	**02 31 30.1 0.0**
	baz=57				
NEW	**Newport**	**57.47 52**	*e*P	**P**	**02 31 35.4 +3.6**
NEW			pmax	pmax	
	comp=Z,12nm,1.2s				
NEW	**Newport**	**57.47 52**	*e*P	**P**	**02 31 35.4 +3.6**
	comp=Z,12nm,1.2s,mb4.8				
A11A	**Hall Mountain,**	**57.49 51**	⇓P	**P**	**02 31 32.3 +0.4**
	baz=57				
E09A	**Wood Farm, Sta**	**57.91 55**	⇑P	**P**	**02 31 34.9 0.0**
	baz=58				
ARCES	**ARCESS Array B**	**58.06 341**	P	**P**	**02 31 34.0 -1.6**
	comp=Z,3.1nm,0.9s,mb4.3,baz=32,slow=8.6,SNR=7.1				
ARCES			LR	LR	02 58 45.3
	comp=Z,322nm,18.2s,MS4.5,baz=33,slow=38				
D10A	**Wagner Farm, O**	**58.08 54**	⇑P	**P**	**02 31 36.0 -0.1**
	baz=58				
ABKAR	**Akbulak array**	**58.48 310**	*e*P	**P**	**02 31 37.8 -1.1**
	comp=Z,2.5nm,0.4s,mb4.6				
K05A	**Summer Lake**	**58.53 60**	⇑P	**P**	**02 31 40.0 +0.7**
	baz=58				
A13A	**Flathead Natio**	**58.55 51**	⇑P	**P**	**02 31 39.6 +0.2**
	baz=58				
I07A	**Izee**	**58.55 58**	⇓P	**P**	**02 31 40.3 +0.9**
	baz=58				
D11A	**Klaveano Farm,**	**58.61 53**	⇑P	**P**	**02 31 39.3 -0.5**
	baz=58				

C12B Naegeli Ranch, 58.69 52 ⇓P P 02 31 40.0 -0.3
baz=58
DDI Dehra Dun 58.70 282 ex x 02 31 45.0
F10A Beach Ranch, E 58.74 55 ⇑P P 02 31 41.1 +0.4
baz=59
H08A Prairie City 58.78 57 ⇑P P 02 31 41.2 +0.2
baz=59
SMLA Simla 58.80 284 eP P 02 31 41.6 +0.3
SMLA AMb AMB 02 31 43.1
comp=Z,76nm,2.3s,mb5.3
G09A Cove 58.84 56 ⇑P P 02 31 41.5 0.0
baz=59
B13A Whitefish 58.85 51 ⇓P P 02 31 41.1 -0.4
baz=59,SNR=9.0
BSMT Bassoo Peak 58.98 52 eP P 02 31 42.8 +0.4
A14A Double T Ranch 59.05 50 ⇑P P 02 31 42.4 -0.4
baz=59
E11A Bogner Ranch, 59.09 54 ⇑P P 02 31 42.7 -0.4
baz=59
D12A Red Ives Fores 59.15 53 ⇑P P 02 31 42.6 -0.9
baz=59
C13A Hot Springs 59.20 52 ⇓P P 02 31 43.3 -0.6
baz=59
H09A Durkee 59.27 56 ⇑P P 02 31 43.6 -0.8
baz=59
JTMT Jette 59.32 52 eP P 02 31 45.7 +1.0
F11A Grangeville 59.40 54 ⇓P P 02 31 44.6 -0.6
baz=59,SNR=5.2
E12A Beaver Dam Sad 59.41 53 ⇓P P 02 31 44.9 -0.4
baz=59,SNR=7.1
A15A Johnson Ranch, 59.41 50 ⇑P P 02 31 44.4 -0.9
baz=59
J08A Circle Bar Ran 59.58 58 ⇑P P 02 31 45.9 -0.6
baz=59
C14A Swan Lake 59.60 51 ⇓P P 02 31 46.1 -0.5
baz=59
D13A Huson 59.62 52 ⇓P P 02 31 46.2 -0.6
baz=59
SWMT Swartz Lake 59.62 52 eP P 02 31 47.4 +0.7
G11A Walters Elk Ra 59.62 55 ⇓P P 02 31 46.4 -0.5
baz=59,SNR=7.0
B15A Bradely Ranch, 59.90 50 ⇓P P 02 31 47.6 -1.1
baz=60
F12A Elk City 59.98 54 ⇓P P 02 31 48.8 -0.5
baz=60,SNR=8.1
J09A Fry Pan Ranch, 60.01 57 ⇑P P 02 31 49.1 -0.4
baz=60
A16A West Butte Ran 60.03 49 ⇑P P 02 31 48.6 -0.9
baz=60
WVOR Wild Horse Val 60.04 59 eP P 02 31 50.5 +0.8
WVOR pmax pmax
comp=Z,12nm,1.0s,mb4.9
WVOR Wild Horse Val 60.04 59 eP P 02 31 50.5 +0.7
comp=Z,12nm,1.0s,mb4.9
SLMT Seeley Lake 60.05 52 eP P 02 31 49.8 0.0
MSO Missoula 60.06 52 eP P 02 31 49.6 -0.2
comp=Z,20nm,1.4s,mb4.9
I10A Payette 60.11 56 ⇓P P 02 31 50.4 +0.2
baz=60
D14A Greenough 60.14 52 ⇓P P 02 31 49.4 -1.0
baz=60,SNR=5.5
E13A Victor 60.16 53 ⇑P P 02 31 49.9 -0.6
baz=60
H11A Donnelly 60.19 55 ⇓P P 02 31 50.3 -0.5
baz=60,SNR=7.2
OHCM Honcut 60.19 63 eP P 02 31 54.4 +3.5
C15A Salmond Ranch, 60.21 51 ⇑P P 02 31 50.2 -0.6
baz=60,SNR=5.3
KLMR Klimovskoe 60.27 329 eP P 02 31 52.5 +1.5
KLMR pmax pmax
comp=Z,28nm,1.9s,mb5.0
B16A M & M Farms, S 60.30 50 ⇑P P 02 31 50.6 -0.8
baz=60
NDI New Delhi 60.30 281 ex sP 02 32 04.0 -0.5
G12A Big Creek, Yel 60.32 55 ⇑P P 02 31 51.4 -0.3
baz=60
CHMT Chamberlain Mo 60.38 52 eP P 02 31 51.5 -0.5
F13A Darby 60.47 53 ⇓P P 02 31 52.2 -0.4
baz=60,SNR=5.6
AYAN Aya Nagar 60.49 281 eP P 02 31 52.1 -0.9
AYAN AMb AMB 02 31 57.5
comp=Z,19nm,1.0s,mb5.1
E14A Clinton 60.55 52 ⇑P P 02 31 52.7 -0.5
baz=60,SNR=6.3
BEKR Beckwourth 60.56 62 ⇓P P 02 31 53.3 -0.1
baz=60
C16A Fuhringer Ranc 60.65 50 ⇑P P 02 31 53.4 -0.4
baz=60,SNR=16
D15A Lincoln 60.70 51 ⇑P P 02 31 53.9 -0.2
baz=60
I11A Placerville 60.70 56 ⇑P P 02 31 53.9 -0.3
baz=60
B17A L&G Farms, Che 60.85 49 ⇓P P 02 31 54.9 -0.3
baz=61
K10A MacKenzie Ranc 60.87 57 ⇑P P 02 31 55.0 -0.4
baz=61,SNR=7.7
H12A Diamond D Ranc 60.94 55 ⇓P P 02 31 55.2 -0.6
baz=61
G13A Cobalt 60.95 54 ⇑P P 02 31 55.3 -0.6
baz=61,SNR=7.6
A18A Metzger Ranch, 60.96 48 ⇓P P 02 31 55.5 -0.3
baz=61
SUMG Summit 60.99 4 eP P 02 31 56.7 +0.9
comp=Z,29nm,1.1s,mb5.3
E15A Deer Lodge 61.01 52 ⇑P P 02 31 56.1 -0.2
baz=61,SNR=6.0
FFC Flin Flon 61.05 40 eP P 02 31 56.1 -0.4
FFC pmax pmax
comp=Z,21nm,1.0s,mb5.2
FFC Flin Flon 61.05 40 eP P 02 31 56.1 -0.4
comp=Z,21nm,1.0s,mb5.2
MFID Camas Ranch 61.08 56 ⇑P P 02 31 56.1 -0.7
baz=61
D16A Dana Ranch, Ca 61.23 51 ⇑P P 02 31 57.5 -0.3
baz=61,SNR=14
I12A Atlanta 61.24 56 ⇑P P 02 31 57.5 -0.5
baz=61,SNR=7.5
H13A Challis 61.27 55 ⇑P P 02 31 57.7 -0.4
baz=61,SNR=8.2
C17A Wharram Farm, 61.28 50 ⇑P P 02 31 57.5 -0.5
baz=61,SNR=15
B18A Beardsley Farm 61.32 49 ⇓P P 02 31 57.9 -0.5
baz=61,SNR=6.1
K11A Parker Ranch, 61.36 57 ⇑P P 02 31 58.7 0.0
baz=61,SNR=5.5
F15A Butte 61.46 52 ⇓P P 02 31 59.2 -0.1
baz=61,SNR=14
E16A East Helena 61.47 51 ⇑P P 02 31 59.2 -0.2
baz=61
LRM Limekiln Ridge 61.49 52 eP P 02 31 59.5 0.0
JOF Joensuu 61.51 334 eP P 02 31 57.9 -1.5
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
JOF Joensuu 61.51 334 ep P 02 31 57.9 -1.5
comp=Z,4.5nm,0.7s,mb4.7
L10A Juniper Basin 61.53 58 ⇓P P 02 31 59.5 -0.4
baz=61,SNR=6.1
EGMT Eagleton 61.56 49 ⇓P P 02 31 59.8 -0.2
baz=61,SNR=6.2
EGMT Eagleton 61.56 49 eP P 02 31 59.9 -0.1
comp=Z,21nm,1.0s,mb5.2
FCC Fort Churchill 61.58 33 eP P 02 31 59.1 -0.8
comp=Z,0.5nm,0.9s,mb3.6
J12A Stokes Ranch, 61.60 56 ⇑P P 02 32 00.0 -0.3
baz=61,SNR=6.9
D17A Six Diamond Ra 61.62 50 ⇓P P 02 31 59.7 -0.7
baz=61,SNR=5.8
KHET Khetri 61.65 282 eP P 02 32 00.8 -0.1
KHET AMb AMB 02 32 05.8
comp=Z,11nm,0.6s,mb5.2
CMB Columbia Colle 61.67 64 eP P 02 32 00.7 -0.2
CMB pmax pmax
comp=Z,11nm,1.0s,mb4.9
CMB Columbia Colle 61.67 64 eP P 02 32 00.7 -0.2
comp=Z,11nm,1.0s,mb4.9
DLMT Dillon 61.70 53 eP P 02 32 04.9 +4.0
comp=Z,40nm,2.0s,mb5.2
H14A Leadore 61.73 54 ⇓P P 02 32 00.6 -0.7
baz=62
I13A Wildhorse Cree 61.75 55 ⇑P P 02 32 01.3 0.0
baz=62,SNR=7.1
HLID Hailey 61.80 55 ⇓P P 02 32 00.9 -0.7
baz=62,SNR=6.4
HLID Hailey 61.80 55 eP P 02 32 01.5 -0.1
comp=Z,7.5nm,1.1s,mb4.7
M10A I.L. Ranch, Tu 61.83 58 ⇓P P 02 32 01.9 0.0
baz=62
G15A Dillon 61.88 53 ⇓P P 02 32 01.8 -0.4
baz=62,SNR=14
MCMT McKenzie Canyo 61.89 54 eP P 02 32 03.1 +0.8
comp=Z,3.2nm,0.9s,mb4.5
L11A Cat Creek Ranc 61.89 57 ⇑P P 02 32 01.4 -0.9
baz=62,SNR=7.3
E17A Martinsdale 61.96 51 ⇓P P 02 32 03.3 +0.6
baz=62,SNR=17
WAKR Walker 61.96 63 eP P 02 32 06.9 +4.1
F16A Kennard Place, 61.97 52 ⇓P P 02 32 03.0 +0.3
baz=62,SNR=5.3
KBL Kabul 62.02 292 eP P 02 32 03.4 +0.1
KBL pmax pmax
comp=Z,17nm,0.9s,mb5.2
KBL Kabul 62.02 292 eP P 02 32 03.4 +0.1
comp=Z,17nm,0.9s,mb5.2
J13A Cove Ranch, Pi 62.04 56 ⇑P P 02 32 03.8 +0.5
baz=62,SNR=6.2
BOZ Bozeman (W) 62.05 52 ⇓P P 02 32 03.6 +0.3
baz=62,SNR=18
BOZ Bozeman (W) 62.05 52 eP P 02 32 03.6 +0.3
BOZ pmax pmax
comp=Z,31nm,1.5s,mb5.2
BOZ Bozeman (W) 62.05 52 eP P 02 32 03.6 +0.3
comp=Z,31nm,1.5s,mb5.2
K12A Draper Farm, C 62.09 57 ⇓P P 02 32 03.6 -0.1
baz=62
I14A Mackay 62.11 55 ⇑P P 02 32 04.0 +0.2
baz=62,SNR=6.9
G16A Moss Hill, Enn 62.22 53 ⇓P P 02 32 04.4 -0.1
baz=62,SNR=18
L12A House Creek Ra 62.33 57 ⇓P P 02 32 05.9 +0.6
baz=62,SNR=5.1
E18A Harlowton 62.40 51 ⇑P P 02 32 06.0 +0.3
baz=62
F17A Fitzpatrick Pl 62.41 52 ⇓P P 02 32 05.9 +0.1
baz=62,SNR=6.1
QLMT Earthquake Lak 62.67 53 eP P 02 32 08.0 +0.5
NVAR Mina Array Bea 62.70 62 P P 02 32 07.8 0.0
comp=Z,5.5nm,0.8s,mb4.8,baz=292,slow=6.9,SNR=9.3
G17A Pierce Place, 62.74 52 ⇑P P 02 32 08.1 +0.1
baz=62
M12A Wells 62.85 58 ⇑P P 02 32 09.4 +0.6
baz=63,SNR=5.6
H16A Russell Place, 62.85 53 ⇓P P 02 32 09.3 +0.5
baz=63,SNR=6.9
F18A Big Timber 62.92 51 ⇑P P 02 32 09.4 +0.2
baz=63,SNR=5.6
L13A Double Diamond 62.99 57 ⇑P P 02 32 10.7 +1.1
baz=63
J15A Blackfoot 63.02 55 ⇑P P 02 32 11.1 +1.2
baz=63
GCMT Greycliff 63.02 51 eP P 02 32 10.4 +0.6
comp=Z,4.7nm,0.7s,mb4.7
P10A Eureka 63.07 60 ⇑P P 02 32 11.5 +1.3
baz=63
N12A Clover Valley, 63.13 58 ⇓P P 02 32 11.4 +0.7
baz=63
N12A Clover Valley, 63.13 58 eP P 02 32 11.1 +0.4
comp=Z,16nm,1.3s,mb5.0
K14A Jones Ranch, D 63.14 56 ⇓P P 02 32 11.6 +0.9
baz=63
MTUM Tungsten Hills 63.22 63 eP P 02 32 15.6 +4.3
O11A Cowboy Ranch, 63.23 59 ⇓P P 02 32 12.4 +1.2
baz=63
I16A Newdale 63.25 54 ⇓P P 02 32 11.9 +0.6
baz=63
SCO Scoresbysund 63.30 358 i P sP 02 32 26.5 +2.4
comp=Z,10nm,1.0s
M13A Montello 63.32 57 ⇑P P 02 32 12.1 +0.2
baz=63
G18A Lazy EL Ranch, 63.38 51 ⇓P P 02 32 12.5 +0.2
baz=63
H17A Grant Village 63.42 53 ⇓P P 02 32 13.8 +1.3
baz=63,SNR=6.3
K15A Arbon 63.42 55 ⇑P P 02 32 13.1 +0.6
baz=63
L14A Malta 63.43 56 ⇑P P 02 32 13.1 +0.5
baz=63,SNR=5.2
RCTC Rector, Farmer 63.46 64 ⇓P P 02 32 13.8 +0.9
baz=63
IMW Indian Meadow 63.54 53 eP P 02 32 14.3 +1.0
comp=Z,7.6nm,1.0s,mb4.7
J16A Bone 63.56 54 ⇓P P 02 32 14.2 +0.7
baz=63,SNR=6.1
Q10A Clear Creek Ra 63.61 61 ⇑P P 02 32 14.2 +0.3
baz=63
N13A Wendover, West 63.62 58 ⇓P P 02 32 14.7 +0.9
baz=63
SMMC Simmler 63.62 66 ⇓P P 02 32 15.0 +1.0
baz=64
KAF Kangasniemi 63.63 335 eP P 02 32 11.2 -2.4
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KAF Kangasniemi 63.63 335 ep P 02 32 11.2 -2.4
comp=Z,6.7nm,0.7s,mb4.8
RLMT Red Lodge 63.67 51 ⇓P P 02 32 14.2 +0.1
baz=64
O12A Currie 63.68 59 ⇓P P 02 32 14.6 +0.4
baz=64,SNR=6.2
RRI2 Red Ridge 63.68 54 eP P 02 32 18.9 +4.7
comp=Z,16nm,0.8s,mb5.1
BHPL Bhopal 63.69 277 eP P 02 32 14.5 -0.1
BHPL AMb AMB 02 32 20.5
comp=Z,38nm,1.4s,mb5.2
M14A Sheep Mountain 63.71 57 ⇓P P 02 32 15.2 +0.8
baz=64
I17A Pilgrim Ck. 63.73 53 ⇓P P 02 32 14.7 +0.2
baz=64
TPAW Teton Pass 63.79 54 eP P 02 32 15.9 +0.9
comp=Z,14nm,0.8s,mb5.1
VES Vestal, Richgr 63.86 65 ⇓P P 02 32 15.2 -0.4
baz=64
K16A Soda Springs 63.86 55 ⇓P P 02 32 16.0 +0.6
baz=64,SNR=5.9
REDW Red Top Meadow 63.93 54 eP P 02 32 16.6 +0.8
comp=Z,15nm,0.9s,mb5.0
L15A Malad City 63.94 56 ⇓P P 02 32 15.2 -0.7
baz=64
NGP Nagpur 63.97 274 eP P 02 32 16.9 +0.5
J17A Brown Place, J 64.01 54 ⇑P P 02 32 16.7 +0.3
baz=64,SNR=6.1
R10A Warm Springs 64.01 61 ⇑P P 02 32 17.2 +0.7
baz=64
Q11A Duckwater 64.05 60 ⇓P P 02 32 16.9 +0.2
baz=64
S10A Tonopah Range, 64.07 62 ⇑P P 02 32 16.8 0.0
baz=64,SNR=6.5
P12A McGill 64.09 59 ⇑P P 02 32 17.1 +0.2
baz=64
N14A Grayback Hills 64.22 57 ⇑P P 02 32 17.7 0.0
baz=64,SNR=6.2
FINES FINESS Array B 64.23 335 P P 02 32 16.1 -1.4
comp=Z,4.4nm,0.5s,mb4.8,baz=31,slow=7.3,SNR=31
FINES LR LR 03 03 01.9
comp=Z,470nm,18.7s,MS4.7,baz=17,slow=39
M15A Larsen Ranch, 64.25 56 ⇑P P 02 32 18.2 +0.2
baz=64,SNR=6.6
I18A Diamond G Ranc 64.29 53 ⇑P P 02 32 18.0 -0.2
baz=64
SPUT South Promonto 64.35 56 eP P 02 32 21.5 +2.8
comp=Z,11nm,0.9s,mb4.9
ISA Isabella 64.35 65 ⇑P P 02 32 18.4 -0.4
baz=64
R11A Troy Canyon, C 64.40 61 ⇓P P 02 32 18.6 -0.4
baz=64,SNR=7.4
Q12A Willow Creek R 64.41 60 ⇓P P 02 32 18.8 -0.3
baz=64
L16A Fish Haven 64.47 55 ⇑P P 02 32 19.8 +0.4
baz=64
ARVC Arvin 64.48 65 ⇑P P 02 32 20.3 +0.8
baz=64
J18A Kendall Valley 64.49 54 ⇓P P 02 32 19.7 +0.2
baz=64
P13A Bates Ranch, G 64.63 59 ⇓P P 02 32 21.0 +0.5
baz=64
HWUT Hardware Ranch 64.66 56 eP P 02 32 20.9 +0.2
comp=Z,25nm,1.4s,mb5.0
MPMC Manual Prospec 64.71 64 ⇓P P 02 32 20.8 -0.3
baz=64,SNR=7.1
L17A Cokeville 64.74 55 ⇑P P 02 32 21.5 +0.4
baz=64
S11A Rachel 64.76 61 ⇑P P 02 32 22.1 +0.7
baz=65
M16A Huntsville 64.82 56 ⇑P P 02 32 22.1 +0.4
baz=65
FURC Furnace Creek, 64.84 63 ⇓P P 02 32 22.0 +0.1
baz=65
K18A Toltan Ranch, 64.85 54 ⇑P P 02 32 22.0 +0.1
baz=65,SNR=6.0
DUG Dugway 64.86 58 ⇑P P 02 32 21.7 -0.3
baz=65,SNR=9.3
DUG Dugway 64.86 58 eP P 02 32 22.1 +0.1
DUG pmax pmax
comp=Z,15nm,1.0s,mb5.0
DUG Dugway 64.86 58 eP P 02 32 22.1 +0.1
comp=Z,15nm,1.0s,mb5.0
OSI Osito Adit 64.87 66 ⇑P P 02 32 22.6 +0.4
baz=65
Q13A Wheeler Ranch, 64.95 59 ⇓P P 02 32 22.4 -0.2
baz=65,SNR=8.1
R12A Pony Springs, 65.00 60 ⇑P P 02 32 22.5 -0.4
baz=65
BW06 Boulder Array 65.04 54 ⇑P P 02 32 22.7 -0.4
baz=65,SNR=6.1
BW06 Boulder Array 65.04 54 eP P 02 32 23.0 -0.1
comp=Z,9.6nm,0.9s,mb4.8
PDAR Pinedale Array 65.04 54 P P 02 32 23.0 -0.1
comp=Z,6.0nm,0.8s,mb4.7,baz=303,slow=2.5,SNR=18
PDAR LR LR 03 01 20.4
comp=Z,72nm,19.0s,MS3.9,baz=82,slow=37
P14A Drum Mountains 65.10 58 ⇑P P 02 32 23.6 0.0
baz=65,SNR=8.0
EDW2 Edwards Air Fo 65.16 65 ⇑P P 02 32 23.7 -0.4
baz=65,SNR=6.2
U10A Ash Meadows, A 65.19 63 ⇑P P 02 32 24.3 0.0
baz=65
M17A Scullys Gap (B 65.26 55 ⇑P P 02 32 25.2 +0.6
baz=65
L18A Fontenelle, Gr 65.32 55 ⇓P P 02 32 25.0 0.0
baz=65
S12A Delamar Landin 65.33 61 ⇓P P 02 32 24.9 -0.1
baz=65,SNR=5.9
T11A Corn Creek, Al 65.34 61 ⇓P P 02 32 25.2 0.0
baz=65
Q14A Sevier Lake (B 65.37 59 ⇑P P 02 32 25.3 0.0
baz=65,SNR=16
JLU Jordanelle 65.38 56 eP P 02 32 28.4 +3.0
comp=Z,23nm,1.8s,mb4.9
K19A Absolon Red Bu 65.40 53 ⇓P P 02 32 25.4 -0.1
baz=65
NLU North Lily Min 65.44 57 eP P 02 32 30.0 +4.2
comp=Z,8.7nm,0.9s,mb4.8
OBN Obninsk 65.45 326 i P P 02 32 28.3 +2.7
OBN e 02 32 34.9
OBN e 02 33 00.4
OBN eSS SS 02 45 25.6 +5.1
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
OBN MLR MLR
comp=Z,300nm,20.0s,MS4.5
N17A Moffit Pass 65.51 56 ⇓P P 02 32 26.8 +0.5
baz=65
MWC Mount Wilson 65.54 66 eP P 02 32 29.9 +3.4
MWC pmax pmax
comp=Z,21nm,1.3s,mb5.0
MWC Mount Wilson 65.54 66 eP P 02 32 29.9 +3.4
comp=Z,21nm,1.3s,mb5.0
L19A Farson 65.59 54 ⇑P P 02 32 27.5 +0.8
baz=65
O16A Springville 65.61 57 ⇑P P 02 32 27.4 +0.6
baz=65,SNR=5.6
GSC Goldstone 65.63 64 ⇑P P 02 32 26.8 -0.3
baz=66,SNR=5.1
GSC Goldstone 65.63 64 eP P 02 32 27.4 +0.4
GSC pmax pmax
comp=Z,11nm,1.0s,mb4.8
GSC Goldstone 65.63 64 eP P 02 32 27.4 +0.4
comp=Z,11nm,1.0s,mb4.8
M18A Lyman 65.63 55 ⇓P P 02 32 26.9 -0.1
baz=65
K20A Yellowstone Ra 65.79 53 ⇑P P 02 32 27.4 -0.6
baz=66
SHPR Sheep Range 65.86 62 eP P 02 32 32.2 +3.7
Q15A Fillmore 65.89 58 ⇓P P 02 32 29.1 +0.4
baz=66
S13A Holt Ranch, En 65.94 60 ⇓P P 02 32 28.7 -0.3
baz=66,SNR=6.3
O17A Robinson Place 66.06 56 ⇑P P 02 32 30.3 +0.5
baz=66
V11A Goodsprings 66.12 63 ⇓P P 02 32 30.2 -0.1
baz=66,SNR=6.3
N18A Larsen Ranch, 66.15 55 ⇑P P 02 32 30.5 +0.1
baz=66
L20A Wamsutter 66.22 54 ⇓P P 02 32 30.6 -0.2
baz=66
CCUT Cedar City 66.26 60 eP P 02 32 34.5 +3.4
comp=Z,12nm,1.1s,mb4.8
T13A Saint George 66.28 61 ⇑P P 02 32 31.4 +0.2
baz=66,SNR=6.2
MSU Marysvale 66.33 59 eP P 02 32 32.2 +0.7
TMUT Trail Mountain 66.38 57 eP P 02 32 35.4 +3.6
comp=Z,8.2nm,0.9s,mb4.8
VSU Vasula 66.39 332 i P P 02 32 34.1 +2.5
VSU pmax pmax
comp=Z,19nm,1.7s,mb4.8
VSU MLR MLR
comp=Z,316nm,18.0s,MS4.6
O18A Roosevelt 66.43 56 ⇓P P 02 32 32.3 +0.2
baz=66
N19A John Jarvie Ra 66.49 55 ⇓P P 02 32 32.4 -0.1
baz=66
MURC Murrieta 66.49 66 ⇑P P 02 32 32.9 +0.3
baz=66
CTA Charters Tower 66.51 187 P P 02 32 35.5 +2.8
comp=Z,4.6nm,0.8s,mb4.5,baz=15,slow=6.9,SNR=4.3
CTA Charters Tower 66.51 187 P P 02 32 35.5 +2.8
P17A Butcher Ranch, 66.54 57 ⇓P P 02 32 32.5 -0.3
baz=66,SNR=5.4
V12A Nelson 66.55 62 ⇑P P 02 32 33.8 +0.8
baz=66
U13A Pakoon Wash 66.64 61 ⇑P P 02 32 33.9 +0.4
baz=66,SNR=6.4
Q16A Castle Valley 66.65 58 ⇑P P 02 32 33.7 +0.1
baz=66
GMRC Granite Mounta 66.68 64 ⇓P P 02 32 33.9 +0.1
baz=66
T14A Hurricane 66.75 60 ⇓P P 02 32 34.5 +0.3
baz=67
L21A Rawlins 66.78 53 ⇓P P 02 32 33.9 -0.4
baz=67
ULM Lac du Bonnet 66.84 41 P P 02 32 33.6 -0.9
comp=Z,2.8nm,0.6s,mb4.5,baz=318,slow=6.6,SNR=5.0
ULM LR LR 03 04 09.9
comp=Z,114nm,18.6s,MS4.1,baz=289,slow=38
R16A Teasdale 66.89 58 ⇓P P 02 32 35.2 +0.1
baz=67,SNR=5.7
SRU San Rafael 66.90 57 ⇑P P 02 32 34.9 -0.3
baz=67,SNR=15
SRU San Rafael 66.90 57 eP P 02 32 35.1 -0.1
SRU pmax pmax
comp=Z,18nm,0.9s,mb5.1
SRU San Rafael 66.90 57 eP P 02 32 35.1 -0.1
comp=Z,18nm,0.9s,mb5.1
O19A Miners Draw (B 66.92 55 ⇓P P 02 32 35.2 0.0
baz=67
BELC Belle Mtn. 66.98 64 ⇑P P 02 32 35.9 +0.1
baz=67
V13A Grand Canyon W 67.00 62 ⇑P P 02 32 35.8 0.0
baz=67,SNR=5.0
M21A Separation Pea 67.03 53 ⇑P P 02 32 36.0 +0.1
baz=67
N20A Spence Gulch, 67.05 55 ⇑P P 02 32 36.3 +0.2
baz=67,SNR=8.6
U14A Mt Trumbull 67.11 61 ⇑P P 02 32 36.9 +0.3
baz=67,SNR=5.8
RSSD Black Hills 67.12 50 eP P 02 32 35.0 -1.5
RSSD pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
RSSD Black Hills 67.12 50 eP P 02 32 35.0 -1.4
comp=Z,4.0nm,0.5s,mb4.7
Q18A Rafter H Ranch 67.13 57 ⇓P P 02 32 36.6 -0.1
baz=67
T15A Red Dirt Ranch 67.19 60 ⇓P P 02 32 37.2 +0.2
baz=67
VSR Storozhevoye 67.23 321 eP pP 02 32 46.7 +0.3
VSR pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR MLR MLR
comp=N,470nm,18.0s
VSR MLR MLR
comp=Z,680nm,18.0s,MS4.9

VSR MLR MLR
comp=E,560nm,28.0s
R17A Hanksville Air 67.25 58 ⇓P P 02 32 37.1 -0.3
baz=67,SNR=6.8
VORD Divnogorie 67.36 321 *e*P pP 02 32 48.0 +0.8
IRM Iron Mountain 67.40 64 ⇑P P 02 32 38.9 +0.5
baz=67
P19A Cripple Cowboy 67.44 56 ⇓P P 02 32 38.0 -0.6
baz=67,SNR=5.1
N21A Black Mountain 67.51 54 ⇓P P 02 32 39.0 0.0
baz=67
BC3 Big Chuckw Mtn 67.55 64 ⇓P P 02 32 39.5 +0.1
baz=67
W13A Hualapai Mount 67.56 62 ⇓P P 02 32 39.3 -0.1
baz=67
M22A Cedar Creek Ra 67.59 53 ⇓P P 02 32 39.0 -0.5
baz=67
U15A North Rim 67.64 60 ⇑P P 02 32 40.1 +0.2
baz=68,SNR=5.6
V14A Boquillas Ranc 67.68 61 ⇓P P 02 32 39.9 -0.3
baz=68,SNR=17
S17A Black Ridge (B 67.72 59 ⇑P P 02 32 40.0 -0.4
baz=68,SNR=24
R18A Canyonlands Na 67.75 57 ⇓P P 02 32 39.8 -0.8
baz=68
X13A Yucca 67.93 63 ⇓P P 02 32 41.0 -0.7
baz=68,SNR=9.5
PDMCI Parker Dam,Lak 67.93 63 ⇑P P 02 32 41.7 -0.1
baz=68
W14A Seligman 67.97 62 ⇓P P 02 32 42.0 0.0
baz=68,SNR=7.8
AFI Afiamalu 67.98 143 LR LR 02 55 27.1
comp=E,221nm,20.3s,MS4.4,baz=88,slow=30
Y12C Blythe 68.06 64 ⇓P P 02 32 42.3 -0.3
baz=68
N22A Wattenberg Ran 68.08 54 ⇓P P 02 32 41.8 -0.8
baz=68
V15A Kaibab Nationa 68.12 61 ⇑P P 02 32 43.0 +0.1
baz=68,SNR=6.6
T17A Navajo Res., N 68.15 59 ⇓P P 02 32 42.8 -0.2
baz=68
S18A Hurst Farm, Bl 68.16 58 ⇓P P 02 32 42.5 -0.6
baz=68,SNR=7.2
R19A Curley Farm, L 68.18 57 ⇓P P 02 32 42.8 -0.4
baz=68
WRAB Tennant Creek 68.19 199 *e*P P 02 32 42.1 -1.2
WRAB pmax pmax
comp=Z,11nm,1.0s,mb4.8
WRAB Tennant Creek 68.19 199 *e*P P 02 32 42.1 -1.1
comp=Z,12nm,1.0s,mb4.9
WB2 Warramunga Arr 68.19 199 *e*P P 02 32 43.5 +0.2
WRA Warramunga Arr 68.20 199 P P 02 32 42.3 -1.0
comp=Z,9.1nm,0.9s,mb4.8,baz=18,slow=7.0,SNR=14
WRA LR LR 02 59 16.2
comp=Z,140nm,19.5s,MS4.2,baz=20,slow=33
AGMN Agassiz Refuge 68.24 42 *e*P P 02 32 44.4 +0.9
comp=Z,29nm,1.5s,mb5.1
Q20A Ridgley Place, 68.29 56 ⇓P P 02 32 43.7 -0.2
baz=68
NB2 NORSAR Subarra 68.44 341 P P 02 32 43.4 -1.1
comp=Z,11nm,0.7s,mb5.0,baz=28,slow=6.5
NOA NORSAR Array B 68.44 341 P P 02 32 43.9 -0.6
comp=Z,6.7nm,0.5s,mb4.9,baz=27,slow=6.4,SNR=18
NOA LR LR 03 05 56.6
comp=Z,296nm,19.8s,MS4.5,baz=40,slow=39
Y13A Salome 68.45 63 ⇑P P 02 32 45.1 +0.1
baz=68
W15A Williams 68.49 61 ⇑P P 02 32 45.6 +0.4
baz=68
U17A Shonto 68.50 59 ⇓P P 02 32 45.7 +0.4
baz=68
U16A Tuba City 68.53 60 ⇑P P 02 32 45.8 +0.3
baz=68,SNR=5.9
X14A Yava 68.59 62 ⇑P P 02 32 45.8 -0.1
baz=68,SNR=6.6
T18A Mexican Hat 68.60 58 ⇓P P 02 32 45.3 -0.6
baz=68,SNR=5.5
S19A Harvey Farm, M 68.62 57 ⇓P P 02 32 45.5 -0.5
baz=68,SNR=18
R20A Redvale 68.76 57 ⇓P P 02 32 46.8 -0.1
baz=69
Q21A Lamborn Mesa, 68.79 56 ⇑P P 02 32 47.2 +0.1
baz=69
WUAZ Wupatki 68.80 61 ⇑P P 02 32 47.6 +0.5
baz=69
WUAZ Wupatki 68.80 61 *e*P P 02 32 51.5 +4.3
comp=Z,9.1nm,1.0s,mb4.7
FITZ Fitzroy Crossi 68.82 208 *e*P P 02 32 45.6 -1.7
comp=Z,20nm,0.9s,mb5.0
FITZ Fitzroy Crossi 68.82 208 P P 02 32 46.0 -1.3
comp=Z,3.7nm,0.9s,mb4.3,baz=93,slow=5.8,SNR=3.7
Y14A Wickenburg 68.87 63 ⇓P P 02 32 47.5 -0.2
baz=69,SNR=7.2
Z13A Yuma Proving G 68.97 64 ⇓P P 02 32 47.8 -0.4
baz=69,SNR=7.9
X15A Humboldt 68.97 62 ⇑P P 02 32 48.4 +0.1
baz=69,SNR=18
V17A Tonalea, Kykot 69.08 60 ⇑P P 02 32 49.0 +0.1
baz=69,SNR=26
U18A Rough Rock, Ch 69.09 59 ⇓P P 02 32 48.7 -0.2
baz=69
R21A Cimarron 69.12 56 ⇓P P 02 32 49.4 +0.3
baz=69,SNR=5.1
Q22A Crested Butte, 69.15 55 ⇓P P 02 32 49.1 -0.1
baz=69
113A Mohawk Valley, 69.19 64 ⇓P P 02 32 49.4 -0.3
baz=69
NACGM Naroch 69.22 330 *e* P 02 32 51.0 +1.6
ISCO Idaho Springs 69.23 54 *e*P P 02 32 50.2 +0.4
ISCO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ISCO Idaho Springs 69.23 54 *e*P P 02 32 50.2 +0.4
comp=Z,6.0nm,0.9s,mb4.5
Y15A Casa Rosa Ranc 69.28 62 ⇓P P 02 32 50.0 -0.1
baz=69,SNR=7.6
DZM Mont Dzumac 69.31 167 *e*LR LR 02 53 47.1
comp=Z,395nm,26.9s
POO Poona 69.33 275 *e*P P 02 32 50.9 +0.2
POO AMb AMB 02 32 56.2
comp=Z,36nm,0.9s,mb5.3
MVCO Mesa Verde 69.36 58 ⇑P P 02 32 50.3 -0.3
baz=69,SNR=5.1
MVCO Mesa Verde 69.36 58 *e*P P 02 32 50.6 0.0
comp=Z,9.3nm,0.9s,mb4.7
S21A Coal Bank Pass 69.46 57 ⇑P P 02 32 51.5 +0.3
baz=69
X16A Lo Mia Camp, P 69.51 61 ⇑P P 02 32 51.9 +0.4
baz=69,SNR=7.4
V18A Ganado 69.53 60 ⇓P P 02 32 51.6 -0.1
baz=69,SNR=6.5
U19A Dine' College, 69.57 59 ⇓P P 02 32 51.8 -0.1
baz=69,SNR=5.7
R22A Saguache, Gunn 69.67 56 ⇑P P 02 32 52.8 +0.3
baz=70,SNR=5.5
114A Black Gap (USA 69.75 64 ⇑P P 02 32 53.2 +0.1
baz=70,SNR=7.5
Y16A Circle Bar Ran 69.85 62 ⇓P P 02 32 53.8 +0.1
baz=70,SNR=6.5
GOF Gofitskoye 69.91 315 *e*P sP 02 33 08.0 +1.2
GOF pmax pmax
comp=Z,50nm,1.3s,mb5.3
KAD Karad 69.94 274 *e*P P 02 32 54.1 -0.3
KAD AMb AMB 02 33 08.6
comp=Z,42nm,1.7s,mb5.1
X17A Forest Lakes 69.95 61 ⇑P P 02 32 54.9 +0.6
baz=70
115A Sonoran Desert 70.19 63 ⇑P P 02 32 56.1 +0.3
baz=70,SNR=5.8
Z16A Peralta Trail, 70.25 62 ⇑P P 02 32 56.1 0.0
baz=70
W19A Sanders 70.27 60 ⇑P P 02 32 56.5 +0.3
baz=70
X18A Snowflake 70.33 60 ⇑P P 02 32 56.7 +0.1
baz=70,SNR=5.5
214A Organ Pipe Nat 70.33 64 ⇓P P 02 32 56.9 +0.2
baz=70
V20A Brimhall 70.34 59 ⇑P P 02 32 56.8 +0.1
baz=70
Y17A Roosevelt 70.36 62 ⇓P P 02 32 56.3 -0.5
baz=70,SNR=6.0
T22A Edith 70.42 57 ⇓P P 02 32 56.9 -0.2
baz=70
EYMN Ely 70.48 40 *e*P P 02 33 00.2 +2.9
comp=Z,30nm,1.6s,mb5.0
116A Eloy 70.61 63 ⇓P P 02 32 58.6 +0.3
baz=70
SDCO Great Sand Dun 70.72 55 *e*P P 02 32 58.9 0.0
W20A Ramah 70.79 59 ⇓P P 02 32 59.7 +0.3
baz=71
Y18A Canyon Day Jun 70.80 61 ⇑P P 02 32 59.3 -0.1
baz=71,SNR=5.7
X19A St. Johns 70.80 60 ⇑P P 02 32 59.4 -0.1
baz=71,SNR=7.3
V21A Milan 70.83 58 ⇑P P 02 32 59.2 -0.4
baz=71
Z17A San Carlos Hig 70.86 62 ⇓P P 02 32 59.7 -0.1
baz=71
KIV Kislovodsk 70.88 314 *e*P P 02 33 05.1 +5.3
KIV *e*S S 02 42 15.8 +2.9
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,570nm,20.0s,MS4.8
KIV Kislovodsk 70.88 314 *e*P P 02 33 02.3 +2.5
comp=Z,14nm,0.9s,mb4.9
ZEI Tsey 71.13 313 *e*P P 02 33 02.6 +1.2
ZEI pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
216A Three Points, 71.14 63 ⇓P P 02 33 01.7 +0.1
baz=71
Y19A Nutrioso 71.14 60 ⇓P P 02 33 02.1 +0.6
baz=71,SNR=5.0
X20A Quemado 71.19 60 ⇓P P 02 33 02.0 +0.2
baz=71,SNR=6.3
117A Oracle 71.19 62 ⇑P P 02 33 01.6 -0.3
baz=71,SNR=5.8
ECSD EROS Data Cent 71.19 46 *e*P P 02 33 00.6 -1.1
comp=Z,12nm,1.0s,mb4.8
TUC Tucson 71.34 63 *e*P P 02 33 03.5 +0.7
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TUC Tucson 71.34 63 *e*P P 02 33 03.5 +0.7
comp=Z,6.3nm,1.1s,mb4.5
118A Homack Ranch, 71.62 62 ⇑P P 02 33 04.3 -0.1
baz=71,SNR=18
X21A Alamocita Cree 71.68 59 ⇓P P 02 33 04.8 0.0
baz=72,SNR=6.3
AKASG Malin Array Be 71.69 326 P P 02 33 02.7 -1.9
comp=Z,5.0nm,0.5s,mb4.7,baz=34,slow=6.4,SNR=20
AKASG LR LR 03 06 09.0
comp=Z,440nm,21.4s,MS4.7,baz=20,slow=37
AKASG Malin Array Be 71.69 326 P P 02 33 02.7 -1.9
AKASG LR LR 03 06 09.0
217A Green Valley 71.69 63 ⇓P P 02 33 05.0 +0.1
baz=72
Y20A Horse Springs, 71.70 60 ⇓P P 02 33 05.1 +0.2
baz=72,SNR=5.7
ASAR Alice Springs 71.89 198 P P 02 33 06.6 +0.7
comp=Z,6.8nm,0.9s,mb4.6,baz=12,slow=5.1,SNR=18
119A Ashpeak Ranch, 71.93 61 ⇑P P 02 33 06.6 +0.2
baz=72
218A Dragoon 72.03 62 ⇓P P 02 33 06.9 -0.1
baz=72,SNR=8.6
Y21A Point of Rocks 72.05 59 ⇑P P 02 33 07.6 +0.5
baz=72
LAZ Ladron 72.09 59 *e*P P 02 33 07.8 +0.5
comp=Z,2.2nm,1.1s,mb4.0
X22A Bernardo 72.10 59 ⇓P P 02 33 07.6 +0.3
baz=72
ANMO Albuquerque 72.11 58 *e*P P 02 33 11.4 +4.0
ANMO pmax pmax
comp=Z,29nm,2.2s
ANMO Albuquerque 72.11 58 *e*P P 02 33 11.4 +4.0
comp=Z,29nm,2.2s,mb4.8
Z20A Nine Sixteen R 72.12 61 ⇓P P 02 33 08.2 +0.7
baz=72
318A Bisbee 72.43 63 ⇑P P 02 33 09.3 -0.1
baz=72,SNR=8.2
120A U Bar Ranch, L 72.49 61 ⇑P P 02 33 09.7 0.0
baz=72,SNR=7.3
219A White Tail Can 72.49 62 ⇓P P 02 33 09.9 +0.1
baz=72,SNR=7.7
Y22A Socorro 72.52 59 ⇑P P 02 33 10.0 +0.1
baz=72
Z21A St. Cloud Mine 72.54 60 ⇑P P 02 33 10.0 +0.1
baz=72,SNR=5.9
GNI Garni 72.59 310 *c i*P P 02 33 16.1 +5.9
GNI pmax pmax
comp=Z,29nm,1.5s
GNI MLR MLR
comp=Z,411nm,19.0s
GNI Garni 72.59 310 *e*P P 02 33 12.2 +2.1
comp=Z,18nm,1.0s,mb5.0
SOC Sochi 72.61 316 *e*P P 02 33 14.2 +4.0
SOC *e*S S 02 42 28.1 -4.7
SOC pmax pmax
comp=Z,11nm,0.9s,mb4.8
RMQ Roma 72.71 184 *e*P P 02 33 14.4 +3.6
comp=Z,30nm,1.1s,mb5.1
BSD Bornholm Skovb 72.75 336 *i* P P 02 33 10.1 -0.7
BSD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BSD Bornholm Skovb 72.75 336 *i* P P 02 33 10.1 -0.7
comp=Z,10nm,0.9s,mb4.8
319A Douglas 72.91 62 ⇑P P 02 33 11.9 -0.3
baz=73,SNR=8.7
COP Copenhagen 72.91 338 *i* P P 02 33 14.9 +3.1
COP pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COP Copenhagen 72.91 338 *i* P P 02 33 14.9 +3.1
comp=Z,10nm,0.8s,mb4.8
220A Playas Peak, P 73.00 62 ⇑P P 02 33 12.3 -0.5
baz=73,SNR=8.1
121A Cookes Peak, D 73.02 61 ⇓P P 02 33 12.6 -0.2
baz=73,SNR=5.8
MUD Monsted U'grnd 73.03 340 *e*P P 02 33 17.9 +5.4
MUD pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MUD Monsted U'grnd 73.03 340 *i* P P 02 33 17.9 +5.4
comp=Z,5.0nm,0.7s,mb4.5
Y23A Lovelace Mesa, 73.06 59 ⇓P P 02 33 12.8 -0.2
baz=73
W25A X Bar L Ranch, 73.09 57 ⇓P P 02 33 13.0 -0.2
baz=73
221A Mesquite Ranch 73.39 61 ⇓P P 02 33 14.9 -0.1
baz=73,SNR=5.1
Y24A Capitan 73.43 58 ⇑P P 02 33 14.7 -0.5
baz=73,SNR=6.1
SCHQ Schefferville 73.63 23 P P 02 33 14.6 -1.4
comp=Z,4.5nm,0.9s,mb4.4,baz=330,slow=8.1,SNR=3.0
SCHQ LR LR 03 05 32.6
comp=Z,197nm,18.1s,MS4.4,baz=217,slow=36
222A Williams Famil 73.73 61 ⇑P P 02 33 17.2 +0.2
baz=74
Y25A Mesa, Roswell 73.87 58 ⇓P P 02 33 18.4 +0.6
baz=74
X26A CR and CF Fran 73.94 57 ⇑P P 02 33 18.4 +0.2
baz=74
124A Stringfield Ra 74.29 59 ⇓P P 02 33 19.8 -0.5
baz=74
Z25A Roswell 74.31 58 ⇓P P 02 33 20.5 +0.1
baz=74
224A Corundas Mount 74.69 60 ⇓P P 02 33 22.9 +0.3
baz=74
Z26A Caprock 74.75 58 ⇓P P 02 33 22.3 -0.6
baz=75,SNR=5.3
Y27A Causey 74.79 57 ⇓P P 02 33 23.0 -0.2
baz=75
125A Gardner Draw, 74.79 59 ⇑P P 02 33 23.1 -0.1
baz=75
KIS Kishinev 74.82 324 *e*L 02 59 42.0
KIS LRM 03 09 18.0
comp=Z,500nm,18.0s
MSTX Muleshoe 74.95 56 ⇓P P 02 33 24.2 +0.1
baz=75
Z27A Tatum 75.17 57 ⇑P P 02 33 24.7 -0.7
baz=75,SNR=5.0
GDL2 Guadalupe Moun 75.29 59 *e*P P 02 33 25.8 -0.3
OJC Ojcow 75.49 331 *e*P P 02 33 30.6 +3.7
325A Bean Ranch, Si 75.52 60 ⇓P P 02 33 27.2 -0.2
baz=75
226A Malaga, Loving 75.55 59 ⇑P P 02 33 27.2 -0.4
baz=75
STHS Stebnicka Huta 75.68 330 *e*P P 02 33 29.3 +1.3
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.7
STHS Stebnicka Huta 75.68 330 *e*P P 02 33 29.3 +1.3
comp=Z,11nm,1.0s,mb4.7
STHS Stebnicka Huta 75.68 330 *e*P P 02 33 29.3 +1.3
BUR08 Bucovina Ar. S 75.72 326 *e*P P 02 33 28.0 -0.2
KOLS Kolonicke sedl 75.72 329 *e*P P 02 33 31.7 +3.4
KOLS pmax pmax
comp=Z,15nm,1.0s,mb4.9
KOLS Kolonicke sedl 75.72 329 *e*P P 02 33 31.7 +3.4
comp=Z,15nm,1.0s,mb4.9
KOLS Kolonicke sedl 75.72 329 *e*P P 02 33 31.7 +3.4
BURAR Bucovina Array 75.73 326 ⇑P P 02 33 28.1 -0.3
BURAR Bucovina Array 75.73 326 ⇑*i*P P 02 33 28.0 -0.4
BUR01 Bucovina Ar. S 75.73 326 P P 02 33 32.6 +4.2
425A Indio Mountain 75.93 60 ⇓P P 02 33 29.2 -0.5
baz=76,SNR=6.1
NIE Niedzica 76.00 330 *e*P P 02 33 30.0 +0.2
326A Caldwell Ranch 76.15 59 ⇓P P 02 33 30.7 -0.3
baz=76
TRPA Tarpa 76.30 328 ⇑*i*P P 02 33 31.6 0.0
OKC Ostrava-Krasne 76.36 332 *e*P P 02 33 32.3 +0.4
OKC MLR MLR
comp=Z,400nm,15.0s,MS4.8
OKC Ostrava-Krasne 76.36 332 *e*P P 02 33 32.3 +0.4
OKC *ex* x 02 33 35.8
OKC AMS AMS 03 11 40.0
comp=Z,400nm,15.0s
UPC Upice 76.46 333 *e*P P 02 33 34.5 +2.1
UPC *ex* x 02 33 36.6
DPC Dobruska-Polom 76.50 333 *e*P P 02 33 32.3 -0.4
DPC MLR MLR
comp=Z,500nm,17.5s,MS4.9
DPC Dobruska-Polom 76.50 333 *e*P P 02 33 32.3 -0.4
DPC *ex* x 02 33 36.6
DPC AMS AMS 03 11 20.0
comp=Z,500nm,17.5s
ARMA Armidale 76.54 181 *e*P P 02 33 34.6 +1.7
ARMA Armidale 76.54 181 *e*P P 02 33 37.6 +4.7
VRI Vrincioaia 76.58 325 ⇑P P 02 33 33.2 0.0
VRI Vrincioaia 76.58 325 ⇑*i*P P 02 33 33.2 0.0
426A McDonald Obser 76.59 60 ⇑P P 02 33 32.9 -0.6
baz=76
MORC Moravsky Berou 76.61 332 *e*P P 02 33 33.3 0.0
MORC pmax pmax
comp=Z,13nm,1.0s,mb4.8
MORC Moravsky Berou 76.61 332 *e*P P 02 33 33.3 0.0
comp=Z,13nm,1.0s,mb4.8
MORC Moravsky Berou 76.61 332 ⇑*i*P P 02 33 33.2 -0.1
WMOK Wichita Mounta 76.65 53 *e*P P 02 33 33.2 -0.6
WMOK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
WMOK Wichita Mounta 76.65 53 *e*P P 02 33 33.2 -0.6
comp=Z,4.1nm,1.0s,mb4.3
CLL Collm 76.65 335 *e*P P 02 33 32.0 -1.5
CLL *i* pP 02 33 39.3 -3.7
CLL *i* 02 33 43.7
CLL pmax pmax
comp=Z,12nm,0.9s,mb4.8
CLL MLR MLR
comp=Z,400nm,19.1s,MS4.8
CLL Collm 76.65 335 *e*P P 02 33 32.0 -1.5
comp=Z,22nm,0.9s,mb5.1
CLL LR LR
comp=Z,400nm,19.1s,MS4.8
CLL Collm 76.65 335 *e*P P 02 33 32.0 -1.5
comp=Z,6.0nm,1.0s,mb4.5
CLL Lm 02 10 00.0
comp=N,300nm,19.5s
CLL Lm 02 10 00.0
comp=E,100nm,18.1s
CLL Lm 02 10 00.0
comp=Z,400nm,19.1s
CLL ⇑*i*P(2) 02 33 36.7
comp=Z,22nm,0.9s
CLL *i* pP pP 02 33 39.3 -3.7
CLL *i* pP(2) 02 33 43.7
CLL *e*S S 02 43 12.0 -5.7
CLL *e*PS 02 43 52.0
CLL *e*SS SS 02 48 42.0 +30
CLL *e* 02 50 54.0
CLL *e*SSS 02 51 42.0
CLL *e* 02 54 00.0
KECS Kecovo 76.73 330 *e*P P 02 33 37.6 +3.6
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KECS Kecovo 76.73 330 *e*P P 02 33 37.6 +3.6
comp=Z,6.9nm,0.9s,mb4.6
KECS Kecovo 76.73 330 *e*P P 02 33 37.6 +3.6
BRG Berggiesshubel 76.77 335 *e*P P 02 33 37.5 +3.3
comp=Z,13nm,1.2s,mb4.7
BRG
comp=N,264nm,16.0s
BRG
comp=E,230nm,25.9s
BRG
comp=Z,479nm,18.1s
BRG Berggiesshubel 76.77 335 *e*P P 02 33 37.5 +3.4
BRG pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BRG MLR MLR
comp=N,8μm,16.0s
BRG MLR MLR
comp=E,158nm,25.9s
BRG MLR MLR
comp=Z,138nm,18.1s,MS4.3
328A Wristen Ranch, 76.80 58 ⇑P P 02 33 33.9 -0.7
baz=77,SNR=5.6
427A Hayter Ranch, 76.83 59 ⇑P P 02 33 34.7 -0.2
baz=77
PVCC Panska Ves 76.88 334 *e*P P 02 33 35.3 +0.5
PVCC MLR MLR
comp=Z,500nm,15.7s,MS4.9
PVCC Panska Ves 76.88 334 *e*P P 02 33 35.3 +0.5
PVCC *ex* x 02 33 38.6
PVCC AMS AMS 03 11 10.0
comp=Z,500nm,15.7s
526A Mary Lane Ranc 76.99 60 ⇑P P 02 33 35.4 -0.4
baz=77,SNR=7.7
TIRR Tirgusor 77.04 323 *e*P P 02 33 35.6 -0.2
TIRR pmax pmax
comp=Z,12nm,1.0s,mb4.8
TIRR Tirgusor 77.04 323 *e*P P 02 33 35.6 -0.2
comp=Z,12nm,1.0s,mb4.8
TIRR Tirgusor 77.04 323 ⇑*i*P P 02 33 35.6 -0.2
HARR Harsova 77.05 323 ⇑P P 02 33 35.8 -0.1
HARR Harsova 77.05 323 ⇑*i*P P 02 33 35.8 -0.1
MLR Muntele Rosu 77.20 325 P P 02 33 41.9 +5.2
MLR Muntele Rosu 77.20 325 ⇑*i*P P 02 33 37.0 +0.3
527A Woodward Ranch 77.21 60 ⇑P P 02 33 36.4 -0.7
baz=77
MALT Malatya 77.23 313 *e*P P 02 33 38.1 +1.1
MALT pmax pmax
comp=Z,14nm,0.8s,mb4.9
MALT Malatya 77.23 313 *e*P P 02 33 38.1 +1.2
comp=Z,14nm,0.8s,mb4.9
MALT Malatya 77.23 313 ⇑*i*P P 02 33 38.3 +1.3
VYHS Vyhne 77.29 331 *e*P P 02 33 40.2 +3.0
VYHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VYHS Vyhne 77.29 331 *e*P P 02 33 40.2 +3.0
comp=Z,9.0nm,1.1s,mb4.6
VYHS Vyhne 77.29 331 *e*P P 02 33 40.2 +3.0
VRAC Vranov 77.33 332 P P 02 33 41.9 +4.6
626A Big Bend Ranch 77.33 60 ⇑P P 02 33 37.2 -0.5
baz=77,SNR=7.3
428A Kincaid Ranch, 77.34 59 ⇑P P 02 33 37.5 -0.2
baz=77
DRGR 77.36 327 P P 02 33 41.6 +4.0
DRGR 77.36 327 ⇑*i*P P 02 33 37.3 -0.3
PRU Pruhonice 77.37 334 *e*P P 02 33 38.1 +0.5
PRU *e* pP 02 33 48.5 +1.5
PRU MLR MLR
comp=Z,400nm,15.1s,MS4.9
PRU Pruhonice 77.37 334 *e*P P 02 33 38.1 +0.5
PRU *ex* x 02 33 41.8
PRU *e*pP pP 02 33 48.5 +1.5
PRU AMS AMS 03 11 10.0
comp=Z,400nm,15.1s
PSZ Piszkesteto 77.42 330 *e*P P 02 33 37.0 -0.9
PSZ pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
PSZ Piszkesteto 77.42 330 *e*P P 02 33 37.0 -0.9
comp=Z,6.1nm,1.0s,mb4.5
PSZ Piszkesteto 77.42 330 ⇑*i*P P 02 33 38.1 +0.2
VOIR 77.60 325 ⇓P P 02 33 39.4 +0.5
VOIR 77.60 325 ⇓*i*P P 02 33 39.3 +0.4
MOX Moxa 77.64 336 *e*P P 02 33 38.7 -0.4
comp=Z,15nm,1.4s,mb4.7
MOX
comp=Z,200nm,21.0s
TREC Trest 77.69 333 *e*P P 02 33 39.2 -0.2
TREC *e**PP pP 02 33 42.5 -6.3
TREC MLR MLR
comp=Z,600nm,19.9s,MS4.9
TREC Trest 77.69 333 *e*P P 02 33 39.2 -0.2

TREC ex x 02 33 42.5
TREC AMS AMS 03 12 10.0
comp=Z,600nm,19.9s
TXAR Lajitas Array 77.77 60 P **P 02 33 39.3 -0.9**
comp=Z,5.7nm,0.5s,mb4.7,baz=300,slow=4.8,SNR=49
NKC Novy Kostel 77.77 335 eP **P 02 33 39.5 -0.3**
NKC e 02 33 53.2
NKC MLR MLR
comp=Z,300nm,17.7s,MS4.7
NKC Novy Kostel 77.77 335 eP **P 02 33 39.5 -0.3**
NKC ex x 02 33 43.6
NKC epP pP 02 33 53.2 +3.9
NKC AMS AMS 03 10 30.0
comp=Z,300nm,17.7s
627A Terlingua Ranc 77.85 60 ⇑P **P 02 33 39.4 -1.2**
baz=78,SNR=7.5
628A Black Gap, Mar 78.12 60 ⇑P **P 02 33 41.7 -0.4**
baz=78
CCM Cathedral Cave 78.14 47 eP **P 02 33 44.8 +2.7**
KHC Kasperske Hory 78.42 334 eP **P 02 33 43.6 +0.2**
KHC e*PP pP 02 33 47.5 -5.4
KHC e 02 33 59.3
KHC MLR MLR
comp=Z,500nm,14.9s,MS5.0
KHC Kasperske Hory 78.42 334 eP **P 02 33 43.4 0.0**
comp=Z,12nm,0.8s,mb4.9
KHC Kasperske Hory 78.42 334 eP **P 02 33 43.6 +0.2**
KHC ex x 02 33 47.5
KHC epP pP 02 33 59.3 +6.4
KHC AMS AMS 03 12 10.0
comp=Z,500nm,14.9s
BR131 Keskin Array S 78.48 317 eP **P 02 33 44.3 +0.4**
comp=Z,5.3nm,0.8s,mb4.5
BRTR Keskin Array B 78.48 317 P **P 02 33 44.4 +0.4**
comp=Z,10nm,0.8s,mb4.8,baz=64,slow=4.2,SNR=45
BRTR LR LR 03 14 05.2
comp=Z,231nm,19.7s,MS4.5,baz=198,slow=40
PRD Provadia 78.49 323 i P **P 02 33 47.8 +3.9**
GZR Gura Zlata 78.52 327 ⇑P **P 02 33 43.9 -0.1**
GZR Gura Zlata 78.52 327 ⇑iP **P 02 33 43.9 -0.1**
GRA1 Grafenberg Arr 78.61 336 eP **P 02 33 44.6 +0.2**
comp=Z,16nm,1.2s,mb4.8
GRF Grafenberg Arr 78.61 336 eP **P 02 33 44.6 +0.2**
comp=Z,16nm,1.2s,mb4.8
GRF Grafenberg Arr 78.61 336 eP **P 02 33 44.6 +0.2**
GRF pmax pmax
comp=Z,16nm,1.2s,mb4.8
GRF Grafenberg Arr 78.61 336 eP **P 02 33 44.6 +0.2**
GRF pmax pmax
comp=Z,16nm,1.2s,mb4.8
GEC2 GERESS Array S 78.64 334 eP **P 02 33 44.7 +0.1**
comp=Z,1μm,1.0s
GERES GERESS Array B 78.64 334 P **P 02 33 44.1 -0.5**
comp=Z,3.3nm,0.7s,mb4.4,baz=27,slow=6.3,SNR=13
GERES LR LR 03 12 28.7
comp=Z,439nm,18.1s,MS4.8,baz=194,slow=39
STKA Stephens Creek 78.65 190 eP **P 02 33 43.9 -0.7**
comp=Z,4.9nm,0.9s,mb4.4
STKA Stephens Creek 78.65 190 P **P 02 33 47.2 +2.5**
comp=Z,6.2nm,0.9s,mb4.6,baz=354,slow=9.2,SNR=11
STKA LR LR 03 04 53.1
comp=Z,191nm,20.1s,MS4.4,baz=205,slow=33
STKA Stephens Creek 78.65 190 P **P 02 33 47.2 +2.5**
STKA LR LR 03 04 53.1
BZS Buzias 78.77 327 P **P 02 33 49.4 +4.0**
BZS Buzias 78.77 327 ⇑iP **P 02 33 45.5 +0.1**
CONA Conrad Observa 78.77 332 ⇑iP **P 02 33 45.9 +0.5**
comp=Z,15nm,1.0s,mb4.9,SNR=7.6
HGN Heimansgroeve 79.03 339 eP **P 02 33 50.2 +3.5**
comp=Z,11nm,1.1s,mb4.7
SZH Strazhica 79.04 324 i P **P 02 33 50.6 +3.6**
MEM Membach 79.15 339 P **P 02 33 50.9 +3.5**
comp=Z,11nm,1.8s,mb4.5
JCT Junction City 79.21 57 eP **P 02 33 51.3 +3.2**
PKSM Moragy 79.33 330 ⇑P **P 02 33 47.7 -0.8**
PKSM Moragy 79.33 330 ⇑iP **P 02 33 47.7 -0.8**
TOD Tromm 79.36 337 eP **P 02 33 52.1 +3.6**
BCLA Clavier 79.50 340 P **P 02 33 52.6 +3.3**
comp=Z,9.3nm,1.4s,mb4.5
GIVF Givet 79.91 340 eP **P 02 33 50.4 -1.1**
DOU Dourbes 79.97 340 P **P 02 33 55.3 +3.4**
comp=Z,5.9nm,2.2s,mb4.1
WLF Walferdange 79.99 339 P **P 02 33 56.4 +4.4**
comp=Z,9.8nm,1.8s,mb4.4
BAIF Baives 80.09 340 eP **P 02 33 51.6 -0.9**
comp=Z,12nm,0.9s,mb4.5
BAIF Baives 80.09 340 eP **P 02 33 51.6 -0.9**
BAIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BAIF Baives 80.09 340 eP **P 02 33 51.6 -0.9**
comp=Z,6.2nm,0.9s,mb4.5
FORT Forrest 80.10 202 eP **P 02 33 52.3 -0.3**
comp=Z,28nm,0.8s,mb5.2
FORT Forrest 80.10 202 P **P 02 33 53.0 +0.4**
comp=Z,13nm,0.7s,mb5.0
PERS Pernice 80.15 332 eP **P 02 33 58.1 +5.2**
DIM Dimitrovgrad 80.22 323 i P **P 02 33 58.3 +5.0**
KBA Koelnbreinsper 80.32 333 ⇑iP **P 02 33 54.3 +0.5**
comp=Z,27nm,0.9s,mb5.2,SNR=8.5
VTS Vitosha 80.71 325 i P **P 02 34 00.2 +4.2**
SPAK Spaichingen-Ko 80.73 337 eP **P 02 33 59.9 +3.9**
MOTA Moosalm 80.76 335 ⇑iP **P 02 33 56.2 0.0**
comp=Z,13nm,0.8s,mb4.9,SNR=14
CDF Champ du Feu 80.86 338 eP **P 02 33 55.6 -1.0**
comp=Z,19nm,0.9s,mb4.7
CDF Champ du Feu 80.86 338 eP **P 02 33 55.6 -1.0**
CDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CDF Champ du Feu 80.86 338 eP **P 02 33 55.6 -1.0**
comp=Z,9.4nm,0.9s,mb4.7
TAOE Nuku Hiva Isla 80.98 113 eLR LR 02 59 03.9
comp=Z,555nm,30.1s,baz=319
ECH Echery 81.07 338 eP **P 02 33 57.2 -0.6**
ECH pmax pmax
comp=Z,11nm,1.0s,mb4.7
ECH Echery 81.07 338 eP **P 02 33 57.2 -0.6**
comp=Z,11nm,1.0s,mb4.8
BOJS Bojanci 81.10 331 i P **P 02 34 00.7 +2.7**
JAVS Javornik 81.14 332 eP **P 02 34 00.5 +2.2**
FELD Feldberg im Sc 81.15 337 eP **P 02 34 01.8 +3.6**
CEY Cerknica 81.17 332 eP **P 02 34 01.0 +2.7**
MEZF Maizieres J'vi 81.34 339 eP **P 02 33 58.4 -0.8**
MMB Musomiste 81.34 324 i P **P 02 34 03.7 +4.3**
THEF They Montfort 81.36 338 eP **P 02 34 02.9 +3.6**
MOF Molkenrain 81.41 337 eP **P 02 34 03.3 +3.7**
HAU Haudompre 81.47 338 eP **P 02 33 58.8 -1.1**
comp=Z,14nm,0.8s,mb4.6
HAU eMLR MLR
comp=Z,397nm,20.0s,MS4.5
HAU Haudompre 81.47 338 eP **P 02 33 58.8 -1.1**
HAU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
HAU MLR MLR
comp=Z,400nm,20.0s,MS4.8
HAU Haudompre 81.47 338 eP **P 02 33 58.8 -1.1**
comp=Z,7.2nm,0.8s,mb4.7
HAU LR LR
comp=Z,400nm,20.0s,MS4.8
HINF Hinteralfeld 81.51 338 eP **P 02 33 58.7 -1.5**
comp=Z,10nm,0.8s,mb4.5
HINF Hinteralfeld 81.51 338 eP **P 02 33 58.7 -1.5**
HINF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HINF Hinteralfeld 81.51 338 eP **P 02 33 58.7 -1.5**
comp=Z,5.1nm,0.8s,mb4.5
BBS Basel-Blauen 81.66 337 eP **P 02 34 04.6 +3.6**
LOMF Lomont 81.95 337 eP **P 02 34 06.1 +3.6**
PPT Papeete 82.12 126 eS S 02 44 20.2 +3.8
comp=Z,387nm,30.0s
PPT eLR LR 02 59 41.3
comp=Z,665nm,25.0s,baz=325
PPT Papeete 82.12 126 LR LR 03 02 33.7
comp=Z,154nm,21.8s,MS4.3,baz=281,slow=30
FLN La Foliniere 82.35 343 eP **P 02 34 03.6 -1.0**
FLN eMLR MLR
comp=Z,418nm,21.0s,MS4.5
FLN La Foliniere 82.35 343 eP **P 02 34 03.6 -1.0**
FLN LR LR
comp=Z,420nm,21.0s,MS4.8
CSS Prodhromos 82.40 314 eP **P 02 34 06.2 +1.1**
comp=Z,11nm,0.6s,mb5.0
LDF La Druitiere 82.44 342 eP **P 02 34 03.8 -1.2**
LOR Lormes 82.78 339 eP **P 02 34 05.8 -1.0**
comp=Z,9.4nm,0.6s,mb4.7
LOR eMLR MLR
comp=Z,492nm,20.8s,MS4.6
LOR Lormes 82.78 339 eP **P 02 34 05.8 -1.0**
LOR pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LOR MLR MLR
comp=Z,490nm,20.8s,MS4.9
LOR Lormes 82.78 339 eP **P 02 34 05.8 -1.0**
comp=Z,4.7nm,0.6s,mb4.7
LOR LR LR
comp=Z,490nm,20.8s,MS4.9
GRR Gorron 82.79 343 eP **P 02 34 05.8 -1.0**
comp=Z,31nm,1.0s,mb5.0
GRR Gorron 82.79 343 eP **P 02 34 05.8 -1.0**
GRR pmax pmax
comp=Z,15nm,1.0s,mb5.0
GRR Gorron 82.79 343 eP **P 02 34 05.8 -1.0**
comp=Z,15nm,1.0s,mb5.0
CABF La Chapelle 82.83 338 eP **P 02 34 06.3 -0.8**
comp=Z,18nm,1.1s,mb4.7
CABF La Chapelle 82.83 338 eP **P 02 34 06.3 -0.8**
CABF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CABF La Chapelle 82.83 338 eP **P 02 34 06.3 -0.8**
comp=Z,9.2nm,1.1s,mb4.7
SSF Saint Saulge 83.06 339 eP **P 02 34 07.2 -1.1**
comp=Z,12nm,0.9s,mb4.6
SSF Saint Saulge 83.06 339 eP **P 02 34 07.2 -1.1**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
SSF Saint Saulge 83.06 339 eP **P 02 34 07.2 -1.1**
comp=Z,9.9nm,0.9s,mb4.6
SGMF Saint Gilles 83.25 344 eP **P 02 34 08.2 -1.0**
comp=Z,22nm,0.9s,mb4.9
SGMF Saint Gilles 83.25 344 eP **P 02 34 08.2 -1.0**
SGMF pmax pmax
comp=Z,11nm,0.9s,mb4.9
SGMF Saint Gilles 83.25 344 eP **P 02 34 08.2 -1.0**
comp=Z,11nm,0.9s,mb4.9
ROSF Rostrenen 83.31 344 eP **P 02 34 08.6 -0.9**
comp=Z,21nm,0.9s,mb4.9
ROSF Rostrenen 83.31 344 eP **P 02 34 08.6 -0.9**
ROSF pmax pmax
comp=Z,11nm,0.9s,mb4.9
ROSF Rostrenen 83.31 344 eP **P 02 34 08.6 -0.9**
comp=Z,10nm,0.9s,mb4.9
AVF Avril sur Loir 83.35 339 eP **P 02 34 08.9 -0.9**
comp=Z,22nm,0.8s,mb5.0
AVF Avril sur Loir 83.35 339 eP **P 02 34 08.9 -0.9**
AVF pmax pmax
comp=Z,11nm,0.8s,mb4.9
AVF Avril sur Loir 83.35 339 eP **P 02 34 08.9 -0.9**
comp=Z,11nm,0.8s,mb4.9
SMF Signal de Mont 83.37 339 eP **P 02 34 09.2 -0.7**
comp=Z,66nm,1.0s,mb5.3
SMF Signal de Mont 83.37 339 eP **P 02 34 09.2 -0.7**
SMF pmax pmax
comp=Z,33nm,1.0s,mb5.3
SMF Signal de Mont 83.37 339 eP **P 02 34 09.2 -0.7**
comp=Z,33nm,1.0s,mb5.3
LPL La Plagne 83.67 337 eP **P 02 34 11.3 -0.1**
LPG La Plagne 83.68 337 eP **P 02 34 11.5 0.0**
comp=Z,15nm,0.9s,mb4.8
LPG La Plagne 83.68 337 eP **P 02 34 11.5 0.0**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
LPG La Plagne 83.68 337 eP **P 02 34 11.5 0.0**
comp=Z,7.4nm,0.9s,mb4.8
BGF Bois d'Agland 83.69 340 eP **P 02 34 10.7 -0.8**
comp=Z,8.5nm,0.7s,mb4.7
BGF Bois d'Agland 83.69 340 eP **P 02 34 10.7 -0.8**
BGF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
BGF Bois d'Agland 83.69 340 eP **P 02 34 10.7 -0.8**
comp=Z,4.3nm,0.7s,mb4.7
QUIF Quistinic 83.69 344 eP **P 02 34 10.2 -1.3**
PLDF La Plantade 84.06 339 eP **P 02 34 17.5 +4.1**
AGO Saint Agoulin 84.10 339 eP **P 02 34 18.0 +4.4**
TCF Toulx Ste Croi 84.10 340 eP **P 02 34 12.8 -0.8**
MFF Saint Martin d 84.33 342 eP **P 02 34 13.5 -1.3**
MBDF Montbardon 84.38 336 eP **P 02 34 14.3 -0.8**
comp=Z,5.8nm,0.5s,mb4.7
MBDF Montbardon 84.38 336 eP **P 02 34 14.3 -0.8**
MBDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
MBDF Montbardon 84.38 336 eP **P 02 34 14.3 -0.8**
comp=Z,2.9nm,0.5s,mb4.7
PYM Petit Puy Mans 84.41 339 eP **P 02 34 19.3 +4.1**
ORIF Oris-en-Rattie 84.45 337 eP **P 02 34 15.2 -0.2**
comp=Z,32nm,1.0s,mb5.1
ORIF eMLR MLR
comp=Z,267nm,21.8s,MS4.3
ORIF Oris-en-Rattie 84.45 337 eP **P 02 34 15.2 -0.2**
ORIF pmax pmax
comp=Z,16nm,1.0s,mb5.1
ORIF Oris-en-Rattie 84.45 337 eP **P 02 34 15.2 -0.2**
comp=Z,16nm,1.0s,mb5.1
SSB Saint Sauveur 84.47 338 eP **P 02 34 15.7 +0.2**
SSB pmax pmax
comp=Z,13nm,1.0s,mb5.0
SSB Saint Sauveur 84.47 338 eP **P 02 34 15.7 +0.2**
comp=Z,13nm,1.0s,mb5.0
AQU L'Aquila 84.51 331 eP **P 02 34 15.4 -0.4**
AQU pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
AQU L'Aquila 84.51 331 eP **P 02 34 15.4 -0.4**
comp=Z,6.1nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.83 338 eP **P 02 34 16.9 -0.4**
comp=Z,16nm,0.9s,mb4.9
VIVF Saint-Julien-l 84.83 338 eP **P 02 34 16.9 -0.4**
VIVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
VIVF Saint-Julien-l 84.83 338 eP **P 02 34 16.9 -0.4**
comp=Z,7.9nm,0.9s,mb4.8
SBF Sospel 84.99 336 eP **P 02 34 16.8 -1.4**
comp=Z,37nm,0.9s,mb5.2
SBF Sospel 84.99 336 eP **P 02 34 16.8 -1.4**
SBF pmax pmax
comp=Z,19nm,0.9s,mb5.2
SBF Sospel 84.99 336 eP **P 02 34 16.8 -1.4**
comp=Z,19nm,0.9s,mb5.2
RJF Les Rejaudoux 85.19 340 eP **P 02 34 17.9 -1.2**
RJF eMLR MLR
comp=Z,466nm,21.2s,MS4.5
RJF Les Rejaudoux 85.19 340 eP **P 02 34 17.9 -1.2**
RJF LR LR
comp=Z,470nm,21.3s,MS4.8
SMRF Simiane la Rot 85.41 337 eP **P 02 34 19.4 -0.8**
CAF Calviac 85.41 340 eP **P 02 34 19.4 -0.9**
comp=Z,5.6nm,0.7s,mb4.5
CAF Calviac 85.41 340 eP **P 02 34 19.4 -0.9**
CAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
CAF Calviac 85.41 340 eP **P 02 34 19.4 -0.9**
comp=Z,2.8nm,0.7s,mb4.5
FRF La Foret Royal 85.49 336 eP **P 02 34 19.5 -1.2**
LFF La Frestale 85.71 341 eP **P 02 34 20.5 -1.2**
comp=Z,18nm,0.9s,mb5.0
LFF La Frestale 85.71 341 eP **P 02 34 20.5 -1.2**
LFF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
LFF La Frestale 85.71 341 eP **P 02 34 20.5 -1.2**
comp=Z,8.9nm,0.9s,mb5.0
PGF Pioggiola 85.74 334 eP **P 02 34 20.8 -1.1**
LMR La Mourre 85.74 336 eP **P 02 34 21.3 -0.6**
LASF Ste Croix 85.77 338 eP **P 02 34 21.2 -0.8**
MTLF Montolieu 86.87 339 eP **P 02 34 26.0 -1.5**
comp=Z,24nm,1.3s,mb5.0
MTLF Montolieu 86.87 339 eP **P 02 34 26.0 -1.5**
MTLF pmax pmax
comp=Z,12nm,1.3s,mb5.0
MTLF Montolieu 86.87 339 eP **P 02 34 26.0 -1.5**
comp=Z,12nm,1.3s,mb5.0
EPF Esparros 87.61 340 eP **P 02 34 29.8 -1.3**
SJPF Ste Jean 87.89 341 eP **P 02 34 30.5 -1.9**
ESDC Sonseca Array 91.77 342 P **P 02 34 48.1 -2.5**
comp=Z,0.1nm,0.4s,mb3.5,baz=13,slow=5.8,SNR=4.5
ESDC LR LR 03 20 10.1
comp=Z,165nm,20.0s,MS4.5,baz=65,slow=38
KEST Kesra 91.84 331 P **P 02 34 50.5 -0.6**
comp=Z,1.0nm,0.8s,mb4.2,baz=34,slow=3.6,SNR=1.9
KEST LR LR 03 20 16.0
comp=Z,108nm,18.6s,MS4.3,baz=350,slow=38
TORD Torodi Ar. Bea 115.25 329 PKIKP PKiKP 02 40 23.4 -1.2
comp=Z,0.3nm,0.8s,baz=25,slow=1.7,SNR=4.6
TORD PKKPbc PKKPbc 02 50 57.4 -0.2
comp=Z,0.2nm,0.5s,baz=217,slow=1.2,SNR=5.4
TORD PKKPab PKKPab 02 51 07.1 -0.1
comp=Z,1.3nm,1.0s,baz=212,slow=5.0,SNR=4.2
LPAZ La Paz 134.61 62 PKP PKPdf 02 41 01.9 +0.3
comp=Z,3.1nm,1.1s,baz=338,slow=5.3,SNR=5.2
PLCA Paso Flores 148.34 96 PKPbc PKPbc 02 41 28.7 0.0
comp=Z,17nm,0.9s,baz=283,slow=3.5,SNR=21
PLCA Paso Flores 148.34 96 ePKPbc PKPbc 02 41 28.7 0.0
CPUP Villa Florida 148.74 60 PKPbc PKPbc 02 41 29.7 -0.5
comp=Z,9.7nm,0.6s,baz=310,slow=1.8,SNR=26
CPUP Villa Florida 148.74 60 PKPbc PKPbc 02 41 29.7 -0.5
NVL N'lazarevskaya 149.32 204 ePKHKP 02 41 24.2
NVL e*PP 02 41 30.4
NVL pmax pmax
comp=Z,27nm,1.2s
VNA2 Neumayer--Watz 153.69 194 ePKPdf PKPdf 02 41 34.3 +1.8
VNA2 e 02 41 43.0
VNA2 e 02 41 55.6
VNA1 Neumayer--Stat 154.08 194 ePKPdf PKPab 02 41 57.5 +2.6

IDC 12 02:26:10.8±1.1, 10°.14N×138°.45E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, Error ellipse: s-maj=58.6km s-min=18.3km az=80.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.17**	**188**	P	P	P	02 32 23.2	+0.4
	1.0nm,1.0s,baz=11,slow=9.2,SNR=3.4							
ASAR	**Alice Springs**	**33.89**	**187**	P	P	P	02 32 55.9	+0.4
	0.5nm,0.4s,baz=16,slow=13,SNR=10							
STKA	**Stephens Creek**	**41.89**	**176**	P	P	P	02 34 02.2	-0.8
	2.4nm,0.8s,baz=348,slow=8.1,SNR=5.3							
MKAR	**Makanchi Array**	**59.75**	**319**	P	P	P	02 36 17.2	-0.4
	0.2nm,0.6s,baz=118,slow=5.2,SNR=3.3							
KURK	**Kurchatov**	**63.28**	**322**	P	P	P	02 36 41.8	+0.5
	0.6nm,0.8s,baz=105,slow=6.8,SNR=3.2							
BVAR	**Borovoye Array**	**68.80**	**323**	P	P	P	02 37 17.3	+0.5
	0.6nm,0.4s,baz=111,slow=7.9,SNR=3.9							
ARCES	**ARCESS Array B**	**88.35**	**341**	P	P	P	02 39 03.0	-1.2
	1.7nm,0.8s,baz=76,slow=7.5,SNR=3.7							
YKA	**Yellowknife Ar**	**88.76**	**26**	P	P	P	02 39 06.7	+0.4
	0.3nm,0.5s,baz=291,slow=4.9,SNR=8.8							

IDC 12 02:29:22.3±2.6, 4°.99N×84°.84W, h0km, mb3.4/2, mb1 3.6/2, mb1mx3.4/18, mbtmp3.4/2, Error ellipse: s-maj=102.8km s-min=49.7km az=43.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**61.44**	**345**	P	P	P	02 39 40.2	-0.1
	0.3nm,0.4s,baz=133,slow=6.2,SNR=14							
TORD	**Torodi Ar. Bea**	**85.51**	**77**	P	P	P	02 42 03.3	+0.3
	0.2nm,0.6s,baz=270,slow=5.1,SNR=7.3							
ASAR	**Alice Springs**	**138.33**	**240**	PKP	PKPdf	PKPdf	02 48 49.5	-1.0
	0.2nm,0.5s,baz=96,slow=4.1,SNR=3.1							
WRA	**Warramunga Arr**	**139.10**	**245**	PKP	PKPdf	PKPdf	02 48 51.5	-0.6
	0.3nm,0.6s,baz=108,slow=2.9,SNR=2.8							

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*IDC **12** 02:34:23.0±35.0, 14°.47S×169°.66E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=618.0km s-min=106.2km az=72.0*

ISC 12 02:34:56.8±4.9, 15°.7S±0°.2×167°.6E±0°.7, h121km±45km, n24, σ0°95/10, mb4.1/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**6.43**	**186**	eS	**Sn**	**Sn**	**02 37 40.7**	**-0.3**
NOUC	**Port Laguerre**	**6.45**	**190**	eP	**Pn**	**Pn**	**02 36 29.8**	**+0.4**
NOUC				eS	**Sn**	**Sn**	**02 37 41.1**	**-0.6**
EIDS	**Eidsvold**	**18.15**	**235**	eP	**P**	**P**	**02 39 01.9**	**+2.1**
CMSA	**Cobar Meteorol**	**25.40**	**228**	eP	**P**	**P**	**02 40 14.3**	**+1.3**
STKA	**Stephens Creek**	**28.57**	**231**	**P**	**P**	**P**	**02 40 41.6**	**+0.1**
	2.1nm,0.7s,mb3.9,baz=63,slow=9.0,SNR=5.7							
WRA	**Warramunga Arr**	**31.86**	**257**	P	**P**	**P**	**02 41 09.3**	**-1.3**
	0.7nm,0.6s,mb3.6,baz=85,slow=8.1,SNR=5.4							
ASAR	**Alice Springs**	**32.59**	**251**	P	**P**	**P**	**02 41 16.1**	**-0.9**
	2.8nm,0.7s,mb4.2,baz=76,slow=9.0,SNR=27							
BBOO	**Buckleboo**	**33.20**	**233**	eP	**P**	**P**	**02 41 22.2**	**+0.1**
	3.2nm,0.6s,mb4.3							
FITZ	**Fitzroy Crossi**	**40.11**	**260**	P	**P**	**P**	**02 42 20.2**	**-0.7**
	4.7nm,0.7s,mb4.4,baz=88,slow=7.5,SNR=11							
HINF	**Hinteralfeld**	**144.25**	**338**	ePKP1	PKPdf	PKPdf	02 54 15.1	-3.3
CABF	**La Chapelle**	**145.54**	**337**	ePKP1	PKPbc	PKPbc	02 54 20.4	-0.7
	4.6nm,0.7s							
FLN	**La Foliniere**	**145.62**	**346**	ePKP1	PKPbc	PKPbc	02 54 19.7	-1.5
LDF	**La Druitiere**	**145.69**	**345**	ePKP1	PKPbc	PKPbc	02 54 20.3	-1.2
LOR	**Lormes**	**145.76**	**340**	ePKP1	PKPbc	PKPbc	02 54 19.7	-2.0
SSF	**Saint Saulge**	**146.06**	**340**	ePKP1	PKPbc	PKPbc	02 54 21.5	-1.1
	3.0nm,0.7s							
GRR	**Gorron**	**146.06**	**346**	ePKP1	PKPbc	PKPbc	02 54 21.1	-1.5
LPG	**La Plagne**	**146.22**	**335**	ePKP1	PKPbc	PKPbc	02 54 23.8	+0.7
AVF	**Avril sur Loir**	**146.35**	**340**	ePKP1	PKPbc	PKPbc	02 54 23.0	-0.5
	0.9nm,0.4s							
SGMF	**Saint Gilles**	**146.55**	**348**	ePKP1	PKPbc	PKPbc	02 54 22.4	-1.6
ORIF	**Oris-en-Rattie**	**147.04**	**336**	ePKP1	PKPbc	PKPbc	02 54 25.2	-0.3
SBF	**Sospel**	**147.25**	**333**	ePKP1	PKPbc	PKPbc	02 54 25.1	-1.0
MFF	**Saint Martin d**	**147.55**	**344**	ePKP1	PKPbc	PKPbc	02 54 25.4	-1.5
FRF	**La Foret Royal**	**147.84**	**333**	ePKP1	PKPbc	PKPbc	02 54 25.2	-2.5
SMRF	**Simiane la Rot**	**147.94**	**335**	ePKP1	PKPbc	PKPbc	02 54 25.5	-2.5

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*NIED **12** 02:43:00, 21°.90N×122°.00E, h38km, Mw4.6 Best double couple: M0 1.06000×10^16 NP1:φs=35.00000°, δ87.00000°, λ129.00000°. NP2:φs 129.00000°, δ40.00000°, λ5.00000°.*

*IDC **12** 02:43:04.5±0.7, 21°.51N×122°.17E, h0km, mb4.1/16, mb1 4.3/17, mb1mx4.2/24, mbtmp4.2/17, ML4.1/1, MS3.6/5, Ms1 3.6/5, ms1mx3.1/28, Error ellipse: s-maj=34.2km s-min=13.5km az=68.0*

*NEIC **12** 02:43:06.0±0.5, 21°.62N×122°.27E, h10km, mb4.5/4, Error ellipse: s-maj=14.9km s-min=6.4km az=74.0*

*ISCJB **12** 02:43:07.2±0.6, 21°.64N±0°.02×122°.12E±0°.02, h23km±5km, mb4.2/24, MS3.6/4, Error ellipse: s-maj=3.3km s-min=2.9km az=148.3*

*TAP **12** 02:43:09.0, 21°.77N×122°.00E, h28km, ML4.8, C*

*JMA **12** 02:43:11.4±0.3, 21°.93N×122°.05E, h128km, M4.6*

*BJI **12** 02:43:15.8, 22°.47N×121°.87E, h10km, mB4.9/8, mb4.4/15, ML3.7/2, Ms7 3.6/2*

*MAN **12** 02:43:56, 18°.13N×121°.60E, h33km, mb3.7, ML2.4, MS1.9*

ISC 12 02:43:09.1±0.7, 21°.66N±0°.02×122°.09E±0°.02, h26km±6km, n122, σ1°32/169, mb4.2/24, MS3.6/4, 18D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.62**	**307**	⇓iP	**Pb**	**Pb**	**02 43 19.2**	**-2.2**
	baz=302							
TSEB	**Hengchuen, Pin**	**1.13**	**282**	eP	**Pn**	**Pn**	**02 43 27.8**	**-1.4**
	baz=290							
TSEB				eS	**Sn**	**Sn**	**02 43 42.2**	**-1.7**
	baz=290							
HEN	**Hengchun**	**1.30**	**285**	eP	**Pn**	**Pn**	**02 43 29.6**	**-1.9**
	baz=292							
HEN				eS	**Sn**	**Sn**	**02 43 46.3**	**-1.8**
	baz=292							
TAW	**Tawu**	**1.30**	**302**	eP	**Pn**	**Pn**	**02 43 29.6**	**-2.0**
	baz=300							
TAW				eS	**Sn**	**Sn**	**02 43 44.6**	**-3.6**
	baz=300							
EAST	**Anshuo**	**1.35**	**302**	P	**Pn**	**Pn**	**02 43 30.3**	**-2.0**
	baz=300							
EAST				eS	**Sn**	**Sn**	**02 43 45.7**	**-3.8**
	baz=300							
TTN	**Taitung**	**1.39**	**321**	eP	**Pn**	**Pn**	**02 43 31.0**	**-1.8**
	baz=331							
TTN				eS	**Sn**	**Sn**	**02 43 48.2**	**-2.2**
	baz=331							
ECL	**Taimali**	**1.40**	**312**	⇓iP	**Pn**	**Pn**	**02 43 30.8**	**-2.2**
	baz=297							
ECL				eS	**Sn**	**Sn**	**02 43 45.8**	**-4.9**
	baz=297							
TWG	**Pinlang**	**1.49**	**321**	ePg	**Pn**	**Pn**	**02 43 32.1**	**-2.1**
TWG	**Pinlang**	**1.49**	**321**	⇓iP	**Pn**	**Pn**	**02 43 32.5**	**-1.7**
	baz=305							
TWG				eS	**Sn**	**Sn**	**02 43 49.6**	**-3.2**
	baz=305							
SCZT	**Fangliau**	**1.53**	**298**	⇓iP	**Pn**	**Pn**	**02 43 33.8**	**-1.0**
	baz=295							
SCZT				eS	**Sn**	**Sn**	**02 43 51.3**	**-2.6**
	baz=295							
CHKT	**Chengkung**	**1.58**	**335**	⇓iP	**Pn**	**Pn**	**02 43 33.1**	**-2.3**
	baz=336							

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
CHKT				S	Sn	02 43 50.8	-4.2
	baz=336						
SSD	**Sandimen**	**1.73**	**309**	*e*P	**Pn**	02 43 35.9	-1.6
	baz=308						
SSD				*e*S	Sn	02 43 56.5	-2.2
	baz=308						
TWP	**Hsiaoliuchiu**	**1.74**	**293**	*e*P	**Pn**	02 43 38.9	+1.2
	baz=291						
TWP				*e*S	Sn	02 44 00.6	+1.6
	baz=291						
ELDTW	**Lidau**	**1.81**	**327**	⇓*i*P	**Pn**	02 43 37.0	-1.6
	baz=335						
SGLT	**Jiouru**	**1.82**	**306**	*e*P	**Pn**	02 43 38.4	-0.3
	baz=305						
SGLT				*e*S	Sn	02 44 01.0	+0.1
	baz=305						
TWF1	**Yuli**	**1.83**	**337**	⇓*i*P	**Pn**	02 43 37.2	-1.7
	baz=338						
YULB	**Yu-li**	**1.87**	**337**	*e*Pn	**Pn**	02 43 37.7	-1.7
YULB				*e*Sg	Sn	02 44 00.1	-2.1
TWM1	**Shoushan**	**1.93**	**307**	*e*P	**Pn**	02 43 41.7	+1.5
	baz=306						
TWM1				*e*S	Sn	02 44 05.3	+1.7
	baz=306						
STYT	**Tauyuan**	**1.94**	**321**	*e*P	**Pn**	02 43 39.7	-0.6
	baz=321						
EHY	**Hungye**	**1.97**	**339**	⇓*i*P	**Pn**	02 43 39.2	-1.6
	baz=349						
SGST	**Jiashian**	**1.98**	**316**	P	**Pn**	02 43 41.6	+0.6
	baz=316						
SGST				*e*S	Sn	02 44 05.6	+0.6
	baz=316						
WTP	**Ta-pu**	**2.08**	**319**	⇓P	**Pn**	02 43 43.0	+0.6
	baz=320						
WTP				*e*S	Sn	02 44 08.2	+0.7
	baz=320						
CHN1	**Nanshi**	**2.09**	**317**	P	**Pn**	02 43 43.3	+0.8
	baz=317						
CHN1				*e*S	Sn	02 44 08.2	+0.5
	baz=317						
YUS	**Yu-Shan**	**2.10**	**330**	⇓*i*P	**Pn**	02 43 42.1	-0.5
	baz=337						
TPUB	**Ta-pu**	**2.12**	**321**	*e*Pn	**Pn**	02 43 43.2	+0.5
TPUB				*e*Sg	Sn	02 44 10.6	+2.4
CHN3	**Shinhua**	**2.13**	**312**	*e*P	**Pn**	02 43 44.6	+1.7
	baz=311						
CHN3				*e*S	Sn	02 44 09.4	+0.9
	baz=311						
CHN4	**Tsaushan**	**2.17**	**321**	⇓*i*P	**Pn**	02 43 44.5	+0.9
	baz=321						
CHN4				*e*S	Sn	02 44 10.9	+1.1
	baz=321						
TWK	**Hsinying**	**2.18**	**317**	*e*P	**Pn**	02 43 44.6	+0.9
	baz=318						
ALS	**Alishan**	**2.19**	**327**	⇓*i*P	**Pn**	02 43 44.1	+0.3
	baz=314						
ALS				*e*S	Sn	02 44 09.9	-0.1
	baz=314						
TAI1	**Yung-k'ang**	**2.20**	**309**	*e*P	**Pn**	02 43 45.1	+1.1
	baz=308						
ESL	**Shilin**	**2.22**	**344**	P	**Pn**	02 43 42.8	-1.5
	baz=356						
ESL				*e*S	Sn	02 44 08.6	-2.4
	baz=356						
SCLT	**Jiali**	**2.31**	**311**	*e*P	**Pn**	02 43 45.5	+0.1
	baz=311						
SCLT				*e*S	Sn	02 44 12.7	-0.3
	baz=311						
CHN5	**Tsauling**	**2.32**	**326**	⇓*i*P	**Pn**	02 43 46.6	+1.0
	baz=310						
CHN5				*e*S	Sn	02 44 14.9	+1.5
	baz=310						
HWA	**Hwalien**	**2.34**	**349**	*e*P	**Pn**	02 43 43.7	-2.2
	baz=351						
SSLB	**Suanglung**	**2.36**	**334**	*e*Pn	**Pn**	02 43 45.7	-0.5
CHN2	**Minshiung**	**2.38**	**322**	*e*P	**Pn**	02 43 48.0	+1.5
	baz=322						
CHY	**Chiayi**	**2.39**	**320**	*e*P	**Pn**	02 43 47.1	+0.6
	baz=305						
CHY				*e*S	Sn	02 44 14.7	-0.2
	baz=305						
CHN8	**Yiju**	**2.41**	**314**	*e*P	**Pn**	02 43 47.2	+0.3
	baz=314						
TWD	**Chiawan**	**2.45**	**349**	*e*P	**Pn**	02 43 45.6	-1.8
WGK	**Gukeng**	**2.46**	**325**	*e*P	**Pn**	02 43 48.5	+1.0
	baz=311						
WGK				*e*S	Sn	02 44 17.3	+0.6
	baz=311						
SMLT	**Sun Moon Lake**	**2.47**	**334**	P	**Pn**	02 43 48.1	+0.4
	baz=345						
SMLT				*e*S	Sn	02 44 17.1	+0.2
	baz=345						
TYC	**Yuchr**	**2.50**	**333**	*e*P	**Pn**	02 43 48.0	-0.2
	baz=344						
TYC				*e*S	Sn	02 44 19.4	+1.6
	baz=344						
NACB	**Ninganchiao**	**2.54**	**350**	*e*Pn	**Pn**	02 43 47.0	-1.7
WNT	**Mingjian**	**2.56**	**330**	*e*P	**Pn**	02 43 50.5	+1.7
	baz=318						
WNT				*e*S	Sn	02 44 20.4	+1.3
	baz=318						
WHF	**Hehuan Shan**	**2.58**	**343**	⇓*i*P	**Pn**	02 43 48.7	-0.5
	baz=345						
WHF				*e*S	Sn	02 44 17.9	-1.9
	baz=345						
TWT	**Tachien**	**2.71**	**342**	⇓*i*P	**Pn**	02 43 51.3	+0.3
	baz=352						
WDGT	**Dungji**	**2.75**	**306**	*e*P	**Pn**	02 43 50.6	-0.9
	baz=305						
WDGT				*e*S	Sn	02 44 21.1	-2.8
	baz=305						
ENA	**Nanau**	**2.77**	**353**	*e*P	**Pn**	02 43 50.9	-1.0
	baz=355						
TCU	**Taichung**	**2.79**	**333**	*e*P	**Pn**	02 43 53.2	+1.1
	baz=319						
TCU				*e*S	Sn	02 44 25.9	+0.9
	baz=319						
NNS	**Nan Shan**	**2.84**	**347**	*e*P	**Pn**	02 43 51.9	-0.9
	baz=358						
HATJ	**Hateruma jima**	**2.86**	**33**	P	**Pn**	02 43 54.1	+1.0
HATJ				S	Sn	02 44 26.3	-0.3
YOJ	**Yonaguni jima**	**2.91**	**17**	P	**Pn**	02 43 54.0	+0.2
YOJ				S	Sn	02 44 27.6	-0.3
YOJ	**Yonaguni jima**	**2.91**	**17**	*e*P	**Pn**	02 43 53.8	0.0
	baz=19						
TWQ1	**Liyutan**	**2.93**	**336**	P	**Pn**	02 43 55.9	+1.9
	baz=323						
TWQ1				*e*S	Sn	02 44 30.6	+2.1
	baz=323						
TWC	**Suao**	**2.94**	**356**	*e*P	**Pn**	02 43 53.7	-0.4
	baz=357						
TWC				*e*S	Sn	02 44 27.3	-1.3
	baz=357						
NSY	**Sanyi**	**3.00**	**336**	P	**Pn**	02 43 57.1	+2.2
	baz=324						
NSY				*e*S	Sn	02 44 32.3	+2.2
	baz=324						
PNG	**Penghu**	**3.01**	**309**	*e*P	**Pn**	02 43 54.2	-0.9
	baz=309						
PNG				*e*S	Sn	02 44 27.2	-3.2
	baz=309						
IRIF	**Iriomote-Funau**	**3.06**	**29**	P	**Pn**	02 43 56.6	+0.8
IRIF				S	Sn	02 44 31.8	+0.2
YHNB	**Yeheng**	**3.06**	**348**	*e*Pn	**Pn**	02 43 55.9	0.0
TWE	**Neicheng**	**3.07**	**353**	*e*P	**Pn**	02 43 55.5	-0.4
	baz=355						
NSK	**Sanguang**	**3.07**	**348**	⇓P	**Pn**	02 43 56.1	+0.2
	baz=357						
JKRS	**Kuro-shima**	**3.11**	**34**	P	**Pn**	02 43 57.7	+1.2
JKRS				S	Sn	02 44 33.0	+0.1
NSTT	**Nanjuang**	**3.12**	**342**	*e*P	**Pn**	02 43 57.6	+1.0
	baz=325						
NSTT				*e*S	Sn	02 44 33.4	+0.4
	baz=325						
JIJ	**Ishigaki jima**	**3.29**	**35**	P	**Pn**	02 43 59.5	+0.6
JIJ				S	Sn	02 44 35.8	-1.4
TWB1	**Santiao Chiao**	**3.33**	**358**	*e*P	**Pn**	02 43 58.9	-0.7
	baz=10.0						
TWA	**Mucha**	**3.33**	**352**	*e*P	**Pn**	02 44 00.2	+0.7
	baz=354						
TATO	**Taipei**	**3.34**	**351**	*e*Pn	**Pn**	02 44 00.4	+0.7
TAP1	**Taipei**	**3.40**	**351**	*e*P	**Pn**	02 44 00.5	+0.1
	baz=353						
NWF	**Wu-fen Shan**	**3.40**	**355**	⇓P	**Pn**	02 44 01.8	+1.3
	baz=9.0						
NWF				*e*S	Sn	02 44 41.8	+1.7
	baz=9.0						
TWS1	**Kuangyinshan**	**3.48**	**350**	*e*P	**Pn**	02 44 02.7	+1.1
	baz=352						
TWY	**Chenhua**	**3.62**	**353**	*e*P	**Pn**	02 44 05.1	+1.6
	baz=355						
JTJ	**Tarama**	**3.82**	**39**	P	**Pn**	02 44 06.8	+0.6
JTJ				S	Sn	02 44 49.4	-0.9
APYP	**Conner**	**3.86**	**192**	*e*P	**Pn**	02 44 06.7	-0.2
PCYT	**Pengchaiyu**	**3.95**	**360**	*e*P	**Pn**	02 44 07.8	-0.2
	baz=2.0						
ABRA	**Dolores**	**4.20**	**198**	*e*P	**Pn**	02 44 14.2	+2.7
JMJ	**Miyako jima 2**	**4.30**	**43**	S	**Sn**	02 45 01.6	-0.7
JOGS	**Gusukube**	**4.34**	**44**	P	**Pn**	02 44 14.5	+1.1
JOGS				S	**Sn**	02 45 02.9	-0.2
QZH	**Quanzhou**	**4.58**	**316**	Pn	**Pn**	02 44 16.7	0.0
QZH				Sn	**Sn**	02 45 05.2	-3.9
QZH				smax			
	comp=N,300nm,0.6s						
QZH				smax			
	comp=E,280nm,0.4s						
PALP	**Palanan**	**4.59**	**176**	*e*P	**Pn**	02 44 18.4	+1.6
CAUP	**Cauayan**	**4.70**	**183**	*e*P	**Pn**	02 44 20.2	+1.8
CAUP				*e*S	**Pb**	02 44 27.0	-3.9
BOLP	**Bolinao**	**5.64**	**202**	*e*P	**Pn**	02 44 33.1	+1.8
BALP	**Baler**	**5.91**	**185**	*e*P	**Pn**	02 44 35.3	+0.3
JKE	**Kume jima 2**	**6.32**	**42**	P	**Pn**	02 44 41.5	+0.8
JKE				*e*S	**Sn**	02 45 49.7	-2.4
JAGN	**Aguni-jima**	**6.80**	**43**	*e*S	**Sn**	02 46 00.2	-3.5
TGY	**Tagaytay City**	**7.60**	**188**	Pn	**Pn**	02 44 59.0	+0.8
	comp=E,36nm,0.3s,baz=323,slow=20,SNR=7.7						
JOW	**Kunigami**	**7.64**	**46**	*e*S	**Sn**	02 46 20.4	-4.0
GQP	**Guinayangan**	**7.72**	**177**	⇓*i*P	**Pn**	02 45 00.6	+0.7
QIZ	**Qiongzhong**	**11.78**	**259**	*e*Pn	**Pn**	02 45 55.7	+0.1
KSRS	**Korea Array**	**16.53**	**17**	Pn	**Pn**	02 47 00.5	+1.4
	comp=E,0.6nm,0.3s,baz=199,slow=12,SNR=27						
KSRS				Sn	**Sn**	02 49 56.2	-5.6
	comp=E,1.0nm,0.3s,baz=202,slow=23,SNR=8.9						
KSRS				LR	LR	02 53 47.3	
	comp=E,145nm,19.2s,baz=20,slow=39						
BJI	**Beijing**	**19.00**	**346**	P	**Pn**	02 47 31.6	+2.0
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI				LR	LR		
	comp=Z,140nm,19.4s						
LZH	**Lanzhou**	**21.43**	**316**	*e*P	**P**	02 47 57.8	+2.5
LZH				pP		02 48 04.1	
LZH				sP	sP	02 48 07.3	+1.6
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.3						
LZH				pmax	pmax		
	comp=Z,87nm,4.5s						
CMAR	**Chiang Mai Arr**	**21.97**	**266**	P	**P**	02 48 01.7	+0.6
	comp=Z,3.3nm,0.9s,mb3.8,baz=71,slow=9.0,SNR=9.5						
MDJ	**Mudanjiang**	**23.72**	**13**	P	**P**	02 48 13.0	-6.0
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,180nm,6.6s						
MDJ	**Mudanjiang**	**23.72**	**13**	*e*P	**P**	02 48 22.1	+3.2
	comp=Z,33nm,0.9s,mb4.8						
SONM	**Songino Array**	**29.00**	**338**	P	**P**	02 49 06.0	-0.6
	comp=Z,3.0nm,0.7s,mb4.1,baz=155,slow=10,SNR=5.5						
SONM				LR	LR	03 01 49.9	
	comp=Z,176nm,21.4s,MS3.6,baz=109,slow=39						
KAKA	**Kakadu**	**35.64**	**162**	*e*P	**P**	02 50 00.4	-4.6
	comp=Z,15nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**39.67**	**175**	*e*P	**P**	02 50 36.7	-2.4
	comp=Z,8.3nm,1.1s,mb4.4						
FITZ	**Fitzroy Crossi**	**39.67**	**175**	P	**P**	02 50 35.6	-3.5
	comp=Z,4.2nm,0.8s,mb4.2,baz=353,slow=6.1,SNR=6.6						
MK31	**Makanchi Array**	**40.74**	**318**	*e*P	**P**	02 50 48.6	+0.9
MKAR	**Makanchi Array**	**40.74**	**318**	P	**P**	02 50 49.0	+1.3
	comp=Z,1.8nm,0.4s,mb4.0,baz=112,slow=10.0,SNR=29						
PETK	**Petropavlovsk-**	**41.52**	**32**	LR	LR	03 09 33.0	
	comp=Z,28nm,21.5s,MS3.1,baz=230,slow=38						
ZALV	**Zalesovo Beam**	**42.81**	**328**	P	**P**	02 51 04.8	+0.3
	comp=Z,7.4nm,0.5s,mb4.7,baz=114,slow=7.6,SNR=14						
ZALV	**Zalesovo Beam**	**42.81**	**328**	P	**P**	02 51 04.8	+0.3
WRAB	**Tennant Creek**	**43.04**	**163**	*e*P	**P**	02 51 04.8	-2.0
	comp=Z,6.2nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**43.05**	**163**	P	**P**	02 51 04.8	-2.0
	comp=Z,7.3nm,0.7s,mb4.5,baz=345,slow=9.1,SNR=54						
WB2	**Warramunga Arr**	**43.05**	**163**	*e*P	**P**	02 51 04.8	-2.0
TKM2	**Tokmak 2**	**43.99**	**310**	*e*P	**P**	02 51 16.4	+2.1
	comp=Z,4.2nm,0.8s,mb4.2						
KURK	**Kurchatov**	**44.56**	**321**	*e*P	**P**	02 51 19.2	+0.5
	comp=Z,9.4nm,1.1s,mb4.5						
ASAR	**Alice Springs**	**46.50**	**165**	P	**P**	02 51 32.9	-1.4
	comp=Z,2.0nm,0.5s,mb4.3,baz=347,slow=8.7,SNR=34						
BVAR	**Borovoye Array**	**50.15**	**322**	P	**P**	02 52 02.4	+0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=97,slow=12,SNR=4.4						
FORT	**Forrest**	**52.45**	**174**	*e*P	**P**	02 52 18.2	-1.4
	comp=Z,11nm,0.6s,mb5.0						
BBOO	**Buckleboo**	**55.79**	**166**	*e*P	**P**	02 52 42.9	-1.0
	comp=Z,6.9nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**56.42**	**160**	P	**P**	02 52 47.0	-1.4
	comp=Z,1.1nm,0.6s,mb4.1,baz=345,slow=12,SNR=4.3						
ARCES	**ARCESS Array B**	**72.18**	**338**	P	**P**	02 54 33.6	+2.4
	comp=Z,3.0nm,1.0s,mb4.2,baz=78,slow=4.7,SNR=3.2						
FINES	**FINESS Array B**	**74.03**	**330**	P	**P**	02 54 42.5	+0.2
	comp=Z,1.8nm,0.7s,mb4.1,baz=59,slow=8.3,SNR=3.2						
AKASG	**Malin Array Be**	**75.30**	**319**	P	**P**	02 54 50.0	+0.1
	comp=Z,1.5nm,0.6s,mb4.1,baz=60,slow=5.9,SNR=8.1						
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	02 54 51.2	+0.9
	comp=Z,0.6nm,1.0s,mb3.5,baz=94,slow=4.6,SNR=3.0						
NOA	**NORSAR Array B**	**80.83**	**333**	P	**P**	02 55 20.3	-0.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=62,slow=4.8,SNR=2.4						
NOA				LR	LR	03 35 27.1	
	comp=Z,31nm,19.5s,MS3.7,baz=5.0,slow=39						
YKA	**Yellowknife Ar**	**84.96**	**23**	P	**P**	02 55 42.3	+0.6
	comp=Z,0.1nm,0.6s,mb3.1,baz=308,slow=4.9,SNR=3.5						
YKA	**Yellowknife Ar**	**84.96**	**23**	P	**P**	02 55 42.3	+0.6
GERES	**GERESS Array B**	**85.31**	**321**	P	**P**	02 55 45.4	+1.6
	comp=Z,1.2nm,0.8s,mb4.1,baz=67,slow=7.8,SNR=7.4						
MAW	**Mawson**	**99.01**	**199**	LR	LR	03 37 21.4	
	comp=Z,57nm,19.6s,MS4.1,baz=305,slow=33						

NIED ***12*** *02:47:00,35°.80N×138°.00E,h5km,Mw3.7 Best double couple: M₀=4.72000×10¹⁴ NP1:φ₀=238.00000°,δ85.00000°, λ-171.00000°. NP2:φ₀=147.00000°,δ81.00000°, λ-5.00000°.*

ISCJB ***12*** *02:47:15.9±0.6,35°.79N±0°.04×137°.99E±0°.06,h10km, Error ellipse: s-maj=7.2km s-min=5.0km az=25.6*

IDC ***12*** *02:47:16.7±1.3,35°.85N×137°.96E,h0km,mb3.6/2, mb1 3.8/3,mb1mx3.3/26,mbtmp3.5/3,ML2.9/1,Error ellipse: s-maj=11.6km s-min=10.1km az=105.0*

JMA ***12*** *02:47:16.3,35°.79N×137°.97E,h10km,M4.0 Broadband fault plane solution: P waves. NP1:φ₀=242.00000°, δ71.00000°,λ-166.00000°. NP2:φ₀=148.00000°, δ77.00000°,λ-20.00000°. Principal axes: T Plg4.0000°, Azm196.0000°; N Plg67.0000°, Azm295.0000°; P Plg23.0000°, Azm104.0000°;*

JMA Felt II J1.

ISC 12 02:47:16.4±0.6, 35°.80N±0°.04×138°.00E±0°.06, h10km, n12, σ0°96/13, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNT	**Takato**	**0.14**	**56**	⇑P	**Pg**		**02 47 19.7**	**+0.1**
JNT				S	**Sg**		**02 47 22.2**	**+0.4**
JNY	**Yasuok**	**0.45**	**194**	⇑P	**Pg**		**02 47 24.7**	**-0.5**
JNY				*e*S	**Sg**		**02 47 31.0**	**-0.2**
JYN	**Shimob**	**0.54**	**124**	⇓P	**Pg**		**02 47 27.1**	**+0.3**
SHZ3	**Shizuoka 3**	**0.75**	**167**	⇑P	**Pg**		**02 47 30.2**	**-0.7**
MAT	**Matsushiro**	**0.76**	**13**	P	**Pg**		**02 47 30.6**	**-0.6**
MAT				S			02 47 40.6	
MJAR	**Matsushiro Arr**	**0.76**	**13**	Pg	**Pg**		**02 47 30.2**	**-0.9**
	437nm,0.3s,baz=201,slow=18,SNR=862							
MJAR				Lg			02 47 40.8	
	248nm,0.3s,baz=199,slow=32,SNR=25							
JRY	**Ryogami san**	**0.77**	**73**	⇓P	**Pg**		**02 47 31.0**	**-0.2**
JTT	**Ttatey**	**0.97**	**327**	P	**Pg**		**02 47 35.0**	**-0.1**
JGM	**Miyama**	**1.05**	**265**	⇓P	**Pg**		**02 47 35.6**	**-0.9**
KSRS	**Korea Array**	**8.27**	**285**	Pn	**Pn**		**02 49 18.6**	**+2.2**
	0.1nm,0.3s,baz=98,slow=14,SNR=5.0							
KSRS				Lg			02 51 52.8	
	0.1nm,0.3s,baz=102,slow=32,SNR=5.8							
WRA	**Warramunga Arr**	**55.54**	**184**	P	pP		02 56 53.5	-1.6
	0.8nm,0.8s,baz=359,slow=7.3,SNR=4.8							
ASAR	**Alice Springs**	**59.27**	**184**	P	**P**		**02 57 20.8**	**+2.7**
	0.3nm,0.7s,baz=2.1,slow=8.7,SNR=4.4							

ISCJB ***12*** *02:55:20.8±0.8,39°.42N±0°.03×33°.06E±0°.05,h5km±6km, Error ellipse: s-maj=6.7km s-min=4.4km az=38.8*

CSEM ***12*** *02:55:20.8±0.1,39°.43N×33°.04E,h5km,MD2.8,Error ellipse: s-maj=4.7km s-min=3.3km az=119.0*

DDA ***12*** *02:55:20.5,39°.42N×33°.07E,h7km±1km,Md2.8*

ISK ***12*** *02:55:21.2,39°.47N×33°.06E,h16km,MD3.0*

ISC 12 02:55:21.3±0.6, 39°.43N±0°.03×33°.05E±0°.05, h8km±5km, n40, σ0°70/51, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.13**	**28**	*i* P	**Pg**		**02 55 23.7**	**-0.5**
BBAL				*i* S	**Sg**		**02 55 25.9**	**-0.1**
BBAL	**Bala**	**0.13**	**28**	*i* P	**Pg**		**02 55 23.7**	**-0.4**
BBAL				*i* S	**Sg**		**02 55 25.9**	**-0.1**
LOD	**Lodumlu**	**0.51**	**335**	PG	**Pg**		**02 55 31.1**	**0.0**
LOD				*e*SG	**Sg**		**02 55 38.5**	**+0.7**
LOD	**Lodumlu**	**0.51**	**335**	*i* Pg	**Pg**		**02 55 31.2**	**0.0**
KIZT	**Kizilcal**	**1.06**	**239**	*e*PN	**Pn**		**02 55 42.8**	**+0.3**
KIZT				*e*SN	**Sn**		**02 55 57.5**	**+0.1**
KIZT	**Kizilcal**	**1.06**	**239**	*e*Pn	**Pn**		**02 55 42.8**	**+0.3**
KIZT				*e*Sn	**Sn**		**02 55 57.5**	**+0.1**
ELDT	**Eldivan**	**1.10**	**15**	*i* P	**Pg**		**02 55 42.4**	**0.0**
ELDT				*i* S	**Sg**		**02 55 57.5**	**+0.8**
ELDT	**Eldivan**	**1.10**	**15**	*i* P	**Pg**		**02 55 42.4**	**0.0**
ELDT				*i* S	**Sg**		**02 55 57.5**	**+0.8**
KDHN	**Kadinhani**	**1.16**	**219**	*i* P	**Pg**		**02 55 42.6**	**-1.0**
KDHN				*i* S	**Sg**		**02 55 59.6**	**+1.0**
KDHN	**Kadinhani**	**1.16**	**219**	*i* P	**Pg**		**02 55 42.6**	**-1.0**
KDHN				*i* S	**Sg**		**02 55 59.6**	**+1.0**
SVRH	**Sivrihisar-ESK**	**1.18**	**271**	*e*PN	**Pn**		**02 55 43.4**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.18**	**271**	*e*Pn	**Pn**		**02 55 43.4**	**-0.8**
CANT	**Cankiri**	**1.26**	**20**	*e*PN	**Pn**		**02 55 43.7**	**-1.5**
SULT	**Sultanhani-AKS**	**1.28**	**163**	*e*PN	**Pn**		**02 55 45.2**	**-0.4**
SULT	**Sultanhani-AKS**	**1.28**	**163**	*e*Pn	**Pn**		**02 55 45.2**	**-0.4**
LADK	**Ladik-KONYA**	**1.34**	**204**	*e*PN	**Pn**		**02 55 46.3**	**0.0**
LADK	**Ladik-KONYA**	**1.34**	**204**	*e*Pn	**Pn**		**02 55 46.3**	**0.0**
CORM	**Corum**	**1.43**	**58**	*e*PN	**Pn**		**02 55 46.6**	**-1.0**
CORM	**Corum**	**1.43**	**58**	*e*Pn	**Pn**		**02 55 46.7**	**-0.9**
KONT	**Konya--Tatoy**	**1.58**	**200**	*e*PN	**Pn**		**02 55 50.3**	**+0.7**
KONT	**Konya--Tatoy**	**1.58**	**200**	*e*Pn	**Pn**		**02 55 50.3**	**+0.7**
ESKT	**Eskisehir**	**1.70**	**274**	*e*PN	**Pn**		**02 55 51.0**	**-0.3**
ESKT	**Eskisehir**	**1.70**	**274**	*e*Pn	**Pn**		**02 55 51.0**	**-0.3**
TOS	**Tosya**	**1.77**	**25**	*e*PN	**Pn**		**02 55 51.4**	**-0.9**
TOS	**Tosya**	**1.77**	**25**	*e*Pn	**Pn**		**02 55 51.4**	**-0.9**
YOZ	**Yozgat**	**1.77**	**82**	*e*PN	**Pn**		**02 55 52.5**	**+0.2**
YOZ	**Yozgat**	**1.77**	**82**	*e*Pn	**Pn**		**02 55 52.5**	**+0.2**
CTKT	**Corum**	**1.79**	**48**	*i* P	**Pn**		**02 55 53.4**	**+0.8**
CTKT				*i* S	**Sn**		**02 56 17.0**	**+1.4**
CTKT	**Corum**	**1.79**	**48**	*i* P	**Pn**		**02 55 53.4**	**+0.8**
CTKT				*i* S	**Sn**		**02 56 17.0**	**+1.4**
SAFT	**Safranbolu**	**1.83**	**352**	*e*PN	**Pn**		**02 55 53.2**	**+0.1**
SAFT	**Safranbolu**	**1.83**	**352**	*e*Pn	**Pn**		**02 55 53.2**	**+0.1**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**		**02 55 58.0**	**-0.1**
GULT	**Gulveren**	**2.19**	**298**	*e*Pn	**Pn**		**02 55 58.0**	**0.0**
HDMB	**Hadim**	**2.50**	**190**	*e*PN	**Pn**		**02 56 02.7**	**+0.4**
HDMB	**Hadim**	**2.50**	**190**	*e*Pn	**Pn**		**02 56 02.7**	**+0.4**
KOZT	**Kozan**	**2.92**	**131**	*e*PN	**Pn**		**02 56 09.3**	**+1.1**
SARI	**SarD1z-Kayseri**	**2.94**	**104**	*e*PN	**Pn**		**02 56 07.5**	**-0.9**
SARI	**SarD1z-Kayseri**	**2.94**	**104**	*e*Pn	**Pn**		**02 56 07.5**	**-0.9**
SVSK	**Karacayir**	**3.09**	**80**	*e*PN	**Pn**		**02 56 10.4**	**0.0**
SVSK	**Karacayir**	**3.09**	**80**	*e*Pn	**Pn**		**02 56 10.4**	**0.0**

JMA 12 03:13:01.0±0.1, 43°.28N×145°.42E, h94km±1km, M3.6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.25**	**70**	P		Pn	03 13 14.7	+0.1
NEM2				*e*S		Sn	03 13 24.9	+0.1
JNK	**Nakash**	**0.59**	**301**	P		Pn	03 13 16.7	-0.2
JNK				*e*S		Sn	03 13 28.4	-0.3
JAK	**Akkeshi**	**0.60**	**242**	P		Pn	03 13 17.1	+0.2
JAK				*e*S		Sn	03 13 29.1	+0.3
JRA	**Rausu**	**0.69**	**342**	P		Pn	03 13 17.9	+0.1
JRA				*e*S		Sn	03 13 30.7	+0.4
JAR	**Ashorobuto**	**1.21**	**271**	P		Pn	03 13 23.6	+0.3
JAR				*e*S		Sn	03 13 40.1	0.0
JOB	**Onbets**	**1.22**	**253**	P		Pn	03 13 23.9	+0.4
JOB				*e*S		Sn	03 13 40.5	+0.1
JTKR	**Abashiri--Toko**	**1.30**	**303**	P	

TUIG	**Tuzandepetl**	**1.34**	**38**	*i* P	**Pn**	**04 38 19.0**	**-0.4**
TUIG				*i* S	**Sn**	**04 38 38.5**	**+0.3**
OXX	**Oaxaca**	**1.38**	**275**	*i* P	**Pn**	**04 38 20.5**	**+0.6**
OXX				*i* S	**Sn**	**04 38 38.8**	**-0.3**
OXX	**Oaxaca**	**1.38**	**275**	*i* P	**Pn**	**04 38 20.5**	**+0.6**
OXX				*i* S	**Sn**	**04 38 38.8**	**-0.3**
VHO	**Vista Hermosa**	**1.39**	**274**	*i* P	**Pn**	**04 38 20.3**	**+0.2**
VHO				*i* S	**Sn**	**04 38 38.9**	**-0.3**
VHO	**Vista Hermosa**	**1.39**	**274**	*i* P	**Pn**	**04 38 20.3**	**+0.2**
VHO				*i* S	**Sn**	**04 38 38.9**	**-0.3**
HUIG	**Huatulco**	**1.43**	**214**	*i* P	**Pn**	**04 38 18.9**	**-1.7**
HUIG				*i* S	**Sn**	**04 38 38.6**	**-1.5**
HUIG	**Huatulco**	**1.43**	**214**	*i* P	**Pn**	**04 38 18.9**	**-1.7**
HUIG				*i* S	**Sn**	**04 38 38.6**	**-1.5**
TGIG		**2.08**	**95**	*i* P	**Pn**	**04 38 28.1**	**-0.5**
TGIG				*i* S	**Sn**	**04 38 53.0**	**-1.4**
PCIG		**2.34**	**122**	*i* P	**Pn**	**04 38 32.5**	**+0.4**
PCIG				*i* S	**Sn**	**04 38 59.9**	**-0.7**
TPIG	**Tehuac#an**	**2.45**	**306**	*i* P	**Pn**	**04 38 33.3**	**-0.1**
TPIG				*i* S	**Sn**	**04 39 03.1**	**0.0**
UTMO	**Huajuapan**	**2.56**	**290**	*i* P	**Pn**	**04 38 35.4**	**+0.6**
UTMO				*i* S	**Sn**	**04 39 05.6**	**0.0**
PNIG	**Pinotepa**	**2.79**	**259**	*i* P	**Pn**	**04 38 35.9**	**-2.0**
PNIG	**Pinotepa**	**2.79**	**259**	*i* P	**Pn**	**04 38 35.9**	**-2.0**
PNIG				*i* S	**Sn**	**04 39 08.9**	**-2.1**
LVIG	**Laguna Verde**	**2.94**	**339**	*i* P	**Pn**	**04 38 37.2**	**-2.7**
LVIG				*i* S	**Sn**	**04 39 09.7**	**-5.1**
LVIG	**Laguna Verde**	**2.94**	**339**	*i* P	**Pn**	**04 38 37.2**	**-2.7**
LVIG				*i* S	**Sn**	**04 39 09.7**	**-5.1**
CCIG	**Comitan**	**3.09**	**102**	*i* P	**Pn**	**04 38 41.5**	**-0.3**
CCIG	**Comitan**	**3.09**	**102**	*i* P	**Pn**	**04 38 41.5**	**-0.3**
CCIG				*i* S	**Sn**	**04 39 17.5**	**-0.7**
PPM	**Popocatepetl**	**3.81**	**304**	*e*P	**Pn**	**04 38 52.7**	**+1.3**
PPM	**Popocatepetl**	**3.81**	**304**	*e*P	**Pn**	**04 38 52.7**	**+1.3**
PPM				*i* P		04 38 53.7	
PPM				*i* S	**Sn**	**04 39 34.7**	**-0.6**
PPM				*i* S	**Sn**	**04 39 36.0**	**+0.7**
YAIG	**Yautepec**	**4.07**	**298**	*i* P	**Pn**	**04 38 55.3**	**+0.4**
YAIG	**Yautepec**	**4.07**	**298**	*i* P	**Pn**	**04 38 55.3**	**+0.4**
YAIG				*i* S	**Sn**	**04 39 41.8**	**+0.2**
IIO	**Organos**	**4.18**	**309**	*i* P	**Pn**	**04 38 56.3**	**-0.2**
IIO	**Organos**	**4.18**	**309**	*i* P	**Pn**	**04 38 56.3**	**-0.2**
IIO				*i* S	**Sn**	**04 39 44.4**	**0.0**
PLIG	**Platanillo**	**4.27**	**290**	*i* P	**Pn**	**04 38 57.6**	**-0.1**
PLIG	**Platanillo**	**4.27**	**290**	*i* P	**Pn**	**04 38 57.6**	**-0.1**
PLIG				*i* S	**Sn**	**04 39 46.4**	**0.0**
MZVM		**4.36**	**301**	*i* P	**Pn**	**04 39 01.6**	**+2.7**
MZVM				*i* S	**Sn**	**04 39 51.4**	**+2.8**
PBVM	**Pinon**	**4.37**	**305**	*i* P	**Pn**	**04 39 00.2**	**+1.1**
PBVM	**Pinon**	**4.37**	**305**	*i* P	**Pn**	**04 39 00.2**	**+1.1**
PBVM				*i* S	**Sn**	**04 39 49.1**	**+0.2**
JAT	**Jato**	**4.39**	**126**	*e*P	**Pn**	**04 39 02.0**	**+2.7**
ACX	**Acapulco**	**4.44**	**269**	*i* P	**Pn**	**04 38 56.9**	**-3.1**
ACX	**Acapulco**	**4.44**	**269**	*i* P	**Pn**	**04 38 56.9**	**-3.1**
ACX				*i* S	**Sn**	**04 39 45.0**	**-5.6**
PTVM	**Pico Tres Padr**	**4.48**	**306**	*e*P	**Pn**	**04 39 02.0**	**+1.5**
PTVM	**Pico Tres Padr**	**4.48**	**306**	*e*P	**Pn**	**04 39 02.0**	**+1.5**
PTVM				*i* S	**Sn**	**04 39 51.6**	**0.0**
TP2	**Tecpan 2**	**4.64**	**117**	*e*P	**Pn**	**04 39 04.4**	**+1.7**
CAIG	**El Cayaco**	**4.77**	**272**	*i* P	**Pn**	**04 38 58.4**	**-6.0**
CAIG	**El Cayaco**	**4.77**	**272**	*i* P	**Pn**	**04 38 58.4**	**-6.0**
CAIG				*i* S	**Sn**	**04 39 58.0**	**-0.6**
DEIG	**Demacu**	**4.86**	**314**	*i* P	**Pn**	**04 39 07.9**	**+2.2**
FUG	**Fuego 3**	**4.96**	**120**	*e*P	**Pn**	**04 39 09.2**	**+2.2**
APG	**El Apazote**	**5.03**	**112**	P	**Pn**	**04 39 07.1**	**-0.8**
	18nm,0.3s,baz=297,slow=9.9,SNR=175						
APG				S	**Sn**	**04 40 02.0**	**-2.8**
	35nm,0.3s,baz=166,slow=20,SNR=10						
IXG	**Ixpaco**	**5.42**	**120**	*e*P	**Pn**	**04 39 15.1**	**+1.8**
MRL	**Marmol**	**5.70**	**109**	*e*P	**Pn**	**04 39 16.6**	**-0.4**
ZIIG	**Zihuatanejo**	**5.94**	**277**	*i* P	**Pn**	**04 39 17.4**	**-2.9**
ZIIG	**Zihuatanejo**	**5.94**	**277**	*i* P	**Pn**	**04 39 17.4**	**-2.9**
ZIIG				*i* S	**Sn**	**04 40 26.1**	**-1.0**
RBDL	**Robledal**	**6.09**	**117**	*e*P	**Pn**	**04 39 22.6**	**+0.2**
RBDL				*e*S	Px	04 40 02.3	
MOIG	**Morelia**	**6.22**	**297**	*i* P	**Pn**	**04 39 25.7**	**+1.6**
MOIG	**Morelia**	**6.22**	**297**	*i* P	**Pn**	**04 39 25.7**	**+1.6**
RTR	**El Retiro**	**6.23**	**119**	*e*P	**Pn**	**04 39 25.4**	**+1.1**
SBLS	**San Blas**	**6.28**	**119**	*e*P	**Pn**	**04 39 26.3**	**+1.3**
SNJE	**San Jose**	**6.28**	**119**	*e*P	**Pn**	**04 39 25.3**	**+0.4**
LFRS	**El Faro**	**6.86**	**118**	*e*P	**Pn**	**04 39 33.6**	**+0.8**
TGUH	**Tegucigalpa,Un**	**8.24**	**109**	*e*Pn	**Pn**	**04 39 53.6**	**+2.0**
CRIN	**San Cristobal**	**9.02**	**117**	*e*P	**Pn**	**04 40 04.2**	**+2.0**
CRIN				*e*S	Px	04 40 19.5	
CNGN	**Cerro Negro**	**9.41**	**117**	*e*P	**Pn**	**04 40 08.9**	**+1.4**
COPN	**Copaltepe**	**9.66**	**118**	*e*P	**Pn**	**04 40 11.4**	**+0.5**
CSAN		**9.80**	**118**	AML	AML	04 40 17.3	
	comp=Z,354nm,0.4s						
BOAB	**BOACO BROADBAN**	**10.33**	**115**	*e*P	**Pn**	**04 40 20.1**	**+0.1**
SSN	**San Juan del S**	**10.74**	**120**	*e*P	**Pn**	**04 40 25.9**	**+0.3**
JTS	**JuntasAbangare**	**12.03**	**122**	P	**Pn**	**04 40 41.8**	**-1.0**
	comp=Z,5.7nm,0.3s,baz=321,slow=18,SNR=32						
JTS	**JuntasAbangare**	**12.03**	**122**	*e*Pn	**Pn**	**04 40 42.9**	**+0.1**
HKT	**Hockley**	**12.93**	**358**	*e*Pn	**Pn**	**04 41 00.9**	**+6.3**
JCT	**Junction City**	**14.07**	**344**	*e*Pn	**Pn**	**04 41 09.9**	**+0.6**
TXAR	**Lajitas Array**	**14.52**	**329**	P	**Pn**	**04 41 16.7**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=149,slow=13,SNR=13						
NATX	**Nacogdoches**	**14.74**	**2**	*e*P	**Pn**	**04 41 21.9**	**+4.1**
MNTX	**Cornudas Mount**	**17.30**	**330**	*e*P	**Pn**	**04 41 50.0**	**+0.4**
	comp=Z,2.9nm,1.4s						
MIAR	**Mount Ida**	**17.57**	**5**	*e*P	**Pn**	**04 41 52.5**	**-0.4**
	comp=Z,17nm,0.9s						
WMOK	**Wichita Mounta**	**17.97**	**351**	*e*P	**Pn**	**04 41 56.5**	**-1.2**
	comp=Z,19nm,1.5s						
AMTX	**Amarillo**	**18.74**	**343**	*e*Pn	**Pn**	**04 42 07.2**	**+0.4**
	comp=Z,12nm,0.9s						
GOGA	**Godfrey**	**19.53**	**31**	*e*P	**P**	**04 42 12.4**	**-1.4**
	comp=Z,4.3nm,0.5s						
BNM	**Barren Site**	**19.91**	**331**	*e*P	**P**	**04 42 18.8**	**+0.8**
	comp=Z,3.9nm,1.0s						
WVT	**Waverly**	**20.20**	**18**	*e*P	**P**	**04 42 19.8**	**-1.3**
	comp=Z,4.9nm,0.7s						
LAZ	**Ladron**	**20.36**	**331**	*e*P	**P**	**04 42 24.2**	**+1.4**
	comp=Z,1.4nm,0.9s						
ANMO	**Albuquerque**	**20.51**	**333**	P	**P**	**04 42 25.8**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=138,slow=10,SNR=9.3						
ANMO				sP	sP	04 42 57.8	0.0
	comp=Z,4.1nm,0.8s,baz=144,slow=11,SNR=9.0						
ANMO	**Albuquerque**	**20.51**	**333**	*e*P	**P**	**04 42 25.4**	**+1.0**
	comp=Z,1.5nm,0.7s						
TUC	**Tucson**	**20.74**	**320**	*e*P	**P**	**04 42 28.7**	**+1.7**
	comp=Z,11nm,1.0s						
TKL	**Tuckaleechee C**	**21.25**	**27**	P	**P**	**04 42 29.8**	**-2.6**
	comp=Z,4.4nm,0.6s,mb3.9,baz=193,slow=14,SNR=6.6						
CCM	**Cathedral Cave**	**21.30**	**9**	*e*P	**P**	**04 42 32.1**	**-0.8**
KSU1	**Kansas State U**	**22.08**	**357**	*e*P	**P**	**04 42 41.5**	**+0.3**
	comp=Z,16nm,0.8s,mb4.4						
OLIL	**Olney**	**22.58**	**15**	*e*P	**P**	**04 42 44.7**	**-1.7**
	comp=Z,16nm,1.0s,mb4.3						
WCI	**Wyandotte Cave**	**22.60**	**19**	*e*P	**P**	**04 42 44.0**	**-2.6**
SCIA	**State Center**	**24.92**	**4**	*e*P	**P**	**04 43 07.2**	**-0.7**
	comp=Z,46nm,0.8s,mb5.0						
SDV	**Santo Domingo**	**25.31**	**105**	P	**P**	**04 43 11.7**	**0.0**
	comp=Z,1.9nm,0.6s,mb3.7,baz=22,slow=14,SNR=3.9						
JFWS	**Jewell Farm**	**26.21**	**8**	*e*P	**P**	**04 43 18.3**	**-1.3**
	comp=Z,16nm,1.0s,mb4.4						
PDAR	**Pinedale Array**	**28.45**	**338**	P	**P**	**04 43 38.5**	**-1.1**
	comp=Z,0.2nm,0.6s,mb2.9,baz=70,slow=3.0,SNR=3.3						
ELK	**Elko**	**29.30**	**328**	LR	LR	04 56 56.8	
	comp=Z,49nm,18.0s,baz=220,slow=39						
NVAR	**Mina Array Bea**	**29.39**	**321**	P	**P**	**04 43 50.3**	**+2.4**
	comp=Z,3.4nm,0.7s,mb4.1,baz=134,slow=8.8,SNR=20						
NVAR				sP	sP	04 44 23.6	-0.2
	comp=Z,1.8nm,0.9s,baz=128,slow=9.8,SNR=3.7						
SADO	**Sadowa**	**30.86**	**23**	P	**P**	**04 43 57.2**	**-3.7**
	comp=Z,3.1nm,0.9s,mb4.0,baz=194,slow=18,SNR=3.3						
SADO	**Sadowa**	**30.86**	**23**	P	**P**	**04 43 57.2**	**-3.7**
AGMN	**Agassiz Refuge**	**31.25**	**359**	P	**P**	**04 44 02.2**	**-2.0**
	comp=Z,8.7nm,1.0s,mb4.4						
MCMT	**McKenzie Canyo**	**31.46**	**336**	*e*P	**P**	**04 44 08.1**	**+2.0**
	comp=Z,0.7nm,0.6s,mb3.6						
ULM	**Lac du Bonnet**	**33.20**	**359**	P	**P**	**04 44 18.2**	**-3.1**
	comp=Z,1.4nm,0.5s,mb4.1,baz=187,slow=11,SNR=4.5						
ULM	**Lac du Bonnet**	**33.20**	**359**	P	**P**	**04 44 18.2**	**-3.1**
LPAZ	**La Paz**	**42.53**	**140**	P	**P**	**04 45 39.8**	**-0.2**
	comp=Z,1.9nm,0.7s,mb3.9,baz=295,slow=10,SNR=5.2						
SIV	**San Ignacio**	**47.02**	**132**	P	**P**	**04 46 15.0**	**-0.7**
	comp=Z,2.6nm,0.7s,mb4.1,baz=310,slow=6.9,SNR=14						
SIV				pP	pP	04 46 39.8	-0.9
	comp=Z,1.2nm,0.6s,baz=321,slow=8.5,SNR=4.5						
YKA	**Yellowknife Ar**	**47.45**	**348**	P	**P**	**04 46 17.6**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.2,baz=153,slow=7.2,SNR=80						
YKA				sP	sP	04 46 54.6	-0.7
	comp=Z,0.7nm,0.7s,baz=152,slow=7.6,SNR=3.5						
ARCES	**ARCESS Array B**	**84.31**	**18**	P	**P**	**04 50 13.7**	**-0.8**
	comp=Z,2.9nm,0.8s,mb4.2,baz=318,slow=8.8,SNR=4.0						

*IDC **12** 04:58:43.3±1.0, 4°.46S×102°.24E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.3/24, mbtmp4.3/16, MS3.6/2, Ms1 3.6/2, ms1mx3.0/27, Error ellipse: s-maj=37.6km s-min=10.0km az=49.0*

*ISCJB **12** 04:58:47.3±0.6, 4°.64S±0°.05×101°.86E±0°.06, h51km±6km, mb4.4/19, Error ellipse: s-maj=11.7km s-min=5.7km az=135.3*

*DJA **12** 04:58:47, 4°.64S×101°.88E, h16km, Mw5.4/4*

*NEIC **12** 04:58:48.2±0.6, 4°.49S×102°.03E, h35km, mb4.6/5, Error ellipse: s-maj=26.3km s-min=7.2km az=51.0*

ISC 12 04:58:49.2±0.6, 4°.60S±0°.06×101°.92E±0°.05, h48km±5km, n57, σ0=97/51, mb4.4/19, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.06**	**77**	P	**Pn**	**04 59 06.3**	**-1.3**
KSI	**Kapahiang**	**1.16**	**35**	P	**Pn**	**04 59 07.3**	**-1.7**
LHSI	**Lahat**	**1.77**	**64**	P	**Pn**	**04 59 18.6**	**+1.2**
LWLI	**Liwa**	**2.17**	**101**	P	**Pn**	**04 59 22.3**	**-0.5**
MDSI	**Maura Dua**	**2.25**	**87**	P	**Pn**	**04 59 23.5**	**-0.5**
PPSI	**Pulau Pagai**	**2.64**	**314**	P	**Pn**	**04 59 30.9**	**+1.5**
KASI	**Kota Agung**	**2.72**	**110**	P	**Pn**	**04 59 30.8**	**+0.4**
BLSI	**Bandar Lampung**	**3.40**	**103**	P	**Pn**	**04 59 40.4**	**+0.7**
SDSI	**Sungai Dareh**	**3.68**	**352**	P	**Pn**	**04 59 46.9**	**+3.3**
PDSI	**Padang**	**3.94**	**338**	P	**Pn**	**04 59 47.8**	**+0.6**
RBSI	**Rajabasa**	**4.00**	**108**	P	**Pn**	**04 59 50.4**	**+2.4**
CGJI	**Cibinong**	**4.25**	**118**	P	**Pn**	**04 59 49.8**	**-1.6**
SISI	**Saibi**	**4.31**	**319**	P	**Pn**	**04 59 51.0**	**-1.3**
PPI	**Padang Panjang**	**4.39**	**340**	P	**Pn**	**04 59 53.6**	**+0.2**
DBJI	**Dramaga**	**5.18**	**112**	P	**Pn**	**05 00 04.1**	**-0.1**
	395nm,0.8s,3.4nm						
CBJI	**Citeko**	**5.23**	**110**	P	**Pn**	**05 00 09.5**	**+4.7**
	1um,1.0s,8.4nm						
MNSI	**Mandailing Nat**	**5.85**	**336**	P	**Pn**	**05 00 13.0**	**-0.4**
	67nm,0.6s,3μm0.8nm						
LEM	**Lembang**	**6.08**	**112**	P	**Pn**	**05 00 22.6**	**+6.0**
MYKOM	**Kota Tinggi**	**6.63**	**17**	P	**Pn**	**05 00 25.9**	**+1.7**
	70nm,0.9s,813nm0.3nm						
XMIS	**Christmas Isla**	**6.91**	**148**	P	**Pn**	**05 00 28.1**	**+0.1**
	133nm,1.3s,0.8nm						
GSI	**Gunungsitoli**	**7.30**	**323**	P	**Pn**	**05 00 32.5**	**-0.8**
	78nm,0.7s,0.7nm						
COCO	**West Island**	**9.06**	**213**	P	**Pn**	**05 00 56.8**	**-0.7**
KAPI	**Kappang**	**17.77**	**92**	LR	LR	05 09 54.5	
	comp=Z,116nm,21.1s,baz=73,slow=38						
CMAR	**Chiang Mai Arr**	**23.10**	**353**	P	**P**	**05 03 50.9**	**-0.1**
	5.7nm,0.8s,mb4.0,baz=184,slow=9.1,SNR=16						
FITZ	**Fitzroy Crossi**	**26.79**	**122**	P	**P**	**05 04 25.0**	**0.0**
	1.6nm,0.4s,mb3.9,baz=307,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**26.79**	**122**	*e*P	**P**	**05 04 25.3**	**+0.3**
	12nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**35.05**	**119**	P	**P**	**05 05 37.7**	**0.0**
	2.2nm,0.4s,mb4.4,baz=302,slow=9.0,SNR=23						
WRA				S	**S**	**05 11 05.3**	**-1.6**
	0.5nm,0.9s,baz=191,slow=24,SNR=3.4						
WRAB	**Tennant Creek**	**35.05**	**119**	*e*P	**P**	**05 05 37.7**	**-0.1**
	6.1nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**35.06**	**119**	*e*P	**P**	**05 05 38.0**	**+0.2**
ASAR	**Alice Springs**	**36.19**	**125**	P	**P**	**05 05 48.1**	**+0.6**
	1.2nm,0.6s,mb4.0,baz=297,slow=8.1,SNR=15						
ASAR				S	**S**	**05 11 26.1**	**+1.7**
	0.4nm,0.6s,baz=297,slow=14,SNR=4.1						
CTA	**Charters Tower**	**45.78**	**114**	P	**P**	**05 07 06.6**	**+0.1**
	3.2nm,0.5s,mb4.5,baz=240,slow=14,SNR=3.8						
CTA	**Charters Tower**	**45.78**	**114**	P	**P**	**05 07 06.6**	**+0.1**
STKA	**Stephens Creek**	**46.00**	**131**	P	**P**	**05 07 09.3**	**+1.3**
	2.1nm,0.5s,mb4.3,baz=303,slow=7.3,SNR=6.7						
STKA	**Stephens Creek**	**46.00**	**131**	*e*P	**P**	**05 07 07.9**	**-0.1**
	1.0nm,0.3s,mb4.2						
KSRS	**Korea Array**	**48.34**	**28**	P	**P**	**05 07 25.8**	**-0.3**
	2.2nm,0.6s,mb4.3,baz=221,slow=7.1,SNR=8.4						
SONM	**Songino Array**	**52.36**	**4**	P	**P**	**05 07 57.2**	**+0.9**
	6.6nm,0.6s,mb4.7,baz=186,slow=7.7,SNR=11						
SONM	**Songino Array**	**52.36**	**4**	P	**P**	**05 07 57.1**	**+0.9**
MJAR	**Matsushiro Arr**	**53.14**	**37**	P	**P**	**05 08 00.1**	**-2.2**
	1.6nm,0.4s,mb4.3,baz=209,slow=8.0,SNR=3.6						
MKAR	**Makanchi Array**	**54.04**	**343**	P	**P**	**05 08 09.0**	**+0.3**
	7.6nm,0.6s,mb4.8,baz=149,slow=8.4,SNR=21						
KURK	**Kurchatov**	**58.63**	**343**	P	**P**	**05 08 40.9**	**-0.4**
	1.8nm,0.7s,mb4.2,baz=165,slow=6.5,SNR=8.0						
KURK	**Kurchatov**	**58.63**	**343**	*e*P	**P**	**05 08 41.0**	**-0.3**
	3.0nm,0.8s,mb4.4						
ZAA0	**Zalesovo Array**	**60.07**	**348**	*e*P	**P**	**05 08 50.7**	**-0.5**
ZALV	**Zalesovo Beam**	**60.07**	**348**	P	**P**	**05 08 51.0**	**-0.1**
	9.1nm,0.4s,mb5.1,baz=159,slow=6.1,SNR=22						
BVAR	**Borovoye Array**	**63.27**	**339**	P	**P**	**05 09 12.1**	**-0.7**
	2.6nm,0.4s,mb4.7,baz=142,slow=10,SNR=13						
ABKAR	**Akbulak array**	**64.83**	**331**	*e*P	**P**	**05 09 23.8**	**+0.7**
	4.3nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**66.55**	**331**	P	**P**	**05 09 39.0**	**+4.9**
AKTO	**Aktyubinsk**	**66.55**	**331**	P	**P**	**05 09 39.0**	**+4.9**
	1.0nm,0.5s,mb4.1,baz=107,slow=12,SNR=3.4						
PETK	**Petropavlovsk-**	**74.07**	**31**	P	**P**	**05 10 18.9**	**-1.2**
	1.5nm,0.7s,mb4.0,baz=280,slow=4.4,SNR=4.1						
BOSA	**Boshof**	**76.11**	**242**	LR	LR	05 38 24.2	
	comp=Z,61nm,18.4s,baz=345,slow=31						
BRTR	**Keskin Array B**	**76.48**	**313**	P	**P**	**05 10 34.4**	**+0.2**
	0.9nm,0.6s,mb3.9,baz=131,slow=6.0,SNR=5.8						
ARCES	**ARCESS Array B**	**89.56**	**340**	P	**P**	**05 11 42.0**	**+1.0**
	7.4nm,1.2s,mb4.9,baz=89,slow=6.6,SNR=7.4						
PDAR	**Pinedale Array**	**132.84**	**32**	PKP	PKPdf	05 18 00.3	+1.0
	0.3nm,0.6s,baz=29,slow=2.1,SNR=2.3						
WMOK	**Wichita Mounta**	**144.40**	**30**	*e*PKPdf	PKPdf	05 18 18.9	-1.8
TXAR	**Lajitas Array**	**145.47**	**42**	PKPbc	PKPbc	05 18 23.6	+0.9
	5.6nm,0.7s,baz=295,slow=1.2,SNR=80						
WCI	**Wyandotte Cave**	**145.70**	**12**	*e*PKPbc	PKPbc	05 18 23.3	+0.2
MIAR	**Mount Ida**	**146.92**	**24**	*e*PKPbc	PKPbc	05 18 27.6	+0.7
JCT	**Junction City**	**147.10**	**36**	*e*PKPbc	PKPbc	05 18 28.4	+0.8

*ISCJB **12** 05:02:19.0±0.5, 35°.27N±0°.05×81°.13E±0°.06, h10km, mb3.9/11, MS3.6/7, Error ellipse: s-maj=7.0km s-min=6.8km az=175.2*

*IDC **12** 05:02:19.2±1.1, 35°.19N×81°.18E, h0km, mb3.9/6, mb1 3.9/11, mb1mx3.7/30, mbtmp3.8/11, ML3.4/5, MS3.5/11, Ms1 3.5/11, ms1mx3.2/35, Error ellipse: s-maj=25.0km s-min=18.7km az=67.0*

*NEIC **12** 05:02:20.5±0.4, 35°.21N×81°.21E, h10km, mb4.2/6, Error ellipse: s-maj=8.0km s-min=6.8km az=57.0*

*MOS **12** 05:02:22.2±1.2, 35°.32N×81°.11E, h33km, mb4.3/5, Error ellipse: s-maj=14.4km s-min=7.7km az=96.6*

*BJI **12** 05:02:27.9, 35°.88N×81°.40E, h9km, mB4.6/2, mb3.7/2, ML4.1/6, Ms4.0/2*

ISC 12 05:02:20.5±0.5, 35°.20N±0°.05×81°.22E±0°.06, h10km, n50, σ0=83/50, mb3.9/12, MS3.6/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.00**	**317**	Pn	**Pn**	**05 03 54.1**	**+4.8**
KSH				Sn	**Sn**	**05 05 08.6**	**+11**
KSH				smax			
	comp=N,240nm,1.3s						
KSH				smax			
	comp=E,81nm,0.7s						
UCH	**Uchtor**	**8.76**	**325**	*e*Pn	**Pn**	**05 04 28.8**	**+1.7**
	comp=E,37nm,1.3s						
UCH				*e*Sg	Sn	05 06 59.8	+54
TKM2	**Tokmak 2**	**8.86**	**332**	*e*P	**Pn**	**05 04 27.2**	**-1.3**
TKM2				pmax	pmax		
	comp=Z,12nm,1.1s						
TKM2	**Tokmak 2**	**8.86**	**332**	*e*Pn	**Pn**	**05 04 27.2**	**-1.3**
	comp=Z,12nm,1.1s						
TKM2				Sg	Sn	05 07 03.1	+55
AML	**Almayashu**	**9.08**	**322**	*e*Pn	**Pn**	**05 04 36.7**	**+5.2**
	comp=Z,31nm,1.1s						
AML				*e*S	**Sn**	**05 06 31.1**	**+17**
AAK	**Ala-Archa**	**9.08**	**327**	Pn	**Pn**	**05 04 36.1**	**+4.6**
	comp=Z,0.0nm,0.3s,baz=146,slow=12,SNR=10.0						
AAK				Pg	Pn	05 05 02.5	+31
	comp=Z,0.0nm,0.3s,baz=132,slow=18,SNR=4.7						
AAK				Lg		05 07 07.4	
	comp=Z,0.0nm,0.3s,baz=312,slow=17,SNR=3.8						
AAK				LR	LR	05 08 24.9	
	comp=Z,445nm,18.3s,baz=130,slow=40						
AAK	**Ala-Archa**	**9.08**	**327**	P	**Pn**	**05 04 31.9**	**+0.3**
AAK						05 06 14.6	
AAK	**Ala-Archa**	**9.08**	**327**	Pn	**Pn**	**05 04 31.9**	**+0.3**
AAK				Sn	**Sn**	**05 06 14.6**	**+0.8**
AAK				Lg		05 07 07.4	
AAK				LR	LR	05 08 24.9	
FRU	**Bishkek**	**9.19**	**328**	*i* P	**Pn**	**05 04 39.0**	**+6.0**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
FRU				pmax	pmax		
	comp=E,190nm,2.0s						
EKS2	**Erkin-Say**	**9.44**	**324**	*e*Pn	**Pn**	**05 04 35.9**	**-0.5**
EKS2				S	**Sn**	**05 06 40.2**	**+18**
KBL	**Kabul**	**10.03**	**270**	*e*Pn	**Pn**	**05 04 44.2**	**-0.4**
KBL				Sn	**Sn**	**05 06 37.1**	**-0.1**
MK31	**Makanchi Array**	**11.61**	**4**	*e*Pn	**Pn**	**05 05 05.5**	**-0.7**
MK31				Sn	**Sn**	**05 07 16.5**	**+0.7**
MKAR	**Makanchi Array**	**11.61**	**4**	Pn	**Pn**	**05 05 05.7**	**-0.5**
	comp=E,0.4nm,0.3s,baz=189,slow=13,SNR=20						
GTA	**Gaotai**	**15.38**	**69**	*e*P	**Pn**	**05 06 05.9**	**+8.5**
GTA				pP	pP	05 06 10.3	+5.3
GTA				sP	sP	05 06 13.6	+7.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KURK	**Kurchatov**	**15.62**	**354**	Pn	**Pn**	**05 05 57.0**	**-3.5**
	comp=Z,0.0nm,0.3s,baz=173,slow=12,SNR=17						
KURK				LR	LR	05 12 54.7	
	comp=Z,55nm,18.7s,baz=180,slow=41						
KURK	**Kurchatov**	**15.62**	**354**	*e*P	**Pn**	**05 05 58.7**	**-1.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**15.62**	**354**	*e*P	**Pn**	**05 05 58.7**	**-1.9**
	comp=Z,4.0nm,1.0s						
KURK				LR	LR	05 12 54.7	
ZALV	**Zalesovo Beam**	**18.91**	**7**	P	**Pn**	**05 06 40.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=181,slow=10,SNR=2.4						
ZALV				LR	LR	05 14 15.4	
	comp=Z,39nm,20.4s,baz=199,slow=38						
BVAR	**Borovoye Array**	**19.40**	**340**	P	**Pn**	**05 06 46.8**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=143,slow=5.0,SNR=6.4						
BVAR				LR	LR	05 14 17.0	
	comp=Z,83nm,20.6s,baz=245,slow=37						
BVAR	**Borovoye Array**	**19.40**	**340**	P	**Pn**	**05 06 46.8**	**-0.8**
BVAR				LR	LR	05 14 17.0	
BRVK	**Borovoye**	**19.46**	**340**	*e*P	**Pn**	**05 06 47.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1

2.1nm,0.6s,mb3.6,baz=99,slow=8.3,SNR=34
ASAR PcP PcP 06 01 18.9 -0.8
0.4nm,0.5s,baz=101,slow=4.2,SNR=5.2
WB2 Warramunga Arr 44.00 263 *eP* **P 05 59 43.2 -0.2**
WRAB Tennant Creek 44.00 263 *eP* **P 05 59 42.5 -0.9**
2.6nm,0.6s,mb3.7
WRA Warramunga Arr 44.01 263 P **P 05 59 42.8 -0.7**
1.5nm,0.3s,mb3.7,baz=95,slow=7.7,SNR=45
FITZ Fitzroy Crossi 52.44 263 P **P 06 00 47.0 +0.1**
1.2nm,0.7s,mb3.2,baz=124,slow=6.5,SNR=6.7
FITZ Fitzroy Crossi 52.44 263 *eP* **P 06 00 46.4 -0.5**
0.9nm,0.5s,mb3.3
MBWA Marble Bar 57.19 258 *eP* **P 06 01 20.1 -0.3**
2.2nm,0.3s,mb4.0
CASY Casey 62.95 205 *eP* **P 06 01 58.0 -0.2**
2.6nm,0.8s,mb3.8
QSPA South Pole Qui 68.67 180 *eP* **P 06 02 33.0 -1.0**
1.4nm,0.7s,mb3.7
YULB Yu-li 73.59 304 *eP* **P 06 03 03.3 -0.7**
PDAR Pinedale Array 89.94 43 P **P 06 04 28.2 +0.7**
0.4nm,0.6s,mb3.4,baz=255,slow=4.5,SNR=4.3
CMAR Chiang Mai Arr 89.96 290 P **P 06 04 29.8 +1.5**
0.7nm,0.3s,mb4.0,baz=106,slow=2.9,SNR=5.4
ARCES ARCESS Array B 129.71 349 PKP PKPdf 06 10 32.3 -1.7
8.7nm,1.2s,baz=14,slow=1.2,SNR=7.2
AKASG Malin Array Be 143.56 330 PKP PKPdf 06 10 56.8 -3.2
3.3nm,0.4s,baz=43,slow=4.3,SNR=30
CLL Collm 148.82 346 *i* PKPbc PKPbc 06 11 12.9 -0.4
CLL *i* PKPab PKPab 06 11 17.6 -1.1
GERES GERESS Array B 150.93 343 PKPbc PKPbc 06 11 17.0 -1.3
0.7nm,0.4s,baz=42,slow=3.1,SNR=6.3

ISCJB ***12*** *05:54:13.5±0.3,35°.35N±0°.04×81°.30E±0°.07, h10km, mb4.0/19, MS3.4/2, Error ellipse: s-maj=7.9km s-min=4.7km az=161.7*
IDC ***12*** *05:54:13.2±0.7,35°.38N×81°.45E, h0km, mb3.9/12, mb1 4.1/16, mb1mx3.9/28, mbtmp3.9/16, ML3.6/4, MS3.3/5, Ms1 3.3/5, ms1mx2.9/51, Error ellipse: s-maj=18.3km s-min=13.0km az=78.0*
NEIC ***12*** *05:54:14.8±0.4,35°.32N×81°.40E, h10km, mb4.2/7, Error ellipse: s-maj=9.2km s-min=7.3km az=46.0*
MOS ***12*** *05:54:16.9±1.1,35°.41N×81°.35E, h33km, mb4.4/7, Error ellipse: s-maj=13.6km s-min=7.1km az=106.3*
NNC ***12*** *05:54:21.1±3.2,35°.89N×81°.63E, h12km±15km, mb3.7, Error ellipse: s-maj=24.0km s-min=15.5km az=112.0*
BJI ***12*** *05:54:23.7,35°.89N×81°.57E, h40km, mB4.7/1, ML4.2/5, Ms3.9/3*
DMN ***12*** *05:55:54.7±22.0, 28°.99N×84°.87E, h33km, Error ellipse: s-maj=705.7km s-min=52.4km az=155.0*

ISC 12 05:54:15.6±0.3,35°.39N±0°.03×81°.36E±0°.07,h10km,n73, σ1§03/77,mb4.0/19,MS3.4/2,5C-6D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.94**	**315**	Pn	**Pg**	**05 56 05.2**	**-4.2**
KSH				Sn	**Sg**	**05 57 18.2**	**-8.1**
KSH				smax			
	comp=N,170nm,0.6s						
KSH				smax			
	comp=E,190nm,0.7s						
KKN	**Kakani**	**8.28**	**155**	*eP*	**Pn**	**05 56 15.6**	**-0.2**
	comp=E,21nm,0.7s						
DMN	**Daman**	**8.39**	**157**	*eP*	**Pn**	**05 56 18.4**	**+1.1**
	comp=E,22nm,0.6s						
GUN	**Gumba**	**8.39**	**151**	*eP*	**Pn**	**05 56 18.5**	**+1.2**
	comp=E,34nm,0.6s						
PKI	**Pulchoki**	**8.53**	**155**	*eP*	**Pn**	**05 56 20.3**	**+1.1**
	comp=E,24nm,0.6s						
TKM2	**Tokmak 2**	**8.75**	**331**	⇓Pg	Px	05 56 54.0	
TKM2				⇓Lg		05 58 50.9	
	comp=E,18nm,0.7s						
AAK	**Ala-Archa**	**8.99**	**326**	LR	LR	06 00 18.9	
	comp=E,314nm,18.4s,baz=281,slow=40						
WMQ	**Urumqi**	**9.73**	**28**	*eP*	**Pn**	**05 56 39.4**	**+3.8**
WMQ				smax			
	comp=N,24nm,1.3s						
WMQ				smax			
	comp=E,18nm,1.3s						
WMQ				LR	LR		
	comp=N,150nm,17.0s						
WMQ				LR	LR		
	comp=E,77nm,15.0s						
KK31	**Karatay Array**	**11.39**	**316**	⇑Pn	**Pn**	**05 57 00.5**	**+2.1**
	comp=E,0.9nm,0.5s,baz=127,slow=13,SNR=7.4						
KK31				⇓Lg		06 00 20.4	
	comp=E,6.9nm,0.9s						
MK31	**Makanchi Array**	**11.41**	**3**	Pn	**Pn**	**05 56 57.9**	**-0.6**
	comp=E,4.9nm,0.7s,baz=186,slow=13,SNR=29						
MK31				⇓Sn	**Sn**	**05 58 59.6**	**-6.4**
	comp=E,11nm,0.8s,baz=182,slow=24,SNR=5.5						
MK31				⇓Lg		06 00 07.0	
	comp=E,7.8nm,0.8s,baz=165,slow=32,SNR=4.5						
MK31	**Makanchi Array**	**11.41**	**3**	*e*Pn	**Pn**	**05 56 58.5**	**-0.1**
MK31				Sn	**Sn**	**05 59 07.1**	**+1.1**
MKAR	**Makanchi Array**	**11.41**	**3**	Pn	**Pn**	**05 56 59.0**	**+0.4**
	comp=E,0.8nm,0.3s,baz=185,slow=12,SNR=36						
MKAR				Sn	**Sn**	**05 59 02.6**	**-3.5**
	comp=E,0.3nm,0.3s,baz=195,slow=22,SNR=3.5						
MKAR	**Makanchi Array**	**11.41**	**3**	Pn	**Pn**	**05 56 59.0**	**+0.4**
MKAR				Sn	**Sn**	**05 59 02.6**	**-3.5**
GTA	**Gaotai**	**15.20**	**69**	*eP*	**Pn**	**05 57 58.0**	**+7.7**
GTA				pP	pP	05 58 02.5	+4.3
GTA				sP	sP	05 58 05.6	+6.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURBB	**Kurchatov Arra**	**15.36**	**353**	⇑Pn	**Pn**	**05 57 50.6**	**-1.7**
	comp=Z,1.4nm,1.4s						
KURBB				⇑Lg		06 02 12.5	
	comp=Z,2.7nm,1.2s						
KURK	**Kurchatov**	**15.44**	**353**	⇑Pn	**Pn**	**05 57 51.6**	**-1.8**
	comp=Z,8.5nm,1.0s						
KURK				⇓Lg		06 02 17.5	
KURK	**Kurchatov**	**15.44**	**353**	Pn	**Pn**	**05 57 50.1**	**-3.3**
	comp=Z,0.0nm,0.3s,baz=173,slow=12,SNR=17						
KURK				LR	LR	06 04 47.5	
	comp=Z,41nm,18.4s,baz=140,slow=41						
KURK	**Kurchatov**	**15.44**	**353**	*eP*	**Pn**	**05 57 51.0**	**-2.4**
KURK				*e*		06 00 45.6	
KURK	**Kurchatov**	**15.44**	**353**	*e*Pn	**Pn**	**05 57 51.0**	**-2.4**
KURK				*e*Sn	**Sn**	**06 00 45.6**	**+1.2**
KURK				LR	LR	06 04 47.5	
ZAA0	**Zalesovo Array**	**18.71**	**6**	*eP*	**Pn**	**05 58 34.0**	**-0.4**
ZALV	**Zalesovo Beam**	**18.71**	**6**	P	**Pn**	**05 58 34.7**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=195,slow=11,SNR=11						
ZALV				S	**Sn**	**06 02 02.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=1.9						
ZALV	**Zalesovo Beam**	**18.71**	**6**	P	**Pn**	**05 58 34.7**	**+0.3**
ZALV				S	**Sn**	**06 02 02.7**	**-0.9**
BVA0	**Borovoye Array**	**19.26**	**340**	P	**Pn**	**05 58 41.5**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=153,slow=14,SNR=16						
BVAR	**Borovoye Array**	**19.26**	**340**	P	**Pn**	**05 58 41.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=141,slow=9.6,SNR=14						
BVAR				LR	LR	06 05 29.7	
	comp=Z,32nm,18.2s,baz=138,slow=35						
BRVK	**Borovoye**	**19.32**	**339**	*eP*	**Pn**	**05 58 40.8**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**19.32**	**339**	*eP*	**Pn**	**05 58 40.8**	**-0.9**
	comp=Z,3.6nm,0.6s						
NVS	**Novosibirsk**	**19.49**	**3**	*eP*	**Pn**	**05 58 43.6**	**-0.2**
AB31	**Akbulak array**	**20.94**	**318**	P	**P**	**05 58 58.8**	**+0.4**
	comp=Z,7.5nm,0.9s,baz=127,slow=10,SNR=37						
ABKAR	**Akbulak array**	**20.94**	**318**	*eP*	**P**	**05 58 58.8**	**+0.4**
	comp=Z,8.0nm,0.9s						
MOY	**Mondy**	**21.51**	**35**	*eP*	**P**	**05 59 07.0**	**+2.5**
ZAK	**Zakamensk**	**21.85**	**40**	*eP*	**P**	**05 59 09.9**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb3.9						
SONM	**Songino Array**	**22.36**	**49**	P	**P**	**05 59 13.8**	**+0.2**
	comp=Z,4.1nm,0.8s,mb3.9,baz=243,slow=6.5,SNR=13						
AKTK	**Aktyubinsk**	**22.63**	**319**	P	**P**	**05 59 16.6**	**+0.1**
AKTK				LR	LR	06 08 59.0	
AKTO	**Aktyubinsk**	**22.63**	**319**	⇑P	**P**	**05 59 17.8**	**+1.3**
	comp=Z,0.9nm,1.1s,mb3.1						
AKTO	**Aktyubinsk**	**22.63**	**319**	P	**P**	**05 59 16.6**	**+0.1**
	comp=Z,2.5nm,0.8s,mb3.7,baz=123,slow=8.0,SNR=8.0						
AKTO				LR	LR	06 08 58.9	
	comp=Z,218nm,18.6s,MS3.6,baz=128,slow=39						
CHTO	**Chiang Mai**	**22.69**	**132**	P	**P**	**05 59 15.7**	**-1.7**
ULN	**Ulaanbaatar**	**22.77**	**49**	*eP*	**P**	**05 59 18.1**	**+0.1**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
ULN	**Ulaanbaatar**	**22.77**	**49**	*eP*	**P**	**05 59 18.1**	**0.0**
	comp=Z,7.5nm,1.0s,mb4.1						
CMAR	**Chiang Mai Arr**	**22.97**	**133**	P	**P**	**05 59 19.8**	**-0.5**
	comp=Z,0.8nm,0.3s,mb3.6,baz=318,slow=11,SNR=5.3						
KSRS	**Korea Array**	**37.23**	**73**	LR	LR	06 17 31.3	
	comp=Z,43nm,21.0s,MS3.2,baz=245,slow=38						
BRTR	**Keskin Array B**	**37.73**	**291**	P	**P**	**06 01 32.9**	**+1.5**
	comp=Z,0.3nm,0.4s,mb3.4,baz=78,slow=9.4,SNR=3.9						
CSS	**Prodhromos**	**38.95**	**284**	P	**P**	**06 01 40.4**	**-1.4**
AKASG	**Malin Array Be**	**40.19**	**309**	P	**P**	**06 01 50.2**	**-1.7**
	comp=Z,1.4nm,0.6s,mb3.9,baz=82,slow=7.6,SNR=9.1						
AKASG	**Malin Array Be**	**40.19**	**309**	P	**P**	**06 01 50.2**	**-1.7**
FINES	**FINESS Array B**	**43.18**	**325**	P	**P**	**06 02 15.0**	**-1.2**
	comp=Z,3.0nm,0.7s,mb4.1,baz=111,slow=9.0,SNR=4.2						
NB2	**NORSAR Subarra**	**50.30**	**323**	P	**P**	**06 03 12.4**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**50.30**	**323**	P	**P**	**06 03 12.8**	**+0.8**
	comp=Z,2.0nm,0.7s,mb4.2,baz=89,slow=7.5,SNR=6.0						
GERES	**GERESS Array B**	**50.35**	**307**	P	**P**	**06 03 13.3**	**+0.7**
	comp=Z,1.1nm,0.8s,mb4.0,baz=74,slow=6.1,SNR=6.3						
CDF	**Champ du Feu**	**54.60**	**308**	*eP*	**P**	**06 03 44.4**	**+0.3**
	comp=Z,2.1nm,0.7s,mb4.0						
CDF	**Champ du Feu**	**54.60**	**308**	*eP*	**P**	**06 03 44.4**	**+0.3**
CDF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
CDF	**Champ du Feu**	**54.60**	**308**	*eP*	**P**	**06 03 44.4**	**+0.3**
	comp=Z,1.0nm,0.7s,mb4.0						
HINF	**Hinteralfeld**	**55.04**	**308**	*eP*	**P**	**06 03 47.3**	**+0.1**
LPG	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.8**
	comp=Z,9.4nm,0.9s,mb4.5						
LPG	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.8**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
LPG	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.8**
	comp=Z,4.7nm,0.9s,mb4.5						
LPL	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.7**
	comp=Z,7.2nm,0.6s,mb4.5						
LPL	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.7**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
LPL	**La Plagne**	**55.78**	**305**	*eP*	**P**	**06 03 53.4**	**+0.7**
	comp=Z,3.6nm,0.6s,mb4.6						
BILL	**Bilibino**	**55.84**	**27**	*eP*	**P**	**06 03 57.6**	**+4.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
LOR	**Lormes**	**57.14**	**308**	*eP*	**P**	**06 04 01.8**	**-0.5**
SMF	**Signal de Mont**	**57.34**	**307**	*eP*	**P**	**06 04 03.5**	**-0.3**
SSF	**Saint Saulge**	**57.43**	**308**	*eP*	**P**	**06 04 04.1**	**-0.2**
CAF	**Calviac**	**59.09**	**306**	*eP*	**P**	**06 04 16.3**	**+0.3**
LDF	**La Druitiere**	**59.23**	**310**	*eP*	**P**	**06 04 16.8**	**-0.1**
	comp=Z,4.2nm,0.7s,mb4.3						
LDF	**La Druitiere**	**59.23**	**310**	*eP*	**P**	**06 04 16.8**	**-0.1**
LDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
LDF	**La Druitiere**	**59.23**	**310**	*eP*	**P**	**06 04 16.8**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.3						
RJF	**Les Rejaudoux**	**59.32**	**306**	*eP*	**P**	**06 04 17.0**	**-0.6**
GRR	**Gorron**	**59.76**	**310**	*eP*	**P**	**06 04 20.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**74.15**	**275**	P	**P**	**06 05 52.0**	**-0.6**
	comp=Z,3.8nm,0.9s,mb4.3,baz=44,slow=5.3,SNR=23						
WRA	**Warramunga Arr**	**74.50**	**129**	P	**P**	**06 05 52.4**	**-2.0**
	comp=Z,1.5nm,1.1s,mb3.8,baz=327,slow=5.4,SNR=4.0						
ASAR	**Alice Springs**	**76.97**	**132**	P	**P**	**06 06 07.2**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.5,baz=50,slow=37,SNR=5.5						
YKA	**Yellowknife Ar**	**81.61**	**7**	P	**P**	**06 06 33.1**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=339,slow=5.5,SNR=13						
LPAZ	**La Paz**	**146.80**	**297**	PKPbc	PKPbc	06 13 55.9	-2.5
	comp=Z,1.3nm,0.7s,baz=127,slow=1.2,SNR=6.0						

CSEM ***12*** *06:10:16.7±0.1,39°.41N×33°.06E, h2km, MD3.2, Error ellipse: s-maj=3.6km s-min=2.7km az=135.0*
ISK ***12*** *06:10:16.0,39°.43N×33°.04E, h3km, MD3.2*
DDA ***12*** *06:10:16.0,39°.42N×33°.08E, h7km±1km, Md3.2*
ISCJB ***12*** *06:10:17.3±0.3,39°.41N±0°.02×33°.06E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=2.7km az=135.1*

ISC 12 06:10:16.8±0.5,39°.41N±0°.02×33°.06E±0°.03,h1km±4km, n62,σ0§85/88,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.14**	**22**	*i* P	**Pg**	**06 10 19.4**	**-0.2**
BBAL				*i* S	**Sg**	**06 10 21.4**	**0.0**
BBAL	**Bala**	**0.14**	**22**	*i* P	**Pg**	**06 10 19.4**	**-0.2**
BBAL				*i* S	**Sg**	**06 10 21.4**	**0.0**
LOD	**Lodumlu**	**0.53**	**335**	*e*PG	**Pg**	**06 10 26.3**	**-0.7**
LOD				*e*SG	**Sg**	**06 10 34.4**	**+0.6**
LOD	**Lodumlu**	**0.53**	**335**	*e*Pg	**Pg**	**06 10 26.3**	**-0.6**
LOD				*e*Sg	**Sg**	**06 10 34.4**	**+0.6**
CDAG	**Cicekdag**	**1.04**	**78**	*i* P	**Pg**	**06 10 35.8**	**-1.0**
CDAG				*i* S	**Sg**	**06 10 50.2**	**-0.1**
CDAG	**Cicekdag**	**1.04**	**78**	*i* P	**Pg**	**06 10 35.8**	**-1.0**
CDAG				*i* S	**Sg**	**06 10 50.2**	**0.0**
KIZT	**Kizilcal**	**1.06**	**240**	*e*PG	**Pg**	**06 10 36.9**	**-0.2**
KIZT				*e*SG	**Sg**	**06 10 52.1**	**+1.3**
KIZT	**Kizilcal**	**1.06**	**240**	*e*Pg	**Pg**	**06 10 36.9**	**-0.2**
KIZT				*e*Sg	**Sg**	**06 10 52.1**	**+1.3**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**06 10 36.9**	**-1.3**
ELDT				*i* S	**Sg**	**06 10 52.8**	**+0.1**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**06 10 36.9**	**-1.3**
ELDT				*i* S	**Sg**	**06 10 52.8**	**+0.1**
KDHN	**Kadinhani**	**1.15**	**220**	*i* P	**Pg**	**06 10 38.5**	**-0.4**
KDHN				*i* S	**Sg**	**06 10 54.8**	**+1.0**
KDHN	**Kadinhani**	**1.15**	**220**	*i* P	**Pg**	**06 10 38.5**	**-0.4**
KDHN				*i* S	**Sg**	**06 10 54.8**	**+1.0**
SVRH	**Sivrihisar-ESK**	**1.19**	**272**	*e*PN	**Pn**	**06 10 39.4**	**-1.2**
SVRH				*e*SN	**Sn**	**06 10 55.8**	**-1.6**
SVRH	**Sivrihisar-ESK**	**1.19**	**272**	*e*Pn	**Pn**	**06 10 39.4**	**-1.2**
SVRH				*e*Sn	**Sn**	**06 10 55.8**	**-1.5**
SULT	**Sultanhani-AKS**	**1.26**	**163**	*e*PN	**Pn**	**06 10 41.0**	**-0.6**
SULT	**Sultanhani-AKS**	**1.26**	**163**	*e*Pn	**Pn**	**06 10 41.0**	**-0.6**
CANT	**Cankiri**	**1.27**	**20**	*e*PN	**Pn**	**06 10 40.5**	**-1.2**
LADK	**Ladik-KONYA**	**1.32**	**204**	*e*PN	**Pn**	**06 10 41.8**	**-0.6**
LADK	**Ladik-KONYA**	**1.32**	**204**	*e*Pn	**Pn**	**06 10 41.8**	**-0.6**
SGKT	**Sivrigoynuk**	**1.39**	**327**	*i* P	**Pn**	**06 10 42.5**	**-0.9**
SGKT				*i* S	**Sg**	**06 11 02.4**	**+0.8**
SGKT	**Sivrigoynuk**	**1.39**	**327**	*i* P	**Pn**	**06 10 42.5**	**-0.9**
SGKT				*i* S	**Sg**	**06 11 02.3**	**+0.7**
CORM	**Corum**	**1.44**	**57**	*e*PN	**Pn**	**06 10 43.5**	**-0.5**
CORM	**Corum**	**1.44**	**57**	*e*Pn	**Pn**	**06 10 43.5**	**-0.5**
KONT	**Konya--Tatoy**	**1.56**	**201**	*e*PN	**Pn**	**06 10 46.0**	**+0.3**
KONT	**Konya--Tatoy**	**1.56**	**201**	*e*Pn	**Pn**	**06 10 46.0**	**+0.3**
ESKT	**Eskisehir**	**1.71**	**274**	*e*PN	**Pn**	**06 10 47.4**	**-0.4**
ESKT	**Eskisehir**	**1.71**	**274**	*i* P	**Pn**	**06 10 48.2**	**+0.5**
ESKT				*i* S	**Sn**	**06 11 09.2**	**-1.1**
ESKT	**Eskisehir**	**1.71**	**274**	*e*Pn	**Pn**	**06 10 47.4**	**-0.4**
SEYT	**Eskypehyr**	**1.71**	**274**	*i* P	**Pn**	**06 10 48.2**	**+0.4**
SEYT				*i* S	**Sn**	**06 11 09.2**	**-1.1**
ILGA	**Ilgaz**	**1.72**	**17**	*i* P	**Pn**	**06 10 47.9**	**+0.1**
ILGA				*i* S	**Sn**	**06 11 10.0**	**-0.4**
ILGA	**Ilgaz**	**1.72**	**17**	*i* P	**Pn**	**06 10 47.9**	**+0.1**
ILGA				*i* S	**Sn**	**06 11 10.0**	**-0.4**
MDU	**Mudurnu**	**1.76**	**307**	*e*PN	**Pn**	**06 10 48.3**	**-0.2**
MDU	**Mudurnu**	**1.76**	**307**	*e*Pn	**Pn**	**06 10 48.3**	**-0.2**
YOZ	**Yozgat**	**1.77**	**82**	*e*PN	**Pn**	**06 10 48.7**	**+0.2**
YOZ	**Yozgat**	**1.77**	**82**	*e*Pn	**Pn**	**06 10 48.7**	**+0.2**
BOLV	**Bolvadin**	**1.78**	**248**	*e*P	**Pn**	**06 10 49.7**	**+1.0**
BOLV				*e*S	**Sn**	**06 11 11.7**	**-0.3**
BOLV	**Bolvadin**	**1.78**	**248**	*e*P	**Pn**	**06 10 49.7**	**+1.0**
BOLV				*e*S	**Sn**	**06 11 11.7**	**-0.2**
TOS	**Tosya**	**1.78**	**24**	*e*PN	**Pn**	**06 10 47.7**	**-1.1**
TOS	**Tosya**	**1.78**	**24**	*e*Pn	**Pn**	**06 10 47.7**	**-1.1**
CTKT	**Corum**	**1.80**	**47**	*i* P	**Pn**	**06 10 49.3**	**+0.3**
CTKT				*i* S	**Sn**	**06 11 14.8**	**+2.3**
CTKT	**Corum**	**1.80**	**47**	*i* P	**Pn**	**06 10 49.3**	**+0.3**
CTKT				*i* S	**Sn**	**06 11 14.8**	**+2.3**
SAFT	**Safranbolu**	**1.85**	**351**	*e*PN	**Pn**	**06 10 49.4**	**-0.3**
SAFT	**Safranbolu**	**1.85**	**351**	*e*Pn	**Pn**	**06 10 49.4**	**-0.3**
BALT	**Daday**	**2.14**	**7**	*i* P	**Pn**	**06 10 55.3**	**+1.7**
BALT				*i* S	**Sn**	**06 11 23.2**	**+2.5**
BALT	**Daday**	**2.14**	**7**	*i* P	**Pn**	**06 10 55.3**	**+1.7**
BALT				*i* S	**Sn**	**06 11 23.2**	**+2.4**
GULT	**Gulveren**	**2.20**	**298**	*e*PN	**Pn**	**06 10 55.0**	**+0.4**
GULT	**Gulveren**	**2.20**	**298**	*e*Pn	**Pn**	**06 10 55.0**	**+0.5**
ALT	**Altintas**	**2.31**	**262**	*e*PN	**Pn**	**06 10 56.2**	**+0.1**
ALT	**Altintas**	**2.31**	**262**	*e*Pn	**Pn**	**06 10 56.2**	**+0.1**
HDMB	**Hadim**	**2.48**	**191**	*e*PN	**Pn**	**06 10 59.1**	**+0.7**
HDMB	**Hadim**	**2.48**	**191**	*e*Pn	**Pn**	**06 10 59.1**	**+0.7**
SUTC	**Sutluce-Ispart**	**2.52**	**221**	*e*PN	**Pn**	**06 10 59.5**	**+0.6**
SUTC	**Sutluce-Ispart**	**2.52**	**221**	*e*Pn	**Pn**	**06 10 59.5**	**+0.7**
BZK	**Bozkurt**	**2.65**	**15**	*e*PN	**Pn**	**06 11 00.7**	**+0.1**
BZK	**Bozkurt**	**2.65**	**15**	*e*Pn	**Pn**	**06 11 00.7**	**+0.1**
DIKM	**Dikmen**	**2.80**	**36**	*e*PN	**Pn**	**06 11 03.2**	**+0.5**
DIKM	**Dikmen**	**2.80**	**36**	*e*Pn	**Pn**	**06 11 03.2**	**+0.5**
KOZT	**Kozan**	**2.91**	**131**	*e*PN	**Pn**	**06 11 04.4**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.93**	**103**	*e*PN	**Pn**	**06 11 03.6**	**-0.9**
SARI	**SarD1z-Kayseri**	**2.93**	**103**	*e*Pn	**Pn**	**06 11 03.6**	**-0.9**
SVSK	**Karacayir**	**3.08**	**79**	*e*PN	**Pn**	**06 11 07.3**	**+0.7**
SVSK	**Karacayir**	**3.08**	**79**	*e*Pn	**Pn**	**06 11 07.3**	**+0.7**

PLV ***12*** *06:26:07.5,39°.76N×100°.98E, h0km*
BGS ***12*** *06:27:57.9±1.4,30°.41N×103°.27E, h20km, mb6.2, MS8.2*
IDC ***12*** *06:27:57.5±0.2,31°.00N×103°.35E, h0km, mb5.9/66, mb1 5.9/68, mb1mx5.9/68, mbtmp5.9/68, ML4.3/2, MS7.9/49, Ms1 7.9/49, ms1mx7.7/66, Error ellipse: s-maj=6.6km s-min=4.4km az=35.0*
MOS ***12*** *06:27:58.4±1.1,30°.93N×103°.38E, h16km, mb7.0/120, MS8.1/94, Error ellipse: s-maj=5.7km s-min=3.3km az=125.3*
BJI ***12*** *06:27:58.7,30°.97N×103°.57E, h14km, mB7.3/44, mb6.4/57, ML7.0/12, Ms8.2/64, Ms7 8.0/65*
ISCJB ***12*** *06:27:59.1±0.1,31°.08N±0°.01×103°.32E±0°.01, h12km, mb6.7/384, MS8.0/299, Error ellipse: s-maj=2.1km s-min=1.6km az=5.4*
TEH ***12*** *06:28:00.0,31°.10N×103°.27E, h10km*
GCMT ***12*** *06:28:01.6±0.1,31°.44N×104°.10E, h13km, MW7.9/111, Moment Tensor Solution. s87,c174; s111,c374; Duration: 21s8 Moment tensor: Scale 10^{21}Nm; M_{rr}0.57±.00; $M_{\theta\theta}$0.01±.00; $M_{\phi\phi}$-0.57±.00; $M_{r\theta}$-0.20±.03; $M_{\theta\phi}$-0.35±.00; $M_{\phi r}$0.56±.03; Best double couple: $M_0$0.89700×10^{21} NP1:ϕ_s231.00000°, δ35.00000°, λ138.00000°. NP2:ϕ_s357.00000°, δ68.00000°, λ63.00000°. Principal axes: T 0.9130, Plg58.0000°, Azm229.0000°; N -0.0310, Plg25.0000°, Azm9.0000°; P -0.8810, Plg18.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s.*
NEIC ***12*** *06:28:01.6±0.1,31°.00N×103°.32E, h19km, mb6.9/236, ME7.7, MS8.1/199, MW7.9 Error ellipse: s-maj=3.7km s-min=2.5km az=21.0 Broadband fault plane solution: P waves. NP1:ϕ_s195.00000°, δ30.00000°, λ90.00000°. NP2:ϕ_s15.00000°, δ60.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm285.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm105.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger one about 17 seconds later. Depth based on larger event. Energy computed from BB mechanism.*
*NEIC Guozhen, Lanzhou, Leshan, Wu'an, Xichang and Ya'an. Felt in much of central, eastern and southern China, including Beijing, Guangzhou, Hefei, Nanjing, Shanghai, Tianjin, Wuhan and in Hong Kong. Also felt in parts of Bangladesh, Taiwan, Thailand and Vietnam. Seiches were observed at Kotalipara, Bangladesh. At least 69,195 people killed, 374,177 injured and 18,392 missing and presumed dead in the Chengdu-Lixian-Guangyuan area. More than 45.5 million people in 10 provinces and regions were affected. At least 15 million people were evacuated from their homes and more than 5 million were left homeless. An estimated 5.36 million buildings collapsed and more than 21 million buildings were damaged in Sichuan and in parts of Chongqing, Gansu, Hubei, Shaanxi and Yunnan. The total economic loss was estimated at 86 billion US dollars. Beichuan, Dujiangyan, Wuolong and Yingxiu were almost completely destroyed. Landslides and rockfalls damaged or destroyed several mountain roads and railways and buried buildings in the Beichuan-Wenchuan area, cutting off access to the region for several days. At least 700 people were buried by a landslide at Qingchuan. Landslides also dammed several rivers, creating 34 barrier lakes which threatened about 700,000 people downstream. A train was buried by a landslide near Longnan, Gansu. At least 2,473 dams sustained some damage and more than 53,000 km of roads and 48,000 km of tap water pipelines were damaged. About 1.5 km of surface faulting was observed near Qingchuan, surface cracks and fractures occurred on three mountains in the area, and subsidence and street cracks were observed in the city itself. Maximum intensity XI was assigned in the Wenchuan area. Felt [VIII] at Deyang and M

TGV	Tuan Giao	9.44	180	eP		Pn	06 30 23.7 +7.4
WHN	Wuhan	9.46	90	⇑P		Pn	06 30 14.1 -2.5
WHN				sP			06 30 19.7
WHN				S		Sn	06 32 05.1 +2.0
WHN				LR		LR	
	comp=E,25864μm,10.2s						
WHN				LR		LR	
	comp=Z,10000μm,8.4s						
MTZV	Met	9.84	164	eP		Pn	06 30 28.2 +6.4
TIY	Taiyuan	10.00	46	eP		Pn	06 30 25.6 +1.6
TIY				sP			06 30 35.0
TIY				S		Sn	06 32 10.4 -6.0
TIY				pmax	pmax		
	comp=Z,410nm,0.8s						
TIY				pmax	pmax		
	comp=Z,68μm,8.4s						
TIY				LR	LR		
	comp=N,6015μm,8.1s						
TIY				LR	LR		
	comp=E,6353μm,7.5s						
TIY				LR	LR		
	comp=Z,2219μm,7.3s						
BGV	Bac-Giang	10.06	165	eP		Pn	06 30 29.9 +5.0
HBVN	Hoa-Binh	10.35	170	eP		Pn	06 30 33.9 +5.1
IMP	Imphal	10.43	235	ex		Pn	06 30 31.0 +1.1
IMP				ex		x	06 34 07.0
PLV	Phu-Lien	10.63	163	eP		Pn	06 30 35.5 +2.9
LSA	Lhasa	10.64	266	P		Pn	06 30 35.1 +2.3
LSA				pmax	pmax		
	comp=Z,1μm,1.1s						
LSA				LR	LR		
	comp=N,16000μm,22.3s						
LSA				LR	LR		
	comp=E,4000μm,16.4s						
LSA				LR	LR		
	comp=Z,6000μm,12.6s						
LSA	Lhasa	10.64	266⇑	ePn		Pn	06 30 34.0 +1.2
BTO	Baotou	10.94	28	P		Pn	06 30 36.6 -0.2
BTO				pmax	pmax		
	comp=Z,80nm,0.7s						
BTO				LR	LR		
	comp=N,893μm,14.3s						
BTO				LR	LR		
	comp=E,708μm,9.2s						
THV	Thanh Hoa	11.38	168	eP		Pn	06 30 45.3 +2.4
SHL	Shillong	11.51	244	i P		Pn	06 30 44.0 -0.6
SHL				i x		x	06 34 10.0
HHC	Hu-ho-hao-te	11.80	32⇑	iP		Pn	06 30 49.0 +0.4
HHC				pP			06 30 52.4
HHC				sP			06 30 55.6
HHC				PP			06 30 58.7
HHC				S		Sn	06 32 59.3 -1.2
HHC				SS			06 33 15.5
HHC				pmax	pmax		
	comp=Z,250nm,1.2s						
HHC				pmax	pmax		
	comp=Z,75μm,4.7s						
HHC				LR	LR		
	comp=N,5600μm,6.3s						
HHC				LR	LR		
	comp=E,2909μm,6.5s						
HHC				LR	LR		
	comp=Z,3781μm,5.9s						
GZH	Guangzhou	11.91	129	P		Pn	06 30 43.6 -6.6
GZH				S		Sn	06 32 53.4 -10
GZH				LR	LR		
	comp=N,16235μm,14.7s						
GZH				LR	LR		
	comp=E,17924μm,12.5s						
TIA	Tai'an	12.55	62	P		Pn	06 30 58.1 -0.8
TIA				LR	LR		
	comp=N,2164μm,7.2s						
TIA				LR	LR		
	comp=E,4826μm,8.1s						
TURI	Tura	12.73	248	ex		x	06 31 45.0
CHTO	Chiang Mai	12.84	199	ePn		Pn	06 31 04.2 +1.3
CHTO				eSn		Sn	06 33 26.9 +0.9
CHTO	Chiang Mai	12.84	199	Pn		Pn	06 31 06.5 +3.6
	SNR=204						
CHTO				Pn		Pn	06 31 06.5 +3.6
	SNR=204						
HKC	Hong Kong Obse	13.01	130⇓	iP		Pn	06 31 02.0 -3.2
CM31	Chiang Mai Arr	13.18	199	ePn		Pn	06 31 08.2 +0.7
CMAR	Chiang Mai Arr	13.18	199	Pn		Pn	06 31 06.7 -0.8
	comp=E,0.6nm,0.3s,baz=11,slow=12,SNR=20						
CMAR				Lg			06 34 53.6
	baz=265,slow=32,SNR=2.1						
CMAR				LR		LR	06 37 10.3
	comp=E,6959μm,18.3s,baz=15,slow=42						
NJ2	Nanjing	13.24	82	eP		Pn	06 31 06.8 -1.6
NJ2				pP			06 31 13.0
NJ2				PP			06 31 17.5
NJ2				sP			06 31 19.6
NJ2				S		Sn	06 33 32.6 -3.2
NJ2				sS			06 33 44.6
NJ2				pmax	pmax		
	comp=Z,530nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,24μm,4.3s						
NJ2				LR	LR		
	comp=N,9177μm,7.8s						
NJ2				LR	LR		
	comp=E,14864μm,9.1s						
NJ2				LR	LR		
	comp=Z,17842μm,11.3s						
QIZ	Qiongzhong	13.34	152	P		Pn	06 31 08.0 -1.7
QIZ				pP			06 31 12.7
QIZ				S		Sn	06 33 37.3 -0.9
QIZ				pmax	pmax		
	comp=Z,480nm,1.9s						
QIZ				LR	LR		
	comp=N,3842μm,18.5s						
QIZ				LR	LR		
	comp=E,1832μm,14.9s						
QIZ				LR	LR		
	comp=Z,3703μm,14.2s						
QIZ	Qiongzhong	13.34	152⇓	ePn		Pn	06 31 06.6 -3.1
GTK	Gangtok	13.41	258	ex		Pn	06 31 13.5 +2.8
GTK				ex		x	06 31 25.0
BJT	Baijiatuau	13.71	46	eP		Pn	06 31 15.6 +0.9
BJI	Beijing	13.73	46	P		Pn	06 31 15.5 +0.5
BJI				S		Sn	06 33 50.1 +2.4
BJI				pmax	pmax		
	comp=Z,810nm,1.2s						
BJI				pmax	pmax		
	comp=Z,58μm,11.2s						
BJI				LR	LR		
	comp=N,14992μm,15.7s						
BJI				LR	LR		
	comp=E,8413μm,17.0s						
BJI				LR	LR		
	comp=Z,12003μm,23.6s						
SLGI	Shiliguri	13.80	255	eP		Pn	06 31 15.6 -0.4
TAPN	Taplejung	14.17	259	eP		Pn	06 31 20.1 -0.9
ODAN	Odare	14.60	257	eP		Pn	06 31 25.5 -1.4
QZH	Quanzhou	14.76	111⇓	iP		Pn	06 31 26.6 -2.5
QZH				S		Sn	06 34 12.0 -0.8
QZH				pmax	pmax		
	comp=Z,3μm,1.0s						
QZH				pmax	pmax		
	comp=Z,204μm,9.9s						
RAMN	Ramite	15.23	259	eP		Pn	06 31 33.4 -2.1
SSE	Sheshan	15.27	85	⇓P		Pn	06 31 34.5 -1.4
SSE				pP		pP	06 31 39.3 -3.7
SSE				S		Sn	06 34 20.5 -4.8
SSE				pmax	pmax		
	comp=Z,980nm,1.5s						
SSE				pmax	pmax		
	comp=Z,15μm,5.6s						
SSE				LR	LR		
	comp=N,15190μm,10.5s						
SSE				LR	LR		
	comp=E,3417μm,10.5s						
SSE				LR	LR		
	comp=Z,12200μm,13.0s						
GUN	Gumba	15.55	263	eP		Pn	06 31 37.2 -2.5
	comp=Z,43μm,1.4s						
GUN	Gumba	15.55	263	eP		Pn	06 31 37.4 -2.3
CAL	Calcutta	15.88	241	eP		Pn	06 31 42.2 -1.7
CAL				ex		x	06 34 56.3
PKI	Pulchoki	16.05	262	eP		Pn	06 31 43.5 -2.6
	comp=Z,99μm,1.9s						
PKI	Pulchoki	16.05	262	eP		Pn	06 31 43.6 -2.5
PKIN	Phulchoki	16.06	262	eP		Pn	06 31 43.9 -2.3
KKN	Kakani	16.10	263	eP		Pn	06 31 44.0 -2.7
KKN	Kakani	16.10	263	eP		Pn	06 31 44.0 -2.7
	comp=Z,57μm,1.6s						
DMN	Daman	16.30	262	eP		Pn	06 31 46.8 -2.5
	comp=Z,78μm,1.5s						
DMN	Daman	16.30	262	eP		Pn	06 31 46.8 -2.5
DL2	Dalian	16.86	57	⇑P		Pn	06 31 58.5 +2.1
DL2				S		Sn	06 35 05.4 +1.4
DL2				pmax	pmax		
	comp=Z,4μm,1.9s						
DL2				pmax	pmax		
	comp=Z,152μm,8.2s						
DL2				LR	LR		
	comp=N,5998μm,15.7s						
DL2				LR	LR		
	comp=E,5757μm,16.7s						
DL2				LR	LR		
	comp=Z,8807μm,16.7s						
SONM	Songino Array	16.91	7	Pn		Pn	06 31 56.9 0.0
	comp=Z,1.0nm,0.3s,baz=184,slow=11,SNR=60						
SONM				Lg			06 37 08.0
	comp=Z,10nm,0.3s,baz=184,slow=30,SNR=2.3						
ULN	Ulaanbaatar	17.02	8	eP		Pn	06 32 01.4 +3.2
ULN	Ulaanbaatar	17.02	8⇑	ePn		Pn	06 31 58.2 0.0
	comp=Z,42μm,2.4s						
TATO	Taipei	17.10	106	ePn		Pn	06 31 57.5 -2.0
	comp=Z,18μm,1.5s						
YHNB	Yeheng	17.14	107	ePn		Pn	06 31 59.6 -0.4
	comp=Z,7μm,1.0s						
TPUB	Ta-pu	17.18	113⇓	ePn		Pn	06 31 59.1 -1.4
	comp=Z,5μm,0.9s						
SSLB	Suanglung	17.20	111⇓	ePn		Pn	06 31 59.4 -1.3
	comp=Z,108nm,3.3s						
NACB	Ninganchiao	17.54	109⇓	eP		Pn	06 32 03.7 -1.2
	comp=Z,31μm,1.6s						
YULB	Yu-li	17.66	111⇓	ePn		Pn	06 32 04.5 -2.0
	comp=Z,3μm,0.9s						
WMQ	Urumqi	17.77	320⇑	iP		Pn	06 32 08.2 +0.5
WMQ				S		Sn	06 35 28.6 +2.8
WMQ				sS		sS	06 35 34.5 -1.9
WMQ				SS			06 35 48.8
WMQ				pmax	pmax		
	comp=Z,4μm,1.5s						
WMQ				pmax	pmax		
	comp=Z,486μm,10.0s						
WMQ				LR	LR		
	comp=N,19674μm,15.0s						
WMQ				LR	LR		
	comp=E,9306μm,19.0s						
WMQ				LR	LR		
	comp=Z,5944μm,18.0s						
TWG	Pinlang	17.77	113	eP		Pn	06 32 05.8 -2.0
	comp=Z,16μm,1.6s						
BWNR	Bhubaneshwar	19.09	240	eP		Pn	06 32 18.6 -5.4
BWNR				eS		Sn	06 35 53.9 -4.3
ZAK	Zakamensk	19.30	360	eP		Pn	06 32 28.3 +2.0
ZAK				pmax	pmax		
	comp=Z,5μm,1.6s						
SNY	Shenyang	19.44	51	⇓P		Pn	06 32 26.8 -1.2
SNY				S		Sn	06 36 07.3 +1.1
SNY				pmax	pmax		
	comp=Z,1μm,2.5s						
SNY				pmax	pmax		
	comp=Z,142μm,12.0s						
SNY				LR	LR		
	comp=N,2462μm,14.4s						
SNY				LR	LR		
	comp=E,7965μm,18.0s						
SNY				LR	LR		
	comp=Z,9004μm,17.4s						
BBP	Basco	19.78	118	eP		Pn	06 32 35.2 +2.9
ALBI	Allahabad	19.84	259	eP		Pn	06 32 31.0 -2.0
PTH	Pithoragarh	20.05	272	eP		P	06 32 34.0 +0.4
INCN	Inchon	20.24	65⇓	eP		P	06 32 35.4 -0.2
	comp=Z,5μm,1.0s						
INCN				LR	LR		
	comp=Z,15019μm,19.0s,MS8.4						
INCN	Inchon	20.24	65	P		P	06 32 38.1 +2.5
	SNR=180						
INCN				P			06 32 38.1
	SNR=180						
JOSI	Joshimath	20.46	275	eP		P	06 32 37.2 -0.9
JOSI				AMb		AMB	06 32 44.6
	comp=Z,36μm,1.0s						
TLY	Talaya	20.60	0	Pn		P	06 32 42.6 +3.2
	comp=Z,7μm,1.0s						
TLY	Talaya	20.60	0c	iP		P	06 32 41.1 +1.7
TLY				eS		S	06 36 34.2 +4.4
TLY				eSS			06 37 11.1
TLY				pmax	pmax		
	comp=Z,4μm,2.0s						
TLY				MLR	MLR		
	comp=Z,5652μm,15.0s,MS8.1						
TLY	Talaya	20.60	0⇑	eP		P	06 32 41.0 +1.6
	comp=Z,16nm,0.6s						
ABRA	Dolores	20.65	126	eP		P	06 32 45.5 +5.3
MOY	Mondy	20.66	356	eP		P	06 32 42.8 +2.7
MOY				pmax	pmax		
	comp=Z,20μm,2.2s						
APYP	Conner	20.87	125	eP		P	06 32 46.2 +3.6
BOLP	Bolinao	21.00	130	eP		P	06 32 50.5 +6.4
IRK	Irkutsk	21.17	2	eP		P	06 32 51.6 +6.0
IRK				e			06 33 15.8
IRK				pmax	pmax		
	comp=Z,17μm,1.9s,mb7.0						
SGCP	Mt. Cagua	21.20	123	eP		P	06 32 52.7 +6.5
KSRS	Korea Array	21.24	66	P		P	06 32 46.0 -0.5
	comp=Z,474nm,0.9s,mb5.8,baz=252,slow=10.0,SNR=110						
KSRS				S		S	06 36 45.2 +2.5
	comp=Z,457nm,1.1s,baz=255,slow=9.8,SNR=3.0						
KSRS				Lg			06 39 08.9
	comp=Z,137nm,1.0s,baz=248,slow=26,SNR=3.1						
KSRS				LR		LR	06 41 22.0
	comp=Z,5852μm,19.2s,MS8.0,baz=261,slow=38						
KSRS	Korea Array	21.24	66	P		P	06 32 46.0 -0.5
KSRS				S		S	06 36 45.2 +2.5
KSRS				pmax	pmax		
	comp=Z,474nm,0.9s,mb5.8						
KSRS				smax			
	comp=N,457nm,1.1s						
KSRS				MLR	MLR		
	comp=Z,852μm,19.2s,MS7.2						
CVP	Callao Caves	21.39	124⇓	eP		P	06 32 50.2 +2.0
BCPH	Baguio City Da	21.45	129⇑	iP		P	06 32 51.0 +2.2
BCPH				i S		S	06 36 50.6 +3.6
SCZP	Santa Cruz	21.45	131	eP		P	06 32 53.7 +4.9
CN2	Changchun	21.58	48	⇑P		P	06 32 50.4 +0.4
CN2				esP		sP	06 32 57.0 +3.8
CN2				eS		S	06 36 44.3 -4.9
CN2				pmax	pmax		
	comp=Z,990nm,1.5s,mb6.0						
CN2				pmax	pmax		
	comp=Z,113μm,12.0s						
CN2				LR	LR		
	comp=N,11543μm,19.0s,MS8.3						
CN2				LR	LR		
	comp=E,5365μm,19.0s,MS8.3						
CN2				LR	LR		
	comp=Z,7908μm,19.0s,MS8.1						
PBA	Port Blair	21.67	209	ex		P	06 32 54.6 +3.3
PBA				ex		x	06 36 47.2
DDI	Dehra Dun	21.77	275	ex		P	06 32 55.0 +2.7
DDI				ex		x	06 34 24.0
CAUP	Cauayan	21.90	126	eP		P	06 32 58.0 +4.2
HIA	Hailar	21.98	30	eP		P	06 32 54.1 -0.3
HIA				pmax	pmax		
	comp=Z,7μm,1.3s						
HIA				MLR	MLR		
	comp=Z,2902μm,20.0s						
HIA	Hailar	21.98	30	eP		P	06 32 54.1 -0.2
	comp=Z,7μm,1.3s,mb6.9						
HIA				LR	LR		
	comp=Z,2902μm,20.0s,MS7.7						
JOW	Kunigami	22.18	95	P		P	06 32 57.1 +0.5
	comp=Z,418nm,0.6s,mb6.0						
JOW				S		S	06 37 04.2 +3.0
	comp=Z,562nm,1.2s,baz=73,slow=28,SNR=2.2						
JOW				LR		LR	06 42 23.6
	comp=Z,1827μm,18.1s,MS7.5,baz=300,slow=39						
CIT	Chita	22.24	17	eP		P	06 32 58.7 +1.7
CIT				e			06 37 52.5
CIT				pmax	pmax		
	comp=Z,22μm,2.5s,mb7.2						
PALP	Palanan	22.24	124	eP		P	06 33 04.1 +6.7
PCPH	Palayan	22.38	130⇓	eP		P	06 32 59.9 +1.1
AGRA	Agra	22.52	267	eP		P	06 33 00.2 0.0
VIS	Vishakhapatnam	22.53	239	i x		S	06 37 09.8 +1.8
SDNR	Sundarnagar	22.55	278	eP		P	06 32 59.5 -1.1
SDNR				ex		x	06 34 08.5
BALP	Baler	22.57	128	eP		P	06 33 04.6 +3.8
MK31	Makanchi Array	22.60	320⇑	eP		P	06 33 01.5 +0.5
MKAR	Makanchi Array	22.60	320	P		P	06 33 01.4 +0.4
	comp=Z,664nm,0.9s,mb6.0,baz=134,slow=8.6,SNR=131						
MKAR				S		S	06 37 12.5 +3.3
	comp=Z,309nm,1.1s,baz=91,slow=23,SNR=1.5						
MKAR				LR		LR	06 43 41.6
	comp=Z,3853μm,19.5s,MS7.8,baz=124,slow=42						
MKAR	Makanchi Array	22.60	320	P		P	06 33 01.4 +0.4
MKAR				S		S	06 37 12.5 +3.4
BISR	Bishrakh	22.62	270	eP		P	06 33 02.7 +1.3
NDI	New Delhi	22.79	271	eP		P	06 33 01.0 -2.1
NDI				ex		x	06 37 18.0
KKR	Kurukshetra	22.89	274	eP		P	06 33 04.8 +0.6
AYAN	Aya Nagar	22.91	270	eP		P	06 33 04.2 -0.2
AYAN				AMb		AMB	06 33 13.9
	comp=Z,3μm,1.1s,mb6.6						
SONA	Sohna	23.00	270	eP		P	06 33 05.5 +0.1
SONA				AMb		AMB	06 33 15.0
	comp=Z,4μm,0.9s,mb6.9						
LUBP	Lubang	23.20	134	eP		P	06 33 10.2 +2.7
DLH	Dalhousie	23.32	281	eP		P	06 33 08.0 -0.7
DLH				ex		x	06 37 36.0
TGY	Tagaytay City	23.35	132	P		P	06 33 09.3 +0.1
	comp=Z,991nm,1.0s,mb6.2,baz=147,slow=2.6,SNR=14						
TGY	Tagaytay City	23.35	132⇓	eP		Px	06 33 20.5
JNU	Nakatsue	23.37	78	P		P	06 33 09.3 +0.1
THN	Thein Dam	23.54	281	eP		P	06 33 08.8 -2.2
THN				ex		x	06 37 29.9
POLP	Polilio Island	23.54	130	eP		P	06 33 16.3 +5.2
PGP	Puerto Galera	23.82	133⇑	iP		P	06 33 20.5 +6.9
KSH	Kashi	23.83	298⇑	iP		P	06 33 16.5 +2.9
KSH				pP			06 33 20.6
KSH				sP		sP	06 33 23.6 +6.7
KSH				PP			06 33 50.6
KSH				PcP		PcP	06 36 57.5 +0.8
KSH				S		S	06 37 27.4 -2.2
KSH				SS			06 38 23.5
KSH				pmax	pmax		
	comp=Z,12μm,2.0s,mb7.0						
KSH				LR	LR		
	comp=N,4086μm,16.0s,MS8.2						
KSH				LR	LR		
	comp=E,3914μm,14.0s,MS8.2						
KSH				LR	LR		
	comp=Z,2968μm,14.9s,MS7.9						
NGP	Nagpur	23.92	251	i x		x	06 33 09.8
NGP				ex		x	06 33 30.5
	comp=Z,9μm,1.5s						
NGP				i S		S	06 37 30.8 -0.5
KHET	Khetri	24.14	270	eP		P	06 33 16.8 +0.3
KHET				AMb		AMB	06 33 30.5
	comp=Z,3μm,2.1s,mb6.4						
KHET				ex		x	06 38 00.6
AAA	Alma-Ata	24.22	308	i P		P	06 33 22.1 +5.0
AAA				pmax	pmax		
	comp=Z,403μm,11.6s						
AAA				MLR	MLR		
	comp=Z,2925μm,19.0s,MS7.8						
BHPL	Bhopal	24.33	258	eP		P	06 33 15.8 -2.5
BHPL				AMb		AMB	06 33 39.1
	comp=Z,6μm,1.4s,mb6.8						
BHPL				ex		x	06 37 47.5
ULHL	Ulahol	24.36	305	P		P	06 33 19.3 +0.9
	SNR=252						
BOAC	Boac	24.41	132	eP		P	06 33 24.8 +5.7
GQP	Guinayangan	24.47	130⇓	eP		P	06 33 21.1 +1.4
BUSP	Coron	24.53	137	eP		P	06 33 23.1 +3.0
MDJ	Mudanjiang	24.61	49	P		P	06 33 20.9 +0.3
MDJ				pP			06 33 23.6
MDJ				sP		sP	06 33 25.0 +1.1
MDJ				S		S	06 37 35.1 -6.9
MDJ				sS		sS	06 37 47.7 +1.9
MDJ				ScP		ScP	06 40 36.8 -0.6
MDJ				PcS		PcS	06 40 38.0 -0.1
MDJ				pmax	pmax		
	comp=Z,630nm,1.4s,mb6.0						
MDJ				pmax	pmax		
	comp=Z,64μm,8.4s						
MDJ				LR	LR		
	comp=N,6490μm,29.1s,MS8.0						
MDJ				LR	LR		
	comp=E,3001μm,30.1s,MS8.0						
MDJ				LR	LR		
	comp=Z,6356μm,15.8s						
MDJ	Mudanjiang	24.61	49	eP		P	06 33 22.4 +1.8
	comp=Z,15μm,2.3s,mb7.1						
MDJ				LR	LR		
	comp=Z,4209μm,20.0s,MS7.9						
ORY	Orie	24.64	349d	iP		P	06 33 22.8 +2.0
SJMP	San Jose	24.72	135	eP		P	06 33 23.4 +1.5
KZA	Kyzart	25.01	304	P		P	06 33 25.8 +1.4
	SNR=454						
TKM2	Tokmak 2	25.03	306	P		P	06 33 25.9 +1.4
	SNR=122						
TKM2	Tokmak 2	25.03	306⇑	iP		P	06 33 25.4 +0.9
TKM2				MLR	MLR		
	comp=Z,3516μm,22.0s,MS7.8						
TKM2	Tokmak 2	25.03	306⇑	iP		P	06 33 25.4 +0.9
	comp=Z,226nm,1.5s,mb5.5						
TKM2				LR	LR		
	comp=Z,3516μm,22.0s,MS7.8						
AUQP	San Andres	25.05	131	eP		P	06 33 31.8 +6.8
OTRP	Odiongan	25.35	133	eP		P	06 33 32.8 +5.1
KBK	Karagaybulak	25.40	305	P		P	06 33 29.7 +1.8
	SNR=118						
AJM	Ajmer	25.56	267	eP		P	06 33 28.1 -1.4
AJM				AMb		AMB	06 33 38.8
	comp=Z,3μm,1.1s,mb6.7						
UCH	Uchtor	25.58	304	P		P	06 33 30.9 +1.4
	SNR=122						
UCH	Uchtor	25.58	304	PFAKE			06 33 40.0 +10
UCH				LR	LR		
	comp=Z,3419μm,21.0s,MS7.8						
KTGM	Kuala Trenggan	25.60	181	P		P	06 33 33.4 +3.5
VLA	Vladivostok	25.61	54	eP		P	06 33 29.4 -0.4
VLA				i *PP		pP	06 33 31.9 -0.2
VLA				eS		S	06 37 58.0 0.0
VLA				pmax	pmax		
	comp=Z,1μm,1.8s,mb6.1						
VLA				MLR	MLR		
	comp=Z,9521μm,19.0s,MS8.3						
CHMS	Chumysh	25.64	306	P		P	06 33 30.7 +0.6
	SNR=77						
FRU	Bishkek	25.68	305⇑	eP		P	06 33 31.0 +0.6
FRU				i		pP	06 33 32.0 -0.7
FRU				i			06 34 14.0
FRU				i S		S	06 37 54.0 -5.2
FRU				MLR	MLR		
	comp=Z,2300μm,20.0s,MS7.7						
AAK	Ala-Archa	25.71	305	P		P	06 33 33.9 +3.2
	comp=Z,12μm,0.8s,mb7.5						
AAK	Ala-Archa	25.71	305	P		P	06 33 32.2 +1.6
	SNR=139						
AAK	Ala-Archa	25.71	305	P		P	06 33 31.7 +1.0
	comp=Z,244nm,0.9s,mb5.7,baz=112,slow=7.0,SNR=66						
AAK				LR		LR	06 45 16.6
	comp=Z,3558μm,21.9s,MS7.8,baz=326,slow=40						
AAK	Ala-Archa	25.71	305	P		P	06 33 31.7 +1.0
AAK				pmax	pmax		
	comp=Z,244nm,0.9s,mb5.7						
AAK				MLR	MLR		
	comp=Z,558μm,21.9s,MS7.0						
AAK	Ala-Archa	25.71	305⇑	eP		P	06 33 32.1 +1.4
	comp=Z,17μm,2.0s,mb7.2						
AAK				LR	LR		
	comp=Z,3610μm,22.0s,MS7.9						
AAK	Ala-Archa	25.71	305	P		P	06 33 32.5 +1.8
	SNR=1753						
AAK				P			06 33 32.5
	SNR=1753						
KULM	Kulim	25.77	186	P		P	06 33 34.1 +2.7
KULM	Kulim	25.77	186	eP		P	06 33 28.3 -3.1
	comp=Z,1μm,0.9s,mb6.4						
KULM				LR	LR		
	comp=Z,3624μm,20.0s,MS7.9						
PVCP	Virac	25.84	128	eP		P	06 33 37.1 +5.1
USP	Ospenovka	25.90	306	P		P	06 33 33.4 +1.0
	SNR=157						
BATP	Bataraza	25.92	146	eP		P	06 33 35.2 +2.4
CUYO	Cuyo Island	25.93	137	eP		P	06 33 34.0 +1.2
KALP	Kalibo	26.08	134⇑	eP		Px	06 33 45.6
AML	Almayashu	26.14	303	P		P	06 33 35.7 +1.1

SNR=111
AML Almayashu 26.14 303 *e*P **P 06 33 35.6 +1.1**
comp=Z,96nm,1.6s
AML LR LR
comp=Z,4285μm,19.0s
EKS2 Erkin-Say 26.22 304 P **P 06 33 36.8 +1.4**
SNR=111
EKS2 Erkin-Say 26.22 304 *e*P **P 06 33 36.6 +1.3**
comp=Z,226nm,1.5s,mb5.5
EKS2 LR LR
comp=Z,2991μm,22.0s,MS7.8
HYB Hyderabad 26.32 245⇑*i*P **P 06 33 33.0 -3.4**
HYB *e*S **S 06 38 16.0 +6.4**
HYB LR LR 06 45 00.0
comp=Z,283nm,16.0s
MMPH Masbate 26.38 130 *e*P **P 06 33 44.2 +7.2**
RCP Roxas 26.42 133⇑*e*P **P 06 33 37.5 +0.2**
ZAA0 Zalesovo Array 26.49 335 *e*P **P 06 33 37.5 -0.1**
ZALV Zalesovo Beam 26.49 335 P **P 06 33 37.0 -0.7**
comp=Z,556nm,1.0s,mb6.1,baz=136,slow=8.6,SNR=118
ZALV Lg 06 42 00.2
comp=Z,22nm,0.7s,baz=153,slow=19,SNR=2.5
ZALV Zalesovo Beam 26.49 335 P **P 06 33 37.0 -0.7**
ZALV Lg 06 42 00.2
IPM Ipoh 26.54 185 P **P 06 33 40.2 +1.9**
IPM Ipoh 26.54 185 P **P 06 33 35.3 -3.1**
BSI Banda Aceh 26.54 198 P **P 06 33 39.7 +1.3**
KURK Kurchatov 26.91 324 P **P 06 33 41.4 0.0**
comp=Z,10μm,1.2s,mb7.2
KURK Kurchatov 26.91 324 P **P 06 33 40.9 -0.5**
comp=Z,103nm,0.8s,baz=127,slow=8.7,SNR=103
KURK S **S 06 38 27.9 +10**
comp=Z,265nm,1.1s,baz=109,slow=11,SNR=2.1
KURK Lg 06 42 14.9
comp=Z,70nm,1.1s,baz=126,slow=22,SNR=2.1
KURK LR LR 06 45 42.2
comp=Z,4337μm,18.8s,MS8.0,baz=130,slow=40
KURK PKPPKP 07 08 08.1
comp=Z,18nm,1.0s,baz=312,slow=3.9,SNR=4.1
KURK Kurchatov 26.91 324 P **P 06 33 40.7 -0.7**
KURK *e* 06 33 50.5
KURK pmax pmax
comp=Z,7μm,1.3s,mb7.0
KURK Kurchatov 26.91 324 *e*P **P 06 33 41.6 +0.2**
comp=Z,265nm,2.8s
KURK LR LR
comp=Z,4742μm,19.0s,MS8.1
CNP Cataram 26.96 129 *e*P **P 06 33 48.1 +5.9**
GUIM Jordan 27.04 135 *e*P **P 06 33 48.4 +5.4**
KDM Kudat 27.13 150 P **P 06 33 44.5 +0.7**
LATR Latur 27.33 249 *ex* x 06 33 42.0
KKM Kota Kinabalu 27.65 152 P **P 06 33 48.6 +0.2**
KKM Kota Kinabalu 27.65 152 *e*P **P 06 33 48.0 -0.4**
comp=Z,21μm,2.0s,mb7.4
KKM LR LR
comp=Z,1799μm,20.0s,MS7.7
FRIM Kepong 27.73 184 P **P 06 33 52.3 +3.2**
BOD Bodaibo 27.74 12 *e*P **P 06 33 49.8 +1.0**
BOD pmax pmax
comp=Z,2μm,1.6s,mb6.5
NVS Novosibirsk 27.77 335 *e*P **P 06 33 50.4 +1.3**
NVS pmax pmax
comp=E,4μm,2.1s
NVS pmax pmax
comp=Z,6μm,2.1s,mb6.9
NVS pmax pmax
comp=N,8μm,2.0s
TSI Tuntungan 27.79 190 P **P 06 33 52.9 +3.3**
OCLP Ormoc 28.00 131 *e*P **P 06 33 58.7 +7.2**
KLR Kul'dur 28.03 42 *e*P **P 06 33 47.2 -4.3**
LLP Lapu-Lapu 28.14 133 *e*P **P 06 33 52.0 -0.8**
LLP *e*S Sx 06 38 56.3
SDKM Sandakan 28.43 150 P **P 06 33 55.2 -0.1**
SNPH Sibulan 28.44 135⇓*e*P **P 06 33 58.3 +2.8**
TBP Tagbilaran 28.55 134 *e*P **P 06 33 56.8 +0.3**
JASL Jaisalmer 28.64 270 *ex* **P 06 33 59.0 +1.8**
KGM Kluang 28.89 180 P **P 06 34 01.0 +1.5**
KBL Kabul 28.98 286 *e*P **P 06 33 59.7 -0.5**
KBL pmax pmax
comp=Z,4μm,1.1s,mb7.0
KBL Kabul 28.98 286 *e*P **P 06 33 59.7 -0.4**
comp=Z,4μm,1.1s,mb7.0
DCPH Dipolog City 29.11 136⇑*e*P **P 06 34 00.4 -1.0**
MYKOM Kota Tinggi 29.12 179 P **P 06 34 03.9 +2.5**
BTM Bintulu 29.19 160 P **P 06 34 03.6 +1.4**
MAJO Matsushiro 29.35 70 *e*P **P 06 34 03.0 -0.4**
MAJO pmax pmax
comp=Z,1μm,1.2s,mb6.5
MAJO MLR MLR
comp=Z,3629μm,19.0s,MS8.0
MAJO Matsushiro 29.35 70 *e*P **P 06 34 03.0 -0.4**
comp=Z,1μm,1.2s,mb6.5
MAJO LR LR
comp=Z,3629μm,19.0s,MS8.0
MAT Matsushiro 29.35 70 P **P 06 34 02.5 -0.9**
MAT S **S 06 38 55.0 -2.2**
MJAR Matsushiro Arr 29.36 70 P **P 06 34 02.1 -1.4**
comp=Z,87nm,1.1s,baz=275,slow=7.9,SNR=33
MJAR S **S 06 39 06.9 +10**
comp=Z,23nm,0.8s,baz=304,slow=22,SNR=1.8
MJAR LR LR 06 46 35.0
comp=Z,2962μm,19.0s,MS7.9,baz=265,slow=38
MJAR PKPPKP 07 08 10.1
MJAR Matsushiro Arr 29.36 70 P **P 06 34 02.1 -1.4**
MJAR S **S 06 39 06.9 +10**
MJAR LR LR 06 46 35.0
BHV Bhavnagar 29.39 259 *e*P **P 06 34 02.5 -1.4**
POO Poona 29.46 252 *e*P **P 06 34 03.2 -1.3**
NRGR Nerungri 29.61 24 *i*P **P 06 34 08.9 +3.4**
HABR Khabarovsk 29.63 45*c i*P **P 06 34 08.1 +2.3**
HABR *e**PP pP 06 34 11.4 +3.3
HABR *e**SP sP 06 34 12.7 +3.7
HABR *e* 06 35 03.6
HABR *e*PPP 06 35 11.8
HABR *e* 06 37 11.9
HABR *e*S **S 06 39 04.0 +2.7**
HABR *e**SS sS 06 39 10.4 +5.3
HABR *e*SS SS 06 40 36.0 -31
HABR *e* 06 40 55.2
HABR *e* 06 44 48.9
HABR pmax pmax
comp=Z,2μm,2.2s,mb6.5
HABR pmax pmax
comp=N,484nm,2.6s
HABR pmax pmax
comp=E,1μm,1.8s
HABR MLR MLR
comp=Z,4672μm,11.0s,MS8.4
HABR MLR MLR
comp=E,4563μm,10.0s
HABR MLR MLR
comp=N,3364μm,18.0s
SBUM Sibu 29.66 162 P **P 06 34 06.3 0.0**
PAGZ Pagadian 29.71 137 *e*P **P 06 34 09.3 +2.6**
CLNS Chul'man 29.81 24*c i*P **P 06 34 08.8 +1.6**
CLNS *e**PP pP 06 34 18.0 +8.5
CLNS *e* 06 35 12.2
CLNS pmax pmax
comp=Z,836nm,1.4s,mb6.3
CLNS pmax pmax
comp=E,497nm,1.3s
CLNS pmax pmax
comp=N,527nm,1.5s
CLNS pmax pmax
comp=Z,2μm,1.6s,mb6.6
CLNS pmax pmax
comp=N,786nm,0.8s
CLNS pmax pmax
comp=E,1μm,1.5s
CLNS MLR MLR
comp=Z,124μm,11.0s,MS6.8
KAD Karad 29.83 249 *e*P **P 06 34 07.8 0.0**
KAD *ex* x 06 39 07.0
CGP Cagayan de Oro 30.02 134⇓*e*P **P 06 34 15.1 +5.6**
GSI Gunungsitoli 30.10 192 P **P 06 34 11.0 +0.8**
KSM Kuching 30.15 166 P **P 06 34 12.8 +2.1**
KSM Kuching 30.15 166 *e*P **P 06 34 10.9 +0.2**
comp=Z,1μm,1.1s,mb6.5
KSM LR LR
comp=Z,1700μm,20.0s,MS7.7
BUTP Butuan 30.21 132 *e*P **P 06 34 16.8 +5.6**
BUKP Musuan 30.70 134 *e*P **P 06 34 21.8 +6.3**
CTBH Cotabato--PC H 30.72 136 *e*P **P 06 34 14.3 -1.4**
JHJ Hachijo jima 2 30.82 76 P **P 06 34 15.7 -0.8**
comp=Z,425nm,0.6s,mb6.4,baz=232,slow=18,SNR=3.3
JHJ S **S 06 39 32.9 +13**
comp=Z,519nm,0.9s,baz=238,slow=19,SNR=1.9
JHJ LR LR 06 48 13.6
comp=Z,3506μm,18.1s,MS8.1,baz=300,slow=39
BIPH Bislig 31.28 132⇓*e*P **P 06 34 19.7 -0.9**
KCP Kidapawan 31.40 135⇓*e*P **P 06 34 29.5 +7.8**
DMPH Davao City--Mi 31.59 134⇓*e*P **P 06 34 25.3 +1.9**
DAV Davao City (W) 31.65 134 P **P 06 34 22.4 -1.5**
comp=Z,216nm,0.3s,mb6.4,baz=56,slow=0.8,SNR=13
DAV S **S 06 39 35.0 +1.5**
comp=Z,144nm,0.4s,baz=10,slow=23,SNR=1.4
DAV LR LR 06 48 53.7
comp=Z,3355μm,20.3s,MS8.0,baz=132,slow=40
DAV Davao City (W) 31.65 134 P **P 06 34 22.4 -1.5**
DAV pP 06 34 26.0 -0.2
DAV S **S 06 39 35.0 +1.5**
DAV LR LR 06 48 53.7
DAV Davao City (W) 31.65 134 P **P 06 34 25.9 +2.0**
SNR=57
DAV P 06 34 25.9
SNR=57
DAV Davao City (W) 31.65 134⇓*e*P **P 06 34 29.2 +5.4**
PALK Pallekele 31.78 227 P **P 06 34 25.4 +0.4**
comp=Z,3μm,1.2s,mb6.9,SNR=17
PALK Pallekele 31.78 227 P **P 06 34 25.0 0.0**
PALK Pallekele 31.78 227 *e*P **P 06 34 25.2 +0.2**
comp=Z,249nm,2.3s,mb5.6
GSPH General Santos 32.05 136 *e*P **P 06 34 36.6 +9.3**
MATI Mati 32.16 134 *e*P **P 06 34 34.7 +6.3**
BVAR Borovoye Array 32.44 322 P **P 06 34 28.9 -1.5**
comp=Z,95nm,0.7s,mb5.8,baz=108,slow=9.7,SNR=74
BVAR S **S 06 39 48.5 +3.5**
comp=Z,140nm,1.0s,baz=95,slow=18,SNR=2.1
BVAR Lg 06 45 04.9
comp=Z,27nm,1.0s,baz=134,slow=25,SNR=2.0
BVAR LR LR 06 47 43.2
comp=Z,2960μm,21.7s,MS7.9,baz=210,slow=36
BVAR Borovoye Array 32.44 322 P **P 06 34 28.9 -1.5**
BVAR S **S 06 39 48.5 +3.5**
BRVK Borovoye 32.51 322 P **P 06 34 32.3 +1.3**
comp=Z,3μm,1.3s,mb7.0
BRVK Borovoye 32.51 322 *e*P **P 06 34 31.3 +0.3**
BRVK pmax pmax
comp=Z,2μm,1.1s,mb7.0
BRVK MLR MLR
comp=Z,2327μm,20.0s,MS7.9
BRVK Borovoye 32.51 322 *e*P **P 06 34 31.3 +0.3**
comp=Z,2μm,1.1s,mb7.0
BRVK LR LR
comp=Z,2327μm,20.0s,MS7.9
TRD Trivandrum 33.31 233⇑*ex* **P 06 34 44.0 +5.5**
TRD *ex* x 06 40 50.0
ASAJ Asahikawa 33.39 56 P **P 06 34 37.9 -1.0**
comp=Z,91nm,0.8s,mb5.7,baz=262,slow=13,SNR=31
ASAJ S **S 06 40 03.1 +3.1**
comp=Z,77nm,0.9s,baz=351,slow=20,SNR=1.4
ASAJ LR LR 06 49 22.8
comp=Z,2349μm,18.0s,MS7.9,baz=266,slow=38
ASAJ Asahikawa 33.39 56 P **P 06 34 37.9 -1.0**
ASAJ S **S 06 40 03.2 +3.2**
ASAJ smax
comp=N,77nm,1.0s
ASAJ MLR MLR
comp=Z,349μm,18.0s
ERM Erimo 33.51 60 P **P 06 34 42.4 +2.4**
comp=Z,2μm,1.4s,mb6.9,SNR=41
ERM Erimo 33.51 60 *e*P **P 06 34 40.2 +0.2**
ERM pmax pmax
comp=Z,2μm,1.2s,mb6.8
ERM MLR MLR
comp=Z,1891μm,22.0s,MS7.8
ERM Erimo 33.51 60 *e*P **P 06 34 40.2 +0.2**
comp=Z,2μm,1.2s,mb6.8
ERM LR LR
comp=Z,1891μm,22.0s,MS7.8
CBIJ Chichi jima 34.03 87 P **P 06 34 43.1 -1.5**
comp=Z,223nm,0.3s,mb6.5,baz=259,slow=16,SNR=11
CBIJ S **S 06 40 09.7 -0.7**
comp=Z,159nm,0.4s,baz=298,slow=22,SNR=3.9
CBIJ LR LR 06 48 34.9
comp=Z,1566μm,20.9s,MS7.7,baz=293,slow=36
YSS Yuzh-Sakhalins 34.06 51*ei*P **P 06 34 45.0 +0.3**
YSS *i* pP 06 34 46.4 -0.6
YSS *i* 06 35 54.0
YSS *e*PPP 06 36 19.0
YSS *e*S **S 06 40 09.0 -1.5**
YSS *e*SSS 06 42 42.0
YSS smax
comp=N,116μm,14.0s
YSS MLR MLR
comp=Z,5364μm,16.0s,MS8.4
YSS MLR MLR
comp=N,4565μm,15.0s,MS8.5
YSS MLR MLR
comp=E,4479μm,13.0s,MS8.5
YSS Yuzh-Sakhalins 34.06 51 *e*P **P 06 34 43.4 -1.3**
comp=E,3μm,1.1s,mb7.1
YSS LR LR
comp=Z,5282μm,19.0s,MS8.3
YAK Yakutsk 35.37 21 *e*P **P 06 34 55.9 +0.1**
YAK *e**PP pP 06 35 04.9 +6.8
YAK *e* 06 36 15.0
YAK *e*S **S 06 40 30.8 +0.6**
YAK *e* 06 45 06.6
YAK pmax pmax
comp=Z,624nm,1.1s,mb6.5
YAK pmax pmax
comp=N,251nm,1.1s
YAK pmax pmax
comp=E,278nm,1.4s
YAK pmax pmax
comp=Z,2μm,1.0s,mb7.1
YAK pmax pmax
comp=E,2μm,1.4s
YAK pmax pmax
comp=N,1μm,1.3s
YAK smax
comp=N,11μm,2.5s
YAK smax
comp=E,7μm,3.0s
YAK MLR MLR
comp=E,1375μm,10.0s,MS8.1
YAK MLR MLR
comp=N,1213μm,13.0s,MS8.1
YAK MLR MLR
comp=Z,2900μm,13.0s,MS8.2
YAK Yakutsk 35.37 21 *e*P **P 06 34 54.7 -1.1**
comp=Z,2μm,0.8s,mb7.1
YAK LR LR
comp=Z,2332μm,19.0s,MS8.0
YUK Yuzh-Kuril'sk 35.70 57 P **P 06 35 00.5 +1.6**
YUK *i* S **S 06 40 35.5 -0.3**
YUK *e*SS SS 06 43 01.0 -10
YUK *e*SSS 06 43 29.0
YUK pmax pmax
comp=N,10μm,2.0s
YUK pmax pmax
comp=E,30μm,2.0s
YUK pmax pmax
comp=Z,42μm,2.0s,mb8.0
YUK pmax pmax
comp=N,7μm,1.6s
YUK pmax pmax
comp=E,7μm,1.6s
YUK pmax pmax
comp=Z,14μm,1.6s,mb7.6
YUK smax
comp=N,118μm,8.0s
YUK smax
comp=E,110μm,8.0s
IMYA Miami 36.16 290 *e*P **P 06 35 03.3 +0.4**
MNCY Minicoy 36.26 238 *i*P **P 06 35 02.0 -2.0**
MNCY *i* x x 06 36 30.0
MHI Mashad 36.67 290 *e*P **P 06 35 09.4 +2.1**
IDAH Dahanechah 36.78 284 *e*P **P 06 35 07.8 -0.5**
IMOG Moghan 36.79 290 *e*P **P 06 35 08.2 -0.1**
IPAY Payeh 37.04 291 *e*P **P 06 35 10.6 +0.2**
IAKL Akhelmad 37.22 291 *e*P **P 06 35 13.0 +1.1**
ABKAR Akbulak array 37.23 312 *e*P **P 06 35 11.9 +0.1**
comp=E,70nm,1.4s
IEMG Emamgholi 37.24 292 *e*P **P 06 35 13.4 +1.3**
IKRD Kardeh 37.40 291 *e*P **P 06 35 07.5 -5.9**
ASH Ashkhabad 37.45 293 P **P 06 35 17.0 +3.2**
ASH S **S 06 41 03.0 +0.5**
ABKT Ailbek 37.63 293 P **P 06 35 16.6 +1.2**
comp=E,9μm,1.5s,mb7.3
VAN Vannovskaya 37.64 293 *e*P **P 06 35 18.8 +3.3**
ISFR Sfrayin 37.78 292 *e*P **P 06 35 16.6 -0.1**
AKTK Aktyubinsk 38.71 313 P **P 06 35 24.3 0.0**
AKTK S **S 06 41 18.3 -3.0**
AKTK LR LR 06 53 34.3
AKTO Aktyubinsk 38.71 313 P **P 06 35 24.3 0.0**
comp=E,127nm,0.9s,mb5.7,baz=100,slow=7.9,SNR=56
AKTO S **S 06 41 18.3 -3.0**
comp=E,81nm,0.9s,baz=170,slow=23,SNR=1.7
AKTO LR LR 06 53 34.3
comp=E,1736μm,18.8s,MS7.9,baz=272,slow=40
AKTO Aktyubinsk 38.71 313 P **P 06 35 24.3 0.0**
AKTO S **S 06 41 18.3 -3.0**
KAPI Kappang 39.14 154 P **P 06 35 27.7 -0.6**
comp=E,6μm,1.2s,mb7.2,SNR=74
KAPI Kappang 39.14 154 P **P 06 35 26.5 -1.8**
comp=E,306nm,0.9s,mb6.0,baz=319,slow=6.6,SNR=44
KAPI S **S 06 41 26.1 -2.4**
comp=E,81nm,0.8s,baz=198,slow=14,SNR=1.6
KAPI Kappang 39.14 154 P **P 06 35 26.4 -1.8**
KAPI S **S 06 41 26.1 -2.4**
SVE Sverdlovsk 39.16 324⇓*e*P **P 06 35 28.4 +0.4**
SVE pmax pmax
comp=Z,6μm,1.3s,mb7.2
SVE pmax pmax
comp=Z,171μm,17.2s
ARU Arti 40.08 323 P **P 06 35 36.4 +0.7**
comp=Z,7μm,0.9s,mb7.4
ARU Arti 40.08 323*c i*P **P 06 35 35.5 -0.2**
ARU *e* 06 37 10.0
ARU *e*PPP 06 37 33.5
ARU *e*S **S 06 41 43.4 +1.6**
ARU SS SS 06 44 40.6 +1.7
ARU pmax pmax
comp=Z,1μm,2.5s,mb6.2
ARU pmax pmax
comp=Z,76μm,10.1s
ARU MLR MLR
comp=Z,1776μm,16.0s,MS8.0
ARU Arti 40.08 323 *e*P **P 06 35 35.1 -0.6**
comp=Z,24nm,1.9s
ARU LR LR
comp=Z,1732μm,22.0s,MS7.9
IBAF Bafgh 40.58 284 *e*P **P 06 35 42.5 +2.3**
BIDO Bidbid 40.68 271⇓P **P 06 35 42.7 +1.6**
SNR=48
IBND Bandar-abas 40.79 277 *e*P **P 06 35 40.4 -1.5**
IBND *e*P pP 06 35 41.2 -3.1
SMDO Samad 40.91 270⇓P **P 06 35 43.2 +0.1**
SNR=66
JMDO Jabal Madar 41.12 269 P **P 06 35 45.7 +0.9**
SNR=32
IGLO Ghaloghah 41.17 291 *e*P **P 06 35 46.7 +1.7**
IKIA Kiasar 41.33 291 *e*P **P 06 35 47.4 +1.1**
HOQ Hoqain 41.36 271 P **P 06 35 47.5 +0.8**
SNR=33
XMIS Christmas Isla 41.36 177 *e*P **P 06 35 48.3 +1.6**
XMIS Christmas Isla 41.36 177 *e*P **P 06 35 47.4 +0.7**
comp=Z,2μm,0.9s,mb6.7
ICHK Chekchek 41.41 285 *e*P **P 06 35 48.7 +1.7**
IMEH Mehriz 41.42 284 *e*P **P 06 35 45.8 -1.3**
BANOM Banah 41.45 275⇑P **P 06 35 47.6 +0.2**
SNR=35
BSY Bisya 41.76 270⇑P **P 06 35 49.4 -0.5**
SNR=116
GUMO Guam 41.85 105 P **P 06 35 50.4 -0.4**
comp=Z,360nm,0.8s,mb6.1,baz=176,slow=3.0,SNR=20
GUMO LR LR 06 54 30.3
comp=Z,821μm,18.3s,MS7.7,baz=129,slow=38
GUMO Guam 41.85 105 P **P 06 35 50.4 -0.4**
GUMO pmax pmax
comp=Z,360nm,0.8s,mb6.0
GUMO MLR MLR
comp=Z,821μm,18.3s,MS7.6
GUMO Guam 41.85 105 *e*P **P 06 35 52.1 +1.3**
comp=Z,8μm,1.4s,mb7.1
GUMO LR LR
comp=Z,798μm,20.0s,MS7.6
HATD Hatta, Dubai 41.95 274 P **P 06 35 53.0 +1.5**
SNR=53
IALA Alasht 42.04 291 *e*P **P 06 35 52.5 +0.3**
ASHO Ashiyiah 42.06 273 P **P 06 35 52.6 +0.2**
SNR=91
ISAD Sadrabad 42.08 285 *e*P **P 06 35 53.3 +0.8**
SOKR Solikamsk 42.08 327*c i*P **P 06 35 54.5 +2.4**
SOKR 06 37 45.9
SOKR pmax pmax
comp=Z,10μm,1.7s,mb7.2
SOKR MLR MLR
comp=Z,2402μm,16.0s,MS8.2
ARQ Araqi 42.13 271⇑P **P 06 35 56.6 +3.7**
SNR=40
IFIR Firoozkooh 42.15 290 *e*P **P 06 35 55.3 +2.2**
NAZ Nazwa, Dubai 42.30 274 P **P 06 35 54.9 +0.5**
SNR=63
IPRN Peran 42.40 291 *e*P **P 06 35 55.5 +0.4**
FAQ Al Faqa, Dubai 42.44 274⇓P **P 06 35 56.7 +1.2**
SNR=76
ASUD Al Ashush, Dub 42.70 274⇑P **P 06 35 59.2 +1.6**
SNR=60
IDMV Damavand 42.74 290 *e*P **P 06 35 58.0 +0.1**
ISFB Sefidab 42.78 288 *e*P **P 06 35 59.1 +0.9**
TIXI Tiksi 42.92 12 *e*P **P 06 35 56.6 -2.2**
TIXI pmax pmax
comp=Z,6μm,1.4s,mb7.1
TIXI Tiksi 42.92 12 *e*P **P 06 35 56.6 -2.1**
comp=Z,6μm,1.4s,mb7.1
IPAR Pars 43.10 282 *e*P **P 06 35 59.9 -0.9**
IGAR Gharneh 43.33 286 *e*P **P 06 36 04.5 +1.8**
SKR Severo-Kuril's 43.40 47*α i*P **P 06 36 01.2 -1.7**
SKR *e* 06 37 44.0
SKR *e*PPP 06 38 16.0
SKR *e*S **S 06 42 20.0 -11**
SKR *i* SSS 06 45 44.0
SKR pmax pmax
comp=N,4μm,2.0s
SKR pmax pmax
comp=E,2μm,2.0s
SKR pmax pmax
comp=E,26μm,18.0s
SKR pmax pmax
comp=Z,44μm,18.0s
SKR pmax pmax
comp=N,17μm,16.0s
SKR pmax pmax
comp=E,33μm,18.0s
SKR pmax pmax
comp=Z,32μm,18.0s
SKR pmax pmax
comp=N,22μm,16.0s
SKR smax
comp=N,85μm,20.0s
SKR smax
comp=E,103μm,18.0s
SKR MLR MLR
comp=N,2122μm,18.0s,MS8.2
SKR MLR MLR
comp=E,1644μm,18.0s,MS8.2
COCO West Island 43.46 189 P **P 06 36 07.8 +4.1**
comp=E,11μm,1.4s,mb7.4,SNR=13
COCO West Island 43.46 189 *e*P **P 06 36 05.5 +1.8**
COCO pmax pmax
comp=Z,8μm,1.4s,mb7.3
COCO MLR MLR
comp=Z,1525μm,19.0s,MS7.9
COCO West Island 43.46 189 *e*P **P 06 36 05.5 +1.7**
comp=Z,8μm,1.4s,mb7.3
COCO LR LR
comp=Z,1525μm,19.0s,MS7.9
COCO West Island 43.46 189 P **P 06 36 07.4 +3.7**
SNR=23
COCO P 06 36 07.4
SNR=23
IKLH Kolahrood 43.52 287 *e*P **P 06 36 04.4 +0.2**
IR3 Iran Long-Peri 43.57 290 *e*P **P 06 36 05.0 +0.4**
IMHD Mahdasht 43.82 291 *e*P **P 06 36 06.3 -0.3**
IPIR Pirpir 44.22 286 *e*P **P 06 36 10.1 +0.3**
SEY Seymchan 44.43 30*c i*P **P 06 36 13.5 +2.4**
IRAZ Razeghan 44.47 290 *e*P **P 06 36 11.3 -0.5**
PEA0B Petropavlovsk- 44.66 44 *e*P **P 06 36 13.4 +0.4**
PETK Petropavlovsk- 44.66 44 P **P 06 36 10.7 -2.3**
comp=Z,148nm,0.8s,mb5.8,baz=245,slow=2.2,SNR=40
PETK LR LR 06 55 40.2
comp=Z,766μm,21.4s,MS7.6,baz=296,slow=37
PETK PKPPKP 07 07 51.0

comp=Z,9.6nm,1.0s,baz=114,slow=1.8,SNR=3.7
PET Petropavlovsk 45.22 44α *i*P **P 06 36 18.1 +0.6**
PET *e*S **S 06 42 54.4 -3.1**
PET *e*SS SS 06 46 18.5 -1.5
PET pmax pmax
comp=Z,44μm,10.8s
PET pmax pmax
comp=Z,42μm,13.3s
PET pmax pmax
comp=Z,2μm,1.3s,mb6.7
PET smax
comp=N,75μm,19.2s
PET MLR MLR
comp=Z,3567μm,17.0s,MS8.4
PET MLR MLR
comp=Z,3431μm,16.0s
PET Petropavlovsk 45.22 44 *e*P **P 06 36 18.1 +0.6**
comp=Z,2μm,1.2s,mb6.8
PET LR LR
comp=Z,3302μm,21.0s,MS8.2
MAK Makhachkala 45.40 301*c i*P **P 06 36 21.8 +2.7**
MAK *i*S **S 06 43 17.8 +17**
MAK pmax pmax
comp=Z,3μm,1.6s,mb6.8
MAK pmax pmax
comp=E,3μm,1.5s
MAK pmax pmax
comp=N,2μm,1.5s
MAK pmax pmax
comp=E,49μm,7.7s
MAK pmax pmax
comp=Z,73μm,7.8s
MAK pmax pmax
comp=N,38μm,8.5s
MAK MLR MLR
comp=Z,1353μm,14.0s,MS8.0
MAK MLR MLR
comp=E,1598μm,14.0s,MS8.4
MAK MLR MLR
comp=N,2831μm,16.0s,MS8.4
IHRS Heris 46.27 295 *e*P **P 06 36 25.3 -0.7**
IBST Bostanabad 46.48 294 *e*P **P 06 36 27.7 0.0**
IKOM Komasi 46.66 289 *e*P **P 06 36 29.4 +0.3**
IFTB Fath-abad 46.82 295 *e*P **P 06 36 32.1 +1.7**
ILIN Lien 46.94 290 *e*P **P 06 36 28.3 -3.1**
IAZR Azarshahr 47.20 294 *e*P **P 06 36 33.4 +0.1**
IMRD Marand 47.25 296 *e*P **P 06 36 33.3 -0.4**
ISHB Shabestar 47.38 295 *e*P **P 06 36 34.5 -0.2**
IGHG Ghaleghazi 47.39 290 *e*P **P 06 36 34.8 0.0**
MTA Mtatsminda 47.52 300 P **P 06 36 37.9 +2.1**
MTA S **S 06 43 30.0 -1.0**
TBLG Delisi 47.56 300 *e*P **P 06 36 38.1 +2.0**
TBLG Delisi 47.56 300 P **P 06 36 38.1 +2.1**
QRN Al-Qurain 47.70 282 *e*P **P 06 36 36.9 -0.5**
QRN AMb AMB 06 37 01.8
comp=Z,4μm,1.5s,mb7.2
GNI Garni 47.77 298 *e*P **P 06 36 41.6 +3.9**
GNI Garni 47.77 298 *e*P **P 06 36 39.8 +2.1**
GNI Garni 47.77 298 *e*P **P 06 36 39.9 +2.2**
comp=Z,6μm,1.5s,mb7.4
GNI LR LR
comp=Z,870μm,20.0s,MS7.7
GNI Garni 47.77 298 P **P 06 36 40.1 +2.5**
SNR=231
GNI P 06 36 40.1
SNR=231
KBD Kabd 47.77 283 *e*P **P 06 36 37.5 -0.3**
KBD AMb AMB 06 37 02.7
comp=Z,3μm,1.0s,mb7.3
MIB Mutribah 47.88 284 *e*P **P 06 36 37.9 -0.9**
MIB AMb AMB 06 36 50.2
comp=Z,4μm,1.0s,mb7.4
RDF Al-Radifah 47.96 282 *e*P **P 06 36 38.9 -0.5**
RDF AMb AMB 06 37 04.6
comp=Z,7μm,1.1s,mb7.7
GOR Gori 48.00 300 P **P 06 36 41.0 +1.6**
ZEI Tsey 48.06 301 *e*P **P 06 36 39.4 -0.5**
ZEI pmax pmax
comp=Z,1μm,1.4s,mb6.7
ZEI pmax pmax
comp=N,353nm,1.0s
ZEI pmax pmax
comp=E,391nm,1.0s
KEH Kehvi 48.09 301 P **P 06 36 41.7 +1.5**
DGAR Diego Garcia 48.37 223 P **P 06 36 43.8 +1.2**
comp=E,7μm,1.5s,mb7.5,SNR=13
DGAR Diego Garcia 48.37 223*c i*P **P 06 36 41.7 -0.9**
DGAR Diego Garcia 48.37 223 *e*P **P 06 36 42.4 -0.2**
comp=E,4μm,1.2s,mb7.4
DGAR LR LR
comp=Z,550μm,19.0s,MS7.6
DGAR Diego Garcia 48.37 223 P **P 06 36 45.1 +2.6**
SNR=17
DGAR P 06 36 45.1
SNR=17
ONI Oni 48.41 301 P **P 06 36 43.5 +0.9**
ONI S **S 06 43 43.6 +0.2**
GOF Gofitskoye 48.46 305⇑ *i*P **P 06 36 52.6 +10**
GOF pmax pmax
comp=Z,3μm,1.2s,mb7.2
CLDR Caldiran 48.55 297 *e*P **P 06 36 46.6 +2.8**
CLDR Caldiran 48.55 297 P **P 06 36 45.0 +1.2**
DYDN Diyadin 48.66 297⇑ *i*P **P 06 36 45.7 +1.1**
DIGO Kars 48.76 298⇑ *i*P **P 06 36 47.3 +1.9**
KIV Kislovodsk 48.81 303 P **P 06 36 47.5 +1.8**
comp=Z,12μm,1.0s,mb7.9
KIV Kislovodsk 48.81 303 *e*P **P 06 36 46.8 +1.1**
KIV *e* 06 38 07.7
KIV *e* 06 38 41.4
KIV *e*S **S 06 43 52.1 +3.1**
KIV *e*SSS 06 48 40.6
KIV pmax pmax
comp=Z,21μm,5.5s
KIV pmax pmax
comp=Z,2μm,1.0s,mb7.0
KIV MLR MLR
comp=Z,1981μm,17.0s,MS8.2
KIV Kislovodsk 48.81 303 *e*P **P 06 36 46.2 +0.5**
comp=Z,7μm,1.3s,mb7.5
KIV LR LR
comp=Z,2492μm,19.0s,MS8.2
KARS Kars 48.95 299 *e*P **P 06 36 50.2 +3.3**
KARS Kars 48.95 299 P **P 06 36 47.9 +1.1**
HKR Hakkari 48.97 295 *e*P **P 06 36 49.7 +2.7**
HKR Hakkari 48.97 295 P **P 06 36 46.4 -0.6**
VANB Van 49.05 296 *e*P **P 06 36 48.3 +0.7**
VANB Van 49.05 296 P **P 06 36 48.4 +0.8**
VRHR Novokhopersk 49.11 313 *e*P **P 06 36 48.1 +0.2**
VRHR *e* 06 36 48.1
VRHR *e**PP pP 06 36 59.6 +9.4
VRHR *e* 06 38 38.1
VRHR *e*S **S 06 43 50.5 -2.5**
VRHR pmax pmax
comp=Z,14μm,3.7s
VRHR pmax pmax
comp=N,610nm,2.6s
VRHR pmax pmax
comp=E,4μm,2.2s
VRHR pmax pmax
comp=Z,41μm,11.4s
VRHR pmax pmax
comp=N,3μm,7.5s
VRHR pmax pmax
comp=E,32μm,12.2s
VRHR smax
comp=N,84μm,11.2s
VRHR smax
comp=Z,103μm,10.9s
VRHR smax
comp=E,49μm,6.9s
VRHR MLR MLR
comp=Z,1646μm,17.0s,MS8.1
VRHR MLR MLR
comp=N,731μm,16.0s
VRHR MLR MLR
comp=E,1830μm,24.0s
AGRB Hanur-Agry 49.19 297 *e*P **P 06 36 51.8 +3.2**
BHD Baghdad 49.41 289 *i*P **P 06 36 47.0 -3.4**
BHD *e*PP PP 06 38 46.0 +1.6
BHD *i*S **S 06 43 56.0 -1.7**
MSL Mosul 49.70 293 *e*P **P 06 36 51.0 -1.6**
MSL *e*S **S 06 44 01.0 -0.8**
ARTV Artvin 49.73 300⇑ *i*P **P 06 36 54.6 +1.8**
DAGI Agillar 49.76 300⇑ *i*P **P 06 36 54.5 +1.6**
DBOC Borcka 49.90 300⇑ *i*P **P 06 36 55.0 +0.9**

DDEM Demirkent 49.91 299⇑ *i*P **P 06 36 55.5 +1.4**
BCA Borcka 49.91 300 *e*P **P 06 36 56.1 +1.9**
BCA Borcka 49.91 300 P **P 06 36 54.3 +0.1**
DBAD Bademkaya 49.93 299⇑ *i*P **P 06 36 55.9 +1.6**
HOMI Horasan 49.93 298⇑ *i*P **P 06 36 55.5 +1.1**
TATV Tatvan 49.93 296⇑ *i*P **P 06 36 55.5 +1.1**
ERZM Erzurum 50.36 298 *i* P **P 06 36 59.5 +1.9**
EZM Erzurum 50.37 298 *e*P **P 06 37 00.6 +3.0**
EZM Erzurum 50.37 298 P **P 06 36 59.3 +1.7**
PZAR Pazar-Rize 50.50 300 *e*P **P 06 37 01.4 +2.8**
VORD Divnogorie 50.58 313*d i*P **P 06 36 59.1 0.0**
VORD *i* 06 38 59.1
VORD *e*S **S 06 44 20.2 +6.6**
VORD pmax pmax
comp=Z,30nm,1.0s
VORD pmax pmax
comp=N,9.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.4s
BTMT Batman 50.59 296 *e*P **P 06 37 00.6 +1.3**
VOR Voronezh 50.61 314 *e*P **P 06 36 59.0 -0.3**
VOR pmax pmax
comp=Z,8μm,1.4s,mb7.5
VSR Storozhevoye 50.65 313*c i*P **P 06 36 59.3 -0.3**
VSR *e* 06 36 59.4
VSR *e* 06 38 59.1
VSR *e*S **S 06 44 20.2 +5.6**
VSR pmax pmax
comp=Z,60nm,0.9s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,50nm,0.8s
VSR pmax pmax
comp=Z,36μm,10.6s
VSR pmax pmax
comp=N,3μm,11.2s
VSR pmax pmax
comp=E,23μm,11.8s
VSR smax
comp=E,77μm,12.1s
VSR smax
comp=Z,65μm,7.5s
VSR smax
comp=N,72μm,11.7s
VSR MLR MLR
comp=Z,1795μm,20.0s,MS8.1
VSR MLR MLR
comp=N,624μm,15.0s,MS8.1
VSR MLR MLR
comp=E,1353μm,18.0s,MS8.1
BEST Besiri 50.83 296 *i* P **P 06 37 01.3 +0.2**
SOC Sochi 50.99 303*ce*P **P 06 37 01.6 -0.7**
SOC *e**PP pP 06 37 04.0 -0.7
SOC *e*PPP 06 40 02.8
SOC *e*S **S 06 44 18.0 -1.5**
SOC *e* 06 44 35.3
SOC MLR MLR
comp=Z,1818μm,22.0s,MS8.1
KOPT Kop Dagi 51.00 298⇑ *i*P **P 06 37 03.5 +1.0**
BINT Bingol 51.23 297 *e*P **P 06 37 06.5 +2.4**
BINT Bingol 51.23 297 P **P 06 37 05.7 +1.6**
KTUT Trabzon 51.37 300 *e*P **P 06 37 05.6 +0.4**
MACK Trabzon 51.38 300⇑ *i*P **P 06 37 07.3 +2.0**
MOS Moscow 51.48 319 *e*P **P 06 37 02.4 -3.3**
MOS *e* 06 38 59.9
MOS *e*S **S 06 44 20.0 -5.9**
MOS *e*SS SS 06 47 58.1 -3.3
MOS *e*SSS 06 49 36.2
MOS pmax pmax
comp=Z,3μm,1.1s,mb7.1
MOS pmax pmax
comp=N,710nm,1.1s
MOS pmax pmax
comp=E,2μm,1.3s
MOS MLR MLR
comp=Z,2626μm,18.0s,MS8.3
MOS MLR MLR
comp=E,1792μm,15.0s
BILL Bilibino 51.48 25 *e*P **P 06 37 03.9 -1.7**
BILL Bilibino 51.48 25 *e*P **P 06 37 04.3 -1.3**
comp=E,992nm,1.0s,mb6.7
BILL LR LR
comp=Z,1969μm,19.0s,MS8.2
GUMT Gumushane 51.68 299 *e*P **P 06 37 07.8 +0.3**
DIYA Diyarbakir 51.71 296⇑ *i*P **P 06 37 08.3 +0.5**
KAKA Kakadu 51.71 143 *e*P **P 06 37 04.5 -3.4**
comp=Z,1μm,1.4s,mb6.6
KAKA Kakadu 51.71 143 *e*P **P 06 37 04.7 -3.2**
comp=Z,577nm,0.8s,mb6.6
EZC Erzincan 51.91 298 *e*P **P 06 37 10.9 +1.6**
EZC Erzincan 51.91 298 P **P 06 37 09.4 +0.1**
PTK Pertek 52.06 297 *e*P **P 06 37 13.4 +3.0**
PTK Pertek 52.06 297 P **P 06 37 11.0 +0.6**
OBN Obninsk 52.09 318 P **P 06 37 13.7 +3.4**
comp=Z,6μm,1.2s,mb7.4,SNR=19
OBN Obninsk 52.09 318*c i*P **P 06 37 10.6 +0.3**
OBN *e* 06 38 22.7
OBN *e* 06 39 16.0
OBN pmax pmax
comp=Z,21μm,4.2s
OBN pmax pmax
comp=Z,2μm,1.6s,mb6.8
OBN Obninsk 52.09 318 *e*P **P 06 37 09.9 -0.4**
comp=Z,135nm,1.2s,mb5.8
ESPY Espiye-Giresun 52.16 300 *e*P **P 06 37 12.1 +1.1**
SVRC Sivrice-ELAZID 52.24 297 *e*P **P 06 37 14.2 +2.6**
MUKL Al Mukalla 52.25 264 *e*P **P 06 37 11.3 -0.8**
ANN Anapa 52.44 305*c i*P **P 06 37 13.9 +0.8**
ANN *i* 06 38 22.4
ANN *i* 06 39 16.7
ANN *i*S **S 06 44 42.2 +2.8**
ANN *i* 06 46 56.8
ANN pmax pmax
comp=E,11μm,6.1s
ANN pmax pmax
comp=Z,28μm,6.1s
ANN pmax pmax
comp=N,4μm,3.0s
ANN pmax pmax
comp=Z,1μm,1.8s,mb6.6
ANN pmax pmax
comp=N,514nm,1.9s
ANN pmax pmax
comp=E,395nm,1.9s
ANN MLR MLR
comp=N,950μm,19.0s,MS8.2
ANN MLR MLR
comp=E,1683μm,19.0s,MS8.2
ANN MLR MLR
comp=Z,1967μm,19.0s,MS8.2
ELZG Elazig 52.46 297⇑ *i*P **P 06 37 14.6 +1.3**
GRSN GIRESUNGRSN 52.50 300 *i* P **P 06 37 12.2 -1.4**
MYA Malataya 52.92 297 *e*P **P 06 37 18.8 +2.1**
MYA Malataya 52.92 297 P **P 06 37 17.1 +0.3**
MALT Malatya 52.92 297 *e*P **P 06 37 17.0 +0.2**
MALT Malatya 52.92 297 Pn **P 06 37 17.5 +0.7**
MALT Malatya 52.92 297⇑ *i*P **P 06 37 17.2 +0.4**
ATAB Bozova 53.22 296⇑ *i*P **P 06 37 19.7 +0.7**
DARE Darende-Malaty 53.26 298 *e*P **P 06 37 21.7 +2.5**
AKCD Akcadag 53.31 297⇑ *i*P **P 06 37 20.9 +1.3**
FITZ Fitzroy Crossi 53.36 153 *e*P **P 06 37 19.2 -0.9**
comp=Z,523nm,0.7s,mb6.6
FITZ *e*S **S 06 44 49.5 -2.9**
FITZ Fitzroy Crossi 53.36 153 P **P 06 37 19.2 -0.9**
comp=Z,104nm,0.8s,mb5.8,baz=349,slow=7.2,SNR=37
FITZ S **S 06 44 38.8 -14**
comp=Z,59nm,1.0s,baz=130,slow=14,SNR=1.5
FITZ Fitzroy Crossi 53.36 153 *e*P **P 06 37 19.4 -0.7**
comp=Z,2μm,1.6s,mb6.8
LVZ Lovozero 53.62 334 P **P 06 37 24.7 +3.3**
comp=Z,4μm,1.0s,mb7.3,SNR=10
LVZ Lovozero 53.62 334*c i*P **P 06 37 22.7 +1.3**
LVZ pmax pmax
comp=Z,1μm,2.3s,mb6.4
LVZ Lovozero 53.62 334 PFAKE 06 37 30.0 +8.6
LVZ LR LR
comp=Z,4368μm,21.0s,MS8.5
SVSK Karacayir 53.65 299 *e*P **P 06 37 22.7 +0.6**
ERBA Erbaa 53.67 300⇑ *i*P **P 06 37 22.6 +0.3**
GZT Gaziantep 53.81 296⇑ *i*P **P 06 37 23.2 -0.1**
TOKT Tokat 53.91 300 *e*P **P 06 37 28.0 +4.0**
TOKT Tokat 53.91 300 P **P 06 37 23.9 -0.1**
TOKA Tokat 53.95 300⇑ *i*P **P 06 37 24.4 0.0**

APA Apatity 54.06 334⇑ *i*P **P 06 37 25.7 +1.1**
APA *i* 06 39 30.0
APA *i*S **S 06 45 02.0 +1.2**
APA *i*PS 06 45 19.0
APA *i* 06 47 12.0
APA pmax pmax
comp=Z,65μm,11.0s
APA MLR MLR
comp=Z,8400μm,15.0s,MS8.9
KVT Kavak 54.11 301 *e*P **P 06 37 26.0 +0.6**
KVT Kavak 54.11 301 P **P 06 37 25.1 -0.4**
GAZ Gaziantep 54.13 296 *e*P **P 06 37 28.0 +2.4**
GAZ Gaziantep 54.13 296 P **P 06 37 26.4 +0.7**
SARI SarD1z-Kayseri 54.16 298 *e*P **P 06 37 31.9 +6.0**
MBWA Marble Bar 54.25 161 *e*P **P 06 37 25.6 -0.9**
comp=Z,138nm,0.6s,mb6.1
MBWA LR LR
comp=Z,784μm,22.0s,MS7.7
MBWA Marble Bar 54.25 161 P **P 06 37 29.3 +2.8**
SNR=97
MBWA P 06 37 29.3
SNR=97
KMRS Kahramanmaras 54.29 296 *e*P **P 06 37 27.0 +0.2**
KUZU Kuzuini 54.34 295⇑ *i*P **P 06 37 27.4 +0.2**
SMY Shemya 54.56 45 *e*P **P 06 37 28.7 +0.2**
SMY pmax pmax
comp=Z,5μm,1.1s,mb7.5
SMY Shemya 54.56 45 *e*P **P 06 37 30.7 +2.2**
comp=Z,4μm,1.2s,mb7.3
SMY LR LR
comp=Z,2113μm,19.0s,MS8.2
DIKM Dikmen 54.57 301 *e*P **P 06 37 30.7 +1.9**
JOF Joensuu 54.73 328 *e*P **P 06 37 28.1 -1.5**
JOF pmax pmax
comp=Z,934nm,1.4s,mb6.6
JOF Joensuu 54.73 328 *e*p **P 06 37 28.1 -1.5**
comp=Z,934nm,1.4s,mb6.6
SIM Simferopol' 54.74 306*ce*P **P 06 37 30.0 +0.1**
SIM *i* pP 06 37 32.3 0.0
SIM *e*S **S 06 45 09.0 -1.6**
SIM MLR MLR
comp=Z,1260μm,19.0s,MS8.0
BYBT Boyabat 54.97 301 *e*P **P 06 37 34.9 +3.2**
BYBT Boyabat 54.97 301 P **P 06 37 30.9 -0.8**
YOZ Yozgat 54.98 299 *e*P **P 06 37 34.5 +2.7**
YOZ Yozgat 54.98 299 P **P 06 37 31.0 -0.8**
COBT Iskenderun 55.04 295⇑ *i*P **P 06 37 31.8 -0.5**
KOZT Kozan 55.12 296 *e*P **P 06 37 32.9 0.0**
CTKT Corum 55.14 300⇑ *i*P **P 06 37 32.8 -0.2**
YAYL Yayladag 55.28 295⇑ *i*P **P 06 37 34.7 +0.7**
PUL Pulkovo 55.29 324*c i*P **P 06 37 37.3 +3.6**
PUL pmax pmax
comp=Z,2μm,1.6s,mb6.9
CEYT Ceyhan 55.30 296 *e*P **P 06 37 36.8 +2.6**
CEYT Ceyhan 55.30 296 P **P 06 37 33.5 -0.7**
CORM Corum 55.37 300 *e*P **P 06 37 37.0 +2.5**
BZK Bozkurt 55.42 302 *e*P **P 06 37 37.1 +2.2**
BZK Bozkurt 55.42 302 P **P 06 37 34.4 -0.5**
YURE YUREGIR 55.44 296⇑ *i*P **P 06 37 36.0 +0.9**
BDHA Al Bayda' 55.45 266⇑ *e*P **P 06 37 35.2 -0.3**
FKH Fakeheh 55.55 292 *e*P **P 06 37 36.1 +0.1**
TOS Tosya 55.62 301 *e*P **P 06 37 37.3 +1.0**
TOS Tosya 55.62 301 P **P 06 37 36.0 -0.3**
CDAG Cicekdag 55.69 299⇑ *i*P **P 06 37 36.9 0.0**
KRTS Karatas 55.71 295 *e*P **P 06 37 40.2 +3.1**
ASF Jabal al Asfar 55.77 290 P **P 06 37 37.0 -0.6**
comp=Z,57nm,0.9s,mb5.6,baz=292,slow=1.7,SNR=55
ASF S **S 06 45 26.3 +1.6**
comp=Z,130nm,1.4s,baz=241,slow=11,SNR=1.5
KARA Karaisali 55.77 296 *e*P **P 06 37 39.8 +2.2**
LBOS 55.77 266⇑ *e*P **P 06 37 37.5 -0.3**
LBOS AMb AMB 06 37 42.4
comp=Z,3μm,1.9s,mb7.1
LBOS *i*S **S 06 45 24.1 -1.1**
ILGA Ilgaz 55.84 301⇑ *i*P **P 06 37 38.3 +0.4**
HWQ Hawqa 55.90 293 *e*P **P 06 37 38.2 -0.3**
BALT Daday 55.97 302⇑ *i*P **P 06 37 38.4 -0.4**
SANA San'a 55.97 268 *e*P **P 06 37 38.9 -0.3**
GULE Gulek 55.98 296⇑ *i*P **P 06 37 39.6 +0.5**
CANT Cankiri 56.01 301 *e*P **P 06 37 40.9 +1.6**
CANT Cankiri 56.01 301 P **P 06 37 39.2 0.0**
DHBB Dhamar BB 56.19 267⇑ *e*P **P 06 37 40.5 -0.3**
DHBB AMb AMB 06 37 44.0
comp=Z,2μm,2.1s,mb6.7
DHBB *i*S **S 06 45 29.5 -1.1**
ELDT Eldivan 56.19 300⇑ *i*P **P 06 37 40.9 +0.4**
BR131 Keskin Array S 56.22 299 *e*P **P 06 37 39.7 -0.9**
BR131 LR LR
comp=Z,506μm,21.0s,MS7.6
BRTR Keskin Array B 56.22 299 P **P 06 37 39.8 -0.9**
comp=Z,57nm,0.9s,mb5.6,baz=100,slow=6.4,SNR=77
BRTR PcP PcP 06 38 36.0 -2.4
comp=Z,426nm,0.9s,baz=96,slow=5.4,SNR=6.5
BRTR LR LR 07 06 55.0
comp=Z,578μm,19.1s,MS7.7,baz=242,slow=42
BRTR Keskin Array B 56.22 299 P **P 06 37 39.8 -0.9**
BRTR 06 38 36.0
RCY Rachaya 56.24 292 *e*P **P 06 37 41.1 +0.2**
BHL Bhannes 56.24 292 *e*P **P 06 37 40.5 -0.4**
MERS Mersin 56.29 296 *e*P **P 06 37 42.7 +1.4**
KSHT 'Keshet 56.39 291 Pn **P 06 37 44.4 +2.4**
KSDI Kefar Szold 56.45 291 Pn **P 06 37 42.3 -0.2**
KEV Kevo 56.51 336 *e*P **P 06 37 42.7 +0.4**
KEV pmax pmax
comp=Z,1μm,0.9s,mb7.0
KEV MLR MLR
comp=Z,1837μm,20.0s,MS8.2
KEV Kevo 56.51 336 *e*P **P 06 37 42.7 +0.4**
comp=Z,1μm,0.9s,mb7.0
KEV LR LR
comp=Z,1837μm,20.0s,MS8.2
KEV Kevo 56.51 336 *e*p **P 06 37 41.2 -1.1**
comp=Z,1μm,1.0s,mb7.0
ADEN Aden 56.52 265 *e*P **P 06 37 42.6 -0.6**
SAFT Safranbolu 56.55 301 *e*P **P 06 37 47.1 +4.1**
SAFT Safranbolu 56.55 301 P **P 06 37 42.4 -0.6**
BBAL Bala 56.65 299⇑ *i*P **P 06 37 43.9 +0.2**
SULT Sultanhani-AKS 56.70 298 *e*P **P 06 37 44.8 +0.6**
SULT Sultanhani-AKS 56.70 298 P **P 06 37 43.7 -0.5**
MMAI Mount Meron Ar 56.71 291 P **P 06 37 43.6 -0.7**
comp=Z,10.0nm,0.4s,baz=75,slow=6.3,SNR=24
MMAI PcP PcP 06 38 40.4 0.0
comp=Z,1μm,1.1s,baz=132,slow=2.1,SNR=9.1
MMAI S **S 06 45 40.8 +3.5**
comp=Z,25nm,1.0s,baz=64,slow=9.8,SNR=2.0
MMAI LR LR 07 07 04.9
comp=Z,964μm,21.9s,MS7.9,baz=65,slow=41
LOD Lodumlu 56.83 300 *e*P **P 06 37 46.9 +1.9**
LOD Lodumlu 56.83 300 P **P 06 37 44.3 -0.7**
HMDT Nahal Hemdat 56.85 290 Pn **P 06 37 45.7 +0.4**
HNTI Hanita 56.87 291 Pn **P 06 37 46.3 +0.8**
MMLI Mount Malkishu 56.87 291 Pn **P 06 37 45.8 +0.3**
EREN Erenkoy 56.94 295 *e*P **P 06 37 47.1 +1.3**
EREN Erenkoy 56.94 295 P **P 06 37 44.7 -1.2**
AKASG Malin Array Be 56.95 313 P **P 06 37 43.2 -2.5**
comp=Z,209nm,0.7s,mb6.3,baz=69,slow=6.9,SNR=85
AKASG S **S 06 45 47.2 +7.3**
comp=Z,10nm,0.8s,baz=303,slow=26,SNR=2.7
AKASG Malin Array Be 56.95 313 *i* P **P 06 37 44.5 -1.2**
AKASG pmax pmax
comp=Z,209nm,0.6s
AKASG Malin Array Be 56.95 313 P **P 06 37 43.2 -2.5**
AKASG S **S 06 45 47.2 +7.3**
ARCES ARCESS Array B 57.04 336 P **P 06 37 43.8 -2.3**
comp=Z,188nm,1.0s,mb6.1,baz=80,slow=7.5,SNR=39
ARCES LR LR 07 04 47.9
comp=Z,858μm,18.0s,MS7.9,baz=102,slow=39
ARCES PKP2bc 07 07 46.8
comp=Z,26nm,1.1s,baz=270,slow=3.6,SNR=4.6
ARCES ARCESS Array B 57.04 336 P **P 06 37 43.8 -2.3**
ARCES LR LR 07 04 47.9
ARCES ⇑*e* 07 07 46.8
ARE0 ARCESS Array S 57.04 336 *e*P **P 06 37 47.1 +1.0**
KAF Kangasniemi 57.08 327 *e*P **P 06 37 44.5 -1.9**
KAF pmax pmax
comp=Z,732nm,1.0s,mb6.7
KAF Kangasniemi 57.08 327 *e*p **P 06 37 44.5 -1.9**
comp=Z,732nm,1.0s,mb6.7
IKL Isikli 57.11 295 *e*P **P 06 37 47.9 +0.8**
IKL Isikli 57.11 295 P **P 06 37 46.2 -0.9**
MICGM Minsk 57.15 318⇓ *i*P **P 06 37 44.0 -3.1**
OFRI 'Ofer 57.17 291 Pn **P 06 37 49.8 +2.3**
SGKT Sivrigoynuk 57.18 301 *i* P **P 06 37 47.2 -0.2**

MNK	**Minsk**	**57.18 318**	⇓*i*P	**P**	**06 37 44.0**	**-3.2**
MNK			*e*		06 38 40.0	
MNK			*e*		06 39 54.0	
MNK			*e*PPP		06 41 20.0	
MNK			*e*S	**S**	**06 45 34.0**	**-8.8**
MNK			*e*PS		06 46 00.0	
MNK			*e*SS	SS	06 49 38.0	+6.7
MNK			pmax	pmax		
	comp=Z,2µm,1.2s,mb7.1					
MNK			pmax	pmax		
	comp=N,620nm,1.2s					
MNK			pmax	pmax		
	comp=Z,119µm,10.0s					
MNK			pmax	pmax		
	comp=Z,95µm,8.0s					
MNK			smax			
	comp=E,136µm,12.0s					
DSI	**Dead Sea**	**57.18 290**	Pn	**P**	**06 37 48.2**	**+0.5**
SLTI	**Sal'it**	**57.24 291**	Pn	**P**	**06 37 48.3**	**+0.2**
FINES	**FINESS Array B**	**57.25 326**	P	**P**	**06 37 45.8**	**-1.9**
	comp=E,217nm,0.9s,mb6.2,baz=91,slow=6.2,SNR=54					
FINES			LR	LR	07 04 48.9	
	comp=E,1129µm,19.2s,MS8.0,baz=87,slow=39					
MZDA	**Masada**	**57.28 289**	Pn	**P**	**06 37 49.1**	**+0.7**
KDZE	**Karadeniz Ereo**	**57.44 302**	*e*P	**P**	**06 37 50.6**	**+1.3**
YTIR	**Yattir**	**57.46 290**	Pn	**P**	**06 37 48.5**	**-1.2**
LFK	**Lefkose**	**57.51 294**	*e*P	**P**	**06 37 48.7**	**-1.2**
LADK	**Ladik-KONYA**	**57.57 298**	*e*P	**P**	**06 37 49.3**	**-1.1**
LADK	**Ladik-KONYA**	**57.57 298**	P	**P**	**06 37 49.2**	**-1.1**
KONT	**Konya--Tatoy**	**57.65 298**	*e*P	**P**	**06 37 49.8**	**-1.1**
KONT	**Konya--Tatoy**	**57.65 298**	P	**P**	**06 37 49.7**	**-1.1**
KDHN	**Kadinhani**	**57.67 298** ⇑*i*P		**P**	**06 37 50.3**	**-0.8**
ZFRI	**Zfri**	**57.68 289**	Pn	**P**	**06 37 50.9**	**-0.3**
NACGM	**Naroch**	**57.72 318**	*e*P	**P**	**06 37 48.0**	**-3.1**
KIZT	**Kizilcal**	**57.75 299**	*e*P	**P**	**06 37 50.1**	**-1.5**
CSS	**Prodhromos**	**57.76 294**	*e*P	**P**	**06 37 52.8**	**+1.1**
CSS	**Prodhromos**	**57.76 294**	*e*P	**P**	**06 37 49.6**	**-2.1**
	comp=E,1µm,0.9s,mb7.0					
WAKE	**Wake Island**	**57.79 86**	*e*P	**P**	**06 37 52.7**	**+0.6**
	comp=E,25µm,2.1s,mb7.9					
WAKE			LR	LR		
	comp=Z,670µm,20.0s,MS7.8					
MDU	**Mudurnu**	**57.82 301**	*e*P	**P**	**06 37 51.2**	**-0.9**
HDMB	**Hadim**	**57.83 297**	*e*P	**P**	**06 37 50.9**	**-1.3**
HDMB	**Hadim**	**57.83 297**	P	**P**	**06 37 50.8**	**-1.3**
ZUQR	**Zugar Island**	**57.86 267**	*e*P	**P**	**06 37 52.0**	**-0.6**
MSEY	**Mahe Island**	**57.86 241**	P	**P**	**06 37 54.3**	**+1.7**
	comp=Z,1µm,1.2s,mb6.8,SNR=11					
MSEY	**Mahe Island**	**57.86 241**	*e*P	**P**	**06 37 51.7**	**-0.9**
MSEY			pmax	pmax		
	comp=Z,2µm,1.7s,mb6.9					
MSEY	**Mahe Island**	**57.86 241**	*e*P	**P**	**06 37 49.6**	**-3.0**
	comp=Z,2µm,1.7s,mb6.9					
MSEY			LR	LR		
	comp=Z,779µm,21.0s,MS7.8					
MSEY	**Mahe Island**	**57.86 241**	P	**P**	**06 37 55.2**	**+2.6**
	SNR=13					
MSEY			P		06 37 55.2	
	SNR=13					
KTK1	**Kautokeino**	**57.86 335**	AMS	AMS	07 00 51.1	
	comp=N,4714µm,20.1s					
SVRH	**Sivrihisar-ESK**	**57.87 300**	*e*P	**P**	**06 37 54.2**	**+1.8**
SVRH	**Sivrihisar-ESK**	**57.87 300**	P	**P**	**06 37 51.0**	**-1.4**
RTMI	**Retamim**	**57.91 289**	Pn	**P**	**06 37 53.8**	**+1.0**
KIS	**Kishinev**	**57.94 309** ⇑*i*P		**P**	**06 37 50.0**	**-2.8**
	comp=N,6µm,3.0s					
KIS	**Kishinev**	**57.94 309**	*i* PP	PP	06 40 28.0	+27
	comp=N,14µm,15.0s					
KIS			*i* S	**S**	**06 45 46.0**	**-7.1**
	comp=N,62µm,16.0s					
KIS	**Kishinev**	**57.94 309**	*i* PS		06 46 16.0	
KIS			*i* SS	SS	06 50 20.0	+36
KIS			*i* LQ		07 01 04.0	
KIS			LRM		07 04 44.0	
	comp=N,661µm,15.5s					
KIS	**Kishinev**	**57.94 309** ⇓*i*P		**P**	**06 37 50.0**	**-2.8**
KIS			*i*		06 40 28.0	
KIS			*i* S	**S**	**06 45 46.0**	**-7.1**
KIS			*i* SS	SS	06 50 20.0	+36
KIS			pmax	pmax		
	comp=N,2µm,3.0s					
KIS			pmax	pmax		
	comp=Z,6µm,3.0s					
KIS			pmax	pmax		
	comp=E,8µm,4.0s					
KIS			pmax	pmax		
	comp=Z,58µm,10.0s					
KIS			pmax	pmax		
	comp=N,8µm,16.0s					
KIS			pmax	pmax		
	comp=E,29µm,13.0s					
KIS			pmax	pmax		
	comp=Z,71µm,18.0s					
KIS			pmax	pmax		
	comp=Z,66µm,18.0s					
KIS			pmax	pmax		
	comp=N,14µm,15.0s					
KIS			pmax	pmax		
	comp=E,44µm,19.0s					
KIS			smax			
	comp=E,62µm,16.0s					
HENT	**Hendek**	**57.96 301**	*i* P	**P**	**06 37 52.1**	**-0.9**
HRFI	**Mount Harif**	**57.97 288**	Pn	**P**	**06 37 52.2**	**-1.0**
RMNI	**Mount Ramon**	**58.00 289**	Pn	**P**	**06 37 53.5**	**0.0**
LEF	**Lefka**	**58.06 294**	*e*P	**P**	**06 37 52.6**	**-1.2**
LEF	**Lefka**	**58.06 294**	P	**P**	**06 37 52.6**	**-1.2**
EIL	**Elat**	**58.16 288**	P	**P**	**06 37 53.1**	**-1.5**
	comp=E,116nm,0.7s,mb6.0,baz=4.0,slow=3.8,SNR=30					
EIL			S	**S**	**06 45 56.9**	**+0.4**
	comp=E,78nm,1.1s,baz=335,slow=18,SNR=2.7					
EIL			LR	LR	07 07 10.0	
	comp=E,963µm,18.1s,MS8.0,baz=84,slow=40					
EIL	**Elat**	**58.16 288**	Pn	**P**	**06 37 53.0**	**-1.6**
GAZI	**Gazipasa**	**58.17 296** ⇑*i*P		**P**	**06 37 53.4**	**-1.1**
KRMI	**Paran Flat**	**58.19 288**	Pn	**P**	**06 37 54.5**	**-0.3**
ESKT	**Eskisehir**	**58.35 300**	*e*P	**P**	**06 37 56.9**	**+1.1**
ESKT	**Eskisehir**	**58.35 300**	P	**P**	**06 37 56.8**	**+1.1**
ESKT	**Eskisehir**	**58.35 300**	*i* P	**P**	**06 37 54.4**	**-1.3**
GULT	**Gulveren**	**58.35 301**	*e*P	**P**	**06 37 54.7**	**-1.1**
GULT	**Gulveren**	**58.35 301**	P	**P**	**06 37 54.6**	**-1.1**
LEOM	**Leova**	**58.44 308** ⇑*i*P		**P**	**06 37 57.6**	**+1.3**
BOLV	**Bolvadin**	**58.49 299** ⇑*i*P		**P**	**06 37 56.5**	**-0.3**
GPA	**Golpazari**	**58.54 301**	*e*P	**P**	**06 37 55.7**	**-1.3**
GPA	**Golpazari**	**58.54 301**	P	**P**	**06 37 55.7**	**-1.4**
BORA	**Eskisehir**	**58.54 300** ⇑*i*P		**P**	**06 37 57.0**	**-0.1**
ATA	**Atar**	**58.68 265**	P	**P**	**06 37 57.8**	**-0.6**
WRAB	**Tennant Creek**	**58.79 146**	P	**P**	**06 37 59.0**	**+0.1**
	comp=E,9µm,0.9s,mb7.8,SNR=92					
WRAB	**Tennant Creek**	**58.79 146**	*e*P	**P**	**06 37 56.0**	**-2.9**
	comp=E,65nm,1.4s,mb5.5					
WRAB			LR	LR		
	comp=Z,421µm,22.0s,MS7.5					
WRA	**Warramunga Arr**	**58.79 146**	P	**P**	**06 37 56.0**	**-2.9**
	comp=Z,97nm,0.8s,mb5.9,baz=337,slow=7.4,SNR=130					
WRA			S	**S**	**06 45 52.3**	**-12**
	comp=Z,8.9nm,0.8s,baz=137,slow=33,SNR=2.1					
WRA			PKP2bc		07 07 41.8	
	comp=Z,30nm,1.0s,baz=157,slow=1.4,SNR=8.8					
WRA	**Warramunga Arr**	**58.79 146**	P	**P**	**06 37 56.0**	**-2.9**
WRA			S	**S**	**06 45 52.3**	**-12**
WRA	**Warramunga Arr**	**58.79 146**	P	**P**	**06 37 56.0**	**-2.9**
WRA			S	**S**	**06 45 52.3**	**-12**
WRA			⇑*e*		07 07 41.8	
WB2	**Warramunga Arr**	**58.80 146**	*e*P	**P**	**06 37 56.1**	**-2.8**
BJO	**Bjornoya**	**58.81 342** ⇑*i*P		**P**	**06 38 00.0**	**+1.6**
BJO			AMS	AMS	07 08 31.7	
	comp=Z,3034µm,17.7s,MS8.5					
TIRR	**Tirgusor**	**58.81 306**	P	**P**	**06 37 57.5**	**-1.4**
TIRR			pmax	pmax		
	comp=Z,4µm,1.6s,mb7.2					
TIRR	**Tirgusor**	**58.81 306**	*e*P	**P**	**06 37 56.2**	**-2.7**
	comp=Z,4µm,1.6s,mb7.2					
TIRR	**Tirgusor**	**58.81 306** ⇑*i*P		**P**	**06 37 58.8**	**-0.1**
SUTC	**Sutluce-Ispart**	**58.81 298**	*e*P	**P**	**06 37 58.6**	**-0.4**
SHUT	**Suhut-Afyon**	**58.84 299**	*e*P	**P**	**06 37 58.7**	**-0.5**
BJO1	**Bjornoya**	**58.86 342** ⇑*i*P		**P**	**06 38 00.0**	**+1.3**
BJO1			LR	LR		
	comp=Z,3034µm,17.7s,MS8.5					
COEN	**Coen**	**58.87 133**	*e*P	**P**	**06 37 57.2**	**-2.3**
	comp=Z,19µm,1.2s,mb8.0					
ADVT	**Abdulvahap**	**58.92 301**	*e*P	**P**	**06 37 58.8**	**-0.9**
ADVT	**Abdulvahap**	**58.92 301**	P	**P**	**06 37 58.7**	**-1.0**
ATD	**Arta Tunnel**	**58.95 265**	P	**P**	**06 37 57.7**	**-2.6**
	comp=Z,80nm,0.8s,mb5.8,baz=29,slow=2.7,SNR=12					
ATD			S	**S**	**06 45 55.2**	**-12**
	comp=Z,23nm,1.0s,baz=308,slow=19,SNR=2.4					
ATD			LR	LR	07 03 56.8	
	comp=Z,643µm,21.6s,MS7.7,baz=57,slow=37					
ATD	**Arta Tunnel**	**58.95 265**	P	**P**	**06 37 57.7**	**-2.6**
ATD			S	**S**	**06 45 55.2**	**-12**
ATD			LR	LR	07 03 56.9	
ALT	**Altintas**	**59.03 300**	*e*P	**P**	**06 38 00.5**	**0.0**
ALT	**Altintas**	**59.03 300**	P	**P**	**06 37 59.6**	**-0.9**
ISP	**Isparta**	**59.08 298**	*e*P	**P**	**06 37 59.5**	**-1.3**
ISP	**Isparta**	**59.08 298**	P	**P**	**06 38 00.6**	**-0.2**
ISP	**Isparta**	**59.08 298**	*e*P	**P**	**06 37 59.7**	**-1.1**
	comp=Z,15µm,2.0s,mb7.7					
ISP			LR	LR		
	comp=Z,941µm,22.0s,MS7.9					
ISP	**Isparta**	**59.08 298** ⇑*i*P		**P**	**06 37 59.7**	**-1.1**
ISP	**Isparta**	**59.08 298**	P	**P**	**06 37 59.9**	**-0.9**
HARR	**Harsova**	**59.09 306** ⇓*i*P		**P**	**06 38 01.4**	**+0.6**
BCK	**Bucak**	**59.13 298**	*e*P	**P**	**06 38 00.5**	**-0.7**
BCK	**Bucak**	**59.13 298**	P	**P**	**06 38 00.5**	**-0.7**
YLV	**Yalova**	**59.15 301**	*e*P	**P**	**06 37 59.8**	**-1.5**
YLV	**Yalova**	**59.15 301**	P	**P**	**06 37 59.8**	**-1.5**
PSN	**Preselentsi**	**59.17 305**	P	**P**	**06 38 03.5**	**+2.1**
SGH	**Sud-Ghoubbet**	**59.18 265**	P	**P**	**06 38 00.7**	**-1.2**
KLYT	**Kilyos**	**59.20 302**	*e*P	**P**	**06 38 00.4**	**-1.2**
KLYT	**Kilyos**	**59.20 302**	P	**P**	**06 38 00.4**	**-1.3**
SPITS	**Spitsbergen Ar**	**59.23 346**	P	**P**	**06 38 00.0**	**-1.2**
	comp=Z,337nm,1.0s,mb6.3,baz=101,slow=8.6,SNR=50					
SPITS			LR	LR	07 07 00.7	
	comp=Z,2122µm,21.5s,MS8.2,baz=75,slow=40					
SPB4	**Spitsbergen Ar**	**59.23 346**	*e*P	**P**	**06 38 01.1**	**-0.2**
ISK	**Istanbul-Kandi**	**59.24 302**	*e*P	**P**	**06 38 01.2**	**-0.7**
ISK	**Istanbul-Kandi**	**59.24 302**	P	**P**	**06 38 01.2**	**-0.7**
ANTB	**Antalya**	**59.25 297**	*e*P	**P**	**06 38 01.1**	**-0.9**
GEMT	**Gemlik**	**59.32 301**	*e*P	**P**	**06 38 01.3**	**-1.2**
TRO	**Tromso**	**59.33 336** ⇑*i*P		**P**	**06 38 02.5**	**+0.5**
TRO			*e*S	S	**06 46 12.5**	**+2.0**
TRO			AMS	AMS	07 06 21.5	
	comp=Z,2326µm,13.8s,MS8.5					
BGKT	**Bogazkoy**	**59.42 302**	*e*P	**P**	**06 38 02.1**	**-1.0**
BGKT	**Bogazkoy**	**59.42 302**	P	**P**	**06 38 02.0**	**-1.1**
ULDT	**Uludag**	**59.44 301**	*i* P	**P**	**06 38 02.2**	**-1.1**
KORT	**Korkueli**	**59.45 297** ⇑*i*P		**P**	**06 38 02.3**	**-1.1**
GDZ	**Gediz**	**59.49 300** ⇑*i*P		**P**	**06 38 03.2**	**-0.5**
HSP	**Hornsund**	**59.50 345**	*e*P	**P**	**06 38 03.6**	**+0.4**
CTKS	**Kestanelik-??a**	**59.59 302**	*e*P	**P**	**06 38 06.0**	**+1.6**
VRI	**Vrincioaia**	**59.62 308** ⇑*i*P		**P**	**06 38 04.4**	**0.0**
PLOR	**Plostina**	**59.67 308** ⇓*i*P		**P**	**06 38 05.9**	**+1.1**
PLOR	**Plostina**	**59.67 308** ⇓*i*P		**P**	**06 38 05.9**	**+1.1**
ELBA	**Catalca**	**59.67 302** ⇑*i*P		**P**	**06 38 04.6**	**-0.3**
AVR	**AVREN**	**59.68 305**	P	**P**	**06 38 06.5**	**+1.6**
KHL	**Karahalli**	**59.68 299**	*e*P	**P**	**06 38 05.0**	**0.0**
KHL	**Karahalli**	**59.68 299**	P	**P**	**06 38 05.0**	**0.0**
CTYL	**Yal??k??y-??at**	**59.69 303**	*e*P	**P**	**06 38 05.5**	**+0.5**
KHAL	**Karahalli**	**59.69 299** ⇑*i*P		**P**	**06 38 04.4**	**-0.7**
SLVT	**Silivri**	**59.81 302**	*e*P	**P**	**06 38 05.0**	**-0.9**
SLVT	**Silivri**	**59.81 302**	P	**P**	**06 38 04.9**	**-1.0**
PRD	**Provadia**	**59.85 305**	P	**P**	**06 38 08.3**	**+2.2**
ELL	**Elmali**	**59.87 297**	*e*P	**P**	**06 38 07.9**	**+1.5**
ELL	**Elmali**	**59.87 297**	P	**P**	**06 38 04.9**	**-1.4**
NEF	**NEVSHA**	**59.92 305**	P	**P**	**06 38 06.7**	**+0.1**
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**06 38 06.4**	**-0.2**
	comp=Z,3µm,1.1s,mb7.3					
SUW			*e*		06 38 28.4	
SUW			*e*S	**S**	**06 46 21.8**	**+2.9**
SUW			LMZ		07 05 02.3	
	comp=Z,2038µm,21.0s					
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**06 38 06.4**	**-0.2**
SUW			*e*S	**S**	**06 46 21.8**	**+2.9**
SUW			pmax	pmax		
	comp=Z,3µm,1.1s,mb7.3					
SUW			MLR	MLR		
	comp=Z,2038µm,21.0s,MS8.2					
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**06 38 05.8**	**-0.8**
	comp=Z,3µm,0.8s,mb7.3					
DST	**Dursunbey**	**59.98 301**	*e*P	**P**	**06 38 09.0**	**+1.9**
DST	**Dursunbey**	**59.98 301**	P	**P**	**06 38 08.9**	**+1.9**
GOLH	**Golhisar**	**59.98 298** ⇑*i*P		**P**	**06 38 06.1**	**-1.0**
KBS	**Kingsbay**	**60.03 347** ⇑*i*P		**P**	**06 38 07.1**	**+0.4**
KBS			*e*S	S	**06 46 21.7**	**+2.4**
KBS			AMS	AMS	07 08 01.0	
	comp=Z,1333µm,23.2s,MS8.0					
KBS	**Kingsbay**	**60.03 347**	*e*P	**P**	**06 38 07.8**	**+1.0**
KBS			*e*S	**S**	**06 46 28.8**	**+10**
KBS			pmax	pmax		
	comp=Z,979nm,1.2s,mb6.7					
KBS			MLR	MLR		
	comp=Z,1369µm,20.0s,MS8.1					
KBS	**Kingsbay**	**60.03 347**	*e*P	**P**	**06 38 07.8**	**+1.0**
	comp=Z,979nm,1.2s,mb6.7					
KBS			*e*S	**S**	**06 46 28.8**	**+10**
KBS			LR	LR		
	comp=Z,1369µm,20.0s,MS8.1					
GLHS	**Glhisar (BURDU**	**60.05 298**	*e*P	**P**	**06 38 07.4**	**-0.2**
GLHS	**Glhisar (BURDU**	**60.05 298**	P	**P**	**06 38 05.4**	**-2.2**
DEMI	**Demirci**	**60.07 300** ⇑*i*P		**P**	**06 38 07.0**	**-0.7**
DURS	**Dursunbey**	**60.09 301** ⇑*i*P		**P**	**06 38 07.3**	**-0.5**
BUR01	**Bucovina Ar. S**	**60.18 310**	P	**P**	**06 38 08.4**	**+0.1**
BURAR	**Bucovina Array**	**60.18 310**	P	**P**	**06 38 08.8**	**+0.5**
BURAR	**Bucovina Array**	**60.18 310** ⇑*i*P		**P**	**06 38 08.4**	**+0.1**
CRLT	**Corlu**	**60.18 302**	*e*P	**P**	**06 38 10.5**	**+2.1**
CRLT	**Corlu**	**60.18 302**	P	**P**	**06 38 07.8**	**-0.6**
BUR08	**Bucovina Ar. S**	**60.19 310**	*e*P	**P**	**06 38 07.1**	**-1.2**
DENT	**Denizli**	**60.22 298**	*e*P	**P**	**06 38 06.9**	**-1.8**
DENT	**Denizli**	**60.22 298**	P	**P**	**06 38 06.9**	**-1.8**
DNZL	**Cakiroluk**	**60.23 298** ⇑*i*P		**P**	**06 38 08.1**	**-0.7**
MLR	**Muntele Rosu**	**60.24 308**	P	**P**	**06 38 07.3**	**-1.4**
	comp=Z,166nm,0.9s,mb6.1,baz=14,slow=3.9,SNR=106					
MLR			S	**S**	**06 46 25.9**	**+3.0**
	comp=Z,148nm,1.3s,baz=278,slow=14,SNR=1.6					
MLR			LR	LR	07 09 15.2	
	comp=Z,1149µm,20.2s,MS8.0,baz=62,slow=41					
MLR	**Muntele Rosu**	**60.24 308**	P	**P**	**06 38 09.6**	**+0.8**
MLR	**Muntele Rosu**	**60.24 308** ⇓*i*P		**P**	**06 38 10.6**	**+1.9**
AKAS	**Kas**	**60.26 297** ⇑*i*P		**P**	**06 38 07.2**	**-1.8**
KULA	**Kula-Manisa**	**60.27 299**	*e*P	**P**	**06 38 10.2**	**+1.1**
BNT	**Bandirma**	**60.27 302**	*e*P	**P**	**06 38 10.9**	**+1.8**
BNT	**Bandirma**	**60.27 302**	P	**P**	**06 38 07.0**	**-2.0**
ADK	**Adak**	**60.28 45**	P	**P**	**06 38 09.9**	**+1.0**
ADK			pmax	pmax		
	comp=Z,1µm,1.2s,mb6.8					
ADK	**Adak**	**60.28 45**	*e*P	**P**	**06 38 08.5**	**-0.4**
	comp=Z,1µm,1.3s,mb6.7					
ADK			LR	LR		
	comp=Z,1661µm,21.0s,MS8.2					
KSL	**Kastellorizon**	**60.30 297**	*e*P	**P**	**06 38 08.4**	**-0.9**
MANT	**Manisa**	**60.35 299**	*i* P	**P**	**06 38 08.0**	**-1.7**
TKR	**Tekirdag**	**60.37 302**	*e*P	**P**	**06 38 11.5**	**+1.8**
TKR	**Tekirdag**	**60.37 302**	P	**P**	**06 38 08.4**	**-1.3**
LVV	**L'vov**	**60.40 313** ⇓*i*P		**P**	**06 38 11.1**	**+1.4**
LVV			*e*		06 38 52.9	
LVV			*e*S	**S**	**06 46 29.3**	**+4.5**
LVV	**L'vov**	**60.40 313**	*e*P	**P**	**06 38 09.0**	**-0.7**
GAMB	**Gambell**	**60.42 31**	*e*P	**P**	**06 38 10.7**	**+1.1**
	comp=Z,1µm,0.3s,mb7.3					
BALB	**Balikesir**	**60.51 301**	*e*P	**P**	**06 38 11.4**	**+0.7**
BALB	**Balikesir**	**60.51 301**	P	**P**	**06 38 09.5**	**-1.2**
FETY	**Fethiye**	**60.53 297**	*e*P	**P**	**06 38 09.7**	**-1.2**
FETY	**Fethiye**	**60.53 297**	P	**P**	**06 38 08.1**	**-2.8**
JMB	**Yambol**	**60.63 304**	P	**P**	**06 38 11.9**	**+0.5**
JMB	**Yambol**	**60.63 304**	P	**P**	**06 38 11.5**	**+0.1**
JMB	**Yambol**	**60.63 304**	P	**P**	**06 38 13.9**	**+2.5**
BALY	**Balya**	**60.67 301** ⇑*i*P		**P**	**06 38 11.4**	**-0.4**
EDRB	**Edirne**	**60.69 304**	*e*P	**P**	**06 38 13.4**	**+1.5**
EDRB	**Edirne**	**60.69 304**	P	**P**	**06 38 11.5**	**-0.4**
SART	**Tekirdag**	**60.71 302** ⇑*i*P		**P**	**06 38 11.8**	**-0.3**
RKY	**Sarkoy-Tekirda**	**60.72 302**	*e*P	**P**	**06 38 13.4**	**+1.3**
RKY	**Sarkoy-Tekirda**	**60.72 302**	P	**P**	**06 38 10.9**	**-1.2**
AKHS	**Akhisar**	**60.79 300** ⇑*i*P		**P**	**06 38 12.0**	**-0.6**
AKS	**Akhisar**	**60.79 300**	*e*P	**P**	**06 38 15.8**	**+3.1**
AKS	**Akhisar**	**60.79 300**	P	**P**	**06 38 11.9**	**-0.7**
TURN	**Turunc**	**60.82 298** ⇑*i*P		**P**	**06 38 14.4**	**+1.5**
SZH	**Strazhica**	**60.86 305**	P	**P**	**06 38 14.6**	**+1.6**
VOIR		**60.86 308**	P	**P**	**06 38 13.1**	**+0.1**
VOIR		**60.86 308** ⇑*i*P		**P**	**06 38 13.3**	**+0.3**
YER	**Yerkesik**	**60.98 298**	*e*P	**P**	**06 38 14.8**	**+0.8**
YER	**Yerkesik**	**60.98 298**	P	**P**	**06 38 12.7**	**-1.2**
LPK	**Lapseki**	**61.11 302**	*e*P	**P**	**06 38 16.3**	**+1.5**
LPK	**Lapseki**	**61.11 302**	P	**P**	**06 38 13.9**	**-0.9**
AYDN	**Tasoluk**	**61.12 299** ⇑*i*P		**P**	**06 38 14.7**	**-0.2**
KWP	**Kalwaria Pacla**	**61.28 313**	*e*P	**P**	**06 38 15.6**	**-0.1**
KWP			*e*		06 38 38.8	
KWP			*e*S	**S**	**06 46 47.8**	**+12**
KWP			LMZ		07 06 01.5	
	comp=Z,1783µm,23.5s					
KWP	**Kalwaria Pacla**	**61.28 313**	*e*P	**P**	**06 38 15.5**	**-0.2**
	comp=Z,8µm,1.3s,mb7.7					
BMR	**Baia Mare**	**61.29 311**	P	**P**	**06 38 16.1**	**+0.2**
BMR	**Baia Mare**	**61.29 311** ⇑*i*P		**P**	**06 38 17.1**	**+1.3**
PVL	**Pavlikeni**	**61.29 305**	P	**P**	**06 38 18.7**	**+2.8**
MLSB	**Milas**	**61.31 298**	*e*P	**P**	**06 38 17.3**	**+1.1**
MLSB	**Milas**	**61.31 298**	P	**P**	**06 38 14.8**	**-1.4**
IZM	**Izmir**	**61.35 300**	*e*P	**P**	**06 38 20.4**	**+3.9**
IZM	**Izmir**	**61.35 300**	P	**P**	**06 38 16.5**	**+0.1**
ARG	**Arkhangelos**	**61.40 297**	*e*P	**P**	**06 38 17.4**	**+0.6**
ARG	**Arkhangelos**	**61.40 297**	P	**P**	**06 38 15.0**	**-1.8**
ARG	**Arkhangelos**	**61.40 297**	P	**P**	**06 38 15.6**	**-1.2**
ENEZ	**Enez**	**61.44 302**	*e*P	**P**	**06 38 20.2**	**+3.1**
ALN	**Alexandroupoli**	**61.47 303**	*e*P	**P**	**06 38 19.0**	**+1.8**
ALN	**Alexandroupoli**	**61.47 303**	P	**P**	**06 38 18.0**	**+0.8**
DIM	**Dimitrovgrad**	**61.49 304**	P	**P**	**06 38 20.5**	**+3.2**
LOF	**Lofoten**	**61.51 335**	*e*P	**P**	**06 38 17.9**	**+0.9**
BLCB	**Balcova**	**61.52 300**	*e*P	**P**	**06 38 18.0**	**+0.4**
BLCB	**Balcova**	**61.52 300**	P	**P**	**06 38 16.4**	**-1.2**
BLCB	**Balcova**	**61.52 300**	P	**P**	**06 38 17.1**	**-0.5**
GCAM	**G?zelcaml?**	**61.59 299** ⇑*i*P		**P**	**06 38 17.7**	**-0.4**
EZN	**Ezine**	**61.60 301**	*e*P	**P**	**06 38 19.2**	**+1.1**
EZN	**Ezine**	**61.60 301**	P	**P**	**06 38 17.0**	**-1.1**
MOR8	**Moi Rana**	**61.60 332**	*e*P	**P**	**06 38 15.6**	**-2.0**
WAR	**Warsaw**	**61.63 316**	*e*P	**P**	**06 38 19.9**	**+1.8**
WAR			*e*		06 38 40.7	
WAR			*e*S	**S**	**06 46 37.9**	**-2.5**
WAR			LMZ		07 06 17.4	
	comp=Z,2612µm,19.9s					
BDRM	**Kayabasi**	**61.64 298**	*i* P	**P**	**06 38 17.0**	**-1.4**
TNA	**Tin City**	**61.64 28**	*e*P	**P**	**06 38 18.8**	**+0.8**
	comp=Z,19nm,0.4s,mb5.6					
DAT	**Datca**	**61.65 298**	*e*P	**P**	**06 38 19.0**	**+0.6**
KDZ	**Kurdzhali**	**61.70 304**	P	**P**	**06 38 19.8**	**+1.1**
KOLS	**Kolonicke sedl**	**61.74 312**	*i* P	**P**	**06 38 19.1**	**+0.3**
KOLS			*e*		06 42 10.8	
KOLS			*e*S	**S**	**06 46 42.0**	**+0.1**
KOLS			*e*SS	SS	06 50 48.3	+5.3
KOLS			pmax	pmax		
	comp=Z,343nm,1.4s,mb6.3					
KOLS	**Kolonicke sedl**	**61.74 312**	*i* P	**P**	**06 38 19.1**	**+0.3**
	comp=Z,343nm,1.4s,mb6.3					
KOLS			*e*		06 42 10.8	
KOLS			*e*S	**S**	**06 46 42.0**	**+0.1**
KOLS			*e*SS	SS	06 50 48.3	+5.3
KOLS			*e*SS	SS	06 51 34.1	+51
KOLS	**Kolonicke sedl**	**61.74 312**	*i* P	**P**	**06 38 19.1**	**+0.3**
KOLS			*e*		06 42 10.8	
KOLS			*e*S	**S**	**06 46 42.0**	**+0.1**
KOLS			*e*SS	SS	06 50 48.3	+5.3
BODT	**Bodrum**	**61.74 298**	*e*P	**P**	**06 38 09.4**	**-10**
RDO	**Rodhopi**	**61.76 303**	*e*P	**P**	**06 38 20.7**	**+1.5**
RDO	**Rodhopi**	**61.76 303**	P	**P**	**06 38 18.5**	**-0.7**
ASAR	**Alice Springs**	**61.78 148**	P	**P**	**06 38 16.9**	**-2.5**
	comp=Z,151nm,0.8s,mb6.2,baz=328,slow=6.2,SNR=68					
ASAR			S	**S**	**06 46 42.8**	**-0.1**
	comp=Z,12nm,0.9s,baz=334,slow=9.7,SNR=3.3					
ASAR			PKPPKP		07 07 26.1	
	comp=Z,7.5nm,0.8s,baz=146,slow=3.0,SNR=5.4					
ASAR	**Alice Springs**	**61.78 148**	P	**P**	**06 38 16.9**	**-2.5**
ASAR			S	**S**	**06 46 42.8**	**-0.1**
TRPA	**Tarpa**	**61.78 311** ⇓*i*P		**P**	**06 38 20.3**	**+1.1**
BOZC	**Bozcaada**	**61.79 302** ⇑*i*P		**P**	**06 38

TIM	Timisoara	63.35 309⇑	*i* P	P	06 38 31.8	+2.1
THR1	Thera Island	63.37 298	P	P	06 38 31.5	+1.5
THR4	Thira Island,	63.39 298	P	P	06 38 31.0	+0.9
THR4	Thira Island,	63.39 298	P	P	06 38 31.5	+1.4
THR3	Thira Island,	63.41 298	P	P	06 38 28.0	-2.2
THR3	Thira Island,	63.41 298	P	P	06 38 28.6	-1.6
THR6	Thira Island,	63.42 298	P	P	06 38 28.0	-2.3
THR6	Thira Island,	63.42 298	P	P	06 38 28.2	-2.1
SOH	Sokhos	63.43 303	*e*P	P	06 38 31.8	+1.5
SOH	Sokhos	63.43 303	P	P	06 38 29.9	-0.4
HFS	Hagfors	63.45 326	P	P	06 38 28.2	-1.9
	comp=Z,173nm,0.7s,mb6.3,baz=90,slow=3.6,SNR=52					
HFS			LR	LR	07 09 13.1	
	comp=Z,1205µm,19.4s,MS8.1,baz=74,slow=39					
KWAJ	Kwajalein Atol	63.47 96	*e*P	P	06 38 33.3	+2.3
	comp=Z,1µm,1.1s,mb7.0					
PAIG	Paliouri	63.49 302	P	P	06 38 30.0	-0.7
PAIG	Paliouri	63.49 302	P	P	06 38 30.2	-0.5
PLG	Polygyros	63.52 303	*e*P	P	06 38 31.7	+0.8
PLG	Polygyros	63.52 303	P	P	06 38 30.0	-0.9
PLG	Polygyros	63.52 303	P	P	06 38 30.1	-0.8
PSZ	Piszkesteto	63.55 312	*e*P	P	06 38 30.4	-0.5
	comp=Z,1µm,1.3s,mb6.8					
PSZ			LR	LR		
	comp=Z,728µm,21.0s,MS7.8					
PSZ	Piszkesteto	63.55 312⇑	*e*P	P	06 38 33.0	+2.1
PSZ	Piszkesteto	63.55 312⇑	*i*P	P	06 38 31.4	+0.5
GKP	Gorka Klasztor	63.56 318	*e*P	P	06 38 32.5	+1.6
GKP			*e*		06 38 53.4	
GKP			*e*S	S	06 47 13.8	+9.2
GKP			LMZ		07 08 13.3	
	comp=Z,2565µm,20.1s					
AOS	Alonnisos	63.60 301	P	P	06 38 30.0	-1.4
AOS	Alonnisos	63.60 301	P	P	06 38 30.5	-0.9
NPS	Neapolis	63.64 297	*e*P	P	06 38 32.6	+0.8
HORT	Hortiatis	63.69 303	P	P	06 38 31.0	-1.0
HORT	Hortiatis	63.69 303	P	P	06 38 31.0	-1.0
LIKS	Likavka	63.70 313	*i* P	P	06 38 35.2	+3.3
LIKS			pmax	pmax		
	comp=Z,187nm,1.1s,mb6.0					
LIKS	Likavka	63.70 313	*i* P	P	06 38 35.2	+3.3
	comp=Z,187nm,1.1s,mb6.0					
LIKS	Likavka	63.70 313	*i* P	P	06 38 35.2	+3.3
XRY	Khrisi	63.72 296	*e*P	P	06 38 31.0	-1.3
THE	Thessaloniki	63.77 303	P	P	06 38 30.9	-1.7
LAST	Lasithi	63.78 297	*e*P	P	06 38 33.5	+0.8
LAST	Lasithi	63.78 297	P	P	06 38 32.0	-0.7
LAST	Lasithi	63.78 297	P	P	06 38 32.1	-0.6
FURI	Furi	63.81 265	*e*P	P	06 38 35.7	+2.6
FURI			S	S	06 47 19.5	+11
SVIS	Svilajnac	63.81 308	P	P	06 38 36.3	+3.5
VAY	Valandovo	63.83 304	P	P	06 38 32.0	-0.9
VAY	Valandovo	63.83 304	*e*P	P	06 38 31.0	-1.9
VAY	Valandovo	63.83 304	P	P	06 38 31.7	-1.2
BARS	Barje	63.87 306	P	P	06 38 32.7	-0.5
RAC	Raciborz	63.95 314	*e*P	P	06 38 34.1	+0.5
RAC			*e*S	S	06 47 11.1	+1.5
RAC			MLR	MLR		
	comp=Z,1550µm,20.0s,MS8.2					
STIP	Stip	63.98 305	*e*P	P	06 38 32.0	-1.9
STIP	Stip	63.98 305	P	P	06 38 32.6	-1.3
PTL	Penteli	63.99 300	*e*P	P	06 38 34.3	+0.2
NEO	Neokhori	64.03 302	*e*P	P	06 38 34.7	+0.4
XOR	Xorichti	64.04 302	P	P	06 38 32.5	-1.8
VYHS	Vyhne	64.04 313	*i* P	P	06 38 34.8	+0.6
VYHS			*e*		06 42 35.7	
VYHS			*e*S	S	06 47 10.4	-0.4
VYHS			pmax	pmax		
	comp=Z,591nm,1.7s,mb6.3					
VYHS	Vyhne	64.04 313	*i* P	P	06 38 34.8	+0.6
	comp=Z,591nm,1.7s,mb6.3					
VYHS			*e*		06 42 35.7	
VYHS			*e*S	S	06 47 10.4	-0.4
VYHS			*e*SS	SS	06 51 34.1	+15
VYHS			*e*SS	SS	06 51 46.8	+28
VYHS	Vyhne	64.04 313	*i* P	P	06 38 34.8	+0.6
VYHS			*e*		06 42 35.7	
VYHS			*e*S	S	06 47 10.4	-0.4
VYHS			*e*SS	SS	06 51 34.1	+15
OKC	Ostrava-Krasne	64.05 314	*e*P	P	06 38 34.1	-0.1
OKC			*e**PP	pP	06 38 38.1	+1.4
OKC			*e*S	S	06 47 17.2	+6.3
OKC			MLR	MLR		
	comp=Z,1754µm,15.9s,MS8.3					
OKC	Ostrava-Krasne	64.05 314	P	P	06 38 34.3	+0.1
OKC	Ostrava-Krasne	64.05 314	*e*P	P	06 38 34.1	-0.1
OKC			*e*pP	pP	06 38 38.1	+1.4
OKC			*e*PCP	PcP	06 39 00.1	-9.4
OKC			*e*x	x	06 42 54.7	
OKC			*e*S	S	06 47 17.2	+6.3
OKC			*e*x	x	06 51 53.2	
OKC			AMS	AMS	07 08 20.0	
	comp=Z,1754µm,15.9s					
ATHU	Athens Univers	64.08 300	P	P	06 38 34.3	-0.3
VLY	Voula,Athens	64.11 300	*e*P	P	06 38 36.7	+1.9
ATH	Athens Observa	64.13 300	*e*P	P	06 38 35.5	+0.5
IDI	Anoyia	64.19 297	P	P	06 38 34.0	-1.3
	comp=Z,196nm,0.7s,mb6.3,baz=35,slow=9.7,SNR=22					
IDI			S	S	06 47 06.9	-6.1
	comp=Z,56nm,1.2s,baz=245,slow=6.2,SNR=2.3					
IDI			LR	LR	07 11 50.0	
	comp=Z,520µm,22.0s,MS7.7,baz=70,slow=41					
IDI	Anoyia	64.19 297	*e*P	P	06 38 36.5	+1.1
BUD	Budapest	64.24 311⇑	*e*P	P	06 38 37.0	+1.5
GRUS	Gruza	64.28 307	P	P	06 38 35.0	-0.8
KOLL	Kolacno	64.29 313	*i* P	P	06 38 35.7	-0.1
KOLL	Kolacno	64.29 313	*i* P	P	06 38 35.7	-0.1
LIT	Litokhoron	64.30 303	*e*P	P	06 38 36.6	+0.6
LIT	Litokhoron	64.30 303	P	P	06 38 34.1	-1.9
BSD	Bornholm Skovb	64.31 320⇑	*i*P	P	06 38 36.7	+0.9
BSD			pmax	pmax		
	comp=Z,660nm,0.9s,mb6.7					
BSD	Bornholm Skovb	64.31 320⇑	*i*P	P	06 38 36.7	+0.9
	comp=Z,655nm,0.9s,mb6.7					
BSD			*e*S	S	06 47 24.2	+10
BSD	Bornholm Skovb	64.31 320⇑	*i*P	P	06 38 36.7	+0.9
	comp=Z,655nm,0.9s,mb6.6,SNR=20					
SIVA	Sivas	64.34 297	*e*P	P	06 38 37.2	+0.8
SIVA	Sivas	64.34 297	P	P	06 38 35.0	-1.4
SIVA	Sivas	64.34 297	P	P	06 38 35.7	-0.7
NB2	NORSAR Subarra	64.36 327	P	P	06 38 34.7	-1.3
	comp=Z,1µm,0.9s,mb6.9,baz=74,slow=6.9					
NB2	NORSAR Subarra	64.36 327	P	P	06 38 37.0	+1.0
NOA	NORSAR Array B	64.36 327	P	P	06 38 34.4	-1.7
	comp=Z,36nm,0.6s,mb5.6,baz=149,slow=15,SNR=63					
NOA			LR	LR	07 09 19.2	
	comp=Z,1185µm,19.6s,MS8.1,baz=90,slow=38					
NAIG	Nisos Aigina	64.37 300	*e*P	P	06 38 34.1	-2.5
TRUS	Trudelj	64.38 308⇑	*i*P	P	06 38 34.9	-1.6
ATAL	Atalanti	64.39 301	P	P	06 38 35.2	-1.5
SKO	Skopje	64.41 305	*e*P	P	06 38 34.9	-1.8
SKO	Skopje	64.41 305	P	P	06 38 37.1	+0.4
LKR	Lokris	64.42 301	*e*P	P	06 38 37.1	+0.2
LKR	Lokris	64.42 301	P	P	06 38 35.0	-1.9
LKR	Lokris	64.42 301	P	P	06 38 35.4	-1.5
MORC	Moravsky Berou	64.44 314	*e*P	P	06 38 36.6	-0.2
	comp=Z,1µm,1.0s,mb6.8					
MORC	Moravsky Berou	64.44 314⇑	*i*P	P	06 38 39.0	+2.2
NAO01	NORSAR Array S	64.57 327	*e*P	P	06 38 35.2	-2.2
NAO01			LR	LR		
	comp=Z,893µm,20.0s,MS8.0					
NIKO	Nikolski	64.59 42	*e*P	P	06 38 40.8	+3.1
	comp=Z,435nm,1.2s,mb6.4					
DID	Didima	64.65 300	*e*P	P	06 38 37.4	-1.0
DID	Didima	64.65 300	P	P	06 38 35.2	-3.2
LTK	Loutraki	64.67 301	*e*P	P	06 38 38.3	-0.2
LTK	Loutraki	64.67 301	P	P	06 38 36.4	-2.1
VAM	Vamos	64.67 297	*e*P	P	06 38 39.8	+1.3
DIVS	Divibare	64.70 308	P	P	06 38 37.8	-0.8
DIVS	Divibare	64.70 308	P	P	06 38 37.8	-0.8
KZN	Kozani	64.74 303	*e*P	P	06 38 39.3	+0.4
KZN	Kozani	64.74 303	P	P	06 38 37.0	-1.9
KZN	Kozani	64.74 303	P	P	06 38 37.8	-1.1
WNDE	Wendo Genet	64.76 263	*e*P	P	06 38 40.1	+0.7
BIA	Bitola	64.82 304	*e*P	P	06 38 37.4	-2.0
THL	Klokotos Trika	64.82 302	*e*P	P	06 38 39.6	+0.1
THL	Klokotos Trika	64.82 302	P	P	06 38 37.7	-1.8
FNA	Florina	64.86 304	P	P	06 38 38.0	-1.7
FNA	Florina	64.86 304	P	P	06 38 38.6	-1.1
KSP	Ksiaz	64.86 316	*e*P	P	06 38 39.1	-0.4
KSP			*e*		06 39 02.5	
KSP			*e*S	S	06 47 31.4	+11
KSP			LMZ		07 08 22.1	
	comp=Z,3655µm,19.5s					
KSP	Ksiaz	64.86 316⇑	*e*P	P	06 38 39.0	-0.5
KSP			*i* *PP	pP	06 38 43.1	+1.1
KSP			*e*PPP		06 42 43.5	
KSP			*e*S	S	06 47 19.5	-1.4
KSP			MLR	MLR		
	comp=E,2870µm,24.4s					
KSP			MLR	MLR		
	comp=Z,4216µm,19.5s,MS8.6					
KARN	Karanos	64.89 298	*e*P	P	06 38 40.0	0.0
KARN	Karanos	64.89 298	P	P	06 38 38.8	-1.2
PKSM	Moragy	64.90 310	P	P	06 38 39.4	-0.5
PKSM	Moragy	64.90 310⇑	*i*P	P	06 38 39.3	-0.6
SMOL	Smolenice	64.92 313	*i* P	P	06 38 43.1	+3.1
SMOL	Smolenice	64.92 313	*i* P	P	06 38 43.1	+3.1
GVD	Gavdhos	64.96 297	*e*P	P	06 38 40.9	+0.4
GVD	Gavdhos	64.96 297	*e*P	P	06 38 40.8	+0.3
	comp=Z,4µm,0.9s,mb7.5					
GVD	Gavdhos	64.96 297	P	P	06 38 40.3	-0.2
NWAO	Narrogin (SRO)	64.98 167	P	P	06 38 38.2	-2.1
	comp=Z,86nm,0.7s,mb5.9,baz=346,slow=7.0,SNR=16					
NWAO			LR	LR	07 06 52.0	
	comp=Z,7µm,21.3s,baz=331,slow=36					
NWAO			PKP2bc		07 07 30.3	
	comp=Z,54nm,1.2s,baz=145,slow=5.1,SNR=3.9					
NWAO	Narrogin (SRO)	64.98 167	*e*P	P	06 38 41.0	+0.7
NWAO			pmax	pmax		
	comp=Z,2µm,1.1s					
NWAO			MLR	MLR		
	comp=Z,1208µm,22.0s					
NWAO	Narrogin (SRO)	64.98 167	*e*P	P	06 38 41.0	+0.7
	comp=Z,2µm,1.1s,mb7.1					
NWAO			LR	LR		
	comp=Z,1208µm,22.0s,MS8.1					
NWAO	Narrogin (SRO)	64.98 167	P	P	06 38 44.3	+4.0
	SNR=43					
NWAO			P		06 38 44.3	
	SNR=43					
DPC	Dobruska-Polom	65.00 315	*e*P	P	06 38 40.4	-0.1
DPC			*e**PP	pP	06 38 44.7	+1.8
DPC			*e*		06 39 06.6	
DPC			*e*		06 41 09.0	
DPC			*e*S	S	06 47 27.9	+5.3
DPC			MLR	MLR		
	comp=Z,1811µm,16.6s,MS8.3					
DPC	Dobruska-Polom	65.00 315	P	P	06 38 40.5	0.0
DPC	Dobruska-Polom	65.00 315	*e*P	P	06 38 40.4	-0.1
DPC			*e*pP	pP	06 38 44.7	+1.8
DPC			*e*PCP	PcP	06 39 06.6	-6.8
DPC			*e*PP	PP	06 41 09.0	+5.9
DPC			*e*x	x	06 41 34.1	
DPC			*e*x	x	06 43 07.9	
DPC			*e*S	S	06 47 27.9	+5.3
DPC			*e*x	x	06 52 09.1	
DPC			AMS	AMS	07 08 20.0	
	comp=Z,1811µm,16.6s					
DOMB	Dombas	65.01 329	*e*P	P	06 38 39.3	-0.9
UPC	Upice	65.14 315	P	P	06 38 41.1	-0.2
VLI	Veliai	65.15 299	*e*P	P	06 38 39.1	-2.6
GUR	Goura	65.16 301	*e*P	P	06 38 41.2	-0.5
GUR	Goura	65.16 301	P	P	06 38 39.2	-2.5
OHR	Ohrid	65.16 304	P	P	06 38 41.0	-0.6
OHR	Ohrid	65.16 304	*e*P	P	06 38 39.1	-2.5
OHR	Ohrid	65.16 304	P	P	06 38 40.4	-1.2
BBLS	Lazići	65.18 308	P	P	06 38 41.5	-0.2
IVA	Berane	65.18 306‖	*i*P	P	06 38 41.9	+0.2
IVA	Berane	65.18 306	P	P	06 38 42.0	+0.3
VRAC	Vranov	65.18 314	P	P	06 38 40.7	-0.9
	comp=Z,198nm,0.7s,mb6.2,baz=71,slow=7.3,SNR=52					
VRAC			S	S	06 47 21.0	-3.8
	comp=Z,18nm,0.9s,baz=270,slow=22,SNR=1.6					
VRAC			LR	LR	07 09 16.3	
	comp=Z,2277µm,18.7s,MS8.4,baz=65,slow=38					
VRAC	Vranov	65.18 314	P	P	06 38 41.9	+0.3
VRAC	Vranov	65.18 314‖	*i*P	P	06 38 42.1	+0.5
EVR	Evrytania	65.20 302	*e*P	P	06 38 43.7	+1.8
PHP	Peshkopia	65.21 305	*e*P	P	06 38 42.4	+0.4
PVY	Plav	65.22 306‖	*i*P	P	06 38 42.2	+0.2
PVY	Plav	65.22 306	P	P	06 38 44.0	+2.0
KYTH	Kithira	65.23 299	*e*P	P	06 38 40.2	-2.0
BCI	Bajram Curri	65.24 306	*e*P	P	06 38 42.8	+0.7
EFP	Efpalio	65.30 301	*e*P	P	06 38 43.2	+0.6
EFP	Efpalio	65.30 301	P	P	06 38 39.9	-2.7
LAKA	Lakka	65.32 301	P	P	06 38 40.6	-2.1
VLX	Vlachokerasia	65.33 300	*e*P	P	06 38 42.9	+0.1
VLX	Vlachokerasia	65.33 300	P	P	06 38 41.5	-1.3
KBN	Korca	65.34 304	*e*P	P	06 38 42.2	-0.6
RGN	Rugen	65.36 320	*e*P	P	06 38 41.6	-1.1
	comp=Z,6µm,1.9s,mb7.3					
RGN	Rugen	65.36 320	*e*P	P	06 38 42.7	0.0
	comp=Z,2µm,0.9s,mb7.1					
PLE	Pljevlja	65.37 307‖	*i*P	P	06 38 43.3	+0.3
PLE	Pljevlja	65.37 307‖	*i*P	P	06 38 43.3	+0.4
CTA	Charters Tower	65.44 135	*e*P	P	06 38 41.8	-1.8
	comp=Z,873nm,1.9s,mb6.5					
CTA			*e*S	S	06 47 31.0	+2.5
CTA	Charters Tower	65.44 135	P	P	06 38 41.6	-1.9
	comp=Z,324nm,0.9s,mb6.4,baz=318,slow=8.4,SNR=38					
CTA			S	S	06 47 26.6	-1.9
	comp=Z,40nm,1.0s,baz=348,slow=21,SNR=2.0					
CTA			LR	LR	07 08 38.5	
	comp=Z,513µm,21.1s,MS7.7,baz=314,slow=37					
CTA	Charters Tower	65.44 135	P	P	06 38 41.6	-2.0
CTA			S	S	06 47 26.6	-1.9
CTAO	Charters Tower	65.44 135	*e*P	P	06 38 43.7	+0.1
CTAO			pmax	pmax		
	comp=Z,2µm,1.2s,mb7.0					
CTAO			MLR	MLR		
	comp=Z,513µm,21.0s,MS7.7					
CTAO	Charters Tower	65.44 135	*e*P	P	06 38 43.7	+0.1
	comp=Z,2µm,1.2s,mb7.0					
CTAO			LR	LR		
	comp=Z,513µm,21.0s,MS7.7					
UPR	University Cam	65.44 301	*e*P	P	06 38 43.8	+0.3
UPR	University Cam	65.44 301	P	P	06 38 43.2	-0.3
COP	Copenhagen	65.47 322⇑	*i*P	P	06 38 45.0	+1.6
COP			*e*S	S	06 47 29.8	+1.7
COP			pmax	pmax		
	comp=Z,770nm,0.8s,mb6.8					
COP			MLR	MLR		
	comp=Z,690µm,18.0s,MS7.9					
COP	Copenhagen	65.47 322⇑	*i*P	P	06 38 45.0	+1.6
	comp=Z,771nm,0.8s,mb6.8					
COP			*e*S	S	06 47 29.8	+1.7
COP						
	comp=Z,687µm,18.0s					
PUK	Puka	65.47 306	*e*P	P	06 38 42.7	-0.9
MOL	Molde	65.50 330⇑	*i*P	P	06 38 43.4	0.0
MOL			AMS	AMS	07 09 48.6	
	comp=Z,1848µm,23.1s,MS8.2					
KONO	Kongsberg	65.57 326⇑	*i*P	P	06 38 44.8	+0.9
KONO			*e*S	S	06 47 34.1	+4.9
KONO			AMS	AMS	07 08 57.4	
	comp=Z,891µm,14.0s,MS8.1					
KONO	Kongsberg	65.57 326	P	P	06 38 42.9	-1.0
KONO			pmax	pmax		
	comp=Z,2µm,1.3s,mb6.9					
KONO	Kongsberg	65.57 326	*e*P	P	06 38 42.7	-1.2
	comp=Z,53nm,0.9s,mb5.6					
KONO			LR	LR		
	comp=Z,997µm,20.0s,MS8.0					
JAN	Janina	65.63 303	*e*P	P	06 38 45.7	+1.0
UNV	Unalaska Valle	65.64 41	*e*P	P	06 38 45.4	+0.9
	comp=Z,664nm,1.0s,mb6.6					
TIR	Tirane	65.73 305	P	P	06 38 44.1	-1.3
TIR			pmax	pmax		
	comp=Z,3µm,1.1s,mb7.3					
TIR	Tirane	65.73 305	*e*P	P	06 38 43.7	-1.7
	comp=Z,3µm,1.1s,mb7.3					
TIR			LR	LR		
	comp=Z,765µm,22.0s,MS7.9					
TIR	Tirane	65.73 305	P	P	06 38 45.5	+0.1
ITM	Ithomi	65.74 300	*e*P	P	06 38 45.0	-0.5
ITM	Ithomi	65.74 300	P	P	06 38 43.0	-2.5
ITM	Ithomi	65.74 300	P	P	06 38 43.3	-2.2
UPM	Unac-Piva	65.75 307‖	*i*P	P	06 38 44.3	-1.1
UPM	Unac-Piva	65.75 307	P	P	06 38 45.0	-0.4
RLS	Riolos of Patr	65.76 301	*e*P	P	06 38 45.8	+0.2
TTG	Podgorica	65.78 306‖	*i*P	P	06 38 44.2	-1.4
TTG	Podgorica	65.78 306	P	P	06 38 45.0	-0.6
RUE	Ruedersdorf	65.80 318	*e*P	P	06 38 44.2	-1.4
	comp=Z,5µm,2.0s,mb7.2					
RUE	Ruedersdorf	65.80 318	*e*P	P	06 38 45.0	-0.5
	comp=Z,1µm,0.9s,mb6.9					
FORT	Forrest	65.82 157	*e*P	P	06 38 44.1	-1.7
	comp=Z,925nm,0.9s,mb6.8					
FORT	Forrest	65.82 157	*e*P	P	06 38 47.0	+1.2
	comp=Z,3µm,0.9s,mb7.3					
NKY	Niksic	65.82 307‖	*i*P	P	06 38 45.1	-0.8
NKY	Niksic	65.82 307‖	*i*P	P	06 38 45.1	-0.8
TREC	Trest	65.87 314	*e*P	P	06 38 46.0	-0.1
TREC			*e**PP	pP	06 38 50.2	+1.7
TREC			*e*		06 39 11.8	
TREC			*e*		06 41 16.4	
TREC			*e*S	S	06 47 38.8	+5.6
TREC			MLR	MLR		
	comp=Z,2116µm,19.8s,MS8.3					
TREC	Trest	65.87 314	*e*P	P	06 38 46.0	-0.1
TREC			*e*pP	pP	06 38 50.2	+1.7
TREC			*e*PCP	PcP	06 39 11.8	-5.2
TREC			*e*PP	PP	06 41 16.4	+5.7
TREC			*e*x	x	06 41 41.2	
TREC			*e*x	x	06 43 14.7	
TREC			*e*S	S	06 47 38.8	+5.6
TREC			*e*x	x	06 52 25.4	
TREC			AMS	AMS	07 08 10.0	
	comp=Z,2116µm,19.8s					
AKUT	Akutan	65.95 40	*e*P	P	06 38 48.2	+1.7
	comp=Z,3µm,2.2s,mb6.9					
AKUT			LR	LR		
	comp=Z,1159µm,18.0s,MS8.1					
ULC	Ulcinj	65.95 306‖	*i*P	P	06 38 45.9	-0.8
ULC	Ulcinj	65.95 306	P	P	06 38 45.0	-1.7
PYL	PYLOS	65.98 300	*e*P	P	06 38 45.6	-1.4
PYL	PYLOS	65.98 300	P	P	06 38 44.5	-2.5
PVCC	Panska Ves	66.00 316	*e*P	P	06 38 47.0	+0.1
PVCC			*e**PP	pP	06 38 50.9	+1.5
PVCC			*e*		06 39 12.8	
PVCC			*e*		06 41 18.1	
PVCC			*e*S	S	06 47 42.2	+7.4
PVCC			MLR	MLR		
	comp=Z,1698µm,15.9s,MS8.3					
PVCC	Panska Ves	66.00 316	P	P	06 38 47.2	+0.3
PVCC	Panska Ves	66.00 316	*e*P	P	06 38 47.0	+0.1
PVCC			*e*pP	pP	06 38 50.9	+1.5
PVCC			*e*PCP	PcP	06 39 12.8	-4.7
PVCC			*e*PP	PP	06 41 18.1	+6.3
PVCC			*e*x	x	06 41 43.7	
PVCC			*e*x	x	06 43 15.0	
PVCC			*e*S	S	06 47 42.2	+7.4
PVCC			*e*x	x	06 52 26.8	
PVCC			AMS	AMS	07 09 20.0	
	comp=Z,1698µm,15.9s					
IGT	Igoumenitsa	66.05 303	P	P	06 38 46.0	-1.4
IGT	Igoumenitsa	66.05 303	P	P	06 38 46.9	-0.5
BUM	Brajici-Budva	66.07 306‖	*i*P	P	06 38 47.1	-0.4
BUM	Brajici-Budva	66.07 306	P	P	06 38 47.0	-0.5
BRY	Bratogost	66.10 307‖	*i*P	P	06 38 46.2	-1.5
BRY	Bratogost	66.10 307	P	P	06 38 47.0	-0.7
CONA	Conrad Observa	66.11 313	*i* P	P	06 38 47.4	-0.2
	comp=Z,982nm,1.2s,mb6.7,SNR=242					
SRN	Sarande	66.16 303	*e*P	P	06 38 43.5	-4.6
PRU	Pruhonice	66.20 315	*e*P	P	06 38 48.1	-0.1
PRU			*e**PP	pP	06 38 52.5	+1.8
PRU			*e*		06 39 15.0	
PRU			*e*		06 41 18.9	
PRU			*e*S	S	06 47 44.3	+7.0
PRU			MLR	MLR		
	comp=Z,2082µm,16.3s,MS8.4					
PRU	Pruhonice	66.20 315	P	P	06 38 48.2	0.0
PRU	Pruhonice	66.20 315	*e*P	P	06 38 48.1	-0.1
PRU			*e*pP	pP	06 38 52.5	+1.8
PRU			*e*PCP	PcP	06 39 15.0	-3.4
PRU			*e*PP	PP	06 41 18.9	+5.3
PRU			*e*x	x	06 41 43.7	
PRU			*e*x	x	06 43 21.0	
PRU			*e*S	S	06 47 44.3	+7.0
PRU			*e*x	x	06 52 29.9	
PRU			AMS	AMS	07 09 00.0	
	comp=Z,2082µm,16.3s					
KFL	Anninata	66.24 301	P	P	06 38 47.5	-1.2
PRA	Prague	66.24 315	⇑P	P	06 38 49.0	+0.5
PRA			S	S	06 47 40.0	+2.2
PRA			AMS	AMS	07 05 15.0	
BRG	Berggiesshubel	66.26 316⇑	*i*P	P	06 38 48.0	-0.5
	comp=Z,60nm,1.1s,mb5.5					
BRG			*i*		06 38 52.3	
	comp=Z,553nm,1.1s					
BRG			*e*		06 39 07.3	
	comp=Z,867nm,1.2s					
BRG			*e*		06 39 14.7	
	comp=Z,897nm,1.2s					
BRG			*e*		06 39 30.0	
	comp=Z,1µm,0.9s					
BRG			*i*		06 39 44.2	
	comp=Z,2µm,1.5s					
BRG			PP	PP	06 41 11.1	-2.9
	comp=Z,947nm,1.5s					
BRG			PPP		06 43 30.0	
BRG			S	S	06 47 52.0	+14
BRG						
	comp=N,224µm,20.9s					
BRG						
	comp=E,158µm,21.9s					
BRG	Berggiesshubel	66.26 316	SS	SS	06 52 32.0	+39
BRG						
	comp=N,2742µm,18.7s					
BRG						
	comp=E,1348µm,28.3s					
BRG						
	comp=Z,1334µm,18.2s					
BRG	Berggiesshubel	66.26 316⇑	*i*P	P	06 38 48.0	-0.5
BRG			*i*		06 38 52.3	
BRG			*e*		06 39 14.7	
BRG					06 41 11.1	
BRG			S	S	06 47 52.0	+14
BRG			pmax	pmax		
	comp=Z,1µm,1.5s,mb6.8					
BRG			MLR	MLR		
	comp=E,134µm,21.9s,MS7.8					
BRG			MLR	MLR		
	comp=N,567µm,20.9s,MS7.8					
BRG			MLR	MLR		
	comp=Z,807µm,18.2s,MS8.0					
HCY	Herceg Novi	66.30 306‖	*i*P	P	06 38 48.6	-0.3
HCY	Herceg Novi	66.30 306	P	P	06 38 49.0	+0.1
TREB	Trebinje	66.30 307	P	P	06 38 51.0	+2.0
VLS	Valsamata	66.36 301	*e*P	P	06 38 49.8	+0.4
VLS	Valsamata	66.36 301	P	P	06 38 47.0	-2.4
VLS	Valsamata	66.36 301	P	P	06 38 47.2	-2.2
BLY	Banja Luka	66.37 309	P	P	06 38 51.0	+1.6
KEK	Kerkira	66.37 303	*e*P	P	06 38 49.9	+0.4
KEK	Kerkira	66.37 303	P	P	06 38 47.0	-2.5
KEK	Kerkira	66.37 303	P	P	06 38 47.8	-1.

CLL ePS 06 48 35.0
CLL e 06 49 21.0
CLL eSS SS 06 52 36.0 +36
CLL eSSS 06 55 42.0
CLL e 06 58 34.0
STON Ston 66.69 307 P **P 06 38 51.5 0.0**
STON Ston 66.69 307 i P **P 06 38 51.5 0.0**
STON Ston 66.69 307 i P **P 06 38 51.5 0.0**
DAG Danmarks Havn 66.75 348⇑ eP **P 06 38 50.4 -0.9**
DAG pmax pmax
comp=Z,630nm,1.5s,mb6.4
DAG Danmarks Havn 66.75 348⇑ iP **P 06 38 50.4 -0.9**
comp=Z,633nm,1.5s,mb6.4
MUD Monsted U'grnd 66.91 323⇑ iP **P 06 38 54.4 +1.8**
MUD pmax pmax
comp=Z,820nm,1.2s,mb6.6
MUD Monsted U'grnd 66.91 323⇑ iP **P 06 38 54.4 +1.8**
comp=Z,818nm,1.2s,mb6.6
MUD eS S 06 48 02.6 +17
FOO Floro 66.95 329⇑ iP **P 06 38 51.6 -1.1**
FOO AMS AMS 07 10 31.4
comp=Z,1819μm,18.9s,MS8.3
PERS Pernice 67.04 312 eP **P 06 38 52.8 -0.8**
PERS e 06 39 21.9
SOKA Soboth 67.08 312⇑ iP **P 06 38 53.9 +0.1**
comp=Z,1μm,1.1s,mb6.8
KHC Kasperske Hory 67.10 315 eP **P 06 38 53.9 0.0**
KHC e*PP pP 06 38 57.8 +1.4
KHC e 06 39 19.7
KHC e 06 41 25.5
KHC eS S 06 47 55.3 +7.2
KHC MLR MLR
comp=Z,2088μm,19.6s,MS8.4
KHC Kasperske Hory 67.10 315 eP **P 06 38 53.4 -0.5**
comp=Z,995nm,1.3s,mb6.7
KHC Kasperske Hory 67.10 315 eP **P 06 38 53.9 0.0**
KHC epP pP 06 38 57.8 +1.4
KHC ePCP PcP 06 39 19.7 -2.4
KHC ex x 06 39 31.0
KHC ex x 06 39 38.5
KHC ePP PP 06 41 25.5 +4.1
KHC ex x 06 41 45.3
KHC ex x 06 43 41.0
KHC eS S 06 47 55.3 +7.2
KHC ex x 06 52 40.5
KHC AMS AMS 07 08 50.0
comp=Z,2088μm,19.6s
GEC2 GERESS Array S 67.12 314 eP **P 06 38 53.7 -0.4**
GEC2 pmax pmax
comp=Z,5μm,0.7s,mb7.7
GEC2 GERESS Array S 67.12 314 eP **P 06 38 53.6 -0.5**
comp=Z,5μm,0.7s,mb7.7
GERES GERESS Array B 67.12 314 P **P 06 38 53.2 -0.9**
comp=Z,102nm,0.8s,mb5.9,baz=66,slow=3.6,SNR=60
GERES LR LR 07 09 28.1
comp=Z,1762μm,21.4s,MS8.2,baz=64,slow=37
MOA Molln 67.14 313 P **P 06 38 53.8 -0.4**
MOA Molln 67.14 313 i P **P 06 38 53.7 -0.5**
comp=Z,1μm,1.2s,mb6.9,SNR=149
LEGS Legarje 67.16 311 eP **P 06 38 53.1 -1.3**
ZAVS Zavodnje 67.17 311 eP **P 06 38 53.6 -0.9**
SCTE Santa Cesarea 67.19 304 eP **P 06 38 54.3 -0.4**
SNART Snartemo 67.19 325 eP **P 06 38 53.1 -1.3**
BSEG Bad Segeberg 67.23 320 eP **P 06 38 53.8 -0.9**
comp=Z,1μm,1.2s,mb6.9
SUE Sulen 67.29 329 eP **P 06 38 56.0 +1.1**
BER Bergen 67.29 328 eP **P 06 38 53.9 -1.1**
BER ⇑iP pP 06 38 56.3 -1.2
BER AMS AMS 07 10 45.5
comp=Z,1661μm,18.0s,MS8.3
BER Bergen 67.29 328⇑ iP **P 06 38 56.3 +1.3**
BER LR LR
comp=Z,1661μm,18.0s,MS8.3
TANN Tannenbergstha 67.30 316 eP **P 06 38 54.2 -1.0**
comp=Z,1μm,1.4s,mb6.8
ASK Askoy 67.32 328 eP **P 06 38 55.6 +0.5**
BERN Bernov 67.34 316 ⇑P Px 06 39 13.6
BOJS Bojanci 67.37 310 eP **P 06 38 55.3 -0.4**
BOJS e 06 39 23.0
BOJS ePP PP 06 41 48.6 +25
BOJS e 06 43 30.6
BOJS eS S 06 47 54.2 +2.7
BOJS eSS SS 06 53 20.6 +70
NKC Novy Kostel 67.38 316 eP **P 06 38 55.7 0.0**
NKC e*PP pP 06 38 59.4 +1.3
NKC e 06 39 21.7
NKC e 06 41 30.5
NKC MLR MLR
comp=Z,1427μm,17.7s,MS8.2
NKC Novy Kostel 67.38 316 eP **P 06 38 55.7 0.0**
NKC epP pP 06 38 59.4 +1.3
NKC ePCP PcP 06 39 21.7 -1.6
NKC ePP PP 06 41 30.5 +6.7
NKC ex x 06 41 50.2
NKC ex x 06 43 32.8
NKC eS S 06 48 01.6 +10
NKC ex x 06 52 48.1
NKC AMS AMS 07 09 40.0
comp=Z,1427μm,17.7s
WERD Werda 67.38 316 eP **P 06 38 55.0 -0.7**
EGD Espegrend 67.39 326 eP **P 06 38 57.0 +1.4**
GUNZ Gunzen 67.40 316 eP **P 06 38 55.3 -0.5**
WERN Wernitzgruen 67.40 316 eP **P 06 38 55.3 -0.5**
TTA Tatalina 67.41 29 eP **P 06 38 54.9 -0.7**
OBKA Obir 67.45 312 P **P 06 38 55.9 -0.3**
OBKA Obir 67.45 312⇑ iP **P 06 38 55.6 -0.6**
comp=Z,765nm,1.2s,mb6.6,SNR=69
MIDW Midway 67.50 70 eP **P 06 39 00.8 +4.0**
comp=Z,2μm,1.2s,mb6.9
MIDW LR LR
comp=Z,669μm,19.0s,MS7.9
VNDS Vrh nad Dolski 67.50 311 eP **P 06 38 55.9 -0.7**
WET Wettzell 67.52 315 eP **P 06 38 55.9 -0.7**
comp=Z,4μm,2.2s,mb7.0
WET Wettzell 67.52 315 eP **P 06 38 55.9 -0.7**
WET pmax pmax
comp=Z,4μm,2.2s,mb7.0
JNW Jan Mayen West 67.61 341 eP **P 06 39 01.5 +4.7**
LJU Ljubljana 67.64 311 eP **P 06 38 57.3 -0.1**
LJU e 06 39 25.4
LJU eS S 06 48 01.4 +6.6
LJU Ljubljana 67.64 311 eP **P 06 38 57.3 -0.1**
LJU e 06 39 25.4
LJU ePP PP 06 41 57.4 +31
LJU e 06 43 35.9
LJU eS S 06 48 01.4 +6.6
LJU eSS SS 06 53 21.8 +67
JMIC Jan Mayen 67.65 341 P **P 06 38 55.4 -1.6**
comp=Z,62nm,0.9s,mb5.6,baz=142,slow=14,SNR=2.0
JMIC S S 06 48 00.7 +6.5
comp=Z,13nm,0.3s,baz=154,slow=20,SNR=2.1
JMIC LR LR 07 12 49.4
comp=Z,1094μm,18.8s,MS8.1,baz=233,slow=40
STAV Stavanger 67.69 326 eP **P 06 38 59.5 +2.0**
ROTZ Rotzenmuhle 67.69 316 eP **P 06 38 57.1 -0.6**
comp=Z,2μm,1.3s,mb7.0
MOX Moxa 67.72 317 eP **P 06 38 57.5 -0.3**
MOX eSS SS 06 53 02.0 +46
MOX Moxa 67.72 317 eP **P 06 38 56.8 -1.0**
comp=Z,2μm,1.8s,mb6.8
COLD Coldfoot 67.76 24 eP **P 06 38 56.6 -1.2**
comp=Z,129nm,1.3s,mb5.8
KMY Karmoy 67.80 327 eP **P 06 38 58.2 0.0**
CEY Cerknica 67.82 311 P **P 06 38 58.0 -0.6**
NVLJ Novalja 67.97 310 P **P 06 39 00.5 +1.0**
NVLJ Novalja 67.97 310 i P **P 06 39 00.5 +1.0**
MYKA Terra Mystica 67.99 312⇑ iP **P 06 38 55.1 -4.5**
comp=Z,224nm,1.2s,mb6.1
CLZ Clausthal 67.99 318 eP **P 06 38 58.6 -0.9**
comp=Z,2μm,1.3s,mb7.1
CLZ Clausthal 67.99 318 eP **P 06 38 58.6 -0.9**
CLZ pmax pmax
comp=Z,2μm,1.3s,mb7.1
JAVS Javornik 67.99 311 eP **P 06 38 59.3 -0.4**
JAVS e 06 39 27.2
KBA Koelnbreinsper 68.00 313 i P **P 06 38 59.0 -0.7**
comp=Z,1μm,1.2s,mb6.8,SNR=76
VOY Vojsko 68.05 311 eP **P 06 38 58.7 -1.3**
VOY e pP 06 39 02.5 0.0
RJOB Jochberg 68.10 313 eP **P 06 38 59.6 -0.7**
comp=Z,2μm,1.5s,mb7.0
LSR Lussari 68.12 312|| eP **P 06 39 00.0 -0.4**
LTRZ Laterza 68.15 305 P **P 06 39 00.9 +0.1**
DRE Drenchia 68.16 312|| eP **P 06 38 59.0 -1.7**
PTCC Patocco-Chiusa 68.26 312 P **P 06 38 59.9 -1.4**
TRI Trieste 68.26 311 eP **P 06 39 00.4 -0.9**
TRI pmax pmax
comp=Z,2μm,1.2s,mb6.9
TRI MLR MLR
comp=Z,693μm,19.0s,MS7.9
TRI Trieste 68.26 311 eP **P 06 39 00.4 -0.9**
comp=Z,2μm,1.2s,mb6.9
TRI LR LR
comp=Z,693μm,19.0s,MS7.9
GRA1 Grafenberg Arr 68.31 316 eP **P 06 39 00.9 -0.7**
comp=Z,2μm,1.2s,mb7.1
GRA1 LR LR
comp=Z,2381μm,20.0s,MS8.4
GRF Grafenberg Arr 68.31 316 eP **P 06 39 00.9 -0.7**
comp=Z,2μm,1.2s,mb7.1
GRF eL 07 10 32.2
comp=Z,2381μm,20.0s
GRF Grafenberg Arr 68.31 316 eP **P 06 39 00.9 -0.7**
GRF pmax pmax
comp=Z,2μm,1.2s,mb7.1
GRF MLR MLR
comp=Z,2381μm,20.0s,MS8.4
GRF Grafenberg Arr 68.31 316 eP **P 06 39 00.9 -0.7**
GRF pmax pmax
comp=Z,2μm,1.2s,mb7.1
GRF MLR MLR
comp=Z,2381μm,20.0s,MS8.4
GRFO Grafenberg 68.31 316 eP **P 06 39 01.0 -0.6**
comp=Z,2μm,1.2s,mb6.9
GRFO Grafenberg 68.31 316 P **P 06 39 01.5 -0.1**
PLRO Paularo 68.33 312⇑ eP **P 06 39 02.0 +0.2**
SDPT Sand Point 68.35 38 eP **P 06 39 03.5 +1.8**
comp=Z,875nm,1.4s,mb6.6
SDPT LR LR
comp=Z,1248μm,20.0s,MS8.1
SVW2 Sparrevohn 68.35 31 eP **P 06 39 02.1 +0.5**
BAD Bernadia 68.39 312⇑ eP **P 06 39 01.0 -1.1**
ZOU Zoufplan 68.44 312|| eP **P 06 39 02.0 -0.5**
HLG Helgoland 68.46 321 eP **P 06 39 01.4 -1.0**
comp=Z,3μm,1.7s,mb7.0
MPRI Monte Prat 68.55 312|| eP **P 06 39 02.0 -1.2**
RGNG Rignano Grg 68.60 306 P **P 06 39 02.7 -0.8**
ABTA Abfaltersbach 68.66 312|| iP **P 06 38 59.8 -4.0**
comp=Z,397nm,1.2s,mb6.2,SNR=85
CSMI Casera Mimoias 68.66 312⇑ eP **P 06 39 06.0 +2.2**
TIP Timpagrande 68.75 304 eP **P 06 39 03.2 -1.3**
comp=Z,2μm,1.2s,mb6.9
TIP LR LR
comp=Z,742μm,22.0s,MS7.9
FG2 Serracapriola 68.84 307 P **P 06 39 05.2 +0.2**
FUR Furstenfeldbru 68.88 314 eP **P 06 39 04.3 -0.8**
comp=Z,4μm,1.0s,mb7.3
FUR Furstenfeldbru 68.88 314 eP **P 06 39 04.3 -0.8**
FUR pmax pmax
comp=Z,4μm,1.0s,mb7.3
BPAW Bear Paw Mtn. 68.92 27 eP **P 06 39 03.8 -1.3**
comp=Z,1μm,1.6s,mb6.6
FG5 Orsara di Pugl 68.97 306 P **P 06 39 05.8 -0.1**
PPLA Purkeypile 69.00 28 eP **P 06 39 05.0 -0.6**
comp=Z,496nm,0.5s,mb6.7
WTTA Wattenberg 69.01 313 i P **P 06 39 05.1 -0.9**
comp=Z,2μm,1.6s,mb6.7,SNR=169
WATA Walderalm 69.02 313⇑ iP **P 06 39 04.8 -1.2**
comp=Z,517nm,0.8s,mb6.5,SNR=136
CHGN Chignik 69.03 36 eP **P 06 39 05.2 -0.7**
RER Riviere de l'E 69.17 228 eP **P 06 39 07.2 -0.1**
comp=Z,1μm,0.8s,mb6.8
RER LR LR
comp=Z,525μm,22.0s,MS7.7
IBBN Ibbenburen 69.29 319 eP **P 06 39 06.4 -1.2**
comp=Z,2μm,1.2s,mb6.9
CSSN Cassano Irpino 69.31 306 P **P 06 39 07.1 -0.9**
MOTA Moosalm 69.31 313⇑ iP **P 06 39 06.7 -1.1**
comp=Z,721nm,0.9s,mb6.6,SNR=137
HDH Heidenheim-Cha 69.36 315 P **P 06 39 09.0 +0.8**
OFFI Offida 69.39 308 P **P 06 39 09.2 +0.7**
SIND Sindeldorf 69.42 316 P **P 06 39 07.9 -0.6**
RETA Reutte 69.46 314 i P **P 06 39 08.4 -0.4**
comp=Z,732nm,1.2s,mb6.5,SNR=101
FETA Feichten 69.67 313 i P **P 06 39 09.1 -1.0**
comp=Z,2μm,1.1s,mb6.9,SNR=208
WIT Witteveen 69.68 320⇑ eP **P 06 39 11.8 +1.8**
comp=Z,4μm,1.6s,mb7.1
WIT Witteveen 69.68 320⇑ eP **P 06 39 11.8 +1.8**
comp=Z,4μm,1.6s,mb7.1
FSSB Fossombrone 69.70 309 P **P 06 39 11.1 +0.8**
COLA College 69.74 26 eP **P 06 39 09.2 -1.0**
COLA pmax pmax
comp=Z,8μm,1.5s,mb7.4
COLA MLR MLR
comp=Z,1108μm,20.0s,MS8.1
COLA College 69.74 26 eP **P 06 39 09.2 -1.0**
comp=Z,8μm,1.5s,mb7.4
COLA LR LR
comp=Z,1108μm,20.0s,MS8.1
CEL Celeste 69.74 303 eP **P 06 39 09.5 -1.2**
comp=Z,5μm,1.1s,mb7.3
CEL LR LR
comp=Z,434μm,21.0s,MS7.7
TNS Taunus Mts 69.75 317 eP **P 06 39 09.6 -0.9**
comp=Z,2μm,1.5s,mb6.8
TNS Taunus Mts 69.75 317 eP **P 06 39 09.6 -0.9**
TNS pmax pmax
comp=Z,2μm,1.5s,mb6.8
SNTG Esanatoglia 69.77 309 P **P 06 39 10.6 -0.1**
TOD Tromm 69.79 316 eP **P 06 39 11.1 +0.3**
AQU L'Aquila 69.82 308 eP **P 06 39 11.1 0.0**
AQU pmax pmax
comp=Z,5μm,1.5s,mb7.2
AQU MLR MLR
comp=Z,813μm,20.0s,MS8.0
AQU L'Aquila 69.82 308 eP **P 06 39 11.1 0.0**
comp=Z,5μm,1.5s,mb7.2
AQU LR LR
comp=Z,813μm,20.0s,MS8.0
AQU L'Aquila 69.82 308⇑ iP **P 06 39 12.0 +0.9**
AQU L'Aquila 69.82 308⇑ iP **P 06 39 12.0 +0.9**
NRCA Norcia 69.82 308 P **P 06 39 10.3 -0.8**
RFI Roccamonfina 69.85 307 P **P 06 39 11.6 +0.3**
SCLL Scilla 69.87 303 P **P 06 39 11.2 -0.3**
RSO Redoubt South 69.88 31 eP **P 06 39 11.3 +0.2**
MCK McKinley 69.89 27 eP **P 06 39 10.8 -0.4**
MCK pmax pmax
comp=Z,1μm,1.0s,mb6.7
MCK McKinley 69.89 27 eP **P 06 39 10.3 -0.8**
comp=Z,1μm,1.0s,mb6.7
STU Stuttgart 69.90 315 eP **P 06 39 10.3 -1.2**
comp=Z,1μm,0.9s,mb6.8
STU Stuttgart 69.90 315 eP **P 06 39 11.3 -0.2**
STU pmax pmax
comp=Z,1μm,1.0s,mb6.9
STU Stuttgart 69.90 315 eP **P 06 39 11.3 -0.2**
comp=Z,1μm,1.0s,mb6.9
SWS Schriesheim-Wi 69.90 316 P **P 06 39 14.8 +3.3**
BUG Bochum--Univer 69.92 318 eP **P 06 39 10.4 -1.1**
comp=Z,2μm,1.4s,mb6.8
BUCH Bad Urach 69.94 315 P **P 06 39 11.4 -0.3**
PTQR Pietraquaria 69.96 308 P **P 06 39 11.5 -0.4**
WTSB Winterswijk 69.97 319⇑ eP **P 06 39 13.7 +1.9**
comp=Z,1μm,2.3s,mb6.5
DAVA Damuels 70.09 314 P **P 06 39 11.8 -0.9**
DAVA Damuels 70.09 314⇑ iP **P 06 39 11.6 -1.1**
comp=Z,763nm,1.4s,mb6.4,SNR=103
BADI Badiali 70.13 309 P **P 06 39 13.6 +0.6**
FUORN Ofenpass-Fuorn 70.13 313⇑ iP **P 06 39 12.2 -0.7**
CDCA Citt' di Caste 70.15 309 P **P 06 39 14.9 +1.8**
LBG Lerchenberg 70.19 315 P **P 06 39 13.3 +0.1**
GUT Gutenstein 70.24 315 P **P 06 39 13.3 -0.3**
CERT Cerreto 70.27 308 P **P 06 39 15.6 +1.7**
KMBO Kilima Mbogo 70.29 256 P **P 06 39 12.6 -1.8**
comp=Z,68nm,0.7s,mb5.7,baz=46,slow=9.8,SNR=34
KMBO PKPPKP 07 07 16.6
comp=Z,47nm,1.3s,baz=213,slow=3.7,SNR=11
KMBO Kilima Mbogo 70.29 256 eP **P 06 39 12.7 -1.7**
KMBO pmax pmax
comp=Z,909nm,1.0s
KMBO MLR MLR
comp=Z,301μm,20.0s
KMBO Kilima Mbogo 70.29 256 eP **P 06 39 12.7 -1.7**
comp=Z,909nm,1.0s,mb6.7
KMBO LR LR
comp=Z,301μm,20.0s,MS7.5
KMBO Kilima Mbogo 70.29 256 eP **P 06 39 13.6 -0.8**
DAVOX Davos/Dischmat 70.30 313⇑ iP **P 06 39 13.1 -0.9**
DAVOX Davos/Dischmat 70.30 313 P **P 06 39 12.8 -1.2**
comp=Z,273nm,0.7s,mb6.3,baz=74,slow=5.7,SNR=63
DAVOX S S 06 48 27.7 +1.4
comp=Z,25nm,1.1s,baz=355,slow=19,SNR=1.7
DAVOX LR LR 07 13 54.9
comp=Z,1427μm,19.3s,MS8.2,baz=51,slow=39
DAVOX Davos/Dischmat 70.30 313 P **P 06 39 12.8 -1.2**
DAVOX S S 06 48 27.7 +1.4
DAVOX Davos/Dischmat 70.30 313 P **P 06 39 12.8 -1.2**
DAVOX S S 06 48 27.7 +1.4
DAVOX LR LR 07 13 54.9
LRW Lerwick 70.33 329⇑ eP **P 06 39 13.0 -0.9**
LRW AMb AMB 06 39 39.0
comp=Z,1μm,2.9s,mb6.3
LRW AMS AMS 07 11 29.0
comp=Z,1536μm,20.3s,MS8.2
LIENZ Kamor/St.Gall 70.33 314⇑ iP **P 06 39 13.2 -0.9**
KTD Kalmit 70.34 316 eP **P 06 39 15.1 +1.0**
BERNI Berninapass 70.37 313⇑ iP **P 06 39 13.6 -0.8**
ABH Alteburg 70.42 317 eP **P 06 39 15.8 +1.2**
SPAK Spaichingen-Ko 70.43 315 eP **P 06 39 15.1 +0.4**
VENT Ventotene 70.44 306 P **P 06 39 15.6 +0.6**
SEI Scarperia 70.49 310 P **P 06 39 15.6 +0.4**
SISB Singen-Schiene 70.49 314 P **P 06 39 15.1 0.0**
PLONS Plons/SG 70.50 314⇑ iP **P 06 39 14.0 -1.2**
BFO Black Forest 70.61 315 P **P 06 39 15.3 -0.5**
comp=Z,3μm,1.1s,mb7.1,SNR=91
BFO Black Forest 70.61 315 eP **P 06 39 14.5 -1.3**
comp=Z,2μm,1.3s,mb6.8
BFO Black Forest 70.61 315 P **P 06 39 14.6 -1.2**
BFO pmax pmax
comp=Z,1μm,1.1s,mb6.8
WILA Wila 70.64 314⇑ iP **P 06 39 15.0 -1.0**
WILA Wila 70.64 314 ⇑P **P 06 39 14.9 -1.1**
LANF Langenberg 70.64 316 eP **P 06 39 16.5 +0.5**
VDL Val di Lei 70.70 313⇑ iP **P 06 39 15.6 -0.8**
VDL Val di Lei 70.70 313 ⇑P **P 06 39 15.5 -0.9**
SLE Schleitheim 70.75 315⇑ iP **P 06 39 15.7 -1.0**
SLE Schleitheim 70.75 315 ⇑P **P 06 39 15.6 -1.1**
RUP Ruppelstein 70.78 317 eP **P 06 39 17.7 +0.9**
SSY Sortino 70.78 302 P **P 06 39 18.2 +1.1**
LLS Linth-Limmern 70.82 314⇑ iP **P 06 39 16.1 -1.0**
LLS Linth-Limmern 70.82 314 ⇑P **P 06 39 16.0 -1.1**
HAVL Avola 70.83 302 P **P 06 39 18.4 +1.0**
STR Strasbourg 70.84 316 eP **P 06 39 17.7 +0.5**
ZUR Degenried 70.86 314⇑ iP **P 06 39 16.4 -1.0**
ZUR Degenried 70.86 314 ⇑P **P 06 39 16.3 -1.1**
GSCL Gusciola 70.87 311 P **P 06 39 19.1 +1.6**
PMR Palmer 70.88 29 eP **P 06 39 15.5 -1.7**
PMR pmax pmax
comp=Z,2μm,1.4s,mb6.8
PMR MLR MLR
comp=Z,1168μm,17.0s,MS8.2
PMR Palmer 70.88 29 eP **P 06 39 15.5 -1.7**
comp=Z,2μm,1.4s,mb6.8
PMR LR LR
comp=Z,1168μm,17.0s,MS8.2
ERBM Eremo 70.95 311 P **P 06 39 19.9 +1.9**
HGN Heimansgroeve 70.97 318⇑ eP **P 06 39 19.5 +1.5**
comp=Z,760nm,2.3s,mb6.2
HGN Heimansgroeve 70.97 318 ePP PP 06 42 04.8 +10
HGN Heimansgroeve 70.97 318 eS S 06 48 39.1 +5.2
HGN Heimansgroeve 70.97 318 eSS SS 06 53 37.0 +31
HGN Heimansgroeve 70.97 318 P **P 06 39 17.3 -0.7**
MEM Membach 71.00 318 P **P 06 39 17.4 -0.7**
comp=Z,225nm,1.2s,mb6.0
FELD Feldberg im Sc 71.00 315 eP **P 06 39 18.7 +0.5**
MUO Muotathal 71.00 314⇑ iP **P 06 39 17.3 -0.9**
HVZN Vizzini 71.03 302 P **P 06 39 21.2 +2.6**
VLC Villacollemand 71.08 311⇑ eP **P 06 39 18.4 -0.4**
comp=Z,2μm,1.0s,mb6.9
VLC LR LR
comp=Z,1070μm,22.0s,MS8.1
SULZ Cheisacher 71.08 314⇑ iP **P 06 39 17.5 -1.2**
BEBN Eben Emael 71.10 318 P **P 06 39 18.9 +0.1**
LIBD Limburg 71.12 315 eP **P 06 39 19.5 +0.6**
VAE Valguarnera 71.13 303 P **P 06 39 19.6 +0.4**
comp=Z,94nm,1.0s,mb5.7,baz=48,slow=6.3,SNR=9.5
VAE S S 06 48 37.9 +1.7
comp=Z,26nm,0.8s,baz=75,slow=22,SNR=1.8
VAE Valguarnera 71.13 303 P **P 06 39 19.6 +0.4**
VAE S S 06 48 37.9 +1.7
OHAK Old Harbor 71.15 34 eP **P 06 39 17.7 -1.2**
comp=Z,2μm,1.5s,mb6.8
OHAK LR LR
comp=Z,1704μm,21.0s,MS8.3
BNALP Bannalp 71.17 314⇑ iP **P 06 39 17.6 -1.7**
MUGIO Muggio 71.19 313⇑ iP **P 06 39 18.4 -1.0**
FUSIO Fusio 71.20 313⇑ iP **P 06 39 18.7 -0.7**
CDF Champ du Feu 71.21 316 eP **P 06 39 18.4 -1.0**
comp=Z,3μm,1.2s,mb6.8
CDF Champ du Feu 71.21 316 eP **P 06 39 18.4 -1.0**
CDF pmax pmax
comp=Z,1μm,1.2s,mb6.7
CDF Champ du Feu 71.21 316 eP **P 06 39 18.4 -1.0**
comp=Z,1μm,1.2s,mb6.7
KDAK Kodiak Island 71.22 33 P **P 06 39 21.5 +2.2**
comp=Z,6μm,1.1s,mb7.4,SNR=13
KDAK Kodiak Island 71.22 33 P **P 06 39 18.4 -0.9**
comp=Z,890nm,1.1s,mb6.6,baz=359,slow=5.5,SNR=21
KDAK S S 06 48 38.1 +1.5
comp=Z,15nm,0.7s,baz=256,slow=16,SNR=1.7
KDAK LR LR 07 13 44.0
comp=Z,1423μm,19.7s,MS8.2,baz=119,slow=38
KDAK Kodiak Island 71.22 33 P **P 06 39 18.4 -0.9**
KDAK S S 06 48 38.1 +1.6
KDAK pmax pmax
comp=Z,890nm,1.1s,mb6.6
KDAK smax
comp=N,15nm,0.7s
KDAK MLR MLR
comp=Z,423μm,19.7s,MS7.7
KDAK Kodiak Island 71.22 33 eP **P 06 39 18.5 -0.8**
comp=Z,2μm,0.9s,mb7.0
KDAK LR LR
comp=Z,1432μm,19.0s,MS8.2
WLF Walferdange 71.33 317 P **P 06 39 19.5 -0.6**
comp=Z,2μm,1.3s,mb6.8
WLF Walferdange 71.33 317 eP **P 06 39 19.4 -0.7**
comp=Z,4μm,1.3s,mb7.2
WLF Walferdange 71.33 317 eP **P 06 39 20.6 +0.5**
WLF pmax pmax
comp=Z,3μm,1.0s,mb7.1
WLF Walferdange 71.33 317 eP **P 06 39 19.3 -0.8**
comp=Z,3μm,1.0s,mb7.1
WLF LR LR
comp=Z,950μm,21.0s,MS8.0
ECH Echery 71.36 315 eP **P 06 39 20.3 -0.1**
ECH Echery 71.36 315 eP **P 06 39 19.2 -1.2**
ECH pmax pmax
comp=Z,309nm,1.1s,mb6.2
ECH MLR MLR
comp=Z,817μm,22.0s,MS8.0
ECH Echery 71.36 315 eP **P 06 39 19.2 -1.2**
comp=Z,309nm,1.1s,mb6.2
ECH LR LR
comp=Z,817μm,22.0s,MS8.0
HASLI Hasliberg/Brie 71.39 314⇑ iP **P 06 39 19.6 -1.0**
BALST Balsthal 71.42 314⇑ iP **P 06 39 19.6 -1.2**
BBS Basel-Blauen 71.48 315 eP **P 06 39 20.9 -0.2**
BCLA Clavier 71.48 318 P **P 06 39 20.2 -0.9**
comp=Z,570nm,1.9s,mb6.2
USI Ustica 71.49 304 P **P 06 39 22.1 +0.8**
SCO Scoresbysund 71.53 343⇑ iP **P 06 39 22.6 +1.6**
SCO pmax pmax
comp=Z,260nm,1.1s,mb6.1
SCO Scoresbysund 71.53 343⇑ iP **P 06 39 22.6 +1.6**
comp=Z,260nm,1.1s,mb6.1
MOF Molkenrain 71.54 315 eP **P 06 39 21.7 +0.2**
PAX Paxson 71.63 27 eP **P 06 39 22.0 +0.3**
PAX pmax pmax
comp=Z,5μm,1.6s,mb7.2
PAX Paxson 71.63 27 eP **P 06 39 22.0 +0.3**
comp=Z,5μm,1.6s,mb7.2
BOURR Bourrignon 71.68 315⇑ iP **P 06 39 21.3 -1.0**
HINF Hinteralfeld 71.72 315 eP **P 06 39 21.2 -1.4**
comp=Z,2μm,0.9s,mb6.7
HINF Hinteralfeld 71.72 315 eP **P 06 39 21.2 -1.4**
HINF pmax pmax
comp=Z,920nm,0.9s,mb6.7
HINF Hinteralfeld 71.72 315 eP **P 06 39 21.2 -1.4**
comp=Z,920nm,0.9s,mb6.7
WDD Wield Dalam 71.73 301 eP **P 06 39 23.6 +0.8**
comp=Z,3μm,0.9s,mb7.2
WDD LR LR

comp=Z,359μm,20.0s,MS7.6
WIMIS Wimmis 71.75 314⇑iP P 06 39 21.9 -0.9
MMK Mattmark 71.81 313⇑iP P 06 39 22.6 -0.6
TARA Tarawa 71.83 100 eP P 06 39 26.1 +2.3
comp=Z,5μm,1.3s,mb7.3
TARA LR LR
comp=Z,361μm,21.0s,MS7.6
UCC Uccle 71.85 319 P P 06 39 22.4 -0.9
UCC P'P' 07 07 14.2
LKBD Leukerbad 71.88 314⇑P P 06 39 22.7 -0.8
GIVF Givet 71.90 318 eP P 06 39 22.6 -1.0
comp=Z,2μm,0.9s,mb6.6
GIVF Givet 71.90 318 eP P 06 39 22.6 -1.0
GIVF pmax pmax
comp=Z,757nm,0.9s,mb6.6
GIVF Givet 71.90 318 eP P 06 39 22.6 -1.0
comp=Z,757nm,0.9s,mb6.6
HAU Haudompre 71.94 315 eP P 06 39 22.6 -1.3
comp=Z,1μm,1.0s,mb6.5
HAU eMLR MLR
comp=Z,2219μm,18.5s,MS8.2
HAU Haudompre 71.94 315 eP P 06 39 22.6 -1.3
HAU pmax pmax
comp=Z,594nm,1.0s,mb6.5
HAU Haudompre 71.94 315 eP P 06 39 22.6 -1.3
comp=Z,594nm,1.0s,mb6.5
LOMF Lomont 71.94 315 eP P 06 39 24.1 +0.2
SNF Seneffe 72.03 318 P P 06 39 23.4 -0.9
comp=Z,40nm,2.2s
DOU Dourbes 72.03 318 P P 06 39 23.6 -0.8
THEF They Montfort 72.06 316 eP P 06 39 24.8 +0.2
SENIN Lac Senin/Sane 72.09 314⇑iP P 06 39 23.9 -0.9
TORNY Torny/Romont 72.12 314⇑iP P 06 39 24.0 -1.0
DIX Grande Dixence 72.15 313⇑iP P 06 39 24.9 -0.3
RFYF Reffroy 72.19 316 eP P 06 39 24.7 -0.6
comp=Z,2μm,1.1s,mb6.8,baz=64
RFYF Reffroy 72.19 316 eP P 06 39 24.7 -0.6
comp=Z,2μm,1.1s,mb7.0
EGAK Eagle 72.19 24 eP P 06 39 23.9 -1.1
comp=Z,10μm,2.6s,mb7.3
EGAK LR LR
comp=Z,1446μm,19.0s,MS8.3
ERC Erice 72.20 304 P P 06 39 28.3 +2.7
GRYON Gryon 72.26 314⇑iP P 06 39 25.0 -0.8
ORE Reay 72.26 328⇑eP P 06 39 24.9 -0.8
BAIF Baives 72.27 318 eP P 06 39 25.1 -0.7
comp=Z,2μm,1.1s,mb6.6
BAIF Baives 72.27 318 eP P 06 39 25.1 -0.7
BAIF pmax pmax
comp=Z,803nm,1.1s,mb6.6
BAIF Baives 72.27 318 eP P 06 39 25.1 -0.7
comp=Z,803nm,1.1s,mb6.6
AIGLE Aigle 72.31 314⇑iP P 06 39 25.1 -1.1
MENT Mentasta 72.31 26 eP P 06 39 25.4 -0.4
STKA Stephens Creek 72.32 146 eP P 06 39 23.6 -2.6
comp=Z,281nm,0.7s,mb6.3
STKA eS S 06 48 23.5 -26
STKA Stephens Creek 72.32 146 P P 06 39 24.1 -2.1
comp=Z,38nm,0.7s,baz=326,slow=6.4,SNR=31
STKA S S 06 48 49.1 -0.6
comp=Z,29nm,1.1s,baz=249,slow=14,SNR=1.9
STKA Stephens Creek 72.32 146 eP P 06 39 23.7 -2.5
comp=Z,397nm,1.3s,mb6.2
EIDS Eidsvold 72.33 135 eP P 06 39 26.3 -0.1
comp=Z,3μm,1.3s,mb7.1
BRANT Les Verrieres 72.34 314⇑iP P 06 39 25.4 -0.9
SALAN Lac Salanfe 72.39 314⇑iP P 06 39 25.8 -0.8
INK Inuvik 72.40 19 P P 06 39 24.5 -1.7
comp=Z,250nm,1.1s,mb6.0,baz=329,slow=7.8,SNR=124
INK S S 06 48 46.4 -3.4
comp=Z,22nm,0.9s,baz=295,slow=9.1,SNR=1.7
INK LR LR 07 18 08.1
comp=Z,814μm,18.3s,MS8.0,baz=303,slow=42
INK Inuvik 72.40 19 P P 06 39 24.5 -1.8
INK S S 06 48 46.4 -3.5
INK pmax pmax
comp=Z,250nm,1.1s
INK smax
comp=N,22nm,0.9s
INK Inuvik 72.40 19 eP P 06 39 25.8 -0.4
comp=N,2μm,1.2s,mb6.9
EMV Vieux Emosson 72.47 313⇑iP P 06 39 26.5 -0.6
EMV Vieux Emosson 72.47 313 ⇑P P 06 39 26.4 -0.7
OG01 Vacheresse 72.49 314 eP P 06 39 27.8 +0.6
MEZF Maizieres J'vi 72.49 316 eP P 06 39 26.2 -1.0
comp=N,2μm,1.3s,mb6.7,baz=46
MEZF Maizieres J'vi 72.49 316 eP P 06 39 26.2 -1.0
comp=N,2μm,1.3s,mb7.0
DIV Divide 72.50 28 eP P 06 39 26.3 -0.7
comp=N,8μm,1.9s,mb7.3
AWI1 Witton 72.51 322 eP P 06 39 24.9 -2.3
MCD Coleburn Disti 72.52 327 eP P 06 39 26.4 -0.8
MME1 Meikle Cairn 72.52 327⇑eP P 06 39 25.9 -1.3
ABA1 Baconsthorpe 72.64 322 eP P 06 39 27.4 -0.6
PGF Pioggiola 72.69 309 eP P 06 39 27.8 -0.7
comp=N,3μm,1.1s,mb6.9
PGF Pioggiola 72.69 309 eP P 06 39 27.8 -0.7
PGF pmax pmax
comp=Z,2μm,1.1s,mb6.9
PGF Pioggiola 72.69 309 eP P 06 39 27.8 -0.7
comp=Z,2μm,1.1s,mb6.9
AEU East Anglia Un 72.72 321⇑eP P 06 39 27.0 -1.4
CABF La Chapelle 72.73 314 eP P 06 39 27.5 -1.1
comp=Z,1μm,1.0s,mb6.5
CABF La Chapelle 72.73 314 eP P 06 39 27.5 -1.1
CABF pmax pmax
comp=Z,625nm,1.0s,mb6.5
CABF La Chapelle 72.73 314 eP P 06 39 27.5 -1.1
comp=Z,625nm,1.0s,mb6.5
MVH1 Achvaich 72.78 328 eP P 06 39 28.1 -0.5
LPG La Plagne 72.82 313 eP P 06 39 28.9 -0.3
comp=Z,5μm,0.9s,mb7.2
LPG La Plagne 72.82 313 eP P 06 39 28.9 -0.3
LPG pmax pmax
comp=Z,3μm,0.9s,mb7.2
LPG La Plagne 72.82 313 eP P 06 39 28.9 -0.3
comp=Z,3μm,0.9s,mb7.2
LPL La Plagne 72.82 313 eP P 06 39 28.8 -0.4
comp=Z,4μm,0.9s,mb7.1
LPL La Plagne 72.82 313 eP P 06 39 28.8 -0.4
LPL pmax pmax
comp=Z,2μm,0.9s,mb7.1
LPL La Plagne 72.82 313 eP P 06 39 28.8 -0.4
comp=Z,2μm,0.9s,mb7.1
SAOF Saorge 72.99 311 eP P 06 39 29.7 -0.5
RSC Scourie 73.00 328⇑eP P 06 39 29.1 -0.9
ESY Stoneypath 73.06 326⇑eP P 06 39 29.3 -1.1
BNI Bardonecchia 73.07 313 eP P 06 39 29.9 -0.8
BNI pmax pmax
comp=Z,2μm,1.1s,mb7.0
BNI MLR MLR
comp=Z,1604μm,21.0s,MS8.3
BNI Bardonecchia 73.07 313 eP P 06 39 29.9 -0.8
comp=Z,2μm,1.1s,mb7.0
BNI LR LR
comp=Z,1604μm,21.0s,MS8.3
AUTN L'Aution 73.07 311 eP P 06 39 31.5 +0.8
BMRM Bremner River 73.07 28 eP P 06 39 29.8 -0.5
comp=Z,7μm,1.6s,mb7.3
MDO Dochfour 73.11 327⇑eP P 06 39 29.0 -1.7
OPO Ambohidratompo 73.11 235 P P 06 39 28.3 -2.9
comp=Z,64nm,0.9s,mb5.6,baz=48,slow=5.4,SNR=19
OPO LR LR 07 09 43.3
comp=Z,775μm,22.0s,MS7.9,baz=38,slow=34
SBF Sospel 73.12 311 eP P 06 39 29.8 -1.2
comp=Z,4μm,1.0s,mb7.0
SBF Sospel 73.12 311 eP P 06 39 29.8 -1.2
SBF pmax pmax
comp=Z,2μm,1.0s,mb7.0
SBF Sospel 73.12 311 eP P 06 39 29.8 -1.2
comp=Z,2μm,1.0s,mb7.0
MBDF Montbardon 73.16 312 eP P 06 39 31.2 0.0
comp=Z,3μm,1.0s,mb6.8
MBDF Montbardon 73.16 312 eP P 06 39 31.2 0.0
MBDF pmax pmax
comp=Z,1μm,1.0s,mb6.8
MBDF Montbardon 73.16 312 eP P 06 39 31.2 0.0
comp=Z,1μm,1.0s,mb6.8
LUCF Luceram 73.17 311 eP P 06 39 30.7 -0.6
TOUF Mont Tournerai 73.17 311 eP P 06 39 31.2 -0.1
MID Middleton Isla 73.19 30 eP P 06 39 31.7 +0.6
MID pmax pmax
comp=Z,2μm,0.9s,mb6.9
MID MLR MLR
comp=Z,1596μm,18.0s,MS8.3
MID Middleton Isla 73.19 30 eP P 06 39 31.7 +0.6
comp=Z,2μm,0.9s,mb6.9
MID LR LR
comp=Z,1596μm,18.0s,MS8.3
MENF Mencas 73.20 319 eP P 06 39 30.8 -0.6
REVF Revere 73.22 311 eP P 06 39 31.9 +0.3
DAWY Dawson 73.24 24 eP P 06 39 30.6 -0.7
MVIF Mont Vial 73.29 311 eP P 06 39 31.8 -0.2
EBH Black Hill 73.33 326 eP P 06 39 31.1 -0.9
EDI Edinburgh 73.34 326⇑eP P 06 39 31.7 -0.3
EDI AMb AMB 06 39 38.0
comp=Z,816nm,8.6s
EDI AMS AMS 07 13 49.9
comp=Z,759μm,18.9s,MS8.0
EBL Broad Law 73.35 326 eP P 06 39 31.4 -0.7
SUMG Summit 73.36 349 eP P 06 39 30.5 -1.4
comp=Z,5μm,1.6s,mb7.2
ABPO Ambohimpanom 73.38 235 P P 06 39 34.4 +1.6
comp=Z,252nm,0.7s,mb6.3,SNR=9.4
ABPO Ambohimpanom 73.38 235 eP P 06 39 31.0 -1.8
comp=Z,83nm,1.8s
ABPO LR LR
comp=Z,508μm,19.0s,MS7.8
XAL Allendale 73.40 324⇑eP P 06 39 30.7 -1.7
TFO1 Folkestone 73.50 320⇑eP P 06 39 32.4 -0.7
TFO1 AMb AMB 06 39 42.5
comp=Z,2μm,1.2s,mb6.8
TFO1 AMS AMS 07 14 32.9
comp=Z,1910μm,19.8s,MS8.4
EAU Auchinoon 73.50 326⇑eP P 06 39 31.8 -1.2
KAC Achnashellach 73.51 328⇑eP P 06 39 32.2 -0.8
CALN Calern 73.52 311 eP P 06 39 33.6 +0.2
RRR Rubha Reidh 73.55 328⇑eP P 06 39 32.7 -0.5
EKA Eskdalemuir Ar 73.63 325 P P 06 39 32.0 -1.8
comp=Z,154nm,1.0s,mb5.9,baz=65,slow=4.7,SNR=64
ORIF Oris-en-Rattie 73.63 313 eP P 06 39 33.1 -0.9
comp=Z,4μm,1.3s,mb6.9
ORIF eMLR MLR
comp=Z,2248μm,22.8s,MS8.1
ORIF Oris-en-Rattie 73.63 313 eP P 06 39 33.1 -0.9
ORIF pmax pmax
comp=Z,2μm,1.3s,mb6.9
ORIF Oris-en-Rattie 73.63 313 eP P 06 39 33.1 -0.9
comp=Z,2μm,1.3s,mb6.9
ESK Eskdalemuir 73.66 325 P P 06 39 33.0 -1.0
comp=Z,1μm,1.2s,mb6.8,SNR=29
ESK Eskdalemuir 73.66 325⇑eP P 06 39 32.7 -1.3
ESK AMb AMB 06 39 39.9
comp=Z,854nm,8.8s
ESK AMS AMS 07 12 11.5
comp=Z,971μm,20.8s,MS8.1
ESK Eskdalemuir 73.66 325 eP P 06 39 32.9 -1.1
ESK pmax pmax
comp=Z,1μm,1.3s,mb6.7
ESK MLR MLR
comp=Z,1183μm,20.0s,MS8.2
ESK Eskdalemuir 73.66 325 eP P 06 39 32.9 -1.1
comp=Z,1μm,1.3s,mb6.7
ESK LR LR
comp=Z,1183μm,20.0s,MS8.2
ECK Cauldkaine Hil 73.69 325 eP P 06 39 32.7 -1.4
KSB Sheil Bridge 73.72 328 eP P 06 39 32.7 -1.6
EAB Aberfoyle 73.75 326⇑eP P 06 39 33.1 -1.4
KPL Plockton 73.76 328⇑eP P 06 39 32.9 -1.6
KPL AMb AMB 06 40 02.4
comp=Z,811nm,6.2s
KPL AMS AMS 07 14 39.3
comp=Z,1863μm,16.5s,MS8.4
FRF La Foret Royal 73.77 311 eP P 06 39 33.6 -1.2
comp=Z,3μm,1.4s,mb6.7
FRF La Foret Royal 73.77 311 eP P 06 39 33.6 -1.2
FRF pmax pmax
comp=Z,1μm,1.4s,mb6.7
FRF La Foret Royal 73.77 311 eP P 06 39 33.6 -1.2
comp=Z,1μm,1.4s,mb6.7
LOR Lormes 73.78 316 eP P 06 39 33.2 -1.6
comp=Z,857nm,1.0s,mb6.3,baz=62
LOR eMLR MLR
comp=Z,1913μm,18.5s,MS8.1
LOR Lormes 73.78 316 eP P 06 39 33.2 -1.6
LOR pmax pmax
comp=Z,429nm,1.0s,mb6.3
LOR MLR MLR
comp=Z,1913μm,18.5s,MS8.4
LOR Lormes 73.78 316 eP P 06 39 33.2 -1.6
comp=Z,429nm,1.0s,mb6.3
LOR LR LR
comp=Z,1913μm,18.5s,MS8.4
VSL Villasalto 73.80 307 eP P 06 39 34.8 -0.3
comp=Z,2μm,1.4s,mb6.8
VSL LR LR
comp=Z,408μm,22.0s,MS7.7
RES Resolute Bay 73.83 5 P P 06 39 34.0 -0.7
comp=Z,364nm,1.1s,mb6.2,baz=3.1,slow=8.2,SNR=68
RES S S 06 49 03.7 -2.3
comp=Z,22nm,1.1s,baz=31,slow=15,SNR=2.0
RES Resolute Bay 73.83 5 P P 06 39 34.0 -0.7
RES S S 06 49 03.7 -2.3
RES pmax pmax
comp=Z,364nm,1.1s,mb6.2
RES smax
comp=N,22nm,1.1s
RES Resolute Bay 73.83 5 eP P 06 39 35.1 +0.4
comp=N,1μm,1.2s,mb6.7
LHO Holmfirth 73.89 323⇑eP P 06 39 33.6 -1.7
RRH Rhenigidale 73.91 329⇑eP P 06 39 34.0 -1.4
LMR La Mourre 73.96 311 eP P 06 39 34.8 -1.2
comp=N,4μm,1.5s,mb6.8
LMR La Mourre 73.96 311 eP P 06 39 34.8 -1.2
LMR pmax pmax
comp=Z,2μm,1.5s,mb6.8
LMR La Mourre 73.96 311 eP P 06 39 34.8 -1.2
comp=Z,2μm,1.5s,mb6.8
CWF Charnwood Fore 74.01 322⇑eP P 06 39 34.8 -1.2
CWF AMb AMB 06 40 04.0
comp=Z,748nm,7.1s
CWF AMS AMS 07 15 12.8
comp=Z,999μm,17.5s,MS8.2
PGBU Glenifferbraes 74.02 326 eP P 06 39 34.5 -1.6
PGBU AMb AMB 06 39 44.3
comp=Z,998nm,4.4s
PGBU AMS AMS 07 16 03.1
comp=Z,1164μm,17.2s,MS8.2
KAR1 Arisaig 74.06 327⇑eP P 06 39 35.2 -1.1
SMF Signal de Mont 74.08 315 eP P 06 39 35.3 -1.3
comp=Z,3μm,1.2s,mb6.8
SMF Signal de Mont 74.08 315 eP P 06 39 35.3 -1.3
SMF pmax pmax
comp=Z,2μm,1.2s,mb6.8
SMF Signal de Mont 74.08 315 eP P 06 39 35.3 -1.3
comp=Z,2μm,1.2s,mb6.8
SSF Saint Saulge 74.09 316 eP P 06 39 35.1 -1.5
comp=Z,2μm,1.4s,mb6.6
SSF Saint Saulge 74.09 316 eP P 06 39 35.1 -1.5
SSF pmax pmax
comp=Z,1μm,1.4s,mb6.6
SSF Saint Saulge 74.09 316 eP P 06 39 35.1 -1.5
comp=Z,1μm,1.4s,mb6.6
TAVF Tavernes 74.12 312 eP P 06 39 35.8 -1.1
KSK Scoval 74.17 328⇑eP P 06 39 36.4 -0.5
XDE Dent Fell 74.22 325 eP P 06 39 35.8 -1.4
VILF Villemus 74.23 312 eP P 06 39 38.3 +0.8
GCD Castle Douglas 74.26 325⇑eP P 06 39 36.4 -1.0
SMRF Simiane la Rot 74.26 312 eP P 06 39 37.0 -0.7
comp=Z,2μm,1.4s,mb6.5
SMRF Simiane la Rot 74.26 312 eP P 06 39 37.0 -0.7
comp=Z,2μm,1.4s,mb6.8
SSB Saint Sauveur 74.30 314 eP P 06 39 38.0 +0.1
SSB Saint Sauveur 74.30 314 eP P 06 39 37.2 -0.7
SSB pmax pmax
comp=Z,1μm,1.3s,mb6.6
SSB MLR MLR
comp=Z,1081μm,20.0s,MS8.1
SSB Saint Sauveur 74.30 314 eP P 06 39 37.2 -0.7
comp=Z,1μm,1.3s,mb6.6
SSB LR LR
comp=Z,1081μm,20.0s,MS8.1
STNC Stoke 74.30 323⇑eP P 06 39 36.9 -0.9
STNC AMb AMB 06 39 46.9
comp=Z,941nm,2.8s,mb6.2
AVF Avril sur Loir 74.31 315 eP P 06 39 36.6 -1.3
comp=Z,4μm,1.4s,mb6.9
AVF Avril sur Loir 74.31 315 eP P 06 39 36.6 -1.3
AVF pmax pmax
comp=Z,2μm,1.4s,mb6.8
AVF Avril sur Loir 74.31 315 eP P 06 39 36.6 -1.3
comp=Z,2μm,1.4s,mb6.8
VIVF Saint-Julien-I 74.42 313 eP P 06 39 37.6 -1.0
comp=Z,2μm,1.1s,mb6.7
VIVF Saint-Julien-I 74.42 313 eP P 06 39 37.6 -1.0
VIVF pmax pmax
comp=Z,1μm,1.1s,mb6.7
VIVF Saint-Julien-I 74.42 313 eP P 06 39 37.6 -1.0
comp=Z,1μm,1.1s,mb6.7
BERF Bertagne 74.50 311 eP P 06 39 39.5 +0.4
PLDF La Plantade 74.54 315 eP P 06 39 40.0 +0.7
TREF Trevaresse 74.55 312 eP P 06 39 40.4 +1.0
GAL1 Galloway 74.63 325 eP P 06 39 38.2 -1.4
GAL1 AMb AMB 06 40 01.2
comp=Z,847nm,2.2s,mb6.3
GAL1 AMS AMS 07 15 28.9
comp=Z,1104μm,15.9s,MS8.2
WOL Wolverton 74.69 321 eP P 06 39 38.3 -1.8
WOL AMb AMB 06 40 14.5
comp=Z,1μm,2.2s,mb6.5
BGF Bois d'Agland 74.73 315 eP P 06 39 39.0 -1.3
comp=Z,1μm,1.0s,mb6.4
BGF Bois d'Agland 74.73 315 eP P 06 39 39.0 -1.3
BGF pmax pmax
comp=Z,502nm,1.0s,mb6.4
BGF Bois d'Agland 74.73 315 eP P 06 39 39.0 -1.3
comp=Z,502nm,1.0s,mb6.4
AGO Saint Agoulin 74.80 315 eP P 06 39 42.0 +1.2
GIM North Isle of 74.82 325⇑eP P 06 39 39.6 -1.2
SWN1 Swindon 74.90 321⇑eP P 06 39 38.9 -2.3
SWN1 AMb AMB 06 39 49.3
comp=Z,1μm,4.6s
SWN1 AMS AMS 07 15 21.5
comp=Z,1198μm,17.4s,MS8.2
HLM1 Long Mynd 74.95 323⇑eP P 06 39 40.6 -0.9
PYM Petit Puy Mans 75.02 315 eP P 06 39 42.4 +0.3
LBL Lubilhac 75.12 314 eP P 06 39 43.1 +0.4
TCF Toulx Ste Croi 75.24 315 eP P 06 39 42.4 -0.9
comp=Z,2μm,1.0s,mb6.6
TCF Toulx Ste Croi 75.24 315 eP P 06 39 42.4 -0.9
TCF pmax pmax
comp=Z,863nm,1.0s,mb6.6
TCF Toulx Ste Croi 75.24 315 eP P 06 39 42.4 -0.9
comp=Z,863nm,1.0s,mb6.6
BORG Borgarnes 75.27 339 P P 06 39 48.6 +5.5
comp=Z,2μm,1.2s,mb7.0,SNR=9.3
BORG Borgarnes 75.27 339 P P 06 39 43.3 +0.2
comp=Z,271nm,1.0s,mb6.1,baz=66,slow=4.9,SNR=30
BORG S S 06 49 20.4 -1.9
comp=Z,9.4nm,0.9s,baz=64,slow=21,SNR=2.8
BORG LR LR 07 16 35.4
comp=Z,696μm,18.4s,MS8.0,baz=47,slow=39
BORG Borgarnes 75.27 339 P P 06 39 43.3 +0.2
BORG S S 06 49 20.4 -1.9
BORG pmax pmax
comp=Z,271nm,1.0s
BORG smax
comp=N,9.0nm,0.9s
BORG MLR MLR
comp=Z,696μm,18.5s
BORG Borgarnes 75.27 339 eP P 06 39 44.5 +1.3
comp=Z,3μm,1.3s,mb7.0
BORG LR LR
comp=Z,743μm,19.0s,MS8.0
LASF Ste Croix 75.31 313 eP P 06 39 43.0 -0.7
comp=Z,4μm,1.3s,mb6.9
WLF1 Llynfaes 75.32 324⇑eP P 06 39 42.5 -1.2
WLF1 AMb AMB 06 39 49.7
comp=Z,3μm,8.7s
HGH Gray Hill 75.37 322⇑eP P 06 39 43.0 -0.9
HTR Trewern Hill 75.39 322⇑eP P 06 39 42.9 -1.2
LDF La Druitiere 75.46 318 eP P 06 39 43.3 -1.2
comp=Z,1μm,0.9s,mb6.5
LDF La Druitiere 75.46 318 eP P 06 39 43.3 -1.2
LDF pmax pmax
comp=Z,537nm,0.9s,mb6.5
LDF La Druitiere 75.46 318 eP P 06 39 43.3 -1.2
comp=Z,537nm,0.9s,mb6.5
FRNF Fournols 75.47 314 eP P 06 39 45.6 +0.9
MBAR Mbarara 75.48 260 P P 06 39 47.3 +2.1
comp=Z,179nm,1.0s,mb6.0,SNR=9.4
KEST Kesra 75.55 303 P P 06 39 45.8 +0.5
comp=Z,22nm,0.6s,baz=295,slow=2.5,SNR=41
KEST S S 06 49 29.1 +2.6
comp=Z,20nm,1.2s,baz=159,slow=14,SNR=1.9
KEST LR LR 07 14 13.1
comp=Z,194μm,20.5s,MS7.4,baz=2.8,slow=37
FLN La Foliniere 75.58 318 eP P 06 39 43.9 -1.3
comp=Z,1μm,1.0s,mb6.5,baz=56
FLN eMLR MLR
comp=Z,1707μm,20.0s,MS8.1
FLN La Foliniere 75.58 318 eP P 06 39 43.9 -1.3
FLN pmax pmax
comp=Z,633nm,1.0s,mb6.5
FLN MLR MLR
comp=Z,1707μm,20.0s,MS8.3
FLN La Foliniere 75.58 318 eP P 06 39 43.9 -1.3
comp=Z,632nm,1.0s,mb6.5
FLN LR LR
comp=Z,1707μm,20.0s,MS8.3
GMM Mts of Mourne 75.58 325⇑eP P 06 39 44.4 -0.7
PNL Peninsula 75.93 28 eP P 06 39 46.8 -0.2
comp=Z,1μm,0.5s,mb7.0
HYT Haines Junctio 75.94 26 eP P 06 39 47.0 -0.1
GRR Gorron 75.99 318 eP P 06 39 46.4 -1.2
comp=Z,2μm,0.9s,mb6.8
GRR Gorron 75.99 318 eP P 06 39 46.4 -1.2
GRR pmax pmax
comp=Z,986nm,0.9s,mb6.7
GRR Gorron 75.99 318 eP P 06 39 46.4 -1.2
comp=Z,986nm,0.9s,mb6.7
CAF Calviac 76.00 314 eP P 06 39 47.2 -0.5
comp=Z,2μm,1.3s,mb6.6
CAF Calviac 76.00 314 eP P 06 39 47.2 -0.5
CAF pmax pmax
comp=Z,998nm,1.3s,mb6.6
CAF Calviac 76.00 314 eP P 06 39 47.2 -0.5
comp=Z,998nm,1.3s,mb6.6
RJF Les Rejaudoux 76.15 315 eP P 06 39 48.0 -0.6
comp=Z,2μm,1.2s,mb6.7
RJF eMLR MLR
comp=Z,1189μm,19.0s,MS7.9
RJF Les Rejaudoux 76.15 315 eP P 06 39 48.0 -0.6
RJF pmax pmax
comp=Z,1μm,1.2s,mb6.7
RJF MLR MLR
comp=Z,1189μm,19.0s,MS8.2
RJF Les Rejaudoux 76.15 315 eP P 06 39 48.0 -0.6
comp=Z,1μm,1.2s,mb6.7
RJF LR LR
comp=Z,1189μm,19.0s,MS8.2
DMUB Kingscourt 76.24 325⇑iP P 06 39 48.0 -0.9
JSA Saint Aubin 76.31 319⇑eP P 06 39 48.2 -1.2
JSA AMb AMB 06 40 12.1
comp=Z,1μm,6.4s
DSB Dublin 76.34 324 eP P 06 39 49.1 -0.4
comp=Z,807nm,1.0s,mb6.6
ARMA Armidale 76.42 138 eP P 06 39 51.6 +1.5
ARMA eS S 06 49 40.4 +4.7
ARMA Armidale 76.42 138 eP P 06 39 52.6 +2.5
comp=Z,1μm,1.3s,mb6.7
MFF Saint Martin d 76.49 316 eP P 06 39 49.4 -1.1
comp=Z,2μm,1.0s,mb6.6
MFF Saint Martin d 76.49 316 eP P 06 39 49.4 -1.1
MFF pmax pmax
comp=Z,779nm,1.0s,mb6.6
MFF Saint Martin d 76.49 316 eP P 06 39 49.4 -1.1
comp=Z,779nm,1.0s,mb6.6
CMAH Djebel Manchou 76.50 305 P P 06 39 51.2 +0.5
HTL Hartland 76.61 322⇑eP P 06 39 50.0 -1.0
HTL AMb AMB 06 39 57.1
comp=Z,804nm,4.3s
HTL AMS AMS 07 16 42.9
comp=Z,1527μm,19.6s,MS8.3
DYA Yadsworthy 76.61 321 eP P 06 39 49.5 -1.6
DYA AMb AMB 06 40 13.5
comp=Z,1μm,6.2s
DYA AMS AMS 07 14 34.1
comp=Z,623μm,18.4s,MS8.0
ABSA Djebel Ababsia 76.63 304 P P 06 39 51.9 +0.4
MTLF Montolieu 76.70 313 eP P 06 39 51.0 -0.7
comp=Z,2μm,1.2s,mb6.5
MTLF Montolieu 76.70 313 eP P 06 39 51.0 -0.7
MTLF pmax pmax
comp=Z,761nm,1.2s,mb6.5
MTLF Montolieu 76.70 313 eP P 06 39 51.0 -0.7
comp=Z,761nm,1.2s,mb6.5
EJON La Jonquera 76.72 312 ⇑P P 06 39 52.7 +0.9

comp=Z,23µm,6.1s
DCN Croghan 76.73 325⇑iP P 06 39 50.7 -1.0
LFF La Frestale 76.81 315 eP P 06 39 51.8 -0.5
comp=Z,1µm,0.8s,mb6.5
LFF La Frestale 76.81 315 eP P 06 39 51.8 -0.5
LFF pmax pmax
comp=Z,503nm,0.8s,mb6.5
LFF La Frestale 76.81 315 eP P 06 39 51.8 -0.5
comp=Z,503nm,0.8s,mb6.5
CAEH 'Ain El Ouahch 76.83 305 P **P 06 39 52.5 -0.1**
SGMF Saint Gilles 77.02 319 eP P 06 39 52.8 -0.6
comp=Z,2µm,0.9s,mb6.7
SGMF Saint Gilles 77.02 319 eP P 06 39 52.8 -0.6
SGMF pmax pmax
comp=Z,945nm,0.9s,mb6.7
SGMF Saint Gilles 77.02 319 eP P 06 39 52.8 -0.6
comp=Z,945nm,0.9s,mb6.7
CKFL Kef-Lekhel 77.11 305 P **P 06 39 53.9 -0.2**
CASM Ain Smara 77.34 305 P **P 06 39 55.9 +0.5**
ROSF Rostrenen 77.39 319 eP P 06 39 54.7 -0.8
comp=Z,2µm,1.4s,mb6.7
ROSF Rostrenen 77.39 319 eP P 06 39 54.7 -0.8
ROSF pmax pmax
comp=Z,1µm,1.4s,mb6.6
ROSF Rostrenen 77.39 319 eP P 06 39 54.7 -0.8
comp=Z,1µm,1.4s,mb6.6
CCA1 Carnmenellis 77.45 321⇑eP P 06 39 53.6 -2.2
CCA1 AMb AMB 06 40 24.5
comp=Z,874nm,4.9s
CTEI Djebel Teioual 77.49 305 P **P 06 39 57.9 +1.6**
QUIF Quistinic 77.55 319 eP P 06 39 55.5 -0.9
comp=Z,1µm,1.0s,mb6.5
QUIF Quistinic 77.55 319 eP P 06 39 55.5 -0.9
QUIF pmax pmax
comp=Z,704nm,1.0s,mb6.5
QUIF Quistinic 77.55 319 eP P 06 39 55.5 -0.9
comp=Z,704nm,1.0s,mb6.5
DFRA Djebel Bou Aff 77.63 305 P **P 06 39 57.9 +0.8**
SKAG Skagway 77.66 27 eP P 06 39 55.4 -1.4
comp=Z,5µm,2.2s,mb7.0
SKAG LR LR
comp=Z,1416µm,18.0s,MS8.3
BST Brest 77.85 319 eP P 06 39 58.7 +0.7
EMIR Miracle 77.86 312 ⇓P P 06 39 59.9 +1.6
comp=Z,12µm,4.1s
EPF Esparros 78.04 313 eP P 06 39 57.9 -1.3
comp=Z,870nm,1.1s,mb6.3
EPF Esparros 78.04 313 eP P 06 39 57.9 -1.3
EPF pmax pmax
comp=Z,435nm,1.1s,mb6.3
EPF Esparros 78.04 313 eP P 06 39 57.9 -1.3
comp=Z,435nm,1.1s,mb6.3
ETOS Mallorca 78.11 309 ⇑P P 06 40 01.8 +2.1
comp=Z,21µm,5.1s
SET Setif 78.13 305 P **P 06 40 01.0 +1.1**
CKHR Kef el Ahmar 78.14 305 P **P 06 40 01.6 +1.7**
EBIE Bielsa 78.34 313 ⇑P P 06 40 02.8 +1.9
comp=Z,38µm,6.3s
EPOB Poblet 78.44 311 ⇑P P 06 40 02.9 +1.5
comp=Z,35µm,5.6s
ETSF Etsaut 78.67 313 eP P 06 40 02.3 -0.4
comp=Z,821nm,0.8s,mb6.4
ETSF Etsaut 78.67 313 eP P 06 40 02.3 -0.4
ETSF pmax pmax
comp=Z,411nm,0.8s,mb6.4
ETSF Etsaut 78.67 313 eP P 06 40 02.3 -0.4
comp=Z,411nm,0.8s,mb6.4
RIV Riverview 78.73 141 eP P 06 40 07.3 +4.3
CAN Canberra 78.74 143 eP P 06 40 02.3 -0.7
CAN pmax pmax
comp=Z,2µm,1.4s,mb6.7
CAN MLR MLR
comp=Z,553µm,20.0s,MS7.9
CAN Canberra 78.74 143 eP P 06 40 02.3 -0.7
comp=Z,2µm,1.4s,mb6.7
CAN LR LR
comp=Z,553µm,20.0s,MS7.9
TOO Toolangi 78.81 147 eP P 06 40 01.0 -2.3
CNB Canberra Magne 78.92 143 eP P 06 40 04.4 +0.4
SJPF Ste Jean 78.97 314 eP P 06 40 04.1 -0.3
comp=Z,950nm,1.0s,mb6.4
SJPF Ste Jean 78.97 314 eP P 06 40 04.1 -0.3
SJPF pmax pmax
comp=Z,475nm,1.0s,mb6.4
SJPF Ste Jean 78.97 314 eP P 06 40 04.1 -0.3
comp=Z,475nm,1.0s,mb6.4
VAL Valentia 79.02 325 eP P 06 40 05.5 +1.0
VAL Valentia 79.02 325 ⇓iS S 06 50 11.1 +7.5
EALK Alkurruntz 79.09 314 ⇑P P 06 40 06.2 +1.2
comp=Z,34µm,5.5s
ERTA Horta de San J 79.13 311 ⇑P P 06 40 06.4 +1.1
comp=Z,33µm,5.3s
JOHN Johnston Islan 79.13 77 PFAKE 06 40 20.0 +14
JOHN LR LR
comp=Z,445µm,21.0s,MS7.8
ELIZ Elizondo 79.13 314 P **P 06 40 05.5 +0.2**
ELIZ pmax pmax
comp=Z,893nm,1.4s,mb6.5
ELIZ Elizondo 79.13 314 P **P 06 40 05.5 +0.3**
comp=Z,893nm,1.4s,mb6.5
ESAC San Caprasio 79.24 312 ⇑P P 06 40 07.2 +1.3
comp=Z,36µm,5.3s
SIT Sitka 79.26 28 P **P 06 40 08.8 +3.2**
SIT pmax pmax
comp=Z,1µm,1.3s,mb6.7
SIT Sitka 79.26 28 eP P 06 40 08.9 +3.3
comp=Z,1µm,1.5s,mb6.6
SIT LR LR
comp=Z,1299µm,21.0s,MS8.2
AKET Djebel Ketaf 79.27 306 P **P 06 40 07.2 +1.0**
EIBI Ibiza 79.47 309 ⇑P P 06 40 09.2 +2.1
comp=Z,44µm,6.0s
ABA Alger-Bouzarea 79.48 307 P **P 06 40 11.3 +4.1**
ADJB Djebel Djouab 79.53 306 P **P 06 40 08.6 +1.1**
EMHD Djebel Mahouad 79.84 306 P **P 06 40 10.2 +1.0**
EMOS Mosqueruela 79.96 311 ⇑P P 06 40 12.0 +2.2
comp=Z,40µm,5.4s
ECRI Cripan 80.04 314 P **P 06 40 11.2 +1.0**
ECRI pmax pmax
comp=Z,3µm,2.3s,mb6.8
ECRI Cripan 80.04 314 P **P 06 40 11.2 +1.0**
comp=Z,3µm,2.3s,mb6.8
NOUC Port Laguerre 80.21 123 eP P 06 40 11.5 +0.2
ELAN Lanestosa 80.27 315 ⇑P P 06 40 13.1 +1.7
comp=Z,36µm,6.0s
SFJD Kangerlussuaq 80.27 350 P **P 06 40 09.7 -1.3**
comp=Z,475nm,0.8s,mb6.5,baz=4.3,slow=5.8,SNR=42
SFJD S S 06 50 19.0 +2.7
comp=Z,8.7nm,0.8s,baz=326,slow=11,SNR=2.4
SFJD LR LR 07 19 38.5
comp=Z,1468µm,21.6s,MS8.3,baz=1.9,slow=39
SFJD Kangerlussuaq 80.27 350 P **P 06 40 09.7 -1.3**
SFJD S S 06 50 19.0 +2.7
SFJD pmax pmax
comp=Z,475nm,0.8s,mb6.5
SFJD smax
comp=N,9.0nm,0.8s
SFJD MLR MLR
comp=Z,468µm,21.6s,MS7.8
SFJD Kangerlussuaq 80.27 350⇑eP P 06 40 09.3 -1.6
comp=Z,984nm,0.8s,mb6.8
SFJD LR LR
comp=Z,1479µm,21.0s,MS8.3
DZM Mont Dzumac 80.29 123 eP P 06 40 13.8 +2.1
comp=Z,1µm,1.4s,mb6.7
DZM eS S 06 50 16.0 -1.7
comp=Z,449µm,30.8s
DZM eLR LR 07 05 05.2
comp=Z,1253µm,23.5s
DZM Mont Dzumac 80.29 123⇓eP P 06 40 12.3 +0.6
comp=Z,1µm,1.1s,mb6.7
DLBC Dease Lake 80.36 25 P **P 06 40 11.7 +0.2**
comp=Z,174nm,1.1s,mb5.9,baz=305,slow=5.3,SNR=83
DLBC S S 06 50 18.9 +1.5
comp=Z,11nm,1.0s,baz=106,slow=26,SNR=1.4
DLBC LR LR 07 19 09.6
comp=Z,1340µm,18.9s,MS8.3,baz=300,slow=38
DLBC Dease Lake 80.36 25 eP P 06 40 11.6 0.0
EBEN Beniarda 80.68 310 ⇑P P 06 40 15.7 +2.0
comp=Z,21µm,6.0s
ECHE Chera 80.70 311 P **P 06 40 15.1 +1.3**
ECHE pmax pmax
comp=Z,259nm,1.0s,mb6.1
ECHE Chera 80.70 311 P **P 06 40 15.1 +1.3**
comp=Z,259nm,1.0s,mb6.1
ETOR Torete 80.73 312 P **P 06 40 13.1 -0.8**
ETOR pmax pmax
comp=Z,271nm,1.8s,mb5.9
ETOR Torete 80.73 312 P **P 06 40 13.1 -0.9**
comp=Z,271nm,1.8s,mb5.9
EBNR Beni Rached 80.78 307 P **P 06 40 15.5 +1.2**
ECHA Ech Chlef 80.96 307 P **P 06 40 19.2 +3.9**
CRAG Craig 81.24 29 eP P 06 40 18.7 +2.3
comp=Z,2µm,2.2s,mb6.7
CRAG LR LR
comp=Z,942µm,18.0s,MS8.2
EANR 'Ain N'Sour 81.25 307 P **P 06 40 20.0 +3.2**
EARI Arriondas 81.30 316 ⇑P P 06 40 18.8 +1.8
comp=Z,33µm,5.4s
ETRT Tiaret 81.41 306 P **P 06 40 21.5 +3.8**
ETOB Tobarra 81.59 310 ⇑P P 06 40 20.7 +2.2
comp=Z,43µm,5.6s
YKA Yellowknife Ar 81.91 17 P **P 06 40 17.6 -2.1**
comp=Z,44nm,0.7s,mb5.5,baz=330,slow=5.1,SNR=208
YKA PKKP PKKPdf 06 58 21.7 -17
comp=Z,4.5nm,0.8s,baz=102,slow=2.8,SNR=4.9
YKA PKKPbc PKKPbc 06 58 48.0 -2.6
comp=Z,11nm,0.9s,baz=93,slow=1.6,SNR=3.7
YKA PKPPKP 07 06 51.3
comp=Z,4.9nm,0.7s,baz=326,slow=4.7,SNR=5.6
YKA LR LR 07 22 31.2
comp=Z,85µm,19.9s,MS7.1,baz=0.0,slow=40
YKA Yellowknife Ar 81.91 17 P **P 06 40 17.6 -2.1**
YKA PKKP PKKPdf 06 58 21.8 -17
YKA PKKPbc PKKPbc 06 58 48.0 -2.6
YKA P'P' 07 06 51.4
YKA LR LR 07 22 31.2
GUD Guadarrama 82.16 313 P **P 06 40 21.2 -0.3**
GUD pmax pmax
comp=Z,2µm,1.6s,mb6.7
GUD Guadarrama 82.16 313 P **P 06 40 21.2 -0.3**
comp=Z,2µm,1.6s,mb6.7
EVIA Vianos 82.22 311 P **P 06 40 22.5 +0.6**
EVIA pmax pmax
comp=Z,2µm,1.5s,mb6.8
EVIA Vianos 82.22 311 P **P 06 40 22.5 +0.7**
comp=Z,2µm,1.5s,mb6.8
FUNA Funafuti 82.40 105 eP P 06 40 25.6 +2.4
comp=Z,9µm,2.1s,mb7.3
FUNA LR LR
comp=Z,247µm,20.0s,MS7.6
EPON Pontenova 82.44 316 ⇑P P 06 40 24.7 +1.8
comp=Z,32µm,5.6s
ODJA Bouhanifia 82.44 307 P **P 06 40 29.0 +5.9**
USTO Oran 82.50 307 P **P 06 40 28.0 +4.6**
ESDC Sonseca Array 82.58 312 P **P 06 40 24.1 +0.4**
comp=Z,28nm,0.6s,mb5.5,baz=47,slow=4.8,SNR=39
ESDC S S 06 50 43.3 +2.1
comp=Z,0.3nm,0.3s,baz=46,slow=11,SNR=2.3
ESDC PKPPKP 07 06 53.8
comp=Z,0.2nm,0.3s,baz=265,slow=3.7,SNR=4.5
ESDC Sonseca Array 82.58 312 ⇑P P 06 40 23.6 -0.2
comp=Z,2µm,3.0s
ESLA Sonseca Array 82.58 312 eP P 06 40 24.8 +1.1
comp=Z,285nm,1.5s,mb6.1
ESLA LR LR
comp=Z,4046µm,19.0s,MS8.8
EHUE Huescar 82.73 310 P **P 06 40 24.8 +0.2**
EHUE pmax pmax
comp=Z,3µm,2.0s,mb6.9
EHUE Huescar 82.73 310 P **P 06 40 24.8 +0.3**
comp=Z,3µm,2.0s,mb6.9
PAB San Pablo 82.90 312 P **P 06 40 25.8 +0.4**
PAB pmax pmax
comp=Z,470nm,1.3s,mb6.4
PAB San Pablo 82.90 312 eP P 06 40 24.3 -1.1
comp=Z,470nm,1.4s,mb6.3
PAB LR LR
comp=Z,769µm,19.0s,MS8.1
ENIJ Nijar 82.94 309 P **P 06 40 26.4 +0.7**
ENIJ pmax pmax
comp=Z,1µm,1.4s,mb6.8
ENIJ Nijar 82.94 309 P **P 06 40 26.4 +0.7**
comp=Z,1µm,1.4s,mb6.8
ERUA La Rua 82.99 316 P **P 06 40 26.5 +0.7**
ERUA pmax pmax
comp=Z,796nm,1.7s,mb6.5
ERUA La Rua 82.99 316 P **P 06 40 26.5 +0.7**
comp=Z,796nm,1.7s,mb6.5
ECAL Calabor 83.01 315 ⇑P P 06 40 27.6 +1.7
comp=Z,28µm,5.4s
EQES Quesada 83.05 310 ⇑P P 06 40 26.8 +0.5
comp=Z,47µm,5.7s
PBRG Braganca 83.09 315 eP P 06 40 27.6 +1.3
comp=Z,708nm,1.4s,mb6.5
ODZI Dziouia 83.20 307 P **P 06 40 29.0 +1.9**
EBAN Banos Encina 83.32 311 P **P 06 40 27.2 -0.4**
EBAN pmax pmax
comp=Z,2µm,1.9s,mb6.7
EBAN Banos Encina 83.32 311 P **P 06 40 27.2 -0.4**
comp=Z,2µm,1.9s,mb6.7
EBER Berja 83.44 309 ⇑P P 06 40 29.3 +1.0
comp=Z,30µm,4.7s
MOO Moorlands 83.50 149 eP P 06 40 29.7 +1.5
STS Santiago 83.53 317 P **P 06 40 29.3 +0.7**
STS pmax pmax
comp=Z,775nm,1.4s,mb6.6
STS Santiago 83.53 317 P **P 06 40 29.3 +0.7**
comp=Z,775nm,1.4s,mb6.6
MVO Moncorvo 83.64 315 *i* P **P 06 40 31.7 +2.5**
comp=Z,906nm,1.3s,mb6.7
MVO Moncorvo 83.64 315 *e*PP PP 06 43 43.9 +2.6
MVO *e*S S 06 50 54.3 +2.4
MVO *e*LQ 07 11 24.5
MVO *e*LR LR 07 13 36.6
comp=Z,681µm,17.3s
MVO Moncorvo 83.64 315 eP P 06 40 30.7 +1.5
ECOG Cogollos-Vega 83.67 310 P **P 06 40 30.1 +0.7**
ECOG pmax pmax
comp=Z,213nm,0.9s,mb6.3
ECOG Cogollos-Vega 83.67 310 P **P 06 40 30.1 +0.6**
comp=Z,213nm,0.9s,mb6.3
EMAZ Mazaricos 83.74 317 ⇑P P 06 40 31.4 +1.8
comp=Z,34µm,5.5s
EADA Adamuz 83.83 311 ⇑P P 06 40 31.8 +1.5
comp=Z,35µm,5.9s
ELOB Lobios 83.85 316 ⇑P P 06 40 31.3 +1.1
comp=Z,35µm,5.7s
PCAB Cabril 83.92 315 eP P 06 40 31.6 +1.0
comp=Z,1µm,1.6s,mb6.8
EGUA Guajares 83.92 309 P **P 06 40 29.8 -0.9**
TAU Tasmania Unive 83.94 149 P **P 06 40 34.3 +3.9**
comp=Z,2µm,1.3s,mb7.1,SNR=19
TAU Tasmania Unive 83.94 149 eP P 06 40 29.1 -1.3
TAU pmax pmax
comp=Z,513nm,1.2s,mb6.5
TAU MLR MLR
comp=Z,462µm,22.0s,MS7.8
TAU Tasmania Unive 83.94 149 eP P 06 40 29.1 -1.3
comp=Z,513nm,1.2s,mb6.5
TAU LR LR
comp=Z,462µm,22.0s,MS7.8
ERON Agron 83.98 310 P **P 06 40 29.7 -1.3**
comp=Z,209nm,0.8s,mb6.3
PVRL Vila Real 83.99 315 *i* P **P 06 40 33.0 +2.0**
comp=Z,950nm,4.0s
PVRL Vila Real 83.99 315 *e*PP PP 06 43 46.0 +1.9
EZAM Zamans 84.06 316 P **P 06 40 31.7 +0.4**
EZAM pmax pmax
comp=Z,685nm,1.2s,mb6.7
EZAM Zamans 84.06 316 P **P 06 40 31.7 +0.4**
comp=Z,685nm,1.2s,mb6.7
EALB Alboran 84.07 308 ⇑P P 06 40 31.8 +0.2
comp=Z,51µm,6.0s
ELOJ Sierra Loja 84.13 310 P **P 06 40 30.7 -1.1**
ELOJ pmax pmax
comp=Z,1µm,2.2s,mb6.7
ELOJ Sierra Loja 84.13 310 P **P 06 40 30.7 -1.1**
comp=Z,1µm,2.2s,mb6.7
MTE Manteigas 84.40 314 *i* P **P 06 40 35.6 +2.5**
comp=Z,2µm,1.9s,mb6.8
MTE Manteigas 84.40 314 *e*PP PP 06 43 52.5 +5.0
MTE *e*S S 06 50 59.1 -0.5
MTE *e*LR LR 07 14 29.3
comp=Z,571µm,22.1s
MTE Manteigas 84.40 314 eP P 06 40 33.1 -0.1
comp=Z,1µm,1.3s,mb6.9
MTE LR LR
comp=Z,614µm,20.0s,MS8.0
PVIS Viseu 84.43 315 eP P 06 40 34.7 +1.5
comp=Z,1µm,2.6s,mb6.6
PTO Porto 84.61 315 eP P 06 40 38.3 +4.2
PCBR Castelo Branco 84.69 314 eP P 06 40 35.9 +1.3
comp=Z,712nm,1.3s,mb6.6
EMIJ Mijas 84.87 310 ⇑P P 06 40 35.4 -0.2
comp=Z,16µm,4.9s
PMRV Marv??o 84.89 313 *i* P **P 06 40 37.6 +2.0**
comp=Z,2µm,2.2s,mb6.8
PMRV Marv??o 84.89 313 *e*PP PP 06 43 51.7 +0.2
PMRV *e*S S 06 51 20.9 +16
PMRV *e*LQ 07 07 31.2
PMRV *e*LR LR 07 15 32.2
comp=Z,756µm,14.8s
PMRV Marv??o 84.89 313 eP P 06 40 37.1 +1.5
EBAD Badajoz 85.05 313 ⇑P P 06 40 36.8 +0.4
comp=Z,37µm,5.8s
FRB Frobisher Bay 85.30 356 P **P 06 40 35.5 -1.6**
comp=Z,153nm,0.7s,mb6.3,baz=5.8,slow=6.4,SNR=74
FRB S S 06 51 04.5 -3.2
comp=Z,21nm,1.0s,baz=343,slow=22,SNR=2.0
FRB PKPPKP 07 06 49.0
comp=Z,14nm,1.1s,baz=222,slow=2.9,SNR=4.5
FRB LR LR 07 22 22.7
comp=Z,552µm,20.1s,MS7.9,baz=339,slow=38
FRB Frobisher Bay 85.30 356 P **P 06 40 35.5 -1.6**
FRB S S 06 51 04.5 -3.1
PAF Port-aux-Franc 85.33 201 eP P 06 40 35.9 -1.4
PAF pmax pmax
comp=Z,2µm,0.9s,mb7.3
PAF MLR MLR
comp=Z,341µm,21.0s,MS7.7
PAF Port-aux-Franc 85.33 201 eP P 06 40 35.9 -1.3
comp=Z,2µm,0.9s,mb7.3
PAF LR LR
comp=Z,341µm,21.0s,MS7.7
PESTR Estremoz 85.34 313 *i* P **P 06 40 39.9 +2.0**
comp=Z,897nm,1.6s,mb6.7
PESTR Estremoz 85.34 313 *e*PP PP 06 43 59.3 +4.1
PESTR *e*S S 06 51 28.4 +19
PESTR *e*LQ 07 07 35.6
PESTR *e*LR LR 07 14 54.8
comp=Z,718µm,20.1s
EJIF Jimena Fronter 85.39 310 P **P 06 40 37.4 -0.8**
EJIF pmax pmax
comp=Z,2µm,1.6s,mb6.9
EJIF Jimena Fronter 85.39 310 P **P 06 40 37.4 -0.8**
comp=Z,2µm,1.6s,mb6.9
PBAR Barrancos 85.40 312 *i* P **P 06 40 40.1 +1.9**
comp=Z,1µm,1.8s,mb6.8
PBAR Barrancos 85.40 312 *e*PP PP 06 44 08.2 +12
PBAR *e*S S 06 51 09.9 +0.3
PBAR *e*LQ 07 08 37.5
PBAR *e*LR LR 07 14 36.3
comp=Z,874µm,17.1s
PTOM Tomar 85.40 314 eP P 06 40 39.9 +1.7
comp=Z,2µm,1.8s,mb6.9
ESPR Espera 85.41 311 ⇑P P 06 40 39.6 +1.4
comp=Z,40µm,5.6s
EMIN Mina Concepcio 85.41 312 ⇑P P 06 40 39.9 +1.6
comp=Z,38µm,5.7s
LSZ Lusaka 85.56 249 P **P 06 40 37.6 -1.6**
comp=Z,54nm,0.9s,mb5.8,baz=47,slow=6.7,SNR=32
LSZ S S 06 51 00.9 -11
comp=Z,20nm,1.1s,baz=109,slow=3.9,SNR=2.3
LSZ Lusaka 85.56 249 P **P 06 40 37.6 -1.6**
LSZ S S 06 51 00.9 -11
LSZ smax
comp=N,20nm,1.1s
LSZ Lusaka 85.56 249 eP P 06 40 36.2 -3.0
comp=N,26µm,6.9s
LSZ LR LR
comp=Z,448µm,22.0s,MS7.8
LSZ Lusaka 85.56 249⇑iP P 06 40 39.3 0.0
BBB Bella Bella 85.67 29 P **P 06 40 39.3 +0.1**
comp=Z,166nm,1.1s,mb6.2,baz=311,slow=4.1,SNR=23
BBB S S 06 51 00.6 -11
comp=Z,5.9nm,0.9s,baz=101,slow=22,SNR=2.2
BBB LR LR 07 21 59.2
comp=Z,463µm,18.9s,MS7.9,baz=141,slow=38
EVO Evora 85.81 313 *i* P **P 06 40 42.3 +2.1**
comp=Z,2µm,1.6s,mb7.0
EVO Evora 85.81 313 *e*PP PP 06 43 58.5 -0.5
SFS San Fernando 85.87 310 eP P 06 40 41.9 +1.4
SFS pmax pmax
comp=Z,3µm,1.2s,mb7.3
SFS MLR MLR
comp=Z,1919µm,20.0s,MS8.5
SFS San Fernando 85.87 310 eP P 06 40 41.9 +1.4
comp=Z,3µm,1.2s,mb7.3
SFS LR LR
comp=Z,1919µm,20.0s,MS8.5
PBEJ Beja 86.02 312 eP P 06 40 42.0 +0.8
comp=Z,1µm,2.5s,mb6.7
PBEJ Beja 86.02 312 *i* PP PP 06 44 12.3 +12
EGRO El Granado 86.06 312 ⇑P P 06 40 43.1 +1.7
comp=Z,39µm,6.1s
KIP Kipapa 86.18 67 eP P 06 40 44.3 +2.0
KIP pmax pmax
comp=Z,844nm,1.3s,mb6.8
KIP MLR MLR
comp=Z,288µm,22.0s,MS7.6
KIP Kipapa 86.18 67 eP P 06 40 44.2 +1.9
comp=Z,844nm,1.3s,mb6.8
KIP LR LR
comp=Z,288µm,22.0s,MS7.6
HON Honolulu 86.24 67 P **P 06 40 46.8 +4.2**
HON Honolulu 86.24 67 eP P 06 40 45.7 +3.1
PVAQ Vaqueiros 86.29 312 *i* P **P 06 40 44.2 +1.6**
comp=Z,1µm,1.9s,mb6.9
PVAQ Vaqueiros 86.29 312 *i* PP PP 06 44 05.7 +2.7
PVAQ *e*S S 06 51 25.4 +7.0
PVAQ *e*LQ 07 09 29.6
PVAQ *e*LR LR 07 16 40.1
comp=Z,562µm,24.4s
PMAFR Mafra 86.34 314 *i* P **P 06 40 44.9 +2.1**
comp=Z,2µm,1.9s,mb7.1
PMAFR Mafra 86.34 314 *e*PP PP 06 44 07.0 +3.7
PMAFR *e*S S 06 51 08.1 -11
PMAFR *e*LQ 07 08 18.2
PMAFR *e*LR LR 07 16 05.5
comp=Z,631µm,18.0s
PCVE Castro Verde 86.36 312 *i* P **P 06 40 45.0 +2.1**
comp=Z,1µm,1.8s,mb6.8
PCVE Castro Verde 86.36 312 *i* PP PP 06 44 08.0 +4.5
PCVE *e*S S 06 51 42.0 +23
PCVE *e*LQ 07 09 42.6
PCVE *e*LR LR 07 13 42.5
comp=Z,961µm,18.6s
LIS Lisbon 86.41 314 eP P 06 40 42.9 -0.3
LIS *e*S S 06 51 06.4 -13
LIS *e*S S 06 51 06.4 -13
LIS AMS AMS 07 17 29.5
comp=N,1502µm,18.9s
LIS Lisbon 86.41 314 eP P 06 40 42.9 -0.2
LIS *e*S S 06 51 06.4 -13
PBDV Barranco-do-Ve 86.53 312 *i* P **P 06 40 46.5 +2.7**
comp=N,2µm,1.7s,mb7.0
PBDV Barranco-do-Ve 86.53 312 *i* PP PP 06 44 16.8 +12
PBDV *e*S S 06 51 13.3 -7.3
PBDV *e*LQ 07 09 57.6
PBDV *e*LR LR 07 17 43.5
comp=N,774µm,19.4s
PTEO Sao Teotonio 86.85 312 eP P 06 40 47.3 +2.0
comp=N,2µm,2.0s,mb7.0
PTEO Sao Teotonio 86.85 312 *e*PP PP 06 44 17.6 +10
MDT Midelt 86.92 307 P **P 06 40 46.5 +0.8**
comp=N,78nm,1.0s,mb5.9,baz=71,slow=6.1,SNR=34
MORF Marmelete 86.95 312 *i* P **P 06 40 48.0 +2.2**
comp=N,2µm,1.3s,mb7.2
MORF Marmelete 86.95 312 *e*PP PP 06 44 15.3 +7.1
MORF *e*S S 06 51 48.4 +24
MORF *e*LQ 07 10 40.0
MORF *e*LR LR 07 14 27.0
comp=N,848µm,17.2s
MORF Marmelete 86.95 312 eP P 06 40 45.4 -0.4
MORF *e*S S 06 51 10.0 -15
MORF Marmelete 86.95 312 eP P 06 40 47.8 +2.0
PFVI Vila Bisbo 87.16 312 *i* P **P 06 40 49.4 +2.5**
comp=N,2µm,2.5s,mb6.8
PFVI Vila Bisbo 87.16 312 *i* PP PP 06 44 11.0 +1.0
PFVI *e*S S 06 51 37.7 +11
PFVI *e*LQ 07 10 08.8
PFVI *e*LR LR 07 14 24.8
comp=N,785µm,16.2s
PFVI Vila Bisbo 87.16 312 eP P 06 40 48.1 +1.2
MOPA Mopani 87.71 241 eP P 06 40 47.7 -1.9
MOPA AMS AMS 07 18 31.4

comp=Z,299µm,20.4s,MS7.7
RTC Rabat Centre 87.76 309 *e*P P 06 40 51.2 +1.4
comp=Z,727nm,0.7s,mb7.0
RTC LR LR
comp=Z,336µm,20.0s,MS7.8
MSNA Messina 88.08 243⇑*i*P P 06 40 51.0 -0.4
MSNA AMS AMS 07 22 59.6
comp=Z,224µm,18.7s,MS7.6
POHA Pohakuloa 89.03 68⇑*e*P P 06 40 57.0 +0.9
comp=Z,3µm,1.2s,mb7.4
POHA LR LR
comp=Z,328µm,20.0s,MS7.8
KHU Kahuku 89.23 68 *e*P P 06 40 57.9 +0.9
FCC Fort Churchill 89.34 9 *e*P P 06 40 56.5 -0.2
FCC pmax pmax
comp=Z,88nm,1.4s,mb5.9
FCC Fort Churchill 89.34 9 *e*P P 06 40 56.5 -0.3
comp=Z,88nm,1.4s,mb5.9
PUH Pauahi 89.48 68 *e*P P 06 40 57.7 -0.5
STCH Steam Cracks 89.55 68 *e*P P 06 40 59.0 +0.5
POGA Pongola 89.77 238⇑*i*P P 06 40 58.3 -0.9
POGA AMS AMS 07 17 42.1
comp=Z,360µm,23.2s,MS7.7
EDM Edmonton 90.19 21 *e*P P 06 41 00.0 -0.9
PGC Sidney 90.29 29 *e*P P 06 41 01.2 -0.2
comp=Z,378nm,2.5s,mb6.3
MCW Mount Constitu 90.53 29 P P 06 41 03.0 +0.5
A05A Maple Falls 90.58 28⇑P P 06 41 01.7 -1.0
baz=90,SNR=45
A05A ⇑S S 06 51 54.0 -4.5
baz=90
A06A Chilliwack 90.74 28⇓P P 06 41 02.6 -0.9
baz=90,SNR=16
A06A ⇓S S 06 51 55.9 -4.1
baz=90
NLWA Neilton Lookou 91.10 30⇓P P 06 41 04.4 -0.8
baz=91
NLWA Neilton Lookou 91.10 30 *e*P P 06 41 05.5 +0.4
comp=Z,1µm,1.4s,mb7.1
NLWA LR LR
comp=Z,855µm,21.0s,MS8.2
B06A Marblemount 91.20 28⇑P P 06 41 05.0 -0.7
baz=91,SNR=97
A07A Ashnola River, 91.21 27⇓P P 06 41 05.0 -0.7
baz=91,SNR=153
RPW Rockport 91.24 28 P P 06 41 06.0 +0.1
JCW Jim Creek 91.28 28 *e*P P 06 41 06.3 +0.3
GNW Green Mountain 91.40 29 *e*P P 06 41 08.0 +1.4
comp=Z,22nm,0.4s,mb5.8
ERPM east rand prop 91.66 240 *e*P P 06 41 06.7 -1.3
ERPM AMS AMS 07 20 51.2
comp=Z,334µm,20.4s,MS7.8
A08A Turner Farm, O 91.72 27⇓P P 06 41 08.0 -0.1
baz=92,SNR=546
B07A Winthrop 91.79 27⇑P P 06 41 08.2 -0.2
baz=92,SNR=200
FFC Flin Flon 91.81 14 P P 06 41 07.5 -0.9
comp=Z,3µm,1.1s,mb7.5
FFC Flin Flon 91.81 14 *e*P P 06 41 05.9 -2.5
FFC pmax pmax
comp=Z,360nm,0.9s,mb6.7
FFC MLR MLR
comp=Z,638µm,21.0s,MS8.0
FFC Flin Flon 91.81 14 *e*P P 06 41 05.9 -2.5
comp=Z,360nm,0.9s,mb6.7
FFC LR LR
comp=Z,638µm,21.0s,MS8.0
E03A Lebam 91.89 30⇓P P 06 41 08.5 -0.4
baz=92
RMW Rattlesnake Mo 91.91 29 P P 06 41 09.3 +0.3
C06A Tall Timber Ra 91.91 28⇓P P 06 41 08.3 -0.7
baz=92,SNR=24
A09A Danville 91.96 26⇑P P 06 41 08.7 -0.5
baz=92,SNR=209
NLW Nelson Butte 92.01 28 P P 06 41 09.6 +0.2
D05A Enumclaw 92.05 29⇓P P 06 41 09.3 -0.3
baz=92
KLOF Kloof 92.14 240 *e*P P 06 41 08.0 -2.3
KLOF AMS AMS 07 17 56.8
comp=Z,231µm,23.2s,MS7.6
B08A Colville Reser 92.18 27⇓P P 06 41 09.9 -0.3
baz=92,SNR=272
A10A Northport 92.34 26⇑P P 06 41 10.3 -0.6
baz=92,SNR=16
F03A Seaside 92.37 31⇓P P 06 41 11.3 +0.2
baz=92
KSR Koster 92.40 241 *e*P P 06 41 12.2 +0.8
KSR AMS AMS 07 21 10.9
comp=Z,144µm,21.3s,MS7.4
RCS Mount Rainier- 92.41 29 P P 06 41 12.4 +1.1
C07A Waterville 92.44 28⇓P P 06 41 10.7 -0.7
baz=92,SNR=125
LON Longmire 92.47 29 *e*P P 06 41 11.4 -0.2
LON *e* 06 44 54.9
LON pmax pmax
comp=Z,2µm,2.0s,mb7.1
LON Longmire 92.47 29 *e*P P 06 41 11.4 -0.2
LON *e*PP PP 06 44 54.9 +3.2
D06A Cle Elum 92.52 28⇑P P 06 41 11.5 -0.3
baz=92,SNR=54
RVW Rose Valley 92.55 30 P P 06 41 13.3 +1.4
B09A Rice 92.58 26⇓P P 06 41 12.1 0.0
baz=92,SNR=300
WPW White Pass 92.62 29 P P 06 41 15.7 +3.4
PRYS Parys 92.64 240⇑*i*P P 06 41 10.6 -1.9
PRYS AMS AMS 07 21 18.9
comp=Z,374µm,21.0s,MS7.8
AFI Afiamalu 92.74 104 P P 06 41 14.8 +1.6
comp=Z,308nm,1.2s,mb6.6,baz=253,slow=9.5,SNR=23
AFI S SKSac 06 51 29.5 -18
comp=Z,24nm,1.0s,baz=319,slow=17,SNR=2.1
AFI LR LR 07 20 37.4
comp=Z,193µm,21.1s,MS7.5,baz=134,slow=34
AFI Afiamalu 92.74 104 P P 06 41 18.2 +4.9
AFI pmax pmax
comp=Z,560nm,1.1s,mb6.9
AFI Afiamalu 92.74 104 P P 06 41 15.0 +1.7
comp=Z,813nm,1.4s,mb7.0
AFI S SKSac 06 51 29.5 -18
AFI LR LR 07 20 37.4
C08A Higginbotham F 92.76 27⇓P P 06 41 12.7 -0.2
baz=92,SNR=95
A11A Hall Mountain, 92.80 25⇑P P 06 41 13.5 +0.5
baz=93,SNR=174
HEBO Mount Hebo 92.84 31 *e*P P 06 41 18.1 +4.8
comp=Z,8µm,2.2s,mb7.8
F04A Amboy 92.86 30⇑P P 06 41 13.9 +0.5
baz=93,SNR=39
LBTB Lobatse 92.93 243 P P 06 41 11.6 -2.3
comp=Z,13nm,0.6s,mb5.6,baz=87,slow=3.9,SNR=12
LBTB S SKSac 06 51 33.2 -15
comp=Z,6.8nm,0.8s,baz=52,slow=6.3,SNR=1.7
LBTB LR LR 07 24 12.9
comp=Z,314µm,19.9s,MS7.8,baz=320,slow=36
LBTB Lobatse 92.93 243 *e*P P 06 41 12.5 -1.4
LBTB pmax pmax
comp=Z,130nm,0.8s,mb6.4
LBTB MLR MLR
comp=Z,324µm,20.0s,MS7.8
LBTB Lobatse 92.93 243 *e*P P 06 41 12.5 -1.4
comp=Z,130nm,0.8s,mb6.4
LBTB LR LR
comp=Z,324µm,20.0s,MS7.8
LBTB Lobatse 92.93 243⇑*i*P P 06 41 12.8 -1.1
E06A Yakima 92.98 29⇑P P 06 41 14.2 +0.3
baz=93,SNR=166
B10A Chitwood Farm, 93.03 26⇓P P 06 41 14.4 +0.3
baz=93,SNR=24
C09A Chrisman Ranch 93.05 27⇓P P 06 41 14.3 +0.1
baz=93,SNR=136
TOA0 Torodi Ar. Sit 93.05 287 *e*P P 06 41 13.1 -1.7
TOA0 *e*PP PP 06 44 56.9 -0.6
TORD Torodi Ar. Bea 93.05 287 P P 06 41 12.5 -2.3
comp=Z,55nm,1.0s,mb5.9,baz=44,slow=3.1,SNR=40
TORD PP PP 06 44 58.1 +0.6
comp=Z,49nm,0.9s,baz=70,slow=5.6,SNR=2.7
TORD PKKPbc PKKPbc 06 58 25.1 +2.2
comp=Z,11nm,1.0s,baz=288,slow=1.1,SNR=5.6
A12A Yaak River Ran 93.08 25⇓P P 06 41 14.7 +0.4
baz=93,SNR=24
NEW Newport 93.10 26 *e*P P 06 41 13.7 -0.7
NEW pmax pmax
comp=Z,197nm,0.8s
NEW MLR MLR
comp=Z,942µm,21.0s
NEW Newport 93.10 26 *e*P P 06 41 13.7 -0.7
comp=Z,197nm,0.8s,mb6.6
NEW LR LR
comp=Z,942µm,21.0s,MS8.2
KSD Kokstad 93.15 236⇑*i*P P 06 41 12.3 -2.5
KSD AML AML 07 20 33.3
comp=Z,1824µm,22.0s
KSD AMS AMS 07 20 41.1
comp=Z,1824µm,22.0s,MS8.5
OD2 Odessa Site #2 93.21 27 P P 06 41 14.7 -0.3
SEK Senekal 93.21 239 *e*P P 06 41 14.1 -1.1
B11A Sandpoint 93.23 25⇓P P 06 41 15.4 +0.4
baz=93,SNR=149
OUZ Omahuta 93.27 129 *e*P P 06 41 15.6 +0.3
comp=Z,2µm,2.3s,mb7.1
C10A Spilker Farm, 93.40 26⇑P P 06 41 15.8 0.0
baz=93,SNR=14
D08A Wollman Farm, 93.40 27⇑P P 06 41 16.1 +0.3
baz=93,SNR=74
G04A Mulino 93.41 31⇓P P 06 41 15.8 -0.1
baz=93,SNR=55
E07A Sunnyside 93.43 28⇑P P 06 41 16.0 0.0
baz=93,SNR=41
B12A Libby 93.49 25⇓P P 06 41 16.6 +0.4
baz=93,SNR=27
A13A Flathead Natio 93.51 24⇓P P 06 41 16.2 -0.2
baz=93
COR Corvallis 93.53 31 *e*P P 06 41 15.9 -0.6
COR *e* 06 45 01.2
COR *e*S S 06 52 17.0 -8.2
COR MLR MLR
comp=Z,126µm,21.0s,MS7.3
WALA Waterton Lakes 93.58 24 *e*P P 06 41 16.5 -0.1
comp=Z,31nm,1.3s,mb5.6
WALA *e*PP PP 06 45 20.0 +20
D09A Jones Farm, Ri 93.64 27⇑P P 06 41 16.9 0.0
baz=93,SNR=66
RSW Rattlesnake Hi 93.67 28 *e*P P 06 41 18.3 +1.2
HOOD Mount Hood Mea 93.67 30 *e*P P 06 41 18.3 +1.2
comp=Z,2µm,1.3s,mb7.4
HAWA Hanford 93.70 28 *e*P P 06 41 16.8 -0.4
comp=Z,35µm,1.6s
HAWA LR LR
comp=Z,626µm,20.0s,MS8.1
E08A Dider Farm, El 93.81 28⇑P P 06 41 18.1 +0.4
baz=94,SNR=42
A14A Double T Ranch 93.82 23⇓P P 06 41 17.4 -0.3
baz=94,SNR=91
F07A Phinny Hill Vi 93.94 29⇑P P 06 41 18.6 +0.2
baz=94,SNR=23
H04A Detroit Lake 93.95 31⇓P P 06 41 18.3 -0.1
baz=94,SNR=35
B13A Whitefish 93.97 24⇑P P 06 41 18.9 +0.5
baz=94,SNR=237
SCHQ Schefferville 94.04 354 P P 06 41 16.9 -1.7
comp=Z,193nm,1.0s,mb6.5,baz=26,slow=5.7,SNR=40
SCHQ PKKPbc PKKPbc 06 58 21.8 +0.6
comp=Z,30nm,0.9s,baz=178,slow=0.9,SNR=8.3
SCHQ LR LR 07 29 08.0
comp=Z,691µm,19.5s,MS8.1,baz=3.7,slow=39
SCHQ Schefferville 94.04 354 *e*P P 06 41 17.3 -1.3
comp=Z,423nm,0.9s,mb6.9
SCHQ LR LR
comp=Z,871µm,20.0s,MS8.2
D10A Wagner Farm, O 94.04 27⇓P P 06 41 18.8 0.0
baz=94,SNR=180
A15A Johnson Ranch, 94.05 23⇓P P 06 41 18.4 -0.4
baz=94
E09A Wood Farm, Sta 94.15 27⇓P P 06 41 18.8 -0.5
baz=94,SNR=36
C12B Naegeli Ranch, 94.17 25⇓P P 06 41 19.1 -0.3
baz=94,SNR=16
G06A Carlson Farm, 94.17 29⇑P P 06 41 18.9 -0.5
baz=94,SNR=55
VTHM Trough 94.25 29 P P 06 41 23.7 +3.9
SWZ Schweizer 94.30 241 *e*P P 06 41 20.2 0.0
BSMT Bassoo Peak 94.30 25 *e*P P 06 41 19.6 -0.3
KEBM Edson Butte 94.39 33 *e*P P 06 41 25.0 +4.5
D11A Klavano Farm, 94.41 26⇓P P 06 41 19.8 -0.7
baz=94,SNR=248
A16A West Butte Ran 94.45 22⇑P P 06 41 19.7 -0.9
baz=94,SNR=240
F08A Pendleton 94.49 28⇓P P 06 41 20.5 -0.4
baz=94,SNR=48
PMPS Porto Santo 94.50 313 *i*PP PP 06 45 15.7 +7.6
C13A Hot Springs 94.52 25⇓P P 06 41 20.6 -0.4
baz=94,SNR=260
YBMT Yellow Bay 94.56 24 *e*P P 06 41 21.2 +0.1
JTMT Jette 94.57 24 *e*P P 06 41 21.2 0.0
E10A Myers Farm, Un 94.58 27⇑P P 06 41 20.7 -0.5
baz=94,SNR=62
LNOR Lincton Mounta 94.62 28 *e*P P 06 41 22.7 +1.2
B15A Bradely Ranch, 94.68 23⇑P P 06 41 21.0 -0.7
baz=94,SNR=211
C14A Swan Lake 94.74 24⇓P P 06 41 21.4 -0.6
baz=94
D12A Red Ives Fores 94.77 25⇑P P 06 41 21.7 -0.4
baz=94
G08A Pilot Rock 94.83 28⇓P P 06 41 22.3 -0.2
baz=95,SNR=53
SWMT Swartz Lake 94.87 24 *e*P P 06 41 22.6 0.0
B16A M & M Farms, S 94.88 23⇑P P 06 41 21.8 -0.8
baz=95,SNR=84
F09A S2 Ranch, Elgi 94.91 28⇑P P 06 41 22.5 -0.3
baz=95,SNR=9.7
F10A Beach Ranch, E 94.96 27⇓P P 06 41 22.7 -0.3
baz=95,SNR=191
A18A Metzger Ranch, 95.03 21⇓P P 06 41 22.6 -0.7
baz=95,SNR=248
E11A Bogner Ranch, 95.03 26⇑P P 06 41 22.5 -0.8
baz=95,SNR=254
D13A Huson 95.06 25⇑P P 06 41 22.6 -0.8
baz=95,SNR=102
PMAR Madeira 95.08 313 *e*P P 06 41 25.6 +1.7
comp=Z,952nm,2.0s,mb6.9
PMAR Madeira 95.08 313 *i*PP PP 06 45 16.4 +3.7
BOSA Boshof 95.12 240 P P 06 41 22.3 -1.6
comp=Z,34nm,0.8s,mb5.9,baz=56,slow=5.3,SNR=38
BOSA PKKP PKKPbc 06 58 21.8 +3.6
comp=Z,10nm,0.7s,baz=259,slow=3.1,SNR=7.3
BOSA LR LR 07 26 55.7
comp=Z,272µm,19.4s,MS7.7,baz=60,slow=37
BOSA Boshof 95.12 240 *e*P P 06 41 22.4 -1.6
comp=Z,12nm,0.6s,mb5.5
BOSA Boshof 95.12 240 *e*P P 06 41 22.5 -1.4
BOSA AMS AMS 07 21 16.5
comp=Z,314µm,23.5s,MS7.7
C15A Salmond Ranch, 95.13 23⇑P P 06 41 23.2 -0.6
baz=95,SNR=272
E12A Beaver Dam Sad 95.22 26⇓P P 06 41 23.4 -0.8
baz=95
EFAM Famara 95.22 308⇑P P 06 41 26.0 +1.4
comp=Z,18µm,6.0s
HUMO Hull Mountain 95.23 32 *e*P P 06 41 26.6 +2.2
comp=Z,423nm,1.2s,mb6.8
HUMO *e*PP PP 06 45 15.4 +2.0
HUMO LR LR
comp=Z,644µm,22.0s,MS8.1
B17A L&G Farms, Che 95.28 22⇓P P 06 41 23.7 -0.7
baz=95,SNR=183
SLMT Seeley Lake 95.28 24 *e*P P 06 41 22.9 -1.6
G09A Cove 95.31 28⇑P P 06 41 23.9 -0.8
baz=95,SNR=104
C16A Fuhringer Ranc 95.39 23⇑P P 06 41 24.3 -0.7
baz=95,SNR=153
D14A Greenough 95.41 24⇓P P 06 41 24.2 -0.8
baz=95,SNR=130
F11A Grangeville 95.44 27⇓P P 06 41 24.5 -0.7
baz=95,SNR=157
MSO Missoula 95.47 25 *e*P P 06 41 25.2 -0.2
comp=Z,165nm,1.1s,mb6.4
MSO *e*PP PP 06 45 16.3 +1.2
MSO LR LR
comp=Z,576µm,22.0s,MS8.0
B18A Beardsley Farm 95.51 21⇑P P 06 41 24.6 -0.9
baz=95,SNR=79
H08A Prairie City 95.58 29⇑P P 06 41 25.3 -0.6
baz=95,SNR=44
I07A Izee 95.58 30⇑P P 06 41 25.2 -0.7
baz=95,SNR=46
CHMT Chamberlain Mo 95.64 24 *e*P P 06 41 25.6 -0.5
E13A Victor 95.71 25⇑P P 06 41 25.6 -0.8
baz=96,SNR=214
D15A Lincoln 95.79 24⇑P P 06 41 26.1 -0.7
baz=96,SNR=115
G11A Walters Elk Ra 95.81 27⇓P P 06 41 25.6 -1.3
baz=96,SNR=110
EGMT Eagleton 95.85 22⇓P P 06 41 25.4 -1.6
baz=96,SNR=84
EGMT Eagleton 95.85 22 *e*P P 06 41 26.5 -0.5
comp=Z,469nm,1.0s,mb6.9
EGMT LR LR
comp=Z,729µm,21.0s,MS8.1
BMO Blue Mountains 95.86 28 *e*P P 06 41 29.5 +2.4
BMO Blue Mountains 95.86 28 *e*P P 06 41 27.4 +0.3
comp=Z,154nm,1.0s,mb6.4
BMO *e*PP PP 06 45 19.6 +1.5
BMO LR LR
comp=Z,563µm,20.0s,MS8.0
H09A Durkee 95.87 28⇓P P 06 41 26.2 -1.0
baz=96,SNR=49
C17A Wharram Farm, 95.87 22⇑P P 06 41 25.6 -1.5
baz=96,SNR=101
F12A Elk City 95.90 26⇓P P 06 41 26.0 -1.3
baz=96,SNR=90
RAO Raoul Island 95.90 121 P P 06 41 26.6 -0.9
comp=Z,104nm,0.4s,mb6.6,baz=343,slow=19,SNR=1.9
RAO LR LR 07 20 06.3
comp=Z,175µm,20.8s,MS7.5,baz=125,slow=33
E14A Clinton 95.98 25⇑P P 06 41 26.6 -1.1
baz=96,SNR=93
HVD Gariep Dam 96.01 238⇑*i*P P 06 41 26.6 -1.3
HVD AMS AMS 07 24 11.7
comp=Z,501µm,20.4s,MS8.0
YBH Yreka Blue Hor 96.03 33 P P 06 41 29.1 +1.1
comp=Z,14nm,1.1s,baz=47,slow=1.6,SNR=14
YBH PKKPbc PKKPbc 06 58 16.3 +0.8
comp=Z,5.1nm,0.6s,baz=125,slow=8.5,SNR=5.9
YBH LR LR 07 25 20.0
comp=Z,375µm,21.9s,MS7.8,baz=318,slow=36
YBH Yreka Blue Hor 96.03 33 *e*P P 06 41 28.5 +0.5
comp=Z,120nm,1.0s,mb6.3
YBH LR LR
comp=Z,416µm,19.0s,MS7.9
CFTV Fuerteventura 96.05 308⇑P P 06 41 30.8 +2.4
comp=Z,1µm,2.3s,mb6.9
K05A Summer Lake 96.07 31⇓P P 06 41 27.1 -1.1
baz=96,SNR=52
D16A Dana Ranch, Ca 96.13 23⇓P P 06 41 28.1 -0.3
baz=96,SNR=182
F13A Darby 96.21 25⇑P P 06 41 28.1 -0.6
baz=96,SNR=66
KHMM Horse Mountain 96.21 34 *e*P P 06 41 33.9 +5.0
TSUM Tsumeb 96.22 251 P P 06 41 29.0 -0.1
comp=Z,3.1nm,0.5s,baz=47,slow=4.5,SNR=15
TSUM Tsumeb 96.22 251⇑*e*P P 06 41 28.9 -0.2
comp=Z,218nm,1.4s,mb6.4
TSUM LR LR
comp=Z,460µm,21.0s,MS7.9
TSUM Tsumeb 96.22 251⇑*i*P P 06 41 28.7 -0.4
E15A Deer Lodge 96.28 24⇓P P 06 41 28.4 -0.6
baz=96,SNR=144
D17A Six Diamond Ra 96.31 23⇑P P 06 41 28.5 -0.6
baz=96,SNR=135
HRY Holter Researc 96.31 24 *e*P P 06 41 29.0 -0.1
G12A Big Creek, Yel 96.40 26⇑P P 06 41 30.7 +1.1
baz=96
I09A Lost Marbles R 96.41 29⇓P P 06 41 29.4 -0.2
baz=96,SNR=46
H11A Donnelly 96.49 27⇑P P 06 41 29.9 -0.1
baz=96,SNR=71
E16A East Helena 96.52 24⇓P P 06 41 30.1 0.0
baz=96,SNR=42
CMLA Cha da Macela 96.54 322 *e*P P 06 41 31.9 +1.5
comp=Z,111nm,1.4s,mb6.1
CMLA Cha da Macela 96.54 322 *e*PP PP 06 45 25.8 +2.0
CMLA *e*LQ 07 08 49.6
CMLA *e*LR LR 07 13 48.9
GRON Grota Negra 96.54 322 *e*P P 06 41 31.7 +1.3
GRON Grota Negra 96.54 322 *e*PP PP 06 45 24.6 +0.8
F14A Wisdom 96.55 25⇑P P 06 41 30.4 +0.1
baz=96,SNR=14
D18A Linhart Farms, 96.56 22⇓P P 06 41 30.1 -0.2
baz=96,SNR=88
PSET Sete Cidades 96.60 322 *e*P P 06 41 34.7 +4.0
comp=Z,99nm,1.8s,mb5.9
PSET Sete Cidades 96.60 322 *e*PP PP 06 45 26.4 +2.2
J08A Circle Bar Ran 96.61 29⇑P P 06 41 30.6 0.0
baz=96,SNR=52
PDA Ponta Delgada 96.63 322 *e*P P 06 41 34.0 +3.2
PDA Ponta Delgada 96.63 322 *e*PP PP 06 45 25.1 +0.7
PDA *e*LQ 07 08 22.0
PDA *e*LR LR 07 14 39.0
I10A Payette 96.69 28⇓P P 06 41 30.7 -0.2
baz=96,SNR=47
RPZ Rata Peaks 96.74 138 P P 06 41 30.9 0.0
comp=Z,54nm,0.6s,mb6.1,baz=294,slow=1.8,SNR=41
RPZ PP PP 06 45 36.0 +10
comp=Z,70nm,0.9s,baz=341,slow=9.8,SNR=3.6
RPZ LR LR 07 22 48.1
comp=Z,270µm,20.6s,MS7.7,baz=304,slow=34
RPZ Rata Peaks 96.74 138 *e*P P 06 41 32.1 +1.3
comp=Z,138nm,1.4s,mb6.2
RPZ *e*PP PP 06 45 29.6 +3.4
GRM Grahamstown 96.74 235⇑*i*P P 06 41 31.8 +0.6
GRM AMS AMS 07 23 20.3
comp=Z,226µm,20.0s,MS7.7
ADH Angra Heroismo 96.77 323 *e*P P 06 41 35.1 +3.7
comp=Z,261nm,1.7s,mb6.4
ADH Angra Heroismo 96.77 323 *e*PP PP 06 45 29.1 +3.6
XMAS Kiritimati 96.81 84 *e*P P 06 41 34.9 +2.9
comp=Z,761nm,1.1s,mb7.0
XMAS LR LR
comp=Z,224µm,19.0s,MS7.7
F15A Butte 96.83 24⇑P P 06 41 31.2 -0.4
baz=97,SNR=71
G13A Cobalt 96.84 26⇓P P 06 41 31.6 0.0
baz=97,SNR=53
E17A Martinsdale 96.86 23⇑P P 06 41 31.5 -0.2
baz=97,SNR=136
LRM Limekiln Ridge 96.87 24 *e*P P 06 41 30.6 -1.1
PSMA Santa Maria 96.90 321 *e*P P 06 41 35.5 +3.5
comp=Z,461nm,1.8s,mb6.6
PSMA Santa Maria 96.90 321 *e*PP PP 06 45 27.0 +0.5
J09A Fry Pan Ranch, 96.91 29⇓P P 06 41 32.0 0.0
baz=97,SNR=40
MOD Modoc 96.99 31 *e*P P 06 41 34.8 +2.5
comp=Z,400nm,1.3s,mb6.7
MOD *e*PP PP 06 45 30.7 +3.7
MOD LR LR
comp=Z,555µm,19.0s,MS8.1
G14A Jackson 97.00 25⇓P P 06 41 32.0 -0.3
baz=97,SNR=60
WDC Whiskeytown Da 97.01 33 *e*P P 06 41 33.3 +0.8
WDC pmax pmax
comp=Z,259nm,1.3s,mb6.5
WDC MLR MLR
comp=Z,501µm,22.0s,MS8.0
WDC Whiskeytown Da 97.01 33 *e*P P 06 41 33.3 +0.8
comp=Z,260nm,1.3s,mb6.5
WDC LR LR
comp=Z,501µm,22.0s,MS8.0
DGMT Dagmar 97.07 18⇓P P 06 41 32.1 -0.5
baz=97
DGMT Dagmar 97.07 18 *e*P P 06 41 32.4 -0.2
comp=Z,219nm,0.9s,mb6.6
DGMT *e*PP PP 06 45 29.8 +2.5
DGMT LR LR
comp=Z,984µm,22.0s,MS8.2
H12A Diamond D Ranc 97.07 26⇓P P 06 41 32.7 +0.1
baz=97,SNR=32
E18A Harlowton 97.08 22⇓P P 06 41 32.2 -0.4
baz=97,SNR=111
SOE Somerset East 97.09 236 *e*P P 06 41 33.9 +1.1
I11A Placerville 97.17 27⇓P P 06 41 33.2 +0.1
baz=97,SNR=45
CASY Casey 97.19 177 *e*P P 06 41 29.9 -2.5
CASY Casey 97.19 177 *e*P P 06 41 30.1 -2.2
comp=Z,254nm,0.9s,mb6.7
CASY LR LR
comp=Z,546µm,21.0s,MS8.0
F16A Kennard Place, 97.19 24⇓P P 06 41 32.9 -0.3
baz=97,SNR=41
DLMT Dillon 97.21 25 *e*P P 06 41 33.1 -0.2
comp=Z,184nm,0.9s,mb6.5
PMAN Manadas 97.22 324 *e*P P 06 41 34.1 +0.6
comp=Z,257nm,1.6s,mb6.4
PMAN Manadas 97.22 324 *e*PP PP 06 45 34.9 +5.9
ROSA Rosais 97.24 324 *e*P P 06 41 38.2 +4.7
J10A Berg Farm, Mel 97.25 28⇓P P 06 41 33.2 -0.3
baz=97,SNR=5.1
EOSO Osorio 97.26 309⇑P P 06 41 34.4 +0.6
comp=Z,14µm,5.9s
ULM Lac du Bonnet 97.27 12 P P 06 41 32.8 -0.7
comp=Z,63nm,1.1s,mb6.0,baz=348,slow=5.1,SNR=44

ULM PP PP 06 45 25.4 -3.3
comp=Z,84nm,1.1s,baz=320,slow=8.8,SNR=2.1
ULM PKKPbc PKKPbc 06 58 12.7 +0.2
comp=Z,39nm,0.8s,baz=176,slow=2.5,SNR=15
ULM PKPPKP 07 06 26.5
comp=Z,9.7nm,1.0s,baz=165,slow=4.8,SNR=3.7
ULM LR LR 07 32 40.0
comp=Z,913µm,20.1s,MS8.3,baz=331,slow=40
ULM Lac du Bonnet 97.27 12 *e*P **P 06 41 31.6 -1.8**
comp=Z,279nm,1.3s,mb6.5
ULM LR LR
comp=Z,1073µm,20.0s,MS8.3
H13A Challis 97.28 26 ⇓P **P 06 41 33.1 -0.5**
baz=97,SNR=39
WVOR Wild Horse Val 97.29 30 *e*P **P 06 41 35.0 +1.3**
WVOR *e* 06 45 37.0
WVOR pmax pmax
comp=Z,1µm,0.9s,mb7.4
WVOR MLR MLR
comp=Z,478µm,20.0s,MS8.0
WVOR Wild Horse Val 97.29 30 *e*P **P 06 41 35.0 +1.3**
comp=Z,1µm,0.9s,mb7.4
WVOR *e*PP PP 06 45 37.0 +7.7
WVOR LR LR
comp=Z,478µm,20.0s,MS8.0
ODZ Otahua Downs 97.30 139 *e*P **P 06 41 37.4 +4.0**
comp=Z,225nm,2.2s,mb6.2
ODZ *e*PP PP 06 45 29.5 -1.0
BOZ Bozeman (W) 97.31 24 ⇓P **P 06 41 33.3 -0.4**
baz=97,SNR=117
BOZ Bozeman (W) 97.31 24 *e*P **P 06 41 33.7 0.0**
BOZ pmax pmax
comp=Z,133nm,1.1s,mb6.3
BOZ MLR MLR
comp=Z,614µm,20.0s,MS8.1
BOZ Bozeman (W) 97.31 24 *e*P **P 06 41 33.7 0.0**
comp=Z,133nm,1.1s,mb6.3
BOZ LR LR
comp=Z,614µm,20.0s,MS8.1
URZ Urewera 97.32 130 P **P 06 41 32.5 -1.2**
comp=Z,14nm,1.0s,baz=49,slow=2.1,SNR=4.0
URZ Urewera 97.32 130 *e*P **P 06 41 33.0 -0.7**
comp=Z,4.0nm,0.4s
F17A Fitzpatrick Pl 97.41 23 ⇑P **P 06 41 33.4 -0.8**
baz=97,SNR=129
G15A Dillon 97.42 25 ⇑P **P 06 41 33.5 -0.7**
baz=97,SNR=208
KHZ Kahutara 97.44 135 *e*P **P 06 41 37.2 +3.1**
comp=Z,218nm,1.1s,mb6.5
KHZ *e*PP PP 06 45 32.1 +0.5
EBAJ Bajamar 97.48 310 ⇑P **P 06 41 36.6 +1.8**
PICO 97.50 324 *e*PP PP 06 45 34.5 +3.4
SNZO South Karori 97.51 134 *e*P **P 06 41 37.2 +2.8**
comp=Z,174nm,1.2s,mb6.5
SNZO *e*PP PP 06 45 28.6 -3.7
SNZO LR LR
comp=Z,309µm,20.0s,MS7.8
PCED Cedros 97.54 324 *e*P **P 06 41 37.5 +2.6**
comp=Z,216nm,1.4s,mb6.5
PCED Cedros 97.54 324 *e*PP PP 06 45 30.8 -0.6
H14A Leadore 97.57 26 ⇑P **P 06 41 34.5 -0.4**
baz=97,SNR=43
CALA Caldeira 97.57 324 *e*PP PP 06 45 36.5 +4.9
MCMT McKenzie Canyo 97.58 25 *e*P **P 06 41 34.7 -0.2**
comp=Z,15nm,0.3s,mb6.0
I12A Atlanta 97.60 27 ⇓P **P 06 41 34.5 -0.5**
baz=97,SNR=124
G16A Moss Hill, Enn 97.61 24 ⇑P **P 06 41 34.5 -0.6**
baz=97,SNR=37
MIR Mirnyy 97.63 184 ⇑*i*P **P 06 41 33.6 -0.8**
MIR *i* S SKSac 06 52 10.0 -1.5
MIR pmax pmax
comp=Z,10µm,10.0s
MIR pmax pmax
comp=N,3µm,12.0s
MIR pmax pmax
comp=Z,462nm,1.6s,mb6.8
MIR pmax pmax
comp=E,1µm,8.0s
MIR smax
comp=N,28µm,12.0s
MIR smax
comp=E,5µm,13.0s
MFID Camas Ranch 97.64 28 ⇓P **P 06 41 34.6 -0.7**
baz=97,SNR=29
MCQ Macquarie Isla 97.71 151 *e*P **P 06 41 39.5 +4.5**
F18A Big Timber 97.73 23 ⇑P **P 06 41 34.8 -0.8**
baz=98,SNR=139
K10A MacKenzie Ranc 97.75 29 ⇑P **P 06 41 35.1 -0.7**
baz=98,SNR=28
H15A Lima 97.83 25 ⇓P **P 06 41 35.7 -0.5**
baz=98,SNR=48
GCMT Greycliff 97.85 23 *e*P **P 06 41 36.8 +0.7**
comp=E,393nm,0.5s,mb7.2
CCAN Las Canadas 97.86 309 P **P 06 41 38.8 +2.3**
comp=E,99nm,1.0s,mb6.3
I13A Wildhorse Cree 97.89 26 ⇑P **P 06 41 35.9 -0.4**
baz=98,SNR=43
G17A Pierce Place, 97.90 24 ⇓P **P 06 41 36.0 -0.3**
baz=98,SNR=36
UPI Upington 97.99 242 *e*P **P 06 41 37.4 +0.5**
UPI AMS AMS 07 25 46.6
comp=Z,274µm,19.6s,MS7.8
HOPS Hopland 97.99 35 *e*P **P 06 41 39.3 +2.4**
comp=Z,73nm,1.4s,mb6.0
HOPS *e*PP PP 06 45 37.4 +2.6
HOPS LR LR
comp=Z,589µm,21.0s,MS8.1
J12A Stokes Ranch, 98.07 27 ⇑P **P 06 41 37.2 +0.1**
baz=98,SNR=47
HLID Hailey 98.07 27 ⇓P **P 06 41 36.7 -0.5**
baz=98,SNR=178
HLID Hailey 98.07 27 *e*P **P 06 41 37.2 0.0**
comp=Z,251nm,1.1s,mb6.7
HLID *e*PP PP 06 45 34.0 -1.2
HLID LR LR
comp=Z,560µm,20.0s,MS8.1
QLMT Earthquake Lak 98.08 24 *e*P **P 06 41 37.8 +0.5**
QLMT *e*PP PP 06 45 32.5 -2.7
K11A Parker Ranch, 98.10 28 ⇓P **P 06 41 37.1 -0.2**
baz=98,SNR=22
LAO LASA Array 98.12 20 *e*P **P 06 41 37.9 +0.5**
comp=Z,792nm,0.5s,mb7.5
LAO *e*PP PP 06 45 35.8 +0.4
LAO LR LR
comp=Z,850µm,20.0s,MS8.2
I14A Mackay 98.13 26 ⇑P **P 06 41 37.0 -0.5**
baz=98
H16A Russell Place, 98.26 24 ⇑P **P 06 41 38.1 +0.1**
baz=98
G18A Lazy EL Ranch, 98.30 23 ⇓P **P 06 41 38.3 +0.1**
baz=98,SNR=14
J13A Cove Ranch, Pi 98.30 27 ⇓P **P 06 41 38.5 +0.3**
baz=98,SNR=128
YMR Madison River 98.39 24 *e*P **P 06 41 40.2 +1.6**
comp=Z,120nm,0.9s,mb6.4
YMR *e*PP PP 06 45 40.5 +2.9
I15A Monteview 98.42 25 ⇓P **P 06 41 38.8 0.0**
baz=98,SNR=36
EHIG Higuera 98.43 310 ⇑P **P 06 41 39.6 +0.5**
YNR Norris Junctio 98.45 24 *e*P **P 06 41 39.5 +0.6**
comp=Z,104nm,1.1s,mb6.3
YNR *e*PP PP 06 45 42.7 +4.7
OHCM Honcut 98.49 34 *e*P **P 06 41 42.8 +3.6**
L10A Juniper Basin 98.50 29 ⇑P **P 06 41 39.8 +0.7**
baz=98,SNR=68
RLMT Red Lodge 98.57 23 ⇓P **P 06 41 40.0 +0.6**
baz=98,SNR=44
RLMT Red Lodge 98.57 23 *e*P **P 06 41 39.7 +0.3**
comp=Z,495nm,1.6s,mb6.8
RLMT *e*PP PP 06 45 42.3 +3.4
RLMT LR LR
comp=Z,743µm,21.0s,MS8.2
BEKR Beckwourth 98.59 33 ⇑P **P 06 41 39.9 +0.3**
baz=98
YFT Old Faithful 98.62 24 *e*P **P 06 41 43.0 +3.4**
comp=Z,228nm,1.0s,mb6.7
YFT *e*PP PP 06 45 45.2 +5.8
K12A Draper Farm, C 98.66 28 ⇑P **P 06 41 40.0 +0.1**
baz=98,SNR=49
LKWY Lake 98.68 24 *e*P **P 06 41 39.7 -0.2**
LKWY pmax pmax
comp=Z,858nm,1.7s,mb7.0
LKWY MLR MLR
comp=Z,1534µm,22.0s,MS8.4
LKWY Lake 98.68 24 *e*P **P 06 41 39.7 -0.2**
comp=Z,858nm,1.7s,mb7.0
LKWY LR LR
comp=Z,1534µm,22.0s,MS8.4
L11A Cat Creek Ranc 98.72 28 ⇑P **P 06 41 40.5 +0.4**
baz=98,SNR=78
MCCM Marconi Confer 98.75 35 PFAKE 06 41 50.0 +10
MCCM LR LR
comp=Z,512µm,20.0s,MS8.0
H17A Grant Village 98.76 24 ⇓P **P 06 41 40.5 +0.2**
baz=98,SNR=65
I16A Newdale 98.89 25 ⇓P **P 06 41 40.7 -0.1**
baz=99,SNR=52
M10A I.L. Ranch, Tu 98.93 29 ⇑P **P 06 41 40.7 -0.4**
baz=99,SNR=39
J15A Blackfoot 98.96 26 ⇓P **P 06 41 41.2 0.0**
baz=99,SNR=48
K13A Stover Farm, H 98.97 27 ⇑P **P 06 41 41.6 +0.4**
baz=99,SNR=24
L12A House Creek Ra 99.03 28 ⇓P **P 06 41 41.8 +0.3**
baz=99,SNR=26
IMW Indian Meadow 99.07 24 *e*P **P 06 41 41.0 -0.7**
comp=Z,89nm,0.8s,mb6.3
IMW *e*PP PP 06 45 42.6 -0.2
CHIE El Hierro 99.09 310 P **P 06 41 45.9 +3.8**
comp=Z,404nm,1.8s,mb6.7
AGMN Agassiz Refuge 99.14 13 *e*P **P 06 41 42.3 +0.5**
comp=Z,47nm,0.6s,mb6.2
AGMN *e*PP PP 06 45 44.6 +1.5
AGMN LR LR
comp=Z,744µm,19.0s,MS8.2
PAHR Pah Rah Range 99.17 32 *e*P **P 06 41 43.3 +1.1**
I17A Pilgrim Ck. 99.18 24 ⇑P **P 06 41 43.0 +0.8**
baz=99,SNR=18
DCID1 Drake Creek 99.25 25 ⇑*e*P **P 06 41 44.7 +2.2**
comp=Z,476nm,0.5s,mb7.3
DCID1 *e*PP PP 06 45 46.9 +2.7
M11A Holland Ranch, 99.31 29 ⇑P **P 06 41 43.3 +0.5**
baz=99,SNR=39
WCN Washoe City 99.33 33 ⇑P **P 06 41 43.6 +0.7**
baz=99
J16A Bone 99.37 25 ⇓P **P 06 41 43.5 +0.5**
baz=99,SNR=40
RRI2 Red Ridge 99.41 25 *e*P **P 06 41 44.0 +0.8**
comp=Z,234nm,1.4s,mb6.5
RRI2 *e*PP PP 06 45 45.5 0.0
K14A Jones Ranch, D 99.41 26 ⇑P **P 06 41 43.8 +0.6**
baz=99,SNR=20
TPAW Teton Pass 99.42 25 ⇑*e*P **P 06 41 45.0 +1.8**
TPAW *e*PP PP 06 45 48.0 +2.5
LOHW Long Hollow 99.44 24 *e*P **P 06 41 43.7 +0.4**
comp=Z,98nm,1.6s,mb6.1
LOHW *e*PP PP 06 45 45.3 -0.3
L13A Double Diamond 99.50 27 ⇑P **P 06 41 43.9 +0.2**
baz=99,SNR=21
SNOW Snow King Moun 99.52 24 *e*P **P 06 41 45.5 +1.9**
comp=Z,168nm,1.4s,mb6.3
SNOW *e*PP PP 06 45 52.0 +5.8
BMN Battle Mountai 99.54 30 ⇑*e*P **P 06 41 44.2 +0.4**
BMN *e* 06 45 50.4
BMN pmax pmax
comp=Z,123nm,1.0s,mb6.3
BMN MLR MLR
comp=Z,680µm,22.0s,MS8.1
BMN Battle Mountai 99.54 30 ⇑*e*P **P 06 41 44.2 +0.4**
comp=Z,122nm,1.0s,mb6.3
BMN *e*PP PP 06 45 50.4 +3.9
BMN LR LR
comp=Z,680µm,22.0s,MS8.1
K15A Arbon 99.54 26 ⇑P **P 06 41 44.2 +0.5**
baz=99,SNR=13
REDW Red Top Meadow 99.57 25 *e*Pdif **P 06 41 45.5 +1.6**
REDW *e*PP PP 06 45 48.7 +2.1
N10A Dunphy 99.61 30 ⇓P **P 06 41 44.7 +0.6**
baz=99
J17A Brown Place, J 99.62 24 ⇑P **P 06 41 44.4 +0.3**
baz=99,SNR=15
I18A Diamond G Ranc 99.64 24 ⇑P Pdif 06 41 44.6 +0.5
baz=99,SNR=18
M12A Wells 99.69 28 ⇓P Pdif 06 41 44.8 +0.5
baz=100,SNR=20
K16A Soda Springs 99.76 25 ⇑P Pdif 06 41 44.8 +0.1
baz=100,SNR=22
L14A Malta 99.83 27 ⇓P Pdif 06 41 45.4 +0.4
baz=100,SNR=15
N11A Elko Archery C 99.85 29 ⇑P Pdif 06 41 45.6 +0.5
baz=100,SNR=16
O10A Cortez Mining, 99.97 30 ⇑P Pdif 06 41 46.1 +0.5
baz=100,SNR=12
J18A Kendall Valley 100.00 24 ⇑P Pdif 06 41 46.1 +0.4
baz=100,SNR=31
AHID Auburn Hatcher 100.00 25 *e*Pdif Pdif 06 41 48.1 +2.4
AHID *e*PP PP 06 45 47.3 -2.5
AHID LR LR
comp=Z,755µm,19.0s,MS8.2
M13A Montello 100.03 28 ⇑P Pdif 06 41 46.1 +0.2
baz=100,SNR=18
M13A Montello 100.03 28 *e*Pdif Pdif 06 41 48.2 +2.3
M13A *e*PP PP 06 45 52.0 +1.7
CMB Columbia Colle 100.04 34 *e*P Pdif 06 41 46.7 +0.7
CMB *e* 06 45 54.4
CMB MLR MLR
comp=Z,572µm,22.0s,MS8.0
K17A Gardner Place, 100.08 25 ⇓P Pdif 06 41 46.1 0.0
baz=100,SNR=9.8
N12A Clover Valley, 100.11 29 ⇓P Pdif 06 41 46.3 +0.1
baz=100,SNR=30
N12A Clover Valley, 100.11 29 *e*Pdif Pdif 06 41 48.7 +2.4
N12A *e*PP PP 06 45 48.0 -2.9
WAKR Walker 100.11 33 *e*Pdif Pdif 06 41 50.9 +4.6
ELK Elko 100.12 29 P Pdif 06 41 47.0 +0.8
comp=Z,13nm,1.0s,baz=2.7,slow=2.7,SNR=31
ELK PP PP 06 45 49.7 -1.2
comp=Z,25nm,0.9s,baz=42,slow=4.4,SNR=2.6
ELK PKKPbc PKKPbc 06 58 06.3 +2.0
comp=Z,15nm,0.9s,baz=119,slow=8.2,SNR=8.7
ELK Elko 100.12 29 P Pdif 06 41 47.1 +0.8
ELK 06 45 49.7
ELK pmax pmax
comp=Z,13nm,1.0s
ELK pmax pmax
comp=Z,25nm,0.9s
ELK Elko 100.12 29 *e*Pdif Pdif 06 41 49.2 +2.9
ELK *e*PP PP 06 45 49.2 -1.7
ELK LR LR
comp=Z,721µm,21.0s,MS8.2
L15A Malad City 100.18 26 ⇓P Pdif 06 41 46.6 0.0
baz=100,SNR=14
HVU Hansel Valley 100.22 27 *e*P Pdif 06 41 48.7 +1.9
HVU *e* 06 45 56.2
EYMN Ely 100.23 10 *e*Pdif Pdif 06 41 45.9 -0.9
EYMN LR LR
comp=Z,901µm,20.0s,MS8.3
M14A Sheep Mountain 100.24 27 ⇑P Pdif 06 41 46.7 -0.1
baz=100,SNR=19
SUR Sutherland 100.35 239 P Pdif 06 41 48.0 +0.7
comp=Z,8.2nm,0.7s,baz=95,slow=6.4,SNR=3.3
SUR PP PP 06 45 50.0 -4.1
comp=Z,35nm,0.9s,baz=354,slow=4.9,SNR=2.6
SUR PKKPbc PKKPbc 06 58 10.2 +6.4
comp=Z,9.6nm,0.8s,baz=130,slow=4.7,SNR=7.0
SUR Sutherland 100.35 239 *e*P Pdif 06 41 50.3 +3.0
SUR AMS AMS 07 25 16.0
comp=Z,288µm,21.8s,MS7.7
N13A Wendover, West 100.45 28 ⇓P Pdif 06 41 47.9 +0.2
baz=100,SNR=10
N13A Wendover, West 100.45 28 *e*Pdif Pdif 06 41 50.2 +2.4
N13A *e*PP PP 06 45 51.9 -1.5
O11A Cowboy Ranch, 100.46 29 ⇑P Pdif 06 41 48.1 +0.3
baz=100,SNR=26
K18A Toltan Ranch, 100.49 24 ⇑P Pdif 06 41 48.2 +0.2
baz=100,SNR=9.2
L16A Fish Haven 100.53 26 ⇑P Pdif 06 41 48.4 +0.3
baz=100
SAO San Andreas Ge 100.53 35 PFAKE 06 42 00.0 +12
SAO LR LR
comp=Z,417µm,20.0s,MS7.9
P10A Eureka 100.54 30 ⇓P Pdif 06 41 48.5 +0.4
baz=100,SNR=13
BW06 Boulder Array 100.55 24 ⇓P Pdif 06 41 48.4 +0.2
baz=100,SNR=16
BW06 Boulder Array 100.55 24 *e*Pdif Pdif 06 41 49.5 +1.3
BW06 LR LR
comp=Z,692µm,20.0s,MS8.2
PDAR Pinedale Array 100.55 24 P Pdif 06 41 47.4 -0.8
comp=Z,6.3nm,0.8s,baz=34,slow=2.4,SNR=32
PDAR PP PP 06 45 51.0 -3.0
comp=Z,27nm,1.0s,baz=352,slow=7.5,SNR=2.7
PDAR PKKPbc PKKPbc 06 58 04.0 +0.8
comp=Z,8.0nm,0.8s,baz=153,slow=4.9,SNR=13
PDAR PKPPKP 07 06 24.8
comp=Z,8.8nm,1.2s,baz=150,slow=3.3,SNR=4.1
M15A Larsen Ranch, 100.62 27 ⇓P Pdif 06 41 48.9 +0.4
baz=100
L17A Cokeville 100.66 25 ⇓P Pdif 06 41 48.7 0.0
baz=100,SNR=14
CVNA Calvinia 100.67 240 *e*P Pdif 06 41 52.4 +3.6
CVNA AMS AMS 07 24 36.7
comp=Z,586µm,22.3s,MS8.0
NVAR Mina Array Bea 100.70 32 P Pdif 06 41 49.9 +1.1
comp=Z,8.5nm,0.8s,baz=308,slow=5.2,SNR=10
NVAR PP PP 06 46 03.7 +8.3
comp=Z,68nm,1.1s,baz=302,slow=5.5,SNR=3.7
NVAR PKKPbc PKKPbc 06 58 05.2 +2.5
comp=Z,17nm,0.8s,baz=156,slow=2.9,SNR=9.6
NVAR PKPPKP 07 06 26.2
comp=Z,2.0nm,0.8s,baz=166,slow=3.2,SNR=4.2
NVAR Mina Array Bea 100.70 32 P Pdif 06 41 49.9 +1.1
NVAR PP PP 06 46 03.7 +8.3
NVAR PKKPbc PKKPbc 06 58 05.2 +2.5
NVAR P'P' 07 06 26.2
O12A Currie 100.72 29 ⇑P Pdif 06 41 49.8 +0.8
baz=100,SNR=34
K19A Absolon Red Bu 100.74 24 ⇓P Pdif 06 41 49.3 +0.2
baz=100,SNR=8.3
HWUT Hardware Ranch 100.83 26 *e*Pdif Pdif 06 41 50.1 +0.7
HWUT *e*PP PP 06 46 03.5 +7.3
HWUT *e*PKPdf PKiKP 06 46 15.8 +0.6
HWUT LR LR
comp=Z,753µm,21.0s,MS8.2
BGU Big Grassy Mou 100.86 27 *e*Pdif Pdif 06 41 53.7 +4.2
comp=Z,2µm,0.9s
N14A Grayback Hills 100.86 27 ⇑P Pdif 06 41 50.5 +0.9
baz=101,SNR=12
P11A Circle Ranch, 100.90 30 ⇓P Pdif 06 41 50.2 +0.5
baz=101
M16A Huntsville 101.06 26 ⇓P Pdif 06 41 51.1 +0.6
baz=101,SNR=8.8
K20A Yellowstone Ra 101.06 23 ⇑P Pdif 06 41 50.8 +0.3
baz=101,SNR=25
N15A Stansbury Isla 101.08 27 ⇑P Pdif 06 41 51.0 +0.4
baz=101
RSSD Black Hills 101.10 20 *e*P Pdif 06 41 51.1 +0.5
RSSD *e* 06 46 03.3
RSSD MLR MLR
comp=Z,177µm,19.0s,MS7.6
MLAC Mammoth Lakes 101.10 33 ⇓P Pdif 06 41 51.1 +0.4
baz=101
L18A Fontenelle, Gr 101.12 25 ⇓P Pdif 06 41 51.0 +0.2
baz=101,SNR=17
O13A Hicks Ranch, I 101.15 28 ⇑P Pdif 06 41 51.7 +0.8
baz=101,SNR=14
L19A Farson 101.20 24 ⇓P Pdif 06 41 52.0 +0.9
baz=101,SNR=15
Q10A Clear Creek Ra 101.22 31 ⇓P Pdif 06 41 52.2 +1.0
baz=101
M17A Scullys Gap (B 101.28 25 ⇓P Pdif 06 41 52.0 +0.5
baz=101,SNR=20
P12A McGill 101.32 29 ⇑P Pdif 06 41 52.3 +0.7
baz=101,SNR=26
DRV Dumont d'Urvil 101.34 166 Pdif Pdif 06 41 57.0 +5.3
DRV Dumont d'Urvil 101.34 166 PP PP 06 46 36.0 +35
DRV SS SS 07 01 07.0 +35
DRV R 07 17 00.0
NOQ North Oquirrh 101.44 27 *e*Pdif Pdif 06 41 55.0 +2.8
NOQ *e*PP PP 06 46 04.8 +3.9
MTUM Tungsten Hills 101.45 33 *e*Pdif Pdif 06 41 56.8 +4.6
TPH Tonopah 101.48 32 PFAKE 06 42 00.0 +7.7
TPH LR LR
comp=Z,375µm,20.0s,MS7.9
N16A Rees Ranch, Co 101.50 26 ⇑P Pdif 06 41 53.2 +0.8
baz=101,SNR=11
Q11A Duckwater 101.53 30 ⇑P Pdif 06 41 53.3 +0.7
baz=101,SNR=11
M18A Lyman 101.54 25 ⇓P Pdif 06 41 53.1 +0.5
baz=101,SNR=24
KOMG Komaggas 101.56 242 *e*P Pdif 06 41 50.8 -1.9
KOMG AMS AMS 07 29 19.5
comp=Z,271µm,19.4s,MS7.8
DUG Dugway 101.56 27 ⇑P Pdif 06 41 53.1 +0.4
baz=101,SNR=15
DUG Dugway 101.56 27 *e*P Pdif 06 41 54.8 +2.1
DUG *e* 06 46 05.8
DUG MLR MLR
comp=Z,367µm,19.0s,MS7.9
DUG Dugway 101.56 27 *e*Pdif Pdif 06 41 54.8 +2.1
DUG *e*PP PP 06 46 05.8 +4.0
DUG LR LR
comp=Z,367µm,19.0s,MS7.9
O15A The Old Anders 101.63 27 ⇓P Pdif 06 41 53.8 +0.8
baz=101
L20A Wamsutter 101.64 24 ⇑P Pdif 06 41 53.3 +0.2
baz=101,SNR=23
N17A Moffit Pass 101.68 26 ⇓P Pdif 06 41 53.7 +0.5
baz=101,SNR=16
P13A Bates Ranch, G 101.71 29 ⇓P Pdif 06 41 54.0 +0.7
baz=102,SNR=29
R10A Warm Springs 101.71 31 ⇓P Pdif 06 41 54.1 +0.7
baz=102
Q12A Willow Creek R 101.72 29 ⇑P Pdif 06 41 54.1 +0.7
baz=102,SNR=27
JLU Jordanelle 101.74 26 *e*Pdif Pdif 06 41 54.9 +1.4
JLU *e*PP PP 06 46 02.7 -0.5
M19A Rock Springs 101.80 24 ⇑P Pdif 06 41 54.2 +0.5
baz=102
TIN Tinemaha 101.85 33 ⇑P Pdif 06 41 54.9 +0.9
baz=102
S10A Tonopah Range, 101.88 31 ⇑P Pdif 06 41 55.0 +0.9
baz=102,SNR=58
DBIC Dimbokro 101.97 285 P Pdif 06 41 55.0 +0.5
comp=Z,3.9nm,0.6s,baz=18,slow=4.5,SNR=9.7
DBIC PP PP 06 46 09.3 +3.1
comp=Z,92nm,1.1s,baz=34,slow=9.4,SNR=4.2
DBIC Dimbokro 101.97 285 P Pdif 06 41 55.0 +0.5
DBIC 06 46 09.3
DBIC pmax pmax
comp=Z,4.0nm,0.6s
DBIC pmax pmax
comp=Z,92nm,1.2s
DBIC Dimbokro 101.97 285 *e*Pdif Pdif 06 41 57.6 +3.1
DBIC LR LR
comp=Z,469µm,20.0s,MS8.0
DBIC Dimbokro 101.97 285 ⇑*i*P Pdif 06 41 54.8 +0.3
RCTC Rector, Farmer 101.97 34 ⇑P Pdif 06 41 54.7 +0.2
baz=102
R11A Troy Canyon, C 101.97 30 ⇓P Pdif 06 41 55.3 +0.7
baz=102,SNR=33
P14A Drum Mountains 101.98 28 ⇑P Pdif 06 41 55.2 +0.7
baz=102,SNR=12
DAU Daniels Canyon 101.98 26 *e*P Pdif 06 41 59.7 +5.1
L21A Rawlins 102.01 23 ⇑P Pdif 06 41 55.1 +0.4
baz=102,SNR=18
KIC Kosan Boka 102.04 285 *e*PKP2 Pdif 06 42 01.1 +6.3
comp=Z,257nm,1.3s
NLU North Lily Min 102.06 27 *e*Pdif Pdif 06 41 56.7 +1.8
NLU *e*PP PP 06 46 11.6 +6.0
O16A Springville 102.07 27 ⇑P Pdif 06 41 55.5 +0.5
baz=102
N18A Larsen Ranch, 102.08 25 ⇑P Pdif 06 41 55.1 +0.1
baz=102,SNR=26
TIC Toumodi 102.12 285 *e*PKP2 Pdif 06 42 02.2 +7.0
comp=Z,549nm,1.8s
Q13A Wheeler Ranch, 102.13 29 ⇑P Pdif 06 41 56.2 +0.9
baz=102
M20A Sweetwater, Wa 102.15 24 ⇑P Pdif 06 41 55.4 +0.1
baz=102,SNR=21
MPU Maple Canyon 102.18 27 *e*Pdif Pdif 06 41 57.4 +1.9
MPU *e*PP PP 06 46 10.4 +4.0
ELIM Elim 102.22 237 *i* P Pdif 06 41 57.2 +1.6
GRAC Grapevine Rang 102.29 32 ⇓P Pdif 06 41 56.5 +0.6
baz=102
RWWY Rawlins 102.31 23 *e*Pdif Pdif 06 41 57.7 +1.7
RWWY *e*PP PP 06 46 03.4 -3.8
P15A Leamington 102.31 27 ⇑P Pdif 06 41 56.7 +0.7
baz=102,SNR=11
M21A Separation Pea 102.33 23 ⇑P Pdif 06 41 56.1 0.0
baz=102,SNR=21
N19A John Jarvie Ra 102.33 25 ⇑P Pdif 06 41 56.6 +0.5
baz=102,SNR=15
LIC Lamto 102.36 285 *e*P Pdif 06 41 58.2 +2.0
comp=Z,150nm,1.1s
LIC *e*MLR MLR
comp=Z,453µm,21.0s,MS7.7
LIC Lamto 102.36 285 *e*PKP2 Pdif 06 42 02.4 +6.2

comp=Z,184nm,1.1s
LIC Lamto 102.36 285 *e*P Pdif 06 41 58.2 +2.0
comp=Z,75nm,1.1s
LIC *e*PKPab Pdif 06 42 02.4 +6.2
LIC LR LR
comp=Z,226µm,21.0s,MS7.7
COWI Conover 102.37 9 *e*Pdif Pdif 06 41 55.8 -0.5
comp=Z,5µm,0.8s
COWI *e*PP PP 06 46 07.6 +0.1
COWI LR LR
comp=Z,1187µm,21.0s,MS8.4
O17A Robinson Place 102.37 26 ⇓P Pdif 06 41 57.3 +1.0
baz=102,SNR=32
SMMC Simmler 102.40 35 ⇓P Pdif 06 41 57.5 +1.1
baz=102
Q14A Sevier Lake (B 102.41 28 ⇓P Pdif 06 41 57.3 +0.8
baz=102,SNR=17
R12A Pony Springs, 102.41 30 ⇓P Pdif 06 41 57.2 +0.7
baz=102
CWC Cottonwood Cre 102.42 33 ⇓P Pdif 06 41 57.3 +0.8
baz=102
VES Vestal, Richgr 102.42 34 ⇑P Pdif 06 41 57.2 +0.7
baz=102
S11A Rachel 102.49 31 ⇑P Pdif 06 41 57.7 +0.9
baz=102,SNR=12
P16A Fountain Green 102.52 27 ⇑P Pdif 06 41 57.5 +0.5
baz=102,SNR=12
O18A Roosevelt 102.58 26 ⇑P Pdif 06 41 58.1 +0.9
baz=102,SNR=22
N20A Spence Gulch, 102.71 24 ⇓P Pdif 06 41 58.6 +0.8
baz=102,SNR=27
Q15A Fillmore 102.76 28 ⇑P Pdif 06 41 59.1 +1.0
baz=102,SNR=6.4
M22A Cedar Creek Ra 102.77 23 ⇑P Pdif 06 41 58.5 +0.4
baz=102
DAC Darwin (Calif) 102.78 33 PFAKE 06 42 10.0 +12
DAC LR LR
comp=Z,430µm,20.0s,MS8.0
R13A O'Grain Ranch, 102.80 29 ⇑P Pdif 06 41 59.2 +1.0
baz=103,SNR=11
PKM Peak Mountain 102.82 35 ⇓P Pdif 06 41 59.3 +1.0
baz=103
ISA Isabella 102.86 34 ⇓P Pdif 06 41 59.0 +0.6
baz=103
ISA Isabella 102.86 34 *e*Pdif Pdif 06 42 02.0 +3.6
O19A Miners Draw (B 102.87 25 ⇓P Pdif 06 41 59.4 +0.9
baz=103,SNR=24
S12A Delamar Landin 102.91 30 ⇓P Pdif 06 41 59.5 +0.9
baz=103,SNR=16
MAW Mawson 102.95 195 *e*P Pdif 06 42 00.7 +1.8
comp=Z,17nm,0.9s
MAW Mawson 102.95 195 P Pdif 06 41 57.8 -1.1
comp=Z,13nm,0.9s,baz=1.4,slow=7.9,SNR=10.0
MAW PKKPbc PKKPbc 06 57 58.0 +0.6
comp=Z,24nm,0.7s,baz=202,slow=5.9,SNR=14
MAW Mawson 102.95 195 *e*Pdif Pdif 06 41 58.4 -0.5
MAW *e*PP PP 06 46 32.6 +20
MAW LR LR
comp=Z,536µm,20.0s,MS8.1
FURC Furnace Creek, 102.96 32 ⇑P Pdif 06 41 59.8 +0.9
baz=103,SNR=13
TMUT Trail Mountain 102.97 27 *e*Pdif Pdif 06 42 03.5 +4.5
P17A Butcher Ranch, 102.99 26 ⇑P Pdif 06 41 59.5 +0.4
baz=103,SNR=34
MPMC Manual Prospec 103.00 33 ⇑P Pdif 06 41 59.7 +0.6
baz=103,SNR=18
N21A Black Mountain 103.03 24 ⇓P Pdif 06 41 59.4 +0.2
baz=103,SNR=17
P18A Preston Nutter 103.05 26 ⇓P Pdif 06 42 00.3 +1.0
baz=103
T11A Corn Creek, Al 103.06 31 ⇓P Pdif 06 42 00.1 +0.7
baz=103,SNR=48
R14A James Farms, M 103.10 29 ⇑P Pdif 06 42 00.1 +0.6
baz=103
ARVC Arvin 103.12 34 ⇓P Pdif 06 42 00.6 +0.9
baz=103
PHWY Pilot Hill 103.23 22 *e*Pdif Pdif 06 42 01.6 +1.4
PHWY *e*PP PP 06 46 17.0 +2.9
SBC Santa Barbara 103.23 35 ⇓P Pdif 06 42 00.9 +0.7
baz=103
U10A Ash Meadows, A 103.24 32 ⇑P Pdif 06 42 01.1 +0.9
baz=103
MVU Marysvale 103.25 28 PFAKE 06 42 10.0 +10
MVU LR LR
comp=Z,570µm,22.0s,MS8.1
MSU Marysvale 103.26 28 *e*P Pdif 06 42 04.3 +4.1
Q16A Castle Valley 103.31 27 ⇑P Pdif 06 42 00.2 -0.2
baz=103,SNR=14
O20A White River Ci 103.33 24 ⇓P Pdif 06 42 00.7 +0.1
baz=103,SNR=22
ECSD EROS Data Cent 103.35 15 *e*Pdif Pdif 06 42 03.2 +2.6
ECSD LR LR
comp=Z,866µm,19.0s,MS8.3
N22A Wattenberg Ran 103.35 23 ⇑P Pdif 06 42 00.6 -0.1
baz=103,SNR=22
S13A Holt Ranch, En 103.36 30 ⇑P Pdif 06 42 01.1 +0.5
baz=103,SNR=11
LRMC Laurel Mountai 103.38 33 ⇑P Pdif 06 42 01.5 +0.7
baz=103
SRU San Rafael 103.39 26 ⇓P Pdif 06 42 01.5 +0.6
baz=103
SRU San Rafael 103.39 26 *e*Pdif Pdif 06 42 05.4 +4.6
R15A Junction 103.48 28 ⇑P Pdif 06 42 01.5 +0.3
baz=103,SNR=23
S14A Cedar City 103.50 29 ⇑P Pdif 06 42 00.8 -0.5
baz=103,SNR=9.6
P19A Cripple Cowboy 103.51 25 ⇓P Pdif 06 42 01.2 -0.1
baz=103
O21A Pagoda 103.53 24 ⇑P Pdif 06 42 01.2 -0.3
baz=103,SNR=14
Q18A Rafter H Ranch 103.55 26 ⇑P Pdif 06 42 01.3 -0.2
baz=103,SNR=22
OSI Osito Adit 103.58 35 ⇑P Pdif 06 42 02.3 +0.6
baz=103
OSI Osito Adit 103.58 35 *e*Pdif Pdif 06 42 08.5 +6.8
CCUT Cedar City 103.59 29 *e*Pdif Pdif 06 42 05.7 +3.9
BSC Santa Cruz Isl 103.63 36 ⇓P Pdif 06 42 02.4 +0.5
baz=103
U11A Corn Creek 103.66 31 ⇓P Pdif 06 42 02.7 +0.6
baz=103
SHOC Shoshone 103.69 32 ⇑P Pdif 06 42 02.7 +0.5
baz=104
SHPR Sheep Range 103.69 31 *e*Pdif Pdif 06 42 04.8 +2.7
T12A Moapa 103.71 31 ⇑P Pdif 06 42 02.7 +0.5
baz=104,SNR=12
EDW2 Edwards Air Fo 103.72 34 ⇓P Pdif 06 42 03.0 +0.7
baz=104,SNR=10
R16A Teasdale 103.73 28 ⇑P Pdif 06 42 03.0 +0.7
baz=104,SNR=22
T13A Saint George 103.81 30 ⇑P Pdif 06 42 03.3 +0.6
baz=104,SNR=26
BLG Laguna Peak 103.82 35 ⇑P Pdif 06 42 03.7 +1.0
baz=104
P20A De Beque 103.84 25 ⇑P Pdif 06 42 03.2 +0.4
baz=104,SNR=15
S15A Panguitch 103.90 29 ⇓P Pdif 06 42 03.5 +0.4
baz=104,SNR=13
R17A Hanksville Air 103.92 27 ⇓P Pdif 06 42 04.0 +0.8
baz=104,SNR=24
GSC Goldstone 103.94 33 ⇑P Pdif 06 42 04.3 +1.0
baz=104,SNR=9.6
GSC Goldstone 103.94 33 *e*Pdif Pdif 06 42 07.2 +3.9
U12A Valley of Fire 104.03 31 ⇑P Pdif 06 42 04.7 +1.0
baz=104,SNR=8.3
DECC Green Verdugo 104.07 35 ⇑P Pdif 06 42 04.8 +0.9
baz=104
T14A Hurricane 104.12 29 ⇓P Pdif 06 42 05.0 +0.9
baz=104,SNR=14
GLMI Grayling 104.12 6 PFAKE 06 42 20.0 +16
GLMI LR LR
comp=Z,747µm,20.0s,MS8.2
V11A Goodsprings 104.13 32 ⇑P Pdif 06 42 04.9 +0.8
baz=104
P21A Newcastle 104.16 24 ⇓P Pdif 06 42 04.9 +0.7
baz=104
RRX Edison Barstow 104.19 33 ⇑P Pdif 06 42 05.6 +1.2
baz=104
PASC Pasadena Art C 104.20 35 *e*Pdif Pdif 06 42 09.2 +4.8
comp=Z,63nm,1.0s
PASC *e*PKPdf PKiKP 06 46 19.7 -1.9
MWC Mount Wilson 104.22 34 *e*P Pdif 06 42 05.7 +1.2
TUQ Turquoise Moun 104.24 32 ⇓P Pdif 06 42 05.4 +0.8
baz=104
R18A Canyonlands Na 104.26 26 ⇓P Pdif 06 42 05.2 +0.5
baz=104,SNR=6.9
SNCC San Nicolas Is 104.28 36 ⇓P Pdif 06 42 05.9 +1.1
baz=104
SNCC San Nicolas Is 104.28 36 *e*Pdif Pdif 06 42 04.6 -0.2
SNCC *e*PKPdf PKiKP 06 46 21.6 -0.2
U13A Pakoon Wash 104.29 30 ⇓P Pdif 06 42 05.3 +0.5
baz=104,SNR=24
Q20A Ridgley Place, 104.36 25 ⇓P Pdif 06 42 05.4 +0.2
baz=104,SNR=26
T15A Red Dirt Ranch 104.45 29 ⇓P Pdif 06 42 06.5 +0.9
baz=104
V12A Nelson 104.48 31 ⇑P Pdif 06 42 06.1 +0.4
baz=104,SNR=28
SADO Sadowa 104.50 2 Pdiff Pdif 06 42 10.1 +4.4
comp=Z,10nm,0.8s,baz=27,slow=6.4,SNR=3.2
SADO PP PP 06 46 32.7 +9.3
comp=Z,68nm,1.1s,baz=17,slow=9.2,SNR=3.3
SADO PKKPbc PKKPbc 06 57 52.8 +1.0
comp=Z,15nm,0.8s,baz=194,slow=5.2,SNR=4.9
FMP Fort Macarthur 104.52 35 ⇓P Pdif 06 42 06.9 +1.1
baz=104
ISCO Idaho Springs 104.53 23 *e*P Pdif 06 42 07.5 +1.6
ISCO MLR MLR
comp=Z,666µm,19.0s,MS8.2
HEC Hector,Ludlow 104.55 33 ⇓P Pdif 06 42 06.8 +0.8
baz=104
S17A Black Ridge (B 104.56 27 ⇑P Pdif 06 42 06.2 +0.2
baz=104,SNR=11
R19A Curley Farm, L 104.59 26 ⇑P Pdif 06 42 06.4 +0.2
baz=104,SNR=18
OGNE Ogallala 104.60 20 *e*Pdif Pdif 06 42 07.1 +0.9
OGNE LR LR
comp=Z,735µm,20.0s,MS8.2
U14A Mt Trumbull 104.63 30 ⇑P Pdif 06 42 06.5 +0.2
baz=104,SNR=24
SMCO Snowmass 104.63 24 *e*Pdif Pdif 06 42 09.3 +2.9
LONY Lake Ozonia 104.66 358 *e*Pdif Pdif 06 42 08.4 +1.9
LONY LR LR
comp=Z,626µm,20.0s,MS8.2
CIS Catalina Islan 104.71 35 ⇓P Pdif 06 42 07.7 +1.0
baz=104
Q21A Lamborn Mesa, 104.72 25 ⇑P Pdif 06 42 07.5 +0.7
baz=104
BBRC Big Bear Sol-O 104.74 34 ⇓P Pdif 06 42 07.5 +0.7
baz=104
V13A Grand Canyon W 104.76 31 ⇓P Pdif 06 42 07.9 +1.0
baz=104
W12A Cal Nev Ari 104.83 32 ⇑P Pdif 06 42 07.6 +0.4
baz=105
S18A Hurst Farm, Bl 104.83 27 ⇑P Pdif 06 42 07.4 +0.1
baz=105,SNR=13
T16A Glen Canyon Da 104.84 28 ⇑P Pdif 06 42 07.5 +0.2
baz=105
GMRC Granite Mounta 104.90 32 ⇑P Pdif 06 42 07.2 -0.4
baz=105
Q22A Crested Butte, 104.93 24 ⇓P Pdif 06 42 07.3 -0.4
baz=105,SNR=31
LBNH Lisbon 104.94 357 PFAKE 06 46 30.0 +7.3
LBNH LR LR
comp=Z,583µm,19.0s,MS8.1
SCI San Clemente I 104.98 36 ⇓P Pdif 06 42 08.4 +0.5
baz=105
U15A North Rim 105.00 29 ⇓P Pdif 06 42 07.9 -0.1
baz=105,SNR=17
R20A Redvale 105.00 25 ⇑P Pdif 06 42 08.4 +0.4
baz=105,SNR=19
S19A Harvey Farm, M 105.11 26 ⇑P Pdif 06 42 08.7 +0.3
baz=105,SNR=8.6
T17A Navajo Res., N 105.11 28 ⇑P Pdif 06 42 08.9 +0.4
baz=105
MURC Murrieta 105.14 34 ⇑P Pdif 06 42 09.2 +0.6
baz=105
R21A Cimarron 105.15 25 ⇑P Pdif 06 42 09.0 +0.3
baz=105,SNR=19
NCB Newcomb 105.30 358 *e*Pdif Pdif 06 42 11.6 +2.3
NCB LR LR
comp=Z,954µm,20.0s,MS8.3
V14A Boquillas Ranc 105.33 30 ⇑P Pdif 06 42 10.3 +0.8
baz=105,SNR=34
JFWS Jewell Farm 105.33 10 *e*P Pdif 06 42 12.2 +2.7
JFWS Jewell Farm 105.33 10 *e*Pdif Pdif 06 42 11.1 +1.6
JFWS LR LR
comp=Z,611µm,19.0s,MS8.2
T18A Mexican Hat 105.36 27 ⇓P Pdif 06 42 10.3 +0.7
baz=105,SNR=16
NEE2 Needles Airpor 105.39 32 ⇓P Pdif 06 42 09.7 0.0
baz=105
BELC Belle Mtn. 105.39 33 ⇑P Pdif 06 42 10.0 +0.3
baz=105
W13A Hualapai Mount 105.44 31 ⇓P Pdif 06 42 10.6 +0.7
baz=105,SNR=18
PFO Pinyon Flat Ob 105.49 34 ⇑P Pdif 06 42 10.9 +0.7
baz=105
PFO Pinyon Flat Ob 105.49 34 *e*P Pdif 06 42 12.3 +2.1
PFO MLR MLR
comp=Z,144µm,21.0s,MS7.5
PFO Pinyon Flat Ob 105.49 34 *e*Pdif Pdif 06 42 12.3 +2.2
PFO LR LR
comp=Z,144µm,21.0s,MS7.5
U17A Shonto 105.52 28 ⇑P Pdif 06 42 11.1 +0.8
baz=105,SNR=24
R22A Saguache, Gunn 105.55 24 ⇑P Pdif 06 42 12.0 +1.5
baz=105
V15A Kaibab Nationa 105.56 29 ⇓P Pdif 06 42 11.2 +0.7
baz=105,SNR=19
IRM Iron Mountain 105.65 32 ⇑P Pdif 06 42 11.9 +1.0
baz=105,SNR=26
S21A Coal Bank Pass 105.69 25 ⇑P Pdif 06 42 11.6 +0.6
baz=105,SNR=17
W14A Seligman 105.69 30 ⇑P Pdif 06 42 11.7 +0.6
baz=106,SNR=22
U16A Tuba City 105.72 28 ⇓P Pdif 06 42 11.5 +0.3
baz=106,SNR=19
SCIA State Center 105.80 13 *e*Pdif Pdif 06 42 12.6 +1.0
comp=Z,1µm,0.9s
SCIA *e*PKPdf PKiKP 06 46 24.0 -0.3
SCIA LR LR
comp=Z,826µm,21.0s,MS8.3
MVCO Mesa Verde 105.82 26 ⇑P Pdif 06 42 12.0 +0.4
baz=106,SNR=9.9
MVCO Mesa Verde 105.82 26 *e*Pdif Pdif 06 42 13.8 +2.1
MVCO LR LR
comp=Z,530µm,19.0s,MS8.1
ACCN Adirondack Com 105.87 358 *e*Pdif Pdif 06 42 15.9 +4.1
X13A Yucca 105.89 31 ⇓P Pdif 06 42 11.9 0.0
baz=106,SNR=36
BC3 Big Chuckw Mtn 105.93 33 ⇓P Pdif 06 42 11.7 -0.5
baz=106
T19A Beclabito 105.96 27 ⇑P Pdif 06 42 11.9 -0.3
baz=106,SNR=16
U18A Rough Rock, Ch 105.99 27 ⇓P Pdif 06 42 12.0 -0.4
baz=106
PDMCI Parker Dam,Lak 105.99 32 ⇓P Pdif 06 42 12.3 -0.1
baz=106
W15A Williams 106.07 30 ⇓P Pdif 06 42 13.1 +0.4
baz=106
MONP Monument Peak 106.10 34 ⇑P Pdif 06 42 13.0 +0.1
baz=106,SNR=5.1
BAR Barrett 106.15 34 *e*Pdif Pdif 06 42 14.5 +1.4
WUAZ Wupatki 106.16 29 ⇓P Pdif 06 42 12.9 -0.2
baz=106
WUAZ Wupatki 106.16 29 *e*Pdif Pdif 06 42 15.0 +1.8
WUAZ LR LR
comp=Z,445µm,20.0s,MS8.0
Y12C Blythe 106.28 32 ⇓P Pdif 06 42 13.9 +0.2
baz=106,SNR=5.3
V17A Tonalea, Kykot 106.31 28 ⇓P Pdif 06 42 13.9 +0.1
baz=106,SNR=28
SWSC Sam W. Stewart 106.36 34 ⇓P Pdif 06 42 13.7 -0.3
baz=106
U19A Dine' College, 106.36 27 ⇑P Pdif 06 42 13.3 -0.8
baz=106
X14A Yava 106.40 31 ⇓P Pdif 06 42 14.4 +0.2
baz=106,SNR=14
SDCO Great Sand Dun 106.42 24 *e*Pdif Pdif 06 42 16.6 +2.3
SDCO LR LR
comp=Z,530µm,21.0s,MS8.1
DVTC Desert V Tower 106.44 34 ⇓P Pdif 06 42 15.4 +1.0
baz=106
W16A Flagstaff 106.45 29 ⇓P Pdif 06 42 14.3 -0.1
baz=106
Y13A Salome 106.54 32 ⇓P Pdif 06 42 15.6 +0.8
baz=106,SNR=7.2
U20A Newcomb 106.55 26 ⇑P Pdif 06 42 15.4 +0.5
baz=106
BBTS Babate 106.56 299 PP PP 06 46 49.8 +10
comp=Z,99nm,1.2s,baz=341,slow=2.4,SNR=4.3
V18A Ganado 106.58 28 ⇑P Pdif 06 42 15.8 +0.8
baz=106,SNR=6.5
T22A Edith 106.58 25 ⇑P Pdif 06 42 15.8 +0.7
baz=106,SNR=16
X15A Humboldt 106.67 30 ⇑P Pdif 06 42 16.2 +0.8
baz=106,SNR=15
AAM Ann Arbor 106.71 5 PFAKE 06 46 40.0 +14
AAM LR LR
comp=Z,649µm,19.0s,MS8.2
GLA Glamis 106.72 33 ⇑P Pdif 06 42 16.5 +0.9
baz=106
GLA Glamis 106.72 33 *e*Pdif Pdif 06 42 17.9 +2.3
GLA *e*PP PP 06 46 39.6 -0.8
Y14A Wickenburg 106.80 31 ⇑P Pdif 06 42 16.5 +0.5
baz=107,SNR=14
W17A Winslow 106.81 29 ⇓P Pdif 06 42 16.5 +0.5
baz=107
V19A Window Rock 106.92 27 ⇓P Pdif 06 42 16.9 +0.4
baz=107
X16A Lo Mia Camp, P 107.07 30 ⇓P Pdif 06 42 17.2 0.0
baz=107,SNR=23
V20A Brimhall 107.08 27 ⇓P Pdif 06 42 17.0 -0.3
baz=107
Y15A Casa Rosa Ranc 107.08 30 ⇑P Pdif 06 42 17.0 -0.2
baz=107,SNR=10
BINY Binghamton 107.10 360 *e*Pdif Pdif 06 42 19.5 +2.2
BINY LR LR
comp=Z,615µm,20.0s,MS8.2
Z13A Yuma Proving G 107.13 32 ⇓P Pdif 06 42 17.9 +0.4
baz=107,SNR=28
W18A Petrified Fore 107.17 28 ⇑P Pdif 06 42 18.0 +0.4
baz=107
CBKS Cedar Bluff 107.22 19 PFAKE 06 46 40.0 +13
CBKS LR LR
comp=Z,710µm,21.0s,MS8.2
112A Yuma 107.26 33 ⇑P Pdif 06 42 18.4 +0.3
baz=107
Z14A Wintersburg 107.31 31 ⇑P Pdif 06 42 18.8 +0.5
baz=107
W19A Sanders 107.32 28 ⇓P Pdif 06 42 18.7 +0.4
baz=107
V21A Milan 107.39 26 ⇑P Pdif 06 42 18.9 +0.3
baz=107
X17A Forest Lakes 107.41 29 ⇓P Pdif 06 42 19.3 +0.6
baz=107
113A Mohawk Valley, 107.44 32 ⇓P Pdif 06 42 19.3 +0.5
baz=107
Y16A Circle Bar Ran 107.52 30 ⇑P Pdif 06 42 18.9 -0.2
baz=107,SNR=17
V22A San Miguel Ran 107.56 25 ⇑P Pdif 06 42 21.4 +2.0
baz=107
X18A Snowflake 107.60 28 ⇓P Pdif 06 42 19.9 +0.4
baz=107
W20A Ramah 107.65 27 ⇑P Pdif 06 42 19.7 -0.1
baz=107
Z15A Gila River Ind 107.73 31 ⇑P Pdif 06 42 20.3 +0.2
baz=108
KSU1 Kansas State U 107.76 16 *e*Pdif Pdif 06 42 20.8 +0.5
KSU1 LR LR
comp=Z,946µm,20.0s,MS8.3
HDIL Hopedale 107.78 10 *e*Pdif Pdif 06 42 25.5 +5.1
HDIL LR LR
comp=Z,684µm,20.0s,MS8.2
114A Black Gap (USA 107.86 32 ⇓P Pdif 06 42 21.0 +0.3
baz=108
Y17A Roosevelt 107.94 30 ⇑P Pdif 06 42 21.7 +0.6
baz=108
X19A St. Johns 107.95 28 ⇓P Pdif 06 42 21.7 +0.6
baz=108
V23A Ortiz Mt. (NFS 107.98 25 ⇑P Pdif 06 42 22.1 +0.9
baz=108
W21A San Fidel 107.99 26 ⇑P Pdif 06 42 22.1 +0.9
baz=108
Z16A Peralta Trail, 108.00 30 ⇑P Pdif 06 42 21.9 +0.6
baz=108
X20A Quemado 108.17 27 ⇑P Pdif 06 42 22.5 +0.4
baz=108
115A Sonoran Desert 108.19 31 ⇓P Pdif 06 42 22.7 +0.5
baz=108
Y18A Canyon Day Jun 108.21 29 ⇑P Pdif 06 42 22.7 +0.4
baz=108
W22A Albuquerque 108.33 26 ⇑P Pdif 06 42 23.1 +0.4
baz=108
Y19A Nutrioso 108.38 28 ⇑P Pdif 06 42 23.5 +0.5
baz=108
Z17A San Carlos Hig 108.44 29 ⇓P Pdif 06 42 23.6 +0.3
baz=108
W23A Werner Place, 108.51 25 ⇓P Pdif 06 42 23.1 -0.5
baz=108,SNR=10
X21A Alamocita Cree 108.53 27 ⇓P Pdif 06 42 23.5 -0.2
baz=108,SNR=6.4
116A Eloy 108.54 31 ⇓P Pdif 06 42 24.6 +0.8
baz=108
214A Organ Pipe Nat 108.56 32 ⇑P Pdif 06 42 24.1 +0.3
baz=108
ANMO Albuquerque 108.58 26 Pdiff Pdif 06 42 29.5 +5.5
comp=Z,6.8nm,1.0s,baz=322,slow=4.2,SNR=14
ANMO PKiKP PKiKP 06 46 26.6 -3.1
comp=Z,26nm,1.1s,baz=1.7,slow=4.3,SNR=3.0
ANMO PKKPbc PKKPbc 06 57 38.7 -0.2
comp=Z,9.3nm,0.7s,baz=127,slow=4.5,SNR=12
ANMO PKKP PKKPbc 06 57 54.0 +15
comp=Z,31nm,0.8s,baz=154,slow=5.2,SNR=18
ANMO Albuquerque 108.58 26 *e*Pdif Pdif 06 42 28.3 +4.3
ANMO PKPdf PKiKP 06 46 26.6 -3.1
ANMO PKKPbc PKKPbc 06 57 38.7 -0.2
ANMO PKKP PKKPbc 06 57 54.0 +15
ANMO LR LR
comp=Z,475µm,22.0s,MS8.0
SSPA Standing Stone 108.65 1 PFAKE 06 46 40.0 +10
SSPA LR LR
comp=Z,122µm,20.0s,MS7.5
W24A Lazy 6 Ranch, 108.73 25 ⇑P Pdif 06 42 26.1 +1.5
baz=108
Y20A Horse Springs, 108.77 28 ⇓P Pdif 06 42 23.7 -1.0
baz=108
X22A Bernardo 108.77 26 ⇓P Pdif 06 42 24.5 -0.3
baz=108
Z18A Geronimo 108.81 29 ⇓P Pdif 06 42 24.3 -0.6
baz=109
LAZ Ladron 108.82 26 *e*Pdif Pdif 06 42 31.1 +6.2
comp=Z,1µm,0.4s
LAZ *e*PKPdf PKiKP 06 46 28.8 -1.3
ACSO Alum Creek Sta 108.82 5 *e*Pdif Pdif 06 42 28.6 +3.7
comp=Z,78nm,1.4s
ACSO *e*PKPdf PKiKP 06 46 23.5 -6.5
ACSO LR LR
comp=Z,646µm,20.0s,MS8.2
Z19A T-Link Ranch, 108.95 29 ⇑P Pdif 06 42 25.6 0.0
baz=109
117A Oracle 108.95 30 ⇑P Pdif 06 42 25.7 +0.2
baz=109
Y21A Point of Rocks 108.96 27 ⇑P Pdif 06 42 25.7 +0.1
baz=109
X23A Hourglass Bar 109.02 26 ⇑P Pdif 06 42 25.7 -0.2
baz=109
W25A X Bar L Ranch, 109.06 24 ⇑P Pdif 06 42 25.9 -0.2
baz=109,SNR=6.2
LENM Lemitar 109.09 26 *e*Pdif Pdif 06 42 28.8 +2.6
216A Three Points, 109.13 31 ⇑P Pdif 06 42 26.2 -0.2
baz=109
TUC Tucson 109.16 30 *e*P Pdif 06 42 31.0 +4.5
TUC MLR MLR
comp=Z,579µm,21.0s,MS8.1
Y22D IRIS PASSCAL I 109.19 26 ⇓P Pdif 06 42 26.5 -0.1
baz=109
118A Homack Ranch, 109.22 29 ⇓P Pdif 06 42 26.7 0.0
baz=109
BNM Barren Site 109.23 26 *e*Pdif Pdif 06 42 31.8 +5.0
BNM *e*PKPdf PKiKP 06 46 22.5 -8.4
Y22A Socorro 109.30 26 ⇓P Pdif 06 42 26.9 -0.1
baz=109
X24A Lazy VL Ranch, 109.31 25 ⇓P Pdif 06 42 27.4 +0.3
baz=109
Z20A Nine Sixteen R 109.38 28 ⇓P Pdif 06 42 27.6 +0.2
baz=109
119A Ashpeak Ranch, 109.39 29 ⇑P Pdif 06 42 27.6 +0.1
baz=109
BLO Bloomington 109.52 8 *e*Pdif Pdif 06 42 27.6 -0.4
BLO *e*PKPdf PKiKP 06 46 32.5 +1.2
BLO *e*PKKPbc PKKPbc 06 57 37.1 +1.0
MCWV Mont Chateau 109.58 3 PFAKE 06 46 40.0 +8.6
MCWV LR LR
comp=Z,1148µm,20.0s,MS8.4
Z21A St. Cloud Mine 109.58 27 ⇓P Pdif 06 42 27.7 -0.6
baz=109,SNR=14
217A Green Valley 109.61 31 ⇓P Pdif 06 42 28.9 +0.5
baz=109
X25A Clemmons Ranch 109.61 24 ⇓P Pdif 06 42 28.8 +0.3
baz=109

Y23A	Lovelace Mesa,	109.64	26	⇓P		Pdif	06 42 28.1	-0.5
	baz=109,SNR=5.8							
218A	Dragoon	109.77	30	⇓P		Pdif	06 42 29.6	+0.4
	baz=110							
120A	U Bar Ranch, L	109.86	28	⇑P		Pdif	06 42 29.6	+0.1
	baz=110							
Y24A	Capitan	109.88	25	⇑P		Pdif	06 42 29.6	0.0
	baz=110,SNR=5.3							
X26A	CR and CF Fran	109.89	24	⇑P		Pdif	06 42 30.4	+0.7
	baz=110							
CCM	Cathedral Cave	109.90	12	*e*P		Pdif	06 42 29.9	+0.1
CCM				*e*			06 46 31.8	
CCM				*e*			06 57 35.8	
CCM				MLR		MLR		
	comp=Z,239μm,19.0s,MS7.8							
Z22A	Elephant Butte	109.90	27	⇓P		Pdif	06 42 30.6	+0.8
	baz=110							
SYO	Syowa Base	110.02	200‖	*e*Pdiff		Pdif	06 42 30.4	+0.1
SYO	Syowa Base	110.02	200‖	*i*P		PP	06 46 50.9	-14
X27A	F and S Farms,	110.05	23	⇓P		Pdif	06 42 30.7	+0.3
	baz=110							
219A	White Tail Can	110.08	29	⇑P		Pdif	06 42 30.9	+0.4
	baz=110							
Y25A	Mesa, Roswell	110.15	25	⇓P		Pdif	06 42 31.1	+0.3
	baz=110							
121A	Cookes Peak, D	110.21	28	⇓P		Pdif	06 42 31.4	+0.3
	baz=110							
318A	Bisbee	110.25	30	⇑P		Pdif	06 42 31.8	+0.4
	baz=110							
AMTX	Amarillo	110.29	22	*e*Pdif		Pdif	06 42 37.0	+5.5
AMTX				LR		LR		
	comp=Z,574μm,21.0s,MS8.1							
122A	Conniff Cattle	110.38	27	⇓P		Pdif	06 42 32.2	+0.3
	baz=110							
Y26A	Elida	110.45	24	⇑P		Pdif	06 42 32.5	+0.2
	baz=110							
220A	Playas Peak, P	110.46	29	⇑P		Pdif	06 42 32.5	+0.2
	baz=110							
WCI	Wyandotte Cave	110.48	8	*e*P		Pdif	06 42 35.7	+3.4
WCI				*e*			06 46 33.0	
WCI				MLR		MLR		
	comp=Z,106μm,19.0s,MS7.4							
WCI	Wyandotte Cave	110.48	8	*e*Pdif		Pdif	06 42 35.7	+3.4
WCI				*e*PKPdf		PKiKP	06 46 33.0	-0.2
WCI				*e*SP		SP	06 56 46.4	+10
WCI				*e*PKKPbc		PKKPbc	06 57 32.4	-0.6
WCI				LR		LR		
	comp=Z,106μm,19.0s,MS7.4							
SIUC	Southern Illin	110.57	11	*e*Pdif		Pdif	06 42 41.7	+8.9
319A	Douglas	110.61	30	⇓P		Pdif	06 42 32.9	0.0
	baz=110							
221A	Mesquite Ranch	110.68	28	⇓P		Pdif	06 42 33.8	+0.6
	baz=110							
Y27A	Causey	110.72	23	⇓P		Pdif	06 42 33.6	+0.2
	baz=110							
Z25A	Roswell	110.72	25	⇑P		Pdif	06 42 32.7	-0.7
	baz=110,SNR=10							
MSTX	Muleshoe	110.77	23	⇓P		Pdif	06 42 33.4	-0.2
	baz=110							
222A	Williams Famil	110.86	27	⇓P		Pdif	06 42 33.9	-0.2
	baz=111							
320A	Kipp Ranch, An	110.96	29	⇑P		Pdif	06 42 35.1	+0.6
	baz=111							
124A	Stringfield Ra	110.97	26	⇓P		Pdif	06 42 34.6	+0.1
	baz=111,SNR=10.0							
Z26A	Caprock	110.99	24	⇑P		Pdif	06 42 35.3	+0.7
	baz=111							
223A	Chaparral, Ant	111.21	27	⇓P		Pdif	06 42 36.2	+0.6
	baz=111							
Z27A	Tatum	111.22	24	⇑P		Pdif	06 42 36.1	+0.5
	baz=111							
125A	Gardner Draw,	111.30	25	⇓P		Pdif	06 42 36.1	+0.1
	baz=111							
WMOK	Wichita Mounta	111.30	19	*e*P		Pdif	06 42 40.1	+4.1
WMOK				MLR		MLR		
	comp=Z,1052μm,20.0s,MS8.4							
224A	Corundas Mount	111.50	26	⇑P		Pdif	06 42 36.6	-0.3
	baz=111,SNR=11							
PARMO	Parma	111.51	11	*e*PKPdf		PKiKP	06 46 35.7	+0.5
126A	Clayton Basin,	111.54	25	⇓P		Pdif	06 42 37.3	+0.2
	baz=111							
225A	Deer Hill, Car	111.73	26	⇓P		Pdif	06 42 37.8	-0.2
	baz=112							
127A	Arkansas Junct	111.75	24	⇑P		Pdif	06 42 38.0	0.0
	baz=112							
GDL2	Guadalupe Moun	111.82	25	*e*Pdif		Pdif	06 42 42.4	+4.1
GDL2				*e*PKPdf		PKiKP	06 46 39.0	+3.1
MNTX	Cornudas Mount	111.89	26	*e*Pdif		Pdif	06 42 37.9	-0.7
MNTX				*e*PKPdf		PKiKP	06 46 39.2	+3.2
MNTX				LR		LR		
	comp=Z,391μm,20.0s,MS8.0							
CLNB	Carlsbad	111.94	25	*e*PKPdf		PKiKP	06 46 37.3	+1.2
CLNB				*e*PP		PP	06 47 22.1	+4.0
BLA	Blacksburg	111.99	3	PFAKE			06 46 50.0	+14
BLA				LR		LR		
	comp=Z,904μm,20.0s,MS8.4							
226A	Malaga, Loving	112.04	25	⇑P		Pdif	06 42 39.2	-0.1
	baz=112							
324A	Moseley Ranch,	112.08	26	⇓P		Pdif	06 42 39.4	0.0
	baz=112							
GNAR	Gosnell	112.15	12	PKP		PKiKP	06 46 37.8	+1.4
HALT	Halls	112.32	11	*e*PKPdf		PKiKP	06 46 38.5	+1.8
325A	Bean Ranch, Si	112.34	26	⇑P		Pdif	06 42 41.1	+0.5
	baz=112,SNR=12							
WVT	Waverly	112.34	10	*e*Pdif		Pdif	06 42 35.6	-5.0
WVT				*e*PKPdf		PKiKP	06 46 39.3	+2.5
WVT				*e*PKKPbc		PKKPbc	06 57 28.1	+1.3
WVT				LR		LR		
	comp=Z,484μm,19.0s,MS8.1							
227A	Bennet, Jal	112.37	24	⇑P		Pdif	06 42 40.8	+0.1
	baz=112							
326A	Caldwell Ranch	112.75	25	⇓P		Pdif	06 42 42.6	+0.1
	baz=112							
MIAR	Mount Ida	112.82	15	PKIKP		PKiKP	06 46 38.6	+0.9
MIAR	Mount Ida	112.82	15	*e*PKPdf		PKiKP	06 46 39.6	+1.9
MIAR				LR		LR		
	comp=Z,682μm,21.0s,MS8.2							
425A	Indio Mountain	112.86	26	⇑P		Pdif	06 42 43.4	+0.5
	baz=113,SNR=12							
327A	Balmorhea Ranc	112.88	25	⇓P		Pdif	06 42 43.5	+0.5
	baz=113							
328A	Wristen Ranch,	113.11	24	⇓P		Pdif	06 42 44.5	+0.4
	baz=113							
PPT	Papeete	113.21	97	*e*Pdif		Pdif	06 42 43.4	-1.1
	comp=Z,13μm,28.8s							
PPT	Papeete	113.21	97	*e*PKiKP		PKiKP	06 46 40.2	+1.5
	comp=Z,176nm,1.8s							
PPT	Papeete	113.21	97	*e*PP		PP	06 47 27.6	-1.3
	comp=Z,29μm,30.2s							
PPT				*e*SKSac		SKSac	06 53 21.9	-2.1
	comp=Z,30μm,27.0s							
PPT	Papeete	113.21	97	*e*PS		PS	06 57 01.4	-3.0
	comp=Z,267μm,26.8s							
PPT				*e*SS		SS	07 03 09.4	-5.4
	comp=Z,264μm,31.0s							
PPT				*e*LQ			07 15 21.7	
	comp=Z,1023μm,39.0s							
PPT				*e*LR		LR	07 20 27.6	
	comp=Z,2040μm,35.8s,baz=308							
PPT	Papeete	113.21	97	PKiKP		PKiKP	06 46 38.2	-0.5
	comp=Z,25nm,0.9s,baz=288,slow=3.2,SNR=3.0							
PPT	Papeete	113.21	97	*e*P		Pdif	06 42 43.4	-1.1
PPT							06 46 38.2	
PPT				*i*			06 46 40.2	
PPT				*e*			06 47 27.6	
PPT				*e*			06 53 21.9	
PPT				*e*PS		PS	06 57 01.4	-3.0
PPT				*e*SS		SS	07 03 09.4	-5.4
PPT				MLR		MLR		
	comp=Z,9μm,20.0s							
PPT	Papeete	113.21	97	*e*Pdif		Pdif	06 42 43.4	-1.1
PPT				PKPdf		PKiKP	06 46 38.2	-0.5
PPT				*e*PKiKP		PKiKP	06 46 40.2	+1.5
PPT				*e*PP		PP	06 47 27.6	-1.3
PPT				*e*SKSac		SKSac	06 53 21.9	-2.1
PPT				*e*PS		PS	06 57 01.4	-3.0
PPT				*e*SS		SS	07 03 09.4	-5.4
PPT				*e*LQ			07 15 21.7	
PPT				LR		LR		
	comp=Z,9μm,20.0s							
PAE	Paea	113.25	97	*e*PKiKP		PKiKP	06 46 39.9	+1.1
	comp=Z,54nm,1.5s							
TKL	Tuckaleechee C	113.29	6	PKiKP		PKiKP	06 46 39.4	+0.8
	comp=Z,22nm,0.6s,baz=171,slow=2.1,SNR=7.9							
TKL	Tuckaleechee C	113.29	6	*e*P		Pdif	06 42 41.2	-3.7
TKL				*e*			06 46 39.4	
				e			06 46 40.7	
426A	McDonald Obser	113.32	26	⇓P		Pdif	06 42 45.3	+0.3
	baz=113							
427A	Hayter Ranch,	113.39	25	⇑P		Pdif	06 42 46.1	+0.9
	baz=113							
TIAR	Tiarei	113.40	97	*e*PKiKP		PKiKP	06 46 40.6	+1.5
	comp=Z,136nm,1.2s							
CPCT	Cooper Cave	113.42	7	*e*PKPdf		PKiKP	06 46 39.0	+0.2
PMOR	Pomariorio Ree	113.48	94	*e*PKiKP		PKiKP	06 46 40.9	+1.6
	comp=Z,397nm,1.3s							
SWET	Sewanee	113.49	8	*e*PKPdf		PKiKP	06 46 38.2	-0.8
428A	Kincaid Ranch,	113.75	24	⇓P		Pdif	06 42 47.2	+0.3
	baz=114							
526A	Mary Lane Ranc	113.84	26	⇓P		Pdif	06 42 47.8	+0.5
	baz=114							
527A	Woodward Ranch	113.94	25	⇑P		Pdif	06 42 48.3	+0.6
	baz=114							
CNNC	Cliffs of the	114.04	1	PFAKE			06 46 50.0	+10
CNNC				LR		LR		
	comp=Z,685μm,22.0s,MS8.2							
528A	Cox Ranch, San	114.23	25	⇑P		Pdif	06 42 49.2	+0.2
	baz=114							
SHEL	Horse Pasture	114.25	265	PFAKE			06 46 50.0	+9.3
SHEL				LR		LR		
	comp=Z,162μm,20.0s,MS7.6							
626A	Big Bend Ranch	114.28	26	⇓P		Pdif	06 42 49.6	+0.3
	baz=114							
MEH	Mehetia	114.63	97	*e*PKiKP		PKiKP	06 46 42.3	+0.8
	comp=Z,92nm,1.1s							
627A	Terlingua Ranc	114.65	26	⇑P		Pdif	06 42 50.8	-0.1
	baz=114							
TXAR	Lajitas Array	114.66	26	Pdiff		Pdif	06 42 52.7	+1.8
	comp=Z,1.8nm,1.1s,baz=11,slow=1.3,SNR=8.8							
TXAR				PKP		PKiKP	06 46 39.8	-1.6
	comp=Z,16nm,0.6s,baz=17,slow=0.3,SNR=35							
TXAR				PP		PP	06 47 51.8	+14
	comp=Z,58nm,1.0s,baz=335,slow=4.0,SNR=5.4							
TXAR				PKKPbc		PKKPbc	06 57 19.6	+0.7
	comp=Z,28nm,0.6s,baz=168,slow=7.5,SNR=59							
TXAR				PKKP		PKKPdf	06 57 41.1	+0.1
	comp=Z,48nm,0.9s,baz=128,slow=4.8,SNR=6.0							
TXAR	Lajitas Array	114.66	26	P		Pdif	06 42 52.7	+1.8
TXAR							06 46 39.8	
TXAR							06 57 19.7	
TXAR	Lajitas Array	114.66	26	Pdif		Pdif	06 42 52.7	+1.8
TXAR				PKP		PKiKP	06 46 39.8	-1.6
TXAR				PP		PP	06 47 51.8	+14
TXAR				PKKPbc		PKKPbc	06 57 19.6	+0.7
TXAR				PKKP		PKKPdf	06 57 41.1	+0.1
628A	Black Gap, Mar	114.81	25	⇑P		Pdif	06 42 52.0	+0.4
	baz=115,SNR=5.1							
SBA	Scott Base	114.86	168	*e*Pdif		Pdif	06 42 57.4	+5.6
SBA				*e*PKPdf		PKiKP	06 46 43.9	+3.7
SBA				LR		LR		
	comp=Z,360μm,19.0s,MS8.0							
JSC	Jenkinsville	114.86	4	PKIKP		PKiKP	06 46 42.7	+1.1
JSC	Jenkinsville	114.86	4	*e*PKPdf		PKiKP	06 46 42.9	+1.3
NATX	Nacogdoches	115.22	17	*e*PKPdf		PKiKP	06 46 40.4	-2.0
NATX				LR		LR		
	comp=Z,740μm,19.0s,MS8.3							
LRAL	Lakeview Retre	115.50	10	*e*PKPdf		PKPdf	06 46 44.8	+1.9
LRAL				LR		LR		
	comp=Z,680μm,19.0s,MS8.3							
GOGA	Godfrey	115.55	6	PKIKP		PKPdf	06 46 42.6	-0.4
GOGA				MLR		MLR		
	comp=Z,936μm,22.0s,MS8.3							
VBMS	Vicksburg	115.70	13	*e*PKPdf		PKPdf	06 46 44.6	+1.2
VBMS				LR		LR		
	comp=Z,1254μm,19.0s,MS8.5							
BBSR	BB Station	115.91	349	PFAKE			06 46 50.0	+6.3
BBSR				LR		LR		
	comp=Z,537μm,22.0s,MS8.1							
NHSC	New Hope	116.09	3	PFAKE			06 47 00.0	+16
NHSC				LR		LR		
	comp=Z,826μm,20.0s,MS8.3							
LPIG	La Paz	116.36	34	PKP		PKPdf	06 46 44.6	-0.2
	comp=Z,51nm,0.8s,baz=340,slow=5.3,SNR=7.6							
LPIG				PP		PP	06 47 55.0	+5.3
	comp=Z,92nm,1.0s,baz=221,slow=4.9,SNR=3.3							
LPIG				PKKP		PKKPdf	06 57 36.9	-0.9
	comp=Z,72nm,1.1s,baz=19,slow=2.6,SNR=5.3							
HKT	Hockley	116.63	19	PKIKP		PKPdf	06 46 46.7	+1.5
HKT	Hockley	116.63	19	*e*PKPdf		PKPdf	06 46 47.4	+2.3
HKT				LR		LR		
	comp=Z,137μm,20.0s,MS7.6							
TAOE	Nuku Hiva Isla	117.17	84	*e*PKiKP		PKiKP	06 46 49.0	+2.5
	comp=Z,272nm,1.0s							
TAOE				*e*SKSac		SKSac	06 53 38.4	-0.9
	comp=Z,21μm,27.3s							
TAOE	Nuku Hiva Isla	117.17	84	*e*PS		PS	06 57 34.2	-6.4
	comp=Z,139μm,26.7s							
TAOE				*e*SS		SS	07 04 01.7	-5.0
	comp=Z,185μm,29.9s							
TAOE				*e*LQ			07 17 09.1	
	comp=Z,432μm,37.3s							
TAOE				*e*LR		LR	07 21 51.3	
	comp=Z,597μm,28.0s,baz=311							
TAOE	Nuku Hiva Isla	117.17	84	*e*PKiKP		PKiKP	06 46 49.0	+2.5
TAOE				*e*SKSac		SKSac	06 53 38.4	-0.9
TAOE				*e*PS		PS	06 57 34.2	-6.4
TAOE				*e*SS		SS	07 04 01.7	-5.0
TAOE				*e*LQ			07 17 09.1	
BRAL	Brewton	117.48	10	PKPdf		PKPdf	06 46 47.5	+0.7
BRAL				LR		LR		
	comp=Z,537μm,19.0s,MS8.2							
KVTX	Kingsville	118.29	21	*e*PKPdf		PKPdf	06 46 48.7	+0.3
KVTX				LR		LR		
	comp=Z,745μm,19.0s,MS8.3							
MAIG	Mazatlaan	118.96	32	*i*P		PKPdf	06 46 53.2	+3.4
NVL	N'lazarevskaya	119.48	202	*e*P		Pdif	06 43 07.8	-4.5
NVL				*i*			06 46 46.0	
NVL				*e*PPP			06 50 48.0	
NVL				*e*SP		SP	06 57 52.4	-5.6
NVL				*e*			07 04 48.0	
NVL				pmax		pmax		
	comp=Z,7μm,17.8s							
NVL				MLR		MLR		
	comp=Z,369μm,26.0s,MS7.9							
MAIT	Maitri	119.51	202	*e*PKPab		Pdif	06 43 14.1	+1.6
MAIT				*e*E			06 46 45.7	
MAIT				*e*EPP			06 48 09.7	
MAIT	Maitri	119.51	202	*e*PKPab		SP	06 57 57.2	-1.1
QSPA	South Pole Qui	120.84	180	PKP		PKPdf	06 46 50.9	-0.8
	comp=Z,322nm,0.9s,baz=287,slow=1.2,SNR=84							
QSPA				PP		PP	06 48 17.1	-3.6
	comp=Z,260nm,1.1s,baz=308,slow=7.0,SNR=3.4							
DWPF	Disney	120.98	5	*e*PKPdf		PKPdf	06 46 56.0	+2.4
DWPF				*e*PP		PP	06 48 22.0	+0.9
DWPF				LR		LR		
	comp=Z,275μm,20.0s,MS7.9							
CJM	Chamela	122.80	32	*i*P		PKPdf	06 46 59.2	+1.9
MOIG	Morelia	124.31	28	*i*P		PKPdf	06 47 01.6	+1.5
PTVM	Pico Tres Padr	125.20	26	*i*P		PKPdf	06 47 03.4	+1.6
IIO	Organos	125.35	26	*i*P		PKPdf	06 47 04.3	+2.2
PBVM	Pinon	125.35	26	*i*P		PKPdf	06 47 04.8	+2.7
UNM	Universidad Na	125.41	26	*i*PKIKP		PKPdf	06 47 03.7	+1.4
PPM	Popocatepetl	125.86	26	*i*PKIKP		PKPdf	06 47 04.4	+1.3
YAIG	Yautepec	125.88	26	*i*P		PKPdf	06 47 05.5	+2.3
ZIIG	Zihuatanejo	126.04	30	*i*P		PKPdf	06 47 04.6	+1.1
LVIG	Laguna Verde	126.05	23	*i*P		PKPdf	06 47 04.6	+1.1
PLIG	Platanillo	126.14	27	*i*P		PKPdf	06 47 01.7	-1.9
CAIG	El Cayaco	127.04	29	*i*P		PKPdf	06 47 04.3	-1.2
ACX	Acapulco	127.37	28	*i*P		PKPdf	06 47 09.1	+3.0
GRTK	Grand Turk	127.46	354	*e*PKPdf		PKPdf	06 47 07.6	+1.5
GRTK				LR		LR		
	comp=Z,325μm,20.0s,MS8.0							
RKT	Rikitea	127.96	96	*e*PKIKP		PKPdf	06 47 09.6	+2.7
	comp=Z,441nm,1.3s							
TUIG	Tuzandepetl	128.28	22	*e*P		PKPdf	06 47 09.4	+1.6
OXX	Oaxaca	128.38	25	*i*P		PKPdf	06 47 10.9	+3.0
VHO	Vista Hermosa	128.39	25	*i*P		PKPdf	06 47 09.3	+1.4
PNIG	Pinotepa	128.49	27	*i*P		PKPdf	06 47 10.2	+2.0
CMIG	Matias Romero	129.01	23	PKP		PKPdf	06 47 08.5	-0.7
	comp=Z,56nm,1.0s,baz=326,slow=2.3,SNR=29							
CMIG				PP		PP	06 49 18.6	+3.5
	comp=Z,53nm,0.9s,baz=336,slow=13,SNR=1.8							
GTBY	Guantanamo Bay	129.28	358	*e*PKPdf		PKPdf	06 47 10.8	+1.2
GTBY				*e*PP		PP	06 49 18.9	+2.2
GTBY				LR		LR		
	comp=Z,554μm,22.0s,MS8.2							
ANWB	Willy Bob	129.49	342	*e*PKPdf		PKPdf	06 47 09.7	-0.4
ANWB				*e*PP		PP	06 49 18.3	+0.1
ANWB				LR		LR		
	comp=Z,322μm,20.0s,MS8.0							
HUIG	Huatulco	129.81	25	*i*P		PKPdf	06 47 09.6	-1.1
CBYP	Canovanas	129.87	347	*e*PKPdf		PKPdf	06 47 12.9	+2.1
CBYP				*e*PP		PP	06 49 20.8	+0.2
AGPR	Aguadilla, PR	129.91	348	*e*PKPdf		PKPdf	06 47 11.6	+0.7
MTP	Monte Pirata	129.98	346	*e*PKPdf		PKPdf	06 47 08.1	-2.9
SDDR	Presa de Saban	129.98	353	*e*PKPdf		PKPdf	06 47 10.0	-1.0
SDDR				LR		LR		
	comp=Z,549μm,21.0s,MS8.2							
SJG	San Juan	130.08	347	PKP		PKPdf	06 47 10.1	-1.1
	comp=Z,54nm,0.7s,baz=71,slow=1.6,SNR=5.5							
SJG				PP		PP	06 49 30.0	+8.1
	comp=Z,190nm,0.7s,baz=343,slow=4.8,SNR=12							
SJG	San Juan	130.08	347	PKIKP		PKPdf	06 47 10.1	-1.1
SJG							06 49 30.0	
SJG				pmax		pmax		
	comp=Z,54nm,0.7s							
SJG				pmax		pmax		
	comp=Z,190nm,0.7s							
SJG	San Juan	130.08	347	*e*PKPdf		PKPdf	06 47 10.5	-0.7
SJG				LR		LR		
	comp=Z,773μm,20.0s,MS8.4							
BPA	Boggy Peak	130.10	341	*e*P		PKPdf	06 47 11.6	+0.4
BPA	Boggy Peak	130.10	341	*e*P		PKPdf	06 47 11.6	+0.4
CRPR	Cabo Rojo, PR	130.36	348	*e*PKPdf		PKPdf	06 47 12.0	+0.3
ICM	Isla Caja Muer	130.37	347	*e*PKPdf		PKPdf	06 47 11.2	-0.5
ICM				*e*PP		PP	06 49 18.8	-5.0
CCIG	Comitan	130.62	20	*i*P		PKPdf	06 47 13.1	+0.8
LZG	Guadaloupe-1	130.94	341	*e*P		PKPdf	06 47 15.6	+2.8
MTDJ	Mount Denham	130.99	1	*e*PKPdf		PKPdf	06 47 13.6	+0.7
MTDJ				LR		LR		
	comp=Z,389μm,20.0s,MS8.1							
SCG	Saint Claude	131.02	341	*e*P		PKPdf	06 47 16.6	+3.6
PHG	Guadaloupe-2	131.03	341	*e*P		PKPdf	06 47 16.4	+3.4
HMG	Houelmont	131.07	341	*e*P		PKPdf	06 47 16.1	+2.9
CMJ	Castle Mountai	131.09	360‖	*e*P		PKPdf	06 47 15.5	+2.4
STH	Stony Hill	131.14	0‖	*e*P		PKPdf	06 47 15.6	+2.4
STH				*i*S		SKPdf	06 50 43.9	-5.0
GWJ	Greenwich	131.15	0‖	*e*P		PKPdf	06 47 16.0	+2.8
HOJ	Hope	131.22	0‖	*e*P		PKPdf	06 47 14.3	+0.9
MCJ	Malvern	131.28	1‖	*e*P		PKPdf	06 47 11.3	-2.2
MDN	Morne-Daniel	131.62	340	*e*P		PKPdf	06 47 14.8	+0.7
MDN	Morne-Daniel	131.62	340	*e*P		PKPdf	06 47 14.8	+0.7
DSTT	Stowe	131.66	340	*e*P		PKPdf	06 47 20.8	+6.5
DSTT	Stowe	131.66	340	*e*		PKPdf	06 47 20.8	+6.5
DPMT	Pointe Michel	131.67	340	*e*P		PKPdf	06 47 24.9	+11
DPMT	Pointe Michel	131.67	340	*e*		PKPdf	06 47 24.9	+11
FDF	Fort de France	132.10	340	*e*PKIKP		PKPdf	06 47 16.5	+1.4
FDF				MLR		MLR		
	comp=Z,362μm,21.0s,MS8.1							
FDF	Fort de France	132.10	340	*e*P		PKPdf	06 47 16.3	+1.2
MVM	Montagne Vaucl	132.19	339	*e*P		PKPdf	06 47 24.9	+10
BIM	Bigot	132.28	339	*e*P		PKPdf	06 47 18.6	+3.2
APG	El Apazote	132.31	18	PKP		PKPdf	06 47 14.2	-1.3
	comp=Z,14nm,1.1s,baz=2,1,slow=2.7,SNR=6.0							
TGUH	Tegucigalpa,Un	133.99	14	*e*PKPpre			06 47 09.1	
TGUH				LR		LR		
	comp=Z,286μm,19.0s,MS8.0							
RCBR	Riachuelo	134.33	295	*e*PKPdf		PKPdf	06 47 20.7	+1.4
RCBR				*e*PP		PP	06 49 52.8	+2.1
RCBR				LR		LR		
	comp=Z,300μm,19.0s,MS8.0							
GRSS	Sisters	134.54	339	*e*P		PKPdf	06 47 21.5	+1.9
GRSS	Sisters	134.54	339	*e*P		PKPdf	06 47 21.5	+1.9
GRHS	Sauteurs	134.62	339	*e*P		PKPdf	06 47 20.1	+0.3
GRHS	Sauteurs	134.62	339	*e*P		PKPdf	06 47 20.1	+0.3
GRW	Mount Saint Ca	134.68	339	*e*P		PKPdf	06 47 23.1	+3.1
GRW	Mount Saint Ca	134.68	339	*e*P		PKPdf	06 47 23.1	+3.1
GRGR	Grenville	134.71	339	*e*PKPdf		PKPdf	06 47 17.9	-2.1
GRGR				LR		LR		
	comp=Z,367μm,22.0s,MS8.1							
BOT	Bacolet	135.32	338	*e*P		PKPdf	06 47 22.5	+1.3
BOT	Bacolet	135.32	338	*e*P		PKPdf	06 47 22.5	+1.3
TPR	Prospect	135.32	338	*e*P		PKPdf	06 47 24.9	+3.7
TPR	Prospect	135.32	338	*e*P		PKPdf	06 47 24.9	+3.7
TRN	Trinidad (W)	136.03	338	*e*PKIKP		PKPdf	06 47 26.1	+3.6
TRN	Trinidad (W)	136.03	338	*e*P		PKPdf	06 47 26.1	+3.6
TBH	Brigand Hill	136.07	338	*e*PKIKP		PKPdf	06 47 33.7	+11
TBH	Brigand Hill	136.07	338	*e*P		PKPdf	06 47 33.7	+11
TPP	Pointe-a-Pierr	136.35	338	*e*PKIKP		PKPdf	06 47 20.4	-2.7
TPP	Pointe-a-Pierr	136.35	338	*e*P		PKPdf	06 47 20.4	-2.7
PCR

LPAZ	**La Paz**	**163.37**	**330**	PKIKP	PKPdf	06 48 03.1	-0.8
LPAZ	**La Paz**	**163.37**	**330**	*e*PKPdf	PKPdf	06 48 03.4	-0.6
LPAZ				LR	LR		
	comp=Z,397μm,22.0s						
LPA	**La Plata**	**163.85**	**251**	*de*PKP	PKPdf	06 48 05.0	+1.1
LPA				*ep*PKP	pPKPdf	06 48 10.0	+3.5
LPA				*es*PKP		06 48 13.0	
LPA				*e*PP	PP	06 52 41.0	-1.5
LPA				*e*SKKS	SKKSac	06 59 24.0	-6.6
COYC	**Coyhaique**	**165.09**	**192**	⇑*e*P	PKPdf	06 48 05.4	+0.8
TRQA	**Tornquist**	**166.07**	**236**	*e*PKPdf	PKPdf	06 48 04.4	-1.2
TRQA				LR	LR		
	comp=Z,520μm,21.0s						
LVC	**Limon Verde**	**169.13**	**319**	PKP	PKPdf	06 48 08.3	0.0
	comp=Z,33nm,1.0s,baz=250,slow=0.9,SNR=7.4						
LVC				PP	PP	06 53 05.4	-3.4
	comp=Z,38nm,1.1s,baz=302,slow=6.4,SNR=1.6						
LVC	**Limon Verde**	**169.13**	**319**	PKP	PKPdf	06 48 08.3	0.0
LVC				PP	PP	06 53 05.4	-3.4
PLCA	**Paso Flores**	**169.17**	**205**	PKP	PKPdf	06 48 07.3	-0.5
	comp=Z,207nm,1.2s,baz=191,slow=1.3,SNR=31						
PLCA				PP	PP	06 53 04.7	-3.9
	comp=Z,62nm,1.0s,baz=219,slow=3.7,SNR=1.9						
PLCA	**Paso Flores**	**169.17**	**205**	PKIKP	PKPdf	06 48 07.3	-0.5
PLCA						06 53 04.7	
PLCA				pmax	pmax		
	comp=Z,207nm,1.2s						
PLCA				pmax	pmax		
	comp=Z,62nm,1.0s						
PLCA	**Paso Flores**	**169.17**	**205**	*e*PKPdf	PKPdf	06 48 07.6	-0.1
PLCA				*e*PP	PP	06 53 07.3	-1.3
PLCA				LR	LR		
	comp=Z,259μm,19.0s						
MECH	**Mejillones**	**170.35**	**324**	⇓*i*P	PKPdf	06 48 12.3	+3.3
CFAA	**Coronel Fontan**	**172.80**	**264**	PKP	PKPdf	06 48 08.6	-1.4
	comp=Z,32nm,1.2s,baz=281,slow=1.8,SNR=29						
CFAA				PP	PP	06 53 28.7	+0.4
	comp=Z,5.2nm,0.9s,baz=170,slow=9.6,SNR=1.8						
CFAA	**Coronel Fontan**	**172.80**	**264**	PKP	PKPdf	06 48 08.6	-1.4
CFAA				PP	PP	06 53 28.7	+0.4
CCHI	**Chillan**	**173.30**	**213**	⇑*i*P	PKPdf	06 48 10.5	+0.5
LMEL	**Las Melosas**	**173.90**	**241**	⇑*i*P	PKPdf	06 48 11.3	+0.9
NICH	**Los Niches**	**174.00**	**228**	⇑*i*P	PKPdf	06 48 10.5	+0.2
FCH	**Farellones**	**174.17**	**246**	⇑*i*P	PKPdf	06 48 13.0	+2.5
CLCH	**Cerro Calan**	**174.34**	**244**	⇑*i*P	PKPdf	06 48 11.0	+0.5
LCO	**Las Campanas**	**174.47**	**290**	*e*PKPdf	PKPdf	06 48 11.0	+0.3
LCO				*e*PP	PP	06 53 37.8	+1.5
LCO				LR	LR		
	comp=Z,347μm,20.0s						
LCO	**Las Campanas**	**174.47**	**290**	⇑*i*P	PKPdf	06 48 12.0	+1.3
TLL	**Tololo Astrono**	**174.90**	**279**	⇑*i*P	PKPdf	06 48 11.5	+0.8
CMCH	**Combarbala**	**175.17**	**267**	*e*P	PKPdf	06 48 10.7	-0.1

DJA 12 06:28:32.0±0.55N×121.91E, h7km, MLv4.4/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.44**	**216**	P	Pg	06 28 41.2	+0.6
APSI				S	Sg	06 28 48.9	+2.5
LUWI	**Luwuk**	**0.99**	**120**	P	Pg	06 28 50.7	-0.3
LUWI				S	Sg	06 29 04.2	+0.3
MRSI	**Marisa**	**1.02**	**2**	P	Pg	06 28 50.6	-1.0
MRSI				S	Sg	06 29 05.9	+1.0
PCI	**Palu**	**2.10**	**260**	P	Pn	06 29 09.4	+1.8
TTSI	**Tana Toraja**	**3.24**	**220**	P	Pn	06 29 24.1	+0.8
KDI	**Kendari**	**3.46**	**168**	P	Pn	06 29 25.8	-0.5
LBMI	**Labuha**	**5.59**	**91**	P	Pn	06 30 01.6	+5.9
NLAI	**Namlea**	**5.83**	**117**	P	Pn	06 30 00.0	+1.0

ISCJB 12 06:36:37.0±0.8, 31.36N±0.07×104.1E±0.1, h10km, mb5.4/2, Error ellipse: s-maj=15.6km s-min=5.5km az=36.3
IDC 12 06:36:36.8±2.3, 31.20N×103.38E, h0km, mb5.5/3, mb1 5.8/3, mb1mx5.0/24, mbtmp5.6/3, Error ellipse: s-maj=65.7km s-min=36.7km az=93.0
ISC 12 06:36:39.1±0.7, 31.34N±0.06×103.99E±0.09, h10km, n7, σ1.9 08/9, mb5.4/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**205**	Pg	**Pg**	**06 36 48.2**	**0.0**
CD2				Sg	**Sg**	**06 36 54.1**	**-0.4**
CD2				smax			
	comp=N,829μm,0.9s						
LZH	**Lanzhou**	**4.74**	**359**	*e*P	**Pg**	**06 38 11.0**	**+1.2**
LZH				pP		06 38 13.6	
LZH				sP		06 38 14.8	
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN	**Xi'an**	**4.96**	**56**	Pg	**Pg**	**06 38 14.9**	**+0.9**
XAN				Sg	**Sg**	**06 39 17.0**	**-1.2**
XAN				smax			
	comp=N,9μm,0.8s						
XAN				smax			
	comp=E,5μm,0.9s						
GTA	**Gaotai**	**8.74**	**338**	*e*P	**Pn**	**06 38 43.0**	**-2.5**
GTA				pP		06 38 47.6	
GTA				sP		06 38 50.2	
GTA				pmax	pmax		
	comp=Z,5μm,1.8s						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**06 41 23.6**	**+4.8**
	comp=Z,247nm,0.7s,baz=259,slow=10,SNR=14						
WRA	**Warramunga Arr**	**58.73**	**146**	P	**P**	**06 46 37.7**	**+0.5**
	comp=Z,72nm,0.6s,mb5.9,baz=338,slow=7.9,SNR=17						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**06 48 57.0**	**+0.7**
	comp=Z,9.4nm,0.7s,mb4.9,baz=325,slow=5.0,SNR=5.3						

IDC 12 06:39:27.7±6.0, 29.98N×105.92E, h0km, mb5.4/2, mb1 5.5/4, mb1mx4.8/25, mbtmp5.3/4, ML5.3/1, Error ellipse: s-maj=145.9km s-min=35.0km az=128.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.11**	**211**	Pn	Pn	06 42 34.9	-0.4
	4.6nm,0.3s,baz=6.6,slow=8.3,SNR=7.8						
KSRS	**Korea Array**	**19.74**	**62**	P	Pn	06 43 58.1	-2.3
	8.9nm,0.3s,baz=262,slow=10,SNR=17						
WRA	**Warramunga Arr**	**56.68**	**148**	P	P	06 49 12.9	-0.1
	46nm,0.8s,baz=328,slow=9.0,SNR=4.9						
ASAR	**Alice Springs**	**59.73**	**150**	P	P	06 49 35.0	+0.6
	30nm,1.1s,baz=331,slow=6.7,SNR=2.1						

IDC 12 06:41:05.0±1.3, 35.62N×105.29E, h0km, mb4.8/4, mb1 5.0/4, mb1mx4.6/25, mbtmp4.8/4, Error ellipse: s-maj=86.2km s-min=25.6km az=68.0, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**54.42**	**325**	P	P	06 50 33.3	-0.3
	5.5nm,0.5s,baz=96,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**61.74**	**149**	P	P	06 51 25.0	-0.3
	6.6nm,0.5s,baz=341,slow=7.8,SNR=4.0						
ASAR	**Alice Springs**	**64.89**	**151**	P	P	06 51 46.6	+0.5
	9.6nm,0.8s,baz=340,slow=5.7,SNR=3.5						
YKA	**Yellowknife Ar**	**77.09**	**18**	P	P	06 52 59.9	+0.2
	4.6nm,0.6s,baz=318,slow=4.8,SNR=4.3						

NEIC 12 06:41:26.5±1.5, 31.97N×104.79E, h10km, mb5.2/1, Error ellipse: s-maj=35.5km s-min=15.3km az=81.0
ISCJB 12 06:41:28.5±0.9, 31.84N±0.06×104.1E±0.2, h10km, mb4.8/3, Error ellipse: s-maj=20.3km s-min=8.4km az=9.4
IDC 12 06:41:29.6±2.2, 31.95N×103.96E, h0km, mb4.6/3, mb1 4.8/4, mb1mx4.4/27, mbtmp4.7/4, ML5.2/1, Error ellipse: s-maj=43.0km s-min=33.5km az=22.0
ISC 12 06:41:28.3±2.8, 32.01N±0.08×104.5E±0.5, h10km, n9, σ1.9 19/10, mb4.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.28**	**211**	Pg	**Pg**	**06 41 54.6**	**+1.7**
CD2				Sg	**Sg**	**06 41 59.2**	**-10**
CD2				smax			
	comp=N,343μm,0.9s						
CM31	**Chiang Mai Arr**	**14.41**	**202**	*e*Pn	**Pn**	**06 44 51.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.41**	**202**	Pn	**Pn**	**06 44 51.7**	**-0.6**
	comp=N,3.6nm,0.3s,baz=5.8,slow=8.7,SNR=6.7						
CMAR	**Chiang Mai Arr**	**14.41**	**202**	Pn	**Pn**	**06 44 51.7**	**-0.6**
KSRS	**Korea Array**	**19.96**	**68**	P	**P**	**06 46 07.8**	**+7.3**
	comp=N,19nm,0.8s,baz=252,slow=10,SNR=2.5						
MKAR	**Makanchi Array**	**22.55**	**317**	P	**P**	**06 46 27.9**	**-0.4**
	comp=N,19nm,0.8s,mb4.6,baz=126,slow=9.2,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.07**	**333**	P	**P**	**06 47 03.4**	**+1.6**
	comp=N,13nm,0.6s,mb4.7,baz=124,slow=7.7,SNR=1.8						
KBL	**Kabul**	**29.69**	**285**	P	**P**	**06 47 33.2**	**-1.1**
WRAB	**Tennant Creek**	**59.02**	**147**	*e*P	**P**	**06 51 24.7**	**-3.8**
	comp=N,13nm,0.7s,mb5.1						

ISCJB 12 06:41:54.3±0.5, 31.6N±0.1×104.1E±0.1, h10km, mb5.0/24, Error ellipse: s-maj=19.3km s-min=9.6km az=39.1
IDC 12 06:41:54.6±0.7, 31.70N×104.22E, h0km, mb4.9/20, mb1 5.0/20, mb1mx4.9/33, mbtmp4.9/20, Error ellipse: s-maj=25.2km s-min=16.1km az=40.0
MOS 12 06:41:55.4±1.1, 31.51N×103.92E, h18km, mb4.9/1, Error ellipse: s-maj=18.5km s-min=9.5km az=116.2
NEIC 12 06:41:56.0±0.4, 31.59N×104.03E, h10km, mb5.7/4, Error ellipse: s-maj=13.9km s-min=8.6km az=50.0
ISC 12 06:41:56.4±0.5, 31.8N±0.1×104.2E±0.1, h10km, n39, σ0.9 89/39, mb5.0/24, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.76**	**107**	Pn	**Pn**	**06 43 08.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**14.09**	**201**	Pn	**Pn**	**06 45 10.7**	**-5.5**
	0.8nm,0.3s,baz=9.2,slow=8.5,SNR=2.8						
KSRS	**Korea Array**	**20.29**	**67**	P	**P**	**06 46 30.2**	**-2.1**
	32nm,0.9s,baz=257,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**06 46 53.4**	**-3.1**
	19nm,0.8s,mb4.6,baz=122,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**06 46 53.4**	**-3.1**
ZALV	**Zalesovo Beam**	**26.17**	**334**	P	**P**	**06 47 30.1**	**-0.7**
	29nm,0.8s,mb4.9,baz=131,slow=4.0,SNR=2.0						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**06 47 38.2**	**+1.9**
	31nm,0.8s,mb4.9,baz=123,slow=10,SNR=0.9						
PETK	**Petropavlovsk-**	**43.64**	**45**	P	**P**	**06 50 00.8**	**-0.1**
	6.4nm,1.0s,mb4.3,baz=234,slow=4.8,SNR=2.5						
MOS	**Moscow**	**51.43**	**318**	*e*P	**P**	**06 50 53.7**	**-7.8**
ASF	**Jabal al Asfar**	**56.22**	**290**	P	**P**	**06 51 36.8**	**-0.1**
	8.9nm,0.8s,mb4.8,baz=212,slow=9.5,SNR=2.4						
BRTR	**Keskin Array B**	**56.51**	**299**	P	**P**	**06 51 38.5**	**-0.3**
	5.0nm,0.8s,mb4.6,baz=95,slow=7.8,SNR=3.2						
ARCES	**ARCESS Array B**	**56.70**	**336**	P	**P**	**06 51 40.8**	**+1.1**
	14nm,0.8s,mb5.0,baz=81,slow=7.5,SNR=4.9						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**06 51 40.7**	**-1.4**
	3.9nm,0.4s,mb4.8,baz=68,slow=7.7,SNR=5.6						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**06 51 43.5**	**+1.0**
	12nm,0.5s,mb5.2,baz=110,slow=8.8,SNR=7.6						
SPITS	**Spitsbergen Ar**	**58.72**	**346**	P	**P**	**06 51 54.1**	**+0.3**
	9.3nm,0.7s,mb4.9,baz=123,slow=7.2,SNR=4.2						
WRAB	**Tennant Creek**	**58.97**	**147**	*e*P	**P**	**06 51 56.7**	**+0.5**
	47nm,0.6s,mb5.7						
WRA	**Warramunga Arr**	**58.97**	**147**	P	**P**	**06 51 56.6**	**+0.4**
	29nm,0.6s,mb5.5,baz=338,slow=7.9,SNR=6.2						
ASAR	**Alice Springs**	**62.01**	**149**	P	**P**	**06 52 15.9**	**-1.0**
	5.7nm,0.8s,mb4.8,baz=336,slow=6.1,SNR=2.7						
ASAR	**Alice Springs**	**62.01**	**149**	P	**P**	**06 52 16.0**	**-0.9**
HFS	**Hagfors**	**63.28**	**326**	P	**P**	**06 52 25.0**	**0.0**
	39nm,1.0s,mb5.5,baz=72,slow=4.8,SNR=3.6						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**06 52 30.5**	**-0.2**
	13nm,0.8s,mb5.0,baz=72,slow=6.6,SNR=3.9						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**06 52 30.5**	**-0.2**
IDI	**Anoyia**	**64.52**	**297**	P	**P**	**06 52 32.8**	**-0.8**
	22nm,0.6s,mb5.3,baz=118,slow=14,SNR=4.5						
GERES	**GERESS Array B**	**67.16**	**314**	P	**P**	**06 52 51.4**	**+1.0**
	5.8nm,0.9s,mb4.6,baz=79,slow=5.1,SNR=3.2						
DAVOX	**Davos/Dischmat**	**70.35**	**313**	P	**P**	**06 53 11.0**	**+0.7**
	14nm,0.6s,mb5.1,baz=55,slow=4.4,SNR=5.2						
PGF	**Pioggiola**	**72.80**	**310**	*e*P	**P**	**06 53 25.1**	**-0.1**
LPG	**La Plagne**	**72.87**	**313**	*e*P	**P**	**06 53 26.0**	**+0.5**
	124nm,0.8s,mb5.6						
LPG	**La Plagne**	**72.87**	**313**	*e*P	**P**	**06 53 26.0**	**+0.5**
	62nm,0.8s,mb5.6						
LPL	**La Plagne**	**72.87**	**313**	*e*P	**P**	**06 53 25.8**	**+0.2**
	114nm,0.9s,mb5.5						
LPL	**La Plagne**	**72.87**	**313**	*e*P	**P**	**06 53 25.8**	**+0.2**
	57nm,0.9s,mb5.5						
EKA	**Eskdalemuir Ar**	**73.47**	**325**	P	**P**	**06 53 28.8**	**-0.1**
	12nm,1.2s,mb4.7,baz=61,slow=5.8,SNR=3.0						
LMR	**La Mourre**	**74.05**	**311**	*e*P	**P**	**06 53 31.9**	**-0.6**
SSF	**Saint Saulge**	**74.09**	**316**	*e*P	**P**	**06 53 31.9**	**-0.8**
SMF	**Signal de Mont**	**74.10**	**315**	*e*P	**P**	**06 53 32.9**	**+0.2**
	167nm,1.5s,mb5.5						
SMF	**Signal de Mont**	**74.10**	**315**	*e*P	**P**	**06 53 32.9**	**+0.2**
	84nm,1.5s,mb5.5						
AVF	**Avril sur Loir**	**74.32**	**316**	*e*P	**P**	**06 53 33.3**	**-0.7**
SFJD	**Kangerlussuaq**	**79.70**	**350**	P	**P**	**06 54 04.1**	**+0.2**
	25nm,0.9s,mb5.2,baz=354,slow=6.1,SNR=6.3						
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**06 54 12.7**	**+1.6**
	9.2nm,0.8s,mb4.8,baz=325,slow=5.1,SNR=6.9						
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**06 54 12.7**	**+1.5**

ISCJB 12 06:42:06.5±0.5, 31.29N±0.08×104.7E±0.1, h10km, mb5.1/16, Error ellipse: s-maj=17.0km s-min=10.9km az=164.1
MOS 12 06:42:06.5±1.7, 31.33N×104.86E, h12km, mb4.9/1, Error ellipse: s-maj=19.1km s-min=11.1km az=103.2
IDC 12 06:42:07.1±0.8, 31.28N×104.66E, h0km, mb5.0/12, mb1 5.2/14, mb1mx4.9/32, mbtmp5.1/14, ML4.8/2, Error ellipse: s-maj=33.5km s-min=16.8km az=61.0
NEIC 12 06:42:08.9±0.6, 31.34N×104.68E, h10km, mb5.7/4, Error ellipse: s-maj=16.6km s-min=11.2km az=93.0
ISC 12 06:42:08.7±0.5, 31.32N±0.08×104.7E±0.1, h10km, n25, σ0.9 99/25, mb5.1/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.84**	**204**	Pn	**Pn**	**06 45 24.8**	**-0.1**
	2.0nm,0.3s,baz=8.0,slow=8.9,SNR=5.1						
SONM	**Songino Array**	**16.54**	**4**	Pn	**Pn**	**06 45 59.3**	**-1.3**
	2.0nm,0.3s,baz=185,slow=14,SNR=2.5						
KSRS	**Korea Array**	**20.08**	**66**	P	**P**	**06 46 38.0**	**-4.2**
	32nm,0.7s,baz=256,slow=10,SNR=4.9						
TKM2	**Tokmak 2**	**25.82**	**305**	P	**P**	**06 47 42.3**	**+2.3**
UCH	**Uchtor**	**26.40**	**303**	P	**P**	**06 47 45.2**	**-0.1**
KURK	**Kurchatov**	**27.39**	**323**	P	**P**	**06 47 54.1**	**+0.1**
	11nm,0.5s,mb4.7,baz=125,slow=8.0,SNR=2.5						
PETK	**Petropavlovsk-**	**43.67**	**44**	P	**P**	**06 50 14.5**	**+1.1**
	26nm,0.9s,mb5.0,baz=240,slow=2.9,SNR=5.6						
KEV	**Kevo**	**56.75**	**336**	*e*P	**P**	**06 51 52.5**	**+0.2**
	46nm,0.7s,mb5.6						
BR131	**Keskin Array S**	**57.09**	**300**	P	**P**	**06 51 54.1**	**-1.1**
	5.6nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**57.28**	**336**	P	**P**	**06 51 56.4**	**+0.3**
	25nm,0.8s,mb5.3,baz=74,slow=7.6,SNR=5.6						
SPITS	**Spitsbergen Ar**	**59.25**	**346**	P	**P**	**06 52 08.8**	**-0.9**
	13nm,0.8s,mb5.0,baz=99,slow=12,SNR=4.2						
ASAR	**Alice Springs**	**61.41**	**149**	P	**P**	**06 52 25.6**	**+0.5**
	14nm,0.8s,mb5.2,baz=337,slow=6.4,SNR=5.3						
ASAR	**Alice Springs**	**61.41**	**149**	P	**P**	**06 52 25.6**	**+0.5**
KWP	**Kalwaria Pacla**	**61.94**	**313**	*e*P	**P**	**06 52 29.0**	**+0.5**
	129nm,1.1s,mb6.0						
HFS	**Hagfors**	**63.88**	**326**	P	**P**	**06 52 41.4**	**+0.2**
	17nm,0.5s,mb5.3,baz=101,slow=6.2,SNR=7.5						
NOA	**NORSAR Array B**	**64.76**	**328**	P	**P**	**06 52 46.6**	**-0.3**
	13nm,0.6s,mb5.1,baz=71,slow=6.6,SNR=6.9						
CTA	**Charters Tower**	**64.82**	**136**	P	**P**	**06 52 47.8**	**0.0**
	21nm,0.9s,mb5.2,baz=34,slow=7.3,SNR=5.9						
BRG	**Berggiesshubel**	**66.87**	**316**	*e*P	**P**	**06 52 57.8**	**-3.0**
	23nm,1.0s,mb5.2						
BRG				*e*	pP	06 53 01.0	-3.0
	32nm,1.0s						
BRG	**Berggiesshubel**	**66.87**	**316**	*e*P	**P**	**06 52 57.8**	**-2.9**
BRG				*e*	pP	06 53 01.0	-3.0
BRG				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
KHC	**Kasperske Hory**	**67.74**	**315**	*e*P	**P**	**06 53 05.0**	**-1.3**
KHC	**Kasperske Hory**	**67.74**	**315**	*e*P	**P**	**06 53 05.0**	**-1.3**
GERES	**GERESS Array B**	**67.77**	**314**	P	**P**	**06 53 07.3**	**+0.8**
	comp=Z,4.1nm,0.7s,mb4.6,baz=70,slow=5.6,SNR=5.2						
STKA	**Stephens Creek**	**71.91**	**148**	P	**P**	**06 53 31.0**	**-1.0**
	comp=Z,23nm,1.0s,mb5.1,baz=304,slow=12,SNR=2.8						
EKA	**Eskdalemuir Ar**	**74.07**	**326**	P	**P**	**06 53 45.4**	**+0.8**
	comp=Z,4.7nm,0.7s,mb4.5,baz=71,slow=5.6,SNR=5.2						
YKA	**Yellowknife Ar**	**81.33**	**17**	P	**P**	**06 54 26.3**	**+1.3**
	comp=Z,9.9nm,0.6s,mb4.9,baz=329,slow=5.2,SNR=5.0						

IDC 12 06:42:29.7±0.6, 31.03N×103.79E, h0km, mb4.9/13, mb1 5.0/14, mb1mx4.7/29, mbtmp4.9/14, ML5.2/1, Error ellipse: s-maj=33.1km s-min=13.6km az=58.0
ISCJB 12 06:42:32.1±1.0, 31.03N±0.10×103.9E±0.2, h30km±7km, mb4.9/12, Error ellipse: s-maj=23.5km s-min=13.9km az=154.9
ISC 12 06:42:33.2±1.3, 31.06N±0.09×103.9E±0.1, h22km±9km, n15, σ0.9 69/16, mb4.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.18**	**213**	Pg	**Pb**	**06 42 37.6**	**-0.7**
CD2				Sg	**Sb**	**06 42 42.2**	**+0.5**
CD2				smax			
	comp=E,343μm,0.9s						
CMAR	**Chiang Mai Arr**	**13.32**	**201**	Pn	**Pn**	**06 45 40.8**	**-0.2**
	comp=E,3.9nm,0.3s,baz=8.0,slow=8.4,SNR=5.4						
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**06 47 13.0**	**-0.5**
	comp=E,49nm,0.7s,baz=259,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**22.38**	**319**	P	**P**	**06 47 36.4**	**+1.3**
	comp=E,29nm,0.8s,mb4.8,baz=114,slow=9.6,SNR=3.3						
BVAR	**Borovoye Array**	**32.70**	**322**	P	**P**	**06 49 03.2**	**-0.6**
	comp=E,13nm,0.8s,mb4.9,baz=114,slow=7.8,SNR=2.4						
FINES	**FINESS Array B**	**57.49**	**326**	P	**P**	**06 52 20.6**	**+0.2**
	comp=E,11nm,0.8s,mb4.9,baz=79,slow=7.2,SNR=1.8						
WRA	**Warramunga Arr**	**58.55**	**146**	P	**P**	**06 52 28.2**	**+0.1**
	comp=E,29nm,0.7s,mb5.4,baz=336,slow=7.7,SNR=4.5						
ASAR	**Alice Springs**	**61.56**	**149**	P	**P**	**06 52 49.0**	**+0.3**
	comp=E,5.6nm,0.4s,mb5.0,baz=336,slow=6.5,SNR=6.2						
HFS	**Hagfors**	**63.70**	**326**	P	**P**	**06 53 02.3**	**-0.3**
	comp=E,6.5nm,0.6s,mb4.8,baz=116,slow=6.6,SNR=1.7						
NOA	**NORSAR Array B**	**64.59**	**327**	P	**P**	**06 53 07.5**	**-1.0**
	comp=E,3.0nm,0.6s,mb4.5,baz=73,slow=6.5,SNR=1.5						
NWAO	**Narrogin (SRO)**	**64.88**	**168**	P	**P**	**06 53 10.5**	**-0.2**
	comp=E,18nm,0.8s,mb5.2,baz=328,slow=13,SNR=7.1						
CTA	**Charters Tower**	**65.13**	**136**	P	**P**	**06 53 12.9**	**+0.4**
	comp=E,14nm,0.9s,mb5.0,baz=315,slow=8.6,SNR=2.7						
STKA	**Stephens Creek**	**72.08**	**147**	P	**P**	**06 53 55.6**	**-0.1**
	comp=E,11nm,0.4s,mb5.1,baz=9.6,slow=4.5,SNR=5.6						
EKA	**Eskdalemuir Ar**	**73.88**	**325**	P	**P**	**06 54 05.4**	**-0.7**
	comp=E,1.8nm,0.8s,mb4.1,baz=42,slow=7.6,SNR=2.9						
YKA	**Yellowknife Ar**	**81.79**	**17**	P	**P**	**06 54 51.7**	**+1.7**
	comp=E,6.5nm,0.7s,mb4.7,baz=329,slow=5.0,SNR=3.1						

ISCJB 12 06:43:12.8±0.1, 31.25N±0.02×103.70E±0.03, h10km, mb5.6/126, Error ellipse: s-maj=3.3km s-min=2.8km az=156.5
IDC 12 06:43:12.2±0.3, 31.23N×103.72E, h0km, mb5.4/45, mb1 5.4/47, mb1mx5.4/50, mbtmp5.4/47, ML4.4/1, Error ellipse: s-maj=12.0km s-min=9.0km az=51.0
MOS 12 06:43:13.6±0.9, 31.20N×103.75E, h19km, mb5.8/40, Error ellipse: s-maj=8.5km s-min=4.8km az=120.3
BJI 12 06:43:14.7, 31.27N×103.82E, h14km, mB6.3/5, mb6.2/7, ML5.7/9, Ms6.3/3, Ms7 5.9/4
NEIC 12 06:43:14.4±0.1, 31.21N×103.72E, h10km, mb5.8/62, Error ellipse: s-maj=4.4km s-min=3.5km az=54.0
NEIC Felt at Chengdu.
DJA 12 06:43:25, 31.16N×103.69E, h80km, mb6.1/17
SZGRF 12 06:43:44.0, 33.78N×100.29E, h33km, mb6.2, Qinghai, China
ISC 12 06:43:14.8±0.1, 31.28N±0.02×103.68E±0.03, h10km, n343, σ0.9 96/335, mb5.6/126, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**170**	Pg	**Pg**	**06 43 23.5**	**+1.3**
CD2				Sg	**Sg**	**06 43 29.6**	**+2.4**
CD2				smax			
	comp=E,740μm,1.0s						
LZH	**Lanzhou**	**4.79**	**2**	*e*Pg	**Pg**	**06 44 46.7**	**+0.1**
LZH				Sn	**Sn**	**06 45 28.5**	**+5.9**
LZH				Sg	**Sg**	**06 45 51.6**	**+2.9**
LZH				smax			
	comp=N,23μm,0.8s						
LZH				smax			
	comp=E,34μm,1.1s						
LZH				LR	LR		
	comp=N,994μm,6.0s						
LZH				LR	LR		
	comp=Z,1026μm,6.9s						
ENH	**Enshi**	**5.10**	**100**	*e*Pn	**Pn**	**06 44 27.5**	**-3.7**
XAN	**Xi'an**	**5.21**	**57**	Pn	**Pn**	**06 44 35.7**	**+3.0**
XAN				Sn	**Sn**	**06 45 23.8**	**-8.9**
XAN				Sg	**Sg**	**06 45 51.6**	**-10**
XAN				smax			
	comp=N,10μm,1.2s						
XAN				smax			
	comp=E,6μm,1.1s						
XAN				LR	LR		
	comp=N,667μm,17.2s					

CN2 Changchun 21.23 48 eP **P 06 48 06.4 +5.6**
CN2 esP sP 06 48 13.0 +8.0
CN2 eS **S 06 52 00.3 +3.6**
CN2 pmax pmax
comp=Z,2µm,1.0s,mb6.3
HIA Hailar 21.67 29 eP **P 06 48 05.7 +0.3**
HIA pmax pmax
comp=Z,3µm,1.6s
HIA Hailar 21.67 29 eP **P 06 48 05.7 +0.3**
comp=Z,3µm,1.6s,mb6.5
MK31 Makanchi Array 22.61 319 eP **P 06 48 17.4 +1.9**
MKAR Makanchi Array 22.61 319 P **P 06 48 16.1 +0.6**
comp=Z,227nm,1.1s,mb5.5,baz=128,slow=7.1,SNR=8.1
SMLA Simla 22.67 277 eP **P 06 48 15.1 -1.2**
AGRA Agra 22.80 266 eP **P 06 48 18.9 +1.3**
AGRA AMb AMB 06 48 27.6
comp=Z,693nm,1.1s,mb6.0
BISR Bishrakh 22.89 270 ex x 06 48 13.9
AYAN Aya Nagar 23.18 270 eP **P 06 48 22.4 +0.7**
AYAN AMb AMB 06 48 29.1
comp=Z,351nm,1.3s,mb5.6
SONA Sohna 23.27 269 eP **P 06 48 22.1 -0.5**
SONA AMb AMB 06 48 30.1
comp=Z,331nm,1.3s,mb5.6
TGY Tagaytay City 23.30 133 P **P 06 48 22.5 -0.6**
comp=Z,191nm,0.5s,mb5.8,baz=225,slow=8.6,SNR=3.5
KSH Kashi 23.97 298 P **P 06 48 31.0 +1.7**
KSH ePP 06 49 06.1
KSH ePcP PcP 06 52 12.1 +0.7
KSH eS **S 06 52 44.6 -1.3**
KSH eSS 06 53 38.0
KSH eScP ScP 06 55 49.3 -0.6
KSH ePcS PcS 06 55 51.0 +0.1
NGP Nagpur 24.24 251 ex x 06 48 28.1
NGP AMb AMB 06 48 31.1
comp=Z,450nm,0.8s,mb5.9
MDJ Mudanjiang 24.26 49 P **P 06 48 30.7 -1.2**
MDJ pP 06 48 33.3
MDJ S **S 06 52 49.0 -1.6**
MDJ sS sS 06 52 54.4 -1.2
MDJ ScP ScP 06 55 49.6 -1.0
MDJ PcS PcS 06 55 51.0 -0.5
MDJ pmax pmax
comp=Z,3µm,4.1s
MDJ Mudanjiang 24.26 49 eP **P 06 48 33.1 +1.2**
comp=Z,6µm,2.0s,mb6.7
KHET Khetri 24.40 270 eP **P 06 48 33.1 -0.3**
KHET AMb AMB 06 48 42.6
comp=Z,250nm,1.1s,mb5.6
AAK Ala-Archa 25.80 304 P **P 06 48 49.7 +3.7**
comp=Z,48nm,1.1s,mb5.0,baz=160,slow=18,SNR=4.5
AAK Ala-Archa 25.80 304 eP **P 06 48 48.4 +2.4**
AAK pmax pmax
comp=Z,25nm,1.3s,mb4.6
AJM Ajmer 25.84 267 eP **P 06 48 46.5 0.0**
KULM Kulim 26.01 187 eP **P 06 48 48.2 +0.2**
ZALV Zalesovo Beam 26.41 335 P **P 06 48 52.5 +1.2**
comp=Z,201nm,1.1s,mb5.6,baz=129,slow=12,SNR=2.7
HYB Hyderabad 26.65 245 i P **P 06 48 52.0 -1.8**
KURK Kurchatov 26.89 323 P **P 06 48 56.6 +1.0**
comp=Z,100nm,1.0s,mb5.3,baz=129,slow=9.0,SNR=5.3
KURK Kurchatov 26.89 323 P **P 06 48 56.6 +0.9**
KURK pmax pmax
comp=Z,100nm,1.0s,mb5.3
KURK Kurchatov 26.89 323 eP **P 06 48 57.4 +1.8**
comp=Z,1µm,1.4s,mb6.3
KKM Kota Kinabalu 27.72 152 eP **P 06 49 03.0 -0.5**
MDRS Chennai 28.17 235 eP **P 06 49 07.3 -0.2**
MAJO Matsushiro 29.03 70 eP **P 06 49 13.7 -1.3**
MAT Matsushiro 29.03 70 P **P 06 49 13.2 -1.8**
MJAR Matsushiro Arr 29.03 70 P **P 06 49 13.5 -1.5**
comp=Z,30nm,0.9s,mb5.0,baz=279,slow=9.9,SNR=10
POO Poona 29.79 252 eP **P 06 49 21.6 -0.2**
KSM Kuching 30.30 167 eP **P 06 49 26.7 +0.3**
comp=Z,43nm,0.6s,mb5.4
BHJ Bhuj 31.19 264 eP **P 06 49 34.7 +0.4**
BVAR Borovoye Array 32.43 322 P **P 06 49 45.3 +0.5**
comp=Z,19nm,0.8s,mb5.0,baz=126,slow=7.3,SNR=5.7
BVAR PcP PcP 06 52 32.0 +0.2
comp=Z,27nm,0.8s,baz=108,slow=4.7,SNR=5.2
BRVK Borovoye 32.50 322 eP **P 06 49 45.4 0.0**
ASAJ Asahikawa 33.05 56 P **P 06 49 50.0 -0.3**
comp=Z,55nm,0.7s,mb5.6,baz=77,slow=33,SNR=5.9
ASAJ Asahikawa 33.05 56 P **P 06 49 50.0 -0.3**
ASAJ pmax pmax
comp=Z,55nm,0.7s
ARU Arti 40.07 322 eP **P 06 50 49.8 -0.2**
ARU S **S 06 56 57.6 +1.8**
ARU SS SS 06 59 53.7 +0.8
GUMO Guam 41.66 106 P **P 06 51 00.5 -3.1**
comp=Z,140nm,0.9s,mb5.6,baz=285,slow=4.5,SNR=4.6
TIXI Tiksi 42.65 11 eP **P 06 51 10.6 -0.4**
TIXI Tiksi 42.65 11 eP **P 06 51 09.5 -1.5**
COCO West Island 43.72 190 eP **P 06 51 21.0 +0.8**
PETK Petropavlovsk- 44.32 44 P **P 06 51 24.1 -0.6**
comp=Z,54nm,0.9s,mb5.3,baz=227,slow=4.0,SNR=11
PETK S **S 06 57 53.0 -5.6**
comp=Z,2.3nm,0.5s,baz=345,slow=32,SNR=6.0
PET Petropavlovsk 44.88 45 eP **P 06 51 27.8 -1.4**
PET Petropavlovsk 44.88 45 eP **P 06 51 27.5 -1.7**
comp=Z,57nm,0.8s,mb5.5
UMR Umm Al-Rimmam 47.85 283 eP **P 06 51 53.1 +0.2**
UMR AMb AMB 06 51 54.4
comp=Z,225nm,1.0s,mb6.2
GNI Garni 47.90 298 eP **P 06 51 45.3 -7.8**
GNI pmax pmax
comp=Z,112nm,1.1s
GNI Garni 47.90 298 eP **P 06 51 45.3 -7.8**
comp=Z,112nm,1.1s,mb5.8
MIB Mutribah 48.09 284 eP **P 06 51 54.9 +0.1**
MIB AMb AMB 06 51 56.3
comp=Z,466nm,0.8s,mb6.5
RDF Al-Radifah 48.17 282 eP **P 06 51 56.1 +0.7**
RDF AMb AMB 06 51 57.5
comp=Z,529nm,0.9s,mb6.6
ZEI Tsey 48.17 301 eP **P 06 51 53.2 -2.0**
ZEI pmax pmax
comp=Z,37nm,1.0s,mb5.4
KIV Kislovodsk 48.91 303 eP **P 06 52 02.1 +1.2**
KIV pmax pmax
comp=Z,156nm,1.1s,mb6.0
KIV Kislovodsk 48.91 303 eP **P 06 52 01.8 +0.9**
comp=Z,145nm,1.1s,mb5.9
VRHR Novokhopersk 49.16 313 eP **P 06 52 03.0 +0.4**
VRHR pmax pmax
comp=Z,140nm,1.3s,mb5.8
VRHR pmax pmax
comp=N,220nm,1.4s
VRHR pmax pmax
comp=E,340nm,2.0s
VSR Storozhevoye 50.70 313 eP **P 06 52 14.5 +0.1**
VSR pmax pmax
comp=Z,60nm,1.2s,mb5.4
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,110nm,1.3s
KAKA Kakadu 51.72 143 eP **P 06 52 20.3 -2.1**
comp=E,99nm,0.9s,mb5.7
KAKA Kakadu 51.72 143 eP **P 06 52 19.0 -3.4**
comp=E,335nm,0.9s,mb6.3
FITZ Fitzroy Crossi 53.44 154 eP **P 06 52 34.5 -0.5**
comp=E,96nm,1.2s,mb5.6
FITZ Fitzroy Crossi 53.44 154 P **P 06 52 33.0 -2.1**
comp=E,73nm,1.0s,mb5.5,baz=6.4,slow=6.9,SNR=7.0
LVZ Lovozero 53.54 334 eP **P 06 52 34.5 -0.8**
LVZ pmax pmax
comp=Z,74nm,1.4s,mb5.4
APA Apatity 53.98 333 eP **P 06 52 40.0 +1.5**
APA MLR MLR
comp=Z,270µm,25.0s
SMY Shemya 54.22 45 eP **P 06 52 40.3 -0.1**
SMY pmax pmax
comp=Z,329nm,1.0s,mb6.2
SMY Shemya 54.22 45 eP **P 06 52 40.3 -0.2**
comp=Z,329nm,1.0s,mb6.2
MBWA Marble Bar 54.37 161 eP **P 06 52 41.4 -0.3**
comp=Z,89nm,0.9s,mb5.7
JOF Joensuu 54.69 328 eP **P 06 52 42.1 -1.6**
JOF pmax pmax
comp=Z,96nm,0.9s,mb5.8
JOF Joensuu 54.69 328 ep **P 06 52 42.1 -1.6**
comp=Z,96nm,0.9s,mb5.8
PUL Pulkovo 55.27 324 eP **P 06 52 48.4 +0.4**
PUL pmax pmax
comp=Z,111nm,0.5s,mb6.2
ASF Jabal al Asfar 55.94 290 P **P 06 52 53.6 +0.4**
comp=Z,31nm,0.9s,mb5.3,baz=282,slow=2.5,SNR=6.8
BRTR Keskin Array B 56.34 299 P **P 06 52 55.2 -0.8**
comp=Z,15nm,0.9s,mb5.0,baz=117,slow=7.8,SNR=5.2
BRTR PcP PcP 06 53 51.0 -2.1
comp=Z,14nm,0.8s,baz=100,slow=3.9,SNR=7.3
KEV Kevo 56.42 336 eP **P 06 52 53.7 -2.4**
KEV pmax pmax
comp=Z,80nm,0.9s,mb5.8
KEV Kevo 56.42 336 ep **P 06 52 53.7 -2.4**
comp=Z,80nm,0.9s,mb5.8
MMAI Mount Meron Ar 56.88 291 P **P 06 53 00.2 +0.3**
comp=Z,20nm,1.0s,mb5.1,baz=69,slow=12,SNR=3.9
ARCES ARCESS Array B 56.95 336 P **P 06 52 59.6 -0.2**
comp=Z,33nm,0.8s,mb5.4,baz=89,slow=7.3,SNR=13
AKASG Malin Array Be 57.00 313 P **P 06 52 58.8 -1.7**
comp=Z,56nm,1.1s,mb5.5,baz=71,slow=7.6,SNR=4.7
KAF Kangasniemi 57.05 327 eP **P 06 52 56.2 -4.4**
KAF pmax pmax
comp=Z,37nm,0.8s,mb5.5
KAF Kangasniemi 57.05 327 ep **P 06 52 56.2 -4.4**
comp=Z,37nm,0.8s,mb5.5
FINES FINESS Array B 57.22 326 P **P 06 53 01.4 -0.5**
comp=Z,21nm,0.9s,mb5.2,baz=110,slow=7.1,SNR=3.7
NACGM Naroch 57.73 318 e **P 06 53 04.0 -1.6**
CSS Prodhromos 57.91 294 eP **P 06 53 07.5 +0.3**
EIL Elat 58.35 288 P **P 06 53 09.8 -0.5**
comp=Z,69nm,1.0s,mb5.7,baz=46,slow=3.5,SNR=8.9
EIL PcP PcP 06 54 02.3 +1.0
comp=Z,40nm,0.9s,baz=48,slow=5.3,SNR=3.8
EIL Elat 58.35 288 P **P 06 53 09.8 -0.5**
EIL PcP PcP 06 54 02.3 +1.0
WRAB Tennant Creek 58.82 146 P **P 06 53 13.2 -0.3**
comp=Z,2µm,0.8s,SNR=13
WRAB Tennant Creek 58.82 146 eP **P 06 53 12.9 -0.6**
WRAB pmax pmax
comp=Z,435nm,1.0s,mb6.4
WRAB Tennant Creek 58.82 146 eP **P 06 53 12.9 -0.6**
comp=Z,435nm,1.0s,mb6.4
WRA Warramunga Arr 58.82 146 P **P 06 53 13.2 -0.3**
comp=Z,165nm,0.7s,mb6.2,baz=338,slow=7.8,SNR=19
COEN Coen 58.83 134 eP **P 06 53 13.8 +0.1**
comp=Z,2µm,1.4s
WB2 Warramunga Arr 58.83 146 eP **P 06 53 13.4 -0.2**
SPITS Spitsbergen Ar 59.08 346 P **P 06 53 14.4 -0.2**
comp=Z,58nm,0.9s,mb5.6,baz=111,slow=9.3,SNR=9.6
SPB4 Spitsbergen Ar 59.08 346 eP **P 06 53 15.6 +1.0**
ISP Isparta 59.21 298 eP **P 06 53 15.9 -0.3**
ISP Isparta 59.21 298 eP **P 06 53 16.3 +0.2**
GAMB Gambell 60.09 31 eP **P 06 53 21.4 -0.4**
comp=Z,65nm,1.3s,mb5.5
MLR Muntele Rosu 60.32 308 P **P 06 53 26.5 +2.8**
comp=Z,18nm,0.7s,mb5.2,baz=283,slow=11,SNR=5.2
KOLS Kolonicke sedl 61.79 312 eP **P 06 53 32.9 -0.7**
comp=Z,7µm,6.1s
KOLS Kolonicke sedl 61.79 312 eP **P 06 53 32.9 -0.7**
ASAR Alice Springs 61.83 148 P **P 06 53 33.5 -0.6**
comp=Z,64nm,0.9s,mb5.8,baz=333,slow=6.2,SNR=12
STHS Stebnicka Huta 62.30 313 eP **P 06 53 38.5 +1.5**
STHS pmax pmax
comp=Z,48nm,1.7s,mb5.3
STHS Stebnicka Huta 62.30 313 eP **P 06 53 38.5 +1.5**
comp=Z,48nm,1.7s,mb5.3
STHS Stebnicka Huta 62.30 313 eP **P 06 53 38.5 +1.5**
OJC Ojcow 62.96 314 eP **P 06 53 41.3 -0.1**
KECS Kecovo 63.05 312 eP **P 06 53 42.9 +0.9**
KECS pmax pmax
comp=Z,67nm,2.6s,mb5.3
KECS Kecovo 63.05 312 eP **P 06 53 42.9 +0.9**
comp=Z,37nm,2.6s,mb5.3
KECS Kecovo 63.05 312 eP **P 06 53 42.9 +0.9**
HFS Hagfors 63.42 326 P **P 06 53 43.6 -0.7**
comp=Z,23nm,0.8s,mb5.3,baz=66,slow=3.5,SNR=5.1
VAY Valandovo 63.93 304 eP **P 06 53 46.6 -1.3**
STIP Stip 64.08 305 eP **P 06 53 47.8 -1.2**
VYHS Vyhne 64.09 313 eP **P 06 53 49.8 +0.9**
VYHS Vyhne 64.09 313 eP **P 06 53 49.8 +0.9**
NB2 NORSAR Subarra 64.32 327 P **P 06 53 49.2 -1.0**
comp=Z,59nm,0.9s,mb5.6,baz=72,slow=6.5
NOA NORSAR Array B 64.32 327 P **P 06 53 48.9 -1.3**
comp=Z,14nm,0.8s,mb5.0,baz=152,slow=22,SNR=3.7
IDI Amaya 64.32 297 P **P 06 53 50.1 -0.6**
comp=Z,67nm,0.8s,mb5.7,baz=40,slow=10,SNR=7.4
KOLL Kolacno 64.34 313 eP **P 06 53 51.0 +0.5**
KOLL Kolacno 64.34 313 eP **P 06 53 51.0 +0.5**
KSP Ksiaz 64.89 316 eP **P 06 53 53.3 -0.8**
NWAO Narrogin (SRO) 65.13 167 P **P 06 53 55.0 -0.7**
comp=Z,155nm,1.0s,mb6.0,baz=338,slow=6.6,SNR=14
NWAO Narrogin (SRO) 65.13 167 eP **P 06 53 55.8 +0.1**
NWAO pmax pmax
comp=Z,148nm,1.0s
NWAO Narrogin (SRO) 65.13 167 eP **P 06 53 55.8 +0.1**
comp=Z,148nm,1.0s,mb6.0
OHR Ohrid 65.25 304 eP **P 06 53 54.6 -2.0**
CTA Charters Tower 65.40 136 eP **P 06 53 57.7 0.0**
CTA Charters Tower 65.40 136 P **P 06 53 56.5 -1.2**
comp=Z,68nm,1.0s,mb5.6,baz=322,slow=8.5,SNR=8.1
FORT Forrest 65.91 157 eP **P 06 54 01.2 +0.4**
comp=Z,125nm,0.8s,mb6.0
CLL Collm 66.68 317 eP **P 06 54 06.0 +0.4**
CLL Collm 66.68 317 eP **P 06 54 06.0 +0.4**
TTA Tatalina 67.09 29 eP **P 06 54 07.1 -0.9**
TTA Tatalina 67.09 29 eP **P 06 54 07.0 -1.0**
GERES GERESS Array B 67.17 314 P **P 06 54 09.3 +0.6**
comp=Z,11nm,0.9s,mb4.8,baz=72,slow=5.7,SNR=4.6
BOJS Bojanci 67.43 310 eP **P 06 54 11.2 +0.7**
COLD Coldfoot 67.46 24 eP **P 06 54 10.8 +0.5**
comp=Z,168nm,1.1s,mb6.0
LJU Ljubljana 67.70 311 i P **P 06 54 16.6 +4.4**
CEY Cerknica 67.88 311 eP **P 06 54 13.6 +0.3**
SVW2 Sparrevohn 68.03 31 eP **P 06 54 14.5 +0.5**
JAVS Javornik 68.05 311 eP **P 06 54 14.9 +0.4**
CHUM Lake Minchumin 68.19 28 eP **P 06 54 15.4 +0.5**
comp=Z,191nm,1.2s,mb6.0
GRA1 Grafenberg Arr 68.34 316 eP **P 06 54 16.9 +0.7**
comp=Z,336nm,2.1s,mb6.0
GRF Grafenberg Arr 68.34 316 eP **P 06 54 16.9 +0.7**
comp=Z,336nm,2.1s,mb6.0
GRF Grafenberg Arr 68.34 316 eP **P 06 54 16.9 +0.7**
GRF pmax pmax
comp=Z,336nm,2.1s,mb6.0
GRF Grafenberg Arr 68.34 316 eP **P 06 54 16.9 +0.7**
GRF pmax pmax
comp=Z,336nm,2.1s,mb6.0
GRF Grafenberg Arr 68.34 316 eP **P 06 54 16.9 +0.7**
comp=Z,336nm,2.1s,mb6.0
BPAW Bear Paw Mtn. 68.61 27 eP **P 06 54 18.0 +0.4**
comp=Z,206nm,1.2s,mb5.9
PPLA Purkeypile 68.68 28 eP **P 06 54 18.4 +0.3**
comp=Z,132nm,0.8s,mb5.9
CHGN Chignik 68.69 36 eP **P 06 54 17.5 -0.7**
KTH Kantishna Hill 68.89 28 eP **P 06 54 19.5 +0.2**
comp=Z,205nm,1.4s,mb5.9
RER Riviere de l'E 69.51 228 eP **P 06 54 23.4 -0.4**
comp=Z,140nm,0.8s,mb5.9
RSO Redoubt South 69.56 31 eP **P 06 54 23.8 +0.3**
CEL Celeste 69.84 303 eP **P 06 54 26.2 +0.5**
comp=Z,153nm,1.2s,mb5.8
DAVOX Davos/Dischmat 70.35 313 P **P 06 54 28.7 0.0**
comp=Z,26nm,0.9s,mb5.2,baz=159,slow=6.4,SNR=3.6
KMBO Kilima Mbogo 70.60 256 P **P 06 54 29.9 -0.8**
comp=Z,9.3nm,0.7s,mb4.8,baz=34,slow=9.4,SNR=6.3
OHAK Old Harbor 70.82 34 eP **P 06 54 30.9 -0.4**
KDAK Kodiak Island 70.89 33 P **P 06 54 30.6 -1.1**
comp=Z,92nm,0.6s,mb5.9,baz=321,slow=2.7,SNR=14
KDAK Kodiak Island 70.89 33 eP **P 06 54 31.3 -0.4**
MEM Membach 71.01 318 P **P 06 54 32.5 -0.1**
CDF Champ du Feu 71.24 316 eP **P 06 54 33.8 -0.2**
comp=Z,109nm,1.1s,mb5.4
CDF Champ du Feu 71.24 316 eP **P 06 54 33.8 -0.2**
CDF pmax pmax
comp=Z,54nm,1.1s,mb5.4
CDF Champ du Feu 71.24 316 eP **P 06 54 33.8 -0.2**
comp=Z,54nm,1.1s,mb5.4
WLF Walferdange 71.35 317 P **P 06 54 35.8 +1.2**
comp=Z,67nm,1.2s,mb5.5
BCLA Clavier 71.50 318 P **P 06 54 35.9 +0.4**
comp=Z,48nm,1.6s,mb5.2
HINF Hinteralfeld 71.75 315 eP **P 06 54 36.8 -0.4**
GIVF Givet 71.92 318 eP **P 06 54 38.2 +0.1**
HAU Haudompre 71.97 316 eP **P 06 54 38.1 -0.4**
SNF Seneffe 72.04 319 P **P 06 54 39.2 +0.4**
DOU Dourbes 72.05 318 P **P 06 54 38.9 0.0**
INK Inuvik 72.11 19 P **P 06 54 38.0 -0.9**
comp=Z,95nm,0.9s,mb5.7,baz=319,slow=6.3,SNR=14
INK Inuvik 72.11 19 eP **P 06 54 38.9 0.0**
INK pmax pmax
comp=Z,137nm,0.9s
INK Inuvik 72.11 19 eP **P 06 54 38.9 0.0**
comp=Z,138nm,0.9s,mb5.9
DIV Divide 72.19 29 eP **P 06 54 39.9 +0.4**
comp=Z,225nm,1.3s,mb5.9
BAIF Baives 72.29 318 eP **P 06 54 40.4 +0.1**
comp=Z,78nm,1.1s,mb5.2
BAIF Baives 72.29 318 eP **P 06 54 40.4 +0.1**
BAIF pmax pmax
comp=Z,39nm,1.1s,mb5.2
BAIF Baives 72.29 318 eP **P 06 54 40.4 +0.1**
comp=Z,39nm,1.1s,mb5.2
EIDS Eidsvold 72.29 136 eP **P 06 54 40.6 0.0**
comp=Z,129nm,1.1s,mb5.8
STKA Stephens Creek 72.35 147 eP **P 06 54 40.6 -0.2**
comp=Z,43nm,0.7s,mb5.5
STKA Stephens Creek 72.35 147 P **P 06 54 39.7 -1.1**
comp=Z,54nm,0.8s,mb5.6,baz=344,slow=8.0,SNR=10
STKA Stephens Creek 72.35 147 P **P 06 54 39.7 -1.1**
MEZF Maizieres J'vi 72.52 316 eP **P 06 54 41.7 0.0**
BMRM Bremner River 72.75 28 eP **P 06 54 43.4 +0.5**
comp=Z,182nm,1.0s,mb6.0
PGF Pioggiola 72.75 310 eP **P 06 54 43.6 +0.4**
comp=Z,162nm,1.1s,mb5.6
PGF Pioggiola 72.75 310 eP **P 06 54 43.6 +0.4**
PGF pmax pmax
comp=Z,81nm,1.1s,mb5.6
PGF Pioggiola 72.75 310 eP **P 06 54 43.6 +0.4**
comp=Z,81nm,1.1s,mb5.6
CABF La Chapelle 72.77 314 eP **P 06 54 43.0 -0.2**
LPG La Plagne 72.86 313 eP **P 06 54 44.5 +0.7**
comp=Z,131nm,0.7s,mb5.7
LPG La Plagne 72.86 313 eP **P 06 54 44.5 +0.7**
LPG pmax pmax
comp=Z,66nm,0.7s,mb5.7
LPG La Plagne 72.86 313 eP **P 06 54 44.5 +0.7**
comp=Z,66nm,0.7s,mb5.7
LPL La Plagne 72.87 313 eP **P 06 54 44.4 +0.5**
comp=Z,146nm,0.8s,mb5.7
LPL La Plagne 72.87 313 eP **P 06 54 44.4 +0.5**
LPL pmax pmax
comp=Z,73nm,0.8s,mb5.7
LPL La Plagne 72.87 313 eP **P 06 54 44.4 +0.5**
comp=Z,73nm,0.8s,mb5.7
DAWY Dawson 72.93 24 eP **P 06 54 43.8 -0.1**
SBF Sospel 73.18 311 eP **P 06 54 45.6 -0.1**
comp=Z,116nm,0.9s,mb5.5
SBF Sospel 73.18 311 eP **P 06 54 45.6 -0.1**
SBF pmax pmax
comp=Z,58nm,0.9s,mb5.5
SBF Sospel 73.18 311 eP **P 06 54 45.6 -0.1**
comp=Z,58nm,0.9s,mb5.5
MBDF Montbardon 73.21 312 eP **P 06 54 46.4 +0.5**
OPO Ambohidratompo 73.45 236 P **P 06 54 46.2 -1.4**
comp=Z,14nm,0.8s,mb4.9,baz=51,slow=6.0,SNR=7.9
RES Resolute Bay 73.59 5 P **P 06 54 47.1 -0.6**
comp=Z,57nm,1.1s,mb5.4,baz=46,slow=4.6,SNR=7.3
RES Resolute Bay 73.59 5 eP **P 06 54 48.1 +0.4**
RES pmax pmax
comp=Z,71nm,1.1s,mb5.5
RES Resolute Bay 73.59 5 eP **P 06 54 48.0 +0.4**
comp=Z,71nm,1.1s,mb5.5
EKA Eskdalemuir Ar 73.60 325 P **P 06 54 46.7 -1.4**
comp=Z,17nm,1.1s,mb4.9,baz=56,slow=5.2,SNR=6.0
ESK Eskdalemuir 73.63 325 eP **P 06 54 48.2 0.0**
ORIF Oris-en-Rattie 73.68 313 eP **P 06 54 48.7 0.0**
ABPO Ambohimpanom 73.72 235 eP **P 06 54 48.9 -0.3**
ABPO pmax pmax
comp=Z,33nm,1.2s,mb5.1
ABPO Ambohimpanom 73.72 235 eP **P 06 54 48.9 -0.3**
comp=Z,33nm,1.2s,mb5.1
LOR Lormes 73.81 316 eP **P 06 54 48.6 -0.8**
comp=Z,137nm,1.6s,mb5.3
LOR Lormes 73.81 316 eP **P 06 54 48.6 -0.8**
LOR pmax pmax
comp=Z,69nm,1.6s,mb5.3
LOR Lormes 73.81 316 eP **P 06 54 48.6 -0.8**
comp=Z,69nm,1.6s,mb5.3
FRF La Foret Royal 73.83 311 eP **P 06 54 49.2 -0.3**
LMR La Mourre 74.02 311 eP **P 06 54 50.6 -0.1**
SMF Signal de Mont 74.12 315 eP **P 06 54 50.8 -0.4**
comp=Z,135nm,0.9s,mb5.6
SMF Signal de Mont 74.12 315 eP **P 06 54 50.8 -0.4**
SMF pmax pmax
comp=Z,68nm,0.9s,mb5.6
SMF Signal de Mont 74.12 315 eP **P 06 54 50.8 -0.4**
comp=Z,68nm,0.9s,mb5.6
SSF Saint Saulge 74.12 316 eP **P 06 54 50.7 -0.5**
comp=Z,94nm,1.2s,mb5.3
SSF Saint Saulge 74.12 316 eP **P 06 54 50.7 -0.5**
SSF pmax pmax
comp=Z,47nm,1.2s,mb5.3
SSF Saint Saulge 74.12 316 eP **P 06 54 50.7 -0.5**
comp=Z,47nm,1.2s,mb5.3
AVF Avril sur Loir 74.34 315 eP **P 06 54 52.0 -0.5**
comp=Z,133nm,1.1s,mb5.5
AVF Avril sur Loir 74.34 315 eP **P 06 54 52.0 -0.5**
AVF pmax pmax
comp=Z,67nm,1.1s,mb5.5
AVF Avril sur Loir 74.34 315 eP **P 06 54 52.0 -0.5**
comp=Z,67nm,1.1s,mb5.5
VIVF Saint-Julien-l 74.47 313 eP **P 06 54 53.0 -0.2**
comp=Z,75nm,1.2s,mb5.2
VIVF Saint-Julien-l 74.47 313 eP **P 06 54 53.0 -0.2**
VIVF pmax pmax
comp=Z,37nm,1.2s,mb5.2
VIVF Saint-Julien-l 74.47 313 eP **P 06 54 53.0 -0.2**
comp=Z,37nm,1.2s,mb5.2
BGF Bois d'Agland 74.76 315 eP **P 06 54 54.5 -0.4**
comp=Z,90nm,1.3s,mb5.2
BGF Bois d'Agland 74.76 315 eP **P 06 54 54.5 -0.4**
BGF pmax pmax
comp=Z,45nm,1.3s,mb5.2
BGF Bois d'Agland 74.76 315 eP **P 06 54 54.5 -0.4**
comp=Z,45nm,1.3s,mb5.2
TCF Toulx Ste Croi 75.28 315 eP **P 06 54 57.9 0.0**
comp=Z,86nm,1.1s,mb5.3
TCF Toulx Ste Croi 75.28 315 eP **P 06 54 57.9 0.0**
TCF pmax pmax
comp=Z,43nm,1.1s,mb5.3
TCF Toulx Ste Croi 75.28 315 eP **P 06 54 57.9 0.0**
comp=Z,43nm,1.1s,mb5.3
LASF Ste Croix 75.35 313 eP **P 06 54 58.6 +0.2**
comp=Z,172nm,1.4s,mb5.5
LDF La Druitiere 75.48 318 eP **P 06 54 58.6 -0.4**
FLN La Foliniere 75.60 319 eP **P 06 54 59.3 -0.4**
comp=Z,130nm,1.4s,mb5.4
FLN La Foliniere 75.60 319 eP **P 06 54 59.3 -0.4**
FLN pmax pmax
comp=Z,65nm,1.4s,mb5.4
FLN La Foliniere 75.60 319 eP **P 06 54 59.3 -0.4**
comp=Z,65nm,1.4s,mb5.4
PNL Peninsula 75.61 28 eP **P 06 55 00.5 +0.9**
comp=Z,93nm,1.0s,mb5.7
HYT Haines Junctio 75.63 26 eP **P 06 55 00.7 +1.0**
GRR Gorron 76.00 318 eP **P 06 55 01.7 -0.3**
comp=Z,144nm,1.2s,mb5.5
GRR Gorron 76.00 318 eP **P 06 55 01.7 -0.3**
GRR pmax pmax
comp=Z,72nm,1.2s,mb5.5
GRR Gorron 76.00 318 eP **P 06 55 01.7 -0.3**
comp=Z,72nm,1.2s,mb5.5
CAF Calviac 76.05 314 eP **P 06 55 02.7 +0.4**
comp=Z,76nm,1.1s,mb5.2
CAF Calviac 76.05 314 eP **P 06 55 02.7 +0.4**
CAF pmax pmax
comp=Z,38nm,1.1s,mb5.2
CAF Calviac 76.05 314 eP **P 06 55 02.7 +0.4**
comp=Z,38nm,1.1s,mb5.2
RJF Les Rejaudoux 76.19 315 eP **P 06 55 03.4 +0.2**
comp=Z,175nm,1.4s,mb5.5
RJF Les Rejaudoux 76.19 315 eP **P 06 55 03.4 +0.2**
RJF pmax pmax
comp=Z,88nm,1.4s,mb5.5
RJF Les Rejaudoux 76.19 315 eP **P 06 55 03.4 +0.2**
comp=Z,88nm,1.4s,mb5.5
DMUB Kingscourt 76.21 325 eP **P 06 55 03.1 0.0**
DSB Dublin 76.32 324 eP **P 06 55 04.3 +0.5**
comp=Z,25nm,1.1s,mb5.0
ARMA Armidale 76.40 139 eP **P 06 55 05.7 +1.3**
ARMA Armidale 76.40 139 eP **P 06 55 05.5 +1.1**
comp=Z,792nm,2.5s,mb6.2
MFF Saint Martin d 76.52 316 eP **P 06 55 04.9 -0.1**
comp=Z,90nm,1.1s,mb5.3
MFF Saint Martin d 76.52 316 eP **P 06 55 04.9 -0.1**

MFF pmax pmax
comp=Z,45nm,1.1s,mb5.3
MFF Saint Martin d 76.52 316 *eP* **P 06 55 04.9 -0.1**
comp=Z,45nm,1.1s,mb5.3
DCN Croghan 76.71 325 *eP* **P 06 55 05.8 -0.1**
MTLF Montolieu 76.75 313 *eP* **P 06 55 06.4 0.0**
LFF La Frestale 76.85 315 *eP* **P 06 55 07.3 +0.4**
SGMF Saint Gilles 77.04 319 *eP* **P 06 55 08.0 +0.1**
comp=Z,290nm,1.4s,mb5.7
SGMF Saint Gilles 77.04 319 *eP* **P 06 55 08.0 +0.1**
SGMF pmax pmax
comp=Z,145nm,1.4s,mb5.7
SGMF Saint Gilles 77.04 319 *eP* **P 06 55 08.0 +0.1**
comp=Z,145nm,1.4s,mb5.7
SKAG Skagway 77.34 27 *eP* **P 06 55 09.8 +0.4**
comp=Z,190nm,1.0s,mb6.0
ROSF Rostrenen 77.39 319 *eP* **P 06 55 10.0 +0.1**
comp=Z,225nm,1.5s,mb5.6
ROSF Rostrenen 77.39 319 *eP* **P 06 55 10.0 +0.1**
ROSF pmax pmax
comp=Z,113nm,1.5s,mb5.6
ROSF Rostrenen 77.39 319 *eP* **P 06 55 10.0 +0.1**
comp=Z,112nm,1.5s,mb5.6
QUIF Quistinic 77.56 319 *eP* **P 06 55 10.7 -0.1**
comp=Z,130nm,1.3s,mb5.4
QUIF Quistinic 77.56 319 *eP* **P 06 55 10.7 -0.1**
QUIF pmax pmax
comp=Z,65nm,1.3s,mb5.4
QUIF Quistinic 77.56 319 *eP* **P 06 55 10.7 -0.1**
comp=Z,65nm,1.3s,mb5.4
EPF Esparros 78.09 313 *eP* **P 06 55 13.4 -0.5**
ETSF Etsaut 78.72 313 *eP* **P 06 55 17.8 +0.4**
TOO Toolangi 78.85 147 *eP* **P 06 55 18.3 +0.4**
CNB Canberra Magne 78.94 143 *eP* **P 06 55 18.8 +0.4**
SIT Sitka 78.94 29 *eP* **P 06 55 19.3 +1.0**
SJPF Ste Jean 79.02 314 *eP* **P 06 55 19.6 +0.6**
comp=Z,158nm,1.5s,mb5.4
SJPF Ste Jean 79.02 314 *eP* **P 06 55 19.6 +0.6**
SJPF pmax pmax
comp=Z,79nm,1.5s,mb5.4
SJPF Ste Jean 79.02 314 *eP* **P 06 55 19.6 +0.6**
comp=Z,79nm,1.5s,mb5.4
DLBC Dease Lake 80.05 25 P **P 06 55 22.9 -1.4**
comp=Z,26nm,1.0s,mb5.1,baz=307,slow=7.0,SNR=4.5
DLBC Dease Lake 80.05 25 *eP* **P 06 55 25.4 +1.1**
SFJD Kangerlussuaq 80.10 350 P **P 06 55 22.4 -2.1**
comp=Z,59nm,0.8s,mb5.5,baz=357,slow=7.2,SNR=8.9
SFJD Kangerlussuaq 80.10 350 *eP* **P 06 55 24.0 -0.5**
DZM Mont Dzumac 80.19 123 *eP* **P 06 55 26.0 +0.5**
comp=Z,194nm,1.2s,mb5.9
YKA Yellowknife Ar 81.63 17 P **P 06 55 31.8 -0.9**
comp=Z,20nm,0.6s,mb5.2,baz=330,slow=5.4,SNR=18
ESDC Sonseca Array 82.63 312 P **P 06 55 37.0 -1.4**
comp=Z,6.5nm,0.9s,mb4.7,baz=45,slow=4.9,SNR=5.0
ESDC Sonseca Array 82.63 312 P **P 06 55 37.0 -1.4**
MOO Moorlands 83.55 149 *eP* **P 06 55 43.6 +0.8**
TAU Tasmania Unive 83.99 149 *eP* **P 06 55 45.7 +0.7**
TAU pmax pmax
comp=Z,54nm,1.1s,mb5.6
TAU Tasmania Unive 83.99 149 *eP* **P 06 55 45.7 +0.7**
comp=Z,54nm,1.1s,mb5.6
FRB Frobisher Bay 85.10 357 P **P 06 55 49.1 -1.4**
comp=Z,14nm,0.8s,mb5.1,baz=36,slow=4.2,SNR=4.6
BBB Bella Bella 85.35 29 P **P 06 55 50.2 -1.7**
comp=Z,15nm,0.9s,mb5.1,baz=347,slow=4.3,SNR=3.2
LSZ Lusaka 85.89 250 P **P 06 55 54.4 -0.8**
comp=Z,32nm,0.9s,mb5.5,baz=64,slow=8.7,SNR=7.1
LSZ Lusaka 85.89 250 P **P 06 55 54.4 -0.8**
LSZ pmax pmax
comp=Z,32nm,0.9s,mb5.5
MDT Midelt 87.00 307 P **P 06 56 00.1 -0.4**
comp=Z,22nm,0.9s,mb5.4,baz=80,slow=4.9,SNR=6.6
PUH Pauahi 89.15 68 *eP* **P 06 56 11.9 +0.8**
EDM Edmonton 89.89 21 *eP* **P 06 56 14.5 +0.7**
NLWA Neilton Lookou 90.78 30 *eP* **P 06 56 18.8 +0.7**
comp=Z,134nm,1.5s,mb6.0
RPW Rockport 90.93 28 *eP* **P 06 56 19.9 +1.1**
comp=Z,14nm,1.2s,mb5.2
JCW Jim Creek 90.96 29 *eP* **P 06 56 20.1 +1.2**
GNW Green Mountain 91.08 29 *eP* **P 06 56 20.9 +1.4**
comp=Z,90nm,1.9s,mb5.8
TORD Torodi Ar. Bea 93.24 287 P **P 06 56 29.1 -1.0**
comp=Z,20nm,1.1s,mb5.5,baz=79,slow=3.6,SNR=5.1
LBTB Lobatse 93.26 243 P **P 06 56 28.8 -1.0**
comp=Z,6.1nm,0.4s,mb5.3,baz=72,slow=3.7,SNR=8.8
YBMT Yellow Bay 94.26 24 *eP* **P 06 56 35.8 +1.6**
comp=Z,41nm,1.3s,mb5.7
BOSA Boshof 95.46 240 P **P 06 56 38.0 -1.8**
comp=Z,15nm,0.9s,mb5.4,baz=60,slow=5.1,SNR=6.0
CASY Casey 97.39 177 *eP* **P 06 56 47.2 -0.5**
CASY Casey 97.39 177 *eP* **P 06 56 47.3 -0.4**
comp=Z,40nm,1.3s,mb5.7
SSPA Standing Stone 108.43 1 *e*Pdif Pdif 06 57 39.4 +1.7
comp=Z,234nm,1.4s
ACSO Alum Creek Sta 108.58 5 *e*Pdif Pdif 06 57 39.3 +1.0
comp=Z,293nm,1.7s
BNM Barren Site 108.92 26 *e*Pdif Pdif 06 57 39.2 -0.6
comp=Z,47nm,0.8s
SLM Saint Louis 109.24 12 *eP* Pdif 06 57 37.1 -4.1
OLIL Olney 109.48 10 *e*Pdif Pdif 06 57 36.4 -5.9
FVM French Village 109.85 12 *eP* Pdif 06 57 45.4 +1.5
CBN Corbin 110.87 1 *e*Pdif Pdif 06 57 49.6 +1.2
MIAR Mount Ida 112.54 15 P Pdif 06 58 04.3 +8.4
PPT Papeete 112.97 97 *e*PKiKP PKiKP 07 01 49.6 -3.0
comp=Z,80nm,1.5s
TIAR Tiarei 113.16 97 *e*PKiKP PKiKP 07 01 51.1 -1.9
comp=Z,128nm,1.2s
OXF Oxford 113.41 12 *eP* Pdif 06 58 00.1 +0.4
TXAR Lajitas Array 114.34 26 PKKPbc PKKPbc 07 12 34.1 -0.3
comp=Z,1.8nm,0.7s,baz=170,slow=7.3,SNR=9.9
ROSC El Rosal 144.02 357 PKP PKPdf 07 02 49.8 -1.6
comp=Z,78nm,0.9s,baz=102,slow=7.3,SNR=8.9
ROSC El Rosal 144.02 357 *e*PKPdf PKPdf 07 02 50.1 -1.3
PMSA Palmer Station 145.62 189 PKPbc PKPbc 07 02 50.0 -2.7
comp=Z,83nm,1.1s,baz=186,slow=3.9,SNR=4.7
PMSA Palmer Station 145.62 189 *e*PKPdf PKPdf 07 02 52.4 -0.1
RPN Rapa Nui 150.95 90 PKPbc PKPbc 07 03 07.6 -0.5
comp=Z,178nm,0.9s,baz=302,slow=3.0,SNR=6.2
USHA Ushuaia 155.80 191 PKPab PKPab 07 03 33.4 -1.6
comp=Z,32nm,1.0s,baz=135,slow=6.9,SNR=4.6
NNA Nana 160.79 2 PKP PKPdf 07 03 15.4 -0.3
comp=Z,4.9nm,0.4s,baz=300,slow=4.6,SNR=2.3
CPUP Villa Florida 162.65 282 PKP PKPdf 07 03 16.1 -1.3
comp=Z,24nm,1.2s,baz=239,slow=3.1,SNR=2.9
LPAZ La Paz 163.31 332 PKPab PKPab 07 04 06.8 -1.9
comp=Z,8.9nm,0.9s,baz=140,slow=11,SNR=15
LVC Limon Verde 169.13 321 PKP PKPdf 07 03 22.5 -0.2
comp=Z,32nm,1.2s,baz=213,slow=7.6,SNR=3.0
PLCA Paso Flores 169.48 205 PKP PKPdf 07 03 20.9 -1.5
comp=Z,27nm,1.2s,baz=237,slow=1.4,SNR=3.0
PLCA PKPab PKPab 07 04 32.9 -2.4
comp=Z,13nm,1.1s,baz=141,slow=18,SNR=3.4
PLCA Paso Flores 169.48 205 PKP PKPdf 07 03 20.9 -1.5
PLCA PKPab PKPab 07 04 32.9 -2.4
CFAA Coronel Fontan 173.09 265 PKP PKPdf 07 03 23.6 -0.9
comp=Z,2.3nm,1.0s,baz=244,slow=13,SNR=2.8

*IDC **12** 06:43:55.5±1.1,31°.25N×104°.54E, h0km, mb5.1/14, mb1 5.3/15, mb1mx5.1/29, mbtmp5.2/15, ML4.6/1, Error ellipse: s-maj=35.9km s-min=21.6km az=39.0*
*ISCJB **12** 06:43:56.4±2.0,31°.2N±0°.1×104°.7E±0°.1, h15km±12km, mb5.2/43, Error ellipse: s-maj=18.4km s-min=15.9km az=165.5*
*MOS **12** 06:43:56.7±0.8,31°.26N×104°.64E, h17km, mb5.5/27, Error ellipse: s-maj=20.5km s-min=7.1km az=125.7*
*NEIC **12** 06:43:57.2±0.7,31°.27N×104°.71E, h10km, mb5.4/29, Error ellipse: s-maj=18.3km s-min=14.4km az=74.0*
ISC 12 06:43:57.9±2.1, 31°.3N±0°.1×104°.6E±0°.1, h13km±12km**, n118,** σ0$87/119**, mb5.2**/43**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.83**	**246**	Pg	**Pg**	**06 44 14.0**	**+0.1**
CD2				Sg	**Sg**	**06 44 20.1**	**-4.7**
CD2				smax			
	comp=N,2341μm,0.7s						
CD2				smax			
	comp=E,1035μm,0.6s						
SONM	**Songino Array**	**16.61**	**4**	Pn	**Pn**	**06 47 50.3**	**-0.1**
	comp=E,2.1nm,0.3s,baz=178,slow=13,SNR=2.7						
KSRS	**Korea Array**	**20.17**	**66**	P	**P**	**06 48 32.1**	**0.0**
	comp=E,91nm,0.7s,baz=250,slow=11,SNR=2.9						
KSRS	**Korea Array**	**20.17**	**66**	P	**P**	**06 48 32.1**	**0.0**
KSRS				pmax	pmax		
	comp=Z,91nm,0.7s						
MKAR	**Makanchi Array**	**23.17**	**318**	P	**P**	**06 49 04.8**	**+0.7**
	comp=Z,77nm,0.9s,mb5.1,baz=111,slow=9.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.79**	**334**	P	**P**	**06 49 38.6**	**+1.2**
	comp=Z,25nm,0.6s,mb4.9,baz=134,slow=10,SNR=3.0						
AML	**Almayashu**	**26.94**	**302**	*eP*	**P**	**06 49 42.1**	**+3.1**
	comp=Z,85nm,0.7s,mb5.4						
EKS2	**Erkin-Say**	**27.01**	**304**	P	**P**	**06 49 41.2**	**+1.6**
KURK	**Kurchatov**	**27.40**	**323**	P	**P**	**06 49 40.8**	**-2.2**
	comp=Z,63nm,1.0s,mb5.1,baz=131,slow=9.0,SNR=2.6						
KURK	**Kurchatov**	**27.40**	**323**	P	**P**	**06 49 41.6**	**-1.4**
BVAR	**Borovoye Array**	**32.96**	**321**	P	**P**	**06 50 30.2**	**-1.9**
	comp=Z,15nm,0.7s,mb5.0,baz=104,slow=9.1,SNR=2.3						
BVAR	**Borovoye Array**	**32.96**	**321**	P	**P**	**06 50 30.2**	**-1.9**
MALT	**Malatya**	**53.80**	**297**	*eP*	**P**	**06 53 24.0**	**+3.6**
MALT				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
MALT	**Malatya**	**53.80**	**297**	*eP*	**P**	**06 53 24.0**	**+3.6**
	comp=Z,21nm,0.6s,mb5.2						
BR131	**Keskin Array S**	**57.06**	**300**	*eP*	**P**	**06 53 43.3**	**-0.5**
	comp=Z,11nm,0.6s,mb5.1						
BRTR	**Keskin Array B**	**57.06**	**300**	P	**P**	**06 53 44.6**	**+0.9**
	comp=Z,17nm,0.8s,mb5.1,baz=92,slow=6.8,SNR=6.1						
ARCES	**ARCESS Array B**	**57.31**	**336**	P	**P**	**06 53 46.3**	**+1.3**
	comp=Z,40nm,0.9s,mb5.4,baz=81,slow=7.6,SNR=4.5						
AKASG	**Malin Array Be**	**57.61**	**313**	P	**P**	**06 53 47.1**	**-0.4**
	comp=Z,46nm,0.9s,mb5.5,baz=69,slow=6.7,SNR=7.2						
FINES	**FINESS Array B**	**57.70**	**326**	P	**P**	**06 53 49.9**	**+2.0**
	comp=Z,7.4nm,0.5s,mb5.0,baz=86,slow=7.8,SNR=3.7						
CSS	**Prodhromos**	**58.67**	**294**	P	**P**	**06 53 54.2**	**-0.9**
ISP	**Isparta**	**59.94**	**298**	*eP*	**P**	**06 54 03.7**	**-0.2**
ISP				pmax	pmax		
	comp=Z,42nm,0.6s,mb5.7						
ISP	**Isparta**	**59.94**	**298**	*eP*	**P**	**06 54 03.7**	**-0.3**
	comp=Z,42nm,0.6s,mb5.6						
ASAR	**Alice Springs**	**61.39**	**149**	P	**P**	**06 54 13.9**	**+0.2**
	comp=Z,35nm,0.9s,mb5.5,baz=335,slow=5.1,SNR=4.2						
KWP	**Kalwaria Pacla**	**61.94**	**313**	*eP*	**P**	**06 54 17.9**	**+0.6**
KWP				pmax	pmax		
	comp=Z,98nm,0.7s,mb6.0						
KWP	**Kalwaria Pacla**	**61.94**	**313**	*eP*	**P**	**06 54 17.9**	**+0.6**
	comp=Z,98nm,0.7s,mb6.0						
HFS	**Hagfors**	**63.90**	**326**	P	**P**	**06 54 27.9**	**-2.3**
	comp=Z,11nm,0.5s,mb5.1,baz=64,slow=6.6,SNR=3.1						
NB2	**NORSAR Subarra**	**64.78**	**328**	P	**P**	**06 54 33.0**	**-2.9**
	comp=Z,68nm,1.2s,mb5.6,baz=72,slow=6.9						
NB2	**NORSAR Subarra**	**64.78**	**328**	P	**P**	**06 54 33.0**	**-2.9**
NB2	**NORSAR Subarra**	**64.78**	**328**	P	**P**	**06 54 33.0**	**-2.9**
NOA	**NORSAR Array B**	**64.78**	**328**	P	**P**	**06 54 33.6**	**-2.2**
	comp=Z,14nm,0.7s,mb5.1,baz=70,slow=6.9,SNR=3.9						
MORC	**Moravsky Berou**	**65.09**	**314**	*eP*	**P**	**06 54 38.3**	**+0.2**
MORC				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
MORC	**Moravsky Berou**	**65.09**	**314**	*eP*	**P**	**06 54 38.3**	**+0.2**
	comp=Z,38nm,1.0s,mb5.4						
GERES	**GERESS Array B**	**67.77**	**314**	P	**P**	**06 54 55.7**	**+0.4**
	comp=Z,12nm,0.9s,mb4.9,baz=65,slow=4.7,SNR=2.8						
STU	**Stuttgart**	**70.52**	**316**	P	**P**	**06 55 12.2**	**-0.2**
KMBO	**Kilima Mbogo**	**71.39**	**257**	P	**P**	**06 55 18.1**	**-0.1**
CDF	**Champ du Feu**	**71.83**	**316**	*eP*	**P**	**06 55 20.0**	**-0.3**
	comp=Z,56nm,0.9s,mb5.2						
CDF	**Champ du Feu**	**71.83**	**316**	*eP*	**P**	**06 55 20.0**	**-0.3**
CDF				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
CDF	**Champ du Feu**	**71.83**	**316**	*eP*	**P**	**06 55 20.0**	**-0.3**
	comp=Z,28nm,0.9s,mb5.2						
WLF	**Walferdange**	**71.92**	**317**	*eP*	**P**	**06 55 20.2**	**-0.6**
WLF				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.6						
WLF	**Walferdange**	**71.92**	**317**	*eP*	**P**	**06 55 20.2**	**-0.6**
	comp=Z,67nm,0.9s,mb5.6						
HINF	**Hinteralfeld**	**72.35**	**316**	*eP*	**P**	**06 55 23.0**	**-0.4**
	comp=Z,44nm,0.9s,mb5.1						
HINF	**Hinteralfeld**	**72.35**	**316**	*eP*	**P**	**06 55 23.0**	**-0.4**
HINF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
HINF	**Hinteralfeld**	**72.35**	**316**	*eP*	**P**	**06 55 23.0**	**-0.4**
	comp=Z,22nm,0.9s,mb5.1						
GIVF	**Givet**	**72.48**	**318**	*eP*	**P**	**06 55 23.8**	**-0.4**
	comp=Z,72nm,0.9s,mb5.3						
GIVF	**Givet**	**72.48**	**318**	*eP*	**P**	**06 55 23.8**	**-0.4**
GIVF				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
GIVF	**Givet**	**72.48**	**318**	*eP*	**P**	**06 55 23.8**	**-0.4**
	comp=Z,36nm,0.9s,mb5.3						
HAU	**Haudompre**	**72.56**	**316**	*eP*	**P**	**06 55 24.3**	**-0.4**
BAIF	**Baives**	**72.85**	**318**	*eP*	**P**	**06 55 26.2**	**-0.2**
	comp=Z,28nm,0.8s,mb5.0						
BAIF	**Baives**	**72.85**	**318**	*eP*	**P**	**06 55 26.2**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
BAIF	**Baives**	**72.85**	**318**	*eP*	**P**	**06 55 26.2**	**-0.2**
	comp=Z,14nm,0.8s,mb4.9						
MEZF	**Maizieres J'vi**	**73.10**	**317**	*eP*	**P**	**06 55 27.5**	**-0.4**
CABF	**La Chapelle**	**73.37**	**315**	*eP*	**P**	**06 55 29.5**	**0.0**
PGF	**Pioggiola**	**73.40**	**310**	*eP*	**P**	**06 55 30.8**	**+1.1**
	comp=Z,88nm,0.8s,mb5.4						
PGF	**Pioggiola**	**73.40**	**310**	*eP*	**P**	**06 55 30.8**	**+1.1**
PGF				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
PGF	**Pioggiola**	**73.40**	**310**	*eP*	**P**	**06 55 30.8**	**+1.1**
	comp=Z,44nm,0.8s,mb5.4						
LPG	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
	comp=Z,181nm,0.9s,mb5.7						
LPG	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
LPG				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.7						
LPG	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
	comp=Z,90nm,0.9s,mb5.7						
LPL	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
	comp=Z,136nm,0.9s,mb5.6						
LPL	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
LPL				pmax	pmax		
	comp=Z,68nm,0.9s,mb5.6						
LPL	**La Plagne**	**73.48**	**313**	*eP*	**P**	**06 55 31.0**	**+0.8**
	comp=Z,68nm,0.9s,mb5.6						
SBF	**Sospel**	**73.81**	**312**	*eP*	**P**	**06 55 32.4**	**+0.3**
	comp=Z,160nm,0.9s,mb5.7						
SBF	**Sospel**	**73.81**	**312**	*eP*	**P**	**06 55 32.4**	**+0.3**
SBF				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.7						
SBF	**Sospel**	**73.81**	**312**	*eP*	**P**	**06 55 32.4**	**+0.3**
	comp=Z,80nm,0.9s,mb5.7						
MBDF	**Montbardon**	**73.83**	**313**	*eP*	**P**	**06 55 33.7**	**+1.5**
EKA	**Eskdalemuir Ar**	**74.09**	**326**	P	**P**	**06 55 31.7**	**-1.8**
	comp=Z,9.2nm,0.8s,mb4.7,baz=49,slow=4.8,SNR=3.0						
ORIF	**Oris-en-Rattie**	**74.29**	**313**	*eP*	**P**	**06 55 35.3**	**+0.4**
	comp=Z,67nm,0.7s,mb5.4						
ORIF	**Oris-en-Rattie**	**74.29**	**313**	*eP*	**P**	**06 55 35.3**	**+0.4**
ORIF				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.4						
ORIF	**Oris-en-Rattie**	**74.29**	**313**	*eP*	**P**	**06 55 35.3**	**+0.4**
	comp=Z,34nm,0.7s,mb5.4						
LOR	**Lormes**	**74.39**	**316**	*eP*	**P**	**06 55 34.7**	**-0.8**
FRF	**La Foret Royal**	**74.45**	**312**	*eP*	**P**	**06 55 35.4**	**-0.5**
	comp=Z,15nm,0.6s,mb4.8						
FRF	**La Foret Royal**	**74.45**	**312**	*eP*	**P**	**06 55 35.4**	**-0.5**
FRF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
FRF	**La Foret Royal**	**74.45**	**312**	*eP*	**P**	**06 55 35.4**	**-0.5**
	comp=Z,7.7nm,0.6s,mb4.8						
LMR	**La Mourre**	**74.65**	**311**	*eP*	**P**	**06 55 36.6**	**-0.4**
SSF	**Saint Saulge**	**74.71**	**316**	*eP*	**P**	**06 55 36.8**	**-0.5**
	comp=Z,34nm,1.0s,mb4.9						
SSF	**Saint Saulge**	**74.71**	**316**	*eP*	**P**	**06 55 36.8**	**-0.5**
SSF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
SSF	**Saint Saulge**	**74.71**	**316**	*eP*	**P**	**06 55 36.8**	**-0.5**
	comp=Z,17nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**74.71**	**315**	*eP*	**P**	**06 55 37.0**	**-0.3**
	comp=Z,82nm,1.0s,mb5.3						
SMF	**Signal de Mont**	**74.71**	**315**	*eP*	**P**	**06 55 37.0**	**-0.3**
SMF				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
SMF	**Signal de Mont**	**74.71**	**315**	*eP*	**P**	**06 55 37.0**	**-0.3**
	comp=Z,41nm,1.0s,mb5.3						
AVF	**Avril sur Loir**	**74.93**	**316**	*eP*	**P**	**06 55 38.3**	**-0.3**
	comp=Z,53nm,0.9s,mb5.2						
AVF	**Avril sur Loir**	**74.93**	**316**	*eP*	**P**	**06 55 38.3**	**-0.3**
AVF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
AVF	**Avril sur Loir**	**74.93**	**316**	*eP*	**P**	**06 55 38.3**	**-0.3**
	comp=Z,26nm,0.9s,mb5.2						
VIVF	**Saint-Julien-l**	**75.08**	**314**	*eP*	**P**	**06 55 39.6**	**+0.1**
	comp=Z,37nm,0.8s,mb5.0						
VIVF	**Saint-Julien-l**	**75.08**	**314**	*eP*	**P**	**06 55 39.6**	**+0.1**
VIVF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
VIVF	**Saint-Julien-l**	**75.08**	**314**	*eP*	**P**	**06 55 39.6**	**+0.1**
	comp=Z,18nm,0.8s,mb5.1						
TCF	**Toulx Ste Croi**	**75.86**	**316**	*eP*	**P**	**06 55 44.0**	**0.0**
	comp=Z,71nm,1.0s,mb5.2						
TCF	**Toulx Ste Croi**	**75.86**	**316**	*eP*	**P**	**06 55 44.0**	**0.0**
TCF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
TCF	**Toulx Ste Croi**	**75.86**	**316**	*eP*	**P**	**06 55 44.0**	**0.0**
	comp=Z,35nm,1.0s,mb5.2						
LASF	**Ste Croix**	**75.97**	**313**	*eP*	**P**	**06 55 45.1**	**+0.5**
	comp=Z,50nm,1.0s,mb5.1						
LDF	**La Druitiere**	**76.04**	**319**	*eP*	**P**	**06 55 44.4**	**-0.5**
FLN	**La Foliniere**	**76.15**	**319**	*eP*	**P**	**06 55 45.1**	**-0.5**
	comp=Z,74nm,1.1s,mb5.2						
FLN	**La Foliniere**	**76.15**	**319**	*eP*	**P**	**06 55 45.1**	**-0.5**
FLN				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
FLN	**La Foliniere**	**76.15**	**319**	*eP*	**P**	**06 55 45.1**	**-0.5**
	comp=Z,37nm,1.0s,mb5.3						
GRR	**Gorron**	**76.56**	**319**	*eP*	**P**	**06 55 47.4**	**-0.5**
	comp=Z,86nm,0.9s,mb5.4						
GRR	**Gorron**	**76.56**	**319**	*eP*	**P**	**06 55 47.4**	**-0.5**
GRR				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
GRR	**Gorron**	**76.56**	**319**	*eP*	**P**	**06 55 47.4**	**-0.5**
	comp=Z,43nm,0.9s,mb5.4						
CAF	**Calviac**	**76.65**	**315**	*eP*	**P**	**06 55 49.1**	**+0.6**
RJF	**Les Rejaudoux**	**76.78**	**315**	*eP*	**P**	**06 55 49.2**	**0.0**
MFF	**Saint Martin d**	**77.10**	**317**	*eP*	**P**	**06 55 51.1**	**+0.1**
	comp=Z,57nm,1.0s,mb5.2						
MFF	**Saint Martin d**	**77.10**	**317**	*eP*	**P**	**06 55 51.1**	**+0.1**
MFF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
MFF	**Saint Martin d**	**77.10**	**317**	*eP*	**P**	**06 55 51.1**	**+0.1**
	comp=Z,29nm,1.0s,mb5.2						
MTLF	**Montolieu**	**77.37**	**313**	*eP*	**P**	**06 55 53.0**	**+0.5**
	comp=Z,20nm,0.9s,mb4.8						
MTLF	**Montolieu**	**77.37**	**313**	*eP*	**P**	**06 55 53.0**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MTLF	**Montolieu**	**77.37**	**313**	*eP*	**P**	**06 55 53.0**	**+0.5**
	comp=Z,9.8nm,0.9s,mb4.7						
LFF	**La Frestale**	**77.44**	**315**	*eP*	**P**	**06 55 53.5**	**+0.6**
SGMF	**Saint Gilles**	**77.59**	**319**	*eP*	**P**	**06 55 53.6**	**-0.1**
	comp=Z,107nm,1.1s,mb5.4						
SGMF	**Saint Gilles**	**77.59**	**319**	*eP*	**P**	**06 55 53.6**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
SGMF	**Saint Gilles**	**77.59**	**319**	*eP*	**P**	**06 55 53.6**	**-0.1**
	comp=Z,53nm,1.1s,mb5.4						
ROSF	**Rostrenen**	**77.95**	**320**	*eP*	**P**	**06 55 55.5**	**-0.2**
	comp=Z,55nm,1.0s,mb5.2						
ROSF	**Rostrenen**	**77.95**	**320**	*eP*	**P**	**06 55 55.5**	**-0.2**
ROSF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
ROSF	**Rostrenen**	**77.95**	**320**	*eP*	**P**	**06 55 55.5**	**-0.2**
	comp=Z,27nm,1.0s,mb5.1						
QUIF	**Quistinic**	**78.12**	**319**	*eP*	**P**	**06 56 55.6**	**-0.1**
SJPF	**Ste Jean**	**79.62**	**314**	*eP*	**P**	**06 56 05.1**	**+0.1**
	comp=Z,40nm,0.9s,mb5.0						
SJPF	**Ste Jean**	**79.62**	**314**	*eP*	**P**	**06 56 05.1**	**+0.1**
SJPF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
SJPF	**Ste Jean**	**79.62**	**314**	*eP*	**P**	**06 56 05.1**	**+0.1**
	comp=Z,20nm,0.9s,mb5.0						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	**06 56 14.8**	**+0.6**
	comp=Z,11nm,0.7s,mb4.9,baz=330,slow=5.3,SNR=3.9						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	**06 56 14.8**	**+0.6**
YKA				pmax	pmax		
	comp=Z,11nm,0.7s						

*IDC **12** 06:48:56.7±0.5,32°.56N×105°.50E, h0km, mb4.8/22, mb1 4.9/24, mb1mx4.8/35, mbtmp4.8/24, ML4.6/2, Error ellipse: s-maj=22.1km s-min=10.6km az=54.0*
*ISCJB **12** 06:48:57.0±0.3,32°.48N×0°.04×105°.43E±0°.04, h10km, mb5.0/32, Error ellipse: s-maj=5.9km s-min=5.0km az=144.1*
*MOS **12** 06:48:57.7±1.3,32°.48N×105°.43E, h18km, mb5.4/3, Error ellipse: s-maj=12.2km s-min=7.9km az=114.0*
*BJI **12** 06:48:57.7,32°.43N×105°.67E, h17km, mb5.6/1, ML5.5/4*
*NEIC **12** 06:48:59.1±0.3,32°.44N×105°.23E, h10km, mb5.3/5, Error ellipse: s-maj=9.1km s-min=6.0km az=53.0*
ISC 12 06:48:59.3±0.2, 32°.54N±0°.03×105°.37E±0°.04, h10km**, n80,** σ1$22/83**, mb5.0**/32**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.13**	**221**	Pg	**Sn**	**06 50 03.5**	**+2.2**
CD2				Sg	**Sg**	**06 50 08.9**	**+1.3**
CD2				smax			
	comp=E,190μm,0.8s						
XAN

comp=Z,4.8nm,0.4s,mb4.9,baz=68,slow=7.5,SNR=8.8
AKASG **Malin Array Be** 57.19 313 P P 06 58 44.2 -2.1
MMAI **Mount Meron Ar** 57.76 291 P P 06 58 49.0 -1.6
comp=Z,0.7nm,0.3s,mb4.2,baz=30,slow=9.0,SNR=2.9
SPITS **Spitsbergen Ar** 58.21 346 P P 06 58 52.2 -0.8
comp=Z,16nm,0.9s,mb5.0,baz=88,slow=2.6,SNR=5.2
COEN **Coen** 58.70 136 *eP* P 06 58 56.3 -0.9
comp=Z,321nm,0.7s
WRAB **Tennant Creek** 59.09 148 *eP* P 06 58 59.2 -0.7
comp=Z,95nm,0.6s,mb6.0
WRA **Warramunga Arr** 59.09 148 P P 06 58 59.3 -0.6
comp=Z,79nm,0.7s,mb5.9,baz=342,slow=7.3,SNR=34
WB2 **Warramunga Arr** 59.10 148 *eP* P 06 58 59.4 -0.5
ISP **Isparta** 59.89 298 P P 06 59 03.6 -1.7
KWP **Kalwaria Pacla** 61.52 313 *eP* P 06 59 17.9 +1.7
KWP pmax pmax
comp=Z,29nm,0.7s,mb5.5
KWP **Kalwaria Pacla** 61.52 313 *eP* P 06 59 17.9 +1.6
comp=Z,29nm,0.7s,mb5.5
ASAR **Alice Springs** 62.18 150 P P 06 59 20.6 -0.3
comp=Z,50nm,0.7s,mb5.8,baz=336,slow=7.0,SNR=41
HFS **Hagfors** 63.19 326 P P 06 59 25.6 -1.6
comp=Z,2.9nm,0.3s,mb4.9,baz=77,slow=7.8,SNR=12
NB2 **NORSAR Subarra** 64.03 327 P P 06 59 32.2 -0.6
comp=Z,25nm,1.0s,mb5.2,baz=71,slow=6.9
NB2 **NORSAR Subarra** 64.03 327 P P 06 59 32.2 -0.6
NB2 **NORSAR Subarra** 64.03 327 P P 06 59 32.2 -0.6
NOA **NORSAR Array B** 64.03 327 P P 06 59 31.7 -1.1
comp=Z,13nm,0.9s,mb4.9,baz=70,slow=6.6,SNR=6.3
IDI **Anoyia** 65.03 297 P P 06 59 36.6 -3.2
comp=Z,12nm,0.6s,mb5.1,baz=306,slow=12,SNR=4.2
CTA **Charters Tower** 65.33 137 P P 06 59 40.6 -1.1
comp=Z,12nm,0.8s,mb5.0,baz=340,slow=5.1,SNR=6.1
VRAC **Vranov** 65.38 314 P P 06 59 42.6 +0.8
comp=Z,3.6nm,0.4s,mb4.8,baz=68,slow=11,SNR=3.1
NWAO **Narrogin (SRO)** 66.07 169 P P 06 59 45.4 -0.9
comp=Z,20nm,0.7s,mb5.3,baz=352,slow=8.7,SNR=6.8
CHUM **Lake Minchumin** 66.41 28 *eP* P 06 59 49.0 +0.9
GERES **GERESS Array B** 67.31 314 P P 06 59 54.6 +0.4
comp=Z,6.9nm,1.1s,mb4.6,baz=57,slow=4.9,SNR=4.3
INK **Inuvik** 70.45 20 P P 07 00 14.8 +1.5
DAVOX **Davos/Dischmat** 70.53 313 P P 07 00 14.2 0.0
comp=Z,6.8nm,0.6s,mb4.8,baz=86,slow=0.9,SNR=6.4
KMBO **Kilima Mbogo** 72.28 257 P P 07 00 25.9 +0.6
comp=Z,6.5nm,1.0s,mb4.5,baz=52,slow=14,SNR=4.4
KMBO **Kilima Mbogo** 72.28 257 P P 07 00 25.9 +0.6
STKA **Stephens Creek** 72.64 148 P P 07 00 24.8 -2.1
comp=Z,25nm,0.8s,mb5.2,baz=320,slow=4.8,SNR=8.9
LPG **La Plagne** 73.05 313 *eP* P 07 00 30.7 +1.3
comp=Z,28nm,0.6s,mb5.1
LPG **La Plagne** 73.05 313 *eP* P 07 00 30.7 +1.3
LPG pmax pmax
comp=Z,14nm,0.6s,mb5.1
LPG **La Plagne** 73.05 313 *eP* P 07 00 30.7 +1.3
comp=Z,14nm,0.6s,mb5.1
LPL **La Plagne** 73.05 313 *eP* P 07 00 30.6 +1.2
comp=Z,24nm,0.5s,mb5.1
LPL **La Plagne** 73.05 313 *eP* P 07 00 30.6 +1.2
LPL pmax pmax
comp=Z,12nm,0.5s,mb5.1
LPL **La Plagne** 73.05 313 *eP* P 07 00 30.6 +1.2
comp=Z,12nm,0.5s,mb5.1
PGF **Pioggiola** 73.06 310 *eP* P 07 00 29.5 0.0
MBDF **Montbardon** 73.41 313 *eP* P 07 00 32.0 +0.4
comp=Z,26nm,0.9s,mb4.9
SBF **Sospel** 73.42 312 *eP* P 07 00 32.6 +1.0
comp=Z,82nm,1.0s,mb5.3
ORIF **Oris-en-Rattie** 73.87 313 *eP* P 07 00 34.8 +0.5
comp=Z,50nm,1.0s,mb5.1
LOR **Lormes** 73.91 316 *eP* P 07 00 36.2 +1.8
FRF **La Foret Royal** 74.07 312 *eP* P 07 00 36.6 +1.2
SMF **Signal de Mont** 74.23 315 *eP* P 07 00 38.0 +1.7
LMR **La Mourre** 74.27 311 *eP* P 07 00 36.9 +0.3
VIVF **Saint-Julien-l** 74.64 314 *eP* P 07 00 39.7 +0.9
LASF **Ste Croix** 75.55 313 *eP* P 07 00 44.7 +0.7
QSPA **South Pole Qui** 122.31 180 PKP PKPdf 07 07 51.1 -2.1
comp=Z,7.4nm,0.9s,baz=286,slow=2.5,SNR=5.4

ISCJB ***12*** *06:50:35.2±0.4, 31°.85N±0°.05×104°.43E±0°.08, h10km, mb4.9/52, Error ellipse: s-maj=10.5km s-min=7.5km az=163.2*
IDC ***12*** *06:50:35.1±0.6, 31°.93N×104°.53E, h0km, mb4.9/26, mb1 4.9/27, mb1mx4.8/36, mbtmp4.9/27, ML5.1/1, MS6.4/1, Ms1 6.6/1, ms1mx5.4/49, Error ellipse: s-maj=26.6km s-min=13.2km az=57.0*
NEIC ***12*** *06:50:36.9±0.2, 31°.91N×104°.48E, h10km, mb5.1/25, Error ellipse: s-maj=8.0km s-min=4.9km az=70.0*
MOS ***12*** *06:50:36.9±0.9, 31°.89N×104°.48E, h22km, mb5.3/23, Error ellipse: s-maj=15.3km s-min=6.1km az=126.0*
ISC 12 06:50:37.3±0.4, 31°.91N±0°.06×104°.44E±0°.09, h10km, n124, σ0 69/124, mb4.9/52, 32C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.15**	**211**	Pg	**Pg**	**06 50 53.9**	**-5.5**
CD2				Sg	**Sg**	**06 50 58.9**	**-16**
CD2				smax			
comp=N,102μm,0.5s							
CM31	**Chiang Mai Arr**	**14.28**	**202**	Pn	**Pn**	**06 54 00.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**14.28**	**202**	Pn	**Pn**	**06 53 59.1**	**-0.5**
comp=N,3.0nm,0.3s,baz=22,slow=9.9,SNR=5.0							
CMAR				LR	LR	06 59 51.3	
comp=N,154μm,18.3s,baz=110,slow=39							
KSRS	**Korea Array**	**20.07**	**68**	P	**P**	**06 55 12.5**	**+1.8**
comp=N,0.7nm,0.3s,baz=251,slow=10,SNR=2.8							
KSRS	**Korea Array**	**20.07**	**68**	P	**P**	**06 55 12.5**	**+1.8**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
MK31	**Makanchi Array**	**22.57**	**318**	P	**P**	**06 55 37.0**	**-0.5**
MKAR	**Makanchi Array**	**22.57**	**318**	P	**P**	**06 55 38.8**	**+1.2**
comp=Z,3.2nm,0.4s,mb4.1,baz=127,slow=8.6,SNR=8.8							
TKM2	**Tokmak 2**	**25.29**	**304**	*eP*	**P**	**06 56 04.8**	**+1.0**
TKM2				pmax	pmax		
comp=Z,175nm,1.4s,mb5.4							
TKM2	**Tokmak 2**	**25.29**	**304**	*eP*	**P**	**06 56 04.8**	**+1.0**
comp=Z,175nm,1.4s,mb5.4							
AAK	**Ala-Archa**	**26.00**	**303**	P	**P**	**06 56 09.4**	**-0.8**
ZAA0	**Zalesovo Array**	**26.13**	**333**	*eP*	**P**	**06 56 11.4**	**+0.2**
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**06 56 10.9**	**-0.3**
comp=Z,12nm,0.7s,mb4.6,baz=134,slow=9.4,SNR=3.5							
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**06 56 18.2**	**+1.0**
comp=Z,5.9nm,0.6s,mb4.3,baz=153,slow=5.4,SNR=5.0							
KBL	**Kabul**	**29.64**	**285**	*eP*	**P**	**06 56 42.5**	**-0.4**
KBL				pmax	pmax		
comp=Z,20nm,0.8s,mb4.9							
KBL	**Kabul**	**29.64**	**285**	*eP*	**P**	**06 56 42.5**	**-0.4**
comp=Z,20nm,0.8s,mb4.9							
BVAR	**Borovoye Array**	**32.34**	**321**	P	**P**	**06 57 05.2**	**-1.3**
comp=Z,9.4nm,0.9s,mb4.6,baz=122,slow=11,SNR=7.0							
BVAR				ScP	ScP	07 03 36.3	-1.6
comp=Z,4.4nm,0.6s,baz=116,slow=3.4,SNR=3.7							
BRVK	**Borovoye**	**32.42**	**321**	P	**P**	**06 57 06.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	**32.83**	**52**	P	**P**	**06 57 09.3**	**-1.5**
KEV	**Kevo**	**56.12**	**336**	*eP*	**P**	**07 00 16.5**	**+0.2**
KEV				pmax	pmax		
comp=Z,17nm,0.6s,mb5.2							
KEV	**Kevo**	**56.12**	**336**	*eP*	**P**	**07 00 16.5**	**+0.1**
comp=Z,17nm,0.6s,mb5.2							
ASF	**Jabal al Asfar**	**56.34**	**290**	P	**P**	**07 00 18.9**	**+0.4**
comp=Z,9.5nm,0.8s,mb4.9,baz=322,slow=1.6,SNR=6.6							
BR131	**Keskin Array S**	**56.60**	**299**	*eP*	**P**	**07 00 19.8**	**-0.5**
comp=Z,4.3nm,0.6s,mb4.7							
BRTR	**Keskin Array B**	**56.60**	**299**	P	**P**	**07 00 19.4**	**-0.9**
comp=Z,7.2nm,0.8s,mb4.8,baz=117,slow=5.5,SNR=6.4							
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**07 00 18.9**	**-1.2**
comp=Z,7.3nm,0.5s,mb5.0,baz=86,slow=7.3,SNR=6.7							
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**07 00 18.9**	**-1.2**
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**07 00 23.1**	**-0.2**
comp=Z,9.8nm,0.5s,mb5.1,baz=68,slow=7.5,SNR=7.0							
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**07 00 22.6**	**-0.6**
comp=Z,18nm,0.5s,mb5.4,baz=89,slow=7.4,SNR=14							
CSS	**Prodhromos**	**58.25**	**294**	*eP*	**P**	**07 00 31.8**	**-0.2**
comp=Z,12nm,0.5s,mb5.2							
SPITS	**Spitsbergen Ar**	**58.63**	**346**	P	**P**	**07 00 33.9**	**-0.1**
comp=Z,4.1nm,0.5s,mb4.7,baz=82,slow=7.0,SNR=5.6							
EIL	**Elat**	**58.77**	**288**	P	**P**	**07 00 35.2**	**-0.5**
comp=Z,22nm,1.1s,mb5.1,baz=114,slow=1.6,SNR=4.4							
WRAB	**Tennant Creek**	**58.98**	**147**	*eP*	**P**	**07 00 37.3**	**+0.2**
WRAB				pmax	pmax		
comp=Z,28nm,0.6s,mb5.5							
WRAB	**Tennant Creek**	**58.98**	**147**	*eP*	**P**	**07 00 37.3**	**+0.2**
comp=Z,28nm,0.6s,mb5.5							
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**07 00 35.9**	**-1.2**
comp=Z,15nm,0.6s,mb5.2,baz=328,slow=9.0,SNR=6.4							
WRA				PcP	PcP	07 01 24.9	-1.3
comp=Z,2.8nm,0.5s,baz=0.0,slow=2.8,SNR=4.6							
KWP	**Kalwaria Pacla**	**61.37**	**313**	*eP*	**P**	**07 00 54.2**	**+1.0**
KWP				pmax	pmax		
comp=Z,28nm,0.5s,mb5.7							
KWP	**Kalwaria Pacla**	**61.37**	**313**	*eP*	**P**	**07 00 54.1**	**+0.9**
comp=Z,28nm,0.5s,mb5.6							
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**07 00 58.1**	**+0.3**
comp=Z,7.1nm,0.5s,mb5.1,baz=332,slow=6.4,SNR=6.8							
HFS	**Hagfors**	**63.27**	**326**	P	**P**	**07 01 05.4**	**-0.4**
comp=Z,12nm,0.4s,mb5.3,baz=124,slow=4.6,SNR=13							
PSZ	**Piszkesteto**	**63.67**	**312**	P	**P**	**07 01 07.7**	**-0.9**
NB2	**NORSAR Subarra**	**64.14**	**327**	P	**P**	**07 01 10.7**	**-0.8**
comp=Z,6.3nm,0.5s,mb4.9,baz=71,slow=6.5							
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**07 01 11.0**	**-0.5**
comp=Z,9.6nm,0.6s,mb5.0,baz=72,slow=6.6,SNR=9.1							
MORC	**Moravsky Berou**	**64.51**	**314**	*eP*	**P**	**07 01 14.7**	**+0.6**
MORC				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.9							
MORC	**Moravsky Berou**	**64.51**	**314**	*eP*	**P**	**07 01 14.7**	**+0.5**
comp=Z,7.4nm,0.6s,mb4.9							
IDI	**Anoyia**	**64.61**	**297**	P	**P**	**07 01 13.7**	**-1.4**
comp=Z,16nm,0.6s,mb5.2,baz=62,slow=9.9,SNR=6.1							
GVD	**Gavdhos**	**65.39**	**297**	P	**P**	**07 01 19.3**	**-0.9**
NWAO	**Narrogin (SRO)**	**65.61**	**168**	P	**P**	**07 01 25.3**	**+4.1**
comp=Z,20nm,1.0s,mb5.1,baz=5.0,slow=7.5,SNR=4.5							
GERES	**GERESS Array B**	**67.19**	**314**	P	**P**	**07 01 31.8**	**+0.4**
comp=Z,4.1nm,0.6s,mb4.6,baz=61,slow=5.1,SNR=13							
AQU	**L'Aquila**	**70.02**	**308**	P	**P**	**07 01 48.8**	**-0.4**
DAVOX	**Davos/Dischmat**	**70.39**	**313**	P	**P**	**07 01 51.7**	**+0.4**
comp=Z,18nm,0.6s,mb5.2,baz=68,slow=5.0,SNR=8.5							
CDF	**Champ du Feu**	**71.24**	**316**	⇑*iP*	**P**	**07 01 56.6**	**+0.1**
comp=Z,17nm,0.6s,mb4.8							
CDF	**Champ du Feu**	**71.24**	**316**	⇑*iP*	**P**	**07 01 56.6**	**+0.1**
CDF				pmax	pmax		
comp=Z,8.0nm,0.6s,mb4.8							
CDF	**Champ du Feu**	**71.24**	**316**	⇑*iP*	**P**	**07 01 56.6**	**+0.1**
comp=Z,8.3nm,0.6s,mb4.8							
KMBO	**Kilima Mbogo**	**71.37**	**257**	P	**P**	**07 01 59.1**	**+1.3**
comp=Z,3.4nm,0.6s,mb4.5,baz=36,slow=11,SNR=4.0							
KMBO	**Kilima Mbogo**	**71.37**	**257**	P	**P**	**07 01 59.1**	**+1.3**
KMBO				pmax	pmax		
comp=Z,3.0nm,0.6s							
KMBO	**Kilima Mbogo**	**71.37**	**257**	*eP*	**P**	**07 01 57.2**	**-0.7**
HINF	**Hinteralfeld**	**71.77**	**315**	⇑*iP*	**P**	**07 01 59.4**	**-0.3**
GIVF	**Givet**	**71.89**	**318**	⇑*iP*	**P**	**07 02 00.6**	**+0.2**
comp=Z,13nm,0.6s,mb4.8							
GIVF	**Givet**	**71.89**	**318**	⇑*iP*	**P**	**07 02 00.6**	**+0.2**
GIVF				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.7							
GIVF	**Givet**	**71.89**	**318**	⇑*iP*	**P**	**07 02 00.6**	**+0.2**
comp=Z,6.4nm,0.6s,mb4.7							
HAU	**Haudompre**	**71.98**	**316**	*eP*	**P**	**07 02 00.9**	**-0.1**
BAIF	**Baives**	**72.25**	**318**	⇑*iP*	**P**	**07 02 03.0**	**+0.4**
comp=Z,18nm,0.8s,mb4.7							
BAIF	**Baives**	**72.25**	**318**	⇑*iP*	**P**	**07 02 03.0**	**+0.4**
BAIF				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.8							
BAIF	**Baives**	**72.25**	**318**	⇑*iP*	**P**	**07 02 03.0**	**+0.4**
comp=Z,8.8nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**72.53**	**147**	P	**P**	**07 02 04.1**	**-0.2**
comp=Z,8.4nm,0.8s,mb4.7,baz=326,slow=7.7,SNR=4.0							
CABF	**La Chapelle**	**72.79**	**314**	*eP*	**P**	**07 02 06.1**	**+0.2**
PGF	**Pioggiola**	**72.86**	**310**	*eP*	**P**	**07 02 06.9**	**+0.6**
comp=Z,36nm,0.6s,mb5.2							
PGF	**Pioggiola**	**72.86**	**310**	*eP*	**P**	**07 02 06.9**	**+0.6**
PGF				pmax	pmax		
comp=Z,18nm,0.6s,mb5.2							
PGF	**Pioggiola**	**72.86**	**310**	*eP*	**P**	**07 02 06.9**	**+0.6**
comp=Z,18nm,0.6s,mb5.2							
LPG	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.5**	**+0.9**
comp=Z,66nm,0.8s,mb5.3							
LPG	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.5**	**+0.9**
LPG				pmax	pmax		
comp=Z,33nm,0.8s,mb5.3							
LPG	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.5**	**+0.9**
comp=Z,33nm,0.8s,mb5.3							
LPL	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.4**	**+0.8**
comp=Z,34nm,0.5s,mb5.2							
LPL	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.4**	**+0.8**
LPL				pmax	pmax		
comp=Z,17nm,0.5s,mb5.2							
LPL	**La Plagne**	**72.91**	**313**	⇑*iP*	**P**	**07 02 07.4**	**+0.8**
comp=Z,17nm,0.5s,mb5.2							
SBF	**Sospel**	**73.25**	**311**	*eP*	**P**	**07 02 08.7**	**+0.1**
comp=Z,79nm,0.9s,mb5.3							
SBF	**Sospel**	**73.25**	**311**	*eP*	**P**	**07 02 08.7**	**+0.1**
SBF				pmax	pmax		
comp=Z,39nm,0.9s,mb5.3							
SBF	**Sospel**	**73.25**	**311**	*eP*	**P**	**07 02 08.7**	**+0.1**
comp=Z,40nm,0.9s,mb5.3							
MBDF	**Montbardon**	**73.26**	**312**	*eP*	**P**	**07 02 08.0**	**-0.7**
EKA	**Eskdalemuir Ar**	**73.46**	**325**	P	**P**	**07 02 08.0**	**-1.6**
comp=Z,5.4nm,0.8s,mb4.6,baz=68,slow=5.4,SNR=6.5							
ORIF	**Oris-en-Rattie**	**73.73**	**313**	*eP*	**P**	**07 02 11.7**	**+0.3**
LOR	**Lormes**	**73.81**	**316**	*eP*	**P**	**07 02 11.3**	**-0.6**
LMR	**La Mourre**	**74.09**	**311**	⇑*iP*	**P**	**07 02 13.6**	**0.0**
comp=Z,11nm,0.6s,mb4.7							
LMR	**La Mourre**	**74.09**	**311**	⇑*iP*	**P**	**07 02 13.6**	**0.0**
LMR				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.6							
LMR	**La Mourre**	**74.09**	**311**	⇑*iP*	**P**	**07 02 13.6**	**0.0**
comp=Z,5.4nm,0.6s,mb4.7							
SSF	**Saint Saulge**	**74.12**	**316**	*eP*	**P**	**07 02 13.4**	**-0.3**
comp=Z,17nm,1.0s,mb4.6							
SSF	**Saint Saulge**	**74.12**	**316**	*eP*	**P**	**07 02 13.4**	**-0.3**
SSF				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.6							
SSF	**Saint Saulge**	**74.12**	**316**	*eP*	**P**	**07 02 13.4**	**-0.3**
comp=Z,8.4nm,1.0s,mb4.6							
SMF	**Signal de Mont**	**74.13**	**315**	⇑*iP*	**P**	**07 02 13.5**	**-0.2**
comp=Z,32nm,0.9s,mb5.0							
SMF	**Signal de Mont**	**74.13**	**315**	⇑*iP*	**P**	**07 02 13.5**	**-0.2**
SMF				pmax	pmax		
comp=Z,16nm,0.9s,mb5.0							
SMF	**Signal de Mont**	**74.13**	**315**	⇑*iP*	**P**	**07 02 13.5**	**-0.2**
comp=Z,16nm,0.9s,mb5.0							
AVF	**Avril sur Loir**	**74.35**	**316**	⇑*iP*	**P**	**07 02 14.9**	**-0.1**
comp=Z,22nm,0.9s,mb4.8							
AVF	**Avril sur Loir**	**74.35**	**316**	⇑*iP*	**P**	**07 02 14.9**	**-0.1**
AVF				pmax	pmax		
comp=Z,11nm,0.9s,mb4.8							
AVF	**Avril sur Loir**	**74.35**	**316**	⇑*iP*	**P**	**07 02 14.9**	**-0.1**
comp=Z,11nm,0.9s,mb4.8							
VIVF	**Saint-Julien-l**	**74.51**	**313**	*eP*	**P**	**07 02 17.0**	**+1.0**
TCF	**Toulx Ste Croi**	**75.28**	**316**	*eP*	**P**	**07 02 20.6**	**+0.2**
comp=Z,28nm,1.0s,mb4.8							
TCF	**Toulx Ste Croi**	**75.28**	**316**	*eP*	**P**	**07 02 20.6**	**+0.2**
TCF				pmax	pmax		
comp=Z,14nm,1.0s,mb4.8							
TCF	**Toulx Ste Croi**	**75.28**	**316**	*eP*	**P**	**07 02 20.6**	**+0.2**
comp=Z,14nm,1.0s,mb4.8							
LASF	**Ste Croix**	**75.40**	**313**	⇑*iP*	**P**	**07 02 21.5**	**+0.3**
comp=Z,44nm,1.1s,mb5.0							
LDF	**La Druitiere**	**75.44**	**318**	*eP*	**P**	**07 02 21.3**	**0.0**
GRR	**Gorron**	**75.97**	**318**	*eP*	**P**	**07 02 24.4**	**+0.1**
comp=Z,30nm,0.7s,mb5.0							
GRR	**Gorron**	**75.97**	**318**	*eP*	**P**	**07 02 24.4**	**+0.1**
GRR				pmax	pmax		
comp=Z,15nm,0.7s,mb5.0							
GRR	**Gorron**	**75.97**	**318**	*eP*	**P**	**07 02 24.4**	**+0.1**
comp=Z,15nm,0.7s,mb5.0							
CAF	**Calviac**	**76.07**	**314**	⇑*iP*	**P**	**07 02 25.6**	**+0.6**
comp=Z,21nm,0.9s,mb4.8							
CAF	**Calviac**	**76.07**	**314**	⇑*iP*	**P**	**07 02 25.6**	**+0.6**
CAF				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8							
CAF	**Calviac**	**76.07**	**314**	⇑*iP*	**P**	**07 02 25.6**	**+0.6**
comp=Z,10nm,0.9s,mb4.8							
RJF	**Les Rejaudoux**	**76.21**	**315**	*eP*	**P**	**07 02 26.4**	**+0.7**
MFF	**Saint Martin d**	**76.51**	**317**	*eP*	**P**	**07 02 27.6**	**+0.2**
comp=Z,26nm,0.9s,mb4.8							
MFF	**Saint Martin d**	**76.51**	**317**	*eP*	**P**	**07 02 27.6**	**+0.2**
MFF				pmax	pmax		
comp=Z,13nm,0.9s,mb4.9							
MFF	**Saint Martin d**	**76.51**	**317**	*eP*	**P**	**07 02 27.6**	**+0.2**
comp=Z,13nm,0.9s,mb4.9							
LFF	**La Frestale**	**76.87**	**315**	*eP*	**P**	**07 02 30.2**	**+0.7**
comp=Z,21nm,0.8s,mb4.8							
LFF	**La Frestale**	**76.87**	**315**	*eP*	**P**	**07 02 30.2**	**+0.7**
LFF				pmax	pmax		
comp=Z,11nm,0.8s,mb4.8							
LFF	**La Frestale**	**76.87**	**315**	*eP*	**P**	**07 02 30.2**	**+0.7**
comp=Z,11nm,0.8s,mb4.8							
SGMF	**Saint Gilles**	**76.99**	**319**	⇑*iP*	**P**	**07 02 30.6**	**+0.5**
comp=Z,29nm,0.8s,mb5.0							
SGMF	**Saint Gilles**	**76.99**	**319**	⇑*iP*	**P**	**07 02 30.6**	**+0.5**
SGMF				pmax	pmax		
comp=Z,14nm,0.8s,mb4.9							
SGMF	**Saint Gilles**	**76.99**	**319**	⇑*iP*	**P**	**07 02 30.6**	**+0.5**
comp=Z,14nm,0.8s,mb5.0							
ROSF	**Rostrenen**	**77.34**	**319**	*eP*	**P**	**07 02 32.5**	**+0.4**
QUIF	**Quistinic**	**77.52**	**319**	*eP*	**P**	**07 02 33.5**	**+0.4**
ETSF	**Etsaut**	**78.75**	**314**	*eP*	**P**	**07 02 40.7**	**+0.7**
SJPF	**Ste Jean**	**79.05**	**314**	*eP*	**P**	**07 02 42.9**	**+1.3**
SFJD	**Kangerlussuaq**	**79.60**	**350**	P	**P**	**07 02 43.8**	**-0.4**
comp=Z,9.0nm,0.6s,mb4.9,baz=4.6,slow=6.7,SNR=5.9							
YKA	**Yellowknife Ar**	**80.84**	**17**	P	**P**	**07 02 50.7**	**-0.3**
comp=Z,5.5nm,0.9s,mb4.5,baz=329,slow=5.1,SNR=2.8							
ESDC	**Sonseca Array**	**82.69**	**312**	P	**P**	**07 03 01.6**	**+0.4**
comp=Z,0.3nm,0.3s,mb3.8,baz=38,slow=5.3,SNR=4.4							
MDT	**Midelt**	**87.14**	**307**	P	**P**	**07 03 23.2**	**-0.5**
comp=Z,5.1nm,1.0s,mb4.7,baz=343,slow=6.3,SNR=3.9							
SCHQ	**Schefferville**	**93.29**	**355**	P	**P**	**07 03 51.5**	**-0.5**
comp=Z,11nm,0.9s,mb5.3,baz=342,slow=0.7,SNR=4.5							
QSPA	**South Pole Qui**	**121.68**	**180**	PKP	PKPdf	07 09 29.3	-0.8
comp=Z,4.1nm,0.6s,baz=240,slow=2.8,SNR=7.3							

ISCJB ***12*** *06:51:20.4±0.5, 31°.42N±0°.05×103°.9E±0°.1, h10km, mb4.8/8, Error ellipse: s-maj=14.4km s-min=6.3km az=9.4*
IDC ***12*** *06:51:21.2±1.8, 31°.52N×103°.88E, h0km, mb4.8/7, mb1 4.9/8, mb1mx4.5/27, mbtmp4.8/8, ML4.3/1, Error ellipse: s-maj=41.2km s-min=30.5km az=19.0*
NEIC ***12*** *06:51:22.0±0.6, 31°.54N×104°.09E, h10km, mb4.9/2, Error ellipse: s-maj=19.6km s-min=10.5km az=77.0*
MOS ***12*** *06:51:23.5±1.0, 31°.46N×103°.88E, h33km, mb5.1/3, Error ellipse: s-maj=26.5km s-min=13.8km az=110.8*
ISC 12 06:51:22.2±0.5, 31°.39N±0°.04×103°.9E±0°.1, h10km, n21, σ0 97/22, mb4.8/8, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.49**	**190**	⇑*iP*g	**Pg**	**06 51 32.0**	**+0.3**
CD2				Sg	**Sg**	**06 51 37.1**	**-1.1**
CD2				smax			
comp=N,825μm,1.0s							
CMAR	**Chiang Mai Arr**	**13.62**	**200**	Pn	**Pn**	**06 54 38.0**	**+2.5**
comp=N,0.5nm,0.3s,baz=20,slow=11,SNR=2.8							
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**06 56 03.0**	**+0.2**
comp=N,30nm,0.8s,baz=258,slow=11,SNR=5.4							
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**06 56 03.0**	**+0.2**
KSRS				pmax	pmax		
comp=Z,30nm,0.8s							
CN2	**Changchun**	**21.05**	**48**	*eP*	**P**	**06 56 07.2**	**+0.9**
MK31	**Makanchi Array**	**22.62**	**319**	*eP*	**P**	**06 56 23.2**	**+0.2**
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**06 56 23.9**	**+0.9**
comp=Z,24nm,0.9s,mb4.6,baz=119,slow=9.9,SNR=3.6							
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**06 56 23.9**	**+0.9**
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**06 56 58.0**	**-0.4**
comp=Z,23nm,0.8s,mb4.8,baz=137,slow=9.4,SNR=3.4							
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**06 57 03.4**	**+0.3**
comp=Z,20nm,0.8s,mb4.7,baz=131,slow=9.1,SNR=3.3							
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**06 57 03.8**	**+0.7**
KURK				pmax	pmax		
comp=Z,33nm,0.9s,mb4.9							
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**06 57 03.8**	**+0.7**
comp=Z,33nm,0.9s,mb4.9							
ARU	**Arti**	**40.07**	**322**	*eP*	**P**	**06 58

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,14nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**	**07 03 12.4**	**+0.6**
	comp=Z,6.7nm,0.8s,mb4.7,baz=75,slow=7.0,SNR=3.9						
BRTR	**Keskin Array B**	**56.91**	**299**	P	**P**	**07 03 14.8**	**-1.0**
	comp=Z,2.8nm,0.7s,mb4.4,baz=100,slow=5.4,SNR=4.3						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**07 03 15.3**	**-0.6**
	comp=Z,6.2nm,0.6s,mb4.8,baz=89,slow=6.4,SNR=5.0						
MMAI	**Mount Meron Ar**	**57.68**	**291**	P	**P**	**07 03 20.9**	**-0.5**
	comp=Z,2.1nm,0.5s,mb4.4,baz=348,slow=11,SNR=3.8						
WRAB	**Tennant Creek**	**59.10**	**148**	*eP*	**P**	**07 03 31.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
WRAB	**Tennant Creek**	**59.10**	**148**	*eP*	**P**	**07 03 31.0**	**-0.2**
	comp=Z,28nm,0.8s,mb5.3						
HFS	**Hagfors**	**63.17**	**326**	P	**P**	**07 03 57.2**	**-1.2**
	comp=Z,4.2nm,0.6s,mb4.8,baz=96,slow=6.0,SNR=4.5						
NB2	**NORSAR Subarra**	**64.02**	**327**	P	**P**	**07 04 02.7**	**-1.3**
	comp=Z,12nm,0.8s,mb5.0,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**07 04 02.8**	**-1.2**
	comp=Z,9.4nm,0.9s,mb4.8,baz=70,slow=6.6,SNR=6.1						
NWAO	**Narrogin (SRO)**	**66.04**	**169**	P	**P**	**07 04 18.5**	**+1.1**
	comp=Z,13nm,0.8s,mb5.0,baz=3.0,slow=7.3,SNR=4.1						
PVCC	**Panska Ves**	**66.10**	**316**	*eP*	**P**	**07 04 25.4**	**+7.7**
PVCC	**Panska Ves**	**66.10**	**316**	*eP*	**P**	**07 04 25.4**	**+7.7**
PRU	**Pruhonice**	**66.32**	**315**	*eP*	**P**	**07 04 19.4**	**+0.2**
PRU	**Pruhonice**	**66.32**	**315**	*eP*	**P**	**07 04 19.4**	**+0.2**
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**07 04 24.1**	**-1.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=58,slow=2.4,SNR=3.4						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**07 04 24.1**	**-1.2**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**70.54**	**20**	P	**P**	**07 04 45.2**	**0.0**
	comp=Z,3.5nm,0.6s,mb4.5,baz=243,slow=11,SNR=3.7						
LPG	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.5**	**0.0**
	comp=Z,42nm,0.9s,mb5.1						
LPG	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.5**	**0.0**
LPG				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
LPG	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.5**	**0.0**
	comp=Z,21nm,0.9s,mb5.1						
LPL	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.4**	**-0.1**
	comp=Z,27nm,0.8s,mb4.9						
LPL	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.4**	**-0.1**
LPL				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
LPL	**La Plagne**	**73.01**	**313**	*eP*	**P**	**07 05 00.4**	**-0.1**
	comp=Z,14nm,0.8s,mb4.9						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*eP*	**P**	**07 05 04.7**	**-0.7**
	comp=Z,24nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*eP*	**P**	**07 05 04.7**	**-0.7**
ORIF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*eP*	**P**	**07 05 04.7**	**-0.7**
	comp=Z,12nm,0.9s,mb4.8						
LDF	**La Druitiere**	**75.46**	**319**	*eP*	**P**	**07 05 14.5**	**-0.2**
SKAG	**Skagway**	**75.67**	**27**	*eP*	**P**	**07 05 16.9**	**+1.1**
	comp=Z,18nm,0.8s,mb5.0						
SGMF	**Saint Gilles**	**77.00**	**319**	*eP*	**P**	**07 05 24.5**	**+1.0**
	comp=Z,19nm,0.9s,mb4.7						
SGMF	**Saint Gilles**	**77.00**	**319**	*eP*	**P**	**07 05 24.5**	**+1.0**
SGMF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
SGMF	**Saint Gilles**	**77.00**	**319**	*eP*	**P**	**07 05 24.5**	**+1.0**
	comp=Z,9.4nm,0.9s,mb4.7						
YKA	**Yellowknife Ar**	**80.09**	**18**	P	**P**	**07 05 40.3**	**0.0**
	comp=Z,6.9nm,0.6s,mb4.8,baz=328,slow=5.1,SNR=15						
YKA	**Yellowknife Ar**	**80.09**	**18**	P	**P**	**07 05 40.3**	**0.0**
EBNR	**Beni Rached**	**81.19**	**307**	P	**P**	**07 05 42.0**	**-4.7**
TOA0	**Torodi Ar. Sit**	**94.13**	**288**	*eP*	**P**	**07 06 53.4**	**+3.4**
TORD	**Torodi Ar. Bea**	**94.13**	**288**	P	**P**	**07 06 48.6**	**-1.4**
	comp=Z,8.5nm,1.2s,mb5.1,baz=83,slow=1.7,SNR=3.8						

*ISCJB **12** 06:53:59.6±0.6, 28°.7N±0°.2×109°.1E±0°.4, h10km, mb5.0/15, Error ellipse: s-maj=54.8km s-min=11.8km az=146.2*
*IDC **12** 06:54:00.5±0.8, 28°.75N×109°.01E, h0km, mb4.9/14, mb1 5.0/14, mb1mx4.7/38, mbtmp4.9/14, Error ellipse: s-maj=66.0km s-min=14.9km az=56.0*

ISC 12 06:54:01.8±0.6, 28°.7N±0°.2×109°.1E±0°.4, h10km, n22, σ1§08/22, mb5.0/15, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**49.23**	**159**	*eP*	**P**	**07 02 54.6**	**+4.1**
	15nm,1.0s,mb5.0						
FITZ	**Fitzroy Crossi**	**49.23**	**159**	P	**P**	**07 02 52.3**	**+1.8**
	7.0nm,0.7s,mb4.8,baz=4.5,slow=7.0,SNR=4.0						
FITZ	**Fitzroy Crossi**	**49.23**	**159**	P	**P**	**07 02 52.3**	**+1.8**
WRA	**Warramunga Arr**	**54.19**	**150**	P	**P**	**07 03 29.7**	**+2.2**
	12nm,0.5s,mb5.1,baz=340,slow=7.7,SNR=10.0						
WRA	**Warramunga Arr**	**54.19**	**150**	P	**P**	**07 03 29.7**	**+2.1**
WRA				pmax	pmax		
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**57.31**	**153**	P	**P**	**07 03 49.3**	**-0.7**
	comp=Z,8.2nm,0.7s,mb4.8,baz=335,slow=5.8,SNR=6.0						
ASAR	**Alice Springs**	**57.31**	**153**	P	**P**	**07 03 49.3**	**-0.7**
ASAR	**Alice Springs**	**57.31**	**153**	P	**P**	**07 03 49.3**	**-0.7**
ARCES	**ARCESS Array B**	**61.17**	**336**	P	**P**	**07 04 17.1**	**+1.0**
	comp=Z,12nm,0.9s,mb5.0,baz=96,slow=8.7,SNR=4.1						
ASF	**Jabal al Asfar**	**61.24**	**293**	P	**P**	**07 04 17.1**	**-0.2**
	comp=Z,23nm,1.0s,mb5.3,baz=296,slow=4.3,SNR=6.1						
BRTR	**Keskin Array B**	**61.67**	**302**	P	**P**	**07 04 19.1**	**-0.9**
	comp=Z,5.2nm,0.8s,mb4.7,baz=123,slow=6.1,SNR=3.7						
FORT	**Forrest**	**61.88**	**162**	*eP*	**P**	**07 04 21.3**	**0.0**
	comp=Z,18nm,0.7s,mb5.3						
FINES	**FINESS Array B**	**61.92**	**327**	P	**P**	**07 04 20.8**	**-0.5**
	comp=Z,19nm,0.7s,mb5.4,baz=90,slow=5.7,SNR=6.1						
AKASG	**Malin Array Be**	**62.14**	**315**	P	**P**	**07 04 22.2**	**-0.8**
	comp=Z,9.4nm,0.7s,mb5.0,baz=69,slow=6.4,SNR=4.2						
STKA	**Stephens Creek**	**67.74**	**150**	P	**P**	**07 04 58.7**	**-0.8**
	comp=Z,8.6nm,0.7s,mb4.9,baz=331,slow=5.4,SNR=6.0						
STKA	**Stephens Creek**	**67.74**	**150**	P	**P**	**07 04 58.7**	**-0.8**
HFS	**Hagfors**	**68.12**	**328**	P	**P**	**07 05 01.1**	**-0.6**
	comp=Z,15nm,0.8s,mb5.1,baz=75,slow=11,SNR=5.2						
NOA	**NORSAR Array B**	**68.95**	**329**	P	**P**	**07 05 06.3**	**-0.5**
	comp=Z,14nm,0.9s,mb4.9,baz=71,slow=6.5,SNR=5.1						
IDI	**Anoyia**	**69.66**	**300**	P	**P**	**07 05 12.3**	**+0.6**
	comp=Z,26nm,0.9s,mb5.2,baz=17,slow=9.5,SNR=5.1						
GERES	**GERESS Array B**	**72.27**	**316**	P	**P**	**07 05 28.9**	**+1.6**
	comp=Z,2.4nm,0.6s,mb4.3,baz=57,slow=7.2,SNR=3.6						
CNB	**Canberra Magne**	**74.17**	**147**	*eP*	**P**	**07 05 36.2**	**-2.3**
EKA	**Eskdalemuir Ar**	**78.32**	**327**	P	**P**	**07 06 02.7**	**+0.7**
	comp=Z,6.5nm,0.9s,mb4.5,baz=51,slow=5.9,SNR=5.0						

*ISCJB **12** 06:53:59.4±1.3, 31°.91N±0°.07×103°.37E±0°.07, h10km, mb4.7/2, Error ellipse: s-maj=10.4km s-min=8.4km az=34.2*
*IDC **12** 06:54:00.6±21.0, 31°.92N×103°.05E, h0km, mb4.6/3, mb1 4.6/3, mb1mx4.1/25, mbtmp4.6/3, Error ellipse: s-maj=542.8km s-min=39.6km az=9.0*

ISC 12 06:54:01.5±1.2, 31°.83N±0°.07×103°.26E±0°.08, h10km, n6, σ0§86/9, mb4.6/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.28**	**6**	Pg	**Pb**	**06 55 17.3**	**+0.5**
LZH				Sg	**Sg**	**06 56 19.2**	**+0.3**
LZH				smax			
	comp=N,9μm,1.2s						
LZH				smax			
	comp=E,5μm,1.0s						
XAN	**Xi'an**	**5.25**	**64**	Pg	**Sn**	**06 56 10.8**	**-10**
XAN				Sg	**Sg**	**06 56 48.9**	**-1.0**
XAN				smax			
	comp=N,4μm,0.9s						
XAN				smax			
	comp=E,6μm,1.0s						
WHN	**Wuhan**	**9.58**	**95**	*eP*	**Pn**	**06 56 18.8**	**-0.7**
WHN				S	**Sn**	**06 58 08.0**	**+0.7**
WHN				LR	LR		
	comp=Z,517μm,13.9s						
KSRS	**Korea Array**	**21.02**	**68**	P	**P**	**06 58 47.0**	**+1.7**
	comp=Z,19nm,0.7s,mb4.5,baz=255,slow=11,SNR=4.3						
ARCES	**ARCESS Array B**	**56.31**	**336**	P	**P**	**07 03 41.4**	**-0.6**
	comp=Z,2.4nm,0.5s,mb4.5,baz=76,slow=7.5,SNR=3.2						
FINES	**FINESS Array B**	**56.57**	**326**	P	**P**	**07 03 43.4**	**-0.6**
	comp=Z,6.2nm,0.6s,mb4.8,baz=80,slow=8.4,SNR=5.0						

*BJI **12** 06:54:16.8, 31°.26N×103°.59E, h13km, mB6.2/6, mb5.8/9, ML5.3/9, Ms5.8/2, Ms7 5.8/2*
*IDC **12** 06:54:16.4±0.4, 31°.20N×103°.67E, h0km, mb5.0/34, mb1 5.0/36, mb1mx5.0/41, mbtmp5.0/36, ML4.5/2, Error ellipse: s-maj=15.3km s-min=10.9km az=49.0*
*ISCJB **12** 06:54:16.4±0.2, 31°.15N±0°.03×103°.76E±0°.04, h10km, mb5.1/81, Error ellipse: s-maj=4.6km s-min=4.0km az=151.4*
*MOS **12** 06:54:17.3±0.8, 31°.15N×103°.75E, h18km, mb5.4/37, Error ellipse: s-maj=8.8km s-min=5.2km az=113.4*
*NEIC **12** 06:54:18.1±0.2, 31°.15N×103°.75E, h10km, mb5.3/50, Error ellipse: s-maj=4.7km s-min=3.9km az=53.0*
*SZGRF **12** 06:54:46.6, 33°.49N×100°.19E, h33km, mb5.0, Qinghai, China*

ISC 12 06:54:18.4±0.2, 31°.20N±0°.03×103°.76E±0°.04, h10km, n255, σ1§03/258, mb5.1/81, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**180**	Pg	**Pg**	**06 54 26.0**	**+1.8**
CD2				Sg	**Sg**	**06 54 31.6**	**+3.5**
CD2				smax			
	comp=N,250μm,1.0s						
GYA	**Guiyang**	**5.37**	**151**	Pg	**Pg**	**06 55 56.8**	**-4.5**
GYA				smax			
	comp=N,3μm,0.8s						
GYA				smax			
	comp=E,2μm,0.8s						
KMI	**Kunming**	**6.12**	**189**	Pn	**Pn**	**06 55 50.5**	**+1.6**
KMI				Sn	**Sn**	**06 57 00.9**	**+1.9**
KMI				smax			
	comp=N,1μm,1.3s						
KMI				smax			
	comp=E,900nm,1.2s						
GTA	**Gaotai**	**8.80**	**340**	*eP*	**Pn**	**06 56 21.3**	**-4.4**
GTA				pP		06 56 25.6	
GTA				sP		06 56 28.7	
GTA				S	**Sn**	**06 57 57.3**	**-7.6**
GTA				pmax	pmax		
	comp=Z,600nm,2.3s						
GTA				pmax	pmax		
	comp=Z,7μm,5.4s						
LSA	**Lhasa**	**10.98**	**265**	*e*Pn	**Pn**	**06 56 54.8**	**-0.8**
	comp=Z,60nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.51**	**31**	*eP*	**Pn**	**06 57 07.1**	**+4.3**
HHC				pP		06 57 10.4	
HHC				sP		06 57 13.6	
HHC				S	**Sn**	**06 59 17.8**	**+6.5**
HHC				sS		06 59 21.4	
HHC				SS		06 59 32.5	
HHC				pmax	pmax		
	comp=Z,710nm,1.3s						
NJ2	**Nanjing**	**12.89**	**82**	*eP*	**Pn**	**06 57 21.8**	**+0.1**
NJ2				pP		06 57 28.6	
NJ2				PP		06 57 33.6	
NJ2				sP		06 57 34.7	
NJ2				pmax	pmax		
	comp=Z,100nm,0.8s						
CHTO	**Chiang Mai**	**13.08**	**201**	P	**Pn**	**06 57 24.1**	**-0.2**
QIZ	**Qiongzhong**	**13.31**	**154**	P	**Pn**	**06 57 26.4**	**-1.1**
QIZ				S	**Sn**	**06 59 51.6**	**-3.9**
QIZ				pmax	pmax		
	comp=Z,290nm,6.5s						
BJT	**Baijiatuau**	**13.38**	**45**	P	**Pn**	**06 57 28.0**	**-0.3**
BJI	**Beijing**	**13.40**	**45**	P	**Pn**	**06 57 28.0**	**-0.6**
CM31	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**06 57 29.0**	**+0.1**
	comp=Z,80nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**06 57 27.2**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=11,slow=11,SNR=4.4						
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**06 57 27.2**	**-1.7**
SONM	**Songino Array**	**16.73**	**6**	Pn	**Pn**	**06 58 12.5**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=184,slow=13,SNR=4.3						
SONM	**Songino Array**	**16.73**	**6**	Pn	**Pn**	**06 58 12.4**	**-0.4**
ULN	**Ulaanbaatar**	**16.83**	**8**	*eP*	**Pn**	**06 58 15.7**	**+1.6**
SSLB	**Suanglung**	**16.94**	**112**	*eP*	**Pn**	**06 58 14.5**	**-1.0**
	comp=Z,756nm,1.4s						
NACB	**Ninganchiao**	**17.27**	**110**	P	**Pn**	**06 58 12.9**	**-6.8**
	comp=Z,431nm,1.6s						
WMQ	**Urumqi**	**17.88**	**319**	*eP*	**Pn**	**06 58 30.3**	**+3.2**
TLY	**Talaya**	**20.46**	**360**	P	**P**	**06 58 57.0**	**+1.0**
MOY	**Mondy**	**20.55**	**355**	*eP*	**P**	**06 59 02.8**	**+5.8**
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**06 59 02.0**	**+1.3**
	comp=Z,141nm,0.8s,baz=261,slow=10,SNR=28						
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**06 59 02.0**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,141nm,0.8s						
CN2	**Changchun**	**21.24**	**48**	*eP*	**P**	**06 59 09.2**	**+4.7**
CN2				*es*P	sP	06 59 16.0	+7.4
CN2				*eS*	**S**	**07 03 03.2**	**+2.7**
HIA	**Hailar**	**21.70**	**29**	P	**P**	**06 59 10.2**	**+0.8**
MK31	**Makanchi Array**	**22.71**	**319**	*eP*	**P**	**06 59 19.8**	**-0.4**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**06 59 20.1**	**-0.1**
	comp=Z,275nm,1.1s,mb5.6,baz=132,slow=10.0,SNR=23						
KSH	**Kashi**	**24.06**	**298**	P	**P**	**06 59 34.1**	**+0.3**
KSH				*ep*P		06 59 38.1	
KSH				*es*P	sP	06 59 41.2	+3.1
KSH				*eP*P		07 00 08.2	
KSH				*e*PcP	PcP	07 03 15.2	0.0
KSH				S	**S**	**07 03 47.7**	**-3.4**
KSH				sS	sS	07 03 55.1	-1.0
KSH				SS		07 04 41.2	
KSH				*e*ScP	ScP	07 06 52.1	-1.7
KSH				PcS	PcS	07 06 54.1	-0.7
MDJ	**Mudanjiang**	**24.27**	**49**	P	**P**	**06 59 34.5**	**-1.1**
MDJ				pP		06 59 36.9	
MDJ				S	**S**	**07 03 52.8**	**-1.5**
MDJ				sS	sS	07 03 57.8	-1.5
MDJ				PcS	PcS	07 06 53.6	-1.6
MDJ				ScS	ScS	07 10 40.0	-1.4
MDJ				pmax	pmax		
	comp=Z,310nm,3.4s						
MDJ	**Mudanjiang**	**24.27**	**49**	*eP*	**P**	**06 59 36.7**	**+1.1**
KZA	**Kyzart**	**25.21**	**303**	P	**P**	**06 59 48.0**	**+3.8**
	SNR=24						
TKM2	**Tokmak 2**	**25.21**	**306**	*eP*	**P**	**06 59 46.5**	**+2.2**
TKM2				pmax	pmax		
	comp=Z,1μm,2.3s,mb6.1						
TKM2	**Tokmak 2**	**25.21**	**306**	*eP*	**P**	**06 59 46.5**	**+2.3**
	comp=Z,1μm,2.3s,mb6.1						
KBK	**Karagaybulak**	**25.59**	**305**	P	**P**	**06 59 49.3**	**+1.6**
	SNR=13						
UCH	**Uchtor**	**25.78**	**303**	P	**P**	**06 59 53.0**	**+3.6**
	SNR=11						
AAK	**Ala-Archa**	**25.90**	**304**	P	**P**	**06 59 52.9**	**+2.3**
	SNR=8.3						
AAK	**Ala-Archa**	**25.90**	**304**	P	**P**	**06 59 52.4**	**+1.9**
	comp=Z,111nm,0.8s,mb5.4,baz=103,slow=5.1,SNR=37						
AAK	**Ala-Archa**	**25.90**	**304**	*eP*	**P**	**06 59 52.9**	**+2.4**
AAK				pmax	pmax		
	comp=Z,258nm,1.7s,mb5.5						
AAK	**Ala-Archa**	**25.90**	**304**	*eP*	**P**	**06 59 53.4**	**+2.9**
	comp=Z,249nm,1.0s,mb5.7						
USP	**Osgenovka**	**26.09**	**306**	P	**P**	**06 59 55.2**	**+3.1**
	SNR=8.0						
AML	**Almayashu**	**26.34**	**303**	P	**P**	**06 59 54.6**	**+0.2**
	SNR=5.2						
AML	**Almayashu**	**26.34**	**303**	*eP*	**P**	**06 59 57.3**	**+2.9**
	comp=Z,161nm,1.1s,mb5.5						
EKS2	**Erkin-Say**	**26.42**	**304**	P	**P**	**06 59 57.4**	**+2.2**
	comp=Z,381nm,1.5s,mb5.7						
ZAA0	**Zalesovo Array**	**26.51**	**335**	*eP*	**P**	**06 59 55.3**	**-0.5**
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**06 59 55.3**	**-0.6**
	comp=Z,82nm,0.9s,mb5.2,baz=134,slow=8.5,SNR=14						
HYB	**Hyderabad**	**26.68**	**245**	*i* P	**P**	**07 00 00.0**	**+2.3**
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**06 59 59.2**	**-1.1**
	comp=Z,119nm,0.8s,mb5.5,baz=128,slow=11,SNR=22						
KURK	**Kurchatov**	**26.99**	**323**	*eP*	**P**	**07 00 00.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,233nm,1.2s,mb5.6						
KURK	**Kurchatov**	**26.99**	**323**	*eP*	**P**	**07 00 00.1**	**-0.1**
	comp=Z,233nm,1.2s,mb5.6						
KKM	**Kota Kinabalu**	**27.62**	**152**	*eP*	**P**	**07 00 08.8**	**+2.7**
	comp=Z,204nm,1.4s,mb5.6						
MAT	**Matsushiro**	**29.00**	**70**	P	**P**	**07 00 19.2**	**+0.9**
MJAR	**Matsushiro Arr**	**29.00**	**70**	P	**P**	**07 00 20.0**	**+1.6**
	comp=Z,14nm,1.1s,mb4.6,baz=271,slow=10,SNR=7.1						
KBL	**Kabul**	**29.26**	**286**	*eP*	**P**	**07 00 21.3**	**+0.6**
KBL				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
KBL	**Kabul**	**29.26**	**286**	*eP*	**P**	**07 00 21.3**	**+0.6**
	comp=Z,28nm,0.9s,mb5.0						
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**07 00 48.4**	**-0.9**
	comp=Z,15nm,0.7s,mb5.0,baz=120,slow=8.9,SNR=6.9						
BRVK	**Borovoye**	**32.60**	**322**	*eP*	**P**	**07 00 48.7**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.3						
BRVK	**Borovoye**	**32.60**	**322**	*eP*	**P**	**07 00 51.0**	**+1.1**
	comp=Z,40nm,0.8s,mb5.4						
YSS	**Yuzh-Sakhalins**	**33.72**	**51**	P	**P**	**07 01 00.0**	**+0.2**
YAK	**Yakutsk**	**35.12**	**21**	P	**P**	**07 01 11.9**	**+0.2**
KAPI	**Kappang**	**39.12**	**154**	*eP*	**P**	**07 01 44.1**	**-2.0**
	comp=Z,71nm,1.2s,mb5.3						
ARU	**Arti**	**40.17**	**322**	*eP*	**P**	**07 01 53.9**	**-0.6**
ARU				S	**S**	**07 07 59.5**	**-1.5**
ARU				SS	SS	07 10 58.4	-0.2
ARU	**Arti**	**40.17**	**322**	*eP*	**P**	**07 01 54.0**	**-0.5**
PETK	**Petropavlovsk-**	**44.33**	**44**	P	**P**	**07 02 28.6**	**+0.2**
	comp=Z,22nm,0.9s,mb4.9,baz=204,slow=3.3,SNR=8.4						
GNI	**Garni**	**48.00**	**298**	P	**P**	**07 02 57.9**	**+0.4**
ZEI	**Tsey**	**48.27**	**301**	*eP*	**P**	**07 03 00.9**	**+1.3**
ZEI				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
KIV	**Kislovodsk**	**49.01**	**303**	*eP*	**P**	**07 03 06.9**	**+1.6**
KIV				pmax	pmax		
	comp=Z,85nm,1.0s,mb5.7						
KIV				MLR	MLR		
	comp=Z,215μm,17.0s						
KIV	**Kislovodsk**	**49.01**	**303**	P	**P**	**07 03 07.7**	**+2.4**
VSR	**Storozhevoye**	**50.80**	**313**	*eP*	**P**	**07 03 18.6**	**-0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
VSR				pmax	pmax		
	comp=N,30nm,1.2s						
VSR				pmax	pmax		
	comp=E,60nm,1.2s						
MALT	**Malatya**	**53.16**	**297**	P	**P**	**07 03 37.7**	**+1.2**
FITZ	**Fitzroy Crossi**	**53.34**	**154**	*eP*	**P**	**07 03 37.2**	**-0.7**
	comp=E,26nm,1.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**53.34**	**154**	*eP*	**P**	**07 03 36.4**	**-1.6**
	comp=E,12nm,1.0s,mb4.8						
LVZ	**Lovozero**	**53.64**	**334**	*eP*	**P**	**07 03 38.0**	**-1.6**
LVZ				pmax	pmax		
	comp=Z,47nm,2.2s,mb5.0						
SMY	**Shemya**	**54.23**	**45**	P	**P**	**07 03 43.9**	**-0.3**
SMY				pmax	pmax		
	comp=Z,2μm,2.2s						
SMY	**Shemya**	**54.23**	**45**	P	**P**	**07 03 43.9**	**-0.2**
	comp=Z,2μm,2.2s						
MBWA	**Marble Bar**	**54.27**	**162**	*eP*	**P**	**07 03 43.9**	**-0.9**
	comp=Z,30nm,0.9s,mb5.2						
ASF	**Jabal al Asfar**	**56.03**	**290**	P	**P**	**07 03 57.3**	**-0.2**
	comp=Z,22nm,1.1s,mb5.1,baz=302,slow=4.0,SNR=5.5						
BR131	**Keskin Array B**	**56.44**	**299**	*eP*	**P**	**07 03 59.7**	**-0.6**
	comp=Z,5.2nm,0.6s,mb4.7						
BRTR	**Keskin Array B**	**56.44**	**299**	P	**P**	**07 04 00.2**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=6.9,SNR=4.4						
KEV	**Kevo**	**56.52**	**336**	P	**P**	**07 04 00.8**	**+0.4**
ARCES	**ARCESS Array B**	**57.05**	**336**	P	**P**	**07 04 02.7**	**-1.4**
	comp=Z,16nm,0.8s,mb5.1,baz=104,slow=3.8,SNR=4.0						
AKASG	**Malin Array Be**	**57.10**	**313**	P	**P**	**07 04 03.3**	**-1.5**
	comp=Z,7.6nm,0.8s,mb4.8,baz=41,slow=29,SNR=8.2						
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**07 04 06.1**	**-0.1**
	comp=Z,16nm,0.8s,mb5.1,baz=99,slow=9.8,SNR=6.8						
NACGM	**Naroch**	**57.84**	**318**	*e*	**P**	**07 04 07.0**	**-2.9**
CSS	**Prodhromos**	**58.01**	**294**	P	**P**	**07 04 12.0**	**+0.5**
EIL	**Elat**	**58.44**	**288**	P	**P**	**07 04 13.8**	**-0.7**
	comp=Z,24nm,0.9s,mb5.2,baz=16,slow=4.0,SNR=5.2						
WRAB	**Tennant Creek**	**58.72**	**146**	P	**P**	**07 04 16.9**	**+0.5**
	comp=Z,517nm,0.8s,SNR=5.7						
WRAB	**Tennant Creek**	**58.72**	**146**	*eP*	**P**	**07 04 16.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
WRAB	**Tennant Creek**	**58.72**	**146**	*eP*	**P**	**07 04 16.0**	**-0.5**
	comp=Z,22nm,0.7s,mb5.3						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**07 04 16.1**	**-0.3**
	comp=Z,50nm,0.9s,mb5.5,baz=336,slow=7.6,SNR=10						
COEN	**Coen**	**58.73**	**134**	*eP*	**P**	**07 04 16.2**	**-0.4**
	comp=Z,199nm,1.0s,mb6.1						
WB2	**Warramunga Arr**	**58.73**	**146**	*eP*	**P**	**07 04 15.5**	**-1.0**
SPITS	**Spitsbergen Ar**	**59.17**	**346**	P	**P**	**07 04 19.5**	**+0.6**
	comp=Z,13nm,0.8s,mb5.0,baz=118,slow=10,SNR=4.1						
ISP	**Isparta**	**59.30**	**298**	P	**P**	**07 04 20.0**	**-0.5**
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**07 04 36.9**	**-0.2**
	comp=Z,14nm,0.9s,mb5.1,baz=329,slow=6.4,SNR=7.9						
OJC	**Ojcow**	**63.06**	**314**	*eP*	**P**	**07 04 52.6**	**+6.9**
HFS	**Hagfors**	**63.53**	**326**	P	**P**	**07 04 46.8**	**-1.9**
	comp=Z,6.1nm,0.5s,mb4.8,baz=99,slow=8.9,SNR=4.1						
NB2	**NORSAR Subarra**	**64.42**	**327**	P	**P**	**07 04 52.2**	**-2.3**
	comp=Z,3.5nm,0.6s,m

comp=Z,11nm,0.9s,mb4.8
UCC Uccle 71.97 319 P **P 07 05 43.5 +1.5**
GIVF Givet 72.02 318 *eP* **P 07 05 41.9 -0.4**
HAU Haudompre 72.08 316 *eP* **P 07 05 41.9 -0.8**
SNF Seneffe 72.14 319 P **P 07 05 43.4 +0.4**
DOU Dourbes 72.15 318 P **P 07 05 43.1 -0.1**
INK Inuvik 72.16 19 P **P 07 05 41.5 -1.4**
comp=Z,29nm,0.8s,mb5.3,baz=309,slow=6.5,SNR=8.3
INK Inuvik 72.16 19 *eP* **P 07 05 43.1 +0.2**
INK pmax pmax
comp=Z,36nm,0.9s
INK Inuvik 72.16 19 *eP* **P 07 05 43.1 +0.2**
comp=Z,36nm,0.9s,mb5.3
EIDS Eidsvold 72.19 136 *eP* **P 07 05 42.5 -1.1**
comp=Z,12nm,0.8s,mb4.9
DIV Divide 72.22 29 *eP* **P 07 05 44.8 +1.4**
comp=Z,34nm,1.0s,mb5.2
STKA Stephens Creek 72.25 147 *eP* **P 07 05 43.2 -0.6**
comp=Z,20nm,0.9s,mb5.0
STKA Stephens Creek 72.25 147 P **P 07 05 43.3 -0.5**
comp=Z,12nm,0.7s,mb5.0,baz=334,slow=5.3,SNR=6.7
STKA Stephens Creek 72.25 147 *eP* **P 07 05 42.8 -1.0**
comp=Z,4.2nm,0.8s,mb4.4
BAIF Baives 72.39 318 *eP* **P 07 05 44.2 -0.4**
MEZF Maizieres J'vi 72.62 316 *eP* **P 07 05 45.6 -0.4**
BMRM Bremner River 72.79 28 *eP* **P 07 05 47.0 +0.3**
comp=Z,73nm,1.0s,mb5.6
PGF Pioggiola 72.86 310 *eP* **P 07 05 47.3 -0.2**
comp=Z,147nm,1.2s,mb5.5
PGF Pioggiola 72.86 310 *eP* **P 07 05 47.3 -0.2**
PGF pmax pmax
comp=Z,73nm,1.2s,mb5.5
PGF Pioggiola 72.86 310 *eP* **P 07 05 47.3 -0.2**
comp=Z,73nm,1.2s,mb5.5
CABF La Chapelle 72.87 314 *eP* **P 07 05 47.0 -0.5**
LPG La Plagne 72.97 313 *eP* **P 07 05 48.3 +0.2**
comp=Z,53nm,0.7s,mb5.3
LPG La Plagne 72.97 313 *eP* **P 07 05 48.3 +0.2**
LPG pmax pmax
comp=Z,27nm,0.7s,mb5.3
LPG La Plagne 72.97 313 *eP* **P 07 05 48.3 +0.2**
comp=Z,26nm,0.7s,mb5.3
LPL La Plagne 72.97 313 *eP* **P 07 05 48.2 +0.1**
comp=Z,87nm,1.1s,mb5.3
LPL La Plagne 72.97 313 *eP* **P 07 05 48.2 +0.1**
LPL pmax pmax
comp=Z,44nm,1.1s,mb5.3
LPL La Plagne 72.97 313 *eP* **P 07 05 48.2 +0.1**
comp=Z,44nm,1.1s,mb5.3
DAWY Dawson 72.97 24 *eP* **P 07 05 47.9 +0.1**
SBF Sospel 73.28 311 *eP* **P 07 05 49.4 -0.6**
comp=Z,86nm,1.0s,mb5.3
SBF Sospel 73.28 311 *eP* **P 07 05 49.4 -0.6**
SBF pmax pmax
comp=Z,43nm,1.0s,mb5.3
SBF Sospel 73.28 311 *eP* **P 07 05 49.4 -0.6**
comp=Z,43nm,1.0s,mb5.3
MBDF Montbardon 73.31 312 *eP* **P 07 05 50.6 +0.5**
comp=Z,41nm,0.9s,mb5.0
MBDF Montbardon 73.31 312 *eP* **P 07 05 50.6 +0.5**
MBDF pmax pmax
comp=Z,20nm,0.9s,mb5.0
MBDF Montbardon 73.31 312 *eP* **P 07 05 50.6 +0.5**
comp=Z,20nm,0.9s,mb5.0
RES Resolute Bay 73.67 5 *eP* **P 07 05 52.5 +0.8**
EKA Eskdalemuir Ar 73.71 325 P **P 07 05 51.5 -0.8**
comp=Z,2.7nm,0.8s,mb4.2,baz=60,slow=4.3,SNR=3.2
ORIF Oris-en-Rattie 73.78 313 *eP* **P 07 05 52.6 -0.3**
comp=Z,63nm,1.1s,mb5.2
ORIF Oris-en-Rattie 73.78 313 *eP* **P 07 05 52.6 -0.3**
ORIF pmax pmax
comp=Z,31nm,1.1s,mb5.2
ORIF Oris-en-Rattie 73.78 313 *eP* **P 07 05 52.6 -0.3**
comp=Z,31nm,1.1s,mb5.2
LOR Lormes 73.91 316 *eP* **P 07 05 52.7 -0.9**
LMR La Mourre 74.12 311 *eP* **P 07 05 54.2 -0.7**
comp=Z,97nm,1.4s,mb5.2
LMR La Mourre 74.12 311 *eP* **P 07 05 54.2 -0.7**
LMR pmax pmax
comp=Z,49nm,1.4s,mb5.2
LMR La Mourre 74.12 311 *eP* **P 07 05 54.2 -0.7**
comp=Z,49nm,1.4s,mb5.2
SMF Signal de Mont 74.22 315 *eP* **P 07 05 54.5 -0.9**
comp=Z,51nm,1.0s,mb5.1
SMF Signal de Mont 74.22 315 *eP* **P 07 05 54.5 -0.9**
SMF pmax pmax
comp=Z,26nm,1.0s,mb5.1
SMF Signal de Mont 74.22 315 *eP* **P 07 05 54.5 -0.9**
comp=Z,26nm,1.0s,mb5.1
SSF Saint Saulge 74.22 316 *eP* **P 07 05 54.6 -0.8**
comp=Z,47nm,1.3s,mb5.0
SSF Saint Saulge 74.22 316 *eP* **P 07 05 54.6 -0.8**
SSF pmax pmax
comp=Z,23nm,1.3s,mb5.0
SSF Saint Saulge 74.22 316 *eP* **P 07 05 54.6 -0.8**
comp=Z,24nm,1.3s,mb5.0
AVF Avril sur Loir 74.44 315 *eP* **P 07 05 55.9 -0.8**
comp=Z,66nm,1.2s,mb5.1
AVF Avril sur Loir 74.44 315 *eP* **P 07 05 55.9 -0.8**
AVF pmax pmax
comp=Z,33nm,1.2s,mb5.1
AVF Avril sur Loir 74.44 315 *eP* **P 07 05 55.9 -0.8**
comp=Z,33nm,1.2s,mb5.1
VIVF Saint-Julien-l 74.57 313 *eP* **P 07 05 56.9 -0.6**
comp=Z,52nm,1.3s,mb5.0
VIVF Saint-Julien-l 74.57 313 *eP* **P 07 05 56.9 -0.6**
VIVF pmax pmax
comp=Z,26nm,1.3s,mb5.0
VIVF Saint-Julien-l 74.57 313 *eP* **P 07 05 56.9 -0.6**
comp=Z,26nm,1.3s,mb5.0
BGF Bois d'Agland 74.86 315 *eP* **P 07 05 58.3 -0.9**
TCF Toulx Ste Croi 75.38 315 *eP* **P 07 06 01.7 -0.4**
comp=Z,49nm,1.2s,mb5.0
TCF Toulx Ste Croi 75.38 315 *eP* **P 07 06 01.7 -0.4**
TCF pmax pmax
comp=Z,25nm,1.2s,mb5.0
TCF Toulx Ste Croi 75.38 315 *eP* **P 07 06 01.7 -0.4**
comp=Z,24nm,1.2s,mb5.0
LASF Ste Croix 75.46 313 *eP* **P 07 06 02.4 -0.2**
comp=Z,30nm,1.1s,mb4.9
FLN La Foliniere 75.70 319 *eP* **P 07 06 03.2 -0.7**
comp=Z,48nm,1.1s,mb5.0
FLN La Foliniere 75.70 319 *eP* **P 07 06 03.2 -0.7**
FLN pmax pmax
comp=Z,24nm,1.1s,mb5.0
FLN La Foliniere 75.70 319 *eP* **P 07 06 03.2 -0.7**
comp=Z,24nm,1.1s,mb5.0
KEST Kesra 75.75 303 P **P 07 06 02.7 -1.8**
comp=Z,3.7nm,0.9s,mb4.3,baz=280,slow=21,SNR=2.0
GRR Gorron 76.11 318 *eP* **P 07 06 05.5 -0.8**
comp=Z,51nm,1.0s,mb5.1
GRR Gorron 76.11 318 *eP* **P 07 06 05.5 -0.8**
GRR pmax pmax
comp=Z,26nm,1.0s,mb5.1
GRR Gorron 76.11 318 *eP* **P 07 06 05.5 -0.8**
comp=Z,26nm,1.0s,mb5.1
CAF Calviac 76.15 314 *eP* **P 07 06 06.6 0.0**
RJF Les Rejaudoux 76.29 315 *eP* **P 07 06 07.4 0.0**
ARMA Armidale 76.30 139 *eP* **P 07 06 08.8 +1.3**
MFF Saint Martin d 76.62 317 *eP* **P 07 06 08.8 -0.4**
comp=Z,45nm,1.2s,mb5.0
MFF Saint Martin d 76.62 317 *eP* **P 07 06 08.8 -0.4**
MFF pmax pmax
comp=Z,22nm,1.2s,mb5.0
MFF Saint Martin d 76.62 317 *eP* **P 07 06 08.8 -0.4**
comp=Z,22nm,1.2s,mb5.0
MTLF Montolieu 76.85 313 *eP* **P 07 06 10.3 -0.3**
comp=Z,35nm,1.3s,mb4.8
MTLF Montolieu 76.85 313 *eP* **P 07 06 10.3 -0.3**
MTLF pmax pmax
comp=Z,17nm,1.3s,mb4.8
MTLF Montolieu 76.85 313 *eP* **P 07 06 10.3 -0.3**
comp=Z,17nm,1.3s,mb4.8
LFF La Frestale 76.95 315 *eP* **P 07 06 11.1 0.0**
SGMF Saint Gilles 77.14 319 *eP* **P 07 06 12.0 -0.1**
comp=Z,48nm,1.0s,mb5.1
SGMF Saint Gilles 77.14 319 *eP* **P 07 06 12.0 -0.1**
SGMF pmax pmax
comp=Z,24nm,1.0s,mb5.1
SGMF Saint Gilles 77.14 319 *eP* **P 07 06 12.0 -0.1**
comp=Z,24nm,1.0s,mb5.1
SKAG Skagway 77.39 27 *eP* **P 07 06 14.6 +1.3**
comp=Z,34nm,0.8s,mb5.3
ROSF Rostrenen 77.50 319 *eP* **P 07 06 14.0 -0.1**
comp=Z,30nm,0.9s,mb4.9
ROSF Rostrenen 77.50 319 *eP* **P 07 06 14.0 -0.1**
ROSF pmax pmax
comp=Z,15nm,0.9s,mb4.9
ROSF Rostrenen 77.50 319 *eP* **P 07 06 14.0 -0.1**
comp=Z,15nm,0.9s,mb4.9
EPF Esparros 78.19 313 *eP* **P 07 06 17.1 -1.0**
TOO Toolangi 78.75 147 *eP* **P 07 06 21.3 +0.3**
ETSF Etsaut 78.82 313 *eP* **P 07 06 21.8 +0.2**
comp=Z,21nm,0.9s,mb4.8
ETSF Etsaut 78.82 313 *eP* **P 07 06 21.8 +0.2**
ETSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ETSF Etsaut 78.82 313 *eP* **P 07 06 21.8 +0.2**
comp=Z,10nm,0.9s,mb4.8
CNB Canberra Magne 78.84 143 *eP* **P 07 06 21.2 -0.3**
DZM Mont Dzumac 80.09 123 P **P 07 06 29.4 +0.7**
DLBC Dease Lake 80.09 26 P **P 07 06 29.2 +1.1**
comp=Z,4.3nm,0.9s,mb4.4,baz=69,slow=6.9,SNR=3.1
DLBC Dease Lake 80.09 26 P **P 07 06 28.4 +0.2**
SFJD Kangerlussuaq 80.19 350 P **P 07 06 27.9 -0.6**
comp=Z,14nm,0.7s,mb5.0,baz=329,slow=8.8,SNR=5.6
SFJD Kangerlussuaq 80.19 350 *i P* **P 07 06 27.8 -0.8**
SFJD pmax pmax
comp=Z,15nm,0.7s,mb5.0
SFJD Kangerlussuaq 80.19 350 P **P 07 06 27.9 -0.6**
SFJD Kangerlussuaq 80.19 350 *i P* **P 07 06 27.8 -0.8**
comp=Z,15nm,0.7s,mb5.0
YKA Yellowknife Ar 81.69 17 P **P 07 06 36.0 -0.6**
comp=Z,6.3nm,0.7s,mb4.6,baz=328,slow=5.1,SNR=6.5
YKA Yellowknife Ar 81.69 17 P **P 07 06 36.0 -0.6**
ESLA Sonseca Array 82.73 312 *eP* **P 07 06 42.3 -0.2**
SFS San Fernando 86.03 311 P **P 07 07 00.0 +0.6**
MDT Midelt 87.10 307 P **P 07 07 04.9 +0.2**
comp=Z,7.5nm,1.0s,mb4.9,baz=67,slow=3.1,SNR=4.5
FFC Flin Flon 91.60 15 *eP* **P 07 07 23.0 -2.4**
FFC pmax pmax
comp=Z,45nm,1.3s,mb5.6
FFC Flin Flon 91.60 15 *eP* **P 07 07 23.0 -2.4**
comp=Z,45nm,1.3s,mb5.6
LBTB Lobatse 93.28 243 *eP* **P 07 07 34.1 +0.5**
TORD Torodi Ar. Bea 93.32 287 P **P 07 07 34.6 +0.5**
comp=Z,3.6nm,0.9s,mb4.8,baz=65,slow=3.5,SNR=3.7
ROSC El Rosal 144.10 357 SKPbc PKPdf 07 13 54.8 -0.4
comp=Z,16nm,0.7s,baz=32,slow=1.9,SNR=6.3
ROSC El Rosal 144.10 357 *e*PKPdf PKPdf 07 13 54.6 -0.5
OTAV Otavalo 148.66 4 *e*PKPdf PKPdf 07 14 04.4 +1.5
PLCA Paso Flores 169.43 204 PKP PKPdf 07 14 26.1 +0.1
comp=Z,4.1nm,0.9s,baz=294,slow=1.9,SNR=3.7
PLCA PKPab PKPab 07 15 37.8 -0.9
comp=Z,5.6nm,0.9s,baz=168,slow=3.4,SNR=8.9
PLCA Paso Flores 169.43 204 *e*PKPdf PKPdf 07 14 26.4 +0.5
CFAA Coronel Fontan 173.15 265 PKP PKPdf 07 14 28.7 +0.6
comp=Z,0.6nm,1.0s,baz=98,slow=1.3,SNR=4.3

CASC 12 06:56:42.2±1.7, 11°.57N×88°.12W, h2km±18km, MD3.6, ML3.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.54**	**43**	*eP*	Pn	06 57 09.8	-0.9
CRIN				*eS*	Sn	06 57 31.0	-0.3
CRIN				AML	AML	06 57 31.1	
	comp=N,206nm,0.3s						
COPN	**Copaltepe**	**1.62**	**68**	*eP*	Pn	06 57 11.9	+0.1
COPN				*eS*	Sn	06 57 34.1	+0.8
MIRN	**Miramar**	**1.63**	**58**	*eP*	Pn	06 57 11.5	-0.5
MIRN				*eS*	Sn	06 57 33.9	+0.4
CNCH	**Conchagua**	**1.72**	**9**	*eP*	Pn	06 57 12.8	-0.4
CNCH				*eS*	Sn	06 57 37.9	+2.0
SNVI	**San Vicente**	**2.15**	**341**	*eP*	Pn	06 57 18.5	-0.6
LFRS	**El Faro**	**2.24**	**336**	*eS*	Sn	06 57 49.4	+0.8

*IDC **12** 06:57:32.8±0.5, 31°.80N×104°.55E, h0km, mb4.8/36, mb1 4.9/38, mb1mx4.8/45, mbtmp4.8/38, ML4.2/1, Error ellipse: s-maj=16.2km s-min=10.9km az=54.0*
*ISCJB **12** 06:57:33.2±0.3, 31°.86N±0°.04×104°.63E±0°.06, h10km, mb4.8/50, Error ellipse: s-maj=6.8km s-min=5.2km az=6.6*
*NEIC **12** 06:57:34.9±0.2, 31°.86N×104°.64E, h10km, mb5.1/11, Error ellipse: s-maj=8.2km s-min=5.4km az=58.0*
*MOS **12** 06:57:34.4±1.0, 31°.84N×104°.59E, h18km, mb5.2/12, Error ellipse: s-maj=12.0km s-min=6.6km az=120.7*
*BJI **12** 06:57:36.2, 31°.65N×104°.48E, h15km, mb5.2/1, ML4.7/3*
ISC 12 06:57:35.1±0.3, 31°.87N±0°.03×104°.61E±0°.06, h10km, n115, σ0888/114, mb4.8/50, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.20**	**217**	Pg	**Pg**	**06 58 09.3**	**+11**
CD2				Sg	**Sg**	**06 58 14.3**	**+0.6**
CD2				smax			
	comp=N,1491μm,0.5s						
LZH	**Lanzhou**	**4.25**	**352**	*e*Pg	**Pg**	**06 58 56.6**	**0.0**
LZH				Sg	**Sg**	**06 59 51.3**	**-0.5**
LZH				smax			
	comp=N,2μm,1.1s						
LZH				smax			
	comp=E,2μm,1.0s						
LSA	**Lhasa**	**11.77**	**263**	*eP*	**Pn**	**07 00 25.6**	**+2.5**
BJI	**Beijing**	**12.41**	**46**	P	**Pn**	**07 00 39.5**	**+7.6**
CM31	**Chiang Mai Arr**	**14.30**	**202**	*eP*	**Pn**	**07 01 02.4**	**+4.7**
	comp=E,18nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.30**	**202**	Pn	**Pn**	**07 00 57.7**	**0.0**
	baz=21,slow=13,SNR=2.3						
SONM	**Songino Array**	**16.00**	**4**	Pn	**Pn**	**07 01 20.8**	**+0.5**
	comp=E,1.0nm,0.3s,baz=188,slow=14,SNR=2.8						
NACB	**Ninganchiao**	**16.83**	**113**	*eP*	**Pn**	**07 01 34.4**	**+3.4**
KSRS	**Korea Array**	**19.95**	**67**	P	**Pn**	**07 02 09.6**	**+0.5**
	comp=E,3.6nm,0.3s,baz=253,slow=10,SNR=10						
KSRS	**Korea Array**	**19.95**	**67**	P	**Pn**	**07 02 09.6**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CN2	**Changchun**	**20.26**	**48**	*eP*	**P**	**07 02 12.9**	**+2.3**
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**07 02 37.4**	**+0.7**
	comp=Z,20nm,0.8s,mb4.6,baz=123,slow=14,SNR=8.2						
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**07 02 37.4**	**+0.7**
AAK	**Ala-Archa**	**26.14**	**303**	P	**P**	**07 03 10.1**	**+0.8**
	comp=Z,5.2nm,0.6s,mb4.2,baz=149,slow=6.2,SNR=4.3						
ZAA0	**Zalesovo Array**	**26.23**	**333**	*eP*	**P**	**07 03 10.0**	**0.0**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**07 03 10.3**	**+0.3**
	comp=Z,19nm,0.6s,mb4.8,baz=134,slow=9.3,SNR=7.9						
KURK	**Kurchatov**	**26.90**	**322**	P	**P**	**07 03 16.2**	**+0.1**
	comp=Z,8.5nm,0.5s,mb4.6,baz=121,slow=12,SNR=4.0						
KURK	**Kurchatov**	**26.90**	**322**	P	**P**	**07 03 16.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
KURK	**Kurchatov**	**26.90**	**322**	*eP*	**P**	**07 03 15.3**	**-0.8**
KKM	**Kota Kinabalu**	**27.89**	**155**	*eP*	**P**	**07 03 25.5**	**+0.2**
	comp=Z,21nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**28.09**	**71**	P	**P**	**07 03 27.1**	**+0.1**
	comp=Z,2.4nm,0.5s,mb4.0,baz=276,slow=9.9,SNR=5.0						
BVAR	**Bovoye Array**	**32.46**	**321**	P	**P**	**07 04 05.2**	**-0.2**
	comp=Z,7.4nm,0.6s,mb4.7,baz=112,slow=8.5,SNR=5.8						
ABKAR	**Akbulak array**	**37.49**	**311**	*eP*	**P**	**07 04 49.1**	**+0.2**
	comp=Z,18nm,0.8s,mb5.0						
ARU	**Arti**	**40.09**	**322**	*eP*	**P**	**07 05 11.4**	**+0.8**
ARU				pmax	pmax		
	comp=Z,61nm,0.6s,mb5.5						
ARU	**Arti**	**40.09**	**322**	*eP*	**P**	**07 05 11.4**	**+0.8**
	comp=Z,61nm,0.6s,mb5.5						
PETK	**Petropavlovsk-**	**43.35**	**45**	P	**P**	**07 05 38.1**	**+0.8**
	comp=Z,5.7nm,0.5s,mb4.5,baz=290,slow=1.9,SNR=12						
GOF	**Gofitskoye**	**48.87**	**304**	*eP*	**P**	**07 06 19.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**53.62**	**155**	P	**P**	**07 06 55.6**	**-1.1**
	comp=Z,4.8nm,0.6s,mb4.6,baz=339,slow=7.3,SNR=5.8						
JOF	**Joensuu**	**54.61**	**327**	*eP*	**P**	**07 07 02.3**	**-1.2**
JOF				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
JOF	**Joensuu**	**54.61**	**327**	*ep*	**P**	**07 07 02.3**	**-1.2**
	comp=Z,11nm,0.6s,mb5.1						
KEV	**Kevo**	**56.21**	**336**	*eP*	**P**	**07 07 13.6**	**-1.3**
KEV				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
KEV	**Kevo**	**56.21**	**336**	*ep*	**P**	**07 07 13.6**	**-1.3**
	comp=Z,14nm,0.7s,mb5.1						
ASF	**Jabal al Asfar**	**56.49**	**290**	P	**P**	**07 07 17.3**	**-0.2**
	comp=Z,5.9nm,0.7s,mb4.8,baz=318,slow=4.6,SNR=4.2						
BRTR	**Keskin Array B**	**56.74**	**299**	P	**P**	**07 07 18.9**	**-0.2**
	comp=Z,7.8nm,0.8s,mb4.8,baz=92,slow=6.9,SNR=6.7						
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**07 07 18.3**	**-0.4**
	comp=Z,4.8nm,0.6s,mb4.7,baz=81,slow=7.5,SNR=5.8						
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**07 07 18.3**	**-0.4**
KAF	**Kangasniemi**	**56.99**	**327**	*eP*	**P**	**07 07 15.8**	**-4.7**
KAF				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
KAF	**Kangasniemi**	**56.99**	**327**	*ep*	**P**	**07 07 15.8**	**-4.7**
	comp=Z,12nm,0.7s,mb5.0						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**07 07 22.0**	**+0.1**
	comp=Z,17nm,0.6s,mb5.2,baz=88,slow=7.7,SNR=14						
AKASG	**Malin Array Be**	**57.18**	**313**	P	**P**	**07 07 21.8**	**-0.3**
	comp=Z,3.4nm,0.6s,mb4.6,baz=198,slow=15,SNR=7.0						
COEN	**Coen**	**58.67**	**135**	*eP*	**P**	**07 07 33.1**	**+0.2**
	comp=Z,461nm,1.3s						
SPITS	**Spitsbergen Ar**	**58.70**	**346**	P	**P**	**07 07 31.3**	**-1.1**
	comp=Z,6.6nm,0.7s,mb4.8,baz=76,slow=7.0,SNR=4.2						
SPB4	**Spitsbergen Ar**	**58.70**	**346**	P	**P**	**07 07 29.4**	**-3.0**
WRAB	**Tennant Creek**	**58.87**	**147**	*eP*	**P**	**07 07 34.7**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,296nm,1.5s						
WRAB	**Tennant Creek**	**58.87**	**147**	*eP*	**P**	**07 07 34.6**	**+0.4**
	comp=Z,296nm,1.5s						
WRA	**Warramunga Arr**	**58.87**	**147**	P	**P**	**07 07 34.1**	**-0.1**
	comp=Z,13nm,0.6s,mb5.1,baz=340,slow=7.3,SNR=8.1						
WB2	**Warramunga Arr**	**58.88**	**147**	*eP*	**P**	**07 07 34.5**	**+0.2**
EIL	**Elat**	**58.92**	**288**	P	**P**	**07 07 33.4**	**-1.3**
	comp=Z,9.6nm,0.9s,mb4.8,baz=53,slow=6.0,SNR=4.9						
KBS	**Kingsbay**	**59.48**	**347**	*eP*	**P**	**07 07 44.6**	**+6.8**
MLR	**Muntele Rosu**	**60.59**	**308**	P	**P**	**07 07 45.3**	**-0.5**
	comp=Z,29nm,1.1s,mb5.3,baz=96,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**07 07 53.8**	**-1.3**
	comp=Z,48nm,1.0s,mb5.6,baz=143,slow=2.5,SNR=6.1						
HFS	**Hagfors**	**63.38**	**326**	P	**P**	**07 08 02.5**	**-1.9**
	comp=Z,7.5nm,0.5s,mb5.0,baz=100,slow=6.2,SNR=8.9						
NB2	**NORSAR Subarra**	**64.25**	**327**	P	**P**	**07 08 09.4**	**-0.7**
	comp=Z,5.2nm,0.6s,mb4.7,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.25**	**327**	P	**P**	**07 08 08.9**	**-1.2**
	comp=Z,5.9nm,0.7s,mb4.8,baz=71,slow=6.6,SNR=7.1						
IDI	**Anoyia**	**64.76**	**297**	P	**P**	**07 08 11.9**	**-2.0**
	comp=Z,24nm,0.7s,mb5.3,baz=335,slow=2.8,SNR=5.5						
VRAC	**Vranov**	**65.38**	**314**	P	**P**	**07 08 17.2**	**-0.5**
	comp=Z,5.1nm,0.6s,mb4.8,baz=320,slow=22,SNR=2.8						
NWAO	**Narrogin (SRO)**	**65.54**	**168**	P	**P**	**07 08 18.1**	**-0.6**
	comp=Z,83nm,1.1s,mb5.7,baz=154,slow=5.6,SNR=2.0						
GERES	**GERESS Array B**	**67.32**	**314**	P	**P**	**07 08 30.4**	**+0.3**
	comp=Z,5.0nm,0.9s,mb4.5,baz=82,slow=4.8,SNR=4.7						
KDAK	**Kodiak Island**	**69.97**	**34**	P	**P**	**07 08 45.9**	**-0.5**
	comp=Z,25nm,0.9s,mb5.2,baz=282,slow=11,SNR=3.1						
DAVOX	**Davos/Dischmat**	**70.52**	**313**	P	**P**	**07 08 49.8**	**-0.2**
	comp=Z,9.5nm,0.7s,mb4.9,baz=311,slow=18,SNR=5.0						
INK	**Inuvik**	**71.30**	**19**	P	**P**	**07 08 54.4**	**+0.1**
	comp=Z,13nm,0.7s,mb5.0,baz=173,slow=24,SNR=5.0						
INK	**Inuvik**	**71.30**	**19**	P	**P**	**07 08 54.4**	**+0.1**
GIVF	**Givet**	**72.01**	**318**	*eP*	**P**	**07 09 00.0**	**+1.0**
BAIF	**Baives**	**72.38**	**318**	*eP*	**P**	**07 09 02.3**	**+1.1**
STKA	**Stephens Creek**	**72.42**	**148**	P	**P**	**07 09 00.5**	**-1.0**
	comp=Z,12nm,0.8s,mb4.9,baz=324,slow=5.7,SNR=4.6						
PGF	**Pioggiola**	**72.99**	**310**	*eP*	**P**	**07 09 05.5**	**+0.5**
	comp=Z,44nm,0.8s,mb5.1						
PGF	**Pioggiola**	**72.99**	**310**	*eP*	**P**	**07 09 05.5**	**+0.5**
PGF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
PGF	**Pioggiola**	**72.99**	**310**	*eP*	**P**	**07 09 05.5**	**+0.5**
	comp=Z,22nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
	comp=Z,35nm,0.7s,mb5.1						
LPG	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
LPG				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
LPG	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
	comp=Z,18nm,0.7s,mb5.1						
LPL	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
	comp=Z,24nm,0.6s,mb5.0						
LPL	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
LPL				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
LPL	**La Plagne**	**73.04**	**313**	*eP*	**P**	**07 09 06.1**	**+0.9**
	comp=Z,12nm,0.6s,mb5.0						
SBF	**Sospel**	**73.38**	**312**	*eP*	**P**	**07 09 06.9**	**-0.4**
	comp=Z,36nm,0.8s,mb5.1						
SBF	**Sospel**	**73.38**	**312**	*eP*	**P**	**07 09 06.9**	**-0.4**
SBF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
SBF	**Sospel**	**73.38**	**312**	*eP*	**P**	**07 09 06.9**	**-0.4**
	comp=Z,18nm,0.8s,mb5.0						
MBDF	**Montbardon**	**73.39**	**313**	*eP*	**P**	**07 09 08.9**	**+1.6**
EKA	**Eskdalemuir Ar**	**73.57**	**325**	P	**P**	**07 09 06.4**	**-1.7**
	comp=Z,4.2nm,0.9s,mb4.3,baz=57,slow=4.9,SNR=4.7						
ORIF	**Oris-en-Rattie**	**73.86**	**313**	*eP*	**P**	**07 09 10.3**	**+0.3**
LOR	**Lormes**	**73.94**	**316**	*eP*	**P**	**07 09 10.7**	**+0.2**
FRF	**La Foret Royal**	**74.03**	**312**	*eP*	**P**	**07 09 10.9**	**-0.2**
LMR	**La Mourre**	**74.23**	**311**	*eP*	**P**	**07 09 12.2**	**0.0**
SMF	**Signal de Mont**	**74.26**	**315**	*eP*	**P**	**07 09 12.3**	**0.0**
	comp=Z,11nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**74.26**	**315**	*eP*	**P**	**07 09 12.3**	**0.0**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**74.26**	**315**	*eP*	**P**	**07 09 12.3**	**0.0**
	comp=Z,5.6nm,0.7s,mb4.6						
OPO	**Ambohidratompo**	**74.44**	**236**	P	**P**	**07 09 12.2**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.2,baz=66,slow=6.6,SNR=3.7						
AVF	**Avril sur Loir**	**74.47**	**316**	*eP*	**P**	**07 09 13.5**	**-0.1**
	comp=Z,10.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**74.47**	**316**	*eP*	**P**	**07 09 13.5**	**-0.1**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**74.47**	**316**	*eP*	**P**	**07 09 13.5**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.5						
BGF	**Bois d'Agland**	**74.89**	**316**	*eP*	**P**	**07 09 16.0**	**0.0**
TCF	**Toulx Ste Croi**	**75.41**	**316**	*eP*	**P**	**07 09 19.3**	**+0.3**
LASF	**Ste Croix**	**75.53**	**313**	*eP*	**P**	**07 09 20.3**	**+0.5**
LDF	**La Druitiere**	**75.56**	**318**	*eP*	**P**	**07 09 20.6**	**+0.7**
	comp=Z,18nm,0.9s,mb4.7						
LDF	**La Druitiere**	**75.56**	**318**	*eP*	**P**	**07 09 20.6**	**+0.7**
LDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
LDF

ellipse: s-maj=103.0km s-min=34.7km az=14.0
ISCJB ***12*** *06:59:40.6±0.7,31°.26N±0°.06×103°.9E±0°.2,h10km, mb4.2/3, Error ellipse: s-maj=21.7km s-min=7.1km az=16.7*

ISC 12 06:59:42.1±0.7,31°23N±0°.05×103°.8E±0°.2,h10km,n7, σ0s80/8,mb4.2/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**188**	Pg	**Pg**	**06 59 48.0**	**-0.6**
CD2				Sg	**Sg**	**06 59 53.5**	**+0.6**
CD2				smax			
	comp=E,38μm,1.1s						
SONM	**Songino Array**	**16.70**	**6**	P	**Pn**	**07 03 36.6**	**+0.6**
	comp=E,0.5nm,0.3s,baz=185,slow=16,SNR=3.6						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**07 04 23.6**	**-0.1**
	comp=E,17nm,0.7s,baz=261,slow=10,SNR=6.1						
CN2	**Changchun**	**21.18**	**48**	*eP*	**P**	**07 04 28.3**	**+0.7**
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**07 05 20.2**	**+0.8**
	comp=E,5.5nm,0.7s,mb4.2,baz=134,slow=10,SNR=2.8						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**07 05 23.7**	**-0.3**
	comp=E,8.5nm,0.9s,mb4.3,baz=129,slow=9.4,SNR=2.8						
YKA	**Yellowknife Ar**	**81.64**	**17**	P	**P**	**07 11 58.3**	**-1.8**
	comp=E,1.4nm,0.7s,mb4.0,baz=325,slow=5.2,SNR=3.1						

IDC ***12*** *07:00:26.1±1.0,30°.98N×103°.32E,h0km,mb4.6/12, mb1 4.7/12,mb1mx4.4/28,mbtmp4.6/12, Error ellipse: s-maj=54.5km s-min=19.9km az=56.0*
ISCJB ***12*** *07:00:27.8±3.0,31°.3N±0°.1×104°.0E±0°.2,h14km±19km, mb4.7/17, Error ellipse: s-maj=31.4km s-min=15.2km az=149.1*
NEIC ***12*** *07:00:29.0±0.6,31°.22N×103°.65E,h10km,mb5.0/6, Error ellipse: s-maj=20.3km s-min=13.4km az=220.0*
MOS ***12*** *07:00:29.5±1.6,31°.26N×103°.65E,h25km,mb5.2/5, Error ellipse: s-maj=17.4km s-min=10.9km az=110.0*

ISC 12 07:00:28.7±3.5,31°3N±0°.1×103°.9E±0°.2,h6km±22km,n55, σ1s13/56,mb4.7/17,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**196**	Pg	**Pg**	**07 00 37.0**	**0.0**
CD2				Sg	**Sg**	**07 00 42.7**	**+0.1**
CD2				smax			
	comp=N,109μm,0.6s						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**07 06 07.2**	**+1.1**
	comp=N,9.4nm,0.7s,mb4.4,baz=136,slow=9.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**07 06 07.2**	**+1.1**
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**07 06 07.2**	**+1.1**
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**07 06 09.7**	**-1.2**
	comp=N,6.5nm,0.8s,mb4.2,baz=134,slow=9.1,SNR=5.4						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**07 06 09.7**	**-1.1**
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**07 06 09.7**	**-1.2**
ARU	**Arti**	**40.15**	**322**	P	**P**	**07 08 03.1**	**-2.1**
ARU	**Arti**	**40.15**	**322**	P	**P**	**07 08 03.1**	**-2.1**
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**07 10 14.3**	**-0.2**
	comp=N,6.9nm,0.8s,mb4.7,baz=82,slow=7.6,SNR=4.2						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**07 10 14.4**	**-0.2**
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**07 10 15.0**	**-1.8**
	comp=N,3.4nm,0.6s,mb4.6,baz=90,slow=8.0,SNR=3.4						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**07 10 15.0**	**-1.8**
WRAB	**Tennant Creek**	**58.75**	**146**	*eP*	**P**	**07 10 27.9**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**58.75**	**146**	*eP*	**P**	**07 10 27.9**	**+0.3**
	comp=Z,26nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**07 10 27.3**	**-0.3**
	comp=Z,22nm,1.0s,mb5.2,baz=337,slow=7.5,SNR=5.2						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**07 10 27.3**	**-0.3**
HFS	**Hagfors**	**63.49**	**326**	P	**P**	**07 10 55.8**	**-3.4**
	comp=Z,2.8nm,0.5s,mb4.6,baz=80,slow=8.1,SNR=5.3						
HFS	**Hagfors**	**63.49**	**326**	P	**P**	**07 10 55.8**	**-3.4**
NB2	**NORSAR Subarra**	**64.38**	**327**	P	**P**	**07 11 03.1**	**-2.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=75,slow=6.9						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**07 11 03.5**	**-1.6**
	comp=Z,1.7nm,0.6s,mb4.2,baz=73,slow=6.6,SNR=3.6						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**07 11 03.5**	**-1.6**
GERES	**GERESS Array B**	**67.27**	**314**	P	**P**	**07 11 22.4**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=52,slow=13,SNR=3.9						
GERES	**GERESS Array B**	**67.27**	**314**	P	**P**	**07 11 22.4**	**-1.5**
CDF	**Champ du Feu**	**71.33**	**316**	*eP*	**P**	**07 11 49.5**	**+0.4**
CDF	**Champ du Feu**	**71.33**	**316**	*eP*	**P**	**07 11 49.5**	**+0.4**
WDD	**Wield Dalam**	**71.98**	**301**	*eP*	**P**	**07 11 53.6**	**+0.4**
	comp=Z,72nm,0.7s,mb5.7						
INK	**Inuvik**	**72.01**	**19**	P	**P**	**07 11 53.6**	**+0.8**
	comp=Z,13nm,1.0s,mb4.8,baz=340,slow=5.5,SNR=4.6						
INK	**Inuvik**	**72.01**	**19**	P	**P**	**07 11 53.7**	**+0.9**
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**07 11 52.2**	**-2.7**
	comp=Z,8.8nm,0.9s,mb4.7,baz=343,slow=5.5,SNR=3.0						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**07 11 52.2**	**-2.7**
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.1**	**+1.1**
	comp=Z,16nm,0.7s,mb4.8						
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.1**	**+1.1**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.1**	**+1.1**
	comp=Z,7.9nm,0.7s,mb4.8						
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.0**	**+1.0**
	comp=Z,15nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.0**	**+1.0**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 12 00.0**	**+1.0**
	comp=Z,7.3nm,0.6s,mb4.8						
SMF	**Signal de Mont**	**74.22**	**315**	*eP*	**P**	**07 12 06.6**	**+0.3**
AVF	**Avril sur Loir**	**74.44**	**315**	*eP*	**P**	**07 12 07.7**	**+0.1**
TCF	**Toulx Ste Croi**	**75.37**	**315**	*eP*	**P**	**07 12 13.6**	**+0.6**
GRR	**Gorron**	**76.09**	**318**	*eP*	**P**	**07 12 17.5**	**+0.4**
	comp=Z,9.6nm,0.5s,mb4.7						
GRR	**Gorron**	**76.09**	**318**	*eP*	**P**	**07 12 17.5**	**+0.4**
GRR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
GRR	**Gorron**	**76.09**	**318**	*eP*	**P**	**07 12 17.5**	**+0.4**
	comp=Z,4.8nm,0.5s,mb4.7						
CAF	**Calviac**	**76.15**	**314**	*eP*	**P**	**07 12 18.3**	**+0.9**
RJF	**Les Rejaudoux**	**76.29**	**315**	*eP*	**P**	**07 12 19.3**	**+1.1**
MFF	**Saint Martin d**	**76.61**	**317**	*eP*	**P**	**07 12 20.5**	**+0.4**
MFF	**Saint Martin d**	**76.61**	**317**	*eP*	**P**	**07 12 20.5**	**+0.4**
SGMF	**Saint Gilles**	**77.12**	**319**	*eP*	**P**	**07 12 23.8**	**+0.9**
SGMF	**Saint Gilles**	**77.12**	**319**	*eP*	**P**	**07 12 23.8**	**+0.9**
SFJD	**Kangerlussuaq**	**80.09**	**350**	P	**P**	**07 12 37.4**	**-1.5**
	comp=Z,8.1nm,0.7s,mb4.8,baz=334,slow=9.5,SNR=3.6						
SFJD	**Kangerlussuaq**	**80.09**	**350**	P	**P**	**07 12 37.4**	**-1.5**
SFJD	**Kangerlussuaq**	**80.09**	**350**	P	**P**	**07 12 37.4**	**-1.5**
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**07 12 48.8**	**+2.1**
	comp=Z,3.1nm,0.7s,mb4.4,baz=327,slow=4.9,SNR=4.5						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**07 12 48.8**	**+2.1**
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**07 12 48.8**	**+2.1**

ISCJB ***12*** *07:00:40.8±0.5,32°.28N±0°.08×104°.97E±0°.09,h10km, mb4.7/23, Error ellipse: s-maj=13.1km s-min=7.5km az=43.0*
IDC ***12*** *07:00:41.2±0.7,32°.25N×104°.99E,h0km,mb4.7/20, mb1 4.8/22,mb1mx4.6/33,mbtmp4.7/22,ML4.4/2,MS6.6/1, Ms1 6.6/1,ms1mx5.5/44, Error ellipse: s-maj=24.2km s-min=12.3km az=43.0*
NEIC ***12*** *07:00:42.7±0.4,32°.20N×104°.91E,h10km,mb5.0/3, Error ellipse: s-maj=24.2km s-min=8.2km az=50.0*
MOS ***12*** *07:00:43.9±0.8,32°.17N×104°.88E,h33km,mb5.2/3, Error ellipse: s-maj=38.5km s-min=11.4km az=120.8*

ISC 12 07:00:43.0±0.5,32°31N±0°.06×105°.00E±0°.08,h10km,n59, σ0s75/61,mb4.7/23,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.89**	**346**	Pg	**Pg**	**07 01 56.8**	**-0.7**
LZH				Sn	**Sn**	**07 02 34.1**	**+5.6**
LZH				Sg	**Sg**	**07 02 47.5**	**-0.4**
LZH				smax			
	comp=N,5μm,0.8s						
LZH				smax			
	comp=E,6μm,0.7s						
SONM	**Songino Array**	**15.54**	**4**	Pn	**Pn**	**07 04 22.0**	**-0.1**
	comp=E,1.0nm,0.3s,baz=181,slow=16,SNR=2.7						
SONM	**Songino Array**	**15.54**	**4**	P	**Pn**	**07 04 22.0**	**-0.1**
SONM	**Songino Array**	**15.54**	**4**	Pn	**Pn**	**07 04 22.0**	**-0.1**
KSRS	**Korea Array**	**19.48**	**68**	Pn	**Pn**	**07 05 12.2**	**+1.0**
	comp=E,1.4nm,0.3s,baz=249,slow=10,SNR=4.2						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**07 05 12.2**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JOW	**Kunigami**	**20.95**	**99**	P	**P**	**07 05 27.7**	**+1.6**
	comp=Z,18nm,0.3s,baz=270,slow=9.1,SNR=5.4						
JOW	**Kunigami**	**20.95**	**99**	P	**P**	**07 05 27.7**	**+1.6**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**07 05 44.6**	**+1.0**
	comp=Z,12nm,0.6s,mb4.5,baz=130,slow=8.5,SNR=15						
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**07 05 44.7**	**+1.1**
ZALV	**Zalesovo Beam**	**25.99**	**332**	P	**P**	**07 06 16.6**	**+0.8**
	comp=Z,13nm,0.5s,mb4.7,baz=132,slow=9.4,SNR=9.1						
ZALV	**Zalesovo Beam**	**25.99**	**332**	P	**P**	**07 06 16.6**	**+0.8**
ZALV	**Zalesovo Beam**	**25.99**	**332**	P	**P**	**07 06 16.6**	**+0.8**
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**07 06 23.4**	**+0.6**
	comp=Z,12nm,0.8s,mb4.5,baz=130,slow=9.2,SNR=5.9						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**07 06 23.4**	**+0.6**
MAJO	**Matsushiro**	**27.63**	**72**	*eP*	**P**	**07 06 30.4**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**27.63**	**72**	*eP*	**P**	**07 06 30.4**	**-0.3**
	comp=Z,19nm,0.8s,mb4.8						
MAT	**Matsushiro**	**27.63**	**72**	P	**P**	**07 06 30.0**	**-0.7**
MJAR	**Matsushiro Arr**	**27.64**	**72**	P	**P**	**07 06 30.1**	**-0.6**
	comp=Z,11nm,0.9s,mb4.5,baz=133,slow=3.0,SNR=8.7						
MJAR	**Matsushiro Arr**	**27.64**	**72**	P	**P**	**07 06 30.1**	**-0.7**
MJAR	**Matsushiro Arr**	**27.64**	**72**	P	**P**	**07 06 30.1**	**-0.6**
BVAR	**Borovoye Array**	**32.34**	**320**	P	**P**	**07 07 12.9**	**+0.7**
	comp=Z,3.4nm,0.6s,mb4.4,baz=113,slow=9.3,SNR=5.3						
BVAR	**Borovoye Array**	**32.34**	**320**	P	**P**	**07 07 12.9**	**+0.7**
ABKAR	**Akbulak array**	**37.46**	**310**	*eP*	**P**	**07 07 53.6**	**-2.9**
	comp=Z,16nm,1.0s,mb4.8						
ARU	**Arti**	**39.96**	**321**	*eP*	**P**	**07 08 18.2**	**+0.9**
ARU				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
ARU	**Arti**	**39.96**	**321**	*eP*	**P**	**07 08 18.2**	**+0.9**
	comp=Z,23nm,0.8s,mb5.0						
GUMO	**Guam**	**40.87**	**108**	P	**P**	**07 08 25.1**	**-0.2**
	comp=Z,46nm,0.7s,mb5.2,baz=198,slow=20,SNR=3.1						
GUMO	**Guam**	**40.87**	**108**	P	**P**	**07 08 25.1**	**-0.2**
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**07 08 40.4**	**-0.3**
	comp=Z,27nm,1.2s,mb4.9,baz=265,slow=2.1,SNR=4.1						
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**07 08 40.4**	**-0.3**
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**07 08 40.4**	**-0.3**
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**07 10 24.5**	**-0.2**
	comp=Z,4.0nm,0.6s,mb4.6,baz=83,slow=7.2,SNR=7.3						
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**07 10 24.5**	**-0.2**
BRTR	**Keskin Array B**	**56.82**	**299**	P	**P**	**07 10 27.9**	**+0.3**
	comp=Z,5.4nm,0.8s,mb4.7,baz=110,slow=4.2,SNR=5.9						
BRTR	**Keskin Array B**	**56.82**	**299**	P	**P**	**07 10 27.9**	**+0.3**
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**07 10 28.5**	**0.0**
	comp=Z,8.9nm,0.7s,mb4.9,baz=89,slow=6.9,SNR=4.6						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**07 10 28.5**	**0.0**
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**07 10 29.4**	**-0.2**
	comp=Z,1.2nm,0.3s,mb4.4,baz=69,slow=8.0,SNR=4.2						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**07 10 29.4**	**-0.2**
SPITS	**Spitsbergen Ar**	**58.36**	**346**	P	**P**	**07 10 38.4**	**+0.5**
	comp=Z,18nm,1.0s,mb5.0,baz=134,slow=5.6,SNR=4.1						
SPITS	**Spitsbergen Ar**	**58.36**	**346**	P	**P**	**07 10 38.4**	**+0.6**
WRAB	**Tennant Creek**	**59.06**	**147**	*eP*	**P**	**07 10 42.7**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.5						
WRAB	**Tennant Creek**	**59.06**	**147**	*eP*	**P**	**07 10 42.7**	**-0.6**
	comp=Z,42nm,0.9s,mb5.5						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**07 10 43.3**	**-0.1**
	comp=Z,8.8nm,0.6s,mb5.0,baz=316,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**07 10 43.3**	**-0.1**
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**07 11 04.1**	**-0.2**
	comp=Z,6.0nm,0.5s,mb5.0,baz=329,slow=6.5,SNR=8.4						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**07 11 04.1**	**-0.2**
HFS	**Hagfors**	**63.20**	**326**	P	**P**	**07 11 10.6**	**-0.4**
	comp=Z,3.4nm,0.6s,mb4.6,baz=90,slow=4.4,SNR=5.0						
HFS	**Hagfors**	**63.20**	**326**	P	**P**	**07 11 10.6**	**-0.5**
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**07 11 15.9**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.5,baz=71,slow=6.6,SNR=6.0						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**07 11 16.0**	**-0.7**
INK	**Inuvik**	**70.77**	**20**	P	**P**	**07 12 00.0**	**+1.0**
	comp=Z,5.4nm,0.6s,mb4.7,baz=314,slow=1.8,SNR=4.4						
INK	**Inuvik**	**70.77**	**20**	P	**P**	**07 12 00.0**	**+1.0**
INK	**Inuvik**	**70.77**	**20**	P	**P**	**07 12 00.0**	**+1.0**
STKA	**Stephens Creek**	**72.61**	**148**	P	**P**	**07 12 09.6**	**-0.9**
	comp=Z,4.3nm,0.5s,mb4.6,baz=355,slow=6.2,SNR=5.9						
STKA	**Stephens Creek**	**72.61**	**148**	P	**P**	**07 12 09.6**	**-0.9**
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**07 12 53.6**	**-0.2**
	comp=Z,3.1nm,0.7s,mb4.4,baz=329,slow=5.4,SNR=6.4						
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**07 12 53.6**	**-0.3**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**07 12 53.6**	**-0.2**

IDC ***12*** *07:01:31.6±0.4,31°.45N×104°.18E,h0km,mb5.0/47, mb1 5.1/48,mb1mx5.0/52,mbtmp5.0/48,ML4.0/1, Error ellipse: s-maj=13.3km s-min=9.7km az=58.0*
ISCJB ***12*** *07:01:32.3±0.2,31°.60N±0°.03×104°.13E±0°.04,h10km, mb5.1/104, Error ellipse: s-maj=4.4km s-min=4.1km az=6.4*
MOS ***12*** *07:01:33.7±0.8,31°.62N×104°.21E,h20km,mb5.4/50, Error ellipse: s-maj=8.2km s-min=5.0km az=121.1*
NEIC ***12*** *07:01:34.0±0.2,31°.64N×104°.22E,h10km,mb5.3/60, Error ellipse: s-maj=5.0km s-min=4.2km az=222.0*
BJI ***12*** *07:01:34.4,31°.45N×104°.49E,h13km,mb5.4/6,ML5.4/10, Ms5.5/1,Ms7 5.4/1*
SZGRF ***12*** *07:01:42.3,31°.38N×102°.99E,h33km,mb5.4, Sichuan, China*

ISC 12 07:01:34.3±0.2,31°63N±0°.03×104°11E±0°.04,h10km,n300, σ0s96/280,mb5.1/104,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.78**	**203**	Pg	**Pg**	**07 01 52.0**	**+2.7**
CD2				Sg	**Sg**	**07 02 00.3**	**+0.9**
CD2				smax			
	comp=E,106μm,0.5s						
ENH	**Enshi**	**4.81**	**105**	Pn	**Pn**	**07 02 46.3**	**-0.5**
GYA	**Guiyang**	**5.61**	**156**	Pg	**Pn**	**07 03 06.9**	**+9.0**
GYA				smax			
	comp=N,4μm,1.0s						
GYA				smax			
	comp=E,7μm,0.6s						
KMI	**Kunming**	**6.59**	**191**	Pn	**Pn**	**07 03 13.2**	**+1.9**
KMI				Sn	**Sn**	**07 04 26.4**	**-0.1**
KMI				smax			
	comp=N,1μm,0.8s						
KMI				smax			
	comp=E,1μm,0.7s						
LSA	**Lhasa**	**11.33**	**264**	*eP*	**Pn**	**07 04 19.9**	**+3.7**
LSA				pmax	pmax		
	comp=Z,33nm,0.6s						
LSA	**Lhasa**	**11.33**	**264**	*eP*	**Pn**	**07 04 19.9**	**+3.7**
	comp=Z,33nm,0.6s						
BJT	**Baijiatuau**	**12.87**	**46**	P	**Pn**	**07 04 35.6**	**-1.6**
CHTO	**Chiang Mai**	**13.59**	**201**	*eP*	**Pn**	**07 04 50.0**	**+2.9**
CHTO				pmax	pmax		
	comp=Z,121nm,1.0s						
CHTO	**Chiang Mai**	**13.59**	**201**	*ePn*	**Pn**	**07 04 50.0**	**+2.9**
	comp=Z,121nm,1.0s						
CM31	**Chiang Mai Arr**	**13.92**	**201**	*ePn*	**Pn**	**07 04 54.3**	**+2.6**
	comp=Z,116nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.92**	**201**	Pn	**Pn**	**07 04 52.0**	**+0.3**
	comp=Z,2.2nm,0.3s,baz=12,slow=11,SNR=12						
QZH	**Quanzhou**	**14.38**	**114**	*eP*	**Pn**	**07 04 59.4**	**+1.4**
TAPN	**Taplejung**	**14.90**	**258**	*eP*	**Pn**	**07 05 04.5**	**-0.6**
ODAN	**Odare**	**15.35**	**256**	*eP*	**Pn**	**07 05 09.8**	**-1.2**
RAMN	**Ramite**	**15.97**	**257**	*eP*	**Pn**	**07 05 18.0**	**-1.1**
GUN	**Gumba**	**16.26**	**261**	*eP*	**Pn**	**07 05 21.8**	**-1.0**
	comp=Z,400nm,0.8s						
SONM	**Songino Array**	**16.28**	**5**	Pn	**Pn**	**07 05 22.0**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=180,slow=14,SNR=4.7						
YHNB	**Yeheng**	**16.72**	**110**	*ePn*	**Pn**	**07 05 25.6**	**-3.0**
PKI	**Pulchoki**	**16.76**	**261**	*eP*	**Pn**	**07 05 27.7**	**-1.5**
	comp=Z,242nm,0.8s						
PKIN	**Phulchoki**	**16.77**	**261**	*eP*	**Pn**	**07 05 27.5**	**-1.8**
	comp=Z,160nm,0.7s						
PKIN	**Phulchoki**	**16.77**	**261**	*eP*	**Pn**	**07 05 28.0**	**-1.3**
	comp=Z,291nm,0.6s						
KKN	**Kakani**	**16.80**	**262**	*eP*	**Pn**	**07 05 27.9**	**-1.8**
	comp=Z,256nm,0.9s						
DMN	**Daman**	**17.00**	**261**	*eP*	**Pn**	**07 05 30.7**	**-1.6**
	comp=Z,408nm,0.9s						
KSRS	**Korea Array**	**20.43**	**67**	P	**P**	**07 06 13.2**	**+1.5**
	comp=Z,53nm,0.8s,baz=254,slow=9.6,SNR=11						
KSRS	**Korea Array**	**20.43**	**67**	P	**P**	**07 06 13.2**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,53nm,0.9s						
CN2	**Changchun**	**20.73**	**48**	*eP*	**P**	**07 06 17.1**	**+2.2**
MK31	**Makanchi Array**	**22.59**	**318**	*eP*	**P**	**07 06 36.2**	**+1.4**
MKAR	**Makanchi Array**	**22.59**	**318**	P	**P**	**07 06 35.7**	**+0.9**
	comp=Z,23nm,0.6s,mb4.8,baz=135,slow=8.3,SNR=9.4						
MDJ	**Mudanjiang**	**23.76**	**50**	P	**P**	**07 06 48.7**	**+1.8**
MDJ	**Mudanjiang**	**23.76**	**50**	*eP*	**P**	**07 06 47.1**	**+0.3**
VLA	**Vladivostok**	**24.77**	**55**	*eP*	**P**	**07 06 54.1**	**-2.0**
VLA				*e*		07 07 05.7	
TKM2	**Tokmak 2**	**25.22**	**305**	*eP*	**P**	**07 07 01.0**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.1						
TKM2	**Tokmak 2**	**25.22**	**305**	*eP*	**P**	**07 07 01.0**	**+0.8**
	comp=Z,48nm,0.8s,mb5.1						
UCH	**Uchtor**	**25.80**	**303**	*eP*	**P**	**07 07 08.2**	**+2.7**
	comp=Z,38nm,0.7s,mb5.0						
AAK	**Ala-Archa**	**25.92**	**303**	P	**P**	**07 07 05.7**	**-0.8**
	comp=Z,32nm,0.9s,mb4.8,baz=17,slow=2.5,SNR=5.3						
AAK	**Ala-Archa**	**25.92**	**303**	P	**P**	**07 07 05.7**	**-0.8**
AAK				pmax	pmax		
	comp=Z,32nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**25.92**	**303**	*eP*	**P**	**07 07 05.5**	**-1.1**
ZAA0	**Zalesovo Array**	**26.26**	**334**	*eP*	**P**	**07 07 10.0**	**+0.6**
ZALV	**Zalesovo Beam**	**26.26**	**334**	P	**P**	**07 07 10.3**	**+0.8**
	comp=Z,81nm,0.7s,mb5.4,baz=132,slow=9.9,SNR=22						
AML	**Almayashu**	**26.37**	**302**	*eP*	**P**	**07 07 12.8**	**+2.1**
	comp=Z,26nm,0.6s,mb4.9						
EKS2	**Erkin-Say**	**26.44**	**303**	*eP*	**P**	**07 07 13.0**	**+1.8**
	comp=Z,17nm,0.7s,mb4.7						
KURK	**Kurchatov**	**26.83**	**323**	P	**P**	**07 07 15.5**	**+0.8**
	comp=Z,39nm,0.8s,mb5.0,baz=128,slow=10,SNR=11						
KURK	**Kurchatov**	**26.83**	**323**	P	**P**	**07 07 15.5**	**+0.8**
KURK				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.0						
KURK	**Kurchatov**	**26.83**	**323**	*eP*	**P**	**07 07 15.8**	**+1.1**
	comp=Z,32nm,0.6s,mb5.0						
MAJO	**Matsushiro**	**28.57**	**71**	P	**P**	**07 07 29.7**	**-0.7**
MJAR	**Matsushiro Arr**	**28.57**	**71**	P	**P**	**07 07 28.9**	**-1.6**
	comp=Z,7.3nm,0.5s,mb4.7,baz=279,slow=10.0,SNR=7.2						
KBL	**Kabul**	**29.44**	**285**	*eP*	**P**	**07 07 39.7**	**+1.5**
KBL				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
KBL	**Kabul**	**29.44**	**285**	*eP*	**P**	**07 07 39.7**	**+1.5**
	comp=Z,30nm,0.8s,mb5.1						
BVAR	**Borovoye Array**	**32.39**	**321**	P	**P**	**07 08 05.0**	**+1.1**
	comp=Z,12nm,0.6s,mb4.9,baz=125,slow=8.4,SNR=11						
BRVK	**Borovoye**	**32.46**	**321**	*eP*	**P**	**07 08 05.6**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
BRVK	**Borovoye**	**32.46**	**321**	*eP*	**P**	**07 08 05.6**	**+1.0**
	comp=Z,21nm,0.7s,mb5.1						
YAK	**Yakutsk**	**34.62**	**21**	P	**P**	**07 08 22.9**	**-0.3**
ARU	**Arti**	**40.02**	**322**	P	**P**	**07 09 10.0**	**+0.8**
ARU	**Arti**	**40.02**	**322**	*eP*	**P**	**07 09 10.0**	**+0.8**
	comp=Z,60nm,0.6s,mb5.5						
PETK	**Petropavlovsk-**	**43.81**	**44**	P	**P**	**07 09 38.4**	**-1.8**
	comp=Z,7.5nm,0.8s,mb4.5,baz=300,slow=3.2,SNR=3.6						
KIV	**Kislovodsk**	**49.03**	**303**	*eP*	**P**	**07 10

comp=Z,48nm,1.2s,mb5.4
CTA Charters Tower 65.40 136 *e*P **P 07 12 17.2 0.0**
comp=Z,10nm,1.0s,mb4.8
CTA Charters Tower 65.40 136 P **P 07 12 17.1 -0.1**
comp=Z,5.5nm,0.5s,mb4.8,baz=350,slow=6.7,SNR=5.8
CTAO Charters Tower 65.40 136 *e*P **P 07 12 17.2 0.0**
FORT Forrest 66.09 158 *e*P **P 07 12 21.7 +0.2**
comp=Z,36nm,1.0s,mb5.4
BRG Berggiesshubel 66.29 316 *i*P **P 07 12 22.7 +0.1**
comp=Z,36nm,0.8s,mb5.4
BRG Berggiesshubel 66.29 316 *i*P **P 07 12 22.7 0.0**
BRG pmax pmax
comp=Z,19nm,0.8s,mb5.2
CLL Collm 66.68 317 *i*P **P 07 12 25.2 0.0**
CLL *e* 07 12 35.0
CLL Collm 66.68 317 *i*P **P 07 12 25.2 0.0**
CLL *e* 07 12 35.0
PERS Pernice 67.14 312 *i*P **P 07 12 28.5 +0.3**
KHC Kasperske Hory 67.16 315 *e*P **P 07 12 28.5 +0.3**
KHC Kasperske Hory 67.16 315 *e*P **P 07 12 28.5 +0.3**
GERES GERESS Array B 67.19 314 P **P 07 12 28.9 +0.4**
comp=Z,18nm,0.9s,mb5.1,baz=65,slow=4.9,SNR=17
BOJS Bojanci 67.49 310 *e*P **P 07 12 30.1 -0.3**
CEY Cerknica 67.93 311 *i*P **P 07 12 33.2 +0.1**
JAVS Javornik 68.10 311 *i*P **P 07 12 34.0 -0.2**
GRA1 Grafenberg Arr 68.35 316 *e*P **P 07 12 36.6 +0.8**
comp=Z,22nm,0.9s,mb5.2
GRF Grafenberg Arr 68.35 316 *e*P **P 07 12 36.6 +0.8**
comp=Z,22nm,0.9s,mb5.2
GRF Grafenberg Arr 68.35 316 *e*P **P 07 12 36.6 +0.8**
GRF pmax pmax
comp=Z,22nm,0.9s,mb5.2
GRF Grafenberg Arr 68.35 316 *e*P **P 07 12 36.6 +0.8**
GRF pmax pmax
comp=Z,22nm,0.9s,mb5.2
COLA College 68.95 26 *e*P **P 07 12 39.5 +0.2**
COLA pmax pmax
comp=Z,37nm,0.9s,mb5.3
COLA College 68.95 26 *e*P **P 07 12 39.5 +0.2**
comp=Z,38nm,0.9s,mb5.3
STU Stuttgart 69.94 315 *e*P **P 07 12 45.9 +0.2**
STU pmax pmax
comp=Z,41nm,0.8s,mb5.4
STU Stuttgart 69.94 315 *e*P **P 07 12 45.9 +0.2**
comp=Z,41nm,0.8s,mb5.4
DAVOX Davos/Dischmat 70.38 313 P **P 07 12 48.1 -0.3**
comp=Z,26nm,0.5s,mb5.4,baz=76,slow=6.7,SNR=17
KDAK Kodiak Island 70.40 34 P **P 07 12 48.1 -0.2**
comp=Z,21nm,0.6s,mb5.2,baz=356,slow=15,SNR=6.1
MEM Membach 71.00 318 P **P 07 12 52.2 +0.1**
KMBO Kilima Mbogo 71.04 256 P **P 07 12 53.1 +0.2**
comp=Z,22nm,0.9s,mb5.1,baz=47,slow=9.6,SNR=20
KMBO Kilima Mbogo 71.04 256 *e*P **P 07 12 52.8 -0.1**
KMBO pmax pmax
comp=Z,34nm,1.1s
KMBO Kilima Mbogo 71.04 256 *e*P **P 07 12 52.8 -0.1**
comp=Z,34nm,1.1s,mb5.2
BEBN Eben Emael 71.10 318 P **P 07 12 52.8 +0.1**
CDF Champ du Feu 71.25 316 *e*P **P 07 12 53.5 -0.1**
comp=Z,62nm,0.9s,mb5.2
CDF Champ du Feu 71.25 316 *e*P **P 07 12 53.5 -0.1**
CDF pmax pmax
comp=Z,31nm,0.9s,mb5.2
CDF Champ du Feu 71.25 316 *e*P **P 07 12 53.5 -0.1**
comp=Z,31nm,0.9s,mb5.2
WLF Walferdange 71.34 317 P **P 07 12 55.1 +0.9**
WLF Walferdange 71.34 317 *e*P **P 07 12 55.0 +0.8**
WLF pmax pmax
comp=Z,74nm,0.9s,mb5.6
WLF Walferdange 71.34 317 *e*P **P 07 12 55.0 +0.8**
comp=Z,74nm,0.9s,mb5.6
BCLA Clavier 71.49 318 P **P 07 12 55.4 +0.3**
INK Inuvik 71.66 19 P **P 07 12 55.9 +0.2**
comp=Z,12nm,0.7s,mb4.9,baz=328,slow=9.2,SNR=9.5
INK Inuvik 71.66 19 *e*P **P 07 12 55.9 +0.1**
INK pmax pmax
comp=Z,59nm,1.4s
INK Inuvik 71.66 19 *e*P **P 07 12 55.9 +0.1**
comp=Z,59nm,1.4s,mb5.3
HINF Hinteralfeld 71.77 315 *e*P **P 07 12 56.4 -0.4**
comp=Z,40nm,0.9s,mb5.1
HINF Hinteralfeld 71.77 315 *e*P **P 07 12 56.4 -0.4**
HINF pmax pmax
comp=Z,20nm,0.9s,mb5.0
HINF Hinteralfeld 71.77 315 *e*P **P 07 12 56.4 -0.4**
comp=Z,20nm,0.9s,mb5.0
UCC Uccle 71.85 319 P **P 07 12 57.8 +0.6**
GIVF Givet 71.91 318 *e*P **P 07 12 57.6 0.0**
comp=Z,79nm,1.0s,mb5.3
GIVF Givet 71.91 318 *e*P **P 07 12 57.6 0.0**
GIVF pmax pmax
comp=Z,39nm,1.0s,mb5.3
GIVF Givet 71.91 318 *e*P **P 07 12 57.6 0.0**
comp=Z,39nm,1.0s,mb5.3
HAU Haudompre 71.98 316 *e*P **P 07 12 57.7 -0.4**
SNF Seneffe 72.02 319 P **P 07 12 58.4 +0.1**
DOU Dourbes 72.04 318 P **P 07 12 58.6 +0.2**
BAIF Baives 72.28 318 *e*P **P 07 13 00.0 +0.2**
comp=Z,39nm,0.9s,mb5.0
BAIF Baives 72.28 318 *e*P **P 07 13 00.0 +0.2**
BAIF pmax pmax
comp=Z,20nm,0.9s,mb5.0
BAIF Baives 72.28 318 *e*P **P 07 13 00.0 +0.2**
comp=Z,20nm,0.9s,mb5.0
STKA Stephens Creek 72.44 147 *e*P **P 07 13 00.3 -0.6**
comp=Z,16nm,0.9s,mb4.9
STKA Stephens Creek 72.44 147 P **P 07 13 00.4 -0.4**
comp=Z,16nm,0.7s,mb5.1,baz=349,slow=4.8,SNR=6.1
STKA Stephens Creek 72.44 147 *e*P **P 07 13 00.5 -0.3**
comp=Z,3.5nm,0.7s,mb4.4
MEZF Maizieres J'vi 72.52 316 *e*P **P 07 13 01.2 -0.1**
comp=Z,30nm,0.8s,mb5.0
MEZF Maizieres J'vi 72.52 316 *e*P **P 07 13 01.2 -0.1**
comp=Z,30nm,0.8s,mb5.3
CABF La Chapelle 72.79 314 *e*P **P 07 13 02.6 -0.3**
comp=Z,31nm,1.0s,mb4.9
CABF La Chapelle 72.79 314 *e*P **P 07 13 02.6 -0.3**
CABF pmax pmax
comp=Z,15nm,1.0s,mb4.9
CABF La Chapelle 72.79 314 *e*P **P 07 13 02.6 -0.3**
comp=Z,15nm,1.0s,mb4.9
PGF Pioggiola 72.82 310 *e*P **P 07 13 03.4 +0.2**
comp=Z,113nm,1.0s,mb5.5
PGF Pioggiola 72.82 310 *e*P **P 07 13 03.4 +0.2**
PGF pmax pmax
comp=Z,57nm,1.0s,mb5.5
PGF Pioggiola 72.82 310 *e*P **P 07 13 03.4 +0.2**
comp=Z,57nm,1.0s,mb5.5
LPG La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
comp=Z,125nm,0.8s,mb5.6
LPG La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
LPG pmax pmax
comp=Z,63nm,0.8s,mb5.6
LPG La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
comp=Z,63nm,0.8s,mb5.6
LPL La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
comp=Z,173nm,1.1s,mb5.6
LPL La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
LPL pmax pmax
comp=Z,86nm,1.1s,mb5.6
LPL La Plagne 72.90 313 *e*P **P 07 13 04.1 +0.5**
comp=Z,86nm,1.1s,mb5.6
RES Resolute Bay 73.22 5 P **P 07 13 05.7 +0.8**
comp=Z,9.3nm,1.0s,mb4.7,baz=83,slow=12,SNR=4.8
RES Resolute Bay 73.22 5 P **P 07 13 05.7 +0.7**
SBF Sospel 73.23 311 *e*P **P 07 13 05.2 -0.4**
comp=Z,109nm,0.9s,mb5.5
SBF Sospel 73.23 311 *e*P **P 07 13 05.2 -0.4**
SBF pmax pmax
comp=Z,54nm,0.9s,mb5.5
SBF Sospel 73.23 311 *e*P **P 07 13 05.2 -0.4**
comp=Z,54nm,0.9s,mb5.5
EKA Eskdalemuir Ar 73.53 325 P **P 07 13 07.0 -0.2**
comp=Z,11nm,0.9s,mb4.8,baz=50,slow=6.2,SNR=12
ORIF Oris-en-Rattie 73.71 313 *e*P **P 07 13 08.3 -0.1**
LOR Lormes 73.82 316 *e*P **P 07 13 08.2 -0.8**
FRF La Foret Royal 73.87 311 *e*P **P 07 13 09.0 -0.4**
comp=Z,54nm,1.2s,mb5.1
FRF La Foret Royal 73.87 311 *e*P **P 07 13 09.0 -0.4**
FRF pmax pmax
comp=Z,27nm,1.2s,mb5.0
FRF La Foret Royal 73.87 311 *e*P **P 07 13 09.0 -0.4**
comp=Z,27nm,1.2s,mb5.0
OPO Ambohidratompo 73.95 236 P **P 07 13 08.9 -1.2**
comp=Z,30nm,1.0s,mb5.2,baz=44,slow=4.9,SNR=21
LMR La Mourre 74.07 311 *e*P **P 07 13 10.2 -0.3**
comp=Z,65nm,1.2s,mb5.2
LMR La Mourre 74.07 311 *e*P **P 07 13 10.2 -0.3**
LMR pmax pmax
comp=Z,32nm,1.2s,mb5.1
LMR La Mourre 74.07 311 *e*P **P 07 13 10.2 -0.3**
comp=Z,32nm,1.2s,mb5.1
SSF Saint Saulge 74.13 316 *e*P **P 07 13 10.3 -0.5**
comp=Z,22nm,0.9s,mb4.8
SSF Saint Saulge 74.13 316 *e*P **P 07 13 10.3 -0.5**
SSF pmax pmax
comp=Z,11nm,0.9s,mb4.8
SSF Saint Saulge 74.13 316 *e*P **P 07 13 10.3 -0.5**
comp=Z,11nm,0.9s,mb4.8
SMF Signal de Mont 74.13 315 *e*P **P 07 13 10.5 -0.3**
comp=Z,129nm,1.1s,mb5.5
SMF Signal de Mont 74.13 315 *e*P **P 07 13 10.5 -0.3**
SMF pmax pmax
comp=Z,65nm,1.1s,mb5.5
SMF Signal de Mont 74.13 315 *e*P **P 07 13 10.5 -0.3**
comp=Z,65nm,1.1s,mb5.5
ABPO Ambohimpanom 74.22 235 *e*P **P 07 13 10.7 -0.9**
ABPO pmax pmax
comp=Z,21nm,1.0s,mb5.0
ABPO Ambohimpanom 74.22 235 *e*P **P 07 13 10.7 -0.9**
comp=Z,21nm,1.0s,mb5.0
AVF Avril sur Loir 74.35 315 *e*P **P 07 13 11.8 -0.3**
comp=Z,67nm,0.9s,mb5.2
AVF Avril sur Loir 74.35 315 *e*P **P 07 13 11.8 -0.3**
AVF pmax pmax
comp=Z,34nm,0.9s,mb5.3
AVF Avril sur Loir 74.35 315 *e*P **P 07 13 11.8 -0.3**
comp=Z,34nm,0.9s,mb5.3
SMRF Simiane la Rot 74.36 312 *e*P **P 07 13 12.3 +0.1**
VIVF Saint-Julien-l 74.50 313 *e*P **P 07 13 12.7 -0.3**
comp=Z,50nm,1.0s,mb5.1
VIVF Saint-Julien-l 74.50 313 *e*P **P 07 13 12.7 -0.3**
VIVF pmax pmax
comp=Z,25nm,1.0s,mb5.1
VIVF Saint-Julien-l 74.50 313 *e*P **P 07 13 12.7 -0.3**
comp=Z,25nm,1.0s,mb5.1
BGF Bois d'Agland 74.77 315 *e*P **P 07 13 14.2 -0.3**
BORG Borgarnes 74.98 339 P **P 07 13 17.0 +1.6**
comp=Z,19nm,0.9s,mb5.0,baz=61,slow=3.9,SNR=3.7
BORG Borgarnes 74.98 339 P **P 07 13 17.0 +1.6**
TCF Toulx Ste Croi 75.29 315 *e*P **P 07 13 17.4 -0.1**
comp=Z,53nm,1.0s,mb5.1
TCF Toulx Ste Croi 75.29 315 *e*P **P 07 13 17.4 -0.1**
TCF pmax pmax
comp=Z,26nm,1.0s,mb5.1
TCF Toulx Ste Croi 75.29 315 *e*P **P 07 13 17.4 -0.1**
comp=Z,26nm,1.0s,mb5.1
LASF Ste Croix 75.39 313 *e*P **P 07 13 18.4 +0.3**
comp=Z,34nm,0.9s,mb5.0
LDF La Druitiere 75.47 318 *e*P **P 07 13 18.1 -0.4**
comp=Z,53nm,1.1s,mb5.1
LDF La Druitiere 75.47 318 *e*P **P 07 13 18.1 -0.4**
LDF pmax pmax
comp=Z,26nm,1.1s,mb5.1
LDF La Druitiere 75.47 318 *e*P **P 07 13 18.1 -0.4**
comp=Z,26nm,1.1s,mb5.1
FLN La Foliniere 75.58 319 *e*P **P 07 13 18.8 -0.4**
comp=Z,66nm,1.2s,mb5.2
FLN La Foliniere 75.58 319 *e*P **P 07 13 18.8 -0.4**
FLN pmax pmax
comp=Z,33nm,1.2s,mb5.1
FLN La Foliniere 75.58 319 *e*P **P 07 13 18.8 -0.4**
comp=Z,33nm,1.2s,mb5.1
KEST Kesra 75.78 303 P **P 07 13 20.2 -0.4**
comp=Z,4.0nm,1.0s,mb4.3,baz=29,slow=8.5,SNR=3.2
GRR Gorron 75.99 318 *e*P **P 07 13 21.2 -0.3**
comp=Z,58nm,0.9s,mb5.2
GRR Gorron 75.99 318 *e*P **P 07 13 21.2 -0.3**
GRR pmax pmax
comp=Z,29nm,0.9s,mb5.2
GRR Gorron 75.99 318 *e*P **P 07 13 21.2 -0.3**
comp=Z,29nm,0.9s,mb5.2
CAF Calviac 76.07 314 *e*P **P 07 13 22.4 +0.4**
comp=Z,46nm,1.0s,mb5.1
CAF Calviac 76.07 314 *e*P **P 07 13 22.4 +0.4**
CAF pmax pmax
comp=Z,23nm,1.0s,mb5.1
CAF Calviac 76.07 314 *e*P **P 07 13 22.4 +0.4**
comp=Z,23nm,1.0s,mb5.1
RJF Les Rejaudoux 76.21 315 *e*P **P 07 13 23.1 +0.3**
comp=Z,49nm,1.1s,mb5.1
RJF Les Rejaudoux 76.21 315 *e*P **P 07 13 23.1 +0.3**
comp=Z,25nm,1.1s,mb5.0
ARMA Armidale 76.42 139 *e*P **P 07 13 25.5 +1.5**
MFF Saint Martin d 76.52 317 *e*P **P 07 13 24.4 -0.2**
comp=Z,123nm,1.4s,mb5.3
MFF Saint Martin d 76.52 317 *e*P **P 07 13 24.4 -0.2**
comp=Z,62nm,1.4s,mb5.3
MTLF Montolieu 76.79 313 *e*P **P 07 13 26.2 +0.1**
comp=Z,26nm,1.1s,mb4.8
MTLF Montolieu 76.79 313 *e*P **P 07 13 26.2 +0.1**
MTLF pmax pmax
comp=Z,13nm,1.1s,mb4.8
MTLF Montolieu 76.79 313 *e*P **P 07 13 26.2 +0.1**
comp=Z,13nm,1.1s,mb4.8
LFF La Frestale 76.87 315 *e*P **P 07 13 26.9 +0.4**
comp=Z,32nm,0.9s,mb5.0
LFF La Frestale 76.87 315 *e*P **P 07 13 26.9 +0.4**
LFF pmax pmax
comp=Z,16nm,0.9s,mb5.0
LFF La Frestale 76.87 315 *e*P **P 07 13 26.9 +0.4**
comp=Z,16nm,0.9s,mb5.0
SGMF Saint Gilles 77.02 319 *e*P **P 07 13 27.6 +0.3**
comp=Z,88nm,1.2s,mb5.3
SGMF Saint Gilles 77.02 319 *e*P **P 07 13 27.6 +0.3**
SGMF pmax pmax
comp=Z,44nm,1.2s,mb5.3
SGMF Saint Gilles 77.02 319 *e*P **P 07 13 27.6 +0.3**
comp=Z,44nm,1.2s,mb5.3
ROSF Rostrenen 77.37 319 *e*P **P 07 13 29.5 +0.2**
comp=Z,81nm,1.3s,mb5.2
ROSF Rostrenen 77.37 319 *e*P **P 07 13 29.5 +0.2**
ROSF pmax pmax
comp=Z,40nm,1.3s,mb5.2
ROSF Rostrenen 77.37 319 *e*P **P 07 13 29.5 +0.2**
comp=Z,40nm,1.3s,mb5.2
QUIF Quistinic 77.55 319 *e*P **P 07 13 30.3 0.0**
comp=Z,56nm,1.3s,mb5.0
QUIF Quistinic 77.55 319 *e*P **P 07 13 30.3 0.0**
QUIF pmax pmax
comp=Z,28nm,1.3s,mb5.0
QUIF Quistinic 77.55 319 *e*P **P 07 13 30.3 0.0**
comp=Z,28nm,1.3s,mb5.0
EPF Esparros 78.12 313 *e*P **P 07 13 33.0 -0.6**
ETSF Etsaut 78.75 314 *e*P **P 07 13 37.5 +0.4**
comp=Z,28nm,1.0s,mb4.8
ETSF Etsaut 78.75 314 *e*P **P 07 13 37.5 +0.4**
ETSF pmax pmax
comp=Z,14nm,1.0s,mb4.8
ETSF Etsaut 78.75 314 *e*P **P 07 13 37.5 +0.4**
comp=Z,14nm,1.0s,mb4.8
TOO Toolangi 78.94 148 *e*P **P 07 13 38.4 +0.4**
CNB Canberra Magne 79.00 144 *e*P **P 07 13 38.7 +0.4**
SJPF Ste Jean 79.04 314 *e*P **P 07 13 39.4 +0.7**
DLBC Dease Lake 79.58 26 P **P 07 13 42.0 +0.7**
comp=Z,2.4nm,0.7s,mb4.3,baz=221,slow=19,SNR=2.9
DLBC Dease Lake 79.58 26 P **P 07 13 42.0 +0.7**
SFJD Kangerlussuaq 79.83 350 P **P 07 13 42.1 -0.4**
comp=Z,23nm,0.8s,mb5.2,baz=20,slow=5.2,SNR=8.9
SFJD Kangerlussuaq 79.83 350 P **P 07 13 42.1 -0.4**
YKA Yellowknife Ar 81.19 17 P **P 07 13 49.9 0.0**
comp=Z,6.5nm,0.6s,mb4.7,baz=328,slow=5.3,SNR=12
YKA PKKPbc PKKPbc 07 32 22.1 -4.0
comp=Z,0.9nm,0.7s,baz=153,slow=2.1,SNR=8.2
YKA Yellowknife Ar 81.19 17 P **P 07 13 49.9 0.0**
YKA PKKPbc PKKPbc 07 32 22.1 -4.0
ESDC Sonseca Array 82.67 312 P **P 07 13 58.3 +0.2**
comp=Z,0.4nm,0.2s,mb4.0,baz=33,slow=4.5,SNR=3.6
LSZ Lusaka 86.35 250 P **P 07 14 16.4 -0.6**
comp=Z,38nm,1.1s,mb5.5,baz=63,slow=4.7,SNR=9.5
LSZ Lusaka 86.35 250 P **P 07 14 16.4 -0.6**
LSZ pmax pmax
comp=Z,38nm,1.1s,mb5.5
LSZ Lusaka 86.35 250 *e*P **P 07 14 16.9 -0.2**
comp=Z,684nm,2.5s
MDT Midelt 87.09 307 P **P 07 14 18.7 -1.8**
comp=Z,6.1nm,1.0s,mb4.8,baz=84,slow=2.5,SNR=5.1
FCC Fort Churchill 88.68 9 *e*P **P 07 14 27.6 0.0**
FCC pmax pmax
comp=Z,1.0nm,1.3s,mb4.0
FCC Fort Churchill 88.68 9 *e*P **P 07 14 27.6 0.0**
comp=Z,1.2nm,1.3s,mb4.1
EDM Edmonton 89.44 21 *e*P **P 07 14 32.0 +0.7**
LON Longmire 91.67 30 P **P 07 14 41.8 0.0**
TORD Torodi Ar. Bea 93.48 288 P **P 07 14 49.3 -1.4**
comp=Z,3.6nm,1.1s,mb4.7,baz=58,slow=2.6,SNR=3.0
SCHQ Schefferville 93.54 355 P **P 07 14 49.0 -1.2**
comp=Z,9.7nm,1.1s,mb5.1,baz=68,slow=5.8,SNR=3.1
LBTB Lobatse 93.75 243 P **P 07 14 50.3 -1.3**
comp=Z,2.1nm,0.4s,mb4.9,baz=176,slow=6.6,SNR=5.5
SLMT Seeley Lake 94.50 25 *e*P **P 07 14 56.9 +2.1**
comp=Z,3.9nm,0.8s,mb4.9
BOSA Boshof 95.95 240 P **P 07 14 59.8 -1.9**
comp=Z,3.7nm,0.9s,mb4.8,baz=62,slow=13,SNR=3.8
BOSA Boshof 95.95 240 P **P 07 14 59.8 -1.8**
BOSA pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
BOSA Boshof 95.95 240 *e*P **P 07 14 59.5 -2.2**
TSUM Tsumeb 97.00 252 P **P 07 15 03.9 -2.7**
comp=Z,2.5nm,0.9s,mb4.6,baz=16,slow=5.7,SNR=4.7
URZ Urewera 97.20 131 *e*P **P 07 15 15.0 +7.9**
comp=Z,60nm,0.4s
SMCO Snowmass 103.86 24 *e*Pdif Pdif 07 15 37.8 +1.0
comp=Z,27nm,1.5s
ACSO Alum Creek Sta 108.20 6 *e*PKPdf PKiKP 07 20 07.1 +4.4
SYO Syowa Base 110.77 200 || *e*Pdiff Pdif 07 16 06.2 -1.3
TZTN Tazewell 111.81 7 *e*PKPdf PKiKP 07 20 09.6 -0.1
TXAR Lajitas Array 113.87 26 PKP PKiKP 07 20 13.3 -0.5
comp=Z,0.6nm,0.6s,baz=24,slow=0.7,SNR=4.3
TXAR PKKPbc PKKPbc 07 30 55.1 -0.4
comp=Z,1.9nm,1.0s,baz=162,slow=6.0,SNR=5.7
QSPA South Pole Qui 121.40 180 PKP PKPdf 07 20 25.3 -1.3
comp=Z,7.2nm,0.7s,baz=272,slow=2.3,SNR=12
QSPA South Pole Qui 121.40 180 *e*PKPdf PKPdf 07 20 25.7 -0.9
SDV Santo Domingo 139.41 352 PKP PKPdf 07 21 03.5 +0.9
comp=Z,6.6nm,0.7s,baz=270,slow=4.0,SNR=4.5
SDV Santo Domingo 139.41 352 *e*PKPdf PKPdf 07 21 03.7 +1.1
ROSC El Rosal 143.69 357 PKP PKPdf 07 21 08.7 -1.6
comp=Z,7.7nm,0.6s,baz=251,slow=14,SNR=5.0
PMSA Palmer Station 146.02 189 PKPbc PKPbc 07 21 12.2 -1.3
comp=Z,24nm,0.9s,baz=278,slow=7.1,SNR=4.2
OTAV Otavalo 148.22 5 *e*PKPdf PKPbc 07 21 22.2 +0.9
USHA Ushuaia 156.21 191 PKPab PKPab 07 21 56.0 -0.3
comp=Z,13nm,0.7s,baz=110,slow=8.4,SNR=6.2
SIV San Ignacio 159.40 316 PKPab PKPab 07 22 10.3 -0.9
comp=Z,2.5nm,0.9s,baz=58,slow=4.8,SNR=3.9
LPAZ La Paz 163.18 333 PKP PKPdf 07 21 37.3 -0.3
comp=Z,4.5nm,1.1s,baz=29,slow=6.1,SNR=4.3
LPAZ La Paz 163.18 333 PKIKP PKPdf 07 21 37.3 -0.3
LPAZ pmax pmax
comp=Z,5.0nm,1.1s
LPAZ La Paz 163.18 333 *e*PKPdf PKPdf 07 21 38.3 +0.7
LVC Limon Verde 169.09 324 PKPab PKPab 07 22 53.3 -0.3
comp=Z,2.7nm,0.8s,baz=91,slow=7.1,SNR=3.7
PLCA Paso Flores 169.94 204 PKPab PKPab 07 22 55.4 -1.5
comp=Z,4.4nm,1.0s,baz=147,slow=7.1,SNR=6.0
PLCA Paso Flores 169.94 204 PKP2 PKPab 07 22 55.4 -1.5
PLCA pmax pmax
comp=Z,4.0nm,1.0s
CFAA Coronel Fontan 173.47 268 PKP PKPdf 07 21 40.7 -3.4
comp=Z,0.4nm,1.0s,baz=304,slow=7.5,SNR=3.5
CFAA PKPab PKPab 07 23 10.7 -2.5
comp=Z,0.4nm,1.1s,baz=69,slow=3.0,SNR=3.6
CFAA Coronel Fontan 173.47 268 PKP PKPdf 07 21 40.7 -3.4
CFAA PKPab PKPab 07 23 10.7 -2.5

ISCJB ***12*** *07:05:03.4±0.4, 32°.34N±0°.05×105°.30E±0°.06, h10km, mb4.6/16, Error ellipse: s-maj=8.3km s-min=5.9km az=44.0*
IDC ***12*** *07:05:03.5±0.7, 32°.26N×105°.27E, h0km, mb4.6/13, mb1 4.7/14, mb1mx4.4/30, mbtmp4.6/14, ML4.6/1, Error ellipse: s-maj=26.5km s-min=14.7km az=62.0*
MOS ***12*** *07:05:04.4±0.7, 32°.15N×105°.09E, h19km, mb5.1/1, Error ellipse: s-maj=34.9km s-min=20.4km az=116.2*
NEIC ***12*** *07:05:05.4±0.4, 32°.17N×105°.13E, h10km, mb5.0/3, Error ellipse: s-maj=16.6km s-min=8.9km az=56.0*
ISC 12 07:05:06.2±1.7, 32°.39N±0°.05×105°.37E±0°.06, h17km±10km, n24, σ1 9 11/27, mb4.6/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.02**	**224**	Pg	**Sn**	**07 06 06.4**	**+2.1**
CD2				Sg	**Sg**	**07 06 10.6**	**-0.4**
CD2				smax			
comp=E,47μm,0.5s							
XAN	**Xi'an**	**3.40**	**60**	Pg	**Pb**	**07 06 06.3**	**+0.3**
XAN				Sg	**Sb**	**07 06 47.8**	**+0.7**
XAN				smax			
comp=N,2μm,0.9s							
XAN				smax			
comp=E,4μm,0.8s							
LZH	**Lanzhou**	**3.90**	**341**	Pg	**Pg**	**07 06 15.2**	**-5.7**
LZH				Sn	**Sn**	**07 06 49.3**	**-1.5**
LZH				Sg	**Sg**	**07 07 02.3**	**-9.2**
LZH				smax			
comp=N,8μm,0.6s							
LZH				smax			
comp=E,14μm,0.7s							
KSRS	**Korea Array**	**19.16**	**68**	P	**Pn**	**07 09 30.1**	**+0.4**
comp=E,1.7nm,0.3s,baz=258,slow=10,SNR=5.9							
CN2	**Changchun**	**19.43**	**48**	*e*P	**Pn**	**07 09 36.5**	**+3.6**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**07 10 08.9**	**+1.3**
comp=E,16nm,0.8s,mb4.5,baz=121,slow=12,SNR=3.6							
KLR	**Kul'dur**	**25.92**	**42**	*e*P	**P**	**07 10 34.0**	**-3.3**
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**07 10 45.8**	**-0.4**
comp=E,10.0nm,0.9s,mb4.3,baz=122,slow=11,SNR=3.1							
KURK				ScP	ScP	07 17 50.9	+3.4
comp=E,4.8nm,0.6s,baz=117,slow=2.1,SNR=4.7							
YSS	**Yuzh-Sakhalins**	**31.91**	**52**	*e*P	**P**	**07 11 34.2**	**+3.5**
YSS				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.8							
YSS	**Yuzh-Sakhalins**	**31.91**	**52**	*e*P	**P**	**07 11 34.2**	**+3.5**
comp=Z,10nm,0.6s,mb4.8							
BVAR	**Borovoye Array**	**32.48**	**320**	ScP	ScP	07 18 05.2	-0.2
comp=Z,3.0nm,0.5s,baz=135,slow=3.6,SNR=3.6							
ABKAR	**Akbulak array**	**37.65**	**310**	P	**P**	**07 12 20.4**	**+0.2**
comp=Z,7.3nm,0.8s,mb4.5							
KAPI	**Kappang**	**39.63**	**157**	P	**P**	**07 12 36.3**	**-0.9**
comp=Z,27nm,0.8s,mb5.0,baz=334,slow=3.9,SNR=6.2							
PETK	**Petropavlovsk-**	**42.52**	**45**	P	**P**	**07 13 02.9**	**+2.3**
comp=Z,1.0nm,0.5s,mb3.8,baz=289,slow=4.4,SNR=4.3							
FITZ	**Fitzroy Crossi**	**53.82**	**156**	P	**P**	**07 14 27.2**	**-1.0**
comp=Z,9.2nm,0.9s,mb4.7,baz=1.9,slow=11,SNR=3.6							
BRTR	**Keskin Array B**	**57.05**	**299**	P	**P**	**07 14 51.3**	**-0.1**
comp=Z,1.6nm,0.7s,mb4.2,baz=103,slow=6.4,SNR=3.5							
WRAB	**Tennant Creek**	**58.95**	**148**	*e*P	**P**	**07 15 04.3**	**-0.4**
comp=Z,31nm,0.7s,mb5.5							
WRA	**Warrannunga Arr**	**58.96**	**148**	P	**P**	**07 15 04.0**	**-0.8**
comp=Z,20nm,0.7s,mb5.2,baz=338,slow=7.5,SNR=6.4							
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	**07 15 25.9**	**+0.1**
comp=Z,11nm,0.8s,mb5.0,baz=336,slow=5.8,SNR=6.2							
NWAO	**Narrogin (SRO)**	**65.92**	**169**	P	**P**	**07 15 51.2**	**+0.1**
comp=Z,11nm,0.7s,mb5.0,baz=301,slow=4.1,SNR=3.5							
STKA	**Stephens Creek**	**72.51**	**148**	P	**P**	**07 16 30.5**	**-1.5**
comp=Z,3.9nm,0.7s,mb4.5,baz=331,slow=9.5,SNR=2.9							
EKA	**Eskdalemuir Ar**	**73.51**	**326**	P	**P**	**07 16 38.9**	**+1.1**
comp=Z,1.0nm,0.6s,mb3.9,baz=59,slow=5.9,SNR=3.6							
YKA	**Yellowknife Ar**	**80.15**	**18**	P	**P**	**07 17 14.9**	**-0.1**
comp=Z,2.0nm,0.7s,mb4.2,baz=325,slow=4.9,SNR=4.2							
PDAR	**Pinedale Array**	**98.64**	**25**	P	**P**	**07 18 43.8**	**-0.7**
comp=Z,0.5nm,0.4s,mb4.4,baz=224,slow=2.5,SNR=3.7							

ISCJB ***12*** *07:06:36.7±0.3, 32°.13N±0°.04×104°.79E±0°.07, h10km, mb4.8/54, Error ellipse: s-maj=8.3km s-min=5.3km az=11.9*
IDC ***12*** *07:06:36.8±0.5, 32°.19N×104°.84E, h0km, mb4.7/29, mb1 4.8/30, mb1mx4.7/40, mbtmp4.7/30, ML4.4/1, Error ellipse: s-maj=20.2km s-min=11.0km az=54.0*
NEIC ***12*** *07:06:38.4±0.2, 32°.19N×104°.85E, h10km, mb4.9/17, Error ellipse: s-maj=8.7km s-min=4.9km az=61.0*
MOS ***12*** *07:06:38.2±0.6, 32°.18N×104°.86E, h20km, mb5.1/16, Error ellipse: s-maj=18.9km s-min=8.1km az=121.6*
SZGRF ***12*** *07:07:09.1, 34°.14N×100°.47E, h33km, mb4.8, Qinghai, China*
ISC 12 07:06:38.6±0.3, 32°.14N±0°.04×104°.77E±0°.07, h10km, n103, σ0 9 65/103, mb4.8/54, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.50**	**215**	Pg	**Sn**	**07 07 22.3**	**-2.9**
CD2				Sg	**Sg**	**07 07 26.9**	**0.0**
CD2				smax			
comp=N,141μm,0.7s							
CMAR	**Chiang Mai Arr**	**14.60**	**202**	Pn	**Pn**	**07 10 07.4**	**+2.1**

comp=N,0.5nm,0.3s,baz=7.7,slow=8.9,SNR=2.8
MKAR Makanchi Array 22.59 317 P **P 07 11 37.9 -1.2**
comp=N,11nm,1.0s,mb4.3,baz=113,slow=11,SNR=3.1
MKAR Makanchi Array 22.59 317 P **P 07 11 37.9 -1.2**
ZAA0 Zalesovo Array 26.05 333 P **P 07 12 11.7 -0.2**
ZALV Zalesovo Beam 26.05 333 P **P 07 12 12.2 +0.3**
comp=N,4.6nm,0.3s,mb4.4,baz=133,slow=10,SNR=5.4
KURK Kurchatov 26.77 322 P **P 07 12 17.8 -0.7**
comp=N,9.5nm,1.0s,mb4.3,baz=122,slow=9.6,SNR=2.4
KAPI Kappang 39.61 156 P **P 07 14 09.4 -1.1**
comp=N,11nm,0.8s,mb4.6,baz=343,slow=6.9,SNR=5.0
KAPI Kappang 39.61 156 P **P 07 14 09.3 -1.1**
FITZ Fitzroy Crossi 53.81 155 P **P 07 16 00.5 -1.1**
comp=N,9.7nm,0.9s,mb4.7,baz=290,slow=2.5,SNR=3.7
ASF Jabal al Asfar 56.52 290 P **P 07 16 21.9 +0.6**
comp=N,12nm,1.0s,mb4.9,baz=345,slow=5.3,SNR=8.5
ARCES ARCESS Array B 56.55 336 P **P 07 16 20.1 -0.8**
comp=N,18nm,1.0s,mb5.0,baz=92,slow=8.1,SNR=4.1
BRTR Keskin Array B 56.73 299 P **P 07 16 22.1 -0.5**
comp=N,2.5nm,0.8s,mb4.3,baz=89,slow=6.4,SNR=4.6
FINES FINESS Array B 57.03 326 P **P 07 16 24.8 +0.5**
comp=N,12nm,0.9s,mb4.9,baz=73,slow=6.4,SNR=4.6
FINES FINESS Array B 57.03 326 P **P 07 16 24.8 +0.4**
AKASG Malin Array Be 57.09 313 P **P 07 16 24.4 -0.5**
comp=N,4.4nm,0.8s,mb4.6,baz=67,slow=6.8,SNR=4.5
MMAI Mount Meron Ar 57.43 291 P **P 07 16 27.9 +0.2**
comp=N,6.6nm,1.0s,mb4.6,baz=76,slow=11,SNR=3.9
EIL Elat 58.97 288 P **P 07 16 38.1 -0.4**
comp=N,13nm,0.8s,mb5.0,baz=12,slow=3.3,SNR=6.2
WRAB Tennant Creek 59.02 147 *eP* **P 07 16 38.6 -0.2**
WRAB pmax pmax
comp=Z,29nm,0.9s,mb5.3
WRAB Tennant Creek 59.02 147 *eP* **P 07 16 38.6 -0.2**
comp=Z,29nm,0.9s,mb5.3
WRA Warramunga Arr 59.03 147 P **P 07 16 39.3 +0.5**
comp=Z,10nm,0.6s,mb5.1,baz=338,slow=7.3,SNR=5.1
ATD Arta Tunnel 60.23 265 P **P 07 16 48.4 +1.0**
comp=Z,22nm,0.9s,mb5.2,baz=242,slow=22,SNR=9.1
MLR Muntele Rosu 60.53 308 P **P 07 16 49.5 +0.5**
comp=Z,6.3nm,0.9s,mb4.8,baz=128,slow=12,SNR=2.5
ASAR Alice Springs 62.09 150 P **P 07 16 59.4 -0.3**
comp=Z,3.7nm,0.5s,mb4.8,baz=335,slow=6.7,SNR=4.3
STHS Stebnicka Huta 62.39 313 *eP* **P 07 17 01.8 +0.3**
STHS pmax pmax
comp=Z,79nm,3.1s
STHS Stebnicka Huta 62.39 313 *eP* **P 07 17 01.8 +0.3**
comp=Z,79nm,3.1s
STHS Stebnicka Huta 62.39 313 *eP* **P 07 17 01.8 +0.3**
KECS Kecovo 63.16 312 *eP* **P 07 17 06.7 +0.1**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
KECS Kecovo 63.16 312 *eP* **P 07 17 06.7 +0.1**
comp=Z,2.8nm,0.9s,mb4.4
KECS Kecovo 63.16 312 *eP* **P 07 17 06.7 +0.1**
NOA NORSAR Array B 64.09 327 P **P 07 17 11.3 -1.3**
comp=Z,5.9nm,1.0s,mb4.6,baz=70,slow=6.6,SNR=2.8
IDI Anoyia 64.76 297 P **P 07 17 17.3 -0.1**
comp=Z,9.0nm,0.8s,mb4.8,baz=18,slow=16,SNR=3.2
CTA Charters Tower 65.38 137 P **P 07 17 21.2 -0.2**
comp=Z,4.0nm,0.7s,mb4.6,baz=293,slow=6.7,SNR=3.4
NWAO Narrogin (SRO) 65.78 169 P **P 07 17 24.2 +0.5**
comp=Z,19nm,0.9s,mb5.1,baz=346,slow=8.0,SNR=3.6
GERES GERESS Array B 67.23 314 P **P 07 17 32.8 -0.3**
comp=Z,4.6nm,0.9s,mb4.5,baz=72,slow=4.3,SNR=5.0
BPAW Bear Paw Mtn. 67.42 27 *eP* **P 07 17 34.7 +0.7**
comp=Z,29nm,1.2s,mb5.2
PPLA Purkeypile 67.48 29 *eP* **P 07 17 33.6 -0.8**
comp=Z,157nm,1.8s,mb5.7
GRA1 Grafenberg Arr 68.38 316 *eP* **P 07 17 41.1 +0.9**
comp=Z,7.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.38 316 *eP* **P 07 17 41.1 +0.9**
comp=Z,7.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.38 316 *eP* **P 07 17 41.1 +0.9**
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.38 316 *eP* **P 07 17 41.1 +0.9**
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.38 316 *eP* **P 07 17 41.1 +0.9**
comp=Z,7.0nm,1.0s,mb4.7
KDAK Kodiak Island 69.66 34 P **P 07 17 47.3 -0.8**
comp=Z,20nm,0.9s,mb5.1,baz=286,slow=7.4,SNR=3.2
DAVOX Davos/Dischmat 70.43 313 P **P 07 17 53.2 +0.2**
comp=Z,7.2nm,0.8s,mb4.6,baz=350,slow=22,SNR=4.1
INK Inuvik 70.99 20 P **P 07 17 56.5 +0.5**
comp=Z,7.5nm,0.9s,mb4.6,baz=318,slow=7.1,SNR=3.1
CDF Champ du Feu 71.27 316 *eP* **P 07 17 57.9 -0.2**
comp=Z,14nm,0.9s,mb4.6
CDF Champ du Feu 71.27 316 *eP* **P 07 17 57.9 -0.2**
CDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CDF Champ du Feu 71.27 316 *eP* **P 07 17 57.9 -0.2**
comp=Z,7.1nm,0.9s,mb4.6
KMBO Kilima Mbogo 71.70 257 P **P 07 18 01.7 +0.5**
comp=Z,6.6nm,0.9s,mb4.6,baz=48,slow=9.4,SNR=6.2
HINF Hinteralfeld 71.80 315 *eP* **P 07 18 00.9 -0.4**
comp=Z,13nm,1.0s,mb4.5
GIVF Givet 71.90 318 *eP* **P 07 18 01.8 0.0**
BAIF Baives 72.27 318 *eP* **P 07 18 04.2 +0.2**
comp=Z,13nm,0.9s,mb4.6
BAIF Baives 72.27 318 *eP* **P 07 18 04.2 +0.2**
BAIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BAIF Baives 72.27 318 *eP* **P 07 18 04.2 +0.2**
comp=Z,6.6nm,0.9s,mb4.6
STKA Stephens Creek 72.57 148 P **P 07 18 05.2 -0.7**
comp=Z,2.1nm,0.4s,mb4.4,baz=324,slow=9.0,SNR=4.6
PGF Pioggiola 72.92 310 *eP* **P 07 18 08.4 +0.3**
comp=Z,54nm,1.1s,mb5.1
PGF Pioggiola 72.92 310 *eP* **P 07 18 08.4 +0.3**
PGF pmax pmax
comp=Z,27nm,1.0s,mb5.1
PGF Pioggiola 72.92 310 *eP* **P 07 18 08.4 +0.3**
comp=Z,27nm,1.0s,mb5.1
LPG La Plagne 72.95 313 *eP* **P 07 18 08.9 +0.7**
comp=Z,43nm,0.9s,mb5.1
LPL La Plagne 72.96 313 *eP* **P 07 18 08.8 +0.6**
comp=Z,46nm,0.9s,mb5.1
ORIF Oris-en-Rattie 73.77 313 *eP* **P 07 18 13.1 0.0**
comp=Z,19nm,0.8s,mb4.8
FRF La Foret Royal 73.95 312 *eP* **P 07 18 13.7 -0.4**
SSF Saint Saulge 74.15 316 *eP* **P 07 18 14.7 -0.5**
comp=Z,15nm,1.1s,mb4.5
SMF Signal de Mont 74.16 315 *eP* **P 07 18 14.9 -0.4**
comp=Z,48nm,1.1s,mb5.0
SMF Signal de Mont 74.16 315 *eP* **P 07 18 14.9 -0.4**
SMF pmax pmax
comp=Z,24nm,1.1s,mb5.0
SMF Signal de Mont 74.16 315 *eP* **P 07 18 14.9 -0.4**
comp=Z,24nm,1.1s,mb5.0
AVF Avril sur Loir 74.38 316 *eP* **P 07 18 16.2 -0.4**
comp=Z,31nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.55 313 *eP* **P 07 18 17.4 -0.2**
comp=Z,11nm,0.8s,mb4.5
TCF Toulx Ste Croi 75.31 316 *eP* **P 07 18 21.9 -0.1**
comp=Z,17nm,1.0s,mb4.7
LASF Ste Croix 75.45 313 *eP* **P 07 18 22.9 +0.1**
comp=Z,25nm,1.1s,mb4.8
LDF La Druitiere 75.45 318 *eP* **P 07 18 22.4 -0.3**
comp=Z,26nm,1.2s,mb4.7
LDF La Druitiere 75.45 318 *eP* **P 07 18 22.4 -0.3**
LDF pmax pmax
comp=Z,13nm,1.2s,mb4.7
LDF La Druitiere 75.45 318 *eP* **P 07 18 22.4 -0.3**
comp=Z,13nm,1.2s,mb4.7
FLN La Poliniere 75.56 319 *eP* **P 07 18 23.1 -0.3**
GRR Gorron 75.97 319 *eP* **P 07 18 25.6 -0.1**
comp=Z,36nm,1.0s,mb5.0
GRR Gorron 75.97 319 *eP* **P 07 18 25.6 -0.1**
GRR pmax pmax
comp=Z,18nm,1.0s,mb5.0
GRR Gorron 75.97 319 *eP* **P 07 18 25.6 -0.1**
comp=Z,18nm,1.0s,mb5.0
CAF Calviac 76.11 314 *eP* **P 07 18 26.9 +0.3**
comp=Z,17nm,0.9s,mb4.7
CAF Calviac 76.11 314 *eP* **P 07 18 26.9 +0.3**
CAF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CAF Calviac 76.11 314 *eP* **P 07 18 26.9 +0.3**
comp=Z,8.4nm,0.9s,mb4.7
RJF Les Rejaudoux 76.24 315 *eP* **P 07 18 27.7 +0.4**
ARMA Armidale 76.45 140 *eP* **P 07 18 30.1 +1.6**
MFF Saint Martin d 76.53 317 *eP* **P 07 18 29.0 +0.1**
comp=Z,42nm,1.2s,mb5.0
MFF Saint Martin d 76.53 317 *eP* **P 07 18 29.0 +0.1**
MFF pmax pmax
comp=Z,21nm,1.2s,mb4.9
MFF Saint Martin d 76.53 317 *eP* **P 07 18 29.0 +0.1**
comp=Z,21nm,1.2s,mb5.0
MTLF Montolieu 76.84 313 *eP* **P 07 18 30.7 -0.1**
LFF La Frestale 76.90 315 *eP* **P 07 18 31.5 +0.5**
SGMF Saint Gilles 77.00 319 *eP* **P 07 18 31.8 +0.3**
comp=Z,40nm,1.1s,mb5.0
SGMF Saint Gilles 77.00 319 *eP* **P 07 18 31.8 +0.3**
SGMF pmax pmax
comp=Z,20nm,1.1s,mb5.0
SGMF Saint Gilles 77.00 319 *eP* **P 07 18 31.8 +0.3**
comp=Z,20nm,1.1s,mb5.0
ROSF Rostrenen 77.35 319 *eP* **P 07 18 33.7 +0.2**
comp=Z,16nm,1.0s,mb4.6
ROSF Rostrenen 77.35 319 *eP* **P 07 18 33.7 +0.2**
ROSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ROSF Rostrenen 77.35 319 *eP* **P 07 18 33.7 +0.2**
comp=Z,8.3nm,1.0s,mb4.6
ETSF Etsaut 78.80 314 *eP* **P 07 18 42.1 +0.5**
comp=Z,17nm,1.0s,mb4.6
ETSF Etsaut 78.80 314 *eP* **P 07 18 42.1 +0.5**
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ETSF Etsaut 78.80 314 *eP* **P 07 18 42.1 +0.5**
comp=Z,8.4nm,1.0s,mb4.6
SJPF Ste Jean 79.08 314 *eP* **P 07 18 44.0 +0.8**
YKA Yellowknife Ar 80.54 17 P **P 07 18 51.0 +0.3**
comp=Z,7.6nm,0.9s,mb4.6,baz=328,slow=4.9,SNR=9.0
YKA Yellowknife Ar 80.54 17 P **P 07 18 51.0 +0.3**
LSZ Lusaka 87.05 250 P **P 07 19 25.3 +0.6**
comp=Z,8.5nm,1.0s,mb4.9,baz=36,slow=5.9,SNR=4.6
LSZ Lusaka 87.05 250 P **P 07 19 25.3 +0.5**
LSZ pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
TORD Torodi Ar. Bea 93.86 288 P **P 07 19 56.1 -0.7**
comp=Z,1.8nm,1.0s,mb4.5,baz=34,slow=5.2,SNR=2.7
SDV Santo Domingo 138.97 353 PKP PKPdf 07 26 03.6 -2.5
comp=Z,7.6nm,0.9s,baz=72,slow=3.6,SNR=3.4

ISCJB ***12*** *07:07:29.8±0.2, 32°.28N±0°.03×105°.08E±0°.03, h10km, mb4.8/44, Error ellipse: s-maj=5.0km s-min=3.9km az=7.5*
IDC ***12*** *07:07:30.0±0.4, 32°.23N×104°.94E, h0km, mb4.7/30, mb1 4.7/31, mb1mx4.6/39, mbtmp4.7/31, MS6.3/1, Ms1 6.3/1, ms1mx4.9/45, Error ellipse: s-maj=16.8km s-min=9.7km az=51.0*
NEIC ***12*** *07:07:31.8±0.2, 32°.22N×104°.92E, h10km, mb4.9/12, Error ellipse: s-maj=6.7km s-min=5.0km az=47.0*
MOS ***12*** *07:07:31.2±0.8, 32°.19N×104°.90E, h22km, mb5.0/10, Error ellipse: s-maj=11.1km s-min=8.3km az=110.7*
BJI ***12*** *07:07:36.2, 32°.29N×104°.80E, h19km, mb4.8/2, ML5.3/3*
SZGRF ***12*** *07:07:50.7, 34°.53N×105°.48E, h33km, mb4.6, Gansu, China*

ISC 12 07:07:31.5±1.0, 32°.25N±0°.03×105°.01E±0°.04, h8km±6km, n103, σ0.86/106, mb4.8/44, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.73**	**60**	Pg	**Pg**	**07 08 42.2**	**-0.9**
XAN				Sg	**Sg**	**07 09 31.8**	**+0.4**
XAN				smax			
	comp=N,5μm,0.9s						
XAN				smax			
	comp=E,8μm,0.7s						
LZH	**Lanzhou**	**3.95**	**346**	Pg	**Pg**	**07 08 42.4**	**-4.7**
LZH				Sn	**Sn**	**07 09 26.5**	**+7.6**
LZH				Sg	**Sg**	**07 09 38.1**	**-0.2**
LZH				smax			
	comp=N,10μm,0.7s						
LZH				smax			
	comp=E,12μm,0.6s						
ENH	**Enshi**	**4.31**	**116**	*e*Pn	**Pn**	**07 08 36.5**	**-0.9**
ENH				Pg	**Pg**	**07 08 52.1**	**-2.0**
ENH				*e*Sg	**Sg**	**07 09 50.4**	**+0.4**
BJT	**Baijiatuau**	**11.88**	**46**	*e*P	**Pn**	**07 10 22.3**	**+1.0**
LSA	**Lhasa**	**12.16**	**262**	P	**Pn**	**07 10 23.7**	**-1.5**
CHTO	**Chiang Mai**	**14.45**	**204**	*e*P	**Pn**	**07 11 04.4**	**+7.9**
CHTO				pmax	pmax		
	comp=Z,14nm,0.9s						
CHTO	**Chiang Mai**	**14.45**	**204**	*e*P	**Pn**	**07 11 04.4**	**+8.0**
	comp=Z,14nm,0.9s						
CM31	**Chiang Mai Arr**	**14.79**	**203**	*e*P	**Pn**	**07 11 08.3**	**+7.3**
	comp=Z,9.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**14.79**	**203**	Pn	**Pn**	**07 11 02.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=23,slow=9.5,SNR=2.5						
SONM	**Songino Array**	**15.60**	**3**	Pn	**Pn**	**07 11 14.2**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=183,slow=13,SNR=2.6						
ULN	**Ulaanbaatar**	**15.67**	**5**	*e*P	**Pn**	**07 11 16.1**	**+3.5**
TAPN	**Taplejung**	**15.79**	**256**	*e*P	**Pn**	**07 11 14.2**	**-0.1**
YHNB	**Yeheng**	**16.24**	**114**	*e*P	**Pn**	**07 11 23.7**	**+3.6**
	comp=Z,198nm,1.2s						
ODAN	**Odare**	**16.24**	**255**	*e*P	**Pn**	**07 11 19.4**	**-0.7**
RAMN	**Ramite**	**16.86**	**256**	*e*P	**Pn**	**07 11 27.5**	**-0.4**
GUN	**Gumba**	**17.11**	**260**	*e*P	**Pn**	**07 11 32.9**	**+1.8**
PKI	**Pulchoki**	**17.62**	**260**	*e*P	**Pn**	**07 11 38.1**	**+0.6**
PKIN	**Phulchoki**	**17.63**	**260**	*e*P	**Pn**	**07 11 38.2**	**+0.6**
KKN	**Kakani**	**17.65**	**261**	*e*P	**Pn**	**07 11 39.7**	**+1.8**
DMN	**Daman**	**17.86**	**260**	*e*P	**Pn**	**07 11 41.7**	**+1.3**
KS15	**Wonju Array Si**	**19.46**	**68**	*e*P	**Pn**	**07 12 01.9**	**+2.1**
KSRS	**Korea Array**	**19.49**	**68**	P	**Pn**	**07 12 00.8**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=250,slow=9.8,SNR=4.4						
KSRS	**Korea Array**	**19.49**	**68**	P	**Pn**	**07 12 00.9**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JOW	**Kunigami**	**20.93**	**99**	LR	LR	07 20 24.6	
	comp=Z,89μm,20.1s,baz=145,slow=37						
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**07 12 33.8**	**+0.8**
	comp=Z,14nm,0.7s,mb4.5,baz=128,slow=6.4,SNR=12						
ZAA0	**Zalesovo Array**	**26.05**	**332**	*e*P	**P**	**07 13 04.6**	**-0.6**
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	**P**	**07 13 04.5**	**-0.6**
	comp=Z,8.7nm,0.5s,mb4.6,baz=130,slow=9.6,SNR=2.8						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 13 12.1**	**0.0**
	comp=Z,6.4nm,0.5s,mb4.5,baz=135,slow=8.4,SNR=8.0						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 13 12.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
KURK	**Kurchatov**	**26.82**	**321**	*e*P	**P**	**07 13 12.6**	**+0.5**
	comp=Z,11nm,0.7s,mb4.5						
MAJO	**Matsushiro**	**27.64**	**72**	*e*P	**P**	**07 13 19.4**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
MAJO	**Matsushiro**	**27.64**	**72**	*e*P	**P**	**07 13 19.4**	**-0.4**
	comp=Z,8.5nm,0.4s,mb4.7						
MJAR	**Matsushiro Arr**	**27.64**	**72**	P	**P**	**07 13 19.6**	**-0.2**
	comp=Z,5.3nm,0.5s,mb4.4,baz=277,slow=9.9,SNR=7.9						
KKM	**Kota Kinabalu**	**28.09**	**156**	*e*P	**P**	**07 13 22.6**	**-1.3**
	comp=Z,140nm,1.4s,mb5.4						
KSM	**Kuching**	**31.02**	**170**	*e*P	**P**	**07 13 50.1**	**+0.3**
	comp=Z,9.0nm,0.7s,mb4.7						
YSS	**Yuzh-Sakhalins**	**32.23**	**52**	*e*P	**P**	**07 14 01.1**	**+0.9**
YSS				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.9						
YSS	**Yuzh-Sakhalins**	**32.23**	**52**	*e*P	**P**	**07 14 01.1**	**+0.9**
	comp=Z,14nm,0.7s,mb4.9						
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**07 14 01.7**	**+0.2**
	comp=Z,4.5nm,0.6s,mb4.5,baz=111,slow=9.6,SNR=5.9						
ABKAR	**Akbulak array**	**37.51**	**310**	*e*P	**P**	**07 14 46.0**	**+0.2**
	comp=Z,6.1nm,0.7s,mb4.4						
KAPI	**Kappang**	**39.62**	**157**	P	**P**	**07 15 02.9**	**-0.9**
	comp=Z,15nm,0.6s,mb4.9,baz=330,slow=12,SNR=6.7						
GUMO	**Guam**	**40.85**	**108**	P	**P**	**07 15 14.5**	**+0.4**
	comp=Z,20nm,0.3s,mb5.2,baz=216,slow=8.7,SNR=3.1						
PETK	**Petropavlovsk-**	**42.83**	**45**	P	**P**	**07 15 29.9**	**+0.1**
	comp=Z,8.1nm,0.6s,mb4.6,baz=342,slow=4.7,SNR=20						
PETK	**Petropavlovsk-**	**42.83**	**45**	P	**P**	**07 15 29.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.83**	**155**	*e*P	**P**	**07 16 54.8**	**-0.2**
	comp=Z,28nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.83**	**155**	P	**P**	**07 16 54.5**	**-0.5**
	comp=Z,16nm,0.9s,mb5.0,baz=354,slow=3.8,SNR=5.6						
JOF	**Joensuu**	**54.48**	**327**	*e*P	**P**	**07 16 58.6**	**-0.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
JOF	**Joensuu**	**54.48**	**327**	*e*p	**P**	**07 16 58.6**	**-0.7**
	comp=Z,6.9nm,0.6s,mb4.8						
KEV	**Kevo**	**56.00**	**336**	*e*P	**P**	**07 17 08.4**	**-1.8**
KEV				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
KEV	**Kevo**	**56.00**	**336**	*e*p	**P**	**07 17 08.4**	**-1.8**
	comp=Z,14nm,0.6s,mb5.2						
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**07 17 13.8**	**-0.2**
	comp=Z,4.6nm,0.4s,mb4.8,baz=86,slow=6.7,SNR=14						
BRTR	**Keskin Array B**	**56.85**	**299**	P	**P**	**07 17 16.1**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.3,baz=103,slow=5.3,SNR=4.1						
KAF	**Kangasniemi**	**56.86**	**327**	*e*P	**P**	**07 17 11.9**	**-4.5**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
KAF	**Kangasniemi**	**56.86**	**327**	*e*p	**P**	**07 17 11.9**	**-4.5**
	comp=Z,4.4nm,0.5s,mb4.7						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**07 17 17.3**	**-0.4**
	comp=Z,5.8nm,0.4s,mb5.0,baz=92,slow=7.1,SNR=11						
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**07 17 17.8**	**-1.0**
	comp=Z,2.6nm,0.4s,mb4.7,baz=67,slow=7.7,SNR=6.8						
SPITS	**Spitsbergen Ar**	**58.41**	**346**	P	**P**	**07 17 27.8**	**+0.6**
	comp=Z,1.8nm,0.5s,mb4.4,baz=137,slow=6.9,SNR=3.2						
WRAB	**Tennant Creek**	**59.01**	**147**	*e*P	**P**	**07 17 32.2**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.5						
WRAB	**Tennant Creek**	**59.01**	**147**	*e*P	**P**	**07 17 32.2**	**+0.3**
	comp=Z,39nm,0.8s,mb5.5						
WRA	**Warramunga Arr**	**59.01**	**147**	*e*P	**P**	**07 17 32.0**	**+0.1**
	comp=Z,22nm,0.5s,mb5.5,baz=328,slow=8.9,SNR=19						
WB2	**Warramunga Arr**	**59.01**	**147**	*e*P	**P**	**07 17 31.9**	**0.0**
ATD	**Arta Tunnel**	**60.45**	**265**	P	**P**	**07 17 42.5**	**+0.4**
	comp=Z,6.2nm,0.5s,mb4.9,baz=342,slow=20,SNR=2.0						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**07 17 53.0**	**+0.2**
	comp=Z,11nm,0.4s,mb5.3,baz=329,slow=6.5,SNR=15						
HFS	**Hagfors**	**63.26**	**326**	P	**P**	**07 17 59.4**	**-0.9**
	comp=Z,3.7nm,0.5s,mb4.7,baz=99,slow=9.2,SNR=5.7						
NB2	**NORSAR Subarra**	**64.11**	**327**	P	**P**	**07 18 04.6**	**-1.3**
	comp=Z,12nm,1.0s,mb4.9,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**07 18 05.2**	**-0.8**
	comp=Z,4.1nm,0.7s,mb4.6,baz=70,slow=6.6,SNR=4.9						
IDI	**Anoyia**	**64.89**	**297**	P	**P**	**07 18 10.0**	**-1.5**
	comp=Z,4.1nm,0.5s,mb4.8,baz=39,slow=13,SNR=3.5						
CTA	**Charters Tower**	**65.32**	**137**	*e*P	**P**	**07 18 14.5**	**+0.2**
	comp=Z,9.2nm,1.1s,mb4.7						
CTA	**Charters Tower**	**65.32**	**137**	P	**P**	**07 18 14.3**	**0.0**
	comp=Z,3.5nm,0.5s,mb4.7,baz=7.2,slow=9.4,SNR=5.3						
NWAO	**Narrogin (SRO)**	**65.85**	**169**	P	**P**	**07 18 17.6**	**+0.2**
	comp=Z,14nm,0.6s,mb5.2,baz=332,slow=10,SNR=6.6						
FORT	**Forrest**	**66.38**	**158**	*e*P	**P**	**07 18 21.2**	**+0.3**
	comp=Z,21nm,0.5s,mb5.4						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**07 18 26.8**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=114,slow=6.5,SNR=3.3						
GRA1	**Grafenberg Arr**	**68.44**	**316**	*e*P	**P**	**07 18 39.9**	**+6.0**
	comp=Z,4.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**68.44**	**316**	*e*P	**P**	**07 18 39.9**	**+6.0**
	comp=Z,4.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**68.44**	**316**	*e*P	**P**	**07 18 39.9**	**+6.0**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**68.44**	**316**	*e*P	**P**	**07 18 39.9**	**+6.0**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**68.44**	**316**	*e*P	**P**	**07 18 39.9**	**+6.0**
	comp=Z,4.0nm,0.9s,mb4.5						
KDAK	**Kodiak Island**	**69.46**	**34**	P	**P**	**07 18 40.1**	**0.0**
	comp=Z,7.7nm,0.4s,mb5.0,baz=311,slow=21,SNR=8.8						
INK	**Inuvik**	**70.82**	**20**	P	**P**	**07 18 48.1**	**-0.2**
	comp=Z,5.2nm,0.6s,mb4.7,baz=351,slow=5.1,SNR=4.9						
STKA	**Stephens Creek**	**72.56**	**148**	*e*P	**P**	**07 18 58.9**	**-0.2**
	comp=Z,9.0nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**72.56**	**148**	P	**P**	**07 18 58.9**	**-0.3**
	comp=Z,6.7nm,0.4s,mb4.9,baz=340,slow=5.7,SNR=12						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.1**	**+0.2**
	comp=Z,42nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.1**	**+0.2**
LPG				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.1**	**+0.2**
	comp=Z,21nm,0.8s,mb5.1						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.0**	**+0.1**
	comp=Z,26nm,0.6s,mb5.0						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.0**	**+0.1**
LPL				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 19 02.0**	**+0.1**
	comp=Z,13nm,0.6s,mb5.0						
MBDF	**Montbardon**	**73.39**	**313**	*e*P	**P**	**07 19 04.4**	**+0.3**
MBDF	**Montbardon**	**73.39**	**313**	*e*P	**P**	**07 19 04.4**	**+0.3**
MBDF	**Montbardon**	**73.39**	**313**	*e*P	**P**	**07 19 04.4**	**+0.3**
EKA	**Eskdalemuir Ar**	**73.45**	**326**	P	**P**	**07 19 03.5**	**-0.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=57,slow=5.2,SNR=3.0						
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**07 19 08.1**	**-0.8**
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**07 19 08.1**	**-0.8**
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**07 19 08.1**	**-0.8**
CNB	**Canberra Magne**	**79.05**	**144**	*e*P	**P**	**07 19 36.4**	**+0.2**
TOO	**Toolangi**	**79.07**	**148**	*e*P	**P**	**07 19 36.3**	**+0.1**
YKA	**Yellowknife Ar**	**80.37**	**17**	P	**P**	**07 19 43.0**	**-0.1**
	comp=Z,3.3nm,0.5s,mb4.5,baz=326,slow=5.1,SNR=12						
YKA	**Yellowknife Ar**	**80.37**	**17**	P	**P**	**07 19 43.0**	**-0.1**
FRB	**Frobisher Bay**	**84.19**	**357**	P	**P**	**07 20 02.7**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.2,baz=31,slow=5.9,SNR=3.2						
FRB	**Frobisher Bay**	**84.19**	**357**	P	**P**	**07 20 02.7**	**-0.4**
SCHQ	**Schefferville**	**92.99**	**355**	P	**P**	**07 20 45.7**	**+0.4**
	comp=Z,2.1nm,0.9s,mb4.6,baz=338,slow=5.4,SNR

GIVF Givet 72.82 318 *eP* **P 07 20 12.2 +0.4**
HAU Haudompre 72.91 316 *eP* **P 07 20 12.3 -0.1**
BAIF Baives 73.19 319 *eP* **P 07 20 14.4 +0.4**
comp=Z,15nm,1.0s,mb4.6
BAIF Baives 73.19 319 *eP* **P 07 20 14.4 +0.4**
BAIF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BAIF Baives 73.19 319 *eP* **P 07 20 14.4 +0.4**
comp=Z,7.3nm,1.0s,mb4.6
PGF Pioggiola 73.77 310 *eP* **P 07 20 18.1 +0.5**
comp=Z,58nm,1.0s,mb5.2
PGF Pioggiola 73.77 310 *eP* **P 07 20 18.1 +0.5**
PGF pmax pmax
comp=Z,29nm,1.0s,mb5.2
PGF Pioggiola 73.77 310 *eP* **P 07 20 18.1 +0.5**
comp=Z,29nm,1.0s,mb5.2
LPG La Plagne 73.83 314 *eP* **P 07 20 18.9 +1.0**
comp=Z,30nm,0.7s,mb5.0
LPG La Plagne 73.83 314 *eP* **P 07 20 18.9 +1.0**
LPG pmax pmax
comp=Z,15nm,0.7s,mb5.0
LPG La Plagne 73.83 314 *eP* **P 07 20 18.9 +1.0**
comp=Z,15nm,0.7s,mb5.0
LPL La Plagne 73.84 314 *eP* **P 07 20 18.0 0.0**
comp=Z,25nm,0.8s,mb4.9
LPL La Plagne 73.84 314 *eP* **P 07 20 18.0 0.0**
LPL pmax pmax
comp=Z,12nm,0.8s,mb4.9
LPL La Plagne 73.84 314 *eP* **P 07 20 18.0 0.0**
comp=Z,12nm,0.8s,mb4.9
OPO Ambohidratompo 74.45 237 P **P 07 20 22.6 +0.8**
comp=Z,1.7nm,0.7s,mb4.1,baz=40,slow=6.2,SNR=4.7
LOR Lormes 74.74 316 *eP* **P 07 20 22.8 -0.4**
SSF Saint Saulge 75.05 316 *eP* **P 07 20 24.9 -0.1**
comp=Z,13nm,1.1s,mb4.5
SSF Saint Saulge 75.05 316 *eP* **P 07 20 24.9 -0.1**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
SSF Saint Saulge 75.05 316 *eP* **P 07 20 24.9 -0.1**
comp=Z,6.4nm,1.1s,mb4.5
SMF Signal de Mont 75.06 316 *eP* **P 07 20 25.1 +0.1**
comp=Z,34nm,1.1s,mb4.9
SMF Signal de Mont 75.06 316 *eP* **P 07 20 25.1 +0.1**
SMF pmax pmax
comp=Z,17nm,1.1s,mb4.9
SMF Signal de Mont 75.06 316 *eP* **P 07 20 25.1 +0.1**
comp=Z,17nm,1.1s,mb4.9
AVF Avril sur Loir 75.28 316 *eP* **P 07 20 26.3 0.0**
comp=Z,11nm,0.8s,mb4.5
AVF Avril sur Loir 75.28 316 *eP* **P 07 20 26.3 0.0**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
AVF Avril sur Loir 75.28 316 *eP* **P 07 20 26.3 0.0**
comp=Z,5.3nm,0.8s,mb4.5
BGF Bois d'Agland 75.70 316 *eP* **P 07 20 28.7 0.0**
TCF Toulx Ste Croi 76.21 316 *eP* **P 07 20 32.1 +0.5**
comp=Z,11nm,0.9s,mb4.5
TCF Toulx Ste Croi 76.21 316 *eP* **P 07 20 32.1 +0.5**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 76.21 316 *eP* **P 07 20 32.1 +0.5**
comp=Z,5.7nm,0.9s,mb4.5
CAF Calviac 77.00 315 *eP* **P 07 20 36.9 +0.8**
comp=Z,14nm,1.0s,mb4.5
CAF Calviac 77.00 315 *eP* **P 07 20 36.9 +0.8**
CAF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CAF Calviac 77.00 315 *eP* **P 07 20 36.9 +0.8**
comp=Z,7.3nm,1.0s,mb4.6

IDC 12 07:12:53.0±0.8, 31°87N×105°96E, h0km, mb4.3/7, mb1 4.5/8, mb1mx4.1/26, mbtmp4.2/8, ML3.5/1, Error ellipse: s-maj=39.5km s-min=18.7km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.89**	**67**	P	Pn	07 17 16.4	+0.9
	0.2nm,0.3s,baz=263,slow=9.6,SNR=2.8						
MKAR	**Makanchi Array**	**23.48**	**316**	P	P	07 18 04.6	+0.2
	3.6nm,0.9s,baz=133,slow=9.1,SNR=2.8						
FINES	**FINESS Array B**	**57.82**	**326**	P	P	07 22 46.9	+1.0
	2.1nm,0.5s,baz=93,slow=8.0,SNR=4.1						
WRA	**Warramunga Arr**	**58.26**	**148**	P	P	07 22 49.7	+0.3
	4.2nm,0.4s,baz=339,slow=7.8,SNR=6.9						
ASAR	**Alice Springs**	**61.35**	**151**	P	P	07 23 10.9	+0.3
	3.2nm,0.7s,baz=337,slow=6.6,SNR=6.2						
GERES	**GERESS Array B**	**68.14**	**315**	P	P	07 23 55.0	+0.2
	0.4nm,0.5s,baz=42,slow=4.5,SNR=3.4						
STKA	**Stephens Creek**	**71.81**	**149**	P	P	07 24 16.9	-0.4
	2.8nm,0.5s,baz=328,slow=8.3,SNR=5.4						
YKA	**Yellowknife Ar**	**80.49**	**18**	P	P	07 25 05.2	-1.3
	1.4nm,0.5s,baz=327,slow=5.0,SNR=9.9						

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*ISCJB **12** 07:13:39.3±0.2, 31°00N±0°04×103°55E±0°05, h10km, mb4.6/65, Error ellipse: s-maj=6.0km s-min=4.6km az=146.6*
*IDC **12** 07:13:39.2±0.5, 30°92N×103°49E, h0km, mb4.6/30, mb1 4.7/30, mb1mx4.6/37, mbtmp4.6/30, Error ellipse: s-maj=21.2km s-min=10.8km az=56.0*
*NEIC **12** 07:13:41.2±0.2, 31°04N×103°53E, h10km, mb4.7/29, Error ellipse: s-maj=7.9km s-min=5.7km az=45.0*
*MOS **12** 07:13:42.8±0.9, 30°93N×103°45E, h33km, mb4.9/27, Error ellipse: s-maj=12.5km s-min=6.1km az=123.6*
*BJI **12** 07:13:44.5, 31°07N×103°34E, h14km, mb4.8/7, ML4.7/7*
ISC 12 07:13:41.2±0.2, 31°02N±0°03×103°53E±0°04, h10km, n158, σ0°97/157, mb4.6/65, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.22**	**120**	Pg	**Pg**	**07 13 51.4**	**+5.5**
CD2				Sg	**Sg**	**07 13 58.8**	**+10**
CD2				smax			
	comp=N,108μm,0.5s						
ENH	**Enshi**	**5.18**	**97**	*e*Pn	**Pn**	**07 14 57.5**	**-1.3**
	comp=N,438nm,0.6s						
GYA	**Guiyang**	**5.31**	**148**	*e*Pg	**Pb**	**07 15 09.0**	**-5.2**
GYA				Sg	**Sb**	**07 16 11.9**	**-6.2**
GYA				smax			
	comp=N,810nm,1.0s						
GYA				smax			
	comp=E,2μm,1.0s						
XAN	**Xi'an**	**5.46**	**55**	Pg	**Pg**	**07 15 22.7**	**-3.0**
XAN				Sg	**Sg**	**07 16 35.5**	**-0.9**
XAN				smax			
	comp=N,810nm,0.9s						
XAN				smax			
	comp=E,2μm,1.2s						
KMI	**Kunming**	**5.92**	**187**	Pg	**Pn**	**07 15 09.0**	**0.0**
KMI				Sg	**Sb**	**07 16 34.6**	**-0.9**
KMI				smax			
	comp=N,240nm,1.4s						
KMI				smax			
	comp=E,270nm,1.3s						
WHN	**Wuhan**	**9.32**	**90**	*e*P	**Pn**	**07 15 51.3**	**-4.3**
WHN				S	**Sn**	**07 17 41.0**	**+0.5**
LSA	**Lhasa**	**10.78**	**266**	*e*P	**Pn**	**07 16 16.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**13.18**	**199**	Pn	**Pn**	**07 16 50.5**	**+2.0**
	comp=E,0.8nm,0.3s,baz=11,slow=11,SNR=2.8						
KS15	**Wonju Array Si**	**21.10**	**66**	*e*P	**P**	**07 18 25.6**	**-0.2**
KSRS	**Korea Array**	**21.13**	**66**	P	**P**	**07 18 28.8**	**+2.6**
	comp=E,16nm,0.6s,mb4.5,baz=243,slow=9.8,SNR=9.4						
KSRS	**Korea Array**	**21.13**	**66**	P	**P**	**07 18 28.8**	**+2.6**
KSRS				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.5						
CN2	**Changchun**	**21.50**	**48**	*e*P	**P**	**07 18 37.1**	**+6.9**
HIA	**Hailar**	**21.95**	**29**	*e*P	**P**	**07 18 35.7**	**+0.8**
HIA				pmax	pmax		
	comp=Z,20nm,0.5s						
HIA	**Hailar**	**21.95**	**29**	*e*P	**P**	**07 18 35.7**	**+0.7**
	comp=Z,20nm,0.5s,mb4.8						
MK31	**Makanchi Array**	**22.72**	**320**	*e*P	**P**	**07 18 45.4**	**+2.3**
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**07 18 44.5**	**+1.3**
	comp=Z,14nm,0.9s,mb4.4,baz=133,slow=12,SNR=8.5						
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**07 18 44.5**	**+1.3**
MDJ	**Mudanjiang**	**24.53**	**49**	*e*P	**P**	**07 19 01.6**	**+0.8**
	comp=Z,6.1nm,0.6s,mb4.3						
KULM	**Kulim**	**25.74**	**187**	P	**P**	**07 19 13.5**	**+1.4**
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**07 19 14.6**	**+1.8**
	comp=Z,13nm,0.8s,mb4.5,baz=83,slow=4.2,SNR=10						
ZAA0	**Zalesovo Array**	**26.58**	**335**	*e*P	**P**	**07 19 20.2**	**+0.9**
ZALV	**Zalesovo Beam**	**26.58**	**335**	P	**P**	**07 19 19.9**	**+0.6**
	comp=Z,10nm,0.7s,mb4.5,baz=135,slow=9.3,SNR=4.7						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**07 19 23.7**	**+0.4**
	comp=Z,11nm,0.7s,mb4.5,baz=130,slow=9.4,SNR=9.7						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**07 19 23.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.5						
KURK	**Kurchatov**	**27.02**	**324**	*e*P	**P**	**07 19 19.7**	**-3.6**
	comp=Z,19nm,0.8s,mb4.7						
KKM	**Kota Kinabalu**	**27.55**	**152**	*e*P	**P**	**07 19 31.2**	**+2.8**
	comp=Z,66nm,1.3s,mb5.1						
BVAR	**Borovoye Array**	**32.55**	**322**	P	**P**	**07 20 12.7**	**+0.4**
	comp=Z,3.0nm,0.6s,mb4.4,baz=120,slow=9.3,SNR=5.0						
BVAR				PcP	PcP	07 22 58.1	-0.5
	comp=Z,2.7nm,0.7s,baz=150,slow=3.3,SNR=4.8						
BRVK	**Borovoye**	**32.62**	**322**	*e*P	**P**	**07 20 13.6**	**+0.6**
KAPI	**Kappang**	**39.04**	**154**	P	**P**	**07 21 07.3**	**-1.0**
	comp=Z,9.0nm,0.8s,mb4.6,baz=315,slow=4.3,SNR=3.5						
PETK	**Petropavlovsk-**	**44.59**	**44**	P	**P**	**07 21 54.9**	**+1.6**
	comp=Z,5.0nm,1.0s,mb4.3,baz=328,slow=2.9,SNR=5.5						
PETK	**Petropavlovsk-**	**44.59**	**44**	P	**P**	**07 21 54.9**	**+1.6**
ZEI	**Tsey**	**48.20**	**302**	*e*P	**P**	**07 22 21.1**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
KIV	**Kislovodsk**	**48.95**	**303**	*e*P	**P**	**07 22 28.0**	**+0.4**
KIV				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
JOF	**Joensuu**	**54.84**	**328**	*e*P	**P**	**07 23 08.8**	**-2.4**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
JOF	**Joensuu**	**54.84**	**328**	*e*p	**P**	**07 23 08.8**	**-2.4**
	comp=Z,8.4nm,0.6s,mb5.0						
ASF	**Jabal al Asfar**	**55.91**	**290**	P	**P**	**07 23 20.0**	**+0.5**
	comp=Z,2.8nm,0.8s,mb4.4,baz=278,slow=2.8,SNR=3.6						
BRTR	**Keskin Array B**	**56.35**	**300**	P	**P**	**07 23 22.2**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.3,baz=82,slow=6.3,SNR=5.7						
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**07 23 26.7**	**-0.8**
	comp=Z,4.4nm,0.6s,mb4.7,baz=68,slow=7.1,SNR=6.2						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**07 23 25.1**	**-2.5**
	comp=Z,2.5nm,0.7s,mb4.3,baz=84,slow=9.2,SNR=3.8						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**07 23 28.8**	**-0.5**
	comp=Z,9.2nm,0.8s,mb4.8,baz=99,slow=9.8,SNR=7.7						
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**07 23 38.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**07 23 38.3**	**-0.7**
	comp=Z,23nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**07 23 38.3**	**-0.7**
	comp=Z,11nm,0.7s,mb5.0,baz=327,slow=8.9,SNR=5.8						
COEN	**Coen**	**58.74**	**134**	*e*P	**P**	**07 23 40.8**	**+1.2**
	comp=Z,103nm,1.0s,mb5.8						
SPITS	**Spitsbergen Ar**	**59.30**	**346**	P	**P**	**07 23 41.8**	**-0.8**
	comp=Z,4.0nm,0.7s,mb4.5,baz=93,slow=11,SNR=4.6						
KWP	**Kalwaria Pacla**	**61.41**	**313**	*e*P	**P**	**07 23 58.0**	**+0.6**
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**07 24 00.2**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.6,baz=341,slow=6.6,SNR=6.5						
HFS	**Hagfors**	**63.56**	**326**	P	**P**	**07 24 11.1**	**-0.6**
	comp=Z,4.1nm,0.6s,mb4.7,baz=102,slow=6.4,SNR=6.4						
NB2	**NORSAR Subarra**	**64.46**	**327**	P	**P**	**07 24 16.6**	**-1.0**
	comp=Z,2.4nm,0.6s,mb4.4,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**07 24 16.9**	**-0.7**
	comp=Z,5.5nm,0.8s,mb4.6,baz=74,slow=6.5,SNR=9.3						
NWAO	**Narrogin (SRO)**	**64.91**	**167**	P	**P**	**07 24 19.8**	**-1.0**
	comp=Z,30nm,1.2s,mb5.2,baz=320,slow=6.0,SNR=5.9						
NWAO	**Narrogin (SRO)**	**64.91**	**167**	P	**P**	**07 24 19.8**	**-1.0**
VRAC	**Vranov**	**65.31**	**314**	P	**P**	**07 24 23.4**	**0.0**
	comp=Z,2.7nm,0.4s,mb4.7,baz=59,slow=3.7,SNR=3.6						
CTA	**Charters Tower**	**65.31**	**135**	P	**P**	**07 24 21.8**	**-1.8**
	comp=Z,2.0nm,0.4s,mb4.5,baz=324,slow=8.7,SNR=3.3						
CTA	**Charters Tower**	**65.31**	**135**	P	**P**	**07 24 21.8**	**-1.8**
CLL	**Collm**	**66.78**	**317**	*i* P	**P**	**07 24 32.5**	**-0.2**
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**07 24 35.6**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.3,baz=73,slow=4.6,SNR=5.3						
COLD	**Coldfoot**	**67.74**	**24**	*e*P	**P**	**07 24 39.9**	**+1.4**
	comp=Z,13nm,0.9s,mb5.0						
BPAW	**Bear Paw Mtn.**	**68.89**	**27**	*e*P	**P**	**07 24 47.3**	**+1.5**
	comp=Z,10nm,0.9s,mb4.8						
PPLA	**Purkeypile**	**68.97**	**28**	*e*P	**P**	**07 24 47.3**	**+1.0**
	comp=Z,76nm,1.6s,mb5.4						
KMBO	**Kilima Mbogo**	**70.41**	**256**	P	**P**	**07 24 59.2**	**+3.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=29,slow=20,SNR=3.5						
KMBO	**Kilima Mbogo**	**70.41**	**256**	P	**P**	**07 24 59.2**	**+3.2**
DAVOX	**Davos/Dischmat**	**70.43**	**313**	P	**P**	**07 24 55.6**	**0.0**
	comp=Z,3.9nm,0.5s,mb4.6,baz=74,slow=8.3,SNR=6.9						
KDAK	**Kodiak Island**	**71.17**	**33**	P	**P**	**07 24 59.7**	**-0.2**
	comp=Z,23nm,1.0s,mb5.1,baz=320,slow=7.9,SNR=3.8						
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**07 25 00.6**	**-0.5**
	comp=Z,8.7nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**07 25 00.6**	**-0.5**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**07 25 00.6**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.4						
HINF	**Hinteralfeld**	**71.85**	**315**	*e*P	**P**	**07 25 03.5**	**-0.7**
	comp=Z,8.4nm,0.8s,mb4.4						
HINF	**Hinteralfeld**	**71.85**	**315**	*e*P	**P**	**07 25 03.5**	**-0.7**
HINF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
HINF	**Hinteralfeld**	**71.85**	**315**	*e*P	**P**	**07 25 03.5**	**-0.7**
	comp=Z,4.2nm,0.8s,mb4.4						
GIVF	**Givet**	**72.02**	**318**	*e*P	**P**	**07 25 04.9**	**-0.3**
HAU	**Haudompre**	**72.07**	**316**	*e*P	**P**	**07 25 04.8**	**-0.7**
STKA	**Stephens Creek**	**72.21**	**147**	*e*P	**P**	**07 25 06.1**	**-0.3**
	comp=Z,4.8nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**07 25 06.0**	**-0.4**
	comp=Z,3.1nm,0.5s,mb4.5,baz=321,slow=4.2,SNR=5.6						
INK	**Inuvik**	**72.39**	**19**	P	**P**	**07 25 07.7**	**+0.6**
	comp=Z,8.3nm,0.8s,mb4.7,baz=334,slow=7.3,SNR=10						
BAIF	**Baives**	**72.40**	**318**	*e*P	**P**	**07 25 07.2**	**-0.2**
	comp=Z,13nm,1.0s,mb4.5						
BAIF	**Baives**	**72.40**	**318**	*e*P	**P**	**07 25 07.2**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BAIF	**Baives**	**72.40**	**318**	*e*P	**P**	**07 25 07.2**	**-0.2**
	comp=Z,6.4nm,1.0s,mb4.5						
MEZF	**Maizieres J'vi**	**72.62**	**316**	*e*P	**P**	**07 25 08.5**	**-0.3**
PGF	**Pioggiola**	**72.82**	**310**	*e*P	**P**	**07 25 10.0**	**-0.1**
	comp=Z,111nm,1.4s,mb5.3						
PGF	**Pioggiola**	**72.82**	**310**	*e*P	**P**	**07 25 10.0**	**-0.1**
PGF				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3						
PGF	**Pioggiola**	**72.82**	**310**	*e*P	**P**	**07 25 10.0**	**-0.1**
	comp=Z,56nm,1.4s,mb5.3						
CABF	**La Chapelle**	**72.86**	**314**	*e*P	**P**	**07 25 09.7**	**-0.5**
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.1**	**+0.3**
	comp=Z,23nm,0.8s,mb4.8						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.1**	**+0.3**
LPG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.1**	**+0.3**
	comp=Z,11nm,0.8s,mb4.8						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.0**	**+0.2**
	comp=Z,31nm,1.0s,mb4.9						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.0**	**+0.2**
LPL				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**07 25 11.0**	**+0.2**
	comp=Z,16nm,1.0s,mb4.9						
EKA	**Eskdalemuir Ar**	**73.74**	**325**	P	**P**	**07 25 14.8**	**-0.5**
	comp=Z,3.0nm,0.9s,mb4.2,baz=46,slow=6.0,SNR=5.1						
ORIF	**Oris-en-Rattie**	**73.76**	**313**	*e*P	**P**	**07 25 15.2**	**-0.4**
	comp=Z,11nm,1.0s,mb4.4						
ORIF	**Oris-en-Rattie**	**73.76**	**313**	*e*P	**P**	**07 25 15.2**	**-0.4**
ORIF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ORIF	**Oris-en-Rattie**	**73.76**	**313**	*e*P	**P**	**07 25 15.2**	**-0.4**
	comp=Z,5.5nm,1.0s,mb4.4						
RES	**Resolute Bay**	**73.86**	**5**	P	**P**	**07 25 16.7**	**+1.0**
	comp=Z,7.8nm,0.9s,mb4.7,baz=348,slow=5.9,SNR=13						
FRF	**La Foret Royal**	**73.90**	**311**	*e*P	**P**	**07 25 15.8**	**-0.6**
LOR	**Lormes**	**73.90**	**316**	*e*P	**P**	**07 25 15.3**	**-1.1**
	comp=Z,16nm,1.1s,mb4.5						
LOR	**Lormes**	**73.90**	**316**	*e*P	**P**	**07 25 15.3**	**-1.1**
LOR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
LOR	**Lormes**	**73.90**	**316**	*e*P	**P**	**07 25 15.3**	**-1.1**
	comp=Z,7.8nm,1.1s,mb4.5						
LMR	**La Mourre**	**74.09**	**311**	*e*P	**P**	**07 25 17.0**	**-0.6**
SMF	**Signal de Mont**	**74.21**	**315**	*e*P	**P**	**07 25 17.5**	**-0.7**
	comp=Z,21nm,1.0s,mb4.7						
SMF	**Signal de Mont**	**74.21**	**315**	*e*P	**P**	**07 25 17.5**	**-0.7**
SMF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
SMF	**Signal de Mont**	**74.21**	**315**	*e*P	**P**	**07 25 17.5**	**-0.7**
	comp=Z,11nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**74.21**	**316**	*e*P	**P**	**07 25 17.4**	**-0.8**
	comp=Z,8.0nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**74.21**	**316**	*e*P	**P**	**07 25 17.4**	**-0.8**
SSF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**74.21**	**316**	*e*P	**P**	**07 25 17.4**	**-0.8**
	comp=Z,4.0nm,1.0s,mb4.3						
AVF	**Avril sur Loir**	**74.44**	**315**	*e*P	**P**	**07 25 18.9**	**-0.6**
	comp=Z,16nm,0.9s,mb4.6						
AVF	**Avril sur Loir**	**74.44**	**315**	*e*P	**P**	**07 25 18.9**	**-0.6**
AVF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
AVF	**Avril sur Loir**	**74.44**	**315**	*e*P	**P**	**07 25 18.9**	**-0.6**
	comp=Z,7.8nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**74.55**	**313**	*e*P	**P**	**07 25 19.6**	**-0.6**
	comp=Z,14nm,1.0s,mb4.5						
VIVF	**Saint-Julien-l**	**74.55**	**313**	*e*P	**P**	**07 25 19.6**	**-0.6**
VIVF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
VIVF	**Saint-Julien-l**	**74.55**	**313**	*e*P	**P**	**07 25 19.6**	**-0.6**
	comp=Z,7.0nm,1.0s,mb4.5						
BGF	**Bois d'Agland**	**74.85**	**315**	*e*P	**P**	**07 25 21.2**	**-0.7**
TCF	**Toulx Ste Croi**	**75.37**	**315**	*e*P	**P**	**07 25 24.6**	**-0.3**
	comp=Z,14nm,1.0s,mb4.6						
TCF	**Toulx Ste Croi**	**75.37**	**315**	*e*P	**P**	**07 25 24.6**	**-0.3**
TCF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**75.37**	**315**	*e*P	**P**	**07 25 24.6**	**-0.3**
	comp=Z,7.2nm,1.0s,mb4.6						
LASF	**Ste Croix**	**75.44**	**313**	*e*P	**P**	**07 25 25.1**	**-0.2**
LDF	**La Druitiere**	**75.58**	**318**	*e*P	**P**	**07 25 25.5**	**-0.6**
FLN	**La Foliniere**	**75.70**	**319**	*e*P	**P**	**07 25 26.2**	**-0.6**
GRR	**Gorron**	**76.11**	**318**	*e*P	**P**	**07 25 28.6**	**-0.5**
	comp=Z,11nm,0.7s,mb4.6						
GRR	**Gorron**	**76.11**	**318**	*e*P	**P**	**07 25 28.6**	**-0.5**
GRR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
GRR	**Gorron**	**76.11**	**318**	*e*P	**P**	**07 25 28.6**	**-0.5**
	comp=Z,5.6nm,0.7s,mb4.6						
CAF	**Calviac**	**76.13**	**314**	*e*P	**P**	**07 25 29.3**	**0.0**
	comp=Z,8.9nm,0.9s,mb4.4						
CAF	**Calviac**	**76.13**	**314**	*e*P	**P**	**07 25 29.3**	**0.0**
CAF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CAF	**Calviac**	**76.13**	**314**	*e*P	**P**	**07 25 29.3**	**0.0**
	comp=Z,4.4nm,0.9s,mb4.4						
RJF	**Les Rejaudoux**	**76.28**	**315**	*e*P	**P**	**07 25 30.3**	**+0.2**
	comp=Z,12nm,0.9s,mb4.5						
RJF	**Les Rejaudoux**	**76.28**	**315**	*e*P	**P**	**07 25 30.3**	**+0.2**
RJF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
RJF	**Les Rejaudoux**	**76.28**	**315**	*e*P	**P**	**07 25 30.3**	**+0.2**
	comp=Z,6.0nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**76.62**	**316**	*e*P	**P**	**07 25 31.7**	**-0.3**
	comp=Z,10nm,0.8s,mb4.5						
MFF	**Saint Martin d**	**76.62**	**316**	*e*P	**P**	**07 25 31.7**	**-0.3**
MFF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MFF	**Saint Martin d**	**76.62**	**316**	*e*P	**P**	**07 25 31.7**	**-0.3**
	comp=Z,5.1nm,0.8s,mb4.5						
MTLF	**Montolieu**	**76.83**	**313**	*e*P	**P**	**07 25 33.1**	**-0.2**
LFF	**La Frestale**	**76.94**	**315**	*e*P	**P**	**07 25 34.0**	**+0.1**
SGMF	**Saint Gilles**	**77.15**	**319**	*e*P	**P**	**07 25 34.9**	**-0.1**
	comp=Z,9.6nm,0.7s,mb4.5						
SGMF	**Saint Gilles**	**77.15**	**319**	*e*P	**P**	**07 25 34.9**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SGMF	**Saint Gilles**	**77.15**	**319**	*e*P	**P**	**07 25 34.9**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.5						
ROSF	**Rostrenen**	**77.51**	**319**	*e*P	**P**	**07 25 36.9**	**-0.1**
	comp=Z,8.9nm,0.8s,mb4.5						
ROSF	**Rostrenen**	**77.51**	**319**	*e*P	**P**	**07 25 36.9**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ROSF	**Rostrenen**	**77.51**	**319**	*e*P	**P**	**07 25 36.9**	**-0.1**
	comp=Z,4.4nm,0.8s,mb4.4						
SKAG	**Skagway**	**77.63**	**27**	*e*P	**P**	**07 25 39.4**	**+1.9**
QUIF	**Quistinic**	**77.67**	**319**	*e*P	**P**	**07 25 37.5**	**-0.4**
ETSF	**Etsaut**	**78.80**	**313**	*e*P	**P**	**07 25 44.5**	**+0.2**
	comp=Z,8.2nm,0.9s,mb4.3						
ETSF	**Etsaut**

LPG	**La Plagne**	**73.24 313**	*eP*	**P**	**07 27 07.0**	**+1.2**
LPG			pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.24 313**	*eP*	**P**	**07 27 07.0**	**+1.2**
comp=Z,4.3nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.24 313**	*eP*	**P**	**07 27 06.9**	**+1.1**
comp=Z,6.9nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.24 313**	*eP*	**P**	**07 27 06.9**	**+1.1**
LPL			pmax	pmax		
comp=Z,3.0nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.24 313**	*eP*	**P**	**07 27 06.9**	**+1.1**
comp=Z,3.5nm,0.5s,mb4.5						
ORIF	**Oris-en-Rattie**	**74.06 313**	*eP*	**P**	**07 27 11.2**	**+0.6**
comp=Z,18nm,1.0s,mb4.6						
ORIF	**Oris-en-Rattie**	**74.06 313**	*eP*	**P**	**07 27 11.2**	**+0.6**
ORIF			pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.7						
ORIF	**Oris-en-Rattie**	**74.06 313**	*eP*	**P**	**07 27 11.2**	**+0.6**
comp=Z,8.8nm,1.0s,mb4.6						
SMF	**Signal de Mont**	**74.46 315**	*eP*	**P**	**07 27 13.2**	**+0.3**
AVF	**Avril sur Loir**	**74.68 316**	*eP*	**P**	**07 27 14.4**	**+0.2**

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*IDC **12** 07:15:58.0±2.1, 1°.36S×145°.48E, h0km, mb4.4/4, mb1 4.6/5, mb1mx4.2/17, mbtmp4.4/5, ML4.1/1, Error ellipse: s-maj=70.8km s-min=26.5km az=95.0*
*ISCJB **12** 07:16:02.4±2.1, 1°.5S±0°.2×145°.3E±0°.4, h33km, mb4.3/5, Error ellipse: s-maj=52.1km s-min=23.1km az=174.7*
*NEIC **12** 07:16:04.2±0.8, 1°.35S×145°.12E, h35km, mb4.5/1, Error ellipse: s-maj=31.6km s-min=12.4km az=99.0*
ISC 12 07:16:04.2±2.1, 1°.4S±0°.2×145°.3E±0°.4, h35km, n9, σ0§30/7, mb4.3/5, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**18.57**	**177**	P	**Pn**	**07 20 18.6**	**-0.1**
0.4nm,0.3s,baz=351,slow=12,SNR=4.1							
WRAB	**Tennant Creek**	**21.28**	**209**	*eP*	**P**	**07 20 47.7**	**-0.1**
10nm,0.5s,mb4.4							
WRA	**Warramunga Arr**	**21.29**	**209**	P	**P**	**07 20 47.6**	**-0.3**
6.0nm,0.5s,mb4.2,baz=33,slow=10,SNR=7.7							
ASAR	**Alice Springs**	**24.71**	**206**	P	**P**	**07 21 22.9**	**+0.6**
7.4nm,0.8s,mb4.3,baz=34,slow=7.5,SNR=13							
FITZ	**Fitzroy Crossi**	**25.43**	**228**	*eP*	**P**	**07 21 29.0**	**+0.1**
9.4nm,0.6s,mb4.5							
FITZ	**Fitzroy Crossi**	**25.43**	**228**	P	**P**	**07 21 28.7**	**-0.2**
6.8nm,0.8s,mb4.2,baz=57,slow=11,SNR=5.7							
BVAR	**Borovoye Array**	**82.09**	**324**	P	**P**	**07 28 21.0**	**-0.1**
5.1nm,0.7s,mb4.5,baz=104,slow=6.3,SNR=9.4							
TORD	**Torodi Ar. Bea**	**142.13**	**290**	PKP	PKPdf	07 35 34.2	+0.3
0.6nm,0.6s,baz=86,slow=1.1,SNR=4.6							
DBIC	**Dimbokro**	**149.78**	**281**	PKPbc	PKPbc	07 35 50.5	-1.1
2.5nm,0.5s,baz=128,slow=1.0,SNR=9.0							

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*IDC **12** 07:17:05.1±4.2, 30°.63N×104°.01E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/26, mbtmp4.1/9, Error ellipse: s-maj=102.9km s-min=44.9km az=179.0*
ISC 12 07:17:10.1±4.1, 30°.7N±0°.4×104°.0E±0°.3, h28km±13km, n11, σ0§36/12, mb4.1/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.25**	**312**	Pg	**Pb**	**07 17 16.8**	**+0.1**
CD2				Sg	**Sb**	**07 17 21.2**	**0.0**
CD2				smax			
comp=N,20μm,0.8s							
ZALV	**Zalesovo Beam**	**27.00**	**335**	P	**P**	**07 22 49.2**	**-0.3**
comp=N,4.0nm,0.3s,mb4.4,baz=134,slow=10,SNR=2.3							
KURK	**Kurchatov**	**27.47**	**324**	P	**P**	**07 22 53.7**	**0.0**
comp=N,3.1nm,0.9s,mb3.8,baz=128,slow=9.7,SNR=2.6							
BRTR	**Keskin Array B**	**56.82**	**300**	P	**P**	**07 26 51.7**	**-0.4**
comp=N,1.0nm,0.7s,mb4.0,baz=66,slow=4.9,SNR=3.7							
ARCES	**ARCESS Array B**	**57.54**	**336**	P	**P**	**07 26 56.8**	**+0.1**
comp=N,2.7nm,0.9s,mb4.3,baz=83,slow=7.4,SNR=2.8							
AKASG	**Malin Array Be**	**57.55**	**313**	P	**P**	**07 26 56.8**	**-0.2**
comp=N,1.0nm,0.6s,mb4.0,baz=67,slow=7.8,SNR=2.5							
FINES	**FINESS Array B**	**57.81**	**326**	P	**P**	**07 26 58.9**	**+0.2**
comp=N,1.8nm,0.6s,mb4.3,baz=99,slow=7.2,SNR=3.3							
NOA	**NORSAR Array B**	**64.90**	**328**	P	**P**	**07 27 47.4**	**+0.8**
comp=N,0.9nm,0.6s,mb4.0,baz=77,slow=6.0,SNR=3.1							
INK	**Inuvik**	**72.53**	**19**	P	**P**	**07 28 33.5**	**-0.6**
comp=N,1.6nm,0.7s,mb4.1,baz=357,slow=5.7,SNR=2.6							
YKA	**Yellowknife Ar**	**82.07**	**17**	P	**P**	**07 29 27.9**	**+0.3**
comp=N,0.8nm,0.6s,mb3.8,baz=328,slow=5.4,SNR=4.2							
YKA	**Yellowknife Ar**	**82.07**	**17**	P	**P**	**07 29 27.9**	**+0.3**

IDC 12 07:19:18.3±1.4, 30°.73N×104°.61E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.7/24, mbtmp4.1/4, Error ellipse: s-maj=49.3km s-min=26.7km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.41**	**65**	P	P	07 23 56.4	-0.5
1.6nm,0.7s,baz=263,slow=11,SNR=3.0							
ARCES	**ARCESS Array B**	**57.77**	**336**	P	P	07 29 11.2	+0.4
4.1nm,1.0s,baz=76,slow=7.6,SNR=3.4							
WRA	**Warramunga Arr**	**57.93**	**147**	P	P	07 29 12.4	0.0
1.3nm,0.5s,baz=336,slow=7.6,SNR=3.2							
FINES	**FINESS Array B**	**58.11**	**326**	P	P	07 29 12.8	-0.5
5.0nm,1.0s,baz=113,slow=14,SNR=3.4							

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*ISCJB **12** 07:19:30.4±0.9, 31°.0N±0°.2×104°.64E±0°.07, h10km, mb4.0/5, Error ellipse: s-maj=22.8km s-min=8.8km az=179.0*
*IDC **12** 07:19:31.2±1.0, 31°.02N×104°.67E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/24, mbtmp3.9/6, Error ellipse: s-maj=42.9km s-min=20.0km az=46.0*
ISC 12 07:19:32.6±0.8, 31°.0N±0°.1×104°.59E±0°.07, h10km, n7, σ1§03/8, mb4.0/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.71**	**265**	Pg	**Pg**	**07 19 51.3**	**+4.8**
CD2				Sg	**Sg**	**07 19 55.3**	**-0.5**
CD2				smax			
comp=N,22μm,0.5s							
KSRS	**Korea Array**	**20.33**	**65**	P	**P**	**07 24 08.0**	**-0.9**
comp=N,3.4nm,0.6s,baz=260,slow=10,SNR=5.4							
MKAR	**Makanchi Array**	**23.35**	**319**	P	**P**	**07 24 42.3**	**+1.1**
comp=N,0.7nm,0.5s,mb3.4,baz=133,slow=12,SNR=2.6							
BRTR	**Keskin Array B**	**57.17**	**300**	P	**P**	**07 29 20.6**	**+0.9**
comp=N,0.3nm,0.4s,mb3.7,baz=100,slow=5.1,SNR=2.5							
FINES	**FINESS Array B**	**57.91**	**326**	P	**P**	**07 29 23.4**	**-1.2**
comp=N,1.5nm,0.4s,mb4.3,baz=87,slow=8.0,SNR=4.5							
WRA	**Warramunga Arr**	**58.13**	**147**	P	**P**	**07 29 28.0**	**+1.4**
comp=N,2.9nm,0.6s,mb4.5,baz=338,slow=7.7,SNR=5.7							
ASAR	**Alice Springs**	**61.16**	**149**	P	**P**	**07 29 46.5**	**-0.9**
comp=N,0.8nm,0.8s,mb3.9,baz=343,slow=7.0,SNR=2.9							

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*IDC **12** 07:20:31.7±1.3, 31°.19N×103°.85E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.7/27, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=52.8km s-min=27.6km az=75.0*
*NEIC **12** 07:20:33.4±0.6, 31°.18N×103°.74E, h10km, mb4.5/1, Error ellipse: s-maj=23.8km s-min=11.6km az=86.0*
*ISCJB **12** 07:20:34.4±1.2, 31°.1N±0°.1×103°.6E±0°.2, h32km±9km, mb4.1/6, Error ellipse: s-maj=34.5km s-min=19.1km az=172.2*
ISC 12 07:20:35.0±1.8, 31°.2N±0°.1×103°.7E±0°.2, h21km±14km, n9, σ0§43/10, mb4.1/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**168**	Pg	**Pb**	**07 20 40.7**	**-0.6**
CD2				Sg	**Sb**	**07 20 46.1**	**+0.5**
CD2				smax			
comp=E,26μm,0.6s							
CMAR	**Chiang Mai Arr**	**13.37**	**200**	Pn	**Pn**	**07 23 43.4**	**-0.3**
comp=E,0.2nm,0.3s,baz=14,slow=7.8,SNR=3.0							
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**07 26 15.7**	**+0.6**
comp=E,2.2nm,0.7s,mb3.8,baz=133,slow=9.0,SNR=3.7							
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**07 26 15.7**	**+0.6**
ARCES	**ARCESS Array B**	**57.05**	**336**	P	**P**	**07 30 19.0**	**-0.1**
comp=E,3.2nm,0.9s,mb4.3,baz=83,slow=7.4,SNR=2.8							
WRAB	**Tennant Creek**	**58.73**	**146**	*eP*	**P**	**07 30 32.0**	**+0.6**
comp=E,3.2nm,0.7s,mb4.5							
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**07 30 51.7**	**-0.3**
comp=E,0.5nm,0.5s,mb3.9,baz=339,slow=6.9,SNR=2.6							
INK	**Inuvik**	**72.20**	**19**	P	**P**	**07 31 57.8**	**-0.3**
comp=E,1.8nm,0.8s,mb4.1,baz=315,slow=4.8,SNR=4.1							
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**07 32 51.6**	**-0.1**

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comp=E,0.9nm,0.6s,mb3.9,baz=331,slow=5.2,SNR=5.5

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*ISCJB **12** 07:21:32.8±4.6, 31°.65N±0°.07×104°.3E±0°.1, h14km±29km, mb4.4/27, Error ellipse: s-maj=16.2km s-min=8.9km az=151.4*
*IDC **12** 07:21:32.7±0.6, 31°.77N×104°.36E, h0km, mb4.3/21, mb1 4.4/23, mb1mx4.3/36, mbtmp4.3/23, ML4.3/2, Error ellipse: s-maj=27.7km s-min=13.0km az=56.0*
*MOS **12** 07:21:33.3±0.7, 31°.68N×104°.32E, h18km, mb4.9/6, Error ellipse: s-maj=18.4km s-min=7.7km az=114.9*
*NEIC **12** 07:21:34.1±0.3, 31°.68N×104°.28E, h10km, mb4.5/7, Error ellipse: s-maj=10.0km s-min=5.6km az=59.0*
ISC 12 07:21:34.6±4.4, 31°.69N±0°.06×104°.3E±0°.1, h13km±28km, n60, σ0§80/60, mb4.4/27, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.03**	**201**	Pn	**Pn**	**07 24 52.2**	**-0.9**
0.9nm,0.3s,baz=7.0,slow=9.3,SNR=4.4							
SONM	**Songino Array**	**16.21**	**5**	Pn	**Pn**	**07 25 21.8**	**-0.2**
0.4nm,0.3s,baz=173,slow=13,SNR=2.1							
ULN	**Ulaanbaatar**	**16.30**	**7**	*eP*	**Pn**	**07 25 23.1**	**0.0**
NACB	**Ninganchiao**	**17.01**	**112**	*eP*	**Pn**	**07 25 33.6**	**+1.3**
18nm,0.9s							
KS15	**Wonju Array Si**	**20.24**	**67**	*eP*	**P**	**07 26 04.5**	**-5.1**
MKAR	**Makanchi Array**	**22.65**	**318**	P	**P**	**07 26 36.7**	**+1.3**
3.0nm,0.6s,mb3.9,baz=130,slow=9.8,SNR=5.7							
MKAR	**Makanchi Array**	**22.65**	**318**	P	**P**	**07 26 36.7**	**+1.3**
AAK	**Ala-Archa**	**26.01**	**303**	P	**P**	**07 27 07.3**	**0.0**
1.8nm,0.5s,mb3.8,baz=138,slow=15,SNR=2.8							
ZALV	**Zalesovo Beam**	**26.27**	**334**	P	**P**	**07 27 08.5**	**-1.0**
6.6nm,0.3s,mb4.6,baz=127,slow=9.5,SNR=4.2							
KURK	**Kurchatov**	**26.88**	**322**	P	**P**	**07 27 15.1**	**+0.1**
4.6nm,0.6s,mb4.2,baz=127,slow=8.7,SNR=7.0							
KURK	**Kurchatov**	**26.88**	**322**	*eP*	**P**	**07 27 15.2**	**+0.2**
KURK				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.2							
KURK	**Kurchatov**	**26.88**	**322**	*eP*	**P**	**07 27 15.2**	**+0.2**
comp=Z,4.1nm,0.5s,mb4.2							
KKM	**Kota Kinabalu**	**27.84**	**154**	*eP*	**P**	**07 27 21.4**	**-2.5**
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**07 28 04.3**	**+0.1**
comp=Z,2.2nm,0.5s,mb4.2,baz=123,slow=11,SNR=5.9							
ABKAR	**Akbulak array**	**37.41**	**311**	*eP*	**P**	**07 28 47.7**	**+0.5**
comp=Z,3.2nm,0.8s,mb4.2							
AKTK	**Aktyubinsk**	**38.86**	**313**	P	**P**	**07 29 00.1**	**+0.6**
AKTO	**Aktyubinsk**	**38.86**	**313**	P	**P**	**07 29 00.1**	**+0.6**
comp=Z,2.2nm,0.5s,mb4.2,baz=103,slow=5.7,SNR=6.3							
FITZ	**Fitzroy Crossi**	**53.57**	**155**	P	**P**	**07 30 54.0**	**-1.4**
comp=Z,3.6nm,0.9s,mb4.3,baz=63,slow=16,SNR=3.1							
JOF	**Joensuu**	**54.62**	**328**	*eP*	**P**	**07 31 01.5**	**-1.1**
JOF				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6							
JOF	**Joensuu**	**54.62**	**328**	*ep*	**P**	**07 31 01.5**	**-1.1**
comp=Z,3.9nm,0.6s,mb4.6							
ASF	**Jabal al Asfar**	**56.30**	**290**	P	**P**	**07 31 16.4**	**+1.3**
comp=Z,1.4nm,0.3s,mb4.4,baz=280,slow=1.8,SNR=4.1							
BR131	**Keskin Array S**	**56.59**	**299**	*eP*	**P**	**07 31 17.2**	**+0.1**
comp=Z,0.6nm,0.4s,mb4.0							
BRTR	**Keskin Array B**	**56.59**	**299**	P	**P**	**07 31 17.2**	**+0.1**
comp=Z,2.0nm,0.8s,mb4.2,baz=91,slow=6.6,SNR=8.7							
ARCES	**ARCESS Array B**	**56.80**	**336**	P	**P**	**07 31 17.1**	**-1.0**
comp=Z,2.7nm,0.5s,mb4.5,baz=80,slow=8.2,SNR=11							
KAF	**Kangasniemi**	**56.99**	**327**	*eP*	**P**	**07 31 13.8**	**-5.8**
KAF				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.9							
KAF	**Kangasniemi**	**56.99**	**327**	*ep*	**P**	**07 31 13.8**	**-5.8**
comp=Z,7.3nm,0.6s,mb4.9							
AKASG	**Malin Array Be**	**57.10**	**313**	P	**P**	**07 31 20.1**	**-0.5**
comp=Z,1.6nm,0.4s,mb4.4,baz=68,slow=6.8,SNR=6.5							
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**07 31 20.6**	**-0.3**
comp=Z,8.0nm,0.5s,mb5.0,baz=83,slow=7.0,SNR=20							
EIL	**Elat**	**58.72**	**288**	P	**P**	**07 31 31.9**	**-0.4**
comp=Z,5.8nm,0.9s,mb4.6,baz=108,slow=6.4,SNR=3.3							
SPITS	**Spitsbergen Ar**	**58.81**	**346**	P	**P**	**07 31 31.4**	**-0.8**
comp=Z,3.4nm,0.8s,mb4.4,baz=96,slow=8.5,SNR=4.9							
WRAB	**Tennant Creek**	**58.87**	**147**	*eP*	**P**	**07 31 33.6**	**+0.4**
WRAB				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.8							
WRAB	**Tennant Creek**	**58.87**	**147**	*eP*	**P**	**07 31 33.6**	**+0.4**
comp=Z,5.7nm,0.6s,mb4.8							
WRA	**Warramunga Arr**	**58.87**	**147**	P	**P**	**07 31 33.7**	**+0.5**
comp=Z,4.1nm,0.6s,mb4.7,baz=338,slow=7.4,SNR=6.4							
ASAR	**Alice Springs**	**61.91**	**149**	P	**P**	**07 31 54.5**	**+0.6**
comp=Z,1.8nm,0.7s,mb4.3,baz=336,slow=6.4,SNR=4.8							
NB2	**NORSAR Subarra**	**64.26**	**327**	P	**P**	**07 32 07.9**	**-1.2**
comp=Z,3.2nm,0.6s,mb4.5,baz=74,slow=6.9							
NOA	**NORSAR Array B**	**64.26**	**327**	P	**P**	**07 32 08.3**	**-0.9**
comp=Z,1.8nm,0.6s,mb4.3,baz=62,slow=4.3,SNR=6.2							
NOA	**NORSAR Array B**	**64.26**	**327**	P	**P**	**07 32 08.3**	**-0.9**
GERES	**GERESS Array B**	**67.26**	**314**	P	**P**	**07 32 29.3**	**+0.6**
comp=Z,1.1nm,0.6s,mb4.1,baz=52,slow=8.6,SNR=5.1							
CDF	**Champ du Feu**	**71.31**	**316**	*eP*	**P**	**07 32 53.7**	**-0.1**
INK	**Inuvik**	**71.56**	**19**	P	**P**	**07 32 54.6**	**-0.4**
comp=Z,3.6nm,0.9s,mb4.3,baz=342,slow=10,SNR=5.2							
HINF	**Hinteralfeld**	**71.83**	**315**	*eP*	**P**	**07 32 56.6**	**-0.4**
BAIF	**Baives**	**72.34**	**318**	*eP*	**P**	**07 33 00.0**	**0.0**
STKA	**Stephens Creek**	**72.41**	**147**	P	**P**	**07 33 02.8**	**+2.3**
comp=Z,3.9nm,0.7s,mb4.4,baz=321,slow=7.1,SNR=6.6							
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
comp=Z,14nm,0.7s,mb4.7							
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
LPG				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.7							
LPG	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
comp=Z,6.9nm,0.7s,mb4.7							
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
comp=Z,16nm,0.8s,mb4.7							
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
LPL				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
LPL	**La Plagne**	**72.97**	**313**	*eP*	**P**	**07 33 04.6**	**+0.8**
comp=Z,7.8nm,0.8s,mb4.7							
SBF	**Sospel**	**73.30**	**311**	*eP*	**P**	**07 33 05.8**	**0.0**
MBDF	**Montbardon**	**73.32**	**312**	*eP*	**P**	**07 33 07.1**	**+1.2**
ORIF	**Oris-en-Rattie**	**73.79**	**313**	*eP*	**P**	**07 33 08.8**	**+0.2**
LOR	**Lormes**	**73.88**	**316**	*eP*	**P**	**07 33 08.5**	**-0.7**
SMF	**Signal de Mont**	**74.20**	**315**	*eP*	**P**	**07 33 10.7**	**-0.3**
AVF	**Avril sur Loir**	**74.42**	**316**	*eP*	**P**	**07 33 12.0**	**-0.3**
VIVF	**Saint-Julien-l**	**74.57**	**313**	*eP*	**P**	**07 33 13.2**	**0.0**
TCF	**Toulx Ste Croi**	**75.35**	**316**	*eP*	**P**	**07 33 17.9**	**+0.2**
GRR	**Gorron**	**76.05**	**318**	*eP*	**P**	**07 33 21.7**	**+0.1**
YKA	**Yellowknife Ar**	**81.09**	**17**	P	**P**	**07 33 48.6**	**-0.5**
comp=Z,0.7nm,0.5s,mb3.9,baz=325,slow=5.1,SNR=7.5							
YKA	**Yellowknife Ar**	**81.09**	**17**	P	**P**	**07 33 48.6**	**-0.6**
YKA				pmax	pmax		
comp=Z,1.0nm,0.5s							

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*IDC **12** 07:22:23.9±0.6, 32°.07N×104°.72E, h0km, mb4.4/19, mb1 4.5/21, mb1mx4.4/32, mbtmp4.4/21, ML3.7/2, Error ellipse: s-maj=22.0km s-min=12.6km az=56.0*
*ISCJB **12** 07:22:24.0±1.4, 32°.13N±0°.03×104°.98E±0°.06, h11km±9km, mb4.6/47, Error ellipse: s-maj=8.0km s-min=5.4km az=178.7*
*NEIC **12** 07:22:26.0±0.3, 32°.17N×104°.96E, h10km, mb4.8/23, Error ellipse: s-maj=8.9km s-min=7.1km az=71.0*
*BJI **12** 07:22:25.7, 32°.20N×105°.03E, h18km, mb4.7/5, ML4.7/4, Ms4.7/1*
*MOS **12** 07:22:27.5±1.5, 32°.04N×104°.86E, h33km, mb4.8/21, Error ellipse: s-maj=12.2km s-min=6.5km az=112.5*
ISC 12 07:22:26.4±1.4, 32°.17N±0°.03×104°.93E±0°.05, h12km±8km, n141, σ1§15/146, mb4.6/47, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.83**	**60**	Pg	**Pg**	**07 23 41.3**	**+1.4**
XAN				Sg	**Sg**	**07 24 29.9**	**+0.4**
XAN				smax			
comp=N,740nm,0.8s							
XAN				smax			
comp=E,2μm,0.8s							
LZH	**Lanzhou**	**4.00**	**347**	Pg	**Pb**	**07 23 34.6**	**-2.3**
LZH				Sn	**Sn**	**07 24 17.6**	**+3.2**
LZH				Sg	**Sg**	**07 24 31.7**	**-3.3**
LZH				smax			
comp=N,3μm,0.9s							
LZH				smax			
comp=E,4μm,1.0s							
ENH	**Enshi**	**4.34**	**115**	*e*Pn	**Pn**	**07 23 31.4**	**-0.8**
KMI	**Kunming**	**7.28**	**196**	Pn	**Pn**	**07 24 13.4**	**+0.8**
KMI				Sn	**Sn**	**07 25 36.2**	**+1.0**
KMI				smax			
comp=N,180nm,0.9s							
KMI				smax			
comp=E,170nm,1.1s							
CHTO	**Chiang Mai**	**14.35**	**203**	P	**Pn**	**07 25 52.6**	**+3.2**
CM31	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**07 25 54.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**07 25 53.8**	**-0.2**
comp=E,0.3nm,0.3s,baz=6.6,slow=11,SNR=3.3							
SONM	**Songino Array**	**15.68**	**4**	Pn	**Pn**	**07 26 09.8**	**+2.7**
comp=E,0.3nm,0.3s,baz=173,slow=13,SNR=2.2							
SONM				Lg		07 30 39.6	
comp=E,0.4nm,0.3s,baz=176,slow=23,SNR=2.3							
ULN	**Ulaanbaatar**	**15.76**	**5**	*eP*	**Pn**	**07 26 07.6**	**-0.4**
ZAK	**Zakamensk**	**18.23**	**357**	*eP*	**Pn**	**07 26 44.2**	**+5.1**
ZAK				pmax	pmax		
comp=Z,12nm,1.1s							
KSRS	**Korea Array**	**19.58**	**68**	P	**Pn**	**07 26 56.6**	**+1.1**
comp=Z,0.3nm,0.3s,baz=254,slow=9.9,SNR=2.9							
HIA	**Hailar**	**20.37**	**29**	*eP*	**P**	**07 27 01.3**	**-1.4**
HIA				pmax	pmax		
comp=Z,5.0nm,0.3s							
HIA	**Hailar**	**20.37**	**29**	*eP*	**P**	**07 27 01.3**	**-1.4**
comp=Z,5.1nm,0.3s							
MK31	**Makanchi Array**	**22.66**	**317**	*eP*	**P**	**07 27 27.8**	**+0.5**
MK31	**Makanchi Array**	**22.66**	**317**	*eP*	**P**	**07 27 27.4**	**+0.1**
MK31	**Makanchi Array**	**22.66**	**317**	*eP*	**P**	**07 27 27.8**	**+0.4**
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**07 27 24.7**	**-2.6**
comp=Z,3.2nm,0.7s,mb3.9,baz=124,slow=11,SNR=3.6							
MKAR	**Makanchi Array**	**22.66**	**317**	*ceP*	**P**	**07 27 33.9**	**+6.6**
MKAR				pmax	pmax		
comp=Z,6.0nm,0.8s							
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**07 27 24.7**	**-2.6**
TKM2	**Tokmak 2**	**25.49**	**303**	*eP*	**P**	**07 27 55.7**	**+1.3**
TKM2				pmax	pmax		
comp=Z,20nm,1.2s,mb4.5							
TKM2	**Tokmak 2**	**25.49**	**303**	*eP*	**P**	**07 27 55.7**	**+1.3**
comp=Z,20nm,1.2s,mb4.5							
ZAA0	**Zalesovo Array**	**26.08**	**332**	*eP*	**P**	**07 27 59.6**	**0.0**
ZALV	**Zalesovo Beam**	**26.08**	**332**	P	**P**	**07 27 59.6**	**0.0**
comp=Z,5.2nm,0.4s,mb4.4,baz=131,slow=10,SNR=4.6							
UCH	**Uchtor**	**26.10**	**301**	*eP*	**P**	**07 28 00.7**	**+0.7**
comp=Z,24nm,1.1s,mb4.6							
AAK	**Ala-Archa**	**26.20**	**302**	*eP*	**P**	**07 28 06.4**	**+5.5**
AAK				pmax	pmax		
comp=Z,2.0nm,1.3s,mb3.5							
AAK	**Ala-Archa**	**26.20**	**302**	P	**P**	**07 28 01.5**	**+0.6**
AML	**Almayashu**	**26.68**	**301**	*eP*	**P**	**07 28 09.9**	**+4.8**
comp=Z,30nm,1.1s,mb4.7							
EKS2	**Erkin-Say**	**26.73**	**302**	*eP*	**P**	**07 28 06.2**	**+0.6**
comp=Z,69nm,2.1s,mb4.8							
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**07 28 09.1**	**+2.6**
comp=Z,4.4nm,0.8s,mb4.1,baz=124,slow=9.3,SNR=4.2							
KURK	**Kurchatov**	**26.83**	**321**	*eP*	**P**	**07 28 10.2**	**+3.8**
KURK				pmax	pmax		
comp=Z,10.0nm,1.4s,mb4.2							
KURK	**Kurchatov**	**26.83**	**321**	*eP*	**P**	**07 28 06.7**	**+0.2**
comp=Z,35nm,1.1s,mb4.8							
KBL	**Kabul**	**29.97**	**284**	P	**P**	**07 28 35.3**	**+0.7**
KBL				pmax	pmax		
comp=Z,4.0nm,0.5s,mb4.4							
KBL	**Kabul**	**29.97**	**284**	P	**P**	**07 28 35.3**	**+0.6**
comp=Z,3.9nm,0.5s,mb4.4							
BRVK	**Borovoye**	**32.48**	**320**	*eP*	**P**	**07 29 01.9**	**+5.4**
BRVK				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.2							
YAK	**Yakutsk**	**33.86**	**21**	P	**P**	**07 29 07.4**	**-1.0**
ABKAR	**Akbulak array**	**37.50**	**310**	*eP*	**P**	**07 29 39.7**	**-0.1**
comp=Z,2.4nm,0.6s,mb4.1							
KAPI	**Kappang**	**39.58**	**156**	P	**P**	**07 29 56.4**	**-1.3**
comp=Z,14nm,0.8s,mb4.8,baz=341,slow=13,SNR=6.2							
**KA

CDF Champ du Feu 71.34 316 *eP* **P 07 33 44.8 -1.1**
comp=Z,19nm,1.2s,mb4.6
CDF Champ du Feu 71.34 316 *eP* **P 07 33 44.8 -1.1**
CDF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CDF Champ du Feu 71.34 316 *eP* **P 07 33 44.8 -1.1**
comp=Z,9.4nm,1.2s,mb4.6
WLF Walferdange 71.41 317 P **P 07 33 49.9 +3.6**
WLF Walferdange 71.41 317 *eP* **P 07 33 47.0 +0.7**
WLF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
WLF Walferdange 71.41 317 *eP* **P 07 33 47.0 +0.6**
comp=Z,6.1nm,0.6s,mb4.7
KMBO Kilima Mbogo 71.84 257 P **P 07 33 47.1 -2.3**
comp=Z,1.8nm,0.7s,mb4.1,baz=35,slow=13,SNR=4.8
KMBO Kilima Mbogo 71.84 257 *eP* **P 07 33 49.5 +0.1**
KMBO pmax pmax
comp=Z,2.0nm,0.6s
KMBO Kilima Mbogo 71.84 257 *eP* **P 07 33 49.5 +0.1**
comp=Z,1.8nm,0.6s,mb4.2
STKA Stephens Creek 72.53 148 P **P 07 33 52.1 -1.0**
comp=Z,3.4nm,0.7s,mb4.4,baz=306,slow=4.4,SNR=5.1
RES Resolute Bay 72.61 5 P **P 07 33 53.8 +0.7**
LPG La Plagne 73.03 313 *eP* **P 07 33 55.8 -0.3**
comp=Z,32nm,1.0s,mb4.9
LPG La Plagne 73.03 313 *eP* **P 07 33 55.8 -0.3**
LPG pmax pmax
comp=Z,16nm,1.0s,mb4.9
LPG La Plagne 73.03 313 *eP* **P 07 33 55.8 -0.3**
comp=Z,16nm,1.0s,mb4.9
LPL La Plagne 73.03 313 *eP* **P 07 33 55.7 -0.4**
comp=Z,15nm,0.8s,mb4.7
LPL La Plagne 73.03 313 *eP* **P 07 33 55.7 -0.4**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPL La Plagne 73.03 313 *eP* **P 07 33 55.7 -0.4**
comp=Z,7.3nm,0.8s,mb4.7
MBDF Montbardon 73.39 313 *eP* **P 07 33 58.1 -0.1**
MBDF Montbardon 73.39 313 *eP* **P 07 33 58.1 -0.1**
MBDF Montbardon 73.39 313 *eP* **P 07 33 58.1 -0.1**
ORIF Oris-en-Rattie 73.85 313 *eP* **P 07 34 00.1 -0.8**
comp=Z,8.2nm,0.7s,mb4.5
ORIF Oris-en-Rattie 73.85 313 *eP* **P 07 34 00.1 -0.8**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 73.85 313 *eP* **P 07 34 00.1 -0.8**
comp=Z,4.1nm,0.7s,mb4.5
LOR Lormes 73.91 316 *eP* **P 07 34 00.1 -1.1**
LOR Lormes 73.91 316 *eP* **P 07 34 00.1 -1.1**
LOR Lormes 73.91 316 *eP* **P 07 34 00.1 -1.1**
VSL Villasalto 74.20 307 *eP* **P 07 34 04.9 +1.9**
comp=Z,28nm,1.2s,mb5.1
LMR La Mourre 74.23 311 *eP* **P 07 34 01.9 -1.3**
LMR La Mourre 74.23 311 *eP* **P 07 34 01.9 -1.3**
LMR La Mourre 74.23 311 *eP* **P 07 34 01.9 -1.3**
SMF Signal de Mont 74.23 315 *eP* **P 07 34 01.9 -1.2**
comp=Z,31nm,1.2s,mb4.8
SMF Signal de Mont 74.23 315 *eP* **P 07 34 01.9 -1.2**
SMF pmax pmax
comp=Z,15nm,1.2s,mb4.8
SMF Signal de Mont 74.23 315 *eP* **P 07 34 01.9 -1.2**
comp=Z,15nm,1.2s,mb4.8
AVF Avril sur Loir 74.45 316 *eP* **P 07 34 03.2 -1.2**
AVF Avril sur Loir 74.45 316 *eP* **P 07 34 03.2 -1.2**
AVF Avril sur Loir 74.45 316 *eP* **P 07 34 03.2 -1.2**
CAF Calviac 76.18 315 *eP* **P 07 34 13.7 -0.7**
CAF Calviac 76.18 315 *eP* **P 07 34 13.7 -0.7**
CAF Calviac 76.18 315 *eP* **P 07 34 13.7 -0.7**
MFF Saint Martin d 76.60 317 *eP* **P 07 34 16.0 -0.7**
MFF Saint Martin d 76.60 317 *eP* **P 07 34 16.0 -0.7**
MFF Saint Martin d 76.60 317 *eP* **P 07 34 16.0 -0.7**
SGMF Saint Gilles 77.06 319 *eP* **P 07 34 18.6 -0.7**
SGMF Saint Gilles 77.06 319 *eP* **P 07 34 18.6 -0.7**
SGMF Saint Gilles 77.06 319 *eP* **P 07 34 18.6 -0.7**
ETSF Etsaut 78.87 314 *eP* **P 07 34 29.1 -0.4**
ETSF Etsaut 78.87 314 *eP* **P 07 34 29.1 -0.4**
ETSF Etsaut 78.87 314 *eP* **P 07 34 29.1 -0.4**
SJPF Ste Jean 79.16 314 *eP* **P 07 34 30.9 -0.1**
SJPF Ste Jean 79.16 314 *eP* **P 07 34 30.9 -0.1**
SJPF Ste Jean 79.16 314 *eP* **P 07 34 30.9 -0.1**
YKA Yellowknife Ar 80.47 17 P **P 07 34 37.9 +0.2**
comp=Z,3.2nm,0.7s,mb4.4,baz=329,slow=5.1,SNR=9.4
FFC Flin Flon 90.40 15 *i P* **P 07 35 32.0 +4.6**
LON Longmire 90.85 30 *eP* **P 07 35 31.5 +1.8**
LON pmax pmax
comp=Z,20nm,1.6s,mb5.2
LON Longmire 90.85 30 *eP* **P 07 35 31.5 +1.8**
comp=Z,20nm,1.6s,mb5.2

BJI ***12*** *07:22:42.6, 31.°28N×102.°75E, h15km, ML4.7/5*
ISCJB ***12*** *07:22:46.9±0.3, 31.°29N±0.°05×103.°24E±0.°06, h10km, mb4.6/36, Error ellipse: s-maj=8.0km s-min=5.8km az=136.3*
IDC ***12*** *07:22:47.5±0.7, 31.°33N×103.°18E, h0km, mb4.5/17, mb1 4.6/19, mb1mx4.4/30, mbtmp4.5/19, ML4.6/2, Error ellipse: s-maj=28.6km s-min=14.6km az=55.0*
NEIC ***12*** *07:22:48.8±0.3, 31.°31N×103.°24E, h10km, mb4.8/13, Error ellipse: s-maj=10.8km s-min=5.9km az=66.0*
MOS ***12*** *07:22:50.4±0.7, 31.°28N×103.°17E, h32km, mb4.9/14, Error ellipse: s-maj=19.0km s-min=7.5km az=118.8*
ISC 12 07:22:48.6±0.3, 31.°27N±0.°05×103.°24E±0.°06, h10km, n86,
σ0°78/87, mb4.6/36, 8C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**129**	Pg	**Pg**	**07 22 57.9**	**-1.9**
CD2				smax			
comp=N,44μm,0.7s							
XAN	**Xi'an**	**5.53**	**59**	Pg	**Pg**	**07 24 41.6**	**+7.1**
XAN				Sg	**Sn**	**07 25 14.9**	**+0.3**
XAN				smax			
comp=N,890nm,0.4s							
XAN				smax			
comp=E,330nm,0.7s							
GYA	**Guiyang**	**5.66**	**147**	ePg	**Pb**	**07 24 26.8**	**-0.7**
GYA				smax			
comp=N,1μm,0.8s							
GYA				smax			
comp=E,670nm,1.0s							
CMAR	**Chiang Mai Arr**	**13.34**	**198**	Pn	**Pn**	**07 25 59.8**	**+1.6**
comp=E,1.6nm,0.3s,baz=8.6,slow=8.7,SNR=12							
CMAR	**Chiang Mai Arr**	**13.34**	**198**	P	**Pn**	**07 25 59.8**	**+1.7**
CMAR	**Chiang Mai Arr**	**13.34**	**198**	Pn	**Pn**	**07 25 59.8**	**+1.6**
SONM	**Songino Array**	**16.72**	**7**	Pn	**Pn**	**07 26 43.9**	**+1.1**
comp=E,1.1nm,0.3s,baz=180,slow=11,SNR=3.9							
KSRS	**Korea Array**	**21.26**	**66**	P	**P**	**07 27 36.1**	**+1.2**
comp=E,8.2nm,0.6s,mb4.2,baz=257,slow=10,SNR=4.7							
KSRS	**Korea Array**	**21.26**	**66**	P	**P**	**07 27 36.2**	**+1.2**
KSRS				pmax	pmax		
comp=Z,8.0nm,0.6s,mb4.2							
MK31	**Makanchi Array**	**22.37**	**320**	P	**P**	**07 27 46.2**	**-0.6**
MKAR	**Makanchi Array**	**22.37**	**320**	P	**P**	**07 27 46.7**	**-0.1**
comp=Z,9.8nm,0.9s,mb4.2,baz=113,slow=9.5,SNR=6.2							
MKAR	**Makanchi Array**	**22.37**	**320**	P	**P**	**07 27 46.7**	**-0.1**
MDJ	**Mudanjiang**	**24.56**	**50**	*eP*	**P**	**07 28 09.4**	**+0.9**
AAK	**Ala-Archa**	**25.50**	**304**	P	**P**	**07 28 19.5**	**+2.5**
comp=Z,8.1nm,0.7s,mb4.3,baz=113,slow=7.6,SNR=10.0							
ZAA0	**Zalesovo Array**	**26.25**	**335**	*eP*	**P**	**07 28 24.1**	**+0.4**
ZALV	**Zalesovo Beam**	**26.25**	**335**	P	**P**	**07 28 24.1**	**+0.3**
comp=Z,6.1nm,0.3s,mb4.6,baz=138,slow=9.0,SNR=7.8							
KURK	**Kurchatov**	**26.67**	**324**	P	**P**	**07 28 27.3**	**-0.3**
comp=Z,24nm,0.9s,mb4.7,baz=127,slow=9.7,SNR=15							
KURK	**Kurchatov**	**26.67**	**324**	*eP*	**P**	**07 28 28.7**	**+1.1**
KURK				pmax	pmax		
comp=Z,29nm,1.0s,mb4.8							
KURK	**Kurchatov**	**26.67**	**324**	*eP*	**P**	**07 28 28.7**	**+1.1**
comp=Z,29nm,1.0s,mb4.8							
KKM	**Kota Kinabalu**	**27.89**	**151**	P	**P**	**07 28 37.6**	**-1.3**
KSM	**Kuching**	**30.38**	**166**	*eP*	**P**	**07 29 02.1**	**+1.1**
BVAR	**Borovoye Array**	**32.20**	**322**	P	**P**	**07 29 17.8**	**+1.1**
comp=Z,3.7nm,0.8s,mb4.3,baz=120,slow=6.0,SNR=4.6							
BVAR				PcP	PcP	07 32 04.5	-0.6
comp=Z,2.2nm,0.6s,baz=90,slow=4.4,SNR=4.0							
BRVK	**Borovoye**	**32.27**	**322**	*eP*	**P**	**07 29 18.3**	**+1.0**
BRVK				pmax	pmax		
comp=Z,13nm,1.2s,mb4.6							
BRVK	**Borovoye**	**32.27**	**322**	*eP*	**P**	**07 29 18.3**	**+1.0**
comp=Z,13nm,1.2s,mb4.6							
ARU	**Arti**	**39.85**	**322**	*eP*	**P**	**07 30 22.8**	**+0.8**
ARU				pmax	pmax		
comp=Z,21nm,0.7s,mb5.0							
ARU	**Arti**	**39.85**	**322**	*eP*	**P**	**07 30 22.8**	**+0.8**
comp=Z,21nm,0.7s,mb5.0							
MOS	**Moscow**	**51.25**	**319**	*eP*	**P**	**07 31 51.4**	**-0.9**
OBN	**Obninsk**	**51.86**	**318**	*eP*	**P**	**07 31 57.2**	**+0.3**
OBN				pmax	pmax		
comp=Z,12nm,1.0s,mb4.8							
AKASG	**Malin Array Be**	**56.73**	**313**	P	**P**	**07 32 31.9**	**-0.5**
comp=Z,5.4nm,0.6s,mb4.8,baz=67,slow=7.2,SNR=7.6							
ARCES	**ARCESS Array B**	**56.80**	**336**	P	**P**	**07 32 32.1**	**-0.5**
comp=Z,9.8nm,0.9s,mb4.8,baz=77,slow=7.3,SNR=6.2							
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**07 32 34.0**	**-0.2**
comp=Z,7.1nm,0.7s,mb4.8,baz=81,slow=4.8,SNR=6.0							
EIL	**Elat**	**57.99**	**288**	P	**P**	**07 32 42.3**	**+0.6**
comp=Z,2.5nm,0.6s,mb4.5,baz=49,slow=9.3,SNR=4.0							
SPITS	**Spitsbergen Ar**	**59.00**	**346**	P	**P**	**07 32 47.2**	**-0.7**
comp=Z,2.8nm,0.5s,mb4.5,baz=81,slow=12,SNR=5.8							
WRA	**Warramunga Arr**	**59.03**	**145**	P	**P**	**07 32 50.9**	**+2.1**
comp=Z,4.7nm,0.6s,mb4.7,baz=336,slow=7.6,SNR=5.0							
ASAR	**Alice Springs**	**62.02**	**148**	P	**P**	**07 33 09.4**	**+0.2**
comp=Z,3.2nm,0.8s,mb4.5,baz=326,slow=6.2,SNR=5.4							
IDI	**Anoyia**	**63.99**	**297**	P	**P**	**07 33 22.2**	**-0.2**
comp=Z,6.5nm,0.4s,mb5.0,baz=71,slow=9.2,SNR=5.7							
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**07 33 21.7**	**-1.0**
comp=Z,3.7nm,0.8s,mb4.4,baz=73,slow=6.0,SNR=3.9							
GERES	**GERESS Array B**	**66.90**	**314**	P	**P**	**07 33 41.3**	**+0.4**
comp=Z,2.9nm,0.9s,mb4.3,baz=81,slow=4.2,SNR=6.8							
COLD	**Coldfoot**	**67.62**	**24**	*eP*	**P**	**07 33 44.3**	**-0.9**
comp=Z,12nm,1.0s,mb4.9							
CDF	**Champ du Feu**	**70.98**	**315**	*eP*	**P**	**07 34 06.0**	**-0.3**
HINF	**Hinteralfeld**	**71.49**	**315**	*eP*	**P**	**07 34 08.8**	**-0.7**
comp=Z,13nm,1.0s,mb4.5							
HINF	**Hinteralfeld**	**71.49**	**315**	*eP*	**P**	**07 34 08.8**	**-0.7**
HINF				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.5							
HINF	**Hinteralfeld**	**71.49**	**315**	*eP*	**P**	**07 34 08.8**	**-0.7**
comp=Z,6.5nm,1.0s,mb4.5							
GIVF	**Givet**	**71.67**	**318**	*eP*	**P**	**07 34 10.2**	**-0.3**
HAU	**Haudompre**	**71.72**	**315**	*eP*	**P**	**07 34 10.1**	**-0.7**
BAIF	**Baives**	**72.04**	**318**	*eP*	**P**	**07 34 12.5**	**-0.2**
comp=Z,13nm,1.1s,mb4.5							
BAIF	**Baives**	**72.04**	**318**	*eP*	**P**	**07 34 12.5**	**-0.2**
BAIF				pmax	pmax		
comp=Z,7.0nm,1.1s,mb4.5							
BAIF	**Baives**	**72.04**	**318**	*eP*	**P**	**07 34 12.5**	**-0.2**
comp=Z,6.7nm,1.1s,mb4.5							
PGF	**Pioggiola**	**72.47**	**309**	*eP*	**P**	**07 34 15.6**	**+0.2**
comp=Z,24nm,0.6s,mb5.0							
PGF	**Pioggiola**	**72.47**	**309**	*eP*	**P**	**07 34 15.6**	**+0.2**
PGF				pmax	pmax		
comp=Z,12nm,0.6s,mb5.0							
PGF	**Pioggiola**	**72.47**	**309**	*eP*	**P**	**07 34 15.6**	**+0.2**
comp=Z,12nm,0.6s,mb5.0							
CABF	**La Chapelle**	**72.50**	**314**	*eP*	**P**	**07 34 15.0**	**-0.5**
STKA	**Stephens Creek**	**72.55**	**146**	P	**P**	**07 34 16.6**	**+0.7**
comp=Z,2.6nm,0.6s,mb4.3,baz=336,slow=4.0,SNR=3.4							
LPG	**La Plagne**	**72.59**	**313**	⇑*iP*	**P**	**07 34 16.6**	**+0.5**
comp=Z,19nm,0.8s,mb4.8							
LPG	**La Plagne**	**72.59**	**313**	⇑*iP*	**P**	**07 34 16.6**	**+0.5**
LPG				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.8							
LPG	**La Plagne**	**72.59**	**313**	⇑*iP*	**P**	**07 34 16.6**	**+0.5**
comp=Z,9.3nm,0.8s,mb4.8							
LPL	**La Plagne**	**72.60**	**313**	⇑*iP*	**P**	**07 34 16.5**	**+0.4**
comp=Z,26nm,0.9s,mb4.9							
LPL	**La Plagne**	**72.60**	**313**	⇑*iP*	**P**	**07 34 16.5**	**+0.4**
LPL				pmax	pmax		
comp=Z,13nm,0.9s,mb4.9							
LPL	**La Plagne**	**72.60**	**313**	⇑*iP*	**P**	**07 34 16.5**	**+0.4**
comp=Z,13nm,0.9s,mb4.9							
SBF	**Sospel**	**72.90**	**311**	*eP*	**P**	**07 34 17.5**	**-0.5**
LOR	**Lormes**	**73.55**	**316**	*eP*	**P**	**07 34 20.7**	**-1.0**
LMR	**La Mourre**	**73.74**	**311**	*eP*	**P**	**07 34 22.5**	**-0.4**
SMF	**Signal de Mont**	**73.86**	**315**	⇑*iP*	**P**	**07 34 22.9**	**-0.6**
comp=Z,12nm,0.7s,mb4.6							
SSF	**Saint Saulge**	**73.86**	**315**	*eP*	**P**	**07 34 22.8**	**-0.7**
comp=Z,8.4nm,0.9s,mb4.4							
AVF	**Avril sur Loir**	**74.08**	**315**	⇑*iP*	**P**	**07 34 24.2**	**-0.6**
comp=Z,18nm,0.9s,mb4.7							
VIVF	**Saint-Julien-l**	**74.19**	**313**	*eP*	**P**	**07 34 25.3**	**-0.2**
TCF	**Toulx Ste Croi**	**75.02**	**315**	*eP*	**P**	**07 34 30.0**	**-0.3**
comp=Z,23nm,1.2s,mb4.7							
TCF	**Toulx Ste Croi**	**75.02**	**315**	*eP*	**P**	**07 34 30.0**	**-0.3**
TCF				pmax	pmax		
comp=Z,12nm,1.2s,mb4.7							
TCF	**Toulx Ste Croi**	**75.02**	**315**	*eP*	**P**	**07 34 30.0**	**-0.3**
comp=Z,12nm,1.2s,mb4.7							
LDF	**La Druitiere**	**75.23**	**318**	*eP*	**P**	**07 34 30.8**	**-0.7**
FLN	**La Foliniere**	**75.35**	**318**	*eP*	**P**	**07 34 31.6**	**-0.6**
GRR	**Gorron**	**75.76**	**318**	*eP*	**P**	**07 34 34.0**	**-0.5**
comp=Z,7.9nm,0.7s,mb4.5							
CAF	**Calviac**	**75.78**	**314**	*eP*	**P**	**07 34 34.8**	**+0.1**
comp=Z,8.8nm,0.9s,mb4.4							
RJF	**Les Rejaudoux**	**75.93**	**315**	*eP*	**P**	**07 34 35.6**	**+0.1**
comp=Z,17nm,1.1s,mb4.6							
RJF	**Les Rejaudoux**	**75.93**	**315**	*eP*	**P**	**07 34 35.6**	**+0.1**
RJF				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.6							
RJF	**Les Rejaudoux**	**75.93**	**315**	*eP*	**P**	**07 34 35.6**	**+0.1**
comp=Z,8.3nm,1.1s,mb4.6							
MFF	**Saint Martin d**	**76.26**	**316**	*eP*	**P**	**07 34 37.1**	**-0.3**
comp=Z,5.6nm,0.6s,mb4.3							
MFF	**Saint Martin d**	**76.26**	**316**	*eP*	**P**	**07 34 37.1**	**-0.3**
MFF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.4							
MFF	**Saint Martin d**	**76.26**	**316**	*eP*	**P**	**07 34 37.1**	**-0.3**
comp=Z,2.8nm,0.6s,mb4.4							
LFF	**La Frestale**	**76.58**	**315**	*eP*	**P**	**07 34 39.4**	**+0.1**
SGMF	**Saint Gilles**	**76.79**	**319**	*eP*	**P**	**07 34 40.2**	**-0.2**
ROSF	**Rostrenen**	**77.15**	**319**	*eP*	**P**	**07 34 42.3**	**-0.1**
SJPF	**Ste Jean**	**78.75**	**314**	*eP*	**P**	**07 34 51.9**	**+0.5**
comp=Z,6.1nm,0.6s,mb4.4							
SJPF	**Ste Jean**	**78.75**	**314**	*eP*	**P**	**07 34 51.9**	**+0.5**
SJPF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.4							
SJPF	**Ste Jean**	**78.75**	**314**	*eP*	**P**	**07 34 51.9**	**+0.5**
comp=Z,3.0nm,0.6s,mb4.4							
TORD	**Torodi Ar. Bea**	**92.88**	**287**	P	**P**	**07 36 03.0**	**+0.8**
comp=Z,0.6nm,0.8s,mb4.1,baz=51,slow=3.8,SNR=2.2							

ISCJB ***12*** *07:24:57.3±0.3, 32.°17N±0.°04×104.°99E±0.°05, h10km, mb4.5/37, Error ellipse: s-maj=6.4km s-min=6.0km az=149.0*
IDC ***12*** *07:24:57.7±0.5, 32.°25N×105.°02E, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.4/32, mbtmp4.4/24, ML4.5/1, Error ellipse: s-maj=20.6km s-min=12.1km az=61.0*
NEIC ***12*** *07:24:59.4±0.3, 32.°21N×104.°96E, h10km, mb4.7/12, Error ellipse: s-maj=7.4km s-min=5.9km az=58.0*
MOS ***12*** *07:24:59.7±0.9, 32.°21N×104.°95E, h25km, mb5.0/5, Error ellipse: s-maj=12.7km s-min=8.3km az=108.1*
BJI ***12*** *07:25:00.4, 32.°04N×105.°20E, h18km, mb4.2/2, ML4.7/4*
ISC 12 07:24:59.4±0.3, 32.°21N±0.°04×104.°96E±0.°04, h10km, n69,
σ1°02/71, mb4.5/37, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.65**	**219**	Pg	**Pg**	**07 25 26.2**	**-4.9**
CD2				smax			
comp=N,69μm,0.5s							
XAN	**Xi'an**	**3.79**	**60**	Pg	**Pg**	**07 26 13.6**	**+1.5**
XAN				Sg	**Sg**	**07 27 00.6**	**-0.6**
XAN				smax			
comp=N,840nm,0.7s							
XAN				smax			
comp=E,490nm,0.9s							
LZH	**Lanzhou**	**3.98**	**347**	Pg	**Pg**	**07 26 13.7**	**-2.0**
LZH				Sn	**Sn**	**07 26 48.8**	**+1.6**
LZH				smax			
comp=N,2μm,0.8s							
LZH				smax			
comp=E,2μm,0.7s							
LSA	**Lhasa**	**12.12**	**262**	*eP*	**Pn**	**07 27 51.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.72**	**203**	Pn	**Pn**	**07 28 29.9**	**+2.0**
comp=E,0.7nm,0.3s,baz=15,slow=10.0,SNR=3.1							
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**07 28 41.6**	**+1.6**
comp=E,0.5nm,0.3s,baz=188,slow=14,SNR=2.3							
ULN	**Ulaanbaatar**	**15.72**	**5**	*eP*	**Pn**	**07 28 39.9**	**-1.0**
NACB	**Ninganchiao**	**16.69**	**114**	*eP*	**Pn**	**07 28 55.5**	**+2.0**
comp=E,1.1nm,0.7s							
KS15	**Wonju Array Si**	**19.51**	**68**	*eP*	**Pn**	**07 29 25.5**	**-2.5**
KSRS	**Korea Array**	**19.55**	**68**	P	**Pn**	**07 29 28.9**	**+0.4**
comp=E,0.8nm,0.3s,baz=255,slow=11,SNR=4.7							
KSRS	**Korea Array**	**19.55**	**68**	P	**Pn**	**07 29 28.9**	**+0.4**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**07 30 02.0**	**+1.3**
comp=Z,4.2nm,0.7s,mb4.0,baz=131,slow=9.2,SNR=5.1							
MDJ	**Mudanjiang**	**22.84**	**50**	*eP*	**P**	**07 30 04.3**	**+1.7**
comp=Z,8.6nm,0.8s,mb4.2							
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**07 30 33.3**	**+0.4**
comp=Z,3.0nm,0.4s,mb4.2,baz=141,slow=9.9,SNR=2.2							
UCH	**Uchtor**	**26.11**	**301**	*eP*	**P**	**07 30 38.2**	**+4.8**
comp=Z,7.4nm,0.8s,mb4.3							
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 30 40.5**	**+0.7**
comp=Z,4.2nm,0.7s,mb4.1,baz=137,slow=8.5,SNR=4.0							
KURK				PcP	PcP	07 34 01.4	-0.8
comp=Z,1.3nm,0.5s,baz=112,slow=2.1,SNR=4.0							
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 30 40.2**	**+0.4**
KURK				PcP	PcP	07 34 01.4	-0.8
MAJO	**Matsushiro**	**27.70**	**72**	P	**P**	**07 30 46.3**	**-1.5**
KKM	**Kota Kinabalu**	**28.07**	**156**	*eP*	**P**	**07 30 49.1**	**-2.1**
comp=Z,27nm,1.1s,mb4.8							
KSM	**Kuching**	**30.98**	**170**	*eP*	**P**	**07 31 16.1**	**-0.9**
comp=Z,5.7nm,0.3s,mb4.9							
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**07 31 29.7**	**+0.6**
comp=Z,3.4nm,0.7s,mb4.3,baz=103,slow=9.0,SNR=4.7							
BRVK	**Borovoye**	**32.47**	**320**	*eP*	**P**	**07 31 30.8**	**+1.0**
ABKAR	**Akbulak array**	**37.50**	**310**	*eP*	**P**	**07 32 13.3**	**0.0**
comp=Z,6.0nm,0.4s,mb4.7							
ARU	**Arti**	**40.02**	**321**	P	**P**	**07 32 35.5**	**+1.2**
ARU	**Arti**	**40.02**	**321**	*eP*	**P**	**07 32 34.9**	**+0.6**
comp=Z,27nm,0.8s,mb5.0							
PETK	**Petropavlovsk-**	**42.89**	**45**	P	**P**	**07 32 57.5**	**-0.4**
comp=Z,6.2nm,0.7s,mb4.5,baz=229,slow=3.6,SNR=8.0							
OBN	**Obninsk**	**52.16**	**317**	*eP*	**P**	**07 34 08.1**	**-1.8**
OBN				pmax	pmax		
comp=Z,16nm,0.8s,mb5.0							
FITZ	**Fitzroy Crossi**	**53.80**	**155**	P	**P**	**07 34 22.1**	**-0.3**
comp=Z,3.2nm,0.9s,mb4.3,baz=9.3,slow=2.6,SNR=3.9							
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**07 34 41.5**	**-0.2**
comp=Z,4.6nm,0.6s,mb4.7,baz=80,slow=7.7,SNR=8.6							
ASF	**Jabal al Asfar**	**56.66**	**290**	P	**P**	**07 34 43.2**	**+0.2**
comp=Z,2.1nm,0.6s,mb4.4,baz=276,slow=4.1,SNR=4.3							
BRTR	**Keskin Array B**	**56.84**	**299**	P	**P**	**07 34 44.2**	**+0.1**
comp=Z,2.0nm,0.8s,mb4.2,baz=95,slow=6.8,SNR=5.4							
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 34 44.5**	**-0.9**
comp=Z,6.2nm,0.6s,mb4.8,baz=92,slow=6.5,SNR=7.1							
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 34 44.5**	**-0.9**
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**07 34 45.7**	**-0.6**
comp=Z,5.2nm,0.7s,mb4.7,baz=67,slow=6.8,SNR=7.2							
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**07 34 45.7**	**-0.6**
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**07 34 59.6**	**+0.2**
comp=Z,13nm,0.6s,mb5.1,baz=340,slow=7.4,SNR=12							
WB2	**Warramunga Arr**	**59.00**	**147**	*eP*	**P**	**07 34 60.0**	**+0.6**
ASAR	**Alice Springs**	**62.06**	**150**	P	**P**	**07 35 20.8**	**+0.6**
comp=Z,4.8nm,0.5s,mb4.9,baz=331,slow=6.7,SNR=11							
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**07 35 32.3**	**-1.3**
comp=Z,2.6nm,0.5s,mb4.5,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**07 35 32.6**	**-1.0**
comp=Z,4.6nm,0.7s,mb4.6,baz=70,slow=6.4,SNR=7.1							
NWAO	**Narrogin (SRO)**	**65.81**	**169**	P	**P**	**07 35 45.0**	**+0.2**
comp=Z,6.0nm,0.7s,mb4.7,baz=338,slow=5.4,SNR=3.1							
BPAW	**Bear Paw Mtn.**	**67.29**	**28**	*eP*	**P**	**07 35 54.2**	**+0.3**
comp=Z,9.8nm,1.0s,mb4.8							
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**07 35 54.1**	**-0.2**
comp=Z,0.9nm,0.6s,mb4.0,baz=57,slow=4.9,SNR=3.7							
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**07 35 54.1**	**-0.2**
GERES				pmax	pmax		
comp=Z,1.0nm,0.6s							
KDAK	**Kodiak Island**	**69.52**	**34**	P	**P**	**07 36 07.3**	**-0.7**
comp=Z,8.0nm,0.6s,mb4.8,baz=320,slow=7.9,SNR=4.2							
INK	**Inuvik**	**70.88**	**20**	P	**P**	**07 36 15.5**	**-0.6**
comp=Z,5.9nm,0.8s,mb4.5,baz=337,slow=5.9,SNR=6.6							
INK	**Inuvik**	**70.88**	**20**	P	**P**	**07 36 15.5**	**-0.6**
CDF	**Champ du Feu**	**71.34**	**316**	*eP*	**P**	**07 36 18.9**	**-0.4**
comp=Z,3.3nm,0.6s,mb4.2							
CDF	**Champ du Feu**	**71.34**	**316**	*eP*	**P**	**07 36 18.9**	**-0.4**
comp=Z,1.6nm,0.6s,mb

comp=Z,2.6nm,0.7s,mb4.2
AKTK Aktyubinsk 38.79 312 P **P 07 35 57.2 0.0**
AKTO Aktyubinsk 38.79 312 P **P 07 35 57.2 0.0**
comp=Z,1.9nm,0.6s,mb4.0,baz=107,slow=14,SNR=4.7
ARU Arti 39.85 321 *e*P **P 07 36 06.3 +0.3**
ARU Arti 39.85 321 *e*P **P 07 36 06.3 +0.3**
PETK Petropavlovsk- 42.72 45 P **P 07 36 29.1 -0.6**
comp=Z,3.8nm,0.7s,mb4.2,baz=235,slow=5.2,SNR=4.9
KIV Kislovodsk 49.22 302 *e*P **P 07 37 21.1 +0.1**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARCES ARCESS Array B 56.35 335 P **P 07 38 12.9 -0.4**
comp=Z,2.6nm,0.6s,mb4.5,baz=77,slow=7.6,SNR=6.8
BRTR Keskin Array B 56.73 299 P **P 07 38 15.8 -0.7**
comp=Z,1.4nm,0.8s,mb4.0,baz=103,slow=6.5,SNR=4.5
FINES FINESS Array B 56.88 326 P **P 07 38 16.2 -1.0**
comp=Z,5.5nm,0.7s,mb4.7,baz=84,slow=5.9,SNR=6.8
AKASG Malin Array Be 57.02 313 P **P 07 38 17.3 -1.2**
comp=Z,1.5nm,0.4s,mb4.4,baz=66,slow=7.6,SNR=3.7
WRAB Tennant Creek 59.18 147 *e*P **P 07 38 35.0 +1.2**
WRAB pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
WRAB Tennant Creek 59.18 147 *e*P **P 07 38 35.0 +1.2**
comp=Z,7.9nm,0.8s,mb4.8
WRA Warramunga Arr 59.18 148 P **P 07 38 34.7 +0.8**
comp=Z,6.7nm,0.9s,mb4.7,baz=338,slow=7.5,SNR=5.1
ASAR Alice Springs 62.26 150 P **P 07 38 55.6 +0.9**
comp=Z,2.6nm,0.8s,mb4.4,baz=332,slow=6.2,SNR=6.6
NB2 NORSAR Subarra 63.94 327 P **P 07 39 03.5 -2.0**
comp=Z,0.2nm,0.6s,mb3.3,baz=74,slow=6.9
NOA NORSAR Array B 63.94 327 P **P 07 39 03.7 -1.8**
comp=Z,2.5nm,0.8s,mb4.3,baz=71,slow=6.6,SNR=4.5
NOA NORSAR Array B 63.94 327 P **P 07 39 03.7 -1.8**
INK Inuvik 70.66 20 P **P 07 39 46.9 -1.0**
comp=Z,1.4nm,0.6s,mb4.1,baz=319,slow=8.7,SNR=3.9
STKA Stephens Creek 72.73 148 P **P 07 40 01.6 +0.8**
comp=Z,0.7nm,0.3s,mb4.0,baz=323,slow=10,SNR=3.4
YKA Yellowknife Ar 80.20 17 P **P 07 40 41.9 -1.0**
comp=Z,0.9nm,0.5s,mb3.9,baz=328,slow=5.2,SNR=6.5

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*IDC **12** 07:31:03.5±0.6, 31°.06N×103°.84E, h0km, mb4.3/22, mb1 4.4/24, mb1mx4.3/32, mbtmp4.3/24, ML4.1/2, Error ellipse: s-maj=21.3km s-min=12.5km az=52.0*
*NEIC **12** 07:31:06.7±0.3, 30°.93N×103°.62E, h10km, mb4.7/16, Error ellipse: s-maj=12.6km s-min=7.4km az=224.0*
*MOS **12** 07:31:07.5±1.8, 30°.95N×103°.76E, h30km, mb4.7/21, Error ellipse: s-maj=11.8km s-min=6.7km az=122.7*
*ISCJB **12** 07:31:07.1±0.7, 30°.84N±0°.03×103°.47E±0°.04, h24km±5km, mb4.4/43, Error ellipse: s-maj=6.3km s-min=5.8km az=163.8*
*BJI **12** 07:31:07.2, 30°.90N×103°.54E, h11km, mB4.8/1, mb4.9/8, ML4.7/9, Ms4.8/1, Ms7 4.9/1*
*SZGRF **12** 07:31:19.2, 32°.97N×104°.03E, h33km, mb4.6, Sichuan, China*

ISC 12 07:31:08.4±0.7, 30°.88N±0°.03×103°.49E±0°.04, h18km±5km, n123, σ1§32/124, mb4.4/43, 5C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**81**	Pg	**Pg**	**07 31 13.7**	**-0.2**
CD2				Sg	**Sg**	**07 31 18.9**	**+1.3**
CD2				smax			
	comp=N,246μm,1.0s						
ENH	**Enshi**	**5.21**	**95**	*e*Pn	**Pn**	**07 32 24.1**	**-1.3**
	comp=N,386nm,0.8s						
LZH	**Lanzhou**	**5.21**	**3**	Sn	**Sb**	**07 33 39.7**	**-1.3**
LZH				Sg	**Sg**	**07 33 54.9**	**-0.6**
LZH				smax			
	comp=N,1μm,0.5s						
LZH				smax			
	comp=E,2μm,0.7s						
GYA	**Guiyang**	**5.21**	**147**	Pg	**Pg**	**07 32 43.2**	**-5.0**
GYA				Sg	**Sg**	**07 33 48.1**	**-7.6**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,3μm,1.0s						
KMI	**Kunming**	**5.77**	**187**	Pn	**Pn**	**07 32 34.6**	**+1.5**
KMI				Sn	**Sn**	**07 33 40.4**	**+1.6**
KMI				smax			
	comp=N,580nm,0.8s						
KMI				smax			
	comp=E,720nm,0.8s						
LSA	**Lhasa**	**10.73**	**267**	*e*P	**Pn**	**07 33 43.7**	**+2.5**
LSA				pmax	pmax		
	comp=Z,69nm,1.3s						
LSA	**Lhasa**	**10.73**	**267**	*e*Pn	**Pn**	**07 33 43.7**	**+2.5**
	comp=Z,69nm,1.3s						
CHTO	**Chiang Mai**	**12.70**	**200**	P	**Pn**	**07 34 14.4**	**+6.3**
CHTO				pmax	pmax		
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**12.70**	**200**	Pn	**Pn**	**07 34 14.4**	**+6.4**
	comp=Z,20nm,0.8s						
CM31	**Chiang Mai Arr**	**13.03**	**199**	*e*Pn	**Pn**	**07 34 21.0**	**+8.3**
	comp=Z,12nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.03**	**199**	Pn	**Pn**	**07 34 14.5**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=13,slow=12,SNR=4.5						
TAPN	**Taplejung**	**14.23**	**260**	*e*P	**Pn**	**07 34 28.9**	**-0.1**
	comp=Z,160nm,1.3s						
ODAN	**Odare**	**14.66**	**258**	*e*P	**Pn**	**07 34 33.3**	**-1.6**
RAMN	**Ramite**	**15.30**	**259**	*e*P	**Pn**	**07 34 41.3**	**-2.1**
GUN	**Gumba**	**15.63**	**264**	*e*P	**Pn**	**07 34 46.3**	**-1.5**
	comp=Z,249nm,1.1s						
PKI	**Pulchoki**	**16.12**	**263**	*e*P	**Pn**	**07 34 52.5**	**-1.6**
	comp=Z,56nm,0.5s						
PKIN	**Phulchoki**	**16.13**	**263**	*e*P	**Pn**	**07 34 52.8**	**-1.4**
KKN	**Kakani**	**16.18**	**264**	*e*P	**Pn**	**07 34 53.1**	**-1.7**
	comp=Z,96nm,0.7s						
DMN	**Daman**	**16.37**	**263**	*e*P	**Pn**	**07 34 55.5**	**-1.8**
	comp=Z,124nm,1.0s						
SSLB	**Suanglung**	**17.04**	**110**	*e*Pn	**Pn**	**07 35 09.6**	**+3.9**
	comp=Z,138nm,1.3s						
SONM	**Songino Array**	**17.08**	**7**	Pn	**Pn**	**07 34 59.8**	**-6.3**
	comp=Z,0.5nm,0.3s,baz=182,slow=19,SNR=2.5						
PTH	**Pithoragarh**	**20.15**	**272**	*ex*	**P**	**07 35 43.2**	**+1.5**
PTH				*es*	**S**	**07 39 21.6**	**-5.7**
KSRS	**Korea Array**	**21.23**	**65**	P	**P**	**07 35 47.7**	**-5.5**
	comp=Z,4.4nm,0.6s,mb4.0,baz=262,slow=10,SNR=8.0						
KSRS	**Korea Array**	**21.23**	**65**	P	**P**	**07 35 47.7**	**-5.5**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
CN2	**Changchun**	**21.63**	**47**	*e*P	**P**	**07 35 58.4**	**+0.9**
CN2				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
MK31	**Makanchi Array**	**22.81**	**320**	*e*P	**P**	**07 36 13.1**	**+3.0**
MKAR	**Makanchi Array**	**22.81**	**320**	P	**P**	**07 36 10.1**	**+0.1**
	comp=Z,3.3nm,0.8s,mb3.8,baz=115,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**22.81**	**320**	*ce*P	**P**	**07 36 14.8**	**+4.7**
MKAR				pmax	pmax		
	comp=Z,11nm,1.0s						
ULHL	**Ulahol**	**24.55**	**305**	P	**P**	**07 36 29.2**	**+2.3**
	SNR=8.4						
KZA	**Kyzart**	**25.20**	**304**	P	**P**	**07 36 35.3**	**+2.4**
	SNR=12						
TKM2	**Tokmak 2**	**25.22**	**306**	*e*P	**P**	**07 36 34.9**	**+1.9**
TKM2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**25.22**	**306**	*e*P	**P**	**07 36 34.9**	**+1.8**
	comp=Z,12nm,1.0s,mb4.4						
UCH	**Uchtor**	**25.77**	**304**	P	**P**	**07 36 40.7**	**+2.7**
	SNR=5.3						
AAK	**Ala-Archa**	**25.90**	**305**	P	**P**	**07 36 39.0**	**-0.2**
	comp=Z,7.0nm,0.9s,mb4.2,baz=135,slow=10,SNR=4.9						
AAK	**Ala-Archa**	**25.90**	**305**↑	*e*P	**P**	**07 36 40.6**	**+1.4**
AAK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.2						
AAK	**Ala-Archa**	**25.90**	**305**	*e*P	**P**	**07 36 42.5**	**+3.3**
	comp=Z,44nm,1.6s,mb4.7						
AML	**Almayashu**	**26.32**	**304**	P	**P**	**07 36 45.3**	**+2.3**
	SNR=6.9						
AML	**Almayashu**	**26.32**	**304**	*e*P	**P**	**07 36 45.4**	**+2.4**
	comp=Z,15nm,1.1s,mb4.4						
EKS2	**Erkin-Say**	**26.41**	**305**	P	**P**	**07 36 45.9**	**+2.0**
	SNR=6.0						
EKS2	**Erkin-Say**	**26.41**	**305**	*e*P	**P**	**07 36 45.8**	**+1.9**
	comp=Z,12nm,0.9s,mb4.4						
ZAA0	**Zalesovo Array**	**26.70**	**335**	*e*P	**P**	**07 36 46.8**	**+0.5**
ZALV	**Zalesovo Beam**	**26.70**	**335**	P	**P**	**07 36 43.9**	**-2.4**
	comp=Z,3.7nm,0.5s,mb4.2,baz=138,slow=9.3,SNR=4.3						
KURK	**Kurchatov**	**27.12**	**324**	P	**P**	**07 36 46.9**	**-3.2**
	comp=Z,5.4nm,0.7s,mb4.2,baz=129,slow=9.4,SNR=8.9						
KURK	**Kurchatov**	**27.12**	**324**↑	*e*P	**P**	**07 36 50.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.3						
KBL	**Kabul**	**29.13**	**286**	*e*P	**P**	**07 37 09.0**	**+0.7**
KBL				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
KBL	**Kabul**	**29.13**	**286**	*e*P	**P**	**07 37 09.0**	**+0.7**
	comp=Z,14nm,0.9s,mb4.7						
BVAR	**Borovoye Array**	**32.65**	**322**	P	**P**	**07 37 36.1**	**-2.9**
	comp=Z,1.1nm,0.6s,mb4.0,baz=115,slow=9.7,SNR=3.1						
BVAR				PcP	PcP	07 40 24.9	+0.2
	comp=Z,1.9nm,0.6s,baz=155,slow=4.8,SNR=4.4						
BRVK	**Borovoye**	**32.72**	**322**	*e*P	**P**	**07 37 40.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
ABKAR	**Akbulak array**	**37.43**	**312**	*e*P	**P**	**07 38 20.7**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.1						
ARU	**Arti**	**40.29**	**323**	*d i*P	**P**	**07 38 44.6**	**+0.4**
ARU						07 40 15.5	
ARU				S	**S**	**07 44 51.6**	**+1.0**
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
GNI	**Garni**	**47.94**	**298**	*e*P	**P**	**07 39 47.0**	**+1.2**
GNI				pmax	pmax		
	comp=Z,16nm,1.3s						
ZEI	**Tsey**	**48.24**	**302**	*e*P	**P**	**07 39 46.6**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
KIV	**Kislovodsk**	**49.00**	**303**	*e*P	**P**	**07 39 54.8**	**+0.9**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
BILL	**Bilibino**	**51.61**	**25**	*e*P	**P**	**07 40 11.9**	**-1.3**
BILL				*e*		07 41 25.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
OBN	**Obninsk**	**52.30**	**318**↑	*e*P	**P**	**07 40 18.6**	**0.0**
OBN				*e*PP	pP	07 40 29.2	+4.8
OBN				*e*		07 41 29.1	
OBN				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.15**	**153**	*e*P	**P**	**07 40 23.4**	**-1.8**
	comp=Z,11nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.15**	**153**	P	**P**	**07 40 23.4**	**-1.9**
	comp=Z,3.4nm,0.8s,mb4.3,baz=123,slow=7.7,SNR=3.3						
JOF	**Joensuu**	**54.94**	**328**	*e*P	**P**	**07 40 37.2**	**-0.6**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
JOF	**Joensuu**	**54.94**	**328**	*e*p	**P**	**07 40 37.2**	**-0.6**
	comp=Z,7.1nm,0.8s,mb4.8						
ASF	**Jabal al Asfar**	**55.93**	**290**	P	**P**	**07 40 44.4**	**-1.0**
	comp=Z,3.4nm,0.7s,mb4.5,baz=259,slow=1.9,SNR=5.7						
BR131	**Keskin Array S**	**56.40**	**300**	*e*P	**P**	**07 40 48.7**	**+0.1**
	comp=Z,3.3nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**56.40**	**300**	P	**P**	**07 40 48.4**	**-0.3**
	comp=Z,3.9nm,1.0s,mb4.4,baz=90,slow=7.4,SNR=7.5						
BRTR	**Keskin Array B**	**56.40**	**300**	*ce*P	**P**	**07 40 48.7**	**0.0**
BRTR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**07 40 53.1**	**-0.8**
	comp=Z,1.3nm,0.4s,mb4.3,baz=73,slow=6.0,SNR=4.7						
ARCES	**ARCESS Array B**	**57.25**	**336**	P	**P**	**07 40 53.3**	**-1.0**
	comp=Z,4.8nm,0.8s,mb4.6,baz=76,slow=8.4,SNR=4.0						
FINES	**FINESS Array B**	**57.46**	**326**	P	**P**	**07 40 53.4**	**-2.5**
	comp=Z,1.9nm,0.6s,mb4.3,baz=104,slow=8.0,SNR=4.5						
EIL	**Elat**	**58.31**	**288**	P	**P**	**07 41 02.0**	**-0.3**
	comp=Z,5.8nm,0.9s,mb4.6,baz=212,slow=1.5,SNR=4.2						
WRAB	**Tennant Creek**	**58.58**	**146**	*e*P	**P**	**07 41 02.8**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,1μm,2.8s						
WRAB	**Tennant Creek**	**58.58**	**146**	*e*P	**P**	**07 41 02.8**	**-1.3**
	comp=Z,1μm,2.8s						
WRA	**Warramunga Arr**	**58.58**	**146**	P	**P**	**07 41 02.6**	**-1.6**
	comp=Z,12nm,0.9s,mb5.0,baz=333,slow=7.6,SNR=9.8						
WB2	**Warramunga Arr**	**58.59**	**146**	*e*P	**P**	**07 41 02.8**	**-1.4**
COEN	**Coen**	**58.67**	**133**	*e*P	**P**	**07 41 06.5**	**+1.7**
	comp=Z,188nm,1.1s						
ASAR	**Alice Springs**	**61.57**	**148**	P	**P**	**07 41 23.1**	**-1.5**
	comp=Z,3.0nm,0.8s,mb4.5,baz=327,slow=6.0,SNR=8.4						
NB2	**NORSAR Subarra**	**64.57**	**327**	P	**P**	**07 41 43.0**	**-1.1**
	comp=Z,2.6nm,0.6s,mb4.4,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.57**	**327**	P	**P**	**07 41 43.4**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.3,baz=72,slow=6.7,SNR=5.4						
CTA	**Charters Tower**	**65.23**	**135**	*e*P	**P**	**07 41 49.4**	**+0.5**
	comp=Z,7.6nm,1.1s,mb4.6						
FORT	**Forrest**	**65.61**	**157**	*e*P	**P**	**07 41 47.6**	**-3.5**
	comp=Z,11nm,0.7s,mb5.0						
BRG	**Berggiesshubel**	**66.46**	**316**	*e*P	**P**	**07 41 58.9**	**+2.4**
	comp=Z,9.9nm,1.4s,mb4.6						
BRG	**Berggiesshubel**	**66.46**	**316**	*e*P	**P**	**07 41 58.9**	**+2.4**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
CLL	**Collm**	**66.86**	**317**	*e*P	**P**	**07 41 59.0**	**-0.1**
CLL	**Collm**	**66.86**	**317**	*e*P	**P**	**07 41 59.0**	**-0.1**
GEC2	**GERESS Array S**	**67.33**	**314**	*e*P	**P**	**07 42 03.3**	**+1.2**
GEC2				pmax	pmax		
	comp=Z,1μm,1.2s						
GEC2	**GERESS Array S**	**67.33**	**314**	*e*P	**P**	**07 42 03.3**	**+1.3**
	comp=Z,1μm,1.2s						
GERES	**GERESS Array B**	**67.33**	**314**	P	**P**	**07 42 01.2**	**-0.9**
	comp=Z,0.4nm,0.3s,mb3.9,baz=72,slow=6.3,SNR=3.8						
COLD	**Coldfoot**	**67.89**	**24**	*e*P	**P**	**07 42 06.3**	**+1.0**
	comp=Z,6.5nm,0.9s,mb4.7						
GRA1	**Grafenberg Arr**	**68.52**	**316**	*e*P	**P**	**07 42 10.1**	**+0.5**
	comp=Z,5.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.52**	**316**	*e*P	**P**	**07 42 10.1**	**+0.5**
	comp=Z,5.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.52**	**316**	*e*P	**P**	**07 42 10.1**	**+0.5**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.52**	**316**	*e*P	**P**	**07 42 10.1**	**+0.5**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
KMBO	**Kilima Mbogo**	**70.34**	**256**	P	**P**	**07 42 19.9**	**-1.5**
	comp=Z,2.7nm,0.8s,mb4.2,baz=39,slow=11,SNR=5.1						
CDF	**Champ du Feu**	**71.41**	**316**	*e*P	**P**	**07 42 27.3**	**-0.1**
WLF	**Walferdange**	**71.53**	**317**	P	**P**	**07 42 28.2**	**+0.2**
BCLA	**Clavier**	**71.69**	**318**	P	**P**	**07 42 28.6**	**-0.4**
HINF	**Hinteralfeld**	**71.93**	**315**	*e*P	**P**	**07 42 30.3**	**-0.2**
STKA	**Stephens Creek**	**72.11**	**147**	*e*P	**P**	**07 42 29.4**	**-2.2**
	comp=Z,3.0nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**72.11**	**147**	P	**P**	**07 42 28.6**	**-3.0**
	comp=Z,2.1nm,0.5s,mb4.3,baz=341,slow=7.3,SNR=6.6						
STKA	**Stephens Creek**	**72.11**	**147**	*e*P	**P**	**07 42 29.9**	**-1.7**
	comp=Z,0.7nm,0.6s,mb3.8						
INK	**Inuvik**	**72.55**	**19**	P	**P**	**07 42 28.9**	**-4.9**
	comp=Z,1.3nm,0.6s,mb4.1,baz=323,slow=4.3,SNR=3.7						
INK	**Inuvik**	**72.55**	**19**	P	**P**	**07 42 28.9**	**-4.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**72.55**	**19**	*e*P	**P**	**07 42 34.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	**Inuvik**	**72.55**	**19**	*e*P	**P**	**07 42 34.2**	**+0.4**
	comp=Z,7.5nm,1.0s,mb4.6						
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**07 42 37.8**	**+0.8**
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 42 37.8**	**+0.7**
	comp=Z,21nm,0.9s,mb4.8						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 42 37.8**	**+0.7**
LPL				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 42 37.8**	**+0.7**
	comp=Z,11nm,0.9s,mb4.8						
RES	**Resolute Bay**	**74.01**	**5**	*e*P	**P**	**07 42 43.0**	**+0.6**
RES				pmax	pmax		
	comp=Z,38nm,2.1s,mb5.0						
RES	**Resolute Bay**	**74.01**	**5**	*e*P	**P**	**07 42 43.0**	**+0.6**
	comp=Z,38nm,2.1s,mb5.0						
SMF	**Signal de Mont**	**74.29**	**315**	*e*P	**P**	**07 42 44.3**	**-0.2**
AVF	**Avril sur Loir**	**74.51**	**315**	*e*P	**P**	**07 42 45.6**	**-0.2**
	comp=Z,8.7nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**74.51**	**315**	*e*P	**P**	**07 42 45.6**	**-0.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**74.51**	**315**	*e*P	**P**	**07 42 45.6**	**-0.2**
	comp=Z,4.3nm,0.8s,mb4.4						
VIVF	**Saint-Julien-l**	**74.62**	**313**	*e*P	**P**	**07 42 46.5**	**+0.1**
TCF	**Toulx Ste Croi**	**75.45**	**315**	*e*P	**P**	**07 42 51.3**	**+0.1**
CAF	**Calviac**	**76.21**	**314**	*e*P	**P**	**07 42 56.2**	**+0.7**
TOO	**Toolangi**	**78.60**	**147**	*e*P	**P**	**07 43 09.7**	**+0.9**
YKA	**Yellowknife Ar**	**82.06**	**17**	P	**P**	**07 43 22.9**	**-4.3**
	comp=Z,1.1nm,0.6s,mb3.9,baz=330,slow=5.6,SNR=4.8						
EDM	**Edmonton**	**90.33**	**21**	*e*P	**P**	**07 44 09.2**	**+1.1**
TORD	**Torodi Ar. Bea**	**93.20**	**287**	P	**P**	**07 44 22.2**	**+0.1**
	comp=Z,1.5nm,1.0s,mb4.4,baz=61,slow=3.0,SNR=3.7						
SRU	**San Rafael**	**103.51**	**27**	*e*P	Pdif	07 45 08.8	+0.8
TXAR	**Lajitas Array**	**114.78**	**26**	PKP	PKiKP	07 49 48.1	-0.1
	comp=Z,0.3nm,0.9s,baz=73,slow=6.7,SNR=2.7						
ROSC	**El Rosal**	**144.41**	**356**	PKP	PKPdf	07 50 41.1	-3.1
	comp=Z,4.9nm,0.6s,baz=65,slow=4.2,SNR=5.7						
ROSC	**El Rosal**	**144.41**	**356**	*e*PKPdf	PKPdf	07 50 44.1	-0.2
LPAZ	**La Paz**	**163.59**	**330**	*e*PKIKP	PKPdf	07 51 15.7	+5.0

IDC 12 07:33:23.1±1.2, 31°.23N×103°.93E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.0/26, mbtmp4.2/11, Error ellipse: s-maj=37.1km s-min=21.9km az=39.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.74**	**66**	P	P	07 38 05.9	+0.7
	5.5nm,0.7s,baz=253,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**22.78**	**319**	P	P	07 38 28.7	+1.6
	2.2nm,0.7s,baz=119,slow=8.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	P	07 39 03.0	+0.7
	3.1nm,0.3s,baz=132,slow=9.9,SNR=5.2						
KURK	**Kurchatov**	**27.05**	**323**	P	P	07 39 06.9	-0.1
	2.3nm,0.7s,baz=124,slow=10.0,SNR=3.6						
ARCES	**ARCESS Array B**	**57.08**	**336**	P	P	07 43 10.8	+0.2
	2.5nm,0.7s,baz=87,slow=7.2,SNR=6.0						
FINES	**FINESS Array B**	**57.38**	**326**	P	P	07 43 11.9	-0.9
	1.1nm,0.4s,baz=92,slow=7.4,SNR=2.1						
WRA	**Warramunga Arr**	**58.66**	**146**	P	P	07 43 22.0	-0.4
	4.9nm,0.6s,baz=338,slow=7.9,SNR=4.8						
NOA	**NORSAR Array B**	**64.47**	**327**	P	P	07 43 59.4	-1.7
	1.0nm,0.5s,baz=72,slow=6.6,SNR=2.9						
INK	**Inuvik**	**72.09**	**19**	P	P	07 44 48.5	-0.2
	1.8nm,0.7s,baz=360,slow=4.4,SNR=3.7						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	P	07 45 42.9	+0.4
	1.1nm,0.6s,baz=329,slow=5.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**93.45**	**287**	P	P	07 46 42.8	+1.8
	0.4nm,0.8s,baz=67,slow=4.8,SNR=2.1						

IDC 12 07:33:34.7±7.0, 31°.32N×104°.05E, h0km, mb4.3/6, mb1 4.4/6, mb1mx3.9/25, mbtmp4.3/6, Error ellipse: s-maj=179.6km s-min=49.8km az=11.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	P	07 39 13.5	-0.1
	2.6nm,0.4s,baz=130,slow=10,SNR=3.5						
ARCES	**ARCESS Array B**	**57.04**	**336**	P	P	07 43 21.9	0.0
	1.0nm,0.4s,baz=90,slow=8.1,SNR=4.0						
FINES	**FINESS Array B**	**57.36**	**326**	P	P	07 43 24.9	+0.5
	2.4nm,0.4s,baz=91,slow=6.8,SNR=4.1						
NOA	**NORSAR Array B**	**64.45**	**327**	P	P	07 44 12.3	-0.3
	1.6nm,0.7s,baz=70,slow=6.5,SNR=3.4						
INK	**Inuvik**	**71.97**	**19**	P	P	07 44 59.8	+0.1
	2.6nm,0.8s,baz=330,slow=5.8,SNR=3.1						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	P	07 45 53.6	0.0
	1.0nm,0.8s,baz=329,slow=5.1,SNR=2.9						

IDC 12 07:34:06.6±1.2, 31°.55N×104°.83E, h0km, mb4.2/6, mb1 4.4/6, mb1mx3.9/26, mbtmp4.2/6, Error ellipse: s-maj=58.8km s-min=24.1km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.06**	**318**	P	P	07 39 13.4	-0.1
	3.4nm,0.8s,baz=119,slow=11,SNR=3.1						
KURK	**Kurchatov**	**27.27**	**322**	P	P	07 39 52.5	+0.1
	4.7nm,0.8s,baz=127,slow=8.8,SNR=3.8						
BRTR	**Keskin Array B**	**57.06**	**300**	P	P	07 43 54.8	+0.3
	1.2nm,0.8s,baz=98,slow=3.2,SNR=3.5						
FINES	**FINESS Array B**	**57.55**	**326**	P	P	07 43 57.1	-0.4
	1.2nm,0.4s,baz=100,slow=7.9,SNR=3.9						
WRA	**Warramunga Arr**	**58.50**	**147**	P	P	07 44 04.6	0.0
	4.5nm,0.5s,baz=339,slow=7.9,SNR=6.2						
YKA	**Yellowknife Ar**	**81.09**	**17**	P	P	07 46 23.5	+0.2
	1.1nm,0.6s,baz=329,slow=5.2,SNR=3.9						

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*IDC **12** 07:34:40.2±0.4, 31°.23N×103°.77E, h0km, mb4.6/29, mb1 4.7/31, mb1mx4.7/34, mbtmp4.6/31, ML4.2/2, Error ellipse: s-maj=14.4km s-min=10.1km az=58.0*
*ISCJB **12** 07:34:42.9±0.6, 31°.22N±0°.02×103°.61E±0°.03, h26km±4km, mb4.9/109, Error ellipse: s-maj=4.0km s-

LSA pmax pmax
comp=Z,21nm,0.6s
LSA Lhasa 10.86 265 Pn **Pn 07 37 21.4 +3.1**
comp=Z,21nm,0.6s
NJ2 Nanjing 13.02 82 *e*P **Pn 07 37 47.1 -0.6**
NJ2 pP 07 37 54.0
NJ2 PP 07 37 58.2
NJ2 sP 07 37 59.9
NJ2 S **Sn 07 40 11.2 -1.1**
NJ2 sS 07 40 24.6
NJ2 pmax pmax
comp=Z,70nm,0.8s
NJ2 pmax pmax
comp=Z,220nm,3.5s
NJ2 Nanjing 13.02 82 *e*P **Pn 07 37 53.8 +6.1**
NJ2 pP 07 38 01.1
NJ2 PP 07 38 04.3
NJ2 sP 07 38 06.4
NJ2 S **Sn 07 40 17.3 +5.0**
NJ2 sS 07 40 28.2
NJ2 pmax pmax
comp=Z,110nm,1.1s
NJ2 pmax pmax
comp=Z,60nm,3.8s
NJ2 LR LR
comp=N,47µm,13.2s
NJ2 LR LR
comp=E,13µm,7.1s
NJ2 LR LR
comp=Z,48µm,11.2s
CHTO Chiang Mai 13.07 200 *e*P **Pn 07 37 50.9 +2.3**
QIZ Qiongzhong 13.40 154 P **Pn 07 37 53.0 -0.1**
QIZ S **Sn 07 40 18.8 -3.0**
QIZ pmax pmax
comp=Z,62nm,1.8s
QIZ LR LR
comp=N,41µm,15.1s
QIZ LR LR
comp=E,20µm,17.3s
QIZ LR LR
comp=Z,42µm,12.9s
CM31 Chiang Mai Arr 13.41 199 *e*Pn **Pn 07 37 54.8 +1.6**
CMAR Chiang Mai Arr 13.41 199 Pn **Pn 07 37 54.6 +1.4**
comp=Z,0.4nm,0.3s,baz=9.1,slow=12,SNR=5.2
CMAR Lg 07 41 50.6
comp=Z,1.5nm,0.3s,baz=12,slow=8.6,SNR=4.3
BJT Baijiatuan 13.44 46 *e*P **Pn 07 37 52.4 -1.1**
BJT pmax pmax
comp=Z,111nm,1.0s
BJT Baijiatuan 13.44 46 *e*Pn **Pn 07 37 52.4 -1.1**
comp=Z,112nm,1.0s
BJI Beijing 13.46 46 P **Pn 07 37 52.1 -1.6**
BJI Beijing 13.46 46 P **Pn 07 37 51.9 -1.8**
TAPN Taplejung 14.40 258 *e*P **Pn 07 38 07.0 +0.3**
comp=Z,193nm,1.1s
QZH Quanzhou 14.63 112 *e*P **Pn 07 38 14.0 +4.2**
QZH S **Sn 07 40 56.5 +4.8**
ODAN Odare 14.84 257 *e*P **Pn 07 38 12.1 -0.5**
comp=Z,144nm,1.1s
RAMN Ramite 15.47 258 *e*P **Pn 07 38 19.8 -1.2**
GUN Gumba 15.78 262 *e*P **Pn 07 38 23.3 -1.7**
comp=Z,281nm,1.1s
PKI Pulchoki 16.27 262 *e*P **Pn 07 38 30.5 -0.9**
comp=Z,155nm,0.9s
PKIN Phulchoki 16.28 262 *e*P **Pn 07 38 30.3 -1.2**
comp=Z,244nm,0.8s
KKN Kakani 16.32 262 *e*P **Pn 07 38 30.7 -1.3**
comp=Z,188nm,0.9s
DMN Daman 16.52 262 *e*P **Pn 07 38 33.5 -1.0**
comp=Z,280nm,1.0s
DL2 Dalian 16.60 58 *e*P **Pn 07 38 31.3 -4.1**
DL2 pmax pmax
comp=Z,20nm,1.1s
SONM Songino Array 16.71 7 Pn **Pn 07 38 37.3 +0.6**
comp=Z,0.6nm,0.3s,baz=186,slow=9.4,SNR=15
SONM Lg 07 43 34.3
baz=218,slow=33,SNR=2.5
ULN Ulaanbaatar 16.81 8 *e*P **Pn 07 38 37.7 -0.3**
ULN pmax pmax
comp=Z,61nm,1.0s
ULN Ulaanbaatar 16.81 8 *e*Pn **Pn 07 38 37.7 -0.3**
comp=Z,61nm,1.0s
YHNB Yeheng 17.00 108 *e*P **Pn 07 38 41.7 +1.1**
comp=Z,189nm,1.0s
TPUB Ta-pu 17.06 113 *e*P **Pn 07 38 43.2 +1.8**
comp=Z,115nm,1.0s
SSLB Suanglung 17.07 112 *e*P **Pn 07 38 42.0 +0.5**
comp=Z,362nm,0.9s
YULB Yu-li 17.54 112 *e*P **Pn 07 38 48.1 +0.7**
comp=Z,88nm,1.1s
TWG Pinlang 17.66 114 *e*P **Pn 07 38 50.6 +1.8**
comp=Z,173nm,1.3s
WMQ Urumqi 17.76 319 *e*P **Pn 07 38 52.0 +2.0**
WMQ pmax pmax
comp=Z,60nm,1.2s
ZAK Zakamensk 19.12 359 *e*P **Pn 07 39 07.4 +0.9**
ZAK pmax pmax
comp=Z,49nm,0.9s
SNY Shenyang 19.17 51 ⇓P **Pn 07 39 07.1 0.0**
SNY S **Sn 07 42 34.7 -6.9**
SNY pmax pmax
comp=Z,160nm,2.5s
INCN Inchon 19.98 66 *e*Pn **Pn 07 39 18.0 +1.2**
comp=Z,72nm,0.9s
TLY Talaya 20.42 0 Pn **P 07 39 22.1 +2.4**
comp=Z,163nm,1.0s,SNR=5.5
TLY Talaya 20.42 0 *e*P **P 07 39 22.1 +2.4**
TLY pmax pmax
comp=Z,31nm,1.1s
TLY Talaya 20.42 0 *e*P **P 07 39 22.2 +2.4**
comp=Z,142nm,1.7s
MOY Mondy 20.50 355 *e*P **P 07 39 22.8 +2.2**
MOY pmax pmax
comp=Z,252nm,2.3s
KSRS Korea Array 20.98 66 P **P 07 39 25.9 -0.1**
comp=Z,22nm,0.7s,baz=259,slow=10,SNR=14
KSRS Korea Array 20.98 66 P **P 07 39 25.9 -0.1**
KSRS pmax pmax
comp=Z,22nm,0.7s
IRK Irkutsk 20.99 1 *e*P **P 07 39 27.3 +1.4**
IRK pmax pmax
comp=Z,371nm,1.2s
CN2 Changchun 21.31 48 *e*P **P 07 39 34.4 +5.0**
CN2 *es*P sP 07 39 41.0 +5.1
CN2 *e*S **S 07 43 28.3 +2.8**
CN2 pmax pmax
comp=Z,390nm,1.0s,mb5.7
CN2 pmax pmax
comp=Z,760nm,6.0s
HIA Hailar 21.73 29 *e*P **P 07 39 34.8 +0.9**
HIA pmax pmax
comp=Z,79nm,1.0s
HIA Hailar 21.73 29 *e*P **P 07 39 34.8 +0.9**
comp=Z,79nm,1.0s,mb5.1
JOW Kunigami 21.99 95 P **P 07 39 37.0 +0.1**
comp=Z,26nm,0.5s,mb4.9,baz=253,slow=14,SNR=3.3
MK31 Makanchi Array 22.60 319 *e*P **P 07 39 44.3 +1.1**
MKAR Makanchi Array 22.60 319 P **P 07 39 44.9 +1.7**
comp=Z,46nm,1.1s,mb4.8,baz=130,slow=11,SNR=18
NDI New Delhi 22.99 270 *ex* **P 07 39 45.0 -2.5**
TGY Tagaytay City 23.32 133 P **P 07 39 52.4 +1.3**
comp=Z,153nm,0.3s,mb5.8,baz=270,slow=6.5,SNR=4.5
KSH Kashi 23.93 298 P **P 07 40 00.5 +3.8**
KSH *ep*P 07 40 04.5
KSH *es*P sP 07 40 07.5 +4.1
KSH *e*PP 07 40 34.6
KSH *e*PcP PcP 07 43 41.6 +2.6
KSH *e*S **S 07 44 15.4 +2.9**
KSH *es*S sS 07 44 21.5 +1.2
KSH *e*SS 07 45 07.6
KSH *e*ScP ScP 07 47 18.6 +1.8
KSH *e*PcS PcS 07 47 20.6 +2.1
MDJ Mudanjiang 24.34 49 P **P 07 39 58.3 -2.1**
MDJ S **S 07 44 15.7 -3.3**
MDJ sS sS 07 44 21.4 -5.4
MDJ ScP ScP 07 47 17.8 0.0
MDJ PcS PcS 07 47 18.9 -0.5
MDJ pmax pmax
comp=Z,21µm,8.6s
MDJ Mudanjiang 24.34 49 *e*P **P 07 40 02.2 +1.8**
comp=Z,88nm,1.1s,mb5.1
TKM2 Tokmak 2 25.09 306 *e*P **P 07 40 09.2 +2.0**
TKM2 pmax pmax
comp=Z,35nm,1.2s,mb4.8
TKM2 Tokmak 2 25.09 306 *e*P **P 07 40 09.2 +2.0**
comp=Z,35nm,1.2s,mb4.8
AAK Ala-Archa 25.77 304 P **P 07 40 16.8 +3.3**
comp=Z,6.8nm,0.8s,mb4.2,baz=100,slow=11,SNR=3.8
AAK Ala-Archa 25.77 304 *i* P **P 07 40 12.0 -1.5**
AAK pmax pmax
comp=Z,10.0nm,1.4s,mb4.2
AAK Ala-Archa 25.77 304 *e*P **P 07 40 20.4 +6.9**
comp=Z,216nm,2.0s,mb5.3
KTGM Kuala Trenggan 25.78 181 P **P 07 40 13.9 +0.1**
KULM Kulim 25.97 187 P **P 07 40 14.6 -0.8**
KULM Kulim 25.97 187 *e*P **P 07 40 14.7 -0.7**
comp=Z,51nm,1.2s,mb4.9
AML Almayashu 26.21 303 *e*P **P 07 40 20.0 +2.6**
comp=Z,39nm,1.3s,mb4.8
EKS2 Erkin-Say 26.29 304 *e*P **P 07 40 24.0 +5.9**
comp=Z,65nm,1.7s,mb4.9
ZAA0 Zalesovo Array 26.41 335 *e*P **P 07 40 19.7 +0.6**
ZALV Zalesovo Beam 26.41 335 P **P 07 40 19.8 +0.7**
comp=Z,18nm,0.6s,mb4.8,baz=134,slow=8.6,SNR=6.8
ZALV Zalesovo Beam 26.41 335 P **P 07 40 19.8 +0.6**
HYB Hyderabad 26.58 245 *i* P **P 07 40 20.0 -1.0**
IPM Ipoh 26.73 186 P **P 07 40 20.8 -1.5**
KURK Kurchatov 26.88 324 P **P 07 40 24.1 +0.7**
comp=Z,17nm,0.9s,mb4.6,baz=128,slow=9.4,SNR=14
KURK Kurchatov 26.88 324 *e*P **P 07 40 21.8 -1.6**
KURK pmax pmax
comp=Z,39nm,1.2s,mb4.8
KURK Kurchatov 26.88 324 *e*P **P 07 40 24.6 +1.2**
comp=Z,60nm,1.2s,mb5.0
BOD Bodaibo 27.52 12 *e*P **P 07 40 29.6 +0.6**
BOD pmax pmax
comp=Z,13nm,1.4s,mb4.4
NVS Novosibirsk 27.69 334 *e*P **P 07 40 35.5 +4.9**
KKM Kota Kinabalu 27.71 152 P **P 07 40 30.8 -0.4**
KKM Kota Kinabalu 27.71 152 *e*P **P 07 40 30.9 -0.3**
comp=Z,253nm,1.4s,mb5.7
FRIM Kepong 27.92 184 P **P 07 40 33.5 +0.5**
SDKM Sandakan 28.48 151 P **P 07 40 37.7 -0.4**
MAT Matsushiro 29.10 70 P **P 07 40 41.3 -2.1**
MJAR Matsushiro Arr 29.10 70 P **P 07 40 42.6 -0.9**
comp=Z,4.2nm,0.9s,mb4.2,baz=270,slow=10,SNR=7.3
KBL Kabul 29.13 286 *e*P **P 07 40 45.5 +1.9**
KBL pmax pmax
comp=Z,32nm,1.1s,mb5.0
KBL Kabul 29.13 286 *e*P **P 07 40 45.5 +1.9**
comp=Z,32nm,1.1s,mb5.0
BTM Bintulu 29.29 160 P **P 07 40 46.2 +1.0**
MYKOM Kota Tinggi 29.30 180 P **P 07 40 45.5 +0.2**
SBUM Sibu 29.77 162 P **P 07 40 50.2 +0.8**
KSM Kuching 30.28 167 P **P 07 40 54.2 +0.2**
KSM Kuching 30.28 167 *e*P **P 07 40 53.6 -0.3**
comp=Z,13nm,0.6s,mb4.8
BVAR Borovoye Array 32.42 322 P **P 07 41 13.5 +1.0**
comp=Z,1.8nm,0.6s,mb4.1,baz=101,slow=7.5,SNR=2.9
BVAR PcP PcP 07 43 59.2 -0.3
comp=Z,6.8nm,0.8s,baz=132,slow=2.2,SNR=8.2
BRVK Borovoye 32.49 322 *e*P **P 07 41 10.4 -2.7**
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
ASAJ Asahikawa 33.12 56 P **P 07 41 17.2 -1.5**
comp=Z,2.1nm,0.4s,mb4.5,baz=218,slow=19,SNR=3.0
ASAJ Asahikawa 33.12 56 P **P 07 41 17.2 -1.5**
ASAJ pmax pmax
comp=Z,2.0nm,0.4s
YSS Yuzh-Sakhalins 33.80 51 *e*P **P 07 41 24.2 -0.4**
ABKAR Abkulak array 37.26 312 *e*P **P 07 41 55.5 +1.1**
comp=Z,6.9nm,0.8s,mb4.5
ABKT Ailbek 37.74 293 P **P 07 42 00.1 +1.5**
comp=Z,163nm,0.7s,mb5.9,SNR=5.7
AKTK Aktyubinsk 38.73 313 P **P 07 42 07.8 +1.1**
AKTO Aktyubinsk 38.73 313 P **P 07 42 07.8 +1.1**
comp=Z,2.4nm,0.8s,mb4.0,baz=98,slow=7.1,SNR=3.1
KAPI Kappang 39.21 154 P **P 07 42 09.5 -1.5**
comp=Z,69nm,1.0s,mb5.3,baz=332,slow=16,SNR=17
ARU Arti 40.06 322 *d i* P **P 07 42 15.2 -2.5**
ARU S **S 07 48 20.0 -2.9**
ARU SS SS 07 51 10.9 -9.2
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.6
ARU Arti 40.06 322 *e*P **P 07 42 23.1 +5.3**
comp=Z,54nm,1.3s,mb5.1
TIXI Tiksi 42.70 11 *e*P **P 07 42 37.5 -1.7**
TIXI pmax pmax
comp=Z,48nm,1.5s,mb5.0
SEY Seymchan 44.18 30 *e*P **P 07 42 52.8 +1.6**
PETK Petropavlovsk- 44.39 44 P **P 07 42 50.1 -2.9**
comp=Z,6.7nm,1.0s,mb4.3,baz=211,slow=5.0,SNR=3.7
KBD Kabd 47.93 283 *e*P **P 07 43 21.5 +0.2**
KBD AMb AMB 07 43 26.3
comp=Z,36nm,1.5s,mb5.2
MIB Mutribah 48.04 284 *e*P **P 07 43 22.0 -0.1**
MIB AMb AMB 07 43 23.0
comp=Z,84nm,1.0s,mb5.7
RDF Al-Radifah 48.12 282 *e*P **P 07 43 23.0 +0.3**
RDF AMb AMB 07 43 36.0
comp=Z,116nm,1.5s,mb5.7
ZEI Tsey 48.14 301 *e*P **P 07 43 22.7 0.0**
ZEI pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KIV Kislovodsk 48.88 303 *e*P **P 07 43 27.7 -0.7**
KIV pmax pmax
comp=Z,29nm,1.2s,mb5.2
KIV Kislovodsk 48.88 303 *e*P **P 07 43 30.2 +1.8**
comp=Z,21nm,0.8s,mb5.2
BILL Bilibino 51.23 25 *i* P **P 07 43 47.9 +2.0**
BILL *e**PP pP 07 43 55.7 +4.9
BILL *e* 07 45 43.4
BILL pmax pmax
comp=Z,21nm,1.2s,mb4.9
BILL Bilibino 51.23 25 *e*P **P 07 43 48.3 +2.4**
comp=Z,17nm,0.9s,mb5.0
MOS Moscow 51.48 319 *e*P **P 07 43 45.8 -2.1**
MOS *e* 07 45 43.6
MOS *e* 07 50 57.3
KAKA Kakadu 51.73 143 *e*P **P 07 43 47.8 -2.4**
comp=Z,46nm,0.9s,mb5.4
KAKA Kakadu 51.73 143 *e*P **P 07 43 47.8 -2.4**
comp=Z,247nm,1.2s,mb6.0
OBN Obninsk 52.09 318 *i* P **P 07 43 52.2 -0.3**
OBN *e**PP pP 07 44 02.3 +4.9
OBN *e* 07 45 50.3
OBN pmax pmax
comp=Z,13nm,1.3s,mb4.7
FITZ Fitzroy Crossi 53.43 154 *e*P **P 07 44 01.6 -1.1**
comp=Z,40nm,1.0s,mb5.3
FITZ Fitzroy Crossi 53.43 154 P **P 07 44 01.6 -1.2**
comp=Z,22nm,0.9s,mb5.1,baz=345,slow=6.7,SNR=18
APA Apatity 53.99 333⇑ *e*P **P 07 44 01.8 -4.5**
APA MLR MLR
comp=Z,37µm,15.0s
MBWA Marble Bar 54.35 161 *e*P **P 07 44 08.9 -0.5**
comp=Z,40nm,0.8s,mb5.4
JOF Joensuu 54.68 328 *e*P **P 07 44 15.4 +4.0**
JOF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
JOF Joensuu 54.68 328 *ep* **P 07 44 15.4 +4.0**
comp=Z,8.7nm,0.8s,mb4.8
ASF Jabal al Asfar 55.90 290 P **P 07 44 21.7 +1.0**
comp=Z,7.4nm,0.9s,mb4.7,baz=311,slow=4.0,SNR=9.1
BRTR Keskin Array B 56.30 299 P **P 07 44 23.6 +0.1**
comp=Z,2.1nm,0.9s,mb4.2,baz=88,slow=6.3,SNR=5.6
KEV Kevo 56.43 336 *e*P **P 07 44 23.2 -0.7**
KEV pmax pmax
comp=Z,17nm,0.7s,mb5.2
KEV Kevo 56.43 336 *ep* **P 07 44 23.2 -0.7**
comp=Z,17nm,0.7s,mb5.2
MMAI Mount Meron Ar 56.83 291 P **P 07 44 27.9 +0.6**
comp=Z,0.5nm,0.4s,mb3.9,baz=95,slow=6.3,SNR=5.3
ARCES ARCESS Array B 56.96 336 P **P 07 44 27.1 -0.6**
comp=Z,5.7nm,0.8s,mb4.6,baz=87,slow=6.2,SNR=4.9
ARCES PcP PcP 07 45 22.2 -0.5
comp=Z,5.4nm,0.8s,baz=72,slow=4.0,SNR=4.4
AKASG Malin Array Be 56.98 313 P **P 07 44 27.2 -0.8**
comp=Z,1.2nm,0.4s,mb4.2,baz=70,slow=6.7,SNR=4.9
KAF Kangasniemi 57.04 327 *e*P **P 07 44 28.7 +0.4**
KAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KAF Kangasniemi 57.04 327 *ep* **P 07 44 28.7 +0.4**
comp=Z,7.7nm,0.8s,mb4.8
FINES FINESS Array B 57.22 326 P **P 07 44 29.2 -0.4**
comp=Z,2.5nm,0.6s,mb4.4,baz=93,slow=6.1,SNR=3.9
FINES FINESS Array B 57.22 326 P **P 07 44 29.2 -0.4**
EIL Elat 58.30 288 P **P 07 44 37.1 -0.6**
comp=Z,11nm,0.8s,mb4.9,baz=29,slow=4.3,SNR=7.2
WRAB Tennant Creek 58.82 146 *e*P **P 07 44 40.9 -0.4**
WRAB pmax pmax
comp=Z,255nm,1.2s,mb6.1
WRAB Tennant Creek 58.82 146 *e*P **P 07 44 40.9 -0.3**
comp=Z,256nm,1.2s,mb6.1
WRA Warramunga Arr 58.83 146 P **P 07 44 40.7 -0.6**
comp=Z,82nm,0.8s,mb5.8,baz=334,slow=7.6,SNR=58
WB2 Warramunga Arr 58.83 146 *e*P **P 07 44 40.9 -0.5**
COEN Coen 58.85 134 *e*P **P 07 44 41.4 -0.1**
comp=Z,557nm,1.3s
SPITS Spitsbergen Ar 59.10 346 P **P 07 44 42.0 -0.5**
comp=Z,4.5nm,0.8s,mb4.5,baz=134,slow=5.6,SNR=2.5
BUR08 Bucovina Ar. S 60.22 310 *e*P **P 07 44 52.1 +1.4**
KWP Kalwaria Pacla 61.30 313 *e*P **P 07 44 59.2 +1.2**
KWP pmax pmax
comp=Z,33nm,0.5s,mb5.7
KWP Kalwaria Pacla 61.30 313 *e*P **P 07 44 59.2 +1.2**
comp=Z,33nm,0.5s,mb5.7
ASAR Alice Springs 61.83 148 P **P 07 45 01.4 -0.4**
comp=Z,29nm,1.0s,mb5.4,baz=332,slow=6.5,SNR=36
STHS Stebnicka Huta 62.28 313 *e*P **P 07 45 04.8 +0.2**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
STHS Stebnicka Huta 62.28 313 *e*P **P 07 45 04.8 +0.2**
comp=Z,2.5nm,1.1s,mb4.3
STHS Stebnicka Huta 62.28 313 *e*P **P 07 45 04.8 +0.2**
VYHS Vyhne 64.07 313 *e*P **P 07 45 17.1 +0.6**
VYHS Vyhne 64.07 313 *e*P **P 07 45 17.1 +0.6**
NB2 NORSAR Subarra 64.31 327 P **P 07 45 17.5 -0.4**
comp=Z,2.0nm,0.6s,mb4.3,baz=74,slow=6.5
NOA NORSAR Array B 64.31 327 P **P 07 45 17.4 -0.5**
comp=Z,4.7nm,1.0s,mb4.5,baz=72,slow=6.6,SNR=2.9
NWAO Narrogin (SRO) 65.11 167 *e*P **P 07 45 22.8 -0.5**
NWAO pmax pmax
comp=Z,52nm,1.1s
NWAO Narrogin (SRO) 65.11 167 *e*P **P 07 45 22.8 -0.5**
comp=Z,52nm,1.1s,mb5.5
CTA Charters Tower 65.42 136 *e*P **P 07 45 25.4 -0.2**
comp=Z,19nm,1.0s,mb5.1
CTAO Charters Tower 65.42 136 *e*P **P 07 45 25.2 -0.4**
CTAO pmax pmax
comp=Z,40nm,1.1s,mb5.4
CTAO Charters Tower 65.42 136 *e*P **P 07 45 25.2 -0.4**
comp=Z,40nm,1.1s,mb5.4
FORT Forrest 65.90 157 *e*P **P 07 45 28.6 +0.1**
comp=Z,50nm,0.8s,mb5.6
FORT Forrest 65.90 157 *e*P **P 07 45 28.4 -0.1**
comp=Z,80nm,0.9s,mb5.8
BRG Berggiesshubel 66.27 316 *e*P **P 07 45 33.8 +3.0**
comp=Z,13nm,1.5s,mb4.8
BRG Berggiesshubel 66.27 316 *e*P **P 07 45 33.8 +3.1**
BRG pmax pmax
comp=Z,8.0nm,1.5s,mb4.5
CLL Collm 66.67 317 *i* P **P 07 45 33.0 -0.3**
CLL *i* 07 45 41.8
CLL Collm 66.67 317 *i* P **P 07 45 33.0 -0.3**
CLL *i* 07 45 41.8
CLL *e*PP PP 07 48 05.0 +5.2
GERES GERESS Array B 67.15 314 P **P 07 45 36.7 +0.3**
comp=Z,0.9nm,0.7s,mb3.9,baz=76,slow=8.4,SNR=4.6
TTA Tatalina 67.15 29 *e*P **P 07 45 36.3 +0.2**
COLD Coldfoot 67.52 24 *e*P **P 07 45 38.5 +0.1**
comp=Z,36nm,1.0s,mb5.3
CHUM Lake Minchumin 68.25 28 *e*P **P 07 45 44.0 +1.0**
comp=Z,51nm,1.4s,mb5.4
GRA1 Grafenberg Arr 68.33 316 *e*P **P 07 45 44.8 +1.0**
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.33 316 *e*P **P 07 45 44.8 +1.0**
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.33 316 *e*P **P 07 45 44.8 +1.0**
GRF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.33 316 *e*P **P 07 45 44.8 +1.0**
GRF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.33 316 *e*P **P 07 45 44.8 +1.0**
comp=Z,5.0nm,1.0s,mb4.5
BPAW Bear Paw Mtn. 68.67 27 *e*P **P 07 45 46.0 +0.3**
comp=Z,49nm,1.2s,mb5.3
PPLA Purkeypile 68.75 28 *e*P **P 07 45 46.5 +0.3**
comp=Z,43nm,0.8s,mb5.4
TRF Thorofare Moun 69.25 27 *e*P **P 07 45 55.5 +6.2**
comp=Z,13nm,0.9s,mb4.8
COLA College 69.49 26 *e*P **P 07 45 50.9 +0.2**
COLA pmax pmax
comp=Z,78nm,1.0s,mb5.6
COLA College 69.49 26 *e*P **P 07 45 50.9 +0.2**
comp=Z,78nm,1.0s,mb5.6
MCK McKinley 69.64 27 *e*P **P 07 45 51.6 -0.1**
MCK pmax pmax
comp=Z,239nm,2.8s,mb5.6
MCK McKinley 69.64 27 *e*P **P 07 45 51.6 -0.1**
comp=Z,240nm,2.8s,mb5.6
KMBO Kilima Mbogo 70.53 256 P **P 07 45 57.9 -0.1**
comp=Z,1.4nm,0.8s,mb3.9,baz=27,slow=11,SNR=4.5
PMR Palmer 70.63 29 *e*P **P 07 45 56.6 -1.2**
KDAK Kodiak Island 70.96 33 P **P 07 45 58.0 -1.9**
comp=Z,21nm,0.8s,mb5.1,baz=307,slow=5.1,SNR=3.4
CDF Champ du Feu 71.22 316⇑ *i*P **P 07 46 01.3 -0.3**
comp=Z,30nm,1.4s,mb4.7
CDF Champ du Feu 71.22 316⇑ *i*P **P 07 46 01.3 -0.3**
CDF pmax pmax
comp=Z,15nm,1.4s,mb4.7
CDF Champ du Feu 71.22 316⇑ *i*P **P 07 46 01.3 -0.3**
comp=Z,15nm,1.4s,mb4.7
SCO Scoresbysund 71.42 343 *i* P **P 07 45 57.2 -5.2**
SCO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SCO Scoresbysund 71.42 343 *i* P **P 07 45 57.2 -5.2**
comp=Z,6.3nm,0.9s,mb4.5
HINF Hinteralfeld 71.74 315⇑ *i*P **P 07 46 04.1 -0.7**
comp=Z,14nm,1.1s,mb4.5
HINF Hinteralfeld 71.74 315⇑ *i*P **P 07 46 04.1 -0.7**
HINF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
HINF Hinteralfeld 71.74 315⇑ *i*P **P 07 46 04.1 -0.7**
comp=Z,7.1nm,1.1s,mb4.5
GIVF Givet 71.90 318⇑ *i*P **P 07 46 05.5 -0.2**
EGAK Eagle 71.95 24 *e*P **P 07 46 05.3 -0.5**
comp=Z,18nm,1.1s,mb4.9
HAU Haudompre 71.96 316⇑ *i*P **P 07 46 05.6 -0.5**
MENT Mentasta 72.06 26 *e*P **P 07 46 06.6 +0.2**
INK Inuvik 72.17 19 P **P 07 46 06.0 -1.0**
comp=Z,22nm,0.9s,mb5.1,baz=312,slow=5.8,SNR=16
INK Inuvik 72.17 19 P **P 07 46 06.0 -1.0**
INK pmax pmax
comp=Z,22nm,0.9s
INK Inuvik 72.17 19 *e*P **P 07 46 06.9 -0.1**
comp=Z,25nm,0.9s,mb5.2
BAIF Baives 72.28 318⇑ *i*P **P 07 46 07.9 -0.1**
comp=Z,20nm,1.1s,mb4.6
BAIF Baives 72.28 318⇑ *i*P **P 07 46 07.9 -0.1**
BAIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BAIF Baives 72.28 318⇑ *i*P **P 07 46 07.9 -0.1**
comp=Z,9.9nm,1.1s,mb4.7
EIDS Eidsvold 72.31 136 *e*P **P 07 46 08.6 +0.2**
comp=Z,57nm,1.2s,mb5.4
STKA Stephens Creek 72.36 147 *e*P **P 07 46 07.8 -0.7**
comp=Z,17nm,0.9s,mb5.0
STKA Stephens Creek 72.36 147 P **P 07 46 07.5 -1.1**
comp=Z,24nm,0.9s,mb5.1,baz=332,slow=6.8,SNR=21
STKA Stephens Creek 72.36 147 *e*P **P 07 46 07.8 -0.7**
comp=Z,8.7nm,1.1s,mb4.6
MEZF Maizieres J'vi 72.50 316 *e*P **P 07 46 09.2 -0.1**
PGF Pioggiola 72.73 310⇑ *i*P **P 07 46 11.0 +0.2**
comp=Z,53nm,1.1s,mb5.1
PGF Pioggiola 72.73 310⇑ *i*P **P 07 46 11.0 +0.2**
PGF pmax pmax
comp=Z,27nm,1.1s,mb5.1
PGF Pioggiola 72.73 310⇑ *i*P **P 07 46 11.0 +0.2**
comp=Z,26nm,1.1s,mb5.1
CABF La Chapelle 72.75 314⇑ *i*P **P 07 46 10.5 -0.3**
comp=Z,19nm,1.2s,mb4.6
CABF La Chapelle 72.75 314⇑ *i*P **P 07 46 10.5 -0.3**
CABF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CABF La Chapelle 72.75 314⇑ *i*P **P 07 46 10.5 -0.3**
comp=Z,9.6nm,1.2s,mb4.6
BMRM Bremner River 72.81 28 *e*P **P 07 46 11.4 +0.4**
comp=Z,82nm,1.1s,mb5.6
LPG La Plagne 72.84 313⇑ *i*P **P 07 46 11.9 +0.5**
comp=Z,28nm,0.8s,mb5.0
LPG La Plagne 72.84 313⇑ *i*P **P 07 46 11.9 +0.5**
LPG pmax pmax
comp=Z,14nm,0.8s,mb4.9
LPG La Plagne 72.84 313⇑ *i*P **P 07 46 11.9 +0.5**
comp=Z,14nm,0.8s,mb4.9
LPL La Plagne 72.85 313⇑ *i*P **P 07 46 11.8 +0.3**

DAWY Dawson 72.99 24 *eP* **P 07 46 11.8 -0.2**
MBDF Montbardon 73.19 312 *eP* **P 07 46 14.2 +0.7**
SUMG Summit 73.22 349 *eP* **P 07 46 15.2 +1.9**
comp=Z,19nm,1.1s,mb5.0
RES Resolute Bay 73.64 5 *eP* **P 07 46 15.5 -0.1**
RES pmax pmax
comp=Z,15nm,1.0s,mb4.9
RES Resolute Bay 73.64 5 *eP* **P 07 46 15.5 -0.1**
comp=Z,15nm,1.0s,mb4.9
ABPO Ambohimpanom 73.65 235 *eP* **P 07 46 15.8 -0.7**
ABPO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ABPO Ambohimpanom 73.65 235 *eP* **P 07 46 15.8 -0.6**
comp=Z,4.9nm,0.9s,mb4.4
ORIF Oris-en-Rattie 73.66 313 *eP* **P 07 46 16.1 -0.2**
comp=Z,29nm,1.1s,mb4.8
ORIF Oris-en-Rattie 73.66 313 *eP* **P 07 46 16.1 -0.2**
ORIF pmax pmax
comp=Z,15nm,1.1s,mb4.8
ORIF Oris-en-Rattie 73.66 313 *eP* **P 07 46 16.1 -0.2**
comp=Z,15nm,1.1s,mb4.8
LOR Lormes 73.79 316 *eP* **P 07 46 16.2 -0.8**
comp=Z,30nm,1.5s,mb4.7
LOR Lormes 73.79 316 *eP* **P 07 46 16.2 -0.8**
LOR pmax pmax
comp=Z,15nm,1.5s,mb4.7
LOR Lormes 73.79 316 *eP* **P 07 46 16.2 -0.8**
comp=Z,15nm,1.5s,mb4.7
LMR La Mourre 74.00 311 *eP* **P 07 46 17.9 -0.4**
SMF Signal de Mont 74.10 315⇑ *iP* **P 07 46 18.2 -0.6**
comp=Z,48nm,1.3s,mb5.0
SMF Signal de Mont 74.10 315⇑ *iP* **P 07 46 18.2 -0.6**
SMF pmax pmax
comp=Z,24nm,1.3s,mb5.0
SMF Signal de Mont 74.10 315⇑ *iP* **P 07 46 18.2 -0.6**
comp=Z,24nm,1.3s,mb5.0
SSF Saint Saulge 74.10 316 *eP* **P 07 46 18.1 -0.7**
comp=Z,26nm,1.4s,mb4.7
SSF Saint Saulge 74.10 316 *eP* **P 07 46 18.1 -0.7**
SSF pmax pmax
comp=Z,13nm,1.4s,mb4.7
SSF Saint Saulge 74.10 316 *eP* **P 07 46 18.1 -0.7**
comp=Z,13nm,1.4s,mb4.7
AVF Avril sur Loir 74.32 315⇑ *iP* **P 07 46 19.5 -0.6**
comp=Z,19nm,0.9s,mb4.7
AVF Avril sur Loir 74.32 315⇑ *iP* **P 07 46 19.5 -0.6**
AVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
AVF Avril sur Loir 74.32 315⇑ *iP* **P 07 46 19.5 -0.6**
comp=Z,9.4nm,0.9s,mb4.7
VIVF Saint-Julien-l 74.44 313⇑ *iP* **P 07 46 20.4 -0.5**
comp=Z,28nm,1.4s,mb4.7
VIVF Saint-Julien-l 74.44 313⇑ *iP* **P 07 46 20.4 -0.5**
VIVF pmax pmax
comp=Z,14nm,1.4s,mb4.7
VIVF Saint-Julien-l 74.44 313⇑ *iP* **P 07 46 20.4 -0.5**
comp=Z,14nm,1.4s,mb4.7
BGF Bois d'Agland 74.74 315 *eP* **P 07 46 22.0 -0.5**
TCF Toulx Ste Croi 75.26 315 *eP* **P 07 46 25.2 -0.3**
comp=Z,27nm,1.3s,mb4.7
TCF Toulx Ste Croi 75.26 315 *eP* **P 07 46 25.2 -0.3**
TCF pmax pmax
comp=Z,13nm,1.3s,mb4.7
TCF Toulx Ste Croi 75.26 315 *eP* **P 07 46 25.2 -0.3**
comp=Z,13nm,1.3s,mb4.7
LASF Ste Croix 75.33 313⇑ *iP* **P 07 46 25.9 -0.1**
comp=Z,49nm,1.5s,mb4.9
LDF La Druitiere 75.46 318⇑ *iP* **P 07 46 26.1 -0.6**
comp=Z,42nm,1.5s,mb4.8
LDF La Druitiere 75.46 318⇑ *iP* **P 07 46 26.1 -0.6**
LDF pmax pmax
comp=Z,21nm,1.5s,mb4.8
LDF La Druitiere 75.46 318⇑ *iP* **P 07 46 26.1 -0.6**
comp=Z,21nm,1.5s,mb4.8
FLN La Foliniere 75.58 318 *eP* **P 07 46 26.8 -0.5**
HYT Haines Junctio 75.69 26 *eP* **P 07 46 28.5 +0.8**
GRR Gorron 75.99 318⇑ *iP* **P 07 46 29.3 -0.4**
CAF Calviac 76.03 314⇑ *iP* **P 07 46 30.1 +0.1**
comp=Z,24nm,1.2s,mb4.7
CAF Calviac 76.03 314⇑ *iP* **P 07 46 30.1 +0.1**
CAF pmax pmax
comp=Z,12nm,1.2s,mb4.7
CAF Calviac 76.03 314⇑ *iP* **P 07 46 30.1 +0.1**
comp=Z,12nm,1.2s,mb4.7
RJF Les Rejaudoux 76.17 315⇑ *iP* **P 07 46 31.0 +0.2**
comp=Z,25nm,1.2s,mb4.7
RJF Les Rejaudoux 76.17 315⇑ *iP* **P 07 46 31.0 +0.2**
RJF pmax pmax
comp=Z,13nm,1.2s,mb4.7
RJF Les Rejaudoux 76.17 315⇑ *iP* **P 07 46 31.0 +0.2**
comp=Z,13nm,1.2s,mb4.7
ARMA Armidale 76.42 139 *eP* **P 07 46 33.3 +1.1**
ARMA Armidale 76.42 139 *eP* **P 07 46 33.5 +1.3**
comp=Z,41nm,1.3s,mb5.2
MFF Saint Martin d 76.50 316 *eP* **P 07 46 32.3 -0.3**
MTLF Montolieu 76.73 313 *eP* **P 07 46 33.8 -0.2**
LFF La Frestale 76.83 315 *eP* **P 07 46 34.7 +0.2**
SGMF Saint Gilles 77.02 319⇑ *iP* **P 07 46 35.6 +0.1**
comp=Z,30nm,1.1s,mb4.8
SGMF Saint Gilles 77.02 319⇑ *iP* **P 07 46 35.6 +0.1**
SGMF pmax pmax
comp=Z,15nm,1.1s,mb4.8
SGMF Saint Gilles 77.02 319⇑ *iP* **P 07 46 35.6 +0.1**
comp=Z,15nm,1.1s,mb4.8
ROSF Rostrenen 77.38 319⇑ *iP* **P 07 46 37.5 0.0**
comp=Z,41nm,1.3s,mb4.9
ROSF Rostrenen 77.38 319⇑ *iP* **P 07 46 37.5 0.0**
ROSF pmax pmax
comp=Z,21nm,1.3s,mb4.9
ROSF Rostrenen 77.38 319⇑ *iP* **P 07 46 37.5 0.0**
comp=Z,21nm,1.3s,mb4.9
SKAG Skagway 77.41 27 *eP* **P 07 46 38.2 +0.8**
comp=Z,33nm,0.9s,mb5.3
QUIF Quistinic 77.55 319 *eP* **P 07 46 38.3 -0.2**
EPF Esparros 78.07 313 *eP* **P 07 46 40.8 -0.7**
CAN Canberra 78.77 144 *eP* **P 07 46 45.7 +0.5**
CAN pmax pmax
comp=Z,35nm,1.4s,mb5.1
CAN Canberra 78.77 144 *eP* **P 07 46 45.7 +0.5**
comp=Z,35nm,1.4s,mb5.1
TOO Toolangi 78.85 147 *eP* **P 07 46 45.5 -0.1**
CNB Canberra Magne 78.95 143 *eP* **P 07 46 46.0 -0.2**
SFJD Kangerlussuaq 80.13 350 *eP* **P 07 46 52.4 +0.1**
SFJD pmax pmax
comp=Z,15nm,0.6s,mb5.1
SFJD Kangerlussuaq 80.13 350 *eP* **P 07 46 52.4 +0.1**
comp=Z,15nm,0.6s,mb5.1
SFJD Kangerlussuaq 80.13 350 *i* P **P 07 46 52.4 +0.1**
comp=Z,22nm,0.8s,mb5.1
YKA Yellowknife Ar 81.68 17 P **P 07 46 60.0 -0.7**
comp=Z,4.0nm,0.7s,mb4.4,baz=324,slow=4.6,SNR=12
YKA Yellowknife Ar 81.68 17 P **P 07 46 60.0 -0.7**
FCC Fort Churchill 89.13 9 *eP* **P 07 47 37.5 -0.4**
EDM Edmonton 89.95 21 *eP* **P 07 47 41.9 +0.1**
ETW Entiat 92.14 28 *eP* **P 07 47 52.3 +0.2**
NEW Newport 92.85 26 *eP* **P 07 47 55.9 +0.5**
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW Newport 92.85 26 *eP* **P 07 47 55.9 +0.5**
comp=Z,5.9nm,0.9s,mb5.0
TOA0 Torodi Ar. Sit 93.19 287 *eP* **P 07 47 57.1 -0.4**
TORD Torodi Ar. Bea 93.19 287 P **P 07 47 56.7 -0.8**
comp=Z,5.7nm,1.1s,mb4.9,baz=60,slow=3.4,SNR=6.2
TORD Torodi Ar. Bea 93.19 287 P **P 07 47 56.7 -0.8**
WALA Waterton Lakes 93.33 24 *eP* **P 07 47 58.1 +0.5**
SCHQ Schefferville 93.88 354 P **P 07 47 58.2 -1.8**
comp=Z,2.2nm,0.8s,mb4.6,baz=45,slow=11,SNR=2.9
SCHQ Schefferville 93.88 354 P **P 07 47 58.2 -1.8**
SLMT Seeley Lake 95.03 24 *eP* **P 07 48 05.8 +0.4**
BOSA Boshof 95.39 240 P **P 07 48 05.9 -1.3**
comp=Z,4.1nm,0.9s,mb4.9,baz=52,slow=5.7,SNR=5.1
IMW Indian Meadow 98.82 25 *eP* **P 07 48 24.3 +1.7**
comp=Z,3.0nm,0.9s,mb4.8
PDAR Pinedale Array 100.30 24 P Pdif 07 48 30.4 +1.3
comp=Z,0.3nm,0.7s,baz=174,slow=1.8,SNR=2.9
HWUT Hardware Ranch 100.58 26 *eP*Pdif Pdif 07 48 29.9 -0.5
comp=Z,2.3nm,0.4s
TXAR Lajitas Array 114.41 26 PKP PKiKP 07 53 22.4 -0.5
comp=Z,0.7nm,0.9s,baz=42,slow=0.3,SNR=5.3
JCT Junction City 114.71 22 *eP*KIKP PKiKP 07 53 23.0 -0.5
QSPA South Pole Qui 121.02 180 *eP*KKPdf PKPdf 07 53 33.0 -1.0
SDV Santo Domingo 139.72 351 PKhKP 07 54 02.2
comp=Z,3.9nm,0.8s,baz=278,slow=1.9,SNR=3.2
ROSC El Rosal 144.05 356 PKP PKPdf 07 54 18.1 -1.0
comp=Z,16nm,0.8s,baz=260,slow=11,SNR=8.0
EFI East Falkland 155.52 208 *eP*KIKP PKPdf 07 54 37.7 +1.8
SIV San Ignacio 159.36 314 PKP PKPdf 07 54 39.6 -2.2
comp=Z,3.4nm,1.0s,baz=322,slow=2.0,SNR=8.1
CPUP Villa Florida 162.59 282 PKP PKPdf 07 54 43.5 -1.5
comp=Z,5.0nm,1.1s,baz=29,slow=2.2,SNR=5.4
LPAZ La Paz 163.31 331 PKP PKPdf 07 54 46.1 +0.2
comp=Z,5.5nm,1.1s,baz=22,slow=5.0,SNR=9.6
LVC Limon Verde 169.12 320 PKPab PKPab 07 56 01.6 -0.4
comp=Z,0.6nm,0.3s,baz=314,slow=6.7,SNR=3.6
PLCA Paso Flores 169.42 205 PKP PKPdf 07 54 50.0 0.0
comp=Z,4.9nm,1.1s,baz=224,slow=2.7,SNR=5.7
PLCA PKPab PKPab 07 56 01.1 -1.6
comp=Z,4.8nm,1.2s,baz=140,slow=6.2,SNR=4.2
CFAA Coronel Fontan 173.02 265 PKP PKPdf 07 54 51.7 -0.4
comp=Z,0.8nm,1.0s,baz=286,slow=2.9,SNR=11
CFAA PKPab PKPab 07 56 18.7 -0.6
comp=Z,0.1nm,0.5s,baz=61,slow=1.9,SNR=3.9
CFAA Coronel Fontan 173.02 265 PKP PKPdf 07 54 51.7 -0.4
CFAA PKPab PKPab 07 56 18.7 -0.6

*ISCJB **12** 07:40:02.4±0.4, 31°.20N±0°.05×104°.0E±0°.1, h10km, mb4.5/16, Error ellipse: s-maj=14.2km s-min=6.9km az=164.2*
*IDC **12** 07:40:02.4±0.7, 31°.27N×104°.20E, h0km, mb4.3/11, mb1 4.5/13, mb1mx4.2/28, mbtmp4.4/13, ML4.1/2, Error ellipse: s-maj=28.3km s-min=14.6km az=62.0*
*NEIC **12** 07:40:04.0±0.4, 31°.26N×104°.13E, h10km, mb4.7/5, Error ellipse: s-maj=16.3km s-min=8.2km az=70.0*
*MOS **12** 07:40:05.3±1.5, 31°.20N×104°.16E, h34km, mb4.6/6, Error ellipse: s-maj=21.2km s-min=11.4km az=98.6*
*BJI **12** 07:40:07.1, 31°.39N×103°.73E, h10km, mb4.8/1, ML4.8/5*
ISC 12 07:40:04.5±0.4, 31°.24N±0°.05×104°.0E±0°.1, h10km, n38, σ1§17/40, mb4.5/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.83**	**359**	*e*Pg	**Pn**	**07 41 11.2**	**-6.1**
LZH				Sg	**Sn**	**07 41 56.1**	**-17**
LZH				smax			
	comp=N,1μm,0.5s						
LZH				smax			
	comp=E,2μm,0.6s						
GYA	**Guiyang**	**5.31**	**153**	*e*Pg	**Pg**	**07 41 47.9**	**+1.6**
GYA				smax			
	comp=N,1μm,1.0s						
GYA				smax			
	comp=E,1μm,0.9s						
KMI	**Kunming**	**6.19**	**190**	Pg	**Pn**	**07 41 36.0**	**0.0**
KMI				Sg	**Sn**	**07 42 52.4**	**+5.5**
KMI				smax			
	comp=N,410nm,1.1s						
KMI				smax			
	comp=E,360nm,1.3s						
HHC	**Hu-ho-hao-te**	**11.38**	**30**	*e*P	**Pn**	**07 42 56.2**	**+9.2**
HHC				pP		07 42 59.5	
HHC				S	**Sn**	**07 45 08.2**	**+14**
HHC				sS		07 45 11.1	
NJ2	**Nanjing**	**12.70**	**82**	*e*P	**Pn**	**07 43 11.4**	**+6.2**
CMAR	**Chiang Mai Arr**	**13.52**	**201**	Pn	**Pn**	**07 43 16.6**	**+0.1**
	comp=E,0.5nm,0.3s,baz=11,slow=10.0,SNR=4.1						
SONM	**Songino Array**	**16.67**	**6**	Pn	**Pn**	**07 43 56.9**	**-1.3**
	comp=E,0.3nm,0.3s,baz=203,slow=9.4,SNR=3.7						
WMQ	**Urumqi**	**17.97**	**319**	*e*P	**Pn**	**07 44 09.9**	**-4.5**
KSRS	**Korea Array**	**20.69**	**66**	P	**P**	**07 44 41.2**	**-3.5**
	comp=E,3.2nm,0.8s,baz=251,slow=10,SNR=2.9						
KSRS	**Korea Array**	**20.69**	**66**	P	**P**	**07 44 41.2**	**-3.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CN2	**Changchun**	**21.07**	**47**	*e*P	**P**	**07 44 51.8**	**+3.0**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.7						
MK31	**Makanchi Array**	**22.81**	**319**	*e*P	**P**	**07 45 08.3**	**+1.0**
MKAR	**Makanchi Array**	**22.81**	**319**	P	**P**	**07 45 07.7**	**+0.4**
	comp=Z,14nm,0.8s,mb4.4,baz=124,slow=10,SNR=7.5						
KURK	**Kurchatov**	**27.07**	**323**	P	**P**	**07 45 46.3**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.0,baz=126,slow=10,SNR=4.2						
KURK	**Kurchatov**	**27.07**	**323**	P	**P**	**07 45 46.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
KURK	**Kurchatov**	**27.07**	**323**	*e*P	**P**	**07 45 47.7**	**+0.6**
	comp=Z,20nm,1.1s,mb4.5						
NVS	**Novosibirsk**	**27.83**	**334**	*e*P	**P**	**07 45 55.6**	**+1.8**
ABKAR	**Akbulak array**	**37.50**	**312**	*e*P	**P**	**07 47 17.2**	**-1.1**
	comp=Z,2.6nm,0.8s,mb4.0						
KAPI	**Kappang**	**39.07**	**155**	P	**P**	**07 47 30.4**	**-1.4**
	comp=Z,7.9nm,0.7s,mb4.6,baz=80,slow=6.1,SNR=4.0						
BILL	**Bilibino**	**51.10**	**25**	*e*P	**P**	**07 49 08.1**	**+1.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.29**	**154**	*e*P	**P**	**07 49 23.4**	**-0.3**
	comp=Z,11nm,1.2s,mb4.7						
BRTR	**Keskin Array B**	**56.58**	**300**	P	**P**	**07 49 49.2**	**+1.8**
	comp=Z,0.8nm,0.7s,mb3.9,baz=81,slow=4.5,SNR=3.0						
ARCES	**ARCESS Array B**	**57.09**	**336**	P	**P**	**07 49 49.4**	**-1.2**
	comp=Z,8.2nm,1.1s,mb4.7,baz=87,slow=7.3,SNR=3.0						
WRAB	**Tennant Creek**	**58.64**	**146**	*e*P	**P**	**07 50 02.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**58.64**	**146**	*e*P	**P**	**07 50 02.1**	**+0.1**
	comp=Z,28nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**58.65**	**146**	P	**P**	**07 50 02.4**	**+0.4**
	comp=Z,14nm,0.5s,mb5.2,baz=338,slow=7.9,SNR=19						
WB2	**Warramunga Arr**	**58.65**	**146**	*e*P	**P**	**07 50 02.0**	**-0.1**
ASAR	**Alice Springs**	**61.66**	**149**	P	**P**	**07 50 19.9**	**-2.8**
	comp=Z,2.7nm,0.7s,mb4.5,baz=331,slow=6.4,SNR=5.9						
COLA	**College**	**69.35**	**26**	*e*P	**P**	**07 51 11.0**	**-0.9**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
COLA	**College**	**69.35**	**26**	*e*P	**P**	**07 51 11.0**	**-0.9**
	comp=Z,4.5nm,0.8s,mb4.5						
INK	**Inuvik**	**72.06**	**19**	P	**P**	**07 51 28.4**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.3,baz=343,slow=7.6,SNR=5.5						
INK	**Inuvik**	**72.06**	**19**	P	**P**	**07 51 28.4**	**0.0**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**72.06**	**19**	*e*P	**P**	**07 51 28.7**	**+0.4**
	comp=Z,5.2nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**72.18**	**147**	P	**P**	**07 51 28.7**	**-0.8**
	comp=Z,3.4nm,0.9s,mb4.3,baz=328,slow=4.8,SNR=4.1						
STKA	**Stephens Creek**	**72.18**	**147**	P	**P**	**07 51 28.7**	**-0.8**
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**07 52 21.4**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=328,slow=5.1,SNR=4.0						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**07 52 21.4**	**-0.8**
ROSC	**El Rosal**	**144.07**	**357**	PKP	PKPdf	07 59 40.3	-0.9
	comp=Z,2.8nm,0.5s,baz=280,slow=12,SNR=3.5						

*IDC **12** 07:40:39.7±0.9, 32°.14N×104°.67E, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.1/27, mbtmp4.3/10, ML4.4/1, Error ellipse: s-maj=35.7km s-min=19.0km az=54.0*
*NEIC **12** 07:40:40.9±0.4, 32°.04N×104°.67E, h10km, mb4.9/4, Error ellipse: s-maj=25.1km s-min=8.7km az=54.0*
*ISCJB **12** 07:40:42.3±0.5, 32°.0N±0°.2×104°.7E±0°.2, h33km, mb4.4/13, Error ellipse: s-maj=35.5km s-min=12.2km az=143.5*
ISC 12 07:40:41.5±2.9, 32°.2N±0°.1×104°.86E±0°.09, h13km±17km, n38, σ0§70/40, mb4.4/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.90**	**60**	Pg	**Pg**	**07 42 01.8**	**+5.7**
XAN				Sg	**Sg**	**07 42 46.4**	**-0.2**
XAN				smax			
	comp=N,940nm,0.7s						
XAN				smax			
	comp=E,430nm,0.7s						
LZH	**Lanzhou**	**4.02**	**348**	*e*Pg	**Pg**	**07 41 59.3**	**+0.8**
LZH				Sg	**Sg**	**07 42 50.0**	**-0.6**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,2μm,0.7s						
KSRS	**Korea Array**	**19.65**	**68**	P	**Pn**	**07 45 10.9**	**-0.4**
	comp=E,1.0nm,0.3s,baz=257,slow=10,SNR=6.1						
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**07 50 23.6**	**+0.3**
	comp=E,1.6nm,0.3s,mb4.5,baz=84,slow=6.2,SNR=13						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 50 27.3**	**+0.4**
	comp=E,1.6nm,0.5s,mb4.3,baz=82,slow=10.0,SNR=2.6						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 50 27.3**	**+0.4**
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**07 50 26.7**	**-0.9**
	comp=E,1.2nm,0.4s,mb4.3,baz=69,slow=7.8,SNR=3.2						
SPITS	**Spitsbergen Ar**	**58.48**	**346**	P	**P**	**07 50 37.4**	**+0.8**
	comp=E,7.3nm,1.0s,mb4.7,baz=46,slow=11,SNR=3.7						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**07 50 40.1**	**-0.7**
	comp=E,4.7nm,0.5s,mb4.8						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**07 50 40.7**	**-0.2**
	comp=E,4.9nm,0.5s,mb4.8,baz=338,slow=7.7,SNR=4.9						
WB2	**Warramunga Arr**	**58.99**	**147**	P	**P**	**07 50 39.8**	**-1.1**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**07 51 03.9**	**+2.2**
	comp=E,1.5nm,0.7s,mb4.2,baz=332,slow=6.6,SNR=3.1						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**07 51 34.8**	**-0.9**
	comp=E,0.8nm,0.6s,mb3.9,baz=51,slow=5.2,SNR=2.9						
INK	**Inuvik**	**70.96**	**20**	P	**P**	**07 51 59.6**	**+1.4**
	comp=E,1.5nm,0.6s,mb4.1,baz=274,slow=3.1,SNR=4.6						
CDF	**Champ du Feu**	**71.32**	**316**	*e*P	**P**	**07 52 00.4**	**-0.3**
CDF	**Champ du Feu**	**71.32**	**316**	*e*P	**P**	**07 52 00.4**	**-0.3**
GIVF	**Givet**	**71.95**	**318**	*e*P	**P**	**07 52 03.9**	**-0.5**
GIVF	**Givet**	**71.95**	**318**	*e*P	**P**	**07 52 03.9**	**-0.5**
HAU	**Haudompre**	**72.06**	**316**	*e*P	**P**	**07 52 05.3**	**+0.2**
HAU	**Haudompre**	**72.06**	**316**	*e*P	**P**	**07 52 05.3**	**+0.2**
BAIF	**Baives**	**72.32**	**318**	*e*P	**P**	**07 52 06.5**	**-0.1**
BAIF	**Baives**	**72.32**	**318**	*e*P	**P**	**07 52 06.5**	**-0.1**
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**07 52 11.4**	**+0.6**
	comp=E,11nm,0.5s,mb4.8						
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**07 52 11.4**	**+0.6**
	comp=E,5.7nm,0.5s,mb4.8						
LPL	**La Plagne**	**73.01**	**313**	*e*P	**P**	**07 52 11.3**	**+0.5**
	comp=E,12nm,0.4s,mb4.8						
LPL	**La Plagne**	**73.01**	**313**	*e*P	**P**	**07 52 11.3**	**+0.5**
	comp=E,6.3nm,0.4s,mb4.9						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*e*P	**P**	**07 52 15.6**	**-0.1**
	comp=E,3.6nm,0.5s,mb4.3						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*e*P	**P**	**07 52 15.6**	**-0.1**
	comp=E,1.8nm,0.5s,mb4.3						
SSF	**Saint Saulge**	**74.20**	**316**	*e*P	**P**	**07 52 17.4**	**-0.4**
SSF	**Saint Saulge**	**74.20**	**316**	*e*P	**P**	**07 52 17.4**	**-0.4**
AVF	**Avril sur Loir**	**74.43**	**316**	*e*P	**P**	**07 52 18.7**	**-0.4**
AVF	**Avril sur Loir**	**74.43**	**316**	*e*P	**P**	**07 52 18.7**	**-0.4**
GRR	**Gorron**	**76.02**	**319**	*e*P	**P**	**07 52 28.2**	**-0.1**
GRR	**Gorron**	**76.02**	**319**	*e*P	**P**	**07 52 28.2**	**-0.1**
CAF	**Calviac**	**76.16**	**314**	*e*P	**P**	**07 52 29.4**	**+0.3**
CAF	**Calviac**	**76.16**	**314**	*e*P	**P**	**07 52 29.4**	**+0.3**
YKA	**Yellowknife Ar**	**80.51**	**17**	P	**P**	**07 52 52.8**	**0.0**
	comp=E,1.6nm,0.6s,mb4.1,baz=328,slow=5.2,SNR=7.3						
YKA	**Yellowknife Ar**	**80.51**	**17**	P	**P**	**07 52 52.8**	**-0.1**

IDC 12 07:41:18.0±0.9, 30°.19N×105°.34E, h0km, mb4.4/7, mb1 4.6/7, mb1mx4.1/24, mbtmp4.5/7, Error ellipse: s-maj=44.8km s-min=19.0km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.09**	**63**	P	P	07 45 52.9	-0.3
	16nm,0.7s,baz=264,slow=11,SNR=8.1						
KURK	**Kurchatov**	**28.62**	**323**	P	P	07 47 14.5	-1.4
	6.4nm,0.9s,baz=127,slow=9.0,SNR=2.7						
WRA	**Warramunga Arr**	**57.12**	**147**	P	P	07 51 07.3	+0.8
	6.9nm,0.6s,baz=328,slow=9.0,SNR=7.4						
AKASG	**Malin Array Be**	**58.79**	**314**	P	P	07 51 18.4	+0.5
	1.2nm,0.6s,baz=70,slow=6.3,SNR=3.2						
FINES	**FINESS Array B**	**58.92**	**327**	P	P	07 51 19.6	+1.0
	0.8nm,0.5s,baz=85,slow=6.5,SNR=3.7						
ASAR	**Alice Springs**	**60.16**	**150**	P	P	07 51 28.2	+0.6
	1.2nm,0.4s,baz=338,slow=6.8,SNR=4.6						
STKA	**Stephens Creek**	**70.66**	**148**	P	P	07 52 34.1	-1.4
	3.5nm,0.5s,baz=322,slow=6.4,SNR=6.6						

*ISCJB **12** 07:43:19.3±0.4, 32°.56N±0°.06×105°.32E±0°.05, h10km, mb4.4/25, Error ellipse: s-maj=8.1km s-min=5.6km az=168.8*
*IDC **12** 07:43:19.2±0.6, 32°.58N×105°.17E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.3/28, mbtmp4.2/18, ML4.0/1, Error ellipse: s-maj=31.0km s-min=13.0km az=54.0*
*NEIC **12** 07:43:21.2±0.5, 32°.59N×105°.27E, h10km, mb4.7/5, Error ellipse: s-maj=33.7km s-min=10.7km az=54.0*
*MOS **12** 07:43:22.8±1.9, 32°.61N×105°.31E, h33km, mb4.9/5, Error ellipse: s-maj=27.3km s-min=9.7km az=120.8*
*BJI **12** 07:43:22.6, 32°.56N×105°.22E, h19km, ML4.6/4*
ISC 12 07:43:21.3±0.4, 32°.64N±0°.05×105°.39E±0°.05, h10km, n48, σ1§33/52, mb4.4/25, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.27**	**64**	Pg	**Pg**	**07 44 23.1**	**-0.8**
XAN				Sn	**Sb**	**07 45 00.4**	**+1.2**
XAN				Sg	**Sg**	**07 45 11.1**	**+4.8**
XAN				smax			
	comp=N,2μm,0.6s						
XAN				smax			
	comp=E,790nm,0.6s						
LZH	**Lanzhou**	**3.67**	**340**	*e*Pg	**Pb**	**07 44 24.7**	**-1.5**
LZH				Sg	**Sg**	**07 45 18.4**	**-0.7**
LZH				smax			
	comp=N,2μm,0.6s						
LZH				smax			
	comp=E,4μm,0.8s						
KMI	**Kunming**	**7.84**	**198**	Pg	**Pb**	**07 45 46.3**	**+9.0**
KMI				Sg	**Sn**	**07 46 56.6**	**+12**
KMI				smax			
	comp=N,120nm,1.0s						
KMI				smax			
	comp=E,210nm,0.8s						
WHN	**Wuhan**	**7.92**	**103**	S	**Sn**	**07 46 43.7**	**-2.6**
KSRS	**Korea Array**	**19.05**	**69**	P	**Pn**	**07 47 45.4**	**+1.0**
	comp=E,0.4nm,0.3s,baz=251,slow=11,SNR=3.7						
MK31	**Makanchi Array**	**22.59**	**315**	*e*P	**P**	**07 48 24.8**	**+3.0**
MKAR	**Makanchi Array**	**22.59**	**315**	P	**P**	**07 48 20.6**	**-1.2**
	comp=E,3.1nm,0.8s,mb3.8,baz=128,slow=13,SNR=3.2						
KLR	**Kul'dur**	**25.72**	**42**	*e*P	**P**	**07 48 52.2**	**+0.6**
ZALV	**Zalesovo Beam**	**25.86**	**332**	P	**P**	**07 48 51.2**	**-1.6**
	comp=E,1.6nm,0.6s,mb3.7,baz=122,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**25.86**	**332**	P	**P**	**07 48 51.2**	**-1.6**
BVAR	**Borovoye Array**	**32.30**	**320**	P	**P**	**07 49 47.3**	**-2.8**
	comp=E,1.6nm,0.7s,mb4.0,baz=125,slow=9.0,SNR=2.8						
ABKAR	**Akbulak array**	**37.50**	**310**	*e*P	**P**	**07 50 36.7**	**+1.6**
	comp=E,1.4nm,0.5s,mb4.0						
AKTK	**Aktyubinsk**	**38.92**	**311**	P	**P**	**07 50 44.2**	**-2.8**
AKTO	**Aktyubinsk**	**38.92**	**311**	P	**P**

LPG	La Plagne	73.00	313	eP	P	07 54 52.8	+1.7
	comp=Z,18nm,0.7s,mb4.8						
LPG	La Plagne	73.00	313	eP	P	07 54 52.8	+1.7
LPG				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
LPG	La Plagne	73.00	313	eP	P	07 54 52.8	+1.7
	comp=Z,8.8nm,0.7s,mb4.8						
SMF	Signal de Mont	74.18	315	eP	P	07 54 58.6	+0.6
	comp=Z,13nm,1.0s,mb4.5						
SMF	Signal de Mont	74.18	315	eP	P	07 54 58.6	+0.6
SMF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
SMF	Signal de Mont	74.18	315	eP	P	07 54 58.6	+0.6
	comp=Z,6.7nm,1.0s,mb4.5						
TCF	Toulx Ste Croi	75.33	316	eP	P	07 55 06.7	+2.0
CAF	Calviac	76.14	315	eP	P	07 55 11.7	+2.4
YKA	Yellowknife Ar	79.90	18	P	P	07 55 29.2	-0.7
	comp=Z,0.4nm,0.4s,mb3.7,baz=326,slow=5.0,SNR=4.2						
TORD	Torodi Ar. Bea	94.20	288	P	P	07 56 40.1	-0.8
	comp=Z,0.2nm,0.7s,mb3.6,baz=12,slow=4.3,SNR=2.5						

ISCJB ***12*** *07:44:13.7±0.4,31°.03N±0°.04×103°.97E±0°.06,h10km, mb4.4/19,Error ellipse: s-maj=8.3km s-min=5.4km az=160.9*

IDC ***12*** *07:44:13.7±0.9,31°.09N×104°.12E,h0km,mb4.2/11, mb1 4.4/13,mb1mx4.1/28,mbtmp4.3/13,ML4.6/1,Error ellipse: s-maj=25.7km s-min=18.8km az=52.0*

NEIC ***12*** *07:44:15.7±0.4,31°.08N×103°.96E,h10km,mb4.7/10,Error ellipse: s-maj=9.4km s-min=8.1km az=90.0*

MOS ***12*** *07:44:16.4±1.2,31°.06N×104°.01E,h35km,mb5.0/4,Error ellipse: s-maj=15.2km s-min=10.0km az=84.4*

BJI ***12*** *07:44:16.1,31°.34N×103°.86E,h9km,mb4.6/2,ML4.6/6*

ISC 12 07:44:15.9±0.4,31°.11N±0°.04×103°.97E±0°.07,h10km,n43, σ1°11/43,mb4.4/19,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	Enshi	4.82	99	ePn	Pn	07 45 26.1	-2.5
XAN	Xi'an	5.10	54	Sg	Sg	07 46 54.1	-5.5
XAN				smax			
	comp=N,1μm,0.9s						
XAN				smax			
	comp=N,1μm,0.9s						
GYA	Guiyang	5.20	152	ePg	Pg	07 45 59.2	+3.7
GYA				Sg	Sg	07 47 03.4	+0.5
GYA				smax			
	comp=N,920nm,0.9s						
GYA				smax			
	comp=E,1μm,0.9s						
LSA	Lhasa	11.16	266	eP	Pn	07 46 56.1	+0.6
CHTO	Chiang Mai	13.06	202	eP	Pn	07 47 21.9	+0.4
CHTO				pmax	pmax		
	comp=Z,89nm,1.6s						
CHTO	Chiang Mai	13.06	202	ePn	Pn	07 47 21.9	+0.4
	comp=Z,89nm,1.6s						
CMAR	Chiang Mai Arr	13.39	201	Pn	Pn	07 47 24.5	-1.6
	comp=Z,1.0nm,0.3s,baz=20,slow=11,SNR=3.7						
SONM	Songino Array	16.81	6	Pn	Pn	07 48 09.6	-1.6
	baz=181,slow=17,SNR=2.7						
ULN	Ulaanbaatar	16.90	7	eP	Pn	07 48 15.4	+3.0
ULN				pmax	pmax		
	comp=Z,18nm,0.9s						
ULN	Ulaanbaatar	16.90	7	eP	Pn	07 48 15.4	+3.0
	comp=Z,18nm,0.9s						
NACB	Ninganchiao	17.07	110	eP	Pn	07 48 16.0	+1.4
	comp=Z,38nm,1.2s						
KS15	Wonju Array Si	20.72	66	eP	P	07 48 59.2	+2.8
KSRS	Korea Array	20.75	66	P	P	07 48 53.4	-3.3
	comp=Z,2.7nm,0.7s,baz=260,slow=10,SNR=2.3						
KSRS	Korea Array	20.75	66	P	P	07 48 53.4	-3.3
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CN2	Changchun	21.17	47	eP	P	07 49 02.9	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
HIA	Hailar	21.70	29	eP	P	07 49 06.1	-0.7
HIA				pmax	pmax		
	comp=Z,14nm,0.4s						
HIA	Hailar	21.70	29	eP	P	07 49 06.1	-0.6
	comp=Z,14nm,0.4s,mb4.7						
MKAR	Makanchi Array	22.90	319	P	P	07 49 19.4	-0.3
	comp=Z,4.8nm,0.8s,mb4.0,baz=113,slow=11,SNR=3.4						
MDJ	Mudanjiang	24.19	49	eP	P	07 49 33.4	+1.1
KULM	Kulim	25.87	188	eP	P	07 49 47.3	-0.6
	comp=Z,22nm,1.3s,mb4.5						
AAK	Ala-Archa	26.11	304	P	P	07 49 49.5	-0.3
	comp=Z,0.6nm,0.3s,mb3.6,baz=48,slow=14,SNR=1.8						
ZAA0	Zalesovo Array	26.67	334	eP	P	07 49 54.9	+0.1
ZALV	Zalesovo Beam	26.67	334	P	P	07 49 55.6	+0.8
	comp=Z,2.3nm,0.4s,mb4.1,baz=138,slow=9.0,SNR=4.0						
KURK	Kurchatov	27.18	323	P	P	07 50 00.6	+1.2
	comp=Z,8.1nm,0.8s,mb4.3,baz=129,slow=9.6,SNR=6.4						
KURK	Kurchatov	27.18	323	eP	P	07 49 59.5	+0.2
PETK	Petropavlovsk-	44.27	44	P	P	07 52 25.2	-0.2
	comp=Z,3.3nm,0.8s,mb4.1,baz=164,slow=2.8,SNR=4.1						
BILL	Bilibino	51.22	25	eP	P	07 53 18.8	-0.3
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BILL	Bilibino	51.22	25	eP	P	07 53 18.5	-0.6
	comp=Z,7.4nm,0.8s,mb4.7						
BRTR	Keskin Array B	56.64	300	P	P	07 54 00.0	+0.9
	comp=Z,1.1nm,0.9s,mb3.9,baz=90,slow=5.8,SNR=3.0						
WRAB	Tennant Creek	58.54	146	eP	P	07 54 13.0	+0.4
WRAB				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WRAB	Tennant Creek	58.54	146	eP	P	07 54 13.0	+0.4
	comp=Z,16nm,0.9s,mb5.0						
WRA	Warramunga Arr	58.54	146	P	P	07 54 11.2	-1.5
	comp=Z,2.5nm,0.6s,mb4.4,baz=340,slow=7.7,SNR=4.0						
WB2	Warramunga Arr	58.55	146	eP	P	07 54 12.9	+0.2
ASAR	Alice Springs	61.55	149	P	P	07 54 33.5	+0.3
	comp=Z,1.2nm,0.6s,mb4.2,baz=340,slow=6.9,SNR=2.6						
COLD	Coldfoot	67.51	24	eP	P	07 55 11.4	-0.3
	comp=Z,5.9nm,0.8s,mb4.7						
BPAW	Bear Paw Mtn.	68.65	27	eP	P	07 55 18.7	-0.2
	comp=Z,6.2nm,0.8s,mb4.6						
COLA	College	69.47	26	eP	P	07 55 23.6	-0.4
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
COLA	College	69.47	26	eP	P	07 55 23.6	-0.4
	comp=Z,8.3nm,0.8s,mb4.7						
INK	Inuvik	72.19	19	P	P	07 55 39.6	-0.9
	comp=Z,5.9nm,0.7s,mb4.6,baz=336,slow=7.8,SNR=10						
YKA	Yellowknife Ar	81.72	17	P	P	07 56 33.3	-1.0
	comp=Z,1.6nm,0.6s,mb4.1,baz=327,slow=5.0,SNR=5.6						
YKA	Yellowknife Ar	81.72	17	P	P	07 56 33.3	-1.0
HAWA	Hanford	93.41	29	eP	P	07 57 32.5	+1.1
	comp=Z,2.8nm,0.8s,mb4.7						
ROSC	El Rosal	144.20	357	PKP	PKPdf	08 03 50.7	-2.1
	comp=Z,3.5nm,0.7s,baz=260,slow=18,SNR=3.7						

IDC 12 07:45:25.5±2.3,54°.23N×86°.00E,h0km,mb1 3.5/3, mb1mx3.3/28,mbtmp3.5/3,ML3.2/3,Error ellipse: s-maj=18.6km s-min=13.2km az=48.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	0.75	249	Pg	Pg	07 45 38.1	-1.8
	1.8nm,0.3s,baz=68,slow=17,SNR=6.2						
ZALV				Lg		07 45 51.2	
	7.4nm,0.3s,baz=68,slow=28,SNR=15						
KURK	Kurchatov	5.72	235	Pn	Pn	07 46 53.5	+1.9
	0.3nm,0.3s,baz=52,slow=13,SNR=4.6						
MKAR	Makanchi Array	7.81	199	Pn	Pn	07 47 21.6	+1.3
	0.5nm,0.3s,baz=23,slow=13,SNR=4.2						
BVAR	Borovoye Array	9.36	269	Pn	Pn	07 47 41.1	-0.4
	0.1nm,0.3s,baz=142,slow=5.6,SNR=4.5						

IDC ***12*** *07:47:26.8±0.8,31°.02N×103°.65E,h0km,mb4.1/15, mb1 4.3/15,mb1mx4.1/27,mbtmp4.2/15,Error ellipse: s-maj=34.0km s-min=15.5km az=52.0*

ISCJB ***12*** *07:47:28.6±0.6,30°.98N±0°.09×103°.7E±0°.1,h23km±4km, mb4.2/18,Error ellipse: s-maj=22.4km s-min=11.3km az=146.7*

NEIC ***12*** *07:47:28.6±0.4,31°.13N×103°.85E,h10km,mb4.4/3,Error ellipse: s-maj=24.9km s-min=7.6km az=54.0*

BJI ***12*** *07:47:28.9,31°.02N×104°.21E,h17km,mb4.4/1,ML4.6/4*

ISC 12 07:47:29.6±0.8,31°.00N±0°.09×103°.7E±0°.1,h16km±5km, n27,σ0°89/28,mb4.2/18,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.11	139	Pg	Pg	07 47 31.9	-1.2
CD2				Sg	Sg	07 47 36.2	+0.8
CD2				smax			
	comp=N,59μm,0.7s						
LZH	Lanzhou	5.08	2	ePn	Pn	07 48 47.1	+2.0
LZH				smax			
	comp=N,760nm,1.0s						
LZH				smax			
	comp=E,700nm,0.8s						
KSRS	Korea Array	21.03	66	P	P	07 52 12.8	+0.1
	comp=E,8.6nm,0.6s,mb4.3,baz=258,slow=10,SNR=11						
MKAR	Makanchi Array	22.82	320	P	P	07 52 31.8	0.0
	comp=E,3.5nm,0.9s,mb3.8,baz=115,slow=9.7,SNR=4.1						
AAK	Ala-Archa	25.96	305	P	P	07 53 01.1	-0.2
	comp=E,0.8nm,0.3s,mb3.7,baz=173,slow=8.1,SNR=2.1						
ZALV	Zalesovo Beam	26.66	335	P	P	07 53 06.6	-0.9
	comp=E,3.2nm,0.9s,mb3.9,baz=146,slow=9.9,SNR=2.8						
KURK	Kurchatov	27.11	324	P	P	07 53 11.2	-0.4
	comp=E,2.8nm,0.7s,mb3.9,baz=126,slow=9.5,SNR=4.9						
AKASG	Malin Array Be	57.19	313	P	P	07 57 14.2	-1.5
	comp=E,0.9nm,0.4s,mb4.2,baz=69,slow=6.9,SNR=3.3						
ARCES	ARCESS Array B	57.21	336	P	P	07 57 13.8	-1.7
	comp=E,5.2nm,1.0s,mb4.5,baz=96,slow=9.3,SNR=4.2						
FINES	FINESS Array B	57.45	326	P	P	07 57 17.6	+0.2
	comp=E,2.2nm,0.7s,mb4.3,baz=54,slow=9.7,SNR=2.3						
WRAB	Tennant Creek	58.59	146	eP	P	07 57 26.2	+0.3
	comp=E,6.0nm,0.6s,mb4.8						
WRA	Warramunga Arr	58.59	146	P	P	07 57 25.7	-0.2
	comp=E,5.4nm,0.6s,mb4.8,baz=337,slow=7.6,SNR=9.1						
WB2	Warramunga Arr	58.60	146	eP	P	07 57 26.0	+0.1
SPITS	Spitsbergen Ar	59.35	346	P	P	07 57 30.2	-0.3
	comp=E,7.8nm,1.0s,mb4.7,baz=111,slow=11,SNR=2.7						
ASAR	Alice Springs	61.59	148	P	P	07 57 46.6	+0.3
	comp=E,0.9nm,0.5s,mb4.2,baz=337,slow=6.4,SNR=4.9						
NOA	NORSAR Array B	64.55	327	P	P	07 58 06.0	+0.4
	comp=E,1.0nm,0.7s,mb4.0,baz=79,slow=4.4,SNR=2.9						
CDF	Champ du Feu	71.43	316	eP	P	07 58 49.9	+0.8
	comp=E,3.5nm,0.7s,mb4.1						
CDF	Champ du Feu	71.43	316	eP	P	07 58 49.9	+0.8
	comp=E,1.8nm,0.7s,mb4.1						
STKA	Stephens Creek	72.12	147	P	P	07 58 53.1	-0.2
	comp=E,1.7nm,0.5s,mb4.2,baz=320,slow=6.8,SNR=3.8						
INK	Inuvik	72.38	19	P	P	07 58 53.2	-1.2
	comp=E,1.4nm,0.8s,mb4.0,baz=334,slow=8.7,SNR=2.9						
LPL	La Plagne	73.06	313	eP	P	07 59 00.3	+1.4
	comp=E,3.8nm,0.6s,mb4.2						
LPL	La Plagne	73.06	313	eP	P	07 59 00.3	+1.4
	comp=E,1.9nm,0.6s,mb4.2						
SMF	Signal de Mont	74.31	315	eP	P	07 59 06.1	-0.1
TCF	Toulx Ste Croi	75.47	315	eP	P	07 59 13.9	+1.0
CAF	Calviac	76.24	314	eP	P	07 59 18.8	+1.5
YKA	Yellowknife Ar	81.90	17	P	P	07 59 47.2	-0.8
	comp=E,0.6nm,0.7s,mb3.7,baz=329,slow=5.2,SNR=4.0						
YKA	Yellowknife Ar	81.90	17	P	P	07 59 47.2	-0.8

IDC 12 07:47:39.6±0.9,32°.12N×105°.89E,h0km,mb4.2/6, mb1 4.3/7,mb1mx4.0/25,mbtmp4.2/7,ML3.8/1,Error ellipse: s-maj=45.0km s-min=20.4km az=49.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.19	52	Pg	Pn	07 48 26.4	-4.6
XAN				Sg	Sb	07 49 16.4	-0.1
XAN				smax			
	comp=N,910nm,0.8s						
XAN				smax			
	comp=E,400nm,0.8s						
KSRS	Korea Array	18.85	68	P	Pn	07 52 00.5	-1.1
	comp=E,0.3nm,0.3s,baz=260,slow=11,SNR=3.6						
BRTR	Keskin Array B	57.56	300	P	P	07 57 30.9	-0.1
	comp=E,0.8nm,0.7s,baz=97,slow=7.1,SNR=4.0						
FINES	FINESS Array B	57.58	326	P	P	07 57 31.1	+0.3
	comp=E,3.3nm,0.8s,baz=97,slow=9.8,SNR=4.0						
AKASG	Malin Array Be	57.80	313	P	P	07 57 32.2	-0.4
	comp=E,0.9nm,0.3s,baz=66,slow=7.4,SNR=3.2						
WRA	Warramunga Arr	58.50	148	P	P	07 57 37.9	+0.1
	comp=E,2.9nm,0.4s,baz=339,slow=8.0,SNR=8.2						
ASAR	Alice Springs	61.60	151	P	P	07 57 59.0	0.0
	comp=E,2.9nm,0.8s,baz=330,slow=6.6,SNR=7.9						
NB2	NORSAR Subarra	64.62	328	P	P	07 58 18.5	-0.1
	comp=Z,1.0nm,0.5s,baz=71,slow=6.5						
NOA	NORSAR Array B	64.62	328	P	P	07 58 19.1	+0.4
	comp=Z,1.6nm,0.6s,baz=72,slow=6.5,SNR=4.3						

IDC 12 07:47:54.4±2.1,31°.58N×104°.24E,h0km,mb4.3/8, mb1 4.4/8,mb1mx4.0/26,mbtmp4.3/8,Error ellipse: s-maj=54.1km s-min=36.1km az=144.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	4.64	57	Sg	Sg	07 50 22.2	-1.5
XAN				smax			
	comp=N,400nm,0.8s						
XAN				smax			
	comp=E,160nm,0.6s						
CN2	Changchun	20.68	48	eP	P	07 52 27.6	-8.3
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
ZALV	Zalesovo Beam	26.34	334	P	P	07 53 32.3	+0.4
	comp=Z,4.7nm,0.8s,baz=132,slow=8.6,SNR=3.5						
ARCES	ARCESS Array B	56.87	336	P	P	07 57 40.5	0.0
	comp=Z,4.1nm,0.9s,baz=77,slow=7.8,SNR=3.6						
FINES	FINESS Array B	57.23	326	P	P	07 57 43.2	0.0
	comp=Z,1.5nm,0.4s,baz=57,slow=7.0,SNR=3.5						
NOA	NORSAR Array B	64.32	327	P	P	07 58 30.9	-0.5
	comp=Z,1.2nm,0.6s,baz=71,slow=6.6,SNR=3.3						
GERES	GERESS Array B	67.29	314	P	P	07 58 50.9	+0.1
	comp=Z,0.7nm,0.6s,baz=78,slow=7.3,SNR=4.1						
KMBO	Kilima Mbogo	71.13	257	P	P	07 59 15.6	+0.5
	comp=Z,2.0nm,0.8s,baz=45,slow=18,SNR=4.8						
INK	Inuvik	71.67	19	P	P	07 59 17.4	-0.1
	comp=Z,3.8nm,0.7s,baz=344,slow=7.1,SNR=7.9						
YKA	Yellowknife Ar	81.20	17	P	P	08 00 11.9	+0.2
	comp=Z,1.3nm,0.5s,baz=329,slow=5.4,SNR=9.4						

CSEM ***12*** *07:48:47.9±0.1,39°.90N×42°.59E,h10km,MD3.0,Error ellipse: s-maj=3.4km s-min=2.5km az=17.0*

ISK ***12*** *07:48:47.8,39°.94N×42°.71E,h17km,MD2.7*

DDA 12 07:48:48.0,39°.88N×42°.64E,h8km±2km,Md3.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.41	137	ePG	Pg	07 48 56.9	+1.0
AGRB				eSG	Sg	07 49 03.2	+1.8
AGRB	Hanur-Agry	0.41	137	ePg	Pg	07 48 56.9	+0.9
AGRB				eSg	Sg	07 49 03.2	+1.9
HOMI	Horasan	0.58	287	iP	Pg	07 48 59.7	+0.3
HOMI				iS	Sg	07 49 09.4	+2.4
DIGO	Kars	0.78	46	iP	Pg	07 49 03.4	+0.4
DIGO				iS	Sg	07 49 14.5	+1.2
DIGO	Kars	0.78	46	iP	Pg	07 49 03.4	+0.3
DIGO				iS	Sg	07 49 14.5	+1.3
EZM	Erzurum	0.98	272	ePG	Pg	07 49 08.2	+1.4
EZM				eSG	Sg	07 49 22.9	+3.3
DDEM	Demirkent	1.22	327	iP	Pb	07 49 10.8	-0.5
DDEM				iS	Sg	07 49 29.8	+2.6
DDEM	Demirkent	1.22	327	iP	Pb	07 49 10.8	-0.6
DAGI	Agillar	1.32	336	iP	Pn	07 49 12.7	-0.1
DAGI				iS	Sb	07 49 31.5	+1.3
DBAD	Bademkaya	1.35	328	iP	Pn	07 49 13.7	+0.5
DBAD				iS	Sb	07 49 33.2	+2.2
DBAD	Bademkaya	1.35	328	iP	Pn	07 49 13.6	+0.4
BCA	Borcka	1.75	334	ePN	Pn	07 49 17.8	-0.9
BCA	Borcka	1.75	334	ePn	Pn	07 49 17.8	-0.9

ISCJB ***12*** *07:49:19.2±0.4,31°.48N±0°.05×104°.30E±0°.07,h10km, mb4.2/16,Error ellipse: s-maj=9.1km s-min=6.4km az=25.3*

IDC ***12*** *07:49:19.4±1.0,31°.43N×104°.21E,h0km,mb4.1/15, mb1 4.3/16,mb1mx4.1/29,mbtmp4.2/16,ML3.7/1,Error ellipse: s-maj=34.0km s-min=17.8km az=48.0*

NEIC ***12*** *07:49:20.9±0.4,31°.50N×104°.36E,h10km,mb4.2/2,Error ellipse: s-maj=14.5km s-min=6.2km az=50.0*

BJI ***12*** *07:49:21.9,31°.47N×104°.37E,h8km,mb4.5/1,ML4.4/3*

ISC 12 07:49:21.2±0.4,31°.47N±0°.04×104°.26E±0°.07,h10km,n27, σ0°93/29,mb4.2/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.71	218	Pg	Pg	07 49 36.4	+1.6
CD2				Sg	Sg	07 49 43.2	-0.9
CD2				smax			
	comp=E,13μm,0.7s						
LZH	Lanzhou	4.61	356	ePg	Pg	07 50 48.2	-1.4
LZH				Sg	Sg	07 51 45.1	-4.2
LZH				smax			
	comp=N,350nm,1.0s						
LZH				smax			
	comp=E,370nm,0.8s						
BJI	Beijing	12.90	45	P	Pn	07 52 28.8	+4.3
SONM	Songino Array	16.42	5	Pn	Pn	07 53 10.8	-0.8
	comp=E,0.3nm,0.3s,baz=198,slow=17,SNR=2.8						
NACB	Ninganchiao	16.96	111	eP	Pn	07 53 17.3	-1.3
KSRS	Korea Array	20.38	67	P	P	07 53 59.8	+1.8
	comp=E,1.6nm,0.6s,baz=257,slow=9.8,SNR=2.7						
CN2	Changchun	20.74	48	eP	P	07 54 04.0	+2.1
MK31	Makanchi Array	22.79	318	eP	P	07 54 24.2	+0.4
MKAR	Makanchi Array	22.79	318	P	P	07 54 23.8	0.0
	comp=E,12nm,1.0s,mb4.3,baz=127,slow=12,SNR=7.4						
ZAA0	Zalesovo Array	26.45	334	eP	P	07 54 58.0	-0.1
ZALV	Zalesovo Beam	26.45	334	P	P	07 54 58.0	0.0
	comp=E,6.0nm,0.7s,mb4.2,baz=128,slow=9.6,SNR=8.2						
KURK	Kurchatov	27.03	323	P	P	07 55 03.6	+0.3
	comp=E,2.0nm,0.2s,mb4.2,baz=131,slow=9.2,SNR=4.6						
BVAR	Borovoye Array	32.59	321	P	P	07 55 51.9	-0.6
	comp=E,1.1nm,0.7s,mb3.9,baz=106,slow=11,SNR=3.6						
ABKAR	Akbulak array	37.53	311	eP	P	07 56 35.5	+0.3
	comp=E,1.5nm,0.7s,mb3.8						
AKTK	Aktyubinsk	38.98	313	P	P	07 56 48.8	+1.4
AKTO	Aktyubinsk	38.98	313	P	P	07 56 48.8	+1.4
	comp=E,1.1nm,0.7s,mb3.7,baz=93,slow=13,SNR=2.8						
FITZ	Fitzroy Crossi	53.39	154	eP	P	07 58 40.5	-0.6
	comp=E,5.4nm,1.0s,mb4.4						
ARCES	ARCESS Array B	56.98	336	P	P	07 59 06.1	-0.3
	comp=E,2.6nm,0.9s,mb4.3,baz=91,slow=8.5,SNR=2.8						
AKASG	Malin Array Be	57.23	313	P	P	07 59 08.5	0.0
	comp=E,0.5nm,0.4s,mb3.9,baz=67,slow=7.0,SNR=3.0						
FINES	FINESS Array B	57.34	326	P	P	07 59 08.6	-0.4
	comp=E,2.0nm,0.9s,mb4.2,baz=78,slow=16,SNR=2.6						
WRA	Warramunga Arr	58.71	147	P	P	07 59 19.5	+0.4
	comp=E,2.6nm,0.6s,mb4.5,baz=340,slow=7.8,SNR=4.6						
SPITS	Spitsbergen Ar	59.01	346	P	P	07 59 20.1	-0.5
	comp=E,6.2nm,1.1s,mb4.6,baz=81,slow=6.1,SNR=2.0						
ASAR	Alice Springs	61.74	149	P	P	07 59 38.6	-1.2
	comp=E,0.6nm,0.4s,mb4.1,baz=335,slow=6.8,SNR=3.1						
NOA	NORSAR Array B	64.42	327	P	P	07 59 56.5	-0.8
	comp=E,0.8nm,0.8s,mb3.8,baz=90,slow=4.5,SNR=2.7						
INK	Inuvik	71.76	19	P	P	08 00 43.1	-0.1
	comp=E,3.9nm,0.6s,mb4.5,baz=332,slow=7.5,SNR=9.9						
YKA	Yellowknife Ar	81.30	17	P	P	08 01 37.4	+0.1
	comp=E,1.0nm,0.5s,mb4.0,baz=327,slow=5.3,SNR=9.5						
YKA	Yellowknife Ar	81.30	17	P	P	08 01 37.4	+0.1

IDC 12 07:52:55.7±1.4,31°.55N×104°.52E,h0km,mb3.8/6, mb1 4.0/6,mb1mx3.6/27,mbtmp3.9/6,Error ellipse: s-maj=65.7km s-min=24.2km az=57.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.88	318	P	P	07 58 01.6	+0.8
	0.5nm,0.4s,baz=115,slow=9.6,SNR=3.1						
ZALV	Zalesovo Beam	26.48	333	P	P	07 58 33.7	-0.7
	2.4nm,0.6s,baz=134,slow=9.8,SNR=4.4						
ARCES	ARCESS Array B	57.00	336	P	P	08 02 42.3	-0.4
	2.8nm,1.0s,baz=86,slow=6.3,SNR=4.4						
WRA	Warramunga Arr	58.64	147	P	P	08 02 54.8	0.0
	1.1nm,0.6s,baz=339,slow=7.6,SNR=4.6						
INK	Inuvik	71.62	19	P	P	08 04 19.7	+1.1
	0.7nm,0.6s,baz=313,slow=8.9,SNR=3.9						
YKA	Yellowknife Ar	81.17	17	P	P	08 05 12.3	-0.5
	0.2nm,0.5s,baz=329,slow=5.2,SNR=4.1						

IDC ***12*** *07:53:48.3±0.9,30°.41N×103°.70E,h0km,mb4.1/12, mb1 4.2/13,mb1mx4.0/28,mbtmp4.2/13,Error ellipse: s-maj=30.9km s-min=16.6km az=59.0*

MOS ***12*** *07:53:49.8±1.1,30°.45N×103°.75E,h22km,mb4.6/4,Error ellipse: s-maj=24.0km s-min=12.4km az=102.0*

ISCJB ***12*** *07:53:50.3±1.8,30°.45N±0°.09×103°.8E±0°.1,h25km±11km, mb4.2/16,Error ellipse: s-maj=21.3km s-min=13.0km az=149.0*

NEIC ***12*** *07:53:50.1±0.4,30°.51N×103°.88E,h10km,mb4.8/1,Error ellipse: s-maj=18.8km s-min=7.5km az=62.0*

BJI ***12*** *07:53:52.5,30°.61N×104°.33E,h20km,mb4.6/3,ML4.1/4*

ISC 12 07:53:51.3±1.9,30°.48N±0°.09×103°.8E±0°.1,h17km±10km, n23,σ0°76/24,mb4.2/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.43	359	Pg	Pg	07 54 01.3	+1.2
CD2				Sg	Sg	07 54 05.0	-1.0
CD2				smax			
	comp=E,16μm,0.9s						
SONM	Songino Array	17.45	6	P	Pn	07 57 52.1	-1.6
	baz=193,slow=12,SNR=3.6						
KSRS	Korea Array	21.18	64	P	P	07 58 37.4	+1.6
	comp=E,6.5nm,0.7s,mb4.1,baz=261,slow=10,SNR=14						
KSRS	Korea Array	21.18	64	P	P	07 58 37.4	+1.6
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
CN2	Changchun

comp=E,1μm,0.6s
XAN Xi'an 5.23 64 Pg **Sn 07 55 59.5 -11**
XAN Sg **Sg 07 56 40.0 0.0**
XAN smax
comp=N,380nm,0.9s
XAN smax
comp=E,140nm,0.9s
MKAR Makanchi Array 21.91 319 P **P 07 58 46.0 +0.6**
comp=E,1.1nm,0.7s,mb3.4,baz=126,slow=9.3,SNR=3.2
ZALV Zalesovo Beam 25.70 334 P **P 07 59 21.7 -0.5**
comp=E,1.5nm,0.6s,mb3.7,baz=126,slow=7.3,SNR=3.1
KURK Kurchatov 26.18 323 P **P 07 59 26.6 0.0**
comp=E,0.6nm,0.4s,mb3.5,baz=126,slow=9.1,SNR=2.7
BRTR Keskin Array B 55.72 299 P **P 08 03 28.7 -0.2**
comp=E,0.5nm,0.7s,mb3.7,baz=116,slow=6.6,SNR=2.7

*ISCJB **12** 07:54:36.2±0.7, 32°.78N±0°.08×106°.0E±0°.1, h10km, mb4.1/8, Error ellipse: s-maj=14.0km s-min=9.1km az=37.7*
*IDC **12** 07:54:36.9±1.0, 32°.45N×105°.41E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.8/27, mbtmp4.0/8, ML4.7/1, Error ellipse: s-maj=76.0km s-min=18.4km az=57.0*
*NEIC **12** 07:54:38.6±0.5, 32°.43N×105°.36E, h10km, mb4.8/1, Error ellipse: s-maj=21.7km s-min=9.4km az=64.0*
ISC 12 07:54:38.4±0.7, 32°.83N±0°.08×106°.0E±0°.1, h10km, n12, σ0$52/13, mb4.1/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.69**	**225**	Pg	**Sn**	**07 55 59.6**	**+5.2**
CD2				Sg	**Sg**	**07 56 05.0**	**0.0**
CD2				smax			
	comp=N,14μm,0.9s						
CMAR	**Chiang Mai Arr**	**15.65**	**206**	Pn	**Pn**	**07 58 11.7**	**-7.3**
	comp=N,1.2nm,0.3s,baz=7.5,slow=9.4,SNR=3.5						
MKAR	**Makanchi Array**	**22.82**	**315**	P	**P**	**07 59 41.0**	**-0.3**
	comp=N,1.8nm,0.8s,mb3.5,baz=128,slow=9.3,SNR=3.1						
KURK	**Kurchatov**	**26.90**	**320**	P	**P**	**08 00 18.6**	**-0.8**
	comp=N,1.5nm,0.4s,mb3.9,baz=123,slow=9.6,SNR=3.9						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**08 04 24.3**	**+0.2**
	comp=N,1.1nm,0.5s,mb4.2,baz=123,slow=7.0,SNR=3.4						
WRAB	**Tennant Creek**	**59.05**	**149**	*eP*	**P**	**08 04 39.0**	**+0.4**
	comp=N,4.7nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**59.05**	**149**	P	**P**	**08 04 38.2**	**-0.5**
	comp=N,3.0nm,0.6s,mb4.5,baz=340,slow=7.5,SNR=5.8						
ASAR	**Alice Springs**	**62.17**	**151**	P	**P**	**08 04 59.9**	**0.0**
	comp=N,1.3nm,0.5s,mb4.3,baz=335,slow=6.5,SNR=7.3						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**08 05 13.3**	**+1.2**
	comp=N,1.0nm,0.7s,mb4.0,baz=74,slow=6.6,SNR=2.2						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**08 05 13.3**	**+1.2**
STKA	**Stephens Creek**	**72.61**	**149**	P	**P**	**08 06 05.7**	**-0.1**
	comp=N,1.0nm,0.8s,mb3.8,baz=333,slow=8.5,SNR=3.9						
STKA	**Stephens Creek**	**72.61**	**149**	P	**P**	**08 06 05.7**	**-0.1**

*ISCJB **12** 07:55:33.9±0.6, 31°.51N±0°.05×104°.5E±0°.2, h10km, mb3.9/7, Error ellipse: s-maj=20.1km s-min=7.4km az=172.2*
*IDC **12** 07:55:33.8±1.1, 31°.60N×104°.35E, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.8/29, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=36.3km s-min=20.4km az=74.0*
*NEIC **12** 07:55:35.6±0.6, 31°.61N×104°.49E, h10km, mb4.7/1, Error ellipse: s-maj=23.1km s-min=10.9km az=84.0*
ISC 12 07:55:35.9±0.6, 31°.53N±0°.05×104°.4E±0°.2, h10km, n12, σ1$03/13, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.58**	**354**	Pg	**Pg**	**07 57 03.9**	**+0.3**
LZH				Sg	**Sb**	**07 57 52.4**	**+0.9**
LZH				smax			
	comp=N,490nm,0.9s						
LZH				smax			
	comp=E,360nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.92**	**202**	Pn	**Pn**	**07 58 54.8**	**+1.4**
	comp=E,0.9nm,0.3s,baz=13,slow=12,SNR=3.9						
SONM	**Songino Array**	**16.36**	**5**	Pn	**Pn**	**07 59 25.9**	**+0.3**
	comp=E,0.3nm,0.3s,baz=184,slow=17,SNR=2.8						
KSRS	**Korea Array**	**20.24**	**67**	P	**P**	**08 00 12.2**	**+0.9**
	comp=E,4.4nm,0.7s,baz=256,slow=10.0,SNR=6.5						
MKAR	**Makanchi Array**	**22.84**	**318**	P	**P**	**08 00 38.3**	**-0.8**
	comp=E,0.9nm,0.7s,mb3.3,baz=129,slow=13,SNR=2.4						
WRAB	**Tennant Creek**	**58.67**	**147**	*eP*	**P**	**08 05 33.5**	**-0.1**
	comp=E,3.9nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.68**	**147**	P	**P**	**08 05 34.2**	**+0.5**
	comp=E,2.6nm,0.6s,mb4.4,baz=328,slow=9.0,SNR=7.3						
WB2	**Warramunga Arr**	**58.68**	**147**	*eP*	**P**	**08 05 33.9**	**+0.2**
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**08 05 55.3**	**+0.8**
	comp=E,0.6nm,0.6s,mb3.9,baz=338,slow=7.0,SNR=3.8						
INK	**Inuvik**	**71.67**	**19**	P	**P**	**08 06 55.1**	**-2.3**
	comp=E,1.2nm,0.8s,mb3.9,baz=297,slow=6.8,SNR=2.3						
STKA	**Stephens Creek**	**72.22**	**147**	P	**P**	**08 06 59.6**	**-1.6**
	comp=E,0.7nm,0.4s,mb4.0,baz=315,slow=8.6,SNR=4.1						
YKA	**Yellowknife Ar**	**81.21**	**17**	P	**P**	**08 07 50.4**	**-1.2**
	comp=E,0.3nm,0.6s,mb3.4,baz=328,slow=6.1,SNR=3.8						

*ISCJB **12** 07:56:57.4±0.5, 31°.40N±0°.07×103°.98E±0°.09, h10km, mb4.0/16, Error ellipse: s-maj=11.1km s-min=9.7km az=170.4*
*IDC **12** 07:56:57.9±0.6, 31°.42N×103°.94E, h0km, mb4.0/16, mb1 4.2/18, mb1mx4.1/28, mbtmp4.0/18, ML4.2/2, Error ellipse: s-maj=25.2km s-min=14.8km az=59.0*
*MOS **12** 07:56:58.8±1.4, 31°.40N×103°.95E, h21km, mb4.4/2, Error ellipse: s-maj=20.6km s-min=11.1km az=105.2*
*NEIC **12** 07:56:59.7±0.5, 31°.39N×103°.86E, h10km, mb4.7/1, Error ellipse: s-maj=17.0km s-min=8.8km az=73.0*
ISC 12 07:56:59.7±0.5, 31°.41N±0°.07×103°.90E±0°.09, h10km, n26, σ1$01/27, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.67**	**359**	*eP*g	**Pg**	**07 58 35.6**	**+6.4**
LZH				Sg	**Sg**	**07 59 22.8**	**-6.9**
LZH				smax			
	comp=N,460nm,0.7s						
LZH				smax			
	comp=E,440nm,0.7s						
XAN	**Xi'an**	**4.98**	**57**	Pg	**Pg**	**07 58 35.9**	**+0.8**
XAN				Sg	**Sg**	**07 59 28.8**	**-11**
XAN				smax			
	comp=N,610nm,0.9s						
XAN				smax			
	comp=E,250nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.65**	**200**	Pn	**Pn**	**08 00 13.7**	**+0.3**
	comp=E,0.5nm,0.3s,baz=214,slow=26,SNR=2.7						
SONM	**Songino Array**	**16.52**	**6**	Pn	**Pn**	**08 00 52.5**	**+1.1**
	comp=E,0.5nm,0.3s,baz=147,slow=8.6,SNR=3.0						
KSRS	**Korea Array**	**20.69**	**67**	P	**P**	**08 01 37.1**	**-2.8**
	comp=E,8.1nm,1.0s,baz=255,slow=10,SNR=4.4						
KSRS	**Korea Array**	**20.69**	**67**	P	**P**	**08 01 37.2**	**-2.7**
KSRS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**08 01 59.7**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.4,baz=119,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**08 01 59.6**	**-1.1**
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**08 02 35.8**	**-0.1**
	comp=Z,3.5nm,0.3s,mb4.3,baz=130,slow=9.8,SNR=3.0						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**08 02 42.2**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.3,baz=129,slow=9.4,SNR=2.2						
KURK				PcP	PcP	08 06 02.2	-0.5
	comp=Z,1.0nm,0.6s,baz=113,slow=2.0,SNR=4.2						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**08 02 42.2**	**+1.5**
KURK				PcP	PcP	08 06 02.2	-0.5
BVAR	**Borovoye Array**	**32.45**	**322**	P	**P**	**08 03 30.1**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.5,baz=87,slow=7.4,SNR=2.2						
BRTR	**Keskin Array B**	**56.44**	**299**	P	**P**	**08 06 42.6**	**+1.0**
	comp=Z,0.7nm,0.8s,mb3.8,baz=92,slow=7.7,SNR=4.7						
ARCES	**ARCESS Array B**	**56.91**	**336**	P	**P**	**08 06 43.6**	**-0.9**
	comp=Z,2.6nm,0.9s,mb4.3,baz=68,slow=6.7,SNR=3.7						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**08 06 46.2**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.3,baz=98,slow=5.7,SNR=2.6						
WRAB	**Tennant Creek**	**58.82**	**146**	*eP*	**P**	**08 06 58.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**58.82**	**146**	*eP*	**P**	**08 06 58.5**	**+0.1**
	comp=Z,4.0nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**08 06 58.9**	**+0.5**
	comp=Z,2.9nm,0.5s,mb4.5,baz=340,slow=7.9,SNR=9.5						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**08 07 19.4**	**+0.3**
	comp=Z,0.7nm,0.4s,mb4.1,baz=342,slow=6.8,SNR=5.5						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**08 07 34.1**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.8,baz=47,slow=7.2,SNR=3.5						
GERES	**GERESS Array B**	**67.21**	**314**	P	**P**	**08 07 54.8**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=52,slow=8.0,SNR=3.2						
KMBO	**Kilima Mbogo**	**70.81**	**256**	P	**P**	**08 08 16.0**	**-0.9**
	comp=Z,1.3nm,0.7s,mb4.0,baz=53,slow=20,SNR=3.2						
INK	**Inuvik**	**71.93**	**19**	P	**P**	**08 08 24.5**	**+1.7**
	comp=Z,3.5nm,1.0s,mb4.2,baz=324,slow=6.1,SNR=6.9						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**08 08 25.9**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=340,slow=6.2,SNR=4.5						
YKA	**Yellowknife Ar**	**81.46**	**17**	P	**P**	**08 09 14.8**	**-1.9**
	comp=Z,1.3nm,0.7s,mb3.9,baz=327,slow=5.1,SNR=9.6						
QSPA	**South Pole Qui**	**121.18**	**180**	PKP	PKPdf	08 15 50.8	-0.8
	comp=Z,0.9nm,0.6s,baz=333,slow=1.2,SNR=6.6						

*ISCJB **12** 07:57:11.4±1.5, 31°.2N±0°.1×104°.5E±0°.3, h10km, mb4.0/8, Error ellipse: s-maj=40.4km s-min=16.3km az=1.5*
*IDC **12** 07:57:12.0±2.2, 31°.25N×104°.51E, h0km, mb4.1/7, mb1 4.3/8, mb1mx3.9/28, mbtmp4.2/8, ML4.8/1, Error ellipse: s-maj=49.8km s-min=39.9km az=80.0*
*NEIC **12** 07:57:13.2±1.4, 31°.21N×104°.61E, h10km, mb4.0/1, Error ellipse: s-maj=37.4km s-min=15.0km az=92.0*
ISC 12 07:57:13.3±1.5, 31°.2N±0°.1×104°.6E±0°.3, h10km, n12, σ0$88/12, mb4.0/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.69**	**203**	Pn	**Pn**	**08 00 27.4**	**-0.1**
	1.4nm,0.3s,baz=8.3,slow=9.1,SNR=16						
MKAR	**Makanchi Array**	**23.16**	**319**	P	**P**	**08 02 20.8**	**+1.0**
	1.2nm,0.6s,mb3.5,baz=122,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**23.16**	**319**	P	**P**	**08 02 20.8**	**+1.0**
ZALV	**Zalesovo Beam**	**26.80**	**334**	P	**P**	**08 02 52.6**	**-0.7**
	4.7nm,0.4s,mb4.4,baz=119,slow=12,SNR=5.0						
KURK	**Kurchatov**	**27.40**	**323**	P	**P**	**08 02 57.7**	**-1.1**
	0.7nm,0.4s,mb3.5,baz=130,slow=9.6,SNR=3.1						
ABKAR	**Akbulak array**	**37.90**	**311**	*eP*	**P**	**08 04 32.5**	**+2.0**
	1.2nm,0.4s,mb4.0						
AKTK	**Aktyubinsk**	**39.35**	**313**	P	**P**	**08 04 41.9**	**-0.8**
AKTO	**Aktyubinsk**	**39.35**	**313**	P	**P**	**08 04 41.9**	**-0.8**
	1.4nm,0.6s,mb3.9,baz=104,slow=8.1,SNR=5.4						
ARCES	**ARCESS Array B**	**57.32**	**336**	P	**P**	**08 07 00.7**	**-0.2**
	2.3nm,0.8s,mb4.2,baz=77,slow=7.6,SNR=4.0						
FINES	**FINESS Array B**	**57.70**	**326**	P	**P**	**08 07 04.2**	**+0.5**
	1.8nm,0.5s,mb4.3,baz=98,slow=8.9,SNR=5.5						
FINES	**FINESS Array B**	**57.70**	**326**	P	**P**	**08 07 04.2**	**+0.5**
YKA	**Yellowknife Ar**	**81.47**	**17**	P	**P**	**08 09 30.7**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=328,slow=5.2,SNR=7.0						

*IDC **12** 07:58:17.4±0.7, 30°.94N×103°.45E, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.1/29, mbtmp4.1/20, Error ellipse: s-maj=24.9km s-min=15.3km az=45.0*
*ISCJB **12** 07:58:18.5±1.4, 30°.91N±0°.07×103°.48E±0°.08, h17km±10km, mb4.1/30, Error ellipse: s-maj=13.6km s-min=10.3km az=41.4*
*NEIC **12** 07:58:19.5±0.3, 30°.93N×103°.43E, h10km, mb4.3/11, Error ellipse: s-maj=16.5km s-min=6.8km az=224.0*
*MOS **12** 07:58:19.5±0.9, 30°.94N×103°.44E, h26km, mb4.5/9, Error ellipse: s-maj=31.8km s-min=9.6km az=125.2*
*BJI **12** 07:58:21.5, 31°.14N×103°.63E, h24km, mb4.6/2, ML4.3/3*
ISC 12 07:58:19.5±1.2, 30°.97N±0°.07×103°.49E±0°.06, h9km±8km, n57, σ0$88/57, mb4.1/30, 12C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**104**	Pg	**Pg**	**07 58 23.2**	**-1.2**
CD2				Sg	**Sg**	**07 58 28.2**	**+0.6**
CD2				smax			
	comp=N,85μm,0.5s						
XAN	**Xi'an**	**5.52**	**55**	Sg	**Sb**	**08 01 01.8**	**-0.4**
XAN				smax			
	comp=N,380nm,0.9s						
XAN				smax			
	comp=E,120nm,1.1s						
SSLB	**Suanglung**	**17.07**	**111**	*eP*	**Pn**	**08 02 20.9**	**+2.5**
	comp=E,46nm,1.1s						
KSRS	**Korea Array**	**21.19**	**66**	P	**P**	**08 03 04.5**	**-0.7**
	comp=E,1.6nm,0.7s,mb3.5,baz=252,slow=10,SNR=3.0						
CN2	**Changchun**	**21.57**	**47**	*eP*	**P**	**08 03 11.2**	**+2.0**
MKAR	**Makanchi Array**	**22.74**	**320**	P	**P**	**08 03 21.2**	**-0.4**
	comp=E,1.0nm,0.4s,mb3.6,baz=120,slow=9.8,SNR=3.9						
KSH	**Kashi**	**23.97**	**298**	P	**P**	**08 03 37.8**	**+3.7**
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**08 03 48.8**	**-2.4**
	comp=E,0.9nm,0.2s,mb3.9,baz=166,slow=4.2,SNR=3.0						
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**08 03 48.8**	**-2.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK	**Ala-Archa**	**25.84**	**305**	*eP*	**P**	**08 03 51.5**	**+0.3**
	comp=Z,3.8nm,0.6s,mb4.1						
AML	**Almayashu**	**26.27**	**303**	*eP*	**P**	**08 03 57.0**	**+2.0**
	comp=Z,3.1nm,0.7s,mb4.0						
EKS2	**Erkin-Say**	**26.36**	**305**	*eP*	**P**	**08 03 57.5**	**+1.7**
	comp=Z,1.6nm,0.5s,mb3.8						
ZAA0	**Zalesovo Array**	**26.62**	**335**	*eP*	**P**	**08 03 58.6**	**+0.6**
ZALV	**Zalesovo Beam**	**26.62**	**335**	P	**P**	**08 03 57.5**	**-0.5**
	comp=Z,3.8nm,0.3s,mb4.4,baz=145,slow=8.1,SNR=4.5						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**08 04 01.6**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.1,baz=126,slow=9.8,SNR=45						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**08 04 01.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**27.04**	**324**	*eP*	**P**	**08 04 02.6**	**+0.8**
	comp=Z,3.3nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**32.57**	**322**	P	**P**	**08 04 51.2**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=95,slow=12,SNR=4.1						
BVAR				PcP	PcP	08 07 33.9	-3.2
	comp=Z,1.0nm,0.6s,baz=158,slow=4.7,SNR=5.3						
ABKAR	**Akbulak array**	**37.37**	**312**	*eP*	**P**	**08 05 32.3**	**0.0**
	comp=Z,1.5nm,0.8s,mb3.9						
AKTK	**Aktyubinsk**	**38.85**	**313**	P	**P**	**08 05 45.5**	**+0.8**
AKTO	**Aktyubinsk**	**38.85**	**313**	P	**P**	**08 05 45.5**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.6,baz=23,slow=4.8,SNR=3.6						
BILL	**Bilibino**	**51.52**	**25**	*eP*	**P**	**08 07 19.5**	**-5.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
JOF	**Joensuu**	**54.86**	**328**	*eP*	**P**	**08 07 49.2**	**-0.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
JOF	**Joensuu**	**54.86**	**328**	*ep*	**P**	**08 07 49.2**	**-0.5**
	comp=Z,2.4nm,0.5s,mb4.5						
ASF	**Jabal al Asfar**	**55.89**	**290**	P	**P**	**08 07 58.6**	**+0.9**
	comp=Z,0.9nm,0.3s,mb4.2,baz=65,slow=5.1,SNR=3.7						
BRTR	**Keskin Array B**	**56.35**	**300**	P	**P**	**08 08 00.5**	**-0.4**
	comp=Z,1.9nm,0.9s,mb4.1,baz=101,slow=6.4,SNR=5.7						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**08 08 04.5**	**-1.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=71,slow=6.5,SNR=4.0						
ARCES	**ARCESS Array B**	**57.17**	**336**	P	**P**	**08 08 05.5**	**-0.7**
	comp=Z,4.0nm,0.9s,mb4.5,baz=94,slow=7.9,SNR=6.5						
ARCES				PcP	PcP	08 08 58.6	-2.1
	comp=Z,1.8nm,0.7s,baz=73,slow=4.1,SNR=5.2						
ARCES	**ARCESS Array B**	**57.17**	**336**	P	**P**	**08 08 05.5**	**-0.7**
ARCES				PcP	PcP	08 08 58.6	-2.1
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**08 08 07.8**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.4,baz=93,slow=6.1,SNR=6.0						
WRAB	**Tennant Creek**	**58.65**	**146**	*eP*	**P**	**08 08 17.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**58.65**	**146**	*eP*	**P**	**08 08 17.0**	**-0.2**
	comp=Z,9.5nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**08 08 17.5**	**+0.3**
	comp=Z,2.0nm,0.5s,mb4.4,baz=337,slow=7.5,SNR=4.2						
WB2	**Warramunga Arr**	**58.66**	**146**	*eP*	**P**	**08 08 16.9**	**-0.3**
ASAR	**Alice Springs**	**61.65**	**148**	P	**P**	**08 08 37.0**	**-0.7**
	comp=Z,0.6nm,0.4s,mb4.0,baz=334,slow=6.9,SNR=2.8						
NB2	**NORSAR Subarra**	**64.49**	**327**	P	**P**	**08 08 55.1**	**-1.0**
	comp=Z,1.6nm,0.5s,mb4.3,baz=75,slow=6.9						
NOA	**NORSAR Array B**	**64.49**	**327**	P	**P**	**08 08 55.5**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.3,baz=75,slow=5.4,SNR=5.6						
GERES	**GERESS Array B**	**67.26**	**314**	P	**P**	**08 09 14.1**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=72,slow=4.3,SNR=3.7						
KMBO	**Kilima Mbogo**	**70.36**	**256**	P	**P**	**08 09 33.2**	**-0.8**
	comp=Z,1.0nm,0.7s,mb3.8,baz=53,slow=20,SNR=2.6						
CDF	**Champ du Feu**	**71.34**	**316**	*iP*	**P**	**08 09 39.1**	**-0.4**
	comp=Z,3.0nm,0.7s,mb4.0						
CDF	**Champ du Feu**	**71.34**	**316**	*iP*	**P**	**08 09 39.1**	**-0.4**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CDF	**Champ du Feu**	**71.34**	**316**	*iP*	**P**	**08 09 39.1**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.0						
INK	**Inuvik**	**72.46**	**19**	P	**P**	**08 09 45.6**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.0,baz=227,slow=3.0,SNR=3.7						
LPG	**La Plagne**	**72.96**	**313**	*iP*	**P**	**08 09 49.7**	**+0.5**
	comp=Z,10.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.96**	**313**	*iP*	**P**	**08 09 49.7**	**+0.5**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.96**	**313**	*iP*	**P**	**08 09 49.7**	**+0.5**
	comp=Z,5.0nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**74.22**	**315**	*iP*	**P**	**08 09 56.1**	**-0.5**
	comp=Z,7.1nm,0.9s,mb4.3						
SMF	**Signal de Mont**	**74.22**	**315**	*iP*	**P**	**08 09 56.1**	**-0.5**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SMF	**Signal de Mont**	**74.22**	**315**	*iP*	**P**	**08 09 56.1**	**-0.5**
	comp=Z,3.5nm,0.9s,mb4.3						
TCF	**Toulx Ste Croi**	**75.38**	**315**	*iP*	**P**	**08 10 03.1**	**-0.2**
	comp=Z,7.8nm,1.0s,mb4.3						
TCF	**Toulx Ste Croi**	**75.38**	**315**	*iP*	**P**	**08 10 03.1**	**-0.2**
TCF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TCF	**Toulx Ste Croi**	**75.38**	**315**	*iP*	**P**	**08 10 03.1**	**-0.2**
	comp=Z,3.9nm,1.0s,mb4.3						
CAF	**Calviac**	**76.14**	**314**	*eP*	**P**	**08 10 07.9**	**+0.2**
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**08 10 39.0**	**-0.3**
	comp=Z,0.7nm,0.8s,mb3.6,baz=327,slow=5.3,SNR=3.6						
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**08 10 39.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**93.17**	**287**	P	**P**	**08 11 34.1**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.9,baz=55,slow=3.5,SNR=4.0						
ROSC	**El Rosal**	**144.32**	**356**	PKP	PKPdf	08 17 56.0	-0.7
	comp=Z,3.1nm,0.5s,baz=282,slow=20,SNR=3.4						

*IDC **12** 08:01:58.0±2.4, 32°.04N×103°.21E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/26, mbtmp3.8/5, Error ellipse: s-maj=68.9km s-min=34.2km az=97.0*
ISC 12 08:01:60.0±3.6, 31°.97N±0°.09×103°.3E±0°.4, h8km±20km, n7, σ0$65/9, mb3.7/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**161**	Pg	**Pg**	**08 02 29.2**	**+7.7**
CD2				Sg	**Sg**	**08 02 35.9**	**-0.1**
CD2				smax			
	comp=N,9μm,0.9s						
LZH	**Lanzhou**	**4.13**	**6**	*eP*g	**Pn**	**08 03 03.7**	**+0.4**
LZH				Sg	**Sn**	**08 04 00.6**	**+8.9**
LZH				smax			
	comp=N,370nm,0.6s						
LZH				smax			
	comp=E,990nm,0.6s						
KSRS	**Korea Array**	**20.92**	**68**	P	**P**	**08 06 42.9**	**0.0**
	comp=E,1.7nm,0.7s,baz=262,slow=9.5,SNR=4.4						
WRA	**Warramunga Arr**	**59.56**	**146**	P	**P**	**08 12 03.4**	**-0.7**
	comp=E,1.6nm,0.6s,mb4.3,baz=341,slow=7.5,SNR=7.8						
ASAR	**Alice Springs**	**62.57**	**148**	P	**P**	**08 12 25.6**	**+1.1**
	comp=E,0.9nm,0.8s,mb4.0,baz=339,slow=6.2,SNR=4.1						
STKA	**Stephens Creek**	**73.09**	**147**	P	**P**	**08 13 31.0**	**+0.3**
	comp=E,0.6nm,0.5s,mb3.8,baz=333,slow=9.0,SNR=2.9						
YKA	**Yellowknife Ar**	**81.06**	**17**	P	**P**	**08 14 14.1**	**-1.0**
	comp=E,0.1nm,0.6s,mb3.0,baz=324,slow=5.1,SNR=2.4						

*IDC **12** 08:02:18.1±0.7, 32°.00N×104°.96E, h0km, mb4.0/13, mb1 4.1/15, mb1mx4.0/30, mbtmp4.0/15, ML4.0/2, Error ellipse: s-maj=30.3km s-min=15.1km az=53.0*
*BJI **12** 08:02:18.9, 31°.43N×104°.30E, h22km, mb4.2/2, ML4.1/8*
*NEIC **12** 08:02:19.3±0.5, 31°.93N×104°.96E, h10km, mb4.3/2, Error ellipse: s-maj=20.4km s-min=10.1km az=65.0*
ISC 12 08:02:18.7±2.2, 31°.90N±0°.08×104°.93E±0°.10, h5km±14km, n34, σ0$99/34, mb4.1/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.27**	**348**	Pg	**Pg**	**08 03 40.2**	**-0.2**
LZH				smax			
	comp=N,710nm,0.7s						
LZH				smax			
	comp=E,700n

CHTO pmax pmax
comp=Z,17nm,0.8s
CHTO Chiang Mai 13.80 203 *e*Pn **Pn 08 06 18.2 +3.7**
comp=Z,17nm,0.8s
CMAR Chiang Mai Arr 14.13 202 Pn **Pn 08 06 20.0 +0.9**
comp=Z,1.0nm,0.3s,baz=14,slow=11,SNR=9.9
SONM Songino Array 16.15 5 Pn **Pn 08 06 45.8 0.0**
comp=Z,0.7nm,0.3s,baz=179,slow=15,SNR=5.9
ULN Ulaanbaatar 16.23 6 *e*P **Pn 08 06 47.1 +0.3**
ULN pmax pmax
comp=Z,27nm,1.3s
ULN Ulaanbaatar 16.23 6 *e*Pn **Pn 08 06 47.1 +0.3**
comp=Z,27nm,1.3s
ZAK Zakamensk 18.66 358 *e*P **Pn 08 07 17.2 +0.3**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
TLY Talaya 19.95 358 *e*P **Pn 08 07 33.2 +0.8**
TLY pmax pmax
comp=Z,25nm,1.5s
TLY Talaya 19.95 358 *e*P **Pn 08 07 33.2 +0.8**
comp=Z,25nm,1.5s
MOY Mondy 20.09 354 *e*P **P 08 07 35.3 +3.1**
KSRS Korea Array 20.11 67 P **P 08 07 32.4 -0.1**
comp=Z,12nm,0.8s,baz=256,slow=10,SNR=9.2
KSRS Korea Array 20.11 67 P **P 08 07 32.4 -0.2**
KSRS pmax pmax
comp=Z,12nm,0.8s
CN2 Changchun 20.43 48 *e*P **P 08 07 38.0 +2.0**
CN2 pmax pmax
comp=Z,30nm,0.7s
MK31 Makanchi Array 22.73 318 *e*P **P 08 08 00.8 +0.2**
MKAR Makanchi Array 22.73 318 P **P 08 08 00.4 -0.2**
comp=Z,7.3nm,0.7s,mb4.2,baz=121,slow=12,SNR=12
KSH Kashi 24.37 297 P **P 08 08 20.0 +3.2**
KSH pmax pmax
comp=Z,42μm,14.1s
TKM2 Tokmak 2 25.42 304 *e*P **P 08 08 27.1 +0.8**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
TKM2 Tokmak 2 25.42 304 *e*P **P 08 08 27.1 +0.8**
comp=Z,4.5nm,0.7s,mb4.1
AAK Ala-Archa 26.12 303 P **P 08 08 32.5 -0.2**
comp=Z,1.4nm,0.5s,mb3.8,baz=180,slow=12,SNR=2.4
ZAA0 Zalesovo Array 26.30 333 *e*P **P 08 08 34.1 -0.1**
ZALV Zalesovo Beam 26.30 333 P **P 08 08 34.1 -0.1**
comp=Z,8.5nm,0.5s,mb4.5,baz=123,slow=11,SNR=6.2
AML Almayashu 26.58 302 *e*P **P 08 08 38.5 +1.6**
comp=Z,9.3nm,1.1s,mb4.2
EKS2 Erkin-Say 26.64 303 *e*P **P 08 08 38.2 +0.8**
comp=Z,3.0nm,0.8s,mb3.9
KLR Kul'dur 26.91 42 *e*P **P 08 08 40.0 +0.3**
KURK Kurchatov 26.94 322 *e*P **P 08 08 39.8 -0.2**
comp=Z,12nm,0.9s,mb4.4,baz=129,slow=8.7,SNR=19
KURK Kurchatov 26.94 322 *e*P **P 08 08 40.1 +0.1**
KURK pmax pmax
comp=Z,15nm,1.0s,mb4.5
KURK Kurchatov 26.94 322 *e*P **P 08 08 40.1 +0.1**
comp=Z,15nm,1.0s,mb4.5
BVAR Borovoye Array 32.51 321 P **P 08 09 29.2 -0.1**
comp=Z,3.1nm,0.6s,mb4.4,baz=115,slow=9.4,SNR=12
ABKAR Akbulak array 37.50 311 *e*P **P 08 10 12.7 +0.3**
comp=Z,5.5nm,0.8s,mb4.3
AKTK Aktyubinsk 38.95 312 P **P 08 10 24.6 +0.1**
AKTO Aktyubinsk 38.95 312 P **P 08 10 24.6 0.0**
comp=Z,2.9nm,0.5s,mb4.3,baz=99,slow=11,SNR=12
KAPI Kappang 39.33 156 P **P 08 10 27.7 -0.4**
comp=Z,7.7nm,0.5s,mb4.7,baz=75,slow=14,SNR=3.9
ARU Arti 40.14 322 *e*P **P 08 10 34.8 +0.4**
ARU pmax pmax
comp=Z,35nm,0.8s,mb5.1
ARU Arti 40.14 322 *e*P **P 08 10 34.8 +0.4**
comp=Z,35nm,0.8s,mb5.1
PETK Petropavlovsk- 43.52 45 P **P 08 11 00.9 -1.2**
comp=Z,5.8nm,0.8s,mb4.4,baz=216,slow=7.3,SNR=4.9
KIV Kislovodsk 49.24 303 *e*P **P 08 11 48.1 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BILL Bilibino 50.48 25 *e*P **P 08 11 51.1 -5.1**
BILL pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
OBN Obninsk 52.23 318 *e*P **P 08 12 00.4 -9.2**
OBN pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
FITZ Fitzroy Crossi 53.54 155 *e*P **P 08 12 19.2 -0.4**
comp=Z,8.7nm,0.9s,mb4.7
FITZ Fitzroy Crossi 53.54 155 P **P 08 12 18.1 -1.5**
comp=Z,5.7nm,0.9s,mb4.5,baz=345,slow=4.7,SNR=6.5
JOF Joensuu 54.67 328 *e*p **P 08 12 26.0 -1.4**
comp=Z,7.5nm,0.7s,mb4.8
KEV Kevo 56.29 336 *e*p **P 08 12 34.1 -4.8**
comp=Z,15nm,0.9s,mb5.0
ASF Jabal al Asfar 56.43 290 P **P 08 12 40.9 +0.4**
comp=Z,2.5nm,0.6s,mb4.4,baz=297,slow=4.3,SNR=2.8
BRTR Keskin Array B 56.71 299 P **P 08 12 42.2 -0.2**
comp=Z,1.8nm,0.7s,mb4.2,baz=91,slow=7.4,SNR=7.5
ARCES ARCESS Array B 56.82 336 P **P 08 12 42.4 -0.3**
comp=Z,4.6nm,0.7s,mb4.6,baz=75,slow=8.0,SNR=9.3
KAF Kangasniemi 57.04 327 *e*p **P 08 12 43.5 -0.9**
comp=Z,5.8nm,0.5s,mb4.9
AKASG Malin Array Be 57.19 313 P **P 08 12 44.8 -0.8**
comp=Z,1.5nm,0.4s,mb4.4,baz=70,slow=6.6,SNR=6.4
FINES FINESS Array B 57.23 326 P **P 08 12 45.6 -0.1**
comp=Z,8.6nm,0.5s,mb5.1,baz=85,slow=7.5,SNR=28
SPITS Spitsbergen Ar 58.81 346 P **P 08 12 56.5 0.0**
comp=Z,2.7nm,0.6s,mb4.5,baz=100,slow=9.4,SNR=6.9
WRAB Tennant Creek 58.81 147 *e*P **P 08 12 58.3 +1.0**
comp=Z,14nm,0.8s,mb5.0
WRA Warramunga Arr 58.82 147 P **P 08 12 57.0 -0.2**
comp=Z,10nm,0.6s,mb5.0,baz=339,slow=7.4,SNR=16
EIL Elat 58.86 288 P **P 08 12 57.0 -0.6**
comp=Z,3.7nm,0.6s,mb4.6,baz=129,slow=16,SNR=4.5
ASAR Alice Springs 61.86 149 P **P 08 13 18.8 +0.8**
comp=Z,4.7nm,0.7s,mb4.7,baz=332,slow=6.2,SNR=13
STHS Stebnicka Huta 62.49 313 *e* **P 08 13 31.3 +9.2**
VYHS Vyhne 64.29 313 *e*P **P 08 13 34.8 +0.8**
VYHS Vyhne 64.29 313 *e*P **P 08 13 34.8 +0.8**
NB2 NORSAR Subarra 64.31 327 P **P 08 13 32.6 -1.3**
comp=Z,3.4nm,0.5s,mb4.6,baz=73,slow=6.9
NOA NORSAR Array B 64.31 327 P **P 08 13 32.4 -1.4**
comp=Z,3.0nm,0.5s,mb4.6,baz=72,slow=6.7,SNR=7.7
NOA NORSAR Array B 64.31 327 P **P 08 13 32.4 -1.4**
BRG Berggiesshubel 66.43 316 *e*P **P 08 13 52.3 +4.5**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
COLD Coldfoot 66.77 24 *e*P **P 08 13 53.9 +4.2**
comp=Z,4.2nm,1.0s,mb4.4
CLL Collm 66.82 317 *e*P **P 08 13 54.0 +3.7**
CLL Collm 66.82 317 *e*P **P 08 13 50.0 -0.3**
GERES GERESS Array B 67.34 314 P **P 08 13 53.5 -0.1**
comp=Z,2.2nm,0.9s,mb4.2,baz=108,slow=4.3,SNR=3.6
GRA1 Grafenberg Arr 68.50 316 *e*P **P 08 14 05.6 +4.7**
comp=Z,2.0nm,0.8s,mb4.2
GRF Grafenberg Arr 68.50 316 *e*P **P 08 14 05.6 +4.7**
comp=Z,2.0nm,0.8s,mb4.2
GRF Grafenberg Arr 68.50 316 *e*P **P 08 14 05.6 +4.7**
GRF pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
GRF Grafenberg Arr 68.50 316 *e*P **P 08 14 05.6 +4.7**
GRF pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KMBO Kilima Mbogo 71.36 257 P **P 08 14 18.1 -1.0**
comp=Z,0.7nm,0.5s,mb3.9,baz=38,slow=12,SNR=3.4
CDF Champ du Feu 71.39 316 *e*P **P 08 14 17.9 -0.8**
comp=Z,4.5nm,0.8s,mb4.2
CDF Champ du Feu 71.39 316 *e*P **P 08 14 17.9 -0.8**
CDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
CDF Champ du Feu 71.39 316 *e*P **P 08 14 17.9 -0.8**
comp=Z,2.3nm,0.8s,mb4.2
INK Inuvik 71.46 19 P **P 08 14 18.9 +0.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=345,slow=8.6,SNR=7.2
INK Inuvik 71.46 19 *e*P **P 08 14 18.7 -0.1**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 71.46 19 *e*P **P 08 14 18.7 0.0**
comp=Z,6.6nm,1.0s,mb4.5
WLF Walferdange 71.48 317 P **P 08 14 20.3 +1.1**
WLF Walferdange 71.48 317 *e*P **P 08 14 23.7 +4.5**
WLF pmax pmax
comp=Z,22nm,1.3s,mb4.9
WLF Walferdange 71.48 317 *e*P **P 08 14 23.7 +4.5**
comp=Z,22nm,1.3s,mb4.9
STKA Stephens Creek 72.36 147 *e*P **P 08 14 25.2 +0.6**
comp=Z,2.5nm,0.5s,mb4.4
STKA Stephens Creek 72.36 147 P **P 08 14 25.2 +0.7**
comp=Z,4.8nm,0.7s,mb4.5,baz=351,slow=5.9,SNR=9.7
LPG La Plagne 73.06 313 *e*P **P 08 14 28.8 +0.1**
comp=Z,17nm,0.9s,mb4.7
LPG La Plagne 73.06 313 *e*P **P 08 14 28.8 +0.1**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPG La Plagne 73.06 313 *e*P **P 08 14 28.8 +0.1**
comp=Z,8.6nm,0.9s,mb4.7
BNI Bardonecchia 73.31 313 *e*P **P 08 14 30.2 0.0**
BNI pmax pmax
comp=Z,15nm,1.4s,mb4.7
BNI Bardonecchia 73.31 313 *e*P **P 08 14 30.2 0.0**
comp=Z,15nm,1.4s,mb4.7
SMF Signal de Mont 74.28 315 *e*P **P 08 14 34.9 -1.0**
comp=Z,6.8nm,0.8s,mb4.3
SMF Signal de Mont 74.28 315 *e*P **P 08 14 34.9 -1.0**
SMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SMF Signal de Mont 74.28 315 *e*P **P 08 14 34.9 -1.0**
comp=Z,3.4nm,0.8s,mb4.3
TCF Toulx Ste Croi 75.43 316 *e*P **P 08 14 41.8 -0.8**
comp=Z,8.7nm,1.0s,mb4.3
TCF Toulx Ste Croi 75.43 316 *e*P **P 08 14 41.8 -0.8**
TCF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TCF Toulx Ste Croi 75.43 316 *e*P **P 08 14 41.8 -0.8**
comp=Z,4.3nm,1.0s,mb4.3
CAF Calviac 76.22 314 *e*P **P 08 14 46.8 -0.3**
comp=Z,7.2nm,0.8s,mb4.3
CAF Calviac 76.22 314 *e*P **P 08 14 46.8 -0.3**
CAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CAF Calviac 76.22 314 *e*P **P 08 14 46.8 -0.3**
comp=Z,3.6nm,0.8s,mb4.3
YKA Yellowknife Ar 81.00 17 P **P 08 15 12.9 -0.1**
comp=Z,2.0nm,0.5s,mb4.3,baz=328,slow=5.2,SNR=17
YKA Yellowknife Ar 81.00 17 P **P 08 15 12.9 -0.1**
SCHQ Schefferville 93.47 355 P **P 08 16 12.7 -1.4**
comp=Z,4.4nm,1.0s,mb4.8,baz=357,slow=1.6,SNR=5.9
TXAR Lajitas Array 113.64 27 PKP PKiKP 08 21 37.3 -0.2
comp=Z,0.3nm,0.9s,baz=116,slow=2.9,SNR=3.9

*ISCJB **12** 08:03:35.7±0.4,32.°01N±0.°08×104.°64E±0.°06,h10km, mb4.6/48, Error ellipse: s-maj=11.3km s-min=7.3km az=18.9*
*IDC **12** 08:03:35.6±0.6,32.°04N×104.°60E,h0km,mb4.4/25, mb1 4.5/26,mb1mx4.4/35,mbtmp4.4/26,ML3.6/1, Error ellipse: s-maj=18.5km s-min=12.5km az=37.0*
*NEIC **12** 08:03:37.7±0.4,32.°05N×104.°70E,h10km,mb4.7/22, Error ellipse: s-maj=11.8km s-min=8.1km az=210.0*
*MOS **12** 08:03:38.3±1.1,32.°02N×104.°57E,h27km,mb4.9/17, Error ellipse: s-maj=14.3km s-min=7.8km az=121.9*
*BJI **12** 08:03:40.5,32.°03N×104.°36E,h22km,mb4.6/4,ML4.4/2*
ISC 12 08:03:37.8±0.4,32.°10N±0.°07×104.°69E±0.°06,h10km,n90, σ1º02/90,mb4.6/48,13C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.04**	**350**	Pg	**Pg**	**08 04 53.4**	**-1.8**
LZH				Sg	**Sg**	**08 05 42.3**	**-5.2**
LZH				smax			
	comp=N,2μm,0.7s						
LZH				smax			
	comp=E,3μm,0.9s						
KSRS	**Korea Array**	**19.80**	**68**	P	**Pn**	**08 08 09.1**	**-0.8**
	comp=E,0.2nm,0.3s,baz=255,slow=11,SNR=2.4						
CN2	**Changchun**	**20.05**	**48**	*e*P	**P**	**08 08 15.2**	**+4.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MK31	**Makanchi Array**	**22.57**	**317**	*e*P	**P**	**08 08 39.2**	**+1.1**
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**08 08 38.1**	**0.0**
	comp=Z,2.2nm,0.6s,mb3.8,baz=299,slow=6.6,SNR=5.8						
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**08 08 38.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**26.05**	**333**	P	**P**	**08 09 09.9**	**-1.3**
	comp=Z,5.6nm,0.4s,mb4.5,baz=122,slow=11,SNR=4.7						
AAK	**Ala-Archa**	**26.07**	**302**	P	**P**	**08 09 10.9**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.6,baz=201,slow=23,SNR=1.7						
AAK	**Ala-Archa**	**26.07**	**302**	P	**P**	**08 09 10.9**	**-0.5**
AML	**Almayashu**	**26.54**	**301**	*e*P	**P**	**08 09 17.9**	**+2.2**
	comp=Z,11nm,0.9s,mb4.4						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**08 09 15.6**	**-2.0**
	comp=Z,5.2nm,0.8s,mb4.1,baz=128,slow=8.7,SNR=4.7						
KURK				PcP	PcP	08 12 40.1	-0.4
	comp=Z,3.2nm,0.6s,baz=106,slow=2.0,SNR=6.1						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**08 09 15.6**	**-2.0**
KURK						08 12 40.1	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
KURK	**Kurchatov**	**26.76**	**322**	*e*P	**P**	**08 09 18.2**	**+0.7**
	comp=Z,7.5nm,0.8s,mb4.3						
KURK				PcP	PcP	08 12 40.1	-0.4
MAJO	**Matsushiro**	**27.95**	**72**	*e*P	**P**	**08 09 30.1**	**+1.7**
MJAR	**Matsushiro Arr**	**27.95**	**72**	P	**P**	**08 09 28.5**	**0.0**
	comp=Z,2.6nm,0.5s,mb4.1,baz=278,slow=9.5,SNR=7.5						
KBL	**Kabul**	**29.79**	**284**	*e*P	**P**	**08 09 47.3**	**+2.5**
	comp=Z,22nm,1.3s,mb4.7						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**08 10 07.7**	**+0.8**
	comp=Z,2.2nm,0.7s,mb4.1,baz=104,slow=12,SNR=5.1						
BVAR				PcP	PcP	08 12 54.1	-0.5
	comp=Z,2.6nm,0.6s,baz=116,slow=3.4,SNR=5.7						
ABKAR	**Akbulak array**	**37.39**	**311**	*e*P	**P**	**08 10 51.7**	**+0.9**
	comp=Z,8.7nm,0.9s,mb4.6						
AKTK	**Aktyubinsk**	**38.83**	**312**	P	**P**	**08 11 02.3**	**-0.5**
AKTO	**Aktyubinsk**	**38.83**	**312**	P	**P**	**08 11 02.3**	**-0.5**
	comp=Z,4.9nm,0.9s,mb4.2,baz=89,slow=9.2,SNR=6.0						
ARU	**Arti**	**39.96**	**321**	*e*P	**P**	**08 11 12.7**	**+0.6**
ARU				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
ARU	**Arti**	**39.96**	**321**	*e*P	**P**	**08 11 12.7**	**+0.6**
	comp=Z,24nm,1.1s,mb4.8						
TIXI	**Tiksi**	**41.68**	**11**	*e*P	**P**	**08 11 29.1**	**+2.9**
TIXI				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.6						
TIXI	**Tiksi**	**41.68**	**11**	*e*P	**P**	**08 11 29.1**	**+2.9**
	comp=Z,21nm,1.4s,mb4.6						
PETK	**Petropavlovsk-**	**43.13**	**45**	P	**P**	**08 11 39.4**	**+1.1**
	comp=Z,2.9nm,0.6s,mb4.2,baz=305,slow=2.4,SNR=11						
ZEI	**Tsey**	**48.49**	**301**	*e*P	**P**	**08 12 20.5**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
KIV	**Kislovodsk**	**49.19**	**303**	*e*P	**P**	**08 12 26.1**	**0.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
BILL	**Bilibino**	**50.06**	**26**	*e*P	**P**	**08 12 32.1**	**-0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BILL	**Bilibino**	**50.06**	**26**	*e*P	**P**	**08 12 32.3**	**0.0**
	comp=Z,6.3nm,1.0s,mb4.6						
OBN	**Obninsk**	**52.08**	**317**	*e*P	**P**	**08 12 48.2**	**+0.5**
OBN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.80**	**155**	P	**P**	**08 12 59.3**	**-1.5**
	comp=Z,2.9nm,0.9s,mb4.2,baz=182,slow=19,SNR=2.3						
ASF	**Jabal al Asfar**	**56.48**	**290**	P	**P**	**08 13 19.9**	**-0.2**
	comp=Z,5.9nm,1.0s,mb4.6,baz=334,slow=3.4,SNR=6.8						
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**08 13 19.9**	**-0.2**
	comp=Z,8.3nm,0.9s,mb4.8,baz=81,slow=8.0,SNR=6.6						
BRTR	**Keskin Array B**	**56.69**	**299**	P	**P**	**08 13 19.1**	**-2.4**
	comp=Z,1.9nm,0.7s,mb4.2,baz=98,slow=6.9,SNR=7.0						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**08 13 23.2**	**-0.3**
	comp=Z,5.8nm,0.5s,mb4.8,baz=94,slow=9.0,SNR=14						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**08 13 23.7**	**-0.3**
	comp=Z,0.7nm,0.3s,mb4.2,baz=68,slow=7.2,SNR=6.2						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**08 13 23.7**	**-0.3**
SPITS	**Spitsbergen Ar**	**58.49**	**346**	P	**P**	**08 13 34.1**	**+0.5**
	comp=Z,9.4nm,0.9s,mb4.8,baz=98,slow=11,SNR=5.4						
EIL	**Elat**	**58.92**	**288**	P	**P**	**08 13 37.3**	**0.0**
	comp=Z,8.4nm,0.9s,mb4.8,baz=72,slow=3.3,SNR=4.6						
WRAB	**Tennant Creek**	**59.03**	**147**	*e*P	**P**	**08 13 38.6**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
WRAB	**Tennant Creek**	**59.03**	**147**	*e*P	**P**	**08 13 38.6**	**+0.6**
	comp=Z,15nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**08 13 36.4**	**-1.6**
	comp=Z,7.9nm,0.7s,mb4.8,baz=328,slow=9.0,SNR=6.5						
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**08 13 36.4**	**-1.6**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIRR	**Tirgusor**	**59.11**	**306**	*e*P	**P**	**08 13 38.6**	**+0.2**
TIRR				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.7						
TIRR	**Tirgusor**	**59.11**	**306**	*e*P	**P**	**08 13 38.6**	**+0.2**
	comp=Z,13nm,1.5s,mb4.7						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**08 14 00.0**	**+1.2**
	comp=Z,3.7nm,0.7s,mb4.6,baz=336,slow=6.1,SNR=6.5						
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**08 14 10.6**	**-1.1**
	comp=Z,1.7nm,0.5s,mb4.3,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**08 14 09.8**	**-2.0**
	comp=Z,3.3nm,0.7s,mb4.5,baz=71,slow=6.6,SNR=4.7						
COLD	**Coldfoot**	**66.36**	**24**	*e*P	**P**	**08 14 26.8**	**+0.5**
	comp=Z,6.4nm,1.0s,mb4.6						
CLL	**Collm**	**66.67**	**317**	*e*P	**P**	**08 14 28.0**	**-0.6**
CLL				*e*		08 14 33.0	
CLL				pmax	pmax		
	comp=Z,957nm,1.3s						
CLL	**Collm**	**66.67**	**317**	*e*P	**P**	**08 14 28.0**	**-0.6**
	comp=Z,10.0nm,1.3s,mb4.7						
CLL				*e*		08 14 33.0	
CLL	**Collm**	**66.67**	**317**	*e*P	**P**	**08 14 28.0**	**-0.6**
	comp=Z,10.0nm,1.3s,mb4.7						
CLL				*e*		08 14 33.0	
GEC2	**GERESS Array S**	**67.21**	**314**	*e*P	**P**	**08 14 33.0**	**+0.9**
GEC2				pmax	pmax		
	comp=Z,1μm,1.1s						
GEC2	**GERESS Array S**	**67.21**	**314**	*e*P	**P**	**08 14 33.0**	**+0.9**
	comp=Z,1μm,1.1s						
GERES	**GERESS Array B**	**67.21**	**314**	P	**P**	**08 14 32.7**	**+0.6**
	comp=Z,4.4nm,1.1s,mb4.4,baz=86,slow=7.2,SNR=4.7						
COLA	**College**	**68.32**	**26**	*e*P	**P**	**08 14 39.0**	**+0.2**
COLA				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
COLA	**College**	**68.32**	**26**	*e*P	**P**	**08 14 39.0**	**+0.3**
	comp=Z,20nm,1.1s,mb5.1						
KDAK	**Kodiak Island**	**69.73**	**34**	P	**P**	**08 14 48.5**	**+0.7**
	comp=Z,47nm,1.1s,mb5.3,baz=314,slow=9.8,SNR=5.2						
BFO	**Black Forest**	**70.66**	**315**	*e*P	**P**	**08 14 57.0**	**+3.4**
BFO				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
BFO	**Black Forest**	**70.66**	**315**	*e*P	**P**	**08 14 57.0**	**+3.4**
	comp=Z,5.2nm,1.1s,mb4.4						
INK	**Inuvik**	**71.05**	**20**	P	**P**	**08 14 55.2**	**-0.4**
	comp=Z,9.8nm,0.9s,mb4.7,baz=326,slow=10,SNR=5.4						
INK	**Inuvik**	**71.05**	**20**	P	**P**	**08 14 55.2**	**-0.4**
CDF	**Champ du Feu**	**71.25**	**316⇑**	*i*P	**P**	**08 14 56.9**	**-0.3**
	comp=Z,5.2nm,0.8s,mb4.2						
CDF	**Champ du Feu**	**71.25**	**316⇑**	*i*P	**P**	**08 14 56.9**	**-0.3**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CDF	**Champ du Feu**	**71.25**	**316⇑**	*i*P	**P**	**08 14 56.9**	**-0.3**
	comp=Z,2.6nm,0.8s,mb4.2						
KMBO	**Kilima Mbogo**	**71.62**	**257**	P	**P**	**08 14 58.5**	**-1.5**
	comp=Z,2.7nm,0.8s,mb4.2,baz=36,slow=16,SNR=5.1						
KMBO	**Kilima Mbogo**	**71.62**	**257**	P	**P**	**08 14 58.5**	**-1.4**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMBO	**Kilima Mbogo**	**71.62**	**257**	*e*P	**P**	**08 15 01.3**	**+1.4**
	comp=Z,3.4nm,1.0s,mb4.2						
DAWY	**Dawson**	**71.83**	**25**	*e*P	**P**	**08 14 59.8**	**-0.6**
STKA	**Stephens Creek**	**72.58**	**148**	P	**P**	**08 15 04.0**	**-1.1**
	comp=Z,6.2nm,0.8s,mb4.6,baz=334,slow=6.2,SNR=3.3						
LPG	**La Plagne**	**72.93**	**313⇑**	*i*P	**P**	**08 15 08.0**	**+0.7**
	comp=Z,26nm,0.8s,mb4.9						
LPG	**La Plagne**	**72.93**	**313⇑**	*i*P	**P**	**08 15 08.0**	**+0.7**
LPG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
LPG	**La Plagne**	**72.93**	**313⇑**	*i*P	**P**	**08 15 08.0**	**+0.7**
	comp=Z,13nm,0.8s,mb4.9						
SMF	**Signal de Mont**	**74.14**	**315⇑**	*i*P	**P**	**08 15 14.0**	**-0.4**
	comp=Z,12nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.14**	**315⇑**	*i*P	**P**	**08 15 14.0**	**-0.4**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.14**	**315⇑**	*i*P	**P**	**08 15 14.0**	**-0.4**
	comp=Z,6.1nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**75.29**	**316⇑**	*i*P	**P**	**08 15 21.1**	**0.0**
	comp=Z,19nm,1.2s,mb4.6						
TCF	**Toulx Ste Croi**	**75.29**	**316⇑**	*i*P	**P**	**08 15 21.1**	**0.0**
TCF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
TCF	**Toulx Ste Croi**	**75.29**	**316⇑**	*i*P	**P**	**08 15 21.1**	**0.0**
	comp=Z,9.4nm,1.2s,mb4.6						
CAF	**Calviac**	**76.09**	**314⇑**	*i*P	**P**	**08 15 26.0**	**+0.4**
SKAG	**Skagway**	**76.23**	**27**	*e*P	**P**	**08 15 27.0**	**+0.9**
	comp=Z,16nm,1.2s,mb4.8						
YKA	**Yellowknife Ar**	**80.59**	**17**	P	**P**	**08 15 48.6**	**-1.6**
	comp=Z,4.8nm,0.6s,mb4.6,baz=328,slow=5.2,SNR=14						
EDM	**Edmonton**	**88.82**	**22**	*e*P	**P**	**08 16 32.0**	**+0.1**
FFC	**Flin Flon**	**90.53**	**15**	*e*P	**P**	**08 16 39.5**	**-0.3**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
FFC	**Flin Flon**	**90.53**	**15**	*e*P	**P**	**08 16 39.5**	**-0.3**
	comp=Z,7.5nm,0.9s,mb5.0						
NEW	**Newport**	**91.67**	**26**	*e*P	**P**	**08 16 46.1**	**+0.8**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	**Newport**	**91.67**	**26**	*e*P	**P**	**08 16 46.1**	**+0.8**
	comp=Z,3.9nm,1.0s,mb4.7						
SLMT	**Seeley Lake**	**93.87**	**25**	*e*P	**P**	**08 16 56.2**	**+0.7**
	comp=Z,4.6nm,0.9s,mb4.9						
HLID	**Hailey**	**96.64**	**27**	*e*P	**P**	**08 17 06.8**	**-1.3**
LPAZ	**La Paz**	**162.96**	**336**	PKP	PKPdf	08 23 41.3	+0.4
	comp=Z,1.9nm,0.9s,baz=27,slow=4.7,SNR=3.6						

IDC 12 08:07:07.1±1.7,31.°44N×103.°47E,h0km,mb3.8/4, mb1 4.0/5,mb1mx3.6/26,mbtmp3.8/5,ML4.1/1,Error ellipse: s-maj=57.8km s-min=30.9km az=100.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.55**	**199**	Pn	Pn	08 10 22.3	+1.6
	0.3nm,0.3s,baz=9.5,slow=9.1,SNR=4.1						
KSRS	**Korea Array**	**21.01**	**67**	P	P	08 11 52.5	+0.3
	2.1nm,0.6s,baz=256,slow=9.9,SNR=4.8						
ASAR	**Alice Springs**	**62.06**	**148**	P	P	08 17 29.1	-0.5
	0.6n

comp=Z,40nm,1.2s,mb4.7
MK31 Makanchi Array 22.91 320 *eP* **P 08 13 07.0 -0.1**
MKAR Makanchi Array 22.91 320 P **P 08 13 07.5 +0.4**
comp=Z,11nm,1.0s,mb4.3,baz=131,slow=10,SNR=13
TKM2 Tokmak 2 25.32 306 *eP* **P 08 13 30.7 +0.7**
TKM2 pmax pmax
comp=Z,20nm,1.1s,mb4.6
TKM2 Tokmak 2 25.32 306 *eP* **P 08 13 30.7 +0.6**
comp=Z,20nm,1.1s,mb4.6
AAK Ala-Archa 26.00 305 P **P 08 13 36.3 +0.2**
comp=Z,4.2nm,0.8s,mb4.0,baz=65,slow=5.4,SNR=6.4
AAK Ala-Archa 26.00 305 P **P 08 13 36.3 +0.2**
AAK *eP* 08 13 37.0
AML Almayashu 26.42 304 *eP* **P 08 13 41.3 +1.2**
comp=Z,16nm,0.8s,mb4.6
EKS2 Erkin-Say 26.51 305 *eP* **P 08 13 41.5 +0.7**
comp=Z,12nm,1.0s,mb4.4
ZALV Zalesovo Beam 26.79 335 P **P 08 13 43.5 +0.3**
comp=Z,3.7nm,0.3s,mb4.3,baz=140,slow=7.7,SNR=3.2
ZALV Zalesovo Beam 26.79 335 P **P 08 13 43.5 +0.3**
KURK Kurchatov 27.21 324 P **P 08 13 46.6 -0.4**
comp=Z,6.3nm,0.8s,mb4.2,baz=130,slow=9.6,SNR=10.0
KURK Kurchatov 27.21 324 P **P 08 13 46.6 -0.4**
KURK *eP* 08 13 46.8
BOD Bodaibo 27.94 12 *eP* **P 08 13 54.1 +0.6**
BVAR Borovoye Array 32.74 322 P **P 08 14 35.4 -0.6**
comp=Z,0.9nm,0.6s,mb3.9,baz=114,slow=7.3,SNR=3.8
ABKAR Akbulak array 37.53 312 *eP* **P 08 15 16.3 -1.0**
comp=Z,5.7nm,0.8s,mb4.3
ARU Arti 40.39 323 *eP* **P 08 15 41.0 -0.1**
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
ARU Arti 40.39 323 *eP* **P 08 15 41.0 -0.1**
comp=Z,5.5nm,0.6s,mb4.5
ZEI Tsey 48.34 302 *eP* **P 08 16 44.0 -1.0**
ZEI pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
KIV Kislovodsk 49.10 303 *eP* **P 08 16 50.7 0.0**
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.9
BILL Bilibino 51.63 25 *eP* **P 08 17 10.5 +1.0**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
OBN Obninsk 52.39 318 *eP* **P 08 17 20.0 +4.6**
OBN pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
JOF Joensuu 55.03 328 *ep* **P 08 17 32.9 -1.7**
comp=Z,3.8nm,0.6s,mb4.6
ASF Jabal al Asfar 56.02 290 P **P 08 17 40.8 -1.5**
comp=Z,1.1nm,0.3s,mb4.3,baz=146,slow=7.4,SNR=3.1
BRTR Keskin Array B 56.49 300 P **P 08 17 44.5 -1.0**
comp=Z,1.1nm,0.8s,mb3.9,baz=93,slow=6.6,SNR=5.2
AKASG Malin Array Be 57.26 313 P **P 08 17 49.4 -1.3**
comp=Z,0.8nm,0.4s,mb4.1,baz=68,slow=6.9,SNR=4.0
AKASG Malin Array Be 57.26 313 P **P 08 17 49.4 -1.3**
ARCES ARCESS Array B 57.34 336 P **P 08 17 50.0 -1.0**
comp=Z,4.8nm,0.9s,mb4.5,baz=23,slow=16,SNR=3.6
FINES FINESS Array B 57.56 326 P **P 08 17 51.4 -1.3**
comp=Z,0.5nm,0.3s,mb4.0,baz=132,slow=13,SNR=4.3
WRAB Tennant Creek 58.48 146 *eP* **P 08 18 01.1 +1.5**
comp=Z,13nm,0.6s,mb5.1
WRA Warramunga Arr 58.49 146 P **P 08 18 00.7 +1.1**
comp=Z,4.8nm,0.9s,mb4.5,baz=337,slow=7.5,SNR=6.8
ASAR Alice Springs 61.48 148 P **P 08 18 20.7 +0.5**
comp=Z,1.6nm,1.0s,mb4.1,baz=340,slow=7.1,SNR=3.3
NB2 NORSAR Subarra 64.66 327 P **P 08 18 39.0 -1.9**
comp=Z,7.2nm,0.9s,mb4.7,baz=73,slow=6.9
NOA NORSAR Array B 64.66 327 P **P 08 18 39.4 -1.4**
comp=Z,2.6nm,0.8s,mb4.3,baz=73,slow=6.3,SNR=4.3
NOA NORSAR Array B 64.66 327 P **P 08 18 39.4 -1.4**
GERES GERESS Array B 67.43 314 P **P 08 18 59.3 +0.4**
comp=Z,0.2nm,0.4s,mb3.5,baz=67,slow=3.5,SNR=3.8
COLD Coldfoot 67.91 24 *eP* **P 08 19 03.0 +1.4**
comp=Z,5.5nm,0.9s,mb4.6
COLA College 69.88 26 *eP* **P 08 19 15.1 +1.2**
comp=Z,7.1nm,0.8s,mb4.7
KMBO Kilima Mbogo 70.41 256 P **P 08 19 16.6 -1.3**
comp=Z,0.4nm,0.4s,mb3.7,baz=39,slow=20,SNR=3.8
STKA Stephens Creek 72.01 147 *eP* **P 08 19 28.2 +1.0**
comp=Z,2.3nm,0.6s,mb4.3
STKA Stephens Creek 72.01 147 P **P 08 19 28.2 +1.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=360,slow=3.4,SNR=4.8
STKA Stephens Creek 72.01 147 P **P 08 19 28.2 +1.0**
INK Inuvik 72.57 19 P **P 08 19 29.6 -0.5**
comp=Z,3.8nm,1.0s,mb4.3,baz=324,slow=7.3,SNR=7.8
RES Resolute Bay 74.06 5 *eP* **P 08 19 39.6 +0.7**
comp=Z,4.5nm,0.9s,mb4.4
YKA Yellowknife Ar 82.10 17 P **P 08 20 23.2 -0.4**
comp=Z,1.1nm,0.7s,mb4.2,baz=326,slow=4.8,SNR=17
YKA Yellowknife Ar 82.10 17 P **P 08 20 23.2 -0.4**
YKA pmax pmax
comp=Z,2.0nm,0.7s
EDM Edmonton 90.36 21 *eP* **P 08 21 06.0 +1.5**
ROSC El Rosal 144.47 356 PKP PKPdf 08 27 39.4 -1.2
comp=Z,3.1nm,0.4s,baz=78,slow=20,SNR=4.6
OTAV Otavalo 149.06 4 *e*PKPbc PKPbc 08 27 53.6 +1.2
LPAZ La Paz 163.68 330 PKP PKPdf 08 28 07.0 -0.1
comp=Z,2.4nm,1.2s,baz=104,slow=5.5,SNR=3.5

*BJI **12** 08:08:15.4, 31.°57N×104.°35E, h10km, mb4.8/6, ML4.6/5*
*IDC **12** 08:08:17.3±0.5, 31.°71N×104.°59E, h0km, mb4.5/26, mb1 4.6/29, mb1mx4.5/36, mbtmp4.5/29, ML4.1/3, Error ellipse: s-maj=17.5km s-min=10.9km az=49.0*
*MOS **12** 08:08:18.9±1.1, 31.°63N×104.°63E, h24km, mb4.9/24, Error ellipse: s-maj=12.3km s-min=7.0km az=118.2*
*ISCJB **12** 08:08:19.9±3.7, 31.°66N±0.°06×104.°54E±0.°08, h28km±27km, mb4.6/45, Error ellipse: s-maj=11.4km s-min=9.1km az=150.1*
*NEIC **12** 08:08:19.4±0.3, 31.°71N×104.°53E, h10km, mb4.7/19, Error ellipse: s-maj=11.1km s-min=7.2km az=61.0*
*DJA **12** 08:08:28, 31.°64N×104.°26E, h54km, mb5.0/8*
*SZGRF **12** 08:08:41.9, 33.°27N×101.°85E, h33km, mb4.6, Qinghai, China*
ISC 12 08:08:20.7±2.4, 31.°69N±0.°06×104.°56E±0.°07, h19km±14km, n94, σ0.9 97/96, mb4.6/45, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.42**	**352**	*e*Pg	**Pg**	**08 09 51.0**	**+5.5**
LZH				Sn	**Sn**	**08 10 26.4**	**+8.5**
LZH				Sg	**Sg**	**08 10 42.5**	**-0.3**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,1μm,0.7s						
CMAR	**Chiang Mai Arr**	**14.12**	**202**	Pn	**Pn**	**08 11 40.2**	**+0.4**
	comp=E,0.3nm,0.3s,baz=13,slow=11,SNR=7.6						
SONM	**Songino Array**	**16.18**	**4**	Pn	**Pn**	**08 12 07.1**	**+0.1**
	comp=E,0.6nm,0.3s,baz=190,slow=16,SNR=8.7						
TLY	**Talaya**	**19.98**	**358**	*e*P	**Pn**	**08 12 55.1**	**+1.4**
TLY				pmax	pmax		
	comp=Z,34nm,1.5s						
TLY	**Talaya**	**19.98**	**358**	*e*P	**Pn**	**08 12 50.8**	**-2.9**
	comp=Z,55nm,1.5s						
KSRS	**Korea Array**	**20.06**	**67**	P	**P**	**08 12 50.6**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=254,slow=11,SNR=15						
MOY	**Mondy**	**20.13**	**354**	*e*P	**P**	**08 12 55.1**	**+1.6**
MOY				pmax	pmax		
	comp=Z,45nm,1.5s						
HIA	**Hailar**	**20.94**	**29**	*e*P	**P**	**08 13 02.9**	**+0.6**
MKAR	**Makanchi Array**	**22.80**	**318**	P	**P**	**08 13 22.3**	**+0.1**
	comp=Z,7.9nm,0.9s,mb4.2,baz=117,slow=10,SNR=6.5						
MDJ	**Mudanjiang**	**23.43**	**49**	*e*P	**P**	**08 13 30.2**	**+1.4**
	comp=Z,87nm,1.5s,mb5.0						
ZAA0	**Zalesovo Array**	**26.37**	**333**	*e*P	**P**	**08 13 55.0**	**-0.6**
ZALV	**Zalesovo Beam**	**26.37**	**333**	P	**P**	**08 13 56.0**	**+0.4**
	comp=Z,8.4nm,0.4s,mb4.6,baz=128,slow=9.6,SNR=7.4						
KURK	**Kurchatov**	**27.02**	**322**	P	**P**	**08 14 01.4**	**0.0**
	comp=Z,8.5nm,0.9s,mb4.3,baz=131,slow=8.7,SNR=8.8						
KURK	**Kurchatov**	**27.02**	**322**	P	**P**	**08 14 01.4**	**-0.1**
KBL	**Kabul**	**29.79**	**285**	*e*P	**P**	**08 14 25.8**	**-0.6**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
KBL	**Kabul**	**29.79**	**285**	*e*P	**P**	**08 14 25.8**	**-0.6**
	comp=Z,10nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**32.58**	**321**	P	**P**	**08 14 50.4**	**-0.3**
	comp=Z,2.3nm,0.7s,mb4.2,baz=116,slow=9.7,SNR=6.0						
YSS	**Yuzh-Sakhalins**	**32.88**	**51**	*e*P	**P**	**08 14 54.1**	**+0.7**
AKTK	**Aktyubinsk**	**39.03**	**313**	P	**P**	**08 15 45.6**	**-0.4**
AKTO	**Aktyubinsk**	**39.03**	**313**	P	**P**	**08 15 45.6**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.0,baz=101,slow=11,SNR=6.9						
SVE	**Sverdlovsk**	**39.26**	**323**	*e*P	**P**	**08 15 49.3**	**+1.4**
KAPI	**Kappang**	**39.27**	**156**	*e*P	**P**	**08 15 50.5**	**+2.1**

comp=Z,20nm,1.0s,mb4.8
ARU Arti 40.21 322 *eP* **P 08 15 55.7 -0.1**
ARU pmax pmax
comp=Z,23nm,0.8s,mb5.0
ARU Arti 40.21 322 *eP* **P 08 15 55.7 -0.1**
comp=Z,23nm,0.8s,mb5.0
PETK Petropavlovsk- 43.50 44 P **P 08 16 21.0 -1.7**
comp=Z,4.6nm,0.8s,mb4.3,baz=256,slow=2.7,SNR=5.9
PETK Petropavlovsk- 43.50 44 P **P 08 16 21.0 -1.7**
PETK Petropavlovsk- 43.50 44 P **P 08 16 21.0 -1.7**
ZEI Tsey 48.60 301 *eP* **P 08 17 02.1 -1.0**
ZEI pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
OBN Obninsk 52.31 318 *eP* **P 08 17 31.5 +0.6**
OBN pmax pmax
comp=Z,14nm,1.0s,mb4.8
FITZ Fitzroy Crossi 53.48 155 *eP* **P 08 17 40.3 +0.4**
comp=Z,14nm,0.9s,mb4.9
FITZ Fitzroy Crossi 53.48 155 P **P 08 17 41.2 +1.2**
comp=Z,8.8nm,0.9s,mb4.7,baz=26,slow=2.8,SNR=9.5
MALT Malatya 53.55 297 *eP* **P 08 17 40.9 +0.5**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 53.55 297 *eP* **P 08 17 40.9 +0.5**
comp=Z,5.5nm,1.1s,mb4.4
ASF Jabal al Asfar 56.51 290 P **P 08 18 02.6 +0.7**
comp=Z,9.5nm,0.9s,mb4.8,baz=318,slow=2.3,SNR=9.7
BRTR Keskin Array B 56.79 299 P **P 08 18 03.8 0.0**
comp=Z,6.6nm,0.8s,mb4.7,baz=98,slow=6.6,SNR=18
ARCES ARCESS Array B 56.89 336 P **P 08 18 03.8 -0.2**
comp=Z,5.2nm,0.8s,mb4.6,baz=64,slow=11,SNR=6.7
AKASG Malin Array Be 57.27 313 P **P 08 18 06.7 -0.2**
comp=Z,3.6nm,0.6s,mb4.6,baz=72,slow=6.1,SNR=10.0
FINES FINESS Array B 57.30 326 P **P 08 18 05.8 -1.2**
comp=Z,12nm,0.8s,mb5.0,baz=76,slow=8.0,SNR=12
MMAI Mount Meron Ar 57.43 291 P **P 08 18 07.7 -0.7**
comp=Z,2.8nm,0.7s,mb4.4,baz=89,slow=11,SNR=4.6
WRA Warramunga Arr 58.75 147 P **P 08 18 15.8 -1.8**
comp=Z,10nm,0.6s,mb5.0,baz=340,slow=7.9,SNR=12
EIL Elat 58.94 288 P **P 08 18 16.9 -2.0**
comp=Z,5.0nm,0.5s,mb4.8,baz=6.3,slow=5.8,SNR=7.7
TIRR Tirgusor 59.27 306 *eP* **P 08 18 20.9 -0.1**
TIRR pmax pmax
comp=Z,13nm,1.4s,mb4.8
TIRR Tirgusor 59.27 306 *eP* **P 08 18 20.9 -0.1**
comp=Z,13nm,1.4s,mb4.8
ASAR Alice Springs 61.79 149 P **P 08 18 38.9 +0.5**
comp=Z,3.3nm,0.5s,mb4.7,baz=334,slow=6.7,SNR=14
STHS Stebnicka Huta 62.57 313 *eP* **P 08 18 44.6 +1.2**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 62.57 313 *eP* **P 08 18 44.6 +1.2**
comp=Z,3.5nm,1.0s,mb4.4
STHS Stebnicka Huta 62.57 313 *eP* **P 08 18 44.6 +1.2**
KECS Kecovo 63.33 312 *eP* **P 08 18 48.6 +0.1**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
KECS Kecovo 63.33 312 *eP* **P 08 18 48.6 +0.1**
comp=Z,2.2nm,0.9s,mb4.3
KECS Kecovo 63.33 312 *eP* **P 08 18 48.6 +0.1**
VYHS Vyhne 64.37 313 *eP* **P 08 18 56.6 +1.3**
VYHS pmax pmax
comp=Z,106nm,3.7s
VYHS Vyhne 64.37 313 *eP* **P 08 18 56.6 +1.3**
comp=Z,106nm,3.7s
VYHS Vyhne 64.37 313 *eP* **P 08 18 56.6 +1.3**
NOA NORSAR Array B 64.38 327 P **P 08 18 54.5 -0.6**
comp=Z,5.5nm,0.8s,mb4.6,baz=70,slow=6.3,SNR=7.6
CTA Charters Tower 65.18 136 P **P 08 19 00.0 -0.8**
comp=Z,6.2nm,0.9s,mb4.6,baz=14,slow=4.2,SNR=3.7
CLL Collm 66.90 317 *eP* **P 08 19 12.0 +0.4**
GEC2 GERESS Array S 67.42 314 *eP* **P 08 19 16.1 +1.2**
GEC2 pmax pmax
comp=Z,2μm,1.3s
GEC2 GERESS Array S 67.42 314 *eP* **P 08 19 16.1 +1.2**
comp=Z,2μm,1.3s
GERES GERESS Array B 67.42 314 P **P 08 19 13.9 -1.0**
comp=Z,2.4nm,0.8s,mb4.3,baz=72,slow=5.9,SNR=8.6
MOX Moxa 67.96 317 *eP* **P 08 19 20.4 +2.1**
comp=Z,65nm,1.1s,mb5.6
GRA1 Grafenberg Arr 68.58 316 *eP* **P 08 19 23.2 +1.0**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 68.58 316 *eP* **P 08 19 23.2 +1.0**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 68.58 316 *eP* **P 08 19 23.2 +1.0**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 68.58 316 *eP* **P 08 19 23.2 +1.0**
comp=Z,6.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.58 316 *eP* **P 08 19 23.2 +1.0**
comp=Z,5.7nm,1.0s,mb4.5
KDAK Kodiak Island 70.13 34 P **P 08 19 32.6 +1.0**
comp=Z,14nm,0.7s,mb5.0,baz=315,slow=4.3,SNR=4.5
BFO Black Forest 70.88 315 *eP* **P 08 19 37.0 +0.6**
BFO pmax pmax
comp=Z,32nm,1.9s,mb4.9
BFO Black Forest 70.88 315 *eP* **P 08 19 37.0 +0.6**
comp=Z,32nm,1.9s,mb4.9
KMBO Kilima Mbogo 71.42 257 P **P 08 19 39.5 -0.7**
comp=Z,2.0nm,0.7s,mb4.2,baz=51,slow=11,SNR=7.7
CDF Champ du Feu 71.47 316 *eP* **P 08 19 38.8 -1.2**
comp=Z,11nm,1.0s,mb4.4
CDF Champ du Feu 71.47 316 *eP* **P 08 19 38.8 -1.2**
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CDF Champ du Feu 71.47 316 *eP* **P 08 19 38.8 -1.2**
comp=Z,5.7nm,1.0s,mb4.5
INK Inuvik 71.47 19 P **P 08 19 38.5 -1.1**
comp=Z,4.2nm,0.7s,mb4.5,baz=329,slow=7.0,SNR=10
INK Inuvik 71.47 19 P **P 08 19 38.5 -1.1**
INK Inuvik 71.47 19 P **P 08 19 38.5 -1.1**
WLF Walferdange 71.56 317 *eP* **P 08 19 41.5 +1.0**
WLF pmax pmax
comp=Z,14nm,1.0s,mb4.8
WLF Walferdange 71.56 317 *eP* **P 08 19 41.5 +1.0**
comp=Z,14nm,1.0s,mb4.9
STKA Stephens Creek 72.29 147 P **P 08 19 44.6 -0.3**
comp=Z,4.5nm,0.8s,mb4.5,baz=309,slow=3.5,SNR=8.0
LPL La Plagne 73.14 313 *eP* **P 08 19 49.7 -0.3**
comp=Z,22nm,0.8s,mb4.8
LPL La Plagne 73.14 313 *eP* **P 08 19 49.7 -0.3**
LPL pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 73.14 313 *eP* **P 08 19 49.7 -0.3**
comp=Z,11nm,0.8s,mb4.8
SMF Signal de Mont 74.36 315 *eP* **P 08 19 55.9 -1.2**
comp=Z,20nm,1.0s,mb4.7
SMF Signal de Mont 74.36 315 *eP* **P 08 19 55.9 -1.2**
SMF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SMF Signal de Mont 74.36 315 *eP* **P 08 19 55.9 -1.2**
comp=Z,9.8nm,1.0s,mb4.7
TCF Toulx Ste Croi 75.51 316 *eP* **P 08 20 03.0 -0.8**
comp=Z,19nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.51 316 *eP* **P 08 20 03.0 -0.8**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.51 316 *eP* **P 08 20 03.0 -0.8**
comp=Z,9.5nm,1.1s,mb4.6
KEST Kesra 76.06 303 P **P 08 20 07.2 0.0**
comp=Z,1.3nm,0.8s,mb3.9,baz=320,slow=9.2,SNR=4.0
CAF Calviac 76.30 314 *eP* **P 08 20 07.9 -0.4**
comp=Z,14nm,1.1s,mb4.5
CAF Calviac 76.30 314 *eP* **P 08 20 07.9 -0.4**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CAF Calviac 76.30 314 *eP* **P 08 20 07.9 -0.4**
comp=Z,6.8nm,1.1s,mb4.5
YKA Yellowknife Ar 81.02 17 P **P 08 20 33.0 -0.9**
comp=Z,1.9nm,0.6s,mb4.2,baz=326,slow=5.0,SNR=17
YKA Yellowknife Ar 81.02 17 P **P 08 20 33.0 -0.9**
SCHQ Schefferville 93.51 355 P **P 08 21 36.4 +1.3**
comp=Z,2.4nm,0.8s,mb4.7,baz=335,slow=4.8,SNR=5.6

*ISCJB **12** 08:10:43.7±0.5, 31.°81N±0.°05×104.°39E±0.°10, h10km, mb4.4/19, Error ellipse: s-maj=13.0km s-min=6.6km az=157.2*
*BJI **12** 08:10:43.0, 31.°78N×104.°45E, h15km, mb4.6/3, ML4.9/3*
*IDC **12** 08:10:44.1±0.7, 32.°27N×104.°99E, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.2/26, mbtmp4.2/14, Error ellipse: s-maj=44.5km s-min=15.4km az=53.0*
*NEIC **12** 08:10:45.3±0.6, 32.°00N×104.°72E, h10km, mb4.7/3, Error ellipse: s-maj=21.2km s-min=11.0km az=65.0*

ISC 12 08:10:46.4±0.5, 31.°88N±0.°06×104.°36E±0.°10, h10km, n29, σ1.9 07/30, mb4.4/19, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.22**	**354**	Pg	**Pb**	**08 12 01.4**	**+0.8**
LZH				Sg	**Sb**	**08 12 51.2**	**-0.4**
LZH				smax			
	comp=N,2μm,0.7s						
LZH				smax			
	comp=E,2μm,0.7s						
GYA	**Guiyang**	**5.77**	**159**	Pg	**Pb**	**08 12 22.0**	**-5.0**
GYA				smax			
	comp=N,2μm,1.1s						
GYA				smax			
	comp=E,3μm,1.2s						
GTA	**Gaotai**	**8.37**	**335**	*e*P	**Pn**	**08 12 47.7**	**-0.1**
GTA				pP		08 12 52.0	
GTA				sP		08 12 55.1	
GTA				pmax	pmax		
	comp=Z,21nm,1.1s						
NJ2	**Nanjing**	**12.31**	**85**	*e*P	**Pn**	**08 13 42.3**	**+0.6**
NJ2				pP		08 13 49.3	
NJ2				PP		08 13 51.6	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2	**Changchun**	**20.40**	**48**	*e*P	**P**	**08 15 24.7**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**08 15 46.6**	**+0.2**
	comp=Z,3.4nm,0.7s,mb3.9,baz=108,slow=13,SNR=4.2						
AML	**Almayashu**	**26.42**	**301**	*e*P	**P**	**08 16 25.8**	**+2.7**
	comp=Z,66nm,1.4s,mb5.0						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**08 16 26.0**	**-0.2**
	comp=Z,2.6nm,0.7s,mb3.9,baz=133,slow=7.6,SNR=3.9						
BVAR	**Borovoye Array**	**32.32**	**321**	P	**P**	**08 17 16.1**	**+0.7**
	comp=Z,2.2nm,0.6s,mb4.2,baz=111,slow=6.5,SNR=6.3						
ABKAR	**Akbulak array**	**37.33**	**311**	*e*P	**P**	**08 18 00.2**	**+1.5**
	comp=Z,6.9nm,0.8s,mb4.5						
ARU	**Arti**	**39.96**	**322**	*e*P	**P**	**08 18 20.5**	**-0.2**
	comp=Z,15nm,0.8s,mb4.8						
JOF	**Joensuu**	**54.49**	**327**	*e*p	**P**	**08 20 14.2**	**+0.4**
	comp=Z,9.7nm,0.6s,mb4.9						
KEV	**Kevo**	**56.11**	**336**	*e*p	**P**	**08 20 23.5**	**-1.9**
	comp=Z,7.8nm,0.6s,mb4.9						
BRTR	**Keskin Array B**	**56.55**	**299**	P	**P**	**08 20 30.4**	**+1.3**
	comp=Z,1.8nm,0.8s,mb4.2,baz=96,slow=7.0,SNR=5.3						
ARCES	**ARCESS Array B**	**56.64**	**336**	P	**P**	**08 20 27.9**	**-1.3**
	comp=Z,4.2nm,0.8s,mb4.5,baz=80,slow=5.7,SNR=4.2						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**08 20 31.4**	**-0.8**
	comp=Z,4.2nm,0.7s,mb4.6,baz=70,slow=6.8,SNR=5.6						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**08 20 31.2**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.6,baz=95,slow=4.8,SNR=6.3						
WRA	**Warramunga Arr**	**59.00**	**147**	P	**P**	**08 20 46.2**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.4,baz=338,slow=7.7,SNR=6.8						
ASAR	**Alice Springs**	**62.04**	**149**	P	**P**	**08 21 07.0**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.4,baz=331,slow=6.4,SNR=8.3						
NB2	**NORSAR Subarra**	**64.12**	**327**	P	**P**	**08 21 19.1**	**-1.4**
	comp=Z,6.0nm,0.7s,mb4.7,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**08 21 18.6**	**-1.9**
	comp=Z,1.7nm,0.6s,mb4.2,baz=72,slow=6.4,SNR=3.8						
GERES	**GERESS Array B**	**67.16**	**314**	P	**P**	**08 21 41.0**	**+0.7**
	comp=Z,1.7nm,0.8s,mb4.1,baz=72,slow=4.3,SNR=5.4						
GERES	**GERESS Array B**	**67.16**	**314**	P	**P**	**08 21 41.0**	**+0.6**
INK	**Inuvik**	**71.35**	**19**	P	**P**	**08 22 02.7**	**-3.3**
	comp=Z,1.7nm,0.8s,mb4.1,baz=304,slow=9.1,SNR=3.0						
INK	**Inuvik**	**71.35**	**19**	P	**P**	**08 22 02.7**	**-3.3**
STKA	**Stephens Creek**	**72.54**	**147**	*e*P	**P**	**08 22 13.1**	**-0.4**
	comp=Z,4.9nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**72.54**	**147**	P	**P**	**08 22 12.9**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=332,slow=8.1,SNR=3.0						
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	**08 22 56.2**	**-4.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=326,slow=5.1,SNR=4.8						
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	**08 22 56.2**	**-4.1**

*IDC **12** 08:10:56.3±0.4, 31.°09N×103.°58E, h0km, mb4.6/31, mb1 4.7/33, mb1mx4.7/34, mbtmp4.6/33, ML4.6/2, Error ellipse: s-maj=15.8km s-min=10.9km az=45.0*
*BJI **12** 08:10:57.3, 31.°14N×103.°60E, h10km, mB5.8/5, mb5.1/21, ML4.8/14, Ms5.5/15, Ms7 5.3/12*
*NEIC **12** 08:10:58.4±0.2, 31.°10N×103.°53E, h10km, mb5.0/76, Error ellipse: s-maj=5.3km s-min=4.3km az=42.0*
*MOS **12** 08:10:58.3±0.9, 31.°11N×103.°52E, h21km, mb5.1/68, Error ellipse: s-maj=7.5km s-min=4.2km az=115.8*
*ISCJB **12** 08:10:58.6±0.7, 31.°06N±0.°03×103.°49E±0.°03, h24km±5km, mb4.9/120, MS6.0/2, Error ellipse: s-maj=5.0km s-min=4.5km az=175.1*
*DJA **12** 08:11:04, 29.°07N×101.°98E, h10km, mb5.4/6*
*SZGRF **12** 08:11:25.7, 33.°45N×100.°38E, h33km, mb5.2, Qinghai, China*
ISC 12 08:10:59.8±0.7, 31.°07N±0.°03×103.°48E±0.°03, h18km±4km, n341, σ0.9 97/344, mb4.9/119, MS6.0/2, 10C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**123**	Pg	**Pg**	**08 11 04.8**	**-1.3**
CD2				Sg	**Sg**	**08 11 10.5**	**+0.2**
CD2				smax			
	comp=N,257μm,0.8s						
XAN	**Xi'an**	**5.47**	**56**	Pg	**Pg**	**08 12 50.6**	**+6.1**
XAN				Sg	**Sg**	**08 13 46.5**	**-8.9**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,900nm,0.9s						
KMI	**Kunming**	**5.96**	**186**	Pn	**Pn**	**08 12 29.1**	**+2.0**
KMI				Sn	**Sn**	**08 13 41.0**	**+6.1**
KMI				smax			
	comp=N,560nm,1.1s						
KMI				smax			
	comp=E,510nm,1.5s						
WHN	**Wuhan**	**9.37**	**90**	P	**Pn**	**08 13 20.2**	**+6.3**
WHN				S	**Sn**	**08 14 54.4**	**-4.4**
LSA	**Lhasa**	**10.73**	**266**	P	**Pn**	**08 13 31.9**	**-0.7**
LSA				S	**Sn**	**08 15 29.0**	**-3.3**
LSA	**Lhasa**	**10.73**	**266**	*e*Pn	**Pn**	**08 13 35.3**	**+2.7**
HHC	**Hu-ho-hao-te**	**11.75**	**32**	*e*P	**Pn**	**08 13 47.5**	**+1.0**
HHC				PP		08 13 57.7	
HHC				S	**Sn**	**08 15 59.5**	**+2.3**
HHC				sS		08 16 03.9	
HHC				SS		08 16 13.7	
HHC				pmax	pmax		
	comp=Z,63nm,1.2s						
HHC				LR	LR		
	comp=N,4μm,6.5s						
HHC				LR	LR		
	comp=E,3μm,5.5s						
HHC				LR	LR		
	comp=Z,8μm,7.7s						
CHTO	**Chiang Mai**	**12.87**	**200**	*e*P	**Pn**	**08 14 04.9**	**+3.0**
NJ2	**Nanjing**	**13.15**	**82**	*e*P	**Pn**	**08 14 05.2**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
CM31	**Chiang Mai Arr**	**13.21**	**199**	*e*Pn	**Pn**	**08 14 11.8**	**+5.3**
CMAR	**Chiang Mai Arr**	**13.21**	**199**	Pn	**Pn**	**08 14 08.0**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=12,slow=11,SNR=8.5						
CMAR	**Chiang Mai Arr**	**13.21**	**199**	Pn	**Pn**	**08 14 08.0**	**+1.4**
QIZ	**Qi

ULN Ulaanbaatar 17.00 8 *eP* **Pn 08 14 57.8 +1.3**
ULN pmax pmax
comp=Z,45nm,1.1s
ULN Ulaanbaatar 17.00 8 *eP* **Pn 08 14 57.8 +1.2**
comp=Z,45nm,1.1s
SSLB Suanglung 17.11 111 *eP* **Pn 08 14 58.8 +0.6**
comp=Z,112nm,1.0s
WMQ Urumqi 17.83 320 P **Pn 08 15 07.8 +1.0**
WMQ pmax pmax
comp=Z,52nm,1.2s
WMQ LR LR
comp=N,23µm,23.0s
WMQ LR LR
comp=Z,19µm,25.0s
ZAK Zakamensk 19.30 360 *eP* **Pn 08 15 25.1 +0.4**
ZAK pmax pmax
comp=Z,17nm,1.5s
INCN Inchon 20.16 65 *e*Pn **P 08 15 35.6 +2.5**
comp=Z,38nm,0.8s
TLY Talaya 20.60 0 *eP* **P 08 15 39.3 +1.6**
TLY pmax pmax
comp=Z,13nm,1.1s
TLY Talaya 20.60 0 *eP* **P 08 15 38.9 +1.2**
comp=Z,29nm,1.2s
MOY Mondy 20.67 356 *eP* **P 08 15 40.2 +1.7**
MOY pmax pmax
comp=Z,74nm,2.2s
KSRS Korea Array 21.16 66 P **P 08 15 41.4 -2.5**
comp=Z,37nm,0.9s,mb4.7,baz=261,slow=11,SNR=17
KSRS Korea Array 21.16 66 P **P 08 15 41.4 -2.5**
KSRS pmax pmax
comp=Z,37nm,0.9s,mb4.7
IRK Irkutsk 21.17 1 *eP* **P 08 15 43.9 0.0**
IRK pmax pmax
comp=Z,217nm,1.5s,mb5.3
CN2 Changchun 21.51 48 *eP* **P 08 15 50.4 +2.7**
CN2 *es*P sP 08 15 57.0 +2.0
CN2 *e*S **S 08 19 44.3 -1.1**
CN2 pmax pmax
comp=Z,70nm,1.3s,mb4.9
HIA Hailar 21.94 29 *eP* **P 08 15 53.1 +0.9**
HIA pmax pmax
comp=Z,47nm,1.0s
HIA Hailar 21.94 29 *eP* **P 08 15 53.1 +0.9**
comp=Z,47nm,1.0s,mb4.9
CIT Chita 22.21 17 *eP* **P 08 15 55.4 +0.3**
CIT *e* 08 16 29.1
MK31 Makanchi Array 22.66 320 *eP* **P 08 15 58.9 -1.0**
MKAR Makanchi Array 22.66 320 P **P 08 16 00.2 +0.3**
comp=Z,3.8nm,0.5s,mb4.1,baz=123,slow=13,SNR=10.0
MKAR ScP ScP 08 23 28.6 -0.4
comp=Z,1.7nm,0.9s,baz=134,slow=3.5,SNR=3.5
MKAR Makanchi Array 22.66 320 P **P 08 16 00.2 +0.3**
MKAR ScP ScP 08 23 28.6 -0.4
KSH Kashi 23.91 298 P **P 08 16 12.2 -0.4**
KSH *ep*P 08 16 16.1
KSH *es*P sP 08 16 19.1 -1.1
KSH *e*PP 08 16 45.0
KSH *e*S **S 08 20 23.5 -4.6**
KSH *e*ScP ScP 08 23 33.1 +0.6
KSH *e*PcS PcS 08 23 35.0 +0.5
KSH pmax pmax
comp=Z,10µm,10.4s
ULHL Ulahol 24.43 305 P **P 08 16 19.4 +2.1**
SNR=9.3
MDJ Mudanjiang 24.54 49 P **P 08 16 15.3 -3.0**
MDJ pP 08 16 17.9
MDJ S **S 08 20 33.9 -4.2**
MDJ sS sS 08 20 39.1 -7.9
MDJ ScP ScP 08 23 33.7 -0.4
MDJ PcS PcS 08 23 34.8 -1.2
MDJ pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
MDJ LR LR
comp=N,15µm,16.0s,MS5.8
MDJ LR LR
comp=E,17µm,13.8s,MS5.8
MDJ LR LR
comp=Z,30µm,15.7s,MS5.9
MDJ Mudanjiang 24.54 49 *eP* **P 08 16 21.1 +2.9**
KZA Kyzart 25.08 304 P **P 08 16 26.1 +2.9**
SNR=5.7
TKM2 Tokmak 2 25.10 306 P **P 08 16 25.5 +2.1**
SNR=8.3
TKM2 Tokmak 2 25.10 306 *eP* **P 08 16 25.5 +2.1**
KBK Karagaybulak 25.47 305 P **P 08 16 29.0 +2.2**
SNR=7.6
UCH Uchtor 25.65 304 P **P 08 16 37.1 +8.7**
SNR=7.2
CHMS Chumysh 25.71 306 P **P 08 16 35.7 +6.7**
SNR=6.0
AAK Ala-Archa 25.78 305 P **P 08 16 37.4 +7.8**
SNR=7.8
AAK Ala-Archa 25.78 305 P **P 08 16 31.4 +1.8**
comp=Z,26nm,0.8s,mb4.8,baz=124,slow=7.3,SNR=13
AAK Ala-Archa 25.78 305[] *eP* **P 08 16 30.5 +0.9**
AAK pmax pmax
comp=Z,65nm,2.5s,mb4.7
AAK Ala-Archa 25.78 305 *eP* **P 08 16 30.4 +0.8**
comp=Z,57nm,0.9s,mb5.1
EKS2 Erkin-Say 26.30 304 P **P 08 16 36.1 +1.8**
SNR=6.8
EKS2 Erkin-Say 26.30 304 *eP* **P 08 16 35.4 +1.2**
comp=Z,15nm,0.5s,mb4.8
HYB Hyderabad 26.40 245 *i* P **P 08 16 38.0 +2.6**
ZAA0 Zalesovo Array 26.53 335 *eP* **P 08 16 36.5 +0.3**
ZALV Zalesovo Beam 26.53 335 P **P 08 16 35.2 -0.9**
comp=Z,11nm,0.4s,mb4.8,baz=135,slow=9.5,SNR=6.2
KURK Kurchatov 26.96 324 P **P 08 16 39.7 -0.4**
comp=Z,33nm,0.8s,mb4.9,baz=128,slow=9.4,SNR=8.1
KURK PcP PcP 08 20 01.0 -0.6
comp=Z,4.6nm,0.7s,baz=116,slow=2.5,SNR=3.8
KURK Kurchatov 26.96 324 *ceP* **P 08 16 40.4 +0.3**
KURK pmax pmax
comp=Z,62nm,1.2s,mb5.0
KURK Kurchatov 26.96 324 *eP* **P 08 16 40.8 +0.7**
comp=Z,52nm,1.1s,mb5.0
BOD Bodaibo 27.72 12 *eP* **P 08 16 46.5 -0.3**
BOD pmax pmax
comp=Z,8.0nm,1.5s,mb4.1
KLR Kul'dur 27.97 41 *eP* **P 08 16 42.0 -7.2**
KBL Kabul 29.07 286 *eP* **P 08 16 59.3 +0.1**
KBL pmax pmax
comp=Z,23nm,0.9s,mb4.9
KBL Kabul 29.07 286 *eP* **P 08 16 59.3 +0.2**
comp=Z,24nm,0.9s,mb4.9
MAT Matsushiro 29.27 70 P **P 08 16 58.6 -2.3**
MJAR Matsushiro Arr 29.27 70 P **P 08 16 59.0 -2.0**
comp=Z,3.5nm,0.9s,mb4.1,baz=269,slow=10,SNR=4.7
PALK Pallekele 31.84 227 *eP* **P 08 17 24.5 +0.7**
BVAR Borovoye Array 32.49 322 P **P 08 17 28.3 -0.8**
comp=Z,5.6nm,0.7s,mb4.5,baz=117,slow=2.0,SNR=3.9
BVAR PcP PcP 08 20 15.1 -0.7
comp=Z,10nm,0.7s,baz=135,slow=3.7,SNR=17
BRVK Borovoye 32.56 322 *i* P **P 08 17 28.8 -1.0**
BRVK pmax pmax
comp=Z,11nm,1.5s,mb4.6
BRVK Borovoye 32.56 322 *eP* **P 08 17 30.3 +0.5**
comp=Z,102nm,1.9s,mb5.4
YSS Yuzh-Sakhalins 33.99 51 *eP* **P 08 17 43.8 +1.5**
YAK Yakutsk 35.33 21 *eP* **P 08 17 53.0 -0.7**
YAK pmax pmax
comp=Z,31nm,0.9s,mb5.2
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,10.0nm,0.9s
ABKT Ailbek 37.71 293 P **P 08 18 16.4 +2.1**
comp=N,258nm,0.8s,mb6.0,SNR=6.9
AKTK Aktyubinsk 38.77 313 P **P 08 18 23.1 0.0**
AKTK PcP PcP 08 20 31.9 -2.4
AKTO Aktyubinsk 38.77 313 P **P 08 18 23.1 0.0**
comp=N,3.5nm,0.7s,mb4.2,baz=88,slow=5.7,SNR=4.0
AKTO PcP PcP 08 20 31.9 -2.4
comp=N,5.2nm,0.9s,baz=138,slow=1.1,SNR=4.7
SVE Sverdlovsk 39.21 324 *eP* **P 08 18 27.8 +1.1**
ARU Arti 40.13 323 *c i* P **P 08 18 34.0 -0.4**
ARU 08 20 06.7
ARU S **S 08 24 41.0 +1.2**
ARU pmax pmax
comp=Z,53nm,1.7s,mb5.0
ARU Arti 40.13 323 *eP* **P 08 18 34.6 +0.2**
comp=Z,19nm,0.6s,mb5.0
TIXI Tiksi 42.90 12 *eP* **P 08 18 54.2 -2.6**
TIXI pmax pmax
comp=Z,16nm,1.2s,mb4.6

TIXI Tiksi 42.90 12 *eP* **P 08 18 55.3 -1.5**
comp=Z,10nm,0.7s,mb4.7
SEY Seymchan 44.39 30[] *i P* **P 08 19 08.6 -0.3**
PETK Petropavlovsk- 44.59 44 P **P 08 19 09.7 -1.0**
comp=Z,5.4nm,0.8s,mb4.4,baz=0.0,slow=3.3,SNR=3.6
GNI Garni 47.85 298 *eP* **P 08 19 37.4 +0.9**
GNI pmax pmax
comp=Z,19nm,1.5s
MIB Mutribah 47.97 284 *eP* **P 08 19 37.0 -0.6**
MIB AMb AMB 08 19 38.3
comp=Z,75nm,0.9s,mb5.7
RDF Al-Radifah 48.05 282 *eP* **P 08 19 38.1 -0.1**
RDF AMb AMB 08 19 46.9
comp=Z,108nm,1.1s,mb5.8
ZEI Tsey 48.14 302 *eP* **P 08 19 37.4 -1.3**
ZEI pmax pmax
comp=Z,13nm,0.9s,mb5.0
KIV Kislovodsk 48.88 303 *eP* **P 08 19 44.7 +0.3**
KIV pmax pmax
comp=Z,37nm,1.1s,mb5.3
KIV Kislovodsk 48.88 303 *eP* **P 08 19 46.5 +2.0**
comp=Z,30nm,0.9s,mb5.3
VRHR Novokhopersk 49.17 313 *eP* **P 08 19 46.3 -0.2**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,70nm,0.5s
VSR Storozhevoye 50.72 313 *eP* **P 08 19 57.6 -0.7**
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.6s
BILL Bilibino 51.44 25[] *i P* **P 08 20 02.6 -0.9**
BILL *e* 08 21 13.1
BILL *e* 08 22 03.4
BILL *e*S **S 08 27 19.4 -2.8**
BILL *e*SS SS 08 30 59.8 +2.1
BILL pmax pmax
comp=Z,24nm,1.7s,mb4.8
BILL Bilibino 51.44 25 *eP* **P 08 20 02.9 -0.6**
comp=Z,25nm,1.3s,mb5.0
MOS Moscow 51.54 319 *eP* **P 08 20 02.0 -2.4**
MOS *e* 08 21 14.1
MOS pmax pmax
comp=Z,52nm,0.8s,mb5.5
OBN Obninsk 52.15 318[] *eP* **P 08 20 07.8 -1.1**
OBN *e* 08 22 04.6
OBN *e*SS SS 08 31 13.3 +4.0
OBN pmax pmax
comp=Z,53nm,1.7s,mb5.2
MALT Malatya 53.00 297 *eP* **P 08 20 17.5 +2.0**
MALT pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MALT Malatya 53.00 297 *eP* **P 08 20 17.5 +2.0**
comp=Z,7.1nm,1.0s,mb4.5
FITZ Fitzroy Crossi 53.32 153 P **P 08 20 17.0 -1.0**
comp=Z,1.8nm,0.6s,mb4.2,baz=311,slow=12,SNR=3.0
APA Apatity 54.10 334[] *eP* **P 08 20 24.0 +0.9**
APA MLR MLR
comp=Z,13µm,17.0s,MS6.1
ASF Jabal al Asfar 55.85 290 P **P 08 20 36.2 -0.1**
comp=Z,8.7nm,0.7s,mb4.9,baz=297,slow=4.3,SNR=11
BR131 Keskin Array S 56.29 300 *eP* **P 08 20 38.6 -0.8**
BRTR Keskin Array B 56.29 300 P **P 08 20 39.0 -0.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=107,slow=6.6,SNR=7.1
BRTR Keskin Array B 56.29 300 *ceP* **P 08 20 39.0 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 56.29 300 P **P 08 20 39.0 -0.3**
AKASG Malin Array Be 57.02 313 P **P 08 20 43.6 -0.7**
comp=Z,7.5nm,0.4s,mb5.0,baz=68,slow=7.5,SNR=18
AKASG PcP PcP 08 21 37.9 -1.5
comp=Z,2.7nm,0.8s,baz=68,slow=4.6,SNR=5.0
AKASG Malin Array Be 57.02 313 *ceP* **P 08 20 43.5 -0.9**
AKASG pmax pmax
comp=Z,8.0nm,0.4s
ARCES ARCESS Array B 57.07 336 P **P 08 20 44.1 -0.4**
comp=Z,8.0nm,0.8s,mb4.8,baz=84,slow=7.6,SNR=8.8
ARCES PcP PcP 08 21 38.7 -0.5
comp=Z,5.5nm,0.6s,baz=87,slow=5.0,SNR=8.1
ARCES ARCESS Array B 57.07 336 P **P 08 20 44.1 -0.4**
ARCES PcP PcP 08 21 38.7 -0.5
FINES FINESS Array B 57.30 326 P **P 08 20 45.3 -0.8**
comp=Z,4.6nm,0.5s,mb4.8,baz=82,slow=7.1,SNR=10
NACGM Naroch 57.78 318 *e* **P 08 20 46.0 -3.6**
CSS Prodhromos 57.84 294 *eP* **P 08 20 50.4 -0.1**
comp=Z,7.6nm,0.6s,mb4.9
WRAB Tennant Creek 58.74 146 *eP* **P 08 20 56.9 +0.2**
WRAB pmax pmax
comp=Z,32nm,0.9s,mb5.3
WRAB Tennant Creek 58.74 146 *eP* **P 08 20 56.9 +0.1**
comp=Z,32nm,0.9s,mb5.3
WRA Warramunga Arr 58.74 146 P **P 08 20 56.1 -0.6**
comp=Z,11nm,0.6s,mb5.1,baz=337,slow=7.5,SNR=12
WB2 Warramunga Arr 58.75 146 *eP* **P 08 20 56.8 0.0**
TIRR Tirgusor 58.88 306 *eP* **P 08 20 57.4 -0.2**
TIRR pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
TIRR Tirgusor 58.88 306 *eP* **P 08 20 57.4 -0.1**
comp=Z,4.9nm,0.7s,mb4.7
ATD Arta Tunnel 59.04 265 P **P 08 20 58.6 -0.4**
comp=Z,3.1nm,0.3s,mb4.8,baz=241,slow=18,SNR=3.9
SUW Suwalki 60.01 318 *eP* **P 08 21 04.6 -0.5**
LVV L'vov 60.46 313 *eP* **P 08 21 08.1 -0.2**
KWP Kalwaria Pacla 61.34 313 *eP* **P 08 21 14.6 +0.3**
ASAR Alice Springs 61.74 148 P **P 08 21 17.4 +0.2**
comp=Z,4.3nm,0.7s,mb4.7,baz=334,slow=6.2,SNR=6.9
ASAR Alice Springs 61.74 148 P **P 08 21 17.4 +0.1**
KOLS Kolonicke sedl 61.80 312 *eP* **P 08 21 16.8 -0.6**
KOLS Kolonicke sedl 61.80 312 *eP* **P 08 21 16.8 -0.6**
STHS Stebnicka Huta 62.32 313 *eP* **P 08 21 21.0 +0.1**
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.32 313 *eP* **P 08 21 21.0 +0.1**
comp=Z,8.2nm,0.9s,mb4.9
STHS Stebnicka Huta 62.32 313 *eP* **P 08 21 21.0 +0.1**
NIE Niedzica 62.90 313 *eP* **P 08 21 25.6 +0.8**
OJC Ojcow 62.99 314 *eP* **P 08 21 25.3 0.0**
KECS Kecovo 63.06 312 *eP* **P 08 21 25.6 -0.3**
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
KECS Kecovo 63.06 312 *eP* **P 08 21 25.6 -0.3**
comp=Z,4.0nm,0.7s,mb4.7
KECS Kecovo 63.06 312 *eP* **P 08 21 25.6 -0.3**
PSZ Piszkesteto 63.61 312 *eP* **P 08 21 30.2 +0.7**
PSZ pmax pmax
comp=Z,12nm,1.2s,mb4.8
PSZ Piszkesteto 63.61 312 *eP* **P 08 21 30.2 +0.7**
comp=Z,12nm,1.2s,mb4.8
VYHS Vyhne 64.11 313 *eP* **P 08 21 33.2 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
VYHS Vyhne 64.11 313 *eP* **P 08 21 33.2 +0.4**
comp=Z,6.9nm,0.9s,mb4.7
VYHS Vyhne 64.11 313 *eP* **P 08 21 33.2 +0.4**
OKC Ostrava-Krasne 64.12 314 *eP* **P 08 21 33.3 +0.5**
NOA NORSAR Array B 64.40 327 P **P 08 21 33.2 -1.3**
comp=Z,3.8nm,0.8s,mb4.5,baz=77,slow=6.1,SNR=6.3
NOA NORSAR Array B 64.40 327 P **P 08 21 33.2 -1.3**
MORC Moravsky Berou 64.51 314 *eP* **P 08 21 35.5 +0.1**
MORC pmax pmax
comp=Z,14nm,0.8s,mb5.0
MORC Moravsky Berou 64.51 314 *eP* **P 08 21 35.5 +0.1**
comp=Z,14nm,0.8s,mb5.0
KSP Ksiaz 64.92 316 *eP* **P 08 21 38.2 +0.1**
KSP Ksiaz 64.92 316 *eP* **P 08 21 37.5 -0.6**
DPC Dobruska-Polom 65.07 315 *eP* **P 08 21 39.9 +0.9**
UPC Upice 65.20 315 *eP* **P 08 21 40.5 +0.6**
CTA Charters Tower 65.37 135 *eP* **P 08 21 41.3 0.0**
comp=Z,9.5nm,1.1s,mb4.7
CTA Charters Tower 65.37 135 P **P 08 21 41.0 -0.3**
comp=Z,10nm,1.0s,mb4.8,baz=345,slow=8.9,SNR=4.4
CTA Charters Tower 65.37 135 P **P 08 21 41.0 -0.3**
CTAO Charters Tower 65.37 135 *eP* **P 08 21 43.6 +2.3**
CTAO pmax pmax
comp=Z,16nm,1.3s,mb4.9
CTAO Charters Tower 65.37 135 *eP* **P 08 21 43.6 +2.3**
comp=Z,16nm,1.3s,mb4.9
FORT Forrest 65.78 157 *eP* **P 08 21 44.4 +0.7**
comp=Z,13nm,0.7s,mb5.1
FORT Forrest 65.78 157 *eP* **P 08 21 44.4 +0.6**

comp=Z,20nm,0.9s,mb5.1
PVCC Panska Ves 66.06 316 *eP* **P 08 21 45.7 +0.3**
PRU Pruhonice 66.27 315 *eP* **P 08 21 47.5 +0.7**
BRG Berggiesshubel 66.32 316 *i* P **P 08 21 47.0 0.0**
comp=Z,16nm,0.9s,mb5.0
BRG *e* 08 21 49.9
comp=Z,14nm,1.0s
BRG Berggiesshubel 66.32 316 *i* P **P 08 21 47.0 -0.1**
BRG *e* 08 21 49.9
BRG pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CLL Collm 66.72 317 *i* P **P 08 21 49.2 -0.4**
CLL *e* 08 21 59.0
CLL pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
CLL Collm 66.72 317 *i* P **P 08 21 49.2 -0.4**
comp=Z,12nm,1.0s,mb4.9
CLL *e* 08 21 59.0
CLL Collm 66.72 317 *i* P **P 08 21 49.2 -0.4**
comp=Z,12nm,1.0s,mb4.9
CLL *e* 08 21 59.0
CLL *e*PP PP 08 24 15.0 -1.3
CLL *e* 08 24 30.0
PERS Pernice 67.11 312 *i* P **P 08 21 52.2 0.0**
KHC Kasperske Hory 67.16 315 *eP* **P 08 21 52.7 +0.2**
KHC pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
KHC Kasperske Hory 67.16 315 *eP* **P 08 21 52.7 +0.2**
comp=Z,9.3nm,1.2s,mb4.7
KHC Kasperske Hory 67.16 315 *eP* **P 08 21 52.4 -0.1**
GERES GERESS Array B 67.19 314 P **P 08 21 52.6 -0.1**
comp=Z,7.8nm,0.9s,mb4.7,baz=70,slow=5.5,SNR=15
BOJS Bojanci 67.44 310 *eP* **P 08 21 54.6 +0.3**
COLD Coldfoot 67.72 24 *eP* **P 08 21 55.9 +0.1**
comp=Z,19nm,0.9s,mb5.1
MOX Moxa 67.78 317 *eP* **P 08 21 56.0 -0.3**
comp=Z,20nm,1.6s,mb4.9
MOX Moxa 67.78 317 *eP* **P 08 21 56.5 +0.2**
comp=Z,20nm,1.6s,mb4.9
MOX Moxa 67.78 317 *eP* **P 08 21 56.5 +0.2**
comp=Z,20nm,1.6s,mb4.9
MOX Moxa 67.78 317 *eP* **P 08 21 56.0 -0.3**
MOX pmax pmax
comp=Z,65nm,1.6s,mb5.4
CEY Cerknica 67.88 311 *i* P **P 08 21 57.1 0.0**
GRA1 Grafenberg Arr 68.38 316 *eP* **P 08 22 00.5 +0.4**
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 68.38 316 *eP* **P 08 22 00.5 +0.4**
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 68.38 316 *eP* **P 08 22 00.5 +0.4**
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 68.38 316 *eP* **P 08 22 00.5 +0.4**
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 68.38 316 *eP* **P 08 22 00.5 +0.4**
comp=Z,14nm,0.9s,mb5.0
COLA College 69.70 26 *eP* **P 08 22 07.8 -0.2**
COLA pmax pmax
comp=Z,22nm,0.9s,mb5.1
COLA College 69.70 26 *eP* **P 08 22 07.8 -0.3**
comp=Z,22nm,0.9s,mb5.1
CEL Celeste 69.81 303 *eP* **P 08 22 09.3 +0.1**
comp=Z,29nm,0.9s,mb5.2
STU Stuttgart 69.96 315 *eP* **P 08 22 10.2 +0.2**
STU pmax pmax
comp=Z,18nm,0.8s,mb5.0
STU Stuttgart 69.96 315 *eP* **P 08 22 10.2 +0.2**
comp=Z,18nm,0.8s,mb5.1
KMBO Kilima Mbogo 70.38 256 P **P 08 22 12.8 -0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=51,slow=13,SNR=6.5
KMBO Kilima Mbogo 70.38 256 *ceP* **P 08 22 12.8 -0.2**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 70.38 256 *eP* **P 08 22 10.4 -2.6**
comp=Z,55nm,2.6s,mb5.0
BFO Black Forest 70.67 315 *eP* **P 08 22 14.3 0.0**
BFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BFO Black Forest 70.67 315 *eP* **P 08 22 14.3 0.0**
comp=Z,6.4nm,0.8s,mb4.6
PMR Palmer 70.84 29 *eP* **P 08 22 13.1 -2.0**
KDAK Kodiak Island 71.17 33 P **P 08 22 17.0 -0.1**
comp=Z,31nm,1.0s,mb5.2,baz=359,slow=1.7,SNR=4.0
KDAK Kodiak Island 71.17 33 P **P 08 22 17.0 -0.1**
CDF Champ du Feu 71.27 316 *eP* **P 08 22 17.6 -0.3**
comp=Z,24nm,0.7s,mb4.9
CDF Champ du Feu 71.27 316 *eP* **P 08 22 17.6 -0.3**
CDF pmax pmax
comp=Z,12nm,0.7s,mb4.9
CDF Champ du Feu 71.27 316 *eP* **P 08 22 17.6 -0.3**
comp=Z,12nm,0.7s,mb4.9
WLF Walferdange 71.39 317 *eP* **P 08 22 19.2 +0.6**
WLF pmax pmax
comp=Z,39nm,1.0s,mb5.3
WLF Walferdange 71.39 317 *eP* **P 08 22 19.2 +0.5**
comp=Z,39nm,1.0s,mb5.3
ECH Echery 71.42 315 *eP* **P 08 22 18.7 -0.2**
ECH pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ECH Echery 71.42 315 *eP* **P 08 22 18.7 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
HINF Hinteralfeld 71.78 315 *eP* **P 08 22 20.4 -0.7**
comp=Z,18nm,0.8s,mb4.7
HINF Hinteralfeld 71.78 315 *eP* **P 08 22 20.4 -0.7**
HINF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HINF Hinteralfeld 71.78 315 *eP* **P 08 22 20.4 -0.7**
comp=Z,8.9nm,0.8s,mb4.8
GIVF Givet 71.96 318 *eP* **P 08 22 21.9 -0.2**
comp=Z,21nm,0.7s,mb4.8
GIVF Givet 71.96 318 *eP* **P 08 22 21.9 -0.2**
GIVF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GIVF Givet 71.96 318 *eP* **P 08 22 21.9 -0.2**
comp=Z,10nm,0.7s,mb4.9
HAU Haudompre 72.00 316 *eP* **P 08 22 21.8 -0.6**
comp=Z,13nm,0.9s,mb4.6
HAU Haudompre 72.00 316 *eP* **P 08 22 21.8 -0.6**
HAU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
HAU Haudompre 72.00 316 *eP* **P 08 22 21.8 -0.6**
comp=Z,6.6nm,0.9s,mb4.6
STKA Stephens Creek 72.27 147 P **P 08 22 22.5 -1.5**
comp=Z,5.4nm,0.6s,mb4.7,baz=355,slow=5.6,SNR=9.3
STKA Stephens Creek 72.27 147 P **P 08 22 22.5 -1.5**
BAIF Baives 72.33 318 *eP* **P 08 22 24.2 -0.1**
comp=Z,38nm,1.2s,mb4.9
BAIF Baives 72.33 318 *eP* **P 08 22 24.2 -0.1**
BAIF pmax pmax
comp=Z,19nm,1.2s,mb4.9
BAIF Baives 72.33 318 *eP* **P 08 22 24.2 -0.1**
comp=Z,19nm,1.2s,mb4.9
INK Inuvik 72.37 19 P **P 08 22 23.7 -0.5**
comp=Z,6.4nm,0.6s,mb4.7,baz=326,slow=8.3,SNR=10
PGF Pioggiola 72.76 310 *eP* **P 08 22 27.2 +0.2**
comp=Z,81nm,1.1s,mb5.3
PGF Pioggiola 72.76 310 *eP* **P 08 22 27.2 +0.2**
PGF pmax pmax
comp=Z,41nm,1.1s,mb5.3
PGF Pioggiola 72.76 310 *eP* **P 08 22 27.2 +0.2**
comp=Z,40nm,1.1s,mb5.3
CABF La Chapelle 72.79 314 *eP* **P 08 22 26.7 -0.4**
comp=Z,9.1nm,0.6s,mb4.6
CABF La Chapelle 72.79 314 *eP* **P 08 22 26.7 -0.4**
CABF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CABF La Chapelle 72.79 314 *eP* **P 08 22 26.7 -0.4**
comp=Z,4.6nm,0.6s,mb4.6
LPG La Plagne 72.88 313 *eP* **P 08 22 28.3 +0.6**
comp=Z,82nm,0.8s,mb5.4
LPG La Plagne 72.88 313 *eP* **P 08 22 28.3 +0.6**
LPG pmax pmax
comp=Z,41nm,0.8s,mb5.4
LPG La Plagne 72.88 313 *eP* **P 08 22 28.3 +0.6**
comp=Z,41nm,0.8s,mb5.4
LPL La Plagne 72.89 313 *eP* **P 08 22 28.1 +0.4**
comp=Z,54nm,0.6s,mb5.3
LPL La Plagne 72.89 313 *eP* **P 08 22 28.1 +0.4**
LPL pmax pmax
comp=Z,27nm,0.6s,mb5.3
LPL La Plagne 72.89 313 *eP* **P 08 22 28.1 +0.4**
comp=Z,27nm,0.6s,mb5.3
BNI Bardonecchia 73.13 313 *eP* **P 08 22 29.2 0.0**

BNI pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BNI Bardonecchia 73.13 313 *e*P **P 08 22 29.2 0.0**
comp=Z,7.7nm,0.7s,mb4.7
SBF Sospel 73.19 311 *e*P **P 08 22 29.3 -0.2**
comp=Z,47nm,0.9s,mb5.1
SBF Sospel 73.19 311 *e*P **P 08 22 29.3 -0.2**
comp=Z,24nm,0.9s,mb5.1
DAWY Dawson 73.20 24 *e*P **P 08 22 28.6 -0.6**
MBDF Montbardon 73.22 312 *e*P **P 08 22 30.6 +0.9**
comp=Z,40nm,1.2s,mb4.9
MBDF Montbardon 73.22 312 *e*P **P 08 22 30.6 +0.9**
MBDF pmax pmax
comp=Z,20nm,1.2s,mb4.9
MBDF Montbardon 73.22 312 *e*P **P 08 22 30.6 +0.9**
comp=Z,20nm,1.2s,mb4.9
ORIF Oris-en-Rattie 73.70 313 *e*P **P 08 22 32.4 -0.1**
comp=Z,20nm,0.8s,mb4.8
ORIF Oris-en-Rattie 73.70 313 *e*P **P 08 22 32.4 -0.1**
ORIF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 73.70 313 *e*P **P 08 22 32.4 -0.1**
comp=Z,10nm,0.8s,mb4.8
ESK Eskdalemuir 73.71 325 *i*P **P 08 22 32.9 +0.5**
RES Resolute Bay 73.83 5 *e*P **P 08 22 32.7 0.0**
RES pmax pmax
comp=Z,133nm,3.0s
RES Resolute Bay 73.83 5 *e*P **P 08 22 32.7 -0.1**
comp=Z,133nm,3.0s
FRF La Foret Royal 73.84 311 *e*P **P 08 22 32.8 -0.5**
comp=Z,18nm,1.0s,mb4.7
FRF La Foret Royal 73.84 311 *e*P **P 08 22 32.8 -0.5**
FRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
FRF La Foret Royal 73.84 311 *e*P **P 08 22 32.8 -0.5**
comp=Z,8.9nm,1.0s,mb4.7
LOR Lormes 73.84 316 *e*P **P 08 22 32.3 -1.0**
comp=Z,12nm,0.8s,mb4.6
LOR Lormes 73.84 316 *e*P **P 08 22 32.3 -1.0**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LOR Lormes 73.84 316 *e*P **P 08 22 32.3 -1.0**
comp=Z,6.1nm,0.8s,mb4.6
LMR La Mourre 74.03 311 *e*P **P 08 22 34.2 -0.3**
comp=Z,34nm,0.9s,mb5.0
LMR La Mourre 74.03 311 *e*P **P 08 22 34.2 -0.3**
LMR pmax pmax
comp=Z,17nm,0.9s,mb5.0
LMR La Mourre 74.03 311 *e*P **P 08 22 34.2 -0.3**
comp=Z,17nm,0.9s,mb5.0
SMF Signal de Mont 74.14 315 *e*P **P 08 22 34.6 -0.5**
comp=Z,57nm,0.9s,mb5.2
SMF Signal de Mont 74.14 315 *e*P **P 08 22 34.6 -0.5**
SMF pmax pmax
comp=Z,29nm,0.9s,mb5.2
SMF Signal de Mont 74.14 315 *e*P **P 08 22 34.6 -0.5**
comp=Z,28nm,0.9s,mb5.2
SSF Saint Saulge 74.15 316 *e*P **P 08 22 34.4 -0.7**
comp=Z,15nm,0.9s,mb4.6
SSF Saint Saulge 74.15 316 *e*P **P 08 22 34.4 -0.7**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SSF Saint Saulge 74.15 316 *e*P **P 08 22 34.4 -0.7**
comp=Z,7.4nm,0.9s,mb4.6
SMRF Simiane la Rot 74.33 312 *e*P **P 08 22 36.2 0.0**
AVF Avril sur Loir 74.37 315 *e*P **P 08 22 35.8 -0.6**
comp=Z,44nm,0.9s,mb5.1
AVF Avril sur Loir 74.37 315 *e*P **P 08 22 35.8 -0.6**
AVF pmax pmax
comp=Z,22nm,0.9s,mb5.1
AVF Avril sur Loir 74.37 315 *e*P **P 08 22 35.8 -0.6**
comp=Z,22nm,0.9s,mb5.1
VIVF Saint-Julien-l 74.48 313 *e*P **P 08 22 36.7 -0.4**
comp=Z,22nm,0.9s,mb4.8
VIVF Saint-Julien-l 74.48 313 *e*P **P 08 22 36.7 -0.4**
VIVF pmax pmax
comp=Z,11nm,0.9s,mb4.8
VIVF Saint-Julien-l 74.48 313 *e*P **P 08 22 36.7 -0.4**
comp=Z,11nm,0.9s,mb4.8
BGF Bois d'Agland 74.79 315 *e*P **P 08 22 38.3 -0.5**
comp=Z,24nm,1.1s,mb4.7
BGF Bois d'Agland 74.79 315 *e*P **P 08 22 38.3 -0.5**
BGF pmax pmax
comp=Z,12nm,1.1s,mb4.7
BGF Bois d'Agland 74.79 315 *e*P **P 08 22 38.3 -0.5**
comp=Z,12nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.31 315 *e*P **P 08 22 41.6 -0.2**
comp=Z,35nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.31 315 *e*P **P 08 22 41.6 -0.2**
TCF pmax pmax
comp=Z,18nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.31 315 *e*P **P 08 22 41.6 -0.2**
comp=Z,18nm,1.0s,mb5.0
LASF Ste Croix 75.37 313 *e*P **P 08 22 42.3 +0.1**
comp=Z,44nm,1.1s,mb5.0
LDF La Druitiere 75.52 318 *e*P **P 08 22 42.4 -0.6**
comp=Z,11nm,0.6s,mb4.6
LDF La Druitiere 75.52 318 *e*P **P 08 22 42.4 -0.6**
LDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LDF La Druitiere 75.52 318 *e*P **P 08 22 42.4 -0.6**
comp=Z,5.6nm,0.6s,mb4.7
KEST Kesra 75.63 303 P **P 08 22 44.1 +0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=96,slow=1.0,SNR=5.5
FLN La Foliniere 75.64 318 *e*P **P 08 22 43.0 -0.7**
GRR Gorron 76.05 318 *e*P **P 08 22 45.6 -0.4**
comp=Z,33nm,0.6s,mb5.1
GRR Gorron 76.05 318 *e*P **P 08 22 45.6 -0.4**
GRR pmax pmax
comp=Z,17nm,0.6s,mb5.2
GRR Gorron 76.05 318 *e*P **P 08 22 45.6 -0.4**
comp=Z,17nm,0.6s,mb5.1
CAF Calviac 76.07 314 *e*P **P 08 22 46.5 +0.3**
comp=Z,24nm,0.9s,mb4.8
CAF Calviac 76.07 314 *e*P **P 08 22 46.5 +0.3**
CAF pmax pmax
comp=Z,12nm,0.9s,mb4.8
CAF Calviac 76.07 314 *e*P **P 08 22 46.5 +0.3**
comp=Z,12nm,0.9s,mb4.8
RJF Les Rejaudoux 76.22 315 *e*P **P 08 22 47.3 +0.3**
comp=Z,60nm,1.2s,mb5.1
RJF Les Rejaudoux 76.22 315 *e*P **P 08 22 47.3 +0.3**
RJF pmax pmax
comp=Z,30nm,1.2s,mb5.1
RJF Les Rejaudoux 76.22 315 *e*P **P 08 22 47.3 +0.3**
comp=Z,30nm,1.2s,mb5.1
MFF Saint Martin d 76.55 316 *e*P **P 08 22 48.7 -0.2**
comp=Z,26nm,0.9s,mb4.8
MFF Saint Martin d 76.55 316 *e*P **P 08 22 48.7 -0.2**
MFF pmax pmax
comp=Z,13nm,0.9s,mb4.9
MFF Saint Martin d 76.55 316 *e*P **P 08 22 48.7 -0.2**
comp=Z,13nm,0.9s,mb4.9
MTLF Montolieu 76.77 313 *e*P **P 08 22 50.1 -0.1**
comp=Z,14nm,0.9s,mb4.6
MTLF Montolieu 76.77 313 *e*P **P 08 22 50.1 -0.1**
MTLF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MTLF Montolieu 76.77 313 *e*P **P 08 22 50.1 -0.1**
comp=Z,7.2nm,0.9s,mb4.6
LFF La Frestale 76.87 315 *e*P **P 08 22 51.0 +0.2**
comp=Z,40nm,1.0s,mb5.0
LFF La Frestale 76.87 315 *e*P **P 08 22 51.0 +0.2**
LFF pmax pmax
comp=Z,20nm,1.0s,mb5.0
LFF La Frestale 76.87 315 *e*P **P 08 22 51.0 +0.2**
comp=Z,20nm,1.0s,mb5.0
SGMF Saint Gilles 77.08 319 *e*P **P 08 22 51.9 0.0**
comp=Z,24nm,0.8s,mb4.9
SGMF Saint Gilles 77.08 319 *e*P **P 08 22 51.9 0.0**
SGMF pmax pmax
comp=Z,12nm,0.8s,mb4.9
SGMF Saint Gilles 77.08 319 *e*P **P 08 22 51.9 0.0**
comp=Z,12nm,0.8s,mb4.9
ROSF Rostrenen 77.44 319 *e*P **P 08 22 53.9 0.0**
comp=Z,56nm,1.2s,mb5.1
ROSF Rostrenen 77.44 319 *e*P **P 08 22 53.9 0.0**
ROSF pmax pmax
comp=Z,28nm,1.2s,mb5.1
ROSF Rostrenen 77.44 319 *e*P **P 08 22 53.9 0.0**
comp=Z,28nm,1.2s,mb5.1
QUIF Quistinic 77.61 319 *e*P **P 08 22 54.6 -0.2**
comp=Z,29nm,1.1s,mb4.8
QUIF Quistinic 77.61 319 *e*P **P 08 22 54.6 -0.2**
QUIF pmax pmax
comp=Z,14nm,1.1s,mb4.8
QUIF Quistinic 77.61 319 *e*P **P 08 22 54.6 -0.2**
comp=Z,14nm,1.1s,mb4.8
EPF Esparros 78.11 313 *e*P **P 08 22 57.0 -0.7**
comp=Z,4.9nm,0.7s,mb4.3
EPF Esparros 78.11 313 *e*P **P 08 22 57.0 -0.7**
EPF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
EPF Esparros 78.11 313 *e*P **P 08 22 57.0 -0.7**
comp=Z,2.5nm,0.7s,mb4.2
TOO Toulangi 78.77 147 *e*P **P 08 23 01.7 +0.5**
SJPF Ste Jean 79.04 314 *e*P **P 08 23 03.5 +0.7**
comp=Z,26nm,1.0s,mb4.8
SJPF Ste Jean 79.04 314 *e*P **P 08 23 03.5 +0.7**
SJPF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SJPF Ste Jean 79.04 314 *e*P **P 08 23 03.5 +0.7**
comp=Z,13nm,1.0s,mb4.8
YKA Yellowknife Ar 81.89 17 P **P 08 23 17.1 -0.7**
comp=Z,2.2nm,0.7s,mb4.2,baz=327,slow=4.9,SNR=7.8
YKA Yellowknife Ar 81.89 17 P **P 08 23 17.1 -0.7**
ESDC Sonseca Array 82.65 312 P **P 08 23 22.6 +0.4**
comp=Z,1.9nm,0.6s,mb4.3,baz=47,slow=5.4,SNR=6.5
MVO Moncorvo 83.70 315 *e*P **P 08 23 28.3 +0.7**
comp=Z,116nm,1.7s,mb5.7
PCAB Cabril 83.98 316 *e*P **P 08 23 29.5 +0.5**
comp=Z,36nm,1.3s,mb5.3
PMRV Marv??o 84.95 313 *e*P **P 08 23 34.8 +0.8**
comp=Z,26nm,1.8s,mb5.1
PBAR Barrancos 85.47 312 *e*P **P 08 23 37.1 +0.5**
comp=Z,144nm,1.8s,mb5.8
EVO Evora 85.87 313 *e*P **P 08 23 38.8 +0.2**
comp=Z,25nm,1.7s,mb5.2
PBEJ Beja 86.08 312 *e*P **P 08 23 40.2 +0.5**
comp=Z,22nm,1.3s,mb5.2
PCVE Castro Verde 86.43 312 *e*P **P 08 23 41.6 +0.2**
comp=Z,37nm,1.4s,mb5.4
MORF Marmelete 87.01 312 *e*P **P 08 23 45.8 +1.6**
FCC Fort Churchill 89.32 9 *e*P **P 08 23 54.6 -0.2**
FCC pmax pmax
comp=Z,1.0nm,1.6s,mb3.9
FCC Fort Churchill 89.32 9 *e*P **P 08 23 54.6 -0.2**
comp=Z,0.6nm,1.6s,mb3.7
FFC Flin Flon 91.79 14 *e*P **P 08 24 05.8 -0.5**
FFC pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
FFC Flin Flon 91.79 14 *e*P **P 08 24 05.8 -0.5**
comp=Z,1.5nm,0.6s,mb4.5
TOA0 Torodi Ar. Sit 93.13 287 *e*P **P 08 24 12.8 -0.5**
TORD Torodi Ar. Bea 93.13 287 P **P 08 24 12.9 -0.4**
comp=Z,3.2nm,0.8s,mb4.8,baz=56,slow=3.9,SNR=13
SCHQ Scheffenville 94.05 354 P **P 08 24 15.9 -0.9**
comp=Z,2.7nm,0.6s,mb4.8,baz=339,slow=3.8,SNR=6.1
BOSA Boshof 95.20 240 P **P 08 24 23.8 +1.4**
comp=Z,4.0nm,1.0s,mb4.8,baz=133,slow=20,SNR=3.7
CASY Casey 97.18 177 *e*P **P 08 24 30.5 +0.1**
comp=Z,100nm,2.6s,mb5.8
AHID Auburn Hatcher 99.96 25 *e*Pdif Pdif 08 24 47.9 +4.2
comp=Z,17nm,0.6s
TXAR Lajitas Array 114.61 26 PKP PKiKP 08 29 38.5 -0.9
comp=Z,0.6nm,0.8s,baz=222,slow=0.7,SNR=5.1
TXAR Lajitas Array 114.61 26 PKP PKiKP 08 29 38.5 -0.9
JCT Junction City 114.92 22 *e*PKIKP PKiKP 08 29 39.3 -0.6
QSPA South Pole Qui 120.84 180 PKP PKPdf 08 29 48.4 -1.3
comp=Z,3.3nm,0.7s,baz=255,slow=2.4,SNR=9.2
ROSC El Rosal 144.22 356 PKP PKPdf 08 30 34.3 -1.1
comp=Z,13nm,0.6s,baz=277,slow=6.7,SNR=8.4
CPUP Villa Florida 162.52 281 PKP PKPdf 08 31 00.2 -0.7
comp=Z,1.2nm,0.7s,baz=225,slow=4.4,SNR=3.8
LPAZ La Paz 163.41 331 PKP PKPdf 08 31 02.2 +0.2
comp=Z,2.8nm,1.0s,baz=50,slow=2.7,SNR=6.6
LPAZ La Paz 163.41 331 PKP PKPdf 08 31 02.2 +0.2
PLCA Paso Flores 169.21 205 PKP PKPdf 08 31 06.3 +0.5
comp=Z,1.5nm,0.8s,baz=246,slow=0.6,SNR=3.0

IDC ***12*** *08:12:49.9±0.7,32°.20N×104°.96E, h0km, mb4.4/14, mb1 4.6/15, mb1mx4.3/28, mbtmp4.4/15, ML4.2/1, Error ellipse: s-maj=39.5km s-min=15.2km az=60.0*
NEIC ***12*** *08:12:51.5±0.4,32°.21N×104°.98E, h10km, mb4.8/1, Error ellipse: s-maj=15.7km s-min=7.7km az=69.0*
ISC 12 08:12:51.3±2.2,32°.22N±0°.07×104°.9E±0°.1, h7km±13km, n21, σ0s82/22, mb4.4/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.96**	**348**	Pg	**Pg**	**08 14 07.8**	**+0.6**
LZH				Sg	**Sg**	**08 14 57.3**	**-1.2**
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,2μm,0.6s						
CMAR	**Chiang Mai Arr**	**14.71**	**203**	Pn	**Pn**	**08 16 20.4**	**+0.6**
	comp=E,0.4nm,0.3s,baz=15,slow=16,SNR=2.4						
CN2	**Changchun**	**19.85**	**48**	*e*P	**Pn**	**08 17 25.8**	**+1.5**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
MKAR	**Makanchi Array**	**22.61**	**317**	P	**P**	**08 17 53.1**	**+0.7**
	comp=Z,6.6nm,0.8s,mb4.1,baz=111,slow=10,SNR=3.3						
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**08 18 25.9**	**+1.0**
	comp=Z,5.4nm,0.4s,mb4.5,baz=134,slow=9.6,SNR=3.0						
FITZ	**Fitzroy Crossi**	**53.84**	**155**	*e*P	**P**	**08 22 14.3**	**-0.7**
	comp=Z,9.6nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.84**	**155**	P	**P**	**08 22 14.1**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.5,baz=205,slow=6.2,SNR=4.6						
ARCES	**ARCESS Array B**	**56.53**	**336**	P	**P**	**08 22 33.9**	**0.0**
	comp=Z,6.9nm,0.8s,mb4.7,baz=81,slow=8.1,SNR=5.6						
BRTR	**Keskin Array B**	**56.78**	**299**	P	**P**	**08 22 37.1**	**+0.9**
	comp=Z,1.5nm,0.8s,mb4.1,baz=92,slow=6.7,SNR=3.5						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**08 22 36.5**	**-1.0**
	comp=Z,8.4nm,0.7s,mb4.9,baz=101,slow=10,SNR=6.5						
AKASG	**Malin Array Be**	**57.12**	**313**	P	**P**	**08 22 37.3**	**-1.0**
	comp=Z,1.1nm,0.4s,mb4.3,baz=69,slow=6.8,SNR=3.5						
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**08 22 51.2**	**-0.8**
	comp=Z,1.0nm,0.8s,mb4.9,baz=341,slow=7.6,SNR=4.9						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**08 23 12.6**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.6,baz=326,slow=6.3,SNR=4.1						
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**08 23 25.6**	**-0.1**
	comp=Z,7.6nm,1.0s,mb4.7,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**08 23 25.4**	**-0.3**
	comp=Z,4.6nm,0.8s,mb4.5,baz=71,slow=6.4,SNR=4.8						
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**08 23 46.4**	**0.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=78,slow=11,SNR=2.4						
INK	**Inuvik**	**70.89**	**20**	P	**P**	**08 24 08.8**	**+0.3**
	comp=Z,3.7nm,0.9s,mb4.3,baz=295,slow=7.2,SNR=2.0						
WLF	**Walferdange**	**71.36**	**317**	*e*P	**P**	**08 24 15.4**	**+3.6**
	comp=Z,7.6nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**72.58**	**148**	P	**P**	**08 24 18.7**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.3,baz=339,slow=8.6,SNR=2.7						
YKA	**Yellowknife Ar**	**80.44**	**17**	P	**P**	**08 25 02.9**	**-0.5**
	comp=Z,1.1nm,0.5s,mb4.0,baz=329,slow=5.2,SNR=3.9						
YKA	**Yellowknife Ar**	**80.44**	**17**	P	**P**	**08 25 02.9**	**-0.5**

IDC 12 08:15:38.1±1.4,31°.76N×103°.94E, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.8/27, mbtmp4.1/5, Error ellipse: s-maj=68.3km s-min=28.8km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**56.95**	**326**	P	P	08 25 25.9	+1.1
	1.7nm,0.4s,baz=90,slow=6.8,SNR=7.2						
WRA	**Warramunga Arr**	**59.10**	**146**	P	P	08 25 40.4	0.0
	1.6nm,0.5s,baz=339,slow=7.9,SNR=6.1						
NOA	**NORSAR Array B**	**64.03**	**327**	P	P	08 26 11.6	-1.7
	0.9nm,0.5s,baz=74,slow=4.2,SNR=3.5						
INK	**Inuvik**	**71.59**	**19**	P	P	08 27 01.0	+0.2
	1.8nm,0.6s,baz=339,slow=7.9,SNR=4.8						
YKA	**Yellowknife Ar**	**81.11**	**17**	P	P	08 27 55.0	+0.1
	0.5nm,0.5s,baz=330,slow=5.5,SNR=3.6						

ISCJB ***12*** *08:16:50.6±1.1,31°.66N±0°.05×104°.52E±0°.08, h7km±8km, mb4.1/14, Error ellipse: s-maj=11.9km s-min=7.6km az=31.3*
IDC ***12*** *08:16:51.5±0.6,31°.60N×104°.29E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.1/32, mbtmp4.2/17, ML3.4/2, Error ellipse: s-maj=26.1km s-min=13.3km az=58.0*
NEIC ***12*** *08:16:53.0±0.4,31°.58N×104°.25E, h10km, Error ellipse: s-maj=15.3km s-min=8.1km az=74.0*
BJI ***12*** *08:16:56.3,31°.86N×104°.14E, h10km, ML4.0/5*
ISC 12 08:16:52.4±1.1,31°.69N±0°.05×104°.43E±0°.08, h5km±8km, n23, σ0s94/26, mb4.1/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.97**	**216**	Pg	**Pg**	**08 17 11.9**	**+1.0**
CD2				Sg	**Sg**	**08 17 23.8**	**+0.3**
CD2				smax			
	comp=N,20μm,0.5s						
LZH	**Lanzhou**	**4.41**	**354**	Pg	**Pb**	**08 18 08.8**	**-1.5**
LZH				Sn	**Sn**	**08 18 59.0**	**+7.3**
LZH				smax			
	comp=N,360nm,0.7s						
LZH				smax			
	comp=E,420nm,0.6s						
XAN	**Xi'an**	**4.45**	**57**	Pg	**Pg**	**08 18 17.1**	**-0.5**
XAN				Sg	**Sg**	**08 19 10.0**	**-5.2**
XAN				smax			
	comp=N,330nm,1.2s						
XAN				smax			
	comp=E,170nm,1.0s						
CMAR	**Chiang Mai Arr**	**14.08**	**202**	Pn	**Pn**	**08 20 10.1**	**-2.5**
	comp=E,0.1nm,0.3s,baz=35,slow=30,SNR=5.3						
SONM	**Songino Array**	**16.19**	**5**	Pn	**Pn**	**08 20 41.7**	**+1.2**
	comp=E,0.2nm,0.3s,baz=188,slow=20,SNR=3.4						
KSRS	**Korea Array**	**20.16**	**67**	P	**P**	**08 21 28.1**	**+0.5**
	comp=E,4.9nm,0.7s,baz=256,slow=10,SNR=6.9						
CN2	**Changchun**	**20.49**	**48**	*e*P	**P**	**08 21 39.1**	**+8.0**
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**08 21 53.7**	**-1.3**
	comp=E,1.4nm,0.7s,mb3.5,baz=126,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**08 21 53.7**	**-1.3**
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	**P**	**08 22 29.4**	**+0.5**
	comp=E,2.0nm,0.3s,mb4.1,baz=98,slow=9.1,SNR=3.4						
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**08 22 36.0**	**+1.4**
	comp=E,3.0nm,0.9s,mb3.8,baz=135,slow=8.4,SNR=3.8						
AKTK	**Aktyubinsk**	**38.94**	**313**	P	**P**	**08 24 19.3**	**+0.2**
AKTO	**Aktyubinsk**	**38.94**	**313**	P	**P**	**08 24 19.3**	**+0.2**
	comp=E,1.6nm,0.6s,mb3.9,baz=106,slow=14,SNR=4.7						
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	**08 26 37.8**	**+0.4**
	comp=E,2.4nm,0.8s,mb4.3,baz=64,slow=8.3,SNR=2.4						
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**08 26 41.3**	**+0.9**
	comp=E,3.1nm,0.8s,mb4.4,baz=2.9,slow=3.8,SNR=5.0						
WRA	**Warramunga Arr**	**58.81**	**147**	P	**P**	**08 26 52.4**	**+0.5**
	comp=E,6.1nm,0.5s,mb4.9,baz=338,slow=7.5,SNR=15						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**08 27 12.4**	**-0.2**
	comp=E,1.3nm,0.5s,mb4.3,baz=341,slow=6.9,SNR=8.3						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**08 27 27.1**	**-1.5**
	comp=E,2.5nm,0.9s,mb4.2,baz=71,slow=6.6,SNR=2.6						
CTA	**Charters Tower**	**65.26**	**136**	P	**P**	**08 27 35.3**	**0.0**
	comp=E,1.8nm,0.4s,mb4.4,baz=326,slow=6.9,SNR=5.4						
KMBO	**Kilima Mbogo**	**71.31**	**257**	P	**P**	**08 28 12.1**	**-1.3**
	comp=E,1.3nm,0.8s,mb3.9,baz=66,slow=14,SNR=3.6						
INK	**Inuvik**	**71.51**	**19**	P	**P**	**08 28 14.2**	**+0.4**
	comp=E,1.0nm,0.5s,mb4.0,baz=339,slow=9.7,SNR=5.2						
STKA	**Stephens Creek**	**72.35**	**147**	P	**P**	**08 28 18.9**	**-0.3**
	comp=E,3.6nm,0.8s,mb4.3,baz=340,slow=4.3,SNR=6.7						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	**P**	**08 29 08.7**	**+0.7**
	comp=E,0.8nm,0.6s,mb3.9,baz=329,slow=5.2,SNR=7.6						

ISCJB ***12*** *08:18:45.8±1.2,31°.34N±0°.04×103°.9E±0°.1, h4km±8km, mb4.0/10, Error ellipse: s-maj=19.0km s-min=6.5km az=2.9*
IDC ***12*** *08:18:47.2±0.9,31°.39N×103°.92E, h0km, mb3.9/10, Error ellipse: s-maj=38.6km s-min=17.8km az=57.0*
NEIC ***12*** *08:18:48.7±0.6,31°.36N×103°.87E, h10km, mb4.7/1, Error ellipse: s-maj=38.7km s-min=10.8km az=57.0*
BJI ***12*** *08:18:49.1,31°.33N×104°.04E, h20km, mb4.3/1, ML4.1/5*
ISC 12 08:18:48.5±1.0,31°.27N±0°.04×103°.8E±0°.1, h9km±7km, n17, σ0s85/18, mb4.0/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**185**	Pg	**Pg**	**08 18 55.3**	**-0.3**
CD2				Sg	**Sg**	**08 19 00.5**	**+0.1**
CD2				smax			
	comp=N,32μm,0.6s						
LZH	**Lanzhou**	**4.80**	**0**	Sg	**Sg**	**08 21 23.1**	**+0.4**
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,190nm,0.7s						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**08 23 28.3**	**-1.9**
	comp=E,1.4nm,0.7s,baz=259,slow=9.3,SNR=3.4						
CN2	**Changchun**	**21.17**	**48**	*e*P	**P**	**08 23 35.0**	**+1.1**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**08 23 49.2**	**-0.9**
	comp=E,3.1nm,0.9s,mb3.7,baz=127,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**08 23 49.2**	**-0.9**
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**08 24 30.4**	**+0.4**
	comp=E,2.2nm,0.7s,mb3.8,baz=128,slow=9.5,SNR=4.1						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**08 25 19.6**	**+0.4**
	comp=E,0.7nm,0.5s,mb3.8,baz=90,slow=10,SNR=2.7						
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**08 28 33.5**	**-0.5**
	comp=E,2.5nm,0.8s,mb4.3,baz=92,slow=8.5,SNR=5.2						
WRAB	**Tennant Creek**	**58.76**	**146**	*e*P	**P**	**08 28 46.8**	**-0.2**
	comp=E,4.3nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**08 28 46.4**	**-0.5**
	comp=E,0.7nm,0.3s,mb4.1,baz=318,slow=12,SNR=9.0						
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**08 29 08.4**	**+0.9**
	comp=E,0.6nm,0.6s,mb3.9,baz=338,slow=7.0,SNR=3.6						
INK	**Inuvik**	**72.08**	**19**	P	**P**	**08 30 12.5**	**-0.1**
	comp=E,1.6nm,0.7s,mb4.1,baz=317,slow=8.6,SNR=6.9						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**08 30 16.0**	**+1.8**
	comp=E,0.7nm,0.5s,mb3.8,baz=339,slow=16,SNR=3.1						
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**08 30 16.0**	**+1.8**
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**08 31 05.6**	**-0.8**
	comp=E,1.0nm,0.6s,mb3.9,baz=331,slow=5.2,SNR=9.0						
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**08 31 05.6**	**-0.8**

ISCJB ***12*** *08:21:38.3±0.9,31°.51N±0°.02×104°.11E±0°.02, h12km±6km, mb4.9/133, MS5.9/6, Error ellipse: s-maj=4.0km s-min=3.5km az=175.6*
IDC ***12*** *08:21:38.0±0.4,31°.52N×104°.12E, h0km, mb4.7/36, mb1 4.8/38, mb1mx4.7/43, mbtmp4.7/38, ML4.5/2, MS5.9/3, Ms1 6.0/3, ms1mx5.0/54, Error ellipse: s-maj=12.9km s-min=9.5km az=46.0*
NEIC ***12*** *08:21:39.9±0.2,31°.50N×104°.05E, h10km, mb5.0/87, Error ellipse: s-maj=4.9km s-min=3.7km az=218.0*
BJI ***12*** *08:21:39.5,31°.53N×104°.28E, h11km, mB5.7/5, mb5.1/29, ML5.3/17, Ms5.5/25, Ms7 5.3/17*
MOS ***12*** *08:21:40.0±0.9,31°.53N×104°.17E, h25km, mb5.2/72, Error ellipse: s-maj=7.4km s-min=4.4km az=117.9*
DJA ***12*** *08:22:01,30°.79N×103°.32E, h159km, mb5.2/30*
SZGRF ***12*** *08:22:09.6,33°.97N×99°.90E, h18km, mb5.0, Qinghai, China*
ISC 12 08:21:40.9±0.6,31°.56N±0°.02×104°.08E±0°.02, h15km±4km, h19km±2.2km: pP-P, n401, σ1s08/412, mb4.9/133, MS5.9/6, 14C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.70**	**203**	Pg	**Pg**	**08 21 54.5**	**0.0**
CD2				Sg	**Sg**	**08 22 05.7**	**+2.0**
CD2				smax			
	comp=N,116μm,1.0s						
LZH	**Lanzhou**	**4.52**	**358**	⇑Pn	**Pn**	**08 22 54.8**	**+6.0**
LZH				Pg	**Pg**	**08 23 06.1**	**-1.4**
LZH				Sn	**Sn**	**08 23 44.1**	**+2.9**
LZH				Sg	**Sg**	**08 24 05.4**	**-0.7**
LZH				smax			
	comp=N,4μm,1.0s						
LZH				smax

comp=E,640nm,1.8s
GTA Gaotai 8.57 337 P Pn 08 23 48.7 +4.3
GTA pP 08 23 52.8
GTA sP 08 23 56.0
GTA S **Sn 08 25 26.0 +5.2**
GTA pmax pmax
comp=Z,27nm,1.1s
GTA LR LR
comp=N,16μm,15.2s
GTA LR LR
comp=E,14μm,13.7s
GTA LR LR
comp=Z,16μm,15.3s
WHN Wuhan 8.87 94 P Pn 08 23 49.1 +0.5
WHN S **Sn 08 25 24.7 -3.6**
WHN LR LR
comp=N,22μm,6.0s
WHN LR LR
comp=E,41μm,12.8s
BTO Baotou 10.23 26 *e*P **Pn 08 24 06.9 -0.2**
IMP Imphal 11.20 235 *e*P **Pn 08 24 20.0 -0.5**
LSA Lhasa 11.29 264 *e*P **Pn 08 24 24.2 +2.6**
LSA pmax pmax
comp=Z,54nm,0.7s
LSA Lhasa 11.29 264 *e*Pn **Pn 08 24 24.2 +2.6**
comp=Z,54nm,0.7s
GZH Guangzhou 11.79 133 P **Pn 08 24 27.0 -1.5**
GZH S **Sn 08 26 33.8 -6.0**
GZH LR LR
comp=N,12μm,15.9s
GZH LR LR
comp=E,22μm,16.0s
TIA Tai'an 11.79 63 P **Pn 08 24 28.2 -0.3**
TIA LR LR
comp=E,43μm,18.0s
SHL Shillong 12.26 244 *e*P **Pn 08 24 33.0 -2.0**
SHL *e*x x 08 28 15.0
NJ2 Nanjing 12.58 84 *e*P **Pn 08 24 33.4 -6.0**
NJ2 pP 08 24 39.2
NJ2 PP 08 24 44.0
NJ2 sP 08 24 45.3
NJ2 S **Sn 08 26 52.6 -6.6**
NJ2 sS 08 27 02.9
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,260nm,3.6s
NJ2 LR LR
comp=N,9μm,12.0s
NJ2 LR LR
comp=E,6μm,9.0s
NJ2 LR LR
comp=Z,20μm,15.2s
BJT Baijiatuau 12.94 46 *e*P **Pn 08 24 45.2 +1.0**
BJT pmax pmax
comp=Z,35nm,0.6s
BJT Baijiatuau 12.94 46 *e*Pn **Pn 08 24 45.2 +1.1**
comp=Z,35nm,0.6s
BJI Beijing 12.96 46 P **Pn 08 24 44.9 +0.5**
BJI pmax pmax
comp=Z,26nm,0.8s
CHTO Chiang Mai 13.51 201 *e*P **Pn 08 24 53.2 +1.2**
CHTO Chiang Mai 13.51 201 P **Pn 08 24 53.9 +1.8**
SNR=11
CHTO P 08 24 53.9
SNR=11
QIZ Qiongzhong 13.51 156 P **Pn 08 24 51.4 -0.7**
QIZ pP 08 24 58.4
QIZ S **Sn 08 27 17.8 -4.3**
QIZ pmax pmax
comp=Z,37nm,0.9s
QIZ pmax pmax
comp=Z,8μm,12.8s
QIZ Qiongzhong 13.51 156 *e*Pn **Pn 08 24 51.1 -1.0**
comp=Z,106nm,1.3s
CM31 Chiang Mai Arr 13.84 201 *e*Pn **Pn 08 24 58.3 +1.7**
CMAR Chiang Mai Arr 13.84 201 Pn **Pn 08 24 57.0 +0.4**
comp=Z,1.6nm,0.3s,baz=13,slow=11,SNR=27
CMAR LR LR 08 30 45.2
comp=Z,25μm,18.4s,baz=149,slow=40
QZH Quanzhou 14.38 114 *e*P **Pn 08 25 08.0 +4.0**
QZH S **Sn 08 27 48.4 +5.1**
TAPN Taplejung 14.86 258 *e*P **Pn 08 25 09.2 -1.2**
comp=Z,356nm,1.2s
ODAN Odare 15.30 256 *e*P **Pn 08 25 14.5 -1.8**
RAMN Ramite 15.93 258 *e*P **Pn 08 25 22.4 -2.1**
DL2 Dalian 16.09 58 P **Pn 08 25 30.3 +3.7**
DL2 pmax pmax
comp=Z,50nm,0.9s
GUN Gumba 16.22 262 *e*P **Pn 08 25 26.9 -1.3**
comp=Z,685nm,1.0s
SONM Songino Array 16.36 6 Pn **Pn 08 25 31.0 +1.2**
comp=Z,0.7nm,0.3s,baz=185,slow=10,SNR=25
ULN Ulaanbaatar 16.45 7 *e*P **Pn 08 25 34.6 +3.6**
ULN pmax pmax
comp=Z,56nm,1.0s
ULN Ulaanbaatar 16.45 7 *e*P **Pn 08 25 34.6 +3.6**
comp=Z,56nm,1.0s
ULN Ulaanbaatar 16.45 7 P **Pn 08 25 34.9 +3.9**
SNR=8.4
ULN P 08 25 34.9
SNR=8.4
PKI Pulchoki 16.72 261 *e*P **Pn 08 25 33.2 -1.4**
comp=Z,418nm,1.0s
PKIN Phulchoki 16.73 261 *e*P **Pn 08 25 33.3 -1.4**
comp=Z,352nm,0.7s
KKN Kakani 16.76 262 *e*P **Pn 08 25 33.4 -1.7**
comp=Z,119nm,0.5s
SSLB Suanglung 16.82 113 *e*Pn **Pn 08 25 35.9 0.0**
comp=Z,97nm,0.8s
TPUB Ta-pu 16.83 115 *e*P **Pn 08 25 41.8 +5.8**
comp=Z,86nm,0.9s
DMN Daman 16.96 261 *e*P **Pn 08 25 36.1 -1.6**
comp=Z,447nm,0.9s
NACB Ninganchiao 17.14 111 *e*P **Pn 08 25 41.6 +1.8**
comp=Z,111nm,1.0s
YULB Yu-li 17.30 114 *e*P **Pn 08 25 43.0 +1.1**
comp=Z,62nm,0.9s
TWG Pinlang 17.43 116 *e*P **Pn 08 25 40.4 -3.1**
comp=Z,73nm,0.9s
WMQ Urumqi 17.79 318 *e*P **Pn 08 25 49.2 +1.3**
WMQ pmax pmax
comp=Z,28nm,1.0s
WMQ LR LR
comp=N,25μm,26.0s
WMQ LR LR
comp=E,13μm,26.0s
WMQ LR LR
comp=Z,20μm,25.0s
SNY Shenyang 18.66 51 ⇑P **Pn 08 25 58.7 +0.1**
SNY S **Sn 08 29 27.0 +0.1**
SNY pmax pmax
comp=Z,68nm,0.5s
SNY LR LR
comp=N,17μm,18.3s
SNY LR LR
comp=E,21μm,15.6s
SNY LR LR
comp=Z,20μm,15.0s
ZAK Zakamensk 18.82 358 *e*P **Pn 08 26 04.3 +3.9**
ZAK pmax pmax
comp=Z,28nm,1.1s
INCN Inchon 19.49 66 *e*P **Pn 08 26 08.0 -0.5**
comp=Z,64nm,0.9s
TLY Talaya 20.11 359 *e*P **P 08 26 20.1 +6.1**
TLY *e* 08 26 35.5
TLY pmax pmax
comp=Z,29nm,1.2s
TLY Talaya 20.11 359 *e*P **P 08 26 20.4 +6.5**
comp=Z,20nm,0.9s
MOY Mondy 20.22 354 *e*P **P 08 26 18.5 +3.3**
MOY pmax pmax
comp=Z,73nm,1.7s
KSRS Korea Array 20.49 67 P **P 08 26 18.1 -0.1**
comp=Z,72nm,0.7s,baz=256,slow=10,SNR=122
KSRS Korea Array 20.49 67 P **P 08 26 18.1 -0.1**
KSRS pmax pmax
comp=Z,73nm,0.7s
PTH Pithoragarh 20.64 271 *e*P **P 08 26 19.0 -0.9**
PTH *e*x x 08 30 58.2
IRK Irkutsk 20.67 0 *e*P **P 08 26 24.8 +4.8**
IRK pmax pmax
comp=Z,187nm,1.1s
JOSI Joshimath 21.02 274 *e*P **P 08 26 24.9 +0.8**
JOSI *e*x x 08 31 04.5
HIA Hailar 21.26 29 *e*P **P 08 26 26.7 +0.2**
HIA pmax pmax
comp=Z,100nm,1.0s
HIA Hailar 21.26 29 *e*P **P 08 26 26.6 +0.2**
comp=Z,100nm,1.0s,mb5.1
CIT Chita 21.60 16 *e*P **P 08 26 25.0 -5.0**
CIT *e* 08 26 34.6
CIT *e* 08 26 55.8
MK31 Makanchi Array 22.62 318 *e*P **P 08 26 41.7 +0.7**
MKAR Makanchi Array 22.62 318 P **P 08 26 42.2 +1.2**
comp=Z,16nm,0.9s,mb4.4,baz=119,slow=11,SNR=23
SMLA Simla 22.97 276 *e*P **P 08 26 41.6 -3.3**
SDNR Sundarnagar 23.09 277 *e*P **P 08 26 44.5 -1.6**
AGRA Agra 23.15 266 *e*P **P 08 26 45.0 -1.8**
NDI New Delhi 23.39 270 *e*P **P 08 26 48.0 -1.3**
AYAN Aya Nagar 23.51 269 *e*P **P 08 26 48.8 -1.8**
AYAN AMb AMB 08 26 51.5
comp=Z,80nm,1.0s,mb5.1
BHK Bhakra 23.57 277 *e*x x 08 26 56.4
SONA Sohna 23.61 269 *e*P **P 08 26 50.3 -1.2**
MDJ Mudanjiang 23.83 50 P **P 08 26 52.8 -0.5**
MDJ pP 08 26 55.6
MDJ sP sP 08 26 56.9 -2.8
MDJ S **S 08 31 07.9 -0.6**
MDJ sS sS 08 31 13.7 -2.2
MDJ ScP ScP 08 34 14.5 +0.4
MDJ PcS PcS 08 34 15.8 +0.2
MDJ pmax pmax
comp=Z,24nm,1.1s,mb4.5
MDJ LR LR
comp=N,16μm,19.9s
MDJ LR LR
comp=E,14μm,26.9s
MDJ LR LR
comp=Z,24μm,18.1s,MS5.7
MDJ Mudanjiang 23.83 50 *e*P **P 08 26 53.1 -0.2**
comp=Z,66nm,0.9s,mb5.1
THN Thein Dam 24.04 280 *e*P **P 08 26 54.3 -1.1**
KSH Kashi 24.14 297 P **P 08 26 59.1 +2.9**
KSH *e*pP 08 27 03.1
KSH *e*sP sP 08 27 06.0 +3.4
KSH *e*PP 08 27 34.1
KSH *e*PcP PcP 08 30 39.0 +2.0
KSH *e*S **S 08 31 14.3 +0.7**
KSH *e*ScP ScP 08 34 16.0 +1.0
KSH *e*PcS PcS 08 34 17.1 +0.4
KSH pmax pmax
comp=Z,12μm,9.9s
KSH LR LR
comp=N,13μm,14.5s,MS5.8
KSH LR LR
comp=E,20μm,14.9s,MS5.8
ULHL Ulahol 24.58 304 P **P 08 27 02.1 +1.9**
SNR=9.6
NGP Nagpur 24.65 251 *e*x x 08 26 56.2
KHET Khetri 24.74 269 *e*P **P 08 27 01.5 -0.3**
KHET AMb AMB 08 27 03.8
comp=Z,66nm,1.1s,mb5.1
KHET *e*x x 08 31 31.0
TKM2 Tokmak 2 25.23 305 P **P 08 27 07.5 +1.3**
SNR=13
TKM2 Tokmak 2 25.23 305 *e*P **P 08 27 07.8 +1.6**
TKM2 pmax pmax
comp=Z,24nm,0.9s,mb4.7
TKM2 Tokmak 2 25.23 305 *e*P **P 08 27 07.8 +1.6**
comp=Z,24nm,0.9s,mb4.7
KZA Kyzart 25.25 303 P **P 08 27 08.6 +2.3**
SNR=23
KBK Karagaybulak 25.62 304 P **P 08 27 11.3 +1.6**
SNR=9.1
UCH Uchtor 25.81 303 P **P 08 27 13.7 +2.3**
SNR=11
AAK Ala-Archa 25.93 304 P **P 08 27 16.9 +4.4**
SNR=5.9
AAK Ala-Archa 25.93 304 P **P 08 27 13.1 +0.6**
comp=Z,5.8nm,0.7s,mb4.2,baz=139,slow=6.8,SNR=17
AAK Ala-Archa 25.93 304⇑*e*P **P 08 27 13.8 +1.3**
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
AAK Ala-Archa 25.93 304 *e*P **P 08 27 14.0 +1.5**
comp=Z,47nm,1.3s,mb4.9
ZAA0 Zalesovo Array 26.31 334 *e*P **P 08 27 15.9 +0.2**
ZALV Zalesovo Beam 26.31 334 P **P 08 27 16.2 +0.5**
comp=Z,36nm,0.9s,mb4.9,baz=130,slow=9.6,SNR=14
AML Almayashu 26.38 302 P **P 08 27 18.5 +2.0**
SNR=16
AML Almayashu 26.38 302 *e*P **P 08 27 18.8 +2.3**
comp=Z,46nm,1.1s,mb4.9
EKS2 Erkin-Say 26.45 303 *e*P **P 08 27 18.6 +1.4**
comp=Z,21nm,1.0s,mb4.6
KURK Kurchatov 26.87 323 P **P 08 27 21.5 +0.6**
comp=Z,10.0nm,0.8s,mb4.4,baz=129,slow=8.9,SNR=32
KURK Kurchatov 26.87 323 *e*P **P 08 27 21.4 +0.5**
KURK pmax pmax
comp=Z,46nm,1.1s,mb4.9
KURK Kurchatov 26.87 323 *e*P **P 08 27 21.4 +0.5**
comp=Z,46nm,1.1s,mb4.9
KURK Kurchatov 26.87 323 P **P 08 27 22.1 +1.2**
SNR=14
KURK P 08 27 22.1
SNR=14
HYB Hyderabad 27.07 245 *i* P **P 08 27 25.0 +2.0**
BOD Bodaibo 27.13 12 *e*P **P 08 27 22.7 -0.4**
BOD pmax pmax
comp=Z,13nm,1.0s,mb4.4
KLR Kul'dur 27.27 42 *e*P **P 08 27 21.0 -3.5**
NVS Novosibirsk 27.59 334 *e*P **P 08 27 30.3 +3.1**
NVS pmax pmax
comp=Z,29nm,1.6s,mb4.7
NVS pmax pmax
comp=N,27nm,1.7s
MAJO Matsushiro 28.62 71 *e*P **P 08 27 34.9 -1.8**
MAJO pmax pmax
comp=Z,18nm,0.6s,mb5.0
MAJO Matsushiro 28.62 71 *e*P **P 08 27 34.9 -1.8**
comp=Z,18nm,0.6s,mb5.0
MAT Matsushiro 28.62 71 P **P 08 27 34.8 -1.9**
MJAR Matsushiro Arr 28.62 71 P **P 08 27 35.5 -1.2**
comp=Z,7.3nm,0.5s,mb4.7,baz=279,slow=10,SNR=25
HABR Khabarovsk 28.86 45 P **P 08 27 36.3 -2.4**
HABR *e**PP pP 08 27 44.9 +1.7
HABR *e*PPP 08 28 35.7
HABR *e* 08 30 44.6
HABR S **S 08 32 23.5 -4.7**
HABR *e**SS sS 08 32 40.2 +4.5
HABR *e*SS SS 08 33 47.5 -43
HABR MLR MLR
comp=Z,19μm,21.0s,MS5.7
JASL Jaisalmer 29.25 269 *e*P **P 08 27 42.4 0.0**
BVAR Borovoye Array 32.42 321 P **P 08 28 09.9 -0.2**
comp=Z,3.5nm,0.6s,mb4.4,baz=113,slow=9.0,SNR=17
BRVK Borovoye 32.50 321⇑*i*P **P 08 28 10.2 -0.5**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
BRVK Borovoye 32.50 321 *e*P **P 08 28 11.0 +0.3**
comp=Z,14nm,0.7s,mb4.9
ASAJ Asahikawa 32.61 56 P **P 08 28 11.4 -0.5**
comp=Z,14nm,0.7s,mb5.0,baz=271,slow=11,SNR=13
ASAJ Asahikawa 32.61 56 P **P 08 28 11.4 -0.5**
ASAJ pmax pmax
comp=Z,14nm,0.7s
YSS Yuzh-Sakhalins 33.29 51⇑*e*P **P 08 28 17.0 -0.7**
YSS *e* 08 28 24.9
YSS pmax pmax
comp=Z,80nm,1.3s,mb5.5
YSS Yuzh-Sakhalins 33.29 51 *e*P **P 08 28 17.1 -0.7**
comp=Z,59nm,1.3s,mb5.4
YAK Yakutsk 34.69 21 *e*P **P 08 28 28.2 -1.5**
YAK pmax pmax
comp=Z,47nm,1.1s,mb5.3
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=N,15nm,1.1s
YAK Yakutsk 34.69 21 *e*P **P 08 28 30.3 +0.6**
comp=N,44nm,0.5s,mb5.6
ABKAR Akbulak array 37.36 311 *e*P **P 08 28 53.3 +0.6**
comp=N,14nm,0.8s,mb4.8
AKTK Aktyubinsk 38.81 313 P **P 08 29 05.3 +0.3**
AKTO Aktyubinsk 38.81 313 P **P 08 29 05.3 +0.3**
comp=N,3.3nm,0.7s,mb4.2,baz=89,slow=8.4,SNR=13
SVE Sverdlovsk 39.12 323⇑*e*P **P 08 29 08.8 +1.3**
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.2
KAPI Kappang 39.32 155 P **P 08 29 08.1 -1.4**
comp=Z,40nm,0.9s,mb5.2,baz=334,slow=5.6,SNR=17
ARU Arti 40.06 322*c i*P **P 08 29 15.6 +0.3**
ARU S **S 08 35 21.8 +1.2**
ARU pmax pmax
comp=Z,37nm,1.2s,mb5.0
ARU Arti 40.06 322 *e*P **P 08 29 15.5 +0.2**
comp=Z,65nm,0.9s,mb5.4
SOKR Solikamsk 42.01 326*c i*P **P 08 29 36.9 +5.6**
SOKR pmax pmax
comp=Z,70nm,0.9s,mb5.3
TIXI Tiksi 42.32 11 *e*P **P 08 29 31.4 -2.2**
TIXI pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
TIXI Tiksi 42.32 11 *e*P **P 08 29 32.4 -1.3**
comp=Z,8.6nm,0.7s,mb4.5
BSY Bisya 42.36 270⇑P **P 08 29 35.4 +0.8**
SNR=8.8
ASHO Ashiyiah 42.63 273⇓P **P 08 29 38.0 +1.2**
SNR=9.4
SEY Seymchan 43.71 30⇑*e*P **P 08 29 42.9 -2.1**
PETK Petropavlovsk- 43.88 44 P **P 08 29 46.0 -0.6**
comp=Z,6.4nm,0.9s,mb4.4,baz=281,slow=1.3,SNR=8.4
PET Petropavlovsk 44.45 45 *e*P **P 08 29 50.9 -0.2**
PET pmax pmax
comp=Z,18nm,0.8s,mb4.8
PET Petropavlovsk 44.45 45 *e*P **P 08 29 50.9 -0.2**
comp=Z,18nm,0.8s,mb4.8
GNI Garni 48.07 298⇑*e*P **P 08 30 21.0 +1.2**
GNI pmax pmax
comp=Z,7.0nm,1.0s
UMR Umm Al-Rimmam 48.12 283 *e*P **P 08 30 21.2 +0.9**
UMR AMb AMB 08 30 29.9
comp=Z,43nm,1.1s,mb5.4
QRN Al-Qurain 48.19 282 *e*P **P 08 30 21.4 +0.6**
QRN AMb AMB 08 30 24.0
comp=Z,123nm,1.2s,mb5.8
ZEI Tsey 48.32 301 *e*P **P 08 30 21.4 -0.3**
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
MIB Mutribah 48.36 283 *e*P **P 08 30 23.2 +1.1**
MIB AMb AMB 08 30 24.0
comp=Z,66nm,0.8s,mb5.7
RDF Al-Radifah 48.44 282 *e*P **P 08 30 24.2 +1.4**
RDF AMb AMB 08 30 32.0
comp=Z,84nm,1.0s,mb5.7
KIV Kislovodsk 49.05 303 *e*P **P 08 30 27.2 0.0**
KIV pmax pmax
comp=Z,38nm,1.2s,mb5.3
VRHR Novokhopersk 49.22 312 *e*P **P 08 30 28.3 -0.1**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VRHR pmax pmax
comp=E,10.0nm,0.6s
KLMR Klimovskoe 50.68 325 P **P 08 30 41.8 +2.4**
KLMR pmax pmax
comp=Z,107nm,1.5s,mb5.5
VSR Storozhevoye 50.76 313 *e*P **P 08 30 39.9 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,20nm,1.1s
BILL Bilibino 50.78 25⇑*e*P **P 08 30 38.4 -1.6**
BILL pmax pmax
comp=Z,17nm,1.7s,mb4.7
BILL Bilibino 50.78 25 *e*P **P 08 30 43.9 +3.9**
comp=Z,48nm,1.5s,mb5.2
MOS Moscow 51.51 319 *e*P **P 08 30 43.1 -2.6**
MOS *e* 08 32 41.3
MOS *e*PPP 08 33 40.6
MOS pmax pmax
comp=Z,59nm,0.7s,mb5.6
KAKA Kakadu 51.74 144 *e*P **P 08 30 45.7 -2.2**
comp=Z,10nm,0.6s,mb4.9
KAKA Kakadu 51.74 144 *e*P **P 08 30 45.9 -1.9**
comp=Z,43nm,0.7s,mb5.5
OBN Obninsk 52.13 318 *e*P **P 08 30 49.3 -1.0**
OBN pmax pmax
comp=Z,15nm,1.2s,mb4.8
FITZ Fitzroy Crossi 53.53 154 *e*P **P 08 31 00.3 -0.8**
comp=Z,22nm,0.9s,mb5.1
FITZ Fitzroy Crossi 53.53 154 P **P 08 31 00.3 -0.8**
comp=Z,11nm,0.9s,mb4.8,baz=358,slow=5.5,SNR=17
APA Apatity 53.89 333⇑*e*P **P 08 31 03.4 +0.3**
APA MLR MLR
comp=Z,31μm,35.0s,MS6.1
MBWA Marble Bar 54.52 162 *e*P **P 08 31 07.7 -0.5**
comp=Z,12nm,0.8s,mb5.0
JOF Joensuu 54.63 328 *e*P **P 08 31 08.2 -0.4**
JOF pmax pmax
comp=Z,21nm,0.7s,mb5.3
JOF Joensuu 54.63 328 *e*p **P 08 31 08.2 -0.4**
comp=Z,20nm,0.7s,mb5.3
ASF Jabal al Asfar 56.17 290 P **P 08 31 19.9 -0.3**
comp=Z,5.9nm,0.9s,mb4.6,baz=308,slow=3.4,SNR=8.0
KEV Kevo 56.31 336 *e*P **P 08 31 19.5 -1.1**
KEV pmax pmax
comp=Z,19nm,0.7s,mb5.2
KEV Kevo 56.31 336 *e*p **P 08 31 19.5 -1.1**
comp=Z,19nm,0.7s,mb5.2
BR131 Keskin Array S 56.50 299 *e*P **P 08 31 21.6 -0.8**
BRTR Keskin Array B 56.50 299 P **P 08 31 21.9 -0.5**
comp=Z,3.5nm,0.7s,mb4.5,baz=90,slow=5.3,SNR=15
BRTR Keskin Array B 56.50 299*ce*P **P 08 31 25.3 +2.9**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 56.84 336 P **P 08 31 24.0 -0.3**
comp=Z,5.7nm,0.8s,mb4.6,baz=80,slow=8.3,SNR=13
ARCES ARCESS Array B 56.84 336 P **P 08 31 24.0 -0.3**
KAF Kangasniemi 57.00 327 *e*P **P 08 31 18.9 -6.7**
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.2
KAF Kangasniemi 57.00 327 *e*p **P 08 31 18.9 -6.7**
comp=Z,17nm,0.7s,mb5.2
AKASG Malin Array Be 57.06 313 P **P 08 31 25.1 -1.1**
comp=Z,1.6nm,0.4s,mb4.5,baz=71,slow=6.7,SNR=13
MMAI Mount Meron Ar 57.09 291 P **P 08 31 27.2 +0.5**
comp=Z,1.3nm,0.5s,mb4.2,baz=270,slow=40,SNR=4.4
MMAI LR LR 09 01 24.7
comp=Z,9μm,20.3s,MS5.8,baz=150,slow=42
FINES FINESS Array B 57.18 326 P **P 08 31 26.4 -0.5**
comp=Z,7.2nm,0.7s,mb4.8,baz=95,slow=9.6,SNR=15
IDID Didziasalis 57.71 319 *e*P **P 08 31 30.0 -0.7**
NACGM Naroch 57.76 318 *e* **P 08 31 29.0 -2.0**
IZAR Zarasai 57.91 319 *e*P **P 08 31 32.4 +0.3**
ISAL Salakas 58.01 319 *e*P **P 08 31 32.7 -0.1**
EIL Elat 58.59 288 P **P 08 31 36.8 -0.4**
comp=Z,8.3nm,0.7s,mb4.9,baz=339,slow=6.3,SNR=8.1
WRAB Tennant Creek 58.86 146 *e*P **P 08 31 38.8 -0.3**
WRAB pmax pmax
comp=Z,67nm,1.0s,mb5.6
WRAB Tennant Creek 58.86 146 *e*P **P 08 31 38.8 -0.3**
comp=Z,67nm,1.0s,mb5.6
WRA Warramunga Arr 58.86 146 P **P 08 31 38.8 -0.3**
comp=Z,12nm,0.6s,mb5.1,baz=339,slow=7.7,SNR=42
WB2 Warramunga Arr 58.87 146 *e*P **P 08 31 39.0 -0.1**
SPB4 Spitsbergen Ar 58.90 346 *e*P **P 08 31 43.7 +5.0**
ATD Arta Tunnel 59.59 265 P **P 08 31 45.0 +0.5**
comp=Z,5.9nm,0.6s,mb4.8,baz=138,slow=22,SNR=4.1
SUW Suwalki 59.99 318 *e*P **P 08 31 46.5 -0.1**
LVV L'vov 60.51 313 *e*P **P 08 31 50.1 -0.1**
KWP Kalwaria Pacla 61.38 313 *e*P **P 08 31 56.9 +0.7**
KOLS Kolonicke sedl 61.85 312 *e*P **P 08 31 58.9 -0.4**
KOLS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 61.85 312 *e*P **P 08 31 58.9 -0.4**
comp=Z,3.1nm,1.1s,mb4.3
KOLS Kolonicke sedl 61.85 312 *e*P **P 08 31 58.9 -0.4**
ASAR Alice Springs 61.89 149 P **P 08 31 59.4 -0.4**
comp=Z,3.8nm,0.5s,mb4.8,baz=337,slow=6.8,SNR=26
STHS Stebnicka Huta 62.36 313 *e*P **P 08 32 03.1 +0.4**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
STHS Stebnicka Huta 62.36 313 *e*P **P 08 32 03.1 +0.4**
comp=Z,3.2nm,1.0s,mb4.4
STHS Stebnicka Huta 62.36 313 *e*P **P 08 32 03.0 +0.3**
NIE Niedzica 62.94 313 *e*P **P 08 32 07.9 +1.3**
OJC Ojcow 63.01 314 *e*P **P 08 32 07.2 +0.1**
PSZ Piszkesteto 63.67 312⇓*e*P **P 08 32 11.9 +0.5**
VYHS Vyhne 64.15 313 *e*P **P 08 32 14.7 +0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 64.15 313 *e*P **P 08 32 14.7 +0.1**
comp=Z,4.7nm,1.2s,mb4.4

VYHS	Vyhne	64.15	313	eP	P	08 32 14.7	+0.1
NB2	NORSAR Subarra	64.27	327	P	P	08 32 13.9	-1.2
	comp=Z,25nm,0.9s,mb5.2,baz=73,slow=6.9						
NOA	NORSAR Array B	64.27	327	P	P	08 32 14.1	-1.0
	comp=Z,17nm,0.8s,mb5.1,baz=72,slow=6.5,SNR=25						
BSD	Bornholm Skovb	64.32	320	eP	P	08 32 14.1	-1.5
BSD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BSD	Bornholm Skovb	64.32	320	i P	P	08 32 14.1	-1.5
	comp=Z,9.8nm,0.8s,mb4.9						
BUD	Budapest	64.37	311	‖eP	P	08 32 16.6	+0.6
NAO01	NORSAR Array S	64.48	327	eP	P	08 32 15.9	-0.7
MORC	Moravsky Berou	64.53	314	eP	P	08 32 17.4	+0.3
MORC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
MORC	Moravsky Berou	64.53	314	eP	P	08 32 17.4	+0.3
	comp=Z,14nm,1.1s,mb4.9						
KSP	Ksiaz	64.94	316	eP	P	08 32 19.9	+0.2
KSP	Ksiaz	64.94	316	eP	P	08 32 20.2	+0.5
VRAC	Vranov	65.28	314	LR	LR	09 04 47.7	
	comp=Z,25μm,20.7s,MS6.4,baz=282,slow=40						
CTA	Charters Tower	65.36	136	eP	P	08 32 22.6	-0.2
	comp=Z,7.4nm,1.0s,mb4.7						
CTA	Charters Tower	65.36	136	P	P	08 32 22.3	-0.5
	comp=Z,3.3nm,0.5s,mb4.6,baz=317,slow=9.5,SNR=4.1						
CTAO	Charters Tower	65.36	136	eP	P	08 32 22.5	-0.3
CTAO				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.1						
CTAO	Charters Tower	65.36	136	eP	P	08 32 22.5	-0.3
	comp=Z,29nm,1.4s,mb5.1						
FORT	Forrest	66.04	157	eP	P	08 32 26.8	-0.1
	comp=Z,22nm,0.8s,mb5.2						
FORT	Forrest	66.04	157	eP	P	08 32 27.0	+0.1
	comp=Z,34nm,0.9s,mb5.4						
BRG	Berggiesshubel	66.32	316	eP	P	08 32 28.4	-0.2
	comp=Z,12nm,1.0s,mb4.9						
BRG				e	pP	08 32 34.0	+0.5
	comp=Z,18nm,1.0s						
BRG				e		08 32 39.5	
	comp=Z,11nm,0.8s						
BRG	Berggiesshubel	66.32	316	eP	P	08 32 28.4	-0.2
BRG				e	pP	08 32 34.0	+0.5
BRG				e		08 32 39.5	
	comp=Z,7.0nm,1.0s,mb4.7						
BRG				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
BRG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TTA	Tatalina	66.68	29	eP	P	08 32 32.8	+2.1
CLL	Collm	66.71	317	i P	P	08 32 30.9	-0.2
CLL				i	pP	08 32 35.7	-0.3
CLL				pmax	pmax		
	comp=Z,12nm,1.8s,mb4.6						
CLL	Collm	66.71	317	i P	P	08 32 30.9	-0.2
	comp=Z,29nm,1.8s,mb5.0						
CLL				i	pP	08 32 35.7	-0.3
CLL	Collm	66.71	317	i P	P	08 32 30.9	-0.2
	comp=Z,29nm,1.8s,mb5.0						
CLL				i pP	pP	08 32 35.7	-0.3
	comp=Z,15nm,1.0s						
MUD	Monsted U'grnd	66.88	323	eP	P	08 32 37.3	+5.2
MUD				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
MUD	Monsted U'grnd	66.88	323	i P	P	08 32 37.3	+5.2
	comp=Z,19nm,0.8s,mb5.2						
COLD	Coldfoot	67.07	24	eP	P	08 32 33.0	-0.1
	comp=Z,28nm,1.1s,mb5.2						
PERS	Pernice	67.17	312	eP	P	08 32 34.3	+0.2
GEC2	GERESS Array S	67.22	314	eP	P	08 32 34.6	+0.2
GEC2				pmax	pmax		
	comp=Z,3μm,1.0s						
GEC2	GERESS Array S	67.22	314	eP	P	08 32 34.6	+0.2
	comp=Z,3μm,1.0s						
GERES	GERESS Array B	67.22	314	P	P	08 32 34.7	+0.3
	comp=Z,3.4nm,0.9s,mb4.4,baz=72,slow=5.7,SNR=15						
BOJS	Bojanci	67.51	310	i P	P	08 32 36.9	+0.6
MOX	Moxa	67.78	317	eP	P	08 32 37.5	-0.4
	comp=Z,14nm,1.1s,mb4.9						
MOX	Moxa	67.78	317	eP	P	08 32 37.9	0.0
	comp=Z,14nm,1.1s,mb4.9						
MOX	Moxa	67.78	317	eP	P	08 32 37.9	0.0
	comp=Z,14nm,1.1s,mb4.9						
MOX	Moxa	67.78	317	eP	P	08 32 37.5	-0.4
MOX				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
MOX	Moxa	67.78	317	eP	P	08 32 37.9	0.0
	comp=Z,14nm,1.1s,mb4.9						
GRA1	Grafenberg Arr	68.38	316	eP	P	08 32 42.2	+0.5
	comp=Z,10.0nm,1.0s,mb4.8						
GRA1				epP	pP	08 32 47.3	+0.7
GRF	Grafenberg Arr	68.38	316	eP	P	08 32 42.2	+0.5
	comp=Z,10.0nm,1.0s,mb4.8						
GRF				epP	pP	08 32 47.3	+0.7
GRF	Grafenberg Arr	68.38	316	eP	P	08 32 42.2	+0.5
GRF				e*PP	pP	08 32 47.3	+0.7
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
GRF	Grafenberg Arr	68.38	316	eP	P	08 32 42.2	+0.5
GRF				e*PP	pP	08 32 47.3	+0.7
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
GRF	Grafenberg Arr	68.38	316	eP	P	08 32 42.2	+0.5
	comp=Z,10.0nm,1.0s,mb4.8						
GRF				epP	pP	08 32 47.3	+0.7
COLA	College	69.03	26	eP	P	08 32 45.2	-0.3
COLA				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
COLA	College	69.03	26	eP	P	08 32 45.2	-0.3
	comp=Z,37nm,1.0s,mb5.3						
PMR	Palmer	70.16	29	eP	P	08 32 55.5	+3.0
KDAK	Kodiak Island	70.48	34	P	P	08 32 53.7	-0.8
	comp=Z,15nm,0.7s,mb5.0,baz=130,slow=10,SNR=4.5						
KMBO	Kilima Mbogo	70.99	256	P	P	08 32 58.4	0.0
	comp=Z,16nm,0.8s,mb5.0,baz=46,slow=11,SNR=43						
KMBO	Kilima Mbogo	70.99	256	eP	P	08 32 57.6	-0.7
KMBO				pmax	pmax		
	comp=Z,21nm,0.9s						
KMBO	Kilima Mbogo	70.99	256	eP	P	08 32 57.6	-0.8
	comp=Z,21nm,0.9s,mb5.1						
KMBO	Kilima Mbogo	70.99	256	P	P	08 32 59.4	+1.0
	SNR=8.0						
KMBO				P		08 32 59.4	
	SNR=8.0						
FELD	Feldberg im Sc	71.08	315	eP	P	08 32 58.1	-0.3
CDF	Champ du Feu	71.28	316	eP	P	08 32 59.0	-0.6
	comp=Z,27nm,0.8s,mb5.0						
CDF	Champ du Feu	71.28	316	eP	P	08 32 59.0	-0.6
CDF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
CDF	Champ du Feu	71.28	316	eP	P	08 32 59.0	-0.6
	comp=Z,14nm,0.8s,mb4.9						
WLF	Walferdange	71.38	317	eP	P	08 33 00.9	+0.8
WLF				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.4						
WLF	Walferdange	71.38	317	eP	P	08 33 00.9	+0.8
	comp=Z,42nm,0.8s,mb5.4						
ECH	Echery	71.44	316	eP	P	08 33 00.5	0.0
EGAK	Eagle	71.50	24	eP	P	08 33 00.3	-0.3
	comp=Z,17nm,1.1s,mb4.9						
MOF	Molkenrain	71.61	315	eP	P	08 33 01.2	-0.4
INK	Inuvik	71.74	19	P	P	08 33 01.2	-0.8
	comp=Z,8.0nm,0.6s,mb4.8,baz=328,slow=8.1,SNR=17						
INK	Inuvik	71.74	19	P	P	08 33 01.2	-0.8
HINF	Hinteralfeld	71.80	315	eP	P	08 33 01.8	-0.9
	comp=Z,20nm,0.9s,mb4.7						
HINF	Hinteralfeld	71.80	315	eP	P	08 33 01.8	-0.9
HINF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
HINF	Hinteralfeld	71.80	315	eP	P	08 33 01.8	-0.9
	comp=Z,10nm,0.9s,mb4.8						
GIVF	Givet	71.94	318	eP	P	08 33 03.1	-0.4
	comp=Z,36nm,0.8s,mb5.0						
GIVF	Givet	71.94	318	eP	P	08 33 03.1	-0.4
GIVF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
GIVF	Givet	71.94	318	eP	P	08 33 03.1	-0.4
	comp=Z,18nm,0.8s,mb5.0						
HAU	Haudompre	72.02	316	eP	P	08 33 03.2	-0.8
	comp=Z,15nm,0.9s,mb4.6						
HAU	Haudompre	72.02	316	eP	P	08 33 03.2	-0.8
HAU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
HAU	Haudompre	72.02	316	eP	P	08 33 03.2	-0.8
	comp=Z,7.4nm,0.9s,mb4.6						
LOMF	Lomont	72.03	315	eP	P	08 33 09.4	+5.3
THEF	They Montfort	72.13	316	eP	P	08 33 04.2	-0.5
BAIF	Baives	72.31	318	eP	P	08 33 05.4	-0.3
	comp=Z,24nm,0.8s,mb4.9						
BAIF	Baives	72.31	318	eP	P	08 33 05.4	-0.3
BAIF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
BAIF	Baives	72.31	318	eP	P	08 33 05.4	-0.3
	comp=Z,12nm,0.8s,mb4.9						
STKA	Stephens Creek	72.40	147	eP	P	08 33 05.8	-0.5
	comp=Z,4.5nm,0.6s,mb4.6						
STKA	Stephens Creek	72.40	147	P	P	08 33 05.8	-0.5
	comp=Z,7.0nm,0.7s,mb4.7,baz=326,slow=6.6,SNR=21						
DAWY	Dawson	72.54	24	eP	P	08 33 06.5	-0.4
MEZF	Maizieres J'vi	72.55	316	eP	P	08 33 06.7	-0.5
	comp=Z,13nm,0.7s,mb4.7						
MEZF	Maizieres J'vi	72.55	316	eP	P	08 33 06.7	-0.5
	comp=Z,13nm,0.7s,mb5.0						
CABF	La Chapelle	72.82	314	eP	P	08 33 08.3	-0.5
	comp=Z,44nm,1.4s,mb4.9						
CABF	La Chapelle	72.82	314	eP	P	08 33 08.3	-0.5
CABF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
CABF	La Chapelle	72.82	314	eP	P	08 33 08.3	-0.5
	comp=Z,22nm,1.4s,mb4.9						
LPG	La Plagne	72.92	313	eP	P	08 33 09.8	+0.3
	comp=Z,62nm,0.7s,mb5.4						
LPG	La Plagne	72.92	313	eP	P	08 33 09.8	+0.3
LPG				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.3						
LPG	La Plagne	72.92	313	eP	P	08 33 09.8	+0.3
	comp=Z,31nm,0.7s,mb5.3						
LPL	La Plagne	72.93	313	eP	P	08 33 09.7	+0.2
	comp=Z,62nm,0.6s,mb5.4						
LPL	La Plagne	72.93	313	eP	P	08 33 09.7	+0.2
LPL				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.4						
LPL	La Plagne	72.93	313	eP	P	08 33 09.7	+0.2
	comp=Z,31nm,0.6s,mb5.4						
SUMG	Summit	73.00	349	eP	P	08 33 12.1	+2.7
	comp=Z,13nm,0.7s,mb5.0						
SAOF	Saorge	73.12	311	eP	P	08 33 11.1	+0.4
AUTN	L'Aution	73.19	312	eP	P	08 33 11.8	+0.7
SBF	Sospel	73.25	311	eP	P	08 33 10.9	-0.6
	comp=Z,52nm,0.9s,mb5.2						
SBF	Sospel	73.25	311	eP	P	08 33 10.9	-0.6
SBF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
SBF	Sospel	73.25	311	eP	P	08 33 10.9	-0.6
	comp=Z,26nm,0.9s,mb5.2						
MBDF	Montbardon	73.27	312	eP	P	08 33 11.6	+0.1
	comp=Z,22nm,0.7s,mb4.9						
MBDF	Montbardon	73.27	312	eP	P	08 33 11.6	+0.1
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
MBDF	Montbardon	73.27	312	eP	P	08 33 11.6	+0.1
	comp=Z,11nm,0.7s,mb4.9						
RES	Resolute Bay	73.29	5	eP	P	08 33 12.7	+1.5
RES				pmax	pmax		
	comp=Z,78nm,2.5s,mb5.2						
RES	Resolute Bay	73.29	5	eP	P	08 33 12.7	+1.5
	comp=Z,78nm,2.5s,mb5.2						
ORIF	Oris-en-Rattie	73.74	313	eP	P	08 33 14.0	-0.3
	comp=Z,26nm,0.9s,mb4.9						
ORIF	Oris-en-Rattie	73.74	313	eP	P	08 33 14.0	-0.3
ORIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
ORIF	Oris-en-Rattie	73.74	313	eP	P	08 33 14.0	-0.3
	comp=Z,13nm,0.9s,mb4.9						
LOR	Lormes	73.85	316	eP	P	08 33 13.7	-1.2
	comp=Z,12nm,0.9s,mb4.5						
LOR	Lormes	73.85	316	eP	P	08 33 13.7	-1.2
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LOR	Lormes	73.85	316	eP	P	08 33 13.7	-1.2
	comp=Z,6.0nm,0.9s,mb4.5						
OPO	Ambohidratompo	73.89	236	P	P	08 33 14.8	-0.7
	comp=Z,10nm,0.7s,mb4.9,baz=50,slow=4.7,SNR=24						
LMR	La Mourre	74.09	311	eP	P	08 33 15.8	-0.6
	comp=Z,22nm,1.0s,mb4.8						
LMR	La Mourre	74.09	311	eP	P	08 33 15.8	-0.6
LMR				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
LMR	La Mourre	74.09	311	eP	P	08 33 15.8	-0.6
	comp=Z,11nm,1.0s,mb4.8						
ABPO	Ambohimpanom	74.16	235	eP	P	08 33 16.4	-0.6
ABPO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ABPO	Ambohimpanom	74.16	235	eP	P	08 33 16.4	-0.6
	comp=Z,9.3nm,0.8s,mb4.8						
SSF	Saint Saulge	74.16	316	eP	P	08 33 15.8	-0.9
	comp=Z,13nm,0.8s,mb4.6						
SSF	Saint Saulge	74.16	316	eP	P	08 33 15.8	-0.9
SSF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SSF	Saint Saulge	74.16	316	eP	P	08 33 15.8	-0.9
	comp=Z,6.3nm,0.8s,mb4.6						
SMF	Signal de Mont	74.16	315	eP	P	08 33 16.0	-0.7
	comp=Z,50nm,0.9s,mb5.2						
SMF	Signal de Mont	74.16	315	eP	P	08 33 16.0	-0.7
SMF				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
SMF	Signal de Mont	74.16	315	eP	P	08 33 16.0	-0.7
	comp=Z,25nm,0.9s,mb5.1						
AVF	Avril sur Loir	74.38	315	eP	P	08 33 17.3	-0.7
	comp=Z,39nm,0.9s,mb5.0						
AVF	Avril sur Loir	74.38	315	eP	P	08 33 17.3	-0.7
AVF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
AVF	Avril sur Loir	74.38	315	eP	P	08 33 17.3	-0.7
	comp=Z,20nm,0.9s,mb5.0						
VIVF	Saint-Julien-l	74.52	313	eP	P	08 33 18.3	-0.6
	comp=Z,20nm,0.8s,mb4.8						
VIVF	Saint-Julien-l	74.52	313	eP	P	08 33 18.3	-0.6
VIVF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
VIVF	Saint-Julien-l	74.52	313	eP	P	08 33 18.3	-0.6
	comp=Z,10nm,0.8s,mb4.8						
BGF	Bois d'Agland	74.80	315	eP	P	08 33 19.6	-0.9
PYM	Petit Puy Mans	75.11	315	eP	P	08 33 23.4	+1.2
LBL	Lubilhac	75.22	314	eP	P	08 33 24.1	+1.2
HYT	Haines Junctio	75.23	26	eP	P	08 33 24.3	+1.6
TCF	Toulx Ste Croi	75.32	315	eP	P	08 33 23.0	-0.4
	comp=Z,30nm,1.0s,mb4.9						
TCF	Toulx Ste Croi	75.32	315	eP	P	08 33 23.0	-0.4
TCF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
TCF	Toulx Ste Croi	75.32	315	eP	P	08 33 23.0	-0.4
	comp=Z,15nm,1.0s,mb4.9						
LASF	Ste Croix	75.42	313	eP	P	08 33 23.8	-0.2
	comp=Z,23nm,0.8s,mb4.8						
LDF	La Druitiere	75.50	318	eP	P	08 33 23.7	-0.7
	comp=Z,25nm,0.9s,mb4.9						
LDF	La Druitiere	75.50	318	eP	P	08 33 23.7	-0.7
LDF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
LDF	La Druitiere	75.50	318	eP	P	08 33 23.7	-0.7
	comp=Z,12nm,0.9s,mb4.8						
FLN	La Foliniere	75.61	319	eP	P	08 33 24.3	-0.8
	comp=Z,27nm,1.0s,mb4.8						
FLN	La Foliniere	75.61	319	eP	P	08 33 24.3	-0.8
FLN				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
FLN	La Foliniere	75.61	319	eP	P	08 33 24.3	-0.8
	comp=Z,14nm,1.0s,mb4.8						
GRR	Gorron	76.02	318	eP	P	08 33 26.8	-0.6
	comp=Z,56nm,0.9s,mb5.2						
GRR	Gorron	76.02	318	eP	P	08 33 26.8	-0.6
GRR				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
GRR	Gorron	76.02	318	eP	P	08 33 26.8	-0.6
	comp=Z,28nm,0.9s,mb5.2						
CAF	Calviac	76.10	314	eP	P	08 33 28.0	+0.1
	comp=Z,24nm,0.8s,mb4.8						
CAF	Calviac	76.10	314	eP	P	08 33 28.0	+0.1
CAF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
CAF	Calviac	76.10	314	eP	P	08 33 28.0	+0.1
	comp=Z,12nm,0.8s,mb4.9						
RJF	Les Rejaudoux	76.24	315	eP	P	08 33 28.7	0.0
	comp=Z,23nm,0.9s,mb4.8						
RJF	Les Rejaudoux	76.24	315	eP	P	08 33 28.7	0.0
RJF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
RJF	Les Rejaudoux	76.24	315	eP	P	08 33 28.7	0.0
	comp=Z,12nm,0.9s,mb4.8						
MFF	Saint Martin d	76.55	317	eP	P	08 33 30.0	-0.5
	comp=Z,48nm,1.2s,mb5.0						
MFF	Saint Martin d	76.55	317	eP	P	08 33 30.0	-0.5
MFF				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
MFF	Saint Martin d	76.55	317	eP	P	08 33 30.0	-0.5
	comp=Z,24nm,1.2s,mb5.0						
MTLF	Montolieu	76.81	313	eP	P	08 33 31.7	-0.3
	comp=Z,5.9nm,0.6s,mb4.4						
MTLF	Montolieu	76.81	313	eP	P	08 33 31.7	-0.3
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MTLF	Montolieu	76.81	313	eP	P	08 33 31.7	-0.3
	comp=Z,3.0nm,0.6s,mb4.4						
LFF	La Frestale	76.89	315	eP	P	08 33 32.5	0.0
	comp=Z,23nm,0.7s,mb4.9						
LFF	La Frestale	76.89	315	eP	P	08 33 32.5	0.0
LFF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
LFF	La Frestale	76.89	315	eP	P	08 33 32.5	0.0
	comp=Z,11nm,0.7s,mb4.9						
SKAG	Skagway	76.95	27	eP	P	08 33 33.2	+0.7
	comp=Z,29nm,1.0s,mb5.2						
SGMF	Saint Gilles	77.05	319	eP	P	08 33 33.1	-0.2
	comp=Z,41nm,0.9s,mb5.1						
SGMF	Saint Gilles	77.05	319	eP	P	08 33 33.1	-0.2
SGMF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
SGMF	Saint Gilles	77.05	319	eP	P	08 33 33.1	-0.2
	comp=Z,21nm,0.9s,mb5.1						
ROSF	Rostrenen	77.41	319	eP	P	08 33 35.0	-0.3
	comp=Z,42nm,1.1s,mb5.0						
ROSF	Rostrenen	77.41	319	eP	P	08 33 35.0	-0.3
ROSF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
ROSF	Rostrenen	77.41	319	eP	P	08 33 35.0	-0.3
	comp=Z,21nm,1.1s,mb5.0						
QUIF	Quistinic	77.58	319	eP	P	08 33 35.8	-0.4
	comp=Z,30nm,1.0s,mb4.9						
QUIF	Quistinic	77.58	319	eP	P	08 33 35.8	-0.4
QUIF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
QUIF	Quistinic	77.58	319	eP	P	08 33 35.8	-0.4
	comp=Z,15nm,1.0s,mb4.9						
EPF	Esparros	78.14	313	eP	P	08 33 38.6	-0.9
	comp=Z,9.0nm,0.8s,mb4.5						
EPF	Esparros	78.14	313	eP	P	08 33 38.6	-0.9
EPF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
EPF	Esparros	78.14	313	eP	P	08 33 38.6	-0.9
	comp=Z,4.5nm,0.8s,mb4.5						
ETSF	Etsaut	78.77	314	eP	P	08 33 43.1	+0.1
	comp=Z,10nm,0.7s,mb4.6						
ETSF	Etsaut	78.77	314	eP	P	08 33 43.1	+0.1
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ETSF	Etsaut	78.77	314	eP	P	08 33 43.1	+0.1
	comp=Z,5.2nm,0.7s,mb4.6						
TOO	Toolangi	78.90	148	eP	P	08 33 43.6	+0.1
CNB	Canberra Magne	78.96	144	eP	P	08 33 44.1	+0.3
SJPF	Ste Jean	79.07	314	eP	P	08 33 45.1	+0.5
	comp=Z,10nm,0.7s,mb4.5						
SJPF	Ste Jean	79.07	314	eP	P	08 33 45.1	+0.5
SJPF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SJPF	Ste Jean	79.07	314	eP	P	08 33 45.1	+0.5
	comp=Z,5.2nm,0.7s,mb4.6						
SFJD	Kangerlussuaq	79.89	350	eP	P	08 33 52.1	+3.5
SFJD				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
SFJD	Kangerlussuaq	79.89	350	eP	P	08 33 52.1	+3.5
	comp=Z,34nm,1.0s,mb5.2						
SFJD	Kangerlussuaq	79.89	350	i P	P	08 33 51.5	+2.9
	comp=Z,18nm,0.8s,mb5.0						
YKA	Yellowknife Ar	81.27	17	P	P	08 33 55.4	-0.7
	comp=Z,2.4nm,0.6s,mb4.3,baz=329,slow=5.3,SNR=16						
ESDC	Sonseca Array	82.70	312	P	P	08 34 04.1	+0.1
	comp=Z,0.5nm,0.4s,mb3.9,baz=292,slow=25,SNR=3.6						
LSZ	Lusaka	86.30	250	P	P	08 34 22.0	-0.5
	comp=Z,20nm,1.1s,mb5.3,baz=53,slow=6.1,SNR=10.0						
LSZ	Lusaka	86.30	250	eP	P	08 34 22.3	-0.2
LSZ				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.5						
LSZ	Lusaka	86.30	250	eP	P	08 34 22.3	-0.2
	comp=Z,34nm,1.1s,mb5.5						
FCC	Fort Churchill	88.76	9	eP	P	08 34 35.9	+2.2
FCC				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb4.0						
FCC	Fort Churchill	88.76	9	eP	P	08 34 35.9	+2.2
	comp=Z,0.8nm,1.2s,mb3.9						
EDM	Edmonton	89.52	21	eP	P	08 34 37.5	+0.1
JCW	Jim Creek	90.56	29	eP	P	08 34 43.4	+1.0
FFC	Flin Flon	91.19	15	eP	P	08 34 47.2	+2.1
FFC				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.3						
FFC	Flin Flon	91.19	15	eP	P	08 34 47.2	+2.1
	comp=Z,23nm,1.5s,mb5.3						
ETW	Entiat	91.68	28	eP	P	08 34 49.1	+1.5
NEW	Newport	92.39	26	eP	P	08 34 51.6	+0.8
NEW				pmax	pmax		
	comp=Z,27nm,1.8s						
NEW	Newport	92.39	26	eP	P	08 34 51.6	+0.8
	comp=Z,27nm,1.8s,mb5.3						
TORD	Torodi Ar. Bea	93.47	288	P	P	08 34 55.1	-1.3
	comp=Z,1.3nm,1.1s,mb4.3,baz=342,slow=1.9,SNR=3.7						
BSMT	Bassoo Peak	93.60	25	eP	P	08 34 58.8	+2.4
SCHQ	Schefferville	93.61	355	P	P	08 34 57.1	+0.8
	comp=Z,9.5nm,1.0s,mb5.2,baz=38,slow=5.0,SNR=6.6						
LBTB	Lobatse	93.69	243	P	P	08 34 56.6	-0.4
	comp=Z,2.6nm,0.5s,mb4.9,baz=130,slow=7.6,S

comp=N,2μm,0.9s
XAN smax
comp=E,900nm,0.8s
GYA Guiyang 5.52 154 Pn Pn 08 27 36.0 +0.7
GYA Sn **Sn 08 28 44.4 +5.8**
GYA smax
comp=N,2μm,0.9s
GYA smax
comp=E,1μm,1.0s
KMI Kunming 6.42 190 Pn Pn 08 27 48.7 +1.0
KMI Sn **Sn 08 29 00.3 -0.4**
KMI smax
comp=N,150nm,1.4s
KMI smax
comp=E,150nm,1.7s
WHN Wuhan 8.95 93 P Pn 08 28 13.7 -8.7
WHN S **Sn 08 29 58.0 -4.9**
HHC Hu-ho-hao-te 11.18 31 *e*P **Pn 08 28 56.7 +3.8**
HHC pP 08 28 59.9
HHC sP 08 29 03.0
HHC PP 08 29 05.8
HHC S **Sn 08 31 04.5 +6.8**
HHC sS 08 31 08.6
HHC SS 08 31 16.8
HHC pmax pmax
comp=Z,140nm,1.4s
HHC LR LR
comp=N,4μm,7.7s
HHC LR LR
comp=E,3μm,7.5s
HHC LR LR
comp=Z,2μm,7.7s
NJ2 Nanjing 12.67 83 *e*P **Pn 08 29 15.8 +2.5**
NJ2 pmax pmax
comp=Z,390nm,1.3s
BJI Beijing 13.07 46 P **Pn 08 29 19.7 +0.9**
BJI pmax pmax
comp=Z,270nm,1.7s
QIZ Qiongzhong 13.47 156 P **Pn 08 29 24.1 -0.2**
QIZ S **Sn 08 31 55.6 +1.7**
QIZ pmax pmax
comp=Z,130nm,1.5s
CM31 Chiang Mai Arr 13.73 201 *e*Pn **Pn 08 29 26.2 -1.7**
CMAR Chiang Mai Arr 13.73 201 Pn **Pn 08 29 28.3 +0.4**
comp=Z,0.3nm,0.3s,baz=12,slow=11,SNR=4.4
SONM Songino Array 16.45 6 Pn **Pn 08 30 04.3 +0.5**
comp=Z,0.9nm,0.3s,baz=189,slow=16,SNR=4.1
SSLB Suanglung 16.86 113 *e*P **Pn 08 30 13.7 +4.5**
WMQ Urumqi 17.80 318 *e*P **Pn 08 30 21.1 +0.3**
KSRS Korea Array 20.60 67 P **P 08 30 52.9 +0.7**
comp=Z,13nm,0.7s,baz=244,slow=9.4,SNR=12
KSRS Korea Array 20.60 67 P **P 08 30 52.9 +0.7**
KSRS pmax pmax
comp=Z,13nm,0.7s
IRK Irkutsk 20.76 1 *e*P **P 08 30 55.9 +2.1**
IRK pmax pmax
comp=Z,90nm,1.9s
CN2 Changchun 20.92 48 *e*P **P 08 31 04.0 +8.4**
CN2 *es*P sP 08 31 10.0 +8.6
CN2 *e*S **S 08 34 57.9 +10**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,240nm,0.7s
CN2 pmax pmax
comp=Z,800nm,4.0s
CN2 LR LR
comp=N,21μm,15.0s,MS5.8
CN2 LR LR
comp=E,23μm,15.0s,MS5.8
CN2 LR LR
comp=Z,30μm,17.0s,MS5.7
HIA Hailar 21.38 29 *e*P **P 08 31 01.5 +1.0**
HIA pmax pmax
comp=Z,11nm,0.6s
HIA Hailar 21.38 29 *e*P **P 08 31 01.5 +1.1**
comp=Z,11nm,0.6s,mb4.3
MKAR Makanchi Array 22.64 319 P **P 08 31 15.2 +1.2**
comp=Z,21nm,1.0s,mb4.5,baz=134,slow=10,SNR=6.3
MDJ Mudanjiang 23.95 50 P **P 08 31 27.2 0.0**
MDJ pP 08 31 29.5
MDJ S **S 08 35 44.3 +1.1**
MDJ sS sS 08 35 49.3 -0.9
MDJ ScP ScP 08 38 47.0 -0.3
MDJ PcS PcS 08 38 48.6 -0.2
MDJ pmax pmax
comp=Z,13nm,1.3s,mb4.2
MDJ pmax pmax
comp=Z,17μm,14.0s
MDJ LR LR
comp=N,17μm,32.5s,MS5.6
MDJ LR LR
comp=E,24μm,30.9s,MS5.6
MDJ LR LR
comp=Z,27μm,17.9s
MDJ Mudanjiang 23.95 50 *e*P **P 08 31 28.5 +1.3**
KSH Kashi 24.11 297 *e*P **P 08 31 31.2 +2.5**
KSH *ep*P 08 31 35.2
KSH *es*P sP 08 31 38.3 +3.6
KSH *e*PP 08 32 06.0
KSH *e*PcP PcP 08 35 11.1 +1.3
KSH *e*S **S 08 35 46.4 +0.4**
KSH *e*SS 08 36 41.1
KSH *e*ScP ScP 08 38 48.1 +0.2
KSH pmax pmax
comp=Z,5μm,14.0s
AAK Ala-Archa 25.91 304 P **P 08 31 46.0 +0.9**
comp=Z,2.8nm,0.5s,mb4.0,baz=176,slow=19,SNR=2.5
AAK Ala-Archa 25.91 304 *e*P **P 08 31 46.2 +1.1**
AAK pmax pmax
comp=Z,15nm,1.3s,mb4.4
AAK Ala-Archa 25.91 304 *e*P **P 08 31 46.2 +1.1**
comp=Z,15nm,1.3s,mb4.3
ZALV Zalesovo Beam 26.35 334 P **P 08 31 49.6 +0.7**
comp=Z,22nm,0.8s,mb4.7,baz=128,slow=9.6,SNR=5.6
KURK Kurchatov 26.89 323 P **P 08 31 53.9 +0.1**
comp=Z,7.9nm,0.6s,mb4.4,baz=127,slow=9.5,SNR=6.1
KURK Kurchatov 26.89 323 *e*P **P 08 31 54.0 +0.1**
KURK pmax pmax
comp=Z,21nm,1.1s,mb4.6
KURK Kurchatov 26.89 323 *e*P **P 08 31 52.9 -0.9**
comp=Z,33nm,0.9s,mb4.9
BOD Bodaibo 27.23 12 *e*P **P 08 31 55.2 -1.6**
BOD pmax pmax
comp=Z,6.0nm,1.7s,mb3.9
KLR Kul'dur 27.38 42 *e*P **P 08 31 58.6 +0.3**
KKM Kota Kinabalu 27.77 153 *e*P **P 08 32 00.6 -1.5**
comp=Z,54nm,1.2s,mb5.0
MAJO Matsushiro 28.72 70 *e*P **P 08 32 09.1 -1.3**
MAJO pmax pmax
comp=Z,55nm,1.7s,mb5.0
MAJO Matsushiro 28.72 70 *e*P **P 08 32 09.1 -1.3**
comp=Z,55nm,1.7s,mb5.0
MAT Matsushiro 28.72 70 P **P 08 32 09.6 -0.8**
MJAR Matsushiro Arr 28.73 70 P **P 08 32 10.1 -0.3**
comp=Z,2.7nm,0.6s,mb4.1,baz=279,slow=10,SNR=5.3
HABR Khabarovsk 28.98 45 *e*P **P 08 32 09.2 -3.3**
HABR *e**PP pP 08 32 18.6 +1.8
HABR 08 33 01.2
HABR *e*S **S 08 36 57.6 -5.3**
HABR pmax pmax
comp=N,26nm,2.1s
HABR pmax pmax
comp=Z,30nm,2.1s,mb4.7
HABR pmax pmax
comp=E,17nm,1.7s
HABR MLR MLR
comp=Z,14μm,18.0s,MS5.6
KBL Kabul 29.37 285 *e*P **P 08 32 15.1 -1.1**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KBL Kabul 29.37 285 *e*P **P 08 32 15.1 -1.1**
comp=Z,10nm,0.9s,mb4.6
BVAR Borovoye Array 32.44 321 P **P 08 32 43.6 +0.6**
comp=Z,2.7nm,0.7s,mb4.2,baz=115,slow=10.0,SNR=3.6
BVAR PcP PcP 08 35 29.3 -0.7
comp=Z,2.6nm,0.5s,baz=165,slow=2.9,SNR=6.4
ASAJ Asahikawa 32.73 56 P **P 08 32 44.9 -0.8**
comp=Z,8.8nm,0.8s,mb4.7,baz=288,slow=15,SNR=4.6
ASAJ Asahikawa 32.73 56 P **P 08 32 44.9 -0.8**
ASAJ pmax pmax
comp=Z,9.0nm,0.8s
YAK Yakutsk 34.80 21 *e*P **P 08 33 02.4 -1.1**
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.9

ABKAR Akbulak array 37.35 311 *e*P **P 08 33 26.1 +0.6**
AKTK Aktyubinsk 38.81 313 P **P 08 33 38.1 +0.4**
AKTK PcP PcP 08 35 48.0 -0.9
AKTO Aktyubinsk 38.81 313 P **P 08 33 38.1 +0.4**
comp=Z,4.3nm,0.5s,mb4.5,baz=103,slow=12,SNR=10
AKTO PcP PcP 08 35 48.0 -0.9
comp=Z,2.1nm,0.6s,baz=116,slow=4.4,SNR=3.5
SVE Sverdlovsk 39.14 323 *e*P **P 08 33 41.8 +1.4**
SVE pmax pmax
comp=Z,23nm,1.0s,mb4.9
ARU Arti 40.08 322 *c i*P **P 08 33 48.3 0.0**
ARU S **S 08 39 54.7 +1.0**
ARU SS SS 08 42 41.4 -10
ARU pmax pmax
comp=Z,27nm,1.0s,mb4.9
ARU Arti 40.08 322 *e*P **P 08 33 48.1 -0.2**
comp=Z,20nm,0.6s,mb5.0
SOKR Solikamsk 42.03 326⇑ *i*P **P 08 34 04.9 +0.6**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb4.9
PETK Petropavlovsk- 44.00 44 P **P 08 34 20.2 -0.1**
comp=Z,4.6nm,0.8s,mb4.3,baz=320,slow=2.5,SNR=8.2
KLMR Klimovskoe 50.70 325 *e*P **P 08 35 12.1 -0.3**
KLMR pmax pmax
comp=Z,45nm,1.0s,mb5.3
BILL Bilibino 50.89 25 *i* P **P 08 35 13.2 -0.5**
BILL *e**PP pP 08 35 20.0 +1.9
BILL *e* 08 36 30.8
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BILL Bilibino 50.89 25 *e*P **P 08 35 13.5 -0.2**
comp=Z,6.6nm,0.8s,mb4.6
MOS Moscow 51.52 319 *e*P **P 08 35 28.0 +9.4**
OBN Obninsk 52.14 318 *e*P **P 08 35 23.5 +0.3**
OBN *e* 08 36 32.4
OBN pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
FITZ Fitzroy Crossi 53.49 154 *e*P **P 08 35 32.8 -0.8**
comp=Z,14nm,1.2s,mb4.8
FITZ Fitzroy Crossi 53.49 154 P **P 08 35 32.8 -0.8**
comp=Z,6.2nm,0.9s,mb4.5,baz=322,slow=6.0,SNR=6.1
JOF Joensuu 54.66 328 *e*P **P 08 35 40.4 -1.2**
JOF pmax pmax
comp=Z,23nm,0.5s,mb5.5
JOF Joensuu 54.66 328 *ep* **P 08 35 40.4 -1.2**
comp=Z,23nm,0.5s,mb5.5
ASF Jabal al Asfar 56.12 290 P **P 08 35 53.2 +0.5**
comp=Z,5.7nm,0.7s,mb4.7,baz=327,slow=4.8,SNR=7.0
KEV Kevo 56.35 336 *e*P **P 08 35 52.6 -1.1**
KEV pmax pmax
comp=Z,19nm,0.7s,mb5.2
KEV Kevo 56.35 336 *ep* **P 08 35 52.6 -1.1**
comp=Z,19nm,0.7s,mb5.2
ARCES ARCESS Array B 56.88 336 P **P 08 35 57.4 -0.1**
comp=Z,7.1nm,0.6s,mb4.9,baz=80,slow=7.8,SNR=15
ARCES PcP PcP 08 36 52.4 -0.4
comp=Z,4.3nm,0.4s,baz=92,slow=2.9,SNR=14
ARCES ARCESS Array B 56.88 336 P **P 08 35 57.4 -0.1**
ARCES PcP PcP 08 36 52.4 -0.4
KAF Kangasniemi 57.03 327 *e*P **P 08 35 57.2 -1.4**
KAF pmax pmax
comp=Z,13nm,0.6s,mb5.1
KAF Kangasniemi 57.03 327 *ep* **P 08 35 57.2 -1.4**
comp=Z,13nm,0.6s,mb5.1
AKASG Malin Array Be 57.06 313 P **P 08 35 58.2 -0.8**
comp=Z,3.7nm,0.6s,mb4.6,baz=67,slow=7.3,SNR=5.5
FINES FINESS Array B 57.21 326 P **P 08 35 59.7 -0.2**
comp=Z,15nm,0.6s,mb5.2,baz=80,slow=7.1,SNR=30
EIL Elat 58.53 288 P **P 08 36 09.2 -0.5**
comp=Z,8.7nm,0.8s,mb4.8,baz=139,slow=5.0,SNR=6.6
WRAB Tennant Creek 58.83 146 *e*P **P 08 36 11.5 -0.2**
WRAB pmax pmax
comp=Z,33nm,0.7s,mb5.5
WRAB Tennant Creek 58.83 146 *e*P **P 08 36 11.5 -0.2**
comp=Z,33nm,0.7s,mb5.5
WRA Warramunga Arr 58.84 146 P **P 08 36 11.4 -0.3**
comp=Z,21nm,0.6s,mb5.3,baz=338,slow=7.5,SNR=26
WB2 Warramunga Arr 58.84 146 *e*P **P 08 36 11.8 0.0**
KOLS Kolonicke sedl 61.85 312 *e*P **P 08 36 32.1 0.0**
KOLS Kolonicke sedl 61.85 312 *e*P **P 08 36 32.1 0.0**
ASAR Alice Springs 61.86 149 P **P 08 36 32.3 -0.1**
comp=Z,8.1nm,0.8s,mb4.9,baz=330,slow=6.1,SNR=15
OJC Ojcow 63.02 314 *e*P **P 08 36 39.7 -0.2**
KECS Kecovo 63.11 312 *e*P **P 08 36 41.1 +0.5**
KECS pmax pmax
comp=Z,7.0nm,1.9s,mb4.5
KECS Kecovo 63.11 312 *e*P **P 08 36 41.1 +0.5**
comp=Z,6.9nm,1.9s,mb4.5
KECS Kecovo 63.11 312 *e*P **P 08 36 41.1 +0.5**
VYHS Vyhne 64.15 313 *e*P **P 08 36 47.6 +0.2**
VYHS Vyhne 64.15 313 *e*P **P 08 36 47.6 +0.2**
NB2 NORSAR Subarra 64.30 327 P **P 08 36 46.8 -1.3**
comp=Z,7.3nm,0.6s,mb4.9,baz=73,slow=6.9
NOA NORSAR Array B 64.30 327 P **P 08 36 47.1 -1.0**
comp=Z,9.9nm,0.7s,mb4.9,baz=73,slow=6.5,SNR=17
NWAO Narrogin (SRO) 65.26 168 P **P 08 36 54.7 0.0**
comp=Z,7.8nm,0.4s,mb5.1,baz=360,slow=3.2,SNR=7.5
NWAO Narrogin (SRO) 65.26 168 P **P 08 36 54.7 0.0**
CTA Charters Tower 65.36 136 *e*P **P 08 36 55.4 -0.2**
comp=Z,4.7nm,0.4s,mb4.9
CTA Charters Tower 65.36 136 P **P 08 36 55.1 -0.5**
comp=Z,6.0nm,0.5s,mb4.9,baz=311,slow=7.2,SNR=11
FORT Forrest 65.99 157 *e*P **P 08 36 59.4 0.0**
comp=Z,17nm,0.8s,mb5.1
BRG Berggiesshubel 66.33 316 *e*P **P 08 37 01.5 0.0**
comp=Z,6.5nm,0.8s,mb4.7
BRG Berggiesshubel 66.33 316 *e*P **P 08 37 01.5 0.0**
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CLL Collm 66.72 317 *e*P **P 08 37 02.0 -2.0**
CLL *e* pP 08 37 08.0 -0.5
CLL Collm 66.72 317 *e*P **P 08 37 02.0 -2.0**
CLL *ep*P pP 08 37 08.0 -0.5
COLD Coldfoot 67.18 24 *e*P **P 08 37 06.8 +0.2**
comp=Z,26nm,0.9s,mb5.3
GEC2 GERESS Array S 67.22 314 *e*P **P 08 37 07.0 -0.2**
GEC2 pmax pmax
comp=Z,1μm,1.1s
GEC2 GERESS Array S 67.22 314 *e*P **P 08 37 07.0 -0.3**
comp=Z,1μm,1.1s
GERES GERESS Array B 67.22 314 P **P 08 37 07.5 +0.2**
comp=Z,1.6nm,0.6s,mb4.2,baz=76,slow=5.6,SNR=4.6
MOX Moxa 67.78 317 *e*P **P 08 37 10.5 -0.3**
GRA1 Grafenberg Arr 68.39 316 *e*P **P 08 37 15.0 +0.4**
comp=Z,3.0nm,0.8s,mb4.4
GRF Grafenberg Arr 68.39 316 *e*P **P 08 37 15.0 +0.4**
comp=Z,3.0nm,0.8s,mb4.4
GRF Grafenberg Arr 68.39 316 *e*P **P 08 37 15.0 +0.4**
GRF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
GRF Grafenberg Arr 68.39 316 *e*P **P 08 37 15.0 +0.4**
GRF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
GRF Grafenberg Arr 68.39 316 *e*P **P 08 37 15.0 +0.4**
comp=Z,3.0nm,0.8s,mb4.4
COLA College 69.14 26 *e*P **P 08 37 19.4 +0.4**
MCK McKinley 69.30 27 *e*P **P 08 37 20.0 0.0**
MCK pmax pmax
comp=Z,16nm,1.0s,mb4.9
MCK McKinley 69.30 27 *e*P **P 08 37 20.0 +0.1**
comp=Z,16nm,1.0s,mb4.9
PMR Palmer 70.27 29 *e*P **P 08 37 25.7 -0.3**
PMR pmax pmax
comp=Z,28nm,0.9s,mb5.2
PMR Palmer 70.27 29 *e*P **P 08 37 25.7 -0.4**
comp=Z,28nm,0.9s,mb5.2
KDAK Kodiak Island 70.59 34 P **P 08 37 27.6 -0.4**
comp=Z,23nm,0.4s,mb5.5,baz=300,slow=8.1,SNR=19
BFO Black Forest 70.69 315 *e*P **P 08 37 28.6 -0.2**
KMBO Kilima Mbogo 70.89 256 P **P 08 37 31.3 +0.7**
comp=Z,3.4nm,0.9s,mb4.3,baz=46,slow=12,SNR=5.1
KMBO Kilima Mbogo 70.89 256 *e*P **P 08 37 30.8 +0.2**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 70.89 256 *e*P **P 08 37 30.8 +0.2**
comp=Z,5.2nm,1.0s,mb4.4
CDF Champ du Feu 71.28 316⇑ *i*P **P 08 37 31.9 -0.5**
comp=Z,9.0nm,0.8s,mb4.5
CDF Champ du Feu 71.28 316⇑ *i*P **P 08 37 31.9 -0.5**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 71.28 316⇑ *i*P **P 08 37 31.9 -0.5**
comp=Z,4.5nm,0.8s,mb4.5
WLF Walferdange 71.38 317 *e*P **P 08 37 33.8 +0.8**
WLF pmax pmax
comp=Z,14nm,0.9s,mb4.9

WLF Walferdange 71.38 317 *e*P **P 08 37 33.8 +0.8**
comp=Z,14nm,0.9s,mb4.9
EGAK Eagle 71.61 24 *e*P **P 08 37 33.9 -0.2**
comp=Z,6.1nm,0.8s,mb4.6
INK Inuvik 71.84 19 *e*P **P 08 37 35.3 -0.2**
INK pmax pmax
comp=Z,25nm,0.8s
INK Inuvik 71.84 19 *e*P **P 08 37 35.2 -0.2**
comp=Z,25nm,0.8s,mb5.2
STKA Stephens Creek 72.37 147 *e*P **P 08 37 38.5 -0.5**
comp=Z,8.0nm,0.6s,mb4.8
STKA Stephens Creek 72.37 147 P **P 08 37 38.6 -0.4**
comp=Z,10nm,0.6s,mb5.0,baz=324,slow=6.2,SNR=17
BMRM Bremner River 72.46 28 *e*P **P 08 37 39.9 +0.6**
comp=Z,53nm,1.0s,mb5.4
DAWY Dawson 72.65 24 *e*P **P 08 37 40.3 0.0**
LPG La Plagne 72.92 313⇑ *i*P **P 08 37 42.7 +0.4**
comp=Z,17nm,0.6s,mb4.8
LPG La Plagne 72.92 313⇑ *i*P **P 08 37 42.7 +0.4**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 72.92 313⇑ *i*P **P 08 37 42.7 +0.4**
comp=Z,8.3nm,0.6s,mb4.8
RES Resolute Bay 73.38 5 *e*P **P 08 37 44.9 +0.4**
RES pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
RES Resolute Bay 73.38 5 *e*P **P 08 37 44.9 +0.4**
comp=Z,9.1nm,0.9s,mb4.7
OPO Ambohidratompo 73.77 236 P **P 08 37 46.7 -0.9**
comp=Z,4.3nm,0.9s,mb4.4,baz=101,slow=10,SNR=9.6
SMF Signal de Mont 74.16 315⇑ *i*P **P 08 37 48.9 -0.7**
comp=Z,16nm,0.8s,mb4.7
SMF Signal de Mont 74.16 315⇑ *i*P **P 08 37 48.9 -0.7**
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SMF Signal de Mont 74.16 315⇑ *i*P **P 08 37 48.9 -0.7**
comp=Z,7.8nm,0.8s,mb4.7
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 08 37 55.9 -0.4**
comp=Z,9.8nm,0.9s,mb4.4
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 08 37 55.9 -0.4**
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 08 37 55.9 -0.4**
comp=Z,4.9nm,0.9s,mb4.4
HYT Haines Junctio 75.34 26 *e*P **P 08 37 57.0 +0.9**
CAF Calviac 76.10 314⇑ *i*P **P 08 38 00.9 +0.1**
comp=Z,3.9nm,0.6s,mb4.2
CAF Calviac 76.10 314⇑ *i*P **P 08 38 00.9 +0.1**
CAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CAF Calviac 76.10 314⇑ *i*P **P 08 38 00.9 +0.1**
comp=Z,2.0nm,0.6s,mb4.2
ARMA Armidale 76.38 139 *e*P **P 08 38 03.5 +1.1**
SKAG Skagway 77.06 27 *e*P **P 08 38 06.9 +1.0**
comp=Z,15nm,0.9s,mb4.9
TOO Toolangi 78.87 148 *e*P **P 08 38 16.3 +0.2**
CNB Canberra Magne 78.94 144 *e*P **P 08 38 16.6 0.0**
SFJD Kangerlussuaq 79.96 350 *i* P **P 08 38 20.1 -1.7**
SFJD pmax pmax
comp=Z,20nm,0.8s,mb5.1
SFJD Kangerlussuaq 79.96 350 *i* P **P 08 38 20.1 -1.7**
comp=Z,20nm,0.8s,mb5.1
YKA Yellowknife Ar 81.37 17 P **P 08 38 29.2 -0.2**
comp=Z,6.8nm,0.5s,mb4.9,baz=327,slow=5.1,SNR=45
YKA Yellowknife Ar 81.37 17 P **P 08 38 29.2 -0.2**
YKA pmax pmax
comp=Z,7.0nm,0.5s
ESDC Sonseca Array 82.70 312 P **P 08 38 35.7 -1.1**
comp=Z,0.3nm,0.3s,mb3.8,baz=53,slow=5.1,SNR=4.3
LSZ Lusaka 86.19 250 P **P 08 38 54.4 -0.5**
comp=Z,9.9nm,1.0s,mb5.0,baz=51,slow=6.2,SNR=4.9
EDM Edmonton 89.62 21 *e*P **P 08 39 11.3 +0.6**
FFC Flin Flon 91.29 15 *e*P **P 08 39 18.3 -0.1**
FFC pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
FFC Flin Flon 91.29 15 *e*P **P 08 39 18.3 -0.1**
comp=Z,8.8nm,1.0s,mb5.0
ETW Entiat 91.79 28 *e*P **P 08 39 21.4 +0.5**
NEW Newport 92.50 26 *e*P **P 08 39 25.1 +0.9**
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 92.50 26 *e*P **P 08 39 25.1 +0.9**
comp=Z,4.8nm,0.9s,mb4.9
TORD Torodi Ar. Bea 93.42 288 P **P 08 39 28.5 -0.6**
comp=Z,1.5nm,0.9s,mb4.4,baz=56,slow=3.1,SNR=6.0
LBTB Lobatse 93.58 243 P **P 08 39 28.4 -1.1**
comp=Z,2.1nm,0.4s,mb4.9,baz=87,slow=5.3,SNR=6.3
SCHQ Schefferville 93.69 355 P **P 08 39 29.1 -0.4**
comp=Z,2.5nm,0.5s,mb4.9,baz=23,slow=4.5,SNR=7.4
YBMT Yellow Bay 93.98 25 *e*P **P 08 39 32.9 +1.9**
TXAR Lajitas Array 114.06 26 PKP PKiKP 08 44 52.2 -0.5
comp=Z,0.4nm,0.5s,baz=339,slow=0.0,SNR=9.7
TXAR Lajitas Array 114.06 26 PKP PKiKP 08 44 52.2 -0.5
QSPA South Pole Qui 121.24 180 *e*PKPdf PKPdf 08 45 03.8 -1.0
ROSC El Rosal 143.84 357 PKP PKPdf 08 45 47.3 -1.8
comp=Z,13nm,0.5s,baz=292,slow=2.5,SNR=7.9
OTAV Otavalo 148.38 5 *e*PKPdf PKPdf 08 45 57.5 +0.7
OTAV *e*PKPbc PKPbc 08 46 01.2 +0.9
OTAV *e*PKPab PKPab 08 46 03.9 +0.6

ISCJB ***12*** *08:31:37.7±0.6,30°.90N±0°.08×103°.33E±0°.08,h10km, mb3.9/11, Error ellipse: s-maj=12.0km s-min=7.9km az=147.5*
IDC ***12*** *08:31:38.0±0.8,30°.99N×103°.50E,h0km,mb3.9/11, mb1 4.1/13,mb1mx3.9/26,mbtmp3.9/13,ML4.0/2, Error ellipse: s-maj=30.8km s-min=17.1km az=56.0*
NEIC ***12*** *08:31:39.7±0.6,30°.98N×103°.49E,h10km, Error ellipse: s-maj=21.5km s-min=10.5km az=79.0*
BJI ***12*** *08:31:42.2,31°.13N×103°.66E,h17km,ML3.7/4*
ISC 12 08:31:39.9±0.6,30°.95N±0°.07×103°.39E±0°.08,h10km,n17, σ1°.01/18,mb3.9/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.60**	**55**	Pg	**Pg**	**08 33 32.0**	**+4.8**
XAN				Sg	**Sb**	**08 34 25.7**	**+0.7**
XAN				smax			
XAN	comp=N,290nm,0.7s			smax			
	comp=E,120nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.07**	**199**	Pn	**Pn**	**08 34 47.3**	**+1.6**
	comp=E,0.4nm,0.3s,baz=18,slow=15,SNR=2.7						
SONM	**Songino Array**	**17.02**	**7**	Pn	**Pn**	**08 35 38.9**	**+1.0**
	comp=E,0.2nm,0.3s,baz=189,slow=12,SNR=3.0						
KSRS	**Korea Array**	**21.27**	**66**	P	**P**	**08 36 24.8**	**-1.6**
	comp=E,4.8nm,0.6s,mb4.0,baz=255,slow=9.7,SNR=10.0						
CN2	**Changchun**	**21.65**	**47**	*e*P	**P**	**08 36 31.3**	**+0.9**
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**08 36 43.4**	**+1.8**
	comp=E,1.3nm,0.6s,mb3.5,baz=89,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**08 36 43.4**	**+1.8**
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**08 37 17.6**	**-0.5**
	comp=E,2.7nm,0.4s,mb4.2,baz=131,slow=9.4,SNR=4.2						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**08 37 21.2**	**-0.6**
	comp=E,2.1nm,0.7s,mb3.8,baz=127,slow=9.8,SNR=4.3						
BVAR	**Borovoye Array**	**32.54**	**322**	P	**P**	**08 38 11.1**	**+0.3**
	comp=E,0.8nm,0.6s,mb3.9,baz=129,slow=11,SNR=2.6						
BRTR	**Keskin Array B**	**56.28**	**300**	P	**P**	**08 41 20.9**	**+0.2**
	comp=E,0.4nm,0.6s,mb3.6,baz=72,slow=4.7,SNR=2.9						
ARCES	**ARCESS Array B**	**57.15**	**336**	P	**P**	**08 41 25.6**	**-0.7**
	comp=E,1.4nm,0.7s,mb4.1,baz=88,slow=7.1,SNR=5.2						
ARCES				PcP	PcP	08 42 20.5	-0.4
	comp=E,2.5nm,0.8s,baz=48,slow=3.6,SNR=3.9						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**08 41 36.9**	**-0.8**
	comp=E,2.1nm,0.6s,mb4.4,baz=337,slow=7.7,SNR=7.2						
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**08 41 58.2**	**+0.1**
	comp=E,0.4nm,0.5s,mb3.8,baz=333,slow=6.9,SNR=4.1						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**08 42 14.7**	**-1.6**
	comp=E,1.5nm,0.8s,mb4.1,baz=74,slow=6.0,SNR=3.4						
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**08 43 59.2**	**-0.6**
	comp=E,0.4nm,0.7s,mb3.5,baz=328,slow=5.1,SNR=3.5						
YKA	**Yellowknife Ar**	**82.02**	**17**	P	**P**	**08 43 59.2**	**-0.6**

ISCJB ***12*** *08:33:05.0±0.8,31°.6N±0°.1×104°.3E±0°.2,h10km,mb4.0/8, Error ellipse: s-maj=30.3km s-min=13.5km az=166.2*
IDC ***12*** *08:33:05.5±0.8,31°.66N×104°.39E,h0km,mb4.0/8, mb1 4.2/9,mb1mx3.8/26,mbtmp4.0/9,ML4.2/1, Error ellipse: s-maj=53.4km s-min=17.1km az=62.0*
NEIC ***12*** *08:33:07.0±0.7,31°.61N×104°.34E,h10km, Error ellipse: s-maj=26.3km s-min=11.9km az=76.0*
ISC 12 08:33:07.1±0.8,31°.6N±0°.1×104°.3E±0°.2,h10km,n11, σ0°.84/11,mb4.0/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.97**	**202**	Pn	**Pn**	**08 36 24.9**	**-0.3**
0.4nm,0.3s,baz=9.8,slow=11,SNR=3.4							
MKAR	**Makanchi Array**	**22.74**	**318**	P	**P**	**08 38 10.5**	**+1.4**
3.3nm,1.0s,mb3.7,baz=133,slow=10,SNR=4.1							
MKAR	**Makanchi Array**	**22.74**	**318**	P	**P**	**08 38 10.5**	**+1.4**
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**08 38 44.0**	**+0.8**
2.0nm,0.3s,mb4.1,baz=114,slow=6.8,SNR=1.9							
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	**08 42 51.8**	**+0.1**
3.9nm,1.0s,mb4.4,baz=94,slow=7.3,SNR=3.3							
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**08 42 53.0**	**-1.5**
4.7nm,0.9s,mb4.5,baz=146,slow=14,SNR=4.7							
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**08 43 05.8**	**+0.2**
1.1nm,0.3s,mb4.4,baz=328,slow=9.0,SNR=15							
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**08 43 27.0**	**+0.7**
0.3nm,0.4s,mb3.7,baz=335,slow=6.5,SNR=4.0							
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**08 43 41.8**	**-0.9**
0.5nm,0.5s,mb3.8,baz=86,slow=4.6,SNR=2.7							
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**08 45 21.9**	**-0.5**
0.3nm,0.4s,mb3.6,baz=326,slow=5.1,SNR=6.5							
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**08 45 21.9**	**-0.5**

*IDC **12** 08:34:33.2±19.0, 33.°13N×104.°00E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.6/24, mbtmp4.1/3, Error ellipse: s-maj=510.8km s-min=75.6km az=10.0*

ISC 12 08:34:24.2±2.1, 31.°2N±0.°1×103.°6E±0.°6, h10km, n4, σ1§23/5, mb4.1/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.89**	**3**	*e*Pg	**Pn**	**08 35 42.6**	**+4.9**
LZH				Sg	**Sn**	**08 36 34.4**	**0.0**
LZH				smax			
	comp=N,200nm,0.9s						
LZH				smax			
	comp=E,340nm,0.9s						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**08 44 08.2**	**-1.4**
	comp=E,4.5nm,1.0s,mb4.5,baz=79,slow=5.6,SNR=4.1						
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**08 44 12.5**	**+1.1**
	comp=E,1.3nm,0.5s,mb4.3,baz=101,slow=9.9,SNR=5.6						
YKA	**Yellowknife Ar**	**81.74**	**17**	P	**P**	**08 46 42.9**	**+0.2**
	comp=E,0.5nm,0.7s,mb3.6,baz=330,slow=5.1,SNR=5.6						

*IDC **12** 08:35:04.3±0.6, 31.°10N×103.°64E, h0km, mb4.4/19, mb1 4.5/21, mb1mx4.4/29, mbtmp4.4/21, ML4.2/2, Error ellipse: s-maj=21.1km s-min=11.8km az=49.0*

*ISCJB **12** 08:35:04.1±0.3, 31.°15N±0.°03×103.°63E±0.°04, h10km, mb4.5/36, Error ellipse: s-maj=5.1km s-min=4.3km az=139.5*

*MOS **12** 08:35:05.6±0.8, 31.°15N×103.°63E, h20km, mb4.7/11, Error ellipse: s-maj=11.3km s-min=6.9km az=97.0*

*BJI **12** 08:35:05.5, 31.°29N×103.°65E, h14km, mb5.0/17, ML4.5/10, Ms5.2/7, Ms7 4.9/6*

*NEIC **12** 08:35:06.4±0.3, 31.°16N×103.°64E, h10km, mb4.6/13, Error ellipse: s-maj=7.4km s-min=6.1km az=33.0*

*DJA **12** 08:35:33, 30.°75N×103.°18E, h245km, mb4.7/8*

ISC 12 08:35:06.2±0.3, 31.°12N±0.°03×103.°60E±0.°03, h10km, n97, σ1§19/102, mb4.5/36, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.96**	**2**	*e*Pg	**Pg**	**08 36 46.6**	**+5.4**
LZH				Sg	**Sg**	**08 37 45.8**	**+0.3**
LZH				smax			
	comp=N,650nm,1.0s						
LZH				smax			
	comp=E,640nm,1.1s						
ENH	**Enshi**	**5.14**	**98**	Pn	**Pn**	**08 36 23.6**	**+0.4**
	comp=E,396nm,0.9s						
XAN	**Xi'an**	**5.36**	**56**	Pg	**Pg**	**08 36 48.6**	**-0.2**
XAN				Sg	**Sb**	**08 37 44.9**	**+0.7**
XAN				smax			
	comp=N,980nm,0.9s						
XAN				smax			
	comp=E,470nm,1.0s						
GYA	**Guiyang**	**5.36**	**149**	Pg	**Pg**	**08 36 46.6**	**-2.3**
GYA				smax			
	comp=N,790nm,1.0s						
GYA				smax			
	comp=E,990nm,0.9s						
KMI	**Kunming**	**6.02**	**187**	Pn	**Pn**	**08 36 37.1**	**+1.8**
KMI				Sn	**Sn**	**08 37 50.6**	**+6.4**
KMI				smax			
	comp=N,180nm,1.4s						
KMI				smax			
	comp=E,190nm,1.1s						
WHN	**Wuhan**	**9.26**	**91**	P	**Pn**	**08 37 20.6**	**+0.8**
WHN				S	**Sn**	**08 38 58.1**	**-6.0**
LSA	**Lhasa**	**10.84**	**266**	*e*P	**Pn**	**08 37 43.7**	**+2.3**
HHC	**Hu-ho-hao-te**	**11.65**	**31**	*e*P	**Pn**	**08 37 52.4**	**-0.1**
HHC				pP		08 37 55.7	
HHC				sP		08 37 59.1	
HHC				PP		08 38 01.9	
HHC				S	**Sn**	**08 40 03.3**	**+0.7**
HHC				sS		08 40 09.0	
HHC				SS		08 40 18.0	
HHC				pmax	pmax		
	comp=Z,43nm,1.1s						
HHC				LR	LR		
	comp=N,3μm,7.4s						
HHC				LR	LR		
	comp=E,5μm,5.9s						
HHC				LR	LR		
	comp=Z,4μm,6.9s						
SHL	**Shillong**	**11.70**	**245**	*e*P	**Pn**	**08 37 54.0**	**+0.8**
CHTO	**Chiang Mai**	**12.95**	**200**	*e*P	**Pn**	**08 38 12.9**	**+2.6**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**12.95**	**200**	*e*Pn	**Pn**	**08 38 12.8**	**+2.5**
	comp=Z,14nm,0.8s						
NJ2	**Nanjing**	**13.04**	**82**	*e*P	**Pn**	**08 38 09.2**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.29**	**200**	Pn	**Pn**	**08 38 16.1**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=13,slow=12,SNR=6.0						
CMAR	**Chiang Mai Arr**	**13.29**	**200**	P	**Pn**	**08 38 16.1**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BJI	**Beijing**	**13.55**	**46**	P	**Pn**	**08 38 20.3**	**+1.8**
TAPN	**Taplejung**	**14.37**	**259**	*e*P	**Pn**	**08 38 29.5**	**-0.2**
ODAN	**Odare**	**14.80**	**257**	*e*P	**Pn**	**08 38 33.9**	**-1.7**
PKI	**Pulchoki**	**16.25**	**262**	*e*P	**Pn**	**08 38 51.8**	**-2.7**
	comp=Z,60nm,0.7s						
KKN	**Kakani**	**16.30**	**263**	*e*P	**Pn**	**08 38 52.2**	**-3.0**
	comp=Z,134nm,0.9s						
DMN	**Daman**	**16.50**	**262**	*e*P	**Pn**	**08 38 55.0**	**-2.7**
	comp=Z,204nm,1.2s						
SONM	**Songino Array**	**16.84**	**7**	Pn	**Pn**	**08 39 01.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=191,slow=14,SNR=11						
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*P	**Pn**	**08 39 01.9**	**-1.2**
SSLB	**Suanglung**	**17.04**	**111**	*e*Pn	**Pn**	**08 39 09.1**	**+4.6**
	comp=Z,45nm,1.0s						
WMQ	**Urumqi**	**17.85**	**320**	*e*P	**Pn**	**08 39 14.3**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,20nm,1.6s						
WMQ				LR	LR		
	comp=N,11μm,18.0s						
WMQ				LR	LR		
	comp=E,22μm,27.0s						
WMQ				LR	LR		
	comp=Z,17μm,29.0s						
ZAK	**Zakamensk**	**19.25**	**359**	*e*P	**Pn**	**08 39 30.3**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,16nm,1.0s						
TLY	**Talaya**	**20.55**	**0**	*e*P	**P**	**08 39 45.2**	**+0.5**
TLY				pmax	pmax		
	comp=Z,22nm,2.2s						
TLY	**Talaya**	**20.55**	**0**	*e*P	**P**	**08 39 45.5**	**+0.9**
	comp=Z,17nm,1.0s						
MOY	**Mondy**	**20.62**	**355**	*e*P	**P**	**08 39 45.6**	**+0.1**
MOY				pmax	pmax		
	comp=Z,73nm,2.0s						
KS15	**Wonju Array Si**	**21.01**	**66**	*e*P	**P**	**08 39 50.5**	**+0.7**
KSRS	**Korea Array**	**21.04**	**66**	P	**P**	**08 39 50.3**	**+0.1**
	comp=Z,57nm,0.7s,mb5.0,baz=261,slow=10,SNR=98						
KSRS	**Korea Array**	**21.04**	**66**	P	**P**	**08 39 50.3**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,57nm,0.7s,mb5.0						
IRK	**Irkutsk**	**21.12**	**1**	||*e*P	**P**	**08 39 51.1**	**+0.3**
IRK				pmax	pmax		
	comp=Z,179nm,1.0s,mb5.3						
CN2	**Changchun**	**21.40**	**48**	*e*P	**P**	**08 39 53.8**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
HIA	**Hailar**	**21.84**	**29**	*e*P	**P**	**08 39 58.5**	**-0.2**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HIA	**Hailar**	**21.84**	**29**	*e*P	**P**	**08 39 58.5**	**-0.2**
	comp=Z,9.3nm,0.5s,mb4.5						
MK31	**Makanchi Array**	**22.69**	**320**	*e*P	**P**	**08 40 07.5**	**-0.2**
MKAR	**Makanchi Array**	**22.69**	**320**	P	**P**	**08 40 07.4**	**-0.3**
	comp=Z,26nm,0.9s,mb4.7,baz=130,slow=11,SNR=40						
KSH	**Kashi**	**23.98**	**298**	P	**P**	**08 40 24.0**	**+3.2**
KSH				pmax	pmax		
	comp=Z,9μm,12.8s						
MDJ	**Mudanjiang**	**24.43**	**49**	P	**P**	**08 40 22.8**	**-2.0**
MDJ	**Mudanjiang**	**24.43**	**49**	*e*P	**P**	**08 40 26.2**	**+1.4**
	comp=Z,88nm,1.4s,mb5.0						
KZA	**Kyzart**	**25.14**	**304**	P	**P**	**08 40 31.8**	**+0.4**
SNR=32							
TKM2	**Tokmak 2**	**25.15**	**306**	P	**P**	**08 40 32.5**	**+1.0**
SNR=8.3							
TKM2	**Tokmak 2**	**25.15**	**306**	*e*P	**P**	**08 40 32.3**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.4						
TKM2	**Tokmak 2**	**25.15**	**306**	*e*P	**P**	**08 40 32.3**	**+0.9**
	comp=Z,14nm,1.2s,mb4.4						
KBK	**Karagaybulak**	**25.52**	**305**	P	**P**	**08 40 37.5**	**+2.6**
SNR=15							
UCH	**Uchtor**	**25.71**	**304**	P	**P**	**08 40 41.4**	**+4.9**
SNR=27							
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**08 40 40.9**	**+3.2**
SNR=15							
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**08 40 39.0**	**+1.3**
	comp=Z,9.8nm,0.8s,mb4.4,baz=122,slow=5.7,SNR=25						
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**08 40 39.0**	**+1.3**
USP	**Ospenovka**	**26.02**	**306**	P	**P**	**08 40 38.4**	**-0.9**
SNR=10.0							
AML	**Almayshu**	**26.27**	**303**	P	**P**	**08 40 44.5**	**+2.9**
SNR=10							
AML	**Almayashu**	**26.27**	**303**	*e*P	**P**	**08 40 44.4**	**+2.7**
	comp=Z,16nm,1.1s,mb4.5						
ZAA0	**Zalesovo Array**	**26.52**	**335**	*e*P	**P**	**08 40 43.5**	**-0.2**
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**08 40 43.5**	**-0.2**
	comp=Z,18nm,0.8s,mb4.6,baz=134,slow=8.5,SNR=22						
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**08 40 48.0**	**+0.1**
	comp=Z,26nm,0.8s,mb4.8,baz=128,slow=9.4,SNR=57						
KURK	**Kurchatov**	**26.98**	**324**	*e*P	**P**	**08 40 48.1**	**+0.2**
BOD	**Bodaibo**	**27.65**	**12**	*e*P	**P**	**08 40 50.1**	**-3.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.2						
KLR	**Kul'dur**	**27.87**	**41**	*e*P	**P**	**08 40 48.5**	**-7.4**
MAJO	**Matsushiro**	**29.15**	**70**	*e*P	**P**	**08 41 09.3**	**+1.8**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
MAJO	**Matsushiro**	**29.15**	**70**	*e*P	**P**	**08 41 09.3**	**+1.8**
	comp=Z,6.6nm,0.8s,mb4.4						
MAT	**Matsushiro**	**29.15**	**70**	P	**P**	**08 41 06.3**	**-1.2**
MJAR	**Matsushiro Arr**	**29.16**	**70**	P	**P**	**08 41 07.1**	**-0.4**
	comp=Z,3.3nm,0.8s,mb4.1,baz=272,slow=10,SNR=6.2						
MJAR	**Matsushiro Arr**	**29.16**	**70**	P	**P**	**08 41 07.1**	**-0.4**
BVAR	**Borovoye Array**	**32.51**	**322**	P	**P**	**08 41 37.1**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.4,baz=113,slow=9.8,SNR=11						
BVAR				PcP	PcP	08 44 24.1	+0.6
	comp=Z,2.0nm,0.9s,baz=142,slow=5.1,SNR=4.1						
BRVK	**Borovoye**	**32.59**	**322**	*e*P	**P**	**08 41 38.2**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BRVK	**Borovoye**	**32.59**	**322**	*e*P	**P**	**08 41 38.2**	**+0.7**
	comp=Z,5.6nm,0.8s,mb4.5						
ABKAR	**Akbulak array**	**37.34**	**312**	*e*P	**P**	**08 42 19.5**	**+0.9**
	comp=Z,2.5nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**38.81**	**313**	P	**P**	**08 42 29.4**	**-1.6**
AKTO	**Aktyubinsk**	**38.81**	**313**	P	**P**	**08 42 29.4**	**-1.6**
	comp=Z,1.1nm,0.6s,mb3.8,baz=99,slow=11,SNR=4.0						
ARU	**Arti**	**40.16**	**322**	*e*P	**P**	**08 42 42.7**	**+0.6**
ARU	**Arti**	**40.16**	**322**	*e*P	**P**	**08 42 42.7**	**+0.6**
TIXI	**Tiksi**	**42.83**	**11**	*e*P	**P**	**08 42 59.5**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
TIXI	**Tiksi**	**42.83**	**11**	*e*P	**P**	**08 43 02.6**	**-1.2**
	comp=Z,5.8nm,0.4s,mb4.7						
PETK	**Petropavlovsk-**	**44.48**	**44**	P	**P**	**08 43 17.6**	**+0.2**
	comp=Z,5.4nm,0.8s,mb4.3,baz=235,slow=5.2,SNR=4.7						
ZEI	**Tsey**	**48.20**	**301**	*e*P	**P**	**08 43 43.8**	**-3.0**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BILL	**Bilibino**	**51.35**	**25**	*e*P	**P**	**08 44 09.0**	**-1.4**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BILL	**Bilibino**	**51.35**	**25**	*e*P	**P**	**08 44 10.0**	**-0.4**
	comp=Z,22nm,1.4s,mb4.9						
OBN	**Obninsk**	**52.18**	**318**	*e*P	**P**	**08 44 20.1**	**+3.3**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.32**	**154**	*e*P	**P**	**08 44 24.8**	**-0.8**
	comp=Z,5.6nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.32**	**154**	P	**P**	**08 44 24.5**	**-1.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=348,slow=7.1,SNR=4.4						
BRTR	**Keskin Array B**	**56.36**	**300**	P	**P**	**08 44 48.1**	**+0.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=84,slow=6.7,SNR=4.2						
AKASG	**Malin Array Be**	**57.06**	**313**	P	**P**	**08 44 51.0**	**-1.3**
	comp=Z,1.4nm,0.6s,mb4.2,baz=69,slow=6.7,SNR=5.5						
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**08 44 54.5**	**+0.6**
	comp=Z,6.4nm,1.1s,mb4.6,baz=334,slow=37,SNR=2.9						
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**08 44 54.5**	**+0.6**
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**08 45 04.3**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.3						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**08 45 04.3**	**+0.1**
	comp=Z,38nm,1.1s,mb5.3						
WRA	**Warramunga Arr**	**58.73**	**146**	P	**P**	**08 45 04.0**	**-0.3**
	comp=Z,12nm,0.7s,mb5.0,baz=337,slow=7.4,SNR=24						
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**08 45 24.5**	**-0.3**
	comp=Z,3.3nm,0.7s,mb4.6,baz=331,slow=6.5,SNR=18						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**08 45 43.1**	**+0.9**
	comp=Z,1.2nm,0.8s,mb4.0,baz=74,slow=6.4,SNR=3.3						
FORT	**Forrest**	**65.79**	**157**	*e*P	**P**	**08 45 51.6**	**+0.2**
	comp=Z,11nm,0.9s,mb4.9						
COLA	**College**	**69.61**	**26**	*e*P	**P**	**08 46 15.2**	**+0.1**
COLA				pmax	pmax		
	comp=Z,46nm,1.5s,mb5.2						
COLA	**College**	**69.61**	**26**	*e*P	**P**	**08 46 15.2**	**0.0**
	comp=Z,46nm,1.5s,mb5.2						
STKA	**Stephens Creek**	**72.25**	**147**	*e*P	**P**	**08 46 30.9**	**-0.7**
	comp=Z,3.9nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**72.25**	**147**	P	**P**	**08 46 30.9**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.4,baz=314,slow=5.7,SNR=9.8						
YKA	**Yellowknife Ar**	**81.81**	**17**	P	**P**	**08 47 23.6**	**-1.4**
	comp=Z,1.0nm,0.7s,mb3.9,baz=327,slow=5.1,SNR=8.3						
YKA	**Yellowknife Ar**	**81.81**	**17**	P	**P**	**08 47 23.6**	**-1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**93.22**	**287**	P	**P**	**08 48 21.2**	**-0.2**
	comp=Z,1.1nm,1.0s,mb4.2,baz=141,slow=2.0,SNR=4.0						

*ISCJB **12** 08:36:23.7±0.4, 30.°95N±0.°06×103.°40E±0.°07, h10km, mb4.2/26, Error ellipse: s-maj=9.2km s-min=8.2km az=21.6*

*IDC **12** 08:36:23.8±0.6, 30.°96N×103.°34E, h0km, mb4.2/20, mb1 4.3/20, mb1mx4.2/28, mbtmp4.2/20, Error ellipse: s-maj=30.6km s-min=13.0km az=49.0*

*NEIC **12** 08:36:25.4±0.5, 30.°94N×103.°39E, h10km, mb4.4/5, Error ellipse: s-maj=22.9km s-min=9.2km az=50.0*

*BJI **12** 08:36:26.4, 31.°05N×103.°22E, h16km, mb4.9/5, ML4.2/3*

ISC 12 08:36:25.7±0.4, 30.°92N±0.°06×103.°32E±0.°07, h10km, n41, σ0§93/42, mb4.2/26, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HHC	**Hu-ho-hao-te**	**11.94**	**32**	*e*P	**Pn**	**08 39 16.4**	**+0.5**
HHC				pP		08 39 23.6	
HHC				sP		08 39 28.4	
HHC				S	**Sn**	**08 41 28.8**	**-0.4**
HHC				sS		08 41 40.5	
HHC				SS		08 41 44.7	
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
NJ2	**Nanjing**	**13.30**	**81**	*e*P	**Pn**	**08 39 36.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,60nm,1.2s						
KSRS	**Korea Array**	**21.34**	**66**	P	**P**	**08 41 12.2**	**-0.6**
	comp=Z,10nm,0.7s,mb4.3,baz=250,slow=8.7,SNR=8.1						
CN2	**Changchun**	**21.70**	**48**	*e*P	**P**	**08 41 22.0**	**+5.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.5						
MK31	**Makanchi Array**	**22.68**	**320**	*e*P	**P**	**08 41 28.6**	**+1.4**
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**08 41 28.1**	**+0.9**
	comp=Z,6.1nm,0.8s,mb4.1,baz=126,slow=11,SNR=5.5						
AAK	**Ala-Archa**	**25.75**	**305**	P	**P**	**08 41 58.0**	**+1.5**
	comp=Z,6.2nm,0.8s,mb4.2,baz=64,slow=8.0,SNR=2.8						
AML	**Almayashu**	**26.18**	**304**	*e*P	**P**	**08 42 02.9**	**+2.6**
	comp=Z,9.4nm,1.2s,mb4.2						
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**08 42 04.4**	**+0.5**
	comp=Z,2.2nm,0.3s,mb4.1,baz=144,slow=12,SNR=2.5						
KURK	**Kurchatov**	**26.99**	**324**	P	**P**	**08 42 07.5**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.1,baz=126,slow=9.6,SNR=7.2						
BVAR	**Borovoye Array**	**32.52**	**322**	P	**P**	**08 42 56.2**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.2,baz=126,slow=7.7,SNR=5.7						
ABKAR	**Akbulak array**	**37.29**	**312**	*e*P	**P**	**08 43 38.6**	**+0.8**
	comp=Z,1.4nm,0.5s,mb4.0						
AKTK	**Aktyubinsk**	**38.77**	**313**	P	**P**	**08 43 49.6**	**-0.6**
AKTO	**Aktyubinsk**	**38.77**	**313**	P	**P**	**08 43 49.6**	**-0.6**
	comp=Z,1.3nm,0.6s,mb3.9,baz=121,slow=7.3,SNR=4.0						
ARU	**Arti**	**40.17**	**323**	P	**P**	**08 44 02.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**53.26**	**153**	P	**P**	**08 45 43.9**	**-0.7**
	comp=Z,2.3nm,0.8s,mb4.2,baz=342,slow=9.4,SNR=3.1						
ASF	**Jabal al Asfar**	**55.77**	**290**	P	**P**	**08 46 02.7**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=348,slow=7.3,SNR=3.9						
BRTR	**Keskin Array B**	**56.25**	**300**	P	**P**	**08 46 04.4**	**-1.8**
	comp=Z,1.1nm,0.7s,mb4.0,baz=89,slow=6.8,SNR=4.4						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**08 46 09.6**	**-1.9**
	comp=Z,1.2nm,0.4s,mb4.2,baz=68,slow=7.4,SNR=4.4						
ARCES	**ARCESS Array B**	**57.15**	**336**	P	**P**	**08 46 09.7**	**-2.4**
	comp=Z,9.6nm,1.2s,mb4.7,baz=88,slow=7.7,SNR=6.8						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**08 46 12.7**	**-0.9**
	comp=Z,2.3nm,0.6s,mb4.4,baz=87,slow=8.2,SNR=5.3						
WRAB	**Tennant Creek**	**58.70**	**145**	*e*P	**P**	**08 46 24.0**	**+0.4**
WRA	**Warramunga Arr**	**58.70**	**145**	P	**P**	**08 46 23.8**	**+0.2**
	comp=Z,3.8nm,0.5s,mb4.7,baz=328,slow=9.0,SNR=9.4						
ASAR	**Alice Springs**	**61.69**	**148**	P	**P**	**08 46 44.4**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.4,baz=336,slow=6.6,SNR=6.7						
NB2	**NORSAR Subarra**	**64.45**	**327**	P	**P**	**08 47 01.0**	**-1.0**
	comp=Z,1.8nm,0.8s,mb4.2,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.45**	**327**	P	**P**	**08 47 00.8**	**-1.1**
	comp=Z,1.1nm,0.6s,mb4.1,baz=72,slow=6.9,SNR=4.1						
NOA	**NORSAR Array B**	**64.45**	**327**	P	**P**	**08 47 00.8**	**-1.1**
GERES	**GERESS Array B**	**67.19**	**314**	P	**P**	**08 47 20.3**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=64,slow=4.6,SNR=3.3						
CDF	**Champ du Feu**	**71.28**	**316**	*e*P	**P**	**08 47 44.7**	**-0.5**
STKA	**Stephens Creek**	**72.23**	**146**	P	**P**	**08 47 50.7**	**-0.3**
	comp=Z,2.4nm,0.5s,mb4.4,baz=323,slow=7.5,SNR=5.9						
INK	**Inuvik**	**72.55**	**19**	*e*P	**P**	**08 47 52.3**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.1						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**08 47 55.3**	**+0.4**
	comp=Z,7.2nm,0.7s,mb4.4						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**08 47 55.3**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.4						
SMF	**Signal de Mont**	**74.15**	**315**	*e*P	**P**	**08 48 01.8**	**-0.5**
	comp=Z,7.5nm,0.9s,mb4.3						
SMF	**Signal de Mont**	**74.15**	**315**	*e*P	**P**	**08 48 01.8**	**-0.5**
	comp=Z,3.8nm,0.9s,mb4.3						
TCF	**Toulx Ste Croi**	**75.31**	**315**	*e*P	**P**	**08 48 08.8**	**-0.3**
CAF	**Calviac**	**76.07**	**314**	*e*P	**P**	**08 48 13.6**	**+0.2**
YKA	**Yellowknife Ar**	**82.06**	**17**	P	**P**	**08 48 45.4**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=330,slow=5.4,SNR=8.8						
YKA	**Yellowknife Ar**	**82.06**	**17**	P	**P**	**08 48 45.4**	**-0.4**
EDM	**Edmonton**	**90.34**	**21**	*e*P	**P**	**08 49 27.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**93.05**	**287**	P	**P**	**08 49 41.0**	**+0.9**
	comp=Z,0.4nm,0.8s,mb3.9,baz=66,slow=3.6,SNR=3.0						

IDC 12 08:37:24.9±1.4, 31.°58N×103.°14E, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.7/25, mbtmp4.0/5, MS4.8/1, Ms1 5.0/1, ms1mx4.1/50, Error ellipse: s-maj=54.9km s-min=25.7km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.60**	**197**	Pn	Pn	08 40 40.9	+1.7
	baz=14,slow=16,SNR=2.5						
CMAR				LR	LR	08 46 39.8	
	comp=Z,5μm,20.7s,baz=275,slow=41

ISC 12 08:40:28.9±0.4, 31°.25N±0°.06×103°.57E±0°.06, h10km, n39, σ1§07/42, mb4.2/23, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**5.49**	**150**	*e*Pg	**Pg**	**08 42 18.7**	**+4.6**
GYA				Sg	**Sg**	**08 43 20.0**	**-5.2**
GYA				smax			
	comp=N,490nm,1.1s						
GYA				smax			
	comp=E,490nm,1.0s						
KMI	**Kunming**	**6.15**	**187**	Pn	**Pn**	**08 42 02.7**	**+2.9**
KMI				Sn	**Sn**	**08 43 15.7**	**+5.6**
KMI				smax			
	comp=N,170nm,1.6s						
KMI				smax			
	comp=E,140nm,1.6s						
WHN	**Wuhan**	**9.29**	**92**	P	**Pn**	**08 42 49.7**	**+6.8**
WHN				S	**Sn**	**08 44 26.3**	**-1.2**
SHL	**Shillong**	**11.74**	**244**	*e*P	**Pn**	**08 43 15.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**13.41**	**199**	Pn	**Pn**	**08 43 38.6**	**-0.7**
	comp=E,0.7nm,0.3s,baz=5.9,slow=29,SNR=2.8						
CMAR	**Chiang Mai Arr**	**13.41**	**199**	Pn	**Pn**	**08 43 38.6**	**-0.7**
KSRS	**Korea Array**	**21.01**	**66**	P	**P**	**08 45 12.0**	**-0.6**
	comp=E,8.4nm,0.7s,mb4.2,baz=260,slow=9.8,SNR=8.6						
CN2	**Changchun**	**21.33**	**48**	*e*P	**P**	**08 45 18.5**	**+2.5**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**22.57**	**319**	*e*P	**P**	**08 45 29.3**	**+0.1**
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**08 45 27.7**	**-1.5**
	comp=Z,8.3nm,1.1s,mb4.1,baz=125,slow=12,SNR=4.2						
KSH	**Kashi**	**23.90**	**298**	P	**P**	**08 45 46.1**	**+3.3**
KSH				pmax	pmax		
	comp=Z,1μm,8.2s						
MDJ	**Mudanjiang**	**24.36**	**49**	*e*P	**P**	**08 45 47.2**	**+0.3**
	comp=Z,4.3nm,0.5s,mb4.1						
AAK	**Ala-Archa**	**25.74**	**304**	P	**P**	**08 46 01.5**	**+2.0**
	comp=Z,4.4nm,0.8s,mb4.0,baz=139,slow=4.4,SNR=5.4						
AML	**Almayashu**	**26.18**	**303**	*e*P	**P**	**08 46 05.3**	**+1.8**
	comp=Z,15nm,1.3s,mb4.3						
ZAA0	**Zalesovo Array**	**26.39**	**335**	*e*P	**P**	**08 46 05.3**	**-0.1**
ZALV	**Zalesovo Beam**	**26.39**	**335**	P	**P**	**08 46 04.2**	**-1.1**
	comp=Z,6.1nm,0.7s,mb4.2,baz=134,slow=8.6,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.39**	**335**	P	**P**	**08 46 04.2**	**-1.1**
KURK	**Kurchatov**	**26.86**	**324**	P	**P**	**08 46 09.3**	**-0.3**
	comp=Z,5.7nm,0.8s,mb4.2,baz=128,slow=9.6,SNR=10.0						
KURK	**Kurchatov**	**26.86**	**324**	*e*P	**P**	**08 46 09.1**	**-0.4**
BVAR	**Borovoye Array**	**32.40**	**322**	P	**P**	**08 46 58.7**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=90,slow=8.6,SNR=3.8						
ABKAR	**Akbulak array**	**37.23**	**312**	*e*P	**P**	**08 47 40.5**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**38.70**	**313**	P	**P**	**08 47 51.9**	**-1.0**
AKTO	**Aktyubinsk**	**38.70**	**313**	P	**P**	**08 47 51.9**	**-1.0**
	comp=Z,1.2nm,0.6s,mb3.8,baz=83,slow=12,SNR=3.6						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**08 48 03.9**	**0.0**
TIXI	**Tiksi**	**42.70**	**12**	*e*P	**P**	**08 48 25.1**	**-0.5**
	comp=Z,8.7nm,1.1s,mb4.4						
BRTR	**Keskin Array B**	**56.27**	**299**	P	**P**	**08 50 09.8**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=75,slow=10,SNR=2.5						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**08 50 13.1**	**-0.8**
	comp=Z,3.6nm,0.9s,mb4.4,baz=85,slow=7.4,SNR=4.0						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**08 50 13.1**	**-0.8**
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**08 50 13.0**	**-1.3**
	comp=Z,1.9nm,0.6s,mb4.3,baz=67,slow=7.3,SNR=2.9						
FINES	**FINESS Array B**	**57.19**	**326**	P	**P**	**08 50 15.6**	**-0.2**
	comp=Z,1.5nm,0.6s,mb4.2,baz=98,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**58.85**	**146**	P	**P**	**08 50 28.0**	**+0.2**
	comp=Z,11nm,0.9s,mb4.9,baz=334,slow=7.5,SNR=14						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**08 50 48.6**	**+0.2**
	comp=Z,2.8nm,0.9s,mb4.4,baz=336,slow=6.6,SNR=9.6						
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	**08 51 05.3**	**+1.2**
	comp=Z,1.6nm,0.9s,mb4.0,baz=77,slow=6.0,SNR=2.5						
COLA	**College**	**69.50**	**26**	*e*P	**P**	**08 51 38.4**	**+1.2**
	comp=Z,5.1nm,0.9s,mb4.5						
INK	**Inuvik**	**72.17**	**19**	*e*P	**P**	**08 51 53.7**	**+0.3**
	comp=Z,5.2nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**72.38**	**147**	P	**P**	**08 51 54.2**	**-0.9**
	comp=Z,0.9nm,0.4s,mb4.0,baz=330,slow=7.1,SNR=3.5						
STKA	**Stephens Creek**	**72.38**	**147**	P	**P**	**08 51 54.2**	**-0.9**
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**08 52 48.2**	**+1.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=324,slow=4.7,SNR=4.1						
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**08 52 48.2**	**+1.1**

*IDC **12** 08:41:36.1±2.4, 31°.21N×103°.57E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/24, mbtmp3.9/4, Error ellipse: s-maj=68.6km s-min=35.1km az=95.0*

*ISCJB **12** 08:41:38.8±1.3, 31°.4N±0°.2×105°.0E±0°.1, h10km, mb3.8/3, Error ellipse: s-maj=33.5km s-min=12.1km az=164.4*

ISC 12 08:41:40.3±1.3, 31°.5N±0°.2×104°.9E±0°.1, h10km, n5, σ1§36/6, mb3.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.11**	**240**	Pg	**Pn**	**08 42 00.0**	**-1.9**
CD2				Sg	**Sn**	**08 42 18.2**	**+1.0**
CD2				smax			
	comp=N,21μm,0.6s						
KSRS	**Korea Array**	**19.90**	**66**	P	**Pn**	**08 46 21.6**	**+8.1**
	comp=N,2.1nm,0.6s,baz=267,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**58.41**	**147**	P	**P**	**08 51 35.9**	**-0.2**
	comp=N,1.9nm,0.8s,mb4.2,baz=337,slow=7.4,SNR=4.7						
ASAR	**Alice Springs**	**61.46**	**150**	P	**P**	**08 51 57.5**	**+0.4**
	comp=N,0.6nm,0.7s,mb3.8,baz=337,slow=6.8,SNR=4.2						
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	**08 53 56.1**	**+0.4**
	comp=N,0.2nm,0.5s,mb3.3,baz=329,slow=5.2,SNR=4.1						

*ISCJB **12** 08:43:25.7±0.9, 31°.3N±0°.2×103°.4E±0°.1, h10km, mb3.9/7, Error ellipse: s-maj=25.7km s-min=13.2km az=32.8*

*IDC **12** 08:43:26.3±1.1, 31°.25N×103°.28E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/25, mbtmp4.0/7, Error ellipse: s-maj=47.8km s-min=19.0km az=51.0*

*BJI **12** 08:43:30.8, 31°.33N×103°.56E, h25km, ML3.9/4*

ISC 12 08:43:27.9±0.9, 31°.3N±0°.2×103°.3E±0°.1, h10km, n9, σ0§38/9, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**10.77**	**28**	*e*P	**Pn**	**08 46 08.5**	**+6.4**
NJ2	**Nanjing**	**13.25**	**83**	*e*P	**Pn**	**08 46 35.9**	**-0.2**
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**08 48 13.7**	**+0.3**
	2.4nm,0.7s,mb3.6,baz=264,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**22.41**	**320**	P	**P**	**08 48 27.1**	**+0.6**
	1.8nm,0.8s,mb3.5,baz=119,slow=12,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.28**	**335**	P	**P**	**08 49 02.8**	**-0.4**
	5.6nm,1.0s,mb4.0,baz=141,slow=9.6,SNR=5.8						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**08 49 07.3**	**+0.1**
	5.0nm,1.0s,mb4.0,baz=130,slow=9.3,SNR=7.7						
BVAR	**Borovoye Array**	**32.24**	**322**	P	**P**	**08 49 55.9**	**-0.4**
	0.7nm,0.5s,mb3.7,baz=110,slow=6.3,SNR=3.0						
WRA	**Warramunga Arr**	**58.99**	**146**	P	**P**	**08 53 28.3**	**+0.4**
	1.9nm,0.5s,mb4.3,baz=335,slow=7.7,SNR=6.9						
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**08 53 47.9**	**-0.4**
	0.8nm,0.9s,mb3.9,baz=336,slow=7.3,SNR=3.5						

*ISCJB **12** 08:47:21.4±1.0, 32°.16N±0°.02×105°.04E±0°.03, h0km±6km, mb4.9/84, MS5.7/3, Error ellipse: s-maj=4.1km s-min=3.7km az=154.6*

*BJI **12** 08:47:23.3, 32°.16N×105°.12E, h9km, mB5.5/6, mb5.0/27, ML4.7/11, Ms5.1/25, Ms7 5.1/20*

*IDC **12** 08:47:23.1±0.4, 32°.22N×105°.01E, h0km, mb4.7/37, mb1 4.8/40, mb1mx4.8/42, mbtmp4.7/40, ML4.3/3, Error ellipse: s-maj=13.9km s-min=10.3km az=37.0*

*NEIC **12** 08:47:25.0±0.2, 32°.20N×104°.97E, h10km, mb4.9/43, Error ellipse: s-maj=4.8km s-min=4.4km az=66.0*

*MOS **12** 08:47:26.0±0.9, 32°.21N×105°.02E, h31km, mb5.0/35, Error ellipse: s-maj=7.9km s-min=5.0km az=101.5*

*SZGRF **12** 08:47:40.6, 33°.14N×103°.08E, h33km, mb4.8, Gansu, China*

*DJA **12** 08:47:43, 31°.99N×104°.71E, h152km, mb5.0/16*

ISC 12 08:47:25.2±1.0, 32°.17N±0°.02×105°.07E±0°.03, h13km±6km, n226, σ1§10/235, mb4.8/84, MS5.7/3, 23C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.04**	**346**	Pn	**Pn**	**08 48 28.8**	**+2.1**
LZH				Pg	**Pg**	**08 48 40.0**	**-2.6**
LZH				Sn	**Sn**	**08 49 15.2**	**+1.4**
LZH				Sg	**Sg**	**08 49 30.0**	**-4.9**
LZH				smax			
	comp=N,4μm,1.0s						
LZH				smax			
	comp=E,7μm,1.1s						
LZH				LR	LR		
	comp=E,21μm,7.4s						
LZH				LR	LR		
	comp=Z,23μm,9.4s						
ENH	**Enshi**	**4.23**	**115**	*e*Pn	**Pn**	**08 48 33.4**	**+4.0**
ENH				*e*Sg	**Sg**	**08 49 41.6**	**+0.5**
GYA	**Guiyang**	**5.86**	**166**	Pg	**Pn**	**08 48 56.8**	**+5.0**
GYA				Sg	**Sn**	**08 49 59.9**	**+1.1**
GYA				smax			
	comp=N,2μm,0.7s						
GYA				smax			
	comp=E,2μm,0.9s						
KMI	**Kunming**	**7.31**	**197**	Pn	**Pn**	**08 49 16.2**	**+4.5**
KMI				Sn	**Sn**	**08 50 35.7**	**+1.1**
KMI				smax			
	comp=N,280nm,1.2s						
KMI				smax			
	comp=E,210nm,0.9s						
WHN	**Wuhan**	**8.10**	**99**	S	**Sn**	**08 50 51.7**	**-2.3**
WHN				LR	LR		
	comp=N,12μm,6.2s						
WHN				LR	LR		
	comp=E,11μm,9.0s						
GTA	**Gaotai**	**8.39**	**331**	*e*P	**Pn**	**08 49 25.6**	**-0.9**
GTA				pP		08 49 29.7	
GTA				sP		08 49 33.0	
GTA				S	**Sn**	**08 51 01.4**	**+0.4**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				LR	LR		
	comp=N,12μm,16.1s						
GTA				LR	LR		
	comp=E,8μm,11.9s						
GTA				LR	LR		
	comp=Z,11μm,12.8s						
HHC	**Hu-ho-hao-te**	**10.11**	**29**	*e*P	**Pn**	**08 49 52.0**	**+1.9**
HHC				pP		08 49 59.1	
HHC				sP		08 50 03.9	
HHC				S	**Sn**	**08 51 43.6**	**+0.3**
HHC				sS		08 51 54.9	
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				LR	LR		
	comp=N,2μm,6.0s						
HHC				LR	LR		
	comp=E,4μm,6.2s						
HHC				LR	LR		
	comp=Z,4μm,6.4s						
GZH	**Guangzhou**	**11.64**	**139**	P	**Pn**	**08 50 07.8**	**-3.3**
GZH				S	**Sn**	**08 52 19.1**	**-1.9**
GZH				LR	LR		
	comp=N,8μm,16.4s						
GZH				LR	LR		
	comp=E,8μm,19.6s						
NJ2	**Nanjing**	**11.69**	**87**	*e*P	**Pn**	**08 50 12.2**	**+0.5**
NJ2				pP		08 50 18.5	
NJ2				PP		08 50 21.1	
NJ2				sP		08 50 23.2	
NJ2				S	**Sn**	**08 52 19.9**	**-2.2**
NJ2				sS		08 52 30.2	
NJ2				pmax	pmax		
	comp=Z,60nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,340nm,3.6s						
NJ2				LR	LR		
	comp=N,4μm,9.9s						
NJ2				LR	LR		
	comp=E,7μm,12.6s						
NJ2				LR	LR		
	comp=Z,4μm,9.5s						
BJT	**Baijiatuau**	**11.90**	**46**	P	**Pn**	**08 50 17.8**	**+3.2**
BJI	**Beijing**	**11.92**	**46**	P	**Pn**	**08 50 15.2**	**+0.3**
LSA	**Lhasa**	**12.20**	**262**	P	**Pn**	**08 50 12.9**	**-5.8**
LSA				S	Sx	08 53 19.8	
LSA				LR	LR		
	comp=E,26μm,55.0s						
LSA				LR	LR		
	comp=Z,41μm,61.1s						
LSA	**Lhasa**	**12.20**	**262**	*e*Pn	**Pn**	**08 50 20.2**	**+1.5**
SHL	**Shillong**	**13.29**	**244**	*e*P	**Pn**	**08 50 30.0**	**-3.6**
SHL				*e*S	Sn	08 53 31.0	+30
QIZ	**Qiongzhong**	**13.77**	**161**	P	**Pn**	**08 50 41.7**	**+1.5**
QIZ				S	**Sn**	**08 53 16.9**	**+3.8**
QIZ				pmax	pmax		
	comp=Z,34nm,1.7s						
QIZ				LR	LR		
	comp=N,7μm,22.4s						
QIZ				LR	LR		
	comp=Z,18μm,19.5s						
QZH	**Quanzhou**	**13.89**	**118**	*e*P	**Pn**	**08 50 40.0**	**-1.8**
QZH				S	**Sn**	**08 53 11.7**	**-4.1**
CHTO	**Chiang Mai**	**14.40**	**204**	*e*P	**Pn**	**08 50 50.7**	**+2.0**
CM31	**Chiang Mai Arr**	**14.73**	**203**	*e*Pn	**Pn**	**08 51 01.5**	**+8.3**
	comp=Z,21nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.73**	**203**	Pn	**Pn**	**08 50 54.8**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=25,slow=9.6,SNR=9.6						
DL2	**Dalian**	**15.05**	**59**	P	**Pn**	**08 50 58.0**	**+0.4**
DL2				pmax	pmax		
	comp=Z,40nm,1.3s						
SONM	**Songino Array**	**15.68**	**3**	Pn	**Pn**	**08 51 05.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=187,slow=14,SNR=12						
ULN	**Ulaanbaatar**	**15.75**	**5**	*e*P	**Pn**	**08 51 08.0**	**+1.4**
ULN				pmax	pmax		
	comp=Z,61nm,1.1s						
ULN	**Ulaanbaatar**	**15.75**	**5**	*e*Pn	**Pn**	**08 51 08.0**	**+1.4**
	comp=Z,61nm,1.1s						
TAPN	**Taplejung**	**15.82**	**257**	*e*P	**Pn**	**08 51 07.3**	**-0.4**
ODAN	**Odare**	**16.27**	**256**	*e*P	**Pn**	**08 51 13.9**	**+0.4**
	comp=Z,62nm,0.6s						
RAMN	**Ramite**	**16.89**	**257**	*e*P	**Pn**	**08 51 20.2**	**-1.1**
	comp=Z,151nm,1.1s						
GUN	**Gumba**	**17.15**	**261**	*e*P	**Pn**	**08 51 22.4**	**-2.2**
	comp=Z,155nm,1.0s						
SNY	**Shenyang**	**17.62**	**52**	⇓P	**Pn**	**08 51 31.3**	**+1.0**
SNY				S	**Sn**	**08 54 43.6**	**-2.8**
SNY				pmax	pmax		
	comp=Z,45nm,1.1s						
SNY				LR	LR		
	comp=N,9μm,21.0s						
SNY				LR	LR		
	comp=E,8μm,13.5s						
SNY				LR	LR		
	comp=Z,17μm,19.8s						
PKI	**Pulchoki**	**17.65**	**260**	*e*P	**Pn**	**08 51 28.9**	**-2.0**
KKN	**Kakani**	**17.69**	**261**	*e*P	**Pn**	**08 51 28.8**	**-2.5**
	comp=Z,56nm,0.7s						
DMN	**Daman**	**17.89**	**260**	*e*P	**Pn**	**08 51 31.6**	**-2.2**
	comp=Z,102nm,1.0s						
WMQ	**Urumqi**	**17.93**	**315**	*e*P	**Pn**	**08 51 35.7**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,33nm,1.5s						
WMQ				LR	LR		
	comp=N,3μm,21.0s						
WMQ				LR	LR		
	comp=E,16μm,28.0s						
WMQ				LR	LR		
	comp=Z,18μm,25.0s						
ZAK	**Zakamensk**	**18.25**	**356**	*e*P	**Pn**	**08 51 39.3**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,28nm,1.5s						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**08 51 52.5**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=253,slow=9.8,SNR=34						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**08 51 52.5**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	**Talaya**	**19.52**	**357**	*e*P	**Pn**	**08 51 54.4**	**+1.0**
TLY				pmax	pmax		
	comp=Z,25nm,1.4s						
TLY	**Talaya**	**19.52**	**357**	*e*Pn	**Pn**	**08 51 54.5**	**+1.0**
	comp=Z,33nm,1.4s						
MOY	**Mondy**	**19.71**	**352**	*e*P	**Pn**	**08 51 56.5**	**+0.8**
MOY				pmax	pmax		
	comp=Z,141nm,1.5s						
CN2	**Changchun**	**19.76**	**48**	*e*P	**Pn**	**08 51 56.3**	**-0.1**
CN2				pmax	pmax		
	comp=Z,80nm,0.7s						
IRK	**Irkutsk**	**20.07**	**359**	⇓*i*P	**P**	**08 52 00.3**	**+2.2**
IRK				pmax	pmax		
	comp=Z,282nm,1.4s						
HIA	**Hailar**	**20.32**	**29**	*e*P	**P**	**08 52 01.7**	**+0.9**
HIA				pmax	pmax		
	comp=Z,120nm,1.6s						
HIA	**Hailar**	**20.32**	**29**	*e*P	**P**	**08 52 01.7**	**+0.9**
	comp=Z,120nm,1.6s						
PTH	**Pithoragarh**	**21.48**	**270**	*ex*	**P**	**08 52 13.7**	**+0.1**
PTH				*ex*	x	08 55 28.8	
MK31	**Makanchi Array**	**22.74**	**317**	*e*P	**P**	**08 52 27.0**	**+0.1**
MKAR	**Makanchi Array**	**22.74**	**317**	P	**P**	**08 52 26.3**	**-0.6**
	comp=Z,22nm,0.9s,mb4.6,baz=118,slow=9.7,SNR=49						
MKAR	**Makanchi Array**	**22.74**	**317**	*i* P	**P**	**08 52 27.1**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
MDJ	**Mudanjiang**	**22.79**	**50**	P	**P**	**08 52 26.5**	**-0.9**
MDJ				pP		08 52 29.1	
MDJ				S	**S**	**08 56 35.1**	**-1.2**
MDJ				ScP	ScP	08 59 56.0	-0.2
MDJ				PcS	PcS	08 59 57.2	-0.3
MDJ				ScS	ScS	09 03 41.7	+0.1
MDJ				pmax	pmax		
	comp=Z,9μm,10.8s						
MDJ				LR	LR		
	comp=N,15μm,25.6s,MS5.4						
MDJ				LR	LR		
	comp=E,13μm,25.6s,MS5.4						
MDJ				LR	LR		
	comp=Z,12μm,20.3s						
MDJ	**Mudanjiang**	**22.79**	**50**	P	**P**	**08 52 28.5**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,9μm,8.8s						
MDJ	**Mudanjiang**	**22.79**	**50**	*e*P	**P**	**08 52 29.2**	**+1.8**
	comp=Z,61nm,1.0s,mb5.0						
NDI	**New Delhi**	**24.24**	**269**	*ex*	**P**	**08 52 40.0**	**-1.9**
KSH	**Kashi**	**24.63**	**295**	*e*P	**P**	**08 52 49.3**	**+4.0**
KSH				*e*pP		08 52 53.1	
KSH				*e*sP	sP	08 52 56.4	+5.5
KSH				*e*PP		08 53 26.3	
KSH				*e*PcP	PcP	08 56 24.2	+1.5
KSH				S	**S**	**08 57 09.1**	**+2.8**
KSH				*e*sS	sS	08 57 16.1	+3.3
KSH				*e*SS		08 58 08.1	
KSH				*e*ScP	ScP	09 00 02.1	+0.9
KSH				*e*PcS	PcS	09 00 03.3	+0.7
KSH				*e*ScS	ScS	09 03 49.1	+0.1
KSH				pmax	pmax		
	comp=Z,13μm,16.4s						
KSH				LR	LR		
	comp=N,5μm,17.8s,MS5.5						
KSH				LR	LR		
	comp=E,13μm,15.1s,MS5.5						
ULHL	**Ulahol**	**24.96**	**302**	P	**P**	**08 52 49.7**	**+1.4**
	SNR=13						
TKM2	**Tokmak 2**	**25.59**	**303**	P	**P**	**08 52 55.2**	**+1.2**
	SNR=23						
TKM2	**Tokmak 2**	**25.59**	**303**	*e*P	**P**	**08 52 55.2**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**25.59**	**303**	*e*P	**P**	**08 52 55.2**	**+1.2**
	comp=Z,16nm,0.6s,mb4.7						
KZA	**Kyzart**	**25.64**	**301**	P	**P**	**08 52 56.5**	**+2.0**
	SNR=26						
KBK	**Karagaybulak**	**25.99**	**302**	P	**P**	**08 52 59.1**	**+1.5**
	SNR=20						
ZAA0	**Zalesovo Array**	**26.14**	**332**	*e*P	**P**	**08 52 58.7**	**-0.2**
ZALV	**Zalesovo Beam**	**26.14**	**332**	P	**P**	**08 52 58.8**	**-0.1**
	comp=Z,7.1nm,0.4s,mb4.5,baz=128,slow=9.6,SNR=17						
UCH	**Uchtor**	**26.21**	**301**	P	**P**	**08 53 00.8**	**+1.3**
	SNR=42						
CHMS	**Chumysh**	**26.21**	**303**	P	Px	08 53 10.8	
	SNR=6.5						
KLR	**Kul'dur**	**26.25**	**42**	*e*P	**P**	**08 52 57.0**	**-2.9**
AAK	**Ala-Archa**	**26.31**	**302**	P	**P**	**08 53 01.8**	**+1.3**
	comp=Z,3.1nm,0.6s,mb4.0,baz=100,slow=4.8,SNR=8.0						
AAK	**Ala-Archa**	**26.31**	**302**	⇑*i*P	**P**	**08 52 59.3**	**-1.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9						
AAK	**Ala-Archa**	**26.31**	**302**	*e*P	**P**	**08 53 01.7**	**+1.2**
	comp=Z,16nm,1.2s,mb4.4						
BOD	**Bodaibo**	**26.37**	**11**	*e*P	**P**	**08 52 59.1**	**-1.8**
BOD				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.3						
USP	**Ospenovka**	**26.46**	**304**	P	**P**	**08 53 02.2**	**+0.4**
	SNR=19						
AML	**Almayashu**	**26.78**	**301**	P	**P**	**08 53 06.7**	**+1.9**
	SNR=16						
KURK	**Kurchatov**	**26.91**	**321**	P	**P**	**08 53 04.6**	**-1.2**
	comp=Z,20nm,0.9s,mb4.6,baz=131,slow=8.5,SNR=34						
KURK	**Kurchatov**	**26.91**	**321**	*c i*P	**P**	**08 53 03.5**	**-2.3**
KURK				pmax	pmax		
	comp=Z,67nm,1.7s,mb4.9						
KURK	**Kurchatov**	**26.91**	**321**	*e*P	**P**	**08 53 05.4**	**-0.4**
	comp=Z,35nm,1.0s,mb4.8						
NVS	**Novosibirsk**	**27.43**	**332**	*e*P	**P**	**08 53 09.0**	**-1.4**
MAT	**Matsushiro**	**27.62**	**72**	P	**P**	**08 53 11.7**	**-0.7**
MJAR	**Matsushiro Arr**	**27.62**	**72**	P	**P**	**08 53 12.3**	**-0.1**
	comp=Z,6.2nm,0.5s,mb4.5,baz=278,slow=10,SNR=22						
KBL	**Kabul**	**30.09**	**284**	*e*P	**P**	**08 53 35.0**	**+0.6**
KBL				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
KBL	**Kabul**	**30.09**	**284**	*e*P	**P**	**08 53 35.0**	**+0.6**
	comp=Z,21nm,0.9s,mb4.9						
ASAJ	**Asahikawa**	**31.57**	**57**	P	**P**	**08 53 47.5**	**+0.2**
	comp=Z,6.5nm,0.6s,mb4.7,baz=261,slow=9.7,SNR=7.1						
ASAJ	**Asahikawa**	**31.57**	**57**	P	**P**	**08 53 47.5**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**32.24**	**52**	*e*P	**P**	**08 53 54.0**	**+0.8**
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**08 53 54.7**	**-0.5**
	comp=Z,6.3nm,0.7s,mb4.6,baz=115,slow=10.0,SNR=32						
BVAR				PcP	PcP	08 56 42.0	+0.1
	comp=Z,6.3nm,0.7s,baz=197,slow=4.5,SNR=5.4						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**08 53 54.7**	**-0.5**
BVAR				PcP	PcP	08 56 42.0	+0.1
BRVK	**Borovoye**	**32.56**	**320**	⇑*i*P	**P**	**08 53 53.6**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,31nm,1.7s,mb5.0						
BRVK	**Borovoye**	**32.56**	**320**	*e*P	**P**	**08 53 56.4**	**+0.5**
	comp=Z,12nm,0.8s,mb4.9						
SVE	**Sverdlovsk**	**39.15**	**322**	⇑*e*P

BRTR Keskin Array B 56.94 299 P P 08 57 09.9 -0.2
comp=Z,4.6nm,0.8s,mb4.6,baz=97,slow=7.0,SNR=18
FINES FINESS Array B 57.15 326 P P 08 57 10.9 -0.4
comp=Z,15nm,0.7s,mb5.1,baz=87,slow=7.8,SNR=28
AKASG Malin Array Be 57.26 313 P P 08 57 11.6 -0.7
comp=Z,4.1nm,0.6s,mb4.7,baz=70,slow=6.3,SNR=7.6
AKASG Malin Array Be 57.26 313 P P 08 57 11.6 -0.7
MMAI Mount Meron Ar 57.66 291 P P 08 57 15.1 -0.3
comp=Z,0.6nm,0.3s,mb4.0,baz=43,slow=16,SNR=4.2
NACGM Naroch 57.86 318 *e* **P 08 57 14.0 -2.4**
SPITS Spitsbergen Ar 58.50 346 P P 08 57 20.3 -0.2
comp=Z,13nm,1.0s,mb4.9,baz=84,slow=10,SNR=6.6
SPITS Spitsbergen Ar 58.50 346 P P 08 57 20.3 -0.3
SPITS pmax pmax
comp=Z,13nm,1.0s
WRAB Tennant Creek 58.91 147 *eP* **P 08 57 24.4 +0.3**
WRA Warramunga Arr 58.91 148 P P 08 57 24.5 +0.4
comp=Z,18nm,0.6s,mb5.3,baz=341,slow=7.4,SNR=83
WB2 Warramunga Arr 58.92 148 *eP* **P 08 57 24.3 +0.2**
EIL Elat 59.20 288 P P 08 57 26.0 -0.2
comp=Z,9.0nm,0.9s,mb4.8,baz=98,slow=5.9,SNR=6.8
EIL Elat 59.20 288 P P 08 57 26.0 -0.2
ATD Arta Tunnel 60.49 265 P P 08 57 35.7 +0.5
comp=Z,10nm,0.6s,mb5.0,baz=342,slow=24,SNR=7.2
MLR Muntele Rosu 60.71 308 P P 08 57 36.0 -0.3
comp=Z,3.4nm,0.8s,mb4.5,baz=295,slow=6.3,SNR=4.9
MLR Muntele Rosu 60.71 308 P P 08 57 36.0 -0.3
MLR pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 61.98 150 P P 08 57 45.6 +0.6
comp=Z,6.4nm,0.4s,mb5.1,baz=331,slow=6.6,SNR=76
ASAR PcP PcP 08 58 25.6 0.0
comp=Z,2.9nm,0.6s,baz=333,slow=5.3,SNR=4.9
KOLS Kolonicke sedl 62.07 312 *eP* **P 08 57 43.9 -1.5**
KOLS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KOLS Kolonicke sedl 62.07 312 *eP* **P 08 57 43.9 -1.5**
comp=Z,3.3nm,1.0s,mb4.4
KOLS Kolonicke sedl 62.07 312 *eP* **P 08 57 43.9 -1.5**
STHS Stebnicka Huta 62.56 313 *eP* **P 08 57 49.2 +0.5**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 62.56 313 *eP* **P 08 57 49.2 +0.5**
comp=Z,3.6nm,0.9s,mb4.5
STHS Stebnicka Huta 62.56 313 *eP* **P 08 57 49.2 +0.5**
KECS Kecovo 63.33 312 *eP* **P 08 57 54.3 +0.5**
KECS pmax pmax
comp=Z,7.0nm,1.8s,mb4.5
KECS Kecovo 63.33 312 *eP* **P 08 57 54.3 +0.5**
comp=Z,6.9nm,1.8s,mb4.5
KECS Kecovo 63.33 312 *eP* **P 08 57 54.3 +0.5**
HFS Hagfors 63.35 326 P P 08 57 53.0 -0.7
comp=Z,3.6nm,0.5s,mb4.8,baz=98,slow=6.1,SNR=9.0
NB2 NORSAR Subarra 64.21 327 P P 08 57 58.1 -1.3
comp=Z,13nm,0.8s,mb5.0,baz=70,slow=6.9
NOA NORSAR Array B 64.21 327 P P 08 57 58.3 -1.1
comp=Z,8.6nm,0.8s,mb4.8,baz=70,slow=6.5,SNR=19
VYHS Vyhne 64.36 313 *eP* **P 08 58 00.5 -0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
VYHS Vyhne 64.36 313 *eP* **P 08 58 00.5 -0.1**
comp=Z,5.3nm,1.2s,mb4.5
VYHS Vyhne 64.36 313 *eP* **P 08 58 00.5 -0.1**
KOLL Kolacno 64.60 313 *eP* **P 08 57 59.5 -2.7**
KOLL Kolacno 64.60 313 *eP* **P 08 57 59.5 -2.7**
IDI Anoyia 64.97 297 P P 08 58 03.3 -1.6
comp=Z,11nm,0.8s,mb4.9,baz=59,slow=9.1,SNR=3.0
VRAC Vranov 65.46 314 P P 08 58 07.0 -0.8
comp=Z,1.7nm,0.3s,mb4.5,baz=108,slow=19,SNR=4.3
TTA Tatalina 65.73 30 *eP* **P 08 58 08.5 -0.8**
NWAO Narrogin (SRO) 65.76 169 P P 08 58 10.1 +0.4
comp=Z,12nm,0.7s,mb5.1,baz=341,slow=12,SNR=3.5
FORT Forrest 66.29 158 *eP* **P 08 58 14.0 +0.8**
comp=Z,16nm,0.8s,mb5.1
BRG Berggiesshubel 66.46 316 *eP* **P 08 58 13.6 -0.5**
comp=Z,6.7nm,1.2s,mb4.5
BRG Berggiesshubel 66.46 316 *eP* **P 08 58 13.6 -0.6**
BRG pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
CLL Collm 66.84 317⇑ *iP* **P 08 58 15.8 -0.8**
CLL *e* 08 58 23.0
CLL pmax pmax
comp=Z,29nm,1.6s,mb5.1
CLL Collm 66.84 317⇑ *iP* **P 08 58 15.8 -0.8**
comp=Z,16nm,1.6s,mb4.8
CLL *i* pP pP 08 58 19.1 -1.7
CLL *e* 08 58 23.0
CLL Collm 66.84 317⇑ *iP* **P 08 58 15.8 -0.8**
comp=Z,16nm,1.6s,mb4.8
CLL *i* pP pP 08 58 19.1 -1.7
CLL *e* 08 58 23.0
GERES GERESS Array B 67.39 314 P P 08 58 19.9 -0.3
comp=Z,1.7nm,0.7s,mb4.2,baz=66,slow=7.5,SNR=9.1
COLA College 68.11 26 *eP* **P 08 58 24.8 +0.4**
COLA pmax pmax
comp=Z,25nm,0.8s,mb5.3
COLA College 68.11 26 *eP* **P 08 58 24.8 +0.4**
comp=Z,25nm,0.8s,mb5.3
MCK McKinley 68.25 27 *eP* **P 08 58 25.5 +0.2**
MCK pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
MCK McKinley 68.25 27 *eP* **P 08 58 25.5 +0.2**
comp=Z,9.7nm,0.6s,mb5.0
GRA1 Grafenberg Arr 68.53 316 *eP* **P 08 58 27.2 -0.1**
comp=Z,8.0nm,1.2s,mb4.5
GRF Grafenberg Arr 68.53 316 *eP* **P 08 58 27.2 -0.1**
comp=Z,8.0nm,1.2s,mb4.5
GRF Grafenberg Arr 68.53 316 *eP* **P 08 58 27.2 -0.1**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
GRF Grafenberg Arr 68.53 316 *eP* **P 08 58 27.2 -0.1**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KDAK Kodiak Island 69.50 34 P P 08 58 33.3 +0.1
comp=Z,22nm,0.6s,mb5.3,baz=346,slow=3.4,SNR=14
KDAK Kodiak Island 69.50 34 *iP* **P 08 58 32.9 -0.2**
EGAK Eagle 70.59 25 *eP* **P 08 58 39.5 -0.2**
comp=Z,6.7nm,0.8s,mb4.6
DAVOX Davos/Dischmat 70.60 313 P P 08 58 39.2 -0.9
comp=Z,4.5nm,0.6s,mb4.6,baz=37,slow=3.8,SNR=7.9
MENT Mentasta 70.68 27 *eP* **P 08 58 40.6 +0.3**
BFO Black Forest 70.84 315 *eP* **P 08 58 41.4 -0.2**
INK Inuvik 70.88 20 *eP* **P 08 58 40.8 -0.6**
INK pmax pmax
comp=Z,22nm,0.9s
INK Inuvik 70.88 20 *eP* **P 08 58 40.8 -0.7**
comp=Z,22nm,0.9s,mb5.1
CDF Champ du Feu 71.43 316⇑ *iP* **P 08 58 44.6 -0.5**
WLF Walferdange 71.50 317 *eP* **P 08 58 46.2 +0.7**
WLF pmax pmax
comp=Z,14nm,0.9s,mb4.9
WLF Walferdange 71.50 317 *eP* **P 08 58 46.2 +0.7**
comp=Z,14nm,0.9s,mb4.9
DAWY Dawson 71.63 25 *eP* **P 08 58 45.8 -0.2**
KMBO Kilima Mbogo 71.95 257 P P 08 58 49.0 +0.2
comp=Z,4.4nm,0.8s,mb4.4,baz=36,slow=9.9,SNR=12
EIDS Eidsvold 72.12 137 *eP* **P 08 58 50.6 +1.2**
comp=Z,36nm,1.4s,mb5.1
STKA Stephens Creek 72.46 148 *eP* **P 08 58 51.5 +0.2**
comp=Z,4.3nm,0.4s,mb4.7
STKA Stephens Creek 72.46 148 P P 08 58 51.7 +0.4
comp=Z,5.8nm,0.5s,mb4.8,baz=341,slow=5.2,SNR=28
STKA Stephens Creek 72.46 148 P P 08 58 51.7 +0.4
SUMG Summit 72.56 349 *eP* **P 08 58 51.8 +0.4**
comp=Z,17nm,1.1s,mb4.9
RES Resolute Bay 72.61 5 *eP* **P 08 58 51.9 +0.2**
RES pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
RES Resolute Bay 72.61 5 *eP* **P 08 58 51.9 +0.1**
comp=Z,7.8nm,1.0s,mb4.6
LPG La Plagne 73.12 313⇑ *iP* **P 08 58 55.7 +0.4**
comp=Z,29nm,0.8s,mb5.0
LPG La Plagne 73.12 313⇑ *iP* **P 08 58 55.7 +0.4**
LPG pmax pmax
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 73.12 313⇑ *iP* **P 08 58 55.7 +0.4**
comp=Z,15nm,0.8s,mb5.0
HYT Haines Junctio 74.31 27 *eP* **P 08 59 03.3 +1.4**
SMF Signal de Mont 74.32 315⇑ *iP* **P 08 59 01.7 -0.6**
comp=Z,18nm,1.0s,mb4.7
SMF Signal de Mont 74.32 315⇑ *iP* **P 08 59 01.7 -0.6**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SMF Signal de Mont 74.32 315⇑ *iP* **P 08 59 01.7 -0.6**
comp=Z,9.1nm,1.0s,mb4.7
TCF Toulx Ste Croi 75.47 316⇑ *iP* **P 08 59 08.6 -0.4**
comp=Z,28nm,1.3s,mb4.8
TCF Toulx Ste Croi 75.47 316⇑ *iP* **P 08 59 08.6 -0.4**
comp=Z,14nm,1.3s,mb4.7
SKAG Skagway 76.02 27 *eP* **P 08 59 13.0 +1.2**
comp=Z,26nm,0.8s,mb5.2
KEST Kesra 76.16 304 P P 08 59 12.2 -0.8
comp=Z,2.3nm,0.9s,mb4.1,baz=145,slow=3.1,SNR=3.9
CAF Calviac 76.27 315⇑ *iP* **P 08 59 13.6 0.0**
comp=Z,17nm,1.1s,mb4.6
CAF Calviac 76.27 315⇑ *iP* **P 08 59 13.6 0.0**
CAF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
CAF Calviac 76.27 315⇑ *iP* **P 08 59 13.6 0.0**
comp=Z,8.4nm,1.1s,mb4.6
SFJD Kangerlussuaq 79.43 351 *i P* **P 08 59 30.0 -0.7**
SFJD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SFJD Kangerlussuaq 79.43 351 *i P* **P 08 59 30.0 -0.7**
comp=Z,10nm,0.9s,mb4.8
YKA Yellowknife Ar 80.43 17 P P 08 59 35.6 -0.6
comp=Z,8.1nm,0.5s,mb4.9,baz=328,slow=5.2,SNR=134
YKA Yellowknife Ar 80.43 17 P P 08 59 35.6 -0.6
YKA pmax pmax
comp=Z,8.0nm,0.5s
ESDC Sonseca Array 82.91 313 P P 08 59 48.8 -1.0
comp=Z,0.5nm,0.4s,mb3.9,baz=49,slow=4.2,SNR=4.6
ESDC Sonseca Array 82.91 313 P P 08 59 48.8 -1.0
LSZ Lusaka 87.30 250 *eP* **P 09 00 12.4 +0.3**
LSZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
LSZ Lusaka 87.30 250 *eP* **P 09 00 12.3 +0.3**
comp=Z,7.2nm,0.8s,mb5.0
FCC Fort Churchill 88.01 10 *eP* **P 09 00 14.7 -0.1**
FCC pmax pmax
comp=Z,1.0nm,1.0s,mb4.0
FCC Fort Churchill 88.01 10 *eP* **P 09 00 14.7 -0.1**
comp=Z,0.6nm,1.0s,mb3.8
EDM Edmonton 88.64 22 *eP* **P 09 00 18.7 +0.8**
JCW Jim Creek 89.61 29 *eP* **P 09 00 23.9 +1.3**
FFC Flin Flon 90.38 15 *iP* **P 09 00 25.9 -0.1**
FFC Flin Flon 90.38 15 *eP* **P 09 00 25.3 -0.7**
comp=Z,15nm,0.8s,mb5.4
ETW Entiat 90.74 29 *eP* **P 09 00 29.2 +1.4**
NEW Newport 91.47 27 *eP* **P 09 00 31.8 +0.6**
NEW pmax pmax
comp=Z,7.0nm,1.1s
NEW Newport 91.47 27 *eP* **P 09 00 31.8 +0.5**
comp=Z,7.2nm,1.1s,mb4.9
BSMT Bassoo Peak 92.69 26 *eP* **P 09 00 38.6 +1.7**
SCHQ Schefferville 93.07 355 P P 09 00 38.3 -0.2
comp=Z,7.0nm,0.8s,mb5.1,baz=12,slow=2.9,SNR=7.0
SLMT Seeley Lake 93.67 25 *eP* **P 09 00 42.2 +0.8**
MSO Missoula 93.86 26 *eP* **P 09 00 43.3 +1.0**
comp=Z,33nm,2.6s,mb5.3
TORD Torodi Ar. Bea 94.09 288 P P 09 00 42.5 -1.4
comp=Z,1.1nm,0.8s,mb4.3,baz=42,slow=3.6,SNR=7.0
EGMT Eagleton 94.28 23 *eP* **P 09 00 44.2 +0.1**
comp=Z,4.1nm,0.8s,mb4.9
HRY Holter Researc 94.72 24 *eP* **P 09 00 46.9 +0.7**
DGMT Dagmar 95.56 19 *eP* **P 09 00 51.1 +1.1**
comp=Z,101nm,2.3s,mb5.8
ULM Lac du Bonnet 95.87 13 P P 09 00 50.2 -1.1
comp=Z,1.8nm,0.6s,mb4.7,baz=177,slow=1.2,SNR=4.1
HLID Hailey 96.43 28 *eP* **P 09 00 55.8 +1.7**
comp=Z,8.9nm,1.6s,mb5.0
BOSA Boshof 96.92 241 P P 09 00 55.5 -1.0
comp=Z,2.6nm,0.8s,mb4.7,baz=328,slow=4.5,SNR=3.1
RSSD Black Hills 99.56 21 *eP* **P 09 01 09.0 +0.9**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
RSSD Black Hills 99.56 21 *eP* **P 09 01 08.9 +0.8**
comp=Z,2.6nm,0.9s,mb4.7
SBA Scott Base 115.63 168 *e*PKIKP PKPdf 09 06 07.0 +1.1
QSPA South Pole Qui 121.94 180 *e*PKPdf PKPdf 09 06 18.0 0.0
OTAV Otavalo 147.60 7 *e*PKPdf PKPdf 09 07 08.4 +1.0
OTAV *e*PKPbc PKPbc 09 07 11.1 +1.1
OTAV *e*PKPab PKPab 09 07 12.6 +0.6
LPAZ La Paz 163.03 337 PKP PKPdf 09 07 28.6 +0.7
comp=Z,3.1nm,1.0s,baz=53,slow=1.1,SNR=7.5
CPUP Villa Florida 163.58 286 PKP PKPdf 09 07 27.7 -0.4
comp=Z,0.3nm,0.3s,baz=128,slow=5.9,SNR=3.7
PLCA Paso Flores 170.76 201 PKP PKPdf 09 07 33.5 +0.6
comp=Z,2.5nm,1.1s,baz=317,slow=2.4,SNR=3.3

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*ISCJB **12** 08:50:35.5±0.3, 32°.31N±0°.04×105°.29E±0°.05, h10km, mb4.5/45, Error ellipse: s-maj=6.7km s-min=5.7km az=151.6*
*IDC **12** 08:50:35.5±0.6, 32°.31N×105°.25E, h0km, mb4.5/27, mb1 4.6/28, mb1mx4.5/36, mbtmp4.5/28, ML3.6/1, Error ellipse: s-maj=21.2km s-min=12.9km az=50.0*
*NEIC **12** 08:50:37.3±0.2, 32°.38N×105°.35E, h10km, mb4.7/14, Error ellipse: s-maj=8.9km s-min=5.3km az=54.0*
*MOS **12** 08:50:37.0±0.9, 32°.34N×105°.27E, h19km, mb4.8/16, Error ellipse: s-maj=12.6km s-min=7.2km az=122.0*
*BJI **12** 08:50:38.7, 32°.24N×105°.19E, h21km, mB4.9/1, mb4.7/8, ML4.9/4, Ms4.8/3, Ms7 4.7/2*
*SZGRF **12** 08:51:04.8, 36°.31N×103°.43E, h15km, mb4.7, Gansu, China*
ISC 12 08:50:37.3±0.3, 32°.37N±0°.04×105°.34E±0°.04, h10km, (h15km±.6km:pP-P), n104, σ0s94/106, mb4.5/45, 15C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.44**	**60**	Pg	**Pg**	**08 51 51.3**	**+8.1**
XAN				Sg	**Sg**	**08 52 26.6**	**-1.1**
XAN				smax			
	comp=N,1μm,0.9s						
XAN				smax			
	comp=E,610nm,1.4s						
LZH	**Lanzhou**	**3.91**	**342**	Pg	**Pg**	**08 51 50.1**	**-2.1**
LZH				Sg	**Sg**	**08 52 36.3**	**-6.5**
LZH				smax			
	comp=N,2μm,0.7s						
LZH				smax			
	comp=E,4μm,0.7s						
LZH				LR	LR		
	comp=E,8μm,8.3s						
HHC	**Hu-ho-hao-te**	**9.83**	**29**	*e*P	**Pn**	**08 53 04.5**	**+5.8**
HHC				pP		08 53 07.8	
HHC				sP		08 53 10.5	
HHC				S	**Sn**	**08 54 55.0**	**+6.0**
HHC				pmax	pmax		
	comp=Z,210nm,1.4s						
HHC				LR	LR		
	comp=N,3μm,7.9s						
HHC				LR	LR		
	comp=E,1μm,6.9s						
HHC				LR	LR		
	comp=Z,4μm,6.9s						
LSA	**Lhasa**	**12.45**	**261**	*e*P	**Pn**	**08 53 36.8**	**+2.2**
CMAR	**Chiang Mai Arr**	**15.00**	**204**	Pn	**Pn**	**08 54 10.7**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=18,slow=12,SNR=2.8						
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**08 54 20.2**	**+4.7**
	comp=Z,0.6nm,0.3s,baz=179,slow=13,SNR=2.8						
ULN	**Ulaanbaatar**	**15.53**	**4**	*e*P	**Pn**	**08 54 12.2**	**-4.1**
TAPN	**Taplejung**	**16.08**	**256**	*e*P	**Pn**	**08 54 23.8**	**+0.2**
	comp=Z,69nm,0.9s						
NACB	**Ninganchiao**	**16.48**	**116**	Pn	**Pn**	**08 54 28.2**	**-0.4**
ODAN	**Odare**	**16.54**	**255**	*e*P	**Pn**	**08 54 28.9**	**-0.5**
	comp=Z,109nm,0.9s						
RAMN	**Ramite**	**17.15**	**256**	*e*P	**Pn**	**08 54 35.9**	**-1.2**
GUN	**Gumba**	**17.40**	**260**	*e*P	**Pn**	**08 54 39.7**	**-0.6**
	comp=Z,102nm,0.9s						
PKI	**Pulchoki**	**17.91**	**260**	*e*P	**Pn**	**08 54 45.5**	**-1.1**
KKN	**Kakani**	**17.94**	**260**	*e*Pn	**Pn**	**08 54 45.6**	**-1.4**
	comp=Z,67nm,0.8s						
DMN	**Daman**	**18.15**	**260**	*e*P	**Pn**	**08 54 48.5**	**-1.0**
	comp=Z,82nm,0.9s						
KS15	**Wonju Array Si**	**19.16**	**68**	*e*P	**Pn**	**08 55 00.3**	**-1.4**
KSRS	**Korea Array**	**19.19**	**68**	P	**Pn**	**08 55 03.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=243,slow=9.7,SNR=2.6						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**08 55 39.6**	**0.0**
	comp=Z,14nm,0.8s,mb4.4,baz=121,slow=12,SNR=7.6						
KSH	**Kashi**	**24.75**	**295**	P	**P**	**08 56 02.1**	**+3.2**
KSH				pmax	pmax		
	comp=Z,5μm,14.7s						
TKM2	**Tokmak 2**	**25.67**	**303**	*e*P	**P**	**08 56 09.2**	**+1.9**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**25.67**	**303**	*e*P	**P**	**08 56 09.2**	**+1.8**
	comp=Z,7.3nm,0.6s,mb4.4						
KLR	**Kul'dur**	**25.95**	**42**	*e*P	**P**	**08 56 12.8**	**+3.0**
ZAA0	**Zalesovo Array**	**26.07**	**332**	*e*P	**P**	**08 56 10.6**	**-0.2**
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**08 56 10.7**	**-0.1**
	comp=Z,3.8nm,0.4s,mb4.3,baz=136,slow=9.9,SNR=3.6						
BOD	**Bodaibo**	**26.13**	**11**	*e*P	**P**	**08 56 12.9**	**+1.6**
BOD				pmax	pmax		
	comp=Z,9.0nm,2.1s,mb3.9						
KURK	**Kurchatov**	**26.89**	**321**	P	**P**	**08 56 18.5**	**+0.2**
	comp=Z,4.1nm,0.4s,mb4.3,baz=128,slow=9.6,SNR=5.8						
KURK	**Kurchatov**	**26.89**	**321**	*e*P	**P**	**08 56 18.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**26.89**	**321**	*e*P	**P**	**08 56 18.1**	**-0.2**
	comp=Z,9.4nm,0.6s,mb4.5						
KULM	**Kulim**	**27.30**	**190**	*e*P	**P**	**08 56 22.0**	**-0.1**
KKM	**Kota Kinabalu**	**28.09**	**157**	*e*P	**P**	**08 56 28.3**	**-1.0**
	comp=Z,9.5nm,0.4s,mb4.8						
BRVK	**Borovoye**	**32.55**	**320**	*e*P	**P**	**08 57 08.9**	**+0.5**
BILL	**Bilibino**	**49.59**	**26**	*e*P	**P**	**08 59 29.6**	**+1.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.82**	**156**	P	**P**	**09 00 01.0**	**+0.6**
	comp=Z,2.3nm,0.8s,mb4.1,baz=353,slow=8.1,SNR=3.2						
KEV	**Kevo**	**56.01**	**336**	*e*P	**P**	**09 00 15.2**	**-0.4**
KEV				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
KEV	**Kevo**	**56.01**	**336**	*e*p	**P**	**09 00 15.2**	**-0.4**
	comp=Z,15nm,0.8s,mb5.1						
ARCES	**ARCESS Array B**	**56.54**	**335**	P	**P**	**09 00 19.6**	**+0.1**
	comp=Z,7.0nm,0.7s,mb4.8,baz=81,slow=7.6,SNR=7.5						
ASF	**Jabal al Asfar**	**56.90**	**290**	P	**P**	**09 00 21.2**	**-1.5**
	comp=Z,6.5nm,0.6s,mb4.8,baz=232,slow=23,SNR=9.0						
BR131	**Keskin Array S**	**57.03**	**299**	*e*P	**P**	**09 00 23.6**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.1						
BRTR	**Keskin Array B**	**57.03**	**299**	P	**P**	**09 00 23.4**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.5,baz=102,slow=6.9,SNR=9.8						
FINES	**FINESS Array B**	**57.11**	**326**	P	**P**	**09 00 23.5**	**-0.1**
	comp=Z,4.7nm,0.7s,mb4.6,baz=97,slow=8.3,SNR=4.3						
AKASG	**Malin Array Be**	**57.29**	**313**	P	**P**	**09 00 24.6**	**-0.5**
	comp=Z,5.2nm,0.6s,mb4.8,baz=68,slow=6.6,SNR=10.0						
SPITS	**Spitsbergen Ar**	**58.36**	**346**	P	**P**	**09 00 32.5**	**+0.3**
	comp=Z,2.8nm,0.5s,mb4.5,baz=96,slow=11,SNR=6.0						
WRA	**Warramunga Arr**	**58.96**	**148**	P	**P**	**09 00 36.5**	**-0.5**
	comp=Z,9.2nm,0.8s,mb4.9,baz=340,slow=7.5,SNR=6.5						
WB2	**Warramunga Arr**	**58.97**	**148**	*e*P	**P**	**09 00 39.5**	**+2.4**
EIL	**Elat**	**59.36**	**288**	P	**P**	**09 00 38.0**	**-1.9**
	comp=Z,6.8nm,0.7s,mb4.8,baz=347,slow=2.7,SNR=6.0						
ATD	**Arta Tunnel**	**60.73**	**265**	P	**P**	**09 00 50.4**	**+1.0**
	comp=Z,3.6nm,0.4s,mb4.9,baz=237,slow=22,SNR=5.7						
ATD	**Arta Tunnel**	**60.73**	**265**	P	**P**	**09 00 50.4**	**+1.0**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**09 00 57.1**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.6,baz=329,slow=6.4,SNR=6.2						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**09 00 58.3**	**+0.1**
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**09 00 58.3**	**+0.1**
	comp=Z,3.8nm,0.9s,mb4.5						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**09 00 58.3**	**+0.1**
STHS	**Stebnicka Huta**	**62.59**	**313**	*e*P	**P**	**09 01 02.3**	**+0.8**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
STHS	**Stebnicka Huta**	**62.59**	**313**	*e*P	**P**	**09 01 02.3**	**+0.8**
HFS	**Hagfors**	**63.31**	**326**	P	**P**	**09 01 05.7**	**-0.4**
	comp=Z,3.5nm,0.6s,mb4.7,baz=100,slow=5.1,SNR=5.7						
KECS	**Kecovo**	**63.36**	**312**	*e*P	**P**	**09 01 07.4**	**+0.7**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
KECS	**Kecovo**	**63.36**	**312**	*e*P	**P**	**09 01 07.4**	**+0.7**
NB2	**NORSAR Subarra**	**64.16**	**327**	P	**P**	**09 01 10.4**	**-1.3**
	comp=Z,4.2nm,0.6s,mb4.7,baz=70,slow=6.5						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**09 01 10.8**	**-0.9**
	comp=Z,4.5nm,0.7s,mb4.6,baz=71,slow=6.5,SNR=14						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**09 01 10.8**	**-0.9**
VYHS	**Vyhne**	**64.39**	**313**	*e*P	**P**	**09 01 14.0**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
VYHS	**Vyhne**	**64.39**	**313**	*e*P	**P**	**09 01 14.0**	**+0.6**
	comp=Z,5.9nm,1.4s,mb4.4						
VYHS	**Vyhne**	**64.39**	**313**	*e*P	**P**	**09 01 14.0**	**+0.6**
KOLL	**Kolacno**	**64.63**	**313**	*e*P	**P**	**09 01 15.8**	**+0.8**
KOLL	**Kolacno**	**64.63**	**313**	*e*P	**P**	**09 01 15.8**	**+0.8**
IDI	**Anoyia**	**65.08**	**297**	P	**P**	**09 01 17.2**	**-0.9**
	comp=Z,8.7nm,0.7s,mb4.9,baz=66,slow=8.1,SNR=4.1						
VRAC	**Vranov**	**65.48**	**314**	P	**P**	**09 01 20.9**	**+0.3**
	comp=Z,5.9nm,0.8s,mb4.7,baz=350,slow=22,SNR=3.1						
VRAC	**Vranov**	**65.48**	**314**	P	**P**	**09 01 20.9**	**+0.4**
VRAC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**66.47**	**316**	*e*P	**P**	**09 01 27.0**	**+0.1**
	comp=Z,5.3nm,0.7s,mb4.7						
BRG	**Berggiesshubel**	**66.47**	**316**	*e*P	**P**	**09 01 27.0**	**+0.1**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
CLL	**Collm**	**66.85**	**317**	*i* P	**P**	**09 01 29.2**	**-0.1**
CLL				*e*	pP	09 01 34.0	+1.5
CLL				*e*		09 01 35.0	
CLL	**Collm**	**66.85**	**317**	*i* P	**P**	**09 01 29.2**	**-0.1**
CLL				*e*(pP)	pP	09 01 34.0	+1.5
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**09 01 33.5**	**+0.6**
	comp=Z,2.9nm,0.8s,mb4.4,baz=71,slow=5.8,SNR=9.1						
GRA1	**Grafenberg Arr**	**68.55**	**316**	*e*P	**P**	**09 01 40.8**	**+0.8**
	comp=Z,6.0nm,0.9s,mb4.5						
GRA1				*e*pP	pP	09 01 45.0	+1.7
GRF	**Grafenberg Arr**	**68.55**	**316**	*e*P	**P**	**09 01 40.8**	**+0.8**
	comp=Z,6.0nm,0.9s,mb4.5						
GRF				*e*pP	pP	09 01 45.0	+1.7
GRF	**Grafenberg Arr**	**68.55**	**316**	*e*P	**P**	**09 01 40.8**	**+0.8**
GRF				*e**PP	pP	09 01 45.0	+1.7
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**68.55**	**316**	*e*P	**P**	**09 01 40.8**	**+0.8**
	comp=Z,6.0nm,0.9s,mb4.5						
GRF				*e*pP	pP	09 01 45.0	+1.7
INK	**Inuvik**	**70.62**	**20**	P	**P**	**09 01 52.5**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=331,slow=6.5,SNR=4.7						
DAVOX	**Davos/Dischmat**	**70.62**	**314**	P	**P**	**09 01 53.1**	**+0.2**
	comp=Z,9.6nm,0.7s,mb4.8,baz=70,slow=4.9,SNR=9.3						
BFO	**Black Forest**	**70.86**	**315**	*e*P	**P**	**09 01 53.8**	**-0.5**
BFO				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
BFO	**Black Forest**	**70.86**	**315**	*e*P	**P**	**09 01 53.8**	**-0.4**
	comp=Z,10.0nm,1.5s,mb4.5						
CDF	**Champ du Feu**	**71.44**	**316**⇑ *iP*		**P**	**09 01

YKA	**Yellowknife Ar**	80.17	18	P	P	09 02 48.1	+0.6
	comp=Z,1.2nm,0.4s,mb4.2,baz=326,slow=5.0,SNR=11						
ESDC	**Sonseca Array**	82.94	313	P	P	09 03 01.6	-1.0
	comp=Z,0.3nm,0.3s,mb3.9,baz=38,slow=7.2,SNR=4.5						
SCHQ	**Schefferville**	92.89	355	P	P	09 03 50.0	-0.3
	comp=Z,1.7nm,0.6s,mb4.6,baz=329,slow=1.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	94.24	288	P	P	09 03 52.5	-4.7
	comp=Z,0.5nm,0.5s,mb4.2,baz=59,slow=8.1,SNR=7.9						
OTAV	**Otavalo**	147.37	7	*e*PKPbc	PKPbc	09 10 23.9	+1.9

IDC ***12*** *08:52:01.2±1.6, 40°.71N×51°.64E, h0km, mb4.2/10, mb1 4.4/14, mb1mx4.1/31, mbtmp4.3/14, ML4.6/4, MS5.6/1, Ms1 5.8/1, ms1mx4.5/50, Error ellipse: s-maj=28.0km s-min=14.3km az=154.0*
ISCJB ***12*** *08:52:04.4±0.6, 41°.26N±0°.06×51°.70E±0°.04, h10km, mb4.4/14, Error ellipse: s-maj=9.3km s-min=3.5km az=158.6*
MOS ***12*** *08:52:04.2±1.6, 40°.93N×51°.78E, h26km, mb4.9/5, Error ellipse: s-maj=10.5km s-min=7.8km az=111.7*
NEIC ***12*** *08:52:04.4±0.7, 40°.99N×51°.71E, h10km, mb4.5/4, Error ellipse: s-maj=15.0km s-min=6.0km az=167.0*
CSEM ***12*** *08:52:08.8±0.5, 41°.08N×51°.76E, h45km±3km, mb4.9/4, Error ellipse: s-maj=15.9km s-min=5.9km az=154.0*
ISC 12 08:52:05.4±0.6, 41°.10N±0°.06×51°.78E±0°.04, h10km, n85, σ1§16/95, mb4.4/14, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDR	**Nardaran**	1.46	250	P	Sn	08 52 44.0	-6.8
	SNR=5.8						
SIZA	**Siyzn**	2.18	270	P	Pn	08 52 44.7	+3.0
	SNR=27						
PQL	**Pirkuli**	2.44	264	P	Pn	08 52 46.3	+1.1
	SNR=12						
IML	**Ismayilli**	2.75	265	P	Pn	08 52 49.9	+0.5
	SNR=12						
SEKA	**Sheki**	3.46	273	P	Pn	08 53 00.9	+1.6
	SNR=40						
MAK	**Makhachkala**	3.69	302	*e*PN	Pn	08 53 08.4	+5.9
MAK				*e*		08 53 50.6	
MAK				pmax	pmax		
	comp=Z,186nm,0.4s						
MAK				smax			
	comp=N,851nm,0.5s						
MAK				smax			
	comp=E,498nm,0.5s						
MAK	**Makhachkala**	3.69	302	*e*Pn	Pn	08 53 08.4	+5.9
	comp=E,186nm,0.4s						
MAK				*e*Sn	Sn	08 53 50.6	+4.6
GANJ	**Ganja**	4.17	266	P	Pn	08 53 07.4	-1.6
	SNR=6.7						
NAX	**Nakhchivan**	5.19	250	P	Pn	08 53 23.1	+0.1
	SNR=3.3						
MTA	**Mtatsminda**	5.29	279	P	Pb	08 53 39.7	+1.8
MTA				S	Sn	08 54 24.8	-0.6
TBLG	**Delisi**	5.34	279	*e*PN	Pb	08 53 39.8	+1.1
TBLG				S	Sn	08 54 26.0	-0.5
TBLG	**Delisi**	5.34	279	P	Pb	08 53 39.8	+1.2
TBLG				S	Sn	08 54 26.0	-0.5
TBLG	**Delisi**	5.34	279	*e*Pn	Pb	08 53 39.8	+1.1
TBLG				Sn	Sn	08 54 26.0	-0.5
GNI	**Garni**	5.44	262	*e*P	Pn	08 53 26.6	+0.1
GNI				pmax	pmax		
	comp=Z,22nm,0.5s						
GNI	**Garni**	5.44	262	*e*Pn	Pn	08 53 26.6	+0.1
	comp=Z,22nm,0.5s						
GNI	**Garni**	5.44	262	*e*P	Pn	08 53 26.6	+0.1
	comp=Z,22nm,0.5s						
GOR	**Gori**	5.83	281	P	Sn	08 54 39.0	+0.4
KEH	**Kehvi**	6.00	284	P	Sn	08 54 42.1	-0.7
ONI	**Oni**	6.40	286	P	Sb	08 55 08.3	-5.0
KIV	**Kislovodsk**	7.30	296	*e*P	Pn	08 53 55.3	+3.3
KIV				pmax	pmax		
	comp=Z,14nm,0.7s						
KIV	**Kislovodsk**	7.30	296	*e*P	Pn	08 53 55.3	+3.3
	comp=Z,14nm,0.7s						
GOF	**Gofitskoye**	7.53	305	*e*P	Pn	08 53 59.6	+4.5
GOF				pmax	pmax		
	comp=Z,50nm,0.9s						
GOF	**Gofitskoye**	7.53	305	*e*P	Pn	08 53 59.6	+4.5
	comp=Z,50nm,0.9s						
AB31	**Akbulak array**	9.98	32	P	Pn	08 54 29.8	+1.1
	comp=Z,14nm,0.8s,baz=218,slow=14,SNR=70						
AB31				S	Sn	08 56 18.7	-2.0
	comp=Z,30nm,0.6s,baz=216,slow=23,SNR=17						
AB31	**Akbulak array**	9.98	32	P	Pn	08 54 29.8	+1.1
	comp=Z,14nm,0.8s,baz=218,SNR=70						
AB31				S	Sn	08 56 18.7	-2.0
	comp=Z,30nm,0.6s,baz=216,SNR=17						
ABKAR	**Akbulak array**	9.98	32	*e*Pn	Pn	08 54 29.5	+0.8
	comp=Z,29nm,0.9s						
ABKAR				*e*Sn	Sn	08 56 20.9	+0.2
ABKAR	**Akbulak array**	9.98	32	*e*Pn	Pn	08 54 29.5	+0.8
	comp=Z,29nm,0.9s						
ABKAR				*e*Sn	Sn	08 56 20.9	+0.2
AKTK	**Aktyubinsk**	10.30	23	Pn	Pn	08 54 34.5	+1.4
AKTK				Sn	Sn	08 56 28.4	-0.1
AKTK	**Aktyubinsk**	10.30	23	P	Pn	08 54 34.5	+1.4
AKTK				S	Sn	08 56 28.4	-0.1
AKTO	**Aktyubinsk**	10.30	23	Pn	Pn	08 54 34.5	+1.4
	comp=Z,2.4nm,0.3s,baz=204,slow=13,SNR=36						
AKTO				Sn	Sn	08 56 28.4	-0.1
	comp=Z,6.2nm,0.3s,baz=205,slow=22,SNR=15						
VRHR	**Novokhopersk**	12.22	328	*e*P	Pn	08 55 02.6	+3.2
VRHR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.4s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR	**Storozhevoye**	13.36	324	*e*P	Pn	08 55 16.2	+1.3
VSR				*e*S	Sn	08 57 38.3	-5.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,20nm,1.1s						
VSR				smax			
	comp=E,80nm,1.2s						
VSR				smax			
	comp=Z,10.0nm,0.4s						
VSR				smax			
	comp=N,50nm,0.6s						
VSR	**Storozhevoye**	13.36	324	*e*P	Pn	08 55 16.2	+1.3
	comp=N,10.0nm,0.7s						
OBN	**Obninsk**	17.26	329	*e*P	Pn	08 56 15.1	+8.8
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN	**Obninsk**	17.26	329	*e*P	Pn	08 56 15.1	+8.8
	comp=Z,8.0nm,1.1s						
BRVK	**Borovoye**	17.31	40	*e*P	Pn	08 56 07.4	+0.4
BRVK				pmax	pmax		
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	17.31	40	*e*Pn	Pn	08 56 07.4	+0.4
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	17.31	40	*e*P	Pn	08 56 07.4	+0.4
	comp=Z,18nm,0.9s						
BVAR	**Borovoye Array**	17.35	40	P	Pn	08 56 07.6	+0.2
	comp=Z,1.2nm,0.3s,baz=230,slow=11,SNR=19						
BVAR	**Borovoye Array**	17.35	40	P	Pn	08 56 07.6	+0.2
MOS	**Moscow**	17.35	332	*e*P	Pn	08 56 06.2	-1.2
MOS				pmax	pmax		
	comp=Z,28nm,0.8s						
MOS	**Moscow**	17.35	332	*e*P	Pn	08 56 06.2	-1.2
	comp=Z,28nm,0.8s						
AKASG	**Malin Array Be**	18.34	309	P	Pn	08 56 18.7	-1.0
	comp=Z,7.1nm,0.3s,baz=110,slow=11,SNR=17						
AKASG	**Malin Array Be**	18.34	309	P	Pn	08 56 18.7	-1.0
MLR	**Muntele Rosu**	19.28	292	P	Pn	08 56 28.1	-3.0
	comp=Z,0.4nm,0.3s,baz=121,slow=7.5,SNR=2.9						
MLR	**Muntele Rosu**	19.28	292	P	Pn	08 56 28.1	-3.0
BUR08	**Bucovina Ar. S**	20.04	298	*e*P	P	08 56 37.7	-0.7
BUR08	**Bucovina Ar. S**	20.04	298	*e*P	P	08 56 37.7	-0.7
KURK	**Kurchatov**	20.90	54	P	P	08 56 47.9	+0.1
	comp=Z,7.9nm,0.7s,baz=253,slow=12,SNR=7.0						
KURK	**Kurchatov**	20.90	54	P	P	08 56 47.8	+0.1
MKAR	**Makanchi Array**	22.61	65	P	P	08 57 05.5	-0.5
	comp=Z,2.5nm,0.7s,mb3.8,baz=250,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	22.61	65	P	P	08 57 05.5	-0.5
ZALV	**Zalesovo Beam**	25.49	48	P	P	08 57 32.8	-0.7
	comp=Z,3.4nm,0.5s,mb4.2,baz=252,slow=7.6,SNR=5.7						
FINES	**FINESS Array B**	25.65	331	P	P	08 57 34.5	-0.3
	comp=Z,3.2nm,0.5s,mb4.2,baz=119,slow=13,SNR=6.4						
FINES	**FINESS Array B**	25.65	331	P	P	08 57 34.5	-0.4
GERES	**GERESS Array B**	27.80	299	P	P	08 57 52.7	-1.7
	comp=Z,0.6nm,0.4s,mb3.5,baz=92,slow=8.8,SNR=8.6						
GERES	**GERESS Array B**	27.80	299	P	P	08 57 52.7	-1.7
BSD	**Bornholm Skovb**	27.95	313	*i* P	P	08 57 53.6	-2.1
BSD	**Bornholm Skovb**	27.95	313	*i* P	P	08 57 53.6	-2.1
MOX	**Moxa**	29.23	303	*e*P	P	08 58 07.1	0.0
	comp=Z,4.0nm,0.9s,mb4.2						
MOX	**Moxa**	29.23	303	*e*P	P	08 58 07.1	0.0
MOX				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
MOX	**Moxa**	29.23	303	*e*P	P	08 58 07.1	0.0
	comp=Z,4.0nm,0.9s,mb4.2						
HFS	**Hagfors**	30.16	322	P	P	08 58 13.9	-1.3
	comp=Z,3.8nm,0.5s,mb4.4,baz=102,slow=8.0,SNR=8.2						
HFS	**Hagfors**	30.16	322	P	P	08 58 13.9	-1.4
DMN	**Daman**	30.43	106	*e*P	P	08 58 14.7	-3.2
	comp=Z,62nm,0.9s,mb5.4						
DAVOX	**Davos/Dischmat**	30.43	295	P	P	08 58 16.3	-1.5
	comp=Z,1.2nm,0.3s,mb4.1,baz=139,slow=9.3,SNR=5.0						
DAVOX	**Davos/Dischmat**	30.43	295	P	P	08 58 16.3	-1.5
KKN	**Kakani**	30.45	105	*e*P	P	08 58 12.7	-5.4
	comp=Z,45nm,0.6s,mb5.4						
NOA	**NORSAR Array B**	31.63	323	P	P	08 58 27.8	-0.4
	comp=Z,1.3nm,0.6s,mb4.0,baz=117,slow=8.5,SNR=4.7						
NOA	**NORSAR Array B**	31.63	323	P	P	08 58 27.8	-0.4
ARCES	**ARCESS Array B**	31.64	343	P	P	08 58 28.5	+0.3
	comp=Z,8.6nm,1.2s,mb4.5,baz=119,slow=10,SNR=3.0						
ARCES	**ARCESS Array B**	31.64	343	P	P	08 58 28.5	+0.3
SPITS	**Spitsbergen Ar**	39.85	349	P	P	08 59 39.3	+0.8
	comp=Z,2.4nm,0.7s,mb4.1,baz=150,slow=8.3,SNR=3.9						
SPITS	**Spitsbergen Ar**	39.85	349	P	P	08 59 39.3	+0.8
CMAR	**Chiang Mai Arr**	46.06	105	LR	LR	09 23 33.3	
	comp=Z,7μm,18.8s,baz=195,slow=41						
TIXI	**Tiksi**	47.58	25	*e*P	P	09 00 41.8	+1.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
TIXI	**Tiksi**	47.58	25	*e*P	P	09 00 41.8	+1.1
	comp=Z,9.8nm,0.6s,mb5.0						
TIXI	**Tiksi**	47.58	25	*e*P	P	09 00 41.8	+1.1
	comp=Z,9.8nm,0.6s,mb5.0						
BJT	**Baijiatuau**	47.91	69	*e*P	P	09 00 44.4	+0.8
	comp=Z,158nm,1.3s						
BJT	**Baijiatuau**	47.91	69	*e*P	P	09 00 44.4	+0.7
	comp=Z,158nm,1.3s						
BILL	**Bilibino**	60.73	23	*e*P	P	09 02 15.3	-1.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.6						
BILL	**Bilibino**	60.73	23	*e*P	P	09 02 16.0	-0.6
	comp=Z,9.0nm,1.3s,mb4.7						
BILL	**Bilibino**	60.73	23	*e*P	P	09 02 16.0	-0.6
	comp=Z,9.0nm,1.3s,mb4.7						
PMSA	**Palmer Station**	137.12	215	PKP	PKPdf	09 11 25.7	-1.8
	comp=Z,8.5nm,0.8s,baz=43,slow=21,SNR=5.9						
PMSA	**Palmer Station**	137.12	215	PKIKP	PKPdf	09 11 25.7	-1.8

IDC ***12*** *08:54:10.6±0.5, 32°.11N×104°.86E, h0km, mb4.6/32, mb1 4.6/35, mb1mx4.6/42, mbtmp4.5/35, ML4.5/3, Error ellipse: s-maj=15.5km s-min=10.6km az=43.0*
ISCJB ***12*** *08:54:11.4±2.2, 32°.03N±0°.04×104°.86E±0°.05, h17km±16km, mb4.6/57, Error ellipse: s-maj=7.3km s-min=6.3km az=11.7*
MOS ***12*** *08:54:11.1±1.2, 32°.08N×104°.95E, h15km, mb4.8/23, Error ellipse: s-maj=10.0km s-min=6.1km az=111.2*
BJI ***12*** *08:54:12.3, 32°.17N×104°.92E, h13km, mb4.9/8, ML4.3/6, Ms5.0/5, Ms7 4.7/4*
NEIC ***12*** *08:54:12.4±0.3, 32°.08N×104°.89E, h10km, mb4.7/21, Error ellipse: s-maj=7.8km s-min=6.6km az=79.0*
SZGRF ***12*** *08:54:26.4, 34°.26N×104°.90E, h33km, mb5.0, Gansu, China*
DJA ***12*** *08:54:39, 31°.51N×104°.56E, h228km, mb4.9/11*
ISC 12 08:54:11.4±1.8, 32°.06N±0°.04×104°.91E±0°.04, h4km±11km, n137, σ1§21/138, mb4.6/57, 3C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	3.90	59	Pg	Pg	08 55 35.9	+10
XAN				Sg	Sg	08 56 12.4	-4.3
XAN				smax			
	comp=N,1μm,1.0s						
XAN				smax			
	comp=E,560nm,1.0s						
LZH	**Lanzhou**	4.11	348	*e*Pg	Pg	08 55 28.7	-1.4
LZH				Sg	Sg	08 56 17.8	-5.6
LZH				smax			
	comp=N,3μm,1.0s						
LZH				smax			
	comp=E,3μm,0.9s						
LZH				LR	LR		
	comp=E,11μm,6.1s						
LZH				LR	LR		
	comp=Z,11μm,7.5s						
GYA	**Guiyang**	5.79	164	Pg	Pg	08 55 58.2	-4.1
GYA				smax			
	comp=N,1μm,1.2s						
GYA				smax			
	comp=E,2μm,0.7s						
KMI	**Kunming**	7.17	196	Pn	Pn	08 56 00.2	+3.2
KMI				Sn	Sn	08 57 17.0	-1.9
KMI				smax			
	comp=N,140nm,0.9s						
KMI				smax			
	comp=E,120nm,0.9s						
WHN	**Wuhan**	8.22	98	P	Pn	08 56 06.9	-4.4
WHN				S	Sn	08 57 42.6	-2.0
CHTO	**Chiang Mai**	14.25	204	*e*P	Pn	08 57 34.6	+0.7
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	**Chiang Mai**	14.25	204	*e*Pn	Pn	08 57 34.6	+0.8
	comp=Z,8.3nm,0.6s						
CM31	**Chiang Mai Arr**	14.58	203	*e*Pn	Pn	08 57 37.5	-0.9
	comp=Z,24nm,0.6s						
CMAR	**Chiang Mai Arr**	14.58	203	Pn	Pn	08 57 39.6	+1.2
	comp=Z,3.1nm,0.3s,baz=9.7,slow=9.9,SNR=16						
DL2	**Dalian**	15.22	59	*e*P	PKiKP	09 10 44.1	-3.9
DL2				pmax	pmax		
	comp=Z,20nm,1.6s						
DL2	**Dalian**	15.22	59	*e*P	PKiKP	09 10 44.1	-3.9
DL2				pmax	pmax		
	comp=Z,20nm,1.6s						
TAPN	**Taplejung**	15.66	257	*e*P	Pn	08 57 50.5	-2.4
	comp=Z,46nm,0.8s						
SONM	**Songino Array**	15.79	4	Pn	Pn	08 57 55.4	+0.9
	comp=Z,0.3nm,0.3s,baz=179,slow=19,SNR=2.8						
ULN	**Ulaanbaatar**	15.87	5	*e*P	Pn	08 57 55.4	0.0
ODAN	**Odare**	16.11	256	*e*P	Pn	08 57 54.3	-4.4
	comp=Z,76nm,0.8s						
RAMN	**Ramite**	16.73	257	*e*P	Pn	08 58 01.6	-5.0
GUN	**Gumba**	17.00	261	*e*P	Pn	08 58 07.2	-2.8
	comp=Z,54nm,0.7s						
PKI	**Pulchoki**	17.50	260	*e*P	Pn	08 58 12.0	-4.3
	comp=Z,49nm,0.7s						
DMN	**Daman**	17.74	261	*e*P	PKiKP	09 10 47.7	-1.6
	comp=Z,235nm,0.8s						
KS15	**Wonju Array Si**	19.61	68	*e*P	Pn	08 58 43.1	+1.2
KSRS	**Korea Array**	19.64	68	P	Pn	08 58 41.4	-0.9
	comp=Z,0.7nm,0.3s,baz=256,slow=10,SNR=13						
KSRS	**Korea Array**	19.64	68	P	Pn	08 58 41.4	-0.9
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	19.93	48	*e*P	Pn	08 58 46.3	+0.6
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
MK31	**Makanchi Array**	22.73	317	*e*P	P	08 59 13.6	-0.6
MKAR	**Makanchi Array**	22.73	317	P	P	08 59 13.8	-0.4
	comp=Z,4.8nm,0.6s,mb4.1,baz=114,slow=12,SNR=7.9						
MDJ	**Mudanjiang**	22.96	50	*e*P	P	08 59 16.1	-0.5
	comp=Z,10nm,0.9s,mb4.3						
NDI	**New Delhi**	24.10	269	*e*P	P	08 59 26.0	-2.1
KSH	**Kashi**	24.55	296	P	P	08 59 35.1	+3.0
KSH				pmax	pmax		
	comp=Z,9μm,19.4s						
TKM2	**Tokmak 2**	25.54	303	*e*P	P	08 59 43.3	+2.3
TKM2				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	25.54	303	*e*P	P	08 59 43.3	+2.3
	comp=Z,12nm,0.8s,mb4.5						
ZAA0	**Zalesovo Array**	26.18	333	*e*P	P	08 59 47.3	+0.6
ZALV	**Zalesovo Beam**	26.18	333	P	P	08 59 46.1	-0.5
	comp=Z,12nm,0.5s,mb4.7,baz=136,slow=9.7,SNR=14						
AAK	**Ala-Archa**	26.25	302	P	P	08 59 47.2	-0.3
	comp=Z,1.0nm,0.4s,mb3.7,baz=162,slow=19,SNR=2.9						
AAK	**Ala-Archa**	26.25	302	P	P	08 59 47.2	-0.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
AAK	**Ala-Archa**	26.25	302	*e*P	P	08 59 50.4	+2.9
	comp=Z,8.1nm,0.9s,mb4.2						
KLR	**Kul'dur**	26.42	42	*e*P	P	08 59 45.8	-3.1
BOD	**Bodaibo**	26.50	11	*e*P	P	08 59 50.3	+0.8
BOD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
KURK	**Kurchatov**	26.91	322	P	P	08 59 52.3	-1.0
	comp=Z,7.5nm,0.8s,mb4.3,baz=128,slow=8.7,SNR=11						
KURK	**Kurchatov**	26.91	322	P	P	08 59 52.3	-1.0
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	26.91	322	*e*P	P	08 59 55.7	+2.4
	comp=Z,14nm,0.9s,mb4.5						
MAJO	**Matsushiro**	27.78	72	*e*P	P	09 00 01.1	-0.2
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
MAJO	**Matsushiro**	27.78	72	*e*P	P	09 00 01.1	-0.3
	comp=Z,6.4nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	27.79	72	P	P	09 00 01.9	+0.6
	comp=Z,1.2nm,0.6s,mb3.7,baz=236,slow=31,SNR=7.0						
KKM	**Kota Kinabalu**	27.96	155	*e*P	P	09 00 04.5	+1.5
	comp=Z,9.1nm,0.5s,mb4.7						
BVAR	**Borovoye Array**	32.48	320	P	P	09 00 42.8	+0.1
	comp=Z,1.8nm,0.6s,mb4.1,baz=111,slow=3.8,SNR=2.7						
ABKAR	**Akbulak array**	37.56	311	*e*P	P	09 01 26.5	-0.1
AKTK	**Aktyubinsk**	39.00	312	P	P	09 01 38.7	+0.1
AKTO	**Aktyubinsk**	39.00	312	P	P	09 01 38.7	+0.1
	comp=Z,6.0nm,0.7s,mb4.5,baz=88,slow=9.6,SNR=7.6						
ARU	**Arti**	40.11	321	*e*P	P	09 01 48.7	+0.9
ARU				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.2						
ARU	**Arti**	40.11	321	*e*P	P	09 01 48.7	+0.9
	comp=Z,74nm,1.4s,mb5.2						
TIXI	**Tiksi**	41.68	11	*e*P	P	09 01 59.9	-0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
TIXI	**Tiksi**	41.68	11	*e*P	P	09 01 59.9	-0.7
	comp=Z,6.9nm,0.8s,mb4.3						
PETK	**Petropavlovsk-**	43.02	45	P	P	09 02 12.2	+0.4
	comp=Z,3.9nm,0.6s,mb4.3,baz=281,slow=2.8,SNR=8.2						
ZEI	**Tsey**	48.67	301	*e*P	P	09 02 56.2	-0.3
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KIV	**Kislovodsk**	49.37	303	*e*P	P	09 03 00.7	-1.2
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
KIV	**Kislovodsk**	49.37	303	*e*P	P	09 03 03.0	+1.1
	comp=Z,13nm,0.6s,mb5.1						
BILL	**Bilibino**	50.02	26	*e*P	P	09 03 06.4	0.0
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
OBN	**Obninsk**	52.24	318	*e*P	P	09 03 25.3	+2.0
OBN				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	53.69	155	*e*P	P	09 03 34.5	+0.1
	comp=Z,10nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	53.69	155	P	P	09 03 34.6	+0.2
	comp=Z,9.0nm,0.9s,mb4.7,baz=349,slow=5.8,SNR=13						
JOF	**Joensuu**	54.59	327	*e*P	P	09 03 38.2	-2.3
JOF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
JOF	**Joensuu**	54.59	327	*e*p	P	09 03 38.2	-2.3
	comp=Z,12nm,0.8s,mb5.0						
MBWA	**Marble Bar**	54.79	163	*e*P	P	09 03 42.5	+0.2
KEV	**Kevo**	56.14	336	*e*P	P	09 03 43.0	-8.5
KEV				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
KEV	**Kevo**	56.14	336	*e*p	P	09 03 43.0	-8.5
	comp=Z,11nm,0.7s,mb5.0						
ASF	**Jabal al Asfar**	56.67	290	P	P	09 03 56.2	+0.3
	comp=Z,8.8nm,0.7s,mb4.8,baz=308,slow=6.4,SNR=16						
ARCES	**ARCESS Array B**	56.67	336	P	P	09 03 54.0	-1.3
	comp=Z,9.5nm,0.8s,mb4.8,baz=83,slow=8.2,SNR=13						
BRTR	**Keskin Array B**	56.87	299	P	P	09 03 56.6	-0.6
	comp=Z,4.7nm,0.7s,mb4.6,baz=94,slow=6.5,SNR=19						
FINES	**FINESS Array B**	57.16	326	P	P	09 03 57.3	-1.6
	comp=Z,12nm,0.9s,mb4.9,baz=101,slow=9.9,SNR=9.1						
AKASG	**Malin Array Be**	57.24	313	P	P	09 03 58.5	-1.1
	comp=Z,8.2nm,0.7s,mb4.9,baz=70,slow=6.3,SNR=17						
SPITS	**Spitsbergen Ar**	58.58	346	P	P	09 04 09.3	+0.7
	comp=Z,4.4nm,0.7s,mb4.6,baz=94,slow=9.4,SNR=7.1						
WRA	**Warramunga Arr**	58.90	147	P	P	09 04 12.0	+0.5
	comp=Z,18nm,0.8s,mb5.1,baz=339,slow=7.5,SNR=32						
EIL	**Elat**	59.11	288	P	P	09 04 12.2	-0.9
	comp=Z,14nm,0.8s,mb5.0,baz=348,slow=3.0,SNR=11						
ATD	**Arta Tunnel**	60.35	265	P	P	09 04 21.6	-0.2
	comp=Z,4.7nm,0.4s,mb4.9,baz=239,slow=20,SNR=4.4						
MLR	**Muntele Rosu**	60.67	308	P	P	09 04 22.8	-0.8
	comp=Z,3.6nm,0.6s,mb4.7,baz=310,slow=6.8,SNR=4.3						
ASAR	**Alice Springs**	61.96	150	P	P	09 04 33.0	+0.6
	comp=Z,6.4nm,0.8s,mb4.8,baz=332,slow=6.2,SNR=25						
KOLS	**Kolonicke sedl**	62.04	312	*e*P	P	09 04 34.9	+2.1
KOLS				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
KOLS	**Kolonicke sedl**	62.04

INK	Inuvik	71.03	20	P	P	09 05 28.7	-1.2
CDF	Champ du Feu	71.41	316	eP	P	09 05 31.6	-1.0
	comp=Z,17nm,0.9s,mb4.7						
CDF	Champ du Feu	71.41	316	eP	P	09 05 31.6	-1.0
CDF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CDF	Champ du Feu	71.41	316	eP	P	09 05 31.6	-1.0
	comp=Z,8.3nm,0.9s,mb4.7						
KMBO	Kilima Mbogo	71.80	257	P	P	09 05 35.4	-0.1
	comp=Z,1.9nm,0.7s,mb4.1,baz=44,slow=8.6,SNR=5.7						
STKA	Stephens Creek	72.44	148	eP	P	09 05 38.7	-0.1
	comp=Z,3.6nm,0.6s,mb4.5						
STKA	Stephens Creek	72.44	148	P	P	09 05 38.9	+0.1
	comp=Z,4.5nm,0.7s,mb4.5,baz=330,slow=6.8,SNR=13						
LPG	La Plagne	73.10	313	eP	P	09 05 42.5	-0.2
	comp=Z,40nm,0.7s,mb5.1						
LPG	La Plagne	73.10	313	eP	P	09 05 42.5	-0.2
LPG				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
LPG	La Plagne	73.10	313	eP	P	09 05 42.5	-0.2
	comp=Z,20nm,0.7s,mb5.2						
SMF	Signal de Mont	74.30	315	eP	P	09 05 48.6	-1.2
	comp=Z,24nm,0.9s,mb4.8						
SMF	Signal de Mont	74.30	315	eP	P	09 05 48.6	-1.2
SMF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
SMF	Signal de Mont	74.30	315	eP	P	09 05 48.6	-1.2
	comp=Z,12nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	75.45	316	eP	P	09 05 55.5	-1.0
	comp=Z,11nm,0.9s,mb4.5						
TCF	Toulx Ste Croi	75.45	316	eP	P	09 05 55.5	-1.0
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TCF	Toulx Ste Croi	75.45	316	eP	P	09 05 55.5	-1.0
	comp=Z,5.7nm,0.9s,mb4.5						
KEST	Kesra	76.11	303	P	P	09 06 01.4	+1.0
	comp=Z,1.0nm,0.7s,mb3.9,baz=258,slow=6.5,SNR=4.0						
CAF	Calviac	76.25	315	eP	P	09 06 00.6	-0.4
	comp=Z,7.9nm,0.9s,mb4.3						
CAF	Calviac	76.25	315	eP	P	09 06 00.6	-0.4
CAF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CAF	Calviac	76.25	315	eP	P	09 06 00.6	-0.4
	comp=Z,4.0nm,0.9s,mb4.3						
CNB	Canberra Magne	78.95	144	eP	P	09 06 16.9	+0.9
YKA	Yellowknife Ar	80.58	17	P	P	09 06 24.0	-0.6
	comp=Z,2.9nm,0.6s,mb4.4,baz=328,slow=5.0,SNR=21						
TORD	Torodi Ar. Bea	94.00	288	P	P	09 07 28.8	-2.3
	comp=Z,0.5nm,0.8s,mb4.0,baz=43,slow=4.7,SNR=2.9						

*ISCJB **12** 08:56:31.1±0.6, 32°.08N±0°.06×104°.85E±0°.09, h10km, mb4.3/29, Error ellipse: s-maj=12.0km s-min=6.0km az=31.9*
*IDC **12** 08:56:31.9±0.9, 32°.14N×104°.75E, h0km, mb4.3/21, mb1 4.4/21, mb1mx4.3/33, mbtmp4.3/21, MS5.9/1, Ms1 5.9/1, ms1mx4.3/48, Error ellipse: s-maj=28.8km s-min=20.3km az=52.0*
*NEIC **12** 08:56:32.4±1.0, 32°.00N×104°.90E, h10km, mb4.5/8, Error ellipse: s-maj=20.9km s-min=18.4km az=112.0*
*MOS **12** 08:56:33.2±0.8, 32°.12N×104°.73E, h21km, mb4.8/8, Error ellipse: s-maj=31.3km s-min=9.8km az=125.3*
*BJI **12** 08:56:33.4, 31°.93N×104°.92E, h20km, mb4.5/2, ML4.6/1*
ISC 12 08:56:33.1±0.5, 32°.11N±0°.04×104°.85E±0°.06, h10km, n59, σ1°03/61, mb4.3/29, 3C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.51	218	Pg	Pg	08 56 59.9	-2.3
CD2				Sg	Sg	08 57 20.7	-1.1
XAN	Xi'an	3.93	60	Pg	Pn	08 57 30.5	-3.0
XAN				Sg	Sg	08 58 37.7	-1.5
XAN				smax			
	comp=N,640nm,0.9s						
XAN				smax			
	comp=E,290nm,0.9s						
LZH	Lanzhou	4.06	348	Pg	Pg	08 57 50.3	-0.5
LZH				Sg	Sg	08 58 41.5	-1.9
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,960nm,0.5s						
BJI	Beijing	12.10	46	P	Pn	08 59 28.6	+3.0
BJI				pmax	pmax		
	comp=Z,21nm,1.1s						
MK31	Makanchi Array	22.66	317	eP	P	09 01 36.4	+2.0
MKAR	Makanchi Array	22.66	317	P	P	09 01 33.9	-0.5
	comp=Z,1.9nm,0.4s,mb3.9,baz=130,slow=9.7,SNR=10						
MKAR	Makanchi Array	22.66	317	P	P	09 01 33.9	-0.5
KSH	Kashi	24.48	296	P	P	09 01 56.1	+3.7
ZALV	Zalesovo Beam	26.11	333	P	P	09 02 07.5	+0.6
	comp=Z,12nm,0.5s,mb4.7,baz=133,slow=10,SNR=7.7						
KLR	Kul'dur	26.42	42	eP	P	09 02 05.8	-4.0
AML	Almayashu	26.65	301	eP	P	09 02 13.7	+1.7
	comp=Z,3.3nm,0.5s,mb4.1						
KURK	Kurchatov	26.84	322	P	P	09 02 14.2	+0.6
	comp=Z,1.1nm,0.3s,mb3.8,baz=142,slow=3.6,SNR=6.8						
BVAR	Borovoye Array	32.41	320	P	P	09 03 03.3	+0.3
	comp=Z,1.4nm,0.6s,mb4.0,baz=119,slow=12,SNR=3.4						
CBIJ	Chichi jima	32.74	89	LR	LR	09 16 29.0	
	comp=Z,21μm,21.6s,baz=263,slow=36						
ABKAR	Akbulak array	37.49	311	eP	P	09 03 47.3	+0.5
AKTK	Aktyubinsk	38.93	312	P	P	09 03 59.4	+0.4
AKTO	Aktyubinsk	38.93	312	P	P	09 03 59.4	+0.4
	comp=Z,3.3nm,0.5s,mb4.4,baz=96,slow=8.6,SNR=8.3						
ARU	Arti	40.04	321	eP	P	09 04 08.8	+0.7
ARU	Arti	40.04	321	eP	P	09 04 08.8	+0.6
TIXI	Tiksi	41.65	11	eP	P	09 04 25.4	+4.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
TIXI	Tiksi	41.65	11	eP	P	09 04 25.4	+4.2
	comp=Z,3.0nm,0.6s,mb4.1						
KIV	Kislovodsk	49.30	303	eP	P	09 05 21.8	-0.4
KIV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ASF	Jabal al Asfar	56.60	290	P	P	09 06 16.5	+0.2
	comp=Z,1.3nm,0.4s,mb4.3,baz=300,slow=5.7,SNR=4.1						
ARCES	ARCESS Array B	56.61	336	P	P	09 06 15.9	+0.2
	comp=Z,2.4nm,0.6s,mb4.4,baz=86,slow=6.9,SNR=6.3						
BRTR	Keskin Array B	56.80	299	P	P	09 06 17.3	-0.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=102,slow=5.8,SNR=4.4						
FINES	FINESS Array B	57.09	326	P	P	09 06 19.4	+0.1
	comp=Z,2.9nm,0.4s,mb4.6,baz=91,slow=7.4,SNR=9.2						
AKASG	Malin Array Be	57.17	313	P	P	09 06 18.2	-1.8
	comp=Z,1.4nm,0.4s,mb4.4,baz=67,slow=7.5,SNR=5.5						
AKASG	Malin Array Be	57.17	313	P	P	09 06 18.2	-1.8
SPITS	Spitsbergen Ar	58.52	346	P	P	09 06 29.8	+0.6
	comp=Z,7.2nm,1.0s,mb4.7,baz=114,slow=7.7,SNR=3.6						
SPITS	Spitsbergen Ar	58.52	346	P	P	09 06 29.8	+0.6
WRA	Warramunga Arr	58.96	147	P	P	09 06 34.3	+1.4
	comp=Z,2.9nm,0.4s,mb4.6,baz=328,slow=9.0,SNR=8.4						
EIL	Elat	59.05	288	P	P	09 06 33.2	-0.3
	comp=Z,3.4nm,0.6s,mb4.5,baz=331,slow=8.9,SNR=3.6						
HFS	Hagfors	63.30	326	P	P	09 07 01.4	-0.5
	comp=Z,2.4nm,0.6s,mb4.5,baz=102,slow=6.4,SNR=4.4						
NB2	NORSAR Subarra	64.16	327	P	P	09 07 06.6	-0.9
	comp=Z,1.3nm,0.5s,mb4.2,baz=70,slow=6.5						
NOA	NORSAR Array B	64.16	327	P	P	09 07 06.4	-1.1
	comp=Z,1.6nm,0.6s,mb4.2,baz=71,slow=6.6,SNR=3.8						
GERES	GERESS Array B	67.30	314	P	P	09 07 27.1	-0.9
	comp=Z,1.1nm,0.7s,mb4.0,baz=57,slow=4.9,SNR=5.1						
COLA	College	68.25	26	eP	P	09 07 38.8	+5.1
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
COLA	College	68.25	26	eP	P	09 07 38.8	+5.1
	comp=Z,6.5nm,0.9s,mb4.7						
DAVOX	Davos/Dischmat	70.50	313	P	P	09 07 47.5	-0.5
	comp=Z,3.1nm,0.5s,mb4.5,baz=55,slow=5.5,SNR=5.9						
INK	Inuvik	71.00	20	P	P	09 07 50.2	-0.3
	comp=Z,3.7nm,0.8s,mb4.4,baz=316,slow=7.0,SNR=4.2						
INK	Inuvik	71.00	20	P	P	09 07 50.3	-0.3
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	71.00	20	eP	P	09 07 55.4	+4.8
	comp=Z,3.6nm,0.8s,mb4.3						
CDF	Champ du Feu	71.34	316	eP	P	09 07 53.0	0.0
	comp=Z,6.2nm,0.9s,mb4.2						
CDF	Champ du Feu	71.34	316	eP	P	09 07 53.0	0.0
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CDF	Champ du Feu	71.34	316	eP	P	09 07 53.0	0.0
	comp=Z,3.1nm,0.9s,mb4.2						
KMBO	Kilima Mbogo	71.76	257	P	P	09 07 56.4	+0.3
	comp=Z,2.1nm,0.7s,mb4.2,baz=60,slow=12,SNR=4.6						
LPG	La Plagne	73.03	313	⇑iP	P	09 08 04.0	+0.9
	comp=Z,17nm,0.6s,mb4.8						
LPG	La Plagne	73.03	313	⇑iP	P	09 08 04.0	+0.9
LPG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
LPG	La Plagne	73.03	313	⇑iP	P	09 08 04.0	+0.9
	comp=Z,8.6nm,0.6s,mb4.9						
SMF	Signal de Mont	74.23	315	eP	P	09 08 10.0	-0.2
	comp=Z,13nm,1.0s,mb4.5						
SMF	Signal de Mont	74.23	315	eP	P	09 08 10.0	-0.2
SMF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
SMF	Signal de Mont	74.23	315	eP	P	09 08 10.0	-0.2
	comp=Z,6.4nm,1.0s,mb4.5						
TCF	Toulx Ste Croi	75.39	316	eP	P	09 08 17.0	+0.1
CAF	Calviac	76.18	314	eP	P	09 08 22.0	+0.5
	comp=Z,7.8nm,0.8s,mb4.4						
CAF	Calviac	76.18	314	eP	P	09 08 22.0	+0.5
CAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CAF	Calviac	76.18	314	eP	P	09 08 22.0	+0.5
	comp=Z,3.9nm,0.8s,mb4.4						
YKA	Yellowknife Ar	80.55	17	P	P	09 08 45.9	+0.7
	comp=Z,2.8nm,0.6s,mb4.3,baz=328,slow=5.1,SNR=7.5						
YKA	Yellowknife Ar	80.55	17	P	P	09 08 45.9	+0.7
TORD	Torodi Ar. Bea	93.93	288	P	P	09 09 51.6	0.0
	comp=Z,0.4nm,0.8s,mb3.9,baz=57,slow=3.5,SNR=3.1						

*ISCJB **12** 08:57:39.9±0.6, 31°.6N±0°.1×104°.5E±0°.2, h10km, mb4.1/11, Error ellipse: s-maj=22.8km s-min=13.6km az=145.6*
*IDC **12** 08:57:40.4±0.9, 31°.53N×104°.32E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/29, mbtmp4.1/11, Error ellipse: s-maj=47.9km s-min=18.0km az=58.0*
*NEIC **12** 08:57:42.0±0.6, 31°.54N×104°.35E, h10km, Error ellipse: s-maj=34.2km s-min=11.8km az=57.0*
ISC 12 08:57:42.0±0.6, 31°.6N±0°.1×104°.5E±0°.2, h10km, n14, σ0°79/14, mb4.1/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	Changchun	20.53	48	eP	P	09 02 20.0	-0.4
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
MKAR	Makanchi Array	22.81	318	P	P	09 02 46.2	+1.4
	comp=Z,1.8nm,0.7s,mb3.6,baz=116,slow=10,SNR=2.6						
ZALV	Zalesovo Beam	26.41	333	P	P	09 03 18.8	+0.2
	comp=Z,2.5nm,0.3s,mb4.2,baz=134,slow=8.4,SNR=3.3						
KURK	Kurchatov	27.04	322	P	P	09 03 24.4	+0.2
	comp=Z,3.8nm,0.8s,mb4.0,baz=128,slow=9.4,SNR=4.2						
KURK	Kurchatov	27.04	322	P	P	09 03 24.4	+0.2
FITZ	Fitzroy Crossi	53.43	155	P	P	09 07 02.1	-0.1
	comp=Z,3.8nm,1.0s,mb4.3,baz=353,slow=8.1,SNR=3.2						
AKASG	Malin Array Be	57.27	313	P	P	09 07 29.9	+0.3
	comp=Z,0.4nm,0.3s,mb3.9,baz=70,slow=6.9,SNR=4.8						
AKASG	Malin Array Be	57.27	313	P	P	09 07 29.9	+0.3
FINES	FINESS Array B	57.33	326	P	P	09 07 29.6	-0.2
	comp=Z,4.6nm,0.8s,mb4.6,baz=66,slow=6.5,SNR=3.3						
ASAR	Alice Springs	61.76	149	P	P	09 08 01.8	+1.1
	comp=Z,1.2nm,0.6s,mb4.2,baz=335,slow=7.0,SNR=2.5						
HFS	Hagfors	63.53	326	P	P	09 08 10.5	-1.8
	comp=Z,1.6nm,0.5s,mb4.3,baz=67,slow=8.0,SNR=3.0						
KMBO	Kilima Mbogo	71.32	257	P	P	09 09 01.2	-1.0
	comp=Z,1.6nm,0.6s,mb4.1,baz=43,slow=13,SNR=4.7						
STKA	Stephens Creek	72.25	147	P	P	09 09 07.3	-0.1
	comp=Z,1.7nm,0.7s,mb4.1,baz=352,slow=6.1,SNR=3.7						
YKA	Yellowknife Ar	81.13	17	P	P	09 09 57.6	+0.3
	comp=Z,0.7nm,0.8s,mb3.6,baz=328,slow=5.2,SNR=3.0						

*ISCJB **12** 08:59:28.0±1.1, 19°.7S±0°.1×177°.8W±0°.2, h540km±22km, mb4.3/9, Error ellipse: s-maj=30.8km s-min=14.9km az=40.0*
*NEIC **12** 08:59:29.2±1.1, 19°.76S×177°.65W, h549km±15km, mb4.3/1, Error ellipse: s-maj=25.6km s-min=12.5km az=143.0*
*IDC **12** 08:59:29.6±1.4, 19°.74S×177°.66W, h554km±19km, mb3.7/7, mb1 3.8/9, mb1mx3.5/20, mbtmp3.6/9, Error ellipse: s-maj=25.2km s-min=12.7km az=141.0*
ISC 12 08:59:28.3±1.1, 19°.7S±0°.2×177°.7W±0°.2, h531km±21km, n22, σ0°81/18, mb4.3/9, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.08	45	P	P	09 01 27.7	+1.4
	3.2nm,0.3s,baz=38,slow=18,SNR=6.9						
AFI				S	S	09 03 02.0	-1.2
	3.3nm,0.3s,baz=222,slow=23,SNR=7.7						
URZ	Urewera	19.03	193	P	P	09 03 15.5	-0.8
	1.1nm,0.3s,baz=229,slow=7.8,SNR=6.8						
CTA	Charters Tower	33.87	263	eP	P	09 05 27.8	+0.9
	12nm,0.4s,mb4.8						
CTA	Charters Tower	33.87	263	P	P	09 05 27.9	+0.9
	17nm,0.4s,mb4.9,baz=86,slow=10,SNR=26						
TOO	Toolangi	36.60	233	eP	P	09 05 50.0	+0.6
STKA	Stephens Creek	38.40	243	P	P	09 06 05.1	+0.9
	6.6nm,0.7s,mb4.3,baz=91,slow=9.4,SNR=10						
ASAR	Alice Springs	44.99	256	P	P	09 06 56.6	+0.2
	18nm,0.8s,mb4.7,baz=90,slow=7.6,SNR=90						
ASAR				PcP	PcP	09 08 25.6	-0.8
	1.9nm,0.6s,baz=106,slow=3.7,SNR=4.5						
ASAR				S	S	09 12 52.8	-3.6
	0.9nm,0.7s,baz=92,slow=16,SNR=11						
WRAB	Tennant Creek	45.00	261	eP	P	09 06 56.3	-0.2
	5.8nm,0.6s,mb4.3						
WRA	Warramunga Arr	45.01	261	P	P	09 06 55.9	-0.7
	3.6nm,0.3s,mb4.4,baz=98,slow=7.4,SNR=32						
FORT	Forrest	49.88	246	eP	P	09 07 31.9	-1.2
	18nm,0.7s,mb4.6						
FITZ	Fitzroy Crossi	53.43	262	P	P	09 07 58.9	0.0
	5.2nm,0.5s,mb4.2,baz=109,slow=4.1,SNR=21						
MJAR	Matsushiro Arr	69.75	323	P	P	09 09 44.9	-0.1
	3.5nm,0.6s,mb4.1,baz=158,slow=5.9,SNR=9.3						
MJAR	Matsushiro Arr	69.75	323	P	P	09 09 44.9	-0.1
MAT	Matsushiro	69.75	323	P	P	09 09 44.8	-0.3
TXAR	Lajitas Array	86.38	57	P	P	09 11 15.3	+0.8
	0.3nm,0.7s,mb3.0,baz=230,slow=6.4,SNR=4.7						
TXAR	Lajitas Array	86.38	57	P	P	09 11 15.3	+0.8
AKASG	Malin Array Be	142.46	332	PKP	PKPdf	09 17 56.0	-4.5
	1.7nm,0.4s,baz=43,slow=3.8,SNR=6.4						
BRTR	Keskin Array B	146.52	313	PKPbc	PKPdf	09 18 08.1	+0.3
	3.3nm,0.8s,baz=141,slow=4.7,SNR=7.2						
CLL	Collm	147.36	348	⇓iP	PKPbc	09 18 11.6	-0.5
CLL	Collm	147.36	348	⇓iPKPbc	PKPbc	09 18 11.6	-0.5
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	147.57	346	eP	PKPbc	09 18 12.2	-0.4
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	149.52	345	PKPbc	PKPbc	09 18 16.4	-1.1
	comp=Z,2.8nm,0.8s,baz=51,slow=2.6,SNR=5.8						
GERES				PKPab	PKPab	09 18 24.3	-0.4
	comp=Z,2.1nm,0.9s,baz=76,slow=5.6,SNR=3.6						

*ISCJB **12** 08:59:36.4±0.5, 31°.18N±0°.06×103°.5E±0°.1, h10km, mb4.1/15, Error ellipse: s-maj=16.4km s-min=8.9km az=173.8*
*IDC **12** 08:59:36.6±0.7, 31°.21N×103°.45E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.0/28, mbtmp4.2/15, ML3.9/2, Error ellipse: s-maj=29.2km s-min=14.9km az=60.0*
*NEIC **12** 08:59:38.2±0.5, 31°.21N×103°.48E, h10km, mb4.2/1, Error ellipse: s-maj=20.0km s-min=9.7km az=78.0*
*BJI **12** 08:59:39.9, 31°.13N×103°.57E, h11km, mB4.8/1, mb4.7/5, ML4.0/4*
ISC 12 08:59:38.5±0.5, 31°.25N±0°.05×103°.5E±0°.1, h10km, n26, σ0°99/24, mb4.1/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.83	3	ePg	Pg	09 01 19.3	+8.3
LZH				Sg	Sg	09 02 10.6	-3.0
LZH				smax			
	comp=N,230nm,0.5s						
LZH				smax			
	comp=E,360nm,0.6s						
KMI	Kunming	6.14	186	Pn	Pn	09 01 08.9	-0.4
KMI				Sn	Sn	09 02 26.3	+6.7
KMI				smax			
	comp=N,110nm,1.0s						
KMI				smax			
	comp=E,140nm,0.9s						
CMAR	Chiang Mai Arr	13.39	199	Pn	Pn	09 02 48.5	-0.1
	comp=E,0.2nm,0.3s,baz=9.1,slow=12,SNR=3.4						
SONM	Songino Array	16.71	7	Pn	Pn	09 03 34.8	+2.2
	comp=E,0.5nm,0.3s,baz=187,slow=10,SNR=4.1						
KSRS	Korea Array	21.07	66	P	P	09 04 23.5	+0.6
	comp=E,8.4nm,0.8s,mb4.1,baz=258,slow=10,SNR=8.8						
CN2	Changchun	21.38	48	eP	P	09 04 31.6	+5.5
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
MKAR	Makanchi Array	22.52	320	P	P	09 04 39.6	+1.4
	comp=Z,2.4nm,0.7s,mb3.7,baz=128,slow=9.9,SNR=3.9						
ZALV	Zalesovo Beam	26.36	335	P	P	09 05 14.6	0.0
	comp=Z,2.2nm,0.3s,mb4.1,baz=136,slow=8.5,SNR=4.3						
ZALV	Zalesovo Beam	26.36	335	P	P	09 05 14.6	0.0
KURK	Kurchatov	26.81	324	P	P	09 05 18.9	+0.2
	comp=Z,2.8nm,0.8s,mb3.8,baz=127,slow=9.6,SNR=4.0						
BVAR	Borovoye Array	32.35	322	PcP	PcP	09 08 55.1	-0.3
	comp=Z,0.6nm,0.5s,baz=153,slow=1.7,SNR=4.2						
TIXI	Tiksi	42.71	12	eP	P	09 07 35.1	-0.1
	comp=Z,2.7nm,0.5s,mb4.2						
ARCES	ARCESS Array B	56.91	336	P	P	09 09 23.7	+0.4
	comp=Z,3.0nm,0.9s,mb4.3,baz=74,slow=6.7,SNR=3.0						
ARCES				PcP	PcP	09 10 17.7	-0.8
	comp=Z,1.6nm,0.6s,baz=95,slow=5.5,SNR=5.3						
FINES	FINESS Array B	57.15	326	P	P	09 09 25.3	+0.3
	comp=Z,1.5nm,0.5s,mb4.2,baz=54,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	58.89	146	P	P	09 09 37.5	-0.2
	comp=Z,2.3nm,0.5s,mb4.5,baz=338,slow=7.8,SNR=5.4						
ASAR	Alice Springs	61.89	148	P	P	09 09 59.6	+1.5
	comp=Z,0.4nm,0.5s,mb3.9,baz=336,slow=6.7,SNR=2.8						
NOA	NORSAR Array B	64.25	327	P	P	09 10 12.5	-0.9
	comp=Z,1.4nm,0.8s,mb4.1,baz=73,slow=6.5,SNR=3.5						
DAVOX	Davos/Dischmat	70.25	313	P	P	09 10 50.8	-0.9
	comp=Z,4.1nm,1.0s,mb4.3,baz=59,slow=4.3,SNR=4.0						
INK	Inuvik	72.19	19	P	P	09 11 02.7	-0.4
	comp=Z,3.0nm,0.8s,mb4.3,baz=326,slow=7.7,SNR=7.5						
INK	Inuvik	72.19	19	P	P	09 11 02.7	-0.4
STKA	Stephens Creek	72.42	147	P	P	09 11 03.2	-1.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=315,slow=11,SNR=2.2						
YKA	Yellowknife Ar	81.71	17	P	P	09 11 56.5	-0.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=331,slow=5.4,SNR=11						
YKA	Yellowknife Ar	81.71	17	P	P	09 11 56.5	-0.2
TXAR	Lajitas Array	114.44	26	PKP	PKiKP	09 18 17.8	-1.3
	comp=Z,0.2nm,0.6s,baz=338,slow=2.2,SNR=4.4						
TXAR	Lajitas Array	114.44	26	PKP	PKiKP	09 18 17.8	-1.3
ROSC	El Rosal	144.03	356	PKP	PKPdf	09 19 15.1	0.0
	comp=Z,4.3nm,0.5s,baz=92,slow=22,SNR=4.1						

IDC 12 09:01:17.4±1.0, 31°.65N×104°.70E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.9/27, mbtmp4.1/8, ML3.8/1, Error ellipse: s-maj=40.6km s-min=18.9km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	19.96	67	P	Pn	09 05 51.8	-0.9
	0.3nm,0.3s,baz=255,slow=10,SNR=9.9						
MKAR	Makanchi Array	22.91	318	P	P	09 06 20.9	-1.9
	3.6nm,1.0s,baz=123,slow=10,SNR=3.1						
ZALV	Zalesovo Beam	26.46	333	P	P	09 06 57.6	+1.7
	1.5nm,0.3s,baz=123,slow=10,SNR=3.3						
ARCES	ARCESS Array B	56.98	336	P	P	09 11 05.7	+1.5
	2.4nm,0.8s,baz=76,slow=7.5,SNR=3.0						
WRA	Warramunga Arr	58.64	147	P	P	09 11 18.5	+2.0
	2.0nm,0.6s,baz=340,slow=7.8,SNR=4.9						
ASAR	Alice Springs	61.69	149	P	P	09 11 35.7	-1.6
	0.8nm,0.7s,baz=333,slow=6.4,SNR=3.0						
INK	Inuvik	71.47	19	P	P	09 12 37.6	-1.7
	2.6nm,1.0s,baz=339,slow=9.9,SNR=3.2						
YKA	Yellowknife Ar	81.02	17	P	P	09 13 32.6	-1.1
	0.6nm,0.7s,baz=327,slow=4.8,SNR=3.7						

IDC 12 09:01:37.0±0.8, 32°.09N×105°.01E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/25, mbtmp4.0/11, Error ellipse: s-maj=56.4km s-min=17.2km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.77	317	P	P	09 06 40.7	-0.2
	1.8nm,0.6s,baz=122,slow=10,SNR=5.1						
ZALV	Zalesovo Beam	26.19	332	P	P	09 07 14.0	+0.9
	1.5nm,0.3s,baz=131,slow=9.2,SNR=2.8						
ARCES	ARCESS Array B	56.68	336	P	P	09 11 21.4	-0.4
	1.4nm,0.6s,baz=82,slow=8.7,SNR=4.3						
BRTR	Keskin Array B	56.93	299	P	P	09 11 25.1	+1.0
	0.5nm,0.7s,baz=85,slow=6.5,SNR=3.8						
FINES	FINESS Array B	57.18	326	P	P	09 11 25.2	-0.2
	1.5nm,0.5s,baz=77,slow=8.4,SNR=4.6						
AKASG	Malin Array Be	57.28	313	P	P	09 11 26.0	-0.3
	0.5nm,0.4s,baz=67

comp=Z,1.0nm,0.8s,mb3.9,baz=327,slow=4.6,SNR=5.1
YKA Yellowknife Ar 81.26 17 P **P 09 15 53.3 +0.1**

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*ISCJB **12** 09:06:05.0±0.7,32°.5N±0°.2×105°.7E±0°.3,h10km,mb3.9/9, Error ellipse: s-maj=48.6km s-min=11.5km az=44.7*
*IDC **12** 09:06:05.7±0.9,32°.64N×105°.80E,h0km,mb3.9/8, mb1 4.0/8,mb1mx3.8/25,mbtmp3.9/8,Error ellipse: s-maj=58.4km s-min=18.6km az=55.0*
*NEIC **12** 09:06:06.9±0.6,32°.61N×105°.80E,h10km,mb3.5/1,Error ellipse: s-maj=43.7km s-min=10.1km az=45.0*
ISC 12 09:06:07.0±0.7,32°.6N±0°.2×105°.8E±0°.3,h10km,n11, σ0§80/11,mb3.9/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**3.92**	**126**	Pn	**Pn**	**09 07 06.3**	**-0.9**
MKAR	**Makanchi Array**	**22.86**	**315**	P	**P**	**09 11 09.9**	**-0.5**
2.3nm,0.8s,mb3.7,baz=121,slow=12,SNR=5.1							
KURK	**Kurchatov**	**26.96**	**320**	P	**P**	**09 11 48.7**	**+0.2**
1.4nm,0.5s,mb3.7,baz=129,slow=8.8,SNR=3.8							
KURK	**Kurchatov**	**26.96**	**320**	P	**P**	**09 11 48.7**	**+0.2**
BVAR	**Borovoye Array**	**32.55**	**319**	P	**P**	**09 12 38.5**	**+0.5**
0.9nm,0.6s,mb3.9,baz=132,slow=10.0,SNR=3.5							
ABKAR	**Akbulak array**	**37.79**	**310**	P	**P**	**09 13 21.8**	**-1.3**
0.5nm,0.6s,mb3.4							
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**09 15 54.8**	**+1.4**
1.7nm,0.5s,mb4.3,baz=90,slow=10,SNR=5.5							
WRA	**Warramunga Arr**	**58.96**	**148**	P	**P**	**09 16 07.5**	**+0.9**
2.9nm,0.8s,mb4.4,baz=340,slow=7.9,SNR=8.7							
ASAR	**Alice Springs**	**62.06**	**151**	P	**P**	**09 16 28.1**	**+0.3**
1.0nm,0.7s,mb4.0,baz=331,slow=6.3,SNR=5.9							
GERES	**GERESS Array B**	**67.53**	**314**	P	**P**	**09 17 02.5**	**-0.7**
0.3nm,0.5s,mb3.6,baz=30,slow=6.1,SNR=2.8							
YKA	**Yellowknife Ar**	**79.82**	**18**	P	**P**	**09 18 15.3**	**+0.1**
0.9nm,0.5s,mb4.0,baz=155,slow=2.0,SNR=18							

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*ISCJB **12** 09:06:30.9±1.0,31°.3N±0°.1×103°.3E±0°.2,h10km,mb3.9/5, Error ellipse: s-maj=32.5km s-min=7.5km az=152.7*
*IDC **12** 09:06:31.3±1.5,31°.37N×103°.70E,h0km,mb4.0/5, mb1 4.2/5,mb1mx3.7/25,mbtmp4.0/5,Error ellipse: s-maj=71.5km s-min=25.7km az=59.0*
ISC 12 09:06:33.4±1.0,31°.4N±0°.1×103°.3E±0°.2,h10km,n8, σ1§36/9,mb3.9/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**5.73**	**148**	Pg	**Pg**	**09 08 21.5**	**-1.6**
GYA				Sg	**Sg**	**09 09 39.4**	**+2.0**
GYA				smax			
comp=N,4μm,0.7s							
GYA				smax			
comp=E,3μm,0.9s							
CN2	**Changchun**	**21.40**	**48**	*e*P	**P**	**09 11 21.9**	**+0.7**
CN2	**Changchun**	**21.40**	**48**	*e*P	**P**	**09 11 21.9**	**+0.7**
ZALV	**Zalesovo Beam**	**26.17**	**335**	P	**P**	**09 12 08.8**	**+1.2**
comp=E,2.6nm,0.3s,mb4.2,baz=141,slow=9.3,SNR=3.0							
KURK	**Kurchatov**	**26.61**	**324**	P	**P**	**09 12 13.0**	**+1.3**
comp=E,1.0nm,0.7s,mb3.5,baz=132,slow=8.5,SNR=2.5							
WRA	**Warramunga Arr**	**59.10**	**146**	P	**P**	**09 16 32.1**	**-1.9**
comp=E,1.4nm,0.5s,mb4.3,baz=339,slow=7.9,SNR=6.4							
INK	**Inuvik**	**72.11**	**19**	P	**P**	**09 17 56.7**	**-0.8**
comp=E,0.8nm,0.7s,mb3.8,baz=320,slow=6.6,SNR=3.8							
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**09 18 50.3**	**-0.8**
comp=E,0.3nm,0.4s,mb3.5,baz=331,slow=5.3,SNR=4.7							

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*ISCJB **12** 09:06:41.0±0.5,31°.20N±0°.07×103°.76E±0°.08,h10km, mb4.2/18, Error ellipse: s-maj=10.6km s-min=8.6km az=143.7*
*IDC **12** 09:06:41.1±0.7,31°.26N×103°.73E,h0km,mb4.1/16, mb1 4.3/18,mb1mx4.1/28,mbtmp4.2/18,ML4.3/2,Error ellipse: s-maj=25.3km s-min=15.6km az=52.0*
*NEIC **12** 09:06:42.9±0.4,31°.26N×103°.77E,h10km,mb4.8/2,Error ellipse: s-maj=10.8km s-min=7.7km az=56.0*
ISC 12 09:06:43.1±0.5,31°.23N±0°.06×103°.75E±0°.08,h10km,n36, σ0§85/35,mb4.2/18,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.03**	**99**	Pn	**Pn**	**09 07 58.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**09 09 55.6**	**+1.7**
0.9nm,0.3s,baz=8.0,slow=9.5,SNR=5.5							
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**09 10 37.2**	**+0.1**
0.5nm,0.3s,baz=175,slow=19,SNR=3.8							
ZAK	**Zakamensk**	**19.14**	**359**	*e*P	**Pn**	**09 11 08.0**	**+0.9**
ZAK				pmax	pmax		
comp=Z,27nm,0.8s							
MOY	**Mondy**	**20.52**	**355**	*e*P	**P**	**09 11 23.1**	**+1.8**
MOY				pmax	pmax		
comp=Z,92nm,1.9s							
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**09 11 25.6**	**+0.3**
comp=Z,7.8nm,0.7s,baz=264,slow=11,SNR=11							
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**09 11 29.2**	**+0.2**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.2							
CN2				pmax	pmax		
comp=Z,30nm,1.2s,mb4.5							
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**09 11 29.2**	**+0.2**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.2							
CN2				pmax	pmax		
comp=Z,30nm,1.2s,mb4.5							
CIT	**Chita**	**21.99**	**16**	*e*P	**P**	**09 11 37.4**	**+0.3**
MK31	**Makanchi Array**	**22.69**	**319**	*e*P	**P**	**09 11 46.0**	**+1.3**
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**09 11 44.0**	**-0.7**
comp=Z,6.5nm,1.0s,mb4.0,baz=123,slow=8.8,SNR=8.0							
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**09 11 44.0**	**-0.7**
MDJ	**Mudanjiang**	**24.25**	**49**	*e*P	**P**	**09 11 59.5**	**-0.7**
comp=Z,39nm,1.5s,mb4.6							
ZAA0	**Zalesovo Array**	**26.48**	**335**	*e*P	**P**	**09 12 20.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**09 12 20.7**	**+0.4**
comp=Z,3.5nm,0.3s,mb4.3,baz=126,slow=7.5,SNR=8.3							
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**09 12 20.7**	**+0.4**
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**09 12 25.1**	**+0.4**
comp=Z,4.3nm,0.9s,mb4.0,baz=130,slow=9.0,SNR=9.0							
BRTR	**Keskin Array B**	**56.42**	**299**	P	**P**	**09 16 24.8**	**-0.1**
comp=Z,0.8nm,0.8s,mb3.8,baz=123,slow=5.9,SNR=3.5							
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**09 16 27.8**	**-0.8**
comp=Z,3.2nm,0.8s,mb4.4,baz=82,slow=8.7,SNR=4.9							
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**09 16 28.2**	**-1.1**
comp=Z,0.8nm,0.4s,mb4.1,baz=70,slow=7.7,SNR=4.5							
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**09 16 29.6**	**-1.1**
comp=Z,5.0nm,1.1s,mb4.5,baz=198,slow=4.0,SNR=2.2							
WRAB	**Tennant Creek**	**58.74**	**146**	P	**P**	**09 16 41.0**	**-0.2**
comp=Z,4.8nm,0.6s,mb4.7							
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**09 16 41.2**	**-0.1**
comp=Z,6.6nm,0.9s,mb4.7,baz=338,slow=7.7,SNR=9.5							
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**09 16 41.2**	**-0.1**
ASAR	**Alice Springs**	**61.75**	**148**	P	**P**	**09 17 01.8**	**-0.1**
comp=Z,1.5nm,0.7s,mb4.2,baz=334,slow=6.5,SNR=6.7							
NB2	**NORSAR Subarra**	**64.39**	**327**	P	**P**	**09 17 17.7**	**-1.3**
comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**09 17 17.5**	**-1.4**
comp=Z,1.1nm,0.6s,mb4.1,baz=262,slow=3.2,SNR=4.5							
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**09 17 17.5**	**-1.4**
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**09 17 37.2**	**-0.4**
comp=Z,0.3nm,0.4s,mb3.6,baz=353,slow=8.6,SNR=4.0							
BPAW	**Bear Paw Mtn.**	**68.63**	**27**	*e*P	**P**	**09 17 45.4**	**-0.6**
DAVOX	**Davos/Dischmat**	**70.43**	**313**	P	**P**	**09 17 57.3**	**-0.1**
comp=Z,2.8nm,0.6s,mb4.4,baz=37,slow=6.2,SNR=5.8							
OHAK	**Old Harbor**	**70.83**	**34**	*e*P	**P**	**09 18 02.1**	**+2.5**
INK	**Inuvik**	**72.14**	**19**	P	**P**	**09 18 06.8**	**-0.6**
comp=Z,2.3nm,0.5s,mb4.3,baz=335,slow=8.3,SNR=13							
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**09 19 00.6**	**-0.6**
comp=Z,1.3nm,0.6s,mb4.1,baz=330,slow=5.3,SNR=13							
TORD	**Torodi Ar. Bea**	**93.31**	**287**	P	**P**	**09 19 58.2**	**-0.4**
comp=Z,0.4nm,0.6s,mb4.0,baz=68,slow=3.1,SNR=4.2							
TXAR	**Lajitas Array**	**114.37**	**26**	PKP	PKiKP	09 25 22.8	-0.6
comp=Z,0.1nm,0.5s,baz=27,slow=2.2,SNR=3.0							

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*ISCJB **12** 09:06:58.6±0.1,31°.20N±0°.02×103°.71E±0°.02,h10km, mb5.0/136,MS5.6/2, Error ellipse: s-maj=3.3km s-min=3.0km az=30.1*
*IDC **12** 09:06:58.5±0.4,31°.17N×103°.64E,h0km,mb4.8/34, mb1 4.9/36,mb1mx4.9/38,mbtmp4.8/36,ML4.7/1,Error ellipse: s-maj=11.7km s-min=9.1km az=36.0*
*BJI **12** 09:06:59.0,31°.16N×103°.69E,h10km,mb5.5/7,mb5.1/31, ML4.9/11,Ms5.2/26,Ms7 5.1/18*
*NEIC **12** 09:07:00.4±0.1,31°.21N×103°.68E,h10km,mb5.0/77,Error ellipse: s-maj=4.0km s-min=3.2km az=50.0*
*MOS **12** 09:07:00.8±0.8,31°.20N×103°.71E,h26km,mb5.1/59,Error ellipse: s-maj=7.4km s-min=4.2km az=116.4*
*DJA **12** 09:07:12,30°.95N×103°.50E,h93km,mb5.4/17*
*SZGRF **12** 09:07:24.1,33°.18N×101°.02E,h33km,mb5.1,Qinghai, China*
ISC 12 09:07:00.6±0.1,31°.20N±0°.02×103°.67E±0°.02,h10km,n352, σ1§00/362,mb5.0/136,MS5.6/2,79C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.88**	**2**	Pg	**Pg**	**09 08 33.6**	**-0.5**
LZH				Sn	**Sn**	**09 09 20.7**	**+10**
LZH				Sg	**Sg**	**09 09 39.8**	**+2.5**
LZH				smax			
comp=N,3μm,1.0s							
LZH				smax			
comp=E,1μm,0.8s							
LZH				LR	LR		
comp=N,15μm,8.7s							
LZH				LR	LR		
comp=Z,18μm,9.6s							
ENH	**Enshi**	**5.09**	**99**	*e*Pn	**Pn**	**09 08 17.6**	**+0.7**
comp=Z,1μm,0.5s							
ENH				*e*Sn	**Sn**	**09 09 13.5**	**-2.3**
XAN	**Xi'an**	**5.26**	**56**	Pg	**Pg**	**09 08 34.5**	**-6.8**
XAN				Sg	**Sg**	**09 09 40.1**	**-9.4**
XAN				smax			
comp=N,2μm,0.9s							
XAN				smax			
comp=E,1μm,1.1s							
KMI	**Kunming**	**6.11**	**188**	Pg	**Pg**	**09 08 56.7**	**-0.8**
KMI				Sn	**Sn**	**09 09 41.9**	**+1.1**
KMI				Sg	**Sg**	**09 10 15.3**	**-1.3**
KMI				smax			
comp=N,440nm,2.0s							
KMI				smax			
comp=E,410nm,1.5s							
KMI				LR	LR		
comp=N,11μm,5.8s							
KMI				LR	LR		
comp=E,6μm,5.8s							
KMI				LR	LR		
comp=Z,14μm,16.6s							
GTA	**Gaotai**	**8.78**	**340**	*e*P	**Pn**	**09 09 12.7**	**+5.2**
GTA				pP		09 09 17.0	
GTA				sP		09 09 20.3	
GTA				pmax	pmax		
comp=Z,12nm,0.8s							
GTA				LR	LR		
comp=N,5μm,14.0s							
GTA				LR	LR		
comp=E,5μm,14.9s							
GTA				LR	LR		
comp=Z,10μm,15.2s							
WHN	**Wuhan**	**9.20**	**91**	P	**Pn**	**09 09 16.2**	**+2.8**
WHN				S	**Sn**	**09 10 50.9**	**-6.1**
WHN				LR	LR		
comp=N,12μm,5.1s							
WHN				LR	LR		
comp=E,15μm,5.1s							
BTO	**Baotou**	**10.71**	**27**	*e*P	**Pn**	**09 09 33.8**	**-0.1**
BTO				S	**Sn**	**09 11 31.2**	**-2.6**
LSA	**Lhasa**	**10.91**	**265**	P	**Pn**	**09 09 38.6**	**+1.8**
LSA	**Lhasa**	**10.91**	**265**	*e*P	**Pn**	**09 09 39.0**	**+2.2**
LSA				pmax	pmax		
comp=Z,23nm,0.7s							
LSA	**Lhasa**	**10.91**	**265**	*e*Pn	**Pn**	**09 09 39.0**	**+2.3**
comp=Z,23nm,0.7s							
HHC	**Hu-ho-hao-te**	**11.55**	**31**	*e*P	**Pn**	**09 09 46.6**	**+1.1**
HHC				pP		09 09 53.8	
HHC				sP		09 09 58.7	
HHC				S	**Sn**	**09 11 53.8**	**-0.8**
HHC				sS		09 12 05.2	
HHC				SS		09 12 09.5	
HHC				pmax	pmax		
comp=Z,25nm,1.1s							
HHC				LR	LR		
comp=N,2μm,5.1s							
HHC				LR	LR		
comp=E,6μm,5.6s							
HHC				LR	LR		
comp=Z,6μm,7.0s							
SHL	**Shillong**	**11.79**	**245**	*e*P	**Pn**	**09 09 48.0**	**-0.9**
GZH	**Guangzhou**	**11.80**	**131**	P	**Pn**	**09 09 45.2**	**-3.8**
GZH				S	**Sn**	**09 11 55.0**	**-5.8**
GZH				LR	LR		
comp=N,5μm,16.3s							
GZH				LR	LR		
comp=E,13μm,22.2s							
GZH	**Guangzhou**	**11.80**	**131**	P	**Pn**	**09 09 45.2**	**-3.8**
GZH				S	**Sn**	**09 11 55.0**	**-5.8**
GZH				LR	LR		
comp=N,5μm,16.3s							
GZH				LR	LR		
comp=E,13μm,22.2s							
NJ2	**Nanjing**	**12.97**	**82**	*e*P	**Pn**	**09 10 05.2**	**+0.2**
NJ2				pP		09 10 12.6	
NJ2				PP		09 10 15.3	
NJ2				sP		09 10 18.6	
NJ2				S	**Sn**	**09 12 28.7**	**-0.6**
NJ2				sS		09 12 40.2	
NJ2				pmax	pmax		
comp=Z,30nm,0.8s							
NJ2				pmax	pmax		
comp=Z,60nm,3.5s							
NJ2				LR	LR		
comp=N,2μm,8.6s							
NJ2				LR	LR		
comp=E,5μm,11.7s							
NJ2				LR	LR		
comp=Z,1μm,10.0s							
CHTO	**Chiang Mai**	**13.05**	**200**	*e*P	**Pn**	**09 10 07.6**	**+1.5**
QIZ	**Qiongzhong**	**13.34**	**154**	P	**Pn**	**09 10 09.9**	**-0.1**
QIZ				S	**Sn**	**09 12 40.4**	**+2.0**
QIZ				pmax	pmax		
comp=Z,25nm,1.0s							
QIZ				LR	LR		
comp=N,8μm,27.0s							
QIZ				LR	LR		
comp=Z,19μm,32.0s							
QIZ	**Qiongzhong**	**13.34**	**154**	*e*Pn	**Pn**	**09 10 09.6**	**-0.5**
CM31	**Chiang Mai Arr**	**13.39**	**200**	*e*Pn	**Pn**	**09 10 11.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**13.39**	**200**	Pn	**Pn**	**09 10 11.5**	**+0.8**
comp=Z,0.5nm,0.3s,baz=9.5,slow=11,SNR=11							
BJT	**Baijiatuau**	**13.44**	**46**	P	**Pn**	**09 10 10.5**	**-0.8**
BJT				pmax	pmax		
comp=Z,21nm,0.6s							
BJT	**Baijiatuau**	**13.44**	**46**	Pn	**Pn**	**09 10 10.4**	**-0.8**
comp=Z,21nm,0.6s							
BJI	**Beijing**	**13.46**	**46**	P	**Pn**	**09 10 10.3**	**-1.2**
BJI				pmax	pmax		
comp=Z,25nm,1.0s							
QZH	**Quanzhou**	**14.56**	**112**	*e*P	**Pn**	**09 10 28.3**	**+1.5**
QZH				S	**Sn**	**09 13 10.0**	**+1.7**
GUN	**Gumba**	**15.82**	**263**	*e*P	**Pn**	**09 10 40.7**	**-2.8**
comp=Z,134nm,0.8s							
PKI	**Pulchoki**	**16.32**	**262**	*e*P	**Pn**	**09 10 45.9**	**-4.0**
comp=Z,166nm,1.0s							
PKIN	**Phulchoki**	**16.33**	**262**	*e*P	**Pn**	**09 10 46.2**	**-3.8**
comp=Z,133nm,0.6s							
KKN	**Kakani**	**16.37**	**263**	*e*P	**Pn**	**09 10 44.7**	**-5.8**
comp=Z,216nm,1.0s							
SONM	**Songino Array**	**16.75**	**6**	Pn	**Pn**	**09 10 56.1**	**+1.0**
comp=Z,2.5nm,0.3s,baz=189,slow=12,SNR=21							
ULN	**Ulaanbaatar**	**16.85**	**8**	*e*P	**Pn**	**09 10 56.7**	**+0.3**
ULN				pmax	pmax		
comp=Z,38nm,0.9s							
ULN	**Ulaanbaatar**	**16.85**	**8**	*e*Pn	**Pn**	**09 10 56.7**	**+0.3**
comp=Z,38nm,0.9s							
YHNB	**Yeheng**	**16.93**	**108**	*e*P	**Pn**	**09 11 00.3**	**+2.6**
comp=Z,77nm,1.0s							
SSLB	**Suanglung**	**17.01**	**111**	*e*P	**Pn**	**09 11 02.2**	**+3.6**
comp=Z,126nm,1.0s							
YULB	**Yu-li**	**17.48**	**112**	*e*P	**Pn**	**09 11 07.1**	**+2.6**
comp=Z,150nm,1.6s							
WMQ	**Urumqi**	**17.83**	**319**	P	**Pn**	**09 11 10.0**	**+1.3**
WMQ				pmax	pmax		
comp=Z,40nm,1.2s							
WMQ				LR	LR		
comp=N,12μm,25.0s							
WMQ				LR	LR		
comp=E,5μm,23.0s							
WMQ				LR	LR		
comp=Z,15μm,29.0s							
SNY	**Shenyang**	**19.16**	**51**	‖P	**Pn**	**09 11 29.3**	**+4.4**
SNY				S	**Sn**	**09 14 55.9**	**-3.6**
SNY				pmax	pmax		
comp=Z,15nm,0.7s							
SNY				LR	LR		
comp=N,7μm,19.5s							
SNY				LR	LR		
comp=E,4μm,21.0s							
SNY				LR	LR		
comp=Z,15μm,26.4s							
INCN	**Inchon**	**19.95**	**65**	*e*P	**Pn**	**09 11 30.9**	**-3.5**
comp=Z,58nm,0.9s							
TLY	**Talaya**	**20.47**	**360**	Pn	**P**	**09 11 40.4**	**+2.2**
comp=Z,138nm,1.0s,SNR=7.7							
TLY	**Talaya**	**20.47**	**360**	*e*P	**P**	**09 11 40.0**	**+1.8**
TLY				pmax	pmax		
comp=Z,26nm,1.0s							
TLY	**Talaya**	**20.47**	**360**	*e*Pn	**P**	**09 11 40.0**	**+1.8**
comp=Z,26nm,1.0s							
KSRS	**Korea Array**	**20.95**	**66**	P	**P**	**09 11 44.4**	**+0.7**
comp=Z,30nm,0.7s,baz=261,slow=10,SNR=28							
KSRS				S	**S**	**09 15 38.4**	**+1.3**
comp=Z,5.8nm,1.0s,baz=256,slow=16,SNR=5.4							
KSRS	**Korea Array**	**20.95**	**66**	P	**P**	**09 11 44.4**	**+0.8**
KSRS				S	**S**	**09 15 38.4**	**+1.3**
KSRS				pmax	pmax		
comp=Z,31nm,0.7s							
KSRS				smax			
comp=N,6.0nm,1.0s							
IRK	**Irkutsk**	**21.04**	**1**	*e*P	**P**	**09 11 46.2**	**+1.8**
IRK				pmax	pmax		
comp=Z,344nm,0.9s,mb5.7							
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**09 11 52.0**	**+4.7**
CN2				*es*P	sP	09 11 59.0	+7.5
CN2				*e*S	**S**	**09 15 46.0**	**+2.2**
CN2				pmax	pmax		
comp=Z,180nm,1.1s,mb5.3							
CN2				pmax	pmax		
comp=Z,800nm,5.0s							
CN2				LR	LR		
comp=N,18μm,17.0s,MS5.6							
CN2				LR	LR		
comp=E,14μm,17.0s,MS5.6							
CN2				LR	LR		
comp=Z,23μm,18.0s,MS5.6							
HIA	**Hailar**	**21.75**	**29**	*e*P	**P**	**09 11 52.8**	**+0.8**
HIA				pmax	pmax		
comp=Z,44nm,0.8s							
HIA	**Hailar**	**21.75**	**29**	*e*P	**P**	**09 11 52.8**	**+0.8**
comp=Z,44nm,0.8s,mb4.9							
MK31	**Makanchi Array**	**22.67**	**319**	*e*P	**P**	**09 12 02.8**	**+0.9**
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**09 12 02.3**	**+0.4**
comp=Z,39nm,1.0s,mb4.8,baz=122,slow=12,SNR=22							
AGRA	**Agra**	**22.78**	**267**	*e*P	**P**	**09 12 02.8**	**-0.5**
BISR	**Bishrakh**	**22.88**	**270**	*e*P	**P**	**09 12 05.0**	**+0.7**
NDI	**New Delhi**	**23.04**	**271**	*e*x	x	09 12 03.0	
KKR	**Kurukshetra**	**23.13**	**274**	*e*P	**P**	**09 12 07.9**	**+0.9**
AYAN	**Aya Nagar**	**23.16**	**270**	*e*P	**P**	**09 12 06.1**	**-1.2**
AYAN				AMb	AMB	09 12 14.0	
comp=Z,56nm,1.3s,mb4.8							
SONA	**Sohna**	**23.26**	**270**	*e*P	**P**	**09 12 07.2**	**-1.2**
SONA				AMb	AMB	09 12 09.0	
comp=Z,54nm,0.5s,mb5.2							
BHK	**Bhakra**	**23.27**	**278**	*e*x	x	09 12 10.8	
THN	**Thein Dam**	**23.76**	**280**	*e*P	**P**	**09 12 11.6**	**-1.7**
KSH	**Kashi**	**24.00**	**298**	P	**P**	**09 12 19.2**	**+3.8**
KSH				*ep*P		09 12 23.0	
KSH				*es*P	sP	09 12 26.1	+6.4
KSH				*e*PP		09 12 54.2	
KSH				*e*PcP	PcP	09 15 59.2	+2.0
KSH				*e*S	**S**	**09 16 34.4**	**+2.2**
KSH				*es*S	sS	09 16 42.1	+4.9
KSH				*e*SS		09 17 29.2	
KSH				*e*PcS	PcS	09 19 37.0	+0.2
KSH				pmax	pmax		
comp=Z,80nm,0.9s,mb5.2							
KSH				LR	LR		
comp=N,17μm,21.1s,MS5.6							
KSH				LR	LR		
comp=E,9μm,17.7s,MS5.6							
MDJ	**Mudanjiang**	**24.33**	**49**	*e*P	**P**	**09 12 19.6**	**+1.3**
comp=E,74nm,1.1s,mb5.0							
KHET	**Khetri**	**24.39**	**270**	*e*P	**P**	**09 12 18.6**	**-0.4**
KHET				AMb	AMB	09 12 20.3	
comp=Z,32nm,1.6s,mb4.5							
ULHL	**Ulahol**	**24.49**	**304**	P	**P**	**09 12 21.9**	**+2.0**
SNR=6.2							
KZA	**Kyzart**	**25.15**	**304**	P	**P**	**09 12 28.5**	**+2.6**
SNR=9.5							
TKM2	**Tokmak 2**	**25.16**	**306**	P	**P**	**09 12 27.4**	**+1.5**
SNR=6.2							
KBK	**Karagaybulak**	**25.53**	**305**	P	**P**	**09 12 31.4**	**+2.1**
SNR=9.4							
UCH	**Uchtor**	**25.72**	**303**	P	**P**	**09 12 33.5**	**+2.5**
SNR=6.2							
FRU	**Bishkek**	**25.82**	**305**	*i* P	**P**	**09 12 34.0**	**+2.1**
AAK	**Ala-Archa**	**25.84**	**304**	P	**P**	**09 12 33.8**	**+1.6**
SNR=5.5							
AAK	**Ala-Archa**	**25.84**	**304**	P	**P**	**09 12 31.7**	**-0.4**
comp=Z,8.6nm,0.9s,mb4.3,baz=124,slow=11,SNR=5.6							
AAK	**Ala-Archa**	**25.84**	**304**	P	**P**	**09 12 31.7**	**-0.4**
AAK				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.3							
AAK	**Ala-Archa**	**25.84**	**304**	*e*P	**P**	**09 12 33.5**	**+1.3**
comp=Z,20nm,0.9s,mb4.6							
AML	**Almayashu**	**26.28**	**303**	P	**P**	**09 12 38.3**	**+2.2**
SNR=6.6							
ZAA0	**Zalesovo Array**	**26.48**	**335**	*e*P	**P**	**09 12 38.2**	**+0.5**
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**09 12 37.8**	**0.0**
comp=Z,29nm,0.8s,mb4.9,baz=138,slow=9.4,SNR=24							
HYB	**Hyderabad**	**26.61**	**245**	*i* P	**P**	**09 12 37.0**	**-2.2**
KURK	**Kurchatov**	**26.95**	**324**	P	**P**	**09 12 42.4**	**+0.4**
comp=Z,32nm,0.8s,mb4.9,baz=128,slow=9.5,SNR=21							
KURK				PcP	PcP	09 16 02.8	-0.9
comp=Z,6.2nm,0.8s,baz=120,slow=2.1,SNR=6.4							
BOD	**Bodaibo**	**27.56**	**12**	*e*P	**P**	**09 12 45.8**	**-1.6**
BOD				pmax	pmax		
comp=Z,10.0nm,1.2s,mb4.3							
NVS	**Novosibirsk**	**27.76**	**334**	*e*P	**P**	**09 12 48.7**	**-0.5**
NVS				pmax	pmax		
comp=Z,48nm,2.5s,mb4.7							
NVS				pmax	pmax		
comp=N,36nm,1.8s				

KAPI Kappang 39.15 154 P **P** **09 14 27.5 -1.0**
comp=E,370nm,0.7s,mb6.2,SNR=7.3
KAPI Kappang 39.15 154 P **P** **09 14 27.2 -1.4**
comp=E,49nm,0.9s,mb5.2,baz=327,slow=11,SNR=18
KAPI Kappang 39.15 154 *eP* **P** **09 14 27.2 -1.3**
comp=E,76nm,1.0s,mb5.4
SVE Sverdlovsk 39.20 324 *eP* **P** **09 14 29.8 +1.2**
ARU Arti 40.13 322*c iP* **P** **09 14 36.5 +0.2**
ARU S **S** 09 20 43.2 +0.6
ARU SS SS 09 23 40.6 +0.6
ARU pmax pmax
comp=Z,27nm,1.0s,mb4.9
ARU Arti 40.13 322 *eP* **P** **09 14 36.5 +0.2**
comp=Z,22nm,0.8s,mb4.9
SOKR Solikamsk 42.11 326*c iP* **P** **09 14 53.1 +0.5**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb4.9
TIXI Tiksi 42.74 11 *eP* **P** **09 14 55.7 -1.8**
TIXI pmax pmax
comp=Z,39nm,1.2s,mb5.0
TIXI Tiksi 42.74 11 *eP* **P** **09 14 56.6 -0.9**
comp=Z,22nm,0.8s,mb4.9
SEY Seymchan 44.19 30⇑*eP* **P** **09 15 09.2 -0.2**
PETK Petropavlovsk- 44.38 44 P **P** **09 15 10.8 -0.2**
comp=Z,7.1nm,0.8s,mb4.4,baz=225,slow=6.1,SNR=6.6
MAK Makhachkala 45.55 301 *eP* **P** **09 15 22.0 +1.5**
UMR Umm Al-Rimmam 47.86 283 *eP* **P** **09 15 38.4 -0.3**
UMR AMb AMB 09 15 39.4
comp=Z,71nm,1.0s,mb5.6
QRN Al-Qurain 47.93 282 *eP* **P** **09 15 38.3 -1.0**
QRN AMb AMB 09 15 42.4
comp=Z,79nm,1.2s,mb5.6
GNI Garni 47.93 298⇑*iP* **P** **09 15 38.9 -0.3**
GNI pmax pmax
comp=Z,30nm,1.7s
GNI Garni 47.93 298 *eP* **P** **09 15 40.4 +1.2**
MIB Mutribah 48.10 284 *eP* **P** **09 15 40.0 -0.7**
MIB AMb AMB 09 15 41.3
comp=Z,125nm,0.9s,mb5.9
RDF Al-Radifah 48.18 282 *eP* **P** **09 15 41.1 -0.2**
RDF AMb AMB 09 15 42.5
comp=Z,102nm,0.8s,mb5.9
ZEI Tsey 48.21 301 *eP* **P** **09 15 41.2 -0.1**
ZEI pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KIV Kislovodsk 48.95 303 *eP* **P** **09 15 45.9 -1.1**
KIV pmax pmax
comp=Z,36nm,1.1s,mb5.3
KIV Kislovodsk 48.95 303 *eP* **P** **09 15 47.8 +0.8**
comp=Z,27nm,0.8s,mb5.3
VRHR Novokhopersk 49.21 313 *eP* **P** **09 15 48.5 -0.3**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,50nm,1.5s
VORD Divnogorie 50.68 313 *eP* **P** **09 15 59.5 -0.5**
VORD pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VORD pmax pmax
comp=N,5.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,0.3s
VSR Storozhevoye 50.75 313 *eP* **P** **09 15 59.9 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,9.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.4s
KLMR Klimovskoe 50.78 325 *eP* **P** **09 15 59.7 -0.9**
KLMR pmax pmax
comp=Z,67nm,1.8s,mb5.3
BILL Bilibino 51.25 25*c iP* **P** **09 16 03.7 -0.4**
BILL *e* 09 16 09.2
BILL *e* 09 17 17.4
BILL pmax pmax
comp=Z,20nm,0.7s,mb5.2
BILL Bilibino 51.25 25 *eP* **P** **09 16 03.5 -0.6**
comp=Z,23nm,0.8s,mb5.2
MOS Moscow 51.55 319 *eP* **P** **09 16 04.9 -1.6**
MOS pmax pmax
comp=Z,44nm,0.8s,mb5.4
KAKA Kakadu 51.66 143 *eP* **P** **09 16 05.4 -2.3**
comp=Z,31nm,0.7s,mb5.3
KAKA Kakadu 51.66 143 *eP* **P** **09 16 05.5 -2.2**
comp=Z,97nm,0.7s,mb5.8
OBN Obninsk 52.16 318*c iP* **P** **09 16 10.5 -0.6**
OBN *e**PP pP 09 16 19.7 +5.5
OBN *e* 09 17 19.4
OBN pmax pmax
comp=Z,49nm,1.7s,mb5.2
ANN Anapa 52.57 305 *eP* **P** **09 16 12.7 -1.6**
ANN *e* 09 18 11.6
ANN *eS* **S** **09 23 39.0 -2.2**
ANN pmax pmax
comp=Z,59nm,1.1s,mb5.4
FITZ Fitzroy Crossi 53.37 154 *eP* **P** **09 16 19.8 -0.5**
comp=Z,24nm,0.6s,mb5.3
FITZ Fitzroy Crossi 53.37 154 P **P** **09 16 19.8 -0.5**
comp=Z,20nm,0.8s,mb5.1,baz=353,slow=5.7,SNR=42
LVZ Lovozero 53.62 334⇑*eP* **P** **09 16 21.3 -0.3**
LVZ pmax pmax
comp=Z,81nm,2.5s,mb5.2
MBWA Marble Bar 54.29 161 *eP* **P** **09 16 26.6 -0.4**
MBWA Marble Bar 54.29 161 *eP* **P** **09 16 26.4 -0.6**
comp=Z,32nm,0.8s,mb5.3
JOF Joensuu 54.75 328 *eP* **P** **09 16 27.4 -2.5**
JOF pmax pmax
comp=Z,11nm,0.7s,mb5.0
JOF Joensuu 54.75 328 *ep* **P** **09 16 27.4 -2.5**
comp=Z,11nm,0.7s,mb5.0
BR131 Keskin Array S 56.37 299 *eP* **P** **09 16 42.1 +0.1**
BRTR Keskin Array B 56.37 299 P **P** **09 16 41.8 -0.2**
comp=Z,5.3nm,0.8s,mb4.6,baz=92,slow=6.6,SNR=23
BRTR PcP PcP 09 17 38.6 -0.5
comp=Z,4.1nm,0.8s,baz=121,slow=3.7,SNR=5.7
KEV Kevo 56.50 336 *eP* **P** **09 16 40.8 -1.6**
KEV pmax pmax
comp=Z,14nm,0.6s,mb5.2
KEV Kevo 56.50 336 *ep* **P** **09 16 40.8 -1.6**
comp=Z,14nm,0.6s,mb5.2
ARCES ARCESS Array B 57.02 336 P **P** **09 16 45.5 -0.6**
comp=Z,12nm,0.8s,mb5.0,baz=83,slow=8.2,SNR=16
ARCES PcP PcP 09 17 40.5 -0.6
comp=Z,7.7nm,0.6s,baz=86,slow=4.2,SNR=16
AKASG Malin Array Be 57.05 313 P **P** **09 16 45.9 -0.8**
comp=Z,6.4nm,0.6s,mb4.8,baz=72,slow=6.4,SNR=13
AKASG PcP PcP 09 17 40.5 -1.0
comp=Z,2.6nm,0.5s,baz=68,slow=4.1,SNR=6.1
FINES FINESS Array B 57.28 326 P **P** **09 16 47.4 -0.7**
comp=Z,5.8nm,0.5s,mb4.8,baz=94,slow=7.4,SNR=12
NACGM Naroch 57.79 318 *e* **P** **09 16 48.0 -3.8**
WRAB Tennant Creek 58.75 146 *eP* **P** **09 16 59.0 +0.1**
WRAB pmax pmax
comp=Z,132nm,0.9s,mb6.0
WRAB Tennant Creek 58.75 146 *eP* **P** **09 16 59.0 +0.1**
comp=Z,132nm,0.9s,mb6.0
WRA Warramunga Arr 58.76 146 P **P** **09 16 58.4 -0.5**
comp=Z,84nm,0.8s,mb5.8,baz=337,slow=7.6,SNR=48
WB2 Warramunga Arr 58.76 146 *eP* **P** **09 16 58.7 -0.2**
SPB4 Spitsbergen Ar 59.16 346 *eP* **P** **09 17 00.9 -0.1**
ATD Arta Tunnel 59.22 265 P **P** **09 17 01.7 -0.6**
comp=Z,3.5nm,0.3s,mb4.9,baz=90,slow=20,SNR=3.4
BUR08 Bucovina Ar. S 60.30 310 *eP* **P** **09 17 08.8 -0.5**
KWP Kalwaria Pacla 61.37 313 *eP* **P** **09 17 17.1 +0.6**
KWP Kalwaria Pacla 61.37 313 *eP* **P** **09 17 16.7 +0.1**
KWP pmax pmax
comp=Z,62nm,1.1s,mb5.7
KWP Kalwaria Pacla 61.37 313 *eP* **P** **09 17 16.7 +0.2**
comp=Z,62nm,1.1s,mb5.7
ASAR Alice Springs 61.76 148 P **P** **09 17 19.6 +0.2**
comp=Z,24nm,0.8s,mb5.3,baz=334,slow=6.4,SNR=64
KOLS Kolonicke sedl 61.84 312 *eP* **P** **09 17 20.1 +0.4**
KOLS pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
KOLS Kolonicke sedl 61.84 312 *eP* **P** **09 17 20.1 +0.4**
comp=Z,5.3nm,1.2s,mb4.5
KOLS Kolonicke sedl 61.84 312 *eP* **P** **09 17 20.1 +0.4**
STHS Stebnicka Huta 62.35 313 *eP* **P** **09 17 23.8 +0.7**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
STHS Stebnicka Huta 62.35 313 *eP* **P** **09 17 23.8 +0.7**
comp=Z,5.4nm,1.1s,mb4.6
STHS Stebnicka Huta 62.35 313 *eP* **P** **09 17 23.8 +0.7**

NIE Niedzica 62.93 313 *eP* **P** **09 17 27.0 0.0**
OJC Ojcow 63.01 314 *eP* **P** **09 17 27.8 +0.2**
KECS Kecovo 63.10 312 *eP* **P** **09 17 31.2 +3.0**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
KECS Kecovo 63.10 312 *eP* **P** **09 17 31.2 +3.0**
comp=Z,3.4nm,1.1s,mb4.4
KECS Kecovo 63.10 312 *eP* **P** **09 17 31.1 +2.9**
HFS Hagfors 63.49 326 P **P** **09 17 29.9 -0.7**
comp=Z,5.3nm,0.5s,mb4.9,baz=93,slow=6.5,SNR=11
PSZ Piszkesteto 63.65 312 *eP* **P** **09 17 32.3 +0.5**
PSZ pmax pmax
comp=Z,52nm,2.1s,mb5.2
PSZ Piszkesteto 63.65 312 *eP* **P** **09 17 32.3 +0.5**
comp=Z,52nm,2.1s,mb5.2
VYHS Vyhne 64.14 313 *eP* **P** **09 17 35.4 +0.4**
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
VYHS Vyhne 64.14 313 *eP* **P** **09 17 35.4 +0.4**
comp=Z,6.4nm,1.1s,mb4.6
VYHS Vyhne 64.14 313 *eP* **P** **09 17 35.4 +0.4**
OKC Ostrava-Krasne 64.14 314 *eP* **P** **09 17 33.2 -1.8**
NB2 NORSAR Subarra 64.38 327 P **P** **09 17 34.9 -1.5**
comp=Z,7.4nm,0.8s,mb4.8,baz=73,slow=6.9
NOA NORSAR Array B 64.38 327 P **P** **09 17 35.4 -1.0**
comp=Z,5.5nm,0.8s,mb4.6,baz=73,slow=6.4,SNR=10
NOA NORSAR Array B 64.38 327 P **P** **09 17 35.4 -1.0**
KOLL Kolacno 64.39 313 *eP* **P** **09 17 37.7 +1.0**
KOLL Kolacno 64.39 313 *eP* **P** **09 17 37.7 +1.0**
MORC Moravsky Berou 64.54 314 *eP* **P** **09 17 37.7 +0.1**
MORC pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
MORC Moravsky Berou 64.54 314 *eP* **P** **09 17 37.7 +0.1**
comp=Z,8.7nm,0.9s,mb4.8
KSP Ksiaz 64.95 316 *eP* **P** **09 17 40.0 -0.3**
NWAO Narrogin (SRO) 65.05 167 P **P** **09 17 41.4 +0.4**
comp=Z,38nm,0.8s,mb5.5,baz=330,slow=6.4,SNR=9.3
DPC Dobruska-Polom 65.09 315 *eP* **P** **09 17 41.6 +0.4**
UPC Upice 65.23 315 *eP* **P** **09 17 42.7 +0.6**
VRAC Vranov 65.27 314 P **P** **09 17 42.7 +0.3**
comp=Z,3.4nm,0.5s,mb4.7,baz=149,slow=12,SNR=6.8
CTA Charters Tower 65.35 136 *eP* **P** **09 17 43.4 +0.2**
comp=Z,15nm,1.0s,mb5.0
CTA Charters Tower 65.35 136 P **P** **09 17 43.4 +0.2**
comp=Z,15nm,0.8s,mb5.0,baz=318,slow=8.2,SNR=12
CTAO Charters Tower 65.35 136 *eP* **P** **09 17 43.4 +0.2**
CTAO pmax pmax
comp=Z,26nm,1.0s,mb5.2
CTAO Charters Tower 65.35 136 *eP* **P** **09 17 43.4 +0.2**
comp=Z,26nm,1.0s,mb5.2
FORT Forrest 65.84 157 *eP* **P** **09 17 46.4 +0.2**
comp=Z,52nm,0.8s,mb5.6
FORT Forrest 65.84 157 *eP* **P** **09 17 46.1 -0.1**
comp=Z,68nm,0.8s,mb5.7
TREC Trest 65.96 314 *eP* **P** **09 17 47.3 +0.4**
PVCC Panska Ves 66.09 316 *eP* **P** **09 17 48.2 +0.6**
PRU Pruhonice 66.29 315 *eP* **P** **09 17 49.5 +0.5**
ALE Alert 66.31 358 P **P** **09 17 49.6 +0.9**
comp=Z,85nm,1.1s,mb5.7,SNR=8.6
BRG Berggiesshubel 66.34 316 *eP* **P** **09 17 49.1 -0.2**
comp=Z,11nm,1.1s,mb4.8
BRG Berggiesshubel 66.34 316 *eP* **P** **09 17 49.1 -0.2**
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
CLL Collm 66.74 317 *i P* **P** **09 17 51.5 -0.3**
CLL *i* 09 17 56.9
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.8
CLL Collm 66.74 317 *i P* **P** **09 17 51.5 -0.3**
comp=Z,11nm,1.1s,mb4.8
CLL *i* pP 09 17 54.3 -0.7
CLL *i* 09 17 56.9
CLL Collm 66.74 317 *i P* **P** **09 17 51.5 -0.3**
comp=Z,11nm,1.1s,mb4.8
CLL *i* pP pP 09 17 54.3 -0.7
CLL *i* 09 17 56.9
TTA Tatalina 67.17 29 *eP* **P** **09 17 54.7 +0.4**
KHC Kasperske Hory 67.19 315 P **P** **09 17 54.3 -0.4**
KHC pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KHC Kasperske Hory 67.19 315 P **P** **09 17 54.3 -0.4**
comp=Z,4.2nm,1.0s,mb4.4
KHC Kasperske Hory 67.19 315 *eP* **P** **09 17 55.6 +0.9**
GERES GERESS Array B 67.22 314 P **P** **09 17 54.5 -0.4**
comp=Z,4.0nm,0.8s,mb4.5,baz=75,slow=5.7,SNR=17
NKC Novy Kostel 67.46 316 *eP* **P** **09 17 56.7 +0.3**
MOX Moxa 67.80 317 *eP* **P** **09 17 58.2 -0.3**
comp=Z,21nm,1.8s,mb4.9
MOX Moxa 67.80 317 *eP* **P** **09 17 58.2 -0.3**
MOX pmax pmax
comp=Z,4.0nm,1.8s,mb4.2
GRA1 Grafenberg Arr 68.40 316 *eP* **P** **09 18 02.6 +0.3**
comp=Z,13nm,1.1s,mb4.9
GRF Grafenberg Arr 68.40 316 *eP* **P** **09 18 02.6 +0.3**
comp=Z,13nm,1.1s,mb4.9
GRF Grafenberg Arr 68.40 316 *eP* **P** **09 18 02.6 +0.3**
GRF pmax pmax
comp=Z,13nm,1.1s,mb4.9
GRF Grafenberg Arr 68.40 316 *eP* **P** **09 18 02.6 +0.3**
GRF pmax pmax
comp=Z,13nm,1.1s,mb4.9
GRF Grafenberg Arr 68.40 316 *eP* **P** **09 18 02.6 +0.3**
comp=Z,13nm,1.1s,mb4.9
PPLA Purkeypile 68.76 28 *eP* **P** **09 18 04.7 +0.3**
comp=Z,35nm,0.7s,mb5.4
COLA College 69.51 26 *eP* **P** **09 18 08.6 -0.3**
COLA pmax pmax
comp=Z,57nm,0.9s,mb5.5
COLA College 69.51 26 *eP* **P** **09 18 08.6 -0.3**
comp=Z,57nm,0.9s,mb5.5
CEL Celeste 69.88 303 *eP* **P** **09 18 10.9 -0.8**
comp=Z,37nm,0.9s,mb5.3
DAVOX Davos/Dischmat 70.40 313 P **P** **09 18 14.1 -0.6**
comp=Z,7.4nm,0.5s,mb4.8,baz=58,slow=5.0,SNR=11
KMBO Kilima Mbogo 70.57 256 P **P** **09 18 15.4 -0.9**
comp=Z,2.2nm,0.7s,mb4.2,baz=51,slow=12,SNR=8.6
PMR Palmer 70.64 29 *eP* **P** **09 18 15.0 -1.0**
PMR pmax pmax
comp=Z,35nm,0.8s,mb5.3
PMR Palmer 70.64 29 *eP* **P** **09 18 15.0 -1.0**
comp=Z,36nm,0.8s,mb5.3
BBOO Buckleboo 70.64 151 *eP* **P** **09 18 15.9 -0.3**
comp=Z,20nm,1.2s,mb4.9
BFO Black Forest 70.69 315 *eP* **P** **09 18 15.9 -0.6**
BFO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BFO Black Forest 70.69 315 *eP* **P** **09 18 15.9 -0.6**
comp=Z,10.0nm,1.0s,mb4.7
KDAK Kodiak Island 70.97 33 *ceP* **P** **09 18 17.9 -0.1**
comp=Z,36nm,0.8s,mb5.3,baz=0.6,slow=2.9,SNR=9.0
KDAK Kodiak Island 70.97 33 *ceP* **P** **09 18 17.8 -0.2**
MEM Membach 71.07 318 P **P** **09 18 19.4 +0.7**
CDF Champ du Feu 71.29 316⇑*iP* **P** **09 18 19.8 -0.4**
comp=Z,16nm,0.8s,mb4.7
CDF Champ du Feu 71.29 316⇑*iP* **P** **09 18 19.8 -0.4**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CDF Champ du Feu 71.29 316⇑*iP* **P** **09 18 19.8 -0.4**
comp=Z,7.8nm,0.8s,mb4.7
WLF Walferdange 71.40 317 P **P** **09 18 18.9 -1.9**
comp=Z,24nm,1.3s,mb5.0
WLF Walferdange 71.40 317 *eP* **P** **09 18 21.6 +0.8**
BCLA Clavier 71.56 318 P **P** **09 18 21.6 -0.1**
comp=Z,6.2nm,1.3s,mb4.4
HINF Hinteralfeld 71.81 315⇑*iP* **P** **09 18 22.6 -0.7**
comp=Z,24nm,1.0s,mb4.8
HINF Hinteralfeld 71.81 315⇑*iP* **P** **09 18 22.6 -0.7**
HINF pmax pmax
comp=Z,12nm,1.0s,mb4.8
HINF Hinteralfeld 71.81 315⇑*iP* **P** **09 18 22.6 -0.7**
comp=Z,12nm,1.0s,mb4.8
UCC Uccle 71.92 319 P **P** **09 18 24.3 +0.4**
EGAK Eagle 71.97 24 *eP* **P** **09 18 23.7 -0.3**
comp=Z,16nm,1.1s,mb4.9
GIVF Givet 71.97 318⇑*iP* **P** **09 18 24.0 -0.2**
comp=Z,23nm,1.0s,mb4.8
GIVF Givet 71.97 318⇑*iP* **P** **09 18 24.0 -0.2**
GIVF pmax pmax
comp=Z,12nm,1.0s,mb4.8
GIVF Givet 71.97 318⇑*iP* **P** **09 18 24.0 -0.2**
comp=Z,12nm,1.0s,mb4.8
HAU Haudompre 72.03 316⇑*iP* **P** **09 18 23.9 -0.7**
comp=Z,11nm,0.9s,mb4.5
HAU Haudompre 72.03 316⇑*iP* **P** **09 18 23.9 -0.7**
HAU pmax pmax
comp=Z,6.0nm,0.9s,mb4.5

HAU Haudompre 72.03 316⇑*iP* **P** **09 18 23.9 -0.7**
comp=Z,5.6nm,0.9s,mb4.5
MENT Mentasta 72.08 26 *eP* **P** **09 18 24.6 0.0**
SNF Seneffe 72.10 319 P **P** **09 18 25.0 +0.1**
comp=Z,5.5nm,1.7s,mb4.2
DOU Dourbes 72.11 318 P **P** **09 18 24.8 -0.2**
comp=Z,4.9nm,1.4s,mb4.2
INK Inuvik 72.19 19 P **P** **09 18 24.9 -0.3**
comp=Z,34nm,0.8s,mb5.3,baz=331,slow=7.3,SNR=61
STKA Stephens Creek 72.29 147 *eP* **P** **09 18 26.2 0.0**
comp=Z,4.2nm,0.7s,mb4.5
BAIF Baives 72.35 318⇑*iP* **P** **09 18 26.4 -0.1**
comp=Z,20nm,1.1s,mb4.7
BAIF Baives 72.35 318⇑*iP* **P** **09 18 26.4 -0.1**
BAIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BAIF Baives 72.35 318⇑*iP* **P** **09 18 26.4 -0.1**
comp=Z,9.9nm,1.1s,mb4.7
CABF La Chapelle 72.82 314⇑*iP* **P** **09 18 28.9 -0.4**
BMRM Bremner River 72.83 28 *eP* **P** **09 18 29.1 0.0**
comp=Z,48nm,0.7s,mb5.5
LPG La Plagne 72.92 313⇑*iP* **P** **09 18 30.4 +0.5**
comp=Z,42nm,0.7s,mb5.2
LPG La Plagne 72.92 313⇑*iP* **P** **09 18 30.4 +0.5**
LPG pmax pmax
comp=Z,21nm,0.7s,mb5.2
LPG La Plagne 72.92 313⇑*iP* **P** **09 18 30.4 +0.5**
comp=Z,21nm,0.7s,mb5.2
LPL La Plagne 72.92 313⇑*iP* **P** **09 18 30.3 +0.3**
comp=Z,29nm,0.6s,mb5.1
LPL La Plagne 72.92 313⇑*iP* **P** **09 18 30.3 +0.3**
LPL pmax pmax
comp=Z,15nm,0.6s,mb5.1
LPL La Plagne 72.92 313⇑*iP* **P** **09 18 30.3 +0.3**
comp=Z,15nm,0.6s,mb5.1
DAWY Dawson 73.01 24 *eP* **P** **09 18 29.8 -0.3**
MBDF Montbardon 73.26 312 *eP* **P** **09 18 32.9 +0.9**
comp=Z,18nm,1.0s,mb4.7
MBDF Montbardon 73.26 312 *eP* **P** **09 18 32.9 +0.9**
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MBDF Montbardon 73.26 312 *eP* **P** **09 18 32.9 +0.9**
comp=Z,9.2nm,1.0s,mb4.7
RES Resolute Bay 73.68 5 *eP* **P** **09 18 33.9 -0.1**
RES pmax pmax
comp=Z,21nm,1.0s,mb5.0
RES Resolute Bay 73.68 5 *eP* **P** **09 18 33.9 -0.1**
comp=Z,21nm,1.0s,mb5.0
ORIF Oris-en-Rattie 73.73 313 *eP* **P** **09 18 34.6 -0.2**
comp=Z,25nm,1.0s,mb4.8
ORIF Oris-en-Rattie 73.73 313 *eP* **P** **09 18 34.6 -0.2**
ORIF pmax pmax
comp=Z,12nm,1.0s,mb4.8
ORIF Oris-en-Rattie 73.73 313 *eP* **P** **09 18 34.6 -0.2**
comp=Z,12nm,1.0s,mb4.8
LOR Lormes 73.86 316⇑*iP* **P** **09 18 34.5 -1.0**
comp=Z,13nm,1.1s,mb4.5
LOR Lormes 73.86 316⇑*iP* **P** **09 18 34.5 -1.0**
LOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
LOR Lormes 73.86 316⇑*iP* **P** **09 18 34.5 -1.0**
comp=Z,6.7nm,1.1s,mb4.5
SMF Signal de Mont 74.17 315⇑*iP* **P** **09 18 36.7 -0.6**
comp=Z,47nm,1.1s,mb5.0
SMF Signal de Mont 74.17 315⇑*iP* **P** **09 18 36.7 -0.6**
SMF pmax pmax
comp=Z,24nm,1.1s,mb5.0
SMF Signal de Mont 74.17 315⇑*iP* **P** **09 18 36.7 -0.6**
comp=Z,24nm,1.1s,mb5.0
SSF Saint Saulge 74.17 316⇑*iP* **P** **09 18 36.6 -0.7**
comp=Z,18nm,1.1s,mb4.6
SSF Saint Saulge 74.17 316⇑*iP* **P** **09 18 36.6 -0.7**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SSF Saint Saulge 74.17 316⇑*iP* **P** **09 18 36.6 -0.7**
comp=Z,9.1nm,1.1s,mb4.6
AVF Avril sur Loir 74.39 315⇑*iP* **P** **09 18 38.0 -0.6**
comp=Z,31nm,1.0s,mb4.9
AVF Avril sur Loir 74.39 315⇑*iP* **P** **09 18 38.0 -0.6**
AVF pmax pmax
comp=Z,16nm,1.0s,mb4.9
AVF Avril sur Loir 74.39 315⇑*iP* **P** **09 18 38.0 -0.6**
comp=Z,16nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.52 313⇑*iP* **P** **09 18 39.0 -0.4**
comp=Z,22nm,1.1s,mb4.7
VIVF Saint-Julien-l 74.52 313⇑*iP* **P** **09 18 39.0 -0.4**
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.7
VIVF Saint-Julien-l 74.52 313⇑*iP* **P** **09 18 39.0 -0.4**
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.33 315⇑*iP* **P** **09 18 43.7 -0.3**
comp=Z,38nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.33 315⇑*iP* **P** **09 18 43.7 -0.3**
TCF pmax pmax
comp=Z,19nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.33 315⇑*iP* **P** **09 18 43.7 -0.3**
comp=Z,19nm,1.1s,mb4.9
LASF Ste Croix 75.40 313⇑*iP* **P** **09 18 44.5 0.0**
comp=Z,23nm,1.0s,mb4.8
LDF La Druitiere 75.53 318⇑*iP* **P** **09 18 44.6 -0.6**
comp=Z,11nm,0.8s,mb4.5
LDF La Druitiere 75.53 318⇑*iP* **P** **09 18 44.6 -0.6**
LDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LDF La Druitiere 75.53 318⇑*iP* **P** **09 18 44.6 -0.6**
comp=Z,5.5nm,0.8s,mb4.5
FLN La Foliniere 75.65 319 *eP* **P** **09 18 45.3 -0.5**
comp=Z,29nm,1.2s,mb4.8
FLN La Foliniere 75.65 319 *eP* **P** **09 18 45.3 -0.5**
FLN pmax pmax
comp=Z,14nm,1.2s,mb4.8
FLN La Foliniere 75.65 319 *eP* **P** **09 18 45.3 -0.5**
comp=Z,14nm,1.2s,mb4.8
KEST Kesra 75.69 303 P **P** **09 18 46.2 -0.2**
comp=Z,2.3nm,0.8s,mb4.1,baz=290,slow=5.7,SNR=5.3
HYT Haines Junctio 75.71 26 *eP* **P** **09 18 47.0 +1.1**
GRR Gorron 76.06 318⇑*iP* **P** **09 18 47.7 -0.5**
comp=Z,28nm,0.9s,mb4.9
GRR Gorron 76.06 318⇑*iP* **P** **09 18 47.7 -0.5**
GRR pmax pmax
comp=Z,14nm,0.9s,mb4.9
GRR Gorron 76.06 318⇑*iP* **P** **09 18 47.7 -0.5**
comp=Z,14nm,0.9s,mb4.9
CAF Calviac 76.10 314⇑*iP* **P** **09 18 48.6 +0.1**
comp=Z,18nm,1.0s,mb4.7
CAF Calviac 76.10 314⇑*iP* **P** **09 18 48.6 +0.1**
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CAF Calviac 76.10 314⇑*iP* **P** **09 18 48.6 +0.1**
comp=Z,8.9nm,1.0s,mb4.7
RJF Les Rejaudoux 76.24 315⇑*iP* **P** **09 18 49.4 +0.1**
comp=Z,38nm,1.2s,mb4.9
RJF Les Rejaudoux 76.24 315⇑*iP* **P** **09 18 49.4 +0.1**
RJF pmax pmax
comp=Z,19nm,1.2s,mb4.9
RJF Les Rejaudoux 76.24 315⇑*iP* **P** **09 18 49.4 +0.1**
comp=Z,19nm,1.2s,mb4.9
ARMA Armidale 76.34 139 *eP* **P** **09 18 51.4 +1.5**
ARPS Mount Arapiles 76.48 149 *eP* **P** **09 18 50.4 -0.1**
comp=Z,47nm,0.7s,mb5.5
MFF Saint Martin d 76.57 316⇑*iP* **P** **09 18 50.8 -0.3**
comp=Z,32nm,1.1s,mb4.9
MFF Saint Martin d 76.57 316⇑*iP* **P** **09 18 50.8 -0.3**
MFF pmax pmax
comp=Z,16nm,1.1s,mb4.9
MFF Saint Martin d 76.57 316⇑*iP* **P** **09 18 50.8 -0.3**
comp=Z,16nm,1.1s,mb4.9
MTLF Montolieu 76.80 313⇑*iP* **P** **09 18 52.2 -0.3**
comp=Z,32nm,1.4s,mb4.8
MTLF Montolieu 76.80 313⇑*iP* **P** **09 18 52.2 -0.3**
MTLF pmax pmax
comp=Z,16nm,1.4s,mb4.8
MTLF Montolieu 76.80 313⇑*iP* **P** **09 18 52.2 -0.3**
comp=Z,16nm,1.4s,mb4.8
LFF La Frestale 76.90 315 *eP* **P** **09 18 53.1 +0.1**
SGMF Saint Gilles 77.09 319⇑*iP* **P** **09 18 54.0 0.0**
comp=Z,47nm,1.0s,mb5.0
SGMF Saint Gilles 77.09 319⇑*iP* **P** **09 18 54.0 0.0**
SGMF pmax pmax
comp=Z,24nm,1.0s,mb5.1
SGMF Saint Gilles 77.09 319⇑*iP* **P** **09 18 54.0 0.0**
comp=Z,24nm,1.0s,mb5.1
SKAG Skagway 77.42 27 *eP* **P** **09 18 55.5 -0.1**
comp=Z,38nm,0.7s,mb5.4
ROSF Rostrenen 77.45 319⇑*iP* **P** **09 18 56.0 0.0**
QUIF Quistinic 77.62 319 *eP* **P** **09 18 56.8 -0.2**
EPF Esparros 78.14 313⇑*iP* **P** **09 18 59.2 -0.8**

ETSF	Etsaut	78.77	313⇑	iP	P	09 19 03.8	+0.4
	comp=Z,10.0nm,0.8s,mb4.5						
ETSF	Etsaut	78.77	313⇑	iP	P	09 19 03.8	+0.4
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ETSF	Etsaut	78.77	313⇑	iP	P	09 19 03.8	+0.4
	comp=Z,5.0nm,0.8s,mb4.5						
TOO	Toolangi	78.78	147	eP	P	09 19 03.8	+0.4
CNB	Canberra Magne	78.88	143	eP	P	09 19 04.5	+0.6
SJPF	Ste Jean	79.07	314⇑	iP	P	09 19 05.7	+0.6
	comp=Z,12nm,0.8s,mb4.6						
SJPF	Ste Jean	79.07	314⇑	iP	P	09 19 05.7	+0.6
SJPF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SJPF	Ste Jean	79.07	314⇑	iP	P	09 19 05.7	+0.6
	comp=Z,6.2nm,0.8s,mb4.6						
SFJD	Kangerlussuaq	80.19	350	eP	P	09 19 09.7	-1.0
SFJD				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
SFJD	Kangerlussuaq	80.19	350	eP	P	09 19 09.7	-1.0
	comp=Z,19nm,0.8s,mb5.1						
SFJD	Kangerlussuaq	80.19	350	iP	P	09 19 09.9	-0.8
	comp=Z,18nm,0.8s,mb5.0						
YKA	Yellowknife Ar	81.71	17	P	P	09 19 18.6	-0.3
	comp=Z,9.8nm,0.6s,mb4.9,baz=328,slow=5.2,SNR=54						
YKA	Yellowknife Ar	81.71	17	P	P	09 19 18.6	-0.3
YKA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ESDC	Sonseca Array	82.68	312	P	P	09 19 24.8	+0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=48,slow=5.8,SNR=3.7						
FCC	Fort Churchill	89.17	9	eP	P	09 19 55.9	-0.2
FFC	Flin Flon	91.62	15	eP	P	09 20 07.1	-0.6
FFC				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.3						
FFC	Flin Flon	91.62	15	eP	P	09 20 07.0	-0.6
	comp=Z,13nm,0.9s,mb5.3						
ETW	Entiat	92.16	28	eP	P	09 20 11.1	+0.7
	comp=Z,5.2nm,0.9s,mb4.9						
TORD	Torodi Ar. Bea	93.25	287	P	P	09 20 15.2	-0.8
	comp=Z,5.1nm,0.9s,mb4.9,baz=61,slow=3.9,SNR=17						
SCHQ	Scheffervilla	93.94	355	P	P	09 20 17.5	-0.8
	comp=Z,6.1nm,0.7s,mb5.2,baz=14,slow=4.7,SNR=10						
BSMT	Bassoo Peak	94.07	25	eP	P	09 20 20.3	+1.2
	comp=Z,4.5nm,0.9s,mb4.9						
YBMT	Yellow Bay	94.34	24	eP	P	09 20 19.6	-0.7
	comp=Z,8.1nm,1.2s,mb5.0						
JTMT	Jette	94.34	25	eP	P	09 20 20.8	+0.4
	comp=Z,2.5nm,0.9s,mb4.6						
SLMT	Seeley Lake	95.05	24	eP	P	09 20 23.6	0.0
	comp=Z,12nm,1.0s,mb5.3						
BOSA	Boshof	95.41	240	P	P	09 20 23.6	-1.8
	comp=Z,2.3nm,0.8s,mb4.7,baz=67,slow=4.1,SNR=5.8						
DLMT	Dillon	96.98	25	eP	P	09 20 33.5	+1.1
	comp=Z,3.9nm,1.0s,mb4.8						
TXAR	Lajitas Array	114.42	26	PKP	PKiKP	09 25 39.9	-1.2
	comp=Z,0.4nm,0.7s,baz=140,slow=0.1,SNR=5.6						
TXAR				PKKPbc	PKKPbc	09 36 18.3	-1.6
	comp=Z,0.5nm,0.7s,baz=165,slow=6.3,SNR=6.6						
TXAR	Lajitas Array	114.42	26	PKP	PKiKP	09 25 39.9	-1.2
TXAR				PKKPbc	PKKPbc	09 36 18.3	-1.6
QSPA	South Pole Qui	120.97	180	ePKPdf	PKPdf	09 25 50.7	-1.3
ROSC	El Rosal	144.10	357	PKP	PKPdf	09 26 35.8	-1.5
	comp=Z,18nm,0.5s,baz=270,slow=24,SNR=16						
ROSC	El Rosal	144.10	357	ePKPdf	PKPdf	09 26 35.7	-1.6
CPUP	Villa Florida	162.65	281	PKP	PKPdf	09 27 02.3	-0.9
	comp=Z,3.1nm,1.0s,baz=238,slow=3.3,SNR=5.2						
CPUP				PKPab	PKPab	09 27 49.6	-2.0
	comp=Z,1.6nm,0.7s,baz=23,slow=6.2,SNR=5.0						
LPAZ	La Paz	163.38	331	PKP	PKPdf	09 27 04.2	+0.1
	comp=Z,3.4nm,1.0s,baz=0.4,slow=3.6,SNR=11						
LPAZ				PKPab	PKPab	09 27 53.0	-1.8
	comp=Z,1.5nm,0.8s,baz=348,slow=4.3,SNR=4.7						
LPAZ	La Paz	163.38	331	PKP	PKPdf	09 27 04.2	+0.1
LPAZ				PKPab	PKPab	09 27 53.0	-1.8
PLCA	Paso Flores	169.40	205	PKP	PKPdf	09 27 07.2	-0.9
	comp=Z,4.9nm,1.2s,baz=235,slow=2.7,SNR=3.0						
PLCA	Paso Flores	169.40	205	PKP	PKPdf	09 27 07.2	-0.9

IDC 12 09:13:28.7±1.5,30°.45N×103°.51E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/24, mbtmp3.9/8, Error ellipse: s-maj=44.7km s-min=25.3km az=39.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.39	64	P	P	09 18 17.5	-0.4
	3.4nm,0.6s,baz=265,slow=11,SNR=9.0						
MKAR	Makanchi Array	23.15	321	P	P	09 18 37.7	+1.1
	1.5nm,0.8s,baz=116,slow=9.0,SNR=2.9						
BVAR	Borovoye Array	32.99	323	P	P	09 20 03.4	-1.8
	1.0nm,0.6s,baz=76,slow=6.1,SNR=3.3						
ARCES	ARCESS Array B	57.65	336	P	P	09 23 20.6	+0.3
	3.2nm,1.0s,baz=88,slow=8.2,SNR=2.3						
WRA	Warramunga Arr	58.22	145	P	P	09 23 24.9	0.0
	1.4nm,0.7s,baz=341,slow=7.9,SNR=3.5						
NOA	NORSAR Array B	64.94	328	P	P	09 24 10.4	+0.6
	0.7nm,0.6s,baz=28,slow=15,SNR=2.7						
INK	Inuvik	72.94	19	P	P	09 24 59.5	0.0
	1.5nm,0.7s,baz=300,slow=4.4,SNR=4.6						
YKA	Yellowknife Ar	82.47	17	P	P	09 25 52.8	+0.1
	0.3nm,0.6s,baz=330,slow=5.5,SNR=3.0						

ISCJB 12 09:13:49.4±0.7,31°.8N±0°.1×104°.22E±0°.07, h10km, mb4.2/14, Error ellipse: s-maj=15.3km s-min=8.0km az=162.8
IDC 12 09:13:49.7±0.8,31°.81N×104°.24E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/26, mbtmp4.1/11, Error ellipse: s-maj=50.9km s-min=17.9km az=51.0
NEIC 12 09:13:51.3±0.6,31°.78N×104°.21E, h10km, mb4.5/3, Error ellipse: s-maj=36.4km s-min=11.6km az=51.0

ISC 12 09:13:51.5±0.7,31°.7N±0°.1×104°.11E±0°.07, h10km, n22, σ0°82/22, mb4.2/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	4.66	59	Sg	Sg	09 16 21.3	+0.1
XAN				smax			
	comp=N,360nm,0.7s						
XAN				smax			
	comp=E,170nm,0.8s						
MKAR	Makanchi Array	22.52	318	P	P	09 18 52.4	+1.1
	comp=E,3.6nm,0.7s,mb3.9,baz=122,slow=12,SNR=6.4						
BVAR	Borovoye Array	32.31	321	P	P	09 20 21.5	+1.0
	comp=E,1.0nm,0.6s,mb3.8,baz=106,slow=11,SNR=3.1						
AKTK	Aktyubinsk	38.72	313	P	P	09 21 13.8	-1.8
AKTO	Aktyubinsk	38.72	313	P	P	09 21 13.8	-1.8
	comp=E,2.1nm,0.7s,mb4.0,baz=67,slow=0.8,SNR=3.9						
ARU	Arti	39.95	322	eP	P	09 21 25.7	-0.1
	comp=E,21nm,1.1s,mb4.8						
BRTR	Keskin Array B	56.44	299	P	P	09 23 33.6	+0.2
	comp=E,1.1nm,0.9s,mb3.9,baz=101,slow=6.4,SNR=5.0						
AKASG	Malin Array Be	56.97	313	P	P	09 23 37.0	0.0
	comp=E,1.1nm,0.5s,mb4.2,baz=279,slow=21,SNR=4.9						
FINES	FINESS Array B	57.06	326	P	P	09 23 37.5	+0.1
	comp=E,2.5nm,0.4s,mb4.5,baz=74,slow=6.4,SNR=12						
WRA	Warramunga Arr	58.98	146	P	P	09 23 51.7	+0.3
	comp=E,3.4nm,0.7s,mb4.5,baz=338,slow=7.5,SNR=4.9						
ASAR	Alice Springs	62.02	149	P	P	09 24 11.9	-0.2
	comp=E,0.7nm,0.5s,mb4.0,baz=335,slow=6.4,SNR=3.8						
NB2	NORSAR Subarra	64.14	327	P	P	09 24 16.8	-9.0
	comp=Z,1.6nm,0.6s,mb4.2,baz=73,slow=6.5						
NOA	NORSAR Array B	64.14	327	P	P	09 24 24.6	-1.2
	comp=Z,0.7nm,0.4s,mb4.0,baz=74,slow=5.5,SNR=4.3						
CDF	Champ du Feu	71.18	316	eP	P	09 25 10.6	+0.2
LPG	La Plagne	72.83	313	eP	P	09 25 21.5	+1.1
	comp=Z,4.9nm,0.5s,mb4.4						
LPG	La Plagne	72.83	313	eP	P	09 25 21.5	+1.1
	comp=Z,2.5nm,0.5s,mb4.4						
LPL	La Plagne	72.83	313	eP	P	09 25 21.4	+1.0
	comp=Z,3.6nm,0.5s,mb4.3						
LPL	La Plagne	72.83	313	eP	P	09 25 21.4	+1.0
	comp=Z,1.8nm,0.5s,mb4.3						
SMF	Signal de Mont	74.06	315	eP	P	09 25 27.6	0.0
TCF	Toulx Ste Croi	75.22	315	eP	P	09 25 34.5	+0.2
YKA	Yellowknife Ar	81.10	17	P	P	09 26 05.6	-1.0
	comp=Z,1.5nm,0.7s,mb4.1,baz=330,slow=5.1,SNR=11						
TORD	Torodi Ar. Bea	93.45	288	P	P	09 27 07.5	-0.3
	comp=Z,0.7nm,0.7s,mb4.2,baz=61,slow=4.0,SNR=3.7						

IDC 12 09:15:12.1±2.0,33°.13N×103°.93E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/26, mbtmp3.9/4, Error ellipse: s-maj=64.2km s-min=33.0km az=82.0, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.04	71	P	P	09 19 46.4	-0.2
	5.9nm,0.7s,baz=262,slow=10,SNR=9.7						
WRA	Warramunga Arr	60.23	147	P	P	09 25 22.2	0.0
	0.6nm,0.5s,baz=340,slow=7.9,SNR=2.3						
INK	Inuvik	70.30	19	P	P	09 26 26.7	-0.2
	0.6nm,0.5s,baz=338,slow=5.7,SNR=4.0						
YKA	Yellowknife Ar	79.81	17	P	P	09 27 22.3	+0.4
	0.4nm,0.6s,baz=330,slow=5.5,SNR=4.2						

IDC 12 09:15:55.6±0.9,31°.22N×103°.54E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.9/25, mbtmp4.1/9, MS5.6/1, Ms1 5.6/1, ms1mx4.2/47, Error ellipse: s-maj=84.1km s-min=16.6km az=57.0
ISCJB 12 09:15:56.3±1.4,31°.51N±0°.07×104°.1E±0°.1, h17km±10km, mb4.1/10, Error ellipse: s-maj=15.6km s-min=10.1km az=21.0
NEIC 12 09:15:57.2±0.5,31°.20N×103°.48E, h10km, mb4.8/1, Error ellipse: s-maj=50.2km s-min=9.7km az=56.0

ISC 12 09:15:58.8±1.3,31°.55N±0°.05×104°.2E±0°.1, h20km±9km, n19, σ1°02/18, mb4.1/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.73	209	Pg	Pg	09 16 13.2	0.0
CD2				Sg	Sg	09 16 17.7	-5.2
CD2				smax			
	comp=N,4μm,0.6s						
LZH	Lanzhou	4.54	357	ePg	Px	09 17 39.7	
LZH				Sg	Sg	09 18 25.4	+1.0
LZH				smax			
	comp=N,660nm,0.6s						
LZH				smax			
	comp=E,830nm,0.8s						
XAN	Xi'an	4.71	57	Pg	Pb	09 17 19.3	-1.4
XAN				Sg	Sb	09 18 11.6	-5.4
XAN				smax			
	comp=N,440nm,0.9s						
XAN				smax			
	comp=E,210nm,0.8s						
MKAR	Makanchi Array	22.68	318	P	P	09 20 57.2	-1.7
	comp=E,0.9nm,0.6s,mb3.4,baz=119,slow=11,SNR=3.5						
MKAR	Makanchi Array	22.68	318	P	P	09 20 57.2	-1.7
ZALV	Zalesovo Beam	26.35	334	P	P	09 21 33.3	0.0
	comp=E,1.2nm,0.3s,mb3.9,baz=134,slow=10,SNR=2.7						
KURK	Kurchatov	26.93	323	P	P	09 21 38.4	-0.2
	comp=E,1.7nm,0.9s,mb3.6,baz=130,slow=9.4,SNR=4.3						
DAV	Davao City (W)	31.51	136	LR	LR	09 35 21.4	
	comp=E,10μm,20.7s,baz=15,slow=37						
FINES	FINESS Array B	57.23	326	P	P	09 25 43.7	-0.7
	comp=E,1.7nm,0.6s,mb4.3,baz=69,slow=7.6,SNR=2.7						
WRAB	Tennant Creek	58.81	146	eP	P	09 25 56.2	+0.3
	comp=E,5.1nm,0.6s,mb4.7						
WRA	Warramunga Arr	58.81	146	P	P	09 25 55.3	-0.6
	comp=E,4.4nm,0.6s,mb4.7,baz=338,slow=7.5,SNR=10						
ASAR	Alice Springs	61.84	149	P	P	09 26 17.8	+1.2
	comp=E,1.2nm,0.5s,mb4.2,baz=338,slow=6.8,SNR=8.7						
CTA	Charters Tower	65.31	136	P	P	09 26 40.5	+0.9
	comp=E,4.2nm,0.8s,mb4.5,baz=354,slow=10,SNR=3.1						
CTA	Charters Tower	65.31	136	P	P	09 26 40.5	+0.9
STKA	Stephens Creek	72.35	147	P	P	09 27 22.8	-0.4
	comp=E,1.3nm,0.6s,mb4.0,baz=339,slow=5.5,SNR=4.6						
YKA	Yellowknife Ar	81.25	17	P	P	09 28 15.6	+2.5
	comp=E,0.3nm,0.6s,mb3.4,baz=327,slow=5.7,SNR=3.4						
YKA	Yellowknife Ar	81.25	17	P	P	09 28 15.6	+2.5
TXAR	Lajitas Array	113.92	26	PKP	PKiKP	09 34 39.2	+2.5
	comp=E,0.1nm,0.8s,baz=270,slow=2.5,SNR=3.7						
TXAR	Lajitas Array	113.92	26	PKP	PKiKP	09 34 39.2	+2.5

ISCJB 12 09:19:08.9±0.4,31°.02N±0°.04×103°.56E±0°.08, h10km, mb4.2/17, Error ellipse: s-maj=9.5km s-min=6.2km az=1.2
IDC 12 09:19:08.8±0.7,30°.99N×103°.49E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/25, mbtmp4.1/13, Error ellipse: s-maj=29.3km s-min=14.7km az=60.0
NEIC 12 09:19:10.8±0.4,31°.07N×103°.63E, h10km, mb4.8/4, Error ellipse: s-maj=11.1km s-min=7.2km az=73.0
MOS 12 09:19:11.8±1.1,31°.01N×103°.55E, h33km, mb4.8/5, Error ellipse: s-maj=19.4km s-min=10.0km az=94.6
BJI 12 09:19:11.3,31°.02N×103°.66E, h12km, mb4.5/6, ML3.9/6, Ms4.5/1, Ms7 4.6/1

ISC 12 09:19:11.1±0.4,31°.06N±0°.04×103°.57E±0°.07, h10km, n38, σ0°96/39, mb4.2/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	5.02	3	ePg	Sn	09 21 17.0	-7.5
LZH				Sg	Sg	09 22 04.3	+12
LZH				smax			
	comp=N,440nm,0.6s						
LZH				smax			
	comp=E,740nm,0.7s						
LZH				LR	LR		
	comp=N,4μm,10.8s						
ENH	Enshi	5.16	97	ePn	Pn	09 20 28.6	+0.3
XAN	Xi'an	5.41	55	Sg	Sg	09 22 01.1	-3.5
XAN				smax			
	comp=N,440nm,0.9s						
XAN				smax			
	comp=E,210nm,0.8s						
KMI	Kunming	5.96	187	Pn	Pn	09 20 39.3	-0.1
KMI				Sn	Sn	09 21 48.0	+0.3
KMI				smax			
	comp=N,99nm,1.0s						
KMI				smax			
	comp=E,110nm,1.1s						
CHTO	Chiang Mai	12.89	200	eP	Pn	09 22 16.5	+2.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.4s						
CHTO	Chiang Mai	12.89	200	ePn	Pn	09 22 16.5	+2.1
	comp=Z,5.8nm,0.4s						
NJ2	Nanjing	13.07	82	eP	Pn	09 22 18.3	+1.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
CMAR	Chiang Mai Arr	13.23	200	Pn	Pn	09 22 18.3	-0.7
	comp=Z,1.3nm,0.3s,baz=102,slow=14,SNR=21						
TLY	Talaya	20.60	0	eP	P	09 23 50.9	+0.7
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY	Talaya	20.60	0	eP	P	09 23 50.9	+0.7
	comp=Z,8.2nm,0.9s						
KSRS	Korea Array	21.08	66	P	P	09 23 56.6	+1.1
	comp=Z,6.0nm,0.5s,mb4.2,baz=259,slow=9.7,SNR=19						
KSRS	Korea Array	21.08	66	P	P	09 23 56.7	+1.2
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
CN2	Changchun	21.45	48	eP	P	09 24 01.2	+1.8
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
MKAR	Makanchi Array	22.72	320	P	P	09 24 13.1	+0.2
	comp=Z,2.1nm,0.8s,mb3.6,baz=117,slow=12,SNR=5.1						
MKAR	Makanchi Array	22.72	320	P	P	09 24 13.1	+0.2
AAK	Ala-Archa	25.85	305	eP	P	09 24 44.5	+1.8
ZAA0	Zalesovo Array	26.57	335	eP	P	09 24 48.7	-0.3
ZALV	Zalesovo Beam	26.57	335	P	P	09 24 49.0	0.0
	comp=Z,2.3nm,0.4s,mb4.1,baz=138,slow=9.1,SNR=9.4						
KURK	Kurchatov	27.01	324	P	P	09 24 53.4	+0.3
	comp=Z,1.7nm,0.6s,mb3.7,baz=127,slow=9.8,SNR=7.6						
BVAR	Borovoye Array	32.55	322	PcP	PcP	09 28 27.2	-1.3
	comp=Z,1.0nm,0.7s,baz=90,slow=1.6,SNR=4.0						
TIXI	Tiksi	42.89	11	eP	P	09 27 08.8	-0.4
TIXI				pmax	pmax		
	comp=Z,38nm,1.8s,mb4.8						
TIXI	Tiksi	42.89	11	eP	P	09 27 08.8	-0.4
	comp=Z,38nm,1.8s,mb4.8						
BILL	Bilibino	51.41	25	eP	P	09 28 16.0	+0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
AKASG	Malin Array Be	57.08	313	P	P	09 28 56.0	-1.3
	comp=Z,0.3nm,0.2s,mb3.9,baz=82,slow=4.7,SNR=5.2						
ARCES	ARCESS Array B	57.11	336	P	P	09 28 57.4	+0.2
	comp=Z,2.3nm,0.8s,mb4.2,baz=84,slow=8.4,SNR=3.1						
ARCES	ARCESS Array B	57.11	336	P	P	09 28 57.4	+0.1
WRAB	Tennant Creek	58.69	146	eP	P	09 29 07.8	-1.1
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
WRAB	Tennant Creek	58.69	146	eP	P	09 29 07.8	-1.1
	comp=Z,5.4nm,0.6s,mb4.8						
WRA	Warramunga Arr	58.69	146	P	P	09 29 08.2	-0.7
	comp=Z,4.1nm,0.5s,mb4.7,baz=338,slow=7.6,SNR=26						
ASAR	Alice Springs	61.69	148	P	P	09 29 28.8	-0.6
	comp=Z,1.1nm,0.5s,mb4.2,baz=339,slow=6.6,SNR=13						
NB2	NORSAR Subarra	64.45	327	P	P	09 29 46.3	-1.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=73,slow=6.2						
NOA	NORSAR Array B	64.45	327	P	P	09 29 46.0	-1.3
	comp=Z,1.3nm,0.8s,mb4.0,baz=73,slow=6.3,SNR=4.2						
COLA	College	69.67	26	eP	P	09 30 19.7	-0.7
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
COLA	College	69.67	26	eP	P	09 30 19.7	-0.7
	comp=Z,4.8nm,0.7s,mb4.5						
STKA	Stephens Creek	72.22	147	P	P	09 30 35.2	-1.1
	comp=Z,1.1nm,0.5s,mb4.0,baz=340,slow=4.2,SNR=4.9						
INK	Inuvik	72.35	19	P	P	09 30 36.4	-0.3
	comp=Z,3.1nm,0.7s,mb4.3,baz=334,slow=8.7,SNR=19						
YKA	Yellowknife Ar	81.87	17	P	P	09 31 29.6	-0.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=328,slow=5.1,SNR=13						
YKA	Yellowknife Ar	81.87	17	P	P	09 31 29.6	-0.6

IDC 12 09:19:55.6±6.7,32°.06N×104°.77E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.8/27, mbtmp4.1/6, Error ellipse: s-maj=167.0km s-min=46.3km az=13.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.65	317	P	P	09 24 58.5	+0.2
	1.0nm,0.5s,baz=129,slow=11,SNR=3.9						
ZALV	Zalesovo Beam	26.12	333	P	P	09 25 31.2	+0.1
	4.0nm,0.5s,baz=134,slow=10,SNR=8.0						
KURK	Kurchatov	26.84	322	P	P	09 25 37.8	+0.1
	1.3nm,0.7s,baz=133,slow=8.4,SNR=4.4						
AKTO	Aktyubinsk	38.91	312	P	P	09 27 22.9	0.0
	1.5nm,0.6s,baz=133,slow=13,SNR=6.9						
ARCES	ARCESS Array B	56.63	336	P	P	09 29 39.3	-0.7
	2.4nm,0.8s,baz=64,slow=5.5,SNR=4.4						
YKA	Yellowknife Ar	80.61	17	P	P	09 32 10.0	+0.3
	0.9nm,0.7s,baz=330,slow=5.1,SNR=7.6						

ISCJB 12 09:23:14.7±0.7,31°.19N±0°.05×103°.8E±0°.2, h10km, mb4.0/11, Error ellipse: s-maj=19.1km s-min=7.0km az=168.4
IDC 12 09:23:14.8±0.8,31°.49N×104°.30E, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.9/28, mbtmp4.0/12, Error ellipse: s-maj=34.9km s-min=16.2km az=53.0
NEIC 12 09:23:16.5±0.6,31°.10N×103°.67E, h10km, Error ellipse: s-maj=17.0km s-min=11.4km az=61.0

ISC 12 09:23:16.6±0.7,31°.16N±0°.06×103°.7E±0°.2, h10km, n21, σ0°77/20, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.25	176	Sg	Sg	09 23 25.0	-0.3
CD2				smax			
	comp=N,540nm,0.6s						
LSA	Lhasa	10.96	266	Pn	Pn	09 25 53.4	-0.1
KSRS	Korea Array	20.91	66	P	P	09 27 51.9	-7.3
	comp=N,2.4nm,0.7s,baz=254,slow=10,SNR=2.5						
MK31	Makanchi Array	22.73	319	eP	P	09 28 19.3	+0.7
MKAR	Makanchi Array	22.73	319	P	P	09 28 20.0	+1.4
	comp=N,2.2nm,0.6s,mb3.8,baz=125,slow=11,SNR=8.3						
MKAR	Makanchi Array	22.73	319	P	P	09 28 20.0	+1.4
CHCP	Chirah Chowk	25.80	284	P	P	09 28 47.6	-0.3
ZAA0	Zalesovo Array	26.53	335	P	P	09 28 53.9	-0.4
ZALV	Zalesovo Beam	26.53	335	P	P	09 28 54.1	-0.2
	comp=N,3.9nm,0.7s,mb4.0,baz=132,slow=8.9,SNR=7.3						
KURK	Kurchatov	27.01	324	P	P	09 28 59.2	+0.5
	comp=N,2.6nm,0.7s,mb3.9,baz=126,slow=9.2,SNR=8.5						
KURK	Kurchatov	27.01	324	P	P	09 28 59.2	+0.5
BVAR	Borovoye Array	32.55	322	P	P	09 29 48.3	+0.6
	comp=N,1.0nm,0.6s,mb4.0,baz=99,slow=9.2,SNR=4.8						
AKTK	Aktyubinsk	38.87	313	P	P	09 30 41.5	-0.4
AKTO	Aktyubinsk	38.87	313	P	P	09 30 41.5	-0.4
	comp=N,1.0nm,0.6s,mb3.7,baz=202,slow=5.7,SNR=3.6						
ARCES	ARCESS Array B	57.08	336	P	P	09 33 01.7	-0.9
	comp=N,1.5nm,0.6s,mb4.2,baz=81,slow=7.5,SNR=4.1						
FINES	FINESS Array B	57.34	326	P	P	09 33 04.1	-0.4
	comp=N,3.9nm,0.9s,mb4.4,baz=64,slow=8.7,SNR=4.2						
WRA	Warramunga Arr	58.70	146	P	P	09 33 14.8	+0.2
	comp=N,3.0nm,0.8s,mb4.4,baz=338,slow=7.5,SNR=8.4						
ASAR	Alice Springs	61.71	148	P	P	09 33 35.9	+0.8
	comp=N,0.8nm,0.8s,mb3.9,baz=337,slow=6.4,SNR=5.1						
NOA	NORSAR Array B	64.44	327	P	P	09 33 51.4	-1.5
	comp=N,0.8nm,0.6s,mb3.9,baz=113,slow=3.0,SNR=3.4						
KMBO	Kilima Mbogo	70.61	256	P	P	09 34 36.1	+3.5
	comp=N,0.6nm,0.3s,mb4.0,baz=66,slow=15,SNR=3.9						
QSPA	South Pole Qui	120.94	180	PKP	PKPdf	09 42 07.1	-0.9
	comp=N,0.6nm,0.8s,baz=163,slow=4.3,SNR=5.9						

IDC 12 09:23:32.5±0.5,32°.18N×104°.84E, h0km, mb4.4/26, mb1 4.5/29, mb1mx4.5/36, mbtmp4.4/29, ML3.9/3, Error ellipse: s-maj=16.6km s-min=10.9km az=49.0
ISCJB 12 09:23:33.2±1.0,32°.11N±0°.03×104°.78E±0°.04, h15km±6km, mb4.7/67, MS5.5/3, Error ellipse: s-maj=5.3km s-min=4.4km az=2.6
NEIC 12 09:23:34.9±0.2,32°.18N×104°.89E, mb4.8/30, Error ellipse: s-maj=5.2km s-min=4.8km az=53.0
*MOS 12

HHC				SS		09 28 16.0	
HHC				pmax	pmax		
	comp=Z,40nm,1.1s						
HHC				pmax	pmax		
	comp=Z,6μm,4.6s						
HHC				LR	LR		
	comp=N,3μm,6.9s						
HHC				LR	LR		
	comp=E,8μm,7.0s						
HHC				LR	LR		
	comp=Z,6μm,6.3s						
NJ2	**Nanjing**	**11.86**	**87**	eP	**Pn**	**09 26 15.3**	**-8.1**
NJ2				pP		09 26 23.0	
NJ2				PP		09 26 25.5	
NJ2				sP		09 26 27.3	
NJ2				S	**Sn**	**09 28 27.7**	**-8.2**
NJ2				sS		09 28 31.5	
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,200nm,3.5s						
NJ2				LR	LR		
	comp=N,6μm,10.1s						
NJ2				LR	LR		
	comp=E,8μm,12.3s						
NJ2				LR	LR		
	comp=Z,12μm,11.5s						
LSA	**Lhasa**	**12.03**	**262**	P	**Pn**	**09 26 25.5**	**-0.2**
LSA	**Lhasa**	**12.03**	**262**	ePn	**Pn**	**09 26 26.5**	**+0.7**
BJT	**Baijiatuau**	**12.04**	**46**	P	**Pn**	**09 26 22.9**	**-3.0**
BJI	**Beijing**	**12.06**	**46**	P	**Pn**	**09 26 22.6**	**-3.5**
BJI				pmax	pmax		
	comp=Z,24nm,1.2s						
QIZ	**Qiongzhong**	**13.81**	**160**	P	**Pn**	**09 26 51.4**	**+1.3**
QIZ				S	**Sn**	**09 29 21.6**	**-2.0**
QIZ				pmax	pmax		
	comp=Z,30nm,1.8s						
CM31	**Chiang Mai Arr**	**14.64**	**203**	ePn	**Pn**	**09 27 02.5**	**+1.0**
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.64**	**203**	Pn	**Pn**	**09 27 03.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=7.2,slow=11,SNR=6.4						
SONM	**Songino Array**	**15.71**	**4**	Pn	**Pn**	**09 27 13.7**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=182,slow=15,SNR=2.1						
SONM	**Songino Array**	**15.71**	**4**	Pn	**Pn**	**09 27 13.7**	**-1.8**
ULN	**Ulaanbaatar**	**15.79**	**5**	P	**Pn**	**09 27 17.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,38nm,1.4s						
ULN	**Ulaanbaatar**	**15.79**	**5**	Pn	**Pn**	**09 27 17.2**	**+0.7**
	comp=Z,38nm,1.4s						
GUN	**Gumba**	**16.98**	**261**	eP	**Pn**	**09 27 29.8**	**-2.0**
	comp=Z,176nm,1.4s						
PKI	**Pulchoki**	**17.48**	**260**	eP	**Pn**	**09 27 36.0**	**-2.2**
	comp=Z,36nm,0.5s						
PKIN	**Phulchoki**	**17.49**	**260**	eP	**Pn**	**09 27 36.0**	**-2.3**
	comp=Z,67nm,0.7s						
KKN	**Kakani**	**17.52**	**261**	eP	**Pn**	**09 27 35.7**	**-2.9**
DMN	**Daman**	**17.72**	**260**	eP	**Pn**	**09 27 39.0**	**-2.1**
WMQ	**Urumqi**	**17.82**	**316**	eP	**Pn**	**09 27 43.5**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,22nm,1.0s						
WMQ				LR	LR		
	comp=N,9μm,25.0s						
WMQ				LR	LR		
	comp=E,3μm,23.0s						
WMQ				LR	LR		
	comp=Z,20μm,23.0s						
ZAK	**Zakamensk**	**18.26**	**357**	eP	**Pn**	**09 27 49.9**	**+2.4**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s						
TLY	**Talaya**	**19.54**	**358**	eP	**Pn**	**09 28 08.4**	**+5.4**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY	**Talaya**	**19.54**	**358**	eP	**Pn**	**09 28 04.4**	**+1.3**
	comp=Z,5.3nm,0.8s						
KSRS	**Korea Array**	**19.64**	**68**	P	**Pn**	**09 28 03.6**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=254,slow=10,SNR=8.2						
KSRS	**Korea Array**	**19.64**	**68**	P	**Pn**	**09 28 03.6**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MOY	**Mondy**	**19.71**	**353**	eP	**Pn**	**09 28 05.9**	**+0.8**
MOY				pmax	pmax		
	comp=Z,38nm,1.6s						
CN2	**Changchun**	**19.91**	**48**	eP	**Pn**	**09 28 08.1**	**+0.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
IRK	**Irkutsk**	**20.09**	**359**	eP	**P**	**09 28 10.8**	**+3.1**
IRK				pmax	pmax		
	comp=Z,141nm,1.5s						
HIA	**Hailar**	**20.42**	**29**	eP	**P**	**09 28 11.3**	**-0.1**
MK31	**Makanchi Array**	**22.64**	**317**	eP	**P**	**09 28 35.7**	**+0.4**
MKAR	**Makanchi Array**	**22.64**	**317**	P	**P**	**09 28 36.2**	**+0.9**
	comp=Z,8.9nm,0.9s,mb4.2,baz=115,slow=10,SNR=12						
MKAR	**Makanchi Array**	**22.64**	**317c**	eP	**P**	**09 28 36.5**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ	**Mudanjiang**	**22.93**	**50**	P	**P**	**09 28 37.4**	**-1.0**
MDJ				S	**S**	**09 32 46.3**	**-2.3**
MDJ				ScP	ScP	09 36 06.0	-0.6
MDJ				PcS	PcS	09 36 07.6	+0.1
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,7μm,18.4s						
MDJ				LR	LR		
	comp=N,12μm,25.7s,MS5.5						
MDJ				LR	LR		
	comp=E,16μm,20.8s,MS5.5						
MDJ				LR	LR		
	comp=Z,22μm,26.4s						
KSH	**Kashi**	**24.48**	**296**	eP	**P**	**09 28 56.8**	**+3.3**
KSH				epP		09 29 00.8	
KSH				esP	sP	09 29 03.8	+6.5
KSH				ePP		09 29 32.1	
KSH				ePcP	PcP	09 32 34.8	+2.8
KSH				eS	**S**	**09 33 15.0**	**+1.2**
KSH				eSS		09 34 12.1	
KSH				eScP	ScP	09 36 11.9	+1.0
KSH				pmax	pmax		
	comp=Z,1μm,11.2s						
KSH				LR	LR		
	comp=N,16μm,21.6s,MS5.6						
KSH				LR	LR		
	comp=E,8μm,17.0s,MS5.6						
ZAA0	**Zalesovo Array**	**26.08**	**333**	eP	**P**	**09 29 08.1**	**+0.3**
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**09 29 07.8**	**-0.1**
	comp=E,9.7nm,0.6s,mb4.5,baz=142,slow=9.3,SNR=11						
AAK	**Ala-Archa**	**26.18**	**302**	P	**P**	**09 29 09.1**	**+0.3**
	comp=E,0.6nm,0.3s,mb3.6,baz=63,slow=9.0,SNR=4.9						
AAK	**Ala-Archa**	**26.18**	**302**	eP	**P**	**09 29 08.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
AAK	**Ala-Archa**	**26.18**	**302**	eP	**P**	**09 29 09.4**	**+0.6**
	comp=Z,366nm,3.3s						
KLR	**Kul'dur**	**26.38**	**42**	eP	**P**	**09 29 07.8**	**-2.8**
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**09 29 14.5**	**-0.1**
	comp=Z,7.9nm,0.8s,mb4.3,baz=128,slow=8.3,SNR=14						
KURK				PcP	PcP	09 32 35.8	-1.3
	comp=Z,3.6nm,0.7s,baz=118,slow=2.1,SNR=3.6						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**09 29 14.5**	**0.0**
KURK						09 32 35.8	
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
KURK	**Kurchatov**	**26.82**	**321**	eP	**P**	**09 29 15.1**	**+0.5**
	comp=Z,42nm,1.4s,mb4.8						
MAT	**Matsushiro**	**27.79**	**72**	P	**P**	**09 29 20.8**	**-2.6**
MJAR	**Matsushiro Arr**	**27.79**	**72**	P	**P**	**09 29 23.5**	**+0.1**
	comp=Z,1.5nm,0.5s,mb3.9,baz=273,slow=12,SNR=4.1						
HABR	**Khabarovsk**	**27.96**	**46**	eP	**P**	**09 29 25.6**	**+0.8**
HABR				e*PP	pP	09 29 34.8	+7.3
HABR				e		09 30 13.5	
HABR				e		09 32 38.8	
HABR				eSS		09 35 27.5	
HABR				MLR	MLR		
	comp=Z,11μm,19.0s,MS5.5						
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**09 30 04.0**	**+0.1**
	comp=Z,1.5nm,0.6s,mb4.0,baz=102,slow=14,SNR=5.0						
BVAR				PcP	PcP	09 32 52.8	+1.5
	comp=Z,2.5nm,0.6s,baz=132,slow=2.2,SNR=6.3						
YSS	**Yuzh-Sakhalins**	**32.39**	**52**	eP	**P**	**09 30 07.0**	**+3.0**
BRVK	**Borovoye**	**32.46**	**320⇑**	iP	**P**	**09 30 03.6**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.5						
BRVK	**Borovoye**	**32.46**	**320**	eP	**P**	**09 30 05.0**	**+0.4**
	comp=Z,5.1nm,0.6s,mb4.5						
ABKAR	**Akbulak array**	**37.48**	**310**	eP	**P**	**09 30 48.3**	**+0.5**
	comp=Z,4.7nm,0.6s,mb4.5						
AKTK	**Aktyubinsk**	**38.91**	**312**	P	**P**	**09 30 60.0**	**0.0**
AKTO	**Aktyubinsk**	**38.91**	**312**	P	**P**	**09 30 60.0**	**0.0**
	comp=Z,4.4nm,0.6s,mb4.3,baz=97,slow=14,SNR=9.8						
SVE	**Sverdlovsk**	**39.06**	**323**	eP	**P**	**09 31 02.4**	**+1.3**
SVE				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.0						
ARU	**Arti**	**40.02**	**321c**	iP	**P**	**09 31 09.3**	**+0.2**
ARU						09 32 38.6	
ARU				S	**S**	**09 37 14.0**	**-0.6**
ARU				SS	SS	09 40 03.5	-7.9
ARU				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0						
ARU	**Arti**	**40.02**	**321**	eP	**P**	**09 31 09.5**	**+0.5**
	comp=Z,123nm,1.7s,mb5.4						
TIXI	**Tiksi**	**41.60**	**11**	eP	**P**	**09 31 21.3**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.6						
TIXI	**Tiksi**	**41.60**	**11**	eP	**P**	**09 31 21.9**	**-0.1**
	comp=Z,12nm,0.8s,mb4.6						
SEY	**Seymchan**	**42.86**	**30⇑**	eP	**P**	**09 31 34.7**	**+2.4**
PETK	**Petropavlovsk-**	**42.99**	**45**	P	**P**	**09 31 32.7**	**-0.8**
	comp=Z,3.1nm,0.7s,mb4.1,baz=273,slow=2.5,SNR=4.1						
PETK	**Petropavlovsk-**	**42.99**	**45**	P	**P**	**09 31 32.7**	**-0.8**
GNI	**Garni**	**48.40**	**297**	eP	**P**	**09 32 15.6**	**-0.9**
GNI				pmax	pmax		
	comp=Z,12nm,1.4s						
ZEI	**Tsey**	**48.59**	**301**	eP	**P**	**09 32 17.6**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KIV	**Kislovodsk**	**49.30**	**303**	eP	**P**	**09 32 22.7**	**-0.6**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
VRHR	**Novokhopersk**	**49.32**	**312**	eP	**P**	**09 32 23.4**	**0.0**
VRHR				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
BILL	**Bilibino**	**49.96**	**26**	eP	**P**	**09 32 28.7**	**+0.7**
BILL				e*PP	pP	09 32 38.8	+8.0
BILL				e		09 33 49.9	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BILL	**Bilibino**	**49.96**	**26**	eP	**P**	**09 32 28.1**	**+0.1**
	comp=Z,13nm,1.1s,mb4.9						
KLMR	**Klimovskoe**	**50.58**	**325**	eP	**P**	**09 32 31.8**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,79nm,1.5s,mb5.4						
VSR	**Storozhevoye**	**50.86**	**312**	eP	**P**	**09 32 34.5**	**-0.5**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
VSR				pmax	pmax		
	comp=N,8.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
MOS	**Moscow**	**51.52**	**318**	eP	**P**	**09 32 42.3**	**+2.4**
OBN	**Obninsk**	**52.15**	**317⇓**	iP	**P**	**09 32 44.6**	**0.0**
OBN				e		09 33 56.6	
OBN				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
KNA	**Kununurra**	**52.85**	**151**	eP	**P**	**09 32 50.6**	**+0.4**
	comp=Z,20nm,0.7s,mb5.2						
ANN	**Anapa**	**52.87**	**304**	eP	**P**	**09 32 43.2**	**-7.0**
ANN				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**53.78**	**155**	eP	**P**	**09 32 57.3**	**+0.3**
	comp=Z,13nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.78**	**155**	P	**P**	**09 32 57.1**	**+0.1**
	comp=Z,7.1nm,0.8s,mb4.6,baz=352,slow=7.1,SNR=9.7						
JOF	**Joensuu**	**54.50**	**327**	eP	**P**	**09 33 00.3**	**-1.5**
JOF				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
JOF	**Joensuu**	**54.50**	**327**	ep	**P**	**09 33 00.3**	**-1.5**
	comp=Z,13nm,0.6s,mb5.0						
KEV	**Kevo**	**56.05**	**336**	eP	**P**	**09 33 07.0**	**-5.9**
KEV				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
KEV	**Kevo**	**56.05**	**336**	ep	**P**	**09 33 07.0**	**-5.9**
	comp=Z,19nm,0.7s,mb5.2						
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**09 33 14.6**	**-2.1**
	comp=Z,7.8nm,0.7s,mb4.8,baz=76,slow=7.6,SNR=9.9						
BR131	**Keskin Array S**	**56.80**	**299**	eP	**P**	**09 33 18.6**	**-0.1**
BRTR	**Keskin Array B**	**56.80**	**299**	P	**P**	**09 33 18.1**	**-0.5**
	comp=Z,1.3nm,0.7s,mb4.1,baz=100,slow=6.1,SNR=8.0						
KAF	**Kangasniemi**	**56.88**	**327**	eP	**P**	**09 33 18.0**	**-0.9**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
KAF	**Kangasniemi**	**56.88**	**327**	ep	**P**	**09 33 18.0**	**-0.9**
	comp=Z,8.0nm,0.6s,mb4.9						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**09 33 19.7**	**-0.6**
	comp=Z,11nm,0.7s,mb5.0,baz=87,slow=7.6,SNR=17						
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**09 33 19.5**	**-1.5**
	comp=Z,2.9nm,0.6s,mb4.5,baz=72,slow=6.2,SNR=11						
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**09 33 19.5**	**-1.5**
SPITS	**Spitsbergen Ar**	**58.48**	**346**	P	**P**	**09 33 30.1**	**+0.1**
	comp=Z,3.3nm,0.5s,mb4.6,baz=92,slow=11,SNR=11						
WRAB	**Tennant Creek**	**58.98**	**147**	eP	**P**	**09 33 35.0**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**58.98**	**147**	eP	**P**	**09 33 35.0**	**+0.9**
	comp=Z,21nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**09 33 34.6**	**+0.4**
	comp=Z,10nm,0.6s,mb5.1,baz=339,slow=7.5,SNR=22						
WB2	**Warramunga Arr**	**58.99**	**147**	eP	**P**	**09 33 35.0**	**+0.8**
EIL	**Elat**	**59.05**	**288**	P	**P**	**09 33 34.1**	**-0.6**
	comp=Z,5.6nm,0.8s,mb4.7,baz=106,slow=4.1,SNR=5.3						
ATD	**Arta Tunnel**	**60.32**	**265**	P	**P**	**09 33 43.1**	**-0.5**
	comp=Z,5.6nm,0.5s,mb4.9,baz=245,slow=21,SNR=5.3						
LVV	**L'vov**	**60.60**	**313**	eP	**P**	**09 33 44.7**	**-0.3**
KWP	**Kalwaria Pacla**	**61.48**	**313**	eP	**P**	**09 33 50.8**	**-0.1**
KWP				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.4						
KWP	**Kalwaria Pacla**	**61.48**	**313**	eP	**P**	**09 33 50.8**	**-0.1**
	comp=Z,34nm,1.0s,mb5.4						
KOLS	**Kolonicke sedl**	**61.95**	**312**	eP	**P**	**09 33 55.2**	**+1.0**
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
KOLS	**Kolonicke sedl**	**61.95**	**312**	eP	**P**	**09 33 55.2**	**+1.0**
	comp=Z,7.2nm,1.3s,mb4.6						
KOLS	**Kolonicke sedl**	**61.95**	**312**	eP	**P**	**09 33 55.2**	**+1.0**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**09 33 55.5**	**+0.5**
	comp=Z,5.4nm,0.8s,mb4.8,baz=331,slow=6.2,SNR=24						
STHS	**Stebnicka Huta**	**62.45**	**313**	eP	**P**	**09 33 58.5**	**+1.0**
STHS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
STHS	**Stebnicka Huta**	**62.45**	**313**	eP	**P**	**09 33 58.5**	**+1.0**
	comp=Z,4.5nm,1.1s,mb4.5						
STHS	**Stebnicka Huta**	**62.45**	**313**	eP	**P**	**09 33 58.5**	**+1.0**
OJC	**Ojcow**	**63.09**	**314**	eP	**P**	**09 34 02.1**	**+0.4**
KECS	**Kecovo**	**63.22**	**312**	eP	**P**	**09 34 01.6**	**-1.0**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
KECS	**Kecovo**	**63.22**	**312**	eP	**P**	**09 34 01.6**	**-1.0**
	comp=Z,1.6nm,0.9s,mb4.2						
KECS	**Kecovo**	**63.22**	**312**	eP	**P**	**09 34 01.6**	**-1.0**
PSZ	**Piszkesteto**	**63.78**	**312**	eP	**P**	**09 34 07.1**	**+0.7**
PSZ				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9						
PSZ	**Piszkesteto**	**63.78**	**312**	eP	**P**	**09 34 07.0**	**+0.7**
	comp=Z,20nm,1.6s,mb4.9						
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**09 34 07.2**	**-1.2**
	comp=Z,5.6nm,0.6s,mb4.8,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**09 34 07.5**	**-0.9**
	comp=Z,5.8nm,0.7s,mb4.7,baz=71,slow=6.6,SNR=11						
VYHS	**Vyhne**	**64.25**	**313**	eP	**P**	**09 34 10.1**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
VYHS	**Vyhne**	**64.25**	**313**	eP	**P**	**09 34 10.1**	**+0.7**
	comp=Z,11nm,1.5s,mb4.7						
VYHS	**Vyhne**	**64.25**	**313**	eP	**P**	**09 34 10.1**	**+0.7**
KOLL	**Kolacno**	**64.49**	**313**	eP	**P**	**09 34 11.5**	**+0.5**
KOLL	**Kolacno**	**64.49**	**313**	eP	**P**	**09 34 11.5**	**+0.5**
FALS	**False Pass**	**65.33**	**39**	P	**P**	**09 34 18.1**	**+1.8**
	comp=Z,316nm,0.9s						
RUE	**Ruedersdorf**	**65.85**	**318**	eP	**P**	**09 34 21.3**	**+1.5**
CLL	**Collm**	**66.74**	**317**	eP	**P**	**09 34 25.0**	**-0.5**
CLL				e	pP	09 34 29.0	+0.6
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
CLL	**Collm**	**66.74**	**317**	eP	**P**	**09 34 25.0**	**-0.5**
	comp=Z,6.0nm,1.1s,mb4.5						
CLL				e	pP	09 34 29.0	+0.6
CLL	**Collm**	**66.74**	**317**	eP	**P**	**09 34 25.0**	**-0.5**
	comp=Z,6.0nm,1.1s,mb4.5						
CLL				epP	pP	09 34 29.0	+0.6
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**09 34 28.9**	**-0.1**
	comp=Z,2.2nm,0.9s,mb4.2,baz=76,slow=7.0,SNR=6.2						
MOX	**Moxa**	**67.81**	**317**	eP	**P**	**09 34 32.8**	**+0.5**
COLA	**College**	**68.21**	**26**	eP	**P**	**09 34 34.9**	**+0.4**
COLA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
COLA	**College**	**68.21**	**26**	eP	**P**	**09 34 34.9**	**+0.4**
	comp=Z,19nm,1.0s,mb5.1						
GRA1	**Grafenberg Arr**	**68.43**	**316**	eP	**P**	**09 34 36.1**	**-0.1**
	comp=Z,10.0nm,1.5s,mb4.6						
GRA1				epP	pP	09 34 40.3	+1.2
GRF	**Grafenberg Arr**	**68.43**	**316**	eP	**P**	**09 34 36.1**	**-0.1**
	comp=Z,10.0nm,1.5s,mb4.6						
GRF				epP	pP	09 34 40.3	+1.2
GRF	**Grafenberg Arr**	**68.43**	**316**	eP	**P**	**09 34 36.1**	**-0.1**
GRF				e*PP	pP	09 34 40.3	+1.2
GRF				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.6						
GRF	**Grafenberg Arr**	**68.43**	**316**	eP	**P**	**09 34 36.1**	**-0.1**
GRF				e*PP	pP	09 34 40.3	+1.2
GRF				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.6						
GRF	**Grafenberg Arr**	**68.43**	**316**	eP	**P**	**09 34 36.1**	**-0.1**
	comp=Z,10.0nm,1.5s,mb4.6						
GRF				epP	pP	09 34 40.3	+1.2
PMR	**Palmer**	**69.31**	**29**	eP	**P**	**09 34 41.5**	**0.0**
KDAK	**Kodiak Island**	**69.61**	**34c**	eP	**P**	**09 34 49.0**	**+5.6**
BFO	**Black Forest**	**70.74**	**315**	eP	**P**	**09 34 50.0**	**-0.5**
BFO				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
BFO	**Black Forest**	**70.74**	**315**	eP	**P**	**09 34 50.0**	**-0.5**
	comp=Z,9.1nm,1.3s,mb4.5						
INK	**Inuvik**	**70.96**	**20**	P	**P**	**09 34 51.2**	**-0.2**
	comp=Z,14nm,0.9s,mb4.9,baz=323,slow=8.2,SNR=18						
INK	**Inuvik**	**70.96**	**20**	P	**P**	**09 34 51.2**	**-0.2**
BBOO	**Buckleboo**	**71.00**	**153**	eP	**P**	**09 34 51.9**	**-0.2**
	comp=Z,3.5nm,1.0s,mb4.2						
CDF	**Champ du Feu**	**71.32**	**316**	eP	**P**	**09 34 53.7**	**-0.3**
	comp=Z,11nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**71.32**	**316**	eP	**P**	**09 34 53.7**	**-0.3**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**71.32**	**316**	eP	**P**	**09 34 53.7**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.5						
WLF	**Walferdange**	**71.40**	**317**	P	**P**	**09 34 54.0**	**-0.4**
	comp=Z,9.5nm,1.3s,mb4.6						
WLF	**Walferdange**	**71.40**	**317**	eP	**P**	**09 34 54.9**	**+0.4**
WLF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
WLF	**Walferdange**	**71.40**	**317**	eP	**P**	**09 34 54.9**	**+0.4**
	comp=Z,13nm,0.9s,mb4.9						
BCLA	**Clavier**	**71.53**	**318**	P	**P**	**09 34 55.0**	**-0.2**
	comp=Z,5.9nm,1.2s,mb4.4						
DAWY	**Dawson**	**71.72**	**25**	eP	**P**	**09 34 56.1**	**0.0**
KMBO	**Kilima Mbogo**	**71.78**	**257**	P	**P**	**09 34 57.1**	**-0.2**
	comp=Z,4.7nm,1.1s,mb4.3,baz=40,slow=9.6,SNR=7.7						
KMBO	**Kilima Mbogo**	**71.78**	**257c**	eP	**P**	**09 34 58.2**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMBO	**Kilima Mbogo**	**71.78**	**257**	eP	**P**	**09 34 58.0**	**+0.7**
	comp=Z,15nm,1.4s,mb4.7						
DOU	**Dourbes**	**72.08**	**318**	P	**P**	**09 35 00.2**	**+1.6**
STKA	**Stephens Creek**	**72.53**	**148**	eP	**P**	**09 35 01.4**	**+0.1**
	comp=Z,3.1nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**09 35 01.5**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.5,baz=330,slow=6.5,SNR=15						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**09 35 01.5**	**+0.2**
SUMG	**Summit**	**72.54**	**349**	eP	**P**	**09 35 05.0**	**+4.1**
	comp=Z,206nm,2.8s,mb5.6						
RES	**Resolute Bay**	**72.64**	**5**	eP	**P**	**09 35 04.6**	**+3.1**
RES				pmax	pmax		
	comp=Z,81nm,2.6s,mb5.2						
RES	**Resolute Bay**	**72.64**	**5**	eP	**P**	**09 35 04.6**	**+3.1**
	comp=Z,81nm,2.6s,mb5.2						
LPG	**La Plagne**	**73.01**	**313**	eP	**P**	**09 35 04.7**	**+0.5**
	comp=Z,39nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.01**	**313**	eP	**P**	**09 35 04.7**	**+0.5**
LPG				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.01**	**313**	eP	**P**	**09 35 04.7**	**+0.5**
	comp=Z,20nm,0.8s,mb5.1						
CMSA	**Cobar Meteorol**	**74.19**	**145**	eP	**P**	**09 35 12.0**	**+0.9**
SMF	**Signal de Mont**	**74.22**	**315**	eP	**P**	**09 35 10.6**	**-0.6**
	comp=Z,24nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**74.22**	**315**	eP	**P**	**09 35 10.6**	**-0.6**
SMF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**74.22**	**315**	eP	**P**	**09 35 10.6**	**-0.6**
	comp=Z,12nm,1.0s,mb4.8						
HYT	**Haines Junctio**	**74.40**	**27**	eP	**P**	**09 35 12.7**	**+0.7**
TCF	**Toulx Ste Croi**	**75.37**	**316**	eP	**P**	**09 35 17.7**	**-0.2**
	comp=Z,17nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**75.37**	**316**	eP	**P**	**09 35 17.7**	**-0.2**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**75.37**	**316**	eP	**P**	**09 35 17.7**	**-0.2**
	comp=Z,8.3nm,1.1s,mb4.6						
CAF	**Calviac**	**76.16**	**314**	eP	**P**	**09 35 22.6**	**+0.1**
YKA	**Yellowknife Ar**	**80.50**	**17**	P	**P**	**09 35 46.1**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=328,slow=4.9,SNR=23						
YKA	**Yellowknife Ar**	**80.50**	**17**	P	**P**	**09 35 46.1**	**-0.1**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ESDC	**Sonseca Array**	**82.80**	**313**	P	**P**	**09 35 59.7**	**+0.9**
	comp=Z,0.6nm,0.4s,mb4.0,baz=36,slow=4.1,SNR=4.6						
FCC	**Fort Churchill**	**88.06**	**10**	eP	**P**	**09 36 24.4**	**-0.2**
	comp=Z,0.4nm,1.0s,mb3.6						
EDM	**Edmonton**	**88.72**	**22**	eP	**P**	**09 36 28.5**	**+0.7**
FFC	**Flin Flon**	**90.44**	**15**	eP	**P**	**09 36 36.0**	**+0.1**
FFC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
FFC	**Flin Flon**	**90.44**	**15**	eP	**P**	**09 36 36.0**	**+0.2**
	comp=Z,10nm,1.0s,mb5.1						
SLMT	**Seeley Lake**	**93.76**	**25**	eP	**P**	**09 36 52.0**	**+0.7**
	comp=Z,2.7nm,0.7s,mb4.8						
TORD	**Torodi Ar. Bea**	**93.94**	**288**	P	**P**	**09 36 51.6**	**-1.2**
	comp=Z,0.6nm,0.9s,mb4.0,baz=44,slow=4.1,SNR=3.3						
JLU	**Jordanelle**	**100.20**	**27**	ePdif	Pdif	09 37 19.8	-0.8
QSPA	**South Pole Qui**	**121.92**	**180**	PKP	PKPdf	09 42 27.0	-0.5
	comp=Z,2.7nm,0.9s,baz=22,slow=1.8,SNR=9.9						

IDC ***12*** *09:25:22.8±1.0, 55.°18N×162.°47E, h0km, mb4.1/8, mb1 4.4/8, mb1mx3.9/27, mbtmp4.1/8, Error ellipse: s-maj=62.1km s-min=18.9km az=137.0*

MOS ***12*** *09:25:24.4±0.8, 55.°05N×163.°04E, h16km, mb4.5/3, Error ellipse: s-maj=17.2km s-min=8.7km az=72.8*

KRSC ***12*** *09:25:25.1±0.6, 55.°06N×162.°95E, h17km±17km, ML4.4*

ISCJB ***12*** *09:25:26.9±0.5, 55.°05N±0.°03×163.°00E±0.°06, h34km±7km, mb4.1/10, Error ellipse: s-maj=5.7km s-min=3.9km az=27.9*

NEIC ***12*** *09:25:30.8±1.1, 55.°15N×162.°59E, h60km±12km, mb4.1/1, Error ellipse: s-maj=20.0km s-min=8.0km az=122.0*

ISC 12 09:25:26.3±1.4, **55.°07N**±0.°03×**162.°96E**±0.°05, **h17**km±9km, **n47**, σ**0.s92**/63, **mb4.1**/10, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.88**	**234**	eP	**Pb**	**09 25 41.1**	**-2.0**
MKZ				i S	**Sb**	**09 25 52.7**	**-1.9**
KBTR	**Krutoberegovo**	**1.14**	**356**	eP	**Pn**	**09 25 47.0**	**-0.4**
KBTR				i S	**Sb**	**09 26 02.2**	**+0.2**
ZLN	**Zelenaya**	**1.55**	**309**	eP	**Pn**	**09 25 52.8**	**-0.2**
ZLN				i S	**Sn**	**09 26 12.9**	**+0.2**
CIRR	**Tsirk**	**1.63**	**311**	eP	**Pn**	**09 25 53.8**	**-0.4**
CIRR				i S	**Sn**	**09 26 14.8**	**0.0**
BZMR	**Bezymyannaya**	**1.65**	**303**	eP	**Pn**	**09 25 54.0**	**-0.4**
BZMR				i S	**Sn**	**09 26 15.3**	**+0.1**
KMNR	**Kamenistaya**	**1.70**	**295**	eP	**Pn**	**09 25 54.5**	**-0.6**
KMNR				i S	**Sn**	**09 26 16.2**	**-0.2**
KIRR	**Kirishev**	**1.73**	**302**	eP	**Pn**	**09 25 55.7**	**+0.1**
SMKR	**Semkarok**	**1.73**	**331**	eP	**Pn**	**09 25 55.3**	**-0.3**
BKI	**Bering**	**1.73**	**84**	eP	**Pn**	**09 25 54.7**	**-0.9**
BKI				i S	**Sn**	**09 26 16.0**	**-1.3**
KRSR	**Krestovskiy**	**1.78**	**311**	eP	**Pn**	**09 25 55.4**	**-0.8**
KRSR				i S	**Sn**	**09 26 17.5**	**-0.9**
BDR	**Baidarnaya**	**1.80**	**327**	eP	**Pn**	**09 25 56.6**	**+0.2**
KPT	**Kopyto**	**1.80**	**301**	eP	**Pn**	**09 25 56.8**	**+0.3**
KLY	**Klyuchi**	**1.80**	**314**	eP	**Pn**	**09 25 54.7**	**-1.9**

SRKR Sorokina 1.88 328 *eP* **Pn 09 25 57.7 +0.1**
KOZR Kozyr 2.01 301 PN **Pn 09 26 00.3 +1.0**
KOZ Kozyrevsk 2.01 301 *eP* **Pn 09 26 00.3 +0.9**
SRDR Sredinnyy 2.22 305 *eP* **Pn 09 26 02.7 +0.4**
KII Karymskiy 2.29 245 *eP* **Pn 09 26 04.1 +0.8**
KII *i* S **Sn 09 26 32.8 +1.7**
SPN Mys Shipunski 2.63 222 *eP* **Pn 09 26 07.1 -0.8**
SPN *i* S **Sn 09 26 38.6 -0.8**
NLC Nalytchevo 2.86 230 *eP* **Pn 09 26 10.8 -0.2**
NLC *i* S **Sn 09 26 44.4 -0.6**
SDLR Sedlovina 3.00 235 *eP* **Pn 09 26 13.1 +0.2**
SDLR *i* S **Sn 09 26 48.1 -0.3**
GNL Ganaly 3.24 247 *eP* **Pn 09 26 16.7 +0.4**
PET Petropavlovsk 3.27 233 *e*PN **Pn 09 26 17.6 +1.0**
PET *e*S **Sn 09 26 55.0 -0.1**
PET pmax pmax
comp=Z,167nm,0.5s
PET smax
comp=N,416nm,1.0s
PET smax
comp=E,297nm,1.0s
PET Petropavlovsk 3.27 233 *eP* **Pn 09 26 17.3 +0.7**
PET *i* S **Sn 09 26 55.1 0.0**
PET Petropavlovsk 3.27 233 *e*Pn **Pn 09 26 16.8 +0.2**
PET *e*Sn **Sn 09 26 57.6 +2.6**
PEA0B Petropavlovsk- 3.67 240 *e*Pn **Pn 09 26 23.7 +1.5**
PEA0B *e*Sn **Sn 09 27 06.3 +1.3**
PETK Petropavlovsk- 3.67 240 Pn **Pn 09 26 23.6 +1.4**
comp=E,8.6nm,0.3s,baz=64,slow=18,SNR=48
RUS Russkaya 3.74 227 *eP* **Pn 09 26 23.3 +0.2**
RUS *i* S **Sn 09 27 05.4 -1.3**
MIPR Malaya Ipel'ka 4.63 235 *eP* **Pn 09 26 36.0 +0.6**
ALID Alaid 6.14 230 P **Pn 09 26 59.4 +3.2**
BILL Biiibino 13.10 5 PN **Pn 09 28 32.5 +1.2**
BILL Biiibino 13.10 5 Pn **Pn 09 28 32.5 +1.1**
TIXI Tiksi 22.06 332 *eP* **P 09 30 19.4 -0.4**
TIXI pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
TIXI Tiksi 22.06 332 *eP* **P 09 30 18.8 -0.9**
comp=Z,6.9nm,0.8s,mb4.1
MAT Matsushiro 25.10 233 P **P 09 30 50.1 +0.2**
MJAR Matsushiro Arr 25.10 233 P **P 09 30 49.1 -0.8**
comp=Z,4.9nm,0.8s,mb4.1,baz=7.8,slow=12,SNR=8.1
INK Inuvik 31.27 40 P **P 09 31 44.8 +0.2**
comp=Z,2.0nm,0.7s,mb4.1,baz=277,slow=6.7,SNR=5.0
YKA Yellowknife Ar 40.56 45 P **P 09 33 04.8 +0.7**
comp=Z,1.9nm,0.7s,mb3.9,baz=298,slow=8.1,SNR=15
YKA Yellowknife Ar 40.56 45 P **P 09 33 04.8 +0.6**
NVAR Mina Array Bea 53.52 73 P **P 09 34 47.2 +1.7**
comp=Z,0.8nm,0.7s,mb3.8,baz=298,slow=6.3,SNR=7.2
PDAR Pinedale Array 55.10 64 P **P 09 34 58.6 +1.5**
comp=Z,0.8nm,0.7s,mb3.9,baz=342,slow=3.0,SNR=7.7
OBN Obninsk 61.74 328 *eP* **P 09 35 42.6 -0.6**
OBN pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
SCHQ Schefferville 63.10 30 P **P 09 35 51.0 -1.3**
comp=Z,2.4nm,0.6s,mb4.5,baz=14,slow=6.8,SNR=8.1
TXAR Lajitas Array 68.33 70 P **P 09 36 27.1 +0.6**
comp=Z,1.1nm,0.7s,mb4.0,baz=303,slow=4.3,SNR=15
ASAR Alice Springs 82.28 207 P **P 09 37 44.9 -1.5**
comp=Z,2.1nm,0.9s,mb4.1,baz=16,slow=4.4,SNR=7.3
ASAR Alice Springs 82.28 207 *eP* **P 09 37 46.8 +0.4**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
QSPA South Pole Qui 144.82 180 PKP PKPdf 09 44 57.8 -2.5
comp=Z,2.4nm,0.7s,baz=57,slow=0.8,SNR=7.8

IDC ***12*** *09:28:26.9±1.3, 34°.43N×73°.45E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.7/27, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=34.8km s-min=27.9km az=66.0*
ISCJB ***12*** *09:28:32.2±1.5, 34°.72N±0°.07×73°.6E±0°.1, h45km±13km, mb3.8/5, Error ellipse: s-maj=19.5km s-min=8.2km az=28.5*
ISC 12 09:28:33.4±1.4,**34°.64N**±0°.08×**73°.7E**±0°.1,**h45**km±13km,
n11,σ1º**06/14**,**mb3.8/5**,**1D**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.67**	**241**	P	**Pn**	**09 28 58.8**	**-1.3**
CEP				S	**Sn**	**09 29 21.0**	**+0.7**
KSH	**Kashi**	**5.20**	**20**	Pn	**Pn**	**09 29 49.4**	**+0.7**
KSH				Sn	**Sn**	**09 30 45.9**	**-1.5**
KSH				smax			
	comp=N,29nm,0.2s						
KSH				smax			
	comp=E,36nm,0.2s						
KK31	**Karatay Array**	**8.80**	**345**	P	**Pn**	**09 30 39.5**	**+1.5**
	comp=E,4.6nm,0.3s,baz=172,slow=13,SNR=40						
KK31				⇓S	**Sn**	**09 32 16.2**	**+0.5**
	comp=E,6.9nm,0.6s,baz=170,slow=22,SNR=11						
BVAR	**Borovoye Array**	**18.52**	**354**	P	**Pn**	**09 32 45.9**	**-0.5**
	comp=E,0.3nm,0.3s,baz=126,slow=2.0,SNR=3.6						
AKTO	**Aktyubinsk**	**19.48**	**329**	P	**Pn**	**09 32 56.9**	**-1.0**
	comp=E,0.4nm,0.3s,baz=140,slow=9.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**20.84**	**19**	P	**P**	**09 33 14.6**	**+3.5**
	comp=E,2.5nm,0.5s,baz=208,slow=1.1,SNR=4.4						
ARCES	**ARCESS Array B**	**43.69**	**338**	P	**P**	**09 36 34.4**	**+1.0**
	comp=E,3.1nm,0.9s,mb4.0,baz=102,slow=8.4,SNR=4.5						
NOA	**NORSAR Array B**	**47.16**	**324**	P	**P**	**09 36 59.6**	**-1.5**
	comp=E,0.7nm,0.7s,mb3.7,baz=103,slow=7.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**67.88**	**271**	P	**P**	**09 39 27.1**	**-0.4**
	comp=E,0.4nm,0.5s,mb3.8,baz=53,slow=5.7,SNR=9.4						
WRA	**Warramunga Arr**	**79.16**	**123**	P	**P**	**09 40 33.9**	**+0.2**
	comp=E,0.9nm,0.8s,mb3.8,baz=336,slow=7.1,SNR=4.9						
YKA	**Yellowknife Ar**	**82.97**	**4**	P	**P**	**09 40 54.0**	**+0.7**
	comp=E,0.6nm,0.8s,mb3.7,baz=344,slow=5.6,SNR=6.6						

ISCJB ***12*** *09:30:52.1±0.5, 32°.37N±0°.07×105°.37E±0°.09, h10km, mb4.0/13, Error ellipse: s-maj=11.5km s-min=9.2km az=137.4*
IDC ***12*** *09:30:52.5±0.8, 32°.07N×104°.83E, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/28, mbtmp4.0/12, Error ellipse: s-maj=35.6km s-min=14.8km az=56.0*
NEIC ***12*** *09:30:54.1±0.4, 32°.42N×105°.44E, h10km, mb4.3/2, Error ellipse: s-maj=13.9km s-min=7.8km az=59.0*
BJI ***12*** *09:30:55.2, 32°.15N×105°.21E, h8km, mb4.8/1, ML4.6/4, Ms5.1/3, Ms7 5.0/3*
ISC 12 09:30:54.5±0.5,**32°.41N**±0°.05×**105°.28E**±0°.08,**h10**km,**n25**,
σ0º**91/27**,**mb4.0/13**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.86**	**342**	*e*Pg	**Pg**	**09 32 08.3**	**-0.1**
LZH				Sg	**Sg**	**09 32 57.0**	**-1.4**
LZH				smax			
	comp=N,760nm,0.5s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,18μm,5.8s						
LZH				LR	LR		
	comp=Z,20μm,6.4s						
HHC	**Hu-ho-hao-te**	**9.82**	**29**	*e*P	**Pn**	**09 33 24.3**	**+8.6**
HHC				pP		09 33 27.5	
HHC				S	**Sn**	**09 35 19.0**	**+13**
HHC				sS		09 35 24.4	
HHC				SS		09 35 30.3	
HHC				pmax	pmax		
	comp=Z,42nm,1.2s						
HHC				LR	LR		
	comp=N,3μm,5.9s						
HHC				LR	LR		
	comp=E,5μm,4.4s						
HHC				LR	LR		
	comp=Z,4μm,5.3s						
GUN	**Gumba**	**17.36**	**260**	*e*P	**Pn**	**09 34 56.9**	**0.0**
	comp=Z,400nm,0.9s						
PKI	**Pulchoki**	**17.87**	**260**	*e*P	**Pn**	**09 35 03.2**	**0.0**
	comp=Z,573nm,1.1s						
PKIN	**Phulchoki**	**17.88**	**260**	*e*P	**Pn**	**09 35 03.8**	**+0.5**
	comp=Z,207nm,0.6s						
KKN	**Kakani**	**17.90**	**260**	*e*P	**Pn**	**09 35 03.7**	**+0.1**
	comp=Z,667nm,0.9s						
DMN	**Daman**	**18.11**	**260**	*e*P	**Pn**	**09 35 06.2**	**+0.1**
	comp=Z,650nm,1.0s						
KSRS	**Korea Array**	**19.22**	**69**	P	**Pn**	**09 35 22.6**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=259,slow=10,SNR=7.7						
MK31	**Makanchi Array**	**22.70**	**316**	*e*P	**P**	**09 35 56.0**	**-0.1**
MKAR	**Makanchi Array**	**22.70**	**316**	P	**P**	**09 35 55.4**	**-0.7**
	comp=Z,1.2nm,0.6s,mb3.5,baz=119,slow=10.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**09 36 27.4**	**-0.1**
	comp=Z,1.5nm,0.5s,mb3.8,baz=136,slow=9.4,SNR=3.9						
UCH	**Uchtor**	**26.23**	**301**	P	**P**	**09 36 32.3**	**+2.7**
	comp=Z,3.0nm,1.1s,mb3.7						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**09 36 33.8**	**-1.1**
	comp=Z,2.5nm,0.8s,mb3.8,baz=127,slow=9.7,SNR=2.8						
BVAR	**Borovoye Array**	**32.42**	**320**	P	**P**	**09 37 25.4**	**+1.1**
	comp=Z,0.9nm,0.7s,mb3.7,baz=128,slow=5.9,SNR=2.5						
ARCES	**ARCESS Array B**	**56.49**	**335**	P	**P**	**09 40 36.5**	**+0.2**
	comp=Z,2.8nm,0.9s,mb4.3,baz=83,slow=7.4,SNR=2.9						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	**P**	**09 40 53.6**	**-0.9**
WRA	**Warramunga Arr**	**59.02**	**148**	P	**P**	**09 40 54.1**	**-0.4**
	comp=Z,3.3nm,0.5s,mb4.6,baz=340,slow=7.5,SNR=13						
WB2	**Warramunga Arr**	**59.02**	**148**	*e*P	**P**	**09 40 54.1**	**-0.5**
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**09 41 14.5**	**-1.1**
	comp=Z,1.8nm,0.5s,mb4.5,baz=330,slow=6.5,SNR=13						
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**09 41 29.1**	**+0.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=163,slow=0.8,SNR=3.1						
INK	**Inuvik**	**70.60**	**20**	P	**P**	**09 42 13.6**	**+4.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=286,slow=7.1,SNR=7.5						
BFO	**Black Forest**	**70.80**	**315**	P	**P**	**09 42 11.3**	**+0.2**
	comp=Z,6.8nm,1.2s,mb4.5						
STKA	**Stephens Creek**	**72.57**	**148**	P	**P**	**09 42 20.6**	**-1.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=354,slow=6.4,SNR=5.1						
YKA	**Yellowknife Ar**	**80.16**	**18**	P	**P**	**09 43 05.1**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.7,baz=327,slow=5.2,SNR=6.4						
YKA	**Yellowknife Ar**	**80.16**	**18**	P	**P**	**09 43 05.1**	**+0.6**

IDC ***12*** *09:31:14.7±0.4, 31°.26N×103°.64E, h0km, mb4.6/28, mb1 4.7/30, mb1mx4.6/37, mbtmp4.6/30, ML4.3/2, MS5.6/1, Ms1 5.6/1, ms1mx4.1/57, Error ellipse: s-maj=15.9km s-min=10.2km az=51.0*
ISCJB ***12*** *09:31:14.7±0.2, 31°.21N±0°.03×103°.68E±0°.04, h10km, mb4.8/75, Error ellipse: s-maj=4.7km s-min=4.1km az=42.9*
BJI ***12*** *09:31:15.2, 31°.16N×103°.56E, h10km, mB5.4/4, mb4.8/18, ML4.8/8, Ms5.2/10, Ms7 5.1/9*
NEIC ***12*** *09:31:16.6±0.2, 31°.26N×103°.63E, h10km, mb4.7/22, Error ellipse: s-maj=6.0km s-min=5.0km az=46.0*
MOS ***12*** *09:31:17.2±1.1, 31°.20N×103°.66E, h29km, mb5.0/38, Error ellipse: s-maj=9.0km s-min=5.0km az=108.8*
DJA ***12*** *09:31:40, 30°.86N×103°.15E, h212km, mb4.7/11*
ISC 12 09:31:16.8±0.2,**31°.25N**±0°.03×**103°.66E**±0°.03,**h10**km,**n181**,
σ1º**10**/180,**mb4.8**/74,**8C-5D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.11**	**99**	*e*Pn	**Pn**	**09 32 33.4**	**-0.1**
	919nm,0.9s						
XAN	**Xi'an**	**5.24**	**57**	Pg	**Pg**	**09 32 53.0**	**-4.2**
XAN				Sg	**Sg**	**09 33 58.8**	**-6.4**
XAN				smax			
	comp=N,1μm,0.9s						
KMI	**Kunming**	**6.15**	**188**	Pn	**Pn**	**09 32 49.5**	**+1.7**
KMI				Sn	**Sn**	**09 34 02.9**	**+4.7**
KMI				smax			
	comp=N,410nm,1.6s						
KMI				smax			
	comp=E,440nm,1.5s						
KMI				LR	LR		
	comp=N,8μm,8.0s						
KMI				LR	LR		
	comp=E,16μm,9.2s						
KMI				LR	LR		
	comp=Z,9μm,16.1s						
GTA	**Gaotai**	**8.73**	**340**	*e*P	**Pn**	**09 33 26.4**	**+3.3**
GTA				pP		09 33 30.5	
GTA				sP		09 33 33.9	
GTA				S	**Sn**	**09 35 05.0**	**+3.4**
GTA				sS		09 35 10.4	
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				pmax	pmax		
	comp=Z,1μm,5.7s						
GTA				LR	LR		
	comp=N,9μm,19.0s						
GTA				LR	LR		
	comp=E,8μm,18.4s						
GTA				LR	LR		
	comp=Z,22μm,17.8s						
WHN	**Wuhan**	**9.21**	**92**	P	**Pn**	**09 33 29.0**	**-0.8**
WHN				LR	LR		
	comp=N,8μm,5.4s						
WHN				LR	LR		
	comp=E,18μm,7.4s						
BTO	**Baotou**	**10.67**	**27**	*e*P	Px	09 34 04.8	
BTO				S	**Sn**	**09 35 47.4**	**-1.7**
BTO				LR	LR		
	comp=N,47nm,1.7s						
BTO				LR	LR		
	comp=E,50nm,1.6s						
LSA	**Lhasa**	**10.90**	**265**	P	**Pn**	**09 33 53.7**	**+0.8**
LSA	**Lhasa**	**10.90**	**265**	*e*P	**Pn**	**09 33 53.8**	**+0.9**
LSA				pmax	pmax		
	comp=Z,52nm,0.8s						
LSA	**Lhasa**	**10.90**	**265**	*e*Pn	**Pn**	**09 33 53.8**	**+0.9**
	comp=Z,52nm,0.8s						
LSA	**Lhasa**	**10.90**	**265**	*e*Pn	**Pn**	**09 33 52.7**	**-0.2**
SHL	**Shillong**	**11.80**	**244**	*e*P	**Pn**	**09 34 04.0**	**-1.3**
SHL				*ex*	x	09 37 32.0	
NJ2	**Nanjing**	**12.98**	**82**	*e*P	**Pn**	**09 34 21.6**	**+0.3**
NJ2				pP		09 34 27.8	
NJ2				PP		09 34 31.4	
NJ2				sP		09 34 34.2	
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.9s						
NJ2				LR	LR		
	comp=N,5μm,14.7s						
NJ2				LR	LR		
	comp=E,5μm,10.2s						
NJ2				LR	LR		
	comp=Z,5μm,8.8s						
CHTO	**Chiang Mai**	**13.09**	**200**	*e*P	**Pn**	**09 34 22.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**13.09**	**200**	*e*Pn	**Pn**	**09 34 22.4**	**-0.5**
	comp=Z,20nm,0.8s						
CM31	**Chiang Mai Arr**	**13.43**	**200**	*e*Pn	**Pn**	**09 34 28.0**	**+0.5**
	comp=Z,24nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.43**	**200**	Pn	**Pn**	**09 34 27.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=11,slow=12,SNR=9.9						
CMAR	**Chiang Mai Arr**	**13.43**	**200**	Pn	**Pn**	**09 34 27.0**	**-0.5**
BJI	**Beijing**	**13.43**	**46**	P	**Pn**	**09 34 31.4**	**+4.0**
BJI				pmax	pmax		
	comp=Z,26nm,1.7s						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**09 35 11.0**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=187,slow=14,SNR=18						
ULN	**Ulaanbaatar**	**16.80**	**8**	*e*P	**Pn**	**09 35 12.6**	**+0.5**
ULN				pmax	pmax		
	comp=Z,45nm,1.0s						
ULN	**Ulaanbaatar**	**16.80**	**8**	*e*P	**Pn**	**09 35 12.6**	**+0.5**
	comp=Z,45nm,1.0s						
SSLB	**Suanglung**	**17.04**	**112**	*e*P	**Pn**	**09 35 18.1**	**+2.9**
	comp=Z,98nm,0.9s						
ZAK	**Zakamensk**	**19.12**	**359**	*e*P	**Pn**	**09 35 40.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
INCN	**Inchon**	**19.94**	**66**	*e*P	**Pn**	**09 35 50.0**	**-0.5**
	comp=Z,23nm,0.7s						
TLY	**Talaya**	**20.42**	**360**	*e*P	**P**	**09 35 56.4**	**+2.5**
TLY				pmax	pmax		
	comp=Z,37nm,2.1s						
TLY	**Talaya**	**20.42**	**360**	*e*P	**P**	**09 35 53.4**	**-0.5**
	comp=Z,86nm,1.8s						
MOY	**Mondy**	**20.50**	**355**	*e*P	**P**	**09 35 57.3**	**+2.5**
MOY				pmax	pmax		
	comp=Z,110nm,2.2s						
JOSI	**Joshimath**	**20.68**	**274**	*e*P	**P**	**09 35 56.9**	**-0.1**
KSRS	**Korea Array**	**20.94**	**66**	P	**P**	**09 36 00.5**	**+0.7**
	comp=Z,46nm,0.9s,baz=260,slow=10,SNR=40						
KSRS	**Korea Array**	**20.94**	**66**	P	**P**	**09 36 00.5**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,46nm,1.0s						
IRK	**Irkutsk**	**20.99**	**1**	*e*P	**P**	**09 36 02.0**	**+1.9**
IRK				pmax	pmax		
	comp=Z,118nm,1.4s						
CN2	**Changchun**	**21.27**	**48**	*e*P	**P**	**09 36 04.6**	**+1.3**
CN2				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.8						
HIA	**Hailar**	**21.71**	**29**	*e*P	**P**	**09 36 08.2**	**+0.3**
HIA				pmax	pmax		
	comp=Z,36nm,0.9s						
HIA	**Hailar**	**21.71**	**29**	*e*P	**P**	**09 36 08.2**	**+0.3**
	comp=Z,36nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**22.62**	**319**	*e*P	**P**	**09 36 18.3**	**+0.6**
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**09 36 18.2**	**+0.6**
	comp=Z,25nm,0.8s,mb4.7,baz=122,slow=12,SNR=38						
MKAR	**Makanchi Array**	**22.62**	**319**	*e*P	**P**	**09 36 18.2**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,25nm,0.8s						
AGRA	**Agra**	**22.77**	**266**	*e*P	**P**	**09 36 18.5**	**-1.0**
BISR	**Bishrakh**	**22.87**	**270**	*e*P	**P**	**09 36 20.6**	**+0.1**
KKR	**Kurukshetra**	**23.12**	**274**	*e*P	**P**	**09 36 22.7**	**-0.3**
AYAN	**Aya Nagar**	**23.15**	**270**	*e*P	**P**	**09 36 22.6**	**-0.9**
AYAN				AMb	AMB	09 36 26.0	
	comp=Z,55nm,1.6s,mb4.7						
SONA	**Sohna**	**23.25**	**269**	*e*P	**P**	**09 36 24.1**	**-0.4**
SONA				AMb	AMB	09 36 27.1	
	comp=Z,86nm,2.3s,mb4.8						
KSH	**Kashi**	**23.96**	**298**	P	**P**	**09 36 35.1**	**+3.8**
KSH				pmax	pmax		
	comp=Z,150nm,2.1s,mb5.0						
MDJ	**Mudanjiang**	**24.30**	**49**	P	**P**	**09 36 36.4**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb3.8						
MDJ	**Mudanjiang**	**24.30**	**49**	*e*P	**P**	**09 36 33.3**	**-1.0**
	comp=Z,42nm,1.0s,mb4.8						
KHET	**Khetri**	**24.38**	**270**	*e*P	**P**	**09 36 34.0**	**-1.2**
ULHL	**Ulahol**	**24.46**	**304**	P	**P**	**09 36 37.3**	**+1.5**
	SNR=22						
KZA	**Kyzart**	**25.11**	**303**	P	**P**	**09 36 44.0**	**+2.2**
	SNR=65						
TKM2	**Tokmak 2**	**25.12**	**306**	P	**P**	**09 36 43.4**	**+1.6**
	SNR=12						
KBK	**Karagaybulak**	**25.49**	**305**	P	**P**	**09 36 47.0**	**+1.8**
	SNR=15						
UCH	**Uchtor**	**25.68**	**303**	P	**P**	**09 36 48.8**	**+1.9**
	SNR=19						
UCH	**Uchtor**	**25.68**	**303**	*e*P	**P**	**09 36 48.4**	**+1.5**
	comp=Z,45nm,1.0s,mb5.0						
FRU	**Bishkek**	**25.78**	**305**	*e*P	**P**	**09 36 48.0**	**+0.2**
FRU				pmax	pmax		
	comp=Z,60nm,1.8s,mb4.8						
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**09 36 48.8**	**+0.8**
	SNR=20						
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**09 36 48.6**	**+0.6**
	comp=Z,26nm,0.8s,mb4.8,baz=107,slow=5.3,SNR=42						
AAK	**Ala-Archa**	**25.81**	**304**	⇓*i*P	**P**	**09 36 47.2**	**-0.9**
AAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.7						
USP	**Ospenovka**	**25.99**	**306**	P	**P**	**09 36 50.3**	**+0.6**
	SNR=14						
AML	**Almayashu**	**26.24**	**303**	P	**P**	**09 36 54.2**	**+2.2**
	SNR=23						
EKS2	**Erkin-Say**	**26.32**	**304**	P	**P**	**09 36 57.1**	**+4.4**
	SNR=9.5						
ZALV	**Zalesovo Beam**	**26.43**	**335**	P	**P**	**09 36 53.6**	**0.0**
	comp=Z,15nm,0.6s,mb4.7,baz=135,slow=9.4,SNR=34						
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**09 36 57.7**	**-0.2**
	comp=Z,32nm,0.8s,mb4.9,baz=129,slow=9.2,SNR=44						
KURK	**Kurchatov**	**26.91**	**324**	⇑*i*P	**P**	**09 36 57.4**	**-0.5**
KURK				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.0						
BOD	**Bodaibo**	**27.51**	**12**	*e*P	**P**	**09 37 04.0**	**+0.8**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
NVS	**Novosibirsk**	**27.71**	**334**	*e*P	**P**	**09 37 03.7**	**-1.3**
NVS				pmax	pmax		
	comp=N,22nm,1.6s						
NVS				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.5						
KLR	**Kul'dur**	**27.74**	**42**	*e*P	**P**	**09 37 03.2**	**-2.2**
MAT	**Matsushiro**	**29.06**	**70**	P	**P**	**09 37 18.8**	**+1.5**
MJAR	**Matsushiro Arr**	**29.06**	**70**	P	**P**	**09 37 16.5**	**-0.9**
	comp=Z,5.1nm,0.9s,mb4.2,baz=271,slow=11,SNR=4.8						
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**09 37 47.3**	**+0.4**
	comp=Z,6.8nm,0.7s,mb4.6,baz=114,slow=9.6,SNR=19						
BVAR				PcP	PcP	09 40 33.3	-0.7
	comp=Z,2.5nm,0.7s,baz=131,slow=4.1,SNR=4.9						
BRVK	**Borovoye**	**32.52**	**322**	⇓*i*P	**P**	**09 37 46.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
BRVK	**Borovoye**	**32.52**	**322**	*e*P	**P**	**09 37 47.4**	**-0.2**
	comp=Z,14nm,0.8s,mb4.9						
ASAJ	**Asahikawa**	**33.08**	**56**	P	**P**	**09 37 51.0**	**-1.6**
	comp=Z,6.9nm,1.1s,mb4.5,baz=186,slow=19,SNR=3.3						
ASAJ	**Asahikawa**	**33.08**	**56**	P	**P**	**09 37 51.1**	**-1.6**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ABKAR	**Akbulak array**	**37.29**	**312**	*e*P	**P**	**09 38 28.2**	**-0.7**
	comp=Z,3.8nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**38.76**	**313**	P	**P**	**09 38 40.4**	**-0.8**
AKTO	**Aktyubinsk**	**38.76**	**313**	P	**P**	**09 38 40.4**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.2,baz=89,slow=11,SNR=8.5						
SVE	**Sverdlovsk**	**39.16**	**324**	⇑*e*P	**P**	**09 38 45.9**	**+1.4**
SVE				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.0						
ARU	**Arti**	**40.09**	**322**	*d i*P	**P**	**09 38 51.1**	**-1.1**
ARU				S	**S**	**09 44 54.4**	**-3.7**
ARU				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.0						
ARU	**Arti**	**40.09**	**322**	*e*P	**P**	**09 38 50.9**	**-1.3**
	comp=Z,28nm,0.8s,mb5.0						
SOKR	**Solikamsk**	**42.07**	**326**	⇑*i*P	**P**	**09 39 10.1**	**+1.6**
SOKR				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.9						
TIXI	**Tiksi**	**42.69**	**11**	*e*P	**P**	**09 39 11.1**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
TIXI	**Tiksi**	**42.69**	**11**	*e*P	**P**	**09 39 12.6**	**-0.8**
	comp=Z,20nm,1.1s,mb4.8						
SEY	**Seymchan**	**44.16**	**30**	⇑*e*P	**P**	**09 39 27.1**	**+1.8**
PETK	**Petropavlovsk-**	**44.36**	**44**	P	**P**	**09 39 25.0**	**-2.1**
	comp=Z,2.2nm,0.6s,mb4.0,baz=289,slow=2.1,SNR=5.8						
GNI	**Garni**	**47.90**	**298**	⇑*e*P	**P**	**09 39 55.4**	**+0.2**
GNI				pmax	pmax		
	comp=Z,19nm,1.2s						
MIB	**Mutribah**	**48.08**	**284**	*e*P	**P**	**09 39 56.0**	**-0.7**
MIB				AMb	AMB	09 39 58.8	
	comp=Z,99nm,1.3s,mb5.7						
RDF	**Al-Radifah**	**48.16**	**282**	*e*P	**P**	**09 39 56.9**	**-0.5**
RDF				A

JOF	Joensuu	54.70	328	ep	P	09 40 44.5	-1.3
	comp=Z,8.3nm,0.6s,mb4.9						
KEV	Kevo	56.45	336	eP	P	09 40 57.0	-1.3
KEV				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
KEV	Kevo	56.45	336	ep	P	09 40 57.0	-1.3
	comp=Z,19nm,0.9s,mb5.1						
ARCES	ARCESS Array B	56.97	336	P	P	09 41 01.4	-0.6
	comp=Z,7.6nm,0.9s,mb4.7,baz=81,slow=7.9,SNR=7.9						
AKASG	Malin Array Be	57.01	313	P	P	09 41 01.4	-1.2
	comp=Z,4.2nm,0.5s,mb4.7,baz=71,slow=6.8,SNR=8.5						
AKASG	Malin Array Be	57.01	313	ceP	P	09 41 01.3	-1.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	57.01	313	P	P	09 41 01.4	-1.2
KAF	Kangasniemi	57.06	327	eP	P	09 41 01.6	-1.2
KAF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KAF	Kangasniemi	57.06	327	ep	P	09 41 01.6	-1.2
	comp=Z,6.0nm,0.7s,mb4.7						
FINES	FINESS Array B	57.24	326	P	P	09 41 03.0	-1.0
	comp=Z,2.5nm,0.6s,mb4.5,baz=102,slow=8.0,SNR=5.8						
EIL	Elat	58.34	288	P	P	09 41 11.6	-0.7
	comp=Z,16nm,1.1s,mb5.0,baz=59,slow=6.8,SNR=5.9						
WRA	Warramunga Arr	58.80	146	P	P	09 41 15.6	+0.1
	comp=Z,12nm,0.7s,mb5.0,baz=338,slow=7.6,SNR=5.5						
COEN	Coen	58.82	134	eP	P	09 41 15.4	-0.3
SPITS	Spitsbergen Ar	59.11	346	P	P	09 41 15.3	-1.6
	comp=Z,9.9nm,0.9s,mb4.8,baz=94,slow=11,SNR=4.2						
SPITS				LR	LR	10 10 09.3	
	comp=Z,5μm,19.9s,baz=345,slow=40						
SPITS	Spitsbergen Ar	59.11	346	P	P	09 41 15.3	-1.6
SPITS				LR	LR	10 10 09.3	
KOLS	Kolonicke sedl	61.80	312	eP	P	09 41 38.0	+2.3
KOLS				e		09 41 45.5	
KOLS	Kolonicke sedl	61.80	312	eP	P	09 41 38.0	+2.3
KOLS				e		09 41 45.5	
ASAR	Alice Springs	61.81	148	P	P	09 41 36.5	+0.6
	comp=Z,4.9nm,0.7s,mb4.7,baz=332,slow=6.5,SNR=15						
STHS	Stebnicka Huta	62.31	313	eP	P	09 41 42.6	+3.5
STHS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
STHS	Stebnicka Huta	62.31	313	eP	P	09 41 42.6	+3.5
	comp=Z,2.8nm,0.7s,mb4.5						
STHS	Stebnicka Huta	62.31	313	eP	P	09 41 42.6	+3.5
OJC	Ojcow	62.97	314	eP	P	09 41 43.8	+0.3
KECS	Kecovo	63.06	312	eP	P	09 41 44.9	+0.8
KECS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
KECS	Kecovo	63.06	312	eP	P	09 41 44.9	+0.8
	comp=Z,1.6nm,0.7s,mb4.3						
KECS	Kecovo	63.06	312	eP	P	09 41 44.9	+0.8
VYHS	Vyhne	64.10	313	eP	P	09 41 51.4	+0.4
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
VYHS	Vyhne	64.10	313	eP	P	09 41 51.4	+0.4
	comp=Z,3.3nm,1.1s,mb4.3						
VYHS	Vyhne	64.10	313	eP	P	09 41 51.4	+0.4
OKC	Ostrava-Krasne	64.10	314	eP	P	09 41 53.1	+2.1
IDI	Anoyia	64.32	297	P	P	09 41 51.3	-1.4
	comp=Z,12nm,0.6s,mb5.1,baz=30,slow=8.8,SNR=10.0						
NB2	NORSAR Subarra	64.33	327	P	P	09 41 50.6	-1.7
	comp=Z,3.3nm,0.7s,mb4.5,baz=74,slow=6.5						
NOA	NORSAR Array B	64.33	327	P	P	09 41 50.8	-1.5
	comp=Z,3.3nm,0.8s,mb4.4,baz=72,slow=6.4,SNR=5.2						
DPC	Dobruska-Polom	65.05	315	eP	P	09 41 58.6	+1.4
NWAO	Narrogin (SRO)	65.10	167	P	P	09 41 57.8	+0.2
	comp=Z,12nm,0.8s,mb5.0,baz=324,slow=11,SNR=4.0						
UPC	Upice	65.18	315	eP	P	09 41 59.7	+1.6
CTA	Charters Tower	65.39	136	P	P	09 41 60.0	+0.2
	comp=Z,9.1nm,0.7s,mb5.0						
FORT	Forrest	65.89	157	eP	P	09 42 03.5	+0.8
	comp=Z,11nm,0.7s,mb5.0						
BRG	Berggiesshubel	66.30	316	eP	P	09 42 05.8	+0.6
	comp=Z,5.5nm,1.0s,mb4.5						
BRG	Berggiesshubel	66.30	316	eP	P	09 42 05.8	+0.6
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CLL	Collm	66.69	317	eP	P	09 42 08.0	+0.2
CLL				e		09 42 13.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
CLL	Collm	66.69	317	eP	P	09 42 08.0	+0.2
	comp=Z,9.0nm,1.3s,mb4.6						
CLL				e		09 42 13.0	
CLL	Collm	66.69	317	eP	P	09 42 08.0	+0.2
	comp=Z,9.0nm,1.3s,mb4.6						
CLL				epP	pP	09 42 13.0	+2.0
KHC	Kasperske Hory	67.14	315	eP	P	09 42 11.2	+0.5
GERES	GERESS Array B	67.17	314	P	P	09 42 10.4	-0.5
	comp=Z,2.2nm,0.9s,mb4.2,baz=62,slow=6.2,SNR=8.4						
MOX	Moxa	67.75	317	eP	P	09 42 14.5	0.0
GRA1	Grafenberg Arr	68.36	316	eP	P	09 42 18.6	+0.3
	comp=Z,6.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	68.36	316	eP	P	09 42 18.6	+0.3
GRF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GRF	Grafenberg Arr	68.36	316	eP	P	09 42 18.6	+0.3
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	68.36	316	eP	P	09 42 18.6	+0.3
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	68.36	316	eP	P	09 42 18.6	+0.3
	comp=Z,6.0nm,1.2s,mb4.5						
BBOO	Buckleboo	70.69	151	eP	P	09 42 32.7	-0.1
	comp=Z,4.7nm,1.1s,mb4.3						
KDAK	Kodiak Island	70.93	33	P	P	09 42 33.8	-0.3
	comp=Z,9.9nm,0.6s,mb4.9,baz=152,slow=3.9,SNR=5.7						
KDAK	Kodiak Island	70.93	33	ceP	P	09 42 34.0	0.0
CDF	Champ du Feu	71.25	316	eP	P	09 42 35.1	-1.0
	comp=Z,6.9nm,0.7s,mb4.4						
CDF	Champ du Feu	71.25	316	eP	P	09 42 35.1	-1.0
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CDF	Champ du Feu	71.25	316	eP	P	09 42 35.1	-1.0
	comp=Z,3.5nm,0.7s,mb4.4						
RMQ	Roma	71.77	138	eP	P	09 42 40.8	+1.4
	comp=Z,6.1nm,0.5s,mb4.8						
INK	Inuvik	72.15	19	P	P	09 42 41.3	+0.1
	comp=Z,7.8nm,0.8s,mb4.7,baz=332,slow=8.1,SNR=18						
STKA	Stephens Creek	72.33	147	eP	P	09 42 42.9	+0.2
	comp=Z,3.9nm,0.6s,mb4.5						
STKA	Stephens Creek	72.33	147	P	P	09 42 43.0	+0.2
	comp=Z,4.8nm,0.5s,mb4.7,baz=324,slow=5.7,SNR=17						
LPG	La Plagne	72.87	313	eP	P	09 42 45.8	-0.1
	comp=Z,28nm,0.9s,mb4.9						
LPG	La Plagne	72.87	313	eP	P	09 42 45.8	-0.1
LPG				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
LPG	La Plagne	72.87	313	eP	P	09 42 45.8	-0.1
	comp=Z,14nm,0.9s,mb4.9						
SMF	Signal de Mont	74.13	315	eP	P	09 42 52.2	-1.1
	comp=Z,19nm,1.0s,mb4.7						
SMF	Signal de Mont	74.13	315	eP	P	09 42 52.2	-1.1
SMF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SMF	Signal de Mont	74.13	315	eP	P	09 42 52.2	-1.1
	comp=Z,9.6nm,1.0s,mb4.7						
TCF	Toulx Ste Croi	75.28	315	eP	P	09 42 59.3	-0.7
	comp=Z,7.8nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	75.28	315	eP	P	09 42 59.3	-0.7
TCF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	75.28	315	eP	P	09 42 59.3	-0.7
	comp=Z,3.9nm,0.8s,mb4.4						
KEST	Kesra	75.66	303	P	P	09 43 06.2	+3.9
	comp=Z,2.3nm,0.6s,mb4.3,baz=90,slow=17,SNR=7.0						
CAF	Calviac	76.06	314	eP	P	09 43 04.0	-0.5
ARPS	Mount Arapiles	76.53	149	eP	P	09 43 07.3	+0.3
	comp=Z,11nm,0.6s,mb5.0						
SFJD	Kangerlussuaq	80.14	350	eP	P	09 43 25.9	-0.8
SFJD				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SFJD	Kangerlussuaq	80.14	350	iP	P	09 43 25.9	-0.8
	comp=Z,8.9nm,0.8s,mb4.8						
YKA	Yellowknife Ar	81.67	17	P	P	09 43 34.6	-0.4
	comp=Z,1.9nm,0.8s,mb4.1,baz=327,slow=4.9,SNR=12						
TORD	Torodi Ar. Bea	93.23	287	P	P	09 44 30.8	-1.2
	comp=Z,1.6nm,0.8s,mb4.5,baz=58,slow=4.2,SNR=8.1						
TORD				PP	PP	09 48 11.0	-4.4
	comp=Z,1.3nm,1.1s,baz=29,slow=3.4,SNR=3.6						
TXAR	Lajitas Array	114.39	26	PKP	PKiKP	09 49 56.8	-0.5
	comp=Z,0.1nm,0.5s,baz=1.9,slow=2.7,SNR=3.0						
QSPA	South Pole Qui	121.02	180	PKP	PKPdf	09 50 07.3	-1.1
	comp=Z,1.7nm,0.6s,baz=265,slow=0.2,SNR=22						
SDV	Santo Domingo	139.72	351	PKhKP		09 50 41.3	
	baz=45,slow=7.1						
CPUP	Villa Florida	162.63	282	PKP	PKPdf	09 51 18.1	-1.3
	comp=Z,0.2nm,0.4s,baz=282,slow=20,SNR=2.2						
PLCA	Paso Flores	169.44	205	PKPab	PKPab	09 52 34.7	-2.5
	comp=Z,1.7nm,0.9s,baz=103,slow=8.2,SNR=3.8						

ISCJB ***12*** *09:32:08.9±0.4, 6°.78N±0°.05×72°.98W±0°.05, h168km±5km, mb3.6/6, Error ellipse: s-maj=9.7km s-min=5.9km az=135.4*

NEIC ***12*** *09:32:10.0±0.8, 6°.73N×73°.08W, h164km±9km, mb4.5/4, Error ellipse: s-maj=13.1km s-min=10.2km az=126.0*

IDC ***12*** *09:32:09.2±0.7, 6°.74N×72°.96W, h157km±8km, mb3.5/6, mb1 3.7/11, mb1mx3.5/25, mbtmp3.6/11, MS4.1/2, Ms1 4.1/2, ms1mx4.1/32, Error ellipse: s-maj=17.3km s-min=7.2km az=132.0*

FUNV ***12*** *09:32:10.1, 6°.73N×73°.09W, h165km, MW4.0*

ISC 12 09:32:09.9±0.4, 6°.77N±0°.05×72°.97W±0°.05, h162km±5km, n37, σ0s87/42, mb3.6/6, 1C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.27	31	⇓iP	Pn	09 32 39.1	+0.9
CAPV				eS	Sn	09 33 00.2	+0.3
ROSC	El Rosal	2.33	216	P	Pn	09 32 50.7	+1.1
	191nm,0.3s,baz=286,slow=20,SNR=442						
ROSC				S	Sn	09 33 19.5	-0.9
	235nm,0.3s,baz=86,slow=18,SNR=8.7						
ROSC				LR	LR	09 33 21.8	
	comp=Z,2μm,19.3s,baz=173,slow=31						
SOCV	Socops	2.58	54	⇓iP	Pn	09 32 53.7	+1.1
SOCV				eS	Sn	09 33 25.4	-0.2
VIGV	El Vigia	2.60	38	⇓iP	Pn	09 32 53.5	+0.7
VIGV				eS	Sn	09 33 25.4	-0.7
SDV	Santo Domingo	3.13	48	P	Pn	09 33 00.5	+1.1
	83nm,0.3s,baz=241,slow=6.9,SNR=647						
SDV				S	Sn	09 33 37.4	-0.4
	67nm,0.3s,baz=105,slow=19,SNR=26						
SDV				LR	LR	09 33 59.8	
	comp=Z,7μm,18.8s,baz=239,slow=35						
ELOV	Elorza	3.47	86	⇓iP	Pn	09 33 05.2	+1.5
VIRV	Villa del Rosa	3.75	8	⇑iP	Pn	09 33 06.1	-1.2
VIRV				eS	Sn	09 33 49.4	-2.6
QARV	Quebrada Arrib	4.19	35	⇓iP	Pn	09 33 13.5	+0.6
SANV	Sanarito	4.35	51	⇓iP	Pn	09 33 15.2	+0.2
CURV	Curarigua	4.39	42	⇓iP	Pn	09 33 15.8	+0.3
DABV	Dabajuro	4.73	29	⇓iP	Pn	09 33 20.5	+0.5
TEPV	Terepaima	4.90	49	⇓iP	Pn	09 33 22.6	+0.4
SIQV	Siquisique	4.96	39	eP	Pn	09 33 22.9	-0.1
BAUV	El Baul	5.34	66	⇓iP	Pn	09 33 27.1	-0.9
MONV	Montecano	5.94	30	eP	Pn	09 33 35.3	-0.6
TURV	Turiamo	6.25	54	eP	Pn	09 33 39.6	-0.4
CAOV	Caicara del Or	6.62	85	eP	Pn	09 33 44.0	-0.9
MERV	Las Mercedes	7.05	69	⇓eP	Pn	09 33 49.7	-1.0
BCIP	Isla Barro Col	7.21	290	ePn	Pn	09 33 48.2	-4.6
	15nm,0.6s						
BIRV	Birongo	7.58	60	eP	Pn	09 33 56.8	-0.8
CUPV	Cepira	7.82	65	eP	Pn	09 34 00.1	-0.7
OTAV	Otavalo	8.48	220	ePn	Pn	09 34 08.6	-1.1
	6.1nm,0.8s						
PCRV	Puerto La Cruz	8.91	67	P	Pn	09 34 16.3	+1.0
	1.9nm,0.3s,baz=230,slow=9.6,SNR=11						
PCRV				S	Sn	09 35 50.2	-4.4
	baz=30,slow=3.0,SNR=1.9						
PCRV	Puerto La Cruz	8.91	67	eP	Pn	09 34 15.7	+0.4
MTDJ	Mount Denham	12.23	339	ePn	Pn	09 35 00.3	+1.5
	37nm,0.4s						
SDDR	Presa de Saban	12.25	8	Pn	Pn	09 35 00.6	+1.5
	11nm,0.6s						
JTS	JuntasAbangare	12.36	287	P	Pn	09 35 00.8	+0.3
	1.5nm,0.3s,baz=40,slow=3.7,SNR=14						
APG	El Apazote	19.02	297	P	P	09 36 18.8	-0.8
	0.2nm,0.3s,baz=103,slow=10,SNR=4.6						
LPAZ	La Paz	23.40	168	P	P	09 37 04.6	+0.2
	0.4nm,0.3s,mb3.3,baz=323,slow=10,SNR=4.7						
LPAZ	La Paz	23.40	168	P	P	09 37 04.6	+0.2
TXAR	Lajitas Array	36.61	312	P	P	09 39 00.8	+0.1
	0.2nm,0.4s,mb3.1,baz=127,slow=9.1,SNR=9.6						
ULM	Lac du Bonnet	47.39	340	P	P	09 40 27.1	-0.4
	2.1nm,0.4s,mb4.2,baz=146,slow=7.9,SNR=7.6						
SCHQ	Schefferville	48.18	5	P	P	09 40 34.4	+0.8
	2.1nm,0.8s,mb3.8,baz=77,slow=10,SNR=5.4						
PDAR	Pinedale Array	48.21	324	P	P	09 40 33.4	-0.7
	0.5nm,0.6s,mb3.4,baz=124,slow=7.6,SNR=3.9						
YKA	Yellowknife Ar	63.37	340	P	P	09 42 21.5	0.0
	2.0nm,0.6s,mb4.1,baz=132,slow=6.7,SNR=35						
ASAR	Alice Springs	149.20	234	PKPbc	PKPbc	09 51 39.6	-0.5
	0.4nm,0.5s,baz=120,slow=3.2,SNR=4.3						
WRA	Warramunga Arr	150.44	241	PKPbc	PKPbc	09 51 42.7	-0.4
	0.4nm,0.3s,baz=106,slow=2.9,SNR=6.0						

IDC 12 09:34:51.7±2.4, 30°.77N×103°.09E, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.8/24, mbtmp4.1/5, Error ellipse: s-maj=69.1km s-min=33.3km az=97.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.58	65	P	P	09 39 42.6	-0.4
	2.9nm,0.8s,baz=251,slow=10.0,SNR=3.3						
WRA	Warramunga Arr	58.69	145	P	P	09 44 51.5	+0.3
	0.7nm,0.3s,baz=328,slow=9.1,SNR=5.6						
ASAR	Alice Springs	61.67	148	P	P	09 45 12.1	+0.6
	1.7nm,0.9s,baz=330,slow=6.2,SNR=4.0						
STKA	Stephens Creek	72.21	146	P	P	09 46 18.1	-0.5
	1.3nm,0.6s,baz=312,slow=6.4,SNR=3.8						
YKA	Yellowknife Ar	82.27	17	P	P	09 47 14.4	-0.3
	0.4nm,0.5s,baz=326,slow=4.5,SNR=3.6						

IDC 12 09:36:46.0±1.8, 31°.78N×104°.54E, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.7/26, mbtmp4.0/5, Error ellipse: s-maj=66.1km s-min=28.0km az=84.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.03	67	P	P	09 41 20.3	-0.1
	3.2nm,0.6s,baz=256,slow=11,SNR=5.9						
WRA	Warramunga Arr	58.83	147	P	P	09 46 45.9	-0.5
	1.0nm,0.4s,baz=328,slow=9.0,SNR=4.7						
ASAR	Alice Springs	61.88	149	P	P	09 47 08.1	+0.9
	0.4nm,0.4s,baz=335,slow=6.6,SNR=3.5						
INK	Inuvik	71.39	19	P	P	09 48 07.0	-0.4
	1.1nm,0.5s,baz=315,slow=6.2,SNR=8.8						
YKA	Yellowknife Ar	80.93	17	P	P	09 49 02.1	+0.3
	0.8nm,0.5s,baz=327,slow=5.1,SNR=12						

IDC 12 09:41:17.8±14.0, 32°.28N×104°.79E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/24, mbtmp3.9/4, Error ellipse: s-maj=375.5km s-min=53.5km az=19.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.50	317	P	P	09 46 19.3	+0.5
	1.2nm,0.7s,baz=126,slow=11,SNR=3.5						
ZALV	Zalesovo Beam	25.94	333	P	P	09 46 51.5	0.0
	2.4nm,0.5s,baz=127,slow=10,SNR=4.5						
ARCES	ARCESS Array B	56.44	335	P	P	09 51 00.2	-0.5
	6.4nm,1.1s,baz=63,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	80.41	17	P	P	09 53 31.1	+0.3
	0.2nm,0.5s,baz=321,slow=4.5,SNR=3.2						

ISCJB ***12*** *09:42:00.9±0.3, 31°.31N±0°.05×103°.96E±0°.08, h10km, mb4.5/32, Error ellipse: s-maj=11.0km s-min=6.3km az=157.7*

IDC ***12*** *09:42:00.9±0.6, 31°.27N×103°.90E, h0km, mb4.4/20, MS5.4/1, Ms1 5.4/1, ms1mx4.0/56, Error ellipse: s-maj=25.5km s-min=12.9km az=53.0*

NEIC ***12*** *09:42:02.6±0.3, 31°.32N×103°.99E, h10km, mb4.5/10, Error ellipse: s-maj=11.8km s-min=6.2km az=63.0*

MOS ***12*** *09:42:02.1±0.8, 31°.26N×103°.88E, h19km, mb4.9/11, Error ellipse: s-maj=19.2km s-min=8.8km az=116.5*

BGS ***12*** *09:42:09.8±1.6, 30°.53N×104°.73E, h10km, mb5.3*

ISC 12 09:42:03.0±0.3, 31°.34N±0°.04×103°.97E±0°.07, h10km, n67, σ0s89/67, mb4.5/32, 15C, Ukrainian

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.47	203	Pg	Sg	09 42 20.2	+1.9
CD2	Chengdu	0.47	203	Pg	Sg	09 42 20.2	+1.9
GYA	Guiyang	5.41	153	Pg	Pg	09 43 48.7	+2.1
GYA				Sg	Sg	09 44 54.9	-1.7
GYA				smax			
	comp=N,8μm,1.0s						
GYA				smax			
	comp=E,7μm,1.2s						
KMI	Kunming	6.29	190	P	Pn	09 43 36.0	+0.2
KMI				pmax	pmax		
	comp=Z,35nm,0.7s						
BTO	Baotou	10.46	26	eP	Pn	09 44 27.7	-5.3
BTO				LR	LR		
	comp=E,87nm,0.7s						
BTO				LR	LR		
	comp=N,130nm,1.1s						
CMAR	Chiang Mai Arr	13.61	201	Pn	Pn	09 45 16.1	-0.1
	comp=N,0.2nm,0.3s,baz=13,slow=12,SNR=7.1						
ZAK	Zakamensk	19.03	359	eP	Pn	09 46 29.0	+3.3
ZAK				pmax	pmax		
	comp=Z,65nm,1.5s						
KSRS	Korea Array	20.66	66	P	P	09 46 44.5	+1.6
	comp=Z,5.6nm,0.7s,baz=262,slow=11,SNR=14						
KSRS	Korea Array	20.66	66	P	P	09 46 44.5	+1.7
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CN2	Changchun	21.01	48	eP	P	09 46 48.8	+2.2
MKAR	Makanchi Array	22.73	319	P	P	09 47 06.0	+1.1
	comp=Z,15nm,1.1s,mb4.3,baz=134,slow=10,SNR=11						
MKAR				LR	LR	09 57 19.1	
	comp=Z,8μm,19.2s,baz=269,slow=40						
UCH	Uchtor	25.86	303	P	P	09 47 36.3	+1.6
	comp=Z,8.9nm,1.1s,mb4.2						
ZAA0	Zalesovo Array	26.46	334	eP	P	09 47 40.4	+0.4
ZALV	Zalesovo Beam	26.46	334	P	P	09 47 40.8	+0.8
	comp=Z,8.6nm,0.7s,mb4.4,baz=134,slow=8.9,SNR=13						
KURK	Kurchatov	26.99	323	P	P	09 47 45.2	+0.4
	comp=Z,8.0nm,0.9s,mb4.2,baz=130,slow=9.1,SNR=17						
KURK	Kurchatov	26.99	323	P	P	09 47 45.2	+0.4
BVAR	Borovoye Array	32.54	322	P	P	09 48 34.4	+0.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=134,slow=8.5,SNR=4.7						
ABKAR	Akbulak array	37.43	311	eP	P	09 49 16.0	-0.2
	comp=Z,2.3nm,0.8s,mb4.1						
AKTK	Aktyubinsk	38.89	313	P	P	09 49 28.8	+0.3
AKTO	Aktyubinsk	38.89	313	P	P	09 49 28.8	+0.3
	comp=Z,1.0nm,0.5s,mb3.8,baz=97,slow=12,SNR=4.5						
ARU	Arti	40.18	322	eP	P	09 49 38.9	-0.2
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ARU	Arti	40.18	322	eP	P	09 49 38.9	-0.2
	comp=Z,8.1nm,0.8s,mb4.5						
VSR	Storozhevoye	50.84	313	eP	P	09 51 03.1	-0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VSR				pmax	pmax		
	comp=N,5.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
JOF	Joensuu	54.77	328	eP	P	09 51 31.5	-1.0
JOF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
JOF	Joensuu	54.77	328	ep	P	09 51 31.5	-1.0
	comp=Z,4.9nm,0.5s,mb4.8						
KEV	Kevo	56.47	336	eP	P	09 51 44.3	-0.3
KEV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
KEV	Kevo	56.47	336	ep	P	09 51 44.3	-0.3
	comp=Z,7.9nm,0.6s,mb4.9						
BRTR	Keskin Array B	56.53	299	P	P	09 51 45.2	-0.3
	comp=Z,1.5nm,0.9s,mb4.0,baz=98,slow=7.6,SNR=5.3						
ARCES	ARCESS Array B	57.00	336	P	P	09 51 48.5	+0.2
	comp=Z,6.1nm,0.8s,mb4.7,baz=80,slow=7.3,SNR=14						
FINES	FINESS Array B	57.31	326	P	P	09 51 50.4	-0.3
	comp=Z,5.5nm,0.8s,mb4.6,baz=94,slow=6.1,SNR=5.9						
WRAB	Tennant Creek	58.73	146	eP	P	09 52 00.8	-0.3
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
WRAB	Tennant Creek	58.73	146	eP	P	09 52 00.8	-0.3
	comp=Z,13nm,0.6s,mb5.1						
WRA	Warramunga Arr	58.73	146	P	P	09 52 00.6	-0.5
	comp=Z,10.0nm,0.6s,mb5.0,baz=338,slow=7.8,SNR=28						
WRA	Warramunga Arr	58.73	146	P	P	09 52 00.6	-0.5
WRA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WB2	Warramunga Arr	58.74	146	eP	P	09 52 00.9	-0.2
ASAR	Alice Springs	61.75	149	P	P	09 52 21.4	-0.3
	comp=Z,2.2nm,0.7s,mb4.4,baz=329,slow=6.4,SNR=13						
HFS	Hagfors	63.51	326	P	P	09 52 32.6	-0.5
	comp=Z,4.3nm,0.7s,mb4.6,baz=103,slow=6.2,SNR=1.4						
NB2	NORSAR Subarra	64.40	327	P	P	09 52 37.8	-1.1
	comp=Z,2.1nm,0.5s,mb4.4,baz=72,slow=6.5						
NOA	NORSAR Array B	64.40	327	P	P	09 52 37.9	-1.0
	comp=Z,2.6nm,0.5s,mb4.5,baz=73,slow=6.6,SNR=9.8						
NOA	NORSAR Array B	64.40	327	P	P	09 52 37.9	-1.0
CLL	Collm	66.81	317	e

China
DJA 12 09:42:33, 31.36N×103.96E, h67km, Mw6.5/16
ISC 12 09:42:26.3±0.8, 31.52N±0.02×104.05E±0.02, h18km±4km, h16km±.6km: pP-P, n803, σ0.82/795, mb5.4/260, MS4.9/5, 175C-54D, Sichuan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**202**	Sg	**Sg**	**09 42 47.6**	**-0.4**
CD2				smax			
	comp=N,15μm,0.4s						
CD2	**Chengdu**	**0.66**	**202**	Sg	**Sg**	**09 42 47.6**	**-0.4**
CD2				smax			
	comp=N,15μm,0.4s						
LZH	**Lanzhou**	**4.56**	**358**	Pn	**Pn**	**09 43 37.4**	**+3.0**
LZH				Sn	**Sn**	**09 44 32.1**	**+5.2**
LZH				Sg	**Sg**	**09 44 51.8**	**-0.9**
LZH				smax			
	comp=N,5μm,1.0s						
LZH				smax			
	comp=E,4μm,0.8s						
LZH				LR	LR		
	comp=N,19μm,7.8s						
LZH				LR	LR		
	comp=Z,22μm,8.6s						
XAN	**Xi'an**	**4.81**	**57**	Pg	**Pg**	**09 43 52.9**	**-5.6**
XAN				Sg	**Sg**	**09 44 47.6**	**-13**
XAN				smax			
	comp=N,9μm,0.9s						
XAN				smax			
	comp=E,1μm,0.9s						
ENH	**Enshi**	**4.84**	**103**	*e*Pn	**Pn**	**09 43 39.3**	**+1.1**
KMI	**Kunming**	**6.47**	**191**	Pn	**Pn**	**09 44 02.2**	**+1.5**
KMI				Sn	**Sn**	**09 45 14.9**	**+0.8**
KMI				smax			
	comp=N,760nm,1.3s						
KMI				smax			
	comp=E,760nm,1.2s						
KMI				LR	LR		
	comp=N,9μm,10.1s						
KMI				LR	LR		
	comp=E,9μm,9.4s						
GTA	**Gaotai**	**8.60**	**338**	*e*P	**Pn**	**09 44 30.8**	**+1.0**
GTA				pP		09 44 35.2	
GTA				sP		09 44 38.6	
GTA				S	**Sn**	**09 46 10.0**	**+3.8**
GTA				sS		09 46 16.2	
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,13μm,6.5s						
GTA				LR	LR		
	comp=N,9μm,14.3s						
GTA				LR	LR		
	comp=E,13μm,13.4s						
GTA				LR	LR		
	comp=Z,18μm,14.0s						
WHN	**Wuhan**	**8.89**	**94**	P	**Pn**	**09 44 34.6**	**+0.7**
WHN				S	**Sn**	**09 46 08.7**	**-4.9**
WHN				LR	LR		
	comp=N,35μm,8.9s						
WHN				LR	LR		
	comp=E,19μm,9.7s						
WHN				LR	LR		
	comp=Z,20μm,8.3s						
HHC	**Hu-ho-hao-te**	**11.11**	**31**	*e*P	**Pn**	**09 45 07.2**	**+3.0**
HHC				pP		09 45 14.3	
HHC				sP		09 45 19.1	
HHC				S	**Sn**	**09 47 12.3**	**+4.3**
HHC				sS		09 47 23.6	
HHC				SS		09 47 27.2	
HHC				pmax	pmax		
	comp=Z,41nm,1.3s						
HHC				LR	LR		
	comp=N,5μm,5.6s						
HHC				LR	LR		
	comp=E,4μm,6.3s						
HHC				LR	LR		
	comp=Z,5μm,7.0s						
IMP	**Imphal**	**11.16**	**236**	*e*P	**Pn**	**09 45 03.0**	**-2.0**
LSA	**Lhasa**	**11.26**	**264**	P	**Pn**	**09 45 08.3**	**+2.0**
LSA				pmax	pmax		
	comp=Z,50nm,0.8s						
LSA	**Lhasa**	**11.26**	**264**	*e*P	**Pn**	**09 45 09.0**	**+2.7**
LSA				pmax	pmax		
	comp=Z,57nm,0.6s						
LSA	**Lhasa**	**11.26**	**264**	*e*Pn	**Pn**	**09 45 09.0**	**+2.7**
	comp=Z,57nm,0.6s						
GZH	**Guangzhou**	**11.78**	**133**	P	**Pn**	**09 45 07.3**	**-6.1**
GZH				S	**Sn**	**09 47 17.0**	**-7.5**
GZH				LR	LR		
	comp=N,14μm,22.0s						
GZH				LR	LR		
	comp=E,11μm,19.9s						
TIA	**Tai'an**	**11.83**	**63**	P	**Pn**	**09 45 13.9**	**-0.2**
TIA				pmax	pmax		
	comp=Z,54nm,0.8s						
SHL	**Shillong**	**12.22**	**244**	*e*P	**Pn**	**09 45 18.0**	**-1.5**
SHL				*i* x	x	09 48 59.0	
NJ2	**Nanjing**	**12.61**	**84**	*e*P	**Pn**	**09 45 24.5**	**-0.3**
NJ2				pP		09 45 30.6	
NJ2				PP		09 45 33.2	
NJ2				sP		09 45 37.1	
NJ2				S	**Sn**	**09 47 46.2**	**+1.4**
NJ2				sS		09 47 57.1	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.5s						
NJ2				LR	LR		
	comp=N,1μm,10.1s						
NJ2				LR	LR		
	comp=E,5μm,10.4s						
NJ2				LR	LR		
	comp=Z,3μm,11.2s						
BJT	**Baijiatuau**	**12.98**	**46**	P	**Pn**	**09 45 29.4**	**-0.4**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BJT	**Baijiatuau**	**12.98**	**46**	Pn	**Pn**	**09 45 29.4**	**-0.4**
	comp=Z,4.1nm,0.4s						
BJI	**Beijing**	**13.00**	**46**	P	**Pn**	**09 45 28.4**	**-1.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	**Chiang Mai**	**13.46**	**201**	*e*P	**Pn**	**09 45 37.8**	**+1.3**
CHTO	**Chiang Mai**	**13.46**	**201**	Pn	**Pn**	**09 45 38.7**	**+2.2**
	SNR=18						
CHTO				Pn	**Pn**	**09 45 38.7**	**+2.2**
	SNR=18						
CHTO	**Chiang Mai**	**13.46**	**201**	P	**Pn**	**09 45 38.7**	**+2.2**
	SNR=18						
CHTO				P		09 45 38.7	
	SNR=18						
QIZ	**Qiongzhong**	**13.49**	**156**	P	**Pn**	**09 45 36.0**	**-0.9**
QIZ				S	**Sn**	**09 48 08.5**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,63nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,13μm,19.1s						
QIZ				LR	LR		
	comp=N,8μm,15.6s						
QIZ				LR	LR		
	comp=Z,19μm,18.6s						
QIZ	**Qiongzhong**	**13.49**	**156**	*e*Pn	**Pn**	**09 45 35.4**	**-1.5**
	comp=Z,124nm,1.0s						
CM31	**Chiang Mai Arr**	**13.80**	**201**	*e*Pn	**Pn**	**09 45 42.7**	**+1.6**
CMAR	**Chiang Mai Arr**	**13.80**	**201**	Pn	**Pn**	**09 45 42.2**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=12,slow=10,SNR=21						
QZH	**Quanzhou**	**14.39**	**113**	*e*P	**Pn**	**09 45 51.5**	**+2.4**
QZH				S	**Sn**	**09 48 33.6**	**+5.3**
QZH				LR	LR		
	comp=N,8μm,11.0s						
QZH				LR	LR		
	comp=E,16μm,12.8s						
QZH				LR	LR		
	comp=Z,25μm,11.7s						
SSE	**Sheshan**	**14.66**	**87**	*e*P	**Pn**	**09 45 51.3**	**-1.5**
SSE				pmax	pmax		
	comp=Z,30nm,0.5s						
SSE				pmax	pmax		
	comp=Z,2μm,12.0s						
GUN	**Gumba**	**16.19**	**262**	*e*P	**Pn**	**09 46 11.6**	**-1.3**
	comp=Z,570nm,0.8s						
SONM	**Songino Array**	**16.39**	**6**	Pn	**Pn**	**09 46 16.0**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=189,slow=12,SNR=12						
ULN	**Ulaanbaatar**	**16.49**	**7**	*e*P	**Pn**	**09 46 16.7**	**+0.2**
ULN				pmax	pmax		
	comp=Z,56nm,1.0s						
ULN	**Ulaanbaatar**	**16.49**	**7**	*e*Pn	**Pn**	**09 46 16.7**	**+0.2**
	comp=Z,56nm,1.0s						
ULN	**Ulaanbaatar**	**16.49**	**7**	Pn	**Pn**	**09 46 20.9**	**+4.4**
	SNR=20						
ULN				Pn	**Pn**	**09 46 20.9**	**+4.4**
	SNR=20						
ULN	**Ulaanbaatar**	**16.49**	**7**	P	**Pn**	**09 46 20.9**	**+4.4**
	SNR=20						
ULN				P		09 46 20.9	
	SNR=20						
TATO	**Taipei**	**16.68**	**109**	*e*Pn	**Pn**	**09 46 19.1**	**-0.1**
	comp=Z,715nm,1.9s						
PKI	**Pulchoki**	**16.69**	**261**	*e*P	**Pn**	**09 46 17.9**	**-1.3**
	comp=Z,276nm,0.8s						
PKIN	**Phulchoki**	**16.70**	**261**	*e*P	**Pn**	**09 46 17.9**	**-1.4**
	comp=Z,256nm,0.7s						
KKN	**Kakani**	**16.73**	**262**	*e*P	**Pn**	**09 46 18.0**	**-1.8**
	comp=Z,274nm,0.9s						
YHNB	**Yeheng**	**16.73**	**110**	*e*Pn	**Pn**	**09 46 17.7**	**-2.1**
	comp=Z,76nm,0.6s						
SSLB	**Suanglung**	**16.83**	**113**	*e*P	**Pn**	**09 46 23.7**	**+2.7**
	comp=Z,179nm,0.9s						
TPUB	**Ta-pu**	**16.83**	**115**	*e*P	**Pn**	**09 46 22.4**	**+1.3**
	comp=Z,70nm,0.8s						
DMN	**Daman**	**16.93**	**262**	*e*P	**Pn**	**09 46 21.0**	**-1.3**
	comp=Z,697nm,1.0s						
NACB	**Ninganchiao**	**17.15**	**111**	*e*P	**Pn**	**09 46 25.9**	**+0.8**
	comp=Z,105nm,0.9s						
YULB	**Yu-li**	**17.30**	**114**	*e*P	**Pn**	**09 46 27.5**	**+0.5**
	comp=Z,47nm,0.8s						
WMQ	**Urumqi**	**17.80**	**318**	P	**Pn**	**09 46 35.4**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,48nm,1.2s						
WMQ				LR	LR		
	comp=N,9μm,20.0s						
WMQ				LR	LR		
	comp=E,3μm,24.0s						
WMQ				LR	LR		
	comp=Z,7μm,23.0s						
SNY	**Shenyang**	**18.70**	**51**	↓P	**Pn**	**09 46 44.7**	**+0.6**
SNY				S	**Sn**	**09 50 12.2**	**-0.6**
SNY				pmax	pmax		
	comp=Z,11nm,0.6s						
SNY				LR	LR		
	comp=N,8μm,20.4s						
SNY				LR	LR		
	comp=E,9μm,21.3s						
SNY				LR	LR		
	comp=Z,6μm,18.0s						
INCN	**Inchon**	**19.52**	**66**	*e*Pn	**Pn**	**09 46 51.9**	**-2.1**
	comp=Z,58nm,0.7s						
TLY	**Talaya**	**20.15**	**359**	*e*P	**P**	**09 47 03.7**	**+4.4**
TLY				pmax	pmax		
	comp=Z,103nm,1.8s						
MOY	**Mondy**	**20.26**	**355**	*e*P	**P**	**09 47 06.7**	**+6.2**
MOY				pmax	pmax		
	comp=Z,171nm,1.9s						
KSRS	**Korea Array**	**20.53**	**67**	P	**P**	**09 47 03.9**	**+0.2**
	comp=Z,71nm,0.6s,baz=257,slow=10,SNR=43						
KSRS				S	**S**	**09 50 54.2**	**+1.7**
	comp=Z,9.4nm,1.1s,baz=257,slow=16,SNR=5.0						
KSRS	**Korea Array**	**20.53**	**67**	P	**P**	**09 47 03.9**	**+0.3**
KSRS				S	**S**	**09 50 54.2**	**+1.7**
KSRS				pmax	pmax		
	comp=Z,71nm,0.6s						
KSRS				smax			
	comp=N,9.0nm,1.1s						
PTH	**Pithoragarh**	**20.61**	**271**	*e*P	**P**	**09 47 03.8**	**-0.8**
IRK	**Irkutsk**	**20.71**	**0**	*e*P	**P**	**09 47 07.0**	**+1.6**
IRK				pmax	pmax		
	comp=Z,329nm,1.8s						
CN2	**Changchun**	**20.84**	**48**	*e*P	**P**	**09 47 07.7**	**+0.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2	**Changchun**	**20.84**	**48**	*e*P	**P**	**09 47 15.7**	**+8.7**
CN2				*es*P	sP	09 47 22.0	+7.4
CN2				*e*S	**S**	**09 51 09.7**	**+11**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,600nm,0.6s						
CN2				pmax	pmax		
	comp=Z,3μm,5.0s						
CN2				LR	LR		
	comp=N,120nm,17.0s,MS3.5						
CN2				LR	LR		
	comp=E,130nm,17.0s,MS3.5						
CN2				LR	LR		
	comp=Z,150nm,19.0s,MS3.4						
JOSI	**Joshimath**	**21.00**	**274**	*e*P	**P**	**09 47 08.7**	**-0.1**
HIA	**Hailar**	**21.31**	**29**	*e*P	**P**	**09 47 11.6**	**-0.3**
HIA				pmax	pmax		
	comp=Z,51nm,0.9s						
HIA	**Hailar**	**21.31**	**29**	*e*P	**P**	**09 47 11.6**	**-0.3**
	comp=Z,51nm,0.9s,mb4.8						
CIT	**Chita**	**21.64**	**16**	*e*P	**P**	**09 47 17.2**	**+1.7**
CIT				*e*		09 47 45.1	
CIT				pmax	pmax		
	comp=Z,229nm,1.8s,mb5.3						
JOW	**Kunigami**	**21.65**	**96**	P	**P**	**09 47 16.4**	**+0.6**
	comp=Z,27nm,0.5s,mb4.9,baz=328,slow=2.4,SNR=3.6						
MK31	**Makanchi Array**	**22.64**	**319**	*e*P	**P**	**09 47 27.1**	**+1.0**
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**09 47 27.2**	**+1.1**
	comp=Z,64nm,1.0s,mb5.0,baz=124,slow=11,SNR=42						
AGRA	**Agra**	**23.12**	**266**	*e*P	**P**	**09 47 30.4**	**-1.1**
AGRA				AMb	AMB	09 47 32.4	
	comp=Z,123nm,0.7s,mb5.5						
TGY	**Tagaytay City**	**23.24**	**134**	P	**P**	**09 47 33.4**	**+0.6**
	comp=Z,269nm,0.6s,mb5.8,baz=78,slow=18,SNR=5.5						
VIS	**Vishakhapatnam**	**23.25**	**239**	*e*P	**P**	**09 47 31.0**	**-1.9**
VIS				AMb	AMB	09 47 31.9	
	comp=Z,109nm,1.1s,mb5.2						
NDI	**New Delhi**	**23.36**	**270**	*e*P	**P**	**09 47 30.0**	**-4.0**
NDI				*e*S	**S**	**09 51 43.0**	**-2.8**
AYAN	**Aya Nagar**	**23.49**	**270**	*e*P	**P**	**09 47 34.8**	**-0.5**
AYAN				AMb	AMB	09 47 36.2	
	comp=Z,91nm,0.9s,mb5.2						
BHK	**Bhakra**	**23.55**	**277**	*e*P	**P**	**09 47 37.4**	**+1.6**
MDJ	**Mudanjiang**	**23.87**	**50**	P	**P**	**09 47 37.5**	**-1.2**
MDJ				pP		09 47 40.3	
MDJ				S	**S**	**09 51 52.9**	**-0.9**
MDJ				sS	sS	09 51 58.8	-4.1
MDJ				ScP	ScP	09 54 58.9	+0.2
MDJ				PcS	PcS	09 55 00.5	-0.1
MDJ				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,8μm,14.0s						
MDJ				LR	LR		
	comp=N,8μm,20.7s,MS5.2						
MDJ				LR	LR		
	comp=E,3μm,16.9s,MS5.2						
MDJ				LR	LR		
	comp=Z,10μm,20.7s,MS5.3						
MDJ	**Mudanjiang**	**23.87**	**50**	*e*P	**P**	**09 47 38.2**	**-0.5**
	comp=Z,126nm,1.0s,mb5.3						
THN	**Thein Dam**	**24.02**	**280**	*e*P	**P**	**09 47 38.8**	**-1.4**
KSH	**Kashi**	**24.13**	**297**	P	**P**	**09 47 42.6**	**+1.5**
KSH				*e*pP		09 47 46.6	
KSH				*es*P	sP	09 47 49.5	+0.5
KSH				*e*PP		09 48 16.5	
KSH				*e*PcP	PcP	09 51 23.5	+1.6
KSH				*e*S	**S**	**09 51 57.3**	**-0.8**
KSH				*e*SS		09 52 49.6	
KSH				*e*ScP	ScP	09 55 01.5	+2.0
KSH				*e*PcS	PcS	09 55 02.6	+1.1
KSH				*e*ScS	ScS	09 58 47.2	+0.6
KSH				pmax	pmax		
	comp=Z,360nm,2.9s,mb5.3						
KSH				LR	LR		
	comp=N,4μm,17.6s,MS5.1						
KSH				LR	LR		
	comp=E,4μm,13.9s,MS5.1						
ULHL	**Ulahol**	**24.58**	**304**	P	**P**	**09 47 47.1**	**+1.9**
	SNR=12						
KHET	**Khetri**	**24.72**	**269**	*e*P	**P**	**09 47 46.5**	**-0.1**
KHET				AMb	AMB	09 47 51.9	
	comp=Z,81nm,0.8s,mb5.3						
BHPL	**Bhopal**	**24.99**	**257**	*e*P	**P**	**09 47 47.6**	**-1.4**
TKM2	**Tokmak 2**	**25.23**	**305**	P	**P**	**09 47 55.2**	**+4.1**
	SNR=34						
KZA	**Kyzart**	**25.24**	**303**	P	**P**	**09 47 53.6**	**+2.4**
	SNR=16						
KBK	**Karagaybulak**	**25.62**	**304**	P	**P**	**09 47 57.6**	**+3.1**
	SNR=13						
UCH	**Uchtor**	**25.81**	**303**	P	**P**	**09 48 02.0**	**+5.7**
	SNR=15						
UCH	**Uchtor**	**25.81**	**303**	*e*P	**P**	**09 47 58.5**	**+2.2**
	comp=Z,1μm,1.1s,mb6.3						
FRU	**Bishkek**	**25.90**	**304**	*e*P	**P**	**09 48 04.0**	**+6.9**
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**09 47 59.5**	**+2.1**
	comp=Z,230nm,0.8s,mb5.8,SNR=6.2						
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**09 47 59.3**	**+1.9**
	SNR=7.7						
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**09 47 59.3**	**+1.9**
	comp=Z,9.4nm,0.6s,mb4.5,baz=108,slow=5.7,SNR=12						
AAK	**Ala-Archa**	**25.93**	**304**	↑*i*P	**P**	**09 47 58.2**	**+0.8**
AAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**25.93**	**304**	*e*P	**P**	**09 47 58.8**	**+1.4**
	comp=Z,58nm,1.2s,mb5.0						
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**09 48 00.1**	**+2.6**
	SNR=17						
AAK				P		09 48 00.1	
	SNR=17						
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**09 48 00.1**	**+2.6**
	SNR=17						
AAK				P		09 48 00.1	
	SNR=17						
KTGM	**Kuala Trenggan**	**26.07**	**182**	P	**P**	**09 47 58.7**	**-0.1**
USP	**Ospenovka**	**26.10**	**305**	P	**P**	**09 48 03.6**	**+4.6**
	SNR=11						
AJM	**Ajmer**	**26.16**	**266**	*e*P	**P**	**09 47 58.1**	**-1.6**
AJM				AMb	AMB	09 48 08.1	
	comp=Z,84nm,1.2s,mb5.1						
KULM	**Kulim**	**26.29**	**188**	P	**P**	**09 48 00.6**	**-0.2**
KULM	**Kulim**	**26.29**	**188**	*e*P	**P**	**09 48 00.1**	**-0.7**
	comp=Z,29nm,0.6s,mb5.0						
ZAA0	**Zalesovo Array**	**26.33**	**334**	*e*P	**P**	**09 48 01.2**	**+0.3**
ZALV	**Zalesovo Beam**	**26.33**	**334**	P	**P**	**09 48 01.3**	**+0.4**
	comp=Z,187nm,0.8s,mb5.7,baz=132,slow=9.5,SNR=38						
ZALV	**Zalesovo Beam**	**26.33**	**334**	P	**P**	**09 48 01.3**	**+0.4**
AML	**Almayashu**	**26.38**	**302**	P	**P**	**09 48 04.1**	**+2.6**
	SNR=16						
AML	**Almayashu**	**26.38**	**302**	*e*P	**P**	**09 48 03.9**	**+2.4**
	comp=Z,109nm,1.1s,mb5.3						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**09 48 07.8**	**+1.9**
	comp=Z,872nm,1.0s,mb6.2,SNR=8.3						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**09 48 06.5**	**+0.6**
	comp=Z,98nm,0.8s,mb5.4,baz=126,slow=8.7,SNR=25						
KURK				PcP	PcP	09 51 27.1	-0.7
	comp=Z,10.0nm,0.6s,baz=122,slow=1.9,SNR=8.6						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**09 48 06.5**	**+0.6**
KURK						09 51 27.2	
KURK				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.4						
KURK	**Kurchatov**	**26.89**	**323**	*e*P	**P**	**09 48 06.6**	**+0.6**
	comp=Z,199nm,1.1s,mb5.6						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**09 48 08.6**	**+2.6**
	SNR=29						
KURK				P		09 48 08.6	
	SNR=29						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**09 48 08.6**	**+2.6**
	SNR=29						
KURK				P		09 48 08.6	
	SNR=29						
HYB	**Hyderabad**	**27.03**	**245**	*i* P	**P**	**09 48 06.0**	**-1.6**
IPM	**Ipoh**	**27.05**	**187**	P	**P**	**09 48 07.5**	**-0.2**
BOD	**Bodaibo**	**27.18**	**12**	*e*P	**P**	**09 48 09.1**	**+0.7**
BOD				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.4						
KDM	**Kudat**	**27.24**	**151**	P	**P**	**09 48 09.8**	**+0.3**
KLR	**Kul'dur**	**27.31**	**42**	*e*P	**P**	**09 48 04.0**	**-5.8**
NVS	**Novosibirsk**	**27.61**	**334**	*e*P	**P**	**09 48 16.3**	**+3.9**
NVS				pmax	pmax		
	comp=Z,81nm,1.6s,mb5.1						
NVS				pmax	pmax		
	comp=N,103nm,1.8s						
NVS				pmax	pmax		
	comp=E,85nm,2.0s						
KKM	**Kota Kinabalu**	**27.79**	**153**	P	**P**	**09 48 14.9**	**+0.6**
KKM	**Kota Kinabalu**	**27.79**	**153**	*e*P	**P**	**09 48 14.2**	**-0.1**
	comp=E,199nm,1.1s,mb5.7						
FRIM	**Kepong**	**28.22**	**185**	P	**P**	**09 48 18.1**	**-0.1**
MAJO	**Matsushiro**	**28.66**	**71**	*e*P	**P**	**09 48 20.9**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.1						
MAJO	**Matsushiro**	**28.66**	**71**	*e*P	**P**	**09 48 20.9**	**-1.1**
	comp=Z,23nm,0.6s,mb5.1						
MAT	**Matsushiro**	**28.66**	**71**	P	**P**	**09 48 19.7**	**-2.3**
MJAR	**Matsushiro Arr**	**28.66**	**71**	P	**P**	**09 48 20.5**	**-1.4**
	comp=Z,9.7nm,0.5s,mb4.8,baz=280,slow=10,SNR=33						
MJAR	**Matsushiro Arr**	**28.66**	**71**	P	**P**	**09 48 20.5**	**-1.4**
HABR	**Khabarovsk**	**28.90**	**45**	*e*P	**P**	**09 48 21.6**	**-2.4**
HABR				*e**PP	pP	09 48 30.8	+1.2
HABR				*e*SS	SS	09 54 34.7	-41
HABR				MLR	MLR		
	comp=Z,6μm,17.0s,MS5.3						
NRGR	**Nerungri**	**28.96**	**24**	*e*P	**P**	**09 48 21.1**	**-3.3**
CLNS	**Chul'man**	**29.16**	**24**	*e*P	**P**	**09 48 20.2**	**-6.0**
CLNS				*e**PP	pP	09 48 29.8	-2.0
CLNS				*e*		09 49 15.6	
CLNS				*e*PPP		09 49 29.0	
CLNS				*e*		09 51 30.0	
CLNS				*e*S	**S**	**09 53 09.6**	**-7.7**
CLNS				*e*SSS		09 55 10.4	
CLNS				pmax	pmax		
	comp=N,8.0nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.5						
CLNS				pmax	pmax		
	comp=N,23nm,1.6s						
CLNS				pmax	pmax		
	comp=E,11nm,1.2s						
CLNS				smax			
	comp=E,2μm,14.4s						
CLNS				smax			
	comp=N,2μm,15.1s						
CLNS				MLR	MLR		
	comp=N,5μm,25.0s,MS5.2						
CLNS				MLR	MLR		
	comp=Z,6μm,16.0s						
CLNS				MLR	MLR		
	comp=E,4μm,20.0s,MS5.2						
JASL	**Jaisalmer**	**29.22**	**270**	*e*P	**P**	**09 48 27.2**	**+0.1**
JASL				AMb	AMB	09 48 30.0	
	comp=Z,57nm,0.6s,mb5.5						
KBL	**Kabul**	**29.41**	**285**	*e*P	**P**	**09 48 30.7**	**+2.0**
KBL				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
KBL	**Kabul**	**29.41**	**285**	*e*P	**P**	**09 48 30.7**	**+2.0**
	comp=Z,31nm,0.8s,mb5.1						
BTM	**Bintulu**	**29.43**	**161**	P	**P**	**09 48 29.1**	**+0.2**
MYKOM	**Kota Tinggi**	**29.57**	**180**	P	**P**	**09 48 30.4**	**+0.2**
SBUM	**Sibu**	**29.92**	**163**	P	**P**	**09 48 33.8**	**+0.4**
KSM	**Kuching**	**30.46**	**168**	P	**P**	**09 48 38.5**	**+0.4**
KSM	**Kuching**	**30.46**	**168**	*e*P	**P**	**09 48 38.0**	**-0.2**
	comp=Z,32nm,0.9s,mb5.0						
KAD	**Karad**	**30.53**	**249**	*e*P	**P**	**09 48 37.5**	**-1.2**
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**09 48 55.9**	**+0.7**
	comp=Z,34nm,0.8s,mb5.2,baz=109,slow=8.0,SNR=32						
BVAR				PcP	PcP	09 51 41.4	-0.6
	comp=Z,11nm,0.6s,baz=141,slow=2.7,SNR=10						
BRVK	**Borovoye**	**32.51**	**321**	P	**P**	**09 48 57.8**	**+2.0**
	comp=Z,380nm,0.8s,mb6.4,SNR=11						
BRVK	**Borovoye**	**32.51**	**321**	↑*i*P	**P**	**09 48 56.9**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.6						
BRVK	**Borovoye**	**32.51**	**321**	*e*P	**P**	**09 48 56.8**	**+1.0**
	comp=Z,61nm,0.9s,mb5.5						
BRVK	**Borovoye**	**32.51**	**321**	P	**P**	**09 48 57.1**	**+1.4**
	SNR=23						
BRVK				P		09 48 57.1	
	SNR=23						
BRVK	**Borovoye**	**32.51**	**321**	P	**P**	**09 48 57.1**	**+1.4**
	SNR=23						
BRVK				P		09 48 57.1	
	SNR=23					

comp=Z,22nm,0.4s,mb5.4
ERM Erimo 32.78 60 *e*P **P 09 48 56.9 -1.4**
comp=Z,22nm,0.4s,mb5.4
YSS Yuzh-Sakhalins 33.33 51⇓*i*P **P 09 49 03.0 0.0**
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.5
YSS pmax pmax
comp=E,30nm,1.0s
YSS Yuzh-Sakhalins 33.33 51 *e*P **P 09 49 02.6 -0.4**
comp=E,68nm,1.1s,mb5.5
YAK Yakutsk 34.74 21 *e*P **P 09 49 12.9 -2.1**
YAK pmax pmax
comp=Z,26nm,0.8s,mb5.2
ABKAR Akbulak array 37.36 311 *e*P **P 09 49 38.4 +0.7**
comp=Z,30nm,0.9s,mb5.1
ABKAR *e*PcP PcP 09 51 55.0 -1.4
ABKT Ailbek 37.98 293 P **P 09 49 45.2 +2.1**
comp=Z,232nm,1.2s,mb5.8,SNR=7.4
AKTK Aktyubinsk 38.82 313 P **P 09 49 50.0 0.0**
AKTK PcP PcP 09 51 59.9 -1.0
AKTO Aktyubinsk 38.82 313 P **P 09 49 50.0 0.0**
comp=Z,25nm,1.0s,mb4.9,baz=96,slow=8.7,SNR=23
AKTO PcP PcP 09 51 59.9 -1.0
comp=Z,8.1nm,0.6s,baz=13,slow=1.9,SNR=5.6
SVE Sverdlovsk 39.14 323⇑*e*P **P 09 49 54.1 +1.6**
SVE pmax pmax
comp=Z,282nm,1.0s,mb6.0
KAPI Kappang 39.30 155 P **P 09 49 53.1 -1.2**
comp=Z,1μm,0.7s,mb6.7,SNR=10
KAPI Kappang 39.30 155 P **P 09 49 53.0 -1.3**
comp=Z,161nm,0.8s,mb5.8,baz=321,slow=5.6,SNR=58
KAPI Kappang 39.30 155 *e*P **P 09 49 52.9 -1.3**
comp=Z,154nm,0.8s,mb5.8
ARU Arti 40.08 322 P **P 09 50 01.5 +1.2**
comp=Z,2μm,0.8s,mb6.8,SNR=11
ARU Arti 40.08 322*c i*P **P 09 50 01.0 +0.7**
ARU *e* 09 51 29.6
ARU S **S 09 56 07.5 +2.2**
ARU SS SS 09 58 51.9 -11
ARU pmax pmax
comp=Z,91nm,1.0s,mb5.5
ARU Arti 40.08 322 *e*P **P 09 50 01.1 +0.8**
comp=Z,213nm,0.8s,mb5.9
GUMO Guam 41.42 106 P **P 09 50 10.0 -1.9**
comp=Z,32nm,0.4s,mb5.3,baz=190,slow=4.3,SNR=4.5
GUMO Guam 41.42 106 P **P 09 50 10.0 -1.9**
GUMO pmax pmax
comp=Z,32nm,0.4s,mb5.3
SOKR Solikamsk 42.03 326*c i*P **P 09 50 17.2 +0.9**
SOKR pmax pmax
comp=Z,380nm,1.0s,mb6.0
BSY Bisya 42.34 270 ⇑P **P 09 50 20.7 +1.4**
SNR=11
BSY Bisya 42.34 270 ⇑P **P 09 50 20.7 +1.4**
SNR=11
TIXI Tiksi 42.36 11 *e*P **P 09 50 16.6 -2.3**
TIXI pmax pmax
comp=Z,20nm,1.0s,mb4.7
TIXI Tiksi 42.36 11 *e*P **P 09 50 18.0 -0.9**
comp=Z,13nm,0.8s,mb4.6
ASHO Ashiyiah 42.61 273 ⇓P **P 09 50 22.9 +1.3**
SNR=9.8
ASHO Ashiyiah 42.61 273 ⇓P **P 09 50 22.9 +1.3**
SNR=9.8
SEY Seymchan 43.76 30⇑*i*P **P 09 50 29.1 -1.2**
PETK Petropavlovsk- 43.93 44 P **P 09 50 31.5 -0.3**
comp=Z,16nm,0.8s,mb4.8,baz=225,slow=4.7,SNR=14
COCO West Island 44.01 190 *i*P **P 09 50 34.2 +1.4**
GNI Garni 48.07 298 *i*P **P 09 51 05.1 +0.4**
GNI Garni 48.07 298 *e*P **P 09 51 08.6 +3.9**
comp=Z,70nm,1.4s,mb5.5
KBD Kabd 48.23 283 *e*P **P 09 51 06.1 0.0**
KBD AMb AMB 09 51 12.4
comp=Z,48nm,1.3s,mb5.4
ZEI Tsey 48.32 301 *e*P **P 09 51 05.8 -0.8**
ZEI pmax pmax
comp=Z,21nm,1.4s,mb5.0
MIB Mutribah 48.34 283 *e*P **P 09 51 06.6 -0.3**
MIB AMb AMB 09 51 13.3
comp=Z,127nm,1.0s,mb5.9
RDF Al-Radifah 48.43 282 *e*P **P 09 51 07.8 +0.2**
RDF AMb AMB 09 51 09.6
comp=Z,114nm,0.8s,mb5.9
KIV Kislovodsk 49.05 303 P **P 09 51 18.5 +6.3**
comp=Z,494nm,1.2s,mb6.4,SNR=8.3
KIV Kislovodsk 49.05 303 *e*P **P 09 51 12.3 +0.1**
KIV pmax pmax
comp=Z,106nm,1.1s,mb5.8
KIV Kislovodsk 49.05 303 *e*P **P 09 51 13.0 +0.9**
comp=Z,141nm,1.2s,mb5.9
VRHR Novokhopersk 49.23 312 *e*P **P 09 51 13.4 0.0**
VRHR pmax pmax
comp=Z,90nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,40nm,1.0s
KLMR Klimovskoe 50.70 325 *e*P **P 09 51 24.5 +0.1**
KLMR pmax pmax
comp=Z,250nm,1.0s,mb6.1
VOR Voronezh 50.72 313 *e*P **P 09 51 28.0 +3.3**
VOR pmax pmax
comp=Z,260nm,1.2s,mb6.0
VSR Storozhevoye 50.77 313 *e*P **P 09 51 24.8 -0.3**
VSR pmax pmax
comp=E,40nm,0.6s
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.6
VSR pmax pmax
comp=N,10.0nm,0.5s
BILL Bilibino 50.82 25*c i*P **P 09 51 24.7 -0.6**
BILL *e* 09 51 32.2
BILL *e* 09 53 20.3
BILL pmax pmax
comp=Z,41nm,1.7s,mb5.1
BILL Bilibino 50.82 25 *e*P **P 09 51 24.5 -0.8**
comp=Z,9.3nm,0.6s,mb4.9
MOS Moscow 51.52 319 *e*P **P 09 51 29.7 -1.0**
MOS *e* 09 53 30.1
MOS pmax pmax
comp=Z,199nm,0.7s,mb6.2
KAKA Kakadu 51.73 144 *e*P **P 09 51 30.5 -2.2**
comp=Z,70nm,0.8s,mb5.6
KAKA Kakadu 51.73 144 *e*P **P 09 51 30.4 -2.3**
comp=Z,227nm,0.8s,mb6.2
OBN Obninsk 52.14 318⇑*i*P **P 09 51 34.1 -1.2**
OBN *e* pP 09 51 40.2 -0.9
OBN *e* 09 52 46.8
OBN *e* 09 53 37.4
OBN pmax pmax
comp=Z,98nm,1.0s,mb5.7
OBN Obninsk 52.14 318 *e*P **P 09 51 35.2 -0.2**
comp=Z,165nm,1.1s,mb5.9
ANN Anapa 52.65 305 *e*P **P 09 51 37.9 -1.4**
ANN *e* 09 53 38.2
ANN *e*S **S 09 59 04.1 -1.8**
ANN pmax pmax
comp=Z,43nm,1.3s,mb5.2
LVZ Lovozero 53.47 334 *e*P **P 09 51 44.2 -0.7**
LVZ pmax pmax
comp=Z,44nm,1.0s,mb5.3
FITZ Fitzroy Crossi 53.51 154 *e*P **P 09 51 45.2 -0.6**
comp=Z,91nm,1.0s,mb5.7
FITZ Fitzroy Crossi 53.51 154 P **P 09 51 45.3 -0.6**
comp=Z,54nm,0.8s,mb5.5,baz=347,slow=5.7,SNR=65
FITZ Fitzroy Crossi 53.51 154 *e*P **P 09 51 45.1 -0.7**
comp=Z,60nm,0.9s,mb5.5
MBWA Marble Bar 54.49 162 *e*P **P 09 51 52.3 -0.6**
MBWA Marble Bar 54.49 162 *e*P **P 09 51 52.2 -0.7**
comp=Z,62nm,0.9s,mb5.5
JOF Joensuu 54.65 328 *e*P **P 09 51 52.5 -1.1**
JOF pmax pmax
comp=Z,83nm,0.8s,mb5.8
JOF Joensuu 54.65 328 *e*p **P 09 51 52.5 -1.1**
comp=Z,83nm,0.8s,mb5.8
SIM Simferopol' 54.94 305⇓*i*P **P 09 51 57.1 +1.0**
SIM pmax pmax
comp=Z,32nm,0.7s,mb5.5
PUL Pulkovo 55.27 324⇑*e*P **P 09 51 57.6 -0.5**
PUL pmax pmax
comp=Z,233nm,1.2s,mb6.1
KEV Kevo 56.33 336 *e*P **P 09 52 05.1 -0.6**
KEV pmax pmax
comp=Z,60nm,0.7s,mb5.7
KEV Kevo 56.33 336 *e*p **P 09 52 05.1 -0.6**
comp=Z,60nm,0.7s,mb5.7

BRTR Keskin Array B 56.49 299 P **P 09 52 07.5 +0.2**
comp=Z,5.2nm,0.7s,mb4.7,baz=98,slow=6.9,SNR=21
ARCES ARCESS Array B 56.86 336 P **P 09 52 09.4 0.0**
comp=Z,51nm,0.9s,mb5.6,baz=77,slow=8.0,SNR=34
ARCES PcP PcP 09 53 04.6 -0.2
comp=Z,9.2nm,0.5s,baz=92,slow=4.3,SNR=9.6
ARE0 ARCESS Array S 56.86 336 *e*P **P 09 52 09.9 +0.5**
KAF Kangasniemi 57.02 327 *e*P **P 09 52 10.2 -0.4**
KAF pmax pmax
comp=Z,73nm,0.9s,mb5.7
KAF Kangasniemi 57.02 327 *e*p **P 09 52 10.2 -0.4**
comp=Z,73nm,0.9s,mb5.7
AKASG Malin Array Be 57.07 313 P **P 09 52 10.7 -0.5**
comp=Z,22nm,0.7s,mb5.3,baz=71,slow=6.6,SNR=34
AKBB Malin Array Si 57.07 313 *e*P **P 09 52 10.4 -0.8**
FINES FINESS Array B 57.20 326 P **P 09 52 12.0 +0.1**
comp=Z,59nm,0.7s,mb5.7,baz=89,slow=7.8,SNR=72
MICGM Minsk 57.20 318⇓*e*P **P 09 52 10.0 -2.1**
MNK Minsk 57.23 318⇓*e*P **P 09 52 10.0 -2.2**
MNK pmax pmax
comp=Z,170nm,1.0s,mb6.0
VSU Vasula 57.24 322*c i*P **P 09 52 12.4 +0.2**
VSU pmax pmax
comp=Z,146nm,1.1s,mb5.9
IDID Didziasalis 57.72 319 *e*P **P 09 52 16.5 +0.8**
NACGM Naroch 57.77 318 *e*P **P 09 52 13.0 -3.0**
IZAR Zarasai 57.92 319 *e*P **P 09 52 17.6 +0.5**
ISAL Salakas 58.02 319 *e*P **P 09 52 18.3 +0.6**
CSS Prodhromos 58.10 294 *e*P **P 09 52 18.4 -0.3**
comp=Z,17nm,0.7s,mb5.2
KIS Kishinev 58.11 309 *e*P **P 09 52 20.0 +1.4**
comp=Z,200nm,1.0s,mb6.1
KIS Kishinev 58.11 309 *e*P **P 09 52 20.0 +1.4**
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.1
COEN Coen 58.77 134 *e*P **P 09 52 23.5 0.0**
comp=Z,626nm,0.8s,mb6.7
WRAB Tennant Creek 58.84 146 P **P 09 52 23.0 -0.9**
comp=Z,1μm,0.6s,SNR=12
WRAB Tennant Creek 58.84 146 *e*P **P 09 52 23.7 -0.2**
WRAB pmax pmax
comp=Z,13nm,0.6s,mb5.1
WRAB Tennant Creek 58.84 146 *e*P **P 09 52 23.7 -0.2**
comp=Z,13nm,0.6s,mb5.1
WRA Warramunga Arr 58.84 146 P **P 09 52 23.6 -0.3**
comp=Z,105nm,0.8s,mb5.9,baz=339,slow=7.7,SNR=51
WRA S **S 10 00 25.9 -2.9**
comp=Z,1.9nm,0.9s,baz=324,slow=14,SNR=4.6
WB2 Warramunga Arr 58.85 146 *e*P **P 09 52 23.7 -0.3**
SPB4 Spitsbergen Ar 58.93 346 *e*P **P 09 52 24.1 +0.2**
TIRR Tirgusor 59.01 306 *e*P **P 09 52 24.3 -0.6**
TIRR pmax pmax
comp=Z,24nm,1.1s,mb5.1
TIRR Tirgusor 59.01 306 *e*P **P 09 52 24.2 -0.7**
comp=Z,24nm,1.1s,mb5.1
VRI Vrincioaia 59.79 308 P **P 09 52 31.0 +0.7**
PLOR Plostina 59.85 308 P **P 09 52 31.6 +0.9**
SUW Suwalki 60.00 318 *e*P **P 09 52 31.8 +0.3**
SUW *e* pP 09 52 36.2 -1.3
BUR08 Bucovina Ar. S 60.33 310 *e*P **P 09 52 34.0 0.0**
MLR Muntele Rosu 60.42 308 P **P 09 52 35.3 +0.7**
LVV L'vov 60.51 313 *e*P **P 09 52 34.9 -0.2**
VOIR 61.04 308 P **P 09 52 39.1 +0.3**
MORW Morawa 61.32 168 *e*P **P 09 52 41.2 +0.5**
KWP Kalwaria Pacla 61.39 313 *e*P **P 09 52 41.7 +0.6**
KWP *e* pP 09 52 46.7 -0.3
KWP Kalwaria Pacla 61.39 313 *e*P **P 09 52 40.6 -0.5**
comp=Z,206nm,1.1s,mb6.2
BMR Baia Mare 61.43 311 P **P 09 52 42.5 +1.1**
KOLS Kolonicke sedl 61.86 312 *e*P **P 09 52 44.7 +0.4**
KOLS *e* pP 09 52 49.3 -0.9
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
KOLS Kolonicke sedl 61.86 312 *e*P **P 09 52 44.7 +0.4**
comp=Z,8.9nm,0.9s,mb4.9
KOLS *e* pP 09 52 49.3 -0.9
KOLS Kolonicke sedl 61.86 312 *e*P **P 09 52 44.7 +0.4**
KOLS *e*pP pP 09 52 49.3 -0.9
ASAR Alice Springs 61.87 149 P **P 09 52 44.6 +0.1**
comp=Z,47nm,0.8s,mb5.6,baz=331,slow=6.2,SNR=73
UZH Uzhgorod 61.93 312 *e*P **P 09 52 43.0 -1.8**
UZH *e* pP 09 52 49.6 -1.1
UZH *e* 09 52 53.0
DRGR 62.20 310 P **P 09 52 47.4 +0.8**
STHS Stebnicka Huta 62.37 313 *e*P **P 09 52 48.1 +0.4**
STHS *e* pP 09 52 53.2 -0.4
STHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
STHS Stebnicka Huta 62.37 313 *e*P **P 09 52 48.1 +0.4**
comp=Z,10nm,1.0s,mb4.9
STHS *e* pP 09 52 53.2 -0.4
STHS Stebnicka Huta 62.37 313 *e*P **P 09 52 48.1 +0.4**
STHS *e*pP pP 09 52 53.1 -0.5
NIE Niedzica 62.95 313 *e*P **P 09 52 52.5 +1.0**
OJC Ojcow 63.02 314 *e*P **P 09 52 52.1 +0.1**
KECS Kecovo 63.12 312 *e*P **P 09 52 53.4 +0.7**
KECS *e* pP 09 52 56.9 -1.8
KECS pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KECS Kecovo 63.12 312 *e*P **P 09 52 53.4 +0.7**
comp=Z,6.6nm,0.7s,mb4.9
KECS *e* pP 09 52 56.9 -1.8
KECS Kecovo 63.12 312 *e*P **P 09 52 53.4 +0.7**
KECS *e*pP pP 09 52 56.9 -1.8
BZS Buzias 63.29 309 P **P 09 52 53.9 0.0**
HFS Hagfors 63.40 326 P **P 09 52 54.0 -0.4**
comp=Z,32nm,0.5s,mb5.7,baz=113,slow=6.7,SNR=13
GKP Gorka Klasztor 63.61 318 *e*P **P 09 52 55.8 -0.1**
GKP *e* pP 09 53 00.5 -1.3
PSZ Piszkesteto 63.67 312 *e*P **P 09 52 56.7 +0.3**
PSZ pmax pmax
comp=Z,32nm,1.1s,mb5.3
PSZ Piszkesteto 63.67 312 *e*P **P 09 52 56.7 +0.3**
comp=Z,32nm,1.1s,mb5.3
PSZ Piszkesteto 63.67 312⇓*e*pP pP 09 53 01.2 -1.1
LIKS Likavka 63.81 313 *e*P **P 09 52 58.6 +1.3**
LIKS Likavka 63.81 313 *e*P **P 09 52 58.6 +1.3**
OKC Ostrava-Krasne 64.15 314 *e*P **P 09 53 00.1 +0.6**
OKC *e*pP pP 09 53 04.7 -0.7
VYHS Vyhne 64.16 313 *e*P **P 09 53 00.2 +0.6**
VYHS *e* pP 09 53 05.2 -0.3
VYHS pmax pmax
comp=Z,18nm,1.4s,mb4.9
VYHS Vyhne 64.16 313 *e*P **P 09 53 00.2 +0.6**
comp=Z,18nm,1.4s,mb4.9
VYHS *e* pP 09 53 05.2 -0.3
VYHS Vyhne 64.16 313 *e*P **P 09 53 00.2 +0.6**
VYHS *e*pP pP 09 53 05.2 -0.3
NB2 NORSAR Subarra 64.28 327 P **P 09 52 59.3 -0.9**
comp=Z,93nm,0.9s,mb5.8,baz=73,slow=6.5
NOA NORSAR Array B 64.28 327 P **P 09 52 59.4 -0.8**
comp=Z,23nm,0.7s,mb5.3,baz=77,slow=6.1,SNR=74
BSD Bornholm Skovb 64.33 320 *i*P **P 09 52 59.7 -0.9**
BSD pmax pmax
comp=Z,45nm,0.8s,mb5.5
BSD Bornholm Skovb 64.33 320 *i*P **P 09 52 59.7 -0.9**
comp=Z,45nm,0.8s,mb5.5
BSD Bornholm Skovb 64.33 320 *i*P PP 09 55 25.1 +3.4
comp=Z,15nm,0.9s
BUD Budapest 64.37 311⇓*e*P **P 09 53 01.8 +0.8**
KOLL Kolacno 64.41 313 *e*P **P 09 53 02.1 +0.9**
KOLL Kolacno 64.41 313 *e*P **P 09 53 02.1 +0.9**
NAO01 NORSAR Array S 64.50 327 *e*P **P 09 53 00.2 -1.4**
comp=Z,60nm,1.1s,mb5.5
MORC Moravsky Berou 64.54 314 *e*P **P 09 53 02.5 +0.4**
MORC pmax pmax
comp=Z,40nm,0.9s,mb5.5
MORC Moravsky Berou 64.54 314 *e*P **P 09 53 02.5 +0.4**
comp=Z,40nm,0.9s,mb5.5
KSP Ksiaz 64.94 316 *e*P **P 09 53 05.1 +0.5**
KSP *e* pP 09 53 10.3 -0.2
KSP Ksiaz 64.94 316⇑*e*P **P 09 53 05.1 +0.5**
KSP *e**PP pP 09 53 09.5 -1.1
PKSM Moragy 65.05 310 P **P 09 53 05.5 +0.1**
DPC Dobruska-Polom 65.09 315 *e*P **P 09 53 06.4 +0.8**
DPC *e*pP pP 09 53 11.2 -0.4
UPC Upice 65.22 315 *e*P **P 09 53 07.1 +0.6**
UPC *e*pP pP 09 53 11.3 -1.1
VRAC Vranov 65.28 314 P **P 09 53 07.5 +0.6**
comp=Z,18nm,0.6s,mb5.3,baz=63,slow=11,SNR=8.9
VRAC Vranov 65.28 314 P **P 09 53 07.7 +0.8**
NWAO Narrogin (SRO) 65.30 168 P **P 09 53 07.0 0.0**
comp=Z,106nm,0.8s,mb5.9,baz=346,slow=6.9,SNR=41
NWAO Narrogin (SRO) 65.30 168 *e*P **P 09 53 07.2 +0.2**

NWAO Narrogin (SRO) 65.30 168 *e*P **P 09 53 06.8 -0.2**
comp=Z,67nm,0.7s,mb5.8
ZST Bratislava 65.35 313 *e*P **P 09 53 08.1 +0.8**
ZST *e* pP 09 53 12.5 -0.8
ZST pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ZST Bratislava 65.35 313 *e*P **P 09 53 08.1 +0.8**
comp=Z,8.8nm,0.8s,mb4.8
ZST *e* pP 09 53 12.5 -0.8
ZST Bratislava 65.35 313 *e*P **P 09 53 08.1 +0.8**
ZST *e*pP pP 09 53 12.5 -0.8
CTA Charters Tower 65.36 136 *e*P **P 09 53 07.6 -0.1**
comp=Z,15nm,0.5s,mb5.3
CTA Charters Tower 65.36 136 P **P 09 53 07.8 +0.1**
comp=Z,22nm,0.6s,mb5.4,baz=328,slow=8.4,SNR=28
CTAO Charters Tower 65.36 136 *e*P **P 09 53 07.4 -0.3**
CTAO pmax pmax
comp=Z,62nm,1.2s,mb5.5
CTAO Charters Tower 65.36 136 *e*P **P 09 53 07.1 -0.6**
comp=Z,62nm,1.2s,mb5.5
RGN Rugen 65.39 320 *e*P **P 09 53 07.0 -0.5**
comp=Z,143nm,0.8s,mb6.0
RGN Rugen 65.39 320 P **P 09 53 08.0 +0.6**
comp=Z,131nm,0.8s,mb6.0
COP Copenhagen 65.47 322⇑*i*P **P 09 53 08.2 +0.2**
COP pmax pmax
comp=Z,68nm,0.8s,mb5.7
COP Copenhagen 65.47 322⇑*i*P **P 09 53 08.2 +0.2**
comp=Z,68nm,0.8s,mb5.7
KONO Kongsberg 65.51 326 P **P 09 53 08.0 -0.2**
KONO pmax pmax
comp=Z,60nm,1.0s,mb5.6
KONO Kongsberg 65.51 326 *e*P **P 09 53 07.7 -0.5**
comp=Z,60nm,1.0s,mb5.6
RUE Ruedersdorf 65.85 318 *e*P **P 09 53 09.8 -0.7**
comp=Z,151nm,1.3s,mb5.9
RUE Ruedersdorf 65.85 318 *e*P **P 09 53 10.1 -0.4**
comp=Z,118nm,1.1s,mb5.8
TREC Trest 65.97 314 *e*P **P 09 53 11.8 +0.5**
TREC *e*pP pP 09 53 16.7 -0.5
FORT Forrest 66.01 157 *e*P **P 09 53 11.8 +0.1**
comp=Z,107nm,0.7s,mb6.0
FORT Forrest 66.01 157 *e*P **P 09 53 11.5 -0.1**
comp=Z,112nm,0.7s,mb6.0
PVCC Panska Ves 66.08 316 *e*P **P 09 53 12.6 +0.6**
PVCC *e*pP pP 09 53 17.6 -0.4
CONA Conrad Observa 66.22 313⇑*i*P **P 09 53 13.6 +0.7**
comp=Z,56nm,1.2s,mb5.5,SNR=14
PRU Pruhonice 66.29 315 *e*P **P 09 53 14.2 +0.8**
PRU *e*pP pP 09 53 19.1 -0.2
PRA Prague 66.33 315 P **P 09 53 14.0 +0.4**
PRA pP pP 09 53 18.0 -1.6
BRG Berggiesshubel 66.33 316 *e*P **P 09 53 13.7 +0.1**
comp=Z,40nm,0.7s,mb5.5
BRG *e* pP 09 53 18.6 -0.9
comp=Z,62nm,0.9s
BRG Berggiesshubel 66.33 316 *e*P **P 09 53 13.7 +0.1**
BRG *e* pP 09 53 18.6 -0.9
BRG pmax pmax
comp=Z,24nm,0.7s,mb5.3
DAG Danmarks Havn 66.42 348 *e*P **P 09 53 13.0 -0.8**
DAG Danmarks Havn 66.42 348 *i*P **P 09 53 13.0 -0.8**
ARSA Arzberg 66.68 312⇑*i*P **P 09 53 16.0 0.0**
comp=Z,33nm,1.2s,mb5.2,SNR=18
CLL Collm 66.72 317 *e*P **P 09 53 15.0 -1.1**
comp=Z,71nm,1.1s,mb5.6
CLL Collm 66.72 317⇑*i*P **P 09 53 15.8 -0.3**
CLL *i* pP 09 53 20.1 -2.0
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CLL Collm 66.72 317⇑*i*P **P 09 53 15.8 -0.3**
comp=Z,27nm,0.9s,mb5.3
CLL *i* pP 09 53 20.1 -2.0
CLL Collm 66.72 317⇑*i*P **P 09 53 15.8 -0.3**
comp=Z,27nm,0.9s,mb5.3
CLL *i* pP pP 09 53 20.1 -2.0
comp=Z,71nm,1.1s
CLL *e*PP PP 09 55 45.0 +2.3
TTA Tatalina 66.73 29 *e*P **P 09 53 15.8 -0.1**
TTA Tatalina 66.73 29 *e*P **P 09 53 15.7 -0.2**
MUD Monsted U'grnd 66.90 323⇑*i*P **P 09 53 17.3 +0.2**
MUD pmax pmax
comp=Z,84nm,0.8s,mb5.8
MUD Monsted U'grnd 66.90 323⇑*i*P **P 09 53 17.3 +0.2**
comp=Z,84nm,0.8s,mb5.8
COLD Coldfoot 67.11 24 *e*P **P 09 53 18.4 +0.1**
comp=Z,36nm,0.9s,mb5.4
PERS Pernice 67.17 312 *i*P **P 09 53 19.1 0.0**
PERS *i* pP 09 53 24.0 -1.0
KHC Kasperske Hory 67.19 315 *e*P **P 09 53 19.3 +0.2**
KHC *e**PP pP 09 53 24.0 -1.1
KHC Kasperske Hory 67.19 315 *e*P **P 09 53 19.2 +0.1**
comp=Z,30nm,1.1s,mb5.2
KHC Kasperske Hory 67.19 315 *e*P **P 09 53 19.3 +0.2**
KHC *e*pP pP 09 53 24.0 -1.1
KHC *e*x x 09 53 35.5
SOKA Soboth 67.21 312⇑*i*P **P 09 53 19.4 +0.2**
comp=Z,56nm,1.1s,mb5.5
GEC2 GERESS Array S 67.22 314 *e*P **P 09 53 18.8 -0.5**
comp=Z,59nm,1.1s,mb5.5
GEC2 GERESS Array S 67.22 314 *e*P **P 09 53 18.8 -0.5**
GEC2 pmax pmax
comp=Z,59nm,1.1s,mb5.5
GERES GERESS Array B 67.22 314 P **P 09 53 19.7 +0.3**
comp=Z,13nm,0.7s,mb5.1,baz=67,slow=5.6,SNR=62
MOA Molln 67.25 313 *i*P **P 09 53 20.1 +0.5**
comp=Z,58nm,1.2s,mb5.5,SNR=20
BSEG Bad Segeberg 67.25 320 *e*P **P 09 53 19.2 -0.2**
comp=Z,158nm,0.9s,mb6.0
TANN Tannenbergstha 67.38 316 *e*P **P 09 53 19.6 -0.7**
comp=Z,49nm,1.0s,mb5.5
NKC Novy Kostel 67.45 316 *e*P **P 09 53 21.1 +0.3**
NKC *e*pP pP 09 53 25.9 -0.8
WERD Werda 67.45 316 *e*P **P 09 53 20.0 -0.8**
comp=Z,46nm,1.0s,mb5.5
GUNZ Gunzen 67.47 316 *e*P **P 09 53 20.2 -0.7**
comp=Z,76nm,0.8s,mb5.8
WERN Wernitzgruen 67.47 316 *e*P **P 09 53 20.3 -0.6**
comp=Z,59nm,1.0s,mb5.6
BOJS Bojanci 67.51 310 *i*P **P 09 53 21.5 +0.3**
BOJS *e* pP 09 53 26.0 -1.2
OBKA Obir 67.58 312⇓*i*P **P 09 53 21.7 0.0**
comp=Z,36nm,1.4s,mb5.2,SNR=9.8
WET Wettzell 67.61 315 *e*P **P 09 53 21.4 -0.4**
comp=Z,54nm,1.3s,mb5.4
WET Wettzell 67.61 315 *e*P **P 09 53 21.4 -0.4**
WET pmax pmax
comp=Z,54nm,1.3s,mb5.4
SVW2 Sparrevohn 67.67 31 *e*P **P 09 53 20.4 -1.5**
ROTZ Rotzenmuhle 67.78 316 *e*P **P 09 53 22.6 -0.2**
comp=Z,93nm,1.0s,mb5.8
MOX Moxa 67.78 317 *e*P **P 09 53 22.8 -0.1**
comp=Z,53nm,1.3s,mb5.4
MOX Moxa 67.78 317 *e*P **P 09 53 22.1 -0.8**
comp=Z,63nm,1.3s,mb5.5
MOX Moxa 67.78 317 *e*P **P 09 53 22.8 -0.1**
MOX pmax pmax
comp=Z,21nm,1.3s,mb5.0
CHUM Lake Minchumin 67.83 28 *e*P **P 09 53 22.9 0.0**
comp=Z,30nm,0.8s,mb5.4
NRDL Niedersach Rie 67.93 319 *e*P **P 09 53 23.5 -0.2**
comp=Z,109nm,1.0s,mb5.8
CEY Cerknica 67.96 311 *i*P **P 09 53 24.0 0.0**
CEY *i* pP 09 53 28.5 -1.5
CLZ Clausthal 68.03 318 *e*P **P 09 53 23.9 -0.5**
comp=Z,123nm,0.9s,mb5.9
CLZ Clausthal 68.03 318 *e*P **P 09 53 23.9 -0.5**
CLZ pmax pmax
comp=Z,123nm,0.9s,mb5.9
KBA Koelnbreinsper 68.12 313 *i*P **P 09 53 25.2 +0.1**
comp=Z,28nm,0.9s,mb5.3,SNR=12
JAVS Javornik 68.13 311 *i*P **P 09 53 24.5 -0.6**
JAVS *e* pP 09 53 29.0 -2.1
VOY Vojsko 68.19 311 *e*P **P 09 53 25.2 -0.3**
VOY *e* pP 09 53 29.3 -2.1
VOY *e* 09 53 38.7
VOY *e* 09 58 04.5
RJOB Jochberg 68.21 313 *e*P **P 09 53 25.2 -0.4**
comp=Z,75nm,1.7s,mb5.4
BPAW Bear Paw Mtn. 68.25 27 *e*P **P 09 53 25.4 -0.2**
comp=Z,34nm,0.8s,mb5.4
PPLA Purkeypile 68.33 29 *e*P **P 09 53 25.9 -0.1**
comp=Z,34nm,0.6s,mb5.6
GRA1 Grafenberg Arr 68.39 316 *e*P **P 09 53 26.4 -0.3**
comp=Z,128nm,1.0s,mb5.9

GRF Grafenberg Arr 68.39 316 *eP* **P 09 53 26.4 -0.3**
comp=Z,128nm,1.0s,mb5.9
GRF Grafenberg Arr 68.39 316 *eP* **P 09 53 26.4 -0.3**
GRF pmax pmax
comp=Z,128nm,1.0s,mb5.9
GRF Grafenberg Arr 68.39 316 *eP* **P 09 53 26.4 -0.3**
GRF pmax pmax
comp=Z,128nm,1.0s,mb5.9
GRFO Grafenberg 68.39 316 *eP* **P 09 53 26.4 -0.3**
TRI Trieste 68.40 311 *eP* **P 09 53 25.9 -0.9**
TRI pmax pmax
comp=Z,53nm,1.0s,mb5.5
TRI Trieste 68.40 311 *eP* **P 09 53 25.9 -0.9**
comp=Z,53nm,1.0s,mb5.5
HLG Helgoland 68.47 321 *eP* **P 09 53 26.6 -0.5**
comp=Z,81nm,0.9s,mb5.8
KTH Kantishna Hill 68.53 28 *eP* **P 09 53 27.0 -0.3**
comp=Z,62nm,1.4s,mb5.3
UBBA Unterbreizbach 68.66 317 *eP* **P 09 53 27.4 -0.9**
comp=Z,30nm,1.4s,mb5.0
ABTA Abfaltersbach 68.78 312⇑ *iP* **P 09 53 28.4 -0.7**
comp=Z,19nm,1.0s,mb5.0,SNR=7.4
FUR Furstenfeldbru 68.97 314 *eP* **P 09 53 30.2 -0.1**
comp=Z,194nm,0.9s,mb6.0
FUR Furstenfeldbru 68.97 314 *eP* **P 09 53 30.2 -0.1**
FUR pmax pmax
comp=Z,194nm,0.9s,mb6.0
TIP Timpagrande 68.98 304 *eP* **P 09 53 30.1 -0.4**
COLA College 69.08 26 *eP* **P 09 53 30.4 -0.3**
COLA pmax pmax
comp=Z,68nm,1.0s,mb5.5
COLA College 69.08 26 *eP* **P 09 53 30.4 -0.3**
comp=Z,68nm,1.0s,mb5.5
WTTA Wattenberg 69.12 313 *i* P **P 09 53 31.3 0.0**
comp=Z,80nm,1.2s,mb5.5,SNR=13
WATA Walderalm 69.13 313⇑ *iP* **P 09 53 31.4 +0.1**
comp=Z,35nm,0.9s,mb5.3,SNR=12
RSO Redoubt South 69.19 31 *eP* **P 09 53 30.5 -1.0**
MCK McKinley 69.23 27 *eP* **P 09 53 31.2 -0.4**
IBBN Ibbenburen 69.32 319 *eP* **P 09 53 31.8 -0.6**
comp=Z,94nm,1.2s,mb6.6
MOTA Moosalm 69.42 313⇓ *iP* **P 09 53 32.8 -0.3**
comp=Z,84nm,1.3s,mb5.5,SNR=12
RETA Reutte 69.57 314 *i* P **P 09 53 33.8 -0.3**
comp=Z,28nm,1.2s,mb5.1,SNR=14
WIT Witteveen 69.71 320⇑ *eP* **P 09 53 36.0 +1.2**
comp=Z,228nm,0.5s,mb6.4
WIT Witteveen 69.71 320 *ex* pP 09 53 40.5 -0.3
comp=Z,483nm,1.1s
FETA Feichten 69.78 313 *i* P **P 09 53 35.3 -0.1**
comp=Z,78nm,0.9s,mb5.6,SNR=24
TNS Taunus Mts 69.81 317 *eP* **P 09 53 34.8 -0.7**
comp=Z,70nm,1.0s,mb5.5
TNS Taunus Mts 69.81 317 *eP* **P 09 53 34.8 -0.7**
TNS pmax pmax
comp=Z,70nm,1.0s,mb5.5
BUG Bochum--Univer 69.96 319 *eP* **P 09 53 35.8 -0.6**
comp=Z,94nm,1.2s,mb5.6
CEL Celeste 69.97 303 *eP* **P 09 53 36.6 -0.1**
comp=Z,98nm,1.3s,mb5.6
STU Stuttgart 69.98 315 *eP* **P 09 53 35.7 -0.9**
comp=Z,87nm,0.9s,mb5.7
STU Stuttgart 69.98 315 *eP* **P 09 53 36.8 +0.2**
STU pmax pmax
comp=Z,50nm,0.8s,mb5.5
STU Stuttgart 69.98 315 *eP* **P 09 53 36.8 +0.2**
comp=Z,50nm,0.8s,mb5.5
AQU L'Aquila 70.00 308 *eP* **P 09 53 37.6 +0.8**
AQU pmax pmax
comp=Z,82nm,1.2s,mb5.5
AQU L'Aquila 70.00 308 *eP* **P 09 53 37.6 +0.8**
comp=Z,82nm,1.2s,mb5.5
WTSB Winterswijk 70.00 319⇑ *eP* **P 09 53 36.8 +0.2**
comp=Z,48nm,0.9s,mb5.4
WTSB Winterswijk 70.00 319 *ex* pP 09 53 41.6 -1.0
comp=Z,90nm,0.9s
DAVA Damuels 70.20 314 *i* P **P 09 53 37.9 0.0**
comp=Z,39nm,1.3s,mb5.2,SNR=6.9
PMR Palmer 70.20 29 *eP* **P 09 53 37.1 -0.6**
PMR pmax pmax
comp=Z,25nm,0.6s,mb5.3
PMR Palmer 70.20 29 *eP* **P 09 53 37.0 -0.6**
comp=Z,25nm,0.6s,mb5.3
LRW Lerwick 70.24 329 *eP* **P 09 53 37.5 -0.4**
LRW AMb AMB 09 53 43.4
comp=Z,78nm,0.9s,mb5.6
WAL1 Walls 70.37 329 *eP* **P 09 53 38.1 -0.6**
DAVOX Davos/Dischmat 70.41 313 P **P 09 53 39.6 +0.4**
comp=Z,40nm,0.7s,mb5.5,baz=73,slow=5.6,SNR=49
OHAK Old Harbor 70.45 34 *eP* **P 09 53 38.9 -0.3**
comp=Z,70nm,0.8s,mb5.6
KDAK Kodiak Island 70.52 34 P **P 09 53 39.4 -0.3**
comp=Z,41nm,0.6s,mb5.6,baz=318,slow=5.3,SNR=24
KDAK Kodiak Island 70.52 34 *i* P **P 09 53 39.2 -0.5**
KDAK Kodiak Island 70.52 34 P **P 09 53 39.4 -0.3**
BFO Black Forest 70.69 315 P **P 09 53 40.0 -0.9**
comp=Z,280nm,1.1s,mb6.1,SNR=14
BFO Black Forest 70.69 315 *eP* **P 09 53 39.8 -1.1**
comp=Z,69nm,1.1s,mb5.5
BFO Black Forest 70.69 315 *eP* **P 09 53 39.8 -1.1**
BFO pmax pmax
comp=Z,69nm,1.1s,mb5.5
LANF Langenberg 70.72 316 *eP* **P 09 53 41.0 -0.1**
KMBO Kilima Mbogo 70.96 256 P **P 09 53 43.0 0.0**
comp=Z,39nm,0.9s,mb5.3,baz=44,slow=9.8,SNR=89
KMBO Kilima Mbogo 70.96 256 *eP* **P 09 53 43.1 +0.1**
KMBO Kilima Mbogo 70.96 256 P **P 09 53 43.8 +0.7**
SNR=16
KMBO P 09 53 43.8
SNR=16
KMBO Kilima Mbogo 70.96 256 P **P 09 53 43.8 +0.7**
SNR=16
KMBO P 09 53 43.8
SNR=16
HGN Heimansgroeve 71.02 318⇑ *eP* **P 09 53 42.8 0.0**
comp=Z,23nm,0.8s,mb5.2
HGN Heimansgroeve 71.02 318 *ex* pP 09 53 47.7 -1.1
comp=Z,35nm,1.2s
MEM Membach 71.04 318 P **P 09 53 43.1 +0.1**
MEM AP pP 09 53 47.8 -1.2
comp=Z,26nm,1.4s
FELD Feldberg im Sc 71.09 315 *eP* **P 09 53 43.2 -0.1**
BEBN Eben Emael 71.15 318 P **P 09 53 43.7 +0.1**
BEBN XP sP 09 53 48.9 -3.0
comp=Z,12nm,1.2s
SCO Scoresbysund 71.26 343 *i* P **P 09 53 48.0 +4.0**
SCO pmax pmax
comp=Z,11nm,1.0s,mb4.7
SCO Scoresbysund 71.26 343 *i* P **P 09 53 48.0 +4.0**
comp=Z,11nm,1.0s,mb4.8
SCO Scoresbysund 71.26 343 *i* P PP 09 56 36.1 +15
comp=Z,6.5nm,1.1s
CDF Champ du Feu 71.29 316⇑ *iP* **P 09 53 44.4 -0.1**
comp=Z,112nm,0.9s,mb5.5
CDF Champ du Feu 71.29 316⇑ *iP* **P 09 53 44.4 -0.1**
CDF pmax pmax
comp=Z,56nm,0.9s,mb5.5
CDF Champ du Feu 71.29 316⇑ *iP* **P 09 53 44.4 -0.1**
comp=Z,56nm,0.9s,mb5.5
WLF Walferdange 71.39 317 P **P 09 53 45.9 +0.8**
WLF AP pP 09 53 50.0 -1.1
comp=Z,122nm,1.3s
WLF Walferdange 71.39 317 *eP* **P 09 53 45.0 -0.1**
comp=Z,186nm,1.0s,mb6.0
WLF Walferdange 71.39 317 *eP* **P 09 53 45.9 +0.8**
WLF pmax pmax
comp=Z,88nm,0.8s,mb5.7
WLF Walferdange 71.39 317 *eP* **P 09 53 45.9 +0.8**
comp=Z,88nm,0.8s,mb5.7
ECH Echery 71.44 316 *eP* **P 09 53 45.1 -0.4**
ECH pmax pmax
comp=Z,42nm,1.0s,mb5.3
ECH Echery 71.44 316 *eP* **P 09 53 45.1 -0.4**
comp=Z,42nm,1.0s,mb5.3
BCLA Clavier 71.53 318 P **P 09 53 46.1 +0.2**
BCLA XP sP 09 53 51.0 -3.1
comp=Z,38nm,1.4s
EGAK Eagle 71.55 24 *eP* **P 09 53 45.2 -0.6**
MOF Molkenrain 71.62 315 *eP* **P 09 53 46.2 -0.4**
MENT Mentasta 71.65 26 *eP* **P 09 53 46.2 -0.2**
INK Inuvik 71.78 19 P **P 09 53 46.9 -0.3**
comp=Z,34nm,0.6s,mb5.4,baz=331,slow=7.7,SNR=70
INK Inuvik 71.78 19 *eP* **P 09 53 47.0 -0.2**
INK pmax pmax
comp=Z,21nm,0.5s
INK Inuvik 71.78 19 *eP* **P 09 53 47.0 -0.2**
comp=Z,21nm,0.5s,mb5.3

HINF Hinteralfeld 71.81 315⇑ *iP* **P 09 53 47.3 -0.4**
comp=Z,99nm,1.0s,mb5.4
HINF Hinteralfeld 71.81 315⇑ *iP* **P 09 53 47.3 -0.4**
HINF pmax pmax
comp=Z,49nm,1.0s,mb5.4
HINF Hinteralfeld 71.81 315⇑ *iP* **P 09 53 47.3 -0.4**
comp=Z,49nm,1.0s,mb5.4
DIV Divide 71.83 29 *eP* **P 09 53 47.6 +0.1**
comp=Z,17nm,0.7s,mb5.1
UCC Uccle 71.89 319 P **P 09 53 48.0 -0.1**
UCC AP pP 09 53 52.0 -2.1
GIVF Givet 71.95 318⇑ *iP* **P 09 53 48.6 +0.1**
comp=Z,109nm,1.0s,mb5.5
GIVF Givet 71.95 318⇑ *iP* **P 09 53 48.6 +0.1**
GIVF pmax pmax
comp=Z,54nm,1.0s,mb5.4
GIVF Givet 71.95 318⇑ *iP* **P 09 53 48.6 +0.1**
comp=Z,54nm,1.0s,mb5.4
HAU Haudompre 72.02 316⇑ *iP* **P 09 53 48.7 -0.3**
comp=Z,82nm,1.1s,mb5.3
HAU Haudompre 72.02 316⇑ *iP* **P 09 53 48.7 -0.3**
HAU pmax pmax
comp=Z,41nm,1.1s,mb5.3
HAU Haudompre 72.02 316⇑ *iP* **P 09 53 48.7 -0.3**
comp=Z,41nm,1.1s,mb5.3
LOMF Lomont 72.03 315 *eP* **P 09 53 48.6 -0.4**
SNF Seneffe 72.07 319 P **P 09 53 49.6 +0.4**
SNF XP sP 09 53 54.3 -3.1
comp=Z,26nm,1.3s
DOU Dourbes 72.08 318 P **P 09 53 49.4 +0.1**
DOU AP pP 09 53 54.4 -0.9
comp=Z,21nm,1.4s
THEF They Montfort 72.14 316 *eP* **P 09 53 49.0 -0.6**
ORE Reay 72.18 328 *eP* **P 09 53 49.4 -0.3**
EIDS Eidsvold 72.25 136 *eP* **P 09 53 50.3 -0.2**
comp=Z,22nm,0.7s,mb5.2
BAIF Baives 72.32 318⇑ *iP* **P 09 53 50.9 +0.2**
comp=Z,110nm,1.0s,mb5.4
BAIF Baives 72.32 318⇑ *iP* **P 09 53 50.9 +0.2**
BAIF pmax pmax
comp=Z,55nm,1.0s,mb5.4
BAIF Baives 72.32 318⇑ *iP* **P 09 53 50.9 +0.2**
comp=Z,55nm,1.0s,mb5.4
STKA Stephens Creek 72.38 147⇑ *iP* **P 09 53 50.8 -0.3**
comp=Z,37nm,0.6s,mb5.5
STKA Stephens Creek 72.38 147 P **P 09 53 50.9 -0.2**
comp=Z,48nm,0.7s,mb5.6,baz=329,slow=6.2,SNR=88
BMRM Bremner River 72.39 28 *eP* **P 09 53 50.9 0.0**
comp=Z,61nm,0.8s,mb5.6
MCD Coleburn Disti 72.45 327 *eP* **P 09 53 51.2 -0.1**
MME1 Meikle Cairn 72.46 327 *eP* **P 09 53 51.2 -0.2**
MEZF Maizieres J'vi 72.56 316⇑ *iP* **P 09 53 52.2 0.0**
comp=Z,57nm,0.8s,mb5.2
MEZF Maizieres J'vi 72.56 316⇑ *iP* **P 09 53 52.2 0.0**
comp=Z,57nm,0.8s,mb5.5
DAWY Dawson 72.58 24 *eP* **P 09 53 51.8 -0.2**
OG01 Vacheresse 72.59 314 *eP* **P 09 53 52.8 +0.4**
CABF La Chapelle 72.82 314⇑ *iP* **P 09 53 53.6 -0.2**
comp=Z,91nm,1.1s,mb5.3
CABF La Chapelle 72.82 314⇑ *iP* **P 09 53 53.6 -0.2**
CABF pmax pmax
comp=Z,46nm,1.1s,mb5.3
CABF La Chapelle 72.82 314⇑ *iP* **P 09 53 53.6 -0.2**
comp=Z,46nm,1.1s,mb5.3
LPG La Plagne 72.93 313⇑ *iP* **P 09 53 55.2 +0.8**
comp=Z,190nm,0.8s,mb5.8
LPG La Plagne 72.93 313⇑ *iP* **P 09 53 55.2 +0.8**
LPG pmax pmax
comp=Z,95nm,0.8s,mb5.8
LPG La Plagne 72.93 313⇑ *iP* **P 09 53 55.2 +0.8**
comp=Z,95nm,0.8s,mb5.8
LPL La Plagne 72.93 313⇑ *iP* **P 09 53 55.1 +0.7**
comp=Z,235nm,0.9s,mb5.8
LPL La Plagne 72.93 313⇑ *iP* **P 09 53 55.1 +0.7**
LPL pmax pmax
comp=Z,118nm,0.9s,mb5.8
LPL La Plagne 72.93 313⇑ *iP* **P 09 53 55.1 +0.7**
comp=Z,118nm,0.9s,mb5.8
ESY Stoneypath 73.02 326 *eP* **P 09 53 54.0 -0.7**
SUMG Summit 73.03 349 *eP* **P 09 53 55.2 +0.7**
MDO Dochfour 73.04 328 *eP* **P 09 53 54.2 -0.6**
BNI Bardonecchia 73.18 313 *eP* **P 09 53 56.3 +0.4**
BNI pmax pmax
comp=Z,32nm,0.8s,mb5.3
BNI Bardonecchia 73.18 313 *eP* **P 09 53 56.3 +0.3**
comp=Z,32nm,0.8s,mb5.3
MENF Mencas 73.24 319 *eP* **P 09 53 56.4 +0.3**
SBF Sospel 73.26 311 *eP* **P 09 53 56.2 -0.2**
EBH Black Hill 73.27 326 *eP* **P 09 53 55.2 -1.0**
MBDF Montbardon 73.28 312 *eP* **P 09 53 56.9 +0.4**
RES Resolute Bay 73.33 5 P **P 09 53 56.3 0.0**
comp=Z,11nm,0.9s,mb4.8,baz=7.0,slow=6.4
RES Resolute Bay 73.33 5 *eP* **P 09 53 56.4 +0.1**
XAL Allendale 73.37 325 *eP* **P 09 53 55.8 -1.0**
EAU Auchinoon 73.45 326 *eP* **P 09 53 56.2 -1.1**
EKA Eskdalemuir Ar 73.59 325 P **P 09 53 57.5 -0.5**
comp=Z,11nm,0.8s,mb4.8,baz=49,slow=6.4,SNR=27
ESK Eskdalemuir 73.62 325 *eP* **P 09 53 57.3 -1.0**
ESK AMb AMB 09 54 03.1
comp=Z,45nm,1.1s,mb5.3
ESK Eskdalemuir 73.62 325 P **P 09 53 57.3 -1.0**
ESK AMb AMB 09 54 03.1
comp=Z,45nm,1.1s,mb5.3
ESK Eskdalemuir 73.62 325 *eP* **P 09 53 57.6 -0.7**
ESK pmax pmax
comp=Z,29nm,0.8s,mb5.3
ESK Eskdalemuir 73.62 325 *eP* **P 09 53 57.6 -0.7**
comp=Z,29nm,0.8s,mb5.3
ECK Cauldkaine Hil 73.65 325 *eP* **P 09 53 57.7 -0.8**
KPL Plockton 73.68 328 *eP* **P 09 53 57.4 -1.2**
KPL AMb AMB 09 54 04.1
comp=Z,45nm,4.8s
ORIF Oris-en-Rattie 73.75 313⇑ *iP* **P 09 53 59.4 +0.2**
comp=Z,85nm,0.9s,mb5.4
ORIF Oris-en-Rattie 73.75 313⇑ *iP* **P 09 53 59.4 +0.2**
ORIF pmax pmax
comp=Z,42nm,0.9s,mb5.4
ORIF Oris-en-Rattie 73.75 313⇑ *iP* **P 09 53 59.4 +0.2**
comp=Z,42nm,0.9s,mb5.4
LOR Lormes 73.86 316⇑ *iP* **P 09 53 59.1 -0.7**
comp=Z,36nm,0.8s,mb5.0
LOR Lormes 73.86 316⇑ *iP* **P 09 53 59.1 -0.7**
LOR pmax pmax
comp=Z,18nm,0.8s,mb5.0
LOR Lormes 73.86 316⇑ *iP* **P 09 53 59.1 -0.7**
comp=Z,18nm,0.8s,mb5.1
LHO Holmfirth 73.87 323 *eP* **P 09 53 59.3 -0.5**
FRF La Foret Royal 73.90 311 *eP* **P 09 53 59.8 -0.4**
PGBU Glenifferbraes 73.97 326 *eP* **P 09 53 59.8 -0.5**
PGBU AMb AMB 09 54 05.5
comp=Z,63nm,1.1s,mb5.5
LMR La Mourre 74.10 311⇑ *iP* **P 09 54 01.1 -0.2**
comp=Z,106nm,1.2s,mb5.4
LMR La Mourre 74.10 311⇑ *iP* **P 09 54 01.1 -0.2**
LMR pmax pmax
comp=Z,53nm,1.2s,mb5.3
LMR La Mourre 74.10 311⇑ *iP* **P 09 54 01.1 -0.2**
comp=Z,53nm,1.2s,mb5.3
SSF Saint Saulge 74.17 316⇑ *iP* **P 09 54 01.2 -0.5**
comp=Z,70nm,1.0s,mb5.2
SSF Saint Saulge 74.17 316⇑ *iP* **P 09 54 01.2 -0.5**
SSF pmax pmax
comp=Z,35nm,1.0s,mb5.2
SSF Saint Saulge 74.17 316⇑ *iP* **P 09 54 01.2 -0.5**
comp=Z,35nm,1.0s,mb5.2
SMF Signal de Mont 74.17 315⇑ *iP* **P 09 54 01.4 -0.3**
comp=Z,198nm,1.0s,mb5.7
SMF Signal de Mont 74.17 315⇑ *iP* **P 09 54 01.4 -0.3**
SMF pmax pmax
comp=Z,99nm,1.0s,mb5.7
SMF Signal de Mont 74.17 315⇑ *iP* **P 09 54 01.4 -0.3**
comp=Z,99nm,1.0s,mb5.7
TAVF Tavernes 74.25 312 *eP* **P 09 54 02.9 +0.7**
SMRF Simiane la Rot 74.39 312 *eP* **P 09 54 03.2 +0.2**
AVF Avril sur Loir 74.39 315⇑ *iP* **P 09 54 02.7 -0.3**
comp=Z,149nm,1.0s,mb5.6
AVF Avril sur Loir 74.39 315⇑ *iP* **P 09 54 02.7 -0.3**
AVF pmax pmax
comp=Z,74nm,1.0s,mb5.6
AVF Avril sur Loir 74.39 315⇑ *iP* **P 09 54 02.7 -0.3**
comp=Z,74nm,1.0s,mb5.6
SSB Saint Sauveur 74.41 314 *eP* **P 09 54 02.6 -0.5**
SSB pmax pmax
comp=Z,43nm,1.4s,mb5.2
SSB Saint Sauveur 74.41 314 *eP* **P 09 54 02.6 -0.5**
comp=Z,43nm,1.4s,mb5.2

VIVF Saint-Julien-I 74.53 313⇑ *iP* **P 09 54 03.7 -0.1**
comp=Z,108nm,1.2s,mb5.4
VIVF Saint-Julien-I 74.53 313⇑ *iP* **P 09 54 03.7 -0.1**
VIVF pmax pmax
comp=Z,54nm,1.2s,mb5.3
VIVF Saint-Julien-I 74.53 313⇑ *iP* **P 09 54 03.7 -0.1**
comp=Z,54nm,1.2s,mb5.3
GAL1 Galloway 74.59 325 *eP* **P 09 54 03.3 -0.7**
GAL1 AMb AMB 09 54 10.4
comp=Z,40nm,5.0s
GAL1 Galloway 74.59 325 P **P 09 54 03.3 -0.7**
GAL1 AMb AMB 09 54 10.4
comp=Z,40nm,5.0s
TREF Trevaresse 74.68 312 *eP* **P 09 54 05.1 +0.4**
PRAF Pradon 74.73 312 *eP* **P 09 54 05.1 +0.1**
GELF Grande-Etoile 74.77 312 *eP* **P 09 54 05.5 +0.3**
BGF Bois d'Agland 74.81 315⇑ *iP* **P 09 54 05.0 -0.4**
comp=Z,50nm,1.1s,mb5.0
BGF Bois d'Agland 74.81 315⇑ *iP* **P 09 54 05.0 -0.4**
BGF pmax pmax
comp=Z,25nm,1.1s,mb5.1
BGF Bois d'Agland 74.81 315⇑ *iP* **P 09 54 05.0 -0.4**
comp=Z,25nm,1.1s,mb5.1
AGO Saint Agoulin 74.89 315 *eP* **P 09 54 06.0 +0.1**
HLM1 Long Mynd 74.94 323 *eP* **P 09 54 05.0 -1.1**
BORG Borgarnes 75.06 339 P **P 09 54 08.1 +1.6**
comp=Z,83nm,1.1s,mb5.6,baz=100,slow=4.9,SNR=6.8
PYM Petit Puy Mans 75.11 315 *eP* **P 09 54 07.2 0.0**
LBL Lubilhac 75.22 314 *eP* **P 09 54 07.9 +0.1**
PNL Peninsula 75.26 28 *eP* **P 09 54 08.1 +0.4**
comp=Z,60nm,0.9s,mb5.5
HYT Haines Junctio 75.28 26 *eP* **P 09 54 09.0 +1.2**
WLF1 Llynfaes 75.30 324 *eP* **P 09 54 07.2 -0.8**
WLF1 AMb AMB 09 54 13.5
comp=Z,176nm,0.9s,mb6.0
TCF Toulx Ste Croi 75.33 315⇑ *iP* **P 09 54 08.4 0.0**
comp=Z,116nm,1.1s,mb5.4
TCF Toulx Ste Croi 75.33 315⇑ *iP* **P 09 54 08.4 0.0**
TCF pmax pmax
comp=Z,58nm,1.1s,mb5.4
TCF Toulx Ste Croi 75.33 315⇑ *iP* **P 09 54 08.4 0.0**
comp=Z,58nm,1.1s,mb5.4
HGH Gray Hill 75.37 322 *eP* **P 09 54 06.9 -1.6**
HTR Trewern Hill 75.38 322 *eP* **P 09 54 08.1 -0.4**
LASF Ste Croix 75.42 313⇑ *iP* **P 09 54 09.2 +0.2**
comp=Z,125nm,1.2s,mb5.4
LDF La Druitiere 75.51 318⇑ *iP* **P 09 54 09.1 -0.3**
comp=Z,87nm,1.0s,mb5.3
LDF La Druitiere 75.51 318⇑ *iP* **P 09 54 09.1 -0.3**
LDF pmax pmax
comp=Z,44nm,1.0s,mb5.3
LDF La Druitiere 75.51 318⇑ *iP* **P 09 54 09.1 -0.3**
comp=Z,44nm,1.0s,mb5.3
FLN La Foliniere 75.62 319⇑ *iP* **P 09 54 09.8 -0.3**
comp=Z,116nm,1.2s,mb5.4
FLN La Foliniere 75.62 319⇑ *iP* **P 09 54 09.8 -0.3**
FLN pmax pmax
comp=Z,58nm,1.2s,mb5.4
FLN La Foliniere 75.62 319⇑ *iP* **P 09 54 09.8 -0.3**
comp=Z,58nm,1.2s,mb5.4
KEST Kesra 75.79 303 P **P 09 54 11.6 +0.3**
comp=Z,2.4nm,0.7s,mb4.2,baz=48,slow=0.5,SNR=7.5
GRR Gorron 76.03 318⇑ *iP* **P 09 54 12.3 -0.1**
comp=Z,124nm,0.9s,mb5.5
GRR Gorron 76.03 318⇑ *iP* **P 09 54 12.3 -0.1**
GRR pmax pmax
comp=Z,62nm,0.9s,mb5.5
GRR Gorron 76.03 318⇑ *iP* **P 09 54 12.3 -0.1**
comp=Z,62nm,0.9s,mb5.5
CAF Calviac 76.10 314⇑ *iP* **P 09 54 13.3 +0.4**
comp=Z,91nm,1.0s,mb5.4
CAF Calviac 76.10 314⇑ *iP* **P 09 54 13.3 +0.4**
CAF pmax pmax
comp=Z,46nm,1.0s,mb5.4
CAF Calviac 76.10 314⇑ *iP* **P 09 54 13.3 +0.4**
comp=Z,46nm,1.0s,mb5.4
RJF Les Rejaudoux 76.24 315⇑ *iP* **P 09 54 14.1 +0.4**
comp=Z,120nm,1.1s,mb5.4
RJF Les Rejaudoux 76.24 315⇑ *iP* **P 09 54 14.1 +0.4**
RJF pmax pmax
comp=Z,60nm,1.1s,mb5.4
RJF Les Rejaudoux 76.24 315⇑ *iP* **P 09 54 14.1 +0.4**
comp=Z,60nm,1.1s,mb5.4
DSB Dublin 76.31 325 *eP* **P 09 54 18.7 +4.8**
JSA Saint Aubin 76.34 320 *eP* **P 09 54 13.1 -1.1**
JSA AMb AMB 09 54 19.6
comp=Z,38nm,1.2s,mb5.2
ARMA Armidale 76.38 139⇑ *iP* **P 09 54 15.5 +1.1**
ARMA Armidale 76.38 139 *eP* **P 09 54 15.7 +1.3**
MFF Saint Martin d 76.56 317⇑ *iP* **P 09 54 15.5 +0.1**
comp=Z,78nm,0.9s,mb5.3
MFF Saint Martin d 76.56 317⇑ *iP* **P 09 54 15.5 +0.1**
MFF pmax pmax
comp=Z,39nm,0.9s,mb5.3
MFF Saint Martin d 76.56 317⇑ *iP* **P 09 54 15.5 +0.1**
comp=Z,39nm,0.9s,mb5.3
HTL Hartland 76.61 322 *eP* **P 09 54 13.5 -2.1**
HTL AMb AMB 09 54 21.2
comp=Z,47nm,3.4s
MTLF Montolieu 76.82 313⇑ *iP* **P 09 54 17.0 0.0**
comp=Z,54nm,1.3s,mb5.0
MTLF Montolieu 76.82 313⇑ *iP* **P 09 54 17.0 0.0**
MTLF pmax pmax
comp=Z,27nm,1.3s,mb5.0
MTLF Montolieu 76.82 313⇑ *iP* **P 09 54 17.0 0.0**
comp=Z,27nm,1.3s,mb5.0
LRDF Laroque-de-Fa 76.82 312 *eP* **P 09 54 16.9 -0.1**
LFF La Frestale 76.90 315⇑ *iP* **P 09 54 17.8 +0.4**
comp=Z,93nm,1.0s,mb5.4
LFF La Frestale 76.90 315⇑ *iP* **P 09 54 17.8 +0.4**
LFF pmax pmax
comp=Z,47nm,1.0s,mb5.4
LFF La Frestale 76.90 315⇑ *iP* **P 09 54 17.8 +0.4**
comp=Z,47nm,1.0s,mb5.4
SKAG Skagway 76.99 27 *eP* **P 09 54 18.4 +0.8**
comp=Z,44nm,0.7s,mb5.5
SGMF Saint Gilles 77.06 319⇑ *iP* **P 09 54 18.5 +0.3**
comp=Z,220nm,1.2s,mb5.7
SGMF Saint Gilles 77.06 319⇑ *iP* **P 09 54 18.5 +0.3**
SGMF pmax pmax
comp=Z,110nm,1.2s,mb5.7
SGMF Saint Gilles 77.06 319⇑ *iP* **P 09 54 18.5 +0.3**
comp=Z,110nm,1.2s,mb5.7
ROSF Rostrenen 77.42 319⇑ *iP* **P 09 54 20.5 +0.3**
comp=Z,162nm,1.3s,mb5.5
ROSF Rostrenen 77.42 319⇑ *iP* **P 09 54 20.5 +0.3**
ROSF pmax pmax
comp=Z,81nm,1.3s,mb5.5
ROSF Rostrenen 77.42 319⇑ *iP* **P 09 54 20.5 +0.3**
comp=Z,81nm,1.3s,mb5.5
VALF Valcebollere 77.43 312 *eP* **P 09 54 20.9 +0.5**
QUIF Quistinic 77.59 319⇑ *iP* **P 09 54 21.3 +0.1**
comp=Z,140nm,1.2s,mb5.5
QUIF Quistinic 77.59 319⇑ *iP* **P 09 54 21.3 +0.1**
QUIF pmax pmax
comp=Z,70nm,1.2s,mb5.5
QUIF Quistinic 77.59 319⇑ *iP* **P 09 54 21.3 +0.1**
comp=Z,70nm,1.2s,mb5.5
MLS Moulis 77.72 313 *eP* **P 09 54 20.4 -1.6**
BST Brest 77.88 320 *eP* **P 09 54 23.0 +0.2**
EPF Esparros 78.15 313⇑ *iP* **P 09 54 23.8 -0.6**
RESF Ens 78.27 313 *eP* **P 09 54 25.6 +0.5**
VIEF Viey 78.43 313 *eP* **P 09 54 26.5 +0.6**
EBIE Bielsa 78.46 313 P **P 09 54 26.4 +0.3**
comp=Z,160nm,2.0s,mb5.6
EPOB Poblet 78.57 312 P **P 09 54 25.9 -0.9**
comp=Z,46nm,1.2s,mb5.3
CAN Canberra 78.77 144 P **P 09 54 28.0 +0.3**
CAN pmax pmax
comp=Z,40nm,1.0s,mb5.3
CAN Canberra 78.77 144 *eP* **P 09 54 27.9 +0.2**
comp=Z,40nm,0.9s,mb5.3
ETSF Etsaut 78.78 314⇑ *iP* **P 09 54 28.4 +0.5**
comp=Z,64nm,1.2s,mb5.1
ETSF Etsaut 78.78 314⇑ *iP* **P 09 54 28.4 +0.5**
ETSF pmax pmax
comp=Z,32nm,1.2s,mb5.1
ETSF Etsaut 78.78 314⇑ *iP* **P 09 54 28.4 +0.5**
comp=Z,32nm,1.2s,mb5.1
TOO Toolangi 78.88 148 *eP* **P 09 54 28.7 +0.4**
CNB Canberra Magne 78.94 144 *eP* **P 09 54 28.9 +0.2**
SJPF Ste Jean 79.08 314⇑ *iP* **P 09 54 30.4 +0.9**
comp=Z,18nm,0.7s,mb4.8
SJPF Ste Jean 79.08 314⇑ *iP* **P 09 54 30.4 +0.9**
SJPF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8

SJPF	Ste Jean	79.08	314	⇑iP		P	09 54 30.4	+0.9
	comp=Z,9.3nm,0.7s,mb4.8							
EALK	Alkurruntz	79.19	314	P		P	09 54 34.6	+4.5
	comp=Z,120nm,2.0s,mb5.5							
ELIZ	Elizondo	79.23	314	P		P	09 54 34.5	+4.1
ELIZ				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.7							
ELIZ	Elizondo	79.23	314	P		P	09 54 34.5	+4.1
	comp=Z,7.0nm,0.7s,mb4.7							
ERTA	Horta de San J	79.26	312	P		P	09 54 32.0	+1.5
	comp=Z,117nm,1.6s,mb5.6							
DLBC	Dease Lake	79.70	26	eP		P	09 54 32.8	+0.2
SFJD	Kangerlussuaq	79.92	350	P		P	09 54 33.3	-0.3
	comp=Z,39nm,0.6s,mb5.5,baz=7.0,slow=6.0,SNR=24							
SFJD	Kangerlussuaq	79.92	350	⇑iP		P	09 54 33.2	-0.5
SFJD				pmax		pmax		
	comp=Z,40nm,0.9s,mb5.3							
SFJD	Kangerlussuaq	79.92	350	eP		P	09 54 33.3	-0.4
	comp=Z,31nm,0.6s,mb5.4							
SFJD	Kangerlussuaq	79.92	350	⇑iP		P	09 54 33.2	-0.5
	comp=Z,40nm,0.9s,mb5.3							
EMOS	Mosqueruela	80.10	311	P		P	09 54 35.5	+0.4
	comp=Z,185nm,1.9s,mb5.7							
ELAN	Lanestosa	80.36	315	P		P	09 54 36.8	+0.3
	comp=Z,49nm,1.4s,mb5.2							
ETOR	Torete	80.85	312	P		P	09 54 38.8	-0.4
ETOR				pmax		pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
ETOR	Torete	80.85	312	P		P	09 54 38.8	-0.4
	comp=Z,9.5nm,0.9s,mb4.7							
YKA	Yellowknife Ar	81.31	17	P		P	09 54 41.0	-0.2
	comp=Z,12nm,0.6s,mb5.0,baz=330,slow=5.2,SNR=61							
YKA				PKKPbc		PKKPbc	10 13 13.3	-3.1
	comp=Z,2.2nm,0.6s,baz=157,slow=1.9,SNR=32							
YKA	Yellowknife Ar	81.31	17	P		P	09 54 41.0	-0.2
YKA				PKKPbc		PKKPbc	10 13 13.3	-3.1
EARI	Arriondas	81.38	316	P		P	09 54 42.5	+0.5
	comp=Z,70nm,1.9s,mb5.3							
ETOB	Tobarra	81.73	310	P		P	09 54 44.8	+0.9
	comp=Z,400nm,2.5s,mb5.9							
GUD	Guadarrama	82.27	313	P		P	09 54 46.9	+0.2
GUD				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.0							
GUD	Guadarrama	82.27	313	P		P	09 54 46.9	+0.2
	comp=Z,18nm,0.8s,mb5.0							
EVIA	Vianos	82.36	311	P		P	09 54 47.4	+0.2
EVIA				pmax		pmax		
	comp=Z,13nm,0.7s,mb5.0							
EVIA	Vianos	82.36	311	P		P	09 54 47.4	+0.3
	comp=Z,13nm,0.7s,mb5.0							
EPON	Pontenova	82.51	317	P		P	09 54 48.2	+0.3
	comp=Z,75nm,1.6s,mb5.5							
ESDC	Sonseca Array	82.70	312	P		P	09 54 48.8	-0.1
	comp=Z,1.9nm,0.5s,mb4.4,baz=40,slow=5.3,SNR=10.0							
ESDC	Sonseca Array	82.70	312	P		P	09 54 50.2	+1.2
	comp=Z,32nm,1.8s,mb5.0							
EHUE	Huescar	82.88	310	P		P	09 54 49.8	-0.1
EHUE				pmax		pmax		
	comp=Z,33nm,1.7s,mb5.1							
EHUE	Huescar	82.88	310	P		P	09 54 49.8	-0.2
	comp=Z,33nm,1.7s,mb5.1							
ECAL	Calabor	83.09	315	P		P	09 54 51.4	+0.5
	comp=Z,17nm,1.0s,mb5.0							
PBRG	Braganca	83.17	315	eP		P	09 54 51.8	+0.5
	comp=Z,21nm,2.1s,mb4.8							
EQES	Quesada	83.20	310	P		P	09 54 52.4	+0.8
	comp=Z,124nm,2.0s,mb5.6							
EBAN	Banos Encina	83.46	311	P		P	09 54 53.5	+0.6
EBAN				pmax		pmax		
	comp=Z,7.0nm,0.5s,mb5.0							
EBAN	Banos Encina	83.46	311	P		P	09 54 53.5	+0.6
	comp=Z,6.6nm,0.5s,mb4.9							
MVO	Moncorvo	83.73	315	eP		P	09 54 54.6	+0.4
	comp=Z,26nm,0.8s,mb5.4							
ELOB	Lobios	83.92	316	P		P	09 54 54.0	-1.2
	comp=Z,9.1nm,1.2s,mb4.8							
EADA	Adamuz	83.96	311	P		P	09 54 51.3	-4.2
	comp=Z,42nm,1.3s,mb5.4							
PCAB	Cabril	84.00	316	eP		P	09 54 56.3	+0.7
	comp=Z,47nm,1.5s,mb5.4							
PVRL	Vila Real	84.08	315	eP		P	09 54 56.5	+0.5
	comp=Z,21nm,1.1s,mb5.2							
ELUQ	Luque	84.12	311	P		P	09 54 55.6	-0.7
ELUQ				pmax		pmax		
	comp=Z,24nm,0.7s,mb5.4							
ELUQ	Luque	84.12	311	P		P	09 54 55.6	-0.6
	comp=Z,24nm,0.7s,mb5.4							
EZAM	Zamans	84.13	316	P		P	09 54 56.0	-0.2
EZAM				pmax		pmax		
	comp=Z,36nm,0.9s,mb5.5							
EZAM	Zamans	84.13	316	P		P	09 54 56.0	-0.2
	comp=Z,36nm,0.9s,mb5.5							
MTE	Manteigas	84.50	314	eP		P	09 54 58.8	+0.6
MTE	Manteigas	84.50	314	eP		P	09 54 58.6	+0.5
	comp=Z,22nm,1.1s,mb5.2							
FRB	Frobisher Bay	84.88	357	P		P	09 54 58.8	-0.8
	comp=Z,7.8nm,0.8s,mb4.9,baz=12,slow=5.6,SNR=18							
PMRV	Marv??o	84.99	314	eP		P	09 55 01.2	+0.5
	comp=Z,35nm,1.9s,mb5.2							
EBAD	Badajoz	85.16	313	P		P	09 55 00.2	-1.3
	comp=Z,24nm,1.8s,mb5.0							
TAM	Tamanrasset	85.21	294	eP		P	09 55 02.0	0.0
TAM				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.8							
TAM	Tamanrasset	85.21	294	eP		P	09 55 02.0	-0.1
	comp=Z,5.2nm,0.6s,mb4.8							
PBAR	Barrancos	85.53	312	eP		P	09 55 03.8	+0.5
	comp=Z,34nm,1.7s,mb5.3							
EMIN	Mina Concepcio	85.54	312	P		P	09 55 01.8	-1.6
	comp=Z,17nm,1.0s,mb5.2							
EJIF	Jimena Fronter	85.54	310	P		P	09 55 06.9	+3.4
EJIF				pmax		pmax		
	comp=Z,18nm,1.2s,mb5.2							
EJIF	Jimena Fronter	85.54	310	P		P	09 55 06.9	+3.4
	comp=Z,18nm,1.2s,mb5.2							
EVO	Evora	85.92	313	eP		P	09 55 06.0	+0.7
	comp=Z,34nm,1.7s,mb5.3							
PBEJ	Beja	86.14	313	eP		P	09 55 07.0	+0.6
	comp=Z,40nm,1.9s,mb5.3							
LSZ	Lusaka	86.26	250	eP		P	09 55 06.7	-0.5
LSZ				pmax		pmax		
	comp=Z,62nm,1.1s,mb5.8							
LSZ	Lusaka	86.26	250	eP		P	09 55 06.7	-0.5
	comp=Z,62nm,1.1s,mb5.8							
LSZ	Lusaka	86.26	250	P		P	09 55 07.9	+0.6
	SNR=8.8							
LSZ				P			09 55 07.9	
	SNR=8.8							
LSZ	Lusaka	86.26	250	P		P	09 55 07.9	+0.6
	SNR=8.8							
LSZ				P			09 55 07.9	
	SNR=8.8							
PCVE	Castro Verde	86.48	313	eP		P	09 55 09.0	+0.9
	comp=Z,40nm,1.6s,mb5.4							
MDT	Midelt	87.11	307	P		P	09 55 11.6	+0.4
	comp=Z,9.6nm,1.0s,mb5.0,baz=32,slow=2.7,SNR=11							
FCC	Fort Churchill	88.80	9	eP		P	09 55 18.3	-0.5
EDM	Edmonton	89.56	21	eP		P	09 55 23.0	+0.5
B06A	Marblemount	90.53	28	⇑P		P	09 55 27.3	+0.3
	baz=90							
A07A	Ashnola River,	90.55	27	⇑P		P	09 55 27.8	+0.6
	baz=90							
RPW	Rockport	90.57	28	eP		P	09 55 27.2	-0.1
	comp=Z,5.8nm,1.0s,mb4.9							
JCW	Jim Creek	90.60	29	eP		P	09 55 28.0	+0.5
A08A	Turner Farm, O	91.05	27	⇓P		P	09 55 29.9	+0.4
	baz=91,SNR=11							
B07A	Winthrop	91.12	28	⇑P		P	09 55 30.3	+0.5
	baz=91,SNR=8.2							
FFC	Flin Flon	91.23	15	P		P	09 55 29.7	-0.5
	comp=Z,111nm,0.7s,mb6.3,SNR=6.8							
FFC	Flin Flon	91.23	15	eP		P	09 55 29.4	-0.8
	comp=Z,98nm,1.9s,mb5.8							
A09A	Danville	91.30	27	⇓P		P	09 55 31.1	+0.5
	baz=91,SNR=6.0							
D05A	Enumclaw	91.37	29	⇑P		P	09 55 31.1	+0.1
	baz=91							
B08A	Colville Reser	91.51	27	⇓P		P	09 55 31.9	+0.2
	baz=91,SNR=7.9							
ETW	Entiat	91.72	28	eP		P	09 55 33.6	+1.0
C07A	Waterville	91.76	28	⇓P		P	09 55 33.2	+0.4
	baz=91							
D06A	Cle Elum	91.84	29	⇑P		P	09 55 33.4	+0.2
	baz=92							
B09A	Rice	91.92	27	⇓P		P	09 55 34.1	+0.6
	baz=92,SNR=5.2							
C08A	Higginbotham F	92.09	27	⇓P		P	09 55 34.2	-0.2
	baz=92							
A11A	Hall Mountain,	92.14	25	⇓P		P	09 55 35.4	+0.8
	baz=92,SNR=5.4							
F04A	Amboy	92.18	30	⇓P		P	09 55 35.1	+0.3
	baz=92							
E06A	Yakima	92.31	29	⇓P		P	09 55 35.9	+0.6
	baz=92							
C09A	Chinnan Ranch	92.38	27	⇑P		P	09 55 36.0	+0.3
	baz=92,SNR=5.8							
OD2	Odessa Site #2	92.54	27	eP		P	09 55 36.3	-0.1
B11A	Sandpoint	92.58	26	⇑P		P	09 55 37.0	+0.5
	baz=92							
G04A	Mulino	92.72	31	⇓P		P	09 55 38.0	+0.7
	baz=92							
D08A	Wollman Farm,	92.73	28	⇑P		P	09 55 37.8	+0.4
	baz=92							
E07A	Sunnyside	92.76	29	⇓P		P	09 55 37.5	+0.1
	baz=92							
A13A	Flathead Natio	92.86	24	⇑P		P	09 55 38.1	+0.2
	baz=92							
WALA	Waterton Lakes	92.93	24	eP		P	09 55 39.0	+0.8
D09A	Jones Farm, Ri	92.97	27	⇑P		P	09 55 38.1	-0.3
	baz=93							
E08A	Dider Farm, El	93.14	28	⇑P		P	09 55 39.3	+0.1
	baz=93							
A14A	Double T Ranch	93.17	24	⇓P		P	09 55 39.3	0.0
	baz=93							
H04A	Detroit Lake	93.26	31	⇓P		P	09 55 39.7	-0.1
	baz=93							
B13A	Whitefish	93.32	25	⇑P		P	09 55 40.7	+0.7
	baz=93,SNR=7.9							
D10A	Wagner Farm, O	93.38	27	⇑P		P	09 55 40.4	+0.1
	baz=93							
A15A	Johnson Ranch,	93.40	23	⇓P		P	09 55 40.4	+0.1
	baz=93							
TORD	Torodi Ar. Bea	93.46	288	P		P	09 55 39.8	-1.4
	comp=Z,6.7nm,1.0s,mb5.0,baz=48,slow=3.7,SNR=21							
TORD				PP		PP	09 59 31.6	+6.2
	comp=Z,1.0nm,0.8s,baz=63,slow=7.6,SNR=3.8							
G06A	Carlson Farm,	93.49	30	⇑P		P	09 55 40.7	-0.2
	baz=93							
C12B	Naegeli Ranch,	93.51	26	⇑P		P	09 55 41.2	+0.3
	baz=93							
BSMT	Bassoo Peak	93.64	25	eP		P	09 55 42.3	+0.8
SCHQ	Schefferville	93.64	355	P		P	09 55 40.8	-0.6
	comp=Z,7.6nm,0.7s,mb5.2,baz=25,slow=4.7,SNR=12							
D11A	Klaveano Farm,	93.75	26	⇑P		P	09 55 42.3	+0.3
	baz=93,SNR=8.9							
A16A	West Butte Ran	93.81	23	⇓P		P	09 55 42.0	-0.2
	baz=93,SNR=9.2							
C13A	Hot Springs	93.87	25	⇓P		P	09 55 42.8	+0.3
	baz=94,SNR=8.9							
YBMT	Yellow Bay	93.91	25	eP		P	09 55 43.2	+0.5
	comp=Z,11nm,1.1s,mb5.2							
E10A	Myers Farm, Un	93.91	27	⇓P		P	09 55 42.4	-0.3
	baz=94							
JTMT	Jette	93.92	25	eP		P	09 55 44.1	+1.3
B15A	Bradely Ranch,	94.03	24	⇑P		P	09 55 43.1	-0.2
	baz=94,SNR=5.3							
C14A	Swan Lake	94.09	24	⇑P		P	09 55 44.2	+0.7
	baz=94							
D12A	Red Ives Fores	94.11	26	⇑P		P	09 55 43.4	-0.2
	baz=94							
G08A	Pilot Rock	94.15	29	⇑P		P	09 55 43.7	-0.2
	baz=94							
SWMT	Swartz Lake	94.22	25	eP		P	09 55 45.0	+0.9
B16A	M & M Farms, S	94.23	23	⇑P		P	09 55 44.2	0.0
	baz=94							
F10A	Beach Ranch, E	94.29	27	⇓P		P	09 55 45.0	+0.5
	baz=94							
E11A	Bogner Ranch,	94.37	27	⇑P		P	09 55 44.8	-0.1
	baz=94,SNR=7.5							
A18A	Metzger Ranch,	94.40	22	⇑P		P	09 55 44.7	-0.2
	baz=94,SNR=6.9							
D13A	Huson	94.40	25	⇓P		P	09 55 44.5	-0.5
	baz=94							
C15A	Salmond Ranch,	94.48	24	⇑P		P	09 55 45.4	0.0
	baz=94,SNR=6.3							
E12A	Beaver Dam Sad	94.56	26	⇓P		P	09 55 45.6	-0.1
	baz=94							
SLMT	Seeley Lake	94.63	25	eP		P	09 55 46.6	+0.6
B17A	L&G Farms, Che	94.64	23	⇑P		P	09 55 46.1	0.0
	baz=94,SNR=8.5							
G09A	Cove	94.64	28	⇑P		P	09 55 45.9	-0.2
	baz=94							
C16A	Fuhringer Ranc	94.75	23	⇑P		P	09 55 46.2	-0.4
	baz=94,SNR=6.0							
D14A	Greenough	94.76	25	⇓P		P	09 55 46.1	-0.5
	baz=94							
F11A	Grangeville	94.78	27	⇑P		P	09 55 46.8	0.0
	baz=94							
B18A	Beardsley Farm	94.88	22	⇑P		P	09 55 46.7	-0.5
	baz=94							
H08A	Prairie City	94.90	29	⇓P		P	09 55 47.2	-0.1
	baz=95							
I07A	Izee	94.90	30	⇓P		P	09 55 47.3	0.0
	baz=95							
CHMT	Chamberlain Mo	94.99	25	eP		P	09 55 47.7	0.0
	comp=Z,6.7nm,1.4s,mb4.9							
E13A	Victor	95.06	25	⇓P		P	09 55 47.9	-0.1
	baz=95,SNR=5.4							
D15A	Lincoln	95.14	24	⇓P		P	09 55 48.3	-0.1
	baz=95							
G11A	Walters Elk Ra	95.14	27	⇑P		P	09 55 47.9	-0.5
	baz=95							
EGMT	Eagleton	95.21	22	⇑P		P	09 55 48.1	-0.6
	baz=95							
C17A	Wharram Farm,	95.23	23	⇓P		P	09 55 48.1	-0.6
	baz=95							
F12A	Elk City	95.23	26	⇑P		P	09 55 48.2	-0.6
	baz=95							
E14A	Clinton	95.33	25	⇑P		P	09 55 49.0	-0.3
	baz=95							
K05A	Summer Lake	95.38	32	⇑P		P	09 55 49.1	-0.5
	baz=95							
D16A	Dana Ranch, Ca	95.49	24	⇓P		P	09 55 49.8	-0.1
	baz=95,SNR=5.2							
F13A	Darby	95.56	26	⇓P		P	09 55 49.9	-0.4
	baz=95							
E15A	Deer Lodge	95.63	25	⇓P		P	09 55 50.7	+0.1
	baz=95							
HRY	Holter Researc	95.67	24	eP		P	09 55 51.0	+0.2
	comp=Z,3.8nm,0.8s,mb4.9							
D17A	Six Diamond Ra	95.67	23	⇓P		P	09 55 51.0	+0.2
	baz=95							
I09A	Lost Marbles R	95.73	29	⇓P		P	09 55 51.2	+0.1
	baz=95							
H11A	Donnelly	95.82	27	⇑P		P	09 55 51.5	0.0
	baz=96							
BOSA	Boshof	95.85	240	P		P	09 55 49.5	-2.3
	comp=Z,5.0nm,0.8s,mb5.0,baz=49,slow=4.2,SNR=7.9							
BOSA	Boshof	95.85	240	eP		P	09 55 49.5	-2.3
E16A	East Helena	95.87	24	⇑P		P	09 55 51.8	+0.1
	baz=96							
D18A	Linhart Farms,	95.92	22	⇑P		P	09 55 52.1	+0.1
	baz=96							
J08A	Circle Bar Ran	95.92	30	⇑P		P	09 55 52.1	+0.1
	baz=96							
G13A	Cobalt	96.18	26	⇑P		P	09 55 53.5	+0.3
	baz=96							
F15A	Butte	96.18	25	⇓P		P	09 55 53.5	+0.3
	baz=96							
LRM	Limekiln Ridge	96.21	25	eP		P	09 55 53.5	+0.2
	comp=Z,20nm,1.0s,mb5.5							
E17A	Martinsdale	96.22	23	⇓P		P	09 55 53.5	+0.2
	baz=96							
E18A	Harlowton	96.44	23	⇓P		P	09 55 54.1	-0.2
	baz=96							
DGMT	Dagmar	96.45	18	⇑P		P	09 55 54.3	0.0
	baz=96							
I11A	Placerville	96.50	28	⇓P		P	09 55 54.7	+0.1
	baz=96							
F16A	Kennard Place,	96.54	24	⇓P		P	09 55 54.6	-0.2
	baz=96							
BOZ	Bozeman (W)	96.66	24	⇑P		P	09 55 55.5	+0.2
	baz=96							
ULM	Lac du Bonnet	96.70	13	P		P	09 55 54.8	-0.6
	comp=Z,1.9nm,0.7s,mb4.6,baz=198,slow=2.1,SNR=3.4							
G15A	Dillon	96.76	25	⇑P		P	09 55 56.4	+0.6
	baz=96							
F17A	Fitzpatrick Pl	96.77	24	⇑P		P	09 55 55.9	+0.1
	baz=96							
TSUM	Tsumeb	96.91	252	P		P	09 55 55.6	-1.2
	comp=Z,2.7nm,0.6s,mb4.8,baz=26,slow=0.7,SNR=9.7							
TSUM	Tsumeb	96.91	252	eP		P	09 55 55.7	-1.1
I12A	Atlanta	96.93	27	⇑P		P	09 55 56.8	+0.2
	baz=97							
G16A	Moss Hill, Enn	96.96	25	⇓P		P	09 55 57.0	+0.3
	baz=97							
F18A	Big Timber	97.09	23	⇓P		P	09 55 57.3	0.0
	baz=97							
H15A	Lima	97.18	25	⇓P		P	09 55 57.9	+0.2
	baz=97							
I13A	Wildhorse Cree	97.22	27	⇓P		P	09 55 57.7	-0.2
	baz=97							
J12A	Stokes Ranch,	97.40	28	⇑P		P	09 55 58.5	-0.2
	baz=97							
HLID	Hailey	97.41	27	⇑P		P	09 55 58.8	0.0
	baz=97							
J13A	Cove Ranch, Pi	97.64	27	⇓P		P	09 56 00.2	+0.4
	baz=97							
I15A	Monteview	97.77	26	⇓P		P	09 56 00.4	0.0
	baz=97							
RLMT	Red Lodge	97.93	23	⇑P		P	09 56 01.3	+0.3
	baz=98							
K12A	Draper Farm, C	97.99	28	⇓P		P	09 56 01.6	+0.2
	baz=98							
L11A	Cat Creek Ranc	98.04	29	⇑P		P	09 56 02.0	+0.4
	baz=98							
PDAR	Pinedale Array	99.90	24	P		Pdif	09 56 10.9	+1.1
	comp=Z,0.3nm,0.5s,baz=112,slow=1.0,SNR=3.1							
NVAR	Mina Array Bea	100.00	32	P		Pdif	09 56 11.9	+1.5
	comp=Z,0.4nm,0.8s,baz=90,slow=0.9,SNR=2.7							
NVAR				PKKPbc		PKKPbc	10 12 26.7	-2.4
	comp=Z,0.7nm,0.6s,baz=148,slow=2.6,SNR=5.4							
O12A	Currie	100.05	29	⇑P		Pdif	09 56 10.6	+0.1
	baz=100							
MAW	Mawson	103.54	195	PKKPbc		PKKPbc	10 12 16.8	-3.4
	comp=Z,2.3nm,0.8s,baz=346,slow=19,SNR=3.6							
TXAR	Lajitas Array	113.99	26	PKP		PKiKP	10 01 04.3	-0.3
	comp=Z,1.4nm,0.6s,baz=192,slow=0.4,SNR=19							
TXAR				PKKPbc		PKKPbc	10 11 45.0	-0.7
	comp=Z,1.4nm,0.7s,baz=162,slow=6.7,SNR=18							
JCT	Junction City	114.32	23	ePKIKP		PKiKP	10 01 04.8	-0.4
MAIT	Maitri	120.15	203	ePKPab		PKPdf	10 01 14.6	-0.4
QSPA	South Pole Qui	121.29	180	PKKPbc		PKKPbc	10 11 18.0	-2.4
	comp=Z,1.1nm,0.7s,baz=212,slow=3.5,SNR=6.5							
QSPA	South Pole Qui	121.29	180	ePKPdf		PKPdf	10 01 16.1	-0.8
VNA2	Neumayer--Watz	126.44	202	ePKPdf		PKPdf	10 01 26.1	-1.0
VNA2				e			11 30 06.6	
VNA1	Neumayer--Stat	126.76	203	ePKPdf		PKPdf	10 01 26.7	-1.0
SDV	Santo Domingo	139.50	352	PKP		PKPdf	10 01 52.8	-0.6
	comp=Z,16nm,0.7s,baz=58,slow=3.9,SNR=12							
ROSC	El Rosal	143.80	357	PKP		PKPdf	10 01 59.4	-1.7
	comp=Z,20nm,0.6s,baz=270,slow=23,SNR=8.0							
ROSC	El Rosal	143.80	357	ePKPdf		PKPdf	10 01 59.2	-1.9
PMSA	Palmer Station	145.91	189	PKPbc		PKPbc	10 02 02.4	-1.3
	comp=Z,40nm,0.7s,baz=177,slow=5.2,SNR=13							
OTAV	Otavalo	148.33	5	ePKPdf		PKPdf	10 02 09.6	+0.8
OTAV				ePKPbc		PKPbc	10 02 12.3	+0.1
RPN	Rapa Nui	150.64	90	PKPbc		PKPbc	10 02 18.1	+0.6
	comp=Z,70nm,0.8s,baz=310,slow=3.2,SNR=5.5							
ATAH	Atahualpa	155.50	6	PKP		PKPdf	10 02 20.8	+1.3
	comp=Z,8.4nm,1.0s,baz=151,slow=19,SNR=2.6							
ATAH				PKPab		PKPab	10 02 46.0	+1.0
	comp=Z,7.5nm,0.6s,baz=282,slow=2.5,SNR=4.2							
USHA	Ushuaia	156.09	191	PKPab		PKPab	10 02 45.7	-0.8
	comp=Z,28nm,0.7s,baz=119,slow=5.9,SNR=15							
SIV	San Ignacio	159.44	315	PKP		PKPdf	10 02 23.0	-1.3
	comp=Z,2.6nm,0.9s,baz=44,slow=3.0,SNR=13							
CPUP	Villa Florida	162.90	283	PKP		PKPdf	10 02 26.5	-1.2
	comp=Z,0.3nm,0.3s,baz=176,slow=1.9,SNR=4.9							
CPUP				PKPab		PKPab	10 03 15.7	-1.4
	comp=Z,0.4nm,0.4s,baz=52,slow=7.6,SNR=3.1							
CPUP	Villa Florida	162.90	283	PKP		PKPdf	10 02 26.5	-1.2
CPUP				PKPab		PKPab	10 03 15.7	-1.4
LPAZ	La Paz	163.25	333	PKP		PKPdf	10 02 28.6	+0.3
	comp=Z,5.0nm,0.9s,baz=45,slow=4.3,SNR=13							
LPAZ				PKPab		PKPab	10 03 17.2	-1.3
	comp=Z,3.0nm,0.8s,baz=35,slow=14,SNR=5.5							
LVC	Limon Verde	169.14	323	PKPab		PKPab	10 03 42.9	-1.5
	comp=Z,7.8nm,1.0s,baz=47,slow=1.1,SNR=7.3							
PLCA	Paso Flores	169.82	204	PKP		PKPdf	10 02 32.1	-0.6
	comp=Z,6.2nm,1.1s,baz=37,slow=11,SNR=3.7							
PLCA				PKPab		PKPab	10 03 45.3	-1.7
	comp=Z,4.4nm,0.7s,baz=180,slow=4.2,SNR=8.4							
CFAA	Coronel Fontan	173.41	267	PKP		PKPdf	10 02 34.4	-0.3
	comp=Z,0.4nm,0.8s,baz=314,slow=4.8,SNR=6.2							
CFAA				PKPab		PKPab	10 04 02.6	-0.8
	comp=Z,0.7nm,0.7s,baz=97,slow=5.0,SNR=9.5							

IDC 12 09:44:07.9±1.4, 3°.00N×128°.85E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, Error ellipse: s-maj=92.6km s-min=16.7km az=71.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.21	188	P	P	09 48 55.7	+0.4
	1.5nm,0.6s,baz=1.3,slow=8.7,SNR=8.2					

comp=Z,3.2nm,0.5s,mb4.6,baz=328,slow=9.0,SNR=12
SPITS Spitsbergen Ar 59.00 346 P **P** 09 57 42.9 +0.4
comp=Z,6.7nm,0.9s,mb4.7,baz=94,slow=12,SNR=3.5
COLD Coldfoot 67.35 24 *e*P **P** 09 58 33.5 -4.6
KDAK Kodiak Island 70.79 33 P **P** 09 58 58.7 -0.8
comp=Z,23nm,1.1s,mb5.0,baz=298,slow=18,SNR=6.4
KDAK Kodiak Island 70.79 33 P **P** 09 58 58.7 -0.9
INK Inuvik 72.01 19 P **P** 09 59 06.4 -0.4
comp=Z,4.3nm,0.7s,mb4.5,baz=340,slow=6.0
YKA Yellowknife Ar 81.53 17 P **P** 10 00 00.5 -0.1
comp=Z,2.0nm,0.6s,mb4.2,baz=329,slow=5.3,SNR=9.7

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*ISCJB **12** 09:49:46.0±1.0, 30.°9N±0.°2×103.°23E±0.°09, h10km, mb4.0/6, Error ellipse: s-maj=22.8km s-min=10.2km az=166.1*
*IDC **12** 09:49:47.6±1.9, 30.°97N×103.°48E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/24, mbtmp3.9/5, Error ellipse: s-maj=62.5km s-min=29.7km az=88.0*
*BJI **12** 09:49:50.9, 31.°08N×103.°81E, h12km, mb4.4/2, ML4.1/5*
ISC 12 09:49:48.6±1.1, 31.°0N±0.°1×103.°33E±0.°10, h10km, n9, σ1°07/10, mb4.0/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**101**	Pg	**Pg**	09 49 54.0	-2.0
CD2				Sg	**Sg**	09 50 02.2	+1.2
CD2				smax			
	comp=N,51μm,0.6s						
KMI	**Kunming**	**5.86**	**185**	P	**Pn**	09 51 08.4	-7.1
KMI				pmax	pmax		
	comp=Z,73nm,1.1s						
KMI	**Kunming**	**5.86**	**185**	P	**Pn**	09 51 08.4	-7.1
KMI				pmax	pmax		
	comp=Z,73nm,1.1s						
KSRS	**Korea Array**	**21.31**	**66**	P	**P**	09 54 34.5	-1.0
	comp=Z,9.1nm,0.7s,mb4.2,baz=265,slow=11,SNR=14						
CN2	**Changchun**	**21.66**	**48**	*e*P	**P**	09 54 39.6	+0.4
CN2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**58.75**	**145**	P	**P**	09 59 47.8	+1.0
	comp=Z,1.2nm,0.5s,mb4.2,baz=328,slow=8.9,SNR=5.9						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	10 00 06.5	-0.7
	comp=Z,0.5nm,0.9s,mb3.6,baz=334,slow=6.8,SNR=3.9						
INK	**Inuvik**	**72.49**	**19**	P	**P**	10 01 14.6	-0.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=316,slow=9.3,SNR=2.9						
YKA	**Yellowknife Ar**	**82.00**	**17**	P	**P**	10 02 09.7	+1.2
	comp=Z,0.1nm,0.3s,mb3.2,baz=329,slow=4.9,SNR=4.9						

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*ISCJB **12** 09:51:23.2±0.5, 31.°63N±0.°05×104.°32E±0.°08, h10km, mb4.1/11, Error ellipse: s-maj=9.9km s-min=7.1km az=26.8*
*IDC **12** 09:51:23.5±0.8, 31.°64N×104.°16E, h0km, mb4.0/9, mb1 4.2/10, mb1mx3.9/27, mbtmp4.1/10, ML3.8/1, Error ellipse: s-maj=36.8km s-min=17.1km az=59.0*
*NEIC **12** 09:51:24.8±0.5, 31.°62N×104.°23E, h10km, mb4.6/3, Error ellipse: s-maj=15.5km s-min=8.3km az=54.0*
*BJI **12** 09:51:24.7, 31.°50N×104.°24E, h14km, ML4.0/6, Ms4.7/2, Ms7 4.7/1*
ISC 12 09:51:25.1±0.5, 31.°64N±0.°05×104.°25E±0.°08, h10km, n21, σ0°94/24, mb4.1/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.84**	**210**	Pg	**Pg**	09 51 50.1	+8.8
CD2				Sg	**Sg**	09 51 52.9	+0.7
CD2				smax			
	comp=N,62μm,0.4s						
CD2	**Chengdu**	**0.84**	**210**	Pg	**Pg**	09 51 50.1	+8.8
CD2				Sg	**Sg**	09 51 52.9	+0.7
CD2				smax			
	comp=N,62μm,0.4s						
LZH	**Lanzhou**	**4.45**	**356**	*e*Pg	**Pg**	09 52 45.4	-5.0
LZH				Sn	**Sn**	09 53 35.5	+11
LZH				smax			
	comp=N,560nm,0.8s						
LZH				smax			
	comp=E,2μm,0.6s						
ENH	**Enshi**	**4.70**	**105**	*e*Pn	**Pn**	09 52 35.3	-0.9
KMI	**Kunming**	**6.62**	**192**	Pg	**Pg**	09 53 23.7	-8.3
CMAR	**Chiang Mai Arr**	**13.97**	**201**	Pn	**Pn**	09 54 41.8	-1.5
	comp=E,0.2nm,0.3s,baz=10,slow=11,SNR=3.8						
KSRS	**Korea Array**	**20.32**	**67**	P	**P**	09 56 02.0	+0.6
	comp=E,2.6nm,0.7s,baz=255,slow=10.0,SNR=4.4						
CN2	**Changchun**	**20.64**	**48**	*e*P	**P**	09 56 05.9	+1.2
MK31	**Makanchi Array**	**22.66**	**318**	*e*P	**P**	09 56 25.6	-0.8
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	09 56 26.4	0.0
	comp=E,3.1nm,1.0s,mb3.7,baz=123,slow=10,SNR=3.8						
AAK	**Ala-Archa**	**26.01**	**303**	P	**P**	09 57 01.5	+3.3
	comp=E,14nm,2.0s,mb4.1						
ZALV	**Zalesovo Beam**	**26.30**	**334**	P	**P**	09 56 59.9	-0.7
	comp=E,1.3nm,0.3s,mb3.9,baz=141,slow=11,SNR=3.1						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	09 57 06.8	+0.7
	comp=E,1.6nm,0.8s,mb3.6,baz=132,slow=9.1,SNR=3.3						
FINES	**FINESS Array B**	**57.19**	**326**	P	**P**	10 01 10.4	-1.6
	comp=E,2.1nm,0.7s,mb4.3,baz=42,slow=15,SNR=1.7						
WRAB	**Tennant Creek**	**58.84**	**147**	*e*P	**P**	10 01 23.6	-0.5
	comp=E,3.8nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**58.85**	**147**	P	**P**	10 01 24.0	-0.1
	comp=E,3.9nm,0.5s,mb4.7,baz=337,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**61.88**	**149**	P	**P**	10 01 45.7	+0.9
	comp=E,1.0nm,0.6s,mb4.2,baz=339,slow=6.5,SNR=6.8						
STKA	**Stephens Creek**	**72.39**	**147**	P	**P**	10 02 51.6	+0.3
	comp=E,2.0nm,0.6s,mb4.2,baz=318,slow=6.7,SNR=6.5						
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	10 02 55.8	+1.0
	comp=E,11nm,0.9s,mb4.5						
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	10 02 55.8	+1.0
	comp=E,5.3nm,0.9s,mb4.5						
YKA	**Yellowknife Ar**	**81.15**	**17**	P	**P**	10 03 39.9	-0.6
	comp=E,0.3nm,0.5s,mb3.5,baz=328,slow=5.6,SNR=2.6						

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*BJI **12** 09:52:08.6, 46.°54N×28.°09W, h31km, mB5.7/6, mb5.3/14, Ms5.5/8, Ms7 5.4/7*
*IDC **12** 09:52:10.3±0.6, 47.°29N×27.°38W, h0km, mb4.4/30, mb1 4.6/32, mb1mx4.5/43, mbtmp4.5/32, ML4.8/2, MS5.3/1, Ms1 5.3/1, ms1mx4.4/57, Error ellipse: s-maj=16.9km s-min=9.9km az=18.0*
*MOS **12** 09:52:10.8±0.9, 47.°35N×27.°34W, h10km, mb5.1/56, Error ellipse: s-maj=6.9km s-min=4.0km az=164.1*
*ISCJB **12** 09:52:10.4±0.1, 47.°33N±0.°04×27.°36W±0.°02, h10km, mb4.8/146, MS5.2/3, Error ellipse: s-maj=5.3km s-min=1.4km az=8.5*
*CSEM **12** 09:52:12.4±0.1, 47.°39N×27.°30W, h10km, mb5.0/83, Error ellipse: s-maj=6.6km s-min=2.4km az=11.0*
*NEIC **12** 09:52:12.6±0.2, 47.°35N×27.°31W, h10km, mb4.9/122, Error ellipse: s-maj=5.8km s-min=2.0km az=191.0*
*SZGRF **12** 09:52:17.4, 47.°62N×27.°00W, h33km, mb5.0, Northern Mid-Atlantic Ridge*
ISC 12 09:52:12.5±0.1, 47.°36N±0.°04×27.°30W±0.°02, h10km, n1030, σ0°77/1025, mb4.8/146, MS5.2/3, 209C-188D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**13.66**	**102**	P	**Pn**	09 55 22.8	-3.3
	53nm,1.3s						
EMAZ	**Mazaricos**	**13.66**	**102**	P	**Pn**	09 55 22.8	-3.3
	53nm,1.3s						
STS	**Santiago**	**13.97**	**102**	P	**Pn**	09 55 26.5	-3.8
STS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
STS	**Santiago**	**13.97**	**102**	P	**Pn**	09 55 26.5	-3.8
	comp=Z,10nm,0.6s						
STS	**Santiago**	**13.97**	**102**	P	**Pn**	09 55 26.5	-3.8
	comp=Z,10nm,0.6s						
EZAM	**Zamans**	**14.20**	**105**	P	**Pn**	09 55 29.9	-3.6
EZAM				pmax	pmax		
	comp=Z,109nm,0.8s						
EZAM	**Zamans**	**14.20**	**105**	P	**Pn**	09 55 29.9	-3.6
	comp=Z,109nm,0.8s						
EZAM	**Zamans**	**14.20**	**105**	P	**Pn**	09 55 29.9	-3.6
	comp=Z,109nm,0.8s						
EPON	**Pontenova**	**14.73**	**98**	P	**Pn**	09 55 38.1	-2.6
	comp=Z,102nm,1.6s						
ELOB	**Lobios**	**14.75**	**105**	P	**Pn**	09 55 36.9	-4.1
	comp=Z,78nm,1.8s						
ELOB	**Lobios**	**14.75**	**105**	P	**Pn**	09 55 36.9	-4.1
	comp=Z,78nm,1.8s						
PCAB	**Cabril**	**14.85**	**105**	*e*P	**Pn**	09 55 39.4	-2.9
	comp=Z,57nm,1.0s						
PVIS	**Viseu**	**15.44**	**108**	*e*P	**Pn**	09 55 46.6	-3.6
	comp=Z,64nm,0.8s						
PMAFR	**Mafra**	**15.58**	**116**	*e*P	**Pn**	09 55 52.4	+0.4
	comp=Z,101nm,1.1s						
ECAL	**Calabor**	**15.59**	**103**	P	**Pn**	09 55 49.7	-2.5
	comp=Z,528nm,3.2s						
ECAL	**Calabor**	**15.59**	**103**	P	**Pn**	09 55 49.7	-2.5
	comp=Z,528nm,3.2s						
BST	**Brest**	**15.63**	**78**	*e*P	**Pn**	09 55 54.9	+2.3
BST	**Brest**	**15.63**	**78**	*e*P	**Pn**	09 55 54.9	+2.3
PBRG	**Braganca**	**15.65**	**103**	*e*P	**Pn**	09 55 50.9	-2.0
	comp=Z,23nm,1.0s						
MVO	**Moncorvo**	**15.77**	**106**	*e*P	**Pn**	09 55 52.1	-2.4
	comp=Z,40nm,1.4s						
MTE	**Manteigas**	**15.83**	**109**	*e*P	**Pn**	09 55 53.0	-2.3
	comp=Z,56nm,1.5s						
MTE	**Manteigas**	**15.83**	**109**	*e*Pn	**Pn**	09 55 54.6	-0.7
	comp=Z,37nm,1.0s						
MTE	**Manteigas**	**15.83**	**109**	*e*Pn	**Pn**	09 55 54.6	-0.7
	comp=Z,37nm,1.0s						
EARI	**Arriondas**	**16.04**	**97**	P	**Pn**	09 55 57.6	-0.4
	comp=Z,232nm,1.3s						
EARI	**Arriondas**	**16.04**	**97**	P	**Pn**	09 55 57.6	-0.4
	comp=Z,232nm,1.3s						
ROSF	**Rostrenen**	**16.15**	**78**	⇑*i*P	**Pn**	09 55 58.5	-0.9
	comp=Z,179nm,1.2s						
ROSF	**Rostrenen**	**16.15**	**78**	⇑*i*P	**Pn**	09 55 58.5	-0.9
ROSF				pmax	pmax		
	comp=Z,90nm,1.2s						
ROSF	**Rostrenen**	**16.15**	**78**	⇑*i*P	**Pn**	09 55 58.5	-0.9
	comp=Z,90nm,1.2s						
PCBR	**Castelo Branco**	**16.18**	**110**	*e*P	**Pn**	09 56 04.1	+4.3
	comp=Z,32nm,1.3s						
PCBR	**Castelo Branco**	**16.18**	**110**	*e*P	**Pn**	09 56 04.1	+4.3
	comp=Z,32nm,1.3s						
QUIF	**Quistinic**	**16.27**	**79**	*e*P	**Pn**	09 56 01.2	+0.3
	comp=Z,47nm,1.0s						
QUIF	**Quistinic**	**16.27**	**79**	*e*P	**Pn**	09 56 01.2	+0.3
QUIF				pmax	pmax		
	comp=Z,23nm,1.0s						
QUIF	**Quistinic**	**16.27**	**79**	*e*P	**Pn**	09 56 01.2	+0.3
	comp=Z,24nm,1.0s						
PMRV	**Marv??o**	**16.47**	**112**	*e*P	**Pn**	09 56 05.8	+2.3
	comp=Z,91nm,0.9s						
PMRV	**Marv??o**	**16.47**	**112**	*e*P	**Pn**	09 56 05.8	+2.3
	comp=Z,91nm,0.9s						
EVO	**Evora**	**16.62**	**115**	*e*P	**Pn**	09 56 06.8	+1.4
	comp=Z,49nm,1.1s						
EVO	**Evora**	**16.62**	**115**	*e*P	**Pn**	09 56 06.8	+1.4
	comp=Z,49nm,1.1s						
SGMF	**Saint Gilles**	**16.63**	**78**	*e*P	**Pn**	09 56 04.9	-0.6
	comp=Z,284nm,1.1s						
SGMF	**Saint Gilles**	**16.63**	**78**	*e*P	**Pn**	09 56 04.9	-0.6
SGMF				pmax	pmax		
	comp=Z,142nm,1.1s						
SGMF	**Saint Gilles**	**16.63**	**78**	*e*P	**Pn**	09 56 04.9	-0.6
	comp=Z,142nm,1.1s						
PESTR	**Estremoz**	**16.68**	**113**	*e*P	**Pn**	09 56 09.6	+3.5
	comp=Z,66nm,1.2s						
PESTR	**Estremoz**	**16.68**	**113**	*e*P	**Pn**	09 56 09.6	+3.5
	comp=Z,66nm,1.2s						
PTEO	**Sao Teotonio**	**16.82**	**119**	*e*P	**Pn**	09 56 07.0	-0.9
	comp=Z,89nm,1.3s						
ESK	**Eskdalemuir**	**16.97**	**53**	*e*P	**Pn**	09 56 09.8	+0.1
ESK				pmax	pmax		
	comp=Z,46nm,1.0s						
ESK	**Eskdalemuir**	**16.97**	**53**	*e*Pn	**Pn**	09 56 09.8	+0.1
	comp=Z,46nm,1.0s						
ESK	**Eskdalemuir**	**16.97**	**53**	*e*Pn	**Pn**	09 56 09.8	+0.1
	comp=Z,46nm,1.0s						
EKA	**Eskdalemuir Ar**	**17.00**	**53**	P	**Pn**	09 56 10.2	+0.1
	baz=252,slow=11,SNR=32						
EKA	**Eskdalemuir Ar**	**17.00**	**53**	P	**Pn**	09 56 10.2	+0.1
MORF	**Marmelete**	**17.02**	**119**	*e*P	**Pn**	09 56 09.1	-1.4
	comp=Z,51nm,1.5s						
PFVI	**Vila Bisbo**	**17.03**	**120**	*e*P	**Pn**	09 56 09.7	-0.9
	comp=Z,72nm,1.4s						
EBAD	**Badajoz**	**17.10**	**113**	P	**Pn**	09 56 12.1	+0.6
	comp=Z,142nm,1.8s						
EBAD	**Badajoz**	**17.10**	**113**	P	**Pn**	09 56 12.1	+0.6
	comp=Z,142nm,1.8s						
PCVE	**Castro Verde**	**17.17**	**117**	*e*P	**Pn**	09 56 11.9	-0.5
	comp=Z,28nm,2.3s						
PCVE	**Castro Verde**	**17.17**	**117**	*e*P	**Pn**	09 56 11.9	-0.5
	comp=Z,28nm,2.3s						
ELAN	**Lanestosa**	**17.27**	**95**	P	**Pn**	09 56 13.6	0.0
	comp=Z,141nm,1.6s						
ELAN	**Lanestosa**	**17.27**	**95**	P	**Pn**	09 56 13.6	0.0
	comp=Z,141nm,1.6s						
PBAR	**Barrancos**	**17.44**	**114**	*e*P	**Pn**	09 56 14.8	-0.9
PBAR	**Barrancos**	**17.44**	**114**	*e*P	**Pn**	09 56 14.8	-0.9
PBDV	**Barranco-do-Ve**	**17.49**	**118**	*e*P	**Pn**	09 56 17.4	+1.0
	comp=Z,62nm,1.6s						
PBDV	**Barranco-do-Ve**	**17.49**	**118**	*e*P	**Pn**	09 56 17.4	+1.0
	comp=Z,62nm,1.6s						
PVAQ	**Vaqueiros**	**17.51**	**117**	*e*P	**Pn**	09 56 16.1	-0.5
	comp=Z,36nm,0.8s						
PVAQ	**Vaqueiros**	**17.51**	**117**	*e*P	**Pn**	09 56 16.1	-0.5
	comp=Z,36nm,0.8s						
EGRO	**El Granado**	**17.57**	**117**	P	**Pn**	09 56 17.4	0.0
	comp=Z,160nm,1.7s						
EGRO	**El Granado**	**17.57**	**117**	P	**Pn**	09 56 17.4	0.0
	comp=Z,160nm,1.7s						
GRR	**Gorron**	**17.75**	**77**	⇑*i*P	**Pn**	09 56 20.9	+1.5
	comp=Z,106nm,1.2s						
GRR	**Gorron**	**17.75**	**77**	⇑*i*P	**Pn**	09 56 20.9	+1.5
GRR				pmax	pmax		
	comp=Z,53nm,1.2s						
GRR	**Gorron**	**17.75**	**77**	⇑*i*P	**Pn**	09 56 20.9	+1.5
	comp=Z,53nm,1.2s						
GRR	**Gorron**	**17.75**	**77**	⇑*i*P	**Pn**	09 56 20.9	+1.5
	comp=Z,53nm,1.2s						
EMIN	**Mina Concepcio**	**17.92**	**115**	P	**Pn**	09 56 20.4	-1.2
	comp=Z,29nm,1.8s						
EMIN	**Mina Concepcio**	**17.92**	**115**	P	**Pn**	09 56 20.4	-1.3
	comp=Z,29nm,1.8s						
GUD	**Guadarrama**	**17.92**	**104**	P	**Pn**	09 56 22.3	+0.7
GUD				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GUD	**Guadarrama**	**17.92**	**104**	P	**Pn**	09 56 22.3	+0.7
	comp=Z,8.7nm,1.2s						
GUD	**Guadarrama**	**17.92**	**104**	P	**Pn**	09 56 22.3	+0.7
	comp=Z,8.7nm,1.2s						
FLN	**La Foiniere**	**17.95**	**76**	⇑*i*P	**Pn**	09 56 23.3	+1.3
	comp=Z,189nm,1.0s						
FLN	**La Foiniere**	**17.95**	**76**	⇑*i*P	**Pn**	09 56 23.3	+1.3
FLN				pmax	pmax		
	comp=Z,95nm,1.0s						
FLN	**La Foiniere**	**17.95**	**76**	⇑*i*P	**Pn**	09 56 23.3	+1.3
	comp=Z,95nm,1.0s						
FLN	**La Foiniere**	**17.95**	**76**	⇑*i*P	**Pn**	09 56 23.3	+1.3
	comp=Z,95nm,1.0s						
LDF	**La Druitiere**	**18.21**	**76**	⇑*i*P	**Pn**	09 56 25.8	+0.7
	comp=Z,123nm,1.1s						
LDF	**La Druitiere**	**18.21**	**76**	⇑*i*P	**Pn**	09 56 25.8	+0.7
LDF				pmax	pmax		
	comp=Z,61nm,1.1s						
LDF	**La Druitiere**	**18.21**	**76**	⇑*i*P	**Pn**	09 56 25.8	+0.7
	comp=Z,61nm,1.1s						
LDF	**La Druitiere**	**18.21**	**76**	⇑*i*P	**Pn**	09 56 25.8	+0.7
	comp=Z,61nm,1.1s						
PAB	**San Pablo**	**18.36**	**107**	*e*P	**Pn**	09 56 26.6	-0.4
PAB				pmax	pmax		
	comp=Z,26nm,1.1s						
PAB	**San Pablo**	**18.36**	**107**	*e*Pn	**Pn**	09 56 26.6	-0.4
	comp=Z,26nm,1.1s						
PAB	**San Pablo**	**18.36**	**107**	*e*Pn	**Pn**	09 56 26.6	-0.4
	comp=Z,26nm,1.1s						
MFF	**Saint Martin d**	**18.52**	**82**	⇑*i*P	**Pn**	09 56 28.1	-0.8
	comp=Z,99nm,1.0s						
MFF	**Saint Martin d**	**18.52**	**82**	⇑*i*P	**Pn**	09 56 28.1	-0.8
MFF				pmax	pmax		
	comp=Z,49nm,1.0s						
MFF	**Saint Martin d**	**18.52**	**82**	⇑*i*P	**Pn**	09 56 28.1	-0.8
	comp=Z,49nm,1.0s						
MFF	**Saint Martin d**	**18.52**	**82**	⇑*i*P	**Pn**	09 56 28.1	-0.8
	comp=Z,49nm,1.0s						
ESDC	**Sonseca Array**	**18.54**	**106**	P	**Pn**	09 56 28.7	-0.5
	comp=Z,2.8nm,0.3s,baz=298,slow=12,SNR=26						
ESDC	**Sonseca Array**	**18.54**	**106**	P	**Pn**	09 56 28.6	-0.6
	comp=Z,12nm,1.0s						
ESDC	**Sonseca Array**	**18.54**	**106**	P	**Pn**	09 56 28.6	-0.7
	comp=Z,12nm,1.0s						
ESLA	**Sonseca Array**	**18.54**	**106**	*e*Pn	**Pn**	09 56 28.9	-0.4
ESLA	**Sonseca Array**	**18.54**	**106**	*e*Pn	**Pn**	09 56 28.9	-0.4
EALK	**Alkurruntz**	**18.58**	**93**	P	**Pn**	09 56 27.2	-2.5
	comp=Z,42nm,2.2s						
SJPF	**Ste Jean**	**18.81**	**93**	*e*P	**Pn**	09 56 31.9	-0.6
	comp=Z,49nm,1.2s						
SJPF	**Ste Jean**	**18.81**	**93**	*e*P	**Pn**	09 56 31.9	-0.6
SJPF				pmax	pmax		
	comp=Z,25nm,1.2s						
SJPF	**Ste Jean**	**18.81**	**93**	*e*P	**Pn**	09 56 31.9	-0.6
	comp=Z,25nm,1.2s						
SJPF	**Ste Jean**	**18.81**	**93**	*e*P	**Pn**	09 56 31.9	-0.6
	comp=Z,25nm,1.2s						
ESPR	**Espera**	**18.99**	**116**	P	**Pn**	09 56 31.6	-3.1
	comp=Z,729nm,3.3s						
ETOR	**Torete**	**19.23**	**101**	P	**Pn**	09 56 36.5	-1.1
ETOR				pmax	pmax		
	comp=Z,28nm,1.4s						
ETOR	**Torete**	**19.23**	**101**	P	**Pn**	09 56 36.5	-1.1
	comp=Z,28nm,1.4s						
ETOR	**Torete**	**19.23**	**101**	P	**Pn**	09 56 36.5	-1.1
	comp=Z,28nm,1.4s						
ETSF	**Etsaut**	**19.35**	**93**	*e*P	**Pn**	09 56 38.5	-0.5
	comp=Z,71nm,1.1s						
ETSF	**Etsaut**	**19.35**	**93**	*e*P	**Pn**	09 56 38.5	-0.5
ETSF				pmax	pmax		
	comp=Z,36nm,1.1s						
ETSF	**Etsaut**	**19.35**	**93**	*e*P	**Pn**	09 56 38.5	-0.5
	comp=Z,36nm,1.1s						
ETSF	**Etsaut**	**19.35**	**93**	*e*P	**Pn**	09 56 38.5	-0.5
	comp=Z,36nm,1.1s						
EBAN	**Banos Encina**	**19.50**	**110**	P	**Pn**	09 56 40.4	-0.4
EBAN				pmax	pmax		
	comp=Z,14nm,1.0s						
EBAN	**Banos Encina**	**19.50**	**110**	P	**Pn**	09 56 40.4	-0.4
	comp=Z,14nm,1.0s						
EBAN	**Banos Encina**	**19.50**	**110**	P	**Pn**	09 56 40.4	-0.4
	comp=Z,14nm,1.0s						
EJIF	**Jimena Fronter**	**19.50**	**116**	P	**Pn**	09 56 42.2	+1.4
EJIF				pmax	pmax		
	comp=Z,17nm,1.0s						
EJIF	**Jimena Fronter**	**19.50**	**116**	P	**Pn**	09 56 42.2	+1.4
	comp=Z,17nm,1.0s						
EJIF	**Jimena Fronter**	**19.50**	**116**	P	**Pn**	09 56 42.2	+1.4
	comp=Z,17nm,1.0s						
LFF	**La Frestale**	**19.54**	**87**	*e*P	**Pn**	09 56 41.0	-0.3
	comp=Z,148nm,1.4s						
LFF	**La Frestale**	**19.54**	**87**	*e*P	**Pn**	09 56 41.0	-0.3
LFF				pmax	pmax		
	comp=Z,74nm,1.4s						
LFF	**La Frestale**	**19.54**	**87**	*e*P	**Pn**	09 56 41.0	-0.3
	comp=Z,74nm,1.4s						
LFF	**La Frestale**	**19.54**	**87**	*e*P	**Pn**	09 56 41.0	-0.3
	comp=Z,74nm,1.4s						
MENF	**Mencas**	**19.55**	**70**	*e*P	**Pn**	09 56 40.3	-1.0
MENF	**Mencas**	**19.55**	**70**	*e*P	**Pn**	09 56 40.3	-1.0
ELUQ	**Luque**	**19.55**	**112**	P	**Pn**	09 56 42.4	+1.0
ELUQ				pmax	pmax		
	comp=Z,126nm,2.6s						
ELUQ	**Luque**	**19.55**	**112**	P	**Pn**	09 56 42.4	+0.9
	comp=Z,126nm,2.6s						
ELUQ	**Luque**	**19.55**	**112**	P	**Pn**	09 56 42.4	+1.0
	comp=Z,126nm,2.6s						
VIEF	**Viey**	**19.75**	**93**	*e*P	**Pn**	09 56 42.7	-1.1
VIEF	**Viey**	**19.75**	**93**	*e*P	**Pn**	09 56 42.7	-1.1
EMIJ	**Mijas**	**19.85**	**115**	P	**Pn**	09 56 44.5	-0.6
	comp=Z,319nm,2.2s						
EMIJ	**Mijas**	**19.85**	**115**	P	**Pn**	09 56 44.5	-0.6
	comp=Z,319nm,2.2s						
ELOJ	**Sierra Loja**	**19.87**	**112**	P	**Pn**	09 56 45.8	+0.5
ELOJ				pmax	pmax		
	comp=Z,28nm,1.2s						
ELOJ	**Sierra Loja**	**19.87**	**112**	P	**Pn**	09 56 45.8	+0.5
	comp=Z,28nm,1.2s						
ELOJ	**Sierra Loja**	**19.87**	**112**	P	**Pn**	09 56 45.8	+0.5
	comp=Z,28nm,1.2s						
ESAC	**San Caprasio**	**19.89**	**97**	P	**Pn**	09 56 44.6	-0.9
	comp=Z,350nm,1.8s						
ESAC	**San Caprasio**	**19.89**	**97**	P	**Pn**	09 56 44.6	-0.8
	comp=Z,350nm,1.8s						
EBIE	**Bielsa**	**19.91**	**93**	P	**Pn**	09 56 45.3	-0.4
	comp=Z,215nm,1.9s						
EBIE	**Bielsa**	**19.91**	**93**	P	**Pn**	09 56 45.3	-0.3
	comp=Z,215nm,1.9s						
RJF	**Les Rejaudoux**	**19.96**	**85**	*e*P	**Pn**	09 56 44.3	-2.0
	comp=Z,54nm,1.3s						
RJF	**Les Rejaudoux**	**19.96**	**85**	*e*P	**Pn**	09 56 44.3	-2.0
RJF				pmax	pmax		
	comp=Z,27nm,1.3s						
RJF	**Les Rejaudoux**	**19.96**	**85**	*e*P	**Pn**	09 56 44.3	-2.0
	comp=Z,27nm,1.3s						
RJF	**Les Rejaudoux**	**19.96**	**85**	*e*P	**Pn**	09 56 44.3	-2.0
	comp=Z,27nm,1.3s						
RESF	**Ens**	**19.99**	**93**	*e*P	**Pn**	09 56 45.3	-1.4
RESF	**Ens**	**19.99**	**93**	*e*P	**Pn**	09 56 45.3	-1.4
EVIA	**Vianos**	**20.06**	**107**	P	**P**	09 56 47.5	+1.8
EVIA				pmax	pmax		
	comp=Z,26nm,1.0s						
EVIA	**Vianos**	**20.06**	**107**	P	**P**	09 56 47.5	+1.8
	comp=Z,26nm,1.0s						

ECHE Chera 20.56 103 P P 09 56 52.8 +1.7
comp=Z,20nm,0.8s
SALF Salau 20.59 92 *eP* **P 09 56 52.1 +0.7**
SALF Salau 20.59 92 *eP* **P 09 56 52.1 +0.7**
FRNF Fournols 20.64 84 *eP* **P 09 56 51.9 -0.1**
FRNF Fournols 20.64 84 *eP* **P 09 56 51.9 -0.1**
ETOB Tobarra 20.68 105 P P 09 56 53.6 +1.2
comp=Z,181nm,2.5s
ETOB Tobarra 20.68 105 P P 09 56 53.6 +1.2
comp=Z,181nm,2.5s
ERTA Horta de San J 20.77 98 P P 09 56 54.7 +1.3
comp=Z,209nm,2.0s
ERTA Horta de San J 20.77 98 P P 09 56 54.7 +1.3
comp=Z,209nm,2.0s
AVF Avril sur Loir 20.83 80⇑ *iP* **P 09 56 53.8 -0.2**
comp=Z,237nm,1.1s
AVF Avril sur Loir 20.83 80⇑ *iP* **P 09 56 53.8 -0.2**
AVF pmax pmax
comp=Z,118nm,1.1s
AVF Avril sur Loir 20.83 80⇑ *iP* **P 09 56 53.8 -0.2**
comp=Z,118nm,1.1s
AVF Avril sur Loir 20.83 80⇑ *iP* **P 09 56 53.8 -0.2**
comp=Z,118nm,1.1s
PYM Petit Puy Mans 20.85 83 *eP* **P 09 56 55.5 +1.3**
PYM Petit Puy Mans 20.85 83 *eP* **P 09 56 55.5 +1.3**
AGO Saint Agoulin 20.85 82 *eP* **P 09 56 55.5 +1.2**
AGO Saint Agoulin 20.85 82 *eP* **P 09 56 55.5 +1.2**
SSF Saint Saulge 20.87 79⇑ *iP* **P 09 56 54.4 0.0**
comp=Z,245nm,1.1s
SSF Saint Saulge 20.87 79⇑ *iP* **P 09 56 54.4 0.0**
SSF pmax pmax
comp=Z,123nm,1.1s
SSF Saint Saulge 20.87 79⇑ *iP* **P 09 56 54.4 0.0**
comp=Z,123nm,1.1s
SSF Saint Saulge 20.87 79⇑ *iP* **P 09 56 54.4 0.0**
comp=Z,123nm,1.1s
BAIF Baives 20.89 71⇑ *iP* **P 09 56 54.4 -0.2**
comp=Z,258nm,1.0s
BAIF Baives 20.89 71⇑ *iP* **P 09 56 54.4 -0.2**
BAIF pmax pmax
comp=Z,129nm,1.0s
BAIF Baives 20.89 71⇑ *iP* **P 09 56 54.4 -0.2**
comp=Z,129nm,1.0s
BAIF Baives 20.89 71⇑ *iP* **P 09 56 54.4 -0.2**
comp=Z,129nm,1.0s
SNF Seneffe 20.91 70 P P 09 56 54.6 -0.2
comp=Z,82nm,1.4s
UCC Uccle 20.94 69 P P 09 56 54.6 -0.5
LOR Lormes 21.06 79⇑ *iP* **P 09 56 56.3 -0.2**
comp=Z,250nm,1.3s,mb5.1
LOR Lormes 21.06 79⇑ *iP* **P 09 56 56.3 -0.2**
LOR pmax pmax
comp=Z,125nm,1.3s,mb5.1
LOR Lormes 21.06 79⇑ *iP* **P 09 56 56.3 -0.2**
comp=Z,125nm,1.3s,mb5.1
LOR Lormes 21.06 79⇑ *iP* **P 09 56 56.3 -0.2**
comp=Z,125nm,1.3s,mb5.1
MTLF Montolieu 21.07 90 *eP* **P 09 56 56.3 -0.3**
comp=Z,236nm,1.7s,mb5.0
MTLF Montolieu 21.07 90 *eP* **P 09 56 56.3 -0.3**
MTLF pmax pmax
comp=Z,118nm,1.7s,mb4.9
MTLF Montolieu 21.07 90 *eP* **P 09 56 56.3 -0.3**
comp=Z,118nm,1.7s,mb4.9
MTLF Montolieu 21.07 90 *eP* **P 09 56 56.3 -0.3**
comp=Z,118nm,1.7s,mb5.0
EPOB Poblet 21.09 96 P P 09 56 57.5 +0.6
comp=Z,162nm,2.0s,mb5.0
EPOB Poblet 21.09 96 P P 09 56 57.5 +0.6
comp=Z,162nm,2.0s,mb5.0
DOU Dourbes 21.14 71 P P 09 56 57.2 -0.1
comp=Z,72nm,1.2s,mb4.9
LBL Lubilhac 21.15 84 *eP* **P 09 56 58.7 +1.2**
LBL Lubilhac 21.15 84 *eP* **P 09 56 58.7 +1.2**
SMF Signal de Mont 21.19 80⇑ *iP* **P 09 56 57.6 -0.3**
comp=Z,290nm,1.2s,mb5.2
SMF Signal de Mont 21.19 80⇑ *iP* **P 09 56 57.6 -0.3**
SMF pmax pmax
comp=Z,145nm,1.2s,mb5.2
SMF Signal de Mont 21.19 80⇑ *iP* **P 09 56 57.6 -0.3**
comp=Z,145nm,1.2s,mb5.2
SMF Signal de Mont 21.19 80⇑ *iP* **P 09 56 57.6 -0.3**
comp=Z,145nm,1.2s,mb5.2
CARF Carcanieres 21.23 92 *eP* **P 09 56 58.2 -0.1**
CARF Carcanieres 21.23 92 *eP* **P 09 56 58.2 -0.1**
GIVF Givet 21.28 71⇑ *iP* **P 09 56 58.5 -0.3**
comp=Z,342nm,1.0s,mb5.3
GIVF Givet 21.28 71⇑ *iP* **P 09 56 58.5 -0.3**
GIVF pmax pmax
comp=Z,171nm,1.0s,mb5.3
GIVF Givet 21.28 71⇑ *iP* **P 09 56 58.5 -0.3**
comp=Z,171nm,1.0s,mb5.3
GIVF Givet 21.28 71⇑ *iP* **P 09 56 58.5 -0.3**
comp=Z,171nm,1.0s,mb5.3
LRDF Laroque-de-Fa 21.44 91 *eP* **P 09 57 00.1 -0.5**
LRDF Laroque-de-Fa 21.44 91 *eP* **P 09 57 00.1 -0.5**
BCLA Clavier 21.56 70 P P 09 57 01.3 -0.5
comp=Z,27nm,0.9s,mb4.7
MEZF Maizieres J'vi 21.63 75⇑ *iP* **P 09 57 02.5 -0.1**
comp=Z,516nm,1.0s,mb5.6
MEZF Maizieres J'vi 21.63 75⇑ *iP* **P 09 57 02.5 -0.1**
comp=Z,516nm,1.0s,mb5.9
MEZF Maizieres J'vi 21.63 75⇑ *iP* **P 09 57 02.5 -0.1**
comp=Z,258nm,1.0s,mb5.6
BEBN Eben Emael 21.77 69 P P 09 57 03.4 -0.7
comp=Z,19nm,1.0s,mb4.5
SJAF Saint Jean de 21.84 92 *eP* **P 09 57 01.3 -3.7**
EJON La Jonquera 21.86 92 P P 09 57 05.9 +0.7
comp=Z,115nm,1.5s,mb5.1
EJON La Jonquera 21.86 92 P P 09 57 05.9 +0.7
comp=Z,115nm,1.5s,mb5.1
LASF Ste Croix 21.93 87⇑ *iP* **P 09 57 05.6 -0.2**
comp=Z,127nm,1.1s,mb5.0
LASF Ste Croix 21.93 87⇑ *iP* **P 09 57 05.6 -0.2**
comp=Z,63nm,1.1s,mb5.0
HGN Heimansgroeve 21.93 69 *eP* **P 09 57 05.1 -0.8**
comp=Z,61nm,0.9s,mb5.0
HGN Heimansgroeve 21.93 69 *eP* **P 09 57 05.1 -0.8**
comp=Z,61nm,0.9s,mb5.0
MEM Membach 21.99 69 P P 09 57 06.0 -0.5
comp=Z,69nm,1.2s,mb5.0
SSB Saint Sauveur 22.01 84 *eP* **P 09 57 07.4 +0.6**
SSB Saint Sauveur 22.01 84 *eP* **P 09 57 07.5 +0.7**
SSB Saint Sauveur 22.01 84 *eP* **P 09 57 07.4 +0.6**
WLF Walferdange 22.18 72 P P 09 57 08.0 -0.5
comp=Z,34nm,1.4s,mb4.6
WLF Walferdange 22.18 72 *eP* **P 09 57 08.9 +0.4**
comp=Z,67nm,1.2s,mb5.0
WLF Walferdange 22.18 72 *eP* **P 09 57 08.0 -0.5**
WLF pmax pmax
comp=Z,61nm,1.3s,mb4.9
WLF Walferdange 22.18 72 *eP* **P 09 57 08.0 -0.5**
comp=Z,61nm,1.3s,mb4.9
WLF Walferdange 22.18 72 *eP* **P 09 57 08.0 -0.5**
comp=Z,61nm,1.3s,mb4.9
VIVF Saint-Julien-I 22.23 85 *eP* **P 09 57 09.2 +0.1**
comp=Z,74nm,1.2s,mb4.7
VIVF Saint-Julien-I 22.23 85 *eP* **P 09 57 09.2 +0.1**
VIVF pmax pmax
comp=Z,37nm,1.2s,mb4.7
VIVF Saint-Julien-I 22.23 85 *eP* **P 09 57 09.2 +0.1**
comp=Z,37nm,1.2s,mb4.7
VIVF Saint-Julien-I 22.23 85 *eP* **P 09 57 09.2 +0.1**
comp=Z,37nm,1.2s,mb4.7
THEF They Montfort 22.29 75 *eP* **P 09 57 08.7 -1.0**
THEF They Montfort 22.29 75 *eP* **P 09 57 08.7 -1.0**
WIT Witteveen 22.33 63 *eP* **P 09 57 10.6 +0.5**
comp=Z,263nm,1.2s,mb5.5
WIT Witteveen 22.33 63 *eP* **P 09 57 10.6 +0.6**
comp=Z,263nm,1.2s,mb5.5
WTSB Winterswijk 22.42 65 *eP* **P 09 57 10.2 -0.8**
comp=Z,79nm,1.8s,mb4.8
WTSB Winterswijk 22.42 65 *eP* **P 09 57 10.2 -0.8**
comp=Z,79nm,1.8s,mb4.8
MDT Midelt 22.52 122 P P 09 57 12.3 0.0
comp=Z,15nm,1.0s,mb4.4,baz=315,slow=8.5,SNR=11
MDT Midelt 22.52 122 P P 09 57 12.3 +0.1
HAU Haudompre 22.57 76 *eP* **P 09 57 12.3 -0.3**
comp=Z,136nm,1.0s,mb5.0
HAU Haudompre 22.57 76 *eP* **P 09 57 12.3 -0.3**
HAU pmax pmax
comp=Z,68nm,1.0s,mb5.0
HAU Haudompre 22.57 76 *eP* **P 09 57 12.3 -0.3**
comp=Z,68nm,1.0s,mb5.0
HAU Haudompre 22.57 76 *eP* **P 09 57 12.3 -0.3**
comp=Z,68nm,1.0s,mb5.0
CABF La Chapelle 22.70 79 *eP* **P 09 57 14.7 +0.7**
comp=Z,182nm,1.0s,mb5.1
CABF La Chapelle 22.70 79 *eP* **P 09 57 14.7 +0.7**
CABF pmax pmax
comp=Z,91nm,1.0s,mb5.2
CABF La Chapelle 22.70 79 *eP* **P 09 57 14.7 +0.7**
comp=Z,91nm,1.0s,mb5.2
CABF La Chapelle 22.70 79 *eP* **P 09 57 14.7 +0.7**
comp=Z,91nm,1.0s,mb5.1
BUG Bochum–Univer 22.73 67 *eP* **P 09 57 13.1 -1.2**
comp=Z,86nm,1.1s,mb5.1
HINF Hinterlafeld 22.94 76 *eP* **P 09 57 16.6 +0.1**
comp=Z,149nm,1.1s,mb5.0
HINF Hinterlafeld 22.94 76 *eP* **P 09 57 16.6 +0.1**
HINF pmax pmax
comp=Z,75nm,1.1s,mb5.0
HINF Hinterlafeld 22.94 76 *eP* **P 09 57 16.6 +0.1**
comp=Z,75nm,1.1s,mb5.0
HINF Hinterlafeld 22.94 76 *eP* **P 09 57 16.6 +0.1**
comp=Z,75nm,1.1s,mb5.0
IBBN Ibbenburen 23.00 65 *eP* **P 09 57 17.0 -0.1**
comp=Z,110nm,1.2s,mb5.2
ORIF Oris-en-Rattie 23.03 84 *eP* **P 09 57 17.0 -0.5**
ORIF Oris-en-Rattie 23.03 84 *eP* **P 09 57 17.0 -0.5**
ECH Echery 23.06 75 *eP* **P 09 57 17.2 -0.6**
ECH Echery 23.06 75 *eP* **P 09 57 17.9 0.0**
ECH Echery 23.06 75 *eP* **P 09 57 17.9 +0.1**
CDF Champ du Feu 23.10 75 *eP* **P 09 57 18.1 -0.2**
comp=Z,100nm,1.0s,mb4.9
CDF Champ du Feu 23.10 75 *eP* **P 09 57 18.1 -0.2**
CDF pmax pmax
comp=Z,50nm,1.0s,mb4.9
CDF Champ du Feu 23.10 75 *eP* **P 09 57 18.1 -0.2**
comp=Z,50nm,1.0s,mb4.9
CDF Champ du Feu 23.10 75 *eP* **P 09 57 18.1 -0.2**
comp=Z,50nm,1.0s,mb4.9
MOF Molkenrain 23.11 76 *eP* **P 09 57 17.8 -0.6**
MOF Molkenrain 23.11 76 *eP* **P 09 57 17.8 -0.6**
TREF Trevaresse 23.12 87 *eP* **P 09 57 19.3 +0.8**
TREF Trevaresse 23.12 87 *eP* **P 09 57 19.3 +0.8**
SFJD Kangerlussuaq 23.12 337 P P 09 57 18.2 -0.1
comp=Z,6.7nm,0.8s,mb4.1,baz=135,slow=12,SNR=4.9
SFJD Kangerlussuaq 23.12 337 P P 09 57 18.2 -0.1
SMRF Simiane la Rot 23.13 86 *eP* **P 09 57 18.8 +0.2**
comp=Z,214nm,1.6s,mb5.0
SMRF Simiane la Rot 23.13 86 *eP* **P 09 57 18.8 +0.2**
comp=Z,214nm,1.6s,mb5.3
SMRF Simiane la Rot 23.13 86 *eP* **P 09 57 18.8 +0.2**
comp=Z,107nm,1.6s,mb5.0
OG01 Vacheresse 23.17 80 *eP* **P 09 57 20.4 +1.4**
OG01 Vacheresse 23.17 80 *eP* **P 09 57 20.4 +1.4**
GELF Grande-Etoile 23.23 88 *eP* **P 09 57 18.5 -1.2**
GELF Grande-Etoile 23.23 88 *eP* **P 09 57 18.5 -1.2**
VILF Villemus 23.26 86 *eP* **P 09 57 20.0 0.0**
VILF Villemus 23.26 86 *eP* **P 09 57 20.0 0.0**
LANF Langenberg 23.35 73 *eP* **P 09 57 20.4 -0.5**
LANF Langenberg 23.35 73 *eP* **P 09 57 20.4 -0.5**
LPL La Plagne 23.42 82 *eP* **P 09 57 20.4 -1.3**
comp=Z,41nm,1.1s,mb4.5
LPL La Plagne 23.42 82 *eP* **P 09 57 20.4 -1.3**
LPL pmax pmax
comp=Z,20nm,1.1s,mb4.5
LPL La Plagne 23.42 82 *eP* **P 09 57 20.4 -1.3**
comp=Z,20nm,1.1s,mb4.5
LPL La Plagne 23.42 82 *eP* **P 09 57 20.4 -1.3**
comp=Z,20nm,1.1s,mb4.5
LPG La Plagne 23.44 82 *eP* **P 09 57 20.2 -1.7**
comp=Z,57nm,1.2s,mb4.6
LPG La Plagne 23.44 82 *eP* **P 09 57 20.2 -1.7**
LPG pmax pmax
comp=Z,29nm,1.2s,mb4.6
LPG La Plagne 23.44 82 *eP* **P 09 57 20.2 -1.7**
comp=Z,29nm,1.2s,mb4.6
LPG La Plagne 23.44 82 *eP* **P 09 57 20.2 -1.7**
comp=Z,29nm,1.2s,mb4.6
KTD Kalmit 23.48 72 *eP* **P 09 57 22.6 +0.4**
KTD Kalmit 23.48 72 *eP* **P 09 57 22.6 +0.4**
TAVF Tavernes 23.58 87 *eP* **P 09 57 22.8 -0.5**
TAVF Tavernes 23.58 87 *eP* **P 09 57 22.8 -0.5**
TNS Taunus Mts 23.59 70 *eP* **P 09 57 23.1 -0.2**
comp=Z,146nm,1.4s,mb5.2
TNS Taunus Mts 23.59 70 *eP* **P 09 57 23.1 -0.2**
TNS pmax pmax
comp=Z,146nm,1.4s,mb5.2
TNS Taunus Mts 23.59 70 *eP* **P 09 57 23.1 -0.2**
comp=Z,146nm,1.4s,mb5.2
FELD Feldberg im Sc 23.68 76 *eP* **P 09 57 23.2 -1.0**
FELD Feldberg im Sc 23.68 76 *eP* **P 09 57 23.2 -1.0**
MBDF Montbardon 23.69 84 *eP* **P 09 57 24.2 -0.1**
comp=Z,67nm,1.1s,mb4.7
MBDF Montbardon 23.69 84 *eP* **P 09 57 24.2 -0.1**
MBDF pmax pmax
comp=Z,34nm,1.1s,mb4.7
MBDF Montbardon 23.69 84 *eP* **P 09 57 24.2 -0.1**
comp=Z,34nm,1.1s,mb4.7
MBDF Montbardon 23.69 84 *eP* **P 09 57 24.2 -0.1**
comp=Z,34nm,1.1s,mb4.7
BFO Black Forest 23.81 74 *eP* **P 09 57 24.7 -0.6**
comp=Z,356nm,2.8s,mb5.3
BFO Black Forest 23.81 74 *eP* **P 09 57 24.7 -0.6**
BFO pmax pmax
comp=Z,356nm,2.8s,mb5.3
BFO Black Forest 23.81 74 *eP* **P 09 57 24.7 -0.6**
comp=Z,356nm,2.8s,mb5.3
LMR La Mourre 23.99 87 *eP* **P 09 57 25.5 -1.5**
LMR La Mourre 23.99 87 *eP* **P 09 57 25.5 -1.5**
FRF La Foret Royal 24.00 87 *eP* **P 09 57 26.6 -0.5**
comp=Z,89nm,1.0s,mb4.9
FRF La Foret Royal 24.00 87 *eP* **P 09 57 26.6 -0.5**
FRF pmax pmax
comp=Z,44nm,1.0s,mb4.8
FRF La Foret Royal 24.00 87 *eP* **P 09 57 26.6 -0.5**
comp=Z,44nm,1.0s,mb4.8
FRF La Foret Royal 24.00 87 *eP* **P 09 57 26.6 -0.5**
comp=Z,44nm,1.0s,mb4.9
MUD Monsted U'grnd 24.02 54 *iP* **P 09 57 27.1 0.0**
MUD pmax pmax
comp=Z,25nm,0.9s,mb4.6
MUD Monsted U'grnd 24.02 54 *iP* **P 09 57 27.1 0.0**
comp=Z,25nm,0.9s,mb4.7
MUD Monsted U'grnd 24.02 54 *iP* **P 09 57 27.1 0.0**
comp=Z,25nm,0.9s,mb4.6
CALN Calern 24.10 86 *eP* **P 09 57 29.1 +1.1**
CALN Calern 24.10 86 *eP* **P 09 57 29.1 +1.1**
TOUF Mont Tournerai 24.25 85 *eP* **P 09 57 30.6 +1.2**
TOUF Mont Tournerai 24.25 85 *eP* **P 09 57 30.6 +1.2**
STU Stuttgart 24.29 73 *eP* **P 09 57 29.3 -0.4**
comp=Z,74nm,1.5s,mb4.9
STU Stuttgart 24.29 73 *eP* **P 09 57 30.5 +0.8**
STU pmax pmax
comp=Z,36nm,1.1s,mb4.7
STU Stuttgart 24.29 73 *eP* **P 09 57 30.5 +0.8**
comp=Z,36nm,1.1s,mb4.7
STU Stuttgart 24.29 73 *eP* **P 09 57 30.5 +0.8**
comp=Z,36nm,1.1s,mb4.7
LUCF Luceram 24.36 85 *eP* **P 09 57 31.2 +0.8**
LUCF Luceram 24.36 85 *eP* **P 09 57 31.2 +0.8**
AUTN L'Aution 24.38 85 *eP* **P 09 57 31.7 +1.1**
AUTN L'Aution 24.38 85 *eP* **P 09 57 31.7 +1.1**
SBF Sospel 24.43 85 *eP* **P 09 57 29.8 -1.2**
comp=Z,224nm,1.2s,mb5.2
SBF Sospel 24.43 85 *eP* **P 09 57 29.8 -1.2**
SBF pmax pmax
comp=Z,112nm,1.2s,mb5.2
SBF Sospel 24.43 85 *eP* **P 09 57 29.8 -1.2**
comp=Z,112nm,1.2s,mb5.2
SBF Sospel 24.43 85 *eP* **P 09 57 29.8 -1.2**
comp=Z,112nm,1.2s,mb5.2
NRDL Niedersach Rie 24.43 64 *eP* **P 09 57 31.1 +0.1**
comp=Z,115nm,1.2s,mb5.2
SAOF Saorge 24.46 85 *eP* **P 09 57 31.9 +0.5**
SAOF Saorge 24.46 85 *eP* **P 09 57 31.9 +0.5**
UBBA Unterbreizbach 24.50 68 *eP* **P 09 57 31.3 -0.3**
comp=Z,32nm,2.1s,mb4.5
BSEG Bad Segeberg 24.52 60 *eP* **P 09 57 30.9 -0.9**
comp=Z,68nm,1.2s,mb5.0
BSEG Bad Segeberg 24.52 60 *eP* **P 09 57 30.9 -0.9**
CLZ Clausthal 24.64 65 *eP* **P 09 57 33.5 +0.7**
comp=Z,139nm,1.2s,mb5.4
CLZ Clausthal 24.64 65 *eP* **P 09 57 33.5 +0.7**
CLZ pmax pmax
comp=Z,139nm,1.2s,mb5.4
CLZ Clausthal 24.64 65 *eP* **P 09 57 33.5 +0.7**
comp=Z,139nm,1.2s,mb5.4
DAVA Damuels 25.05 76⇑ *iP* **P 09 57 38.5 +1.8**
comp=Z,66nm,1.0s,mb5.1,SNR=19
DAVA Damuels 25.05 76 P P 09 57 38.5 +1.8
comp=Z,66nm,1.0s,mb5.1,SNR=19
DAVOX Davos/Dischmat 25.18 77 P P 09 57 38.7 +0.9
comp=Z,22nm,0.9s,mb4.7,baz=290,slow=11,SNR=13
DAVOX Davos/Dischmat 25.18 77 P P 09 57 38.7 +0.8
GRA1 Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
comp=Z,74nm,1.1s,mb5.1
GRA1 Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
comp=Z,74nm,1.1s,mb5.1
GRF Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
comp=Z,74nm,1.1s,mb5.1
GRF Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
GRF pmax pmax
comp=Z,74nm,1.1s,mb5.1
GRF Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
GRF pmax pmax
comp=Z,74nm,1.1s,mb5.1
GRF Grafenberg Arr 25.44 70 *eP* **P 09 57 41.2 +1.1**
comp=Z,74nm,1.1s,mb5.1
MOX Moxa 25.54 68 *eP* **P 09 57 41.6 +0.5**
comp=Z,38nm,1.1s,mb4.8
MOX Moxa 25.54 68 *eP* **P 09 57 41.8 +0.7**
comp=Z,28nm,1.0s,mb4.8
MOX Moxa 25.54 68 *eP* **P 09 57 41.6 +0.5**
MOX pmax pmax
comp=Z,38nm,1.1s,mb4.8
MOX Moxa 25.54 68 *eP* **P 09 57 41.6 +0.5**
comp=Z,38nm,1.1s,mb4.8
SCHQ Schefferville 25.64 302 P P 09 57 41.1 -0.9
comp=Z,14nm,0.8s,mb4.5,baz=95,slow=9.9,SNR=9.0
SCHQ Schefferville 25.64 302 P P 09 57 41.1 -0.9
FETA Feichten 25.68 77⇑ *iP* **P 09 57 44.3 +1.9**
comp=Z,29nm,1.0s,mb4.7,SNR=10
FETA Feichten 25.68 77 P P 09 57 44.3 +1.9
comp=Z,29nm,1.0s,mb4.7,SNR=10
FUR Furstenfeldbru 25.77 74 *eP* **P 09 57 43.7 +0.5**
comp=Z,77nm,1.4s,mb5.0
FUR Furstenfeldbru 25.77 74 *eP* **P 09 57 43.7 +0.5**
FUR pmax pmax
comp=Z,77nm,1.4s,mb5.0
FUR Furstenfeldbru 25.77 74 *eP* **P 09 57 43.7 +0.5**
comp=Z,77nm,1.4s,mb5.0
SUMG Summit 25.82 352 *eP* **P 09 57 45.0 +1.6**
SUMG pmax pmax
comp=Z,2.0nm,0.6s
SUMG Summit 25.82 352 *eP* **P 09 57 45.0 +1.6**
comp=Z,2.4nm,0.6s,mb3.9
SUMG Summit 25.82 352 *eP* **P 09 57 45.0 +1.6**
comp=Z,2.0nm,0.6s,mb3.8
NOA NORSAR Array B 25.91 44 P P 09 57 45.1 +0.8
comp=Z,3.2nm,0.9s,mb3.8,baz=256,slow=9.7,SNR=2.8
NOA NORSAR Array B 25.91 44 P P 09 57 45.1 +0.8
PGF Pioggiola 25.98 87 *eP* **P 09 57 44.4 -0.7**
comp=Z,112nm,1.1s,mb5.0
PGF Pioggiola 25.98 87 *eP* **P 09 57 44.4 -0.7**
PGF pmax pmax
comp=Z,56nm,1.1s,mb5.0
PGF Pioggiola 25.98 87 *eP* **P 09 57 44.4 -0.7**
comp=Z,56nm,1.1s,mb5.0
PGF Pioggiola 25.98 87 *eP* **P 09 57 44.4 -0.7**
comp=Z,56nm,1.1s,mb5.0
WERD Werda 26.01 68 *eP* **P 09 57 44.2 -1.1**
comp=Z,18nm,0.9s,mb4.6
GUNZ Gunzen 26.04 69 *eP* **P 09 57 44.5 -1.1**
comp=Z,28nm,1.1s,mb4.7
ROTZ Rotzenmuhle 26.05 70 *eP* **P 09 57 47.5 +1.8**
comp=Z,48nm,1.6s,mb4.8
WERN Wernitzgruen 26.07 69 *eP* **P 09 57 45.0 -0.9**
comp=Z,29nm,1.2s,mb4.7
TANN Tannenbergstha 26.11 68 *eP* **P 09 57 45.3 -0.9**
comp=Z,28nm,1.2s,mb4.7
NKC Novy Kostel 26.13 69 *eP* **P 09 57 46.3 -0.1**
WTTA Wattenberg 26.22 76⇑ *iP* **P 09 57 48.8 +1.6**
comp=Z,34nm,1.1s,mb4.8,SNR=13
WTTA Wattenberg 26.22 76 P P 09 57 48.8 +1.5
comp=Z,34nm,1.1s,mb4.8,SNR=13
RGN Rugen 26.28 59 *eP* **P 09 57 47.6 -0.1**
comp=Z,58nm,1.3s,mb5.0
CLL Collm 26.32 66 *eP* **P 09 57 47.2 -1.0**
comp=Z,39nm,1.1s,mb4.8
CLL Collm 26.32 66 *i* P **P 09 57 48.8 +0.6**
CLL *i* pP 09 57 51.4 +0.2
CLL *i* 09 57 54.3
CLL pmax pmax
comp=Z,39nm,1.1s,mb4.8
CLL Collm 26.32 66 *i* P **P 09 57 48.8 +0.6**
comp=Z,39nm,1.1s,mb4.8
CLL *i* pP 09 57 51.4 +0.2
CLL *i* 09 57 54.3
CLL Collm 26.32 66 *i* P **P 09 57 48.8 +0.6**
comp=Z,39nm,1.1s,mb4.8
CLL *i* pP pP 09 57 51.4 +0.2
CLL *i* 09 57 54.3
CLL Collm 26.32 66 *i* P **P 09 57 48.8 +0.6**
comp=Z,39nm,1.1s,mb4.8
WET Wettzell 26.60 71 *eP* **P 09 57 50.7 0.0**
comp=Z,32nm,1.2s,mb4.7
WET Wettzell 26.60 71 *eP* **P 09 57 50.7 0.0**
WET pmax pmax
comp=Z,32nm,1.2s,mb4.7
WET Wettzell 26.60 71 *eP* **P 09 57 50.7 0.0**
comp=Z,32nm,1.2s,mb4.7
RUE Ruedersdorf 26.67 64 *eP* **P 09 57 52.5 +1.2**
comp=Z,74nm,1.2s,mb5.1
RUE Ruedersdorf 26.67 64 *eP* **P 09 57 52.2 +0.9**
comp=Z,13nm,0.6s,mb4.6
RUE Ruedersdorf 26.67 64 *eP* **P 09 57 52.2 +0.9**
comp=Z,13nm,0.6s,mb4.6
RJOB Jochberg 26.86 74 *eP* **P 09 57 54.0 +1.0**
comp=Z,100nm,2.4s,mb4.9
HFS Hagfors 26.91 46 P P 09 57 52.3 -1.1
comp=Z,5.4nm,0.9s,mb4.1,baz=292,slow=12,SNR=3.5
HFS Hagfors 26.91 46 P P 09 57 52.3 -1.1
BRG Berggiesshubel 26.97 67 *eP* **P 09 57 54.0 0.0**
comp=Z,47nm,1.2s,mb4.9
BRG Berggiesshubel 26.97 67 *eP* **P 09 57 54.0 0.0**
BRG pmax pmax
comp=Z,28nm,1.2s,mb4.7
KHC Kasperske Hory 27.05 71 *eP* **P 09 57 55.1 +0.4**
KHC Kasperske Hory 27.05 71 *eP* **P 09 57 55.2 +0.4**
GEC2 GERESS Array S 27.19 72 *eP* **P 09 57 55.3 -0.7**
comp=Z,47nm,1.7s,mb4.7
GEC2 GERESS Array S 27.19 72 *eP* **P 09 57 55.3 -0.7**
GEC2 pmax pmax
comp=Z,47nm,1.7s,mb4.7
GEC2 GERESS Array S 27.19 72 *eP* **P 09 57 55.3 -0.7**
comp=Z,47nm,1.7s,mb4.7
GERES GERESS Array B 27.19 72 P P 09 57 55.7 -0.4
comp=Z,5.4nm,0.8s,mb4.1,baz=289,slow=8.1,SNR=14
GERES GERESS Array B 27.19 72 P P 09 57 55.7 -0.3
PRA Prague 27.41 69 P P 09 57 59.0 +1.0
FRB Frobisher Bay 27.85 321 P P 09 58 00.8 -0.9
comp=Z,6.2nm,0.7s,mb4.3,baz=88,slow=8.6,SNR=5.8
FRB Frobisher Bay 27.85 321 P P 09 58 00.9 -0.9
JAVS Javornik 28.21 78 *iP* **P 09 58 06.0 +0.9**
JAVS Javornik 28.21 78 *iP* **P 09 58 06.1 +0.9**
KSP Ksiaz 28.45 67 *eP* **P 09 58 06.8 -0.4**
CEY Cerknica 28.50 78 *iP* **P 09 58 08.6 +0.9**
CEY Cerknica 28.50 78 *iP* **P 09 58 08.6 +0.8**
ARSA Arzberg 28.77 74 *iP* **P 09 58 10.6 +0.4**
comp=Z,17nm,1.4s,mb4.6,SNR=6.1
ARSA Arzberg 28.77 74 P P 09 58 10.6 +0.4
comp=Z,17nm,1.4s,mb4.6,SNR=6.1
VRAC Vranov 28.95 70 P P 09 58 11.6 0.0
comp=Z,2.8nm,0.4s,mb4.4,baz=271,slow=18,SNR=4.5
VRAC Vranov 28.95 70 P P 09 58 11.6 0.0
BOJS Bojanci 29.13 78 *eP* **P 09 58 14.5 +1.2**
BOJS Bojanci 29.13 78 *eP* **P 09 58 14.5 +1.2**
KEST Kesra 29.52 100 P P 09 58 16.2 -0.7
comp=Z,8.5nm,1.0s,mb4.4,baz=234,slow=1.4,SNR=12
ZST Bratislava 29.54 72 *eP* **P 09 58 21.6 +4.6**
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ZST Bratislava 29.54 72 *eP* **P 09 58 21.6 +4.6**
comp=Z,5.6nm,0.7s,mb4.4
ZST Bratislava 29.54 72 *eP* **P 09 58 21.6 +4.6**
KOLL Kolacno 30.28 71 *eP* **P 09 58 25.3 +1.8**
KOLL Kolacno 30.28 71 *eP* **P 09 58 25.3 +1.8**
KOLL Kolacno 30.28 71 *eP* **P 09 58 25.3 +1.8**
VYHS Vyhne 30.58 71 *eP* **P 09 58 27.9 +1.8**
VYHS pmax pmax
comp=Z,84nm,3.0s
VYHS Vyhne 30.58 71 *eP* **P 09 58 27.9 +1.8**
comp=Z,84nm,3.0s
VYHS Vyhne 30.58 71 *eP* **P 09 58 27.9 +1.8**
VYHS Vyhne 30.58 71 *eP* **P 09 58 27.9 +1.8**
comp=Z,84nm,3.0s

LIKS Likavka 30.61 69 *eP* **P 09 58 27.3 +0.9**
LIKS pmax pmax
comp=Z,24nm,0.8s,mb5.1
LIKS Likavka 30.61 69 *eP* **P 09 58 27.3 +0.9**
comp=Z,24nm,0.8s,mb5.1
LIKS Likavka 30.61 69 *eP* **P 09 58 27.3 +0.9**
LIKS Likavka 30.61 69 *eP* **P 09 58 27.3 +0.9**
comp=Z,24nm,0.8s,mb5.1
OJC Ojcow 30.76 67 *eP* **P 09 58 28.7 +1.0**
PSZ Piszkesteto 31.42 71 *eP* **P 09 58 35.4 +1.9**
PSZ pmax pmax
comp=Z,36nm,1.3s,mb5.0
PSZ Piszkesteto 31.42 71 *eP* **P 09 58 35.4 +1.9**
comp=Z,36nm,1.3s,mb5.0
PSZ Piszkesteto 31.42 71 *eP* **P 09 58 35.4 +1.9**
comp=Z,36nm,1.3s,mb5.0
KECS Kecovo 31.64 70 *eP* **P 09 58 37.1 +1.6**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
KECS Kecovo 31.64 70 *eP* **P 09 58 37.1 +1.6**
comp=Z,3.3nm,0.9s,mb4.2
KECS Kecovo 31.64 70 *eP* **P 09 58 37.1 +1.6**
STHS Stebnicka Huta 31.87 68 *eP* **P 09 58 39.3 +1.8**
STHS pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
STHS Stebnicka Huta 31.87 68 *eP* **P 09 58 39.3 +1.8**
comp=Z,9.1nm,1.0s,mb4.6
STHS Stebnicka Huta 31.87 68 *eP* **P 09 58 39.2 +1.7**
STHS Stebnicka Huta 31.87 68 *eP* **P 09 58 39.3 +1.8**
comp=Z,9.1nm,1.0s,mb4.6
CEL Celeste 32.61 90 *eP* **P 09 58 43.7 -0.4**
comp=Z,19nm,1.0s,mb5.0
CEL Celeste 32.61 90 *eP* **P 09 58 43.7 -0.4**
comp=Z,19nm,1.0s,mb5.0
KOLS Kolonicke sedl 32.65 69 *eP* **P 09 58 46.6 +2.3**
KOLS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
KOLS Kolonicke sedl 32.65 69 *eP* **P 09 58 46.6 +2.3**
comp=Z,8.3nm,1.1s,mb4.6
KOLS Kolonicke sedl 32.65 69 *eP* **P 09 58 46.6 +2.3**
KOLS Kolonicke sedl 32.65 69 *eP* **P 09 58 46.6 +2.3**
comp=Z,8.3nm,1.1s,mb4.6
TIP Timpagrande 32.74 88 *eP* **P 09 58 44.6 -0.7**
comp=Z,24nm,1.3s,mb5.0
TIP Timpagrande 32.74 88 *eP* **P 09 58 44.6 -0.6**
comp=Z,24nm,1.3s,mb5.0
UZH Uzhgorod 32.75 69 *eP* **P 09 58 46.6 +1.4**
DIVS Divibare 32.78 78 ⇑*P* **P 09 58 44.8 -0.7**
TRUS Trudelj 33.01 78 *eP* **P 09 58 45.5 -2.0**
FINES FINESS Array B 33.07 45 P **P 09 58 47.1 -0.7**
comp=Z,12nm,0.9s,mb4.8,baz=298,slow=4.1,SNR=8.1
FINES FINESS Array B 33.07 45 P **P 09 58 47.2 -0.7**
GRUS Gruza 33.34 78 *eP* **P 09 58 49.5 -0.9**
LVV L'vov 33.51 66 *eP* **P 09 58 52.7 +0.9**
SVIS Svilajnac 33.53 77 *eP* **P 09 58 52.7 +0.7**
NACGM Naroch 34.01 57 *e* **P 09 58 52.0 -4.1**
NISS 34.35 78 *eP* **P 09 59 00.2 +0.9**
MNK Minsk 34.68 57 *eP* **P 09 59 00.0 -1.9**
MICGM Minsk 34.71 57 *e* **P 09 59 00.0 -2.2**
BUR08 Bucovina Ar. S 34.91 70 *eP* **P 09 59 02.0 -2.0**
BUR08 Bucovina Ar. S 34.91 70 *eP* **P 09 59 02.0 -2.0**
AKASG Malin Array Be 36.45 63 P **P 09 59 16.4 -0.8**
comp=Z,7.8nm,0.9s,mb4.7,baz=282,slow=8.7,SNR=25
AKASG Malin Array Be 36.45 63 P **P 09 59 16.4 -0.7**
RES Resolute Bay 39.12 337 P **P 09 59 39.6 +0.2**
comp=Z,7.9nm,1.1s,mb4.4,baz=116,slow=6.9,SNR=6.8
RES LR LR 10 13 25.8
comp=Z,4μm,20.7s,MS5.2,baz=290,slow=33
RES Resolute Bay 39.12 337 P **P 09 59 39.7 +0.2**
OBN Obninsk 39.45 54⇑*eP* **P 09 59 42.1 -0.3**
OBN pmax pmax
comp=Z,48nm,1.0s,mb5.2
FCC Fort Churchill 40.05 312 *eP* **P 09 59 47.5 +0.2**
FCC pmax pmax
comp=Z,4.0nm,2.6s,mb3.7
FCC Fort Churchill 40.05 312 *eP* **P 09 59 47.5 +0.2**
comp=Z,3.7nm,2.6s,mb3.6
FCC Fort Churchill 40.05 312 *eP* **P 09 59 47.5 +0.2**
comp=Z,3.7nm,2.6s,mb3.6
TORD Torodi Ar. Bea 41.84 135 P **P 10 00 01.5 -1.1**
comp=Z,19nm,0.9s,mb4.7,baz=329,slow=6.3,SNR=54
EYMN Ely 42.11 295 *eP* **P 10 00 04.4 -0.1**
comp=Z,23nm,1.0s,mb4.8
EYMN Ely 42.11 295 *eP* **P 10 00 04.4 -0.1**
comp=Z,23nm,1.0s,mb4.8
VSR Storozhevoye 42.20 59 *eP* **P 10 00 05.1 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.8s
VORD Divnogorie 42.37 59 *eP* **P 10 00 06.6 +0.1**
VORD pmax pmax
comp=Z,30nm,1.8s,mb4.6
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,40nm,0.9s
ULM Lac du Bonnet 43.81 300 P **P 10 00 17.4 -0.8**
comp=E,8.7nm,1.0s,mb4.4,baz=75,slow=8.5,SNR=6.0
ULM Lac du Bonnet 43.81 300 P **P 10 00 17.4 -0.8**
BRTR Keskin Array B 43.82 77 P **P 10 00 18.9 +0.5**
comp=E,10nm,0.9s,mb4.5,baz=293,slow=4.5,SNR=40
BRTR PcP PcP 10 02 02.8 -2.0
comp=E,3.2nm,1.0s,baz=284,slow=5.0,SNR=5.2
BRTR Keskin Array B 43.82 77 P **P 10 00 19.0 +0.5**
BRTR Keskin Array B 43.82 77 PcP PcP 10 02 02.8 -2.0
AGMN Agassiz Refuge 44.62 298 *eP* **P 10 00 24.6 -0.1**
comp=E,18nm,1.0s,mb4.8
AGMN Agassiz Refuge 44.62 298 *eP* **P 10 00 24.6 -0.1**
comp=E,18nm,1.0s,mb4.8
DBIC Dimbokro 44.86 147 P **P 10 00 26.8 -0.2**
comp=E,5.0nm,0.9s,mb4.3,baz=326,slow=5.9,SNR=3.6
DBIC Dimbokro 44.86 147 P **P 10 00 26.8 -0.2**
FFC Flin Flon 45.45 308 *i P* **P 10 00 31.7 +0.5**
SDDR Presa de Saban 45.57 247 *eP* **P 10 00 33.8 +1.2**
comp=E,30nm,1.1s,mb5.1
SDDR Presa de Saban 45.57 247 *eP* **P 10 00 33.8 +1.2**
comp=E,30nm,1.1s,mb5.1
FVM French Village 46.19 282 *eP* **P 10 00 37.3 0.0**
FVM pmax pmax
comp=Z,172nm,2.4s,mb5.6
FVM French Village 46.19 282 *eP* **P 10 00 37.3 0.0**
comp=Z,172nm,2.4s,mb5.5
FVM French Village 46.19 282 *eP* **P 10 00 37.3 0.0**
comp=Z,172nm,2.4s,mb5.5
ECSD EROS Data Cent 47.21 292 *eP* **P 10 00 45.5 +0.2**
comp=Z,20nm,1.1s,mb5.0
ECSD EROS Data Cent 47.21 292 *eP* **P 10 00 45.5 +0.3**
comp=Z,20nm,1.1s,mb5.0
YKA Yellowknife Ar 48.37 322 P **P 10 00 53.4 -0.5**
comp=Z,3.2nm,1.0s,mb4.3,baz=66,slow=7.6,SNR=12
YKA PcP PcP 10 02 18.9 -1.3
comp=Z,2.2nm,0.9s,baz=63,slow=4.0,SNR=9.1
YKA Yellowknife Ar 48.37 322 P **P 10 00 53.4 -0.5**
YKA PcP PcP 10 02 18.9 -1.3
YKA Yellowknife Ar 48.37 322 P **P 10 00 53.4 -0.5**
YKA Yellowknife Ar 48.37 322 PcP PcP 10 02 18.9 -1.4
ZEI Tsey 48.89 68 *eP* **P 10 00 58.7 +0.5**
ZEI pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
DGMT Dagmar 49.46 301 ⇓*P* **P 10 01 01.1 -1.5**
baz=49
MIAR Mount Ida 50.23 281 *eP* **P 10 01 08.4 -0.1**
MIAR pmax pmax
comp=Z,62nm,1.8s,mb5.3
MIAR Mount Ida 50.23 281 *eP* **P 10 01 08.4 -0.1**
comp=Z,62nm,1.8s,mb5.3
MIAR Mount Ida 50.23 281 *eP* **P 10 01 08.4 -0.1**
comp=Z,62nm,1.8s,mb5.3
ARU Arti 50.43 46 *eP* **P 10 01 10.6 +0.8**
ARU pmax pmax
comp=Z,42nm,1.3s,mb5.3
ARU Arti 50.43 46 *eP* **P 10 01 10.6 +0.8**
comp=Z,42nm,1.3s,mb5.3
ARU Arti 50.43 46 *eP* **P 10 01 10.6 +0.8**
comp=Z,42nm,1.3s,mb5.3
GNI Garni 50.83 70 *eP* **P 10 01 15.0 +2.0**
GNI pmax pmax
comp=Z,8.0nm,1.4s
RSSD Black Hills 51.60 297 *eP* **P 10 01 19.4 +0.6**
RSSD Black Hills 51.60 297 *eP* **P 10 01 19.4 +0.6**
EDM Edmonton 52.11 311 *eP* **P 10 01 22.7 +0.3**
EDM Edmonton 52.11 311 *eP* **P 10 01 22.7 +0.3**
INK Inuvik 52.40 333 P **P 10 01 23.8 -0.6**
comp=Z,2.8nm,0.8s,mb4.2,baz=26,slow=7.3,SNR=5.4
INK Inuvik 52.40 333 P **P 10 01 23.8 -0.5**
INK Inuvik 52.40 333 P **P 10 01 23.8 -0.6**
INK Inuvik 52.40 333 P **P 10 01 23.8 -0.5**
A18A Metzger Ranch, 52.46 304 ⇓*P* **P 10 01 24.3 -0.7**
baz=52,SNR=9.3
B18A Beardsley Farm 52.70 304 ⇑*P* **P 10 01 26.0 -0.9**
baz=52,SNR=5.9
EGMT Eagleton 52.88 303 ⇑*P* **P 10 01 27.5 -0.7**
baz=53,SNR=5.7
EGMT Eagleton 52.88 303 *eP* **P 10 01 28.1 0.0**
comp=Z,118nm,2.2s,mb5.4
EGMT Eagleton 52.88 303 *eP* **P 10 01 28.1 -0.1**
comp=Z,118nm,2.2s,mb5.4
SDV Santo Domingo 53.04 238 PKP **P 10 01 30.3 +0.6**
comp=Z,5.0nm,0.8s,mb4.5,baz=18,slow=3.8,SNR=6.1
SDV Santo Domingo 53.04 238 *eP* **P 10 01 30.5 +0.7**
SDV Santo Domingo 53.04 238 *eP* **P 10 01 30.5 +0.7**
AKTK Aktyubinsk 53.18 53 P **P 10 01 29.9 -0.5**
AKTK Aktyubinsk 53.18 53 P **P 10 01 29.9 -0.5**
AKTO Aktyubinsk 53.18 53 P **P 10 01 29.9 -0.5**
comp=Z,8.8nm,0.8s,mb4.7,baz=304,slow=8.1,SNR=19
B17A L&G Farms, Che 53.33 304 ⇑*P* **P 10 01 30.7 -0.7**
baz=53
A16A West Butte Ran 53.42 305 ⇓*P* **P 10 01 31.5 -0.6**
baz=53,SNR=7.7
WMOK Wichita Mounta 53.57 284 *eP* **P 10 01 32.7 -0.8**
WMOK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
WMOK Wichita Mounta 53.57 284 *eP* **P 10 01 32.7 -0.8**
comp=Z,10nm,1.1s,mb4.7
WMOK Wichita Mounta 53.57 284 *eP* **P 10 01 32.7 -0.8**
comp=Z,10nm,1.1s,mb4.7
C17A Wharram Farm, 53.66 303 ⇓*P* **P 10 01 33.1 -0.9**
baz=54,SNR=8.5
E18A Harlowton 53.76 302 ⇑*P* **P 10 01 33.8 -0.9**
baz=54
B16A M & M Farms, S 53.77 305 ⇓*P* **P 10 01 34.1 -0.6**
baz=54,SNR=16
D17A Six Diamond Ra 53.88 303 ⇓*P* **P 10 01 35.0 -0.6**
baz=54,SNR=10.0
F18A Big Timber 54.01 301 ⇓*P* **P 10 01 35.8 -0.8**
baz=54,SNR=5.8
A15A Johnson Ranch, 54.03 306 ⇑*P* **P 10 01 35.9 -0.7**
baz=54
PHWY Pilot Hill 54.03 294 *eP* **P 10 01 36.8 +0.1**
comp=Z,13nm,0.8s,mb4.9
PHWY Pilot Hill 54.03 294 *eP* **P 10 01 36.8 0.0**
comp=Z,13nm,0.8s,mb4.9
GCMT Greycliff 54.05 301 *eP* **P 10 01 36.8 0.0**
comp=Z,13nm,1.1s,mb4.8
GCMT Greycliff 54.05 301 *eP* **P 10 01 36.8 0.0**
comp=Z,13nm,1.1s,mb4.8
C16A Fuhringer Ranc 54.13 304 ⇑*P* **P 10 01 37.0 -0.4**
baz=54,SNR=13
RLMT Red Lodge 54.19 300 ⇑*P* **P 10 01 37.5 -0.3**
baz=54,SNR=9.1
RLMT Red Lodge 54.19 300 *eP* **P 10 01 38.2 +0.4**
comp=Z,41nm,1.4s,mb5.2
RLMT Red Lodge 54.19 300 *eP* **P 10 01 38.2 +0.4**
comp=Z,41nm,1.4s,mb5.2
B15A Bradely Ranch, 54.30 305 ⇓*P* **P 10 01 37.8 -0.9**
baz=54,SNR=11
E17A Martinsdale 54.36 302 ⇑*P* **P 10 01 38.5 -0.6**
baz=54
A14A Double T Ranch 54.41 306 ⇑*P* **P 10 01 38.7 -0.7**
baz=54,SNR=5
D16A Dana Ranch, Ca 54.44 303 ⇑*P* **P 10 01 39.4 -0.3**
baz=54,SNR=14
F17A Fitzpatrick Pl 54.56 302 ⇑*P* **P 10 01 39.5 -1.0**
baz=54,SNR=6.4
C15A Salmond Ranch, 54.63 304 ⇓*P* **P 10 01 40.2 -0.7**
baz=54,SNR=11
WALA Waterton Lakes 54.64 306 *eP* **P 10 01 40.7 -0.3**
comp=Z,0.7nm,0.9s,mb3.7
WALA Waterton Lakes 54.64 306 *eP* **P 10 01 40.7 -0.3**
comp=Z,0.7nm,0.9s,mb3.7
M22A Cedar Creek Ra 54.68 295 ⇑*P* **P 10 01 41.0 -0.4**
baz=54,SNR=11
HRY Holter Researc 54.78 303 *eP* **P 10 01 42.1 0.0**
HRY Holter Researc 54.78 303 *eP* **P 10 01 42.1 0.0**
L21A Rawlins 54.83 296 ⇓*P* **P 10 01 42.4 -0.2**
baz=55,SNR=29
ABKAR Akbulak array 54.87 53 *eP* **P 10 01 43.7 +0.9**
comp=Z,7.4nm,1.0s,mb4.7
ABKAR Akbulak array 54.87 53 *eP* **P 10 01 43.7 +1.0**
comp=Z,7.4nm,1.0s,mb4.7
RWWY Rawlins 54.89 296 *eP* **P 10 01 43.7 +0.7**
comp=Z,48nm,0.9s,mb5.5
RWWY Rawlins 54.89 296 *eP* **P 10 01 43.7 +0.7**
comp=Z,48nm,0.9s,mb5.5
G17A Pierce Place, 54.94 301 ⇓*P* **P 10 01 43.2 0.0**
baz=55,SNR=6.0
N22A Wattenberg Ran 54.94 294 ⇑*P* **P 10 01 41.1 -2.3**
baz=55
A13A Flathead Natio 54.98 306 ⇓*P* **P 10 01 43.0 -0.5**
baz=55
D15A Lincoln 54.99 304 ⇓*P* **P 10 01 43.6 0.0**
baz=55,SNR=24
ISCO Idaho Springs 55.00 293 *eP* **P 10 01 44.4 +0.6**
ISCO pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ISCO Idaho Springs 55.00 293 *eP* **P 10 01 44.4 +0.6**
comp=Z,9.3nm,0.9s,mb4.8
ISCO Idaho Springs 55.00 293 *eP* **P 10 01 44.4 +0.6**
comp=Z,9.3nm,0.9s,mb4.8
K20A Yellowstone Ra 55.03 297 ⇓*P* **P 10 01 43.5 -0.4**
baz=55
M21A Separation Pea 55.03 296 ⇑*P* **P 10 01 44.2 +0.2**
baz=55,SNR=35
LKWY Lake 55.16 300 *eP* **P 10 01 48.4 +3.5**
LKWY pmax pmax
comp=Z,49nm,1.9s,mb5.2
LKWY Lake 55.16 300 *eP* **P 10 01 48.4 +3.4**
comp=Z,49nm,1.9s,mb5.2
F16A Kennard Place, 55.19 302 ⇑*P* **P 10 01 44.5 -0.5**
baz=55
K19A Absolon Red Bu 55.23 298 ⇓*P* **P 10 01 44.6 -0.9**
baz=55,SNR=12
BOZ Bozeman (W) 55.27 302 ⇑*P* **P 10 01 45.5 -0.1**
baz=55,SNR=10
BOZ Bozeman (W) 55.27 302 *eP* **P 10 01 46.0 +0.3**
BOZ Bozeman (W) 55.27 302 *eP* **P 10 01 46.0 +0.4**
C14A Swan Lake 55.27 305 ⇑*P* **P 10 01 44.5 -1.1**
baz=55
I18A Diamond G Ranc 55.31 299 ⇑*P* **P 10 01 46.0 0.0**
baz=55,SNR=11
B13A Whitefish 55.33 306 ⇑*P* **P 10 01 45.8 -0.2**
baz=55,SNR=9.3
YBMT Yellow Bay 55.36 305 *eP* **P 10 01 45.5 -0.7**
YBMT Yellow Bay 55.36 305 *eP* **P 10 01 45.5 -0.8**
H17A Grant Village 55.37 300 ⇓*P* **P 10 01 46.2 -0.1**
baz=55
AMTX Amarillo 55.39 286 *eP* **P 10 01 47.3 +0.6**
AMTX Amarillo 55.39 286 *eP* **P 10 01 47.3 +0.6**
L20A Wamsutter 55.40 297 ⇓*P* **P 10 01 46.6 0.0**
baz=55,SNR=22
E15A Deer Lodge 55.41 303 ⇓*P* **P 10 01 46.6 0.0**
baz=55
SLMT Seeley Lake 55.42 304 *eP* **P 10 01 46.9 +0.1**
SLMT Seeley Lake 55.42 304 *eP* **P 10 01 46.9 +0.2**
CHMT Chamberlain Mo 55.47 304 *eP* **P 10 01 47.0 -0.1**
CHMT Chamberlain Mo 55.47 304 *eP* **P 10 01 47.0 -0.1**
YFT Old Faithful 55.49 300 *eP* **P 10 01 49.3 +2.0**
comp=Z,19nm,1.0s,mb5.1
YFT Old Faithful 55.49 300 *eP* **P 10 01 49.3 +2.1**
comp=Z,19nm,1.0s,mb5.1
D14A Grenough 55.52 304 ⇓*P* **P 10 01 47.4 0.0**
baz=55
SWMT Swartz Lake 55.55 305 *eP* **P 10 01 46.7 -1.0**
SWMT Swartz Lake 55.55 305 *eP* **P 10 01 46.7 -1.0**
H16A Russell Place, 55.58 301 ⇑*P* **P 10 01 47.8 -0.1**
baz=55,SNR=7.2
M20A Sweetwater, Wa 55.60 296 ⇓*P* **P 10 01 48.2 +0.1**
baz=55,SNR=12
G16A Moss Hill, Enn 55.61 302 ⇓*P* **P 10 01 47.9 -0.1**
baz=55,SNR=5.7
N21A Black Mountain 55.62 295 ⇓*P* **P 10 01 48.6 +0.3**
baz=55,SNR=36
I17A Pilgrim Ck. 55.64 300 ⇓*P* **P 10 01 48.7 +0.3**
baz=56
LRM Limekiln Ridge 55.64 302 *eP* **P 10 01 49.4 +1.0**
LRM Limekiln Ridge 55.64 302 *eP* **P 10 01 49.3 +1.0**
F15A Butte 55.65 302 ⇓*P* **P 10 01 48.0 -0.4**
baz=56
PDAR Pinedale Array 55.70 298 P **P 10 01 47.9 -0.9**
comp=Z,8.9nm,0.9s,mb4.8,baz=62,slow=6.9,SNR=26
PDAR Pinedale Array 55.70 298 P **P 10 01 47.8 -1.0**
BW06 Boulder Array 55.70 298 ⇓*P* **P 10 01 48.1 -0.7**
baz=56,SNR=13
BW06 Boulder Array 55.70 298 *eP* **P 10 01 48.0 -0.8**
comp=Z,10nm,0.9s,mb4.9
BW06 Boulder Array 55.70 298 *eP* **P 10 01 48.0 -0.8**
comp=Z,10nm,0.9s,mb4.9
J18A Kendall Valley 55.72 299 ⇓*P* **P 10 01 48.6 -0.3**
baz=56,SNR=31
C13A Hot Springs 55.78 305 ⇓*P* **P 10 01 48.8 -0.5**
baz=56,SNR=9.2
BSMT Bassoo Peak 55.80 306 *eP* **P 10 01 48.8 -0.6**
BSMT Bassoo Peak 55.80 306 *eP* **P 10 01 48.8 -0.6**
LOHW Long Hollow 55.83 299 *eP* **P 10 01 49.8 +0.1**
comp=Z,14nm,1.3s,mb4.8
LOHW Long Hollow 55.83 299 *eP* **P 10 01 49.8 +0.1**
comp=Z,14nm,1.3s,mb4.8
IMW Indian Meadow 55.87 300 *eP* **P 10 01 50.7 +0.7**
comp=Z,12nm,1.1s,mb4.8
IMW Indian Meadow 55.87 300 *eP* **P 10 01 50.7 +0.7**
comp=Z,12nm,1.1s,mb4.8
B12A Libby 55.88 307 ⇑*P* **P 10 01 49.8 -0.2**
baz=56,SNR=6.2
E14A Clinton 55.89 304 ⇓*P* **P 10 01 50.0 -0.1**
baz=56,SNR=7.2
MSO Missoula 55.91 304 *eP* **P 10 01 50.1 -0.1**
comp=Z,6.7nm,1.1s,mb4.6
MSO Missoula 55.91 304 *eP* **P 10 01 50.1 -0.1**
comp=Z,6.7nm,1.1s,mb4.6
L19A Farson 55.96 297 ⇑*P* **P 10 01 50.0 -0.7**
baz=56,SNR=7.5
DLMT Dillon 55.99 302 *eP* **P 10 01 51.4 +0.6**
comp=Z,13nm,1.1s,mb4.9
DLMT Dillon 55.99 302 *eP* **P 10 01 51.4 +0.6**
comp=Z,13nm,1.1s,mb4.9
SNOW Snow King Moun 56.01 299 *eP* **P 10 01 51.7 +0.7**
comp=Z,24nm,1.3s,mb5.1
SNOW Snow King Moun 56.01 299 *eP* **P 10 01 51.7 +0.7**
comp=Z,24nm,1.3s,mb5.1
A11A Hall Mountain, 56.03 307 ⇓*P* **P 10 01 50.6 -0.5**
baz=56,SNR=13
N20A Spence Gulch, 56.03 295 ⇑*P* **P 10 01 51.3 +0.1**
baz=56,SNR=36
G15A Dillon 56.04 302 ⇓*P* **P 10 01 51.2 0.0**
baz=56,SNR=14
J17A Brown Place, J 56.04 299 ⇑*P* **P 10 01 51.0 -0.3**
baz=56,SNR=24
D13A Huson 56.05 305 ⇑*P* **P 10 01 50.6 -0.6**
baz=56
K18A Toltan Ranch, 56.06 298 ⇑*P* **P 10 01 50.9 -0.5**
baz=56
TPAW Teton Pass 56.11 299 *eP* **P 10 01 52.2 +0.5**
comp=Z,19nm,1.5s,mb4.9
TPAW Teton Pass 56.11 299 *eP* **P 10 01 52.2 +0.5**
comp=Z,19nm,1.5s,mb4.9
REDW Red Top Meadow 56.12 299 *eP* **P 10 01 52.2 +0.4**
comp=Z,56nm,1.4s,mb5.4
REDW Red Top Meadow 56.12 299 *eP* **P 10 01 52.2 +0.4**
comp=Z,56nm,1.4s,mb5.4
SDCO Great Sand Dun 56.14 291 *eP* **P 10 01 52.8 +0.8**
SDCO Great Sand Dun 56.14 291 *eP* **P 10 01 52.8 +0.8**
M19A Rock Springs 56.19 297 ⇓*P* **P 10 01 52.3 0.0**
baz=56
I16A Newdale 56.20 300 ⇓*P* **P 10 01 52.5 +0.1**
baz=56
C12B Naegeli Ranch, 56.26 306 ⇓*P* **P 10 01 52.1 -0.6**
baz=56,SNR=8.0
E13A Victor 56.27 304 ⇓*P* **P 10 01 52.3 -0.5**
baz=56,SNR=7.9
P21A Newcastle 56.30 294 ⇑*P* **P 10 01 53.0 -0.2**
baz=56,SNR=20
B11A Sandpoint 56.33 307 ⇑*P* **P 10 01 52.3 -0.9**
baz=56
Q22A Crested Butte, 56.36 293 ⇑*P* **P 10 01 53.2 -0.4**
baz=56,SNR=12
RRI2 Red Ridge 56.41 299 *eP* **P 10 01 54.2 +0.3**
comp=Z,9.3nm,1.0s,mb4.8
RRI2 Red Ridge 56.41 299 *eP* **P 10 01 54.2 +0.3**
comp=Z,9.2nm,1.0s,mb4.8
O20A White River Ci 56.43 295 ⇓*P* **P 10 01 53.9 -0.2**
baz=56,SNR=8.2
MCMT McKenzie Canyo 56.44 302 *eP* **P 10 01 54.2 +0.1**
comp=Z,9.4nm,1.6s,mb4.6
MCMT McKenzie Canyo 56.44 302 *eP* **P 10 01 54.2 +0.1**
comp=Z,9.4nm,1.6s,mb4.6
H15A Lima 56.45 301 ⇑*P* **P 10 01 53.6 -0.5**
baz=56
X27A F and S Farms, 56.46 286 ⇑*P* **P 10 01 54.3 0.0**
baz=56
L18A Fontenelle, Gr 56.48 297 ⇓*P* **P 10 01 54.1 -0.3**
baz=56
K17A Gardner Place, 56.52 299 ⇑*P* **P 10 01 53.9 -0.8**
baz=56,SNR=7.1
G14A Jackson 56.55 302 ⇑*P* **P 10 01 54.6 -0.3**
baz=56
N19A John Jarvie Ra 56.56 296 ⇑*P* **P 10 01 54.6 -0.4**
baz=56,SNR=22
D12A Red Ives Fores 56.57 305 ⇓*P* **P 10 01 54.3 -0.6**
baz=56
J16A Bone 56.63 300 ⇓*P* **P 10 01 55.0 -0.4**
baz=56
MSTX Muleshoe 56.66 286 ⇓*P* **P 10 01 55.2 -0.6**
baz=56,SNR=17
I15A Monteview 56.71 301 ⇓*P* **P 10 01 56.4 +0.3**
baz=56
F13A Darby 56.73 303 ⇑*P* **P 10 01 55.7 -0.4**
baz=56
M18A Lyman 56.79 297 ⇓*P* **P 10 01 56.8 +0.2**
baz=57
Q21A Lamborn Mesa, 56.79 293 ⇓*P* **P 10 01 56.8 +0.1**
baz=57,SNR=18
NEW Newport 56.84 307 *eP* **P 10 01 56.7 -0.1**
NEW Newport 56.84 307 *eP* **P 10 01 56.7 -0.1**
H14A Leadore 56.87 302 ⇑*P* **P 10 01 57.3 +0.2**
baz=57,SNR=8.6
JCT Junction City 56.87 281 *eP* **P 10 01 57.7 +0.4**
JCT Junction City 56.87 281 *eP* **P 10 01 57.7 +0.4**
K16A Soda Springs 56.87 299 ⇑*P* **P 10 01 57.3 +0.1**
baz=57
B10A Chitwood Farm, 56.87 307 ⇓*P* **P 10 01 57.2 +0.1**
baz=57
O19A Miners Draw (B 56.88 295 ⇑*P* **P 10 01 57.6 +0.3**
baz=57,SNR=49
DAWY Dawson 56.90 331 *eP* **P 10 01 56.9 -0.1**
DAWY Dawson 56.90 331 *eP* **P 10 01 56.9 -0.1**
P20A De Beque 56.90 294 ⇑*P* **P 10 01 57.4 0.0**
baz=57,SNR=8.4
Y27A Causey 56.97 286 ⇑*P* **P 10 01 57.7 -0.3**
baz=57
X26A CR and CF Fran 56.98 287 ⇑*P* **P 10 01 58.4 +0.4**
baz=57
W25A X Bar L Ranch, 56.99 288 ⇓*P* **P 10 01 58.4 +0.2**
baz=57
J15A Blackfoot 57.04 300 ⇑*P* **P 10 01 58.3 0.0**
baz=57,SNR=6.2
R21A Cimarron 57.06 293 ⇑*P* **P 10 01 58.8 +0.2**
baz=57
E12A Beaver Dam Sad 57.07 305 ⇑*P* **P 10 01 58.2 -0.3**
baz=57
G13A Cobalt 57.08 303 ⇑*P* **P 10 01 58.2 -0.4**
baz=57,SNR=7.7
D11A Faveano Farm, 57.12 305 ⇑*P* **P 10 01 58.2 -0.6**
baz=57,SNR=5.6
M17A Scullys Gap (B 57.12 297 ⇓*P* **P 10 01 58.4 -0.5**
baz=57
Q20A Ridgley Place, 57.17 294 ⇓*P* **P 10 01 59.1 -0.3**
baz=57,SNR=12
P19A Cripple Cowboy 57.19 295 ⇓*P* **P 10 01 59.3 -0.2**
baz=57,SNR=7.7
C10A Spilker Farm, 57.20 307 ⇓*P* **P 10 01 59.4 0.0**
baz=57
A09A Danville 57.21 308 ⇑*P* **P 10 01 59.3 -0.1**
baz=57,SNR=6.7
F12A Elk City 57.27 304 ⇓*P* **P 10 01 59.5 -0.5**
baz=57,SNR=14
B09A Rice 57.30 308 ⇓*P* **P 10 01 59.7 -0.4**
baz=57,SNR=14
I14A Mackay 57.32 301 ⇓*P* **P 10 02 00.8 +0.5**
baz=57
Z27A Tatum 57.35 285 ⇓*P* **P 10 02 00.5 -0.2**
baz=57
H13A Challis 57.41 302 ⇑*P* **P 10 02 00.8 -0.1**
baz=57,SNR=10
O18A Roosevelt 57.44 296 ⇑*P* **P 10 02 01.3 +0.1**
baz=57,SNR=18
E11A Bogner Ranch, 57.46 305 ⇓*P* **P 10 02 00.2 -1.0**
baz=57,SNR=11
T22A Edith 57.47 291 ⇓*P* **P 10 02 01.9 +0.5**

baz=57,SNR=18
K15A Arbon 57.52 299 ⇓P P 10 02 01.5 -0.3
baz=57
N17A Moffit Pass 57.54 297 ⇓P P 10 02 01.8 -0.2
baz=57
X25A Clemmons Ranch 57.55 287 ⇓P P 10 02 02.1 0.0
baz=57
A08A Turner Farm, O 57.59 309 ⇑P P 10 02 01.8 -0.4
baz=57
D10A Wagner Farm, O 57.63 306 ⇓P P 10 02 01.6 -0.9
baz=57
S21A Coal Bank Pass 57.63 292 ⇑P P 10 02 02.9 +0.2
baz=58,SNR=9.4
R20A Redvale 57.69 293 ⇓P P 10 02 03.3 +0.3
baz=58,SNR=6.6
F11A Grangeville 57.70 304 ⇓P P 10 02 02.4 -0.6
baz=58,SNR=18
I13A Wildhorse Cree 57.72 301 ⇓P P 10 02 03.1 0.0
baz=58,SNR=9.0
C09A Chrisman Ranch 57.74 307 ⇑P P 10 02 02.4 -0.7
baz=58
H12A Diamond D Ranc 57.76 302 ⇓P P 10 02 03.5 +0.1
baz=58,SNR=9.1
M16A Huntsville 57.80 298 ⇓P P 10 02 03.5 -0.3
baz=58
L15A Malad City 57.84 299 ⇑P P 10 02 03.6 -0.4
baz=58
127A Arkansas Junct 57.85 285 ⇓P P 10 02 03.8 -0.4
baz=58
E10A Myers Farm, Un 57.88 305 ⇓P P 10 02 03.5 -0.8
baz=58
Z26A Caprock 57.88 286 ⇑P P 10 02 03.9 -0.5
baz=58
O17A Robinson Place 57.93 296 ⇓P P 10 02 04.4 -0.3
baz=58,SNR=9.3
N16A Rees Ranch, Co 57.94 297 ⇓P P 10 02 04.2 -0.5
baz=58
Y25A Mesa, Roswell 57.94 287 ⇓P P 10 02 04.2 -0.6
baz=58
BRVK Borovoye 57.96 45⇑eP P 10 02 04.6 -0.1
BRVK pmax pmax
comp=Z,19nm,2.5s,mb4.7
P18A Preston Nutter 57.97 295 ⇓P P 10 02 04.8 -0.2
baz=58
B08A Colville Reser 57.97 308 ⇑P P 10 02 04.0 -0.9
baz=58,SNR=9.9
K14A Jones Ranch, D 57.98 300 ⇑P P 10 02 04.6 -0.4
baz=58
BVAR Borovoye Array 58.03 45 P P 10 02 06.5 +1.4
comp=Z,3.2nm,0.8s,mb4.4,baz=296,slow=4.8,SNR=13
BVAR Borovoye Array 58.03 45 P P 10 02 06.5 +1.3
J13A Cove Ranch, Pi 58.06 301 ⇑P P 10 02 05.7 +0.2
baz=58,SNR=11
G11A Walters Elk Ra 58.06 304 ⇓P P 10 02 04.9 -0.6
baz=58,SNR=8.0
HLID Hailey 58.10 301 ⇓P P 10 02 05.5 -0.3
baz=58,SNR=7.7
HLID Hailey 58.10 301 eP P 10 02 07.0 +1.2
HLID Hailey 58.10 301 eP P 10 02 07.0 +1.2
DAU Daniels Canyon 58.12 297 eP P 10 02 06.4 +0.4
DAU Daniels Canyon 58.12 297 eP P 10 02 06.4 +0.4
A07A Ashnola River, 58.12 309 ⇓P P 10 02 05.5 -0.4
baz=58,SNR=6.4
W23A Werner Place, 58.12 289 ⇑P P 10 02 06.4 +0.4
baz=58,SNR=16
C08A Higginbotham F 58.16 307 ⇑P P 10 02 05.9 -0.2
baz=58
R19A Curley Farm, L 58.17 294 ⇑P P 10 02 06.4 0.0
baz=58,SNR=46
D09A Jones Farm, Ri 58.20 306 ⇑P P 10 02 06.3 -0.1
baz=58
M15A Larsen Ranch, 58.20 298 ⇓P P 10 02 06.1 -0.4
baz=58
HVU Hansel Valley 58.20 299 eP P 10 02 06.5 -0.1
HVU pmax pmax
comp=Z,22nm,1.5s,mb5.0
HVU Hansel Valley 58.20 299 eP P 10 02 06.5 -0.1
comp=Z,22nm,1.5s,mb5.0
HVU Hansel Valley 58.20 299 eP P 10 02 06.5 -0.1
comp=Z,22nm,1.5s,mb5.0
227A Bennet, Jal 58.22 284 ⇓P P 10 02 06.1 -0.7
baz=58
Q18A Rafter H Ranch 58.22 295 ⇑P P 10 02 06.3 -0.4
baz=58,SNR=7.7
F10A Beach Ranch, E 58.25 305 ⇓P P 10 02 06.0 -0.9
baz=58,SNR=5.5
328A Wristen Ranch, 58.30 283 ⇑P P 10 02 06.4 -1.0
baz=58
L14A Malta 58.33 299 ⇓P P 10 02 06.5 -0.9
baz=58
B07A Winthrop 58.33 309 ⇓P P 10 02 06.4 -1.0
baz=58
H11A Donnelly 58.33 303 ⇑P P 10 02 06.8 -0.6
baz=58,SNR=5.9
MVCO Mesa Verde 58.36 292 ⇓P P 10 02 07.8 +0.1
baz=58,SNR=9.1
MVCO Mesa Verde 58.36 292 eP P 10 02 09.1 +1.4
MVCO Mesa Verde 58.36 292 eP P 10 02 09.1 +1.4
Z25A Roswell 58.36 286 ⇓P P 10 02 07.4 -0.4
baz=58,SNR=9.0
P17A Butcher Ranch, 58.37 295 ⇓P P 10 02 07.9 +0.1
baz=58,SNR=12
I12A Atlanta 58.38 302 ⇓P P 10 02 08.0 +0.2
baz=58,SNR=18
HYT Haines Junctio 58.39 327 eP P 10 02 10.3 +2.8
HYT Haines Junctio 58.39 327 eP P 10 02 10.3 +2.8
O16A Springville 58.39 297 ⇓P P 10 02 07.7 -0.2
baz=58,SNR=5.1
Y24A Capitan 58.42 287 ⇑P P 10 02 08.0 -0.2
baz=58,SNR=7.9
S19A Harvey Farm, M 58.43 293 ⇑P P 10 02 08.2 0.0
baz=58,SNR=28
ANMO Albuquerque 58.45 289 eP P 10 02 09.6 +1.2
ANMO Albuquerque 58.45 289 eP P 10 02 09.6 +1.2
SRU San Rafael 58.46 295 ⇓P P 10 02 08.1 -0.3
baz=58,SNR=11
SRU San Rafael 58.46 295 eP P 10 02 08.8 +0.4
SRU pmax pmax
comp=Z,16nm,0.8s,mb5.1
SRU San Rafael 58.46 295 eP P 10 02 08.8 +0.4
comp=Z,16nm,0.8s,mb5.1
SRU San Rafael 58.46 295 eP P 10 02 08.8 +0.4
comp=Z,16nm,0.8s,mb5.1
R18A Canyonlands Na 58.51 294 ⇓P P 10 02 08.6 -0.1
baz=58,SNR=10
MPU Maple Canyon 58.59 296 eP P 10 02 10.2 +1.0
comp=Z,12nm,0.9s,mb4.9
MPU Maple Canyon 58.59 296 eP P 10 02 10.2 +0.9
comp=Z,12nm,0.9s,mb4.9
428A Kincaid Ranch, 58.63 283 ⇓P P 10 02 09.1 -0.6
baz=58
W22A Albuquerque 58.64 289 ⇑P P 10 02 10.5 +0.9
baz=58
V21A Milan 58.68 290 ⇑P P 10 02 10.3 +0.4
baz=58
J12A Stokes Ranch, 58.68 301 ⇑P P 10 02 10.0 +0.1
baz=58,SNR=17
125A Gardner Draw, 58.71 286 ⇓P P 10 02 09.9 -0.4
baz=58,SNR=6.8
L13A Double Diamond 58.71 300 ⇑P P 10 02 10.3 +0.2
baz=58
M14A Sheep Mountain 58.71 299 ⇓P P 10 02 09.7 -0.4
baz=58
226A Malaga, Loving 58.72 285 ⇓P P 10 02 09.8 -0.5
baz=59,SNR=8.0
TMUT Trail Mountain 58.77 296 eP P 10 02 10.9 +0.4
comp=Z,24nm,0.8s,mb5.3
TMUT Trail Mountain 58.77 296 eP P 10 02 10.9 +0.4
comp=Z,24nm,0.8s,mb5.3
C07A Waterville 58.77 308 ⇓P P 10 02 09.3 -1.1
baz=59,SNR=8.0
I11A Placerville 58.78 302 ⇓P P 10 02 10.3 -0.3
baz=59,SNR=6.3
F09A S2 Ranch, Elgi 58.79 305 ⇓P P 10 02 10.4 -0.3
baz=59
GDL2 Guadalupe Moun 58.81 285 eP P 10 02 11.5 +0.6
GDL2 Guadalupe Moun 58.81 285 eP P 10 02 11.5 +0.6
Y23A Lovelace Mesa, 58.82 288 ⇓P P 10 02 11.2 +0.3
baz=59,SNR=9.7
P16A Fountain Green 58.85 296 ⇓P P 10 02 11.4 +0.3
baz=59
U20A Newcomb 58.88 291 ⇓P P 10 02 11.7 +0.4
baz=59,SNR=9.7
T19A Beclabito 58.92 292 ⇑P P 10 02 11.5 -0.1
baz=59,SNR=13
O15A The Old Anders 58.93 297 ⇑P P 10 02 12.0 +0.3
baz=59
K12A Draper Farm, C 58.94 301 ⇑P P 10 02 12.1 +0.3
baz=59
ETW Entiat 58.96 308 eP P 10 02 11.0 -0.7
ETW Entiat 58.96 308 eP P 10 02 11.0 -0.8
Q16A Castle Valley 58.97 295 ⇑P P 10 02 11.8 -0.1
baz=59,SNR=11
G09A Cove 58.98 305 ⇑P P 10 02 11.2 -0.8
baz=59,SNR=10.0
R17A Hanksville Air 59.00 294 ⇓P P 10 02 11.9 -0.3
baz=59,SNR=19
S18A Hurst Farm, Bl 59.00 293 ⇑P P 10 02 12.2 0.0
baz=59,SNR=22
MFID Camas Ranch 59.01 302 ⇑P P 10 02 12.1 0.0
baz=59
N14A Grayback Hills 59.02 298 ⇓P P 10 02 11.5 -0.8
baz=59
427A Hayter Ranch, 59.03 283 ⇑P P 10 02 11.6 -0.8
baz=59,SNR=7.1
BNM Barren Site 59.06 288 eP P 10 02 13.3 +0.7
comp=Z,13nm,1.2s,mb4.8
BNM Barren Site 59.06 288 eP P 10 02 13.3 +0.7
comp=Z,13nm,1.2s,mb4.8
528A Cox Ranch, San 59.06 282 ⇓P P 10 02 11.9 -0.8
baz=59,SNR=9.3
326A Caldwell Ranch 59.11 284 ⇑P P 10 02 12.9 -0.1
baz=59
225A Deer Hill, Car 59.16 285 ⇓P P 10 02 13.0 -0.4
baz=59
DUG Dugway 59.19 297 ⇓P P 10 02 13.7 +0.2
baz=59,SNR=15
DUG Dugway 59.19 297 eP P 10 02 13.6 +0.2
DUG Dugway 59.19 297 eP P 10 02 13.6 +0.1
124A Stringfield Ra 59.20 286 ⇓P P 10 02 13.4 -0.2
baz=59,SNR=16
V20A Brimhall 59.21 291 ⇑P P 10 02 14.5 +0.9
baz=59
F08A Pendleton 59.22 306 ⇓P P 10 02 13.4 -0.1
baz=59
LAZ Ladron 59.23 289 eP P 10 02 14.3 +0.5
comp=Z,5.3nm,1.2s,mb4.5
LAZ Ladron 59.23 289 eP P 10 02 14.3 +0.5
comp=Z,5.3nm,1.2s,mb4.5
P15A Leamington 59.25 296 ⇓P P 10 02 13.9 0.0
baz=59
T18A Mexican Hat 59.27 293 ⇑P P 10 02 13.9 -0.1
baz=59,SNR=8.0
LENM Lemitar 59.27 288 eP P 10 02 15.1 +1.0
LENM Lemitar 59.27 288 eP P 10 02 15.1 +1.0
M13A Montello 59.29 299 ⇓P P 10 02 14.2 +0.1
baz=59,SNR=6.2
H09A Durkee 59.29 304 ⇑P P 10 02 14.3 +0.2
baz=59
L12A House Creek Ra 59.31 300 ⇓P P 10 02 14.6 +0.4
baz=59
U19A Dine' College, 59.37 292 ⇓P P 10 02 15.0 +0.2
baz=59,SNR=32
Y22A Socorro 59.41 288 ⇓P P 10 02 15.4 +0.4
baz=59,SNR=19
R16A Teasdale 59.56 295 ⇓P P 10 02 16.4 +0.4
baz=59
426A McDonald Obser 59.56 283 ⇓P P 10 02 16.0 -0.1
baz=59,SNR=11
628A Black Gap, Mar 59.56 282 ⇓P P 10 02 16.5 +0.3
baz=59
527A Woodward Ranch 59.62 283 ⇑P P 10 02 16.0 -0.6
baz=60,SNR=9.6
X21A Alamosita Cree 59.62 289 ⇓P P 10 02 16.5 0.0
baz=59,SNR=15
N13A Wendover, West 59.62 299 ⇑P P 10 02 16.4 0.0
baz=59
V19A Window Rock 59.63 291 ⇓P P 10 02 16.2 -0.4
baz=59,SNR=6.8
G08A Pilot Rock 59.63 305 ⇑P P 10 02 15.6 -0.9
baz=59
224A Corundas Mount 59.64 286 ⇓P P 10 02 16.5 -0.2
baz=60
W20A Ramah 59.65 290 ⇓P P 10 02 15.7 -1.0
baz=60
Q15A Fillmore 59.66 296 ⇑P P 10 02 16.5 -0.3
baz=60,SNR=7.7
M12A Wells 59.70 299 ⇓P P 10 02 16.2 -0.8
baz=60
U18A Rough Rock, Ch 59.71 292 ⇑P P 10 02 17.2 +0.1
baz=60,SNR=13
L11A Cat Creek Ranc 59.73 301 ⇓P P 10 02 17.1 0.0
baz=60,SNR=9.1
325A Bean Ranch, Si 59.73 285 ⇓P P 10 02 16.6 -0.7
baz=60
I09A Lost Marbles R 59.76 303 ⇓P P 10 02 17.3 0.0
baz=60
F07A Phinny Hill Vi 59.80 306 ⇓P P 10 02 17.4 -0.1
baz=60
Y21A Point of Rocks 59.82 289 ⇓P P 10 02 18.4 +0.5
baz=60,SNR=16
Z22A Elephant Butte 59.84 288 ⇓P P 10 02 18.3 +0.3
baz=60,SNR=20
MSU Marysvale 59.84 295 eP P 10 02 18.5 +0.5
MSU Marysvale 59.84 295 eP P 10 02 18.5 +0.5
627A Terlingua Ranc 59.91 282 ⇑P P 10 02 18.4 -0.2
baz=60,SNR=13
O13A Hicks Ranch, I 59.94 298 ⇓P P 10 02 18.8 +0.2
baz=60
T17A Navajo Res., N 59.94 293 ⇓P P 10 02 18.6 0.0
baz=60
E06A Yakima 59.97 307 ⇓P P 10 02 18.1 -0.6
baz=60
526A Mary Lane Ranc 59.99 283 ⇓P P 10 02 19.3 +0.2
baz=60
K10A MacKenzie Ranc 60.00 302 ⇓P P 10 02 19.4 +0.4
baz=60
X20A Quemado 60.01 290 ⇓P P 10 02 19.5 +0.3
baz=60,SNR=6.9
324A Moseley Ranch, 60.02 285 ⇑P P 10 02 18.4 -1.0
baz=60
R15A Junction 60.09 295 ⇓P P 10 02 20.2 +0.5
baz=60,SNR=12
U17A Shonto 60.09 293 ⇑P P 10 02 20.0 +0.2
baz=60
TIXI Tiksi 60.10 8 eP P 10 02 21.5 +2.3
TIXI pmax pmax
comp=Z,29nm,1.8s,mb5.0
TIXI Tiksi 60.10 8 eP P 10 02 21.5 +2.2
comp=Z,29nm,1.8s,mb5.0
TIXI Tiksi 60.10 8 eP P 10 02 21.5 +2.3
comp=Z,29nm,1.8s,mb5.0
425A Indio Mountain 60.11 284 ⇑P P 10 02 19.6 -0.3
baz=60,SNR=5.6
N12A Clover Valley, 60.12 299 ⇓P P 10 02 20.2 +0.4
baz=60
J09A Fry Pan Ranch, 60.16 303 ⇓P P 10 02 20.3 +0.2
baz=60
TXAR Lajitas Array 60.17 282 P P 10 02 20.2 -0.1
comp=Z,4.3nm,0.8s,mb4.5,baz=70,slow=7.1,SNR=21
TXAR Lajitas Array 60.17 282 P P 10 02 20.2 -0.2
V18A Ganado 60.19 292 ⇓P P 10 02 20.5 +0.1
baz=60,SNR=8.4
L10A Juniper Basin 60.20 301 ⇓P P 10 02 20.5 +0.1
baz=60
M11A Holland Ranch, 60.21 300 ⇓P P 10 02 20.8 +0.4
baz=60,SNR=7.3
122A Conniff Cattle 60.21 287 ⇓P P 10 02 20.9 +0.3
baz=60
Q14A Sevier Lake (B 60.22 296 ⇑P P 10 02 20.5 0.0
baz=60,SNR=24
Z21A St. Cloud Mine 60.26 288 ⇑P P 10 02 21.4 +0.5
baz=60,SNR=10
O12A Currie 60.31 298 ⇑P P 10 02 21.0 -0.1
baz=60,SNR=7.7
Y20A Horse Springs, 60.34 289 ⇑P P 10 02 21.8 +0.4
baz=60,SNR=10
626A Big Bend Ranch 60.34 282 ⇑P P 10 02 21.8 +0.3
baz=60,SNR=5.8
P13A Bates Ranch, G 60.38 297 ⇑P P 10 02 22.0 +0.4
baz=60,SNR=14
W18A Petrified Fore 60.44 291 ⇓P P 10 02 22.0 -0.1
baz=60
S15A Panguitch 60.48 295 ⇑P P 10 02 22.3 0.0
baz=60
R14A James Farms, M 60.49 296 ⇓P P 10 02 22.4 0.0
baz=60
N11A Elko Archery C 60.56 299 ⇓P P 10 02 23.1 +0.2
baz=60
J08A Circle Bar Ran 60.56 303 ⇓P P 10 02 22.3 -0.5
baz=60,SNR=9.1
X19A St. Johns 60.59 290 ⇓P P 10 02 23.4 +0.3
baz=60
U16A Tuba City 60.67 293 ⇓P P 10 02 24.2 +0.5
baz=60,SNR=31
Q13A Wheeler Ranch, 60.69 297 ⇓P P 10 02 24.1 +0.4
baz=60,SNR=8.4
V17A Tonalea, Kykot 60.79 292 ⇓P P 10 02 24.6 +0.1
baz=61,SNR=24
121A Cookes Peak, D 60.83 287 ⇑P P 10 02 25.3 +0.5
baz=61,SNR=12
Y19A Nutrioso 60.87 290 ⇑P P 10 02 25.6 +0.5
baz=61,SNR=15
P12A McGill 60.90 298 ⇓P P 10 02 25.6 +0.4
baz=61,SNR=14
T15A Red Dirt Ranch 60.90 294 ⇑P P 10 02 24.6 -0.6
baz=61,SNR=14
S14A Cedar City 60.92 295 ⇑P P 10 02 26.0 +0.6
baz=61,SNR=5.9
O11A Cowboy Ranch, 60.94 299 ⇑P P 10 02 25.9 +0.5
baz=61,SNR=13
X18A Snowflake 60.95 290 ⇓P P 10 02 25.7 +0.1
baz=61,SNR=6.5
Z20A Nine Sixteen R 60.98 288 ⇓P P 10 02 26.0 +0.1
baz=61,SNR=7.5
Q12A Willow Creek R 61.13 297 ⇓P P 10 02 27.1 +0.4
baz=61,SNR=8.0
R13A O'Grain Ranch, 61.15 296 ⇓P P 10 02 27.3 +0.4
baz=61,SNR=16
CCUT Cedar City 61.17 295 eP P 10 02 27.9 +0.8
CCUT Cedar City 61.17 295 eP P 10 02 27.9 +0.8
U15A North Rim 61.22 294 ⇑P P 10 02 27.5 +0.1
baz=61,SNR=10
WUAZ Wupatki 61.22 292 ⇓P P 10 02 28.0 +0.5
baz=61
T14A Hurricane 61.31 295 ⇓P P 10 02 27.9 -0.1
baz=61,SNR=9.7
O10A Cortez Mining, 61.34 299 ⇓P P 10 02 28.6 +0.5
baz=61
P11A Circle Ranch, 61.36 298 ⇓P P 10 02 29.1 +0.7
baz=61
120A U Bar Ranch, L 61.37 288 ⇓P P 10 02 28.8 +0.3
baz=61,SNR=8.8
R12A Pony Springs, 61.44 297 ⇓P P 10 02 29.0 +0.1
baz=61,SNR=15
S13A Holt Ranch, En 61.46 295 ⇑P P 10 02 29.3 +0.2
baz=61,SNR=20
Y18A Canyon Day Jun 61.48 290 ⇑P P 10 02 29.9 +0.6
baz=61,SNR=13
V15A Kaibab Nationa 61.53 293 ⇑P P 10 02 29.9 +0.4
baz=61,SNR=17
W16A Flagstaff 61.59 292 ⇓P P 10 02 30.3 +0.4
baz=61
X17A Forest Lakes 61.62 291 ⇑P P 10 02 30.6 +0.5
baz=61
119A Ashpeak Ranch, 61.66 289 ⇓P P 10 02 30.9 +0.4
baz=62
220A Playas Peak, P 61.71 287 ⇑P P 10 02 31.0 +0.2
baz=62,SNR=9.9
P10A Eureka 61.74 299 ⇑P P 10 02 31.1 +0.2
baz=62
Q11A Duckwater 61.75 298 ⇑P P 10 02 31.1 +0.1
baz=62
U14A Mt Trumbull 61.78 294 ⇓P P 10 02 30.7 -0.5
baz=62,SNR=15
H04A Detroit Lake 61.80 306 ⇓P P 10 02 31.6 +0.4
baz=62
T13A Saint George 61.85 295 ⇑P P 10 02 31.9 +0.2
baz=62,SNR=17
Z18A Geronimo 61.93 289 ⇑P P 10 02 32.3 0.0
baz=62
X16A Lo Mia Camp, P 61.97 291 ⇓P P 10 02 32.8 +0.3
baz=62,SNR=12
W15A Williams 62.00 292 ⇑P P 10 02 33.2 +0.5
baz=62,SNR=8.0
R11A Troy Canyon, C 62.02 297 ⇓P P 10 02 33.1 +0.2
baz=62,SNR=9.0
S12A Delamar Landin 62.05 296 ⇑P P 10 02 33.6 +0.6
baz=62,SNR=8.5
Y17A Roosevelt 62.05 290 ⇑P P 10 02 33.6 +0.5
baz=62,SNR=10
Z17A San Carlos Hig 62.07 290 ⇑P P 10 02 33.2 0.0
baz=62
320A Kipp Ranch, An 62.08 287 ⇓P P 10 02 33.6 +0.3
baz=62
219A White Tail Can 62.13 288 ⇑P P 10 02 33.9 +0.3
baz=62,SNR=12
118A Homack Ranch, 62.17 289 ⇓P P 10 02 34.3 +0.4
baz=62,SNR=8.4
Q10A Clear Creek Ra 62.21 298 ⇓P P 10 02 34.3 +0.2
baz=62,SNR=8.9
V14A Boquillas Ranc 62.23 293 ⇑P P 10 02 34.6 +0.4
baz=62,SNR=8.1
U13A Pakoon Wash 62.27 295 ⇑P P 10 02 34.9 +0.4
baz=62,SNR=15
K05A Summer Lake 62.33 304 ⇓P P 10 02 35.2 +0.4
baz=62
Y16A Circle Bar Ran 62.34 291 ⇑P P 10 02 35.5 +0.5
baz=62,SNR=7.5
X15A Humboldt 62.43 292 ⇑P P 10 02 36.0 +0.4
baz=62,SNR=14
W14A Seligman 62.49 293 ⇑P P 10 02 36.6 +0.6
baz=62,SNR=10
R10A Warm Springs 62.49 297 ⇓P P 10 02 36.3 +0.4
baz=62,SNR=5.8
T11A Corn Creek, Al 62.51 296 ⇓P P 10 02 36.6 +0.5
baz=62
319A Douglas 62.54 287 ⇓P P 10 02 36.8 +0.4
baz=62,SNR=10.0
S11A Rachel 62.57 297 ⇑P P 10 02 36.9 +0.4
baz=62,SNR=7.2
NVS Novosibirsk 62.60 38 eP P 10 02 36.6 +0.2
U12A Valley of Fire 62.61 295 ⇓P P 10 02 37.0 +0.3
baz=62,SNR=6.6
V13A Grand Canyon W 62.64 294 ⇓P P 10 02 37.4 +0.4
baz=62,SNR=20
218A Dragoon 62.65 288 ⇓P P 10 02 37.8 +0.7
baz=62,SNR=9.1
Z16A Peralta Trail, 62.65 290 ⇓P P 10 02 37.5 +0.4
baz=62
117A Oracle 62.71 289 ⇓P P 10 02 38.1 +0.7
baz=62,SNR=13
Y15A Casa Rosa Ranc 62.83 291 ⇑P P 10 02 38.7 +0.4
baz=63,SNR=7.9
X14A Yava 62.85 292 ⇓P P 10 02 38.8 +0.4
baz=63,SNR=10
S10A Tonopah Range, 62.91 297 ⇑P P 10 02 39.1 +0.4
baz=63,SNR=16
SHPR Sheep Range 62.95 295 eP P 10 02 39.7 +0.7
SHPR Sheep Range 62.95 295 eP P 10 02 39.7 +0.7
318A Bisbee 62.96 288 ⇑P P 10 02 39.6 +0.4
baz=63
W13A Hualapai Mount 63.07 293 ⇓P P 10 02 40.2 +0.4
baz=63,SNR=8.9
U11A Corn Creek 63.14 295 ⇑P P 10 02 40.8 +0.5
baz=63
V12A Nelson 63.26 294 ⇓P P 10 02 41.2 +0.1
baz=63,SNR=6.5
Y14A Wickenburg 63.27 292 ⇓P P 10 02 41.6 +0.4
baz=63
217A Green Valley 63.28 289 ⇓P P 10 02 41.3 +0.1
baz=63
X13A Yucca 63.36 293 ⇑P P 10 02 42.0 +0.3
baz=63,SNR=14
KURK Kurchatov 63.42 43 P P 10 02 41.7 -0.2
comp=Z,4.1nm,0.9s,mb4.6,baz=318,slow=7.1,SNR=8.6
KURK Kurchatov 63.42 43 P P 10 02 41.7 -0.2
216A Three Points, 63.54 289 ⇓P P 10 02 43.1 +0.1
baz=63,SNR=7.2
V11A Goodsprings 63.55 295 ⇓P P 10 02 43.3 +0.3
baz=63,SNR=9.4
115A Sonoran Desert 63.58 290 ⇑P P 10 02 43.3 0.0
baz=63
Z14A Wintersburg 63.60 291 ⇓P P 10 02 43.7 +0.3
baz=63
NVAR Mina Array Bea 63.60 299 P P 10 02 42.9 -0.4
comp=Z,1.8nm,0.9s,mb4.1,baz=63,slow=6.2,SNR=6.6
NVAR Mina Array Bea 63.60 299 P P 10 02 42.9 -0.4
U10A Ash Meadows, A 63.72 296 ⇑P P 10 02 44.4 +0.3
baz=64,SNR=6.1
NEE2 Needles Airpor 63.74 294 ⇑P P 10 02 44.6 +0.3
baz=64
PDMCI Parker Dam,Lak 63.74 293 ⇓P P 10 02 44.7 +0.4
baz=64
WCN Washoe City 63.90 300 ⇓P P 10 02 45.7 +0.5
baz=64
114A Black Gap (USA 63.96 291 ⇓P P 10 02 46.3 +0.5
baz=64
GRAC Grapevine Rang 63.98 297 ⇑P P 10 02 46.1 +0.3
baz=64
FURC Furnace Creek, 64.01 296 ⇑P P 10 02 46.0 -0.1
baz=64,SNR=10.0
SHOC Shoshone 64.03 295 ⇑P P 10 02 46.5 +0.4
baz=64

Z13A	Yuma Proving G	64.16	292	⇓P	P	10 02 46.9	-0.2
	baz=64,SNR=11						
Y12C	Blythe	64.34	293	⇑P	P	10 02 48.3	0.0
	baz=64						
GMRC	Granite Mounta	64.38	294	⇑P	P	10 02 47.9	-0.6
	baz=64						
214A	Organ Pipe Nat	64.44	290	⇑P	P	10 02 48.5	-0.4
	baz=64						
IRM	Iron Mountain	64.47	293	⇑P	P	10 02 48.6	-0.5
	baz=64						
BILL	Bilibino	64.48	354	eP	P	10 02 48.1	-0.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.0						
113A	Mohawk Valley,	64.51	291	⇑P	P	10 02 49.4	0.0
	baz=64						
MPMC	Manual Prospec	64.66	296	⇑P	P	10 02 51.0	+0.6
	baz=64,SNR=15						
GSC	Goldstone	64.74	295	⇑P	P	10 02 51.6	+0.8
	baz=65,SNR=12						
GSC	Goldstone	64.74	295	eP	P	10 02 51.6	+0.7
GSC	Goldstone	64.74	295	eP	P	10 02 51.6	+0.7
HEC	Hector,Ludlow	64.76	295	⇑P	P	10 02 51.3	+0.3
	baz=65						
BC3	Big Chuckw Mtn	64.99	293	⇓P	P	10 02 52.7	+0.2
	baz=65,SNR=5.2						
BELC	Belle Mtn.	65.10	294	⇑P	P	10 02 53.5	+0.3
	baz=65,SNR=7.0						
LRMC	Laurel Mountai	65.17	296	⇓P	P	10 02 54.0	+0.4
	baz=65						
ISA	Isabella	65.53	297	⇓P	P	10 02 56.6	+0.6
	baz=65,SNR=7.5						
RCTC	Rector, Farmer	65.56	298	⇓P	P	10 02 56.6	+0.4
	baz=65						
PFO	Pinyon Flat Ob	65.64	294	⇓P	P	10 02 57.4	+0.7
	baz=66						
EDW2	Edwards Air Fo	65.75	296	⇓P	P	10 02 58.1	+0.7
	baz=66						
MURC	Murrieta	66.11	294	⇑P	P	10 02 59.8	0.0
	baz=66						
BAR	Barrett	66.40	293	eP	P	10 03 02.4	+0.8
BAR	Barrett	66.40	293	eP	P	10 03 02.4	+0.8
EKS2	Erkin-Say	66.50	52	eP	P	10 03 03.4	+1.3
EKS2				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
EKS2	Erkin-Say	66.50	52	eP	P	10 03 03.4	+1.3
	comp=Z,12nm,1.3s,mb4.8						
EKS2	Erkin-Say	66.50	52	eP	P	10 03 03.3	+1.2
	comp=Z,12nm,1.3s,mb4.8						
AAK	Ala-Archa	66.90	52	P	P	10 03 05.3	+0.6
	comp=Z,0.6nm,0.3s,mb4.1,baz=349,slow=7.7,SNR=4.3						
AAK	Ala-Archa	66.90	52⇑	eP	P	10 03 05.8	+1.1
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.2						
AAK	Ala-Archa	66.90	52	P	P	10 03 05.3	+0.6
MKAR	Makanchi Array	67.90	44	P	P	10 03 10.8	-0.1
	comp=Z,4.2nm,1.0s,mb4.4,baz=327,slow=5.8,SNR=7.8						
KSH	Kashi	69.88	53	P	P	10 03 26.1	+2.7
KSH				pmax	pmax		
	comp=Z,790nm,9.6s						
SEY	Seymchan	70.06	0⇑	eP	P	10 03 25.0	+1.0
BOD	Bodaibo	70.40	21	eP	P	10 03 23.7	-2.5
BOD				pmax	pmax		
	comp=Z,8.0nm,2.1s,mb4.3						
MOY	Mondy	71.86	31	eP	P	10 03 37.9	+2.7
WMQ	Urumqi	72.66	43	eP	P	10 03 32.4	-7.7
WMQ	Urumqi	72.66	43	eP	P	10 03 32.4	-7.7
ZAK	Zakamensk	73.73	30	eP	P	10 03 48.5	+2.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.1						
KMBO	Kilima Mbogo	73.87	110	P	P	10 03 49.5	+1.8
	comp=Z,1.0nm,0.7s,mb3.9,baz=222,slow=22,SNR=3.8						
KMBO	Kilima Mbogo	73.87	110	P	P	10 03 49.5	+1.9
SONM	Songino Array	76.97	30	P	P	10 04 06.3	+1.3
	comp=Z,2.3nm,0.9s,mb4.1,baz=297,slow=4.5,SNR=4.1						
SONM	Songino Array	76.97	30	P	P	10 04 06.3	+1.3
TSUM	Tsumeb	77.56	137	P	P	10 04 06.1	-2.4
	comp=Z,1.0nm,0.4s,mb4.1,baz=335,slow=5.2,SNR=3.6						
KLR	Kul'dur	82.10	14	eP	P	10 04 29.0	-3.8
HHC	Hu-ho-hao-te	84.88	30	eP	P	10 04 46.1	-1.2
HHC				SKS		10 15 05.4	
HHC				S	S	10 15 11.9	-3.7
HHC				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
HHC				pmax	pmax		
	comp=Z,2μm,5.4s						
HHC				LR	LR		
	comp=N,620nm,18.6s,MS5.3						
HHC				LR	LR		
	comp=E,870nm,18.2s,MS5.3						
HHC				LR	LR		
	comp=Z,900nm,17.8s,MS5.2						
MDJ	Mudanjiang	86.18	16	P	P	10 04 52.0	-1.7
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,6μm,15.6s						
BJI	Beijing	87.11	27	P	P	10 04 57.0	-1.4
BJI	Beijing	87.11	27	P	P	10 05 03.3	+5.0
BJI	Beijing	87.11	27	P	P	10 05 03.3	+5.0
CD2	Chengdu	90.52	40	P	P	10 05 14.1	-0.5
CD2				SKS		10 15 42.7	
CD2				S	S	10 16 05.6	-4.3
CD2				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.8						
CD2				pmax	pmax		
	comp=Z,320nm,6.5s						
CD2				LR	LR		
	comp=N,560nm,5.2s						
CD2				LR	LR		
	comp=Z,590nm,5.5s						
KMI	Kunming	94.98	44	P	P	10 05 32.6	-2.7
KMI				pP	pP	10 05 39.3	+0.6
KMI				pmax	pmax		
	comp=Z,36nm,0.6s,mb6.0						
KMI	Kunming	94.98	44	P	P	10 05 32.6	-2.7
KMI				pP	pP	10 05 39.3	+0.6
KMI				pmax	pmax		
	comp=Z,36nm,0.6s,mb6.0						
GYA	Guiyang	95.63	40	P	P	10 05 38.0	-0.3
GYA				PP	PP	10 09 31.0	+2.3
GYA				SKS		10 16 13.2	
GYA				S	S	10 16 50.9	-4.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.5						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
GYA				LR	LR		
	comp=N,650nm,20.9s,MS5.2						
GYA				LR	LR		
	comp=E,590nm,21.7s,MS5.2						
GYA				LR	LR		
	comp=Z,610nm,20.4s,MS5.1						
QSPA	South Pole Qui	137.24	180	PKP	PKPdf	10 11 33.8	-0.5
	comp=Z,2.7nm,0.9s,baz=180,slow=1.0,SNR=5.9						
WRA	Warramunga Arr	146.84	35	PKPbc	PKPbc	10 12 00.3	-0.1
	comp=Z,5.4nm,0.8s,baz=336,slow=3.2,SNR=23						
ASAR	Alice Springs	151.99	39	PKPbc	PKPbc	10 12 06.9	-0.9
	comp=Z,3.2nm,0.8s,baz=349,slow=2.4,SNR=16						

ISCJB ***12*** *09:54:48.5±0.3,30.°97N±0.°04×103.°55E±0.°07,h10km, mb4.1/28,Error ellipse: s-maj=8.8km s-min=5.7km az=9.3*
IDC ***12*** *09:54:48.9±0.6,31.°01N×103.°53E,h0km,mb4.1/22, mb1 4.2/23,mb1mx4.1/32,mbtmp4.1/23,ML4.1/1,Error ellipse: s-maj=25.3km s-min=13.1km az=53.0*
NEIC ***12*** *09:54:50.0±0.4,31.°06N×103.°72E,h10km,mb4.5/3,Error ellipse: s-maj=9.5km s-min=7.9km az=222.0*
MOS ***12*** *09:54:50.5±0.9,30.°96N×103.°52E,h25km,mb4.5/5,Error ellipse: s-maj=15.8km s-min=8.8km az=118.6*
BJI ***12*** *09:54:52.9,31.°01N×103.°41E,h21km,mb4.6/6,ML3.8/5, Ms4.3/2,Ms7 4.0/2*

ISC 12 09:54:50.5±0.4,31.°03N±0.°04×103.°61E±0.°07,h10km,n54, σ0.°83/57,mb4.1/28,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.17	132	Pg	Pg	09 54 43.5	-11
CD2				Sg	Sg	09 54 48.0	-8.8
CD2				smax			
	comp=N,26μm,0.8s						
LZH	Lanzhou	5.05	2	ePg	Pg	09 56 26.3	-0.9
LZH				Sg	Sb	09 57 24.4	+4.8
LZH				smax			
	comp=N,86nm,0.5s						
LZH				smax			
	comp=E,140nm,0.5s						
ENH	Enshi	5.12	97	Pn	Pn	09 56 03.1	-4.1
KMI	Kunming	5.93	188	Pn	Pn	09 56 19.5	+1.1
KMI				Sn	Sn	09 57 25.4	-1.0
KMI				smax			
	comp=N,60nm,0.8s						
KMI				smax			
	comp=E,67nm,0.8s						
LSA	Lhasa	10.84	266	eP	Pn	09 57 25.9	+0.2
HHC	Hu-ho-hao-te	11.72	31	eP	Pn	09 57 40.7	+3.0
HHC				pP		09 57 46.2	
HHC				sP		09 57 50.3	
HHC				S	Sn	09 59 54.1	+5.5
HHC				sS		10 00 01.9	
HHC				SS		10 00 08.6	
HHC				pmax	pmax		
	comp=Z,37nm,1.1s						
HHC				LR	LR		
	comp=N,570nm,6.3s						
HHC				LR	LR		
	comp=E,880nm,3.5s						
HHC				LR	LR		
	comp=Z,660nm,5.3s						
CMAR	Chiang Mai Arr	13.21	200	Pn	Pn	09 57 57.5	-0.6
	comp=Z,0.3nm,0.3s,baz=9.6,slow=11,SNR=4.2						
BJT	Baijiatuau	13.59	45	eP	Pn	09 58 01.8	-1.5
KSRS	Korea Array	21.07	66	P	P	09 59 35.0	+0.3
	comp=Z,2.4nm,0.8s,mb3.6,baz=251,slow=9.1,SNR=3.3						
KSRS	Korea Array	21.07	66	P	P	09 59 35.1	+0.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.5						
CN2	Changchun	21.45	47	eP	P	09 59 44.8	+6.0
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
HIA	Hailar	21.92	29	eP	P	09 59 39.8	-4.0
MK31	Makanchi Array	22.76	320	eP	P	09 59 53.6	+0.8
MKAR	Makanchi Array	22.76	320	P	P	09 59 53.4	+0.6
	comp=Z,1.5nm,0.4s,mb3.8,baz=128,slow=9.7,SNR=8.5						
AAK	Ala-Archa	25.90	305	P	P	10 00 23.7	+1.2
	comp=Z,5.8nm,0.8s,mb4.2,baz=117,slow=3.6,SNR=12						
ZALV	Zalesovo Beam	26.61	335	P	P	10 00 29.1	+0.3
	comp=Z,2.4nm,0.3s,mb4.2,baz=132,slow=10,SNR=4.7						
KURK	Kurchatov	27.05	324	P	P	10 00 33.2	+0.3
	comp=Z,3.3nm,0.6s,mb4.0,baz=128,slow=9.7,SNR=11						
KURK	Kurchatov	27.05	324	P	P	10 00 33.2	+0.3
BVAR	Borovoye Array	32.59	322	P	P	10 01 22.2	+0.3
	comp=Z,1.0nm,0.6s,mb3.9,baz=128,slow=8.5,SNR=3.9						
TIXI	Tiksi	42.91	11	P	P	10 02 48.6	-0.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
TIXI	Tiksi	42.91	11	P	P	10 02 48.6	-0.2
	comp=Z,4.8nm,0.4s,mb4.6						
BILL	Bilibino	51.43	25	eP	P	10 04 03.1	+7.8
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
OBN	Obninsk	52.25	318	eP	P	10 04 09.9	+8.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRTR	Keskin Array B	56.41	300	P	P	10 04 31.2	-0.9
	comp=Z,0.5nm,0.7s,mb3.7,baz=113,slow=8.2,SNR=4.0						
AKASG	Malin Array Be	57.13	313	P	P	10 04 35.0	-2.0
	comp=Z,1.4nm,0.5s,mb4.2,baz=72,slow=6.6,SNR=4.6						
ARCES	ARCESS Array B	57.15	336	P	P	10 04 37.2	+0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=96,slow=8.3,SNR=4.6						
FINES	FINESS Array B	57.39	326	P	P	10 04 38.3	-0.4
	comp=Z,1.7nm,0.5s,mb4.3,baz=88,slow=6.3,SNR=5.1						
WRA	Warramunga Arr	58.65	146	P	P	10 04 48.7	+0.6
	comp=Z,1.9nm,0.6s,mb4.3,baz=327,slow=9.0,SNR=15						
WB2	Warramunga Arr	58.65	146	eP	P	10 04 48.5	+0.5
HARR	Harsova	59.27	306	S	S	10 13 02.7	+2.4
ASAR	Alice Springs	61.65	148	P	P	10 05 09.2	+0.7
	comp=Z,0.6nm,0.5s,mb4.0,baz=335,slow=7.1,SNR=7.1						
DEV	Deva	62.36	309	S	S	10 13 44.0	+4.3
BZS	Buzias	63.30	309	S	S	10 13 56.4	+4.9
HFS	Hagfors	63.60	326	P	P	10 05 20.6	-0.6
	comp=Z,2.0nm,0.6s,mb4.3,baz=94,slow=6.2,SNR=5.6						
NOA	NORSAR Array B	64.49	327	P	P	10 05 26.5	-0.5
	comp=Z,0.9nm,0.5s,mb4.1,baz=74,slow=5.5,SNR=4.2						
GERES	GERESS Array B	67.30	314	P	P	10 05 45.5	+0.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=74,slow=4.7,SNR=5.2						
DAVOX	Davos/Dischmat	70.47	313	P	P	10 06 05.0	-0.1
	comp=Z,2.9nm,0.7s,mb4.3,baz=10,slow=22,SNR=5.5						
CDF	Champ du Feu	71.37	316	eP	P	10 06 09.9	-0.6
	comp=Z,2.8nm,0.7s,mb4.0						
CDF	Champ du Feu	71.37	316	eP	P	10 06 09.9	-0.6
CDF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
CDF	Champ du Feu	71.37	316	eP	P	10 06 09.9	-0.6
	comp=Z,1.4nm,0.7s,mb4.0						
STKA	Stephens Creek	72.18	147	P	P	10 06 15.8	+0.4
	comp=Z,1.2nm,0.5s,mb4.1,baz=322,slow=6.1,SNR=5.9						
STKA	Stephens Creek	72.18	147	P	P	10 06 15.8	+0.4
INK	Inuvik	72.37	19	P	P	10 06 15.9	-0.2
	comp=Z,1.7nm,0.9s,mb4.0,baz=311,slow=10,SNR=6.0						
LPG	La Plagne	72.99	313	eP	P	10 06 20.5	+0.2
	comp=Z,7.8nm,0.7s,mb4.5						
LPG	La Plagne	72.99	313	eP	P	10 06 20.5	+0.2
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	La Plagne	72.99	313	eP	P	10 06 20.5	+0.2
	comp=Z,3.9nm,0.7s,mb4.5						
EKA	Eskdalemuir Ar	73.78	325	P	P	10 06 24.1	-0.6
	comp=Z,0.9nm,0.7s,mb3.8,baz=78,slow=6.6,SNR=3.5						
RES	Resolute Bay	73.85	5	P	P	10 06 25.0	+0.1
	comp=Z,2.0nm,0.9s,mb4.1,baz=5.6,slow=4.0,SNR=6.6						
SMF	Signal de Mont	74.25	315	eP	P	10 06 26.9	-0.8
TCF	Toulx Ste Croi	75.41	315	eP	P	10 06 34.1	-0.3
CAF	Calviac	76.18	314	eP	P	10 06 38.8	0.0
YKA	Yellowknife Ar	81.89	17	P	P	10 07 10.6	+0.9
	comp=Z,1.1nm,0.6s,mb4.0,baz=327,slow=4.9,SNR=12						
FRB	Frobisher Bay	85.34	357	P	P	10 07 27.2	-0.2
	comp=Z,1.2nm,0.7s,mb4.1,baz=59,slow=10,SNR=5.0						
QSPA	South Pole Qui	120.81	180	PKP	PKPdf	10 13 40.6	-1.0
	comp=Z,1.1nm,0.7s,baz=311,slow=3.4,SNR=7.9						

ISCJB ***12*** *09:56:52.0±0.6,31.°22N±0.°08×103.°9E±0.°1,h10km, mb4.0/1,Error ellipse: s-maj=15.6km s-min=11.7km az=160.2*
IDC ***12*** *09:56:52.3±0.8,31.°23N×103.°84E,h0km,mb3.9/11, mb1 4.0/12,mb1mx3.8/27,mbtmp3.9/12,Error ellipse: s-maj=33.6km s-min=16.6km az=60.0*
NEIC ***12*** *09:56:54.0±0.5,31.°28N×103.°93E,h10km,Error ellipse: s-maj=19.2km s-min=9.2km az=70.0*
BJI ***12*** *09:56:55.0,31.°15N×104.°26E,h15km,mb4.3/3,ML3.9/3*

ISC 12 09:56:54.2±0.6,31.°25N±0.°08×103.°8E±0.°1,h10km,n17, σ0.°70/17,mb4.0/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.49	200	Pn	Pn	10 00 06.7	+1.0
	0.2nm,0.3s,baz=14,slow=11,SNR=5.1						
KSRS	Korea Array	20.79	66	P	P	10 01 35.5	+0.1
	3.1nm,0.7s,baz=263,slow=9.9,SNR=5.4						
CN2	Changchun	21.15	48	eP	P	10 01 40.2	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	Makanchi Array	22.72	319	eP	P	10 01 56.0	0.0
MKAR	Makanchi Array	22.72	319	P	P	10 01 56.4	+0.4
	comp=Z,1.4nm,0.7s,mb3.5,baz=134,slow=10,SNR=4.1						
KURK	Kurchatov	26.99	323	P	P	10 02 35.4	-0.6
	comp=Z,1.0nm,0.6s,mb3.5,baz=126,slow=9.6,SNR=3.9						
KURK	Kurchatov	26.99	323	P	P	10 02 35.4	-0.6
ARCES	ARCESS Array B	57.03	336	P	P	10 06 39.6	-0.2
	comp=Z,3.2nm,0.9s,mb4.4,baz=88,slow=7.3,SNR=4.7						
WRA	Warramunga Arr	58.72	146	P	P	10 06 52.2	-0.1
	comp=Z,2.2nm,0.5s,mb4.5,baz=338,slow=8.0,SNR=13						
ASAR	Alice Springs	61.73	149	P	P	10 07 12.5	-0.3
	comp=Z,0.4nm,0.4s,mb3.9,baz=335,slow=6.8,SNR=6.7						
HFS	Hagfors	63.52	326	P	P	10 07 25.3	+0.9
	comp=Z,1.2nm,0.6s,mb4.1,baz=123,slow=10,SNR=3.1						
HFS	Hagfors	63.52	326	P	P	10 07 25.2	+0.9
NOA	NORSAR Array B	64.41	327	P	P	10 07 29.0	-1.1
	comp=Z,1.3nm,0.8s,mb4.0,baz=73,slow=6.4,SNR=2.9						
INK	Inuvik	72.09	19	P	P	10 08 18.9	+0.8
	comp=Z,1.3nm,0.8s,mb3.9,baz=284,slow=9.2,SNR=3.1						
STKA	Stephens Creek	72.25	147	P	P	10 08 18.4	-1.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=324,slow=8.7,SNR=3.2						
STKA	Stephens Creek	72.25	147	P	P	10 08 18.4	-1.2
YKA	Yellowknife Ar	81.61	17	P	P	10 09 11.3	-0.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=331,slow=5.0,SNR=3.4						

ISCJB ***12*** *09:59:34.7±0.6,32.°18N±0.°08×105.°1E±0.°1,h10km, mb3.9/9,Error ellipse: s-maj=15.7km s-min=9.5km az=142.9*
IDC ***12*** *09:59:35.5±0.8,32.°12N×104.°97E,h0km,mb3.9/9, mb1 4.0/11,mb1mx3.8/28,mbtmp3.9/11,ML3.7/1,Error ellipse: s-maj=36.1km s-min=16.9km az=58.0*
NEIC ***12*** *09:59:36.9±0.6,32.°11N×104.°98E,h10km,Error ellipse: s-maj=19.1km s-min=10.0km az=55.0*
BJI ***12*** *09:59:39.3,32.°52N×104.°45E,h8km,mB4.0/1,mb4.1/3, ML3.8/4,Ms4.1/3,Ms7 4.2/3*

ISC 12 09:59:36.8±0.6,32.°30N±0.°06×105.°1E±0.°1,h10km,n16, σ1.°39/17,mb3.9/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	3.92	345	ePn	Pn	10 00 35.8	-1.2
LZH				Pg	Pg	10 00 48.3	-3.6
LZH				Sg	Sg	10 01 41.1	-1.5
LZH				smax			
	comp=N,260nm,0.6s						
LZH				smax			
	comp=E,440nm,0.8s						
ENH	Enshi	4.25	117	ePn	Pn	10 00 41.6	0.0
CMAR	Chiang Mai Arr	14.87	203	Pn	Pn	10 03 04.5	-2.7
	comp=E,0.2nm,0.3s,baz=315,slow=34,SNR=3.2						
KSRS	Korea Array	19.39	68	P	Pn	10 04 03.7	-0.2
	comp=E,0.2nm,0.3s,baz=258,slow=11,SNR=3.3						
MK31	Makanchi Array	22.68	316	eP	P	10 04 39.6	+1.4
MKAR	Makanchi Array	22.68	316	P	P	10 04 37.0	-1.2
	comp=E,0.4nm,0.4s,mb3.2,baz=118,slow=12,SNR=3.3						
ZALV	Zalesovo Beam	26.04	332	P	P	10 05 11.3	+1.2
	comp=E,1.3nm,0.3s,mb3.9,baz=125,slow=12,SNR=2.1						
KURK	Kurchatov	26.83	321	P	P	10 05 17.5	+0.3
	comp=E,1.4nm,0.7s,mb3.6,baz=118,slow=11,SNR=6.2						
BVAR	Borovoye Array	32.41	320	P	P	10 06 08.6	+2.0
	comp=E,0.7nm,0.4s,mb3.8,baz=110,slow=8.3,SNR=3.6						
ARCES	ARCESS Array B	56.52	335	P	P	10 09 18.3	-0.5
	comp=E,5.9nm,1.1s,mb4.5,baz=88,slow=8.6,SNR=4.5						
FINES	FINESS Array B	57.06	326	P	P	10 09 24.8	+2.0
	comp=E,2.1nm,0.9s,mb4.2,baz=115,slow=6.6,SNR=3.2						
FINES	FINESS Array B	57.06	326	P	P	10 09 24.8	+2.0
WRA	Warramunga Arr	59.00	148	P	P	10 09 36.1	-0.7
	comp=E,1.3nm,0.7s,mb4.1,baz=346,slow=6.9,SNR=6.7						
ASAR	Alice Springs	62.08	150	P	P	10 09 57.2	-0.5
	comp=E,0.8nm,0.6s,mb4.0,baz=331,slow=6.4,SNR=7.4						
YKA	Yellowknife Ar	80.29	18	P	P	10 11 50.1	+2.6
	comp=E,0.6nm,0.6s,mb3.7,baz=327,slow=5.3,SNR=6.9						
QSPA	South Pole Qui	122.07	180	PKP	PKPdf	10 18 31.4	+1.0
	comp=E,0.5nm,0.6s,baz=294,slow=5.8,SNR=7.7						

ISCJB ***12*** *10:01:36.7±0.5,32.°23N±0.°05×105.°02E±0.°09,h10km, mb4.1/16,Error ellipse: s-maj=10.5km s-min=7.1km az=11.7*
IDC ***12*** *10:01:37.5±0.6,32.°27N×105.°05E,h0km,mb4.0/15, mb1 4.1/17,mb1mx4.0/30,mbtmp4.0/17,ML3.8/2,Error ellipse: s-maj=24.7km s-min=13.5km az=56.0*
NEIC ***12*** *10:01:38.8±0.5,32.°22N×105.°00E,h10km,mb4.4/1,Error ellipse: s-maj=15.7km s-min=9.1km az=78.0*
BJI ***12*** *10:01:44.7,32.°16N×104.°54E,h9km,ML4.5/3*

ISC 12 10:01:38.8±0.5,32.°26N±0.°04×105.°01E±0.°08,h10km,n25, σ1.°09/27,mb4.1/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.72	219	Pg	Pg	10 02 09.4	-2.4
CD2				Sg	Sg	10 02 33.2	-0.9
CD2				smax			
	comp=N,7μm,0.7s						
CD2	Chengdu	1.72	219	Pg	Pg	10 02 16.1	+4.3
CD2				Sg	Sg	10 02 29.6	-4.5
CD2				smax			
	comp=N,9μm,0.7s						
LZH	Lanzhou	3.93	346	ePg	Pg	10 02 53.6	-0.5
LZH				Sg	Sg	10 03 42.2	-2.9
LZH				smax			
	comp=N,600nm,1.0s						
LZH				smax			
	comp=E,2μm,1.1s						
CHTO	Chiang Mai	14.46	204	Pn	Pn	10 05 00.7	-2.9
CMAR	Chiang Mai Arr	14.79	203	Pn	Pn	10 05 09.4	+1.4
	comp=E,0.2nm,0.3s,baz=22,slow=9.9,SNR=3.6						
KSRS	Korea Array	19.49	68	P	Pn	10 06 05.7	-1.4
	comp=E,0.2nm,0.3s,baz=257,slow=10.0,SNR=5.0						
MK31	Makanchi Array	22.64	316	eP	P	10 06 40.6	+0.8
MKAR	Makanchi Array	22.64	316	P	P	10 06 41.1	+1.3
	comp=E,1.9nm,0.8s,mb3.6,baz=108,slow=12,SNR=5.6						
ZALV	Zalesovo Beam	26.04	332	P	P	10 07 13.3	+1.4
	comp=E,1.5nm,0.3s,mb4.0,baz=141,slow=9.3,SNR=3.1						
KURK	Kurchatov	26.80	321	P	P	10 07 19.8	+0.9
	comp=E,2.3nm,0.8s,mb3.7,baz=123,slow=10,SNR=7.8						
BVAR	Borovoye Array	32.38	320	P	P	10 08 09.3	+1.0
	comp=E,0.4nm,0.5s,mb3.5,baz=89,slow=10,SNR=2.2						
ARU	Arti	40.00	321	eP	P	10 09 11.8	-1.6
	comp=E,4.0nm,0.4s,mb4.5						
PETK	Petropavlovsk-	42.83	45	P	P	10 09 36.8	+0.1
	comp=E,1.8nm,0.6s,mb4.0,baz=262,slow=2.3,SNR=7.0						
FITZ	Fitzroy Crossi	53.84	155	P	P	10 11 01.4	-0.5
	comp=E,2.7nm,0.8s,mb4.2,baz=336,slow=8.0,SNR=3.9						
ARCES	ARCESS Array B	56.52	336	P	P	10 11 20.6	-0.1
	comp=E,4.2nm,1.0s,mb4.4,baz=84,slow=9.2,SNR=5.0						
BRTR	Keskin Array B	56.84	299	P	P	10 11 24.1	+0.6
	comp=E,0.4nm,0.4s,mb3.8,baz=75,slow=11,SNR=3.8						
FINES	FINESS Array B	57.04	326	P	P	10 11 24.3	-0.3
	comp=E,1.0nm,0.6s,mb4.0,baz=322,slow=34,SNR=2.6						
FINES	FINESS Array B

GTA pmax pmax
comp=Z,30nm,0.9s
GTA pmax pmax
comp=Z,4μm,5.4s
GTA LR LR
comp=N,4μm,18.9s
GTA LR LR
comp=E,4μm,18.3s
GTA LR LR
comp=Z,10μm,20.4s
GTA Gaotai 8.20 329 P **Pb** **10 05 07.5 +8.4**
GTA pP 10 05 10.7
GTA sP 10 05 13.6
GTA S **Sb** **10 06 42.8 +6.0**
GTA sS 10 06 47.8
GTA pmax pmax
comp=Z,30nm,0.9s
GTA pmax pmax
comp=Z,4μm,5.4s
GTA LR LR
comp=N,4μm,18.9s
GTA LR LR
comp=E,4μm,18.3s
GTA LR LR
comp=Z,10μm,20.4s
HHC Hu-ho-hao-te 9.76 29 *e*P **Pn** **10 04 58.2 +0.8**
HHC pP 10 05 01.5
HHC PP 10 05 06.5
HHC S **Sn** **10 06 53.0 +6.0**
HHC sS 10 06 57.9
HHC SS 10 07 05.4
HHC pmax pmax
comp=Z,39nm,1.0s
HHC LR LR
comp=N,2μm,6.3s
HHC LR LR
comp=E,3μm,8.4s
HHC LR LR
comp=Z,4μm,9.5s
NJ2 Nanjing 11.52 89 *e*P **Pn** **10 05 16.4 -5.1**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 Nanjing 11.52 89 *e*P **Pn** **10 05 16.4 -5.1**
NJ2 pmax pmax
comp=Z,20nm,0.5s
CHTO Chiang Mai 14.75 204 *e*Pn **Pn** **10 06 05.5 -0.2**
CM31 Chiang Mai Arr 15.08 204 *e*Pn **Pn** **10 06 11.4 +1.2**
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 15.08 204 Pn **Pn** **10 06 09.8 -0.3**
comp=Z,0.3nm,0.3s,baz=16,slow=11,SNR=8.4
SONM Songino Array 15.36 3 Pn **Pn** **10 06 13.2 -0.5**
comp=Z,0.6nm,0.3s,baz=191,slow=14,SNR=2.8
ULN Ulaanbaatar 15.43 5 *e*P **Pn** **10 06 18.3 +3.7**
comp=Z,6.1nm,0.8s
KSRS Korea Array 19.21 69 P **Pn** **10 07 01.2 -0.8**
comp=Z,1.0nm,0.3s,baz=257,slow=9.8,SNR=22
CN2 Changchun 19.43 49 *e*P **Pn** **10 07 06.2 +1.6**
CN2 pmax pmax
comp=Z,20nm,0.8s
MK31 Makanchi Array 22.63 316 *e*P **P** **10 07 37.4 -0.5**
MKAR Makanchi Array 22.63 316 P **P** **10 07 37.6 -0.3**
comp=Z,4.1nm,0.7s,mb4.0,baz=114,slow=12,SNR=9.7
KSH Kashi 24.64 295 P **P** **10 08 00.7 +3.0**
KSH pmax pmax
comp=Z,1μm,10.3s
ZALV Zalesovo Beam 25.94 332 P **P** **10 08 09.8 +0.4**
comp=Z,4.1nm,0.4s,mb4.3,baz=134,slow=11,SNR=6.1
AAK Ala-Archa 26.28 302 P **P** **10 08 13.0 +0.4**
comp=Z,0.9nm,0.4s,mb3.7,baz=106,slow=7.4,SNR=2.7
KURK Kurchatov 26.77 321 P **P** **10 08 15.4 -1.4**
comp=Z,3.6nm,0.7s,mb4.0,baz=124,slow=10,SNR=8.8
MJAR Matsushiro Arr 27.37 72 P **P** **10 08 21.9 -0.5**
comp=Z,1.9nm,0.8s,mb3.7,baz=276,slow=9.9,SNR=3.6
ASAJ Asahikawa 31.26 57 P **P** **10 08 56.8 -0.1**
comp=Z,2.6nm,0.6s,mb4.2,baz=226,slow=9.5,SNR=7.9
BVAR Borovoye Array 32.35 320 P **P** **10 09 05.8 -0.5**
comp=Z,1.1nm,0.5s,mb3.9,baz=130,slow=8.6,SNR=4.3
ABKAR Akbulak array 37.52 310 *e*P **P** **10 09 50.3 -0.6**
comp=Z,2.1nm,0.5s,mb4.1
AKTK Aktyubinsk 38.94 312 P **P** **10 10 02.4 -0.5**
AKTO Aktyubinsk 38.94 312 P **P** **10 10 02.4 -0.5**
comp=Z,2.2nm,0.6s,mb4.1,baz=99,slow=15,SNR=4.3
KAPI Kappang 39.75 157 P **P** **10 10 10.2 +0.2**
comp=Z,5.5nm,0.6s,mb4.5,baz=218,slow=6.9,SNR=3.7
TIXI Tiksi 41.21 11 *e*P **P** **10 10 21.3 -0.2**
comp=Z,2.0nm,0.6s,mb3.9
PETK Petropavlovsk- 42.52 45 P **P** **10 10 32.3 -0.1**
comp=Z,6.2nm,0.9s,mb4.3,baz=301,slow=2.4,SNR=6.5
FITZ Fitzroy Crossi 53.95 156 P **P** **10 12 01.3 +0.4**
comp=Z,3.0nm,0.6s,mb4.4,baz=325,slow=3.4,SNR=8.0
ARCES ARCESS Array B 56.41 335 P **P** **10 12 18.9 +0.7**
comp=Z,4.1nm,0.9s,mb4.5,baz=86,slow=8.6,SNR=8.8
ASF Jabal al Asfar 56.80 290 P **P** **10 12 22.0 +0.4**
comp=Z,0.7nm,0.3s,mb4.2,baz=315,slow=1.4,SNR=2.3
BRTR Keskin Array B 56.92 299 P **P** **10 12 22.0 -0.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=98,slow=7.6,SNR=7.6
FINES FINESS Array B 56.98 326 P **P** **10 12 21.9 -0.4**
comp=Z,2.2nm,0.4s,mb4.5,baz=75,slow=6.4,SNR=8.2
AKASG Malin Array Be 57.17 313 P **P** **10 12 25.3 +1.4**
comp=Z,1.9nm,0.4s,mb4.5,baz=66,slow=7.3,SNR=5.8
SPITS Spitsbergen Ar 58.24 346 P **P** **10 12 29.9 -1.1**
comp=Z,9.5nm,1.0s,mb4.8,baz=129,slow=28,SNR=2.8
WRA Warramunga Arr 59.09 148 P **P** **10 12 36.9 -0.7**
comp=Z,4.7nm,0.7s,mb4.7,baz=328,slow=9.0,SNR=16
ASAR Alice Springs 62.17 150 P **P** **10 12 58.0 -0.5**
comp=Z,1.8nm,0.4s,mb4.5,baz=331,slow=6.6,SNR=14
HFS Hagfors 63.18 326 P **P** **10 13 06.0 +1.1**
comp=Z,3.0nm,0.5s,mb4.7,baz=77,slow=6.5,SNR=12
NB2 NORSAR Subarra 64.03 327 P **P** **10 13 09.4 -1.1**
comp=Z,2.3nm,0.5s,mb4.5,baz=73,slow=6.9
NOA NORSAR Array B 64.03 327 P **P** **10 13 11.7 +1.2**
comp=Z,2.2nm,0.6s,mb4.4,baz=71,slow=6.6,SNR=7.4
GERES GERESS Array B 67.29 314 P **P** **10 13 32.3 +0.5**
comp=Z,0.3nm,0.5s,mb3.6,baz=70,slow=12,SNR=2.6
DAVOX Davos/Dischmat 70.50 313 P **P** **10 13 51.9 +0.1**
comp=Z,2.6nm,0.5s,mb4.4,baz=142,slow=11,SNR=6.4
INK Inuvik 70.53 20 P **P** **10 13 51.3 -0.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=305,slow=7.6,SNR=4.7
STKA Stephens Creek 72.64 148 P **P** **10 14 03.5 -1.2**
comp=Z,2.1nm,0.6s,mb4.2,baz=300,slow=7.3,SNR=2.9
YKA Yellowknife Ar 80.09 18 P **P** **10 14 46.4 -0.2**
comp=Z,1.3nm,0.5s,mb4.1,baz=328,slow=5.1,SNR=11
TORD Torodi Ar. Bea 94.15 288 P **P** **10 15 56.8 +0.4**
comp=Z,0.4nm,0.7s,mb4.0,baz=56,slow=3.6,SNR=3.8
PLCA Paso Flores 171.11 201 PKP PKPdf 10 22 43.5 -1.9
comp=Z,0.3nm,0.3s,baz=250,slow=8.4,SNR=3.1

KRSC 12 10:03:53.3±0.2**, 55°.01N**×**163°.06E, h15**km±15km**, ML3.6,**
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.90**	**240**	*e*P	Pb	10 04 10.1	-0.4
MKZ				*i* S	Sb	10 04 22.0	-0.2
KBTR	**Krutoberegovo**	**1.21**	**354**	*e*P	Pn	10 04 16.1	+0.5
KBTR				*i* S	Sb	10 04 32.8	+1.6
ZLN	**Zelenaya**	**1.63**	**309**	*e*P	Pn	10 04 22.2	+0.8
ZLN				*i* S	Sn	10 04 44.0	+1.9
BKI	**Bering**	**1.68**	**82**	*e*P	Pn	10 04 23.9	+1.8
BKI				*i* S	Sn	10 04 45.5	+2.1
CIRR	**Tsirk**	**1.72**	**311**	*e*P	Pn	10 04 24.3	+1.7
BZMR	**Bezymyannaya**	**1.73**	**303**	*e*P	Pn	10 04 23.8	+1.0
KMNR	**Kamenistaya**	**1.78**	**296**	*e*P	Pn	10 04 24.2	+0.8
KMNR				*i* S	Sn	10 04 46.9	+1.2
KIRR	**Kirishev**	**1.81**	**303**	*e*P	Pn	10 04 25.6	+1.7
SMKR	**Semkarok**	**1.81**	**331**	*e*P	Pn	10 04 25.3	+1.4
KRSR	**Krestovskiy**	**1.86**	**312**	*e*P	Pn	10 04 25.1	+0.5
KRSR				*i* S	Sn	10 04 47.8	0.0
KPT	**Kopyto**	**1.88**	**302**	*e*P	Pn	10 04 26.0	+1.2
BDR	**Baidarnaya**	**1.88**	**327**	*e*P	Pn	10 04 26.0	+1.2
KLY	**Klyuchi**	**1.89**	**315**	*e*P	Pn	10 04 24.2	-0.8
KLY				*i* S	Sn	10 04 46.6	-1.9
SRKR	**Sorokina**	**1.96**	**328**	*e*P	Pn	10 04 28.0	+2.0
KOZ	**Kozyrevsk**	**2.09**	**301**	*e*P	Pn	10 04 30.3	+2.5
KOZ				*i* S	Sn	10 04 57.0	+3.5
SRDR	**Sredinnyy**	**2.30**	**306**	*e*P	Pn	10 04 32.2	+1.6
SPN	**Mys Shipunski**	**2.62**	**224**	*e*P	Pn	10 04 35.8	+0.8
SPN				*i* S	Sn	10 05 06.3	-0.2
NLC	**Nalytchevo**	**2.86**	**231**	*e*P	Pn	10 04 40.9	+2.6
NLC				*i* S	Sn	10 05 15.2	+2.8
SDLR	**Sedlovina**	**3.01**	**236**	*e*P	Pn	10 04 42.4	+2.1
SDLR				*i* S	Sn	10 05 18.4	+2.4
GNL	**Ganaly**	**3.27**	**248**	*e*P	Pn	10 04 45.7	+1.7
PET	**Petropavlovsk**	**3.27**	**234**	*e*P	Pn	10 04 46.9	+2.9
PET				*i* S	Sn	10 05 25.7	+3.1
RUS	**Russkaya**	**3.74**	**228**	*e*P	Pn	10 04 52.6	+2.3
RUS				*i* S	Sn	10 05 34.8	+0.8

ISCJB ***12*** *10:04:28.8±0.5, 32°.45N±0°.06×105°.39E±0°.09, h10km, mb4.2/14, Error ellipse: s-maj=11.0km s-min=9.0km az=173.6*
IDC ***12*** *10:04:29.4±0.7, 32°.51N×105°.44E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.1/29, mbtmp4.2/14, ML4.1/1, Error ellipse: s-maj=37.5km s-min=13.6km az=55.0*
NEIC ***12*** *10:04:30.9±0.4, 32°.47N×105°.36E, h10km, mb4.1/1, Error ellipse: s-maj=12.6km s-min=7.4km az=64.0*
BJI ***12*** *10:04:31.1, 32°.22N×105°.08E, h10km, mb4.2/3, ML4.6/1, Ms4.8/1, Ms7 4.5/1*
ISC 12 10:04:30.8±0.5**, 32°.50N**±0°.04×**105°.37E**±0°.09**, h10**km**, n27, σ0s.96**/29**, mb4.2**/14**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.10**	**221**	Pg	**Pg**	**10 05 09.5**	**-1.6**
CD2				Sg	**Sg**	**10 05 32.1**	**-6.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,480nm,5.6s						
CD2				smax			
	comp=N,5μm,0.6s						
CD2	**Chengdu**	**2.10**	**221**	Pg	**Pg**	**10 05 09.5**	**-1.6**
CD2				Sg	**Sg**	**10 05 32.1**	**-6.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,480nm,5.6s						
CD2				smax			
	comp=N,5μm,0.6s						
LZH	**Lanzhou**	**3.80**	**341**	*e*Pg	**Pg**	**10 05 41.5**	**-2.1**
LZH				Sg	**Sg**	**10 06 32.2**	**-0.6**
LZH				smax			
	comp=N,1μm,0.5s						
LZH				smax			
	comp=E,1μm,0.6s						
LSA	**Lhasa**	**12.51**	**261**	*e*Pn	**Pn**	**10 07 29.0**	**+0.1**
CHTO	**Chiang Mai**	**14.80**	**205**	Pn	**Pn**	**10 07 59.8**	**-0.5**
KSRS	**Korea Array**	**19.11**	**69**	P	**Pn**	**10 08 53.3**	**-1.4**
	comp=E,0.6nm,0.3s,baz=268,slow=11,SNR=8.2						
CN2	**Changchun**	**19.35**	**49**	*e*P	**Pn**	**10 09 02.5**	**+5.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**10 09 33.3**	**+0.9**
	comp=Z,4.9nm,0.6s,mb4.1,baz=114,slow=9.9,SNR=5.6						
KSH	**Kashi**	**24.72**	**295**	P	**P**	**10 09 55.8**	**+3.6**
ZALV	**Zalesovo Beam**	**25.97**	**332**	P	**P**	**10 10 04.2**	**+0.8**
	comp=Z,2.6nm,0.4s,mb4.2,baz=128,slow=12,SNR=2.5						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**10 10 11.6**	**+0.5**
	comp=Z,2.1nm,0.7s,mb3.8,baz=129,slow=9.0,SNR=3.6						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**10 11 00.7**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.8,baz=115,slow=9.7,SNR=2.4						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**10 11 45.2**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.1						
AKTK	**Aktyubinsk**	**39.00**	**312**	P	**P**	**10 11 58.2**	**+1.0**
AKTO	**Aktyubinsk**	**39.00**	**312**	P	**P**	**10 11 58.2**	**+1.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=102,slow=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	**53.92**	**156**	P	**P**	**10 13 53.2**	**-1.5**
	comp=Z,3.8nm,1.0s,mb4.3,baz=300,slow=8.1,SNR=2.6						
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**10 14 11.6**	**-0.7**
	comp=Z,3.5nm,1.0s,mb4.4,baz=90,slow=6.4,SNR=2.8						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**10 14 17.0**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.4,baz=110,slow=8.1,SNR=3.4						
WRA	**Warramunga Arr**	**59.05**	**148**	P	**P**	**10 14 31.8**	**+0.6**
	comp=Z,4.5nm,0.7s,mb4.6,baz=340,slow=7.5,SNR=4.6						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**10 14 53.3**	**+1.1**
	comp=Z,2.2nm,0.9s,mb4.3,baz=333,slow=6.5,SNR=4.4						
NB2	**NORSAR Subarra**	**64.07**	**327**	P	**P**	**10 15 04.2**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.4,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.07**	**327**	P	**P**	**10 15 04.4**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=74,slow=6.3,SNR=4.1						
STKA	**Stephens Creek**	**72.60**	**148**	P	**P**	**10 15 58.9**	**+0.6**
	comp=Z,1.6nm,0.7s,mb4.0,baz=359,slow=7.3,SNR=2.9						
STKA	**Stephens Creek**	**72.60**	**148**	P	**P**	**10 15 58.9**	**+0.6**
YKA	**Yellowknife Ar**	**80.04**	**18**	P	**P**	**10 16 40.2**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.9,baz=329,slow=5.5,SNR=4.5						
YKA	**Yellowknife Ar**	**80.04**	**18**	P	**P**	**10 16 40.2**	**0.0**
QSPA	**South Pole Qui**	**122.27**	**180**	PKP	PKPdf	10 23 24.9	+0.1
	comp=Z,1.7nm,0.9s,baz=31,slow=1.8,SNR=3.9						

DDA ***12*** *10:05:55.9, 39°.34N×40°.77E, h7km±3km, Md3.0*
ISCJB ***12*** *10:05:56.9±0.6, 39°.38N±0°.03×40°.74E±0°.04, h8km±6km, Error ellipse: s-maj=6.0km s-min=4.1km az=31.0*
CSEM ***12*** *10:05:56.9±0.2, 39°.37N×40°.75E, h10km, MD3.1, Error ellipse: s-maj=6.6km s-min=3.9km az=125.0*
ISK ***12*** *10:05:56.4, 39°.39N×40°.73E, h6km, MD3.1*
ISC 12 10:05:57.3±0.6**, 39°.38N**±0°.03×**40°.74E**±0°.04**, h10**km±5km**, n26, σ0s.89**/38**, 1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.54**	**201**	*e*PG	**Pg**	**10 06 07.3**	**-0.4**
BINT				*e*SG	**Sg**	**10 06 15.7**	**+1.0**
BINT	**Bingol**	**0.54**	**201**	*e*Pg	**Pg**	**10 06 07.3**	**-0.4**
BINT				*e*Sg	**Sg**	**10 06 15.7**	**+1.0**
KOPT	**Kop Dagi**	**0.67**	**344**	⇓*i*P	**Pg**	**10 06 09.8**	**-0.4**
KOPT				*i* S	**Sg**	**10 06 19.9**	**+1.0**
KOPT	**Kop Dagi**	**0.67**	**344**	*i* P	**Pg**	**10 06 09.8**	**-0.4**
KOPT				*i* S	**Sg**	**10 06 19.9**	**+1.0**
EZM	**Erzurum**	**0.72**	**42**	*e*PG	**Pg**	**10 06 10.0**	**-1.1**
EZM				*e*SG	**Sg**	**10 06 21.3**	**+0.8**
ERZM	**Erzurum**	**0.72**	**43**	⇑*i*P	**Pg**	**10 06 09.9**	**-1.3**
ERZM				*i* S	**Sg**	**10 06 21.1**	**+0.6**
ERZM	**Erzurum**	**0.72**	**43**	*i* P	**Pg**	**10 06 09.9**	**-1.2**
ERZM				*i* S	**Sg**	**10 06 21.1**	**+0.6**
HOMI	**Horasan**	**1.12**	**53**	*e*P	**Pb**	**10 06 16.9**	**-1.9**
HOMI				*e*S	**Sb**	**10 06 34.8**	**+1.3**
EZC	**Erzincan**	**1.13**	**290**	*e*PN	**Pn**	**10 06 18.1**	**-1.1**
EZC				*e*SN	**Sn**	**10 06 34.1**	**-0.7**
PTK	**Pertek**	**1.15**	**246**	*e*PN	**Pn**	**10 06 18.8**	**-0.7**
PTK	**Pertek**	**1.15**	**246**	*e*Pn	**Pn**	**10 06 18.8**	**-0.7**
GUMT	**Gumushane**	**1.45**	**319**	*e*PN	**Pn**	**10 06 24.1**	**+0.6**
GUMT	**Gumushane**	**1.45**	**319**	*e*Pn	**Pn**	**10 06 24.1**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.50**	**229**	*e*PN	**Pn**	**10 06 24.4**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.50**	**229**	*e*Pn	**Pn**	**10 06 24.4**	**+0.2**
BEST	**Besiri**	**1.54**	**164**	*e*P	**Pn**	**10 06 24.5**	**-0.3**
BEST				*e*S	**Sn**	**10 06 45.2**	**+0.4**
ELZG	**Elazig**	**1.62**	**238**	*e*P	**Pn**	**10 06 25.6**	**-0.3**
ELZG				*e*S	**Sn**	**10 06 50.2**	**+3.3**
ELZG	**Elazig**	**1.62**	**238**	*e*P	**Pn**	**10 06 25.6**	**-0.3**
ELZG				*e*S	**Sn**	**10 06 50.2**	**+3.3**
AGRB	**Hanur-Agry**	**1.76**	**83**	*e*PN	**Pn**	**10 06 27.9**	**+0.1**
AGRB	**Hanur-Agry**	**1.76**	**83**	*e*Pn	**Pn**	**10 06 27.9**	**+0.1**
MALT	**Malatya**	**2.09**	**240**	*e*PN	**Pn**	**10 06 32.6**	**+0.2**
MALT	**Malatya**	**2.09**	**240**	*e*Pn	**Pn**	**10 06 32.6**	**+0.2**
BCA	**Borcka**	**2.17**	**18**	*e*PN	**Pn**	**10 06 33.5**	**0.0**
BCA	**Borcka**	**2.17**	**18**	*e*Pn	**Pn**	**10 06 33.5**	**0.0**
ESPY	**Espiye-Giresun**	**2.17**	**316**	*e*PN	**Pn**	**10 06 34.5**	**+1.0**
ESPY	**Espiye-Giresun**	**2.17**	**316**	*e*Pn	**Pn**	**10 06 34.6**	**+1.1**

IDC ***12*** *10:06:05.3±0.8, 31°.29N×103°.88E, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.0/27, mbtmp4.1/10, ML4.1/1, Error ellipse: s-maj=33.1km s-min=16.7km az=62.0*
ISCJB ***12*** *10:06:07.4±1.5, 31°.20N±0°.08×104°.0E±0°.1, h26km±11km, mb4.1/11, Error ellipse: s-maj=18.9km s-min=12.2km az=161.8*
NEIC ***12*** *10:06:07.1±0.5, 31°.28N×104°.00E, h10km, mb4.6/2, Error ellipse: s-maj=16.8km s-min=8.6km az=74.0*
BJI ***12*** *10:06:11.9, 31°.48N×103°.92E, h10km, mB4.9/1, mb4.3/4, ML4.0/4*
ISC 12 10:06:07.1±2.2**, 31°.27N**±0°.08×**104°.0E**±0°.1**, h10**km±14km**, n19, σ0s.80**/21**, mb4.1**/11**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**207**	Pg	**Pg**	**10 06 15.0**	**0.0**
CD2				Sg	**Sg**	**10 06 20.3**	**-0.1**
CD2				smax			
	comp=N,33μm,0.6s						
CD2	**Chengdu**	**0.40**	**207**	Pg	**Pg**	**10 06 15.0**	**0.0**
CD2				Sg	**Sg**	**10 06 20.3**	**-0.1**
CD2				smax			
	comp=N,33μm,0.6s						
CM31	**Chiang Mai Arr**	**13.54**	**201**	Pn	**Pn**	**10 09 19.3**	**-0.2**
	comp=N,4.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.54**	**201**	Pn	**Pn**	**10 09 19.8**	**+0.4**
	comp=N,0.3nm,0.3s,baz=21,slow=11,SNR=3.0						
KSRS	**Korea Array**	**20.69**	**66**	P	**P**	**10 10 47.6**	**+0.3**
	comp=N,3.8nm,0.8s,baz=256,slow=9.8,SNR=3.1						
CN2	**Changchun**	**21.06**	**48**	*e*P	**P**	**10 10 55.4**	**+4.1**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
MK31	**Makanchi Array**	**22.78**	**319**	*e*P	**P**	**10 11 11.4**	**+1.7**
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**10 11 08.1**	**-1.6**
	comp=Z,0.5nm,0.3s,mb3.5,baz=120,slow=11,SNR=6.8						
TKM2	**Tokmak 2**	**25.32**	**305**	P	**P**	**10 11 35.2**	**+1.2**
	comp=Z,7.9nm,1.4s,mb4.0						
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**10 11 44.3**	**-0.5**
	comp=Z,1.3nm,0.3s,mb3.9,baz=128,slow=9.3,SNR=2.4						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**10 11 48.9**	**-0.7**
	comp=Z,3.7nm,1.0s,mb3.9,baz=131,slow=9.0,SNR=2.9						
WRAB	**Tennant Creek**	**58.67**	**146**	*e*P	**P**	**10 16 04.4**	**-0.5**
	comp=Z,9.4nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**10 16 05.4**	**+0.4**
	comp=Z,8.6nm,0.7s,mb4.9,baz=337,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**10 16 24.9**	**-0.7**
	comp=Z,3.2nm,1.0s,mb4.4,baz=328,slow=6.2,SNR=6.1						
INK	**Inuvik**	**72.04**	**19**	P	**P**	**10 17 31.4**	**+0.5**
	comp=Z,1.0nm,0.6s,mb3.9,baz=334,slow=4.7,SNR=3.2						
INK	**Inuvik**	**72.04**	**19**	P	**P**	**10 17 31.4**	**+0.5**
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**10 17 32.9**	**+0.6**
	comp=Z,0.7nm,0.4s,mb4.0,baz=316,slow=4.8,SNR=5.1						
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**10 17 32.9**	**+0.6**
YKA	**Yellowknife Ar**	**81.57**	**17**	P	**P**	**10 18 23.9**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=5.2,SNR=4.6						

ISCJB ***12*** *10:07:19.1±0.7, 31°.4N±0°.1×104°.1E±0°.1, h10km, mb4.3/16, Error ellipse: s-maj=20.8km s-min=11.7km az=30.4*
IDC ***12*** *10:07:19.4±1.0, 31°.44N×103°.99E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.1/32, mbtmp4.3/16, MS4.9/1, Ms1 4.9/1, ms1mx3.6/45, Error ellipse: s-maj=34.1km s-min=18.8km az=41.0*
NEIC ***12*** *10:07:21.0±0.5, 31°.49N×104°.16E, h10km, mb4.5/1, Error ellipse: s-maj=24.0km s-min=9.3km az=51.0*
BJI ***12*** *10:07:21.9, 31°.53N×104°.22E, h10km, mB5.1/1, mb4.6/3, ML4.6/2*
ISC 12 10:07:21.2±0.7**, 31°.4N**±0°.1×**104°.0E**±0°.1**, h10**km**, n25, σ0s.74**/23**, mb4.3**/16**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.60**	**66**	P	**P**	**10 12 00.6**	**+0.1**
	5.6nm,1.0s,baz=249,slow=10,SNR=3.6						
CN2	**Changchun**	**20.94**	**48**	*e*P	**P**	**10 12 05.4**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MK31	**Makanchi Array**	**22.69**	**319**	*e*P	**P**	**10 12 23.7**	**+0.9**
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**10 12 23.0**	**+0.2**
	comp=Z,2.9nm,0.5s,mb4.0,baz=116,slow=11,SNR=6.1						
TKM2	**Tokmak 2**	**25.27**	**305**	P	**P**	**10 12 49.5**	**+1.9**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**10 12 57.6**	**-0.1**
	comp=Z,5.9nm,0.5s,mb4.3,baz=138,slow=8.4,SNR=6.3						
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**10 13 03.2**	**+0.6**
	comp=Z,5.8nm,0.7s,mb4.2,baz=126,slow=8.9,SNR=9.7						
MJAR	**Matsushiro Arr**	**28.73**	**70**	LR	LR	10 25 36.5	
	comp=Z,2μm,18.7s,baz=60,slow=38						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**10 13 51.0**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.1,baz=114,slow=8.5,SNR=5.5						
AKTK	**Aktyubinsk**	**38.87**	**313**	P	**P**	**10 14 46.8**	**+0.3**
AKTO	**Aktyubinsk**	**38.87**	**313**	P	**P**	**10 14 46.8**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.7,baz=120,slow=15,SNR=3.1						
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**10 17 05.2**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=85,slow=7.9,SNR=10						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**10 17 07.5**	**-1.0**
	comp=Z,6.9nm,0.6s,mb4.9,baz=97,slow=7.8,SNR=10						
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**10 17 19.1**	**-0.5**
	comp=Z,2.1nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**10 17 20.4**	**+0.7**
	comp=Z,2.5nm,0.5s,mb4.5,baz=339,slow=7.9,SNR=5.7						
SPITS	**Spitsbergen Ar**	**59.02**	**346**	P	**P**	**10 17 20.4**	**-0.2**
	comp=Z,1.6nm,0.5s,mb4.3,baz=94,slow=9.6,SNR=6.5						
HFS	**Hagfors**	**63.47**	**326**	P	**P**	**10 17 50.6**	**-0.4**
	comp=Z,3.6nm,0.4s,mb4.8,baz=102,slow=6.2,SNR=8.4						
NB2	**NORSAR Subarra**	**64.36**	**327**	P	**P**	**10 17 55.9**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.5,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**10 17 56.1**	**-0.7**
	comp=Z,3.0nm,0.5s,mb4.6,baz=73,slow=6.6,SNR=8.0						
DAVOX	**Davos/Dischmat**	**70.46**	**313**	P	**P**	**10 18 35.7**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.3,baz=132,slow=14,SNR=3.7						
INK	**Inuvik**	**71.89**	**19**	P	**P**	**10 18 43.7**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.3,baz=324,slow=7.5,SNR=9.0						
INK	**Inuvik**	**71.89**	**19**	P	**P**	**10 18 43.7**	**-0.4**
SFJD	**Kangerlussuaq**	**80.02**	**350**	P	**P**	**10 19 29.8**	**-0.6**
	comp=Z,4.0nm,0.5s,mb4.6,baz=43,slow=5.9,SNR=5.6						
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**10 19 37.6**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=328,slow=5.2,SNR=3.8						
QSPA	**South Pole Qui**	**121.19**	**180**	PKP	PKPdf	10 26 12.4	-0.6
	comp=Z,1.5nm,1.0s,baz=258,slow=4.8,SNR=5.9						

IDC ***12*** *10:09:10.2±0.8, 31°.66N×104°.30E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.0/28, mbtmp4.2/11, Error ellipse: s-maj=36.5km s-min=15.4km az=57.0*
NEIC ***12*** *10:09:11.8±0.4, 31°.69N×104°.42E, h10km, mb4.6/1, Error ellipse: s-maj=19.9km s-min=7.5km az=59.0*
BJI ***12*** *10:09:12.8, 31°.74N×104°.62E, h17km, mB4.6/1, mb4.5/7, ML4.3/3, Ms4.4/3, Ms7 4.3/2*
ISCJB ***12*** *10:09:13.3±0.6, 31°.69N±0°.08×104°.52E±0°.07, h33km, mb4.2/10, Error ellipse: s-maj=12.9km s-min=7.6km az=27.1*
ISC 12 10:09:12.6±2.7**, 31°.71N**±0°.09×**104°.42E**±0°.08**, h13**km±16km**, n20, σ0s.82**/21**, mb4.2**/10**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.39**	**354**	*e*Pg	**Pg**	**10 10 36.6**	**-0.2**
LZH				Sg	**Sg**	**10 11 32.6**	**-1.0**
LZH				smax			
	comp=N,480nm,1.1s						
LZH				smax			
	comp=E,390nm,1.0s						
LZH				LR	LR		
	comp=N,4μm,5.5s						
LZH				LR	LR		
	comp=Z,4μm,6.8s						
WHN	**Wuhan**	**8.59**	**95**	P	**Pn**	**10 11 17.4**	**+0.7**
WHN				S	**Sn**	**10 12 51.4**	**-2.0**
BTO	**Baotou**	**9.96**	**25**	*e*P	**Pn**	**10 11 36.7**	**+1.3**
SONM	**Songino Array**	**16.17**	**5**	Pn	**Pn**	**10 12 59.8**	**+0.3**
	baz=176,slow=20,SNR=2.3						
KSRS	**Korea Array**	**20.16**	**67**	P	**P**	**10 13 47.5**	**+0.8**
	comp=Z,5.1nm,0.8s,baz=257,slow=10.0,SNR=6.8						
CN2	**Changchun**	**20.48**	**48**	*e*P	**P**	**10 13 51.7**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK31	**Makanchi Array**	**22.70**	**318**	*e*P	**P**	**10 14 13.9**	**+0.1**
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**10 14 13.4**	**-0.4**
	comp=Z,5.8nm,0.9s,mb4.0,baz=122,slow=12,SNR=8.1						
TKM2	**Tokmak 2**	**25.39**	**304**	*e*P	**P**	**10 14 40.4**	**+0.9**
ZALV	**Zalesovo Beam**	**26.30**	**333**	P	**P**	**10 14 47.7**	**+0.1**
	comp=Z,3.8nm,0.3s,mb4.4,baz=123,slow=9.5,SNR=2.6						
KURK	**Kurchatov**	**26.93**	**322**	P	**P**	**10 14 53.2**	**-0.1**
	comp=Z,4.5nm,0.9s,mb4.0,baz=130,slow=9.1,SNR=9.7						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**10 18 58.7**	**-0.4**
	comp=Z,2.1nm,0.4s,mb4.5,baz=90,slow=7.2,SNR=3.3						
WRAB	**Tennant Creek**	**58.83**	**147**	*e*P	**P**	**10 19 09.9**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.83**	**147**	P	**P**	**10 19 11.3**	**+0.4**
	comp=Z,3.1nm,0.7s,mb4.4,baz=339,slow=7.5,SNR=6.9						
ASAR	**Alice Springs**	**61.87**	**149**	P	**P**	**10 19 31.6**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.2,baz=332,slow=6.4,SNR=6.7						
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	**10 19 46.3**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=74,slow=6.5,SNR=2.6						
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**10 20 38.0**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=347,slow=4.7,SNR=4.8						
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**10 20 38.0**	**-0.2**
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**10 21 26.5**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=327,slow=5.1,SNR=16						
QSPA	**South Pole Qui**	**121.48**	**180**	PKP	PKPdf	10 28 03.9	-0.6
	comp=Z,0.7nm,0.8s,baz=150,slow=3.5,SNR=5.6						

SKO ***12*** *10:11:53.7, 43°.33N×26°.17E, h0km, M4.3, ML5.0*
MOS ***12*** *10:11:54.5±1.2, 43°.26N×26°.03E, h12km, mb4.4/6, Error ellipse: s-maj=4.0km s-min=3.4km az=105.5*
SOF ***12*** *10:11:54.7, 43°.25N×26°.05E, h11km, MD4.2*

CSEM **12** *10:11:55.8±0.1, 43°.27N×26°.03E, h10km, MD4.2, Error ellipse: s-maj=2.0km s-min=1.7km az=38.0*
LDG **12** *10:11:55.1±0.1, 43°.28N×25°.95E, h12km, Ml3.7/6, Error ellipse: s-maj=3.6km s-min=3.2km az=154.0*
PRU **12** *10:11:55.0, 43°.22N×26°.04E, h6km, M4.1*
NEIC **12** *10:11:56.3, 43°.20N×25°.94E, h16km, mb4.1/6, ML4.5(BUC), After BUC.*
THE **12** *10:11:56.4, 43°.23N×26°.16E, h14km±3km, ML4.9/2, Error ellipse: s-maj=5.3km s-min=1.2km az=51.0*
PDG **12** *10:11:56.1±0.6, 43°.26N×26°.03E, h23km±1km, ML4.2/10, Error ellipse: s-maj=0.8km s-min=1.5km az=0.0*
IDC **12** *10:11:58.3±2.3, 43°.51N×25°.87E, h22km±13km, mb3.8/13, mb1 3.8/20, mb1mx3.7/33, mbtmp3.8/20, ML3.8/6, Error ellipse: s-maj=15.2km s-min=10.4km az=142.0*
ISC 12 10:11:55.8±0.3, **43°.26N**±0°.01×**26°.04E**±0°.01, **h10**km±2km, **n566**, σ1**§16**/674, **mb3.9**/16, **28C-50D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZH	**Strazhica**	**0.08**	**273**	Pg	**Pg**	**10 11 57.8**	**-0.3**
SZH	**Strazhica**	**0.08**	**273**	Pg	**Pg**	**10 11 57.8**	**-0.3**
PVL	**Pavlikeni**	**0.52**	**265**	Pg	**Pg**	**10 12 08.5**	**+2.6**
ZIMR		**0.63**	**309**	P	**Pg**	**10 12 08.4**	**+0.4**
ZIMR				S	**Sg**	**10 12 17.6**	**+1.3**
ZIMR		**0.63**	**309**	⇑*i*P	**Pg**	**10 12 08.4**	**+0.4**
ZIMR		**0.63**	**309**	S	**Sg**	**10 12 17.6**	**+1.3**
JMB	**Yambol**	**0.89**	**153**	P	**Pg**	**10 12 13.0**	**0.0**
JMB	**Yambol**	**0.89**	**153**	P	**Pg**	**10 12 12.7**	**-0.3**
JMB				S	**Sg**	**10 12 24.5**	**0.0**
JMB	**Yambol**	**0.89**	**153**	Pg	**Pg**	**10 12 12.3**	**-0.7**
JMB	**Yambol**	**0.89**	**153**	Pg	**Pg**	**10 12 12.3**	**-0.7**
JMB	**Yambol**	**0.89**	**153**	P	**Pg**	**10 12 13.0**	**0.0**
JMB				S	**Sg**	**10 12 24.5**	**0.0**
PRD	**Provadia**	**1.00**	**93**	Pg	**Pg**	**10 12 13.8**	**-1.2**
PRD	**Provadia**	**1.00**	**93**	Pg	**Pg**	**10 12 13.8**	**-1.2**
BUC1	**Bucharest**	**1.08**	**360**	⇓P	**Pg**	**10 12 16.5**	**-0.2**
BUC1				S	**Sg**	**10 12 32.3**	**+1.5**
BUC1	**Bucharest**	**1.08**	**360**	P	**Pg**	**10 12 16.4**	**-0.3**
BUC1				S	**Sg**	**10 12 32.3**	**+1.5**
BUC1	**Bucharest**	**1.08**	**360**	⇓*i*P	**Pg**	**10 12 16.5**	**-0.2**
BUC1	**Bucharest**	**1.08**	**360**	P	**Pg**	**10 12 16.5**	**-0.2**
BUC1				S	**Sg**	**10 12 32.3**	**+1.5**
DIM	**Dimitrovgrad**	**1.27**	**197**	P	**Pn**	**10 12 19.9**	**+0.3**
DIM	**Dimitrovgrad**	**1.27**	**197**	P	**Pn**	**10 12 19.9**	**+0.3**
EDRB	**Edirne**	**1.51**	**160**	*e*PN	**Pn**	**10 12 23.1**	**+0.2**
EDRB	**Edirne**	**1.51**	**160**	*e*Pn	**Pn**	**10 12 23.1**	**+0.2**
PLD	**Plovdiv**	**1.52**	**221**	P	**Pn**	**10 12 22.2**	**-0.9**
PLD	**Plovdiv**	**1.52**	**221**	P	**Pn**	**10 12 22.3**	**-0.8**
PLD				S	**Sn**	**10 12 43.7**	**+0.8**
PLD	**Plovdiv**	**1.52**	**221**	Pg	**Pg**	**10 12 23.7**	**-1.3**
PLD	**Plovdiv**	**1.52**	**221**	P	**Pn**	**10 12 22.3**	**-0.8**
PLD	**Plovdiv**	**1.52**	**221**	Pg	**Pg**	**10 12 23.7**	**-1.3**
PLD				S	**Sn**	**10 12 43.7**	**+0.8**
PGB	**Panagyurishte**	**1.55**	**243**	Pg	**Pg**	**10 12 25.5**	**-0.1**
PGB	**Panagyurishte**	**1.55**	**243**	Pg	**Pg**	**10 12 25.5**	**-0.1**
PSN	**Preselentsi**	**1.62**	**74**	Pg	**Pg**	**10 12 23.7**	**-3.1**
KDZ	**Kurdzhali**	**1.68**	**196**	P	**Pn**	**10 12 25.4**	**+0.2**
KDZ				Pg	**Pg**	**10 12 27.6**	**-0.4**
KDZ	**Kurdzhali**	**1.68**	**196**	P	**Pn**	**10 12 25.4**	**+0.2**
MPEP	**Malo Peshtene**	**1.68**	**274**	P	**Pn**	**10 12 25.2**	**-0.1**
MPEP				Pg	**Pg**	**10 12 27.7**	**-0.4**
CVD	**Cernavoda**	**1.79**	**53**	⇓P	**Pn**	**10 12 27.6**	**+0.9**
CVD				S	**Sn**	**10 12 51.7**	**+2.2**
CVD	**Cernavoda**	**1.79**	**53**	P	**Pn**	**10 12 27.5**	**+0.8**
CVD				S	**Sn**	**10 12 51.7**	**+2.2**
CVD	**Cernavoda**	**1.79**	**53**	⇓*i*P	**Pn**	**10 12 27.6**	**+0.9**
CVD	**Cernavoda**	**1.79**	**53**	P	**Pn**	**10 12 27.5**	**+0.8**
CVD				S	**Sn**	**10 12 51.7**	**+2.2**
RZN	**Rozhen**	**1.85**	**212**	P	**Pn**	**10 12 27.4**	**-0.3**
RZN	**Rozhen**	**1.85**	**212**	P	**Pn**	**10 12 27.4**	**-0.3**
ISR	**Istrita**	**1.89**	**11**	⇓*i*P	**Pn**	**10 12 30.0**	**+1.8**
ISR	**Istrita**	**1.89**	**11**	P	**Pn**	**10 12 30.0**	**+1.8**
HARR	**Harsova**	**1.97**	**43**	⇓*i*P	**Pn**	**10 12 29.8**	**+0.5**
HARR	**Harsova**	**1.97**	**43**	P	**Pn**	**10 12 29.8**	**+0.5**
SOF	**Sofiya**	**2.07**	**255**	P	**Pn**	**10 12 34.8**	**+4.2**
TIRR	**Tirgusor**	**2.09**	**54**	⇓P	**Pn**	**10 12 32.1**	**+1.1**
TIRR				S	**Sn**	**10 12 58.7**	**+1.7**
TIRR	**Tirgusor**	**2.09**	**54**	P	**Pn**	**10 12 30.2**	**-0.8**
TIRR				S	**Sn**	**10 12 58.6**	**+1.6**
TIRR	**Tirgusor**	**2.09**	**54**	⇓*i*P	**Pn**	**10 12 32.1**	**+1.1**
TIRR	**Tirgusor**	**2.09**	**54**	P	**Pn**	**10 12 32.1**	**+1.1**
TIRR				S	**Sn**	**10 12 58.6**	**+1.6**
RDO	**Rodhopi**	**2.15**	**190**	*e*P	**Pn**	**10 12 31.6**	**-0.1**
RDO	**Rodhopi**	**2.15**	**190**	P	**Pn**	**10 12 31.4**	**-0.3**
RDO	**Rodhopi**	**2.15**	**190**	P	**Pn**	**10 12 31.6**	**-0.1**
RDO				S	**Sn**	**10 12 58.6**	**+0.2**
RDO	**Rodhopi**	**2.15**	**190**	P	**Pn**	**10 12 31.6**	**-0.1**
RDO				S	**Sn**	**10 12 58.6**	**+0.2**
VTS	**Vitosha**	**2.19**	**253**	*e*P	**Pn**	**10 12 33.4**	**+1.2**
VTS	**Vitosha**	**2.19**	**253**	P	**Pn**	**10 12 32.3**	**+0.1**
VTS	**Vitosha**	**2.19**	**253**	P	**Pn**	**10 12 32.5**	**+0.3**
VTS				S	**Sn**	**10 13 03.0**	**+3.6**
VTS	**Vitosha**	**2.19**	**253**	P	**Pn**	**10 12 33.3**	**+1.1**
VTS	**Vitosha**	**2.19**	**253**	P	**Pn**	**10 12 32.3**	**+0.1**
VTS				S	**Sn**	**10 13 03.0**	**+3.6**
MLR	**Muntele Rosu**	**2.23**	**358**	Pn	**Pn**	**10 12 32.2**	**-0.6**
	123nm,0.3s,baz=201,slow=5.7,SNR=551						
MLR				Pg	**Pg**	**10 12 36.4**	**-2.1**
	276nm,0.3s,baz=166,slow=8.3,SNR=555						
MLR				Lg		10 13 06.8	
	492nm,0.3s,baz=69,slow=17,SNR=12						
MLR	**Muntele Rosu**	**2.23**	**358**	⇓P	**Pn**	**10 12 35.5**	**+2.7**
MLR				S	**Sn**	**10 13 02.2**	**+1.8**
MLR	**Muntele Rosu**	**2.23**	**358**	P	**Pn**	**10 12 33.2**	**+0.4**
MLR	**Muntele Rosu**	**2.23**	**358**	⇓*i*P	**Pn**	**10 12 35.5**	**+2.7**
MLR	**Muntele Rosu**	**2.23**	**358**	P	**Pn**	**10 12 33.2**	**+0.4**
MLR				S	**Sn**	**10 13 02.2**	**+1.8**
VOIR		**2.29**	**342**	⇑P	**Pn**	**10 12 34.4**	**+0.8**
VOIR				S	**Sn**	**10 13 04.6**	**+2.7**
VOIR		**2.29**	**342**	P	**Pn**	**10 12 33.3**	**-0.3**
VOIR		**2.29**	**342**	⇑*i*P	**Pn**	**10 12 34.4**	**+0.8**
VOIR		**2.29**	**342**	P	**Pn**	**10 12 33.3**	**-0.3**
VOIR				S	**Sn**	**10 13 04.6**	**+2.7**
ALN	**Alexandroupoli**	**2.36**	**180**	*e*P	**Pn**	**10 12 35.6**	**+0.9**
ALN	**Alexandroupoli**	**2.36**	**180**	P	**Pn**	**10 12 34.1**	**-0.6**
ALN	**Alexandroupoli**	**2.36**	**180**	P	**Pn**	**10 12 34.6**	**-0.1**
ALN				S	**Sn**	**10 13 03.2**	**-0.6**
ALN	**Alexandroupoli**	**2.36**	**180**	P	**Pn**	**10 12 34.6**	**-0.1**
ALN				S	**Sn**	**10 13 03.2**	**-0.6**
MMB	**Musomiste**	**2.39**	**226**	P	**Pn**	**10 12 37.4**	**+2.3**
MMB	**Musomiste**	**2.39**	**226**	P	**Pn**	**10 12 37.4**	**+2.3**
BRD	**Bordesti**	**2.40**	**17**	⇓*i*P	**Pn**	**10 12 38.6**	**+3.4**
BRD	**Bordesti**	**2.40**	**17**	⇓*i*P	**Pn**	**10 12 38.6**	**+3.4**
CRLT	**Corlu**	**2.48**	**149**	*e*PN	**Pn**	**10 12 36.0**	**-0.2**
CRLT	**Corlu**	**2.48**	**149**	*e*Pn	**Pn**	**10 12 36.0**	**-0.3**
ZAPS	**Zavoj**	**2.49**	**271**	⇓*i*Pn	**Pn**	**10 12 36.6**	**+0.2**
NVR	**Nevrokopi**	**2.50**	**221**	*e*P	**Pn**	**10 12 37.6**	**+1.0**
ENEZ	**Enez**	**2.53**	**178**	*e*PN	**Pn**	**10 12 37.9**	**+0.9**
ENEZ	**Enez**	**2.53**	**178**	*e*Pn	**Pn**	**10 12 37.9**	**+1.0**
TKR	**Tekirdag**	**2.53**	**153**	*e*PN	**Pn**	**10 12 37.0**	**0.0**
TKR	**Tekirdag**	**2.53**	**153**	*e*Pn	**Pn**	**10 12 37.0**	**0.0**
KKB	**Krupnik**	**2.59**	**238**	P	**Pn**	**10 12 38.7**	**+0.9**
KKB	**Krupnik**	**2.59**	**238**	P	**Pn**	**10 12 38.7**	**+0.9**
SLVT	**Silivri**	**2.59**	**141**	*e*PN	**Pn**	**10 12 37.4**	**-0.4**
SLVT	**Silivri**	**2.59**	**141**	*e*Pn	**Pn**	**10 12 37.4**	**-0.4**
ODB	**Odobesti**	**2.61**	**16**	⇑*i*P	**Pn**	**10 12 35.7**	**-2.4**
ODB	**Odobesti**	**2.61**	**16**	⇑*i*P	**Pn**	**10 12 35.7**	**-2.4**
ODB				*e*S	**Sn**	**10 13 11.6**	**+1.7**
PLOR	**Plostina**	**2.62**	**9**	⇓P	**Pn**	**10 12 39.8**	**+1.5**
PLOR	**Plostina**	**2.62**	**9**	⇓*i*P	**Pn**	**10 12 39.8**	**+1.5**
PLOR	**Plostina**	**2.62**	**9**	P	**Pn**	**10 12 39.8**	**+1.5**
VRI	**Vrincioaia**	**2.65**	**10**	⇓P	**Pn**	**10 12 40.2**	**+1.6**
VRI				S	**Sn**	**10 13 14.0**	**+3.2**
VRI	**Vrincioaia**	**2.65**	**10**	P	**Pn**	**10 12 41.0**	**+2.4**
VRI	**Vrincioaia**	**2.65**	**10**	⇓*i*P	**Pn**	**10 12 40.2**	**+1.6**
VRI	**Vrincioaia**	**2.65**	**10**	P	**Pn**	**10 12 40.2**	**+1.6**
VRI				S	**Sn**	**10 13 14.0**	**+3.2**
SART	**Tekirdag**	**2.71**	**161**	⇑*i*P	**Pn**	**10 12 39.6**	**+0.1**
SART	**Tekirdag**	**2.71**	**161**	*i*P	**Pn**	**10 12 39.6**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.71**	**161**	*e*PN	**Pn**	**10 12 39.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.71**	**161**	*e*Pn	**Pn**	**10 12 39.2**	**-0.3**
CTKS	**Kestanelik-??a**	**2.73**	**137**	*e*PN	**Pn**	**10 12 38.8**	**-1.0**
CTKS	**Kestanelik-??a**	**2.73**	**137**	*e*Pn	**Pn**	**10 12 38.8**	**-0.9**
ELBA	**Catalca**	**2.76**	**139**	⇓*i*P	**Pn**	**10 12 40.0**	**-0.1**
ELBA	**Catalca**	**2.76**	**139**	*i*P	**Pn**	**10 12 40.0**	**-0.2**
TLCR		**2.77**	**45**	⇓P	**Pn**	**10 12 41.2**	**+0.9**
TLCR				S	**Sn**	**10 13 18.0**	**+4.2**
TLCR		**2.77**	**45**	P	**Pn**	**10 12 41.1**	**+0.8**
TLCR				S	**Sn**	**10 13 17.9**	**+4.1**
TLCR		**2.77**	**45**	⇓*i*P	**Pn**	**10 12 41.2**	**+0.9**
TLCR		**2.77**	**45**	S	**Sn**	**10 13 18.0**	**+4.2**
TLCR		**2.77**	**45**	P	**Pn**	**10 12 41.1**	**+0.8**
TLCR				S	**Sn**	**10 13 17.9**	**+4.1**
SRS	**Serrai**	**2.81**	**221**	P	**Pn**	**10 12 40.5**	**-0.4**
SRS	**Serrai**	**2.81**	**221**	P	**Pn**	**10 12 41.2**	**+0.3**
SRS	**Serrai**	**2.81**	**221**	P	**Pn**	**10 12 40.5**	**-0.4**
DJES	**Djerdap**	**2.90**	**300**	P	**Pn**	**10 12 39.3**	**-2.8**
BGKT	**Bogazkoy**	**2.91**	**135**	*e*PN	**Pn**	**10 12 42.1**	**-0.1**
BGKT	**Bogazkoy**	**2.91**	**135**	*e*Pn	**Pn**	**10 12 42.1**	**-0.1**
LPK	**Lapseki**	**2.94**	**169**	*e*P	**Pn**	**10 12 43.3**	**+0.7**
LPK	**Lapseki**	**2.94**	**169**	*e*P	**Pn**	**10 12 43.3**	**+0.7**
NISS		**2.99**	**274**	*i*Pn	**Pn**	**10 12 43.7**	**+0.4**
KLYT	**Kilyos**	**3.00**	**131**	*e*PN	**Pn**	**10 12 42.9**	**-0.6**
KLYT	**Kilyos**	**3.00**	**131**	*e*Pn	**Pn**	**10 12 42.9**	**-0.5**
GADA	**Gvkgeada**	**3.07**	**182**	*e*P	**Pn**	**10 12 44.8**	**+0.3**
GADA	**Gvkgeada**	**3.07**	**182**	*e*P	**Pn**	**10 12 44.8**	**+0.4**
MDB	**Medias**	**3.11**	**338**	P	**Pn**	**10 12 46.2**	**+1.2**
MDB	**Medias**	**3.11**	**338**	⇓*i*P	**Pn**	**10 12 46.3**	**+1.3**
MDB	**Medias**	**3.11**	**338**	P	**Pn**	**10 12 46.2**	**+1.2**
BARS	**Barje**	**3.13**	**263**	P	**Pn**	**10 12 45.7**	**+0.5**
BARS	**Barje**	**3.13**	**263**	P	**Pn**	**10 12 45.7**	**+0.5**
SOH	**Sokhos**	**3.15**	**220**	*e*P	**Pn**	**10 12 46.0**	**+0.4**
SOH	**Sokhos**	**3.15**	**220**	P	**Pn**	**10 12 45.9**	**+0.3**
SOH	**Sokhos**	**3.15**	**220**	P	**Pn**	**10 12 45.9**	**+0.3**
GZR	**Gura Zlata**	**3.17**	**313**	P	**Pn**	**10 12 44.7**	**-1.0**
GZR	**Gura Zlata**	**3.17**	**313**	⇑*i*P	**Pn**	**10 12 44.9**	**-0.8**
GZR	**Gura Zlata**	**3.17**	**313**	P	**Pn**	**10 12 44.7**	**-1.0**
GZR				S	**Sn**	**10 13 22.7**	**-0.8**
EDC	**Edincik**	**3.22**	**154**	*e*P	**Pn**	**10 12 47.0**	**+0.6**
EDC	**Edincik**	**3.22**	**154**	*e*P	**Pn**	**10 12 47.0**	**+0.6**
VAY	**Valandovo**	**3.22**	**234**	P	**Pn**	**10 12 46.8**	**+0.3**
VAY	**Valandovo**	**3.22**	**234**	*e*Pn	**Pn**	**10 12 47.2**	**+0.7**
VAY				*e*Sg	**Sg**	**10 13 38.6**	**-0.8**
VAY				*e*Lg		10 13 39.4	
	comp=E,3μm,0.8s						
VAY				*e*Lg		10 13 42.9	
	comp=N,2μm,0.8s						
VAY	**Valandovo**	**3.22**	**234**	P	**Pn**	**10 12 47.1**	**+0.6**
VAY	**Valandovo**	**3.22**	**234**	P	**Pn**	**10 12 46.8**	**+0.3**
VAY	**Valandovo**	**3.22**	**234**	*e*Pn	**Pn**	**10 12 47.1**	**+0.6**
VAY				*e*Sg	**Sg**	**10 13 38.5**	**-0.8**
VAY				*e*Lg		10 13 39.3	
	comp=N,3μm,0.8s						
STIP	**Stip**	**3.25**	**243**	*e*Pn	**Pn**	**10 12 47.5**	**+0.6**
STIP	**Stip**	**3.25**	**243**	P	**Pn**	**10 12 47.3**	**+0.4**
STIP	**Stip**	**3.25**	**243**	P	**Pn**	**10 12 47.3**	**+0.4**
OUR	**Ouranopolis**	**3.31**	**208**	P	**Pn**	**10 12 46.9**	**-0.8**
OUR	**Ouranopolis**	**3.31**	**208**	P	**Pn**	**10 12 46.9**	**-0.8**
LOS	**Limnos**	**3.40**	**193**	P	**Pn**	**10 12 48.4**	**-0.6**
LOS	**Limnos**	**3.40**	**193**	P	**Pn**	**10 12 48.4**	**-0.6**
BOZC	**Bozcaada**	**3.42**	**180**	⇑*i*P	**Pn**	**10 12 49.4**	**+0.2**
LIA	**Limnos Island**	**3.42**	**191**	*e*P	**Pn**	**10 12 49.0**	**-0.3**
LIA	**Limnos Island**	**3.42**	**191**	P	**Pn**	**10 12 48.9**	**-0.4**
LIA	**Limnos Island**	**3.42**	**191**	P	**Pn**	**10 12 48.9**	**-0.4**
EZN	**Ezine**	**3.44**	**176**	*e*P	**Pn**	**10 12 50.1**	**+0.6**
EZN	**Ezine**	**3.44**	**176**	*e*P	**Pn**	**10 12 50.1**	**+0.6**
DEV	**Deva**	**3.45**	**321**	⇓*i*P	**Pn**	**10 12 49.9**	**+0.3**
DEV	**Deva**	**3.45**	**321**	P	**Pn**	**10 12 49.9**	**+0.3**
HORT	**Hortiatis**	**3.45**	**220**	P	**Pn**	**10 12 49.7**	**+0.1**
HORT	**Hortiatis**	**3.45**	**220**	P	**Pn**	**10 12 49.9**	**+0.3**
HORT	**Hortiatis**	**3.45**	**220**	P	**Pn**	**10 12 49.7**	**+0.1**
PLG	**Polygyros**	**3.48**	**215**	*e*P	**Pn**	**10 12 50.2**	**+0.2**
PLG	**Polygyros**	**3.48**	**215**	P	**Pn**	**10 12 50.1**	**+0.1**
PLG	**Polygyros**	**3.48**	**215**	P	**Pn**	**10 12 50.1**	**+0.1**
THE	**Thessaloniki**	**3.49**	**222**	P	**Pn**	**10 12 50.4**	**+0.2**
THE	**Thessaloniki**	**3.49**	**222**	P	**Pn**	**10 12 50.5**	**+0.3**
THE	**Thessaloniki**	**3.49**	**222**	P	**Pn**	**10 12 50.4**	**+0.2**
LEOM	**Leova**	**3.57**	**25**	⇓P	**Pn**	**10 12 52.0**	**+0.7**
LEOM	**Leova**	**3.57**	**25**	⇓*i*P	**Pn**	**10 12 52.0**	**+0.7**
LEOM	**Leova**	**3.57**	**25**	P	**Pn**	**10 12 52.0**	**+0.7**
LEOM				S	**Sn**	**10 13 33.0**	**-0.6**
SKO	**Skopje**	**3.63**	**251**	P	**Pn**	**10 12 53.1**	**+1.0**
SKO	**Skopje**	**3.63**	**251**	P	**Pn**	**10 12 53.1**	**+1.0**
SVIS	**Svilajnac**	**3.64**	**288**	P	**Pn**	**10 12 51.2**	**-1.0**
SVIS	**Svilajnac**	**3.64**	**288**	P	**Pn**	**10 12 51.2**	**-1.0**
YLV	**Yalova**	**3.67**	**136**	*e*P	**Pn**	**10 12 52.8**	**+0.1**
YLV	**Yalova**	**3.67**	**136**	*e*P	**Pn**	**10 12 52.8**	**+0.2**
GEMT	**Gemlik**	**3.68**	**139**	*e*P	**Pn**	**10 12 52.5**	**-0.3**
GEMT	**Gemlik**	**3.68**	**139**	*e*P	**Pn**	**10 12 52.5**	**-0.2**
BALY	**Balya**	**3.71**	**161**	⇑*i*P	**Pn**	**10 12 53.8**	**+0.6**
BALY	**Balya**	**3.71**	**161**	*i*P	**Pn**	**10 12 53.8**	**+0.5**
PAIG	**Paliouri**	**3.77**	**209**	P	**Pn**	**10 12 53.5**	**-0.6**
PAIG	**Paliouri**	**3.77**	**209**	P	**Pn**	**10 12 54.1**	**0.0**
PAIG	**Paliouri**	**3.77**	**209**	P	**Pn**	**10 12 54.1**	**0.0**
BALB	**Balikesir**	**3.88**	**158**	*e*P	**Pn**	**10 12 56.1**	**+0.6**
BALB	**Balikesir**	**3.88**	**158**	*e*P	**Pn**	**10 12 56.1**	**+0.6**
GRUS	**Gruza**	**3.92**	**281**	P	**Pn**	**10 12 55.5**	**-0.6**
GRUS	**Gruza**	**3.92**	**281**	P	**Pn**	**10 12 55.5**	**-0.6**
BZS	**Buzias**	**3.95**	**308**	P	**Pn**	**10 12 55.1**	**-1.4**
BZS	**Buzias**	**3.95**	**308**	⇓*i*P	**Pn**	**10 12 54.9**	**-1.5**
BZS	**Buzias**	**3.95**	**308**	P	**Pn**	**10 12 55.1**	**-1.3**
ADVT	**Abdulvahap**	**3.95**	**134**	*e*P	**Pn**	**10 12 56.1**	**-0.4**
ADVT	**Abdulvahap**	**3.95**	**134**	*e*P	**Pn**	**10 12 56.1**	**-0.4**
PRK	**Paraskevi**	**4.02**	**177**	*e*P	**Pn**	**10 12 57.5**	**+0.1**
PRK	**Paraskevi**	**4.02**	**177**	P	**Pn**	**10 12 57.3**	**-0.1**
PRK	**Paraskevi**	**4.02**	**177**	P	**Pn**	**10 12 57.3**	**-0.1**
SIGR	**SIGRI**	**4.05**	**182**	P	**Pn**	**10 12 57.8**	**-0.1**
SIGR				S	**Sn**	**10 13 44.1**	**-1.3**
SIGR	**SIGRI**	**4.05**	**182**	P	**Pn**	**10 12 57.8**	**-0.1**
SIGR				S	**Sn**	**10 13 44.1**	**-1.3**
IAS	**Iasi**	**4.08**	**15**	⇓*i*P	**Pg**	**10 13 13.8**	**-0.1**
IAS	**Iasi**	**4.08**	**15**	S	**Sg**	**10 14 05.9**	**-0.7**
DURS	**Dursunbey**	**4.09**	**153**	⇑*i*P	**Pn**	**10 12 58.9**	**+0.5**
DURS	**Dursunbey**	**4.09**	**153**	*i*P	**Pn**	**10 12 58.9**	**+0.5**
LIT	**Litokhoron**	**4.13**	**221**	*e*P	**Pn**	**10 12 58.7**	**-0.3**
LIT	**Litokhoron**	**4.13**	**221**	P	**Pn**	**10 12 58.5**	**-0.5**
LIT				S	**Sn**	**10 13 48.3**	**+1.0**
LIT	**Litokhoron**	**4.13**	**221**	P	**Pn**	**10 12 58.5**	**-0.5**
LIT				S	**Sn**	**10 13 48.3**	**+1.0**
DST	**Dursunbey**	**4.14**	**151**	*e*P	**Pn**	**10 12 59.8**	**+0.6**
DST	**Dursunbey**	**4.14**	**151**	*e*P	**Pn**	**10 12 59.8**	**+0.7**
BIA	**Bitola**	**4.16**	**239**	P	**Pn**	**10 13 00.3**	**+0.9**
BIA	**Bitola**	**4.16**	**239**	*e*Pn	**Pn**	**10 12 58.3**	**-1.1**
BIA	**Bitola**	**4.16**	**239**	P	**Pn**	**10 12 59.8**	**+0.4**
BIA	**Bitola**	**4.16**	**239**	*e*Pn	**Pn**	**10 12 58.3**	**-1.1**
BIA	**Bitola**	**4.16**	**239**	P	**Pn**	**10 12 59.8**	**+0.4**
CAVI	**Cavuskoy**	**4.18**	**136**	*e*P	**Pn**	**10 12 59.8**	**+0.1**
CAVI	**Cavuskoy**	**4.18**	**136**	*e*P	**Pn**	**10 12 59.8**	**+0.2**
TRUS	**Trudelj**	**4.19**	**285**	⇓*i*Pn	**Pn**	**10 12 58.2**	**-1.6**
KIS	**Kishinev**	**4.22**	**27**	*e*P	**Pn**	**10 13 06.0**	**+5.8**
KIS				*i*S	**Sn**	**10 13 55.0**	**+5.5**
	comp=N,1μm,1.0s						
KIS				*i*Li		10 14 03.0	
KIS				*i*LQ		10 14 12.0	
KIS	**Kishinev**	**4.22**	**27**	*e*P	**Pn**	**10 13 06.0**	**+5.8**
KIS				*i*S	**Sn**	**10 13 55.0**	**+5.5**
KIS	**Kishinev**	**4.22**	**27**	⇑*i*P	**Pg**	**10 13 16.7**	**+0.1**
KIS	**Kishinev**	**4.22**	**27**	S	**Sg**	**10 14 05.9**	**-5.4**
DRGR		**4.25**	**327**	P	**Pn**	**10 12 59.9**	**-0.6**
DRGR		**4.25**	**327**	⇓*i*P	**Pn**	**10 13 00.5**	**0.0**
DRGR		**4.25**	**327**	P	**Pn**	**10 13 00.5**	**0.0**
FNA	**Florina**	**4.27**	**236**	P	**Pn**	**10 13 01.9**	**+1.0**
FNA	**Florina**	**4.27**	**236**	P	**Pn**	**10 13 02.2**	**+1.3**
FNA	**Florina**	**4.27**	**236**	P	**Pn**	**10 13 01.9**	**+1.0**
BEO	**Beograd**	**4.30**	**293**	P	**Pn**	**10 13 00.0**	**-1.3**
KZN	**Kozani**	**4.35**	**229**	*e*P	**Pn**	**10 13 01.1**	**-0.9**
KZN	**Kozani**	**4.35**	**229**	P	**Pn**	**10 13 02.0**	**0.0**
KZN	**Kozani**	**4.35**	**229**	P	**Pn**	**10 13 02.0**	**0.0**
GPA	**Golpazari**	**4.36**	**132**	*e*P	**Pn**	**10 13 02.5**	**+0.3**
GPA	**Golpazari**	**4.36**	**132**	*e*P	**Pn**	**10 13 02.5**	**+0.3**
GULT	**Gulveren**	**4.38**	**129**	*e*P	**Pn**	**10 13 02.0**	**-0.3**
GULT	**Gulveren**	**4.38**	**129**	*e*P	**Pn**	**10 13 02.0**	**-0.4**
BURAR	**Bucovina Array**	**4.39**	**353**	P	**Pn**	**10 13 03.7**	**+1.2**
BURAR	**Bucovina Array**	**4.39**	**353**	⇑*i*P	**Pn**	**10 13 03.9**	**+1.4**
BURAR	**Bucovina Array**	**4.39**	**353**	P	**Pn**	**10 13 03.7**	**+1.2**
AOS	**Alonnisos**	**4.40**	**202**	P	**Pn**	**10 13 01.9**	**-0.8**
AOS	**Alonnisos**	**4.40**	**202**	P	**Pn**	**10 13 01.9**	**-0.8**
BUR08	**Bucovina Ar. S**	**4.42**	**353**	*e*Pn	**Pn**	**10 13 03.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**4.42**	**353**	*e*Pn	**Pn**	**10 13 03.6**	**+0.6**
PHP	**Peshkopia**	**4.43**	**251**	*e*P	**Pg**	**10 13 27.2**	**+6.5**
XOR	**Xorichti**	**4.45**	**210**	P	**Pn**	**10 13 02.8**	**-0.5**
XOR	**Xorichti**	**4.45**	**210**	P	**Pn**	**10 13 02.6**	**-0.7**
XOR				S	**Sn**	**10 13 54.3**	**-0.8**
XOR	**Xorichti**	**4.45**	**210**	P	**Pn**	**10 13 02.8**	**-0.5**
XOR				S	**Sn**	**10 13 54.3**	**-0.8**
OHR	**Ohrid**	**4.45**	**243**	P	**Pn**	**10 13 03.9**	**+0.6**
OHR	**Ohrid**	**4.45**	**243**	*e*Pn	**Pn**	**10 13 03.9**	**+0.5**
OHR	**Ohrid**	**4.45**	**243**	P	**Pn**	**10 13 04.0**	**+0.7**
OHR	**Ohrid**	**4.45**	**243**	*e*Pn	**Pn**	**10 13 03.8**	**+0.5**
KDZE	**Karadeniz Ereo**	**4.46**	**114**	*e*P	**Pn**	**10 13 02.9**	**-0.5**
KDZE	**Karadeniz Ereo**	**4.46**	**114**	*e*P	**Pn**	**10 13 02.9**	**-0.6**
DIVS	**Divibare**	**4.47**	**283**	⇓*i*Pn	**Pn**	**10 13 03.0**	**-0.6**
BCI	**Bajram Curri**	**4.48**	**261**	*e*P	**Pg**	**10 13 25.5**	**+3.8**
NEO	**Neokhori**	**4.49**	**209**	*e*P	**Pn**	**10 13 03.4**	**-0.5**
PVY	**Plav**	**4.50**	**264**	⇓*i*Pn	**Pn**	**10 13 04.9**	**+0.8**
PVY				*e*Sn	**Sn**	**10 13 56.1**	**-0.5**
PVY	**Plav**	**4.50**	**264**	⇓

BRTR Keskin Array B 6.71 119 Pn **Pn 10 13 34.0 -0.5**
comp=E,3.3nm,0.3s,baz=295,slow=12,SNR=52
BRTR Sn **Sn 10 14 46.5 -4.4**
comp=E,1.8nm,0.3s,baz=294,slow=16,SNR=6.0
BRTR Keskin Array B 6.71 119 P **Pn 10 13 34.0 -0.4**
PKSG 6.79 310⇑ *e*P **Pn 10 13 34.0 -1.5**
ITM Ithomi 6.84 209 *e*P **Pn 10 13 41.2 +5.0**
FEO Feodosiya 6.95 72 *e*P **Pn 10 13 38.6 +0.9**
FEO *e*S **Sn 10 14 55.4 -1.4**
FEO Feodosiya 6.95 72 *e*P **Pn 10 13 38.6 +0.9**
FEO *e*S **Sn 10 14 55.4 -1.4**
STHS Stebnicka Huta 6.99 333 *e*Pn **Pn 10 13 38.8 +0.6**
STHS *e*Sn **Sn 10 14 47.9 -10**
STHS *e*Sg **Sg 10 15 48.5 +8.4**
STHS Stebnicka Huta 6.99 333 *e*PN **Pn 10 13 38.8 +0.6**
STHS *e*SN **Sn 10 14 47.8 -10**
STHS *e*SG **Sg 10 15 48.5 +8.4**
STHS Stebnicka Huta 6.99 333 *e*P **Pn 10 13 38.8 +0.6**
CORM Corum 7.13 113 *e*P **Pn 10 13 39.5 -0.6**
CORM Corum 7.13 113 *e*P **Pn 10 13 39.5 -0.6**
VYHS Vyhne 7.25 319 *e*P **Pn 10 13 41.6 -0.2**
VYHS Vyhne 7.25 319 *e*PN **Pn 10 13 41.6 -0.2**
VYHS Vyhne 7.25 319 *e*P **Pn 10 13 41.6 -0.2**
LIKS Likavka 7.53 323 *e*P **Pn 10 13 46.5 +0.9**
LIKS Likavka 7.53 323 *e*PN **Pn 10 13 46.5 +0.9**
LIKS Likavka 7.53 323 *e*P **Pn 10 13 46.5 +0.9**
AKASG Malin Array Be 7.75 15 Pn **Pn 10 13 44.8 -3.9**
comp=E,6.3nm,0.3s,baz=199,slow=11,SNR=17
AKASG Sn **Sn 10 15 08.2 -8.3**
comp=E,11nm,0.3s,baz=200,slow=21,SNR=6.0
AKASG Lg 10 15 59.7
comp=E,12nm,0.3s,baz=198,slow=28,SNR=5.3
AKASG Malin Array Be 7.75 15 Pn **Pn 10 13 44.8 -3.9**
AKASG Sn **Sn 10 15 08.2 -8.3**
AKASG Lg 10 15 59.7
AKBB Malin Array Si 7.75 15 *e*P **Pn 10 13 48.6 -0.1**
AKBB Malin Array Si 7.75 15 *e*P **Pn 10 13 48.6 -0.1**
KARP Karpathos 7.75 173 *e*P **Pn 10 13 50.5 +1.7**
SMOL Smolenice 7.98 314 *e*P **Pn 10 13 54.4 +2.6**
SMOL Smolenice 7.98 314 *e*PN **Pn 10 13 54.4 +2.6**
IDI Anoyia 8.01 187 Pn **Pn 10 13 52.6 +0.3**
comp=E,1.6nm,0.3s,baz=332,slow=13,SNR=7.0
IDI Anoyia 8.01 187 Pn **Pn 10 13 52.6 +0.3**
KARN Karanos 8.02 193 P **Pn 10 13 56.0 +3.6**
BOJS Bojanci 8.05 290 *i* Pn **Pn 10 13 52.6 -0.1**
BOJS Bojanci 8.05 290 *i* Pn **Pn 10 13 52.7 0.0**
NVLJ Novalja 8.17 283 *e*Pn **Pn 10 13 52.6 -1.8**
NVLJ Sn **Sn 10 15 22.9 -3.8**
NVLJ Novalja 8.17 283 *e*Pn **Pn 10 13 52.6 -1.8**
OJC Ojcow 8.17 331 *e*Pn **Pn 10 13 54.2 -0.2**
OJC *e*Sn **Sn 10 15 27.3 +0.6**
OJC Ojcow 8.17 331 *e*P **Pn 10 13 54.2 -0.2**
OJC *e*S **Sn 10 15 27.3 +0.6**
ANN Anapa 8.35 75 *e*P **Pn 10 13 49.4 -7.5**
ARSA Arzberg 8.42 302 P **Pn 10 13 57.1 -0.8**
ARSA Arzberg 8.42 302⇑ *i*Pn **Pn 10 13 57.4 -0.5**
comp=E,12nm,0.5s
ARSA Arzberg 8.42 302 P **Pn 10 13 57.1 -0.8**
ARSA Arzberg 8.42 302 Pn **Pn 10 13 57.4 -0.5**
comp=E,12nm,0.5s
OKC Ostrava-Krasne 8.53 323 *e*SN **Sn 10 15 31.5 -4.1**
CEY Cerknica 8.66 291 *i* Pn **Pn 10 14 01.3 +0.1**
CEY Cerknica 8.66 291 *i* Pn **Pn 10 14 01.3 +0.1**
JAVS Javornik 8.94 291 *e*Pn **Pn 10 14 08.4 +3.4**
TRI Trieste 9.11 290 P **Pn 10 14 07.8 +0.5**
TRI Trieste 9.11 290 P **Pn 10 14 07.8 +0.5**
CEL Celeste 9.18 240 P **Pn 10 14 08.9 +0.7**
CEL Celeste 9.18 240 P **Pn 10 14 08.9 +0.7**
AQU L'Aquila 9.34 269 P **Pn 10 14 11.9 +1.5**
AQU L'Aquila 9.34 269 P **Pn 10 14 11.9 +1.5**
MOA Molln 9.45 303 P **Pn 10 14 11.7 -0.2**
MOA Molln 9.45 303⇑ *i*Pn **Pn 10 14 11.9 0.0**
comp=E,9.4nm,0.7s
MOA Molln 9.45 303 Pn **Pn 10 14 11.9 0.0**
comp=E,9.4nm,0.7s
DPC Dobruska-Polom 9.72 320 Pn **Pn 10 14 14.5 -1.2**
SOC Sochi 9.96 83 *e*P **Pn 10 14 16.1 -2.8**
SOC *e* 10 16 06.7
SOC pmax pmax
comp=Z,2μm,0.9s
ABTA Abfaltersbach 10.19 295⇑ *i*Pn **Pn 10 14 22.5 +0.4**
comp=Z,10nm,0.8s
ABTA Abfaltersbach 10.19 295 Pn **Pn 10 14 22.5 +0.3**
comp=Z,10nm,0.8s
GERES GERESS Array B 10.23 307 Pn **Pn 10 14 21.6 -1.0**
comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=9.5
GERES GERESS Array B 10.23 307 P **Pn 10 14 21.6 -1.0**
PRU Pruhonice 10.38 314 *e*SN **Sn 10 16 14.7 -6.2**
KHC Kasperske Hory 10.44 309 *e*PN **Pn 10 14 24.1 -1.4**
KHC *e*x x 10 14 38.5
KHC *e*SN **Sn 10 16 15.4 -7.0**
KHC Kasperske Hory 10.44 309 Pn **Pn 10 14 24.1 -1.4**
WET Wettzell 10.85 307 P **Pn 10 14 30.8 -0.3**
WET Wettzell 10.85 307 P **Pn 10 14 30.8 -0.3**
WTTA Wattenberg 10.91 296 P **Pn 10 14 31.5 -0.5**
WTTA Wattenberg 10.91 296 P **Pn 10 14 31.5 -0.5**
MICGM Minsk 11.31 5 *e* **Sn 10 16 46.0 +2.2**
NACGM Naroch 11.66 2 *e*P **Pn 10 14 38.0 -4.1**
VORD Divnogorie 11.86 45 *e*P **Pn 10 14 34.9 -10**
VORD pmax pmax
comp=N,100nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 11.94 44 *e*P **Pn 10 14 39.5 -6.5**
VSR *e*S **Sn 10 16 55.6 -3.6**
VSR pmax pmax
comp=Z,6.0nm,0.5s
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR smax
comp=E,60nm,0.8s
VSR smax
comp=N,30nm,0.6s
VSR smax
comp=Z,3.0nm,0.6s
DAVOX Davos/Dischmat 11.96 293 Pn **Pn 10 14 45.3 -1.1**
comp=Z,0.7nm,0.3s,baz=358,slow=23,SNR=3.3
KIV Kislovodsk 12.09 81 *e*P **Pn 10 14 47.7 -0.4**
KIV *e*S **Sn 10 17 05.5 +2.5**
KIV pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 12.09 81 *e*P **Pn 10 14 47.7 -0.4**
comp=Z,7.0nm,0.8s
KIV *e*S **Sn 10 17 05.5 +2.5**
MOX Moxa 12.30 312 *e*P Sx 10 17 32.1
ZEI Tsey 13.08 86 *e*P **Pn 10 14 58.8 -2.9**
ZEI pmax pmax
comp=Z,12nm,1.1s
BFO Black Forest 13.35 298 P **Pn 10 15 04.8 -0.5**
BFO Black Forest 13.35 298 P **Pn 10 15 04.8 -0.5**
OBN Obninsk 13.69 26 P **Pn 10 15 09.6 -0.3**
OBN pmax pmax
comp=Z,11nm,1.0s
OBN Obninsk 13.69 26 P **Pn 10 15 09.6 -0.3**
comp=Z,11nm,1.0s
MBDF Montbardon 13.95 283 *e*P **Pn 10 15 14.6 +1.1**
comp=Z,12nm,0.6s
MBDF Montbardon 13.95 283 *e*P **Pn 10 15 14.8 +1.3**
MBDF *e*Sn **Sn 10 17 35.7 -13**
comp=Z,2.7nm,0.6s
MBDF Montbardon 13.95 283 *e*P **Pn 10 15 14.6 +1.1**
MBDF pmax pmax
comp=Z,6.0nm,0.6s
MBDF Montbardon 13.95 283 *e*P **Pn 10 15 14.6 +1.1**
comp=Z,5.8nm,0.6s
MBDF *e*P 10 15 14.8
MBDF *e*Sn **Sn 10 17 35.7 -13**
MBDF Montbardon 13.95 283 *e*P **Pn 10 15 14.6 +1.1**
comp=Z,5.8nm,0.6s
LPG La Plagne 13.98 286 *e*P **Pn 10 15 16.9 +3.1**
comp=Z,44nm,1.0s
LPG La Plagne 13.98 286 *e*P **Pn 10 15 16.7 +2.9**
LPG *e*Sn **Sn 10 17 35.7 -13**
comp=Z,9.9nm,0.9s
LPG La Plagne 13.98 286 *e*P **Pn 10 15 16.7 +2.9**
LPG *e*P 10 15 16.9
LPG *e*Sn **Sn 10 17 36.5 -12**
LPG La Plagne 13.98 286 *e*P **Pn 10 15 16.7 +2.9**
LPL La Plagne 13.99 286 *e*P **Pn 10 15 17.1 +3.1**
comp=Z,35nm,1.1s
LPL La Plagne 13.99 286 *e*P **Pn 10 15 16.2 +2.2**
LPL *e*Sn **Sn 10 17 36.8 -13**
comp=Z,1.0nm,0.3s
LPL La Plagne 13.99 286 *e*P **Pn 10 15 16.2 +2.2**
LPL *e*P 10 15 17.1
LPL *e*Sn **Sn 10 17 36.8 -13**
LPL La Plagne 13.99 286 *e*P **Pn 10 15 16.2 +2.2**
CDF Champ du Feu 14.05 298 *e*P **Pn 10 15 18.1 +3.3**
comp=Z,6.7nm,0.9s
CDF Champ du Feu 14.05 298 *e*P **Pn 10 15 16.1 +1.3**
CDF Champ du Feu 14.05 298 *e*P **Pn 10 15 17.9 +3.1**
CDF *e*P 10 15 18.1
CDF Champ du Feu 14.05 298 *e*P **Pn 10 15 17.9 +3.1**
FRF La Foret Royal 14.10 278 *e*P **Pn 10 15 14.6 -1.0**
comp=Z,30nm,1.0s
FRF La Foret Royal 14.10 278 *e*P **Pn 10 15 14.6 -1.0**
FRF pmax pmax
comp=Z,15nm,1.0s
FRF La Foret Royal 14.10 278 *e*P **Pn 10 15 14.6 -1.0**
comp=Z,15nm,1.0s
HINF Hinterlafeld 14.19 295 *e*P **Pn 10 15 17.8 +1.1**
HINF Hinterlafeld 14.19 295 *e*P **Pn 10 15 19.7 +3.0**
HINF Hinterlafeld 14.19 295 *e*P **Pn 10 15 19.7 +3.0**
GNI Garni 14.31 96⇑ *i*P **Pn 10 15 20.3 +1.8**
GNI pmax pmax
comp=Z,12nm,1.2s
CABF La Chapelle 14.52 290 *e*P **Pn 10 15 21.3 +0.1**
comp=Z,15nm,0.8s
CABF La Chapelle 14.52 290 *e*P **Pn 10 15 22.2 +1.0**
CABF La Chapelle 14.52 290 *e*P **Pn 10 15 21.3 +0.1**
CABF pmax pmax
comp=Z,7.0nm,0.8s
CABF La Chapelle 14.52 290 *e*P **Pn 10 15 21.3 +0.1**
comp=Z,7.3nm,0.8s
CABF *e*P 10 15 24.0
MOS Moscow 14.55 27 *e*P **Pn 10 15 23.0 +1.4**
MOS *e* **Sn 10 17 57.7 -5.2**
MOS Moscow 14.55 27 *e*S **Sn 10 17 57.7 -5.2**
HAU Haudompre 14.56 296 *e*P **Pn 10 15 26.4 +4.6**
HAU Haudompre 14.56 296 *e*P **Pn 10 15 26.4 +4.6**
ORIF Oris-en-Rattie 14.58 283 *e*P **Pn 10 15 23.5 +1.4**
comp=Z,21nm,0.9s
ORIF Oris-en-Rattie 14.58 283 *e*P **Pn 10 15 23.1 +1.0**
ORIF *e*Sn **Sn 10 17 51.1 -13**
comp=Z,6.5nm,0.9s
ORIF Oris-en-Rattie 14.58 283 *e*P **Pn 10 15 23.1 +1.0**
ORIF *e*P 10 15 23.5
ORIF *e*Sn **Sn 10 17 51.1 -13**
KEST Kesra 14.91 245 Pn **Pn 10 15 25.5 -1.1**
comp=Z,0.0nm,0.3s,baz=32,slow=18,SNR=1.8
VSU Vasula 15.22 1⇑ *i*P **Pn 10 15 28.3 -2.4**
VSU pmax pmax
comp=Z,27nm,0.7s
VSU Vasula 15.22 1 *i* P **Pn 10 15 28.3 -2.4**
comp=Z,27nm,0.7s
VIVF Saint-Julien-l 15.44 283 *e*P **Pn 10 15 32.9 -0.7**
comp=Z,9.9nm,0.8s
VIVF Saint-Julien-l 15.44 283 *e*P **Pn 10 15 34.8 +1.2**
VIVF Saint-Julien-l 15.44 283 *e*P **Pn 10 15 32.9 -0.7**
VIVF pmax pmax
comp=Z,5.0nm,0.8s
VIVF Saint-Julien-l 15.44 283 *e*P **Pn 10 15 32.9 -0.7**
comp=Z,4.9nm,0.8s
VIVF *e*P 10 15 34.8
SMF Signal de Mont 16.06 290 *e*P **Pn 10 15 41.6 -0.1**
comp=Z,13nm,0.8s
SMF Signal de Mont 16.06 290 *e*Pn **Pn 10 15 37.7 -4.0**
SMF Signal de Mont 16.06 290 *e*P **Pn 10 15 41.6 -0.1**
SMF Signal de Mont 16.06 290 *e*Pn **Pn 10 15 39.6 -2.1**
SMF *e*P 10 15 41.6
SMF *e*P 10 15 45.4
SMF Signal de Mont 16.06 290 *e*Pn **Pn 10 15 39.6 -2.1**
SMF Signal de Mont 16.06 290 *e*P **Pn 10 15 45.4 +3.7**
LASF Ste Croix 16.07 281 *e*P **Pn 10 15 40.1 -1.7**
LOR Lormes 16.11 292 *e*P **Pn 10 15 45.7 +3.4**
comp=Z,24nm,1.1s
LOR Lormes 16.11 292 *e*P **Pn 10 15 42.5 +0.2**
baz=109
LOR *e*Sn **Sn 10 18 26.1 -15**
comp=Z,1.3nm,0.5s
LOR Lormes 16.11 292 *e*P **Pn 10 15 44.5 +2.2**
LOR *e*P 10 15 45.7
LOR Lormes 16.11 292 *e*P **Pn 10 15 45.7 +3.4**
SSF Saint Saulge 16.33 291 *e*P **Pn 10 15 47.8 +2.7**
comp=Z,13nm,0.9s
SSF Saint Saulge 16.33 291 *e*P **Pn 10 15 45.1 0.0**
SSF *e*Sn **Sn 10 18 31.3 -15**
comp=Z,1.1nm,0.3s
SSF Saint Saulge 16.33 291 *e*P **Pn 10 15 47.8 +2.7**
AVF Avril sur Loir 16.41 290 *e*P **Pn 10 15 47.1 +1.0**
comp=Z,14nm,0.9s
AVF Avril sur Loir 16.41 290 *e*Pn **Pn 10 15 42.6 -3.5**
AVF Avril sur Loir 16.41 290 *e*P **Pn 10 15 46.5 +0.4**
AVF Avril sur Loir 16.41 290 *e*Pn **Pn 10 15 44.7 -1.4**
AVF *e*P 10 15 47.1
AVF *e*P 10 15 48.6
AVF Avril sur Loir 16.41 290 *e*Pn **Pn 10 15 44.7 -1.4**
AVF Avril sur Loir 16.41 290 *e*P **Pn 10 15 48.6 +2.5**
BGF Bois d'Agland 16.74 289 *e*Pn **Pn 10 15 47.4 -3.0**
BGF Bois d'Agland 16.74 289 *e*Pn **Pn 10 15 49.2 -1.2**
BGF Bois d'Agland 16.74 289 *e*Pn **Pn 10 15 49.2 -1.2**
TCF Toulx Ste Croi 17.17 288 *e*P **Pn 10 15 57.5 +1.7**
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 17.17 288 *e*P **Pn 10 15 56.1 +0.3**
TCF Toulx Ste Croi 17.17 288 *e*P **Pn 10 15 57.5 +1.7**
TCF pmax pmax
comp=Z,6.0nm,0.9s
TCF Toulx Ste Croi 17.17 288 *e*P **Pn 10 15 57.5 +1.7**
comp=Z,5.9nm,0.9s
TCF *e*P 10 15 57.9
TCF Toulx Ste Croi 17.17 288 *e*P **Pn 10 15 57.5 +1.7**
comp=Z,5.9nm,0.9s
CAF Calviac 17.29 284 *e*P **Pn 10 15 59.4 +2.1**
CAF Calviac 17.29 284 *e*P **Pn 10 15 57.9 +0.6**
CAF Calviac 17.29 284 *e*P **Pn 10 15 59.4 +2.1**
RJF Les Rejaudoux 17.66 285 *e*P **Pn 10 16 03.9 +2.0**
RJF Les Rejaudoux 17.66 285 *e*P **Pn 10 16 02.4 +0.5**
RJF Les Rejaudoux 17.66 285 *e*P **Pn 10 16 03.6 +1.7**
RJF *e*P 10 16 03.9
RJF Les Rejaudoux 17.66 285 *e*P **Pn 10 16 03.6 +1.7**
FINES FINESS Array B 18.21 0 Pn **Pn 10 16 01.9 -6.6**
comp=Z,0.4nm,0.3s,baz=156,slow=10,0,SNR=5.0
FINES FINESS Array B 18.21 0 P **Pn 10 16 01.9 -6.6**
FINES FINESS Array B 18.21 0 Pn **Pn 10 16 01.9 -6.6**
HFS Hagfors 18.49 340 P **Pn 10 16 08.7 -3.2**
comp=Z,0.2nm,0.3s,baz=116,slow=16,SNR=3.1
MFF Saint Martin d 18.81 289 *e*P **Pn 10 16 15.1 -0.8**
MFF Saint Martin d 18.81 289 *e*P **Pn 10 16 15.1 -0.8**
KAF Kangasniemi 18.88 0 *e*P **Pn 10 16 13.0 -3.7**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 18.88 0 *e*p **Pn 10 16 13.0 -3.7**
comp=Z,5.3nm,0.6s
KAF Kangasniemi 18.88 0 *e*P **Pn 10 16 13.0 -3.7**
comp=Z,5.3nm,0.6s
KLMR Klimovskoe 19.40 20 *e*P **Pn 10 16 16.4 -6.5**
KLMR pmax pmax
comp=Z,26nm,0.8s
NB2 NORSAR Subarra 19.90 339 P **Pn 10 16 25.7 -3.2**
comp=Z,1.7nm,0.5s,baz=146,slow=11
NB2 NORSAR Subarra 19.90 339 P **Pn 10 16 25.7 -3.2**
comp=Z,1.7nm,0.5s,baz=146,slow=11,SNR=5.7
NOA NORSAR Array B 19.90 339 P **Pn 10 16 24.1 -4.8**
comp=Z,0.5nm,0.3s,baz=146,slow=11,SNR=5.0
JOF Joensuu 19.93 7 *e*P **Pn 10 16 23.1 -6.1**
JOF pmax pmax
comp=Z,7.0nm,0.5s
JOF Joensuu 19.93 7 *e*p **Pn 10 16 23.1 -6.1**
comp=Z,6.5nm,0.5s
JOF Joensuu 19.93 7 *e*P **Pn 10 16 23.1 -6.1**
comp=Z,6.5nm,0.5s
SGMF Saint Gilles 20.50 294 *e*P **P 10 16 35.4 +1.5**
comp=Z,22nm,0.8s
SGMF Saint Gilles 20.50 294 *e*P **P 10 16 35.4 +1.5**
SGMF pmax pmax
comp=Z,11nm,0.8s
SGMF Saint Gilles 20.50 294 *e*P **P 10 16 35.4 +1.5**
comp=Z,11nm,0.8s
SGMF Saint Gilles 20.50 294 *e*P **P 10 16 35.4 +1.5**
comp=Z,11nm,0.8s
QUIF Quistinic 20.90 293 *e*P **P 10 16 36.7 -1.4**
comp=Z,26nm,0.9s
QUIF Quistinic 20.90 293 *e*P **P 10 16 36.7 -1.4**
QUIF pmax pmax
comp=Z,13nm,0.9s
QUIF Quistinic 20.90 293 *e*P **P 10 16 36.7 -1.4**
comp=Z,13nm,0.9s
QUIF Quistinic 20.90 293 *e*P **P 10 16 36.7 -1.4**
comp=Z,13nm,0.9s
ROSF Rostrenen 20.99 294 *e*P **P 10 16 37.9 -1.2**
comp=Z,49nm,1.2s
ROSF Rostrenen 20.99 294 *e*P **P 10 16 37.9 -1.2**
ROSF pmax pmax
comp=Z,25nm,1.2s
ROSF Rostrenen 20.99 294 *e*P **P 10 16 37.9 -1.2**
comp=Z,24nm,1.2s
ROSF Rostrenen 20.99 294 *e*P **P 10 16 37.9 -1.2**
comp=Z,24nm,1.2s
ELAN Lanestosa 21.43 280 P **P 10 16 43.1 -0.8**
ELAN Lanestosa 21.43 280 P **P 10 16 43.1 -0.8**
EKA Eskdalemuir Ar 22.36 313 P **P 10 16 51.6 -2.2**
comp=Z,0.7nm,0.4s,mb3.4,baz=111,slow=9.8,SNR=5.0
EKA Eskdalemuir Ar 22.36 313 P **P 10 16 51.6 -2.2**
ESDC Sonseca Array 22.71 271 P **P 10 16 57.0 -0.7**
comp=Z,0.3nm,0.3s,mb3.2,baz=68,slow=10,SNR=5.7
ESDC Sonseca Array 22.71 271 P **P 10 16 57.0 -0.6**
AKTK Aktyubinsk 22.89 61 P **P 10 17 00.3 +0.9**
AKTK Aktyubinsk 22.89 61 P **P 10 17 00.3 +0.9**
AKTO Aktyubinsk 22.89 61 P **P 10 17 00.3 +0.9**
comp=Z,2.9nm,0.7s,mb3.8,baz=256,slow=8.3,SNR=7.0
ABKAR Akbulak array 24.05 64 *e*P **P 10 17 12.2 +1.2**
comp=Z,3.5nm,0.7s,mb3.9
ABKAR Akbulak array 24.05 64 *e*P **P 10 17 12.2 +1.2**
comp=Z,3.5nm,0.7s,mb3.9
ARU Arti 24.49 46*d* *i*P **P 10 17 15.6 +0.7**
ARU 10 17 44.5
ARU S **S 10 21 39.0 +3.9**
ARU pmax pmax
comp=Z,13nm,0.8s,mb4.4
ARU Arti 24.49 46 *i* P **P 10 17 15.6 +0.7**
comp=Z,13nm,0.8s,mb4.4
MDT Midelt 26.17 257 P **P 10 17 30.9 +0.6**
comp=Z,3.3nm,0.9s,mb3.9,baz=57,slow=11,SNR=6.2
MDT Midelt 26.17 257 P **P 10 17 30.9 +0.5**
ARCES ARCESS Array B 26.34 360 P **P 10 17 31.7 +0.2**
comp=Z,0.9nm,0.5s,mb3.5,baz=169,slow=10,SNR=3.8
ARCES ARCESS Array B 26.34 360 P **P 10 17 31.7 +0.1**
BVAR Borovoye Array 30.71 56 P **P 10 18 11.2 +0.6**
comp=Z,1.0nm,0.6s,mb3.8,baz=274,slow=8.8,SNR=6.0
BVAR Borovoye Array 30.71 56 P **P 10 18 11.2 +0.5**
AAK Ala-Archa 35.08 74 P **P 10 18 50.5 +1.6**
comp=Z,2.6nm,0.8s,mb4.2,baz=299,slow=5.0,SNR=7.4
AAK Ala-Archa 35.08 74 P **P 10 18 50.5 +1.5**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AAK Ala-Archa 35.08 74 P **P 10 18 50.5 +1.5**
comp=Z,3.0nm,0.8s,mb4.3
KURK Kurchatov 35.97 59 *i* P **P 10 18 53.9 -2.6**
KURK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
TORD Torodi Ar. Bea 36.61 222 P **P 10 19 03.2 +0.9**
comp=Z,1.6nm,0.6s,mb4.0,baz=30,slow=8.6,SNR=14
NVS Novosibirsk 38.19 52 *e*P **P 10 19 18.9 +3.6**
MKAR Makanchi Array 39.19 65 P **P 10 19 24.0 +0.2**
comp=Z,1.0nm,0.4s,mb3.9,baz=298,slow=5.1,SNR=6.4
ZALV Zalesovo Beam 39.23 53 P **P 10 19 24.3 +0.3**
comp=Z,5.0nm,0.5s,mb4.5,baz=273,slow=8.4,SNR=11
ZALV Zalesovo Beam 39.23 53 P **P 10 19 24.3 +0.3**
FRB Frobisher Bay 54.15 327 P **P 10 21 18.9 -1.8**
comp=Z,2.2nm,0.8s,mb4.1,baz=68,slow=11,SNR=5.9
FRB Frobisher Bay 54.15 327 P **P 10 21 18.9 -1.8**
YKA Yellowknife Ar 69.97 342 P **P 10 23 05.5 -1.4**
comp=Z,0.5nm,0.6s,mb3.6,baz=26,slow=6.2,SNR=6.9
PDAR Pinedale Array 85.55 329 P **P 10 24 33.8 -0.3**
comp=Z,0.9nm,1.1s,mb3.9,baz=107,slow=1.5,SNR=4.2

NEIC ***12*** *10:12:29.7, 16°.64N×100°.23W, h18km, MD3.5(MEX), After MEX.*

MEX 12 10:12:29.7±0.3, 16°.64N×100°.23W, h18km±19km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.37**	**53**	*i* P	Pg	10 12 36.4	-1.1
ACX				*i* S	Sg	10 12 41.4	-1.4
ACX	**Acapulco**	**0.37**	**53**	*i* P	Pg	10 12 36.4	-1.1
ACX				*i* S	Sg	10 12 41.4	-1.4
CAIG	**El Cayaco**	**0.40**	**354**	*i* P	Pg	10 12 36.8	-1.3
CAIG				*i* S	Sg	10 12 42.2	-1.5
CAIG	**El Cayaco**	**0.40**	**354**	*i* P	Pg	10 12 36.8	-1.3
CAIG				*i* S	Sg	10 12 42.2	-1.5
PNIG	**Pinotepa**	**2.03**	**97**	*e*P	Pn	10 12 59.9	-3.0
PNIG				*i* S	Sn	10 13 23.8	-4.0
PNIG	**Pinotepa**	**2.03**	**97**	*e*P	Pn	10 12 59.9	-3.0
PNIG				*i* S	Sn	10 13 23.8	-4.0
UTMO	**Huajuapan**	**2.60**	**63**	*e*P	Pn	10 13 08.3	-2.5
UTMO				*i* S	Sn	10 13 38.6	-3.3
MZVM		**2.70**	**20**	*e*P	Pn	10 13 08.8	-3.5
MZVM				*i* S	Sn	10 13 40.7	-3.8
PPM	**Popocatepetl**	**2.85**	**32**	*e*P	Pn	10 13 11.8	-2.5
PPM				*i* S	Sn	10 13 45.7	-2.4
PPM	**Popocatepetl**	**2.85**	**32**	*e*P	Pn	10 13 11.8	-2.5
PPM				*i* S	Sn	10 13 45.7	-2.4

IDC 12 10:13:16.9±2.1, 31°.66N×104°.53E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/26, mbtmp3.8/4, Error ellipse: s-maj=68.5km s-min=31.0km az=90.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.09**	**67**	P	P	10 17 51.6	-0.4
	3.6nm,0.7s,baz=257,slow=10,SNR=6.5						
WRA	**Warramunga Arr**	**58.73**	**147**	P	P	10 23 16.8	+0.2
	1.5nm,0.4s,baz=328,slow=9.1,SNR=14						
ASAR	**Alice Springs**	**61.78**	**149**	P	P	10 23 37.5	+0.1
	0.5nm,0.4s,baz=333,slow=6.5,SNR=9.0						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	P	10 25 33.2	-0.2
	0.1nm,0.5s,baz=322,slow=5.1,SNR=2.9						

IDC 12 10:13:34.0±1.2, 31°.60N×104°.73E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/27, mbtmp3.9/5, ML4.5/1, Error ellipse: s-maj=51.0km s-min=23.0km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.10**	**203**	Pn	Pn	10 16 56.0	+1.1
	0.7nm,0.3s,baz=8.9,slow=8.8,SNR=6.3						
MKAR	**Makanchi Array**	**22.96**	**318**	P	P	10 18 41.1	+1.3
	1.1nm,0.7s,baz=127,slow=9.3,SNR=3.9						
KURK	**Kurchatov**	**27.17**	**322**	P	P	10 19 17.6	-1.3
	1.1nm,0.8s,baz=129,slow=8.8,SNR=4.5						
WRA	**Warramunga Arr**	**58.59**	**147**	P	P	10 23 32.5	-0.2
	4.9nm,0.6s,baz=338,slow=7.9,SNR=17						
YKA	**Yellowknife Ar**	**81.06**	**17**	P	P	10 25 51.0	+0.5
	0.3nm,0.6s,baz=330,slow=5.8,SNR=2.9						

IDC ***12*** *10:16:18.1±0.5, 32°.28N×105°.06E, h0km, mb4.3/24, mb1 4.4/27, mb1mx4.3/36, mbtmp4.3/27, ML4.0/3, Error ellipse: s-maj=19.1km s-min=11.4km az=50.0*

NEIC ***12*** *10:16:19.9±0.4, 32°.26N×105°.00E, h10km, mb4.3/5, Error ellipse: s-maj=10.6km s-min=7.2km az=56.0*

BJI ***12*** *10:16:19.9, 32°.33N×105°.14E, h14km, mB5.3/2, mb4.3/10, ML4.3/6, Ms4.3/8, Ms7 4.3/7*

MOS ***12*** *10:16:20.5±0.9, 32°.27N×105°.06E, h30km, mb4.6/10, Error ellipse: s-maj=13.1km s-min=7.1km az=110.5*

ISC 12 10:16:19.8±1.3, 32°.26N±0°.04×105°.15E±0°.05, h11km±8km, n67,σ0.8 86/73, mb4.4/37, 2C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.80**	**222**	Pg	**Pg**	**10 16 54.8**	**+0.6**
CD2				smax			
	comp=N,7μm,0.4s						
LZH	**Lanzhou**	**3.96**	**345**	*e*Pn	**Pn**	**10 17 22.4**	**+1.9**
LZH				Pg	**Pg**	**10 17 33.4**	**-2.3**
LZH				Sn	**Sn**	**10 18 07.9**	**+0.9**
LZH				Sg	**Sg**	**10 18 21.1**	**-6.0**
LZH				smax			
	comp=N,1μm,0.5s						
LZH				smax			
	comp=E,1μm,0.5s						
LZH				LR	LR		
	comp=E,3μm,8.5s						

LZH LR LR
comp=Z,3μm,9.6s
ENH Enshi 4.21 117 *e*Pn **Pn 10 17 28.2 +4.3**
WHN Wuhan 8.05 100 P **Pn 10 18 11.6 -5.1**
WHN S **Sn 10 19 46.0 -1.7**
WHN LR LR
comp=N,9μm,16.7s
WHN LR LR
comp=E,9μm,18.1s
GTA Gaotai 8.34 330 P **Pn 10 18 15.7 -4.9**
GTA pP 10 18 18.7
GTA sP 10 18 21.6
GTA S **Sn 10 19 55.0 +0.2**
GTA sS 10 20 00.7
GTA pmax pmax
comp=Z,29nm,1.6s
GTA pmax pmax
comp=Z,2μm,4.2s
GTA LR LR
comp=N,2μm,16.2s
GTA LR LR
comp=E,1μm,17.4s
GTA LR LR
comp=Z,4μm,19.5s
BTO Baotou 9.20 24 *e*P Px 10 18 46.8
BTO S **Sn 10 20 25.8 +10**
BTO LR LR
comp=N,15nm,0.5s
BTO LR LR
comp=E,13nm,0.5s
CMAR Chiang Mai Arr 14.84 204 Pn **Pn 10 19 49.6 0.0**
comp=E,0.3nm,0.3s,baz=15,slow=13,SNR=4.4
SONM Songino Array 15.58 3 Pn **Pn 10 19 59.6 +0.3**
comp=E,0.3nm,0.3s,baz=181,slow=11,SNR=4.4
SONM Lg 10 24 34.9
comp=E,0.4nm,0.3s,baz=193,slow=26,SNR=3.7
ULN Ulaanbaatar 15.65 5 *e*P **Pn 10 20 03.9 +3.7**
ULN pmax pmax
comp=Z,6.0nm,0.7s
ULN Ulaanbaatar 15.65 5 *e*P **Pn 10 20 03.9 +3.7**
comp=Z,5.8nm,0.7s
ZAK Zakamensk 18.16 356 *e*P **Pn 10 20 32.2 +0.5**
ZAK pmax pmax
comp=Z,5.0nm,1.0s
KSRS Korea Array 19.38 68 P **Pn 10 20 47.0 +0.3**
comp=Z,0.4nm,0.3s,baz=256,slow=11,SNR=7.9
CN2 Changchun 19.65 48 *e*P **Pn 10 20 51.2 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 22.72 316 *e*P **P 10 21 21.6 0.0**
MKAR Makanchi Array 22.72 316 P **P 10 21 21.0 -0.6**
comp=Z,2.8nm,0.5s,mb3.9,baz=116,slow=11,SNR=15
KSH Kashi 24.65 295 P **P 10 21 43.7 +3.3**
KSH pmax pmax
comp=Z,1μm,11.0s
TKM2 Tokmak 2 25.60 303 *e*P **P 10 21 49.5 +0.5**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
TKM2 Tokmak 2 25.60 303 *e*P **P 10 21 49.5 +0.5**
comp=Z,4.8nm,0.6s,mb4.2
ZALV Zalesovo Beam 26.09 332 P **P 10 21 52.9 -0.4**
comp=Z,5.4nm,0.5s,mb4.3,baz=127,slow=9.8,SNR=8.6
UCH Uchtor 26.21 301 *e*Pn **P 10 21 55.6 +1.1**
comp=Z,8.7nm,1.0s,mb4.2
BOD Bodaibo 26.26 11 *e*P **P 10 21 56.0 +1.2**
KURK Kurchatov 26.88 321 P **P 10 21 59.9 -0.5**
comp=Z,6.3nm,0.8s,mb4.2,baz=135,slow=8.5,SNR=23
KURK PcP PcP 10 25 21.6 -0.9
comp=Z,1.1nm,0.6s,baz=116,slow=2.1,SNR=3.8
KURK Kurchatov 26.88 321 ‖ *i*P **P 10 22 00.1 -0.4**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.3
KURK Kurchatov 26.88 321 P **P 10 21 59.9 -0.5**
KURK PcP PcP 10 25 21.6 -0.9
NVS Novosibirsk 27.38 332 *e*P **P 10 22 10.1 +5.2**
NVS *e* 10 22 16.4
MJAR Matsushiro Arr 27.53 72 P **P 10 22 06.9 +0.4**
comp=Z,1.1nm,0.6s,mb3.7,baz=288,slow=11,SNR=3.4
BVAR Borovoye Array 32.45 320 P **P 10 22 50.2 +0.4**
comp=Z,3.3nm,0.7s,mb4.3,baz=129,slow=12,SNR=7.8
BRVK Borovoye 32.53 320‖ *e*P **P 10 22 49.7 -0.8**
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ABKAR Akbulak array 37.59 310 *e*P **P 10 23 33.7 -0.4**
comp=Z,4.8nm,0.8s,mb4.3
AKTK Aktyubinsk 39.01 312 P **P 10 23 46.5 +0.3**
AKTO Aktyubinsk 39.01 312 P **P 10 23 46.5 +0.3**
comp=Z,3.9nm,0.6s,mb4.3,baz=114,slow=12,SNR=11
ARU Arti 40.08 321 *d i*P **P 10 23 55.4 +0.5**
ARU S **S 10 30 00.3 -0.4**
ARU SS SS 10 32 50.2 -7.6
ARU pmax pmax
comp=Z,33nm,1.2s,mb4.9
TIXI Tiksi 41.45 11 *e*P **P 10 24 05.3 -0.8**
TIXI pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
TIXI Tiksi 41.45 11 *e*P **P 10 24 05.3 -0.7**
comp=Z,4.8nm,1.2s,mb4.0
PETK Petropavlovsk- 42.74 45 P **P 10 24 17.6 +0.7**
comp=Z,4.3nm,0.7s,mb4.3,baz=290,slow=3.8,SNR=12
ZEI Tsey 48.74 301 *e*P **P 10 25 04.0 -0.4**
ZEI pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
KIV Kislovodsk 49.43 303 *e*P **P 10 25 08.2 -1.5**
KIV pmax pmax
comp=Z,11nm,0.8s,mb4.9
BILL Bilibino 49.75 26‖ *e*P **P 10 25 11.7 -0.1**
BILL pmax pmax
comp=Z,5.0nm,1.7s,mb4.3
MOS Moscow 51.59 318 *e*P **P 10 25 26.0 +0.2**
OBN Obninsk 52.22 317 *e*P **P 10 25 30.4 -0.2**
OBN *e* 10 26 42.1
OBN pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
FITZ Fitzroy Crossi 53.79 156 P **P 10 25 42.1 -0.4**
comp=Z,2.6nm,0.9s,mb4.2,baz=326,slow=7.7,SNR=5.0
KEV Kevo 56.04 336 *e*P **P 10 25 56.4 -1.8**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KEV Kevo 56.04 336 *e*p **P 10 25 56.4 -1.8**
comp=Z,9.3nm,0.6s,mb5.0
ARCES ARCESS Array B 56.57 336 P **P 10 26 02.0 0.0**
comp=Z,4.4nm,0.5s,mb4.7,baz=82,slow=7.6,SNR=25
BRTR Keskin Array B 56.95 299 P **P 10 26 04.3 -0.8**
comp=Z,1.4nm,0.6s,mb4.2,baz=100,slow=5.7,SNR=8.1
BRTR Keskin Array B 56.95 299 P **P 10 26 04.4 -0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 57.11 326 P **P 10 26 05.7 -0.2**
comp=Z,7.2nm,0.7s,mb4.8,baz=73,slow=7.7,SNR=12
AKASG Malin Array Be 57.25 313 P **P 10 26 06.4 -0.6**
comp=Z,1.3nm,0.4s,mb4.3,baz=68,slow=6.6,SNR=4.3
WRA Warramunga Arr 58.96 148 P **P 10 26 20.2 +0.9**
comp=Z,6.2nm,0.6s,mb4.8,baz=341,slow=7.4,SNR=36
MLR Muntele Rosu 60.71 308 P **P 10 26 32.7 +1.5**
comp=Z,1.6nm,0.4s,mb4.5,baz=149,slow=12,SNR=3.1
ASAR Alice Springs 62.03 150 P **P 10 26 41.2 +1.0**
comp=Z,2.8nm,0.5s,mb4.6,baz=330,slow=6.5,SNR=32
HFS Hagfors 63.31 326 P **P 10 26 47.7 -0.7**
comp=Z,3.0nm,0.5s,mb4.7,baz=100,slow=7.7,SNR=12
NB2 NORSAR Subarra 64.17 327 P **P 10 26 52.8 -1.2**
comp=Z,2.1nm,0.5s,mb4.4,baz=71,slow=6.5
NOA NORSAR Array B 64.17 327 P **P 10 26 53.1 -0.9**
comp=Z,4.5nm,0.7s,mb4.6,baz=71,slow=6.6,SNR=9.8
CLL Collm 66.82 317 *e*P **P 10 27 05.0 -6.4**
CLL *e* pP 10 27 09.0 -5.8
GERES GERESS Array B 67.38 314 P **P 10 27 14.4 -0.5**
comp=Z,0.4nm,0.5s,mb3.7,baz=80,slow=5.5,SNR=3.3
DAVOX Davos/Dischmat 70.58 313 P **P 10 27 34.8 -0.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=160,slow=19,SNR=3.3
STKA Stephens Creek 72.50 148 P **P 10 27 46.8 +0.3**
comp=Z,2.2nm,0.4s,mb4.5,baz=345,slow=23,SNR=5.6
RES Resolute Bay 72.50 5 P **P 10 27 45.1 -1.0**
comp=Z,2.0nm,1.0s,mb4.0,baz=331,slow=6.5,SNR=5.8
LPG La Plagne 73.11 313 *e*P **P 10 27 50.5 +0.4**
comp=Z,9.7nm,0.6s,mb4.6
LPL La Plagne 73.11 313 *e*P **P 10 27 50.4 +0.3**
comp=Z,6.3nm,0.5s,mb4.5
SMF Signal de Mont 74.30 315 *e*P **P 10 27 57.8 +0.7**
CAF Calviac 76.25 315 *e*P **P 10 28 08.4 0.0**
YKA Yellowknife Ar 80.32 18 P **P 10 28 30.6 +0.1**
comp=Z,2.0nm,0.5s,mb4.3,baz=328,slow=5.1,SNR=31
YKA Yellowknife Ar 80.32 18 P **P 10 28 30.6 0.0**
YKA pmax pmax
comp=Z,2.0nm,0.5s
FRB Frobisher Bay 84.19 357 P **P 10 28 50.8 0.0**
comp=Z,1.2nm,0.7s,mb4.2,baz=15,slow=10,SNR=4.3
TORD Torodi Ar. Bea 94.13 288 P **P 10 29 37.6 -1.4**
comp=Z,0.5nm,0.9s,mb4.0,baz=70,slow=4.3,SNR=2.9

*ISCJB **12** 10:18:00.2±1.2, 47°.3N±0°.2×27°.3W±0°.2, h10km, mb3.8/7, Error ellipse: s-maj=25.7km s-min=17.0km az=170.8*
*IDC **12** 10:18:00.6±1.6, 47°.23N×27°.26W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.5/32, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=57.6km s-min=28.9km az=18.0*
ISC 12 10:18:02.2±1.2, 47°.3N±0°.2×27°.3W±0°.2, h10km, n18, σ0°39/18, mb3.8/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**17.02**	**53**	P	**Pn**	**10 21 59.3**	**-0.6**
baz=248,slow=11,SNR=3.7							
LDF	**La Druitiere**	**18.20**	**76**	*e*P	**Pn**	**10 22 08.6**	**-6.1**
ESDC	**Sonseca Array**	**18.50**	**106**	P	**Pn**	**10 22 18.9**	**+0.4**
1.2nm,0.3s,baz=294,slow=13,SNR=4.2							
TCF	**Toulx Ste Croi**	**20.16**	**82**	*e*P	**P**	**10 22 36.7**	**+0.3**
AVF	**Avril sur Loir**	**20.81**	**80**	*e*P	**P**	**10 22 43.5**	**0.0**
10nm,0.9s							
SSF	**Saint Saulge**	**20.86**	**79**	*e*P	**P**	**10 22 44.1**	**+0.1**
9.8nm,0.9s							
BAIF	**Baives**	**20.89**	**71**	*e*P	**P**	**10 22 44.2**	**-0.1**
12nm,0.9s							
LOR	**Lormes**	**21.05**	**79**	*e*P	**P**	**10 22 46.1**	**0.0**
7.1nm,0.8s,mb3.7							
SMF	**Signal de Mont**	**21.17**	**80**	*e*P	**P**	**10 22 47.4**	**0.0**
18nm,1.1s,mb4.0							
GIVF	**Givet**	**21.28**	**71**	*e*P	**P**	**10 22 48.3**	**-0.2**
MEZF	**Maizieres J'vi**	**21.62**	**75**	*e*P	**P**	**10 22 52.2**	**0.0**
36nm,1.0s,mb4.4							
HAU	**Haudompre**	**22.56**	**76**	*e*P	**P**	**10 23 02.0**	**-0.2**
CABF	**La Chapelle**	**22.69**	**79**	*e*P	**P**	**10 23 04.5**	**+0.9**
HINF	**Hinteralfeld**	**22.93**	**76**	*e*P	**P**	**10 23 06.2**	**0.0**
11nm,1.1s,mb3.9							
CDF	**Champ du Feu**	**23.10**	**74**	*e*P	**P**	**10 23 08.0**	**+0.1**
3.4nm,0.7s,mb3.6							
TORD	**Torodi Ar. Bea**	**41.78**	**135**	P	**P**	**10 25 50.9**	**-0.9**
1.8nm,1.0s,mb3.7,baz=332,slow=8.0,SNR=6.0							
TXAR	**Lajitas Array**	**60.21**	**282**	P	**P**	**10 28 10.6**	**+0.3**
0.3nm,0.7s,mb3.4,baz=66,slow=8.6,SNR=4.5							
TXAR	**Lajitas Array**	**60.21**	**282**	P	**P**	**10 28 10.6**	**+0.3**

*ISCJB **12** 10:19:13.7±1.1, 30°.78N±0°.07×103°.20E±0°.08, h10km, mb3.6/4, Error ellipse: s-maj=10.6km s-min=9.5km az=9.2*
*IDC **12** 10:19:14.3±1.3, 31°.33N×104°.27E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=88.1km s-min=24.8km az=64.0*
*BJI **12** 10:19:21.5, 31°.08N×103°.62E, h13km, ML3.7/3*
ISC 12 10:19:15.9±1.1, 30°.80N±0°.07×103°.26E±0°.08, h10km, n6, σ0°67/8, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.44**	**76**	Pg	**Pg**	**10 19 24.3**	**-0.2**
CD2				Sg	**Sg**	**10 19 30.6**	**+0.3**
CD2				smax			
comp=N,4μm,0.5s							
LZH	**Lanzhou**	**5.29**	**5**	*e*Pg	**Pb**	**10 20 47.3**	**-1.2**
LZH				Sn	**Sn**	**10 21 36.5**	**+0.5**
LZH				smax			
comp=N,90nm,0.5s							
LZH				smax			
comp=E,110nm,0.5s							
KURK Kurchatov 27.06 324 P **P 10 24 59.2 +0.8**							
comp=E,1.0nm,0.8s,mb3.4,baz=133,slow=8.3,SNR=4.6							
WRA Warramunga Arr 58.63 145 P **P 10 29 13.6 +0.2**							
comp=E,0.6nm,0.3s,mb4.0,baz=328,slow=9.0,SNR=9.1							
ASAR Alice Springs 61.62 148 P **P 10 29 33.4 -0.3**							
comp=E,0.4nm,0.5s,mb3.8,baz=336,slow=6.4,SNR=3.5							
YKA Yellowknife Ar 82.19 17 P **P 10 31 32.7 -4.1**							
comp=E,0.2nm,0.6s,mb3.3,baz=329,slow=6.0,SNR=2.5							

*IDC **12** 10:20:38.6±1.1, 31°.59N×104°.30E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/28, mbtmp3.9/9, Error ellipse: s-maj=55.0km s-min=22.3km az=51.0*
*NEIC **12** 10:20:40.5±0.6, 31°.62N×104°.24E, h10km, Error ellipse: s-maj=26.6km s-min=9.2km az=220.0*
ISC 12 10:20:40.9±4.0, 31°.7N±0°.2×104°.3E±0°.2, h11km±24km, n14, σ0°63/16, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.39**	**355**	*e*Pg	**Pg**	**10 22 05.4**	**+0.4**
LZH				Sg	**Sg**	**10 23 01.3**	**-0.5**
LZH				smax			
comp=N,120nm,0.8s							
LZH				smax			
comp=E,130nm,0.6s							
LZH	**Lanzhou**	**4.39**	**355**	*e*Pg	**Pg**	**10 22 05.4**	**+0.4**
LZH				Sg	**Sg**	**10 23 01.3**	**-0.5**
LZH				smax			
comp=N,120nm,0.8s							
LZH				smax			
comp=E,130nm,0.6s							
ENH Enshi 4.66 107 Pn **Pn 10 21 51.7 +0.4**							
ZALV Zalesovo Beam 26.27 334 P **P 10 26 16.0 0.0**							
comp=E,1.4nm,0.3s,mb3.9,baz=120,slow=8.5,SNR=3.5							
KURK Kurchatov 26.88 322 P **P 10 26 20.2 -1.3**							
comp=E,0.9nm,0.5s,mb3.6,baz=130,slow=9.0,SNR=3.9							
BVAR Borovoye Array 32.44 321 P **P 10 27 10.8 0.0**							
comp=E,0.4nm,0.4s,mb3.6,baz=105,slow=11,SNR=2.3							
AKTK Aktyubinsk 38.87 313 P **P 10 28 06.8 +0.7**							
AKTO Aktyubinsk 38.87 313 P **P 10 28 06.8 +0.7**							
comp=E,0.9nm,0.4s,mb3.8,baz=88,slow=9.4,SNR=4.9							
BRTR Keskin Array B 56.61 299 P **P 10 30 23.4 -0.4**							
comp=E,0.4nm,0.8s,mb3.5,baz=34,slow=5.6,SNR=2.7							
ARCES ARCESS Array B 56.79 336 P **P 10 30 25.2 +0.6**							
comp=E,3.8nm,0.9s,mb4.4,baz=56,slow=4.7,SNR=3.5							
FINES FINESS Array B 57.17 326 P **P 10 30 28.0 +0.5**							
comp=E,1.7nm,0.4s,mb4.4,baz=90,slow=7.6,SNR=5.6							
WRAB Tennant Creek 58.87 147 *e*P **P 10 30 39.9 +0.1**							
WRA Warramunga Arr 58.87 147 P **P 10 30 38.6 -1.2**							
comp=E,0.8nm,0.6s,mb4.0,baz=340,slow=7.6,SNR=2.7							
YKA Yellowknife Ar 81.07 17 P **P 10 32 55.7 +0.1**							
comp=E,0.4nm,0.4s,mb3.7,baz=326,slow=5.1,SNR=6.0							

*ISCJB **12** 10:22:01.1±0.8, 31°.28N±0°.07×103°.9E±0°.2, h10km, mb4.0/6, Error ellipse: s-maj=23.1km s-min=8.1km az=14.3*
*IDC **12** 10:22:01.0±1.3, 31°.57N×104°.11E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/26, mbtmp3.8/4, Error ellipse: s-maj=98.3km s-min=25.8km az=64.0*
ISC 12 10:22:03.0±0.8, 31°.25N±0°.06×103°.9E±0°.2, h10km, n9, σ1°04/10, mb4.0/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**193**	Pg	**Pg**	**10 22 09.5**	**-0.4**
CD2				Sg	**Sg**	**10 22 14.3**	**-0.2**
CD2				smax			
comp=N,3μm,0.7s							
FINES FINESS Array B 57.32 326 P **P 10 31 49.1 -1.7**							
comp=N,1.0nm,0.4s,mb4.2,baz=96,slow=7.7,SNR=5.6							
WRA Warramunga Arr 58.72 146 P **P 10 32 01.3 +0.3**							
comp=N,0.9nm,0.6s,mb4.0,baz=340,slow=7.4,SNR=5.0							
ASAR Alice Springs 61.73 149 P **P 10 32 22.6 +1.0**							
comp=N,0.5nm,0.7s,mb3.8,baz=333,slow=6.6,SNR=3.6							
CDF Champ du Feu 71.36 316 *e*P **P 10 33 23.3 +0.3**							
LPG La Plagne 72.99 313 *e*P **P 10 33 34.1 +1.3**							
comp=N,3.1nm,0.5s,mb4.2							
LPL La Plagne 72.99 313 *e*P **P 10 33 34.1 +1.2**							
comp=N,3.1nm,0.5s,mb4.2							
SMF Signal de Mont 74.24 315 *e*P **P 10 33 40.1 -0.1**							
YKA Yellowknife Ar 81.62 17 P **P 10 34 18.9 -2.0**							
comp=N,0.4nm,0.6s,mb3.5,baz=326,slow=4.9,SNR=5.0							

*IDC **12** 10:23:38.1±0.3, 30°.94N×103°.37E, h0km, mb4.9/44, mb1 4.9/46, mb1mx4.9/46, mbtmp4.8/46, ML4.1/2, Error ellipse: s-maj=10.9km s-min=8.0km az=43.0*
*ISCJB **12** 10:23:39.6±0.8, 30°.92N±0°.02×103°.36E±0°.02, h20km±5km, mb5.0/183, MS5.3/2, Error ellipse: s-maj=3.8km s-min=3.3km az=21.3*
*MOS **12** 10:23:39.5±0.8, 30°.93N×103°.40E, h20km, mb5.1/81, Error ellipse: s-maj=6.8km s-min=3.8km az=116.1*
*BJI **12** 10:23:39.1, 30°.97N×103°.48E, h9km, mB5.6/7, mb4.8/31, ML5.0/15, Ms5.0/29, Ms7 4.8/21*
*NEIC **12** 10:23:40.1±0.1, 30°.97N×103°.37E, h10km, mb5.0/102, Error ellipse: s-maj=3.7km s-min=2.8km az=215.0*
NEIC Felt at Baoji and Chengdu.
*DJA **12** 10:23:46, 30°.91N×103°.39E, h51km, mb5.4/23*
*SZGRF **12** 10:23:51.3, 31°.63N×102°.40E, h33km, mb5.2, Sichuan, China*
ISC 12 10:23:41.7±0.7, 30°.94N±0°.02×103°.36E±0°.02, h20km±4km, n485, σ0°92/495, mb5.0/183, MS5.3/2, 86C-12D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**95**	Pg	**Pg**	**10 23 46.5**	**-2.6**
CD2				Sg	**Sg**	**10 23 54.5**	**+0.4**
CD2				smax			
comp=N,309μm,0.6s							
LZH	**Lanzhou**	**5.15**	**4**	*e*Pn	**Pb**	**10 25 05.8**	**-5.3**
LZH				Pg	**Pg**	**10 25 22.2**	**+1.9**
LZH				Sn	**Sb**	**10 26 07.1**	**-5.4**
LZH				Sg	**Sg**	**10 26 31.0**	**+4.0**
LZH				smax			
comp=N,720nm,0.9s							
LZH				smax			
comp=E,2μm,1.0s							
LZH				LR	LR		
comp=E,13μm,8.4s							
LZH				LR	LR		
comp=Z,14μm,9.4s							
ENH Enshi 5.32 96 *e*Pn **Pn 10 25 01.8 +1.7**							
comp=Z,48nm,0.8s							
GYA Guiyang 5.32 146 Pg **Pn 10 25 00.7 +0.6**							
GYA				Sg	**Sn**	**10 26 08.6**	**+7.8**
GYA				smax			
comp=N,2μm,1.0s							
GYA				smax			
comp=E,3μm,0.8s							
KMI Kunming 5.82 186 Pn **Pn 10 25 08.7 +1.8**							
KMI				Sn	**Sn**	**10 26 13.9**	**+0.8**
KMI				smax			
comp=N,420nm,1.5s							
KMI				smax			
comp=E,640nm,1.2s							
KMI				LR	LR		
comp=N,7μm,11.2s							
KMI				LR	LR		
comp=E,9μm,9.8s							
KMI				LR	LR		
comp=Z,5μm,9.1s							
GTA Gaotai 8.94 342 P **Pn 10 25 52.7 +3.1**							
GTA				pP		10 25 57.1	
GTA				sP		10 26 00.2	
GTA				S	**Sn**	**10 27 35.3**	**+5.6**
GTA				sS		10 27 40.6	
GTA				pmax	pmax		
comp=Z,14nm,1.2s							
GTA				pmax	pmax		
comp=Z,2μm,5.4s							
GTA				LR	LR		
comp=N,2μm,10.1s							
GTA				LR	LR		
comp=E,3μm,8.6s							
GTA				LR	LR		
comp=Z,3μm,8.0s							
WHN Wuhan 9.47 90 P **Pn 10 25 55.2 -1.7**							
WHN				S	**Sn**	**10 27 37.0**	**-5.8**
WHN				LR	LR		
comp=N,8μm,6.9s							
WHN				LR	LR		
comp=E,13μm,7.2s							
WHN				LR	LR		
comp=Z,18μm,7.2s							
IMP Imphal 10.35 236 *ex* x 10 26 16.0							
LSA Lhasa 10.62 266 P **Pn 10 26 14.6 +1.8**							
LSA Lhasa 10.62 266 *e*P **Pn 10 26 15.0 +2.2**							
LSA				pmax	pmax		
comp=Z,66nm,1.0s							
LSA Lhasa 10.62 266 *e*Pn **Pn 10 26 15.0 +2.2**							
comp=Z,66nm,1.0s							
SHL Shillong 11.44 245 *i* P **Pn 10 26 23.0 -1.0**							
SHL				*ex*	x	10 29 53.0	
GZH Guangzhou 11.84 129 P **Pn 10 26 25.8 -3.7**							
GZH				S	**Sn**	**10 28 40.8**	**-0.3**
GZH				LR	LR		
comp=N,3μm,5.7s							
GZH				LR	LR		
comp=E,4μm,6.0s							
HHC Hu-ho-hao-te 11.91 32 *e*P **Pn 10 26 31.4 +1.1**							
HHC				pP		10 26 34.7	
HHC				PP		10 26 41.4	
HHC				S	**Sn**	**10 28 46.0**	**+3.4**
HHC				sS		10 28 50.1	
HHC				SS		10 28 58.3	
HHC				pmax	pmax		
comp=Z,16nm,1.1s							
HHC				pmax	pmax		
comp=Z,1μm,4.3s							
HHC				LR	LR		
comp=N,2μm,5.1s							
HHC				LR	LR		
comp=E,3μm,5.5s							
HHC				LR	LR		
comp=Z,2μm,8.0s							
TIA Tai'an 12.62 62 P **Pn 10 26 39.9 -0.2**							
CHTO Chiang Mai 12.72 199 *e*P **Pn 10 26 42.6 +1.1**							
CM31 Chiang Mai Arr 13.06 199 *e*Pn **Pn 10 26 47.7 +1.6**							
CMAR Chiang Mai Arr 13.06 199 Pn **Pn 10 26 46.0 -0.1**							
comp=Z,0.4nm,0.3s,baz=9.6,slow=12,SNR=43							
CMAR				Lg		10 30 36.9	
comp=Z,0.3nm,0.3s,baz=22,slow=32,SNR=3.4							
QIZ Qiongzhong 13.23 152 P **Pn 10 26 48.7 +0.2**							
QIZ				S	**Sn**	**10 29 18.9**	**+3.8**
QIZ				pmax	pmax		
comp=Z,39nm,1.2s							
QIZ				pmax	pmax		
comp=Z,3μm,16.9s							
QIZ				LR	LR		
comp=N,3μm,11.2s							
QIZ				LR	LR		
comp=Z,3μm,11.5s							
NJ2 Nanjing 13.27 81 *e*P **Pn 10 26 43.4 -5.6**							
NJ2				pP		10 26 51.0	
NJ2				PP		10 26 53.6	
NJ2				sP		10 26 55.5	
NJ2				S	**Sn**	**10 29 05.6**	**-10**
NJ2				sS		10 29 15.6	
NJ2				pmax	pmax		
comp=Z,20nm,0.6s							
NJ2				pmax	pmax		
comp=Z,1μm,3.8s							
NJ2				LR	LR		
comp=N,2μm,10.4s							
NJ2				LR	LR		
comp=E,3μm,8.5s							
NJ2				LR	LR		
comp=Z,10μm,7.6s							
BJT Baijiatuau 13.81 46 *e*P **Pn 10 26 58.0 +1.8**							
BJT				pmax	pmax		
comp=Z,52nm,1.0s							
BJT Baijiatuau 13.81 46 *e*Pn **Pn 10 26 58.0 +1.7**							
comp=Z,52nm,1.0s							
BJI Beijing 13.82 45 P **Pn 10 26 55.3 -1.2**							
BJI				pmax	pmax		
comp=Z,11nm,0.7s							
QZH Quanzhou 14.72 110 *e*P **Pn 10 27 08.4 -0.4**							
QZH				S	**Sn**	**10 29 53.9**	**+2.4**
QZH				LR	LR		
comp=N,3μm,10.2s							
QZH				LR	LR		
comp=E,6μm,8.9s							
QZH				LR	LR		
comp=Z,8μm,9.2s							
GUN Gumba 15.53 263 *e*P **Pn 10 27 17.9 -1.6**							
comp=Z,205nm,0.8s							
PKI Pulchoki 16.02 262 *e*P **Pn 10 27 24.2 -1.7**							
comp=Z,184nm,0.6s							
KKN Kakani 16.07 263 *e*P **Pn 10 27 25.0 -1.5**							
comp=Z,238nm,0.7s							
DMN Daman 16.27 263 *e*P **Pn 10 27 27.2 -1.9**							
comp=Z,178nm,1.0s							
SONM Songino Array 17.03 7 P **Pn 10 27 37.2 -1.4**							
comp=Z,0.5nm,0.3s,baz=182,slow=13,SNR=6.9							
YHNB Yeheng 17.11 107 *e*Pn **Pn 10 27 39.3 -0.4**							
comp=Z,54nm,0.6s							
ULN Ulaanbaatar 17.14 8 *e*P **Pn 10 27 39.7 -0.2**							

ULN pmax pmax
comp=Z,27nm,1.1s
ULN Ulaanbaatar 17.14 8 *e*Pn **Pn 10 27 39.7 -0.2**
comp=Z,27nm,1.1s
ULN Ulaanbaatar 17.14 8 Pn **Pn 10 27 44.0 +4.1**
SNR=11
ULN Pn **Pn 10 27 44.0 +4.1**
SNR=11
TPUB Ta-pu 17.14 112 *e*P **Pn 10 27 42.3 +2.2**
comp=Z,50nm,0.9s
SSLB Suanglung 17.16 110 *e*P **Pn 10 27 41.9 +1.5**
comp=Z,65nm,0.9s
YULB Yu-li 17.63 111 *e*P **Pn 10 27 48.6 +2.4**
comp=Z,21nm,0.8s
WMQ Urumqi 17.86 320 P **Pn 10 27 50.4 +1.5**
WMQ pmax pmax
comp=Z,27nm,1.0s
WMQ LR LR
comp=N,2μm,24.0s
WMQ LR LR
comp=E,3μm,22.0s
WMQ LR LR
comp=Z,2μm,22.0s
ZAK Zakamensk 19.42 360 *e*P **Pn 10 28 08.1 +0.3**
ZAK pmax pmax
comp=Z,21nm,1.2s
SNY Shenyang 19.52 51 ⇓P **Pn 10 28 08.1 -1.0**
SNY S **Sn 10 31 34.5 -13**
SNY pmax pmax
comp=Z,20nm,0.5s
SNY LR LR
comp=N,2μm,16.5s
SNY LR LR
comp=E,3μm,16.5s
SNY LR LR
comp=Z,3μm,18.6s
PTH Pithoragarh 20.04 272 *e*P **P 10 28 13.0 -0.5**
INCN Inchon 20.30 65 *e*Pn **P 10 28 17.5 +1.3**
comp=Z,52nm,0.9s
JOSI Joshimath 20.46 275 *e*P **P 10 28 18.8 +0.8**
TLY Talaya 20.73 0 *e*P **P 10 28 21.8 +1.1**
TLY pmax pmax
comp=Z,38nm,1.7s
TLY Talaya 20.73 0 *e*Pn **P 10 28 22.2 +1.5**
comp=Z,22nm,1.1s
TLY Talaya 20.73 0 P **P 10 28 22.7 +2.0**
SNR=9.3
TLY P 10 28 22.7
SNR=9.3
MOY Mondy 20.78 356 *e*P **P 10 28 23.8 +2.4**
MOY pmax pmax
comp=Z,126nm,2.1s
IRK Irkutsk 21.30 2 *e*P **P 10 28 28.3 +1.4**
IRK pmax pmax
comp=Z,145nm,1.0s,mb5.3
KSRS Korea Array 21.30 66 P **P 10 28 25.2 -1.9**
comp=Z,36nm,0.8s,mb4.8,baz=247,slow=9.4,SNR=80
KSRS S **S 10 32 23.8 +0.9**
comp=Z,7.9nm,1.1s,baz=253,slow=15,SNR=5.3
KSRS Korea Array 21.30 66 P **P 10 28 25.2 -1.9**
KSRS S **S 10 32 23.8 +1.0**
KSRS pmax pmax
comp=Z,37nm,0.8s,mb4.8
KSRS smax
comp=N,8.0nm,1.2s
CN2 Changchun 21.67 48 *e*P **P 10 28 30.4 -0.6**
CN2 *es*P sP 10 28 37.0 -2.1
CN2 *e*S **S 10 32 24.0 -5.9**
CN2 pmax pmax
comp=Z,40nm,1.1s,mb4.8
CN2 pmax pmax
comp=Z,2μm,5.0s
CN2 LR LR
comp=N,18μm,17.0s,MS5.8
CN2 LR LR
comp=E,26μm,17.0s,MS5.8
CN2 LR LR
comp=Z,31μm,19.0s,MS5.7
HIA Hailar 22.10 29 *e*P **P 10 28 35.2 -0.3**
HIA pmax pmax
comp=Z,26nm,0.7s
HIA Hailar 22.10 29 *e*P **P 10 28 35.2 -0.3**
comp=Z,26nm,0.7s,mb4.8
CIT Chita 22.36 17 *e*P **P 10 28 38.2 -0.1**
SMLA Simla 22.43 277 *i*P **P 10 28 35.1 -4.1**
SMLA *i*S **S 10 32 39.4 -5.6**
AGRA Agra 22.50 267 *e*P **P 10 28 39.1 -0.9**
AGRA AMb AMB 10 28 40.7
comp=Z,118nm,0.3s,mb5.8
MK31 Makanchi Array 22.69 320 *e*P **P 10 28 43.0 +1.1**
MKAR Makanchi Array 22.69 320 P **P 10 28 42.8 +0.9**
comp=Z,14nm,0.8s,mb4.4,baz=129,slow=11,SNR=32
NDI New Delhi 22.78 271 *e*P **P 10 28 41.0 -2.0**
NDI *e*S **S 10 32 51.0 -0.3**
AYAN Aya Nagar 22.90 271 *e*P **P 10 28 43.2 -1.0**
AYAN AMb AMB 10 28 46.1
comp=Z,35nm,0.8s,mb4.8
SONA Sohna 22.99 270 *e*P **P 10 28 44.2 -1.0**
SONA AMb AMB 10 28 46.9
comp=Z,54nm,1.1s,mb4.9
TGY Tagaytay City 23.28 132 P **P 10 28 49.4 +1.1**
comp=Z,117nm,0.4s,mb5.7,baz=77,slow=14,SNR=5.0
THN Thein Dam 23.55 281 *ex* x 10 28 48.4
KSH Kashi 23.88 298 *e*P **P 10 28 57.5 +3.5**
KSH *ep*P 10 29 01.6
KSH *es*P sP 10 29 04.5 +2.1
KSH *e*PP 10 29 32.1
KSH *e*PcP PcP 10 32 39.0 +2.6
KSH *e*S **S 10 33 11.9 +2.8**
KSH *es*S sS 10 33 19.1 +0.3
KSH *e*SS 10 34 04.5
KSH *e*ScP ScP 10 36 16.1 +2.3
KSH *e*PcS PcS 10 36 17.5 +1.6
KSH *e*ScS ScS 10 40 02.1 +1.5
KSH pmax pmax
comp=Z,150nm,2.2s,mb5.0
KSH LR LR
comp=N,700nm,9.0s
KSH LR LR
comp=E,770nm,12.2s
KHET Khetri 24.13 270 *e*P **P 10 28 56.7 +0.4**
KHET AMb AMB 10 29 00.8
comp=Z,36nm,0.9s,mb4.8
KHET *e*S **S 10 33 14.9 +1.7**
ULHL Ulaho! 24.42 305 P **P 10 29 01.0 +2.1**
SNR=37
MDJ Mudanjiang 24.70 49 P **P 10 28 59.2 -2.1**
MDJ pP 10 29 02.9
MDJ S **S 10 33 17.8 -4.3**
MDJ ScP ScP 10 36 15.6 -0.3
MDJ PcS PcS 10 36 16.9 -1.1
MDJ pmax pmax
comp=Z,17nm,1.4s,mb4.4
MDJ pmax pmax
comp=Z,2μm,16.9s
MDJ LR LR
comp=N,3μm,34.4s
MDJ LR LR
comp=E,2μm,18.3s
MDJ LR LR
comp=Z,3μm,18.3s
MDJ Mudanjiang 24.70 49 *e*P **P 10 28 59.7 -1.6**
comp=Z,87nm,1.4s,mb5.1
KZA Kyzart 25.07 304 P **P 10 29 07.4 +2.7**
SNR=125
TKM2 Tokmak 2 25.09 306 P **P 10 29 06.4 +1.5**
SNR=22
TKM2 Tokmak 2 25.09 306 *e*P **P 10 29 06.2 +1.3**
TKM2 pmax pmax
comp=Z,61nm,1.3s,mb5.0
TKM2 Tokmak 2 25.09 306 *e*P **P 10 29 06.2 +1.3**
comp=Z,61nm,1.3s,mb5.0
KBK Karagaybulak 25.46 305 P **P 10 29 10.6 +2.4**
SNR=14
UCH Uchtor 25.64 304 P **P 10 29 12.5 +2.6**
SNR=37
UCH Uchtor 25.64 304 *e*P **P 10 29 11.9 +2.0**
comp=Z,49nm,1.1s,mb5.0
FRU Bishkek 25.75 305 *e*P **P 10 29 12.0 +1.1**
FRU pmax pmax
comp=Z,60nm,1.8s,mb4.8
AAK Ala-Archa 25.77 305 P **P 10 29 13.8 +2.7**
comp=Z,288nm,0.8s,mb5.9,SNR=22
AAK Ala-Archa 25.77 305 P **P 10 29 13.1 +1.9**
SNR=32
AAK Ala-Archa 25.77 305 P **P 10 29 12.5 +1.4**
comp=Z,14nm,0.7s,mb4.6,baz=148,slow=7.4,SNR=32
AAK Ala-Archa 25.77 305*c i*P **P 10 29 12.8 +1.7**
AAK pmax pmax
comp=Z,29nm,1.2s,mb4.7
AAK Ala-Archa 25.77 305 *e*P **P 10 29 11.9 +0.8**
comp=Z,47nm,0.9s,mb5.0
AAK Ala-Archa 25.77 305 P **P 10 29 13.4 +2.3**
SNR=31
AAK P 10 29 13.4
SNR=31
USP Ospenovka 25.96 306 P **P 10 29 14.3 +1.4**
SNR=16
AML Almayashu 26.20 303 P **P 10 29 17.3 +2.3**
SNR=23
AML Almayashu 26.20 303 *e*P **P 10 29 16.6 +1.6**
comp=Z,23nm,0.8s,mb4.8
HYB Hyderabad 26.25 245 *i*P **P 10 29 15.0 -0.7**
EKS2 Erkin-Say 26.29 305 P **P 10 29 18.0 +2.3**
SNR=7.8
EKS2 Erkin-Say 26.29 305 *e*P **P 10 29 15.7 0.0**
comp=Z,57nm,1.3s,mb4.9
ZAA0 Zalesovo Array 26.60 335 *e*P **P 10 29 18.8 +0.3**
ZALV Zalesovo Beam 26.60 335 P **P 10 29 18.0 -0.5**
comp=Z,30nm,0.7s,mb4.9,baz=136,slow=8.9,SNR=44
KURK Kurchatov 27.00 324 P **P 10 29 22.3 +0.2**
comp=Z,171nm,1.1s,mb5.5,SNR=17
KURK Kurchatov 27.00 324 P **P 10 29 22.2 +0.1**
comp=Z,24nm,0.9s,mb4.7,baz=127,slow=9.7,SNR=47
KURK PcP PcP 10 32 42.7 -0.5
comp=Z,3.8nm,0.9s,baz=121,slow=2.0,SNR=4.0
KURK Kurchatov 27.00 324 P **P 10 29 22.2 +0.1**
KURK 10 32 42.7
KURK pmax pmax
comp=Z,24nm,0.9s,mb4.7
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
KURK Kurchatov 27.00 324 *e*P **P 10 29 22.5 +0.4**
comp=Z,44nm,1.2s,mb4.9
KURK Kurchatov 27.00 324 P **P 10 29 22.9 +0.8**
SNR=15
KURK P 10 29 22.9
SNR=15
BOD Bodaibo 27.86 12 *e*P **P 10 29 29.7 0.0**
BOD pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
NVS Novosibirsk 27.87 335 *e*P **P 10 29 29.4 -0.5**
NVS *e* 10 30 35.6
NVS pmax pmax
comp=N,38nm,1.8s
NVS pmax pmax
comp=E,23nm,1.8s
NVS pmax pmax
comp=Z,39nm,1.8s,mb4.7
KLR Kul'dur 28.14 41 *e*P **P 10 29 27.0 -5.3**
JASL Jaisalmer 28.63 270 *e*P **P 10 29 36.9 0.0**
KBL Kabul 29.00 286 *e*P **P 10 29 41.4 +1.2**
KBL pmax pmax
comp=Z,30nm,1.0s,mb5.0
KBL Kabul 29.00 286 *e*P **P 10 29 41.4 +1.2**
comp=Z,30nm,1.0s,mb5.0
MAT Matsushiro 29.41 70 P **P 10 29 42.2 -1.6**
MJAR Matsushiro Arr 29.41 70 P **P 10 29 44.4 +0.6**
comp=Z,2.7nm,0.9s,mb4.0,baz=267,slow=9.0,SNR=6.0
POO Poona 29.42 252 *ex* x 10 29 41.0
HABR Khabarovsk 29.73 45 *e*P **P 10 29 43.5 -2.9**
HABR *e**SP sP 10 29 57.0 +2.1
HABR 10 30 39.5
HABR *e* 10 32 47.3
HABR *e*S **S 10 34 37.7 -3.7**
HABR *e*SS SS 10 36 08.9 -39
HABR *e* 10 36 30.5
HABR *e* 10 40 21.1
HABR pmax pmax
comp=E,23nm,1.3s
HABR pmax pmax
comp=Z,46nm,2.6s,mb4.8
HABR pmax pmax
comp=N,6.0nm,0.9s
HABR MLR MLR
comp=Z,2μm,19.0s,MS4.8
CLNS Chul'man 29.93 24 *e*P **P 10 29 48.1 0.0**
CLNS pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CLNS pmax pmax
comp=N,9.0nm,0.8s
BVAR Borovoye Array 32.53 322 P **P 10 30 10.4 -0.6**
comp=N,4.8nm,0.6s,mb4.6,baz=114,slow=9.8,SNR=26
BVAR PcP PcP 10 32 56.8 -0.6
comp=N,7.1nm,0.7s,baz=132,slow=4.8,SNR=11
BRVK Borovoye 32.60 322⇑*e*P **P 10 30 11.3 -0.4**
BRVK pmax pmax
comp=Z,20nm,1.7s,mb4.8
BRVK Borovoye 32.60 322 *e*P **P 10 30 12.5 +0.8**
comp=Z,10nm,0.9s,mb4.8
BRVK Borovoye 32.60 322 P **P 10 30 12.9 +1.3**
SNR=5.5
BRVK P 10 30 12.9
SNR=5.5
ASAJ Asahikawa 33.47 56 P **P 10 30 18.9 -0.5**
comp=Z,7.5nm,0.8s,mb4.7,baz=268,slow=9.9,SNR=7.4
ASAJ Asahikawa 33.47 56 P **P 10 30 18.9 -0.5**
ASAJ pmax pmax
comp=Z,8.0nm,0.8s
YSS Yuzh-Sakhalins 34.15 51⇑*e*P **P 10 30 24.7 -0.6**
YAK Yakutsk 35.49 21 *e*P **P 10 30 35.2 -1.4**
YAK pmax pmax
comp=Z,26nm,0.9s,mb5.2
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=N,12nm,1.3s
YAK Yakutsk 35.49 21 *e*P **P 10 30 36.4 -0.2**
comp=N,77nm,1.1s,mb5.5
ABKAR Akbulak array 37.31 312 *e*P **P 10 30 52.7 +0.3**
comp=N,9.4nm,0.7s,mb4.7
ABKT Ailbek 37.67 293 P **P 10 30 57.9 +2.3**
comp=N,458nm,0.7s,SNR=7.8
AKTK Aktyubinsk 38.78 313 P **P 10 31 04.7 -0.1**
AKTO Aktyubinsk 38.78 313 P **P 10 31 04.7 -0.1**
comp=N,3.4nm,0.6s,mb4.3,baz=102,slow=8.1,SNR=16
KAPI Kappang 39.03 153 P **P 10 31 05.6 -1.6**
comp=N,52nm,0.9s,mb5.2,baz=329,slow=11,SNR=20
KAPI Kappang 39.03 153 *e*P **P 10 31 05.5 -1.7**
comp=N,47nm,0.9s,mb5.2
SVE Sverdlovsk 39.25 324⇑*e*P **P 10 31 09.7 +1.1**
SVE pmax pmax
comp=Z,31nm,1.1s,mb5.0
ARU Arti 40.17 323*c i*P **P 10 31 16.4 +0.1**
ARU S **S 10 37 22.1 +0.3**
ARU SS SS 10 40 14.0 -5.7
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.1
ARU Arti 40.17 323 *e*P **P 10 31 16.6 +0.3**
comp=Z,28nm,0.8s,mb5.0
TIXI Tiksi 43.04 12 *e*P **P 10 31 38.3 -1.3**
TIXI pmax pmax
comp=Z,30nm,1.0s,mb5.0
TIXI Tiksi 43.04 12 *e*P **P 10 31 38.5 -1.1**
comp=Z,39nm,1.2s,mb5.0
SEY Seymchan 44.55 29⇑*i*P **P 10 31 51.3 -0.5**
PETK Petropavlovsk- 44.75 44 P **P 10 31 53.0 -0.5**
comp=Z,9.4nm,0.8s,mb4.7,baz=284,slow=4.3,SNR=10.0
PET Petropavlovsk 45.31 44 *e*P **P 10 31 57.6 -0.4**
PET pmax pmax
comp=Z,26nm,0.9s,mb5.1
PET Petropavlovsk 45.31 44 *e*P **P 10 31 57.9 -0.2**
comp=Z,19nm,0.9s,mb4.9
KBD Kabd 47.78 283 *e*P **P 10 32 17.2 -0.6**
KBD AMb AMB 10 32 24.0
comp=Z,31nm,1.3s,mb5.2
GNI Garni 47.82 298*c i*P **P 10 32 19.0 +1.1**
GNI pmax pmax
comp=Z,23nm,1.6s
GNI Garni 47.82 298 *e*P **P 10 32 19.8 +1.9**
comp=Z,27nm,1.1s,mb5.2
MIB Mutribah 47.90 284 *e*P **P 10 32 18.3 -0.4**
MIB AMb AMB 10 32 19.0
comp=Z,87nm,0.8s,mb5.8
RDF Al-Radifah 47.98 283 *e*P **P 10 32 19.2 -0.1**
RDF AMb AMB 10 32 26.2
comp=Z,58nm,0.9s,mb5.6
ZEI Tsey 48.12 302 *e*P **P 10 32 19.7 -0.4**
ZEI *e* 10 32 28.3
ZEI pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KIV Kislovodsk 48.87 303 P **P 10 32 27.6 +1.7**
comp=Z,326nm,1.0s,SNR=5.7
KIV Kislovodsk 48.87 303 *e*P **P 10 32 26.8 +0.9**
KIV pmax pmax
comp=Z,52nm,1.0s,mb5.5
KIV Kislovodsk 48.87 303 *e*P **P 10 32 27.2 +1.3**
comp=Z,40nm,0.8s,mb5.5
KIV Kislovodsk 48.87 303 P **P 10 32 27.0 +1.0**
SNR=16
KIV P 10 32 27.0
SNR=16
VRHR Novokhopersk 49.19 313 *e*P **P 10 32 33.2 +5.0**
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,20nm,1.1s
VRHR pmax pmax
comp=E,20nm,0.5s
VSR Storozhevoye 50.73 313 *e*P **P 10 32 39.4 -0.6**
VSR pmax pmax
comp=Z,20nm,1.1s,mb5.0
VSR pmax pmax
comp=N,20nm,1.9s
VSR pmax pmax
comp=E,20nm,1.5s
KLMR Klimovskoe 50.84 325 *e*P **P 10 32 39.6 -1.0**
KLMR pmax pmax
comp=Z,61nm,1.3s,mb5.4
MOS Moscow 51.57 319 *e*P **P 10 32 44.4 -1.8**
MOS *e* 10 34 40.0
MOS pmax pmax
comp=Z,96nm,0.8s,mb5.8
BILL Bilibino 51.60 25*c i*P **P 10 32 45.4 -0.8**
BILL pmax pmax
comp=Z,28nm,1.0s,mb5.2
BILL Bilibino 51.60 25 *e*P **P 10 32 45.3 -0.9**
comp=Z,28nm,1.0s,mb5.1
KAKA Kakadu 51.62 143 *e*P **P 10 32 44.7 -2.3**
comp=Z,10nm,0.6s,mb4.9
KAKA Kakadu 51.62 143 *e*P **P 10 32 44.5 -2.5**
comp=Z,26nm,0.6s,mb5.3
OBN Obninsk 52.17 318*c i*P **P 10 32 50.2 -0.5**
OBN *e* 10 34 01.6
OBN *e*SS SS 10 43 50.2 -0.9
OBN pmax pmax
comp=Z,39nm,1.0s,mb5.3
OBN Obninsk 52.17 318 *e*P **P 10 32 50.3 -0.4**
ANN Anapa 52.50 305 *e*P **P 10 32 52.4 -0.9**
ANN pmax pmax
comp=Z,51nm,0.9s,mb5.5
MALT Malatya 52.97 297 *e*P **P 10 32 57.7 +0.9**
comp=Z,6.0nm,0.9s,mb4.5
MALT Malatya 52.97 297⇓*i*P **P 10 32 57.5 +0.6**
FITZ Fitzroy Crossi 53.26 153 *e*P **P 10 32 58.2 -0.9**
comp=Z,23nm,0.9s,mb5.1
FITZ Fitzroy Crossi 53.26 153 P **P 10 32 58.0 -1.1**
comp=Z,13nm,0.8s,mb4.9,baz=333,slow=5.0,SNR=20
MBWA Marble Bar 54.13 161 *e*P **P 10 33 04.7 -0.7**
MBWA Marble Bar 54.13 161 *e*P **P 10 33 04.9 -0.5**
comp=Z,31nm,0.8s,mb5.3
JOF Joensuu 54.83 328 *e*P **P 10 33 06.8 -3.2**
JOF pmax pmax
comp=Z,15nm,0.6s,mb5.2
JOF Joensuu 54.83 328 *ep* **P 10 33 06.8 -3.2**
comp=Z,15nm,0.6s,mb5.2
ASF Jabal al Asfar 55.80 290 P **P 10 33 18.2 +0.6**
comp=Z,14nm,0.8s,mb5.0,baz=312,slow=4.3,SNR=17
BR131 Keskin Array S 56.27 300 *e*P **P 10 33 20.7 -0.1**
BRTR Keskin Array B 56.27 300 P **P 10 33 20.6 -0.2**
comp=Z,6.1nm,0.8s,mb4.7,baz=98,slow=6.4,SNR=31
KEV Kevo 56.62 336 *e*P **P 10 33 22.2 -0.6**
KEV pmax pmax
comp=Z,17nm,0.7s,mb5.2
KEV Kevo 56.62 336 *ep* **P 10 33 22.2 -0.6**
comp=Z,17nm,0.7s,mb5.2
MMAI Mount Meron Ar 56.74 291 P **P 10 33 22.6 -1.8**
comp=Z,2.5nm,0.5s,mb4.5,baz=74,slow=11,SNR=4.9
AKASG Malin Array Be 57.03 313 P **P 10 33 24.7 -1.3**
comp=Z,14nm,0.7s,mb5.1,baz=71,slow=6.6,SNR=30
ARCES ARCESS Array B 57.15 336 P **P 10 33 26.4 -0.2**
comp=Z,10nm,0.8s,mb4.9,baz=88,slow=7.8,SNR=12
ARCES PcP PcP 10 34 20.9 -0.2
comp=Z,3.4nm,0.5s,baz=69,slow=3.2,SNR=7.9
KAF Kangasniemi 57.18 327 *e*P **P 10 33 25.3 -1.6**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KAF Kangasniemi 57.18 327 *ep* **P 10 33 25.3 -1.6**
comp=Z,8.7nm,0.7s,mb4.9
FINES FINESS Array B 57.35 326 P **P 10 33 27.8 -0.3**
comp=Z,14nm,0.8s,mb5.0,baz=104,slow=6.9,SNR=16
FINES FINESS Array B 57.35 326 P **P 10 33 27.8 -0.3**
IDID Didziasalis 57.76 319 *e*P **P 10 33 31.0 -0.2**
CSS Prodhromos 57.80 294 *e*P **P 10 33 31.6 -0.1**
comp=Z,21nm,0.8s,mb5.2
NACGM Naroch 57.80 318 *e* **P 10 33 29.0 -2.4**
IZAR Zarasai 57.97 319 *e*P **P 10 33 33.0 +0.4**
ISAL Salakas 58.07 319 *e*P **P 10 33 33.6 +0.3**
WRAB Tennant Creek 58.69 145 P **P 10 33 37.0 -1.0**
comp=Z,450nm,0.8s,SNR=34
WRAB Tennant Creek 58.69 145 *e*P **P 10 33 37.8 -0.2**
WRAB pmax pmax
comp=Z,44nm,0.7s,mb5.6
WRAB Tennant Creek 58.69 145 *e*P **P 10 33 37.8 -0.2**
comp=Z,44nm,0.7s,mb5.6
WRA Warramunga Arr 58.70 145 P **P 10 33 37.5 -0.5**
comp=Z,40nm,0.8s,mb5.5,baz=336,slow=7.6,SNR=111
WB2 Warramunga Arr 58.70 145 *e*P **P 10 33 37.5 -0.5**
COEN Coen 58.79 133 *e*P **P 10 33 38.6 -0.1**
comp=Z,108nm,0.6s,mb6.1
TIRR Tirgusor 58.88 306 *e*P **P 10 33 38.5 -0.6**
TIRR pmax pmax
comp=Z,11nm,0.8s,mb4.9
TIRR Tirgusor 58.88 306 *e*P **P 10 33 38.5 -0.6**
comp=Z,11nm,0.8s,mb4.9
TIRR Tirgusor 58.88 306⇓*i*P **P 10 33 39.1 0.0**
SPITS Spitsbergen Ar 59.34 346 P **P 10 33 41.3 -0.5**
comp=Z,21nm,1.1s,mb5.1,baz=93,slow=8.8,SNR=9.6
SPB4 Spitsbergen Ar 59.35 346 *e*P **P 10 33 41.2 -0.7**
VRI Vrincioaia 59.68 308⇓*i*P **P 10 33 45.5 +0.9**
VRI Vrincioaia 59.68 308⇓*i*P **P 10 33 45.5 +0.9**
SUW Suwalki 60.03 318 *e*P **P 10 33 46.7 -0.2**
BURAR Bucovina Array 60.25 310⇑P **P 10 33 48.7 +0.2**
BURAR Bucovina Array 60.25 310⇑*i*P **P 10 33 48.7 +0.2**
BUR08 Bucovina Ar. S 60.26 310 *e*P **P 10 33 48.4 -0.2**
MLR Muntele Rosu 60.31 308 P **P 10 33 50.2 +1.2**
comp=Z,5.9nm,0.6s,mb4.8,baz=50,slow=1.4,SNR=10
MLR Muntele Rosu 60.31 308⇑*i*P **P 10 33 50.0 +1.0**
LVV L'vov 60.48 313 *e*P **P 10 33 49.3 -0.7**
MORW Morawa 60.88 167 *e*P **P 10 33 53.7 +0.8**
VOIR 60.93 308⇓P **P 10 33 54.5 +1.3**
VOIR 60.93 308⇓*i*P **P 10 33 54.5 +1.3**
KWP Kalwaria Pacla 61.35 313 *e*P **P 10 33 56.4 +0.4**
KWP Kalwaria Pacla 61.35 313 *e*P **P 10 33 56.2 +0.2**
comp=Z,68nm,1.0s,mb5.7
KWP Kalwaria Pacla 61.35 313⇓*i*P **P 10 33 56.7 +0.7**
ASAR Alice Springs 61.69 148 P **P 10 33 58.4 -0.1**
comp=Z,13nm,0.8s,mb5.1,baz=332,slow=6.5,SNR=90
ASAR PcP PcP 10 34 39.2 -0.5
comp=Z,4.1nm,0.8s,baz=334,slow=5.1,SNR=4.4
KOLS Kolonicke sedl 61.81 312 *e*P **P 10 33 59.1 0.0**
KOLS pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
KOLS Kolonicke sedl 61.81 312 *e*P **P 10 33 59.1 0.0**
comp=Z,3.9nm,0.7s,mb4.7
KOLS Kolonicke sedl 61.81 312 *e*P **P 10 33 59.1 0.0**
TRPA Tarpa 61.86 311⇓*i*P **P 10 33 59.8 +0.4**
UZH Uzhgorod 61.88 312 *e*P **P 10 33 59.6 0.0**
DRGR 62.12 310⇑P **P 10 34 00.9 -0.3**
DRGR 62.12 310⇑*i*P **P 10 34 00.9 -0.3**
STHS Stebnicka Huta 62.33 313 *e*P **P 10 34 02.7 +0.1**
STHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
STHS Stebnicka Huta 62.33 313 *e*P **P 10 34 02.7 +0.1**
comp=Z,7.2nm,1.0s,mb4.8
STHS Stebnicka Huta 62.33 313 *e*P **P 10 34 02.7 +0.1**
NIE Niedzica 62.91 313 *e*P **P 10 34 04.8 -1.6**
OJC Ojcow 63.00 314 *e*P **P 10 34 06.4 -0.6**
KECS Kecovo 63.08 312 *e*P **P 10 34 07.9 +0.4**
KECS pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
KECS Kecovo 63.08 312 *e*P **P 10 34 07.9 +0.4**
comp=Z,4.9nm,0.6s,mb4.8
KECS Kecovo 63.08 312 *e*P **P 10 34 07.9 +0.4**
HFS Hagfors 63.55 326 P **P 10 34 10.0 -0.4**
comp=Z,11nm,0.5s,mb5.1,baz=104,slow=6.3,SNR=38
VYHS Vyhne 64.12 313 *e*P **P 10 34 15.0 +0.6**

VYHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
VYHS Vyhne 64.12 313 *eP* **P 10 34 15.0 +0.6**
comp=Z,5.6nm,0.9s,mb4.6
VYHS Vyhne 64.12 313 *eP* **P 10 34 15.0 +0.6**
IDI Anoyia 64.23 297 P **P 10 34 14.1 -1.4**
comp=Z,24nm,0.7s,mb5.3,baz=46,slow=9.6,SNR=11
KOLL Kolacno 64.36 313 *eP* **P 10 34 16.8 +0.8**
KOLL Kolacno 64.36 313 *eP* **P 10 34 16.8 +0.8**
KMBL Kambalda 64.41 162 *eP* **P 10 34 16.2 -0.2**
comp=Z,73nm,0.6s,mb5.9
NB2 NORSAR Subarra 64.45 327 P **P 10 34 15.1 -1.3**
comp=Z,9.4nm,0.7s,mb4.9,baz=72,slow=6.9
NOA NORSAR Array B 64.45 327 P **P 10 34 15.3 -1.0**
comp=Z,8.4nm,0.7s,mb4.9,baz=72,slow=6.7,SNR=23
MORC Moravsky Berou 64.52 314 *eP* **P 10 34 17.4 +0.3**
comp=Z,23nm,1.1s,mb5.1
MORC Moravsky Berou 64.52 314⇑ *iP* **P 10 34 17.6 +0.5**
NWAO Narrogin (SRO) 64.86 167 *eP* **P 10 34 19.7 +0.4**
comp=Z,194nm,0.6s
NWAO Narrogin (SRO) 64.86 167 P **P 10 34 19.8 +0.5**
comp=Z,41nm,0.8s,mb5.5,baz=344,slow=7.7,SNR=27
KSP Ksiaz 64.94 316 *eP* **P 10 34 19.4 -0.4**
PKSM Moragy 64.97 310 ⇓P **P 10 34 20.2 +0.1**
PKSM Moragy 64.97 310 ⇓*iP* **P 10 34 20.2 +0.1**
VRAC Vranov 65.26 314 P **P 10 34 22.4 +0.5**
comp=Z,8.9nm,0.7s,mb4.9,baz=63,slow=8.1,SNR=7.7
VRAC Vranov 65.26 314 ⇓*iP* **P 10 34 22.5 +0.6**
ZST Bratislava 65.31 313 *eP* **P 10 34 22.8 +0.6**
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ZST Bratislava 65.31 313 *eP* **P 10 34 22.8 +0.6**
comp=Z,6.3nm,0.9s,mb4.7
ZST Bratislava 65.31 313 *eP* **P 10 34 22.8 +0.6**
CTA Charters Tower 65.36 135 *eP* **P 10 34 22.5 -0.3**
comp=Z,11nm,0.9s,mb4.9
CTA Charters Tower 65.36 135 P **P 10 34 21.9 -0.8**
comp=Z,15nm,0.8s,mb5.0,baz=313,slow=8.7,SNR=12
CTA Charters Tower 65.36 135 P **P 10 34 21.9 -0.9**
CTAO Charters Tower 65.36 135 *eP* **P 10 34 22.6 -0.2**
CTAO pmax pmax
comp=Z,12nm,0.8s,mb5.0
CTAO Charters Tower 65.36 135 *eP* **P 10 34 22.6 -0.1**
comp=Z,12nm,0.8s,mb5.0
FORT Forrest 65.71 157 *eP* **P 10 34 25.2 +0.3**
comp=Z,35nm,0.7s,mb5.5
CONA Conrad Observa 66.18 313⇑ *iP* **P 10 34 28.2 +0.4**
comp=Z,9.6nm,0.7s,mb4.9,SNR=7.4
ALE Alert 66.56 358 P **P 10 34 30.6 +0.8**
comp=Z,68nm,0.9s,mb5.7,SNR=6.4
ARSA Arzberg 66.64 312⇑ *iP* **P 10 34 30.5 -0.2**
comp=Z,6.3nm,0.7s,mb4.8
CLL Collm 66.74 317 *i* P **P 10 34 30.5 -0.9**
CLL *e* pP 10 34 35.0 -2.7
CLL pmax pmax
comp=Z,39nm,1.1s,mb5.3
CLL Collm 66.74 317 *i* P **P 10 34 30.5 -0.9**
comp=Z,13nm,1.1s,mb4.9
CLL *e* pP 10 34 35.0 -2.7
CLL Collm 66.74 317 *i* P **P 10 34 30.5 -0.9**
comp=Z,13nm,1.1s,mb4.9
CLL *e*pP pP 10 34 35.0 -2.7
CLL *e*PP PP 10 36 55.0 -3.1
MUD Monsted U'grnd 67.00 323 *i* P **P 10 34 33.0 +0.1**
MUD pmax pmax
comp=Z,16nm,0.8s,mb5.1
MUD Monsted U'grnd 67.00 323 *i* P **P 10 34 33.0 +0.1**
comp=Z,16nm,0.8s,mb5.1
SOKA Soboth 67.15 312⇑ *iP* **P 10 34 34.2 +0.1**
comp=Z,13nm,0.8s,mb5.0
GERES GERESS Array B 67.20 314 P **P 10 34 33.9 -0.5**
comp=Z,4.6nm,0.8s,mb4.6,baz=74,slow=5.7,SNR=28
MOA Molln 67.22 313⇑ *iP* **P 10 34 34.9 +0.5**
comp=Z,12nm,1.2s,mb4.8,SNR=5.5
BOJS Bojanci 67.44 310 *i* P **P 10 34 36.5 +0.6**
TTA Tatalina 67.52 29 *eP* **P 10 34 36.1 0.0**
TTA pmax pmax
comp=Z,11nm,0.8s,mb4.9
TTA Tatalina 67.52 29 *eP* **P 10 34 36.1 0.0**
comp=Z,11nm,0.8s,mb5.0
MOX Moxa 67.80 317 *eP* **P 10 34 37.8 -0.3**
comp=Z,12nm,1.4s,mb4.7
MOX Moxa 67.80 317 *eP* **P 10 34 37.9 -0.2**
MOX Moxa 67.80 317 *eP* **P 10 34 37.9 -0.2**
MOX Moxa 67.80 317 *eP* **P 10 34 37.9 -0.2**
JAVS Javornik 68.07 311 *eP* **P 10 34 39.7 -0.1**
KBA Koelnbreinsper 68.08 313⇑ *iP* **P 10 34 39.9 0.0**
comp=Z,11nm,0.8s,mb4.9,SNR=9.2
GRA1 Grafenberg Arr 68.40 316 *eP* **P 10 34 42.2 +0.4**
comp=Z,17nm,1.1s,mb5.0
GRF Grafenberg Arr 68.40 316 *eP* **P 10 34 42.2 +0.4**
comp=Z,17nm,1.1s,mb5.0
GRF Grafenberg Arr 68.40 316 *eP* **P 10 34 42.2 +0.4**
GRF pmax pmax
comp=Z,17nm,1.1s,mb5.0
GRF Grafenberg Arr 68.40 316 *eP* **P 10 34 42.2 +0.4**
GRF pmax pmax
comp=Z,17nm,1.1s,mb5.0
CHUM Lake Minchumin 68.61 27 *eP* **P 10 34 43.0 0.0**
comp=Z,23nm,0.9s,mb5.1
TIP Timpagrande 68.81 304 *eP* **P 10 34 44.3 -0.3**
comp=Z,8.3nm,0.6s,mb4.8
BPAW Bear Paw Mtn. 69.04 27 *eP* **P 10 34 45.7 +0.1**
comp=Z,26nm,0.8s,mb5.2
WTTA Wattenberg 69.08 313⇑ *iP* **P 10 34 45.4 -0.8**
comp=Z,14nm,1.0s,mb4.8,SNR=5.5
PPLA Purkeypile 69.11 28 *eP* **P 10 34 46.2 +0.1**
comp=Z,31nm,0.7s,mb5.3
MOTA Moosalm 69.39 313⇑ *iP* **P 10 34 47.7 -0.4**
comp=Z,7.5nm,0.9s,mb4.6,SNR=6.2
RETA Reutte 69.54 314⇑ *iP* **P 10 34 48.8 -0.2**
comp=Z,3.4nm,0.6s,mb4.4
FETA Feichten 69.75 313 *i* P **P 10 34 50.2 -0.1**
comp=Z,15nm,1.1s,mb4.8,SNR=6.6
CEL Celeste 69.80 303 *eP* **P 10 34 49.6 -1.2**
comp=Z,45nm,1.0s,mb5.4
COLA College 69.85 26 *eP* **P 10 34 50.1 -0.5**
COLA pmax pmax
comp=Z,54nm,0.8s,mb5.5
COLA College 69.85 26 *eP* **P 10 34 50.1 -0.5**
comp=Z,54nm,0.8s,mb5.5
STU Stuttgart 69.98 315 *eP* **P 10 34 51.6 -0.1**
STU pmax pmax
comp=Z,13nm,0.8s,mb4.9
STU Stuttgart 69.98 315 *eP* **P 10 34 51.6 -0.1**
comp=Z,13nm,0.8s,mb4.9
MCK McKinley 70.01 27 *eP* **P 10 34 51.0 -0.6**
MCK pmax pmax
comp=Z,19nm,0.8s,mb5.1
MCK McKinley 70.01 27 *eP* **P 10 34 51.0 -0.6**
comp=Z,20nm,0.8s,mb5.1
KMBO Kilima Mbogo 70.25 256 P **P 10 34 53.2 -0.7**
comp=Z,3.7nm,0.7s,mb4.4,baz=51,slow=11,SNR=12
KMBO Kilima Mbogo 70.25 256 *cP* **P 10 34 53.2 -0.7**
KMBO pmax pmax
comp=Z,4.0nm,0.7s
KMBO Kilima Mbogo 70.25 256 *eP* **P 10 34 53.4 -0.5**
comp=Z,3.0nm,0.8s,mb4.3
DAVOX Davos/Dischmat 70.38 313 P **P 10 34 53.7 -0.4**
comp=Z,12nm,0.7s,mb5.0,baz=82,slow=6.1,SNR=16
BFO Black Forest 70.69 315 P **P 10 34 55.3 -0.7**
comp=Z,54nm,0.9s,mb5.5,SNR=5.9
BFO Black Forest 70.69 315 *eP* **P 10 34 55.9 -0.1**
BFO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BFO Black Forest 70.69 315 *eP* **P 10 34 55.9 -0.1**
comp=Z,9.5nm,1.0s,mb4.7
PMR Palmer 71.00 29 *eP* **P 10 34 56.9 -0.7**
PMR pmax pmax
comp=Z,24nm,0.6s,mb5.3
PMR Palmer 71.00 29 *eP* **P 10 34 56.9 -0.8**
comp=Z,24nm,0.6s,mb5.3
FELD Feldberg im Sc 71.08 315 *eP* **P 10 34 57.9 -0.5**
MEM Membach 71.08 318 P **P 10 34 58.4 0.0**
comp=Z,4.1nm,1.1s,mb4.3
CDF Champ du Feu 71.29 316⇑ *iP* **P 10 34 59.4 -0.2**
comp=Z,27nm,1.0s,mb4.8
CDF Champ du Feu 71.29 316⇑ *iP* **P 10 34 59.4 -0.2**
CDF pmax pmax
comp=Z,13nm,1.0s,mb4.8
CDF Champ du Feu 71.29 316⇑ *iP* **P 10 34 59.4 -0.2**
comp=Z,13nm,1.0s,mb4.8
KDAK Kodiak Island 71.33 33 P **P 10 34 59.0 -0.7**
comp=Z,404nm,0.9s,SNR=6.1
KDAK Kodiak Island 71.33 33 P **P 10 34 59.4 -0.3**
baz=310,slow=7.4

WLF Walferdange 71.41 317 P **P 10 35 01.1 +0.7**
comp=Z,25nm,1.2s,mb5.0
WLF Walferdange 71.41 317 *eP* **P 10 35 00.8 +0.4**
WLF pmax pmax
comp=Z,33nm,0.9s,mb5.3
WLF Walferdange 71.41 317 *eP* **P 10 35 00.8 +0.5**
comp=Z,33nm,0.9s,mb5.3
ECH Echery 71.44 315 *eP* **P 10 35 00.1 -0.5**
ECH Echery 71.44 315 *eP* **P 10 35 00.0 -0.6**
ECH pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ECH Echery 71.44 315 *eP* **P 10 34 60.0 -0.6**
comp=Z,6.5nm,1.0s,mb4.5
BCLA Clavier 71.57 318 P **P 10 35 01.6 +0.3**
comp=Z,6.4nm,1.1s,mb4.5
MOF Molkenrain 71.62 315 *eP* **P 10 35 01.4 -0.2**
HINF Hinteralfeld 71.80 315⇑ *iP* **P 10 35 02.3 -0.5**
comp=Z,14nm,0.7s,mb4.7
HINF Hinteralfeld 71.80 315⇑ *iP* **P 10 35 02.3 -0.5**
HINF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
HINF Hinteralfeld 71.80 315⇑ *iP* **P 10 35 02.3 -0.5**
comp=Z,6.8nm,0.7s,mb4.7
GIVF Givet 71.99 318 *eP* **P 10 35 03.7 -0.1**
comp=Z,26nm,0.8s,mb4.9
GIVF Givet 71.99 318 *eP* **P 10 35 03.7 -0.1**
GIVF pmax pmax
comp=Z,13nm,0.8s,mb4.9
GIVF Givet 71.99 318 *eP* **P 10 35 03.7 -0.1**
comp=Z,13nm,0.8s,mb4.9
HAU Haudompre 72.02 316 *eP* **P 10 35 03.7 -0.4**
comp=Z,16nm,0.9s,mb4.6
HAU Haudompre 72.02 316 *eP* **P 10 35 03.7 -0.4**
HAU pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
HAU Haudompre 72.02 316 *eP* **P 10 35 03.7 -0.4**
comp=Z,7.8nm,0.9s,mb4.6
SNF Seneffe 72.11 319 P **P 10 35 04.8 +0.3**
SNF AP pP 10 35 07.7 -3.3
comp=Z,7.0nm,1.6s
DOU Dourbes 72.12 318 P **P 10 35 04.1 -0.5**
THEF They Montfort 72.14 316 *eP* **P 10 35 04.2 -0.6**
STKA Stephens Creek 72.22 146 *eP* **P 10 35 05.0 -0.3**
comp=Z,12nm,0.6s,mb5.0
STKA Stephens Creek 72.22 146 P **P 10 35 05.1 -0.2**
comp=Z,16nm,0.7s,mb5.1,baz=329,slow=6.4,SNR=50
EIDS Eidsvold 72.24 135 *eP* **P 10 35 06.1 +0.5**
BAIF Baives 72.36 318⇑ *iP* **P 10 35 06.1 0.0**
comp=Z,23nm,1.0s,mb4.8
BAIF Baives 72.36 318⇑ *iP* **P 10 35 06.1 0.0**
BAIF pmax pmax
comp=Z,12nm,1.0s,mb4.8
BAIF Baives 72.36 318⇑ *iP* **P 10 35 06.1 0.0**
comp=Z,12nm,1.0s,mb4.8
MENT Mentasta 72.43 26 *eP* **P 10 35 05.5 -0.7**
INK Inuvik 72.52 19 *eP* **P 10 35 06.2 -0.5**
INK pmax pmax
comp=Z,16nm,0.7s
INK Inuvik 72.52 19 *eP* **P 10 35 06.2 -0.5**
comp=Z,16nm,0.7s,mb5.0
MEZF Maizieres J'vi 72.58 316 *eP* **P 10 35 07.3 -0.1**
DIV Divide 72.62 28 *eP* **P 10 35 07.2 -0.2**
comp=Z,17nm,0.7s,mb5.1
PGF Pioggiola 72.76 310⇑ *iP* **P 10 35 08.9 +0.3**
comp=Z,61nm,1.0s,mb5.2
PGF Pioggiola 72.76 310⇑ *iP* **P 10 35 08.9 +0.3**
PGF pmax pmax
comp=Z,31nm,1.0s,mb5.2
PGF Pioggiola 72.76 310⇑ *iP* **P 10 35 08.9 +0.3**
comp=Z,30nm,1.0s,mb5.2
CABF La Chapelle 72.81 314 *eP* **P 10 35 08.4 -0.4**
comp=Z,20nm,1.0s,mb4.7
CABF La Chapelle 72.81 314 *eP* **P 10 35 08.4 -0.4**
CABF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CABF La Chapelle 72.81 314 *eP* **P 10 35 08.4 -0.4**
comp=Z,9.9nm,1.0s,mb4.7
LPG La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.6**
comp=Z,48nm,0.8s,mb5.2
LPG La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.6**
LPG pmax pmax
comp=Z,24nm,0.8s,mb5.2
LPG La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.6**
comp=Z,24nm,0.8s,mb5.2
LPL La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.5**
comp=Z,44nm,0.8s,mb5.1
LPL La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.5**
LPL pmax pmax
comp=Z,22nm,0.8s,mb5.1
LPL La Plagne 72.90 313⇑ *iP* **P 10 35 09.9 +0.5**
comp=Z,22nm,0.8s,mb5.1
SAOF Saorge 73.06 311 *eP* **P 10 35 10.2 -0.2**
BNI Bardonecchia 73.14 313 *eP* **P 10 35 10.5 -0.3**
BNI pmax pmax
comp=Z,13nm,0.9s,mb4.9
BNI Bardonecchia 73.14 313 *eP* **P 10 35 10.5 -0.3**
comp=Z,13nm,0.9s,mb4.9
BMRM Bremner River 73.18 28 *eP* **P 10 35 10.7 0.0**
comp=Z,68nm,0.8s,mb5.6
SBF Sospel 73.20 311 *eP* **P 10 35 10.9 -0.3**
comp=Z,44nm,0.8s,mb5.1
SBF Sospel 73.20 311 *eP* **P 10 35 10.9 -0.3**
SBF pmax pmax
comp=Z,22nm,0.8s,mb5.1
SBF Sospel 73.20 311 *eP* **P 10 35 10.9 -0.3**
comp=Z,22nm,0.8s,mb5.1
MBDF Montbardon 73.23 312 *eP* **P 10 35 11.9 +0.6**
comp=Z,23nm,1.1s,mb4.7
MBDF Montbardon 73.23 312 *eP* **P 10 35 11.9 +0.6**
MBDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
MBDF Montbardon 73.23 312 *eP* **P 10 35 11.9 +0.6**
comp=Z,12nm,1.1s,mb4.7
DAWY Dawson 73.35 24 *eP* **P 10 35 11.1 -0.6**
SUMG Summit 73.48 349 *eP* **P 10 35 12.5 +0.2**
comp=Z,6.5nm,0.7s,mb4.7
ORIF Oris-en-Rattie 73.71 313⇑ *iP* **P 10 35 14.0 -0.1**
comp=Z,19nm,0.9s,mb4.7
ORIF Oris-en-Rattie 73.71 313⇑ *iP* **P 10 35 14.0 -0.1**
ORIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 73.71 313⇑ *iP* **P 10 35 14.0 -0.1**
comp=Z,9.6nm,0.9s,mb4.7
EKA Eskdalemuir Ar 73.73 325 P **P 10 35 13.4 -0.6**
comp=Z,5.3nm,0.9s,mb4.5,baz=61,slow=6.9,SNR=10
FRF La Foret Royal 73.84 311 *eP* **P 10 35 14.9 -0.1**
LOR Lormes 73.86 316⇑ *iP* **P 10 35 14.1 -0.9**
comp=Z,13nm,1.0s,mb4.5
LOR Lormes 73.86 316⇑ *iP* **P 10 35 14.1 -0.9**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LOR Lormes 73.86 316⇑ *iP* **P 10 35 14.1 -0.9**
comp=Z,6.3nm,1.0s,mb4.5
RES Resolute Bay 73.96 5 *eP* **P 10 35 14.9 -0.2**
LMR La Mourre 74.04 311 *eP* **P 10 35 15.8 -0.3**
SMF Signal de Mont 74.16 315⇑ *iP* **P 10 35 16.4 -0.4**
comp=Z,43nm,0.9s,mb5.1
SMF Signal de Mont 74.16 315⇑ *iP* **P 10 35 16.4 -0.4**
SMF pmax pmax
comp=Z,22nm,0.9s,mb5.1
SMF Signal de Mont 74.16 315⇑ *iP* **P 10 35 16.4 -0.4**
comp=Z,22nm,0.9s,mb5.1
SSF Saint Saulge 74.17 316⇑ *iP* **P 10 35 16.2 -0.6**
comp=Z,18nm,1.0s,mb4.7
SSF Saint Saulge 74.17 316⇑ *iP* **P 10 35 16.2 -0.6**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SSF Saint Saulge 74.17 316⇑ *iP* **P 10 35 16.2 -0.6**
comp=Z,9.1nm,1.0s,mb4.7
SMRF Simiane la Rot 74.34 312 *eP* **P 10 35 18.1 +0.2**
comp=Z,54nm,1.5s,mb5.0
SMRF Simiane la Rot 74.34 312 *eP* **P 10 35 18.1 +0.2**
comp=Z,54nm,1.5s,mb5.3
AVF Avril sur Loir 74.39 315⇑ *iP* **P 10 35 17.7 -0.4**
comp=Z,35nm,0.9s,mb5.0
AVF Avril sur Loir 74.39 315⇑ *iP* **P 10 35 17.7 -0.4**
AVF pmax pmax
comp=Z,17nm,0.9s,mb5.0
AVF Avril sur Loir 74.39 315⇑ *iP* **P 10 35 17.7 -0.4**
comp=Z,17nm,0.9s,mb5.0
VIVF Saint-Julien-l 74.50 313⇑ *iP* **P 10 35 18.5 -0.2**
comp=Z,21nm,1.1s,mb4.7
VIVF Saint-Julien-l 74.50 313⇑ *iP* **P 10 35 18.5 -0.2**
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.7
VIVF Saint-Julien-l 74.50 313⇑ *iP* **P 10 35 18.5 -0.2**
comp=Z,10nm,1.1s,mb4.7

PLDF La Plantade 74.62 315 *eP* **P 10 35 19.1 -0.3**
BGF Bois d'Agland 74.81 315 *eP* **P 10 35 20.0 -0.5**
comp=Z,16nm,1.0s,mb4.6
BGF Bois d'Agland 74.81 315 *eP* **P 10 35 20.0 -0.5**
BGF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BGF Bois d'Agland 74.81 315 *eP* **P 10 35 20.0 -0.5**
comp=Z,8.1nm,1.0s,mb4.6
AGO Saint Agoulin 74.88 315 *eP* **P 10 35 21.0 +0.1**
PYM Petit Puy Mans 75.10 315 *eP* **P 10 35 22.4 +0.2**
TCF Toulx Ste Croi 75.32 315⇑ *iP* **P 10 35 23.4 -0.1**
comp=Z,34nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.32 315⇑ *iP* **P 10 35 23.4 -0.1**
TCF pmax pmax
comp=Z,17nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.32 315⇑ *iP* **P 10 35 23.4 -0.1**
comp=Z,17nm,1.0s,mb4.9
LASF Ste Croix 75.38 313 *eP* **P 10 35 24.0 +0.1**
comp=Z,29nm,1.1s,mb4.8
LDF La Druitiere 75.55 318⇑ *iP* **P 10 35 24.3 -0.4**
comp=Z,16nm,0.9s,mb4.6
LDF La Druitiere 75.55 318⇑ *iP* **P 10 35 24.3 -0.4**
LDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LDF La Druitiere 75.55 318⇑ *iP* **P 10 35 24.3 -0.4**
comp=Z,7.8nm,0.9s,mb4.6
KEST Kesra 75.61 303 P **P 10 35 24.6 -0.8**
comp=Z,1.6nm,0.8s,mb4.0,baz=222,slow=7.5,SNR=4.4
FLN La Foliniere 75.67 318 *eP* **P 10 35 25.0 -0.4**
HYT Haines Junctio 76.06 26 *eP* **P 10 35 28.3 +0.9**
GRR Gorron 76.07 318 *eP* **P 10 35 27.4 -0.4**
comp=Z,31nm,0.8s,mb5.0
GRR Gorron 76.07 318 *eP* **P 10 35 27.4 -0.4**
GRR pmax pmax
comp=Z,16nm,0.8s,mb5.0
GRR Gorron 76.07 318 *eP* **P 10 35 27.4 -0.4**
comp=Z,16nm,0.8s,mb5.0
CAF Calviac 76.08 314⇑ *iP* **P 10 35 28.2 +0.3**
comp=Z,23nm,1.0s,mb4.8
CAF Calviac 76.08 314⇑ *iP* **P 10 35 28.2 +0.3**
CAF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CAF Calviac 76.08 314⇑ *iP* **P 10 35 28.2 +0.3**
comp=Z,11nm,1.0s,mb4.8
RJF Les Rejaudoux 76.23 315⇑ *iP* **P 10 35 29.1 +0.4**
comp=Z,29nm,1.1s,mb4.8
RJF Les Rejaudoux 76.23 315⇑ *iP* **P 10 35 29.1 +0.4**
RJF pmax pmax
comp=Z,15nm,1.1s,mb4.8
RJF Les Rejaudoux 76.23 315⇑ *iP* **P 10 35 29.1 +0.4**
comp=Z,15nm,1.1s,mb4.8
ARMA Armidale 76.33 138 *eP* **P 10 35 30.4 +1.1**
ARPS Mount Arapiles 76.40 149 *eP* **P 10 35 29.4 -0.1**
comp=Z,39nm,0.8s,mb5.4
MFF Saint Martin d 76.58 316⇑ *iP* **P 10 35 30.5 -0.1**
comp=Z,20nm,0.8s,mb4.8
MFF Saint Martin d 76.58 316⇑ *iP* **P 10 35 30.5 -0.1**
MFF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MFF Saint Martin d 76.58 316⇑ *iP* **P 10 35 30.5 -0.1**
comp=Z,9.9nm,0.8s,mb4.8
MTLF Montolieu 76.78 313 *eP* **P 10 35 31.9 +0.1**
comp=Z,6.8nm,0.9s,mb4.3
MTLF Montolieu 76.78 313 *eP* **P 10 35 31.9 +0.1**
MTLF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MTLF Montolieu 76.78 313 *eP* **P 10 35 31.9 +0.1**
comp=Z,3.4nm,0.9s,mb4.3
LFF La Frestale 76.89 315 *eP* **P 10 35 32.7 +0.2**
comp=Z,27nm,0.9s,mb4.9
LFF La Frestale 76.89 315 *eP* **P 10 35 32.7 +0.2**
LFF pmax pmax
comp=Z,14nm,0.9s,mb4.9
LFF La Frestale 76.89 315 *eP* **P 10 35 32.7 +0.2**
comp=Z,14nm,0.9s,mb4.9
SGMF Saint Gilles 77.11 319⇑ *iP* **P 10 35 33.7 +0.1**
comp=Z,32nm,1.0s,mb4.9
SGMF Saint Gilles 77.11 319⇑ *iP* **P 10 35 33.7 +0.1**
SGMF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SGMF Saint Gilles 77.11 319⇑ *iP* **P 10 35 33.7 +0.1**
comp=Z,16nm,1.0s,mb4.9
ROSF Rostrenen 77.47 319⇑ *iP* **P 10 35 35.7 +0.1**
comp=Z,34nm,1.0s,mb4.9
ROSF Rostrenen 77.47 319⇑ *iP* **P 10 35 35.7 +0.1**
ROSF pmax pmax
comp=Z,17nm,1.0s,mb4.9
ROSF Rostrenen 77.47 319⇑ *iP* **P 10 35 35.7 +0.1**
comp=Z,17nm,1.0s,mb4.9
QUIF Quistinic 77.64 319 *eP* **P 10 35 36.4 -0.2**
comp=Z,21nm,1.0s,mb4.7
QUIF Quistinic 77.64 319 *eP* **P 10 35 36.4 -0.2**
QUIF pmax pmax
comp=Z,11nm,1.0s,mb4.7
QUIF Quistinic 77.64 319 *eP* **P 10 35 36.4 -0.2**
comp=Z,11nm,1.0s,mb4.7
SKAG Skagway 77.77 27 *eP* **P 10 35 37.6 +0.5**
comp=Z,25nm,0.8s,mb5.2
TOO Toolangi 78.71 147 *eP* **P 10 35 42.8 +0.3**
ETSF Etsaut 78.75 313⇑ *iP* **P 10 35 43.4 +0.6**
comp=Z,15nm,0.9s,mb4.6
ETSF Etsaut 78.75 313⇑ *iP* **P 10 35 43.4 +0.6**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ETSF Etsaut 78.75 313⇑ *iP* **P 10 35 43.4 +0.6**
comp=Z,7.3nm,0.9s,mb4.6
SJPF Ste Jean 79.05 314 *eP* **P 10 35 45.2 +0.7**
comp=Z,10.0nm,0.8s,mb4.5
SJPF Ste Jean 79.05 314 *eP* **P 10 35 45.2 +0.7**
SJPF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SJPF Ste Jean 79.05 314 *eP* **P 10 35 45.2 +0.7**
comp=Z,5.0nm,0.8s,mb4.5
SFJD Kangerlussuaq 80.39 350 P **P 10 35 51.0 -0.3**
comp=Z,30nm,0.7s,mb5.3,baz=7.3,slow=5.7,SNR=18
SFJD Kangerlussuaq 80.39 350⇑ *iP* **P 10 35 50.6 -0.7**
SFJD pmax pmax
comp=Z,29nm,0.8s,mb5.3
SFJD Kangerlussuaq 80.39 350 *eP* **P 10 35 50.3 -1.0**
comp=Z,26nm,0.6s,mb5.3
SFJD Kangerlussuaq 80.39 350⇑ *iP* **P 10 35 50.6 -0.7**
comp=Z,29nm,0.8s,mb5.2
YKA Yellowknife Ar 82.04 17 P **P 10 35 59.8 -0.3**
comp=Z,9.1nm,0.7s,mb4.8,baz=329,slow=5.1,SNR=104
YKA Yellowknife Ar 82.04 17 P **P 10 35 59.8 -0.3**
ESDC Sonseca Array 82.66 312 P **P 10 36 04.0 +0.2**
comp=Z,0.5nm,0.3s,mb4.0,baz=32,slow=5.5,SNR=4.3
ESDC Sonseca Array 82.66 312 P **P 10 36 04.0 +0.1**
MVO Moncorvo 83.72 315 *eP* **P 10 36 09.8 +0.5**
comp=Z,41nm,1.9s,mb5.2
MTE Manteigas 84.48 314 *eP* **P 10 36 14.3 +1.1**
comp=Z,43nm,1.6s,mb5.3
PMRV Marv??o 84.96 313 *eP* **P 10 36 16.3 +0.7**
comp=Z,55nm,1.7s,mb5.4
FRB Frobisher Bay 85.42 356 P **P 10 36 16.6 -0.8**
comp=Z,8.6nm,0.7s,mb5.0,baz=4.2,slow=6.6,SNR=38
PBAR Barrancos 85.48 312 *eP* **P 10 36 18.9 +0.7**
comp=Z,60nm,1.6s,mb5.5
EVO Evora 85.88 313 *eP* **P 10 36 20.9 +0.7**
comp=Z,43nm,1.5s,mb5.5
PBEJ Beja 86.09 312 *eP* **P 10 36 22.0 +0.7**
comp=Z,9.2nm,1.1s,mb4.9
PVAQ Vaqueiros 86.37 312 *eP* **P 10 36 23.5 +0.8**
comp=Z,62nm,1.6s,mb5.6
PCVE Castro Verde 86.44 312 *eP* **P 10 36 21.4 -1.6**
comp=Z,47nm,1.7s,mb5.4
MDT Midelt 86.98 307 P **P 10 36 26.0 +0.3**
comp=Z,5.3nm,0.9s,mb4.8,baz=69,slow=3.0,SNR=3.4
FCC Fort Churchill 89.46 9 *eP* **P 10 36 36.3 -0.7**
comp=Z,0.4nm,0.9s,mb3.8
EDM Edmonton 90.31 21 *eP* **P 10 36 41.7 +0.6**
RPW Rockport 91.36 28 *eP* **P 10 36 46.9 +0.9**
JCW Jim Creek 91.39 28 *eP* **P 10 36 46.7 +0.5**
FFC Flin Flon 91.94 14 P **P 10 36 48.6 0.0**
comp=Z,120nm,0.8s,SNR=11
FFC Flin Flon 91.94 14 *iP* **P 10 36 48.4 -0.2**
FFC Flin Flon 91.94 14 *eP* **P 10 36 47.5 -1.1**
comp=Z,19nm,0.9s,mb5.4
ETW Entiat 92.51 28 *eP* **P 10 36 51.9 +0.5**
TORD Torodi Ar. Bea 93.07 287 P **P 10 36 54.0 -0.6**
comp=Z,1.8nm,0.8s,mb4.6,baz=50,slow=3.8,SNR=11
TORD PP PP 10 40 41.3 +3.7
comp=Z,0.7nm,0.8s,baz=50,slow=5.9,SNR=3.6
OD2 Odessa Site #2 93.33 27 *eP* **P 10 36 55.2 0.0**
WALA Waterton Lakes 93.70 24 *eP* **P 10 36 57.5 +0.7**
SCHQ Schefferville 94.16 354 P **P 10 36 58.2 -0.6**
comp=Z,4.7nm,0.7s,mb5.0,baz=51,slow=5.4,SNR=6.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	94.16	354	P	P	10 36 58.2	-0.6
BSMT	Bassoo Peak	94.42	25	eP	P	10 37 01.6	+1.4
YBMT	Yellow Bay	94.68	24	eP	P	10 37 02.1	+0.7
JTMT	Jette	94.69	24	eP	P	10 37 02.6	+1.2
SWMT	Swartz Lake	94.99	24	eP	P	10 37 02.9	+0.1
BOSA	Boshof	95.05	240	P	P	10 37 01.9	-1.3
	comp=Z,2.8nm,0.7s,mb4.8,baz=102,slow=21,SNR=3.6						
BOSA	Boshof	95.05	240	P	P	10 37 01.9	-1.3
SLMT	Seeley Lake	95.40	24	eP	P	10 37 04.7	0.0
	comp=Z,18nm,1.2s,mb5.4						
CHMT	Chamberlain Mo	95.76	24	eP	P	10 37 06.4	+0.1
HRY	Holter Researc	96.43	24	eP	P	10 37 09.6	+0.3
	comp=Z,5.4nm,0.9s,mb5.0						
ULM	Lac du Bonnet	97.39	12	P	P	10 37 12.7	-0.9
	comp=Z,2.0nm,0.6s,mb4.7,baz=323,slow=4.0,SNR=3.0						
PDAR	Pinedale Array	100.67	24	P	Pdif	10 37 29.1	+0.7
	comp=Z,0.5nm,0.8s,baz=343,slow=2.8,SNR=4.6						
PDAR				PP	PP	10 41 35.6	+0.9
	comp=Z,1.0nm,1.1s,baz=0.0,slow=4.1,SNR=4.8						
NVAR	Mina Array Bea	100.81	32	P	Pdif	10 37 30.4	+1.3
	comp=Z,0.4nm,0.6s,baz=357,slow=1.8,SNR=2.3						
TXAR	Lajitas Array	114.77	26	PKP	PKiKP	10 42 20.9	-0.3
	comp=Z,1.0nm,0.7s,baz=335,slow=0.7,SNR=13						
TXAR	Lajitas Array	114.77	26	PKP	PKiKP	10 42 20.9	-0.3
JCT	Junction City	115.08	22	ePKIKP	PKiKP	10 42 21.1	-0.7
ROSC	El Rosal	144.34	356	PKP	PKPdf	10 43 16.4	-0.8
	comp=Z,32nm,0.8s,baz=188,slow=1.5,SNR=14						
ROSC	El Rosal	144.34	356	ePKPdf	PKPdf	10 43 16.2	-0.9
OTAV	Otavalo	148.95	4	ePKPdf	PKPdf	10 43 25.1	+0.2
CPUP	Villa Florida	162.44	280	PKP	PKPdf	10 43 41.8	-0.6
	comp=Z,1.4nm,0.6s,baz=3.3,slow=3.3,SNR=6.2						
LPAZ	La Paz	163.47	330	PKP	PKPdf	10 43 44.0	+0.4
	comp=Z,3.4nm,1.0s,baz=16,slow=4.3,SNR=10						
PLCA	Paso Flores	169.05	205	PKP	PKPdf	10 43 46.1	-1.2
	comp=Z,1.6nm,0.8s,baz=194,slow=8.3,SNR=3.4						
PLCA				PKPab	PKPab	10 44 57.5	-1.2
	comp=Z,5.6nm,0.8s,baz=148,slow=5.9,SNR=16						
PLCA	Paso Flores	169.05	205	PKP	PKPdf	10 43 46.1	-1.2
PLCA				PKPab	PKPab	10 44 57.5	-1.2

IDC 12 10:32:47.0±1.1, 31°.61N×103°.68E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/26, mbtmp3.8/5, Error ellipse: s-maj=183.0km s-min=19.6km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.36	319	P	P	10 37 47.1	+0.6
	1.5nm,0.8s,baz=121,slow=11,SNR=3.9						
ZALV	Zalesovo Beam	26.11	334	P	P	10 38 22.9	+0.6
	1.5nm,0.3s,baz=126,slow=9.1,SNR=1.7						
KURK	Kurchatov	26.63	323	P	P	10 38 26.0	-1.1
	1.6nm,0.8s,baz=130,slow=8.3,SNR=5.2						
WRA	Warramunga Arr	59.09	146	P	P	10 42 49.5	+0.3
	1.1nm,0.6s,baz=338,slow=7.8,SNR=5.9						
ASAR	Alice Springs	62.10	149	P	P	10 43 09.6	-0.1
	0.2nm,0.5s,baz=335,slow=6.4,SNR=3.2						

*ISCJB **12** 10:33:30.9±0.4, 32°.46N×0°.05×105°.39E±0°.07, h10km, mb4.1/19, Error ellipse: s-maj=8.8km s-min=6.0km az=26.7*
*IDC **12** 10:33:31.4±0.6, 32°.50N×105°.27E, h0km, mb4.0/16, mb1 4.2/18, mb1mx4.0/30, mbtmp4.0/18, ML4.0/2, Error ellipse: s-maj=26.0km s-min=13.6km az=54.0*
*NEIC **12** 10:33:33.0±0.3, 32°.46N×105°.25E, h10km, mb4.7/3, Error ellipse: s-maj=13.4km s-min=6.4km az=61.0*
*BJI **12** 10:33:33.8, 32°.48N×105°.66E, h24km, ML4.4/3, Ms4.1/1, Ms7 4.1/1*
ISC 12 10:33:32.8±0.4, 32°.49N±0°.05×105°.43E±0°.06, h10km, n28, σ0.91/31, mb4.1/19, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.13	223	Pg	Sn	10 34 30.9	-4.0
CD2				Sg	Sg	10 34 41.8	+0.6
CD2				smax			
	comp=N,5μm,0.5s						
LZH	Lanzhou	3.82	340	Pg	Pn	10 34 33.7	+2.1
LZH				Sg	Sg	10 35 29.7	-5.7
LZH				smax			
	comp=N,500nm,0.7s						
LZH				smax			
	comp=E,1μm,0.6s						
WHN	Wuhan	7.86	102	P	Pn	10 35 16.5	-11
WHN				S	Sn	10 36 54.5	-1.7
CMAR	Chiang Mai Arr	15.15	204	Pn	Pn	10 37 05.5	-1.4
	comp=E,0.6nm,0.3s,baz=23,slow=12,SNR=2.3						
KSRS	Korea Array	19.07	69	P	Pn	10 37 56.9	+0.8
	comp=E,0.1nm,0.3s,baz=250,slow=11,SNR=3.0						
MK31	Makanchi Array	22.72	316	eP	P	10 38 34.4	-0.4
MKAR	Makanchi Array	22.72	316	P	P	10 38 34.3	-0.4
	comp=E,3.1nm,0.8s,mb3.8,baz=115,slow=11,SNR=9.4						
TKM2	Tokmak 2	25.67	302	eP	P	10 39 02.1	-0.7
ZALV	Zalesovo Beam	26.00	332	P	P	10 39 06.1	+0.4
	comp=E,1.9nm,0.3s,mb4.1,baz=126,slow=7.4,SNR=2.2						
KURK	Kurchatov	26.85	321	P	P	10 39 14.0	+0.6
	comp=E,5.3nm,1.2s,mb4.0,baz=133,slow=8.4,SNR=5.5						
AKTK	Aktyubinsk	39.04	312	P	P	10 40 59.2	-0.3
AKTO	Aktyubinsk	39.04	312	P	P	10 40 59.2	-0.3
	comp=E,2.0nm,0.7s,mb4.0,baz=112,slow=15,SNR=5.2						
ARCES	ARCESS Array B	56.46	335	P	P	10 43 14.2	-0.2
	comp=E,2.6nm,0.8s,mb4.3,baz=79,slow=6.3,SNR=8.5						
BRTR	Keskin Array B	57.05	299	P	P	10 43 18.9	-0.1
	comp=E,0.6nm,0.6s,mb3.8,baz=107,slow=6.2,SNR=4.2						
FINES	FINESS Array B	57.05	326	P	P	10 43 17.3	-1.3
	comp=E,1.9nm,0.7s,mb4.2,baz=95,slow=9.9,SNR=2.3						
AKASG	Malin Array Be	57.27	313	P	P	10 43 19.2	-1.2
	comp=E,2.4nm,0.4s,mb4.6,baz=68,slow=8.1,SNR=6.3						
WRAB	Tennant Creek	59.02	148	eP	P	10 43 33.4	+0.4
	comp=E,4.3nm,0.8s,mb4.5						
WRA	Warramunga Arr	59.02	148	P	P	10 43 33.8	+0.9
	comp=E,4.3nm,0.5s,mb4.7,baz=341,slow=8.1,SNR=32						
WB2	Warramunga Arr	59.03	148	eP	P	10 43 33.6	+0.7
ASAR	Alice Springs	62.11	150	P	P	10 43 55.1	+1.1
	comp=E,1.7nm,0.4s,mb4.5,baz=332,slow=6.6,SNR=23						
NOA	NORSAR Array B	64.10	327	P	P	10 44 05.4	-1.3
	comp=E,1.8nm,0.8s,mb4.1,baz=69,slow=6.3,SNR=2.7						
GERES	GERESS Array B	67.39	314	P	P	10 44 27.5	-0.7
	comp=E,0.6nm,0.6s,mb3.8,baz=64,slow=6.8,SNR=3.6						
INK	Inuvik	70.47	20	P	P	10 44 48.8	+1.8
	comp=E,0.8nm,0.8s,mb3.7,baz=332,slow=6.2,SNR=3.6						
KMBO	Kilima Mbogo	72.32	257	P	P	10 44 59.4	+0.2
	comp=E,0.3nm,0.3s,mb3.7,baz=216,slow=23,SNR=4.1						
STKA	Stephens Creek	72.57	148	P	P	10 45 00.4	+0.3
	comp=E,1.7nm,0.7s,mb4.1,baz=343,slow=8.2,SNR=4.2						
LPG	La Plagne	73.12	313	eP	P	10 45 03.9	+0.5
	comp=E,4.0nm,0.7s,mb4.5						
LPL	La Plagne	73.12	313	eP	P	10 45 03.8	+0.4
	comp=E,4.6nm,0.7s,mb4.5						
YKA	Yellowknife Ar	80.03	18	P	P	10 45 41.8	-0.4
	comp=E,0.3nm,0.8s,mb3.3,baz=328,slow=5.1,SNR=2.9						

IDC 12 10:38:10.4±0.8, 31°.59N×104°.57E, h0km, mb3.8/9, mb1 4.1/10, mb1mx3.9/27, mbtmp3.9/10, ML4.6/1, Error ellipse: s-maj=31.2km s-min=17.5km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.03	203	Pn	Pn	10 41 30.7	+0.3
	0.9nm,0.3s,baz=16,slow=13,SNR=6.5						
KSRS	Korea Array	20.09	67	P	P	10 42 44.1	-1.5
	2.5nm,0.7s,baz=254,slow=11,SNR=6.7						
MKAR	Makanchi Array	22.88	318	P	P	10 43 13.8	-1.6
	0.4nm,0.5s,baz=101,slow=12,SNR=4.3						
AKASG	Malin Array Be	57.34	313	P	P	10 48 01.2	+1.1
	0.5nm,0.3s,baz=61,slow=9.6,SNR=4.3						
WRA	Warramunga Arr	58.66	147	P	P	10 48 09.7	+0.1
	3.3nm,0.5s,baz=339,slow=7.7,SNR=30						
ASAR	Alice Springs	61.70	149	P	P	10 48 30.6	+0.2
	1.0nm,0.5s,baz=337,slow=6.7,SNR=15						
GERES	GERESS Array B	67.49	314	P	P	10 49 08.1	0.0
	0.4nm,0.5s,baz=104,slow=7.2,SNR=2.9						
INK	Inuvik	71.57	19	P	P	10 49 34.0	+1.0
	0.7nm,0.7s,baz=258,slow=8.1,SNR=4.7						
STKA	Stephens Creek	72.20	147	P	P	10 49 36.5	-0.6
	0.3nm,0.4s,baz=321,slow=6.4,SNR=3.3						
YKA	Yellowknife Ar	81.12	17	P	P	10 50 27.5	+0.2
	0.5nm,0.7s,baz=329,slow=5.3,SNR=4.9						

IDC 12 10:40:19.4±1.3, 32°.32N×105°.01E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/25, mbtmp3.6/4, Error ellipse: s-maj=79.3km s-min=25.3km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	26.76	321	P	P	10 46 00.7	0.0
	0.3nm,0.4s,baz=128,slow=8.6,SNR=2.4						
WRA	Warramunga Arr	59.06	148	P	P	10 50 21.4	0.0
	0.5nm,0.5s,baz=327,slow=9.1,SNR=5.1						
ASAR	Alice Springs	62.14	150	P	P	10 50 42.8	+0.4
	0.5nm,0.7s,baz=334,slow=6.8,SNR=4.2						
YKA	Yellowknife Ar	80.30	17	P	P	10 52 31.7	-0.2
	0.3nm,0.5s,baz=328,slow=5.5,SNR=3.7						

IDC 12 10:42:17.3±1.2, 32°.62N×105°.79E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/25, mbtmp3.6/5, ML4.3/1, Error ellipse: s-maj=54.9km s-min=25.6km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.39	205	Pn	Pn	10 45 57.5	+1.7
	0.5nm,0.3s,baz=8.5,slow=9.6,SNR=4.3						
MKAR	Makanchi Array	22.84	315	P	P	10 47 22.0	+0.1
	0.7nm,0.5s,baz=118,slow=10,SNR=4.1						
WRA	Warramunga Arr	58.97	148	P	P	10 52 18.9	+0.2
	0.8nm,0.6s,baz=328,slow=9.1,SNR=8.4						
ASAR	Alice Springs	62.08	151	P	P	10 52 39.5	-0.3
	0.5nm,0.8s,baz=332,slow=6.0,SNR=4.7						
YKA	Yellowknife Ar	79.82	18	P	P	10 54 27.1	0.0
	0.3nm,0.7s,baz=331,slow=5.4,SNR=4.4						

*ISCJB **12** 10:43:09.3±0.3, 31°.41N±0°.03×104°.15E±0°.06, h10km, mb4.3/30, Error ellipse: s-maj=7.4km s-min=4.9km az=8.9*
*IDC **12** 10:43:09.1±0.7, 31°.34N×103°.99E, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.2/26, mbtmp4.3/16, ML3.9/1, Error ellipse: s-maj=29.0km s-min=13.2km az=52.0*
*NEIC **12** 10:43:10.9±0.3, 31°.41N×104°.05E, h10km, mb4.3/7, Error ellipse: s-maj=8.3km s-min=4.8km az=59.0*
*MOS **12** 10:43:10.8±1.0, 31°.36N×104°.04E, h23km, mb4.7/15, Error ellipse: s-maj=14.7km s-min=6.8km az=105.0*
*BJI **12** 10:43:11.8, 31°.50N×104°.11E, h14km, mB4.9/5, mb4.7/14, ML4.5/8, Ms4.6/4, Ms7 4.4/3*
ISC 12 10:43:11.4±0.3, 31°.41N±0°.03×104°.11E±0°.06, h10km, n73, σ1.9/18/75, mb4.3/30, 3C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.58	211	Pg	Pg	10 43 24.4	+1.8
CD2				Sg	Sg	10 43 30.8	+0.6
CD2				smax			
	comp=N,19μm,0.9s						
ENH	Enshi	4.76	102	ePn	Pn	10 44 24.2	+1.0
KMI	Kunming	6.38	191	Pn	Pn	10 44 47.0	+1.6
KMI				Sn	Sn	10 45 56.4	-1.9
KMI				smax			
	comp=N,93nm,1.5s						
KMI				smax			
	comp=E,74nm,1.4s						
NJ2	Nanjing	12.57	83	eP	Pn	10 46 15.0	+4.7
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
CMAR	Chiang Mai Arr	13.71	201	Pn	Pn	10 46 25.9	0.0
	comp=Z,0.3nm,0.3s,baz=16,slow=11,SNR=4.5						
SONM	Songino Array	16.50	5	Pn	Pn	10 47 01.7	-1.2
	comp=Z,0.4nm,0.3s,baz=184,slow=16,SNR=7.2						
ULN	Ulaanbaatar	16.59	7	eP	Pn	10 47 04.3	+0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	16.59	7	ePn	Pn	10 47 04.3	+0.3
	comp=Z,8.9nm,1.0s						
ZAK	Zakamensk	18.97	358	eP	Pn	10 47 34.3	+1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	Talaya	20.26	359	eP	P	10 47 49.2	+2.4
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOY	Mondy	20.37	354	eP	P	10 47 50.0	+2.0
KSRS	Korea Array	20.52	66	P	P	10 47 50.2	+0.4
	comp=Z,10.0nm,1.0s,baz=257,slow=10,SNR=11						
KSRS	Korea Array	20.52	66	P	P	10 47 50.2	+0.4
KSRS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
IRK	Irkutsk	20.82	0	eP	P	10 47 54.4	+1.5
IRK				pmax	pmax		
	comp=Z,36nm,1.4s						
CN2	Changchun	20.88	48	eP	P	10 47 52.8	-0.8
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
MK31	Makanchi Array	22.75	319	eP	P	10 48 12.9	-0.7
MKAR	Makanchi Array	22.75	319	P	P	10 48 13.2	-0.4
	comp=Z,14nm,1.1s,mb4.3,baz=116,slow=11,SNR=28						
KSH	Kashi	24.23	297	P	P	10 48 31.8	+3.5
KSH				pmax	pmax		
	comp=Z,270nm,6.8s						
UCH	Uchtor	25.92	303	eP	P	10 48 43.6	0.0
	comp=Z,2.3nm,0.7s,mb3.8						
AAK	Ala-Archa	26.04	304	eP	P	10 48 46.1	+1.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
ZAA0	Zalesovo Array	26.45	334	eP	P	10 48 48.0	-0.4
ZALV	Zalesovo Beam	26.45	334	P	P	10 48 48.5	+0.2
	comp=Z,16nm,0.7s,mb4.7,baz=133,slow=9.5,SNR=28						
KURK	Kurchatov	27.01	323	P	P	10 48 53.2	-0.1
	comp=Z,8.9nm,0.9s,mb4.3,baz=127,slow=8.7,SNR=34						
KURK	Kurchatov	27.01	323	c iP	P	10 48 53.2	-0.2
KURK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.4						
KLR	Kul'dur	27.36	41	eP	P	10 48 56.8	+0.3
NVS	Novosibirsk	27.73	334	eP	P	10 48 54.7	-5.1
BVAR	Borovoye Array	32.56	321	P	P	10 49 41.7	-0.8
	comp=Z,1.2nm,0.6s,mb4.0,baz=116,slow=10,SNR=7.2						
BRVK	Borovoye	32.63	321	iP	P	10 49 43.2	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
ABKAR	Akbulak array	37.48	311	eP	P	10 50 24.0	-1.0
	comp=Z,2.3nm,0.6s,mb4.2						
AKTK	Aktyubinsk	38.94	313	P	P	10 50 36.6	-0.7
AKTO	Aktyubinsk	38.94	313	P	P	10 50 36.6	-0.7
	comp=Z,1.1nm,0.6s,mb3.8,baz=127,slow=19,SNR=4.9						
SVE	Sverdlovsk	39.26	323	eP	P	10 50 40.0	+0.1
SVE				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
ARU	Arti	40.20	322	d iP	P	10 50 47.9	+0.2
ARU				S	S	10 56 55.5	+1.2
ARU				SS	SS	10 59 44.1	-7.9
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.7						
BILL	Bilibino	50.90	25	c iP	P	10 52 12.4	+0.2
BILL				e		10 53 27.8	
BILL				pmax	pmax		
	comp=Z,10.0nm,2.5s,mb4.3						
OBN	Obninsk	52.26	318	eP	P	10 52 22.1	-0.5
OBN				e*PP	pP	10 52 32.2	+6.4
OBN				e		10 54 20.2	
OBN				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
JOF	Joensuu	54.77	328	eP	P	10 52 39.5	-1.4
JOF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
JOF	Joensuu	54.77	328	ep	P	10 52 39.5	-1.4
	comp=Z,6.8nm,0.7s,mb4.8						
KEV	Kevo	56.46	336	eP	P	10 52 50.7	-2.2
KEV				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
KEV	Kevo	56.46	336	ep	P	10 52 50.7	-2.2
	comp=Z,14nm,0.8s,mb5.0						
BRTR	Keskin Array B	56.60	299	P	P	10 52 53.2	-1.2
	comp=Z,0.6nm,0.7s,mb3.7,baz=108,slow=4.0,SNR=3.7						
ARCES	ARCESS Array B	56.99	336	P	P	10 52 55.9	-0.8
	comp=Z,4.4nm,0.7s,mb4.6,baz=80,slow=8.7,SNR=11						
KAF	Kangasniemi	57.14	327	eP	P	10 52 51.5	-6.4
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KAF	Kangasniemi	57.14	327	ep	P	10 52 51.5	-6.4
	comp=Z,4.0nm,0.6s,mb4.6						
FINES	FINESS Array B	57.32	326	P	P	10 52 58.0	-1.2
	comp=Z,4.2nm,0.6s,mb4.7,baz=87,slow=6.5,SNR=7.5						
WRAB	Tennant Creek	58.72	146	eP	P	10 53 09.4	0.0
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WRAB	Tennant Creek	58.72	146	eP	P	10 53 09.4	-0.1
	comp=Z,10nm,0.8s,mb4.9						
WRA	Warramunga Arr	58.72	146	P	P	10 53 09.8	+0.3
	comp=Z,8.0nm,0.9s,mb4.8,baz=337,slow=7.6,SNR=18						
WB2	Warramunga Arr	58.73	146	eP	P	10 53 08.9	-0.5
ASAR	Alice Springs	61.75	149	P	P	10 53 29.4	-0.7
	comp=Z,1.8nm,0.8s,mb4.3,baz=331,slow=6.4,SNR=12						
NB2	NORSAR Subarra	64.41	327	P	P	10 53 45.9	-1.5
	comp=Z,1.9nm,0.6s,mb4.3,baz=72,slow=6.5						
NOA	NORSAR Array B	64.41	327	P	P	10 53 46.1	-1.2
	comp=Z,1.8nm,0.6s,mb4.3,baz=77,slow=6.1,SNR=8.8						
BRG	Berggiesshubel	66.45	316	eP	P	10 54 03.6	+2.8
	comp=Z,2.5nm,1.0s,mb4.2						
BRG	Berggiesshubel	66.45	316	eP	P	10 54 03.6	+2.8
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CLL	Collm	66.84	317	eP	P	10 54 02.0	-1.3
CLL				e	pP	10 54 06.0	-0.5
CLL	Collm	66.84	317	epP	pP	10 54 06.0	-0.5
GERES	GERESS Array B	67.34	314	P	P	10 54 05.1	-1.4
	comp=Z,0.3nm,0.5s,mb3.6,baz=96,slow=6.0,SNR=3.8						
CDF	Champ du Feu	71.40	316	eP	P	10 54 34.2	+2.6
INK	Inuvik	71.87	19	P	P	10 54 33.6	-0.4
	baz=319,slow=6.6						
STKA	Stephens Creek	72.26	147	P	P	10 54 35.4	-1.5
	comp=Z,2.5nm,0.6s,mb4.3,baz=328,slow=5.2,SNR=8.6						
LPG	La Plagne	73.05	313	eP	P	10 54 41.4	-0.1
LPL	La Plagne	73.05	313	eP	P	10 54 41.3	-0.2
MBDF	Montbardon	73.39	312	eP	P	10 54 46.8	+3.2
	comp=Z,9.1nm,0.9s,mb4.4						
MBDF	Montbardon	73.39	312	eP	P	10 54 46.8	+3.2
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MBDF	Montbardon	73.39	312	eP	P	10 54 46.8	+3.2
	comp=Z,4.6nm,0.9s,mb4.4						
SMF	Signal de Mont	74.29	315	eP	P	10 54 51.3	+2.5
	comp=Z,6.6nm,0.9s,mb4.3						
SMF	Signal de Mont	74.29	315	eP	P	10 54 51.3	+2.5
SMF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
SMF	Signal de Mont	74.29	315	eP	P	10 54 51.3	+2.5
	comp=Z,3.3nm,0.9s,mb4.3						
TCF	Toulx Ste Croi	75.44	315	eP	P	10 54 59.1	+3.6
CAF	Calviac	76.22	314	eP	P	10 55 03.1	+3.1
	comp=Z,9.0nm,1.0s,mb4.3						
CAF	Calviac	76.22	314	eP	P	10 55 03.1	+3.1
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CAF	Calviac	76.22	314	eP	P	10 55 03.1	+3.1
	comp=Z,4.5nm,1.0s,mb4.3						
YKA	Yellowknife Ar	81.40	17	P	P	10 55 28.1	0.0
	comp=Z,2.1nm,0.6s,mb4.2,baz=329,slow=5.1,SNR=22						
YKA	Yellowknife Ar	81.40	17	P	P	10 55 28.1	0.0

*IDC **12** 10:43:56.8±0.7, 31°.63N×104°.42E, h0km, mb4.2/16, mb1 4.3/18, mb1mx4.2/29, mbtmp4.2/18, ML4.0/1, Error ellipse: s-maj=24.8km s-min=14.0km az=51.0*
*ISCJB **12** 10:43:58.5±2.0, 31°.67N±0°.06×104°.58E±0°.07, h15km±13km, mb4.2/20, Error ellipse: s-maj=10.9km s-min=8.7km az=146.7*
*NEIC **12** 10:43:58.5±0.4, 31°.62N×104°.47E, h10km, mb4.5/5, Error ellipse: s-maj=11.4km s-min=7.2km az=69.0*
*BJI **12** 10:43:59.8, 31°.96N×104°.46E, h14km, mB5.3/2, mb4.6/4, ML4.5/2, Ms4.1/3, Ms7 4.1/2*
ISC 12 10:43:58.4±1.1, 31°.78N±0°.04×104°.57E±0°.07, h4km±7km, n37, σ1.9/09/40, mb4.2/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.11	219	Pg	Pg	10 44 21.2	+1.6
CD2				Sg	Sg	10 44 34.1	+0.1
CD2				smax			
	comp=N,18μm,0.8s						
LZH	Lanzhou	4.34	352	ePg	Pg	10 45 20.8	-0.7
LZH				Sg	Sg	10 46 16.3	-1.4
LZH				smax			
	comp=N,320nm,0.6s						
LZH				smax			
	comp=E,640nm,0.9s						
GTA	Gaotai	8.54	334	P	Pn	10 46 05.7	+3.0
GTA				pP		10 46 08.8	
GTA				sP		10 46 11.7	
GTA				S	Sn	10 47 43.8	+4.3
GTA				sS		10 47 48.3	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,710nm,5.7s						
GTA				LR	LR		
	comp=N,1μm,18.3s						
GTA				LR	LR		
	comp=E,610nm,20.7s						
GTA				LR	LR		
	comp=Z,2μm,20.7s						
CHTO	Chiang Mai	13.87	203	ePn	Pn	10 47 11.1	-4.7
CMAR	Chiang Mai Arr	14.20	202	Pn	Pn	10 47 17.6	-2.8
	baz=17,slow=9.7,SNR=2.1						
SONM	Songino Array	16.10	4	Pn	Pn	10 47 46.0	+0.6
	comp=Z,0.5nm,0.3s,baz=183,slow=12,SNR=4.2						
TPUB	Ta-pu	16.55	117	ePn	Pn	10 47 51.6	+0.3
KSRS	Korea Array	20.02	67	P	P	10 48 33.3	+1.2
	comp=Z,13nm,0.7s,baz=258,slow=10,SNR=14						
CN2	Changchun	20.34	48	eP	P	10 48 37.0	+1.5
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
MKAR	Makanchi Array	22.74	318	P	P	10 49 01.0	-0.3
	comp=Z,2.0nm,0.5s,mb3.8,baz=112,slow=13,

0.8nm,0.4s,baz=337,slow=7.6,SNR=7.2
ASAR Alice Springs 61.87 149 P P 10 58 38.7 -0.1
0.2nm,0.3s,baz=338,slow=7.0,SNR=3.9

IDC 12 10:51:37.2±2.9,32°31N×105°67E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.5/24,mbtmp3.6/3,Error ellipse: s-maj=371.9km s-min=29.1km az=51.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.00**	**316**	P	P	10 56 43.5	0.0
	0.4nm,0.5s,baz=128,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**58.76**	**148**	P	P	11 01 37.3	+0.2
	1.9nm,0.5s,baz=338,slow=7.9,SNR=16						
ASAR	**Alice Springs**	**61.85**	**151**	P	P	11 01 58.1	-0.1
	0.2nm,0.4s,baz=341,slow=7.0,SNR=4.7						

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*ISCJB **12** 10:54:15.0±1.3,31°31N±0°03×104°1E±0°1,h1km±8km, mb4.2/10,Error ellipse: s-maj=14.7km s-min=5.4km az=9.3*
*IDC **12** 10:54:16.6±0.8,31°31N×104°04E,h0km,mb4.0/9, mb1 4.1/11,mb1mx3.9/26,mbtmp4.0/11,ML3.9/2,Error ellipse: s-maj=31.1km s-min=16.3km az=60.0*
*BJI **12** 10:54:17.5,31°13N×103°88E,h7km,mb4.2/2,ML3.9/9*
*NEIC **12** 10:54:18.3±0.4,31°31N×104°04E,h10km,mb4.8/2,Error ellipse: s-maj=14.6km s-min=6.7km az=70.0*
ISC 12 10:54:18.4±1.0,31°28N±0°03×104°0E±0°1,h11km±7km, n19,σ0°91/23,mb4.1/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**208**	Pg	**Pg**	**10 54 26.4**	**-0.3**
CD2				Sg	**Sg**	**10 54 32.0**	**-0.3**
CD2				smax			
	comp=N,24μm,0.6s						
LZH	**Lanzhou**	**4.79**	**359**	*e*Pn	**Pn**	**10 55 34.7**	**+4.2**
LZH				Pg	**Pg**	**10 55 49.1**	**-1.1**
LZH				Sn	**Sb**	**10 56 37.4**	**-2.7**
LZH				Sg	**Sg**	**10 56 54.1**	**+1.9**
LZH				smax			
	comp=N,210nm,0.8s						
LZH				smax			
	comp=E,120nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.56**	**201**	Pn	**Pn**	**10 57 31.4**	**+0.6**
	comp=E,0.2nm,0.3s,baz=19,slow=17,SNR=2.9						
SONM	**Songino Array**	**16.63**	**6**	Pn	**Pn**	**10 58 11.4**	**0.0**
	comp=E,0.5nm,0.3s,baz=185,slow=15,SNR=3.6						
KSRS	**Korea Array**	**20.67**	**66**	P	**P**	**10 58 57.5**	**-0.8**
	comp=E,6.0nm,0.7s,baz=261,slow=11,SNR=17						
CN2	**Changchun**	**21.04**	**48**	*e*P	**P**	**10 59 05.4**	**+3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**22.78**	**319**	*e*P	**P**	**10 59 21.2**	**+0.5**
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**10 59 21.7**	**+0.9**
	comp=Z,3.1nm,0.8s,mb3.8,baz=125,slow=10,SNR=14						
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**10 59 55.8**	**0.0**
	comp=Z,2.0nm,0.3s,mb4.1,baz=134,slow=13,SNR=3.5						
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**11 00 00.0**	**-0.6**
	comp=Z,0.9nm,0.5s,mb3.5,baz=127,slow=9.4,SNR=6.0						
ARU	**Arti**	**40.23**	**322**	P	**P**	**11 01 55.1**	**+0.2**
	comp=Z,12nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**11 04 16.4**	**+0.4**
	comp=Z,5.3nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**11 04 16.6**	**+0.5**
	comp=Z,4.1nm,0.5s,mb4.8,baz=338,slow=7.8,SNR=37						
WB2	**Warramunga Arr**	**58.68**	**146**	*e*P	**P**	**11 04 16.4**	**+0.3**
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**11 04 36.5**	**-0.2**
	comp=Z,0.6nm,0.5s,mb4.0,baz=345,slow=6.3,SNR=12						
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**11 05 43.2**	**-0.2**
	comp=Z,1.4nm,0.5s,mb4.1,baz=350,slow=7.4,SNR=6.3						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**11 06 34.8**	**-1.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=333,slow=5.6,SNR=3.9						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**11 06 34.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**93.48**	**288**	P	**P**	**11 07 34.2**	**-0.5**
	comp=Z,0.3nm,0.7s,mb3.9,baz=48,slow=4.5,SNR=2.9						

IDC 12 10:54:30.4±6.6,31°59N×105°89E,h0km,mb4.1/4, mb1 4.4/4,mb1mx3.7/24,mbtmp4.1/4,Error ellipse: s-maj=383.1km s-min=32.1km az=81.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**58.05**	**148**	P	P	11 04 26.1	+0.7
	5.2nm,0.6s,baz=338,slow=7.7,SNR=7.7						
ASAR	**Alice Springs**	**61.14**	**151**	P	P	11 04 47.2	+0.6
	1.3nm,0.6s,baz=339,slow=6.7,SNR=11						
STKA	**Stephens Creek**	**71.60**	**148**	P	P	11 05 52.4	-1.2
	1.8nm,0.6s,baz=308,slow=6.3,SNR=6.4						
YKA	**Yellowknife Ar**	**80.77**	**18**	P	P	11 06 45.5	+0.1
	0.3nm,0.7s,baz=328,slow=4.9,SNR=3.6						

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*IDC **12** 10:57:45.9±0.8,31°23N×103°76E,h0km,mb3.8/10, mb1 3.9/11,mb1mx3.7/26,mbtmp3.8/11,ML3.9/1,Error ellipse: s-maj=32.1km s-min=16.0km az=54.0*
*ISCJB **12** 10:57:46.5±0.9,31°28N±0°04×103°9E±0°1,h17km±8km, mb3.7/9,Error ellipse: s-maj=17.7km s-min=6.5km az=1.4*
*NEIC **12** 10:57:47.4±0.4,31°27N×103°80E,h10km,Error ellipse: s-maj=16.6km s-min=8.0km az=66.0*
*BJI **12** 10:57:51.0,31°08N×103°62E,h15km,ML3.7/5*
ISC 12 10:57:46.5±1.5,31°33N±0°05×103°8E±0°1,h3km±10km, n17,σ0°71/18,mb3.7/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**188**	Pg	**Pg**	**10 57 55.4**	**+0.8**
CD2				Sg	**Sg**	**10 57 59.3**	**-0.7**
CD2				smax			
	comp=N,30μm,0.7s						
LZH	**Lanzhou**	**4.75**	**0**	*e*Pg	**Pb**	**10 59 10.5**	**+0.2**
LZH				Sg	**Sb**	**11 00 06.2**	**-1.6**
LZH				smax			
	comp=N,290nm,0.8s						
LZH				smax			
	comp=E,390nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.56**	**200**	Pn	**Pn**	**11 00 59.4**	**-0.3**
	comp=E,0.2nm,0.3s,baz=15,slow=11,SNR=3.4						
KSRS	**Korea Array**	**20.78**	**66**	P	**P**	**11 02 29.6**	**+1.0**
	comp=E,0.5nm,0.4s,baz=252,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**11 02 49.1**	**+0.5**
	comp=E,0.8nm,1.0s,mb3.1,baz=115,slow=5.4,SNR=3.1						
TKM2	**Tokmak 2**	**25.19**	**305**	P	**P**	**11 03 12.7**	**-0.4**
AAK	**Ala-Archa**	**25.88**	**304**	P	**P**	**11 03 20.2**	**+0.8**
	comp=E,1.2nm,0.4s,mb3.8,baz=120,slow=16,SNR=3.3						
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**11 03 24.7**	**+0.6**
	comp=E,0.8nm,0.3s,mb3.8,baz=142,slow=10,SNR=3.4						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**11 03 28.4**	**-0.3**
	comp=E,1.1nm,0.6s,mb3.6,baz=126,slow=10.0,SNR=6.1						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**11 03 28.4**	**-0.3**
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**11 07 45.4**	**-0.7**
	comp=E,1.1nm,0.6s,mb4.1,baz=328,slow=9.0,SNR=6.3						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**11 08 06.5**	**-0.1**
	comp=E,0.5nm,0.6s,mb3.8,baz=335,slow=6.5,SNR=4.5						
NOA	**NORSAR Array B**	**64.34**	**327**	P	**P**	**11 08 23.1**	**0.0**
	comp=E,0.7nm,0.6s,mb3.9,baz=90,slow=6.9,SNR=3.3						
STKA	**Stephens Creek**	**72.33**	**147**	P	**P**	**11 09 12.7**	**-0.8**
	comp=E,0.6nm,0.5s,mb3.8,baz=122,slow=15,SNR=3.4						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**11 10 05.9**	**+0.8**
	comp=E,0.6nm,0.5s,mb3.8,baz=329,slow=5.4,SNR=6.0						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**11 10 05.9**	**+0.8**
TXAR	**Lajitas Array**	**114.25**	**26**	PKP	PKiKP	11 16 28.2	+0.4
	comp=E,0.0nm,0.4s,baz=328,slow=1.8,SNR=3.9						

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*ISCJB **12** 10:59:18.2±0.5,30°86N±0°05×103°31E±0°06,h10km, mb3.9/12,Error ellipse: s-maj=7.0km s-min=6.6km az=43.6*
*IDC **12** 10:59:18.4±0.7,31°02N×103°52E,h0km,mb3.9/11, mb1 4.1/12,mb1mx3.9/26,mbtmp3.9/12,Error ellipse: s-maj=30.3km s-min=15.0km az=52.0*
*NEIC **12** 10:59:19.5±0.5,30°98N×103°56E,h10km,Error ellipse: s-maj=12.8km s-min=8.4km az=63.0*
*BJI **12** 10:59:21.9,30°98N×103°62E,h16km,mb4.0/1,ML3.9/8, Ms4.1/1*
ISC 12 10:59:20.1±0.5,30°98N±0°06×103°40E±0°06,h10km,n22, σ1°14/24,mb3.9/12,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**102**	Pg	**Pg**	**10 59 27.3**	**+0.9**
CD2				Sg	**Sg**	**10 59 32.3**	**+1.7**
CD2				smax			
	comp=N,42μm,0.6s						
ENH	**Enshi**	**5.29**	**96**	*e*Pn	**Pn**	**11 00 36.3**	**-2.9**
KMI	**Kunming**	**5.86**	**186**	Pn	**Pn**	**11 00 49.2**	**+2.1**
KMI				Sn	**Sb**	**11 02 07.3**	**-5.5**
KMI				smax			
	comp=N,48nm,1.2s						
KMI				smax			
	comp=E,49nm,0.9s						
CM31	**Chiang Mai Arr**	**13.11**	**199**	*e*Pn	**Pn**	**11 02 25.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**13.11**	**199**	Pn	**Pn**	**11 02 26.5**	**+0.1**
	baz=9.7,slow=6.4,SNR=2.5						
KSRS	**Korea Array**	**21.25**	**66**	P	**P**	**11 04 04.0**	**-2.5**
	comp=E,2.9nm,0.7s,mb3.7,baz=252,slow=9.3,SNR=5.2						
CN2	**Changchun**	**21.62**	**48**	*e*P	**P**	**11 04 10.4**	**+0.1**
MK31	**Makanchi Array**	**22.68**	**320**	*e*P	**P**	**11 04 23.3**	**+1.6**
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**11 04 22.6**	**+0.9**
	comp=E,1.1nm,0.6s,mb3.4,baz=116,slow=14,SNR=3.2						
AAK	**Ala-Archa**	**25.78**	**305**	P	**P**	**11 04 52.1**	**+1.0**
	comp=E,0.6nm,0.3s,mb3.6,baz=84,slow=10,SNR=1.6						
ZALV	**Zalesovo Beam**	**26.58**	**335**	P	**P**	**11 04 58.0**	**-0.1**
	comp=E,1.6nm,0.3s,mb4.0,baz=139,slow=7.8,SNR=5.2						
KURK	**Kurchatov**	**26.99**	**324**	P	**P**	**11 05 01.8**	**-0.2**
	comp=E,0.6nm,0.4s,mb3.5,baz=126,slow=10.0,SNR=4.4						
BRTR	**Keskin Array B**	**56.28**	**300**	P	**P**	**11 09 00.7**	**-0.2**
	comp=E,0.3nm,0.4s,mb3.7,baz=88,slow=8.9,SNR=2.2						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**11 09 17.5**	**-0.5**
WRA	**Warramunga Arr**	**58.71**	**146**	P	**P**	**11 09 18.0**	**-0.1**
	comp=E,3.0nm,0.5s,mb4.6,baz=337,slow=7.5,SNR=15						
ASAR	**Alice Springs**	**61.70**	**148**	P	**P**	**11 09 38.6**	**0.0**
	comp=E,1.2nm,0.8s,mb4.0,baz=325,slow=7.1,SNR=6.6						
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**11 09 55.9**	**-0.4**
	comp=E,0.7nm,0.7s,mb3.8,baz=74,slow=6.2,SNR=4.1						
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**11 09 55.9**	**-0.4**
COLD	**Coldfoot**	**67.83**	**24**	*e*P	**P**	**11 10 14.6**	**-3.4**
	comp=E,5.3nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**72.23**	**146**	P	**P**	**11 10 44.8**	**-0.6**
	comp=E,1.8nm,0.7s,mb4.1,baz=301,slow=5.9,SNR=5.1						
YKA	**Yellowknife Ar**	**81.99**	**17**	P	**P**	**11 11 39.9**	**0.0**
	comp=E,0.6nm,0.5s,mb3.8,baz=330,slow=5.3,SNR=7.0						
YKA	**Yellowknife Ar**	**81.99**	**17**	P	**P**	**11 11 39.9**	**0.0**

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*HLW **12** 11:01:24.4,34°88N×24°92E,h33km±36km*
*ISCJB **12** 11:01:26.0±0.5,34°60N±0°04×24°79E±0°05,h45km±18km, Error ellipse: s-maj=7.3km s-min=6.5km az=16.8*
*CSEM **12** 11:01:26.9±0.3,34°64N×24°78E,h34km±7km,MD3.3, Error ellipse: s-maj=7.2km s-min=6.1km az=65.0*
*NEIC **12** 11:01:27.8,34°82N×24°76E,h44km,MD3.3(ATH),After ATH.*
*ATH **12** 11:01:27.8,34°82N×24°76E,h44km,MD3.3/10*
ISC 12 11:01:26.8±0.6,34°63N±0°03×24°79E±0°05,h34km±5km, n28,σ1°09/48,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.38**	**2**	*e*P	**Pb**	**11 01 35.2**	**-0.6**
SIVA				*e*S	**Sb**	**11 01 41.5**	**-0.4**
SIVA	**Sivas**	**0.38**	**2**	*e*P	**Pb**	**11 01 35.2**	**-0.6**
SIVA				*e*S	**Sb**	**11 01 41.5**	**-0.4**
GVD	**Gavdhos**	**0.61**	**290**	*e*P	**Pn**	**11 01 39.7**	**+0.5**
GVD				*e*S	**Sb**	**11 01 49.7**	**+1.9**
GVD	**Gavdhos**	**0.61**	**290**	*e*P	**Pn**	**11 01 39.7**	**+0.5**
GVD				*e*S	**Sb**	**11 01 49.7**	**+1.9**
IDI	**Anoyia**	**0.66**	**7**	*e*P	**Pn**	**11 01 39.2**	**-0.6**
IDI				*e*S	**Sb**	**11 01 47.3**	**-1.7**
IDI	**Anoyia**	**0.66**	**7**	*e*P	**Pn**	**11 01 39.2**	**-0.6**
IDI				*e*S	**Sb**	**11 01 47.3**	**-1.7**
LAST	**Lasithi**	**0.77**	**47**	*e*P	**Pn**	**11 01 42.3**	**+1.0**
LAST				*e*S	**Sn**	**11 01 53.0**	**+1.2**
LAST	**Lasithi**	**0.77**	**47**	*e*P	**Pn**	**11 01 42.3**	**+1.0**
LAST				*e*S	**Sn**	**11 01 53.0**	**+1.2**
XRY	**Khrisi**	**0.78**	**72**	*e*P	**Pn**	**11 01 43.3**	**+1.8**
XRY	**Khrisi**	**0.78**	**72**	*e*P	**Pn**	**11 01 43.3**	**+1.8**
VAM	**Vamos**	**0.91**	**328**	*e*P	**Pn**	**11 01 42.8**	**-0.5**
VAM				*e*S	**Sn**	**11 01 54.5**	**-0.7**
VAM	**Vamos**	**0.91**	**328**	*e*P	**Pn**	**11 01 42.8**	**-0.5**
VAM				*e*S	**Sn**	**11 01 54.5**	**-0.7**
NPS	**Neapolis**	**0.92**	**47**	*e*P	**Pn**	**11 01 43.0**	**-0.4**
NPS				*e*S	**Sn**	**11 01 55.1**	**-0.4**
NPS	**Neapolis**	**0.92**	**47**	*e*P	**Pn**	**11 01 43.0**	**-0.4**
NPS				*e*S	**Sn**	**11 01 55.1**	**-0.4**
KARN	**Karanos**	**1.05**	**317**	*e*P	**Pn**	**11 01 45.2**	**+0.1**
KARN				*e*S	**Sn**	**11 01 57.6**	**-1.0**
KARN	**Karanos**	**1.05**	**317**	*e*P	**Pn**	**11 01 45.2**	**+0.1**
KARN				*e*S	**Sn**	**11 01 57.6**	**-1.0**
KARP	**Karpathos**	**2.15**	**64**	*e*P	**Pn**	**11 02 02.1**	**+1.9**
KARP	**Karpathos**	**2.15**	**64**	*e*P	**Pn**	**11 02 02.1**	**+1.9**
KYTH	**Kithira**	**2.18**	**319**	*e*P	**Pn**	**11 02 01.0**	**+0.3**
KYTH	**Kithira**	**2.18**	**319**	*e*P	**Pn**	**11 02 01.0**	**+0.3**
SLUM		**3.15**	**173**	P	**Pn**	**11 02 15.5**	**+1.4**
	baz=175						
SLUM				S	**Sn**	**11 02 50.5**	**0.0**
	baz=175						
SLUM		**3.15**	**173**	P	**Pn**	**11 02 15.5**	**+1.4**
SLUM				S	**Sn**	**11 02 50.6**	**+0.1**
HMAT	**Matruh**	**4.03**	**151**	P	**Pn**	**11 02 25.8**	**-0.3**
	baz=153						
HMAT				S	**Sn**	**11 03 10.5**	**-1.6**
	baz=153						
HMAT	**Matruh**	**4.03**	**151**	P	**Pn**	**11 02 25.8**	**-0.3**
HMAT				S	**Sn**	**11 03 10.5**	**-1.6**
SWA2		**5.40**	**174**	P	**Pn**	**11 02 46.2**	**+1.2**
	baz=175						
SWA2				S	**Sn**	**11 03 44.1**	**-1.9**
	baz=175						
SWA2		**5.40**	**174**	P	**Pn**	**11 02 46.2**	**+1.2**
SWA2				S	**Sn**	**11 03 44.1**	**-1.9**
HNKL	**Nakhl**	**9.08**	**119**	P	**Pn**	**11 03 34.4**	**-1.1**
	baz=120						
HNKL	**Nakhl**	**9.08**	**119**	P	**Pn**	**11 03 34.4**	**-1.1**

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*IDC **12** 11:04:45.2±0.7,32°57N×105°44E,h0km,mb4.0/12, mb1 4.2/14,mb1mx4.0/28,mbtmp4.1/14,ML4.2/2,Error ellipse: s-maj=32.9km s-min=14.0km az=56.0*
*BJI **12** 11:04:46.2,32°41N×105°39E,h10km,mB5.0/2,mb4.2/4, ML4.0/4,Ms4.1/5,Ms7 4.0/4*
*NEIC **12** 11:04:47.1±0.5,32°48N×105°35E,h10km,mb4.3/5,Error ellipse: s-maj=16.5km s-min=8.1km az=73.0*
ISC 12 11:04:46.1±1.5,32°45N±0°03×105°46E±0°06,h5km±9km, n31,σ1°17/37,mb4.1/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.11**	**224**	Pg	**Sn**	**11 05 48.6**	**-0.1**
CD2				Sg	**Sg**	**11 05 54.3**	**+0.3**
CD2				smax			
	comp=N,12μm,0.6s						
LZH	**Lanzhou**	**3.87**	**340**	*e*Pn	**Pn**	**11 05 47.6**	**+1.5**
LZH				Pg	**Pg**	**11 05 58.8**	**-1.3**
LZH				Sn	**Sn**	**11 06 34.0**	**+2.1**
LZH				Sg	**Sg**	**11 06 43.8**	**-6.4**
LZH				smax			
	comp=N,640nm,0.8s						
LZH				smax			
	comp=E,720nm,0.6s						
LZH				LR	LR		
	comp=N,2μm,8.2s						
LZH				LR	LR		
	comp=Z,2μm,9.5s						
GYA	**Guiyang**	**6.06**	**170**	Pg	**Pn**	**11 06 19.5**	**+3.1**
GYA				Sg	**Sn**	**11 07 24.3**	**-1.9**
GYA				smax			
	comp=N,140nm,0.6s						
GYA				smax			
	comp=E,110nm,0.7s						
WHN	**Wuhan**	**7.83**	**102**	P	**Pn**	**11 06 34.2**	**-6.4**
WHN				S	**Sn**	**11 08 09.4**	**-0.2**
WHN				LR	LR		
	comp=N,2μm,5.1s						
WHN				LR	LR		
	comp=E,1μm,6.4s						
CM31	**Chiang Mai Arr**	**15.12**	**204**	*e*Pn	**Pn**	**11 08 19.2**	**-1.2**
	comp=E,2.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**15.12**	**204**	Pn	**Pn**	**11 08 23.0**	**+2.6**
	comp=E,0.6nm,0.3s,baz=46,slow=30,SNR=5.8						
SONM	**Songino Array**	**15.38**	**2**	Pn	**Pn**	**11 08 26.0**	**+2.3**
	comp=E,0.4nm,0.3s,baz=206,slow=15,SNR=3.8						
KSRS	**Korea Array**	**19.06**	**69**	P	**Pn**	**11 09 09.0**	**-1.0**
	comp=E,0.2nm,0.3s,baz=256,slow=10,SNR=6.0						
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**11 09 48.3**	**-0.9**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**11 09 49.9**	**+0.7**
	comp=E,2.1nm,0.7s,mb3.7,baz=117,slow=9.7,SNR=6.3						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**11 10 26.6**	**-1.2**
	comp=E,1.4nm,0.8s,mb3.5,baz=131,slow=8.8,SNR=5.0						
ABKAR	**Akbulak array**	**37.67**	**310**	P	**P**	**11 12 01.7**	**-0.3**
	comp=E,0.6nm,0.4s,mb3.7						
FITZ	**Fitzroy Crossi**	**53.85**	**156**	P	**P**	**11 14 10.7**	**+0.6**
	comp=E,4.7nm,1.1s,mb4.3,baz=329,slow=12,SNR=11						
ARCES	**ARCESS Array B**	**56.51**	**335**	P	**P**	**11 14 27.8**	**-0.9**
	comp=E,3.8nm,1.0s,mb4.4,baz=108,slow=8.7,SNR=2.9						
BRTR	**Keskin Array B**	**57.09**	**299**	P	**P**	**11 14 32.4**	**-1.0**
	comp=E,0.6nm,0.6s,mb3.8,baz=126,slow=6.3,SNR=4.1						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**11 14 32.3**	**-0.8**
	comp=E,1.7nm,0.7s,mb4.2,baz=79,slow=3.0,SNR=3.1						
AKASG	**Malin Array Be**	**57.31**	**313**	P	**P**	**11 14 33.6**	**-1.1**
	comp=E,1.3nm,0.3s,mb4.4,baz=67,slow=7.7,SNR=4.8						
WRAB	**Tennant Creek**	**58.97**	**148**	*e*P	**P**	**11 14 47.2**	**+0.6**
	comp=E,4.9nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.97**	**148**	P	**P**	**11 14 47.3**	**+0.6**
	comp=E,4.9nm,0.7s,mb4.7,baz=341,slow=7.4,SNR=29						
ASAR	**Alice Springs**	**62.06**	**150**	P	**P**	**11 15 08.8**	**+1.0**
	comp=E,2.5nm,0.6s,mb4.5,baz=332,slow=6.0,SNR=23						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**11 15 19.6**	**-1.5**
	comp=E,1.0nm,0.8s,mb3.9,baz=114,slow=5.4,SNR=3.2						
STKA	**Stephens Creek**	**72.52**	**148**	P	**P**	**11 16 14.3**	**+0.4**
	comp=E,0.8nm,0.6s,mb3.9,baz=333,slow=8.2,SNR=4.7						
STKA	**Stephens Creek**	**72.52**	**148**	P	**P**	**11 16 14.3**	**+0.4**
LPG	**La Plagne**	**73.17**	**313**	*e*P	**P**	**11 16 17.8**	**+0.1**
	comp=E,6.6nm,0.7s,mb4.4						
LPG	**La Plagne**	**73.17**	**313**	*e*P	**P**	**11 16 17.8**	**+0.1**
	comp=E,3.3nm,0.7s,mb4.4						
LPL	**La Plagne**	**73.17**	**313**	*e*P	**P**	**11 16 17.7**	**0.0**
	comp=E,2.5nm,0.4s,mb4.2						
LPL	**La Plagne**	**73.17**	**313**	*e*P	**P**	**11 16 17.7**	**0.0**
	comp=E,1.3nm,0.4s,mb4.2						
MBDF	**Montbardon**	**73.53**	**313**	*e*P	**P**	**11 16 21.5**	**+1.6**
AVF	**Avril sur Loir**	**74.57**	**316**	*e*P	**P**	**11 16 21.9**	**-4.0**
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**11 16 55.9**	**-0.5**
	comp=E,0.4nm,0.7s,mb3.5,baz=329,slow=5.3,SNR=5.1						
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**11 16 55.9**	**-0.5**

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*ISCJB **12** 11:06:05.2±0.7,49°36N±0°05×76°05E±0°07,h10km,Error ellipse: s-maj=9.0km s-min=4.9km az=35.7*
*NNC **12** 11:06:05.3±1.0,49°39N×76°15E,h0km,mb3.2,mpv2.8, Error ellipse: s-maj=8.7km s-min=7.1km az=17.0*
*IDC **12** 11:06:06.2±1.2,49°44N×76°17E,h0km,mb1 3.2/3, mb1mx3.1/27,mbtmp3.2/3,ML3.1/3,Error ellipse: s-maj=16.0km s-min=9.0km az=39.0*
ISC 12 11:06:06.7±0.7,49°39N±0°06×76°07E±0°07,h10km,n10, σ1°08/17,8C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.01**	**51**	⇑Pn	**Pn**	**11 06 40.4**	**-0.3**
	1.6nm,0.4s						
KURBB				⇓Sn	**Sn**	**11 07 06.1**	**+0.2**
	3.4nm,0.7s						
KURK	**Kurchatov**	**2.11**	**50**	⇓Pn	**Pn**	**11 06 42.1**	**+0.1**
	7.1nm,0.4s						
KURK				⇑Sn	**Sn**	**11 07 08.6**	**+0.3**
	19nm,0.6s						
KURK	**Kurchatov**	**2.11**	**50**	Pn	**Pn**	**11 06 40.6**	**-1.5**
	1.7nm,0.3s,baz=233,slow=16,SNR=35						
KURK				Lg		11 07 07.1	
	1.9nm,0.3s,baz=233,slow=35,SNR=12						
VOSK	**Vostochnaya**	**4.63**	**318**	⇑Pn	**Pn**	**11 07 16.9**	**+0.2**
	0.6nm,0.4s						
VOSK				⇓Pg	**Pb**	**11 07 27.2**	**-0.8**
	1.3nm,0.5s						
VOSK				⇑Lg		11 08 32.8	
MK31	**Makanchi Array**	**4.91**	**120**	⇑Pn	**Pn**	**11 07 20.7**	**+0.2**
	0.3nm,0.4s,baz=301,slow=11,SNR=14						
MK31				Pg	**Pb**	**11 07 31.4**	**-1.3**
	1.9nm,0.3s,baz=308,slow=12,SNR=15						
MK31				⇑Sn	**Sn**	**11 08 17.5**	**+0.2**
	0.9nm,0.5s,baz=312,slow=26,SNR=5.1						
MK31				⇑Lg		11 08 38.1	
	1.9nm,0.6s,baz=313,slow=26,SNR=3.6						
MKAR	**Makanchi Array**	**4.91**	**120**	Pn	**Pn**	**11 07 20.6**	**+0.1**
	0.2nm,0.3s,baz=301,slow=12,SNR=11						
MKAR				Pg	**Pb**	**11 07 31.1**	**-1.6**
	1.2nm,0.3s,baz=308,slow=15,SNR=18						
MKAR				Sn	**Sn**	**11 08 19.5**	**+2.3**
	0.5nm,0.3s,baz=307,slow=28,SNR=5.4						
MKAR				Lg		11 08 37.1	
	0.7nm,0.3s,baz=310,slow=27,SNR=6.9						
BVA0	**Borovoye Array**	**5.10**	**318**	Pn	**Pn**	**11 07 24.6**	**+1.5**

mb4.0/12, Error ellipse: s-maj=8.8km s-min=5.5km az=162.1

IDC ***12*** *11:08:06.6±0.8, 31°.26N×103°.42E, h0km, mb4.0/12, mb1 4.1/14, mb1mx3.9/27, mbtmp4.0/14, ML3.9/1, Error ellipse: s-maj=30.2km s-min=14.6km az=55.0*

NEIC ***12*** *11:08:08.3±0.4, 31°.28N×103°.42E, h10km, Error ellipse: s-maj=15.7km s-min=7.4km az=72.0*

BJI ***12*** *11:08:08.9, 31°.33N×103°.47E, h9km, mb4.5/3, ML3.9/6*

ISC 12 11:08:08.7±0.4, 31°.37N±0°.04×103°.60E±0°.07, h10km, n28, σ1§20/31, mb4.0/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**164**	Pg	**Pg**	**11 08 17.2**	**-0.9**
CD2				Sg	**Sg**	**11 08 25.1**	**+0.7**
CD2				smax			
comp=N,3μm,1.3s							
LZH	**Lanzhou**	**4.71**	**2**	*e*Pg	**Pb**	**11 09 30.4**	**-0.9**
LZH				smax			
comp=N,220nm,0.8s							
LZH				smax			
comp=E,330nm,0.5s							
GYA	**Guiyang**	**5.58**	**151**	Pg	**Pg**	**11 09 56.0**	**+0.3**
GYA				Sg	**Sb**	**11 10 56.4**	**+3.1**
GYA				smax			
comp=N,310nm,1.0s							
GYA				smax			
comp=E,250nm,1.0s							
KMI	**Kunming**	**6.27**	**187**	Pn	**Pn**	**11 09 38.6**	**-2.7**
KMI				Sn	**Sn**	**11 10 48.8**	**-4.2**
KMI				smax			
comp=N,120nm,1.5s							
KMI				smax			
comp=E,86nm,1.4s							
CMAR	**Chiang Mai Arr**	**13.53**	**199**	Pn	**Pn**	**11 11 19.0**	**-1.8**
baz=16,slow=10,SNR=3.5							
GUN	**Gumba**	**15.79**	**262**	*e*P	**Pn**	**11 11 53.2**	**+2.0**
comp=E,114nm,1.0s							
PKI	**Pulchoki**	**16.29**	**261**	*e*P	**Pn**	**11 11 58.2**	**+0.6**
comp=E,50nm,0.8s							
PKIN	**Phulchoki**	**16.30**	**261**	*e*P	**Pn**	**11 11 58.9**	**+1.2**
KKN	**Kakani**	**16.33**	**262**	*e*P	**Pn**	**11 11 59.2**	**+1.0**
comp=E,135nm,0.8s							
DMN	**Daman**	**16.54**	**262**	*e*P	**Pn**	**11 12 01.0**	**+0.3**
comp=E,128nm,1.0s							
SONM	**Songino Array**	**16.58**	**7**	Pn	**Pn**	**11 12 02.6**	**+1.5**
comp=E,0.5nm,0.3s,baz=164,slow=12,SNR=3.8							
KSRS	**Korea Array**	**20.93**	**67**	P	**P**	**11 12 52.5**	**+0.9**
comp=E,2.4nm,0.6s,baz=259,slow=10,SNR=7.6							
CN2	**Changchun**	**21.22**	**48**	*e*P	**P**	**11 12 58.2**	**+3.6**
CN2				pmax	pmax		
comp=Z,20nm,1.0s,mb4.4							
MK31	**Makanchi Array**	**22.50**	**319**	*e*P	**P**	**11 13 07.8**	**-0.4**
MKAR	**Makanchi Array**	**22.50**	**319**	P	**P**	**11 13 07.2**	**-1.0**
comp=Z,2.2nm,0.8s,mb3.7,baz=129,slow=11,SNR=9.0							
KSH	**Kashi**	**23.86**	**298**	P	**P**	**11 13 25.2**	**+2.9**
KSH				pmax	pmax		
comp=Z,78nm,3.1s							
AAK	**Ala-Archa**	**25.70**	**304**	P	**P**	**11 13 38.9**	**-0.1**
comp=Z,1.3nm,0.4s,mb3.8,baz=81,slow=4.4,SNR=8.5							
AAK	**Ala-Archa**	**25.70**	**304**	P	**P**	**11 13 38.9**	**-0.1**
ZAA0	**Zalesovo Array**	**26.29**	**335**	*e*P	**P**	**11 13 44.1**	**-0.1**
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**11 13 43.9**	**-0.3**
comp=Z,2.7nm,0.6s,mb4.0,baz=138,slow=9.1,SNR=7.1							
KURK	**Kurchatov**	**26.77**	**323**	P	**P**	**11 13 47.6**	**-1.0**
comp=Z,10nm,1.1s,mb4.3,baz=130,slow=9.0,SNR=21							
BVAR	**Borovoye Array**	**32.31**	**322**	P	**P**	**11 14 36.8**	**-0.9**
comp=Z,0.7nm,0.5s,mb3.8,baz=128,slow=9.6,SNR=3.6							
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	**11 17 51.6**	**-1.4**
comp=Z,1.8nm,0.8s,mb4.1,baz=95,slow=8.3,SNR=3.0							
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**11 17 54.5**	**-0.5**
comp=Z,2.6nm,0.8s,mb4.3,baz=122,slow=10,SNR=3.3							
WRA	**Warramunga Arr**	**58.94**	**146**	P	**P**	**11 18 07.1**	**-1.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=334,slow=7.8,SNR=6.1							
ASAR	**Alice Springs**	**61.94**	**148**	P	**P**	**11 18 28.2**	**-0.5**
comp=Z,3.7nm,1.3s,mb4.3,baz=338,slow=6.3,SNR=4.9							
STKA	**Stephens Creek**	**72.47**	**147**	P	**P**	**11 19 35.3**	**-0.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=337,slow=8.9,SNR=3.3							
YKA	**Yellowknife Ar**	**81.56**	**17**	P	**P**	**11 20 27.9**	**+1.7**
comp=Z,0.3nm,0.7s,mb3.4,baz=330,slow=5.0,SNR=3.7							

IDC ***12*** *11:11:00.5±0.3, 31°.23N×103°.61E, h0km, mb5.4/39, mb1 5.4/41, mb1mx5.4/41, mbtmp5.4/41, ML4.3/2, MS5.9/45, Ms1 5.9/45, ms1mx5.8/53, Error ellipse: s-maj=11.3km s-min=8.1km az=41.0*

ISCJB ***12*** *11:11:00.7±0.1, 31°.21N±0°.02×103°.58E±0°.02, h11km, mb5.5/329, MS6.1/268, Error ellipse: s-maj=2.3km s-min=1.8km az=22.9*

BJI ***12*** *11:11:01.0, 31°.26N×103°.67E, h14km, mB6.2/24, mb5.8/35, ML5.8/16, Ms6.3/49, Ms7 6.2/46*

NEIC ***12*** *11:11:02.5±0.1, 31°.21N×103°.62E, h10km, mb5.7/214, MS6.1/197, Error ellipse: s-maj=4.3km s-min=3.0km az=213.0*

NEIC Felt at Chengdu, Guiyang and Luzhou.

MOS ***12*** *11:11:02.6±0.8, 31°.21N×103°.62E, h27km, mb5.8/128, MS6.1/80, Error ellipse: s-maj=6.0km s-min=3.4km az=118.8*

GCMT ***12*** *11:11:02.5±0.3, 31°.31N×103°.62E, h15km±2km, MW6.1/96, Moment Tensor Solution. s14,c16; s96,c133; Duration: 2§7 Moment tensor: Scale 10^18Nm; Mrr-0.56±.11; Mθθ1.39±.09; Mφφ-0.83±.07; Mrθ-0.35±.18; Mφθ1.12±.06; Mφr0.20±.17; Best double couple: M0 1.65200×10^18 NP1:φs204.00000°, δ71.00000°, λ-169.00000°. NP2: φs110.00000°, δ80.00000°, λ-19.00000°. Principal axes: T 1.8820, Plg6.0000°, Azm158.0000°; P -1.4220, Plg21.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

DJA ***12*** *11:11:04, 31°.15N×103°.58E, h17km, Mw6.2/65*

SZGRF ***12*** *11:11:06.9, 31°.02N×103°.25E, h33km, mb5.9, MS6.7, Sichuan, China*

BGS ***12*** *11:11:29.4±1.9, 31°.84N×101°.16E, h10km, mb5.2*

ISC 12 11:11:02.7±0.1, 31°.24N±0°.02×103°.63E±0°.01, h12km, h12km±1.1km: pP-P, n1321, σ1§09/1238, mb5.5/325, MS6.1/268, 126C-117D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**161**	Pg	**Pg**	**11 11 09.6**	**0.0**
CD2				Sg	**Sg**	**11 11 17.9**	**+3.7**
CD2				smax			
comp=N,555μm,0.8s							
LZH	**Lanzhou**	**4.84**	**2**	*e*Pn	**Pn**	**11 12 16.7**	**+1.4**
LZH				Sn	**Sn**	**11 13 13.4**	**+2.1**
LZH				Sg	**Sg**	**11 13 34.8**	**-3.2**
LZH				smax			
comp=N,13μm,0.8s							
LZH				smax			
comp=E,19μm,1.0s							
LZH				LR	LR		
comp=E,265μm,7.8s							
LZH				LR	LR		
comp=Z,366μm,9.5s							
ENH	**Enshi**	**5.13**	**99**	*e*Pn	**Pn**	**11 12 20.9**	**+1.4**
comp=Z,11μm,1.3s							
GYA	**Guiyang**	**5.46**	**150**	Pn	**Pn**	**11 12 24.9**	**+1.1**
GYA				smax			
comp=N,22μm,1.4s							
GYA				smax			
comp=E,30μm,1.3s							
GYA				LR	LR		
comp=N,252μm,7.8s							
GYA				LR	LR		
comp=E,348μm,8.4s							
GYA				LR	LR		
comp=Z,364μm,11.2s							
KMI	**Kunming**	**6.14**	**188**	Pn	**Pn**	**11 12 33.8**	**+0.5**
KMI				Sn	**Sn**	**11 13 43.8**	**+0.3**
KMI				smax			
comp=N,5μm,1.5s							
KMI				smax			
comp=E,5μm,2.1s							
KMI				LR	LR		
comp=Z,181μm,9.9s							
GTA	**Gaotai**	**8.73**	**340**	P	**Pn**	**11 13 10.1**	**+1.4**
GTA				pP		11 13 13.4	
GTA				sP		11 13 16.2	
GTA				S	**Sn**	**11 14 52.7**	**+5.7**
GTA				sS		11 14 58.1	
GTA				pmax	pmax		
comp=Z,5μm,5.4s							
GTA				LR	LR		
comp=N,143μm,15.2s							
GTA				LR	LR		
comp=E,158μm,14.9s							
GTA				LR	LR		
comp=Z,163μm,18.1s							
WHN	**Wuhan**	**9.24**	**92**	P	**Pn**	**11 13 15.9**	**+0.1**
WHN				S	**Sn**	**11 14 56.6**	**-3.1**
WHN				LR	LR		
comp=Z,482μm,10.4s							
TIY	**Taiyuan**	**9.72**	**46**	*e*P	**Pn**	**11 13 23.1**	**+0.8**
TIY				sP		11 13 34.9	
TIY				S	**Sn**	**11 15 19.5**	**+8.1**
TIY				pmax	pmax		
comp=Z,2μm,5.1s							
TIY				LR	LR		
comp=N,62μm,7.5s							
TIY				LR	LR		
comp=E,32μm,5.5s							
BTO	**Baotou**	**10.68**	**27**	*e*P	**Pn**	**11 13 35.4**	**-0.1**
BTO				LR	LR		
comp=N,102μm,11.3s							
BTO				LR	LR		
comp=E,74μm,10.3s							
BTO	**Baotou**	**10.68**	**27**	*e*P	**Pn**	**11 13 33.1**	**-2.4**
BTO				S	**Sn**	**11 15 40.2**	**+5.1**
BTO				LR	LR		
comp=N,76μm,10.6s							
BTO				LR	LR		
comp=E,73μm,9.5s							
IMP	**Imphal**	**10.71**	**235**	*e*P	**Pn**	**11 13 35.0**	**-0.9**
IMP				*ex*	x	11 16 43.0	
LSA	**Lhasa**	**10.88**	**265**	P	**Pn**	**11 13 37.6**	**-0.6**
LSA	**Lhasa**	**10.88**	**265**	*e*P	**Pn**	**11 13 38.6**	**+0.4**
LSA				pmax	pmax		
comp=Z,221nm,0.8s							
LSA	**Lhasa**	**10.88**	**265**	*e*Pn	**Pn**	**11 13 38.5**	**+0.4**
comp=Z,221nm,0.8s							
HHC	**Hu-ho-hao-te**	**11.54**	**32**	*e*P	**Pn**	**11 13 41.9**	**-5.3**
HHC				pP		11 13 49.1	
HHC				sP		11 13 53.8	
HHC				S	**Sn**	**11 15 49.5**	**-6.5**
HHC				sS		11 16 00.1	
HHC				SS		11 16 03.3	
HHC				pmax	pmax		
comp=Z,11nm,1.1s							
HHC				pmax	pmax		
comp=Z,2μm,4.9s							
HHC				LR	LR		
comp=N,43μm,6.0s							
HHC				LR	LR		
comp=E,50μm,7.9s							
HHC				LR	LR		
comp=Z,49μm,8.8s							
SHL	**Shillong**	**11.78**	**244**	*i*P	**Pn**	**11 13 48.5**	**-2.1**
SHL				*i*x	x	11 17 14.0	
GZH	**Guangzhou**	**11.86**	**131**	P	**Pn**	**11 13 46.7**	**-5.0**
GZH				S	**Sn**	**11 15 56.5**	**-7.5**
GZH				LR	LR		
comp=N,120μm,12.2s							
GZH				LR	LR		
comp=E,164μm,11.8s							
GZH	**Guangzhou**	**11.86**	**131**	P	**Pn**	**11 13 46.7**	**-5.0**
GZH				S	**Sn**	**11 15 56.5**	**-7.5**
GZH				LR	LR		
comp=N,120μm,12.2s							
GZH				LR	LR		
comp=E,164μm,11.8s							
TIA	**Tai'an**	**12.28**	**63**	P	**Pn**	**11 13 58.2**	**+0.8**
TIA				pmax	pmax		
comp=Z,130nm,0.7s							
TIA				LR	LR		
comp=N,31μm,9.0s							
TIA				LR	LR		
comp=E,48μm,10.0s							
HKC	**Hong Kong Obse**	**12.95**	**131**	⇑*i*P	**Pn**	**11 14 04.0**	**-2.6**
TURI	**Tura**	**13.00**	**247**	*ex*	x	11 14 49.0	
TURI				*ex*	x	11 15 02.0	
NJ2	**Nanjing**	**13.00**	**82**	*e*P	**Pn**	**11 14 06.2**	**-1.1**
NJ2				pP		11 14 13.4	
NJ2				PP		11 14 17.9	
NJ2				sP		11 14 19.0	
NJ2				S	**Sn**	**11 16 30.5**	**-1.4**
NJ2				sS		11 16 41.9	
NJ2				pmax	pmax		
comp=Z,260nm,1.1s							
NJ2				pmax	pmax		
comp=Z,4μm,3.9s							
NJ2				LR	LR		
comp=N,83μm,10.3s							
NJ2				LR	LR		
comp=E,174μm,11.0s							
NJ2				LR	LR		
comp=Z,513μm,11.0s							
CHTO	**Chiang Mai**	**13.08**	**200**	*e*P	**Pn**	**11 14 08.8**	**+0.5**
CHTO	**Chiang Mai**	**13.08**	**200**	Pn	**Pn**	**11 14 10.2**	**+1.9**
SNR=28							
CHTO				Pn	**Pn**	**11 14 10.2**	**+1.9**
SNR=28							
CHTO	**Chiang Mai**	**13.08**	**200**	P	**Pn**	**11 14 10.2**	**+1.9**
SNR=28							
CHTO				P		11 14 10.2	
SNR=28							
AGT	**Agartala**	**13.19**	**239**	*ex*	**Pn**	**11 14 02.0**	**-7.9**
AGT				*ex*	x	11 14 33.0	
QIZ	**Qiongzhong**	**13.39**	**154**	P	**Pn**	**11 14 07.1**	**-5.5**
QIZ				pP		11 14 12.2	
QIZ				S	**Sn**	**11 16 41.5**	**0.0**
QIZ				sS		11 16 54.1	
QIZ				pmax	pmax		
comp=Z,45nm,2.3s							
QIZ				pmax	pmax		
comp=Z,510nm,3.3s							
QIZ				LR	LR		
comp=N,94μm,7.7s							
QIZ				LR	LR		
comp=Z,121μm,12.9s							
QIZ	**Qiongzhong**	**13.39**	**154**	P	**Pn**	**11 14 07.1**	**-5.5**
QIZ				pP		11 14 12.2	
QIZ				S	**Sn**	**11 16 41.5**	**0.0**
QIZ				sS		11 16 54.1	
QIZ				pmax	pmax		
comp=Z,45nm,2.3s							
QIZ				pmax	pmax		
comp=Z,510nm,3.3s							
QIZ				LR	LR		
comp=N,94μm,7.7s							
QIZ				LR	LR		
comp=Z,121μm,12.9s							
QIZ	**Qiongzhong**	**13.39**	**154**	*e*P	**Pn**	**11 14 10.3**	**-2.3**
comp=Z,222nm,1.1s							
CM31	**Chiang Mai Arr**	**13.41**	**200**	*e*Pn	**Pn**	**11 14 13.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**13.41**	**200**	Pn	**Pn**	**11 14 12.9**	**0.0**
comp=Z,0.6nm,0.3s,baz=11,slow=11,SNR=52							
CMAR				Lg		11 18 13.2	
comp=Z,0.3nm,0.3s,baz=5.9,slow=27,SNR=3.3							
CMAR				LR	LR	11 19 45.0	
comp=Z,47μm,18.0s,baz=13,slow=39							
BJT	**Baijiatuau**	**13.43**	**46**	*e*P	**Pn**	**11 14 13.0**	**-0.1**
BJT				pmax	pmax		
comp=Z,190nm,0.9s							
BJT	**Baijiatuau**	**13.43**	**46**	*e*Pn	**Pn**	**11 14 13.0**	**-0.1**
comp=Z,190nm,0.9s							
BJI	**Beijing**	**13.45**	**46**	P	**Pn**	**11 14 12.2**	**-1.2**
BJI				S	**Sn**	**11 16 42.2**	**-0.6**
BJI				pmax	pmax		
comp=Z,190nm,1.4s							
BJI				pmax	pmax		
comp=Z,4μm,9.4s							
BJI				LR	LR		
comp=N,48μm,13.7s							
BJI				LR	LR		
comp=E,64μm,12.1s							
BJI				LR	LR		
comp=Z,34μm,17.8s							
QZH	**Quanzhou**	**14.62**	**112**	⇑*i*P	**Pn**	**11 14 27.5**	**-1.8**
QZH				S	**Sn**	**11 17 11.4**	**+0.1**
QZH				pmax	pmax		
comp=Z,500nm,1.0s							
QZH				pmax	pmax		
comp=Z,6μm,6.1s							
QZH				LR	LR		
comp=Z,337μm,12.8s							
SSE	**Sheshan**	**15.04**	**86**	⇑P	**Pn**	**11 14 35.2**	**+0.2**
SSE				pP	pP	11 14 38.3	-5.4
SSE				S	**Sn**	**11 17 22.3**	**+0.7**
SSE				sS	sS	11 17 26.9	-17
SSE				pmax	pmax		
comp=Z,380nm,1.5s							
SSE				pmax	pmax		
comp=Z,2μm,6.3s							
SSE				LR	LR		
comp=N,47μm,13.6s							
SSE				LR	LR		
comp=E,120μm,13.6s							
SSE				LR	LR		
comp=Z,162μm,13.5s							
CAL	**Calcutta**	**16.15**	**241**	*e*P	**Pn**	**11 14 49.1**	**-0.5**
DL2	**Dalian**	**16.59**	**58**	⇑*i*P	**Pn**	**11 14 57.6**	**+2.5**
DL2				pmax	pmax		
comp=Z,500nm,1.8s							
DL2				pmax	pmax		
comp=Z,6μm,3.4s							
DL2				LR	LR		
comp=N,36μm,14.5s							
DL2				LR	LR		
comp=E,28μm,15.3s							
DL2				LR	LR		
comp=Z,33μm,15.7s							
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**11 14 56.3**	**-0.3**
comp=Z,0.6nm,0.3s,baz=184,slow=11,SNR=66							
SONM				Lg		11 19 55.9	
comp=Z,0.6nm,0.3s,baz=179,slow=24,SNR=5.0							
SONM				LR	LR	11 22 27.5	
comp=Z,15μm,18.6s,baz=186,slow=41							
ULN	**Ulaanbaatar**	**16.81**	**8**	*e*P	**Pn**	**11 14 57.4**	**-0.4**
ULN				pmax	pmax		
comp=Z,253nm,1.1s							
ULN	**Ulaanbaatar**	**16.81**	**8**	*e*Pn	**Pn**	**11 14 57.4**	**-0.4**
comp=Z,253nm,1.1s							
ULN	**Ulaanbaatar**	**16.81**	**8**	Pn	**Pn**	**11 14 57.7**	**-0.1**
SNR=81							
ULN				Pn	**Pn**	**11 14 57.7**	**-0.1**
SNR=81							
ULN	**Ulaanbaatar**	**16.81**	**8**	P	**Pn**	**11 14 57.7**	**-0.1**
SNR=81							
ULN				P		11 14 57.7	
SNR=81							
TATO	**Taipei**	**16.94**	**107**	*e*Pn	**Pn**	**11 14 59.5**	**-0.1**
comp=Z,2μm,1.6s							
YHNB	**Yeheng**	**16.98**	**108**	*e*Pn	**Pn**	**11 15 00.6**	**+0.4**
comp=Z,319nm,0.8s							
TPUB	**Ta-pu**	**17.05**	**113**	*e*Pn	**Pn**	**11 15 01.4**	**+0.4**
comp=Z,2μm,1.9s							
SSLB	**Suanglung**	**17.06**	**112**	*e*Pn	**Pn**	**11 15 01.1**	**0.0**
comp=Z,1μm,1.4s							
NACB	**Ninganchiao**	**17.39**	**109**	*e*Pn	**Pn**	**11 15 06.2**	**+1.0**
comp=Z,3μm,1.9s							
YULB	**Yu-li**	**17.53**	**112**	*e*Pn	**Pn**	**11 15 07.5**	**+0.5**
comp=Z,570nm,1.4s							
TWG	**Pinlang**	**17.64**	**114**	*e*Pn	**Pn**	**11 15 08.7**	**+0.3**
comp=Z,183nm,0.8s							
WMQ	**Urumqi**	**17.78**	**319**	P	**Pn**	**11 15 08.8**	**-1.1**
WMQ				PP		11 15 22.6	
WMQ				S	**Sn**	**11 18 27.2**	**-0.7**
WMQ				sS	sS	11 18 31.2	-8.9
WMQ				SS		11 18 47.4	
WMQ				PcP	PcP	11 19 47.0	-0.1
WMQ				pmax	pmax		
comp=Z,280nm,2.2s							
WMQ				pmax	pmax		
comp=Z,11μm,3.7s							
WMQ				LR	LR		
comp=N,60μm,13.0s							
WMQ				LR	LR		
comp=E,114μm,13.0s							
WMQ				LR	LR		
comp=Z,81μm,23.0s							
ZAK	**Zakamensk**	**19.13**	**359**	*e*P	**Pn**	**11 15 25.9**	**-0.4**
ZAK				pmax	pmax		
comp=Z,62nm,2.2s							
SNY	**Shenyang**	**19.16**	**51**	⇑P	**Pn**	**11 15 26.6**	**-0.2**
SNY				S	**Sn**	**11 18 57.4**	**-3.9**
SNY				pmax	pmax		
comp=Z,590nm,2.3s							
SNY				LR	LR		
comp=N,27μm,13.5s							
SNY				LR	LR		
comp=E,45μm,18.3s							
SNY				LR	LR		
comp=Z,29μm,13.5s							
BBP	**Basco**	**19.67**	**119**	*e*P	**Pn**	**11 15 34.4**	**+1.4**
INCN	**Inchon**	**19.96**	**66**	*e*Pn	**Pn**	**11 15 35.6**	**-0.9**
comp=Z,334nm,0.9s							
PTH	**Pithoragarh**	**20.26**	**271**	*e*P	**P**	**11 15 36.6**	**-1.4**
TLY	**Talaya**	**20.43**	**0**	P	**P**	**11 15 41.3**	**+1.7**
comp=Z,819nm,1.0s,SNR=28							
TLY	**Talaya**	**20.43**	**0**	*c i*P	**P**	**11 15 40.8**	**+1.2**
TLY				*e*S	**S**	**11 19 31.1**	**+3.0**
TLY				*e*		11 19 45.3	
TLY				*e*SS		11 20 03.4	
TLY				pmax	pmax		
comp=Z,275nm,1.2s							
TLY				MLR	MLR		
comp=Z,35μm,12.0s,MS5.9							
TLY	**Talaya**	**20.43**	**0**	*e*Pn	**P**	**11 15 40.6**	**+1.0**
comp=Z,1μm,2.1s							
TLY				LR	LR		
comp=Z,11μm,19.0s,MS5.2							
MOY	**Mondy**	**20.50**	**355**	⇑*i*P	**P**	**11 15 41.8**	**+1.3**
MOY				*e*		11 19 31.7	
MOY				pmax	pmax		
comp=Z,1μm,1.9s							
JOSI	**Joshimath**	**20.66**	**274**	*e*P	**P**	**11 15 42.3**	**-0.1**
APYP	**Conner**	**20.80**	**126**	*e*P	**P**	**11 15 47.3**	**+3.4**
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**11 15 45.6**	**0.0**
comp=Z,352nm,0.7s,baz=250,slow=10,SNR=379							
KSRS				S	**S**	**11 19 40.9**	**+1.7**
comp=Z,21nm,1.1s,baz=253,slow=18,SNR=5.9							
KSRS				Lg		11 22 11.2	
comp=Z,18nm,1.2s,baz=267,slow=27,SNR=4.0							
KSRS				LR	LR	11 24 19.4	
comp=Z,35μm,18.9s,MS5.8,baz=275,slow=38							
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**11 15 45.7**	**0.0**
KSRS				S	**S**	**11 19 40.9**	**+1.8**
KSRS				pmax	pmax		
comp=Z,352nm,0.7s							
KSRS				smax			
comp=N,21nm,1.1s							
KSRS				MLR	MLR		
comp=Z,35μm,18.9s,MS5.8							
IRK	**Irkutsk**	**20.99**	**1**	⇓*i*P	**P**	**11 15 47.0**	**+1.2**
IRK				*e*		11 19 46.9	
IRK				pmax	pmax		
comp=Z,1μm,1.7s							
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**11 15 51.0**	**+1.9**
CN2				*es*P	sP	11 15 57.0	+3.1
CN2				*e*S	**S**	**11 19 44.9**	**-0.6**
CN2				pmax	pmax		
comp=Z,920nm,1.5s,mb5.9							
CN2				pmax	pmax		
comp=Z,120nm,3.0s							
CN2				LR	LR		
comp=N,39μm,18.0s,MS6.1							
CN2				LR	LR		
comp=E,51μm,18.0s,MS6.1							
CN2				LR	LR		
comp=Z,79μm,19.0s,MS6.1							
HIA	**Hailar**	**21.73**	**29**	*e*P	**P**	**11 15 53.9**	**+0.2**
HIA				pmax	pmax		
comp=Z,423nm,1.3s							
HIA				MLR	MLR		
comp=Z,48μm,19.0s							
HIA	**Hailar**	**21.73**	**29**	*e*P	**P**	**11 15 53.9**	**+0.2**
comp=Z,423nm,1.3s,mb5.7							
HIA				LR	LR		
comp=Z,48μm,19.0s,MS5.9							
CAUP	**Cauayan**	**21.83**	**126**	*e*P	**P**	**11 15 58.3**	**+3.3**
JOW	**Kunigami**	**21.98**	**95**	P	**P**	**11 15 57.9**	**+1.3**
comp=Z,135nm,0.5s,mb5.6,baz=268,slow=7.9,SNR=14							
JOW	**Kunigami**	**21.98**	**95**	P	**P**	**11 15 57.9**	**+1.3**
DDI	**Dehra Dun**	**21.98**	**274**	*e*P	**P**	**11 15 54.0**	**-2.6**
DDI				*ex*	x	11 19 56.0	
CIT	**Chita**	**22.01**	**17**	*e*P	**P**	**11 15 57.3**	**+0.6**
CIT				*e*		11 16 07.0	
CIT				*e*		11 16 26.7	
CIT				pmax	pmax		
comp=Z,1μm,2.0s,mb6.0							
PALP	**Palanan**	**22.16**	**125**	*e*P	**P**	**11 16 00.8**	**+2.2**
BALP	**Baler**	**22.51**	**129**	*e*P	**P**	**11 16 05.0**	**+2.7**

MK31	**Makanchi Array**	**22.61 319**	*e*P	**P**	**11 16 02.8**	**-0.4**
MKAR	**Makanchi Array**	**22.61 319**	P	**P**	**11 16 03.6**	**+0.4**
	comp=Z,249nm,0.9s,mb5.6,baz=121,slow=11,SNR=310					
MKAR			LR	LR	11 25 08.5	
	comp=Z,31μm,18.6s,MS5.8,baz=125,slow=38					
MKAR	**Makanchi Array**	**22.61 319**	*ce*P	**P**	**11 16 03.0**	**-0.2**
MKAR			pmax	pmax		
	comp=Z,249nm,0.9s					
SMLA	**Simla**	**22.62 277**	*i* x	**P**	**11 15 58.6**	**-4.8**
SMLA			*i* x	x	11 20 04.4	
AGRA	**Agra**	**22.75 266**	*e*P	**P**	**11 16 04.1**	**-0.7**
AGRA			*e*x	x	11 20 10.4	
SDNR	**Sundarnagar**	**22.75 278**	*e*P	**P**	**11 16 02.5**	**-2.3**
SDNR			*e*S	**S**	**11 20 13.1**	**-0.6**
VIS	**Vishakhapatnam**	**22.80 239**	*i* P	**P**	**11 16 04.3**	**-1.1**
VIS			*e*x	x	11 16 23.2	
	comp=Z,328nm,1.8s					
VIS			*i* x	x	11 20 12.3	
NDI	**New Delhi**	**23.01 270**	*e*P	**P**	**11 16 03.0**	**-4.5**
NDI			*e*S	**S**	**11 20 11.0**	**-7.0**
AYAN	**Aya Nagar**	**23.13 270**	*e*P	**P**	**11 16 06.5**	**-2.3**
AYAN			AMb	AMB	11 16 13.1	
	comp=Z,427nm,1.2s,mb5.8					
LUBP	**Lubang**	**23.17 135**	*e*P	**P**	**11 16 10.3**	**+1.0**
SONA	**Sohna**	**23.22 269**⇑	*i*P	**P**	**11 16 08.0**	**-1.7**
SONA			*e*x	x	11 20 18.6	
BHK	**Bhakra**	**23.23 278**	*e*x	**P**	**11 16 05.4**	**-4.4**
BHK			*e*x	x	11 16 30.2	
TGY	**Tagaytay City**	**23.31 133**	P	**P**	**11 16 12.7**	**+2.0**
	comp=Z,143nm,0.4s,mb5.8,baz=280,slow=1.5,SNR=10					
POLP	**Polilio Island**	**23.48 130**	*e*P	**P**	**11 16 14.5**	**+1.9**
DLH	**Dalhousie**	**23.50 280**	*e*P	**P**	**11 16 10.0**	**-2.7**
DLH			*e*S	**S**	**11 20 25.0**	**-1.0**
THN	**Thein Dam**	**23.72 280**	*e*P	**P**	**11 16 12.2**	**-2.5**
THN			*e*S	**S**	**11 20 27.1**	**-2.4**
NGP	**Nagpur**	**24.18 251**	*e*x	**P**	**11 16 15.3**	**-3.7**
NGP			*e*x	x	11 16 16.5	
	comp=Z,355nm,1.7s					
NGP			*e*S	**S**	**11 20 37.3**	**+0.1**
AAA	**Alma-Ata**	**24.29 307**	*i* P	**P**	**11 16 21.5**	**+1.7**
AAA			*i* S	**S**	**11 20 40.2**	**+1.7**
AAA			pmax	pmax		
	comp=Z,19μm,6.7s					
AAA			smax			
	comp=N,34μm,13.3s					
AAA			MLR	MLR		
	comp=Z,82μm,18.0s,MS6.3					
MDJ	**Mudanjiang**	**24.33 49**	P	**P**	**11 16 19.0**	**-1.2**
MDJ			pP		11 16 21.8	
MDJ			S	**S**	**11 20 38.2**	**-0.9**
MDJ			sS	sS	11 20 43.5	-1.4
MDJ			ScP	ScP	11 23 36.9	-1.3
MDJ			PcS	PcS	11 23 38.2	-1.1
MDJ			pmax	pmax		
	comp=Z,5μm,5.8s					
MDJ			LR	LR		
	comp=N,24μm,11.8s,MS6.0					
MDJ			LR	LR		
	comp=E,29μm,15.7s,MS6.0					
MDJ			LR	LR		
	comp=Z,38μm,13.4s,MS6.1					
MDJ	**Mudanjiang**	**24.33 49**	*e*P	**P**	**11 16 21.0**	**+0.8**
	comp=Z,995nm,1.6s,mb6.0					
MDJ			LR	LR		
	comp=Z,20μm,19.0s,MS5.6					
KHET	**Khetri**	**24.36 270**	*e*P	**P**	**11 16 19.9**	**-0.7**
KHET			*e*x	x	11 20 38.5	
GQP	**Guinayangan**	**24.42 131**⇓	*e*P	**P**	**11 16 21.7**	**+0.4**
ULHL	**Ulahol**	**24.44 304**	P	**P**	**11 16 22.2**	**+1.0**
	SNR=88					
BUSP	**Coron**	**24.51 138**	*e*P	**P**	**11 16 22.3**	**+0.3**
SJMP	**San Jose**	**24.69 135**	*e*P	**P**	**11 16 24.0**	**+0.3**
ENPP	**El Nido**	**24.72 140**	*e*P	**P**	**11 16 24.4**	**+0.5**
KZA	**Kyzart**	**25.10 303**	P	**P**	**11 16 29.0**	**+1.8**
	SNR=582					
TKM2	**Tokmak 2**	**25.10 306**	P	**P**	**11 16 28.2**	**+0.9**
	SNR=83					
TKM2	**Tokmak 2**	**25.10 306**	*e*P	**P**	**11 16 27.7**	**+0.5**
TKM2			pmax	pmax		
	comp=Z,434nm,1.5s,mb5.8					
TKM2			MLR	MLR		
	comp=Z,85μm,21.0s,MS6.2					
TKM2	**Tokmak 2**	**25.10 306**	*e*P	**P**	**11 16 27.7**	**+0.5**
	comp=Z,434nm,1.5s,mb5.8					
TKM2			LR	LR		
	comp=Z,85μm,21.0s,MS6.2					
KBK	**Karagaybulak**	**25.48 305**	P	**P**	**11 16 31.9**	**+1.3**
	SNR=218					
UCH	**Uchtor**	**25.66 303**	P	**P**	**11 16 34.8**	**+2.4**
	SNR=208					
UCH	**Uchtor**	**25.66 303**	*e*P	**P**	**11 16 33.8**	**+1.5**
	comp=Z,397nm,1.1s,mb5.9					
UCH			LR	LR		
	comp=Z,62μm,19.0s,MS6.2					
CHMS	**Chumysh**	**25.72 305**	P	**P**	**11 16 33.8**	**+0.9**
	SNR=36					
FRU	**Bishkek**	**25.76 305**	*i* P	**P**	**11 16 34.0**	**+0.8**
FRU			*i* S	**S**	**11 21 04.0**	**+1.9**
FRU			*e*		11 21 16.0	
FRU			pmax	pmax		
	comp=Z,720nm,2.0s,mb5.9					
FRU			MLR	MLR		
	comp=Z,52μm,17.0s,MS6.1					
PVCP	**Virac**	**25.77 128**	*e*P	**P**	**11 16 34.7**	**+1.1**
KTGM	**Kuala Trenggan**	**25.78 181**	P	**P**	**11 16 33.8**	**+0.2**
AAK	**Ala-Archa**	**25.79 304**	P	**P**	**11 16 34.2**	**+0.7**
	comp=Z,1μm,1.0s,mb6.5,SNR=74					
AAK	**Ala-Archa**	**25.79 304**	P	**P**	**11 16 34.4**	**+0.9**
	SNR=110					
AAK	**Ala-Archa**	**25.79 304**	P	**P**	**11 16 34.5**	**+1.0**
	comp=Z,81nm,0.8s,mb5.3,baz=122,slow=8.3,SNR=56					
AAK			LR	LR	11 27 31.2	
	comp=Z,76μm,19.1s,MS6.2,baz=90,slow=38					
AAK	**Ala-Archa**	**25.79 304**	*i* P	**P**	**11 16 33.0**	**-0.5**
AAK			MLR	MLR		
	comp=Z,44μm,21.0s,MS6.0					
AAK	**Ala-Archa**	**25.79 304**	*e*P	**P**	**11 16 34.6**	**+1.2**
	comp=Z,267nm,1.0s,mb5.7					
AAK			LR	LR		
	comp=Z,72μm,20.0s,MS6.2					
AAK	**Ala-Archa**	**25.79 304**	P	**P**	**11 16 34.5**	**+1.0**
	SNR=243					
AAK			P		11 16 34.5	
	SNR=243					
AAK	**Ala-Archa**	**25.79 304**	P	**P**	**11 16 34.5**	**+1.0**
	SNR=243					
AAK			P		11 16 34.5	
	SNR=243					
CUYO	**Cuyo Island**	**25.91 138**	*e*P	**P**	**11 16 35.4**	**+0.6**
BATP	**Bataraza**	**25.94 146**	*e*P	**P**	**11 16 35.2**	**+0.1**
KULM	**Kulim**	**25.96 187**	P	**P**	**11 16 35.1**	**-0.1**
KULM	**Kulim**	**25.96 187**	*e*P	**P**	**11 16 33.2**	**-2.0**
	comp=Z,307nm,1.5s,mb5.6					
KULM			LR	LR		
	comp=Z,55μm,20.0s,MS6.1					
USP	**Ospenovka**	**25.97 306**	P	**P**	**11 16 36.2**	**+1.1**
	SNR=164					
AML	**Almayashu**	**26.23 303**	P	**P**	**11 16 38.5**	**+1.1**
	SNR=118					
AML	**Almayashu**	**26.23 303**	*e*P	**P**	**11 16 38.9**	**+1.5**
	comp=Z,244nm,1.0s,mb5.7					
AML			LR	LR		
	comp=Z,56μm,19.0s,MS6.1					
EKS2	**Erkin-Say**	**26.31 304**	P	**P**	**11 16 39.4**	**+1.3**
	SNR=105					
EKS2	**Erkin-Say**	**26.31 304**	*e*P	**P**	**11 16 39.2**	**+1.1**
	comp=Z,254nm,1.3s,mb5.6					
EKS2			LR	LR		
	comp=Z,82μm,20.0s,MS6.3					
RCP	**Roxas**	**26.38 134**⇑	*e*P	**P**	**11 16 38.1**	**-0.9**
ZAA0	**Zalesovo Array**	**26.42 335**	*e*P	**P**	**11 16 39.0**	**0.0**
ZALV	**Zalesovo Beam**	**26.42 335**	P	**P**	**11 16 38.4**	**-0.7**
	comp=Z,116nm,0.9s,mb5.4,baz=134,slow=8.5,SNR=62					
ZALV			LR	LR	11 27 32.3	
	comp=Z,31μm,19.9s,MS5.8,baz=192,slow=38					
HYB	**Hyderabad**	**26.59 245**	*i* P	**P**	**11 16 39.0**	**-1.9**
IPM	**Ipoh**	**26.73 186**	P	**P**	**11 16 41.5**	**-0.7**
KURK	**Kurchatov**	**26.89 324**	P	**P**	**11 16 43.6**	**+0.2**
	comp=Z,2μm,1.0s,mb6.6,SNR=84					
KURK	**Kurchatov**	**26.89 324**	P	**P**	**11 16 42.6**	**-0.7**
	comp=Z,135nm,0.8s,mb5.5,baz=128,slow=9.4,SNR=121					
KURK			LR	LR	11 28 22.8	
	comp=Z,57μm,19.3s,MS6.2,baz=125,slow=39					
KURK	**Kurchatov**	**26.89 324**	*c i*P	**P**	**11 16 43.3**	**-0.1**
KURK			pmax	pmax		
	comp=Z,945nm,2.5s,mb5.9					
KURK			MLR	MLR		
	comp=Z,69μm,22.0s,MS6.2					
KURK	**Kurchatov**	**26.89 324**	*e*P	**P**	**11 16 43.5**	**+0.2**
	comp=Z,356nm,1.0s,mb5.8					
KURK			LR	LR		
	comp=Z,67μm,19.0s,MS6.2					
KURK	**Kurchatov**	**26.89 324**	P	**P**	**11 16 43.6**	**+0.2**
	SNR=212					
KURK			P		11 16 43.6	
	SNR=212					
KURK	**Kurchatov**	**26.89 324**	P	**P**	**11 16 43.6**	**+0.2**
	SNR=212					
KURK			P		11 16 43.6	
	SNR=212					
KDM	**Kudat**	**27.17 150**	P	**P**	**11 16 46.4**	**+0.2**
BOD	**Bodaibo**	**27.52 12**	*e*P	**P**	**11 16 48.7**	**-0.2**
BOD			pmax	pmax		
	comp=Z,64nm,1.0s,mb5.2					
NVS	**Novosibirsk**	**27.70 334**⇑	*i*P	**P**	**11 16 49.9**	**-0.7**
NVS			pmax	pmax		
	comp=Z,625nm,2.4s,mb5.8					
NVS			pmax	pmax		
	comp=N,382nm,1.9s					
NVS			pmax	pmax		
	comp=E,287nm,2.1s					
KKM	**Kota Kinabalu**	**27.70 152**	P	**P**	**11 16 51.5**	**+0.6**
KKM	**Kota Kinabalu**	**27.70 152**	*e*P	**P**	**11 16 50.1**	**-0.8**
	comp=E,943nm,1.6s,mb6.2					
KKM			LR	LR		
	comp=Z,23μm,22.0s,MS5.7					
KLR	**Kul'dur**	**27.76 42**	*e*P	**P**	**11 16 45.8**	**-5.3**
KLR			*e*S	**S**	**11 21 36.0**	**+2.5**
KLR			pmax	pmax		
	comp=E,150nm,1.8s					
KLR			pmax	pmax		
	comp=Z,220nm,1.8s,mb5.5					
KLR			pmax	pmax		
	comp=Z,2μm,10.0s					
KLR			smax			
	comp=E,12μm,14.0s					
KLR			MLR	MLR		
	comp=Z,59μm,10.0s,MS6.5					
FRIM	**Kepong**	**27.92 184**	P	**P**	**11 16 53.0**	**+0.2**
LLP	**Lapu-Lapu**	**28.10 133**	*e*P	**P**	**11 16 54.4**	**-0.1**
SDKM	**Sandakan**	**28.47 151**	P	**P**	**11 16 57.4**	**-0.4**
JASL	**Jaisalmer**	**28.86 270**	*e*P	**P**	**11 17 00.8**	**-0.4**
KGM	**Kluang**	**29.07 181**	P	**P**	**11 17 02.9**	**-0.2**
MAJO	**Matsushiro**	**29.09 70**	*e*P	**P**	**11 17 02.7**	**-0.4**
MAJO			pmax	pmax		
	comp=Z,550nm,2.2s,mb5.9					
MAJO			MLR	MLR		
	comp=Z,11μm,19.0s,MS5.5					
MAJO	**Matsushiro**	**29.09 70**	*e*P	**P**	**11 17 02.7**	**-0.4**
	comp=Z,550nm,2.2s,mb5.9					
MAJO			LR	LR		
	comp=Z,11μm,19.0s,MS5.5					
MAT	**Matsushiro**	**29.09 70**	P	**P**	**11 17 01.9**	**-1.2**
MAT			S	**S**	**11 21 53.4**	**-1.3**
MJAR	**Matsushiro Arr**	**29.09 70**	P	**P**	**11 17 02.5**	**-0.6**
	comp=Z,15nm,0.8s,mb4.8,baz=271,slow=10,SNR=28					
MJAR			ScP	ScP	11 23 53.0	+0.5
	comp=Z,3.0nm,1.0s,baz=263,slow=3.2,SNR=3.0					
MJAR			LR	LR	11 28 52.3	
	comp=Z,9μm,20.3s,MS5.4,baz=265,slow=37					
KBL	**Kabul**	**29.14 286**	*e*P	**P**	**11 17 03.7**	**0.0**
KBL			pmax	pmax		
	comp=Z,627nm,1.7s,mb6.1					
KBL	**Kabul**	**29.14 286**	*e*P	**P**	**11 17 03.7**	**0.0**
	comp=Z,627nm,1.7s,mb6.1					
BTM	**Bintulu**	**29.28 160**	P	**P**	**11 17 05.7**	**+0.7**
MYKOM	**Kota Tinggi**	**29.29 180**	P	**P**	**11 17 05.1**	**0.0**
HABR	**Khabarovsk**	**29.35 45**	*i* P	**P**	**11 17 07.0**	**+1.6**
HABR			*e**SP	sP	11 17 11.2	+0.9
HABR			*e*		11 18 00.9	
HABR			*e*PPP		11 18 08.7	
HABR					11 20 12.5	
HABR			*e*S	**S**	**11 22 01.7**	**+3.1**
HABR			*e*SS	SS	11 23 30.2	-33
HABR			*e*SSS		11 23 44.9	
HABR			*e*		11 27 48.2	
HABR			pmax	pmax		
	comp=N,32nm,1.7s					
HABR			pmax	pmax		
	comp=Z,137nm,1.9s,mb5.4					
HABR			pmax	pmax		
	comp=E,80nm,1.8s					
HABR			pmax	pmax		
	comp=Z,2μm,4.8s					
HABR			MLR	MLR		
	comp=N,13μm,9.0s					
HABR			MLR	MLR		
	comp=Z,28μm,10.0s,MS6.2					
HABR			MLR	MLR		
	comp=E,26μm,12.0s					
NRGR	**Nerungri**	**29.36 24**	*e*P	**P**	**11 17 05.1**	**-0.2**
NRGR			S	**S**	**11 22 04.9**	**+6.4**
NRGR			smax			
	comp=E,118nm,1.0s					
CLNS	**Chul'man**	**29.56 24**	*e*P	**P**	**11 17 07.2**	**+0.1**
CLNS			*e**PP	pP	11 17 15.5	+4.9
CLNS			*e*		11 17 21.8	
CLNS			*e*PPP		11 18 07.5	
CLNS			*e*S	**S**	**11 21 51.2**	**-10**
CLNS			*e*		11 23 32.5	
CLNS			pmax	pmax		
	comp=Z,38nm,1.3s,mb5.0					
CLNS			pmax	pmax		
	comp=E,14nm,1.2s					
CLNS			pmax	pmax		
	comp=N,29nm,1.4s					
CLNS			MLR	MLR		
	comp=E,33μm,13.0s,MS6.2					
CLNS			MLR	MLR		
	comp=N,22μm,12.0s,MS6.2					
CLNS			MLR	MLR		
	comp=Z,46μm,13.0s,MS6.3					
POO	**Poona**	**29.73 252**	*e*P	**P**	**11 17 08.9**	**-0.1**
POO			*e*x	x	11 21 59.4	
SBUM	**Sibu**	**29.76 162**	P	**P**	**11 17 10.3**	**+1.0**
KAD	**Karad**	**30.10 249**	*e*P	**P**	**11 17 13.0**	**+0.7**
KAD			AMb	AMB	11 17 23.2	
	comp=Z,70nm,1.2s,mb5.2					
KSM	**Kuching**	**30.27 167**	P	**P**	**11 17 14.2**	**+0.4**
KSM	**Kuching**	**30.27 167**	*e*P	**P**	**11 17 12.2**	**-1.6**
	comp=Z,68nm,0.9s,mb5.4					
KSM			LR	LR		
	comp=Z,21μm,20.0s,MS5.8					
JHJ	**Hachijo jima 2**	**30.57 77**	LR	LR	11 30 51.2	
	comp=Z,28μm,18.5s,MS5.9,baz=286,slow=39					
BUKP	**Musuan**	**30.66 135**	*e*P	**P**	**11 17 18.2**	**+0.9**
DAV	**Davao City (W)**	**31.61 135**	P	**P**	**11 17 27.5**	**+1.8**
	comp=Z,149nm,0.5s,mb6.1,baz=100,slow=3.6,SNR=13					
DAV			LR	LR	11 30 55.6	
	comp=Z,42μm,18.8s,MS6.1,baz=194,slow=38					
DAV	**Davao City (W)**	**31.61 135**	*e*P	**P**	**11 17 27.3**	**+1.6**
DAV			LR	LR		
	comp=Z,41μm,19.0s,MS6.1					
MATI	**Mati**	**32.13 134**	*e*P	**P**	**11 17 32.2**	**+2.0**
BVAR	**Borovoye Array**	**32.43 322**	P	**P**	**11 17 32.4**	**-0.1**
	comp=Z,35nm,0.7s,mb5.3,baz=117,slow=9.2,SNR=82					
BVAR			PcP	PcP	11 20 19.3	-0.2
	comp=Z,20nm,0.7s,baz=148,slow=2.1,SNR=6.0					
BVAR			LR	LR	11 31 37.0	
	comp=Z,60μm,21.5s,MS6.3,baz=117,slow=38					
BVAR	**Borovoye Array**	**32.43 322**	P	**P**	**11 17 32.4**	**-0.1**
BVAR					11 20 19.3	
BRVK	**Borovoye**	**32.51 322**	P	**P**	**11 17 33.5**	**+0.4**
	comp=Z,868nm,0.8s,mb6.7,SNR=20					
BRVK	**Borovoye**	**32.51 322**	*c i*P	**P**	**11 17 33.2**	**+0.1**
BRVK			pmax	pmax		
	comp=Z,129nm,0.7s,mb6.0					
BRVK			MLR	MLR		
	comp=Z,46μm,18.0s,MS6.2					
BRVK	**Borovoye**	**32.51 322**	*e*P	**P**	**11 17 33.1**	**0.0**
	comp=Z,133nm,0.9s,mb5.9					
BRVK			LR	LR		
	comp=Z,66μm,22.0s,MS6.3					
BRVK	**Borovoye**	**32.51 322**	P	**P**	**11 17 33.5**	**+0.4**
	SNR=63					
BRVK			P		11 17 33.5	
	SNR=63					
BRVK	**Borovoye**	**32.51 322**	P	**P**	**11 17 33.5**	**+0.4**
	SNR=63					
BRVK			P		11 17 33.5	
	SNR=63					
ASAJ	**Asahikawa**	**33.11 56**	P	**P**	**11 17 40.5**	**+2.0**
	comp=Z,26nm,0.8s,mb5.2,baz=270,slow=12,SNR=17					
ASAJ			LR	LR	11 30 20.3	
	comp=Z,17μm,21.0s,MS5.7,baz=267,slow=35					
ASAJ	**Asahikawa**	**33.11 56**	P	**P**	**11 17 40.5**	**+2.0**
ASAJ			pmax	pmax		
	comp=Z,26nm,0.8s					
ASAJ			MLR	MLR		
	comp=Z,17μm,21.0s					
ERM	**Erimo**	**33.23 60**	P	**P**	**11 17 40.6**	**+1.0**
	comp=Z,371nm,1.1s,mb6.2,SNR=6.6					
ERM	**Erimo**	**33.23 60**	*e*P	**P**	**11 17 39.2**	**-0.4**
ERM			pmax	pmax		
	comp=Z,255nm,1.7s,mb5.9					
ERM			MLR	MLR		
	comp=Z,14μm,21.0s,MS5.7					
ERM	**Erimo**	**33.23 60**	*e*P	**P**	**11 17 39.2**	**-0.4**
	comp=Z,255nm,1.7s,mb5.9					
ERM			LR	LR		
	comp=Z,14μm,21.0s,MS5.7					
YSS	**Yuzh-Sakhalins**	**33.78 51**	*ce*P	**P**	**11 17 45.0**	**+0.7**
YSS			*e*		11 17 56.8	
YSS			*i* S	**S**	**11 23 09.0**	**+1.2**
YSS			pmax	pmax		
	comp=E,130nm,1.4s					
YSS			pmax	pmax		
	comp=Z,260nm,1.4s,mb6.0					
YSS			pmax	pmax		
	comp=E,1μm,6.0s					
YSS			pmax	pmax		
	comp=Z,2μm,6.0s					
YSS			smax			
	comp=N,2μm,8.0s					
YSS			MLR	MLR		
	comp=Z,19μm,15.0s,MS6.0					
YSS			MLR	MLR		
	comp=E,20μm,14.0s					
YSS	**Yuzh-Sakhalins**	**33.78 51**	*e*P	**P**	**11 17 44.6**	**+0.3**
	comp=E,166nm,1.3s,mb5.8					
YSS			LR	LR		
	comp=Z,6μm,20.0s,MS5.3					
CBIJ	**Chichi jima**	**33.81 87**	LR	LR	11 31 33.0	
	comp=Z,12μm,18.4s,MS5.7,baz=297,slow=36					
YAK	**Yakutsk**	**35.13 21**	*e*P	**P**	**11 17 54.7**	**-1.0**
YAK			*e**PP	pP	11 18 03.7	+4.4
YAK			*e*		11 20 27.6	
YAK			*e*S	**S**	**11 23 27.5**	**-0.6**
YAK			pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4					
YAK			pmax	pmax		
	comp=E,18nm,1.2s					
YAK			pmax	pmax		
	comp=N,16nm,1.0s					
YAK			smax			
	comp=E,454nm,2.2s					
YAK			smax			
	comp=N,1μm,4.3s					
YAK			MLR	MLR		
	comp=Z,21μm,10.0s,MS6.2					
YAK			MLR	MLR		
	comp=N,14μm,9.0s					
YAK			MLR	MLR		
	comp=E,11μm,11.0s					
YAK	**Yakutsk**	**35.13 21**	*e*P	**P**	**11 17 55.0**	**-0.8**
	comp=E,71nm,0.8s,mb5.7					
YAK			LR	LR		
	comp=Z,26μm,21.0s,MS6.0					
YUK	**Yuzh-Kuril'sk**	**35.43 57**	P	**P**	**11 18 00.5**	**+1.9**
YUK			*i* SP		11 18 12.0	
YUK			*e*PPP		11 19 36.0	
YUK			*e*		11 20 29.0	
YUK			*e*S	**S**	**11 23 32.5**	**-0.7**
YUK			pmax	pmax		
	comp=N,2μm,2.0s					
YUK			pmax	pmax		
	comp=E,3μm,2.0s					
YUK			pmax	pmax		
	comp=Z,5μm,2.0s					
YUK			smax			
	comp=N,5μm,5.0s					
YUK			smax			
	comp=E,3μm,5.0s					
YUK			MLR	MLR		
	comp=N,11μm,15.0s,MS6.0					
YUK			MLR	MLR		
	comp=E,16μm,15.0s,MS6.0					
YUK			MLR	MLR		
	comp=Z,16μm,15.0s,MS5.9					
ABKAR	**Akbulak array**	**37.28 312**	*e*P	**P**	**11 18 14.6**	**+0.3**
	comp=Z,75nm,1.0s,mb5.5					
ABKT	**Ailbek**	**37.76 293**	P	**P**	**11 18 19.9**	**+1.3**
	comp=Z,1μm,1.3s,mb6.5,SNR=47					
VAN	**Vannovskaya**	**37.77 293**	*e*P	**P**	**11 18 16.6**	**-2.0**
AKTK	**Aktyubinsk**	**38.75 313**	P	**P**	**11 18 26.8**	**+0.1**
AKTK			LR	LR	11 36 28.6	
AKTO	**Aktyubinsk**	**38.75 313**	P	**P**	**11 18 26.8**	**+0.1**
	comp=Z,82nm,1.1s,mb5.3,baz=93,slow=8.4,SNR=29					
AKTO			LR	LR	11 36 28.6	
	comp=Z,9μm,19.8s,MS5.6,baz=110,slow=39					
SVE	**Sverdlovsk**	**39.15 324**⇑	*e*P	**P**	**11 18 30.7**	**+0.7**
SVE			*e*		11 20 01.9	
SVE			*e*S	**S**	**11 24 33.0**	**+3.5**
SVE			pmax	pmax		
	comp=Z,344nm,1.2s,mb6.0					
SVE			MLR	MLR		
	comp=Z,17μm,15.0s,MS6.0					
KAPI	**Kappang**	**39.20 154**	P	**P**	**11 18 29.9**	**-0.9**
	comp=Z,880nm,0.9s,mb6.5,SNR=18					
KAPI	**Kappang**	**39.20 154**	P	**P**	**11 18 29.2**	**-1.6**
	comp=Z,95nm,0.8s,mb5.5,baz=326,slow=7.2,SNR=44					
KAPI	**Kappang**	**39.20 154**	P	**P**	**11 18 29.2**	**-1.6**
KAPI			LR	LR		
	comp=Z,7μm,20.0s,MS5.5					
ARU	**Arti**	**40.08 322**	P	**P**	**11 18 37.0**	**-0.7**
	comp=Z,2μm,0.9s,mb6.8,SNR=65					
ARU	**Arti**	**40.08 322**	*d i*P	**P**	**11 18 37.3**	**-0.4**
ARU			*e*		11 20 07.9	
ARU			*e*		11 20 39.4	
ARU			S	**S**	**11 24 44.7**	**+1.3**
ARU			pmax	pmax		
	comp=Z,220nm,0.7s,mb6.0					
ARU			MLR	MLR		
	comp=Z,28μm,21.0s,MS6.1					
ARU	**Arti**	**40.08 322**	*e*P	**P**	**11 18 37.8**	**+0.1**
	comp=Z,279nm,1.0s,mb6.0					
ARU			LR	LR		
	comp=Z,29μm,21.0s,MS6.1					
SMDO	**Samad**	**41.13 270**	⇓P	**P**	**11 18 46.2**	**-0.7**
	SNR=16					
SMDO	**Samad**	**41.13 270**	⇓P	**P**	**11 18 46.2**	**-0.7**
	SNR=16					
XMIS	**Christmas Isla**	**41.52 177**	*e*P	**P**	**11 18 49.0**	**-1.0**
XMIS	**Christmas Isla**	**41.52 177**	*e*P	**P**	**11 18 48.7**	**-1.3**
	comp=Z,1μm,2.2s,mb6.1					
HOQ	**Hoqain**	**41.58 271**	⇓P	**P**	**11 18 51.4**	**+0.9**
	SNR=16					
HOQ	**Hoqain**	**41.58 271**	⇓P	**P**	**11 18 51.4**	**+0.9**
	SNR=16					
BANOM	**Banah**	**41.65 275**	⇑P	**P**	**11 18 52.5**	**+1.4**
	SNR=10					
BANOM	**Banah**	**41.65 275**	⇑P	**P**	**11 18 52.5**	**+1.4**
	SNR=10					
GUMO	**Guam**	**41.69 105**	P	**P**	**11 18 51.3**	**-0.2**
	comp=Z,63nm,0.8s,mb5.3,baz=346,slow=4.2,SNR=3.3					
GUMO			LR	LR	11 34 36.2	
	comp=Z,7μm,20.1s,MS5.5,baz=120,slow=34					
BSY	**Bisya**	**41.98 270**	⇑P	**P**	**11 18 55.0**	**+1.2**
	SNR=32					
BSY	**Bisya**	**41.98 270**	⇑P	**P**	**11 18 55.0**	**+1.2**
	SNR=32					
SOKR	**Solikamsk**	**42.06 326**	*c i*P	**P**	**11 18 54.7**	**+0.7**
SOKR					11 20 50.1	
SOKR			S	**S**	**11 25 11.3**	**-1.5**
SOKR			SS	SS	11 28 17.2	-2.6
SOKR			pmax	pmax		
	comp=Z,540nm,1.3s,mb6.0					
SOKR			MLR	MLR		
	comp=Z,13μm,18.0s,MS5.8					
HATD	**Hatta, Dubai**	**42.15 273**	⇓P	**P**	**11 18 56.9**	**+1.7**
	SNR=26					
HATD	**Hatta, Dubai**	**42.15 273**	⇓P	**P**	**11 18 56.9**	**+1.7**
	SNR=26

SNR=16
FAQ Al Faqa, Dubai 42.64 274 ⇓P **P 11 19 01.4 +2.2**
SNR=16
TIXI Tiksi 42.70 11*c iP* **P 11 18 57.8 -1.3**
TIXI *e* 11 20 37.7
TIXI *e*S **S 11 25 22.9 +0.9**
TIXI pmax pmax
comp=Z,180nm,1.5s,mb5.6
TIXI pmax pmax
comp=E,49nm,1.5s
TIXI pmax pmax
comp=N,72nm,0.9s
TIXI pmax pmax
comp=Z,485nm,11.9s
TIXI smax
comp=N,1μm,7.7s
TIXI smax
comp=E,2μm,11.2s
TIXI MLR MLR
comp=E,12μm,17.0s,MS6.1
TIXI MLR MLR
comp=Z,20μm,13.0s,MS6.2
TIXI MLR MLR
comp=N,17μm,17.0s,MS6.1
TIXI Tiksi 42.70 11 *eP* **P 11 18 58.0 -1.1**
comp=N,102nm,1.0s,mb5.5
TIXI LR LR
comp=Z,31μm,21.0s,MS6.2
COCO West Island 43.67 190 *eP* **P 11 19 06.9 -0.6**
COCO pmax pmax
comp=Z,284nm,1.1s,mb5.9
COCO MLR MLR
comp=Z,12μm,20.0s,MS5.8
COCO West Island 43.67 190 *eP* **P 11 19 06.8 -0.6**
comp=Z,284nm,1.1s,mb5.9
COCO LR LR
comp=Z,12μm,20.0s,MS5.8
SEY Seymchan 44.17 30⇑*iP* **P 11 19 10.8 -0.3**
PEA0B Petropavlovsk- 44.38 44 *eP* **P 11 19 12.1 -0.8**
PETK Petropavlovsk- 44.38 44 P **P 11 19 12.1 -0.7**
comp=Z,28nm,0.8s,mb5.0,baz=216,slow=4.5,SNR=24
PETK LR LR 11 38 14.2
comp=Z,10μm,18.2s,MS5.8,baz=260,slow=37
PET Petropavlovsk 44.94 44 *eP* **P 11 19 15.9 -1.4**
PET *e* 11 21 04.6
PET *e*PS 11 25 54.4
PET pmax pmax
comp=Z,66nm,1.6s,mb5.2
PET pmax pmax
comp=Z,62nm,1.8s,mb5.1
PET pmax pmax
comp=Z,2μm,6.7s
PET MLR MLR
comp=Z,16μm,19.0s,MS6.0
PET MLR MLR
comp=Z,16μm,15.0s
PET Petropavlovsk 44.94 44 *eP* **P 11 19 15.8 -1.6**
comp=Z,75nm,1.1s,mb5.4
PET LR LR
comp=Z,14μm,20.0s,MS5.9
MAK Makhachkala 45.50 301*c iP* **P 11 19 24.2 +2.3**
MAK *e* 11 21 07.4
MAK *e*S **S 11 26 05.7 +2.2**
MAK *e* 11 29 14.4
MAK *e*SSS 11 30 11.2
MAK pmax pmax
comp=Z,163nm,1.0s,mb5.8
MAK MLR MLR
comp=Z,19μm,15.0s,MS6.2
WHFO Wadi Hawf 46.88 266 ⇑P **P 11 19 32.1 -1.0**
SNR=8.7
WHFO Wadi Hawf 46.88 266 ⇑P **P 11 19 32.1 -1.0**
SNR=8.7
MTA Mtatsminda 47.63 300 P **P 11 19 37.6 -1.1**
MTA S **S 11 26 36.2 +2.2**
TBLG Delisi 47.66 300 *eP* **P 11 19 42.0 +3.1**
TBLG Delisi 47.66 300 P **P 11 19 42.0 +3.1**
UMR Umm Al-Rimmam 47.81 283 *eP* **P 11 19 40.1 -0.2**
UMR AMb AMB 11 19 44.7
comp=Z,262nm,1.0s,mb6.2
GNI Garni 47.88 298 *eP* **P 11 19 42.2 +1.6**
GNI Garni 47.88 298*d iP* **P 11 19 41.0 +0.4**
GNI pmax pmax
comp=Z,174nm,1.4s
GNI Garni 47.88 298 *eP* **P 11 19 41.6 +1.0**
comp=Z,124nm,1.0s,mb5.9
GNI LR LR
comp=Z,13μm,20.0s,MS5.9
GNI Garni 47.88 298 P **P 11 19 41.7 +1.1**
SNR=32
GNI P 11 19 41.7
SNR=32
GNI Garni 47.88 298 P **P 11 19 41.7 +1.1**
SNR=32
GNI P 11 19 41.7
SNR=32
MIB Mutribah 48.06 284 *eP* **P 11 19 41.9 -0.2**
MIB AMb AMB 11 19 46.5
comp=Z,478nm,1.3s,mb6.4
GOR Gori 48.10 300 P **P 11 19 43.4 +1.2**
RDF Al-Radifah 48.14 282 *eP* **P 11 19 43.3 +0.5**
RDF AMb AMB 11 19 47.8
comp=Z,406nm,1.4s,mb6.3
ZEI Tsey 48.16 301 *eP* **P 11 19 39.9 -2.8**
ZEI pmax pmax
comp=Z,77nm,1.0s,mb5.7
ZEI pmax pmax
comp=N,36nm,1.1s
ZEI pmax pmax
comp=E,75nm,1.0s
ONI Oni 48.50 301 P **P 11 19 45.2 -0.2**
ONI S **S 11 26 49.4 +3.0**
DGAR Diego Garcia 48.65 223 PFAKE 11 20 00.0 +13
DGAR LR LR
comp=Z,7μm,21.0s,MS5.6
CLDR Caldiran 48.67 297 *eP* **P 11 19 47.9 +1.1**
DYDN Diyadin 48.77 297⇓*iP* **P 11 19 48.6 +1.1**
KIV Kislovodsk 48.90 303 P **P 11 19 49.9 +1.5**
comp=Z,1μm,1.3s,mb6.8,SNR=28
KIV Kislovodsk 48.90 303 *eP* **P 11 19 47.0 -1.4**
KIV *e* 11 21 11.7
KIV *e* 11 21 43.3
KIV *e*S **S 11 26 52.7 +0.8**
KIV pmax pmax
comp=Z,241nm,1.1s,mb6.1
KIV pmax pmax
comp=Z,1μm,7.6s
KIV MLR MLR
comp=Z,15μm,17.0s,MS6.1
KIV Kislovodsk 48.90 303 *eP* **P 11 19 49.8 +1.4**
comp=Z,329nm,1.2s,mb6.2
KIV LR LR
comp=Z,20μm,20.0s,MS6.1
KIV Kislovodsk 48.90 303 P **P 11 19 49.3 +0.9**
SNR=70
KIV P 11 19 49.3
SNR=70
KIV Kislovodsk 48.90 303 P **P 11 19 49.3 +0.9**
SNR=70
KIV P 11 19 49.3
SNR=70
KARS Kars 49.06 299 *eP* **P 11 19 50.5 +0.8**
VRHR Novokhopersk 49.15 313 *eP* **P 11 19 49.5 -0.7**
VRHR *e* 11 21 45.4
VRHR *e*S **S 11 26 52.4 -2.9**
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.6
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,710nm,8.0s
VRHR pmax pmax
comp=N,930nm,15.2s
VRHR pmax pmax
comp=E,940nm,11.3s
VRHR smax
comp=N,940nm,4.6s
VRHR smax
comp=Z,310nm,8.3s
VRHR smax
comp=E,170nm,2.5s
VRHR MLR MLR
comp=Z,9μm,13.0s,MS6.0
VRHR MLR MLR
comp=N,13μm,17.0s,MS6.1
VRHR MLR MLR
comp=E,8μm,17.0s,MS6.1
VANB Van 49.17 296 *eP* **P 11 19 51.2 +0.7**
AGRB Hanur-Agry 49.30 297 *eP* **P 11 19 52.1 +0.5**
BHD Baghdad 49.56 289 *iP* **P 11 19 54.0 +0.4**
BHD *e*S **S 11 27 04.0 +2.5**
ARTV Artvin 49.83 300⇓*iP* **P 11 19 56.2 +0.6**
MSL Mosul 49.83 293 *eP* **P 11 19 57.0 +1.3**
MSL *e*S **S 11 27 09.0 +3.7**
DAGI Agillar 49.86 299⇓*iP* **P 11 19 56.5 +0.7**
DBOC Borcka 50.00 300⇓*iP* **P 11 19 57.3 +0.4**
DDEM Demirkent 50.01 299⇓*iP* **P 11 19 57.4 +0.5**
BCA Borcka 50.02 300 *eP* **P 11 19 56.5 -0.5**
DBAD Bademkaya 50.03 299⇓*iP* **P 11 19 57.9 +0.8**
HOMI Horasan 50.04 298⇓*iP* **P 11 19 58.4 +1.2**
EZM Erzurum 50.48 298 *eP* **P 11 20 06.3 +5.8**
VORD Divnogorie 50.63 312 *eP* **P 11 20 03.0 +1.6**
VORD *e* 11 21 58.8
VORD *e*S **S 11 27 13.2 -2.7**
VORD pmax pmax
comp=Z,90nm,1.1s,mb5.6
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,70nm,0.9s
VORD pmax pmax
comp=Z,680nm,9.7s
VORD pmax pmax
comp=N,150nm,10.9s
VORD pmax pmax
comp=E,330nm,7.6s
VORD smax
comp=N,870nm,4.4s
VORD smax
comp=Z,210nm,4.2s
VORD smax
comp=E,90nm,2.5s
VORD MLR MLR
comp=Z,13μm,16.0s,MS6.0
VORD MLR MLR
comp=N,7μm,19.0s,MS6.0
VORD MLR MLR
comp=E,9μm,15.0s,MS6.0
VOR Voronezh 50.65 313 *eP* **P 11 20 00.0 -1.6**
VOR pmax pmax
comp=Z,500nm,1.2s,mb6.3
VSR Storozhevoye 50.69 313 *eP* **P 11 20 01.2 -0.8**
VSR *e* 11 22 01.7
VSR *e*S **S 11 27 11.1 -5.7**
VSR pmax pmax
comp=Z,190nm,1.0s,mb6.0
VSR pmax pmax
comp=N,30nm,0.8s
VSR pmax pmax
comp=E,110nm,0.8s
VSR pmax pmax
comp=Z,580nm,7.8s
VSR pmax pmax
comp=N,230nm,13.9s
VSR pmax pmax
comp=E,320nm,8.7s
VSR smax
comp=N,1μm,5.1s
VSR smax
comp=Z,840nm,6.5s
VSR smax
comp=E,620nm,6.2s
VSR MLR MLR
comp=Z,15μm,15.0s,MS6.1
VSR MLR MLR
comp=N,6μm,14.0s,MS6.1
VSR MLR MLR
comp=E,11μm,16.0s,MS6.1
KLMR Klimovskoe 50.72 325⇑*iP* **P 11 20 03.1 +1.1**
KLMR *i* 11 21 59.4
KLMR pmax pmax
comp=Z,556nm,1.5s,mb6.3
SOC Sochi 51.08 303*c iP* **P 11 20 04.1 -0.9**
SOC *e* 11 20 11.9
SOC *e* 11 22 01.0
SOC *e*S **S 11 27 20.6 -1.8**
SOC *e**SS sS 11 27 25.5 -2.9
SOC *e*SSS 11 32 31.4
SOC pmax pmax
comp=Z,5μm,1.4s
SOC pmax pmax
comp=Z,26μm,5.7s
KOPT Kop Dagi 51.11 298⇓*iP* **P 11 20 06.1 +0.9**
BILL Bilibino 51.23 25*c iP* **P 11 20 04.9 -0.8**
BILL *e* 11 21 20.2
BILL *e*S **S 11 27 24.2 +0.4**
BILL pmax pmax
comp=Z,93nm,1.2s,mb5.6
BILL MLR MLR
comp=Z,30μm,18.0s,MS6.4
BILL Bilibino 51.23 25 *eP* **P 11 20 04.9 -0.8**
comp=Z,201nm,1.5s,mb5.8
BILL LR LR
comp=Z,25μm,19.0s,MS6.2
BINT Bingol 51.34 297 *eP* **P 11 20 10.0 +2.9**
KTUT Trabzon 51.48 300 *eP* **P 11 20 07.7 -0.3**
MOS Moscow 51.49 319 *eP* **P 11 20 05.8 -2.1**
MOS *e* 11 22 03.8
MOS *e*PPP 11 23 02.8
MOS *e*S **S 11 27 22.2 -5.5**
MOS pmax pmax
comp=Z,800nm,1.4s,mb6.5
MOS pmax pmax
comp=Z,692nm,1.4s,mb6.4
MOS smax
comp=N,2μm,4.9s
MOS MLR MLR
comp=E,37μm,17.0s
MOS MLR MLR
comp=Z,38μm,16.0s,MS6.5
KAKA Kakadu 51.72 143 *eP* **P 11 20 08.0 -2.0**
comp=Z,96nm,0.9s,mb5.7
KAKA Kakadu 51.72 143 *eP* **P 11 20 07.1 -2.9**
comp=Z,280nm,0.8s,mb6.2
GUMT Gumushane 51.79 299 *eP* **P 11 20 11.3 +0.9**
DIYA Diyarbakir 51.83 296⇓*iP* **P 11 20 11.0 +0.3**
EZC Erzincan 52.02 298 *eP* **P 11 20 13.3 +1.2**
OBN Obninsk 52.11 318 P **P 11 20 12.7 +0.2**
comp=Z,1μm,1.3s,mb6.7,SNR=6.6
OBN Obninsk 52.11 318*d iP* **P 11 20 11.3 -1.2**
OBN *e* 11 21 23.1
OBN *e*S **S 11 27 33.7 -2.5**
OBN *e*SS SS 11 31 13.0 0.0
OBN pmax pmax
comp=Z,290nm,1.2s,mb6.1
OBN MLR MLR
comp=Z,39μm,18.0s,MS6.5
OBN Obninsk 52.11 318 *eP* **P 11 20 11.9 -0.5**
OBN LR LR
comp=Z,46μm,19.0s,MS6.5
PTK Pertek 52.18 297 *eP* **P 11 20 13.3 +0.1**
ESPY Espiye-Giresun 52.26 300 *eP* **P 11 20 13.0 -0.9**
SVRC Sivrice-ELAZID 52.35 297 *eP* **P 11 20 14.5 -0.1**
ANN Anapa 52.52 305 *eP* **P 11 20 14.4 -1.3**
ANN *e**PP pP 11 20 24.1 +4.8
ANN *e* 11 21 21.9
ANN *e* 11 22 17.6
ANN *e*S **S 11 27 42.8 +0.7**
ANN *e*SSS 11 33 07.1
ANN pmax pmax
comp=Z,131nm,1.3s,mb5.7
ANN MLR MLR
comp=N,10μm,17.0s,MS6.0
ANN MLR MLR
comp=E,7μm,17.0s,MS6.0
ANN MLR MLR
comp=Z,13μm,17.0s,MS6.0
ELZG Elazig 52.57 297⇓*iP* **P 11 20 17.0 +0.8**
MYA Malatya 53.04 297 *eP* **P 11 20 20.7 +1.0**
MALT Malatya 53.04 297 *eP* **P 11 20 20.1 +0.4**
MALT Malatya 53.04 297 *eP* **P 11 20 20.3 +0.6**
MALT pmax pmax
comp=Z,56nm,1.2s,mb5.4
MALT MLR MLR
comp=Z,13μm,21.0s,MS6.0
MALT Malatya 53.04 297 *eP* **P 11 20 20.3 +0.6**
comp=Z,56nm,1.2s,mb5.4
MALT LR LR
comp=Z,13μm,21.0s,MS6.0
MALT Malatya 53.04 297⇓*iP* **P 11 20 21.0 +1.3**
ATAB Bozova 53.34 296⇓*iP* **P 11 20 21.8 -0.1**
DARE Darende-Malaty 53.37 298 *eP* **P 11 20 25.0 +2.9**
FITZ Fitzroy Crossi 53.42 154 *eP* **P 11 20 21.1 -1.4**
comp=Z,94nm,0.9s,mb5.7
FITZ *e*S **S 11 27 52.2 -2.6**
FITZ Fitzroy Crossi 53.42 154 P **P 11 20 21.4 -1.1**
comp=Z,56nm,0.9s,mb5.5,baz=347,slow=7.5,SNR=70
FITZ Fitzroy Crossi 53.42 154 *eP* **P 11 20 21.1 -1.4**
comp=Z,58nm,0.9s,mb5.5
AKCD Akcadag 53.43 297⇓*iP* **P 11 20 22.7 +0.1**
LVZ Lovozero 53.56 334 P **P 11 20 22.5 -0.5**
comp=Z,372nm,0.9s,mb6.3,SNR=9.6
LVZ Lovozero 53.56 334 *iP* **P 11 20 22.6 -0.4**
LVZ MLR MLR
comp=Z,24μm,25.0s,MS6.2
LVZ Lovozero 53.56 334 PFAKE 11 20 40.0 +17
LVZ LR LR
comp=Z,2μm,20.0s,MS5.2
SVSK Karacayir 53.76 299 *eP* **P 11 20 25.5 +0.6**
ERBA Erbaa 53.78 300⇓*iP* **P 11 20 24.7 -0.4**
APA Apatity 54.00 333⇑*eP* **P 11 20 26.0 -0.3**
APA MLR MLR
comp=Z,65μm,15.0s,MS6.8
TOKT Tokat 54.01 299 *eP* **P 11 20 27.6 +0.8**
KVT Kavak 54.21 301 *eP* **P 11 20 27.9 -0.3**
GAZ Gaziantep 54.25 296 *eP* **P 11 20 27.6 -1.0**
SARI SarD1z-Kayseri 54.27 297 *eP* **P 11 20 29.8 +1.1**
SMY Shemya 54.28 45 *eP* **P 11 20 28.8 +0.3**
SMY pmax pmax
comp=Z,220nm,0.9s,mb6.1
SMY Shemya 54.28 45 *eP* **P 11 20 30.7 +2.2**
comp=Z,330nm,1.2s,mb6.1
SMY LR LR
comp=Z,8μm,19.0s,MS5.8
MBWA Marble Bar 54.34 161 *eP* **P 11 20 28.4 -0.8**
MBWA Marble Bar 54.34 161 *eP* **P 11 20 28.3 -0.9**
comp=Z,94nm,0.9s,mb5.7
MBWA LR LR
comp=Z,8μm,21.0s,MS5.8
KMRS Kahramanmaras 54.41 296 *eP* **P 11 20 28.3 -1.4**
KUZU Kuzuini 54.46 295⇓*iP* **P 11 20 29.7 -0.4**
DIKM Dikmen 54.67 301 *eP* **P 11 20 30.6 -1.0**
JOF Joensuu 54.70 328 *eP* **P 11 20 30.4 -1.0**
JOF pmax pmax
comp=Z,90nm,0.9s,mb5.8
JOF Joensuu 54.70 328 *ep* **P 11 20 30.4 -1.0**
comp=Z,90nm,0.9s,mb5.8
SIM Simferopol' 54.81 306*ceP* **P 11 20 35.1 +2.6**
SIM *e*PPP 11 23 50.0
SIM *e*S **S 11 28 13.0 -0.2**
SIM *e*PS 11 28 34.0
SIM pmax pmax
comp=Z,78nm,1.0s,mb5.7
SIM MLR MLR
comp=Z,23μm,22.2s,MS6.2
YOZ Yozgat 55.08 299 *eP* **P 11 20 33.2 -1.4**
KOZT Kozan 55.24 296 *eP* **P 11 20 34.2 -1.5**
PUL Pulkovo 55.28 324⇑*iP* **P 11 20 37.0 +1.4**
PUL MLR MLR
comp=Z,17μm,17.0s,MS6.2
YAYL Yayladag 55.41 295⇓*iP* **P 11 20 35.9 -1.1**
CEYT Ceyhan 55.42 296 *eP* **P 11 20 35.8 -1.3**
CORM Corum 55.47 300 *eP* **P 11 20 36.6 -0.8**
BZK Bozkurt 55.52 302 *eP* **P 11 20 36.6 -1.1**
YURE YUREGIR 55.56 296⇓*iP* **P 11 20 38.4 +0.3**
CDAG Cicekdag 55.80 299⇓*iP* **P 11 20 38.7 -1.0**
KRTS Karatas 55.83 295 *eP* **P 11 20 40.7 +0.7**
KARA Karaisali 55.89 296 *eP* **P 11 20 39.9 -0.5**
ASF Jabal al Asfar 55.91 290 LR LR 11 49 29.2
comp=Z,7μm,18.1s,MS5.8,baz=116,slow=41
HWQ Hawqa 56.04 293 *eP* **P 11 20 41.2 -0.3**
GULE Gulek 56.10 296⇓*iP* **P 11 20 42.3 +0.4**
CANT Cankiri 56.11 300 *eP* **P 11 20 40.3 -1.7**
BR131 Keskin Array S 56.32 299 *eP* **P 11 20 43.0 -0.5**
BR131 LR LR
comp=Z,4μm,20.0s,MS5.5
BRTR Keskin Array B 56.32 299 P **P 11 20 42.5 -1.0**
comp=Z,23nm,0.9s,mb5.2,baz=112,slow=6.2,SNR=36
BRTR LR LR 11 50 12.5
comp=Z,5μm,19.5s,MS5.6,baz=57,slow=42
BRTR Keskin Array B 56.32 299*ceP* **P 11 20 43.2 -0.2**
BRTR pmax pmax
comp=Z,23nm,0.9s
BHL Bhannes 56.38 292 *eP* **P 11 20 43.6 -0.4**
MERS Mersin 56.41 296 *eP* **P 11 20 43.7 -0.4**
KEV Kevo 56.44 336 *eP* **P 11 20 43.1 -0.7**
KEV pmax pmax
comp=Z,123nm,1.1s,mb5.8
KEV MLR MLR
comp=Z,24μm,19.0s,MS6.3
KEV Kevo 56.44 336 *eP* **P 11 20 43.1 -0.7**
comp=Z,124nm,1.1s,mb5.8
KEV LR LR
comp=Z,24μm,19.0s,MS6.3
KEV Kevo 56.44 336 *ep* **P 11 20 42.5 -1.3**
comp=Z,76nm,0.8s,mb5.8
SAFT Safranbolu 56.64 301 *eP* **P 11 20 45.3 -0.4**
BBAL Bala 56.75 299⇓*iP* **P 11 20 46.0 -0.5**
SULT Sultanhani-AKS 56.81 298 *eP* **P 11 20 46.7 -0.3**
MMAI Mount Meron Ar 56.85 291 LR LR 11 48 09.4
comp=Z,9μm,18.8s,MS5.9,baz=60,slow=39
LOD Lodumlu 56.93 300 *eP* **P 11 20 49.3 +1.5**
ARCES ARCESS Array B 56.97 336 P **P 11 20 47.0 -0.5**
comp=Z,43nm,0.8s,mb5.5,baz=81,slow=7.5,SNR=34
ARCES LR LR 11 47 07.3
comp=Z,26μm,18.0s,MS6.4,baz=98,slow=38
ARE0 ARCESS Array S 56.97 336 *eP* **P 11 20 47.3 -0.3**
AKASG Malin Array Be 56.99 313 P **P 11 20 46.5 -1.6**
comp=Z,49nm,0.9s,mb5.5,baz=71,slow=6.3,SNR=52
AKASG LR LR 11 46 29.8
comp=Z,29μm,18.4s,MS6.4,baz=55,slow=37
AKASG Malin Array Be 56.99 313*ceP* **P 11 20 46.9 -1.2**
AKASG pmax pmax
comp=Z,49nm,0.9s
AKBB Malin Array Si 56.99 313 *eP* **P 11 20 47.1 -1.0**
KAF Kangasniemi 57.05 327 *eP* **P 11 20 45.0 -3.3**
KAF pmax pmax
comp=Z,61nm,0.8s,mb5.7
KAF Kangasniemi 57.05 327 *ep* **P 11 20 45.0 -3.3**
comp=Z,61nm,0.8s,mb5.7
EREN Erenkoy 57.06 294 *eP* **P 11 20 50.0 +1.2**
MICGM Minsk 57.17 318⇓*eP* **P 11 20 46.0 -3.2**
MNK Minsk 57.20 318⇓*eP* **P 11 20 46.0 -3.4**
MNK *e* 11 21 40.0
MNK *e* 11 22 52.0
MNK *e*S **S 11 28 40.0 -4.6**
MNK *e*PS 11 28 52.0
MNK *e*SS SS 11 32 30.0 -3.2
MNK pmax pmax
comp=Z,310nm,1.0s,mb6.3
MNK MLR MLR
comp=Z,139μm,16.0s,MS7.2
MNK MLR MLR
comp=N,21μm,16.0s,MS7.0
MNK MLR MLR
comp=E,91μm,16.0s,MS7.0
FINES FINESS Array B 57.23 326 P **P 11 20 48.9 -0.7**
comp=E,47nm,0.9s,mb5.5,baz=93,slow=7.6,SNR=39
FINES LR LR 11 46 36.9
comp=E,9μm,20.7s,MS5.9,baz=344,slow=37
IKL Isikli 57.23 295 *eP* **P 11 20 48.8 -1.2**
VSU Vasula 57.24 322*d iP* **P 11 20 49.3 -0.4**
VSU pmax pmax
comp=Z,249nm,1.2s,mb6.1
VSU MLR MLR
comp=Z,20μm,18.0s,MS6.3
KDZE Karadeniz Ereo 57.53 302 *eP* **P 11 20 51.5 -0.5**
WAKE Wake Island 57.56 86 PFAKE 11 21 00.0 +7.5
WAKE LR LR
comp=Z,6μm,20.0s,MS5.7
LFK Lefkose 57.63 294 *eP* **P 11 20 53.0 +0.2**
LADK Ladik-KONYA 57.68 298 *eP* **P 11 20 54.5 +1.4**
IDID Didziasalis 57.69 319 *eP* **P 11 20 53.0 +0.1**
NACGM Naroch 57.73 318 *eP* **P 11 20 51.0 -2.2**
KONT Konya--Tatoy 57.76 298 *eP* **P 11 20 54.2 +0.5**
KDHN Kadinhani 57.78 298⇓*iP* **P 11 20 53.1 -0.7**
KIZT Kizilcal 57.86 299 *eP* **P 11 20 54.1 -0.3**
CSS Prodhromos 57.89 294 *eP* **P 11 20 53.7 -1.0**
comp=Z,80nm,1.0s,mb5.7
CSS LR LR
comp=Z,7μm,20.0s,MS5.8
IZAR Zarasai 57.90 319 *eP* **P 11 20 54.4 +0.1**
MDU Mudurnu 57.92 301 *eP* **P 11 20 53.8 -1.0**

HDMB Hadim 57.95 297 *eP* **P 11 20 54.3 -0.7**
SVRH Sivrihisar-ESK 57.97 300 *eP* **P 11 20 53.8 -1.3**
ISAL Salakas 57.99 319 *eP* **P 11 20 54.9 -0.1**
KIS Kishinev 58.01 309 *eP* **P 11 20 55.0 -0.2**
comp=Z,300nm,1.0s,mb6.3
KIS Kishinev 58.01 309 *e*PP PP 11 23 04.0 +0.5
KIS *e*S **S 11 28 50.0 -5.5**
KIS Kishinev 58.01 309 *e*PS 11 29 02.0
KIS *e*SS SS 11 32 10.0 -36
KIS *e*SSS 11 35 12.0
KIS LRM 11 50 20.0
comp=Z,12µm,16.0s
KIS Kishinev 58.01 309 *eP* **P 11 20 55.0 -0.2**
KIS *e* pP 11 21 00.0 +1.1
KIS *e* 11 23 04.0
KIS *e*S **S 11 28 50.0 -5.5**
KIS *e*PS 11 29 02.0
KIS *e*SSS 11 35 12.0
KIS pmax pmax
comp=Z,30nm,1.0s,mb5.3
KIS MLR MLR
comp=Z,12µm,14.0s,MS6.2
KIS MLR MLR
comp=N,6µm,12.0s,MS6.1
KIS MLR MLR
comp=E,8µm,15.0s,MS6.1
KIS MLR MLR
comp=Z,12µm,16.0s
MSEY Mahe Island 58.14 241 PFAKE 11 21 10.0 +13
MSEY LR LR
comp=Z,7µm,19.0s,MS5.8
LEF Lefka 58.18 294 *eP* **P 11 20 56.0 -0.7**
GAZI Gazipasa 58.29 296⇓*iP* **P 11 20 55.6 -1.9**
EIL Elat 58.32 288 LR LR 11 49 53.5
comp=Z,11µm,19.0s,MS6.0,baz=74,slow=40
GULT Gulveren 58.45 301 *eP* **P 11 20 57.9 -0.5**
ESKT Eskisehir 58.45 300 *eP* **P 11 20 59.0 +0.6**
BOLV Bolvadin 58.60 299⇓*iP* **P 11 20 58.7 -0.9**
WRAB Tennant Creek 58.81 146 P **P 11 21 00.0 -1.1**
comp=Z,2µm,1.3s,mb7.0
WRAB Tennant Creek 58.81 146 *eP* **P 11 21 00.3 -0.8**
WRAB LR LR
comp=Z,4µm,21.0s,MS5.5
WRA Warramunga Arr 58.81 146 P **P 11 21 00.7 -0.4**
comp=Z,167nm,0.9s,mb6.1,baz=336,slow=7.6,SNR=228
WRA S **S 11 29 04.9 -1.5**
comp=Z,6.5nm,0.9s,baz=334,slow=14,SNR=11
WRA PKPPKP 11 50 38.6
comp=Z,1.8nm,1.0s,baz=162,slow=1.9,SNR=5.7
WRA PKP2bc 11 50 46.6
comp=Z,2.1nm,0.9s,baz=173,slow=1.8,SNR=5.2
WRA Warramunga Arr 58.81 146 P **P 11 21 00.7 -0.4**
WRA S **S 11 29 04.9 -1.5**
WRA Warramunga Arr 58.81 146 P **P 11 21 00.7 -0.4**
WRA S **S 11 29 04.9 -1.5**
WRA P'P' 11 50 38.6
WRA ⇑*e* 11 50 46.6
WB2 Warramunga Arr 58.82 146 *eP* **P 11 21 00.5 -0.7**
COEN Coen 58.83 134 *eP* **P 11 21 00.9 -0.4**
comp=Z,857nm,0.9s,mb6.8
COEN *e* 11 21 11.3
TIRR Tirgusor 58.89 306 *eP* **P 11 21 00.8 -0.7**
comp=Z,34nm,0.9s,mb5.4
TIRR Tirgusor 58.89 306⇑*iP* **P 11 21 01.0 -0.4**
SUTC Sutluce-Ispart 58.93 298 *eP* **P 11 21 02.8 +0.9**
SHUT Suhut-Afyon 58.95 299 *eP* **P 11 21 00.5 -1.4**
CAVI Cavuskoy 59.00 301 *eP* **P 11 21 03.2 +0.8**
ADVT Abdulvahap 59.02 301 *eP* **P 11 21 01.1 -1.3**
SPITS Spitsbergen Ar 59.11 346 P **P 11 21 02.1 -0.4**
comp=Z,16nm,0.7s,mb5.2,baz=106,slow=7.9,SNR=14
SPITS LR LR 11 49 11.4
comp=Z,23µm,21.3s,MS6.3,baz=80,slow=39
SPITS Spitsbergen Ar 59.11 346 P **P 11 21 02.1 -0.4**
SPITS LR LR 11 49 11.4
SPB4 Spitsbergen Ar 59.11 346 *eP* **P 11 21 02.2 -0.4**
ALT Altintas 59.13 300 *eP* **P 11 21 02.0 -1.2**
ISP Isparta 59.19 298 *eP* **P 11 21 03.2 -0.4**
ISP Isparta 59.19 298 *eP* **P 11 21 03.3 -0.3**
ISP MLR MLR
comp=Z,8µm,20.0s,MS5.8
ISP Isparta 59.19 298 *eP* **P 11 21 03.3 -0.3**
ISP LR LR
comp=Z,8µm,20.0s,MS5.8
BCK Bucak 59.24 298 *eP* **P 11 21 03.5 -0.5**
YLV Yalova 59.24 301 *eP* **P 11 21 03.8 -0.2**
PSN Preselentsi 59.25 305 P **P 11 21 04.3 +0.3**
KLYT Kilyos 59.29 302 *eP* **P 11 21 03.2 -1.2**
ISK Istanbul-Kandi 59.33 302 *eP* **P 11 21 05.4 +0.8**
HSP Hornsund 59.39 345 *eP* **P 11 21 05.5 +1.1**
GEMT Gemlik 59.42 301 *eP* **P 11 21 04.3 -0.9**
BGKT Bogazkoy 59.51 302 *eP* **P 11 21 03.5 -2.3**
VRI Vrincioaia 59.68 308⇑*iP* **P 11 21 07.4 +0.5**
CTKS Kestanelik-??a 59.69 302 *eP* **P 11 21 08.4 +1.4**
PLOR Plostina 59.74 308⇓*iP* **P 11 21 08.0 +0.7**
PLOR Plostina 59.74 308⇓*iP* **P 11 21 08.0 +0.7**
CTYL Yal??k??y-??at 59.77 303 *eP* **P 11 21 06.9 -0.7**
KHAL Karahalli 59.80 299⇓*iP* **P 11 21 06.5 -1.3**
SLVT Silivri 59.90 302 *eP* **P 11 21 06.9 -1.6**
KBS Kingsbay 59.91 347 *eP* **P 11 21 07.5 -0.5**
KBS Kingsbay 59.91 347 *eP* **P 11 21 06.7 -1.2**
KBS LR LR
comp=Z,18µm,21.0s,MS6.2
PRD Provadia 59.93 305 P **P 11 21 10.5 +1.9**
SUW Suwalki 59.97 318 *eP* **P 11 21 08.9 +0.2**
SUW *e* 11 21 10.0
SUW *e*S **S 11 29 24.2 +3.4**
SUW LMZ 11 47 48.8
comp=Z,42µm,18.5s
SUW Suwalki 59.97 318 *eP* **P 11 21 08.1 -0.7**
comp=Z,230nm,0.9s,mb6.2
ELL Elmali 59.98 297 *eP* **P 11 21 06.5 -2.6**
ADK Adak 60.00 45 PFAKE 11 21 20.0 +11
ADK LR LR
comp=Z,7µm,21.0s,MS5.8
GLHS Glhisar (BURDU 60.16 298 *eP* **P 11 21 11.4 +1.0**
DURS Dursunbey 60.19 301⇓*iP* **P 11 21 09.4 -1.0**
BURAR Bucovina Array 60.24 310 P **P 11 21 11.2 +0.5**
BURAR Bucovina Array 60.24 310⇑*iP* **P 11 21 08.8 -1.9**
BUR08 Bucovina Ar. S 60.24 310 *eP* **P 11 21 10.3 -0.4**
CRLT Corlu 60.27 302 *eP* **P 11 21 13.3 +2.2**
MLR Muntele Rosu 60.31 308 P **P 11 21 11.3 +0.1**
comp=Z,33nm,1.0s,mb5.3,baz=322,slow=14,SNR=15
MLR Muntele Rosu 60.31 308 P **P 11 21 11.7 +0.5**
MLR Muntele Rosu 60.31 308⇓*iP* **P 11 21 10.8 -0.4**
DNZL Cakiroluk 60.34 298⇓*iP* **P 11 21 09.9 -1.7**
AKAS Kas 60.38 297⇓*iP* **P 11 21 09.4 -2.4**
KULA Kula-Manisa 60.38 299 *eP* **P 11 21 11.8 0.0**
LVV L'vov 60.44 313 *eP* **P 11 21 11.9 -0.1**
LVV *e* 11 23 24.6
LVV *e*S **S 11 29 24.2 -2.7**
LVV *e*SS SS 11 33 23.4 -0.9
LVV MLR MLR
comp=N,6µm,17.0s,MS6.0
LVV MLR MLR
comp=E,8µm,17.0s,MS6.0
LVV MLR MLR
comp=Z,9µm,17.0s,MS6.0
TKR Tekirdag 60.46 302 *eP* **P 11 21 14.0 +1.7**
BALB Balikesir 60.61 301 *eP* **P 11 21 12.9 -0.5**
FETY Fethiye 60.65 297 *eP* **P 11 21 12.2 -1.5**
JMB Yambol 60.71 304 P **P 11 21 14.6 +0.6**
BALY Balya 60.77 301⇓*iP* **P 11 21 13.6 -0.9**
EDRB Edirne 60.78 304 *eP* **P 11 21 12.9 -1.6**
RKY Sarkoy-Tekirda 60.81 302 *eP* **P 11 21 14.0 -0.7**
AKHS Akhisar 60.89 300⇓*iP* **P 11 21 13.8 -1.6**
VOIR 60.93 308⇑*iP* **P 11 21 15.7 +0.2**
SZH Strazhica 60.94 305 P **P 11 21 14.4 -1.1**
MORW Morawa 61.12 168 *eP* **P 11 21 16.7 -0.1**
LPK Lapseki 61.21 302 *eP* **P 11 21 17.8 +0.3**
AYDN Tasoluk 61.23 299⇑*iP* **P 11 21 19.2 +1.6**
KWP Kalwaria Pacla 61.32 313 *eP* **P 11 21 18.4 +0.4**
KWP *e* pP 11 21 21.3 -0.4
KWP *e*S **S 11 29 39.0 +0.8**
KWP LMZ 11 47 16.2
comp=Z,16µm,25.8s
KWP Kalwaria Pacla 61.32 313 *eP* **P 11 21 18.4 +0.3**
comp=Z,311nm,1.1s,mb6.3
KWP LR LR
comp=Z,16µm,21.0s,MS6.2
KWP Kalwaria Pacla 61.32 313⇓*iP* **P 11 21 18.8 +0.8**
BMR Baia Mare 61.34 311 P **P 11 21 19.1 +0.9**
MLSB Milas 61.42 298 *eP* **P 11 21 19.6 +0.7**
LOF Lofoten 61.45 335 *eP* **P 11 21 19.7 +1.1**

ENEZ Enez 61.53 302 *eP* **P 11 21 17.8 -1.9**
MOR8 Moi Rana 61.54 332 *eP* **P 11 21 16.9 -2.3**
MOR8 AMB AMB 11 21 24.8
comp=Z,69nm,1.1s,mb5.7
BLCB Balcova 61.62 300 *eP* **P 11 21 18.9 -1.4**
WAR Warsaw 61.66 316 *eP* **P 11 21 21.8 +1.5**
WAR *e*S **S 11 29 49.4 +7.0**
WAR LMZ 11 48 53.7
comp=Z,44µm,19.5s
EZN Ezine 61.69 301 *eP* **P 11 21 19.6 -1.1**
DAT Datca 61.76 298 *eP* **P 11 21 20.4 -0.8**
KOLS Kolonicke sedl 61.78 312 *eP* **P 11 21 21.0 -0.2**
KOLS pmax pmax
comp=Z,33nm,1.2s,mb5.3
KOLS Kolonicke sedl 61.78 312 *eP* **P 11 21 21.0 -0.2**
comp=Z,33nm,1.2s,mb5.3
KOLS *e*PP pP 11 21 24.0 -0.9
KOLS Kolonicke sedl 61.78 312 *eP* **P 11 21 21.0 -0.2**
KOLS *e*pP pP 11 21 24.0 -0.9
KDZ Kurdzhali 61.78 304 P **P 11 21 20.7 -0.6**
ASAR Alice Springs 61.82 148 P **P 11 21 21.4 -0.2**
comp=Z,53nm,0.8s,mb5.7,baz=330,slow=6.2,SNR=234
ASAR S **S 11 29 45.6 +0.7**
comp=Z,3.4nm,1.1s,baz=324,slow=14,SNR=9.6
ASAR PKP2bc 11 50 41.5
comp=Z,1.4nm,0.8s,baz=133,slow=2.3,SNR=5.8
ASAR Alice Springs 61.82 148 P **P 11 21 21.4 -0.2**
ASAR S **S 11 29 45.6 +0.7**
ASAR Alice Springs 61.82 148 P **P 11 21 21.4 -0.2**
ASAR S **S 11 29 45.6 +0.7**
ASAR ⇑*e* 11 50 41.5
TRPA Tarpa 61.83 311⇓*iP* **P 11 21 23.0 +1.5**
UZH Uzhgorod 61.85 312 *eP* **P 11 21 22.0 +0.4**
UZH *e* 11 21 30.0
UZH *e* 11 22 04.0
UZH *e* 11 23 44.5
UZH *e*PPP 11 25 08.0
UZH *e*S **S 11 29 44.0 -1.0**
UZH *i* PS 11 30 00.0
UZH *e*SSS 11 36 31.0
UZH MLR MLR
comp=N,6µm,15.0s,MS6.2
UZH MLR MLR
comp=E,12µm,15.0s,MS6.2
UZH MLR MLR
comp=Z,7µm,15.0s,MS5.9
BOZC Bozcaada 61.89 302⇓*iP* **P 11 21 20.9 -1.1**
GADA Gvkgeada 61.89 302 *eP* **P 11 21 21.5 -0.5**
DRGR 62.10 310⇓*iP* **P 11 21 23.9 +0.5**
PLD Plovdiv 62.15 304 P **P 11 21 23.9 +0.1**
RZN Rozhen 62.27 304 P **P 11 21 24.8 +0.2**
STHS Stebnicka Huta 62.29 313 *eP* **P 11 21 25.0 +0.4**
STHS pmax pmax
comp=Z,31nm,1.0s,mb5.4
STHS Stebnicka Huta 62.29 313 *eP* **P 11 21 25.0 +0.4**
comp=Z,30nm,1.0s,mb5.4
STHS *e*PP pP 11 21 28.1 -0.2
STHS Stebnicka Huta 62.29 313 *eP* **P 11 21 25.0 +0.4**
STHS *e*pP pP 11 21 28.1 -0.2
PGB Panagyurishte 62.39 305 P **P 11 21 25.0 -0.4**
GZR Gura Zlata 62.47 308⇓*iP* **P 11 21 26.1 +0.2**
NIE Niedzica 62.88 313 *eP* **P 11 21 32.5 +4.0**
OJC Ojcow 62.96 314 *eP* **P 11 21 28.4 -0.6**
OJC *i* S **S 11 29 58.4 -0.4**
OJC L 11 49 46.0
comp=Z,41nm,19.4s
MMB Musomiste 63.00 304 P **P 11 21 31.0 +1.5**
KECS Kecovo 63.04 312 *eP* **P 11 21 30.0 +0.4**
KECS *e* pP 11 21 33.4 +0.1
KECS pmax pmax
comp=Z,18nm,1.1s,mb5.1
KECS Kecovo 63.04 312 *eP* **P 11 21 30.0 +0.4**
comp=Z,18nm,1.1s,mb5.1
KECS *e*PP pP 11 21 33.4 +0.1
KECS Kecovo 63.04 312 *eP* **P 11 21 30.0 +0.4**
KECS *e*pP pP 11 21 33.4 +0.1
VTS Vitosha 63.05 305 P **P 11 21 29.6 -0.2**
BZS Buzias 63.18 309 P **P 11 21 30.6 0.0**
KKB Krupnik 63.37 304 P **P 11 21 31.6 -0.3**
HFS Hagfors 63.43 326 P **P 11 21 31.1 -0.9**
comp=Z,55nm,1.0s,mb5.6,baz=95,slow=5.2,SNR=32
HFS LR LR 11 50 15.5
comp=Z,13µm,20.3s,MS6.1,baz=78,slow=37
GKP Gorka Klasztor 63.58 318 *eP* **P 11 21 34.1 +1.0**
GKP *e* pP 11 21 35.7 -1.1
GKP *e*S **S 11 30 10.2 +3.7**
GKP LMZ 11 50 12.8
comp=Z,55µm,18.5s
PSZ Piszkesteto 63.59 312 *eP* **P 11 21 33.8 +0.5**
PSZ pmax pmax
comp=Z,92nm,1.4s,mb5.6
PSZ MLR MLR
comp=Z,12µm,19.0s,MS6.1
PSZ Piszkesteto 63.59 312 *eP* **P 11 21 33.8 +0.5**
comp=Z,92nm,1.4s,mb5.6
PSZ LR LR
comp=Z,12µm,19.0s,MS6.1
PSZ Piszkesteto 63.59 312⇑*eP* **P 11 21 35.7 +2.4**
LIKS Likavka 63.74 313 *eP* **P 11 21 34.2 0.0**
LIKS *e* pP 11 21 37.9 -0.1
LIKS pmax pmax
comp=Z,46nm,1.1s,mb5.4
LIKS Likavka 63.74 313 *eP* **P 11 21 34.2 0.0**
comp=Z,46nm,1.1s,mb5.4
LIKS *e*PP pP 11 21 37.9 -0.1
LIKS Likavka 63.74 313 *eP* **P 11 21 34.2 0.0**
LIKS *e*pP pP 11 21 37.9 -0.1
VAY Valandovo 63.91 304 *eP* **P 11 21 33.9 -1.6**
RAC Raciborz 63.98 314 *eP* **P 11 21 36.3 +0.5**
RAC MLR MLR
comp=Z,27µm,17.0s,MS6.5
VYHS Vyhne 64.08 313 *eP* **P 11 21 37.0 +0.5**
VYHS pmax pmax
comp=Z,49nm,1.2s,mb5.4
VYHS Vyhne 64.08 313 *eP* **P 11 21 37.0 +0.5**
comp=Z,49nm,1.2s,mb5.4
VYHS *e*PP pP 11 21 39.8 -0.4
VYHS Vyhne 64.08 313 *eP* **P 11 21 37.0 +0.5**
VYHS *e*pP pP 11 21 39.8 -0.4
OKC Ostrava-Krasne 64.09 314 *eP* **P 11 21 36.1 -0.4**
OKC *e**PP pP 11 21 39.8 -0.4
OKC *e*S **S 11 30 12.6 -0.3**
OKC MLR MLR
comp=Z,28µm,16.5s,MS6.5
OKC Ostrava-Krasne 64.09 314 *eP* **P 11 21 36.1 -0.4**
OKC *e*pP pP 11 21 39.8 -0.4
OKC *e*S **S 11 30 12.6 -0.3**
OKC *e*SKS 11 31 34.8
OKC AMS AMS 11 50 30.0
comp=Z,28µm,16.5s
BUD Budapest 64.29 311⇑*eP* **P 11 21 40.2 +2.3**
BSD Bornholm Skovb 64.31 320⇑*iP* **P 11 21 39.5 +1.6**
BSD pmax pmax
comp=Z,48nm,0.9s,mb5.5
BSD Bornholm Skovb 64.31 320⇑*iP* **P 11 21 39.5 +1.6**
comp=Z,48nm,0.9s,mb5.5
NB2 NORSAR Subarra 64.33 327 P **P 11 21 36.2 -1.7**
comp=Z,78nm,1.0s,mb5.7,baz=72,slow=6.9
NB2 NORSAR Subarra 64.33 327 P **P 11 21 36.2 -1.7**
baz=72,slow=6.9
NB2 NORSAR Subarra 64.33 327 P **P 11 21 36.2 -1.7**
NB2 NORSAR Subarra 64.33 327 P **P 11 21 36.2 -1.7**
NOA NORSAR Array B 64.33 327 P **P 11 21 36.3 -1.6**
comp=Z,48nm,1.2s,mb5.4,baz=74,slow=6.4,SNR=30
NOA PP PP 11 24 01.2 +2.3
comp=Z,18nm,1.1s,baz=74,slow=8.5,SNR=4.5
NOA LR LR 11 51 57.8
comp=Z,11µm,18.4s,MS6.1,baz=75,slow=38
NOA NORSAR Array B 64.33 327 P **P 11 21 36.3 -1.6**
NOA 11 24 01.2
MORC Moravsky Berou 64.48 314 P **P 11 21 39.4 +0.3**
MORC Moravsky Berou 64.48 314⇓*iP* **P 11 21 39.7 +0.6**
SKO Skopje 64.49 305 *eP* **P 11 21 39.8 +0.5**
NAO01 NORSAR Array S 64.54 327 *eP* **P 11 21 38.3 -1.0**
comp=Z,46nm,1.1s,mb5.4
NAO01 *e*PP PP 11 24 03.2 +2.4
NAO01 LR LR
comp=Z,10µm,21.0s,MS6.0
KSP Ksiaz 64.89 316 *eP* **P 11 21 42.2 +0.5**
KSP *e*S **S 11 30 22.6 -0.3**
KSP LMZ 11 51 08.5
comp=Z,80µm,18.6s
KSP Ksiaz 64.89 316⇑*eP* **P 11 21 42.2 +0.5**

KSP *e*S **S 11 30 21.0 -1.8**
KSP *e*SSS 11 37 23.0
KSP MLR MLR
comp=Z,93µm,18.6s,MS7.0
OSL Oslo 64.91 326 *eP* **P 11 21 42.5 +0.8**
OSL AMB AMB 11 21 48.3
comp=Z,136nm,1.1s,mb5.9
PKSM Moragy 64.96 310⇑P **P 11 21 42.1 -0.1**
PKSM Moragy 64.96 310 P **P 11 21 42.3 0.0**
PKSM Moragy 64.96 310⇑*iP* **P 11 21 42.0 -0.2**
DPC Dobruska-Polom 65.04 315 *eP* **P 11 21 43.5 +0.8**
DPC *e*S S 11 30 25.6 +1.0
DPC MLR MLR
comp=Z,47µm,17.4s,MS6.7
DPC Dobruska-Polom 65.04 315 *eP* **P 11 21 43.5 +0.8**
DPC *e*pP pP 11 21 46.6 +0.2
DPC *e*S S 11 30 25.6 +1.0
DPC *e*SKS 11 31 40.4
DPC AMS AMS 11 51 00.0
comp=Z,47µm,17.4s
GVD Gavdhos 65.08 297 P **P 11 21 42.5 -0.8**
NWAO Narrogin (SRO) 65.10 167 P **P 11 21 43.0 -0.1**
comp=Z,83nm,0.8s,mb5.8,baz=344,slow=7.5,SNR=30
NWAO LR LR 11 52 23.9
comp=Z,40nm,19.4s,baz=347,slow=38
NWAO Narrogin (SRO) 65.10 167 *eP* **P 11 21 43.1 0.0**
NWAO LR LR
comp=Z,6µm,22.0s,MS5.8
VRAC Vranov 65.22 314 LR LR 11 51 35.9
comp=Z,28µm,18.9s,MS6.5,baz=319,slow=37
VRAC Vranov 65.22 314 P **P 11 21 44.8 +0.9**
VRAC Vranov 65.22 314⇑*iP* **P 11 21 45.3 +1.4**
OHR Ohrid 65.24 304 *eP* **P 11 21 42.6 -1.6**
IVA Berane 65.25 306⇑*iP* **P 11 21 44.9 +0.7**
IVA Berane 65.25 306⇑*iP* **P 11 21 45.0 +0.7**
ZST Bratislava 65.28 313 *eP* **P 11 21 45.4 +1.1**
ZST pmax pmax
comp=Z,19nm,0.9s,mb5.1
ZST Bratislava 65.28 313 *eP* **P 11 21 45.4 +1.1**
comp=Z,19nm,0.9s,mb5.1
ZST *e*PP pP 11 21 48.0 0.0
ZST Bratislava 65.28 313 *eP* **P 11 21 45.4 +1.1**
ZST *e*pP pP 11 21 48.0 0.0
PVY Plav 65.30 306⇑*iP* **P 11 21 46.4 +1.9**
PVY Plav 65.30 306⇑*iP* **P 11 21 46.4 +1.9**
UNV Unalaska Valle 65.36 41 *eP* **P 11 21 45.5 +0.8**
RGN Rugen 65.37 320 *eP* **P 11 21 44.5 -0.3**
comp=Z,146nm,1.1s,mb5.9
RGN Rugen 65.37 320 *eP* **P 11 21 45.9 +1.1**
comp=Z,130nm,1.1s,mb5.9
CTA Charters Tower 65.41 136 *eP* **P 11 21 44.7 -0.7**
comp=Z,38nm,0.9s,mb5.4
CTA *e*S S 11 30 31.7 +1.9
CTA Charters Tower 65.41 136 P **P 11 21 45.3 -0.1**
comp=Z,44nm,0.8s,mb5.5,baz=325,slow=8.4,SNR=38
CTA LR LR 11 49 28.1
comp=Z,4µm,21.4s,MS5.6,baz=320,slow=35
CTAO Charters Tower 65.41 136 *eP* **P 11 21 44.5 -0.9**
CTAO MLR MLR
comp=Z,4µm,20.0s,MS5.6
PLE Pljevlja 65.44 307⇑*iP* **P 11 21 46.2 +0.8**
PLE Pljevlja 65.44 307⇑*iP* **P 11 21 46.3 +0.8**
COP Copenhagen 65.47 322 *i* P **P 11 21 49.3 +3.9**
COP pmax pmax
comp=Z,36nm,0.8s,mb5.5
COP Copenhagen 65.47 322 *i* P **P 11 21 49.3 +3.9**
comp=Z,36nm,0.8s,mb5.5
KONO Kongsberg 65.54 326 *eP* **P 11 21 45.6 -0.2**
KONO pmax pmax
comp=Z,77nm,1.3s,mb5.6
KONO MLR MLR
comp=Z,11µm,22.0s,MS6.0
KONO Kongsberg 65.54 326 *eP* **P 11 21 45.6 -0.2**
comp=Z,77nm,1.3s,mb5.6
KONO LR LR
comp=Z,11µm,22.0s,MS6.0
TIR Tirane 65.81 305 *eP* **P 11 21 48.2 +0.3**
TIR pmax pmax
comp=Z,60nm,0.8s,mb5.7
TIR MLR MLR
comp=Z,7µm,22.0s,MS5.8
TIR Tirane 65.81 305 *eP* **P 11 21 48.2 +0.3**
comp=Z,60nm,0.8s,mb5.7
TIR LR LR
comp=Z,7µm,22.0s,MS5.8
UPM Unac-Piva 65.81 307⇑*iP* **P 11 21 47.6 -0.3**
UPM Unac-Piva 65.81 307⇑*iP* **P 11 21 47.6 -0.2**
RUE Ruedersdorf 65.82 318 *eP* **P 11 21 47.2 -0.5**
comp=Z,158nm,1.5s,mb5.8
RUE Ruedersdorf 65.82 318 *eP* **P 11 21 48.2 +0.5**
comp=Z,120nm,1.2s,mb5.8
TTG Podgorica 65.85 306⇑*iP* **P 11 21 47.8 -0.3**
NKY Niksic 65.89 307⇑*iP* **P 11 21 48.4 0.0**
NKY Niksic 65.89 307⇑*iP* **P 11 21 48.5 +0.1**
FORT Forrest 65.89 157 *eP* **P 11 21 48.0 -0.3**
comp=Z,94nm,0.8s,mb5.9
FORT Forrest 65.89 157 *eP* **P 11 21 48.3 -0.1**
comp=Z,503nm,1.4s,mb6.4
TREC Trest 65.90 314 *eP* **P 11 21 49.2 +0.9**
TREC MLR MLR
comp=Z,29µm,17.0s,MS6.6
TREC Trest 65.90 314 *eP* **P 11 21 49.2 +0.9**
TREC *e*pP pP 11 21 52.0 -0.1
TREC AMS AMS 11 51 30.0
comp=Z,29µm,17.0s
ULC Ulcinj 66.02 306⇑*iP* **P 11 21 49.1 -0.1**
ULC Ulcinj 66.02 306⇑*iP* **P 11 21 49.1 -0.1**
PVCC Panska Ves 66.03 316 *eP* **P 11 21 48.5 -0.6**
PVCC *e**PP pP 11 21 53.3 +0.5
PVCC *e*S S 11 30 34.7 -2.1
PVCC *e* 11 31 45.0
PVCC MLR MLR
comp=Z,39µm,17.8s,MS6.7
PVCC Panska Ves 66.03 316 *eP* **P 11 21 48.5 -0.6**
PVCC *e*pP pP 11 21 53.3 +0.5
PVCC *e*S S 11 30 34.7 -2.1
PVCC *e*SKS 11 31 45.0
PVCC AMS AMS 11 51 30.0
comp=Z,39µm,17.8s
BUM Brajici-Budva 66.15 306⇑*iP* **P 11 21 50.4 +0.4**
BUM Brajici-Budva 66.15 306⇑*iP* **P 11 21 50.5 +0.4**
CONA Conrad Observa 66.15 313 *i* P **P 11 21 50.3 +0.4**
comp=Z,77nm,1.1s,mb5.6,SNR=41
BRY Bratogost 66.17 307⇑*iP* **P 11 21 49.3 -0.9**
BRY Bratogost 66.17 307⇑*iP* **P 11 21 49.4 -0.8**
PRU Pruhonice 66.24 315 *eP* **P 11 21 51.3 +0.9**
PRU *e*S S 11 30 40.3 +1.0
PRU *e* 11 31 46.0
PRU MLR MLR
comp=Z,50µm,17.2s,MS6.8
PRU Pruhonice 66.24 315 *eP* **P 11 21 51.3 +0.9**
PRU *e*pP pP 11 21 54.4 +0.2
PRU *e*S S 11 30 40.3 +1.0
PRU *e*SKS 11 31 46.0
PRU AMS AMS 11 51 40.0
comp=Z,50µm,17.2s
ALE Alert 66.27 358 P **P 11 21 52.0 +1.8**
comp=Z,176nm,0.9s,mb6.1,SNR=19
PRA Prague 66.27 315⇑P **P 11 21 51.0 +0.3**
BRG Berggiesshubel 66.28 316 *eP* **P 11 21 50.1 -0.6**
comp=Z,72nm,1.2s,mb5.6
BRG Berggiesshubel 66.28 316 *eP* **P 11 21 50.5 -0.2**
comp=Z,23nm,0.9s,mb5.2
BRG *i* pP 11 21 54.0 -0.5
comp=Z,72nm,1.2s
BRG
comp=N,37µm,18.7s
BRG
comp=E,24µm,16.9s
BRG
comp=Z,17µm,18.7s
BRG Berggiesshubel 66.28 316 *eP* **P 11 21 50.5 -0.2**
BRG *i* pP 11 21 54.0 -0.5
BRG pmax pmax
comp=Z,14nm,1.0s,mb5.0
BRG MLR MLR
comp=N,22µm,18.7s,MS6.5
BRG MLR MLR
comp=E,14µm,16.9s,MS6.5
BRG MLR MLR
comp=Z,10µm,18.7s,MS6.1
HCY Herceg Novi 66.37 306 *eP* **P 11 21 52.8 +1.4**
HCY Herceg Novi 66.37 306 *eP* **P 11 21 52.9 +1.5**
ARSA Arzberg 66.61 312 *i* P **P 11 21 52.6 -0.3**
comp=Z,49nm,1.1s,mb5.5,SNR=31

DAG Danmarks Havn 66.62 348 *e*P **P 11 21 52.0 -0.5**
DAG MLR MLR
comp=Z,18µm,18.0s,MS6.3
DAG Danmarks Havn 66.62 348 *i* P **P 11 21 52.0 -0.5**
comp=Z,3.5nm,0.5s,mb4.7
DAG
comp=Z,18µm,18.0s
CLL Collm 66.68 317 *e*P **P 11 21 52.3 -1.0**
comp=Z,81nm,1.2s,mb5.6
CLL Collm 66.68 317 *e*P **P 11 21 53.0 -0.3**
CLL *e* 11 24 23.0
CLL *e*S S 11 30 44.0 -0.6
CLL MLR MLR
comp=Z,34µm,20.0s,MS6.5
CLL Collm 66.68 317 *e*P **P 11 21 53.0 -0.3**
comp=Z,23nm,1.1s,mb5.1
CLL *i* pP 11 21 56.1 -0.9
CLL *e*PP PP 11 24 23.0 +3.3
CLL *e*S S 11 30 44.0 -0.6
CLL LR LR
comp=Z,34µm,20.0s,MS6.5
CLL Collm 66.68 317 *e*P **P 11 21 53.0 -0.3**
comp=Z,23nm,1.1s,mb5.1
CLL ⇓*i*Pmax pP 11 21 56.1 -0.9
comp=Z,81nm,1.2s
CLL *i* 11 22 00.0
CLL *i* 11 23 02.2
comp=Z,53nm,1.5s
CLL *e*PP PP 11 24 23.0 +3.3
CLL *e* 11 24 36.0
CLL *e*S S 11 30 44.0 -0.6
CLL *e*SS SS 11 35 18.0 +16
CLL *e*SSS 11 38 16.0
CLL Lm 11 53 00.0
comp=N,22µm,18.7s
CLL Lm 11 53 00.0
comp=E,22µm,19.1s
CLL Lm 11 53 00.0
comp=Z,34µm,20.0s
STON Ston 66.76 307 P **P 11 21 52.0 -2.0**
STON Ston 66.76 307 *i* P **P 11 21 52.0 -2.0**
MUD Monsted U'grnd 66.90 323 *i* P **P 11 21 55.2 +0.6**
MUD pmax pmax
comp=Z,57nm,1.0s,mb5.6
MUD Monsted U'grnd 66.90 323 *i* P **P 11 21 55.2 +0.6**
comp=Z,57nm,1.0s,mb5.5
SOKA Soboth 67.13 312⇑*i*P **P 11 21 56.1 0.0**
comp=Z,85nm,1.0s,mb5.7
KHC Kasperske Hory 67.13 315 *e*P **P 11 21 56.8 +0.6**
KHC *e*S S 11 30 52.3 +2.1
KHC MLR MLR
comp=Z,41µm,18.1s,MS6.7
KHC Kasperske Hory 67.13 315 *e*P **P 11 21 56.7 +0.6**
comp=Z,44nm,1.3s,mb5.3
KHC Kasperske Hory 67.13 315 *e*P **P 11 21 56.8 +0.6**
KHC *e*pP pP 11 21 59.5 -0.4
KHC *e*S S 11 30 52.3 +2.1
KHC *e*SKS 11 31 56.5
KHC AMS AMS 11 52 20.0
comp=Z,41µm,18.1s
TTA Tatalina 67.15 29 *e*P **P 11 21 57.5 +1.5**
TTA Tatalina 67.15 29 *e*P **P 11 21 57.4 +1.4**
GEC2 GERESS Array S 67.16 314 *e*P **P 11 21 56.0 -0.4**
comp=Z,68nm,1.1s,mb5.6
GEC2 GERESS Array S 67.16 314 *e*P **P 11 21 56.0 -0.4**
GEC2 pmax pmax
comp=Z,68nm,1.1s,mb5.6
GEC2 GERESS Array S 67.16 314 *e*P **P 11 21 56.0 -0.4**
comp=Z,68nm,1.1s,mb5.6
GERES GERESS Array B 67.16 314 P **P 11 21 56.0 -0.4**
comp=Z,32nm,1.0s,mb5.3,baz=56,slow=5.2,SNR=29
GERES LR LR 11 52 45.8
comp=Z,29µm,19.6s,MS6.5,baz=61,slow=37
MOA Molln 67.18 313⇑*i*P **P 11 21 56.6 +0.1**
comp=Z,58nm,1.1s,mb5.5,SNR=27
ZAVS Zavodnje 67.22 311 *e*P **P 11 21 56.7 -0.1**
BSEG Bad Segeberg 67.24 320 *e*P **P 11 21 56.7 -0.1**
comp=Z,132nm,1.2s,mb5.8
BSEG Bad Segeberg 67.24 320 *e*P **P 11 21 56.7 -0.1**
BSEG Bad Segeberg 67.24 320 *e*P **P 11 21 56.7 -0.1**
MIDW Midway 67.24 70 PFAKE 11 22 10.0 +13
MIDW LR LR
comp=Z,4µm,21.0s,MS5.6
TANN Tannenbergstha 67.33 316 *e*P **P 11 21 56.9 -0.5**
comp=Z,63nm,1.2s,mb5.5
NKC Novy Kostel 67.40 316 *e*P **P 11 21 57.9 0.0**
NKC *e*PP pP 11 22 01.3 -0.3
NKC *e*S S 11 30 53.9 +0.5
NKC *e* 11 31 56.8
NKC MLR MLR
comp=Z,36µm,16.6s,MS6.7
NKC Novy Kostel 67.40 316 *e*P **P 11 21 57.9 0.0**
NKC *e*pP pP 11 22 01.3 -0.3
NKC *e*S S 11 30 53.9 +0.5
NKC *e*SKS 11 31 56.8
NKC AMS AMS 11 52 40.0
comp=Z,36µm,16.6s
WERD Werda 67.41 316 *e*P **P 11 21 57.3 -0.6**
comp=Z,58nm,1.1s,mb5.5
BOJS Bojanci 67.42 310 *e*P **P 11 22 00.6 +2.5**
GUNZ Gunzen 67.42 316 *e*P **P 11 21 57.5 -0.5**
comp=Z,85nm,1.1s,mb5.7
WERN Wernitzgruen 67.43 316 *e*P **P 11 21 57.6 -0.4**
comp=Z,77nm,1.1s,mb5.7
OBKA Obir 67.50 312⇑*i*P **P 11 21 58.3 -0.3**
comp=Z,43nm,1.1s,mb5.4,SNR=14
COLD Coldfoot 67.51 24 *e*P **P 11 21 58.0 -0.3**
comp=Z,246nm,0.8s,mb6.3
WET Wettzell 67.55 315 *e*P **P 11 21 58.6 -0.2**
comp=Z,74nm,1.3s,mb5.6
WET Wettzell 67.55 315 *e*P **P 11 21 58.6 -0.2**
WET pmax pmax
comp=Z,74nm,1.3s,mb5.6
WET Wettzell 67.55 315 *e*P **P 11 21 58.6 -0.2**
comp=Z,74nm,1.3s,mb5.6
JMIC Jan Mayen 67.56 341 P **P 11 21 58.7 +0.2**
comp=Z,39nm,0.9s,mb5.4,baz=149,slow=7.9,SNR=4.1
JMIC LR LR 11 54 32.0
comp=Z,8µm,21.1s,MS5.9,baz=51,slow=39
JMIC Jan Mayen 67.56 341 P **P 11 21 58.7 +0.2**
JMIC LR LR 11 54 31.9
LJU Ljubljana 67.69 311 *e*P **P 11 22 02.0 +2.3**
ROTZ Rotzenmuhle 67.72 316 *e*P **P 11 21 59.9 0.0**
comp=Z,112nm,1.2s,mb5.8
MOX Moxa 67.74 317 *e*P **P 11 21 59.6 -0.4**
comp=Z,74nm,1.6s,mb5.5
MOX Moxa 67.74 317 *e*P **P 11 21 59.4 -0.6**
comp=Z,60nm,1.3s,mb5.5
CEY Cerknica 67.87 311 *i* P **P 11 22 03.1 +2.2**
NRDL Niedersach Rie 67.90 319 *e*P **P 11 22 00.9 -0.1**
comp=Z,135nm,1.2s,mb5.8
CLZ Clausthal 68.00 318 *e*P **P 11 22 01.4 -0.2**
comp=Z,124nm,1.3s,mb5.8
CLZ Clausthal 68.00 318 *e*P **P 11 22 01.4 -0.2**
CLZ pmax pmax
comp=Z,124nm,1.3s,mb5.8
CLZ Clausthal 68.00 318 *e*P **P 11 22 01.4 -0.2**
comp=Z,124nm,1.3s,mb5.8
NVLJ Novalja 68.03 310 P **P 11 22 00.2 -1.7**
NVLJ Novalja 68.03 310 *i* P **P 11 22 00.2 -1.7**
JAVS Javornik 68.04 311 *i* P **P 11 22 03.7 +1.7**
KBA Koelnbreinsper 68.05 313⇑*i*P **P 11 22 03.4 +1.4**
comp=Z,76nm,1.4s,mb5.5,SNR=23
SVW2 Sparrevohn 68.09 31 *e*P **P 11 22 04.1 +2.1**
VOJS Vojsko 68.11 311 *e*P **P 11 21 01.8 -0.6**
RJOB Jochberg 68.14 313 *e*P **P 11 22 02.5 -0.1**
comp=Z,901nm,3.2s
CHUM Lake Minchumin 68.24 28 *e*P **P 11 22 03.0 +0.1**
comp=Z,67nm,0.9s,mb5.7
TRI Trieste 68.31 311 *e*P **P 11 22 03.9 +0.2**
TRI pmax pmax
comp=Z,95nm,1.1s,mb5.7
TRI MLR MLR
comp=Z,7µm,21.0s,MS5.9
TRI Trieste 68.31 311 *e*P **P 11 22 03.9 +0.3**
comp=Z,95nm,1.1s,mb5.7
TRI LR LR
comp=Z,7µm,21.0s,MS5.9
GRA1 Grafenberg Arr 68.34 316 *e*P **P 11 22 03.7 -0.1**
comp=Z,152nm,1.4s,mb5.8
GRA1 LR LR
comp=Z,45µm,18.4s,MS6.7
GRF Grafenberg Arr 68.34 316 *e*P **P 11 22 03.7 -0.1**
comp=Z,152nm,1.4s,mb5.8
GRF *e*L 11 53 28.8
comp=Z,45µm,18.4s
GRF Grafenberg Arr 68.34 316 *e*P **P 11 22 03.7 -0.1**
GRF pmax pmax
comp=Z,152nm,1.4s,mb5.8
GRF MLR MLR
comp=Z,45µm,18.4s,MS6.7
GRF Grafenberg Arr 68.34 316 *e*P **P 11 22 03.7 -0.1**
GRF pmax pmax
comp=Z,152nm,1.4s,mb5.8
GRF MLR MLR
comp=Z,45µm,18.4s,MS6.7
GRF Grafenberg Arr 68.34 316 *e*P **P 11 22 03.7 -0.1**
comp=Z,152nm,1.4s,mb5.8
GRF LR LR
comp=Z,45µm,18.4s,MS6.7
HLG Helgoland 68.46 321 *e*P **P 11 22 04.1 -0.4**
comp=Z,94nm,1.1s,mb5.7
UBBA Unterbreizbach 68.62 317 *e*P **P 11 22 04.8 -0.7**
comp=Z,78nm,1.7s,mb5.4
BPAW Bear Paw Mtn. 68.67 27 *e*P **P 11 22 05.2 -0.4**
comp=Z,144nm,1.1s,mb5.8
PPLA Purkeypile 68.74 28 *e*P **P 11 22 06.1 +0.1**
comp=Z,12nm,0.4s,mb5.2
CHGN Chignik 68.76 36 *e*P **P 11 22 08.7 +2.4**
TIP Timpagrande 68.83 304 *e*P **P 11 22 06.4 -0.7**
comp=Z,102nm,1.2s,mb5.6
TIP LR LR
comp=Z,4µm,21.0s,MS5.7
FUR Furstenfeldbru 68.91 314 *e*P **P 11 22 07.3 -0.1**
comp=Z,256nm,1.2s,mb6.0
FUR Furstenfeldbru 68.91 314 *e*P **P 11 22 07.3 -0.1**
FUR pmax pmax
comp=Z,256nm,1.2s,mb6.0
FUR Furstenfeldbru 68.91 314 *e*P **P 11 22 07.3 -0.1**
comp=Z,256nm,1.2s,mb6.0
KTH Kantishna Hill 68.95 28 *e*P **P 11 22 07.0 -0.3**
comp=Z,268nm,1.5s,mb6.0
WTTA Wattenberg 69.05 313 *i* P **P 11 22 08.0 -0.3**
comp=Z,80nm,1.2s,mb5.5,SNR=29
WATA Walderalm 69.06 313⇑*i*P **P 11 22 07.8 -0.5**
comp=Z,32nm,0.8s,mb5.3,SNR=13
TRF Thorofare Moun 69.25 28 *e*P **P 11 22 11.0 +1.9**
comp=Z,4µm,1.2s
TRF *e*PcP PcP 11 22 34.6 +1.7
IBBN Ibbenburen 69.30 319 *e*P **P 11 22 09.2 -0.5**
comp=Z,67nm,1.1s,mb5.5
MOTA Moosalm 69.35 313⇑*i*P **P 11 22 09.6 -0.5**
comp=Z,59nm,1.1s,mb5.4,SNR=29
RER Riviere de l'E 69.45 228 PFAKE 11 22 20.0 +9.0
RER LR LR
comp=Z,4µm,21.0s,MS5.6
COLA College 69.48 26 *e*P **P 11 22 10.0 -0.6**
COLA pmax pmax
comp=Z,182nm,0.9s,mb6.0
COLA MLR MLR
comp=Z,11µm,21.0s,MS6.1
COLA College 69.48 26 *e*P **P 11 22 10.0 -0.6**
comp=Z,182nm,0.9s,mb6.0
COLA LR LR
comp=Z,11µm,21.0s,MS6.1
RETA Reutte 69.50 314 *i* P **P 11 22 10.7 -0.3**
comp=Z,30nm,0.9s,mb5.2,SNR=14
RSO Redoubt South 69.62 31 *e*P **P 11 22 14.0 +2.5**
MCK McKinley 69.64 27 *e*P **P 11 22 11.4 -0.2**
WIT Witteveen 69.69 320 *e*P **P 11 22 13.9 +1.8**
comp=Z,366nm,1.0s,mb6.3
FETA Feichten 69.71 313 *i* P **P 11 22 12.1 -0.2**
comp=Z,84nm,1.1s,mb5.6,SNR=43
TNS Taunus Mts 69.77 317 *e*P **P 11 22 12.1 -0.5**
comp=Z,64nm,0.9s,mb5.5
TNS Taunus Mts 69.77 317 *e*P **P 11 22 12.1 -0.5**
TNS pmax pmax
comp=Z,64nm,0.9s,mb5.5
TNS Taunus Mts 69.77 317 *e*P **P 11 22 12.1 -0.5**
comp=Z,64nm,0.9s,mb5.5
TOD Tromm 69.81 316 *e*P **P 11 22 12.8 -0.1**
CEL Celeste 69.83 303 *e*P **P 11 22 13.3 +0.1**
comp=Z,240nm,1.0s,mb6.1
CEL LR LR
comp=Z,5µm,20.0s,MS5.8
AQU L'Aquila 69.89 308 *e*P **P 11 22 13.4 -0.2**
comp=Z,110nm,1.1s,mb5.7
AQU LR LR
comp=Z,9µm,19.0s,MS6.0
AQU L'Aquila 69.89 308⇓*i*P **P 11 22 15.8 +2.3**
STU Stuttgart 69.93 315 *e*P **P 11 22 13.0 -0.7**
comp=Z,73nm,1.0s,mb5.6
STU Stuttgart 69.93 315 *e*P **P 11 22 12.9 -0.8**
STU pmax pmax
comp=Z,66nm,1.0s,mb5.5
STU Stuttgart 69.93 315 *e*P **P 11 22 12.9 -0.8**
comp=Z,66nm,1.0s,mb5.5
BUG Bochum--Univer 69.93 319 *e*P **P 11 22 13.2 -0.4**
comp=Z,75nm,1.2s,mb5.5
WTSB Winterswijk 69.98 319 *e*P **P 11 22 13.9 +0.1**
comp=Z,87nm,1.6s,mb5.4
DAVA Damuels 70.13 314⇑*i*P **P 11 22 14.5 -0.4**
comp=Z,37nm,1.1s,mb5.2,SNR=9.9
DAVOX Davos/Dischmat 70.34 313 LR LR 11 54 54.1
comp=Z,28µm,18.7s,MS6.5,baz=51,slow=37
WAL1 Walls 70.43 329 *e*P **P 11 22 16.5 0.0**
SPAK Spaichingen-Ko 70.46 315 *e*P **P 11 22 16.9 0.0**
KMBO Kilima Mbogo 70.54 256 P **P 11 22 16.8 -1.2**
comp=Z,2.8nm,0.5s,mb4.5,baz=46,slow=9.2,SNR=7.0
KMBO LR LR 11 55 40.4
comp=Z,4µm,20.4s,MS5.7,baz=275,slow=38
KMBO Kilima Mbogo 70.54 256 P **P 11 22 18.2 +0.3**
SNR=17
KMBO P 11 22 18.2
SNR=17
KMBO Kilima Mbogo 70.54 256 P **P 11 22 18.2 +0.3**
SNR=17
KMBO P 11 22 18.2
SNR=17
PMR Palmer 70.62 29 *e*P **P 11 22 17.0 -0.7**
PMR Palmer 70.62 29 *e*P **P 11 22 16.8 -0.9**
comp=Z,166nm,1.0s,mb5.9
BFO Black Forest 70.64 315 P **P 11 22 17.5 -0.5**
comp=Z,231nm,1.1s,mb6.0,SNR=10
BFO Black Forest 70.64 315 *e*P **P 11 22 17.2 -0.8**
comp=Z,81nm,1.2s,mb5.5
BFO Black Forest 70.64 315 P **P 11 22 17.7 -0.3**
BFO pmax pmax
comp=Z,59nm,1.1s,mb5.4
BFO Black Forest 70.64 315 *e*P **P 11 22 17.2 -0.8**
comp=Z,81nm,1.2s,mb5.5
BFO LR LR
comp=Z,35µm,19.0s,MS6.6
LANF Langenberg 70.67 316 *e*P **P 11 22 18.0 -0.2**
OHAK Old Harbor 70.88 34 *e*P **P 11 22 18.6 -0.7**
comp=Z,146nm,1.0s,mb5.9
OHAK LR LR
comp=Z,16µm,18.0s,MS6.3
KDAK Kodiak Island 70.95 33 P **P 11 22 19.0 -0.7**
comp=Z,858nm,0.7s,mb6.8,SNR=7.1
KDAK Kodiak Island 70.95 33 P **P 11 22 18.6 -1.2**
comp=Z,48nm,0.9s,mb5.5,baz=344,slow=6.4,SNR=15
KDAK LR LR 11 56 07.8
comp=Z,11µm,18.3s,MS6.1,baz=226,slow=38
KDAK Kodiak Island 70.95 33 *e*P **P 11 22 19.1 -0.6**
KDAK pmax pmax
comp=Z,108nm,0.8s,mb5.8
KDAK MLR MLR
comp=Z,10µm,21.0s,MS6.0
KDAK Kodiak Island 70.95 33 *e*P **P 11 22 19.1 -0.7**
comp=Z,108nm,0.8s,mb5.8
KDAK LR LR
comp=Z,10µm,21.0s,MS6.0
HGN Heimansgroeve 70.99 318 *e*P **P 11 22 20.2 +0.1**
comp=Z,42nm,1.3s,mb5.2
MEM Membach 71.01 318 P **P 11 22 20.1 -0.1**
comp=Z,25nm,1.5s,mb4.9
FELD Feldberg im Sc 71.03 315 *e*P **P 11 22 20.2 -0.2**
BEBN Eben Emael 71.12 318 P **P 11 22 21.3 +0.4**
VLC Villacollemand 71.13 311 *e*P **P 11 22 22.5 +1.4**
comp=Z,81nm,1.2s,mb5.5
VLC LR LR
comp=Z,10µm,19.0s,MS6.1
VAE Valguarnera 71.22 303 P **P 11 22 25.6 +3.8**
comp=Z,43nm,0.9s,mb5.4,baz=27,slow=8.3,SNR=4.9
VAE LR LR 11 54 25.3
comp=Z,4µm,19.1s,MS5.7,baz=38,slow=37
VAE Valguarnera 71.22 303 P **P 11 22 25.6 +3.8**
VAE LR LR 11 54 25.4
CDF Champ du Feu 71.23 316 *e*P **P 11 22 20.6 -1.0**
comp=Z,139nm,1.2s,mb5.5
CDF Champ du Feu 71.23 316 *e*P **P 11 22 20.6 -1.0**
CDF pmax pmax
comp=Z,69nm,1.2s,mb5.5
CDF Champ du Feu 71.23 316 *e*P **P 11 22 20.6 -1.0**
comp=Z,69nm,1.2s,mb5.5
WLF Walferdange 71.35 317 P **P 11 22 22.9 +0.7**
comp=Z,108nm,1.4s,mb5.6
WLF Walferdange 71.35 317 *e*P **P 11 22 22.3 0.0**
comp=Z,170nm,1.1s,mb5.9
WLF Walferdange 71.35 317 *e*P **P 11 22 22.7 +0.4**
WLF pmax pmax
comp=Z,154nm,1.1s,mb5.8
WLF MLR MLR
comp=Z,18µm,21.0s,MS6.3
WLF Walferdange 71.35 317 *e*P **P 11 22 22.7 +0.4**
comp=Z,154nm,1.1s,mb5.8
WLF LR LR
comp=Z,18µm,21.0s,MS6.3
PAX Paxson 71.37 27 *e*P **P 11 22 23.4 +1.2**
PAX pmax pmax
comp=Z,32nm,1.0s,mb5.2
PAX Paxson 71.37 27 *e*P **P 11 22 23.4 +1.2**
comp=Z,32nm,1.0s,mb5.2
ECH Echery 71.39 315 *e*P **P 11 22 22.4 -0.2**
ECH Echery 71.39 315 *e*P **P 11 22 22.3 -0.3**
ECH pmax pmax
comp=Z,36nm,1.0s,mb5.3
ECH MLR MLR
comp=Z,25µm,20.0s,MS6.5
ECH Echery 71.39 315 *e*P **P 11 22 22.3 -0.3**
comp=Z,36nm,1.0s,mb5.2
ECH LR LR
comp=Z,25µm,20.0s,MS6.5
SCO Scoresbysund 71.42 343 *e*P **P 11 22 23.4 +1.0**
SCO pmax pmax
comp=Z,12nm,0.8s,mb4.9
SCO Scoresbysund 71.42 343 *i* P **P 11 22 23.4 +1.0**
comp=Z,12nm,0.8s,mb4.9
BCLA Clavier 71.50 318 P **P 11 22 23.0 -0.2**
comp=Z,36nm,1.5s,mb5.1
BBS Basel-Blauen 71.51 315 *e*P **P 11 22 22.8 -0.5**
MOF Molkenrain 71.57 315 *e*P **P 11 22 23.4 -0.3**
TARA Tarawa 71.65 100 PFAKE 11 22 40.0 +15
TARA LR LR
comp=Z,3µm,20.0s,MS5.6
HINF Hinteralfeld 71.75 315 *e*P **P 11 22 23.5 -1.3**
comp=Z,88nm,1.1s,mb5.3
HINF Hinteralfeld 71.75 315 *e*P **P 11 22 23.5 -1.3**
HINF pmax pmax
comp=Z,44nm,1.0s,mb5.3
HINF Hinteralfeld 71.75 315 *e*P **P 11 22 23.5 -1.3**
comp=Z,44nm,1.0s,mb5.3
WDD Wield Dalam 71.83 301 PFAKE 11 22 40.0 +15
WDD LR LR
comp=Z,3µm,22.0s,MS5.5
UCC Uccle 71.86 319 P **P 11 22 25.1 -0.3**
GIVF Givet 71.92 318 *e*P **P 11 22 24.9 -0.8**
comp=Z,68nm,0.9s,mb5.3
GIVF Givet 71.92 318 *e*P **P 11 22 24.9 -0.8**
GIVF pmax pmax
comp=Z,34nm,0.9s,mb5.3
GIVF Givet 71.92 318 *e*P **P 11 22 24.9 -0.8**
comp=Z,34nm,0.9s,mb5.3
EGAK Eagle 71.95 24 *e*P **P 11 22 26.4 +0.7**
comp=Z,33nm,0.9s,mb5.3
EGAK LR LR
comp=Z,17µm,19.0s,MS6.3
HAU Haudompre 71.97 316 *e*P **P 11 22 24.8 -1.3**
comp=Z,119nm,1.4s,mb5.3
HAU *e*MLR MLR
comp=Z,36µm,19.0s,MS6.4
HAU Haudompre 71.97 316 *e*P **P 11 22 24.8 -1.3**
HAU pmax pmax
comp=Z,59nm,1.4s,mb5.3
HAU MLR MLR
comp=Z,36µm,19.0s,MS6.7
HAU Haudompre 71.97 316 *e*P **P 11 22 24.8 -1.3**
comp=Z,59nm,1.4s,mb5.3
HAU LR LR
comp=Z,36µm,19.0s,MS6.7
LOMF Lomont 71.98 315 *e*P **P 11 22 25.4 -0.7**
SNF Seneffe 72.04 319 P **P 11 22 26.4 -0.1**
comp=Z,28nm,2.2s,mb4.8
DOU Dourbes 72.05 318 P **P 11 22 27.1 +0.6**
comp=Z,21nm,1.7s,mb4.8
MENT Mentasta 72.06 26 *e*P **P 11 22 26.2 -0.1**
THEF They Montfort 72.09 316 *e*P **P 11 22 26.7 -0.1**
INK Inuvik 72.16 19 P **P 11 22 26.2 -0.7**
comp=Z,39nm,0.7s,mb5.4,baz=332,slow=7.4,SNR=41
INK LR LR 11 58 30.6
comp=Z,9µm,18.7s,MS6.1,baz=336,slow=40
INK Inuvik 72.16 19 *e*P **P 11 22 26.3 -0.6**
INK Inuvik 72.16 19 P **P 11 22 26.2 -0.7**
INK LR LR 11 58 30.6
ORE Reay 72.23 328 *e*P **P 11 22 28.1 +0.7**
DIV Divide 72.25 28 *e*P **P 11 22 27.6 +0.1**
comp=Z,102nm,0.9s,mb5.8
BAIF Baives 72.29 318 *e*P **P 11 22 27.1 -0.9**
comp=Z,89nm,1.1s,mb5.3
BAIF Baives 72.29 318 *e*P **P 11 22 27.1 -0.9**
BAIF pmax pmax
comp=Z,45nm,1.1s,mb5.3
BAIF Baives 72.29 318 *e*P **P 11 22 27.1 -0.9**
comp=Z,45nm,1.1s,mb5.3
EIDS Eidsvold 72.30 136 *e*P **P 11 22 28.1 -0.1**
comp=Z,152nm,1.3s,mb5.8
STKA Stephens Creek 72.34 147 *e*P **P 11 22 27.2 -1.2**
comp=Z,53nm,1.0s,mb5.4
STKA *e*S S 11 31 54.3 +2.7
STKA Stephens Creek 72.34 147 P **P 11 22 27.8 -0.6**
comp=Z,40nm,0.8s,mb5.4,baz=320,slow=6.3,SNR=119
STKA Stephens Creek 72.34 147 *e*P **P 11 22 27.6 -0.7**
comp=Z,24nm,1.1s,mb5.0
MCD Coleburn Disti 72.49 327 *e*P **P 11 22 29.9 +0.8**
MME1 Meikle Cairn 72.50 327 *e*P **P 11 22 29.6 +0.6**
MEZF Maizieres J'vi 72.52 316 *e*P **P 11 22 28.5 -0.8**
comp=Z,193nm,1.4s,mb5.5
MEZF Maizieres J'vi 72.52 316 *e*P **P 11 22 28.5 -0.8**
comp=Z,193nm,1.4s,mb5.8
OG01 Vacheresse 72.52 314 *e*P **P 11 22 29.3 -0.1**
PGF Pioggiola 72.75 310 *e*P **P 11 22 30.2 -0.6**
comp=Z,426nm,1.3s,mb5.9
PGF Pioggiola 72.75 310 *e*P **P 11 22 30.2 -0.6**
PGF pmax pmax
comp=Z,213nm,1.3s,mb5.9
PGF Pioggiola 72.75 310 *e*P **P 11 22 30.2 -0.6**
comp=Z,213nm,1.3s,mb5.9
CABF La Chapelle 72.76 314 *e*P **P 11 22 29.7 -1.1**
comp=Z,80nm,1.3s,mb5.2
CABF La Chapelle 72.76 314 *e*P **P 11 22 29.7 -1.1**
CABF pmax pmax
comp=Z,40nm,1.3s,mb5.2
CABF La Chapelle 72.76 314 *e*P **P 11 22 29.7 -1.1**
comp=Z,40nm,1.3s,mb5.2
BMRM Bremner River 72.81 28 *e*P **P 11 22 30.6 -0.2**
comp=Z,226nm,1.0s,mb6.0
LPG La Plagne 72.86 313 *e*P **P 11 22 31.2 -0.2**
comp=Z,162nm,0.8s,mb5.7
LPG La Plagne 72.86 313 *e*P **P 11 22 31.2 -0.2**
LPG pmax pmax
comp=Z,81nm,0.8s,mb5.7
LPG La Plagne 72.86 313 *e*P **P 11 22 31.2 -0.2**
comp=Z,81nm,0.8s,mb5.7
LPL La Plagne 72.86 313 *e*P **P 11 22 31.1 -0.4**
comp=Z,167nm,0.9s,mb5.7
LPL La Plagne 72.86 313 *e*P **P 11 22 31.1 -0.4**
LPL pmax pmax
comp=Z,84nm,0.9s,mb5.7
LPL La Plagne 72.86 313 *e*P **P 11 22 31.1 -0.4**
comp=Z,84nm,0.9s,mb5.7
DAWY Dawson 72.99 24 *e*P **P 11 22 26.5 -5.3**
SAOF Saorge 73.04 311 *e*P **P 11 22 32.4 -0.1**
MDO Dochfour 73.08 327 *e*P **P 11 22 32.2 -0.3**
BNI Bardonecchia 73.11 313 *e*P **P 11 22 33.5 +0.6**
BNI pmax pmax
comp=Z,84nm,1.3s,mb5.5
BNI MLR MLR
comp=Z,26µm,20.0s,MS6.5
BNI Bardonecchia 73.11 313 *e*P **P 11 22 33.5 +0.6**
comp=Z,84nm,1.3s,mb5.5
BNI LR LR
comp=Z,26µm,20.0s,MS6.5
AUTN L'Aution 73.12 311 *e*P **P 11 22 33.4 +0.4**
SBF Sospel 73.17 311 *e*P **P 11 22 32.3 -1.0**
comp=Z,207nm,1.0s,mb5.7
SBF Sospel 73.17 311 *e*P **P 11 22 32.3 -1.0**
SBF pmax pmax
comp=Z,103nm,1.0s,mb5.7

SBF Sospel 73.17 311 *e*P **P 11 22 32.3 -1.0**
comp=Z,103nm,1.0s,mb5.7
MBDF Montbardon 73.20 312 *e*P **P 11 22 33.3 -0.2**
comp=Z,65nm,0.8s,mb5.3
MBDF Montbardon 73.20 312 *e*P **P 11 22 33.3 -0.2**
MBDF pmax pmax
comp=Z,33nm,0.8s,mb5.3
MBDF Montbardon 73.20 312 *e*P **P 11 22 33.3 -0.2**
comp=Z,32nm,0.8s,mb5.3
LUCF Luceram 73.22 311 *e*P **P 11 22 34.9 +1.3**
MENF Mencas 73.22 319 *e*P **P 11 22 32.6 -0.8**
TOUF Mont Tournerai 73.22 312 *e*P **P 11 22 34.4 +0.8**
SUMG Summit 73.23 349 *e*P **P 11 22 32.9 -0.2**
comp=Z,117nm,1.4s,mb5.6
EBH Black Hill 73.30 326 *e*P **P 11 22 34.2 +0.4**
EDI Edinburgh 73.32 326 *e*P **P 11 22 33.9 0.0**
EDI AMb AMB 11 22 44.7
comp=Z,44nm,2.0s,mb5.0
MVIF Mont Vial 73.34 311 *e*P **P 11 22 32.9 -1.4**
XAL Allendale 73.39 325 *e*P **P 11 22 33.5 -0.8**
EAU Auchinoon 73.48 326 *e*P **P 11 22 34.7 -0.2**
ESK Eskdalemuir 73.64 325 *e*P **P 11 22 35.9 0.0**
ESK AMb AMB 11 22 41.9
comp=Z,44nm,2.0s,mb5.0
ESK Eskdalemuir 73.64 325 *i* P **P 11 22 36.7 +0.8**
ESK Eskdalemuir 73.64 325 *e*P **P 11 22 35.4 -0.4**
comp=Z,57nm,1.3s,mb5.3
ESK LR LR
comp=Z,9µm,20.0s,MS6.1
RES Resolute Bay 73.64 5 *e*P **P 11 22 35.5 -0.1**
ABPO Ambohimpanom 73.66 235 *e*P **P 11 22 36.0 -0.4**
ABPO pmax pmax
comp=Z,38nm,1.4s,mb5.1
ABPO MLR MLR
comp=Z,3µm,19.0s,MS5.7
ABPO Ambohimpanom 73.66 235 *e*P **P 11 22 36.0 -0.4**
comp=Z,38nm,1.4s,mb5.1
ABPO LR LR
comp=Z,3µm,19.0s,MS5.7
ORIF Oris-en-Rattie 73.67 313 *e*P **P 11 22 35.5 -0.8**
comp=Z,141nm,1.1s,mb5.5
ORIF *e*MLR MLR
comp=Z,43µm,18.8s,MS6.5
ORIF Oris-en-Rattie 73.67 313 *e*P **P 11 22 35.5 -0.8**
ORIF pmax pmax
comp=Z,70nm,1.1s,mb5.5
ORIF Oris-en-Rattie 73.67 313 *e*P **P 11 22 35.5 -0.8**
comp=Z,70nm,1.1s,mb5.5
ECK Cauldkaine Hil 73.67 325 *e*P **P 11 22 36.0 -0.1**
KPL Plockton 73.73 328 *e*P **P 11 22 37.8 +1.5**
KPL AMb AMB 11 22 51.8
comp=Z,61nm,3.7s
LOR Lormes 73.81 316 *e*P **P 11 22 35.4 -1.6**
comp=Z,91nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,27µm,17.8s,MS6.3
LOR Lormes 73.81 316 *e*P **P 11 22 35.4 -1.6**
LOR pmax pmax
comp=Z,46nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,27µm,17.8s,MS6.6
LOR Lormes 73.81 316 *e*P **P 11 22 35.4 -1.6**
comp=Z,46nm,1.3s,mb5.2
LOR LR LR
comp=Z,27µm,17.8s,MS6.6
FRF La Foret Royal 73.82 311 *e*P **P 11 22 36.0 -1.1**
comp=Z,67nm,1.1s,mb5.2
FRF La Foret Royal 73.82 311 *e*P **P 11 22 36.0 -1.1**
FRF pmax pmax
comp=Z,34nm,1.1s,mb5.2
FRF La Foret Royal 73.82 311 *e*P **P 11 22 36.0 -1.1**
comp=Z,34nm,1.1s,mb5.2
VSL Villasalto 73.87 307 *e*P **P 11 22 40.3 +2.7**
comp=Z,53nm,1.2s,mb5.3
VSL LR LR
comp=Z,3µm,19.0s,MS5.6
LHO Holmfirth 73.88 323 *e*P **P 11 22 36.4 -0.9**
LMR La Mourre 74.01 311 *e*P **P 11 22 37.3 -1.0**
comp=Z,149nm,1.2s,mb5.5
LMR La Mourre 74.01 311 *e*P **P 11 22 37.3 -1.0**
LMR pmax pmax
comp=Z,75nm,1.2s,mb5.5
LMR La Mourre 74.01 311 *e*P **P 11 22 37.3 -1.0**
comp=Z,75nm,1.2s,mb5.5
KAR1 Arisaig 74.03 327 *e*P **P 11 22 38.2 +0.1**
SMF Signal de Mont 74.11 315 *e*P **P 11 22 37.6 -1.2**
comp=Z,135nm,0.9s,mb5.6
SMF Signal de Mont 74.11 315 *e*P **P 11 22 37.6 -1.2**
SMF pmax pmax
comp=Z,68nm,0.9s,mb5.6
SMF Signal de Mont 74.11 315 *e*P **P 11 22 37.6 -1.2**
comp=Z,68nm,0.9s,mb5.6
SSF Saint Saulge 74.12 316 *e*P **P 11 22 37.4 -1.4**
comp=Z,86nm,1.2s,mb5.2
SSF Saint Saulge 74.12 316 *e*P **P 11 22 37.4 -1.4**
SSF pmax pmax
comp=Z,43nm,1.2s,mb5.2
SSF Saint Saulge 74.12 316 *e*P **P 11 22 37.4 -1.4**
comp=Z,43nm,1.2s,mb5.2
TAVF Tavernes 74.17 312 *e*P **P 11 22 41.6 +2.4**
SMRF Simiane la Rot 74.31 312 *e*P **P 11 22 39.3 -0.7**
comp=Z,101nm,1.4s,mb5.2
SMRF Simiane la Rot 74.31 312 *e*P **P 11 22 39.3 -0.7**
comp=Z,101nm,1.4s,mb5.6
AVF Avril sur Loir 74.34 315 *e*P **P 11 22 38.8 -1.3**
comp=Z,111nm,0.9s,mb5.5
AVF Avril sur Loir 74.34 315 *e*P **P 11 22 38.8 -1.3**
AVF pmax pmax
comp=Z,56nm,0.9s,mb5.5
AVF Avril sur Loir 74.34 315 *e*P **P 11 22 38.8 -1.3**
comp=Z,56nm,0.9s,mb5.5
SSB Saint Sauveur 74.34 314 *e*P **P 11 22 41.2 +1.1**
SSB Saint Sauveur 74.34 314 *e*P **P 11 22 40.6 +0.5**
SSB pmax pmax
comp=Z,26nm,1.1s,mb5.1
SSB MLR MLR
comp=Z,5µm,19.0s,MS5.8
SSB Saint Sauveur 74.34 314 *e*P **P 11 22 40.6 +0.5**
comp=Z,26nm,1.1s,mb5.1
SSB LR LR
comp=Z,5µm,19.0s,MS5.8
VIVF Saint-Julien-l 74.46 313 *e*P **P 11 22 39.8 -1.0**
comp=Z,119nm,1.3s,mb5.4
VIVF Saint-Julien-l 74.46 313 *e*P **P 11 22 39.8 -1.0**
VIVF pmax pmax
comp=Z,60nm,1.3s,mb5.4
VIVF Saint-Julien-l 74.46 313 *e*P **P 11 22 39.8 -1.0**
comp=Z,60nm,1.3s,mb5.4
PLDF La Plantade 74.57 315 *e*P **P 11 22 42.2 +0.7**
TREF Trevaresse 74.60 312 *e*P **P 11 22 44.4 +2.7**
PRAF Pradon 74.65 312 *e*P **P 11 22 42.6 +0.6**
BGF Bois d'Agland 74.76 315 *e*P **P 11 22 41.3 -1.2**
comp=Z,47nm,1.0s,mb5.0
BGF Bois d'Agland 74.76 315 *e*P **P 11 22 41.3 -1.2**
BGF pmax pmax
comp=Z,23nm,1.0s,mb5.1
BGF Bois d'Agland 74.76 315 *e*P **P 11 22 41.3 -1.2**
comp=Z,23nm,1.0s,mb5.1
AGO Saint Agoulin 74.83 315 *e*P **P 11 22 44.0 +1.0**
HLM1 Long Mynd 74.94 323 *e*P **P 11 22 42.0 -1.5**
PYM Petit Puy Mans 75.05 315 *e*P **P 11 22 45.4 +1.1**
BORG Borgarnes 75.19 339 P **P 11 22 45.3 +0.6**
comp=Z,38nm,1.1s,mb5.2,baz=358,slow=6.1,SNR=3.8
BORG LR LR 11 57 27.8
comp=Z,7µm,19.4s,MS6.0,baz=46,slow=37
TCF Toulx Ste Croi 75.27 315 *e*P **P 11 22 44.6 -0.9**
comp=Z,93nm,1.0s,mb5.4
TCF Toulx Ste Croi 75.27 315 *e*P **P 11 22 44.6 -0.9**
TCF pmax pmax
comp=Z,47nm,1.0s,mb5.4
TCF Toulx Ste Croi 75.27 315 *e*P **P 11 22 44.6 -0.9**
comp=Z,47nm,1.0s,mb5.4
WLF1 Llynfaes 75.31 324 *e*P **P 11 22 46.3 +0.7**
WLF1 AMb AMB 11 22 56.6
comp=Z,187nm,2.0s,mb5.7
LASF Ste Croix 75.35 313 *e*P **P 11 22 45.4 -0.6**
comp=Z,126nm,1.2s,mb5.4
LASF Ste Croix 75.35 313 *e*P **P 11 22 45.4 -0.6**
HGH Gray Hill 75.37 322 *e*P **P 11 22 45.9 0.0**
HTR Trewern Hill 75.38 322 *e*P **P 11 22 45.2 -0.8**
LDF La Druitiere 75.48 318 *e*P **P 11 22 45.5 -1.2**
comp=Z,97nm,1.1s,mb5.3
LDF La Druitiere 75.48 318 *e*P **P 11 22 45.5 -1.2**
LDF pmax pmax
comp=Z,49nm,1.1s,mb5.3
LDF La Druitiere 75.48 318 *e*P **P 11 22 45.5 -1.2**
comp=Z,49nm,1.1s,mb5.3
FRNF Fournols 75.51 314 *e*P **P 11 22 47.3 +0.4**
FLN La Foliniere 75.60 319 *e*P **P 11 22 46.1 -1.2**
comp=Z,136nm,1.4s,mb5.4
FLN *e*MLR MLR
comp=Z,37µm,20.2s,MS6.4
FLN La Foliniere 75.60 319 *e*P **P 11 22 46.1 -1.2**
FLN pmax pmax
comp=Z,68nm,1.4s,mb5.4
FLN MLR MLR
comp=Z,37µm,20.3s,MS6.7
FLN La Foliniere 75.60 319 *e*P **P 11 22 46.1 -1.2**
comp=Z,68nm,1.4s,mb5.4
FLN LR LR
comp=Z,37µm,20.3s,MS6.7
KEST Kesra 75.64 303 P **P 11 22 48.9 +1.0**
comp=Z,11nm,1.1s,mb4.7,baz=304,slow=2.0,SNR=12
KEST LR LR 12 04 35.2
comp=Z,1µm,19.7s,MS5.2,baz=0.6,slow=42
PNL Peninsula 75.67 28 *e*P **P 11 22 47.9 +0.3**
comp=Z,147nm,0.9s,mb5.9
GRR Gorron 76.00 318 *e*P **P 11 22 48.5 -1.2**
comp=Z,120nm,0.9s,mb5.5
GRR Gorron 76.00 318 *e*P **P 11 22 48.5 -1.2**
GRR pmax pmax
comp=Z,60nm,0.9s,mb5.5
GRR Gorron 76.00 318 *e*P **P 11 22 48.5 -1.2**
comp=Z,60nm,0.9s,mb5.5
CAF Calviac 76.04 314 *e*P **P 11 22 49.5 -0.5**
comp=Z,65nm,0.9s,mb5.2
CAF Calviac 76.04 314 *e*P **P 11 22 49.5 -0.5**
CAF pmax pmax
comp=Z,32nm,0.9s,mb5.2
CAF Calviac 76.04 314 *e*P **P 11 22 49.5 -0.5**
comp=Z,32nm,0.9s,mb5.3
RJF Les Rejaudoux 76.19 315 *e*P **P 11 22 50.3 -0.5**
comp=Z,160nm,1.3s,mb5.5
RJF *e*MLR MLR
comp=Z,21µm,20.2s,MS6.1
RJF Les Rejaudoux 76.19 315 *e*P **P 11 22 50.3 -0.5**
RJF pmax pmax
comp=Z,80nm,1.3s,mb5.5
RJF MLR MLR
comp=Z,21µm,20.3s,MS6.4
RJF Les Rejaudoux 76.19 315 *e*P **P 11 22 50.3 -0.5**
comp=Z,80nm,1.3s,mb5.5
RJF LR LR
comp=Z,21µm,20.3s,MS6.4
DMUB Kingscourt 76.22 325 *e*P **P 11 22 50.0 -0.8**
JSA Saint Aubin 76.32 319 *e*P **P 11 22 50.1 -1.4**
JSA AMb AMB 11 22 54.5
comp=Z,47nm,1.4s,mb5.2
DSB Dublin 76.33 324 *e*P **P 11 22 52.5 +1.1**
comp=Z,20nm,0.9s,mb5.0
ARMA Armidale 76.40 139 *e*P **P 11 22 52.9 +0.9**
ARMA *e*S S 11 32 40.9 +3.7
ARMA Armidale 76.40 139 *e*P **P 11 22 52.7 +0.6**
comp=Z,82nm,1.3s,mb5.5
MFF Saint Martin d 76.52 316 *e*P **P 11 22 51.7 -0.9**
comp=Z,133nm,1.2s,mb5.4
MFF Saint Martin d 76.52 316 *e*P **P 11 22 51.7 -0.9**
MFF pmax pmax
comp=Z,66nm,1.2s,mb5.4
MFF Saint Martin d 76.52 316 *e*P **P 11 22 51.7 -0.9**
comp=Z,66nm,1.2s,mb5.4
CMAH Djebel Manchou 76.58 305 P **P 11 22 57.0 +3.8**
DYA Yadsworthy 76.62 321 *e*P **P 11 22 51.9 -1.2**
DYA AMb AMB 11 22 59.1
comp=Z,37nm,1.9s,mb5.0
ABSA Djebel Ababsia 76.71 304 P **P 11 22 59.0 +5.1**
DCN Croghan 76.72 325 *e*P **P 11 22 52.8 -0.8**
LRDF Laroque-de-Fa 76.75 312 *e*P **P 11 22 55.2 +1.2**
MTLF Montolieu 76.75 313 *e*P **P 11 22 53.2 -0.8**
comp=Z,48nm,1.2s,mb5.0
MTLF Montolieu 76.75 313 *e*P **P 11 22 53.2 -0.8**
MTLF pmax pmax
comp=Z,24nm,1.2s,mb5.0
MTLF Montolieu 76.75 313 *e*P **P 11 22 53.2 -0.8**
comp=Z,24nm,1.2s,mb5.0
LFF La Frestale 76.84 315 *e*P **P 11 22 54.1 -0.4**
comp=Z,118nm,1.2s,mb5.4
LFF La Frestale 76.84 315 *e*P **P 11 22 54.1 -0.4**
LFF pmax pmax
comp=Z,59nm,1.2s,mb5.4
LFF La Frestale 76.84 315 *e*P **P 11 22 54.1 -0.4**
comp=Z,59nm,1.2s,mb5.4
FILF Fillols 76.92 312 *e*P **P 11 22 56.7 +1.7**
SGMF Saint Gilles 77.04 319 *e*P **P 11 22 54.9 -0.6**
comp=Z,253nm,1.3s,mb5.7
SGMF Saint Gilles 77.04 319 *e*P **P 11 22 54.9 -0.6**
SGMF pmax pmax
comp=Z,126nm,1.3s,mb5.7
SGMF Saint Gilles 77.04 319 *e*P **P 11 22 54.9 -0.6**
comp=Z,126nm,1.3s,mb5.7
CKFL Kef-Lekhel 77.19 305 P **P 11 23 01.0 +4.4**
VALF Valcebollere 77.35 312 *e*P **P 11 22 56.8 -0.6**
ROSF Rostrenen 77.40 319 *e*P **P 11 22 56.9 -0.6**
comp=Z,194nm,1.3s,mb5.6
ROSF Rostrenen 77.40 319 *e*P **P 11 22 56.9 -0.6**
ROSF pmax pmax
comp=Z,97nm,1.3s,mb5.6
ROSF Rostrenen 77.40 319 *e*P **P 11 22 56.9 -0.6**
comp=Z,97nm,1.3s,mb5.6
SKAG Skagway 77.40 27 *e*P **P 11 22 57.4 0.0**
comp=Z,115nm,1.4s,mb5.6
SKAG LR LR
comp=Z,12µm,17.0s,MS6.3
CASM Ain Smara 77.42 305 P **P 11 23 02.7 +4.8**
QUIF Quistinic 77.56 319 *e*P **P 11 22 57.6 -0.9**
comp=Z,186nm,1.4s,mb5.5
QUIF Quistinic 77.56 319 *e*P **P 11 22 57.6 -0.9**
QUIF pmax pmax
comp=Z,93nm,1.4s,mb5.5
QUIF Quistinic 77.56 319 *e*P **P 11 22 57.6 -0.9**
comp=Z,93nm,1.4s,mb5.5
MLS Moulis 77.65 313 *e*P **P 11 22 58.6 -0.4**
DFRA Djebel Bou Aff 77.71 305 P **P 11 23 04.0 +4.5**
EPF Esparros 78.08 313 *e*P **P 11 23 00.2 -1.3**
comp=Z,40nm,1.1s,mb5.0
EPF Esparros 78.08 313 *e*P **P 11 23 00.2 -1.3**
EPF pmax pmax
comp=Z,20nm,1.1s,mb5.0
EPF Esparros 78.08 313 *e*P **P 11 23 00.2 -1.3**
comp=Z,20nm,1.1s,mb5.0
ETOS Mallorca 78.17 309 ⇑P **P 11 23 04.5 +2.4**
comp=Z,484nm,2.7s,mb6.0
RESF Ens 78.20 313 *e*P **P 11 23 03.5 +1.4**
SET Setif 78.21 305 P **P 11 23 06.0 +3.7**
CKHR Kef el Ahmar 78.22 305 P **P 11 23 07.0 +4.6**
VIEF Viey 78.36 313 *e*P **P 11 23 05.1 +2.1**
EBIE Bielsa 78.39 313 ⇑P **P 11 23 06.3 +3.2**
comp=Z,116nm,3.1s
EPOB Poblet 78.49 311 ⇑P **P 11 23 05.4 +1.6**
comp=Z,397nm,3.5s
ETSF Etsaut 78.71 313 *e*P **P 11 23 04.6 -0.4**
comp=Z,39nm,0.8s,mb5.1
ETSF Etsaut 78.71 313 *e*P **P 11 23 04.6 -0.4**
ETSF pmax pmax
comp=Z,20nm,0.8s,mb5.1
ETSF Etsaut 78.71 313 *e*P **P 11 23 04.6 -0.4**
comp=Z,20nm,0.8s,mb5.1
CAN Canberra 78.75 144 *e*P **P 11 23 05.0 0.0**
CAN pmax pmax
comp=Z,110nm,1.2s,mb5.7
CAN MLR MLR
comp=Z,4µm,19.0s,MS5.7
CAN Canberra 78.75 144 *e*P **P 11 23 05.0 0.0**
comp=Z,110nm,1.2s,mb5.7
CAN LR LR
comp=Z,4µm,19.0s,MS5.7
TOO Toolangi 78.84 147 *e*P **P 11 23 05.5 0.0**
JOHN Johnston Islan 78.88 77 PFAKE 11 23 20.0 +14
JOHN LR LR
comp=Z,4µm,20.0s,MS5.8
CNB Canberra Magne 78.93 143 *e*P **P 11 23 05.5 -0.5**
SIT Sitka 79.00 28 *e*P **P 11 23 08.0 +1.8**
SIT pmax pmax
comp=Z,148nm,1.6s,mb5.7
SIT MLR MLR
comp=Z,10µm,18.0s,MS6.2
SIT Sitka 79.00 28 *e*P **P 11 23 08.0 +1.8**
comp=Z,148nm,1.6s,mb5.7
SIT LR LR
comp=Z,10µm,18.0s,MS6.2
SJPF Ste Jean 79.01 314 *e*P **P 11 23 06.7 +0.1**
comp=Z,34nm,0.8s,mb5.0
SJPF Ste Jean 79.01 314 *e*P **P 11 23 06.7 +0.1**
SJPF pmax pmax
comp=Z,17nm,0.8s,mb5.0
SJPF Ste Jean 79.01 314 *e*P **P 11 23 06.7 +0.1**
comp=Z,17nm,0.8s,mb5.0
EALK Alkurruntz 79.13 314 ⇑P **P 11 23 10.0 +2.8**
comp=Z,431nm,4.2s
ELIZ Elizondo 79.17 314 P **P 11 23 08.9 +1.4**
ELIZ pmax pmax
comp=Z,54nm,1.7s,mb5.2
ELIZ Elizondo 79.17 314 P **P 11 23 08.9 +1.4**
comp=Z,54nm,1.7s,mb5.2
ERTA Horta de San J 79.18 311 ⇑P **P 11 23 10.0 +2.4**
comp=Z,462nm,3.3s
ESAC San Caprasio 79.28 312 ⇑P **P 11 23 10.8 +2.7**
comp=Z,371nm,2.5s,mb5.9
ABA Alger-Bouzarea 79.55 307 P **P 11 23 13.2 +3.5**
EMHD Djebel Mahouad 79.91 306 P **P 11 23 15.4 +3.7**
EMOS Mosqueruela 80.01 311 ⇑P **P 11 23 14.9 +2.8**
comp=Z,27nm,0.9s,mb5.2
ECRI Cripan 80.08 314 P **P 11 23 14.8 +2.4**
ECRI pmax pmax
comp=Z,12nm,1.2s,mb4.7
ECRI Cripan 80.08 314 P **P 11 23 14.8 +2.4**
comp=Z,12nm,1.2s,mb4.7
DLBC Dease Lake 80.10 25 *e*P **P 11 23 13.1 +0.9**
SFJD Kangerlussuaq 80.14 350 *e*P **P 11 23 12.6 +0.3**
SFJD pmax pmax
comp=Z,37nm,0.8s,mb5.4
SFJD Kangerlussuaq 80.14 350 *e*P **P 11 23 11.3 -0.9**
comp=Z,31nm,0.6s,mb5.4
SFJD LR LR
comp=Z,12µm,21.0s,MS6.2
SFJD Kangerlussuaq 80.14 350 *i* P **P 11 23 12.6 +0.3**
comp=Z,37nm,0.8s,mb5.4
DZM Mont Dzumac 80.20 123 *e*LR LR 11 48 11.9
comp=Z,5µm,24.1s
DZM Mont Dzumac 80.20 123 *e*P **P 11 23 13.8 +0.5**
comp=Z,42nm,1.1s,mb5.3
ELAN Lanestosa 80.30 315 ⇑P **P 11 23 16.6 +3.0**
comp=Z,148nm,1.7s,mb5.6
ECHE Chera 80.75 311 P **P 11 23 18.6 +2.5**
ECHE pmax pmax
comp=Z,14nm,1.0s,mb4.8
ECHE Chera 80.75 311 P **P 11 23 18.6 +2.5**
comp=Z,14nm,1.0s,mb4.9
ETOR Torete 80.78 312 P **P 11 23 18.9 +2.7**
ETOR pmax pmax
comp=Z,17nm,1.6s,mb4.7
ETOR Torete 80.78 312 P **P 11 23 18.9 +2.7**
comp=Z,17nm,1.6s,mb4.7
EBNR Beni Rached 80.85 307 P **P 11 23 15.2 -1.5**
ECHA Ech Chlef 81.03 307 P **P 11 23 24.2 +6.5**
EANR 'Ain N'Sour 81.32 307 P **P 11 23 25.8 +6.6**
EARI Arriondas 81.33 316 P **P 11 23 21.4 +2.3**
comp=Z,156nm,2.0s,mb5.6
ETRT Tiaret 81.48 306 P **P 11 23 24.0 +3.9**
ETOB Tobarra 81.64 310 P **P 11 23 23.0 +2.1**
comp=Z,402nm,3.0s
YKA Yellowknife Ar 81.68 17 P **P 11 23 20.1 -0.4**
comp=Z,12nm,0.7s,mb5.0,baz=325,slow=4.9,SNR=45
YKA PKKPbc PKKPbc 11 41 49.2 -3.9
comp=Z,0.6nm,0.5s,baz=155,slow=2.1,SNR=4.5
YKA PKPPKP 11 49 58.4
comp=Z,0.2nm,0.8s,baz=134,slow=2.2,SNR=4.4
YKA LR LR 12 01 17.2
comp=Z,854nm,20.8s,MS5.1,baz=55,slow=37
YKA Yellowknife Ar 81.68 17 P **P 11 23 20.1 -0.5**
YKA pmax pmax
comp=Z,12nm,0.7s
YKA MLR MLR
comp=Z,854nm,20.8s
YKA Yellowknife Ar 81.68 17 P **P 11 23 20.1 -0.4**
YKA PKKPbc PKKPbc 11 41 49.2 -3.9
YKA P'P' 11 49 58.4
YKA LR LR 12 01 17.2
GUD Guadarrama 82.20 313 P **P 11 23 25.3 +1.6**
GUD pmax pmax
comp=Z,22nm,1.0s,mb5.0
GUD Guadarrama 82.20 313 P **P 11 23 25.3 +1.6**
comp=Z,22nm,1.0s,mb5.0
FUNA Funafuti 82.23 105 PFAKE 11 23 40.0 +16
FUNA LR LR
comp=Z,7µm,21.0s,MS6.0
EVIA Vianos 82.27 311 P **P 11 23 27.1 +3.0**
EVIA pmax pmax
comp=Z,27nm,1.0s,mb5.1
EVIA Vianos 82.27 311 P **P 11 23 27.1 +2.9**
comp=Z,26nm,1.0s,mb5.1
EPON Pontenova 82.47 317 P **P 11 23 27.7 +2.6**
comp=Z,96nm,2.0s,mb5.4
ESDC Sonseca Array 82.63 312 P **P 11 23 25.6 -0.4**
comp=Z,4.4nm,0.7s,mb4.6,baz=52,slow=4.6,SNR=13
ESDC LR LR 12 02 52.4
comp=Z,8µm,18.5s,MS6.1,baz=50,slow=38
ESDC Sonseca Array 82.63 312 P **P 11 23 28.3 +2.3**
comp=Z,75nm,3.0s
ESLA Sonseca Array 82.63 312 *e*P **P 11 23 25.1 -0.9**
comp=Z,36nm,1.8s,mb5.1
ESLA LR LR
comp=Z,52µm,20.0s,MS6.9
EHUE Huescar 82.79 310 P **P 11 23 29.1 +2.2**
EHUE pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
EHUE Huescar 82.79 310 P **P 11 23 29.1 +2.2**
comp=Z,8.7nm,0.8s,mb4.8
PAB San Pablo 82.94 312 *e*P **P 11 23 26.4 -1.2**
PAB pmax pmax
comp=Z,70nm,1.9s,mb5.4
PAB MLR MLR
comp=Z,11µm,22.0s,MS6.2
PAB San Pablo 82.94 312 *e*P **P 11 23 26.4 -1.2**
comp=Z,70nm,1.9s,mb5.4
PAB LR LR
comp=Z,11µm,22.0s,MS6.2
ENIJ Nijar 83.00 309 P **P 11 23 28.5 +0.5**
ENIJ pmax pmax
comp=Z,197nm,2.4s,mb5.7
ENIJ Nijar 83.00 309 P **P 11 23 28.4 +0.5**
comp=Z,197nm,2.4s,mb5.7
ECAL Calabor 83.04 315 P **P 11 23 30.6 +2.5**
comp=Z,178nm,1.9s,mb5.8
EQES Quesada 83.11 310 P **P 11 23 29.8 +1.3**
comp=Z,230nm,2.7s,mb5.7
EBAN Banos Encina 83.37 311 P **P 11 23 30.7 +0.8**
EBAN pmax pmax
comp=Z,13nm,0.9s,mb5.0
EBAN Banos Encina 83.37 311 P **P 11 23 30.6 +0.8**
comp=Z,12nm,0.9s,mb4.9
EBER Berja 83.50 309 ⇑P **P 11 23 32.6 +2.1**
comp=Z,445nm,3.2s
MVO Moncorvo 83.67 315 *e*P **P 11 23 33.1 +1.7**
comp=Z,34nm,1.8s,mb5.2
ELOB Lobios 83.88 316 P **P 11 23 34.9 +2.5**
comp=Z,336nm,2.7s,mb6.0
EADA Adamuz 83.88 311 P **P 11 23 34.6 +2.1**
comp=Z,256nm,3.4s
PCAB Cabril 83.95 316 *e*P **P 11 23 34.5 +1.7**
comp=Z,63nm,1.7s,mb5.5
TAU Tasmania Unive 83.97 149 *e*P **P 11 23 32.4 -0.2**
TAU pmax pmax
comp=Z,70nm,1.4s,mb5.6
TAU MLR MLR
comp=Z,2µm,21.0s,MS5.6
TAU Tasmania Unive 83.97 149 *e*P **P 11 23 32.4 -0.2**
comp=Z,70nm,1.4s,mb5.6
TAU LR LR
comp=Z,2µm,21.0s,MS5.6
EGUA Guajares 83.98 310 P **P 11 23 35.4 +2.4**
EGUA pmax pmax
comp=Z,94nm,0.9s,mb5.9
EGUA Guajares 83.98 310 P **P 11 23 35.4 +2.4**
comp=Z,94nm,0.9s,mb5.9
ELUQ Luque 84.03 311 P **P 11 23 35.5 +2.2**
ELUQ pmax pmax
comp=Z,38nm,0.9s,mb5.5
ELUQ Luque 84.03 311 P **P 11 23 35.5 +2.3**
comp=Z,38nm,0.9s,mb5.5
ERON Agron 84.03 310 P **P 11 23 34.3 +1.0**
comp=Z,1.6nm,1.2s
ELOJ Sierra Loja 84.19 310 P **P 11 23 35.6 +1.5**
ELOJ pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ELOJ Sierra Loja 84.19 310 P **P 11 23 35.6 +1.5**
comp=Z,6.9nm,0.9s,mb4.8
MTE Manteigas 84.44 314 *e*P **P 11 23 37.6 +2.3**
comp=Z,87nm,1.9s,mb5.6

MTE Manteigas 84.44 314 eP P 11 23 36.5 +1.1
comp=Z,40nm,1.2s,mb5.4
MTE LR LR
comp=Z,11µm,19.0s,MS6.3
PVIS Viseu 84.47 315 eP P 11 23 39.5 +4.1
comp=Z,65nm,1.6s,mb5.5
PCBR Castelo Branco 84.73 314 eP P 11 23 40.2 +3.4
comp=Z,27nm,1.3s,mb5.2
PMRV Marv??o 84.92 313 eP P 11 23 40.4 +2.6
comp=Z,62nm,0.3s,mb6.2
EMIJ Mijas 84.93 310 P P 11 23 38.7 +0.9
comp=Z,114nm,2.6s,mb5.5
EBAD Badajoz 85.09 313 P P 11 23 40.5 +1.9
comp=Z,154nm,2.1s,mb5.8
PESTR Estremoz 85.38 313 eP P 11 23 43.8 +3.7
comp=Z,39nm,2.5s,mb5.1
PBAR Barrancos 85.45 312 eP P 11 23 43.7 +3.3
comp=Z,55nm,1.9s,mb5.4
EJIF Jimena Fronter 85.45 310 P P 11 23 42.3 +1.8
EJIF pmax pmax
comp=Z,36nm,1.2s,mb5.4
EJIF Jimena Fronter 85.45 310 P P 11 23 42.3 +1.9
comp=Z,36nm,1.2s,mb5.4
EMIN Mina Concepcio 85.46 312 P P 11 23 42.2 +1.7
comp=Z,203nm,2.2s,mb5.9
ESPR Espera 85.46 311 P P 11 23 41.8 +1.3
comp=Z,259nm,3.0s
PAF Port-aux-Franc 85.57 201 PFAKE 11 23 50.0 +10
PAF LR LR
comp=Z,5µm,19.0s,MS5.9
LSZ Lusaka 85.83 249 LR LR 12 02 27.5
comp=Z,5µm,18.9s,MS6.0,baz=47,slow=36
LSZ Lusaka 85.83 249 eP P 11 23 42.5 0.0
LSZ pmax pmax
comp=Z,46nm,1.1s,mb5.6
LSZ MLR MLR
comp=Z,5µm,22.0s,MS5.8
LSZ Lusaka 85.83 249 eP P 11 23 42.5 0.0
comp=Z,46nm,1.1s,mb5.6
LSZ LR LR
comp=Z,5µm,22.0s,MS5.8
EVO Evora 85.85 313 eP P 11 23 44.6 +2.2
comp=Z,59nm,1.4s,mb5.6
KIP Kipapa 85.91 68 PFAKE 11 23 50.0 +7.0
KIP LR LR
comp=Z,2µm,19.0s,MS5.6
SFS San Fernando 85.92 311 PFAKE 11 23 50.0 +7.2
SFS LR LR
comp=Z,10µm,20.0s,MS6.2
PBEJ Beja 86.06 313 eP P 11 23 47.5 +4.0
comp=Z,47nm,1.9s,mb5.4
PVAQ Vaqueiros 86.34 312 eP P 11 23 46.9 +2.1
comp=Z,43nm,1.5s,mb5.5
PCVE Castro Verde 86.41 312 eP P 11 23 49.3 +4.1
comp=Z,41nm,1.6s,mb5.4
LIS Lisbon 86.44 314 eP P 11 23 45.0 -0.4
LIS eS S 11 34 10.9 -10
LIS eS S 11 34 11.6 -10
LIS AMS AMS 12 04 15.4
comp=E,8µm,13.7s
LIS Lisbon 86.44 314 eP P 11 23 45.0 -0.3
LIS eS S 11 34 10.9 -10
MDT Midelt 86.99 307 LR LR 12 06 19.2
comp=E,5µm,18.9s,MS5.9,baz=142,slow=38
MORF Marmelete 86.99 312 eP P 11 23 51.0 +3.0
comp=E,66nm,1.6s,mb5.6
MORF Marmelete 86.99 312 eP P 11 23 47.7 -0.3
MORF eS S 11 34 14.0 -13
RTC Rabat Centre 87.82 309 PFAKE 11 24 00.0 +7.9
RTC LR LR
comp=Z,2µm,19.0s,MS5.5
POHA Pohakuloa 88.76 68 PFAKE 11 24 10.0 +13
POHA LR LR
comp=Z,3µm,19.0s,MS5.8
FCC Fort Churchill 89.13 9 eP P 11 23 57.9 +0.1
comp=Z,2.6nm,1.2s,mb4.4
EDM Edmonton 89.95 21 eP P 11 24 01.9 +0.2
A05A Maple Falls 90.32 28 ⇑P P 11 24 02.5 -1.1
baz=90
MBW Mount Baker 90.56 28 P P 11 24 06.9 +2.2
NLWA Neilton Lookou 90.84 30 eP P 11 24 05.5 -0.4
comp=Z,294nm,2.0s,mb6.3
B06A Marblemount 90.94 28 ⇑P P 11 24 05.0 -1.5
baz=91
A07A Ashnola River, 90.96 27 ⇑P P 11 24 05.5 -1.0
baz=91,SNR=9.6
RPW Rockport 90.99 28 eP P 11 24 05.6 -1.0
comp=Z,44nm,1.6s,mb5.5
JCW Jim Creek 91.02 29 P P 11 24 08.5 +1.7
GNW Green Mountain 91.14 29 eP P 11 24 07.2 -0.2
comp=Z,21nm,1.1s,mb5.4
A08A Turner Farm, O 91.47 27 ⇓P P 11 24 08.0 -0.9
baz=91,SNR=29
B07A Winthrop 91.53 27 ⇑P P 11 24 07.6 -1.6
baz=91,SNR=15
FFC Flin Flon 91.59 15 P P 11 24 10.2 +0.9
comp=Z,216nm,1.0s,mb6.4,SNR=9.9
FFC Flin Flon 91.59 15 eP P 11 24 08.6 -0.7
FFC pmax pmax
comp=Z,50nm,1.1s,mb5.8
FFC MLR MLR
comp=Z,7µm,20.0s,MS6.1
FFC Flin Flon 91.59 15 eP P 11 24 08.6 -0.7
comp=Z,50nm,1.1s,mb5.8
FFC LR LR
comp=Z,7µm,20.0s,MS6.1
A09A Danville 91.71 26 ⇑P P 11 24 09.0 -1.0
baz=91,SNR=18
D05A Enumclaw 91.79 29 ⇓P P 11 24 09.5 -0.9
baz=92
GSM Grass Mountain 91.86 29 P P 11 24 13.8 +3.1
B08A Colville Reser 91.92 27 ⇓P P 11 24 09.8 -1.3
baz=92,SNR=14
F03A Seaside 92.11 31 ⇓P P 11 24 11.3 -0.7
baz=92
ETW Entiat 92.14 28 eP P 11 24 11.9 -0.1
comp=Z,55nm,1.3s,mb5.7
C07A Waterville 92.18 28 ⇑P P 11 24 09.9 -2.3
baz=92,SNR=11
LON Longmire 92.21 29 eP P 11 24 12.1 -0.3
LON pmax pmax
comp=Z,26nm,1.2s,mb5.4
LON Longmire 92.21 29 eP P 11 24 12.1 -0.3
comp=Z,26nm,1.2s,mb5.4
WTV Waterville 92.22 28 P P 11 24 13.7 +1.3
B09A Rice 92.33 26 ⇓P P 11 24 11.4 -1.5
baz=92,SNR=16
C08A Higginbotham F 92.50 27 ⇑P P 11 24 13.1 -0.7
baz=92
A11A Hall Mountain, 92.55 25 ⇓P P 11 24 12.6 -1.3
baz=92,SNR=9.7
AFI Afiamalu 92.58 105 PFAKE 11 24 30.0 +15
AFI LR LR
comp=Z,2µm,20.0s,MS5.5
F04A Amboy 92.60 30 ⇓P P 11 24 13.4 -0.8
baz=92
E06A Yakima 92.72 29 ⇑P P 11 24 14.0 -0.8
baz=92
C09A Chrisman Ranch 92.79 27 ⇑P P 11 24 14.0 -1.0
baz=92,SNR=16
NEW Newport 92.85 26 eP P 11 24 15.9 +0.6
NEW pmax pmax
comp=Z,43nm,1.1s
NEW MLR MLR
comp=Z,8µm,20.0s
NEW Newport 92.85 26 eP P 11 24 15.9 +0.6
comp=Z,43nm,1.1s,mb5.8
NEW LR LR
comp=Z,8µm,20.0s,MS6.2
OD2 Odessa Site #2 92.96 27 P P 11 24 18.0 +2.2
B11A Sandpoint 92.98 25 ⇑P P 11 24 15.9 0.0
baz=93,SNR=9.9
G04A Mulino 93.14 31 ⇓P P 11 24 16.8 +0.1
baz=93
D08A Wollman Farm, 93.15 28 ⇑P P 11 24 16.6 -0.1
baz=93
LBTB Lobatse 93.20 243 PFAKE 11 24 30.0 +13
LBTB LR LR
comp=Z,3µm,20.0s,MS5.7
TOA0 Torodi Ar. Sit 93.20 287 eP P 11 24 17.5 0.0
TORD Torodi Ar. Bea 93.20 287 P P 11 24 17.6 0.0
comp=Z,12nm,0.9s,mb5.3,baz=47,slow=3.1,SNR=38
TORD PP PP 11 28 03.2 +2.4
comp=Z,3.9nm,0.9s,baz=48,slow=5.6,SNR=4.4
TORD PKKPbc PKKPbc 11 41 25.5 +1.1
comp=Z,1.4nm,1.0s,baz=271,slow=2.8,SNR=3.8
TORD LR LR 12 12 42.0
comp=Z,4µm,19.7s,MS5.9,baz=45,slow=40
A13A Flathead Natio 93.26 24 ⇓P P 11 24 16.0 -1.2
baz=93
COR Corvallis 93.27 32 PFAKE 11 24 30.0 +13
COR LR LR
comp=Z,7µm,20.0s,MS6.1
WALA Waterton Lakes 93.33 24 eP P 11 24 18.5 +1.0
comp=Z,0.6nm,1.0s
D09A Jones Farm, Ri 93.38 27 ⇑P P 11 24 17.5 -0.3
baz=93
HOOD Mount Hood Mea 93.41 30 eP P 11 24 17.8 -0.1
comp=Z,103nm,1.0s,mb6.2
RSW Rattlesnake Hi 93.42 28 eP P 11 24 19.1 +1.2
comp=Z,13nm,0.8s,mb5.4
HAWA Hanford 93.44 28 eP P 11 24 18.7 +0.7
comp=Z,38nm,1.3s,mb5.7
HAWA LR LR
comp=Z,7µm,21.0s,MS6.1
A14A Double T Ranch 93.57 23 ⇑P P 11 24 18.4 -0.2
baz=93
H04A Detroit Lake 93.68 31 ⇓P P 11 24 19.0 -0.2
baz=93
B13A Whitefish 93.72 24 ⇓P P 11 24 19.0 -0.3
baz=93,SNR=16
D10A Wagner Farm, O 93.79 27 ⇓P P 11 24 19.3 -0.3
baz=94,SNR=11
A15A Johnson Ranch, 93.80 23 ⇓P P 11 24 19.5 -0.2
baz=94
SCHQ Schefferville 93.89 354 P P 11 24 19.2 -0.8
comp=Z,3.4nm,0.7s,mb4.9,baz=39,slow=10,SNR=5.5
SCHQ LR LR 12 09 08.8
comp=Z,8µm,19.2s,MS6.2,baz=357,slow=37
SCHQ Schefferville 93.89 354 eP P 11 24 18.9 -1.1
comp=Z,20nm,0.9s,mb5.5
SCHQ LR LR
comp=Z,11µm,20.0s,MS6.3
E09A Wood Farm, Sta 93.90 27 ⇓P P 11 24 18.8 -1.3
baz=94
G06A Carlson Farm, 93.92 30 ⇑P P 11 24 18.9 -1.3
baz=94
C12B Naegeli Ranch, 93.92 25 ⇓P P 11 24 18.7 -1.6
baz=94
BSMT Bassoo Peak 94.05 25 eP P 11 24 21.7 +0.8
comp=Z,29nm,1.1s,mb5.6
D11A Klaveano Farm, 94.15 26 ⇑P P 11 24 19.6 -1.7
baz=94,SNR=19
A16A West Butte Ran 94.20 22 ⇑P P 11 24 20.4 -1.1
baz=94,SNR=14
C13A Hot Springs 94.27 25 ⇓P P 11 24 20.9 -1.0
baz=94,SNR=11
YBMT Yellow Bay 94.31 24 eP P 11 24 22.8 +0.8
comp=Z,35nm,1.3s,mb5.6
JTMT Jette 94.32 25 eP P 11 24 24.4 +2.3
comp=Z,17nm,1.1s,mb5.4
E10A Myers Farm, Un 94.33 27 ⇓P P 11 24 20.9 -1.2
baz=94
LNOR Lincton Mounta 94.37 28 eP P 11 24 22.8 +0.5
LNOR pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
LNOR Lincton Mounta 94.37 28 eP P 11 24 22.8 +0.5
comp=Z,5.8nm,0.9s,mb5.0
B15A Bradely Ranch, 94.43 23 ⇓P P 11 24 22.0 -0.6
baz=94,SNR=19
C14A Swan Lake 94.49 24 ⇓P P 11 24 22.3 -0.6
baz=94
D12A Red Ives Fores 94.52 26 ⇓P P 11 24 22.3 -0.7
baz=94
G08A Pilot Rock 94.57 29 ⇑P P 11 24 22.2 -1.1
baz=94
SWMT Swartz Lake 94.62 25 eP P 11 24 24.2 +0.7
comp=Z,18nm,1.2s,mb5.4
B16A M & M Farms, S 94.63 23 ⇑P P 11 24 22.3 -1.2
baz=94
F10A Beach Ranch, E 94.70 27 ⇑P P 11 24 23.6 -0.2
baz=94,SNR=14
E11A Bogner Ranch, 94.78 26 ⇓P P 11 24 23.6 -0.6
baz=94,SNR=16
A18A Metzger Ranch, 94.79 21 ⇓P P 11 24 23.3 -0.8
baz=94,SNR=17
D13A Huson 94.81 25 ⇑P P 11 24 23.5 -0.9
baz=94
C15A Salmond Ranch, 94.88 24 ⇑P P 11 24 24.3 -0.4
baz=95,SNR=22
HUMO Hull Mountain 94.97 33 PFAKE 11 24 40.0 +15
HUMO LR LR
comp=Z,6µm,19.0s,MS6.0
E12A Beaver Dam Sad 94.97 26 ⇓P P 11 24 24.1 -1.0
baz=95
SLMT Seeley Lake 95.03 24 eP P 11 24 25.5 +0.2
comp=Z,37nm,1.0s,mb5.8
B17A L&G Farms, Che 95.03 22 ⇓P P 11 24 24.3 -1.0
baz=95,SNR=16
G09A Cove 95.06 28 ⇑P P 11 24 24.8 -0.7
baz=95
C16A Fuhringer Ranc 95.15 23 ⇓P P 11 24 25.5 -0.4
baz=95,SNR=11
D14A Greenough 95.16 24 ⇓P P 11 24 25.2 -0.7
baz=95,SNR=16
F11A Grangeville 95.19 27 ⇑P P 11 24 25.5 -0.6
baz=95,SNR=17
MSO Missoula 95.22 25 eP P 11 24 26.2 0.0
comp=Z,12nm,0.9s,mb5.3
MSO LR LR
comp=Z,5µm,19.0s,MS6.0
B18A Beardsley Farm 95.27 22 ⇓P P 11 24 26.0 -0.4
baz=95
H08A Prairie City 95.32 29 ⇓P P 11 24 26.1 -0.6
baz=95
I07A Izee 95.32 30 ⇑P P 11 24 25.6 -1.1
baz=95
CHMT Chamberlain Mo 95.39 24 eP P 11 24 26.5 -0.5
comp=Z,7.8nm,1.1s,mb5.0
BOSA Boshof 95.40 240 P P 11 24 26.4 -0.7
comp=Z,2.4nm,0.6s,mb4.8,baz=46,slow=3.4,SNR=7.9
BOSA LR LR 12 04 04.4
comp=Z,4µm,21.5s,MS5.9,baz=62,slow=33
BOSA Boshof 95.40 240 P P 11 24 26.4 -0.7
BOSA LR LR 12 04 04.4
E13A Victor 95.46 25 ⇓P P 11 24 26.7 -0.6
baz=95,SNR=17
D15A Lincoln 95.54 24 ⇑P P 11 24 26.9 -0.8
baz=95
G11A Walters Elk Ra 95.56 27 ⇓P P 11 24 27.0 -0.8
baz=95
BMO Blue Mountains 95.60 28 eP P 11 24 29.3 +1.3
BMO pmax pmax
comp=Z,21nm,1.4s,mb5.4
BMO MLR MLR
comp=Z,6µm,20.0s,MS6.0
BMO Blue Mountains 95.60 28 eP P 11 24 29.3 +1.3
comp=Z,21nm,1.4s,mb5.4
BMO LR LR
comp=Z,6µm,20.0s,MS6.0
EGMT Eagleton 95.61 22 ⇓P P 11 24 27.3 -0.6
baz=95
EGMT Eagleton 95.61 22 eP P 11 24 27.7 -0.2
comp=Z,42nm,1.3s,mb5.7
H09A Durkee 95.61 28 ⇑P P 11 24 26.8 -1.3
baz=95
C17A Wharram Farm, 95.62 23 ⇓P P 11 24 26.7 -1.4
baz=95
F12A Elk City 95.64 26 ⇑P P 11 24 27.3 -0.9
baz=95
E14A Clinton 95.73 25 ⇓P P 11 24 27.9 -0.6
baz=96
YBH Yreka Blue Hor 95.76 33 PFAKE 11 24 40.0 +11
YBH LR LR
comp=Z,4µm,19.0s,MS6.0
RAO Raoul Island 95.80 121 PFAKE 11 24 40.0 +11
RAO LR LR
comp=Z,2µm,19.0s,MS5.6
K05A Summer Lake 95.81 31 ⇑P P 11 24 28.4 -0.5
baz=96
D16A Dana Ranch, Ca 95.89 23 ⇑P P 11 24 28.3 -0.9
baz=96,SNR=11
F13A Darby 95.96 26 ⇑P P 11 24 29.2 -0.4
baz=96
E15A Deer Lodge 96.03 24 ⇑P P 11 24 29.6 -0.3
baz=96,SNR=10
HRY Holter Researc 96.07 24 eP P 11 24 31.0 +0.9
comp=Z,14nm,1.0s,mb5.4
D17A Six Diamond Ra 96.07 23 ⇓P P 11 24 29.2 -0.9
baz=96
H11A Donnelly 96.24 27 ⇓P P 11 24 30.0 -0.9
baz=96
E16A East Helena 96.27 24 ⇓P P 11 24 30.3 -0.7
baz=96
D18A Linhart Farms, 96.32 22 ⇓P P 11 24 31.2 0.0
baz=96
J08A Circle Bar Ran 96.34 29 ⇑P P 11 24 30.9 -0.5
baz=96
TSUM Tsumeb 96.48 252 PFAKE 11 24 40.0 +7.7
TSUM LR LR
comp=Z,3µm,21.0s,MS5.7
CMLA Cha da Macela 96.54 322 PFAKE 11 24 40.0 +7.6
CMLA LR LR
comp=Z,5µm,21.0s,MS6.0
XMAS Kiritimati 96.58 84 PFAKE 11 24 40.0 +7.0
XMAS LR LR
comp=Z,3µm,20.0s,MS5.8
F15A Butte 96.59 25 ⇑P P 11 24 32.4 -0.1
baz=96
G13A Cobalt 96.59 26 ⇑P P 11 24 31.6 -0.9
baz=96
E17A Martinsdale 96.61 23 ⇓P P 11 24 32.1 -0.4
baz=96,SNR=7.9
LRM Limekiln Ridge 96.62 24 eP P 11 24 34.3 +1.7
comp=Z,51nm,1.0s,mb5.9
J09A Fry Pan Ranch, 96.66 29 ⇑P P 11 24 32.1 -0.7
baz=96
MOD Modoc 96.73 31 eP P 11 24 34.2 +1.1
comp=Z,20nm,1.3s,mb5.4
MOD LR LR
comp=Z,5µm,19.0s,MS6.0
WDC Whiskeytown Da 96.74 34 PFAKE 11 24 40.0 +6.7
WDC LR LR
comp=Z,6µm,20.0s,MS6.1
G14A Jackson 96.75 25 ⇑P P 11 24 32.5 -0.7
baz=96
H12A Diamond D Ranc 96.81 27 ⇓P P 11 24 32.9 -0.6
baz=96
DGMT Dagmar 96.83 18 ⇓P P 11 24 32.6 -0.9
baz=96
DGMT Dagmar 96.83 18 eP P 11 24 35.2 +1.7
comp=Z,41nm,1.2s,mb5.7
DGMT LR LR
comp=Z,9µm,21.0s,MS6.2
E18A Harlowton 96.84 23 ⇓P P 11 24 33.0 -0.6
baz=96
I11A Placerville 96.92 28 ⇓P P 11 24 32.9 -1.1
baz=97
DLMT Dillon 96.96 25 eP P 11 24 34.3 +0.1
comp=Z,25nm,1.3s,mb5.5
WVOR Wild Horse Val 97.03 30 eP P 11 24 36.7 +2.2
WVOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
WVOR MLR MLR
comp=Z,4µm,19.0s,MS6.0
WVOR Wild Horse Val 97.03 30 eP P 11 24 36.7 +2.2
comp=Z,9.3nm,1.0s,mb5.2
WVOR LR LR
comp=Z,4µm,19.0s,MS6.0
H13A Challis 97.03 26 ⇑P P 11 24 33.7 -0.8
baz=97
ULM Lac du Bonnet 97.05 12 P P 11 24 34.3 -0.1
comp=Z,1.6nm,0.6s,mb4.6,baz=342,slow=3.2,SNR=2.7
ULM LR LR 12 15 32.1
comp=Z,4µm,18.6s,MS6.0,baz=340,slow=40
BOZ Bozeman (W) 97.06 24 ⇓P P 11 24 34.3 -0.3
baz=97
BOZ Bozeman (W) 97.06 24 eP P 11 24 35.5 +0.9
BOZ pmax pmax
comp=Z,3.0nm,0.5s,mb5.0
BOZ MLR MLR
comp=Z,7µm,21.0s,MS6.1
BOZ Bozeman (W) 97.06 24 eP P 11 24 35.5 +0.9
comp=Z,2.8nm,0.5s,mb5.0
BOZ LR LR
comp=Z,7µm,21.0s,MS6.1
F17A Fitzpatrick Pl 97.17 23 ⇓P P 11 24 34.7 -0.3
baz=97,SNR=14
G15A Dillon 97.17 25 ⇑P P 11 24 34.8 -0.3
baz=97,SNR=18
H14A Leadore 97.32 26 ⇓P P 11 24 35.1 -0.7
baz=97
MCMT McKenzie Canyo 97.33 25 eP P 11 24 36.1 +0.3
comp=Z,5.0nm,1.0s,mb4.9
I12A Atlanta 97.34 27 ⇑P P 11 24 35.7 -0.2
baz=97
CASY Casey 97.35 177 eP P 11 24 37.8 +2.7
CASY Casey 97.35 177 eP P 11 24 34.5 -0.6
comp=Z,41nm,1.5s,mb5.6
CASY LR LR
comp=Z,6µm,22.0s,MS6.0
G16A Moss Hill, Enn 97.36 24 ⇓P P 11 24 34.5 -1.5
baz=97
SNZO South Karori 97.48 134 PFAKE 11 24 50.0 +14
SNZO LR LR
comp=Z,3µm,22.0s,MS5.8
F18A Big Timber 97.48 23 ⇑P P 11 24 36.3 -0.2
baz=97,SNR=10
K10A MacKenzie Ranc 97.49 29 ⇓P P 11 24 36.0 -0.6
baz=97
GCMT Greycliff 97.60 23 eP P 11 24 35.5 -1.5
comp=Z,17nm,1.2s,mb5.5
I13A Wildhorse Cree 97.63 27 ⇑P P 11 24 36.1 -1.1
baz=97
G17A Pierce Place, 97.65 24 ⇓P P 11 24 36.7 -0.6
baz=97
HOPS Hopland 97.72 35 PFAKE 11 24 50.0 +12
HOPS LR LR
comp=Z,5µm,21.0s,MS6.0
J12A Stokes Ranch, 97.81 27 ⇓P P 11 24 37.6 -0.5
baz=98
HLID Hailey 97.82 27 ⇑P P 11 24 37.6 -0.5
baz=98
HLID Hailey 97.82 27 eP P 11 24 38.8 +0.8
comp=Z,52nm,1.7s,mb5.8
HLID LR LR
comp=Z,6µm,20.0s,MS6.0
QLMT Earthquake Lak 97.84 24 eP P 11 24 40.0 +1.9
comp=Z,1.2nm,0.4s,mb4.8
K11A Parker Ranch, 97.84 28 ⇓P P 11 24 37.4 -0.7
baz=98
LAO LASA Array 97.88 20 PFAKE 11 24 50.0 +12
LAO LR LR
comp=Z,8µm,19.0s,MS6.2
H16A Russell Place, 98.01 24 ⇓P P 11 24 37.8 -1.1
baz=98
J13A Cove Ranch, Pi 98.05 27 ⇓P P 11 24 38.9 -0.3
baz=98
RLMT Red Lodge 98.32 23 ⇓P P 11 24 40.3 0.0
baz=98,SNR=6.4
RLMT Red Lodge 98.32 23 PFAKE 11 24 50.0 +10
RLMT LR LR
comp=Z,7µm,20.0s,MS6.1
K12A Draper Farm, C 98.41 28 ⇑P P 11 24 40.6 -0.1
baz=98
LKWY Lake 98.43 24 eP P 11 24 44.5 +3.7
LKWY pmax pmax
comp=Z,36nm,1.5s,mb5.7
LKWY MLR MLR
comp=Z,12µm,20.0s,MS6.4
LKWY Lake 98.43 24 eP P 11 24 44.5 +3.8
comp=Z,36nm,1.5s,mb5.7
LKWY LR LR
comp=Z,12µm,20.0s,MS6.4
L11A Cat Creek Ranc 98.46 28 ⇓P P 11 24 39.8 -1.1
baz=98
MCCM Marconi Confer 98.48 35 PFAKE 11 24 50.0 +8.9
MCCM LR LR
comp=Z,5µm,21.0s,MS6.0
IMW Indian Meadow 98.82 25 eP P 11 24 45.1 +2.6
comp=Z,14nm,1.2s,mb5.4
AGMN Agassiz Refuge 98.92 13 PFAKE 11 24 50.0 +7.1
AGMN LR LR
comp=Z,10µm,21.0s,MS6.3
BMN Battle Mountai 99.28 30 PFAKE 11 25 00.0 +15
BMN LR LR
comp=Z,5µm,19.0s,MS6.1
J18A Kendall Valley 99.75 24 ⇓P Pdif 11 24 44.6 -2.0
baz=100
AHID Auburn Hatcher 99.75 25 PFAKE 11 25 00.0 +13
AHID LR LR
comp=Z,5µm,20.0s,MS6.0
CMB Columbia Colle 99.78 34 PFAKE 11 25 00.0 +13
CMB LR LR
comp=Z,4µm,21.0s,MS5.9
M13A Montello 99.78 28 ⇓P Pdif 11 24 45.3 -1.5
baz=100
M13A Montello 99.78 28 ePdif Pdif 11 24 48.9 +2.2
comp=Z,10nm,1.2s
N12A Clover Valley, 99.85 29 ePdif Pdif 11 24 50.5 +3.4
comp=Z,15nm,1.4s
ELK Elko 99.86 29 PFAKE 11 25 00.0 +13

ELK LR LR
comp=Z,6μm,20.0s,MS6.1
M14A Sheep Mountain 99.98 27 ⇓P Pdif 11 24 46.2 -1.5
baz=100
EYMN Ely 100.02 10 PFAKE 11 25 00.0 +12
EYMN LR LR
comp=Z,7μm,20.0s,MS6.2
N13A Wendover, West 100.19 28 *e*Pdif Pdif 11 24 51.9 +3.3
comp=Z,6.7nm,0.6s
SAO San Andreas Ge 100.27 35 PFAKE 11 25 00.0 +11
SAO LR LR
comp=Z,4μm,19.0s,MS6.0
BW06 Boulder Array 100.30 24 PFAKE 11 25 00.0 +11
BW06 LR LR
comp=Z,10μm,19.0s,MS6.3
PDAR Pinedale Array 100.30 24 P Pdif 11 24 50.1 +1.0
comp=Z,0.6nm,0.7s,baz=67,slow=3.6,SNR=6.2
PDAR PP PP 11 28 54.1 -0.1
comp=Z,1.9nm,1.1s,baz=285,slow=3.5,SNR=6.2
PDAR PKKP PKKPbc 11 41 14.3 +8.4
comp=Z,0.2nm,0.8s,baz=105,slow=3.1,SNR=3.4
NVAR Mina Array Bea 100.43 32 P Pdif 11 24 54.2 +4.5
comp=Z,0.5nm,0.8s,baz=290,slow=2.7,SNR=3.3
NVAR PP PP 11 28 58.7 +3.3
comp=Z,4.1nm,1.0s,baz=318,slow=7.5,SNR=4.7
NVAR PKKP PKKPbc 11 41 13.1 +7.8
comp=Z,0.6nm,0.7s,baz=128,slow=2.6,SNR=3.8
NVAR Mina Array Bea 100.43 32 P Pdif 11 24 54.2 +4.5
NVAR PP PP 11 28 58.7 +3.3
NVAR PKKP PKKPbc 11 41 13.1 +7.8
HWUT Hardware Ranch 100.58 26 PFAKE 11 25 00.0 +10
HWUT LR LR
comp=Z,10μm,21.0s,MS6.3
SUR Sutherland 100.62 239 PFAKE 11 25 00.0 +9.5
SUR LR LR
comp=Z,3μm,19.0s,MS5.8
RSSD Black Hills 100.86 20 *e*P Pdif 11 24 50.9 -0.7
RSSD pmax pmax
comp=Z,15nm,0.9s
RSSD MLR MLR
comp=Z,5μm,19.0s,MS6.1
RSSD Black Hills 100.86 20 *e*Pdif Pdif 11 24 50.9 -0.7
comp=Z,15nm,0.9s
RSSD LR LR
comp=Z,5μm,19.0s,MS6.1
TPH Tonopah 101.21 32 PFAKE 11 25 10.0 +17
TPH LR LR
comp=Z,4μm,21.0s,MS5.8
R10A Warm Springs 101.45 31 ⇓P Pdif 11 24 53.9 -0.3
baz=101
S10A Tonopah Range, 101.62 31 ⇓P Pdif 11 24 54.1 -0.8
baz=101
DBIC Dimbokro 102.13 286 P Pdif 11 24 59.2 +2.0
comp=Z,2.4nm,0.7s,baz=37,slow=4.6,SNR=3.0
DBIC PP PP 11 29 10.5 +1.0
comp=Z,15nm,1.0s,baz=36,slow=8.2,SNR=5.9
DBIC Dimbokro 102.13 286 P Pdif 11 24 59.2 +2.0
DBIC PP PP 11 29 10.5 +1.0
DBIC LR LR
comp=Z,6μm,21.0s,MS6.1
COWI Conover 102.16 9 PFAKE 11 25 10.0 +13
COWI LR LR
comp=Z,8μm,19.0s,MS6.2
KIC Kosan Boka 102.21 285 *e*PKP1 PP 11 29 09.9 -0.2
comp=Z,70nm,1.3s
TIC Toumodi 102.28 286 *e*PKP1 PP 11 29 10.5 -0.2
comp=Z,8.2nm,0.2s
DAC Darwin (Calif) 102.51 33 PFAKE 11 25 10.0 +11
DAC LR LR
comp=Z,4μm,22.0s,MS5.8
LIC Lamto 102.52 285 *e*PKP1 PP 11 29 10.9 -1.6
comp=Z,58nm,1.3s
MVU Marysvale 103.00 28 PFAKE 11 25 10.0 +8.9
MVU LR LR
comp=Z,6μm,21.0s,MS6.1
ECSD EROS Data Cent 103.12 15 PFAKE 11 25 10.0 +8.3
ECSD LR LR
comp=Z,6μm,20.0s,MS6.2
MAW Mawson 103.18 195 PKKPbc PKKPbc 11 40 59.1 +0.4
comp=Z,3.3nm,0.8s,baz=225,slow=3.4,SNR=4.4
PKME Peaks-Kenny Pk 103.59 355 PFAKE 11 25 20.0 +16
PKME LR LR
comp=Z,10μm,21.0s,MS6.3
GLMI Grayling 103.93 6 PFAKE 11 25 20.0 +15
GLMI LR LR
comp=Z,7μm,19.0s,MS6.2
ISCO Idaho Springs 104.29 23 PFAKE 11 25 20.0 +13
ISCO LR LR
comp=Z,9μm,21.0s,MS6.3
OGNE Ogallala 104.36 20 PFAKE 11 25 20.0 +13
OGNE LR LR
comp=Z,7μm,19.0s,MS6.2
LONY Lake Ozonia 104.49 359 PFAKE 11 25 20.0 +12
LONY LR LR
comp=Z,5μm,21.0s,MS6.0
LBNH Lisbon 104.78 357 PFAKE 11 25 20.0 +11
LBNH LR LR
comp=Z,8μm,21.0s,MS6.2
NCB Newcomb 105.13 358 PFAKE 11 29 40.0 +15
NCB LR LR
comp=Z,5μm,20.0s,MS6.0
PFO Pinyon Flat Ob 105.23 34 PFAKE 11 29 40.0 +15
PFO LR LR
comp=Z,1μm,21.0s,MS5.4
SCIA State Center 105.58 13 PFAKE 11 29 40.0 +14
SCIA LR LR
comp=Z,9μm,21.0s,MS6.3
WUAZ Wupatki 105.90 29 PFAKE 11 29 40.0 +13
WUAZ LR LR
comp=Z,5μm,21.0s,MS6.1
RAR Rarotonga 106.11 105 PFAKE 11 29 40.0 +13
RAR LR LR
comp=Z,1μm,19.0s,MS5.5
SDCO Great Sand Dun 106.17 24 PFAKE 11 29 40.0 +13
SDCO LR LR
comp=Z,6μm,21.0s,MS6.1
AAM Ann Arbor 106.52 6 PFAKE 11 29 40.0 +12
AAM LR LR
comp=Z,8μm,22.0s,MS6.2
BINY Binghamton 106.92 360 PFAKE 11 29 40.0 +12
BINY LR LR
comp=Z,5μm,20.0s,MS6.0
ERPA Erie 106.93 3 PFAKE 11 29 40.0 +12
ERPA LR LR
comp=Z,6μm,21.0s,MS6.2
CBKS Cedar Bluff 106.99 19 PFAKE 11 29 40.0 +11
CBKS LR LR
comp=Z,10μm,19.0s,MS6.4
KSU1 Kansas State U 107.53 16 PFAKE 11 29 40.0 +10
KSU1 LR LR
comp=Z,12μm,19.0s,MS6.5
HDIL Hopedale 107.57 10 PFAKE 11 29 40.0 +10
HDIL LR LR
comp=Z,6μm,20.0s,MS6.2
ANMO Albuquerque 108.33 26 *e*PKPdf PKiKP 11 29 32.9 +1.7
ANMO LR LR
comp=Z,6μm,19.0s,MS6.2
SSPA Standing Stone 108.47 1 PFAKE 11 29 40.0 +8.7
SSPA LR LR
comp=Z,6μm,20.0s,MS6.2
ACSO Alum Creek Sta 108.63 5 PFAKE 11 29 40.0 +8.4
ACSO LR LR
comp=Z,6μm,19.0s,MS6.2
TUC Tucson 108.90 30 PFAKE 11 29 40.0 +7.7
TUC LR LR
comp=Z,5μm,21.0s,MS6.1
MCWV Mont Chateau 109.39 3 PFAKE 11 29 40.0 +6.9
MCWV LR LR
comp=Z,6μm,19.0s,MS6.2
CCM Cathedral Cave 109.68 12 PFAKE 11 29 50.0 +16
CCM LR LR
comp=Z,8μm,22.0s,MS6.2
AMTX Amarillo 110.05 22 PFAKE 11 29 50.0 +16
AMTX LR LR
comp=Z,6μm,21.0s,MS6.1
WCI Wyandotte Cave 110.27 8 PFAKE 11 29 50.0 +15
WCI LR LR
comp=Z,4μm,19.0s,MS6.0
CBN Corbin 110.91 1 PFAKE 11 29 50.0 +14
CBN LR LR
comp=Z,5μm,20.0s,MS6.0
WMOK Wichita Mounta 111.07 20 PFAKE 11 29 50.0 +14
WMOK LR LR
comp=Z,6μm,19.0s,MS6.2
MNTX Cornudas Mount 111.64 26 PFAKE 11 29 50.0 +12
MNTX LR LR
comp=Z,5μm,20.0s,MS6.1
WVT Waverly 112.13 10 PFAKE 11 29 50.0 +12
WVT LR LR
comp=Z,5μm,19.0s,MS6.1
PPT Papeete 113.01 97 *e*PS PS 11 39 53.9 -11
comp=Z,2μm,25.2s
PPT *e*SS SS 11 45 59.6 -14
comp=Z,2μm,30.5s
PPT *e*LQ 11 58 41.6
comp=Z,10μm,35.2s
PPT *e*LR LR 12 03 27.2
comp=Z,4μm,24.0s
OXF Oxford 113.46 12 PFAKE 11 29 50.0 +9.1
OXF LR LR
comp=Z,6μm,21.0s,MS6.2
TXAR Lajitas Array 114.40 26 Pdiff Pdif 11 26 02.0 +10
comp=Z,0.3nm,1.0s,baz=298,slow=3.8,SNR=2.6
TXAR PKP PKiKP 11 29 41.9 -1.0
comp=Z,0.3nm,0.5s,baz=30,slow=0.1,SNR=9.2
TXAR PP PP 11 30 40.4 +2.7
comp=Z,2.5nm,1.0s,baz=347,slow=7.5,SNR=5.2
TXAR PKKPbc PKKPbc 11 40 20.9 -0.9
comp=Z,1.8nm,1.1s,baz=160,slow=6.6,SNR=6.5
TXAR Lajitas Array 114.40 26 Pdif Pdif 11 26 02.0 +10
TXAR PKP PKiKP 11 29 41.9 -1.0
TXAR PP PP 11 30 40.4 +2.7
TXAR PKKPbc PKKPbc 11 40 20.9 -0.9
JCT Junction City 114.71 22 PFAKE 11 30 00.0 +17
JCT LR LR
comp=Z,8μm,20.0s,MS6.3
SBA Scott Base 114.98 168 PFAKE 11 29 50.0 +7.6
SBA LR LR
comp=Z,4μm,21.0s,MS6.0
NATX Nacogdoches 114.99 17 PFAKE 11 30 00.0 +16
NATX LR LR
comp=Z,8μm,20.0s,MS6.3
LRAL Lakeview Retre 115.29 10 PFAKE 11 30 00.0 +16
LRAL LR LR
comp=Z,6μm,20.0s,MS6.2
GOGA Godfrey 115.35 7 PFAKE 11 30 00.0 +15
GOGA LR LR
comp=Z,8μm,20.0s,MS6.3
VBMS Vicksburg 115.48 13 PFAKE 11 30 00.0 +15
VBMS LR LR
comp=Z,8μm,19.0s,MS6.3
BBSR BB Station 115.78 349 PFAKE 11 30 00.0 +15
BBSR LR LR
comp=Z,3μm,20.0s,MS5.9
NHSC New Hope 115.90 4 PFAKE 11 30 00.0 +14
NHSC LR LR
comp=Z,7μm,19.0s,MS6.3
HKT Hockley 116.40 19 PFAKE 11 30 00.0 +13
HKT LR LR
comp=Z,6μm,22.0s,MS6.1
TAOE Nuku Hiva Isla 116.94 84 *e*PS PS 11 40 35.1 -5.4
comp=Z,2μm,27.7s
TAOE *e*SS SS 11 47 03.2 -2.0
comp=Z,1μm,26.4s
TAOE *e*LR LR 12 05 15.0
comp=Z,4μm,27.3s
BRAL Brewton 117.27 10 PFAKE 11 30 00.0 +12
BRAL LR LR
comp=Z,8μm,20.0s,MS6.3
KVTX Kingsville 118.04 22 PFAKE 11 30 00.0 +10
KVTX LR LR
comp=Z,6μm,20.0s,MS6.2
MAIT Maitri 119.75 202 *e*PKPab PKPdf 11 29 50.6 -1.1
DWPF Disney 120.79 5 PFAKE 11 30 10.0 +15
DWPF LR LR
comp=Z,7μm,20.0s,MS6.3
QSPA South Pole Qui 121.01 180 *e*PKPdf PKPdf 11 29 52.4 -1.5
QSPA LR LR
comp=Z,3μm,21.0s,MS6.0
GRTK Grand Turk 127.31 354 PFAKE 11 30 20.0 +12
GRTK LR LR
comp=Z,7μm,19.0s,MS6.4
GTBY Guantanamo Bay 129.12 358 PFAKE 11 30 20.0 +8.7
GTBY LR LR
comp=Z,6μm,20.0s,MS6.2
SDDR Presa de Saban 129.83 354 PFAKE 11 30 20.0 +7.3
SDDR LR LR
comp=Z,4μm,20.0s,MS6.1
SJG San Juan 129.96 347 PFAKE 11 30 20.0 +7.0
SJG LR LR
comp=Z,8μm,19.0s,MS6.4
MTDJ Mount Denham 130.81 1 PFAKE 11 30 30.0 +15
MTDJ LR LR
comp=Z,6μm,20.0s,MS6.3
FDF Fort de France 132.01 340 PFAKE 11 30 30.0 +13
FDF LR LR
comp=Z,2μm,22.0s,MS5.8
BBGH Gun Hill 133.01 337 PFAKE 11 30 30.0 +11
BBGH LR LR
comp=Z,4μm,20.0s,MS6.2
TGUH Tegucigalpa,Un 133.76 15 *e*PKPdf PKPdf 11 30 22.3 +2.1
TGUH LR LR
comp=Z,4μm,21.0s,MS6.1
RCBR Riachuelo 134.45 295 PFAKE 11 30 30.0 +8.5
RCBR LR LR
comp=Z,4μm,19.0s,MS6.1
GRGR Grenville 134.62 340 PFAKE 11 30 30.0 +8.2
GRGR LR LR
comp=Z,3μm,21.0s,MS5.9
JTS JuntasAbangare 137.90 13 PFAKE 11 30 40.0 +12
JTS LR LR
comp=Z,3μm,21.0s,MS6.0
BCIP Isla Barro Col 139.69 5 PFAKE 11 30 40.0 +8.8
BCIP LR LR
comp=Z,4μm,19.0s,MS6.1
SDV Santo Domingo 139.73 351 PKhKP 11 30 22.0
comp=Z,4.7nm,0.7s,baz=23,slow=1.3,SNR=7.4
SDV PKP PKPdf 11 30 29.6 -1.7
comp=Z,15nm,0.8s,baz=30,slow=2.6,SNR=13
SDV PP PP 11 33 21.7 -3.4
comp=Z,7.8nm,0.7s,baz=48,slow=4.9,SNR=3.1
SDV Santo Domingo 139.73 351 PKP 11 30 22.0
SDV PKP PKPdf 11 30 29.6 -1.7
SDV PP PP 11 33 21.7 -3.4
SDV LR LR
comp=Z,770nm,20.0s,MS5.5
ROSC El Rosal 144.06 357 PKP PKPdf 11 30 37.4 -1.6
comp=Z,17nm,0.5s,baz=353,slow=2.7,SNR=9.0
ROSC El Rosal 144.06 357 *e*PKPdf PKPdf 11 30 37.4 -1.6
PMSA Palmer Station 145.58 189 PFAKE 11 30 50.0 +10
PMSA LR LR
comp=Z,3μm,19.0s,MS6.1
PAYG Puerto Ayora 146.87 26 *e*PKPbc PKPbc 11 30 46.2 +0.6
PAYG LR LR
comp=Z,3μm,22.0s,MS6.0
OTAV Otavalo 148.63 4 *e*PKPdf PKPdf 11 30 49.0 +2.2
OTAV LR LR
comp=Z,2μm,21.0s,MS5.9
RPN Rapa Nui 150.99 90 PKPbc PKPbc 11 30 57.4 +1.5
comp=Z,107nm,1.0s,baz=316,slow=2.1,SNR=3.2
SPB Sao Paulo 153.26 279 *e*PKPbc PKPbc 11 31 02.5 +1.4
SPB LR LR
comp=Z,3μm,21.0s,MS6.1
EFI East Falkland 155.53 208 PFAKE 11 31 10.0 +14
EFI LR LR
comp=Z,2μm,20.0s,MS6.0
ATAH Atahualpa 155.95 5 PKPbc PKPdf 11 31 09.8 +12
comp=Z,12nm,1.0s,baz=121,slow=3.4,SNR=6.2
ATAH PKPab PKPab 11 31 24.6 +0.3
comp=Z,15nm,0.8s,baz=118,slow=4.0,SNR=5.7
SIV San Ignacio 159.38 314 PKP PKPdf 11 31 01.5 -0.2
comp=Z,2.8nm,1.0s,baz=297,slow=1.3,SNR=10.0
SIV PKPab PKPab 11 31 40.5 +1.3
comp=Z,5.6nm,0.8s,baz=70,slow=2.6,SNR=6.4
NNA Nana 160.84 1 PFAKE 11 31 10.0 +6.6
NNA LR LR
comp=Z,2μm,21.0s
CPUP Villa Florida 162.61 282 PKP PKPdf 11 31 04.2 -0.8
comp=Z,4.1nm,0.8s,baz=52,slow=1.5,SNR=11
CPUP PKPab PKPab 11 31 52.1 -1.2
comp=Z,1.6nm,0.6s,baz=73,slow=4.0,SNR=1.8
CPUP Villa Florida 162.61 282 PKP PKPdf 11 31 04.2 -0.8
CPUP PKPab PKPab 11 31 52.1 -1.2
CPUP LR LR
comp=Z,571nm,19.0s
LPAZ La Paz 163.33 331 PKP PKPdf 11 31 06.2 +0.4
comp=Z,5.6nm,0.9s,baz=9.7,slow=3.1,SNR=15
LPAZ La Paz 163.33 331 PKIKP PKPdf 11 31 06.3 +0.4
LPAZ pmax pmax
comp=Z,6.0nm,0.9s
LPAZ La Paz 163.33 331 *e*PKPdf PKPdf 11 31 07.5 +1.7
LPAZ LR LR
comp=Z,4μm,21.0s
TRQA Tornquist 166.35 236 *e*PKPdf PKPdf 11 31 09.0 +1.1
TRQA LR LR
comp=Z,2μm,20.0s
LVC Limon Verde 169.14 320 PKP PKPdf 11 31 11.3 +1.0
comp=Z,3.1nm,0.7s,baz=68,slow=5.4,SNR=2.9
LVC PKPab PKPab 11 32 22.0 0.0
comp=Z,9.8nm,0.9s,baz=37,slow=4.0,SNR=5.1
LVC PP PP 11 36 21.5 +11
comp=Z,2.8nm,0.8s,baz=66,slow=6.2,SNR=3.0
LVC Limon Verde 169.14 320 *e*PKPdf PKPdf 11 31 11.1 +0.8
LVC LR LR
comp=Z,2μm,22.0s
PLCA Paso Flores 169.42 205 PKP PKPdf 11 31 10.6 +0.7
comp=Z,12nm,1.1s,baz=338,slow=0.5,SNR=4.2
PLCA PKPab PKPab 11 32 21.4 -1.2
comp=Z,8.3nm,0.9s,baz=150,slow=5.4,SNR=5.2
PLCA PP PP 11 36 15.4 +3.6
comp=Z,4.0nm,1.1s,baz=200,slow=5.3,SNR=2.9
PLCA Paso Flores 169.42 205 PKP PKPdf 11 31 10.6 +0.7
PLCA PKPab PKPab 11 32 21.4 -1.3
PLCA PP PP 11 36 15.4 +3.6
PLCA LR LR
comp=Z,3μm,21.0s
CFAA Coronel Fontan 173.04 265 PKP PKPdf 11 31 13.5 +1.4
comp=Z,1.1nm,0.8s,baz=2.2,slow=1.7,SNR=4.7
CFAA PKPab PKPab 11 32 40.9 +1.6
comp=Z,0.5nm,0.8s,baz=124,slow=4.1,SNR=3.0
CFAA PP PP 11 36 39.8 +8.3
comp=Z,0.3nm,0.7s,baz=58,slow=9.5,SNR=3.0
LCO Las Campanas 174.61 293 PKPdf PKPdf 11 31 14.0 +1.4
LCO LR LR
comp=Z,3μm,22.0s

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*ISCJB **12** 11:18:35.4±0.8, 31°.9N±0°.2×104°.6E±0°.2, h10km, mb4.0/9, Error ellipse: s-maj=29.1km s-min=16.2km az=142.3*
*IDC **12** 11:18:36.0±1.0, 32°.02N×104°.72E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.9/26, mbtmp4.0/9, Error ellipse: s-maj=59.7km s-min=19.6km az=59.0*
*NEIC **12** 11:18:37.6±0.6, 32°.01N×104°.70E, h10km, Error ellipse: s-maj=18.7km s-min=11.1km az=51.0*
ISC 12 11:18:37.6±0.8, 32°.0N±0°.1×104°.7E±0°.2, h10km, n10, σ0s35/10, mb4.0/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.64**	**317**	P		**P**	**11 23 39.0**	**+0.2**
	2.5nm,0.8s,mb3.7,baz=120,slow=13,SNR=4.1							
MDJ	**Mudanjiang**	**23.13**	**50**	P		**P**	**11 23 43.9**	**0.0**
ZALV	**Zalesovo Beam**	**26.14**	**333**	P		**P**	**11 24 12.1**	**+0.4**
	2.2nm,0.3s,mb4.2,baz=136,slow=10,SNR=4.7							
ARCES	**ARCESS Array B**	**56.64**	**336**	P		**P**	**11 28 20.4**	**0.0**
	2.1nm,0.7s,mb4.3,baz=73,slow=6.9,SNR=6.0							
FINES	**FINESS Array B**	**57.10**	**326**	P		**P**	**11 28 23.6**	**-0.3**
	2.3nm,0.8s,mb4.3,baz=60,slow=4.6,SNR=3.7							
WRA	**Warramunga Arr**	**58.95**	**147**	P		**P**	**11 28 37.1**	**-0.1**
	1.6nm,0.5s,mb4.3,baz=340,slow=7.6,SNR=4.9							
ASAR	**Alice Springs**	**62.01**	**150**	P		**P**	**11 28 58.4**	**+0.3**
	0.8nm,0.6s,mb4.0,baz=333,slow=6.7,SNR=5.0							
HFS	**Hagfors**	**63.31**	**326**	P		**P**	**11 29 06.0**	**-0.4**
	1.1nm,0.5s,mb4.2,baz=105,slow=17,SNR=3.6							
INK	**Inuvik**	**71.13**	**20**	P		**P**	**11 29 56.4**	**+0.5**
	1.2nm,0.7s,mb4.0,baz=318,slow=4.3,SNR=3.5							
YKA	**Yellowknife Ar**	**80.68**	**17**	P		**P**	**11 30 49.8**	**-0.6**
	0.5nm,0.6s,mb3.6,baz=327,slow=5.2,SNR=4.2							

MAN 12 11:20:34, 13°.76N×120°.71E, h6km, mb4.0, ML2.8, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**138**	*e*P		Pg	11 20 42.1	+1.4
LUBP	**Lubang**	**0.46**	**267**	*e*P		Pg	11 20 43.8	+1.0
LUBP				*e*S		Sg	11 20 48.5	-0.3
BOAC	**Boac**	**1.14**	**105**	*e*P		Pg	11 20 58.3	+2.4
BOAC				*e*S		Sg	11 21 12.8	+2.2
SJMP	**San Jose**	**1.35**	**163**	*e*P		Pn	11 20 59.2	-0.2
SJMP				*e*S		Sb	11 21 07.3	-10

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*ISCJB **12** 11:24:06.0±0.9, 31°.20N±0°.07×104°.0E±0°.1, h10km, mb3.6/5, Error ellipse: s-maj=18.4km s-min=8.3km az=19.7*
*IDC **12** 11:24:06.3±1.1, 31°.28N×104°.08E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/25, mbtmp3.7/6, Error ellipse: s-maj=69.3km s-min=18.3km az=59.0*
*NEIC **12** 11:24:08.0±0.8, 31°.27N×104°.02E, h10km, Error ellipse: s-maj=29.5km s-min=12.3km az=72.0*
ISC 12 11:24:08.1±0.9, 31°.19N±0°.06×103°.9E±0°.2, h10km, n9, σ0s87/11, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**199**	Pg		**Pg**	**11 24 12.9**	**-1.1**
CD2				Sg		**Sg**	**11 24 17.9**	**0.0**
CD2				smax				
	comp=N,8μm,0.7s							
LZH	**Lanzhou**	**4.89**	**360**	*e*Pg		**Pg**	**11 25 48.9**	**+7.2**
LZH				Sg		**Sg**	**11 26 38.7**	**-6.3**
LZH				smax				
	comp=N,130nm,0.7s							
LZH				smax				
	comp=E,210nm,0.5s							
CMAR	**Chiang Mai Arr**	**13.44**	**201**	Pn		**Pn**	**11 27 20.6**	**+1.6**
	baz=22,slow=9.7,SNR=2.1							
MKAR	**Makanchi Array**	**22.78**	**319**	P		**P**	**11 29 10.9**	**+0.2**
	comp=E,0.8nm,0.9s,mb3.1,baz=116,slow=9.9,SNR=2.6							
ZALV	**Zalesovo Beam**	**26.56**	**334**	P		**P**	**11 29 46.4**	**+0.4**
	comp=E,1.9nm,0.3s,mb4.1,baz=129,slow=16,SNR=1.9							
ZALV	**Zalesovo Beam**	**26.56**	**334**	P		**P**	**11 29 46.4**	**+0.4**
KURK	**Kurchatov**	**27.06**	**323**	P		**P**	**11 29 49.8**	**-0.7**
	comp=E,0.7nm,0.8s,mb3.3,baz=130,slow=8.6,SNR=2.3							
WRA	**Warramunga Arr**	**58.66**	**146**	P		**P**	**11 34 04.7**	**-1.0**
	comp=E,0.7nm,0.3s,mb4.2,baz=338,slow=7.7,SNR=23							
ASAR	**Alice Springs**	**61.67**	**149**	P		**P**	**11 34 27.1**	**+0.8**
	comp=E,0.1nm,0.3s,mb3.4,baz=332,slow=6.9,SNR=5.1							

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*IDC **12** 11:25:52.0±0.9, 31°.34N×103°.49E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/26, mbtmp4.0/12, ML4.0/1, Error ellipse: s-maj=32.6km s-min=16.4km az=51.0*
*ISCJB **12** 11:25:53.9±1.1, 31°.27N±0°.09×103°.45E±0°.07, h28km±11km, mb3.9/12, Error ellipse: s-maj=14.9km s-min=10.5km az=1.0*
*NEIC **12** 11:25:54.1±0.7, 31°.45N×103°.61E, h10km, Error ellipse: s-maj=23.3km s-min=12.8km az=77.0*
*BJI **12** 11:25:54.7, 31°.30N×103°.49E, h9km, ML4.0/6*
ISC 12 11:25:54.3±0.9, 31°.28N±0°.04×103°.44E±0°.07, h16km±7km, n24, σ0s80/26, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**143**	Pg		**Pg**	**11 26 02.7**	**-0.8**
CD2				Sg		**Sg**	**11 26 10.2**	**+0.5**
CD2				smax				
	comp=N,14μm,0.8s							
LZH	**Lanzhou**	**4.81**	**4**	*e*Pg		**Pg**	**11 27 36.2**	**+10**
LZH				Sg		**Sg**	**11 28 28.8**	**+0.2**
LZH				smax				
	comp=N,330nm,1.1s							
LZH				smax				
	comp=E,260nm,1.0s							
CMAR	**Chiang Mai Arr**	**13.40**	**199**	Pn		**Pn**	**11 29 08.7**	**+4.8**
	comp=E,0.3nm,0.3s,baz=31,slow=11,SNR=4.3							
GUN	**Gumba**	**15.64**	**262**	*e*P		**Pn**	**11 29 34.3**	**+0.3**
	comp=E,63nm,1.0s							
PKI	**Pulchoki**	**16.14**	**261**	*e*P		**Pn**	**11 29 41.0**	**+0.5**
	comp=E,32nm,0.6s							
PKIN	**Phulchoki**	**16.15**	**261**	*e*P		**Pn**	**11 29 41.0**	**+0.4**
	comp=E,49nm,0.8s							
KKN	**Kakani**	**16.18**	**262**	*e*P		**Pn**	**11 29 40.0**	**-1.0**
	comp=E,77nm,0.8s							
DMN	**Daman**	**16.38**	**262**	*e*P		**Pn**	**11 29 43.3**	**-0.3**
	comp=E,74nm,1.0s							
SONM	**Songino Array**	**16.69**	**7**	Pn		**Pn**	**11 29 48.0**	**+0.7**
	comp=E,0.5nm,0.3s,baz=192,slow=10.0,SNR=2.4							
KSRS	**Korea Array**	**21.10**	**66**	P		**P**	**11 30 37.7**	**-0.3**
	comp=E,3.1nm,0.7s,mb3.7,baz=260,slow=10,SNR=7.3							
MK31	**Makanchi Array**	**22.48**	**320**	*e*P		**P**	**11 30 52.7**	**0.0**
MKAR	**Makanchi Array**	**22.48**	**320**	P		**P**	**11 30 52.8**	**+0.1**
	comp=E,2.5nm,0.8s,mb3.7,baz=124,slow=11,SNR=7.4							
AAK	**Ala-Archa**	**25.63**	**304**	P		**P**	**11 31 25.3**	**+2.3**

comp=E,1.8nm,0.7s,mb3.7,baz=171,slow=7.4,SNR=4.2
ZALV Zalesovo Beam 26.32 335 P **P** 11 31 29.4 +0.3
comp=E,2.4nm,0.3s,mb4.2,baz=138,slow=9.7,SNR=4.6
KURK Kurchatov 26.77 324 P **P** 11 31 33.2 +0.1
comp=E,6.6nm,1.0s,mb4.1,baz=129,slow=9.5,SNR=11
BVAR Borovoye Array 32.30 322 P **P** 11 32 20.6 -1.6
comp=E,1.2nm,0.6s,mb3.9,baz=128,slow=11,SNR=3.3
ARCES ARCESS Array B 56.87 336 P **P** 11 35 37.4 -0.4
comp=E,2.9nm,0.8s,mb4.3,baz=68,slow=7.9,SNR=3.2
WRA Warramunga Arr 58.94 146 P **P** 11 35 53.6 +0.7
comp=E,3.6nm,0.8s,mb4.4,baz=336,slow=7.7,SNR=8.8
ASAR Alice Springs 61.94 148 P **P** 11 36 13.6 +0.3
comp=E,0.9nm,0.8s,mb3.9,baz=328,slow=5.6,SNR=6.6
INK Inuvik 72.18 19 P **P** 11 37 17.4 -0.4
comp=E,1.6nm,0.8s,mb4.0,baz=313,slow=7.3,SNR=6.0
INK Inuvik 72.18 19 P **P** 11 37 17.4 -0.4
YKA Yellowknife Ar 81.69 17 P **P** 11 38 11.6 +0.1
comp=E,0.3nm,0.7s,mb3.3,baz=330,slow=4.6,SNR=3.6
MTE Manteigas 84.30 314 *eP* **P** 11 38 23.9 -1.5
TORD Torodi Ar. Bea 93.04 287 P **P** 11 39 11.5 +3.9
comp=E,0.3nm,0.7s,mb3.8,baz=82,slow=3.1,SNR=2.6

*ISCJB **12** 11:27:33.6±1.5, 31°.16N±0°.06×104°.02E±0°.06, h15km±10km, mb4.2/17, Error ellipse: s-maj=10.4km s-min=8.1km az=36.1*
*IDC **12** 11:27:33.0±0.7, 31°.20N×103°.81E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/27, mbtmp4.1/15, ML4.0/2, Error ellipse: s-maj=27.1km s-min=14.6km az=59.0*
*NEIC **12** 11:27:34.2±0.4, 31°.23N×104°.07E, h10km, mb4.5/4, Error ellipse: s-maj=13.0km s-min=7.4km az=58.0*
*MOS **12** 11:27:35.6±0.7, 31°.14N×103°.85E, h31km, mb4.5/5, Error ellipse: s-maj=19.4km s-min=9.3km az=107.3*
*BJI **12** 11:27:35.9, 31°.24N×104°.20E, h13km, mb4.8/2, ML4.2/2*
ISC 12 11:27:35.4±1.0, 31°.18N±0°.04×103°.94E±0°.06, h15km±6km, n44, σ0°77/47, mb4.2/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**210**	Sg	**Sg**	**11 27 46.0**	**-0.1**
CD2				smax			
comp=N,42μm,0.5s							
ENH	**Enshi**	**4.87**	**99**	*e*Pn	**Pn**	**11 28 43.1**	**-4.8**
LZH	**Lanzhou**	**4.90**	**359**	*e*Pg	**Pg**	**11 29 20.1**	**+11**
LZH				Sg	**Sg**	**11 30 12.2**	**-0.3**
LZH				smax			
comp=N,250nm,1.3s							
LZH				smax			
comp=E,760nm,1.4s							
GYA	**Guiyang**	**5.28**	**152**	Pg	**Pg**	**11 29 22.0**	**+5.6**
GYA				Sg	**Sg**	**11 30 19.0**	**-5.8**
GYA				smax			
comp=N,400nm,0.8s							
GYA				smax			
comp=E,490nm,0.9s							
WHN	**Wuhan**	**8.97**	**91**	P	**Pn**	**11 29 42.4**	**-2.0**
WHN				S	**Sn**	**11 31 24.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**13.45**	**201**	Pn	**Pn**	**11 30 46.0**	**+0.3**
comp=E,0.2nm,0.3s,baz=13,slow=10,SNR=3.1							
SONM	**Songino Array**	**16.74**	**6**	Pn	**Pn**	**11 31 29.8**	**+0.6**
comp=E,0.8nm,0.3s,baz=209,slow=11,SNR=3.9							
ZAK	**Zakamensk**	**19.19**	**359**	*e*P	**Pn**	**11 32 00.8**	**+1.5**
ZAK				pmax	pmax		
comp=Z,9.0nm,1.1s							
KSRS	**Korea Array**	**20.75**	**66**	P	**P**	**11 32 16.7**	**+1.2**
comp=Z,6.2nm,0.6s,baz=264,slow=11,SNR=19							
KSRS	**Korea Array**	**20.75**	**66**	P	**P**	**11 32 16.7**	**+1.2**
KSRS				pmax	pmax		
comp=Z,6.0nm,0.6s							
CN2	**Changchun**	**21.14**	**47**	*e*P	**P**	**11 32 21.5**	**+1.8**
CN2				pmax	pmax		
comp=Z,40nm,0.7s,mb4.9							
MK31	**Makanchi Array**	**22.83**	**319**	*e*P	**P**	**11 32 38.7**	**+1.0**
MKAR	**Makanchi Array**	**22.83**	**319**	P	**P**	**11 32 37.5**	**-0.1**
comp=Z,3.3nm,0.9s,mb3.8,baz=114,slow=11,SNR=5.4							
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**11 33 12.9**	**+0.2**
comp=Z,4.0nm,0.3s,mb4.4,baz=132,slow=8.8,SNR=4.3							
KURK	**Kurchatov**	**27.10**	**323**	P	**P**	**11 33 17.2**	**-0.2**
comp=Z,2.7nm,0.9s,mb3.8,baz=125,slow=10,SNR=4.9							
BRTR	**Keskin Array B**	**56.58**	**300**	P	**P**	**11 37 17.1**	**-0.4**
comp=Z,0.5nm,0.6s,mb3.7,baz=99,slow=7.5,SNR=3.2							
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**11 37 20.1**	**-0.8**
comp=Z,1.5nm,0.6s,mb4.2,baz=85,slow=7.2,SNR=5.2							
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**11 37 22.5**	**-0.6**
comp=Z,2.2nm,0.9s,mb4.2,baz=112,slow=11,SNR=3.5							
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**11 37 22.4**	**-0.6**
WRAB	**Tennant Creek**	**58.61**	**146**	*e*P	**P**	**11 37 32.2**	**+0.4**
WRAB				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.8							
WRAB	**Tennant Creek**	**58.61**	**146**	*e*P	**P**	**11 37 32.2**	**+0.3**
comp=Z,8.4nm,0.9s,mb4.8							
WRA	**Warramunga Arr**	**58.62**	**146**	P	**P**	**11 37 32.4**	**+0.6**
comp=Z,4.3nm,0.6s,mb4.7,baz=338,slow=7.9,SNR=22							
WB2	**Warramunga Arr**	**58.62**	**146**	*e*P	**P**	**11 37 32.2**	**+0.3**
SPITS	**Spitsbergen Ar**	**59.23**	**346**	P	**P**	**11 37 35.2**	**-0.2**
comp=Z,4.3nm,0.8s,mb4.5,baz=142,slow=9.8,SNR=5.7							
ASAR	**Alice Springs**	**61.63**	**149**	P	**P**	**11 37 53.4**	**+0.9**
comp=Z,2.2nm,0.9s,mb4.3,baz=331,slow=6.2,SNR=7.4							
NOA	**NORSAR Array B**	**64.52**	**327**	P	**P**	**11 38 09.9**	**-1.3**
comp=Z,0.7nm,0.6s,mb3.9,baz=73,slow=6.4,SNR=2.5							
CDF	**Champ du Feu**	**71.46**	**316**	*e*P	**P**	**11 38 54.6**	**-0.5**
HINF	**Hinteralfeld**	**71.98**	**315**	*e*P	**P**	**11 38 57.6**	**-0.7**
INK	**Inuvik**	**72.13**	**19**	P	**P**	**11 38 58.7**	**-0.1**
baz=336,slow=4.5							
INK	**Inuvik**	**72.13**	**19**	P	**P**	**11 38 58.7**	**-0.1**
STKA	**Stephens Creek**	**72.15**	**147**	P	**P**	**11 38 59.5**	**+0.2**
comp=Z,1.0nm,0.5s,mb4.0,baz=322,slow=8.0,SNR=2.9							
STKA	**Stephens Creek**	**72.15**	**147**	P	**P**	**11 38 59.5**	**+0.1**
LPG	**La Plagne**	**73.09**	**313**	*e*P	**P**	**11 39 05.3**	**+0.4**
comp=Z,4.1nm,0.6s,mb4.3							
LPG	**La Plagne**	**73.09**	**313**	*e*P	**P**	**11 39 05.3**	**+0.4**
LPG				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2							
LPG	**La Plagne**	**73.09**	**313**	*e*P	**P**	**11 39 05.3**	**+0.4**
comp=Z,2.0nm,0.6s,mb4.2							
LPL	**La Plagne**	**73.10**	**313**	*e*P	**P**	**11 39 05.2**	**+0.2**
comp=Z,4.7nm,0.5s,mb4.4							
LPL	**La Plagne**	**73.10**	**313**	*e*P	**P**	**11 39 05.2**	**+0.2**
LPL				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.3							
LPL	**La Plagne**	**73.10**	**313**	*e*P	**P**	**11 39 05.2**	**+0.2**
comp=Z,2.3nm,0.5s,mb4.4							
ORIF	**Oris-en-Rattie**	**73.91**	**313**	*e*P	**P**	**11 39 10.0**	**+0.2**
SMF	**Signal de Mont**	**74.34**	**315**	*e*P	**P**	**11 39 11.5**	**-0.8**
AVF	**Avril sur Loir**	**74.57**	**316**	*e*P	**P**	**11 39 12.8**	**-0.8**
comp=Z,4.0nm,0.8s,mb4.1							
AVF	**Avril sur Loir**	**74.57**	**316**	*e*P	**P**	**11 39 12.8**	**-0.8**
AVF				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.1							
AVF	**Avril sur Loir**	**74.57**	**316**	*e*P	**P**	**11 39 12.8**	**-0.8**
comp=Z,2.0nm,0.8s,mb4.1							
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**11 39 52.8**	**+0.2**
comp=Z,1.3nm,0.6s,mb4.0,baz=331,slow=5.3,SNR=15							

*IDC **12** 11:28:35.1±0.5, 31°.24N×103°.86E, h0km, mb4.5/24, mb1 4.5/26, mb1mx4.4/34, mbtmp4.4/26, ML3.9/2, Error ellipse: s-maj=23.3km s-min=10.2km az=54.0*
*NEIC **12** 11:28:36.9±0.2, 31°.23N×103°.86E, h10km, mb4.7/17, Error ellipse: s-maj=6.7km s-min=4.2km az=55.0*
*MOS **12** 11:28:36.8±0.8, 31°.19N×103°.84E, h24km, mb4.8/19, Error ellipse: s-maj=13.6km s-min=6.7km az=120.5*
*ISCJB **12** 11:28:37.6±0.8, 31°.16N±0°.05×103°.80E±0°.05, h29km±5km, mb4.6/50, Error ellipse: s-maj=8.8km s-min=6.7km az=35.2*
*BJI **12** 11:28:38.7, 31°.29N×103°.91E, h17km, mB5.6/2, mb4.7/6, ML4.3/9*
*SZGRF **12** 11:29:10.3, 34°.12N×99°.79E, h33km, mb4.6, Qinghai, China*
ISC 12 11:28:38.3±1.0, 31°.19N±0°.05×103°.80E±0°.05, h19km±6km, n104, σ0°74/106, mb4.6/50, 18C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**188**	Pg	**Pg**	**11 28 44.0**	**-0.6**
CD2				Sg	**Sg**	**11 28 49.4**	**+0.6**
CD2				smax			
comp=N,87μm,0.7s							
GYA	**Guiyang**	**5.34**	**151**	Pg	**Pg**	**11 30 16.7**	**-3.9**
GYA				smax			
comp=N,610nm,0.8s							
GYA				smax			
comp=E,670nm,0.7s							
WHN	**Wuhan**	**9.09**	**91**	P	**Pn**	**11 30 42.4**	**-6.1**
WHN				S	**Sn**	**11 32 24.3**	**-6.1**
LSA	**Lhasa**	**11.02**	**266**	*e*P	**Pn**	**11 31 15.6**	**+0.6**
CM31	**Chiang Mai Arr**	**13.42**	**200**	*e*Pn	**Pn**	**11 31 47.9**	**+0.1**
comp=E,6.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**11 31 48.9**	**+1.0**
comp=E,0.1nm,0.3s,baz=9.8,slow=14,SNR=2.6							
GUN	**Gumba**	**15.94**	**263**	*e*P	**Pn**	**11 32 20.6**	**-1.0**
comp=E,26nm,0.5s							
PKI	**Pulchoki**	**16.43**	**262**	*e*P	**Pn**	**11 32 26.8**	**-1.2**
comp=E,31nm,0.6s							
PKIN	**Phulchoki**	**16.44**	**262**	*e*P	**Pn**	**11 32 27.1**	**-1.0**
comp=E,59nm,0.7s							
KKN	**Kakani**	**16.48**	**263**	*e*P	**Pn**	**11 32 28.3**	**-0.3**
comp=E,32nm,0.7s							
DMN	**Daman**	**16.68**	**262**	*e*P	**Pn**	**11 32 29.9**	**-1.2**
comp=E,46nm,0.8s							
SONM	**Songino Array**	**16.74**	**6**	Pn	**Pn**	**11 32 32.0**	**+0.3**
comp=E,0.9nm,0.3s,baz=184,slow=14,SNR=3.9							
SSLB	**Suanglung**	**16.90**	**112**	*e*P	**Pn**	**11 32 35.2**	**+1.3**
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**11 33 18.2**	**-0.8**
comp=E,5.8nm,0.7s,baz=262,slow=10,SNR=5.3							
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**11 33 18.3**	**-0.8**
KSRS				pmax	pmax		
comp=Z,6.0nm,0.7s							
CN2	**Changchun**	**21.22**	**48**	*e*P	**P**	**11 33 24.5**	**+1.5**
CN2				pmax	pmax		
comp=Z,40nm,0.7s,mb4.9							
JOW	**Kunigami**	**21.82**	**95**	P	**P**	**11 33 28.4**	**-1.2**
comp=Z,57nm,0.5s,mb5.3,baz=267,slow=23,SNR=7.7							
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**11 33 39.8**	**+0.5**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**11 33 39.8**	**+0.5**
comp=Z,14nm,1.0s,mb4.3,baz=115,slow=10,SNR=11							
KSH	**Kashi**	**24.10**	**298**	P	**P**	**11 33 56.9**	**+4.1**
AAK	**Ala-Archa**	**25.94**	**304**	P	**P**	**11 34 11.7**	**+2.2**
comp=Z,1.5nm,0.6s,mb3.7,baz=136,slow=9.0,SNR=3.7							
AAK	**Ala-Archa**	**25.94**	**304**	*e*P	**P**	**11 34 10.9**	**+1.4**
AAK				pmax	pmax		
comp=Z,2.0nm,1.2s,mb3.5							
AAK	**Ala-Archa**	**25.94**	**304**	P	**P**	**11 34 11.7**	**+2.2**
AML	**Almayashu**	**26.38**	**303**	*e*P	**P**	**11 34 15.4**	**+2.0**
comp=Z,17nm,1.4s,mb4.4							
ZALV	**Zalesovo Beam**	**26.54**	**335**	P	**P**	**11 34 14.6**	**-0.1**
comp=Z,8.8nm,0.3s,mb4.7,baz=147,slow=8.5,SNR=7.6							
KURK	**Kurchatov**	**27.03**	**323**	P	**P**	**11 34 19.6**	**+0.4**
comp=Z,9.2nm,0.8s,mb4.4,baz=126,slow=9.8,SNR=17							
KURK				PcP	PcP	11 37 39.4	-0.8
comp=Z,1.1nm,0.7s,baz=122,slow=1.9,SNR=5.0							
KBL	**Kabul**	**29.30**	**286**	*e*P	**P**	**11 34 40.8**	**+1.1**
KBL				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.4							
KBL	**Kabul**	**29.30**	**286**	*e*P	**P**	**11 34 40.8**	**+1.1**
comp=Z,5.4nm,0.6s,mb4.5							
BVAR	**Borovoye Array**	**32.57**	**322**	P	**P**	**11 35 08.5**	**+0.2**
comp=Z,1.9nm,0.6s,mb4.2,baz=121,slow=8.2,SNR=7.4							
BRVK	**Borovoye**	**32.64**	**322**	*i*P	**P**	**11 35 09.4**	**+0.5**
BRVK				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.2							
ABKAR	**Akbulak array**	**37.42**	**312**	*e*P	**P**	**11 35 50.8**	**+0.6**
comp=Z,1.7nm,0.6s,mb4.0							
AKTK	**Akubinsk**	**38.89**	**313**	P	**P**	**11 36 03.0**	**+0.4**
AKTO	**Aktyubinsk**	**38.89**	**313**	P	**P**	**11 36 03.0**	**+0.4**
comp=Z,1.4nm,0.5s,mb4.0,baz=61,slow=12,SNR=6.0							
ARU	**Arti**	**40.21**	**322**	*c i*P	**P**	**11 36 13.7**	**+0.3**
ARU						11 37 45.5	
ARU				S	**S**	**11 42 20.0**	**+0.7**
ARU				SS	SS	11 45 10.4	-6.9
ARU				pmax	pmax		
comp=Z,9.0nm,0.7s,mb4.6							
MIB	**Mutribah**	**48.22**	**284**	*e*P	**P**	**11 37 17.8**	**-0.2**
MIB				AMb	AMB	11 37 18.5	
comp=Z,41nm,0.6s,mb5.6							
RDF	**Al-Radifah**	**48.30**	**282**	*e*P	**P**	**11 37 18.8**	**+0.2**
RDF				AMb	AMB	11 37 20.1	
comp=Z,53nm,0.7s,mb5.7							
BILL	**Bilibino**	**51.21**	**25**	*i*P	**P**	**11 37 39.5**	**-0.7**
BILL				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.4							
BILL	**Bilibino**	**51.21**	**25**	*e*P	**P**	**11 37 39.3**	**-0.9**
comp=Z,4.9nm,1.0s,mb4.4							
MOS	**Moscow**	**51.63**	**319**	*e*P	**P**	**11 37 49.7**	**+6.2**
MOS				pmax	pmax		
comp=Z,53nm,0.9s,mb5.5							
OBN	**Obninsk**	**52.24**	**318**	*e*P	**P**	**11 37 49.2**	**+1.1**
OBN				*e*		11 39 00.2	
OBN				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.5							
FITZ	**Fitzroy Crossi**	**53.31**	**154**	P	**P**	**11 37 56.2**	**-0.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=337,slow=10,SNR=3.8							
MBWA	**Marble Bar**	**54.24**	**162**	*e*P	**P**	**11 38 03.5**	**+0.4**
JOF	**Joensuu**	**54.82**	**328**	*e*P	**P**	**11 38 06.3**	**-0.5**
JOF				pmax	pmax		
comp=Z,11nm,0.7s,mb5.0							
JOF	**Joensuu**	**54.82**	**328**	*ep*	**P**	**11 38 06.3**	**-0.5**
comp=Z,10nm,0.7s,mb5.0							
BRTR	**Keskin Array B**	**56.48**	**300**	P	**P**	**11 38 18.6**	**-0.6**
comp=Z,1.5nm,0.9s,mb4.0,baz=116,slow=5.6,SNR=6.4							
BRTR				PcP	PcP	11 39 15.8	0.0
comp=Z,0.8nm,0.8s,baz=108,slow=4.7,SNR=2.6							
KEV	**Kevo**	**56.55**	**336**	*e*P	**P**	**11 38 17.9**	**-1.3**
KEV				pmax	pmax		
comp=Z,15nm,0.7s,mb5.1							
KEV	**Kevo**	**56.55**	**336**	*ep*	**P**	**11 38 17.9**	**-1.3**
comp=Z,15nm,0.7s,mb5.1							
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**11 38 22.5**	**-0.4**
comp=Z,7.8nm,0.8s,mb4.8,baz=90,slow=7.2,SNR=17							
ARCES				PcP	PcP	11 39 17.0	-0.6
comp=Z,2.4nm,0.6s,baz=90,slow=5.4,SNR=5.1							
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**11 38 22.5**	**-0.4**
ARCES				PcP	PcP	11 39 17.0	-0.6
AKASG	**Malin Array Be**	**57.14**	**313**	P	**P**	**11 38 22.8**	**-0.8**
comp=Z,1.9nm,0.5s,mb4.4,baz=67,slow=7.3,SNR=5.7							
AKASG	**Malin Array Be**	**57.14**	**313**	*ceP*	**P**	**11 38 23.0**	**-0.6**
AKASG				pmax	pmax		
comp=Z,2.0nm,0.5s							
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**11 38 24.6**	**-0.4**
comp=Z,3.4nm,0.4s,mb4.7,baz=102,slow=8.0,SNR=9.7							
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**11 38 34.7**	**-0.1**
WRAB				pmax	pmax		
comp=Z,20nm,0.6s,mb5.3							
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**11 38 34.7**	**0.0**
comp=Z,20nm,0.6s,mb5.3							
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**11 38 35.0**	**+0.2**
comp=Z,16nm,0.6s,mb5.2,baz=338,slow=7.7,SNR=33							
WB2	**Warramunga Arr**	**58.69**	**146**	*e*P	**P**	**11 38 34.9**	**+0.1**
SPITS	**Spitsbergen Ar**	**59.20**	**346**	P	**P**	**11 38 37.1**	**-0.5**
comp=Z,8.2nm,0.8s,mb4.8,baz=96,slow=7.6,SNR=9.4							
SPB4	**Spitsbergen Ar**	**59.20**	**346**	*e*P	**P**	**11 38 37.5**	**-0.2**
MLR	**Muntele Rosu**	**60.46**	**308**	P	**P**	**11 38 47.3**	**+0.5**
comp=Z,2.2nm,0.6s,mb4.4,baz=168,slow=17,SNR=3.4							
KWP	**Kalwaria Pacla**	**61.46**	**313**	*e*P	**P**	**11 38 54.1**	**+0.5**
KWP				pmax	pmax		
comp=Z,13nm,0.9s,mb5.1							
KWP	**Kalwaria Pacla**	**61.46**	**313**	*e*P	**P**	**11 38 54.1**	**+0.5**
comp=Z,13nm,0.9s,mb5.0							
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**11 38 56.0**	**+0.7**
comp=Z,4.0nm,0.7s,mb4.7,baz=334,slow=6.8,SNR=15							
STHS	**Stebnicka Huta**	**62.44**	**313**	*e*P	**P**	**11 38 53.0**	**-7.1**
STHS				*e*		11 39 03.9	
STHS				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.9							
HFS	**Hagfors**	**63.56**	**326**	P	**P**	**11 39 06.2**	**-1.1**
comp=Z,4.1nm,0.5s,mb4.7,baz=94,slow=5.9,SNR=9.7							
PSZ	**Piszkesteto**	**63.74**	**312**	P	**P**	**11 39 07.4**	**-1.4**
PSZ				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.7							
PSZ	**Piszkesteto**	**63.74**	**312**	P	**P**	**11 39 07.3**	**-1.4**
comp=Z,6.1nm,0.8s,mb4.7							
NB2	**NORSAR Subarra**	**64.45**	**327**	P	**P**	**11 39 12.1**	**-1.1**
comp=Z,3.7nm,0.6s,mb4.6,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**64.45**	**327**	P	**P**	**11 39 12.2**	**-1.0**
comp=Z,4.0nm,0.6s,mb4.7,baz=72,slow=6.8,SNR=13							
NWAO	**Narrogin (SRO)**	**65.02**	**168**	P	**P**	**11 39 17.3**	**+0.2**
comp=Z,5.2nm,0.8s,mb4.6,baz=349,slow=3.8,SNR=3.0							
CTA	**Charters Tower**	**65.27**	**136**	P	**P**	**11 39 18.9**	**-0.1**
comp=Z,1.6nm,0.3s,mb4.5,baz=313,slow=3.1,SNR=3.7							
BRG	**Berggiesshubel**	**66.42**	**316**	*e*P	**P**	**11 39 26.0**	**-0.1**
comp=Z,4.7nm,0.8s,mb4.5							
BRG	**Berggiesshubel**	**66.42**	**316**	*e*P	**P**	**11 39 26.0**	**-0.2**
BRG				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.3							
CLL	**Collm**	**66.82**	**317**	*e*P	**P**	**11 39 28.0**	**-0.7**
CLL	**Collm**	**66.82**	**317**	*e*P	**P**	**11 39 28.0**	**-0.7**
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**11 39 31.8**	**0.0**
comp=Z,1.9nm,0.8s,mb4.6,baz=73,slow=4.5,SNR=7.2							
COLD	**Coldfoot**	**67.50**	**24**	*e*P	**P**	**11 39 32.6**	**-0.1**
comp=Z,5.9nm,0.8s,mb4.7							
GRA1	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	**11 39 39.7**	**+0.5**
comp=Z,3.0nm,0.8s,mb4.4							
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	**11 39 39.7**	**+0.5**
comp=Z,3.0nm,0.8s,mb4.4							
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	**11 39 39.7**	**+0.5**
GRF				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4							
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	**11 39 39.7**	**+0.5**
GRF				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.4							
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	**11 39 39.7**	**+0.5**
comp=Z,3.0nm,0.8s,mb4.4							
CDF	**Champ du Feu**	**71.38**	**316**	*i*P	**P**	**11 39 56.8**	**-0.2**
comp=Z,7.9nm,0.7s,mb4.5							
CDF	**Champ du Feu**	**71.38**	**316**	*i*P	**P**	**11 39 56.8**	**-0.2**
CDF				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.5							
CDF	**Champ du Feu**	**71.38**	**316**	*i*P	**P**	**11 39 56.8**	**-0.2**
comp=Z,4.0nm,0.7s,mb4.5							
WLF	**Walferdange**	**71.49**	**317**	*e*P	**P**	**11 39 57.8**	**+0.2**
comp=Z,7.7nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**72.22**	**147**	P	**P**	**11 40 01.8**	**-0.4**
comp=Z,2.3nm,0.6s,mb4.3,baz=327,slow=4.8,SNR=7.4							
LPL	**La Plagne**	**73.01**	**313**	*i*P	**P**	**11 40 07.5**	**+0.7**
comp=Z,20nm,0.5s,mb5.0							
LPL	**La Plagne**	**73.01**	**313**	*i*P	**P**	**11 40 07.5**	**+0.7**
LPL				pmax	pmax		
comp=Z,10.0nm,0.5s,mb5.0							
LPL	**La Plagne**	**73.01**	**313**	*i*P	**P**	**11 40 07.5**	**+0.7**
comp=Z,9.9nm,0.5s,mb5.0							
SMF	**Signal de Mont**	**74.26**	**315**	*i*P	**P**	**11 40 13.8**	**-0.4**
comp=Z,14nm,0.8s,mb4.6							
SMF	**Signal de Mont**	**74.26**	**315**	*i*P	**P**	**11 40 13.8**	**-0.4**
SMF				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.6							
SMF	**Signal de Mont**	**74.26**	**315**	*i*P	**P**	**11 40 13.8**	**-0.4**
comp=Z,6.8nm,0.8s,mb4.6							
TCF	**Toulx Ste Croi**	**75.41**	**315**	*i*P	**P**	**11 40 20.8**	**-0.1**
comp=Z,6.7nm,0.8s,mb4.3							
TCF	**Toulx Ste Croi**	**75.41**	**315**	*i*P	**P**	**11 40 20.8**	**-0.1**
TCF				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3							
TCF	**Toulx Ste Croi**	**75.41**	**315**	*i*P	**P**	**11 40 20.8**	**-0.1**
comp=Z,3.3nm,0.8s,mb4.3							
CAF	**Calviac**	**76.19**	**314**	*i*P	**P**	**11 40 25.7**	**+0.4**
comp=Z,8.2nm,0.8s,mb4.4							
CAF	**Calviac**	**76.19**	**314**	*i*P	**P**	**11 40 25.7**	**+0.4**
CAF				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.4							
CAF	**Calviac**	**76.19**	**314**	*i*P	**P**	**11 40 25.7**	**+0.4**
comp=Z,4.1nm,0.8s,mb4.4							
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**11 40 54.6**	**-0.5**
comp=Z,2.7nm,0.6s,mb4.3,baz=330,slow=5.3,SNR=24							
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**11 40 54.6**	**-0.5**
YKA				pmax	pmax		
comp=Z,3.0nm,0.6s							
EDM	**Edmonton**	**89.94**	**21**	*e*P	**P**	**11 41 36.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**93.36**	**287**	P	**P**	**11 41 52.4**	**-0.3**
comp=Z,0.8nm,0.8s,mb4.2,baz=52,slow=3.7,SNR=3.5							
TORD	**Torodi Ar. Bea**	**93.36**	**287**	P	**P**	**11 41 52.4**	**-0.3**
TXAR	**Lajitas Array**	**114.38**	**26**	PKP	PKiKP	11 47 15.9	-1.4
comp=Z,0.1nm,0.7s,baz=248,slow=3.8,SNR=2.6							

*BJI **12** 11:32:12.2, 31°.69N×105°.05E, h20km, ML4.2/3*
*ISCJB **12** 11:32

comp=N,1μm,4.9s
HHC LR LR
comp=E,2μm,6.3s
HHC LR LR
comp=Z,880nm,5.3s
NJ2 Nanjing 11.46 88 *eP* **Pn 11 36 05.7 +2.9**
NJ2 pP 11 36 12.1
NJ2 PP 11 36 15.0
NJ2 sP 11 36 17.9
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
LSA Lhasa 12.46 261 P **Pn 11 36 16.0 -0.4**
SHL Shillong 13.61 243 *eP* **Pn 11 36 23.0 -9.2**
CHTO Chiang Mai 14.75 204 P **Pn 11 36 49.1 +1.4**
CMAR Chiang Mai Arr 15.08 204 Pn **Pn 11 36 52.5 +0.3**
comp=Z,0.4nm,0.3s,baz=15,slow=11,SNR=10
SONM Songino Array 15.38 3 Pn **Pn 11 36 57.3 +1.2**
comp=Z,0.3nm,0.3s,baz=197,slow=14,SNR=2.4
ULN Ulaanbaatar 15.45 4 *eP* **Pn 11 37 01.6 +4.7**
KSRS Korea Array 19.17 69 P **Pn 11 37 42.8 -0.7**
comp=Z,0.7nm,0.3s,baz=260,slow=11,SNR=12
KSRS Korea Array 19.17 69 P **Pn 11 37 42.8 -0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 19.41 49 *eP* **Pn 11 37 49.7 +3.3**
CN2 pmax pmax
comp=Z,20nm,0.6s
HIA Hailar 19.96 29 *eP* **Pn 11 37 52.0 -0.9**
MK31 Makanchi Array 22.69 316 *eP* **P 11 38 20.8 +0.3**
MKAR Makanchi Array 22.69 316 P **P 11 38 21.6 +1.1**
comp=Z,5.0nm,0.7s,mb4.1,baz=114,slow=10.0,SNR=13
TKM2 Tokmak 2 25.62 303 *eP* **P 11 38 49.3 +0.9**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
TKM2 Tokmak 2 25.62 303 *eP* **P 11 38 49.3 +0.9**
comp=Z,4.6nm,0.7s,mb4.1
ZAA0 Zalesovo Array 25.99 332 P **P 11 38 51.1 -0.5**
ZALV Zalesovo Beam 25.99 332 P **P 11 38 51.0 -0.6**
comp=Z,2.6nm,0.4s,mb4.1,baz=135,slow=8.6,SNR=6.3
BOD Bodaibo 26.05 11 *eP* **P 11 38 52.4 +0.3**
BOD pmax pmax
comp=Z,17nm,1.6s,mb4.3
UCH Uchtor 26.24 301 *eP* **P 11 38 55.4 +1.3**
comp=Z,13nm,1.3s,mb4.3
AAK Ala-Archa 26.34 302 P **P 11 38 56.5 +1.5**
comp=Z,1.5nm,0.4s,mb3.9,baz=156,slow=6.6,SNR=4.8
AAK Ala-Archa 26.34 302 *eP* **P 11 38 53.5 -1.5**
AAK pmax pmax
comp=Z,3.0nm,1.3s,mb3.7
AML Almayashu 26.82 300 *eP* **P 11 39 00.6 +1.3**
comp=Z,6.6nm,0.8s,mb4.2
KURK Kurchatov 26.82 321 P **P 11 38 59.2 0.0**
comp=Z,2.5nm,0.6s,mb3.9,baz=130,slow=8.5,SNR=7.3
KURK Kurchatov 26.82 321⇑ *iP* **P 11 38 59.6 +0.4**
KURK pmax pmax
comp=Z,9.0nm,1.2s,mb4.2
BVAR Borovoye Array 32.40 320 P **P 11 39 48.9 +0.2**
comp=Z,1.2nm,0.8s,mb3.8,baz=121,slow=10,SNR=3.0
BRVK Borovoye 32.48 320 *eP* **P 11 39 48.6 -0.7**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
AKTK Aktyubinsk 39.00 312 P **P 11 40 45.5 +0.2**
AKTO Aktyubinsk 39.00 312 P **P 11 40 45.5 +0.2**
comp=Z,2.5nm,0.7s,mb4.1,baz=88,slow=13,SNR=7.2
KAPI Kappang 39.71 157 P **P 11 40 50.9 -0.6**
comp=Z,23nm,0.7s,mb5.0,baz=137,slow=18,SNR=8.6
ARU Arti 40.02 321 *c iP* **P 11 40 54.3 +0.6**
ARU S **S 11 46 58.4 -0.3**
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.5
ARU Arti 40.02 321 *eP* **P 11 40 53.7 0.0**
comp=Z,18nm,1.3s,mb4.7
TIXI Tiksi 41.23 11 *eP* **P 11 41 04.3 +0.8**
TIXI pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
TIXI Tiksi 41.23 11 P **P 11 41 05.0 +1.5**
comp=Z,5.0nm,0.6s,mb4.3
PETK Petropavlovsk- 42.50 45 P **P 11 41 15.9 +1.7**
comp=Z,2.8nm,0.8s,mb4.1,baz=224,slow=10,SNR=3.2
BILL Bilibino 49.51 26 *eP* **P 11 42 12.6 +3.4**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
OBN Obninsk 52.18 317 *eP* **P 11 42 29.3 -0.2**
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KNA Kununurra 52.93 151 *eP* **P 11 42 35.4 0.0**
comp=Z,14nm,0.4s,mb5.2
FITZ Fitzroy Crossi 53.90 156 *eP* **P 11 42 42.3 -0.2**
comp=Z,4.6nm,0.4s,mb4.8
FITZ Fitzroy Crossi 53.90 156 P **P 11 42 42.4 -0.1**
comp=Z,2.2nm,0.4s,mb4.5,baz=340,slow=6.3,SNR=20
JOF Joensuu 54.45 327 *eP* **P 11 42 44.7 -1.3**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
JOF Joensuu 54.45 327 *ep* **P 11 42 44.7 -1.3**
comp=Z,5.7nm,0.6s,mb4.7
ARCES ARCESS Array B 56.46 335 P **P 11 42 60.0 -0.5**
comp=Z,7.5nm,0.9s,mb4.7,baz=79,slow=7.7,SNR=7.4
BRTR Keskin Array B 56.98 299 P **P 11 43 04.3 -0.3**
comp=Z,1.1nm,0.7s,mb4.0,baz=99,slow=7.6,SNR=6.5
FINES FINESS Array B 57.03 326 P **P 11 43 04.0 -0.5**
comp=Z,1.8nm,0.4s,mb4.5,baz=91,slow=9.0,SNR=6.7
AKASG Malin Array Be 57.23 313 P **P 11 43 05.4 -0.7**
comp=Z,3.6nm,0.4s,mb4.8,baz=67,slow=7.6,SNR=10
COEN Coen 58.66 136 *eP* **P 11 43 16.5 -0.1**
WRAB Tennant Creek 59.04 148 *eP* **P 11 43 18.7 -0.4**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb5.0
WRAB Tennant Creek 59.04 148 *eP* **P 11 43 18.7 -0.3**
comp=Z,14nm,0.8s,mb5.0
WRA Warramunga Arr 59.04 148 P **P 11 43 18.8 -0.3**
comp=Z,8.9nm,0.6s,mb5.0,baz=342,slow=7.4,SNR=23
WB2 Warramunga Arr 59.04 148 *eP* **P 11 43 18.9 -0.2**
ASAR Alice Springs 62.12 150 P **P 11 43 40.4 +0.2**
comp=Z,4.8nm,0.7s,mb4.7,baz=332,slow=6.2,SNR=19
HFS Hagfors 63.23 326 P **P 11 43 46.3 -0.8**
comp=Z,1.1nm,0.5s,mb4.2,baz=120,slow=8.5,SNR=3.3
NB2 NORSAR Subarra 64.08 327 P **P 11 43 51.4 -1.3**
comp=Z,3.0nm,0.7s,mb4.4,baz=71,slow=6.9
NOA NORSAR Array B 64.08 327 P **P 11 43 51.3 -1.4**
comp=Z,2.9nm,0.9s,mb4.3,baz=71,slow=6.6,SNR=4.5
VRAC Vranov 65.42 314 P **P 11 44 01.5 -0.1**
comp=Z,1.2nm,0.3s,mb4.4,baz=204,slow=20,SNR=3.2
CLL Collm 66.78 317 *eP* **P 11 44 05.0 -5.3**
CLL *e* 11 44 12.0
GERES GERESS Array B 67.35 314 P **P 11 44 13.8 -0.1**
comp=Z,0.8nm,0.5s,mb4.0,baz=59,slow=5.1,SNR=5.8
DAVOX Davos/Dischmat 70.56 313 P **P 11 44 33.1 -0.8**
comp=Z,3.2nm,0.6s,mb4.5,baz=90,slow=3.8,SNR=5.4
BBOO Buckleboo 71.10 153 *eP* **P 11 44 37.0 -0.3**
comp=Z,2.9nm,1.1s,mb4.1
CDF Champ du Feu 71.37 316 *eP* **P 11 44 38.5 -0.4**
STKA Stephens Creek 72.59 148 *eP* **P 11 44 45.8 -0.4**
comp=Z,2.8nm,0.9s,mb4.2
STKA Stephens Creek 72.59 148 P **P 11 44 45.1 -1.1**
comp=Z,3.0nm,0.7s,mb4.3,baz=346,slow=7.0,SNR=7.5
LPG La Plagne 73.08 313⇑ *iP* **P 11 44 49.6 +0.4**
comp=Z,15nm,0.6s,mb4.8
LPG La Plagne 73.08 313 *iP* **P 11 44 49.6 +0.4**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 73.08 313⇑ *iP* **P 11 44 49.6 +0.4**
comp=Z,7.6nm,0.6s,mb4.8
LPL La Plagne 73.08 313 *eP* **P 11 44 49.6 +0.4**
comp=Z,12nm,0.5s,mb4.7
LPL La Plagne 73.08 313 *eP* **P 11 44 49.6 +0.4**
LPL pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
LPL La Plagne 73.08 313 *eP* **P 11 44 49.6 +0.4**
comp=Z,5.8nm,0.5s,mb4.8
CMSA Cobar Meteorol 74.22 145 *eP* **P 11 44 56.3 +0.5**
SMF Signal de Mont 74.27 315 *eP* **P 11 44 55.4 -0.7**
comp=Z,18nm,1.2s,mb4.6
SMF Signal de Mont 74.27 315 *eP* **P 11 44 55.4 -0.7**
SMF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
SMF Signal de Mont 74.27 315 *eP* **P 11 44 55.4 -0.7**
comp=Z,8.8nm,1.2s,mb4.6
TCF Toulx Ste Croi 75.42 316 *eP* **P 11 45 02.6 -0.2**
YKA Yellowknife Ar 80.10 18 P **P 11 45 27.4 -1.1**
comp=Z,0.8nm,0.6s,mb3.8,baz=327,slow=5.1,SNR=6.3
YKA Yellowknife Ar 80.10 18 P **P 11 45 27.4 -1.1**
TORD Torodi Ar. Bea 94.21 288 P **P 11 46 37.9 -0.7**
comp=Z,0.3nm,0.6s,mb3.9,baz=46,slow=3.8,SNR=3.0

IDC ***12*** *11:35:04.6±0.8, 31.°09N×103.°55E, h0km, mb4.1/10, mb1 4.2/12, mb1mx3.9/28, mbtmp4.1/12, ML4.1/2, Error ellipse: s-maj=30.3km s-min=16.0km az=55.0*
NEIC ***12*** *11:35:05.9±0.5, 31.°12N×103.°62E, h10km, mb4.1/2, Error ellipse: s-maj=14.6km s-min=7.7km az=85.0*
ISCJB ***12*** *11:35:06.8±0.9, 31.°07N±0.°08×103.°6E±0.°1, h31km±7km, mb4.1/12, Error ellipse: s-maj=17.4km s-min=12.8km az=173.3*
BJI ***12*** *11:35:06.5, 31.°11N×103.°48E, h13km, mb4.5/2, ML4.6/3*
ISC 12 11:35:07.5±1.2, 31.°11N±0.°08×103.°6E±0.°1, h19km±9km, n18, σ0$56/19, mb4.1/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**139**	Pg	**Pg**	**11 35 13.1**	**-0.5**
CD2				Sg	**Sg**	**11 35 18.2**	**+0.5**
CD2				smax			
	comp=N,58μm,0.6s						
CMAR	**Chiang Mai Arr**	**13.27**	**199**	Pn	**Pn**	**11 38 14.4**	**-0.5**
	comp=N,0.7nm,0.3s,baz=22,slow=9.7,SNR=4.5						
SONM	**Songino Array**	**16.84**	**7**	Pn	**Pn**	**11 39 02.6**	**+0.4**
	comp=N,0.2nm,0.3s,baz=186,slow=13,SNR=6.6						
ULN	**Ulaanbaatar**	**16.95**	**8**	*eP*	**Pn**	**11 39 01.9**	**-1.5**
	comp=N,8.1nm,0.8s						
KSRS	**Korea Array**	**21.08**	**66**	P	**P**	**11 39 50.5**	**-0.1**
	comp=N,8.6nm,0.7s,mb4.2,baz=263,slow=10,SNR=15						
CN2	**Changchun**	**21.43**	**48**	*eP*	**P**	**11 39 55.2**	**+0.9**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.7						
MKAR	**Makanchi Array**	**22.67**	**320**	P	**P**	**11 40 07.8**	**+0.3**
	comp=Z,3.0nm,0.9s,mb3.7,baz=114,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**22.67**	**320**	P	**P**	**11 40 07.8**	**+0.3**
AAK	**Ala-Archa**	**25.81**	**305**	P	**P**	**11 40 37.6**	**+0.2**
	comp=Z,0.8nm,0.4s,mb3.6,baz=220,slow=17,SNR=1.8						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**11 40 44.0**	**+0.4**
	comp=Z,2.0nm,0.3s,mb4.1,baz=153,slow=9.7,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**11 40 44.0**	**+0.4**
KURK	**Kurchatov**	**26.96**	**324**	P	**P**	**11 40 48.1**	**+0.5**
	comp=Z,2.9nm,0.7s,mb3.9,baz=127,slow=10,SNR=3.4						
TIXI	**Tiksi**	**42.84**	**11**	*eP*	**P**	**11 43 03.1**	**-0.8**
	comp=Z,7.2nm,1.1s,mb4.3						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**11 44 52.0**	**+0.2**
	comp=Z,2.7nm,0.9s,mb4.3,baz=64,slow=8.1,SNR=2.9						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**11 44 53.7**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.1,baz=95,slow=7.4,SNR=2.5						
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**11 45 03.9**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.6,baz=339,slow=7.6,SNR=6.3						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**11 45 25.2**	**+0.5**
	comp=Z,1.2nm,0.7s,mb4.1,baz=309,slow=5.8,SNR=3.1						
YKA	**Yellowknife Ar**	**81.82**	**17**	P	**P**	**11 47 24.7**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=326,slow=4.8,SNR=3.9						

IDC ***12*** *11:39:22.3±1.0, 31.°56N×104.°24E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/28, mbtmp3.6/7, ML4.0/1, Error ellipse: s-maj=35.1km s-min=20.3km az=59.0*
ISC 12 11:39:24.3±2.7, 31.°60N±0.°10×104.°3E±0.°2, h12km±18km, n8, σ0$91/9, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.50**	**355**	*eP*g	**Pg**	**11 40 50.5**	**+0.1**
LZH				Sg	**Sg**	**11 41 39.8**	**-8.8**
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,150nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.95**	**202**	Pn	**Pn**	**11 42 42.0**	**+0.1**
	comp=E,0.2nm,0.3s,baz=9.0,slow=8.5,SNR=2.4						
KSRS	**Korea Array**	**20.29**	**67**	P	**P**	**11 43 59.1**	**-0.6**
	comp=E,1.5nm,0.7s,baz=242,slow=9.6,SNR=4.2						
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**11 44 26.4**	**+0.5**
	comp=E,2.2nm,1.1s,mb3.5,baz=122,slow=10,SNR=3.7						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**11 45 03.7**	**-1.8**
	comp=E,1.1nm,0.9s,mb3.4,baz=130,slow=9.2,SNR=3.1						
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**11 49 22.3**	**-0.1**
	comp=E,0.9nm,0.6s,mb4.0,baz=328,slow=9.1,SNR=8.6						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**11 49 42.9**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.8,baz=340,slow=6.6,SNR=5.5						
YKA	**Yellowknife Ar**	**81.17**	**17**	P	**P**	**11 51 41.1**	**+1.8**
	comp=E,0.2nm,0.6s,mb3.2,baz=326,slow=4.5,SNR=4.0						

ISCJB ***12*** *11:40:07.4±0.5, 31.°92N±0.°07×104.°64E±0.°09, h10km, mb4.0/17, Error ellipse: s-maj=11.4km s-min=8.8km az=148.2*
IDC ***12*** *11:40:08.0±0.8, 31.°98N×104.°60E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML2.7/1, Error ellipse: s-maj=37.5km s-min=16.4km az=54.0*
NEIC ***12*** *11:40:09.3±0.3, 31.°96N×104.°67E, h10km, mb4.2/3, Error ellipse: s-maj=10.5km s-min=6.1km az=64.0*
ISC 12 11:40:09.3±0.5, 31.°95N±0.°06×104.°67E±0.°09, h10km, n26, σ0$67/26, mb4.0/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.46**	**111**	Pn	**Pn**	**11 41 16.2**	**-0.7**
SHL	**Shillong**	**12.89**	**244**	*eP*	**Pn**	**11 43 11.0**	**-1.5**
CM31	**Chiang Mai Arr**	**14.39**	**202**	*ePn*	**Pn**	**11 43 32.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.39**	**202**	Pn	**Pn**	**11 43 34.0**	**+0.9**
	baz=11,slow=10,SNR=3.0						
KSRS	**Korea Array**	**19.87**	**68**	Pn	**Pn**	**11 44 41.2**	**-1.0**
	0.0nm,0.3s,baz=256,slow=12,SNR=3.4						
MK31	**Makanchi Array**	**22.68**	**317**	*eP*	**P**	**11 45 11.3**	**+0.6**
MKAR	**Makanchi Array**	**22.68**	**317**	P	**P**	**11 45 11.2**	**+0.5**
	0.6nm,0.5s,mb3.3,baz=118,slow=8.9,SNR=7.7						
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**11 45 44.2**	**+0.4**
	2.9nm,0.5s,mb4.1,baz=126,slow=10,SNR=4.8						
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**11 45 44.2**	**+0.4**
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**11 45 50.1**	**+0.1**
	1.5nm,0.7s,mb3.7,baz=126,slow=9.2,SNR=6.8						
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**11 46 39.3**	**-0.1**
	1.4nm,0.6s,mb4.0,baz=239,slow=40,SNR=4.1						
AKTK	**Aktyubinsk**	**38.92**	**312**	P	**P**	**11 47 35.2**	**+0.2**
AKTO	**Aktyubinsk**	**38.92**	**312**	P	**P**	**11 47 35.2**	**+0.2**
	0.9nm,0.5s,mb3.8,baz=90,slow=12,SNR=4.7						
ARCES	**ARCESS Array B**	**56.69**	**336**	P	**P**	**11 49 52.3**	**-0.2**
	1.9nm,0.9s,mb4.1,baz=87,slow=6.6,SNR=4.4						
BRTR	**Keskin Array B**	**56.75**	**299**	P	**P**	**11 49 52.7**	**-0.7**
	0.8nm,0.8s,mb3.8,baz=111,slow=6.8,SNR=4.4						
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**11 49 55.8**	**0.0**
	2.2nm,0.4s,mb4.5,baz=74,slow=6.8,SNR=8.1						
WRA	**Warramunga Arr**	**58.91**	**147**	P	**P**	**11 50 09.6**	**+1.0**
	1.9nm,0.6s,mb4.3,baz=339,slow=7.5,SNR=7.7						
ASAR	**Alice Springs**	**61.96**	**150**	P	**P**	**11 50 30.2**	**+0.8**
	0.9nm,0.8s,mb4.0,baz=331,slow=5.6,SNR=4.7						
HFS	**Hagfors**	**63.34**	**326**	P	**P**	**11 50 37.9**	**-0.4**
	1.5nm,0.5s,mb4.4,baz=108,slow=4.8,SNR=8.9						
NOA	**NORSAR Array B**	**64.21**	**327**	P	**P**	**11 50 43.0**	**-1.0**
	0.5nm,0.4s,mb3.9,baz=79,slow=4.5,SNR=2.9						
GERES	**GERESS Array B**	**67.31**	**314**	P	**P**	**11 51 03.5**	**-0.7**
	0.3nm,0.3s,mb3.8,baz=49,slow=4.4,SNR=3.9						
CDF	**Champ du Feu**	**71.35**	**316**	*eP*	**P**	**11 51 29.0**	**-0.2**
	1.1nm,0.5s,mb4.0						
LPG	**La Plagne**	**73.03**	**313**	*eP*	**P**	**11 51 40.0**	**+0.7**
	3.7nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.03**	**313**	*eP*	**P**	**11 51 39.9**	**+0.6**
SMF	**Signal de Mont**	**74.24**	**315**	*eP*	**P**	**11 51 46.2**	**-0.2**
	1.3nm,0.8s,mb3.9						
YKA	**Yellowknife Ar**	**80.75**	**17**	P	**P**	**11 52 23.6**	**+1.1**
	0.3nm,0.6s,mb3.4,baz=329,slow=5.3,SNR=3.7						

ISCJB ***12*** *11:41:07.8±0.2, 32.°28N±0.°03×105.°05E±0.°04, h10km, mb4.5/55, Error ellipse: s-maj=4.7km s-min=3.8km az=13.0*
IDC ***12*** *11:41:07.7±0.5, 32.°30N×105.°01E, h0km, mb4.4/28, mb1 4.5/31, mb1mx4.4/41, mbtmp4.4/31, ML3.8/3, Error ellipse: s-maj=18.3km s-min=10.6km az=56.0*
NEIC ***12*** *11:41:09.5±0.2, 32.°33N×105.°08E, h10km, mb4.5/19, Error ellipse: s-maj=5.3km s-min=4.0km az=65.0*
BJI ***12*** *11:41:09.4, 32.°22N×105.°09E, h9km, mB5.6/4, mb4.4/9, ML4.5/12, Ms4.8/11, Ms7 4.6/8*
MOS ***12*** *11:41:10.3±0.9, 32.°28N×105.°06E, h29km, mb4.8/25, Error ellipse: s-maj=10.4km s-min=6.0km az=107.9*
ISC 12 11:41:10.8±1.0, 32.°29N±0.°03×105.°04E±0.°04, h17km±6km, n129, σ1$07/140, mb4.5/55, 5C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.76**	**219**	Pn	**Pn**	**11 41 41.8**	**+1.3**
CD2				Pg	**Pg**	**11 41 43.7**	**-0.9**
CD2				Sn	**Sn**	**11 42 05.4**	**+3.0**
CD2				Sg	**Sg**	**11 42 07.9**	**+0.5**
CD2				smax			
	comp=N,49μm,0.6s						
LZH	**Lanzhou**	**3.92**	**346**	Pn	**Pn**	**11 42 13.2**	**+3.0**
LZH				Pg	**Pg**	**11 42 23.9**	**-2.0**
LZH				Sn	**Sn**	**11 42 57.3**	**+1.6**
LZH				Sg	**Sg**	**11 43 11.5**	**-5.1**
LZH				smax			
	comp=N,3μm,0.8s						
LZH				smax			
	comp=E,3μm,0.7s						
LZH				LR	LR		
	comp=N,8μm,7.7s						
LZH				LR	LR		
	comp=Z,9μm,9.0s						
ENH	**Enshi**	**4.31**	**117**	*e*Pn	**Pn**	**11 42 16.0**	**+0.5**
GYA	**Guiyang**	**5.98**	**166**	Pg	**Pn**	**11 42 46.4**	**+7.8**
GYA				Sg	**Sn**	**11 43 38.1**	**-8.5**
GYA				smax			
	comp=N,790nm,0.8s						
GYA				smax			
	comp=E,1μm,0.9s						
KMI	**Kunming**	**7.42**	**196**	Pn	**Pn**	**11 42 59.1**	**+0.8**
KMI				Sn	**Sn**	**11 44 18.0**	**-4.1**
KMI				smax			
	comp=N,110nm,1.2s						
KMI				smax			
	comp=E,86nm,1.1s						
WHN	**Wuhan**	**8.14**	**100**	S	**Sn**	**11 44 34.8**	**-5.1**
WHN				LR	LR		
	comp=N,5μm,9.9s						
WHN				LR	LR		
	comp=E,8μm,8.4s						
GTA	**Gaotai**	**8.27**	**331**	*eP*	**Pn**	**11 43 16.7**	**+6.7**
GTA				pP		11 43 20.2	
GTA				sP		11 43 22.7	
GTA				S	**Sn**	**11 44 54.9**	**+12**
GTA				sS		11 45 00.5	
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA				LR	LR		
	comp=N,5μm,11.4s						
GTA				LR	LR		
	comp=E,3μm,11.4s						
GTA				LR	LR		
	comp=Z,7μm,11.4s						
HHC	**Hu-ho-hao-te**	**10.02**	**30**	*eP*	**Pn**	**11 43 36.9**	**+2.9**
HHC				PP		11 43 44.9	
HHC				S	**Sn**	**11 45 30.9**	**+4.9**
HHC				SS		11 45 44.1	
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1μm,4.7s						
HHC				LR	LR		
	comp=N,3μm,7.5s						
HHC				LR	LR		
	comp=E,2μm,5.5s						
HHC				LR	LR		
	comp=Z,2μm,7.8s						
NJ2	**Nanjing**	**11.71**	**87**	*eP*	**Pn**	**11 43 59.6**	**+2.5**
NJ2				pP		11 44 06.2	
NJ2				PP		11 44 09.6	
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
LSA	**Lhasa**	**12.19**	**261**	*eP*	**Pn**	**11 44 04.9**	**+1.2**
LSA	**Lhasa**	**12.19**	**261**	*ePn*	**Pn**	**11 44 04.9**	**+1.1**
CHTO	**Chiang Mai**	**14.50**	**204**	*eP*	**Pn**	**11 44 36.3**	**+1.1**
CM31	**Chiang Mai Arr**	**14.83**	**203**	*ePn*	**Pn**	**11 44 40.4**	**+0.7**
CM31				*e*		11 44 47.0	
CMAR	**Chiang Mai Arr**	**14.83**	**203**	Pn	**Pn**	**11 44 40.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=14,slow=12,SNR=20						
SONM	**Songino Array**	**15.56**	**3**	Pn	**Pn**	**11 44 50.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=180,slow=11,SNR=4.9						
ULN	**Ulaanbaatar**	**15.63**	**5**	*eP*	**Pn**	**11 44 48.8**	**-1.4**
SSLB	**Suanglung**	**16.39**	**117**	*ePn*	**Pn**	**11 45 00.3**	**+0.1**
GUN	**Gumba**	**17.14**	**260**	*eP*	**Pn**	**11 45 08.1**	**-1.5**
	comp=Z,58nm,0.7s						
PKI	**Pulchoki**	**17.65**	**260**	*eP*	**Pn**	**11 45 14.1**	**-1.8**
	comp=Z,70nm,0.8s						
PKIN	**Phulchoki**	**17.66**	**260**	*eP*	**Pn**	**11 45 14.7**	**-1.3**
	comp=Z,73nm,0.7s						
KKN	**Kakani**	**17.68**	**260**	*eP*	**Pn**	**11 45 14.5**	**-1.8**
	comp=Z,36nm,0.7s						
DMN	**Daman**	**17.89**	**260**	*eP*	**Pn**	**11 45 17.1**	**-1.8**
	comp=Z,99nm,1.0s						
ZAK	**Zakamensk**	**18.12**	**356**	*eP*	**Pn**	**11 45 23.7**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KSRS	**Korea Array**	**19.45**	**68**	P	**Pn**	**11 45 37.4**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=259,slow=10,SNR=5.0						
MOY	**Mondy**	**19.59**	**352**	*eP*	**Pn**	**11 45 39.5**	**+0.2**
HIA	**Hailar**	**20.23**	**29**	P	**P**	**11 45 45.1**	**+0.2**
HIA				pmax	pmax		
	comp=Z,15nm,1.0s						
HIA	**Hailar**	**20.23**	**29**	P	**P**	**11 45 45.1**	**+0.2**
	comp=Z,15nm,1.0s						
MK31	**Makanchi Array**	**22.64**	**316**	*eP*	**P**	**11 46 11.3**	**+0.5**
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**11 46 11.1**	**+0.3**
	comp=Z,5.8nm,0.6s,mb4.2,baz=113,slow=8.6,SNR=28						
ULHL	**Ulahol**	**24.88**	**302**	P	**P**	**11 46 34.1**	**+1.6**
	SNR=11						
TKM2	**Tokmak 2**	**25.51**	**303**	P	**P**	**11 46 39.7**	**+1.5**
	SNR=12						
KZA	**Kyzart**	**25.56**	**301**	P	**P**	**11 46 40.9**	**+2.2**
	SNR=12						
KBK	**Karagaybulak**	**25.91**	**302**	P	**P**	**11 46 43.6**	**+1.7**
	SNR=7.5						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**11 46 42.2**	**-0.6**
	comp=Z,4.7nm,0.3s,mb4.5,baz=130,slow=10,SNR=6.8						
UCH	**Uchtor**	**26.12**	**301**	P	**P**	**11 46 46.1**	**+2.2**
	SNR=17						
UCH	**Uchtor**	**26.12**	**301**	*eP*	**P**	**11 46 45.2**	**+1.3**
	comp=Z,20nm,1.1s,mb4.5						
KLR	**Kul'dur**	**26.18**	**42**	*eP*	**P**	**11 46 40.2**	**-4.0**
AAK	**Ala-Archa**	**26.23**	**302**	P	**P**	**11 46 44.8**	**+0.1**
	comp=Z,1.0nm,0.4s,mb3.7,baz=312,slow=16,SNR=3.4						
AAK	**Ala-Archa**	**26.23**	**302**	*eP*	**P**	**11 46 44.5**	**-0.3**
AAK	**Ala-Archa**	**26.23**	**302**	*eP*	**P**	**11 46 45.8**	**+1.1**
	comp=Z,8.1nm,1.1s,mb4.2						
BOD	**Bodaibo**	**26.26**	**11**	*eP*	**P**	**11 46 49.4**	**+4.6**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
**USP

KIV	**Kislovodsk**	**49.34**	**303**	*e*P	**P**	**11 49 59.5**	**+0.4**
KIV				pmax	pmax		
comp=Z,14nm,1.0s,mb5.0							
BILL	**Bilibino**	**49.77**	**26**	*e*P	**P**	**11 50 05.7**	**+3.7**
BILL				pmax	pmax		
comp=Z,4.0nm,1.1s,mb4.4							
MOS	**Moscow**	**51.51**	**318**	*e*P	**P**	**11 50 17.3**	**+2.0**
OBN	**Obninsk**	**52.14**	**317‖**	*e*P	**P**	**11 50 19.5**	**-0.5**
OBN				*i*	pP	11 50 24.6	-0.9
OBN				*e*		11 51 31.8	
OBN				pmax	pmax		
comp=Z,26nm,1.2s,mb5.0							
KNA	**Kununurra**	**52.90**	**151**	*e*P	**P**	**11 50 25.9**	**-0.1**
comp=Z,19nm,0.7s,mb5.1							
FITZ	**Fitzroy Crossi**	**53.85**	**156**	*e*P	**P**	**11 50 32.7**	**-0.3**
comp=Z,7.2nm,0.9s,mb4.6							
FITZ	**Fitzroy Crossi**	**53.85**	**156**	P	**P**	**11 50 32.7**	**-0.3**
comp=Z,3.2nm,0.7s,mb4.4,baz=2.7,slow=9.4,SNR=14							
JOF	**Joensuu**	**54.46**	**327**	*e*P	**P**	**11 50 35.8**	**-1.1**
JOF				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.8							
JOF	**Joensuu**	**54.46**	**327**	*e*p	**P**	**11 50 35.8**	**-1.1**
comp=Z,9.5nm,0.8s,mb4.8							
MBWA	**Marble Bar**	**54.97**	**163**	*e*P	**P**	**11 50 40.8**	**-0.3**
comp=Z,29nm,1.3s,mb5.1							
KEV	**Kevo**	**55.98**	**336**	*e*P	**P**	**11 50 42.2**	**-5.6**
KEV				pmax	pmax		
comp=Z,10.0nm,0.6s,mb5.0							
KEV	**Kevo**	**55.98**	**336**	*e*p	**P**	**11 50 42.2**	**-5.6**
comp=Z,9.5nm,0.6s,mb5.0							
ARCES	**ARCESS Array B**	**56.51**	**336**	P	**P**	**11 50 51.0**	**-0.6**
comp=Z,4.2nm,0.5s,mb4.7,baz=81,slow=7.8,SNR=26							
ASF	**Jabal al Asfar**	**56.69**	**290**	P	**P**	**11 50 53.2**	**-0.3**
comp=Z,3.8nm,0.7s,mb4.5,baz=326,slow=5.2,SNR=6.5							
KAF	**Kangasniemi**	**56.84**	**327**	*e*P	**P**	**11 50 52.8**	**-1.2**
KAF				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.9							
KAF	**Kangasniemi**	**56.84**	**327**	*e*p	**P**	**11 50 52.8**	**-1.2**
comp=Z,7.3nm,0.6s,mb4.9							
BR131	**Keskin Array S**	**56.86**	**299**	*e*P	**P**	**11 50 48.1**	**-6.4**
BRTR	**Keskin Array B**	**56.86**	**299**	P	**P**	**11 50 54.5**	**-0.1**
comp=Z,2.5nm,0.7s,mb4.4,baz=107,slow=6.6,SNR=11							
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**11 50 54.8**	**-0.6**
comp=Z,9.8nm,0.7s,mb5.0,baz=80,slow=7.1,SNR=15							
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**11 50 55.4**	**-1.2**
comp=Z,3.6nm,0.5s,mb4.7,baz=67,slow=7.6,SNR=7.8							
AKASG	**Malin Array Be**	**57.16**	**313**	*ce*P	**P**	**11 50 55.5**	**-1.0**
AKASG				pmax	pmax		
comp=Z,4.0nm,0.5s							
SPITS	**Spitsbergen Ar**	**58.38**	**346**	P	**P**	**11 51 04.6**	**-0.1**
comp=Z,2.4nm,0.6s,mb4.4,baz=88,slow=9.3,SNR=5.8							
WRAB	**Tennant Creek**	**59.02**	**148**	*e*P	**P**	**11 51 09.7**	**-0.1**
WRAB				pmax	pmax		
comp=Z,15nm,0.8s,mb5.1							
WRAB	**Tennant Creek**	**59.02**	**148**	*e*P	**P**	**11 51 09.7**	**-0.1**
comp=Z,15nm,0.8s,mb5.1							
WRA	**Warramunga Arr**	**59.03**	**148**	P	**P**	**11 51 09.9**	**+0.1**
comp=Z,1.3nm,0.6s,mb4.1,baz=335,slow=7.6,SNR=4.8							
WB2	**Warramunga Arr**	**59.03**	**148**	*e*P	**P**	**11 51 09.5**	**-0.4**
EIL	**Elat**	**59.15**	**288**	P	**P**	**11 51 09.6**	**-1.2**
comp=Z,2.3nm,0.4s,mb4.6,baz=186,slow=11,SNR=3.5							
EIL	**Elat**	**59.15**	**288**	P	**P**	**11 51 09.6**	**-1.2**
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**11 51 30.9**	**+0.1**
comp=Z,4.5nm,0.8s,mb4.7,baz=332,slow=6.0,SNR=19							
HFS	**Hagfors**	**63.24**	**326**	P	**P**	**11 51 36.9**	**-1.1**
comp=Z,7.4nm,0.8s,mb4.9,baz=90,slow=6.2,SNR=13							
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**11 51 42.2**	**-1.4**
comp=Z,4.5nm,0.7s,mb4.6,baz=70,slow=6.9							
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**11 51 42.5**	**-1.1**
comp=Z,5.9nm,0.7s,mb4.7,baz=71,slow=6.6,SNR=13							
NWAO	**Narrogin (SRO)**	**65.88**	**169**	P	**P**	**11 51 55.7**	**+0.3**
comp=Z,14nm,1.1s,mb4.9,baz=270,slow=5.1,SNR=5.0							
NWAO	**Narrogin (SRO)**	**65.88**	**169**	P	**P**	**11 51 55.7**	**+0.2**
BRG	**Berggiesshubel**	**66.36**	**316**	*e*P	**P**	**11 52 02.5**	**+4.1**
comp=Z,3.8nm,0.8s,mb4.5							
BRG	**Berggiesshubel**	**66.36**	**316**	*e*P	**P**	**11 52 02.5**	**+4.0**
BRG				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.2							
CLL	**Collm**	**66.74**	**317**	*e*P	**P**	**11 52 03.0**	**+2.1**
CLL	**Collm**	**66.74**	**317**	*e*(P)	**P**	**11 52 03.0**	**+2.1**
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**11 52 04.5**	**0.0**
comp=Z,0.6nm,0.5s,mb3.9,baz=74,slow=4.9,SNR=4.1							
GRA1	**Grafenberg Arr**	**68.43**	**316**	*e*P	**P**	**11 52 16.5**	**+4.9**
comp=Z,5.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**68.43**	**316**	*e*P	**P**	**11 52 16.5**	**+4.9**
comp=Z,5.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**68.43**	**316**	*e*P	**P**	**11 52 16.5**	**+4.9**
GRF				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**68.43**	**316**	*e*P	**P**	**11 52 16.5**	**+4.9**
GRF				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**68.43**	**316**	*e*P	**P**	**11 52 16.5**	**+4.9**
comp=Z,5.0nm,1.0s,mb4.5							
DAVOX	**Davos/Dischmat**	**70.50**	**313**	P	**P**	**11 52 24.3**	**-0.1**
comp=Z,2.4nm,0.5s,mb4.4,baz=104,slow=4.2,SNR=4.5							
INK	**Inuvik**	**70.78**	**20**	P	**P**	**11 52 25.1**	**-0.7**
comp=Z,3.8nm,0.9s,mb4.3,baz=335,slow=6.7,SNR=10							
BBOO	**Buckleboo**	**71.06**	**153**	*e*P	**P**	**11 52 27.2**	**-0.6**
comp=Z,3.6nm,1.0s,mb4.3							
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**11 52 28.7**	**-0.7**
CDF				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2							
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**11 52 28.7**	**-0.7**
comp=Z,1.7nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**72.58**	**148**	*e*P	**P**	**11 52 36.7**	**-0.3**
comp=Z,4.2nm,0.8s,mb4.4							
STKA	**Stephens Creek**	**72.58**	**148**	P	**P**	**11 52 36.8**	**-0.2**
comp=Z,3.2nm,0.7s,mb4.3,baz=344,slow=8.3,SNR=9.9							
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**11 52 39.7**	**+0.1**
LPG				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.9							
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**11 52 39.7**	**+0.1**
comp=Z,8.9nm,0.6s,mb4.9							
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**11 52 39.7**	**0.0**
LPL				pmax	pmax		
comp=Z,7.0nm,0.6s,mb4.8							
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**11 52 39.7**	**0.0**
comp=Z,7.0nm,0.6s,mb4.8							
EKA	**Eskdalemuir Ar**	**73.43**	**326**	P	**P**	**11 52 41.2**	**-0.6**
comp=Z,2.6nm,0.9s,mb4.1,baz=41,slow=7.7,SNR=3.5							
ORIF	**Oris-en-Rattie**	**73.84**	**313**	*e*P	**P**	**11 52 43.9**	**-0.6**
ORIF	**Oris-en-Rattie**	**73.84**	**313**	*e*P	**P**	**11 52 43.9**	**-0.6**
SMF	**Signal de Mont**	**74.22**	**315**	*e*P	**P**	**11 52 45.7**	**-0.9**
SMF				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.9							
SMF	**Signal de Mont**	**74.22**	**315**	*e*P	**P**	**11 52 45.7**	**-0.9**
comp=Z,1.5nm,0.6s,mb4.1							
CMSA	**Cobar Meteorol**	**74.22**	**145**	*e*P	**P**	**11 52 47.4**	**+0.7**
AVF	**Avril sur Loir**	**74.43**	**316**	*e*P	**P**	**11 52 46.9**	**-1.0**
AVF				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2							
AVF	**Avril sur Loir**	**74.43**	**316**	*e*P	**P**	**11 52 46.9**	**-1.0**
comp=Z,2.0nm,0.7s,mb4.2							
OPO	**Ambohidratompo**	**74.97**	**236**	P	**P**	**11 52 50.7**	**-0.7**
comp=Z,2.0nm,0.7s,mb4.1,baz=90,slow=12,SNR=3.5							
TCF	**Toulx Ste Croi**	**75.37**	**316**	*e*P	**P**	**11 52 52.7**	**-0.6**
TCF				pmax	pmax		
comp=Z,2.0nm,0.9s,mb4.0							
TCF	**Toulx Ste Croi**	**75.37**	**316**	*e*P	**P**	**11 52 52.7**	**-0.6**
comp=Z,2.2nm,0.9s,mb4.1							
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**11 53 19.9**	**-0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=327,slow=5.1,SNR=20							
FCC	**Fort Churchill**	**87.90**	**10**	*e*P	**P**	**11 53 59.0**	**-0.2**
comp=Z,0.5nm,1.2s,mb3.6							
EDM	**Edmonton**	**88.53**	**22**	*e*P	**P**	**11 54 01.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**94.03**	**288**	P	**P**	**11 54 27.5**	**-1.1**
comp=Z,0.5nm,0.8s,mb4.0,baz=27,slow=4.6,SNR=3.4							

NEIC ***12*** *11:41:41.7,* $17^{\circ}.00N \times 99^{\circ}.67W$*, h39km, MD3.5(MEX), After MEX.*

MEX 12 11:41:42.0±0.8, 17°.05N×99°.63W, h25km±20km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.33**	**236**	*i* P		Pb	11 41 47.8	-1.6
ACX				*i* S		Sb	11 41 53.5	-1.0
ACX	**Acapulco**	**0.33**	**236**	*i* P		Pb	11 41 47.8	-1.6
ACX				*i* S		Sb	11 41 53.5	-1.0
CAIG	**El Cayaco**	**0.61**	**270**	*i* P		Pb	11 41 51.9	-2.1
CAIG				*i* S		Sb	11 41 59.6	-2.5
CAIG	**El Cayaco**	**0.61**	**270**	*i* P		Pb	11 41 51.9	-2.1
CAIG				*i* S		Sb	11 41 59.6	-2.5
PNIG	**Pinotepa**	**1.59**	**114**	*e*P		Pn	11 42 06.8	-1.8
PNIG				*i* S		Sn	11 42 24.0	-4.2
PNIG	**Pinotepa**	**1.59**	**114**	*e*P		Pn	11 42 06.8	-1.8
PNIG				*i* S		Sn	11 42 24.0	-4.2
UTMO	**Huajuapan**	**1.91**	**66**	*i* P		Pn	11 42 11.5	-1.5
UTMO				*i* S		Sn	11 42 33.0	-3.3
MZVM		**2.16**	**10**	*i* P		Pn	11 42 13.6	-2.8
PPM	**Popocatepetl**	**2.22**	**25**	*i* P		Pn	11 42 16.1	-1.2
PPM				*i* S		Sn	11 42 40.5	-3.4
PPM	**Popocatepetl**	**2.22**	**25**	*i* P		Pn	11 42 16.1	-1.2
PPM				*i* S		Sn	11 42 40.5	-3.4

ISCJB ***12*** *11:45:14.3±1.1,* $32^{\circ}.18N \pm 0^{\circ}.03 \times 104^{\circ}.98E \pm 0^{\circ}.06$*, h9km±7km, mb4.1/20, Error ellipse: s-maj=8.8km s-min=5.4km az=8.7*

IDC ***12*** *11:45:14.7±0.6,* $32^{\circ}.17N \times 104^{\circ}.90E$*, h0km, mb4.1/17, mb1 4.2/20, mb1mx4.1/32, mbtmp4.0/20, ML3.9/2, Error ellipse: s-maj=24.0km s-min=12.7km az=59.0*

BJI ***12*** *11:45:16.9,* $32^{\circ}.31N \times 105^{\circ}.05E$*, h14km, mb4.3/3, ML4.2/8, Ms4.5/3, Ms7 4.1/2*

NEIC ***12*** *11:45:16.7±0.4,* $32^{\circ}.21N \times 104^{\circ}.87E$*, h10km, mb4.3/2, Error ellipse: s-maj=10.7km s-min=7.9km az=57.0*

ISC 12 11:45:16.5±1.0, 32°.21N±0°.03×104°.92E±0°.06, h8km±6km, n39, σ0^{s}.95/45, mb4.1/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.63**	**218**	Pg		**Pg**	**11 45 46.8**	**-1.0**
CD2				Sg		**Sg**	**11 46 09.9**	**+0.9**
CD2				smax				
comp=N,5μm,0.7s								
LZH	**Lanzhou**	**3.96**	**347**	*e*Pg		**Pg**	**11 46 30.6**	**-1.8**
LZH				Sg		**Sg**	**11 47 19.8**	**-4.0**
LZH				smax				
comp=N,1μm,0.9s								
LZH				smax				
comp=E,2μm,0.6s								
LZH				LR		LR		
comp=E,7μm,8.7s								
LZH				LR		LR		
comp=Z,8μm,9.4s								
ENH	**Enshi**	**4.37**	**115**	*e*Pn		**Pn**	**11 46 26.6**	**+3.6**
GYA	**Guiyang**	**5.93**	**165**	Pg		**Pg**	**11 47 10.9**	**+0.7**
GYA				Sg		**Sn**	**11 47 52.5**	**-0.3**
GYA				smax				
comp=N,440nm,0.7s								
GYA				smax				
comp=E,550nm,0.7s								
KMI	**Kunming**	**7.32**	**196**	Pn		**Pn**	**11 47 09.6**	**+6.0**
KMI				Sn		**Sn**	**11 48 27.0**	**+0.1**
KMI				smax				
comp=N,41nm,1.0s								
KMI				smax				
comp=E,40nm,0.7s								
WHN	**Wuhan**	**8.23**	**99**	P		**Pn**	**11 47 06.9**	**-9.3**
WHN				S		**Sn**	**11 48 44.0**	**-5.4**
HHC	**Hu-ho-hao-te**	**10.14**	**30**	*e*P		**Pn**	**11 47 43.0**	**+0.8**
HHC				PP			11 47 51.0	
HHC				S		**Sn**	**11 49 36.7**	**+0.6**
HHC				SS			11 49 48.7	
HHC				pmax		pmax		
comp=Z,36nm,1.1s								
HHC				LR		LR		
comp=N,440nm,4.4s								
HHC				LR		LR		
comp=E,700nm,4.4s								
HHC				LR		LR		
comp=Z,360nm,5.3s								
LSA	**Lhasa**	**12.08**	**262**	Pn		**Pn**	**11 48 10.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**14.72**	**203**	Pn		**Pn**	**11 48 45.4**	**+0.4**
comp=Z,0.2nm,0.3s,baz=9.5,slow=11,SNR=4.7								
SONM	**Songino Array**	**15.64**	**4**	Pn		**Pn**	**11 48 58.4**	**+1.3**
comp=Z,0.5nm,0.3s,baz=179,slow=14,SNR=2.5								
SONM				Lg			11 53 35.2	
comp=Z,0.7nm,0.3s,baz=189,slow=28,SNR=4.4								
KSRS	**Korea Array**	**19.58**	**68**	P		**Pn**	**11 49 45.8**	**-0.3**
comp=Z,0.4nm,0.3s,baz=250,slow=10,SNR=6.8								
CN2	**Changchun**	**19.83**	**48**	*e*P		**Pn**	**11 49 50.3**	**+1.3**
CN2				pmax		pmax		
comp=Z,10.0nm,0.7s								
HIA	**Hailar**	**20.34**	**29**	Pn		**P**	**11 49 56.0**	**+3.0**
MKAR	**Makanchi Array**	**22.62**	**317**	P		**P**	**11 50 17.0**	**-0.5**
comp=Z,4.5nm,0.9s,mb3.9,baz=118,slow=10,SNR=6.1								
ZALV	**Zalesovo Beam**	**26.04**	**332**	P		**P**	**11 50 50.4**	**+0.5**
comp=Z,2.7nm,0.3s,mb4.2,baz=146,slow=10,SNR=2.6								
UCH	**Uchtor**	**26.07**	**301**	*e*P		**P**	**11 50 52.2**	**+1.9**
KURK	**Kurchatov**	**26.79**	**321**	P		**P**	**11 50 57.3**	**+0.6**
comp=Z,1.4nm,0.8s,mb3.6,baz=132,slow=8.8,SNR=5.3								
KURK				PcP		PcP	11 54 18.5	-1.0
comp=Z,0.8nm,0.7s,baz=119,slow=2.1,SNR=3.7								
BVAR	**Borovoye Array**	**32.37**	**320**	P		**P**	**11 51 46.7**	**+0.5**
comp=Z,0.8nm,0.5s,mb3.8,baz=111,slow=7.9,SNR=2.9								
ABKAR	**Akbulak array**	**37.47**	**310**	*e*P		**P**	**11 52 29.9**	**-0.4**
comp=Z,1.9nm,0.8s,mb4.0								
AKTK	**Aktyubinsk**	**38.90**	**312**	P		**P**	**11 52 43.2**	**+0.9**
AKTO	**Aktyubinsk**	**38.90**	**312**	P		**P**	**11 52 43.2**	**+0.9**
comp=Z,1.0nm,0.6s,mb3.7,baz=124,slow=16,SNR=2.5								
PETK	**Petropavlovsk-**	**42.91**	**45**	P		**P**	**11 53 15.0**	**-0.3**
comp=Z,3.8nm,0.8s,mb4.2,baz=235,slow=5.1,SNR=3.2								
FITZ	**Fitzroy Crossi**	**53.83**	**155**	P		**P**	**11 54 39.1**	**-0.8**
comp=Z,1.9nm,0.8s,mb4.1,baz=311,slow=9.3,SNR=3.5								
ARCES	**ARCESS Array B**	**56.54**	**336**	P		**P**	**11 54 58.3**	**-0.5**
comp=Z,3.0nm,0.8s,mb4.4,baz=60,slow=7.2,SNR=5.9								
BRTR	**Keskin Array B**	**56.80**	**299**	P		**P**	**11 55 00.4**	**-0.8**
comp=Z,0.8nm,0.7s,mb3.9,baz=56,slow=7.8,SNR=3.8								
FINES	**FINESS Array B**	**57.04**	**326**	P		**P**	**11 55 02.2**	**-0.3**
comp=Z,2.9nm,0.8s,mb4.3,baz=137,slow=11,SNR=4.2								
WRAB	**Tennant Creek**	**59.02**	**147**	*e*P		**P**	**11 55 16.4**	**-0.4**
comp=Z,2.8nm,0.6s,mb4.5								
WRA	**Warramunga Arr**	**59.02**	**147**	P		**P**	**11 55 16.4**	**-0.5**
comp=Z,5.1nm,0.5s,mb4.8,baz=340,slow=7.6,SNR=19								
ASAR	**Alice Springs**	**62.09**	**150**	P		**P**	**11 55 37.5**	**-0.2**
comp=Z,2.2nm,0.5s,mb4.5,baz=330,slow=6.4,SNR=18								
HFS	**Hagfors**	**63.24**	**326**	P		**P**	**11 55 44.3**	**-0.8**
comp=Z,1.7nm,0.6s,mb4.4,baz=94,slow=13,SNR=4.3								
NB2	**NORSAR Subarra**	**64.10**	**327**	P		**P**	**11 55 49.2**	**-1.5**
comp=Z,1.3nm,0.7s,mb4.2,baz=71,slow=6.5								
NOA	**NORSAR Array B**	**64.10**	**327**	P		**P**	**11 55 48.2**	**-2.5**
comp=Z,1.0nm,0.7s,mb4.0,baz=71,slow=6.5,SNR=2.7								
GERES	**GERESS Array B**	**67.27**	**314**	P		**P**	**11 56 10.8**	**-0.6**
comp=Z,0.2nm,0.4s,mb3.5,baz=60,slow=6.1,SNR=3.1								
INK	**Inuvik**	**70.88**	**20**	P		**P**	**11 56 32.7**	**-0.7**
comp=Z,1.5nm,0.9s,mb3.9,baz=311,slow=6.0,SNR=4.4								
INK	**Inuvik**	**70.88**	**20**	P		**P**	**11 56 32.7**	**-0.7**
STKA	**Stephens Creek**	**72.57**	**148**	P		**P**	**11 56 42.9**	**-1.1**
comp=Z,1.2nm,0.5s,mb4.1,baz=322,slow=7.8,SNR=6.2								
STKA	**Stephens Creek**	**72.57**	**148**	P		**P**	**11 56 42.9**	**-1.1**
YKA	**Yellowknife Ar**	**80.43**	**17**	P		**P**	**11 57 27.8**	**-0.4**
comp=Z,0.5nm,0.5s,mb3.7,baz=327,slow=5.1,SNR=7.2								
YKA	**Yellowknife Ar**	**80.43**	**17**	P		**P**	**11 57 27.8**	**-0.4**

IDC ***12*** *11:46:52.4±0.9,* $31^{\circ}.32N \times 103^{\circ}.92E$*, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/27, mbtmp3.9/10, Error ellipse: s-maj=33.3km s-min=17.1km az=60.0*

ISCJB ***12*** *11:46:53.6±2.2,* $31^{\circ}.29N \pm 0^{\circ}.09 \times 104^{\circ}.0E \pm 0^{\circ}.2$*, h21km±17km, mb3.9/9, Error ellipse: s-maj=23.6km s-min=13.7km az=155.4*

NEIC ***12*** *11:46:53.9±0.4,* $31^{\circ}.36N \times 103^{\circ}.99E$*, h10km, Error ellipse: s-maj=16.5km s-min=7.8km az=70.0*

ISC 12 11:46:53.3±2.7, 31°.34N±0°.09×104°.0E±0°.1, h5km±18km, n14, σ0^{s}.58/15, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**201**	Pg		**Pg**	**11 47 02.4**	**+0.3**
CD2				Sg		**Sg**	**11 47 07.7**	**-0.5**
CD2				smax				
comp=N,17μm,0.8s								
CMAR	**Chiang Mai Arr**	**13.61**	**201**	Pn		**Pn**	**11 50 07.8**	**+0.8**
baz=18,slow=12,SNR=2.2								
KSRS	**Korea Array**	**20.68**	**66**	P		**P**	**11 51 34.9**	**+0.9**
comp=N,1.1nm,0.5s,baz=255,slow=11,SNR=3.3								
CN2	**Changchun**	**21.02**	**48**	*e*P		**P**	**11 51 34.2**	**-3.5**
CN2				pmax		pmax		
comp=Z,10.0nm,0.8s,mb4.2								
MK31	**Makanchi Array**	**22.71**	**319**	P		**P**	**11 51 55.2**	**-0.5**
MKAR	**Makanchi Array**	**22.71**	**319**	P		**P**	**11 51 56.0**	**+0.3**
comp=Z,0.8nm,0.4s,mb3.5,baz=130,slow=12,SNR=3.4								
ZALV	**Zalesovo Beam**	**26.45**	**334**	P		**P**	**11 52 31.1**	**+0.2**
comp=Z,1.4nm,0.4s,mb3.9,baz=133,slow=8.1,SNR=3.1								
KURK	**Kurchatov**	**26.98**	**323**	P		**P**	**11 52 36.1**	**+0.5**
comp=Z,1.1nm,0.7s,mb3.5,baz=127,slow=9.6,SNR=2.9								
ARCES	**ARCESS Array B**	**56.99**	**336**	P		**P**	**11 56 38.8**	**-0.6**
comp=Z,0.7nm,0.3s,mb4.1,baz=81,slow=6.6,SNR=5.4								
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P		**P**	**11 56 51.9**	**-0.3**
WRA	**Warramunga Arr**	**58.74**	**146**	P		**P**	**11 56 52.0**	**-0.2**
comp=Z,1.3nm,0.3s,mb4.4,baz=328,slow=9.1,SNR=12								
ASAR	**Alice Springs**	**61.76**	**149**	P		**P**	**11 57 12.8**	**-0.1**
comp=Z,0.3nm,0.4s,mb3.8,baz=328,slow=6.6,SNR=3.1								
INK	**Inuvik**	**71.97**	**19**	P		**P**	**11 58 17.3**	**-0.1**
comp=Z,1.3nm,0.8s,mb3.9,baz=299,slow=6.7,SNR=3.4								
YKA	**Yellowknife Ar**	**81.50**	**17**	P		**P**	**11 59 11.3**	**0.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=331,slow=5.4,SNR=4.0								

ISCJB ***12*** *11:49:34.9±0.7,* $31^{\circ}.2N \pm 0^{\circ}.1 \times 103^{\circ}.9E \pm 0^{\circ}.1$*, h10km, mb3.9/9, Error ellipse: s-maj=21.6km s-min=12.7km az=137.7*

IDC ***12*** *11:49:35.4±1.0,* $31^{\circ}.24N \times 103^{\circ}.85E$*, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/26, mbtmp4.0/9, MS4.5/1, Ms1 4.7/1, ms1mx3.3/43, Error ellipse: s-maj=38.1km s-min=18.4km az=54.0*

NEIC ***12*** *11:49:37.5±0.7,* $31^{\circ}.53N \times 104^{\circ}.40E$*, h10km, Error ellipse: s-maj=24.6km s-min=12.1km az=70.0*

BJI ***12*** *11:49:41.1,* $31^{\circ}.60N \times 103^{\circ}.91E$*, h20km, mb4.2/2, ML3.3/2*

ISC 12 11:49:36.9±0.7, 31°.2N±0°.1×103°.8E±0°.1, h10km, n14, σ0^{s}.59/14, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn		**Pn**	**11 52 56.4**	**+9.0**
0.3nm,0.3s,baz=8.7,slow=8.9,SNR=6.1								
CMAR				LR		LR	11 58 40.5	
comp=Z,2μm,18.0s,baz=287,slow=40								
KSRS	**Korea Array**	**20.83**	**66**	P		**P**	**11 54 18.7**	**+0.1**
3.0nm,0.6s,baz=261,slow=11,SNR=14								
CN2	**Changchun**	**21.20**	**47**	*e*P		**P**	**11 54 23.3**	**+0.7**
CN2				pmax		pmax		
comp=Z,10.0nm,0.7s,mb4.2								
MK31	**Makanchi Array**	**22.78**	**319**	*e*P		**P**	**11 54 40.4**	**+1.0**
MKAR	**Makanchi Array**	**22.78**	**319**	P		**P**	**11 54 40.0**	**+0.6**
comp=Z,2.4nm,1.0s,mb3.6,baz=115,slow=13,SNR=5.3								
ZALV	**Zalesovo Beam**	**26.56**	**334**	P		**P**	**11 55 14.3**	**-0.5**
comp=Z,1.2nm,0.3s,mb3.9,baz=128,slow=9.3,SNR=1.9								
KURK	**Kurchatov**	**27.06**	**323**	P		**P**	**11 55 19.1**	**-0.3**
comp=Z,1.3nm,0.7s,mb3.5,baz=128,slow=9.3,SNR=5.6								
ARCES	**ARCESS Array B**	**57.10**	**336**	P		**P**	**11 59 22.4**	**-0.7**
comp=Z,3.7nm,1.0s,mb4.4,baz=81,slow=5.9,SNR=2.4								
WRAB	**Tennant Creek**	**58.65**	**146**	*e*P		**P**	**11 59 33.7**	**-0.8**
WRA	**Warramunga Arr**	**58.65**	**146**	P		**P**	**11 59 35.0**	**+0.5**
comp=Z,2.1nm,0.6s,mb4.4,baz=338,slow=7.5,SNR=9.1								
ASAR	**Alice Springs**	**61.67**	**149**	P		**P**	**11 59 55.6**	**+0.5**
comp=Z,0.6nm,0.7s,m

comp=N,68nm,2.1s
KMI smax
comp=E,77nm,1.5s
WHN Wuhan 8.00 103 S **Sn 11 55 41.4 -6.0**
WHN LR LR
comp=N,7μm,9.4s
WHN LR LR
comp=E,2μm,7.2s
WHN LR LR
comp=Z,4μm,11.2s
GTA Gaotai 8.07 328 *e*P **Pn 11 54 19.3 +1.5**
GTA pP 11 54 22.8
GTA sP 11 54 25.3
GTA S **Sn 11 55 50.3 +1.2**
GTA pmax pmax
comp=Z,11nm,0.9s
GTA pmax pmax
comp=Z,1μm,4.8s
GTA LR LR
comp=N,4μm,17.4s
GTA LR LR
comp=E,3μm,12.9s
GTA LR LR
comp=Z,2μm,14.4s
BTO Baotou 8.80 24 *e*P **Pn 11 54 27.7 0.0**
BTO S **Sn 11 56 12.6 +5.7**
HHC Hu-ho-hao-te 9.60 30 *e*P **Pn 11 54 43.2 +4.5**
HHC pP 11 54 46.4
HHC sP 11 54 49.2
HHC S **Sn 11 56 33.0 +6.4**
HHC sS 11 56 38.2
HHC pmax pmax
comp=Z,27nm,1.1s
HHC pmax pmax
comp=Z,1μm,4.4s
HHC LR LR
comp=N,3μm,6.9s
HHC LR LR
comp=E,2μm,5.8s
HHC LR LR
comp=Z,3μm,7.6s
TIA Tai'an 10.39 67 P **Pn 11 54 54.0 +4.4**
NJ2 Nanjing 11.48 89 *e*P **Pn 11 55 07.3 +2.8**
NJ2 pP 11 55 14.9
NJ2 PP 11 55 17.0
NJ2 sP 11 55 20.6
NJ2 S **Sn 11 57 17.0 +4.2**
NJ2 sS 11 57 28.0
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 pmax pmax
comp=Z,230nm,3.5s
NJ2 LR LR
comp=N,2μm,7.6s
NJ2 LR LR
comp=E,2μm,10.1s
GZH Guangzhou 11.89 141 P **Pn 11 55 02.8 -7.3**
GZH S **Sn 11 57 11.7 -11**
GZH LR LR
comp=N,2μm,15.1s
GZH LR LR
comp=E,2μm,17.4s
LSA Lhasa 12.47 260 P **Pn 11 55 15.3 -2.7**
LSA Lhasa 12.47 260 *e*Pn **Pn 11 55 21.0 +2.9**
SHL Shillong 13.68 242 *e*P **Pn 11 55 33.0 -1.6**
QIZ Qiongzhong 14.16 162 P **Pn 11 55 41.9 +0.7**
QIZ S **Sn 11 58 19.5 +1.0**
QIZ LR LR
comp=Z,2μm,17.6s
SONM Songino Array 15.19 3 Pn **Pn 11 55 53.4 -1.6**
SONM Lg 12 00 24.9
comp=Z,0.8nm,0.3s,baz=184,slow=14,SNR=7.3
comp=Z,0.7nm,0.3s,baz=167,slow=27,SNR=5.4
CMAR Chiang Mai Arr 15.25 204 Pn **Pn 11 55 59.4 +3.5**
comp=Z,0.3nm,0.3s,baz=9.9,slow=9.3,SNR=7.5
SNY Shenyang 17.17 53 ⇑P **Pn 11 56 21.9 +1.5**
SNY S **Sn 11 59 33.0 +1.6**
SNY LR LR
comp=N,2μm,12.3s
SNY LR LR
comp=E,2μm,11.7s
SNY LR LR
comp=Z,2μm,14.1s
GUN Gumba 17.42 259 *e*P **Pn 11 56 23.6 -0.1**
comp=Z,41nm,0.7s
PKI Pulchoki 17.93 259 *e*P **Pn 11 56 29.4 -0.6**
PKIN Phulchoki 17.94 259 *e*P **Pn 11 56 30.0 -0.1**
comp=Z,52nm,0.7s
KKN Kakani 17.96 260 *e*P **Pn 11 56 29.7 -0.7**
comp=Z,53nm,0.8s
DMN Daman 18.17 259 *e*P **Pn 11 56 32.3 -0.6**
comp=Z,64nm,1.0s
KSRS Korea Array 19.12 69 P **Pn 11 56 43.5 -0.9**
comp=Z,0.5nm,0.3s,baz=252,slow=9.7,SNR=6.5
KSRS Korea Array 19.12 69 P **Pn 11 56 43.5 -0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 19.30 49 *e*P **Pn 11 56 46.5 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
HIA Hailar 19.80 29 *e*P **Pn 11 56 50.1 -2.4**
HIA pmax pmax
comp=Z,12nm,0.8s
HIA Hailar 19.80 29 *e*Pn **Pn 11 56 50.0 -2.4**
comp=Z,12nm,0.8s
MKAR Makanchi Array 22.53 316 P **P 11 57 21.2 +0.8**
comp=Z,6.8nm,1.0s,mb4.0,baz=115,slow=11,SNR=12
KLR Kul'dur 25.76 42 *e*P **P 11 57 49.2 -2.0**
ZALV Zalesovo Beam 25.81 332 P **P 11 57 51.1 -0.5**
comp=Z,2.2nm,0.3s,mb4.1,baz=134,slow=12,SNR=3.8
BOD Bodaibo 25.86 11 *e*P **P 11 57 52.9 +0.9**
AAK Ala-Archa 26.22 301 P **P 11 57 56.9 +1.4**
comp=Z,0.8nm,0.4s,mb3.6,baz=153,slow=6.8,SNR=4.1
AAK Ala-Archa 26.22 301⇑*e*P **P 11 57 55.3 -0.2**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
KURK Kurchatov 26.66 320 P **P 11 57 59.5 +0.2**
comp=Z,3.4nm,1.0s,mb3.8,baz=128,slow=8.3,SNR=10
KURK Kurchatov 26.66 320⇑*e*P **P 11 58 00.2 +0.9**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.1
KURK Kurchatov 26.66 320 *e*P **P 11 57 59.7 +0.4**
comp=Z,4.7nm,0.8s,mb4.1
MJAR Matsushiro Arr 27.29 73 P **P 11 58 03.0 -2.2**
comp=Z,0.9nm,0.5s,mb3.6,baz=272,slow=8.8,SNR=3.4
BVAR Borovoye Array 32.24 320 P **P 11 58 48.9 0.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=156,slow=26,SNR=3.5
BRVK Borovoye 32.31 320⇑*e*P **P 11 58 49.5 0.0**
BRVK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
AKTK Aktyubinsk 38.85 311 P **P 11 59 46.6 +0.9**
AKTO Aktyubinsk 38.85 311 P **P 11 59 46.6 +0.9**
comp=Z,1.8nm,0.5s,mb4.0,baz=119,slow=9.0,SNR=4.9
ARU Arti 39.85 321 *d*/P **P 11 59 54.4 +0.4**
ARU S **S 12 05 56.0 -2.3**
ARU SS SS 12 08 46.1 -8.2
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.5
KAPI Kappang 39.90 157 P **P 11 59 55.6 +0.9**
comp=Z,7.6nm,0.8s,mb4.5,baz=332,slow=15,SNR=3.7
TIXI Tiksi 41.04 11 *e*P **P 12 00 02.4 -1.2**
TIXI pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
TIXI Tiksi 41.04 11 *e*P **P 12 00 02.6 -1.0**
comp=Z,5.2nm,0.6s,mb4.3
KIV Kislovodsk 49.33 302 *e*P **P 12 01 10.8 +1.0**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BILL Bilibino 49.35 26⇑*e*P **P 12 01 08.8 -0.8**
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
BILL Bilibino 49.35 26 *e*P **P 12 01 08.2 -1.3**
comp=Z,16nm,1.3s,mb4.9
MOS Moscow 51.39 318 *e*P **P 12 01 27.9 +2.7**
OBN Obninsk 52.03 317 *e*P **P 12 01 30.0 0.0**
OBN *e* 12 02 40.1
OBN *e*S **S 12 08 50.8 -2.5**
OBN pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ARCES ARCESS Array B 56.27 335 P **P 12 02 00.5 -0.3**
comp=Z,4.7nm,0.9s,mb4.5,baz=81,slow=7.5,SNR=6.5
FINES FINESS Array B 56.86 326 P **P 12 02 05.1 +0.1**
comp=Z,1.3nm,0.4s,mb4.3,baz=95,slow=9.6,SNR=5.4
BRTR Keskin Array B 56.87 299 P **P 12 02 05.7 +0.2**
comp=Z,1.4nm,0.9s,mb4.0,baz=101,slow=6.4,SNR=7.2
AKASG Malin Array Be 57.08 313 P **P 12 02 06.2 -0.6**
comp=Z,2.5nm,0.7s,mb4.4,baz=68,slow=6.6,SNR=4.7
WRA Warramunga Arr 59.22 148 P **P 12 02 20.3 -1.7**
comp=Z,1.4nm,0.7s,mb4.1,baz=341,slow=7.3,SNR=5.1
KWP Kalwaria Pacla 61.40 313 *e*P **P 12 02 37.2 +0.5**
KWP pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
KWP Kalwaria Pacla 61.40 313 *e*P **P 12 02 37.2 +0.5**
comp=Z,4.6nm,0.4s,mb5.0
ASAR Alice Springs 62.30 150 P **P 12 02 41.9 -1.1**
comp=Z,1.0nm,0.6s,mb4.1,baz=338,slow=6.6,SNR=6.7
HFS Hagfors 63.06 326 P **P 12 02 47.2 -0.5**
comp=Z,3.0nm,0.8s,mb4.5,baz=97,slow=6.4,SNR=4.5
NB2 NORSAR Subarra 63.91 327 P **P 12 02 52.4 -0.8**
comp=Z,2.0nm,0.7s,mb4.3,baz=71,slow=6.9
NOA NORSAR Array B 63.91 327 P **P 12 02 52.8 -0.4**
comp=Z,1.5nm,0.7s,mb4.1,baz=71,slow=6.6,SNR=4.8
GERES GERESS Array B 67.20 314 P **P 12 03 15.4 +0.7**
comp=Z,0.5nm,0.7s,mb3.6,baz=54,slow=12,SNR=2.2
INK Inuvik 70.36 20 P **P 12 03 33.0 -1.1**
comp=Z,2.6nm,0.9s,mb4.2,baz=328,slow=2.1,SNR=4.8
INK Inuvik 70.36 20 P **P 12 03 33.0 -1.1**
KMBO Kilima Mbogo 72.25 257 P **P 12 03 46.8 +0.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=35,slow=24,SNR=4.3
STKA Stephens Creek 72.77 148 P **P 12 03 47.6 -1.3**
comp=Z,0.6nm,0.7s,mb3.6,baz=325,slow=6.4,SNR=2.1
LPG La Plagne 72.93 313 *e*P **P 12 03 50.6 +0.7**
comp=Z,13nm,0.9s,mb4.6
LPG La Plagne 72.93 313 *e*P **P 12 03 50.6 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LPG La Plagne 72.93 313 *e*P **P 12 03 50.6 +0.7**
comp=Z,6.6nm,0.9s,mb4.6
YKA Yellowknife Ar 79.92 18 P **P 12 04 27.8 -1.4**
comp=Z,0.7nm,0.5s,mb3.9,baz=328,slow=5.0,SNR=10
YKA Yellowknife Ar 79.92 18 P **P 12 04 27.8 -1.4**
TORD Torodi Ar. Bea 94.12 288 P **P 12 05 42.0 +2.1**
comp=Z,0.2nm,0.5s,mb3.8,baz=35,slow=3.2,SNR=3.4
M13A Montello 97.86 29 P **P 12 05 56.4 0.0**

CSEM ***12*** *11:55:31.6±0.1, 44°.38N×8°.78E, h10km, ML2.9/9, Error ellipse: s-maj=3.5km s-min=2.2km az=165.0*
ROM ***12*** *11:55:31.4±0.3, 44°.41N×8°.81E, h4km±3km, Md2.5/10, Ml2.4/8, Error ellipse: s-maj=3.0km s-min=2.2km az=175.0*
STR ***12*** *11:55:32.0±0.8, 44°.59N×8°.66E, h5km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
LDG ***12*** *11:55:32.0±0.1, 44°.48N×8°.76E, h5km, Md2.7/3, Ml2.8/24, Error ellipse: s-maj=1.7km s-min=1.4km az=127.0*
GEN ***12*** *11:55:32.3, 44°.44N×8°.78E, h13km, ML2.4*
ISCJB ***12*** *11:55:32.3±0.3, 44°.41N±0°.02×8°.82E±0°.02, h18km±3km, Error ellipse: s-maj=3.9km s-min=2.6km az=166.6*
NEIC ***12*** *11:55:32.0, 44°.59N×8°.66E, h5km, ML2.7(STR), After STR.*
ISC 12 11:55:32.0±0.3, 44°.38N±0°.02×8°.79E±0°.02, h12km±2km, n101, σ0°87/171, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENL	**Genova Univers**	**0.13**	**76**	P	**Pg**	**11 55 35.9**	**+0.6**
GENL				S	**Sg**	**11 55 38.3**	**+0.7**
PCP	**Piancastagn**	**0.24**	**313**	Pg	**Pg**	**11 55 36.7**	**-0.5**
PCP				Sg	**Sg**	**11 55 39.9**	**-0.7**
PCP	**Piancastagn**	**0.24**	**313**	P	**Pg**	**11 55 36.7**	**-0.5**
PCP				Sg	**Sg**	**11 55 39.9**	**-0.7**
QLNO	**Quiliano**	**0.33**	**261**	Pg	**Pg**	**11 55 39.2**	**+0.6**
QLNO				Sg	**Sg**	**11 55 44.0**	**+1.0**
179nm,0.2s							
QLNO	**Quiliano**	**0.33**	**261**	Pg	**Pg**	**11 55 39.2**	**+0.6**
QLNO				Sg	**Sg**	**11 55 44.0**	**+1.0**
179nm,0.2s							
SC2M	**Scurtabo**	**0.53**	**87**	Pg	**Pg**	**11 55 42.7**	**+0.3**
SC2M				Sg	**Sg**	**11 55 50.0**	**+0.5**
317nm,0.3s							
SC2M	**Scurtabo**	**0.53**	**87**	P	**Pg**	**11 55 42.6**	**+0.2**
SC2M				S	**Sg**	**11 55 49.6**	**+0.1**
SC2M				Sg	**Sg**	**11 55 50.0**	**+0.5**
317nm,0.3s							
ROTM	**Rocchetta Tana**	**0.57**	**327**	P	**Pg**	**11 55 42.9**	**-0.3**
ROTM				S	**Sg**	**11 55 50.2**	**-0.5**
RORO	**Rocca Rossa**	**0.58**	**244**	P	**Pg**	**11 55 43.5**	**+0.1**
RORO				S	**Sg**	**11 55 51.4**	**+0.2**
BOB	**Bobbio (Coli)**	**0.61**	**50**	Pg	**Pg**	**11 55 43.8**	**-0.1**
BOB				Sg	**Sg**	**11 55 52.1**	**+0.1**
192nm,0.5s							
BOB	**Bobbio (Coli)**	**0.61**	**50**	Pg	**Pg**	**11 55 43.8**	**-0.1**
BOB				Sg	**Sg**	**11 55 52.1**	**+0.1**
192nm,0.5s							
CODM	**Codolo**	**0.76**	**88**	P	**Pg**	**11 55 46.4**	**-0.3**
CODM				S	**Sg**	**11 55 56.1**	**-0.5**
IMI	**Imperia**	**0.80**	**235**	Pg	**Pg**	**11 55 48.0**	**+0.6**
150nm,0.3s							
IMI	**Imperia**	**0.80**	**235**	P	**Pg**	**11 55 47.8**	**+0.4**
IMI				S	**Sg**	**11 55 58.0**	**+0.1**
MONE	**Monesi**	**0.80**	**249**	P	**Pg**	**11 55 47.5**	**-0.1**
MONE				S	**Sg**	**11 55 57.7**	**-0.4**
GRAM	**Graiana**	**0.92**	**82**	P	**Pg**	**11 55 49.3**	**-0.4**
NEGI	**Seborga**	**0.95**	**237**	P	**Pg**	**11 55 49.8**	**-0.5**
SAOF	**Saorge**	**0.97**	**247**	Pg	**Pg**	**11 55 51.0**	**+0.2**
SAOF				Sg	**Sg**	**11 56 04.8**	**+1.4**
SAOF	**Saorge**	**0.97**	**247**	Pg	**Pg**	**11 55 51.0**	**+0.2**
SAOF				Sg	**Sg**	**11 56 04.8**	**+1.4**
RONM	**Roccetta Nervi**	**0.99**	**240**	P	**Pg**	**11 55 50.5**	**-0.7**
ENR	**Entracque**	**1.00**	**262**	P	**Pg**	**11 55 50.5**	**-0.7**
VALM	**Valbona**	**1.04**	**91**	P	**Pg**	**11 55 51.8**	**-0.3**
AUTN	**L'Aution**	**1.05**	**249**	Pg	**Pg**	**11 55 52.7**	**+0.4**
AUTN				Sg	**Sg**	**11 56 07.6**	**+1.6**
AUTN	**L'Aution**	**1.05**	**249**	Pg	**Pg**	**11 55 52.7**	**+0.4**
AUTN				Sg	**Sg**	**11 56 07.6**	**+1.6**
STV	**Sant Anna di V**	**1.06**	**264**	Pg	**Pg**	**11 55 52.2**	**-0.3**
STV	**Sant Anna di V**	**1.06**	**264**	P	**Pg**	**11 55 51.3**	**-1.2**
STV	**Sant Anna di V**	**1.06**	**264**	Pg	**Pg**	**11 55 52.2**	**-0.3**
SBF	**Sospel**	**1.10**	**243**	*e*Pg	**Pg**	**11 55 52.9**	**-0.4**
SBF				*e*Sg	**Sg**	**11 56 07.8**	**+0.2**
140nm,0.5s							
SBF	**Sospel**	**1.10**	**243**	*e*Pg	**Pg**	**11 55 52.9**	**-0.4**
SBF				*e*Sg	**Sg**	**11 56 07.8**	**+0.2**
70nm,0.5s							
DOI	**San Damiano**	**1.12**	**277**	Pg	**Pg**	**11 55 53.4**	**-0.1**
171nm,0.5s							
DOI	**San Damiano**	**1.12**	**277**	Pg	**Pg**	**11 55 53.4**	**-0.1**
171nm,0.5s							
LUCF	**Luceram**	**1.15**	**246**	Pg	**Pg**	**11 55 54.0**	**-0.1**
LUCF				Sg	**Sg**	**11 56 09.7**	**+0.6**
ERBM	**Eremo**	**1.16**	**87**	Pg	**Pg**	**11 55 54.7**	**+0.3**
618nm,3.3s							
ERBM	**Eremo**	**1.16**	**87**	Pg	**Pg**	**11 55 54.7**	**+0.3**
618nm,3.3s							
TOUF	**Mont Tournerai**	**1.17**	**253**	Sg	**Sg**	**11 56 10.6**	**+0.9**
TOUF	**Mont Tournerai**	**1.17**	**253**	Sg	**Sg**	**11 56 10.6**	**+0.9**
SARO	**Sassorosso**	**1.17**	**99**	P	**Pn**	**11 55 53.6**	**-0.6**
PZZ	**Stroppo**	**1.21**	**277**	Pg	**Pg**	**11 55 54.2**	**-1.1**
89nm,0.3s							
REVF	**Revere**	**1.21**	**239**	Pg	**Pg**	**11 55 56.3**	**+1.0**
REVF	**Revere**	**1.21**	**239**	Pg	**Pg**	**11 55 56.3**	**+1.0**
MVIF	**Mont Vial**	**1.27**	**249**	Pg	**Pg**	**11 55 56.2**	**-0.3**
MVIF	**Mont Vial**	**1.27**	**249**	Pg	**Pg**	**11 55 56.2**	**-0.3**
MAIM	**Mastiano**	**1.31**	**110**	P	**Pn**	**11 55 55.2**	**-0.8**
RSP	**Reno Superiore**	**1.34**	**306**	P	**Pn**	**11 55 54.9**	**-1.5**
TRAV	**Traversella**	**1.36**	**327**	Pg	**Pn**	**11 55 56.4**	**-0.4**
TRAV				Sg	**Sg**	**11 56 15.3**	**-0.5**
TRAV	**Traversella**	**1.36**	**327**	P	**Pn**	**11 55 55.3**	**-1.5**
TRAV	**Traversella**	**1.36**	**327**	Pg	**Pn**	**11 55 56.4**	**-0.4**
TRAV				Sg	**Sg**	**11 56 15.3**	**-0.5**
ORO	**Oropa**	**1.38**	**336**	Pg	**Pg**	**11 55 57.6**	**-0.9**
97nm,0.2s							
ORO	**Oropa**	**1.38**	**336**	Pg	**Pg**	**11 55 57.6**	**-0.9**
97nm,0.2s							
MBDF	**Montbardon**	**1.49**	**284**	*e*Pg	**Pn**	**11 55 59.0**	**+0.5**
MBDF				*e*Sg	**Sg**	**11 56 17.2**	**-2.7**
40nm,0.4s							
MBDF	**Montbardon**	**1.49**	**284**	*e*Pg	**Pn**	**11 55 59.0**	**+0.5**
MBDF				*e*Sg	**Sg**	**11 56 17.2**	**-2.7**
20nm,0.4s							
CALN	**Calern**	**1.51**	**246**	Pg	**Pn**	**11 55 59.3**	**+0.5**
CALN	**Calern**	**1.51**	**246**	Pg	**Pn**	**11 55 59.3**	**+0.5**
FRF	**La Foret Royal**	**1.75**	**243**	*e*Pg	**Pg**	**11 56 05.0**	**-0.6**
FRF				*e*Sg	**Sg**	**11 56 27.6**	**-0.7**
65nm,0.4s							
FRF	**La Foret Royal**	**1.75**	**243**	*e*Pn	**Pn**	**11 56 01.8**	**-0.3**
FRF				*e*Pg	**Pg**	**11 56 05.0**	**-0.6**
FRF				*e*Sg	**Sg**	**11 56 27.6**	**-0.7**
FRF	**La Foret Royal**	**1.75**	**243**	*e*Pg	**Pg**	**11 56 05.0**	**-0.6**
FRF				*e*Sg	**Sg**	**11 56 27.6**	**-0.7**
32nm,0.4s							
PGF	**Pioggiola**	**1.83**	**175**	*e*Pn	**Pn**	**11 56 02.8**	**-0.5**
PGF				*e*Sn	**Sn**	**11 56 26.6**	**+0.3**
3.2nm,0.2s							
PGF	**Pioggiola**	**1.83**	**175**	*e*Pn	**Pn**	**11 56 02.8**	**-0.5**
PGF				*e*Sn	**Sn**	**11 56 26.6**	**+0.3**
1.6nm,0.2s							
LPG	**La Plagne**	**1.83**	**308**	*e*Pg	**Pn**	**11 56 04.7**	**+1.4**
LPG				*e*Sg	**Sn**	**11 56 27.2**	**+0.8**
16nm,0.4s							
LPG	**La Plagne**	**1.83**	**308**	*e*Pg	**Pn**	**11 56 04.7**	**+1.4**
LPG				*e*Sg	**Sn**	**11 56 27.2**	**+0.8**
7.9nm,0.4s							
LPL	**La Plagne**	**1.86**	**309**	*e*Pg	**Pn**	**11 56 04.9**	**+1.3**
LPL				*e*Sg	**Sn**	**11 56 27.8**	**+0.8**
29nm,0.7s							
LPL	**La Plagne**	**1.86**	**309**	*e*Pg	**Pn**	**11 56 04.9**	**+1.3**
LPL				*e*Sg	**Sn**	**11 56 27.8**	**+0.8**
14nm,0.7s							
LMR	**La Mourre**	**1.95**	**239**	*e*Pg	**Pg**	**11 56 08.8**	**-0.7**
LMR				*e*Sn	**Sn**	**11 56 28.6**	**-0.7**
LMR				*e*Sg	**Sg**	**11 56 34.2**	**-0.6**
21nm,0.3s							
LMR	**La Mourre**	**1.95**	**239**	*e*Pn	**Pn**	**11 56 04.6**	**-0.3**
LMR				*e*Pg	**Pg**	**11 56 08.8**	**-0.7**
LMR				*e*Sn	**Sn**	**11 56 28.6**	**-0.7**
LMR				*e*Sg	**Sg**	**11 56 34.2**	**-0.6**
LMR	**La Mourre**	**1.95**	**239**	*e*Pn	**Pn**	**11 56 04.6**	**-0.3**
LMR	**La Mourre**	**1.95**	**239**	*e*Pg	**Pg**	**11 56 08.8**	**-0.7**
LMR				*e*Sn	**Sn**	**11 56 28.6**	**-0.7**
LMR				*e*Sg	**Sg**	**11 56 34.2**	**-0.6**
11nm,0.3s							
ORIF	**Oris-en-Rattie**	**2.15**	**286**	*e*Pg	**Pb**	**11 56 10.7**	**-0.1**
ORIF				*e*Sg	**Sb**	**11 56 37.7**	**+0.3**
19nm,0.5s							
ORIF	**Oris-en-Rattie**	**2.15**	**286**	*e*Pn	**Pn**	**11 56 06.3**	**-1.3**
ORIF				*e*Pg	**Pb**	**11 56 10.7**	**-0.1**
ORIF				*e*Sg	**Sb**	**11 56 37.7**	**+0.3**
ORIF	**Oris-en-Rattie**	**2.15**	**286**	*e*Pn	**Pn**	**11 56 06.3**	**-1.3**
ORIF	**Oris-en-Rattie**	**2.15**	**286**	*e*Pg	**Pb**	**11 56 10.7**	**-0.1**
ORIF				*e*Sg	**Sb**	**11 56 37.7**	**+0.3**
9.6nm,0.5s							
SMRF	**Simiane la Rot**	**2.35**	**261**	*e*Pg	**Pb**	**11 56 15.2**	**+0.9**
SMRF				*e*Sg	**Sb**	**11 56 44.9**	**+1.7**
20nm,0.5s							
SMRF	**Simiane la Rot**	**2.35**	**261**	*e*Pn	**Pn**	**11 56 10.5**	**+0.1**
SMRF				*e*Pg	**Pb**	**11 56 15.2**	**+0.9**
SMRF				*e*Sg	**Sb**	**11 56 44.9**	**+1.7**
SMRF	**Simiane la Rot**	**2.35**	**261**	*e*Pn	**Pn**	**11 56 10.5**	**+0.1**
SMRF	**Simiane la Rot**	**2.35**	**261**	*e*Pg	**Pb**	**11 56 15.2**	**+0.9**
SMRF				*e*Sg	**Sb**	**11 56 44.9**	**+1.7**
10nm,0.5s							
CABF	**La Chapelle**	**2.94**	**321**	*e*P	**Pn**	**11 56 19.0**	**+0.6**
CABF				*e*Sn	**Sn**	**11 56 49.2**	**-4.4**
4.8nm,0.4s							
VIVF	**Saint-Julien-l**	**2.98**	**281**	*e*Pn	**Pn**	**11 56 17.8**	**-1.3**
2.4nm,0.4s							
VIVF				*e*Sn	**Sn**	**11 56 51.5**	**-3.2**
VIVF	**Saint-Julien-l**	**2.98**	**281**	*e*Pn	**Pn**	**11 56 17.8**	**-1.3**
1.2nm,0.4s							
VIVF				*e*Sn	**Sn**	**11 56 51.5**	**-3.2**
LASF	**Ste Croix**	**3.56**	**267**	*e*Pn	**Pn**	**11 56 26.2**	**-0.8**
LASF				*e*Sn	**Sn**	**11 57 06.0**	**-3.0**
1.4nm,0.3s							
LASF	**Ste Croix**	**3.56**	**267**	*e*Pn	**Pn**	**11 56 26.2**	**-0.8**
LASF				*e*Sn	**Sn**	**11 57 06.0**	**-3.0**
0.7nm,0.3s							
HINF	**Hinteralfeld**	**3.70**	**339**	*e*P	**Pn**	**11 56 28.9**	**0.0**
HINF				*e*Sn	**Sn**	**11 57 07.1**	**-5.3**
7.1nm,0.5s							
HINF	**Hinteralfeld**	**3.70**	**339**	*e*P	**Pn**	**11 56 28.9**	**0.0**
HAU	**Haudompre**	**4.01**	**336**	*e*P	**Pn**	**11 56 33.4**	**+0.2**
HAU				*e*Sn	**Sn**	**11 57 14.5**	**-5.5**
16nm,0.5s							
HAU	**Haudompre**	**4.01**	**336**	*e*P	**Pn**	**11 56 33.4**	**+0.2**
SMF	**Signal de Mont**	**4.16**	**305**	*e*P	**Pn**	**11 56 36.4**	**+1.2**
SMF				*e*Sn	**Sn**	**11 57 18.5**	**-5.2**
8.3nm,0.7s							
SMF	**Signal de Mont**	**4.16**	**305**	*e*P	**Pn**	**11 56 36.4**	**+1.2**
SMF				*e*Sn	**Sn**	**11 57 18.5**	**-5.2**
4.2nm,0.7s							
CDF	**Champ du Feu**	**4.17**	**346**	*e*P	**Pn**	**11 56 35.5**	**+0.1**
CDF				*e*Sn	**Sn**	**11 57 18.4**	**-5.7**
6.3nm,0.5s							
CDF	**Champ du Feu**	**4.17**	**346**	*e*P	**Pn**	**11 56 35.5**	**+0.1**
LOR	**Lormes**	**4.50**	**312**	*e*P	**Pn**	**11 56 41.2**	**+1.2**
LOR				*e*Sn	**Sn**	**11 57 26.9**	**-5.3**
8.3nm,0.4s							
LOR	**Lormes**	**4.50**	**312**	*e*P	**Pn**	**11 56 41.2**	**+1.2**
AVF	**Avril sur Loir**	**4.52**	**304**	*e*P	**Pn**	**11 56 41.7**	**+1.5**
AVF				*e*Sn	**Sn**	**11 57 27.3**	**-5.3**
1.1nm,0.3s							
AVF	**Avril sur Loir**	**4.52**	**304**	*e*P	**Pn**	**11 56 41.7**	**+1.5**
SSF	**Saint Saulge**	**4.58**	**308**	*e*P	**Pn**	**11 56 42.3**	**+1.4**
SSF				*e*Sn	**Sn**	**11 57 28.5**	**-5.5**
3.6nm,0.6s							
SSF	**Saint Saulge**	**4.58**	**308**	*e*P	**Pn**	**11 56 42.3**	**+1.4**
BGF	**Bois d'Agland**	**4.72**	**300**	*e*P	**Pn**	**11 56 43.4**	**+0.5**
BGF				*e*Sn	**Sn**	**11 57 32.3**	**-5.2**
6.9nm,0.4s							
BGF	**Bois d'Agland**	**4.72**	**300**	*e*P	**Pn**	**11 56 43.4**	**+0.5**
BGF				*e*Sn	**Sn**	**11 57 32.3**	**-5.2**
3.5nm,0.4s							
MTLF	**Montolieu**	**4.87**	**260**	*e*Pn	**Pn**	**11 56 43.7**	**-1.3**
MTLF				*e*Sn	**Sn**	**11 57 37.4**	**-3.8**
1.0nm,0.4s							
MTLF	**Montolieu**	**4.87**	**260**	*e*Pn	**Pn**	**11 56 43.7**	**-1.3**
MTLF				*e*Sn	**Sn**	**11 57 37.4**	**-3.8**
0.5nm,0.4s							
MEZF	**Maizieres J'vi**	**4.87**	**329**	*e*P	**Pn**	**11 56 46.5**	**+1.5**
MEZF				*e*Sn	**Sn**	**11 57 35.0**	**-6.3**
3.1nm,0.4s							
MEZF	**Maizieres J'vi**	**4.87**	**329**	*e*P	**Pn**	**11 56 46.5**	**+1.5**
TCF	**Toulx Ste Croi**	**5.02**	**295**	*e*P	**Pn**	**11 56 48.7**	**+1.6**
TCF				*e*Sn	**Sn**	**11 57 39.4**	**-5.6**
2.9nm,0.5s							
TCF	**Toulx Ste Croi**	**5.02**	**295**	*e*P	**Pn**	**11 56 48.7**	**+1.6**

IDC 12 11:56:30.8±2.6, 32°.13N×104°.71E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/24, mbtmp3.6/3, Error ellipse: s-maj=380.6km s-min=27.5km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.57**	**317**	P	P	12 01 32.5	0.0
0.3nm,0.5s,baz=120,slow=8.5,SNR=2.7							
WRA	**Warramunga Arr**	**59.04**	**147**	P	P	12 06 32.9	+0.3
1.6nm,0.5s,baz=338,slow=7.9,SNR=12							
ASAR	**Alice Springs**	**62.10**	**150**	P	P	12 06 53.3	-0.2
0.3nm,0.6s,baz=333,slow=7.3,SNR=3.6							

IDC 12 11:58:04.7±1.3, 32°.29N×105°.10E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.6/4, Error ellipse: s-maj=79.0km s-min=25.0km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**26.83**	**321**	P	P	12 03 46.6	-0.1
0.2nm,0.4s,baz=129,slow

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**174**	Pg	**Pg**	**12 01 58.0**	**-0.8**
CD2				Sg	**Sg**	**12 02 03.0**	**+0.1**
CD2				smax			
	comp=E,47μm,0.6s						
LZH	**Lanzhou**	**4.89**	**1**	Pg	**Pb**	**12 03 20.6**	**+2.8**
LZH				Sn	**Sn**	**12 03 58.9**	**-2.5**
LZH				Sn	**Sb**	**12 04 12.1**	**-4.2**
LZH				smax			
	comp=N,220nm,0.7s						
LZH				smax			
	comp=E,180nm,0.7s						
ENH	**Enshi**	**5.04**	**99**	*e*Pn	**Pn**	**12 03 07.5**	**+0.2**
GYA	**Guiyang**	**5.37**	**151**	Pg	**Pg**	**12 03 29.2**	**-6.2**
GYA				smax			
	comp=N,210nm,0.7s						
GYA				smax			
	comp=E,290nm,0.8s						
KMI	**Kunming**	**6.10**	**188**	Pn	**Pn**	**12 03 20.8**	**-1.1**
KMI				Sn	**Sn**	**12 04 32.2**	**+1.0**
KMI				smax			
	comp=N,40nm,1.1s						
KMI				smax			
	comp=E,41nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.39**	**200**	Pn	**Pn**	**12 05 01.5**	**-0.3**
	comp=E,0.2nm,0.3s,baz=15,slow=11,SNR=3.7						
SONM	**Songino Array**	**16.76**	**6**	Pn	**Pn**	**12 05 46.9**	**+0.6**
	comp=E,0.4nm,0.3s,baz=192,slow=13,SNR=2.5						
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**12 06 34.5**	**+0.3**
	comp=E,2.8nm,0.8s,baz=270,slow=9.9,SNR=5.5						
CN2	**Changchun**	**21.27**	**48**	*e*P	**P**	**12 06 38.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**22.71**	**319**	*e*P	**P**	**12 06 54.3**	**+1.1**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**12 06 54.2**	**+1.0**
	comp=Z,1.4nm,0.8s,mb3.5,baz=133,slow=10,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**12 07 29.3**	**+0.4**
	comp=Z,1.2nm,0.4s,mb3.8,baz=147,slow=8.8,SNR=4.8						
KURK	**Kurchatov**	**26.99**	**324**	P	**P**	**12 07 33.5**	**+0.3**
	comp=Z,2.2nm,0.9s,mb3.7,baz=126,slow=9.5,SNR=6.5						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**12 11 36.7**	**-0.4**
	comp=Z,2.2nm,1.0s,mb4.1,baz=81,slow=7.7,SNR=6.2						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**12 11 49.6**	**+0.2**
	comp=Z,7.3nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**12 11 49.6**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.3,baz=328,slow=8.8,SNR=15						
WB2	**Warramunga Arr**	**58.72**	**146**	*e*P	**P**	**12 11 49.4**	**0.0**
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**12 12 09.8**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.8,baz=336,slow=6.3,SNR=7.7						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**12 12 26.6**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.9,baz=63,slow=4.0,SNR=2.7						
STKA	**Stephens Creek**	**72.25**	**147**	P	**P**	**12 13 16.6**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.8,baz=351,slow=9.7,SNR=3.2						
YKA	**Yellowknife Ar**	**81.71**	**17**	P	**P**	**12 14 09.3**	**-0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=5.3,SNR=7.3						
TORD	**Torodi Ar. Bea**	**93.30**	**287**	P	**P**	**12 15 05.8**	**-1.1**
	comp=Z,0.7nm,1.0s,mb4.1,baz=65,slow=3.8,SNR=4.4						

IDC ***12*** *12:04:35.4±0.5, 32°.54N×105°.45E, h0km, mb4.3/21, mb1 4.4/24, mb1mx4.3/32, mbtmp4.3/24, ML3.7/3, Error ellipse: s-maj=25.3km s-min=10.9km az=55.0*

ISCJB ***12*** *12:04:36.0±1.2, 32°.52N±0°.03×105°.49E±0°.04, h14km±8km, mb4.5/44, Error ellipse: s-maj=6.0km s-min=4.9km az=160.5*

NEIC ***12*** *12:04:37.4±0.3, 32°.61N×105°.52E, h10km, mb4.6/17, Error ellipse: s-maj=8.8km s-min=5.4km az=63.0*

MOS ***12*** *12:04:37.7±0.9, 32°.60N×105°.56E, h26km, mb4.9/19, Error ellipse: s-maj=10.4km s-min=6.1km az=111.2*

BJI ***12*** *12:04:38.4, 32°.69N×105°.41E, h11km, mB5.2/10, mb4.5/19, ML4.4/10, Ms4.3/17, Ms7 4.3/15*

DJA ***12*** *12:04:56, 32°.75N×105°.62E, h164km, mb4.4/10*

ISC 12 12:04:37.7±1.3, 32°.53N±0°.03×105°.47E±0°.04, h12km±8km, h15km±.4km: pP-P, n127, σ1°.06/138, mb4.5/44, 14C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.17**	**222**	Pg	**Pg**	**12 05 17.7**	**-1.7**
CD2				Sg	**Sg**	**12 05 46.7**	**-0.9**
CD2				smax			
	comp=N,16μm,0.8s						
LZH	**Lanzhou**	**3.79**	**340**	Pn	**Pn**	**12 05 38.1**	**+2.2**
LZH				Sg	**Sg**	**12 06 34.7**	**-4.8**
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=N,4μm,8.0s						
LZH				LR	LR		
	comp=Z,5μm,10.7s						
ENH	**Enshi**	**4.11**	**122**	Pn	**Pn**	**12 05 43.0**	**+2.7**
GYA	**Guiyang**	**6.14**	**170**	Pn	**Pn**	**12 06 10.4**	**+2.2**
GYA				Sn	**Sn**	**12 07 18.2**	**-0.2**
GYA				smax			
	comp=N,350nm,0.9s						
GYA				smax			
	comp=E,440nm,1.0s						
GYA				LR	LR		
	comp=E,850nm,4.5s						
GYA				LR	LR		
	comp=Z,970nm,4.2s						
KMI	**Kunming**	**7.76**	**199**	P	**Pn**	**12 06 34.8**	**+4.3**
KMI				smax			
	comp=N,100nm,1.0s						
KMI				smax			
	comp=E,97nm,0.9s						
WHN	**Wuhan**	**7.84**	**102**	P	**Pn**	**12 06 26.4**	**-5.1**
WHN				S	**Sn**	**12 08 00.8**	**+0.6**
WHN				LR	LR		
	comp=N,5μm,5.3s						
WHN				LR	LR		
	comp=E,4μm,6.2s						
GTA	**Gaotai**	**8.25**	**328**	*e*P	**Pn**	**12 06 37.6**	**+0.4**
GTA				pP		12 06 40.7	
GTA				sP		12 06 43.6	
GTA				S	**Sn**	**12 08 09.8**	**-0.5**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,1μm,4.2s						
GTA				LR	LR		
	comp=N,2μm,13.5s						
GTA				LR	LR		
	comp=E,2μm,15.6s						
GTA				LR	LR		
	comp=Z,4μm,15.9s						
BTO	**Baotou**	**8.85**	**23**	*e*P	**Pn**	**12 06 44.4**	**-1.0**
BTO				S	**Sn**	**12 08 26.8**	**+1.8**
BTO	**Baotou**	**8.85**	**23**	*e*P	**Pn**	**12 06 52.8**	**+7.4**
BTO				S	**Sn**	**12 08 37.8**	**+13**
BTO				LR	LR		
	comp=N,26nm,1.0s						
BTO				LR	LR		
	comp=E,35nm,1.3s						
HHC	**Hu-ho-hao-te**	**9.63**	**29**	*e*P	**Pn**	**12 07 01.4**	**+5.3**
HHC				pP		12 07 04.7	
HHC				sP		12 07 07.5	
HHC				S	**Sn**	**12 08 52.0**	**+7.7**
HHC				sS		12 08 56.7	
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1μm,4.5s						
HHC				LR	LR		
	comp=N,900nm,7.2s						
HHC				LR	LR		
	comp=E,610nm,5.2s						
HHC				LR	LR		
	comp=Z,810nm,6.4s						
NJ2	**Nanjing**	**11.34**	**89**	*e*P	**Pn**	**12 07 26.4**	**+6.9**
NJ2				pP		12 07 30.0	
NJ2				sP		12 07 32.6	
NJ2				PP		12 07 36.4	
NJ2				S	**Sn**	**12 09 36.9**	**+11**
NJ2				sS		12 09 42.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,70nm,3.5s						
NJ2				LR	LR		
	comp=E,970nm,10.8s						
NJ2				LR	LR		
	comp=Z,960nm,9.6s						
BJI	**Beijing**	**11.43**	**46**	P	**Pn**	**12 07 23.3**	**+2.6**
LSA	**Lhasa**	**12.59**	**261**	P	**Pn**	**12 07 40.2**	**+3.6**
SHL	**Shillong**	**13.75**	**243**	*e*P	**Pn**	**12 07 56.0**	**+3.5**
SHL				*ex*	x	12 08 26.0	
QIZ	**Qiongzhong**	**14.01**	**163**	P	**Pn**	**12 07 59.6**	**+3.6**
QIZ				S	**Sn**	**12 10 36.0**	**+4.5**
QIZ				pmax	pmax		
	comp=Z,23nm,1.4s						
QIZ				LR	LR		
	comp=N,760nm,10.8s						
QIZ				LR	LR		
	comp=Z,2μm,15.0s						
CHTO	**Chiang Mai**	**14.87**	**205**	P	**Pn**	**12 08 11.8**	**+4.1**
CMAR	**Chiang Mai Arr**	**15.19**	**204**	Pn	**Pn**	**12 08 12.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=3.3						
SONM	**Songino Array**	**15.30**	**2**	Pn	**Pn**	**12 08 13.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=3.7						
ULN	**Ulaanbaatar**	**15.36**	**4**	*e*P	**Pn**	**12 08 14.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	**Ulaanbaatar**	**15.36**	**4**	*e*Pn	**Pn**	**12 08 14.8**	**+0.6**
	comp=Z,9.8nm,0.8s						
SNY	**Shenyang**	**17.13**	**52**	⇑P	**Pn**	**12 08 36.8**	**-0.1**
SNY				S	**Sn**	**12 11 45.0**	**-2.3**
SNY				pmax	pmax		
	comp=Z,16nm,1.7s						
SNY				LR	LR		
	comp=N,1μm,16.2s						
SNY				LR	LR		
	comp=E,2μm,19.5s						
SNY				LR	LR		
	comp=Z,2μm,23.1s						
ZAK	**Zakamensk**	**17.91**	**355**	*e*P	**Pn**	**12 08 49.0**	**+2.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSRS	**Korea Array**	**19.03**	**69**	P	**Pn**	**12 08 59.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=253,slow=11,SNR=8.1						
CN2	**Changchun**	**19.27**	**49**	*e*P	**Pn**	**12 09 09.2**	**+6.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HIA	**Hailar**	**19.84**	**28**	*e*P	**Pn**	**12 09 07.7**	**-2.1**
MK31	**Makanchi Array**	**22.72**	**316**	*e*P	**P**	**12 09 38.9**	**-0.4**
MKAR	**Makanchi Array**	**22.72**	**316**	P	**P**	**12 09 39.1**	**-0.1**
	comp=Z,9.7nm,0.8s,mb4.3,baz=118,slow=12,SNR=31						
ULHL	**Ulahol**	**25.06**	**301**	P	**P**	**12 10 03.0**	**+1.1**
	SNR=11						
TKM2	**Tokmak 2**	**25.68**	**302**	P	**P**	**12 10 08.5**	**+1.0**
	SNR=8.4						
KZA	**Kyzart**	**25.74**	**300**	P	**P**	**12 10 09.8**	**+1.8**
	SNR=17						
KLR	**Kul'dur**	**25.75**	**42**	*e*P	**P**	**12 10 06.0**	**-2.1**
BOD	**Bodaibo**	**25.95**	**10**	*e*P	**P**	**12 10 11.4**	**+1.7**
BOD				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.2						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**12 10 09.7**	**-0.3**
	comp=Z,2.8nm,0.3s,mb4.3,baz=134,slow=10,SNR=8.7						
UCH	**Uchtor**	**26.31**	**300**	P	**P**	**12 10 15.0**	**+1.8**
	SNR=15						
AAK	**Ala-Archa**	**26.41**	**301**	P	**P**	**12 10 13.4**	**-0.6**
	comp=Z,1.5nm,0.6s,mb3.7,baz=175,slow=12,SNR=2.8						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**12 10 17.6**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.3,baz=128,slow=8.9,SNR=25						
AML	**Almayashu**	**26.89**	**300**	P	**P**	**12 10 20.0**	**+1.6**
	SNR=11						
AML	**Almayashu**	**26.89**	**300**	*e*P	**P**	**12 10 19.1**	**+0.7**
	comp=Z,13nm,0.9s,mb4.5						
NVS	**Novosibirsk**	**27.27**	**331**	*e*P	**P**	**12 10 21.3**	**-0.4**
NVS				pmax	pmax		
	comp=Z,40nm,2.8s,mb4.5						
NVS				pmax	pmax		
	comp=N,12nm,1.7s						
NVS				pmax	pmax		
	comp=E,13nm,2.0s						
BVAR	**Borovoye Array**	**32.42**	**320**	P	**P**	**12 11 07.7**	**+0.4**
	comp=E,1.8nm,0.7s,mb4.0,baz=106,slow=11,SNR=9.1						
ABKAR	**Akbulak array**	**37.62**	**310**	*e*P	**P**	**12 11 52.1**	**-0.1**
	comp=E,2.8nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**39.04**	**312**	P	**P**	**12 12 04.2**	**+0.1**
AKTO	**Aktyubinsk**	**39.04**	**312**	P	**P**	**12 12 04.2**	**+0.1**
	comp=E,3.8nm,0.6s,mb4.3,baz=116,slow=13,SNR=12						
SVE	**Sverdlovsk**	**39.07**	**322**	*e*P	**P**	**12 12 05.2**	**+0.9**
SVE				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
KAPI	**Kappang**	**39.73**	**157**	P	**P**	**12 12 09.7**	**-0.5**
	comp=Z,12nm,0.7s,mb4.7,baz=336,slow=14,SNR=6.4						
ARU	**Arti**	**40.04**	**321**	P	**P**	**12 12 12.5**	**+0.1**
ARU	**Arti**	**40.04**	**321**	*e*P	**P**	**12 12 12.1**	**-0.3**
	comp=Z,19nm,1.0s,mb4.8						
TIXI	**Tiksi**	**41.13**	**11**	*e*P	**P**	**12 12 20.0**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
ZEI	**Tsey**	**48.83**	**301**	*e*P	**P**	**12 13 19.9**	**-3.0**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
BILL	**Bilibino**	**49.39**	**26**	*e*P	**P**	**12 13 24.7**	**-2.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb4.0						
OBN	**Obninsk**	**52.21**	**317**	*e*P	**P**	**12 13 47.0**	**-1.2**
OBN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.92**	**156**	P	**P**	**12 13 59.1**	**-2.0**
	comp=Z,2.2nm,1.0s,mb4.1,baz=333,slow=9.0,SNR=3.8						
JOF	**Joensuu**	**54.45**	**327**	*e*P	**P**	**12 14 03.8**	**-0.8**
JOF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
JOF	**Joensuu**	**54.45**	**327**	*e*p	**P**	**12 14 03.8**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8						
KEV	**Kevo**	**55.91**	**336**	*e*P	**P**	**12 14 09.6**	**-5.4**
KEV				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.1						
KEV	**Kevo**	**55.91**	**336**	*e*p	**P**	**12 14 09.6**	**-5.4**
	comp=Z,15nm,0.7s,mb5.1						
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**12 14 17.7**	**-1.1**
	comp=Z,9.2nm,0.8s,mb4.9,baz=58,slow=7.3,SNR=6.4						
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**	**12 14 22.7**	**-0.5**
	comp=Z,9.7nm,0.9s,mb4.8,baz=106,slow=4.2,SNR=7.6						
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**	**12 14 22.7**	**-0.5**
BR131	**Keskin Array S**	**57.05**	**299**	*e*P	**P**	**12 14 23.2**	**-0.4**
	comp=Z,3.5nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**57.05**	**299**	P	**P**	**12 14 23.5**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.4,baz=99,slow=7.6,SNR=14						
AKASG	**Malin Array Be**	**57.26**	**313**	P	**P**	**12 14 23.9**	**-1.0**
	comp=Z,5.7nm,0.5s,mb4.8,baz=69,slow=6.6,SNR=19						
COEN	**Coen**	**58.63**	**136**	*e*P	**P**	**12 14 34.6**	**-0.2**
WRAB	**Tennant Creek**	**59.03**	**148**	*e*P	**P**	**12 14 37.6**	**0.0**
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
WRAB	**Tennant Creek**	**59.03**	**148**	*e*P	**P**	**12 14 37.6**	**0.0**
	comp=Z,17nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**59.04**	**148**	P	**P**	**12 14 38.2**	**+0.6**
	comp=Z,10nm,0.8s,mb4.9,baz=341,slow=7.4,SNR=33						
WB2	**Warramunga Arr**	**59.04**	**148**	*e*P	**P**	**12 14 37.6**	**0.0**
BUR08	**Bucovina Ar. S**	**60.60**	**310**	*e*P	**P**	**12 14 47.9**	**-0.3**
KWP	**Kalwaria Pacla**	**61.59**	**313**	*e*P	**P**	**12 14 55.0**	**+0.2**
KWP				pmax	pmax		
	comp=Z,48nm,0.5s						
KWP	**Kalwaria Pacla**	**61.59**	**313**	*e*P	**P**	**12 14 55.0**	**+0.2**
	comp=Z,48nm,0.5s						
KOLS	**Kolonicke sedl**	**62.07**	**312**	*e*P	**P**	**12 14 58.1**	**0.0**
KOLS				*e*	pP	12 15 02.5	+0.6
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
KOLS	**Kolonicke sedl**	**62.07**	**312**	*e*P	**P**	**12 14 58.1**	**0.0**
	comp=Z,6.5nm,1.3s,mb4.6						
KOLS				*e*	pP	12 15 02.5	+0.6
KOLS	**Kolonicke sedl**	**62.07**	**312**	*e*P	**P**	**12 14 58.1**	**0.0**
KOLS				*ep*P	pP	12 15 02.5	+0.6
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**12 14 59.4**	**+0.7**
	comp=Z,5.2nm,0.7s,mb4.8,baz=331,slow=6.1,SNR=34						
STHS	**Stebnicka Huta**	**62.56**	**313**	*e*P	**P**	**12 15 01.4**	**+0.1**
STHS				*e*	pP	12 15 06.1	+0.9
STHS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
STHS	**Stebnicka Huta**	**62.56**	**313**	*e*P	**P**	**12 15 01.4**	**+0.1**
	comp=Z,3.5nm,0.9s,mb4.5						
STHS				*e*	pP	12 15 06.1	+0.9
STHS	**Stebnicka Huta**	**62.56**	**313**	*e*P	**P**	**12 15 01.4**	**+0.1**
STHS				*ep*P	pP	12 15 06.1	+0.9
NIE	**Niedzica**	**63.13**	**313**	*e*P	**P**	**12 15 06.2**	**+1.0**
OJC	**Ojcow**	**63.18**	**314**	*e*P	**P**	**12 15 05.8**	**+0.3**
KECS	**Kecovo**	**63.34**	**312**	*e*P	**P**	**12 15 06.7**	**+0.2**
KECS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
KECS	**Kecovo**	**63.34**	**312**	*e*P	**P**	**12 15 06.7**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.2						
KECS	**Kecovo**	**63.34**	**312**	*e*P	**P**	**12 15 06.7**	**+0.2**
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**12 15 08.4**	**-2.8**
	comp=Z,5.6nm,0.8s,mb4.7,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**12 15 09.1**	**-2.2**
	comp=Z,4.2nm,0.7s,mb4.6,baz=70,slow=6.6,SNR=7.7						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**12 15 09.1**	**-2.2**
OKC	**Ostrava-Krasne**	**64.31**	**314**	*e*P	**P**	**12 15 12.9**	**0.0**
OKC	**Ostrava-Krasne**	**64.31**	**314**	*e*P	**P**	**12 15 12.9**	**0.0**
VYHS	**Vyhne**	**64.37**	**313**	*e*P	**P**	**12 15 13.7**	**+0.4**
VYHS				*e*	pP	12 15 18.2	+1.1
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
VYHS	**Vyhne**	**64.37**	**313**	*e*P	**P**	**12 15 13.7**	**+0.4**
	comp=Z,5.0nm,1.3s,mb4.4						
VYHS				*e*	pP	12 15 18.2	+1.1
VYHS	**Vyhne**	**64.37**	**313**	*e*P	**P**	**12 15 13.7**	**+0.4**
VYHS				*ep*P	pP	12 15 18.2	+1.1
KOLL	**Kolacno**	**64.61**	**313**	*e*P	**P**	**12 15 15.9**	**+1.0**
KOLL				*e*	pP	12 15 19.9	+1.2
KOLL	**Kolacno**	**64.61**	**313**	*e*P	**P**	**12 15 15.9**	**+1.0**
KOLL				*ep*P	pP	12 15 19.9	+1.2
DPC	**Dobruska-Polom**	**65.23**	**315**	*e*P	**P**	**12 15 19.2**	**+0.3**
DPC	**Dobruska-Polom**	**65.23**	**315**	*e*P	**P**	**12 15 19.2**	**+0.3**
UPC	**Upice**	**65.36**	**315**	*e*P	**P**	**12 15 20.6**	**+0.9**
UPC	**Upice**	**65.36**	**315**	*e*P	**P**	**12 15 20.6**	**+0.9**
CLL	**Collm**	**66.81**	**317**	*e*P	**P**	**12 15 28.0**	**-1.0**
CLL				*ep*P	pP	12 15 33.0	+0.1
KHC	**Kasperske Hory**	**67.34**	**315**	*e*P	**P**	**12 15 32.7**	**+0.2**
KHC	**Kasperske Hory**	**67.34**	**315**	*e*P	**P**	**12 15 32.7**	**+0.2**
GERES	**GERESS Array B**	**67.38**	**314**	P	**P**	**12 15 32.5**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=64,slow=6.2,SNR=13						
GRA1	**Grafenberg Arr**	**68.51**	**316**	*e*P	**P**	**12 15 39.8**	**0.0**
	comp=Z,7.0nm,1.2s,mb4.5						
GRA1				*ep*P	pP	12 15 44.4	+0.7
GRF	**Grafenberg Arr**	**68.51**	**316**	*e*P	**P**	**12 15 39.8**	**0.0**
	comp=Z,7.0nm,1.2s,mb4.5						
GRF				*ep*P	pP	12 15 44.4	+0.7
GRF	**Grafenberg Arr**	**68.51**	**316**	*e*P	**P**	**12 15 39.8**	**0.0**
GRF				*e**PP	pP	12 15 44.4	+0.7
GRF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**68.51**	**316**	*e*P	**P**	**12 15 39.8**	**0.0**
GRF				*e**PP	pP	12 15 44.4	+0.7
GRF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**68.51**	**316**	*e*P	**P**	**12 15 39.8**	**0.0**
	comp=Z,7.0nm,1.2s,mb4.5						
GRF				*ep*P	pP	12 15 44.4	+0.7
CDF	**Champ du Feu**	**71.40**	**316**	⇑*i*P	**P**	**12 15 57.3**	**-0.3**
	comp=Z,8.5nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.40**	**316**	⇑*i*P	**P**	**12 15 57.3**	**-0.3**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.40**	**316**	⇑*i*P	**P**	**12 15 57.3**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.4						
WLF	**Walferdange**	**71.46**	**317**	*e*P	**P**	**12 15 58.0**	**+0.1**
WLF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WLF	**Walferdange**	**71.46**	**317**	*e*P	**P**	**12 15 58.0**	**0.0**
	comp=Z,6.8nm,1.0s,mb4.5						
KMBO	**Kilima Mbogo**	**72.36**	**257**	P	**P**	**12 16 04.1**	**+0.2**
	comp=Z,0.5nm,0.3s,mb4.0,baz=40,slow=23,SNR=3.6						
STKA	**Stephens Creek**	**72.59**	**148**	P	**P**	**12 16 04.3**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.2,baz=323,slow=10,SNR=6.8						
STKA	**Stephens Creek**	**72.59**	**148**	P	**P**	**12 16 04.3**	**-0.4**
LPG	**La Plagne**	**73.12**	**313**	⇑*i*P	**P**	**12 16 08.4**	**+0.5**
	comp=Z,37nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.12**	**313**	⇑*i*P	**P**	**12 16 08.4**	**+0.5**
LPG				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
LPG	**La Plagne**	**73.12**	**313**	⇑*i*P	**P**	**12 16 08.4**	**+0.5**
	comp=Z,18nm,0.8s,mb5.1						
SMF	**Signal de Mont**	**74.30**	**315**	⇑*i*P	**P**	**12 16 14.3**	**-0.5**
	comp=Z,16nm,0.9s,mb4.6						
SMF	**Signal de Mont**	**74.30**	**315**	⇑*i*P	**P**	**12 16 14.3**	**-0.5**
SMF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**74.30**	**315**	⇑*i*P	**P**	**12 16 14.3**	**-0.5**
	comp=Z,7.9nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**75.45**	**316**	⇑*i*P	**P**	**12 16 21.3**	**-0.2**
	comp=Z,13nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**75.45**	**316**	⇑*i*P	**P**	**12 16 21.3**	**-0.2**
TCF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**75.45**	**316**	⇑*i*P	**P**	**12 16 21.3**	**-0.2**
	comp=Z,6.7nm,1.1s,mb4.5						
CAF	**Calviac**	**76.26**	**315**	⇑*i*P	**P**	**12 16 26.3**	**+0.2**
YKA	**Yellowknife Ar**	**79.99**	**18**	P	**P**	**12 16 46.0**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=324,slow=4.9,SNR=11						
YKA	**Yellowknife Ar**	**79.99**	**18**	P	**P**	**12 16 46.0**	**-0.4**
ESDC	**Sonseca Array**	**82.91**	**313**	P	**P**	**12 17 01.6**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=49,slow=4.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**94.30**	**288**	P	**P**	**12 17 56.9**	**-0.6**
	comp=

HIA Hailar 20.12 28 *eP* **P 12 10 51.4 +2.0**
MDJ Mudanjiang 22.59 50 P **P 12 11 07.4 -8.6**
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb3.9
MDJ pmax pmax
comp=Z,2μm,8.7s
MK31 Makanchi Array 22.73 316 *eP* **P 12 11 17.6 +0.1**
MKAR Makanchi Array 22.73 316 P **P 12 11 17.4 -0.1**
comp=Z,9.3nm,0.8s,mb4.2,baz=108,slow=12,SNR=8.1
MKAR Makanchi Array 22.73 316 P **P 12 11 17.4 -0.1**
TKM2 Tokmak 2 25.63 303 *eP* **P 12 11 45.8 +0.7**
TKM2 pmax pmax
comp=Z,14nm,0.8s,mb4.5
TKM2 Tokmak 2 25.63 303 *eP* **P 12 11 45.8 +0.7**
comp=Z,14nm,0.8s,mb4.5
ZALV Zalesovo Beam 26.08 332 P **P 12 11 49.1 +0.1**
comp=Z,3.7nm,0.3s,mb4.3,baz=131,slow=11,SNR=6.5
UCH Uchtor 26.25 301 *eP* **P 12 11 52.5 +1.8**
comp=Z,15nm,1.0s,mb4.5
AAK Ala-Archa 26.35 302 P **P 12 11 53.7 +2.1**
comp=Z,2.2nm,0.5s,mb3.9,baz=98,slow=12,SNR=3.0
AAK Ala-Archa 26.35 302 *eP* **P 12 11 53.1 +1.5**
AML Almayashu 26.82 300 *eP* **P 12 11 56.8 +0.9**
comp=Z,7.1nm,0.7s,mb4.3
KURK Kurchatov 26.88 321 P **P 12 11 56.0 -0.3**
comp=Z,9.4nm,0.7s,mb4.5,baz=134,slow=8.3,SNR=11
KURK PcP PcP 12 15 17.5 -0.9
comp=Z,2.1nm,0.4s,baz=121,slow=2.2,SNR=6.2
KURK Kurchatov 26.88 321 P **P 12 11 56.0 -0.3**
KURK 12 15 17.5
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
KURK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
KURK Kurchatov 26.88 321 *eP* **P 12 11 54.6 -1.7**
MAT Matsushiro 27.45 72 P **P 12 12 01.5 0.0**
MJAR Matsushiro Arr 27.45 72 P **P 12 12 02.1 +0.5**
comp=Z,3.6nm,0.6s,mb4.1,baz=277,slow=10,SNR=10
HABR Khabarovsk 27.63 46 *eP* **P 12 12 01.4 -1.6**
HABR *e**SP sP 12 12 15.4 +8.3
HABR *e* 12 15 18.6
HABR S **S 12 16 40.8 -3.9**
HABR *e* 12 22 48.3
HABR MLR MLR
comp=Z,646nm,16.0s
KBL Kabul 30.18 284 *eP* **P 12 12 25.8 -0.1**
KBL pmax pmax
comp=Z,15nm,1.3s,mb4.6
KBL Kabul 30.18 284 *eP* **P 12 12 25.8 -0.2**
comp=Z,15nm,1.3s,mb4.6
ASAJ Asahikawa 31.38 57 P **P 12 12 36.2 -0.1**
comp=Z,3.0nm,0.5s,mb4.3,baz=281,slow=16,SNR=4.7
ASAJ Asahikawa 31.38 57 P **P 12 12 36.2 -0.1**
ASAJ pmax pmax
comp=Z,3.0nm,0.5s
YSS Yuzh-Sakhalins 32.05 52 *eP* **P 12 12 43.2 +1.0**
BVAR Borovoye Array 32.46 320 P **P 12 12 45.9 +0.1**
comp=Z,4.9nm,0.6s,mb4.5,baz=119,slow=9.2,SNR=14
BVAR PcP PcP 12 15 31.8 -0.8
comp=Z,1.3nm,0.5s,baz=116,slow=3.4,SNR=4.2
BRVK Borovoye 32.53 320 ⇑*iP* **P 12 12 46.0 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BRVK Borovoye 32.53 320 *eP* **P 12 12 46.2 -0.2**
comp=Z,7.1nm,0.6s,mb4.8
ABKAR Akbulak array 37.61 310 *eP* **P 12 13 30.0 -0.1**
comp=Z,7.5nm,0.7s,mb4.5
AKTK Aktyubinsk 39.03 312 P **P 12 13 42.0 -0.1**
AKTO Aktyubinsk 39.03 312 P **P 12 13 42.0 -0.1**
comp=Z,5.3nm,0.7s,mb4.4,baz=103,slow=12,SNR=9.8
SVE Sverdlovsk 39.12 322 *eP* **P 12 13 43.6 +0.9**
SVE pmax pmax
comp=Z,26nm,1.0s,mb4.9
KAPI Kappang 39.61 157 P **P 12 13 46.7 -0.6**
comp=Z,18nm,0.9s,mb4.8,baz=355,slow=11,SNR=3.1
KAPI Kappang 39.61 157 *eP* **P 12 13 46.3 -1.0**
comp=Z,25nm,1.0s,mb4.9
ARU Arti 40.08 321 *c iP* **P 12 13 50.7 -0.1**
ARU *e* 12 15 20.3
ARU S **S 12 19 54.9 -1.8**
ARU SS SS 12 22 50.1 -3.7
ARU pmax pmax
comp=Z,48nm,1.2s,mb5.1
ARU Arti 40.08 321 *eP* **P 12 13 50.9 +0.1**
comp=Z,28nm,0.8s,mb5.0
TIXI Tiksi 41.38 11 *eP* **P 12 14 01.2 -0.1**
TIXI pmax pmax
comp=Z,5.0nm,0.4s,mb4.5
TIXI Tiksi 41.38 11 *eP* **P 12 14 01.2 -0.1**
comp=Z,5.0nm,0.4s,mb4.5
SEY Seymchan 42.56 30⇑*eP* **P 12 14 11.7 +0.6**
PEA0B Petropavlovsk- 42.65 45 *eP* **P 12 14 11.4 -0.6**
PETK Petropavlovsk- 42.65 45 P **P 12 14 12.8 +0.9**
comp=Z,11nm,0.7s,mb4.7,baz=288,slow=7.5,SNR=13
ZEI Tsey 48.77 301 *eP* **P 12 14 59.8 -0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KIV Kislovodsk 49.46 303 *eP* **P 12 15 06.2 +0.4**
KIV pmax pmax
comp=Z,17nm,1.0s,mb5.0
BILL Bilibino 49.67 26 *c iP* **P 12 15 07.5 +0.5**
BILL *e*S **S 12 22 12.5 -2.9**
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.4
BILL Bilibino 49.67 26 *eP* **P 12 15 07.1 +0.1**
comp=Z,5.1nm,0.5s,mb4.8
OBN Obninsk 52.23 317⇑*iP* **P 12 15 28.1 +1.6**
OBN *e* 12 16 38.2
OBN *e* 12 17 24.7
OBN pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
KNA Kununurra 52.84 151 *eP* **P 12 15 31.2 -0.2**
comp=Z,27nm,0.7s,mb5.3
FITZ Fitzroy Crossi 53.81 156 *eP* **P 12 15 37.9 -0.5**
comp=Z,10nm,0.8s,mb4.8
FITZ Fitzroy Crossi 53.81 156 P **P 12 15 38.1 -0.3**
comp=Z,6.3nm,0.9s,mb4.6,baz=357,slow=4.9,SNR=8.4
JOF Joensuu 54.52 327 *eP* **P 12 15 42.3 -0.9**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
JOF Joensuu 54.52 327 *ep* **P 12 15 42.3 -0.9**
comp=Z,6.8nm,0.7s,mb4.8
KEV Kevo 56.02 336 *eP* **P 12 15 49.9 -4.0**
KEV pmax pmax
comp=Z,13nm,0.6s,mb5.1
KEV Kevo 56.02 336 *ep* **P 12 15 49.9 -4.0**
comp=Z,13nm,0.6s,mb5.1
ARCES ARCESS Array B 56.55 335 P **P 12 15 57.4 -0.3**
comp=Z,11nm,0.8s,mb5.0,baz=84,slow=8.3,SNR=15
BR131 Keskin Array S 56.98 299 *eP* **P 12 16 00.6 -0.6**
BRTR Keskin Array B 56.98 299 P **P 12 16 01.0 -0.2**
comp=Z,2.6nm,0.6s,mb4.4,baz=92,slow=7.7,SNR=8.4
BRTR Keskin Array B 56.98 299 P **P 12 16 01.0 -0.2**
FINES FINESS Array B 57.10 326 P **P 12 16 01.2 -0.5**
comp=Z,11nm,0.6s,mb5.0,baz=96,slow=7.9,SNR=12
AKASG Malin Array Be 57.26 313 P **P 12 16 02.4 -0.6**
comp=Z,4.7nm,0.6s,mb4.7,baz=69,slow=6.2,SNR=8.4
COEN Coen 58.62 136 *eP* **P 12 16 13.2 +0.3**
WRAB Tennant Creek 58.96 148 *eP* **P 12 16 15.5 +0.3**
WRAB pmax pmax
comp=Z,20nm,0.7s,mb5.3
WRAB Tennant Creek 58.96 148 *eP* **P 12 16 15.5 +0.3**
comp=Z,20nm,0.7s,mb5.2
WRA Warramunga Arr 58.96 148 P **P 12 16 15.4 +0.2**
comp=Z,6.3nm,0.4s,mb5.0,baz=328,slow=9.0,SNR=25
WRA Warramunga Arr 58.96 148 *eP* **P 12 16 15.4 +0.3**
WB2 Warramunga Arr 58.97 148 *eP* **P 12 16 15.5 +0.3**
KWP Kalwaria Pacla 61.59 313 *eP* **P 12 16 33.1 +0.2**
KWP pmax pmax
comp=Z,30nm,1.1s,mb5.3
KWP Kalwaria Pacla 61.59 313 *eP* **P 12 16 33.1 +0.2**
comp=Z,30nm,1.1s,mb5.3
ASAR Alice Springs 62.04 150 P **P 12 16 36.5 +0.3**
comp=Z,8.6nm,0.7s,mb5.0,baz=330,slow=6.5,SNR=20
NB2 NORSAR Subarra 64.16 327 P **P 12 16 48.4 -1.4**
comp=Z,4.5nm,0.6s,mb4.7,baz=70,slow=6.5
NOA NORSAR Array B 64.16 327 P **P 12 16 48.7 -1.1**
comp=Z,7.4nm,0.7s,mb4.8,baz=71,slow=6.6,SNR=12
NWAO Narrogin (SRO) 65.87 169 P **P 12 17 01.7 +0.5**
comp=Z,11nm,0.9s,mb4.9,baz=10.0,slow=6.7,SNR=5.1
NWAO Narrogin (SRO) 65.87 169 P **P 12 17 01.7 +0.5**
FORT Forrest 66.37 159⇑*iP* **P 12 17 04.5 0.0**
comp=Z,5.2nm,0.3s,mb5.0
CLL Collm 66.83 317 *eP* **P 12 17 08.0 +0.7**
CLL Collm 66.83 317 *eP* **P 12 17 08.0 +0.7**
BPAW Bear Paw Mtn. 67.08 28 *eP* **P 12 17 09.0 +0.3**
comp=Z,8.3nm,0.7s,mb4.9
GERES GERESS Array B 67.39 314 P **P 12 17 11.0 +0.1**
comp=Z,0.6nm,0.6s,mb3.8,baz=54,slow=5.0,SNR=3.9
KDAK Kodiak Island 69.30 34 *i P* **P 12 17 23.2 +0.5**
INK Inuvik 70.70 20 *eP* **P 12 17 30.8 -0.3**
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 70.70 20 *eP* **P 12 17 30.8 -0.2**
comp=Z,9.1nm,0.8s,mb4.8
BBOO Buckleboo 71.01 153⇑*iP* **P 12 17 32.9 -0.4**
comp=Z,2.9nm,0.4s,mb4.6
BMRM Brenner River 71.21 29 *eP* **P 12 17 35.1 +0.8**
CDF Champ du Feu 71.42 316 *eP* **P 12 17 34.9 -0.9**
KMBO Kilima Mbogo 72.12 257 P **P 12 17 40.2 -0.3**
comp=Z,1.7nm,0.8s,mb4.0,baz=54,slow=24,SNR=4.2
KMBO Kilima Mbogo 72.12 257 P **P 12 17 40.2 -0.3**
STKA Stephens Creek 72.51 148⇑*iP* **P 12 17 42.2 -0.2**
comp=Z,3.6nm,0.5s,mb4.6
STKA Stephens Creek 72.51 148 P **P 12 17 42.4 0.0**
comp=Z,4.3nm,0.5s,mb4.7,baz=342,slow=5.9,SNR=16
LPG La Plagne 73.12 313 *eP* **P 12 17 46.0 0.0**
comp=Z,17nm,0.8s,mb4.7
LPG La Plagne 73.12 313 *eP* **P 12 17 46.0 0.0**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 73.12 313 *eP* **P 12 17 46.0 0.0**
comp=Z,8.6nm,0.8s,mb4.7
CMSA Cobar Meteorol 74.15 145 *eP* **P 12 17 52.6 +0.5**
SMF Signal de Mont 74.31 315 *eP* **P 12 17 52.0 -1.0**
TCF Toulx Ste Croi 75.46 316 *eP* **P 12 17 58.9 -0.8**
SKAG Skagway 75.83 27 *eP* **P 12 18 02.2 +0.7**
comp=Z,12nm,0.8s,mb4.9
CAF Calviac 76.27 315 *eP* **P 12 18 03.9 -0.4**
YKA Yellowknife Ar 80.25 18 P **P 12 18 26.1 +0.1**
comp=Z,5.6nm,0.5s,mb4.7,baz=328,slow=5.2,SNR=51
YKA Yellowknife Ar 80.25 18 P **P 12 18 26.1 +0.1**
YKA pmax pmax
comp=Z,6.0nm,0.5s
FCC Fort Churchill 87.84 10 *eP* **P 12 19 04.2 -0.6**
comp=Z,4.0nm,3.0s
TORD Torodi Ar. Bea 94.18 288 P **P 12 19 32.6 -2.5**
comp=Z,0.8nm,1.0s,mb4.1,baz=45,slow=3.1,SNR=4.1
QSPA South Pole Qui 122.09 180 *e*PKPdf PKPdf 12 25 08.3 -0.7

ISCJB ***12*** *12:06:51.8±0.5, 32°.19N±0°.04×104°.74E±0°.09, h10km, mb4.4/13, Error ellipse: s-maj=10.4km s-min=5.7km az=1.1*
IDC ***12*** *12:06:52.3±0.8, 32°.12N×104°.72E, h0km, mb4.4/9, mb1 4.5/10, mb1mx4.1/26, mbtmp4.4/10, ML4.1/1, Error ellipse: s-maj=54.0km s-min=17.0km az=64.0*
NEIC ***12*** *12:06:53.7±0.3, 32°.15N×104°.73E, h10km, mb4.5/4, Error ellipse: s-maj=13.5km s-min=6.4km az=75.0*
BJI ***12*** *12:06:54.3, 32°.14N×104°.88E, h16km, mb4.4/1, ML4.6/5, Ms4.4/1, Ms7 4.2/1*
ISC 12 12:06:53.7±0.5, 32°.16N±0°.04×104°.75E±0°.09, h10km, n26, σ0°70/29, mb4.4/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.51**	**214**		Pg	**Pg**	**12 07 21.8**	**-0.9**
CD2					Sg	**Sg**	**12 07 42.9**	**+0.6**
CD2					smax			
comp=E,15μm,0.7s								
GYA	**Guiyang**	**5.93**	**163**		Pg	**Pb**	**12 08 35.1**	**-2.0**
GYA					Sg	**Sb**	**12 09 49.5**	**+1.3**
GYA					smax			
comp=N,500nm,0.8s								
GYA					smax			
comp=E,780nm,0.9s								
GYA					LR	LR		
comp=N,930nm,4.7s								
GYA					LR	LR		
comp=E,1μm,4.2s								
GYA					LR	LR		
comp=Z,1μm,4.8s								
GTA	**Gaotai**	**8.27**	**332**		sP	**Pn**	**12 08 48.1**	**-5.5**
GTA					S	**Sn**	**12 10 20.7**	**-6.3**
GTA					sS		12 10 25.5	
GTA					pmax	pmax		
comp=Z,21nm,1.2s								
GTA					pmax	pmax		
comp=Z,2μm,4.5s								
GTA					LR	LR		
comp=N,2μm,14.1s								
GTA					LR	LR		
comp=E,1μm,12.0s								
GTA					LR	LR		
comp=Z,3μm,13.2s								
CM31	**Chiang Mai Arr**	**14.62**	**202**	*e*Pn		**Pn**	**12 10 20.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**14.62**	**202**	Pn		**Pn**	**12 10 20.4**	**-0.3**
comp=Z,0.3nm,0.3s,baz=11,slow=10.0,SNR=3.4								
ZALV	**Zalesovo Beam**	**26.02**	**333**	P		**P**	**12 12 27.5**	**+0.8**
comp=Z,4.1nm,0.5s,mb4.2,baz=141,slow=11,SNR=2.8								
ZALV	**Zalesovo Beam**	**26.02**	**333**	P		**P**	**12 12 27.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**53.84**	**155**	P		**P**	**12 16 16.3**	**-0.6**
comp=Z,4.0nm,0.6s,mb4.5,baz=346,slow=6.4,SNR=5.6								
ARCES	**ARCESS Array B**	**56.52**	**336**	P		**P**	**12 16 35.2**	**-0.5**
comp=Z,3.7nm,0.7s,mb4.5,baz=82,slow=8.7,SNR=3.6								
FINES	**FINESS Array B**	**57.00**	**326**	P		**P**	**12 16 39.4**	**+0.2**
comp=Z,4.4nm,0.8s,mb4.5,baz=85,slow=8.5,SNR=2.6								
AKASG	**Malin Array Be**	**57.07**	**313**	P		**P**	**12 16 40.1**	**+0.2**
comp=Z,1.7nm,0.6s,mb4.3,baz=66,slow=7.3,SNR=2.7								
WRAB	**Tennant Creek**	**59.05**	**147**	*e*P		**P**	**12 16 54.0**	**-0.1**
WRA	**Warramunga Arr**	**59.05**	**147**	P		**P**	**12 16 54.3**	**+0.2**
comp=Z,2.9nm,0.4s,mb4.7,baz=328,slow=9.1,SNR=6.7								
ASAR	**Alice Springs**	**62.12**	**150**	P		**P**	**12 17 15.1**	**+0.2**
comp=Z,2.0nm,0.5s,mb4.5,baz=334,slow=6.2,SNR=3.1								
CDF	**Champ du Feu**	**71.24**	**316**	*e*P		**P**	**12 18 12.8**	**-0.2**
comp=Z,5.6nm,0.9s,mb4.2								
CDF	**Champ du Feu**	**71.24**	**316**	*e*P		**P**	**12 18 12.8**	**-0.2**
comp=Z,2.8nm,0.9s,mb4.2								
STKA	**Stephens Creek**	**72.60**	**148**	P		**P**	**12 18 21.2**	**0.0**
comp=Z,2.3nm,0.5s,mb4.4,baz=316,slow=6.8,SNR=4.0								
LPG	**La Plagne**	**72.93**	**313**	*e*P		**P**	**12 18 23.8**	**+0.7**
comp=Z,18nm,0.9s,mb4.7								
LPG	**La Plagne**	**72.93**	**313**	*e*P		**P**	**12 18 23.8**	**+0.7**
comp=Z,9.3nm,0.9s,mb4.7								
SMF	**Signal de Mont**	**74.13**	**315**	*e*P		**P**	**12 18 29.8**	**-0.4**
comp=Z,9.3nm,0.9s,mb4.4								
SMF	**Signal de Mont**	**74.13**	**315**	*e*P		**P**	**12 18 29.8**	**-0.4**
comp=Z,4.7nm,0.9s,mb4.4								
TCF	**Toulx Ste Croi**	**75.28**	**316**	*e*P		**P**	**12 18 36.0**	**-0.9**
CAF	**Calviac**	**76.08**	**314**	*e*P		**P**	**12 18 41.8**	**+0.3**
comp=Z,5.3nm,0.8s,mb4.2								
CAF	**Calviac**	**76.08**	**314**	*e*P		**P**	**12 18 41.8**	**+0.3**
comp=Z,2.7nm,0.8s,mb4.2								
YKA	**Yellowknife Ar**	**80.52**	**17**	P		**P**	**12 19 06.5**	**+0.8**
comp=Z,2.0nm,0.6s,mb4.2,baz=329,slow=5.2,SNR=6.2								
YKA	**Yellowknife Ar**	**80.52**	**17**	P		**P**	**12 19 06.5**	**+0.8**

ISCJB ***12*** *12:09:01.2±0.5, 31°.01N±0°.08×103°.52E±0°.08, h10km, mb4.0/12, Error ellipse: s-maj=11.6km s-min=9.5km az=16.5*
IDC ***12*** *12:09:01.7±0.9, 31°.09N×103°.53E, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/24, mbtmp4.0/12, Error ellipse: s-maj=33.9km s-min=17.3km az=55.0*
NEIC ***12*** *12:09:03.2±0.4, 31°.06N×103°.52E, h10km, Error ellipse: s-maj=9.8km s-min=8.3km az=214.0*
BJI ***12*** *12:09:04.9, 30°.81N×103°.58E, h15km, mb4.2/3, ML3.9/7, Ms4.3/1, Ms7 4.2/1*
ISC 12 12:09:03.6±0.5, 31°.09N±0°.07×103°.49E±0°.07, h10km, n21, σ1°13/21, mb4.0/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**128**		Pg	**Pg**	**12 09 11.2**	**+1.8**
CD2					Sg	**Sg**	**12 09 17.7**	**+4.3**
CD2					smax			
comp=N,27μm,0.6s								
ENH	**Enshi**	**5.23**	**97**	Pn		**Pn**	**12 10 20.7**	**-1.1**
LSA	**Lhasa**	**10.75**	**266**	*e*Pn		**Pn**	**12 11 38.7**	**+1.2**
CMAR	**Chiang Mai Arr**	**13.23**	**199**	Pn		**Pn**	**12 12 10.5**	**-1.2**
baz=12,slow=12,SNR=3.7								
BJT	**Baijiatuan**	**13.62**	**46**	Pn		**Pn**	**12 12 16.8**	**0.0**
KSRS	**Korea Array**	**21.14**	**66**	P		**P**	**12 13 46.5**	**-2.1**
comp=N,2.9nm,0.7s,mb3.7,baz=239,slow=10,SNR=2.7								
CN2	**Changchun**	**21.49**	**48**	*e*P		**P**	**12 13 54.8**	**+2.5**
CN2					pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.1								
MK31	**Makanchi Array**	**22.65**	**320**	*e*P		**P**	**12 14 04.6**	**-0.1**
MKAR	**Makanchi Array**	**22.65**	**320**	P		**P**	**12 14 05.7**	**+1.0**
comp=Z,1.4nm,0.6s,mb3.6,baz=125,slow=12,SNR=4.9								
TKM2	**Tokmak 2**	**25.09**	**306**	*e*P		**P**	**12 14 28.8**	**+0.5**
ZALV	**Zalesovo Beam**	**26.51**	**335**	P		**P**	**12 14 42.1**	**+1.1**
comp=Z,1.9nm,0.3s,mb4.1,baz=141,slow=10,SNR=1.7								
KURK	**Kurchatov**	**26.95**	**324**	P		**P**	**12 14 45.4**	**+0.3**
comp=Z,2.7nm,0.6s,mb4.0,baz=131,slow=9.5,SNR=4.4								
BVAR	**Borovoye Array**	**32.48**	**322**	PcP		PcP	12 18 19.5	-1.4
comp=Z,1.2nm,0.5s,baz=134,slow=4.2,SNR=6.3								
AKASG	**Malin Array Be**	**57.01**	**313**	P		**P**	**12 18 47.9**	**-1.5**
comp=Z,0.7nm,0.4s,mb4.1,baz=70,slow=7.0,SNR=3.2								
ARCES	**ARCESS Array B**	**57.06**	**336**	P		**P**	**12 18 48.4**	**-1.0**
comp=Z,4.2nm,1.0s,mb4.4,baz=82,slow=6.5,SNR=2.8								
FINES	**FINESS Array B**	**57.29**	**326**	P		**P**	**12 18 50.4**	**-0.8**
comp=Z,1.2nm,0.4s,mb4.3,baz=96,slow=7.1,SNR=3.6								
WRA	**Warramunga Arr**	**58.76**	**146**	P		**P**	**12 19 02.7**	**+0.8**
comp=Z,0.7nm,0.4s,mb4.0,baz=338,slow=7.5,SNR=4.4								
ASAR	**Alice Springs**	**61.75**	**148**	P		**P**	**12 19 21.6**	**-0.8**
comp=Z,0.6nm,0.5s,mb4.0,baz=338,slow=7.1,SNR=3.1								
NOA	**NORSAR Array B**	**64.39**	**327**	P		**P**	**12 19 38.7**	**-0.7**
comp=Z,1.0nm,0.6s,mb4.0,baz=71,slow=6.9,SNR=3.7								
YKA	**Yellowknife Ar**	**81.86**	**17**	P		**P**	**12 21 23.2**	**+0.5**
comp=Z,0.9nm,0.6s,mb3.9,baz=331,slow=5.4,SNR=6.0								
YKA	**Yellowknife Ar**	**81.86**	**17**	P		**P**	**12 21 23.2**	**+0.5**

ISCJB ***12*** *12:10:42.3±0.8, 31°.7N±0°.2×104°.4E±0°.2, h10km, mb3.8/7, Error ellipse: s-maj=36.0km s-min=12.1km az=136.1*
IDC ***12*** *12:10:42.9±1.0, 31°.79N×104°.33E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/26, mbtmp3.8/7, Error ellipse: s-maj=72.7km s-min=18.3km az=58.0*
NEIC ***12*** *12:10:44.4±0.5, 31°.82N×104°.41E, h10km, Error ellipse: s-maj=26.2km s-min=8.5km az=47.0*
ISC 12 12:10:44.4±0.8, 31°.8N±0°.2×104°.4E±0°.2, h10km, n9, σ0°32/9, mb3.8/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.62**	**108**	*e*Pn		**Pn**	**12 11 54.1**	**-0.2**
MKAR	**Makanchi Array**	**22.62**	**318**	P		**P**	**12 15 45.2**	**0.0**
2.7nm,1.0s,mb3.6,baz=123,slow=12,SNR=3.6								
ZALV	**Zalesovo Beam**	**26.19**	**333**	P		**P**	**12 16 19.3**	**+0.3**
3.3nm,0.3s,mb4.3,baz=138,slow=9.0,SNR=2.9								
KURK	**Kurchatov**	**26.83**	**322**	P		**P**	**12 16 24.6**	**-0.3**
0.4nm,0.5s,mb3.2,baz=130,slow=8.8,SNR=2.1								
ARCES	**ARCESS Array B**	**56.71**	**336**	P		**P**	**12 20 27.3**	**-0.5**
1.6nm,0.7s,mb4.1,baz=74,slow=7.8,SNR=3.7								
WRAB	**Tennant Creek**	**58.92**	**147**	*e*P		**P**	**12 20 43.7**	**-0.2**
WRA	**Warramunga Arr**	**58.93**	**147**	P		**P**	**12 20 43.9**	**0.0**
2.5nm,0.5s,mb4.5,baz=338,slow=7.8,SNR=6.5								
ASAR	**Alice Springs**	**61.97**	**149**	P		**P**	**12 21 05.0**	**+0.4**
0.5nm,0.8s,mb3.7,baz=329,slow=6.6,SNR=2.9								
YKA	**Yellowknife Ar**	**80.93**	**17**	P		**P**	**12 22 59.2**	**+0.6**
0.2nm,0.5s,mb3.3,baz=325,slow=5.4,SNR=2.8								

ISCJB ***12*** *12:11:55.3±0.4, 31°.40N±0°.03×104°.00E±0°.06, h10km, mb4.0/10, Error ellipse: s-maj=7.0km s-min=4.4km az=12.2*
IDC ***12*** *12:11:55.1±0.8, 31°.36N×103°.94E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.8/25, mbtmp4.0/11, ML3.3/1, Error ellipse: s-maj=32.2km s-min=16.2km az=59.0*
NEIC ***12*** *12:11:56.8±0.3, 31°.41N×104°.05E, h10km, Error ellipse: s-maj=11.3km s-min=6.4km az=53.0*
BJI ***12*** *12:11:58.7, 31°.32N×104°.24E, h15km, mB5.2/4, mb4.5/6, ML4.4/7, Ms4.3/4, Ms7 4.2/3*
ISC 12 12:11:57.5±0.4, 31°.38N±0°.03×103°.86E±0°.06, h10km, n24, σ1°00/29, mb4.1/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**191**		Pg	**Pg**	**12 12 07.3**	**+0.5**
CD2					Sg	**Sg**	**12 12 14.2**	**+1.1**
CD2					smax			
comp=N,60μm,0.6s								
LZH	**Lanzhou**	**4.70**	**360**	*e*Pg		**Pg**	**12 13 36.7**	**+9.3**
LZH					Sg	**Sg**	**12 14 30.3**	**+2.0**
LZH					smax			
comp=N,480nm,0.9s								
LZH					smax			
comp=E,170nm,0.8s								
ENH	**Enshi**	**4.96**	**101**	Pn		**Pn**	**12 13 08.7**	**-3.3**
GYA	**Guiyang**	**5.48**	**153**	Pg		**Pg**	**12 13 42.0**	**-0.5**
GYA					Sg	**Sb**	**12 14 41.1**	**+1.9**
GYA					smax			
comp=N,700nm,0.9s								
GYA					smax			
comp=E,690nm,1.0s								
HHC	**Hu-ho-hao-te**	**11.31**	**31**	*e*P		**Pn**	**12 14 38.8**	**-0.3**
HHC					pP		12 14 46.0	
HHC					sP		12 14 50.8	
HHC					S	**Sn**	**12 16 45.5**	**-0.1**
HHC					sS		12 16 56.5	
HHC					SS		12 17 00.5	
HHC					pmax	pmax		
comp=Z,35nm,1.0s								
HHC					pmax	pmax		
comp=Z,890nm,4.5s								
HHC					LR	LR		
comp=N,930nm,6.7s								
HHC					LR	LR		
comp=E,1μm,7.7s								
HHC					LR	LR		
comp=Z,2μm,7.5s								
NJ2	**Nanjing**	**12.78**	**83**	*e*P		**Pn**	**12 15 00.1**	**+0.8**
NJ2					pP		12 15 04.9	
NJ2					sP		12 15 06.1	
NJ2					PP		12 15 10.7	
NJ2					S	**Sn**	**12 17 22.9**	**+1.2**
NJ2					sS		12 17 27.8	
NJ2					pmax	pmax		
comp=Z,20nm,0.8s								
NJ2					pmax	pmax		
comp=Z,130nm,3.6s								
NJ2					LR	LR		
comp=N,320nm,12.0s								
NJ2					LR	LR		
comp=E,430nm,11.2s								
NJ2					LR	LR		
comp=Z,940nm,10.1s								
CMAR	**Chiang Mai Arr**	**13.62**	**200**	Pn		**Pn**	**12 15 11.4**	**+0.6**
comp=Z,0.0nm,0.3s,baz=16,slow=13,SNR=3.3								
KSRS	**Korea Array**	**20.73**	**66**	P		**P**	**12 16 37.2**	**-0.8**
comp=Z,6.4nm,0.7s,baz=256,slow=9.6,SNR=15								
CN2	**Changchun**	**21.05**	**48**	*e*P		**P**	**12 16 42.4**	**+0.8**
CN2					pmax	pmax		
comp=Z,30nm,0.9s,mb4.6								
MK31	**Makanchi Array**	**22.64**	**319**	*e*P		**P**	**12 16 59.1**	**+0.6**
MKAR	**Makanchi Array**	**22.64**	**319**	P		**P**	**12 16 59.0**	**+0.5**
comp=Z,1.6nm,0.7s,mb3.5,baz=118,slow=10,SNR=5.0								
TKM2	**Tokmak 2**	**25.19**	**305**	*e*P		**P**	**12 17 24.2**	**+1.1**
ZALV	**Zalesovo Beam**	**26.39**	**334**	P		**P**	**12 17 32.9**	**-0.9**
comp=Z,2.1nm,0.3s,mb4.1,baz=126,slow=7.3,SNR=2.4								
KURK	**Kurchatov**	**26.90**	**323**	P		**P**	**12 17 38.6**	**+0.1**
comp=Z,2.1nm,1.0s,mb3.6,baz=128,slow=9.3,SNR=3.9								
KURK	**Kurchat

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.22**	**98**	Pn	**Pn**	**12 14 10.6**	**+1.2**
MKAR	**Makanchi Array**	**22.63**	**320**	P	**P**	**12 17 54.8**	**+2.6**
	2.0nm,0.7s,mb3.6,baz=127,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.49**	**335**	P	**P**	**12 18 27.5**	**-1.1**
	2.6nm,0.3s,mb4.2,baz=134,slow=10,SNR=2.9						
KURK	**Kurchatov**	**26.93**	**324**	P	**P**	**12 18 31.9**	**-0.6**
	1.9nm,0.6s,mb3.8,baz=128,slow=9.4,SNR=4.8						
KURK	**Kurchatov**	**26.93**	**324**	P	**P**	**12 18 31.9**	**-0.6**
JHJ	**Hachijo jima 2**	**30.70**	**77**	LR	LR	12 30 42.1	
	comp=Z,1μm,21.2s,baz=336,slow=36						
ABKAR	**Akbulak array**	**37.28**	**312**	*e*P	**P**	**12 20 04.5**	**+1.3**
	0.6nm,0.5s,mb3.7						
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**12 22 36.5**	**-0.4**
	3.1nm,0.9s,mb4.3,baz=83,slow=8.3,SNR=4.0						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**12 22 39.2**	**+0.5**
	1.6nm,0.6s,mb4.2,baz=87,slow=7.1,SNR=2.3						
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**12 22 48.9**	**-0.7**
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**12 22 49.6**	**-0.1**
	7.4nm,0.5s,mb5.0,baz=339,slow=7.9,SNR=14						
WB2	**Warramunga Arr**	**58.78**	**146**	*e*P	**P**	**12 22 49.4**	**-0.4**
ASAR	**Alice Springs**	**61.77**	**148**	P	**P**	**12 23 10.7**	**+0.5**
	0.9nm,0.7s,mb4.0,baz=337,slow=6.8,SNR=3.6						
NOA	**NORSAR Array B**	**64.37**	**327**	P	**P**	**12 23 26.6**	**-0.5**
	0.5nm,0.5s,mb3.8,baz=71,slow=5.4,SNR=3.3						
YKA	**Yellowknife Ar**	**81.83**	**17**	P	**P**	**12 25 08.8**	**-1.4**
	0.4nm,0.5s,mb3.6,baz=328,slow=5.3,SNR=3.3						

ISCJB ***12*** *12:13:45.1±0.3,31°.31N±0°.04×103°.77E±0°.06,h10km, mb4.4/36, Error ellipse: s-maj=8.5km s-min=4.6km az=154.6*
IDC ***12*** *12:13:45.2±0.5,31°.30N×103°.65E,h0km,mb4.3/20, mb1 4.3/22,mb1mx4.2/30,mbtmp4.2/22,ML3.9/2, Error ellipse: s-maj=26.6km s-min=10.8km az=56.0*
NEIC ***12*** *12:13:46.7±0.2,31°.34N×103°.75E,h10km,mb4.7/9, Error ellipse: s-maj=8.4km s-min=4.3km az=61.0*
MOS ***12*** *12:13:46.6±1.0,31°.28N×103°.67E,h22km,mb4.7/8, Error ellipse: s-maj=13.8km s-min=7.5km az=113.7*
BJI ***12*** *12:13:47.7,31°.39N×103°.63E,h20km,mB5.3/3,mb4.4/9, ML4.6/8,Ms4.3/5,Ms7 4.2/3*
ISC 12 12:13:47.2±0.3,31°.32N±0°.03×103°.74E±0°.06,h10km,n81, σ1§**08**/83,**mb4.4**/36,**3C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**178**	Pg	**Pg**	**12 13 56.7**	**+1.5**
CD2				Sg	**Sg**	**12 14 04.2**	**+3.6**
CD2				smax			
	comp=N,112μm,0.5s						
LZH	**Lanzhou**	**4.76**	**1**	*e*Pg	**Pg**	**12 15 18.5**	**+0.1**
LZH				Sg	**Sg**	**12 16 19.1**	**-0.9**
LZH				smax			
	comp=N,300nm,0.7s						
LZH				smax			
	comp=E,460nm,0.8s						
GTA	**Gaotai**	**8.69**	**339**	*e*P	**Pn**	**12 15 54.5**	**+1.6**
GTA				pP		12 15 57.7	
GTA				sP		12 16 00.5	
GTA				S	**Sn**	**12 17 31.6**	**+0.7**
GTA				sS		12 17 37.0	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,1μm,5.7s						
GTA				LR	LR		
	comp=N,1μm,14.7s						
GTA				LR	LR		
	comp=E,2μm,15.3s						
GTA				LR	LR		
	comp=Z,2μm,14.7s						
LSA	**Lhasa**	**10.98**	**265**	*e*P	**Pn**	**12 16 24.9**	**+0.5**
SHL	**Shillong**	**11.90**	**244**	*e*P	**Pn**	**12 16 35.0**	**-2.0**
QIZ	**Qiongzhong**	**13.42**	**154**	Pn	**Pn**	**12 16 56.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**13.52**	**200**	Pn	**Pn**	**12 16 59.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=13,slow=12,SNR=3.1						
SONM	**Songino Array**	**16.62**	**6**	Pn	**Pn**	**12 17 40.9**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=3.3						
ULN	**Ulaanbaatar**	**16.72**	**8**	*e*P	**Pn**	**12 17 41.0**	**-0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ULN	**Ulaanbaatar**	**16.72**	**8**	*e*Pn	**Pn**	**12 17 41.0**	**-0.4**
	comp=Z,8.2nm,0.9s						
WMQ	**Urumqi**	**17.78**	**319**	*e*P	**Pn**	**12 17 48.2**	**-6.6**
ZAK	**Zakamensk**	**19.05**	**359**	*e*P	**Pn**	**12 18 11.4**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**12 18 30.1**	**+0.9**
	comp=Z,17nm,0.6s,baz=252,slow=10.0,SNR=22						
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**12 18 30.1**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,17nm,0.6s						
CN2	**Changchun**	**21.18**	**48**	*e*P	**P**	**12 18 34.3**	**+1.7**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.6						
MK31	**Makanchi Array**	**22.61**	**319**	*e*P	**P**	**12 18 48.1**	**+0.1**
MKAR	**Makanchi Array**	**22.61**	**319**	P	**P**	**12 18 47.6**	**-0.4**
	comp=Z,12nm,0.8s,mb4.4,baz=125,slow=11,SNR=15						
ULHL	**Ulahol**	**24.48**	**304**	P	**P**	**12 19 07.3**	**+1.0**
	SNR=8.4						
KZA	**Kyzart**	**25.13**	**303**	P	**P**	**12 19 14.5**	**+2.2**
	SNR=23						
TKM2	**Tokmak 2**	**25.14**	**305**	P	**P**	**12 19 13.6**	**+1.2**
	SNR=6.5						
KBK	**Karagaybulak**	**25.51**	**304**	P	**P**	**12 19 17.4**	**+1.6**
	SNR=11						
UCH	**Uchtor**	**25.70**	**303**	P	**P**	**12 19 19.6**	**+2.1**
	SNR=14						
UCH	**Uchtor**	**25.70**	**303**	*e*P	**P**	**12 19 18.8**	**+1.3**
	comp=Z,20nm,1.0s,mb4.6						
FRU	**Bishkek**	**25.80**	**305**	*e*P	**P**	**12 19 20.0**	**+1.6**
AAK	**Ala-Archa**	**25.82**	**304**	P	**P**	**12 19 21.6**	**+3.0**
	SNR=6.0						
AAK	**Ala-Archa**	**25.82**	**304**	P	**P**	**12 19 19.4**	**+0.7**
	comp=Z,2.3nm,0.5s,mb4.0,baz=163,slow=7.8,SNR=9.4						
AML	**Almayashu**	**26.26**	**303**	P	**P**	**12 19 24.4**	**+1.8**
	SNR=9.8						
AML	**Almayashu**	**26.26**	**303**	*e*P	**P**	**12 19 22.6**	**0.0**
	comp=Z,14nm,0.9s,mb4.5						
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**12 19 23.1**	**-0.5**
	comp=Z,3.5nm,0.4s,mb4.3,baz=146,slow=9.7,SNR=6.5						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**12 19 27.9**	**-0.3**
	comp=Z,9.9nm,0.8s,mb4.4,baz=128,slow=8.9,SNR=17						
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**12 20 16.4**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.2,baz=119,slow=8.9,SNR=6.9						
ABKAR	**Akbulak array**	**37.30**	**312**	*e*P	**P**	**12 20 59.1**	**-0.2**
	comp=Z,4.0nm,0.8s,mb4.3						
AKTK	**Aktyubinsk**	**38.76**	**313**	P	**P**	**12 21 10.8**	**-0.9**
AKTO	**Aktyubinsk**	**38.76**	**313**	P	**P**	**12 21 10.8**	**-0.9**
	comp=Z,0.8nm,0.4s,mb3.8,baz=90,slow=13,SNR=2.8						
SVE	**Sverdlovsk**	**39.14**	**323**	*e*P	**P**	**12 21 15.9**	**+1.2**
SVE				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
KAPI	**Kappang**	**39.23**	**154**	P	**P**	**12 21 14.7**	**-1.2**
	comp=Z,3.8nm,0.4s,mb4.5,baz=199,slow=3.4,SNR=4.1						
ARU	**Arti**	**40.07**	**322**	*e*P	**P**	**12 21 22.0**	**-0.5**
ARU				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
ARU	**Arti**	**40.07**	**322**	*e*P	**P**	**12 21 22.0**	**-0.5**
	comp=Z,13nm,0.7s,mb4.8						
ZEI	**Tsey**	**48.20**	**301**	*e*P	**P**	**12 22 24.8**	**-3.1**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BILL	**Bilibino**	**51.12**	**25**	*e*P	Px	12 22 59.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
OBN	**Obninsk**	**52.11**	**318**	*e*P	**P**	**12 23 00.4**	**+3.1**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KNA	**Kununurra**	**52.61**	**149**	*e*P	**P**	**12 23 01.0**	**-0.4**
	comp=Z,14nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.45**	**154**	P	**P**	**12 23 06.5**	**-1.1**
	comp=Z,4.6nm,1.0s,mb4.4,baz=274,slow=6.5,SNR=4.5						
BRTR	**Keskin Array B**	**56.37**	**299**	P	**P**	**12 23 27.2**	**-1.3**
	comp=Z,1.0nm,0.8s,mb3.9,baz=101,slow=6.4,SNR=4.3						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**12 23 31.3**	**-0.9**
	comp=Z,4.3nm,0.9s,mb4.5,baz=81,slow=7.6,SNR=9.0						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**12 23 31.9**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=70,slow=6.4,SNR=7.8						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**12 23 33.4**	**-0.8**
	comp=Z,1.4nm,0.5s,mb4.2,baz=103,slow=8.4,SNR=4.7						
COEN	**Coen**	**58.82**	**134**	*e*P	**P**	**12 23 46.4**	**+0.4**
COEN	**Coen**	**58.82**	**134**	*e*P	**P**	**12 23 46.1**	**0.0**
WRAB	**Tennant Creek**	**58.82**	**146**	*e*P	**P**	**12 23 45.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**58.82**	**146**	*e*P	**P**	**12 23 45.8**	**-0.2**
	comp=Z,16nm,0.6s,mb5.2						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**12 23 46.1**	**+0.1**
	comp=Z,15nm,0.5s,mb5.3,baz=338,slow=7.5,SNR=26						
WB2	**Warramunga Arr**	**58.83**	**146**	*e*P	**P**	**12 23 46.0**	**0.0**
ASAR	**Alice Springs**	**61.84**	**148**	P	**P**	**12 24 06.8**	**+0.3**
	comp=Z,3.7nm,0.5s,mb4.8,baz=345,slow=6.7,SNR=20						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**12 24 20.7**	**-1.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=78,slow=6.4,SNR=2.6						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**12 24 20.7**	**-1.9**
NWAO	**Narrogin (SRO)**	**65.16**	**168**	P	**P**	**12 24 27.8**	**-0.6**
	comp=Z,11nm,1.0s,mb4.9,baz=0.0,slow=3.0,SNR=5.1						
NWAO	**Narrogin (SRO)**	**65.16**	**168**	P	**P**	**12 24 27.8**	**-0.6**
GERES	**GERESS Array B**	**67.17**	**314**	P	**P**	**12 24 39.6**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.5,baz=70,slow=6.5,SNR=4.0						
QLP	**Quilpie**	**69.35**	**142**	*e*P	**P**	**12 24 55.6**	**+0.5**
BBOO	**Buckleboo**	**70.72**	**152**	⇑*i*P	**P**	**12 25 02.9**	**-0.5**
	comp=Z,1.8nm,0.4s,mb4.3						
CDF	**Champ du Feu**	**71.25**	**316**	*e*P	**P**	**12 25 05.4**	**-1.1**
CDF	**Champ du Feu**	**71.25**	**316**	*e*P	**P**	**12 25 05.4**	**-1.1**
CDF	**Champ du Feu**	**71.25**	**316**	*e*P	**P**	**12 25 05.4**	**-1.1**
RMQ	**Roma**	**71.77**	**138**	*e*P	**P**	**12 25 10.9**	**+1.0**
	comp=Z,5.0nm,0.5s,mb4.7						
INK	**Inuvik**	**72.06**	**19**	*e*P	**P**	**12 25 10.6**	**-0.5**
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**72.06**	**19**	*e*P	**P**	**12 25 10.6**	**-0.5**
	comp=Z,3.9nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**72.36**	**147**	⇑*i*P	**P**	**12 25 13.0**	**-0.3**
	comp=Z,4.1nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**12 25 13.1**	**-0.2**
	comp=Z,4.4nm,0.5s,mb4.6,baz=320,slow=6.2,SNR=15						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.1**	**-0.3**
	comp=Z,8.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.1**	**-0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.1**	**-0.3**
	comp=Z,4.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.0**	**-0.4**
	comp=Z,10nm,0.7s,mb4.6						
LPL	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.0**	**-0.4**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.88**	**313**	*e*P	**P**	**12 25 16.0**	**-0.4**
	comp=Z,5.3nm,0.7s,mb4.6						
CMSA	**Cobar Meteorol**	**74.08**	**144**	⇑*i*P	**P**	**12 25 24.1**	**+0.6**
SMF	**Signal de Mont**	**74.13**	**315**	*e*P	**P**	**12 25 22.0**	**-1.7**
SMF	**Signal de Mont**	**74.13**	**315**	*e*P	**P**	**12 25 22.0**	**-1.7**
SMF	**Signal de Mont**	**74.13**	**315**	*e*P	**P**	**12 25 22.0**	**-1.7**
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**12 26 04.6**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=328,slow=4.8,SNR=7.5						
TORD	**Torodi Ar. Bea**	**93.27**	**287**	P	**P**	**12 27 02.9**	**+0.2**
	comp=Z,0.5nm,0.7s,mb4.1,baz=74,slow=5.2,SNR=3.7						

ISCJB ***12*** *12:15:38.4±1.0,31°.81N±0°.02×104°.56E±0°.03,h5km±6km, mb4.8/88,MS4.5/3,Error ellipse: s-maj=4.4km s-min=3.8km az=152.5*
IDC ***12*** *12:15:38.9±0.4,31°.80N×104°.51E,h0km,mb4.6/30, mb1 4.6/32,mb1mx4.6/36,mbtmp4.6/32,ML4.3/2,MS4.5/2, Ms1 4.6/2,ms1mx3.7/49,Error ellipse: s-maj=15.6km s-min=9.5km az=50.0*
BJI ***12*** *12:15:39.6,31°.87N×104°.57E,h9km,mB5.3/13,mb4.9/26, ML4.8/13,Ms4.9/25,Ms7 4.7/19*
NEIC ***12*** *12:15:40.9±0.2,31°.86N×104°.62E,h10km,mb4.8/45,Error ellipse: s-maj=6.1km s-min=5.4km az=64.0*
MOS ***12*** *12:15:42.6±1.3,31°.81N×104°.66E,h35km,mb5.0/47,Error ellipse: s-maj=7.7km s-min=4.7km az=110.5*
DJA ***12*** *12:15:43,31°.90N×104°.63E,h6km,mb4.9/13*
SZGRF ***12*** *12:16:11.0,33°.71N×100°.69E,h33km,mb4.8,Qinghai, China*
ISC 12 12:15:40.2±0.9,31°.83N±0°.02×104°.58E±0°.03,h4km±5km**, n229,**σ1§**26**/243,**mb4.8**/88,**MS4.5**/3,**22C-10D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.16**	**218**	Pg	**Pg**	**12 16 01.1**	**-1.2**
CD2				Sg	**Sg**	**12 16 16.1**	**-1.2**
CD2				smax			
	comp=E,94μm,0.6s						
LZH	**Lanzhou**	**4.29**	**352**	Pn	**Pn**	**12 16 48.8**	**+2.6**
LZH				Sn	**Sn**	**12 17 39.4**	**+2.8**
LZH				Sg	**Sg**	**12 17 56.6**	**-1.3**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.6s						
GYA	**Guiyang**	**5.65**	**161**	Pn	**Pn**	**12 17 08.4**	**+3.5**
GYA				Sn	**Sn**	**12 18 18.9**	**+8.6**
GYA				smax			
	comp=N,1μm,0.8s						
GYA				smax			
	comp=E,2μm,1.0s						
KMI	**Kunming**	**6.88**	**194**	Pn	**Pn**	**12 17 25.0**	**+3.3**
KMI				Sn	**Sn**	**12 18 43.2**	**+2.8**
KMI				smax			
	comp=N,290nm,1.2s						
KMI				smax			
	comp=E,380nm,1.6s						
KMI				LR	LR		
	comp=N,7μm,7.0s						
KMI				LR	LR		
	comp=E,6μm,5.8s						
KMI				LR	LR		
	comp=Z,7μm,7.9s						
GTA	**Gaotai**	**8.50**	**334**	*e*P	**Pn**	**12 17 45.7**	**+1.7**
GTA				pP		12 17 49.1	
GTA				sP		12 17 51.8	
GTA				S	**Sn**	**12 19 23.5**	**+3.2**
GTA				sS		12 19 28.0	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,380nm,4.5s						
GTA				LR	LR		
	comp=N,3μm,11.1s						
GTA				LR	LR		
	comp=E,3μm,11.7s						
GTA				LR	LR		
	comp=Z,3μm,12.9s						
HHC	**Hu-ho-hao-te**	**10.61**	**30**	*e*P	**Pn**	**12 18 16.4**	**+3.5**
HHC				PP		12 18 24.6	
HHC				S	**Sn**	**12 20 16.4**	**+4.3**
HHC				SS		12 20 29.1	
HHC				pmax	pmax		
	comp=Z,46nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,4.8s						
HHC				LR	LR		
	comp=N,2μm,5.2s						
HHC				LR	LR		
	comp=E,2μm,6.7s						
HHC				LR	LR		
	comp=Z,2μm,6.8s						
TIA	**Tai'an**	**11.29**	**64**	P	**Pn**	**12 18 21.1**	**-1.1**
LSA	**Lhasa**	**11.75**	**263**	*e*P	**Pn**	**12 18 28.9**	**+0.4**
LSA				pmax	pmax		
	comp=Z,27nm,0.6s						
LSA	**Lhasa**	**11.75**	**263**	*e*Pn	**Pn**	**12 18 28.9**	**+0.4**
	comp=Z,27nm,0.6s						
NJ2	**Nanjing**	**12.13**	**85**	*e*P	**Pn**	**12 18 37.1**	**+3.4**
NJ2				pP		12 18 44.4	
NJ2				PP		12 18 48.4	
NJ2				S	**Sn**	**12 20 54.2**	**+4.8**
NJ2				sS		12 21 05.8	
NJ2				pmax	pmax		
	comp=Z,50nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,680nm,5.7s						
NJ2				LR	LR		
	comp=N,2μm,7.9s						
NJ2				LR	LR		
	comp=E,5μm,11.8s						
QIZ	**Qiongzhong**	**13.60**	**158**	P	**Pn**	**12 18 55.2**	**+1.3**
QIZ				S	**Sn**	**12 21 29.6**	**+4.1**
QIZ				LR	LR		
	comp=N,2μm,8.1s						
QIZ				LR	LR		
	comp=E,780nm,8.4s						
QIZ				LR	LR		
	comp=Z,2μm,8.4s						
CHTO	**Chiang Mai**	**13.92**	**203**	*e*P	**Pn**	**12 19 00.6**	**+2.3**
QZH	**Quanzhou**	**14.11**	**116**	*e*P	**Pn**	**12 19 00.9**	**+0.2**
QZH				S	**Sn**	**12 21 40.0**	**+2.2**
QZH				LR	LR		
	comp=N,3μm,6.3s						
QZH				LR	LR		
	comp=E,4μm,5.8s						
QZH				LR	LR		
	comp=Z,10μm,9.6s						
CM31	**Chiang Mai Arr**	**14.26**	**202**	*e*Pn	**Pn**	**12 19 04.7**	**+1.8**
CMAR	**Chiang Mai Arr**	**14.26**	**202**	Pn	**Pn**	**12 19 02.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=12,slow=12,SNR=8.0						
CMAR				Lg		12 23 14.9	
	comp=Z,0.3nm,0.3s,baz=22,slow=29,SNR=2.9						
CMAR				LR	LR	12 25 03.4	
	comp=Z,2μm,18.0s,baz=5.0,slow=40						
SONM	**Songino Array**	**16.04**	**4**	Pn	**Pn**	**12 19 27.0**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=185,slow=14,SNR=12						
SONM				Lg		12 24 10.2	
	comp=Z,0.3nm,0.3s,baz=198,slow=32,SNR=3.0						
ULN	**Ulaanbaatar**	**16.12**	**6**	*e*P	**Pn**	**12 19 27.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,45nm,1.0s						
ULN	**Ulaanbaatar**	**16.12**	**6**	*e*Pn	**Pn**	**12 19 27.6**	**+0.1**
	comp=Z,45nm,1.0s						
GUN	**Gumba**	**16.68**	**261**	*e*P	**Pn**	**12 19 30.7**	**-4.1**
	comp=Z,287nm,0.8s						
PKI	**Pulchoki**	**17.19**	**261**	*e*P	**Pn**	**12 19 37.6**	**-3.6**
	comp=Z,151nm,0.7s						
PKIN	**Phulchoki**	**17.20**	**261**	*e*P	**Pn**	**12 19 38.2**	**-3.1**
	comp=Z,192nm,0.7s						
KKN	**Kakani**	**17.23**	**261**	*e*P	**Pn**	**12 19 37.2**	**-4.4**
	comp=Z,216nm,0.9s						
DMN	**Daman**	**17.43**	**261**	*e*P	**Pn**	**12 19 40.7**	**-3.5**
	comp=Z,249nm,0.8s						
WMQ	**Urumqi**	**17.88**	**317**	*e*P	**Pn**	**12 19 51.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				LR	LR		
	comp=N,2μm,12.0s						
WMQ				LR	LR		
	comp=E,1μm,12.0s						
WMQ				LR	LR		
	comp=Z,1μm,11.0s						
ZAK	**Zakamensk**	**18.56**	**357**	*e*P	**Pn**	**12 19 58.8**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,22nm,1.3s						
INCN	**Inchon**	**18.98**	**67**	*e*P	**Pn**	**12 20 03.3**	**+0.1**
	comp=Z,51nm,1.0s						
TLY	**Talaya**	**19.85**	**358**	*e*P	**Pn**	**12 20 14.8**	**+1.4**
TLY				pmax	pmax		
	comp=Z,31nm,1.2s						
TLY	**Talaya**	**19.85**	**358**	*e*P	**Pn**	**12 20 11.7**	**-1.8**
	comp=Z,52nm,1.6s						
KSRS	**Korea Array**	**19.99**	**67**	P	**Pn**	**12 20 15.2**	**-0.1**
	comp=Z,63nm,0.9s,baz=256,slow=10,SNR=36						
KSRS	**Korea Array**	**19.99**	**67**	P	**Pn**	**12 20 15.2**	**0.0**
KSRS				pmax	pmax		
	comp=Z,63nm,0.9s						
MOY	**Mondy**	**20.00**	**353**	*e*P	**Pn**	**12 20 15.2**	**0.0**
MOY				pmax	pmax		
	comp=Z,26nm,1.3s						
CN2	**Changchun**	**20.30**	**48**	*e*P	**P**	**12 20 18.7**	**+1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
IRK	**Irkutsk**	**20.40**	**359**	*e*P	**P**	**12 20 19.8**	**+1.9**
IRK				pmax	pmax		
	comp=Z,136nm,1.1s						
HIA	**Hailar**	**20.81**	**29**	*e*P	**P**	**12 20 23.8**	**+1.4**
HIA				pmax	pmax		
	comp=Z,69nm,1.1s						
HIA	**Hailar**	**20.81**	**29**	*e*Pn	**P**	**12 20 23.8**	**+1.4**
	comp=Z,70nm,1.1s						
JOW	**Kunigami**	**21.23**	**98**	P	**P**	**12 20 26.6**	**-0.5**
	comp=Z,20nm,0.5s,mb4.7,baz=276,slow=17,SNR=2.8						
JOW				LR	LR	12 28 46.4	
	comp=Z,2μm,21.4s,MS4.4,baz=335,slow=37						
MK31	**Makanchi Array**	**22.71**	**318**	*e*P	**P**	**12 20 43.0**	**+0.3**
MKAR	**Makanchi Array**	**22.71**	**318**	P	**P**	**12 20 42.8**	**+0.1**
	comp=Z,17nm,1.0s,mb4.4,baz=116,slow=6.8,SNR=12						
MKAR	**Makanchi Array**	**22.71**	**318**	*c*e*P	**P**	**12 20 45.5**	**+2.8**
MKAR				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ	**Mudanjiang**	**23.32**	**50**	P	**P**	**12 20 48.6**	**-0.7**
MDJ				pP		12 20 51.6	
MDJ				sP	sP	12 20 53.0	+1.9
MDJ				S	**S**	**12 25 01.0**	**-1.2**
MDJ				sS	sS	12 25 06.0	+1.7
MDJ				ScP	ScP	12 28 14.5	-0.5
MDJ				PcS	PcS	12 28 15.8	+0.5
MDJ				pmax	pmax		
	comp=Z,39nm,1.7s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,1μm,7.8s						
MDJ	**Mudanjiang**	**23.32**	**50**	*e*P	**P**	**12 20 50.4**	**+1.1**
	comp=Z,117nm,1.6s,mb5.1						
KSH	**Kashi**	**24.40**	**296**	*e*P	**P**	**12 21 02.1**	**+2.6**
KSH				*e*pP		12 21 06.1	
KSH				*e*sP	sP	12 21 09.1	+7.8
KSH				*e*PP		12 21 38.1	
KSH				*e*PcP	PcP	12 24 40.0	+1.3
KSH				*e*S	**S**	**12 25 18.8**	**-1.0**
KSH				*e*sS	sS	12 25 26.2	+4.3
KSH				*e*SS		12 26 15.1	
KSH				*e*ScP	ScP	12 28 17.1	-1.0
KSH				*e*PcS	PcS	12 28 19.0	+0.5
KSH				*e*ScS	ScS	12 32 04.1	-1.5
KSH				pmax	pmax		
	comp=Z,42nm,1.7s,mb4.6						
KSH				LR	LR		

HABR *e*SS 12 27 36.2
HABR pmax pmax
comp=Z,38nm,2.3s,mb4.6
HABR pmax pmax
comp=E,11nm,0.7s
HABR pmax pmax
comp=N,14nm,1.5s
HABR MLR MLR
comp=Z,344nm,14.0s,MS4.1
KBL Kabul 29.77 285 *e*P **P 12 21 48.4 +0.6**
KBL pmax pmax
comp=Z,33nm,1.1s,mb5.0
KBL Kabul 29.77 285 *e*P **P 12 21 48.4 +0.6**
comp=Z,33nm,1.1s,mb5.0
ASAJ Asahikawa 32.10 57 P **P 12 22 08.4 +0.1**
comp=Z,8.6nm,0.8s,mb4.6,baz=299,slow=15,SNR=5.5
ASAJ Asahikawa 32.10 57 P **P 12 22 08.4 +0.1**
ASAJ pmax pmax
comp=Z,9.0nm,0.8s
BVAR Borovoye Array 32.48 321 P **P 12 22 11.0 -0.5**
comp=Z,4.3nm,0.6s,mb4.4,baz=118,slow=8.9,SNR=10
BRVK Borovoye 32.55 321⇑*i*P **P 12 22 13.4 +1.3**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BRVK Borovoye 32.55 321 *e*P **P 12 22 11.8 -0.3**
comp=Z,6.7nm,0.8s,mb4.6
YSS Yuzh-Sakhalins 32.78 51⇑*e*P **P 12 22 14.2 0.0**
YSS pmax pmax
comp=Z,60nm,1.4s,mb5.3
YAK Yakutsk 34.28 21 *e*P **P 12 22 26.0 -1.1**
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,20nm,0.9s,mb5.0
YAK Yakutsk 34.28 21 *e*P **P 12 22 26.0 -1.1**
comp=Z,22nm,0.6s,mb5.3
ABKAR Akbulak array 37.50 311 *e*P **P 12 22 54.5 -0.4**
comp=Z,7.8nm,0.7s,mb4.5
AKTK Aktyubinsk 38.95 312 P **P 12 23 06.9 -0.1**
AKTO Aktyubinsk 38.95 312 P **P 12 23 06.9 -0.1**
comp=Z,4.0nm,0.6s,mb4.3,baz=91,slow=12,SNR=10
SVE Sverdlovsk 39.16 323 *e*P **P 12 23 09.6 +0.9**
SVE pmax pmax
comp=Z,27nm,0.7s,mb5.1
KAPI Kappang 39.39 156 P **P 12 23 10.5 -0.5**
comp=Z,14nm,1.0s,mb4.7,baz=360,slow=19,SNR=3.9
ARU Arti 40.11 322*c i*P **P 12 23 16.4 -0.2**
ARU S **S 12 29 20.7 -2.6**
ARU SS SS 12 32 13.9 -6.5
ARU pmax pmax
comp=Z,49nm,1.0s,mb5.2
ARU Arti 40.11 322 *e*P **P 12 23 16.5 -0.1**
comp=Z,38nm,0.7s,mb5.2
TIXI Tiksi 41.96 11 *e*P **P 12 23 30.6 -1.1**
TIXI pmax pmax
comp=Z,59nm,2.3s,mb4.8
TIXI Tiksi 41.96 11 *e*P **P 12 23 30.6 -1.1**
comp=Z,59nm,2.3s,mb4.8
SOKR Solikamsk 42.02 326⇑*i*P **P 12 23 32.9 +0.6**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb4.9
SEY Seymchan 43.26 30*ce*P **P 12 23 42.1 -0.2**
PETK Petropavlovsk- 43.39 45 P **P 12 23 43.4 -0.1**
comp=Z,17nm,0.8s,mb4.9,baz=272,slow=2.0,SNR=20
PET Petropavlovsk 43.95 45 *e*P **P 12 23 47.0 -1.0**
PET pmax pmax
comp=Z,34nm,1.1s,mb5.0
PET Petropavlovsk 43.95 45 *e*P **P 12 23 47.5 -0.5**
comp=Z,35nm,1.1s,mb5.0
GNI Garni 48.33 297*c i*P **P 12 24 25.2 +2.5**
GNI pmax pmax
comp=Z,26nm,1.7s
ZEI Tsey 48.55 301 *e*P **P 12 24 23.1 -1.3**
ZEI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MIB Mutribah 48.71 283 *e*P **P 12 24 24.9 -0.9**
MIB AMb AMB 12 24 27.9
comp=Z,59nm,1.1s,mb5.5
RDF Al-Radifah 48.81 282 *e*P **P 12 24 26.0 -0.6**
RDF AMb AMB 12 24 28.7
comp=Z,80nm,0.9s,mb5.7
KIV Kislovodsk 49.26 303 *e*P **P 12 24 30.7 +0.9**
KIV pmax pmax
comp=Z,19nm,0.8s,mb5.2
KIV Kislovodsk 49.26 303 *e*P **P 12 24 30.4 +0.6**
BILL Biiibino 50.35 25*c i*P **P 12 24 37.1 -0.6**
BILL *e* 12 25 55.2
BILL *e*S **S 12 31 46.8 -4.1**
BILL pmax pmax
comp=Z,29nm,1.7s,mb5.0
BILL Biiibino 50.35 25 *e*P **P 12 24 37.5 -0.2**
comp=Z,20nm,1.0s,mb5.1
KLMR Klimovskoe 50.70 325 P **P 12 24 39.7 -0.8**
KLMR pmax pmax
comp=Z,31nm,1.0s,mb5.2
OBN Obninsk 52.22 318⇑*e*P **P 12 24 52.5 +0.6**
OBN *e* 12 26 01.8
OBN pmax pmax
comp=Z,49nm,1.7s,mb5.2
KNA Kununurra 52.69 150 *e*P **P 12 24 55.2 -0.6**
comp=Z,22nm,0.7s,mb5.2
ANN Anapa 52.85 305 *e*P **P 12 24 57.5 +0.7**
ANN pmax pmax
comp=Z,56nm,1.0s,mb5.5
SMY Shemya 53.29 45 *e*P **P 12 25 00.9 +1.0**
SMY pmax pmax
comp=Z,143nm,1.1s,mb5.8
SMY Shemya 53.29 45 *e*P **P 12 25 00.9 +1.0**
comp=Z,143nm,1.1s,mb5.8
MALT Malatya 53.51 296⇑P **P 12 25 02.7 +0.9**
MALT Malatya 53.51 296⇑*i*P **P 12 25 02.7 +0.9**
FITZ Fitzroy Crossi 53.60 155 *e*P **P 12 25 01.0 -1.5**
comp=Z,11nm,1.1s,mb4.7
FITZ Fitzroy Crossi 53.60 155 P **P 12 25 01.2 -1.3**
comp=Z,4.4nm,0.8s,mb4.5,baz=310,slow=3.7,SNR=7.8
FITZ Fitzroy Crossi 53.60 155 *e*P **P 12 25 01.5 -1.0**
comp=Z,8.6nm,1.0s,mb4.6
APA Apatity 53.84 333⇑*i*P **P 12 25 03.0 -0.7**
APA MLR MLR
comp=Z,1μm,17.0s,MS5.0
JOF Joensuu 54.63 327 *e*P **P 12 25 08.4 -1.2**
JOF pmax pmax
comp=Z,13nm,0.9s,mb5.0
JOF Joensuu 54.63 327 *ep* **P 12 25 08.4 -1.2**
comp=Z,13nm,0.9s,mb5.0
KEV Kevo 56.24 336 *e*P **P 12 25 19.4 -1.6**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KEV Kevo 56.24 336 *ep* **P 12 25 19.4 -1.6**
comp=Z,5.3nm,0.6s,mb4.8
BR131 Keskin Array S 56.74 299 *e*P **P 12 25 24.3 -0.8**
comp=Z,4.6nm,0.6s,mb4.7
BRTR Keskin Array B 56.74 299 P **P 12 25 24.4 -0.7**
comp=Z,6.5nm,0.8s,mb4.7,baz=95,slow=6.5,SNR=15
ARCES ARCESS Array B 56.77 336 P **P 12 25 23.9 -0.9**
comp=Z,3.9nm,0.7s,mb4.5,baz=87,slow=6.6,SNR=5.3
KAF Kangasniemi 57.01 327 *e*P **P 12 25 25.2 -1.4**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KAF Kangasniemi 57.01 327 *ep* **P 12 25 25.2 -1.4**
comp=Z,9.4nm,0.7s,mb4.9
AKASG Malin Array Be 57.19 313 P **P 12 25 26.6 -1.5**
comp=Z,5.3nm,0.6s,mb4.8,baz=68,slow=6.8,SNR=8.3
AKASG Malin Array Be 57.19 313*ce*P **P 12 25 29.5 +1.4**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 57.19 326 P **P 12 25 27.2 -0.8**
comp=Z,19nm,0.8s,mb5.2,baz=85,slow=6.7,SNR=15
FINES FINESS Array B 57.19 326 P **P 12 25 27.2 -0.8**
VSU Vasula 57.27 322 *e*P **P 12 25 30.5 +2.0**
VSU pmax pmax
comp=Z,33nm,1.1s,mb5.3
IDID Didziasalis 57.78 319 *e*P **P 12 25 31.5 -0.7**
NACGM Naroch 57.84 318 *e* **P 12 25 31.0 -1.6**
IIGN Ignalina 58.07 319 *e*P **P 12 25 32.2 -2.0**
ISAL Salakas 58.08 319 *e*P **P 12 25 33.5 -0.8**
COEN Coen 58.66 135 *e*P **P 12 25 38.8 0.0**
SPB4 Spitsbergen Ar 58.74 346 *e*P **P 12 25 33.8 -4.8**
WRAB Tennant Creek 58.85 147 *e*P **P 12 25 39.8 -0.2**
WRAB pmax pmax
comp=Z,19nm,0.7s,mb5.2
WRAB Tennant Creek 58.85 147 *e*P **P 12 25 39.8 -0.3**
comp=Z,19nm,0.7s,mb5.2
WRA Warramunga Arr 58.85 147 P **P 12 25 39.8 -0.3**
comp=Z,7.3nm,0.6s,mb4.9,baz=317,slow=12,SNR=11
WB2 Warramunga Arr 58.86 147 *e*P **P 12 25 39.7 -0.4**
TIRR Tirgusor 59.20 306⇓P **P 12 25 41.0 -1.3**
TIRR Tirgusor 59.20 306⇓*i*P **P 12 25 41.0 -1.3**
VRI Vrincioaia 59.96 308⇓P **P 12 25 51.0 +3.5**
VRI Vrincioaia 59.96 308⇓*i*P **P 12 25 51.0 +3.5**
PLOR Plostina 60.02 308⇓P **P 12 25 50.4 +2.5**
PLOR Plostina 60.02 308⇓*i*P **P 12 25 50.3 +2.4**
BURAR Bucovina Array 60.48 310⇓P **P 12 25 54.2 +3.2**
BURAR Bucovina Array 60.48 310⇓*i*P **P 12 25 54.2 +3.2**
BUR08 Bucovina Ar. S 60.48 310 *e*P **P 12 25 52.3 +1.3**
MLR Muntele Rosu 60.59 308⇑P **P 12 25 56.4 +4.6**
MLR Muntele Rosu 60.59 308⇑*i*P **P 12 25 56.4 +4.6**
VOIR 61.21 308⇓P **P 12 25 55.3 -0.7**
VOIR 61.21 308⇓*i*P **P 12 25 55.3 -0.7**
ASAR Alice Springs 61.90 149 P **P 12 26 00.8 -0.1**
comp=Z,5.3nm,0.5s,mb4.9,baz=333,slow=6.6,SNR=17
TRPA Tarpa 62.06 311⇑*i*P **P 12 26 05.3 +3.6**
STHS Stebnicka Huta 62.49 313 *e*P **P 12 26 06.5 +1.9**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
STHS Stebnicka Huta 62.49 313 *e*P **P 12 26 06.5 +1.9**
comp=Z,4.8nm,1.0s,mb4.6
STHS Stebnicka Huta 62.49 313 *e*P **P 12 26 06.5 +1.9**
NIE Niedzica 63.06 313 *e*P **P 12 26 11.1 +2.7**
OJC Ojcow 63.13 314 *e*P **P 12 26 11.1 +2.3**
KECS Kecovo 63.25 312 *e*P **P 12 26 12.4 +2.7**
KECS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KECS Kecovo 63.25 312 *e*P **P 12 26 12.4 +2.7**
comp=Z,2.3nm,0.6s,mb4.5
KECS Kecovo 63.25 312 *e*P **P 12 26 12.4 +2.7**
NB2 NORSAR Subarra 64.27 327 P **P 12 26 14.5 -1.7**
comp=Z,5.3nm,0.8s,mb4.6,baz=71,slow=6.9
NOA NORSAR Array B 64.27 327 P **P 12 26 14.8 -1.4**
comp=Z,4.5nm,0.8s,mb4.6,baz=71,slow=6.5,SNR=6.4
VYHS Vyhne 64.28 313 *e*P **P 12 26 19.1 +2.6**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
VYHS Vyhne 64.28 313 *e*P **P 12 26 19.1 +2.6**
comp=Z,4.3nm,1.1s,mb4.4
VYHS Vyhne 64.28 313 *e*P **P 12 26 19.1 +2.6**
MORC Moravsky Berou 64.65 314 *e*P **P 12 26 18.7 -0.2**
comp=Z,8.9nm,1.0s,mb4.8
MORC Moravsky Berou 64.65 314⇑*i*P **P 12 26 19.6 +0.7**
PKSM Moragy 65.20 310⇑P **P 12 26 23.7 +1.2**
PKSM Moragy 65.20 310⇑*i*P **P 12 26 23.7 +1.2**
CTA Charters Tower 65.27 137 P **P 12 26 22.8 -0.3**
comp=Z,6.2nm,0.7s,mb4.8,baz=330,slow=3.4,SNR=4.8
NWAO Narrogin (SRO) 65.51 168 P **P 12 26 24.2 -0.2**
comp=Z,5.8nm,0.6s,mb4.8,baz=10.0,slow=17,SNR=4.0
FORT Forrest 66.13 158 *e*P **P 12 26 27.6 -0.9**
comp=Z,10nm,0.6s,mb5.0
BRG Berggiesshubel 66.42 316 *e*P **P 12 26 29.5 -0.8**
comp=Z,2.0nm,0.6s,mb4.3
BRG Berggiesshubel 66.42 316 *e*P **P 12 26 29.5 -0.8**
BRG pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
CLL Collm 66.81 317 *e*P **P 12 26 31.0 -1.7**
CLL *e* 12 26 38.0
CLL pmax pmax
comp=Z,23nm,1.4s,mb5.0
CLL Collm 66.81 317 *e*P **P 12 26 31.0 -1.7**
comp=Z,5.0nm,1.4s,mb4.3
CLL *i* 12 26 34.7
CLL *e* 12 26 38.0
CLL Collm 66.81 317 *e*P **P 12 26 31.0 -1.7**
comp=Z,5.0nm,1.4s,mb4.3
CLL *i*pP pP 12 26 34.7 +0.6
CLL *e* 12 26 38.0
CLL *i* 12 26 43.4
CLL *e*PP PP 12 28 59.0 -0.4
GERES GERESS Array B 67.33 314 P **P 12 26 35.3 -0.8**
comp=Z,3.7nm,0.8s,mb4.4,baz=76,slow=5.6,SNR=13
MOX Moxa 67.87 317 *e*P **P 12 26 42.0 +2.5**
comp=Z,9.0nm,1.4s,mb4.6
MOX Moxa 67.87 317 *e*P **P 12 26 42.0 +2.5**
MOX pmax pmax
comp=Z,74nm,1.4s,mb5.5
GRA1 Grafenberg Arr 68.49 316 *e*P **P 12 26 45.9 +2.5**
comp=Z,8.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.49 316 *e*P **P 12 26 45.9 +2.5**
comp=Z,8.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.49 316 *e*P **P 12 26 45.9 +2.5**
GRF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.49 316 *e*P **P 12 26 45.9 +2.5**
GRF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.49 316 *e*P **P 12 26 45.9 +2.5**
comp=Z,8.0nm,1.1s,mb4.7
QLP Quilpie 69.31 142 *e*P **P 12 26 48.8 +0.1**
KDAK Kodiak Island 70.01 34 *i*P **P 12 26 52.5 -0.2**
BFO Black Forest 70.79 315 *e*P **P 12 26 55.2 -2.4**
BFO pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BFO Black Forest 70.79 315 *e*P **P 12 26 55.2 -2.4**
comp=Z,8.6nm,1.0s,mb4.6
BBOO Buckleboo 70.83 152 *e*P **P 12 26 57.1 -0.8**
comp=Z,5.1nm,0.4s,mb4.8
INK Inuvik 71.34 19 *e*P **P 12 26 59.7 -0.9**
INK pmax pmax
comp=Z,27nm,1.3s
INK Inuvik 71.34 19 *e*P **P 12 26 59.7 -0.9**
comp=Z,27nm,1.3s,mb5.0
CDF Champ du Feu 71.38 316 *e*P **P 12 26 59.7 -1.5**
comp=Z,7.2nm,0.6s,mb4.5
CDF Champ du Feu 71.38 316 *e*P **P 12 26 59.7 -1.5**
CDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CDF Champ du Feu 71.38 316 *e*P **P 12 26 59.7 -1.5**
comp=Z,3.6nm,0.6s,mb4.5
WLF Walferdange 71.47 317 P **P 12 27 01.9 +0.2**
comp=Z,10nm,1.4s,mb4.6
WLF Walferdange 71.47 317 *e*P **P 12 27 01.3 -0.4**
WLF pmax pmax
comp=Z,17nm,1.0s,mb4.9
WLF Walferdange 71.47 317 *e*P **P 12 27 01.3 -0.4**
comp=Z,17nm,1.0s,mb4.9
KMBO Kilima Mbogo 71.47 257 P **P 12 27 01.2 -1.0**
comp=Z,5.4nm,1.0s,mb4.5,baz=46,slow=11,SNR=10
KMBO Kilima Mbogo 71.47 257*ce*P **P 12 27 04.5 +2.2**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 71.47 257 *e*P **P 12 27 02.8 +0.5**
comp=Z,40nm,1.8s,mb5.0
BCLA Clavier 71.60 318 P **P 12 27 04.3 +1.8**
SNF Seneffe 72.14 319 P **P 12 27 05.2 -0.5**
DOU Dourbes 72.16 318 P **P 12 27 08.1 +2.2**
comp=Z,3.8nm,1.9s,mb4.0
STKA Stephens Creek 72.40 147 *e*P **P 12 27 06.6 -0.8**
comp=Z,3.5nm,0.5s,mb4.5
STKA Stephens Creek 72.40 147 P **P 12 27 06.9 -0.5**
comp=Z,4.8nm,0.7s,mb4.5,baz=351,slow=6.1,SNR=9.1
STKA Stephens Creek 72.40 147 *e*P **P 12 27 06.6 -0.7**
comp=Z,0.8nm,0.6s,mb3.8
LPG La Plagne 73.05 313 *e*P **P 12 27 10.5 -0.8**
comp=Z,24nm,0.7s,mb4.9
LPG La Plagne 73.05 313 *e*P **P 12 27 10.5 -0.8**
LPG pmax pmax
comp=Z,12nm,0.7s,mb4.9
LPG La Plagne 73.05 313 *e*P **P 12 27 10.5 -0.8**
comp=Z,12nm,0.7s,mb4.9
BNI Bardonecchia 73.31 313 *e*P **P 12 27 14.0 +1.2**
BNI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BNI Bardonecchia 73.31 313 *e*P **P 12 27 14.0 +1.2**
comp=Z,6.8nm,0.8s,mb4.6
CMSA Cobar Meteorol 74.07 144 *e*P **P 12 27 17.6 +0.3**
SMF Signal de Mont 74.27 315 *e*P **P 12 27 16.7 -1.7**
comp=Z,21nm,1.0s,mb4.7
SMF Signal de Mont 74.27 315 *e*P **P 12 27 16.7 -1.7**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.7
SMF Signal de Mont 74.27 315 *e*P **P 12 27 16.7 -1.7**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 75.42 316 *e*P **P 12 27 23.6 -1.5**
comp=Z,30nm,1.4s,mb4.7
TCF Toulx Ste Croi 75.42 316 *e*P **P 12 27 23.6 -1.5**
TCF pmax pmax
comp=Z,15nm,1.4s,mb4.7
TCF Toulx Ste Croi 75.42 316 *e*P **P 12 27 23.6 -1.5**
comp=Z,15nm,1.4s,mb4.7
KEST Kesra 76.00 303 P **P 12 27 27.6 -1.0**
comp=Z,1.5nm,0.8s,mb4.0,baz=97,slow=4.7,SNR=4.2
CAF Calviac 76.21 314 *e*P **P 12 27 28.5 -1.1**
comp=Z,15nm,1.1s,mb4.5
CAF Calviac 76.21 314 *e*P **P 12 27 28.5 -1.1**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CAF Calviac 76.21 314 *e*P **P 12 27 28.5 -1.1**
comp=Z,7.4nm,1.1s,mb4.5
YKA Yellowknife Ar 80.88 17 P **P 12 27 54.4 -0.6**
comp=Z,3.5nm,0.6s,mb4.5,baz=328,slow=5.1,SNR=21
YKA Yellowknife Ar 80.88 17 P **P 12 27 54.4 -0.6**
ESDC Sonseca Array 82.83 312 P **P 12 28 04.9 -0.8**
comp=Z,0.2nm,0.3s,mb3.6,baz=46,slow=5.1,SNR=2.4
EDM Edmonton 89.10 22 *e*P **P 12 28 36.6 +0.1**
ETW Entiat 91.23 29 *e*P **P 12 28 46.9 +0.3**
comp=Z,8.8nm,1.1s,mb5.0
SCHQ Schefferville 93.38 355 P **P 12 28 54.9 -1.4**
comp=Z,3.6nm,0.8s,mb4.9,baz=350,slow=3.6,SNR=6.1
YBMT Yellow Bay 93.44 25 *e*P **P 12 28 56.8 +0.1**
comp=Z,11nm,1.3s,mb5.1
JTMT Jette 93.44 25 *e*P **P 12 28 55.7 -1.0**
comp=Z,4.9nm,1.3s,mb4.8
SWMT Swartz Lake 93.74 25 *e*P **P 12 28 58.3 +0.1**
TORD Torodi Ar. Bea 93.80 288 P **P 12 28 57.3 -1.7**
comp=Z,0.8nm,0.8s,mb4.2,baz=54,slow=3.6,SNR=5.2
SLMT Seeley Lake 94.15 25 *e*P **P 12 28 59.6 -0.4**
comp=Z,7.5nm,1.1s,mb5.0
HRY Holter Researc 95.19 24 *e*P **P 12 29 03.6 -1.2**
comp=Z,5.6nm,1.1s,mb4.9
OTAV Otavalo 147.98 6 *e*PKPbc PKPbc 12 35 27.8 +0.4

ISCJB ***12*** *12:22:59.9±0.7, 31°.71N±0°.10×104°.4E±0°.2, h10km, mb3.8/7, Error ellipse: s-maj=19.9km s-min=13.6km az=163.3*
IDC ***12*** *12:23:00.6±1.0, 31°.74N×104°.32E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/27, mbtmp3.8/9, ML3.7/1, Error ellipse: s-maj=36.0km s-min=18.8km az=59.0*
ISC 12 12:23:02.1±0.7, 31°.73N±0°.10×104°.3E±0°.2, h10km, n9, σ0.64/9, mb3.8/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.08**	**201**	Pn	**Pn**	**12 26 21.3**	**-0.4**
0.1nm,0.3s,baz=24,slow=8.9,SNR=2.8							
KSRS	**Korea Array**	**20.23**	**67**	P	**P**	**12 27 37.0**	**-0.3**
3.5nm,1.1s,baz=263,slow=10,SNR=3.2							
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**12 28 03.3**	**+0.3**
1.1nm,0.8s,mb3.4,baz=112,slow=13,SNR=4.3							
ZALV	**Zalesovo Beam**	**26.24**	**333**	P	**P**	**12 28 36.4**	**-0.7**
2.3nm,0.3s,mb4.2,baz=138,slow=7.3,SNR=2.6							
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**12 28 43.6**	**+0.9**
0.7nm,0.7s,mb3.3,baz=129,slow=8.7,SNR=3.3							
ARCES	**ARCESS Array B**	**56.77**	**336**	P	**P**	**12 32 45.1**	**-0.7**
4.6nm,0.9s,mb4.5,baz=91,slow=6.3,SNR=2.9							
WRA	**Warramunga Arr**	**58.89**	**147**	P	**P**	**12 33 00.9**	**-0.4**
0.6nm,0.4s,mb4.0,baz=339,slow=7.9,SNR=8.8							
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**12 33 23.1**	**+1.1**
0.3nm,0.5s,mb3.6,baz=333,slow=6.5,SNR=4.7							
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**12 35 17.2**	**+0.4**
0.5nm,0.9s,mb3.5,baz=322,slow=3.8,SNR=4.3							

IDC ***12*** *12:23:23.5±0.6, 32°.45N×105°.23E, h0km, mb4.2/16, mb1 4.3/19, mb1mx4.2/30, mbtmp4.2/19, ML4.0/1, Error ellipse: s-maj=29.5km s-min=12.1km az=55.0*
NEIC ***12*** *12:23:25.3±0.3, 32°.46N×105°.23E, h10km, Error ellipse: s-maj=10.0km s-min=5.1km az=64.0*
MOS ***12*** *12:23:26.3±0.8, 32°.43N×105°.31E, h32km, mb4.7/9, Error ellipse: s-maj=14.2km s-min=8.0km az=105.3*
BJI ***12*** *12:23:26.3, 32°.47N×105°.32E, h11km, mB5.2/7, mb4.4/10, ML4.5/6, Ms4.5/12, Ms7 4.3/10*
ISC 12 12:23:27.2±1.2, 32°.51N±0°.03×105°.20E±0°.05, h19km±7km, n57, σ1.09/69, mb4.3/25, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.01**	**218**	Pg	**Pg**	**12 24 01.9**	**-4.0**
CD2				Sg	**Sg**	**12 24 33.0**	**+1.0**
CD2				smax			
comp=N,16μm,0.5s							
LZH	**Lanzhou**	**3.74**	**343**	Pn	**Pn**	**12 24 26.4**	**+2.5**
LZH				Pg	**Pg**	**12 24 36.6**	**-2.3**
LZH				Sn	**Sn**	**12 25 09.0**	**+1.6**
LZH				Sg	**Sg**	**12 25 22.6**	**-4.8**
LZH				smax			
comp=N,3μm,0.6s							
LZH				smax			
comp=E,6μm,0.6s							
LZH				LR	LR		
comp=N,5μm,5.1s							
LZH				LR	LR		
comp=Z,6μm,9.2s							
ENH	**Enshi**	**4.29**	**120**	*e*Pn	**Pn**	**12 24 31.2**	**-0.3**
GYA	**Guiyang**	**6.16**	**168**	Pg	**Pn**	**12 24 57.5**	**+0.3**
GYA				Sg	**Sn**	**12 26 02.6**	**-4.5**
GYA				smax			
comp=N,290nm,0.7s							
GYA				smax			
comp=E,560nm,0.9s							
KMI	**Kunming**	**7.67**	**197**	Pn	**Pn**	**12 25 23.7**	**+5.9**
KMI				Sn	**Sn**	**12 26 52.3**	**+8.1**
KMI				smax			
comp=N,52nm,1.4s							
KMI				smax			
comp=E,62nm,1.1s							
WHN	**Wuhan**	**8.05**	**102**	S	**Sn**	**12 26 46.9**	**-6.8**
WHN				LR	LR		
comp=N,4μm,7.0s							
WHN				LR	LR		
comp=E,3μm,6.2s							
GTA	**Gaotai**	**8.15**	**329**	*e*P	**Pn**	**12 25 25.3**	**+0.8**
GTA				S	**Sn**	**12 26 55.8**	**-0.3**
GTA				pmax	pmax		
comp=Z,7.0nm,1.3s							
GTA				pmax	pmax		
comp=Z,290nm,4.5s							
GTA				LR	LR		
comp=N,2μm,11.7s							
GTA				LR	LR		
comp=E,2μm,10.8s							
GTA				LR	LR		
comp=Z,4μm,11.4s							
BTO	**Baotou**	**8.96**	**24**	*e*P	**Pn**	**12 25 42.2**	**+6.6**
BTO				S	**Sn**	**12 27 29.2**	**+13**
HHC	**Hu-ho-hao-te**	**9.77**	**30**	*e*P	**Pn**	**12 25 47.6**	**+1.0**
HHC				pP		12 25 54.8	
HHC				sP		12 25 59.6	
HHC				S	**Sn**	**12 27 35.6**	**-0.1**
HHC				sS		12 27 46.5	
HHC				pmax	pmax		
comp=Z,37nm,1.1s							
HHC				pmax	pmax		
comp=Z,630nm,5.0s							
HHC				LR	LR		
comp=N,2μm,5.6s							
HHC				LR	LR		
comp=E,2μm,4.1s							
HHC				LR	LR		
comp=Z,2μm,7.4s							
NJ2	**Nanjing**	**11.57**	**89**	*e*P	**Pn**	**12 26 13.9**	**+2.6**
NJ2				pP		12 26 21.0	
NJ2				PP		12 26 23.8	
NJ2				sP		12 26 25.7	
NJ2				S	**Sn**	**12 28 20.8**	**+0.8**
NJ2				sS		12 28 30.6	
NJ2				pmax	pmax		
comp=Z,20nm,1.3s							
NJ2				pmax	pmax		
comp=Z,210nm,3.8s							
NJ2				LR	LR		
comp=N,940nm,11.5s							
NJ2				LR	LR		
comp=E,1μm,8.3s							
NJ2				LR	LR		
comp=Z,710nm,10.9s							
QIZ	**Qiongzhong**	**14.05**	**162**	P	**Pn**	**12 26 47.5**	**+2.2**
QIZ				S	**Sn**	**12 29 23.5**	**+2.7**
QIZ				LR	LR		
comp=N,1μm,9.3s							
QIZ				LR	LR		
comp=Z,1μm,10.3s							
CHTO	**Chiang Mai**	**14.75**	**204**	*e*P	**Pn**	**12 26 55.5**	**+0.7**
CHTO				pmax	pmax		
comp=Z,12nm,1.2s							

CHTO	Chiang Mai	14.75	204	eP		Pn	12 26 55.5 +0.7
	comp=Z,12nm,1.2s						
CMAR	Chiang Mai Arr	15.08	203	Pn		Pn	12 26 57.3 -2.0
	comp=Z,0.2nm,0.3s,baz=13,slow=11,SNR=7.2						
SONM	Songino Array	15.34	3	Pn		Pn	12 27 03.5 +1.1
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=2.7						
KSRS	Korea Array	19.25	69	P		Pn	12 27 49.5 -2.0
	comp=Z,0.4nm,0.3s,baz=251,slow=11,SNR=10						
MDJ	Mudanjiang	22.49	50	P		P	12 28 31.2 +5.8
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,110nm,5.0s						
MK31	Makanchi Array	22.58	316	eP		P	12 28 27.2 +1.0
MKAR	Makanchi Array	22.58	316	P		P	12 28 27.0 +0.7
	comp=Z,2.7nm,0.6s,mb3.8,baz=119,slow=8.9,SNR=11						
ZALV	Zalesovo Beam	25.90	332	P		P	12 28 58.0 +0.3
	comp=Z,2.5nm,0.3s,mb4.2,baz=141,slow=9.3,SNR=2.7						
KLR	Kul'dur	25.93	42	eP		P	12 28 55.8 -2.2
BOD	Bodaibo	26.02	11	eP		P	12 28 59.0 +0.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
AAK	Ala-Archa	26.23	301	eP		P	12 29 01.9 +1.1
KURK	Kurchatov	26.72	321	P		P	12 29 04.9 -0.3
	comp=Z,3.1nm,0.8s,mb3.9,baz=130,slow=8.7,SNR=7.6						
KURK				PcP	PcP		12 32 27.4 -0.8
	comp=Z,0.5nm,0.6s,baz=112,slow=2.6,SNR=3.6						
NRGR	Nerungri	27.67	23	eP		P	12 29 22.9 +9.3
BVAR	Borovoye Array	32.30	320	P		P	12 29 55.1 +0.5
	comp=Z,0.8nm,0.5s,mb3.8,baz=120,slow=8.5,SNR=3.7						
BVAR				PcP	PcP		12 32 41.7 -0.6
	comp=Z,1.0nm,0.6s,baz=132,slow=4.2,SNR=5.0						
AKTK	Aktyubinsk	38.88	312	P		P	12 30 50.6 -0.6
AKTO	Aktyubinsk	38.88	312	P		P	12 30 50.6 -0.6
	comp=Z,2.1nm,0.6s,mb4.1,baz=124,slow=7.1,SNR=6.1						
ARU	Arti	39.91	321	c iP		P	12 31 00.3 +0.6
ARU				S		S	12 37 01.2 -2.4
ARU				SS		SS	12 39 52.2 -7.9
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
TIXI	Tiksi	41.20	11	eP		P	12 31 10.6 +0.4
TIXI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.4						
BILL	Bilibino	49.51	26	eP		P	12 32 17.0 +0.9
BILL				e			12 33 39.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
OBN	Obninsk	52.07	317	eP		P	12 32 35.9 +0.3
OBN				e			12 33 46.9
OBN				eSS		SS	12 43 32.6 -2.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	53.99	156	P		P	12 32 49.2 -0.9
	comp=Z,4.8nm,1.1s,mb4.4,baz=346,slow=9.3,SNR=9.8						
ARCES	ARCESS Array B	56.37	335	P		P	12 33 06.6 0.0
	comp=Z,3.6nm,0.7s,mb4.5,baz=76,slow=7.7,SNR=9.7						
BRTR	Keskin Array B	56.87	299	P		P	12 33 10.2 -0.4
	comp=Z,1.3nm,0.8s,mb4.0,baz=101,slow=7.5,SNR=7.7						
BRTR	Keskin Array B	56.87	299	ceP		P	12 33 11.1 +0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	56.93	326	P		P	12 33 10.5 -0.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=93,slow=7.1,SNR=4.4						
AKASG	Malin Array Be	57.11	313	P		P	12 33 11.7 -0.5
	comp=Z,2.1nm,0.4s,mb4.6,baz=70,slow=6.3,SNR=8.7						
AKASG	Malin Array Be	57.11	313	ceP		P	12 33 12.1 -0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
WRAB	Tennant Creek	59.14	148	eP		P	12 33 25.5 -1.2
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
WRAB	Tennant Creek	59.14	148	eP		P	12 33 25.5 -1.1
	comp=Z,9.6nm,0.7s,mb4.9						
WRA	Warramunga Arr	59.14	148	P		P	12 33 25.5 -1.2
	comp=Z,8.1nm,0.7s,mb4.9,baz=340,slow=7.5,SNR=27						
WB2	Warramunga Arr	59.14	148	eP		P	12 33 25.7 -1.0
ASAR	Alice Springs	62.22	150	P		P	12 33 46.9 -0.7
	comp=Z,4.4nm,0.6s,mb4.7,baz=332,slow=6.1,SNR=28						
NOA	NORSAR Array B	63.98	327	P		P	12 33 58.1 -0.8
	comp=Z,1.9nm,1.0s,mb4.1,baz=68,slow=6.4,SNR=3.0						
GERES	GERESS Array B	67.24	314	P		P	12 34 19.9 -0.2
	comp=Z,1.0nm,0.7s,mb4.0,baz=76,slow=5.9,SNR=7.4						
CDF	Champ du Feu	71.26	316	eP		P	12 34 44.9 -0.2
STKA	Stephens Creek	72.69	148	P		P	12 34 53.0 -0.7
	comp=Z,2.6nm,0.8s,mb4.2,baz=352,slow=5.3,SNR=7.6						
STKA	Stephens Creek	72.69	148	P		P	12 34 53.0 -0.7
LPG	La Plagne	72.97	313	eP		P	12 34 56.0 +0.6
	comp=Z,19nm,0.8s,mb4.8						
LPG	La Plagne	72.97	313	eP		P	12 34 56.0 +0.6
LPG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
LPG	La Plagne	72.97	313	eP		P	12 34 56.0 +0.6
	comp=Z,9.6nm,0.8s,mb4.8						
SMF	Signal de Mont	74.16	315	eP		P	12 35 01.0 -1.3
	comp=Z,8.3nm,0.9s,mb4.4						
TCF	Toulx Ste Croi	75.31	316	eP		P	12 35 08.8 -0.2
CAF	Calviac	76.11	315	eP		P	12 35 13.9 +0.3
YKA	Yellowknife Ar	80.08	18	P		P	12 35 34.2 -1.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=328,slow=5.0,SNR=7.3						
YKA	Yellowknife Ar	80.08	18	P		P	12 35 34.2 -1.1

*BJI **12** 12:26:46.3, 32°.04N×104°.98E, $h17^{km}$, ML3.8/6*
*IDC **12** 12:26:51.1±1.0, 31°.79N×104°.76E, $h0^{km}$, mb3.6/5, mb1 3.8/7, mb1mx3.6/27, mbtmp3.6/7, ML3.9/2, Error ellipse: s-maj=36.1km s-min=20.9km az=58.0*
*NEIC **12** 12:26:52.5±0.6, 31°.77N×104°.78E, $h10^{km}$, Error ellipse: s-maj=20.7km s-min=11.0km az=71.0*
ISC 12 12:26:52.2±3.1, 31°.8N±0°.1×104°.9E±0°.2, $h8^{km}$±21^{km}, n9, σ0^{s}40/9, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.29	227	Pg	Pg	12 27 17.2	+0.2
CMAR	Chiang Mai Arr	14.32	203	Pn	Pn	12 30 14.6	-0.7
	0.3nm,0.3s,baz=7.4,slow=7.7,SNR=3.1						
KSRS	Korea Array	19.78	67	P	Pn	12 31 23.9	-0.3
	0.1nm,0.3s,baz=253,slow=9.6,SNR=4.7						
MKAR	Makanchi Array	22.89	317	P	P	12 31 56.2	+0.1
	0.6nm,0.6s,mb3.2,baz=114,slow=12,SNR=2.5						
KURK	Kurchatov	27.08	322	P	P	12 32 34.9	-0.2
	0.9nm,0.8s,mb3.4,baz=129,slow=8.8,SNR=4.0						
WRAB	Tennant Creek	58.70	147	P	P	12 36 50.4	0.0
WRA	Warramunga Arr	58.70	147	P	P	12 36 50.4	0.0
	1.1nm,0.6s,mb4.1,baz=338,slow=7.4,SNR=4.9						
ASAR	Alice Springs	61.76	150	P	P	12 37 12.2	+0.9
	0.4nm,0.6s,mb3.8,baz=334,slow=6.4,SNR=5.1						
YKA	Yellowknife Ar	80.84	17	P	P	12 39 06.3	+0.1
	0.2nm,0.6s,mb3.3,baz=328,slow=5.8,SNR=3.3						

*IDC **12** 12:26:53.5±1.3, 12°.97N×120°.98E, $h0^{km}$, mb3.8/3, mb1 4.1/3, mb1mx3.6/22, mbtmp3.8/3, Error ellipse: s-maj=42.2km s-min=11.7km az=84.0*
*ISCJB **12** 12:26:58.8±0.5, 13°.15N±0°.04×120°.87E±0°.06, $h61^{km}$±8^{km}, mb3.8/3, Error ellipse: s-maj=9.1km s-min=6.5km az=13.1*
*MAN **12** 12:26:58, 13°.19N×120°.81E, $h46^{km}$, mb4.5, ML3.3, MS3.2*
ISC 12 12:26:59.6±0.5, 13°.15N±0°.04×120°.86E±0°.06, $h52^{km}$±9^{km}, n18, σ1^{s}03/23, mb3.8/3, 3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.36	14	‖eP	Pn	12 27 09.4	-0.1
SJMP	San Jose	0.73	160	eP	Pn	12 27 15.0	+1.2
SJMP				eS	Sn	12 27 22.2	-1.9
LUBP	Lubang	0.83	314	eP	Pn	12 27 15.0	-0.2
TGY	Tagaytay City	0.95	4	Pg	Pn	12 27 16.2	-0.5
	2μm,0.3s,baz=164,slow=15,SNR=213						
TGY				Lg		12 27 29.4	
	1μm,0.3s,baz=126,slow=19,SNR=14						
TGY	Tagaytay City	0.95	4	‖eP	Pn	12 27 16.3	-0.4
BUSP	Coron	1.31	210	eP	Pn	12 27 21.9	+0.3
BUSP				eS	Sn	12 27 34.3	-3.8
OTRP	Odiongan	1.38	125	eP	Pn	12 27 22.8	+0.3
OTRP				eS	Sn	12 27 35.2	-4.3
GQP	Guinayangan	1.71	64	‖eP	Pn	12 27 27.1	+0.1
GQP				eS	Sn	12 27 46.8	-1.0
POLP	Polilio Island	1.88	34	eP	Pn	12 27 30.7	+1.3
POLP				eS	Sn	12 27 52.0	0.0
CUYO	Cuyo Island	2.29	176	eP	Pn	12 27 35.0	0.0
ENPP	El Nido	2.39	216	eP	Pn	12 27 36.7	+0.4
RCP	Roxas	2.42	130	eP	Pn	12 27 37.7	+0.9
SCZP	Santa Cruz	2.77	341	eP	Pn	12 27 39.9	-1.7
GUIM	Jordan	3.02	146	eP	Pn	12 27 46.4	+1.3
PVCP	Virac	3.23	82	eP	Pn	12 27 48.9	+1.0
CMAR	Chiang Mai Arr	21.73	287	P	P	12 31 48.2	+1.5
	1.2nm,0.7s,mb3.5,baz=85,slow=7.9,SNR=4.8						
WRA	Warramunga Arr	35.46	158	P	P	12 33 49.5	-1.7
	2.2nm,0.7s,mb4.2,baz=340,slow=7.6,SNR=5.2						
ASAR	Alice Springs	38.75	161	P	P	12 34 18.2	-0.9
	0.8nm,0.5s,mb3.8,baz=337,slow=6.9,SNR=5.1						

IDC 12 12:27:08.9±1.5, 31°.31N×103°.67E, $h0^{km}$, mb3.9/6, mb1 4.1/6, mb1mx3.7/24, mbtmp3.9/6, Error ellipse: s-maj=47.3km s-min=24.2km az=45.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.91	66	P	P	12 31 53.0	+0.1
	1.7nm,0.6s,baz=248,slow=9.4,SNR=4.9						
MKAR	Makanchi Array	22.58	319	P	P	12 32 12.3	+1.5
	0.8nm,0.7s,baz=122,slow=11,SNR=3.0						
ZALV	Zalesovo Beam	26.38	335	P	P	12 32 47.1	+0.4
	1.8nm,0.3s,baz=134,slow=8.3,SNR=3.0						
KURK	Kurchatov	26.86	323	P	P	12 32 50.2	-0.9
	1.9nm,0.7s,baz=130,slow=9.6,SNR=4.9						
WRA	Warramunga Arr	58.85	146	P	P	12 37 09.9	+0.4
	1.4nm,0.7s,baz=327,slow=8.9,SNR=5.0						
YKA	Yellowknife Ar	81.61	17	P	P	12 39 27.7	-0.6
	0.9nm,0.7s,baz=329,slow=5.2,SNR=8.4						

IDC 12 12:27:51.8±1.4, 31°.19N×103°.83E, $h0^{km}$, mb3.6/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=47.2km s-min=27.7km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.28	192	Pg	Pg	12 28 00.8	+3.6
CD2				Sg	Sg	12 28 05.7	+4.8
CD2				smax			
	comp=N,14μm,0.5s						
KSRS	Korea Array	20.83	66	P	P	12 32 34.2	-0.7
	comp=N,1.5nm,0.6s,baz=262,slow=10,SNR=4.8						
MKAR	Makanchi Array	22.76	319	P	P	12 32 55.6	+0.1
	comp=N,0.3nm,0.3s,baz=132,slow=12,SNR=5.7						
WRA	Warramunga Arr	58.67	146	P	P	12 37 51.2	+0.1
	comp=N,0.6nm,0.3s,baz=328,slow=9.0,SNR=9.4						
ASAR	Alice Springs	61.69	149	P	P	12 38 11.9	+0.2
	comp=N,0.3nm,0.5s,baz=325,slow=6.2,SNR=3.2						

*ISCJB **12** 12:29:54.9±0.3, 31°.37N±0°.04×104°.04E±0°.05, $h10^{km}$, mb4.3/24, Error ellipse: s-maj=6.6km s-min=5.4km az=3.0*
*IDC **12** 12:29:55.0±0.5, 31°.31N×103°.96E, $h0^{km}$, mb4.2/18, mb1 4.3/19, mb1mx4.2/27, mbtmp4.1/19, Error ellipse: s-maj=28.2km s-min=11.3km az=55.0*
*NEIC **12** 12:29:56.5±0.2, 31°.35N×104°.05E, $h10^{km}$, mb4.7/5, Error ellipse: s-maj=9.8km s-min=5.2km az=65.0*
*BJI **12** 12:29:57.7, 31°.40N×104°.07E, $h11^{km}$, mB5.0/2, mb4.8/8, ML4.2/9, Ms4.6/4, Ms7 4.4/2*
*MOS **12** 12:29:58.2±1.0, 31°.34N×104°.00E, $h34^{km}$, mb4.6/5, Error ellipse: s-maj=17.9km s-min=9.1km az=110.8*
ISC 12 12:29:57.0±0.3, 31°.40N±0°.03×103°.94E±0°.05, $h10^{km}$, n47, σ0^{s}85/49, mb4.3/24, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.51	198	Pg	Pg	12 30 07.1	+0.2
CD2				Sg	Sg	12 30 13.9	+0.3
CD2				smax			
	comp=N,19μm,0.6s						
GYA	Guiyang	5.47	153	Pg	Pg	12 31 42.6	+0.8
GYA				Sg	Sb	12 32 40.0	+1.7
GYA				smax			
	comp=N,680nm,1.0s						
GYA				smax			
	comp=E,520nm,1.1s						
WHN	Wuhan	8.98	93	P	Pn	12 32 13.4	+6.6
WHN				S	Sn	12 33 48.9	+0.9
WHN				LR	LR		
	comp=N,1μm,4.4s						
WHN				LR	LR		
	comp=E,2μm,4.4s						
HHC	Hu-ho-hao-te	11.26	31	eP	Pn	12 32 42.3	+4.3
HHC				PP		12 32 51.1	
HHC				S	Sn	12 34 51.1	+7.1
HHC				SS		12 35 03.7	
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				LR	LR		
	comp=N,560nm,5.8s						
HHC				LR	LR		
	comp=E,490nm,6.0s						
HHC				LR	LR		
	comp=Z,420nm,5.3s						
CMAR	Chiang Mai Arr	13.65	201	Pn	Pn	12 33 10.9	+0.1
	baz=15,slow=12,SNR=5.5						
ULN	Ulaanbaatar	16.62	7	P	Pn	12 33 49.9	-0.1
KSRS	Korea Array	20.66	66	P	P	12 34 36.7	-0.2
	comp=Z,7.3nm,0.8s,baz=262,slow=10,SNR=15						
KSRS	Korea Array	20.66	66	P	P	12 34 36.7	-0.2
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CN2	Changchun	21.00	48	eP	P	12 34 41.9	+1.4
CN2				pmax	pmax		
	comp=Z,70nm,0.6s						
MK31	Makanchi Array	22.67	319	eP	P	12 34 59.7	+1.3
MKAR	Makanchi Array	22.67	319	P	P	12 34 59.9	+1.5
	comp=Z,9.7nm,1.1s,mb4.2,baz=123,slow=10,SNR=14						
MDJ	Mudanjiang	24.02	49	eP	P	12 35 10.9	-1.1
	comp=Z,4.6nm,0.5s,mb4.2						
ZALV	Zalesovo Beam	26.40	334	P	P	12 35 34.2	+0.7
	comp=Z,3.5nm,0.3s,mb4.3,baz=133,slow=8.7,SNR=5.8						
KURK	Kurchatov	26.93	323	P	P	12 35 39.1	+0.8
	comp=Z,4.9nm,0.8s,mb4.1,baz=126,slow=9.3,SNR=16						
BVAR	Borovoye Array	32.48	322	P	P	12 36 28.8	+1.4
	comp=Z,1.3nm,0.7s,mb3.9,baz=120,slow=10,SNR=5.8						
BVAR				PcP	PcP	12 39 13.7	-0.6
	comp=Z,0.6nm,0.4s,baz=116,slow=3.4,SNR=4.7						
AKTO	Aktyubinsk	38.84	313	P	P	12 37 22.0	-0.1
	comp=Z,0.7nm,0.4s,mb3.7,baz=103,slow=15,SNR=3.0						
AKTO	Aktyubinsk	38.84	313	P	P	12 37 22.0	-0.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
KAPI	Kappang	39.22	155	P	P	12 37 23.7	-1.9
	comp=Z,8.8nm,0.8s,mb4.5,baz=326,slow=3.6,SNR=4.0						
BILL	Bilibino	50.97	25	eP	P	12 38 57.6	-0.8
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
FITZ	Fitzroy Crossi	53.44	154	P	P	12 39 16.0	-1.3
	comp=Z,4.1nm,0.8s,mb4.4,baz=74,slow=1.9,SNR=8.1						
BRTR	Keskin Array B	56.48	299	P	P	12 39 38.3	-0.9
	comp=Z,0.4nm,0.5s,mb3.7,baz=70,slow=7.3,SNR=3.9						
ARCES	ARCESS Array B	56.94	336	P	P	12 39 42.1	+0.1
	comp=Z,2.4nm,0.7s,mb4.3,baz=80,slow=7.3,SNR=10						
ARCES				PcP	PcP	12 40 36.8	-0.4
	comp=Z,2.6nm,0.7s,baz=95,slow=4.5,SNR=6.3						
AKASG	Malin Array Be	57.08	313	P	P	12 39 42.8	-0.6
	comp=Z,0.4nm,0.3s,mb3.9,baz=71,slow=7.4,SNR=4.5						
FINES	FINESS Array B	57.25	326	P	P	12 39 44.0	-0.3
	comp=Z,7.3nm,1.0s,mb4.7,baz=86,slow=6.0,SNR=4.6						
WRAB	Tennant Creek	58.79	146	eP	P	12 39 54.7	-0.9
WRAB				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.3						
WRAB	Tennant Creek	58.79	146	eP	P	12 39 54.6	-0.9
	comp=Z,17nm,0.5s,mb5.3						
WRA	Warramunga Arr	58.79	146	P	P	12 39 54.9	-0.6
	comp=Z,18nm,0.5s,mb5.3,baz=339,slow=7.9,SNR=88						
WB2	Warramunga Arr	58.80	146	eP	P	12 39 54.9	-0.8
ASAR	Alice Springs	61.81	149	P	P	12 40 15.8	-0.4
	comp=Z,1.7nm,0.5s,mb4.5,baz=343,slow=6.7,SNR=24						
NB2	NORSAR Subarra	64.34	327	P	P	12 40 31.7	-0.9
	comp=Z,1.2nm,0.6s,mb4.1,baz=70,slow=6.9						
NOA	NORSAR Array B	64.34	327	P	P	12 40 32.1	-0.4
	comp=Z,1.2nm,0.5s,mb4.2,baz=74,slow=5.4,SNR=4.2						
GERES	GERESS Array B	67.24	314	P	P	12 40 52.1	+0.6
	comp=Z,0.4nm,0.5s,mb3.7,baz=54,slow=5.0,SNR=2.6						
COLA	College	69.23	26	eP	P	12 41 03.7	0.0
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
COLA	College	69.23	26	eP	P	12 41 03.7	0.0
	comp=Z,6.7nm,0.9s,mb4.6						
STKA	Stephens Creek	72.33	147	P	P	12 41 22.2	-0.7
	comp=Z,1.8nm,0.6s,mb4.2,baz=323,slow=6.0,SNR=6.4						
LPG	La Plagne	72.95	313	eP	P	12 41 27.2	+0.6
	comp=Z,7.3nm,0.6s,mb4.5						
LPG	La Plagne	72.95	313	eP	P	12 41 27.2	+0.6
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LPG	La Plagne	72.95	313	eP	P	12 41 27.2	+0.6
	comp=Z,3.7nm,0.6s,mb4.5						
LPL	La Plagne	72.95	313	eP	P	12 41 27.1	+0.5
	comp=Z,5.7nm,0.5s,mb4.5						
LPL	La Plagne	72.95	313	eP	P	12 41 27.1	+0.5
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LPL	La Plagne	72.95	313	eP	P	12 41 27.1	+0.5
	comp=Z,2.8nm,0.5s,mb4.5						
SMF	Signal de Mont	74.19	315	eP	P	12 41 33.5	-0.4
TCF	Toulx Ste Croi	75.35	315	eP	P	12 41 39.8	-0.8
YKA	Yellowknife Ar	81.46	17	P	P	12 42 13.9	-0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=330,slow=5.3,SNR=19						
TORD	Torodi Ar. Bea	93.41	288	P	P	12 43 12.7	-0.5
	comp=Z,0.4nm,0.8s,mb3.9,baz=75,slow=5.1,SNR=2.9						
TXAR	Lajitas Array	114.14	26	PKP	PKiKP	12 48 36.4	-0.7
	comp=Z,0.2nm,0.5s,baz=107,slow=0.9,SNR=4.8						
CPUP	Villa Florida	162.84	282	PKP	PKPdf	12 49 58.6	-1.2
	comp=Z,0.4nm,0.3s,baz=90,slow=7.1,SNR=1.9						

*ISCJB **12** 12:33:04.4±0.4, 31°.28N±0°.04×103°.73E±0°.08, $h10^{km}$, mb4.0/14, Error ellipse: s-maj=10.1km s-min=6.3km az=3.7*
*IDC **12** 12:33:04.3±0.6, 31°.41N×103°.96E, $h0^{km}$, mb4.0/14, mb1 4.1/16, mb1mx3.9/29, mbtmp4.0/16, ML4.0/2, Error ellipse: s-maj=29.9km s-min=12.5km az=58.0*
*NEIC **12** 12:33:05.9±0.4, 31°.40N×103°.92E, $h10^{km}$, Error ellipse: s-maj=12.1km s-min=6.9km az=71.0*
*BJI **12** 12:33:07.5, 31°.37N×103°.61E, $h9^{km}$, mB5.0/1, mb4.2/5, ML4.4/10, Ms4.4/2, Ms7 4.2/2*
ISC 12 12:33:06.3±0.4, 31°.24N±0°.04×103°.49E±0°.07, $h10^{km}$, n29, σ1^{s}41/33, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.40	145	Pg	Pg	12 33 15.0	+0.7
CD2				Sg	Sg	12 33 20.8	+1.2
CD2				smax			
	comp=N,31μm,0.7s						
LZH	Lanzhou	4.84	3	ePg	Pg	12 34 41.9	+2.9
LZH				Sg	Sg	12 35 50.8	+9.1
LZH				smax			
	comp=N,300nm,1.2s						
LZH				smax			
	comp=E,270nm,0.8s						
LZH				LR	LR		
	comp=E,4μm,7.6s						
LZH				LR	LR		
	comp=Z,5μm,10.0s						
GYA	Guiyang	5.52	149	Pg	Pg	12 34 48.5	-3.6
GYA				smax			
	comp=N,430nm,1.1s						
GYA				smax			
	comp=E,410nm,1.1s						
WHN	Wuhan	9.36	91	P	Px	12 35 37.8	
WHN				S	Sn	12 37 10.2	+3.6
WHN				LR	LR		
	comp=N,4μm,8.3s						
WHN				LR	LR		
	comp=E,3μm,6.4s						
LSA	Lhasa	10.76	265	eP	Pn	12 35 44.7	+4.2
HHC	Hu-ho-hao-te	11.59	32	eP	Pn	12 35 53.2	+1.4
HHC				PP		12 36 01.8	
HHC				S	Sn	12 38 01.1	-0.2
HHC				SS		12 38 13.8	
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				LR	LR		
	comp=N,720nm,5.2s						
HHC				LR	LR		
	comp=E,580nm,6.4s						
HHC				LR	LR		
	comp=Z,750nm,5.8s						
SHL	Shillong	11.68	244	eP	Pn	12 35 51.0	-2.0
CHTO	Chiang Mai	13.04	199	Pn	Pn	12 36 16.1	+4.4
CHTO				ePn	Pn	12 36 16.6	+4.9
CMAR	Chiang Mai Arr	13.38	199	Pn	Pn	12 36 18.9	+2.5
	comp=Z,0.3nm,0.3s,baz=11,slow=11,SNR=3.7						
SONM	Songino Array	16.72	7	Pn	Pn	12 36 58.4	-2.2
	comp=Z,0.4nm,0.3s,baz=192,slow=14,SNR=3.8						
KSRS	Korea Array	21.07	66	P	P	12 37 45.8	-4.9
	comp=Z,1.3nm,0.5s,mb3.5,baz=258,slow=11,SNR=3.2						
CN2	Changchun	21.38	48	eP	P	12 37 49.2	-4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	Makanchi Array	22.53	320	eP	P	12 38 07.3	+1.0
MKAR	Makanchi Array	22.53	320	P	P	12 38 06.9	+0.7
	comp=Z,1.8nm,0.7s,mb3.6,baz=125,slow=10,SNR=5.3						
AAK	Ala-Archa	25.69	304	P	P	12 38 39.7	+3.2
	comp=Z,1.3nm,0.5s,mb3.8,baz=117,slow=6.8,SNR=3.3						
ZALV	Zalesovo Beam	26.37	335	P	P	12 38 42.1	-0.4
	comp=Z,3.1nm,0.3s,mb4.3,baz=124,slow=7.9,SNR=4.5						
KURK	Kurchatov	26.82	324	P	P	12 38 46.5	-0.2
	comp=Z,2.9nm,0.8s,mb3.9,baz=130,slow=9.1,SNR=8.6						
KURK	Kurchatov	26.82	324	P	P	12 38 46.5	-0.2
BVAR	Borovoye Array	32.36	322	P	P	12 39 37.1	+1.4
	comp=Z,0.7nm,0.5s,mb3.7,baz=123,slow=5.3,SNR=3.3						
KAP

ellipse: s-maj=17.7km s-min=9.6km az=82.0
MOS ***12*** *12:34:51.5±1.4,32°.01N×104°.49E, h33km, mb4.8/4, Error ellipse: s-maj=18.2km s-min=10.1km az=106.9*
BJI ***12*** *12:34:51.5,32°.16N×104°.77E, h18km, mb4.3/1, ML4.2/3*
ISC 12 12:34:49.4±1.3,32°.02N±0°.04×104°.6E±0°.1, h6km±8km, n40, σ1°11/42, mb4.2/20, 7C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.30**	**212**	Pg	**Pg**	**12 35 14.0**	**-0.4**
CD2				smax			
	comp=N,8μm,0.6s						
LZH	**Lanzhou**	**4.10**	**352**	Pg	**Pg**	**12 36 09.5**	**+1.5**
LZH				Sn	**Sn**	**12 36 44.0**	**+3.1**
LZH				Sg	**Sg**	**12 36 59.7**	**-1.5**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,1μm,0.6s						
LZH				LR	LR		
	comp=N,2μm,7.2s						
LZH				LR	LR		
	comp=Z,4μm,8.9s						
CHTO	**Chiang Mai**	**14.09**	**202**	P	**Pn**	**12 38 14.2**	**+4.6**
CMAR	**Chiang Mai Arr**	**14.43**	**202**	Pn	**Pn**	**12 38 15.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=9.2,slow=12,SNR=3.5						
SONM	**Songino Array**	**15.86**	**5**	Pn	**Pn**	**12 38 34.3**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=190,slow=15,SNR=2.4						
KSRS	**Korea Array**	**19.93**	**68**	P	**Pn**	**12 39 23.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=251,slow=10,SNR=3.2						
HIA	**Hailar**	**20.66**	**29**	P	**P**	**12 39 34.4**	**+4.8**
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**12 39 51.2**	**+1.1**
	comp=Z,2.9nm,0.9s,mb3.7,baz=132,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**12 40 22.9**	**-0.6**
	comp=Z,2.2nm,0.4s,mb4.1,baz=135,slow=9.5,SNR=3.6						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**12 40 27.8**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.4,baz=127,slow=10,SNR=2.0						
NRGR	**Nerungri**	**28.33**	**24**	*e*P	**P**	**12 40 46.8**	**+3.1**
FITZ	**Fitzroy Crossi**	**53.77**	**155**	P	**P**	**12 44 11.8**	**-0.9**
	comp=Z,2.7nm,0.9s,mb4.2,baz=333,slow=8.5,SNR=4.7						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**12 44 32.3**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.4,baz=78,slow=7.8,SNR=6.2						
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**12 44 32.4**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.9,baz=83,slow=6.0,SNR=3.4						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**12 44 33.9**	**-1.8**
	comp=Z,1.0nm,0.5s,mb4.1,baz=101,slow=7.2,SNR=2.0						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**12 44 35.7**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.2,baz=70,slow=7.2,SNR=4.1						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**12 44 35.7**	**-0.3**
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**12 44 49.8**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.5,baz=339,slow=7.5,SNR=5.5						
ASAR	**Alice Springs**	**62.07**	**149**	P	**P**	**12 45 11.0**	**+0.1**
	comp=Z,3.3nm,1.0s,mb4.4,baz=328,slow=6.4,SNR=8.1						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**12 45 22.6**	**-1.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=70,slow=6.2,SNR=2.9						
NWAO	**Narrogin (SRO)**	**65.69**	**168**	P	**P**	**12 45 34.7**	**+0.1**
	comp=Z,15nm,1.0s,mb5.0,baz=354,slow=9.2,SNR=5.5						
NWAO	**Narrogin (SRO)**	**65.69**	**168**	P	**P**	**12 45 34.7**	**+0.1**
GERES	**GERESS Array B**	**67.19**	**314**	P	**P**	**12 45 43.5**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.9,baz=85,slow=4.4,SNR=4.4						
KMBO	**Kilima Mbogo**	**71.50**	**257**	P	**P**	**12 46 12.3**	**+0.9**
	comp=Z,1.1nm,0.6s,mb4.0,baz=38,slow=19,SNR=3.4						
STKA	**Stephens Creek**	**72.56**	**148**	P	**P**	**12 46 16.9**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=333,slow=9.3,SNR=2.5						
STKA	**Stephens Creek**	**72.56**	**148**	P	**P**	**12 46 16.9**	**-0.3**
LPG	**La Plagne**	**72.91**	**313**	⇑*i*P	**P**	**12 46 20.3**	**+0.9**
	comp=Z,17nm,0.8s,mb4.7						
LPG	**La Plagne**	**72.91**	**313**	⇑*i*P	**P**	**12 46 20.3**	**+0.9**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LPG	**La Plagne**	**72.91**	**313**	⇑*i*P	**P**	**12 46 20.3**	**+0.9**
	comp=Z,8.7nm,0.8s,mb4.7						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**12 46 20.2**	**+0.8**
	comp=Z,10.0nm,0.5s,mb4.7						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**12 46 20.2**	**+0.8**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
LPL	**La Plagne**	**72.92**	**313**	⇑*i*P	**P**	**12 46 20.2**	**+0.8**
	comp=Z,5.0nm,0.5s,mb4.7						
MBDF	**Montbardon**	**73.27**	**312**	*e*P	**P**	**12 46 23.9**	**+2.4**
	comp=Z,5.8nm,0.7s,mb4.3						
MBDF	**Montbardon**	**73.27**	**312**	*e*P	**P**	**12 46 23.9**	**+2.4**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MBDF	**Montbardon**	**73.27**	**312**	*e*P	**P**	**12 46 23.9**	**+2.4**
	comp=Z,2.9nm,0.7s,mb4.3						
SMF	**Signal de Mont**	**74.13**	**315**	⇑*i*P	**P**	**12 46 26.3**	**-0.2**
AVF	**Avril sur Loir**	**74.35**	**316**	*e*P	**P**	**12 46 27.7**	**-0.1**
	comp=Z,7.6nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	**74.35**	**316**	*e*P	**P**	**12 46 27.7**	**-0.1**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	**74.35**	**316**	*e*P	**P**	**12 46 27.7**	**-0.1**
	comp=Z,3.8nm,0.9s,mb4.3						
YKA	**Yellowknife Ar**	**80.70**	**17**	P	**P**	**12 47 02.9**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=327,slow=4.9,SNR=7.3						

ISCJB ***12*** *12:37:40.2±0.7,30°.7N±0°.1×103°.15E±0°.06, h10km, mb3.8/12, Error ellipse: s-maj=14.8km s-min=7.8km az=176.8*
IDC ***12*** *12:37:40.8±0.9,30°.87N×103°.32E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.8/25, mbtmp3.9/12, MS4.8/1, Ms1 4.8/1, ms1mx3.2/32, Error ellipse: s-maj=38.5km s-min=16.9km az=56.0*
NEIC ***12*** *12:37:42.5±0.6,30°.96N×103°.52E, h10km, Error ellipse: s-maj=22.2km s-min=9.0km az=224.0*
ISC 12 12:37:42.3±0.7,30°.8N±0°.1×103°.20E±0°.06, h10km, n15, σ0°85/15, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.49**	**76**	Pg	**Pg**	**12 37 53.0**	**+1.1**
CD2				Sg	**Sg**	**12 37 58.6**	**+0.2**
CD2				smax			
	comp=N,8μm,0.7s						
ENH	**Enshi**	**5.45**	**94**	Pn	**Pn**	**12 38 60.0**	**-3.6**
KSRS	**Korea Array**	**21.48**	**65**	P	**P**	**12 42 30.1**	**-1.0**
	comp=N,2.5nm,0.7s,mb3.6,baz=248,slow=9.0,SNR=4.7						
MKAR	**Makanchi Array**	**22.72**	**321**	P	**P**	**12 42 45.6**	**+1.4**
	comp=N,0.5nm,0.7s,mb3.1,baz=129,slow=11,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.67**	**335**	P	**P**	**12 43 20.7**	**-0.5**
	comp=N,2.2nm,0.3s,mb4.2,baz=131,slow=15,SNR=1.6						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**12 43 25.4**	**+0.9**
	comp=N,0.6nm,0.6s,mb3.3,baz=130,slow=9.6,SNR=4.3						
CBIJ	**Chichi jima**	**34.20**	**86**	LR	LR	12 57 48.7	
	comp=N,1μm,20.1s,baz=125,slow=35						
ARCES	**ARCESS Array B**	**57.23**	**336**	P	**P**	**12 47 29.3**	**0.0**
	comp=N,1.1nm,0.7s,mb4.0,baz=87,slow=7.3,SNR=2.4						
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**12 47 30.9**	**+0.4**
	comp=N,1.2nm,0.7s,mb4.0,baz=94,slow=8.9,SNR=2.6						
WRA	**Warramunga Arr**	**58.65**	**145**	P	**P**	**12 47 40.0**	**+0.1**
	comp=N,1.3nm,0.8s,mb4.0,baz=327,slow=9.0,SNR=6.5						
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**12 48 00.9**	**+0.7**
	comp=N,0.4nm,0.4s,mb3.9,baz=331,slow=6.9,SNR=4.6						
NOA	**NORSAR Array B**	**64.50**	**327**	P	**P**	**12 48 17.5**	**-1.4**
	comp=N,1.0nm,0.6s,mb4.0,baz=72,slow=6.1,SNR=3.5						
STKA	**Stephens Creek**	**72.17**	**146**	P	**P**	**12 49 07.2**	**0.0**
	comp=N,0.4nm,0.5s,mb3.6,baz=298,slow=4.3,SNR=3.7						
INK	**Inuvik**	**72.70**	**19**	P	**P**	**12 49 09.5**	**-0.5**
	comp=N,0.8nm,0.6s,mb3.8,baz=338,slow=5.9,SNR=5.0						
YKA	**Yellowknife Ar**	**82.21**	**17**	P	**P**	**12 50 02.6**	**-0.7**
	comp=N,0.8nm,0.6s,mb3.8,baz=330,slow=5.2,SNR=8.1						

IDC 12 12:38:37.4±0.9,31°.76N×104°.20E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, Error ellipse: s-maj=38.0km s-min=20.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.32**	**67**	P	P	12 43 15.2	+0.2
	1.9nm,0.8s,baz=258,slow=10.0,SNR=3.4						
FITZ	**Fitzroy Crossi**	**53.67**	**154**	P	P	12 48 00.8	-0.1
	2.1nm,0.8s,baz=320,slow=7.9,SNR=3.1						
BRTR	**Keskin Array B**	**56.49**	**299**	P	P	12 48 22.8	+1.5
	0.5nm,0.5s,baz=80,slow=8.9,SNR=3.5						
FINES	**FINESS Array B**	**57.07**	**326**	P	P	12 48 23.9	-1.1
	3.1nm,0.9s,baz=93,slow=8.4,SNR=2.6						
WRA	**Warramunga Arr**	**58.97**	**147**	P	P	12 48 38.8	0.0
	1.9nm,0.6s,baz=338,slow=7.3,SNR=7.4						
ASAR	**Alice Springs**	**62.01**	**149**	P	P	12 48 59.7	+0.2
	0.9nm,0.6s,baz=331,slow=6.4,SNR=7.3						
STKA	**Stephens Creek**	**72.51**	**147**	P	P	12 50 05.7	-0.3
	0.4nm,0.4s,baz=294,slow=10,SNR=3.0						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	P	12 50 54.1	+0.2

0.3nm,0.6s,baz=324,slow=4.6,SNR=4.5

ISCJB ***12*** *12:38:51.7±0.4,31°.47N±0°.03×104°.26E±0°.07, h10km, mb4.2/23, Error ellipse: s-maj=8.6km s-min=4.6km az=8.2*
IDC ***12*** *12:38:51.9±0.6,31°.45N×104°.18E, h0km, mb4.2/18, mb1 4.3/20, mb1mx4.2/30, mbtmp4.2/20, ML4.0/2, Error ellipse: s-maj=23.6km s-min=13.0km az=58.0*
NEIC ***12*** *12:38:53.7±0.3,31°.42N×104°.08E, h10km, mb4.5/4, Error ellipse: s-maj=10.3km s-min=5.7km az=57.0*
MOS ***12*** *12:38:54.5±0.6,31°.47N×104°.24E, h29km, mb4.3/5, Error ellipse: s-maj=18.7km s-min=8.6km az=111.6*
BJI ***12*** *12:38:55.1,31°.64N×104°.26E, h20km, mB5.0/3, mb4.5/11, ML4.2/6, Ms4.2/3, Ms7 4.4/1*
ISC 12 12:38:53.9±0.3,31°.45N±0°.03×104°.18E±0°.07, h10km, n48, σ0°98/51, mb4.2/23, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.65**	**214**	Pg	**Pg**	**12 39 09.2**	**+2.8**
CD2				Sg	**Sg**	**12 39 15.8**	**+0.9**
CD2				smax			
	comp=N,16μm,0.8s						
LZH	**Lanzhou**	**4.64**	**357**	*e*Pn	**Pn**	**12 40 05.4**	**+1.5**
LZH				Sn	**Sn**	**12 40 55.9**	**-1.9**
LZH				smax			
	comp=N,590nm,0.7s						
LZH				smax			
	comp=E,460nm,0.5s						
LZH	**Lanzhou**	**4.64**	**357**	*e*Pg	**Pg**	**12 40 33.8**	**+11**
LZH				Sg	**Sg**	**12 41 23.7**	**+1.0**
LZH				smax			
	comp=N,680nm,1.0s						
LZH				smax			
	comp=E,290nm,0.8s						
ENH	**Enshi**	**4.71**	**103**	*e*Pn	**Pn**	**12 40 07.5**	**+2.5**
CM31	**Chiang Mai Arr**	**13.77**	**201**	Pn	**Pn**	**12 42 07.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**13.77**	**201**	Pn	**Pn**	**12 42 07.4**	**-1.9**
	comp=E,0.2nm,0.3s,baz=8.4,slow=9.1,SNR=8.7						
SONM	**Songino Array**	**16.45**	**5**	Pn	**Pn**	**12 42 44.5**	**-0.3**
	comp=E,0.4nm,0.3s,baz=203,slow=14,SNR=4.1						
ZAK	**Zakamensk**	**18.93**	**358**	*e*P	**Pn**	**12 43 16.1**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MOY	**Mondy**	**20.34**	**354**	*e*P	**P**	**12 43 31.3**	**+1.2**
KSRS	**Korea Array**	**20.45**	**66**	P	**P**	**12 43 30.6**	**-0.9**
	comp=Z,5.2nm,0.7s,baz=257,slow=10,SNR=9.4						
KSRS	**Korea Array**	**20.45**	**66**	P	**P**	**12 43 30.6**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CN2	**Changchun**	**20.81**	**48**	*e*P	**P**	**12 43 36.3**	**+1.0**
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**	**12 43 56.3**	**+0.1**
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**12 43 56.5**	**+0.2**
	comp=Z,19nm,1.1s,mb4.4,baz=121,slow=12,SNR=20						
TKM2	**Tokmak 2**	**25.37**	**305**	*e*P	**P**	**12 44 22.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TKM2	**Tokmak 2**	**25.37**	**305**	*e*P	**P**	**12 44 22.1**	**+1.0**
	comp=Z,3.3nm,0.8s,mb3.9						
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**12 44 30.6**	**-0.1**
	comp=Z,5.0nm,0.3s,mb4.5,baz=126,slow=9.3,SNR=6.3						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**12 44 36.1**	**+0.2**
	comp=Z,5.1nm,0.7s,mb4.2,baz=128,slow=8.8,SNR=14						
BVAR	**Borovoye Array**	**32.57**	**321**	P	**P**	**12 45 25.1**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=116,slow=10,SNR=6.5						
ARU	**Arti**	**40.20**	**322**	P	**P**	**12 46 30.2**	**0.0**
BILL	**Bilibino**	**50.84**	**25**	*e*P	**P**	**12 47 53.7**	**-0.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
OBN	**Obninsk**	**52.27**	**318**	*e*P	**P**	**12 48 08.4**	**+3.3**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.40**	**154**	P	**P**	**12 48 11.9**	**-1.9**
	comp=Z,1.1nm,0.6s,mb4.0,baz=330,slow=7.1,SNR=5.1						
ARCES	**ARCESS Array B**	**56.98**	**336**	P	**P**	**12 48 38.4**	**-0.6**
	comp=Z,2.8nm,0.9s,mb4.3,baz=64,slow=5.5,SNR=5.3						
ARCES				PcP	PcP	12 49 33.9	-0.3
	comp=Z,1.9nm,0.7s,baz=73,slow=4.1,SNR=4.5						
AKASG	**Malin Array Be**	**57.20**	**313**	P	**P**	**12 48 39.8**	**-1.1**
	comp=Z,0.6nm,0.4s,mb4.0,baz=68,slow=7.7,SNR=2.5						
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**12 48 41.1**	**-0.5**
	comp=Z,3.2nm,0.6s,mb4.5,baz=101,slow=9.9,SNR=5.5						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**12 48 52.1**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**12 48 52.1**	**+0.2**
	comp=Z,7.6nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**12 48 52.7**	**+0.8**
	comp=Z,2.4nm,0.5s,mb4.5,baz=315,slow=12,SNR=13						
WB2	**Warramunga Arr**	**58.73**	**146**	*e*P	**P**	**12 48 52.0**	**+0.1**
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**12 49 13.1**	**+0.5**
	comp=Z,1.1nm,0.7s,mb4.1,baz=333,slow=6.5,SNR=6.1						
NB2	**NORSAR Subarra**	**64.41**	**327**	P	**P**	**12 49 28.5**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.3,baz=75,slow=6.5						
NOA	**NORSAR Array B**	**64.41**	**327**	P	**P**	**12 49 28.5**	**-1.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=73,slow=6.5,SNR=6.0						
GERES	**GERESS Array B**	**67.36**	**314**	P	**P**	**12 49 49.0**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=39,slow=5.1,SNR=4.1						
KMBO	**Kilima Mbogo**	**71.05**	**257**	P	**P**	**12 50 12.9**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.0,baz=69,slow=16,SNR=4.7						
CDF	**Champ du Feu**	**71.42**	**316**	*e*P	**P**	**12 50 13.7**	**-0.5**
CDF	**Champ du Feu**	**71.42**	**316**	*e*P	**P**	**12 50 13.7**	**-0.5**
INK	**Inuvik**	**71.81**	**19**	P	**P**	**12 50 15.8**	**-0.4**
	comp=Z,6.0nm,0.7s,mb4.7,baz=332,slow=7.7,SNR=32						
INK	**Inuvik**	**71.81**	**19**	P	**P**	**12 50 15.8**	**-0.4**
STKA	**Stephens Creek**	**72.26**	**147**	P	**P**	**12 50 19.1**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=323,slow=7.8,SNR=3.0						
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**12 50 24.4**	**+0.3**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**12 50 24.4**	**+0.3**
	comp=Z,3.1nm,0.6s,mb4.4						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**12 50 24.3**	**+0.2**
LPL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**12 50 24.3**	**+0.2**
	comp=Z,2.0nm,0.4s,mb4.4						
AVF	**Avril sur Loir**	**74.52**	**316**	*e*P	**P**	**12 50 31.9**	**-0.7**
AVF	**Avril sur Loir**	**74.52**	**316**	*e*P	**P**	**12 50 31.9**	**-0.7**
YKA	**Yellowknife Ar**	**81.35**	**17**	P	**P**	**12 51 09.9**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.2,baz=328,slow=5.3,SNR=19						
TORD	**Torodi Ar. Bea**	**93.59**	**288**	P	**P**	**12 52 10.3**	**-0.5**
	comp=Z,0.2nm,0.7s,mb3.7,baz=126,slow=3.7,SNR=3.0						

KRSC 12 12:43:21.5±0.9,52°.58N×159°.64E, h25km±24km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.57**	**24**	*e*P	Pb	12 43 32.8	0.0
SPN				*i* S	Sb	12 43 40.5	0.0
NLC	**Nalytchevo**	**0.62**	**343**	*e*P	Pb	12 43 33.9	+0.2
NLC				*i* S	Sb	12 43 43.1	+1.1
RUS	**Russkaya**	**0.70**	**258**	*e*P	Pb	12 43 34.6	-0.5
RUS				*i* S	Sb	12 43 44.3	-0.1
PET	**Petropavlovsk**	**0.75**	**307**	*e*P	Pb	12 43 35.3	-0.5
PET				*i* S	Sb	12 43 45.7	+0.1
SDLR	**Sedlovina**	**0.84**	**327**	*e*P	Pb	12 43 36.8	-0.5
SDLR				*i* S	Sb	12 43 47.7	-0.4
KII	**Karymskiy**	**1.46**	**356**	*e*P	Pn	12 43 47.4	+1.1
KII				*i* S	Sn	12 44 06.2	+1.6
GNL	**Ganaly**	**1.52**	**318**	*e*P	Pn	12 43 47.4	+0.4
GNL				*i* S	Sn	12 44 06.6	+0.7
MIPR	**Malaya Ipel'ka**	**1.79**	**261**	P	Pn	12 43 51.1	+0.3
MKZ	**Mys Kozlova**	**2.34**	**31**	*e*P	Pn	12 43 56.9	-1.4
MKZ				*i* S	Sn	12 44 22.7	-3.5
KMNR	**Kamenistaya**	**3.20**	**6**	*e*P	Pn	12 44 13.0	+2.9
ZLN	**Zelenaya**	**3.51**	**11**	*e*P	Pn	12 44 17.7	+3.3
ZLN				*i* S	Sn	12 44 59.8	+4.7
KBTR	**Krutoberegovo**	**4.08**	**26**	*e*P	Pn	12 44 24.4	+2.2
KBTR				*i* S	Sn	12 45 10.8	+1.7
SMKR	**Semkarok**	**4.15**	**14**	*e*P	Pn	12 44 26.7	+3.6
SRKR	**Sorokina**	**4.18**	**12**	*e*P	Pn	12 44 27.5	+4.0

ISCJB ***12*** *12:44:14.4±0.7,31°.48N±0°.09×104°.2E±0°.1, h10km, mb3.6/4, Error ellipse: s-maj=16.2km s-min=13.0km az=167.5*
IDC ***12*** *12:44:15.5±1.2,31°.51N×104°.01E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/27, mbtmp3.8/6, ML4.4/1, Error ellipse: s-maj=37.7km s-min=22.5km az=55.0*
NEIC ***12*** *12:44:16.3±0.7,31°.54N×104°.20E, h10km, Error ellipse: s-maj=18.3km s-min=13.1km az=77.0*
ISC 12 12:44:16.5±0.7,31°.52N±0°.09×104°.2E±0°.1, h10km, n11, σ1°16/12, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.69**	**209**	Pg	**Pg**	**12 44 21.6**	**-8.3**
CD2				Sg	**Sg**	**12 44 27.0**	**-12**
CD2				smax			
	comp=N,16μm,0.9s						
WHN	**Wuhan**	**8.81**	**94**	S	**Sn**	**12 47 55.3**	**-7.9**
BJT	**Baijiatuau**	**12.92**	**46**	Pn	**Pn**	**12 47 18.4**	**-1.8**
CMAR	**Chiang Mai Arr**	**13.83**	**201**	Pn	**Pn**	**12 47 31.6**	**-1.1**
	comp=N,0.6nm,0.3s,baz=6.7,slow=10.0,SNR=7.5						
KSRS	**Korea Array**	**20.45**	**67**	P	**P**	**12 48 55.2**	**+1.1**
	comp=N,1.1nm,0.8s,baz=247,slow=10,SNR=2.7						
MK31	**Makanchi Array**	**22.69**	**318**	*e*P	**P**	**12 49 18.8**	**+0.7**
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**12 49 19.1**	**+1.0**
	comp=N,0.9nm,0.8s,mb3.2,baz=129,slow=11,SNR=4.0						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**12 49 56.5**	**-1.4**
	comp=N,0.9nm,0.7s,mb3.4,baz=130,slow=9.3,SNR=3.6						
WRAB	**Tennant Creek**	**58.79**	**146**	*e*P	**P**	**12 54 14.3**	**-0.8**
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**12 54 15.8**	**+0.7**
	comp=N,1.5nm,0.8s,mb4.1,baz=336,slow=7.6,SNR=6.4						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**12 54 37.2**	**+1.4**
	comp=N,0.5nm,0.7s,mb3.8,baz=345,slow=6.9,SNR=5.5						

ISCJB ***12*** *12:44:40.3±0.8,31°.3N±0°.1×104°.2E±0°.1, h10km, mb3.9/7, Error ellipse: s-maj=22.7km s-min=10.8km az=30.7*
IDC ***12*** *12:44:40.5±1.0,31°.39N×104°.10E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/26, mbtmp4.0/8, Error ellipse: s-maj=45.8km s-min=18.4km az=52.0*
NEIC ***12*** *12:44:43.4±1.9,31°.76N×104°.49E, h10km, Error ellipse: s-maj=85.5km s-min=12.8km az=30.0*
ISC 12 12:44:42.3±0.8,31°.4N±0°.1×104°.2E±0°.1, h10km, n12, σ1°04/12, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.71**	**102**	Pn	**Pn**	**12 45 52.6**	**-0.8**
KSRS	**Korea Array**	**20.51**	**66**	P	**P**	**12 49 20.4**	**-0.2**
	1.8nm,0.8s,baz=257,slow=12,SNR=3.1						
CN2	**Changchun**	**20.89**	**47**	*e*P	**P**	**12 49 26.4**	**+1.8**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
MK31	**Makanchi Array**	**22.83**	**319**	*e*P	**P**	**12 49 46.2**	**+0.8**
MKAR	**Makanchi Array**	**22.83**	**319**	P	**P**	**12 49 45.6**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.4,baz=124,slow=11,SNR=6.3						
TKM2	**Tokmak 2**	**25.41**	**305**	P	**P**	**12 50 11.7**	**+1.8**
ZALV	**Zalesovo Beam**	**26.53**	**334**	P	**P**	**12 50 19.4**	**-0.6**
	comp=Z,2.0nm,0.3s,mb4.1,baz=132,slow=8.5,SNR=4.2						
KURK	**Kurchatov**	**27.08**	**323**	P	**P**	**12 50 24.0**	**-1.0**
	comp=Z,2.2nm,0.8s,mb3.7,baz=129,slow=9.0,SNR=4.6						
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**12 54 29.8**	**-0.8**
	comp=Z,2.9nm,0.7s,mb4.4,baz=126,slow=7.1,SNR=3.5						
WRA	**Warramunga Arr**	**58.65**	**146**	P	**P**	**12 54 40.6**	**+0.8**
	comp=Z,2.1nm,0.8s,mb4.2,baz=328,slow=9.0,SNR

STKA Stephens Creek 71.99 147 P **P 13 01 37.9 -0.5**
comp=Z,1.0nm,0.4s,mb4.1,baz=346,slow=8.4,SNR=4.7

BJI ***12*** *12:50:29.9,56°.50N×153°.10W,h20km,mB5.6/14, mb5.5/37,Ms5.4/18,Ms7 5.1/16*
MOS ***12*** *12:50:31.4±0.8,56°.60N×153°.24W,h10km,mb5.5/125, MS4.8/10,Error ellipse: s-maj=7.5km s-min=3.4km az=89.0*
ISCJB ***12*** *12:50:33.7±0.1,56°.60N±0°.02×153°.16W±0°.03,h24km, mb5.2/332,MS4.8/17,Error ellipse: s-maj=3.4km s-min=1.5km az=38.1*
NEIC ***12*** *12:50:35.0,56°.47N×153°.07W,h20km,mb5.2/215, ML5.1(AEIC),After AEIC.*
NEIC Felt at Anchorage.
IDC ***12*** *12:50:35.1±0.5,56°.59N×153°.20W,h23km±2km,mb4.9/34, mb1 5.0/35,mb1mx5.0/38,mbtmp4.9/35,ML4.2/1,MS4.7/5, Ms1 4.7/5,ms1mx4.0/45,Error ellipse: s-maj=12.2km s-min=8.8km az=22.0*
SZGRF ***12*** *12:50:40.3,56°.92N×153°.26W,h26km,mb5.5,Kodiak Island, Alaska, United States, region*
DJA ***12*** *12:50:41,57°.77N×153°.58W,h21km,mb5.3/11*
ISC 12 12:50:35.7±0.1,56°.61N±0°.02×153°.17W±0°.03,h26km, h26km±.4km:pP-P,n1200,σ0974/1183,mb5.2/332,MS4.8/17, 358C-214D,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.62**	**354**	P		**P**	**Pb**	**12 50 48.0**	**+0.1**
OHAK				S			**Sb**	**12 50 59.5**	**+3.2**
KDAK	**Kodiak Island**	**1.22**	**15**	Pn		**Pn**	**Pn**	**12 50 56.4**	**-0.7**
	1μm,0.3s,baz=203,slow=7.8,SNR=5940								
KDAK				Sn			**Sn**	**12 51 12.4**	**-0.3**
	510nm,0.3s,baz=207,slow=11,SNR=6.5								
KDAK	**Kodiak Island**	**1.22**	**15**	P		**Pn**		**12 50 56.4**	**-0.7**
KDAK				S		**Sn**		**12 51 12.8**	**0.0**
AUL	**Augustine Lava**	**2.79**	**357**	P		**Pn**		**12 51 20.0**	**+1.5**
CHGN	**Chignik**	**2.93**	**266**	P		**Pn**		**12 51 19.3**	**-1.1**
RSO	**Redoubt South**	**3.87**	**3**	*e*Pn		**Pn**		**12 51 33.9**	**+0.4**
SLKM	**Skilak Lake**	**4.21**	**20**	P		**Pn**		**12 51 36.5**	**-1.5**
SDPT	**Sand Point**	**4.29**	**256**	P		**Pn**		**12 51 38.0**	**-1.2**
MID	**Middleton Isla**	**4.60**	**49**	*e*P		**Pn**		**12 51 44.9**	**+1.4**
SVW2	**Sparrevohn**	**4.67**	**345**	P		**Pn**		**12 51 45.0**	**+0.5**
FIB	**Fire Island**	**4.83**	**18**	*e*P		**Pn**		**12 51 46.1**	**-0.5**
PMR	**Palmer**	**5.42**	**21**	*e*P		**Pn**		**12 51 52.5**	**-2.1**
SKT	**Skwentna**	**5.46**	**8**	P		**Pn**		**12 51 54.4**	**-0.7**
EYAK	**Cordova Ski Ar**	**5.54**	**41**	P		**Pn**		**12 51 53.8**	**-2.6**
SML	**Sawmill**	**5.78**	**23**	P		**Pn**		**12 51 58.0**	**-1.6**
DIV	**Divide**	**5.94**	**37**	P		**Pn**		**12 51 59.7**	**-2.1**
FALS	**False Pass**	**6.05**	**257**	*e*Pn		**Pn**		**12 52 01.6**	**-1.8**
FALS				*e*Sn			**Sn**	**12 53 09.0**	**-2.6**
BMRM	**Bremner River**	**6.24**	**42**	P		**Pn**		**12 52 03.9**	**-2.1**
PPLA	**Purkeypile**	**6.33**	**4**	P		**Pn**		**12 52 07.2**	**0.0**
TT01	**Tatalina**	**6.48**	**348**	P		**Pn**		**12 52 09.6**	**+0.3**
TTA	**Tatalina**	**6.50**	**348**	*e*P		**Pn**		**12 52 09.7**	**+0.2**
TRF	**Thorofare Moun**	**7.02**	**11**	P		**Pn**		**12 52 16.2**	**-0.4**
KTH	**Kantishna Hill**	**7.06**	**8**	P		**Pn**		**12 52 16.8**	**-0.4**
CHUM	**Lake Minchumin**	**7.31**	**3**	P		**Pn**		**12 52 20.3**	**-0.3**
MCK	**McKinley**	**7.45**	**15**	P		**Pn**		**12 52 21.8**	**-0.8**
PAX	**Paxson**	**7.47**	**28**	*e*P		**Pn**		**12 52 23.1**	**+0.3**
PAX					pmax	pmax			
	comp=Z,154nm,1.1s								
PAX	**Paxson**	**7.47**	**28**	*e*Pn		**Pn**		**12 52 23.1**	**+0.3**
	comp=Z,154nm,1.1s								
AKUT	**Akutan**	**7.59**	**256**	*e*Pn		**Pn**		**12 52 23.1**	**-1.4**
BPAW	**Bear Paw Mtn.**	**7.60**	**7**	P		**Pn**		**12 52 23.3**	**-1.2**
PNL	**Peninsula**	**7.91**	**61**	P		**Pn**		**12 52 26.7**	**-2.1**
MENT	**Mentasta**	**7.94**	**33**	*e*P		**Pn**		**12 52 27.7**	**-1.5**
UNV	**Unalaska Valle**	**8.11**	**256**	*e*Pn		**Pn**		**12 52 29.8**	**-1.8**
GCSA	**Galena City Sc**	**8.37**	**349**	P		**Pn**		**12 52 34.8**	**-0.3**
BCA3	**Beaver Creek A**	**8.64**	**37**	P		**Pn**		**12 52 36.9**	**-2.0**
COLA	**College**	**8.69**	**15**	P		**Pn**		**12 52 37.7**	**-1.8**
IL1	**Eielson Array**	**8.75**	**18**	P		**Pn**		**12 52 38.2**	**-2.1**
HYT	**Haines Junctio**	**9.17**	**56**	*e*Pn		**Pn**		**12 52 45.8**	**-0.3**
SPIA	**Saint Paul Isl**	**9.36**	**281**	P		**Pn**		**12 52 47.9**	**-0.9**
IM3	**Indian Mountai**	**9.41**	**359**	P		**Pn**		**12 52 48.5**	**-0.9**
SIT	**Sitka**	**9.79**	**80**	*e*P		**Pn**		**12 52 50.1**	**-4.5**
SIT					pmax	pmax			
	comp=Z,42nm,1.1s								
SIT	**Sitka**	**9.79**	**80**	*e*P		**Pn**		**12 52 50.1**	**-4.5**
	comp=Z,42nm,1.1s								
SKAG	**Skagway**	**9.88**	**66**	P		**Pn**		**12 52 53.1**	**-2.7**
EGAK	**Eagle**	**10.07**	**31**	*e*Pn		**Pn**		**12 52 58.0**	**-0.4**
DAWY	**Dawson**	**10.11**	**37**	*e*Pn		**Pn**		**12 52 58.0**	**-0.9**
CRAG	**Craig**	**11.27**	**87**	*e*P		**Pn**		**12 53 14.8**	**0.0**
	comp=Z,62nm,1.1s								
TNA	**Tin City**	**11.44**	**328**	*e*P		**Pn**		**12 53 17.6**	**+0.5**
	comp=Z,152nm,0.9s								
GAMB	**Gambell**	**11.65**	**316**	*e*Pn		**Pn**		**12 53 19.6**	**-0.4**
	comp=Z,75nm,1.3s								
DIB	**Dawson Inlet,**	**12.38**	**97**	T				13 05 47.5	
	SNR=93								
DLBC	**Dease Lake**	**12.56**	**72**	Pn		**Pn**		**12 53 31.5**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=268,slow=12,SNR=14								
DLBC	**Dease Lake**	**12.56**	**72**	*e*P		**Pn**		**12 53 31.5**	**-0.9**
INK	**Inuvik**	**14.74**	**29**	Pn		**Pn**		**12 54 00.8**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=237,slow=16,SNR=46								
INK				LR		LR		13 01 26.7	
	comp=Z,2μm,18.4s,baz=220,slow=44								
INK	**Inuvik**	**14.74**	**29**	*e*Pn		**Pn**		**12 54 00.4**	**-1.7**
BBB	**Bella Bella**	**15.21**	**96**	LR		LR		12 59 07.2	
	comp=Z,2μm,18.3s,baz=303,slow=34								
SMY	**Shemya**	**19.21**	**272**	*e*P		**Pn**		**12 54 56.6**	**-1.8**
SMY					pmax	pmax			
	comp=Z,86nm,0.7s								
SMY	**Shemya**	**19.21**	**272**	*e*P		**Pn**		**12 54 56.6**	**-1.8**
	comp=Z,86nm,0.7s								
PGC	**Sidney**	**19.59**	**101**	*e*Pn		**Pn**		**12 55 01.9**	**-1.0**
	comp=Z,2.4nm,1.1s								
NLWA	**Neilton Lookou**	**20.12**	**105**	⇑P		**P**		**12 55 06.7**	**-0.6**
	baz=20,SNR=8.9								
NLWA	**Neilton Lookou**	**20.12**	**105**	*e*Pn		**P**		**12 55 06.7**	**-0.6**
	comp=Z,68nm,1.0s								
A05A	**Maple Falls**	**20.14**	**99**	⇓P		**P**		**12 55 06.4**	**-1.1**
	baz=20								
YKA	**Yellowknife Ar**	**20.17**	**57**	P		**P**		**12 55 07.1**	**-0.6**
	comp=Z,34nm,1.0s,baz=269,slow=10,SNR=168								
YKA				PcP		PcP		12 59 20.4	-0.8
	comp=Z,2.2nm,0.7s,baz=276,slow=1.9,SNR=5.5								
YKA				pPcP				12 59 27.6	
	comp=Z,4.7nm,0.7s,baz=278,slow=1.7,SNR=8.4								
YKA				ScP		ScP		13 02 55.3	-0.1
	comp=Z,3.6nm,0.9s,baz=276,slow=2.0,SNR=12								
YKA	**Yellowknife Ar**	**20.17**	**57**	P		**P**		**12 55 07.1**	**-0.6**
YKA								12 59 20.4	
YKA								12 59 27.7	
YKA	**Yellowknife Ar**	**20.17**	**57**	P		**P**		**12 55 07.1**	**-0.6**
YKA				PcP		PcP		12 59 20.4	-0.8
YKA				pPcP				12 59 27.6	
YKA				ScP		ScP		13 02 55.4	-0.1
A06A	**Chilliwack**	**20.41**	**98**	⇑P		**P**		**12 55 09.2**	**-1.3**
	baz=20								
GNW	**Green Mountain**	**20.57**	**103**	*e*P		**P**		**12 55 10.7**	**-1.6**
	comp=Z,29nm,1.2s								
JCW	**Jim Creek**	**20.68**	**101**	*e*Pn		**P**		**12 55 13.8**	**+0.4**
B06A	**Marblemount**	**20.74**	**99**	⇓P		**P**		**12 55 13.0**	**-1.0**
	baz=21								
RPW	**Rockport**	**20.76**	**100**	P		**P**		**12 55 14.4**	**+0.2**
E03A	**Lebam**	**20.81**	**106**	⇓P		**P**		**12 55 14.3**	**-0.5**
	baz=21								
A07A	**Ashnola River,**	**21.04**	**97**	⇓P		**P**		**12 55 16.9**	**-0.4**
	baz=21,SNR=38								
F03A	**Seaside**	**21.21**	**108**	⇑P		**P**		**12 55 18.4**	**-0.8**
	baz=21								
D05A	**Enumclaw**	**21.25**	**103**	⇑P		**P**		**12 55 18.9**	**-0.7**
	baz=21								
C06A	**Tall Timber Ra**	**21.40**	**100**	⇓P		**P**		**12 55 20.6**	**-0.5**
	baz=21								
B07A	**Winthrop**	**21.52**	**98**	⇓P		**P**		**12 55 22.0**	**-0.4**
	baz=21,SNR=34								
BILL	**Bilibino**	**21.56**	**318**	*c iP*		**P**		**12 55 21.9**	**-0.8**
BILL				*e**PP				12 55 30.0	
BILL					pmax	pmax			
	comp=Z,220nm,1.7s,mb5.3								
BILL				MLR		MLR			
	comp=Z,3μm,14.0s,MS4.8								
BILL	**Bilibino**	**21.56**	**318**	*e*P		**P**		**12 55 21.7**	**-1.0**
	comp=Z,206nm,0.9s,mb5.6								
LON	**Longmire**	**21.62**	**104**	*e*P		**P**		**12 55 24.1**	**+0.6**
LON					pmax	pmax			
	comp=Z,32nm,1.0s,mb4.7								
LON	**Longmire**	**21.62**	**104**	*e*P		**P**		**12 55 24.1**	**+0.5**
	comp=Z,32nm,1.0s,mb4.7								
A08A	**Turner Farm, O**	**21.70**	**96**	⇓P		**P**		**12 55 23.7**	**-0.7**
	baz=22,SNR=16								
WPW	**White Pass**	**21.79**	**104**	P		**P**		**12 55 26.1**	**+0.7**
F04A	**Amboy**	**21.82**	**106**	⇓P		**P**		**12 55 24.6**	**-1.0**
	baz=22,SNR=10								
D06A	**Cle Elum**	**21.87**	**102**	⇓P		**P**		**12 55 25.2**	**-0.9**
	baz=22,SNR=9.2								
ETW	**Entiat**	**21.90**	**100**	*e*P		**P**		**12 55 26.6**	**+0.2**
C07A	**Waterville**	**22.00**	**100**	⇓P		**P**		**12 55 26.5**	**-1.0**
	baz=22,SNR=22								
B08A	**Colville Reser**	**22.00**	**98**	⇑P		**P**		**12 55 26.7**	**-0.9**
	baz=22,SNR=31								
TBM	**Table Mountain**	**22.02**	**102**	P		**P**		**12 55 27.9**	**+0.2**
WTV	**Waterville**	**22.05**	**100**	P		**P**		**12 55 28.2**	**+0.2**
A09A	**Danville**	**22.07**	**95**	⇑P		**P**		**12 55 27.7**	**-0.6**
	baz=22,SNR=44								
E06A	**Yakima**	**22.20**	**103**	⇓P		**P**		**12 55 29.1**	**-0.6**
	baz=22,SNR=23								
COR	**Corvallis**	**22.25**	**110**	*e*P		**P**		**12 55 30.3**	**0.0**
COR					pmax	pmax			
	comp=Z,83nm,1.1s,mb5.1								
COR	**Corvallis**	**22.25**	**110**	*e*P		**P**		**12 55 30.3**	**0.0**
	comp=Z,84nm,1.1s,mb5.1								
G04A	**Mulino**	**22.26**	**108**	⇑P		**P**		**12 55 29.9**	**-0.5**
	baz=22,SNR=7.5								
C08A	**Higginbotham F**	**22.49**	**99**	⇑P		**P**		**12 55 31.8**	**-1.0**
	baz=22,SNR=8.3								
B09A	**Rice**	**22.62**	**96**	⇓P		**P**		**12 55 32.9**	**-1.2**
	baz=22,SNR=34								
HOOD	**Mount Hood Mea**	**22.62**	**106**	*e*P		**P**		**12 55 34.7**	**+0.5**
	comp=Z,365nm,1.3s,mb5.7								
A10A	**Northport**	**22.63**	**95**	⇑P		**P**		**12 55 33.7**	**-0.6**
	baz=22								
H04A	**Detroit Lake**	**22.77**	**108**	⇑P		**P**		**12 55 34.7**	**-1.0**
	baz=23,SNR=24								
E07A	**Sunnyside**	**22.79**	**102**	⇑P		**P**		**12 55 35.6**	**-0.4**
	baz=23								
MDW	**Midway**	**22.81**	**102**	P		**P**		**12 55 36.4**	**+0.2**
VBEM	**Beaver Butte**	**22.83**	**107**	P		**P**		**12 55 36.5**	**+0.1**
C09A	**Chrisman Ranch**	**22.91**	**98**	⇑P		**P**		**12 55 36.4**	**-0.8**
	baz=23,SNR=11								
EDM	**Edmonton**	**22.91**	**82**	*e*P		**P**		**12 55 36.8**	**-0.4**
OD2	**Odessa Site #2**	**22.91**	**99**	P		**P**		**12 55 36.6**	**-0.6**
KEBM	**Edson Butte**	**22.94**	**115**	*e*P		**P**		**12 55 38.3**	**+0.8**
	comp=Z,166nm,1.2s,mb5.3								
D08A	**Wollman Farm,**	**23.00**	**100**	⇑P		**P**		**12 55 37.1**	**-1.0**
	baz=23,SNR=32								
WRD	**Warden**	**23.03**	**101**	P		**P**		**12 55 37.1**	**-1.4**
RSW	**Rattlesnake Hi**	**23.04**	**102**	*e*P		**P**		**12 55 38.5**	**-0.1**
HAWA	**Hanford**	**23.07**	**102**	*e*P		**P**		**12 55 37.5**	**-1.4**
	comp=Z,54nm,1.1s,mb4.9								
F07A	**Phinny Hill Vi**	**23.17**	**103**	⇓P		**P**		**12 55 38.8**	**-1.2**
	baz=23,SNR=8.7								
B10A	**Chitwood Farm,**	**23.20**	**96**	⇓P		**P**		**12 55 39.4**	**-0.8**
	baz=23								
G06A	**Carlson Farm,**	**23.22**	**105**	⇑P		**P**		**12 55 39.3**	**-1.2**
	baz=23								
E08A	**Dider Farm, El**	**23.27**	**101**	⇓P		**P**		**12 55 39.8**	**-1.2**
	baz=23,SNR=13								
NEW	**Newport**	**23.27**	**96**	*e*P		**P**		**12 55 40.8**	**-0.2**
NEW					pmax	pmax			
	comp=Z,57nm,1.4s								
NEW	**Newport**	**23.27**	**96**	*e*P		**P**		**12 55 40.8**	**-0.2**
	comp=Z,57nm,1.4s,mb4.8								
A11A	**Hall Mountain,**	**23.30**	**93**	⇑P		**P**		**12 55 40.9**	**-0.4**
	baz=23,SNR=21								
D09A	**Jones Farm, Ri**	**23.33**	**99**	⇑P		**P**		**12 55 40.6**	**-1.0**
	baz=23,SNR=8.5								
C10A	**Spilker Farm,**	**23.43**	**97**	⇓P		**P**		**12 55 41.8**	**-0.9**
	baz=23								
B11A	**Sandpoint**	**23.59**	**95**	⇑P		**P**		**12 55 44.2**	**0.0**
	baz=24,SNR=14								
A12A	**Yaak River Ran**	**23.71**	**93**	⇓P		**P**		**12 55 45.4**	**+0.1**
	baz=24								
E09A	**Wood Farm, Sta**	**23.75**	**100**	⇓P		**P**		**12 55 44.5**	**-1.1**
	baz=24,SNR=7.6								
BBOR	**Butler Butte**	**23.77**	**112**	P		**P**		**12 55 46.9**	**+1.0**
HUMO	**Hull Mountain**	**23.83**	**113**	*e*P		**P**		**12 55 46.6**	**+0.2**
	comp=Z,58nm,1.0s,mb5.0								
F08A	**Pendleton**	**23.86**	**102**	⇑P		**P**		**12 55 46.6**	**0.0**
	baz=24,SNR=6.7								
D10A	**Wagner Farm, O**	**23.89**	**98**	⇑P		**P**		**12 55 46.1**	**-0.8**
	baz=24,SNR=18								
B12A	**Libby**	**24.00**	**94**	⇓P		**P**		**12 55 47.3**	**-0.6**
	baz=24								
LNOR	**Lincton Mounta**	**24.07**	**102**	*e*P		**P**		**12 55 48.3**	**-0.3**
G08A	**Pilot Rock**	**24.08**	**103**	⇓P		**P**		**12 55 47.9**	**-0.8**
	baz=24,SNR=25								
E10A	**Myers Farm, Un**	**24.33**	**99**	⇑P		**P**		**12 55 50.0**	**-1.0**
	baz=24,SNR=14								
F09A	**S2 Ranch, Elgi**	**24.38**	**101**	⇓P		**P**		**12 55 51.2**	**-0.2**
	baz=24								
A13A	**Flathead Natio**	**24.39**	**92**	⇑P		**P**		**12 55 50.9**	**-0.6**
	baz=24								
D11A	**Klaveano Farm,**	**24.41**	**97**	⇑P		**P**		**12 55 50.5**	**-1.2**
	baz=24,SNR=38								
C12B	**Naegeli Ranch,**	**24.50**	**95**	⇑P		**P**		**12 55 51.8**	**-0.7**
	baz=24								
F10A	**Beach Ranch, E**	**24.58**	**100**	⇓P		**P**		**12 55 52.4**	**-0.8**
	baz=24,SNR=35								
I07A	**Izee**	**24.59**	**106**	⇑P		**P**		**12 55 52.7**	**-0.6**
	baz=24,SNR=16								
YBH	**Yreka Blue Hor**	**24.59**	**114**	P		**P**		**12 55 53.8**	**+0.5**
	comp=Z,28nm,0.9s,mb4.8,baz=335,slow=3.5,SNR=51								
YBH				LR		LR		13 03 18.2	
	comp=Z,1μm,18.0s,MS4.4,baz=326,slow=31								
YBH	**Yreka Blue Hor**	**24.59**	**114**	*e*P		**P**		**12 55 54.6**	**+1.2**
YBH					pmax	pmax			
	comp=Z,27nm,0.9s								
YBH	**Yreka Blue Hor**	**24.59**	**114**	*e*P		**P**		**12 55 54.6**	**+1.3**
	comp=Z,27nm,0.9s,mb4.8								
WALA	**Waterton Lakes**	**24.60**	**91**	*e*P		**P**		**12 55 53.4**	**0.0**
	comp=Z,0.9nm,1.0s								
B13A	**Whitefish**	**24.68**	**93**	⇓P		**P**		**12 55 53.3**	**-0.8**
	baz=24,SNR=12								
KHMM	**Horse Mountain**	**24.72**	**117**	*e*P		**P**		**12 55 56.5**	**+2.0**
	comp=Z,53nm,1.2s,mb5.0								
G09A	**Cove**	**24.73**	**102**	⇓P		**P**		**12 55 54.2**	**-0.4**
	baz=25,SNR=37								
H08A	**Prairie City**	**24.74**	**105**	⇓P		**P**		**12 55 53.9**	**-0.8**
	baz=25,SNR=19								
BSMT	**Bassoo Peak**	**24.80**	**94**	*e*P		**P**		**12 55 55.2**	**+0.1**
K05A	**Summer Lake**	**24.80**	**110**	⇑P		**P**		**12 55 53.6**	**-1.7**
	baz=25,SNR=27								
E11A	**Bogner Ranch,**	**24.90**	**98**	⇑P		**P**		**12 55 54.9**	**-1.2**
	baz=25,SNR=18								
A14A	**Double T Ranch**	**24.92**	**91**	⇓P		**P**		**12 55 55.8**	**-0.5**
	baz=25,SNR=29								
D12A	**Red Ives Fores**	**24.95**	**96**	⇑P		**P**		**12 55 55.7**	**-0.9**
	baz=25,SNR=32								
C13A	**Hot Springs**	**25.01**	**94**	⇓P		**P**		**12 55 56.6**	**-0.5**
	baz=25,SNR=18								
JTMT	**Jette**	**25.13**	**94**	*e*P		**P**		**12 55 57.9**	**-0.4**
H09A	**Durkee**	**25.19**	**103**	⇑P		**P**		**12 55 58.2**	**-0.5**
	baz=25,SNR=26								
E12A	**Beaver Dam Sad**	**25.22**	**98**	⇓P		**P**		**12 55 58.3**	**-0.7**
	baz=25								
YBMT	**Yellow Bay**	**25.22**	**94**	*e*P		**P**		**12 55 58.5**	**-0.5**
F11A	**Grangeville**	**25.22**	**99**	⇑P		**P**		**12 55 58.3**	**-0.7**
	baz=25,SNR=22								
BMO	**Blue Mountains**	**25.26**	**102**	*e*P		**P**		**12 55 59.6**	**+0.2**
	comp=Z,33nm,1.1s,mb4.8								
A15A	**Johnson Ranch,**	**25.30**	**90**	⇓P		**P**		**12 55 59.0**	**-0.7**
	baz=25,SNR=19								
C14A	**Swan Lake**	**25.42**	**93**	⇑P		**P**		**12 56 00.2**	**-0.7**
	baz=25								
SWMT	**Swartz Lake**	**25.43**	**94**	*e*P		**P**		**12 56 00.4**	**-0.5**
G11A	**Walters Elk Ra**	**25.47**	**100**	⇓P		**P**		**12 56 00.8**	**-0.5**
	baz=25,SNR=70								
WDC	**Whiskeytown Da**	**25.54**	**116**	*e*P		**P**		**12 56 02.6**	**+0.6**
WDC					pmax	pmax			
	comp=Z,44nm,1.1s,mb4.9								
WDC	**Whiskeytown Da**	**25.54**	**116**	*e*P		**P**		**12 56 02.6**	**+0.6**
	comp=Z,44nm,1.1s,mb4.9								
I09A	**Lost Marbles R**	**25.60**	**104**	⇓P		**P**		**12 56 02.1**	**-0.4**
	baz=26,SNR=7.4								
J08A	**Circle Bar Ran**	**25.63**	**106**	⇑P		**P**		**12 56 02.7**	**0.0**
	baz=26,SNR=18								
MOD	**Modoc**	**25.70**	**111**	*e*P		**P**		**12 56 03.6**	**+0.3**
KCPM	**Cahto Peak**	**25.71**	**119**	*e*P		**P**		**12 56 06.9**	**+3.4**
	comp=Z,148nm,1.3s,mb5.4								
B15A	**Bradely Ranch,**	**25.76**	**91**	⇑P		**P**		**12 56 04.2**	**+0.2**
	baz=26,SNR=30								
F12A	**Elk City**	**25.80**	**99**	⇓P		**P**		**12 56 03.5**	**-0.7**
	baz=26,SNR=32								
MSO	**Missoula**	**25.86**	**95**	*e*P		**P**		**12 56 03.9**	**-1.0**
	comp=Z,32nm,1.0s,mb4.7								
SLMT	**Seeley Lake**	**25.86**	**94**	*e*P		**P**		**12 56 04.1**	**-0.7**
A16A	**West Butte Ran**	**25.95**	**89**	⇑P		**P**		**12 56 05.0**	**-0.6**
	baz=26,SNR=19								
D14A	**Greenough**	**25.95**	**95**	⇓P		**P**		**12 56 04.8**	**-0.8**
	baz=26,SNR=17								
E13A	**Victor**	**25.96**	**96**	⇓P		**P**		**12 56 05.0**	**-0.7**
	baz=26,SNR=11								
J09A	**Fry Pan Ranch,**	**26.02**	**105**	⇑P		**P**		**12 56 06.3**	**0.0**
	baz=26,SNR=25								
I10A	**Payette**	**26.03**	**103**	⇓P		**P**		**12 56 06.2**	**-0.3**
	baz=26,SNR=7.1								
C15A	**Salmond Ranch,**	**26.04**	**92**	⇓P		**P**		**12 56 06.1**	**-0.4**
	baz=26,SNR=22								
H11A	**Donnelly**	**26.05**	**101**	⇑P		**P**		**12 56 06.4**	**-0.2**
	baz=26,SNR=37								
WVOR	**Wild Horse Val**	**26.19**	**108**	*e*P		**P**		**12 56 08.1**	**+0.3**
CHMT	**Chamberlain Mo**	**26.19**	**95**	*e*P		**P**		**12 56 07.4**	**-0.4**
F13A	**Darby**	**26.28**	**98**	⇓P		**P**		**12 56 08.6**	**-0.1**
	baz=26,SNR=17								
E14A	**Clinton**	**26.36**	**96**	⇓P		**P**		**12 56 09.0**	**-0.3**
	baz=26,SNR=15								
J10A	**Berg Farm, Mel**	**26.49**	**104**	⇓P		**P**		**12 56 10.4**	**-0.1**
	baz=26								
C16A	**Fuhringer Ranc**	**26.50**	**92**	⇓P		**P**		**12 56 09.5**	**-1.1**
	baz=26,SNR=7.6								
D15A	**Lincoln**	**26.52**	**94**	⇓P		**P**		**12 56 10.3**	**-0.4**
	baz=26,SNR=11								
I11A	**Placerville**	**26.60**	**103**	⇓P		**P**		**12 56 11.6**	**0.0**
	baz=26,SNR=16								
B17A	**L&G Farms, Che**	**26.75**	**90**	⇓P		**P**		**12 56 12.1**	**-0.8**
	baz=27								
G13A	**Cobalt**	**26.77**	**99**	⇑P		**P**		**12 56 12.9**	**-0.2**
	baz=27,SNR=20								
H12A	**Diamond D Ranc**	**26.78**	**100**	⇓P		**P**		**12 56 12.7**	**-0.5**
	baz=27,SNR=15								
F14A	**Wisdom**	**26.79**	**97**	⇑P		**P**		**12 56 12.9**	**-0.3**
	baz=27								
E15A	**Deer Lodge**	**26.82**	**95**	⇑P		**P**		**12 56 12.7**	**-0.8**
	baz=27,SNR=7.6								
K10A	**MacKenzie Ranc**	**26.88**	**105**	⇑P		**P**		**12 56 14.1**	**0.0**
	baz=27,SNR=13								
A18A	**Metzger Ranch,**	**26.93**	**88**	⇓P		**P**		**12 56 13.8**	**-0.6**
	baz=27								
MFID	**Camas Ranch**	**27.01**	**103**	⇓P		**P**		**12 56 14.9**	**-0.3**
	baz=27,SNR=14								
OHCM	**Honcut**	**27.01**	**116**	*e*P		**P**		**12 56 15.2**	**-0.1**
D16A	**Dana Ranch, Ca**	**27.06**	**93**	⇑P		**P**		**12 56 15.2**	**-0.4**
	baz=27,SNR=17								
HRY	**Holter Researc**	**27.09**	**94**	*e*P		**P**		**12 56 15.9**	**-0.1**
G14A	**Jackson**	**27.10**	**98**	⇑P		**P**		**12 56 15.3**	**-0.7**
	baz=27								
H13A	**Challis**	**27.10**	**100**	⇓P		**P**		**12 56 15.8**	**-0.2**
	baz=27,SNR=18								
I12A	**Atlanta**	**27.13**	**102**	⇑P		**P**		**12 56 16.2**	**-0.1**

H16A **Russell Place,** 28.66 97 ⇑P P 12 56 30.0 0.0
baz=28,SNR=22
WAKR **Walker** 28.67 115 *eP* P 12 56 31.0 +0.9
F18A **Big Timber** 28.75 93 ⇓P P 12 56 31.2 +0.4
baz=29,SNR=8.8
YMR **Madison River** 28.83 96 *eP* P 12 56 30.0 -1.5
comp=Z,42nm,0.3s,mb5.7
O10A **Cortez Mining,** 28.84 109 ⇑P P 12 56 32.0 +0.3
baz=29
GCMT **Greycliff** 28.85 93 *eP* P 12 56 29.7 -1.9
comp=Z,28nm,1.4s,mb4.8
J15A **Blackfoot** 28.86 100 ⇑P P 12 56 32.2 +0.5
baz=29,SNR=29
N11A **Elko Archery C** 28.86 107 ⇑P P 12 56 32.0 +0.2
baz=29
M12A **Wells** 28.87 105 ⇑P P 12 56 32.5 +0.6
baz=29,SNR=9.7
L13A **Double Diamond** 28.93 103 ⇑P P 12 56 32.4 +0.1
baz=29
YNR **Norris Junctio** 28.96 96 *eP* P 12 56 32.1 -0.6
comp=Z,27nm,1.2s,mb4.9
K14A **Jones Ranch, D** 29.03 102 ⇑P P 12 56 33.4 +0.1
baz=29
YFT **Old Faithful** 29.04 97 *eP* P 12 56 35.5 +2.1
comp=Z,33nm,0.9s,mb5.1
I16A **Newdale** 29.06 98 ⇑P P 12 56 34.2 +0.6
baz=29,SNR=5.7
ELK **Elko** 29.18 107 P P 12 56 35.2 +0.6
comp=Z,7.4nm,0.8s,mb4.5,baz=310,slow=8.5,SNR=38
ELK ScP ScP 13 03 21.4 +0.5
comp=Z,0.5nm,0.3s,baz=22,slow=4.8,SNR=3.1
ELK **Elko** 29.18 107 P P 12 56 35.2 +0.6
ELK ScP ScP 13 03 21.4 +0.5
G18A **Lazy EL Ranch,** 29.20 94 ⇓P P 12 56 34.4 -0.3
baz=29
N12A **Clover Valley,** 29.21 106 ⇑P P 12 56 35.3 +0.5
baz=29,SNR=10
N12A **Clover Valley,** 29.21 106 *eP* P 12 56 35.9 +1.0
LKWY **Lake** 29.21 96 *eP* P 12 56 37.1 +2.2
LKWY pmax pmax
comp=Z,62nm,1.6s,mb5.1
LKWY **Lake** 29.21 96 *eP* P 12 56 37.1 +2.2
comp=Z,62nm,1.6s,mb5.1
H17A **Grant Village** 29.22 96 ⇓P P 12 56 36.1 +1.1
baz=29,SNR=20
K15A **Arbon** 29.28 101 ⇑P P 12 56 36.5 +1.0
baz=29,SNR=9.2
NVAR **Mina Array Bea** 29.30 113 P P 12 56 36.0 +0.3
comp=Z,11nm,0.8s,mb4.6,baz=298,slow=9.0,SNR=56
NVAR PcP PcP 12 59 42.0 +0.2
comp=Z,0.8nm,0.8s,baz=259,slow=1.8,SNR=3.0
NVAR pPcP 12 59 49.2
comp=Z,2.8nm,0.7s,baz=291,slow=2.0,SNR=7.2
NVAR ScP ScP 13 03 21.2 -0.1
comp=Z,2.6nm,0.8s,baz=300,slow=2.7,SNR=9.5
NVAR **Mina Array Bea** 29.30 113 P P 12 56 36.0 +0.3
NVAR PcP PcP 12 59 42.0 +0.2
NVAR pPcP 12 59 49.2
NVAR ScP ScP 13 03 21.2 -0.1
M13A **Montello** 29.31 105 ⇓P P 12 56 36.4 +0.6
baz=29,SNR=18
M13A **Montello** 29.31 105 *eP* P 12 56 35.5 -0.2
L14A **Malta** 29.34 103 ⇑P P 12 56 36.9 +0.9
baz=29,SNR=7.8
IMW **Indian Meadow** 29.35 97 *eP* P 12 56 37.2 +1.2
comp=Z,20nm,1.0s,mb4.8
P10A **Eureka** 29.35 110 ⇓P P 12 56 36.1 0.0
baz=29
J16A **Bone** 29.39 99 ⇑P P 12 56 36.8 +0.4
baz=29,SNR=14
O11A **Cowboy Ranch,** 29.40 108 ⇑P P 12 56 37.3 +0.7
baz=29,SNR=12
RLMT **Red Lodge** 29.48 94 ⇑P P 12 56 37.7 +0.4
baz=29,SNR=11
RLMT **Red Lodge** 29.48 94 *eP* P 12 56 38.0 +0.8
RRI2 **Red Ridge** 29.50 99 *eP* P 12 56 37.8 +0.4
comp=Z,14nm,1.0s,mb4.7
I17A **Pilgrim Ck.** 29.53 97 ⇓P P 12 56 38.6 +0.9
baz=29,SNR=9.5
TPAW **Teton Pass** 29.61 98 *eP* P 12 56 39.4 +1.0
comp=Z,17nm,1.1s,mb4.7
MLAC **Mammoth Lakes** 29.64 115 ⇓P P 12 56 38.9 +0.1
baz=30
N13A **Wendover, West** 29.65 105 ⇑P P 12 56 39.6 +0.8
baz=30,SNR=7.7
N13A **Wendover, West** 29.65 105 *eP* P 12 56 38.7 -0.1
M14A **Sheep Mountain** 29.65 104 ⇓P P 12 56 39.4 +0.6
baz=30,SNR=15
K16A **Soda Springs** 29.70 100 ⇑P P 12 56 39.8 +0.6
baz=30
LOHW **Long Hollow** 29.72 98 *eP* P 12 56 39.5 +0.2
comp=Z,15nm,1.1s,mb4.6
SNOW **Snow King Moun** 29.73 98 *eP* P 12 56 40.9 +1.4
comp=Z,21nm,1.4s,mb4.7
REDW **Red Top Meadow** 29.74 98 *eP* P 12 56 40.0 +0.4
comp=Z,25nm,1.4s,mb4.8
HVU **Hansel Valley** 29.77 103 *eP* P 12 56 40.2 +0.4
HVU pmax pmax
comp=Z,16nm,1.1s,mb4.7
HVU **Hansel Valley** 29.77 103 *eP* P 12 56 40.2 +0.4
comp=Z,16nm,1.1s,mb4.7
P11A **Circle Ranch,** 29.77 109 ⇑P P 12 56 40.0 +0.1
baz=30
O12A **Currie** 29.78 107 ⇑P P 12 56 40.3 +0.3
baz=30,SNR=11
J17A **Brown Place, J** 29.82 98 ⇑P P 12 56 40.4 +0.1
baz=30,SNR=8.3
L15A **Malad City** 29.82 102 ⇓P P 12 56 40.7 +0.4
baz=30,SNR=9.9
Q10A **Clear Creek Ra** 29.98 111 ⇓P P 12 56 41.9 +0.2
baz=30
MTUM **Tungsten Hills** 30.00 115 *eP* P 12 56 43.3 +1.4
I18A **Diamond G Ranc** 30.09 97 ⇓P P 12 56 43.4 +0.8
baz=30,SNR=11
M15A **Larsen Ranch,** 30.16 103 ⇓P P 12 56 43.7 +0.4
baz=30,SNR=7.7
N14A **Grayback Hills** 30.20 104 ⇑P P 12 56 44.2 +0.6
baz=30,SNR=16
LAO **LASA Array** 30.21 89 *eP* P 12 56 42.8 -0.8
comp=Z,27nm,1.1s,mb4.9
BGU **Big Grassy Mou** 30.23 104 *eP* P 12 56 43.8 -0.1
comp=Z,7.6nm,1.0s,mb4.4
SPUT **South Promonto** 30.27 103 *eP* P 12 56 44.2 -0.1
comp=Z,16nm,1.1s,mb4.7
P12A **McGill** 30.27 108 ⇑P P 12 56 44.8 +0.5
baz=30,SNR=16
O13A **Hicks Ranch, I** 30.29 106 ⇓P P 12 56 44.3 -0.2
baz=30
DGMT **Dagmar** 30.29 84 ⇑P P 12 56 43.6 -0.9
baz=30
DGMT **Dagmar** 30.29 84 *eP* P 12 56 44.5 +0.1
comp=Z,38nm,1.1s,mb5.0
J18A **Kendall Valley** 30.30 98 ⇑P P 12 56 44.5 0.0
baz=30,SNR=15
L16A **Fish Haven** 30.33 101 ⇓P P 12 56 45.7 +0.9
baz=30,SNR=18
Q11A **Duckwater** 30.35 110 ⇓P P 12 56 45.3 +0.3
baz=30,SNR=23
R10A **Warm Springs** 30.43 111 ⇑P P 12 56 46.2 +0.5
baz=30,SNR=11
N15A **Stansbury Isla** 30.53 104 ⇓P P 12 56 46.6 +0.1
baz=30
HWUT **Hardware Ranch** 30.54 102 *eP* P 12 56 47.5 +0.8
S10A **Tonopah Range,** 30.56 112 ⇑P P 12 56 47.0 +0.2
baz=30,SNR=7.1
L17A **Cokeville** 30.58 100 ⇓P P 12 56 47.2 +0.2
baz=30,SNR=7.3
Q12A **Willow Creek R** 30.64 109 ⇓P P 12 56 48.0 +0.5
baz=30,SNR=13
K18A **Toltan Ranch,** 30.67 99 ⇑P P 12 56 46.8 -1.0
baz=30
M16A **Huntsville** 30.71 102 ⇓P P 12 56 48.5 +0.3
baz=31,SNR=5.6
R11A **Troy Canyon, C** 30.75 110 ⇓P P 12 56 48.5 0.0
baz=31,SNR=28
P13A **Bates Ranch, G** 30.76 107 ⇑P P 12 56 48.8 +0.2
baz=31,SNR=18
FCC **Fort Churchill** 30.78 61 *eP* P 12 56 48.2 -0.4
FCC pmax pmax
comp=Z,1.0nm,1.3s
FCC **Fort Churchill** 30.78 61 *eP* P 12 56 48.2 -0.4
comp=Z,0.6nm,1.3s
BW06 **Boulder Array** 30.85 98 ⇓P P 12 56 49.3 0.0
baz=31,SNR=18
BW06 **Boulder Array** 30.85 98 *eP* P 12 56 49.4 +0.1
PDAR **Pinedale Array** 30.85 98 P P 12 56 49.5 +0.1
comp=Z,10nm,0.7s,mb4.8,baz=314,slow=5.2,SNR=106
PDAR PcP PcP 12 59 46.5 +0.9
comp=Z,0.4nm,0.7s,baz=349,slow=0.9,SNR=2.6
PDAR pPcP 12 59 52.4
comp=Z,1.0nm,0.7s,baz=276,slow=1.3,SNR=3.7
DUG **Dugway** 30.86 105 ⇑P P 12 56 49.6 +0.1
baz=31,SNR=8.0
DUG **Dugway** 30.86 105 *eP* P 12 56 50.0 +0.5
GRAC **Grapevine Rang** 30.87 114 ⇓P P 12 56 49.2 -0.4
baz=31
SMMC **Simmler** 30.91 119 ⇑P P 12 56 49.9 0.0
baz=31
VES **Vestal, Richgr** 30.93 118 ⇓P P 12 56 49.8 -0.3
baz=31
O15A **The Old Anders** 30.99 104 ⇑P P 12 56 50.2 -0.4
baz=31
N16A **Rees Ranch, Co** 31.11 102 ⇑P P 12 56 50.9 -0.8
baz=31
M17A **Scullys Gap (B** 31.12 101 ⇑P P 12 56 51.8 0.0
baz=31,SNR=9.0
Q13A **Wheeler Ranch,** 31.12 108 ⇓P P 12 56 51.9 +0.1
baz=31,SNR=9.8
L18A **Fontenelle, Gr** 31.16 100 ⇑P P 12 56 51.4 -0.6
baz=31
P14A **Drum Mountains** 31.16 106 ⇓P P 12 56 52.1 0.0
baz=31,SNR=21
K19A **Absolon Red Bu** 31.20 97 ⇓P P 12 56 51.7 -0.8
baz=31,SNR=7.3
S11A **Rachel** 31.20 111 ⇑P P 12 56 52.4 -0.2
baz=31
R12A **Pony Springs,** 31.28 109 ⇑P P 12 56 53.0 -0.2
baz=31,SNR=9.2
JLU **Jordanelle** 31.31 103 *eP* P 12 56 54.3 +0.9
comp=Z,15nm,1.2s,mb4.7
PKM **Peak Mountain** 31.33 120 ⇓P P 12 56 53.6 -0.1
baz=31,SNR=5.5
ISA **Isabella** 31.37 117 ⇓P P 12 56 53.6 -0.4
baz=31,SNR=6.6
ISA **Isabella** 31.37 117 *eP* P 12 56 54.1 +0.1
ISA pmax pmax
comp=Z,147nm,2.3s,mb5.4
ISA **Isabella** 31.37 117 *eP* P 12 56 54.1 +0.1
comp=Z,147nm,2.3s,mb5.4
N17A **Moffit Pass** 31.40 102 ⇓P P 12 56 53.5 -0.8
baz=31
L19A **Farson** 31.41 99 ⇓P P 12 56 54.4 +0.1
baz=31,SNR=5.7
NLU **North Lily Min** 31.43 104 *eP* P 12 56 55.3 +0.8
comp=Z,9.0nm,1.1s,mb4.5
M18A **Lyman** 31.48 100 ⇑P P 12 56 54.5 -0.4
baz=31,SNR=7.5
Q14A **Sevier Lake (B** 31.49 107 ⇓P P 12 56 55.4 +0.3
baz=31,SNR=18
FURC **Furnace Creek,** 31.54 114 ⇑P P 12 56 56.0 +0.5
baz=31,SNR=9.2
MPMC **Manual Prospec** 31.54 115 ⇓P P 12 56 55.8 +0.2
baz=31,SNR=16
O16A **Springville** 31.56 103 ⇑P P 12 56 55.7 +0.1
baz=31
K20A **Yellowstone Ra** 31.59 97 ⇓P P 12 56 55.4 -0.5
baz=31,SNR=11
P15A **Leamington** 31.60 105 ⇑P P 12 56 54.7 -1.3
baz=32
ARVC **Arvin** 31.62 118 ⇓P P 12 56 54.8 -1.4
baz=32
S12A **Delamar Landin** 31.70 110 ⇓P P 12 56 57.3 +0.4
baz=32,SNR=8.5
R13A **O'Grain Ranch,** 31.72 109 ⇑P P 12 56 56.1 -1.0
baz=32
SBC **Santa Barbara** 31.75 120 ⇓P P 12 56 56.3 -1.0
baz=32
T11A **Corn Creek, Al** 31.78 111 ⇓P P 12 56 57.9 +0.3
baz=32,SNR=26
U10A **Ash Meadows, A** 31.85 114 ⇓P P 12 56 58.8 +0.6
baz=32,SNR=6.8
P16A **Fountain Green** 31.90 104 ⇓P P 12 56 56.9 -1.8
baz=32
LRMC **Laurel Mountai** 31.90 116 ⇓P P 12 56 58.9 +0.2
baz=32,SNR=7.9
M19A **Rock Springs** 31.92 99 ⇑P P 12 56 58.7 -0.2
baz=32,SNR=10
Q15A **Fillmore** 31.96 106 ⇓P P 12 56 58.2 -0.9
baz=32
O17A **Robinson Place** 31.98 103 ⇑P P 12 56 59.9 +0.6
baz=32,SNR=8.0
L20A **Wamsutter** 32.03 98 ⇓P P 12 56 59.5 -0.3
baz=32,SNR=6.4
OSI **Osito Adit** 32.09 119 ⇑P P 12 56 59.8 -0.5
baz=32
S13A **Holt Ranch, En** 32.23 109 ⇓P P 12 57 01.7 +0.2
baz=32,SNR=16
SHOC **Shoshone** 32.28 114 ⇑P P 12 57 02.1 +0.1
baz=32
O18A **Roosevelt** 32.32 102 ⇑P P 12 57 03.2 +0.8
baz=32,SNR=10
BLG **Laguna Peak** 32.33 120 ⇓P P 12 57 01.9 -0.5
baz=32
N19A **John Jarvie Ra** 32.33 100 ⇓P P 12 57 02.4 0.0
baz=32,SNR=17
TMUT **Trail Mountain** 32.37 104 *eP* P 12 57 04.2 +1.5
comp=Z,21nm,1.4s,mb4.8
SHPR **Sheep Range** 32.38 112 *eP* P 12 57 03.6 +0.7
MSU **Marysvale** 32.42 106 *eP* P 12 57 04.4 +1.2
T12A **Moapa** 32.44 111 ⇓P P 12 57 03.1 -0.3
baz=32
S14A **Cedar City** 32.46 108 ⇑P P 12 57 03.1 -0.4
baz=32
M20A **Sweetwater, Wa** 32.46 98 ⇑P P 12 57 03.8 +0.2
baz=32,SNR=8.4
GSC **Goldstone** 32.48 115 ⇓P P 12 57 04.1 +0.3
baz=32,SNR=5.7
GSC **Goldstone** 32.48 115 *eP* P 12 57 03.7 -0.1
GSC pmax pmax
comp=Z,155nm,2.5s,mb5.4
GSC **Goldstone** 32.48 115 *eP* P 12 57 03.7 -0.1
comp=Z,155nm,2.5s,mb5.4
P17A **Butcher Ranch,** 32.49 104 ⇓P P 12 57 03.5 -0.3
baz=32
CCUT **Cedar City** 32.51 109 *eP* P 12 57 04.7 +0.7
comp=Z,28nm,1.5s,mb5.0
DECC **Green Verdugo** 32.57 118 ⇓P P 12 57 04.1 -0.4
baz=32
L21A **Rawlins** 32.59 97 ⇑P P 12 57 04.6 0.0
baz=32,SNR=15
R15A **Junction** 32.59 107 ⇓P P 12 57 04.5 -0.2
baz=32
T13A **Saint George** 32.63 110 ⇓P P 12 57 05.5 +0.4
baz=32,SNR=12
P18A **Preston Nutter** 32.65 103 ⇓P P 12 57 05.1 -0.1
baz=32
Q16A **Castle Valley** 32.66 105 ⇓P P 12 57 06.0 +0.7
baz=32,SNR=5.4
MWC **Mount Wilson** 32.73 118 *eP* P 12 57 05.9 0.0
MWC pmax pmax
comp=Z,31nm,1.3s,mb5.1
MWC **Mount Wilson** 32.73 118 *eP* P 12 57 05.9 0.0
comp=Z,31nm,1.3s,mb5.1
U12A **Valley of Fire** 32.75 111 ⇓P P 12 57 06.6 +0.4
baz=33,SNR=7.2
V11A **Goodsprings** 32.76 113 ⇑P P 12 57 06.9 +0.7
baz=33,SNR=11
O19A **Miners Draw (B** 32.78 101 ⇑P P 12 57 06.7 +0.3
baz=33,SNR=10.0
TUQ **Turquoise Moun** 32.82 114 ⇓P P 12 57 07.1 +0.3
baz=33
M21A **Separation Pea** 32.83 97 ⇓P P 12 57 06.9 +0.1
baz=33,SNR=9.8
RWWY **Rawlins** 32.86 97 *eP* P 12 57 07.2 +0.2
SRU **San Rafael** 32.87 104 ⇓P P 12 57 07.8 +0.7
baz=33,SNR=41
SRU **San Rafael** 32.87 104 *eP* P 12 57 08.0 +0.9
SRU pmax pmax
comp=Z,45nm,0.9s,mb5.4
SRU **San Rafael** 32.87 104 *eP* P 12 57 08.0 +0.9
comp=Z,45nm,0.9s,mb5.4
N20A **Spence Gulch,** 32.87 99 ⇓P P 12 57 08.0 +0.8
baz=33,SNR=11
S15A **Panguitch** 32.94 108 ⇑P P 12 57 08.6 +0.8
baz=33
R16A **Teasdale** 32.96 106 ⇓P P 12 57 09.1 +1.2
baz=33,SNR=12
RSSD **Black Hills** 33.01 91 *eP* P 12 57 08.1 -0.2
RSSD pmax pmax
comp=Z,16nm,0.8s,mb5.0
RSSD **Black Hills** 33.01 91 *eP* P 12 57 08.1 -0.2
comp=Z,16nm,0.8s,mb5.0
T14A **Hurricane** 33.03 109 ⇓P P 12 57 08.8 +0.3
baz=33,SNR=9.4
U13A **Pakoon Wash** 33.06 111 ⇑P P 12 57 09.3 +0.4
baz=33,SNR=24
Q18A **Rafter H Ranch** 33.09 103 ⇓P P 12 57 09.3 +0.3
baz=33,SNR=12
HEC **Hector,Ludlow** 33.09 115 ⇑P P 12 57 08.9 -0.2
baz=33
V12A **Nelson** 33.14 113 ⇓P P 12 57 10.1 +0.6
baz=33,SNR=23
CIS **Catalina Islan** 33.22 119 ⇓P P 12 57 09.8 -0.4
baz=33
R17A **Hanksville Air** 33.27 105 ⇑P P 12 57 10.8 +0.2
baz=33,SNR=14
P19A **Cripple Cowboy** 33.33 102 ⇑P P 12 57 11.2 +0.1
baz=33,SNR=18
N21A **Black Mountain** 33.33 99 ⇑P P 12 57 11.1 -0.1
baz=33,SNR=7.8
O20A **White River Ci** 33.37 100 ⇓P P 12 57 11.6 +0.1
baz=33,SNR=25
M22A **Cedar Creek Ra** 33.39 97 ⇑P P 12 57 11.5 -0.2
baz=33,SNR=8.3
T15A **Red Dirt Ranch** 33.43 108 ⇑P P 12 57 11.6 -0.4
baz=33,SNR=16
W12A **Cal Nev Ari** 33.46 113 ⇑P P 12 57 12.1 -0.2
baz=33
U14A **Mt Trumbull** 33.47 110 ⇑P P 12 57 12.8 +0.4
baz=33,SNR=15
GMRC **Granite Mounta** 33.47 115 ⇑P P 12 57 12.4 0.0
baz=33,SNR=13
V13A **Grand Canyon W** 33.48 112 ⇑P P 12 57 12.6 +0.1
baz=33,SNR=9.1
SCI **San Clemente I** 33.50 120 ⇑P P 12 57 12.6 -0.1
baz=33
MURC **Murrieta** 33.65 118 ⇑P P 12 57 13.7 -0.3
baz=34
R18A **Canyonlands Na** 33.73 104 ⇑P P 12 57 14.7 0.0
baz=34,SNR=6.4
O21A **Pagoda** 33.74 99 ⇑P P 12 57 14.6 -0.1
baz=34,SNR=6.1
P20A **De Beque** 33.74 101 ⇓P P 12 57 14.7 -0.1
baz=34,SNR=7.4
S17A **Black Ridge (B** 33.80 106 ⇑P P 12 57 15.6 +0.3
baz=34,SNR=8.7
ULM **Lac du Bonnet** 33.84 76 P P 12 57 15.8 +0.4
comp=Z,10nm,0.9s,mb4.8,baz=299,slow=9.8,SNR=11
ULM PcP PcP 12 59 54.5 +0.8
comp=Z,2.4nm,0.6s,baz=297,slow=2.3,SNR=2.4
ULM pPcP 13 00 00.3
comp=Z,5.2nm,0.7s,baz=328,slow=3.9,SNR=4.0
ULM ScP ScP 13 03 35.5 -1.0
comp=Z,1.0nm,0.5s,baz=267,slow=5.8,SNR=3.8
ULM **Lac du Bonnet** 33.84 76 *eP* P 12 57 15.5 0.0
comp=Z,44nm,1.1s,mb5.3
ULM *e*pP pP 12 57 22.2 -0.9
N22A **Wattenberg Ran** 33.88 98 ⇓P P 12 57 16.0 +0.1
baz=34,SNR=9.9
T16A **Glen Canyon Da** 33.91 107 ⇓P P 12 57 16.2 -0.1
baz=34
BELC **Belle Mtn.** 33.92 116 ⇓P P 12 57 15.9 -0.4
baz=34,SNR=14
U15A **North Rim** 33.92 109 ⇑P P 12 57 16.5 +0.2
baz=34,SNR=7.6
NEE2 **Needles Airpor** 34.01 113 ⇓P P 12 57 17.2 +0.2
baz=34
PFO **Pinyon Flat Ob** 34.01 117 ⇓P P 12 57 16.8 -0.3
baz=34
PFO **Pinyon Flat Ob** 34.01 117 *eP* P 12 57 16.6 -0.5
V14A **Boquillas Ranc** 34.11 111 ⇑P P 12 57 18.6 +0.7
baz=34,SNR=12
W13A **Hualapai Mount** 34.12 112 ⇓P P 12 57 18.6 +0.6
baz=34,SNR=6.5
R19A **Curley Farm, L** 34.14 104 ⇑P P 12 57 17.6 -0.6
baz=34
Q20A **Ridgley Place,** 34.18 102 ⇓P P 12 57 18.5 -0.1
baz=34,SNR=6.3
S18A **Hurst Farm, Bl** 34.19 105 ⇑P P 12 57 18.3 -0.3
baz=34,SNR=22
IRM **Iron Mountain** 34.22 115 ⇓P P 12 57 19.0 +0.1
baz=34,SNR=26
TIXI **Tiksi** 34.23 327 *c iP* P 12 57 17.7 -0.9
TIXI pmax pmax
comp=Z,52nm,0.8s,mb5.5
TIXI MLR MLR
comp=Z,1μm,13.0s,MS4.9
TIXI **Tiksi** 34.23 327 *eP* P 12 57 18.2 -0.4
P21A **Newcastle** 34.24 100 ⇓P P 12 57 19.1 0.0
baz=34,SNR=13
ALE **Alert** 34.42 13 P P 12 57 20.0 -0.2
comp=Z,513nm,0.8s,mb6.5,SNR=56
W14A **Seligman** 34.44 111 ⇑P P 12 57 21.3 +0.4
baz=34,SNR=9.9
V15A **Kaibab Nationa** 34.45 110 ⇓P P 12 57 21.3 +0.4
baz=34,SNR=18
BC3 **Big Chuckw Mtn** 34.47 116 ⇑P P 12 57 21.0 -0.1
baz=34,SNR=7.8
X13A **Yucca** 34.54 113 ⇓P P 12 57 21.8 +0.1
baz=34,SNR=11
MONP **Monument Peak** 34.60 118 ⇑P P 12 57 22.5 +0.2
baz=34,SNR=6.0
S19A **Harvey Farm, M** 34.61 104 ⇑P P 12 57 22.2 -0.1
baz=34,SNR=7.3
PDMCI **Parker Dam,Lak** 34.62 113 ⇓P P 12 57 22.0 -0.3
baz=34
U17A **Shonto** 34.65 107 ⇑P P 12 57 22.5 -0.1
baz=34,SNR=5.9
BAR **Barrett** 34.65 118 *eP* P 12 57 22.1 -0.5
Q21A **Lamborn Mesa,** 34.66 101 ⇓P P 12 57 22.1 -0.6
baz=34
T18A **Mexican Hat** 34.66 106 ⇑P P 12 57 22.6 -0.2
baz=34,SNR=20
R20A **Redvale** 34.69 103 ⇑P P 12 57 23.0 0.0
baz=34,SNR=13
U16A **Tuba City** 34.75 108 ⇓P P 12 57 23.6 +0.2
baz=35,SNR=10
Y12C **Blythe** 34.86 114 ⇑P P 12 57 24.6 +0.2
baz=35,SNR=13
SWSC **Sam W. Stewart** 34.87 117 ⇓P P 12 57 24.3 -0.3
baz=35
W15A **Williams** 34.89 110 ⇓P P 12 57 25.1 +0.4
baz=35,SNR=9.1
AGMN **Agassiz Refuge** 34.95 79 *eP* P 12 57 25.3 +0.2
AGMN *e*pP pP 12 57 31.9 -0.9
Q22A **Crested Butte,** 35.00 100 ⇓P P 12 57 26.1 +0.4
baz=35,SNR=5.8
R21A **Cimarron** 35.01 102 ⇑P P 12 57 25.9 +0.2
baz=35
ISCO **Idaho Springs** 35.04 98 *eP* P 12 57 26.5 +0.5
ISCO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ISCO **Idaho Springs** 35.04 98 *eP* P 12 57 26.4 +0.4
comp=Z,10nm,1.0s,mb4.7
WUAZ **Wupatki** 35.10 109 ⇑P P 12 57 26.7 +0.2
baz=35
WUAZ **Wupatki** 35.10 109 *eP* P 12 57 27.1 +0.6
comp=Z,28nm,1.2s,mb5.1
X14A **Yava** 35.12 112 ⇓P P 12 57 27.1 +0.4
baz=35,SNR=18
Y13A **Salome** 35.16 114 ⇑P P 12 57 27.1 +0.1
baz=35
U18A **Rough Rock, Ch** 35.20 106 ⇑P P 12 57 27.2 -0.2
baz=35
GLA **Glamis** 35.26 116 ⇑P P 12 57 28.1 +0.2
baz=35,SNR=6.2
GLA **Glamis** 35.26 116 *eP* P 12 57 28.1 +0.1
V17A **Tonalea, Kykot** 35.32 108 ⇑P P 12 57 29.1 +0.7
baz=35,SNR=21
W16A **Flagstaff** 35.34 110 ⇓P P 12 57 29.4 +0.8
baz=35,SNR=7.7
MVCO **Mesa Verde** 35.35 104 ⇓P P 12 57 28.8 +0.2
baz=35,SNR=7.8
MVCO **Mesa Verde** 35.35 104 *eP* P 12 57 28.2 -0.4
comp=Z,17nm,1.1s,mb4.9
S21A **Coal Bank Pass** 35.39 103 ⇑P P 12 57 29.8 +0.8
baz=35,SNR=6.9
X15A **Humboldt** 35.44 111 ⇓P P 12 57 29.9 +0.4
baz=35,SNR=10
Y14A **Wickenburg** 35.48 112 ⇓P P 12 57 29.9 +0.1
baz=35,SNR=12
U19A **Dine' College,** 35.65 106 ⇓P P 12 57 31.0 -0.2
baz=36
V18A **Ganado** 35.70 107 ⇑P P 12 57 31.6 -0.1
baz=36,SNR=7.6
Z13A **Yuma Proving G** 35.73 114 ⇓P P 12 57 32.0 +0.1
baz=36,SNR=9.2
W17A **Winslow** 35.78 109 ⇑P P 12 57 32.4 0.0
baz=36
Y15A **Casa Rosa Ranc** 35.81 112 ⇑P P 12 57 33.1 +0.4
baz=36,SNR=14
X16A **Lo Mia Camp, P** 35.91 110 ⇑P P 12 57 34.4 +0.9
baz=36,SNR=24

U20A	Newcomb	35.95	105	⇓P		P	12 57 34.1 +0.3
	baz=36						
Z14A	Wintersburg	35.96	113	⇓P		P	12 57 34.1 +0.2
	baz=36						
113A	Mohawk Valley,	36.02	115	⇓P		P	12 57 34.3 -0.2
	baz=36						
V19A	Window Rock	36.17	106	⇑P		P	12 57 35.8 0.0
	baz=36						
OGNE	Ogallala	36.22	93	eP		P	12 57 36.3 +0.2
	comp=Z,41nm,0.9s,mb5.4						
W18A	Petrified Fore	36.26	108	⇓P		P	12 57 36.3 -0.2
	baz=36						
X17A	Forest Lakes	36.30	110	⇓P		P	12 57 36.3 -0.6
	baz=36						
Y16A	Circle Bar Ran	36.31	111	⇑P		P	12 57 37.7 +0.8
	baz=36,SNR=6.9						
T22A	Edith	36.35	103	⇑P		P	12 57 37.8 +0.5
	baz=36,SNR=16						
V20A	Brimhall	36.42	106	⇑P		P	12 57 38.1 +0.3
	baz=36,SNR=6.3						
W19A	Sanders	36.45	107	⇑P		P	12 57 38.4 +0.3
	baz=36						
114A	Black Gap (USA	36.48	114	⇑P		P	12 57 38.5 +0.1
	baz=36						
SDCO	Great Sand Dun	36.57	100	eP		P	12 57 39.9 +0.8
X18A	Snowflake	36.60	109	⇓P		P	12 57 39.7 +0.3
	baz=36,SNR=5.8						
Z16A	Peralta Trail,	36.76	111	⇓P		P	12 57 41.0 +0.3
	baz=37						
Y17A	Roosevelt	36.78	110	⇓P		P	12 57 41.5 +0.6
	baz=37,SNR=5.4						
115A	Sonoran Desert	36.85	113	⇓P		P	12 57 41.9 +0.3
	baz=37						
V21A	Milan	36.85	105	⇓P		P	12 57 42.1 +0.5
	baz=37						
W20A	Ramah	36.91	106	⇑P		P	12 57 42.3 +0.3
	baz=37,SNR=20						
X19A	St. Johns	37.02	108	⇓P		P	12 57 43.4 +0.4
	baz=37						
Y18A	Canyon Day Jun	37.14	109	⇓P		P	12 57 44.8 +0.8
	baz=37,SNR=9.7						
214A	Organ Pipe Nat	37.15	114	⇑P		P	12 57 44.4 +0.3
	baz=37						
116A	Eloy	37.23	112	⇑P		P	12 57 44.8 +0.1
	baz=37						
Z17A	San Carlos Hig	37.29	110	⇑P		P	12 57 45.5 +0.3
	baz=37						
X20A	Quemado	37.35	107	⇓P		P	12 57 46.2 +0.4
	baz=37,SNR=11						
ECSD	EROS Data Cent	37.36	85	eP		P	12 57 45.1 -0.7
W21A	San Fidel	37.37	105	⇑P		P	12 57 46.0 0.0
	baz=37						
Y19A	Nutrioso	37.41	108	⇑P		P	12 57 47.3 +1.0
	baz=37,SNR=13						
EYMN	Ely	37.52	76	eP		P	12 57 46.9 -0.1
	comp=Z,69nm,0.9s,mb5.4						
YAK	Yakutsk	37.55	311	c iP		P	12 57 45.9 -1.3
YAK				e*PP		pP	12 57 52.2 -2.7
YAK				ePPP			12 59 19.7
YAK				e			13 00 11.0
YAK				eSS		SS	13 06 04.3 -15
YAK				e			13 08 03.6
YAK				pmax		pmax	
	comp=Z,100nm,0.8s,mb5.6						
YAK				pmax		pmax	
	comp=E,36nm,1.1s						
YAK				pmax		pmax	
	comp=N,11nm,1.0s						
YAK				MLR		MLR	
	comp=E,1μm,17.0s						
YAK				MLR		MLR	
	comp=Z,2μm,17.0s,MS4.9						
YAK	Yakutsk	37.55	311	eP		P	12 57 45.8 -1.3
	comp=Z,273nm,0.8s,mb6.0						
Z18A	Geronimo	37.68	110	⇑P		P	12 57 48.9 +0.3
	baz=38						
117A	Oracle	37.72	111	⇑P		P	12 57 49.2 +0.3
	baz=38,SNR=11						
X21A	Alamocita Cree	37.81	106	⇓P		P	12 57 50.3 +0.7
	baz=38,SNR=59						
W22A	Albuquerque	37.82	105	⇑P		P	12 57 50.4 +0.7
	baz=38						
TUC	Tucson	37.90	112	eP		P	12 57 50.5 +0.1
TUC				pmax		pmax	
	comp=Z,21nm,1.4s,mb4.7						
TUC	Tucson	37.90	112	eP		P	12 57 50.5 0.0
	comp=Z,21nm,1.4s,mb4.7						
Y20A	Horse Springs,	37.91	107	⇑P		P	12 57 51.3 +0.8
	baz=38,SNR=11						
Z19A	T-Link Ranch,	37.92	109	⇑P		P	12 57 51.2 +0.7
	baz=38						
118A	Homack Ranch,	38.06	110	⇓P		P	12 57 52.4 +0.6
	baz=38,SNR=5.8						
ANMO	Albuquerque	38.13	104	P		P	12 57 51.1 -1.2
	comp=Z,2.1nm,0.6s,mb4.0,baz=326,slow=9.9,SNR=8.4						
ANMO				pPcP			13 00 14.5
	comp=Z,5.2nm,0.9s,baz=312,slow=2.4,SNR=6.8						
ANMO				ScP		ScP	13 03 53.7 +1.3
	comp=Z,4.7nm,1.1s,baz=308,slow=2.2,SNR=6.3						
W23A	Werner Place,	38.14	104	⇑P		P	12 57 53.1 +0.7
	baz=38,SNR=5.8						
LAZ	Ladron	38.18	106	eP		P	12 57 53.4 +0.6
	comp=Z,10nm,1.3s,mb4.4						
Y21A	Point of Rocks	38.20	107	⇑P		P	12 57 53.7 +0.8
	baz=38,SNR=11						
119A	Ashpeak Ranch,	38.31	110	⇑P		P	12 57 54.7 +0.8
	baz=38,SNR=7.0						
217A	Green Valley	38.31	112	⇑P		P	12 57 54.9 +1.0
	baz=38,SNR=6.0						
Z20A	Nine Sixteen R	38.41	109	⇑P		P	12 57 55.3 +0.6
	baz=38,SNR=17						
LENM	Lemitar	38.45	106	eP		P	12 57 55.6 +0.6
LPM	Los Pinos Moun	38.52	105	eP		P	12 57 56.4 +0.8
218A	Dragoon	38.55	111	⇑P		P	12 57 56.3 +0.5
	baz=38						
X23A	Hourglass Bar	38.55	105	⇑P		P	12 57 56.1 +0.2
	baz=38						
Y22A	Socorro	38.63	106	⇑P		P	12 57 57.2 +0.7
	baz=38,SNR=10						
BNM	Barren Site	38.65	105	eP		P	12 57 56.7 0.0
	comp=Z,12nm,1.0s,mb4.6						
Z21A	St. Cloud Mine	38.74	107	⇓P		P	12 57 58.3 +0.8
	baz=39,SNR=10						
120A	U Bar Ranch, L	38.83	109	⇑P		P	12 57 58.7 +0.4
	baz=39						
219A	White Tail Can	38.94	110	⇓P		P	12 57 59.7 +0.6
	baz=39,SNR=9.8						
CBKS	Cedar Bluff	38.97	94	eP		P	12 57 59.6 +0.2
CBKS				e*PP		pP	12 58 06.8 -0.3
CBKS				pmax		pmax	
	comp=Z,45nm,1.0s,mb5.2						
CBKS	Cedar Bluff	38.97	94	eP		P	12 57 59.6 +0.2
	comp=Z,45nm,1.0s,mb5.2						
CBKS				epP		pP	12 58 06.8 -0.3
318A	Bisbee	39.00	112	⇑P		P	12 58 00.0 +0.3
	baz=39,SNR=10						
W25A	X Bar L Ranch,	39.00	102	⇑P		P	12 58 00.2 +0.5
	baz=39,SNR=22						
Y23A	Lovelace Mesa,	39.12	105	⇓P		P	12 58 01.6 +0.9
	baz=39,SNR=20						
Z22A	Elephant Butte	39.16	107	⇑P		P	12 58 01.5 +0.6
	baz=39,SNR=30						
121A	Cookes Peak, D	39.29	108	⇑P		P	12 58 02.8 +0.7
	baz=39,SNR=8.6						
220A	Playas Peak, P	39.39	110	⇓P		P	12 58 03.4 +0.5
	baz=39,SNR=8.9						
YSS	Yuzh-Sakhalins	39.41	284	eP		P	12 58 02.0 -1.0
YSS				e		pP	12 58 09.4 -1.3
YSS				pmax		pmax	
	comp=Z,20nm,0.8s,mb4.9						
YSS				MLR		MLR	
	comp=E,1μm,20.0s						
YSS				MLR		MLR	
	comp=Z,800nm,20.0s,MS4.5						
YSS	Yuzh-Sakhalins	39.41	284	eP		P	12 58 02.1 -0.9
	comp=Z,25nm,0.8s,mb5.0						
X25A	Clemmons Ranch	39.41	103	⇑P		P	12 58 03.8 +0.7
	baz=39,SNR=6.3						
319A	Douglas	39.42	111	⇑P		P	12 58 03.8 +0.6
	baz=39						
Y24A	Capitan	39.46	104	⇑P		P	12 58 04.3 +0.8
	baz=39,SNR=16						
122A	Conniff Cattle	39.57	107	⇓P		P	12 58 05.6 +1.2
	baz=39,SNR=6.2						
221A	Mesquite Ranch	39.70	109	⇑P		P	12 58 06.5 +0.9
	baz=40,SNR=5.9						
320A	Kipp Ranch, An	39.84	110	⇑P		P	12 58 07.3 +0.6
	baz=40,SNR=12						
X26A	CR and CF Fran	39.86	102	⇓P		P	12 58 07.2 +0.4
	baz=40,SNR=16						
Y25A	Mesa, Roswell	39.86	104	⇓P		P	12 58 07.2 +0.4
	baz=40,SNR=31						
COWI	Conover	39.92	77	eP		P	12 58 09.4 +2.2
	comp=Z,15nm,0.8s,mb4.8						
222A	Williams Famil	39.98	108	⇑P		P	12 58 08.4 +0.6
	baz=40,SNR=8.5						
X27A	F and S Farms,	40.17	101	⇓P		P	12 58 09.7 +0.3
	baz=40,SNR=7.2						
Y26A	Elida	40.32	103	⇑P		P	12 58 11.0 +0.3
	baz=40						
Z25A	Roswell	40.34	104	⇑P		P	12 58 11.2 +0.4
	baz=40,SNR=5.6						
124A	Stringfield Ra	40.39	106	⇓P		P	12 58 11.5 +0.3
	baz=40,SNR=15						
223A	Chaparral, Ant	40.41	107	⇑P		P	12 58 11.5 +0.1
	baz=40						
SCIA	State Center	40.44	85	eP		P	12 58 09.3 -2.3
	comp=Z,28nm,0.9s,mb5.0						
KSU1	Kansas State U	40.50	91	eP		P	12 58 10.3 -1.7
	comp=Z,22nm,0.6s,mb5.1						
Y27A	Causey	40.71	102	⇑P		P	12 58 14.1 +0.2
	baz=41,SNR=30						
Z26A	Caprock	40.74	104	⇑P		P	12 58 14.3 +0.2
	baz=41,SNR=19						
AMTX	Amarillo	40.76	100	eP		P	12 58 14.2 -0.1
	comp=Z,56nm,1.1s,mb5.1						
224A	Corundas Mount	40.84	106	⇓P		P	12 58 15.1 +0.2
	baz=41,SNR=27						
125A	Gardner Draw,	40.84	105	⇑P		P	12 58 15.3 +0.3
	baz=41,SNR=11						
MSTX	Muleshoe	40.86	102	⇓P		P	12 58 14.9 -0.2
	baz=41,SNR=7.9						
CPRX	Cap Rock	40.98	104	eP		P	12 58 14.5 -1.6
	comp=Z,13nm,1.0s,mb4.5						
Z27A	Tatum	41.12	103	⇓P		P	12 58 16.8 -0.4
	baz=41,SNR=10						
225A	Deer Hill, Car	41.18	106	⇑P		P	12 58 18.0 +0.2
	baz=41,SNR=5.9						
126A	Clayton Basin,	41.20	104	⇑P		P	12 58 18.0 +0.1
	baz=41						
MNTX	Cornudas Mount	41.20	107	eP		P	12 58 18.3 +0.3
	comp=Z,20nm,1.0s,mb4.7						
ASAJ	Asahikawa	41.31	281	P		P	12 58 18.2 -0.5
	comp=Z,82nm,0.8s,mb5.4,baz=34,slow=4.3,SNR=86						
324A	Moseley Ranch,	41.35	107	⇑P		P	12 58 19.1 0.0
	baz=41,SNR=9.7						
GDL2	Guadalupe Moun	41.36	105	eP		P	12 58 19.7 +0.5
	comp=Z,6.5nm,0.9s,mb4.3						
JFWS	Jewell Farm	41.39	82	eP		P	12 58 18.6 -0.8
JFWS				pmax		pmax	
	comp=Z,40nm,0.9s,mb5.0						
JFWS	Jewell Farm	41.39	82	eP		P	12 58 18.6 -0.8
	comp=Z,40nm,0.9s,mb5.0						
CLNB	Carlsbad	41.57	105	eP		P	12 58 21.5 +0.5
	comp=Z,13nm,1.3s,mb4.4						
226A	Malaga, Loving	41.60	105	⇓P		P	12 58 21.3 +0.1
	baz=42,SNR=14						
325A	Bean Ranch, Si	41.68	106	⇓P		P	12 58 21.8 0.0
	baz=42,SNR=26						
227A	Bennet, Jal	42.08	104	⇓P		P	12 58 25.2 +0.1
	baz=42,SNR=8.7						
425A	Indio Mountain	42.13	107	⇓P		P	12 58 26.0 +0.5
	baz=42,SNR=24						
326A	Caldwell Ranch	42.25	106	⇓P		P	12 58 26.6 +0.1
	baz=42,SNR=29						
CLNS	Chul'man	42.38	306	eP		P	12 58 24.2 -3.1
CLNS				pmax		pmax	
	comp=Z,18nm,0.8s,mb4.8						
CLNS				pmax		pmax	
	comp=N,7.0nm,0.7s						
CLNS				MLR		MLR	
	comp=Z,2μm,14.0s,MS5.1						
CLNS				MLR		MLR	
	comp=N,689nm,12.0s						
CLNS				MLR		MLR	
	comp=E,650nm,19.0s						
ERM	Erimo	42.41	278	eP		P	12 58 26.9 -0.8
ERM				pmax		pmax	
	comp=Z,111nm,1.0s,mb5.5						
ERM	Erimo	42.41	278	eP		P	12 58 26.9 -0.8
	comp=Z,111nm,1.0s,mb5.5						
WMOK	Wichita Mounta	42.46	97	eP		P	12 58 28.1 -0.1
WMOK				pmax		pmax	
	comp=Z,28nm,0.8s,mb4.9						
WMOK	Wichita Mounta	42.46	97	eP		P	12 58 28.1 0.0
	comp=Z,28nm,0.8s,mb4.9						
HABR	Khabarovsk	42.52	291	c eP		P	12 58 26.7 -1.9
HABR				e			13 00 05.4
HABR				e			13 00 18.7
HABR				ePPP			13 00 37.3
HABR				eS		S	13 04 47.2 -1.8
HABR				eSS		SS	13 07 58.3 -0.2
HABR				eSSS			13 08 32.1
HABR				pmax		pmax	
	comp=Z,67nm,1.0s,mb5.3						
HABR				pmax		pmax	
	comp=E,37nm,1.0s						
HABR				pmax		pmax	
	comp=N,23nm,0.8s						
HABR				MLR		MLR	
	comp=Z,725nm,17.0s,MS4.6						
426A	McDonald Obser	42.73	106	⇑P		P	12 58 30.7 +0.2
	baz=43,SNR=12						
328A	Wristen Ranch,	42.82	104	⇓P		P	12 58 30.9 -0.3
	baz=43						
427A	Hayter Ranch,	42.92	105	⇓P		P	12 58 32.2 +0.2
	baz=43,SNR=5.9						
526A	Mary Lane Ranc	43.17	107	⇑P		P	12 58 34.5 +0.5
	baz=43,SNR=15						
527A	Woodward Ranch	43.36	106	⇑P		P	12 58 35.4 -0.1
	baz=43,SNR=12						
428A	Kincaid Ranch,	43.40	105	⇑P		P	12 58 36.1 +0.2
	baz=43,SNR=26						
HDIL	Hopedale	43.52	83	eP		P	12 58 35.8 -0.9
	comp=Z,106nm,0.8s,mb5.6						
SUMG	Summit	43.55	23	eP		P	12 58 37.0 +0.4
	comp=Z,70nm,0.9s,mb5.4						
626A	Big Bend Ranch	43.55	107	⇓P		P	12 58 37.4 +0.3
	baz=43,SNR=14						
KLR	Kul'dur	43.74	294	i P		P	12 58 33.8 -4.5
KLR				e		pP	12 58 41.2 -5.0
KLR				pmax		pmax	
	comp=E,62nm,1.6s						
KLR				pmax		pmax	
	comp=Z,140nm,1.6s,mb5.4						
DAG	Danmarks Havn	43.82	14	⇓iP		P	12 58 38.5 -0.2
DAG				i		pP	12 58 44.0 -2.5
DAG				pmax		pmax	
	comp=Z,76nm,0.9s,mb5.4						
DAG	Danmarks Havn	43.82	14	⇓iP		P	12 58 38.5 -0.2
	comp=Z,76nm,0.9s,mb5.4						
DAG				i		pP	12 58 44.0 -2.5
TXAR	Lajitas Array	43.97	107	P		P	12 58 40.9 +0.4
	comp=Z,12nm,0.8s,mb4.7,baz=316,slow=5.8,SNR=127						
TXAR				pPcP			13 00 32.7
	comp=Z,3.4nm,0.8s,baz=342,slow=0.2,SNR=4.4						
TXAR				ScP		ScP	13 04 15.1 -0.5
	comp=Z,2.2nm,1.1s,baz=318,slow=1.2,SNR=4.5						
TXAR	Lajitas Array	43.97	107	P		P	12 58 40.9 +0.4
TXAR							13 00 32.7
TXAR	Lajitas Array	43.97	107	P		P	12 58 40.9 +0.4
TXAR				pPcP			13 00 32.7
TXAR				ScP		ScP	13 04 15.1 -0.5
627A	Terlingua Ranc	44.03	107	⇑P		P	12 58 40.9 0.0
	baz=44,SNR=21						
SFJD	Kangerlussuaq	44.03	34	P		P	12 58 40.9 +0.4
	comp=Z,38nm,0.8s,mb5.2,baz=306,slow=8.8,SNR=18						
SFJD	Kangerlussuaq	44.03	34	⇑iP		P	12 58 40.9 +0.4
SFJD				pmax		pmax	
	comp=Z,50nm,1.0s,mb5.2						
SFJD	Kangerlussuaq	44.03	34	eP		P	12 58 39.9 -0.6
	comp=Z,50nm,0.7s,mb5.3						
SFJD	Kangerlussuaq	44.03	34	⇑iP		P	12 58 40.9 +0.4
	comp=Z,50nm,1.0s,mb5.2						
SFJD	Kangerlussuaq	44.03	34	i P		PP	13 00 36.2 +13
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	44.20	88	eP		P	12 58 40.5 -1.7
CCM				pmax		pmax	
	comp=Z,27nm,0.8s,mb5.0						
CCM	Cathedral Cave	44.20	88	eP		P	12 58 40.5 -1.7
	comp=Z,27nm,0.8s,mb5.0						
628A	Black Gap, Mar	44.27	106	⇓P		P	12 58 42.8 0.0
	baz=44,SNR=26						
KBS	Kingsbay	44.43	4	c iP		P	12 58 44.6 +1.1
KBS				pmax		pmax	
	comp=Z,48nm,1.0s,mb5.2						
KBS	Kingsbay	44.43	4	eP		P	12 58 43.4 -0.1
	comp=Z,32nm,0.8s,mb5.1						
FVM	French Village	44.70	87	eP		P	12 58 44.4 -1.8
FVM				pmax		pmax	
	comp=Z,45nm,1.1s,mb5.2						
FVM	French Village	44.70	87	eP		P	12 58 44.4 -1.8
	comp=Z,45nm,1.1s,mb5.2						
JCT	Junction City	45.14	102	eP		P	12 58 49.1 -0.7
JCT				e*PP		pP	12 58 56.4 -1.2
JCT				pmax		pmax	
	comp=Z,60nm,0.9s,mb5.4						
JCT	Junction City	45.14	102	eP		P	12 58 49.1 -0.7
	comp=Z,60nm,0.9s,mb5.4						
JCT				epP		pP	12 58 56.4 -1.3
SPB4	Spitsbergen Ar	45.32	3	eP		P	12 58 50.5 -0.1
SPITS	Spitsbergen Ar	45.32	3	P		P	12 58 50.4 -0.3
	comp=Z,41nm,0.8s,mb5.3,baz=31,slow=5.0,SNR=48						
SPITS				LR		LR	13 19 44.1
	comp=Z,555nm,18.3s,MS4.5,baz=355,slow=39						
OLIL	Olney	45.45	84	eP		P	12 58 51.5 -0.7
	comp=Z,70nm,0.8s,mb5.5						
OLIL				epP		pP	12 58 58.8 -1.2
MIAR	Mount Ida	45.47	93	eP		P	12 58 51.8 -0.5
MIAR				pmax		pmax	
	comp=Z,64nm,1.0s,mb5.4						
MIAR	Mount Ida	45.47	93	eP		P	12 58 51.8 -0.6
	comp=Z,64nm,1.0s,mb5.4						
SCHQ	Schefferville	45.57	54	P		P	12 58 52.2 -0.7
	comp=Z,9.8nm,0.5s,mb5.0,baz=312,slow=8.3,SNR=27						
SCHQ	Schefferville	45.57	54	eP		P	12 58 52.3 -0.5
	comp=Z,32nm,1.1s,mb5.2						
PARMO	Parma	46.03	88	P		P	12 58 55.3 -1.5
USIN	University of	46.24	85	eP		P	12 58 57.7 -0.6
	comp=Z,37nm,0.8s,mb5.4						
BOD	Bodaibo	46.43	312	⇓iP		P	12 58 58.5 -1.1
NATX	Nacogdoches	46.96	96	eP		P	12 59 02.8 -1.4
	comp=Z,85nm,1.0s,mb5.6						
NATX				epP		pP	12 59 12.1 +0.1
ACSO	Alum Creek Sta	47.19	79	eP		P	12 59 05.2 -0.6
	comp=Z,39nm,0.8s,mb5.4						
WVT	Waverly	47.48	87	eP		P	12 59 07.1 -1.0
WVT				e*PP		pP	12 59 14.9 -1.1
WVT				pmax		pmax	
	comp=Z,19nm,0.8s,mb5.1						
WVT	Waverly	47.48	87	eP		P	12 59 07.1 -1.0
	comp=Z,19nm,0.8s,mb5.1						
WVT				epP		pP	12 59 14.8 -1.1
ERPA	Erie	47.49	75	eP		P	12 59 08.5 +0.4
	comp=Z,71nm,0.8s,mb5.7						
HKT	Hockley	47.71	99	eP		P	12 59 10.5 +0.6
HKT				pmax		pmax	
	comp=Z,39nm,1.1s,mb5.3						
HKT	Hockley	47.71	99	eP		P	12 59 10.5 +0.6
	comp=Z,39nm,1.1s,mb5.3						
OXF	Oxford	47.79	89	eP		P	12 59 09.8 -0.8
OXF				pmax		pmax	
	comp=Z,128nm,0.9s,mb6.0						
OXF	Oxford	47.79	89	eP		P	12 59 09.8 -0.8
	comp=Z,128nm,0.9s,mb6.0						
MDJ	Mudanjiang	47.90	290	P		P	12 59 09.8 -1.4
MDJ				ScP		ScP	13 04 33.4 +1.7
MDJ				PcS		PcS	13 04 34.9 +0.1
MDJ				S		S	13 06 06.0 -0.7
MDJ				ScS		ScS	13 09 03.7 +1.4
MDJ				pmax		pmax	
	comp=Z,24nm,1.1s,mb5.1						
MDJ				pmax		pmax	
	comp=Z,46nm,3.8s						
MDJ				LR		LR	
	comp=N,900nm,25.9s,MS4.7						
MDJ				LR		LR	
	comp=E,460nm,24.3s,MS4.7						
MDJ				LR		LR	
	comp=Z,550nm,32.9s						
MDJ	Mudanjiang	47.90	290	eP		P	12 59 09.9 -1.3
	comp=Z,32nm,0.9s,mb5.4						
SCO	Scoresbysund	48.53	20	i P		P	12 59 15.6 -0.1
SCO				pmax		pmax	
	comp=Z,12nm,1.0s,mb4.9						
SCO	Scoresbysund	48.53	20	i P		P	12 59 15.6 -0.1
	comp=Z,12nm,1.0s,mb4.9						
MAJO	Matsushiro	48.98	276	eP		P	12 59 18.7 -1.0
MAJO				pmax		pmax	
	comp=Z,52nm,0.8s,mb5.6						
MAJO	Matsushiro	48.98	276	eP		P	12 59 18.7 -1.0
	comp=Z,52nm,0.8s,mb5.6						
MAT	Matsushiro	48.98	276	P		P	12 59 19.2 -0.5
MJAR	Matsushiro Arr	48.98	276	P		P	12 59 19.6 -0.1
	comp=Z,10nm,0.7s,mb5.0,baz=38,slow=6.9,SNR=28						
SWET	Sewanee	49.20	86	eP		P	12 59 20.1 -1.2
NCB	Newcomb	49.23	69	eP		P	12 59 20.4 -1.0
	comp=Z,71nm,1.4s,mb5.5						
MCWV	Mont Chateau	49.30	77	eP		P	12 59 21.1 -1.0
	comp=Z,48nm,0.8s,mb5.6						
BINY	Binghamton	49.55	72	eP		P	12 59 23.0 -0.9
	comp=Z,46nm,0.9s,mb5.5						
HIA	Hailar	49.61	301	eP		P	12 59 23.5 -0.8
HIA				pmax		pmax	
	comp=Z,52nm,1.3s						
HIA	Hailar	49.61	301	eP		P	12 59 23.5 -0.9
	comp=Z,52nm,1.3s,mb5.4						
SSPA	Standing Stone	49.65	75	eP		P	12 59 23.8 -1.0
	comp=Z,46nm,0.9s,mb5.5						
LRAL	Lakeview Retre	50.23	89	eP		P	12 59 27.8 -1.4
	comp=Z,40nm,1.4s,mb5.2						
CIT	Chita	50.54	307	eP		P	12 59 32.2 +0.9
CIT				e		pP	12 59 39.2 0.0
CIT				pmax		pmax	
	comp=Z,204nm,1.8s,mb5.8						
ELN	Prospectdale	50.56	80	eP		P	12 59 30.9 -0.8
CN2	Changchun	50.60	292	eP		P	12 59 30.8 -1.1
CN2				pmax		pmax	
	comp=Z,10.0nm,0.9s,mb4.8						
BLA	Blacksburg	50.76	80	eP		P	12 59 34.6 +1.5
BLA				pmax		pmax	
	comp=Z,41nm,0.9s,mb5.4						
BLA	Blacksburg	50.76	80	eP		P	12 59 34.6 +1.4
	comp=Z,41nm,0.9s,mb5.4						
GOGA	Godfrey	51.90	86	eP		P	12 59 40.1 -1.6
GOGA				pmax		pmax	
	comp=Z,33nm,1.1s,mb5.2						
GOGA	Godfrey	51.90	86	eP		P	12 59 40.1 -1.6
	comp=Z,33nm,1.1s,mb5.2						
JSC	Jenkinsville	52.46	83	eP		P	12 59 44.9 -1.0
BORG	Borgarnes	53.53	23	eP		P	12 59 51.9 -1.5
KSRS	Korea Array	53.90	285	P		P	12 59 56.4 -0.1
	comp=Z,12nm,0.8s,mb4.9,baz=40,slow=6.7,SNR=26						
KEV	Kevo	53.94	360	eP		P	12 59 55.6 -0.7
KEV				pmax		pmax	
	comp=Z,34nm,0.7s,mb5.4						
KEV	Kevo	53.94	360	ep		P	12 59 55.6 -0.7
	comp=Z,34nm,0.7s,mb5.4	

SONM LR LR 13 26 31.5
comp=Z,2µm,18.4s,MS5.3,baz=73,slow=38
BJT Baijiatuau 58.08 295 *e*P **P 13 00 25.6 -0.7**
BJT pmax pmax
comp=Z,51nm,0.6s
BJT Baijiatuau 58.08 295 *e*P **P 13 00 25.6 -0.7**
comp=Z,51nm,0.6s,mb5.7
HHC Hu-ho-hao-te 59.71 299 ⇑P **P 13 00 38.4 +0.8**
HHC pP pP 13 00 48.5 +2.8
HHC sP sP 13 00 52.5 +3.7
HHC PP PP 13 02 52.0 +2.9
HHC ScP ScP 13 05 22.0 -1.2
HHC PcS PcS 13 05 26.1 -0.3
HHC S **S 13 08 46.0 -0.5**
HHC sS sS 13 09 01.4 +1.6
HHC SS SS 13 12 42.2 +0.4
HHC pmax pmax
comp=Z,81nm,1.1s,mb5.7
HHC pmax pmax
comp=Z,420nm,5.3s
HHC LR LR
comp=N,550nm,17.8s,MS5.1
HHC LR LR
comp=E,1µm,15.9s,MS5.1
HHC LR LR
comp=Z,1µm,15.3s,MS5.2
NVS Novosibirsk 59.82 326⇑*i*P **P 13 00 37.6 -0.6**
NVS *e*PPP 13 04 24.0
NVS *i*S **S 13 08 42.8 -4.8**
NVS pmax pmax
comp=Z,124nm,1.3s,mb5.8
NVS pmax pmax
comp=N,45nm,1.4s
NVS pmax pmax
comp=E,36nm,1.2s
NVS pmax pmax
comp=Z,58nm,2.0s,mb5.3
NVS pmax pmax
comp=N,30nm,2.2s
NVS pmax pmax
comp=E,41nm,2.2s
NVS smax
comp=N,58nm,2.1s
NVS smax
comp=E,65nm,2.5s
ZAA0 Zalesovo Array 60.08 325 *e*P **P 13 00 39.8 -0.2**
ZALV Zalesovo Beam 60.08 325 P **P 13 00 40.4 +0.4**
comp=E,54nm,0.8s,mb5.7,baz=36,slow=7.1,SNR=46
ZALV pP pP 13 00 47.5 -0.6
comp=E,67nm,0.7s,baz=33,slow=6.8,SNR=13
JOF Joensuu 60.76 358 *e*P **P 13 00 43.9 -0.6**
JOF pmax pmax
comp=Z,42nm,0.7s,mb5.7
JOF Joensuu 60.76 358 *e*p **P 13 00 43.9 -0.6**
comp=Z,42nm,0.7s,mb5.7
KAF Kangasniemi 61.62 0 *e*P **P 13 00 49.4 -0.9**
KAF pmax pmax
comp=Z,35nm,0.7s,mb5.6
KAF Kangasniemi 61.62 0 *e*p **P 13 00 49.4 -0.9**
comp=Z,35nm,0.7s,mb5.6
SOKR Solikamsk 61.75 343*c i*P **P 13 00 50.5 -0.7**
SOKR pmax pmax
comp=Z,120nm,1.0s,mb6.0
NB2 NORSAR Subarra 62.05 9 P **P 13 00 53.3 +0.1**
comp=Z,4.7nm,0.7s,mb4.7,baz=352,slow=6.9
NOA NORSAR Array B 62.05 9 P **P 13 00 53.2 0.0**
comp=Z,34nm,0.7s,mb5.6,baz=350,slow=6.8,SNR=115
NAO01 NORSAR Array S 62.22 9 *e*P **P 13 00 54.1 -0.3**
comp=Z,36nm,0.8s,mb5.5
FINES FINESS Array B 62.29 0 P **P 13 00 54.6 -0.2**
comp=Z,35nm,0.7s,mb5.6,baz=5.2,slow=8.4,SNR=53
FINES pP pP 13 01 02.0 -0.9
comp=Z,31nm,0.8s,baz=358,slow=9.7,SNR=14
KLMR Klimovskoe 62.46 353 *e*P **P 13 00 55.3 -0.6**
KLMR pmax pmax
comp=Z,92nm,1.0s,mb5.9
NJ2 Nanjing 62.83 287 *e*P **P 13 00 58.3 -0.6**
NJ2 pP pP 13 01 05.8 -1.2
NJ2 pmax pmax
comp=Z,40nm,0.8s,mb5.6
KONO Kongsberg 63.29 10 *e*P **P 13 01 01.2 -0.3**
KONO pmax pmax
comp=Z,42nm,0.8s,mb5.6
KONO Kongsberg 63.29 10 *e*P **P 13 01 01.1 -0.3**
comp=Z,42nm,0.8s,mb5.6
SVE Sverdlovsk 63.68 340‖*e*P **P 13 01 04.2 +0.1**
SVE *e*S **S 13 09 37.7 +1.4**
SVE pmax pmax
comp=Z,83nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,1µm,22.0s,MS5.0
ARU Arti 64.44 341*c i*P **P 13 01 08.6 -0.5**
ARU *e* 13 01 43.6
ARU S **S 13 09 44.9 -0.8**
ARU pmax pmax
comp=Z,64nm,0.7s,mb5.8
ARU Arti 64.44 341 *e*P **P 13 01 08.4 -0.6**
comp=Z,64nm,0.8s,mb5.7
KURK Kurchatov 64.80 326 P **P 13 01 12.1 +0.5**
comp=Z,26nm,0.7s,mb5.4,baz=31,slow=6.7,SNR=59
KURK pP pP 13 01 19.5 -0.2
comp=Z,24nm,0.7s,baz=30,slow=6.7,SNR=23
KURK PP PP 13 03 27.2 -6.4
comp=Z,8.3nm,0.8s,baz=32,slow=10,SNR=4.2
KURK Kurchatov 64.80 326 P **P 13 01 12.1 +0.5**
KURK *PP pP 13 01 19.5 -0.2
KURK Kurchatov 64.80 326 P **P 13 01 12.1 +0.5**
KURK pP pP 13 01 19.5 -0.2
KURK PP PP 13 03 27.2 -6.4
BRVK Borovoye 65.04 333*c i*P **P 13 01 12.8 -0.3**
BRVK pmax pmax
comp=Z,153nm,1.7s,mb5.8
BRVK Borovoye 65.04 333 *e*P **P 13 01 12.7 -0.4**
comp=Z,62nm,0.8s,mb5.7
BRVK Borovoye 65.04 333 P **P 13 01 13.1 0.0**
SNR=30
BRVK P 13 01 13.1
SNR=30
BVAR Borovoye Array 65.04 333 P **P 13 01 12.9 -0.2**
comp=Z,76nm,0.7s,mb5.8,baz=33,slow=6.6,SNR=363
BVAR pP pP 13 01 20.2 -1.0
comp=Z,67nm,0.7s,baz=46,slow=6.2,SNR=21
TGUH Tegucigalpa,Un 65.15 103 P **P 13 01 14.8 +0.5**
comp=Z,32nm,0.8s,mb5.4
VSU Vasula 65.28 0 *i*P **P 13 01 14.5 -0.1**
VSU pmax pmax
comp=Z,101nm,1.2s,mb5.7
ESK Eskdalemuir 65.80 18 *i*P **P 13 01 18.3 +0.4**
ESK Eskdalemuir 65.80 18 *e*P **P 13 01 17.8 -0.2**
comp=Z,46nm,0.9s,mb5.5
GTA Gaotai 66.33 306 *e*P **P 13 01 21.5 -0.1**
GTA pP pP 13 01 28.4 -1.4
GTA sP sP 13 01 32.4 -0.4
GTA pmax pmax
comp=Z,33nm,1.1s,mb5.3
MUD Monsted U'grnd 66.39 11⇑*i*P **P 13 01 22.2 +0.5**
MUD pmax pmax
comp=Z,34nm,0.9s,mb5.4
MUD Monsted U'grnd 66.39 11⇑*i*P **P 13 01 22.2 +0.5**
comp=Z,34nm,0.9s,mb5.4
MK31 Makanchi Array 67.05 322 *e*P **P 13 01 25.7 -0.4**
MKAR Makanchi Array 67.05 322 P **P 13 01 25.9 -0.2**
comp=Z,40nm,0.7s,mb5.5,baz=46,slow=6.4,SNR=116
MKAR pP pP 13 01 33.1 -1.1
comp=Z,32nm,0.7s,baz=48,slow=7.5,SNR=17
MKAR PP PP 13 03 43.3 -10
comp=Z,5.1nm,0.7s,baz=46,slow=8.8,SNR=4.3
MKAR Makanchi Array 67.05 322 P **P 13 01 25.9 -0.2**
MKAR *PP pP 13 01 33.2 -1.0
MKAR Makanchi Array 67.05 322 P **P 13 01 25.9 -0.2**
MKAR pP pP 13 01 33.1 -1.1
MKAR PP PP 13 03 43.3 -10
LZH Lanzhou 67.17 301 *e*P **P 13 01 27.3 +0.2**
COP Copenhagen 67.46 9⇑*i*P **P 13 01 28.9 +0.4**
COP pmax pmax
comp=Z,24nm,0.8s,mb5.3
COP Copenhagen 67.46 9⇑*i*P **P 13 01 28.9 +0.4**
comp=Z,24nm,0.8s,mb5.3
WMQ Urumqi 67.67 317⇑*i*P **P 13 01 30.9 +0.9**
WMQ pmax pmax
comp=Z,53nm,1.1s,mb5.5
MOS Moscow 67.67 353 *e*P **P 13 01 28.4 -1.5**
MOS *e* 13 01 54.5
MOS *e* 13 03 56.4
MOS pmax pmax
comp=Z,70nm,0.9s,mb5.7

IZAR Zarasai 68.00 0 *e*P **P 13 01 32.5 +0.5**
ISAL Salakas 68.18 0 *e*P **P 13 01 33.6 +0.5**
BSD Bornholm Skovb 68.22 7⇑*i*P **P 13 01 33.5 +0.2**
BSD pmax pmax
comp=Z,41nm,0.8s,mb5.5
BSD Bornholm Skovb 68.22 7 *i*P **P 13 01 33.4 +0.1**
BSD Bornholm Skovb 68.22 7⇑*i*P **P 13 01 33.5 +0.2**
comp=Z,41nm,0.8s,mb5.5
SSLB Suanglung 68.25 280 *e*P **P 13 01 33.3 -0.7**
comp=Z,43nm,0.9s,mb5.5
OBN Obninsk 68.36 354 *i*P **P 13 01 34.2 0.0**
OBN *e**PP pP 13 01 41.9 -0.5
OBN *e* 13 04 04.0
OBN pmax pmax
comp=Z,21nm,0.6s,mb5.3
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.7
OBN Obninsk 68.36 354 *e*P **P 13 01 33.4 -0.8**
comp=Z,21nm,0.4s,mb5.5
IIGN Ignalina 68.40 0 *e*P **P 13 01 34.8 +0.3**
IDID Didziasalis 68.44 0 *e*P **P 13 01 34.8 +0.1**
HLG Helgoland 68.49 12 *e*P **P 13 01 36.0 +1.0**
comp=Z,110nm,1.2s,mb5.8
RGN Rugen 68.66 8 *e*P **P 13 01 37.2 +1.1**
comp=Z,96nm,0.9s,mb5.7
NACGM Naroch 68.85 0 *e* **P 13 01 34.0 -3.3**
BSEG Bad Segeberg 69.00 10 *e*P **P 13 01 39.0 +0.8**
comp=Z,43nm,1.0s,mb5.3
MICGM Minsk 69.25 359‖*e*P **P 13 01 36.0 -3.8**
MNK Minsk 69.25 359‖*e*P **P 13 01 36.0 -3.8**
MNK pmax pmax
comp=Z,17nm,1.0s,mb4.9
WIT Witteveen 69.69 13 *e*P **P 13 01 44.4 +1.9**
comp=Z,124nm,0.3s,mb6.3
SUW Suwalki 69.70 2 *e*P **P 13 01 42.2 -0.3**
SUW Suwalki 69.70 2 *e*P **P 13 01 41.7 -0.8**
comp=Z,94nm,0.8s,mb5.8
SDDR Presa de Saban 69.92 86 *e*P **P 13 01 43.1 -1.3**
comp=Z,28nm,0.8s,mb5.2
GKP Gorka Klasztor 70.20 6 *e*P **P 13 01 46.2 +0.5**
AKTK Aktyubinsk 70.24 339 P **P 13 01 45.7 -0.2**
AKTO Aktyubinsk 70.24 339 P **P 13 01 45.7 -0.2**
comp=Z,37nm,0.8s,mb5.4,baz=22,slow=5.7,SNR=132
IBBN Ibbenburen 70.32 12 *e*P **P 13 01 47.1 +0.7**
comp=Z,47nm,1.0s,mb5.4
NRDL Niedersach Rie 70.40 11 *e*P **P 13 01 47.3 +0.5**
comp=Z,49nm,0.9s,mb5.4
WTSB Winterswijk 70.54 13⇑*i*P **P 13 01 48.2 +0.5**
comp=Z,63nm,0.9s,mb5.5
WTSB Winterswijk 70.54 13 *ex* x 13 01 55.5
comp=Z,56nm,0.9s
WTSB Winterswijk 70.54 13 *ex* x 13 02 02.3
comp=Z,41nm,1.2s
RUE Ruedersdorf 70.75 8 *e*P **P 13 01 49.7 +0.7**
comp=Z,75nm,0.9s,mb5.6
RUE *e*pP pP 13 01 56.9 -0.3
RUE Ruedersdorf 70.75 8 *e*P **P 13 01 49.2 +0.3**
comp=Z,53nm,0.8s,mb5.5
ABKAR Akbulak array 70.98 338 *e*P **P 13 01 50.1 -0.3**
comp=Z,45nm,0.8s,mb5.5
CLZ Clausthal 71.07 11 *e*P **P 13 01 51.9 +1.0**
comp=Z,57nm,1.0s,mb5.5
CLZ Clausthal 71.07 11 *e*P **P 13 01 51.9 +1.0**
CLZ pmax pmax
comp=Z,57nm,1.0s,mb5.5
BUG Bochum--Univer 71.11 13 *e*P **P 13 01 51.5 +0.3**
comp=Z,58nm,0.9s,mb5.5
MENF Mencas 71.27 16 *e*P **P 13 01 52.4 +0.3**
UCC Uccle 71.36 15 P **P 13 01 52.8 +0.1**
CD2 Chengdu 71.43 298 P **P 13 01 53.1 -0.4**
CD2 pP pP 13 02 03.4 +1.7
CD2 sP sP 13 02 07.3 +2.5
CD2 PP PP 13 04 33.6 +2.0
CD2 sS sS 13 11 24.2 +0.6
CD2 SKS 13 11 48.9
CD2 SS SS 13 15 43.6 -0.5
CD2 pmax pmax
comp=Z,300nm,0.8s,mb6.3
CD2 pmax pmax
comp=Z,650nm,5.5s
CD2 LR LR
comp=N,2µm,5.9s
CD2 LR LR
comp=Z,1µm,6.5s
BEBN Eben Emael 71.54 14 P **P 13 01 54.1 +0.2**
comp=Z,17nm,1.2s,mb4.8
HGN Heimansgroeve 71.61 14⇑*i*P **P 13 01 54.3 +0.1**
comp=Z,50nm,1.3s,mb5.3
HGN Heimansgroeve 71.61 14 *ex* x 13 02 01.6
comp=Z,50nm,1.1s
HGN Heimansgroeve 71.61 14 *ex* PcP 13 02 08.0 -5.4
comp=Z,50nm,1.5s
SNF Seneffe 71.63 15 P **P 13 01 54.8 +0.4**
comp=Z,16nm,1.2s,mb4.8
MEM Membach 71.77 14 P **P 13 01 55.3 +0.1**
comp=Z,29nm,1.0s,mb5.2
CLL Collm 71.85 9 *e*P **P 13 01 55.7 +0.1**
comp=Z,29nm,0.9s,mb5.2
CLL Collm 71.85 9⇑*i*P **P 13 01 55.7 +0.1**
CLL *i* pP pP 13 02 03.5 -0.4
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 71.85 9⇑*i*P **P 13 01 55.7 +0.1**
comp=Z,29nm,0.9s,mb5.2
CLL *i* pP pP 13 02 03.5 -0.4
CLL Collm 71.85 9⇑*i*P **P 13 01 55.7 +0.1**
comp=Z,29nm,0.9s,mb5.2
CLL *i* pP pP 13 02 03.5 -0.4
CLL *e* 13 02 07.0
CLL *i* (PcP) PcP 13 02 12.3 -2.1
CLL *e*(PP) 13 04 32.0
BCLA Clavier 71.86 14 P **P 13 01 55.9 +0.1**
comp=Z,17nm,1.2s,mb4.9
UBBA Unterbreizbach 72.04 11 *e*P **P 13 01 56.9 +0.1**
comp=Z,55nm,1.9s,mb5.2
BAIF Baives 72.06 15⇑*i*P **P 13 01 57.5 +0.6**
comp=Z,62nm,0.9s,mb5.2
BAIF Baives 72.06 15⇑*i*P **P 13 01 57.5 +0.6**
BAIF pmax pmax
comp=Z,31nm,0.9s,mb5.2
BAIF Baives 72.06 15⇑*i*P **P 13 01 57.5 +0.6**
comp=Z,31nm,0.9s,mb5.2
VSR Storozhevoye 72.06 352 *e*P **P 13 01 56.3 -0.6**
VSR pmax pmax
comp=Z,50nm,1.0s,mb5.4
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,20nm,1.1s
DOU Dourbes 72.08 15 P **P 13 01 57.4 +0.3**
comp=Z,17nm,1.2s,mb4.8
GIVF Givet 72.10 15⇑*i*P **P 13 01 57.6 +0.4**
comp=Z,84nm,1.0s,mb5.3
GIVF Givet 72.10 15⇑*i*P **P 13 01 57.6 +0.4**
GIVF pmax pmax
comp=Z,42nm,1.0s,mb5.3
GIVF Givet 72.10 15⇑*i*P **P 13 01 57.6 +0.4**
comp=Z,42nm,1.0s,mb5.3
VORD Divnogorie 72.30 352 *e*P **P 13 01 57.5 -0.9**
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.3
VORD pmax pmax
comp=E,80nm,0.7s
BST Brest 72.34 21 *e*P **P 13 01 59.0 +0.4**
BRG Berggiesshubel 72.36 9 *e*P **P 13 01 59.1 +0.4**
comp=Z,34nm,1.0s,mb5.2
BRG Berggiesshubel 72.36 9 *e*P **P 13 01 59.0 +0.3**
comp=Z,34nm,1.0s,mb5.2
BRG *e* pP 13 02 07.7 +0.7
comp=Z,25nm,0.9s
BRG *e* 13 02 18.4
comp=Z,27nm,1.1s
BRG Berggiesshubel 72.36 9 *e*P **P 13 01 59.0 +0.3**
BRG *e* pP 13 02 07.7 +0.8
BRG *e* 13 02 18.4
BRG pmax pmax
comp=Z,20nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,15nm,0.9s,mb4.9
BRG pmax pmax
comp=Z,16nm,1.1s,mb4.9
MOX Moxa 72.38 10⇑*i*P **P 13 01 59.2 +0.4**
comp=Z,94nm,1.4s,mb5.5
MOX Moxa 72.38 10 *e*P **P 13 01 59.2 +0.4**
comp=Z,49nm,0.8s,mb5.5
MOX *e*pP pP 13 02 06.9 -0.1
MOX Moxa 72.38 10⇑*i*P **P 13 01 59.2 +0.4**
MOX pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
TNS Taunus Mts 72.45 12 *e*P **P 13 01 59.8 +0.5**
comp=Z,50nm,0.8s,mb5.5
TNS Taunus Mts 72.45 12 *e*P **P 13 01 59.8 +0.5**
TNS pmax pmax
comp=Z,50nm,0.8s,mb5.5
ROSF Rostrenen 72.46 21⇑*i*P **P 13 01 59.7 +0.3**
comp=Z,34nm,0.9s,mb5.0
ROSF Rostrenen 72.46 21⇑*i*P **P 13 01 59.7 +0.3**
ROSF pmax pmax
comp=Z,17nm,0.9s,mb5.0
ROSF Rostrenen 72.46 21⇑*i*P **P 13 01 59.7 +0.3**
comp=Z,17nm,0.9s,mb5.0
KSP Ksiaz 72.56 7 *e*P **P 13 02 00.5 +0.5**
KSP Ksiaz 72.56 7⇑*e*P **P 13 02 00.3 +0.4**
KSP *e**PP pP 13 02 07.3 -0.8
FLN La Foliniere 72.57 19⇑*i*P **P 13 01 59.9 -0.1**
comp=Z,61nm,0.9s,mb5.2
FLN La Foliniere 72.57 19⇑*i*P **P 13 01 59.9 -0.1**
FLN pmax pmax
comp=Z,31nm,0.9s,mb5.2
FLN La Foliniere 72.57 19⇑*i*P **P 13 01 59.9 -0.1**
comp=Z,31nm,0.9s,mb5.2
WERD Werda 72.64 10 *e*P **P 13 02 00.8 +0.4**
comp=Z,20nm,0.9s,mb5.0
SGMF Saint Gilles 72.68 20⇑*i*P **P 13 02 00.9 +0.3**
comp=Z,75nm,1.0s,mb5.3
SGMF Saint Gilles 72.68 20⇑*i*P **P 13 02 00.9 +0.3**
SGMF pmax pmax
comp=Z,37nm,1.0s,mb5.3
SGMF Saint Gilles 72.68 20⇑*i*P **P 13 02 00.9 +0.3**
comp=Z,37nm,1.0s,mb5.3
TANN Tannenbergstha 72.68 10 *e*P **P 13 02 01.2 +0.5**
comp=Z,24nm,1.1s,mb5.0
TKM2 Tokmak 2 72.69 325 P **P 13 02 01.8 +1.0**
SNR=68
TKM2 Tokmak 2 72.69 325 *e*P **P 13 02 01.3 +0.5**
TKM2 pmax pmax
comp=Z,58nm,0.8s,mb5.6
TKM2 Tokmak 2 72.69 325 *e*P **P 13 02 01.3 +0.5**
comp=Z,58nm,0.8s,mb5.6
WLF Walferdange 72.71 14 P **P 13 02 01.7 +0.8**
comp=Z,27nm,1.7s,mb4.9
WLF Walferdange 72.71 14 *e*P **P 13 02 01.4 +0.6**
comp=Z,92nm,1.7s,mb5.4
WLF Walferdange 72.71 14 *e*P **P 13 02 01.1 +0.3**
WLF pmax pmax
comp=Z,31nm,1.0s,mb5.2
WLF Walferdange 72.71 14 *e*P **P 13 02 01.1 +0.3**
comp=Z,31nm,1.0s,mb5.2
USP Ospenovka 72.72 326 P **P 13 02 01.6 +0.6**
SNR=56
GUNZ Gunzen 72.72 10 *e*P **P 13 02 01.1 +0.2**
comp=Z,27nm,0.9s,mb5.2
LDF La Druitiere 72.79 18⇑*i*P **P 13 02 01.2 -0.1**
comp=Z,58nm,1.1s,mb5.1
LDF La Druitiere 72.79 18⇑*i*P **P 13 02 01.2 -0.1**
LDF pmax pmax
comp=Z,29nm,1.1s,mb5.1
LDF La Druitiere 72.79 18⇑*i*P **P 13 02 01.2 -0.1**
comp=Z,29nm,1.1s,mb5.1
WERN Wernitzgruen 72.80 10 *e*P **P 13 02 02.0 +0.6**
comp=Z,31nm,0.9s,mb5.2
GRR Gorron 72.86 19⇑*i*P **P 13 02 02.0 +0.3**
comp=Z,52nm,0.9s,mb5.2
GRR Gorron 72.86 19⇑*i*P **P 13 02 02.0 +0.3**
GRR pmax pmax
comp=Z,26nm,0.9s,mb5.2
GRR Gorron 72.86 19⇑*i*P **P 13 02 02.0 +0.3**
comp=Z,26nm,0.9s,mb5.2
QUIF Quistinic 72.88 21⇑*i*P **P 13 02 02.2 +0.3**
comp=Z,30nm,0.8s,mb5.0
QUIF Quistinic 72.88 21⇑*i*P **P 13 02 02.2 +0.3**
QUIF pmax pmax
comp=Z,15nm,0.8s,mb5.0
QUIF Quistinic 72.88 21⇑*i*P **P 13 02 02.2 +0.3**
comp=Z,15nm,0.8s,mb5.0
CHMS Chumysh 72.89 325 P **P 13 02 02.8 +0.8**
SNR=39
AKASG Malin Array Be 73.04 358 P **P 13 02 02.0 -0.8**
comp=Z,35nm,0.7s,mb5.4,baz=2.4,slow=6.0,SNR=42
AKBB Malin Array Si 73.04 358 *e*P **P 13 02 01.5 -1.3**
FRU Bishkek 73.08 325⇑*i*P **P 13 02 04.0 +0.9**
FRU pmax pmax
comp=Z,150nm,1.2s,mb5.8
FRU MLR MLR
comp=Z,2µm,16.0s,MS5.4
ULHL Ulahol 73.08 324 P **P 13 02 04.2 +1.0**
SNR=35
KBK Karagaybulak 73.13 325 P **P 13 02 04.5 +1.1**
SNR=44
GRA1 Grafenberg Arr 73.28 11 *e*P **P 13 02 04.8 +0.6**
comp=Z,44nm,0.8s,mb5.4
GRA1 *e*pP pP 13 02 12.5 +0.1
GRF Grafenberg Arr 73.28 11 *e*P **P 13 02 04.8 +0.6**
comp=Z,44nm,0.8s,mb5.4
GRF *e*pP pP 13 02 12.5 +0.1
GRF Grafenberg Arr 73.28 11 *e*P **P 13 02 04.8 +0.6**
GRF *e**PP pP 13 02 12.5 +0.1
GRF pmax pmax
comp=Z,44nm,0.8s,mb5.4
GRF Grafenberg Arr 73.28 11 *e*P **P 13 02 04.8 +0.6**
GRF *e**PP pP 13 02 12.5 +0.1
GRF pmax pmax
comp=Z,44nm,0.8s,mb5.4
AAK Ala-Archa 73.30 325 P **P 13 02 05.1 +0.7**
SNR=44
AAK Ala-Archa 73.30 325 P **P 13 02 05.3 +0.9**
comp=Z,35nm,0.7s,mb5.4,baz=113,slow=2.0,SNR=72
AAK PP PP 13 04 44.5 -2.7
comp=Z,8.1nm,0.8s,baz=295,slow=6.9,SNR=4.5
AAK Ala-Archa 73.30 325*c i*P **P 13 02 05.1 +0.7**
AAK pmax pmax
comp=Z,29nm,0.7s,mb5.3
AAK Ala-Archa 73.30 325 *e*P **P 13 02 05.0 +0.6**
comp=Z,58nm,0.8s,mb5.6
AAK Ala-Archa 73.30 325 P **P 13 02 05.6 +1.2**
SNR=22
AAK P 13 02 05.6
SNR=22
ROTZ Rotzenmuhle 73.30 10 *e*P **P 13 02 05.1 +0.8**
comp=Z,33nm,0.9s,mb5.3
OJC Ojcow 73.38 5 *e*P **P 13 02 05.0 +0.2**
EKS2 Erkin-Say 73.50 326 P **P 13 02 06.5 +1.0**
SNR=51
EKS2 Erkin-Say 73.50 326 *e*P **P 13 02 06.3 +0.8**
comp=Z,67nm,0.9s,mb5.6
KZA Kyzart 73.56 325 P **P 13 02 07.3 +1.3**
SNR=29
LANF Langenberg 73.60 13 *e*P **P 13 02 06.6 +0.5**
GYA Guiyang 73.64 293 P **P 13 02 05.6 -1.1**
GYA pP pP 13 02 13.0 -1.9
GYA PcP PcP 13 02 23.4 +1.0
GYA PP PP 13 04 52.8 +2.2
GYA S S 13 11 34.0 -1.3
GYA SKS 13 12 07.6
GYA SS SS 13 16 21.0 +3.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=N,610nm,20.0s,MS5.0
GYA LR LR
comp=E,540nm,22.1s,MS5.0
GYA LR LR
comp=Z,630nm,21.8s,MS4.9
UCH Uchtor 73.66 325 P **P 13 02 07.8 +1.2**
SNR=16
UCH Uchtor 73.66 325 *e*P **P 13 02 07.5 +0.9**
comp=Z,15nm,0.8s,mb5.0
MEZF Maizieres J'vi 73.70 15⇑*i*P **P 13 02 07.2 +0.5**
comp=Z,54nm,1.0s,mb5.1
MEZF Maizieres J'vi 73.70 15⇑*i*P **P 13 02 07.2 +0.5**
comp=Z,54nm,1.0s,mb5.4
MORC Moravsky Berou 73.70 6 *e*P **P 13 02 06.5 -0.2**
comp=Z,11nm,0.7s,mb4.9
MORC Moravsky Berou 73.70 6⇑*i*P **P 13 02 07.2 +0.5**
LVV L'vov 73.92 2 *e*P **P 13 02 06.8 -1.1**
STU Stuttgart 73.97 12 *e*P **P 13 02 08.7 +0.4**
comp=Z,26nm,0.9s,mb5.2
STU Stuttgart 73.97 12 *e*P **P 13 02 08.4 +0.1**

STU pmax pmax
comp=Z,13nm,0.8s,mb4.9
STU Stuttgart 73.97 12 *eP* **P 13 02 08.4 +0.1**
comp=Z,13nm,0.8s,mb4.9
WET Wettzell 73.98 9 *eP* **P 13 02 09.1 +0.8**
comp=Z,24nm,1.2s,mb5.0
WET Wettzell 73.98 9 *eP* **P 13 02 09.1 +0.8**
WET pmax pmax
comp=Z,24nm,1.2s,mb5.0
AML Almayashu 74.00 326 P **P 13 02 10.1 +1.6**
SNR=56
AML Almayashu 74.00 326 *eP* **P 13 02 09.7 +1.1**
comp=Z,63nm,0.8s,mb5.6
KHC Kasperske Hory 74.06 9 *eP* **P 13 02 09.2 +0.4**
comp=Z,32nm,0.8s,mb5.3
KHC *epP* pP 13 02 15.6 -1.4
KWP Kalwaria Pacla 74.08 3 *eP* **P 13 02 09.4 +0.5**
KWP Kalwaria Pacla 74.08 3 *eP* **P 13 02 09.2 +0.3**
comp=Z,43nm,0.9s,mb5.4
CDF Champ du Feu 74.09 13⇑ *iP* **P 13 02 09.4 +0.4**
comp=Z,62nm,1.0s,mb5.2
CDF Champ du Feu 74.09 13⇑ *iP* **P 13 02 09.4 +0.4**
CDF pmax pmax
comp=Z,31nm,1.0s,mb5.2
CDF Champ du Feu 74.09 13⇑ *iP* **P 13 02 09.4 +0.4**
comp=Z,31nm,1.0s,mb5.2
THEF They Montfort 74.10 14 *eP* **P 13 02 09.6 +0.6**
VRAC Vranov 74.11 7⇓ *iP* **P 13 02 09.8 +0.7**
VRAC Vranov 74.11 7⇓ *iP* **P 13 02 09.8 +0.7**
NIE Niedzica 74.20 4 *eP* **P 13 02 10.2 +0.6**
NIE *e*PP pP 13 02 17.6 -0.3
STHS Stebnicka Huta 74.24 4 *eP* **P 13 02 11.1 +1.3**
STHS *e* pP 13 02 18.8 +0.7
STHS pmax pmax
comp=Z,32nm,0.7s,mb5.4
STHS Stebnicka Huta 74.24 4 *eP* **P 13 02 11.1 +1.3**
comp=Z,32nm,0.7s,mb5.4
STHS *e* pP 13 02 18.8 +0.7
STHS Stebnicka Huta 74.24 4 *eP* **P 13 02 11.1 +1.3**
STHS *epP* pP 13 02 18.8 +0.7
ECH Echery 74.27 14 *eP* **P 13 02 10.2 +0.2**
ECH Echery 74.27 14 *eP* **P 13 02 10.0 0.0**
ECH *e*PP pP 13 02 17.7 -0.5
ECH pmax pmax
comp=Z,27nm,0.8s,mb5.2
ECH Echery 74.27 14 *eP* **P 13 02 10.0 0.0**
comp=Z,27nm,0.8s,mb5.2
ECH *epP* pP 13 02 17.7 -0.6
BFO Black Forest 74.30 13 *eP* **P 13 02 10.6 +0.4**
comp=Z,117nm,2.2s,mb5.4
BFO Black Forest 74.30 13 *eP* **P 13 02 10.6 +0.4**
BFO pmax pmax
comp=Z,117nm,2.2s,mb5.4
GEC2 GERESS Array S 74.35 9 *eP* **P 13 02 10.8 +0.3**
comp=Z,21nm,0.8s,mb5.1
GEC2 GERESS Array S 74.35 9 *eP* **P 13 02 10.8 +0.3**
GEC2 pmax pmax
comp=Z,21nm,0.8s,mb5.1
GERES GERESS Array B 74.35 9 P **P 13 02 10.9 +0.5**
comp=Z,16nm,0.7s,mb5.1,baz=353,slow=4.4,SNR=96
GERES pP pP 13 02 18.2 -0.5
comp=Z,17nm,0.7s,baz=354,slow=4.0,SNR=23
HAU Haudompre 74.37 14⇑ *iP* **P 13 02 10.8 +0.2**
comp=Z,48nm,0.8s,mb5.2
HAU Haudompre 74.37 14⇑ *iP* **P 13 02 10.8 +0.2**
HAU pmax pmax
comp=Z,24nm,0.8s,mb5.2
HAU Haudompre 74.37 14⇑ *iP* **P 13 02 10.8 +0.2**
comp=Z,24nm,0.8s,mb5.2
LIKS Likavka 74.52 5 *eP* **P 13 02 12.6 +1.2**
LIKS *e* pP 13 02 20.5 +0.8
LIKS pmax pmax
comp=Z,32nm,1.0s,mb5.2
LIKS Likavka 74.52 5 *eP* **P 13 02 12.6 +1.2**
comp=Z,32nm,1.0s,mb5.2
LIKS *e* pP 13 02 20.5 +0.8
LIKS Likavka 74.52 5 *eP* **P 13 02 12.6 +1.2**
LIKS *epP* pP 13 02 20.5 +0.8
HINF Hinteralfeld 74.62 14⇑ *iP* **P 13 02 12.2 +0.1**
comp=Z,37nm,0.9s,mb5.0
HINF Hinteralfeld 74.62 14⇑ *iP* **P 13 02 12.2 +0.1**
HINF pmax pmax
comp=Z,19nm,0.9s,mb5.0
HINF Hinteralfeld 74.62 14⇑ *iP* **P 13 02 12.2 +0.1**
comp=Z,18nm,0.9s,mb5.0
MOF Molkenrain 74.62 14 *eP* **P 13 02 12.2 +0.1**
FELD Feldberg im Sc 74.71 13 *eP* **P 13 02 12.6 0.0**
MFF Saint Martin d 74.71 19⇑ *iP* **P 13 02 12.9 +0.3**
comp=Z,69nm,0.9s,mb5.3
MFF Saint Martin d 74.71 19⇑ *iP* **P 13 02 12.9 +0.3**
MFF pmax pmax
comp=Z,35nm,0.9s,mb5.3
MFF Saint Martin d 74.71 19⇑ *iP* **P 13 02 12.9 +0.3**
comp=Z,34nm,0.9s,mb5.3
LOR Lormes 74.73 16⇑ *iP* **P 13 02 13.0 +0.3**
comp=Z,69nm,0.8s,mb5.3
LOR Lormes 74.73 16⇑ *iP* **P 13 02 13.0 +0.3**
LOR pmax pmax
comp=Z,34nm,0.8s,mb5.3
LOR Lormes 74.73 16⇑ *iP* **P 13 02 13.0 +0.3**
comp=Z,34nm,0.8s,mb5.3
KOLS Kolonicke sedl 74.76 3 *eP* **P 13 02 13.5 +0.6**
KOLS pmax pmax
comp=Z,38nm,1.6s,mb5.1
KOLS Kolonicke sedl 74.76 3 *eP* **P 13 02 13.5 +0.6**
comp=Z,38nm,1.6s,mb5.1
KOLS Kolonicke sedl 74.76 3 *eP* **P 13 02 13.5 +0.6**
FUR Furstenfeldbru 74.80 11 *eP* **P 13 02 13.5 +0.4**
comp=Z,40nm,0.8s,mb5.4
FUR *epP* pP 13 02 21.0 -0.3
FUR Furstenfeldbru 74.80 11 *eP* **P 13 02 13.5 +0.4**
FUR *e*PP pP 13 02 21.0 -0.3
FUR pmax pmax
comp=Z,40nm,0.8s,mb5.4
SSF Saint Saulge 74.88 16⇑ *iP* **P 13 02 13.8 +0.2**
comp=Z,82nm,0.9s,mb5.4
SSF Saint Saulge 74.88 16⇑ *iP* **P 13 02 13.8 +0.2**
SSF pmax pmax
comp=Z,41nm,0.9s,mb5.4
SSF Saint Saulge 74.88 16⇑ *iP* **P 13 02 13.8 +0.2**
comp=Z,41nm,0.9s,mb5.4
KOLL Kolacno 74.95 6 *eP* **P 13 02 14.9 +0.9**
KOLL *e* pP 13 02 23.9 +1.7
KOLL Kolacno 74.95 6 *eP* **P 13 02 14.9 +0.9**
KOLL *epP* pP 13 02 23.9 +1.7
VYHS Vyhne 75.06 5 *eP* **P 13 02 15.2 +0.6**
VYHS *e* pP 13 02 22.6 -0.2
VYHS *e* 13 02 27.8
VYHS pmax pmax
comp=Z,14nm,0.9s,mb4.9
VYHS Vyhne 75.06 5 *eP* **P 13 02 15.2 +0.6**
comp=Z,14nm,0.9s,mb4.9
VYHS *e* pP 13 02 22.6 -0.2
VYHS *e* 13 02 27.8
VYHS Vyhne 75.06 5 *eP* **P 13 02 15.2 +0.6**
VYHS *epP* pP 13 02 22.6 -0.2
VYHS *es*P sP 13 02 27.8 +1.9
UZH Uzhgorod 75.06 3 *eP* **P 13 02 13.4 -1.2**
UZH *e* pP 13 02 22.4 -0.5
UZH *e* 13 02 34.6
LOMF Lomont 75.07 14 *eP* **P 13 02 15.0 +0.3**
AVF Avril sur Loir 75.12 16⇑ *iP* **P 13 02 15.0 0.0**
comp=Z,70nm,0.8s,mb5.3
AVF Avril sur Loir 75.12 16⇑ *iP* **P 13 02 15.0 0.0**
AVF pmax pmax
comp=Z,35nm,0.8s,mb5.3
AVF Avril sur Loir 75.12 16⇑ *iP* **P 13 02 15.0 0.0**
comp=Z,35nm,0.8s,mb5.3
KECS Kecovo 75.15 4 *eP* **P 13 02 15.7 +0.6**
KECS *e* pP 13 02 22.9 -0.4
KECS pmax pmax
comp=Z,16nm,0.8s,mb5.0
KECS Kecovo 75.15 4 *eP* **P 13 02 15.7 +0.6**
comp=Z,16nm,0.8s,mb5.0
KECS *e* pP 13 02 22.9 -0.4
KECS Kecovo 75.15 4 *eP* **P 13 02 15.7 +0.6**
KECS *epP* pP 13 02 22.9 -0.4
ZST Bratislava 75.25 7 *eP* **P 13 02 16.8 +1.1**
ZST *e* pP 13 02 23.7 -0.3
ZST pmax pmax
comp=Z,26nm,0.9s,mb5.2
ZST Bratislava 75.25 7 *eP* **P 13 02 16.8 +1.1**
comp=Z,26nm,0.9s,mb5.2
ZST *e* pP 13 02 23.7 -0.3
ZST *e* 13 02 30.1
ZST Bratislava 75.25 7 *eP* **P 13 02 16.8 +1.1**
ZST *epP* pP 13 02 23.7 -0.3
ZST *es*P sP 13 02 30.1 +3.1
BGF Bois d'Agland 75.26 17⇑ *iP* **P 13 02 15.9 +0.1**
comp=Z,64nm,0.8s,mb5.3
BGF Bois d'Agland 75.26 17⇑ *iP* **P 13 02 15.9 +0.1**
BGF pmax pmax
comp=Z,32nm,0.8s,mb5.3
BGF Bois d'Agland 75.26 17⇑ *iP* **P 13 02 15.9 +0.1**
comp=Z,32nm,0.8s,mb5.3
SMF Signal de Mont 75.33 16⇑ *iP* **P 13 02 16.2 0.0**
comp=Z,66nm,0.9s,mb5.2
SMF Signal de Mont 75.33 16⇑ *iP* **P 13 02 16.2 0.0**
SMF pmax pmax
comp=Z,33nm,0.9s,mb5.3
SMF Signal de Mont 75.33 16⇑ *iP* **P 13 02 16.2 0.0**
comp=Z,33nm,0.9s,mb5.3
RJOB Jochberg 75.37 10 *eP* **P 13 02 16.8 +0.4**
comp=Z,42nm,0.8s,mb5.4
MOA Molln 75.39 9⇑ *iP* **P 13 02 16.7 +0.2**
comp=Z,9.7nm,0.9s,mb4.7,SNR=6,6
RETA Reutte 75.41 11⇑ *iP* **P 13 02 16.9 +0.3**
comp=Z,10.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.42 17⇑ *iP* **P 13 02 16.8 +0.1**
comp=Z,49nm,1.0s,mb5.1
TCF Toulx Ste Croi 75.42 17⇑ *iP* **P 13 02 16.8 +0.1**
TCF pmax pmax
comp=Z,25nm,1.0s,mb5.1
TCF Toulx Ste Croi 75.42 17⇑ *iP* **P 13 02 16.8 +0.1**
comp=Z,24nm,1.0s,mb5.1
CONA Conrad Observa 75.43 8 *iP* **P 13 02 17.4 +0.7**
comp=Z,28nm,0.8s,mb5.2,SNR=26
DAVA Damuels 75.51 12⇓ *iP* **P 13 02 17.6 +0.4**
comp=Z,13nm,0.9s,mb4.8
MOTA Moosalm 75.59 11⇑ *iP* **P 13 02 18.2 +0.5**
comp=Z,24nm,0.9s,mb5.1,SNR=14
WATA Walderalm 75.65 11⇑ *iP* **P 13 02 18.5 +0.6**
comp=Z,37nm,0.9s,mb5.3,SNR=12
PSZ Piszkesteto 75.69 5 *eP* **P 13 02 18.2 0.0**
comp=Z,26nm,0.9s,mb5.2
PSZ Piszkesteto 75.69 5 *eP* **P 13 02 19.0 +0.8**
PSZ Piszkesteto 75.69 5⇓ *iP* **P 13 02 19.0 +0.8**
CABF La Chapelle 75.70 15⇑ *iP* **P 13 02 18.9 +0.6**
comp=Z,54nm,0.9s,mb5.2
CABF La Chapelle 75.70 15⇑ *iP* **P 13 02 18.9 +0.6**
CABF pmax pmax
comp=Z,27nm,0.9s,mb5.2
CABF La Chapelle 75.70 15⇑ *iP* **P 13 02 18.9 +0.6**
comp=Z,27nm,0.9s,mb5.2
WTTA Wattenberg 75.72 11 *iP* **P 13 02 19.3 +0.9**
comp=Z,48nm,0.8s,mb5.5,SNR=27
AGO Saint Agoulin 75.80 17 *eP* **P 13 02 20.5 +1.6**
FETA Feichten 75.87 11⇓ *iP* **P 13 02 20.0 +0.7**
comp=Z,34nm,0.9s,mb5.3
PLDF La Plantade 75.96 16 *eP* **P 13 02 21.6 +1.8**
VERF Verneugheol 75.99 17 *eP* **P 13 02 20.3 +0.3**
KBA Koelnbreinsper 76.07 9 *iP* **P 13 02 21.4 +1.0**
comp=Z,50nm,0.9s,mb5.4,SNR=31
PYM Petit Puy Mans 76.08 17 *eP* **P 13 02 21.9 +1.4**
ARSA Arzberg 76.08 8⇑ *iP* **P 13 02 21.1 +0.6**
comp=Z,16nm,0.8s,mb5.0
BUR08 Bucovina Ar. S 76.11 1 *eP* **P 13 02 20.6 0.0**
BURAR Bucovina Array 76.14 1⇑ *iP* **P 13 02 20.9 +0.1**
BURAR Bucovina Array 76.14 1⇑ *iP* **P 13 02 20.9 +0.1**
RJF Les Rejaudoux 76.26 18⇑ *iP* **P 13 02 21.5 0.0**
comp=Z,46nm,0.9s,mb5.1
RJF Les Rejaudoux 76.26 18⇑ *iP* **P 13 02 21.5 0.0**
RJF pmax pmax
comp=Z,23nm,0.9s,mb5.1
RJF Les Rejaudoux 76.26 18⇑ *iP* **P 13 02 21.5 0.0**
comp=Z,23nm,0.9s,mb5.1
ABTA Abfaltersbach 76.32 10⇑ *iP* **P 13 02 21.9 0.0**
comp=Z,16nm,1.1s,mb4.9,SNR=6.4
EMAZ Mazaricos 76.33 26 P **P 13 02 23.5 +1.6**
comp=Z,15nm,1.1s,mb4.8
EPON Pontenova 76.41 25 P **P 13 02 22.8 +0.5**
comp=Z,9.8nm,0.6s,mb4.9
COLF Collangettes 76.41 17 *eP* **P 13 02 22.8 +0.4**
LFF La Frestale 76.48 19⇑ *iP* **P 13 02 23.1 +0.3**
comp=Z,90nm,0.8s,mb5.4
LFF La Frestale 76.48 19⇑ *iP* **P 13 02 23.1 +0.3**
LFF pmax pmax
comp=Z,45nm,0.8s,mb5.5
LFF La Frestale 76.48 19⇑ *iP* **P 13 02 23.1 +0.3**
comp=Z,45nm,0.8s,mb5.5
MYKA Terra Mystica 76.54 9⇑ *iP* **P 13 02 23.1 0.0**
comp=Z,12nm,0.9s,mb4.8
SOKA Soboth 76.61 8⇑ *iP* **P 13 02 23.8 +0.3**
comp=Z,34nm,1.1s,mb5.2
LBL Lubilhac 76.62 17 *eP* **P 13 02 25.1 +1.6**
PERS Pernice 76.66 8 *eP* **P 13 02 24.1 +0.3**
KMI Kunming 76.72 295 P **P 13 02 26.3 +1.9**
KMI pmax pmax
comp=Z,16nm,0.8s,mb5.0
CAF Calviac 76.72 18⇑ *iP* **P 13 02 24.3 +0.2**
comp=Z,48nm,1.0s,mb5.1
CAF Calviac 76.72 18⇑ *iP* **P 13 02 24.3 +0.2**
CAF pmax pmax
comp=Z,24nm,1.0s,mb5.1
CAF Calviac 76.72 18⇑ *iP* **P 13 02 24.3 +0.2**
comp=Z,24nm,1.0s,mb5.1
OBKA Obir 76.74 9⇑ *iP* **P 13 02 24.6 +0.4**
comp=Z,74nm,0.7s,mb5.7,SNR=40
KIS Kishinev 76.75 359 *eP* **P 13 02 21.0 -3.3**
KIS *e* 13 02 35.0
SSB Saint Sauveur 76.78 16 *eP* **P 13 02 24.8 +0.4**
SSB Saint Sauveur 76.78 16 *eP* **P 13 02 24.1 -0.3**
SSB pmax pmax
comp=Z,11nm,0.8s,mb4.8
SSB Saint Sauveur 76.78 16 *eP* **P 13 02 24.1 -0.4**
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 76.86 14⇑ *iP* **P 13 02 26.2 +1.3**
comp=Z,21nm,0.9s,mb4.8
LPL La Plagne 76.86 14⇑ *iP* **P 13 02 26.2 +1.3**
LPL pmax pmax
comp=Z,11nm,0.9s,mb4.8
LPL La Plagne 76.86 14⇑ *iP* **P 13 02 26.2 +1.3**
comp=Z,11nm,0.9s,mb4.8
GROS Grobnik 76.87 8 *eP* **P 13 02 25.0 +0.1**
EARI Arriondas 76.87 23 P **P 13 02 25.5 +0.5**
comp=Z,14nm,0.8s,mb4.9
LPG La Plagne 76.88 14⇑ *iP* **P 13 02 26.6 +1.6**
comp=Z,22nm,0.8s,mb4.8
LPG La Plagne 76.88 14⇑ *iP* **P 13 02 26.6 +1.6**
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 76.88 14⇑ *iP* **P 13 02 26.6 +1.6**
comp=Z,11nm,0.8s,mb4.8
DRGR 76.92 3 P **P 13 02 25.8 +0.6**
DRGR 76.92 3⇓ *iP* **P 13 02 25.7 +0.5**
VNDS Vrh nad Dolski 77.16 9 *iP* **P 13 02 26.3 -0.2**
VIVF Saint-Julien-I 77.21 16⇑ *iP* **P 13 02 27.3 +0.4**
comp=Z,46nm,0.9s,mb5.1
VIVF Saint-Julien-I 77.21 16⇑ *iP* **P 13 02 27.3 +0.4**
VIVF pmax pmax
comp=Z,23nm,0.9s,mb5.1
VIVF Saint-Julien-I 77.21 16⇑ *iP* **P 13 02 27.3 +0.4**
comp=Z,23nm,0.9s,mb5.1
BNI Bardonecchia 77.31 14 *eP* **P 13 02 28.5 +1.1**
BNI pmax pmax
comp=Z,19nm,0.9s,mb5.0
BNI Bardonecchia 77.31 14 *eP* **P 13 02 28.5 +1.1**
comp=Z,19nm,0.9s,mb5.0
JAVS Javornik 77.31 9 *eP* **P 13 02 26.7 -0.7**
ELAN Lanestosa 77.32 22 P **P 13 02 27.9 +0.4**
comp=Z,11nm,0.8s,mb4.8
PKSM Moragy 77.32 6 P **P 13 02 27.9 +0.4**
PKSM Moragy 77.32 6⇓ *iP* **P 13 02 27.4 -0.1**
ORIF Oris-en-Rattie 77.33 15⇑ *iP* **P 13 02 28.1 +0.6**
comp=Z,28nm,0.8s,mb4.9
ORIF Oris-en-Rattie 77.33 15⇑ *iP* **P 13 02 28.1 +0.6**
ORIF pmax pmax
comp=Z,14nm,0.8s,mb4.9
ORIF Oris-en-Rattie 77.33 15⇑ *iP* **P 13 02 28.1 +0.6**
comp=Z,14nm,0.8s,mb4.9
CEY Cerknica 77.50 9 *eP* **P 13 02 28.0 -0.5**
ELOB Lobios 77.57 26 P **P 13 02 31.0 +2.0**
comp=Z,7.8nm,0.7s,mb4.8
MBDF Montbardon 77.64 14⇑ *iP* **P 13 02 30.7 +1.4**
comp=Z,31nm,0.8s,mb5.0
MBDF Montbardon 77.64 14⇑ *iP* **P 13 02 30.7 +1.4**
MBDF pmax pmax
comp=Z,15nm,0.8s,mb5.0
MBDF Montbardon 77.64 14⇑ *iP* **P 13 02 30.7 +1.4**
comp=Z,15nm,0.8s,mb5.0
PCAB Cabril 77.73 26 *eP* **P 13 02 31.1 +1.3**
comp=Z,34nm,1.3s,mb5.1
PCAB *epP* pP 13 02 38.9 +0.8
BOJS Bojanci 77.80 8 *iP* **P 13 02 29.9 -0.2**
ECAL Calabor 77.82 25 P **P 13 02 32.2 +1.9**
LASF Ste Croix 77.84 17⇑ *iP* **P 13 02 31.1 +0.7**
comp=Z,24nm,0.9s,mb4.8
SJPF Ste Jean 77.88 21⇑ *iP* **P 13 02 31.5 +0.9**
comp=Z,11nm,0.8s,mb4.5
SJPF Ste Jean 77.88 21⇑ *iP* **P 13 02 31.5 +0.9**
SJPF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SJPF Ste Jean 77.88 21⇑ *iP* **P 13 02 31.5 +0.9**
comp=Z,5.4nm,0.8s,mb4.5
VRI Vrincioaia 77.90 0 P **P 13 02 31.0 +0.3**
VRI Vrincioaia 77.90 0⇓ *iP* **P 13 02 30.7 0.0**
PLOR Plostina 77.91 0⇑ P **P 13 02 32.1 +1.3**
PLOR Plostina 77.91 0⇑ *iP* **P 13 02 32.1 +1.3**
PBRG Braganca 77.94 25 *eP* **P 13 02 31.9 +0.9**
comp=Z,30nm,1.7s,mb4.9
PBRG *epP* pP 13 02 39.5 +0.2
BZS Buzias 78.05 4⇑ *iP* **P 13 02 31.8 +0.2**
SMRF Simiane la Rot 78.20 16⇑ *iP* **P 13 02 33.6 +1.2**
comp=Z,38nm,0.7s,mb5.1
SMRF Simiane la Rot 78.20 16⇑ *iP* **P 13 02 33.6 +1.2**
comp=Z,38nm,0.7s,mb5.4
ETSF Etsaut 78.21 20⇑ *iP* **P 13 02 33.3 +0.8**
comp=Z,79nm,0.7s,mb5.5
ETSF Etsaut 78.21 20⇑ *iP* **P 13 02 33.3 +0.8**
ETSF pmax pmax
comp=Z,39nm,0.7s,mb5.5
ETSF Etsaut 78.21 20⇑ *iP* **P 13 02 33.3 +0.8**
comp=Z,40nm,0.7s,mb5.5
PVRL Vila Real 78.22 26 *eP* **P 13 02 33.8 +1.2**
comp=Z,48nm,2.1s,mb5.1
PVRL *epP* pP 13 02 41.5 +0.7
EPF Esparros 78.25 20⇑ *iP* **P 13 02 32.3 -0.4**
comp=Z,21nm,0.8s,mb4.8
EPF Esparros 78.25 20⇑ *iP* **P 13 02 32.3 -0.4**
EPF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
EPF Esparros 78.25 20⇑ *iP* **P 13 02 32.3 -0.4**
comp=Z,10nm,0.8s,mb4.8
MLR Muntele Rosu 78.27 1⇑ P **P 13 02 33.5 +0.7**
MLR Muntele Rosu 78.27 1⇑ *iP* **P 13 02 33.5 +0.7**
MTLF Montolieu 78.29 18⇑ *iP* **P 13 02 33.2 +0.3**
comp=Z,29nm,0.8s,mb5.0
MTLF Montolieu 78.29 18⇑ *iP* **P 13 02 33.2 +0.3**
MTLF pmax pmax
comp=Z,14nm,0.8s,mb4.9
MTLF Montolieu 78.29 18⇑ *iP* **P 13 02 33.2 +0.3**
comp=Z,14nm,0.8s,mb5.0
PRAF Pradon 78.31 16 *eP* **P 13 02 34.3 +1.3**
GZR Gura Zlata 78.31 3 P **P 13 02 33.4 +0.3**
GZR Gura Zlata 78.31 3⇑ *iP* **P 13 02 33.5 +0.5**
VOIR 78.32 1 P **P 13 02 33.5 +0.5**
VOIR 78.32 1⇓ *iP* **P 13 02 33.7 +0.7**
LSA Lhasa 78.33 307 P **P 13 02 34.6 +1.2**
LSA Lhasa 78.33 307 *eP* **P 13 02 34.4 +1.0**
LSA pmax pmax
comp=Z,54nm,1.0s,mb5.4
LSA Lhasa 78.33 307 *eP* **P 13 02 34.4 +1.0**
comp=Z,54nm,1.0s,mb5.4
VIEF Viey 78.34 20 *eP* **P 13 02 34.1 +0.9**
TOUF Mont Tournerai 78.41 14 *eP* **P 13 02 34.3 +0.8**
AUTN L'Aution 78.45 14 *eP* **P 13 02 34.0 +0.2**
MLS Moulis 78.46 19 *eP* **P 13 02 32.9 -1.0**
RESF Ens 78.47 20 *eP* **P 13 02 35.2 +1.3**
MVO Moncorvo 78.48 25 *eP* **P 13 02 35.0 +1.0**
comp=Z,41nm,1.2s,mb5.2
MVO *epP* pP 13 02 42.8 +0.5
SDV Santo Domingo 78.53 91 *eP* **P 13 02 34.4 -0.3**
comp=Z,7.9nm,0.8s,mb4.7
LUCF Luceram 78.54 14 *eP* **P 13 02 34.0 -0.3**
EBIE Bielsa 78.55 20 P **P 13 02 34.6 +0.3**
TLCR 78.56 359⇓ P **P 13 02 35.2 +0.8**
TLCR 78.56 359⇓ *iP* **P 13 02 35.2 +0.8**
ANN Anapa 78.57 352 *eP* **P 13 02 31.4 -3.1**
ANN *e*PP pP 13 02 42.0 -0.7
ANN *eS* S 13 12 24.6 -4.5
ANN pmax pmax
comp=Z,82nm,1.2s,mb5.5
SBF Sospel 78.58 14⇑ *iP* **P 13 02 34.8 +0.3**
comp=Z,86nm,0.8s,mb5.4
SBF Sospel 78.58 14⇑ *iP* **P 13 02 34.8 +0.3**
SBF pmax pmax
comp=Z,43nm,0.8s,mb5.4
SBF Sospel 78.58 14⇑ *iP* **P 13 02 34.8 +0.3**
comp=Z,43nm,0.8s,mb5.4
CFR Carcaliu 78.58 359⇓ P **P 13 02 34.6 +0.1**
CFR Carcaliu 78.58 359⇓ *iP* **P 13 02 34.6 +0.1**
TAVF Tavernes 78.63 15 *eP* **P 13 02 35.7 +0.9**
SIM Simferopol' 78.63 355 P **P 13 02 35.5 +0.7**
SIM pmax pmax
comp=Z,15nm,0.6s,mb5.1
VLC Villacollemand 78.66 12 *eP* **P 13 02 34.9 0.0**
comp=Z,33nm,0.8s,mb5.3
PVIS Viseu 78.70 26 *eP* **P 13 02 36.2 +1.0**
comp=Z,38nm,0.8s,mb5.4
PVIS *epP* pP 13 02 43.9 +0.4
FRF La Foret Royal 78.77 15⇑ *iP* **P 13 02 35.8 +0.3**
comp=Z,60nm,1.1s,mb5.2
FRF La Foret Royal 78.77 15⇑ *iP* **P 13 02 35.8 +0.3**
FRF pmax pmax
comp=Z,30nm,1.1s,mb5.1
FRF La Foret Royal 78.77 15⇑ *iP* **P 13 02 35.8 +0.3**
comp=Z,30nm,1.1s,mb5.1
KIV Kislovodsk 78.92 348 *eP* **P 13 02 36.9 +0.5**
KIV pmax pmax
comp=Z,41nm,0.8s,mb5.4
KIV Kislovodsk 78.92 348 *eP* **P 13 02 36.5 0.0**
comp=Z,38nm,0.8s,mb5.4
KIV Kislovodsk 78.92 348 P **P 13 02 37.3 +0.9**
SNR=11
KIV P 13 02 37.3
SNR=11
LMR La Mourre 78.97 15⇑ *iP* **P 13 02 37.2 +0.5**
comp=Z,92nm,1.2s,mb5.3
LMR La Mourre 78.97 15⇑ *iP* **P 13 02 37.2 +0.5**
LMR pmax pmax
comp=Z,46nm,1.2s,mb5.3
LMR La Mourre 78.97 15⇑ *iP* **P 13 02 37.2 +0.5**
comp=Z,46nm,1.2s,mb5.3
HARR Harsova 79.07 359⇓ P **P 13 02 37.4 +0.2**
HARR Harsova 79.07 359⇓ *iP* **P 13 02 37.4 +0.2**
MTE Manteigas 79.09 26 *eP* **P 13 02 38.3 +0.9**
comp=Z,57nm,1.4s,mb5.3
MTE *epP* pP 13 02 46.0 +0.3
MTE Manteigas 79.09 26 *eP* **P 13 02 37.5 +0.1**
comp=Z,36nm,0.8s,mb5.4
TIRR Tirgusor 79.30 359 P **P 13 02 38.5 +0.1**
TIRR Tirgusor 79.30 359 *eP* **P 13 02 38.0 -0.5**
comp=Z,22nm,0.8s,mb5.1
TIRR Tirgusor 79.30 359⇑ P **P 13 02 38.4 0.0**
ESAC San Caprasio 79.36 20 P **P 13 02 39.6 +0.8**
comp=Z,12nm,0.5s,mb5.1
SOC Sochi 79.59 351 *c iP* **P 13 02 39.9 -0.2**
SOC pmax pmax
comp=Z,1μm,0.9s
PCBR Castelo Branco 79.63 26 *eP* **P 13 02 40.8 +0.5**
comp=Z,45nm,1.3s,mb5.2
PCBR *epP* pP 13 02 48.6 0.0
ETOR Torete 79.92 22 P **P 13 02 41.2 -0.7**
ZEI Tsey 79.95 347 *eP* **P 13 02 42.2 +0.2**
ZEI *e* pP 13 02 48.6 -1.7
ZEI pmax pmax
comp=Z,18nm,1.0s,mb5.0
EPOB Poblet 80.01 19 P **P 13 02 41.5 -0.8**
PMAFR Mafra 80.02 28 *epP* pP 13 02 51.0 +0.3
PMAFR A 13 02 51.4
comp=Z,85nm,0.7s
PGF Pioggiola 80.08 13⇑ *iP* **P 13 02 43.0 +0.3**
comp=Z,39nm,0.8s,mb5.1
PGF Pioggiola 80.08 13⇑ *iP* **P 13 02 43.0 +0.3**
PGF pmax pmax
comp=Z,19nm,0.8s,mb5.1
PGF Pioggiola 80.08 13⇑ *iP* **P 13 02 43.0 +0.3**
comp=Z,20nm,0.8s,mb5.1
ONI Oni 80.18 348 P **P 13 02 43.5 +0.3**
KEH Kehvi 80.40 347 P **P 13 02 41.1 -3.3**
ESDC Sonseca Array 80.61 24 P **P 13 02 46.3 +0.7**
comp=Z,12nm,0.8s,mb4.9,baz=342,slow=5.1,SNR=41
ESDC pP pP 13 02 54.1 +0.2
comp=Z,18nm,0.7s,baz=343,slow=5.2,SNR=20
ESDC Sonseca Array 80.61 24 P **P 13 02 46.3 +0.6**

comp=Z,8.0nm,0.7s,mb4.8
ESLA Sonseca Array 80.61 24 *e*P **P 13 02 45.2 -0.4**
comp=Z,5.3nm,0.8s,mb4.5
PAB San Pablo 80.64 24 *e*P **P 13 02 44.7 -1.1**
PAB pmax pmax
comp=Z,13nm,1.3s,mb4.7
PAB San Pablo 80.64 24 *e*P **P 13 02 44.6 -1.2**
comp=Z,13nm,1.3s,mb4.7
EMOS Mosqueruela 80.67 21 P **P 13 02 45.3 -0.6**
GOR Gori 80.70 347 P **P 13 02 45.6 -0.5**
EVO Evora 80.74 27 *ep*P pP 13 02 54.4 -0.2
EVO A 13 02 59.3
comp=Z,33nm,1.4s
AQU L'Aquila 80.76 10 *e*P **P 13 02 46.2 -0.2**
AQU pmax pmax
comp=Z,22nm,0.8s,mb5.1
AQU L'Aquila 80.76 10 *e*P **P 13 02 46.2 -0.2**
comp=Z,22nm,0.8s,mb5.1
EBAD Badajoz 80.77 26 P **P 13 02 46.7 +0.1**
comp=Z,9.9nm,0.8s,mb4.8
TBLG Delisi 80.87 347 *e*P **P 13 02 47.6 +0.6**
TBLG Delisi 80.87 347 P **P 13 02 47.6 +0.6**
MTA Mtatsminda 80.90 346 P **P 13 02 47.7 +0.6**
PBEJ Beja 81.25 27 *ep*P pP 13 02 57.4 0.0
PBEJ A 13 03 00.8
comp=Z,24nm,2.1s
PBAR Barrancos 81.32 26 *e*P **P 13 02 49.9 +0.5**
comp=Z,49nm,1.3s,mb5.3
PBAR *ep*P pP 13 02 57.9 +0.2
OTAV Otavalo 81.42 103 P **P 13 02 49.6 -0.6**
comp=Z,5.5nm,0.8s,mb4.5
SHL Shillong 81.55 304 *i* P **P 13 02 51.5 +0.7**
PCVE Castro Verde 81.58 27 *e*P **P 13 02 51.5 +0.7**
comp=Z,26nm,1.8s,mb4.9
PCVE *ep*P pP 13 02 59.3 +0.1
SKO Skopje 81.69 4 *e*P **P 13 02 51.1 -0.2**
MORF Marmelete 81.73 28 *ep*P pP 13 02 59.9 -0.1
MORF A 13 03 10.9
comp=Z,56nm,1.9s
EMIN Mina Concepcio 81.80 26 P **P 13 02 52.4 +0.5**
comp=Z,11nm,1.1s,mb4.7
EGRO El Granado 81.82 27 P **P 13 02 51.5 -0.5**
PFVI Vila Bisbo 81.85 28 *ep*P pP 13 03 00.8 +0.2
PFVI A 13 03 02.0
comp=Z,56nm,1.6s
TAPN Taplejung 81.87 308 *e*P **P 13 02 53.1 +0.6**
comp=Z,118nm,0.7s,mb5.9
PVAQ Vaqueiros 81.88 27 *e*P **P 13 02 53.0 +0.6**
comp=Z,46nm,2.1s,mb5.0
PVAQ *ep*P pP 13 03 00.7 0.0
EADA Adamuz 81.91 25 P **P 13 02 53.4 +0.9**
comp=Z,15nm,1.1s,mb4.8
PBDV Barranco-do-Ve 81.98 27 *e*P **P 13 02 54.3 +1.4**
comp=Z,58nm,1.6s,mb5.3
PBDV *ep*P pP 13 03 01.8 +0.5
STIP Stip 81.99 4 *e*P **P 13 02 52.3 -0.6**
EBAN Banos Encina 82.09 24 P **P 13 02 54.9 +1.4**
EBAN pmax pmax
comp=Z,15nm,0.9s,mb4.9
EBAN Banos Encina 82.09 24 P **P 13 02 54.9 +1.4**
comp=Z,15nm,0.9s,mb4.9
ABKT Ailbek 82.16 336 P **P 13 02 54.2 +0.3**
comp=Z,194nm,1.0s,mb6.0,SNR=5.7
GUN Gumba 82.17 310 *e*P **P 13 02 54.8 +0.7**
comp=Z,119nm,0.8s,mb5.9
JIRN Jiri 82.25 310 *e*P **P 13 02 55.4 +0.9**
KRUS Krusevo 82.28 4 *e*P **P 13 02 53.4 -1.0**
VAY Valandovo 82.38 3 *e*P **P 13 02 54.9 -0.1**
JOSI Joshimath 82.38 316 *e*P **P 13 02 55.2 +0.1**
KBL Kabul 82.41 326 *e*P **P 13 02 54.0 -1.2**
KBL pmax pmax
comp=Z,24nm,0.8s,mb5.2
KBL Kabul 82.41 326 *e*P **P 13 02 54.0 -1.2**
comp=Z,24nm,0.8s,mb5.2
GNI Garni 82.43 346 *c i*P **P 13 02 55.9 +0.7**
GNI pmax pmax
comp=Z,15nm,0.9s
GNI Garni 82.43 346 *e*P **P 13 02 55.1 -0.2**
comp=Z,27nm,0.8s,mb5.2
GNI Garni 82.43 346 P **P 13 02 57.4 +2.2**
SNR=6.7
GNI P 13 02 57.4
SNR=6.7
ODAN Odare 82.44 308 *e*P **P 13 02 55.8 +0.3**
comp=Z,52nm,0.8s,mb5.5
OHR Ohrid 82.52 5 *e*P **P 13 02 54.9 -0.8**
KKN Kakani 82.53 310 *e*P **P 13 02 56.3 +0.4**
comp=Z,79nm,0.9s,mb5.8
PKI Pulchoki 82.66 310 *e*P **P 13 02 57.0 +0.3**
comp=Z,102nm,0.8s,mb5.9
PKIN Phulchoki 82.66 310 *e*P **P 13 02 57.6 +0.9**
comp=Z,93nm,0.6s,mb6.0
RAMN Ramite 82.70 309 *e*P **P 13 02 57.1 +0.2**
comp=Z,176nm,0.7s,mb6.2
DMN Daman 82.76 310 *e*P **P 13 02 57.7 +0.5**
comp=Z,134nm,0.8s,mb6.0
ESPR Espera 82.85 26 P **P 13 02 58.8 +1.3**
comp=Z,18nm,1.0s,mb5.0
ELOJ Sierra Loja 82.98 24 P **P 13 02 59.8 +1.6**
ELOJ pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ELOJ Sierra Loja 82.98 24 P **P 13 02 59.8 +1.7**
comp=Z,4.0nm,0.6s,mb4.6
ECOG Cogollos-Vega 82.99 24 P **P 13 02 59.4 +1.2**
ECOG pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ECOG Cogollos-Vega 82.99 24 P **P 13 02 59.4 +1.2**
comp=Z,8.9nm,0.6s,mb5.0
DDI Dehra Dun 83.16 317 *ex* x 13 03 00.0
EMIJ Mijas 83.40 25 P **P 13 02 59.7 -0.6**
BR131 Keskin Array S 83.86 355 *e*P **P 13 03 02.3 -0.4**
comp=Z,11nm,0.8s,mb5.0
BRTR Keskin Array B 83.86 355 P **P 13 03 02.9 +0.2**
comp=Z,12nm,0.8s,mb5.1,baz=29,slow=2.8,SNR=70
BRTR pP pP 13 03 10.2 -0.8
comp=Z,11nm,0.8s,baz=3.5,slow=1.9,SNR=17
CHTO Chiang Mai 83.90 295 *e*P **P 13 03 01.2 -2.0**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
CHTO Chiang Mai 83.90 295 *e*P **P 13 03 01.2 -2.0**
comp=Z,8.9nm,0.9s,mb4.9
TIP Timpagrande 84.20 8 *e*P **P 13 03 03.7 -0.7**
comp=Z,21nm,0.9s,mb5.3
CM31 Chiang Mai Arr 84.20 295 *e*P **P 13 03 03.8 -0.9**
comp=Z,20nm,0.8s,mb5.3
CMAR Chiang Mai Arr 84.20 295 P **P 13 03 04.1 -0.6**
comp=Z,15nm,0.7s,mb5.2,baz=7.6,slow=5.7,SNR=61
MALT Malatya 84.94 351 *e*P **P 13 03 07.0 -1.1**
comp=Z,18nm,1.1s,mb5.1
MALT Malatya 84.94 351 ⇑ *i*P **P 13 03 09.5 +1.4**
NDI New Delhi 84.95 317 *ex* x 13 03 06.0
BISR Bishrakh 84.97 317 *e*P **P 13 03 07.8 -0.6**
CEL Celeste 85.05 9 *e*P **P 13 03 06.7 -2.0**
comp=Z,25nm,0.8s,mb5.4
AYAN Aya Nagar 85.16 317 *e*P **P 13 03 08.4 -1.0**
SONA Sohna 85.39 317 *e*P **P 13 03 10.1 -0.5**
AGRA Agra 85.98 316 *e*P **P 13 03 12.9 -0.6**
KHET Khetri 86.03 318 *e*P **P 13 03 13.0 -0.7**
KHET AMb AMB 13 03 15.5
comp=Z,17nm,0.6s,mb5.5
KEST Kesra 86.83 14 P **P 13 03 18.7 +1.2**
comp=Z,2.3nm,0.7s,mb4.5,baz=156,slow=3.0,SNR=6.8
CSS Prodhromos 88.62 355 *e*P **P 13 03 25.6 -0.6**
comp=Z,17nm,0.8s,mb5.4
JASL Jaisalmer 88.82 322 *e*P **P 13 03 26.2 -1.0**
BHPL Bhopal 89.77 315 *e*P **P 13 03 29.5 -2.2**
MMAI Mount Meron Ar 90.44 353 P **P 13 03 35.3 +0.6**
comp=Z,0.9nm,0.3s,mb4.6,baz=1.3,slow=6.2,SNR=3.9
ASF Jabal al Asfar 91.16 351 P **P 13 03 38.3 +0.3**
comp=Z,0.8nm,0.3s,mb4.6,baz=315,slow=5.7,SNR=5.0
MIB Mutribah 92.19 342 *e*P **P 13 03 42.7 -0.2**
MIB AMb AMB 13 03 43.8
comp=Z,107nm,0.8s,mb6.2
UMR Umm Al-Rimmam 92.37 342 *e*P **P 13 03 43.3 -0.4**
UMR AMb AMB 13 03 44.5
comp=Z,69nm,0.9s,mb6.0
RDF Al-Radifah 93.01 342 *e*P **P 13 03 46.9 +0.3**
RDF AMb AMB 13 03 48.1
comp=Z,50nm,0.9s,mb6.0
QRN Al-Qurain 93.12 342 *e*P **P 13 03 47.0 -0.1**
QRN AMb AMB 13 03 48.4
comp=Z,43nm,0.9s,mb5.9
HYB Hyderabad 94.54 311 *i* P **P 13 03 52.5 -1.3**
POO Poona 95.42 316 *ex* x 13 03 52.5
KAD Karad 96.40 315 *e*P **P 13 04 00.7 -1.6**
ASAR Alice Springs 100.58 243 P Pdif 13 04 20.9 -0.2
comp=Z,0.4nm,0.8s,baz=22,slow=5.1,SNR=3.5
TORD Torodi Ar. Bea 107.42 26 PP PP 13 09 16.5 -1.7
comp=Z,1.6nm,1.1s,baz=345,slow=3.5,SNR=3.7
TORD PKKPbc PKKPbc 13 20 11.8 -0.7
comp=Z,0.5nm,0.7s,baz=146,slow=1.1,SNR=3.2
TORD PKKP PKKPbc 13 20 19.6 +7.1
comp=Z,1.0nm,0.8s,baz=179,slow=1.7,SNR=4.8
TORD PKKPab PKKPab 13 20 32.2 +0.5
comp=Z,0.6nm,0.8s,baz=157,slow=3.0,SNR=2.9
KMBO Kilima Mbogo 124.06 347 PKP PKPdf 13 09 31.9 +0.2
comp=Z,3.8nm,0.7s,baz=31,slow=5.9,SNR=14
KMBO Kilima Mbogo 124.06 347 *e*PKPdf PKPdf 13 09 31.9 +0.2
TSUM Tsumeb 142.02 14 *e*PKPdf PKPdf 13 10 02.5 -2.5
QSPA South Pole Qui 146.39 180 PKPbc PKPbc 13 10 12.1 -0.1
comp=Z,12nm,0.8s,baz=38,slow=1.0,SNR=41
QSPA pPKPbc pPKPbc 13 10 19.3 -1.5
comp=Z,68nm,0.9s,baz=61,slow=1.6,SNR=40
LBTB Lobatse 148.43 2 PKPbc PKPbc 13 10 19.2 -0.2
comp=Z,24nm,0.8s,baz=15,slow=1.3,SNR=36
LBTB Lobatse 148.43 2 *e*PKPbc PKPbc 13 10 18.7 -0.7
BOSA Boshof 152.00 3 PKPbc PKPbc 13 10 27.2 -0.7
comp=Z,15nm,0.7s,baz=21,slow=3.2,SNR=30
BOSA pPKPbc pPKPbc 13 10 34.9 -1.7
comp=Z,15nm,0.7s,baz=5.9,slow=3.5,SNR=8.7
BOSA Boshof 152.00 3 *e*PKPbc PKPbc 13 10 26.7 -1.2
SUR Sutherland 155.42 12 PKPab PKPab 13 10 51.7 0.0
comp=Z,8.3nm,0.8s,baz=309,slow=14,SNR=4.4
VNA2 Neumayer--Watz 159.59 148 *e*PKPdf PKPdf 13 10 30.3 +0.2
VNA2 *e* 13 11 12.9

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*ISCJB **12** 12:54:07.7±1.1, 32°.02N±0°.08×105°.2E±0°.2, h10km, mb3.2/4, Error ellipse: s-maj=21.4km s-min=12.1km az=5.0*
*IDC **12** 12:54:07.6±1.4, 31°.76N×104°.68E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/26, mbtmp3.4/4, Error ellipse: s-maj=86.5km s-min=25.0km az=54.0*
ISC 12 12:54:09.8±1.1, 32°.02N±0°.08×105°.1E±0°.2, h10km, n8, σ1§10/10, mb3.2/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.61**	**227**	Pg	**Pg**	**12 54 41.4**	**+0.8**
LZH	**Lanzhou**	**4.19**	**346**	*e*Pg	**Pn**	**12 55 18.7**	**+5.0**
LZH				Sn	**Sn**	**12 55 51.5**	**-11**
LZH				Sg	**Sn**	**12 56 04.0**	**+1.3**
LZH				smax			
	comp=N,140nm,0.6s						
LZH				smax			
	comp=E,190nm,0.6s						
MKAR	**Makanchi Array**	**22.88**	**317**	P	**P**	**12 59 11.9**	**-1.4**
	comp=E,0.3nm,0.7s,mb2.8,baz=114,slow=11,SNR=2.4						
KURK	**Kurchatov**	**27.05**	**321**	P	**P**	**12 59 51.3**	**-0.8**
	comp=E,0.1nm,0.3s,mb2.8,baz=134,slow=8.5,SNR=2.7						
WRA	**Warramunga Arr**	**58.77**	**148**	P	**P**	**13 04 07.5**	**-0.6**
	comp=E,0.8nm,0.5s,mb4.0,baz=338,slow=7.4,SNR=9.5						
WRA	**Warramunga Arr**	**58.77**	**148**	P	**P**	**13 04 07.5**	**-0.6**
WRA	**Warramunga Arr**	**58.77**	**148**	P	**P**	**13 04 07.5**	**-0.6**
YKA	**Yellowknife Ar**	**80.56**	**18**	P	**P**	**13 06 23.4**	**+1.5**
	comp=E,0.2nm,0.5s,mb3.3,baz=327,slow=5.2,SNR=2.5						

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*ISCJB **12** 12:54:57.7±1.0, 31°.17N±0°.05×103°.81E±0°.08, h14km±7km, mb4.2/16, Error ellipse: s-maj=10.9km s-min=7.6km az=8.3*
*IDC **12** 12:54:57.4±0.8, 31°.18N×103°.66E, h0km, mb4.3/11, mb1 4.3/13, mb1mx4.1/29, mbtmp4.2/13, ML3.4/2, Error ellipse: s-maj=27.8km s-min=14.7km az=58.0*
*NEIC **12** 12:54:58.8±0.4, 31°.19N×103°.79E, h10km, mb4.4/2, Error ellipse: s-maj=12.1km s-min=7.9km az=77.0*
*BJI **12** 12:54:58.2, 31°.33N×103°.71E, h14km, mB5.0/2, mb4.6/4, ML4.2/11, Ms4.3/4, Ms7 4.2/3*
ISC 12 12:54:59.2±1.0, 31°.12N±0°.04×103°.80E±0°.07, h10km±7km, n33, σ1§08/37, mb4.2/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**190**	Pg	**Pg**	**12 55 04.5**	**+0.9**
CD2				Sg	**Sg**	**12 55 13.7**	**+7.2**
CD2				smax			
	comp=N,27μm,0.6s						
LZH	**Lanzhou**	**4.95**	**0**	Pg	**Pg**	**12 56 34.7**	**+0.6**
LZH				Sg	**Sg**	**12 57 32.6**	**-5.6**
LZH				smax			
	comp=N,190nm,0.8s						
LZH				smax			
	comp=E,190nm,0.7s						
LZH				LR	LR		
	comp=E,3μm,7.9s						
LZH				LR	LR		
	comp=Z,2μm,8.9s						
ENH	**Enshi**	**4.97**	**98**	*e*Pn	**Sn**	**12 57 17.4**	**+6.1**
	comp=Z,195nm,0.5s						
GYA	**Guiyang**	**5.28**	**151**	Pg	**Pg**	**12 56 39.1**	**-1.2**
GYA				Sg	**Sg**	**12 57 45.8**	**-2.9**
GYA				smax			
	comp=N,230nm,0.9s						
GYA				smax			
	comp=E,240nm,0.8s						
LSA	**Lhasa**	**11.01**	**266**	Pn	**Pn**	**12 57 37.9**	**+1.1**
HHC	**Hu-ho-hao-te**	**11.56**	**31**	*e*P	**Pn**	**12 57 44.1**	**-0.1**
HHC				pP		12 57 49.7	
HHC				sP		12 57 53.7	
HHC				S	**Sn**	**12 59 55.0**	**+1.7**
HHC				SS		13 00 08.9	
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
HHC				LR	LR		
	comp=N,500nm,5.8s						
HHC				LR	LR		
	comp=E,620nm,6.0s						
HHC				LR	LR		
	comp=Z,550nm,5.4s						
CMAR	**Chiang Mai Arr**	**13.35**	**200**	Pn	**Pn**	**12 58 08.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=5.7,slow=12,SNR=3.0						
CMAR	**Chiang Mai Arr**	**13.35**	**200**	Pn	**Pn**	**12 58 08.9**	**+0.1**
SONM	**Songino Array**	**16.81**	**6**	Pn	**Pn**	**12 58 53.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=4.8						
ULN	**Ulaanbaatar**	**16.91**	**8**	*e*Pn	**Pn**	**12 58 54.1**	**-1.6**
	comp=Z,6.5nm,0.9s						
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**12 59 42.9**	**+1.5**
	comp=Z,4.2nm,0.6s,baz=260,slow=10,SNR=17						
MK31	**Makanchi Array**	**22.80**	**319**	*e*Pn	**P**	**12 59 57.4**	**-4.5**
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**12 59 59.7**	**-2.1**
	comp=Z,13nm,1.0s,mb4.3,baz=125,slow=11,SNR=47						
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**12 59 59.7**	**-2.1**
TKM2	**Tokmak 2**	**25.29**	**306**	*e*P	**P**	**13 00 25.7**	**0.0**
	comp=Z,5.8nm,1.0s,mb4.1						
UCH	**Uchtor**	**25.85**	**304**	*e*P	**P**	**13 00 31.6**	**+0.8**
	comp=Z,11nm,1.0s,mb4.4						
AAK	**Ala-Archa**	**25.98**	**304**	P	**P**	**13 00 32.0**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.0,baz=105,slow=6.1,SNR=11						
AAK	**Ala-Archa**	**25.98**	**304**	*e*P	**P**	**13 00 33.0**	**+1.1**
	comp=Z,5.4nm,0.8s,mb4.1						
AML	**Almayashu**	**26.41**	**303**	*e*P	**P**	**13 00 37.1**	**+1.2**
	comp=Z,5.8nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**26.50**	**304**	*e*P	**P**	**13 00 37.8**	**+1.2**
	comp=Z,5.5nm,1.1s,mb4.0						
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**13 00 36.2**	**-1.1**
	comp=Z,37nm,0.8s,mb5.0,baz=134,slow=8.4,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**13 00 36.2**	**-1.1**
KURK	**Kurchatov**	**27.08**	**324**	P	**P**	**13 00 40.1**	**-1.7**
	comp=Z,12nm,0.8s,mb4.5,baz=128,slow=9.4,SNR=65						
KURK	**Kurchatov**	**27.08**	**324**	*e*P	**P**	**13 00 40.1**	**-1.7**
	comp=Z,39nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.25**	**154**	P	**P**	**13 04 17.7**	**-0.3**
	comp=Z,2.5nm,0.9s,mb4.2,baz=42,slow=5.5,SNR=4.9						
FITZ	**Fitzroy Crossi**	**53.25**	**154**	*e*P	**P**	**13 04 17.3**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.1						
FITZ				P		13 04 17.7	
ARCES	**ARCESS Array B**	**57.14**	**336**	P	**P**	**13 04 44.5**	**-1.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=69,slow=5.9,SNR=3.2						
WRAB	**Tennant Creek**	**58.63**	**146**	*e*P	**P**	**13 04 56.7**	**+0.2**
	comp=Z,4.8nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.63**	**146**	P	**P**	**13 04 57.0**	**+0.4**
	comp=Z,3.1nm,0.5s,mb4.6,baz=338,slow=7.6,SNR=17						
ASAR	**Alice Springs**	**61.64**	**148**	P	**P**	**13 05 17.7**	**+0.6**
	comp=Z,1.1nm,0.8s,mb4.1,baz=338,slow=6.6,SNR=8.0						
STKA	**Stephens Creek**	**72.16**	**147**	P	**P**	**13 06 24.6**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=314,slow=5.7,SNR=3.6						
INK	**Inuvik**	**72.23**	**19**	P	**P**	**13 06 23.1**	**-1.0**
	comp=Z,2.0nm,0.7s,mb4.1,baz=304,slow=2.3,SNR=7.4						
YKA	**Yellowknife Ar**	**81.75**	**17**	P	**P**	**13 07 17.9**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=328,slow=4.8,SNR=7.1						

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*ISCJB **12** 12:58:41.2±0.9, 31°.24N±0°.08×103°.08E±0°.09, h10km, mb3.8/6, Error ellipse: s-maj=14.4km s-min=8.1km az=44.1*
*IDC **12** 12:58:42.4±1.6, 31°.09N×103°.37E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/26, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=53.9km s-min=24.3km az=94.0*
*BJI **12** 12:58:49.9, 30°.98N×103°.29E, h9km, mb4.1/1, ML3.7/6*
ISC 12 12:58:43.5±0.9, 31°.23N±0°.08×103°.15E±0°.10, h10km, n10, σ0§86/12, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.61**	**121**	Pg	**Pg**	**12 58 55.0**	**-0.3**
CD2				Sg	**Sg**	**12 59 03.9**	**+0.6**
CD2				smax			
	comp=N,5μm,0.9s						
GYA	**Guiyang**	**5.66**	**146**	Pg	**Pg**	**13 00 27.7**	**-4.3**
GYA				smax			
	comp=N,170nm,1.1s						
GYA				smax			
	comp=E,230nm,1.0s						
GYA	**Guiyang**	**5.66**	**146**	Pg	**Pg**	**13 00 27.9**	**-4.1**
GYA				Sg	**Sb**	**13 01 30.7**	**+0.3**
GYA				smax			
	comp=N,170nm,1.1s						
GYA				smax			
	comp=E,230nm,1.1s						
CMAR	**Chiang Mai Arr**	**13.28**	**198**	Pn	**Pn**	**13 01 53.0**	**+1.0**
	comp=E,0.2nm,0.3s,baz=1.8,slow=14,SNR=3.4						
KSRS	**Korea Array**	**21.35**	**66**	P	**P**	**13 03 30.4**	**-0.4**
	comp=E,2.4nm,0.6s,mb3.7,baz=241,slow=8.9,SNR=7.1						
WRA	**Warramunga Arr**	**59.03**	**145**	P	**P**	**13 08 42.3**	**-1.4**
	comp=E,1.9nm,1.0s,mb4.1,baz=332,slow=7.6,SNR=6.1						
ASAR	**Alice Springs**	**62.02**	**148**	P	**P**	**13 09 03.3**	**-0.8**
	comp=E,0.4nm,0.8s,mb3.6,baz=341,slow=6.1,SNR=4.5						
INK	**Inuvik**	**72.31**	**19**	P	**P**	**13 10 09.7**	**+0.9**
	comp=E,1.5nm,0.9s,mb3.9,baz=338,slow=3.9,SNR=4.7						
STKA	**Stephens Creek**	**72.56**	**146**	P	**P**	**13 10 09.9**	**-0.8**
	comp=E,0.8nm,0.5s,mb3.9,baz=302,slow=6.0,SNR=4.6						
YKA	**Yellowknife Ar**	**81.81**	**17**	P	**P**	**13 11 03.4**	**+1.1**
	comp=E,0.4nm,0.6s,mb3.5,baz=331,slow=5.3,SNR=6.3						

IDC 12 13:00:17.9±27.0, 30°.11N×104°.09E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=653.4km s-min=45.3km az=119.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.85**	**340**	Pg	Pg	13 00 20.8	-13
CD2				Sg	Sg	13 00 25.7	-19
CD2				smax			
	comp=N,33μm,0.4s						
KSRS	**Korea Array**	**21.09**	**63**	P	P	13 05 03.5	-0.3
	comp=N,1.3nm,0.6s,baz=269,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**57.66**	**146**	P	P	13 10 10.0	-0.1
	comp=N,0.3nm,0.5s,baz=338,slow=7.8,SNR=1.4						
ASAR	**Alice Springs**	**60.65**	**148**	P	P	13 10 31.0	+0.2
	comp=N,0.2nm,0.4s,baz=328,slow=6.6,SNR=1.9						

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*ISCJB **12** 13:02:01.7±0.5, 30°.85N±0°.05×103°.65E±0°.06, h10km, mb4.0/13, Error ellipse: s-maj=7.7km s-min=7.3km az=167.5*
*IDC **12** 13:02:02.0±0.8, 30°.89N×103°.60E, h0km, mb4.0/10, mb1 4.1/12, mb1mx3.9/29, mbtmp4.0/12, ML3.7/1, Error ellipse: s-maj=29.2km s-min=15.7km az=59.0*
*NEIC **12** 13:02:04.0±0.5, 30°.86N×103°.41E, h10km, mb4.4/2, Error ellipse: s-maj=16.5km s-min=9.9km az=57.0*
*BJI **12** 13:02:04.7, 30°.90N×103°.57E, h10km, mb4.6/5, ML3.9/9, Ms4.2/4, Ms7 4.1/2*
ISC 12 13:02:03.9±0.5, 30°.85N±0°.05×103°.56E±0°.06, h10km, n27, σ1§20/31, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.18**	**69**	Pg	**Pg**	**13 02 11.8**	**+4.1**
CD2				Sg	**Sg**	**13 02 18.2**	**+7.9**
CD2				smax			
	comp=N,38μm,0.8s						
ENH	**Enshi**	**5.14**	**95**	*e*P	**Pn**	**13 03 25.6**	**+4.7**
LZH	**Lanzhou**	**5.23**	**2**	Pg	**Pg**	**13 03 44.2**	**+0.1**
LZH				Sg	**Sg**	**13 04 49.0**	**-2.9**
LZH				smax			
	comp=N,120nm,0.9s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.4s						
LZH				LR	LR		
	comp=Z,3μm,9.4s						
WHN	**Wuhan**	**9.29**	**89**	P	**Pn**	**13 04 12.1**	**-5.8**
WHN				S	**Sn**	**13 06 01.0**	**-1.5**
WHN				LR	LR		
	comp=N,1μm,2.4s						
WHN				LR	LR		
	comp=E,2μm,5.1s						
WHN				LR	LR		
	comp=Z,1μm,5.9s						
HHC	**Hu-ho-hao-te**	**11.90**	**31**	*e*P	**Pn**	**13 04 55.4**	**+1.9**
HHC				PP		13 05 04.6	
HHC				S	**Sn**	**13 07 08.2**	**+1.8**
HHC				SS		13 07 22.0	
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				LR	LR		
	comp=N,510nm,5.1s						
HHC				LR	LR		
	comp=E,640nm,5.2s						
HHC				LR	LR		
	comp=Z,700nm,6.9s						
CMAR	**Chiang Mai Arr**	**13.03**	**200**	Pn	**Pn**	**13 05 10.7**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=18,slow=8.9,SNR=1.9						
NJ2	**Nanjing**	**13.11**	**81**	*e*P	**Pn**	**13 05 10.3**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,50nm,1.2s						
SONM	**Songino Array**	**17.11**	**6**	Pn	**Pn**	**13 06 02.7**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=188,slow=19,SNR=2.7						
KSRS	**Korea Array**	**21.18**	**65**	P	**P**	**13 06 48.9**	**-0.5**
	comp=Z,4.8nm,0.8s,mb3.9,baz=245,slow=9.6,SNR=11						
CN2	**Changchun**	**21.60**	**47**	*e*P	**P**	**13 06 58.6**	**+4.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MK31	**Makanchi Array**	**22.88**	**320**	*e*P	**P**	**13 07 09.4**	**+2.0**
MKAR	**Makanchi Array**	**22.88**	**320**	P	**P**	**13 07 05.9**	**-1.4**
	comp=Z,1.8nm,0.8s,mb3.6,baz=125,slow=10,SNR=5.7						
TKM2	**Tokmak 2**	**25.29**	**306**	*e*P	**P**	**13 07 33.2**	**+2.8**
UCH	**Uchtor**	**25.84**	**304**	P	**P**	**13 07 34.4**	**-1.0**
AAK	**Ala-Archa**	**25.97**	**305**	P	**P**	**13 07 36.5**	**0.0**
	comp=Z,2.5nm,0.7s,mb3.9,baz=100,slow=6.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.76**	**335**	P	**P**	**13 07 43.9**	**+0.4**
	comp=Z,1.6nm,0.3s,mb4.0,baz=134,slow=12,SNR=1.0						
KURK	**Kurchatov**	**27.18**	**324**	P	**P**	**13 07 47.4**	**0.0**
	comp=Z,2.8nm,0.8s,mb3.9,baz=130,slow=9.0,SNR=8.3						
KURK	**Kurchatov**	**27.18**	**324**	*e*P	**P**	**13 07 48.9**	**+1.6**
BRVK	**Borovoye**	**32.78**	**322**	P	**P**	**13 08 36.2**	**-0.7**
	comp=Z,2.1nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**37.50**	**312**	*e*P	**P**	**13 09 16.4**	**-1.2**
WRAB	**Tennant Creek**	**58.52**	**146**	*e*P	**P**	**13 12 00.2**	**-0.3**
	comp=Z,4.1nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.52**	**146**	P	**P**	**13 12 00.6**	**+0.1**
	comp=Z,2.3nm,0.5s,mb4.5,baz=338,slow=7

*NEIC **12** 13:07:15.5±0.5, 31°.08N×103°.47E, h10km, mb4.4/2, Error ellipse: s-maj=14.6km s-min=8.6km az=65.0*
*BJI **12** 13:07:17.6, 31°.22N×103°.65E, h17km, mB4.9/2, mb4.5/6, ML3.8/6, Ms4.4/2, Ms7 4.1/2*

ISC 12 13:07:15.4±0.5, 31°.11N±0°.06×103°.42E±0°.07, h10km, n25, σ0:95/27, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**124**	Pg	**Pg**	**13 07 22.6**	**+0.2**
CD2				Sg	**Sg**	**13 07 28.8**	**+1.7**
CD2				smax			
	comp=N,34μm,0.6s						
ENH	**Enshi**	**5.29**	**98**	P	**Pn**	**13 08 36.6**	**+2.0**
GYA	**Guiyang**	**5.44**	**148**	Pg	**Pg**	**13 08 55.1**	**-4.5**
GYA				smax			
	comp=N,210nm,1.0s						
GYA				smax			
	comp=E,200nm,0.9s						
HHC	**Hu-ho-hao-te**	**11.74**	**32**	*e*P	**Pn**	**13 10 07.8**	**+4.9**
HHC				PP		13 10 17.2	
HHC				S	**Sn**	**13 12 21.5**	**+7.5**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				LR	LR		
	comp=N,340nm,5.9s						
HHC				LR	LR		
	comp=E,590nm,4.5s						
HHC				LR	LR		
	comp=Z,500nm,6.3s						
NJ2	**Nanjing**	**13.20**	**82**	*e*P	**Pn**	**13 10 22.6**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**13.23**	**199**	Pn	**Pn**	**13 10 24.3**	**+0.9**
	baz=12,slow=9.2,SNR=3.4						
SONM	**Songino Array**	**16.86**	**7**	Pn	**Pn**	**13 11 12.1**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=187,slow=12,SNR=4.3						
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**13 11 59.7**	**-1.3**
	comp=Z,3.7nm,0.8s,mb3.8,baz=261,slow=11,SNR=9.3						
CN2	**Changchun**	**21.52**	**48**	*e*P	**P**	**13 12 03.9**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**22.59**	**320**	P	**P**	**13 12 17.4**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.2,baz=146,slow=10,SNR=1.1						
UCH	**Uchtor**	**25.59**	**304**	P	**P**	**13 12 52.1**	**+7.5**
	comp=Z,4.4nm,0.9s,mb4.0						
AAK	**Ala-Archa**	**25.72**	**305**	P	**P**	**13 12 47.2**	**+1.4**
	comp=Z,0.6nm,0.3s,mb3.6,baz=139,slow=11,SNR=1.7						
AAK	**Ala-Archa**	**25.72**	**305**	P	**P**	**13 12 48.9**	**+3.1**
ZALV	**Zalesovo Beam**	**26.47**	**335**	P	**P**	**13 12 52.8**	**+0.3**
	comp=Z,1.9nm,0.3s,mb4.0,baz=144,slow=8.2,SNR=1.9						
KURK	**Kurchatov**	**26.89**	**324**	P	**P**	**13 12 56.8**	**+0.4**
	comp=Z,2.2nm,0.8s,mb3.8,baz=128,slow=9.7,SNR=3.8						
BVAR	**Borovoye Array**	**32.42**	**322**	P	**P**	**13 13 45.5**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=111,slow=8.0,SNR=2.9						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**13 17 13.3**	**-0.7**
	comp=Z,3.8nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.81**	**146**	P	**P**	**13 17 13.1**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.4,baz=338,slow=7.7,SNR=12						
WB2	**Warramunga Arr**	**58.81**	**146**	*e*P	**P**	**13 17 13.4**	**-0.7**
ASAR	**Alice Springs**	**61.80**	**148**	P	**P**	**13 17 34.1**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.8,baz=325,slow=6.3,SNR=6.5						
NWAO	**Narrogin (SRO)**	**65.02**	**167**	P	**P**	**13 17 55.1**	**-0.5**
	comp=Z,10.0nm,1.0s,mb4.8,baz=315,slow=10.0,SNR=1.7						
STKA	**Stephens Creek**	**72.33**	**147**	P	**P**	**13 18 40.5**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.0,baz=331,slow=4.6,SNR=4.3						
INK	**Inuvik**	**72.34**	**19**	P	**P**	**13 18 40.3**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=328,slow=7.8,SNR=13						
RES	**Resolute Bay**	**73.79**	**5**	P	**P**	**13 18 48.9**	**-0.6**
	comp=Z,1.1nm,0.9s,mb3.8,baz=337,slow=7.7,SNR=3.7						
YKA	**Yellowknife Ar**	**81.86**	**17**	P	**P**	**13 19 33.9**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=330,slow=5.2,SNR=13						

IDC 12 13:08:41.5±7.7, 32°.09N×104°.41E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/25, mbtmp3.5/3, Error ellipse: s-maj=438.9km s-min=39.2km az=80.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.31**	**205**	Pg	Pn	13 08 48.8	-18
CD2				Sg	Sn	13 09 01.4	-24
CD2				smax			
	comp=N,7μm,0.8s						
LZH	**Lanzhou**	**4.01**	**353**	*e*Pg	Pn	13 09 28.0	-16
LZH				Sg	Sn	13 10 15.0	-17
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,200nm,0.5s						
BTO	**Baotou**	**9.62**	**26**	*e*P	Sn	13 12 56.4	+6.4
WRA	**Warramunga Arr**	**59.15**	**147**	P	P	13 18 45.2	+1.1
	comp=E,1.0nm,0.7s,baz=337,slow=7.7,SNR=3.1						
ASAR	**Alice Springs**	**62.20**	**149**	P	P	13 19 04.0	-0.9
	comp=E,0.4nm,0.7s,baz=333,slow=6.2,SNR=1.9						
YKA	**Yellowknife Ar**	**80.67**	**17**	P	P	13 20 55.9	0.0
	comp=E,0.1nm,0.4s,baz=325,slow=5.3,SNR=4.1						

*ISCJB **12** 13:09:07.2±0.4, 32°.10N±0°.08×104°.9E±0°.1, h10km, mb4.0/13, Error ellipse: s-maj=15.5km s-min=8.3km az=147.2*
*IDC **12** 13:09:07.7±0.8, 32°.16N×104°.98E, h0km, mb3.9/10, mb1 4.0/13, mb1mx3.8/30, mbtmp3.8/13, ML3.4/3, Error ellipse: s-maj=33.1km s-min=16.2km az=59.0*
*NEIC **12** 13:09:09.2±0.3, 32°.11N×104°.89E, h10km, mb4.5/3, Error ellipse: s-maj=11.7km s-min=6.1km az=60.0*

ISC 12 13:09:09.2±0.4, 32°.12N±0°.08×104°.9E±0°.1, h10km, n24, σ0:61/24, mb4.0/13, 5C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.33**	**114**	P	**Pn**	**13 10 14.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**14.63**	**203**	Pn	**Pn**	**13 12 35.1**	**-1.2**
	0.0nm,0.3s,baz=17,slow=9.8,SNR=3.6						
SONM	**Songino Array**	**15.74**	**4**	Pn	**Pn**	**13 12 50.4**	**-0.4**
	0.3nm,0.3s,baz=182,slow=8.7,SNR=3.7						
KSRS	**Korea Array**	**19.62**	**68**	P	**Pn**	**13 13 35.4**	**-3.8**
	0.2nm,0.3s,baz=248,slow=10.0,SNR=5.2						
MKAR	**Makanchi Array**	**22.61**	**317**	P	**P**	**13 14 11.8**	**+1.1**
	1.1nm,0.8s,mb3.3,baz=111,slow=9.9,SNR=2.7						
ZAA0	**Zalesovo Array**	**26.12**	**333**	*e*P	**P**	**13 14 42.9**	**-0.3**
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**13 14 43.5**	**+0.4**
	1.4nm,0.4s,mb3.9,baz=129,slow=9.5,SNR=4.2						
ABKAR	**Akbulak array**	**37.53**	**311**	*e*P	**P**	**13 16 23.1**	**-0.1**
AKTK	**Aktyubinsk**	**38.96**	**312**	P	**P**	**13 16 35.2**	**0.0**
AKTO	**Aktyubinsk**	**38.96**	**312**	P	**P**	**13 16 35.2**	**0.0**
	0.6nm,0.5s,mb3.6,baz=126,slow=17,SNR=1.9						
FITZ	**Fitzroy Crossi**	**53.74**	**155**	P	**P**	**13 18 32.1**	**+0.5**
	1.8nm,0.7s,mb4.1,baz=355,slow=5.9,SNR=2.5						
ARCES	**ARCESS Array B**	**56.62**	**336**	P	**P**	**13 18 51.3**	**-0.6**
	7.4nm,1.1s,mb4.6,baz=82,slow=6.5,SNR=3.6						
FINES	**FINESS Array B**	**57.11**	**326**	P	**P**	**13 18 55.0**	**-0.5**
	1.8nm,0.9s,mb4.1,baz=51,slow=7.3,SNR=1.5						
WRAB	**Tennant Creek**	**58.94**	**147**	*e*P	**P**	**13 19 09.6**	**+0.8**
	2.3nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.94**	**147**	P	**P**	**13 19 08.6**	**-0.2**
	0.9nm,0.3s,mb4.2,baz=328,slow=9.1,SNR=8.2						
WB2	**Warramunga Arr**	**58.95**	**147**	*e*P	**P**	**13 19 09.0**	**+0.2**
ASAR	**Alice Springs**	**62.01**	**150**	P	**P**	**13 19 30.6**	**+0.9**
	0.5nm,0.6s,mb3.8,baz=339,slow=7.1,SNR=5.9						
GERES	**GERESS Array B**	**67.33**	**314**	P	**P**	**13 20 04.2**	**0.0**
	0.1nm,0.3s,mb3.3,baz=352,slow=14,SNR=3.1						
LPG	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**13 20 39.9**	**+0.5**
	4.8nm,0.5s,mb4.4						
LPG	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**13 20 39.9**	**+0.5**
	2.4nm,0.5s,mb4.4						
LPL	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**13 20 39.8**	**+0.4**
	5.8nm,0.5s,mb4.4						
LPL	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**13 20 39.8**	**+0.4**
	2.9nm,0.5s,mb4.5						
SMF	**Signal de Mont**	**74.26**	**315**	⇑*i*P	**P**	**13 20 45.8**	**-0.7**
YKA	**Yellowknife Ar**	**80.52**	**17**	P	**P**	**13 21 21.8**	**+0.6**
	0.5nm,0.6s,mb3.6,baz=329,slow=5.1,SNR=6.4						

*ISCJB **12** 13:11:09.0±0.5, 32°.32N±0°.05×104°.8E±0°.1, h10km, mb3.9/14, Error ellipse: s-maj=15.2km s-min=6.4km az=164.5*
*IDC **12** 13:11:09.6±0.7, 32°.32N×104°.72E, h0km, mb3.9/12, mb1 4.1/15, mb1mx3.9/29, mbtmp3.9/15, ML3.8/3, Error ellipse: s-maj=31.1km s-min=14.8km az=57.0*
*NEIC **12** 13:11:11.1±0.5, 32°.30N×104°.64E, h10km, mb4.3/2, Error ellipse: s-maj=17.3km s-min=8.7km az=68.0*

ISC 12 13:11:11.3±0.5, 32°.25N±0°.05×104°.6E±0°.1, h10km, n22, σ1:02/23, mb3.9/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.88**	**351**	*e*Pg	**Pg**	**13 12 27.5**	**+1.8**
LZH				Sg	**Sg**	**13 13 16.0**	**0.0**
LZH				smax			
	comp=N,370nm,0.6s						
LZH				smax			
	comp=E,790nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.65**	**202**	Pn	**Pn**	**13 14 37.5**	**-1.1**
	comp=E,0.3nm,0.3s,baz=7.1,slow=8.8,SNR=4.7						
SONM	**Songino Array**	**15.63**	**4**	Pn	**Pn**	**13 14 49.0**	**-2.4**
	comp=E,0.2nm,0.3s,baz=184,slow=18,SNR=1.4						
KSRS	**Korea Array**	**19.80**	**68**	P	**Pn**	**13 15 38.7**	**-4.6**
	comp=E,0.2nm,0.3s,baz=255,slow=10,SNR=4.6						
MKAR	**Makanchi Array**	**22.43**	**317**	P	**P**	**13 16 08.1**	**-1.9**
	comp=E,0.5nm,0.6s,mb3.1,baz=116,slow=9.8,SNR=2.3						
UCH	**Uchtor**	**25.84**	**301**	*e*P	**P**	**13 16 44.2**	**+1.4**
	comp=E,4.4nm,1.1s,mb3.9						
ZALV	**Zalesovo Beam**	**25.90**	**333**	P	**P**	**13 16 43.1**	**-0.1**
	comp=E,0.6nm,0.5s,mb3.4,baz=146,slow=11,SNR=1.5						
KURK	**Kurchatov**	**26.61**	**322**	P	**P**	**13 16 49.1**	**-0.6**
	comp=E,0.9nm,0.7s,mb3.4,baz=131,slow=8.9,SNR=2.1						
BVAR	**Borovoye Array**	**32.18**	**320**	P	**P**	**13 17 39.3**	**+0.2**
	comp=E,0.2nm,0.4s,mb3.3,baz=101,slow=7.5,SNR=2.0						
BRTR	**Keskin Array B**	**56.57**	**299**	P	**P**	**13 20 54.9**	**+0.8**
	comp=E,0.8nm,0.8s,mb3.8,baz=110,slow=6.4,SNR=1.9						
FINES	**FINESS Array B**	**56.87**	**326**	P	**P**	**13 20 55.0**	**-0.8**
	comp=E,7.6nm,1.1s,mb4.6,baz=90,slow=7.6,SNR=5.0						
WRAB	**Tennant Creek**	**59.18**	**147**	*e*P	**P**	**13 21 13.2**	**+0.7**
	comp=E,3.3nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**59.18**	**147**	P	**P**	**13 21 12.7**	**+0.1**
	comp=E,1.2nm,0.7s,mb4.1,baz=298,slow=8.0,SNR=24						
WB2	**Warramunga Arr**	**59.19**	**147**	*e*P	**P**	**13 21 13.3**	**+0.8**
ASAR	**Alice Springs**	**62.24**	**150**	P	**P**	**13 21 33.5**	**+0.2**
	comp=E,1.0nm,0.5s,mb4.2,baz=333,slow=6.5,SNR=9.7						
NB2	**NORSAR Subarra**	**63.94**	**327**	P	**P**	**13 21 45.6**	**+1.4**
	comp=Z,2.4nm,0.7s,mb4.3,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**13 21 45.2**	**+1.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=76,slow=4.6,SNR=2.7						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**13 21 45.2**	**+1.0**
STKA	**Stephens Creek**	**72.73**	**148**	P	**P**	**13 22 39.7**	**+0.2**
	comp=Z,0.6nm,0.3s,mb4.0,baz=352,slow=6.2,SNR=6.1						
STKA	**Stephens Creek**	**72.73**	**148**	*e*P	**P**	**13 22 39.7**	**+0.2**
YKA	**Yellowknife Ar**	**80.47**	**17**	P	**P**	**13 23 23.3**	**+0.3**
	comp=Z,1.2nm,0.5s,mb4.1,baz=328,slow=5.1,SNR=20						
PDAR	**Pinedale Array**	**99.03**	**25**	P	**P**	**13 24 51.2**	**-1.2**
	comp=Z,0.4nm,0.9s,mb4.0,baz=241,slow=7.1,SNR=3.9						

IDC 12 13:14:59.8±1.4, 31°.22N×103°.88E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/25, mbtmp3.4/5, Error ellipse: s-maj=46.3km s-min=24.5km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.78**	**66**	P	P	13 19 42.2	-0.2
	2.5nm,0.6s,baz=258,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**22.77**	**319**	P	P	13 20 02.2	-1.4
	0.4nm,0.6s,baz=121,slow=12,SNR=2.5						
KURK	**Kurchatov**	**27.04**	**323**	P	P	13 20 44.7	+1.1
	0.5nm,0.7s,baz=130,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**58.67**	**146**	P	P	13 24 58.5	-0.6
	0.4nm,0.7s,baz=339,slow=7.8,SNR=3.2						
ASAR	**Alice Springs**	**61.69**	**149**	P	P	13 25 20.3	+0.6
	0.1nm,0.5s,baz=337,slow=7.1,SNR=3.0						

IDC 12 13:16:21.9±1.2, 31°.16N×103°.98E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, Error ellipse: s-maj=47.5km s-min=21.4km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.72**	**66**	P	P	13 21 03.4	-0.5
	1.1nm,0.5s,baz=246,slow=9.6,SNR=4.5						
MKAR	**Makanchi Array**	**22.87**	**319**	P	P	13 21 26.8	+0.1
	0.5nm,0.5s,baz=121,slow=10,SNR=4.7						
KURK	**Kurchatov**	**27.14**	**323**	P	P	13 22 06.3	-0.2
	0.9nm,0.9s,baz=124,slow=9.6,SNR=3.4						
WRA	**Warramunga Arr**	**58.58**	**146**	P	P	13 26 20.8	+0.3
	0.5nm,0.3s,baz=327,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**61.59**	**149**	P	P	13 26 41.1	-0.1
	0.2nm,0.4s,baz=339,slow=6.5,SNR=4.9						

*ISCJB **12** 13:18:45.3±0.5, 31°.25N±0°.07×103°.33E±0°.09, h10km, mb3.9/13, Error ellipse: s-maj=12.7km s-min=8.4km az=144.7*
*IDC **12** 13:18:45.5±0.8, 31°.27N×103°.36E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.8/27, mbtmp3.8/12, ML3.5/2, Error ellipse: s-maj=31.6km s-min=15.2km az=56.0*
*NEIC **12** 13:18:47.3±0.5, 31°.30N×103°.40E, h10km, mb4.2/3, Error ellipse: s-maj=14.2km s-min=8.0km az=57.0*
*BJI **12** 13:18:48.9, 31°.40N×103°.43E, h10km, mb4.2/3, ML4.0/7, Ms3.8/2, Ms7 3.5/1*

ISC 12 13:18:47.4±0.5, 31°.31N±0°.06×103°.29E±0°.08, h10km, n23, σ0:83/25, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.56**	**135**	Pg	**Pg**	**13 18 58.5**	**+0.1**
CD2				Sg	**Sg**	**13 19 07.5**	**+1.7**
CD2				smax			
	comp=N,9μm,0.6s						
ENH	**Enshi**	**5.43**	**99**	*e*Pn	**Pn**	**13 20 08.4**	**-0.1**
	comp=N,56nm,0.6s						
GYA	**Guiyang**	**5.66**	**148**	Pg	**Pg**	**13 20 30.5**	**-5.5**
GYA				smax			
	comp=N,230nm,0.8s						
GYA				smax			
	comp=E,160nm,0.9s						
WHN	**Wuhan**	**9.53**	**92**	P	**Pn**	**13 20 54.8**	**-10**
WHN				S	**Sn**	**13 22 43.8**	**-8.1**
CMAR	**Chiang Mai Arr**	**13.39**	**198**	Pn	**Pn**	**13 21 58.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=14,slow=11,SNR=2.4						
SONM	**Songino Array**	**16.68**	**7**	Pn	**Pn**	**13 22 41.9**	**+0.8**
	comp=E,0.0nm,0.3s,baz=190,slow=14,SNR=3.6						
KSRS	**Korea Array**	**21.20**	**66**	P	**P**	**13 23 33.2**	**0.0**
	comp=E,2.4nm,0.8s,mb3.6,baz=243,slow=10,SNR=5.3						
CN2	**Changchun**	**21.46**	**48**	*e*P	**P**	**13 23 36.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
MK31	**Makanchi Array**	**22.37**	**320**	*e*P	**P**	**13 23 46.2**	**+0.6**
MKAR	**Makanchi Array**	**22.37**	**320**	P	**P**	**13 23 45.7**	**+0.1**
	comp=Z,2.4nm,0.9s,mb3.6,baz=128,slow=11,SNR=11						
UCH	**Uchtor**	**25.39**	**303**	*e*P	**P**	**13 24 18.6**	**+3.7**
	comp=Z,2.5nm,1.1s,mb3.7						
AAK	**Ala-Archa**	**25.51**	**304**	P	**P**	**13 24 17.5**	**+1.5**
	comp=Z,1.5nm,0.3s,mb4.0,baz=135,slow=12,SNR=5.5						
AAK	**Ala-Archa**	**25.51**	**304**	P	**P**	**13 24 17.5**	**+1.5**
ZALV	**Zalesovo Beam**	**26.24**	**335**	P	**P**	**13 24 22.3**	**-0.1**
	comp=Z,2.1nm,0.8s,mb3.7,baz=134,slow=8.5,SNR=5.3						
KURK	**Kurchatov**	**26.67**	**324**	P	**P**	**13 24 26.2**	**-0.1**
	comp=Z,3.1nm,0.8s,mb3.9,baz=130,slow=9.4,SNR=15						
KURK	**Kurchatov**	**26.67**	**324**	P	**P**	**13 24 25.3**	**-1.0**
	comp=Z,4.4nm,1.0s,mb3.9						
BVAR	**Borovoye Array**	**32.20**	**322**	P	**P**	**13 25 15.2**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.6,baz=104,slow=11,SNR=3.6						
WRAB	**Tennant Creek**	**59.03**	**146**	*e*P	**P**	**13 28 46.8**	**-0.9**
	comp=Z,4.0nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**59.03**	**146**	P	**P**	**13 28 46.6**	**-1.1**
	comp=Z,2.3nm,0.8s,mb4.3,baz=338,slow=7.5,SNR=11						
WB2	**Warramunga Arr**	**59.04**	**146**	*e*P	**P**	**13 28 46.7**	**-1.0**
ASAR	**Alice Springs**	**62.03**	**148**	P	**P**	**13 29 07.3**	**-0.7**
	comp=Z,0.8nm,0.7s,mb4.0,baz=339,slow=6.7,SNR=7.7						
STKA	**Stephens Creek**	**72.56**	**146**	P	**P**	**13 30 14.1**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=5.7,slow=10,SNR=1.8						
YKA	**Yellowknife Ar**	**81.70**	**17**	P	**P**	**13 31 04.9**	**-0.8**
	comp=Z,0.2nm,0.6s,mb3.2,baz=330,slow=4.9,SNR=2.6						

*ISCJB **12** 13:19:23.2±0.7, 32°.00N±0°.05×104°.6E±0°.1, h10km, mb3.9/8, Error ellipse: s-maj=14.6km s-min=6.2km az=14.8*
*IDC **12** 13:19:23.5±1.0, 31°.82N×104°.20E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.7/26, mbtmp3.9/8, Error ellipse: s-maj=76.1km s-min=18.1km az=58.0*
*NEIC **12** 13:19:25.2±0.5, 31°.84N×104°.18E, h10km, Error ellipse: s-maj=47.4km s-min=9.9km az=57.0*

ISC 12 13:19:25.4±0.7, 31°.92N±0°.06×104°.4E±0°.1, h10km, n13, σ0:81/15, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.13**	**207**	Pg	**Sn**	**13 20 03.0**	**+0.1**
CD2				Sg	**Sg**	**13 20 07.1**	**+5.2**
CD2				smax			
	comp=N,5μm,0.6s						
LZH	**Lanzhou**	**4.18**	**354**	*e*Pg	**Pn**	**13 20 25.6**	**-3.6**
LZH				Sg	**Sn**	**13 21 23.5**	**+5.5**
LZH				smax			
	comp=N,92nm,0.7s						
LZH				smax			
	comp=E,420nm,0.8s						
GTA	**Gaotai**	**8.34**	**335**	*e*P	**Pn**	**13 21 27.9**	**+1.6**
GTA				pP		13 21 31.6	
GTA				sP		13 21 33.1	
GTA				pmax	pmax		
	comp=Z,16nm,1.1s						
MKAR	**Makanchi Array**	**22.52**	**318**	P	**P**	**13 24 24.6**	**-0.5**
	comp=Z,3.1nm,1.0s,mb3.7,baz=113,slow=12,SNR=4.7						
ZAA0	**Zalesovo Array**	**26.09**	**333**	*e*P	**P**	**13 24 58.5**	**-0.5**
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**13 24 59.9**	**+0.8**
	comp=Z,2.3nm,0.5s,mb4.0,baz=137,slow=8.7,SNR=5.5						
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**13 25 04.9**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.5,baz=128,slow=9.1,SNR=2.1						
ARCES	**ARCESS Array B**	**56.61**	**336**	P	**P**	**13 29 07.8**	**-0.1**
	comp=Z,4.9nm,0.9s,mb4.5,baz=82,slow=8.6,SNR=4.4						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**13 29 09.6**	**-1.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=86,slow=8.8,SNR=3.8						
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**13 29 25.4**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=338,slow=7.7,SNR=3.5						
WB2	**Warramunga Arr**	**59.04**	**147**	P	**P**	**13 29 26.2**	**+0.5**
ASAR	**Alice Springs**	**62.08**	**149**	P	**P**	**13 29 46.1**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.8,baz=347,slow=6.7,SNR=3.1						
YKA	**Yellowknife Ar**	**80.85**	**17**	P	**P**	**13 31 39.6**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=329,slow=5.2,SNR=6.1						

*ISCJB **12** 13:21:31.2±0.4, 31°.19N±0°.05×103°.81E±0°.09, h10km, mb3.9/14, Error ellipse: s-maj=12.5km s-min=5.6km az=154.6*
*IDC **12** 13:21:31.3±0.8, 31°.15N×103°.73E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.8/27, mbtmp3.9/12, ML3.9/2, Error ellipse: s-maj=31.2km s-min=15.7km az=56.0*
*NEIC **12** 13:21:32.9±0.5, 31°.19N×103°.82E, h10km, mb4.1/5, Error ellipse: s-maj=16.4km s-min=7.6km az=65.0*
*BJI **12** 13:21:32.8, 31°.32N×103°.76E, h17km, mb4.3/2, ML3.7/9, Ms3.8/1, Ms7 3.8/1*

ISC 12 13:21:33.2±0.4, 31°.20N±0°.05×103°.77E±0°.09, h10km, n23, σ0:99/25, mb3.9/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**183**	Pg	**Pg**	**13 21 39.9**	**+0.9**
CD2				Sg	**Sg**	**13 21 46.9**	**+4.0**
CD2				smax			
	comp=N,27μm,0.6s						
GYA	**Guiyang**	**5.36**	**151**	Pg	**Pg**	**13 23 17.4**	**+1.5**
GYA				Sg	**Sb**	**13 24 10.1**	**-1.3**
GYA				smax			
	comp=N,130nm,0.9s						
GYA				smax			
	comp=E,130nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**13 24 43.9**	**+0.1**
	comp=E,0.3nm,0.3s,baz=9.8,slow=11,SNR=1.9						
SONM	**Songino Array**	**16.73**	**6**	Pn	**Pn**	**13 25 29.0**	**+1.4**
	comp=E,0.2nm,0.3s,baz=188,slow=13,SNR=5.1						
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**13 26 16.0**	**+0.6**
	comp=E,5.0nm,0.7s,baz=259,slow=10,SNR=12						
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**13 26 20.4**	**+1.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.4						
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**13 26 34.7**	**-0.4**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**13 26 34.1**	**-1.0**
	comp=Z,2.9nm,0.9s,mb3.7,baz=119,slow=9.9,SNR=10.0						
TKM2	**Tokmak 2**	**25.23**	**306**	P	**P**	**13 27 01.7**	**+2.5**
	comp=Z,1.7nm,0.9s,mb3.6						
UCH	**Uchtor**	**25.79**	**303**	P	**P**	**13 27 04.9**	**+0.6**
	comp=Z,6.8nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**25.91**	**304**	P	**P**	**13 27 06.9**	**+1.5**
	comp=Z,1.2nm,0.3s,mb3.9,

ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**13 35 17.6**	**0.0**
	comp=Z,1.4nm,0.9s,mb4.1,baz=331,slow=6.4,SNR=9.8						
STKA	**Stephens Creek**	**72.27**	**146**	P	**P**	**13 36 24.1**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=326,slow=7.3,SNR=3.5						
YKA	**Yellowknife Ar**	**81.93**	**17**	P	**P**	**13 37 17.3**	**-1.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=327,slow=4.7,SNR=4.1						

*IDC **12** 13:26:49.2±0.9, 31°.05N×103°.78E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML3.6/1, Error ellipse: s-maj=34.3km s-min=17.8km az=64.0*
*ISCJB **12** 13:26:50.3±4.2, 31°.04N±0°.05×103°.8E±0°.1, h21km±32km, mb3.8/9, Error ellipse: s-maj=19.5km s-min=8.9km az=3.3*
*NEIC **12** 13:26:50.7±0.4, 31°.07N×103°.78E, h10km, mb4.4/1, Error ellipse: s-maj=16.7km s-min=7.2km az=74.0*
*BJI **12** 13:26:53.2, 31°.06N×103°.67E, h10km, mb4.4/1, ML4.0/6, Ms4.2/1*

ISC 12 13:26:52.6±0.9, 31°.07N±0°.07×103°.8E±0°.1, h22km±7km, n16, σ0$45/17, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.16**	**186**	Pg	**Pb**	**13 26 56.9**	**-0.6**
CD2				Sg	**Sb**	**13 27 01.2**	**+0.4**
CD2				smax			
	comp=N,118μm,0.6s						
CMAR	**Chiang Mai Arr**	**13.30**	**200**	Pn	**Pn**	**13 30 00.3**	**+0.2**
	baz=12,slow=11,SNR=2.7						
SONM	**Songino Array**	**16.86**	**6**	Pn	**Pn**	**13 30 47.8**	**+0.8**
	comp=N,0.2nm,0.3s,baz=190,slow=16,SNR=3.0						
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**13 31 33.1**	**-0.4**
	comp=N,3.4nm,0.6s,baz=258,slow=10,SNR=9.5						
CN2	**Changchun**	**21.31**	**47**	*e*P	**P**	**13 31 43.6**	**+5.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MKAR	**Makanchi Array**	**22.82**	**320**	P	**P**	**13 31 54.1**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.2,baz=120,slow=12,SNR=2.9						
ZAA0	**Zalesovo Array**	**26.63**	**335**	*e*P	**P**	**13 32 28.4**	**-0.8**
ZALV	**Zalesovo Beam**	**26.63**	**335**	P	**P**	**13 32 29.5**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.4,baz=111,slow=7.9,SNR=2.7						
KURK	**Kurchatov**	**27.11**	**324**	P	**P**	**13 32 33.0**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.4,baz=130,slow=8.9,SNR=3.8						
KURK	**Kurchatov**	**27.11**	**324**	P	**P**	**13 32 33.0**	**-0.6**
WRAB	**Tennant Creek**	**58.60**	**146**	*e*P	**P**	**13 36 48.0**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**58.60**	**146**	P	**P**	**13 36 48.0**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=337,slow=7.7,SNR=15						
WB2	**Warramunga Arr**	**58.61**	**146**	*e*P	**P**	**13 36 47.7**	**-0.2**
ASAR	**Alice Springs**	**61.61**	**148**	P	**P**	**13 37 08.6**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.8,baz=333,slow=7.0,SNR=5.5						
STKA	**Stephens Creek**	**72.13**	**147**	P	**P**	**13 38 15.1**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=314,slow=10,SNR=3.5						
YKA	**Yellowknife Ar**	**81.81**	**17**	P	**P**	**13 39 09.9**	**+0.5**
	comp=Z,0.3nm,0.6s,mb3.4,baz=332,slow=5.6,SNR=4.1						

IDC 12 13:27:35.0±17.0, 31°.78N×103°.90E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/28, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=272.7km s-min=72.2km az=141.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.15**	**6**	Pn	Pn	13 31 23.5	+0.3
	0.4nm,0.3s,baz=191,slow=12,SNR=1.8						
MKAR	**Makanchi Array**	**22.36**	**318**	P	P	13 32 34.6	+0.1
	0.9nm,0.7s,baz=124,slow=12,SNR=2.2						
AAK	**Ala-Archa**	**25.68**	**303**	P	P	13 33 06.8	+0.1
	0.8nm,0.3s,baz=117,slow=9.0,SNR=1.8						
ZALV	**Zalesovo Beam**	**26.04**	**334**	P	P	13 33 09.5	-0.3
	1.8nm,0.8s,baz=134,slow=8.2,SNR=3.6						
KURK	**Kurchatov**	**26.60**	**323**	P	P	13 33 15.2	+0.3
	3.0nm,0.8s,baz=130,slow=9.3,SNR=7.5						
BVAR	**Borovoye Array**	**32.16**	**321**	P	P	13 34 04.2	0.0
	0.8nm,0.7s,baz=105,slow=9.1,SNR=3.6						

*ISCJB **12** 13:29:19.3±1.1, 31°.30N±0°.08×104°.2E±0°.2, h10km, mb3.4/4, Error ellipse: s-maj=29.5km s-min=10.3km az=166.8*
*IDC **12** 13:29:19.8±1.4, 31°.24N×104°.13E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=45.4km s-min=26.8km az=57.0*

ISC 12 13:29:21.4±1.1, 31°.27N±0°.09×104°.1E±0°.2, h10km, n6, σ0$94/7, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.81**	**357**	Pg	**Pb**	**13 30 41.5**	**-4.3**
LZH				Sg	**Sn**	**13 31 29.6**	**-0.1**
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,340nm,1.2s						
LZH				LR	LR		
	comp=E,790nm,6.5s						
LZH				LR	LR		
	comp=Z,860nm,7.8s						
KSRS	**Korea Array**	**20.57**	**66**	P	**P**	**13 34 01.2**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=258,slow=10,SNR=7.7						
KURK	**Kurchatov**	**27.12**	**323**	P	**P**	**13 35 05.5**	**+1.0**
	comp=Z,0.9nm,0.9s,mb3.3,baz=130,slow=8.6,SNR=3.0						
WRA	**Warramunga Arr**	**58.60**	**146**	P	**P**	**13 39 17.9**	**-0.7**
	comp=Z,0.2nm,0.3s,mb3.6,baz=337,slow=7.6,SNR=2.4						
ASAR	**Alice Springs**	**61.62**	**149**	P	**P**	**13 39 39.9**	**+0.6**
	comp=Z,0.1nm,0.5s,mb3.2,baz=349,slow=7.8,SNR=1.1						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**13 41 37.3**	**-1.6**
	comp=Z,0.3nm,0.5s,mb3.4,baz=330,slow=5.2,SNR=3.6						

*ISCJB **12** 13:30:23.4±0.6, 31°.67N±0°.10×104°.4E±0°.1, h10km, mb3.5/7, Error ellipse: s-maj=19.5km s-min=10.6km az=144.8*
*IDC **12** 13:30:23.5±1.1, 31°.74N×104°.50E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/27, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=56.3km s-min=20.4km az=62.0*
*NEIC **12** 13:30:27.9±3.0, 31°.71N×104°.41E, h30km±23km, mb4.1/1, Error ellipse: s-maj=13.4km s-min=7.3km az=53.0*

ISC 12 13:30:25.3±0.6, 31°.72N±0°.10×104°.4E±0°.1, h10km, n11, σ0$40/11, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.59**	**107**	P	**Pn**	**13 31 35.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**14.10**	**202**	Pn	**Pn**	**13 33 45.5**	**+0.3**
	0.1nm,0.3s,baz=1,9,slow=8.3,SNR=3.0						
MK31	**Makanchi Array**	**22.69**	**318**	*e*P	**P**	**13 35 27.0**	**+0.2**
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**13 35 27.6**	**+0.8**
	0.4nm,0.4s,mb3.2,baz=122,slow=12,SNR=3.5						
ZAA0	**Zalesovo Array**	**26.28**	**333**	*e*P	**P**	**13 36 00.4**	**-0.3**
ZALV	**Zalesovo Beam**	**26.28**	**333**	P	**P**	**13 36 00.4**	**-0.2**
	1.3nm,0.7s,mb3.6,baz=128,slow=9.6,SNR=4.7						
KURK	**Kurchatov**	**26.91**	**322**	P	**P**	**13 36 06.0**	**-0.4**
	0.8nm,0.7s,mb3.3,baz=130,slow=9.2,SNR=4.4						
WRAB	**Tennant Creek**	**58.84**	**147**	*e*P	**P**	**13 40 23.8**	**-0.3**
	0.7nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**58.84**	**147**	P	**P**	**13 40 23.6**	**-0.5**
	0.6nm,0.5s,mb3.9,baz=340,slow=7.9,SNR=5.1						
ASAR	**Alice Springs**	**61.88**	**149**	P	**P**	**13 40 44.8**	**-0.1**
	0.2nm,0.5s,mb3.5,baz=337,slow=7.0,SNR=1.8						
YKA	**Yellowknife Ar**	**81.02**	**17**	P	**P**	**13 42 40.0**	**0.0**
	0.2nm,0.6s,mb3.2,baz=331,slow=5.9,SNR=2.9						

IDC 12 13:32:05.0±1.1, 31°.15N×103°.86E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/24, mbtmp3.6/7, Error ellipse: s-maj=42.2km s-min=20.3km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.83**	**66**	P	P	13 36 49.0	+0.9
	4.1nm,0.8s,baz=264,slow=9.8,SNR=3.2						
MKAR	**Makanchi Array**	**22.81**	**319**	P	P	13 37 10.5	+1.2
	2.0nm,1.0s,baz=115,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	P	13 37 44.2	-0.5
	0.6nm,0.4s,baz=123,slow=10,SNR=3.8						
KURK	**Kurchatov**	**27.09**	**323**	P	P	13 37 49.7	+0.5
	3.8nm,0.9s,baz=126,slow=9.0,SNR=5.5						
WRA	**Warramunga Arr**	**58.63**	**146**	P	P	13 42 04.2	+0.2
	0.6nm,1.0s,baz=326,slow=9.4,SNR=2.7						
ASAR	**Alice Springs**	**61.64**	**149**	P	P	13 42 24.6	0.0
	0.2nm,0.8s,baz=334,slow=8.2,SNR=3.0						
YKA	**Yellowknife Ar**	**81.72**	**17**	P	P	13 44 24.0	-1.1
	0.1nm,0.5s,baz=329,slow=4.7,SNR=2.9						

*IDC **12** 13:32:10.2±0.6, 31°.24N×103°.90E, h0km, mb4.1/17, mb1 4.2/19, mb1mx4.1/28, mbtmp4.1/19, ML3.7/2, Error ellipse: s-maj=27.2km s-min=12.9km az=53.0*
*ISCJB **12** 13:32:13.0±0.7, 31°.17N±0°.06×103°.89E±0°.06, h32km±6km, mb4.2/24, Error ellipse: s-maj=10.2km s-min=8.5km az=29.6*
*MOS **12** 13:32:12.9±1.1, 31°.25N×104°.11E, h34km, mb4.4/7, Error ellipse: s-maj=18.8km s-min=9.4km az=112.8*
*BJI **12** 13:32:13.6, 31°.31N×104°.10E, h23km, mB5.3/4, mb4.4/10, ML4.2/12, Ms4.4/3, Ms7 4.1/3*
*NEIC **12** 13:32:15.2±2.1, 31°.23N×103°.89E, h32km±16km, mb4.2/5, Error ellipse: s-maj=9.0km s-min=5.2km az=55.0*

ISC 12 13:32:13.7±1.1, 31°.21N±0°.06×103°.87E±0°.06, h21km±9km, n57, σ0$74/58, mb4.2/24, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**197**	Pg	**Pb**	**13 32 19.6**	**-1.1**
CD2				Sg	**Sb**	**13 32 25.6**	**+0.1**
CD2				smax			
	comp=N,47μm,0.6s						
ENH	**Enshi**	**4.93**	**100**	*e*P	**Pn**	**13 33 27.1**	**+0.6**
GYA	**Guiyang**	**5.33**	**152**	Pg	Px	13 33 49.6	
GYA				smax			
	comp=N,250nm,1.0s						
GYA				smax			
	comp=E,310nm,0.9s						
HHC	**Hu-ho-hao-te**	**11.45**	**31**	*e*P	**Pn**	**13 35 00.0**	**+4.1**
HHC				PP		13 35 09.0	
HHC				S	**Sn**	**13 37 09.6**	**+6.4**
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,490nm,5.0s						
HHC				LR	LR		
	comp=N,540nm,6.9s						
HHC				LR	LR		
	comp=E,730nm,6.3s						
HHC				LR	LR		
	comp=Z,810nm,6.7s						
NJ2	**Nanjing**	**12.80**	**82**	*e*P	**Pn**	**13 35 15.4**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.46**	**200**	Pn	**Pn**	**13 35 23.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=17,slow=13,SNR=2.7						
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**13 36 06.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=190,slow=16,SNR=4.0						
ZAK	**Zakamensk**	**19.15**	**359**	*e*P	**Pn**	**13 36 31.9**	**-4.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MOY	**Mondy**	**20.55**	**355**	*e*P	**P**	**13 36 56.7**	**+6.0**
KSRS	**Korea Array**	**20.79**	**66**	P	**P**	**13 36 53.2**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=259,slow=11,SNR=9.6						
CN2	**Changchun**	**21.16**	**48**	*e*P	**P**	**13 36 57.6**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
MK31	**Makanchi Array**	**22.76**	**319**	*e*P	**P**	**13 37 15.0**	**+0.5**
MKAR	**Makanchi Array**	**22.76**	**319**	P	**P**	**13 37 14.7**	**+0.2**
	comp=Z,5.3nm,1.0s,mb3.9,baz=125,slow=10,SNR=13						
MKAR	**Makanchi Array**	**22.76**	**319**	*c e*P	**P**	**13 37 15.1**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**22.76**	**319**	P	**P**	**13 37 14.7**	**+0.2**
UCH	**Uchtor**	**25.85**	**303**	*e*P	**P**	**13 37 45.2**	**+1.5**
	comp=Z,6.3nm,1.2s,mb4.0						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**13 37 45.7**	**+0.9**
	comp=Z,0.7nm,0.3s,mb3.6,baz=93,slow=19,SNR=2.8						
AAK	**Ala-Archa**	**25.97**	**304**	*e*P	**P**	**13 37 46.1**	**+1.3**
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	**P**	**13 37 49.5**	**-0.3**
	comp=Z,5.0nm,0.8s,mb4.1,baz=133,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	**P**	**13 37 49.5**	**-0.2**
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	**P**	**13 37 49.5**	**-0.3**
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**13 37 54.4**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.1,baz=128,slow=9.2,SNR=9.6						
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**13 37 54.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**13 37 54.0**	**-0.3**
	comp=Z,7.8nm,1.1s,mb4.2						
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**13 38 43.5**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=112,slow=9.3,SNR=6.5						
BVAR				PcP	PcP	13 41 29.0	-0.3
	comp=Z,0.7nm,0.5s,baz=132,slow=6.0,SNR=4.2						
ABKAR	**Akbulak array**	**37.45**	**312**	*e*P	**P**	**13 39 25.8**	**+0.4**
	comp=Z,0.5nm,0.4s,mb3.7						
AKTK	**Aktyubinsk**	**38.91**	**313**	P	**P**	**13 39 38.5**	**+0.7**
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**13 39 38.5**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.7,baz=126,slow=8.7,SNR=2.3						
ARU	**Arti**	**40.22**	**322**	*c i*P	**P**	**13 39 48.4**	**-0.1**
ARU				S	**S**	**13 45 53.1**	**-1.2**
ARU				SS	SS	13 48 46.8	-5.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
BILL	**Bilibino**	**51.16**	**25**	*e*P	**P**	**13 41 12.3**	**-2.5**
BILL				*e*		13 43 05.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
OBN	**Obninsk**	**52.26**	**318**	*e*P	**P**	**13 41 22.9**	**-0.3**
OBN				*e*		13 42 35.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BRTR	**Keskin Array B**	**56.51**	**300**	P	**P**	**13 41 54.1**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.7,baz=104,slow=8.0,SNR=4.4						
BRTR	**Keskin Array B**	**56.51**	**300**	*c e*P	**P**	**13 41 56.7**	**+2.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**56.51**	**300**	P	**P**	**13 41 54.1**	**-0.3**
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**13 41 57.6**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.4,baz=79,slow=8.5,SNR=9.4						
ARCES				PcP	PcP	13 42 52.0	-0.6
	comp=Z,1.6nm,0.5s,baz=79,slow=4.7,SNR=5.8						
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**13 41 57.6**	**-0.3**
ARCES				PcP	PcP	13 42 52.0	-0.6
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**13 41 59.1**	**-1.0**
	comp=Z,2.7nm,0.6s,mb4.5,baz=100,slow=6.6,SNR=6.7						
WRAB	**Tennant Creek**	**58.67**	**146**	*e*P	**P**	**13 42 10.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**58.67**	**146**	*e*P	**P**	**13 42 10.2**	**+0.5**
	comp=Z,9.7nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**13 42 09.8**	**+0.1**
	comp=Z,7.6nm,0.6s,mb4.9,baz=338,slow=7.9,SNR=42						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**13 42 09.8**	**+0.1**
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**13 42 09.8**	**+0.1**
WB2	**Warramunga Arr**	**58.68**	**146**	*e*P	**P**	**13 42 10.2**	**+0.4**
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**13 42 30.6**	**+0.3**
	comp=Z,1.2nm,0.5s,mb4.2,baz=339,slow=6.7,SNR=16						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**13 42 30.7**	**+0.4**
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**13 42 30.6**	**+0.3**
NB2	**NORSAR Subarra**	**64.46**	**327**	P	**P**	**13 42 47.0**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**13 42 47.1**	**-1.2**
	comp=Z,2.3nm,0.7s,mb4.3,baz=72,slow=6.8,SNR=6.4						
CLL	**Collm**	**66.84**	**317**	*e*P	**P**	**13 43 04.0**	**+0.2**
CLL				*e*	pP	13 43 13.0	+2.5
CLL	**Collm**	**66.84**	**317**	*e*pP	pP	13 43 13.0	+2.5
GERES	**GERESS Array B**	**67.33**	**314**	P	**P**	**13 43 07.1**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=64,slow=6.2,SNR=4.4						
COLD	**Coldfoot**	**67.45**	**24**	P	**P**	**13 43 06.8**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**13 43 36.5**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.0,baz=323,slow=9.4,SNR=6.9						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**13 44 29.3**	**-0.6**
	comp=Z,1.9nm,0.6s,mb4.2,baz=330,slow=5.3,SNR=27						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**13 44 29.3**	**-0.6**
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**13 44 29.3**	**-0.6**
TORD	**Torodi Ar. Bea**	**93.41**	**287**	P	**P**	**13 45 27.7**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.9,baz=54,slow=3.3,SNR=2.5						

*ISCJB **12** 13:33:51.3±0.6, 31°.06N±0°.08×104°.13E±0°.07, h10km, mb3.7/7, Error ellipse: s-maj=12.0km s-min=7.5km az=159.6*
*IDC **12** 13:33:52.0±1.1, 31°.10N×104°.01E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/25, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=36.2km s-min=21.2km az=59.0*
*NEIC **12** 13:33:53.3±0.5, 31°.15N×104°.18E, h10km, mb4.3/1, Error ellipse: s-maj=14.8km s-min=9.4km az=57.0*

ISC 12 13:33:53.4±0.6, 31°.10N±0°.07×104°.07E±0°.08, h10km, n12, σ0$71/13, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**235**	Pg	**Pg**	**13 33 55.5**	**-4.4**
CD2				Sg	**Sg**	**13 34 03.9**	**-0.3**
CD2				smax			
	comp=N,19μm,0.4s						
ENH	**Enshi**	**4.74**	**99**	Pn	**Pn**	**13 35 02.4**	**-2.5**
CMAR	**Chiang Mai Arr**	**13.41**	**201**	Pn	**Pn**	**13 37 04.0**	**+0.1**
	comp=N,0.2nm,0.3s,baz=5.7,slow=10.0,SNR=2.5						
KSRS	**Korea Array**	**20.68**	**66**	P	**P**	**13 38 34.1**	**+0.6**
	comp=N,3.3nm,0.7s,baz=244,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**22.96**	**319**	P	**P**	**13 38 57.8**	**0.0**
	comp=N,1.4nm,0.8s,mb3.4,baz=128,slow=11,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.71**	**334**	P	**P**	**13 39 32.2**	**-0.5**
	comp=N,1.1nm,0.8s,mb3.5,baz=141,slow=9.3,SNR=2.0						
KURK	**Kurchatov**	**27.23**	**323**	P	**P**	**13 39 37.5**	**+0.2**
	comp=N,1.2nm,0.8s,mb3.5,baz=128,slow=9.7,SNR=3.5						
WRAB	**Tennant Creek**	**58.48**	**146**	*e*P	**P**	**13 43 50.0**	**+0.3**
	comp=N,1.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.48**	**146**	P	**P**	**13 43 50.2**	**+0.4**
	comp=N,1.6nm,0.7s,mb4.2,baz=338,slow=7.7,SNR=3.2						
WB2	**Warramunga Arr**	**58.49**	**146**	*e*P	**P**	**13 43 50.2**	**+0.4**
ASAR	**Alice Springs**	**61.50**	**149**	P	**P**	**13 44 10.8**	**+0.4**
	comp=N,0.4nm,0.7s,mb3.7,baz=341,slow=6.8,SNR=1.9						
YKA	**Yellowknife Ar**	**81.71**	**17**	P	**P**	**13 46 11.9**	**+0.2**
	comp=N,0.2nm,0.6s,mb3.2,baz=331,slow=5.3,SNR=2.1						

*ISCJB **12** 13:35:03.7±0.5, 31°.09N±0°.06×104°.10E±0°.07, h10km, mb4.0/12, Error ellipse: s-maj=9.3km s-min=7.5km az=42.6*
*IDC **12** 13:35:03.8±0.8, 31°.07N×103°.89E, h0km, mb4.0/9, mb1 4.1/11, mb1mx3.8/27, mbtmp4.0/11, ML3.7/1, Error ellipse: s-maj=30.6km s-min=16.0km az=56.0*
*BJI **12** 13:35:04.3, 30°.98N×103°.61E, h10km, mb4.6/1, ML4.1/6*
*NEIC **12** 13:35:06.2±0.5, 31°.00N×103°.71E, h10km, mb4.3/4, Error ellipse: s-maj=16.4km s-min=9.2km az=55.0*

ISC 12 13:35:06.0±0.5, 31°.07N±0°.06×103°.90E±0°.10, h10km, n22, σ1$03/23, mb4.0/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.20**	**218**	Pg	**Pg**	**13 35 11.3**	**+1.1**
CD2				Sg	**Sg**	**13 35 17.0**	**+4.0**
CD2				smax			
	comp=N,34μm,0.7s						
ENH	**Enshi**	**4.88**	**98**	Pn	**Pn**	**13 36 24.5**	**+5.1**
CMAR	**Chiang Mai Arr**	**13.34**	**201**	Pn	**Pn**	**13 38 15.8**	**+0.4**
	comp=N,0.1nm,0.3s,baz=18,slow=12,SNR=1.7						
SONM	**Songino Array**	**16.85**	**6**	Pn	**Pn**	**13 39 03.0**	**+1.2**
	comp=N,0.3nm,0.3s,baz=179,slow=13,SNR=2.4						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**13 39 47.2**	**-0.4**
	comp=N,5.6nm,0.8s,baz=260,slow=10,SNR=11						
CN2	**Changchun**	**21.24**	**47**	*e*P	**P**	**13 39 55.0**	**+3.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MK31	**Makanchi Array**	**22.89**	**319**	*e*P	**P**	**13 40 09.1**	**-0.5**
MKAR	**Makanchi Array**	**22.89**	**319**	P	**P**	**13 40 08.2**	**-1.5**
	comp=Z,3.0nm,1.0s,mb3.7,baz=132,slow=12,SNR=7.2						
UCH	**Uchtor**	**25.95**	**304**	*e*P	**P**	**13 40 40.6**	**+2.1**
	comp=Z,15nm,1.4s,mb4.3						
AAK	**Ala-Archa**	**26.08**	**304**	P	**P**	**13 40 39.4**	**-0.3**
	comp=Z,2.1nm,0.5s,mb3.9,baz=128,slow=7.5,SNR=8.8						
EKS2	**Erkin-Say**	**26.60**	**304**	P	**P**	**13 40 44.1**	**-0.2**
	comp=Z,6.6nm,1.3s,mb4.0						
ZAA0	**Zalesovo Array**	**26.68**	**335**	*e*P	**P**	**13 40 45.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.68**	**335**	P	**P**	**13 40 45.8**	**+0.9**
	comp=Z,2.0nm,0.5s,mb4.0,baz=147,slow=14,SNR=7.8						
KURK	**Kurchatov**	**27.17**	**324**	P	**P**	**13 40 48.1**	**-1.2**
	comp=Z,4.1nm,1.1s,mb3.9,baz=128,slow=9.6,SNR=6.2						
KURK	**Kurchatov**	**27.17**	**324**	*e*P	**P**	**13 40 48.8**	**-0.6**
	comp=Z,4.7nm,1.1s,mb3.9						
WRAB	**Tennant Creek**	**58.54**	**146**	*e*P	**P**	**13 45 02.2**	**-0.5**
	comp=Z,3.3nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.54**	**146**	P	**P**	**13 45 02.4**	**-0.3**
	comp=Z,3.0nm,0.7s,mb4.5,baz=338,slow=7.7,SNR=10						
WB2	**Warramunga Arr**	**58.55**	**146**	*e*P	**P**	**13 45 02.4**	**-0.4**
ASAR	**Alice Spring

comp=Z,1.4nm,0.5s,mb4.3,baz=69,slow=6.4,SNR=5.2
WRAB Tennant Creek 59.27 148 *e*P **P 13 46 04.3 +0.4**
comp=Z,4.0nm,0.8s,mb4.5
WRA Warramunga Arr 59.27 148 P **P 13 46 01.7 -2.2**
comp=Z,2.6nm,0.8s,mb4.3,baz=339,slow=7.5,SNR=5.5
WB2 Warramunga Arr 59.28 148 *e*P **P 13 46 04.3 +0.4**
ASAR Alice Springs 62.36 150 P **P 13 46 22.9 -1.9**
comp=Z,1.7nm,0.8s,mb4.2,baz=336,slow=6.4,SNR=7.4
NOA NORSAR Array B 63.85 327 P **P 13 46 33.9 -0.4**
comp=Z,1.4nm,0.7s,mb4.1,baz=69,slow=6.3,SNR=3.6
NOA NORSAR Array B 63.85 327 P **P 13 46 33.9 -0.4**
CDF Champ du Feu 71.14 316 *e*P **P 13 47 21.3 +0.7**
LPG La Plagne 72.84 313 *e*P **P 13 47 31.7 +0.8**
comp=Z,4.7nm,0.6s,mb4.3
LPL La Plagne 72.85 313 *e*P **P 13 47 31.7 +0.8**
comp=Z,4.0nm,0.5s,mb4.3
SMF Signal de Mont 74.03 315 *e*P **P 13 47 38.2 +0.3**
YKA Yellowknife Ar 79.97 18 P **P 13 48 11.8 +0.8**
comp=Z,0.8nm,0.7s,mb3.8,baz=328,slow=5.1,SNR=8.0

ISK ***12*** *13:36:13.8, 38.°54N×43.°56E, h5km, MD2.5*
ISCJB ***12*** *13:36:14.7±1.5, 38.°58N±0.°09×43.°5E±0.°1, h10km, Error ellipse: s-maj=16.9km s-min=7.4km az=40.9*
CSEM ***12*** *13:36:14.7±0.8, 38.°58N×43.°54E, h2km, MD2.5, Error ellipse: s-maj=26.3km s-min=11.9km az=136.0*
ISC 12 13:36:15.2±1.6, 38.°57N±0.°09×43.°5E±0.°1, h10km, n9, σ1°01/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.10**	**246**	*i* P	**Pg**	**13 36 16.2**	**-1.6**
TVAN	**Van**	**0.10**	**246**	*i* P	**Pg**	**13 36 16.2**	**-1.6**
VANB	**Van**	**0.11**	**282**	PG	**Pg**	**13 36 16.7**	**-1.2**
VANB				*e*SG	**Sg**	**13 36 20.1**	**+0.3**
VANB	**Van**	**0.11**	**282**	*i* Pg	**Pg**	**13 36 16.7**	**-1.2**
VANB				*e*Sg	**Sg**	**13 36 20.2**	**+0.3**
VANT	**Van**	**0.25**	**234**	*e*PG	**Pg**	**13 36 20.3**	**-0.1**
VANT				*e*SG	**Sg**	**13 36 25.4**	**+1.6**
CLDR	**Caldiran**	**0.65**	**28**	*e*PG	**Pg**	**13 36 28.5**	**+0.7**
CLDR	**Caldiran**	**0.65**	**28**	*e*Pg	**Pg**	**13 36 28.5**	**+0.8**
AGRB	**Hanur-Agry**	**1.08**	**338**	*e*PN	**Pg**	**13 36 36.4**	**+0.4**
AGRB	**Hanur-Agry**	**1.08**	**338**	*e*Pn	**Pg**	**13 36 36.4**	**+0.3**

ISCJB ***12*** *13:37:08.4±0.6, 32.°21N±0.°08×105.°2E±0.°2, h10km, mb4.0/9, Error ellipse: s-maj=22.9km s-min=9.9km az=162.0*
IDC ***12*** *13:37:08.9±0.9, 32.°23N×105.°17E, h0km, mb4.0/8, mb1 4.1/10, mb1mx3.8/27, mbtmp3.9/10, Error ellipse: s-maj=51.4km s-min=17.9km az=65.0*
NEIC ***12*** *13:37:10.4±0.4, 32.°23N×105.°17E, h10km, mb4.4/1, Error ellipse: s-maj=16.7km s-min=7.4km az=72.0*
ISC 12 13:37:10.5±0.6, 32.°23N±0.°08×105.°2E±0.°2, h10km, n14, σ0°67/14, mb4.0/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.82**	**204**	Pn	**Pn**	**13 40 40.8**	**+0.7**
0.3nm,0.3s,baz=8.0,slow=8.4,SNR=6.6							
SONM	**Songino Array**	**15.61**	**3**	Pn	**Pn**	**13 40 51.2**	**+0.7**
0.3nm,0.3s,baz=185,slow=14,SNR=2.0							
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 42 14.1**	**+1.4**
1.5nm,0.8s,mb3.5,baz=126,slow=11,SNR=2.0							
ZAA0	**Zalesovo Array**	**26.12**	**332**	*e*P	**P**	**13 42 44.2**	**-0.2**
ZALV	**Zalesovo Beam**	**26.12**	**332**	P	**P**	**13 42 43.9**	**-0.5**
2.0nm,0.5s,mb3.9,baz=134,slow=9.1,SNR=5.1							
ABKAR	**Akbulak array**	**37.62**	**310**	*e*P	**P**	**13 44 24.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.75**	**156**	P	**P**	**13 46 32.8**	**-0.2**
14nm,1.4s,mb4.7,baz=0.0,slow=9.1,SNR=2.5							
ARCES	**ARCESS Array B**	**56.61**	**336**	P	**P**	**13 46 52.5**	**-0.6**
3.1nm,0.8s,mb4.4,baz=81,slow=7.5,SNR=4.7							
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**13 46 56.3**	**-0.7**
0.6nm,0.4s,mb4.0,baz=72,slow=8.9,SNR=0.9							
WRAB	**Tennant Creek**	**58.92**	**148**	*e*P	**P**	**13 47 10.0**	**+0.1**
2.9nm,0.8s,mb4.4							
WRA	**Warramunga Arr**	**58.92**	**148**	P	**P**	**13 47 09.6**	**-0.3**
0.6nm,0.3s,mb4.1,baz=328,slow=9.1,SNR=5.1							
WB2	**Warramunga Arr**	**58.93**	**148**	*e*P	**P**	**13 47 09.5**	**-0.5**
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	**13 47 31.1**	**+0.2**
0.4nm,0.4s,mb3.9,baz=338,slow=6.9,SNR=1.7							
YKA	**Yellowknife Ar**	**80.35**	**18**	P	**P**	**13 49 22.4**	**+0.8**
0.5nm,0.6s,mb3.6,baz=329,slow=5.1,SNR=4.7							

ISCJB ***12*** *13:38:24.0±0.9, 39.°91N±0.°06×41.°83E±0.°07, h7km±11km, Error ellipse: s-maj=10.8km s-min=7.3km az=36.3*
ISK ***12*** *13:38:23.2, 39.°87N×41.°84E, h5km, MD2.8*
ISC 12 13:38:24.2±0.9, 39.°89N±0.°06×41.°81E±0.°07, h16km±8km, n7, σ0°69/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.18**	**26**	*i* P	**Pg**	**13 38 27.8**	**-0.7**
ERZM	**Erzurum**	**0.34**	**273**	*i* P	**Pg**	**13 38 31.3**	**+0.1**
EZM	**Erzurum**	**0.34**	**273**	*e*PG	**Pg**	**13 38 31.6**	**+0.4**
AGRB	**Hanur-Agry**	**0.97**	**108**	*e*PG	**Pg**	**13 38 42.2**	**-0.7**
AGRB				*e*SG	**Sg**	**13 38 56.5**	**+1.0**
DBAD	**Bademkaya**	**1.13**	**356**	*i* P	**Pn**	**13 38 45.8**	**+0.4**
DBAD				*i* S	**Sb**	**13 38 59.9**	**0.0**
DAGI	**Agillar**	**1.19**	**4**	*i* P	**Pn**	**13 38 45.6**	**-0.6**
BCA	**Borcka**	**1.56**	**355**	*e*PN	**Pg**	**13 38 53.2**	**-1.0**
BCA				*e*SN	**Sg**	**13 39 15.7**	**+1.1**

CSEM ***12*** *13:38:31.2, 64.°70N×17.°34W, h3km, ML3.7, After REY*
REY 12 13:38:31.2, 64.°70N×17.°34W, h3km, ML3.6, ML3.7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRF	**Grimsfjall**	**0.29**	**174**	P	Pg	13 38 37.0	+0.2
IKRE	**Kreppuhraun**	**0.42**	**78**	P	Pg	13 38 39.1	-0.1
IKRE				S	Sg	13 38 45.3	+0.6
ISKR	**Skrokkalda**	**0.47**	**254**	P	Pg	13 38 39.9	-0.3
ISKR				S	Sg	13 38 46.5	+0.2
IMKO	**Mokollar**	**0.51**	**56**	P	Pg	13 38 40.9	-0.1
IMKO				S	Sg	13 38 48.4	+0.7
IBRU	**Bruarjokull**	**0.55**	**76**	P	Pg	13 38 41.4	-0.4
IBRU				S	Sg	13 38 49.3	+0.3
ISVA	**Svartarkot**	**0.64**	**3**	P	Pg	13 38 42.9	-0.6
ISVA				S	Sg	13 38 52.0	+0.1
IHVA	**Hvannstoosfjol**	**0.68**	**67**	P	Pg	13 38 43.4	-0.8
IHVA				S	Sg	13 38 52.8	-0.3
IVSH	**V-Sauoahnukur**	**0.70**	**80**	P	Pg	13 38 43.8	-0.8
IVSH				S	Sg	13 38 53.4	-0.3
IKAL	**Kalfafell**	**0.77**	**191**	P	Pg	13 38 44.8	-1.0
IKAL				S	Sg	13 38 55.7	-0.1
IADA	**Aoalbol**	**0.82**	**66**	P	Pg	13 38 45.7	-1.2
IADA				S	Sg	13 38 57.0	-0.5
IFAG	**Fagurholsmyri**	**0.88**	**160**	P	Pg	13 38 46.7	-1.3
IFAG				S	Sg	13 38 58.9	-0.4
IREN	**Reynihlio**	**0.97**	**11**	P	Pg	13 38 48.3	-1.5
IREN				S	Sg	13 39 01.7	-0.7
IGLU	**Glumsstadir**	**1.01**	**72**	P	Pg	13 38 48.8	-1.6
IGLU				S	Sg	13 39 02.4	-1.1
IKVO	**Krokottuvotn**	**1.04**	**11**	P	Pg	13 38 49.4	-1.7
IKVO				S	Sg	13 39 03.5	-1.1
IGRS	**Grimsstaoir**	**1.08**	**28**	P	Pg	13 38 50.2	-1.6
IGRS				S	Sg	13 39 05.0	-0.7
ISNB	**Snabyli**	**1.12**	**211**	P	Pg	13 38 51.0	-1.6
IGRA	**Granastaoir**	**1.23**	**355**	P	Pg	13 38 52.5	-2.3
IGRA				S	Sg	13 39 09.0	-1.7
IGYG	**Gygjarholskot**	**1.31**	**253**	P	Pg	13 38 53.7	-2.6

IDC ***12*** *13:40:52.1±0.4, 30.°97N×103.°47E, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.5/33, mbtmp4.4/29, ML3.8/1, MS4.6/16, Ms1 4.6/16, ms1mx4.2/44, Error ellipse: s-maj=16.8km s-min=10.2km az=55.0*
ISCJB ***12*** *13:40:52.1±0.2, 31.°00N±0.°02×103.°52E±0.°03, h10km, mb4.6/72, MS4.7/31, Error ellipse: s-maj=3.2km s-min=3.0km az=146.1*
BJI ***12*** *13:40:53.0, 31.°02N×103.°65E, h9km, mB5.2/21, mb4.8/27, ML5.0/18, Ms5.2/43, Ms7 4.9/30*
NEIC ***12*** *13:40:54.1±0.2, 31.°03N×103.°51E, h10km, mb4.8/41, MS5.0/1, Error ellipse: s-maj=4.9km s-min=3.9km az=59.0*
MOS ***12*** *13:40:55.3±0.8, 30.°95N×103.°51E, h33km, mb4.9/38, MS4.6/9, Error ellipse: s-maj=8.5km s-min=5.2km az=109.6*

DJA ***12*** *13:41:02, 30.°90N×103.°47E, h69km, mb5.2/26*
SZGRF ***12*** *13:41:02.4, 31.°12N×102.°69E, h33km, mb4.8, Sichuan, China*
ISC 12 13:40:54.1±0.2, 31.°00N±0.°02×103.°52E±0.°02, h10km, n227, σ1°12/227, mb4.6/72, MS4.7/31, 10C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.22**	**113**	Pg	**Pg**	**13 41 01.0**	**+2.2**
CD2				Sg	**Sg**	**13 41 06.9**	**+5.0**
CD2				smax			
comp=N,423μm,0.9s							
LZH	**Lanzhou**	**5.08**	**3**	Pg	**Pg**	**13 42 35.4**	**+3.9**
LZH				Sg	**Sg**	**13 43 38.5**	**+1.2**
LZH				smax			
comp=N,730nm,1.2s							
LZH				smax			
comp=E,720nm,1.2s							
LZH				LR	LR		
comp=N,25μm,8.4s							
LZH				LR	LR		
comp=Z,31μm,9.4s							
ENH	**Enshi**	**5.19**	**97**	*e*P	**Pn**	**13 42 12.9**	**+0.9**
comp=Z,799nm,0.8s							
GYA	**Guiyang**	**5.30**	**148**	Pn	**Pn**	**13 42 14.2**	**+0.8**
GYA				Sn	**Sn**	**13 43 18.0**	**+3.5**
GYA				smax			
comp=N,1μm,1.2s							
GYA				smax			
comp=E,2μm,1.3s							
GYA				LR	LR		
comp=N,17μm,7.8s							
GYA				LR	LR		
comp=E,18μm,9.6s							
GYA				LR	LR		
comp=Z,32μm,9.0s							
KMI	**Kunming**	**5.89**	**187**	Pn	**Pn**	**13 42 23.5**	**+2.0**
KMI				Sn	**Sn**	**13 43 30.0**	**+0.8**
KMI				smax			
comp=N,1μm,1.2s							
KMI				smax			
comp=E,910nm,1.3s							
KMI				LR	LR		
comp=N,5μm,3.8s							
KMI				LR	LR		
comp=E,24μm,7.1s							
KMI				LR	LR		
comp=Z,8μm,13.1s							
GTA	**Gaotai**	**8.92**	**341**	*e*P	**Pn**	**13 43 04.5**	**+1.5**
GTA				pP		13 43 07.8	
GTA				sP		13 43 10.5	
GTA				S	**Sn**	**13 44 44.1**	**+0.5**
GTA				pmax	pmax		
comp=Z,6.0nm,1.2s							
GTA				pmax	pmax		
comp=Z,330nm,4.5s							
GTA				LR	LR		
comp=N,6μm,15.3s							
GTA				LR	LR		
comp=E,6μm,10.8s							
GTA				LR	LR		
comp=Z,7μm,15.9s							
WHN	**Wuhan**	**9.33**	**90**	P	**Pn**	**13 43 09.4**	**+0.7**
WHN				S	**Sn**	**13 44 53.2**	**-0.5**
WHN				LR	LR		
comp=N,9μm,3.9s							
WHN				LR	LR		
comp=E,24μm,5.8s							
WHN				LR	LR		
comp=Z,31μm,7.9s							
LSA	**Lhasa**	**10.76**	**266**	P	**Pn**	**13 43 29.8**	**+1.4**
LSA				LR	LR		
comp=N,1μm,11.9s							
LSA				LR	LR		
comp=E,9μm,10.7s							
LSA				LR	LR		
comp=Z,11μm,10.7s							
LSA	**Lhasa**	**10.76**	**266**	*e*P	**Pn**	**13 43 29.3**	**+0.9**
LSA				pmax	pmax		
comp=Z,34nm,0.8s							
LSA	**Lhasa**	**10.76**	**266**	*e*P	**Pn**	**13 43 29.3**	**+1.0**
comp=Z,34nm,0.8s							
SHL	**Shillong**	**11.59**	**245**	*e*P	**Pn**	**13 43 40.0**	**+0.3**
SHL				*ex*	x	13 46 57.0	
GZH	**Guangzhou**	**11.78**	**130**	P	**Pn**	**13 43 38.9**	**-3.3**
GZH				S	**Sn**	**13 45 47.0**	**-6.7**
GZH				LR	LR		
comp=N,13μm,9.3s							
GZH				LR	LR		
comp=E,12μm,11.0s							
HHC	**Hu-ho-hao-te**	**11.79**	**31**	*e*P	**Pn**	**13 43 43.2**	**+0.9**
HHC				pP		13 43 50.4	
HHC				sP		13 43 55.3	
HHC				S	**Sn**	**13 45 54.6**	**+0.7**
HHC				sS		13 46 05.3	
HHC				SS		13 46 08.5	
HHC				pmax	pmax		
comp=Z,13nm,1.0s							
HHC				pmax	pmax		
comp=Z,120nm,4.6s							
HHC				LR	LR		
comp=N,2μm,5.3s							
HHC				LR	LR		
comp=E,2μm,5.5s							
HHC				LR	LR		
comp=Z,2μm,6.0s							
TIA	**Tai'an**	**12.47**	**62**	P	Px	13 44 03.2	
CHTO	**Chiang Mai**	**12.82**	**200**	*e*P	**Pn**	**13 43 58.6**	**+2.1**
CHTO				pmax	pmax		
comp=Z,35nm,0.8s							
CHTO	**Chiang Mai**	**12.82**	**200**	*e*P	**Pn**	**13 43 58.6**	**+2.1**
comp=Z,35nm,0.8s							
NJ2	**Nanjing**	**13.13**	**81**	*e*P	**Pn**	**13 44 00.0**	**-0.7**
NJ2				pP		13 44 07.6	
NJ2				PP		13 44 11.3	
NJ2				sP		13 44 12.9	
NJ2				S	**Sn**	**13 46 24.6**	**-2.1**
NJ2				sS		13 46 34.9	
NJ2				pmax	pmax		
comp=Z,20nm,0.9s							
NJ2				pmax	pmax		
comp=Z,410nm,3.9s							
NJ2				LR	LR		
comp=N,3μm,11.7s							
NJ2				LR	LR		
comp=E,6μm,10.4s							
CM31	**Chiang Mai Arr**	**13.16**	**199**	*e*P	**Pn**	**13 44 03.4**	**+2.3**
comp=E,34nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.16**	**199**	Pn	**Pn**	**13 44 01.4**	**+0.2**
comp=E,0.3nm,0.3s,baz=11,slow=11,SNR=31							
CMAR				Lg		13 47 55.1	
comp=E,0.0nm,0.3s,baz=356,slow=18,SNR=3.2							
CMAR				LR	LR	13 50 02.2	
comp=E,489nm,19.2s,baz=236,slow=42							
CMAR				SCP	SCP	13 53 05.5	-0.5
comp=E,0.2nm,0.3s,baz=308,slow=2.0,SNR=14							
QIZ	**Qiongzhong**	**13.22**	**153**	P	**Pn**	**13 44 01.4**	**-0.6**
QIZ				S	**Sn**	**13 46 32.1**	**+3.0**
QIZ				pmax	pmax		
comp=Z,34nm,1.8s							
QIZ				LR	LR		
comp=N,9μm,10.9s							
QIZ				LR	LR		
comp=Z,12μm,11.7s							
KKTK	**Khon Kaen**	**14.61**	**183**	P	**Pn**	**13 44 21.8**	**+0.8**
comp=Z,432nm,0.9s							
QZH	**Quanzhou**	**14.62**	**111**	*e*P	**Pn**	**13 44 19.9**	**-1.1**
QZH				S	**Sn**	**13 47 02.8**	**-0.3**
QZH				LR	LR		
comp=N,15μm,7.2s							
QZH				LR	LR		
comp=E,21μm,10.0s							
QZH				LR	LR		
comp=Z,32μm,10.9s							
GUN	**Gumba**	**15.67**	**263**	*e*P	**Pn**	**13 44 33.1**	**-2.0**
comp=Z,282nm,1.2s							
UBT	**Ubonrachathani**	**15.74**	**175**	⇑P	**Pn**	**13 44 41.2**	**+5.2**
CAL	**Calcutta**	**15.96**	**242**	*e*S	**Sn**	**13 47 36.8**	**+1.1**
PKI	**Pulchoki**	**16.16**	**262**	*e*P	**Pn**	**13 44 39.4**	**-2.1**
comp=Z,154nm,0.9s							
PKIN	**Phulchoki**	**16.17**	**262**	*e*P	**Pn**	**13 44 40.0**	**-1.6**
comp=Z,112nm,0.7s							
KKN	**Kakani**	**16.21**	**263**	*e*P	**Pn**	**13 44 39.9**	**-2.2**
comp=Z,149nm,0.8s							
DMN	**Daman**	**16.41**	**263**	*e*P	**Pn**	**13 44 42.2**	**-2.4**
comp=Z,232nm,1.1s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.96**	**7**	Pn	**Pn**	**13 44 51.0**	**-0.4**
comp=Z,0.4nm,0.3s,baz=196,slow=15,SNR=9.6							
SONM				Lg		13 49 59.2	
baz=90,slow=39,SNR=1.2							
SSLB	**Suanglung**	**17.06**	**111**	*e*P	**Pn**	**13 44 55.0**	**+2.2**
comp=Z,102nm,1.1s							
ULN	**Ulaanbaatar**	**17.06**	**8**	*e*P	**Pn**	**13 44 55.2**	**+2.5**
ULN				pmax	pmax		
comp=Z,45nm,1.5s							
ULN	**Ulaanbaatar**	**17.06**	**8**	*e*P	**Pn**	**13 44 55.2**	**+2.5**
comp=Z,45nm,1.5s							
WMQ	**Urumqi**	**17.90**	**320**	P	**Pn**	**13 45 03.1**	**0.0**
WMQ				SS		13 48 40.6	
WMQ				PcP	PcP	13 49 42.1	+3.0
WMQ				pmax	pmax		
comp=Z,28nm,2.0s							
WMQ				pmax	pmax		
comp=Z,370nm,20.0s							
WMQ				LR	LR		
comp=N,5μm,13.0s							
WMQ				LR	LR		
comp=E,2μm,10.0s							
WMQ				LR	LR		
comp=Z,2μm,19.0s							
ZAK	**Zakamensk**	**19.36**	**360**	*e*P	**Pn**	**13 45 22.5**	**+1.6**
ZAK				pmax	pmax		
comp=Z,20nm,1.1s							
SNY	**Shenyang**	**19.38**	**51**	⇑P	**Pn**	**13 45 28.8**	**+7.6**
SNY				S	**Sn**	**13 48 56.5**	**-2.0**
SNY				pmax	pmax		
comp=Z,13nm,1.2s							
SNY				LR	LR		
comp=N,890nm,8.7s							
SNY				LR	LR		
comp=E,1μm,15.0s							
SNY				LR	LR		
comp=Z,1μm,19.1s							
PTH	**Pithoragarh**	**20.17**	**272**	*e*P	**P**	**13 45 28.4**	**-0.4**
JOSI	**Joshimath**	**20.59**	**275**	*e*P	**P**	**13 45 33.2**	**-0.1**
TLY	**Talaya**	**20.66**	**0**	*e*P	**P**	**13 45 41.0**	**+7.1**
TLY				*e*		13 45 52.8	
TLY				*e*PPP		13 46 03.3	
TLY				pmax	pmax		
comp=Z,11nm,0.9s							
TLY				MLR	MLR		
comp=Z,2μm,11.0s,MS4.8							
MOY	**Mondy**	**20.73**	**356**	*e*P	**P**	**13 45 36.7**	**+2.0**
MOY				pmax	pmax		
comp=Z,95nm,2.5s							
KSRS	**Korea Array**	**21.15**	**66**	P	**P**	**13 45 39.3**	**0.0**
comp=Z,17nm,0.9s,mb4.4,baz=250,slow=9.0,SNR=29							
KSRS				LR	LR	13 54 46.5	
comp=Z,506nm,20.2s,MS3.9,baz=274,slow=39							
KSRS	**Korea Array**	**21.15**	**66**	P	**P**	**13 45 39.3**	**0.0**
KSRS				pmax	pmax		
comp=Z,17nm,0.9s,mb4.4							
KSRS				MLR	MLR		
comp=Z,506nm,20.3s,MS3.9							
IRK	**Irkutsk**	**21.23**	**1**	*e*P	**P**	**13 45 41.6**	**+1.5**
IRK				pmax	pmax		
comp=Z,107nm,2.1s,mb4.8							
CN2	**Changchun**	**21.53**	**47**	*e*P	**P**	**13 45 44.5**	**+1.2**
CN2				*es*P	sP	13 45 51.0	+3.5
CN2				*e*S	**S**	**13 49 38.4**	**-3.5**
CN2				pmax	pmax		
comp=Z,30nm,1.5s,mb4.5							
CN2				pmax	pmax		
comp=Z,3μm,6.0s							
CN2				LR	LR		
comp=N,31μm,17.0s,MS5.9							
CN2				LR	LR		
comp=E,33μm,17.0s,MS5.9							
CN2				LR	LR		
comp=Z,42μm,18.0s,MS5.9							
DDI	**Dehra Dun**	**21.91**	**275**	*ex*	x	13 45 47.0	
HIA	**Hailar**	**21.98**	**29**	*e*P	**P**	**13 45 49.0**	**+0.9**
HIA				pmax	pmax		
comp=Z,20nm,0.9s							
HIA	**Hailar**	**21.98**	**29**	*e*P	**P**	**13 45 49.0**	**+0.9**
comp=Z,20nm,0.9s,mb4.6							
JOW	**Kunigami**	**22.05**	**95**	LR	LR	13 55 24.2	
comp=Z,2μm,20.3s,MS4.5,baz=129,slow=40							
MK31	**Makanchi Array**	**22.73**	**320**	*e*P	**P**	**13 45 57.0**	**+0.8**
MKAR	**Makanchi Array**	**22.73**	**320**	P	**P**	**13 45 56.6**	**+0.4**
comp=Z,8.3nm,0.9s,mb4.2,baz=123,slow=10,SNR=22							
MKAR				ScP	ScP	13 53 23.6	-2.2
comp=Z,1.5nm,0.9s,baz=131,slow=5.0,SNR=4.7							
MKAR				LR	LR	13 55 30.6	
comp=Z,3μm,19.4s,MS4.8,baz=66,slow=39							
NDI	**New Delhi**	**22.92**	**271**	*e*P	**P**	**13 45 56.0**	**-2.3**
NDI				*ex*	x	13 50 56.0	
AYAN	**Aya Nagar**	**23.04**	**270**	*e*P	**P**	**13 45 58.1**	**-1.4**
SONA	**Sohna**	**23.13**	**270**	*e*P	**P**	**13 45 58.8**	**-1.7**
KSH	**Kashi**	**23.98**	**298**	*e*P	**P**	**13 46 12.1**	**+3.4**
KSH				*ep*P		13 46 16.1	
KSH				*es*P	sP	13 46 19.1	+6.1
KSH				*e*PP		13 46 47.1	
KSH				*e*PcP	PcP	13 49 52.0	+1.2
KSH				*e*S	**S**	**13 50 27.4**	**+2.0**
KSH				*es*S	sS	13 50 35.3	+4.9
KSH				*e*SS		13 51 22.0	
KSH				*e*ScP	ScP	13 53 29.1	-0.2
KSH				*e*PcS	PcS	13 53 30.1	-0.2
KSH				*e*ScS	ScS	13 57 15.2	-1.0
KSH				LR	LR		
comp=N,1μm,8.4s							
KSH				LR	LR		
comp=E,1μm,10.3s							
NGP	**Nagpur**	**24.02**	**252**	*e*P	**P**	**13 46 05.1**	**-4.2**
NGP				*ex*	x	13 46 12.1	
comp=Z,122nm,1.5s							
NGP				*e*S	**S**	**13 50 23.8**	**-2.6**
KHET	**Khetri**	**24.26**	**270**	*e*P	**P**	**13 46 09.7**	**-1.7**
KHET				AMb	AMB	13 46 12.9	
comp=Z,15nm,0.8s,mb4.5							
KHET				*e*S	**S**	**13 50 33.0**	**+2.7**
ULHL	**Ulahol**	**24.50**	**305**	P	**P**	**13 46 15.4**	**+1.9**
SNR=20							
MDJ	**Mudanjiang**	**24.55**	**49**	P	**P**	**13 46 12.5**	**-1.5**
MDJ				pP		13 46 15.5	
MDJ				S	**S**	**13 50 32.7**	**-2.0**
MDJ				sS	sS	13 50 38.3	-1.4
MDJ				ScP	ScP	13 53 29.8	-1.0
MDJ				PcS	PcS	13 53 31.1	-0.6
MDJ				pmax	pmax		
comp=Z,96nm,3.5s							
MDJ	**Mudanjiang**	**24.55**	**49**	*e*P	**P**	**13 46 14.7**	**+0.8**
comp=Z,22nm,0.9s,mb4.7							
KZA	**Kyzart**	**25.15**	**304**	P	**P**	**13 46 21.4**	**+2.0**
SNR=30							
TKM2	**Tokmak 2**	**25.17**	**306**	*e*P	**P**	**13 46 20.6**	**+1.1**
TKM2				pmax	pmax		
comp=Z,15nm,1.0s,mb4.5							
TKM2	**Tokmak 2**	**25.17**	**306**	*e*P	**P**	**13 46 20.6**	**+1.1**
comp=Z,15nm,1.0s,mb4.5							
KBK	**Karagaybulak**	**25.54**	**305**	P	**P**	**13 46 25.0**	**+2.1**
SNR=8.1							
UCH	**Uchtor**	**25.72**	**304**	P	**P**	**13 46 26.4**	**+1.8**
SNR=8.8							
UCH	**Uchtor**	**25.72**	**304**	*e*P	**P**	**13 46 26.3**	**+1.7**
comp=Z,41nm,1.3s,mb4.8							
FRU	**Bishkek**	**25.82**	**305**	*e*P	**P**	**13 46 27.0**	**+1.5**
FRU				pmax	pmax		
comp=Z,100nm,1.8s,mb5.0							
AAK	**Ala-Archa**	**25.85**	**305**	P	**P**	**13 46 25.8**	**+0.1**
comp=Z,5.2nm,0.6s,mb4.2,baz=116,slow=6.0,SNR=13							
AAK				LR	LR	13 58 09.1	
comp=Z,2μm,21.1s,MS4.7,baz=96,slow=40							
**A

KURK Kurchatov 27.03 324 P **P** **13 46 36.0 -0.4**
comp=Z,8.2nm,0.8s,mb4.3,baz=128,slow=9.5,SNR=47
KURK LR LR 13 57 51.3
comp=Z,2μm,18.6s,MS4.7,baz=125,slow=38
KURK Kurchatov 27.03 324*c i*P **P** **13 46 36.2 -0.1**
KURK pmax pmax
comp=Z,15nm,1.0s,mb4.5
KURK Kurchatov 27.03 324 *e*P **P** **13 46 35.9 -0.4**
comp=Z,20nm,1.0s,mb4.6
BOD Bodaibo 27.77 12 *e*P **P** **13 46 42.5 -0.4**
NVS Novosibirsk 27.88 335 *e*P **P** **13 46 41.7 -2.2**
NVS *e* 13 49 54.5
NVS pmax pmax
comp=N,35nm,2.2s
NVS pmax pmax
comp=E,26nm,2.2s
NVS pmax pmax
comp=Z,48nm,2.2s,mb4.7
KBL Kabul 29.12 286 *e*P **P** **13 46 55.8 +0.6**
KBL pmax pmax
comp=Z,17nm,1.0s,mb4.7
KBL Kabul 29.12 286 *e*P **P** **13 46 55.8 +0.6**
comp=Z,17nm,1.0s,mb4.7
MAT Matsushiro 29.26 70 P **P** **13 46 55.6 -0.8**
MJAR Matsushiro Arr 29.26 70 P **P** **13 46 56.6 +0.2**
comp=Z,0.5nm,0.5s,baz=192,slow=11,SNR=1.6
MJAR LR LR 14 00 22.6
comp=Z,586nm,18.8s,MS4.2,baz=255,slow=40
MJAR Matsushiro Arr 29.26 70 P **P** **13 46 56.6 +0.2**
MJAR LR LR 14 00 22.6
POO Poona 29.57 252 *ex* x 13 46 56.0
HABR Khabarovsk 29.59 45 *e*P Px 13 47 11.1
HABR *e* 13 47 53.1
HABR *e* 13 50 00.8
HABR *e*S **S** **13 51 51.5 -2.7**
HABR *e**SS sS 13 52 07.7 +8.5
HABR *e*SS SS 13 53 23.3 -36
HABR *e* 13 53 44.5
HABR *e* 13 57 35.2
HABR pmax pmax
comp=E,18nm,2.4s
HABR pmax pmax
comp=Z,31nm,2.1s,mb4.7
HABR pmax pmax
comp=N,21nm,2.2s
HABR MLR MLR
comp=Z,286nm,17.0s,MS4.0
JHJ Hachijo jima 2 30.71 76 LR LR 14 00 53.9
comp=Z,1μm,18.8s,MS4.7,baz=32,slow=39
DAV Davao City (W) 31.51 135 LR LR 14 01 21.7
comp=Z,1μm,19.6s,MS4.6,baz=204,slow=39
BVAR Borovoye Array 32.56 322 P **P** **13 47 25.2 -0.1**
comp=Z,1.8nm,0.6s,mb4.2,baz=113,slow=11,SNR=2.8
BVAR PcP PcP 13 50 10.8 -0.8
comp=Z,2.9nm,0.7s,baz=183,slow=2.8,SNR=6.8
BVAR ScP ScP 13 53 56.3 +0.7
comp=Z,0.6nm,0.6s,baz=130,slow=3.4,SNR=2.3
BVAR LR LR 14 01 32.7
comp=Z,2μm,21.7s,MS4.8,baz=92,slow=38
BVAR Borovoye Array 32.56 322 P **P** **13 47 25.2 -0.1**
BVAR 13 50 10.8
BRVK Borovoye 32.64 322⇑ *e*P **P** **13 47 26.6 +0.6**
BRVK pmax pmax
comp=Z,18nm,2.5s,mb4.6
ASAJ Asahikawa 33.32 56 P **P** **13 47 33.2 +1.2**
comp=Z,3.5nm,0.8s,mb4.4,baz=225,slow=7.1,SNR=2.3
ASAJ Asahikawa 33.32 56 P **P** **13 47 33.2 +1.2**
ASAJ pmax pmax
comp=Z,4.0nm,0.8s
YSS Yuzh-Sakhalins 34.01 51 *e*P **P** **13 47 38.2 +0.2**
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.3
YAK Yakutsk 35.38 21 *e*P **P** **13 47 48.8 -0.9**
YAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK MLR MLR
comp=Z,243nm,10.0s,MS4.3
YAK MLR MLR
comp=N,120nm,8.0s
YAK MLR MLR
comp=E,190nm,10.0s
YAK Yakutsk 35.38 21 *e*P **P** **13 47 49.3 -0.3**
comp=E,11nm,0.5s,mb5.0
ABKAR Akbulak array 37.37 312 *e*P **P** **13 48 06.8 -0.1**
comp=E,2.6nm,0.7s,mb4.2
AKTK Aktyubinsk 38.84 313 P **P** **13 48 18.8 -0.4**
AKTO Aktyubinsk 38.84 313 P **P** **13 48 18.8 -0.4**
comp=E,1.1nm,0.5s,mb3.8,baz=100,slow=8.5,SNR=4.9
KAPI Kappang 39.03 154 P **P** **13 48 20.2 -0.9**
comp=E,15nm,0.7s,mb4.8,baz=283,slow=6.8,SNR=4.8
SVE Sverdlovsk 39.28 324 *e*P **P** **13 48 23.3 +0.4**
SVE pmax pmax
comp=Z,25nm,1.5s,mb4.7
SVE MLR MLR
comp=Z,884nm,16.0s,MS4.7
ARU Arti 40.21 323*c i*P **P** **13 48 30.3 -0.2**
ARU *e* 13 50 03.5
ARU S **S** **13 54 37.6 +0.3**
ARU SS SS 13 57 32.3 -2.8
ARU pmax pmax
comp=Z,15nm,1.0s,mb4.7
ARU MLR MLR
comp=Z,1μm,18.0s,MS4.8
ARU Arti 40.21 323 *e*P **P** **13 48 30.4 -0.2**
comp=Z,11nm,0.8s,mb4.6
GUMO Guam 41.72 105 LR LR 14 06 24.6
comp=Z,383nm,20.2s,MS4.3,baz=305,slow=37
SOKR Solikamsk 42.20 327⇑ *i*P **P** **13 48 46.9 0.0**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
SOKR MLR MLR
comp=Z,770nm,19.0s,MS4.6
TIXI Tiksi 42.95 11 *e*P **P** **13 48 51.6 -1.3**
TIXI pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
TIXI MLR MLR
comp=Z,389nm,12.0s,MS4.5
TIXI Tiksi 42.95 11 *e*P **P** **13 48 51.5 -1.4**
comp=Z,14nm,1.0s,mb4.7
SEY Seymchan 44.43 29 *e*P **P** **13 49 04.7 -0.1**
PETK Petropavlovsk- 44.62 44 P **P** **13 49 05.9 -0.6**
comp=Z,4.2nm,0.9s,mb4.3,baz=256,slow=5.8,SNR=2.9
PETK LR LR 14 09 06.9
comp=Z,194nm,19.5s,MS4.0,baz=116,slow=38
GNI Garni 47.91 298 *e*P **P** **13 49 32.5 -0.1**
GNI pmax pmax
comp=Z,7.0nm,1.3s
ZEI Tsey 48.20 302 *e*P **P** **13 49 33.4 -1.4**
ZEI pmax pmax
comp=Z,20nm,2.1s,mb4.8
KIV Kislovodsk 48.95 303 *e*P **P** **13 49 41.4 +0.9**
KIV pmax pmax
comp=Z,15nm,0.9s,mb5.0
KIV MLR MLR
comp=Z,297nm,16.0s,MS4.4
KLMR Klimovskoe 50.87 325 *e*P **P** **13 49 53.9 -0.9**
KLMR pmax pmax
comp=Z,20nm,0.9s,mb5.0
BILL Bilibino 51.48 25*c i*P **P** **13 49 58.9 -0.5**
BILL *e* 13 50 17.4
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.7
BILL Bilibino 51.48 25 *e*P **P** **13 49 58.6 -0.7**
comp=Z,7.2nm,0.9s,mb4.6
MOS Moscow 51.61 319 *e*P **P** **13 49 58.1 -2.4**
MOS *e* 13 50 06.8
OBN Obninsk 52.22 318⇑ *e*P **P** **13 50 04.5 -0.6**
OBN *e* 13 50 12.7
OBN *e* 13 51 12.3
OBN pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KNA Kununurra 52.44 149 *e*P **P** **13 50 03.0 -4.0**
comp=Z,18nm,0.8s,mb5.1
FITZ Fitzroy Crossi 53.25 153 *e*P **P** **13 50 09.8 -3.2**
comp=Z,11nm,0.9s,mb4.8
FITZ Fitzroy Crossi 53.25 153 P **P** **13 50 12.2 -0.8**
comp=Z,5.2nm,1.0s,mb4.4,baz=353,slow=2.6,SNR=5.3
FITZ Fitzroy Crossi 53.25 153 *e*P **P** **13 50 12.6 -0.4**
comp=Z,9.8nm,1.0s,mb4.7
MBWA Marble Bar 54.15 161 *e*P **P** **13 50 19.0 -0.6**
comp=Z,50nm,1.5s,mb5.2
BR131 Keskin Array S 56.36 300 *e*P **P** **13 50 34.9 -0.5**
comp=Z,3.1nm,0.9s,mb4.3
BRTR Keskin Array B 56.36 300 P **P** **13 50 34.6 -0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=100,slow=5.4,SNR=11
BRTR Keskin Array B 56.36 300*ce*P **P** **13 50 35.2 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 57.09 313 P **P** **13 50 39.4 -1.1**
comp=Z,2.1nm,0.5s,mb4.4,baz=70,slow=6.5,SNR=11
ARCES ARCESS Array B 57.15 336 P **P** **13 50 40.3 -0.3**
comp=Z,5.8nm,0.9s,mb4.6,baz=24,slow=8.9,SNR=4.0
ARCES PcP PcP 13 51 35.9 +0.7
comp=Z,3.9nm,0.8s,baz=65,slow=6.0,SNR=3.7
ARCES LR LR 14 17 22.6
comp=Z,779nm,19.6s,MS4.8,baz=129,slow=38
ARCES ARCESS Array B 57.15 336 P **P** **13 50 40.3 -0.3**
ARCES 13 51 35.9
FINES FINESS Array B 57.37 326 P **P** **13 50 41.9 -0.4**
comp=Z,4.3nm,0.8s,mb4.5,baz=61,slow=6.5,SNR=3.7
KIS Kishinev 58.08 309 LRM 14 17 04.0
comp=Z,800nm,14.0s
EIL Elat 58.30 288 LR LR 14 19 50.3
comp=Z,349nm,18.7s,MS4.5,baz=132,slow=40
WRAB Tennant Creek 58.66 146 *e*P **P** **13 50 51.9 +0.1**
WRAB pmax pmax
comp=Z,34nm,0.8s,mb5.4
WRAB Tennant Creek 58.66 146 *e*P **P** **13 50 51.9 +0.1**
comp=Z,34nm,0.8s,mb5.4
WRA Warramunga Arr 58.67 146 P **P** **13 50 51.6 -0.2**
comp=Z,16nm,0.9s,mb5.1,baz=338,slow=7.4,SNR=55
WB2 Warramunga Arr 58.67 146 *e*P **P** **13 50 51.9 0.0**
COEN Coen 58.73 134 *e*P **P** **13 50 52.5 +0.1**
COEN Coen 58.73 134 *e*P **P** **13 50 52.7 +0.3**
comp=Z,188nm,1.0s
SUW Suwalki 60.08 318 *e*P **P** **13 51 00.7 -0.6**
KWP Kalwaria Pacla 61.41 313 *e*P **P** **13 51 10.8 +0.3**
KWP Kalwaria Pacla 61.41 313 *e*P **P** **13 51 10.1 -0.3**
KWP pmax pmax
comp=Z,32nm,1.0s,mb5.4
KWP Kalwaria Pacla 61.41 313 *e*P **P** **13 51 10.1 -0.3**
comp=Z,32nm,1.0s,mb5.4
ASAR Alice Springs 61.66 148 P **P** **13 51 12.2 -0.1**
comp=Z,4.0nm,0.8s,mb4.6,baz=334,slow=6.6,SNR=32
STHS Stebnicka Huta 62.39 313 *e*P **P** **13 51 17.1 +0.1**
STHS *e* 13 52 00.7
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
STHS Stebnicka Huta 62.39 313 *e*P **P** **13 51 17.1 +0.1**
comp=Z,2.9nm,0.8s,mb4.5
STHS Stebnicka Huta 62.39 313 *e*P **P** **13 51 17.1 +0.1**
NIE Niedzica 62.97 313 *e*P **P** **13 51 21.5 +0.6**
OJC Ojcow 63.06 314 *e*P **P** **13 51 21.3 -0.1**
KECS Kecovo 63.14 312 *e*P **P** **13 51 22.3 +0.3**
KECS *e* 13 51 28.5
KECS *e* 13 51 38.8
KECS pmax pmax
comp=Z,3.0nm,1.4s,mb4.2
KECS Kecovo 63.14 312 *e*P **P** **13 51 22.3 +0.3**
comp=Z,3.4nm,1.4s,mb4.3
KECS Kecovo 63.14 312 *e*P **P** **13 51 22.3 +0.3**
PSZ Piszkesteto 63.68 312⇓ *e*P **P** **13 51 25.7 +0.1**
OKC Ostrava-Krasne 64.19 314 *e*P **P** **13 51 29.0 +0.1**
OKC MLR MLR
comp=Z,1μm,16.0s,MS5.1
OKC Ostrava-Krasne 64.19 314 *e*P **P** **13 51 29.0 +0.1**
OKC AMS AMS 14 20 20.0
comp=Z,1μm,16.0s
NB2 NORSAR Subarra 64.48 327 P **P** **13 51 28.9 -1.7**
comp=Z,10nm,1.1s,mb4.8,baz=72,slow=6.5
NOA NORSAR Array B 64.48 327 P **P** **13 51 28.9 -1.7**
comp=Z,2.8nm,0.7s,mb4.4,baz=73,slow=6.6,SNR=8.7
NWAO Narrogin (SRO) 64.89 167 P **P** **13 51 33.0 -0.5**
comp=Z,17nm,0.8s,mb5.1,baz=358,slow=9.3,SNR=6.7
DPC Dobruska-Polom 65.14 315 *e*P **P** **13 51 35.4 +0.3**
DPC MLR MLR
comp=Z,2μm,19.2s,MS5.2
DPC Dobruska-Polom 65.14 315 *e*P **P** **13 51 35.4 +0.3**
DPC AMS AMS 14 21 10.0
comp=Z,2μm,19.2s
CTA Charters Tower 65.30 135 *e*P **P** **13 51 36.2 -0.3**
comp=Z,9.4nm,1.0s,mb4.8
FORT Forrest 65.71 157 *e*P **P** **13 51 39.2 +0.3**
comp=Z,18nm,0.8s,mb5.2
FORT Forrest 65.71 157 *e*P **P** **13 51 39.4 +0.5**
comp=Z,25nm,0.8s,mb5.3
TREC Trest 66.00 314 AMS AMS 14 21 30.0
comp=Z,1μm,15.5s
PVCC Panska Ves 66.14 316 AMS AMS 14 21 40.0
comp=Z,1μm,17.9s
PRU Pruhonice 66.34 315 *e*P **P** **13 51 43.5 +0.7**
PRU MLR MLR
comp=Z,2μm,17.1s,MS5.3
PRU Pruhonice 66.34 315 *e*P **P** **13 51 43.5 +0.7**
PRU AMS AMS 14 21 50.0
comp=Z,2μm,17.1s
BRG Berggiesshubel 66.39 316 *e*P **P** **13 51 42.7 -0.5**
comp=Z,5.8nm,1.1s,mb4.5
BRG *e* 13 51 48.2
comp=Z,6.8nm,1.2s
BRG
comp=N,428nm,16.2s
BRG
comp=E,822nm,21.1s
BRG
comp=Z,1μm,16.8s
BRG Berggiesshubel 66.39 316 *e*P **P** **13 51 42.7 -0.5**
BRG *e* 13 51 48.2
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
BRG pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
BRG MLR MLR
comp=N,256nm,16.2s,MS4.8
BRG MLR MLR
comp=E,492nm,21.1s,MS4.8
BRG MLR MLR
comp=Z,669nm,16.8s,MS4.9
CLL Collm 66.79 317⇓ *i*P **P** **13 51 45.3 -0.4**
CLL *i* 13 51 56.5
CLL pmax pmax
comp=Z,29nm,1.1s,mb5.2
CLL MLR MLR
comp=Z,900nm,21.5s,MS5.0
CLL Collm 66.79 317⇓ *i*P **P** **13 51 45.3 -0.4**
comp=Z,9.0nm,1.1s,mb4.7
CLL *i* 13 51 56.5
CLL LR LR
comp=Z,900nm,21.5s,MS5.0
CLL Collm 66.79 317⇓ *i*P **P** **13 51 45.3 -0.4**
comp=Z,9.0nm,1.1s,mb4.7
CLL *i* 13 51 56.5
CLL Lm 14 22 00.0
comp=N,400nm,21.0s
CLL Lm 14 22 00.0
comp=E,700nm,19.8s
CLL Lm 14 22 00.0
comp=Z,900nm,21.5s
KHC Kasperske Hory 67.23 315 AMS AMS 14 22 10.0
comp=Z,1μm,17.7s
GEC2 GERESS Array S 67.26 314 *e*P **P** **13 51 48.5 -0.2**
GERES GERESS Array B 67.26 314 P **P** **13 51 48.6 -0.1**
comp=Z,2.6nm,0.8s,mb4.3,baz=76,slow=5.6,SNR=14
GERES LR LR 14 22 50.2
comp=Z,1μm,18.1s,MS5.1,baz=118,slow=37
NKC Novy Kostel 67.51 316 *e*P **P** **13 51 40.8 -9.5**
NKC MLR MLR
comp=Z,1μm,15.2s,MS5.2
NKC Novy Kostel 67.51 316 *e*P **P** **13 51 40.8 -9.5**
NKC AMS AMS 14 22 30.0
comp=Z,1μm,15.2s
COLD Coldfoot 67.77 24 *e*P **P** **13 51 51.9 +0.3**
comp=Z,16nm,0.9s,mb5.1
MOX Moxa 67.85 317 *e*P **P** **13 51 51.9 -0.5**
GRA1 Grafenberg Arr 68.45 316 *e*P **P** **13 51 56.7 +0.5**
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 68.45 316 *e*P **P** **13 51 56.7 +0.5**
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 68.45 316 *e*P **P** **13 51 56.7 +0.5**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 68.45 316 *e*P **P** **13 51 56.7 +0.5**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
BPAW Bear Paw Mtn. 68.92 27 *e*P **P** **13 51 58.7 -0.2**
comp=Z,13nm,1.0s,mb4.8
COLA College 69.74 26 *e*P **P** **13 52 03.4 -0.5**
COLA pmax pmax
comp=Z,20nm,0.9s,mb5.0
COLA College 69.74 26 *e*P **P** **13 52 03.4 -0.6**
comp=Z,20nm,0.9s,mb5.0
MCK McKinley 69.89 27 *e*P **P** **13 52 04.5 -0.4**
MCK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MCK McKinley 69.89 27 *e*P **P** **13 52 04.5 -0.5**
comp=Z,8.4nm,0.9s,mb4.7
KMBO Kilima Mbogo 70.39 256 P **P** **13 52 07.8 -1.0**
comp=Z,0.8nm,0.5s,mb3.9,baz=42,slow=15,SNR=3.6
KMBO Kilima Mbogo 70.39 256 *e*P **P** **13 52 07.5 -1.3**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 70.39 256 *e*P **P** **13 52 07.5 -1.3**
comp=Z,2.8nm,0.9s,mb4.2
CDF Champ du Feu 71.34 316 *e*P **P** **13 52 13.5 -0.5**
comp=Z,17nm,1.1s,mb4.6
CDF Champ du Feu 71.34 316 *e*P **P** **13 52 13.5 -0.5**
CDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
CDF Champ du Feu 71.34 316 *e*P **P** **13 52 13.5 -0.5**
comp=Z,8.3nm,1.1s,mb4.6
WLF Walferdange 71.46 317 P **P** **13 52 14.5 -0.2**
comp=Z,11nm,1.1s,mb4.7
WLF Walferdange 71.46 317 *e*P **P** **13 52 14.6 -0.1**
WLF pmax pmax
comp=Z,20nm,1.0s,mb5.0
WLF Walferdange 71.46 317 *e*P **P** **13 52 14.6 -0.1**
comp=Z,20nm,1.0s,mb5.0
STKA Stephens Creek 72.19 147⇓ *i*P **P** **13 52 18.8 -0.4**
comp=Z,3.8nm,0.6s,mb4.5
STKA Stephens Creek 72.19 147 P **P** **13 52 18.7 -0.5**
comp=Z,4.4nm,0.7s,mb4.5,baz=326,slow=6.9,SNR=15
STKA Stephens Creek 72.19 147 *e*P **P** **13 52 19.0 -0.3**
comp=Z,0.9nm,0.7s,mb3.8
INK Inuvik 72.42 19 P **P** **13 52 19.7 -0.4**
comp=Z,6.4nm,0.9s,mb4.5,baz=329,slow=7.8,SNR=21
INK Inuvik 72.42 19 *e*P **P** **13 52 19.4 -0.7**
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 72.42 19 *e*P **P** **13 52 19.4 -0.7**
comp=Z,8.8nm,0.9s,mb4.7
LPG La Plagne 72.95 313 *e*P **P** **13 52 24.2 +0.5**
comp=Z,25nm,0.9s,mb4.8
LPG La Plagne 72.95 313 *e*P **P** **13 52 24.2 +0.5**
LPG pmax pmax
comp=Z,13nm,0.9s,mb4.9
LPG La Plagne 72.95 313 *e*P **P** **13 52 24.2 +0.5**
comp=Z,13nm,0.9s,mb4.8
BMRM Bremner River 73.06 28 *e*P **P** **13 52 24.5 +0.4**
comp=Z,29nm,1.0s,mb5.2
CMSA Cobar Meteorol 73.94 143⇓ *i*P **P** **13 52 30.2 +0.6**
SMF Signal de Mont 74.22 315 *e*P **P** **13 52 30.5 -0.6**
comp=Z,26nm,1.0s,mb4.8
SMF Signal de Mont 74.22 315 *e*P **P** **13 52 30.5 -0.6**
SMF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SMF Signal de Mont 74.22 315 *e*P **P** **13 52 30.5 -0.6**
comp=Z,13nm,1.0s,mb4.8
TCF Toulx Ste Croi 75.38 315 *e*P **P** **13 52 37.6 -0.3**
KEST Kesra 75.69 303 P **P** **13 52 41.0 +1.2**
comp=Z,0.8nm,0.7s,mb3.8,baz=63,slow=14,SNR=2.2
CAF Calviac 76.14 314 *e*P **P** **13 52 42.5 +0.2**
comp=Z,12nm,1.0s,mb4.5
CAF Calviac 76.14 314 *e*P **P** **13 52 42.5 +0.2**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CAF Calviac 76.14 314 *e*P **P** **13 52 42.5 +0.2**
comp=Z,5.8nm,1.0s,mb4.5
TOO Toolangi 78.69 147 *e*P **P** **13 52 53.2 -3.2**
YKA Yellowknife Ar 81.94 17 P **P** **13 53 13.0 -0.7**
comp=Z,2.3nm,0.9s,mb4.1,baz=324,slow=4.7,SNR=22
EDM Edmonton 90.21 21 *e*P **P** **13 53 55.4 +0.7**
EDM *e* 13 54 02.6
FFC Flin Flon 91.84 14 *i*P **P** **13 54 02.3 0.0**
FFC Flin Flon 91.84 14 *e*P **P** **13 54 01.5 -0.8**
comp=Z,5.7nm,0.9s,mb4.9
TORD Torodi Ar. Bea 93.19 287 P **P** **13 54 08.2 -1.0**
comp=Z,1.6nm,1.0s,mb4.4,baz=46,slow=4.2,SNR=6.8
TXAR Lajitas Array 114.66 26 PKP PKiKP 13 59 34.9 -0.2
comp=Z,0.1nm,0.4s,baz=217,slow=1.2,SNR=4.3
ROSC El Rosal 144.29 356 *e*PKP PKPdf 14 00 30.9 -0.3
OTAV Otavalo 148.88 4 *e*PKPbc PKPbc 14 00 43.2 +0.4
LPAZ La Paz 163.49 331 PKP PKPdf 14 00 58.8 +1.0
comp=Z,1.0nm,0.6s,baz=0.0,slow=0.0,SNR=3.8
LPAZ La Paz 163.49 331 PKPdf PKPdf 14 00 58.8 +1.0
PLCA Paso Flores 169.16 205 PKPab PKPab 14 02 11.9 -1.3
comp=Z,2.6nm,0.9s,baz=180,slow=2.0,SNR=5.7

*IDC **12** 13:43:08.9±1.3,24°.31S×68°.03W,h202km±10km,mb3.0/2, mb1 3.3/4,mb1mx3.1/16,mbtmp3.0/4,Error ellipse: s-maj=33.0km s-min=17.5km az=59.0*
*ISCJB **12** 13:43:09.2±0.8,24°.18S±0°.07×67°.9W±0°.1,h215km±9km, mb3.1/2,Error ellipse: s-maj=17.1km s-min=11.4km az=161.9*
*GUC **12** 13:43:09.7±0.3,24°.10S×67°.84W,h199km±5km,ML3.9*
*NEIC **12** 13:43:09.7,24°.10S×67°.84W,h199km,MG3.9(GUC), After GUC.*

ISC 12 13:43:10.4±0.9,24°.12S±0°.08×67°.9W±0°.1,h208km±10km, n13,σ0°.9 40/21,mb3.1/2,1C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.78**	**328**	P	**Pn**	**13 43 47.5**	**0.0**
	5.8nm,0.3s,baz=146,slow=6.7,SNR=66						
LVC				S	**Sn**	**13 44 16.1**	**-0.1**
	30nm,0.3s,baz=315,slow=20,SNR=153						
LVC	**Limon Verde**	**1.78**	**328**	⇓*i*P	**Pn**	**13 43 47.4**	**0.0**
LVC				*i* S	**Sn**	**13 44 16.2**	**0.0**
LVC				AML	AML	13 44 18.2	
	comp=E,299nm,0.3s						
PECH	**Pedro de Valdi**	**2.24**	**312**	*i* P	**Pn**	**13 43 52.3**	**+0.2**
PECH				*i* S	**Sn**	**13 44 24.9**	**+0.3**
PECH				AML	AML	13 44 26.4	
	comp=N,939nm,0.3s						
ANCH	**Antofagasta**	**2.36**	**280**	*i* P	**Pn**	**13 43 53.4**	**+0.1**
ANCH				*i* S	**Sn**	**13 44 26.7**	**+0.1**
PB04	**Plate Boundary**	**2.37**	**321**	*i* P	**Pn**	**13 43 58.7**	**+5.2**
PB04				*i* S	**Sn**	**13 44 35.9**	**+8.9**
PB04				AML	AML	13 44 37.8	
	comp=N,235nm,0.3s						
PB01	**Plate Boundary**	**3.41**	**334⇑**	*i*P	**Pn**	**13 44 05.4**	**0.0**
PB01				*i* S	**Sn**	**13 44 48.1**	**-0.3**
PB01				AML	AML	13 44 50.9	
	comp=N,105nm,0.2s						
HMBC	**Humberston**	**4.26**	**334**	*e*P	**Pn**	**13 44 15.5**	**-0.3**
HMBC				*i* S	**Sn**	**13 45 06.7**	**-0.4**
MNMC	**Miæe Miæ**	**5.22**	**342**	*i* P	**Pn**	**13 44 27.8**	**-0.1**
MNMC				*i* S	**Sn**	**13 45 29.0**	**-0.1**
CFAA	**Coronel Fontan**	**7.46**	**182**	P	**Pn**	**13 44 52.3**	**-4.3**
	comp=N,0.1nm,0.3s,baz=355,slow=11,SNR=3.5						
LPAZ	**La Paz**	**7.80**	**358**	P	**Pn**	**13 45 02.4**	**+1.2**
	comp=N,1.1nm,0.3s,baz=180,slow=3.0,SNR=23						
CPUP	**Villa Florida**	**9.80**	**105**	P	**Pn**	**13 45 26.7**	**-0.3**
	comp=N,0.3nm,0.3s,baz=260,slow=12,SNR=3.9						
TXAR	**Lajitas Array**	**63.31**	**325**	P	**P**	**13 53 17.1**	**-0.3**
	comp=N,0.3nm,0.8s,mb3.0,baz=164,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	**77.36**	**69**	P	**P**	**13 54 42.8**	**+0.1**
	comp=N,0.6nm,0.8s,mb3.3,baz=247,slow=5.6,SNR=4.1						

IDC 12 13:43:47.4±1.4,31°.36N×103°.99E,h0km,mb4.0/6, mb1 4.2/7,mb1mx3.8/25,mbtmp4.0/7,ML3.9/1,Error ellipse: s-maj=38.8km s-min=25.2km az=66.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.56**	**6**	Pn	Pn	13 47 39.2	-1.6
	0.4nm,0.3s,baz=182,slow=11,SNR=3.3						
KSRS	**Korea Array**	**20.63**	**66**	P	P	13 48 29.1	+0.7
	4.8nm,1.1s,baz=268,slow=8.5,SNR=2.9						
KURK	**Kurchatov**	**26.99**	**323**	P	P	13 49 31.0	+0.4
	0.8nm,0.7s,baz=129,slow=10,SNR=7.2						
PETK	**Petropavlovsk-**	**44.07**	**44**	P	P	13 51 56.3	-0.6
	1.6nm,0.7s,baz=255,slow=5.7,SNR=1.5						
WRA	**Warramunga Arr**	**58.74**	**146**	P	P	13 53 46.8	-0.3
	3.5nm,0.6s,baz=337,slow=7.8,SNR=2.6						
ASAR	**Alice Springs**	**61.76**	**149**	P	P	13 54 07.8	+0.1
	0.6nm,0.6s,baz=338,slow=7.0,SNR=0.8						
YKA	**Yellowknife Ar**	**81.48**	**17**	P	P	13 56 06.3	+0.2
	0.4nm,0.6s,baz=330,slow=5.4,SNR=1.7						
YKA	**Yellowknife Ar**	**81.48**	**17**	P	P	13 56 06.3	+0.2

*IDC **12** 13:47:33.4±1.1,31°.66N×103°.20E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/25,mbtmp3.6/7,ML3.4/1,Error ellipse: s-maj=39.2km s-min=19.6km az=57.0*
*NEIC **12** 13:47:34.6±0.7,31°.64N×103°.20E,h10km,mb4.3/1,Error ellipse: s-maj=22.3km s-min=11.8km az=54.0*
*BJI **12** 13:47:36.5,31°.69N×103°.35E,h10km,ML3.6/6*
ISC 12 13:47:34.6±2.1,31°.64N±0°.09×103°.2E±0°.1,h8km±14km, n12,σ0§89/13,mb3.7/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.87**	**146**	Pg	**Pg**	**13 47 50.7**	**-0.6**
CD2				Sg	**Sg**	**13 48 02.7**	**0.0**
CD2				smax			
	comp=N,5μm,0.6s						
ENH	**Enshi**	**5.58**	**103**	Pn	**Pn**	**13 48 59.2**	**+1.5**
	comp=N,130nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.68**	**197**	Pn	**Pn**	**13 50 50.1**	**+1.3**
	comp=N,0.1nm,0.3s,baz=23,slow=9.8,SNR=2.3						
KSRS	**Korea Array**	**21.15**	**67**	P	**P**	**13 52 20.1**	**+0.1**
	comp=N,1.7nm,0.7s,mb3.5,baz=250,slow=11,SNR=4.3						
MK31	**Makanchi Array**	**22.07**	**319**	*eP*	**P**	**13 52 29.9**	**+0.1**
MKAR	**Makanchi Array**	**22.07**	**319**	P	**P**	**13 52 29.9**	**+0.1**
	comp=N,1.7nm,0.9s,mb3.5,baz=126,slow=10,SNR=4.4						
ZALV	**Zalesovo Beam**	**25.91**	**335**	P	**P**	**13 53 06.5**	**-0.3**
	comp=N,0.6nm,0.5s,mb3.4,baz=134,slow=8.3,SNR=3.6						
KURK	**Kurchatov**	**26.35**	**323**	P	**P**	**13 53 10.8**	**-0.1**
	comp=N,1.8nm,0.8s,mb3.7,baz=128,slow=9.3,SNR=6.8						
WRAB	**Tennant Creek**	**59.35**	**146**	P	**P**	**13 57 34.1**	**-3.1**
	comp=N,1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**59.35**	**146**	P	**P**	**13 57 36.8**	**-0.5**
	comp=N,0.7nm,0.6s,mb3.9,baz=337,slow=7.4,SNR=5.2						
WB2	**Warramunga Arr**	**59.36**	**146**	*eP*	**P**	**13 57 36.1**	**-1.2**
ASAR	**Alice Springs**	**62.35**	**148**	P	**P**	**13 57 58.4**	**+0.7**
	comp=N,0.4nm,0.8s,mb3.6,baz=350,slow=4.9,SNR=3.2						

*ISCJB **12** 13:50:10.1±2.7,30°.9N±0°.1×103°.1E±0°.1,h4km±17km, mb3.3/5,Error ellipse: s-maj=22.5km s-min=17.2km az=44.0*
*IDC **12** 13:50:11.6±1.4,31°.01N×103°.08E,h0km,mb3.3/5, mb1 3.6/5,mb1mx3.3/24,mbtmp3.4/5,Error ellipse: s-maj=46.0km s-min=26.3km az=58.0*
ISC 12 13:50:12.3±3.0,31°.0N±0°.1×103°.1E±0°.1,h4km±18km,n7, σ0§36/9,mb3.3/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**102**	Pg	**Pg**	**13 50 23.3**	**+0.5**
CD2				Sg	**Sg**	**13 50 29.6**	**-0.3**
CD2				smax			
	comp=N,10μm,0.7s						
GYA	**Guiyang**	**5.50**	**145**	Pg	**Pg**	**13 51 57.8**	**-0.1**
GYA				Sg	**Sg**	**13 53 03.4**	**-5.8**
GYA				smax			
	comp=N,160nm,0.8s						
GYA				smax			
	comp=E,130nm,0.7s						
KSRS	**Korea Array**	**21.44**	**66**	P	**P**	**13 55 01.4**	**-0.1**
	comp=E,0.9nm,0.5s,mb3.4,baz=268,slow=11,SNR=5.2						
KURK	**Kurchatov**	**26.82**	**324**	P	**P**	**13 55 53.0**	**-0.5**
	comp=E,0.2nm,0.3s,mb3.1,baz=134,slow=7.8,SNR=3.4						
WRA	**Warramunga Arr**	**58.88**	**145**	P	**P**	**14 00 12.4**	**-0.1**
	comp=E,0.3nm,0.7s,mb3.5,baz=337,slow=7.7,SNR=4.7						
ASAR	**Alice Springs**	**61.86**	**148**	P	**P**	**14 00 32.9**	**+0.1**
	comp=E,0.2nm,0.4s,mb3.6,baz=342,slow=7.1,SNR=2.2						
YKA	**Yellowknife Ar**	**82.01**	**17**	P	**P**	**14 02 33.9**	**+0.6**
	comp=E,0.1nm,0.5s,mb3.0,baz=331,slow=4.8,SNR=1.9						

*ISCJB **12** 13:51:04.5±0.8,31°.5N±0°.1×104°.3E±0°.2,h10km,mb3.5/8, Error ellipse: s-maj=27.3km s-min=13.8km az=141.5*
*IDC **12** 13:51:05.0±1.2,31°.55N×104°.18E,h0km,mb3.5/9, mb1 3.7/9,mb1mx3.5/27,mbtmp3.5/9,Error ellipse: s-maj=41.1km s-min=20.9km az=51.0*
*NEIC **12** 13:51:06.5±0.6,31°.52N×104°.13E,h10km,Error ellipse: s-maj=36.1km s-min=10.6km az=57.0*
ISC 12 13:51:06.6±0.8,31°.6N±0°.1×104°.2E±0°.2,h10km,n11, σ0§50/11,mb3.5/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**13 55 43.0**	**-0.3**
	0.9nm,0.8s,baz=261,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**13 56 08.5**	**+0.2**
	0.7nm,0.8s,mb3.1,baz=107,slow=9.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	**P**	**13 56 42.5**	**-0.1**
	1.1nm,0.5s,mb3.6,baz=144,slow=12,SNR=4.1						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**13 56 48.2**	**+0.3**
	0.5nm,0.6s,mb3.2,baz=126,slow=9.5,SNR=1.6						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**13 56 48.2**	**+0.3**
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**14 00 52.6**	**-1.1**
	1.0nm,0.6s,mb4.0,baz=89,slow=7.4,SNR=1.7						
WRA	**Warramunga Arr**	**58.80**	**147**	P	**P**	**14 01 04.9**	**-0.3**
	0.4nm,0.5s,mb3.7,baz=338,slow=7.7,SNR=1.8						
WB2	**Warramunga Arr**	**58.81**	**146**	*eP*	**P**	**14 01 05.0**	**-0.2**
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**14 01 26.4**	**+0.5**
	0.2nm,0.6s,mb3.4,baz=333,slow=7.0,SNR=1.6						
INK	**Inuvik**	**71.69**	**19**	P	**P**	**14 02 28.4**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=326,slow=3.6,SNR=1.4						
YKA	**Yellowknife Ar**	**81.22**	**17**	P	**P**	**14 03 23.1**	**+0.8**
	0.1nm,0.3s,mb3.2,baz=328,slow=4.4,SNR=2.0						

*IDC **12** 13:55:07.3±0.7,31°.18N×103°.56E,h0km,mb4.1/16, mb1 4.2/18,mb1mx4.1/28,mbtmp4.1/18,ML3.8/1,Error ellipse: s-maj=26.6km s-min=13.8km az=52.0*
*NEIC **12** 13:55:09.0±0.3,31°.18N×103°.53E,h10km,mb4.5/7,Error ellipse: s-maj=9.6km s-min=5.4km az=52.0*
*MOS **12** 13:55:09.1±0.8,31°.13N×103°.55E,h26km,mb4.6/14,Error ellipse: s-maj=16.3km s-min=7.7km az=111.0*
*BJI **12** 13:55:10.1,31°.34N×103°.54E,h12km,mB4.9/1,mb4.3/5, ML3.9/10,Ms4.0/1,Ms7 3.9/1*
ISC 12 13:55:09.9±0.8,31°.25N±0°.03×103°.61E±0°.07,h13km±5km, n62,σ1§04/65,mb4.2/29,3C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**159**	Pg	**Pg**	**13 55 17.6**	**+0.4**
CD2				Sg	**Sg**	**13 55 22.6**	**+0.5**
CD2				smax			
	comp=N,16μm,0.7s						
LZH	**Lanzhou**	**4.83**	**2**	Pg	**Pg**	**13 56 41.6**	**-0.8**
LZH				Sg	**Sg**	**13 57 43.1**	**-1.8**
LZH				smax			
	comp=N,83nm,0.7s						
LZH				smax			
	comp=E,180nm,0.8s						
LZH				LR	LR		
	comp=E,1μm,5.7s						
LZH				LR	LR		
	comp=Z,2μm,6.4s						
ENH	**Enshi**	**5.16**	**99**	*e*Pn	**Pn**	**13 56 28.5**	**+1.7**
	comp=Z,120nm,0.8s						
GYA	**Guiyang**	**5.47**	**150**	Pg	**Pg**	**13 56 51.1**	**-3.7**
GYA				smax			
	comp=N,300nm,0.9s						
GYA				smax			
	comp=E,400nm,1.0s						
HHC	**Hu-ho-hao-te**	**11.54**	**32**	*e*P	**Pn**	**13 57 50.2**	**-4.1**
HHC				PP		13 57 58.5	
HHC				S	**Sn**	**13 59 51.0**	**-12**
HHC				SS		14 00 04.2	
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,4.5s						
HHC				LR	LR		
	comp=N,410nm,6.2s						
HHC				LR	LR		
	comp=E,800nm,5.8s						
HHC				LR	LR		
	comp=Z,930nm,5.9s						
CMAR	**Chiang Mai Arr**	**13.42**	**199**	Pn	**Pn**	**13 58 18.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=14,slow=11,SNR=3.1						
SONM	**Songino Array**	**16.70**	**7**	Pn	**Pn**	**13 59 04.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=189,slow=11,SNR=5.5						
ZAK	**Zakamensk**	**19.11**	**359**	*e*P	**Pn**	**13 59 34.4**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOY	**Mondy**	**20.49**	**355**	*e*P	**P**	**13 59 50.0**	**+2.6**
KSRS	**Korea Array**	**20.98**	**66**	P	**P**	**13 59 53.6**	**+0.7**
	comp=Z,6.2nm,0.7s,baz=262,slow=10,SNR=16						
KSRS	**Korea Array**	**20.98**	**66**	P	**P**	**13 59 53.6**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**13 59 57.7**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**22.59**	**319**	*e*P	**P**	**14 00 10.3**	**+0.3**
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**14 00 10.2**	**+0.1**
	comp=Z,15nm,1.0s,mb4.4,baz=124,slow=10,SNR=41						
MKAR	**Makanchi Array**	**22.59**	**319**	*i* P	**P**	**14 00 10.5**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,15nm,1.0s						
ULHL	**Ulahol**	**24.42**	**304**	P	**P**	**14 00 29.2**	**+1.1**
	SNR=11						
KZA	**Kyzart**	**25.07**	**303**	P	**P**	**14 00 36.0**	**+1.9**
	SNR=28						
TKM2	**Tokmak 2**	**25.08**	**306**	P	**P**	**14 00 35.3**	**+1.2**
	SNR=6.2						
KBK	**Karagaybulak**	**25.45**	**305**	P	**P**	**14 00 39.1**	**+1.6**
	SNR=6.6						
UCH	**Uchtor**	**25.64**	**303**	P	**P**	**14 00 41.2**	**+2.0**
	SNR=16						
UCH	**Uchtor**	**25.64**	**303**	*e*P	**P**	**14 00 40.1**	**+0.9**
	comp=Z,17nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**25.77**	**304**	P	**P**	**14 00 44.0**	**+3.6**
	SNR=9.4						
AAK	**Ala-Archa**	**25.77**	**304**	P	**P**	**14 00 41.5**	**+1.2**
	comp=Z,8.6nm,0.8s,mb4.3,baz=112,slow=6.0,SNR=23						
AAK	**Ala-Archa**	**25.77**	**304**	*e*P	**P**	**14 00 40.9**	**+0.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**25.77**	**304**	P	**P**	**14 00 41.5**	**+1.2**
AML	**Almayashu**	**26.20**	**303**	P	**P**	**14 00 45.8**	**+1.5**
	SNR=7.2						
AML	**Almayashu**	**26.20**	**303**	*e*P	**P**	**14 00 45.6**	**+1.3**
	comp=Z,9.5nm,1.1s,mb4.2						
EKS2	**Erkin-Say**	**26.28**	**304**	*e*P	**P**	**14 00 45.0**	**0.0**
	comp=Z,5.8nm,0.9s,mb4.1						
ZAA0	**Zalesovo Array**	**26.41**	**335**	*e*P	**P**	**14 00 45.6**	**-0.3**
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**14 00 45.6**	**-0.4**
	comp=Z,8.4nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=20						
KURK	**Kurchatov**	**26.88**	**324**	P	**P**	**14 00 49.8**	**-0.4**
	comp=Z,10.0nm,0.8s,mb4.4,baz=128,slow=9.4,SNR=22						
KURK	**Kurchatov**	**26.88**	**324**	*d i* P	**P**	**14 00 50.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**14 01 38.9**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.1,baz=119,slow=9.2,SNR=8.4						
BRVK	**Borovoye**	**32.48**	**322**	*e*P	**P**	**14 01 40.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
BRVK	**Borovoye**	**32.48**	**322**	*e*P	**P**	**14 01 40.2**	**+0.2**
	comp=Z,2.7nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**37.26**	**312**	*e*P	**P**	**14 02 20.0**	**-1.2**
SVE	**Sverdlovsk**	**39.13**	**324**	*e*P	**P**	**14 02 37.7**	**+0.8**
SVE				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
ARU	**Arti**	**40.06**	**322**	*d i* P	**P**	**14 02 44.2**	**-0.4**
ARU						14 04 14.0	
ARU				S	**S**	**14 08 49.6**	**-0.5**
ARU				SS	SS	14 11 42.1	-5.0
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**14 02 44.4**	**-0.2**
	comp=Z,7.6nm,0.8s,mb4.5						
TIXI	**Tiksi**	**42.69**	**11**	*e*P	**P**	**14 03 04.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
ZEI	**Tsey**	**48.13**	**301**	*e*P	**P**	**14 03 48.6**	**-1.0**
ZEI				*e*		14 04 04.7	
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KIV	**Kislovodsk**	**48.88**	**303**	*e*P	**P**	**14 03 56.0**	**+0.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
BILL	**Bilibino**	**51.23**	**25**	*e*P	**P**	**14 04 13.8**	**+1.0**
BILL				*e*PP	pP	14 04 21.9	+5.1
BILL				*e*SP	sP	14 04 27.4	+9.1
BILL				*e*		14 06 06.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,2.5s,mb4.0						
OBN	**Obninsk**	**52.09**	**318**	*e*P	**P**	**14 04 19.3**	**-0.1**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BRTR	**Keskin Array B**	**56.30**	**299**	P	**P**	**14 04 49.7**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=90,slow=7.2,SNR=3.0						
AKASG	**Malin Array Be**	**56.97**	**313**	P	**P**	**14 04 53.9**	**-1.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=71,slow=5.8,SNR=5.4						
FINES	**FINESS Array B**	**57.21**	**326**	P	**P**	**14 04 55.6**	**-0.9**
	comp=Z,3.2nm,0.9s,mb4.4,baz=76,slow=8.0,SNR=4.4						
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P	**P**	**14 05 07.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P	**P**	**14 05 07.8**	**-0.4**
	comp=Z,7.2nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**58.83**	**146**	P	**P**	**14 05 07.7**	**-0.6**
	comp=Z,2.9nm,0.5s,mb4.6,baz=337,slow=7.6,SNR=31						
WB2	**Warramunga Arr**	**58.84**	**146**	*e*P	**P**	**14 05 07.6**	**-0.8**
KWP	**Kalwaria Pacla**	**61.30**	**313**	*e*P	**P**	**14 05 24.6**	**-0.3**
KWP				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.9						
KWP	**Kalwaria Pacla**	**61.30**	**313**	*e*P	**P**	**14 05 24.6**	**-0.4**
	comp=Z,14nm,1.3s,mb4.9						
ASAR	**Alice Springs**	**61.84**	**148**	P	**P**	**14 05 28.2**	**-0.5**
	comp=Z,1.2nm,0.7s,mb4.1,baz=346,slow=6.1,SNR=4.3						
CLL	**Collm**	**66.66**	**317**	*e*P	**P**	**14 05 59.0**	**-1.2**
CLL				*e*	pP	14 06 02.0	-2.3
CLL	**Collm**	**66.66**	**317**	*e*pP	pP	14 06 02.0	-2.3
GERES	**GERESS Array B**	**67.14**	**314**	P	**P**	**14 06 02.5**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=144,slow=6.9,SNR=3.1						
INK	**Inuvik**	**72.16**	**19**	P	**P**	**14 06 32.6**	**-1.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=339,slow=5.8,SNR=2.4						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**14 06 34.4**	**-1.1**
	comp=Z,1.6nm,0.6s,mb4.1,baz=349,slow=8.1,SNR=6.4						
STKA	**Stephens Creek**	**72.36**	**147**	*e*P	**P**	**14 06 34.4**	**-1.2**
YKA	**Yellowknife Ar**	**81.68**	**17**	P	**P**	**14 07 27.9**	**+0.3**
	comp=Z,0.2nm,0.6s,mb3.3,baz=328,slow=5.1,SNR=2.2						
TORD	**Torodi Ar. Bea**	**93.18**	**287**	P	**P**	**14 08 23.8**	**-0.7**
	comp=Z,0.6nm,1.0s,mb4.0,baz=38,slow=2.6,SNR=2.7						

*IDC **12** 13:58:25.0±0.9,31°.56N×103°.61E,h0km,mb3.8/10, mb1 3.9/11,mb1mx3.8/25,mbtmp3.8/11,ML2.9/1,Error ellipse: s-maj=36.8km s-min=16.8km az=58.0*
*BJI **12** 13:58:24.6,31°.54N×103°.53E,h10km,ML3.6/7,Ms3.7/1*
*ISCJB **12** 13:58:25.6±0.4,31°.36N±0°.05×103°.48E±0°.10,h10km, mb3.9/14,Error ellipse: s-maj=12.3km s-min=6.4km az=162.3*
*NEIC **12** 13:58:26.8±0.6,31°.48N×103°.40E,h10km,mb4.4/1,Error ellipse: s-maj=19.8km s-min=10.0km az=57.0*
ISC 12 13:58:27.5±0.4,31°.37N±0°.05×103°.48E±0°.10,h10km,n27, σ1§36/29,mb3.9/14,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**153**	Pg	**Pg**	**13 58 36.3**	**-1.2**
LZH	**Lanzhou**	**4.71**	**4**	*e*Pg	**Pn**	**13 59 43.5**	**+4.9**
LZH				Sn	**Sn**	**14 00 34.4**	**+1.1**
LZH				smax			
	comp=N,300nm,0.8s						
LZH				smax			
	comp=E,210nm,0.7s						
LZH	**Lanzhou**	**4.71**	**4**	*e*Pg	**Pg**	**14 00 02.2**	**+4.4**
LZH				Sg	**Sg**	**14 00 52.4**	**-6.4**
LZH				smax			
	comp=N,280nm,0.8s						
LZH				smax			
	comp=E,380nm,0.7s						
ENH	**Enshi**	**5.28**	**100**	Pn	**Pn**	**13 59 48.9**	**+2.6**
CMAR	**Chiang Mai Arr**	**13.50**	**199**	Pn	**Pn**	**14 01 39.5**	**+0.5**
	comp=E,0.0nm,0.3s,baz=6.7,slow=10.0,SNR=5.7						
KSRS	**Korea Array**	**21.03**	**67**	P	**P**	**14 03 09.9**	**-1.4**
	comp=E,1.1nm,0.7s,mb3.3,baz=251,slow=11,SNR=3.0						
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**14 03 23.6**	**+9.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**14 03 23.6**	**+9.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**22.43**	**319**	*e*P	**P**	**14 03 25.6**	**-0.6**
MKAR	**Makanchi Array**	**22.43**	**319**	P	**P**	**14 03 26.0**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.3,baz=113,slow=11,SNR=4.0						
ZAA0	**Zalesovo Array**	**26.25**	**335**	*e*P	**P**	**14 03 59.8**	**-2.8**
ZALV	**Zalesovo Beam**	**26.25**	**335**	P	**P**	**14 04 00.3**	**-2.3**
	comp=Z,4.5nm,0.6s,mb4.2,baz=126,slow=9.6,SNR=12						
KURK	**Kurchatov**	**26.72**	**324**	P	**P**	**14 04 06.8**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.3,baz=122,slow=11,SNR=2.6						
ABKAR	**Akbulak array**	**37.10**	**312**	*e*P	**P**	**14 05 39.9**	**+2.1**
ARCES	**ARCESS Array B**	**56.80**	**336**	P	**P**	**14 08 09.0**	**-2.4**
	comp=Z,3.2nm,0.9s,mb4.3,baz=60,slow=7.2,SNR=3.9						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**14 08 12.2**	**-1.1**
	comp=Z,1.5nm,0.7s,mb4.1,baz=96,slow=13,SNR=3.4						
WRAB	**Tennant Creek**	**58.99**	**146**	*e*P	**P**	**14 08 27.4**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.99**	**146**	P	**P**	**14 08 27.2**	**-0.2**
	comp=Z,0.7nm,0.5s,mb4.0,baz=327,slow=9.0,SNR=10.0						
WB2	**Warramunga Arr**	**59.00**	**146**	*e*P	**P**	**14 08 27.8**	**+0.4**
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**14 08 48.1**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.8,baz=340,slow=7.0,SNR=3.5						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**14 08 59.7**	**-2.1**
	comp=Z,0.6nm,0.7s,mb3.7,baz=84,slow=8.0,SNR=1.7						
LPG	**La Plagne**	**72.68**	**313**	*e*P	**P**	**14 09 56.9**	**+1.5**
	comp=Z,4.6nm,0.5s,mb4.3						
LPL	**La Plagne**	**72.68**	**313**	*e*P	**P**	**14 09 56.8**	**+1.4**
	comp=Z,4.5nm,0.5s,mb4.3						
SMF	**Signal de Mont**	**73.94**	**315**	*e*P	**P**	**14 10 03.6**	**+0.8**
AVF	**Avril sur Loir**	**74.16**	**315**	*e*P	**P**	**14 10 04.9**	**+0.8**
CAF	**Calviac**	**75.86**	**314**	*e*P	**P**	**14 10 15.4**	**+1.4**
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**14 10 41.6**	**-3.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=329,slow=5.2,SNR=6.9						

*IDC **12** 14:00:07.0±13.0,18°.96S×170°.57E,h0km,mb4.2/5, mb1 4.3/5,mb1mx3.9/17,mbtmp4.2/5,Error ellipse: s-maj=227.7km s-min=107.9km az=68.0*
ISC 12 14:00:31.8±4.2,19°.9S±0°.2×168°.2E±0°.6,h35km,n7, σ0§93/8,mb4.0/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.58**	**209**	*e*S	**Sn**	**14 01 41.4**	**+0.1**
NOUC	**Port Laguerre**	**2.85**	**219**	*e*P	**Pn**	**14 01 13.4**	**-1.3**
NOUC				*e*S	**Sn**	**14 01 48.0**	**+0.2**
CTA	**Charters Tower**	**20.65**	**266**	P	**P**	**14 05 13.6**	**+5.0**
	3.2nm,0.7s,baz=88,slow=14,SNR=6.4						
STKA	**Stephens Creek**	**26.70**	**238**	P	**P**	**14 06 09.6**	**+1.9**
	1.4nm,0.6s,mb3.6,baz=79,slow=14,SNR=5.2						
WRA	**Warramunga Arr**	**31.83**	**264**	P	**P**	**14 06 52.5**	**-1.0**
	0.7nm,0.6s,mb3.6,baz=86,slow=7.8,SNR=5.3						
ASAR	**Alice Springs**	**32.05**	**257**	P	**P**	**14 06 55.3**	**-0.1**
	5.7nm,0.8s,mb4.5,baz=85,slow=8.8,SNR=73						
FITZ	**Fitzroy Crossi**	**40.23**	**265**	P	**P**	**14 08 05.8**	**+0.4**
	5.2nm,0.6s,mb4.4,baz=116,slow=8.1,SNR=24						

*ISCJB **12** 14:02:12.6±0.5,31°.19N±0°.07×103°.8E±0°.1,h10km, mb3.8/9,Error ellipse: s-maj=16.2km s-min=9.2km az=164.6*
*IDC **12** 14:02:12.6±0.9,31°.06N×103°.57E,h0km,mb3.7/8, mb1 3.9/8,mb1mx3.6/24,mbtmp3.7/8,Error ellipse: s-maj=40.5km s-min=17.7km az=58.0*
*NEIC **12** 14:02:14.3±0.4,31°.24N×103°.83E,h10km,mb4.5/2,Error ellipse: s-maj=17.5km s-min=7.2km az=63.0*
*BJI **12** 14:02:16.4,30°.95N×103°.67E,h23km,ML3.2/5*
ISC 12 14:02:14.5±0.5,31°.18N±0°.07×103°.7E±0°.1,h10km,n16, σ0§62/17,mb3.8/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**172**	Pg	**Pg**	**14 02 19.7**	**-0.3**
CD2				Sg	**Sg**	**14 02 31.6**	**+7.9**
CD2				smax			
	comp=N,7μm,0.7s						
CMAR	**Chiang Mai Arr**	**13.38**	**200**	Pn	**Pn**	**14 05 26.1**	**+1.5**
	comp=N,0.1nm,0.3s,baz=7.7,slow=9.4,SNR=2.4						
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**14 06 58.4**	**+1.1**
	comp=N,3.2nm,0.7s,baz=243,slow=9.6,SNR=10						
MK31	**Makanchi Array**	**22.70**	**319**	*e*P	**P**	**14 07 15.6**	**-0.6**
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**14 07 16.3**	**+0.1**
	comp=N,0.9nm,0.7s,mb3.3,baz=122,slow=12,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	**P**	**14 07 51.6**	**-0.4**
	comp=N,0.3nm,0.4s,mb3.2,baz=138,slow=8.8,SNR=2.5						
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**14 07 56.2**	**0.0**
	comp=N,0.4nm,0.5s,mb3.2,baz=129,slow=9.4,SNR=3.7						
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**14 07 56.2**	**-0.1**
ABKAR	**Akbulak array**	**37.37**	**312**	*e*P	**P**	**14 09 27.4**	**+0.2**
	comp=N,6.8nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**14 12 12.2**	**-0.3**
	comp=N,2.3nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**14 12 12.3**	**-0.3**
	comp=N,2.2nm,0.7s,mb4.3,baz=337,slow=7.6,SNR

ISC 12 14:06:27.9±0.5, 31°.93N±0°.06×104°.82E±0°.09, h10km, n26, σ1°.04/31, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.22**	**349**	Pn		**Pn**	**Pn**	**14 07 35.2**	**+2.9**
LZH				Pg		**Pg**	**Pg**	**14 07 45.2**	**-3.6**
LZH				Sn		**Sn**	**Sn**	**14 08 19.5**	**-2.1**
LZH				Sg		**Sg**	**Sg**	**14 08 33.2**	**-10**
LZH				smax					
	comp=N,600nm,0.8s								
LZH				smax					
	comp=E,1μm,0.8s								
LZH				LR		LR			
	comp=E,2μm,6.4s								
LZH				LR		LR			
	comp=Z,2μm,7.9s								
ENH	**Enshi**	**4.33**	**111**	*e*Pg		**Pg**	**Pg**	**14 07 50.3**	**-0.6**
GTA	**Gaotai**	**8.50**	**333**	*e*P		**Pn**	**Pn**	**14 08 35.6**	**+4.6**
GTA				pP				14 08 38.8	
GTA				sP				14 08 41.5	
GTA				S		**Sn**	**Sn**	**14 10 07.5**	**+0.5**
GTA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
GTA				pmax		pmax			
	comp=Z,220nm,4.2s								
GTA				LR		LR			
	comp=N,420nm,7.8s								
GTA				LR		LR			
	comp=E,570nm,9.0s								
GTA				LR		LR			
	comp=Z,820nm,10.5s								
HHC	**Hu-ho-hao-te**	**10.42**	**30**	*e*P		**Pn**	**Pn**	**14 08 56.7**	**-0.7**
HHC				PP				14 09 04.8	
HHC				S		**Sn**	**Sn**	**14 10 49.6**	**-4.6**
HHC				pmax		pmax			
	comp=Z,7.0nm,1.0s								
HHC				pmax		pmax			
	comp=Z,270nm,4.6s								
HHC				LR		LR			
	comp=N,280nm,6.3s								
HHC				LR		LR			
	comp=E,660nm,6.1s								
HHC				LR		LR			
	comp=Z,520nm,6.9s								
CMAR	**Chiang Mai Arr**	**14.43**	**203**	Pn		**Pn**	**Pn**	**14 09 48.5**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=10,slow=12,SNR=4.5								
SONM	**Songino Array**	**15.93**	**4**	Pn		**Pn**	**Pn**	**14 10 12.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=13,SNR=4.4								
KSRS	**Korea Array**	**19.76**	**67**	P		**Pn**	**Pn**	**14 10 59.9**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=255,slow=11,SNR=4.5								
MK31	**Makanchi Array**	**22.77**	**317**	*e*P		**P**	**P**	**14 11 30.2**	**-0.2**
MKAR	**Makanchi Array**	**22.77**	**317**	P		**P**	**P**	**14 11 29.8**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.0,baz=124,slow=13,SNR=3.1								
ZALV	**Zalesovo Beam**	**26.25**	**333**	P		**P**	**P**	**14 12 04.0**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.5,baz=134,slow=10,SNR=3.2								
ZALV	**Zalesovo Beam**	**26.25**	**333**	P		**P**	**P**	**14 12 04.0**	**+0.9**
KURK	**Kurchatov**	**26.96**	**322**	P		**P**	**P**	**14 12 08.8**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.2,baz=130,slow=8.6,SNR=2.5								
KURK	**Kurchatov**	**26.96**	**322**	P		**P**	**P**	**14 12 08.8**	**-0.7**
BVAR	**Borovoye Array**	**32.53**	**321**	P		**P**	**P**	**14 12 58.7**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=128,slow=14,SNR=2.2								
TIXI	**Tiksi**	**41.82**	**11**	*e*P		**P**	**P**	**14 14 20.1**	**+2.7**
	comp=Z,2.6nm,0.4s,mb4.2								
FITZ	**Fitzroy Crossi**	**53.61**	**155**	P		**P**	**P**	**14 15 48.8**	**-0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=340,slow=12,SNR=3.0								
WRAB	**Tennant Creek**	**58.83**	**147**	*e*P		**P**	**P**	**14 16 26.7**	**0.0**
	comp=Z,4.0nm,0.6s,mb4.6								
WRA	**Warramunga Arr**	**58.83**	**147**	P		**P**	**P**	**14 16 26.9**	**+0.1**
	comp=Z,2.6nm,0.5s,mb4.5,baz=339,slow=7.8,SNR=35								
WB2	**Warramunga Arr**	**58.83**	**147**	*e*P		**P**	**P**	**14 16 26.5**	**-0.2**
ASAR	**Alice Springs**	**61.89**	**150**	P		**P**	**P**	**14 16 47.8**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.2,baz=338,slow=6.7,SNR=16								
CTA	**Charters Tower**	**65.20**	**137**	P		**P**	**P**	**14 17 10.1**	**+0.5**
	comp=Z,1.3nm,0.4s,mb4.3,baz=346,slow=12,SNR=4.7								
CTA	**Charters Tower**	**65.20**	**137**	P		**P**	**P**	**14 17 10.1**	**+0.5**
STKA	**Stephens Creek**	**72.37**	**148**	P		**P**	**P**	**14 17 52.7**	**-1.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=318,slow=13,SNR=4.0								
STKA	**Stephens Creek**	**72.37**	**148**	*e*P		**P**	**P**	**14 17 53.9**	**-0.1**
YKA	**Yellowknife Ar**	**80.72**	**17**	P		**P**	**P**	**14 18 42.4**	**+1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=328,slow=5.1,SNR=3.2								
YKA	**Yellowknife Ar**	**80.72**	**17**	P		**P**	**P**	**14 18 42.4**	**+1.4**

*ISCJB **12** 14:09:38.1±1.0, 32°.1N±0°.3×104°.0E±0°.5, h10km, mb3.7/5, Error ellipse: s-maj=73.0km s-min=19.2km az=147.8*
*IDC **12** 14:09:38.8±1.2, 32°.31N×104°.17E, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.4/26, mbtmp3.5/4, Error ellipse: s-maj=75.9km s-min=24.5km az=61.0*
*NEIC **12** 14:09:40.1±0.7, 32°.25N×104°.07E, h10km, mb4.6/1, Error ellipse: s-maj=52.4km s-min=13.8km az=57.0*

ISC 12 14:09:40.2±0.9, 32°.3N±0°.3×104°.1E±0°.5, h10km, n6, σ0°.32/6, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.11**	**317**	P		**P**	**P**	**14 14 35.5**	**0.0**
	0.2nm,0.5s,mb2.8,baz=122,slow=14,SNR=2.2								
WRAB	**Tennant Creek**	**59.44**	**147**	*e*P		**P**	**P**	**14 19 43.0**	**-0.3**
	2.6nm,0.6s,mb4.4								
WRA	**Warramunga Arr**	**59.44**	**147**	P		**P**	**P**	**14 19 43.3**	**0.0**
	1.6nm,0.6s,mb4.2,baz=339,slow=7.4,SNR=11								
WB2	**Warramunga Arr**	**59.45**	**147**	*e*P		**P**	**P**	**14 19 43.1**	**-0.2**
ASAR	**Alice Springs**	**62.48**	**149**	P		**P**	**P**	**14 20 04.3**	**+0.4**
	0.6nm,0.6s,mb3.9,baz=333,slow=6.2,SNR=6.3								
YKA	**Yellowknife Ar**	**80.60**	**17**	P		**P**	**P**	**14 21 52.6**	**0.0**
	0.1nm,0.3s,mb3.2,baz=333,slow=5.5,SNR=3.0								

*ISCJB **12** 14:09:44.6±0.4, 32°.01N±0°.03×104°.03E±0°.09, h10km, mb3.9/9, Error ellipse: s-maj=10.7km s-min=4.6km az=7.8*
*IDC **12** 14:09:45.5±0.8, 32°.09N×104°.04E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.8/29, mbtmp3.9/11, ML3.8/2, MS3.8/1, Ms1 3.8/1, ms1mx3.0/32, Error ellipse: s-maj=34.7km s-min=16.3km az=59.0*
*NEIC **12** 14:09:47.1±0.4, 32°.05N×104°.07E, h10km, mb4.3/2, Error ellipse: s-maj=17.4km s-min=7.8km az=69.0*
*BJI **12** 14:09:47.9, 31°.97N×104°.44E, h10km, mb4.4/3, ML4.3/5, Ms4.6/3, Ms7 4.2/3*

ISC 12 14:09:46.8±0.4, 31°.98N±0°.03×103°.95E±0°.09, h10km, n26, σ1°.06/29, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.08**	**189**	Pg		**Pg**	**Pg**	**14 10 05.8**	**-1.8**
CD2				Sg		**Sg**	**Sg**	**14 10 20.6**	**-1.0**
CD2				smax					
	comp=N,21μm,0.7s								
LZH	**Lanzhou**	**4.09**	**359**	Pg		**Pg**	**Pg**	**14 11 03.6**	**-1.6**
LZH				Sg		**Sg**	**Sg**	**14 11 57.5**	**-0.7**
LZH				smax					
	comp=N,550nm,0.6s								
LZH				smax					
	comp=E,720nm,0.8s								
LZH				LR		LR			
	comp=E,5μm,5.9s								
LZH				LR		LR			
	comp=Z,6μm,6.4s								
HHC	**Hu-ho-hao-te**	**10.76**	**33**	*e*P		**Pn**	**Pn**	**14 12 21.7**	**+0.8**
HHC				PP				14 12 30.0	
HHC				S		**Sn**	**Sn**	**14 14 21.7**	**+0.3**
HHC				SS				14 14 35.3	
HHC				pmax		pmax			
	comp=Z,24nm,1.0s								
HHC				LR		LR			
	comp=N,960nm,5.3s								
HHC				LR		LR			
	comp=E,1μm,5.6s								
HHC				LR		LR			
	comp=Z,540nm,4.7s								
CMAR	**Chiang Mai Arr**	**14.20**	**200**	Pn		**Pn**	**Pn**	**14 13 09.1**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=12,slow=9.8,SNR=7.8								
SONM	**Songino Array**	**15.94**	**6**	Pn		**Pn**	**Pn**	**14 13 29.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=3.2								
KSRS	**Korea Array**	**20.43**	**68**	P		**P**	**P**	**14 14 22.0**	**-2.1**
	comp=Z,2.1nm,0.7s,baz=255,slow=9.8,SNR=5.2								
CN2	**Changchun**	**20.60**	**49**	*e*P		**P**	**P**	**14 14 27.2**	**+1.2**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
MK31	**Makanchi Array**	**22.23**	**318**	*e*P		**P**	**P**	**14 14 45.5**	**+2.1**
MKAR	**Makanchi Array**	**22.23**	**318**	P		**P**	**P**	**14 14 44.0**	**+0.6**
	comp=Z,1.4nm,0.6s,mb3.5,baz=116,slow=11,SNR=8.3								
MKAR				LR		LR		14 22 47.0	
	comp=Z,278nm,21.2s,baz=46,slow=35								
MKAR	**Makanchi Array**	**22.23**	**318**	P		**P**	**P**	**14 14 44.0**	**+0.6**
MKAR				LR		LR		14 22 47.0	
ZAA0	**Zalesovo Array**	**25.87**	**334**	*e*P		**P**	**P**	**14 15 18.3**	**-0.2**
ZALV	**Zalesovo Beam**	**25.87**	**334**	P		**P**	**P**	**14 15 18.1**	**-0.3**
	comp=Z,1.7nm,0.5s,mb3.8,baz=136,slow=9.0,SNR=7.6								
KURK	**Kurchatov**	**26.46**	**322**	P		**P**	**P**	**14 15 23.7**	**-0.1**
	comp=Z,2.4nm,0.9s,mb3.7,baz=128,slow=8.1,SNR=7.4								
KURK	**Kurchatov**	**26.46**	**322**	*e*P		**P**	**P**	**14 15 25.4**	**+1.5**
	comp=Z,3.2nm,1.0s,mb3.8								
ABKAR	**Akbulak array**	**36.99**	**311**	P		**P**	**P**	**14 16 56.2**	**-0.1**
FINES	**FINESS Array B**	**56.76**	**326**	P		**P**	**P**	**14 19 29.9**	**-0.7**
	comp=Z,2.4nm,0.8s,mb4.3,baz=74,slow=6.8,SNR=4.7								
FINES	**FINESS Array B**	**56.76**	**326**	P		**P**	**P**	**14 19 29.9**	**-0.7**
WRAB	**Tennant Creek**	**59.27**	**146**	P		**P**	**P**	**14 19 48.6**	**-0.1**
	comp=Z,2.7nm,0.6s,mb4.5								
WRA	**Warramunga Arr**	**59.28**	**146**	P		**P**	**P**	**14 19 49.2**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.3,baz=339,slow=7.4,SNR=8.8								
WRA	**Warramunga Arr**	**59.28**	**146**	P		**P**	**P**	**14 19 49.2**	**+0.5**
WB2	**Warramunga Arr**	**59.28**	**146**	P		**P**	**P**	**14 19 48.8**	**+0.1**
ASAR	**Alice Springs**	**62.31**	**149**	P		**P**	**P**	**14 20 10.9**	**+1.6**
	comp=Z,0.5nm,0.4s,mb4.0,baz=331,slow=6.7,SNR=5.5								
ASAR	**Alice Springs**	**62.31**	**149**	P		**P**	**P**	**14 20 10.9**	**+1.6**
STKA	**Stephens Creek**	**72.82**	**147**	P		**P**	**P**	**14 21 15.8**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=345,slow=8.6,SNR=3.7								
YKA	**Yellowknife Ar**	**80.89**	**17**	P		**P**	**P**	**14 22 01.5**	**+0.8**
	comp=Z,0.2nm,0.5s,mb3.3,baz=321,slow=4.8,SNR=3.5								
YKA	**Yellowknife Ar**	**80.89**	**17**	P		**P**	**P**	**14 22 01.5**	**+0.8**

*IDC **12** 14:10:20.9±0.5, 31°.17N×103°.62E, h0km, mb4.4/22, mb1 4.4/24, mb1mx4.3/33, mbtmp4.4/24, ML3.9/2, Error ellipse: s-maj=22.5km s-min=11.3km az=48.0*
*NEIC **12** 14:10:22.6±0.2, 31°.19N×103°.65E, h10km, mb4.6/20, Error ellipse: s-maj=6.6km s-min=4.9km az=54.0*
*MOS **12** 14:10:22.2±0.7, 31°.14N×103°.69E, h21km, mb4.7/23, Error ellipse: s-maj=11.3km s-min=6.3km az=112.6*
*ISCJB **12** 14:10:23.3±0.7, 31°.13N±0°.05×103°.66E±0°.05, h28km±5km, mb4.5/49, Error ellipse: s-maj=8.8km s-min=6.5km az=44.7*
*BJI **12** 14:10:24.0, 31°.34N×103°.59E, h18km, mB5.1/6, mb4.7/15, ML4.6/9, Ms4.6/8, Ms7 4.4/4*
*SZGRF **12** 14:10:30.7, 31°.25N×102°.84E, h33km, mb4.4, Sichuan, China*

ISC 12 14:10:24.2±0.8, 31°.16N±0°.05×103°.65E±0°.05, h18km±5km, n122, σ0°.90/124, mb4.5/49, 4C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**159**	Pg		**Pg**	**Pg**	**14 10 30.0**	**-0.2**
CD2				Sg		**Sg**	**Sg**	**14 10 33.8**	**-0.4**
CD2				smax					
	comp=N,47μm,0.9s								
ENH	**Enshi**	**5.11**	**98**	*e*P		**Pn**	**Pn**	**14 11 43.5**	**+3.8**
WHN	**Wuhan**	**9.22**	**91**	P		**Pn**	**Pn**	**14 12 38.2**	**+1.9**
WHN				LR		LR			
	comp=N,4μm,7.5s								
WHN				LR		LR			
	comp=E,1μm,7.6s								
LSA	**Lhasa**	**10.88**	**266**	P		**Pn**	**Pn**	**14 12 57.8**	**-1.3**
LSA	**Lhasa**	**10.88**	**266**	*e*P		**Pn**	**Pn**	**14 13 00.6**	**+1.5**
LSA				pmax		pmax			
	comp=Z,8.0nm,0.6s								
LSA	**Lhasa**	**10.88**	**266**	*e*P		**Pn**	**Pn**	**14 13 00.6**	**+1.6**
	comp=Z,7.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**13.35**	**200**	Pn		**Pn**	**Pn**	**14 13 32.2**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=11,slow=9.7,SNR=3.2								
SONM	**Songino Array**	**16.79**	**6**	Pn		**Pn**	**Pn**	**14 14 17.0**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=183,slow=11,SNR=6.6								
ULN	**Ulaanbaatar**	**16.89**	**8**	*e*P		**Pn**	**Pn**	**14 14 19.1**	**-0.4**
ULN				pmax		pmax			
	comp=Z,7.0nm,0.8s								
ULN	**Ulaanbaatar**	**16.89**	**8**	*e*P		**Pn**	**Pn**	**14 14 19.1**	**-0.4**
	comp=Z,6.7nm,0.8s								
ZAK	**Zakamensk**	**19.21**	**359**	*e*P		**Pn**	**Pn**	**14 14 48.3**	**+0.4**
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.8s								
TLY	**Talaya**	**20.50**	**360**	*e*P		**P**	**P**	**14 15 05.3**	**+4.2**
TLY				pmax		pmax			
	comp=Z,11nm,1.2s								
MOY	**Mondy**	**20.58**	**355**	*e*P		**P**	**P**	**14 15 04.0**	**+2.1**
MOY				pmax		pmax			
	comp=Z,45nm,3.1s								
KSRS	**Korea Array**	**20.99**	**66**	P		**P**	**P**	**14 15 05.2**	**-1.2**
	comp=Z,13nm,0.7s,baz=266,slow=11,SNR=28								
KSRS	**Korea Array**	**20.99**	**66**	P		**P**	**P**	**14 15 05.3**	**-1.1**
KSRS				pmax		pmax			
	comp=Z,13nm,0.7s								
CN2	**Changchun**	**21.34**	**48**	*e*P		**P**	**P**	**14 15 11.8**	**+1.6**
CN2				pmax		pmax			
	comp=Z,30nm,0.9s,mb4.6								
JOW	**Kunigami**	**21.95**	**95**	P		**P**	**P**	**14 15 17.5**	**+0.6**
	comp=Z,28nm,0.5s,mb5.0,baz=234,slow=19,SNR=3.6								
MKAR	**Makanchi Array**	**22.68**	**320**	P		**P**	**P**	**14 15 24.1**	**-0.4**
	comp=Z,20nm,1.1s,mb4.5,baz=119,slow=9.9,SNR=24								
ULHL	**Ulahol**	**24.50**	**304**	P		**P**	**P**	**14 15 43.6**	**+1.3**
	SNR=8.5								
KZA	**Kyzart**	**25.15**	**304**	P		**P**	**P**	**14 15 50.2**	**+1.9**
	SNR=5.6								
TKM2	**Tokmak 2**	**25.16**	**306**	P		**P**	**P**	**14 15 49.1**	**+0.8**
	SNR=8.4								
TKM2	**Tokmak 2**	**25.16**	**306**	*e*P		**P**	**P**	**14 15 48.9**	**+0.6**
TKM2				pmax		pmax			
	comp=Z,12nm,1.1s,mb4.3								
TKM2	**Tokmak 2**	**25.16**	**306**	*e*P		**P**	**P**	**14 15 48.9**	**+0.5**
	comp=Z,12nm,1.1s,mb4.3								
KBK	**Karagaybulak**	**25.53**	**305**	P		**P**	**P**	**14 15 53.2**	**+1.5**
	SNR=10								
UCH	**Uchtor**	**25.72**	**304**	P		**P**	**P**	**14 15 55.2**	**+1.8**
	SNR=9.9								
UCH	**Uchtor**	**25.72**	**304**	*e*P		**P**	**P**	**14 15 54.9**	**+1.5**
	comp=Z,24nm,1.1s,mb4.6								
AAK	**Ala-Archa**	**25.85**	**304**	P		**P**	**P**	**14 15 57.9**	**+3.4**
	SNR=11								
AAK	**Ala-Archa**	**25.85**	**304**	P		**P**	**P**	**14 15 54.6**	**+0.1**
	comp=Z,8.7nm,0.8s,mb4.3,baz=109,slow=7.5,SNR=22								
AAK	**Ala-Archa**	**25.85**	**304**	‖*e*P		**P**	**P**	**14 15 56.1**	**+1.6**
AAK				pmax		pmax			
	comp=Z,11nm,1.2s,mb4.3								
AAK	**Ala-Archa**	**25.85**	**304**	*e*P		**P**	**P**	**14 15 55.1**	**+0.6**
USP	**Ospenovka**	**26.03**	**306**	P		**P**	**P**	**14 15 56.8**	**+0.6**
	SNR=5.2								
AML	**Almayashu**	**26.28**	**303**	P		**P**	**P**	**14 16 00.2**	**+1.7**
	SNR=8.1								
AML	**Almayashu**	**26.28**	**303**	*e*P		**P**	**P**	**14 15 58.2**	**-0.3**
	comp=Z,13nm,1.0s,mb4.4								
EKS2	**Erkin-Say**	**26.36**	**304**	P		**P**	**P**	**14 16 02.8**	**+3.6**
	SNR=5.8								
EKS2	**Erkin-Say**	**26.36**	**304**	*e*P		**P**	**P**	**14 15 58.4**	**-0.8**
	comp=Z,7.0nm,0.3s,mb4.7								
ZAA0	**Zalesovo Array**	**26.50**	**335**	*e*P		**P**	**P**	**14 15 59.6**	**-0.7**
ZALV	**Zalesovo Beam**	**26.50**	**335**	P		**P**	**P**	**14 15 59.9**	**-0.4**
	comp=Z,4.9nm,0.7s,mb4.1,baz=134,slow=9.0,SNR=10								
KURK	**Kurchatov**	**26.97**	**324**	P		**P**	**P**	**14 16 04.1**	**-0.5**
	comp=Z,11nm,0.7s,mb4.5,baz=128,slow=9.6,SNR=30								
KURK	**Kurchatov**	**26.97**	**324**	‖*e*P		**P**	**P**	**14 16 04.4**	**-0.2**
KURK				pmax		pmax			
	comp=Z,24nm,1.2s,mb4.6								
KURK	**Kurchatov**	**26.97**	**324**	*e*P		**P**	**P**	**14 16 02.4**	**-2.1**
	comp=Z,16nm,1.0s,mb4.5								
BOD	**Bodaibo**	**27.60**	**12**	*e*P		**P**	**P**	**14 16 10.3**	**+0.2**
BOD				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.2								
NVS	**Novosibirsk**	**27.78**	**334**	*e*P		**P**	**P**	**14 16 08.2**	**-3.6**
BVAR	**Borovoye Array**	**32.51**	**322**	P		**P**	**P**	**14 16 53.5**	**-0.1**
	comp=Z,1.8nm,0.5s,mb4.2,baz=115,slow=9.9,SNR=10								
BVAR				PcP		PcP		14 19 39.4	-0.7
	comp=Z,1.3nm,0.7s,baz=90,slow=2.9,SNR=3.6								
BRVK	**Borovoye**	**32.58**	**322**	‖*i*P		**P**	**P**	**14 16 54.2**	**0.0**
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.2s,mb4.2								
BRVK	**Borovoye**	**32.58**	**322**	*e*P		**P**	**P**	**14 16 54.0**	**-0.3**
	comp=Z,3.2nm,0.6s,mb4.4								
ABKAR	**Akbulak array**	**37.34**	**312**	*e*P		**P**	**P**	**14 17 35.3**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.1								
SVE	**Sverdlovsk**	**39.22**	**324**	*e*P		**P**	**P**	**14 17 51.7**	**+0.6**
SVE				pmax		pmax			
	comp=Z,16nm,1.2s,mb4.6								
ARU	**Arti**	**40.15**	**322**	*d*i*P*		**P**	**P**	**14 17 58.6**	**-0.2**
ARU				*e*				14 19 28.7	
ARU				S		**S**	**S**	**14 24 04.2**	**-0.1**
ARU				SS		SS	SS	14 26 57.5	-4.6
ARU				pmax		pmax			
	comp=Z,12nm,0.7s,mb4.7								
TIXI	**Tiksi**	**42.78**	**11**	*e*P		**P**	**P**	**14 18 19.4**	**-0.8**
TIXI				pmax		pmax			
	comp=Z,13nm,1.1s,mb4.6								
TIXI	**Tiksi**	**42.78**	**11**	*e*P		**P**	**P**	**14 18 19.4**	**-0.8**
SEY	**Seymchan**	**44.24**	**30**	‖*e*P		**P**	**P**	**14 18 31.1**	**-0.9**
GNI	**Garni**	**47.93**	**298**	*c*i*P*		**P**	**P**	**14 19 03.0**	**+1.5**
GNI				pmax		pmax			
	comp=Z,16nm,1.7s								
ZEI	**Tsey**	**48.21**	**301**	*e*P		**P**	**P**	**14 19 03.4**	**-0.2**
ZEI				pmax		pmax			
	comp=Z,8.0nm,1.3s,mb4.6								
KIV	**Kislovodsk**	**48.95**	**303**	*e*P		**P**	**P**	**14 19 10.4**	**+1.1**
KIV				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
BILL	**Bilibino**	**51.29**	**25**	‖*i*P		**P**	**P**	**14 19 26.2**	**-0.5**
BILL				pmax		pmax			
	comp=Z,18nm,1.7s,mb4.7								
BILL	**Bilibino**	**51.29**	**25**	*e*P		**P**	**P**	**14 19 26.7**	**0.0**
	comp=Z,5.6nm,0.9s,mb4.5								
OBN	**Obninsk**	**52.17**	**318**	*e*P		**P**	**P**	**14 19 33.3**	**-0.2**
OBN				*e*				14 20 43.8	
OBN				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.5								
KNA	**Kununurra**	**52.52**	**149**	*e*P		**P**	**P**	**14 19 36.0**	**-0.4**
	comp=Z,8.0nm,0.8s,mb4.7								
FITZ	**Fitzroy Crossi**	**53.34**	**154**	*e*P		**P**	**P**	**14 19 40.9**	**-1.6**
	comp=Z,4.8nm,0.8s,mb4.5								
FITZ	**Fitzroy Crossi**	**53.34**	**154**	P		**P**	**P**	**14 19 41.8**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.2,baz=335,slow=8.0,SNR=5.5								
ASF	**Jabal al Asfar**	**55.96**	**290**	P		**P**	**P**	**14 20 01.4**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.3,baz=262,slow=4.8,SNR=4.0								
BRTR	**Keskin Array B**	**56.37**	**299**	P		**P**	**P**	**14 20 03.9**	**-0.4**
	comp=Z,1.2nm,0.8s,mb4.0,baz=101,slow=6.4,SNR=6.4								
ARCES	**ARCESS Array B**	**57.05**	**336**	P		**P**	**P**	**14 20 08.2**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.6,baz=90,slow=8.5,SNR=7.8								
ARCES				PcP		PcP		14 21 03.4	0.0
	comp=Z,1.3nm,0.6s,baz=96,slow=4.9,SNR=3.5								
ARCES	**ARCESS Array B**	**57.05**	**336**	P		**P**	**P**	**14 20 08.2**	**-0.5**
ARCES				PcP		PcP		14 21 03.4	0.0
AKASG	**Malin Array Be**	**57.06**	**313**	P		**P**	**P**	**14 20 07.9**	**-1.1**
	comp=Z,3.7nm,0.5s,mb4.6,baz=70,slow=6.6,SNR=8.5								
FINES	**FINESS Array B**	**57.30**	**326**	P		**P**	**P**	**14 20 09.4**	**-1.2**
	comp=Z,2.5nm,0.7s,mb4.3,baz=86,slow=9.8,SNR=4.4								
EIL	**Elat**	**58.35**	**288**	P		**P**	**P**	**14 20 18.2**	**-0.2**
	comp=Z,5.2nm,0.8s,mb4.6,baz=26,slow=6.3,SNR=5.0								
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P		**P**	**P**	**14 20 21.6**	**+0.6**
WRAB				pmax		pmax			
	comp=Z,11nm,0.6s,mb5.1								
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P		**P**	**P**	**14 20 21.6**	**+0.5**
	comp=Z,11nm,0.6s,mb5.1								
WRA	**Warramunga Arr**	**58.74**	**146**	P		**P**	**P**	**14 20 21.3**	**+0.2**
	comp=Z,8.0nm,0.6s,mb4.9,baz=338,slow=7.8,SNR=19								
WB2	**Warramunga Arr**	**58.74**	**146**	*e*P		**P**	**P**	**14 20 21.4**	**+0.2**
KWP	**Kalwaria Pacla**	**61.38**	**313**	*e*P		**P**	**P**	**14 20 39.6**	**+0.6**
KWP	**Kalwaria Pacla**	**61.38**	**313**	*e*P		**P**	**P**	**14 20 38.8**	**-0.1**
KWP				pmax		pmax			
	comp=Z,32nm,1.3s,mb5.3								
KWP	**Kalwaria Pacla**	**61.38**	**313**	*e*P		**P**	**P**	**14 20 38.8**	**-0.2**
	comp=Z,32nm,1.3s,mb5.3								
ASAR	**Alice Springs**	**61.74**	**148**	P		**P**	**P**	**14 20 42.0**	**+0.4**
	comp=Z,4.3

s-min=3.8km az=169.2
MOS ***12*** *14:15:26.5±0.8, 32.°07N×104.°71E, h28km, mb5.2/44, Error ellipse: s-maj=7.7km s-min=4.2km az=114.4*
BJI ***12*** *14:15:26.5, 32.°12N×104.°77E, h19km, mB5.1/19, mb4.9/25, ML4.9/17, Ms4.6/26, Ms7 4.4/24*
NEIC ***12*** *14:15:27.4±0.1, 32.°12N×104.°65E, mb5.0/57, Error ellipse: s-maj=4.0km s-min=3.2km az=49.0*
DJA ***12*** *14:15:36, 32.°10N×104.°76E, h85km, mb5.4/32*
SZGRF ***12*** *14:15:56.9, 34.°82N×101.°03E, h33km, mb5.2, Qinghai, China*
ISC 12 14:15:26.3±0.7, 32.°11N±0.°02×104.°69E±0.°03, h11km±4km, h19km±3.0km: pP-P, n317, σ0.96/331, mb5.0/122, MS4.3/3, 40C-21D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.43**	**214**	Pg	**Pg**	**14 15 53.2**	**-0.6**
CD2				Sg	**Sg**	**14 16 13.9**	**+1.5**
CD2				smax			
	comp=N,93μm,0.7s						
LZH	**Lanzhou**	**4.03**	**350**	*e*Pn	**Pn**	**14 16 31.0**	**+3.1**
LZH				Pg	**Pg**	**14 16 41.7**	**-1.8**
LZH				Sn	**Sn**	**14 17 17.4**	**+2.4**
LZH				Sg	**Sg**	**14 17 34.3**	**-1.4**
LZH				smax			
	comp=N,3μm,0.9s						
LZH				smax			
	comp=E,4μm,0.7s						
LZH				LR	LR		
	comp=E,5μm,4.6s						
LZH				LR	LR		
	comp=Z,7μm,5.6s						
ENH	**Enshi**	**4.50**	**113**	*e*Pn	**Pn**	**14 16 37.4**	**+3.0**
ENH				*e*Pg	**Pg**	**14 16 49.1**	**-3.5**
ENH				*e*Sg	**Sg**	**14 17 50.6**	**-0.3**
GYA	**Guiyang**	**5.89**	**162**	Pn	**Pn**	**14 16 55.8**	**+2.4**
GYA				Sn	**Sn**	**14 17 59.2**	**-1.7**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,2μm,0.8s						
KMI	**Kunming**	**7.17**	**194**	Pn	**Pn**	**14 17 13.3**	**+2.3**
KMI				Sn	**Sn**	**14 18 33.7**	**+1.4**
KMI				smax			
	comp=N,180nm,0.8s						
KMI				smax			
	comp=E,190nm,0.9s						
KMI				LR	LR		
	comp=N,2μm,6.9s						
KMI				LR	LR		
	comp=E,1μm,7.5s						
KMI				LR	LR		
	comp=Z,2μm,8.2s						
GTA	**Gaotai**	**8.29**	**333**	*e*P	**Pn**	**14 17 27.3**	**+0.9**
GTA				pP		14 17 30.6	
GTA				S	**Sn**	**14 19 00.4**	**+0.4**
GTA				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA				pmax	pmax		
	comp=Z,87nm,3.9s						
GTA				LR	LR		
	comp=N,2μm,10.8s						
GTA				LR	LR		
	comp=E,1μm,12.6s						
GTA				LR	LR		
	comp=Z,3μm,10.8s						
WHN	**Wuhan**	**8.41**	**98**	P	**Pn**	**14 17 27.0**	**-1.1**
WHN				S	**Sn**	**14 18 59.0**	**-4.0**
WHN				LR	LR		
	comp=E,7μm,3.6s						
WHN				LR	LR		
	comp=Z,5μm,6.0s						
BTO	**Baotou**	**9.51**	**25**	*e*P	**Pn**	**14 17 43.1**	**+0.1**
BTO				S	**Sn**	**14 19 25.2**	**-4.6**
HHC	**Hu-ho-hao-te**	**10.33**	**30**	*e*P	**Pn**	**14 17 56.9**	**+2.6**
HHC				pP		14 18 04.0	
HHC				sP		14 18 08.9	
HHC				S	**Sn**	**14 19 51.1**	**+1.1**
HHC				sS		14 20 02.6	
HHC				SS		14 20 04.9	
HHC				pmax	pmax		
	comp=Z,38nm,1.1s						
HHC				pmax	pmax		
	comp=Z,680nm,5.1s						
HHC				LR	LR		
	comp=N,600nm,6.4s						
HHC				LR	LR		
	comp=E,1μm,5.9s						
HHC				LR	LR		
	comp=Z,1μm,6.6s						
TIA	**Tai'an**	**11.09**	**65**	P	**Pn**	**14 18 05.0**	**+0.3**
LSA	**Lhasa**	**11.87**	**262**	P	**Pn**	**14 18 17.2**	**+1.7**
LSA	**Lhasa**	**11.87**	**262**	*e*P	**Pn**	**14 18 16.8**	**+1.3**
LSA				pmax	pmax		
	comp=Z,14nm,0.6s						
LSA	**Lhasa**	**11.87**	**262**	*e*P	**Pn**	**14 18 16.8**	**+1.4**
	comp=Z,14nm,0.6s						
NJ2	**Nanjing**	**12.02**	**87**	*e*P	**Pn**	**14 18 15.4**	**-2.1**
NJ2				pP		14 18 21.7	
NJ2				PP		14 18 25.7	
NJ2				sP		14 18 28.6	
NJ2				S	**Sn**	**14 20 27.1**	**-4.4**
NJ2				sS		14 20 39.0	
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,680nm,3.8s						
NJ2				LR	LR		
	comp=N,550nm,8.7s						
NJ2				LR	LR		
	comp=E,1μm,10.2s						
NJ2				LR	LR		
	comp=Z,750nm,9.8s						
QIZ	**Qiongzhong**	**13.82**	**159**	P	**Pn**	**14 18 44.4**	**+2.2**
QIZ				pP		14 18 50.4	
QIZ				sP		14 18 56.0	
QIZ				S	**Sn**	**14 21 20.3**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,19nm,1.5s						
QIZ				LR	LR		
	comp=N,2μm,10.2s						
QIZ				LR	LR		
	comp=Z,2μm,10.5s						
CHTO	**Chiang Mai**	**14.21**	**203**	*e*P	**Pn**	**14 18 49.1**	**+1.6**
CHTO				pmax	pmax		
	comp=Z,12nm,0.6s						
CHTO	**Chiang Mai**	**14.21**	**203**	*e*P	**Pn**	**14 18 49.1**	**+1.7**
	comp=Z,12nm,0.6s						
CM31	**Chiang Mai Arr**	**14.54**	**202**	*e*Pn	**Pn**	**14 18 52.9**	**+0.8**
	comp=Z,26nm,0.5s						
CM31				*e*P		14 18 59.8	
CMAR	**Chiang Mai Arr**	**14.54**	**202**	Pn	**Pn**	**14 18 52.6**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=11,slow=11,SNR=12						
CMAR				LR	LR	14 25 20.8	
	comp=Z,211nm,19.1s,baz=20,slow=41						
SONM	**Songino Array**	**15.76**	**4**	Pn	**Pn**	**14 19 08.6**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=171,slow=9.6,SNR=18						
SONM				Lg		14 23 45.7	
	comp=Z,0.3nm,0.3s,baz=191,slow=28,SNR=4.0						
ULN	**Ulaanbaatar**	**15.84**	**6**	*e*P	**Pn**	**14 19 11.9**	**+2.8**
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**15.84**	**6**	*e*P	**Pn**	**14 19 11.9**	**+2.8**
	comp=Z,17nm,0.8s						
YHNB	**Yeheng**	**16.44**	**113**	*e*P	**Pn**	**14 19 19.6**	**+2.7**
	comp=Z,26nm,0.6s						
SSLB	**Suanglung**	**16.58**	**116**	*e*P	**Pn**	**14 19 21.6**	**+2.9**
	comp=Z,82nm,1.1s						
GUN	**Gumba**	**16.82**	**260**	*e*P	**Pn**	**14 19 20.2**	**-1.5**
	comp=Z,74nm,0.5s						
PKI	**Pulchoki**	**17.32**	**260**	*e*P	**Pn**	**14 19 25.9**	**-2.1**
	comp=Z,126nm,0.6s						
PKIN	**Phulchoki**	**17.33**	**260**	*e*P	**Pn**	**14 19 26.1**	**-2.0**
	comp=Z,156nm,0.7s						
KKN	**Kakani**	**17.36**	**261**	*e*P	**Pn**	**14 19 26.5**	**-2.0**
	comp=Z,83nm,0.7s						
DMN	**Daman**	**17.56**	**260**	*e*P	**Pn**	**14 19 28.9**	**-2.1**
	comp=Z,71nm,0.7s						
WMQ	**Urumqi**	**17.74**	**316**	*e*P	**Pn**	**14 19 34.2**	**+1.1**
WMQ				sP	sP	14 19 40.3	+1.6
WMQ				S	**Sn**	**14 22 49.2**	**-1.6**
WMQ				sS	sS	14 22 54.9	-8.1
WMQ				SS		14 23 11.0	
WMQ				PcP	PcP	14 24 12.1	+1.4
WMQ				pmax	pmax		
	comp=Z,26nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,650nm,5.2s						
WMQ				LR	LR		
	comp=N,2μm,11.0s						
WMQ				LR	LR		
	comp=E,1μm,10.0s						
WMQ				LR	LR		
	comp=Z,470nm,14.0s						
SNY	**Shenyang**	**17.91**	**52**	||P	**Pn**	**14 19 34.8**	**-0.4**
SNY				S	**Sn**	**14 22 58.3**	**+3.4**
SNY				pmax	pmax		
	comp=Z,750nm,5.4s						
SNY				LR	LR		
	comp=N,350nm,5.7s						
SNY				LR	LR		
	comp=E,1μm,7.5s						
SNY				LR	LR		
	comp=Z,500nm,12.3s						
ZAK	**Zakamensk**	**18.29**	**357**	*e*P	**Pn**	**14 19 40.7**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,23nm,1.2s						
TLY	**Talaya**	**19.57**	**358**	*e*P	**Pn**	**14 19 57.0**	**+1.7**
TLY				pmax	pmax		
	comp=Z,18nm,0.9s						
TLY				MLR	MLR		
	comp=Z,471nm,11.0s						
MOY	**Mondy**	**19.73**	**353**	*e*P	**Pn**	**14 19 58.3**	**+1.1**
MOY				pmax	pmax		
	comp=Z,50nm,1.6s						
KSRS	**Korea Array**	**19.80**	**68**	P	**Pn**	**14 19 56.4**	**-1.7**
	comp=Z,1.8nm,0.3s,baz=253,slow=9.9,SNR=27						
KSRS	**Korea Array**	**19.80**	**68**	P	**Pn**	**14 19 56.4**	**-1.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CN2	**Changchun**	**20.05**	**48**	*e*P	**P**	**14 20 02.0**	**+2.8**
CN2				*e*sP	sP	14 20 09.0	+5.0
CN2				*e*S	**S**	**14 23 42.1**	**-2.3**
CN2				pmax	pmax		
	comp=Z,50nm,0.7s						
CN2				pmax	pmax		
	comp=Z,600nm,6.0s						
CN2				LR	LR		
	comp=N,800nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=E,900nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=Z,1μm,13.0s,MS4.4						
IRK	**Irkutsk**	**20.12**	**359**	*e*P	**P**	**14 20 01.8**	**+1.8**
IRK				pmax	pmax		
	comp=Z,375nm,0.8s						
HIA	**Hailar**	**20.53**	**29**	*e*P	**P**	**14 20 05.7**	**+1.3**
HIA				pmax	pmax		
	comp=Z,22nm,0.6s						
HIA	**Hailar**	**20.53**	**29**	*e*P	**P**	**14 20 05.7**	**+1.3**
	comp=Z,22nm,0.6s						
CIT	**Chita**	**20.93**	**15**	*e*P	**P**	**14 20 11.0**	**+2.3**
CIT				*e*		14 20 23.2	
CIT				pmax	pmax		
	comp=Z,117nm,1.8s						
MK31	**Makanchi Array**	**22.57**	**317**	*e*P	**P**	**14 20 26.8**	**+0.5**
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**14 20 26.3**	**0.0**
	comp=Z,8.7nm,0.6s,mb4.4,baz=115,slow=13,SNR=13						
MDJ	**Mudanjiang**	**23.08**	**50**	P	**P**	**14 20 32.3**	**+0.5**
MDJ				pP		14 20 35.1	
MDJ				S	**S**	**14 24 43.5**	**+1.0**
MDJ				sS	sS	14 24 48.6	+0.4
MDJ				pmax	pmax		
	comp=Z,24nm,1.8s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,200nm,4.2s						
MDJ	**Mudanjiang**	**23.08**	**50**	*e*P	**P**	**14 20 32.9**	**+1.1**
	comp=Z,28nm,1.0s,mb4.7						
KSH	**Kashi**	**24.36**	**296**	*e*P	**P**	**14 20 53.1**	**+8.9**
KSH				*e*pP		14 20 57.1	
KSH				*e*sP	sP	14 21 00.0	+11
KSH				*e*S	**S**	**14 25 14.5**	**+11**
KSH				*e*ScP	ScP	14 28 04.1	+2.1
KSH				*e*PcS	PcS	14 28 06.1	+2.9
KSH				*e*ScS	ScS	14 31 52.0	+2.5
KSH				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.1						
KSH				LR	LR		
	comp=N,220nm,9.3s						
KSH				LR	LR		
	comp=E,340nm,7.8s						
ZAA0	**Zalesovo Array**	**26.05**	**333**	*e*P	**P**	**14 20 59.3**	**0.0**
ZALV	**Zalesovo Beam**	**26.05**	**333**	P	**P**	**14 20 59.4**	**+0.1**
	comp=E,34nm,0.5s,mb5.1,baz=135,slow=9.9,SNR=79						
ZALV				PcP	PcP	14 24 26.0	-0.9
	comp=E,2.0nm,0.6s,baz=140,slow=3.2,SNR=3.5						
BOD	**Bodaibo**	**26.49**	**11**	*e*P	**P**	**14 21 04.2**	**+0.9**
BOD				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.7						
KLR	**Kul'dur**	**26.51**	**42**	*e*P	**P**	**14 21 00.0**	**-3.6**
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**14 21 05.7**	**-0.1**
	comp=Z,8.3nm,0.7s,mb4.4,baz=126,slow=9.6,SNR=21						
KURK				PcP	PcP	14 24 28.2	-0.5
	comp=Z,3.3nm,0.9s,baz=108,slow=1.9,SNR=4.0						
NVS	**Novosibirsk**	**27.33**	**333**	*i* P	**P**	**14 21 10.4**	**-0.5**
NVS				*e*		14 24 28.1	
NVS				*e*S	**S**	**14 25 43.8**	**-6.5**
NVS				*i* SS		14 27 06.8	
NVS				pmax	pmax		
	comp=N,19nm,1.5s						
NVS				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.5						
NVS				pmax	pmax		
	comp=E,14nm,1.6s						
NVS				smax			
	comp=N,11nm,2.0s						
NVS				smax			
	comp=E,23nm,2.4s						
MAT	**Matsushiro**	**27.95**	**72**	P	**P**	**14 21 15.3**	**-1.4**
MJAR	**Matsushiro Arr**	**27.95**	**72**	P	**P**	**14 21 15.9**	**-0.8**
	comp=E,2.9nm,0.6s,mb4.1,baz=278,slow=9.7,SNR=8.5						
HABR	**Khabarovsk**	**28.10**	**46**	*e*P	**P**	**14 21 15.8**	**-2.1**
HABR				*e**PP	pP	14 21 24.9	+3.5
HABR				PPP		14 22 13.2	
HABR				*e*		14 24 28.7	
HABR				*e*SS		14 27 17.3	
HABR				*e*		14 31 59.9	
HABR				pmax	pmax		
	comp=E,34nm,1.9s						
HABR				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.5						
HABR				pmax	pmax		
	comp=N,27nm,2.0s						
HABR				MLR	MLR		
	comp=Z,127nm,18.0s,MS3.5						
KSM	**Kuching**	**30.93**	**169**	*e*P	**P**	**14 21 43.2**	**0.0**
	comp=Z,24nm,1.0s,mb5.0						
ASAJ	**Asahikawa**	**31.88**	**57**	P	**P**	**14 21 51.1**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.5,baz=252,slow=5.3,SNR=6.5						
ASAJ	**Asahikawa**	**31.88**	**57**	P	**P**	**14 21 51.2**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**14 21 55.4**	**+0.2**
	comp=Z,3.8nm,0.7s,mb4.3,baz=116,slow=9.1,SNR=7.1						
BVAR				PcP	PcP	14 24 42.2	-0.6
	comp=Z,4.7nm,0.7s,baz=129,slow=4.0,SNR=9.6						
BRVK	**Borovoye**	**32.40**	**320**	*e*P	**P**	**14 21 56.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
YAK	**Yakutsk**	**33.99**	**21**	*e*P	**P**	**14 22 09.4**	**-0.2**
YAK				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK	**Yakutsk**	**33.99**	**21**	*e*P	**P**	**14 22 09.6**	**0.0**
	comp=N,58nm,0.8s,mb5.6						
ABKAR	**Akbulak array**	**37.39**	**311**	*e*P	**P**	**14 22 39.2**	**+0.3**
	comp=N,9.2nm,0.6s,mb4.8						
ABKT	**Ailbek**	**38.27**	**292**	P	**P**	**14 22 48.4**	**+1.9**
	comp=N,198nm,0.7s,mb6.0,SNR=8.9						
AKTK	**Aktyubinsk**	**38.83**	**312**	P	**P**	**14 22 51.5**	**+0.4**
AKTO	**Aktyubinsk**	**38.83**	**312**	P	**P**	**14 22 51.5**	**+0.4**
	comp=N,7.2nm,0.5s,mb4.7,baz=97,slow=9.7,SNR=17						
SVE	**Sverdlovsk**	**39.00**	**323**	||*e*P	**P**	**14 22 53.3**	**+0.9**
SVE				*e*S	**S**	**14 28 50.8**	**-0.1**
SVE				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0						
KAPI	**Kappang**	**39.60**	**156**	P	**P**	**14 22 56.2**	**-1.6**
	comp=Z,339nm,1.0s,mb6.0,SNR=5.2						
KAPI	**Kappang**	**39.60**	**156**	P	**P**	**14 22 56.7**	**-1.1**
	comp=Z,40nm,0.8s,mb5.2,baz=331,slow=12,SNR=14						
ARU	**Arti**	**39.95**	**321**	P	**P**	**14 23 00.5**	**+0.2**
	comp=Z,311nm,0.9s,mb6.0,SNR=11						
ARU	**Arti**	**39.95**	**321**	*c i* P	**P**	**14 23 00.7**	**+0.4**
ARU				*e*		14 24 29.9	
ARU				S	**S**	**14 29 06.7**	**+1.5**
ARU				SS	SS	14 32 00.7	-1.0
ARU				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.2						
ARU	**Arti**	**39.95**	**321**	*e*P	**P**	**14 23 00.6**	**+0.2**
	comp=Z,59nm,1.1s,mb5.2						
TIXI	**Tiksi**	**41.67**	**11**	*i* P	**P**	**14 23 13.6**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.9						
TIXI	**Tiksi**	**41.67**	**11**	*e*P	**P**	**14 23 13.5**	**-0.9**
	comp=Z,25nm,0.6s,mb5.0						
TIXI				*e*	pP	14 23 17.7	-0.2
SOKR	**Solikamsk**	**41.85**	**326**	*c i* P	**P**	**14 23 16.6**	**+0.7**
SOKR				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.1						
SEY	**Seymchan**	**42.98**	**30**	⇑*i* P	**P**	**14 23 25.4**	**+0.4**
PETK	**Petropavlovsk-**	**43.13**	**45**	P	**P**	**14 23 25.7**	**-0.7**
	comp=Z,5.1nm,0.7s,mb4.4,baz=307,slow=2.2,SNR=15						
PETK	**Petropavlovsk-**	**43.13**	**45**	P	**P**	**14 23 25.7**	**-0.7**
ZEI	**Tsey**	**48.48**	**301**	*e*P	**P**	**14 24 08.5**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KIV	**Kislovodsk**	**49.19**	**303**	*e*P	**P**	**14 24 15.1**	**+0.8**
KIV				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.3						
KIV	**Kislovodsk**	**49.19**	**303**	*e*P	**P**	**14 24 15.0**	**+0.8**
	comp=Z,40nm,1.2s,mb5.3						
VRHR	**Novokhopersk**	**49.23**	**312**	*e*P	**P**	**14 24 14.2**	**-0.3**
VRHR				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.6						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
BILL	**Bilibino**	**50.06**	**26**	*c i* P	**P**	**14 24 20.3**	**-0.2**
BILL				*i*	pP	14 24 24.8	+0.7
BILL				*e**PP	pP	14 24 31.1	+7.0
BILL				*e*		14 25 40.2	
BILL				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
BILL	**Bilibino**	**50.06**	**26**	*e*P	**P**	**14 24 20.1**	**-0.5**
	comp=Z,9.8nm,0.8s,mb4.9						
KLMR	**Klimovskoe**	**50.53**	**325**	*e*P	**P**	**14 24 23.1**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
VORD	**Divnogorie**	**50.71**	**312**	*e*P	**P**	**14 24 25.3**	**-0.4**
VORD				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
VORD				pmax	pmax		
	comp=N,7.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,10.0nm,1.1s						
VSR	**Storozhevoye**	**50.77**	**312**	*e*P	**P**	**14 24 25.8**	**-0.4**
VSR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
VSR				pmax	pmax		
	comp=N,20nm,1.2s						
VSR				pmax	pmax		
	comp=E,30nm,1.1s						
MOS	**Moscow**	**51.44**	**318**	*e*P	**P**	**14 24 30.0**	**-1.1**
KAKA	**Kakadu**	**51.89**	**145**	*e*P	**P**	**14 24 32.8**	**-2.1**
	comp=E,13nm,0.8s,mb4.9						
OBN	**Obninsk**	**52.07**	**317**	⇓*i* P	**P**	**14 24 36.0**	**+0.1**
OBN				*e*		14 25 48.7	
OBN				pmax	pmax		
	comp=Z,39nm,1.7s,mb5.1						
ANN	**Anapa**	**52.77**	**304**	*e*P	**P**	**14 24 34.7**	**-6.5**
ANN				*e**PP	pP	14 24 44.3	-0.5
ANN				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
MALT	**Malatya**	**53.46**	**296**	*e*P	**P**	**14 24 47.1**	**+0.7**
MALT				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MALT	**Malatya**	**53.46**	**296**	*e*P	**P**	**14 24 47.1**	**+0.7**
	comp=Z,5.3nm,0.8s,mb4.5						
MALT	**Malatya**	**53.46**	**296**	⇑*i* P	**P**	**14 24 47.5**	**+1.1**
APA	**Apatity**	**53.63**	**333**	⇓*i* P	**P**	**14 24 48.2**	**+1.0**
APA				*i*	pP	14 24 52.1	+1.3
APA				MLR	MLR		
	comp=Z,900nm,21.0s,MS4.8						
FITZ	**Fitzroy Crossi**	**53.81**	**155**	⇑*i* P	**P**	**14 24 48.5**	**-0.5**
	comp=Z,33nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**53.81**	**155**	P	**P**	**14 24 48.6**	**-0.4**
	comp=Z,21nm,0.8s,mb5.1,baz=349,slow=5.1,SNR=44						
FITZ	**Fitzroy Crossi**	**53.81**	**155**	*e*P	**P**	**14 24 48.5**	**-0.5**
	comp=Z,22nm,1.0s,mb5.0						
JOF	**Joensuu**	**54.45**	**327**	*e*P	**P**	**14 24 52.6**	**-0.6**
JOF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
JOF	**Joensuu**	**54.45**	**327**	*e*p	**P**	**14 24 52.6**	**-0.6**
	comp=Z,12nm,0.6s,mb5.0						
MBWA	**Marble Bar**	**54.89**	**163**	*e*P	**P**	**14 24 56.5**	**-0.3**
MBWA	**Marble Bar**	**54.89**	**163**	*e*P	**P**	**14 24 56.3**	**-0.5**
	comp=Z,26nm,1.1s,mb5.2						
KEV	**Kevo**	**56.02**	**336**	*e*P	**P**	**14 25 02.9**	**-1.6**
KEV				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.3						
KEV	**Kevo**	**56.02**	**336**	*e*p	**P**	**14 25 02.9**	**-1.6**
	comp=Z,17nm,0.5s,mb5.3						
ASF	**Jabal al Asfar**	**56.47**	**290**	P	**P**	**14 25 09.4**	**+1.1**
	comp=Z,19nm,0.8s,mb5.2,baz=314,slow=5.1,SNR=26						
ARCES	**ARCESS Array B**	**56.55**	**336**	P	**P**	**14 25 07.9**	**-0.4**
	comp=Z,11nm,0.6s,mb5.1,baz=84,slow=7.9,SNR=27						
ARCES				PcP	PcP	14 26 04.4	-0.3
	comp=Z,2.6nm,0.6s,baz=79,slow=4.7,SNR=2.6						
ARE0	**ARCESS Array S**	**56.55**	**336**	*e*P	**P**	**14 25 07.8**	**-0.4**
BR131	**Keskin Array S**	**56.68**	**299**	*e*P	**P**	**14 25 08.9**	**-0.8**
	comp=Z,2.9nm,0.6s,mb4.5						
BRTR	**Keskin Array B**	**56.68**	**299**	P	**P**	**14 25 09.4**	**-0.2**
	comp=Z,4.0nm,0.7s,mb4.6,baz=108,slow=6.6,SNR=20						
BRTR				PcP	PcP	14 26 05.2	-0.6
	comp=Z,1.1nm,0.6s,baz=123,slow=5.1,SNR=2.3						
KAF	**Kangasniemi**	**56.83**	**327**	*e*P	**P**	**14 25 08.9**	**-1.4**
KAF				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.1						
KAF	**Kangasniemi**	**56.83**	**327**	*e*p	**P**	**14 25 08.9**	**-1.4**
	comp=Z,11nm,0.5s,mb5.1						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**14 25 11.2**	**-0.5**
	comp=Z,17nm,0.7s,mb5.2,baz=90,slow=7.6,SNR=22						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**14 25 11.5**	**-0.7**
	comp=Z,12nm,0.6s,mb5.1,baz=68,slow=6.9,SNR=22						
AKBB	**Malin Array Si**	**57.07**	**313**	*e*P	**P**	**14 25 11.0**	**-1.2**
VSU	**Vasula**	**57.11**	**322**	*e*P	**P**	**14 25 12.2**	**-0.1**
VSU				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
MMAI	**Mount Meron Ar**	**57.38**	**291**	P	**P**	**14 25 15.1**	**+0.3**
	comp=Z,1.1nm,0.4s,mb4.2,baz=40,slow=9.1,SNR=5.0						
NACGM	**Naroch**	**57.69**	**318**	*e*	**P**	**14 25 14.0**	**-2.5**
TLCR		**58.64**	**307**	||P	**P**	**14 25 23.1**	**-0.2**
TLCR		**58.64**	**307**	||*i* P	**P**	**14 25 23.1**	**-0.2**
COEN	**Coen**	**58.79**	**135**	*e*P	**P**	**14 25 24.6**	**0.0**
	comp=Z,177nm,0.8s,mb6.1						
EIL	**Elat**	**58.91**	**288**	P	**P**	**14 25 25.6**	**+0.1**
	comp=Z,19nm,0.8s,mb5.2,baz=21,slow=4.0,SNR=21						
WRAB	**Tennant Creek**	**59.03**	**147**	P	**P**	**14 25 26.0**	**-0.3**

VOIR 61.11 308⇓*i*P P 14 25 40.5 +0.2
KWP Kalwaria Pacla 61.39 313 *e*P P 14 25 42.6 +0.4
KWP Kalwaria Pacla 61.39 313 *e*P P 14 25 42.0 -0.1
comp=Z,30nm,1.2s,mb5.3
KWP Kalwaria Pacla 61.39 313⇑*i*P P 14 25 42.6 +0.5
MORW Morawa 61.79 169 *e*P P 14 25 45.4 +0.5
KOLS Kolonicke sedl 61.87 312 *e*P P 14 25 45.2 -0.2
KOLS pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.87 312 *e*P P 14 25 45.2 -0.2
comp=Z,5.3nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.87 312 *e*P P 14 25 45.2 -0.2
UZH Uzhgorod 61.95 312 *e*P P 14 25 45.0 -0.9
ASAR Alice Springs 62.09 150 P P 14 25 47.1 +0.1
comp=Z,7.4nm,0.5s,mb5.1,baz=334,slow=6.7,SNR=67
DRGR 62.24 310⇓P P 14 25 48.7 +0.8
DRGR 62.24 310⇓*i*P P 14 25 48.7 +0.8
STHS Stebnicka Huta 62.36 313 *e*P P 14 25 49.2 +0.5
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.36 313 *e*P P 14 25 49.2 +0.5
comp=Z,7.2nm,0.9s,mb4.8
STHS Stebnicka Huta 62.36 313 *e*P P 14 25 49.2 +0.5
GZR Gura Zlata 62.65 308 P P 14 25 51.4 +0.7
GZR Gura Zlata 62.65 308⇓*i*P P 14 25 48.8 -1.9
NIE Niedzica 62.94 313 *e*P P 14 25 53.0 +0.4
OJC Ojcow 63.00 314 *e*P P 14 25 52.8 -0.2
KECS Kecovo 63.13 312 *e*P P 14 25 54.2 +0.4
KECS pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KECS Kecovo 63.13 312 *e*P P 14 25 54.2 +0.4
comp=Z,4.5nm,0.8s,mb4.7
KECS Kecovo 63.13 312 *e*P P 14 25 54.2 +0.4
BZS Buzias 63.34 309⇓P P 14 25 55.4 +0.1
BZS Buzias 63.34 309⇓*i*P P 14 25 55.4 +0.1
PSZ Piszkesteto 63.69 312⇓*e*P P 14 25 57.6 0.0
PSZ Piszkesteto 63.69 312⇓*i*P P 14 25 58.0 +0.4
NB2 NORSAR Subarra 64.08 327 P P 14 25 58.7 -1.2
comp=Z,34nm,1.4s,mb5.2,baz=70,slow=6.9
NOA NORSAR Array B 64.08 327 P P 14 25 58.8 -1.2
comp=Z,7.7nm,0.6s,mb4.9,baz=71,slow=6.6,SNR=17
VYHS Vyhne 64.17 313 *e*P P 14 26 01.0 +0.3
VYHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
VYHS Vyhne 64.17 313 *e*P P 14 26 01.0 +0.3
comp=Z,9.1nm,1.2s,mb4.7
VYHS Vyhne 64.17 313 *e*P P 14 26 01.0 +0.3
NAO01 NORSAR Array S 64.30 327 *e*P P 14 26 00.2 -1.1
BUD Budapest 64.39 311⇓*e*P P 14 26 02.6 +0.4
KOLL Kolacno 64.41 313 *e*P P 14 26 02.8 +0.6
KOLL Kolacno 64.41 313 *e*P P 14 26 02.8 +0.6
MORC Moravsky Berou 64.52 314 *e*P P 14 26 02.9 -0.1
comp=Z,12nm,0.9s,mb4.9
MORC Moravsky Berou 64.52 314⇓*i*P P 14 26 03.6 +0.6
IDI Anoyia 64.71 297 P P 14 26 02.9 -1.6
comp=Z,9.1nm,0.7s,mb4.9,baz=320,slow=18,SNR=6.2
SMOL Smolenice 65.03 313 *e*P P 14 26 07.4 +1.1
SMOL Smolenice 65.03 313 *e*P P 14 26 07.4 +1.1
PKSM Moragy 65.09 310 P P 14 26 06.9 +0.2
PKSM Moragy 65.09 310⇑*i*P P 14 26 06.4 -0.3
VRAC Vranov 65.27 314 ⇓P P 14 26 08.6 +0.8
VRAC Vranov 65.27 314⇓*i*P P 14 26 08.6 +0.8
CTA Charters Tower 65.41 137 *e*P P 14 26 08.7 -0.3
comp=Z,6.4nm,0.5s,mb4.9
CTA Charters Tower 65.41 137 P P 14 26 07.2 -1.8
comp=Z,8.0nm,0.5s,mb5.0,baz=324,slow=9.4,SNR=18
ALE Alert 65.44 358 P P 14 26 08.6 +0.1
comp=Z,53nm,0.8s,mb5.6,SNR=6.3
CONA Conrad Observa 66.22 313⇑*i*P P 14 26 14.4 +0.3
comp=Z,7.8nm,0.8s,mb4.8,SNR=6.8
BRG Berggiesshubel 66.28 316 *e*P P 14 26 14.2 -0.2
comp=Z,11nm,0.9s,mb4.9
BRG *e* pP 14 26 18.1 +0.1
comp=Z,8.0nm,0.7s
BRG Berggiesshubel 66.28 316 *e*P P 14 26 14.2 -0.1
BRG *e* pP 14 26 18.1 +0.1
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BRG pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
FORT Forrest 66.35 158 *e*P P 14 26 14.9 0.0
comp=Z,16nm,0.9s,mb5.1
FORT Forrest 66.35 158 *e*P P 14 26 14.8 0.0
comp=Z,26nm,0.9s,mb5.3
COLD Coldfoot 66.36 24 *e*P P 14 26 14.4 -0.2
comp=Z,21nm,1.0s,mb5.1
CLL Collm 66.67 317⇑*i*P P 14 26 15.9 -0.9
CLL *i* 14 26 24.6
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CLL Collm 66.67 317⇑*i*P P 14 26 15.9 -0.9
comp=Z,9.0nm,1.0s,mb4.8
CLL *i* 14 26 24.6
CLL Collm 66.67 317⇑*i*P P 14 26 15.9 -0.9
comp=Z,9.0nm,1.0s,mb4.8
CLL *i* pP pP 14 26 24.6 +4.1
ARSA Arzberg 66.69 312⇑*i*P P 14 26 16.9 -0.2
comp=Z,6.5nm,0.7s,mb4.8
CHUM Lake Minchumin 67.06 28 *e*P P 14 26 19.4 +0.3
comp=Z,22nm,0.9s,mb5.2
KHC Kasperske Hory 67.17 315 *e*P P 14 26 19.5 -0.5
KHC pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KHC Kasperske Hory 67.17 315 *e*P P 14 26 19.5 -0.5
comp=Z,2.6nm,0.7s,mb4.4
GEC2 GERESS Array S 67.20 314 *e*P P 14 26 20.3 0.0
GEC2 pmax pmax
comp=Z,3μm,1.1s
GEC2 GERESS Array S 67.20 314 *e*P P 14 26 20.3 0.0
comp=Z,3μm,1.1s
GERES GERESS Array B 67.20 314 P P 14 26 20.1 -0.2
comp=Z,4.3nm,0.7s,mb4.6,baz=64,slow=6.1,SNR=26
SOKA Soboth 67.22 312⇑*i*P P 14 26 20.2 -0.2
comp=Z,12nm,0.7s,mb5.0
MOA Molln 67.25 313⇓*i*P P 14 26 20.6 +0.1
comp=Z,7.9nm,0.8s,mb4.8
BPAW Bear Paw Mtn. 67.48 27 *e*P P 14 26 21.8 0.0
comp=Z,17nm,0.8s,mb5.1
BOJS Bojanci 67.55 310 *e*P P 14 26 22.5 0.0
PPLA Purkeypile 67.55 29 *e*P P 14 26 22.6 +0.4
comp=Z,76nm,1.2s,mb5.6
VNDS Vrh nad Dolski 67.66 311 *i*P P 14 26 22.9 -0.3
MOX Moxa 67.73 317 *e*P P 14 26 23.1 -0.5
comp=Z,8.0nm,1.2s,mb4.6
MOX Moxa 67.73 317 *e*P P 14 26 23.1 -0.5
MOX pmax pmax
comp=Z,94nm,1.2s,mb5.7
KTH Kantishna Hill 67.76 28 *e*P P 14 26 23.6 0.0
comp=Z,27nm,1.2s,mb5.2
LJU Ljubljana 67.80 311 *i*P P 14 26 27.0 +3.0
CEY Cerknica 67.98 311 *i*P P 14 26 25.0 -0.3
KBA Koelnbreinsper 68.13 313⇑*i*P P 14 26 26.0 -0.1
comp=Z,7.7nm,0.6s,mb4.9,SNR=11
JAVS Javornik 68.15 311 *i*P P 14 26 25.7 -0.6
COLA College 68.31 26 *e*P P 14 26 26.7 -0.3
COLA pmax pmax
comp=Z,55nm,1.3s,mb5.4
COLA College 68.31 26 *e*P P 14 26 26.7 -0.3
comp=Z,55nm,1.3s,mb5.4
GRA1 Grafenberg Arr 68.35 316 *e*P P 14 26 28.0 +0.5
comp=Z,14nm,1.0s,mb5.0
GRF Grafenberg Arr 68.35 316 *e*P P 14 26 28.0 +0.5
comp=Z,14nm,1.0s,mb5.0
GRF Grafenberg Arr 68.35 316 *e*P P 14 26 28.0 +0.5
GRF pmax pmax
comp=Z,14nm,1.0s,mb5.0
GRF Grafenberg Arr 68.35 316 *e*P P 14 26 28.0 +0.5
GRF pmax pmax
comp=Z,14nm,1.0s,mb5.0
GRF Grafenberg Arr 68.35 316 *e*P P 14 26 28.0 +0.5
comp=Z,14nm,1.0s,mb5.0
RSO Redoubt South 68.41 31 P P 14 26 28.1 +0.5
MCK McKinley 68.46 27 *e*P P 14 26 27.6 -0.3
MCK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
MCK McKinley 68.46 27 *e*P P 14 26 27.6 -0.3
comp=Z,7.9nm,0.7s,mb4.8
ABTA Abfaltersbach 68.78 313⇓*i*P P 14 26 29.2 -1.0
comp=Z,3.9nm,0.6s,mb4.5
TIP Timpagrande 69.11 304 *e*P P 14 26 31.7 -0.7
comp=Z,13nm,0.6s,mb5.0
WTTA Wattenberg 69.11 313 *i*P P 14 26 32.1 -0.2
comp=Z,13nm,0.6s,mb5.0,SNR=9.0
FETA Feichten 69.78 313⇑*i*P P 14 26 36.0 -0.4
comp=Z,18nm,1.1s,mb4.9,SNR=14

BFO Black Forest 70.66 315 *e*P P 14 26 40.9 -0.9
BFO *e* 14 26 49.3
BFO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BFO Black Forest 70.66 315 *e*P P 14 26 40.9 -0.9
comp=Z,7.6nm,0.9s,mb4.6
BFO *e* 14 26 49.3
MENT Mentasta 70.88 27 *e*P P 14 26 42.4 -0.4
MEM Membach 70.97 318 P P 14 26 44.1 +0.5
comp=Z,4.0nm,1.3s,mb4.2
INK Inuvik 71.05 20 P P 14 26 43.5 -0.3
comp=Z,16nm,0.6s,mb5.1,baz=327,slow=7.8,SNR=81
INK Inuvik 71.05 20 *e*P P 14 26 43.3 -0.5
INK *e* pP 14 26 47.6 +0.1
INK pmax pmax
comp=Z,17nm,0.7s
INK Inuvik 71.05 20 *e*P P 14 26 43.2 -0.5
comp=Z,17nm,0.7s,mb5.1
INK *e* pP 14 26 47.5 0.0
FELD Feldberg im Sc 71.06 315 *e*P P 14 26 43.6 -0.6
CDF Champ du Feu 71.25 316⇑*i*P P 14 26 45.0 -0.3
comp=Z,20nm,0.8s,mb4.8
CDF Champ du Feu 71.25 316⇑*i*P P 14 26 45.0 -0.3
CDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CDF Champ du Feu 71.25 316⇑*i*P P 14 26 45.0 -0.3
comp=Z,10nm,0.8s,mb4.8
WLF Walferdange 71.32 317 P P 14 26 46.5 +0.8
comp=Z,23nm,1.2s,mb5.0
WLF Walferdange 71.32 317 *e*P P 14 26 46.2 +0.4
WLF pmax pmax
comp=Z,42nm,1.1s,mb5.3
WLF Walferdange 71.32 317 *e*P P 14 26 46.2 +0.4
comp=Z,42nm,1.1s,mb5.3
ECH Echery 71.41 316 *e*P P 14 26 45.6 -0.7
ECH Echery 71.41 316 *e*P P 14 26 45.4 -0.9
ECH pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ECH Echery 71.41 316 *e*P P 14 26 45.4 -0.9
comp=Z,7.4nm,1.0s,mb4.6
BCLA Clavier 71.46 318 P P 14 26 46.3 -0.3
MOF Molkenrain 71.59 315 *e*P P 14 26 46.9 -0.5
BMRM Bremner River 71.62 29 *e*P P 14 26 47.2 -0.1
comp=Z,29nm,0.8s,mb5.3
KMBO Kilima Mbogo 71.62 257 P P 14 26 49.1 +1.0
comp=Z,10.0nm,0.9s,mb4.8,baz=48,slow=10,SNR=23
KMBO Kilima Mbogo 71.62 257 P P 14 26 49.1 +1.0
KMBO pmax pmax
comp=Z,10.0nm,0.9s
KMBO Kilima Mbogo 71.62 257 *e*P P 14 26 48.5 +0.3
comp=Z,9.8nm,0.8s,mb4.8
DAWY Dawson 71.83 25 *e*P P 14 26 47.6 -0.9
DAWY *e* pP 14 26 52.0 -0.2
SNF Seneffe 71.99 319 P P 14 26 49.9 +0.1
comp=Z,3.6nm,1.0s,mb4.3
LOMF Lomont 72.00 315 *e*P P 14 26 49.3 -0.6
DOU Dourbes 72.01 318 P P 14 26 49.8 -0.1
comp=Z,3.7nm,1.0s,mb4.3
EIDS Eidsvold 72.29 137⇑*i*P P 14 26 52.1 +0.3
SUMG Summit 72.56 349 *e*P P 14 26 52.6 -0.2
comp=Z,11nm,0.9s,mb4.8
OG01 Vacheresse 72.57 314 *e*P P 14 26 53.1 -0.2
STKA Stephens Creek 72.58 148⇑*i*P P 14 26 52.9 -0.5
comp=Z,6.8nm,0.6s,mb4.8
STKA Stephens Creek 72.58 148 P P 14 26 53.0 -0.4
comp=Z,8.3nm,0.5s,mb4.9,baz=329,slow=5.7,SNR=36
STKA Stephens Creek 72.58 148 *e*P P 14 26 52.9 -0.5
comp=Z,1.4nm,0.8s,mb3.9
LPG La Plagne 72.93 313⇑*i*P P 14 26 56.0 +0.5
comp=Z,87nm,0.6s,mb5.5
LPG La Plagne 72.93 313⇑*i*P P 14 26 56.0 +0.5
LPG pmax pmax
comp=Z,44nm,0.6s,mb5.6
LPG La Plagne 72.93 313⇑*i*P P 14 26 56.0 +0.5
comp=Z,44nm,0.6s,mb5.6
SAOF Saorge 73.14 312 *e*P P 14 26 56.4 -0.4
BNI Bardonecchia 73.19 313 *e*P P 14 26 56.8 -0.2
BNI pmax pmax
comp=Z,11nm,0.8s,mb4.8
BNI Bardonecchia 73.19 313 *e*P P 14 26 56.8 -0.2
comp=Z,11nm,0.8s,mb4.8
AUTN L'Aution 73.22 312 *e*P P 14 26 57.2 0.0
SMF Signal de Mont 74.14 315⇑*i*P P 14 27 02.1 -0.5
comp=Z,39nm,0.8s,mb5.1
SMF Signal de Mont 74.14 315⇑*i*P P 14 27 02.1 -0.5
SMF pmax pmax
comp=Z,20nm,0.8s,mb5.1
SMF Signal de Mont 74.14 315⇑*i*P P 14 27 02.1 -0.5
comp=Z,20nm,0.8s,mb5.1
AGO Saint Agoulin 74.86 315 *e*P P 14 27 07.8 +1.0
PYM Petit Puy Mans 75.09 315 *e*P P 14 27 09.1 +1.0
LBL Lubilhac 75.21 314 *e*P P 14 27 09.8 +1.0
TCF Toulx Ste Croi 75.29 316⇑*i*P P 14 27 09.1 -0.1
comp=Z,27nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.29 316⇑*i*P P 14 27 09.1 -0.1
TCF pmax pmax
comp=Z,14nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.29 316⇑*i*P P 14 27 09.1 -0.1
comp=Z,14nm,0.9s,mb4.9
KEST Kesra 75.92 303 P P 14 27 13.6 +0.5
comp=Z,1.4nm,0.5s,mb4.1,baz=9.4,slow=2.0,SNR=7.0
CAF Calviac 76.08 314⇑*i*P P 14 27 14.0 +0.2
comp=Z,24nm,0.8s,mb4.9
CAF Calviac 76.08 314⇑*i*P P 14 27 14.0 +0.2
CAF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CAF Calviac 76.08 314⇑*i*P P 14 27 14.0 +0.2
comp=Z,12nm,0.8s,mb4.9
TOO Toolangi 79.09 148 *e*P P 14 27 30.5 0.0
YKA Yellowknife Ar 80.59 17 P P 14 27 38.1 -0.3
comp=Z,12nm,0.6s,mb5.0,baz=329,slow=5.2,SNR=124
YKA PKKPbc PKKPbc 14 46 16.0 -3.1
comp=Z,1.0nm,0.5s,baz=156,slow=2.1,SNR=23
ESDC Sonseca Array 82.71 313 P P 14 27 49.2 -0.8
comp=Z,3.4nm,0.7s,mb4.5,baz=44,slow=5.1,SNR=6.9
MVO Mcorvo 83.70 315 *e*P P 14 27 55.7 +0.6
comp=Z,22nm,1.0s,mb5.2
MVO 14 32 39.5
PCAB Cabril 83.96 316 *e*P P 14 27 57.1 +0.6
comp=Z,25nm,1.9s,mb5.0
PVIS Viseu 84.49 315 *e*P P 14 27 57.2 -2.0
comp=Z,21nm,1.7s,mb5.0
PMRV Marv??o 84.98 314 *e*P P 14 28 02.0 +0.3
comp=Z,11nm,0.9s,mb5.0
PMRV *i* P 14 33 38.6
PBAR Barrancos 85.53 313 *e*P P 14 28 04.6 +0.2
comp=Z,12nm,0.9s,mb5.1
PBAR *i* P 14 34 20.8
EVO Evora 85.91 313 *e*P P 14 28 06.7 +0.4
comp=Z,13nm,1.2s,mb5.0
PBEJ Beja 86.13 313 *e*P P 14 28 07.9 +0.4
comp=Z,16nm,1.7s,mb5.0
PVAQ Vaqueiros 86.43 312 *e*P P 14 28 02.1 -6.8
comp=Z,19nm,1.3s,mb5.2
PVAQ *i* P 14 34 56.2
PCVE Castro Verde 86.48 313 *e*P P 14 28 09.9 +0.7
comp=Z,12nm,1.4s,mb5.0
PCVE *i* P 14 34 50.4
FCC Fort Churchill 88.13 10 *e*P P 14 28 15.9 -0.8
comp=Z,0.4nm,0.9s
EDM Edmonton 88.81 22 *e*P P 14 28 19.8 -0.2
JCW Jim Creek 89.83 29 *e*P P 14 28 25.3 +0.4
FFC Flin Flon 90.52 15 P P 14 28 27.9 -0.1
comp=Z,66nm,1.0s,mb5.9,SNR=6.1
FFC Flin Flon 90.52 15 *e*P P 14 28 27.5 -0.5
FFC *e* pP 14 28 31.8 0.0
FFC pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
FFC Flin Flon 90.52 15 *e*P P 14 28 27.5 -0.5
comp=Z,9.1nm,0.8s,mb5.2
FFC *e* pP 14 28 31.8 0.0
ETW Entiat 90.95 29 *e*P P 14 28 31.0 +0.8
comp=Z,12nm,1.3s,mb5.1
NEW Newport 91.67 26 *e*P P 14 28 34.3 +0.8
NEW pmax pmax
comp=Z,9.0nm,1.0s
NEW Newport 91.67 26 *e*P P 14 28 34.3 +0.9
comp=Z,8.9nm,1.0s,mb5.0
BSMT Bassoo Peak 92.88 25 *e*P P 14 28 40.2 +1.1
comp=Z,7.0nm,1.1s,mb5.0
SCHQ Schefferville 93.11 355 P P 14 28 39.3 -0.7
comp=Z,3.6nm,0.8s,mb4.9,baz=47,slow=6.8,SNR=6.1
TORD Torodi Ar. Bea 93.80 288 P P 14 28 43.1 -0.8
comp=Z,1.4nm,0.7s,mb4.5,baz=41,slow=4.2,SNR=5.9
SLMT Seeley Lake 93.86 25 *e*P P 14 28 43.3 -0.3
comp=Z,8.9nm,0.9s,mb5.2

CHMT Chamberlain Mo 94.23 25 *e*P P 14 28 45.1 -0.2
HRY Holter Researc 94.91 24 *e*P P 14 28 48.5 +0.1
comp=Z,5.9nm,1.0s,mb5.0
PDAR Pinedale Array 99.14 25 PP PP 14 33 08.1 -0.9
comp=Z,0.6nm,1.0s,baz=330,slow=5.1,SNR=3.9
TXAR Lajitas Array 113.23 27 PKiKP PKiKP 14 34 04.1 -0.2
comp=Z,0.5nm,0.6s,baz=202,slow=1.3,SNR=4.8
TXAR PP PP 14 34 53.3 +0.3
comp=Z,0.6nm,0.8s,baz=335,slow=5.5,SNR=3.8
TXAR Lajitas Array 113.23 27 PKPdf PKiKP 14 34 04.1 -0.2
TXAR PP PP 14 34 53.3 +0.3
MAIT Maitri 120.90 203 *e*PKPab PKPdf 14 34 17.3 -0.2
SDV Santo Domingo 139.00 353 *e*PKPdf PKPdf 14 34 53.0 -0.6
OTAV Otavalo 147.69 6 *e*PKPdf PKPdf 14 35 10.1 +1.2
OTAV *e*PKPbc PKPbc 14 35 12.4 +0.9
LPAZ La Paz 162.95 336 PKP PKPdf 14 35 30.0 +0.8
comp=Z,2.4nm,0.8s,baz=50,slow=3.4,SNR=8.3
PLCA Paso Flores 170.58 203 PKP PKPdf 14 35 34.5 +0.3
comp=Z,1.5nm,0.9s,baz=177,slow=2.9,SNR=3.1

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*ISCJB **12** 14:16:21.3±1.1, 35°.19N±0°.10×81°.7E±0°.1, h10km, mb3.9/6, Error ellipse: s-maj=15.2km s-min=13.4km az=43.4*
*IDC **12** 14:16:24.3±1.2, 35°.28N×81°.02E, h0km, mb4.0/6, mb1 4.0/11, mb1mx3.8/30, mbtmp4.0/11, ML3.9/3, Error ellipse: s-maj=35.9km s-min=18.7km az=68.0*
*NEIC **12** 14:16:25.9±0.9, 35°.29N×81°.21E, h10km, mb4.1/2, Error ellipse: s-maj=20.8km s-min=13.4km az=74.0*
*BJI **12** 14:16:32.3, 35°.88N×81°.66E, h10km, mb4.5/2, ML4.1/4, Ms4.2/1*
ISC 12 14:16:23.1±1.3, 35°.1N±0°.1×81°.6E±0°.2, h10km, n23, σ1§44/25, mb3.9/6, 3C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.28**	**316**	Pn	**Pn**	**14 17 59.4**	**+3.6**
KSH				Sn	**Sn**	**14 19 12.5**	**+4.9**
KSH				smax			
comp=N,120nm,0.7s							
KSH				smax			
comp=E,120nm,0.7s							
UCH	**Uchtor**	**9.00**	**324**	*e*Pn	**Pn**	**14 18 34.2**	**+1.1**
comp=E,15nm,0.7s							
TKM2	**Tokmak 2**	**9.08**	**331**	*e*P	**Pn**	**14 18 35.6**	**+1.5**
comp=E,4.1nm,0.6s							
AAK	**Ala-Archa**	**9.32**	**325**	Pn	**Pn**	**14 18 39.0**	**+1.5**
comp=E,0.0nm,0.3s,baz=124,slow=15,SNR=2.3							
AAK				Lg		14 21 09.3	
comp=E,0.0nm,0.3s,baz=10,slow=19,SNR=3.6							
MK31	**Makanchi Array**	**11.65**	**2**	⇑Pn	**Pn**	**14 19 09.4**	**+0.1**
comp=E,3.1nm,0.6s,baz=185,slow=14,SNR=9.4							
MK31	**Makanchi Array**	**11.65**	**2**	*e*P	**Pn**	**14 19 09.9**	**+0.5**
MKAR	**Makanchi Array**	**11.65**	**2**	Pn	**Pn**	**14 19 09.9**	**+0.5**
comp=E,0.5nm,0.3s,baz=180,slow=12,SNR=6.2							
KK31	**Karatay Array**	**11.74**	**316**	⇑Pn	**Pn**	**14 19 13.5**	**+2.9**
comp=E,1.1nm,0.5s,baz=135,slow=11,SNR=16							
KK31				⇓Sn	**Sn**	**14 21 23.7**	**+2.2**
comp=E,1.9nm,0.5s,baz=104,slow=8.0,SNR=13							
KK31				⇑Lg		14 22 29.9	
comp=E,9.6nm,1.2s							
KURK	**Kurchatov**	**15.72**	**353**	Pn	**Pn**	**14 20 01.6**	**-2.9**
baz=176,slow=12,SNR=14							
KURK	**Kurchatov**	**15.72**	**353**	*e*Pn	**Pn**	**14 20 02.4**	**-2.1**
comp=E,10nm,1.0s							
ZAA0	**Zalesovo Array**	**18.94**	**6**	*e*P	**Pn**	**14 20 45.5**	**+0.9**
ZALV	**Zalesovo Beam**	**18.94**	**6**	Pn	**Pn**	**14 20 45.4**	**+0.8**
comp=E,0.4nm,0.3s,baz=191,slow=12,SNR=8.7							
ZALV	**Zalesovo Beam**	**18.94**	**6**	Pn	**Pn**	**14 20 45.4**	**+0.8**
BVAR	**Borovoye Array**	**19.58**	**339**	Pn	**Pn**	**14 20 51.1**	**-1.3**
comp=E,0.5nm,0.3s,baz=127,slow=9.8,SNR=13							
BRVK	**Borovoye**	**19.64**	**339**	*e*P	**Pn**	**14 20 52.5**	**-0.6**
comp=E,9.8nm,0.9s							
ABKAR	**Akbulak array**	**21.28**	**318**	*e*P	**P**	**14 21 08.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**22.62**	**133**	P	**P**	**14 21 32.2**	**+8.1**
comp=E,1.8nm,0.7s,mb3.6,baz=309,slow=9.5,SNR=4.6							
AKTK	**Aktyubinsk**	**22.97**	**319**	P	**P**	**14 21 25.6**	**-1.9**
AKTO	**Aktyubinsk**	**22.97**	**319**	P	**P**	**14 21 25.6**	**-1.9**
comp=E,1.3nm,0.6s,mb3.5,baz=111,slow=11,SNR=2.2							
FINES	**FINESS Array B**	**43.52**	**325**	P	**P**	**14 24 25.7**	**-0.7**
comp=E,2.0nm,0.8s,mb3.9,baz=125,slow=9.0,SNR=2.3							
ARCES	**ARCESS Array B**	**45.81**	**336**	P	**P**	**14 24 44.1**	**-0.5**
comp=E,3.5nm,0.9s,mb4.3,baz=96,slow=6.5,SNR=4.8							
TORD	**Torodi Ar. Bea**	**74.40**	**275**	P	**P**	**14 28 00.6**	**-1.0**
comp=E,1.1nm,0.8s,mb3.8,baz=47,slow=4.5,SNR=4.8							
BOSA	**Boshof**	**82.76**	**228**	P	**P**	**14 28 49.8**	**+2.5**
comp=E,3.6nm,1.1s,mb4.3,baz=74,slow=7.4,SNR=3.6							

IDC 12 14:20:18.4±1.9, 31°.89N×105°.30E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.5/25, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=86.5km s-min=32.0km az=88.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.55**	**205**	Pn	Pn	14 23 46.8	+1.1
0.2nm,0.3s,baz=7.3,slow=8.9,SNR=5.3							
WRA	**Warramunga Arr**	**58.57**	**148**	P	P	14 30 16.3	-0.7
0.3nm,0.3s,baz=328,slow=9.0,SNR=5.3							
ASAR	**Alice Springs**	**61.65**	**150**	P	P	14 30 38.8	+0.8
0.5nm,0.6s,baz=331,slow=6.4,SNR=5.3							
YKA	**Yellowknife Ar**	**80.64**	**18**	P	P	14 32 32.6	-0.1
0.3nm,0.5s,baz=327,slow=5.0,SNR=4.0							

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*IDC **12** 14:23:36.8±0.8, 31°.46N×104°.07E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/29, mbtmp3.7/13, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/31, Error ellipse: s-maj=30.0km s-min=15.4km az=60.0*
*ISCJB **12** 14:23:37.4±0.4, 31°.64N±0°.05×104°.32E±0°.05, h10km, mb3.9/13, Error ellipse: s-maj=6.8km s-min=5.7km az=30.7*
*NEIC **12** 14:23:38.8±0.5, 31°.40N×103°.92E, h10km, mb4.1/2, Error ellipse: s-maj=19.2km s-min=9.1km az=69.0*
*BJI **12** 14:23:43.6, 31°.34N×104°.05E, h20km, ML3.5/7*
ISC 12 14:23:39.5±0.4, 31°.63N±0°.04×104°.20E±0°.05, h10km, n28, σ0§88/30, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.81**	**208**	Pg	**Pg**	**14 24 00.5**	**+5.4**
CD2				Sg	**Sg**	**14 24 06.8**	**+1.1**
CD2				smax			
comp=N,8μm,0.5s							
LZH	**Lanzhou**	**4.46**	**356**	*e*Pg	**Pg**	**14 25 06.2**	**+1.2**
LZH				smax			
comp=N,84nm,0.8s							
LZH				smax			
comp=E,64nm,0.6s							
ENH	**Enshi**	**4.74**	**105**	*e*Pg	**Pg**	**14 25 11.5**	**+1.2**
ENH				*e*Sg	**Sg**	**14 26 11.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**13.95**	**201**	Pn	**Pn**	**14 26 51.1**	**-6.2**
comp=E,0.0nm,0.3s,baz=11,slow=14,SNR=2.9							
SONM	**Songino Array**	**16.27**	**5**	Pn	**Pn**	**14 27 30.5**	**+2.4**
comp=E,0.3nm,0.3s,baz=193,slow=10,SNR=2.3							
KSRS	**Korea Array**	**20.36**	**67**	P	**P**	**14 28 15.5**	**-0.7**
comp=E,2.0nm,0.8s,baz=261,slow=9.4,SNR=4.8							
MK31	**Makanchi Array**	**22.64**	**318**	*e*P	**P**	**14 28 40.7**	**+0.1**
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**14 28 41.1**	**+0.5**
comp=E,1.0nm,0.6s,mb3.4,baz=121,slow=12,SNR=5.8							
ZAA0	**Zalesovo Array**	**26.29**	**334**	*e*P	**P**	**14 29 15.1**	**+0.1**
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	**P**	**14 29 15.4**	**+0.5**
comp=E,1.7nm,0.6s,mb3.7,baz=132,slow=8.5,SNR=7.6							
KURK	**Kurchatov**	**26.88**	**323**	P	**P**	**14 29 19.2**	**-1.1**
comp=E,1.3nm,0.9s,mb3.5,baz=125,slow=8.8,SNR=5.7							
KURK				LR	LR	14 40 31.4	
comp=E,167nm,21.5s,baz=135,slow=38							
ABKAR	**Akbulak array**	**37.39**	**311**	*e*P	**P**	**14 30 52.6**	**+0.2**
comp=E,1.8nm,0.8s,mb4.0							
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**14 33 24.4**	**-1.5**
comp=E,1.0nm,0.4s,mb4.2,baz=69,slow=7.2,SNR=4.1							
WRAB	**Tennant Creek**	**58.86**	**146**	*e*P	**P**	**14 33 39.0**	**+0.4**
comp=E,1.6nm,0.5s,mb4.3							
WRA	**Warramunga Arr**	**58.86**	**147**	P	**P**	**14 33 38.9**	**+0.3**
comp=E,1.0nm,0.5s,mb4.1,baz=317,slow=11,SNR=17							
WB2	**Warramunga Arr**	**58.87**	**146**	*e*P	**P**	**14 33 38.5**	**-0.1**
ASAR	**Alice Springs**	**61.89**	**149**	P	**P**	**14 33 56.3**	**-2.9**
comp=E,0.5nm,0.5s,mb4.0,baz=338,slow=6.8,SNR=11							
GERES	**GERESS Array B**	**67.25**	**314**	P	**P**	**14

STKA	**Stephens Creek**	**72.40**	**147**	*e*P	**P**	**14 35 05.4**	**-0.4**
LPG	**La Plagne**	**72.96**	**313**	*e*P	**P**	**14 35 09.5**	**+0.4**
	comp=E,9.9nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.96**	**313**	*e*P	**P**	**14 35 09.5**	**+0.3**
SMF	**Signal de Mont**	**74.19**	**315**	*e*P	**P**	**14 35 15.7**	**-0.7**
TCF	**Toulx Ste Croi**	**75.34**	**315**	*e*P	**P**	**14 35 22.9**	**-0.2**
CAF	**Calviac**	**76.12**	**314**	*e*P	**P**	**14 35 27.9**	**+0.3**
YKA	**Yellowknife Ar**	**81.17**	**17**	P	**P**	**14 35 55.1**	**+0.1**
	comp=E,0.3nm,0.6s,mb3.4,baz=327,slow=5.0,SNR=5.0						

*IDC **12** 14:26:13.4±1.1,31°.28N×103°.65E,h0km,mb3.6/7, mb1 3.8/7,mb1mx3.5/25,mbtmp3.6/7,Error ellipse: s-maj=41.6km s-min=19.0km az=55.0*
*ISCJB **12** 14:26:14.1±0.5,31°.40N±0°.04×103°.7E±0°.1,h10km, mb3.7/7,Error ellipse: s-maj=13.0km s-min=5.2km az=177.0*
*NEIC **12** 14:26:15.1±0.5,31°.42N×103°.95E,h10km,mb4.3/1,Error ellipse: s-maj=40.9km s-min=8.0km az=56.0*
*BJI **12** 14:26:15.9,31°.47N×103°.94E,h9km,mB4.8/2,mb4.4/2, ML3.6/6,Ms4.1/2,Ms7 4.1/2*

ISC 12 14:26:15.7±0.5,31°.36N±0°.04×103°.6E±0°.1,h10km,n15, σ1§36/18,mb3.7/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**160**	Pg	**Pg**	**14 26 26.6**	**+1.6**
CD2				Sg	**Sg**	**14 26 32.3**	**+1.0**
CD2				smax			
	comp=N,4μm,0.5s						
LZH	**Lanzhou**	**4.72**	**3**	*e*Pg	**Pb**	**14 27 35.2**	**-3.3**
LZH				Sn	**Sn**	**14 28 20.4**	**-1.3**
LZH				smax			
	comp=N,78nm,0.8s						
LZH				smax			
	comp=E,150nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.46**	**32**	*e*P	**Pn**	**14 29 01.3**	**+1.9**
HHC				pP		14 29 04.6	
HHC				sP		14 29 11.2	
HHC				S	**Sn**	**14 31 09.8**	**+2.4**
HHC				sS		14 31 14.5	
HHC				SS		14 31 24.2	
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,4.7s						
HHC				LR	LR		
	comp=N,290nm,5.6s						
HHC				LR	LR		
	comp=Z,490nm,5.5s						
KSRS	**Korea Array**	**20.96**	**67**	P	**P**	**14 30 58.5**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=269,slow=10,SNR=3.3						
MK31	**Makanchi Array**	**22.49**	**319**	*e*P	**P**	**14 31 16.8**	**+1.7**
MKAR	**Makanchi Array**	**22.49**	**319**	P	**P**	**14 31 16.2**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.4,baz=123,slow=10,SNR=5.0						
ZAA0	**Zalesovo Array**	**26.29**	**335**	*e*P	**P**	**14 31 51.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**14 31 51.1**	**-0.1**
	comp=Z,2.2nm,0.8s,mb3.7,baz=128,slow=9.7,SNR=6.0						
KURK	**Kurchatov**	**26.77**	**323**	P	**P**	**14 31 56.1**	**+0.6**
	comp=Z,1.6nm,0.8s,mb3.6,baz=126,slow=9.4,SNR=6.5						
WRAB	**Tennant Creek**	**58.94**	**146**	*e*P	**P**	**14 36 13.9**	**-1.4**
	comp=Z,1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**58.94**	**146**	P	**P**	**14 36 13.5**	**-1.8**
	comp=Z,0.6nm,0.5s,mb3.9,baz=328,slow=9.0,SNR=7.2						
WB2	**Warramunga Arr**	**58.95**	**146**	*e*P	**P**	**14 36 13.8**	**-1.5**
ASAR	**Alice Springs**	**61.95**	**148**	P	**P**	**14 36 34.9**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.6,baz=337,slow=7.1,SNR=2.4						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**14 38 32.1**	**-1.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=330,slow=5.4,SNR=3.6						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**14 38 32.1**	**-1.2**

KRSC 12 14:26:54.6±1.3,53°.18N×158°.79E,h132km±31km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDLR	**Sedlovina**	**0.11**	**30**	*e*P	Pn	14 27 13.0	+0.6
SDLR				*i* S	Sn	14 27 26.8	+0.8
PET	**Petropavlovsk**	**0.18**	**208**	*e*P	Pn	14 27 13.0	+0.4
PET				*i* S	Sn	14 27 26.7	+0.6
NLC	**Nalytchevo**	**0.33**	**91**	*e*P	Pn	14 27 13.7	+0.7
NLC				*i* S	Sn	14 27 28.1	+1.1
GNL	**Ganaly**	**0.72**	**316**	*e*P	Pn	14 27 15.8	+0.5
GNL				*i* S	Sn	14 27 31.5	+0.5
SPN	**Mys Shipunski**	**0.75**	**96**	*e*P	Pn	14 27 15.9	+0.4
SPN				*i* S	Sn	14 27 31.5	+0.2
RUS	**Russkaya**	**0.77**	**193**	*e*P	Pn	14 27 15.7	0.0
RUS				*i* S	Sn	14 27 31.4	-0.2
KII	**Karymskiy**	**0.94**	**24**	*e*P	Pn	14 27 18.4	+1.3
KII				*i* S	Sn	14 27 36.2	+2.0
MIPR	**Malaya Ipel'ka**	**1.53**	**235**	*e*P	Pn	14 27 24.2	+1.1
MKZ	**Mys Kozlova**	**2.22**	**50**	*e*P	Pn	14 27 32.0	+0.7
MKZ				*i* S	Sn	14 27 59.0	-0.5
KMNR	**Kamenistaya**	**2.72**	**18**	*e*P	Pn	14 27 39.7	+2.2
KPT	**Kopyto**	**2.91**	**16**	*e*P	Pn	14 27 41.6	+1.5
KIRR	**Kirishev**	**2.92**	**17**	*e*P	Pn	14 27 42.2	+2.0
BZMR	**Bezymyannaya**	**2.93**	**19**	*e*P	Pn	14 27 42.5	+2.2
KOZ	**Kozyrevsk**	**2.95**	**12**	*e*P	Pn	14 27 42.2	+1.7
ZLN	**Zelenaya**	**3.08**	**22**	*e*P	Pn	14 27 44.6	+2.5
CIRR	**Tsirk**	**3.15**	**20**	*e*P	Pn	14 27 45.5	+2.3
SRDR	**Sredinnyy**	**3.19**	**9**	*e*P	Pn	14 27 45.0	+1.4
KRSR	**Krestovskiy**	**3.21**	**18**	*e*P	Pn	14 27 45.7	+1.8
KLY	**Klyuchi**	**3.32**	**18**	*e*P	Pn	14 27 48.2	+2.9
BDR	**Baidarnaya**	**3.67**	**21**	*e*P	Pn	14 27 52.6	+2.7
SRKR	**Sorokina**	**3.74**	**21**	*e*P	Pn	14 27 53.1	+2.2
SMKR	**Semkarok**	**3.74**	**23**	*e*P	Pn	14 27 52.9	+2.0
KBTR	**Krutoberegovo**	**3.83**	**36**	*e*P	Pn	14 27 53.2	+1.2

*ISCJB **12** 14:27:47.9±0.6,31°.81N±0°.05×105°.20E±0°.07,h10km, mb3.5/6,Error ellipse: s-maj=9.3km s-min=6.6km az=16.5*
*NEIC **12** 14:27:47.9±0.8,32°.09N×104°.95E,h10km,mb3.8/2,Error ellipse: s-maj=27.7km s-min=16.7km az=80.0*
*IDC **12** 14:27:48.5±1.1,31°.85N×105°.28E,h0km,mb3.3/4, mb1 3.6/6,mb1mx3.4/27,mbtmp3.4/6,ML3.7/1,Error ellipse: s-maj=36.9km s-min=24.0km az=68.0*

ISC 12 14:27:50.3±0.6,31°.76N±0°.05×105°.25E±0°.07,h10km,n11, σ1§13/13,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.53**	**237**	Pg	**Pg**	**14 28 21.7**	**+2.0**
CD2				Sg	**Sg**	**14 28 37.4**	**-2.1**
CD2				smax			
	comp=N,3μm,0.7s						
LZH	**Lanzhou**	**4.47**	**345**	*e*Pg	**Pg**	**14 29 20.4**	**+4.5**
LZH				Sg	**Sg**	**14 30 14.2**	**+0.4**
LZH				smax			
	comp=N,120nm,0.7s						
LZH				smax			
	comp=E,54nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.42**	**205**	Pn	**Pn**	**14 31 15.6**	**+1.1**
	comp=E,0.1nm,0.3s,baz=6.1,slow=8.2,SNR=5.3						
KSRS	**Korea Array**	**19.49**	**67**	P	**Pn**	**14 32 17.9**	**-0.8**
	baz=255,slow=9.9,SNR=2.9						
MKAR	**Makanchi Array**	**23.14**	**317**	P	**P**	**14 32 57.0**	**+0.3**
	comp=E,0.4nm,0.7s,mb3.0,baz=113,slow=11,SNR=3.1						
KURK	**Kurchatov**	**27.32**	**322**	P	**P**	**14 33 27.9**	**-7.2**
	comp=E,0.8nm,0.8s,mb3.3						
WRAB	**Tennant Creek**	**58.49**	**148**	*e*P	**P**	**14 37 46.2**	**-0.5**
	comp=E,1.1nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**58.49**	**148**	P	**P**	**14 37 47.4**	**+0.7**
	comp=E,0.4nm,0.6s,mb3.6,baz=340,slow=7.4,SNR=5.4						
WB2	**Warramunga Arr**	**58.49**	**148**	*e*P	**P**	**14 37 47.2**	**+0.4**
ASAR	**Alice Springs**	**61.56**	**150**	P	**P**	**14 38 07.8**	**0.0**
	comp=E,0.3nm,0.7s,mb3.5,baz=334,slow=6.7,SNR=3.3						
YKA	**Yellowknife Ar**	**80.78**	**18**	P	**P**	**14 40 01.8**	**-1.9**
	comp=E,0.2nm,0.5s,mb3.3,baz=326,slow=5.5,SNR=3.4						

*ISCJB **12** 14:31:19.9±0.8,31°.8N±0°.1×104°.7E±0°.2,h10km,mb3.5/7, Error ellipse: s-maj=30.3km s-min=12.0km az=155.3*
*IDC **12** 14:31:20.8±1.1,31°.85N×104°.51E,h0km,mb3.5/7, mb1 3.6/8,mb1mx3.5/27,mbtmp3.5/8,ML3.7/1,Error ellipse: s-maj=62.8km s-min=17.8km az=57.0*
*NEIC **12** 14:31:22.1±0.6,31°.84N×104°.60E,h10km,Error ellipse: s-maj=23.6km s-min=9.4km az=65.0*

ISC 12 14:31:22.1±0.8,31°.8N±0°.1×104°.6E±0°.2,h10km,n10, σ0§66/10,mb3.5/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.27**	**202**	Pn	**Pn**	**14 34 44.3**	**0.0**
	0.1nm,0.3s,baz=9.4,slow=9.3,SNR=2.9						
MK31	**Makanchi Array**	**22.72**	**318**	P	**P**	**14 36 24.9**	**+1.0**
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**14 36 24.1**	**+0.1**
	0.2nm,0.5s,mb2.8,baz=119,slow=12,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.25**	**333**	P	**P**	**14 36 57.1**	**-0.2**
	0.8nm,0.5s,mb3.5,baz=134,slow=8.5,SNR=3.7						
KURK	**Kurchatov**	**26.92**	**322**	P	**P**	**14 37 02.9**	**-0.5**
	0.2nm,0.3s,mb3.2,baz=138,slow=8.6,SNR=3.6						
BRTR	**Keskin Array B**	**56.76**	**299**	P	**P**	**14 41 05.7**	**-0.6**
	0.4nm,0.4s,mb3.8,baz=106,slow=5.2,SNR=3.5						
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**14 41 08.9**	**-0.2**
	0.8nm,0.4s,mb4.1,baz=91,slow=9.5,SNR=5.5						
WRA	**Warramunga Arr**	**58.85**	**147**	P	**P**	**14 41 20.8**	**-0.3**
	0.4nm,0.6s,mb3.6,baz=328,slow=9.0,SNR=6.2						
WB2	**Warramunga Arr**	**58.85**	**147**	*e*P	**P**	**14 41 20.2**	**-0.9**
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**14 41 43.3**	**+1.5**
	0.2nm,0.5s,mb3.5,baz=328,slow=6.1,SNR=2.9						

*ISCJB **12** 14:32:49.6±1.0,32°.83N±0°.09×106°.0E±0°.2,h10km, mb3.5/5,Error ellipse: s-maj=30.3km s-min=7.3km az=157.9*
*IDC **12** 14:32:50.2±1.3,32°.85N×105°.93E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/26,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=76.8km s-min=21.0km az=55.0*
*NEIC **12** 14:32:51.6±0.9,32°.84N×105°.85E,h10km,mb3.9/1,Error ellipse: s-maj=27.5km s-min=11.5km az=64.0*

ISC 12 14:32:52.1±1.0,32°.73N±0°.09×105°.8E±0°.2,h10km,n10, σ0§93/14,mb3.5/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.73**	**334**	*e*Pn	**Pn**	**14 33 55.9**	**+6.2**
LZH				Pg	**Pg**	**14 34 03.7**	**+0.2**
LZH				Sn	**Sn**	**14 34 38.1**	**+4.4**
LZH				Sg	**Sg**	**14 34 52.4**	**+0.5**
LZH				smax			
	comp=N,470nm,0.8s						
LZH				smax			
	comp=E,470nm,0.8s						
LZH				LR	LR		
	comp=E,690nm,6.6s						
LZH				LR	LR		
	comp=Z,770nm,7.6s						
GTA	**Gaotai**	**8.26**	**325**	*e*P	**Pn**	**14 35 02.7**	**+11**
GTA				pP		14 35 06.1	
GTA				sP		14 35 08.7	
GTA				S	**Sn**	**14 36 42.3**	**+17**
GTA				sS		14 36 48.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,180nm,4.8s						
GTA				LR	LR		
	comp=N,230nm,9.9s						
GTA				LR	LR		
	comp=E,220nm,11.1s						
GTA				LR	LR		
	comp=Z,380nm,9.9s						
CMAR	**Chiang Mai Arr**	**15.51**	**205**	Pn	**Pn**	**14 36 31.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=12,slow=8.0,SNR=8.9						
MK31	**Makanchi Array**	**22.80**	**315**	*e*P	**P**	**14 37 52.7**	**-2.1**
MKAR	**Makanchi Array**	**22.80**	**315**	P	**P**	**14 37 53.5**	**-1.2**
	comp=Z,0.8nm,0.7s,mb3.2,baz=114,slow=15,SNR=6.5						
UCH	**Uchtor**	**26.48**	**300**	*e*P	**P**	**14 38 29.6**	**+0.2**
	comp=Z,3.3nm,1.3s,mb3.7						
KURK	**Kurchatov**	**26.89**	**320**	P	**P**	**14 38 32.5**	**-0.4**
	comp=Z,0.4nm,0.3s,mb3.4,baz=125,slow=8.3,SNR=3.2						
KURK	**Kurchatov**	**26.89**	**320**	P	**P**	**14 38 32.5**	**-0.4**
WRA	**Warramunga Arr**	**59.04**	**148**	P	**P**	**14 42 51.9**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=338,slow=7.4,SNR=2.8						
ASAR	**Alice Springs**	**62.15**	**151**	P	**P**	**14 43 14.4**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.7,baz=336,slow=6.8,SNR=5.1						

*ISCJB **12** 14:33:42.0±0.6,31°.94N±0°.09×104°.9E±0°.1,h10km, mb3.7/8,Error ellipse: s-maj=19.6km s-min=10.7km az=150.5*
*IDC **12** 14:33:42.0±1.0,31°.82N×104°.62E,h0km,mb3.8/7, mb1 3.9/8,mb1mx3.6/26,mbtmp3.7/8,ML3.4/1,Error ellipse: s-maj=44.0km s-min=18.6km az=57.0*
*NEIC **12** 14:33:43.7±0.5,32°.07N×105°.07E,h10km,mb4.3/1,Error ellipse: s-maj=18.5km s-min=7.9km az=65.0*

ISC 12 14:33:44.0±0.6,31°.99N±0°.09×104°.9E±0°.1,h10km,n15, σ0§90/15,mb3.7/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.51**	**203**	Pn	**Pn**	**14 37 11.2**	**+1.9**
	0.2nm,0.3s,baz=7.2,slow=8.7,SNR=8.0						
KSRS	**Korea Array**	**19.68**	**68**	P	**Pn**	**14 38 16.2**	**+1.7**
	0.1nm,0.3s,baz=241,slow=8.6,SNR=4.1						
MK31	**Makanchi Array**	**22.77**	**317**	*e*P	**P**	**14 38 47.2**	**+0.8**
MKAR	**Makanchi Array**	**22.77**	**317**	P	**P**	**14 38 45.7**	**-0.7**
	0.6nm,0.7s,mb3.2,baz=105,slow=11,SNR=2.7						
ZAA0	**Zalesovo Array**	**26.23**	**333**	P	**P**	**14 39 18.0**	**-0.9**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**14 39 18.4**	**-0.5**
	1.5nm,0.6s,mb3.7,baz=128,slow=9.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**14 39 18.4**	**-0.5**
KURK	**Kurchatov**	**26.96**	**322**	P	**P**	**14 39 26.1**	**+0.6**
	1.1nm,0.9s,mb3.4,baz=122,slow=8.8,SNR=3.1						
WRAB	**Tennant Creek**	**58.84**	**147**	*e*P	**P**	**14 43 42.0**	**-0.9**
	1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**58.84**	**147**	P	**P**	**14 43 42.6**	**-0.2**
	1.5nm,0.6s,mb4.2,baz=339,slow=7.5,SNR=9.8						
WB2	**Warramunga Arr**	**58.85**	**147**	*e*P	**P**	**14 43 42.4**	**-0.5**
ASAR	**Alice Springs**	**61.91**	**150**	P	**P**	**14 44 03.5**	**-0.2**
	0.5nm,0.5s,mb3.9,baz=331,slow=6.3,SNR=8.1						
STKA	**Stephens Creek**	**72.39**	**148**	P	**P**	**14 45 09.0**	**-1.2**
	0.3nm,0.3s,mb3.7,baz=0.0,slow=5.1,SNR=3.1						
STKA	**Stephens Creek**	**72.39**	**148**	*e*P	**P**	**14 45 09.2**	**-1.0**
YKA	**Yellowknife Ar**	**80.64**	**17**	P	**P**	**14 45 56.9**	**+0.3**
	0.2nm,0.5s,mb3.3,baz=328,slow=5.3,SNR=4.3						

IDC 12 14:37:04.5±1.3,31°.74N×104°.29E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.4/25,mbtmp3.4/4,Error ellipse: s-maj=81.0km s-min=25.8km az=62.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.07**	**201**	Pn	Pn	14 40 30.7	+5.5
	0.1nm,0.3s,baz=2.9,slow=9.3,SNR=5.3						
MKAR	**Makanchi Array**	**22.61**	**318**	P	P	14 42 06.3	-0.3
	0.2nm,0.6s,baz=125,slow=6.4,SNR=3.8						
WRA	**Warramunga Arr**	**58.91**	**147**	P	P	14 47 05.3	-0.2
	0.4nm,0.4s,baz=339,slow=7.9,SNR=7.6						
ASAR	**Alice Springs**	**61.95**	**149**	P	P	14 47 26.4	+0.2
	0.4nm,0.9s,baz=337,slow=6.7,SNR=4.9						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	P	14 49 21.2	+0.3
	0.1nm,0.5s,baz=321,slow=4.6,SNR=2.9						

*ISCJB **12** 14:37:46.5±0.6,30°.81N±0°.07×103°.28E±0°.06,h10km, mb3.6/9,Error ellipse: s-maj=10.4km s-min=7.4km az=177.4*
*IDC **12** 14:37:46.9±0.9,30°.91N×103°.56E,h0km,mb3.6/8, mb1 3.7/10,mb1mx3.6/27,mbtmp3.6/10,ML3.7/1,Error ellipse: s-maj=30.4km s-min=17.0km az=57.0*
*NEIC **12** 14:37:48.2±0.5,30°.93N×103°.54E,h10km,mb4.0/1,Error ellipse: s-maj=16.7km s-min=8.5km az=72.0*
*BJI **12** 14:37:51.7,30°.79N×103°.49E,h13km,ML3.7/4*

ISC 12 14:37:48.5±0.5,30°.91N±0°.07×103°.40E±0°.08,h10km,n16, σ1§10/17,mb3.6/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**89**	Pg	**Pg**	**14 37 55.9**	**+1.2**
CD2				Sg	**Sg**	**14 38 02.2**	**+3.4**
CD2				smax			
	comp=N,12μm,0.5s						
CMAR	**Chiang Mai Arr**	**13.04**	**199**	Pn	**Pn**	**14 40 54.8**	**+1.0**
	baz=20,slow=8.6,SNR=2.6						
SONM	**Songino Array**	**17.06**	**7**	P	**Pn**	**14 41 47.9**	**+0.9**
	comp=N,0.3nm,0.3s,baz=185,slow=14,SNR=2.6						
KSRS	**Korea Array**	**21.28**	**66**	P	**P**	**14 42 33.5**	**-1.6**
	comp=N,0.9nm,0.6s,mb3.3,baz=247,slow=9.1,SNR=3.4						
MKAR	**Makanchi Array**	**22.74**	**320**	P	**P**	**14 42 51.8**	**+1.2**
	comp=N,0.8nm,0.7s,mb3.2,baz=122,slow=12,SNR=5.0						
AAK	**Ala-Archa**	**25.82**	**305**	P	**P**	**14 43 21.2**	**+1.4**
	comp=N,0.9nm,0.4s,mb3.6,baz=105,slow=12,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.64**	**335**	P	**P**	**14 43 27.2**	**+0.1**
	comp=N,0.4nm,0.4s,mb3.3,baz=120,slow=8.8,SNR=2.8						
KURK	**Kurchatov**	**27.05**	**324**	P	**P**	**14 43 31.0**	**+0.2**
	comp=N,0.7nm,0.2s,mb3.8,baz=134,slow=7.9,SNR=2.6						
BRVK	**Borovoye**	**32.65**	**322**	*e*P	**P**	**14 44 18.6**	**-1.8**
	comp=N,1.0nm,0.5s,mb4.0						
ABKAR	**Akbulak array**	**37.35**	**312**	*e*P	**P**	**14 45 01.6**	**+0.5**
TIXI	**Tiksi**	**43.07**	**12**	P	**P**	**14 45 46.2**	**-1.9**
WRA	**Warramunga Arr**	**58.65**	**146**	P	**P**	**14 47 45.7**	**-0.4**
	comp=N,0.7nm,0.5s,mb4.0,baz=337,slow=7.5,SNR=7.2						
WB2	**Warramunga Arr**	**58.66**	**145**	*e*P	**P**	**14 47 45.6**	**-0.5**
ASAR	**Alice Springs**	**61.64**	**148**	P	**P**	**14 48 05.9**	**-0.6**
	comp=N,0.1nm,0.4s,mb3.3,baz=329,slow=7.0,SNR=3.9						
STKA	**Stephens Creek**	**72.17**	**146**	P	**P**	**14 49 12.9**	**-0.6**
YKA	**Yellowknife Ar**	**82.06**	**17**	P	**P**	**14 50 08.4**	**-0.3**
	comp=N,0.5nm,0.7s,mb3.6,baz=328,slow=5.2,SNR=7.2						

*ISCJB **12** 14:38:47.7±0.5,31°.71N±0°.07×104°.2E±0°.1,h10km, mb4.2/11,Error ellipse: s-maj=14.4km s-min=8.8km az=153.2*
*IDC **12** 14:38:47.6±0.8,31°.80N×104°.19E,h0km,mb3.9/9, mb1 4.0/11,mb1mx3.8/28,mbtmp3.9/11,ML3.8/2,Error ellipse: s-maj=35.2km s-min=15.0km az=61.0*
*NEIC **12** 14:38:49.8±0.5,31°.75N×104°.10E,h10km,mb4.7/3,Error ellipse: s-maj=17.6km s-min=9.0km az=58.0*
*BJI **12** 14:38:54.2,31°.76N×104°.49E,h21km,mB5.0/1,mb4.5/3, ML4.1/2*

ISC 12 14:38:49.8±0.5,31°.76N±0°.07×104°.2E±0°.1,h10km,n22, σ1§20/22,mb4.2/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.82**	**107**	P	**Pn**	**14 40 04.9**	**+2.6**
CMAR	**Chiang Mai Arr**	**14.05**	**201**	Pn	**Pn**	**14 42 08.9**	**-0.1**
	0.1nm,0.3s,baz=17,slow=12,SNR=4.3						
SONM	**Songino Array**	**16.15**	**5**	Pn	**Pn**	**14 42 36.3**	**-0.5**
	0.3nm,0.3s,baz=185,slow=16,SNR=2.9						
KSRS	**Korea Array**	**20.36**	**67**	P	**P**	**14 43 24.8**	**-1.6**
	1.2nm,0.8s,baz=256,slow=9.3,SNR=3.3						
CN2	**Changchun**	**20.62**	**48**	*e*P	**P**	**14 43 32.4**	**+3.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MK31	**Makanchi Array**	**22.51**	**318**	*e*P	**P**	**14 43 50.3**	**+0.8**
MKAR	**Makanchi Array**	**22.51**	**318**	P	**P**	**14 43 49.8**	**+0.4**
	comp=Z,5.3nm,1.1s,mb3.9,baz=116,slow=11,SNR=15						
UCH	**Uchtor**	**25.75**	**302**	*e*P	**P**	**14 44 21.6**	**+1.1**
ZAA0	**Zalesovo Array**	**26.15**	**334**	*e*P	**P**	**14 44 24.3**	**+0.3**
ZALV	**Zalesovo Beam**	**26.15**	**334**	P	**P**	**14 44 24.0**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.0,baz=133,slow=8.7,SNR=13						
KURK	**Kurchatov**	**26.75**	**323**	P	**P**	**14 44 29.3**	**-0.1**
	comp=Z,2.4nm,0.9s,mb3.7,baz=130,slow=8.9,SNR=6.7						
KURK	**Kurchatov**	**26.75**	**323**	*e*P	**P**	**14 44 29.7**	**+0.3**
	comp=Z,4.3nm,0.3s,mb4.5						
BRVK	**Borovoye**	**32.38**	**321**	P	**P**	**14 45 21.8**	**+2.5**
	comp=Z,1.7nm,0.3s,mb4.3						
ABKAR	**Akbulak array**	**37.27**	**311**	*e*P	**P**	**14 46 01.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**53.69**	**154**	P	**P**	**14 48 10.1**	**-1.8**
	comp=Z,0.9nm,0.8s,mb3.8,baz=7.6,slow=7.3,SNR=3.6						
ARCES	**ARCESS Array B**	**56.68**	**336**	P	**P**	**14 48 30.2**	**-2.7**
	comp=Z,2.1nm,0.7s,mb4.3,baz=60,slow=9.8,SNR=4.3						
WRAB	**Tennant Creek**	**58.99**	**146**	*e*P	**P**	**14 48 49.9**	**+0.2**
	comp=Z,1.1nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**58.99**	**146**	P	**P**	**14 48 49.9**	**+0.1**
	comp=Z,9.7nm,0.7s,mb5.0,baz=338,slow=7.7,SNR=36						
WB2	**Warramunga Arr**	**59.00**	**146**	*e*P	**P**	**14 48 50.1**	**+0.3**
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**14 49 10.5**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.2,baz=334,slow=5.9,SNR=13						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**14 49 22.0**	**-1.9**
	comp=Z,0.5nm,0.6s,mb3.8,baz=78,slow=6.4,SNR=2.6						
YKA	**Yellowknife Ar**	**81.06**	**17**	P	**P**	**14 51 04.2**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.3,SNR=4.2						

*ISCJB **12** 14:40:20.6±0.5,32°.76N±0°.08×105°.2E±0°.2,h10km, mb4.0/10,Error ellipse: s-maj=24.2km s-min=6.0km az=156.2*
*IDC **12** 14:40:21.3±1.1,32°.83N×105°.23E,h0km,mb3.8/7, mb1 4.0/8,mb1mx3.7/26,mbtmp3.8/8,ML3.4/1,Error ellipse: s-maj=88.4km s-min=18.8km az=58.0*
*NEIC **12** 14:40:25.0±5.9,32°.92N×105°.27E,h25km±42km,mb4.5/3, Error ellipse: s-maj=30.1km s-min=8.7km az=50.0*
*BJI **12** 14:40:31.0,33°.35N×104°.73E,h25km,mb4.5/1,ML3.5/4, Ms3.7/3,Ms7 3.6/3*

ISC 12 14:40:22.8±0.6,32°.83N±0°.09×105°.2E±0°.2,h10km,n22, σ0§67/26,mb4.0/10,Sichuan

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

ISC 12 14:41:35.8±1.6, 31°.35N±0°.07×103°.53E±0°.07, h9km±12km, n22, σ1ᵒ00/23, mb4.0/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**156**	Pg	**Pg**	**14 41 44.4**	**-0.8**
CD2				Sg	**Sg**	**14 41 52.4**	**+0.9**
CD2				smax			
	comp=N,9μm,1.0s						
KMI	**Kunming**	**6.25**	**187**	Pn	**Pn**	**14 43 06.5**	**-1.7**
KMI				smax			
	comp=N,59nm,1.7s						
KMI				smax			
	comp=E,47nm,1.4s						
KMI				LR	LR		
	comp=N,760nm,8.3s						
KMI				LR	LR		
	comp=E,2μm,11.1s						
CMAR	**Chiang Mai Arr**	**13.49**	**199**	Pn	**Pn**	**14 44 44.1**	**-3.4**
	comp=E,0.1nm,0.3s,baz=8.2,slow=9.5,SNR=2.9						
GUN	**Gumba**	**15.73**	**262**	*e*P	**Pn**	**14 45 19.2**	**+1.6**
	comp=E,42nm,0.9s						
PKI	**Pulchoki**	**16.23**	**261**	*e*P	**Pn**	**14 45 24.7**	**+0.6**
	comp=E,30nm,0.7s						
KKN	**Kakani**	**16.27**	**262**	*e*P	**Pn**	**14 45 25.2**	**+0.5**
	comp=E,67nm,0.7s						
DMN	**Daman**	**16.47**	**262**	*e*P	**Pn**	**14 45 27.3**	**+0.1**
	comp=E,64nm,1.0s						
SONM	**Songino Array**	**16.61**	**7**	Pn	**Pn**	**14 45 28.1**	**-0.7**
	comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=2.1						
KSRS	**Korea Array**	**21.00**	**67**	P	**P**	**14 46 19.2**	**-0.3**
	comp=E,2.2nm,0.7s,baz=260,slow=9.9,SNR=5.4						
CN2	**Changchun**	**21.28**	**48**	*e*P	**P**	**14 46 25.3**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.0						
MK31	**Makanchi Array**	**22.47**	**319**	*e*P	**P**	**14 46 35.0**	**-0.3**
MKAR	**Makanchi Array**	**22.47**	**319**	P	**P**	**14 46 33.5**	**-1.7**
	comp=Z,1.2nm,0.7s,mb3.4,baz=130,slow=11,SNR=4.4						
UCH	**Uchtor**	**25.53**	**303**	*e*P	**P**	**14 47 05.7**	**+0.9**
	comp=Z,9.7nm,1.5s,mb4.1						
ZAA0	**Zalesovo Array**	**26.29**	**335**	*e*P	**P**	**14 47 10.6**	**-0.8**
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**14 47 11.2**	**-0.2**
	comp=Z,3.6nm,0.9s,mb3.9,baz=134,slow=8.5,SNR=7.2						
KURK	**Kurchatov**	**26.75**	**323**	P	**P**	**14 47 15.6**	**-0.1**
	comp=Z,3.4nm,0.8s,mb3.9,baz=130,slow=9.4,SNR=10						
KURK	**Kurchatov**	**26.75**	**323**	*e*P	**P**	**14 47 15.0**	**-0.7**
	comp=Z,16nm,1.3s,mb4.4						
TIXI	**Tiksi**	**42.61**	**12**	*e*P	**P**	**14 49 32.8**	**+0.9**
WRAB	**Tennant Creek**	**58.95**	**146**	P	**P**	**14 51 36.1**	**+0.5**
	comp=Z,7.2nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**58.95**	**146**	P	**P**	**14 51 35.0**	**-0.7**
	comp=Z,2.3nm,0.9s,mb4.2,baz=339,slow=7.6,SNR=5.2						
ASAR	**Alice Springs**	**61.96**	**148**	P	**P**	**14 51 56.7**	**+0.5**
	comp=Z,0.7nm,0.8s,mb3.8,baz=338,slow=6.9,SNR=3.5						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**14 53 53.9**	**+0.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=327,slow=4.8,SNR=3.5						

IDC 12 14:44:32.9±1.0, 31°.24N×103°.80E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.5/25, mbtmp3.4/8, ML3.6/1, Error ellipse: s-maj=34.8km s-min=18.5km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.46**	**200**	Pn	Pn	14 47 44.8	-0.5
	0.1nm,0.3s,baz=11,slow=11,SNR=4.4						
KSRS	**Korea Array**	**20.83**	**66**	P	P	14 49 16.1	0.0
	0.5nm,0.7s,baz=246,slow=8.3,SNR=2.7						
MKAR	**Makanchi Array**	**22.71**	**319**	P	P	14 49 38.1	+1.9
	0.2nm,0.4s,baz=128,slow=9.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	P	14 50 10.1	-1.6
	0.9nm,0.7s,baz=146,slow=10,SNR=3.1						
KURK	**Kurchatov**	**26.99**	**323**	P	P	14 50 16.2	-0.1
	0.3nm,0.6s,baz=126,slow=9.5,SNR=2.5						
WRA	**Warramunga Arr**	**58.73**	**146**	P	P	14 54 32.1	-0.6
	0.8nm,0.7s,baz=337,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**61.74**	**149**	P	P	14 54 53.8	+0.6
	0.2nm,0.7s,baz=336,slow=8.0,SNR=3.2						
YKA	**Yellowknife Ar**	**81.64**	**17**	P	P	14 56 52.8	+0.2
	0.2nm,0.5s,baz=327,slow=5.3,SNR=4.0						

*IDC **12** 14:46:05.9±0.4, 32°.75N×105°.65E, h0km, mb4.9/27, mb1 4.9/30, mb1mx4.9/34, mbtmp4.8/30, ML4.3/3, MS4.5/11, Ms1 4.5/11, ms1mx4.0/35, Error ellipse: s-maj=16.7km s-min=10.1km az=50.0*

*ISCJB **12** 14:46:06.2±0.8, 32°.72N±0°.02×105°.60E±0°.02, h12km±5km, mb5.0/148, MS4.7/37, Error ellipse: s-maj=3.6km s-min=3.1km az=166.7*

*BJI **12** 14:46:06.3, 32°.72N×105°.64E, h10km, mB5.2/16, mb5.1/34, ML5.2/19, Ms5.1/44, Ms7 4.8/35*

*MOS **12** 14:46:07.4±0.7, 32°.73N×105°.66E, h22km, mb5.2/64, MS4.7/25, Error ellipse: s-maj=7.2km s-min=3.9km az=116.6*

*NEIC **12** 14:46:07.7±0.1, 32°.73N×105°.62E, h10km, mb5.1/92, MS4.7/4, Error ellipse: s-maj=3.5km s-min=2.7km az=222.0*

*DJA **12** 14:46:11, 32°.71N×105°.63E, h25km, mb5.5/34*

*SZGRF **12** 14:46:39.0, 36°.44N×102°.95E, h33km, mb5.2, Qinghai, China*

ISC 12 14:46:07.1±0.8, 32°.74N±0°.02×105°.62E±0°.02, h5km±4km, h25km±1.2km: pP-P, n453, σ0ᵒ90/474, mb5.0/148, MS4.7/37, 27C-26D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.41**	**222**	Pn	**Pn**	**14 46 48.4**	**+1.2**
CD2				Pg	**Pg**	**14 46 53.0**	**-0.3**
CD2				Sg	**Sg**	**14 47 24.8**	**+0.2**
CD2				smax			
	comp=N,69μm,1.0s						
LZH	**Lanzhou**	**3.65**	**337**	*e*Pn	**Pn**	**14 47 06.9**	**+2.7**
LZH				Sn	**Sn**	**14 47 43.6**	**-4.0**
LZH				Sg	**Sg**	**14 48 02.7**	**-1.6**
LZH				smax			
	comp=N,30μm,0.7s						
LZH				smax			
	comp=E,40μm,0.6s						
LZH				LR	LR		
	comp=N,57μm,7.4s						
LZH				LR	LR		
	comp=Z,60μm,8.5s						
ENH	**Enshi**	**4.12**	**126**	*e*Pn	**Pn**	**14 47 12.3**	**+1.7**
ENH				*e*Pg	**Pg**	**14 47 22.3**	**-3.7**
ENH				*e*Sg	**Sg**	**14 48 16.2**	**-3.1**
GYA	**Guiyang**	**6.32**	**171**	Pn	**Pn**	**14 47 42.9**	**+2.0**
GYA				Sn	**Sn**	**14 48 48.4**	**-5.2**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,2μm,0.8s						
TIY	**Taiyuan**	**7.47**	**46**	*e*Pn	**Pn**	**14 47 59.7**	**+3.1**
TIY				Sn	**Sn**	**14 49 20.5**	**-1.2**
TIY				LR	LR		
	comp=Z,6μm,8.3s						
WHN	**Wuhan**	**7.76**	**104**	Pn	**Pn**	**14 48 00.4**	**-0.3**
WHN				Sn	**Sn**	**14 49 25.3**	**-3.6**
WHN				LR	LR		
	comp=N,24μm,3.3s						
WHN				LR	LR		
	comp=E,18μm,4.8s						
WHN				LR	LR		
	comp=Z,19μm,3.2s						
KMI	**Kunming**	**7.99**	**199**	P	**Pn**	**14 48 03.8**	**-0.1**
KMI				S	**Sn**	**14 49 33.2**	**-1.5**
KMI				smax			
	comp=N,410nm,1.7s						
KMI				smax			
	comp=E,410nm,1.6s						
KMI				LR	LR		
	comp=N,5μm,10.9s						
KMI				LR	LR		
	comp=E,6μm,9.2s						
KMI				LR	LR		
	comp=Z,6μm,13.6s						
GTA	**Gaotai**	**8.15**	**326**	⇓P	**Pn**	**14 48 06.2**	**+0.2**
GTA				pP		14 48 09.5	
GTA				sP		14 48 12.3	
GTA				S	**Sn**	**14 49 38.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,200nm,1.0s						
GTA				pmax	pmax		
	comp=Z,300nm,5.1s						
GTA				LR	LR		
	comp=N,17μm,11.14s						
GTA				LR	LR		
	comp=E,14μm,9.6s						
GTA				LR	LR		
	comp=Z,9μm,14.1s						
BTO	**Baotou**	**8.61**	**23**	*e*P	**Pn**	**14 48 11.5**	**-0.8**
BTO				S	**Sn**	**14 49 49.1**	**-0.7**
BTO				LR	LR		
	comp=N,3μm,10.1s						
BTO				LR	LR		
	comp=E,1μm,7.2s						
HHC	**Hu-ho-hao-te**	**9.39**	**29**	*e*P	**Pn**	**14 48 27.0**	**+3.9**
HHC				pP		14 48 34.1	
HHC				S	**Sn**	**14 50 13.7**	**+4.7**
HHC				sS		14 50 24.4	
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,5.0s						
HHC				LR	LR		
	comp=N,6μm,5.3s						
HHC				LR	LR		
	comp=E,5μm,5.0s						
HHC				LR	LR		
	comp=Z,4μm,5.7s						
TIA	**Tai'an**	**10.11**	**67**	P	**Pn**	**14 48 34.1**	**+1.2**
BJT	**Baijiatuau**	**11.18**	**46**	P	**Pn**	**14 48 45.3**	**-2.2**
BJT				pmax	pmax		
	comp=Z,26nm,0.6s						
BJT	**Baijiatuau**	**11.18**	**46**	Pn	**Pn**	**14 48 45.3**	**-2.2**
	comp=Z,26nm,0.6s						
BJI	**Beijing**	**11.20**	**46**	P	**Pn**	**14 48 48.1**	**+0.3**
BJI				pmax	pmax		
	comp=Z,18nm,0.7s						
BJI				LR	LR		
	comp=N,6μm,9.8s						
BJI				LR	LR		
	comp=E,4μm,9.8s						
BJI				LR	LR		
	comp=Z,1μm,17.5s						
NJ2	**Nanjing**	**11.21**	**90**	*e*P	**Pn**	**14 48 51.1**	**+3.1**
NJ2				pP		14 48 58.3	
NJ2				PP		14 49 01.3	
NJ2				S	**Sn**	**14 50 57.2**	**+3.5**
NJ2				sS		14 51 08.5	
NJ2				SS		14 51 13.6	
NJ2				pmax	pmax		
	comp=Z,50nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,600nm,3.6s						
NJ2				LR	LR		
	comp=N,1μm,8.9s						
NJ2				LR	LR		
	comp=E,2μm,8.7s						
GZH	**Guangzhou**	**11.79**	**143**	P	**Pn**	**14 48 50.5**	**-5.4**
GZH				S	**Sn**	**14 50 55.2**	**-13**
GZH				LR	LR		
	comp=N,5μm,10.4s						
GZH				LR	LR		
	comp=E,5μm,9.1s						
LSA	**Lhasa**	**12.75**	**260**	P	**Pn**	**14 49 10.8**	**+1.8**
LSA				S	**Sn**	**14 51 31.1**	**-0.3**
LSA				LR	LR		
	comp=N,3μm,22.4s						
LSA				LR	LR		
	comp=E,1μm,14.9s						
LSA				LR	LR		
	comp=Z,2μm,12.1s						
LSA	**Lhasa**	**12.75**	**260**	*e*P	**Pn**	**14 49 10.9**	**+1.9**
LSA				pmax	pmax		
	comp=Z,80nm,1.0s						
LSA	**Lhasa**	**12.75**	**260**	*e*P	**Pn**	**14 49 10.9**	**+1.9**
	comp=Z,80nm,1.0s						
QZH	**Quanzhou**	**13.76**	**121**	*e*P	**Pn**	**14 49 28.2**	**+5.3**
QZH				S	**Sn**	**14 52 04.6**	**+8.5**
QZH				LR	LR		
	comp=N,4μm,9.6s						
QZH				LR	LR		
	comp=E,4μm,11.7s						
QZH				LR	LR		
	comp=Z,7μm,11.4s						
CHRT	**Chiangrai**	**13.84**	**204**	P	**Pn**	**14 49 24.0**	**+0.1**
	comp=Z,276nm,0.9s						
QIZ	**Qiongzhong**	**14.17**	**163**	P	**Pn**	**14 49 27.0**	**-1.4**
QIZ				pP	pP	14 49 31.0	-6.5
QIZ				sP	sP	14 49 37.4	-0.8
QIZ				S	**Sn**	**14 52 08.2**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,36nm,0.8s						
QIZ				LR	LR		
	comp=N,5μm,9.0s						
QIZ				LR	LR		
	comp=Z,7μm,11.9s						
QIZ	**Qiongzhong**	**14.17**	**163**	*e*Pn	**Pn**	**14 49 26.0**	**-2.4**
	comp=Z,99nm,1.1s						
DL2	**Dalian**	**14.37**	**60**	*e*P	**Pn**	**14 49 35.0**	**+3.9**
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
SONM	**Songino Array**	**15.09**	**2**	Pn	**Pn**	**14 49 40.0**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=180,slow=13,SNR=20						
SONM				Lg		14 54 09.1	
	comp=Z,1.3nm,0.3s,baz=211,slow=24,SNR=3.9						
CHG	**Chiang Mai**	**15.10**	**205**	⇑P	**Pn**	**14 49 47.8**	**+6.6**
	comp=Z,84nm,0.7s						
CHTO	**Chiang Mai**	**15.10**	**205**	*e*P	**Pn**	**14 49 41.2**	**0.0**
CHTO				pmax	pmax		
	comp=Z,56nm,0.8s						
CHTO	**Chiang Mai**	**15.10**	**205**	*e*P	**Pn**	**14 49 41.2**	**0.0**
	comp=Z,56nm,0.8s						
CHTO				*e*		14 49 47.7	
CHTO	**Chiang Mai**	**15.10**	**205**	Pn	**Pn**	**14 49 48.3**	**+7.0**
	SNR=7.6						
CHTO				Pn	**Pn**	**14 49 48.3**	**+7.0**
	SNR=7.6						
ULN	**Ulaanbaatar**	**15.15**	**4**	*e*P	**Pn**	**14 49 42.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,98nm,1.1s						
ULN	**Ulaanbaatar**	**15.15**	**4**	*e*P	**Pn**	**14 49 42.1**	**+0.4**
	comp=Z,98nm,1.1s						
ULN	**Ulaanbaatar**	**15.15**	**4**	Pn	**Pn**	**14 49 42.7**	**+1.0**
	SNR=18						
ULN				Pn	**Pn**	**14 49 42.7**	**+1.0**
	SNR=18						
CM31	**Chiang Mai Arr**	**15.43**	**204**	*e*Pn	**Pn**	**14 49 45.4**	**-0.2**
	comp=Z,77nm,0.8s						
CM31				*e*P		14 49 51.2	
CMAR	**Chiang Mai Arr**	**15.43**	**204**	Pn	**Pn**	**14 49 45.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=14,slow=11,SNR=78						
CMAR				Lg		14 54 27.2	
	comp=Z,0.1nm,0.3s,baz=16,slow=32,SNR=2.7						
CMAR				LR	LR	14 56 43.5	
	comp=Z,380nm,19.3s,baz=281,slow=41						
TATO	**Taipei**	**15.90**	**115**	P	**Pn**	**14 49 53.5**	**+1.9**
	comp=Z,111nm,1.1s						
TATO				*e*pP	pP	14 50 02.1	+5.3
YHNB	**Yeheng**	**15.98**	**116**	*e*P	**Pn**	**14 49 57.4**	**+4.8**
	comp=Z,244nm,1.2s						
SSLB	**Suanglung**	**16.17**	**120**	*e*P	**Pn**	**14 49 56.0**	**+0.8**
	comp=Z,169nm,1.0s						
TPUB	**Ta-pu**	**16.23**	**122**	*e*P	**Pn**	**14 49 56.2**	**+0.3**
	comp=Z,85nm,1.1s						
TAPN	**Taplejung**	**16.40**	**256**	*e*P	**Pn**	**14 49 58.5**	**+0.4**
NACB	**Ninganchiao**	**16.42**	**117**	*e*P	**Pn**	**14 49 58.4**	**+0.1**
	comp=Z,183nm,1.3s						
YULB	**Yu-li**	**16.66**	**120**	*e*P	**Pn**	**14 50 04.1**	**+2.7**
	comp=Z,54nm,0.9s						
SNY	**Shenyang**	**16.91**	**52**	⇓P	**Pn**	**14 50 04.5**	**+0.2**
SNY				S	**Sn**	**14 53 19.8**	**+7.3**
SNY				pmax	pmax		
	comp=Z,17nm,1.9s						
SNY				LR	LR		
	comp=N,2μm,19.2s						
SNY				LR	LR		
	comp=E,3μm,18.9s						
SNY				LR	LR		
	comp=Z,2μm,15.9s						
RAMN	**Ramite**	**17.47**	**256**	*e*P	**Pn**	**14 50 10.2**	**-1.3**
GUN	**Gumba**	**17.70**	**259**	*e*P	**Pn**	**14 50 14.0**	**-0.4**
	comp=Z,550nm,0.9s						
ZAK	**Zakamensk**	**17.72**	**355**	*e*P	**Pn**	**14 50 14.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,26nm,1.4s						
INCN	**Inchon**	**17.83**	**69**	P	**Pn**	**14 50 17.3**	**+1.4**
	comp=Z,31nm,0.8s						
WMQ	**Urumqi**	**17.86**	**313**	P	**Pn**	**14 50 16.1**	**-0.2**
WMQ				pP	pP	14 50 19.4	+1.0
WMQ				PP		14 50 30.8	
WMQ				S	**Sn**	**14 53 32.6**	**-3.1**
WMQ				sS	sS	14 53 38.0	-6.8
WMQ				pmax	pmax		
	comp=Z,110nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,330nm,3.0s						
WMQ				LR	LR		
	comp=N,5μm,18.0s						
WMQ				LR	LR		
	comp=E,3μm,17.0s						
WMQ				LR	LR		
	comp=Z,2μm,17.0s						
PKI	**Pulchoki**	**18.21**	**259**	*e*P	**Pn**	**14 50 19.7**	**-1.0**
	comp=Z,169nm,0.7s						
PKIN	**Phulchoki**	**18.22**	**259**	*e*P	**Pn**	**14 50 19.5**	**-1.3**
	comp=Z,231nm,0.8s						
KKN	**Kakani**	**18.24**	**260**	*e*P	**Pn**	**14 50 19.9**	**-1.1**
	comp=Z,366nm,1.0s						
CAL	**Calcutta**	**18.36**	**241**	*e*P	**Pn**	**14 50 22.1**	**-0.4**
CAL				*ex*	x	14 52 25.6	
DMN	**Daman**	**18.45**	**259**	*e*P	**Pn**	**14 50 22.6**	**-1.0**
	comp=Z,432nm,1.0s						
KSRS	**Korea Array**	**18.84**	**69**	Pn	**Pn**	**14 50 27.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=252,slow=9.9,SNR=28						
KSRS				Lg		14 56 05.8	
	comp=Z,0.1nm,0.3s,baz=243,slow=19,SNR=4.8						
TLY	**Talaya**	**18.99**	**356**	Pn	**Pn**	**14 50 30.6**	**+0.7**
	comp=Z,172nm,0.8s,SNR=5.6						
TLY	**Talaya**	**18.99**	**356**	*e*P	**Pn**	**14 50 30.8**	**+0.9**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2μm,16.0s						
TLY	**Talaya**	**18.99**	**356**	*e*P	**Pn**	**14 50 30.1**	**+0.2**
	comp=Z,72nm,1.4s						
TLY	**Talaya**	**18.99**	**356**	P	**Pn**	**14 50 36.3**	**+6.4**
	SNR=17						
TLY				P		14 50 36.3	
	SNR=17						
CN2	**Changchun**	**19.04**	**49**	*e*P	**Pn**	**14 50 31.7**	**+1.0**
CN2				*es*P	sP	14 50 38.0	+6.0
CN2				*e*S	**Sn**	**14 54 00.0**	**-4.2**
CN2				pmax	pmax		
	comp=Z,50nm,1.5s						
CN2				pmax	pmax		
	comp=Z,700nm,5.0s						
CN2				LR	LR		
	comp=N,3μm,16.0s						
CN2				LR	LR		
	comp=E,2μm,16.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
MOY	**Mondy**	**19.22**	**351**	*e*P	**Pn**	**14 50 34.0**	**+1.3**
MOY				pmax	pmax		
	comp=Z,74nm,2.5s						
IRK	**Irkutsk**	**19.52**	**358**	*e*P	**Pn**	**14 50 34.8**	**-1.5**
IRK				pmax	pmax		
	comp=Z,142nm,1.6s						
HIA	**Hailar**	**19.60**	**28**	*e*P	**Pn**	**14 50 36.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,103nm,1.3s						
HIA	**Hailar**	**19.60**	**28**	*e*P	**Pn**	**14 50 36.9**	**-0.5**
	comp=Z,103nm,1.3s						
CIT	**Chita**	**20.12**	**14**	*e*P	**P**	**14 50 42.9**	**+1.2**
CIT				*e*		14 50 54.9	
CIT				*e*		14 51 10.4	
CIT				*e*		14 54 50.3	
NNT	**Nongplab**	**20.77**	**196**	P	**P**	**14 50 55.0**	**+6.1**
PTH	**Pithoragarh**	**21.96**	**268**	*e*P	**P**	**14 51 01.0**	**-0.7**
MDJ	**Mudanjiang**	**22.07**	**51**	P	**P**	**14 51 02.9**	**+0.1**
MDJ				pP		14 51 05.8	
MDJ				sP	sP	14 51 07.0	+2.1
MDJ				S	**S**	**14 55 06.9**	**+0.4**
MDJ				ScP	ScP	14 58 37.7	-0.8
MDJ				PcS	PcS	14 58 38.9	0.0
MDJ				pmax	pmax		
	comp=Z,190nm,4.5s						
MDJ				LR	LR		
	comp=N,2μm,14.6s,MS4.7						
MDJ				LR	LR		
	comp=E,1μm,16.6s,MS4.7						
MDJ				LR	LR		
	comp=Z,2μm,14.6s,MS4.5						
MDJ	**Mudanjiang**	**22.07**	**51**	*e*P	**P**	**14 51 04.4**	**+1.6**
	comp=Z,43nm,1.3s,mb4.7						
JOSI	**Joshimath**	**22.28**	**271**	*e*P	**P**	**14 51 05.4**	**+0.3**
MK31	**Makanchi Array**	**22.66**	**315**	*e*P	**P**	**14 51 09.1**	**0.0**
MKAR	**Makanchi Array**	**22.66**	**315**	P	**P**	**14 51 09.2**	**+0.2**
	comp=Z,42nm,0.6s,mb5.0,baz=117,slow=13,SNR=198						
MKAR				LR	LR	14 59 39.7	
	comp=Z,2μm,19.1s,MS4.5,baz=115,slow=36						
DDI	**Dehra Dun**	**23.59**	**272**	*ex*	x	14 51 18.0	
SDNR	**Sundarnagar**	**24.27**	**275**	*e*P	**P**	**14 51 25.9**	**+0.7**
JBP	**Jabalpur**	**24.52**	**254**	⇑*e*P	**P**	**14 51 28.0**	**+0.5**
JBP				*ex*	x	14 51 38.2	
	comp=Z,144nm,1.1s						
JBP				*e*S	**S**	**14 55 47.0**	**-1.5**
AGRA	**Agra**	**24.55**	**264**	*e*P	**P**	**14 51 28.2**	**+0.3**
AGRA				AMb	AMB	14 51 38.7	
	comp=Z,138nm,1.3s,mb5.3						
BISR	**Bishrakh**	**24.56**	**268**	*e*P	**P**	**14 51 28.2**	**+0.3**
NDI	**New Delhi**	**24.72**	**268**	*e*P	**P**	**14 51 27.0**	**-2.3**
NDI				*ex*	x	14 56 04.5	
BHK	**Bhakra**	**24.75**	**275**	*e*P	**P**	**14 51 28.0**	**-1.6**
KSH	**Kashi**	**24.81**	**294**	P	**P**	**14 51 34.0**	**+4.0**
KSH				*e*pP		14 51 38.1	
KSH				*es*P	sP	14 51 41.4	+9.2
KSH				*e*PP		14 52 12.0	
KSH				*e*PcP	PcP	14 55 08.1	+1.7
KSH				*e*S	**S**	**14 55 55.4**	**+2.3**
KSH				*es*S	sS	14 56 03.1	+7.5
KSH				*e*SS		14 56 56.2	
KSH				*e*ScP	ScP	14 58 45.2	-0.7
KSH				*e*PcS	PcS	14 58 47.1	+0.7
KSH				*e*ScS	ScS	15 02 33.2	-0.7
KSH				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.4						
KSH				LR	LR		
	comp=N,1μm,10.4s,MS4.9						
KSH				LR	LR		
	comp=E,1μm,10.5s,MS4.9						
AYAN	**Aya Nagar**	**24.85**	**268**	*e*P	**P**	**14 51 30.8**	**+0.3**
AYAN				AMb	AMB	14 51 32.3	
	comp=Z,39nm,1.4s,mb4.7						
SONA	**Sohna**	**24.96**	**267**	*e*P	**P**	**14 51 31.2**	**-0.3**
SONA				AMb	AMB	14 51 39.8	
	comp=Z,58nm,1.0s,mb5.1						
ULHL	**Ulahol**	**25.06**	**301**	P	**P**	**14 51 33.8**	**+1.5**
	SNR=31						
KLR	**Kul'dur**	**25.52**	**42**	*e*P	**P**	**14 51 33.0**	**-3.4**
KLR				*e*S	**S**	**14 56 06.0**	**+1.9**
KLR				pmax	pmax		
	comp=E,68nm,1.6s						
KLR				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.0						
KLR				MLR	MLR		
	comp=Z,3μm,12.0s,MS5.0						
TKM2	**Tokmak 2**	**25.68**	**302**	P	**P**	**14 51 39.3**	**+1.4**
	SNR=52						
TKM2	**Tokmak 2**	**25.68**	**302**	*e*P	**P**	**14 51 39.0**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.1						
TKM2	**Tokmak 2**	**25.68**	**302**	*e*P	**P**	**14 51 39.0**	**+1.1**
	comp=Z,44nm,0.7s,mb5.1						
BOD	**Bodaibo**	**25.73**	**10**	*e*P	**P**	**14 51 39.3**	**+1.1**
BOD				pmax	pmax		
	comp=Z,38nm,1.5s,mb4.7						
KZA	**Kyzart**	**25.75**	**300**	P	**P**	**14 51 40.7**	**+2.2**
	SNR=78						
ZAA0	**Zalesovo Array**	**25.86**	**331**	*e*P	**P**	**14 51 38.9**	**-0.6**
ZALV	**Zalesovo Beam**	**25.86**	**331**	P	**P**	**14 51 39.3**	**-0.1**
	comp=Z,7.8nm,0.4s,mb4.6,baz=133,slow=10.0,SNR=35						
KHET	**Khetri**	**26.08**	**268**	*e*P	**P**	**14 51 42.2**	**+0.5**
KHET				AMb	AMB	14 51 44.0	
	comp=Z,45nm,1.6s,mb4.7						
KBK	**Karagaybulak**	**26.09**	**301**	P	**P**	**14 51

SNR=101
FRU Bishkek 26.36 301 *i* P **P 14 51 45.0 +0.9**
FRU pmax pmax
comp=Z,100nm,2.0s,mb5.0
FRU MLR MLR
comp=Z,1μm,14.0s,MS4.5
AAK Ala-Archa 26.41 301 P **P 14 51 45.7 +1.2**
comp=Z,366nm,0.9s,mb5.9,SNR=9.0
AAK Ala-Archa 26.41 301 P **P 14 51 45.9 +1.4**
SNR=40
AAK Ala-Archa 26.41 301 P **P 14 51 45.3 +0.8**
comp=Z,30nm,0.8s,mb4.9,baz=96,slow=6.3,SNR=22
AAK Ala-Archa 26.41 301 *d iP* **P 14 51 45.7 +1.2**
AAK pmax pmax
comp=Z,45nm,1.2s,mb4.9
AAK Ala-Archa 26.41 301 *e*P **P 14 51 44.6 0.0**
comp=Z,61nm,0.9s,mb5.1
AAK Ala-Archa 26.41 301 P **P 14 51 46.2 +1.7**
SNR=30
AAK P pP 14 51 46.2 +0.2
SNR=30
USP Ospenovka 26.54 302 P **P 14 51 46.8 +1.1**
SNR=91
KURK Kurchatov 26.77 320 P **P 14 51 47.7 +0.1**
comp=Z,378nm,0.7s,mb6.0,SNR=36
KURK Kurchatov 26.77 320 P **P 14 51 46.8 -0.9**
comp=Z,35nm,0.9s,mb4.9,baz=140,slow=8.6,SNR=88
KURK LR LR 15 03 01.8
comp=Z,1μm,19.1s,MS4.5,baz=115,slow=38
KURK Kurchatov 26.77 320 *d iP* **P 14 51 47.7 +0.1**
KURK pmax pmax
comp=Z,86nm,1.2s,mb5.2
KURK Kurchatov 26.77 320 *e*P **P 14 51 47.6 0.0**
comp=Z,49nm,0.8s,mb5.1
KURK Kurchatov 26.77 320 P **P 14 51 48.2 +0.5**
SNR=30
KURK P pP 14 51 48.2 -1.0
SNR=30
AML Almayashu 26.90 300 P **P 14 51 50.9 +2.0**
SNR=41
AML Almayashu 26.90 300 *e*P **P 14 51 50.6 +1.7**
comp=Z,63nm,0.8s,mb5.2
EKS2 Erkin-Say 26.93 301 P **P 14 51 50.4 +1.1**
SNR=19
EKS2 Erkin-Say 26.93 301 *e*P **P 14 51 49.7 +0.4**
comp=Z,15nm,0.8s,mb4.6
MAT Matsushiro 27.01 73 P **P 14 51 48.3 -1.7**
MJAR Matsushiro Arr 27.01 73 P **P 14 51 49.7 -0.3**
comp=Z,11nm,1.0s,mb4.3,baz=273,slow=9.7,SNR=5.9
HABR Khabarovsk 27.10 46 *e*P **P 14 51 47.1 -3.6**
HABR *e*PPP 14 52 38.6
HABR *e* 14 55 08.5
HABR *e* 15 02 36.9
HABR pmax pmax
comp=Z,36nm,1.8s,mb4.6
HABR pmax pmax
comp=N,30nm,2.9s
HABR pmax pmax
comp=E,36nm,1.8s
HABR MLR MLR
comp=N,527nm,18.0s,MS4.5
HABR MLR MLR
comp=E,1μm,18.0s,MS4.5
HABR MLR MLR
comp=Z,907nm,16.0s,MS4.4
NVS Novosibirsk 27.15 331 ⇓*iP* **P 14 51 50.4 -0.6**
NVS *e* 14 57 58.0
NVS pmax pmax
comp=N,33nm,1.9s
NVS pmax pmax
comp=Z,40nm,1.9s,mb4.6
NVS pmax pmax
comp=E,44nm,2.0s
CLNS Chul'man 27.52 23 *e*P **P 14 51 54.8 +0.5**
CLNS pmax pmax
comp=Z,11nm,0.7s,mb4.6
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS MLR MLR
comp=Z,2μm,12.0s,MS5.0
CLNS MLR MLR
comp=N,972nm,12.0s,MS4.7
CLNS MLR MLR
comp=E,902nm,17.0s,MS4.7
HYB Hyderabad 28.76 245 *i* P **P 14 52 05.0 -0.8**
KBL Kabul 30.40 284 *e*P **P 14 52 21.4 +1.2**
KBL pmax pmax
comp=Z,45nm,1.1s,mb5.1
KBL Kabul 30.40 284 *e*P **P 14 52 21.4 +1.2**
comp=Z,45nm,1.1s,mb5.1
ASAJ Asahikawa 30.87 58 P **P 14 52 23.6 -0.7**
comp=Z,3.6nm,0.5s,mb4.5,baz=299,slow=11,SNR=6.7
ASAJ Asahikawa 30.87 58 P **P 14 52 23.6 -0.7**
ASAJ pmax pmax
comp=Z,4.0nm,0.5s
KSM Kuching 31.41 171 *e*P **P 14 52 29.5 +0.3**
comp=Z,46nm,1.3s,mb5.1
YSS Yuzh-Sakhalins 31.53 52 *e*P **P 14 52 29.5 -0.5**
YSS *e* 14 52 42.3
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.1
YSS MLR MLR
comp=Z,1μm,16.0s,MS4.6
YSS MLR MLR
comp=E,800nm,14.0s
YSS Yuzh-Sakhalins 31.53 52 *e*P **P 14 52 29.4 -0.6**
comp=E,26nm,1.2s,mb4.9
BVAR Borovoye Array 32.35 319 P **P 14 52 37.0 -0.2**
comp=E,10.0nm,0.7s,mb4.8,baz=113,slow=9.7,SNR=61
BVAR ScP ScP 14 59 05.4 -3.8
comp=E,2.2nm,0.8s,baz=105,slow=3.3,SNR=4.7
BVAR LR LR 15 06 17.3
comp=E,752nm,18.1s,MS4.4,baz=111,slow=37
BRVK Borovoye 32.42 319 P **P 14 52 38.4 +0.6**
comp=E,159nm,0.8s,mb5.9,SNR=18
BRVK Borovoye 32.42 319 *d iP* **P 14 52 38.1 +0.3**
BRVK pmax pmax
comp=Z,18nm,0.7s,mb5.0
BRVK Borovoye 32.42 319 *e*P **P 14 52 37.8 0.0**
comp=Z,23nm,0.8s,mb5.0
BRVK Borovoye 32.42 319 P **P 14 52 38.4 +0.6**
SNR=13
BRVK P pP 14 52 38.4 -0.9
SNR=13
YAK Yakutsk 33.13 21 *e*P **P 14 52 43.0 -0.8**
YAK *e**PP pP 14 52 50.9 +5.5
YAK *e*PPP 14 53 54.2
YAK *e* 14 55 25.8
YAK *e*S **S 14 57 56.5 -6.8**
YAK *e*SSS 15 00 03.1
YAK *e* 15 03 02.1
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=Z,31nm,0.8s,mb5.3
YAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
YAK smax
comp=N,101nm,3.2s
YAK smax
comp=E,51nm,2.7s
YAK MLR MLR
comp=E,804nm,11.0s,MS4.9
YAK MLR MLR
comp=N,956nm,11.0s,MS4.9
YAK MLR MLR
comp=Z,1μm,11.0s,MS4.9
YAK Yakutsk 33.13 21 *e*P **P 14 52 43.1 -0.7**
comp=Z,54nm,0.8s,mb5.5
ABKAR Akbulak array 37.59 310 *e*P **P 14 53 22.6 +0.2**
comp=Z,28nm,0.8s,mb5.0
ABKT Ailbek 38.77 291 P **P 14 53 34.6 +2.1**
comp=Z,238nm,1.0s,mb5.9,SNR=11
SVE Sverdlovsk 38.99 322⇑*eP* **P 14 53 34.7 +0.7**
SVE *e*S **S 14 59 28.2 -4.9**
SVE pmax pmax
comp=Z,77nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,492nm,16.0s,MS4.4
AKTK Aktyubinsk 39.00 311 P **P 14 53 34.7 +0.5**
AKTK LR LR 15 10 56.9
AKTO Aktyubinsk 39.00 311 P **P 14 53 34.7 +0.5**
comp=Z,9.6nm,0.7s,mb4.6,baz=95,slow=8.3,SNR=38
AKTO LR LR 15 10 56.9
comp=Z,1μm,20.8s,MS4.8,baz=102,slow=38

KAPI Kappang 39.87 158 P **P 14 53 41.5 -0.3**
comp=Z,509nm,1.0s,mb6.2,SNR=7.5
ARU Arti 39.96 321 P **P 14 53 42.1 -0.1**
comp=Z,634nm,0.9s,SNR=34
ARU Arti 39.96 321 *d iP* **P 14 53 42.3 +0.1**
ARU *e* 14 55 13.3
ARU PPP 14 55 39.1
ARU S **S 14 59 48.0 +0.2**
ARU SS SS 15 02 40.7 -3.4
ARU pmax pmax
comp=Z,129nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,492nm,16.0s,MS4.5
ARU Arti 39.96 321 *eP* **P 14 53 42.2 0.0**
comp=Z,113nm,0.9s,mb5.6
GUMO Guam 40.51 109 LR LR 15 10 36.2
comp=Z,317nm,18.1s,MS4.2,baz=135,slow=36
TIXI Tiksi 40.91 11 *eP* **P 14 53 49.4 -0.4**
TIXI pmax pmax
comp=Z,45nm,1.3s,mb4.9
TIXI MLR MLR
comp=Z,2μm,15.0s,MS5.0
TIXI Tiksi 40.91 11 *eP* **P 14 53 49.3 -0.5**
comp=Z,53nm,1.2s,mb5.0
SOKR Solikamsk 41.78 325 *c iP* **P 14 53 57.7 +0.5**
SOKR pmax pmax
comp=Z,80nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,520nm,16.0s,MS4.5
SEY Seymchan 42.04 30⇑*eP* **P 14 53 59.0 -0.2**
PETK Petropavlovsk- 42.13 45 P **P 14 53 59.8 -0.3**
comp=Z,11nm,0.9s,mb4.5,baz=224,slow=4.1,SNR=7.6
ASHO Ashiyiah 43.88 273 P **P 14 54 16.4 +1.8**
SNR=8.1
GNI Garni 48.70 297⇑*eP* **P 14 54 53.7 +1.3**
GNI pmax pmax
comp=Z,25nm,1.2s
GNI Garni 48.70 297 P **P 14 54 52.9 +0.6**
comp=Z,25nm,1.0s,mb5.2
GNI Garni 48.70 297 P **P 14 54 54.5 +2.2**
SNR=5.2
GNI P pP 14 54 54.5 +0.6
SNR=5.2
ZEI Tsey 48.84 301 *eP* **P 14 54 51.5 -1.9**
ZEI pmax pmax
comp=Z,14nm,1.0s,mb5.0
UMR Umm Al-Rimmam 49.13 283 *eP* **P 14 54 55.7 -0.2**
UMR AMb AMB 14 55 03.7
comp=Z,77nm,1.2s,mb5.6
BILL Bilibino 49.15 26 *c iP* **P 14 54 55.2 -0.2**
BILL *e**PP pP 14 55 03.4 +6.4
BILL *e* 14 56 49.3
BILL pmax pmax
comp=Z,58nm,1.7s,mb5.3
BILL Bilibino 49.15 26 *eP* **P 14 54 55.2 -0.3**
comp=Z,22nm,0.6s,mb5.4
KBD Kabd 49.28 282 *eP* **P 14 54 56.5 -0.4**
KBD AMb AMB 14 55 05.4
comp=Z,40nm,0.9s,mb5.5
MIB Mutribah 49.36 283 *eP* **P 14 54 57.3 -0.3**
MIB AMb AMB 14 55 05.5
comp=Z,141nm,1.0s,mb6.0
VRHR Novokhopersk 49.40 312 *eP* **P 14 54 57.6 0.0**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.7
RDF Al-Radifah 49.48 282 *eP* **P 14 54 58.6 +0.1**
RDF AMb AMB 14 55 07.0
comp=Z,141nm,0.9s,mb6.0
KIV Kislovodsk 49.52 302 *eP* **P 14 54 59.1 +0.5**
KIV pmax pmax
comp=Z,56nm,1.0s,mb5.5
KIV Kislovodsk 49.52 302 *eP* **P 14 54 59.0 +0.5**
comp=Z,56nm,1.0s,mb5.5
KIV Kislovodsk 49.52 302 P **P 14 54 59.6 +1.0**
SNR=11
KIV P pP 14 54 59.6 -0.6
SNR=11
KLMR Klimovskoe 50.47 325 *eP* **P 14 55 05.2 -0.4**
KLMR pmax pmax
comp=Z,134nm,1.0s,mb5.9
VOR Voronezh 50.87 313 *eP* **P 14 55 08.0 -0.7**
VOR pmax pmax
comp=Z,260nm,1.4s,mb6.0
VORD Divnogorie 50.88 312 *eP* **P 14 55 08.3 -0.5**
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 50.94 312 *eP* **P 14 55 08.8 -0.4**
VSR pmax pmax
comp=Z,60nm,1.0s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,30nm,0.6s
MOS Moscow 51.50 318 *eP* **P 14 55 11.5 -1.9**
MOS *e* 14 56 29.2
MOS *e* 14 57 12.2
MOS *e*PPP 14 58 13.0
MOS *e*S **S 15 02 23.7 -10**
MOS pmax pmax
comp=Z,132nm,1.0s,mb5.8
MOS pmax pmax
comp=Z,100nm,1.0s,mb5.7
SOC Sochi 51.70 302 *eP* **P 14 55 14.5 -0.6**
SOC *e**SP sP 14 55 26.6 +9.3
SOC *e*PPP 14 58 11.0
SOC *e*S **S 15 02 34.9 -2.1**
SOC *e* 15 05 01.2
SOC *e*SS SS 15 06 02.5 -11
SOC *e*SSS 15 07 45.0
SOC pmax pmax
comp=Z,25nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,385nm,19.0s,MS4.5
KAKA Kakadu 51.95 146 *eP* **P 14 55 14.9 -2.3**
comp=Z,30nm,0.9s,mb5.2
KAKA Kakadu 51.95 146 *eP* **P 14 55 14.7 -2.5**
comp=Z,50nm,0.6s,mb5.6
OBN Obninsk 52.15 317 *eP* **P 14 55 17.8 -0.4**
OBN *e* 14 55 23.0
OBN *e* 14 56 26.7
OBN pmax pmax
comp=Z,39nm,1.0s,mb5.3
ANN Anapa 53.06 304 *eP* **P 14 55 20.1 -5.1**
ANN *e**PP pP 14 55 29.7 +2.9
ANN *e* 14 56 32.5
ANN *e*S **S 15 02 45.8 -10**
ANN *e*SS SS 15 06 25.5 -9.1
ANN pmax pmax
comp=Z,68nm,1.3s,mb5.4
ANN MLR MLR
comp=N,716nm,17.0s,MS4.9
ANN MLR MLR
comp=E,598nm,17.0s,MS4.9
ANN MLR MLR
comp=Z,561nm,17.0s,MS4.7
APA Apatity 53.43 333⇑*iP* **P 14 55 28.4 +0.9**
APA MLR MLR
comp=Z,1μm,14.0s,MS5.1
MALT Malatya 53.89 296 *eP* **P 14 55 32.6 +1.2**
MALT pmax pmax
comp=Z,13nm,1.0s,mb4.8
MALT Malatya 53.89 296 *eP* **P 14 55 32.6 +1.2**
comp=Z,13nm,1.0s,mb4.8
MALT Malatya 53.89 296⇑*iP* **P 14 55 32.3 +0.9**
FITZ Fitzroy Crossi 54.06 156⇑*iP* **P 14 55 31.8 -0.8**
comp=Z,31nm,0.9s,mb5.2
FITZ Fitzroy Crossi 54.06 156 P **P 14 55 31.9 -0.7**
comp=Z,18nm,0.8s,mb5.0,baz=350,slow=5.7,SNR=26
FITZ Fitzroy Crossi 54.06 156 *eP* **P 14 55 31.7 -0.9**
comp=Z,23nm,1.0s,mb5.1
JOF Joensuu 54.35 327 *eP* **P 14 55 32.7 -1.6**
JOF pmax pmax
comp=Z,40nm,0.7s,mb5.5
JOF Joensuu 54.35 327 *ep* **P 14 55 32.7 -1.6**
comp=Z,40nm,0.7s,mb5.5
MBWA Marble Bar 55.26 164 *eP* **P 14 55 40.7 -0.7**
comp=Z,34nm,1.0s,mb5.3
KEV Kevo 55.77 336 *eP* **P 14 55 42.6 -1.9**

KEV pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
KEV Kevo 55.77 336 *ep* **P 14 55 42.6 -1.9**
comp=Z,9.9nm,0.5s,mb5.1
ARCES ARCESS Array B 56.31 335 P **P 14 55 48.2 -0.2**
comp=Z,8.6nm,0.7s,mb4.9,baz=81,slow=8.1,SNR=23
ARCES ARCESS Array B 56.31 335 P **P 14 55 48.2 -0.2**
KAF Kangasniemi 56.74 326 *eP* **P 14 55 50.0 -1.5**
KAF pmax pmax
comp=Z,23nm,0.7s,mb5.3
KAF Kangasniemi 56.74 326 *ep* **P 14 55 50.0 -1.5**
comp=Z,23nm,0.7s,mb5.3
FINES FINESS Array B 56.94 326 P **P 14 55 52.4 -0.6**
comp=Z,31nm,0.7s,mb5.4,baz=97,slow=8.2,SNR=62
FINES LR LR 15 22 12.1
comp=Z,496nm,19.8s,MS4.6,baz=175,slow=38
BR131 Keskin Array S 57.07 299 *eP* **P 14 55 53.8 -0.4**
comp=Z,4.8nm,0.6s,mb4.7
BRTR Keskin Array B 57.07 299 P **P 14 55 54.0 -0.2**
comp=Z,6.7nm,0.9s,mb4.7,baz=106,slow=7.8,SNR=43
VSU Vasula 57.09 322 *d iP* **P 14 55 53.7 -0.4**
VSU pmax pmax
comp=Z,88nm,1.1s,mb5.7
MICGM Minsk 57.21 317 *e* **P 14 56 01.0 +6.0**
AKASG Malin Array Be 57.22 313 P **P 14 55 54.5 -0.6**
comp=Z,23nm,0.7s,mb5.3,baz=68,slow=6.5,SNR=56
AKASG LR LR 15 21 30.9
comp=Z,658nm,19.5s,MS4.7,baz=110,slow=37
AKASG Malin Array Be 57.22 313 P **P 14 55 54.5 -0.6**
AKASG LR LR 15 21 30.9
AKBB Malin Array Si 57.22 313 *eP* **P 14 55 54.1 -1.0**
MNK Minsk 57.24 317 *eP* **P 14 56 01.0 +5.8**
IDID Didziasalis 57.69 318 *eP* **P 14 55 58.8 +0.5**
NACGM Naroch 57.75 318 *e* **P 14 55 56.0 -2.8**
IIGN Ignalina 57.97 319 *eP* **P 14 56 00.7 +0.4**
ISAL Salakas 57.98 319 *eP* **P 14 56 00.3 -0.1**
SPB4 Spitsbergen Ar 58.07 346 *eP* **P 14 56 01.0 +0.2**
COEN Coen 58.69 136 *eP* **P 14 56 05.1 -0.7**
comp=Z,159nm,0.8s,mb6.1
COEN *ep*P pP 14 56 10.3 +2.9
TLCR 58.90 306⇑P **P 14 56 07.1 +0.1**
TLCR 58.90 306⇑*iP* **P 14 56 07.1 +0.1**
WRAB Tennant Creek 59.14 148 P **P 14 56 08.0 -0.8**
comp=Z,624nm,0.7s,SNR=32
WRA Warramunga Arr 59.14 148 P **P 14 56 08.2 -0.6**
comp=Z,48nm,0.7s,mb5.6,baz=340,slow=7.4,SNR=171
WB2 Warramunga Arr 59.15 148 *eP* **P 14 56 08.1 -0.8**
WB2 *ep*P pP 14 56 13.4 +3.0
CFR Carcaliu 59.36 307⇑*iP* **P 14 56 08.7 -1.5**
HARR Harsova 59.64 306⇑P **P 14 56 12.6 +0.5**
HARR Harsova 59.64 306⇑*iP* **P 14 56 12.6 +0.5**
VRI Vrincioaia 60.10 308 P **P 14 56 16.2 +0.9**
VRI Vrincioaia 60.10 308⇓*iP* **P 14 56 15.8 +0.5**
PLOR Plostina 60.16 308⇓P **P 14 56 16.4 +0.7**
PLOR Plostina 60.16 308⇓*iP* **P 14 56 16.4 +0.7**
BURAR Bucovina Array 60.57 310⇑P **P 14 56 18.4 0.0**
BURAR Bucovina Array 60.57 310⇑*iP* **P 14 56 18.4 0.0**
BUR01 Bucovina Ar. S 60.57 310 P **P 14 56 18.9 +0.5**
BUR08 Bucovina Ar. S 60.57 310 *eP* **P 14 56 18.6 +0.2**
LVV L'vov 60.67 313 *eP* **P 14 56 18.9 -0.2**
MLR Muntele Rosu 60.74 308 P **P 14 56 19.0 -0.7**
comp=Z,4.6nm,0.6s,mb4.8,baz=359,slow=6.5,SNR=11
MLR Muntele Rosu 60.74 308 P **P 14 56 19.0 -0.6**
MLR pmax pmax
comp=Z,5.0nm,0.6s
MLR Muntele Rosu 60.74 308 P **P 14 56 20.1 +0.5**
MLR Muntele Rosu 60.74 308⇓*iP* **P 14 56 20.1 +0.5**
VOIR 61.35 308 P **P 14 56 24.2 +0.4**
VOIR 61.35 308⇑*iP* **P 14 56 23.9 +0.1**
KWP Kalwaria Pacla 61.54 313 *eP* **P 14 56 25.3 +0.3**
KWP Kalwaria Pacla 61.54 313 *eP* **P 14 56 25.2 +0.2**
comp=Z,113nm,1.0s,mb6.0
KWP Kalwaria Pacla 61.54 313⇓*iP* **P 14 56 25.4 +0.4**
KOLS Kolonicke sedl 62.03 312 *eP* **P 14 56 28.6 +0.3**
KOLS *e* 14 56 36.3
KOLS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KOLS Kolonicke sedl 62.03 312 *eP* **P 14 56 28.6 +0.3**
comp=Z,7.8nm,0.9s,mb4.8
KOLS *e* 14 56 36.3
KOLS Kolonicke sedl 62.03 312 *eP* **P 14 56 28.6 +0.3**
KOLS *ep*P pP 14 56 36.3 +6.4
UZH Uzhgorod 62.12 312⇓*iP* **P 14 56 28.8 -0.1**
UZH *e* 14 56 37.6
ASAR Alice Springs 62.24 151 P **P 14 56 29.5 -0.4**
comp=Z,25nm,0.7s,mb5.5,baz=337,slow=6.9,SNR=205
DRGR 62.45 310 P **P 14 56 31.9 +0.8**
DRGR 62.45 310⇓*iP* **P 14 56 32.3 +1.1**
STHS Stebnicka Huta 62.52 313 *eP* **P 14 56 31.9 +0.3**
STHS *e* 14 56 39.8
STHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
STHS Stebnicka Huta 62.52 313 *eP* **P 14 56 31.9 +0.3**
comp=Z,10nm,1.0s,mb4.9
STHS *e* 14 56 39.8
STHS Stebnicka Huta 62.52 313 *eP* **P 14 56 31.9 +0.3**
STHS *ep*P pP 14 56 39.8 +6.6
GZR Gura Zlata 62.88 308 P **P 14 56 35.0 +0.9**
GZR Gura Zlata 62.88 308⇓*iP* **P 14 56 34.5 +0.5**
NIE Niedzica 63.09 313 *eP* **P 14 56 36.2 +0.8**
OJC Ojcow 63.13 314 *eP* **P 14 56 35.7 0.0**
KECS Kecovo 63.30 312 *eP* **P 14 56 37.2 +0.4**
KECS *e* 14 56 45.0
KECS pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
KECS Kecovo 63.30 312 *eP* **P 14 56 37.2 +0.4**
comp=Z,5.5nm,1.2s,mb4.6
KECS *e* 14 56 45.0
KECS Kecovo 63.30 312 *eP* **P 14 56 37.2 +0.4**
KECS *ep*P pP 14 56 45.0 +6.6
BZS Buzias 63.56 309⇓P **P 14 56 38.5 -0.1**
BZS Buzias 63.56 309⇓*iP* **P 14 56 38.5 -0.1**
PSZ Piszkesteto 63.86 312 *eP* **P 14 56 40.6 +0.1**
comp=Z,14nm,1.3s,mb4.8
PSZ Piszkesteto 63.86 312⇓*eP* **P 14 56 40.4 -0.1**
PSZ Piszkesteto 63.86 312⇓*iP* **P 14 56 40.7 +0.2**
LIKS Likavka 63.96 313 *eP* **P 14 56 41.8 +0.7**
LIKS pmax pmax
comp=Z,40nm,1.4s,mb5.3
LIKS Likavka 63.96 313 *eP* **P 14 56 41.8 +0.7**
comp=Z,40nm,1.4s,mb5.3
LIKS Likavka 63.96 313 *eP* **P 14 56 41.8 +0.7**
NB2 NORSAR Subarra 63.98 327 P **P 14 56 39.7 -1.4**
comp=Z,18nm,0.8s,mb5.2,baz=71,slow=6.9
NOA NORSAR Array B 63.98 327 P **P 14 56 39.9 -1.2**
comp=Z,14nm,0.8s,mb5.0,baz=70,slow=6.5,SNR=32
OKC Ostrava-Krasne 64.27 314 *eP* **P 14 56 43.7 +0.6**
OKC *e**PP pP 14 56 51.3 +6.6
OKC MLR MLR
comp=Z,400nm,17.3s,MS4.7
OKC Ostrava-Krasne 64.27 314 *eP* **P 14 56 43.7 +0.6**
OKC *ep*P pP 14 56 51.3 +6.6
OKC AMS AMS 15 25 10.0
comp=Z,400nm,17.3s
VYHS Vyhne 64.32 313 *eP* **P 14 56 44.0 +0.5**
VYHS *e* 14 56 51.4
VYHS pmax pmax
comp=Z,17nm,1.3s,mb4.9
VYHS Vyhne 64.32 313 *eP* **P 14 56 44.0 +0.5**
comp=Z,17nm,1.3s,mb4.9
VYHS *e* 14 56 51.4
VYHS Vyhne 64.32 313 *eP* **P 14 56 44.0 +0.5**
VYHS *ep*P pP 14 56 51.4 +6.3
BUD Budapest 64.57 311⇓*eP* **P 14 56 46.0 +0.8**
MORC Moravsky Berou 64.65 314 *eP* **P 14 56 45.9 +0.2**
comp=Z,11nm,0.8s,mb5.0
MORC Moravsky Berou 64.65 314⇑*iP* **P 14 56 46.2 +0.5**
KSP Ksiaz 65.01 316 *eP* **P 14 56 47.9 -0.1**
TTA Tatalina 65.01 30 *eP* **P 14 56 47.6 -0.2**
TTA pmax pmax
comp=Z,25nm,1.2s,mb5.1
TTA Tatalina 65.01 30 *eP* **P 14 56 47.6 -0.2**
comp=Z,25nm,1.2s,mb5.1
DPC Dobruska-Polom 65.17 315 *eP* **P 14 56 49.7 +0.7**
DPC *e**PP pP 14 56 57.4 +6.7
DPC MLR MLR
comp=Z,600nm,18.2s,MS4.8
DPC Dobruska-Polom 65.17 315 *eP* **P 14 56 49.7 +0.7**
DPC *ep*P pP 14 56 57.4 +6.7
DPC AMS AMS 15 25 20.0
comp=Z,600nm,18.2s
PKSM Moragy 65.28 310⇓P **P 14 56 49.1 -0.7**
PKSM Moragy 65.28 310⇓*iP* **P 14 56 49.1 -0.7**

VRAC Vranov 65.40 314 ⇑P **P 14 56 51.4 +0.9**
VRAC Vranov 65.40 314 ⇑*i*P **P 14 56 51.4 +0.9**
COLD Coldfoot 65.46 25 *e*P **P 14 56 50.6 0.0**
comp=Z,39nm,1.2s,mb5.3
ZST Bratislava 65.51 313 *e*P **P 14 56 51.9 +0.6**
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ZST Bratislava 65.51 313 *e*P **P 14 56 51.9 +0.6**
comp=Z,5.6nm,0.7s,mb4.7
ZST Bratislava 65.51 313 *e*P **P 14 56 51.9 +0.6**
TREC Trest 66.07 314 *e*P **P 14 56 55.6 +0.7**
TREC *e**PP pP 14 57 03.4 +6.9
TREC MLR MLR
comp=Z,500nm,14.9s,MS4.8
TREC Trest 66.07 314 *e*P **P 14 56 55.6 +0.7**
TREC *e*pP pP 14 57 03.4 +6.9
TREC AMS AMS 15 26 20.0
comp=Z,500nm,14.9s
CHUM Lake Minchumin 66.13 28 *e*P **P 14 56 55.1 +0.1**
comp=Z,20nm,0.8s,mb5.2
PVCC Panska Ves 66.14 316 *e*P **P 14 56 55.9 +0.6**
PVCC MLR MLR
comp=Z,400nm,13.9s,MS4.8
PVCC Panska Ves 66.14 316 *e*P **P 14 56 55.9 +0.6**
PVCC AMS AMS 15 25 40.0
comp=Z,400nm,13.9s
NWAO Narrogin (SRO) 66.22 169 *e*P **P 14 56 56.0 +0.1**
comp=Z,149nm,0.7s,mb6.1
NWAO Narrogin (SRO) 66.22 169 P **P 14 56 56.1 +0.2**
comp=Z,24nm,0.7s,mb5.4,baz=345,slow=7.8,SNR=17
PRU Pruhonice 66.37 315 *e*P **P 14 56 57.7 +0.9**
PRU *e**PP pP 14 57 05.5 +7.1
PRU MLR MLR
comp=Z,600nm,15.2s,MS4.9
PRU Pruhonice 66.37 315 *e*P **P 14 56 57.7 +0.9**
PRU *e*pP pP 14 57 05.5 +7.1
PRU AMS AMS 15 26 10.0
comp=Z,600nm,15.2s
BRG Berggiesshubel 66.37 316 *e*P **P 14 56 56.7 -0.1**
comp=Z,12nm,0.9s,mb4.9
BRG *e* 14 57 04.0
comp=Z,9.5nm,0.8s
BRG Berggiesshubel 66.37 316 *e*P **P 14 56 56.7 -0.1**
BRG *e* 14 57 04.0
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BRG pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CONA Conrad Observa 66.38 313 ⇓*i*P **P 14 56 56.9 +0.1**
comp=Z,19nm,1.4s,mb5.0
BPAW Bear Paw Mtn. 66.56 28 *e*P **P 14 56 57.6 -0.2**
comp=Z,19nm,0.9s,mb5.1
PPLA Purkeypile 66.62 29 *e*P **P 14 56 58.4 +0.2**
comp=Z,22nm,0.6s,mb5.4
FORT Forrest 66.65 159 *e*P **P 14 56 58.2 -0.4**
comp=Z,65nm,0.8s,mb5.7
FORT Forrest 66.65 159 *e*P **P 14 56 58.1 -0.5**
comp=Z,82nm,0.8s,mb5.8
MUD Monsted U'grnd 66.73 323 *i*P **P 14 56 58.8 -0.1**
MUD pmax pmax
comp=Z,20nm,0.9s,mb5.2
MUD Monsted U'grnd 66.73 323 *i*P **P 14 56 58.8 -0.1**
comp=Z,20nm,0.9s,mb5.2
CLL Collm 66.75 317 *i*P **P 14 56 58.6 -0.6**
CLL *i* 14 57 06.4
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,500nm,19.5s,MS4.7
CLL Collm 66.75 317 *i*P **P 14 56 58.6 -0.6**
comp=Z,18nm,1.1s,mb5.0
CLL *i* 14 57 06.4
CLL LR LR
comp=Z,500nm,19.5s,MS4.7
CLL Collm 66.75 317 *i*P **P 14 56 58.6 -0.6**
comp=Z,18nm,1.1s,mb5.0
CLL LmV 14 28 00.0
comp=Z,500nm,19.5s
CLL *i*pP pP 14 57 06.4 +5.6
KTH Kantishna Hill 66.83 28 *e*P **P 14 56 59.5 0.0**
comp=Z,84nm,1.5s,mb5.5
TRF Thorofare Moun 67.14 28 *e*P **P 14 57 02.5 +1.1**
KHC Kasperske Hory 67.29 315 *e*P **P 14 57 03.0 +0.4**
KHC *e**PP pP 14 57 10.5 +6.2
KHC MLR MLR
comp=Z,600nm,15.6s,MS4.9
KHC Kasperske Hory 67.29 315 *e*P **P 14 57 02.0 -0.6**
comp=Z,4.9nm,0.9s,mb4.5
KHC Kasperske Hory 67.29 315 *e*P **P 14 57 03.0 +0.4**
KHC *e*pP pP 14 57 10.5 +6.2
KHC AMS AMS 15 28 20.0
comp=Z,600nm,15.6s
GEC2 GERESS Array S 67.33 314 *e*P **P 14 57 02.4 -0.5**
GEC2 pmax pmax
comp=Z,3μm,1.1s
GEC2 GERESS Array S 67.33 314 *e*P **P 14 57 02.4 -0.5**
comp=Z,3μm,1.1s
GERES GERESS Array B 67.33 314 P **P 14 57 03.2 +0.3**
comp=Z,11nm,1.1s,mb4.8,baz=71,slow=5.8,SNR=33
MOA Molln 67.39 313 ⇑*i*P **P 14 57 04.1 +0.7**
comp=Z,17nm,1.4s,mb4.9,SNR=7.4
SOKA Soboth 67.40 312 ⇑*i*P **P 14 57 03.1 -0.3**
comp=Z,19nm,1.2s,mb5.0
COLA College 67.40 26 *e*P **P 14 57 02.8 -0.3**
COLA *e**PP pP 14 57 10.3 +5.6
COLA pmax pmax
comp=Z,37nm,1.0s,mb5.4
COLA College 67.40 26 *e*P **P 14 57 02.8 -0.3**
comp=Z,37nm,1.0s,mb5.4
COLA *e*pP pP 14 57 10.3 +5.6
RSO Redoubt South 67.46 32 *e*P **P 14 57 03.9 +0.3**
NKC Novy Kostel 67.50 316 *e*P **P 14 57 04.6 +0.6**
NKC *e**PP pP 14 57 11.9 +6.3
NKC MLR MLR
comp=Z,500nm,18.8s,MS4.8
NKC Novy Kostel 67.50 316 *e*P **P 14 57 04.6 +0.6**
NKC *e*pP pP 14 57 11.9 +6.3
NKC AMS AMS 15 27 30.0
comp=Z,500nm,18.8s
BOJS Bojanci 67.74 311 *e*P **P 14 57 06.2 +0.6**
MOX Moxa 67.82 317 *e*P **P 14 57 06.0 0.0**
comp=Z,15nm,1.6s,mb4.8
MOX Moxa 67.82 317 *e*P **P 14 57 06.0 0.0**
MOX pmax pmax
comp=Z,8.0nm,1.6s,mb4.5
CEY Cerknica 68.17 311 *i*P **P 14 57 06.6 -1.7**
KBA Koelnbreinsper 68.28 313 ⇑*i*P **P 14 57 09.2 +0.2**
comp=Z,9.2nm,1.3s,mb4.7
JAVS Javornik 68.33 311 *i*P **P 14 57 10.2 +0.9**
GRA1 Grafenberg Arr 68.45 316 *e*P **P 14 57 10.0 0.0**
comp=Z,19nm,1.1s,mb5.0
GRF Grafenberg Arr 68.45 316 *e*P **P 14 57 10.0 0.0**
comp=Z,19nm,1.1s,mb5.0
GRF Grafenberg Arr 68.45 316 *e*P **P 14 57 10.0 0.0**
GRF pmax pmax
comp=Z,19nm,1.1s,mb5.0
GRF Grafenberg Arr 68.45 316 *e*P **P 14 57 10.0 0.0**
GRF pmax pmax
comp=Z,19nm,1.1s,mb5.0
GRF Grafenberg Arr 68.45 316 *e*P **P 14 57 10.0 0.0**
comp=Z,19nm,1.1s,mb5.0
PMR Palmer 68.49 30 *e*P **P 14 57 09.2 -0.8**
PMR pmax pmax
comp=Z,20nm,0.5s,mb5.4
PMR Palmer 68.49 30 *e*P **P 14 57 09.2 -0.8**
comp=Z,20nm,0.5s,mb5.4
KDAK Kodiak Island 68.77 34 LR LR 15 28 31.8
comp=Z,281nm,18.5s,MS4.5,slow=37
WTTA Wattenberg 69.26 313 *i*P **P 14 57 15.2 +0.2**
comp=Z,21nm,1.1s,mb5.0,SNR=6.9
MOTA Moosalm 69.55 314 ⇓*i*P **P 14 57 16.6 -0.2**
comp=Z,16nm,1.1s,mb4.9
FETA Feichten 69.92 313 ⇑*i*P **P 14 57 18.9 -0.2**
comp=Z,14nm,1.0s,mb4.8,SNR=6.0
DIV Divide 70.12 29 *e*P **P 14 57 20.3 +0.2**
INK Inuvik 70.19 20 LR LR 15 32 19.7
comp=Z,413nm,20.9s,MS4.7,baz=134,slow=40
INK Inuvik 70.19 20 *e*P **P 14 57 19.8 -0.6**
INK pmax pmax
comp=Z,10.0nm,0.6s
INK Inuvik 70.19 20 *e*P **P 14 57 19.8 -0.6**
comp=Z,9.9nm,0.6s,mb4.9
DAVOX Davos/Dischmat 70.55 314 P **P 14 57 22.7 -0.3**
comp=Z,7.4nm,0.6s,mb4.8,baz=68,slow=4.8,SNR=8.9
BMRM Bremner River 70.69 29 *e*P **P 14 57 23.2 -0.4**
comp=Z,31nm,0.9s,mb5.2
BFO Black Forest 70.76 315 *e*P **P 14 57 23.3 -1.0**
BFO pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BFO Black Forest 70.76 315 *e*P **P 14 57 23.3 -1.0**
comp=Z,9.4nm,1.2s,mb4.6
MEM Membach 71.03 318 P **P 14 57 26.2 +0.4**
CDF Champ du Feu 71.35 316 *e*P **P 14 57 27.3 -0.5**
comp=Z,49nm,1.4s,mb4.9
CDF Champ du Feu 71.35 316 *e*P **P 14 57 27.3 -0.5**
CDF pmax pmax
comp=Z,24nm,1.4s,mb4.9
CDF Champ du Feu 71.35 316 *e*P **P 14 57 27.3 -0.5**
comp=Z,24nm,1.4s,mb4.9
WLF Walferdange 71.40 317 P **P 14 57 28.6 +0.5**
comp=Z,24nm,1.5s,mb4.9
WLF Walferdange 71.40 317 *e*P **P 14 57 28.1 0.0**
WLF pmax pmax
comp=Z,43nm,1.2s,mb5.2
WLF Walferdange 71.40 317 *e*P **P 14 57 28.1 0.0**
comp=Z,43nm,1.2s,mb5.2
ECH Echery 71.51 316 *e*P **P 14 57 28.3 -0.5**
ECH pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ECH Echery 71.51 316 *e*P **P 14 57 28.2 -0.5**
comp=Z,7.7nm,1.1s,mb4.5
BCLA Clavier 71.51 318 P **P 14 57 29.7 +0.9**
comp=Z,4.2nm,1.2s,mb4.2
UCC Uccle 71.85 319 P **P 14 57 30.7 0.0**
HINF Hinteralfeld 71.88 316 *e*P **P 14 57 30.2 -0.8**
comp=Z,15nm,1.0s,mb4.6
HINF Hinteralfeld 71.88 316 *e*P **P 14 57 30.2 -0.8**
HINF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
HINF Hinteralfeld 71.88 316 *e*P **P 14 57 30.2 -0.8**
comp=Z,7.4nm,1.0s,mb4.6
GIVF Givet 71.94 318 *e*P **P 14 57 30.9 -0.4**
RES Resolute Bay 72.00 6 *e*P **P 14 57 31.1 -0.2**
RES pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
RES Resolute Bay 72.00 6 *e*P **P 14 57 31.1 -0.2**
comp=Z,9.3nm,1.1s,mb4.6
SNF Seneffe 72.04 319 P **P 14 57 31.7 -0.2**
comp=Z,4.8nm,1.4s,mb4.2
DOU Dourbes 72.07 318 P **P 14 57 31.8 -0.3**
HAU Haudompre 72.08 316 *e*P **P 14 57 31.6 -0.7**
HAU *e*MLR MLR
comp=Z,451nm,20.0s,MS4.4
HAU Haudompre 72.08 316 *e*P **P 14 57 31.6 -0.7**
HAU LR LR
comp=Z,450nm,20.0s,MS4.7
SUMG Summit 72.09 349 *e*P **P 14 57 31.6 -0.2**
comp=Z,13nm,1.0s,mb4.8
BAIF Baives 72.30 318 *e*P **P 14 57 33.3 -0.2**
comp=Z,22nm,1.0s,mb4.7
BAIF Baives 72.30 318 *e*P **P 14 57 33.3 -0.2**
BAIF pmax pmax
comp=Z,11nm,1.0s,mb4.7
BAIF Baives 72.30 318 *e*P **P 14 57 33.3 -0.2**
comp=Z,11nm,1.0s,mb4.8
KMBO Kilima Mbogo 72.53 257 P **P 14 57 35.7 +0.2**
comp=Z,7.0nm,0.8s,mb4.7,baz=46,slow=11,SNR=20
KMBO Kilima Mbogo 72.53 257 *e*P **P 14 57 36.1 +0.7**
KMBO *e* 14 57 42.9
KMBO pmax pmax
comp=Z,21nm,1.1s
KMBO Kilima Mbogo 72.53 257 *e*P **P 14 57 36.1 +0.7**
comp=Z,21nm,1.1s,mb5.0
KMBO *e* 14 57 42.9
MEZF Maizieres J'vi 72.60 317 *e*P **P 14 57 35.1 -0.2**
comp=Z,22nm,1.0s,mb4.7
MEZF Maizieres J'vi 72.60 317 *e*P **P 14 57 35.1 -0.2**
comp=Z,22nm,1.0s,mb5.0
STKA Stephens Creek 72.70 148 ⇓*i*P **P 14 57 35.2 -0.7**
comp=Z,7.7nm,0.7s,mb4.7
STKA Stephens Creek 72.70 148 P **P 14 57 35.3 -0.6**
comp=Z,12nm,0.9s,mb4.8,baz=334,slow=6.4,SNR=33
STKA LR LR 15 30 36.3
comp=Z,183nm,19.8s,MS4.3,baz=115,slow=37
STKA Stephens Creek 72.70 148 *e*P **P 14 57 34.9 -1.0**
comp=Z,3.5nm,1.0s,mb4.2
CABF La Chapelle 72.92 315 *e*P **P 14 57 36.5 -0.8**
LPG La Plagne 73.07 313 *e*P **P 14 57 38.7 +0.5**
comp=Z,37nm,0.6s,mb5.2
LPG La Plagne 73.07 313 *e*P **P 14 57 38.7 +0.5**
LPG pmax pmax
comp=Z,18nm,0.6s,mb5.2
LPG La Plagne 73.07 313 *e*P **P 14 57 38.7 +0.5**
comp=Z,18nm,0.6s,mb5.2
LPL La Plagne 73.07 313 *e*P **P 14 57 38.6 +0.4**
comp=Z,49nm,0.8s,mb5.2
LPL La Plagne 73.07 313 *e*P **P 14 57 38.6 +0.4**
LPL pmax pmax
comp=Z,25nm,0.8s,mb5.2
LPL La Plagne 73.07 313 *e*P **P 14 57 38.6 +0.4**
comp=Z,25nm,0.8s,mb5.2
BNI Bardonecchia 73.33 313 *e*P **P 14 57 39.5 -0.2**
BNI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
BNI Bardonecchia 73.33 313 *e*P **P 14 57 39.5 -0.2**
comp=Z,5.5nm,0.6s,mb4.7
MBDF Montbardon 73.44 313 *e*P **P 14 57 40.6 +0.2**
comp=Z,23nm,0.9s,mb4.8
MBDF Montbardon 73.44 313 *e*P **P 14 57 40.6 +0.2**
MBDF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MBDF Montbardon 73.44 313 *e*P **P 14 57 40.6 +0.2**
comp=Z,11nm,0.9s,mb4.8
ORIF Oris-en-Rattie 73.89 313 *e*P **P 14 57 42.8 -0.2**
comp=Z,27nm,0.7s,mb5.0
ORIF *e*MLR MLR
comp=Z,695nm,21.2s,MS4.6
ORIF Oris-en-Rattie 73.89 313 *e*P **P 14 57 42.8 -0.2**
ORIF pmax pmax
comp=Z,13nm,0.7s,mb5.0
ORIF Oris-en-Rattie 73.89 313 *e*P **P 14 57 42.8 -0.2**
comp=Z,13nm,0.7s,mb5.0
LOR Lormes 73.91 316 *e*P **P 14 57 42.1 -1.0**
comp=Z,16nm,1.1s,mb4.5
LOR *e*MLR MLR
comp=Z,369nm,22.0s,MS4.3
LOR Lormes 73.91 316 *e*P **P 14 57 42.1 -1.0**
LOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
LOR MLR MLR
comp=Z,370nm,22.0s,MS4.6
LOR Lormes 73.91 316 *e*P **P 14 57 42.1 -1.0**
comp=Z,7.9nm,1.1s,mb4.6
LOR LR LR
comp=Z,370nm,22.0s,MS4.6
SSF Saint Saulge 74.22 316 *e*P **P 14 57 44.2 -0.7**
comp=Z,12nm,0.9s,mb4.5
SSF Saint Saulge 74.22 316 *e*P **P 14 57 44.2 -0.7**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SSF Saint Saulge 74.22 316 *e*P **P 14 57 44.2 -0.7**
comp=Z,5.8nm,0.9s,mb4.5
SMF Signal de Mont 74.24 316 *e*P **P 14 57 44.4 -0.6**
comp=Z,29nm,1.0s,mb4.9
SMF Signal de Mont 74.24 316 *e*P **P 14 57 44.4 -0.6**
SMF pmax pmax
comp=Z,15nm,1.0s,mb4.9
SMF Signal de Mont 74.24 316 *e*P **P 14 57 44.4 -0.6**
comp=Z,15nm,1.0s,mb4.9
AVF Avril sur Loir 74.45 316 *e*P **P 14 57 45.7 -0.6**
comp=Z,27nm,1.0s,mb4.8
AVF Avril sur Loir 74.45 316 *e*P **P 14 57 45.7 -0.6**
AVF pmax pmax
comp=Z,14nm,1.0s,mb4.8
AVF Avril sur Loir 74.45 316 *e*P **P 14 57 45.7 -0.6**
comp=Z,14nm,1.0s,mb4.8
VIVF Saint-Julien-l 74.66 314 *e*P **P 14 57 46.9 -0.6**
SKAG Skagway 75.30 27 *e*P **P 14 57 51.1 +0.1**
comp=Z,27nm,0.8s,mb5.2
LDF La Druitiere 75.48 319 *e*P **P 14 57 51.6 -0.6**
comp=Z,34nm,1.3s,mb4.8
LDF La Druitiere 75.48 319 *e*P **P 14 57 51.6 -0.6**
LDF pmax pmax
comp=Z,17nm,1.3s,mb4.8
LDF La Druitiere 75.48 319 *e*P **P 14 57 51.6 -0.6**
comp=Z,17nm,1.3s,mb4.8
LASF Ste Croix 75.57 313 *e*P **P 14 57 52.6 -0.1**
comp=Z,19nm,1.1s,mb4.7
FLN La Foliniere 75.59 319 *e*P **P 14 57 52.0 -0.8**
FLN *e*MLR MLR
comp=Z,714nm,19.8s,MS4.7
FLN La Foliniere 75.59 319 *e*P **P 14 57 52.0 -0.8**
FLN LR LR
comp=Z,710nm,19.8s,MS5.0
ABPO Ambohimpanom 75.90 236 *e*P **P 14 57 54.6 -0.3**
ABPO pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ABPO Ambohimpanom 75.90 236 *e*P **P 14 57 54.6 -0.3**
comp=Z,8.6nm,0.9s,mb4.7
GRR Gorron 76.00 319 *e*P **P 14 57 54.8 -0.4**
comp=Z,34nm,1.0s,mb4.9
GRR Gorron 76.00 319 *e*P **P 14 57 54.8 -0.4**
GRR pmax pmax
comp=Z,17nm,1.0s,mb4.9
GRR Gorron 76.00 319 *e*P **P 14 57 54.8 -0.4**
comp=Z,17nm,1.0s,mb4.9
KEST Kesra 76.23 304 P **P 14 57 56.3 -0.4**
comp=Z,1.8nm,0.9s,mb4.0,baz=342,slow=8.1,SNR=4.1
RJF Les Rejaudoux 76.33 315 *e*P **P 14 57 57.3 +0.2**
comp=Z,31nm,1.3s,mb4.8
RJF Les Rejaudoux 76.33 315 *e*P **P 14 57 57.3 +0.2**
RJF pmax pmax
comp=Z,16nm,1.3s,mb4.8
RJF Les Rejaudoux 76.33 315 *e*P **P 14 57 57.3 +0.2**
comp=Z,16nm,1.3s,mb4.8
ARMA Armidale 76.44 140 *e*P **P 14 57 58.1 +0.4**
MFF Saint Martin d 76.59 317 *e*P **P 14 57 58.5 0.0**
comp=Z,35nm,1.1s,mb4.9
MFF Saint Martin d 76.59 317 *e*P **P 14 57 58.5 0.0**
MFF pmax pmax
comp=Z,17nm,1.1s,mb4.9
MFF Saint Martin d 76.59 317 *e*P **P 14 57 58.5 0.0**
comp=Z,17nm,1.1s,mb4.9
ROSF Rostrenen 77.36 320 *e*P **P 14 58 03.9 +1.1**
comp=Z,38nm,1.2s,mb4.9
ROSF Rostrenen 77.36 320 *e*P **P 14 58 03.9 +1.1**
ROSF pmax pmax
comp=Z,19nm,1.2s,mb4.9
ROSF Rostrenen 77.36 320 *e*P **P 14 58 03.9 +1.1**
comp=Z,19nm,1.2s,mb4.9
QUIF Quistinic 77.55 319 *e*P **P 14 58 04.6 +0.7**
comp=Z,21nm,1.0s,mb4.7
QUIF Quistinic 77.55 319 *e*P **P 14 58 04.6 +0.7**
QUIF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
QUIF Quistinic 77.55 319 *e*P **P 14 58 04.6 +0.7**
comp=Z,10nm,1.0s,mb4.7
SFJD Kangerlussuaq 78.95 351 *i*P **P 14 58 11.2 -0.1**
SFJD pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SFJD Kangerlussuaq 78.95 351 *i*P **P 14 58 11.2 -0.1**
comp=Z,7.3nm,0.8s,mb4.7
TOO Toolangi 79.21 149 *e*P **P 14 58 12.7 -0.3**
DZM Mont Dzumac 79.63 125 *e*P **P 14 58 15.1 -0.6**
DZM Mont Dzumac 79.63 125 *e*P **P 14 58 16.4 +0.8**
comp=Z,25nm,0.8s,mb5.2
YKA Yellowknife Ar 79.75 18 P **P 14 58 15.1 -0.6**
comp=Z,4.7nm,0.7s,mb4.6,baz=329,slow=5.3,SNR=63
YKA PKKPbc PKKPbc 15 16 59.5 -3.2
comp=Z,0.7nm,0.5s,baz=156,slow=1.9,SNR=15
YKA Yellowknife Ar 79.75 18 P **P 14 58 15.2 -0.6**
YKA PKKPbc PKKPbc 15 16 59.5 -3.2
FCC Fort Churchill 87.38 10 *e*P **P 14 58 54.2 -0.8**
FCC pmax pmax
comp=Z,1.0nm,1.3s,mb3.9
FCC Fort Churchill 87.38 10 *e*P **P 14 58 54.2 -0.8**
comp=Z,0.5nm,1.3s
FFC Flin Flon 89.71 16 P **P 14 59 05.1 -1.0**
comp=Z,50nm,0.7s,mb6.0,SNR=5.1
FFC Flin Flon 89.71 16 *c*e*P **P 14 59 05.8 -0.3**
FFC Flin Flon 89.71 16 *e*P **P 14 59 05.4 -0.7**
comp=Z,18nm,1.3s,mb5.2
ETW Entiat 90.02 29 *e*P **P 14 59 08.1 +0.4**
comp=Z,3.4nm,0.7s,mb4.8
BSMT Bassoo Peak 91.97 26 *e*P **P 14 59 17.2 +0.5**
comp=Z,5.8nm,1.1s,mb4.8
YBMT Yellow Bay 92.25 25 P **P 14 59 19.1 +1.1**
SCHQ Schefferville 92.55 356 P **P 14 59 19.0 -0.2**
comp=Z,2.3nm,0.3s,mb5.0,baz=24,slow=3.3,SNR=11
SCHQ Schefferville 92.55 356 P **P 14 59 19.0 -0.2**
SLMT Seeley Lake 92.96 25 *e*P **P 14 59 21.5 +0.2**
comp=Z,4.8nm,0.7s,mb5.0
CHMT Chamberlain Mo 93.33 26 *e*P **P 14 59 23.0 0.0**
TORD Torodi Ar. Bea 94.35 289 P **P 14 59 27.7 -0.6**
comp=Z,0.5nm,0.7s,mb4.1,baz=69,slow=4.3,SNR=6.3
TORD Torodi Ar. Bea 94.35 289 P **P 14 59 27.7 -0.6**
NVAR Mina Array Bea 98.26 33 PKKPbc PKKPbc 15 16 14.0 -2.8
comp=Z,0.5nm,0.5s,baz=151,slow=3.4,SNR=3.6
TXAR Lajitas Array 112.31 27 PKiKP PKiKP 15 04 43.8 -0.6
comp=Z,0.2nm,0.6s,baz=318,slow=1.2,SNR=3.2
TXAR PKKPbc PKKPbc 15 15 33.7 -0.5
comp=Z,1.5nm,0.8s,baz=157,slow=5.9,SNR=14
TXAR Lajitas Array 112.31 27 PKPdf PKiKP 15 04 43.8 -0.6
TXAR PKKPbc PKKPbc 15 15 33.7 -0.5
MAIT Maitri 121.78 203 *e*PKPab PKPdf 15 05 00.7 -0.4
VNA2 Neumayer--Watz 128.07 203 *e*PKPdf PKPdf 15 05 11.7 -1.5
baz=70,slow=2.8
VNA2 *e* 15 37 54.8
VNA2 *e* 15 47 56.7
OTAV Otavalo 146.98 7 *e*PKPbc PKPbc 15 05 52.0 +0.5
LPAZ La Paz 162.67 339 PKP PKPdf 15 06 10.9 +0.2
comp=Z,0.7nm,0.7s,baz=16,slow=7.4,SNR=3.1
PLCA Paso Flores 171.45 200 PKP PKPdf 15 06 16.6 +0.1
comp=Z,4.0nm,1.1s,baz=220,slow=2.2,SNR=4.6

NEIC ***12*** *14:49:09.8, 34°.88N×24°.60E, h33km, MD3.5(ATH), After ATH.*
CSEM ***12*** *14:49:09.8, 34°.88N×24°.60E, h33km, MD3.5, After ATH*
ATH 12 14:49:09.8, 34°.88N×24°.60E, h33km±2km, MD3.5/15, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.22**	**51**	*e*PB	Pb	14 49 16.4	-0.2
SIVA				*e*SB	Sb	14 49 22.0	+0.8
SIVA	**Sivas**	**0.22**	**51**	*e*Pb	Pb	14 49 16.4	-0.2
SIVA				*e*Sb	Sb	14 49 22.0	+0.8
GVD	**Gavdhos**	**0.42**	**265**	*e*PB	Pb	14 49 19.1	-0.1
GVD				*e*SB	Sb	14 49 27.1	+1.4
GVD	**Gavdhos**	**0.42**	**265**	*e*Pb	Pb	14 49 19.1	-0.1
GVD				*e*Sb	Sb	14 49 27.1	+1.4
IDI	**Anoyia**	**0.47**	**30**	*e*PB	Pb	14 49 20.4	+0.5
IDI				*e*SB	Sb	14 49 28.3	+1.4
IDI	**Anoyia**	**0.47**	**30**	*e*Pb	Pb	14 49 20.4	+0.5
IDI				*e*Sb	Sb	14 49 28.3	+1.4
VAM	**Vamos**	**0.62**	**328**	*e*PN	Pn	14 49 22.4	+0.1
VAM				*e*SN	Sn	14 49 32.0	+0.9
VAM	**Vamos**	**0.62**	**328**	*e*Pn	Pn	14 49 22.4	+0.1
VAM				*e*Sn	Sn	14 49 32.0	+0.9
KARN	**Karanos**	**0.76**	**313**	*e*PN	Pn	14 49 24.5	+0.2
KARN	**Karanos**	**0.76**	**313**	*e*Pn	Pn	14 49 24.5	+0.2
LAST	**Lasithi**	**0.77**	**68**	*e*PN	Pn	14 49 24.9	+0.5
LAST				*e*SN	Sn	14 49 36.9	+2.0
LAST	**Lasithi**	**0.77**	**68**	*e*Pn	Pn	14 49 24.9	+0.5
LAST				*e*Sn	Sn	14 49 36.9	+2.0
XRY	**Khrisi**	**0.90**	**90**	*e*PN	Pn	14 49 27.0	+0.9
XRY	**Khrisi**	**0.90**	**90**	*e*Pn	Pn	14 49 27.0	+0.9
NPS	**Neapolis**	**0.91**	**65**	*e*PN	Pn	14 49 27.7	+1.4
NPS				*e*SN	Sn	14 49 40.4	+2.1
NPS	**Neapolis**	**0.91**	**65**	*e*Pn	Pn	14 49 27.7	+1.4
NPS				*e*Sn	Sn	14 49 40.4	+2.1
ZKR	**Zakros**	**1.35**	**80**	*e*PN	Pn	14 49 35.1	+2.8
ZKR	**Zakros**	**1.35**	**80**	*e*Pn	Pn	14 49 35.1	+2.8
KYTH	**Kithira**	**1.89**	**318**	*e*PB	Pb	14 49 42.5	-1.2
KYTH	**Kithira**	**1.89**	**318**	*e*Pb	Pb	14 49 42.5	-1.2
KARP	**Karpathos**	**2.20**	**72**	*e*PB	Pb	14 49 47.2	-1.7
KARP	**Karpathos**	**2.20**	**72**	*e*Pb	Pb	14 49 47.2	-1.7
VLI	**Veliai**	**2.28**	**324**	*e*PN	Pn	14 49 47.8	+2.7
VLI	**Veliai**	**2.28**	**324**	*e*Pn	Pn	14 49 47.8	+2.7
APE	**Apeiranthos**	**2.31**	**19**	*e*PN	Pn	14 49 47.6	+2.1
APE	**Apeiranthos**	**2.31**	**19**	*e*Pn	Pn	14 49 47.6	+2.1
DID	**Didima**	**2.84**	**338**	*e*PN	Pn	14 49 55.2	+2.4
DID	**Didima**	**2.84**	**338**	*e*Pn	Pn	14 49 55.2	+2.4
ITM	**Ithomi**	**3.16**	**317**	*e*PN	Pn	14 49 59.4	+2.3
ITM	**Ithomi**	**3.16**	**317**	*e*Pn	Pn	14 49 59.4	+2.3

TAP ***12*** *14:51:43.2, 22°.80N×121°.71E, h13km, ML3.7, C*
JMA ***12*** *14:51:45.1±0.3, 22°.69N×121°.94E, h80km, M2.8*
ISC 12 14:51:41.6±0.4, 22°.82N±0°.02×121°.77E±0°.02, h6km±3km, n58, σ0°88/110, 6C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung** baz=327	**0.46**	**307**	⇑*i*P	**Pg**	**14 51 51.6**	**+1.0**

CHKT			S		Sg	14 51 57.3 +0.7
	baz=327					
TTN	**Taitung**	**0.58 264**	P		**Pg**	**14 51 53.4 +0.7**
	baz=265					
TTN			*i* S		**Sg**	**14 52 00.9 +0.7**
	baz=265					
TWG	**Pinlang**	**0.64 270**	P		**Pg**	**14 51 54.2 +0.2**
	baz=272					
TWG			S		**Sg**	**14 52 03.2 +0.9**
	baz=272					
TWF1	**Yuli**	**0.69 321⇑**	*i*P		**Pg**	**14 51 55.5 +0.7**
	baz=327					
TWF1			*e*S		**Sg**	**14 52 04.1 +0.4**
	baz=327					
ECL	**Taimali**	**0.78 254⇓**	*i*P		**Pg**	**14 51 56.4 -0.2**
	baz=254					
ECL			*e*S		**Sg**	**14 52 05.6 -1.2**
	baz=254					
ELDTW	**Lidau**	**0.78 298⇑**	*i*P		**Pg**	**14 51 56.5 -0.2**
	baz=315					
ELDTW			S		**Sg**	**14 52 06.3 -0.5**
	baz=315					
EHY	**Hungye**	**0.80 329**	P		**Pg**	**14 51 57.4 +0.5**
	baz=335					
EHY			*e*S		**Sg**	**14 52 06.7 -0.7**
	baz=335					
LAY	**Lan-yu**	**0.80 194**	P		**Pg**	**14 51 56.9 -0.1**
	baz=190					
LAY			S		**Sg**	**14 52 06.7 -0.7**
	baz=190					
TAW	**Tawu**	**0.93 240**	P		**Pg**	**14 51 58.8 -0.6**
	baz=250					
TAW			*e*S		**Sg**	**14 52 10.0 -1.4**
	baz=250					
EAST	**Anshuo**	**0.95 243⇓**	*i*P		**Pg**	**14 51 59.3 -0.6**
	baz=242					
EAST			*e*S		**Sg**	**14 52 10.3 -2.0**
	baz=242					
STYT	**Tauyuan**	**0.99 290⇑**	*i*P		**Pg**	**14 52 00.1 -0.5**
	baz=304					
STYT			*e*S		**Sg**	**14 52 13.1 -0.5**
	baz=304					
YUS	**Yu-Shan**	**1.00 312⇑**	*i*P		**Pg**	**14 52 01.0 +0.1**
	baz=317					
YUS			*e*S		**Sg**	**14 52 13.1 -0.9**
	baz=317					
ESL	**Shilin**	**1.04 343**	P		**Pg**	**14 52 01.4 -0.2**
	baz=356					
ESL			*e*S		**Sg**	**14 52 14.2 -0.8**
	baz=356					
SSD	**Sandimen**	**1.05 266**	*e*P		**Pg**	**14 52 00.9 -0.9**
	baz=267					
ALS	**Alishan**	**1.12 308⇑**	*i*P		**Pg**	**14 52 03.0 -0.1**
	baz=313					
ALS			*e*S		**Sg**	**14 52 18.1 +0.4**
	baz=313					
SGST	**Jiashian**	**1.12 284⇓**	*i*P		**Pg**	**14 52 03.4 +0.3**
	baz=286					
SGST			*e*S		**Sg**	**14 52 17.9 +0.2**
	baz=286					
WTP	**Ta-pu**	**1.14 292**	*e*P		**Pg**	**14 52 03.3 -0.3**
	baz=303					
WTP			*e*S		**Sg**	**14 52 19.1 +0.6**
	baz=303					
SCZT	**Fangliau**	**1.15 247**	*e*P		**Pg**	**14 52 03.2 -0.5**
	baz=254					
SCZT			*e*S		**Sg**	**14 52 17.6 -1.0**
	baz=254					
HWA	**Hwalien**	**1.16 353**	*e*P		**Pg**	**14 52 04.0 +0.1**
	baz=356					
SGLT	**Jiouru**	**1.18 266**	*e*P		**Pg**	**14 52 05.9 +1.6**
	baz=270					
SGLT			*e*S		**Sg**	**14 52 20.0 +0.4**
	baz=270					
CHN1	**Nanshi**	**1.20 288**	*i* P		**Pg**	**14 52 05.2 +0.6**
	baz=301					
CHN1			S		**Sg**	**14 52 21.1 +0.9**
	baz=301					
CHN4	**Tsaushan**	**1.20 296**	P		**Pg**	**14 52 04.7 -0.1**
	baz=307					
CHN4			*e*S		**Sg**	**14 52 20.7 +0.4**
	baz=307					
TWM1	**Shoushan**	**1.24 270**	*e*P		**Pg**	**14 52 05.5 +0.1**
	baz=271					
HEN	**Hengchun**	**1.25 230**	*e*P		**Pg**	**14 52 05.3 -0.3**
	baz=217					
HEN			*e*S		**Sg**	**14 52 19.9 -1.9**
	baz=217					
TWK	**Hsinying**	**1.26 291**	*e*P		**Pg**	**14 52 06.1 +0.3**
	baz=306					
TWK			*e*S		**Sg**	**14 52 22.3 +0.2**
	baz=306					
TWD	**Chiawan**	**1.27 353**	*e*P		**Pn**	**14 52 04.7 -1.2**
	baz=8.0					
TWD			*e*S		**Sg**	**14 52 20.7 -1.6**
	baz=8.0					
CHN5	**Tsauling**	**1.27 308**	P		**Pn**	**14 52 05.9 0.0**
	baz=322					
CHN5			*e*S		**Sg**	**14 52 22.9 +0.6**
	baz=322					
CHN3	**Shinhua**	**1.32 281**	*e*P		**Pn**	**14 52 07.9 +1.3**
	baz=283					
CHN3			*e*S		**Sb**	**14 52 27.1 +3.1**
	baz=283					
SMLT	**Sun Moon Lake**	**1.33 323**	P		**Pn**	**14 52 06.4 -0.3**
	baz=337					
SMLT			*e*S		**Sb**	**14 52 23.6 -0.6**
	baz=337					
TYC	**Yuchr**	**1.37 322**	*e*P		**Pn**	**14 52 07.2 -0.1**
	baz=337					
TYC			*e*S		**Sb**	**14 52 25.3 -0.1**
	baz=337					
TWP	**Hsiaoliuchiu**	**1.38 250**	*e*P		**Pn**	**14 52 07.5 0.0**
	baz=233					
CHN2	**Minshiung**	**1.39 301**	*e*P		**Pn**	**14 52 07.1 -0.4**
	baz=306					
CHN2			*e*S		**Sb**	**14 52 26.6 +0.7**
	baz=306					
WHF	**Hehuan Shan**	**1.40 341**	P		**Pn**	**14 52 07.2 -0.5**
	baz=345					
WHF			*e*S		**Sb**	**14 52 23.7 -2.6**
	baz=345					
WGK	**Gukeng**	**1.41 308**	*e*P		**Pn**	**14 52 08.3 +0.5**
	baz=329					
WGK			*e*S		**Sb**	**14 52 26.5 0.0**
	baz=329					
CHY	**Chiayi**	**1.41 299**	*e*P		**Pn**	**14 52 07.8 -0.1**
	baz=304					
CHY			*e*S		**Sb**	**14 52 26.3 -0.3**
	baz=304					
WNT	**Mingjian**	**1.45 317**	*e*P		**Pn**	**14 52 09.2 +0.8**
	baz=322					
WNT			*e*S		**Sb**	**14 52 27.6 -0.2**
	baz=322					
SCLT	**Jiali**	**1.49 284**	*e*P		**Pn**	**14 52 08.2 -0.8**
	baz=287					
SCLT			*e*S		**Sn**	**14 52 29.8 +0.9**
	baz=287					
CHN8	**Yiju**	**1.53 290**	*e*P		**Pn**	**14 52 09.9 +0.4**
	baz=293					
CHN8			*e*S		**Sn**	**14 52 30.0 +0.3**
	baz=293					
TWT	**Tachien**	**1.53 339**	*e*P		**Pn**	**14 52 09.9 +0.4**
	baz=355					
TWT			*e*S		**Sn**	**14 52 27.6 -2.1**
	baz=355					
ENA	**Nanau**	**1.60 359**	P		**Pn**	**14 52 09.9 -0.6**
	baz=12					
ENA			*e*S		**Sn**	**14 52 30.0 -1.6**
	baz=12					
NNS	**Nan Shan**	**1.65 347**	*e*P		**Pn**	**14 52 11.3 0.0**
	baz=351					
NNS			*e*S		**Sn**	**14 52 31.2 -1.6**
	baz=351					
TCU	**Taichung**	**1.66 323**	*e*P		**Pn**	**14 52 12.6 +1.3**
	baz=328					
TCU			*e*S		**Sn**	**14 52 33.4 +0.4**
	baz=328					
TWQ1	**Liyutan**	**1.77 329**	*e*P		**Pn**	**14 52 14.2 +1.4**
	baz=334					
TWQ1			*e*S		**Sn**	**14 52 36.0 +0.2**
	baz=334					
TWC	**Suao**	**1.78 2**	P		**Pn**	**14 52 13.0 0.0**
	baz=15					
TWC			*e*S		**Sn**	**14 52 35.2 -0.8**
	baz=15					
NSY	**Sanyi**	**1.84 330**	*e*P		**Pn**	**14 52 15.0 +1.2**
	baz=334					
NSY			*e*S		**Sn**	**14 52 37.9 +0.6**
	baz=334					
NSK	**Sanguang**	**1.89 349**	P		**Pn**	**14 52 14.9 +0.4**
	baz=352					
NSK			*e*S		**Sn**	**14 52 37.3 -1.3**
	baz=352					
TWE	**Neicheng**	**1.90 357**	*e*P		**Pn**	**14 52 14.9 +0.3**
	baz=10.0					
TWE			*e*S		**Sn**	**14 52 38.6 -0.2**
	baz=10.0					
NSTT	**Nanjuang**	**1.94 339**	*e*P		**Pn**	**14 52 16.4 +1.3**
	baz=352					
NSTT			*e*S		**Sn**	**14 52 39.0 -0.8**
	baz=352					
YOJ	**Yonaguni jima**	**1.99 35**	P		**Pn**	**14 52 17.9 +2.0**
TWA	**Mucha**	**2.16 356**	*e*P		**Pn**	**14 52 18.8 +0.7**
	baz=358					
TWA			*e*S		**Sn**	**14 52 45.0 -0.3**
	baz=358					
TWB1	**Santiao Chiao**	**2.19 5**	*e*P		**Pn**	**14 52 18.6 0.0**
	baz=18					
TWB1			*e*S		**Sn**	**14 52 45.2 -0.9**
	baz=18					
HATJ	**Hateruma jima**	**2.24 56**	P		**Pn**	**14 52 20.1 +0.8**
HATJ			*e*S		**Sn**	**14 52 46.5 -0.8**
NWF	**Wu-fen Shan**	**2.24 0**	*e*P		**Pn**	**14 52 20.4 +1.0**
	baz=351					
NWF			*e*S		**Sn**	**14 52 47.9 +0.6**
	baz=351					
TWS1	**Kuangyinshan**	**2.29 352**	*e*P		**Pn**	**14 52 22.7 +2.7**
	baz=354					
IRIF	**Iriomote-Funau**	**2.35 50**	P		**Pn**	**14 52 21.8 +1.0**
IRIF			*e*S		**Sn**	**14 52 50.3 +0.3**
JKRS	**Kuro-shima**	**2.50 55**	P		**Pn**	**14 52 23.9 +1.1**
JKRS			*e*S		**Sn**	**14 52 53.1 -0.5**
JIJ	**Ishigaki jima**	**2.67 54**	P		**Pn**	**14 52 26.0 +0.8**
JIJ			*e*S		**Sn**	**14 52 55.7 -2.1**
JTJ	**Tarama**	**3.24 55**	P		**Pn**	**14 52 34.4 +1.3**
JTJ			*e*S		**Sn**	**14 53 11.6 -0.5**

ISCJB ***12*** *14:55:26.7±0.7, 32°.07N±0°.05×105°.35E±0°.10, h10km, mb3.8/8, Error ellipse: s-maj=12.3km s-min=6.8km az=160.2*
IDC ***12*** *14:55:27.5±0.9, 31°.72N×104°.72E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/28, mbtmp3.6/8, ML3.2/2, Error ellipse: s-maj=34.7km s-min=18.7km az=56.0*
NEIC ***12*** *14:55:28.5±0.6, 31°.78N×104°.98E, h10km, mb4.2/2, Error ellipse: s-maj=17.3km s-min=10.8km az=49.0*
BJI ***12*** *14:55:28.0, 32°.36N×105°.14E, h10km, mb4.7/1, ML3.7/3, Ms4.1/2, Ms7 3.8/2*
ISC 12 14:55:28.8±0.7, 32°.07N±0°.05×105°.21E±0°.09, h10km, n14, σ0.98/17, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.08**	**115**	*e*Pg	**Pg**	**14 56 46.1**	**-0.9**
LZH	**Lanzhou**	**4.17**	**345**	*e*Pn	**Pn**	**14 56 36.2**	**+3.8**
LZH				Pg	**Pg**	**14 56 47.2**	**-1.4**
LZH				Sg	**Sb**	**14 57 31.7**	**-0.8**
LZH				smax			
	comp=N,530nm,0.7s						
LZH				smax			
	comp=E,470nm,0.6s						
LZH				LR	LR		
	comp=N,1μm,7.2s						
LZH				LR	LR		
	comp=Z,1μm,8.5s						
HHC	**Hu-ho-hao-te**	**10.14**	**28**	*e*P	**Pn**	**14 57 54.6**	**+0.1**
HHC				PP		14 58 02.6	
HHC				S	**Sn**	**14 59 48.5**	**+0.2**
HHC				SS		15 00 02.3	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				LR	LR		
	comp=N,710nm,5.2s						
HHC				LR	LR		
	comp=E,510nm,5.1s						
HHC				LR	LR		
	comp=Z,560nm,6.1s						
CMAR	**Chiang Mai Arr**	**14.68**	**204**	Pn	**Pn**	**14 58 50.1**	**-6.5**
	comp=Z,0.0nm,0.3s,baz=9.5,slow=12,SNR=2.5						
KSRS	**Korea Array**	**19.40**	**68**	P	**Pn**	**15 00 00.3**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=251,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**22.90**	**317**	P	**P**	**15 00 31.9**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.3,baz=136,slow=8.1,SNR=4.0						
KURK	**Kurchatov**	**27.06**	**321**	P	**P**	**15 01 12.0**	**+0.7**
	comp=Z,1.0nm,0.8s,mb3.4,baz=113,slow=7.1,SNR=3.6						
BVAR	**Borovoye Array**	**32.64**	**320**	P	**P**	**15 02 01.1**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=120,slow=5.7,SNR=2.7						
TIXI	**Tiksi**	**41.63**	**11**	P	**P**	**15 03 18.3**	**+1.6**
	comp=Z,3.5nm,1.1s,mb3.9						
WRAB	**Tennant Creek**	**58.76**	**148**	*e*P	**P**	**15 05 26.8**	**-0.4**
	comp=Z,2.9nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**58.77**	**148**	P	**P**	**15 05 27.0**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=339,slow=7.3,SNR=7.9						
WB2	**Warramunga Arr**	**58.77**	**148**	*e*P	**P**	**15 05 26.8**	**-0.4**
ASAR	**Alice Springs**	**61.84**	**150**	P	**P**	**15 05 48.0**	**-0.2**
	comp=Z,1.0nm,0.8s,mb4.0,baz=330,slow=6.4,SNR=7.4						
YKA	**Yellowknife Ar**	**80.49**	**18**	P	**P**	**15 07 43.6**	**+3.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=329,slow=5.3,SNR=7.9						

ISCJB ***12*** *15:02:08.6±0.6, 32°.14N±0°.04×104°.80E±0°.08, h10km, mb3.5/5, Error ellipse: s-maj=9.5km s-min=6.2km az=13.9*
IDC ***12*** *15:02:09.5±1.3, 31°.57N×103°.84E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.3/26, mbtmp3.4/5, Error ellipse: s-maj=301.4km s-min=20.0km az=54.0*
NEIC ***12*** *15:02:11.3±0.5, 31°.62N×103°.92E, h10km, Error ellipse: s-maj=29.8km s-min=9.1km az=223.0*
ISC 12 15:02:10.3±0.6, 32°.20N±0°.04×104°.85E±0°.08, h10km, n12, σ0.71/16, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.58**	**216**	Pg	**Sn**	**15 02 53.9**	**-5.1**
CD2				Sg	**Sg**	**15 03 00.4**	**-0.9**
CD2				smax			
	comp=N,6μm,0.8s						
LZH	**Lanzhou**	**3.97**	**348**	*e*Pg	**Pn**	**15 03 01.8**	**-9.4**
LZH				Sg	**Sn**	**15 04 02.5**	**+4.7**
LZH				smax			
	comp=N,68nm,1.0s						
LZH				smax			
	comp=E,51nm,1.0s						
LZH				LR	LR		
	comp=E,280nm,5.8s						
LZH				LR	LR		
	comp=Z,320nm,7.0s						
LZH	**Lanzhou**	**3.97**	**348**	*e*Pn	**Pb**	**15 03 20.5**	**+0.2**
LZH				Pg	**Pg**	**15 03 26.5**	**+0.2**
LZH				Sg	**Sg**	**15 04 16.6**	**-1.2**
LZH				smax			
	comp=N,150nm,0.6s						
LZH				smax			
	comp=E,160nm,0.6s						
ENH	**Enshi**	**4.41**	**115**	Pn	**Pb**	**15 03 26.2**	**-1.7**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**15 07 10.9**	**0.0**
	comp=E,0.4nm,0.6s,mb3.0,baz=119,slow=8.9,SNR=3.2						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**15 07 50.7**	**+0.5**
	comp=E,0.4nm,0.8s,mb3.0,baz=124,slow=11,SNR=3.4						
ABKAR	**Akbulak array**	**37.44**	**310**	*e*P	**P**	**15 09 23.9**	**+0.4**
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**15 11 56.1**	**+0.2**
	comp=E,2.8nm,0.9s,mb4.3,baz=151,slow=17,SNR=2.5						
WRA	**Warramunga Arr**	**59.04**	**147**	P	**P**	**15 12 11.0**	**+0.4**
	comp=E,0.7nm,0.9s,mb3.7,baz=328,slow=9.0,SNR=5.4						
WB2	**Warramunga Arr**	**59.04**	**147**	*e*P	**P**	**15 12 11.1**	**+0.6**
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**15 12 31.9**	**+0.5**
	comp=E,0.1nm,0.3s,mb3.4,baz=336,slow=6.6,SNR=5.7						
STKA	**Stephens Creek**	**72.58**	**148**	*e*P	**P**	**15 13 38.3**	**+0.6**

IDC ***12*** *15:04:48.4±1.1, 31°.84N×104°.21E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/28, mbtmp3.4/6, ML3.7/1, MS4.2/9, Ms1 4.2/9, ms1mx3.8/26, Error ellipse: s-maj=72.0km s-min=18.9km az=59.0*
NEIC ***12*** *15:04:50.1±0.6, 31°.78N×104°.08E, h10km, mb4.2/1, Error ellipse: s-maj=23.6km s-min=10.0km az=66.0*
ISC 12 15:04:50.4±0.8, 31°.8N±0°.1×104°.1E±0°.3, h10km, n10, σ0.83/11, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.88**	**199**	Pg	**Pg**	**15 04 59.8**	**-7.6**
CD2				Sg	**Sg**	**15 05 05.2**	**-14**
CD2				smax			
	comp=N,16μm,0.7s						
CMAR	**Chiang Mai Arr**	**14.03**	**201**	Pn	**Pn**	**15 08 09.2**	**-0.1**
	comp=N,0.1nm,0.3s,baz=4.0,slow=9.0,SNR=4.7						
MKAR	**Makanchi Array**	**22.49**	**318**	P	**P**	**15 09 50.0**	**+0.2**
	comp=N,0.2nm,0.7s,mb2.7,baz=138,slow=12,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.14**	**334**	P	**P**	**15 10 22.9**	**-1.6**
	comp=N,0.7nm,0.5s,mb3.5,baz=134,slow=10,SNR=2.3						
KURK	**Kurchatov**	**26.73**	**323**	P	**P**	**15 10 29.4**	**-0.4**
	comp=N,0.3nm,0.6s,mb3.0,baz=123,slow=10,SNR=2.5						
KIS	**Kishinev**	**57.99**	**309**	*e*	**P**	**15 14 45.0**	**+1.9**
WRAB	**Tennant Creek**	**59.01**	**146**	*e*P	**P**	**15 14 50.9**	**+0.5**
	comp=N,1.1nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**59.02**	**146**	P	**P**	**15 14 50.6**	**+0.2**
	comp=N,0.5nm,0.5s,mb3.8,baz=338,slow=7.7,SNR=5.0						
WB2	**Warramunga Arr**	**59.02**	**146**	*e*P	**P**	**15 14 50.6**	**+0.1**
ASAR	**Alice Springs**	**62.05**	**149**	P	**P**	**15 15 10.8**	**-0.4**
	comp=N,0.2nm,0.5s,mb3.5,baz=343,slow=7.3,SNR=4.4						

BJI ***12*** *15:05:30.0, 31°.20N×103°.79E, h17km, mB5.2/18, mb5.0/32, ML5.1/11, Ms5.2/43, Ms7 4.9/31*
ISCJB ***12*** *15:05:30.8±0.6, 31°.21N±0°.02×103°.72E±0°.02, h28km±4km, mb4.9/147, MS4.7/30, Error ellipse: s-maj=3.6km s-min=3.2km az=29.0*
MOS ***12*** *15:05:31.6±0.7, 31°.21N×103°.76E, h34km, mb5.1/71, MS4.7/19, Error ellipse: s-maj=7.3km s-min=4.2km az=116.0*
IDC ***12*** *15:05:31.9±3.8, 31°.22N×103°.73E, h24km±25km, mb4.7/34, mb1 4.7/36, mb1mx4.7/37, mbtmp4.6/36, ML4.0/2, MS4.3/16, Ms1 4.3/16, ms1mx4.1/36, Error ellipse: s-maj=13.3km s-min=9.2km az=52.0*
NEIC ***12*** *15:05:31.3±0.1, 31°.24N×103°.69E, mb5.0/96, MS4.8/5, Error ellipse: s-maj=3.6km s-min=2.8km az=218.0*
DJA ***12*** *15:05:35, 31°.20N×103°.80E, h44km, mb5.3/18*
SZGRF ***12*** *15:05:51.9, 32°.91N×101°.19E, h33km, mb5.0, Sichuan, China*
ISC 12 15:05:31.6±0.7, 31°.23N±0°.02×103°.69E±0°.02, h18km±4km, h24km±3.7km; pP-P, n404, σ0.98/418, mb4.9/147, MS4.7/30, 96C-9D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**170**	Pg	**Pg**	**15 05 35.9**	**-2.6**
CD2				Sg	**Sg**	**15 05 44.6**	**+1.4**
CD2				smax			
	comp=N,182μm,0.8s						
LZH	**Lanzhou**	**4.85**	**1**	Pg	**Pg**	**15 07 00.7**	**-3.8**
LZH				Sn	**Sn**	**15 07 41.8**	**+2.6**
LZH				Sg	**Sg**	**15 08 06.3**	**-1.0**
LZH				smax			
	comp=N,1μm,0.8s						
LZH				smax			
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=E,55μm,9.3s						
LZH				LR	LR		
	comp=Z,57μm,10.4s						
LZH	**Lanzhou**	**4.85**	**1**	*e*Pn	**Pb**	**15 06 55.1**	**-0.9**
LZH				Pg	**Pg**	**15 07 00.7**	**-3.8**
LZH				Sg	**Sg**	**15 08 06.3**	**-1.0**
LZH				smax			
	comp=N,1μm,0.8s						
LZH				smax			
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=E,55μm,9.3s						
LZH				LR	LR		
	comp=Z,57μm,10.4s						
ENH	**Enshi**	**5.08**	**99**	*e*P	**Pn**	**15 06 47.7**	**+1.0**
	comp=Z,2μm,1.0s						
GYA	**Guiyang**	**5.42**	**151**	Pn	**Pn**	**15 06 53.8**	**+2.4**
GYA				Sn	**Sn**	**15 07 59.3**	**+6.0**
GYA				smax			
	comp=N,2μm,1.0s						
GYA				smax			
	comp=E,3μm,1.0s						
KMI	**Kunming**	**6.14**	**188**	Pn	**Pn**	**15 07 01.9**	**+0.5**
KMI				Sn	**Sn**	**15 08 13.9**	**+2.8**
KMI				smax			
	comp=N,680nm,1.6s						
KMI				smax			
	comp=E,950nm,1.5s						
KMI				LR	LR		
	comp=N,11μm,10.5s						
KMI				LR	LR		
	comp=E,34μm,11.9s						
KMI				LR	LR		
	comp=Z,7μm,11.9s						
GTA	**Gaotai**	**8.76**	**340**	*e*P	**Pn**	**15 07 39.6**	**+2.4**
GTA				pP		15 07 44.2	
GTA				sP		15 07 46.9	
GTA				S	**Sn**	**15 09 17.8**	**+2.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,210nm,6.9s						
GTA				LR	LR		
	comp=N,6μm,13.5s						
GTA				LR	LR		
	comp=E,10μm,14.7s						
GTA				LR	LR		
	comp=Z,8μm,10.5s						
WHN	**Wuhan**	**9.18**	**92**	P	**Pn**	**15 07 43.2**	**+0.1**
WHN				S	**Sn**	**15 09 21.3**	**-4.7**
WHN				LR	LR		
	comp=N,38μm,7.1s						
WHN				LR	LR		
	comp=E,14μm,6.5s						
WHN				LR	LR		
	comp=Z,18μm,7.4s						
BTO	**Baotou**	**10.67**	**27**	*e*P	**Pn**	**15 07 59.8**	**-3.6**
BTO				S	**Sn**	**15 09 53.9**	**-8.4**
BTO				LR	LR		
	comp=N,2μm,8.4s						
BTO				LR	LR		
	comp=E,2μm,10.0s						
LSA	**Lhasa**	**10.93**	**265**	P	**Pn**	**15 08 08.0**	**+0.9**
LSA				LR	LR		
	comp=N,7μm,15.9s						
LSA				LR	LR		
	comp=E,3μm,13.4s						
LSA				LR	LR		
	comp=Z,4μm,10.9s						
LSA	**Lhasa**	**10.93**	**265**	*e*P	**Pn**	**15 08 08.8**	**+1.7**
LSA				pmax	pmax		
	comp=Z,34nm,0.8s						
LSA	**Lhasa**	**10.93**	**265**	*e*P	**Pn**	**15 08 08.8**	**+1.8**
	comp=Z,34nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.52**	**31**	*e*P	**Pn**	**15 08 15.9**	**+0.9**
HHC				pP		15 08 19.3	
HHC				PP		15 08 25.4	
HHC				S	**Sn**	**15 10 25.8**	**+2.7**
HHC				SS		15 10 39.8	
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,460nm,4.7s						
HHC				LR	LR		
	comp=N,3μm,5.1s						
HHC				LR	LR		
	comp=E,3μm,5.5s						
HHC				LR	LR		
	comp=Z,2μm,5.9s						
GZH	**Guangzhou**	**11.81**	**131**	P	**Pn**	**15 08 15.6**	**-3.5**
GZH				S	**Sn**	**15 10 24.4**	**-6.0**
GZH				LR	LR		
	comp=N,5μm,10.1s						
GZH				LR	LR		
	comp=E,4μm,10.5s						
SHL	**Shillong**	**11.82**	**244**	*e*P	**Pn**	**15 08 19.0**	**-0.3**
SHL				*ex*	x	15 11 53.0	
TIA	**Tai'an**	**12.23**	**62**	P	**Pn**	**15 08 24.0**	**-0.9**
TIA				S	**Sn**	**15 10 41.0**	**+0.3**
TIA				LR	LR		
	comp=N,3μm,5.0s						
TIA				LR	LR		
	comp=E,3μm,6.0s						
NJ2	**Nanjing**	**12.95**	**82**	*e*P	**Pn**	**15 08 34.2**	**-0.4**
NJ2				pP		15 08 40.7	
NJ2				PP		15 08 45.5	

NJ2 sP 15 08 46.7
NJ2 S **Sn** **15 10 52.1 -6.1**
NJ2 sS 15 11 03.3
NJ2 pmax pmax
comp=Z,60nm,1.2s
NJ2 pmax pmax
comp=Z,210nm,4.0s
NJ2 LR LR
comp=N,7μm,7.0s
NJ2 LR LR
comp=E,8μm,9.0s
NJ2 LR LR
comp=Z,22μm,9.2s
CHTO Chiang Mai 13.09 200 *e*P **Pn** **15 08 38.4 +1.8**
CHTO pmax pmax
comp=Z,29nm,0.8s
CHTO Chiang Mai 13.09 200 *e*P **Pn** **15 08 38.4 +1.8**
comp=Z,29nm,0.8s
QIZ Qiongzhong 13.36 154 P **Pn** **15 08 39.9 -0.4**
QIZ pP 15 08 45.6
QIZ sP 15 08 52.1
QIZ S **Sn** **15 11 09.4 +1.1**
QIZ pmax pmax
comp=Z,27nm,0.8s
QIZ LR LR
comp=N,6μm,8.8s
QIZ LR LR
comp=Z,8μm,9.8s
BJI Beijing 13.42 46 P **Pn** **15 08 36.1 -4.9**
BJI pmax pmax
comp=Z,8.0nm,0.9s
BJI LR LR
comp=N,2μm,9.4s
BJI LR LR
comp=E,2μm,9.4s
BJI LR LR
comp=Z,270nm,17.9s
CM31 Chiang Mai Arr 13.42 200 *e*Pn **Pn** **15 08 42.7 +1.5**
comp=Z,25nm,0.6s
CM31 *e*pP 15 08 51.5
CMAR Chiang Mai Arr 13.42 200 Pn **Pn** **15 08 41.5 +0.4**
comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=25
CMAR Lg 15 12 50.7
baz=28,slow=26,SNR=3.5
CMAR LR LR 15 14 10.2
comp=Z,861nm,20.4s,baz=350,slow=39
QZH Quanzhou 14.56 112 *e*P **Pn** **15 08 57.7 +1.0**
QZH S **Sn** **15 11 38.8 +1.2**
QZH LR LR
comp=N,6μm,5.0s
QZH LR LR
comp=E,7μm,6.3s
QZH LR LR
comp=Z,11μm,9.8s
GUN Gumba 15.85 262 *e*P **Pn** **15 09 11.8 -2.0**
comp=Z,277nm,1.0s
PKI Pulchoki 16.34 262 *e*P **Pn** **15 09 17.9 -2.2**
comp=Z,316nm,1.1s
PKIN Phulchoki 16.35 262 *e*P **Pn** **15 09 18.4 -1.9**
comp=Z,176nm,0.7s
KKN Kakani 16.39 263 *e*P **Pn** **15 09 18.5 -2.2**
comp=Z,237nm,0.8s
DL2 Dalian 16.55 58 P **Pn** **15 09 24.2 +1.6**
DL2 pmax pmax
comp=Z,40nm,1.2s
DMN Daman 16.59 262 *e*P **Pn** **15 09 21.4 -1.9**
comp=Z,202nm,0.8s
SONM Songino Array 16.71 6 Pn **Pn** **15 09 24.9 +0.2**
comp=Z,0.4nm,0.3s,baz=188,slow=13,SNR=32
SONM Lg 15 14 28.0
comp=Z,0.2nm,0.3s,baz=193,slow=18,SNR=2.9
SONM LR LR 15 16 28.3
comp=Z,3μm,21.4s,baz=185,slow=39
ULN Ulaanbaatar 16.81 8 *e*P **Pn** **15 09 26.1 +0.2**
ULN pmax pmax
comp=Z,33nm,1.0s
ULN Ulaanbaatar 16.81 8 *e*P **Pn** **15 09 26.1 +0.2**
comp=Z,33nm,1.0s
TATO Taipei 16.88 107 Pn **Pn** **15 09 26.9 0.0**
YHNB Yeheng 16.93 108 *e*P **Pn** **15 09 26.5 -1.0**
comp=Z,151nm,1.2s
SSLB Suanglung 17.00 112 *e*P **Pn** **15 09 29.8 +1.4**
comp=Z,167nm,0.9s
NACB Ninganchiao 17.33 110 *e*P **Pn** **15 09 34.8 +2.3**
comp=Z,83nm,0.9s
TWG Pinlang 17.59 114 *e*P **Pn** **15 09 36.9 +1.2**
comp=Z,58nm,0.9s
WMQ Urumqi 17.82 319 *e*P **Pn** **15 09 39.7 +1.2**
WMQ PP 15 09 54.3
WMQ S **Sn** **15 12 56.0 -0.7**
WMQ SS 15 13 18.2
WMQ PcP PcP 15 14 18.3 +3.3
WMQ pmax pmax
comp=Z,45nm,1.2s
WMQ pmax pmax
comp=Z,480nm,6.0s
WMQ LR LR
comp=N,1μm,15.0s
WMQ LR LR
comp=E,650nm,18.0s
WMQ LR LR
comp=Z,1μm,14.0s
SNY Shenyang 19.12 51 ⇓P **Pn** **15 09 53.8 -0.6**
SNY S **Sn** **15 13 20.6 -7.5**
SNY pmax pmax
comp=Z,28nm,0.5s
SNY LR LR
comp=N,1μm,7.2s
SNY LR LR
comp=E,1μm,13.2s
SNY LR LR
comp=Z,1μm,19.2s
ZAK Zakamensk 19.14 359 *e*P **Pn** **15 09 48.4 -6.1**
ZAK pmax pmax
comp=Z,25nm,1.1s
INCN Inchon 19.92 66 *e*P **Pn** **15 10 02.8 -1.1**
comp=Z,52nm,0.6s
PTH Pithoragarh 20.32 271 *e*P **P** **15 10 07.2 +0.6**
TLY Talaya 20.44 360 Pn **P** **15 10 10.6 +2.9**
comp=Z,112nm,0.7s,SNR=7.0
TLY Talaya 20.44 360 *e*P **P** **15 10 09.8 +2.1**
TLY *e* 15 10 28.5
TLY *e*SS 15 14 41.8
TLY pmax pmax
comp=Z,25nm,1.3s
TLY MLR MLR
comp=Z,3μm,13.0s,MS4.8
TLY Talaya 20.44 360 *e*P **P** **15 10 09.8 +2.1**
comp=Z,12nm,0.6s
MOY Mondy 20.52 355 *e*P **P** **15 10 10.9 +2.3**
MOY pmax pmax
comp=Z,118nm,2.1s
KSRS Korea Array 20.92 66 P **P** **15 10 13.2 +0.1**
comp=Z,94nm,0.7s,baz=263,slow=10,SNR=207
KSRS Korea Array 20.92 66 P **P** **15 10 13.3 +0.2**
KSRS pmax pmax
comp=Z,94nm,0.7s
IRK Irkutsk 21.00 1 *e*P **P** **15 10 15.5 +1.6**
IRK pmax pmax
comp=Z,218nm,1.2s,mb5.4
CN2 Changchun 21.26 48 *e*P **P** **15 10 17.6 +0.9**
CN2 *e*sP sP 15 10 28.0 +3.6
CN2 *e*S **S** **15 14 11.6 -0.6**
CN2 pmax pmax
comp=Z,190nm,1.1s,mb5.3
CN2 pmax pmax
comp=Z,500nm,5.0s
CN2 LR LR
comp=N,2μm,15.0s,MS4.6
CN2 LR LR
comp=E,1μm,15.0s,MS4.6
CN2 LR LR
comp=Z,1μm,16.0s,MS4.3
HIA Hailar 21.71 29 *e*P **P** **15 10 21.6 +0.1**
HIA pmax pmax
comp=Z,41nm,0.8s
HIA Hailar 21.71 29 *e*P **P** **15 10 21.6 +0.1**
comp=Z,40nm,0.8s,mb4.9
JOW Kunigami 21.92 95 P **P** **15 10 25.6 +1.7**
comp=Z,42nm,0.4s,mb5.2,baz=236,slow=4.8,SNR=5.7
CIT Chita 22.00 16 *e* **P** **15 10 29.2 +4.6**
CIT *e* 15 10 55.4
DDI Dehra Dun 22.04 274 *ex* **P** **15 10 28.0 +2.8**
JBP Jabalpur 22.53 255⇑ *e*P **P** **15 10 31.3 +0.8**
JBP *ex* x 15 10 53.9
comp=Z,68nm,1.4s

JBP *ex* x 15 14 57.0
MK31 Makanchi Array 22.66 319 *e*P **P** **15 10 31.9 +0.3**
MKAR Makanchi Array 22.66 319 P **P** **15 10 31.8 +0.2**
comp=Z,34nm,0.9s,mb4.8,baz=119,slow=9.9,SNR=52
MKAR ScP ScP 15 17 59.5 -1.1
comp=Z,2.4nm,0.8s,baz=112,slow=4.8,SNR=4.7
MKAR Makanchi Array 22.66 319 *ce*P **P** **15 10 31.7 +0.1**
MKAR pmax pmax
comp=Z,34nm,0.9s
MKAR Makanchi Array 22.66 319 P **P** **15 10 31.8 +0.2**
MKAR ScP ScP 15 17 59.5 -1.1
NDI New Delhi 23.06 270 *e*P **P** **15 10 35.0 -1.1**
NDI *ex* x 15 15 10.5
BHK Bhakra 23.29 278 *e*P **P** **15 10 40.2 +1.8**
KSH Kashi 24.00 298 P **P** **15 10 48.7 +3.6**
KSH *e*pP 15 10 52.7
KSH *e*sP sP 15 10 55.7 +2.6
KSH *e*PP 15 11 22.8
KSH *e*PcP PcP 15 14 29.8 +3.0
KSH S **S** **15 15 02.7 +1.5**
KSH *e*SS 15 15 55.5
KSH *e*PcS PcS 15 18 06.9 +0.5
KSH *e*ScS ScS 15 21 52.7 +1.3
KSH pmax pmax
comp=Z,58nm,1.1s,mb4.9
KSH LR LR
comp=N,1μm,9.8s
KSH LR LR
comp=E,1μm,7.9s
NGP Nagpur 24.24 251 *i* P **P** **15 10 46.8 -0.6**
NGP *ex* x 15 14 55.3
MDJ Mudanjiang 24.29 49 P **P** **15 10 48.9 +1.2**
MDJ pP 15 10 51.8
MDJ sP sP 15 10 53.1 -2.6
MDJ S **S** **15 15 08.3 +2.5**
MDJ sS sS 15 15 13.5 -1.5
MDJ ScP ScP 15 18 07.3 +2.3
MDJ PcS PcS 15 18 08.7 +1.7
MDJ pmax pmax
comp=Z,59nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,380nm,4.7s
MDJ Mudanjiang 24.29 49 *e*P **P** **15 10 47.1 -0.6**
comp=Z,101nm,1.3s,mb5.1
KZA Kyzart 25.15 303 P **P** **15 10 57.7 +2.1**
SNR=42
TKM2 Tokmak 2 25.16 306 P **P** **15 10 57.4 +1.8**
SNR=9.7
KBK Karagaybulak 25.53 305 P **P** **15 11 00.8 +1.8**
SNR=22
UCH Uchtor 25.72 303 P **P** **15 11 03.4 +2.7**
SNR=31
FRU Bishkek 25.82 305 *e*P **P** **15 11 03.0 +1.4**
FRU *i* 15 11 20.0
FRU pmax pmax
comp=Z,50nm,1.6s,mb4.8
FRU MLR MLR
comp=Z,20μm,11.0s,MS5.9
AAK Ala-Archa 25.84 304 P **P** **15 11 03.5 +1.7**
SNR=9.1
AAK Ala-Archa 25.84 304 P **P** **15 11 02.4 +0.5**
comp=Z,9.3nm,1.0s,mb4.3,baz=84,slow=7.6,SNR=4.0
AAK Ala-Archa 25.84 304⇑ *e*P **P** **15 11 03.1 +1.2**
AAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
AAK Ala-Archa 25.84 304 *e*P **P** **15 11 02.6 +0.7**
comp=Z,23nm,0.9s,mb4.7
AML Almayashu 26.28 303 P **P** **15 11 07.9 +2.1**
SNR=8.9
ZAA0 Zalesovo Array 26.46 335 *e*P **P** **15 11 07.2 -0.1**
ZALV Zalesovo Beam 26.46 335 P **P** **15 11 07.1 -0.2**
comp=Z,29nm,0.8s,mb4.9,baz=136,slow=8.6,SNR=77
HYB Hyderabad 26.64 245 *i* P **P** **15 11 07.0 -2.3**
KURK Kurchatov 26.94 324 P **P** **15 11 12.0 +0.3**
comp=Z,214nm,1.1s,mb5.6,SNR=21
KURK Kurchatov 26.94 324 P **P** **15 11 11.8 +0.2**
comp=Z,29nm,0.8s,mb4.8,baz=127,slow=9.6,SNR=87
KURK PcP PcP 15 14 32.4 -0.9
comp=Z,5.8nm,0.8s,baz=120,slow=2.2,SNR=4.4
KURK Kurchatov 26.94 324 *c i*P **P** **15 11 11.9 +0.2**
KURK pmax pmax
comp=Z,34nm,1.0s,mb4.8
KURK Kurchatov 26.94 324 *e*P **P** **15 11 11.7 0.0**
comp=Z,43nm,1.1s,mb4.9
BOD Bodaibo 27.52 12 *e*P **P** **15 11 16.2 -0.6**
BOD pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
KLR Kul'dur 27.73 42 *e*P **P** **15 11 14.3 -4.5**
KLR MLR MLR
comp=Z,2μm,11.0s,MS4.9
NVS Novosibirsk 27.74 334⇓ *i*P **P** **15 11 18.6 -0.2**
NVS *e* 15 14 29.4
NVS *e*S **S** **15 15 51.0 -9.2**
NVS pmax pmax
comp=Z,54nm,2.4s,mb4.8
NVS pmax pmax
comp=N,37nm,2.1s
NVS pmax pmax
comp=E,26nm,2.3s
NVS smax
comp=N,15nm,2.0s
NVS smax
comp=E,36nm,1.9s
MAJO Matsushiro 29.04 70 *e*P **P** **15 11 29.1 -1.5**
MAT Matsushiro 29.04 70 P **P** **15 11 29.1 -1.5**
MJAR Matsushiro Arr 29.04 70 P **P** **15 11 29.8 -0.8**
comp=E,6.3nm,0.7s,mb4.4,baz=274,slow=11,SNR=14
MJAR LR LR 15 24 19.8
comp=E,298nm,18.5s,MS3.9,baz=260,slow=39
MJAR Matsushiro Arr 29.04 70 P **P** **15 11 29.8 -0.8**
MJAR LR LR 15 24 19.8
KBL Kabul 29.20 286 *e*P **P** **15 11 33.2 +1.1**
KBL pmax pmax
comp=Z,27nm,1.0s,mb4.9
KBL Kabul 29.20 286 *e*P **P** **15 11 33.1 +1.1**
comp=Z,27nm,1.0s,mb4.9
HABR Khabarovsk 29.32 45 *e*P **P** **15 11 32.6 -0.4**
HABR *e**SP sP 15 11 44.8 +3.9
HABR *e* 15 12 26.3
HABR S **S** **15 16 23.1 -2.2**
HABR *e**SS sS 15 16 38.9 +4.3
HABR *e*SS SS 15 17 51.7 -38
HABR *e* 15 22 10.5
HABR pmax pmax
comp=Z,12nm,0.9s,mb4.6
HABR pmax pmax
comp=E,24nm,1.7s
HABR pmax pmax
comp=N,8.0nm,1.3s
HABR MLR MLR
comp=Z,312nm,16.0s,MS4.0
KSM Kuching 30.25 167 *e*P **P** **15 11 41.4 -0.1**
comp=Z,10nm,0.7s,mb4.7
BVAR Borovoye Array 32.48 322 P **P** **15 12 00.9 +0.2**
comp=Z,4.2nm,0.7s,mb4.3,baz=118,slow=9.5,SNR=27
BVAR PcP PcP 15 14 46.8 -0.6
comp=Z,8.8nm,0.7s,baz=148,slow=3.6,SNR=14
BVAR LR LR 15 25 23.0
comp=Z,976nm,18.3s,MS4.5,baz=21,slow=37
BVAR Borovoye Array 32.48 322 P **P** **15 12 00.9 +0.2**
BVAR 15 14 46.8
BRVK Borovoye 32.55 322 P **P** **15 12 01.8 +0.4**
comp=Z,94nm,0.7s,mb5.8,SNR=8.5
BRVK Borovoye 32.55 322 *e*P **P** **15 12 01.6 +0.2**
BRVK *e* 15 14 46.7
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.8
BRVK Borovoye 32.55 322 *e*P **P** **15 12 01.6 +0.2**
comp=Z,11nm,0.8s,mb4.8
BRVK *e*PcP PcP 15 14 46.7 -0.9
ASAJ Asahikawa 33.07 56 P **P** **15 12 05.2 -0.8**
comp=Z,10nm,0.8s,mb4.8,baz=265,slow=14,SNR=9.9
ASAJ Asahikawa 33.07 56 P **P** **15 12 05.2 -0.8**
ASAJ pmax pmax
comp=Z,11nm,0.8s
ERM Erimo 33.19 60 P **P** **15 12 07.9 +0.8**
comp=Z,129nm,0.5s,mb6.1,SNR=6.0
YSS Yuzh-Sakhalins 33.75 51 *e*P **P** **15 12 11.0 -0.9**
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.3
YSS Yuzh-Sakhalins 33.75 51 *e*P **P** **15 12 12.0 0.0**
comp=Z,28nm,1.2s,mb5.1
YAK Yakutsk 35.12 21 *c i*P **P** **15 12 22.9 -0.7**
YAK pmax pmax
comp=Z,43nm,0.9s,mb5.4

YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK MLR MLR
comp=E,463nm,12.0s,MS4.6
YAK MLR MLR
comp=Z,318nm,11.0s,MS4.3
YAK MLR MLR
comp=N,400nm,11.0s,MS4.6
YAK Yakutsk 35.12 21 *e*P **P** **15 12 22.8 -0.7**
comp=N,45nm,0.8s,mb5.5
ABKAR Akbulak array 37.33 312 *e*P **P** **15 12 42.8 +0.2**
comp=N,3.9nm,0.6s,mb4.4
ABKT Ailbek 37.82 293 P **P** **15 12 48.6 +1.6**
comp=N,299nm,0.7s,mb6.1,SNR=12
AKTK Aktyubinsk 38.80 313 P **P** **15 12 55.2 +0.2**
AKTK PcP PcP 15 15 06.1 0.0
AKTO Aktyubinsk 38.80 313 P **P** **15 12 55.2 +0.2**
comp=N,3.2nm,0.7s,mb4.2,baz=94,slow=8.1,SNR=8.5
AKTO PcP PcP 15 15 06.1 0.0
comp=N,4.2nm,0.7s,baz=78,slow=2.0,SNR=3.7
KAPI Kappang 39.16 154 P **P** **15 12 56.9 -1.5**
comp=N,42nm,0.9s,mb5.2,baz=339,slow=19,SNR=9.5
SVE Sverdlovsk 39.19 324⇑ *e*P **P** **15 12 59.2 +1.0**
SVE *e*S **S** **15 18 57.5 +0.2**
SVE pmax pmax
comp=Z,30nm,1.1s,mb4.9
SVE MLR MLR
comp=Z,566nm,13.0s,MS4.6
ARU Arti 40.12 322 P **P** **15 13 06.7 +0.7**
comp=Z,189nm,0.7s,mb5.9,SNR=6.0
ARU Arti 40.12 322 *c i*P **P** **15 13 06.1 +0.1**
ARU *e* 15 14 38.8
ARU S **S** **15 19 13.2 +2.0**
ARU SS SS 15 22 05.1 -3.7
ARU pmax pmax
comp=Z,26nm,1.0s,mb4.9
ARU Arti 40.12 322 *e*P **P** **15 13 05.9 0.0**
comp=Z,20nm,0.6s,mb5.0
GUMO Guam 41.63 106 LR LR 15 31 22.3
comp=Z,284nm,18.9s,MS4.2,baz=125,slow=37
SOKR Solikamsk 42.10 326 *d i*P **P** **15 13 23.1 +0.9**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.0
SOKR MLR MLR
comp=Z,360nm,17.0s,MS4.3
TIXI Tiksi 42.70 11 *e*P **P** **15 13 25.9 -1.0**
TIXI pmax pmax
comp=Z,29nm,1.4s,mb4.8
TIXI MLR MLR
comp=Z,542nm,11.0s,MS4.7
TIXI Tiksi 42.70 11 *e*P **P** **15 13 25.8 -1.1**
comp=Z,9.7nm,0.6s,mb4.7
SEY Seymchan 44.16 30⇑ *e*P **P** **15 13 37.8 -1.0**
PETK Petropavlovsk- 44.35 44 P **P** **15 13 39.7 -0.8**
comp=Z,8.7nm,0.7s,mb4.6,baz=224,slow=6.2,SNR=6.3
UMR Umm Al-Rimmam 47.87 283 *e*P **P** **15 14 07.9 -0.7**
UMR AMb AMB 15 14 09.1
comp=Z,57nm,1.1s,mb5.5
GNI Garni 47.94 298 *c i*P **P** **15 14 09.7 +0.8**
GNI pmax pmax
comp=Z,18nm,1.2s
KBD Kabd 48.00 283 *e*P **P** **15 14 08.4 -1.1**
KBD AMb AMB 15 14 10.2
comp=Z,33nm,1.0s,mb5.3
MIB Mutribah 48.12 284 *e*P **P** **15 14 09.8 -0.6**
MIB AMb AMB 15 14 11.0
comp=Z,123nm,0.9s,mb6.0
RDF Al-Radifah 48.20 282 *e*P **P** **15 14 10.9 -0.1**
RDF AMb AMB 15 14 12.2
comp=Z,106nm,0.8s,mb5.9
ZEI Tsey 48.21 301 *e*P **P** **15 14 10.7 -0.3**
ZEI pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KIV Kislovodsk 48.95 303 *e*P **P** **15 14 16.6 -0.1**
KIV pmax pmax
comp=Z,21nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,259nm,15.0s,MS4.3
KIV Kislovodsk 48.95 303 *e*P **P** **15 14 17.4 +0.7**
comp=Z,29nm,1.1s,mb5.2
BILL Bilibino 51.22 25 *c i*P **P** **15 14 32.9 -0.6**
BILL *e**PP pP 15 14 40.8 +1.5
BILL *e* 15 15 49.8
BILL *e*SS SS 15 25 24.9 -0.8
BILL pmax pmax
comp=Z,37nm,1.2s,mb5.2
BILL Bilibino 51.22 25 *e*P **P** **15 14 32.7 -0.8**
comp=Z,20nm,0.9s,mb5.0
MOS Moscow 51.54 319 *e*P **P** **15 14 44.5 +8.4**
MOS pmax pmax
comp=Z,52nm,0.7s,mb5.6
KAKA Kakadu 51.67 143⇑ *i*P **P** **15 14 34.8 -2.7**
comp=Z,25nm,0.8s,mb5.2
KAKA Kakadu 51.67 143 *e*P **P** **15 14 34.8 -2.7**
comp=Z,74nm,0.8s,mb5.7
OBN Obninsk 52.15 318⇑ *i*P **P** **15 14 40.6 -0.1**
OBN *e**PP pP 15 14 51.4 +4.9
OBN *e* 15 15 51.2
OBN pmax pmax
comp=Z,17nm,0.7s,mb5.1
KNA Kununurra 52.55 149 *e*P **P** **15 14 43.2 -0.8**
comp=Z,66nm,0.7s,mb5.7
ANN Anapa 52.57 305 *e*P **P** **15 14 41.8 -2.1**
ANN *e**PP pP 15 14 52.6 +2.8
ANN *e* 15 15 51.0
ANN *e* 15 16 41.3
ANN *e*PPP 15 17 44.1
ANN *e*S **S** **15 22 06.0 -4.0**
ANN *e*SS SS 15 25 47.9 -0.1
ANN pmax pmax
comp=Z,85nm,1.3s,mb5.5
MALT Malatya 53.10 297 ⇓P **P** **15 14 50.1 +2.2**
MALT Malatya 53.10 297⇓ *i*P **P** **15 14 50.1 +2.2**
FITZ Fitzroy Crossi 53.38 154⇑ *i*P **P** **15 14 49.2 -0.9**
comp=Z,19nm,0.7s,mb5.1
FITZ Fitzroy Crossi 53.38 154 P **P** **15 14 49.4 -0.7**
comp=Z,15nm,0.9s,mb4.9,baz=353,slow=5.2,SNR=33
FITZ Fitzroy Crossi 53.38 154 *e*P **P** **15 14 49.1 -1.0**
comp=Z,19nm,1.1s,mb4.9
APA Apatity 54.04 333⇑ *i*P **P** **15 14 55.5 +1.1**
APA MLR MLR
comp=Z,2μm,13.0s,MS5.4
MBWA Marble Bar 54.31 161 *e*P **P** **15 14 56.2 -0.6**
comp=Z,29nm,0.8s,mb5.3
MBWA *e*pP pP 15 15 03.0 +0.3
JOF Joensuu 54.74 328 *e*P **P** **15 14 57.6 -1.9**
JOF pmax pmax
comp=Z,13nm,0.7s,mb5.1
JOF Joensuu 54.74 328 *e*p **P** **15 14 57.6 -1.9**
comp=Z,13nm,0.7s,mb5.1
ASF Jabal al Asfar 55.97 290 P **P** **15 15 09.5 +0.6**
comp=Z,8.0nm,0.7s,mb4.9,baz=306,slow=4.1,SNR=14
BRTR Keskin Array B 56.38 299 P **P** **15 15 11.3 -0.4**
comp=Z,5.6nm,0.9s,mb4.6,baz=101,slow=6.5,SNR=5.3
BRTR PcP PcP 15 16 08.5 -0.2
comp=Z,3.9nm,0.8s,baz=114,slow=4.1,SNR=4.2
KEV Kevo 56.48 336 *e*P **P** **15 15 11.5 -0.4**
KEV pmax pmax
comp=Z,22nm,0.8s,mb5.2
KEV Kevo 56.48 336 *e*P **P** **15 15 11.4 -0.5**
comp=Z,22nm,0.8s,mb5.2
KEV Kevo 56.48 336 *e*p **P** **15 15 11.0 -0.9**
comp=Z,22nm,0.7s,mb5.3
MMAI Mount Meron Ar 56.91 291 P **P** **15 15 15.6 0.0**
comp=Z,0.5nm,0.4s,mb3.9,baz=94,slow=4.3,SNR=4.5
MMAI PcP PcP 15 16 11.4 +0.4
comp=Z,7.1nm,0.8s,baz=93,slow=5.8,SNR=6.1
ARCES ARCESS Array B 57.00 336 P **P** **15 15 15.5 -0.1**
comp=Z,13nm,0.8s,mb5.0,baz=76,slow=7.6,SNR=17
ARCES PcP PcP 15 16 10.2 -0.5
comp=Z,5.9nm,0.7s,baz=90,slow=3.2,SNR=9.2
ARCES ARCESS Array B 57.00 336 P **P** **15 15 15.5 -0.1**
ARCES PcP PcP 15 16 10.2 -0.5
AKASG Malin Array Be 57.04 313 P **P** **15 15 14.9 -1.4**
comp=Z,2.0nm,0.5s,mb4.4,baz=71,slow=6.6,SNR=12
AKASG LR LR 15 41 15.8
comp=Z,758nm,18.3s,MS4.8,baz=95,slow=38
AKASG Malin Array Be 57.04 313 *ce*P **P** **15 15 15.3 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 57.27 326 P **P** **15 15 17.1 -0.6**
comp=Z,9.6nm,0.9s,mb4.8,baz=101,slow=6.7,SNR=12
VSU Vasula 57.28 323 *e*P **P** **15 15 17.9 +0.1**
VSU pmax pmax

comp=Z,27nm,1.0s,mb5.2
WRAB Tennant Creek 58.77 146 P **P 15 15 28.0 -0.6**
comp=Z,634nm,0.7s,SNR=45
WRAB Tennant Creek 58.77 146 *e*P **P 15 15 28.4 -0.2**
WRAB pmax pmax
comp=Z,73nm,0.8s,mb5.8
WRAB Tennant Creek 58.77 146 *e*P **P 15 15 28.4 -0.2**
comp=Z,73nm,0.8s,mb5.8
WRA Warramunga Arr 58.77 146 P **P 15 15 28.3 -0.3**
comp=Z,35nm,0.5s,mb5.7,baz=338,slow=7.7,SNR=130
WB2 Warramunga Arr 58.78 146 *e*P **P 15 15 28.4 -0.2**
SPB4 Spitsbergen Ar 59.14 346 *e*P **P 15 15 30.2 -0.3**
ISP Isparta 59.24 298 P **P 15 15 31.6 -0.3**
ISP pmax pmax
comp=Z,39nm,0.8s,mb5.5
ISP Isparta 59.24 298 P **P 15 15 31.6 -0.2**
comp=Z,39nm,0.8s,mb5.5
BUR08 Bucovina Ar. S 60.29 310 *e*P **P 15 15 38.8 -0.1**
LVV L'vov 60.49 313 *e*P **P 15 15 39.9 -0.3**
KWP Kalwaria Pacla 61.37 313 *e*P **P 15 15 46.7 +0.5**
KWP pmax pmax
comp=Z,55nm,1.1s,mb5.6
KWP Kalwaria Pacla 61.37 313 *e*P **P 15 15 46.7 +0.5**
comp=Z,54nm,1.1s,mb5.6
ASAR Alice Springs 61.78 148 P **P 15 15 49.0 -0.1**
comp=Z,18nm,0.8s,mb5.2,baz=330,slow=6.6,SNR=100
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 15 50.1 +0.8**
KOLS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 15 50.1 +0.8**
comp=Z,2.2nm,0.7s,mb4.4
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 15 50.1 +0.8**
UZH Uzhgorod 61.90 312 *e*P **P 15 15 48.8 -1.0**
UZH *e* 15 16 25.0
STHS Stebnicka Huta 62.34 313 *e*P **P 15 15 53.3 +0.5**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
STHS Stebnicka Huta 62.34 313 *e*P **P 15 15 53.3 +0.5**
comp=Z,4.8nm,1.0s,mb4.6
STHS Stebnicka Huta 62.34 313 *e*P **P 15 15 53.3 +0.5**
NIE Niedzica 62.92 313 *e*P **P 15 15 57.5 +0.9**
OJC Ojcow 63.01 314 *e*P **P 15 15 57.3 +0.1**
KECS Kecovo 63.09 312 *e*P **P 15 15 58.6 +0.8**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.09 312 *e*P **P 15 15 58.6 +0.8**
comp=Z,2.2nm,0.8s,mb4.3
KECS Kecovo 63.09 312 *e*P **P 15 15 58.6 +0.8**
PSZ Piszkesteto 63.64 312 *e*P **P 15 16 01.6 +0.2**
PSZ pmax pmax
comp=Z,11nm,1.2s,mb4.8
PSZ Piszkesteto 63.64 312 *e*P **P 15 16 01.6 +0.1**
comp=Z,11nm,1.2s,mb4.8
VYHS Vyhne 64.13 313 *e*P **P 15 16 04.8 +0.1**
VYHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VYHS Vyhne 64.13 313 *e*P **P 15 16 04.8 +0.1**
comp=Z,3.6nm,0.9s,mb4.4
VYHS Vyhne 64.13 313 *e*P **P 15 16 04.8 +0.1**
OKC Ostrava-Krasne 64.14 314 *e*P **P 15 16 05.2 +0.5**
OKC MLR MLR
comp=Z,800nm,15.2s,MS5.0
OKC Ostrava-Krasne 64.14 314 *e*P **P 15 16 05.2 +0.5**
OKC AMS AMS 15 45 10.0
comp=Z,800nm,15.2s
NB2 NORSAR Subarra 64.37 327 P **P 15 16 04.6 -1.4**
comp=Z,8.4nm,0.8s,mb4.8,baz=72,slow=6.5
NOA NORSAR Array B 64.37 327 P **P 15 16 04.6 -1.3**
comp=Z,7.6nm,0.8s,mb4.8,baz=73,slow=6.4,SNR=18
KOLL Kolacno 64.38 313 *e*P **P 15 16 07.3 +1.0**
KOLL Kolacno 64.38 313 *e*P **P 15 16 07.3 +1.0**
MORC Moravsky Berou 64.53 314 *e*P **P 15 16 06.5 -0.8**
comp=Z,6.4nm,0.8s,mb4.7
MORC Moravsky Berou 64.53 314⇑*i*P **P 15 16 07.9 +0.7**
NWAO Narrogin (SRO) 65.08 167 P **P 15 16 10.8 0.0**
comp=Z,32nm,0.9s,mb5.3,baz=325,slow=9.5,SNR=8.0
DPC Dobruska-Polom 65.08 315 *e*P **P 15 16 11.1 +0.3**
DPC MLR MLR
comp=Z,900nm,15.9s,MS5.1
DPC Dobruska-Polom 65.08 315 *e*P **P 15 16 11.1 +0.3**
DPC AMS AMS 15 45 40.0
comp=Z,900nm,15.9s
CTA Charters Tower 65.36 136 *e*P **P 15 16 12.7 -0.2**
comp=Z,16nm,1.2s,mb4.9
FORT Forrest 65.86 157⇑*i*P **P 15 16 16.0 +0.1**
comp=Z,32nm,0.7s,mb5.5
FORT Forrest 65.86 157 *e*P **P 15 16 15.9 -0.1**
comp=Z,57nm,0.9s,mb5.6
TREC Trest 65.95 314 AMS AMS 15 46 00.0
comp=Z,800nm,15.1s
PVCC Panska Ves 66.08 316 *e*P **P 15 16 18.0 +0.8**
PVCC MLR MLR
comp=Z,800nm,14.4s,MS5.1
PVCC Panska Ves 66.08 316 *e*P **P 15 16 18.0 +0.8**
PVCC AMS AMS 15 46 20.0
comp=Z,800nm,14.4s
CONA Conrad Observa 66.20 313⇑*i*P **P 15 16 18.2 +0.1**
comp=Z,7.1nm,1.0s,mb4.7
PRU Pruhonice 66.28 315 *e*P **P 15 16 19.2 +0.6**
PRU MLR MLR
comp=Z,1μm,16.9s,MS5.1
PRU Pruhonice 66.28 315 *e*P **P 15 16 19.2 +0.6**
PRU AMS AMS 15 46 30.0
comp=Z,1μm,16.9s
BRG Berggiesshubel 66.33 316 *e*P **P 15 16 18.8 0.0**
comp=Z,9.5nm,0.9s,mb4.8
BRG *e* pP 15 16 24.5 -0.4
comp=Z,4.8nm,0.8s
BRG
comp=N,504nm,21.2s
BRG
comp=E,518nm,20.9s
BRG
comp=Z,768nm,16.4s
BRG Berggiesshubel 66.33 316 *e*P **P 15 16 18.8 -0.1**
BRG *e* pP 15 16 24.5 -0.4
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRG MLR MLR
comp=N,302nm,21.2s,MS4.6
BRG MLR MLR
comp=E,310nm,20.9s,MS4.6
BRG MLR MLR
comp=Z,460nm,16.4s,MS4.8
CLL Collm 66.73 317⇓*i*P **P 15 16 21.1 -0.3**
CLL pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
CLL MLR MLR
comp=Z,500nm,22.0s,MS4.7
CLL Collm 66.73 317⇓*i*P **P 15 16 21.1 -0.3**
comp=Z,9.0nm,1.0s,mb4.8
CLL *e* pP 15 16 26.0 -1.4
CLL LR LR
comp=Z,500nm,22.0s,MS4.7
CLL Collm 66.73 317⇓*i*P **P 15 16 21.1 -0.3**
comp=Z,9.0nm,1.0s,mb4.8
CLL *e*pP pP 15 16 26.0 -1.4
CLL *e* 15 16 45.0
CLL *e*PP PP 15 18 58.0 +10
SOKA Soboth 67.18 312⇓*i*P **P 15 16 24.0 -0.3**
comp=Z,8.3nm,0.9s,mb4.8
KHC Kasperske Hory 67.18 315 *e*P **P 15 16 24.7 +0.4**
KHC MLR MLR
comp=Z,900nm,15.5s,MS5.1
KHC Kasperske Hory 67.18 315 *e*P **P 15 16 24.7 +0.4**
KHC AMS AMS 15 47 00.0
comp=Z,900nm,15.5s
GEC2 GERESS Array S 67.21 314 *e*P **P 15 16 24.2 -0.3**
GEC2 pmax pmax
comp=Z,2μm,1.0s
GEC2 GERESS Array S 67.21 314 *e*P **P 15 16 24.2 -0.3**
comp=Z,2μm,1.0s
GERES GERESS Array B 67.21 314 P **P 15 16 24.2 -0.3**
comp=Z,4.2nm,0.9s,mb4.5,baz=75,slow=5.7,SNR=22
NKC Novy Kostel 67.45 316 *e*P **P 15 16 26.5 +0.5**
NKC MLR MLR
comp=Z,900nm,21.6s,MS5.0
NKC Novy Kostel 67.45 316 *e*P **P 15 16 26.5 +0.5**
NKC AMS AMS 15 47 10.0
comp=Z,900nm,21.6s
COLD Coldfoot 67.50 24 *e*P **P 15 16 25.9 -0.2**
comp=Z,30nm,0.9s,mb5.3
MOX Moxa 67.79 317 *e*P **P 15 16 27.9 -0.2**
comp=Z,9.0nm,1.3s,mb4.6
MOX Moxa 67.79 317 *e*P **P 15 16 27.9 -0.2**
MOX pmax pmax
comp=Z,15nm,1.3s,mb4.9
CHUM Lake Minchumin 68.23 28 *e*P **P 15 16 30.7 +0.1**
comp=Z,14nm,0.7s,mb5.1
GRA1 Grafenberg Arr 68.39 316 *e*P **P 15 16 32.3 +0.4**
comp=Z,10.0nm,1.0s,mb4.8
GRF Grafenberg Arr 68.39 316 *e*P **P 15 16 32.3 +0.4**
comp=Z,10.0nm,1.0s,mb4.8
GRF Grafenberg Arr 68.39 316 *e*P **P 15 16 32.3 +0.4**
GRF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GRF Grafenberg Arr 68.39 316 *e*P **P 15 16 32.3 +0.4**
GRF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GRF Grafenberg Arr 68.39 316 *e*P **P 15 16 32.3 +0.4**
comp=Z,10.0nm,1.0s,mb4.8
BPAW Bear Paw Mtn. 68.65 27 *e*P **P 15 16 33.1 -0.2**
comp=Z,14nm,0.7s,mb5.0
PPLA Purkeypile 68.72 28 *e*P **P 15 16 33.9 +0.2**
comp=Z,26nm,0.7s,mb5.3
WTTA Wattenberg 69.10 313⇑*i*P **P 15 16 35.9 -0.5**
comp=Z,10nm,1.1s,mb4.7
TRF Thorofare Moun 69.23 28 *e*P **P 15 16 38.2 +1.3**
comp=Z,8.7nm,0.8s,mb4.7
COLA College 69.47 26 *e*P **P 15 16 38.0 -0.4**
COLA pmax pmax
comp=Z,47nm,0.8s,mb5.5
COLA College 69.47 26 *e*P **P 15 16 38.0 -0.3**
comp=Z,47nm,0.8s,mb5.5
RSO Redoubt South 69.60 31 *e*P **P 15 16 39.0 -0.2**
MCK McKinley 69.62 27 *e*P **P 15 16 39.1 -0.2**
MCK pmax pmax
comp=Z,14nm,0.8s,mb4.9
MCK McKinley 69.62 27 *e*P **P 15 16 39.1 -0.2**
comp=Z,14nm,0.8s,mb5.0
CEL Celeste 69.88 303 *e*P **P 15 16 41.0 -0.4**
comp=Z,22nm,0.9s,mb5.1
KMBO Kilima Mbogo 70.59 256 P **P 15 16 47.2 +1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=46,slow=12,SNR=10
KMBO Kilima Mbogo 70.59 256 P **P 15 16 47.2 +1.1**
PMR Palmer 70.61 29 *e*P **P 15 16 44.4 -1.0**
PMR pmax pmax
comp=Z,32nm,0.8s,mb5.3
PMR Palmer 70.61 29 *e*P **P 15 16 44.4 -1.0**
comp=Z,32nm,0.8s,mb5.3
BFO Black Forest 70.69 315 *e*P **P 15 16 45.4 -0.7**
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BFO Black Forest 70.69 315 *e*P **P 15 16 45.4 -0.8**
comp=Z,7.8nm,1.0s,mb4.6
OHAK Old Harbor 70.86 34 *e*P **P 15 16 46.5 -0.5**
comp=Z,22nm,0.6s,mb5.3
MEM Membach 71.06 318 P **P 15 16 48.8 +0.5**
CDF Champ du Feu 71.28 316⇑*i*P **P 15 16 49.3 -0.5**
comp=Z,22nm,1.0s,mb4.7
CDF Champ du Feu 71.28 316⇑*i*P **P 15 16 49.3 -0.5**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 71.28 316⇑*i*P **P 15 16 49.3 -0.5**
comp=Z,11nm,1.0s,mb4.8
WLF Walferdange 71.39 317 P **P 15 16 51.1 +0.7**
comp=Z,20nm,1.2s,mb4.9
WLF Walferdange 71.39 317 *e*P **P 15 16 50.6 +0.2**
WLF pmax pmax
comp=Z,30nm,1.0s,mb5.2
WLF Walferdange 71.39 317 *e*P **P 15 16 50.6 +0.2**
comp=Z,30nm,1.0s,mb5.2
ECH Echery 71.44 315 *e*P **P 15 16 50.0 -0.7**
ECH pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ECH Echery 71.44 315 *e*P **P 15 16 50.0 -0.7**
comp=Z,5.4nm,0.9s,mb4.5
BCLA Clavier 71.55 318 P **P 15 16 51.1 -0.2**
comp=Z,13nm,0.9s,mb4.9
HINF Hinteralfeld 71.80 315⇑*i*P **P 15 16 52.2 -0.7**
comp=Z,16nm,1.0s,mb4.6
HINF Hinteralfeld 71.80 315⇑*i*P **P 15 16 52.2 -0.7**
HINF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
HINF Hinteralfeld 71.80 315⇑*i*P **P 15 16 52.2 -0.7**
comp=Z,8.1nm,1.0s,mb4.6
UCC Uccle 71.91 319 P **P 15 16 52.9 -0.6**
EGAK Eagle 71.93 24 *e*P **P 15 16 52.6 -0.7**
comp=Z,12nm,0.9s,mb4.8
GIVF Givet 71.96 318⇑*i*P **P 15 16 53.5 -0.3**
comp=Z,27nm,1.0s,mb4.8
GIVF Givet 71.96 318⇑*i*P **P 15 16 53.5 -0.3**
GIVF pmax pmax
comp=Z,14nm,1.0s,mb4.8
GIVF Givet 71.96 318⇑*i*P **P 15 16 53.5 -0.3**
comp=Z,14nm,1.0s,mb4.8
HAU Haudompre 72.02 316⇑*i*P **P 15 16 53.5 -0.7**
comp=Z,13nm,1.0s,mb4.5
HAU *e*MLR MLR
comp=Z,631nm,21.8s,MS4.5
HAU Haudompre 72.02 316⇑*i*P **P 15 16 53.5 -0.7**
HAU pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
HAU MLR MLR
comp=Z,630nm,21.8s,MS4.8
HAU Haudompre 72.02 316⇑*i*P **P 15 16 53.5 -0.7**
comp=Z,6.5nm,1.0s,mb4.5
HAU LR LR
comp=Z,630nm,21.8s,MS4.8
MENT Mentasta 72.05 26 *e*P **P 15 16 53.5 -0.6**
SNF Seneffe 72.09 319 P **P 15 16 54.6 +0.1**
comp=Z,4.9nm,1.3s,mb4.3
DOU Dourbes 72.10 318 P **P 15 16 54.6 0.0**
comp=Z,30nm,1.0s,mb5.2
INK Inuvik 72.16 19 P **P 15 16 54.3 -0.4**
comp=Z,29nm,0.8s,mb5.3,baz=329,slow=7.4,SNR=89
INK Inuvik 72.16 19 P **P 15 16 54.3 -0.3**
INK pmax pmax
comp=Z,29nm,0.8s
INK Inuvik 72.16 19 *e*P **P 15 16 54.1 -0.6**
comp=Z,29nm,0.8s,mb5.3
EIDS Eidsvold 72.25 136 *e*P **P 15 16 55.8 +0.1**
comp=Z,12nm,0.8s,mb4.9
STKA Stephens Creek 72.30 147⇑*i*P **P 15 16 55.5 -0.4**
comp=Z,14nm,0.6s,mb5.1
STKA Stephens Creek 72.30 147 P **P 15 16 55.6 -0.4**
comp=Z,18nm,0.6s,mb5.2,baz=330,slow=6.2,SNR=69
STKA Stephens Creek 72.30 147 *e*P **P 15 16 55.5 -0.5**
comp=Z,4.2nm,0.7s,mb4.5
BAIF Baives 72.34 318⇑*i*P **P 15 16 55.8 -0.2**
comp=Z,16nm,1.0s,mb4.6
BAIF Baives 72.34 318⇑*i*P **P 15 16 55.8 -0.2**
BAIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BAIF Baives 72.34 318⇑*i*P **P 15 16 55.8 -0.2**
comp=Z,8.2nm,1.0s,mb4.6
MEZF Maizieres J'vi 72.56 316 *e*P **P 15 16 57.1 -0.3**
comp=Z,13nm,0.9s,mb4.5
MEZF Maizieres J'vi 72.56 316 *e*P **P 15 16 57.1 -0.3**
comp=Z,13nm,0.9s,mb4.8
BMRM Bremner River 72.79 28 *e*P **P 15 16 58.5 0.0**
comp=Z,62nm,0.8s,mb5.6
PGF Pioggiola 72.80 310 *e*P **P 15 16 58.9 0.0**
comp=Z,57nm,1.0s,mb5.2
PGF Pioggiola 72.80 310 *e*P **P 15 16 58.9 0.0**
PGF pmax pmax
comp=Z,28nm,1.0s,mb5.2
PGF Pioggiola 72.80 310 *e*P **P 15 16 58.9 0.0**
comp=Z,28nm,1.0s,mb5.2
CABF La Chapelle 72.81 314⇑*i*P **P 15 16 58.4 -0.5**
comp=Z,24nm,1.1s,mb4.7
CABF La Chapelle 72.81 314⇑*i*P **P 15 16 58.4 -0.5**
CABF pmax pmax
comp=Z,12nm,1.1s,mb4.7
CABF La Chapelle 72.81 314⇑*i*P **P 15 16 58.4 -0.5**
comp=Z,12nm,1.1s,mb4.7
LPG La Plagne 72.91 313⇑*i*P **P 15 16 59.9 +0.4**
comp=Z,38nm,0.8s,mb5.1
LPG La Plagne 72.91 313⇑*i*P **P 15 16 59.9 +0.4**
LPG pmax pmax
comp=Z,19nm,0.8s,mb5.1
LPG La Plagne 72.91 313⇑*i*P **P 15 16 59.9 +0.4**
comp=Z,19nm,0.8s,mb5.1
LPL La Plagne 72.91 313⇑*i*P **P 15 16 59.8 +0.2**
comp=Z,36nm,0.9s,mb5.0
LPL La Plagne 72.91 313⇑*i*P **P 15 16 59.8 +0.2**
LPL pmax pmax
comp=Z,18nm,0.9s,mb5.0
LPL La Plagne 72.91 313⇑*i*P **P 15 16 59.8 +0.2**
comp=Z,18nm,0.9s,mb5.0
MBDF Montbardon 73.25 312⇑*i*P **P 15 17 02.4 +0.8**
comp=Z,16nm,1.0s,mb4.6
MBDF Montbardon 73.25 312⇑*i*P **P 15 17 02.4 +0.8**
MBDF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MBDF Montbardon 73.25 312⇑*i*P **P 15 17 02.4 +0.8**
comp=Z,8.1nm,1.0s,mb4.6
SUMG Summit 73.25 349 *e*P **P 15 17 00.8 -0.3**
comp=Z,17nm,1.0s,mb4.9
OPO Ambohidratompo 73.43 236 P **P 15 17 01.8 -1.1**
comp=Z,2.6nm,0.7s,mb4.3,baz=33,slow=5.9,SNR=6.5
RES Resolute Bay 73.65 5 *e*P **P 15 17 03.2 -0.2**
RES pmax pmax
comp=Z,18nm,1.0s,mb5.0
RES Resolute Bay 73.65 5 *e*P **P 15 17 03.2 -0.2**
comp=Z,18nm,1.0s,mb4.9
ESK Eskdalemuir 73.68 325 *i*P **P 15 17 04.4 +0.5**
ORIF Oris-en-Rattie 73.72 313⇑*i*P **P 15 17 04.1 -0.3**
comp=Z,15nm,0.9s,mb4.6
ORIF *e*MLR MLR
comp=Z,1μm,19.2s,MS4.9
ORIF Oris-en-Rattie 73.72 313⇑*i*P **P 15 17 04.1 -0.3**
ORIF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ORIF Oris-en-Rattie 73.72 313⇑*i*P **P 15 17 04.1 -0.3**
comp=Z,7.6nm,0.9s,mb4.6
LOR Lormes 73.85 316⇑*i*P **P 15 17 04.0 -1.1**
comp=Z,7.9nm,0.8s,mb4.4
LOR *e*MLR MLR
comp=Z,521nm,21.2s,MS4.5
LOR Lormes 73.85 316⇑*i*P **P 15 17 04.0 -1.1**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LOR MLR MLR
comp=Z,520nm,21.3s,MS4.8
LOR Lormes 73.85 316⇑*i*P **P 15 17 04.0 -1.1**
comp=Z,4.0nm,0.8s,mb4.4
LOR LR LR
comp=Z,520nm,21.3s,MS4.8
SMF Signal de Mont 74.16 315⇑*i*P **P 15 17 06.2 -0.7**
comp=Z,35nm,0.9s,mb5.0
SMF Signal de Mont 74.16 315⇑*i*P **P 15 17 06.2 -0.7**
SMF pmax pmax
comp=Z,17nm,0.9s,mb5.0
SMF Signal de Mont 74.16 315⇑*i*P **P 15 17 06.2 -0.7**
comp=Z,18nm,0.9s,mb5.0
SSF Saint Saulge 74.16 316⇑*i*P **P 15 17 06.1 -0.8**
comp=Z,13nm,1.0s,mb4.5
SSF Saint Saulge 74.16 316⇑*i*P **P 15 17 06.1 -0.8**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SSF Saint Saulge 74.16 316⇑*i*P **P 15 17 06.1 -0.8**
comp=Z,6.3nm,1.0s,mb4.5
AVF Avril sur Loir 74.39 315⇑*i*P **P 15 17 07.5 -0.7**
comp=Z,31nm,1.0s,mb4.9
AVF Avril sur Loir 74.39 315⇑*i*P **P 15 17 07.5 -0.7**
AVF pmax pmax
comp=Z,16nm,1.0s,mb4.9
AVF Avril sur Loir 74.39 315⇑*i*P **P 15 17 07.5 -0.7**
comp=Z,16nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.51 313⇑*i*P **P 15 17 08.5 -0.5**
comp=Z,13nm,0.9s,mb4.5
VIVF Saint-Julien-l 74.51 313⇑*i*P **P 15 17 08.5 -0.5**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 74.51 313⇑*i*P **P 15 17 08.5 -0.5**
comp=Z,6.4nm,0.9s,mb4.5
BGF Bois d'Agland 74.81 315 *e*P **P 15 17 09.9 -0.7**
TCF Toulx Ste Croi 75.32 315 *e*P **P 15 17 13.3 -0.3**
comp=Z,26nm,0.9s,mb4.8
TCF Toulx Ste Croi 75.32 315 *e*P **P 15 17 13.3 -0.3**
TCF pmax pmax
comp=Z,13nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.32 315 *e*P **P 15 17 13.3 -0.3**
comp=Z,13nm,0.9s,mb4.9
LASF Ste Croix 75.40 313⇑*i*P **P 15 17 14.0 -0.1**
comp=Z,22nm,1.0s,mb4.8
LDF La Druitiere 75.53 318⇑*i*P **P 15 17 14.0 -0.7**
comp=Z,14nm,0.9s,mb4.6
LDF La Druitiere 75.53 318⇑*i*P **P 15 17 14.0 -0.7**
LDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LDF La Druitiere 75.53 318⇑*i*P **P 15 17 14.0 -0.7**
comp=Z,7.0nm,0.9s,mb4.6
FLN La Foliniere 75.64 319⇑*i*P **P 15 17 14.7 -0.7**
comp=Z,32nm,1.2s,mb4.8
FLN *e*MLR MLR
comp=Z,481nm,19.5s,MS4.5
FLN La Foliniere 75.64 319⇑*i*P **P 15 17 14.7 -0.7**
FLN pmax pmax
comp=Z,16nm,1.2s,mb4.8
FLN MLR MLR
comp=Z,480nm,19.5s,MS4.8
FLN La Foliniere 75.64 319⇑*i*P **P 15 17 14.7 -0.7**
comp=Z,16nm,1.2s,mb4.8
FLN LR LR
comp=Z,480nm,19.5s,MS4.8
KEST Kesra 75.69 303 P **P 15 17 16.8 +0.8**
comp=Z,1.5nm,0.8s,mb4.0,baz=357,slow=6.8,SNR=3.1
GRR Gorron 76.05 318⇑*i*P **P 15 17 17.2 -0.5**
comp=Z,20nm,0.8s,mb4.8
GRR Gorron 76.05 318⇑*i*P **P 15 17 17.2 -0.5**
GRR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GRR Gorron 76.05 318⇑*i*P **P 15 17 17.2 -0.5**
comp=Z,10.0nm,0.8s,mb4.8
CAF Calviac 76.09 314⇑*i*P **P 15 17 18.1 +0.1**
comp=Z,20nm,0.9s,mb4.7
CAF Calviac 76.09 314⇑*i*P **P 15 17 18.1 +0.1**
CAF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CAF Calviac 76.09 314⇑*i*P **P 15 17 18.1 +0.1**
comp=Z,10nm,0.9s,mb4.8
RJF Les Rejaudoux 76.23 315 *e*P **P 15 17 18.9 0.0**
RJF *e*MLR MLR
comp=Z,387nm,19.5s,MS4.4
RJF Les Rejaudoux 76.23 315 *e*P **P 15 17 18.9 0.0**
RJF LR LR
comp=Z,390nm,19.5s,MS4.7
ARMA Armidale 76.36 139 *e*P **P 15 17 20.7 +1.1**
MFF Saint Martin d 76.56 317⇑*i*P **P 15 17 20.4 -0.3**
comp=Z,21nm,0.9s,mb4.8
MFF Saint Martin d 76.56 317⇑*i*P **P 15 17 20.4 -0.3**
MFF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MFF Saint Martin d 76.56 317⇑*i*P **P 15 17 20.4 -0.3**
comp=Z,11nm,0.9s,mb4.8
MTLF Montolieu 76.79 313⇑*i*P **P 15 17 21.8 -0.3**
comp=Z,16nm,1.1s,mb4.6
MTLF Montolieu 76.79 313⇑*i*P **P 15 17 21.8 -0.3**
MTLF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
MTLF Montolieu 76.79 313⇑*i*P **P 15 17 21.8 -0.3**
comp=Z,8.1nm,1.1s,mb4.6
LFF La Frestale 76.89 315 *e*P **P 15 17 22.7 +0.1**
comp=Z,14nm,0.8s,mb4.7
LFF La Frestale 76.89 315 *e*P **P 15 17 22.7 +0.1**
LFF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LFF La Frestale 76.89 315 *e*P **P 15 17 22.7 +0.1**
comp=Z,7.2nm,0.8s,mb4.7
SGMF Saint Gilles 77.08 319⇑*i*P **P 15 17 23.5 -0.1**
comp=Z,18nm,0.7s,mb4.8
SGMF Saint Gilles 77.08 319⇑*i*P **P 15 17 23.5 -0.1**
SGMF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SGMF Saint Gilles 77.08 319⇑*i*P **P 15 17 23.5 -0.1**
comp=Z,8.9nm,0.7s,mb4.8
SKAG Skagway 77.39 27 *e*P **P 15 17 25.4 +0.3**
comp=Z,34nm,0.8s,mb5.3
ROSF Rostrenen 77.44 319⇑*i*P **P 15 17 25.5 -0.1**
comp=Z,21nm,0.9s,mb4.8
ROSF Rostrenen 77.44 319⇑*i*P **P 15 17 25.5 -0.1**
ROSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ROSF Rostrenen 77.44 319⇑*i*P **P 15 17 25.5 -0.1**
comp=Z,10.0nm,0.9s,mb4.8
QUIF Quistinic 77.61 319 *e*P **P 15 17 26.2 -0.4**
comp=Z,31nm,1.2s,mb4.8
QUIF Quistinic 77.61 319 *e*P **P 15 17 26.2 -0.4**
QUIF pmax pmax
comp=Z,15nm,1.2s,mb4.8
QUIF Quistinic 77.61 319 *e*P **P 15 17 26.2 -0.4**
comp=Z,15nm,1.2s,mb4.8
EPF Esparros 78.13 313 *e*P **P 15 17 28.7 -0.9**
ETSF Etsaut 78.76 313⇑*i*P **P 15 17 33.3 +0.3**
comp=Z,10nm,0.8s,mb4.5
ETSF Etsaut 78.76 313⇑*i*P **P 15 17 33.3 +0.3**

ETSF					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
ETSF	**Etsaut**	**78.76**	**313**	⇑*iP*		**P**	**15 17 33.3**	**+0.3**
	comp=Z,5.2nm,0.8s,mb4.5							
TOO	**Toolangi**	**78.80**	**147**	*eP*		**P**	**15 17 33.1**	**0.0**
CNB	**Canberra Magne**	**78.89**	**143**	*eP*		**P**	**15 17 32.3**	**-1.3**
SJPF	**Ste Jean**	**79.06**	**314**	⇑*iP*		**P**	**15 17 35.2**	**+0.5**
	comp=Z,9.2nm,0.8s,mb4.5							
SJPF	**Ste Jean**	**79.06**	**314**	⇑*iP*		**P**	**15 17 35.2**	**+0.5**
SJPF					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
SJPF	**Ste Jean**	**79.06**	**314**	⇑*iP*		**P**	**15 17 35.2**	**+0.5**
	comp=Z,4.6nm,0.8s,mb4.5							
SFJD	**Kangerlussuaq**	**80.16**	**350**	*iP*		**P**	**15 17 39.4**	**-0.8**
SFJD					pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0							
SFJD	**Kangerlussuaq**	**80.16**	**350**	*eP*		**P**	**15 17 39.3**	**-0.9**
	comp=Z,47nm,1.5s,mb5.2							
SFJD	**Kangerlussuaq**	**80.16**	**350**	*iP*		**P**	**15 17 39.4**	**-0.8**
	comp=Z,15nm,0.8s,mb5.0							
YKA	**Yellowknife Ar**	**81.68**	**17**	P		**P**	**15 17 48.0**	**-0.4**
	comp=Z,9.3nm,0.6s,mb4.9,baz=329,slow=5.2,SNR=120							
YKA				PKKPbc		PKKPbc	15 36 15.6	-5.3
	comp=Z,0.1nm,0.4s,baz=153,slow=2.4,SNR=4.0							
YKA	**Yellowknife Ar**	**81.68**	**17**	P		**P**	**15 17 48.0**	**-0.4**
YKA				PKKPbc		PKKPbc	15 36 15.7	-5.3
ESDC	**Sonseca Array**	**82.68**	**312**	P		**P**	**15 17 53.7**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=56,slow=4.5,SNR=4.5							
LSZ	**Lusaka**	**85.88**	**250**	P		**P**	**15 18 10.1**	**-0.5**
	comp=Z,11nm,1.0s,mb5.0,baz=42,slow=5.9,SNR=9.5							
LSZ	**Lusaka**	**85.88**	**250**	P		**P**	**15 18 10.1**	**-0.5**
LSZ					pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0							
LSZ	**Lusaka**	**85.88**	**250**	*eP**		**P**	**15 18 09.7**	**-0.9**
	comp=Z,9.5nm,1.1s,mb4.9							
FCC	**Fort Churchill**	**89.13**	**9**	*eP*		**P**	**15 18 24.6**	**-1.0**
FCC					pmax	pmax		
	comp=Z,1.0nm,1.3s,mb4.0							
FCC	**Fort Churchill**	**89.13**	**9**	*eP*		**P**	**15 18 24.6**	**-1.0**
	comp=Z,0.6nm,1.3s,mb3.8							
EDM	**Edmonton**	**89.94**	**21**	*eP*		**P**	**15 18 29.2**	**-0.3**
FFC	**Flin Flon**	**91.59**	**15**	P		**P**	**15 18 36.9**	**-0.2**
	comp=Z,83nm,0.9s,mb6.1,SNR=7.5							
FFC	**Flin Flon**	**91.59**	**15**	*eP*		**P**	**15 18 36.5**	**-0.6**
FFC					pmax	pmax		
	comp=Z,11nm,0.8s,mb5.2							
FFC	**Flin Flon**	**91.59**	**15**	*eP*		**P**	**15 18 36.5**	**-0.7**
	comp=Z,11nm,0.8s,mb5.2							
ETW	**Entiat**	**92.12**	**28**	*eP*		**P**	**15 18 40.1**	**+0.4**
	comp=Z,3.3nm,0.8s,mb4.7							
TOA0	**Torodi Ar. Sit**	**93.26**	**287**	*eP*		**P**	**15 18 44.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**93.26**	**287**	P		**P**	**15 18 44.9**	**-0.7**
	comp=Z,5.2nm,1.0s,mb4.9,baz=59,slow=3.4,SNR=20							
SCHQ	**Schefferville**	**93.91**	**355**	P		**P**	**15 18 46.9**	**-0.9**
	comp=Z,4.3nm,0.6s,mb5.0,baz=27,slow=5.0,SNR=7.0							
SCHQ	**Schefferville**	**93.91**	**355**	P		**P**	**15 18 46.9**	**-0.9**
BSMT	**Bassoo Peak**	**94.04**	**25**	*eP*		**P**	**15 18 49.4**	**+0.8**
	comp=Z,4.5nm,0.9s,mb4.9							
BSMT				*ep*P		pP	15 18 54.0	-0.8
BOSA	**Boshof**	**95.44**	**240**	P		**P**	**15 18 53.9**	**-1.3**
	comp=Z,4.3nm,0.8s,mb4.9,baz=53,slow=3.6,SNR=6.8							
ULM	**Lac du Bonnet**	**97.05**	**13**	LR		LR	16 05 12.9	
	comp=Z,210nm,18.7s,MS4.7,baz=224,slow=37							
RSSD	**Black Hills**	**100.85**	**20**	*eP*		Pdif	15 19 19.8	+0.5
RSSD					pmax	pmax		
	comp=Z,5.0nm,1.1s							
RSSD	**Black Hills**	**100.85**	**20**	*eP*dif		Pdif	15 19 19.8	+0.5
	comp=Z,5.4nm,1.1s							
TXAR	**Lajitas Array**	**114.39**	**26**	PKP		PKiKP	15 24 10.2	-0.4
	comp=Z,0.4nm,0.7s,baz=185,slow=1.5,SNR=6.6							
TXAR				PKKPbc		PKKPbc	15 34 48.6	-0.9
	comp=Z,0.6nm,0.8s,baz=156,slow=6.3,SNR=7.3							
ROSC	**El Rosal**	**144.07**	**357**	PKP		PKPdf	15 25 04.9	-1.9
	comp=Z,18nm,0.6s,baz=243,slow=9.0,SNR=9.3							
ROSC	**El Rosal**	**144.07**	**357**	*e*PKPpre		PKPdf	15 25 04.8	-2.1
OTAV	**Otavalo**	**148.64**	**4**	*e*PKPdf		PKPdf	15 25 15.4	+0.9
CPUP	**Villa Florida**	**162.67**	**282**	PKP		PKPdf	15 25 31.5	-1.3
	comp=Z,0.3nm,0.3s,baz=331,slow=1.1,SNR=4.4							
CPUP				PKPab		PKPab	15 26 19.3	-2.0
	comp=Z,0.5nm,0.4s,baz=86,slow=20,SNR=4.0							
LPAZ	**La Paz**	**163.36**	**332**	PKP		PKPdf	15 25 34.0	+0.3
	comp=Z,3.3nm,0.9s,baz=343,slow=0.7,SNR=10.0							
LPAZ				PKPab		PKPab	15 26 23.1	-1.2
	comp=Z,1.3nm,0.8s,baz=14,slow=4.5,SNR=4.0							
PLCA	**Paso Flores**	**169.43**	**205**	PKP		PKPdf	15 25 37.5	-0.1
	comp=Z,3.4nm,1.0s,baz=153,slow=3.8,SNR=4.7							
PLCA				PKPab		PKPab	15 26 48.7	-1.8
	comp=Z,1.6nm,0.8s,baz=107,slow=5.1,SNR=3.0							

BJI 12 15:05:36.2,31°.05N×103°.42E,h14km,mB5.3/1,mb4.4/2, ML4.9/7,Ms5.1/9,Ms7 4.9/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIY	**Taiyuan**	**9.98**	**46**	*eP*	Pn	15 08 06.6	+7.5
TIY				LR	LR		
	comp=N,2μm,4.3s						
TIY				LR	LR		
	comp=E,2μm,3.0s						
TIY				LR	LR		
	comp=Z,1μm,3.6s						
HHC	**Hu-ho-hao-te**	**11.79**	**32**	*eP*	Pn	15 08 27.5	+3.6
HHC				pP		15 08 34.7	
HHC				sP		15 08 39.6	
HHC				S	Sn	15 10 36.3	+1.1
HHC				sS		15 10 47.7	
HHC				SS		15 10 51.3	
HHC				pmax	pmax		
	comp=Z,34nm,1.1s						
HHC				pmax	pmax		
	comp=Z,370nm,4.8s						
HHC				LR	LR		
	comp=N,3μm,5.0s						
HHC				LR	LR		
	comp=E,3μm,5.4s						
HHC				LR	LR		
	comp=Z,3μm,6.5s						

*ISCJB **12** 15:08:57.7±0.5,31°.91N±0°.05×104°.50E±0°.09,h10km, mb4.4/13,Error ellipse: s-maj=10.9km s-min=6.7km az=17.2*
*IDC **12** 15:08:58.0±0.7,31°.81N×104°.33E,h0km,mb4.3/12, mb1 4.4/12,mb1mx4.1/28,mbtmp4.3/12,MS4.4/2, Ms1 4.3/2,ms1mx3.3/37,Error ellipse: s-maj=37.7km s-min=14.0km az=56.0*
*NEIC **12** 15:08:59.7±0.4,31°.95N×104°.58E,h10km,mb5.1/1,Error ellipse: s-maj=18.2km s-min=7.4km az=66.0*
ISC 12 15:08:59.8±0.5,31°.91N±0°.05×104°.44E±0°.09,h10km,n22, σ0.976/23,mb4.4/13,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.15**	**210**	Pg	**Pg**	**15 09 22.9**	**+0.9**
CD2				Sg	**Sg**	**15 09 36.6**	**-0.4**
CD2				smax			
	comp=N,21μm,0.7s						
CMAR	**Chiang Mai Arr**	**14.28**	**202**	Pn	**Pn**	**15 12 23.6**	**+1.4**
	comp=N,0.3nm,0.3s,baz=10,slow=12,SNR=3.2						
KSRS	**Korea Array**	**20.07**	**68**	P	**P**	**15 13 34.7**	**+1.4**
	comp=N,5.5nm,0.8s,baz=253,slow=8.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**15 14 34.4**	**+0.6**
	comp=N,1.9nm,0.7s,mb3.8,baz=134,slow=9.2,SNR=2.8						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**15 14 40.8**	**+1.0**
	comp=N,5.0nm,1.0s,mb4.0,baz=123,slow=9.8,SNR=4.5						
BVAR	**Borovoye Array**	**32.34**	**321**	P	**P**	**15 15 29.3**	**+0.2**
	comp=N,1.6nm,0.7s,mb4.0,baz=110,slow=7.8,SNR=2.3						
AKTK	**Aktyubinsk**	**38.80**	**312**	P	**P**	**15 16 23.4**	**-1.2**
AKTO	**Aktyubinsk**	**38.80**	**312**	P	**P**	**15 16 23.4**	**-1.2**
	comp=N,1.4nm,0.4s,mb4.0,baz=162,slow=3.2,SNR=2.7						
KNA	**Kununurra**	**52.82**	**150**	*eP*	**P**	**15 18 15.2**	**-0.4**
	comp=N,11nm,0.4s,mb5.1						
FITZ	**Fitzroy Crossi**	**53.72**	**155**	*eP*	**P**	**15 18 21.2**	**-1.0**
	comp=N,6.5nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.72**	**155**	P	**P**	**15 18 21.1**	**-1.0**
	comp=N,4.1nm,0.8s,mb4.4,baz=348,slow=8.5,SNR=5.2						
ARCES	**ARCESS Array B**	**56.64**	**336**	P	**P**	**15 18 42.7**	**+0.1**
	comp=N,4.2nm,0.9s,mb4.5,baz=83,slow=7.4,SNR=2.4						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**15 18 45.9**	**+0.2**
	comp=N,1.9nm,0.6s,mb4.3,baz=82,slow=13,SNR=3.6						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**15 18 45.9**	**+0.2**
WRAB	**Tennant Creek**	**58.98**	**147**	*eP*	**P**	**15 18 59.5**	**-0.2**
	comp=N,11nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**15 18 59.8**	**+0.1**
	comp=N,6.3nm,0.5s,mb4.9,baz=328,slow=9.0,SNR=8.3						
WB2	**Warramunga Arr**	**58.99**	**147**	*eP*	**P**	**15 18 59.5**	**-0.3**
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**15 19 20.4**	**-0.1**
	comp=N,3.1nm,0.5s,mb4.7,baz=334,slow=6.6,SNR=8.0						
STKA	**Stephens Creek**	**72.53**	**147**	*eP*	**P**	**15 20 26.3**	**-0.6**
	comp=N,2.9nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**72.53**	**147**	P	**P**	**15 20 26.3**	**-0.6**
	comp=N,4.1nm,0.7s,mb4.5,baz=343,slow=6.5,SNR=4.7						
STKA	**Stephens Creek**	**72.53**	**147**	*eP*	**P**	**15 20 26.3**	**-0.6**
YKA	**Yellowknife Ar**	**80.84**	**17**	P	**P**	**15 21 13.0**	**-0.5**
	comp=N,0.6nm,0.6s,mb3.7,baz=328,slow=5.1,SNR=3.2						

*SOF **12** 15:11:21.1,40°.51N×27°.40E,h2km,MD3.3*
*ISCJB **12** 15:11:25.0±0.3,40°.66N±0°.02×27°.37E±0°.02,h14km±2km, Error ellipse: s-maj=2.7km s-min=2.2km az=10.1*
*DDA **12** 15:11:24.8,40°.64N×27°.35E,h25km,MI3.8*
*SKO **12** 15:11:24.6,40°.62N×27°.35E,h0km*
*NEIC **12** 15:11:25.0,40°.63N×27°.38E,h22km,MD3.8(ATH), ML3.9(ISK),After ISK.*
*ATH **12** 15:11:25.3,40°.63N×27°.39E,h34km±3km,MD3.8/12*
*ISK **12** 15:11:25.4,40°.64N×27°.37E,h22km,ML3.9*
*CSEM **12** 15:11:25.5±0.1,40°.63N×27°.36E,h12km,ML3.9,Error ellipse: s-maj=2.1km s-min=1.7km az=27.0*
*THE **12** 15:11:25.0,40°.65N×27°.37E,h0km±2km,ML4.5/7,Error ellipse: s-maj=4.3km s-min=2.0km az=85.0*
ISC 12 15:11:25.7±0.3,40°.64N±0°.02×27°.37E±0°.02,h11km±2km, n217,σ0.992/268,9C-11D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SART	**Tekirdag**	**0.15**	**290**	*iP*	**Pg**	**15 11 30.4**	**+1.2**
SART				*i*S	**Sg**	**15 11 33.0**	**+1.3**
SART	**Tekirdag**	**0.15**	**290**	*iP*	**Pg**	**15 11 30.4**	**+1.2**
SART				*i*S	**Sg**	**15 11 33.0**	**+1.3**
RKY	**Sarkoy-Tekirda**	**0.16**	**289**	PG	**Pg**	**15 11 30.4**	**+1.2**
RKY	**Sarkoy-Tekirda**	**0.16**	**289**	*i*Pg	**Pg**	**15 11 30.4**	**+1.2**
TKR	**Tekirdag**	**0.37**	**19**	PG	**Pg**	**15 11 34.1**	**+0.9**
TKR				*e*SG	**Sg**	**15 11 40.0**	**+1.8**
TKR	**Tekirdag**	**0.37**	**19**	*i*Pg	**Pg**	**15 11 34.1**	**+1.0**
TKR				*e*Sg	**Sg**	**15 11 40.0**	**+1.8**
EDC	**Edincik**	**0.47**	**128**	PG	**Pg**	**15 11 35.6**	**+0.6**
EDC	**Edincik**	**0.47**	**128**	*i*Pg	**Pg**	**15 11 35.6**	**+0.6**
LPK	**Lapseki**	**0.54**	**241**	PG	**Pg**	**15 11 36.6**	**+0.5**
LPK				*e*SG	**Sg**	**15 11 44.7**	**+1.5**
LPK	**Lapseki**	**0.54**	**241**	*i*Pg	**Pg**	**15 11 36.6**	**+0.5**
LPK				*e*Sg	**Sg**	**15 11 44.7**	**+1.5**
CRLT	**Corlu**	**0.56**	**29**	PG	**Pg**	**15 11 37.6**	**+0.9**
CRLT	**Corlu**	**0.56**	**29**	*i*Pg	**Pg**	**15 11 37.6**	**+0.9**
SLVT	**Silivri**	**0.87**	**47**	PG	**Pg**	**15 11 42.5**	**+0.1**
SLVT				*e*SG	**Sg**	**15 11 55.0**	**+1.2**
SLVT	**Silivri**	**0.87**	**47**	*i*Pg	**Pg**	**15 11 42.5**	**0.0**
SLVT				*e*Sg	**Sg**	**15 11 55.0**	**+1.2**
BALY	**Balya**	**0.92**	**168**	*iP*	**Pg**	**15 11 43.4**	**+0.1**
BALY				*i*S	**Sg**	**15 11 55.4**	**+0.1**
BALY	**Balya**	**0.92**	**168**	*iP*	**Pg**	**15 11 43.4**	**+0.1**
BALY				*i*S	**Sg**	**15 11 55.4**	**+0.1**
ENEZ	**Enez**	**0.93**	**277**	PG	**Pg**	**15 11 43.6**	**0.0**
ENEZ	**Enez**	**0.93**	**277**	*i*Pg	**Pg**	**15 11 43.6**	**0.0**
ELBA	**Catalca**	**0.95**	**57**	*iP*	**Pg**	**15 11 43.4**	**-0.6**
ELBA				*i*S	**Sg**	**15 11 55.4**	**-1.0**
ELBA	**Catalca**	**0.95**	**57**	*iP*	**Pg**	**15 11 43.4**	**-0.6**
ELBA				*i*S	**Sg**	**15 11 55.4**	**-1.0**
ALN	**Alexandroupoli**	**1.04**	**285**	*e*PN	**Pg**	**15 11 45.6**	**-0.1**
ALN				*e*SN	**Sg**	**15 11 59.6**	**+0.4**
ALN	**Alexandroupoli**	**1.04**	**285**	P	**Pg**	**15 11 45.5**	**-0.2**
ALN				S	**Sg**	**15 11 58.9**	**-0.3**
ALN	**Alexandroupoli**	**1.04**	**285**	*e*Pn	**Pg**	**15 11 45.6**	**-0.1**
ALN				S	**Sg**	**15 11 58.9**	**-0.3**
ALN				*e*Sn	**Sg**	**15 11 59.6**	**+0.4**
CTKS	**Kestanelik-??a**	**1.05**	**55**	PG	**Pg**	**15 11 45.0**	**-0.9**
CTKS	**Kestanelik-??a**	**1.05**	**55**	*i*Pg	**Pg**	**15 11 45.0**	**-0.9**
BALB	**Balikesir**	**1.07**	**158**	PN	**Pg**	**15 11 46.0**	**-0.3**
BALB	**Balikesir**	**1.07**	**158**	*i*Pn	**Pg**	**15 11 46.0**	**-0.3**
CTYL	**Yal??k??y-??at**	**1.09**	**39**	PN	**Pg**	**15 11 45.8**	**-0.8**
CTYL	**Yal??k??y-??at**	**1.09**	**39**	*i*Pn	**Pg**	**15 11 45.8**	**-0.8**
EZN	**Ezine**	**1.14**	**225**	PN	**Pg**	**15 11 46.8**	**-0.8**
EZN	**Ezine**	**1.14**	**225**	*i*Pn	**Pg**	**15 11 46.8**	**-0.8**
BGKT	**Bogazkoy**	**1.19**	**62**	*e*PN	**Pn**	**15 11 47.2**	**-1.0**
BGKT	**Bogazkoy**	**1.19**	**62**	*e*Pn	**Pn**	**15 11 47.2**	**-1.1**
GADA	**Gvkgeada**	**1.21**	**249**	*e*PN	**Pn**	**15 11 47.5**	**-1.0**
GADA	**Gvkgeada**	**1.21**	**249**	*e*Pn	**Pn**	**15 11 47.5**	**-1.0**
BOZC	**Bozcaada**	**1.28**	**232**	*iP*	**Pn**	**15 11 48.9**	**-0.6**
BOZC				*i*S	**Sb**	**15 12 05.5**	**-0.8**
EDRB	**Edirne**	**1.30**	**339**	*e*PN	**Pn**	**15 11 48.8**	**-0.9**
EDRB	**Edirne**	**1.30**	**339**	*e*Pn	**Pn**	**15 11 48.8**	**-0.9**
DURS	**Dursunbey**	**1.34**	**140**	*iP*	**Pn**	**15 11 50.0**	**-0.2**
DURS				*i*S	**Sb**	**15 12 09.8**	**+2.0**
DURS	**Dursunbey**	**1.34**	**140**	*iP*	**Pn**	**15 11 50.0**	**-0.2**
DURS				*i*S	**Sb**	**15 12 09.8**	**+2.0**
ISK	**Istanbul-Kandi**	**1.35**	**71**	*e*PN	**Pn**	**15 11 49.3**	**-1.1**
ISK	**Istanbul-Kandi**	**1.35**	**71**	*e*Pn	**Pn**	**15 11 49.3**	**-1.1**
GEMT	**Gemlik**	**1.40**	**98**	*e*PN	**Pn**	**15 11 50.2**	**-1.0**
GEMT	**Gemlik**	**1.40**	**98**	*e*Pn	**Pn**	**15 11 50.2**	**-0.9**
KLYT	**Kilyos**	**1.41**	**64**	*e*PN	**Pn**	**15 11 50.4**	**-0.8**
KLYT	**Kilyos**	**1.41**	**64**	*e*Pn	**Pn**	**15 11 50.4**	**-0.8**
ULDT	**Uludag**	**1.44**	**110**	*iP*	**Pn**	**15 11 51.2**	**-0.4**
ULDT				*i*S	**Sn**	**15 12 12.1**	**+1.6**
ULDT	**Uludag**	**1.44**	**110**	*iP*	**Pn**	**15 11 51.2**	**-0.4**
ULDT				*i*S	**Sn**	**15 12 12.1**	**+1.7**
RDO	**Rodhopi**	**1.48**	**291**	*e*PN	**Pn**	**15 11 52.1**	**-0.1**
RDO				*e*SN	**Sn**	**15 12 11.0**	**-0.5**
RDO	**Rodhopi**	**1.48**	**291**	P	**Pn**	**15 11 52.1**	**-0.1**
RDO				S	**Sn**	**15 12 12.6**	**+1.1**
RDO	**Rodhopi**	**1.48**	**291**	P	**Pn**	**15 11 52.1**	**-0.1**
RDO				*e*Sn	**Sn**	**15 12 11.0**	**-0.5**
RDO				S	**Sn**	**15 12 12.6**	**+1.1**
YLV	**Yalova**	**1.52**	**92**	*e*PN	**Pn**	**15 11 52.4**	**-0.5**
YLV	**Yalova**	**1.52**	**92**	*e*Pn	**Pn**	**15 11 52.4**	**-0.4**
PRK	**Paraskevi**	**1.63**	**212**	*e*PB	**Pn**	**15 11 53.8**	**-0.4**
PRK				*e*SN	**Sn**	**15 12 14.7**	**-0.4**
PRK	**Paraskevi**	**1.63**	**212**	P	**Pn**	**15 11 53.8**	**-0.4**
PRK				S	**Sn**	**15 12 17.9**	**+2.8**
PRK	**Paraskevi**	**1.63**	**212**	P	**Pn**	**15 11 53.8**	**-0.4**
PRK				*e*Sn	**Sn**	**15 12 14.7**	**-0.4**
PRK				S	**Sn**	**15 12 17.9**	**+2.8**
HRT	**Hereke**	**1.75**	**83**	*e*PN	**Pn**	**15 11 55.2**	**-0.8**
HRT	**Hereke**	**1.75**	**83**	*e*Pn	**Pn**	**15 11 55.2**	**-0.8**
AKS	**Akhisar**	**1.79**	**169**	*e*PN	**Pn**	**15 11 56.6**	**+0.2**
AKS	**Akhisar**	**1.79**	**169**	*e*Pn	**Pn**	**15 11 56.6**	**+0.1**
AKHS	**Akhisar**	**1.79**	**169**	*iP*	**Pn**	**15 11 56.8**	**+0.3**
AKHS				*i*S	**Sn**	**15 12 18.9**	**-0.2**
AKHS	**Akhisar**	**1.79**	**169**	*iP*	**Pn**	**15 11 56.8**	**+0.3**
AKHS				*i*S	**Sn**	**15 12 19.0**	**-0.1**
KDZ	**Kurdzhali**	**1.79**	**305**	P	**Pn**	**15 11 56.5**	**0.0**
KDZ				Pg	**Pg**	**15 11 59.5**	**-0.5**
KDZ	**Kurdzhali**	**1.79**	**305**	P	**Pn**	**15 11 56.5**	**0.0**
ADVT	**Abdulvahap**	**1.81**	**96**	*e*PN	**Pn**	**15 11 56.6**	**-0.3**
ADVT	**Abdulvahap**	**1.81**	**96**	*e*Pn	**Pn**	**15 11 56.6**	**-0.2**
LIA	**Limnos Island**	**1.83**	**247**	*e*PN	**Pn**	**15 11 56.4**	**-0.6**
LIA				*e*SN	**Sn**	**15 12 19.1**	**-1.1**
LIA	**Limnos Island**	**1.83**	**247**	P	**Pn**	**15 11 56.2**	**-0.8**
LIA				S	**Sn**	**15 12 22.0**	**+1.8**
LIA	**Limnos Island**	**1.83**	**247**	*e*Pn	**Pn**	**15 11 56.4**	**-0.6**
LIA				*e*Sn	**Sn**	**15 12 19.1**	**-1.1**
LIA				S	**Sn**	**15 12 22.0**	**+1.8**
SIGR	**SIGRI**	**1.84**	**220**	P	**Pn**	**15 11 56.6**	**-0.6**
SIGR				S	**Sn**	**15 12 22.9**	**+2.5**
SIGR	**SIGRI**	**1.84**	**220**	P	**Pn**	**15 11 56.6**	**-0.6**
SIGR				S	**Sn**	**15 12 22.9**	**+2.5**
DEMI	**Demirci**	**1.90**	**147**	*iP*	**Pn**	**15 11 58.2**	**+0.3**
DEMI	**Demirci**	**1.90**	**147**	*iP*	**Pn**	**15 11 58.2**	**+0.2**
JMB	**Yambol**	**1.92**	**342**	P	**Pn**	**15 11 58.5**	**+0.2**
JMB				S	**Sn**	**15 12 24.1**	**+1.7**
JMB	**Yambol**	**1.92**	**342**	P	**Pn**	**15 11 58.8**	**+0.5**
JMB				Pg	**Pg**	**15 12 02.9**	**+0.4**
JMB	**Yambol**	**1.92**	**342**	P	**Pn**	**15 11 58.5**	**+0.2**
JMB	**Yambol**	**1.92**	**342**	Pg	**Pg**	**15 12 02.9**	**+0.4**
JMB				S	**Sn**	**15 12 24.1**	**+1.7**
DIM	**Dimitrovgrad**	**1.98**	**316**	P	**Pn**	**15 12 02.2**	**+3.1**
DIM	**Dimitrovgrad**	**1.98**	**316**	P	**Pn**	**15 12 02.2**	**+3.1**
IZM	**Izmir**	**2.24**	**182**	*e*PN	**Pn**	**15 12 02.1**	**-0.5**
IZM	**Izmir**	**2.24**	**182**	*e*Pn	**Pn**	**15 12 02.1**	**-0.5**
GDZ	**Gediz**	**2.24**	**133**	*iP*	**Pn**	**15 12 03.1**	**+0.4**
GDZ				*i*S	**Sn**	**15 12 31.6**	**+1.2**
GDZ	**Gediz**	**2.24**	**133**	*iP*	**Pn**	**15 12 03.1**	**+0.4**
GDZ				*i*S	**Sn**	**15 12 31.5**	**+1.2**
BLCB	**Balcova**	**2.26**	**187**	*e*PN	**Pn**	**15 12 02.6**	**-0.4**
BLCB	**Balcova**	**2.26**	**187**	P	**Pn**	**15 12 05.2**	**+2.2**
BLCB	**Balcova**	**2.26**	**187**	*e*Pn	**Pn**	**15 12 02.6**	**-0.4**
BLCB	**Balcova**	**2.26**	**187**	P	**Pn**	**15 12 05.2**	**+2.2**
RZN	**Rozhen**	**2.26**	**299**	P	**Pn**	**15 12 02.9**	**-0.1**
RZN				Pg	**Pg**	**15 12 07.3**	**-1.8**
RZN	**Rozhen**	**2.26**	**299**	P	**Pn**	**15 12 02.9**	**-0.1**
GPA	**Golpazari**	**2.27**	**98**	*e*PN	**Pn**	**15 12 02.6**	**-0.5**
GPA	**Golpazari**	**2.27**	**98**	*e*Pn	**Pn**	**15 12 02.6**	**-0.5**
MANT	**Manisa**	**2.33**	**156**	*e*P	**Pn**	**15 12 04.1**	**+0.2**
MANT	**Manisa**	**2.33**	**156**	*e*P	**Pn**	**15 12 04.1**	**+0.2**
KULA	**Kula-Manisa**	**2.34**	**154**	*e*PN	**Pn**	**15 12 03.5**	**-0.6**
KULA	**Kula-Manisa**	**2.34**	**154**	*e*Pn	**Pn**	**15 12 03.5**	**-0.6**
GULT	**Gulveren**	**2.41**	**94**	*e*PN	**Pn**	**15 12 04.9**	**0.0**
GULT	**Gulveren**	**2.41**	**94**	*e*Pn	**Pn**	**15 12 04.9**	**0.0**
PLD	**Plovdiv**	**2.49**	**307**	P	**Pn**	**15 12 05.9**	**-0.2**
PLD	**Plovdiv**	**2.49**	**307**	P	**Pn**	**15 12 05.3**	**-0.8**
PLD	**Plovdiv**	**2.49**	**307**	P	**Pn**	**15 12 05.9**	**-0.2**
PRD	**Provadia**	**2.56**	**0**	P	**Pn**	**15 12 12.9**	**+5.8**
OUR	**Ouranopolis**	**2.60**	**264**	P	**Pn**	**15 12 06.2**	**-1.5**
OUR	**Ouranopolis**	**2.60**	**264**	P	**Pn**	**15 12 06.2**	**-1.5**
ALT	**Altintas**	**2.63**	**126**	*e*PN	**Pn**	**15 12 07.7**	**-0.4**
ALT	**Altintas**	**2.63**	**126**	*e*Pn	**Pn**	**15 12 07.7**	**-0.4**
NVR	**Nevrokopi**	**2.75**	**286**	*e*PN	**Pn**	**15 12 09.7**	**0.0**
NVR	**Nevrokopi**	**2.75**	**286**	*e*Pn	**Pn**	**15 12 09.7**	**0.0**
KHL	**Karahalli**	**2.85**	**144**	*e*PN	**Pn**	**15 12 10.9**	**-0.1**
KHL	**Karahalli**	**2.85**	**144**	*e*Pn	**Pn**	**15 12 10.9**	**-0.1**
ESKT	**Eskisehir**	**2.89**	**112**	*e*PN	**Pn**	**15 12 10.9**	**-0.7**
ESKT	**Eskisehir**	**2.89**	**112**	*e*Pn	**Pn**	**15 12 10.9**	**-0.7**
SRS	**Serrai**	**2.91**	**281**	P	**Pn**	**15 12 11.6**	**-0.2**
SRS	**Serrai**	**2.91**	**281**	P	**Pn**	**15 12 11.6**	**-0.2**
PAIG	**Paliouri**	**2.91**	**257**	P	**Pn**	**15 12 11.0**	**-0.9**
PAIG	**Paliouri**	**2.91**	**257**	P	**Pn**	**15 12 11.0**	**-0.9**
MMB	**Musomiste**	**2.91**	**290**	P	**Pn**	**15 12 12.7**	**+0.8**
MMB				Pg	**Pg**	**15 12 19.7**	**-1.8**
MMB	**Musomiste**	**2.91**	**290**	P	**Pn**	**15 12 12.7**	**+0.8**
MDU	**Mudurnu**	**2.93**	**92**	*e*PN	**Pn**	**15 12 12.7**	**+0.5**
MDU	**Mudurnu**	**2.93**	**92**	*e*Pn	**Pn**	**15 12 12.7**	**+0.5**
SMG	**Samos**	**2.

comp=N,49μm,0.6s
LZH Lanzhou 4.91 1 *e*Pg **Pg 15 17 20.3 -0.3**
LZH Sg **Sg 15 18 24.9 +0.7**
LZH smax
comp=N,74nm,0.9s
LZH smax
comp=E,91nm,0.9s
ENH Enshi 5.07 99 Pn **Pn 15 17 02.5 0.0**
comp=E,63nm,0.8s
KMI Kunming 6.08 188 Pn **Pn 15 17 16.3 -0.1**
KMI Sn **Sn 15 18 25.8 -0.2**
KMI smax
comp=N,78nm,1.0s
KMI smax
comp=E,60nm,1.1s
CMAR Chiang Mai Arr 13.36 200 Pn **Pn 15 19 01.6 +5.3**
comp=E,0.1nm,0.3s,baz=4.1,slow=7.4,SNR=3.7
SONM Songino Array 16.78 6 Pn **Pn 15 19 42.4 +1.0**
comp=E,0.2nm,0.3s,baz=197,slow=13,SNR=3.0
KSRS Korea Array 20.95 66 P **P 15 20 30.1 +0.6**
comp=E,4.8nm,0.6s,baz=264,slow=11,SNR=18
CN2 Changchun 21.31 48 *e*P **P 15 20 41.9 +8.6**
MK31 Makanchi Array 22.70 319 P **P 15 20 48.9 +0.8**
MKAR Makanchi Array 22.70 319 P **P 15 20 50.0 +1.8**
comp=E,2.1nm,1.0s,mb3.5,baz=119,slow=14,SNR=5.0
ZALV Zalesovo Beam 26.52 335 P **P 15 21 23.1 -0.9**
comp=E,0.9nm,0.5s,mb3.6,baz=128,slow=12,SNR=2.8
KURK Kurchatov 26.99 324 P **P 15 21 28.0 -0.3**
comp=E,0.8nm,0.7s,mb3.4,baz=128,slow=9.1,SNR=3.7
ABKAR Akbulak array 37.37 312 *e*P **P 15 22 58.5 -0.6**
WRAB Tennant Creek 58.72 146 *e*P **P 15 25 43.4 -1.1**
comp=E,5.0nm,0.6s,mb4.7
WB2 Warramunga Arr 58.73 146 *e*P **P 15 25 43.6 -1.0**
INK Inuvik 72.22 19 P **P 15 27 10.6 -0.7**
comp=E,1.7nm,0.8s,mb4.1,baz=342,slow=10,SNR=5.9
STKA Stephens Creek 72.25 147 P **P 15 27 10.4 -1.4**
comp=E,1.6nm,0.6s,mb4.2,baz=333,slow=7.8,SNR=7.9
STKA Stephens Creek 72.25 147 *e*P **P 15 27 10.2 -1.7**
YKA Yellowknife Ar 81.74 17 P **P 15 28 04.8 -0.1**
comp=E,0.6nm,0.6s,mb3.7,baz=330,slow=5.5,SNR=8.1
YKA Yellowknife Ar 81.74 17 P **P 15 28 04.8 -0.1**

ISCJB ***12*** *15:16:54.7±0.3,31°.02N±0°.05×103°.40E±0°.06,h10km, mb4.2/31,MS3.9/3,Error ellipse: s-maj=8.2km s-min=6.5km az=45.0*
IDC ***12*** *15:16:54.5±0.7,30°.97N×103°.35E,h0km,mb4.1/16, mb1 4.2/18,mb1mx4.1/27,mbtmp4.0/18,ML3.6/2,MS3.9/4, Ms1 3.9/4,ms1mx3.3/42,Error ellipse: s-maj=26.5km s-min=14.2km az=56.0*
NEIC ***12*** *15:16:56.5±0.4,31°.04N×103°.45E,h10km,mb4.4/9,Error ellipse: s-maj=10.7km s-min=7.1km az=51.0*
BJI ***12*** *15:16:57.8,31°.15N×103°.45E,h17km,mB5.1/6,mb4.4/12, ML4.4/9,Ms4.6/8,Ms7 4.4/6*
MOS ***12*** *15:16:58.0±0.9,30°.99N×103°.41E,h35km,mb4.5/16,Error ellipse: s-maj=13.8km s-min=7.9km az=109.5*
ISC 12 15:16:57.0±0.3,31°.07N±0°.05×103°.37E±0°.06,h10km,n76, σ1°.09/80,mb4.2/31,MS3.9/3,4C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**116**	Pg	**Pg**	**15 17 06.7**	**+2.4**
CD2				Sg	**Sg**	**15 17 13.8**	**+4.6**
CD2				smax			
	comp=N,30μm,0.7s						
ENH	**Enshi**	**5.33**	**97**	Pn	**Pn**	**15 18 17.9**	**+1.3**
	comp=N,278nm,0.8s						
KMI	**Kunming**	**5.95**	**186**	Pn	**Pn**	**15 18 26.7**	**+1.5**
KMI				Sn	**Sn**	**15 19 42.4**	**+9.0**
KMI				smax			
	comp=N,120nm,1.2s						
KMI				smax			
	comp=E,100nm,1.4s						
KMI				LR	LR		
	comp=N,2μm,9.1s						
KMI				LR	LR		
	comp=E,2μm,5.6s						
KMI				LR	LR		
	comp=Z,1μm,11.1s						
WHN	**Wuhan**	**9.46**	**90**	P	**Pn**	**15 19 14.4**	**+1.1**
WHN				S	**Sn**	**15 20 54.0**	**-5.7**
WHN				LR	LR		
	comp=N,2μm,7.3s						
WHN				LR	LR		
	comp=E,4μm,5.4s						
WHN				LR	LR		
	comp=Z,3μm,9.1s						
LSA	**Lhasa**	**10.64**	**266**	P	**Pn**	**15 19 30.8**	**+1.3**
LSA				S	**Sn**	**15 21 41.9**	**+13**
LSA				LR	LR		
	comp=N,680nm,19.2s						
LSA				LR	LR		
	comp=E,930nm,12.7s						
LSA				LR	LR		
	comp=Z,1μm,10.9s						
LSA	**Lhasa**	**10.64**	**266**	*e*Pn	**Pn**	**15 19 31.6**	**+2.1**
HHC	**Hu-ho-hao-te**	**11.79**	**32**	*e*P	**Pn**	**15 19 50.8**	**+5.6**
HHC				pP		15 19 55.3	
HHC				PP		15 20 00.9	
HHC				S	**Sn**	**15 22 06.2**	**+9.3**
HHC				sS		15 22 12.0	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,5.1s						
HHC				LR	LR		
	comp=N,490nm,6.3s						
HHC				LR	LR		
	comp=E,590nm,6.3s						
HHC				LR	LR		
	comp=Z,590nm,6.6s						
CMAR	**Chiang Mai Arr**	**13.19**	**199**	Pn	**Pn**	**15 20 03.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=60,slow=13,SNR=2.5						
NJ2	**Nanjing**	**13.24**	**82**	*e*P	**Pn**	**15 20 10.6**	**+5.5**
NJ2				pP		15 20 15.6	
NJ2				sP		15 20 18.6	
NJ2				PP		15 20 21.6	
NJ2				S	**Sn**	**15 22 40.9**	**+8.5**
NJ2				sS		15 22 46.1	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,500nm,3.7s						
NJ2				LR	LR		
	comp=N,790nm,8.5s						
NJ2				LR	LR		
	comp=E,1μm,12.4s						
NJ2				LR	LR		
	comp=Z,8μm,7.4s						
SONM	**Songino Array**	**16.90**	**7**	P	**Pn**	**15 20 53.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=188,slow=9.9,SNR=3.6						
SONM				LR	LR	15 27 59.1	
	comp=Z,281nm,19.9s,baz=196,slow=39						
ZAK	**Zakamensk**	**19.29**	**360**	*e*P	**Pn**	**15 21 24.3**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSRS	**Korea Array**	**21.24**	**66**	P	**P**	**15 21 43.2**	**+0.1**
	comp=Z,13nm,0.9s,mb4.3,baz=248,slow=9.5,SNR=17						
KSRS				LR	LR	15 29 38.7	
	comp=Z,195nm,20.4s,MS3.5,baz=65,slow=36						
KSRS	**Korea Array**	**21.24**	**66**	P	**P**	**15 21 43.3**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,195nm,20.4s,MS3.5						
CN2	**Changchun**	**21.57**	**48**	*e*P	**P**	**15 21 47.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
MK31	**Makanchi Array**	**22.59**	**320**	*e*P	**P**	**15 21 58.1**	**+0.6**
MKAR	**Makanchi Array**	**22.59**	**320**	P	**P**	**15 21 58.2**	**+0.7**
	comp=Z,3.7nm,0.9s,mb3.8,baz=127,slow=11,SNR=8.0						
KSH	**Kashi**	**23.83**	**298**	P	**P**	**15 22 14.0**	**+3.8**
KSH				pmax	pmax		
	comp=Z,1μm,10.1s						
TKM2	**Tokmak 2**	**25.02**	**306**	*e*P	**P**	**15 22 22.8**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
TKM2	**Tokmak 2**	**25.02**	**306**	*e*P	**P**	**15 22 22.8**	**+1.8**
	comp=Z,6.3nm,0.9s,mb4.2						
UCH	**Uchtor**	**25.57**	**304**	*e*P	**P**	**15 22 28.6**	**+2.5**
	comp=Z,8.5nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**25.70**	**305**	P	**P**	**15 22 29.6**	**+2.3**
	comp=Z,5.8nm,0.7s,mb4.2,baz=97,slow=3.4,SNR=15						
AAK	**Ala-Archa**	**25.70**	**305**	*d* P	**P**	**15 22 30.5**	**+3.2**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**25.70**	**305**	P	**P**	**15 22 30.4**	**+3.2**
ZAA0	**Zalesovo Array**	**26.48**	**335**	*e*P	**P**	**15 22 34.0**	**-0.2**
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**15 22 34.3**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.2,baz=138,slow=8.3,SNR=13						
KURK	**Kurchatov**	**26.90**	**324**	P	**P**	**15 22 38.3**	**+0.3**
	comp=Z,4.8nm,0.9s,mb4.0,baz=128,slow=9.9,SNR=11						
KURK	**Kurchatov**	**26.90**	**324**	*c i*P	**P**	**15 22 38.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
KURK	**Kurchatov**	**26.90**	**324**	*e*P	**P**	**15 22 38.2**	**+0.2**
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**15 23 27.4**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=98,slow=9.1,SNR=3.8						
BVAR				PcP	PcP	15 26 12.7	-1.4
	comp=Z,1.4nm,0.7s,baz=113,slow=3.4,SNR=4.6						
BRVK	**Borovoye**	**32.50**	**322**	‖ *i*P	**P**	**15 23 27.8**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BRVK	**Borovoye**	**32.50**	**322**	*e*P	**P**	**15 23 27.6**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.2						
ABKAR	**Akbulak array**	**37.22**	**312**	*e*P	**P**	**15 24 08.6**	**+0.1**
ARU	**Arti**	**40.07**	**323**	*c i*P	**P**	**15 24 32.0**	**-0.3**
ARU				S	**S**	**15 30 36.3**	**-1.8**
ARU				SS	SS	15 33 22.9	-12
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
TIXI	**Tiksi**	**42.91**	**12**	*e*P	**P**	**15 24 53.7**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.7						
TIXI	**Tiksi**	**42.91**	**12**	*e*P	**P**	**15 24 53.7**	**-1.6**
	comp=Z,24nm,1.6s,mb4.7						
SEY	**Seymchan**	**44.43**	**30**	*e*P	**P**	**15 25 06.8**	**-0.8**
ZEI	**Tsey**	**48.05**	**301**	*e*P	**P**	**15 25 36.7**	**+0.2**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
KIV	**Kislovodsk**	**48.80**	**303**	*e*P	**P**	**15 25 45.5**	**+3.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BILL	**Bilibino**	**51.47**	**25**	*e*P	**P**	**15 26 01.2**	**-0.9**
BILL				*e*PP	pP	15 26 10.5	+5.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.2						
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**15 26 41.7**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.9,baz=68,slow=6.6,SNR=4.1						
AKASG	**Malin Array Be**	**56.95**	**313**	*ce*P	**P**	**15 26 43.2**	**+0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**15 26 41.7**	**-0.6**
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**15 26 43.0**	**+0.5**
	comp=Z,2.1nm,0.8s,mb4.2,baz=83,slow=7.5,SNR=3.2						
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**15 26 43.0**	**+0.4**
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**15 26 43.8**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.3,baz=93,slow=6.7,SNR=7.3						
WRAB	**Tennant Creek**	**58.80**	**146**	P	**P**	**15 26 55.4**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**58.80**	**146**	P	**P**	**15 26 55.4**	**-0.2**
	comp=Z,5.4nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**15 26 54.1**	**-1.5**
	comp=Z,3.8nm,0.9s,mb4.4,baz=336,slow=7.6,SNR=7.0						
WB2	**Warramunga Arr**	**58.81**	**146**	P	**P**	**15 26 54.3**	**-1.4**
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**15 27 15.1**	**-0.9**
	comp=Z,1.3nm,0.8s,mb4.1,baz=334,slow=6.9,SNR=6.5						
IDI	**Anoyia**	**64.18**	**297**	LR	LR	15 59 16.3	
	comp=Z,103nm,19.8s,MS4.0,slow=40						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**15 27 31.5**	**-1.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=74,slow=6.5,SNR=4.0						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**15 27 31.5**	**-1.0**
CLL	**Collm**	**66.65**	**317**	*e*P	**P**	**15 27 47.0**	**-0.6**
CLL	**Collm**	**66.65**	**317**	*e*P	**P**	**15 27 47.0**	**-0.6**
CLL				*e*PP	PP	15 30 14.0	-0.1
GERES	**GERESS Array B**	**67.12**	**314**	P	**P**	**15 27 49.5**	**-1.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=64,slow=6.1,SNR=4.1						
DAVOX	**Davos/Dischmat**	**70.30**	**313**	LR	LR	15 59 53.4	
	comp=Z,142nm,19.1s,MS4.2,slow=37						
CDF	**Champ du Feu**	**71.20**	**316**	*e*P	**P**	**15 28 15.2**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.1						
CDF	**Champ du Feu**	**71.20**	**316**	*e*P	**P**	**15 28 15.2**	**-0.8**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CDF	**Champ du Feu**	**71.20**	**316**	*e*P	**P**	**15 28 15.2**	**-0.8**
	comp=Z,1.9nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**72.33**	**146**	P	**P**	**15 28 21.4**	**-1.4**
	comp=Z,1.4nm,0.6s,mb4.1,baz=339,slow=5.8,SNR=5.1						
INK	**Inuvik**	**72.39**	**19**	P	**P**	**15 28 22.6**	**-0.3**
	comp=Z,1.2nm,0.6s,mb4.0,baz=344,slow=12,SNR=8.4						
LPG	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.8**	**+0.1**
	comp=Z,6.1nm,0.7s,mb4.3						
LPG	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.8**	**+0.1**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
LPG	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.8**	**+0.1**
	comp=Z,3.0nm,0.7s,mb4.3						
LPL	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.7**	**0.0**
	comp=Z,7.3nm,0.8s,mb4.4						
LPL	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.7**	**0.0**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LPL	**La Plagne**	**72.81**	**313**	*e*P	**P**	**15 28 25.7**	**0.0**
	comp=Z,3.7nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**74.08**	**315**	*e*P	**P**	**15 28 32.2**	**-0.9**
	comp=Z,5.9nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**74.08**	**315**	*e*P	**P**	**15 28 32.2**	**-0.9**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SMF	**Signal de Mont**	**74.08**	**315**	*e*P	**P**	**15 28 32.2**	**-0.9**
	comp=Z,3.0nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**81.91**	**17**	P	**P**	**15 29 15.3**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=328,slow=5.1,SNR=11						
YKA	**Yellowknife Ar**	**81.91**	**17**	P	**P**	**15 29 15.3**	**-1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FFC	**Flin Flon**	**91.81**	**14**	*i* P	**P**	**15 30 05.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**93.04**	**287**	P	**P**	**15 30 09.6**	**-1.8**
	comp=Z,0.3nm,0.9s,mb3.7,baz=60,slow=4.8,SNR=3.0						
TXAR	**Lajitas Array**	**114.65**	**26**	PKP	PKiKP	15 35 37.4	-0.6
	comp=Z,0.2nm,0.5s,baz=348,slow=1.9,SNR=3.9						

IDC ***12*** *15:18:43.2±0.6,32°.45N×105°.21E,h0km,mb4.0/16, mb1 4.2/17,mb1mx4.1/28,mbtmp4.0/17,ML3.8/1,MS3.7/3, Ms1 3.7/3,ms1mx3.2/38,Error ellipse: s-maj=35.4km s-min=13.0km az=56.0*
NEIC ***12*** *15:18:44.5±0.3,32°.45N×105°.33E,h10km,mb4.4/9,Error ellipse: s-maj=10.6km s-min=5.6km az=47.0*
MOS ***12*** *15:18:46.4±0.8,32°.42N×105°.25E,h35km,mb4.6/10,Error ellipse: s-maj=17.0km s-min=8.8km az=121.0*
BJI ***12*** *15:18:48.5,32°.56N×105°.10E,h11km,mB4.9/2,mb4.5/7, ML4.8/4,Ms4.6/4,Ms7 4.1/3*
ISC 12 15:18:43.4±1.3,32°.48N±0°.04×105°.36E±0°.07,h1km±7km, n66,σ0°.95/69,mb4.2/31,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.08**	**221**	Pg	**Pg**	**15 19 25.6**	**+2.4**
CD2				Sg	**Sg**	**15 19 49.0**	**-1.1**
CD2				smax			
	comp=N,28μm,0.6s						
LZH	**Lanzhou**	**3.81**	**341**	*e*Pn	**Pn**	**15 19 46.3**	**+3.1**
LZH				Pg	**Pg**	**15 19 56.5**	**+0.1**
LZH				Sn	**Sn**	**15 20 32.5**	**+3.9**
LZH				Sg	**Sg**	**15 20 43.7**	**-2.1**
LZH				smax			
	comp=N,2μm,0.6s						
LZH				smax			
	comp=E,4μm,0.7s						
LZH				LR	LR		
	comp=E,4μm,3.8s						
LZH				LR	LR		
	comp=Z,4μm,4.5s						
ENH	**Enshi**	**4.16**	**121**	Pn	**Pn**	**15 19 46.5**	**-1.6**
LSA	**Lhasa**	**12.49**	**261**	*e*P	**Pn**	**15 21 42.9**	**+0.6**
SONM	**Songino Array**	**15.36**	**3**	Pn	**Pn**	**15 22 23.9**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=196,slow=13,SNR=4.7						
KSRS	**Korea Array**	**19.13**	**69**	P	**Pn**	**15 23 14.7**	**+6.0**
	comp=Z,0.7nm,0.3s,baz=249,slow=10,SNR=5.8						
KSRS	**Korea Array**	**19.13**	**69**	P	**Pn**	**15 23 14.7**	**+6.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	**19.38**	**49**	*e*P	**Pn**	**15 23 18.4**	**+6.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**15 23 45.9**	**-0.3**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**15 23 46.7**	**+0.5**
	comp=Z,4.3nm,0.8s,mb4.0,baz=122,slow=9.6,SNR=5.8						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**15 23 46.7**	**+0.5**
TKM2	**Tokmak 2**	**25.63**	**303**	*e*P	**P**	**15 24 14.8**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**25.63**	**303**	*e*P	**P**	**15 24 14.8**	**+0.4**
	comp=Z,5.6nm,0.9s,mb4.2						
KLR	**Kul'dur**	**25.85**	**42**	*e*P	**P**	**15 24 16.3**	**0.0**
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**15 24 17.3**	**-0.1**
	comp=Z,1.9nm,0.6s,mb3.9,baz=129,slow=14,SNR=3.4						
UCH	**Uchtor**	**26.25**	**301**	P	**P**	**15 24 20.8**	**+0.8**
	comp=Z,10nm,1.0s,mb4.4						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**15 24 24.6**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.0,baz=130,slow=8.6,SNR=4.1						
AML	**Almayashu**	**26.83**	**300**	*e*P	**P**	**15 24 25.9**	**+0.6**
	comp=Z,8.2nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**15 25 14.5**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.8,baz=100,slow=6.0,SNR=3.5						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**15 25 58.3**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**39.00**	**312**	P	**P**	**15 26 11.2**	**+0.1**
AKTO	**Aktyubinsk**	**39.00**	**312**	P	**P**	**15 26 11.2**	**+0.1**
	comp=Z,0.7nm,0.3s,mb3.7,baz=110,slow=14,SNR=3.8						
TIXI	**Tiksi**	**41.20**	**11**	P	**P**	**15 26 28.7**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
TIXI	**Tiksi**	**41.20**	**11**	P	**P**	**15 26 28.7**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.2						
ZEI	**Tsey**	**48.78**	**301**	*e*P	**P**	**15 27 28.8**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
OBN	**Obninsk**	**52.18**	**317**	*e*P	**P**	**15 27 57.0**	**+1.6**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.91**	**156**	P	**P**	**15 28 08.9**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.2,baz=315,slow=1.4,SNR=3.2						
ARCES	**ARCESS Array B**	**56.45**	**335**	P	**P**	**15 28 26.5**	**+0.3**
	comp=Z,3.9nm,1.1s,mb4.4,baz=78,slow=9.6,SNR=2.7						
ARCES	**ARCESS Array B**	**56.45**	**335**	P	**P**	**15 28 26.5**	**+0.3**
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**15 28 30.2**	**-0.4**
	comp=Z,1.5nm,0.9s,mb4.0,baz=99,slow=6.9,SNR=6.8						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**15 28 34.4**	**+3.9**
	comp=Z,2.3nm,0.8s,mb4.3,baz=64,slow=4.4,SNR=3.8						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**15 28 34.4**	**+3.9**
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**15 28 30.5**	**-1.6**
	comp=Z,2.1nm,0.7s,mb4.3,baz=69,slow=6.7,SNR=5.6						
WRAB	**Tennant Creek**	**59.04**	**148**	*e*P	**P**	**15 28 45.3**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**59.04**	**148**	*e*P	**P**	**15 28 45.3**	**+0.3**
	comp=Z,7.5nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**59.05**	**148**	P	**P**	**15 28 45.5**	**+0.4**
	comp=Z,5.5nm,0.8s,mb4.6,baz=339,slow=7.7,SNR=3.8						
WB2	**Warramunga Arr**	**59.05**	**148**	*e*P	**P**	**15 28 45.1**	**0.0**
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**15 29 07.0**	**+0.8**
	comp=Z,1.2nm,0.5s,mb4.4,baz=335,slow=6.8,SNR=3.3						
NB2	**NORSAR Subarra**	**64.08**	**327**	P	**P**	**15 29 17.2**	**-1.4**
	comp=Z,0.9nm,0.6s,mb4.2,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**15 29 17.4**	**-1.2**
	comp=Z,1.6nm,0.8s,mb4.3,baz=72,slow=6.5,SNR=3.7						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**15 29 17.4**	**-1.2**
BRG	**Berggiesshubel**	**66.41**	**316**	*e*P	**P**	**15 29 43.3**	**+9.4**
	comp=Z,2.3nm,0.7s,mb4.5						
BRG	**Berggiesshubel**	**66.41**	**316**	*e*P	**P**	**15 29 43.3**	**+9.4**
BRG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.2						
CLL	**Collm**	**66.78**	**317**	*i* P	**P**	**15 29 42.3**	**+6.0**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.8						
CLL	**Collm**	**66.78**	**317**	*i* P	**P**	**15 29 42.3**	**+6.0**
	comp=Z,6.0nm,1.3s,mb4.7						
CLL	**Collm**	**66.78**	**317**	*i* pP	pP	15 29 42.3	+5.6
	comp=Z,6.0nm,1.3s						
GERES	**GERESS Array B**	**67.35**	**314**	P	**P**	**15 29 40.2**	**+0.2**
	comp=Z,0.6nm,0.6s,mb4.0,baz=57,slow=4.9,SNR=4.5						
INK	**Inuvik**	**70.51**	**20**	P	**P**	**15 30 00.1**	**+0.9**
	comp=Z,1.3nm,0.9s,mb4.1,baz=287,slow=2.7,SNR=2.5						
CDF	**Champ du Feu**	**71.38**	**316**	*e*P	**P**	**15 30 04.1**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.3						
CDF	**Champ du Feu**	**71.38**	**316**	*e*P	**P**	**15 30 04.1**	**-0.8**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
CDF	**Champ du Feu**	**71.38**	**316**	*e*P	**P**	**15 30 04.1**	**-0.8**
	comp=Z,1.5nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**72.59**	**148**	P	**P**	**15 30 11.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.1,baz=18,slow=3.2,SNR=2.2						
STKA	**Stephens Creek**	**72.59**	**148**	P	**P**	**15 30 11.5**	**-0.7**
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**15 30 15.2**	**0.0**
	comp=Z,20nm,1.0s,mb4.9						
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**15 30 15.2**	**0.0**
LPG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**15 30 15.2**	**0.0**
	comp=Z,9.9nm,1.0s,mb4.9						
LPL	**La Plagne**	**73.09**	**313**	*e*P	**P**	**15 30 15.1**	**-0.1**
SMF	**Signal de Mont**	**74.27**	**315

CMAR Chiang Mai Arr 14.43 202 Pn Pn 15 29 36.2 +0.4
comp=Z,0.5nm,0.3s,baz=14,slow=11,SNR=5.5
SONM Songino Array 15.86 4 Pn Pn 15 29 56.1 +1.4
comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=3.5
KSRS Korea Array 19.89 68 P Pn 15 30 44.0 -0.5
comp=Z,0.2nm,0.3s,baz=254,slow=10,SNR=7.2
CN2 Changchun 20.16 48 *e*P **P 15 30 47.9 +2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 22.60 317 P P 15 31 14.0 +2.0
comp=Z,1.5nm,0.8s,mb3.5,baz=116,slow=13,SNR=4.5
ZAA0 Zalesovo Array 26.11 333 *e*P **P 15 31 45.4 +0.3**
ZALV Zalesovo Beam 26.11 333 P P 15 31 45.5 +0.3
comp=Z,2.4nm,0.5s,mb4.0,baz=132,slow=10,SNR=10
ZALV Zalesovo Beam 26.11 333 P P 15 31 45.5 +0.3
KURK Kurchatov 26.79 322 P P 15 31 51.6 +0.2
comp=Z,1.3nm,0.8s,mb3.5,baz=129,slow=8.6,SNR=5.8
TIXI Tiksi 41.78 11 *e*P **P 15 34 00.2 -0.3**
comp=Z,4.9nm,1.3s,mb4.0
ARCES ARCESS Array B 56.62 336 P P 15 35 53.8 -0.2
comp=Z,3.1nm,0.8s,mb4.4,baz=92,slow=6.1,SNR=6.1
FINES FINESS Array B 57.06 326 P P 15 35 57.2 -0.1
comp=Z,1.2nm,0.7s,mb4.1,baz=83,slow=7.9,SNR=3.5
FINES FINESS Array B 57.06 326 P P 15 35 57.2 -0.1
WRAB Tennant Creek 58.98 147 *e*P **P 15 36 11.0 -0.3**
WRA Warramunga Arr 58.99 147 P P 15 36 10.8 -0.5
comp=Z,1.7nm,0.5s,mb4.3,baz=339,slow=7.5,SNR=12
WB2 Warramunga Arr 58.99 147 *e*P **P 15 36 10.8 -0.5**
ASAR Alice Springs 62.04 149 P P 15 36 31.9 -0.1
comp=Z,0.7nm,0.5s,mb4.0,baz=334,slow=6.6,SNR=7.9
INK Inuvik 71.16 19 P P 15 37 30.0 +0.2
comp=Z,2.0nm,0.5s,mb4.3,baz=330,slow=8.1,SNR=17
CDF Champ du Feu 71.27 316 *e*P **P 15 37 30.3 -0.5**
STKA Stephens Creek 72.53 148 *e*P **P 15 37 37.8 -0.6**
LPG La Plagne 72.95 313 *e*P **P 15 37 40.9 0.0**
comp=Z,6.9nm,0.7s,mb4.4
LPL La Plagne 72.95 313 *e*P **P 15 37 40.8 -0.1**
comp=Z,3.8nm,0.4s,mb4.4
SMF Signal de Mont 74.16 315 *e*P **P 15 37 47.0 -1.0**
YKA Yellowknife Ar 80.70 17 P P 15 38 24.5 +0.2
comp=Z,1.2nm,0.6s,mb4.0,baz=329,slow=5.1,SNR=15

ISCJB ***12*** *15:28:43.9±0.4, 32.°34N±0.°06×105.°29E±0.°10, h10km, mb4.2/16, MS4.4/2, Error ellipse: s-maj=12.6km s-min=7.2km az=151.1*
IDC ***12*** *15:28:44.5±0.7, 32.°41N×105.°26E, h0km, mb4.1/14, mb1 4.2/15, mb1mx4.1/28, mbtmp4.1/15, ML3.5/1, MS4.3/8, Ms1 4.3/8, ms1mx3.7/39, Error ellipse: s-maj=34.7km s-min=13.7km az=53.0*
NEIC ***12*** *15:28:46.2±0.4, 32.°35N×105.°19E, h10km, mb4.7/3, Error ellipse: s-maj=20.6km s-min=8.4km az=59.0*
BJI ***12*** *15:28:46.1, 32.°46N×105.°31E, h10km, mb4.5/2, ML4.3/4, Ms4.8/5, Ms7 4.5/3*
ISC 12 15:28:46.0±0.5, 32.°37N±0.°06×105.°28E±0.°10, h10km, n35, σ0.°86/36, mb4.2/16, MS4.4/2, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.89**	**343**	*e*Pn	**Pn**	**15 29 39.6**	**-6.3**
LZH				Pg	**Pn**	**15 29 46.8**	**+0.9**
LZH				Sn	**Sn**	**15 30 32.6**	**+1.0**
LZH				Sg	**Sg**	**15 30 43.7**	**-7.3**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,22μm,6.3s						
LZH				LR	LR		
	comp=Z,23μm,8.5s						
TIY	**Taiyuan**	**7.93**	**46**	*e*Pn	**Pn**	**15 30 42.1**	**+0.8**
TIY				LR	LR		
	comp=N,2μm,6.6s						
TIY				LR	LR		
	comp=E,2μm,3.6s						
TIY				LR	LR		
	comp=Z,2μm,7.8s						
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**15 32 27.5**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=193,slow=9.0,SNR=3.6						
UBT	**Ubonrachathani**	**17.05**	**181**	⇓P	**Pn**	**15 32 41.0**	**-3.6**
KSRS	**Korea Array**	**19.24**	**68**	P	**Pn**	**15 33 10.0**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=247,slow=11,SNR=3.8						
MK31	**Makanchi Array**	**22.72**	**316**	*e*P	**P**	**15 33 47.9**	**0.0**
MKAR	**Makanchi Array**	**22.72**	**316**	P	**P**	**15 33 47.8**	**-0.1**
	comp=Z,2.3nm,0.7s,mb3.7,baz=118,slow=9.7,SNR=14						
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	**P**	**15 34 18.9**	**-0.3**
	comp=Z,1.3nm,0.4s,mb3.8,baz=133,slow=8.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	**P**	**15 34 18.9**	**-0.4**
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**15 34 26.4**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.6,baz=123,slow=9.5,SNR=7.2						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**15 34 26.8**	**+0.1**
	comp=Z,2.0nm,0.6s,mb3.8						
BVAR	**Borovoye Array**	**32.44**	**320**	P	**P**	**15 35 16.0**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=115,slow=10.0,SNR=4.9						
ABKAR	**Akbulak array**	**37.60**	**310**	*e*P	**P**	**15 36 01.2**	**+0.6**
AKTK	**Aktyubinsk**	**39.02**	**312**	P	**P**	**15 36 12.9**	**+0.3**
AKTO	**Aktyubinsk**	**39.02**	**312**	P	**P**	**15 36 12.9**	**+0.3**
	comp=Z,1.1nm,0.5s,mb3.8,baz=109,slow=16,SNR=5.6						
KAPI	**Kappang**	**39.65**	**157**	P	**P**	**15 36 17.3**	**-0.8**
	comp=Z,14nm,0.7s,mb4.8,baz=108,slow=3.2,SNR=5.4						
GUMO	**Guam**	**40.67**	**108**	LR	LR	15 52 05.7	
	comp=Z,218nm,18.9s,MS4.0,baz=133,slow=34						
TIXI	**Tiksi**	**41.32**	**11**	*e*P	**P**	**15 36 29.5**	**-1.9**
ARCES	**ARCESS Array B**	**56.52**	**335**	P	**P**	**15 38 27.4**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.2,baz=82,slow=8.3,SNR=3.2						
ARCES	**ARCESS Array B**	**56.52**	**335**	P	**P**	**15 38 27.4**	**-0.6**
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**15 38 31.7**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=114,slow=8.5,SNR=4.3						
AKASG	**Malin Array Be**	**57.25**	**313**	P	**P**	**15 38 32.9**	**-0.6**
	comp=Z,2.7nm,0.4s,mb4.6,baz=68,slow=7.3,SNR=5.9						
IDID	**Didziasalis**	**57.77**	**319**	*e*P	**P**	**15 38 36.1**	**-1.0**
IIGN	**Ignalina**	**58.05**	**319**	*e*P	**P**	**15 38 32.7**	**-6.3**
ISAL	**Salakas**	**58.06**	**319**	*e*P	**P**	**15 38 31.9**	**-7.1**
WRAB	**Tennant Creek**	**58.98**	**148**	*e*P	**P**	**15 38 46.8**	**+0.9**
	comp=Z,4.2nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**15 38 46.8**	**+0.9**
	comp=Z,5.2nm,0.6s,mb4.8,baz=338,slow=7.5,SNR=18						
WB2	**Warramunga Arr**	**58.99**	**148**	*e*P	**P**	**15 38 47.0**	**+1.0**
KWP	**Kalwaria Pacla**	**61.58**	**313**	*e*P	**P**	**15 39 03.7**	**+0.3**
	comp=Z,20nm,0.7s,mb5.4						
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**15 39 08.0**	**+1.0**
	comp=Z,2.2nm,0.6s,mb4.5,baz=330,slow=6.3,SNR=20						
GERES	**GERESS Array B**	**67.38**	**314**	P	**P**	**15 39 40.9**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=104,slow=3.1,SNR=2.9						
INK	**Inuvik**	**70.63**	**20**	LR	LR	16 16 46.6	
	comp=Z,387nm,18.3s,MS4.7,baz=143,slow=41						
YKA	**Yellowknife Ar**	**80.19**	**18**	P	**P**	**15 40 56.4**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.2,SNR=5.2						
YKA	**Yellowknife Ar**	**80.19**	**18**	P	**P**	**15 40 56.4**	**+0.2**
ULM	**Lac du Bonnet**	**95.63**	**13**	P	**P**	**15 42 10.9**	**-0.7**
	comp=Z,0.9nm,0.4s,mb4.5,baz=9.5,slow=6.1,SNR=2.0						

ISCJB ***12*** *15:28:51.6±0.1, 31.°03N±0.°02×103.°48E±0.°02, h10km, mb4.9/106, MS4.5/20, Error ellipse: s-maj=3.1km s-min=2.8km az=146.6*
BJI ***12*** *15:28:52.4, 31.°10N×103.°59E, h10km, mB5.2/17, mb5.1/29, ML5.0/14, Ms5.1/42, Ms7 5.0/29*
NEIC ***12*** *15:28:53.4±0.1, 31.°06N×103.°51E, h10km, mb5.0/65, MS4.5/1, Error ellipse: s-maj=3.6km s-min=3.3km az=56.0*
MOS ***12*** *15:28:53.7±0.7, 31.°02N×103.°54E, h25km, mb5.1/51, MS4.5/14, Error ellipse: s-maj=7.5km s-min=4.6km az=105.3*
IDC ***12*** *15:28:55.6±2.0, 31.°05N×103.°49E, h24km±12km, mb4.5/28, mb1 4.6/30, mb1mx4.6/32, mbtmp4.5/30, ML4.2/2, MS4.3/12, Ms1 4.3/12, ms1mx3.9/35, Error ellipse: s-maj=13.8km s-min=10.3km az=50.0*
DJA ***12*** *15:28:58, 30.°94N×103.°59E, h37km, mb5.2/15*
SZGRF ***12*** *15:29:30.5, 34.°43N×99.°00E, h33km, mb4.7, Qinghai, China*
ISC 12 15:28:53.7±0.1, 31.°04N±0.°02×103.°49E±0.°02, h10km, (h18km±4.3km: pP-P), n337, σ1.°00/344, mb4.9/106, MS4.5/20, 26C-19D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**119**	Pg	**Pg**	**15 28 59.8**	**+0.8**
CD2				Sg	**Sg**	**15 29 05.7**	**+3.1**
CD2				smax			
	comp=N,276μm,0.8s						
LZH	**Lanzhou**	**5.05**	**3**	*e*Pg	**Pb**	**15 30 17.2**	**-4.9**
LZH				Sn	**Sn**	**15 31 14.3**	**+6.6**
LZH				Sg	**Sg**	**15 31 37.6**	**+1.9**
LZH				smax			
	comp=N,990nm,0.9s						
LZH				smax			
	comp=E,990nm,0.8s						
LZH				LR	LR		
	comp=N,28μm,5.5s						
LZH				LR	LR		
	comp=Z,30μm,7.3s						
ENH	**Enshi**	**5.22**	**97**	*e*P	**Pn**	**15 30 15.6**	**+3.7**
	comp=Z,821nm,0.8s						
GYA	**Guiyang**	**5.34**	**148**	Pn	**Pn**	**15 30 13.2**	**-0.3**
GYA				Sn	**Sn**	**15 31 18.3**	**+3.2**
GYA				smax			
	comp=N,3μm,1.2s						
GYA				smax			
	comp=E,2μm,1.0s						
KMI	**Kunming**	**5.93**	**187**	Pn	**Pn**	**15 30 22.7**	**+1.2**
KMI				Sn	**Sn**	**15 31 29.6**	**+0.1**
KMI				smax			
	comp=N,1μm,1.3s						
KMI				smax			
	comp=E,1μm,1.2s						
KMI				LR	LR		
	comp=N,22μm,9.4s						
KMI				LR	LR		
	comp=E,16μm,9.1s						
KMI				LR	LR		
	comp=Z,22μm,9.4s						
GTA	**Gaotai**	**8.88**	**341**	*e*P	**Pn**	**15 31 04.0**	**+2.0**
GTA				pP		15 31 08.4	
GTA				sP		15 31 11.6	
GTA				S	**Sn**	**15 32 43.3**	**+1.2**
GTA				sS		15 32 47.2	
GTA				pmax	pmax		
	comp=Z,26nm,1.2s						
GTA				pmax	pmax		
	comp=Z,280nm,5.7s						
GTA				LR	LR		
	comp=N,4μm,12.3s						
GTA				LR	LR		
	comp=E,5μm,11.7s						
GTA				LR	LR		
	comp=Z,4μm,10.5s						
WHN	**Wuhan**	**9.36**	**90**	P	**Pn**	**15 31 10.1**	**+1.5**
WHN				S	**Sn**	**15 32 50.4**	**-3.4**
WHN				LR	LR		
	comp=N,9μm,5.3s						
WHN				LR	LR		
	comp=E,23μm,6.2s						
WHN				LR	LR		
	comp=Z,29μm,7.0s						
LSA	**Lhasa**	**10.74**	**266**	*e*P	**Pn**	**15 31 28.9**	**+1.3**
LSA				pmax	pmax		
	comp=Z,79nm,0.8s						
LSA	**Lhasa**	**10.74**	**266**	*e*P	**Pn**	**15 31 28.9**	**+1.3**
	comp=Z,79nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.77**	**31**	*e*P	**Pn**	**15 31 45.1**	**+3.5**
HHC				pP		15 31 49.6	
HHC				PP		15 31 54.9	
HHC				S	**Sn**	**15 33 57.5**	**+4.5**
HHC				sS		15 34 04.2	
HHC				SS		15 34 11.9	
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,4.8s						
HHC				LR	LR		
	comp=N,1μm,6.1s						
HHC				LR	LR		
	comp=E,5μm,5.6s						
HHC				LR	LR		
	comp=Z,3μm,5.8s						
GZH	**Guangzhou**	**11.82**	**130**	P	**Pn**	**15 31 42.7**	**+0.4**
GZH				S	**Sn**	**15 33 58.1**	**+3.8**
GZH				LR	LR		
	comp=N,9μm,9.9s						
GZH				LR	LR		
	comp=E,8μm,10.0s						
TIA	**Tai'an**	**12.48**	**62**	P	**Pn**	**15 31 51.3**	**0.0**
TIA				pmax	pmax		
	comp=Z,48nm,0.6s						
TIA				LR	LR		
	comp=N,2μm,8.0s						
TIA				LR	LR		
	comp=E,980nm,7.0s						
CHG	**Chiang Mai**	**12.85**	**200**	⇓P	**Pn**	**15 32 00.6**	**+4.2**
	comp=E,60nm,0.8s						
CHTO	**Chiang Mai**	**12.85**	**200**	*e*P	**Pn**	**15 31 57.8**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,40nm,0.8s						
CHTO	**Chiang Mai**	**12.85**	**200**	*e*P	**Pn**	**15 31 57.8**	**+1.4**
	comp=Z,40nm,0.8s						
NJ2	**Nanjing**	**13.15**	**82**	*e*P	**Pn**	**15 32 00.1**	**-0.3**
NJ2				pP		15 32 07.4	
NJ2				PP		15 32 10.1	
NJ2				sP		15 32 12.4	
NJ2				S	**Sn**	**15 34 25.2**	**-1.5**
NJ2				sS		15 34 37.2	
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,650nm,5.8s						
NJ2				LR	LR		
	comp=N,5μm,7.6s						
NJ2				LR	LR		
	comp=E,12μm,14.6s						
NJ2				LR	LR		
	comp=Z,15μm,12.6s						
CMAR	**Chiang Mai Arr**	**13.18**	**199**	Pn	**Pn**	**15 32 02.4**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=10,slow=12,SNR=39						
CMAR				Lg		15 35 58.4	
	baz=20,slow=29,SNR=7.6						
CMAR				LR	LR	15 37 24.5	
	comp=Z,2μm,19.3s,baz=18,slow=39						
CMAR				ScP	ScP	15 41 04.6	-1.0
	comp=Z,0.2nm,0.3s,baz=314,slow=2.6,SNR=11						
CM31	**Chiang Mai Arr**	**13.19**	**199**	*e*P	**Pn**	**15 32 02.5**	**+1.4**
	comp=Z,34nm,0.6s						
QIZ	**Qiongzhong**	**13.26**	**153**	P	**Pn**	**15 32 01.9**	**-0.2**
QIZ				S	**Sn**	**15 34 30.8**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,360nm,3.8s						
QIZ				LR	LR		
	comp=N,5μm,10.3s						
QIZ				LR	LR		
	comp=Z,5μm,10.3s						
BJT	**Baijiatuau**	**13.66**	**46**	*e*P	**Pn**	**15 32 07.2**	**-0.2**
BJT				pmax	pmax		
	comp=Z,68nm,0.9s						
BJT	**Baijiatuau**	**13.66**	**46**	*e*P	**Pn**	**15 32 07.2**	**-0.2**
	comp=Z,68nm,0.9s						
BJI	**Beijing**	**13.68**	**45**	P	**Pn**	**15 32 06.5**	**-1.1**
BJI				pmax	pmax		
	comp=Z,14nm,1.0s						
BJI				LR	LR		
	comp=N,3μm,8.9s						
BJI				LR	LR		
	comp=E,2μm,11.5s						
BJI				LR	LR		
	comp=Z,1μm,18.6s						
QZH	**Quanzhou**	**14.65**	**111**	*e*P	**Pn**	**15 32 20.4**	**-0.6**
QZH				LR	LR		
	comp=N,7μm,7.5s						
QZH				LR	LR		
	comp=E,7μm,7.3s						
QZH				LR	LR		
	comp=Z,8μm,10.9s						
GUN	**Gumba**	**15.65**	**263**	*e*P	**Pn**	**15 32 31.8**	**-2.5**
	comp=Z,539nm,1.2s						
CAL	**Calcutta**	**15.95**	**242**	*e*P	**Pn**	**15 32 38.0**	**-0.3**
PKI	**Pulchoki**	**16.15**	**262**	*e*P	**Pn**	**15 32 38.0**	**-2.7**
	comp=Z,308nm,0.8s						
PKIN	**Phulchoki**	**16.16**	**262**	*e*P	**Pn**	**15 32 37.9**	**-2.9**
	comp=Z,394nm,0.7s						
KKN	**Kakani**	**16.19**	**263**	*e*P	**Pn**	**15 32 38.6**	**-2.8**
	comp=Z,268nm,0.6s						
DMN	**Daman**	**16.39**	**263**	*e*P	**Pn**	**15 32 40.9**	**-3.0**
	comp=Z,375nm,0.9s						
DL2	**Dalian**	**16.80**	**57**	P	**Pn**	**15 32 51.8**	**+2.9**
DL2				pmax	pmax		
	comp=Z,70nm,1.2s						
SONM	**Songino Array**	**16.92**	**7**	Pn	**Pn**	**15 32 50.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=187,slow=13,SNR=34						
SONM				Lg		15 37 54.6	
	baz=172,slow=30,SNR=3.6						
SONM				LR	LR	15 40 07.1	
	comp=Z,3μm,18.1s,baz=188,slow=40						
ULN	**Ulaanbaatar**	**17.03**	**8**	*e*P	**Pn**	**15 32 51.7**	**-0.1**
ULN				pmax	pmax		
	comp=Z,63nm,1.0s						
ULN	**Ulaanbaatar**	**17.03**	**8**	*e*P	**Pn**	**15 32 51.7**	**0.0**
	comp=Z,63nm,1.0s						
ULN	**Ulaanbaatar**	**17.03**	**8**	Pn	**Pn**	**15 32 52.4**	**+0.6**
	SNR=24						
ULN				Pn	**Pn**	**15 32 52.4**	**+0.6**
	SNR=24						
YHNB	**Yeheng**	**17.03**	**107**	P	**Pn**	**15 32 52.4**	**+0.4**
	comp=Z,39nm,0.8s						
SSLB	**Suanglung**	**17.09**	**111**	P	**Pn**	**15 32 54.1**	**+1.3**
	comp=Z,37nm,0.8s						
WMQ	**Urumqi**	**17.86**	**320**	*e*P	**Pn**	**15 33 03.6**	**+1.5**
WMQ				S	**Sn**	**15 36 19.6**	**-1.5**
WMQ				sS	sS	15 36 23.5	-8.8
WMQ				SS		15 36 41.3	
WMQ				PcP	PcP	15 37 40.0	+1.4
WMQ				pmax	pmax		
	comp=Z,37nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.0s						
WMQ				LR	LR		
	comp=N,1μm,11.0s						
WMQ				LR	LR		
	comp=E,2μm,12.0s						
ZAK	**Zakamensk**	**19.33**	**360**	*e*P	**Pn**	**15 33 20.2**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,26nm,1.1s						
SNY	**Shenyang**	**19.38**	**51**	⇓P	**Pn**	**15 33 20.6**	**0.0**
SNY				S	**Sn**	**15 36 59.2**	**+1.3**
SNY				pmax	pmax		
	comp=Z,36nm,1.7s						
SNY				LR	LR		
	comp=N,530nm,10.2s						
SNY				LR	LR		
	comp=E,1μm,15.0s						
SNY				LR	LR		
	comp=Z,2μm,18.4s						
PTH	**Pithoragarh**	**20.15**	**272**	*e*P	**P**	**15 33 29.0**	**+0.9**
INCN	**Inchon**	**20.16**	**65**	*e*P	**P**	**15 33 28.2**	**+0.1**
	comp=Z,80nm,0.9s						
TLY	**Talaya**	**20.63**	**0**	Pn	**P**	**15 33 34.7**	**+1.7**
	comp=Z,130nm,1.1s,SNR=11						
TLY	**Talaya**	**20.63**	**0**	*e*P	**P**	**15 33 33.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,58nm,1.4s						
TLY	**Talaya**	**20.63**	**0**	*e*P	**P**	**15 33 33.9**	**+0.9**
	comp=Z,58nm,1.4s						
TLY	**Talaya**	**20.63**	**0**	P	**P**	**15 33 35.2**	**+2.2**
	SNR=11						
TLY				P		15 33 35.2	
	SNR=11						
MOY	**Mondy**	**20.70**	**356**	*e*P	**P**	**15 33 35.4**	**+1.6**
MOY				pmax	pmax		
	comp=Z,159nm,2.5s						
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**15 33 39.1**	**+0.2**
	comp=Z,82nm,1.0s,mb5.0,baz=245,slow=9.4,SNR=70						
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**15 33 39.1**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.0						
IRK	**Irkutsk**	**21.20**	**1**	*e*P	**P**	**15 33 41.0**	**+1.8**
IRK				pmax	pmax		
	comp=Z,253nm,1.1s,mb5.5						
CN2	**Changchun**	**21.52**	**48**	*e*P	**P**	**15 33 44.0**	**+1.2**
CN2				*es*P	sP	15 33 50.0	+3.1
CN2				*e*S	**S**	**15 37 38.0**	**-3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
CN2				pmax	pmax		
	comp=Z,900nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,2μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1μm,15.0s,MS4.5						
DDI	**Dehra Dun**	**21.88**	**275**	*ex*	x	15 33 46.0	
HIA	**Hailar**	**21.96**	**29**	*e*P	**P**	**15 33 47.8**	**+0.4**
HIA				pmax	pmax		
	comp=Z,68nm,0.9s						
HIA	**Hailar**	**21.96**	**29**	*e*P	**P**	**15 33 47.8**	**+0.4**
	comp=Z,68nm,0.9s,mb5.1						
CIT	**Chita**	**22.24**	**17**	*e*P	**P**	**15 33 51.0**	**+0.6**
CIT				*e*		15 34 16.7	
CIT				*e*		15 34 29.0	
CIT				pmax	pmax		
	comp=Z,176nm,1.5s,mb5.3						
JBP	**Jabalpur**	**22.32**	**255**	⇓*i*P	**P**	**15 33 49.9**	**-1.6**
JBP				*ex*	x	15 33 58.4	
	comp=Z,83nm,1.3s						
JBP				*e*S	**S**	**15 37 57.4**	**+0.3**
SDNR	**Sundarnagar**	**22.66**	**278**	*e*P	**P**	**15 33 53.9**	**-1.2**
MK31	**Makanchi Array**	**22.69**	**320**	P	**P**	**15 33 56.4**	**+1.2**
MK31	**Makanchi Array**	**22.69**	**320**	P	**P**	**15 33 56.4**	**+1.2**
MKAR	**Makanchi Array**	**22.69**	**320**	P	**P**	**15 33 56.5**	**+1.3**
	comp=Z,14nm,1.0s,mb4.3,baz=126,slow=11,SNR=20						
MKAR				ScP	ScP	15 41 23.2	-2.0
	comp=Z,1.4nm,0.7s,baz=113,slow=2.8,SNR=6.9						
MKAR	**Makanchi Array**	**22.69**	**320**	P	**P**	**15 33 56.5**	**+1.3**
MKAR	**Makanchi Array**	**22.69**	**320**	P	**P**	**15 33 56.5**	**+1.3**
MKAR				ScP	ScP	15 41 23.2	-2.0
NDI	**New Delhi**	**22.89**	**271**	*e*P	**P**	**15 33 54.0**	**-3.5**
NDI				*e*S	**S**	**15 38 04.5**	**-3.0**
TGY	**Tagaytay City**	**23.26**	**133**	LR	LR	15 42 19.8	
	comp=Z,10nm,18.1s,baz=357,slow=35						
DLH	**Dalhousie**	**23.42**	**281**	*ex*	x	15 34 06.0	
THN	**Thein Dam**	**23.64**	**281**	*e*P	**P**	**15 34 03.9**	**-1.4**
KSH	**Kashi**	**23.93**	**298**	P	**P**	**15 34 11.3**	**+3.4**
KSH				*ep*P		15 34 15.3	
KSH				*es*P	sP	15 34 18.4	+6.2
KSH				*e*PP		15 34 46.3	
KSH				*e*PcP	PcP	15 37 51.2	+1.0
KSH				*e*S	**S**	**15 38 26.6**	**+2.3**
KSH				*e*ScP	ScP	15 41 28.1	-0.6
KSH				*e*PcS	PcS	15 41 29.3	-0.4
KSH				*e*ScS	ScS	15 45 14.2	-1.4
KSH				LR	LR		
	comp=N,410nm,7.9s						
KSH				LR	LR		
	comp=E,710nm,7.7s						
NGP	**Nagpur**	**24.01**	**252**	*e*P	**P**	**15 34 03.6**	**-5.1**
NGP				*e*S	**S**	**15 38 19.5**	**-6.3**
MDJ	**Mudanjiang**	**24.55**	**49**	P	**P**	**15 34 11.5**	**-1.9**
MDJ				pP		15 34 14.5	
MDJ				S	**S**	**15 38 32.3**	**-1.8**
MDJ				sS	sS	15 38 37.4	-1.7
MDJ				ScP	ScP	15 41 28.7	-1.6
MDJ				PcS	PcS	15 41 30.2	-1.0
MDJ	**Mudanjiang**	**24.55**	**49**	*e*P	**P**	**15 34 13.5**	**+0.1**
	comp=E,62nm,1.1s,mb5.0						
KZA	**Kyzart**	**25.11**	**304**	P	**P**	**15 34 21.2**	**+2.7**
	SNR=26						
TKM2	**Tokmak 2**	**25.12**	**306**	P	**P**	**15 34 25.9**	**+7.2**
	SNR=13						
KBK	**Karagaybulak**	**25.50**	**305**	P	**P**	**15 34 24.1**	**+2.1**
	SNR=32						
UCH	**Uchtor**	**25.68**	**304**	P	**P**	**15 34 29.3**	**+5.6**
	SNR=7.7						
CHMS	**Chumysh**	**25.74**	**306**	P	**P**	**15 34 28.0**	**+3.7**
	SNR=6.8						
FRU	**Bishkek**	**25.78**	**305**	*i*P	**P**	**15 34 30.0**	**+5.3**
FRU				pmax	pmax		
	comp=Z,160nm,1.8s,mb5.2						
FRU				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.1

SNR=41
AAK P 15 34 29.1
SNR=41
USP Ospenovka 26.00 306 P **P 15 34 30.9 +4.3**
SNR=11
AML Almayashu 26.24 303 P **P 15 34 34.6 +5.8**
SNR=8.3
EKS2 Erkin-Say 26.32 304 P **P 15 34 34.7 +5.1**
SNR=11
HYB Hyderabad 26.40 245 *i* P **P 15 34 31.0 +0.6**
ZAA0 Zalesovo Array 26.56 335 *e*P **P 15 34 31.0 -0.6**
ZALV Zalesovo Beam 26.56 335 P **P 15 34 31.2 -0.3**
comp=N,19nm,0.8s,mb4.7,baz=136,slow=8.7,SNR=48
KURK Kurchatov 26.99 324 P **P 15 34 35.0 -0.5**
comp=N,133nm,1.0s,mb5.4,SNR=5.4
KURK Kurchatov 26.99 324 P **P 15 34 35.4 -0.1**
comp=N,9.7nm,0.8s,mb4.4,baz=128,slow=9.8,SNR=30
KURK ScP ScP 15 41 34.0 -3.2
comp=N,2.6nm,0.8s,baz=123,slow=2.9,SNR=7.2
KURK Kurchatov 26.99 324*c i*P **P 15 34 35.6 +0.1**
KURK pmax pmax
comp=Z,18nm,1.0s,mb4.6
KURK Kurchatov 26.99 324 *e*P **P 15 34 35.4 0.0**
comp=Z,34nm,1.1s,mb4.8
KURK Kurchatov 26.99 324 P **P 15 34 35.9 +0.4**
SNR=10
KURK P 15 34 35.9
SNR=10
BOD Bodaibo 27.74 12 *e*P **P 15 34 41.2 -1.0**
BOD pmax pmax
comp=Z,13nm,1.0s,mb4.5
NVS Novosibirsk 27.83 335⇑*i*P **P 15 34 42.6 -0.4**
NVS *e*S **S 15 39 29.8 +3.9**
NVS pmax pmax
comp=Z,40nm,1.9s,mb4.7
NVS pmax pmax
comp=N,31nm,2.0s
NVS pmax pmax
comp=E,34nm,2.2s
NVS smax
comp=N,32nm,2.2s
NVS smax
comp=E,20nm,2.0s
KBL Kabul 29.09 286 *e*P **P 15 34 54.1 -0.3**
KBL pmax pmax
comp=Z,33nm,0.9s,mb5.1
KBL Kabul 29.09 286 *e*P **P 15 34 54.1 -0.3**
comp=Z,33nm,0.9s,mb5.1
MAT Matsushiro 29.27 70 P **P 15 34 54.7 -1.3**
MJAR Matsushiro Arr 29.27 70 P **P 15 34 55.3 -0.7**
comp=Z,7.5nm,1.1s,mb4.3,baz=275,slow=9.3,SNR=6.7
MJAR PcP PcP 15 38 02.2 -0.6
comp=Z,1.2nm,0.8s,baz=349,slow=0.6,SNR=4.1
MJAR LR LR 15 47 35.6
comp=Z,463nm,20.2s,MS4.1,baz=255,slow=38
MJAR Matsushiro Arr 29.27 70 P **P 15 34 55.3 -0.7**
MJAR 15 38 02.2
MJAR Matsushiro Arr 29.27 70 P **P 15 34 55.3 -0.7**
MJAR PcP PcP 15 38 02.2 -0.6
MJAR LR LR 15 47 35.6
POO Poona 29.55 252 *e*P **P 15 34 58.9 +0.3**
POO AMb AMB 15 35 14.1
comp=Z,37nm,0.7s,mb5.2
HABR Khabarovsk 29.58 45 *e*P **P 15 34 57.5 -1.1**
HABR *e**PP pP 15 35 05.1 +3.4
HABR *e* 15 35 50.6
HABR *e* 15 37 59.7
HABR *e* 15 41 43.9
HABR *e* 15 45 34.3
HABR pmax pmax
comp=N,6.0nm,1.0s
HABR pmax pmax
comp=E,36nm,2.5s
HABR pmax pmax
comp=Z,43nm,2.3s,mb4.8
HABR MLR MLR
comp=Z,485nm,17.0s,MS4.2
CLNS Chul'man 29.79 24 *e*P **P 15 35 00.0 -0.4**
CLNS pmax pmax
comp=Z,16nm,0.8s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS MLR MLR
comp=Z,2μm,13.0s,MS4.8
KAD Karad 29.92 250 *e*P **P 15 35 03.0 +1.1**
BHJ Bhuj 31.00 264 *e*P **P 15 35 11.9 +0.5**
BVAR Borovoye Array 32.52 322 P **P 15 35 24.8 +0.3**
comp=Z,1.9nm,0.7s,mb4.1,baz=121,slow=8.7,SNR=12
BVAR PcP PcP 15 38 10.0 -1.0
comp=Z,4.1nm,0.7s,baz=142,slow=3.3,SNR=8.0
BVAR ScP ScP 15 41 54.0 -0.9
comp=Z,2.4nm,0.8s,baz=157,slow=4.2,SNR=7.3
BVAR Borovoye Array 32.52 322 P **P 15 35 24.8 +0.3**
BVAR 15 38 10.0
BVAR Borovoye Array 32.52 322 P **P 15 35 24.8 +0.3**
BVAR PcP PcP 15 38 10.0 -1.0
BVAR ScP ScP 15 41 54.0 -0.9
BRVK Borovoye 32.59 322 *e*P **P 15 35 24.8 -0.3**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.8
BRVK Borovoye 32.59 322 *e*P **P 15 35 24.8 -0.3**
comp=Z,16nm,1.2s,mb4.8
ASAJ Asahikawa 33.32 56 P **P 15 35 31.4 -0.2**
comp=Z,11nm,0.8s,mb4.8,baz=263,slow=13,SNR=8.5
ASAJ Asahikawa 33.32 56 P **P 15 35 31.4 -0.2**
ASAJ pmax pmax
comp=Z,11nm,0.8s
YSS Yuzh-Sakhalins 34.00 51⇑*e*P **P 15 35 36.8 -0.7**
YSS pmax pmax
comp=Z,40nm,1.2s,mb5.2
YSS MLR MLR
comp=Z,600nm,16.0s,MS4.4
YSS Yuzh-Sakhalins 34.00 51 *e*P **P 15 35 36.7 -0.8**
comp=Z,36nm,1.3s,mb5.2
YAK Yakutsk 35.36 21*c i*P **P 15 35 48.3 -0.7**
YAK pmax pmax
comp=Z,61nm,0.9s,mb5.5
YAK pmax pmax
comp=E,19nm,1.1s
YAK pmax pmax
comp=N,22nm,1.2s
YAK MLR MLR
comp=N,513nm,11.0s
YAK MLR MLR
comp=Z,582nm,10.0s,MS4.6
YAK MLR MLR
comp=E,277nm,8.0s
YAK Yakutsk 35.36 21 *e*P **P 15 35 48.2 -0.8**
comp=E,58nm,0.8s,mb5.6
ABKAR Akbulak array 37.33 312 *e*P **P 15 36 06.1 +0.1**
comp=E,12nm,0.9s,mb4.7
ABKT Ailbek 37.73 293 P **P 15 36 11.8 +2.2**
comp=E,159nm,1.3s,mb5.6,SNR=6.8
AKTK Aktyubinsk 38.80 313 P **P 15 36 19.2 +0.8**
AKTO Aktyubinsk 38.80 313 P **P 15 36 19.2 +0.8**
comp=E,3.8nm,0.9s,mb4.1,baz=128,slow=10,SNR=5.9
AKTO Aktyubinsk 38.80 313 P **P 15 36 19.2 +0.8**
KAPI Kappang 39.07 154 P **P 15 36 22.4 +1.4**
comp=E,30nm,1.0s,mb5.0,baz=106,slow=4.5,SNR=6.0
SVE Sverdlovsk 39.24 324⇑*e*P **P 15 36 22.8 +0.8**
SVE pmax pmax
comp=Z,16nm,1.0s,mb4.7
ARU Arti 40.16 323*d i*P **P 15 36 29.9 +0.2**
ARU *e* 15 38 00.6
ARU S **S 15 42 37.1 +1.0**
ARU SS SS 15 45 32.5 -1.2
ARU pmax pmax
comp=Z,42nm,2.5s,mb4.7
ARU Arti 40.16 323 *e*P **P 15 36 28.4 -1.3**
comp=Z,17nm,0.8s,mb4.8
SOKR Solikamsk 42.16 327⇑*i*P **P 15 36 47.2 +1.1**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.7
SOKR MLR MLR
comp=Z,330nm,16.0s,MS4.3
TIXI Tiksi 42.92 11*c i*P **P 15 36 51.0 -1.1**
TIXI pmax pmax
comp=Z,22nm,0.8s,mb4.9
TIXI MLR MLR
comp=Z,1μm,17.0s,MS4.8
TIXI Tiksi 42.92 11 *e*P **P 15 36 51.0 -1.2**
comp=Z,12nm,0.7s,mb4.7
SEY Seymchan 44.41 30⇑*i*P **P 15 37 03.9 -0.3**
PETK Petropavlovsk- 44.60 44 P **P 15 37 05.6 -0.3**
comp=Z,16nm,0.8s,mb4.9,baz=216,slow=5.0,SNR=18
PETK Petropavlovsk- 44.60 44 P **P 15 37 05.6 -0.3**

GNI Garni 47.87 298 *e*P **P 15 37 31.8 0.0**
GNI pmax pmax
comp=Z,14nm,1.4s
GNI Garni 47.87 298 P **P 15 37 37.5 +5.7**
SNR=5.3
GNI P 15 37 37.5
SNR=5.3
ZEI Tsey 48.16 302 *e*P **P 15 37 33.6 -0.4**
ZEI pmax pmax
comp=Z,16nm,1.5s,mb4.8
KIV Kislovodsk 48.91 303 *e*P **P 15 37 40.2 +0.4**
KIV pmax pmax
comp=Z,30nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,183nm,17.0s,MS4.1
KIV Kislovodsk 48.91 303 *e*P **P 15 37 40.9 +1.2**
comp=Z,36nm,1.0s,mb5.4
KIV Kislovodsk 48.91 303 P **P 15 37 41.5 +1.8**
SNR=10.0
KIV P 15 37 41.5
SNR=10.0
BILL Bilibino 51.46 25*c i*P **P 15 37 57.9 -0.8**
BILL *e* 15 38 09.9
BILL *e* 15 39 57.4
BILL pmax pmax
comp=Z,42nm,1.2s,mb5.2
BILL Bilibino 51.46 25 *e*P **P 15 37 57.8 -0.9**
comp=Z,30nm,0.9s,mb5.2
MOS Moscow 51.57 319 *e*P **P 15 38 01.6 +1.9**
MOS pmax pmax
comp=Z,57nm,1.1s,mb5.4
KAKA Kakadu 51.63 143 *e*P **P 15 37 56.6 -4.0**
comp=Z,6.8nm,0.5s,mb4.8
KAKA Kakadu 51.63 143 P **P 15 37 58.9 -1.6**
OBN Obninsk 52.18 318⇑*e*P **P 15 38 03.7 -0.6**
OBN *e*S **S 15 45 27.0 -1.6**
OBN *e*SS SS 15 49 06.5 +0.9
OBN pmax pmax
comp=Z,26nm,1.7s,mb4.9
ANN Anapa 52.53 305 *e*P **P 15 37 59.4 -7.7**
ANN pmax pmax
comp=Z,52nm,1.3s,mb5.3
MALT Malatya 53.03 297⇓*i*P **P 15 38 15.5 +4.7**
FITZ Fitzroy Crossi 53.29 153 *e*P **P 15 38 09.3 -3.6**
comp=Z,9.8nm,0.9s,mb4.7
FITZ Fitzroy Crossi 53.29 153 P **P 15 38 12.1 -0.8**
comp=Z,9.3nm,1.0s,mb4.7
LVZ Lovozero 53.69 334 *i* P **P 15 38 15.8 +0.6**
APA Apatity 54.13 334⇑*i*P **P 15 38 18.1 -0.4**
APA MLR MLR
comp=Z,2μm,12.0s,MS5.3
MBWA Marble Bar 54.19 161 *e*P **P 15 38 18.4 -1.0**
comp=Z,18nm,0.8s,mb5.0
JOF Joensuu 54.80 328 *e*P **P 15 38 22.4 -1.0**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 54.80 328 *e*p **P 15 38 22.4 -1.0**
comp=Z,9.4nm,0.6s,mb5.0
BR131 Keskin Array S 56.32 300 *e*P **P 15 38 34.4 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
BRTR Keskin Array B 56.32 300 P **P 15 38 34.3 -0.4**
comp=Z,1.7nm,0.8s,mb4.1,baz=114,slow=6.8,SNR=8.8
BRTR Keskin Array B 56.32 300*c e*P **P 15 38 34.9 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
KEV Kevo 56.58 336 *e*P **P 15 38 32.6 -3.5**
KEV pmax pmax
comp=Z,16nm,0.9s,mb5.0
KEV Kevo 56.58 336 *e*p **P 15 38 32.6 -3.5**
comp=Z,16nm,0.9s,mb5.1
AKASG Malin Array Be 57.05 313 P **P 15 38 39.1 -0.6**
comp=Z,4.7nm,0.6s,mb4.7,baz=70,slow=6.7,SNR=9.4
AKASG Malin Array Be 57.05 313 P **P 15 38 39.1 -0.6**
AKASG Malin Array Be 57.05 313 P **P 15 38 39.1 -0.6**
ARCES ARCESS Array B 57.10 336 P **P 15 38 39.3 -0.5**
comp=Z,5.7nm,0.8s,mb4.7,baz=72,slow=7.8,SNR=7.1
ARCES PcP PcP 15 39 33.4 -1.1
comp=Z,1.8nm,0.5s,baz=76,slow=5.1,SNR=5.3
ARCES LR LR 16 05 38.5
comp=Z,203nm,19.2s,MS4.2,baz=12,slow=39
ARCES ARCESS Array B 57.10 336 P **P 15 38 39.3 -0.5**
ARCES 15 39 33.4
KAF Kangasniemi 57.16 327 *e*P **P 15 38 39.3 -1.0**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KAF Kangasniemi 57.16 327 *e*p **P 15 38 39.3 -1.0**
comp=Z,7.5nm,0.7s,mb4.8
VSU Vasula 57.33 323 *i* P **P 15 38 42.2 +0.6**
FINES FINESS Array B 57.33 326 P **P 15 38 41.0 -0.5**
comp=Z,5.8nm,0.7s,mb4.7,baz=98,slow=12,SNR=9.7
WRAB Tennant Creek 58.71 146 *e*P **P 15 38 50.9 -0.7**
WRAB pmax pmax
comp=Z,20nm,0.6s,mb5.3
WRAB Tennant Creek 58.71 146 *e*P **P 15 38 50.9 -0.8**
comp=Z,20nm,0.6s,mb5.3
WRA Warramunga Arr 58.71 146 P **P 15 38 51.4 -0.3**
comp=Z,13nm,0.6s,mb5.1,baz=340,slow=7.7,SNR=57
WRA Warramunga Arr 58.71 146 P **P 15 38 51.4 -0.3**
WRA Warramunga Arr 58.71 146 P **P 15 38 51.4 -0.3**
WB2 Warramunga Arr 58.72 146 *e*P **P 15 38 50.9 -0.8**
COEN Coen 58.78 134 *e*P **P 15 38 52.4 +0.2**
comp=Z,53nm,0.5s,mb5.8
VRI Vrincioaia 59.71 308⇓P **P 15 38 59.1 +0.7**
VRI Vrincioaia 59.71 308⇓*i*P **P 15 38 59.1 +0.7**
PLOR Plostina 59.77 308⇓P **P 15 38 59.7 +0.9**
PLOR Plostina 59.77 308⇓*i*P **P 15 38 59.7 +0.9**
BURAR Bucovina Array 60.28 310⇓P **P 15 39 02.5 +0.3**
BURAR Bucovina Array 60.28 310⇓*i*P **P 15 39 02.5 +0.3**
BUR08 Bucovina Ar. S 60.28 310 P **P 15 39 01.6 -0.7**
MLR Muntele Rosu 60.34 308⇓P **P 15 39 07.1 +4.4**
MLR Muntele Rosu 60.34 308⇓*i*P **P 15 39 07.1 +4.4**
VOIR 60.96 308⇓P **P 15 39 07.6 +0.7**
VOIR 60.96 308⇓*i*P **P 15 39 07.6 +0.7**
KWP Kalwaria Pacla 61.37 313 *e*P **P 15 39 09.8 +0.2**
KWP pmax pmax
comp=Z,18nm,0.6s,mb5.4
KWP Kalwaria Pacla 61.37 313 *e*P **P 15 39 09.8 +0.1**
comp=Z,18nm,0.6s,mb5.4
ASAR Alice Springs 61.71 148 P **P 15 39 11.7 -0.5**
comp=Z,2.9nm,0.7s,mb4.5,baz=334,slow=6.4,SNR=20
ASAR Alice Springs 61.71 148 P **P 15 39 11.7 -0.4**
ASAR Alice Springs 61.71 148 P **P 15 39 11.7 -0.5**
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 39 12.6 -0.2**
KOLS pmax pmax
comp=Z,4.0nm,1.4s,mb4.4
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 39 12.6 -0.2**
comp=Z,4.1nm,1.4s,mb4.4
KOLS *e* 15 39 32.8
KOLS Kolonicke sedl 61.83 312 *e*P **P 15 39 12.6 -0.2**
KOLS *e* 15 39 32.8
STHS Stebnicka Huta 62.34 313 *e*P **P 15 39 16.4 +0.2**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
STHS Stebnicka Huta 62.34 313 *e*P **P 15 39 16.4 +0.2**
comp=Z,2.7nm,0.8s,mb4.4
STHS Stebnicka Huta 62.34 313 *e*P **P 15 39 16.4 +0.2**
OJC Ojcow 63.02 314 *e*P **P 15 39 20.5 -0.2**
OJC *e*pP pP 15 39 24.8 +0.9
KECS Kecovo 63.09 312 *e*P **P 15 39 21.0 -0.2**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.09 312 *e*P **P 15 39 21.0 -0.2**
comp=Z,2.1nm,0.7s,mb4.4
KECS Kecovo 63.09 312 *e*P **P 15 39 21.0 -0.2**
VYHS Vyhne 64.13 313 *e*P **P 15 39 28.3 +0.2**
VYHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
VYHS Vyhne 64.13 313 *e*P **P 15 39 28.3 +0.2**
comp=Z,7.0nm,1.3s,mb4.5
VYHS Vyhne 64.13 313 *e*P **P 15 39 28.3 +0.2**
OKC Ostrava-Krasne 64.14 314 *e*P **P 15 39 28.2 +0.1**
OKC MLR MLR
comp=Z,300nm,15.4s,MS4.6
OKC Ostrava-Krasne 64.14 314 *e*P **P 15 39 28.2 +0.1**
OKC AMS AMS 16 08 50.0
comp=Z,300nm,15.4s
KOLL Kolacno 64.38 313 *e*P **P 15 39 30.4 +0.7**
KOLL Kolacno 64.38 313 *e*P **P 15 39 30.4 +0.7**
NB2 NORSAR Subarra 64.43 327 P **P 15 39 28.4 -1.4**
comp=Z,5.7nm,0.7s,mb4.7,baz=72,slow=6.5
NOA NORSAR Array B 64.43 327 P **P 15 39 28.6 -1.2**
comp=Z,3.1nm,0.8s,mb4.4,baz=77,slow=6.1,SNR=13
MORC Moravsky Berou 64.54 314 *e*P **P 15 39 30.6 -0.1**
comp=Z,5.8nm,0.8s,mb4.7
MORC Moravsky Berou 64.54 314⇓*i*P **P 15 39 30.8 +0.1**

NWAO Narrogin (SRO) 64.93 167 *e*P **P 15 39 32.8 -0.5**
NWAO pmax pmax
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 64.93 167 *e*P **P 15 39 32.8 -0.5**
comp=Z,22nm,0.9s,mb5.2
PKSM Moragy 65.00 310⇓P **P 15 39 33.3 -0.5**
PKSM Moragy 65.00 310⇓*i*P **P 15 39 33.3 -0.5**
DPC Dobruska-Polom 65.10 315 *e*P **P 15 39 34.4 +0.1**
UPC Upice 65.23 315 *e*P **P 15 39 35.1 -0.1**
FORT Forrest 65.75 157 *e*P **P 15 39 39.0 +0.3**
comp=Z,14nm,0.8s,mb5.0
FORT Forrest 65.75 157 *e*P **P 15 39 39.3 +0.6**
comp=Z,13nm,0.8s,mb5.0
TREC Trest 65.96 314 AMS AMS 16 09 50.0
comp=Z,400nm,14.5s
PVCC Panska Ves 66.09 316 *e*P **P 15 39 40.8 0.0**
PVCC MLR MLR
comp=Z,300nm,18.6s,MS4.5
PVCC Panska Ves 66.09 316 *e*P **P 15 39 40.8 0.0**
PVCC AMS AMS 16 09 20.0
comp=Z,300nm,18.6s
CSNA Conrad Observa 66.20 313⇓*i*P **P 15 39 41.9 +0.4**
comp=Z,11nm,1.3s,mb4.7
PRU Pruhonice 66.30 315 *e*P **P 15 39 42.0 -0.1**
PRU MLR MLR
comp=Z,300nm,13.9s,MS4.7
PRU Pruhonice 66.30 315 *e*P **P 15 39 42.0 -0.1**
PRU AMS AMS 16 09 50.0
comp=Z,300nm,13.9s
BRG Berggiesshubel 66.35 316 *e*P **P 15 39 41.8 -0.6**
comp=Z,6.3nm,0.9s,mb4.7
BRG Berggiesshubel 66.35 316 *e*P **P 15 39 41.8 -0.6**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ALE Alert 66.47 358 P **P 15 39 43.6 +0.9**
comp=Z,40nm,1.0s,mb5.4,SNR=5.8
CLL Collm 66.75 317⇑*i*P **P 15 39 44.1 -0.9**
CLL *i* pP 15 39 47.9 -0.3
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CLL MLR MLR
comp=Z,300nm,19.5s,MS4.5
CLL Collm 66.75 317⇑*i*P **P 15 39 44.1 -0.9**
comp=Z,6.0nm,1.0s,mb4.6
CLL *i* pP 15 39 47.9 -0.3
CLL LR LR
comp=Z,300nm,19.5s,MS4.5
CLL Collm 66.75 317⇑*i*pP **P 15 39 44.1 -0.9**
comp=Z,6.0nm,1.0s,mb4.6
CLL *i* (sP) sP 15 39 47.9 -1.5
CLL *e* 15 40 02.0
CLL *e*PP PP 15 42 06.0 -5.6
SOKA Soboth 67.17 312⇑*i*P **P 15 39 47.5 -0.2**
comp=Z,9.2nm,1.2s,mb4.7
KHC Kasperske Hory 67.19 315 *e*P **P 15 39 47.7 -0.1**
KHC MLR MLR
comp=Z,400nm,16.0s,MS4.7
KHC Kasperske Hory 67.19 315 *e*P **P 15 39 47.7 -0.1**
KHC AMS AMS 16 10 20.0
comp=Z,400nm,16.0s
GEC2 GERESS Array S 67.22 314 *e*P **P 15 39 48.0 0.0**
GEC2 pmax pmax
comp=Z,1μm,0.9s
GEC2 GERESS Array S 67.22 314 *e*P **P 15 39 48.0 0.0**
comp=Z,1μm,0.9s
GERES GERESS Array B 67.22 314 P **P 15 39 47.9 -0.1**
comp=Z,1.6nm,0.7s,mb4.2,baz=76,slow=5.6,SNR=10
GERES LR LR 16 10 48.0
comp=Z,244nm,20.0s,MS4.4,baz=158,slow=37
GERES GERESS Array B 67.22 314 P **P 15 39 47.9 -0.1**
GERES GERESS Array B 67.22 314 P **P 15 39 47.9 -0.1**
GERES LR LR 16 10 48.0
TTA Tatalina 67.38 29 *e*P **P 15 39 48.4 -0.4**
TTA pmax pmax
comp=Z,15nm,0.8s,mb5.1
TTA Tatalina 67.38 29 *e*P **P 15 39 48.4 -0.4**
comp=Z,15nm,0.8s,mb5.1
NKC Novy Kostel 67.47 316 *e*P **P 15 39 49.6 +0.1**
NKC MLR MLR
comp=Z,400nm,17.6s,MS4.7
NKC Novy Kostel 67.47 316 *e*P **P 15 39 49.6 +0.1**
NKC AMS AMS 16 10 10.0
comp=Z,400nm,17.6s
VNDS Vrh nad Dolski 67.60 311 *e*P **P 15 39 50.1 -0.3**
COLD Coldfoot 67.75 24 *e*P **P 15 39 50.6 -0.4**
comp=Z,28nm,0.9s,mb5.3
MOX Moxa 67.81 317 *e*P **P 15 39 55.0 +3.3**
comp=Z,10.0nm,1.5s,mb4.6
MOX Moxa 67.81 317 *e*P **P 15 39 55.0 +3.3**
MOX pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
CEY Cerknica 67.91 311 *i* P **P 15 39 52.3 -0.2**
JAVS Javornik 68.09 311 *i* P **P 15 39 54.5 +1.0**
SVW2 Sparrevohn 68.32 31 *e*P **P 15 39 55.1 +0.3**
GRA1 Grafenberg Arr 68.40 316 *e*P **P 15 39 55.4 -0.1**
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.40 316 *e*P **P 15 39 55.4 -0.1**
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.40 316 *e*P **P 15 39 55.4 -0.1**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.40 316 *e*P **P 15 39 55.4 -0.1**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.40 316 *e*P **P 15 39 55.4 -0.1**
comp=Z,6.0nm,1.0s,mb4.6
CHUM Lake Minchumin 68.48 27 *e*P **P 15 39 55.7 0.0**
comp=Z,15nm,0.7s,mb5.1
BPAW Bear Paw Mtn. 68.90 27 *e*P **P 15 39 57.9 -0.4**
comp=Z,26nm,0.8s,mb5.2
PPLA Purkeypile 68.97 28 *e*P **P 15 39 58.7 0.0**
comp=Z,41nm,0.7s,mb5.5
KTH Kantishna Hill 69.18 27 *e*P **P 15 39 59.5 -0.6**
comp=Z,55nm,1.6s,mb5.2
COLA College 69.72 26 *e*P **P 15 40 03.0 -0.3**
COLA pmax pmax
comp=Z,48nm,0.8s,mb5.5
COLA College 69.72 26 *e*P **P 15 40 03.0 -0.4**
comp=Z,48nm,0.8s,mb5.5
RSO Redoubt South 69.85 31 *e*P **P 15 40 05.2 +1.0**
MCK McKinley 69.87 27 *e*P **P 15 40 03.2 -1.1**
MCK pmax pmax
comp=Z,15nm,0.8s,mb5.0
MCK McKinley 69.87 27 *e*P **P 15 40 03.2 -1.1**
comp=Z,15nm,0.8s,mb5.0
KMBO Kilima Mbogo 70.38 256 P **P 15 40 06.8 -1.4**
comp=Z,3.8nm,0.8s,mb4.4,baz=49,slow=15,SNR=7.4
KMBO Kilima Mbogo 70.38 256 *i* P **P 15 40 10.3 +2.1**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 70.38 256 *e*P **P 15 40 06.9 -1.4**
comp=Z,8.3nm,1.0s,mb4.6
KMBO Kilima Mbogo 70.38 256 P **P 15 40 09.8 +1.5**
SNR=5.5
KMBO P 15 40 09.8
SNR=5.5
BFO Black Forest 70.70 315 *e*P **P 15 40 08.6 -1.0**
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 70.70 315 *e*P **P 15 40 08.6 -1.0**
comp=Z,6.4nm,1.0s,mb4.5
PMR Palmer 70.86 29 *e*P **P 15 40 09.6 -0.8**
PMR pmax pmax
comp=Z,39nm,0.8s,mb5.4
PMR Palmer 70.86 29 *e*P **P 15 40 09.6 -0.8**
comp=Z,39nm,0.8s,mb5.4
OHAK Old Harbor 71.11 34 *e*P **P 15 40 11.4 -0.6**
comp=Z,32nm,0.8s,mb5.3
KDAK Kodiak Island 71.18 33 P **P 15 40 12.1 -0.4**
comp=Z,38nm,0.8s,mb5.4
CDF Champ du Feu 71.30 316⇑*i*P **P 15 40 12.5 -0.8**
comp=Z,8.5nm,0.8s,mb4.4
CDF Champ du Feu 71.30 316⇑*i*P **P 15 40 12.5 -0.8**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 71.30 316⇑*i*P **P 15 40 12.5 -0.8**
comp=Z,4.3nm,0.8s,mb4.4
WLF Walferdange 71.41 317 P **P 15 40 13.9 0.0**
comp=Z,6.5nm,0.9s,mb4.6
WLF Walferdange 71.41 317 *e*P **P 15 40 14.3 +0.3**
WLF pmax pmax
comp=Z,24nm,1.1s,mb5.0
WLF Walferdange 71.41 317 *e*P **P 15 40 14.3 +0.3**
comp=Z,24nm,1.1s,mb5.0
BCLA Clavier 71.57 318 P **P 15 40 15.2 +0.3**
comp=Z,10nm,1.6s,mb4.5

UCC	Uccle	71.94	319	P	P	15 40 18.2	+1.1
DOU	Dourbes	72.12	318	P	P	15 40 18.0	-0.2
EGAK	Eagle	72.18	24	eP	P	15 40 16.9	-1.3
	comp=Z,9.9nm,1.0s,mb4.7						
STKA	Stephens Creek	72.24	147	eP	P	15 40 17.8	-1.2
	comp=Z,4.2nm,0.5s,mb4.6						
STKA	Stephens Creek	72.24	147	P	P	15 40 19.0	0.0
	comp=Z,5.0nm,0.5s,mb4.7,baz=334,slow=5.6,SNR=20						
STKA	Stephens Creek	72.24	147	eP	P	15 40 17.9	-1.1
	comp=Z,1.1nm,0.6s,mb4.0						
MENT	Mentasta	72.29	26	eP	P	15 40 18.5	-0.5
INK	Inuvik	72.39	19	P	P	15 40 19.1	-0.4
	comp=Z,18nm,0.7s,mb5.1,baz=327,slow=7.0,SNR=59						
INK	Inuvik	72.39	19	P	P	15 40 19.1	-0.4
INK				pmax	pmax		
	comp=Z,18nm,0.7s						
INK	Inuvik	72.39	19	eP	P	15 40 18.7	-0.8
	comp=Z,19nm,0.8s,mb5.1						
LPG	La Plagne	72.91	313	⇑iP	P	15 40 23.2	+0.2
	comp=Z,26nm,0.8s,mb4.9						
LPG	La Plagne	72.91	313	⇑iP	P	15 40 23.2	+0.2
LPG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
LPG	La Plagne	72.91	313	⇑iP	P	15 40 23.2	+0.2
	comp=Z,13nm,0.8s,mb4.9						
BMRM	Bremner River	73.05	28	eP	P	15 40 23.5	0.0
	comp=Z,59nm,0.8s,mb5.6						
DAWY	Dawson	73.22	24	eP	P	15 40 23.7	-0.8
SUMG	Summit	73.41	349	eP	P	15 40 25.0	-0.5
	comp=Z,4.5nm,0.6s,mb4.6						
RES	Resolute Bay	73.85	5	eP	P	15 40 27.8	-0.3
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
RES	Resolute Bay	73.85	5	eP	P	15 40 27.8	-0.3
	comp=Z,10nm,1.0s,mb4.7						
SMF	Signal de Mont	74.17	315	⇑iP	P	15 40 29.5	-0.9
	comp=Z,26nm,0.9s,mb4.8						
SMF	Signal de Mont	74.17	315	⇑iP	P	15 40 29.5	-0.9
SMF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
SMF	Signal de Mont	74.17	315	⇑iP	P	15 40 29.5	-0.9
	comp=Z,13nm,0.9s,mb4.9						
TCF	Toulx Ste Croix	75.33	315	eP	P	15 40 36.5	-0.6
KEST	Kesra	75.65	303	P	P	15 40 40.0	+0.8
	comp=Z,1.5nm,0.9s,mb3.9,baz=297,slow=2.3,SNR=3.1						
CAF	Calviac	76.10	314	eP	P	15 40 41.2	-0.3
	comp=Z,10.0nm,0.9s,mb4.5						
CAF	Calviac	76.10	314	eP	P	15 40 41.2	-0.3
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
CAF	Calviac	76.10	314	eP	P	15 40 41.2	-0.3
	comp=Z,5.0nm,0.9s,mb4.4						
SKAG	Skagway	77.64	27	eP	P	15 40 50.5	+0.5
	comp=Z,24nm,0.8s,mb5.2						
TOO	Toolangi	78.73	147	eP	P	15 40 56.4	+0.2
SFJD	Kangerlussuaq	80.31	350	eP	P	15 41 03.3	-1.2
SFJD				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
SFJD	Kangerlussuaq	80.31	350	eP	P	15 41 03.3	-1.2
	comp=Z,19nm,0.8s,mb5.1						
SFJD	Kangerlussuaq	80.31	350	iP	P	15 41 03.1	-1.4
	comp=Z,14nm,0.8s,mb4.9						
YKA	Yellowknife Ar	81.91	17	P	P	15 41 12.6	-0.5
	comp=Z,5.4nm,0.6s,mb4.6,baz=328,slow=5.1,SNR=59						
YKA				PKKPbc	PKKPbc	15 59 39.3	-4.6
	comp=Z,0.2nm,0.7s,baz=149,slow=2.2,SNR=2.8						
YKA				LR	LR	16 20 44.2	
	comp=Z,17nm,18.6s,MS3.4,baz=105,slow=38						
ESDC	Sonseca Array	82.67	312	P	P	15 41 17.0	-0.5
	comp=Z,0.7nm,0.5s,mb4.0,baz=65,slow=4.7,SNR=4.1						
FCC	Fort Churchill	89.35	9	eP	P	15 41 49.3	-0.8
	comp=Z,0.3nm,1.1s						
EDM	Edmonton	90.18	21	eP	P	15 41 54.3	+0.2
JCW	Jim Creek	91.25	28	eP	P	15 41 59.1	-0.1
FFC	Flin Flon	91.81	14	P	P	15 42 01.6	0.0
	comp=Z,82nm,0.8s,mb6.1,SNR=8.4						
FFC	Flin Flon	91.81	14	eP	P	15 42 00.8	-0.8
FFC				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.2						
FFC	Flin Flon	91.81	14	eP	P	15 42 00.8	-0.8
	comp=Z,11nm,0.8s,mb5.2						
ETW	Entiat	92.37	28	eP	P	15 42 05.1	+0.8
	comp=Z,5.5nm,0.7s,mb5.0						
TORD	Torodi Ar. Bea	93.15	287	P	P	15 42 06.9	-1.6
	comp=Z,1.5nm,0.8s,mb4.5,baz=52,slow=4.7,SNR=9.5						
TORD				PP	PP	15 45 54.1	+2.5
	comp=Z,0.9nm,0.8s,baz=50,slow=6.3,SNR=3.9						
SCHQ	Schefferville	94.08	354	P	P	15 42 11.0	-1.1
	comp=Z,4.8nm,0.7s,mb5.0,baz=42,slow=8.2,SNR=5.4						
BSMT	Bassoo Peak	94.28	25	eP	P	15 42 14.0	+0.9
	comp=Z,5.0nm,0.9s,mb4.9						
SWMT	Swartz Lake	94.85	24	eP	P	15 42 16.5	+0.7
	comp=Z,3.4nm,0.8s,mb4.8						
SLMT	Seeley Lake	95.26	24	eP	P	15 42 17.7	0.0
	comp=Z,7.2nm,0.9s,mb5.1						
PDAR	Pinedale Array	100.53	24	P	Pdif	15 42 41.8	+0.4
	comp=Z,0.2nm,0.6s,baz=12,slow=4.6,SNR=2.8						
PDAR				PP	PP	15 46 42.9	-4.4
	comp=Z,0.6nm,0.8s,baz=19,slow=6.7,SNR=2.8						
SYO	Syowa Base	110.03	200	⇑eX		15 47 20.8	
TXAR	Lajitas Array	114.64	26	PKP	PKiKP	15 47 34.1	-0.5
	comp=Z,0.8nm,0.6s,baz=241,slow=0.5,SNR=13						
SDV	Santo Domingo	139.91	351	ePKPpre		15 48 19.0	
ROSC	El Rosal	144.25	356	PKP	PKPdf	15 48 30.0	-0.7
	comp=Z,20nm,0.3s,baz=166,slow=1.8,SNR=6.9						
ROSC	El Rosal	144.25	356	ePKPpre	PKPdf	15 48 29.6	-1.1
OTAV	Otavalo	148.84	4	ePKPbc	PKPbc	15 48 42.5	+0.2
CPUP	Villa Florida	162.53	281	PKP	PKPdf	15 48 56.1	0.0
	comp=Z,0.7nm,0.5s,baz=35,slow=5.2,SNR=4.7						
LPAZ	La Paz	163.44	331	PKP	PKPdf	15 48 58.2	+0.9
	comp=Z,2.2nm,0.6s,baz=22,slow=11,SNR=3.1						
LPAZ	La Paz	163.44	331	PKP	PKPdf	15 48 58.2	+0.9
PLCA	Paso Flores	169.19	205	PKP	PKPdf	15 49 01.1	+0.1
	comp=Z,0.7nm,0.8s,baz=176,slow=3.5,SNR=2.9						
PLCA				PKPab	PKPab	15 50 11.1	-1.9
	comp=Z,2.5nm,0.8s,baz=110,slow=4.0,SNR=6.2						
PLCA	Paso Flores	169.19	205	PKP	PKPdf	15 49 01.1	+0.1
PLCA				PKPab	PKPab	15 50 11.1	-1.9

*ISCJB **12** 15:37:00.9±0.6, 32°.1N±0°.1×104°.8E±0°.1, h10km, mb3.6/13, Error ellipse: s-maj=20.8km s-min=10.1km az=141.7*
*IDC **12** 15:37:01.2±0.9, 32°.01N×104°.68E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/27, mbtmp3.7/11, ML3.2/1, Error ellipse: s-maj=41.0km s-min=17.3km az=50.0*
*NEIC **12** 15:37:02.8±0.5, 32°.10N×104°.86E, h10km, mb3.7/3, Error ellipse: s-maj=27.0km s-min=8.5km az=56.0*

ISC 12 15:37:03.2±0.5, 32°.19N±0°.06×104°.9E±0°.1, h10km, n19, σ0s84/20, mb3.7/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	3.98	348	ePg	Pg	15 38 18.5	-0.9
LZH				Sg	Sg	15 39 10.1	-0.9
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,210nm,0.7s						
KSRS	Korea Array	19.62	68	P	Pn	15 41 34.4	+1.3
	comp=E,0.1nm,0.3s,baz=258,slow=11,SNR=4.3						
MKAR	Makanchi Array	22.62	317	P	P	15 42 03.3	-0.6
	comp=E,0.8nm,0.5s,mb3.4,baz=114,slow=10,SNR=9.0						
ZAA0	Zalesovo Array	26.05	333	eP	P	15 42 36.7	+0.3
ZALV	Zalesovo Beam	26.05	333	P	P	15 42 37.4	+0.9
	comp=E,1.7nm,0.5s,mb3.9,baz=137,slow=9.3,SNR=7.2						
KURK	Kurchatov	26.79	321	P	P	15 42 44.0	+0.8
	comp=E,0.2nm,0.4s,mb3.0,baz=129,slow=8.7,SNR=4.1						
KURK	Kurchatov	26.79	321	P	P	15 42 44.0	+0.8
BVAR	Borovoye Array	32.36	320	P	P	15 43 33.9	+1.4
	comp=E,0.3nm,0.5s,mb3.4,baz=90,slow=7.2,SNR=2.5						
ABKAR	Akbulak array	37.46	310	eP	P	15 44 17.1	+0.5
	comp=E,0.5nm,0.4s,mb3.7						
AKTK	Aktyubinsk	38.89	312	P	P	15 44 29.2	+0.5
AKTO	Aktyubinsk	38.89	312	P	P	15 44 29.2	+0.5
	comp=E,0.5nm,0.5s,mb3.5,baz=113,slow=13,SNR=2.5						
TIXI	Tiksi	41.56	11	eP	P	15 44 51.0	+0.4
	comp=E,0.7nm,0.6s,mb3.5						
ARCES	ARCESS Array B	56.54	336	P	P	15 46 44.3	-1.0
	comp=E,1.6nm,0.7s,mb4.1,baz=79,slow=6.3,SNR=4.2						
FINES	FINESS Array B	57.04	326	P	P	15 46 47.9	-1.0
	comp=E,1.4nm,0.5s,mb4.2,baz=96,slow=12,SNR=6.9						
WRAB	Tennant Creek	59.02	147	eP	P	15 47 03.1	-0.2
	comp=E,1.5nm,0.7s,mb4.1						
WRA	Warramunga Arr	59.02	147	P	P	15 47 02.8	-0.5
	comp=E,0.8nm,0.9s,mb3.8,baz=340,slow=7.4,SNR=7.3						
WB2	Warramunga Arr	59.02	147	P	P	15 47 02.0	-1.3
ASAR	Alice Springs	62.09	150	P	P	15 47 23.2	-0.9
	comp=E,0.2nm,0.7s,mb3.4,baz=338,slow=6.5,SNR=4.3						
YKA	Yellowknife Ar	80.46	17	P	P	15 49 15.5	+0.7
	comp=E,0.4nm,0.6s,mb3.6,baz=328,slow=5.1,SNR=9.0						

*IDC **12** 15:40:34.8±0.8, 31°.24N×103°.82E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/25, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=32.0km s-min=16.3km az=56.0*
*ISCJB **12** 15:40:35.5±1.5, 31°.23N±0°.08×103°.85E±0°.09, h19km±12km, mb4.0/11, Error ellipse: s-maj=14.5km s-min=11.4km az=138.5*
*NEIC **12** 15:40:36.5±0.4, 31°.26N×103°.74E, h10km, mb4.2/2, Error ellipse: s-maj=13.7km s-min=7.7km az=57.0*
*BJI **12** 15:40:37.2, 31°.19N×103°.89E, h12km, mb4.3/1, ML3.9/7*

ISC 12 15:40:37.2±0.8, 31°.19N±0°.04×103°.74E±0°.09, h16km±5km, n23, σ0s96/26, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.28	177	Pg	Pg	15 40 42.4	-0.9
CD2				Sg	Sg	15 40 47.4	+0.1
CD2				smax			
	comp=N,42μm,0.6s						
LZH	Lanzhou	4.88	1	ePg	Pg	15 42 17.4	+6.6
LZH				Sg	Sg	15 43 14.9	+0.9
LZH				smax			
	comp=N,100nm,1.0s						
LZH				smax			
	comp=E,320nm,1.1s						
ENH	Enshi	5.03	99	Pn	Pn	15 41 53.8	+1.8
WHN	Wuhan	9.14	91	P	Pn	15 42 46.9	-1.6
WHN				S	Sn	15 44 25.2	-5.9
CMAR	Chiang Mai Arr	13.40	200	Pn	Pn	15 43 48.1	+1.3
	comp=E,0.1nm,0.3s,baz=9.2,slow=12,SNR=3.6						
KSRS	Korea Array	20.90	66	P	P	15 45 18.4	-0.5
	comp=E,2.1nm,0.8s,baz=266,slow=12,SNR=6.8						
CN2	Changchun	21.26	48	eP	P	15 45 25.7	+3.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MK31	Makanchi Array	22.71	319	eP	P	15 45 36.8	-1.4
MKAR	Makanchi Array	22.71	319	P	P	15 45 38.2	+0.1
	comp=Z,4.7nm,1.0s,mb3.9,baz=126,slow=9.6,SNR=13						
ZAA0	Zalesovo Array	26.51	335	eP	P	15 46 13.6	-0.2
ZALV	Zalesovo Beam	26.51	335	P	P	15 46 14.1	+0.3
	comp=Z,3.7nm,1.0s,mb3.9,baz=134,slow=8.5,SNR=7.5						
ZALV	Zalesovo Beam	26.51	335	P	P	15 46 14.1	+0.3
KURK	Kurchatov	26.99	324	P	P	15 46 17.8	-0.4
	comp=Z,2.0nm,0.9s,mb3.7,baz=128,slow=9.1,SNR=9.7						
KURK	Kurchatov	26.99	324	eP	P	15 46 18.7	+0.5
TIXI	Tiksi	42.73	11	eP	P	15 48 31.6	-1.6
	comp=Z,0.8nm,0.6s,mb3.6						
BRTR	Keskin Array B	56.43	299	P	P	15 50 19.1	+1.0
	comp=Z,0.6nm,0.8s,mb3.7,baz=97,slow=5.1,SNR=3.8						
ARCES	ARCESS Array B	57.05	336	P	P	15 50 21.7	-0.4
	comp=Z,4.4nm,0.9s,mb4.5,baz=79,slow=6.7,SNR=2.8						
WRAB	Tennant Creek	58.72	146	eP	P	15 50 34.7	+0.4
	comp=Z,5.1nm,0.7s,mb4.7						
WRA	Warramunga Arr	58.72	146	P	P	15 50 34.4	+0.1
	comp=Z,5.4nm,0.9s,mb4.6,baz=338,slow=7.6,SNR=21						
WB2	Warramunga Arr	58.72	146	eP	P	15 50 34.5	+0.1
ASAR	Alice Springs	61.73	148	P	P	15 50 55.0	+0.1
	comp=Z,1.0nm,0.8s,mb4.0,baz=325,slow=5.0,SNR=9.4						
YKA	Yellowknife Ar	81.70	17	P	P	15 52 54.0	-0.6
	comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=5.3,SNR=12						
YKA	Yellowknife Ar	81.70	17	P	P	15 52 54.0	-0.6

*ISCJB **12** 15:42:38.7±0.7, 30°.78N±0°.09×103°.27E±0°.07, h10km, mb3.5/9, Error ellipse: s-maj=12.4km s-min=8.4km az=175.5*
*IDC **12** 15:42:39.6±1.0, 30°.95N×103°.55E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/25, mbtmp3.5/8, ML3.0/1, Error ellipse: s-maj=38.9km s-min=18.4km az=57.0*
*NEIC **12** 15:42:41.0±0.6, 30°.95N×103°.57E, h10km, mb4.0/2, Error ellipse: s-maj=26.9km s-min=9.5km az=66.0*

ISC 12 15:42:40.8±0.7, 30°.87N±0°.09×103°.33E±0°.07, h10km, n13, σ0s99/14, mb3.5/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.37	83	Pg	Pg	15 42 48.1	-0.1
CD2				Sg	Sg	15 42 54.3	+1.1
CD2				smax			
	comp=N,11μm,0.7s						
SONM	Songino Array	17.11	7	P	Pn	15 46 40.1	+0.2
	comp=N,0.1nm,0.3s,baz=177,slow=11,SNR=2.5						
KSRS	Korea Array	21.36	65	P	P	15 47 25.9	-2.2
	comp=N,1.2nm,0.6s,mb3.4,baz=239,slow=8.3,SNR=4.1						
MKAR	Makanchi Array	22.73	320	P	P	15 47 44.3	+1.5
	comp=N,0.4nm,0.7s,mb3.0,baz=139,slow=11,SNR=2.5						
ZALV	Zalesovo Beam	26.65	335	P	P	15 48 19.8	+0.3
	comp=N,1.2nm,0.7s,mb3.6,baz=131,slow=8.6,SNR=4.2						
KURK	Kurchatov	27.04	324	P	P	15 48 23.7	+0.7
	comp=N,0.4nm,0.5s,mb3.2,baz=130,slow=9.5,SNR=3.2						
KURK	Kurchatov	27.04	324	P	P	15 48 23.7	+0.6
TIXI	Tiksi	43.12	12	eP	P	15 50 38.8	-2.0
	comp=N,1.0nm,0.5s,mb3.8						
WRAB	Tennant Creek	58.65	145	eP	P	15 52 38.5	+0.2
	comp=N,1.9nm,0.8s,mb4.2						
WRA	Warramunga Arr	58.65	145	P	P	15 52 38.5	+0.1
	comp=N,0.9nm,0.9s,mb3.8,baz=324,slow=9.1,SNR=4.4						
WB2	Warramunga Arr	58.66	145	eP	P	15 52 37.9	-0.5
ASAR	Alice Springs	61.64	148	P	P	15 52 59.3	+0.5
	comp=N,0.4nm,0.8s,mb3.6,baz=347,slow=7.6,SNR=2.9						
YKA	Yellowknife Ar	82.11	17	P	P	15 55 00.8	-0.5
	comp=N,0.2nm,0.5s,mb3.3,baz=329,slow=5.0,SNR=3.1						

GUC 12 15:46:51.2±0.5, 21°.38S×68°.75W, h108km±5km, ML3.5, 3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.76	296	⇓iP	Pn	15 47 11.2	+1.3
PB01				iS	Sn	15 47 25.6	+1.7
PB01				AML	AML	15 47 26.7	
	comp=N,3μm,0.2s						
PB04	Plate Boundary	1.12	217	eP	Pn	15 47 19.6	+6.1
PB04				eS	Sn	15 47 41.1	+11
PB04				AML	AML	15 47 46.2	
	comp=E,446nm,0.2s						
LVC	Limon Verde	1.24	187	eP	Pn	15 47 15.8	+0.9
LVC				iS	Sn	15 47 34.6	+1.9
LVC				AML	AML	15 47 35.8	
	comp=E,738nm,0.5s						
MACH	Maria Elena	1.24	229	eP	Pn	15 47 16.0	+1.2
MACH				iS	Sn	15 47 34.3	+1.6
PECH	Pedro de Valdi	1.48	215	eP	Pn	15 47 18.6	+0.9
PECH				iS	Sn	15 47 39.1	+1.3
PECH				AML	AML	15 47 42.8	
	comp=N,658nm,0.2s						
HMBC	Humberston	1.52	316	⇓iP	Pn	15 47 18.9	+0.7
HMBC				eS	Sn	15 47 39.9	+1.2
PSGC	Pisagua	2.19	324	⇓eP	Pn	15 47 26.3	-0.2
PSGC				eS	Sn	15 47 52.6	-0.9
MNMC	Miæe Miæ	2.37	340	eP	Pn	15 47 30.0	+1.1
MNMC				iS	Sn	15 47 60.0	+2.2

MEX 12 15:48:44.5±0.5, 16°.65N×99°.67W, h12km±3km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.32	313	iP	Pg	15 48 50.7	-0.3
ACX				iS	Sg	15 48 55.2	-0.2
CAIG	El Cayaco	0.70	305	iP	Pg	15 48 55.8	-2.2
CAIG				iS	Sg	15 49 05.6	-1.6
PNIG	Pinotepa	1.50	100	iP	Pn	15 49 07.6	-3.6
PNIG				iS	Sn	15 49 25.8	-4.9
UTMO	Huajuapan	2.13	56	iP	Pn	15 49 17.3	-2.7
UTMO				iS	Sn	15 49 41.5	-4.9

*ISCJB **12** 15:49:23.4±0.8, 31°.20N±0°.07×104°.18E±0°.09, h10km, mb3.4/4, Error ellipse: s-maj=12.7km s-min=7.8km az=35.4*
*IDC **12** 15:49:23.2±1.4, 31°.66N×104°.77E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, ML3.6/1, Error ellipse: s-maj=74.6km s-min=22.0km az=57.0*
*NEIC **12** 15:49:25.0±0.7, 31°.62N×104°.68E, h10km, Error ellipse: s-maj=24.0km s-min=10.3km az=64.0*

ISC 12 15:49:25.8±0.8, 31°.13N±0°.05×104°.11E±0°.09, h10km, n9, σ0s98/11, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.37	234	Pg	Pg	15 49 32.5	-0.7
CD2				Sg	Sg	15 49 39.4	+1.3
CD2				smax			
	comp=N,3μm,0.9s						
LZH	Lanzhou	4.95	358	ePg	Pg	15 51 01.2	+0.7
LZH				Sg	Sb	15 51 53.1	+1.1
LZH				smax			
	comp=N,34nm,0.5s						
LZH				smax			
	comp=E,34nm,0.6s						
CMAR	Chiang Mai Arr	13.46	202	Pn	Pn	15 52 44.7	+7.8
	comp=E,0.1nm,0.3s,baz=8.1,slow=8.7,SNR=7.0						
MK31	Makanchi Array	22.96	319	eP	P	15 54 29.3	-0.9
MKAR	Makanchi Array	22.96	319	P	P	15 54 29.6	-0.5
	comp=E,0.6nm,0.9s,mb3.0,baz=118,slow=12,SNR=4.6						
KURK	Kurchatov	27.23	323	P	P	15 55 07.5	-2.3
	comp=E,0.5nm,0.7s,mb3.1,baz=127,slow=8.6,SNR=2.9						
WRA	Warramunga Arr	58.50	146	P	P	15 59 22.6	+0.3
	comp=E,0.4nm,0.4s,mb3.8,baz=338,slow=7.6,SNR=4.9						
WB2	Warramunga Arr	58.50	146	eP	P	15 59 22.9	+0.6
ASAR	Alice Springs	61.51	149	P	P	15 59 42.9	-0.1
	comp=E,0.5nm,1.0s,mb3.6,baz=340,slow=6.9,SNR=4.4						

*ISCJB **12** 15:52:07.9±0.4, 31°.40N±0°.04×103°.97E±0°.10, h10km, mb3.9/14, Error ellipse: s-maj=12.0km s-min=5.8km az=8.8*
*IDC **12** 15:52:07.5±0.7, 31°.29N×103°.81E, h0km, mb4.0/14, mb1 4.1/15, mb1mx3.9/26, mbtmp4.0/15, ML3.5/1, Error ellipse: s-maj=30.5km s-min=14.2km az=55.0*
*NEIC **12** 15:52:09.7±0.5, 31°.35N×103°.80E, h10km, mb3.8/1, Error ellipse: s-maj=14.5km s-min=8.5km az=62.0*
*BJI **12** 15:52:11.7, 31°.22N×104°.06E, h18km, mB4.9/1, mb4.2/8, ML3.7/8*

ISC 12 15:52:09.9±0.4, 31°.39N±0°.04×103°.84E±0°.09, h10km, n26, σ0s97/27, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.48	189	Pg	Pg	15 52 19.7	+0.5
CD2				Sg	Sg	15 52 26.3	+0.7
CD2				smax			
	comp=N,5μm,0.9s						
ENH	Enshi	4.98	101	Pn	Pn	15 53 27.3	+2.6
	comp=N,158nm,0.8s						
LSA	Lhasa	11.07	265	P	Pn	15 54 57.0	+8.7
CMAR	Chiang Mai Arr	13.61	200	Pn	Pn	15 55 23.9	+0.8
	comp=N,0.1nm,0.3s,baz=16,slow=13,SNR=4.7						
SONM	Songino Array	16.54	6	Pn	Pn	15 56 03.2	+1.3
	comp=N,0.2nm,0.3s,baz=179,slow=13,SNR=3.9						
KSRS	Korea Array	20.74	66	P	P	15 56 51.2	+0.5
	comp=N,2.8nm,0.7s,baz=258,slow=9.5,SNR=10						
CN2	Changchun	21.06	48	eP	P	15 56 55.3	+1.2
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MK31	Makanchi Array	22.62	319	eP	P	15 57 11.6	+0.9
MKAR	Makanchi Array	22.62	319	P	P	15 57 12.2	+1.5
	comp=Z,1.4nm,0.7s,mb3.5,baz=118,slow=10,SNR=9.7						
ZAA0	Zalesovo Array	26.37	334	eP	P	15 57 46.4	+0.3
ZALV	Zalesovo Beam	26.37	334	P	P	15 57 46.5	+0.5
	comp=Z,2.4nm,0.6s,mb3.9,baz=132,slow=9.8,SNR=11						
KURK	Kurchatov	26.89	323	P	P	15 57 51.1	+0.3
	comp=Z,2.7nm,0.8s,mb3.8,baz=127,slow=9.4,SNR=15						
BVAR	Borovoye Array	32.43	322	P	P	15 58 39.9	0.0
	comp=Z,0.6nm,0.6s,mb3.6,baz=125,slow=12,SNR=3.5						
TIXI	Tiksi	42.52	11	eP	P	16 00 04.3	-0.8
	comp=Z,1.0nm,0.5s,mb3.8						
ARCES	ARCESS Array B	56.91	336	P	P	16 01 54.2	-0.4
	comp=Z,1.9nm,0.8s,mb4.2,baz=81,slow=7.5,SNR=5.2						
FINES	FINESS Array B	57.21	326	P	P	16 01 55.8	-1.1
	comp=Z,2.1nm,0.8s,mb4.2,baz=357,slow=4.7,SNR=3.7						
WRA	Warramunga Arr	58.83	146	P	P	16 02 07.8	-1.0
	comp=Z,1.7nm,0.5s,mb4.3,baz=338,slow=7.6,SNR=18						
WB2	Warramunga Arr	58.84	146	eP	P	16 02 07.8	-1.0
ASAR	Alice Springs	61.85	149	P	P	16 02 28.4	-0.8
	comp=Z,0.5nm,0.5s,mb3.9,baz=338,slow=6.6,SNR=14						
NOA	NORSAR Array B	64.30	327	P	P	16 02 43.9	-1.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=56,slow=2.0,SNR=3.4						
INK	Inuvik	71.97	19	P	P	16 03 32.4	-0.8
	comp=Z,1.9nm,0.7s,mb4.2,baz=330,slow=8.6,SNR=11						
STKA	Stephens Creek	72.37	147	P	P	16 03 34.9	-1.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=257,slow=17,SNR=3.8						
STKA	Stephens Creek	72.37	147	eP	P	16 03 34.7	-1.3
YKA	Yellowknife Ar	81.49	17	P	P	16 04 26.7	-0.4
	comp=Z,1.1nm,0.6s,mb4.0,baz=330,slow=5.3,SNR=17						
YKA	Yellowknife Ar	81.49	17	P	P	16 04 26.7	-0.4
TORD	Torodi Ar. Bea	93.33	287	P	P	16 05 24.

UCH Uchtor 26.11 301 P P 15 59 59.1 +1.0
comp=Z,9.9nm,1.2s,mb4.2
AAK Ala-Archa 26.22 302 ⇓*iP* **P 15 59 59.5 +0.5**
KURK Kurchatov 26.83 321 P **P 16 00 04.6 +0.1**
comp=Z,4.3nm,1.0s,mb3.9,baz=130,slow=8.5,SNR=13
KURK PcP PcP 16 03 26.3 -0.7
comp=Z,1.3nm,0.7s,baz=110,slow=2.1,SNR=5.4
KURK Kurchatov 26.83 321 P **P 16 00 04.6 +0.1**
KURK 16 03 26.3
KURK pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
KURK Kurchatov 26.83 321 *eP* **P 16 00 04.5 0.0**
comp=Z,4.7nm,0.9s,mb4.0
KURK PcP PcP 16 03 26.3 -0.7
BVAR Borovoye Array 32.41 320 P **P 16 00 53.6 -0.3**
comp=Z,0.7nm,0.5s,mb3.7,baz=120,slow=8.8,SNR=6.0
BVAR PcP PcP 16 03 40.0 -1.1
comp=Z,1.1nm,0.7s,baz=126,slow=2.6,SNR=6.0
BRVK Borovoye 32.48 320⇑ *eP* **P 16 00 53.7 -0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
BRVK Borovoye 32.48 320 *eP* **P 16 00 53.5 -1.1**
comp=Z,2.4nm,1.0s,mb4.0
ABKAR Akbulak array 37.51 310 *eP* **P 16 01 37.7 -0.3**
comp=Z,2.4nm,0.8s,mb4.0
AKTK Aktyubinsk 38.94 312 P **P 16 01 50.5 +0.5**
AKTO Aktyubinsk 38.94 312 P **P 16 01 50.5 +0.5**
comp=Z,0.9nm,0.5s,mb3.8,baz=99,slow=4.8,SNR=5.0
SVE Sverdlovsk 39.07 322 *eP* **P 16 01 51.6 +0.6**
SVE pmax pmax
comp=Z,13nm,1.1s,mb4.6
KAPI Kappang 39.59 156 P **P 16 01 55.3 -0.4**
comp=Z,2.4nm,0.4s,mb4.3,baz=323,slow=15,SNR=2.2
ARU Arti 40.03 321 *d iP* **P 16 01 59.2 +0.2**
ARU *e* 16 03 29.7
ARU S **S 16 08 06.7 +2.2**
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.7
ARU Arti 40.03 321 *eP* **P 16 01 58.8 -0.2**
comp=Z,15nm,0.9s,mb4.7
TIXI Tiksi 41.55 11 *eP* **P 16 02 09.8 -1.6**
TIXI pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
TIXI Tiksi 41.55 11 *eP* **P 16 02 09.8 -1.5**
comp=Z,1.4nm,0.5s,mb3.9
PETK Petropavlovsk- 42.91 45 P **P 16 02 22.6 -0.1**
comp=Z,2.7nm,0.7s,mb4.1,baz=330,slow=1.8,SNR=7.0
ZEI Tsey 48.63 301 *eP* **P 16 03 07.7 -0.4**
ZEI pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KIV Kislovodsk 49.33 303 *eP* **P 16 03 13.8 +0.4**
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BILL Bilibino 49.88 26 *eP* **P 16 03 16.2 -1.1**
BILL *e* 16 04 37.3
BILL pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
KNA Kununurra 52.85 151 *eP* **P 16 03 40.3 +0.3**
comp=Z,12nm,0.8s,mb4.9
FITZ Fitzroy Crossi 53.79 155 P **P 16 03 46.8 -0.1**
comp=Z,3.1nm,0.8s,mb4.3,baz=338,slow=4.2,SNR=6.0
KEV Kevo 56.04 336 *eP* **P 16 04 01.3 -1.3**
KEV pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KEV Kevo 56.04 336 *ep* **P 16 04 01.3 -1.3**
comp=Z,10nm,0.7s,mb5.0
ARCES ARCESS Array B 56.57 336 P **P 16 04 05.7 -0.7**
comp=Z,3.4nm,0.6s,mb4.5,baz=79,slow=8.8,SNR=13
ARCES ARCESS Array B 56.57 336 P **P 16 04 05.7 -0.7**
BRTR Keskin Array B 56.84 299 P **P 16 04 08.3 -0.5**
comp=Z,1.3nm,0.8s,mb4.0,baz=96,slow=6.4,SNR=7.2
BRTR Keskin Array B 56.84 299 *eP* **P 16 04 08.3 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
FINES FINESS Array B 57.07 326 P **P 16 04 09.6 -0.6**
comp=Z,5.8nm,0.8s,mb4.7,baz=89,slow=7.6,SNR=9.9
FINES FINESS Array B 57.07 326 P **P 16 04 09.6 -0.6**
AKASG Malin Array Be 57.18 313 P **P 16 04 10.0 -1.0**
comp=Z,2.0nm,0.5s,mb4.4,baz=70,slow=6.7,SNR=4.0
WRAB Tennant Creek 58.98 147 *eP* **P 16 04 24.2 +0.2**
WRAB pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
WRAB Tennant Creek 58.98 147 *eP* **P 16 04 24.2 +0.2**
comp=Z,9.8nm,0.7s,mb5.0
WRA Warramunga Arr 58.98 147 P **P 16 04 24.4 +0.4**
comp=Z,6.6nm,0.6s,mb4.9,baz=340,slow=7.4,SNR=28
WB2 Warramunga Arr 58.99 147 *eP* **P 16 04 24.1 0.0**
ASAR Alice Springs 62.05 150 P **P 16 04 45.5 +0.6**
comp=Z,3.4nm,0.7s,mb4.6,baz=332,slow=6.7,SNR=24
NB2 NORSAR Subarra 64.14 327 P **P 16 04 56.8 -1.5**
comp=Z,1.6nm,0.5s,mb4.3,baz=72,slow=6.9
NOA NORSAR Array B 64.14 327 P **P 16 04 57.1 -1.2**
comp=Z,3.5nm,0.8s,mb4.5,baz=71,slow=6.7,SNR=7.2
GERES GERESS Array B 67.31 314 P **P 16 05 18.2 -0.8**
comp=Z,0.8nm,0.8s,mb3.8,baz=69,slow=4.6,SNR=5.2
INK Inuvik 70.89 20 P **P 16 05 40.4 -0.6**
comp=Z,2.9nm,0.7s,mb4.3,baz=322,slow=6.2,SNR=11
BBOO Buckleboo 71.01 153 *eP* **P 16 05 41.9 -0.1**
comp=Z,1.2nm,0.4s,mb4.2
CDF Champ du Feu 71.34 316 *eP* **P 16 05 43.8 -0.2**
STKA Stephens Creek 72.53 148 *eP* **P 16 05 51.3 +0.1**
comp=Z,3.1nm,1.0s,mb4.2
STKA Stephens Creek 72.53 148 P **P 16 05 51.3 +0.2**
comp=Z,1.6nm,0.5s,mb4.2,baz=357,slow=5.6,SNR=7.1
STKA Stephens Creek 72.53 148 *eP* **P 16 05 50.9 -0.3**
LPG La Plagne 73.03 313 *eP* **P 16 05 54.5 +0.3**
comp=Z,11nm,0.7s,mb4.6
LPL La Plagne 73.04 313⇑ *iP* **P 16 05 54.4 +0.2**
comp=Z,8.3nm,0.6s,mb4.5
CMSA Cobar Meteorol 74.18 145 *eP* **P 16 06 01.8 +0.9**
AVF Avril sur Loir 74.45 316 *eP* **P 16 06 01.8 -0.7**
comp=Z,3.7nm,0.8s,mb4.1
YKA Yellowknife Ar 80.44 17 P **P 16 06 35.1 -0.6**
comp=Z,1.2nm,0.5s,mb4.0,baz=328,slow=5.1,SNR=17
TORD Torodi Ar. Bea 93.99 288 P **P 16 07 42.5 -0.4**
comp=Z,0.3nm,0.6s,mb3.9,baz=37,slow=3.3,SNR=3.7

BJI 12 15:54:36.8, 31.77N×103.30E, h15km, mb4.4/1, ML4.1/2, Ms3.8/1, Ms7 3.7/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.94**	**155**	Pg	Pg	15 54 53.0	-2.1
CD2				Sg	Sg	15 54 59.4	-8.0
CD2				smax			
	comp=N,16μm,0.7s						

*IDC **12** 15:57:26.0±0.7, 31.38N×104.02E, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.9/28, mbtmp4.0/15, ML3.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.1/39, Error ellipse: s-maj=29.8km s-min=13.7km az=62.0*
*ISCJB **12** 15:57:27.1±1.7, 31.37N±0.06×104.1E±0.1, h21km±13km, mb4.0/15, Error ellipse: s-maj=16.2km s-min=9.6km az=163.4*
*NEIC **12** 15:57:27.4±0.3, 31.42N×104.14E, h10km, mb3.8/3, Error ellipse: s-maj=12.9km s-min=5.9km az=69.0*
*BJI **12** 15:57:27.4, 31.41N×104.19E, h12km, mb4.3/5, ML3.8/3*
ISC 12 15:57:27.5±1.9, 31.39N±0.06×104.0E±0.1, h10km±13km, n28, σ0.80/28, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**206**	Pg	**Pg**	**15 57 36.5**	**-1.3**
CD2				Sg	**Sg**	**15 57 45.8**	**+1.0**
CD2				smax			
	comp=N,4μm,0.9s						
NJ2	**Nanjing**	**12.64**	**83**	*eP*	Px	16 00 43.9	
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.67**	**201**	Pn	**Pn**	**16 00 41.8**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=25,slow=9.3,SNR=2.9						
SONM	**Songino Array**	**16.52**	**6**	Pn	**Pn**	**16 01 17.8**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=180,slow=17,SNR=3.8						
KSRS	**Korea Array**	**20.59**	**66**	P	**P**	**16 02 07.8**	**+1.0**
	comp=Z,3.9nm,0.7s,baz=248,slow=9.1,SNR=9.8						
CN2	**Changchun**	**20.94**	**48**	*eP*	**P**	**16 02 12.0**	**+1.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.72**	**319**	P	**P**	**16 02 29.8**	**+0.3**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**16 02 30.5**	**+1.0**
	comp=Z,3.5nm,1.1s,mb3.7,baz=126,slow=12,SNR=5.8						
MKAR				LR	LR	16 12 34.6	
	comp=Z,61nm,18.6s,baz=112,slow=40						
ZAA0	**Zalesovo Array**	**26.44**	**334**	*eP*	**P**	**16 03 04.4**	**0.0**
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**16 03 04.8**	**+0.4**
	comp=Z,3.0nm,0.7s,mb4.0,baz=131,slow=9.8,SNR=8.7						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**16 03 09.8**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.7,baz=126,slow=9.3,SNR=5.8						
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**16 03 59.4**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=98,slow=8.9,SNR=3.1						
ABKAR	**Akbulak array**	**37.44**	**311**	*eP*	**P**	**16 04 41.0**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.7						
TIXI	**Tiksi**	**42.49**	**11**	*eP*	**P**	**16 05 21.7**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.5						
FITZ	**Fitzroy Crossi**	**53.40**	**154**	P	**P**	**16 06 47.0**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=266,slow=8.7,SNR=3.3						
ARCES	**ARCESS Array B**	**56.98**	**336**	P	**P**	**16 07 12.1**	**-0.6**
	comp=Z,2.3nm,0.9s,mb4.2,baz=90,slow=8.4,SNR=3.8						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**16 07 13.4**	**-1.8**
	comp=Z,2.1nm,0.8s,mb4.2,baz=72,slow=12,SNR=3.6						
WRAB	**Tennant Creek**	**58.74**	**146**	*eP*	**P**	**16 07 25.5**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**16 07 25.8**	**0.0**
	comp=Z,1.7nm,0.3s,mb4.5,baz=328,slow=9.1,SNR=28						
WB2	**Warramunga Arr**	**58.75**	**146**	*eP*	**P**	**16 07 25.4**	**-0.5**
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**16 07 46.6**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.2,baz=334,slow=6.9,SNR=7.5						
MEM	**Membach**	**71.13**	**318**	P	**P**	**16 08 37.3**	**-8.8**
BCLA	**Clavier**	**71.62**	**318**	P	**P**	**16 08 44.0**	**-5.1**
INK	**Inuvik**	**71.91**	**19**	P	**P**	**16 08 50.6**	**+1.0**
	comp=Z,1.3nm,0.6s,mb4.0,baz=328,slow=7.8,SNR=8.8						
STKA	**Stephens Creek**	**72.28**	**147**	P	**P**	**16 08 53.1**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=320,slow=6.2,SNR=4.4						
STKA	**Stephens Creek**	**72.28**	**147**	*eP*	**P**	**16 08 53.0**	**-0.2**
YKA	**Yellowknife Ar**	**81.44**	**17**	P	**P**	**16 09 44.4**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=329,slow=5.2,SNR=7.4						
YKA	**Yellowknife Ar**	**81.44**	**17**	P	**P**	**16 09 44.4**	**0.0**

*IDC **12** 15:58:55.4±0.6, 31.22N×103.83E, h0km, mb4.1/12, mb1 4.3/14, mb1mx4.1/27, mbtmp4.1/14, ML3.6/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/37, Error ellipse: s-maj=32.8km s-min=13.7km az=61.0*
*ISCJB **12** 15:58:57.9±0.8, 31.18N±0.05×103.81E±0.08, h29km±6km, mb4.2/18, MS3.1/2, Error ellipse: s-maj=12.3km s-min=7.4km az=171.6*
*NEIC **12** 15:58:57.0±0.3, 31.21N×103.87E, h10km, mb4.2/4, Error ellipse: s-maj=10.6km s-min=6.4km az=66.0*
*BJI **12** 15:58:57.3, 31.16N×104.05E, h14km, mb4.5/9, ML4.0/8, Ms4.4/3, Ms7 3.9/1*
ISC 12 15:58:58.5±1.0, 31.22N±0.04×103.82E±0.08, h17km±6km, n33, σ0.86/35, mb4.2/18, MS3.1/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**190**	Pg	**Pg**	**15 59 04.5**	**-0.7**
CD2				Sg	**Sg**	**15 59 10.0**	**+0.3**
CD2				smax			
	comp=N,22μm,0.8s						
KMI	**Kunming**	**6.15**	**189**	Pn	**Pn**	**16 00 28.6**	**+0.1**
KMI				Sn	**Sn**	**16 01 39.7**	**+1.3**
KMI				smax			
	comp=N,82nm,1.5s						
KMI				smax			
	comp=E,96nm,1.1s						
KMI				LR	LR		
	comp=N,1μm,11.8s						
KMI				LR	LR		
	comp=E,1μm,7.4s						
KMI				LR	LR		
	comp=Z,1μm,13.2s						
LSA	**Lhasa**	**11.04**	**265**	*eP*	**Pn**	**16 01 35.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**13.45**	**200**	Pn	**Pn**	**16 02 09.1**	**+0.4**
	baz=14,slow=12,SNR=4.1						
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**16 02 52.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=6.2						
SONM				LR	LR	16 09 55.0	
	comp=Z,286nm,20.9s,baz=76,slow=40						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**16 03 40.5**	**+1.4**
	comp=Z,8.1nm,0.7s,baz=261,slow=10,SNR=12						
KSRS				LR	LR	16 12 51.5	
	comp=Z,94nm,20.3s,MS3.1,baz=235,slow=40						
CN2	**Changchun**	**21.18**	**48**	*eP*	**P**	**16 03 44.5**	**+1.6**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.6						
MK31	**Makanchi Array**	**22.73**	**319**	P	**P**	**16 03 59.3**	**-0.1**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**16 04 00.2**	**+0.8**
	comp=Z,7.1nm,0.9s,mb4.1,baz=126,slow=12,SNR=14						
UCH	**Uchtor**	**25.81**	**303**	*eP*	**P**	**16 04 29.2**	**+0.5**
	comp=Z,9.3nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**25.94**	**304**	P	**P**	**16 04 33.1**	**+3.3**
	comp=Z,1.7nm,0.6s,mb3.8,baz=127,slow=3.3,SNR=7.3						
ZAA0	**Zalesovo Array**	**26.51**	**334**	*eP*	**P**	**16 04 35.0**	**+0.2**
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**16 04 34.7**	**-0.1**
	comp=Z,5.5nm,0.8s,mb4.2,baz=139,slow=9.9,SNR=6.5						
ZALV				LR	LR	16 16 27.3	
	comp=Z,49nm,20.5s,MS3.0,baz=337,slow=40						
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**16 04 34.7**	**-0.1**
ZALV				LR	LR	16 16 27.3	
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**16 04 38.4**	**-0.9**
	comp=Z,3.2nm,0.8s,mb3.9,baz=127,slow=9.7,SNR=5.4						
KURK				PcP	PcP	16 08 02.5	+2.1
	comp=Z,0.3nm,0.4s,baz=132,slow=6.8,SNR=4.2						
KURK	**Kurchatov**	**27.01**	**323**	*eP*	**P**	**16 04 39.6**	**+0.3**
KURK				PcP	PcP	16 08 02.5	+2.1
BVAR	**Borovoye Array**	**32.55**	**322**	P	**P**	**16 05 28.3**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=112,slow=9.8,SNR=4.3						
BVAR				PcP	PcP	16 08 13.9	-0.8
	comp=Z,0.7nm,0.7s,baz=141,slow=5.2,SNR=4.4						
BRVK	**Borovoye**	**32.62**	**322**	*eP*	**P**	**16 05 28.2**	**-0.9**
	comp=Z,2.1nm,0.8s,mb4.1						
ARU	**Arti**	**40.19**	**322**	P	**P**	**16 06 35.8**	**+2.1**
	comp=Z,2.1nm,0.6s,mb4.0						
TIXI	**Tiksi**	**42.69**	**11**	*eP*	**P**	**16 06 52.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.33**	**154**	P	**P**	**16 08 15.9**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.1,baz=323,slow=5.1,SNR=4.7						
BRTR	**Keskin Array B**	**56.48**	**300**	P	**P**	**16 08 38.5**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=111,slow=6.5,SNR=1.7						
WRAB	**Tennant Creek**	**58.70**	**146**	*eP*	**P**	**16 08 54.8**	**-0.4**
	comp=Z,22nm,0.9s,mb5.2						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**16 08 55.1**	**-0.2**
	comp=Z,10nm,0.8s,mb4.9,baz=337,slow=7.6,SNR=20						
WB2	**Warramunga Arr**	**58.71**	**146**	*eP*	**P**	**16 08 54.8**	**-0.5**
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**16 09 16.1**	**+0.2**
	comp=Z,2.2nm,0.8s,mb4.4,baz=334,slow=6.5,SNR=10						
INK	**Inuvik**	**72.13**	**19**	P	**P**	**16 10 21.1**	**-0.5**
	comp=Z,2.1nm,0.7s,mb4.2,baz=340,slow=6.7,SNR=7.7						
STKA	**Stephens Creek**	**72.24**	**147**	P	**P**	**16 10 21.9**	**-0.7**
	comp=Z,2.0nm,0.7s,mb4.2,baz=325,slow=9.4,SNR=5.7						
STKA	**Stephens Creek**	**72.24**	**147**	*eP*	**P**	**16 10 21.7**	**-0.9**
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**16 11 14.5**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=330,slow=5.2,SNR=8.8						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**16 11 14.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**93.37**	**287**	P	**P**	**16 12 11.9**	**-1.3**
	comp=Z,0.7nm,1.0s,mb4.0,baz=67,slow=3.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**93.37**	**287**	P	**P**	**16 12 11.9**	**-1.3**

*ISCJB **12** 16:04:03.1±0.6, 31.78N±0.06×104.59E±0.10, h10km, mb3.5/9, Error ellipse: s-maj=12.3km s-min=7.7km az=17.7*
*IDC **12** 16:04:03.2±1.0, 31.91N×104.60E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, Error ellipse: s-maj=38.7km s-min=18.6km az=52.0*
*BJI **12** 16:04:04.3, 31.85N×104.66E, h10km, ML3.7/5, Ms3.9/1*
*NEIC **12** 16:04:05.5±0.5, 32.10N×104.82E, h10km, mb4.1/1, Error ellipse: s-maj=21.1km s-min=10.0km az=67.0*
ISC 12 16:04:05.0±0.6, 31.76N±0.05×104.5E±0.1, h10km, n17, σ1.12/19, mb3.5/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.04**	**216**	Pn	**Pn**	**16 04 25.7**	**+0.1**
CD2				Sn	**Sn**	**16 04 40.2**	**+0.1**
CD2				smax			
	comp=N,4μm,0.8s						
LZH	**Lanzhou**	**4.35**	**353**	Pg	**Pb**	**16 05 21.4**	**-0.1**
LZH				Sg	**Sb**	**16 06 17.1**	**+3.1**
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,170nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.15**	**202**	Pn	**Pn**	**16 07 32.1**	**+6.6**
	comp=E,0.1nm,0.3s,baz=14,slow=13,SNR=5.4						
SONM	**Songino Array**	**16.12**	**5**	Pn	**Pn**	**16 07 53.9**	**+2.2**
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=4.3						
KSRS	**Korea Array**	**20.11**	**67**	P	**P**	**16 08 38.0**	**-0.9**
	comp=E,0.2nm,0.3s,baz=253,slow=11,SNR=8.6						
MK31	**Makanchi Array**	**22.70**	**318**	*eP*	**P**	**16 09 06.5**	**-0.1**
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**16 09 07.1**	**+0.5**
	comp=E,0.4nm,0.6s,mb3.0,baz=116,slow=12,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.27**	**333**	P	**P**	**16 09 39.3**	**-1.0**
	comp=E,0.6nm,0.4s,mb3.5,baz=134,slow=8.3,SNR=3.0						
KURK	**Kurchatov**	**26.91**	**322**	P	**P**	**16 09 45.8**	**-0.3**
	comp=E,0.5nm,0.7s,mb3.1,baz=127,slow=9.5,SNR=3.2						
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**16 13 51.0**	**-0.9**
	comp=E,2.9nm,1.0s,mb4.2,baz=108,slow=9.2,SNR=4.0						
WRAB	**Tennant Creek**	**58.84**	**147**	P	**P**	**16 14 07.6**	**+3.7**
	comp=E,1.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**58.85**	**147**	P	**P**	**16 14 04.2**	**+0.3**
	comp=E,0.5nm,0.6s,mb3.7,baz=328,slow=9.0,SNR=6.5						
WB2	**Warramunga Arr**	**58.85**	**147**	*eP*	**P**	**16 14 05.0**	**+1.1**
ASAR	**Alice Springs**	**61.89**	**149**	P	**P**	**16 14 25.2**	**+0.6**
	comp=E,0.2nm,0.5s,mb3.5,baz=332,slow=6.4,SNR=4.3						
INK	**Inuvik**	**71.44**	**19**	P	**P**	**16 15 24.2**	**-0.9**
	comp=E,0.5nm,0.7s,mb3.6,baz=11,slow=5.2,SNR=3.5						
INK	**Inuvik**	**71.44**	**19**	P	**P**	**16 15 24.2**	**-0.9**
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**16 16 16.9**	**-2.6**
	comp=E,0.1nm,0.5s,mb3.0,baz=328,slow=5.1,SNR=3.1						

*IDC **12** 16:07:17.7±0.9, 31.63N×104.33E, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/29, mbtmp3.7/11, ML3.3/2, Error ellipse: s-maj=31.8km s-min=17.7km az=58.0*
*NEIC **12** 16:07:19.4±0.5, 31.60N×104.19E, h10km, mb3.9/2, Error ellipse: s-maj=14.3km s-min=8.2km az=62.0*
ISC 12 16:07:21.7±2.0, 31.61N±0.07×104.2E±0.1, h26km±15km, n19, σ0.81/22, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.48**	**356**	Pn	**Pn**	**16 08 20.5**	**-7.3**
LZH				Pg	**Pb**	**16 08 37.2**	**-2.4**
LZH				Sn	**Sn**	**16 09 13.9**	**-5.2**
LZH				Sg	**Sb**	**16 09 34.0**	**+0.9**
LZH				smax			
	comp=N,630nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,1μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,6.5s						
ENH	**Enshi**	**4.73**	**105**	*e*Pn	**Pn**	**16 08 32.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**13.93**	**201**	Pn	**Pn**	**16 10 37.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=14,slow=13,SNR=2.8						
SONM	**Songino Array**	**16.30**	**5**	Pn	**Pn**	**16 11 08.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=2.3						
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**16 11 55.9**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=248,slow=8.5,SNR=4.2						
MK31	**Makanchi Array**	**22.66**	**318**	*eP*	**P**	**16 12 20.7**	**0.0**
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**16 12 21.3**	**+0.6**
	comp=Z,2.0nm,0.7s,mb3.6,baz=119,slow=13,SNR=10						
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**16 12 21.3**	**+0.6**
ZALV	**Zalesovo Beam**	**26.31**	**334**	P	**P**	**16 12 55.6**	**+0.6**
	comp=Z,2.0nm,0.7s,mb3.8,baz=128,slow=10,SNR=11						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**16 13 00.7**	**+0.4**
	comp=Z,1.5nm,0.8s,mb3.5,baz=130,slow=9.3,SNR=8.5						
KURK	**Kurchatov**	**26.90**	**323**	*eP*	**P**	**16 13 00.0**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.3						
BVAR	**Borovoye Array**	**32.45**	**321**	P	**P**	**16 13 50.0**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=115,slow=10.0,SNR=4.9						
WRAB	**Tennant Creek**	**58.84**	**146**	*eP*	**P**	**16 17 17.0**	**-1.0**
	comp=Z,2.0nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**58.84**	**147**	P	**P**	**16 17 18.2**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.0,baz=339,slow=7.6,SNR=6.7						
WB2	**Warramunga Arr**	**58.85**	**146**	*eP*	**P**	**16 17 18.0**	**-0.1**
ASAR	**Alice Springs**	**61.87**	**149**	P	**P**	**16 17 38.6**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.6,baz=339,slow=6.6,SNR=3.3						
ASAR	**Alice Springs**	**61.87**	**149**	P	**P**	**16 17 38.6**	**-0.2**
INK	**Inuvik**	**71.66**	**19**	P	**P**	**16 18 39.7**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=324,slow=12,SNR=6.1						
YKA	**Yellowknife Ar**	**81.19**	**17**	P	**P**	**16 19 34.0**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=327,slow=5.2,SNR=7.9						

*ISCJB **12** 16:09:49.4±0.3, 31.67N±0.04×104.13E±0.05, h10km, mb4.2/30, MS3.8/8, Error ellipse: s-maj=6.7km s-min=5.3km az=170.8*
*IDC **12** 16:09:50.3±0.6, 31.92N×104.33E, h0km, mb4.0/18, mb1 4.1/20, mb1mx4.1/30, mbtmp4.0/20, ML4.1/2, MS3.8/8, Ms1 3.8/8, ms1mx3.4/39, Error ellipse: s-maj=24.4km s-min=12.4km az=54.0*
*BJI **12** 16:09:50.2, 31.76N×104.34E, h12km, mB5.0/2, mb4.4/9, ML4.2/12, Ms4.6/11, Ms7 4.0/7*
*NEIC **12** 16:09:52.0±0.2, 31.92N×104.38E, h10km, mb4.5/10, Error ellipse: s-maj=8.9km s-min=4.9km az=56.0*
*MOS **12** 16:09:53.3±1.1, 31.84N×104.25E, h34km, mb4.7/12, Error ellipse: s-maj=14.3km s-min=8.1km az=111.1*
ISC 12 16:09:51.8±0.3, 31.76N±0.04×104.21E±0.06, h10km, n78, σ1.96/77, mb4.2/30, MS3.8/8, 9C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.93**	**204**	Pg	**Pg**	**16 10 06.2**	**-3.6**
CD2				smax			
	comp=N,34μm,1.0s						
LZH	**Lanz

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ				LR	LR		
	comp=N,890nm,12.0s						
WMQ				LR	LR		
	comp=E,710nm,8.0s						
WMQ				LR	LR		
	comp=Z,290nm,21.0s						
ZAK	**Zakamensk**	**18.62**	**358**	*e*P	**Pn**	**16 14 09.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MOY	**Mondy**	**20.03**	**354**	*e*P	Px	16 14 38.4	
KSRS	**Korea Array**	**20.31**	**67**	P	**P**	**16 14 27.6**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=256,slow=10.0,SNR=5.9						
KSRS	**Korea Array**	**20.31**	**67**	P	**P**	**16 14 27.6**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CN2	**Changchun**	**20.58**	**48**	*e*P	Px	16 14 46.4	
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
MK31	**Makanchi Array**	**22.55**	**318**	*e*P	**P**	**16 14 51.7**	**-0.1**
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**16 14 52.3**	**+0.4**
	comp=Z,1.6nm,0.6s,mb3.6,baz=114,slow=12,SNR=9.4						
MKAR				LR	LR	16 24 29.9	
	comp=Z,508nm,18.3s,MS4.0,baz=129,slow=39						
UCH	**Uchtor**	**25.80**	**302**	P	**P**	**16 15 24.0**	**+1.1**
	comp=Z,14nm,1.0s,mb4.4						
AAK	**Ala-Archa**	**25.91**	**303**	P	**P**	**16 15 31.4**	**+7.4**
	comp=Z,9.7nm,0.8s,mb4.4,baz=124,slow=7.2,SNR=26						
AAK	**Ala-Archa**	**25.91**	**303**	P	**P**	**16 15 31.4**	**+7.4**
ZAA0	**Zalesovo Array**	**26.17**	**334**	*e*P	**P**	**16 15 25.1**	**-1.1**
ZALV	**Zalesovo Beam**	**26.17**	**334**	P	**P**	**16 15 25.6**	**-0.6**
	comp=Z,7.4nm,0.5s,mb4.5,baz=129,slow=10.0,SNR=30						
ZALV				LR	LR	16 26 28.4	
	comp=Z,171nm,19.0s,MS3.6,baz=341,slow=38						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**16 15 32.2**	**+0.5**
	comp=Z,1.5nm,0.7s,mb3.6,baz=133,slow=8.4,SNR=8.6						
KURK				LR	LR	16 27 28.2	
	comp=Z,289nm,19.8s,MS3.8,baz=125,slow=40						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**16 15 32.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.6						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**16 15 32.0**	**+0.3**
	comp=Z,21nm,1.1s,mb4.6						
KURK				LR	LR	16 27 28.2	
NVS	**Novosibirsk**	**27.45**	**333**	*e*P	**P**	**16 15 46.1**	**+8.4**
MJAR	**Matsushiro Arr**	**28.45**	**71**	LR	LR	16 28 10.3	
	comp=Z,131nm,21.5s,MS3.5,baz=185,slow=39						
DAV	**Davao City (W)**	**31.64**	**136**	LR	LR	16 29 27.2	
	comp=Z,236nm,21.3s,MS3.8,baz=121,slow=37						
BVAR	**Borovoye Array**	**32.33**	**321**	P	**P**	**16 16 21.4**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.5,baz=116,slow=10,SNR=4.2						
BVAR				PcP	PcP	16 19 08.8	+0.1
	comp=Z,0.3nm,0.6s,baz=20,slow=4.7,SNR=2.7						
BVAR				LR	LR	16 30 33.4	
	comp=Z,402nm,20.5s,MS4.1,baz=88,slow=38						
BVAR	**Borovoye Array**	**32.33**	**321**	P	**P**	**16 16 21.4**	**+0.4**
BVAR				LR		16 19 08.8	
BRVK	**Borovoye**	**32.41**	**321**	P	**P**	**16 16 22.5**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
BRVK	**Borovoye**	**32.41**	**321**	P	**P**	**16 16 22.4**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.2						
ABKAR	**Akbulak array**	**37.30**	**311**	*e*P	**P**	**16 17 04.7**	**+0.7**
	comp=Z,0.6nm,0.3s,mb3.9						
AKTK	**Aktyubinsk**	**38.76**	**313**	P	**P**	**16 17 16.3**	**+0.1**
AKTK				LR	LR	16 35 40.5	
AKTO	**Aktyubinsk**	**38.76**	**313**	P	**P**	**16 17 16.3**	**+0.1**
	comp=Z,1.5nm,0.5s,mb4.0,baz=101,slow=13,SNR=5.2						
AKTO				LR	LR	16 35 40.5	
	comp=Z,66nm,18.5s,MS3.5,baz=30,slow=40						
TIXI	**Tiksi**	**42.09**	**11**	*e*P	**P**	**16 17 40.8**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
TIXI	**Tiksi**	**42.09**	**11**	*e*P	**P**	**16 17 40.8**	**-2.7**
	comp=Z,3.6nm,0.9s,mb4.0						
PETK	**Petropavlovsk-**	**43.66**	**45**	P	**P**	**16 17 55.2**	**-1.3**
	comp=Z,1.9nm,0.7s,mb3.9,baz=281,slow=6.7,SNR=2.7						
ZEI	**Tsey**	**48.31**	**301**	*e*P	**P**	**16 18 38.8**	**+5.5**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
KIV	**Kislovodsk**	**49.03**	**303**	*e*P	**P**	**16 18 46.8**	**+8.0**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.67**	**154**	P	**P**	**16 19 14.6**	**+0.8**
	comp=Z,1.2nm,0.5s,mb4.1,baz=349,slow=8.0,SNR=6.5						
KEV	**Kevo**	**56.17**	**336**	*e*P	**P**	**16 19 29.7**	**-1.6**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KEV	**Kevo**	**56.17**	**336**	*e*p	**P**	**16 19 29.7**	**-1.6**
	comp=Z,5.8nm,0.6s,mb4.8						
BRTR	**Keskin Array B**	**56.49**	**299**	P	**P**	**16 19 34.9**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=81,slow=7.6,SNR=3.7						
ARCES	**ARCESS Array B**	**56.70**	**336**	P	**P**	**16 19 34.0**	**-1.1**
	comp=Z,1.7nm,0.4s,mb4.4,baz=80,slow=7.8,SNR=24						
AKASG	**Malin Array Be**	**57.00**	**313**	P	**P**	**16 19 37.3**	**-0.3**
	comp=Z,1.3nm,0.3s,mb4.4,baz=68,slow=7.4,SNR=6.7						
AKASG				LR	LR	16 47 49.5	
	comp=Z,61nm,19.8s,MS3.7,baz=65,slow=40						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 19 36.9**	**-0.9**
	comp=Z,2.3nm,0.8s,mb4.3,baz=110,slow=10,SNR=6.3						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 19 36.9**	**-0.9**
WRAB	**Tennant Creek**	**58.97**	**147**	*e*P	**P**	**16 19 52.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**58.97**	**147**	*e*P	**P**	**16 19 52.1**	**+0.5**
	comp=Z,9.7nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**58.97**	**147**	P	**P**	**16 19 52.2**	**+0.6**
	comp=Z,6.8nm,0.8s,mb4.7,baz=337,slow=7.5,SNR=23						
WB2	**Warramunga Arr**	**58.98**	**147**	*e*P	**P**	**16 19 52.3**	**+0.6**
ASAR	**Alice Springs**	**62.01**	**149**	P	**P**	**16 20 13.2**	**+0.9**
	comp=Z,1.0nm,0.8s,mb4.0,baz=325,slow=6.2,SNR=8.8						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**16 20 24.8**	**-1.4**
	comp=Z,0.8nm,0.6s,mb4.0,baz=72,slow=6.6,SNR=3.3						
GERES	**GERESS Array B**	**67.15**	**314**	P	**P**	**16 20 45.5**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=59,slow=5.1,SNR=4.5						
CDF	**Champ du Feu**	**71.21**	**316**	⇑*i*P	**P**	**16 21 10.9**	**0.0**
	comp=Z,2.5nm,0.6s,mb4.0						
CDF	**Champ du Feu**	**71.21**	**316**	⇑*i*P	**P**	**16 21 10.9**	**0.0**
CDF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
CDF	**Champ du Feu**	**71.21**	**316**	⇑*i*P	**P**	**16 21 10.9**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**72.51**	**147**	P	**P**	**16 21 19.1**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.2,baz=299,slow=8.8,SNR=4.1						
LPG	**La Plagne**	**72.86**	**313**	⇑*i*P	**P**	**16 21 21.9**	**+1.0**
	comp=Z,12nm,0.4s,mb4.8						
LPG	**La Plagne**	**72.86**	**313**	⇑*i*P	**P**	**16 21 21.9**	**+1.0**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
LPG	**La Plagne**	**72.86**	**313**	⇑*i*P	**P**	**16 21 21.9**	**+1.0**
	comp=Z,6.0nm,0.4s,mb4.9						
LPL	**La Plagne**	**72.87**	**313**	⇑*i*P	**P**	**16 21 21.8**	**+0.9**
	comp=Z,14nm,0.4s,mb4.9						
LPL	**La Plagne**	**72.87**	**313**	⇑*i*P	**P**	**16 21 21.8**	**+0.9**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
LPL	**La Plagne**	**72.87**	**313**	⇑*i*P	**P**	**16 21 21.8**	**+0.9**
	comp=Z,7.2nm,0.4s,mb5.0						
SMF	**Signal de Mont**	**74.09**	**315**	*e*P	**P**	**16 21 27.9**	**-0.2**
SJPF	**Ste Jean**	**79.00**	**314**	*e*P	**P**	**16 21 57.2**	**+1.2**
	comp=Z,5.6nm,0.8s,mb4.3						
SJPF	**Ste Jean**	**79.00**	**314**	*e*P	**P**	**16 21 57.2**	**+1.2**
SJPF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SJPF	**Ste Jean**	**79.00**	**314**	*e*P	**P**	**16 21 57.2**	**+1.2**
	comp=Z,2.8nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**16 22 04.6**	**-2.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=330,slow=5.2,SNR=15						
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**16 22 04.6**	**-2.0**

ISCJB ***12*** *16:14:32.2±0.6, 32°.32N×0°.05×105°.21E±0°.08, h10km, mb3.9/11, Error ellipse: s-maj=10.8km s-min=6.1km az=24.2*
IDC ***12*** *16:14:32.8±0.8, 32°.25N×105°.15E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, Error ellipse: s-maj=67.2km s-min=16.8km az=59.0*
NEIC ***12*** *16:14:34.1±0.5, 32°.40N×105°.42E, h10km, mb4.3/2, Error ellipse: s-maj=19.2km s-min=9.0km az=50.0*
BJI ***12*** *16:14:37.2, 32°.21N×105°.05E, h10km, ML3.9/4*
ISC 12 16:14:34.3±0.6, 32°.32N±0°.05×105°.17E±0°.08, h10km, n20, σ1º**01**/22**, mb3.9**/11**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.85**	**221**	Pg	**Pg**	**16 15 07.9**	**-1.8**
CD2				smax			
	comp=N,730nm,0.7s						
CD2	**Chengdu**	**1.85**	**221**	Pg	**Sn**	**16 15 29.4**	**-0.1**
CD2				Sg	**Sg**	**16 15 34.2**	**+0.5**
CD2				smax			
	comp=N,12μm,0.5s						
LZH	**Lanzhou**	**3.92**	**344**	Pg	**Pg**	**16 15 49.0**	**-0.3**
LZH				Sg	**Sg**	**16 16 36.2**	**-3.9**
LZH				smax			
	comp=N,450nm,0.5s						
LZH				smax			
	comp=E,340nm,0.5s						
ENH	**Enshi**	**4.22**	**118**	*e*Pg	**Pg**	**16 15 51.1**	**-4.1**
CMAR	**Chiang Mai Arr**	**14.90**	**204**	Pn	**Pn**	**16 18 07.8**	**+2.8**
	comp=E,0.1nm,0.3s,baz=10.0,slow=13,SNR=3.8						
SONM	**Songino Array**	**15.53**	**3**	Pn	**Pn**	**16 18 18.2**	**+5.0**
	comp=E,0.1nm,0.3s,baz=180,slow=16,SNR=3.9						
MKAR	**Makanchi Array**	**22.70**	**316**	P	**P**	**16 19 34.8**	**-1.1**
	comp=E,1.0nm,0.6s,mb3.4,baz=119,slow=9.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	**P**	**16 20 08.8**	**+1.2**
	comp=E,0.5nm,0.4s,mb3.4,baz=116,slow=9.8,SNR=3.3						
AAK	**Ala-Archa**	**26.30**	**302**	*e*P	**P**	**16 20 09.6**	**-0.4**
	comp=E,1.8nm,0.3s,mb4.1						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**16 20 15.0**	**+0.2**
	comp=E,2.0nm,1.1s,mb3.6,baz=133,slow=8.2,SNR=4.8						
ARCES	**ARCESS Array B**	**56.53**	**335**	P	**P**	**16 24 16.1**	**-0.2**
	comp=E,5.6nm,1.1s,mb4.5,baz=79,slow=9.3,SNR=3.5						
WRAB	**Tennant Creek**	**58.99**	**148**	*e*P	**P**	**16 24 34.0**	**-0.2**
	comp=E,2.4nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**16 24 34.1**	**-0.1**
	comp=E,1.6nm,0.9s,mb4.0,baz=340,slow=7.8,SNR=9.7						
WB2	**Warramunga Arr**	**59.00**	**148**	*e*P	**P**	**16 24 33.9**	**-0.4**
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**16 24 55.0**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.8,baz=335,slow=6.9,SNR=8.3						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**16 25 10.8**	**+2.4**
	comp=E,0.8nm,0.7s,mb3.8,baz=70,slow=6.3,SNR=3.5						
STKA	**Stephens Creek**	**72.54**	**148**	P	**P**	**16 26 01.0**	**-0.3**
	comp=E,0.4nm,0.4s,mb3.7,baz=39,slow=6.5,SNR=2.8						
STKA	**Stephens Creek**	**72.54**	**148**	P	**P**	**16 26 01.0**	**-0.4**
YKA	**Yellowknife Ar**	**80.27**	**18**	P	**P**	**16 26 45.2**	**+0.3**
	comp=E,0.8nm,0.5s,mb3.9,baz=327,slow=5.2,SNR=10						
YKA	**Yellowknife Ar**	**80.27**	**18**	P	**P**	**16 26 45.2**	**+0.3**

IDC ***12*** *16:18:31.5±1.0, 31°.98N×104°.78E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, Error ellipse: s-maj=69.8km s-min=19.1km az=57.0*
NEIC ***12*** *16:18:33.2±0.7, 32°.25N×105°.16E, h10km, mb4.2/1, Error ellipse: s-maj=27.3km s-min=12.5km az=71.0*
ISC 12 16:18:31.5±1.7, 31°.97N±0°.05×104°.6E±0°.1, h0km±12km**, n13,** σ0º**87**/15**, mb3.5**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.26**	**213**	Pg	**Pg**	**16 19 05.2**	**+10**
CD2				Sg	**Sg**	**16 19 12.0**	**0.0**
CD2				smax			
	comp=N,2μm,0.5s						
LZH	**Lanzhou**	**4.15**	**352**	Pg	**Pg**	**16 19 50.7**	**-0.3**
LZH				Sg	**Sg**	**16 20 39.6**	**-5.2**
LZH				smax			
	comp=N,170nm,0.7s						
LZH				smax			
	comp=E,250nm,1.0s						
ENH	**Enshi**	**4.55**	**111**	Pn	**Pn**	**16 19 42.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**14.38**	**202**	Pn	**Pn**	**16 22 03.8**	**+7.5**
	comp=E,0.1nm,0.3s,baz=11,slow=9.3,SNR=4.8						
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**16 23 36.1**	**+2.7**
	comp=E,0.6nm,0.7s,mb3.2,baz=122,slow=14,SNR=3.4						
ZAA0	**Zalesovo Array**	**26.12**	**333**	*e*P	**P**	**16 24 05.7**	**-1.2**
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**16 24 06.8**	**-0.1**
	comp=E,1.3nm,0.6s,mb3.8,baz=126,slow=9.1,SNR=6.5						
KURK	**Kurchatov**	**26.80**	**322**	P	**P**	**16 24 13.3**	**+0.3**
	comp=E,0.3nm,0.5s,mb3.2,baz=121,slow=10,SNR=3.0						
WRAB	**Tennant Creek**	**58.98**	**147**	P	**P**	**16 28 32.4**	**-0.4**
	comp=E,1.5nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**16 28 32.9**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.6,baz=340,slow=7.8,SNR=5.8						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**16 28 52.6**	**-1.0**
	comp=E,0.2nm,0.6s,mb3.5,baz=329,slow=6.5,SNR=4.2						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**16 28 52.6**	**-1.0**
YKA	**Yellowknife Ar**	**80.75**	**17**	P	**P**	**16 30 46.5**	**+0.2**
	comp=E,0.1nm,0.4s,mb3.2,baz=328,slow=5.2,SNR=3.8						

ISCJB ***12*** *16:18:51.5±1.0, 31°.9N±0°.1×104°.9E±0°.3, h10km, mb3.7/5, Error ellipse: s-maj=33.6km s-min=16.3km az=154.6*
IDC ***12*** *16:18:52.1±1.4, 31°.99N×104°.84E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/26, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=75.2km s-min=22.1km az=56.0*
NEIC ***12*** *16:18:53.5±0.8, 31°.96N×104°.78E, h10km, mb4.2/1, Error ellipse: s-maj=26.4km s-min=12.9km az=65.0*
ISC 12 16:18:53.6±1.0, 32°.0N±0°.1×104°.8E±0°.2, h10km**, n6,** σ0º**78**/6**, mb3.7**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.43**	**203**	Pn	**Pn**	**16 22 18.0**	**0.0**
	0.3nm,0.3s,baz=9.5,slow=9.5,SNR=9.2						
MKAR	**Makanchi Array**	**22.73**	**317**	P	**P**	**16 23 54.9**	**-0.7**
	1.0nm,0.8s,mb3.3,baz=124,slow=12,SNR=5.1						
KURK	**Kurchatov**	**26.92**	**322**	P	**P**	**16 24 35.5**	**+0.7**
	1.0nm,0.8s,mb3.4,baz=129,slow=9.3,SNR=5.2						
WRAB	**Tennant Creek**	**58.86**	**147**	*e*P	**P**	**16 28 52.1**	**-0.5**
	1.5nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**58.87**	**147**	P	**P**	**16 28 52.3**	**-0.3**
	0.5nm,0.6s,mb3.8,baz=338,slow=7.9,SNR=5.5						
ASAR	**Alice Springs**	**61.92**	**150**	P	**P**	**16 29 14.2**	**+0.7**
	0.3nm,0.5s,mb3.6,baz=338,slow=6.7,SNR=5.1						

BJI ***12*** *16:24:16.0, 31°.76N×104°.50E, h10km, ML3.7/4, Ms4.1/1, Ms7 3.7/1*
ISCJB ***12*** *16:24:18.3±0.5, 31°.72N±0°.05×104°.33E±0°.10, h10km, mb3.4/7, Error ellipse: s-maj=12.2km s-min=6.4km az=175.3*
IDC ***12*** *16:24:18.3±1.1, 31°.58N×104°.21E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, Error ellipse: s-maj=44.9km s-min=19.9km az=54.0*
NEIC ***12*** *16:24:20.4±0.6, 31°.75N×104°.36E, h10km, mb3.4/1, Error ellipse: s-maj=18.9km s-min=10.0km az=54.0*
ISC 12 16:24:20.4±0.5, 31°.74N±0°.04×104°.30E±0°.10, h10km**, n17,** σ0º**99**/20**, mb3.4**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**4.36**	**355**	*e*Pg	**Pn**	**16 25 25.0**	**-1.7**
LZH				Sg	**Sn**	**16 26 11.1**	**-6.4**
LZH				smax			
	comp=N,54nm,1.0s						
LZH				smax			
	comp=E,50nm,0.8s						
LZH	**Lanzhou**	**4.36**	**355**	*e*Pg	**Pg**	**16 25 44.0**	**+0.1**
LZH				Sg	**Sg**	**16 26 34.3**	**-6.0**
LZH				smax			
	comp=N,30nm,0.5s						
LZH				smax			
	comp=E,40nm,0.6s						
ENH	**Enshi**	**4.68**	**107**	Pn	**Pn**	**16 25 32.5**	**+1.3**
KMI	**Kunming**	**6.73**	**192**	Pn	**Pn**	**16 25 59.5**	**+0.2**
KMI				Sn	**Sn**	**16 27 15.6**	**-0.5**
KMI				smax			
	comp=N,29nm,1.1s						
KMI				smax			
	comp=E,46nm,1.3s						
KMI				LR	LR		
	comp=N,400nm,8.6s						
KMI				LR	LR		
	comp=E,1μm,9.2s						
KMI				LR	LR		
	comp=Z,540nm,9.3s						
CMAR	**Chiang Mai Arr**	**14.08**	**201**	Pn	**Pn**	**16 27 42.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=8.3,slow=10.0,SNR=11						
SONM	**Songino Array**	**16.16**	**5**	Pn	**Pn**	**16 28 11.9**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=187,slow=15,SNR=2.6						
KSRS	**Korea Array**	**20.24**	**67**	P	**P**	**16 28 56.8**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=249,slow=11,SNR=4.1						
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**	**16 29 21.4**	**+0.2**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**16 29 21.6**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.2,baz=115,slow=11,SNR=6.7						
ZAA0	**Zalesovo Array**	**26.23**	**334**	*e*P	**P**	**16 29 55.8**	**+0.4**
ZALV	**Zalesovo Beam**	**26.23**	**334**	P	**P**	**16 29 55.6**	**+0.2**
	comp=Z,0.5nm,0.4s,mb3.4,baz=134,slow=8.5,SNR=5.2						
KURK	**Kurchatov**	**26.85**	**322**	P	**P**	**16 30 01.3**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.2,baz=131,slow=8.8,SNR=3.7						
ABKAR	**Akbulak array**	**37.38**	**311**	*e*P	**P**	**16 31 33.1**	**-0.1**
	comp=Z,0.2nm,0.2s,mb3.6						
WRA	**Warramunga Arr**	**58.91**	**147**	P	**P**	**16 34 19.6**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=339,slow=7.9,SNR=6.1						
WB2	**Warramunga Arr**	**58.91**	**147**	*e*P	**P**	**16 34 17.9**	**-2.0**
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**16 34 38.6**	**-1.9**
	comp=Z,0.4nm,0.9s,mb3.5,baz=330,slow=7.0,SNR=4.7						
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**16 36 35.1**	**-0.1**
	comp=Z,0.1nm,0.4s,mb3.1,baz=329,slow=5.7,SNR=3.2						

IDC ***12*** *16:24:39.7±1.0, 31°.08N×103°.66E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, Error ellipse: s-maj=43.2km s-min=18.6km az=48.0*
NEIC ***12*** *16:24:40.9±0.6, 31°.13N×103°.68E, h10km, mb4.1/1, Error ellipse: s-maj=24.0km s-min=10.3km az=47.0*
BJI ***12*** *16:24:40.4, 31°.03N×103°.59E, h17km, ML3.6/6, Ms3.8/3, Ms7 3.7/2*
ISCJB ***12*** *16:24:41.7±0.8, 31°.1N±0°.1×103°.6E±0°.1, h31km±6km, mb3.6/8, Error ellipse: s-maj=23.4km s-min=12.6km az=39.1*
ISC 12 16:24:42.3±1.3, 31°.2N±0°.1×103°.7E±0°.1, h19km±9km**, n14,** σ0º**88**/16**, mb3.7**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.25**	**162**	Pg	**Pg**	**16 24 46.2**	**-1.9**
CD2				Sg	**Sg**	**16 24 53.0**	**+1.0**
CD2				smax			
	comp=N,22μm,0.7s						
CD2	**Chengdu**	**0.25**	**162**	Pg	**Pg**	**16 24 47.2**	**-0.9**
CD2				Sg	**Sg**	**16 24 53.0**	**+1.0**
CD2				smax			
	comp=N,22μm,0.7s						
LSA	**Lhasa**	**10.90**	**266**	P	**Pn**	**16 27 17.5**	**+0.1**
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**16 29 24.8**	**+0.4**
	comp=N,1.2nm,0.6s,baz=261,slow=10.0,SNR=5.0						
MK31	**Makanchi Array**	**22.70**	**320**	*e*P	**P**	**16 29 42.1**	**-0.7**
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**16 29 41.8**	**-1.0**
	comp=N,0.6nm,0.8s,mb3.1,baz=121,slow=12,SNR=3.9						
AAK	**Ala-Archa**	**25.87**	**304**	P	**P**	**16 30 13.8**	**+1.0**
	comp=N,0.9nm,0.4s,mb3.6,baz=146,slow=7.3,SNR=4.7						
AAK	**Ala-Archa**	**25.87**	**304**	*e*P	**P**	**16 30 13.3**	**+0.5**
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**16 30 18.3**	**-0.3**
	comp=N,0.7nm,0.4s,mb3.5,baz=139,slow=9.6,SNR=2.9						
KURK	**Kurchatov**	**26.99**	**324**	P	**P**	**16 30 25.1**	**+2.3**
	comp=N,1.2nm,0.7s,mb3.5,baz=126,slow=9.7,SNR=5.7						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**16 34 39.0**	**0.0**
	comp=N,0.9nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**16 34 39.0**	**+0.1**
	comp=N,1.3nm,0.6s,mb4.1,baz=337,slow=7.6,SNR=7.9						
WB2	**Warramunga Arr**	**58.72**	**146**	*e*P	**P**	**16 34 38.5**	**-0.6**
ASAR	**Alice Springs**	**61.72**	**148**	P	**P**	**16 34 59.2**	**-0.3**
	comp=N,0.4nm,0.7s,mb3.7,baz=335,slow=6.5,SNR=5.2						

IDC ***12*** *16:26:29.9±0.8, 32°.41N×105°.43E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, MS4.2/1, Ms1 4.2/1, ms1mx2.6/35, Error ellipse: s-maj=69.9km s-min=16.0km az=57.0*
NEIC ***12*** *16:26:31.5±0.5, 32°.54N×105°.63E, h10km, mb4.4/1, Error ellipse: s-maj=21.0km s-min=9.1km az=65.0*
ISC 12 16:26:31.7±2.1, 32°.48N±0°.04×105°.5E±0°.1, h10km±13km**, n16,** σ0º**77**/18**, mb3.7**/10**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.16**	**224**	Pg	**Sn**	**16 27 26.5**	**-8.1**
CD2				Sg	**Sg**	**16 27 40.7**	**-0.5**
CD2				smax			
	comp=N,6μm,0.8s						
LZH	**Lanzhou**	**3.85

ABKAR	Akbulak array	37.40	311	*e*P	P	16 34 29.7	-0.3
WRAB	Tennant Creek	58.84	146	*e*P	P	16 37 15.4	-0.5
WRA	Warramunga Arr	58.84	146	P	P	16 37 15.7	-0.2
	comp=Z,1.6nm,0.8s,mb4.1,baz=336,slow=7.4,SNR=5.5						
WB2	Warramunga Arr	58.85	146	*e*P	P	16 37 15.8	-0.2
ASAR	Alice Springs	61.87	149	P	P	16 37 38.0	+1.4
	comp=Z,0.6nm,0.8s,mb3.8,baz=312,slow=6.1,SNR=4.9						
NOA	NORSAR Array B	64.29	327	P	P	16 37 50.9	-1.3
	comp=Z,0.6nm,0.6s,mb3.8,baz=106,slow=3.5,SNR=3.3						
NOA	NORSAR Array B	64.29	327	P	P	16 37 50.9	-1.3
GERES	GERESS Array B	67.26	314	P	P	16 38 10.0	-1.6
	comp=Z,0.2nm,0.5s,mb3.4,baz=30,slow=11,SNR=3.5						
KMBO	Kilima Mbogo	71.09	256	P	P	16 38 35.0	-0.9
	comp=Z,2.0nm,0.8s,mb4.1,baz=52,slow=12,SNR=6.1						
INK	Inuvik	71.67	19	P	P	16 38 37.7	-0.8
	comp=Z,4.2nm,0.8s,mb4.4,baz=339,slow=7.6,SNR=13						
INK	Inuvik	71.67	19	P	P	16 38 37.7	-0.9
YKA	Yellowknife Ar	81.21	17	P	P	16 39 32.2	-0.5
	comp=Z,1.1nm,0.6s,mb4.0,baz=328,slow=5.0,SNR=16						
YKA	Yellowknife Ar	81.21	17	P	P	16 39 32.2	-0.5

*BJI **12** 16:28:21.4, 31.°18N×104.°45E, h17km, mB4.6/2, mb4.3/2, ML4.4/4, Ms4.6/3, Ms7 4.5/3*
*IDC **12** 16:28:23.4±1.1, 31.°08N×103.°85E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/25, mbtmp3.8/7, MS3.9/8, Ms1 3.9/8, ms1mx3.3/36, Error ellipse: s-maj=42.1km s-min=18.7km az=55.0*
*NEIC **12** 16:28:24.6±0.7, 31.°49N×104.°45E, h10km, mb4.2/2, Error ellipse: s-maj=24.5km s-min=10.0km az=64.0*
*ISCJB **12** 16:28:26.2±0.8, 31.°04N±0.°09×103.°87E±0.°09, h36km±8km, mb3.8/6, Error ellipse: s-maj=15.3km s-min=12.1km az=15.2*
ISC 12 16:28:27.1±0.9**, 31.°10N**±0.°09×**103.°90E**±0.°08**, h25**km±8km**, n15**, σ0**.968/16, mb3.8/6, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.22	212	Pg	Pb	16 28 31.8	-1.2
CD2				Sg	Sb	16 28 37.9	+0.9
CD2				smax			
	comp=N,12μm,0.5s						
LSA	Lhasa	11.10	266	S	Sn	16 33 07.2	-0.2
LSA				LR	LR		
	comp=E,900nm,7.8s						
LSA				LR	LR		
	comp=Z,1μm,9.5s						
CMAR	Chiang Mai Arr	13.36	201	Pn	Pn	16 31 42.5	+7.2
	comp=Z,0.2nm,0.3s,baz=8.1,slow=8.7,SNR=6.5						
SONM	Songino Array	16.82	6	Pn	Pn	16 32 22.5	+1.7
	comp=Z,0.1nm,0.3s,baz=189,slow=13,SNR=3.6						
KSRS	Korea Array	20.81	66	P	P	16 33 06.1	-0.5
	comp=Z,2.1nm,0.6s,baz=261,slow=9.9,SNR=6.0						
CN2	Changchun	21.22	47	*e*P	P	16 33 10.3	-0.7
MK31	Makanchi Array	22.87	319	P	P	16 33 28.2	-0.3
MKAR	Makanchi Array	22.87	319	P	P	16 33 28.0	-0.4
	comp=Z,1.4nm,0.8s,mb3.4,baz=124,slow=12,SNR=2.6						
UCH	Uchtor	25.93	304	*e*P	P	16 33 57.8	+0.5
ZALV	Zalesovo Beam	26.65	334	P	P	16 34 03.4	-0.2
	comp=Z,1.6nm,0.8s,mb3.6,baz=127,slow=9.3,SNR=2.6						
KURK	Kurchatov	27.14	323	P	P	16 34 08.1	0.0
	comp=Z,0.5nm,0.3s,mb3.5,baz=128,slow=10,SNR=3.0						
KURK	Kurchatov	27.14	323	P	P	16 34 08.1	-0.1
	comp=Z,3.5nm,1.2s,mb3.8						
WRAB	Tennant Creek	58.57	146	*e*P	P	16 38 21.7	-0.1
	comp=Z,1.9nm,0.5s,mb4.4						
WRA	Warramunga Arr	58.57	146	P	P	16 38 22.1	+0.3
	comp=Z,0.8nm,0.4s,mb4.1,baz=328,slow=9.0,SNR=5.1						
ASAR	Alice Springs	61.58	149	P	P	16 38 42.8	+0.4
	comp=Z,0.3nm,0.5s,mb3.7,baz=335,slow=6.4,SNR=3.3						

*IDC **12** 16:28:50.6±0.5, 31.°14N×103.°71E, h0km, mb4.3/22, mb1 4.4/23, mb1mx4.3/29, mbtmp4.3/23, ML3.6/1, MS3.9/11, Ms1 3.9/11, ms1mx3.6/34, Error ellipse: s-maj=19.8km s-min=10.8km az=55.0*
*ISCJB **12** 16:28:53.0±0.6, 31.°15N±0.°03×103.°76E±0.°05, h28km±5km, mb4.5/52, MS4.0/2, Error ellipse: s-maj=6.8km s-min=4.9km az=171.1*
*NEIC **12** 16:28:52.0±0.2, 31.°13N×103.°76E, h10km, mb4.6/25, Error ellipse: s-maj=7.0km s-min=5.1km az=50.0*
*BJI **12** 16:28:52.9, 31.°26N×103.°76E, h16km, mB4.9/11, mb4.6/18, ML4.4/9, Ms4.5/16, Ms7 4.4/13*
*MOS **12** 16:28:53.4±0.8, 31.°13N×103.°78E, h33km, mb4.7/25, Error ellipse: s-maj=12.0km s-min=6.2km az=106.2*
*SZGRF **12** 16:28:59.8, 31.°15N×102.°95E, h33km, mb4.7, Sichuan, China*
*DJA **12** 16:29:01, 31.°13N×103.°75E, h55km, mb4.6/10*
ISC 12 16:28:53.8±0.7**, 31.°15N**±0.°03×**103.°71E**±0.°05**, h18**km±4km**, n117**, σ1**.902/123, mb4.5/52, MS4.0/2, 17C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.24	170	Pg	Pg	16 28 58.4	-1.0
CD2				Sg	Sg	16 29 03.7	+0.5
CD2				smax			
	comp=N,208μm,0.7s						
LZH	Lanzhou	4.93	1	*e*Pg	Pg	16 30 27.1	-1.0
LZH				Sg	Sg	16 31 35.3	+3.4
LZH				smax			
	comp=N,1μm,1.3s						
LZH				smax			
	comp=E,680nm,1.1s						
LZH				LR	LR		
	comp=E,7μm,8.7s						
LZH				LR	LR		
	comp=Z,8μm,9.5s						
KMI	Kunming	6.06	188	Pn	Pn	16 30 24.8	+2.3
KMI				Sn	Sn	16 31 33.3	+1.9
KMI				smax			
	comp=N,230nm,1.2s						
KMI				smax			
	comp=E,190nm,1.2s						
KMI				LR	LR		
	comp=N,3μm,7.5s						
KMI				LR	LR		
	comp=E,4μm,6.7s						
KMI				LR	LR		
	comp=Z,2μm,5.4s						
LSA	Lhasa	10.94	266	P	Pn	16 31 27.4	-1.9
HHC	Hu-ho-hao-te	11.58	31	*e*P	Pn	16 31 39.5	+1.5
HHC				pP		16 31 46.6	
HHC				PP		16 31 51.4	
HHC				S	Sn	16 33 48.3	+1.5
HHC				sS		16 33 59.0	
HHC				SS		16 34 03.0	
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,400nm,4.8s						
HHC				LR	LR		
	comp=N,540nm,5.1s						
HHC				LR	LR		
	comp=E,900nm,5.9s						
HHC				LR	LR		
	comp=Z,860nm,6.2s						
NJ2	Nanjing	12.95	82	*e*P	Pn	16 31 59.9	+3.1
NJ2				pP		16 32 07.6	
NJ2				sP		16 32 10.2	
NJ2				PP		16 32 11.7	
NJ2				S	Sn	16 34 24.0	+3.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,60nm,3.8s						
NJ2				LR	LR		
	comp=N,910nm,8.0s						
NJ2				LR	LR		
	comp=E,820nm,11.1s						
NJ2				LR	LR		
	comp=Z,2μm,12.9s						
CHTO	Chiang Mai	13.02	200	*e*P	Pn	16 32 01.5	+3.7
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	Chiang Mai	13.02	200	*e*Pn	Pn	16 32 01.5	+3.7
	comp=Z,8.6nm,0.9s						
QIZ	Qiongzhong	13.28	154	P	Pn	16 32 00.6	-0.8
QIZ				S	Sn	16 34 27.9	-0.7
QIZ				LR	LR		
	comp=N,1μm,9.6s						
QIZ				LR	LR		
	comp=Z,1μm,10.7s						
CM31	Chiang Mai Arr	13.35	200	*e*P	Pn	16 32 12.1	+10
CMAR	Chiang Mai Arr	13.35	200	Pn	Pn	16 32 07.2	+4.9
	comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=4.9						
CMAR				LR	LR	16 37 47.5	
	comp=Z,277nm,18.6s,baz=355,slow=40						
SONM	Songino Array	16.79	6	Pn	Pn	16 32 48.5	+0.8
	comp=Z,0.2nm,0.3s,baz=191,slow=9.2,SNR=14						
SONM				LR	LR	16 39 54.2	
	comp=Z,304nm,20.9s,baz=30,slow=40						
ULN	Ulaanbaatar	16.89	8	*e*P	Pn	16 32 52.4	+3.4
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	16.89	8	*e*P	Pn	16 32 52.4	+3.4
	comp=Z,6.6nm,0.9s						
SSLB	Suanglung	16.96	111	*e*P	Pn	16 32 53.4	+3.3
	comp=Z,152nm,1.5s						
WMQ	Urumqi	17.89	319	*e*P	Pn	16 33 02.1	+0.6
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,5.0s						
WMQ				LR	LR		
	comp=N,760nm,8.0s						
WMQ				LR	LR		
	comp=E,420nm,10.0s						
WMQ				LR	LR		
	comp=Z,390nm,16.0s						
ZAK	Zakamensk	19.22	359	*e*P	Pn	16 33 16.3	-1.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY	Talaya	20.52	360	*e*P	P	16 33 32.9	+2.2
TLY				*e*		16 33 46.8	
TLY				*e*PPP		16 33 55.3	
TLY				*e*S	S	16 37 22.8	+3.4
TLY				pmax	pmax		
	comp=Z,19nm,1.7s						
TLY				MLR	MLR		
	comp=Z,343nm,19.0s,MS3.7						
TLY	Talaya	20.52	360	P	P	16 33 31.6	+0.9
MOY	Mondy	20.60	355	*e*P	P	16 33 33.4	+1.8
MOY				pmax	pmax		
	comp=Z,65nm,2.0s						
KSRS	Korea Array	20.94	66	P	P	16 33 34.4	-1.1
	comp=Z,12nm,0.7s,baz=263,slow=10,SNR=21						
KSRS	Korea Array	20.94	66	P	P	16 33 34.4	-1.1
KSRS				pmax	pmax		
	comp=Z,12nm,0.7s						
IRK	Irkutsk	21.08	1	*e*P	P	16 33 38.0	+1.2
IRK				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.0						
CN2	Changchun	21.31	48	*e*P	P	16 33 39.4	0.0
CN2				pmax	pmax		
	comp=Z,50nm,0.9s,mb4.8						
HIA	Hailar	21.77	29	*e*P	P	16 33 44.3	0.0
HIA				pmax	pmax		
	comp=Z,20nm,0.8s						
HIA	Hailar	21.77	29	*e*P	P	16 33 44.3	0.0
	comp=Z,20nm,0.8s,mb4.6						
DDI	Dehra Dun	22.05	275	*e*x	x	16 33 51.0	
CIT	Chita	22.08	16	*e*P	P	16 33 48.1	+0.6
CIT				*e*		16 34 06.0	
CIT				*e*		16 34 20.7	
CIT				pmax	pmax		
	comp=Z,89nm,1.4s,mb5.0						
MK31	Makanchi Array	22.72	319	*e*P	P	16 33 55.0	+0.5
MKAR	Makanchi Array	22.72	319	P	P	16 33 55.1	+0.7
	comp=Z,8.0nm,0.9s,mb4.1,baz=127,slow=9.8,SNR=11						
MDJ	Mudanjiang	24.33	49	*e*P	P	16 34 10.1	-0.2
	comp=Z,60nm,1.5s,mb4.8						
TKM2	Tokmak 2	25.21	306	*e*P	P	16 34 19.6	+1.3
TKM2				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.4						
TKM2	Tokmak 2	25.21	306	*e*P	P	16 34 19.6	+1.3
	comp=Z,18nm,1.4s,mb4.4						
UCH	Uchtor	25.77	304	*e*P	P	16 34 24.9	+1.6
	comp=Z,12nm,1.1s,mb4.3						
AAK	Ala-Archa	25.90	304	P	P	16 34 26.0	+1.5
	comp=Z,3.6nm,0.8s,mb3.9,baz=104,slow=4.9,SNR=9.4						
AAK	Ala-Archa	25.90	304	*e*P	P	16 34 24.9	+0.4
EKS2	Erkin-Say	26.41	304	*e*P	P	16 34 29.5	+0.3
	comp=Z,3.8nm,0.9s,mb3.9						
ZAA0	Zalesovo Array	26.54	335	*e*P	P	16 34 29.7	-0.4
ZALV	Zalesovo Beam	26.54	335	P	P	16 34 30.2	+0.1
	comp=Z,9.9nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=17						
KURK	Kurchatov	27.01	324	P	P	16 34 34.6	+0.1
	comp=Z,11nm,1.0s,mb4.3,baz=129,slow=9.0,SNR=17						
KURK				PcP	PcP	16 37 53.9	-1.7
	comp=Z,1.3nm,0.8s,baz=85,slow=2.1,SNR=4.2						
KURK	Kurchatov	27.01	324	*e*P	P	16 34 34.3	-0.1
KURK				PcP	PcP	16 37 53.9	-1.7
BOD	Bodaibo	27.60	12	*e*P	P	16 34 38.2	-1.4
NVS	Novosibirsk	27.81	334	*e*P	P	16 34 34.2	-7.4
BVAR	Borovoye Array	32.55	322	P	P	16 35 22.9	-0.6
	comp=Z,1.3nm,0.9s,mb3.9,baz=134,slow=8.4,SNR=5.9						
BVAR				PcP	PcP	16 38 09.1	-0.6
	comp=Z,2.2nm,0.9s,baz=114,slow=3.6,SNR=8.1						
BRVK	Borovoye	32.62	322	P	P	16 35 24.2	+0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
BRVK	Borovoye	32.62	322	P	P	16 35 24.1	0.0
	comp=Z,9.0nm,1.3s,mb4.5						
YAK	Yakutsk	35.19	21	*e*P	P	16 35 44.6	-1.7
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
ABKAR	Akbulak array	37.39	312	*e*P	P	16 36 05.5	+0.2
	comp=Z,0.9nm,0.6s,mb3.8						
KAPI	Kappang	39.09	154	P	P	16 36 19.6	-0.3
	comp=Z,4.2nm,0.7s,mb4.3,baz=313,slow=12,SNR=3.5						
ARU	Arti	40.19	322	*c iP*	P	16 36 28.5	-0.2
ARU				S	S	16 42 34.5	+0.1
ARU				SS	SS	16 45 26.4	-6.0
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.4						
TIXI	Tiksi	42.78	11	*e*P	P	16 36 48.1	-1.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.3						
TIXI	Tiksi	42.78	11	*e*P	P	16 36 48.1	-1.6
	comp=Z,25nm,1.8s,mb4.7						
SEY	Seymchan	44.22	30	*e*P	P	16 37 00.6	-0.8
PETK	Petropavlovsk-	44.40	44	P	P	16 37 02.7	-0.3
	comp=Z,1.7nm,0.8s,mb3.8,baz=165,slow=34,SNR=3.1						
ZEI	Tsey	48.26	301	*e*P	P	16 37 31.8	-1.7
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KIV	Kislovodsk	49.00	303	*e*P	P	16 37 39.7	+0.5
KIV				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KIV	Kislovodsk	49.00	303	*e*P	P	16 37 39.7	+0.5
	comp=Z,16nm,0.9s,mb5.0						
KLMR	Klimovskoe	50.84	325	*e*P	P	16 37 51.7	-1.2
KLMR				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
BILL	Bilibino	51.28	25	⇑*e*P	P	16 37 55.3	-0.8
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BILL	Bilibino	51.28	25	*e*P	P	16 37 54.9	-1.2
	comp=Z,3.5nm,0.8s,mb4.3						
OBN	Obninsk	52.22	318	*e*P	P	16 38 03.5	+0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KNA	Kununurra	52.48	149	*e*P	P	16 38 05.4	-0.2
	comp=Z,18nm,0.8s,mb5.0						
FITZ	Fitzroy Crossi	53.31	154	*e*P	P	16 38 12.8	+1.1
	comp=Z,8.4nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	53.31	154	P	P	16 38 11.5	-0.3
	comp=Z,5.3nm,0.8s,mb4.5,baz=351,slow=5.2,SNR=10.0						
BR131	Keskin Array S	56.42	300	*e*P	P	16 38 34.2	0.0
	comp=Z,3.8nm,1.0s,mb4.4						
BRTR	Keskin Array B	56.42	300	P	P	16 38 34.0	-0.1
	comp=Z,2.5nm,0.9s,mb4.2,baz=97,slow=6.3,SNR=12						
ARCES	ARCESS Array B	57.08	336	P	P	16 38 37.6	-0.8
	comp=Z,2.2nm,0.8s,mb4.2,baz=7.8,slow=9.8,SNR=4.7						
AKASG	Malin Array Be	57.11	313	P	P	16 38 38.2	-0.6
	comp=Z,0.8nm,0.5s,mb4.0,baz=77,slow=5.4,SNR=8.1						
AKASG				LR	LR	17 04 25.4	
	comp=Z,183nm,18.1s,MS4.2,baz=130,slow=37						
FINES	FINESS Array B	57.34	326	P	P	16 38 42.0	+1.7
	comp=Z,2.6nm,0.9s,mb4.3,baz=100,slow=7.9,SNR=3.9						
WRA	Warramunga Arr	58.70	146	P	P	16 38 50.2	-0.1
	comp=Z,30nm,0.8s,mb5.4,baz=337,slow=7.5,SNR=58						
WB2	Warramunga Arr	58.71	146	*e*P	P	16 38 50.2	-0.2
SPITS	Spitsbergen Ar	59.21	346	P	P	16 38 53.2	0.0
	comp=Z,3.8nm,0.8s,mb4.5,baz=80,slow=9.5,SNR=3.9						
ASAR	Alice Springs	61.71	148	P	P	16 39 11.2	+0.3
	comp=Z,6.9nm,0.8s,mb4.8,baz=330,slow=6.2,SNR=30						
ASAR				PcP	PcP	16 39 52.4	+0.3
	comp=Z,1.7nm,0.7s,baz=334,slow=5.0,SNR=4.6						
NIE	Niedzica	62.99	313	*e*P	P	16 39 20.3	+1.1
VYHS	Vyhne	64.20	313	*e*P	P	16 39 27.4	+0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
VYHS	Vyhne	64.20	313	*e*P	P	16 39 27.4	+0.2
	comp=Z,3.0nm,1.1s,mb4.2						
VYHS	Vyhne	64.20	313	*e*P	P	16 39 27.4	+0.2
NB2	NORSAR Subarra	64.44	327	P	P	16 39 26.8	-1.8
	comp=Z,0.8nm,0.6s,mb3.9,baz=74,slow=6.5						
NOA	NORSAR Array B	64.44	327	P	P	16 39 27.5	-1.1
	comp=Z,1.8nm,0.8s,mb4.2,baz=74,slow=6.5,SNR=4.1						
FORT	Forrest	65.78	157	*e*P	P	16 39 38.0	+0.4
	comp=Z,12nm,0.8s,mb5.0						
CLL	Collm	66.79	317	*e*P	P	16 39 44.0	0.0
CLL	Collm	66.79	317	*e*P	P	16 39 44.0	0.0
CLL				*e*PP	PP	16 42 14.0	+3.2
CLL				Lm		17 10 00.0	
	comp=N,100nm,18.0s						
CLL				Lm		17 10 00.0	
	comp=E,100nm,18.2s						
CLL				Lm		17 10 00.0	
	comp=Z,100nm,21.0s						
GERES	GERESS Array B	67.27	314	P	P	16 39 47.3	+0.3
	comp=Z,1.4nm,0.9s,mb4.0,baz=79,slow=6.9,SNR=9.3						
COLD	Coldfoot	67.57	24	*e*P	P	16 39 47.2	-1.4
	comp=Z,6.0nm,0.9s,mb4.6						
GRA1	Grafenberg Arr	68.45	316	*e*P	P	16 39 54.8	+0.3
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	68.45	316	*e*P	P	16 39 54.8	+0.3
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	68.45	316	*e*P	P	16 39 54.8	+0.3
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	68.45	316	*e*P	P	16 39 54.8	+0.3
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
COLA	College	69.54	26	*e*P	P	16 39 59.9	-1.0
COLA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
COLA	College	69.54	26	*e*P	P	16 39 59.9	-1.0
	comp=Z,9.2nm,0.8s,mb4.8						
KMBO	Kilima Mbogo	70.59	256	P	P	16 40 07.8	-0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=48,slow=22,SNR=3.2						
KMBO	Kilima Mbogo	70.59	256	P	P	16 40 07.8	-0.4
CDF	Champ du Feu	71.35	316	⇑*iP*	P	16 40 11.9	-0.4
	comp=Z,14nm,1.2s,mb4.5						
CDF	Champ du Feu	71.35	316	⇑*iP*	P	16 40 11.9	-0.4
CDF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
CDF	Champ du Feu	71.35	316	⇑*iP*	P	16 40 11.9	-0.4
	comp=Z,6.8nm,1.2s,mb4.5						
INK	Inuvik	72.23	19	P	P	16 40 16.9	-0.3
	comp=Z,4.3nm,0.8s,mb4.4,baz=320,slow=6.6,SNR=11						
STKA	Stephens Creek	72.23	147	*e*P	P	16 40 17.3	-0.3
	comp=Z,4.0nm,0.7s,mb4.5						
STKA	Stephens Creek	72.23	147	P	P	16 40 18.1	+0.4
	comp=Z,4.6nm,0.7s,mb4.5,baz=330,slow=6.1,SNR=16						
STKA	Stephens Creek	72.23	147	*e*P	P	16 40 17.1	-0.5
	comp=Z,1.2nm,0.8s,mb3.9						
LPG	La Plagne	72.97	313	⇑*iP*	P	16 40 22.5	+0.4
	comp=Z,18nm,0.9s,mb4.7						
LPG	La Plagne	72.97	313	⇑*iP*	P	16 40 22.5	+0.4
LPG				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
LPG	La Plagne	72.97	313	⇑*iP*	P	16 40 22.5	+0.4
	comp=Z,8.9nm,0.9s,mb4.7						
CMSA	Cobar Meteorol	73.96	144	*e*P	P	16 40 28.1	+0.2
SMF	Signal de Mont	74.23	315	⇑*iP*	P	16 40 28.8	-0.6
	comp=Z,19nm,1.1s,mb4.7						
SMF	Signal de Mont	74.23	315	⇑*iP*	P	16 40 28.8	-0.6
SMF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
SMF	Signal de Mont	74.23	315	⇑*iP*	P	16 40 28.8	-0.6
	comp=Z,9.7nm,1.1s,mb4.7						
TCF	Toulx Ste Croi	75.39	315	⇑*iP*	P	16 40 35.8	-0.3
	comp=Z,9.4nm,1.0s,mb4.4						
TCF	Toulx Ste Croi	75.39	315	⇑*iP*	P	16 40 35.8	-0.3
TCF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TCF	Toulx Ste Croi	75.39	315	⇑*iP*	P	16 40 35.8	-0.3
	comp=Z,4.7nm,1.0s,mb4.4						
CAF	Calviac	76.15	314	⇑*iP*	P	16 40 40.7	+0.2
	comp=Z,5.6nm,0.9s,mb4.2						
CAF	Calviac	76.15	314	⇑*iP*	P	16 40 40.7	+0.2
CAF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CAF	Calviac	76.15	314	⇑*iP*	P	16 40 40.7	+0.2
	comp=Z,2.8nm,0.9s,mb4.2						
SKAG	Skagway	77.45	27	P	P	16 40 46.9	-0.7
	comp=Z,25nm,0.5s,mb5.4						
YKA	Yellowknife Ar	81.75	17	P	P	16 41 10.2	-0.6
	comp=Z,1.6nm,0.8s,mb4.0,baz=328,slow=4.9,SNR=14						
YKA	Yellowknife Ar	81.75	17	P	P	16 41 10.2	-0.7
TORD	Torodi Ar. Bea	93.30	287	P	P	16 42 06.3	-1.5
	comp=Z,2.7nm,1.2s,mb4.6,baz=74,slow=3.4,SNR=6.5						
QSPA	South Pole Qui	120.92	180	PKP	PKPdf	16 47 43.1	-0.6
	comp=Z,1.7nm,0.8s,baz=289,slow=2.3,SNR=9.6						

*ISCJB **12** 16:32:24.9±0.8, 31.°1N±0.°1×104.°1E±0.°2, h10km, mb3.9/7, Error ellipse: s-maj=27.1km s-min=12.7km az=160.8*
*IDC **12** 16:32:25.2±1.2, 30.°98N×103.°66E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/24, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=42.6km s-min=20.6km az=63.0*
*NEIC **12** 16:32:27.5±0.7, 31.°28N×104.°34E, h10km, mb4.8/1, Error ellipse: s-maj=27.2km s-min=12.6km az=79.0*
*BJI **12** 16:32:27.7, 31.°48N×104.°16E, h10km, mb4.5/2, ML3.8/3*
ISC 12 16:32:26.8±0.8**, 31.°1N**±0.°1×**104.°0E**±0.°2**, h10**km**, n12, σ0**.951/12, mb3.9/7, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.95	358	*e*Pg	Pn	16 33 45.9	+4.7
LZH				smax			
	comp=N,61nm,0.6s						
LZH				smax			
	comp=E,120nm,0.7s						
CMAR	Chiang Mai Arr	13.43	201	Pn	P

LZH LR LR
comp=E,3μm,5.4s
LZH LR LR
comp=Z,4μm,7.3s
ENH Enshi 4.42 117 *e*Pg **Pg 16 35 33.1 -3.5**
GTA Gaotai 8.16 331 *e*P Px 16 36 29.0
GTA pP 16 36 33.5
GTA sP 16 36 36.2
GTA S **Sb 16 38 09.6 -0.9**
GTA sS 16 38 15.0
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,220nm,5.1s
GTA LR LR
comp=N,670nm,9.3s
GTA LR LR
comp=E,520nm,11.4s
GTA LR LR
comp=Z,760nm,10.2s
WHN Wuhan 8.26 100 P **Pn 16 36 06.0 -5.6**
WHN S **Sn 16 37 45.3 +0.4**
WHN LR LR
comp=N,3μm,7.0s
WHN LR LR
comp=E,550nm,2.5s
WHN LR LR
comp=Z,2μm,5.8s
HHC Hu-ho-hao-te 10.01 30 *e*P **Pn 16 36 38.5 +2.9**
HHC pP 16 36 45.6
HHC sP 16 36 50.5
HHC S **Sn 16 38 30.3 +2.3**
HHC sS 16 38 41.3
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,570nm,4.7s
HHC LR LR
comp=N,680nm,6.6s
HHC LR LR
comp=E,600nm,5.3s
HHC LR LR
comp=Z,570nm,6.5s
NJ2 Nanjing 11.81 88 *e*P **Pn 16 37 03.2 +3.0**
NJ2 pmax pmax
comp=Z,40nm,1.2s
BJI Beijing 11.88 47 P **Pn 16 37 02.4 +1.2**
BJI pmax pmax
comp=Z,14nm,1.3s
QIZ Qiongzhong 13.99 160 P **Pn 16 37 32.9 +2.8**
QIZ S **Sn 16 40 09.0 +3.5**
QIZ LR LR
comp=Z,400nm,7.1s
CMAR Chiang Mai Arr 14.85 203 Pn **Pn 16 37 43.0 +1.1**
comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=7.4
SONM Songino Array 15.50 4 Pn **Pn 16 37 50.7 +0.4**
comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=4.7
NACB Ninganchiao 16.79 115 *e*Pn **Pn 16 38 02.1 -4.9**
GUN Gumba 17.06 260 *e*P **Pn 16 38 10.7 +0.3**
comp=Z,66nm,1.1s
PKI Pulchoki 17.56 259 *e*P **Pn 16 38 17.7 +1.0**
comp=Z,30nm,0.7s
PKIN Phulchoki 17.57 259 *e*P **Pn 16 38 17.5 +0.1**
KKN Kakani 17.60 260 *e*P **Pn 16 38 16.7 -0.4**
comp=Z,41nm,0.9s
DMN Daman 17.80 260 *e*P **Pn 16 38 19.2 -0.5**
comp=Z,39nm,0.8s
KSRS Korea Array 19.52 69 P **Pn 16 38 39.0 -1.6**
comp=Z,0.1nm,0.3s,baz=87,slow=25,SNR=3.8
CN2 Changchun 19.73 49 *e*P **Pn 16 38 47.8 +4.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 22.52 316 *e*P **P 16 39 12.3 +0.7**
MKAR Makanchi Array 22.52 316 P **P 16 39 12.3 +0.7**
comp=Z,2.8nm,0.7s,mb3.8,baz=108,slow=9.3,SNR=11
ZAA0 Zalesovo Array 25.92 332 *e*P **P 16 39 43.6 -0.2**
ZALV Zalesovo Beam 25.92 332 P **P 16 39 44.2 +0.3**
comp=Z,2.9nm,0.8s,mb3.9,baz=126,slow=9.3,SNR=6.2
ZALV Zalesovo Beam 25.92 332 P **P 16 39 44.2 +0.3**
KURK Kurchatov 26.68 321 P **P 16 39 52.0 +1.2**
comp=Z,2.9nm,0.6s,mb4.0,baz=130,slow=7.9,SNR=9.9
KURK PcP PcP 16 43 13.5 -0.7
comp=Z,1.1nm,0.7s,baz=105,slow=2.1,SNR=4.1
KURK Kurchatov 26.68 321 *e*P **P 16 39 50.7 -0.2**
comp=Z,7.8nm,1.0s,mb4.2
KURK PcP PcP 16 43 13.5 -0.7
BVAR Borovoye Array 32.26 320 P **P 16 40 41.5 +1.2**
comp=Z,1.6nm,0.6s,mb4.0,baz=119,slow=11,SNR=6.7
BRVK Borovoye 32.33 320 *e*P **P 16 40 41.8 +0.9**
comp=Z,3.1nm,0.7s,mb4.2
ABKAR Akbulak array 37.38 310 *e*P **P 16 41 24.7 +0.1**
comp=Z,3.5nm,0.8s,mb4.2
AKTK Aktyubinsk 38.81 312 P **P 16 41 37.4 +0.8**
AKTO Aktyubinsk 38.81 312 P **P 16 41 37.4 +0.8**
comp=Z,3.2nm,0.6s,mb4.3,baz=111,slow=13,SNR=15
ARU Arti 39.88 321 *e*P **P 16 41 45.8 +0.4**
comp=Z,16nm,0.9s,mb4.8
FITZ Fitzroy Crossi 53.95 155 P **P 16 43 34.9 -0.9**
comp=Z,3.6nm,0.9s,mb4.3,baz=122,slow=4.4,SNR=4.0
JOF Joensuu 54.35 327 *e*p **P 16 43 36.0 -2.2**
comp=Z,5.4nm,0.7s,mb4.6
KEV Kevo 55.88 336 *e*p **P 16 43 48.3 -0.8**
comp=Z,6.2nm,0.7s,mb4.8
ARCES ARCESS Array B 56.41 335 P **P 16 43 53.1 +0.1**
comp=Z,3.2nm,0.7s,mb4.5,baz=60,slow=7.2,SNR=12
KAF Kangasniemi 56.73 327 *e*p **P 16 43 54.6 -0.7**
comp=Z,8.6nm,0.7s,mb4.9
BR131 Keskin Array S 56.74 299 *e*P **P 16 43 55.9 +0.2**
comp=Z,1.8nm,0.8s,mb4.2
BRTR Keskin Array B 56.74 299 P **P 16 43 56.0 +0.3**
comp=Z,2.4nm,0.8s,mb4.3,baz=95,slow=6.7,SNR=13
FINES FINESS Array B 56.92 326 P **P 16 43 56.6 -0.1**
comp=Z,7.2nm,0.7s,mb4.8,baz=82,slow=7.5,SNR=21
AKASG Malin Array Be 57.04 313 P **P 16 43 57.1 -0.6**
comp=Z,2.4nm,0.5s,mb4.5,baz=68,slow=6.7,SNR=7.3
SPITS Spitsbergen Ar 58.29 346 P **P 16 44 06.3 +0.2**
comp=Z,1.7nm,0.6s,mb4.2,baz=117,slow=14,SNR=3.2
WRAB Tennant Creek 59.13 147 *e*P **P 16 44 11.9 -0.8**
WRA Warramunga Arr 59.14 147 P **P 16 44 11.5 -1.2**
comp=Z,4.6nm,0.8s,mb4.6,baz=339,slow=7.5,SNR=12
WB2 Warramunga Arr 59.14 147 *e*P **P 16 44 11.6 -1.1**
ASAR Alice Springs 62.21 150 P **P 16 44 33.1 -0.5**
comp=Z,1.7nm,0.7s,mb4.3,baz=327,slow=6.1,SNR=12
NB2 NORSAR Subarra 63.98 327 P **P 16 44 44.0 -1.0**
comp=Z,5.4nm,0.6s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 63.98 327 P **P 16 44 44.1 -0.8**
comp=Z,5.2nm,0.7s,mb4.7,baz=71,slow=6.6,SNR=15
CLL Collm 66.62 317 *e*P **P 16 45 03.0 +0.8**
GERES GERESS Array B 67.17 314 P **P 16 45 06.3 +0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=75,slow=7.1,SNR=6.5
INK Inuvik 70.75 20 P **P 16 45 26.4 -1.3**
comp=Z,3.4nm,0.8s,mb4.3,baz=330,slow=8.9,SNR=10.0
CDF Champ du Feu 71.21 316 *e*P **P 16 45 30.2 -0.6**
comp=Z,6.2nm,0.9s,mb4.3
STKA Stephens Creek 72.69 148 P **P 16 45 38.5 -1.3**
comp=Z,2.0nm,0.8s,mb4.1,baz=4.4,slow=5.8,SNR=5.8
LPG La Plagne 72.90 313 *e*P **P 16 45 41.9 +0.9**
comp=Z,13nm,0.6s,mb4.7
LPL La Plagne 72.90 313 *e*P **P 16 45 41.8 +0.7**
comp=Z,12nm,0.6s,mb4.7
SMF Signal de Mont 74.10 315 *e*P **P 16 45 47.3 -0.8**
comp=Z,6.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 75.25 316 *e*P **P 16 45 54.9 +0.1**
YKA Yellowknife Ar 80.29 17 P **P 16 46 22.1 -0.4**
comp=Z,3.2nm,0.7s,mb4.4,baz=330,slow=5.2,SNR=20

*ISCJB **12** 16:36:53.7±0.5,31°.87N±0°.06×104°.6E±0°.1,h10km, mb3.9/11, Error ellipse: s-maj=15.2km s-min=6.7km az=160.6*
*IDC **12** 16:36:54.2±0.9,31°.82N×104°.43E,h0km,mb3.9/10, mb1 4.1/10,mb1mx3.9/28,mbtmp4.0/10,MS3.4/1, Ms1 3.4/1,ms1mx2.4/32,Error ellipse: s-maj=34.2km s-min=17.2km az=50.0*
*NEIC **12** 16:36:56.0±0.5,31°.99N×104°.65E,h10km,mb4.4/1,Error ellipse: s-maj=19.5km s-min=9.2km az=63.0*
ISC 12 16:36:56.1±0.5,31°.95N±0°.07×104°.7E±0°.1,h10km,n22, σ0=92/23,mb3.9/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.18**	**351**	*e*Pg	**Pg**	**16 38 17.4**	**+1.2**
LZH				Sg	**Sg**	**16 39 15.0**	**+4.6**
LZH				smax			
	comp=N,100nm,0.8s						
LZH				smax			
	comp=E,170nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.38**	**202**	Pn	**Pn**	**16 40 22.5**	**+2.7**
	comp=E,0.2nm,0.3s,baz=8.5,slow=7.8,SNR=4.5						
KSRS	**Korea Array**	**19.89**	**68**	P	**Pn**	**16 41 29.2**	**0.0**
	comp=E,2.8nm,0.7s,baz=256,slow=9.8,SNR=4.1						
MK31	**Makanchi Array**	**22.66**	**317**	*e*P	**P**	**16 41 57.4**	**+0.1**
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**16 41 57.3**	**0.0**
	comp=E,2.3nm,1.0s,mb3.6,baz=86,slow=7.4,SNR=5.1						
AAK	**Ala-Archa**	**26.12**	**303**	P	**P**	**16 42 27.3**	**-2.9**
	comp=E,1.0nm,0.3s,mb3.8,baz=337,slow=6.9,SNR=4.2						
ZAA0	**Zalesovo Array**	**26.18**	**333**	*e*P	**P**	**16 42 30.4**	**0.0**
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**16 42 30.7**	**+0.2**
	comp=E,2.5nm,0.5s,mb4.0,baz=132,slow=9.4,SNR=6.8						
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**16 42 37.0**	**+0.3**
	comp=E,1.9nm,0.8s,mb3.7,baz=126,slow=8.1,SNR=4.3						
BVAR	**Borovoye Array**	**32.43**	**321**	P	**P**	**16 43 26.3**	**+0.2**
	comp=E,0.7nm,0.6s,mb3.6,baz=100,slow=6.8,SNR=3.9						
BRVK	**Borovoye**	**32.50**	**321**	*e*P	**P**	**16 43 24.4**	**-2.3**
ABKAR	**Akbulak array**	**37.47**	**311**	*e*P	**P**	**16 44 08.5**	**-1.1**
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**16 44 31.4**	**+0.2**
	comp=E,7.1nm,0.8s,mb4.5						
TIXI	**Tiksi**	**41.84**	**11**	*e*P	**P**	**16 44 46.1**	**+0.4**
	comp=E,0.6nm,0.4s,mb3.6						
WRAB	**Tennant Creek**	**58.92**	**147**	*e*P	**P**	**16 46 55.0**	**-0.4**
WRA	**Warramunga Arr**	**58.92**	**147**	P	**P**	**16 46 55.4**	**-0.1**
	comp=E,1.8nm,0.6s,mb4.3,baz=328,slow=9.0,SNR=8.0						
WB2	**Warramunga Arr**	**58.92**	**147**	*e*P	**P**	**16 46 55.0**	**-0.6**
ASAR	**Alice Springs**	**61.97**	**149**	P	**P**	**16 47 16.2**	**-0.1**
	comp=E,0.7nm,0.5s,mb4.1,baz=334,slow=6.6,SNR=8.2						
INK	**Inuvik**	**71.21**	**19**	P	**P**	**16 48 15.1**	**+0.3**
	comp=E,0.9nm,0.3s,mb4.1,baz=316,slow=14,SNR=7.5						
STKA	**Stephens Creek**	**72.46**	**148**	*e*P	**P**	**16 48 22.1**	**-0.7**
YKA	**Yellowknife Ar**	**80.75**	**17**	P	**P**	**16 49 09.9**	**+0.6**
	comp=E,0.7nm,0.6s,mb3.8,baz=328,slow=5.1,SNR=6.3						
YKA	**Yellowknife Ar**	**80.75**	**17**	P	**P**	**16 49 09.9**	**+0.6**

IDC 12 16:39:03.1±1.2,32°.49N×105°.48E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.5/24,mbtmp3.6/4,Error ellipse: s-maj=74.4km s-min=25.0km az=60.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.16**	**204**	Pn	Pn	16 42 43.8	+5.2
	0.1nm,0.3s,baz=9.5,slow=9.6,SNR=4.8						
MKAR	**Makanchi Array**	**22.76**	**316**	P	P	16 44 06.8	0.0
	0.4nm,0.6s,baz=118,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**59.00**	**148**	P	P	16 49 04.6	-0.1
	1.6nm,0.7s,baz=339,slow=7.4,SNR=5.1						
ASAR	**Alice Springs**	**62.09**	**150**	P	P	16 49 25.9	+0.1
	0.6nm,0.8s,baz=338,slow=7.0,SNR=3.5						
YKA	**Yellowknife Ar**	**80.03**	**18**	P	P	16 51 14.2	+0.1
	0.4nm,0.6s,baz=329,slow=5.1,SNR=5.3						

*ISCJB **12** 16:40:53.4±0.7,31°.0N±0°.1×104°.22E±0°.06,h10km, mb3.6/8,Error ellipse: s-maj=15.3km s-min=7.9km az=2.1*
*BJI **12** 16:40:53.3,31°.08N×103°.92E,h22km,ML3.8/5*
*IDC **12** 16:40:53.0±1.0,31°.02N×103°.94E,h0km,mb3.7/6, mb1 3.9/7,mb1mx3.6/25,mbtmp3.7/7,ML3.5/1,Error ellipse: s-maj=53.6km s-min=20.2km az=62.0*
*NEIC **12** 16:40:54.8±0.5,31°.00N×103°.92E,h10km,mb4.1/2,Error ellipse: s-maj=20.6km s-min=10.1km az=62.0*
ISC 12 16:40:54.9±0.7,31°.07N±0°.09×104°.14E±0°.07,h10km,n14, σ1=02/15,mb3.6/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**245**	Pg	**Pg**	**16 41 01.9**	**-0.1**
CD2				Sg	**Sg**	**16 41 07.6**	**+0.7**
CD2				smax			
	comp=N,16μm,0.7s						
CMAR	**Chiang Mai Arr**	**13.41**	**202**	Pn	**Pn**	**16 44 03.1**	**-2.2**
	comp=N,0.1nm,0.3s,baz=15,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**23.03**	**319**	P	**P**	**16 46 00.4**	**+0.4**
	comp=N,0.4nm,0.7s,mb3.0,baz=125,slow=10,SNR=3.6						
AAK	**Ala-Archa**	**26.25**	**304**	P	**P**	**16 46 32.8**	**+2.7**
	comp=N,0.5nm,0.3s,mb3.6,baz=270,slow=4.4,SNR=4.4						
AAK	**Ala-Archa**	**26.25**	**304**	P	**P**	**16 46 29.6**	**-0.5**
	comp=N,2.4nm,0.9s,mb3.7						
KURK	**Kurchatov**	**27.29**	**323**	P	**P**	**16 46 37.2**	**-2.3**
	comp=N,1.2nm,0.8s,mb3.5,baz=128,slow=9.7,SNR=4.2						
WRAB	**Tennant Creek**	**58.42**	**146**	P	**P**	**16 50 51.6**	**+0.7**
	comp=N,2.4nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**58.42**	**146**	P	**P**	**16 50 51.1**	**+0.2**
	comp=N,0.6nm,0.5s,mb3.9,baz=337,slow=7.6,SNR=5.1						
WB2	**Warramunga Arr**	**58.43**	**146**	*e*P	**P**	**16 50 51.5**	**+0.5**
ASAR	**Alice Springs**	**61.44**	**149**	P	**P**	**16 51 11.5**	**-0.1**
	comp=N,0.4nm,0.7s,mb3.6,baz=338,slow=7.1,SNR=4.1						
STKA	**Stephens Creek**	**71.96**	**147**	P	**P**	**16 52 18.9**	**+0.3**
	comp=N,0.5nm,0.5s,mb3.7,baz=312,slow=10,SNR=3.4						
STKA	**Stephens Creek**	**71.96**	**147**	*e*P	**P**	**16 52 18.6**	**+0.1**
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**16 53 13.7**	**+0.4**
	comp=N,0.4nm,0.7s,mb3.5,baz=330,slow=5.2,SNR=5.7						
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**16 53 13.7**	**+0.4**

*BJI **12** 16:41:21.1,31°.93N×104°.98E,h10km,mb4.2/6,ML4.1/5, Ms4.1/3,Ms7 4.1/2*
*IDC **12** 16:41:21.9±0.5,32°.19N×104°.97E,h0km,mb4.2/20, mb1 4.3/21,mb1mx4.2/30,mbtmp4.2/21,ML3.9/1,Error ellipse: s-maj=22.1km s-min=11.2km az=49.0*
*ISCJB **12** 16:41:23.1±1.6,32°.11N±0°.04×104°.96E±0°.05, h15km±10km,mb4.2/31,Error ellipse: s-maj=7.8km s-min=6.8km az=39.5*
*NEIC **12** 16:41:23.7±0.3,32°.14N×104°.88E,h10km,mb4.2/8,Error ellipse: s-maj=13.3km s-min=6.3km az=48.0*
ISC 12 16:41:22.8±1.2,32°.19N±0°.04×104°.94E±0°.05,h4km±7km, n54,σ1=05/56,mb4.2/31,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.63**	**219**	Pg	**Sn**	**16 42 10.8**	**-2.8**
CD2				Sg	**Sg**	**16 42 15.5**	**+0.4**
CD2				smax			
	comp=N,13μm,0.7s						
LZH	**Lanzhou**	**3.99**	**347**	*e*Pn	**Pn**	**16 42 28.8**	**+4.1**
LZH				Pg	**Pg**	**16 42 38.7**	**-0.6**
LZH				Sg	**Sg**	**16 43 29.0**	**-2.1**
LZH				smax			
	comp=N,2μm,1.2s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,4.6s						
LZH				LR	LR		
	comp=Z,3μm,5.8s						
ENH	**Enshi**	**4.33**	**115**	Pn	**Pn**	**16 42 32.5**	**+3.0**
WHN	**Wuhan**	**8.21**	**99**	P	**Pn**	**16 43 22.4**	**-0.2**
WHN				S	**Sn**	**16 44 52.6**	**-3.3**
BJI	**Beijing**	**11.99**	**46**	P	**Pn**	**16 44 17.0**	**+2.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.70**	**203**	Pn	**Pn**	**16 44 56.0**	**+4.5**
	comp=Z,0.2nm,0.3s,baz=7.8,slow=9.9,SNR=7.9						
SONM	**Songino Array**	**15.67**	**4**	Pn	**Pn**	**16 45 07.2**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=4.2						
KSRS	**Korea Array**	**19.57**	**68**	P	**Pn**	**16 45 52.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=251,slow=11,SNR=7.8						
CN2	**Changchun**	**19.83**	**48**	*e*P	**Pn**	**16 45 56.9**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.66**	**317**	*e*P	**P**	**16 46 25.9**	**+1.1**
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**16 46 25.5**	**+0.6**
	comp=Z,4.8nm,0.7s,mb4.0,baz=116,slow=11,SNR=19						
TKM2	**Tokmak 2**	**25.49**	**303**	*e*P	**P**	**16 46 53.7**	**+1.7**
	comp=Z,2.4nm,0.6s,mb3.9						
ZAA0	**Zalesovo Array**	**26.08**	**332**	*e*P	**P**	**16 46 57.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.08**	**332**	P	**P**	**16 46 57.8**	**+0.6**
	comp=Z,4.1nm,0.5s,mb4.2,baz=130,slow=9.3,SNR=9.3						
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**16 46 57.6**	**0.0**
	comp=Z,5.7nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**26.21**	**302**	P	**P**	**16 47 00.1**	**+1.5**
	comp=Z,0.8nm,0.4s,mb3.6,baz=144,slow=8.7,SNR=3.1						
AAK	**Ala-Archa**	**26.21**	**302**	P	**P**	**16 47 00.1**	**+1.5**
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**16 47 05.0**	**+1.0**
	comp=Z,1.1nm,0.3s,mb3.8,baz=129,slow=9.2,SNR=10						
KURK	**Kurchatov**	**26.83**	**321**	*e*P	**P**	**16 47 04.4**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.0						
MJAR	**Matsushiro Arr**	**27.72**	**72**	P	**P**	**16 47 12.3**	**+0.1**
	comp=Z,1.4nm,0.6s,mb3.8,baz=279,slow=9.8,SNR=4.5						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**16 47 54.3**	**+0.9**
	comp=Z,1.9nm,0.6s,mb4.1,baz=107,slow=9.9,SNR=6.8						
BRVK	**Borovoye**	**32.47**	**320**	P	**P**	**16 47 53.7**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**37.50**	**310**	*e*P	**P**	**16 48 38.2**	**+0.7**
	comp=Z,1.6nm,0.4s,mb4.1						
AKTK	**Aktyubinsk**	**38.93**	**312**	P	**P**	**16 48 49.5**	**0.0**
AKTO	**Aktyubinsk**	**38.93**	**312**	P	**P**	**16 48 49.5**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.0,baz=77,slow=6.2,SNR=8.6						
KAPI	**Kappang**	**39.59**	**156**	P	**P**	**16 48 53.3**	**-2.0**
	comp=Z,3.4nm,1.0s,mb4.5,baz=191,slow=2.6,SNR=4.1						
KAPI	**Kappang**	**39.59**	**156**	P	**P**	**16 48 53.3**	**-2.0**
ARU	**Arti**	**40.02**	**321**	*e*P	**P**	**16 48 59.0**	**+0.4**
	comp=Z,16nm,0.9s,mb4.8						
TIXI	**Tiksi**	**41.55**	**11**	*e*P	**P**	**16 49 10.8**	**-0.2**
	comp=Z,1.8nm,0.7s,mb3.8						
PETK	**Petropavlovsk-**	**42.92**	**45**	P	**P**	**16 49 21.3**	**-1.0**
	comp=Z,3.5nm,0.6s,mb4.3,baz=276,slow=2.0,SNR=13						
FITZ	**Fitzroy Crossi**	**53.79**	**155**	P	**P**	**16 50 47.1**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.2,baz=307,slow=10,SNR=4.8						
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**16 50 51.0**	**-0.2**
	comp=Z,7.6nm,0.9s,mb4.6						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**16 51 05.1**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.4,baz=80,slow=7.2,SNR=7.3						
BRTR	**Keskin Array B**	**56.83**	**299**	P	**P**	**16 51 07.5**	**-1.0**
	comp=Z,1.3nm,0.8s,mb4.0,baz=95,slow=6.7,SNR=6.7						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**16 51 05.0**	**-3.3**
	comp=Z,5.5nm,0.8s,mb4.6						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 51 09.8**	**+0.1**
	comp=Z,2.9nm,0.5s,mb4.5,baz=94,slow=7.0,SNR=18						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 51 09.8**	**+0.1**
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**16 51 09.8**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.9,baz=80,slow=4.3,SNR=17						
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**16 51 09.8**	**-0.8**
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**16 51 23.9**	**+0.3**
	comp=Z,5.5nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**16 51 23.9**	**+0.3**
	comp=Z,2.8nm,0.5s,mb4.5,baz=340,slow=7.7,SNR=12						
WB2	**Warramunga Arr**	**58.99**	**147**	*e*P	**P**	**16 51 23.7**	**+0.1**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**16 51 45.1**	**+0.6**
	comp=Z,1.2nm,0.5s,mb4.3,baz=332,slow=6.4,SNR=15						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**16 51 57.0**	**-0.9**
	comp=Z,2.0nm,0.8s,mb4.2,baz=70,slow=6.5,SNR=3.5						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**16 52 17.8**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.6,baz=36,slow=7.0,SNR=4.0						
CDF	**Champ du Feu**	**71.34**	**316**	*e*P	**P**	**16 52 43.2**	**-0.4**
	comp=Z,4.7nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**16 52 50.1**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.0,baz=315,slow=4.7,SNR=5.4						
STKA	**Stephens Creek**	**72.53**	**148**	*e*P	**P**	**16 52 50.6**	**-0.2**
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**16 52 54.3**	**+0.5**
	comp=Z,16nm,0.9s,mb4.7						
LPL	**La Plagne**	**73.03**	**313**	*e*P	**P**	**16 52 54.2**	**+0.4**
SMF	**Signal de Mont**	**74.23**	**315**	*e*P	**P**	**16 52 59.5**	**-1.3**
YKA	**Yellowknife Ar**	**80.45**	**17**	P	**P**	**16 53 34.6**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.2,baz=328,slow=5.2,SNR=30						
QSPA	**South Pole Qui**	**121.96**	**180**	PKP	PKPdf	17 00 16.6	-0.5
	comp=Z,1.1nm,0.5s,baz=358,slow=1.7,SNR=11						
QSPA	**South Pole Qui**	**121.96**	**180**	PKP	PKPdf	17 00 16.6	-0.5

*IDC **12** 16:44:07.1±0.6,31°.70N×104°.40E,h0km,mb4.0/14, mb1 4.2/14,mb1mx4.0/28,mbtmp4.0/14,MS3.2/1, Ms1 3.2/1,ms1mx2.5/40,Error ellipse: s-maj=34.4km s-min=12.9km az=53.0*
*NEIC **12** 16:44:08.6±0.4,31°.74N×104°.48E,h10km,mb4.0/2,Error ellipse: s-maj=31.8km s-min=6.8km az=54.0*
*BJI **12** 16:44:08.8,31°.56N×104°.49E,h14km,mb4.0/2,ML4.0/4*
ISC 12 16:44:07.3±1.5,31°.72N±0°.04×104°.47E±0°.09,h0km±9km, n27,σ0=81/29,mb4.0/14,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.01**	**217**	Pg	**Pg**	**16 44 24.4**	**-2.3**
CD2				Sg	**Sg**	**16 44 41.3**	**+1.5**
CD2				smax			
	comp=N,3μm,0.5s						
LZH	**Lanzhou**	**4.39**	**353**	*e*Pg	**Pg**	**16 45 31.0**	**-0.4**
LZH				Sn	**Sb**	**16 46 20.2**	**+1.4**
LZH				smax			
	comp=N,120nm,0.8s						
LZH				smax			
	comp=E,140nm,0.9s						
LZH	**Lanzhou**	**4.39**	**353**	*e*Pg	**Pn**	**16 45 15.1**	**-0.1**
LZH				Sg	**Sn**	**16 46 06.7**	**-0.3**
LZH				smax			
	comp=N,180nm,0.8s						
LZH				smax			
	comp=E,170nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.12**	**202**	Pn	**Pn**	**16 47 36.1**	**+7.5**
	comp=E,0.5nm,0.3s,baz=7.2,slow=8.7,SNR=20						
SONM	**Songino Array**	**16.16**	**5**	Pn	**Pn**	**16 48 01.1**	**+5.4**
	comp=E,0.2nm,0.3s,baz=190,slow=13,SNR=5.3						
SONM				LR	LR	16 53 28.2	
	comp=E,95nm,20.8s,baz=332,slow=35						
KSRS	**Korea Array**	**20.11**	**67**	P	**P**	**16 48 43.5**	**+0.9**
	comp=E,3.4nm,0.6s,baz=253,slow=10,SNR=8.8						
MK31	**Makanchi Array**	**22.73**	**318**	*e*P	**P**	**16 49 10.3**	**-0.4**
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**16 49 10.9**	**+0.2**
	comp=E,1.4nm,0.7s,mb3.6,baz=118,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.31**	**333**	P	**P**	**16 49 44.3**	**-0.1**
	comp=E,1.2nm,0.6s,mb3.7,baz=140,slow=8.6,SNR=4.0						
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**16 49 50.8**	**+0.5**
	comp=E,0.5nm,0.3s,mb3.8,baz=130,slow=8.7,SNR=2.9						
KURK	**Kurchatov**	**26.95**	**322**	*e*P	**P**	**16 49 50.3**	**0.0**
	comp=E,1.3nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**32.51**	**321**	P	**P**	**16 50 39.1**	**-0.5**
	comp=E,1.1nm,0.6s,mb4.0,baz=245,slow=39,SNR=6.2						
AKTK	**Aktyubinsk**	**38.

comp=N,310nm,0.6s
LZH smax
comp=E,420nm,0.6s
LZH LR LR
comp=E,820nm,8.2s
LZH LR LR
comp=Z,1μm,9.5s
CMAR Chiang Mai Arr 15.15 206 Pn **Pn 16 49 47.1 -0.1**
comp=Z,0.3nm,0.3s,baz=9.4,slow=9.1,SNR=7.8
KSRS Korea Array 18.77 68 P **Pn 16 50 39.8 +6.9**
comp=Z,0.1nm,0.3s,baz=261,slow=10,SNR=4.3
MKAR Makanchi Array 23.13 316 P **P 16 51 19.4 0.0**
comp=Z,1.0nm,0.8s,mb3.3,baz=111,slow=12,SNR=4.9
ZALV Zalesovo Beam 26.35 331 P **P 16 51 50.0 +0.8**
comp=Z,0.8nm,0.5s,mb3.5,baz=142,slow=8.2,SNR=3.5
WRAB Tennant Creek 58.66 148 *e*P **P 16 56 11.1 +0.3**
comp=Z,1.2nm,0.5s,mb4.2
WRA Warramunga Arr 58.66 148 P **P 16 56 10.7 -0.1**
comp=Z,1.8nm,0.7s,mb4.2,baz=338,slow=7.4,SNR=6.6
WB2 Warramunga Arr 58.67 148 *e*P **P 16 56 10.6 -0.2**
ASAR Alice Springs 61.76 151 P **P 16 56 31.7 -0.3**
comp=Z,0.6nm,0.5s,mb4.0,baz=329,slow=6.4,SNR=6.0
YKA Yellowknife Ar 80.09 18 P **P 16 58 28.6 +5.8**
comp=Z,0.4nm,0.7s,mb3.5,baz=329,slow=5.4,SNR=4.5

*IDC **12** 16:50:08.8±1.0, 31°.08N×103°.38E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=37.9km s-min=17.5km az=54.0*
*NEIC **12** 16:50:10.8±0.6, 31°.23N×103°.65E, h10km, mb4.2/6, Error ellipse: s-maj=17.4km s-min=10.3km az=51.0*
*BJI **12** 16:50:10.6, 31°.25N×103°.70E, h10km, mb4.2/2, ML4.0/11, Ms3.9/3, Ms7 3.6/2*
*ISCJB **12** 16:50:11.8±0.8, 31°.20N±0°.05×103°.61E±0°.09, h31km±6km, mb3.9/14, Error ellipse: s-maj=12.6km s-min=8.1km az=166.4*
ISC 12 16:50:11.8±1.0, 31°.27N±0°.04×103°.61E±0°.09, h14km±7km, n25, σ1§19/28, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**161**	Pg	**Pg**	**16 50 18.3**	**-1.1**
CD2				Sg	**Sg**	**16 50 25.8**	**+1.3**
CD2				smax			
comp=N,32μm,0.5s							
LZH	**Lanzhou**	**4.81**	**2**	*e*Pg	**Pg**	**16 51 50.0**	**+6.0**
LZH				Sg	**Sg**	**16 52 43.6**	**-2.8**
LZH				smax			
comp=N,120nm,1.1s							
LZH				smax			
comp=E,100nm,0.8s							
KMI	**Kunming**	**6.17**	**187**	Pn	**Pn**	**16 51 42.1**	**-0.4**
KMI				Sn	**Sn**	**16 52 52.7**	**-0.1**
KMI				smax			
comp=N,23nm,1.2s							
KMI				smax			
comp=E,25nm,1.3s							
KMI				LR	LR		
comp=N,400nm,8.5s							
KMI				LR	LR		
comp=E,1μm,11.0s							
KMI				LR	LR		
comp=Z,370nm,8.1s							
LSA	**Lhasa**	**10.87**	**265**	*e*P	**Pn**	**16 52 48.0**	**+1.0**
comp=Z,3.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**13.44**	**199**	Pn	**Pn**	**16 53 28.9**	**+6.8**
comp=Z,0.2nm,0.3s,baz=10,slow=9.0,SNR=9.0							
SONM	**Songino Array**	**16.68**	**7**	Pn	**Pn**	**16 54 05.7**	**+0.6**
comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=5.2							
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**16 54 55.4**	**+0.9**
comp=Z,3.5nm,0.8s,baz=261,slow=10,SNR=9.0							
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**16 54 59.6**	**+1.7**
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.2							
MK31	**Makanchi Array**	**22.58**	**319**	P	**P**	**16 55 11.8**	**+0.1**
MKAR	**Makanchi Array**	**22.58**	**319**	P	**P**	**16 55 09.8**	**-1.9**
comp=Z,2.0nm,0.8s,mb3.6,baz=125,slow=10,SNR=12							
UCH	**Uchtor**	**25.64**	**303**	*e*P	**P**	**16 55 42.4**	**+1.5**
comp=Z,4.4nm,1.0s,mb3.9							
AAK	**Ala-Archa**	**25.76**	**304**	P	**P**	**16 55 44.7**	**+2.6**
comp=Z,1.6nm,0.5s,mb3.8,baz=105,slow=5.0,SNR=7.9							
AAK	**Ala-Archa**	**25.76**	**304**	*e*P	**P**	**16 55 44.3**	**+2.3**
comp=Z,3.1nm,0.8s,mb3.9							
AML	**Almayashu**	**26.20**	**303**	*e*P	**P**	**16 55 44.9**	**-1.1**
comp=Z,6.4nm,1.1s,mb4.1							
EKS2	**Erkin-Say**	**26.28**	**304**	*e*P	**P**	**16 55 47.0**	**+0.3**
comp=Z,3.7nm,1.1s,mb3.8							
ZAA0	**Zalesovo Array**	**26.39**	**335**	*e*P	**P**	**16 55 47.5**	**-0.1**
ZALV	**Zalesovo Beam**	**26.39**	**335**	P	**P**	**16 55 46.5**	**-1.2**
comp=Z,2.2nm,0.7s,mb3.8,baz=133,slow=8.3,SNR=8.7							
KURK	**Kurchatov**	**26.87**	**324**	P	**P**	**16 55 51.8**	**-0.2**
comp=Z,2.3nm,0.7s,mb3.8,baz=129,slow=9.6,SNR=8.9							
KURK	**Kurchatov**	**26.87**	**324**	*e*P	**P**	**16 55 51.0**	**-0.9**
comp=Z,7.2nm,1.1s,mb4.1							
BVAR	**Borovoye Array**	**32.40**	**322**	P	**P**	**16 56 41.5**	**+0.5**
comp=Z,0.6nm,0.6s,mb3.6,baz=120,slow=8.7,SNR=4.0							
WRAB	**Tennant Creek**	**58.84**	**146**	P	**P**	**17 00 09.6**	**-0.5**
comp=Z,2.8nm,0.8s,mb4.3							
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**17 00 08.7**	**-1.4**
comp=Z,1.1nm,0.5s,mb4.2,baz=338,slow=7.6,SNR=11							
WB2	**Warramunga Arr**	**58.85**	**146**	*e*P	**P**	**17 00 09.0**	**-1.1**
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**17 00 29.7**	**-0.9**
comp=Z,0.5nm,0.8s,mb3.7,baz=337,slow=6.9,SNR=4.7							
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**17 02 31.1**	**+1.9**
comp=Z,0.2nm,0.6s,mb3.2,baz=333,slow=5.6,SNR=4.2							

*IDC **12** 16:52:15.8±1.2, 30°.81N×103°.92E, h0km, mb3.4/6, mb1 3.7/6, mb1mx3.4/23, mbtmp3.5/6, Error ellipse: s-maj=43.1km s-min=23.5km az=64.0*
*ISCJB **12** 16:52:16.2±0.7, 30°.7N±0°.1×104°.2E±0°.1, h10km, mb3.6/6, Error ellipse: s-maj=24.6km s-min=7.2km az=35.8*
*NEIC **12** 16:52:17.6±0.7, 31°.02N×104°.38E, h10km, mb4.2/1, Error ellipse: s-maj=54.1km s-min=13.3km az=58.0*
ISC 12 16:52:18.2±0.7, 30°.7N±0°.1×104°.1E±0°.1, h10km, n10, σ1§01/11, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**307**	Pg	**Pg**	**16 52 24.3**	**-0.5**
CD2				Sg	**Sg**	**16 52 30.4**	**+1.1**
CD2				smax			
comp=N,6μm,0.9s							
KSRS	**Korea Array**	**20.84**	**65**	P	**P**	**16 57 01.2**	**+1.1**
comp=N,1.9nm,0.6s,baz=246,slow=9.5,SNR=6.8							
MKAR	**Makanchi Array**	**23.26**	**320**	P	**P**	**16 57 24.5**	**-1.2**
comp=N,0.4nm,0.7s,mb3.0,baz=118,slow=12,SNR=2.8							
WRAB	**Tennant Creek**	**58.16**	**146**	P	**P**	**17 02 11.9**	**-0.5**
comp=N,1.5nm,0.7s,mb4.1							
WRA	**Warramunga Arr**	**58.16**	**146**	P	**P**	**17 02 12.6**	**+0.2**
comp=N,0.6nm,0.5s,mb3.9,baz=337,slow=7.5,SNR=5.1							
WB2	**Warramunga Arr**	**58.17**	**146**	*e*P	**P**	**17 02 13.1**	**+0.6**
ASAR	**Alice Springs**	**61.17**	**149**	P	**P**	**17 02 33.8**	**+0.8**
comp=N,0.2nm,0.5s,mb3.5,baz=334,slow=6.8,SNR=4.2							
STKA	**Stephens Creek**	**71.70**	**147**	P	**P**	**17 03 40.0**	**-0.2**
comp=N,0.4nm,0.6s,mb3.5,baz=349,slow=5.2,SNR=3.2							
STKA	**Stephens Creek**	**71.70**	**147**	*e*P	**P**	**17 03 40.1**	**-0.2**
YKA	**Yellowknife Ar**	**82.08**	**17**	P	**P**	**17 04 35.9**	**-2.5**
comp=N,0.3nm,0.7s,mb3.3,baz=322,slow=5.0,SNR=3.1							

*ISCJB **12** 16:52:53.3±0.4, 31°.24N±0°.03×103°.94E±0°.06, h10km, mb4.2/14, Error ellipse: s-maj=7.3km s-min=4.7km az=2.6*
*IDC **12** 16:52:53.4±0.8, 31°.03N×103°.59E, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.0/26, mbtmp4.1/11, ML3.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/36, Error ellipse: s-maj=31.8km s-min=15.0km az=54.0*
*NEIC **12** 16:52:55.2±0.5, 31°.18N×103°.80E, h10km, mb4.2/4, Error ellipse: s-maj=17.3km s-min=8.8km az=67.0*
*BJI **12** 16:52:55.8, 31°.20N×103°.70E, h9km, mB5.1/3, mb4.2/10, ML4.2/11, Ms4.2/6, Ms7 4.3/5*
ISC 12 16:52:55.4±0.4, 31°.18N±0°.03×103°.80E±0°.06, h10km, n31, σ1§18/35, mb4.2/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**187**	Pg	**Pg**	**16 53 02.2**	**+1.3**
CD2				Sg	**Sg**	**16 53 07.2**	**+2.7**
CD2				smax			
comp=N,54μm,0.8s							
LZH	**Lanzhou**	**4.89**	**0**	*e*Pg	**Pg**	**16 54 22.2**	**-6.9**
LZH				Sg	**Sg**	**16 55 33.8**	**+1.3**
LZH				smax			
comp=N,160nm,0.9s							
LZH				smax			
comp=E,470nm,1.0s							
LZH				LR	LR		
comp=N,2μm,8.0s							
LZH				LR	LR		
comp=Z,3μm,9.2s							
KMI	**Kunming**	**6.11**	**189**	Pn	**Pn**	**16 54 26.1**	**+0.4**
KMI				Sn	**Sn**	**16 55 33.3**	**-2.3**
KMI				smax			
comp=N,59nm,1.6s							
KMI				smax			
comp=E,78nm,1.3s							
KMI				LR	LR		
comp=N,910nm,12.3s							
KMI				LR	LR		
comp=E,360nm,9.2s							
KMI				LR	LR		
comp=Z,960nm,12.5s							
WHN	**Wuhan**	**9.09**	**91**	P	**Pn**	**16 55 08.3**	**+1.6**
WHN				S	**Sn**	**16 56 46.7**	**-2.4**
WHN				LR	LR		
comp=N,2μm,6.4s							
WHN				LR	LR		
comp=E,1μm,7.6s							
WHN				LR	LR		
comp=Z,2μm,5.6s							
CM31	**Chiang Mai Arr**	**13.41**	**200**	*e*P	**Pn**	**16 56 14.8**	**+9.0**
comp=Z,6.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**13.41**	**200**	Pn	**Pn**	**16 56 06.4**	**+0.6**
comp=Z,0.1nm,0.3s,baz=14,slow=11,SNR=5.9							
SONM	**Songino Array**	**16.75**	**6**	Pn	**Pn**	**16 56 51.6**	**+1.6**
comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=5.7							
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**16 57 38.9**	**+1.5**
comp=Z,4.6nm,0.6s,baz=260,slow=9.8,SNR=15							
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**16 57 46.3**	**+5.0**
CN2				pmax	pmax		
comp=Z,20nm,0.8s,mb4.5							
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**16 57 57.0**	**-0.6**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**16 57 56.6**	**-1.0**
comp=Z,8.2nm,1.0s,mb4.1,baz=130,slow=11,SNR=13							
UCH	**Uchtor**	**25.82**	**303**	P	**P**	**16 58 27.7**	**+1.0**
comp=Z,5.5nm,1.1s,mb4.0							
AAK	**Ala-Archa**	**25.94**	**304**	P	**P**	**16 58 28.2**	**+0.3**
comp=Z,0.8nm,0.5s,mb3.5,baz=128,slow=12,SNR=3.5							
AAK	**Ala-Archa**	**25.94**	**304**	*e*P	**P**	**16 58 30.8**	**+3.0**
ZAA0	**Zalesovo Array**	**26.54**	**335**	P	**P**	**16 58 31.5**	**-1.6**
ZALV	**Zalesovo Beam**	**26.54**	**335**	P	**P**	**16 58 32.9**	**-0.2**
comp=Z,2.4nm,0.8s,mb3.8,baz=134,slow=8.5,SNR=8.5							
ZALV				LR	LR	17 09 48.3	
comp=Z,105nm,19.3s,baz=160,slow=38							
KURK	**Kurchatov**	**27.03**	**323**	P	**P**	**16 58 37.6**	**+0.1**
comp=Z,3.0nm,0.3s,mb4.4,baz=128,slow=9.5,SNR=3.0							
KURK	**Kurchatov**	**27.03**	**323**	*e*P	**P**	**16 58 37.3**	**-0.3**
comp=Z,6.7nm,1.1s,mb4.1							
ABKAR	**Akbulak array**	**37.43**	**312**	*e*P	**P**	**17 00 07.4**	**-1.2**
TIXI	**Tiksi**	**42.73**	**11**	*e*P	**P**	**17 00 51.6**	**-0.7**
comp=Z,4.2nm,0.9s,mb4.2							
KNA	**Kununurra**	**52.47**	**149**	*e*P	**P**	**17 02 07.7**	**-0.8**
comp=Z,9.8nm,0.7s,mb4.8							
BRTR	**Keskin Array B**	**56.48**	**300**	P	**P**	**17 02 36.1**	**-1.5**
comp=Z,0.5nm,0.7s,mb3.7,baz=64,slow=2.9,SNR=3.2							
WRAB	**Tennant Creek**	**58.68**	**146**	*e*P	**P**	**17 02 52.7**	**-0.5**
comp=Z,13nm,0.7s,mb5.1							
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**17 02 52.9**	**-0.3**
comp=Z,8.6nm,0.6s,mb5.0,baz=338,slow=7.6,SNR=42							
WB2	**Warramunga Arr**	**58.69**	**146**	*e*P	**P**	**17 02 52.7**	**-0.5**
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**17 03 13.6**	**-0.2**
comp=Z,2.4nm,0.8s,mb4.4,baz=344,slow=6.7,SNR=24							
STKA	**Stephens Creek**	**72.22**	**147**	*e*P	**P**	**17 04 19.9**	**-0.7**
comp=Z,2.3nm,0.6s,mb4.3							
STKA	**Stephens Creek**	**72.22**	**147**	P	**P**	**17 04 19.6**	**-1.0**
comp=Z,3.0nm,0.6s,mb4.4,baz=334,slow=5.8,SNR=14							
STKA	**Stephens Creek**	**72.22**	**147**	*e*P	**P**	**17 04 20.0**	**-0.5**
CMSA	**Cobar Meteorol**	**73.94**	**144**	*e*P	**P**	**17 04 31.1**	**+0.3**
YKA	**Yellowknife Ar**	**81.70**	**17**	P	**P**	**17 05 14.6**	**+1.0**
comp=Z,0.9nm,0.7s,mb3.8,baz=328,slow=5.2,SNR=14							

*ISCJB **12** 16:59:09.7±0.8, 30°.9N±0°.2×103°.4E±0°.1, h10km, mb3.6/8, Error ellipse: s-maj=26.6km s-min=11.6km az=37.1*
*IDC **12** 16:59:10.3±1.1, 31°.03N×103°.43E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/24, mbtmp3.7/7, MS3.8/1, Ms1 3.8/1, ms1mx2.7/31, Error ellipse: s-maj=45.7km s-min=18.5km az=51.0*
*NEIC **12** 16:59:11.3±0.7, 30°.83N×103°.20E, h10km, mb4.0/2, Error ellipse: s-maj=31.4km s-min=11.1km az=223.0*
ISC 12 16:59:11.8±0.8, 31°.0N±0°.2×103°.4E±0°.1, h10km, n12, σ1§00/12, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.34**	**96**	P	**Pn**	**17 00 32.8**	**+1.3**
55nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.10**	**199**	Pn	**Pn**	**17 02 27.1**	**+9.2**
baz=13,slow=14,SNR=2.7							
KSRS	**Korea Array**	**21.29**	**66**	P	**P**	**17 03 57.4**	**-1.1**
1.4nm,0.7s,mb3.4,baz=262,slow=10.0,SNR=6.2							
MK31	**Makanchi Array**	**22.65**	**320**	*e*P	**P**	**17 04 13.0**	**+0.1**
MKAR	**Makanchi Array**	**22.65**	**320**	P	**P**	**17 04 13.7**	**+0.8**
1.6nm,1.0s,mb3.4,baz=126,slow=12,SNR=7.1							
ZALV	**Zalesovo Beam**	**26.55**	**335**	P	**P**	**17 04 49.3**	**-0.3**
0.5nm,0.5s,mb3.4,baz=130,slow=8.0,SNR=3.9							
KURK	**Kurchatov**	**26.96**	**324**	P	**P**	**17 04 54.2**	**+0.9**
2.0nm,0.2s,mb4.2,baz=131,slow=9.2,SNR=2.5							
KURK	**Kurchatov**	**26.96**	**324**	*e*P	**P**	**17 04 54.1**	**+0.7**
1.3nm,0.8s,mb3.5							
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**17 05 41.4**	**-0.9**
0.3nm,0.6s,mb3.3,baz=141,slow=9.3,SNR=3.0							
WRAB	**Tennant Creek**	**58.73**	**145**	*e*P	**P**	**17 09 07.1**	**-2.9**
2.5nm,0.8s,mb4.3							
WRA	**Warramunga Arr**	**58.74**	**145**	P	**P**	**17 09 10.4**	**+0.4**
0.6nm,0.5s,mb3.9,baz=338,slow=7.8,SNR=5.9							
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**17 09 30.4**	**0.0**
0.2nm,0.6s,mb3.5,baz=339,slow=6.7,SNR=4.5							

*IDC **12** 17:01:04.0±0.8, 32°.60N×105°.42E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.8/29, mbtmp3.8/17, ML3.4/2, MS3.9/3, Ms1 4.0/3, ms1mx3.0/38, Error ellipse: s-maj=29.9km s-min=16.1km az=51.0*
*BJI **12** 17:01:05.9, 32°.56N×105°.38E, h13km, mB4.5/1, mb3.8/3, ML4.0/4, Ms3.6/4, Ms7 3.8/4*
*NEIC **12** 17:01:06.7±5.0, 32°.64N×105°.41E, h15km±32km, mb4.1/3, Error ellipse: s-maj=16.7km s-min=8.1km az=71.0*
ISC 12 17:01:05.7±1.7, 32°.67N±0°.07×105°.5E±0°.1, h7km±10km, n33, σ0§77/36, mb4.0/21, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.67**	**339**	*e*Pn	**Pn**	**17 02 06.5**	**+3.8**
LZH				Pg	**Pg**	**17 02 15.8**	**-0.1**
LZH				Sg	**Sg**	**17 03 02.9**	**-0.5**
LZH				smax			
comp=N,620nm,0.7s							
LZH				smax			
comp=E,1μm,0.8s							
LZH				LR	LR		
comp=E,550nm,6.2s							
LZH				LR	LR		
comp=Z,860nm,7.8s							
ENH	**Enshi**	**4.19**	**124**	*e*P	**Pb**	**17 02 20.6**	**+1.0**
GTA	**Gaotai**	**8.13**	**327**	*e*P	**Pn**	**17 03 05.4**	**+1.3**
GTA				pP		17 03 09.6	
GTA				sP		17 03 12.5	
GTA				S	**Sn**	**17 04 40.5**	**+4.2**
GTA				pmax	pmax		
comp=Z,4.0nm,1.1s							
GTA				pmax	pmax		
comp=Z,120nm,5.1s							
GTA				LR	LR		
comp=N,350nm,7.8s							
GTA				LR	LR		
comp=E,260nm,9.6s							
GTA				LR	LR		
comp=Z,600nm,7.2s							
SONM	**Songino Array**	**15.17**	**2**	Pn	**Pn**	**17 04 40.1**	**-0.1**
comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=3.8							
CMAR	**Chiang Mai Arr**	**15.31**	**204**	Pn	**Pn**	**17 04 41.7**	**-0.6**
baz=13,slow=13,SNR=3.6							
KSRS	**Korea Array**	**18.99**	**69**	P	**Pn**	**17 05 27.1**	**-1.2**
comp=Z,0.2nm,0.3s,baz=251,slow=11,SNR=5.2							
MK31	**Makanchi Array**	**22.62**	**315**	*e*P	**P**	**17 06 06.9**	**+0.1**
MKAR	**Makanchi Array**	**22.62**	**315**	P	**P**	**17 06 07.4**	**+0.6**
comp=Z,1.5nm,0.6s,mb3.6,baz=122,slow=11,SNR=14							
ZALV	**Zalesovo Beam**	**25.86**	**331**	P	**P**	**17 06 38.4**	**+0.8**
comp=Z,1.1nm,0.6s,mb3.6,baz=141,slow=9.6,SNR=4.4							
ZALV	**Zalesovo Beam**	**25.86**	**331**	P	**P**	**17 06 38.4**	**+0.8**
KURK	**Kurchatov**	**26.73**	**320**	P	**P**	**17 06 46.2**	**+0.7**
comp=Z,1.0nm,0.3s,mb3.8,baz=123,slow=10,SNR=2.9							
KURK	**Kurchatov**	**26.73**	**320**	*e*P	**P**	**17 06 45.3**	**-0.3**
comp=Z,2.3nm,0.7s,mb3.8							
BVAR	**Borovoye Array**	**32.32**	**320**	P	**P**	**17 07 34.6**	**-0.5**
comp=Z,0.5nm,0.5s,mb3.6,baz=108,slow=9.4,SNR=5.8							
BRVK	**Borovoye**	**32.39**	**320**	*e*P	**P**	**17 07 36.2**	**+0.5**
comp=Z,1.2nm,0.6s,mb3.9							
AKTK	**Aktyubinsk**	**38.94**	**311**	P	**P**	**17 08 31.9**	**-0.2**
AKTO	**Aktyubinsk**	**38.94**	**311**	P	**P**	**17 08 31.9**	**-0.2**
comp=Z,0.8nm,0.5s,mb3.7,baz=103,slow=13,SNR=4.1							
ARCES	**ARCESS Array B**	**56.32**	**335**	P	**P**	**17 10 47.0**	**+0.4**
comp=Z,7.4nm,1.1s,mb4.6,baz=78,slow=7.2,SNR=13							
FINES	**FINESS Array B**	**56.92**	**326**	P	**P**	**17 10 52.0**	**+1.0**
comp=Z,2.0nm,0.7s,mb4.3,baz=96,slow=10.0,SNR=4.2							
BRTR	**Keskin Array B**	**56.98**	**299**	P	**P**	**17 10 51.3**	**-0.6**
comp=Z,0.3nm,0.5s,mb3.6,baz=90,slow=8.6,SNR=2.9							
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**17 10 51.9**	**-1.1**
comp=Z,0.8nm,0.4s,mb4.1,baz=67,slow=7.1,SNR=3.6							
WRAB	**Tennant Creek**	**59.15**	**148**	*e*P	**P**	**17 11 08.2**	**+1.1**
comp=Z,5.2nm,1.0s,mb4.5							
WRA	**Warramunga Arr**	**59.15**	**148**	P	**P**	**17 11 06.9**	**-0.3**
comp=Z,1.1nm,0.8s,mb3.9,baz=340,slow=7.7,SNR=4.5							
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**17 11 27.4**	**-0.7**
comp=Z,0.6nm,0.9s,mb3.7,baz=334,slow=6.7,SNR=6.5							
NOA	**NORSAR Array B**	**63.97**	**327**	P	**P**	**17 11 37.3**	**-1.9**
comp=Z,1.3nm,0.9s,mb4.0,baz=68,slow=6.1,SNR=2.9							
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**17 12 00.0**	**-0.8**
comp=Z,0.9nm,0.9s,mb3.8,baz=93,slow=2.7,SNR=5.3							
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**17 12 24.9**	**-0.8**
comp=Z,3.9nm,0.8s,mb4.1							
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**17 12 36.7**	**+0.6**
comp=Z,6.7nm,0.7s,mb4.4							
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**17 12 36.6**	**+0.5**
comp=Z,8.4nm,0.9s,mb4.4							
SMF	**Signal de Mont**	**74.20**	**315**	*e*P	**P**	**17 12 42.6**	**-0.4**
comp=Z,2.5nm,0.6s,mb4.0							
TCF	**Toulx Ste Croi**	**75.35**	**316**	*e*P	**P**	**17 12 49.6**	**0.0**
comp=Z,2.7nm,0.7s,mb4.0							
CAF	**Calviac**	**76.16**	**315**	*e*P	**P**	**17 12 55.1**	**+0.8**
YKA	**Yellowknife Ar**	**79.86**	**18**	P	**P**	**17 13 14.7**	**+0.2**
comp=Z,0.5nm,0.5s,mb3.7,baz=326,slow=5.1,SNR=8.1							
YKA	**Yellowknife Ar**	**79.86**	**18**	P	**P**	**17 13 14.7**	**+0.2**

*IDC **12** 17:01:44.0±0.8, 30°.87N×103°.60E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/25, mbtmp3.8/11, MS3.8/8, Ms1 3.8/8, ms1mx3.3/36, Error ellipse: s-maj=36.6km s-min=15.8km az=55.0*
*NEIC **12** 17:01:45.7±0.5, 30°.81N×103°.50E, h10km, mb4.0/1, Error ellipse: s-maj=26.1km s-min=9.2km az=62.0*
*ISCJB **12** 17:01:46.4±1.0, 30°.79N±0°.07×103°.6E±0°.1, h30km±6km, mb3.7/10, MS3.8/3, Error ellipse: s-maj=16.2km s-min=11.7km az=5.4*
*BJI **12** 17:01:48.4, 30°.92N×103°.56E, h24km, mB4.9/2, mb4.3/4, ML4.0/6, Ms4.4/1, Ms7 4.0/1*
ISC 12 17:01:46.4±1.5, 30°.77N±0°.07×103°.5E±0°.1, h15km±8km, n17, σ0§78/17, mb3.7/10, MS3.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**60**	Pg	**Pg**	**17 01 52.0**	**-0.6**
CD2				Sg	**Sg**	**17 01 57.2**	**+0.4**
CD2				smax			
comp=N,29μm,0.6s							
HHC	**Hu-ho-hao-te**	**12.02**	**31**	*e*P	**Pn**	**17 04 37.7**	**+0.6**
HHC				pP		17 04 42.1	
HHC				PP		17 04 47.6	
HHC				S	**Sn**	**17 06 51.3**	**+0.5**
HHC				SS		17 07 04.9	
HHC				pmax	pmax		
comp=Z,17nm,1.0s							
HHC				pmax	pmax		
comp=Z,270nm,4.5s							
HHC				LR	LR		
comp=N,260nm,4.5s							
HHC				LR	LR		
comp=E,680nm,6.8s							
HHC				LR	LR		
comp=Z,370nm,5.8s							
SONM	**Songino Array**	**17.20**	**7**	Pn	**Pn**	**17 05 46.2**	**+0.2**
baz=182,slow=11,SNR=4.1							
KSRS	**Korea Array**	**21.29**	**65**	P	**P**	**17 06 30.0**	**-2.4**
comp=Z,0.8nm,0.6s,mb3.3,baz=247,slow=8.6,SNR=2.8							
MKAR	**Makanchi Array**	**22.88**	**320**	P	**P**	**17 06 50.2**	**+0.9**
comp=Z,0.6nm,0.6s,mb3.2,baz=128,slow=11,SNR=3.2							
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**17 07 25.4**	**-0.2**
comp=Z,3.1nm,0.7s,mb3.9,baz=135,slow=7.9,SNR=9.4							
KURK	**Kurchatov**	**27.19**	**324**	P	**P**	**17 07 28.8**	**-0.5**
comp=Z,1.0nm,0.2s,mb3.9,baz=127,slow=10.0,SNR=2.0							
KURK	**Kurchatov**	**27.19**	**324**	*e*P	**P**	**17 07 29.2**	**-0.1**
comp=Z,3.0nm,0.9s,mb3.8							
PETK	**Petropavlovsk-**	**44.82**	**44**	LR	LR	17 32 08.3	
comp=Z,141nm,18.2s,MS3.9,baz=243,slow=41							

WHN	**Wuhan**	**9.35**	**91**	P	**Pn**	**17 05 23.3 -2.9**
WHN				S	**Sn**	**17 07 03.9 -6.5**
WHN				LR	LR	
	comp=N,2μm,5.9s					
WHN				LR	LR	
	comp=E,6μm,6.4s					
WHN				LR	LR	
	comp=Z,7μm,7.4s					
LSA	**Lhasa**	**10.76**	**266**	P	**Pn**	**17 05 46.5 +0.9**
LSA				S	**Sn**	**17 07 50.4 +5.3**
LSA				LR	LR	
	comp=N,400nm,13.1s					
LSA				LR	LR	
	comp=E,2μm,13.1s					
LSA				LR	LR	
	comp=Z,2μm,11.2s					
LSA	**Lhasa**	**10.76**	**266**	*e*P	**Pn**	**17 05 46.9 +1.3**
LSA				pmax	pmax	
	comp=Z,22nm,0.8s					
LSA	**Lhasa**	**10.76**	**266**	*e*P	**Pn**	**17 05 46.9 +1.3**
	comp=Z,22nm,0.8s					
BTO	**Baotou**	**10.85**	**27**	*e*P	**Pn**	**17 05 53.6 +6.8**
SHL	**Shillong**	**11.62**	**245**	*e*P	**Pn**	**17 05 58.0 +0.6**
SHL				*i* x	x	17 09 21.0
HHC	**Hu-ho-hao-te**	**11.71**	**32**	*e*P	**Pn**	**17 05 59.1 +0.6**
HHC				pP		17 06 02.4
HHC				sP		17 06 08.8
HHC				S	**Sn**	**17 08 10.8 +2.5**
HHC				SS		17 08 24.0
HHC				pmax	pmax	
	comp=Z,18nm,1.1s					
HHC				pmax	pmax	
	comp=Z,250nm,4.6s					
HHC				LR	LR	
	comp=N,2μm,7.1s					
HHC				LR	LR	
	comp=E,1μm,3.6s					
HHC				LR	LR	
	comp=Z,2μm,7.3s					
TIA	**Tai'an**	**12.44**	**62**	*e*P	**Pn**	**17 06 08.0 -0.5**
CHTO	**Chiang Mai**	**12.91**	**200**	*e*P	**Pn**	**17 06 14.9 -0.2**
CHTO				pmax	pmax	
	comp=Z,38nm,0.7s					
CHTO	**Chiang Mai**	**12.91**	**200**	*e*P	**Pn**	**17 06 14.9 -0.2**
	comp=Z,38nm,0.7s					
NJ2	**Nanjing**	**13.13**	**82**	*e*P	**Pn**	**17 06 17.8 -0.2**
NJ2				pP		17 06 24.8
NJ2				PP		17 06 27.1
NJ2				sP		17 06 30.1
NJ2				S	**Sn**	**17 08 42.6 -0.5**
NJ2				sS		17 08 53.8
NJ2				pmax	pmax	
	comp=Z,30nm,0.6s					
NJ2				pmax	pmax	
	comp=Z,480nm,4.4s					
NJ2				LR	LR	
	comp=N,1μm,7.0s					
NJ2				LR	LR	
	comp=E,3μm,10.7s					
CM31	**Chiang Mai Arr**	**13.25**	**199**	*e*P	**Pn**	**17 06 20.8 +1.0**
	comp=E,40nm,0.6s					
CM31				*e*		17 06 30.5
CMAR	**Chiang Mai Arr**	**13.25**	**199**	Pn	**Pn**	**17 06 19.4 -0.3**
	comp=E,0.3nm,0.3s,baz=11,slow=12,SNR=17					
CMAR				LR	LR	17 11 45.6
	comp=E,426nm,19.1s,baz=220,slow=39					
QIZ	**Qiongzhong**	**13.32**	**153**	P	**Pn**	**17 06 20.6 0.0**
QIZ				S	**Sn**	**17 08 49.4 +1.5**
QIZ				pmax	pmax	
	comp=Z,34nm,1.8s					
QIZ				LR	LR	
	comp=N,990nm,7.8s					
QIZ				LR	LR	
	comp=Z,1μm,10.9s					
BJI	**Beijing**	**13.62**	**46**	P	**Pn**	**17 06 23.2 -1.5**
BJI				pmax	pmax	
	comp=Z,8.0nm,0.7s					
BJI				LR	LR	
	comp=N,1μm,9.7s					
BJI				LR	LR	
	comp=E,650nm,7.9s					
BJI				LR	LR	
	comp=Z,310nm,19.3s					
GUN	**Gumba**	**15.67**	**263**	*e*P	**Pn**	**17 06 50.2 -2.0**
	comp=Z,171nm,0.9s					
PKI	**Pulchoki**	**16.16**	**262**	*e*P	**Pn**	**17 06 56.3 -2.3**
	comp=Z,102nm,0.8s					
PKIN	**Phulchoki**	**16.17**	**262**	*e*P	**Pn**	**17 06 56.5 -2.2**
	comp=Z,210nm,0.7s					
KKN	**Kakani**	**16.21**	**263**	*e*P	**Pn**	**17 06 56.8 -2.4**
	comp=Z,129nm,0.8s					
DMN	**Daman**	**16.41**	**262**	*e*P	**Pn**	**17 06 59.4 -2.4**
	comp=Z,107nm,0.8s					
DL2	**Dalian**	**16.75**	**57**	P	**Pn**	**17 07 09.4 +3.4**
DL2				pmax	pmax	
	comp=Z,30nm,1.4s					
SONM	**Songino Array**	**16.86**	**7**	Pn	**Pn**	**17 07 06.9 -0.3**
	comp=Z,1.5nm,0.3s,baz=186,slow=11,SNR=18					
SONM				LR	LR	17 14 22.7
	comp=Z,870nm,18.5s,baz=102,slow=40					
ULN	**Ulaanbaatar**	**16.96**	**8**	*e*P	**Pn**	**17 07 08.7 +0.2**
ULN				pmax	pmax	
	comp=Z,17nm,0.9s					
ULN	**Ulaanbaatar**	**16.96**	**8**	*e*P	**Pn**	**17 07 08.7 +0.2**
	comp=Z,16nm,0.9s					
SSLB	**Suanglung**	**17.11**	**111**	*e*P	**Pn**	**17 07 08.0 -2.6**
	comp=Z,54nm,1.0s					
WMQ	**Urumqi**	**17.81**	**320**	P	**Pn**	**17 07 19.2 +0.1**
WMQ				PP		17 07 33.7
WMQ				S	**Sn**	**17 10 35.3 -1.5**
WMQ				SS		17 10 57.7
WMQ				pmax	pmax	
	comp=Z,26nm,1.0s					
WMQ				pmax	pmax	
	comp=Z,310nm,4.0s					
WMQ				LR	LR	
	comp=N,550nm,8.0s					
WMQ				LR	LR	
	comp=E,480nm,7.0s					
WMQ				LR	LR	
	comp=Z,370nm,23.0s					
INCN	**Inchon**	**20.12**	**65**	*e*P	**P**	**17 07 45.1 0.0**
	comp=Z,18nm,0.6s					
PTH	**Pithoragarh**	**20.16**	**272**	*e*P	**P**	**17 07 47.4 +1.9**
TLY	**Talaya**	**20.56**	**0**	*e*P	**P**	**17 07 51.0 +1.3**
TLY				*e*		17 08 07.5
TLY				pmax	pmax	
	comp=Z,7.0nm,0.9s					
TLY				MLR	MLR	
	comp=Z,773nm,16.0s,MS4.2					
MOY	**Mondy**	**20.63**	**356**	*e*P	**P**	**17 07 52.4 +1.9**
MOY				pmax	pmax	
	comp=Z,55nm,1.9s					
KSRS	**Korea Array**	**21.12**	**66**	P	**P**	**17 07 54.4 -1.6**
	comp=Z,30nm,0.7s,mb4.7,baz=246,slow=10,SNR=20					
KSRS				LR	LR	17 16 47.0
	comp=Z,166nm,20.0s,MS3.4,baz=1.4,slow=39					
KSRS	**Korea Array**	**21.12**	**66**	P	**P**	**17 07 54.4 -1.5**
KSRS				pmax	pmax	
	comp=Z,30nm,0.7s,mb4.7					
KSRS				MLR	MLR	
	comp=Z,166nm,20.0s,MS3.4					
IRK	**Irkutsk**	**21.13**	**1**	*e*P	**P**	**17 07 57.2 +1.3**
IRK				pmax	pmax	
	comp=Z,83nm,1.0s,mb5.0					
CN2	**Changchun**	**21.47**	**48**	*e*P	**P**	**17 08 02.2 +2.6**
CN2				*es*P	sP	17 08 09.0 -1.4
CN2				*e*S	**S**	**17 11 56.0 -0.2**
CN2				pmax	pmax	
	comp=Z,100nm,1.0s,mb5.1					
CN2				pmax	pmax	
	comp=Z,700nm,6.0s					
CN2				LR	LR	
	comp=N,800nm,13.0s,MS4.5					
CN2				LR	LR	
	comp=E,900nm,13.0s,MS4.5					
CN2				LR	LR	
	comp=Z,1μm,14.0s,MS4.4					
HIA	**Hailar**	**21.90**	**29**	*e*P	**P**	**17 08 05.1 +1.0**
HIA				pmax	pmax	
	comp=Z,16nm,0.8s					
HIA	**Hailar**	**21.90**	**29**	*e*P	**P**	**17 08 05.1 +1.0**
	comp=Z,16nm,0.8s,mb4.5					
CIT	**Chita**	**22.17**	**17**	*e*P	**P**	**17 08 08.8 +1.8**
AGRA	**Agra**	**22.63**	**267**	*e*P	**P**	**17 08 12.1 -0.1**
AGRA				AMb	AMB	17 08 13.9
	comp=Z,60nm,0.7s,mb5.1					
MK31	**Makanchi Array**	**22.64**	**320**	*e*P	**P**	**17 08 12.7 +0.6**
MK31				*e*		17 08 18.2
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**17 08 12.1 0.0**
	comp=Z,5.8nm,0.7s,mb4.1,baz=117,slow=12,SNR=25					
BISR	**Bishrakh**	**22.73**	**270**	*e*P	**P**	**17 08 13.5 +0.3**
NDI	**New Delhi**	**22.90**	**271**	*ex*	x	17 08 13.0
KKR	**Kurukshetra**	**22.99**	**274**	*e*P	**P**	**17 08 16.0 0.0**
AYAN	**Aya Nagar**	**23.02**	**270**	*e*P	**P**	**17 08 15.7 -0.5**
AYAN				AMb	AMB	17 08 22.6
	comp=Z,36nm,1.4s,mb4.6					
SONA	**Sohna**	**23.11**	**270**	*e*P	**P**	**17 08 16.3 -0.9**
SONA				AMb	AMB	17 08 17.7
	comp=Z,36nm,0.8s,mb4.9					
BHK	**Bhakra**	**23.14**	**278**	*e*P	**P**	**17 08 19.8 +2.3**
KSH	**Kashi**	**23.91**	**298**	*e*P	**P**	**17 08 28.7 +3.8**
KSH				*e*pP		17 08 32.7
KSH				*es*P	sP	17 08 35.6 -0.5
KSH				*e*PP		17 09 02.0
KSH				*e*PcP	PcP	17 12 09.6 +2.6
KSH				*e*S	**S**	**17 12 43.6 +4.0**
KSH				*e*ScP	ScP	17 15 46.6 +3.0
KSH				*e*PcS	PcS	17 15 48.0 +1.5
KSH				*e*ScS	ScS	17 19 32.6 +2.1
KSH				pmax	pmax	
	comp=Z,110nm,2.9s,mb4.8					
KSH				LR	LR	
	comp=N,290nm,10.1s					
KSH				LR	LR	
	comp=E,350nm,7.1s					
KHET	**Khetri**	**24.25**	**270**	*e*P	**P**	**17 08 26.9 -1.2**
KHET				AMb	AMB	17 08 38.4
	comp=Z,25nm,1.4s,mb4.5					
ULHL	**Ulahol**	**24.43**	**305**	P	**P**	**17 08 31.4 +1.9**
	SNR=9.7					
MDJ	**Mudanjiang**	**24.50**	**49**	P	**P**	**17 08 29.0 -1.2**
MDJ				S	**S**	**17 12 49.3 +0.4**
MDJ				sS	sS	17 12 54.5 -7.4
MDJ				ScP	ScP	17 15 46.6 +1.5
MDJ				PcS	PcS	17 15 48.0 +0.1
MDJ				pmax	pmax	
	comp=Z,220nm,7.2s					
MDJ				LR	LR	
	comp=Z,160nm,18.5s,MS3.5					
KZA	**Kyzart**	**25.08**	**304**	P	**P**	**17 08 38.0 +2.5**
	SNR=26					
TKM2	**Tokmak 2**	**25.09**	**306**	P	**P**	**17 08 36.9 +1.3**
	SNR=9.5					
TKM2	**Tokmak 2**	**25.09**	**306**	*e*P	**P**	**17 08 36.6 +1.0**
TKM2				pmax	pmax	
	comp=Z,18nm,1.1s,mb4.5					
TKM2	**Tokmak 2**	**25.09**	**306**	*e*P	**P**	**17 08 36.5 +0.9**
	comp=Z,18nm,1.1s,mb4.5					
KBK	**Karagaybulak**	**25.46**	**305**	P	**P**	**17 08 41.0 +2.0**
	SNR=10					
UCH	**Uchtor**	**25.65**	**304**	P	**P**	**17 08 42.9 +2.2**
	SNR=18					
UCH	**Uchtor**	**25.65**	**304**	*e*P	**P**	**17 08 42.5 +1.8**
	comp=Z,25nm,1.0s,mb4.7					
FRU	**Bishkek**	**25.75**	**305**	*e*P	**P**	**17 08 42.0 +0.4**
FRU				pmax	pmax	
	comp=Z,40nm,1.8s,mb4.7					
AAK	**Ala-Archa**	**25.78**	**305**	P	**P**	**17 08 45.3 +3.5**
	SNR=9.0					
AAK	**Ala-Archa**	**25.78**	**305**	P	**P**	**17 08 42.4 +0.6**
	comp=Z,6.4nm,0.8s,mb4.2,baz=117,slow=4.2,SNR=14					
AAK	**Ala-Archa**	**25.78**	**305***c*	*i*P	**P**	**17 08 43.3 +1.5**
AAK				pmax	pmax	
	comp=Z,15nm,1.7s,mb4.2					
AAK	**Ala-Archa**	**25.78**	**305**	*e*P	**P**	**17 08 43.0 +1.2**
	comp=Z,21nm,0.9s,mb4.7					
USP	**Ospenovka**	**25.96**	**306**	P	**P**	**17 08 44.6 +1.1**
	SNR=7.5					
AML	**Almayashu**	**26.21**	**303**	P	**P**	**17 08 47.6 +1.9**
	SNR=10					
AML	**Almayashu**	**26.21**	**303**	*e*P	**P**	**17 08 47.5 +1.7**
	comp=Z,26nm,1.2s,mb4.6					
EKS2	**Erkin-Say**	**26.29**	**304**	P	**P**	**17 08 48.0 +1.6**
	SNR=5.8					
EKS2	**Erkin-Say**	**26.29**	**304**	*e*P	**P**	**17 08 47.7 +1.2**
	comp=Z,15nm,1.1s,mb4.4					
ZAA0	**Zalesovo Array**	**26.50**	**335**	*e*P	**P**	**17 08 48.0 -0.2**
ZALV	**Zalesovo Beam**	**26.50**	**335**	P	**P**	**17 08 48.2 0.0**
	comp=Z,17nm,0.7s,mb4.7,baz=136,slow=9.2,SNR=38					
KURK	**Kurchatov**	**26.94**	**324**	P	**P**	**17 08 52.6 +0.3**
	comp=Z,21nm,0.8s,mb4.7,baz=129,slow=9.4,SNR=32					
KURK				PcP	PcP	17 12 12.7 -0.9
	comp=Z,2.8nm,0.6s,baz=116,slow=1.9,SNR=15					
KURK	**Kurchatov**	**26.94**	**324***ce*	P	**P**	**17 08 52.2 0.0**
KURK				pmax	pmax	
	comp=Z,34nm,1.2s,mb4.8					
KURK	**Kurchatov**	**26.94**	**324**	*e*P	**P**	**17 08 52.5 +0.2**
	comp=Z,43nm,1.0s,mb4.9					
BOD	**Bodaibo**	**27.68**	**12**	*e*P	**P**	**17 08 58.2 -0.5**
NVS	**Novosibirsk**	**27.78**	**335**	*e*P	**P**	**17 08 57.9 -1.8**
NVS				pmax	pmax	
	comp=Z,13nm,1.6s,mb4.3					
NVS				pmax	pmax	
	comp=N,11nm,1.7s					
NVS				pmax	pmax	
	comp=E,5.0nm,1.3s					
KLR	**Kul'dur**	**27.93**	**41**	*e*P	**P**	**17 09 00.0 -1.1**
KBL	**Kabul**	**29.08**	**286**	*e*P	**P**	**17 09 12.7 +1.2**
KBL				pmax	pmax	
	comp=Z,12nm,0.9s,mb4.6					
KBL	**Kabul**	**29.08**	**286**	*e*P	**P**	**17 09 12.7 +1.2**
	comp=Z,12nm,0.9s,mb4.6					
MAT	**Matsushiro**	**29.24**	**70**	P	**P**	**17 09 15.9 +3.0**
MJAR	**Matsushiro Arr**	**29.24**	**70**	P	**P**	**17 09 14.5 +1.6**
	comp=Z,2.2nm,0.9s,mb3.9,baz=206,slow=20,SNR=4.4					
MJAR				LR	LR	17 21 59.4
	comp=Z,165nm,19.9s,MS3.6,baz=265,slow=39					
DAV	**Davao City (W)**	**31.60**	**135**	LR	LR	17 23 43.8
	comp=Z,293nm,19.5s,MS4.0,baz=257,slow=39					
BVAR	**Borovoye Array**	**32.47**	**322**	P	**P**	**17 09 41.5 +0.3**
	comp=Z,3.6nm,0.6s,mb4.4,baz=117,slow=9.0,SNR=26					
BVAR				PcP	PcP	17 12 27.3 -0.5
	comp=Z,7.6nm,0.7s,baz=143,slow=3.7,SNR=21					
BRVK	**Borovoye**	**32.55**	**322***c*	*i*P	**P**	**17 09 42.2 +0.3**
BRVK				pmax	pmax	
	comp=Z,7.0nm,0.7s,mb4.7					
BRVK	**Borovoye**	**32.55**	**322**	*e*P	**P**	**17 09 42.0 +0.1**
	comp=Z,13nm,1.1s,mb4.8					
YSS	**Yuzh-Sakhalins**	**33.95**	**51**	*e*P	**P**	**17 09 56.0 +1.8**
YAK	**Yakutsk**	**35.29**	**21**	*e*P	**P**	**17 10 04.2 -1.4**
YAK				pmax	pmax	
	comp=Z,12nm,0.9s,mb4.8					
YAK				MLR	MLR	
	comp=Z,222nm,12.0s,MS4.1					
YAK				MLR	MLR	
	comp=N,81nm,8.0s					
YAK				MLR	MLR	
	comp=E,125nm,10.0s					
YAK	**Yakutsk**	**35.29**	**21**	*e*P	**P**	**17 10 04.7 -0.9**
	comp=E,17nm,0.8s,mb5.0					
ABKAR	**Akbulak array**	**37.29**	**312**	*e*P	**P**	**17 10 23.1 +0.3**
	comp=E,4.8nm,0.8s,mb4.4					
AKTK	**Aktyubinsk**	**38.76**	**313**	P	**P**	**17 10 35.3 +0.1**
AKTK				PcP	PcP	17 12 46.1 -0.3
AKTO	**Aktyubinsk**	**38.76**	**313**	P	**P**	**17 10 35.3 +0.1**
	comp=E,2.6nm,0.7s,mb4.1,baz=87,slow=14,SNR=8.0					
AKTO				PcP	PcP	17 12 46.1 -0.3
	comp=E,1.8nm,0.6s,baz=102,slow=6.8,SNR=4.1					
SVE	**Sverdlovsk**	**39.19**	**324⇑**	*e*P	**P**	**17 10 39.7 +1.0**
SVE				*e*S	**S**	**17 16 32.4 -4.7**
SVE				pmax	pmax	
	comp=Z,30nm,1.1s,mb4.9					
ARU	**Arti**	**40.12**	**322***c*	*i*P	**P**	**17 10 46.6 +0.2**
ARU				*e*		17 12 17.2
ARU				S	**S**	**17 16 51.6 +0.6**
ARU				SS	SS	17 19 48.8 0.0
ARU				pmax	pmax	
	comp=Z,30nm,1.2s,mb4.9					
ARU	**Arti**	**40.12**	**322**	*e*P	**P**	**17 10 46.5 0.0**
	comp=Z,24nm,1.0s,mb4.9					
TIXI	**Tiksi**	**42.86**	**12***c*	*i*P	**P**	**17 11 07.7 -1.0**
TIXI				pmax	pmax	
	comp=Z,14nm,0.9s,mb4.7					
TIXI				MLR	MLR	
	comp=Z,455nm,19.0s,MS4.4					
TIXI	**Tiksi**	**42.86**	**12**	*e*P	**P**	**17 11 07.6 -1.1**
	comp=Z,12nm,0.6s,mb4.8					
SEY	**Seymchan**	**44.35**	**30⇑**	*e*P	**P**	**17 11 20.5 -0.3**
PETK	**Petropavlovsk-**	**44.55**	**44**	P	**P**	**17 11 22.6 0.0**
	comp=Z,4.9nm,1.0s,mb4.3,baz=344,slow=2.5,SNR=6.8					
MIB	**Mutribah**	**47.98**	**284**	*e*P	**P**	**17 11 49.3 -0.6**
MIB				AMb	AMB	17 11 59.6
	comp=Z,36nm,1.0s,mb5.3					
RDF	**Al-Radifah**	**48.06**	**282**	*e*P	**P**	**17 11 50.5 0.0**
RDF				AMb	AMB	17 12 02.6
	comp=Z,51nm,1.3s,mb5.4					
ZEI	**Tsey**	**48.13**	**301**	*e*P	**P**	**17 11 49.0 -1.9**
ZEI				pmax	pmax	
	comp=Z,6.0nm,1.0s,mb4.6					
KIV	**Kislovodsk**	**48.88**	**303**	*e*P	**P**	**17 11 57.2 +0.6**
KIV				pmax	pmax	
	comp=Z,20nm,1.0s,mb5.1					
KIV				MLR	MLR	
	comp=Z,75nm,17.0s,MS3.8					
KIV	**Kislovodsk**	**48.88**	**303**	*e*P	**P**	**17 11 56.6 0.0**
	comp=Z,11nm,0.8s,mb5.0					
VRHR	**Novokhopersk**	**49.16**	**313**	*e*P	**P**	**17 11 58.5 -0.2**
VRHR				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb5.0					
VRHR				pmax	pmax	
	comp=N,9.0nm,0.4s					
VRHR				pmax	pmax	
	comp=E,40nm,0.9s					
VORD	**Divnogorie**	**50.64**	**313**	*e*P	**P**	**17 12 07.9 -2.0**
VORD				pmax	pmax	
	comp=Z,5.0nm,0.6s,mb4.6					
VORD				pmax	pmax	
	comp=N,6.0nm,1.0s					
VORD				pmax	pmax	
	comp=E,10.0nm,1.0s					
VSR	**Storozhevoye**	**50.71**	**313**	*e*P	**P**	**17 12 08.7 -1.7**
VSR				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.8					
VSR				pmax	pmax	
	comp=N,6.0nm,0.6s					
VSR				pmax	pmax	
	comp=E,9.0nm,0.5s					
KLMR	**Klimovskoe**	**50.77**	**325**	*e*P	**P**	**17 12 09.8 -0.9**
KLMR				pmax	pmax	
	comp=Z,35nm,1.2s,mb5.2					
BILL	**Bilibino**	**51.40**	**25***c*	*i*P	**P**	**17 12 14.8 -0.5**
BILL				*e**PP	pP	17 12 23.4 -0.2
BILL				pmax	pmax	
	comp=Z,30nm,1.7s,mb5.0					
MOS	**Moscow**	**51.52**	**319**	*e*P	**P**	**17 12 10.1 -6.3**
MOS				*e*		17 15 18.2
MOS				pmax	pmax	
	comp=Z,40nm,0.6s,mb5.5					
KAKA	**Kakadu**	**51.67**	**143**	*e*P	**P**	**17 12 16.3 -1.7**
	comp=Z,8.3nm,0.6s,mb4.8					
OBN	**Obninsk**	**52.13**	**318⇑**	*e*P	**P**	**17 12 20.7 -0.3**
OBN				*e**PP	pP	17 12 29.5 +0.2
OBN				pmax	pmax	
	comp=Z,31nm,1.7s,mb5.0					
FITZ	**Fitzroy Crossi**	**53.35**	**153**	*e*P	**P**	**17 12 29.9 -0.4**
	comp=Z,6.7nm,0.9s,mb4.6					
FITZ	**Fitzroy Crossi**	**53.35**	**153**	P	**P**	**17 12 29.4 -1.0**
	comp=Z,3.8nm,0.8s,mb4.4,baz=323,slow=6.9,SNR=7.8					
MBWA	**Marble Bar**	**54.25**	**161**	*e*P	**P**	**17 12 36.6 -0.2**
JOF	**Joensuu**	**54.75**	**328**	*e*P	**P**	**17 12 39.0 -1.1**
JOF				pmax	pmax	
	comp=Z,8.0nm,0.6s,mb4.9					
JOF	**Joensuu**	**54.75**	**328**	*e*p	**P**	**17 12 39.0 -1.1**
	comp=Z,7.8nm,0.6s,mb4.9					
BR131	**Keskin Array S**	**56.29**	**299**	*e*P	**P**	**17 12 51.5 0.0**
	comp=Z,0.7nm,0.6s,mb3.9					
BRTR	**Keskin Array B**	**56.29**	**299**	P	**P**	**17 12 50.7 -0.9**
	comp=Z,0.9nm,0.6s,mb4.0,baz=110,slow=6.7,SNR=7.9					
BRTR	**Keskin Array B**	**56.29**	**299***ce*	P	**P**	**17 12 51.5 -0.1**
BRTR				pmax	pmax	
	comp=Z,1.0nm,0.6s					
KEV	**Kevo**	**56.52**	**336**	*e*P	**P**	**17 12 50.3 -2.4**
KEV				pmax	pmax	
	comp=Z,15nm,0.8s,mb5.1					
KEV	**Kevo**	**56.52**	**336**	*e*p	**P**	**17 12 50.3 -2.4**
	comp=Z,15nm,0.8s,mb5.1					
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**17 12 55.7 -0.8**
	comp=Z,6.0nm,0.5s,mb4.9,baz=70,slow=6.7,SNR=15					
ARCES	**ARCESS Array B**	**57.05**	**336**	P	**P**	**17 12 56.0 -0.4**
	comp=Z,4.8nm,0.7s,mb4.6,baz=86,slow=7.7,SNR=13					
ARCES				PcP	PcP	17 13 50.8 -0.4
	comp=Z,5.5nm,0.7s,baz=69,slow=4.0,SNR=8.6					
ARE0	**ARCESS Array S**	**57.05**	**336**	*e*P	**P**	**17 12 55.9 -0.5**
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**17 12 57.0 -1.3**
	comp=Z,5.5nm,0.6s,mb4.7,baz=80,slow=7.1,SNR=13					
WRAB	**Tennant Creek**	**58.76**	**146**	*e*P	**P**	**17 13 09.0 0.0**
WRAB				pmax	pmax	
	comp=Z,38nm,0.9s,mb5.4					
WRAB	**Tennant Creek**	**58.76**	**146**	*e*P	**P**	**17 13 09.0 0.0**
	comp=Z,38nm,0.9s,mb5.4					
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**17 13 09.0 0.0**
	comp=Z,19nm,0.8s,mb5.2,baz=337,slow=7.5,SNR=14					
WB2	**Warramunga Arr**	**58.77**	**146**	*e*P	**P**	**17 13 09.3 +0.2**
COEN	**Coen**	**58.82**	**134**	*e*P	**P**	**17 13 09.4 -0.2**
VRI	**Vrincioaia**	**59.68**	**308**	*i*P	**P**	**17 13 15.6 +0.4**
VRI	**Vrincioaia**	**59.68**	**308**	*i*P	**P**	**17 13 15.6 +0.4**
PLOR	**Plostina**	**59.73**	**308**	*i*P	**P**	**17 13 14.7 -0.9**
PLOR	**Plostina**	**59.73**	**308**	*i*P	**P**	**17 13 14.6 -1.0**
BURAR	**Bucovina Array**	**60.24**	**310**	*i*P	**P**	**17 13 19.1 +0.1**
BURAR	**Bucovina Array**	**60.24**	**310**	*i*P	**P**	**17 13 19.0 0.0**
BUR08	**Bucovina Ar. S**	**60.24**	**310**	*e*P	**P**	**17 13 18.8 -0.2**
MLR	**Muntele Rosu**	**60.31**	**308**	*i*P	**P**	**17 13 21.1 +1.6**
MLR	**Muntele Rosu**	**60.31**	**308**	*i*P	**P**	**17 13 21.1 +1.6**
VOIR		**60.93**	**308**	*i*P	**P**	**17 13 24.2 +0.5**
VOIR		**60.93**	**308**	*i*P	**P**	**17 13 24.2 +0.5**
KWP	**Kalwaria Pacla**	**61.33**	**313**	*e*P	**P**	**17 13 26.8 +0.4**
KWP	**Kalwaria Pacla**	**61.33**	**313**	*e*P	**P**	**17 13 26.6 +0.2**
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**17 13 29.9 +0.3**
	comp=Z,5.8nm,0.8s,mb4.8,baz=333,slow=6.4,SNR=30					
KOLS	**Kolonicke sedl**	**61.79**	**312**	*e*P	**P**	**17 13 29.6 +0.1**
KOLS				pmax	pmax	
	comp=Z,4.0nm,1.0s,mb4.5					
KOLS	**Kolonicke sedl**	**61.79**	**312**	*e*P	**P**	**17 13 29.6 +0.1**
	comp=Z,4.3nm,1.0s,mb4.5					
KOLS	**Kolonicke sedl**	**61.79**	**312**	*e*P	**P**	**17 13 29.6 +0.1**
DRGR		**62.11**	**310**	*i*P	**P**	**17 13 25.5 -6.2**
DRGR		**62.11**	**310**	*i*P	**P**	**17 13 25.5 -6.2**
STHS	**Stebnicka Huta**	**62.31**	**313**	*e*P	**P**	**17 13 33.2 +0.2**
STHS				pmax	pmax	
	comp=Z,5.0nm,1.0s,mb4.6					
STHS	**Stebnicka Huta**	**62.31**	**313**	*e*P	**P**	**17 13 33.2 +0.2**
	comp=Z,4.8nm,1.0s,mb4.6					
STHS	**Stebnicka Huta**	**62.31**	**313**	*e*P	**P**	**17 13 33.2 +0.2**
OJC	**Ojcow**	**62.98**	**314**	*e*P	**P**	**17 13 37.4 0.0**
KECS	**Kecovo**	**63.05**	**312**	*e*P	**P**	**17 13 38.2 +0.2**
KECS				pmax	pmax	
	comp=Z,2.0nm,0.7s,mb4.4					
KECS	**Kecovo**	**63.05**	**312**	*e*P	**P**	**17 13 38.2 +0.2**
	comp=Z,1.9nm,0.7s,mb4.3					
KECS	**Kecovo**	**63.05**	**312**	*e*P	**P**	**17 13 38.2 +0.2**
BZS	**Buzias**	**63.18**	**309**	*i*P	**P**	**17 13 38.5 -0.4**
BZS	**Buzias**	**63.18**	**

CTA Charters Tower 65.39 135 P **P 17 13 53.2 -0.4**
comp=Z,7.0nm,0.7s,mb4.8,baz=327,slow=12,SNR=6.9
CTA Charters Tower 65.39 135 P **P 17 13 53.2 -0.4**
CTAO Charters Tower 65.39 135 *eP* **P 17 13 53.6 0.0**
FORT Forrest 65.81 157 *eP* **P 17 13 56.5 +0.4**
comp=Z,12nm,0.8s,mb5.0
TREC Trest 65.92 314 AMS AMS 17 43 40.0
comp=Z,200nm,12.8s
PVCC Panska Ves 66.05 316 *eP* **P 17 13 57.9 +0.4**
PVCC MLR MLR
comp=Z,300nm,20.2s,MS4.5
PVCC Panska Ves 66.05 316 *eP* **P 17 13 57.9 +0.4**
PVCC AMS AMS 17 43 50.0
comp=Z,300nm,20.2s
PRU Pruhonice 66.26 315 *eP* **P 17 13 59.6 +0.8**
PRU MLR MLR
comp=Z,200nm,14.1s,MS4.5
PRU Pruhonice 66.26 315 *eP* **P 17 13 59.6 +0.8**
PRU AMS AMS 17 44 00.0
comp=Z,200nm,14.1s
BRG Berggiesshubel 66.31 316 *eP* **P 17 13 59.0 -0.1**
comp=Z,7.8nm,0.8s,mb4.8
BRG Berggiesshubel 66.31 316 *eP* **P 17 13 59.0 -0.1**
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CLL Collm 66.70 317 ⇑*iP* **P 17 14 01.1 -0.6**
CLL *e* pP 17 14 08.0 -2.2
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CLL MLR MLR
comp=Z,200nm,20.5s,MS4.3
CLL Collm 66.70 317 ⇑*iP* **P 17 14 01.1 -0.6**
CLL *e* pP 17 14 08.0 -2.2
CLL Collm 66.70 317 ⇑*iP* **P 17 14 01.1 -0.6**
comp=Z,7.0nm,0.9s,mb4.7
CLL *e*pP pP 17 14 08.0 -2.2
CLL *e*PP PP 17 16 27.0 -1.4
SOKA Soboth 67.14 312 ⇑*iP* **P 17 14 04.4 -0.2**
comp=Z,9.1nm,1.0s,mb4.8
KHC Kasperske Hory 67.15 315 *eP* **P 17 14 04.6 0.0**
KHC MLR MLR
comp=Z,300nm,19.7s,MS4.5
KHC Kasperske Hory 67.15 315 *eP* **P 17 14 04.6 0.0**
KHC AMS AMS 17 44 30.0
comp=Z,300nm,19.7s
GEC2 GERESS Array S 67.18 314 *eP* **P 17 14 03.9 -0.8**
GEC2 pmax pmax
comp=Z,1μm,1.0s
GEC2 GERESS Array S 67.18 314 *eP* **P 17 14 03.9 -0.9**
comp=Z,1μm,1.0s
GERES GERESS Array B 67.18 314 P **P 17 14 04.8 +0.1**
comp=Z,3.3nm,0.7s,mb4.5,baz=64,slow=6.1,SNR=22
NKC Novy Kostel 67.42 316 *eP* **P 17 14 06.5 +0.2**
NKC MLR MLR
comp=Z,200nm,16.5s,MS4.4
NKC Novy Kostel 67.42 316 *eP* **P 17 14 06.5 +0.2**
NKC AMS AMS 17 44 40.0
comp=Z,200nm,16.5s
COLD Coldfoot 67.68 24 *eP* **P 17 14 07.4 -0.2**
comp=Z,16nm,0.8s,mb5.1
MOX Moxa 67.77 317 *eP* **P 17 14 08.1 -0.3**
comp=Z,11nm,1.5s,mb4.7
MOX Moxa 67.77 317 *eP* **P 17 14 08.1 -0.3**
MOX pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
MOX Moxa 67.77 317 *eP* **P 17 14 08.1 -0.3**
KBA Koelnbreinsper 68.06 313 ⇑*iP* **P 17 14 10.2 -0.1**
comp=Z,4.7nm,0.7s,mb4.7
GRA1 Grafenberg Arr 68.36 316 *eP* **P 17 14 12.7 +0.5**
comp=Z,13nm,1.4s,mb4.8
GRF Grafenberg Arr 68.36 316 *eP* **P 17 14 12.7 +0.5**
comp=Z,13nm,1.4s,mb4.8
GRF Grafenberg Arr 68.36 316 *eP* **P 17 14 12.7 +0.5**
GRF pmax pmax
comp=Z,13nm,1.4s,mb4.8
GRF Grafenberg Arr 68.36 316 *eP* **P 17 14 12.7 +0.5**
GRF pmax pmax
comp=Z,13nm,1.4s,mb4.8
CHUM Lake Minchumin 68.41 27 *eP* **P 17 14 12.7 +0.4**
comp=Z,10nm,0.5s,mb5.1
BPAW Bear Paw Mtn. 68.84 27 *eP* **P 17 14 14.4 -0.5**
comp=Z,2μm,0.6s
PPLA Purkeypile 68.91 28 *eP* **P 17 14 15.6 +0.2**
comp=Z,27nm,0.6s,mb5.4
WTTA Wattenberg 69.06 313 ⇑*iP* **P 17 14 16.4 -0.2**
comp=Z,4.7nm,0.5s,mb4.7
COLA College 69.65 26 *eP* **P 17 14 19.8 -0.1**
COLA pmax pmax
comp=Z,29nm,0.8s,mb5.3
COLA College 69.65 26 *eP* **P 17 14 19.8 -0.1**
comp=Z,29nm,0.8s,mb5.3
FETA Feichten 69.73 313 ⇑*iP* **P 17 14 20.4 -0.3**
comp=Z,9.3nm,1.0s,mb4.7
KMBO Kilima Mbogo 70.40 256 P **P 17 14 24.6 -0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=44,slow=14,SNR=6.7
BFO Black Forest 70.66 315 *eP* **P 17 14 25.9 -0.5**
BFO pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
BFO Black Forest 70.66 315 *eP* **P 17 14 25.9 -0.5**
comp=Z,10nm,1.3s,mb4.6
MEM Membach 71.04 318 P **P 17 14 28.8 +0.1**
KDAK Kodiak Island 71.12 33 LR LR 17 52 14.5
comp=Z,134nm,18.0s,MS4.2,slow=41
KDAK Kodiak Island 71.12 33 *i*P **P 17 14 28.7 -0.3**
CDF Champ du Feu 71.26 316 ⇑*iP* **P 17 14 29.7 -0.3**
comp=Z,10nm,0.6s,mb4.7
WLF Walferdange 71.37 317 P **P 17 14 31.5 +0.8**
comp=Z,15nm,1.2s,mb4.8
WLF Walferdange 71.37 317 *eP* **P 17 14 31.2 +0.5**
WLF pmax pmax
comp=Z,29nm,1.1s,mb5.1
WLF Walferdange 71.37 317 *eP* **P 17 14 31.2 +0.5**
comp=Z,29nm,1.1s,mb5.1
BCLA Clavier 71.53 318 P **P 17 14 30.9 -0.7**
SNF Seneffe 72.07 319 P **P 17 14 35.1 +0.2**
DOU Dourbes 72.08 318 P **P 17 14 35.2 +0.2**
MENT Mentasta 72.23 26 *eP* **P 17 14 35.7 +0.1**
STKA Stephens Creek 72.29 147 ⇑*iP* **P 17 14 36.2 -0.1**
comp=Z,6.5nm,0.6s,mb4.7
STKA Stephens Creek 72.29 147 P **P 17 14 36.4 +0.1**
comp=Z,8.4nm,0.6s,mb4.9,baz=330,slow=5.8,SNR=33
STKA Stephens Creek 72.29 147 *eP* **P 17 14 36.1 -0.1**
comp=Z,1.6nm,0.8s,mb4.0
INK Inuvik 72.33 19 *eP* **P 17 14 35.5 -0.6**
INK pmax pmax
comp=Z,21nm,1.1s
INK Inuvik 72.33 19 *eP* **P 17 14 35.5 -0.6**
comp=Z,21nm,1.1s,mb5.0
LPG La Plagne 72.87 313 ⇑*iP* **P 17 14 40.4 +0.6**
comp=Z,33nm,0.7s,mb5.1
BMRM Bremner River 72.98 28 *eP* **P 17 14 40.2 +0.1**
comp=Z,19nm,0.7s,mb5.1
DAWY Dawson 73.16 24 *eP* **P 17 14 40.6 -0.5**
RES Resolute Bay 73.79 5 *eP* **P 17 14 44.1 -0.6**
RES pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
RES Resolute Bay 73.79 5 *eP* **P 17 14 44.1 -0.6**
comp=Z,4.9nm,1.0s,mb4.4
SMF Signal de Mont 74.13 315 ⇑*iP* **P 17 14 46.7 -0.5**
comp=Z,21nm,0.8s,mb4.8
TCF Toulx Ste Croi 75.29 315 ⇑*iP* **P 17 14 53.7 -0.2**
comp=Z,19nm,1.0s,mb4.7
CAF Calviac 76.06 314 ⇑*iP* **P 17 14 58.6 +0.3**
comp=Z,12nm,0.8s,mb4.6
TOO Toulangi 78.78 147 *eP* **P 17 15 14.1 +0.7**
YKA Yellowknife Ar 81.84 17 P **P 17 15 29.3 -0.4**
comp=Z,3.9nm,0.7s,mb4.5,baz=329,slow=5.2,SNR=41
YKA PKKPbc PKKPbc 17 33 57.7 -3.2
comp=Z,0.3nm,0.5s,baz=160,slow=1.8,SNR=8.8
YKA Yellowknife Ar 81.84 17 P **P 17 15 29.3 -0.4**
YKA PKKPbc PKKPbc 17 33 57.7 -3.2
ESDC Sonseca Array 82.64 312 P **P 17 15 33.7 -0.6**
comp=Z,0.5nm,0.4s,mb3.9,baz=117,slow=3.2,SNR=5.2
ESDC Sonseca Array 82.64 312 P **P 17 15 33.7 -0.6**
EDM Edmonton 90.12 21 *eP* **P 17 16 11.3 +0.6**
FFC Flin Flon 91.75 14 *eP* **P 17 16 17.7 -0.6**
FFC pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
FFC Flin Flon 91.75 14 *eP* **P 17 16 17.6 -0.6**
comp=Z,6.3nm,0.8s,mb5.0
TORD Torodi Ar. Bea 93.14 287 P **P 17 16 23.8 -1.7**
comp=Z,1.7nm,0.9s,mb4.5,baz=57,slow=3.2,SNR=9.1
TORD Torodi Ar. Bea 93.14 287 P **P 17 16 23.8 -1.7**
SCHQ Schefferville 94.01 354 P **P 17 16 28.6 -0.2**
comp=Z,4.5nm,0.7s,mb5.0,baz=26,slow=8.8,SNR=7.3
PDAR Pinedale Array 100.47 24 PP PP 17 21 05.0 +1.2
comp=Z,0.5nm,0.9s,baz=317,slow=8.1,SNR=3.9
TXAR Lajitas Array 114.57 26 PKP PKiKP 17 21 50.2 -1.1
comp=Z,0.8nm,0.6s,baz=190,slow=0.7,SNR=12
TXAR PP PP 17 22 49.7 +2.5
comp=Z,0.5nm,0.9s,baz=328,slow=4.4,SNR=4.0
TXAR PKKPbc PKKPbc 17 32 27.5 -1.9
comp=Z,0.6nm,0.8s,baz=157,slow=6.8,SNR=6.8
ROSC El Rosal 144.18 356 PKP PKPdf 17 22 46.0 -1.4
comp=Z,16nm,0.6s,baz=103,slow=23,SNR=5.9
OTAV Otavalo 148.78 4 *e*PKPdf PKPdf 17 22 55.5 +0.3
CPUP Villa Florida 162.53 281 PKP PKPdf 17 23 11.1 -1.9
comp=Z,0.3nm,0.3s,baz=288,slow=20,SNR=2.9
LPAZ La Paz 163.39 331 PKP PKPdf 17 23 14.0 0.0
comp=Z,1.2nm,0.6s,baz=349,slow=3.1,SNR=3.9
LPAZ La Paz 163.39 331 PKP PKPdf 17 23 14.0 0.0
PLCA Paso Flores 169.25 205 PKP PKPdf 17 23 17.4 -0.5
comp=Z,1.5nm,0.9s,baz=23,slow=15,SNR=3.7
PLCA PKPab PKPab 17 24 28.9 -1.2
comp=Z,4.0nm,0.8s,baz=164,slow=5.1,SNR=10
PLCA Paso Flores 169.25 205 PKP PKPdf 17 23 17.4 -0.5
PLCA PKPab PKPab 17 24 28.9 -1.2

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*ISCJB **12** 17:07:49.3±0.4, 31°.24N±0°.04×103°.68E±0°.09, h10km, mb4.3/16, Error ellipse: s-maj=11.6km s-min=5.2km az=178.3*
*IDC **12** 17:07:49.4±0.7, 31°.14N×103°.61E, h0km, mb4.2/12, mb1 4.2/14, mb1mx4.1/26, mbtmp4.1/14, ML3.8/1, Error ellipse: s-maj=28.0km s-min=14.2km az=57.0*
*NEIC **12** 17:07:52.5±3.9, 31°.15N×103°.59E, h20km±28km, mb4.5/2, Error ellipse: s-maj=17.2km s-min=7.7km az=72.0*
*BJI **12** 17:07:53.0, 31°.13N×103°.93E, h20km, mB4.9/4, mb4.5/7, ML4.2/7, Ms4.3/1, Ms7 4.3/1*
ISC 12 17:07:51.6±0.4, 31°.23N±0°.03×103°.55E±0°.08, h10km, n28, σ1900/31, mb4.3/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**151**	Pg	**Pg**	**17 07 59.8**	**+1.0**
CD2				Sg	**Sg**	**17 08 05.6**	**+2.0**
CD2				smax			
	comp=N,23μm,0.6s						
LZH	**Lanzhou**	**4.86**	**3**	*e*Pg	**Pg**	**17 09 24.7**	**+0.1**
LZH				Sg	**Sg**	**17 10 28.7**	**+1.2**
LZH				smax			
	comp=N,110nm,0.8s						
LZH				smax			
	comp=E,110nm,0.7s						
KMI	**Kunming**	**6.12**	**187**	Pn	**Pn**	**17 09 30.6**	**+8.4**
KMI				Sn	**Sn**	**17 10 33.3**	**+1.1**
KMI				smax			
	comp=N,76nm,0.9s						
KMI				smax			
	comp=E,89nm,0.8s						
KMI				LR	LR		
	comp=N,550nm,10.5s						
KMI				LR	LR		
	comp=E,2μm,10.8s						
KMI				LR	LR		
	comp=Z,620nm,10.5s						
CMAR	**Chiang Mai Arr**	**13.38**	**199**	Pn	**Pn**	**17 10 59.9**	**-1.8**
	baz=22,slow=9.7,SNR=2.9						
SONM	**Songino Array**	**16.73**	**7**	Pn	**Pn**	**17 11 47.0**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=189,slow=11,SNR=5.2						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**17 12 35.0**	**-0.6**
	comp=Z,12nm,0.7s,mb4.4,baz=261,slow=10,SNR=33						
CN2	**Changchun**	**21.36**	**48**	*e*P	**P**	**17 12 39.1**	**+0.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MK31	**Makanchi Array**	**22.58**	**320**	*e*P	**P**	**17 12 51.5**	**-0.5**
MKAR	**Makanchi Array**	**22.58**	**320**	P	**P**	**17 12 53.6**	**+1.6**
	comp=Z,5.4nm,1.0s,mb3.9,baz=127,slow=10,SNR=5.4						
KSH	**Kashi**	**23.89**	**298**	P	**P**	**17 13 10.2**	**+4.7**
KSH				pmax	pmax		
	comp=Z,220nm,7.8s						
ZAA0	**Zalesovo Array**	**26.41**	**335**	*e*P	**P**	**17 13 28.1**	**-0.1**
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**17 13 29.0**	**+0.9**
	comp=Z,4.8nm,0.8s,mb4.1,baz=134,slow=8.5,SNR=6.2						
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**17 13 29.0**	**+0.9**
KURK	**Kurchatov**	**26.87**	**324**	P	**P**	**17 13 33.5**	**+1.1**
	comp=Z,4.5nm,0.8s,mb4.0,baz=129,slow=9.3,SNR=6.1						
BVAR	**Borovoye Array**	**32.40**	**322**	P	**P**	**17 14 20.6**	**-0.8**
	comp=Z,0.6nm,0.6s,mb3.6,baz=134,slow=14,SNR=2.7						
TIXI	**Tiksi**	**42.73**	**12**	*e*P	**P**	**17 15 47.2**	**-1.3**
	comp=Z,1.6nm,0.5s,mb4.0						
MIB	**Mutribah**	**48.00**	**284**	*e*P	**P**	**17 16 31.2**	**+0.3**
MIB				AMb	AMB	17 16 32.1	
	comp=Z,19nm,0.9s,mb5.1						
RDF	**Al-Radifah**	**48.08**	**282**	*e*P	**P**	**17 16 32.2**	**+0.7**
RDF				AMb	AMB	17 16 32.9	
	comp=Z,23nm,0.9s,mb5.2						
BRTR	**Keskin Array B**	**56.27**	**299**	P	**P**	**17 17 32.1**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=97,slow=6.1,SNR=4.1						
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**17 17 35.5**	**-1.3**
	comp=Z,3.7nm,0.9s,mb4.4,baz=72,slow=5.8,SNR=3.8						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**17 17 49.7**	**-0.8**
	comp=Z,9.4nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**17 17 49.8**	**-0.7**
	comp=Z,4.7nm,0.6s,mb4.7,baz=338,slow=7.8,SNR=33						
WB2	**Warramunga Arr**	**58.84**	**146**	*e*P	**P**	**17 17 49.6**	**-1.0**
ASAR	**Alice Springs**	**61.84**	**148**	P	**P**	**17 18 10.4**	**-0.5**
	comp=Z,1.7nm,0.7s,mb4.3,baz=338,slow=6.7,SNR=13						
STKA	**Stephens Creek**	**72.37**	**147**	*e*P	**P**	**17 19 14.1**	**-3.6**
	comp=Z,1.3nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**17 19 14.9**	**-2.8**
	comp=Z,1.8nm,0.5s,mb4.2,baz=318,slow=4.3,SNR=7.8						
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**17 20 09.3**	**-0.7**
	comp=Z,1.4nm,0.6s,mb4.0,baz=330,slow=5.2,SNR=14						
TORD	**Torodi Ar. Bea**	**93.15**	**287**	P	**P**	**17 21 06.9**	**+0.4**
	comp=Z,0.5nm,0.8s,mb4.0,baz=54,slow=4.2,SNR=2.7						

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*ISCJB **12** 17:08:17.9±0.6, 30°.83N±0°.09×103°.25E±0°.06, h10km, mb4.0/10, Error ellipse: s-maj=13.5km s-min=7.2km az=173.4*
*IDC **12** 17:08:17.9±0.8, 30°.87N×103°.39E, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.0/26, mbtmp4.1/11, ML4.0/1, Error ellipse: s-maj=27.3km s-min=18.1km az=51.0*
*NEIC **12** 17:08:19.6±0.9, 30°.92N×103°.42E, h10km, mb4.1/1, Error ellipse: s-maj=27.0km s-min=13.9km az=81.0*
ISC 12 17:08:20.0±0.6, 30°.90N±0°.09×103°.31E±0°.06, h10km, n15, σ0998/16, mb4.0/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**89**	Pg	**Pg**	**17 08 27.7**	**+0.1**
CD2				Sg	**Sg**	**17 08 33.8**	**+1.0**
CD2				smax			
	comp=N,35μm,0.6s						
CMAR	**Chiang Mai Arr**	**13.01**	**199**	Pn	**Pn**	**17 11 26.1**	**+1.2**
	comp=N,0.2nm,0.3s,baz=17,slow=10,SNR=6.7						
KSRS	**Korea Array**	**21.36**	**66**	P	**P**	**17 13 05.9**	**-1.5**
	comp=N,5.6nm,0.6s,mb4.0,baz=247,slow=9.8,SNR=6.4						
AAK	**Ala-Archa**	**25.75**	**305**	P	**P**	**17 13 52.7**	**+2.0**
	comp=N,1.4nm,0.5s,mb3.7,baz=90,slow=7.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.61**	**335**	P	**P**	**17 13 59.1**	**+0.8**
	comp=N,3.0nm,0.7s,mb3.9,baz=134,slow=9.2,SNR=3.7						
KURK	**Kurchatov**	**27.00**	**324**	P	**P**	**17 14 02.8**	**+0.9**
	comp=N,3.8nm,0.7s,mb4.1,baz=129,slow=9.4,SNR=5.3						
KURK	**Kurchatov**	**27.00**	**324**	*e*P	**P**	**17 14 02.5**	**+0.6**
	comp=N,4.3nm,0.9s,mb4.0						
BRTR	**Keskin Array B**	**56.24**	**300**	P	**P**	**17 18 00.2**	**-0.3**
	comp=N,0.9nm,0.7s,mb3.9,baz=90,slow=7.4,SNR=3.9						
WRA	**Warramunga Arr**	**58.69**	**145**	P	**P**	**17 18 17.4**	**-0.5**
	comp=N,4.7nm,0.9s,mb4.5,baz=338,slow=7.7,SNR=3.5						
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**17 18 37.5**	**-0.7**
	comp=N,0.7nm,0.5s,mb4.0,baz=333,slow=6.6,SNR=4.4						
NB2	**NORSAR Subarra**	**64.46**	**327**	P	**P**	**17 18 55.2**	**-1.1**
	comp=Z,0.3nm,0.7s,mb3.4,baz=76,slow=6.9						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**17 18 55.4**	**-0.9**
	comp=Z,1.7nm,0.7s,mb4.2,baz=73,slow=6.5,SNR=4.7						
KMBO	**Kilima Mbogo**	**70.19**	**256**	P	**P**	**17 19 32.3**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=43,slow=15,SNR=4.3						
YKA	**Yellowknife Ar**	**82.08**	**17**	P	**P**	**17 20 39.7**	**-0.5**
	comp=Z,1.1nm,0.6s,mb4.0,baz=330,slow=5.2,SNR=7.2						
YKA	**Yellowknife Ar**	**82.08**	**17**	P	**P**	**17 20 39.7**	**-0.5**

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*ISCJB **12** 17:11:60.0±0.7, 31°.22N±0°.07×104°.14E±0°.10, h10km, mb3.8/8, Error ellipse: s-maj=13.4km s-min=8.0km az=36.8*
*IDC **12** 17:12:00.6±0.9, 31°.29N×104°.07E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/25, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=51.8km s-min=17.2km az=61.0*
*NEIC **12** 17:12:01.7±0.6, 31°.27N×104°.14E, h10km, mb4.6/1, Error ellipse: s-maj=25.4km s-min=11.7km az=68.0*
ISC 12 17:12:01.9±0.7, 31°.24N±0°.06×104°.0E±0°.1, h10km, n11, σ0878/12, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**217**	Pg	**Pg**	**17 12 09.4**	**-0.5**
CD2				Sg	**Sg**	**17 12 15.2**	**0.0**
CD2				smax			
	comp=N,9μm,0.7s						
CMAR	**Chiang Mai Arr**	**13.53**	**201**	Pn	**Pn**	**17 15 14.9**	**+0.9**
	comp=N,0.1nm,0.3s,baz=7.8,slow=8.9,SNR=3.2						
MKAR	**Makanchi Array**	**22.84**	**319**	P	**P**	**17 17 05.0**	**-0.1**
	comp=N,0.5nm,0.7s,mb3.1,baz=114,slow=12,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.58**	**334**	P	**P**	**17 17 40.3**	**+0.3**
	comp=N,0.7nm,0.5s,mb3.5,baz=147,slow=11,SNR=3.0						
KURK	**Kurchatov**	**27.11**	**323**	P	**P**	**17 17 44.5**	**-0.3**
	comp=N,0.9nm,0.2s,mb3.9,baz=128,slow=9.4,SNR=2.3						
WRAB	**Tennant Creek**	**58.61**	**146**	*e*P	**P**	**17 21 56.4**	**-2.8**
	comp=N,4.3nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**58.61**	**146**	P	**P**	**17 21 59.9**	**+0.7**
	comp=N,2.9nm,0.6s,mb4.5,baz=338,slow=7.8,SNR=19						
WB2	**Warramunga Arr**	**58.62**	**146**	*e*P	**P**	**17 21 58.6**	**-0.6**
ASAR	**Alice Springs**	**61.63**	**149**	P	**P**	**17 22 20.9**	**+1.0**
	comp=N,0.5nm,0.8s,mb3.7,baz=336,slow=6.4,SNR=4.5						
STKA	**Stephens Creek**	**72.15**	**147**	P	**P**	**17 23 26.6**	**-0.1**
	comp=N,0.5nm,0.6s,mb3.6,baz=15,slow=13,SNR=3.1						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**17 24 19.6**	**+0.1**
	comp=N,0.4nm,0.6s,mb3.6,baz=329,slow=5.6,SNR=5.1						

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*ISCJB **12** 17:13:29.7±0.6, 31°.58N±0°.04×104°.1E±0°.1, h10km, mb3.6/6, Error ellipse: s-maj=15.3km s-min=5.4km az=9.1*
*IDC **12** 17:13:29.9±1.1, 31°.55N×103°.99E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/25, mbtmp3.4/6, Error ellipse: s-maj=57.0km s-min=20.1km az=63.0*
*NEIC **12** 17:13:31.4±0.7, 31°.57N×104°.00E, h10km, mb4.1/1, Error ellipse: s-maj=25.2km s-min=12.4km az=72.0*
*BJI **12** 17:13:32.9, 31°.61N×104°.18E, h21km, mb4.2/1, ML3.8/4*
ISC 12 17:13:32.1±0.6, 31°.52N±0°.04×104°.1E±0°.1, h10km, n12, σ0982/14, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**204**	Pg	**Pg**	**17 13 46.2**	**+1.3**
CD2				Sg	**Sg**	**17 13 53.4**	**-0.2**
CD2				smax			
	comp=N,4μm,0.7s						
LZH	**Lanzhou**	**4.56**	**358**	*e*Pg	**Pg**	**17 15 08.4**	**+8.9**
LZH				Sg	**Sg**	**17 15 59.2**	**+0.5**
LZH				smax			
	comp=N,66nm,1.0s						
LZH				smax			
	comp=E,70nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.80**	**201**	Pn	**Pn**	**17 16 48.0**	**+0.1**
	baz=11,slow=10,SNR=2.8						
CN2	**Changchun**	**20.83**	**48**	*e*P	**P**	**17 18 14.6**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**17 18 30.3**	**-3.0**
	comp=Z,0.8nm,0.8s,mb3.2,baz=129,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.34**	**334**	P	**P**	**17 19 08.3**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.4,baz=129,slow=11,SNR=2.6						
WRAB	**Tennant Creek**	**58.82**	**146**	P	**P**	**17 23 30.3**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**58.83**	**146**	P	**P**	**17 23 31.1**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=340,slow=7.6,SNR=4.3						
WB2	**Warramunga Arr**	**58.83**	**146**	*e*P	**P**	**17 23 30.9**	**0.0**
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**17 23 51.1**	**-0.5**
	comp=Z,0.4nm,1.0s,mb3.5,baz=333,slow=6.2,SNR=2.9						
YKA	**Yellowknife Ar**	**81.31**	**17**	P	**P**	**17 25 47.5**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.2,SNR=3.7						
YKA	**Yellowknife Ar**	**81.31**	**17**	P	**P**	**17 25 47.5**	**-0.8**

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*ISCJB **12** 17:14:26.4±0.5, 31°.78N±0°.05×104°.48E±0°.10, h10km, mb4.0/16, Error ellipse: s-maj=12.2km s-min=6.9km az=172.0*
*BJI **12** 17:14:26.9, 31°.38N×104°.79E, h25km, mb4.4/1, ML3.6/3*
*IDC **12** 17:14:27.0±0.8, 31°.82N×104°.42E, h0km, mb3.8/14, mb1 3.9/16, mb1mx3.9/29, mbtmp3.8/16, ML3.7/1, Error ellipse: s-maj=30.2km s-min=16.4km az=52.0*
*NEIC **12** 17:14:30.8±3.1, 31°.79N×104°.38E, h25km±23km, mb4.3/2, Error ellipse: s-maj=13.5km s-min=7.5km az=71.0*
ISC 12 17:14:28.5±0.5, 31°.76N±0°.06×104°.47E±0°.10, h10km, n33, σ0986/33, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.34**	**353**	Sg	**Sg**	**17 16 50.3**	**+2.3**
LZH				smax			
	comp=N,66nm,0.6s						
LZH				smax			
	comp=E,120nm,1.1s						
LSA	**Lhasa**	**11.64**	**263**	*e*P	**Pn**	**17 17 15.5**	**+0.8**
	comp=E,3.3nm,0.6s						
CM31	**Chiang Mai Arr**	**14.16**	**202**	*e*P	**Pn**	**17 17 56.5**	**+7.4**
	comp=E,5.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.16**	**202**	Pn	**Pn**	**17 17 48.9**	**-0.2**
	baz=6.7,slow=9.3,SNR=3.1						
SONM	**Songino Array**	**16.12**	**5**	Pn	**Pn**	**17 18 14.9**	**-0.2**
	comp=E,0.3nm,0.3s,baz=186,slow=12,SNR=3.2						
KSRS	**Korea Array**	**20.10**	**67**	P	**P**	**17 19 01.6**	**-0.6**
	comp=E,4.2nm,1.0s,baz=256,slow=11,SNR=6.8						
MK31	**Makanchi Array**	**22.69**	**318**	*e*P	**P**	**17 19 30.1**	**0.0**
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**17 19 30.3**	**+0.2**
	comp=E,0.8nm,0.5s,mb3.4,baz=120,slow=11,SNR=5.4						
KSH	**Kashi**	**24.35**	**296**	P	**P**	**17 19 49.3**	**+2.9**
KSH				pmax	pmax		
	comp=Z,170nm,5.7s						
ZALV	**Zalesovo Beam**	**26.27**	**333**	P	**P**	**17 20 04.0**	**+0.2**
	comp=Z,2.6nm,0.6s,mb3.9,baz=130,slow=9.2,SNR=8.6						
ZALV	**Zalesovo Beam**	**26.27**	**333**	P	**P**	**17 20 04.0**	**+0.2**
KURK	**Kurchatov**	**26.91**	**322**	P	**P**	**17 20 09.8**	**+0.2**
	comp=Z,0.7nm,0.4s,mb3.5,baz=130,slow=8.6,SNR=4.6						
KURK	**Kurchatov**	**26.91**	**322**	P	**P**	**17 20 09.8**	**+0.2**
BVAR	**Borovoye Array**	**32.47**	**321**	P	**P**	**17 20 58.0**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.7,baz=116,slow=9.1,SNR=6.4						
AKTK	**Aktyubinsk**	**38.92**	**312**	P	**P**	**17 21 54.5**	**+0.3**
AKTO	**Aktyubinsk**	**38.92**	**312**	P	**P**	**17 21 54.5**	**+0.3**
	comp=Z,1.1nm,0.6s,mb3.8,baz=110,slow=12,SNR=4.1						
BR131	**Keskin Array S**	**56.69**	**299**	*e*P	**P**	**

0.3nm,0.5s,baz=128,slow=9.3,SNR=3.3
WRA Warramunga Arr 58.61 147 P P 17 27 43.8 0.0
0.3nm,0.5s,baz=338,slow=7.8,SNR=4.8

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*ISCJB **12** 17:20:51.0±0.6,31°.38N±0°.05×104°.04E±0°.09,h10km, mb3.7/7, Error ellipse: s-maj=11.6km s-min=7.0km az=22.1*
*IDC **12** 17:20:51.3±0.9,31°.29N×103°.88E,h0km,mb3.5/7, mb1 3.7/7,mb1mx3.5/24,mbtmp3.6/7, Error ellipse: s-maj=44.6km s-min=17.7km az=55.0*
*NEIC **12** 17:20:54.0±0.7,31°.49N×104°.17E,h10km,mb4.4/2, Error ellipse: s-maj=16.7km s-min=11.5km az=59.0*
*BJI **12** 17:20:55.8,30°.80N×103°.41E,h10km,ML3.7/9,Ms3.8/1*
ISC 12 17:20:52.7±0.6,31°.34N±0°.05×103°.99E±0°.09,h10km,n17, σ1°.20/20,mb3.7/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**205**	Pg	**Pg**	**17 21 02.2**	**+0.4**
CD2				Sg	**Sg**	**17 21 08.4**	**+0.4**
CD2				smax			
	comp=N,22μm,0.6s						
LZH	**Lanzhou**	**4.74**	**359**	*e*Pg	**Pn**	**17 21 59.7**	**-4.5**
LZH				Sg	**Sn**	**17 22 45.7**	**-14**
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,160nm,0.7s						
ENH	**Enshi**	**4.85**	**101**	*e*Pn	**Pn**	**17 22 05.7**	**+0.1**
KMI	**Kunming**	**6.29**	**190**	Pn	**Pn**	**17 22 22.1**	**-3.4**
KMI				Sn	**Sn**	**17 23 24.0**	**-13**
KMI				smax			
	comp=N,39nm,0.8s						
KMI				smax			
	comp=E,22nm,0.9s						
KMI				LR	LR		
	comp=N,370nm,7.4s						
KMI				LR	LR		
	comp=E,920nm,10.8s						
CMAR	**Chiang Mai Arr**	**13.61**	**201**	Pn	**Pn**	**17 24 10.2**	**+4.3**
	comp=E,0.1nm,0.3s,baz=11,slow=8.9,SNR=6.8						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**17 24 52.6**	**+7.5**
	comp=E,0.1nm,0.3s,baz=193,slow=11,SNR=4.1						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**17 25 32.9**	**+0.4**
	comp=E,1.4nm,0.6s,baz=254,slow=9.9,SNR=2.4						
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**17 25 52.7**	**-2.1**
	comp=E,0.3nm,0.7s,mb2.8,baz=102,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**17 25 52.7**	**-2.1**
ZAA0	**Zalesovo Array**	**26.47**	**334**	*e*P	**P**	**17 26 29.9**	**+0.2**
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**17 26 30.6**	**+0.9**
	comp=E,0.7nm,0.6s,mb3.4,baz=131,slow=7.9,SNR=3.5						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**17 26 35.3**	**+0.7**
	comp=E,1.3nm,0.8s,mb3.5,baz=126,slow=10,SNR=7.6						
KURK	**Kurchatov**	**27.00**	**323**	*e*P	**P**	**17 26 36.1**	**+1.5**
	comp=E,2.5nm,1.0s,mb3.7						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**17 30 47.8**	**-2.9**
	comp=E,8.4nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**17 30 51.9**	**+1.2**
	comp=E,0.6nm,0.5s,mb3.9,baz=338,slow=7.6,SNR=9.0						
ASAR	**Alice Springs**	**61.74**	**149**	P	**P**	**17 31 12.3**	**+0.9**
	comp=E,0.3nm,0.5s,mb3.7,baz=337,slow=6.8,SNR=7.5						
STKA	**Stephens Creek**	**72.25**	**147**	P	**P**	**17 32 17.1**	**-1.1**

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*ISCJB **12** 17:21:47.4±0.4,31°.76N±0°.04×104°.49E±0°.07,h10km, mb4.1/23, Error ellipse: s-maj=9.3km s-min=6.0km az=14.2*
*IDC **12** 17:21:47.7±0.6,31°.71N×104°.37E,h0km,mb4.1/18, mb1 4.1/20,mb1mx4.1/31,mbtmp4.0/20,ML3.2/2, Error ellipse: s-maj=27.8km s-min=12.0km az=54.0*
*NEIC **12** 17:21:49.6±0.3,31°.76N×104°.39E,h10km,mb4.3/4, Error ellipse: s-maj=9.9km s-min=6.2km az=54.0*
*MOS **12** 17:21:49.6±0.8,31°.72N×104°.39E,h27km,mb4.5/4, Error ellipse: s-maj=16.1km s-min=9.2km az=119.3*
*BJI **12** 17:21:49.4,31°.76N×104°.53E,h13km,mb4.3/3,ML4.3/3, Ms3.9/1*
ISC 12 17:21:49.7±0.4,31°.79N±0°.04×104°.41E±0°.07,h10km,n43, σ0°.82/45,mb4.1/23,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.04**	**213**	Pg	**Pg**	**17 22 11.3**	**+1.7**
CD2				Sg	**Sg**	**17 22 22.8**	**-0.3**
CD2				smax			
	comp=N,14μm,0.7s						
ENH	**Enshi**	**4.61**	**108**	*e*Pn	**Pn**	**17 23 01.8**	**+2.4**
LSA	**Lhasa**	**11.60**	**263**	*e*P	**Pn**	**17 24 36.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**14.16**	**202**	Pn	**Pn**	**17 25 09.7**	**-0.7**
	comp=N,0.0nm,0.3s,baz=17,slow=10,SNR=2.6						
SONM	**Songino Array**	**16.10**	**5**	Pn	**Pn**	**17 25 36.3**	**+0.3**
	comp=N,0.1nm,0.3s,baz=173,slow=7.4,SNR=11						
KSRS	**Korea Array**	**20.14**	**67**	P	**P**	**17 26 24.7**	**+0.8**
	comp=N,2.6nm,0.6s,baz=257,slow=10,SNR=3.2						
KSRS	**Korea Array**	**20.14**	**67**	P	**P**	**17 26 24.7**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK31	**Makanchi Array**	**22.65**	**318**	*e*P	**P**	**17 26 51.1**	**+0.3**
MKAR	**Makanchi Array**	**22.65**	**318**	P	**P**	**17 26 51.3**	**+0.5**
	comp=Z,2.9nm,0.7s,mb3.8,baz=115,slow=12,SNR=15						
UCH	**Uchtor**	**25.93**	**302**	*e*P	**P**	**17 27 24.2**	**+2.2**
	comp=Z,6.9nm,1.0s,mb4.1						
AAK	**Ala-Archa**	**26.05**	**303**	P	**P**	**17 27 23.9**	**+0.8**
	comp=Z,1.1nm,0.5s,mb3.7,baz=211,slow=9.3,SNR=3.8						
ZAA0	**Zalesovo Array**	**26.23**	**333**	*e*P	**P**	**17 27 24.3**	**-0.3**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**17 27 24.8**	**+0.2**
	comp=Z,3.3nm,0.6s,mb4.1,baz=132,slow=9.9,SNR=13						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**17 27 24.8**	**+0.2**
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**17 27 30.5**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.0,baz=130,slow=8.8,SNR=17						
KURK	**Kurchatov**	**26.86**	**322**	*e*P	**P**	**17 27 30.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.2						
KURK	**Kurchatov**	**26.86**	**322**	*e*P	**P**	**17 27 30.3**	**-0.1**
	comp=Z,8.9nm,1.2s,mb4.2						
BVAR	**Borovoye Array**	**32.43**	**321**	P	**P**	**17 28 20.2**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.0,baz=120,slow=9.7,SNR=15						
BRVK	**Borovoye**	**32.50**	**321**	*e*P	**P**	**17 28 20.4**	**+0.1**
ABKAR	**Akbulak array**	**37.42**	**311**	*e*P	**P**	**17 29 02.9**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.0						
AKTK	**Aktyubinsk**	**38.87**	**312**	P	**P**	**17 29 14.6**	**-0.4**
AKTO	**Aktyubinsk**	**38.87**	**312**	P	**P**	**17 29 14.6**	**-0.4**
	comp=Z,1.6nm,0.5s,mb4.0,baz=101,slow=11,SNR=8.7						
ARU	**Arti**	**40.06**	**322**	*c i*P	**P**	**17 29 25.1**	**+0.3**
ARU				*e*		17 30 53.9	
ARU				S	**S**	**17 35 30.8**	**+0.2**
ARU				SS	SS	17 38 21.6	-6.0
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**17 29 25.1**	**+0.2**
	comp=Z,12nm,0.7s,mb4.7						
ZEI	**Tsey**	**48.45**	**301**	*e*P	**P**	**17 30 30.4**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.62**	**155**	P	**P**	**17 31 09.9**	**-1.4**
	comp=Z,2.9nm,0.9s,mb4.2,baz=62,slow=2.2,SNR=2.5						
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**17 31 32.4**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.0,baz=101,slow=7.2,SNR=9.6						
ARCES	**ARCESS Array B**	**56.75**	**336**	P	**P**	**17 31 33.0**	**-0.3**
	comp=Z,3.8nm,0.9s,mb4.4,baz=84,slow=12,SNR=4.1						
AKASG	**Malin Array Be**	**57.11**	**313**	P	**P**	**17 31 35.3**	**-0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=73,slow=5.9,SNR=5.8						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**17 31 36.0**	**-0.3**
	comp=Z,3.2nm,0.6s,mb4.5,baz=76,slow=8.0,SNR=10						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**17 31 36.0**	**-0.3**
WRA	**Warramunga Arr**	**58.89**	**147**	P	**P**	**17 31 48.0**	**-1.0**
	comp=Z,3.4nm,0.7s,mb4.5,baz=338,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**17 32 10.0**	**+0.3**
	comp=Z,1.3nm,0.9s,mb4.0,baz=334,slow=6.4,SNR=3.6						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**17 32 23.6**	**-0.9**
	comp=Z,1.3nm,0.7s,mb4.1,baz=71,slow=6.7,SNR=3.4						
GERES	**GERESS Array B**	**67.26**	**314**	P	**P**	**17 32 44.4**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=118,slow=2.3,SNR=6.1						
STKA	**Stephens Creek**	**72.44**	**147**	P	**P**	**17 33 15.7**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.9,baz=306,slow=17,SNR=2.2						
LPG	**La Plagne**	**72.98**	**313**	*e*P	**P**	**17 33 19.7**	**+0.3**
	comp=Z,12nm,1.0s,mb4.5						
LPL	**La Plagne**	**72.98**	**313**	*e*P	**P**	**17 33 19.7**	**+0.3**
SMF	**Signal de Mont**	**74.20**	**315**	*e*P	**P**	**17 33 25.8**	**-0.8**
	comp=Z,14nm,1.1s,mb4.5						
AVF	**Avril sur Loir**	**74.42**	**316**	*e*P	**P**	**17 33 27.1**	**-0.8**
CAF	**Calviac**	**76.14**	**314**	*e*P	**P**	**17 33 37.7**	**-0.1**
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**17 34 03.9**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=328,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**17 34 03.9**	**-0.1**

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*IDC **12** 17:22:45.0±1.9,2°.21N×96°.63E,h0km,mb3.8/8,mb1 3.8/9, mb1mx3.6/24,mbtmp3.7/9,ML3.7/1,MS3.7/1,Ms1 3.7/1, ms1mx3.0/33,Error ellipse: s-maj=83.5km s-min=20.0km az=57.0*
*ISCJB **12** 17:22:47.7±0.8,2°.18N±0°.08×96°.40E±0°.09,h33km, mb3.8/8,Error ellipse: s-maj=16.5km s-min=5.4km az=140.1*
*DJA **12** 17:22:48,2°.02N×96°.33E,h55km,MLv3.9/4*
*NEIC **12** 17:22:50.2±0.7,2°.23N×96°.51E,h35km,Error ellipse: s-maj=20.4km s-min=10.4km az=62.0*
ISC 12 17:22:49.8±0.8,2°.18N±0°.08×96°.43E±0°.09,h35km,n17, σ0°.85/21,mb3.8/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.44**	**127**	P	**Pn**	**17 23 12.3**	**-1.1**
GSI				S	**Sn**	**17 23 30.2**	**-0.8**
TSI	**Tuntungan**	**2.50**	**58**	P	**Pn**	**17 23 29.5**	**+1.6**
TSI				S	**Sn**	**17 24 10.7**	**+13**
MNSI	**Mandailing Nat**	**3.43**	**114**	P	**Pn**	**17 23 40.6**	**-0.2**
MNSI				S	**Sn**	**17 24 20.7**	**+0.4**
BSI	**Banda Aceh**	**3.48**	**341**	P	**Pn**	**17 23 40.6**	**-0.9**
BSI				S	**Sn**	**17 24 20.6**	**-0.9**
KULM	**Kulim**	**5.22**	**54**	*e*P	**Pn**	**17 24 05.6**	**+0.2**
	33nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.36**	**8**	Pn	**Pn**	**17 26 35.3**	**-1.6**
	0.1nm,0.3s,baz=200,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**43.20**	**122**	P	**P**	**17 30 46.8**	**-0.9**
	0.4nm,0.6s,mb3.3,baz=299,slow=9.2,SNR=5.6						
WRA	**Warramunga Arr**	**43.20**	**122**	P	**P**	**17 30 46.8**	**-0.9**
WB2	**Warramunga Arr**	**43.21**	**122**	*e*P	**P**	**17 30 48.1**	**+0.3**
ASAR	**Alice Springs**	**44.60**	**127**	P	**P**	**17 30 58.3**	**-0.6**
	0.2nm,0.5s,mb3.2,baz=308,slow=7.8,SNR=4.3						
MKAR	**Makanchi Array**	**46.11**	**347**	P	**P**	**17 31 11.2**	**+0.7**
	1.0nm,0.5s,mb4.0,baz=156,slow=9.2,SNR=11						
SONM	**Songino Array**	**46.28**	**9**	P	**P**	**17 31 11.9**	**0.0**
	0.4nm,0.5s,mb3.6,baz=190,slow=7.3,SNR=2.4						
KURK	**Kurchatov**	**50.65**	**345**	P	**P**	**17 31 45.8**	**+0.3**
	0.6nm,0.5s,mb3.8,baz=167,slow=6.4,SNR=5.7						
ZALV	**Zalesovo Beam**	**52.47**	**351**	P	**P**	**17 31 59.8**	**+0.8**
	2.2nm,0.5s,mb4.3,baz=172,slow=6.4,SNR=10.0						
STKA	**Stephens Creek**	**54.58**	**132**	*e*P	**P**	**17 32 16.4**	**+1.5**
BVAR	**Borovoye Array**	**55.08**	**341**	P	**P**	**17 32 18.3**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=155,slow=8.2,SNR=3.5						
ARCES	**ARCESS Array B**	**81.36**	**340**	P	**P**	**17 35 03.5**	**+1.1**
	3.1nm,1.0s,mb4.2,baz=75,slow=4.9,SNR=2.7						

IDC 12 17:24:14.6±1.0,31°.34N×104°.02E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.5/24,mbtmp3.6/6,Error ellipse: s-maj=74.6km s-min=19.1km az=58.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.75**	**319**	P	P	17 29 18.3	+0.1
	0.3nm,0.3s,baz=110,slow=13,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	P	17 29 52.6	-0.5
	0.5nm,0.5s,baz=144,slow=5.5,SNR=3.5						
KURK	**Kurchatov**	**27.01**	**323**	P	P	17 29 58.4	+0.3
	0.8nm,0.8s,baz=127,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**58.71**	**146**	P	P	17 34 14.3	+0.1
	0.9nm,0.5s,baz=328,slow=9.1,SNR=7.8						
ASAR	**Alice Springs**	**61.73**	**149**	P	P	17 34 35.0	+0.1
	0.3nm,0.5s,baz=335,slow=6.6,SNR=3.3						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	P	17 36 33.3	0.0
	0.2nm,0.6s,baz=328,slow=5.0,SNR=4.3						

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*ISCJB **12** 17:24:26.3±0.5,31°.44N±0°.05×104°.0E±0°.1,h10km, mb3.9/12,Error ellipse: s-maj=12.5km s-min=7.0km az=166.9*
*IDC **12** 17:24:26.4±0.8,31°.43N×104°.09E,h0km,mb3.9/12, mb1 4.0/14,mb1mx3.8/28,mbtmp3.9/14,ML3.5/2,Error ellipse: s-maj=31.1km s-min=15.1km az=59.0*
*NEIC **12** 17:24:28.2±0.4,31°.44N×104°.02E,h10km,mb4.6/1,Error ellipse: s-maj=13.2km s-min=7.6km az=63.0*
*BJI **12** 17:24:28.1,31°.18N×104°.28E,h10km,mb4.1/3,ML3.6/4*
ISC 12 17:24:28.3±0.5,31°.39N±0°.05×103°.96E±0°.10,h10km,n22, σ0°.89/23,mb3.9/12,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.68**	**359**	*e*Pg	**Pg**	**17 26 11.6**	**+14**
LZH				Sg	**Sg**	**17 26 59.0**	**+0.4**
LZH				smax			
	comp=N,92nm,0.7s						
LZH				smax			
	comp=E,190nm,1.0s						
ENH	**Enshi**	**4.89**	**102**	*e*P	**Pn**	**17 25 42.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**13.66**	**201**	Pn	**Pn**	**17 27 43.4**	**+1.3**
	comp=E,0.1nm,0.3s,baz=11,slow=8.5,SNR=4.6						
SONM	**Songino Array**	**16.53**	**6**	Pn	**Pn**	**17 28 19.7**	**-0.3**
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=3.6						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**17 29 07.6**	**-0.4**
	comp=E,2.2nm,0.8s,baz=259,slow=11,SNR=4.4						
CN2	**Changchun**	**20.99**	**48**	*e*P	**P**	**17 29 14.0**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**17 29 30.3**	**+0.5**
	comp=Z,1.5nm,0.8s,mb3.5,baz=112,slow=16,SNR=4.3						
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**17 29 30.3**	**+0.5**
ZAA0	**Zalesovo Array**	**26.41**	**334**	*e*P	**P**	**17 30 04.8**	**0.0**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**17 30 04.7**	**-0.1**
	comp=Z,1.7nm,0.8s,mb3.6,baz=130,slow=8.8,SNR=4.8						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**17 30 10.3**	**+0.6**
	comp=Z,1.5nm,0.8s,mb3.6,baz=128,slow=8.9,SNR=5.3						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**17 30 10.3**	**+0.6**
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**17 30 59.5**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.5,baz=151,slow=13,SNR=3.5						
FINES	**FINESS Array B**	**57.26**	**326**	P	**P**	**17 34 15.1**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.3,baz=64,slow=6.6,SNR=4.4						
WRAB	**Tennant Creek**	**58.78**	**146**	*e*P	**P**	**17 34 26.6**	**-0.2**
	comp=Z,4.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**58.78**	**146**	P	**P**	**17 34 26.0**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.4,baz=338,slow=7.5,SNR=7.6						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**17 34 47.5**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=331,slow=5.8,SNR=6.1						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**17 35 03.0**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=74,slow=6.3,SNR=3.6						
INK	**Inuvik**	**71.92**	**19**	P	**P**	**17 35 49.1**	**-2.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=349,slow=16,SNR=3.5						
STKA	**Stephens Creek**	**72.32**	**147**	P	**P**	**17 35 53.5**	**-0.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=348,slow=7.5,SNR=6.4						
STKA	**Stephens Creek**	**72.32**	**147**	P	**P**	**17 35 53.5**	**-0.6**
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**17 36 44.6**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=329,slow=5.0,SNR=4.9						

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*IDC **12** 17:29:03.9±0.5,31°.20N×103°.56E,h0km,mb4.3/22, mb1 4.4/24,mb1mx4.3/31,mbtmp4.3/24,ML3.7/2,MS4.1/17, Ms1 4.1/17,ms1mx3.8/38,Error ellipse: s-maj=20.1km s-min=11.2km az=55.0*
*ISCJB **12** 17:29:06.7±0.7,31°.18N±0°.03×103°.56E±0°.03,h32km±5km, mb4.6/63,MS4.1/20,Error ellipse: s-maj=4.6km s-min=4.1km az=14.2*
*MOS **12** 17:29:06.6±1.1,31°.23N×103°.60E,h30km,mb4.9/30,Error ellipse: s-maj=9.2km s-min=5.2km az=107.7*
*BJI **12** 17:29:06.5,31°.21N×103°.68E,h24km,mB5.1/14,mb4.7/23, ML4.7/13,Ms4.9/29,Ms7 4.6/23*
*NEIC **12** 17:29:09.4±1.5,31°.24N×103°.61E,h35km±12km,mb4.7/18, Error ellipse: s-maj=5.3km s-min=4.2km az=48.0*
*DJA **12** 17:29:21,31°.55N×103°.74E,h146km,mb4.4/7*
*SZGRF **12** 17:29:31.0,33°.25N×100°.63E,h33km,mb4.6,Qinghai, China*
ISC 12 17:29:07.5±0.7,31°.22N±0°.02×103°.54E±0°.03,h19km±4km, n165,σ1°.14/169,mb4.6/63,MS4.1/20,10C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**149**	Pg	**Pg**	**17 29 14.5**	**-0.6**
CD2				Sg	**Sg**	**17 29 22.2**	**+1.9**
CD2				smax			
	comp=N,75μm,0.6s						
LZH	**Lanzhou**	**4.86**	**3**	*e*Pn	**Pb**	**17 30 26.3**	**-5.6**
LZH				Pg	**Pg**	**17 30 38.1**	**-2.4**
LZH				Sn	**Sb**	**17 31 26.0**	**-4.0**
LZH				Sg	**Sg**	**17 31 43.7**	**+0.2**
LZH				smax			
	comp=N,1μm,1.2s						
LZH				smax			
	comp=E,1μm,1.1s						
LZH				LR	LR		
	comp=E,22μm,7.5s						
LZH				LR	LR		
	comp=Z,23μm,9.8s						
ENH	**Enshi**	**5.20**	**99**	*e*P	**Pn**	**17 30 24.2**	**-0.1**
	comp=Z,266nm,0.4s						
KMI	**Kunming**	**6.12**	**187**	Pn	**Pn**	**17 30 37.5**	**+0.7**
KMI				Sn	**Sn**	**17 31 47.6**	**+1.4**
KMI				smax			
	comp=N,300nm,1.8s						
KMI				smax			
	comp=E,250nm,1.1s						
KMI				LR	LR		
	comp=N,4μm,8.9s						
KMI				LR	LR		
	comp=E,14μm,10.7s						
KMI				LR	LR		
	comp=Z,3μm,8.9s						
WHN	**Wuhan**	**9.31**	**91**	P	**Pn**	**17 31 20.0**	**-0.6**
WHN				S	**Sn**	**17 33 04.6**	**-0.2**
WHN				LR	LR		
	comp=N,6μm,6.4s						
WHN				LR	LR		
	comp=E,14μm,7.0s						
WHN				LR	LR		
	comp=Z,14μm,8.2s						
LSA	**Lhasa**	**10.80**	**265**	P	**Pn**	**17 31 41.0**	**-0.1**
LSA				S	**Sn**	**17 33 42.3**	**+0.9**
LSA				LR	LR		
	comp=E,3μm,12.5s						
LSA				LR	LR		
	comp=Z,4μm,11.8s						
LSA	**Lhasa**	**10.80**	**265**	*e*P	**Pn**	**17 31 42.1**	**+1.0**
LSA				pmax	pmax		
	comp=Z,20nm,0.6s						
LSA	**Lhasa**	**10.80**	**265**	*e*P	**Pn**	**17 31 42.1**	**+1.1**
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.59**	**32**	*e*P	**Pn**	**17 31 52.6**	**+0.8**
HHC				pP		17 31 58.2	
HHC				PP		17 32 02.3	
HHC				S	**Sn**	**17 34 03.1**	**+2.5**
HHC				sS		17 34 11.9	
HHC				SS		17 34 18.9	
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,4.6s						
HHC				LR	LR		
	comp=N,2μm,5.3s						
HHC				LR	LR		
	comp=E,1μm,6.0s						
HHC				LR	LR		
	comp=Z,1μm,5.9s						
SHL	**Shillong**	**11.71**	**244**	*e*P	**Pn**	**17 31 53.0**	**-0.4**
SHL				*i* x	x	17 35 20.0	
CHTO	**Chiang Mai**	**13.04**	**200**	*e*P	**Pn**	**17 32 14.8**	**+3.2**
CHTO				pmax	pmax		
	comp=Z,11nm,0.6s						
CHTO	**Chiang Mai**	**13.04**	**200**	*e*P	**Pn**	**17 32 14.8**	**+3.1**
	comp=Z,11nm,0.6s						
NJ2	**Nanjing**	**13.07**	**82**	*e*P	**Pn**	**17 32 13.1**	**+1.0**
NJ2				pP		17 32 20.2	
NJ2				PP		17 32 22.2	
NJ2				sP		17 32 24.9	
NJ2				S	**Sn**	**17 34 39.4**	**+2.4**
NJ2				sS		17 34 50.9	
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,200nm,3.7s						
NJ2				LR	LR		
	comp=N,1μm,8.6s						
NJ2				LR	LR		
	comp=E,2μm,11.4s						
NJ2				LR	LR		
	comp=Z,1μm,12.0s						
CM31	**Chiang Mai Arr**	**13.37**	**199**	*e*P	**Pn**	**17 32 17.2**	**+1.0**
	comp=Z,5.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**13.37**	**199**	Pn	**Pn**	**17 32 16.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=14,slow=10,SNR=12						
CMAR				LR	LR	17 37 36.5	
	comp=Z,537nm,18.7s,baz=15,slow=38						
QIZ	**Qiongzhong**	**13.41**	**153**	P	**Pn**	**17 32 15.8**	**-0.9**
QIZ				S	**Sn**	**17 34 44.7**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,25nm,1.7s						
QIZ				LR	LR		
	comp=N,1μm,6.4s						
QIZ				LR	LR		
	comp=E,580nm,9.3s						
QIZ				LR	LR		
	comp=Z,2μm,10.8s						
QIZ	**Qiongzhong**	**13.41**	**153**	*e*P	**Pn**	**17 32 16.5**	**-0.2**
GUN	**Gumba**	**15.72**	**262**	*e*P	**Pn**	**17 32 45.2**	**-2.6**
	comp=Z,205nm,0.9s						
PKI	**Pulchoki**	**16.22**	**262**	*e*P	**Pn**	**17 32 51.4**	**-2.8**
	comp=Z,201nm,0.7s						
PKIN	**Phulchoki**	**16.23**	**262**	*e*P	**Pn**	**17 32 51.7**	**-2.7**
	comp=Z,167nm,0.6s						
KKN	**Kakani**	**16.26**	**262**	*e*P	**Pn**	**17 32 51.8**	**-3.0**
	comp=Z,242nm,0.7s						
DMN	**Daman**	**16.46**	**262**	*e*P	**Pn**	**17 32 54.5**	**-2.9**
	comp=Z,202nm,0.

DDI Dehra Dun 21.91 274 *ex* x 17 33 58.5
CIT Chita 22.05 17 *eP* **P 17 34 01.4 +0.6**
CIT *e* 17 34 24.8
MK31 Makanchi Array 22.58 320 *eP* **P 17 34 06.9 +0.4**
MKAR Makanchi Array 22.58 320 P **P 17 34 06.4 -0.1**
comp=Z,19nm,0.8s,mb4.6,baz=119,slow=9.9,SNR=87
MKAR LR LR 17 43 26.7
comp=Z,745nm,19.0s,MS4.1,baz=133,slow=38
MKAR Makanchi Array 22.58 320 *ceP* **P 17 34 07.0 +0.5**
MKAR pmax pmax
comp=Z,19nm,0.8s
KSH Kashi 23.89 298 P **P 17 34 23.2 +3.4**
KSH pmax pmax
comp=Z,160nm,2.4s,mb5.0
ULHL Ulahol 24.39 304 P **P 17 34 26.1 +1.7**
SNR=13
KZA Kyzart 25.05 304 P **P 17 34 32.5 +2.1**
SNR=98
TKM2 Tokmak 2 25.05 306 P **P 17 34 32.1 +1.6**
SNR=16
TKM2 Tokmak 2 25.05 306 *eP* **P 17 34 31.7 +1.3**
TKM2 pmax pmax
comp=Z,26nm,1.3s,mb4.6
TKM2 Tokmak 2 25.05 306 *eP* **P 17 34 31.7 +1.3**
comp=Z,26nm,1.3s,mb4.6
KBK Karagaybulak 25.43 305 P **P 17 34 35.5 +1.7**
SNR=54
UCH Uchtor 25.61 304 P **P 17 34 38.1 +2.5**
SNR=34
UCH Uchtor 25.61 304 *eP* **P 17 34 37.6 +2.1**
comp=Z,38nm,1.0s,mb4.9
CHMS Chumysh 25.67 305 P **P 17 34 37.0 +1.0**
SNR=6.8
FRU Bishkek 25.71 305⇑ *eP* **P 17 34 37.0 +0.6**
FRU pmax pmax
comp=Z,50nm,1.8s,mb4.7
AAK Ala-Archa 25.74 304 P **P 17 34 39.2 +2.5**
SNR=23
AAK Ala-Archa 25.74 304 P **P 17 34 37.2 +0.5**
comp=Z,16nm,0.9s,mb4.6,baz=99,slow=6.8,SNR=24
AAK Ala-Archa 25.74 304 *c iP* **P 17 34 37.4 +0.7**
AAK pmax pmax
comp=Z,14nm,1.0s,mb4.5
USP Ospenovka 25.93 306 P **P 17 34 39.3 +0.9**
SNR=32
AML Almayashu 26.18 303 P **P 17 34 42.4 +1.8**
SNR=20
AML Almayashu 26.18 303 *eP* **P 17 34 42.2 +1.6**
comp=Z,116nm,0.6s,mb5.6
EKS2 Erkin-Say 26.26 304 P **P 17 34 39.6 -1.7**
SNR=20
EKS2 Erkin-Say 26.26 304 *eP* **P 17 34 42.2 +0.8**
comp=Z,21nm,1.1s,mb4.6
ZAA0 Zalesovo Array 26.41 335 *eP* **P 17 34 42.6 0.0**
ZALV Zalesovo Beam 26.41 335 P **P 17 34 42.3 -0.3**
comp=Z,11nm,0.8s,mb4.4,baz=138,slow=9.1,SNR=37
ZALV LR LR 17 45 46.0
comp=Z,352nm,21.8s,MS3.9,baz=160,slow=38
KURK Kurchatov 26.87 324 P **P 17 34 46.6 -0.1**
comp=Z,18nm,0.7s,mb4.7,baz=128,slow=9.6,SNR=79
KURK LR LR 17 46 24.5
comp=Z,585nm,19.1s,MS4.2,baz=130,slow=39
KURK Kurchatov 26.87 324 *c iP* **P 17 34 46.5 -0.2**
KURK pmax pmax
comp=Z,45nm,1.2s,mb4.9
BOD Bodaibo 27.55 12 *eP* **P 17 34 52.7 -0.1**
NVS Novosibirsk 27.69 334 *eP* **P 17 34 47.8 -6.2**
NVS *eS* **S 17 39 28.4 -6.6**
NVS *e* 17 40 55.2
NVS pmax pmax
comp=Z,23nm,2.2s,mb4.4
NVS pmax pmax
comp=N,17nm,2.0s
NVS pmax pmax
comp=E,13nm,2.0s
NVS smax
comp=N,19nm,2.2s
NVS smax
comp=E,17nm,2.2s
KBL Kabul 29.08 286 *eP* **P 17 35 07.7 +1.0**
KBL pmax pmax
comp=Z,18nm,1.2s,mb4.7
KBL Kabul 29.08 286 *eP* **P 17 35 07.7 +1.0**
comp=Z,18nm,1.2s,mb4.7
MJAR Matsushiro Arr 29.16 70 LR LR 17 48 01.1
comp=Z,260nm,18.2s,MS3.9,baz=195,slow=39
HABR Khabarovsk 29.42 45 *eP* **P 17 35 07.3 -2.2**
HABR *e**SP sP 17 35 21.0 +3.1
HABR *eS* **S 17 40 00.0 -2.4**
HABR *e**SS sS 17 40 16.1 +3.9
HABR *eSS* SS 17 41 29.4 -38
HABR *e* 17 41 55.1
HABR *e* 17 45 45.7
HABR pmax pmax
comp=E,40nm,2.3s
HABR pmax pmax
comp=Z,26nm,2.5s,mb4.5
HABR pmax pmax
comp=N,26nm,2.4s
HABR MLR MLR
comp=Z,207nm,18.0s,MS3.8
DAV Davao City (W) 31.65 135 LR LR 17 47 29.5
comp=Z,401nm,20.2s,MS4.1,baz=344,slow=35
BVAR Borovoye Array 32.40 322 P **P 17 35 36.0 +0.2**
comp=Z,3.6nm,0.6s,mb4.3,baz=118,slow=9.3,SNR=31
BVAR PcP PcP 17 38 22.3 -0.6
comp=Z,0.7nm,0.5s,baz=132,slow=4.3,SNR=3.7
BVAR LR LR 17 49 39.6
comp=Z,735nm,21.3s,MS4.3,baz=115,slow=38
BVAR Borovoye Array 32.40 322 P **P 17 35 36.0 +0.2**
BVAR 17 38 22.3
BVAR Borovoye Array 32.40 322 P **P 17 35 36.0 +0.2**
BVAR PcP PcP 17 38 22.3 -0.6
BVAR LR LR 17 49 39.6
BRVK Borovoye 32.48 322⇑ *eP* **P 17 35 36.5 +0.1**
BRVK pmax pmax
comp=Z,15nm,1.2s,mb4.7
BRVK Borovoye 32.48 322 *eP* **P 17 35 36.3 -0.1**
comp=Z,9.3nm,0.8s,mb4.7
YAK Yakutsk 35.17 21 *eP* **P 17 35 58.5 -1.2**
YAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
YAK Yakutsk 35.17 21 *eP* **P 17 35 58.5 -1.3**
comp=Z,8.1nm,0.6s,mb4.8
ABKAR Akbulak array 37.24 312 *eP* **P 17 36 17.9 +0.3**
comp=Z,2.9nm,0.7s,mb4.2
AKTK Aktyubinsk 38.71 313 P **P 17 36 30.4 +0.4**
AKTK LR LR 17 55 01.6
AKTO Aktyubinsk 38.71 313 P **P 17 36 30.4 +0.4**
comp=Z,2.6nm,0.5s,mb4.2,baz=115,slow=10,SNR=6.6
AKTO LR LR 17 55 01.6
comp=Z,108nm,18.9s,MS3.7,baz=110,slow=40
SVE Sverdlovsk 39.12 324⇓ *eP* **P 17 36 34.3 +1.0**
SVE *eS* **S 17 42 25.0 -6.9**
SVE pmax pmax
comp=Z,23nm,1.1s,mb4.8
SVE MLR MLR
comp=Z,267nm,14.0s,MS4.2
ARU Arti 40.05 322 *c iP* **P 17 36 41.5 +0.4**
ARU *e* 17 38 10.5
ARU S **S 17 42 47.2 +1.4**
ARU SS SS 17 45 42.7 -0.3
ARU pmax pmax
comp=Z,22nm,1.0s,mb4.8
ARU Arti 40.05 322 *eP* **P 17 36 40.9 -0.1**
comp=Z,25nm,1.0s,mb4.9
GUMO Guam 41.75 105 LR LR 17 52 15.9
comp=Z,212nm,20.7s,MS4.0,baz=186,slow=33
SOKR Solikamsk 42.03 326⇓ *iP* **P 17 36 58.7 +1.3**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb4.9
TIXI Tiksi 42.73 12 *eP* **P 17 37 01.0 -1.9**
TIXI pmax pmax
comp=Z,13nm,1.9s,mb4.3
TIXI Tiksi 42.73 12 *eP* **P 17 37 01.5 -1.4**
comp=Z,3.4nm,0.5s,mb4.3
SEY Seymchan 44.23 30⇑ *eP* **P 17 37 14.8 -0.2**
PETK Petropavlovsk- 44.44 44 P **P 17 37 16.2 -0.7**
comp=Z,3.3nm,1.0s,mb4.0,baz=186,slow=5.8,SNR=3.5
PETK LR LR 17 57 40.0
comp=Z,167nm,19.2s,MS4.0,baz=241,slow=39
MIB Mutribah 47.99 284 *eP* **P 17 37 43.8 -1.4**
MIB AMb AMB 17 37 50.4
comp=Z,55nm,0.8s,mb5.6
RDF Al-Radifah 48.07 282 *eP* **P 17 37 45.8 -0.1**
RDF AMb AMB 17 37 51.6
comp=Z,53nm,0.9s,mb5.6
ZEI Tsey 48.10 301 *eP* **P 17 37 44.9 -1.0**
ZEI pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KIV Kislovodsk 48.85 303 *eP* **P 17 37 52.7 +1.1**
KIV pmax pmax
comp=Z,18nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,134nm,17.0s,MS4.0
KIV Kislovodsk 48.85 303 *eP* **P 17 37 52.6 +1.0**
comp=Z,29nm,1.3s,mb5.2
VRHR Novokhopersk 49.11 313 *eP* **P 17 37 51.8 -1.7**
VRHR pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,3.0nm,0.4s
VORD Divnogorie 50.59 313 *eP* **P 17 38 02.7 -2.0**
VORD pmax pmax
comp=N,8.0nm,0.4s
VORD pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
VORD pmax pmax
comp=E,20nm,0.7s
VSR Storozhevoye 50.65 313 *eP* **P 17 38 03.5 -1.7**
VSR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.8s
KLMR Klimovskoe 50.70 325 *eP* **P 17 38 04.6 -0.8**
KLMR pmax pmax
comp=Z,24nm,1.0s,mb5.1
BILL Bilibino 51.28 25⇑ *eP* **P 17 38 11.2 +1.6**
BILL *e* 17 40 07.2
BILL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MOS Moscow 51.46 319 *eP* **P 17 38 10.3 -0.9**
MOS pmax pmax
comp=Z,38nm,0.8s,mb5.4
OBN Obninsk 52.07 318⇑ *eP* **P 17 38 15.7 -0.1**
OBN *e* 17 40 14.8
OBN pmax pmax
comp=Z,26nm,1.7s,mb4.9
KNA Kununurra 52.62 149 *eP* **P 17 38 19.7 -0.5**
comp=Z,12nm,0.6s,mb5.0
FITZ Fitzroy Crossi 53.44 154 P **P 17 38 25.1 -1.1**
comp=Z,1.7nm,0.7s,mb4.1,baz=86,slow=13,SNR=8.4
JOF Joensuu 54.67 328 *eP* **P 17 38 33.6 -1.2**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
JOF Joensuu 54.67 328 *ep* **P 17 38 33.6 -1.2**
comp=Z,4.8nm,0.7s,mb4.6
BRTR Keskin Array B 56.27 299 P **P 17 38 45.5 -1.1**
comp=Z,0.6nm,0.5s,mb3.9,baz=93,slow=6.2,SNR=7.3
BRTR LR LR 18 08 13.8
comp=Z,56nm,19.1s,MS3.7,baz=94,slow=42
BRTR Keskin Array B 56.27 299 *ceP* **P 17 38 46.7 +0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
KEV Kevo 56.43 336 *eP* **P 17 38 45.7 -1.6**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KEV Kevo 56.43 336 *ep* **P 17 38 45.7 -1.6**
comp=Z,7.4nm,0.7s,mb4.8
AKASG Malin Array Be 56.95 313 P **P 17 38 50.7 -0.6**
comp=Z,2.2nm,0.4s,mb4.5,baz=68,slow=7.3,SNR=8.7
AKASG LR LR 18 04 40.9
comp=Z,174nm,18.3s,MS4.2,baz=75,slow=38
ARCES ARCESS Array B 56.96 336 P **P 17 38 49.9 -1.1**
comp=Z,4.6nm,0.8s,mb4.5,baz=82,slow=5.9,SNR=10
ARCES PcP PcP 17 39 46.0 -0.1
comp=Z,1.9nm,0.7s,baz=60,slow=5.4,SNR=2.7
ARCES LR LR 18 05 18.8
comp=Z,294nm,18.8s,MS4.4,baz=30,slow=38
ARCES ARCESS Array B 56.96 336 P **P 17 38 49.9 -1.1**
ARCES 17 39 46.0
ARCES ARCESS Array B 56.96 336 P **P 17 38 49.9 -1.1**
ARCES PcP PcP 17 39 46.0 -0.1
ARCES LR LR 18 05 18.8
FINES FINESS Array B 57.20 326 P **P 17 38 52.4 -0.5**
comp=Z,3.2nm,0.6s,mb4.5,baz=66,slow=6.5,SNR=11
WRAB Tennant Creek 58.84 146 *eP* **P 17 39 04.6 -0.2**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb5.0
WRAB Tennant Creek 58.84 146 *eP* **P 17 39 04.6 -0.2**
comp=Z,14nm,0.8s,mb5.0
WRA Warramunga Arr 58.84 146 P **P 17 39 04.5 -0.3**
comp=Z,8.6nm,0.6s,mb5.0,baz=338,slow=7.6,SNR=64
WB2 Warramunga Arr 58.84 146 *eP* **P 17 39 04.4 -0.4**
SPITS Spitsbergen Ar 59.11 346 P **P 17 39 07.3 +1.3**
comp=Z,7.7nm,1.0s,mb4.7,baz=95,slow=9.3,SNR=8.8
KOLS Kolonicke sedl 61.74 312 *eP* **P 17 39 25.4 +1.0**
KOLS Kolonicke sedl 61.74 312 *eP* **P 17 39 25.4 +1.0**
KOLS Kolonicke sedl 61.74 312 *e* **P 17 39 25.4 +1.0**
ASAR Alice Springs 61.84 148 P **P 17 39 25.1 -0.2**
comp=Z,1.9nm,0.7s,mb4.3,baz=338,slow=7.1,SNR=32
STHS Stebnicka Huta 62.25 313 *eP* **P 17 39 27.5 -0.4**
STHS Stebnicka Huta 62.25 313 *eP* **P 17 39 27.5 -0.4**
STHS Stebnicka Huta 62.25 313 *e* **P 17 39 27.5 -0.4**
OJC Ojcow 62.92 314 *eP* **P 17 39 29.8 -2.5**
VYHS Vyhne 64.04 313 *eP* **P 17 39 40.1 +0.3**
VYHS Vyhne 64.04 313 *eP* **P 17 39 40.1 +0.3**
VYHS Vyhne 64.04 313 *e* **P 17 39 40.1 +0.3**
OKC Ostrava-Krasne 64.05 314 AMS AMS 18 08 20.0
comp=Z,400nm,17.0s
NB2 NORSAR Subarra 64.30 327 P **P 17 39 39.5 -1.7**
comp=Z,1.7nm,0.6s,mb4.2,baz=75,slow=6.5
NOA NORSAR Array B 64.30 327 P **P 17 39 40.3 -1.0**
comp=Z,2.3nm,0.8s,mb4.2,baz=75,slow=5.3,SNR=4.8
DPC Dobruska-Polom 65.00 315 AMS AMS 18 09 00.0
comp=Z,600nm,16.2s
TREC Trest 65.86 314 AMS AMS 18 09 30.0
comp=Z,300nm,18.1s
PVCC Panska Ves 65.99 316 AMS AMS 18 09 40.0
comp=Z,500nm,20.3s
PRU Pruhonice 66.20 315 *eP* **P 17 39 55.1 +1.4**
PRU MLR MLR
comp=Z,600nm,19.3s,MS4.8
PRU Pruhonice 66.20 315 *eP* **P 17 39 55.1 +1.4**
PRU AMS AMS 18 09 40.0
comp=Z,600nm,19.3s
CLL Collm 66.64 317 *eP* **P 17 39 57.0 +0.4**
CLL Collm 66.64 317 *eP* **P 17 39 57.0 +0.4**
comp=Z,6.0nm,1.2s,mb4.5
CLL *e*PP PP 17 42 22.0 -1.0
CLL Lm 18 11 00.0
comp=N,300nm,19.6s
CLL Lm 18 11 00.0
comp=E,200nm,19.2s
CLL Lm 18 11 00.0
comp=Z,400nm,20.7s
KHC Kasperske Hory 67.09 315 AMS AMS 18 10 20.0
comp=Z,500nm,22.1s
GERES GERESS Array B 67.12 314 P **P 17 39 59.0 -0.7**
comp=Z,1.1nm,0.9s,mb3.9,baz=57,slow=3.6,SNR=8.1
GERES LR LR 18 10 37.7
comp=Z,332nm,18.1s,MS4.6,baz=54,slow=37
GERES GERESS Array B 67.12 314 P **P 17 39 59.0 -0.7**
GERES LR LR 18 10 37.7
NKC Novy Kostel 67.37 316 AMS AMS 18 10 30.0
comp=Z,500nm,22.5s
COLD Coldfoot 67.56 24 *eP* **P 17 40 02.4 +0.3**
comp=Z,10nm,0.9s,mb4.8
GRA1 Grafenberg Arr 68.31 316 *eP* **P 17 40 07.7 +0.6**
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.31 316 *eP* **P 17 40 07.7 +0.6**
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.31 316 *eP* **P 17 40 07.7 +0.6**
GRF pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.31 316 *eP* **P 17 40 07.7 +0.6**
GRF pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.31 316 *eP* **P 17 40 07.7 +0.6**
comp=Z,5.0nm,1.1s,mb4.5
BBOO Buckleboo 70.72 151 *eP* **P 17 40 21.2 -0.9**
comp=Z,1.4nm,0.4s,mb4.2
CDF Champ du Feu 71.20 316 *eP* **P 17 40 24.9 0.0**
comp=Z,11nm,1.0s,mb4.5
INK Inuvik 72.20 19 P **P 17 40 30.2 -0.4**
comp=Z,4.5nm,0.8s,mb4.4,baz=331,slow=7.4,SNR=14
STKA Stephens Creek 72.37 147 *eP* **P 17 40 31.3 -0.7**
comp=Z,2.8nm,0.6s,mb4.4
STKA Stephens Creek 72.37 147 P **P 17 40 31.4 -0.7**
comp=Z,2.8nm,0.6s,mb4.4,baz=356,slow=4.1,SNR=12
LPG La Plagne 72.82 313 *eP* **P 17 40 35.5 +0.8**
comp=Z,13nm,0.7s,mb4.7
SMF Signal de Mont 74.08 315 *eP* **P 17 40 41.9 -0.2**
comp=Z,7.4nm,0.6s,mb4.5
CMSA Cobar Meteorol 74.10 143 *eP* **P 17 40 42.5 +0.2**
TCF Toulx Ste Croi 75.23 315 *eP* **P 17 40 48.9 +0.1**
YKA Yellowknife Ar 81.72 17 P **P 17 41 24.3 0.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=328,slow=5.3,SNR=12
AFI Afiamalu 92.64 105 LR LR 18 21 11.8
comp=Z,38nm,19.1s,MS3.9,baz=199,slow=34
TORD Torodi Ar. Bea 93.14 287 P **P 17 42 20.5 -0.3**
comp=Z,1.0nm,0.9s,mb4.2,baz=73,slow=3.4,SNR=5.3

KRSC 12 17:30:05.8±0.1, 55°.02N×163°.09E, h15km±15km, ML3.8,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.92**	**240**	*eP*	Pb	17 30 22.9	-0.4
MKZ				*i* S	Sb	17 30 35.4	+0.1
KBTR	**Krutoberegovo**	**1.20**	**353**	*eP*	Pn	17 30 28.9	+0.9
KBTR				*i* S	Sb	17 30 45.7	+2.2
ZLN	**Zelenaya**	**1.64**	**308**	*eP*	Pn	17 30 34.8	+0.8
ZLN				*i* S	Sn	17 30 56.8	+2.0
BKI	**Bering**	**1.67**	**82**	*eP*	Pn	17 30 36.5	+2.1
BKI				*i* S	Sn	17 30 58.1	+2.6
CIRR	**Tsirk**	**1.73**	**310**	*eP*	Pn	17 30 36.0	+0.8
BZMR	**Bezymyannaya**	**1.74**	**303**	*eP*	Pn	17 30 36.6	+1.2
BZMR				*i* S	Sn	17 30 59.6	+2.3
KMNR	**Kamenistaya**	**1.79**	**296**	*eP*	Pn	17 30 36.6	+0.5
KMNR				*i* S	Sn	17 30 59.0	+0.5
SMKR	**Semkarok**	**1.81**	**330**	*eP*	Pn	17 30 37.3	+0.9
KIRR	**Kirishev**	**1.82**	**302**	*eP*	Pn	17 30 38.3	+1.8
KIRR				*i* S	Sn	17 31 01.6	+2.3
KRSR	**Krestovskiy**	**1.87**	**311**	*eP*	Pn	17 30 37.5	+0.3
KRSR				*i* S	Sn	17 31 01.0	+0.5
BDR	**Baidarnaya**	**1.88**	**326**	*eP*	Pn	17 30 38.6	+1.3
KPT	**Kopyto**	**1.89**	**301**	*eP*	Pn	17 30 38.6	+1.2
KPT				*e*S	Sn	17 31 02.1	+1.2
KLY	**Klyuchi**	**1.89**	**314**	*eP*	Pn	17 30 37.2	-0.3
KLY				*i* S	Sn	17 30 59.6	-1.5
SRKR	**Sorokina**	**1.96**	**327**	*eP*	Pn	17 30 39.7	+1.2
KOZ	**Kozyrevsk**	**2.10**	**301**	*eP*	Pn	17 30 42.8	+2.4
KOZ				*i* S	Sn	17 31 09.8	+3.5
SRDR	**Sredinnyy**	**2.31**	**306**	*eP*	Pn	17 30 44.6	+1.3
KII	**Karymskiy**	**2.34**	**247**	*eP*	Pn	17 30 45.9	+2.3
KII				*i* S	Sn	17 31 14.8	+2.7
SPN	**Mys Shipunski**	**2.64**	**224**	*eP*	Pn	17 30 48.6	+0.8
SPN				*i* S	Sn	17 31 19.3	-0.2
NLC	**Nalytchevo**	**2.88**	**231**	*eP*	Pn	17 30 53.4	+2.3
NLC				*i* S	Sn	17 31 27.6	+2.2
SDLR	**Sedlovina**	**3.03**	**237**	*eP*	Pn	17 30 55.5	+2.4
SDLR				*i* S	Sn	17 31 32.2	+3.2
GNL	**Ganaly**	**3.29**	**248**	*eP*	Pn	17 30 58.6	+1.9
PET	**Petropavlovsk**	**3.29**	**234**	*eP*	Pn	17 30 59.1	+2.3
PET				*i* S	Sn	17 31 38.0	+2.4
RUS	**Russkaya**	**3.76**	**228**	*eP*	Pn	17 31 05.2	+2.1
RUS				*i* S	Sn	17 31 49.4	+2.4

*IDC **12** 17:36:32.1±0.8, 31°.63N×104°.16E, h0km, mb3.8/13, mb1 4.0/15, mb1mx3.8/29, mbtmp3.8/15, ML3.1/2, Error ellipse: s-maj=28.8km s-min=15.4km az=55.0*
*NEIC **12** 17:36:33.8±3.5, 31°.62N×104°.21E, h11km±23km, mb4.0/2, Error ellipse: s-maj=10.9km s-min=6.5km az=61.0*
*BJI **12** 17:36:34.9, 31°.72N×104°.27E, h17km, mb4.6/1, ML3.7/4*
ISC 12 17:36:33.9±1.0, 31°.63N±0°.03×104°.20E±0°.08, h10km±6km, n34, σ0°82/37, mb3.9/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.81**	**208**	Pg	**Pg**	**17 36 51.3**	**+1.9**
CD2				Sg	**Sg**	**17 36 59.7**	**-0.2**
CD2				smax			
	comp=N,2μm,0.6s						
LZH	**Lanzhou**	**4.46**	**356**	*e*Pn	**Pn**	**17 37 43.3**	**+1.8**
LZH				Sn	**Sn**	**17 38 36.2**	**+2.8**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,65nm,0.8s						
LZH	**Lanzhou**	**4.46**	**356**	*e*Pg	**Pg**	**17 37 58.2**	**-1.1**
LZH				Sg	**Sg**	**17 38 56.4**	**-0.7**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,75nm,0.7s						
ENH	**Enshi**	**4.74**	**105**	*e*Pn	**Pn**	**17 37 44.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**13.95**	**201**	Pn	**Pn**	**17 39 51.5**	**-0.1**
	comp=E,0.0nm,0.3s,baz=16,slow=16,SNR=2.4						
SONM	**Songino Array**	**16.28**	**5**	Pn	**Pn**	**17 40 23.1**	**+0.6**
	comp=E,0.1nm,0.3s,baz=183,slow=9.4,SNR=2.4						
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**17 41 10.5**	**-0.1**
	comp=E,1.7nm,0.6s,baz=255,slow=9.5,SNR=16						
CN2	**Changchun**	**20.68**	**48**	*e*P	**P**	**17 41 15.4**	**+1.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**17 41 35.0**	**+0.1**
	comp=Z,1.3nm,0.7s,mb3.5,baz=121,slow=12,SNR=9.3						
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**17 41 35.0**	**+0.1**
ZAA0	**Zalesovo Array**	**26.29**	**334**	*e*P	**P**	**17 42 09.4**	**+0.1**
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	**P**	**17 42 09.5**	**+0.2**
	comp=Z,2.0nm,0.6s,mb3.8,baz=134,slow=9.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	**P**	**17 42 09.5**	**+0.2**
KURK	**Kurchatov**	**26.88**	**323**	P	**P**	**17 42 14.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.7,baz=130,slow=8.5,SNR=5.4						
KURK	**Kurchatov**	**26.88**	**323**	P	**P**	**17 42 14.3**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.5						
BVAR	**Borovoye Array**	**32.43**	**321**	P	**P**	**17 43 04.2**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.8,baz=139,slow=12,SNR=5.8						
BRVK	**Borovoye**	**32.51**	**321**	*e*P	**P**	**17 43 03.9**	**-0.7**
ARCES	**ARCESS Array B**	**56.82**	**336**	P	**P**	**17 46 17.6**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.1,baz=54,slow=6.2,SNR=4.4						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**17 46 18.6**	**-1.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=64,slow=8.3,SNR=4.1						
FINES	**FINESS Array B**	**57.18**	**326**	P	**P**	**17 46 19.9**	**-0.7**
	comp=Z,2.3nm,0.9s,mb4.2,baz=103,slow=8.2,SNR=3.6						
WRAB	**Tennant Creek**	**58.86**	**146**	*e*P	**P**	**17 46 32.9**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**58.86**	**146**	P	**P**	**17 46 33.5**	**+0.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=338,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**17 46 53.2**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=335,slow=6.7,SNR=10.0						
GERES	**GERESS Array B**	**67.24**	**314**	P	**P**	**17 47 28.3**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=72,slow=4.3,SNR=6.2						
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**17 47 53.6**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.1						
INK	**Inuvik**	**71.64**	**19**	P	**P**	**17 47 55.2**	**0.0**
	comp=Z,1.0nm,0.4s,mb4.1,baz=108,slow=23,SNR=4.5						
INK	**Inuvik**	**71.64**	**19**	P	**P**	**17 47 55.2**	**0.0**
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**17 48 03.7**	**+0.3**
	comp=Z,9.7nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**17 48 03.7**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.4						
SMF	**Signal de Mont**	**74.18**	**315**	*e*P	**P**	**17 48 10.0**	**-0.7**
AVF	**Avril sur Loir**	**74.41**	**316**	*e*P	**P**	**17 48 11.2**	**-0.7**
CAF	**Calviac**	**76.12**	**314**	*e*P	**P**	**17 48 22.0**	**+0.1**
YKA	**Yellowknife Ar**	**81.17**	**17**	P	**P**	**17 48 48.7**	**-0.6**
	comp=Z,0.2nm,0.4s,mb3.4,baz=330,slow=5.3,SNR=4.8						
YKA	**Yellowknife Ar**	**81.17**	**17**	P	**P**	**17 48 48.7**	**-0.6**

*ISCJB **12** 17:36:42.8±1.1, 37°.4N±0°.1×72°.0E±0°.2, h161km±16km, Error ellipse: s-maj=25.1km s-min=11.5km az=35.1*
*NEIC **12** 17:36:46.4±0.9, 38°.07N×70°.51E, h35km, mb4.4/1, Error ellipse: s-maj=28.8km s-min=10.1km az=104.0*
*IDC **12** 17:36:47.0±8.7, 37°.63N×72°.05E, h163km±62km, mb1 3.1/5, mb1mx2.9/29, mbtmp3.1/5, Error ellipse: s-maj=91.3km s-min=73.8km az=105.0*
ISC 12 17:36:44.1±1.1, 37°.43N±0°.10×71°.9E±0°.2, h149km±15km, n26, σ0°82/30, 1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.72**	**220**	*e*P	**Pn**	**17 37 40.1**	**-0.6**
KSH	**Kashi**	**3.79**	**55**	Pn	**Pn**	**17 37 37.0**	**-4.5**
KSH				Sn	**Sn**	**17 38 15.9**	**-10**
KSH				smax			
	comp=N,84nm,0.3s						
KSH				smax			

comp=E,100nm,0.3s
AML Almayashu 4.88 15 P **Pn 17 37 56.5 +0.6**
SNR=66
AML Almayashu 4.88 15 *e*P **Pn 17 37 56.1 +0.2**
UCH Uchtor 5.18 22 P **Pn 17 38 00.5 +0.7**
SNR=47
UCH Uchtor 5.18 22 *e*P **Pn 17 38 00.1 +0.3**
KZA Kyzart 5.29 28 P **Pn 17 38 01.1 -0.2**
SNR=8.7
EKS2 Erkin-Say 5.41 15 P **Pn 17 38 03.5 +0.6**
SNR=13
EKS2 Erkin-Say 5.41 15 *e*P **Pn 17 38 02.4 -0.5**
AAK Ala-Archa 5.55 20 P **Pn 17 38 05.4 +0.6**
SNR=24
AAK Ala-Archa 5.55 20 P **Pn 17 38 05.5 +0.8**
comp=E,0.1nm,0.3s,baz=187,slow=9.6,SNR=36
AAK S **Sn 17 39 07.0 -0.8**
comp=E,0.0nm,0.3s,baz=274,slow=22,SNR=11
AAK Ala-Archa 5.55 20 *e*P **Pn 17 38 04.9 +0.2**
AAK S **Sn 17 39 07.0 -0.8**
KBK Karagaybulak 5.71 23 P **Pn 17 38 07.9 +1.1**
SNR=12
KK31 Karatay Array 5.77 350 P **Pn 17 38 08.1 +0.4**
comp=E,11nm,0.3s,baz=166,slow=12,SNR=98
KK31 S **Sn 17 39 09.9 -3.1**
comp=E,50nm,0.7s,baz=166,slow=23,SNR=27
ULHL Ulahol 5.84 33 P **Pn 17 38 08.3 -0.2**
SNR=13
CHMS Chumysh 5.96 20 P **Pn 17 38 10.6 +0.3**
SNR=18
USP Ospenovka 6.15 18 P **Pn 17 38 12.5 -0.2**
SNR=10.0
TKM2 Tokmak 2 6.16 26 P **Pn 17 38 13.3 +0.5**
SNR=12
TKM2 Tokmak 2 6.16 26 *e*P **Pn 17 38 12.6 -0.2**
MKAR Makanchi Array 12.10 36 P **Pn 17 39 30.6 -0.9**
comp=E,0.0nm,0.3s,baz=213,slow=10,SNR=3.1
KURK Kurchatov 14.11 18 P **Pn 17 39 57.3 0.0**
comp=E,0.1nm,0.3s,baz=207,slow=10,SNR=7.7
KURK Kurchatov 14.11 18 *e*P **Pn 17 39 59.7 +2.4**
comp=E,2.7nm,0.8s
AB31 Akbulak array 14.67 327 ⇓P **Pn 17 40 05.0 +0.7**
comp=E,0.3nm,0.3s,baz=132,slow=12,SNR=11
BVAR Borovoye Array 15.63 357 P **Pn 17 40 14.8 -1.4**
comp=E,0.4nm,0.3s,baz=169,slow=11,SNR=6.3
BRVK Borovoye 15.67 356 *e*P **Pn 17 40 17.0 +0.4**
ZALV Zalesovo Beam 18.76 24 P **P 17 40 51.1 -0.4**
comp=E,0.4nm,0.3s,baz=198,slow=9.2,SNR=6.4

IDC ***12*** *17:39:09.0±1.2, 32.°60N×105.°78E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.3/25, mbtmp3.4/5, MS3.5/2, Ms1 3.5/2, ms1mx2.7/30, Error ellipse: s-maj=175.0km s-min=19.4km az=55.0*

ISC 12 17:39:10.1±0.9, 33.°1N±0.°4×106.°4E±0.°8, h10km, n9, σ1§14/10, mb3.6/6, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.66**	**326**	*e*Pn	**Pn**	**17 40 09.9**	**+3.2**
LZH				Pg	**Pg**	**17 40 19.0**	**-1.2**
LZH				Sg	**Sg**	**17 41 06.5**	**-1.1**
LZH				smax			
	comp=N,280nm,0.6s						
LZH				smax			
	comp=E,420nm,0.8s						
SONM	**Songino Array**	**14.74**	**0**	LR	LR	17 49 50.2	
	comp=E,177nm,18.7s,baz=224,slow=42						
MKAR	**Makanchi Array**	**22.88**	**314**	P	**P**	**17 44 13.8**	**+0.1**
	comp=E,0.6nm,0.6s,mb3.2,baz=120,slow=14,SNR=5.0						
ZALV	**Zalesovo Beam**	**25.88**	**330**	P	**P**	**17 44 43.7**	**+1.9**
	comp=E,0.4nm,0.3s,mb3.4,baz=128,slow=9.3,SNR=3.0						
KURK	**Kurchatov**	**26.92**	**319**	P	**P**	**17 44 52.1**	**+0.9**
	comp=E,0.3nm,0.4s,mb3.2,baz=123,slow=10,SNR=2.2						
WRAB	**Tennant Creek**	**59.10**	**149**	*e*P	**P**	**17 49 10.0**	**-0.7**
	comp=E,4.2nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**59.10**	**149**	P	**P**	**17 49 10.2**	**-0.6**
	comp=E,0.4nm,0.4s,mb3.8,baz=339,slow=7.3,SNR=5.7						
WRA	**Warramunga Arr**	**59.10**	**149**	P	**P**	**17 49 10.2**	**-0.6**
ASAR	**Alice Springs**	**62.23**	**151**	P	**P**	**17 49 31.6**	**-0.5**
	comp=E,0.3nm,0.5s,mb3.6,baz=332,slow=6.5,SNR=7.2						

ISCJB ***12*** *17:39:39.7±0.3, 32.°15N±0.°03×104.°94E±0.°06, h10km, mb4.3/32, Error ellipse: s-maj=7.0km s-min=4.9km az=3.3*
IDC ***12*** *17:39:40.1±0.6, 32.°17N×104.°90E, h0km, mb4.2/17, mb1 4.3/20, mb1mx4.2/31, mbtmp4.2/20, ML3.7/3, Error ellipse: s-maj=25.6km s-min=12.3km az=53.0*
NEIC ***12*** *17:39:43.8±1.8, 32.°18N×104.°97E, h24km±13km, mb4.4/6, Error ellipse: s-maj=8.0km s-min=4.7km az=65.0*
MOS ***12*** *17:39:43.0±0.8, 32.°17N×104.°91E, h33km, mb4.8/8, Error ellipse: s-maj=16.1km s-min=7.9km az=115.0*
BJI ***12*** *17:39:43.2, 32.°12N×104.°84E, h22km, mB5.1/3, mb4.2/9, ML4.2/10, Ms4.2/7, Ms7 4.1/6*

ISC 12 17:39:41.6±0.3, 32.°17N±0.°03×104.°94E±0.°06, h10km, n64, σ0§96/69, mb4.3/32, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.61**	**219**	Pg	**Pg**	**17 40 11.1**	**-1.5**
CD2				Sg	**Sg**	**17 40 33.2**	**-0.3**
CD2				smax			
	comp=N,10μm,0.6s						
LZH	**Lanzhou**	**4.01**	**347**	*e*Pn	**Pn**	**17 40 45.6**	**+2.6**
LZH				Pg	**Pg**	**17 40 56.5**	**-1.9**
LZH				Sg	**Sg**	**17 41 45.7**	**-4.6**
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,4μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,9.8s						
LZH				LR	LR		
	comp=Z,4μm,8.4s						
ENH	**Enshi**	**4.33**	**115**	*e*Pn	**Pn**	**17 40 47.6**	**+0.1**
KMI	**Kunming**	**7.29**	**196**	Pn	**Pn**	**17 41 29.1**	**+1.0**
KMI				Sn	**Sn**	**17 42 42.1**	**-8.8**
KMI				smax			
	comp=N,30nm,1.4s						
KMI				smax			
	comp=E,30nm,1.4s						
WHN	**Wuhan**	**8.21**	**99**	P	**Pn**	**17 41 32.1**	**-8.7**
WHN				S	**Sn**	**17 43 10.0**	**-3.7**
WHN				LR	LR		
	comp=N,2μm,4.2s						
WHN				LR	LR		
	comp=E,2μm,8.5s						
GTA	**Gaotai**	**8.33**	**331**	*e*P	**Pn**	**17 41 32.3**	**-10**
GTA				pP		17 41 36.7	
GTA				sP		17 41 39.9	
GTA				S	**Sn**	**17 43 09.3**	**-7.3**
GTA				sS		17 43 13.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,4.5s						
GTA				LR	LR		
	comp=N,510nm,10.2s						
GTA				LR	LR		
	comp=E,350nm,9.9s						
GTA				LR	LR		
	comp=Z,710nm,12.6s						
BJI	**Beijing**	**12.00**	**46**	P	Px	17 42 43.7	
CM31	**Chiang Mai Arr**	**14.69**	**203**	P	**Pn**	**17 43 09.8**	**+0.3**
	comp=Z,9.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**17 43 10.2**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=7.8						
SONM	**Songino Array**	**15.68**	**4**	Pn	**Pn**	**17 43 23.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=3.4						
ULN	**Ulaanbaatar**	**15.76**	**5**	P	**Pn**	**17 43 23.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ULN	**Ulaanbaatar**	**15.76**	**5**	P	**Pn**	**17 43 23.9**	**+0.4**
	comp=Z,8.0nm,1.1s						
KSRS	**Korea Array**	**19.58**	**68**	P	**Pn**	**17 44 11.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=98,slow=18,SNR=4.2						
CN2	**Changchun**	**19.84**	**48**	*e*P	**Pn**	**17 44 18.3**	**+4.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	**Makanchi Array**	**22.66**	**317**	*e*P	**P**	**17 44 43.5**	**+0.6**
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**17 44 43.9**	**+1.0**
	comp=Z,3.2nm,0.6s,mb3.9,baz=116,slow=12,SNR=17						
KSH	**Kashi**	**24.52**	**296**	P	**P**	**17 45 05.1**	**+3.9**
KSH				pmax	pmax		
	comp=Z,560nm,7.6s						
TKM2	**Tokmak 2**	**25.50**	**303**	*e*P	**P**	**17 45 11.5**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
TKM2	**Tokmak 2**	**25.50**	**303**	*e*P	**P**	**17 45 11.5**	**+1.5**
	comp=Z,5.0nm,0.8s,mb4.1						
ZAA0	**Zalesovo Array**	**26.09**	**332**	*e*P	**P**	**17 45 15.3**	**+0.1**
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**17 45 15.5**	**+0.3**
	comp=Z,2.9nm,0.5s,mb4.1,baz=127,slow=9.8,SNR=13						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**17 45 15.5**	**+0.3**
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**17 45 17.9**	**+2.4**
	comp=Z,5.7nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**26.21**	**302**	P	**P**	**17 45 17.2**	**+0.7**
	comp=Z,0.6nm,0.3s,mb3.6,baz=153,slow=14,SNR=3.0						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**17 45 22.2**	**+0.2**
	comp=Z,3.8nm,0.8s,mb4.0,baz=132,slow=8.7,SNR=15						
KURK				PcP	PcP	17 48 44.0	-0.4
	comp=Z,1.1nm,0.6s,baz=122,slow=1.9,SNR=5.5						
BVAR	**Borovoye Array**	**32.41**	**320**	P	**P**	**17 46 12.1**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.1,baz=120,slow=9.2,SNR=11						
BVAR				PcP	PcP	17 48 58.2	-0.4
	comp=Z,1.0nm,0.7s,baz=126,slow=3.8,SNR=5.4						
ABKAR	**Akbulak array**	**37.51**	**310**	*e*P	**P**	**17 46 55.5**	**0.0**
	comp=Z,5.7nm,0.7s,mb4.4						
AKTK	**Aktyubinsk**	**38.94**	**312**	P	**P**	**17 47 08.2**	**+0.7**
AKTO	**Aktyubinsk**	**38.94**	**312**	P	**P**	**17 47 08.2**	**+0.7**
	comp=Z,3.2nm,0.7s,mb4.2,baz=123,slow=10.0,SNR=7.7						
ARU	**Arti**	**40.03**	**321**	*d*P	**P**	**17 47 16.8**	**+0.2**
ARU				*e*		17 48 47.8	
ARU				S	**S**	**17 53 21.0**	**-1.1**
ARU				SS	SS	17 56 15.4	-3.6
ARU				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.9						
ARU	**Arti**	**40.03**	**321**	*e*P	**P**	**17 47 16.8**	**+0.2**
	comp=Z,18nm,0.8s,mb4.8						
ZEI	**Tsey**	**48.63**	**301**	*e*P	**P**	**17 48 24.3**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KIV	**Kislovodsk**	**49.33**	**303**	*e*P	**P**	**17 48 31.4**	**+0.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
OBN	**Obninsk**	**52.17**	**317**	*e*P	**P**	**17 48 50.4**	**-1.7**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
KNA	**Kununurra**	**52.84**	**151**	*e*P	**P**	**17 48 56.0**	**-1.5**
	comp=Z,13nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.78**	**155**	*e*P	**P**	**17 49 03.7**	**-0.7**
	comp=Z,4.1nm,0.8s,mb4.4						
JOF	**Joensuu**	**54.51**	**327**	*e*P	**P**	**17 49 08.1**	**-1.1**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
JOF	**Joensuu**	**54.51**	**327**	*e*p	**P**	**17 49 08.1**	**-1.1**
	comp=Z,2.7nm,0.5s,mb4.5						
KEV	**Kevo**	**56.05**	**336**	*e*P	**P**	**17 49 17.4**	**-2.8**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KEV	**Kevo**	**56.05**	**336**	*e*p	**P**	**17 49 17.4**	**-2.8**
	comp=Z,9.7nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**17 49 23.0**	**-1.0**
	comp=Z,3.2nm,0.8s,mb4.4,baz=88,slow=7.4,SNR=13						
BRTR	**Keskin Array B**	**56.84**	**299**	P	**P**	**17 49 25.7**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.2,baz=89,slow=7.7,SNR=8.1						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**17 49 27.5**	**-0.2**
	comp=Z,7.0nm,0.7s,mb4.8,baz=89,slow=8.8,SNR=15						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**17 49 27.5**	**-0.2**
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**17 49 27.7**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.3,baz=68,slow=7.0,SNR=8.1						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**17 49 41.8**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**17 49 41.8**	**+0.3**
	comp=Z,10nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**17 49 42.0**	**+0.5**
	comp=Z,2.9nm,0.3s,mb4.7,baz=328,slow=9.0,SNR=44						
WB2	**Warramunga Arr**	**58.98**	**147**	*e*P	**P**	**17 49 41.6**	**+0.1**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**17 50 03.0**	**+0.7**
	comp=Z,3.4nm,0.8s,mb4.5,baz=332,slow=6.4,SNR=30						
NB2	**NORSAR Subarra**	**64.14**	**327**	P	**P**	**17 50 14.6**	**-1.3**
	comp=Z,1.9nm,0.6s,mb4.3,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**17 50 17.1**	**+1.3**
	comp=Z,3.4nm,0.8s,mb4.5,baz=71,slow=6.5,SNR=8.3						
GERES	**GERESS Array B**	**67.31**	**314**	P	**P**	**17 50 35.7**	**-0.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=78,slow=7.0,SNR=4.8						
INK	**Inuvik**	**70.91**	**20**	P	**P**	**17 50 58.3**	**-0.2**
	comp=Z,2.1nm,0.8s,mb4.1,baz=9.8,slow=7.5,SNR=7.7						
CDF	**Champ du Feu**	**71.35**	**316**	*e*P	**P**	**17 51 01.1**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**72.53**	**148**	⇑*i*P	**P**	**17 51 08.7**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**17 51 08.8**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.3,baz=328,slow=6.0,SNR=9.5						
LPG	**La Plagne**	**73.03**	**313**	⇑*i*P	**P**	**17 51 12.0**	**+0.3**
	comp=Z,17nm,0.8s,mb4.8						
CMSA	**Cobar Meteorol**	**74.17**	**145**	⇑*i*P	**P**	**17 51 19.4**	**+1.0**
SMF	**Signal de Mont**	**74.24**	**315**	⇑*i*P	**P**	**17 51 18.0**	**-0.7**
	comp=Z,7.0nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**75.39**	**316**	*e*P	**P**	**17 51 24.9**	**-0.5**
CAF	**Calviac**	**76.19**	**315**	*e*P	**P**	**17 51 30.0**	**0.0**
YKA	**Yellowknife Ar**	**80.46**	**17**	P	**P**	**17 51 53.3**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=328,slow=5.2,SNR=17						
QSPA	**South Pole Qui**	**121.94**	**180**	PKP	PKPdf	17 58 34.4	-0.5
	comp=Z,1.0nm,0.6s,baz=296,slow=2.5,SNR=8.5						

IDC ***12*** *17:41:29.4±1.2, 32.°45N×105.°28E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.5/24, mbtmp3.7/4, Error ellipse: s-maj=71.7km s-min=24.7km az=61.0*

ISC 12 17:41:30.7±1.0, 32.°7N±0.°2×105.°4E±0.°4, h10km, n5, σ1§70/6, mb3.7/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.65**	**340**	*e*Pg	**Pg**	**17 42 38.4**	**-2.2**
LZH				Sg	**Sg**	**17 43 28.2**	**+0.3**
LZH				smax			
	comp=N,250nm,0.6s						
LZH				smax			
	comp=E,380nm,0.7s						
MKAR	**Makanchi Array**	**22.58**	**315**	P	**P**	**17 46 31.9**	**+0.9**
	comp=E,1.3nm,0.8s,mb3.4,baz=116,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**59.18**	**148**	P	**P**	**17 51 31.2**	**-0.7**
	comp=E,1.7nm,0.6s,mb4.2,baz=339,slow=7.5,SNR=5.2						
ASAR	**Alice Springs**	**62.28**	**150**	P	**P**	**17 51 52.5**	**-0.4**
	comp=E,0.5nm,0.6s,mb3.9,baz=337,slow=7.0,SNR=3.8						
YKA	**Yellowknife Ar**	**79.89**	**18**	P	**P**	**17 53 41.0**	**+1.8**
	comp=E,0.2nm,0.6s,mb3.3,baz=328,slow=5.2,SNR=2.9						

IDC ***12*** *17:43:04.3±0.9, 31.°79N×104.°49E, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.7/27, mbtmp3.8/9, ML2.9/2, Error ellipse: s-maj=35.7km s-min=18.4km az=67.0*
BJI ***12*** *17:43:04.3, 31.°60N×104.°60E, h10km, mb4.2/3, ML3.4/2*
NEIC ***12*** *17:43:06.1±0.5, 31.°80N×104.°55E, h10km, mb4.3/2, Error ellipse: s-maj=20.4km s-min=9.5km az=80.0*

ISC 12 17:43:05.1±2.5, 31.°85N±0.°08×104.°6E±0.°2, h3km±17km, n13, σ1§02/14, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.27**	**352**	*e*Pg	**Pg**	**17 44 27.6**	**+0.7**
LZH				Sg	**Sg**	**17 45 20.9**	**-1.4**
CMAR	**Chiang Mai Arr**	**14.26**	**202**	Pn	**Pn**	**17 46 28.4**	**+0.3**
	0.0nm,0.3s,baz=6.2,slow=8.4,SNR=2.6						
SONM	**Songino Array**	**16.03**	**4**	Pn	**Pn**	**17 46 53.6**	**+2.1**
	0.2nm,0.3s,baz=190,slow=15,SNR=3.1						
KSRS	**Korea Array**	**20.00**	**67**	P	**P**	**17 47 39.6**	**+0.8**
	4.3nm,0.7s,baz=253,slow=11,SNR=9.7						
MKAR	**Makanchi Array**	**22.68**	**318**	P	**P**	**17 48 07.2**	**-0.4**
	1.2nm,0.7s,mb3.5,baz=119,slow=13,SNR=4.0						
KSH	**Kashi**	**24.37**	**296**	P	**P**	**17 48 27.5**	**+3.1**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**17 48 41.2**	**+0.1**
	0.7nm,0.5s,mb3.5,baz=134,slow=10,SNR=3.3						
KURK	**Kurchatov**	**26.89**	**322**	*e*P	**P**	**17 48 43.1**	**-4.0**
	1.8nm,0.8s,mb3.6						
WRAB	**Tennant Creek**	**58.88**	**147**	*e*P	**P**	**17 53 04.9**	**-0.5**
	5.3nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**58.88**	**147**	P	**P**	**17 53 04.7**	**-0.8**
	3.5nm,0.7s,mb4.5,baz=338,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**17 53 25.9**	**-0.3**
	0.9nm,0.5s,mb4.2,baz=334,slow=6.6,SNR=9.4						
STKA	**Stephens Creek**	**72.42**	**147**	P	**P**	**17 54 32.3**	**-0.4**
	0.8nm,0.6s,mb3.9,baz=353,slow=12,SNR=4.2						
YKA	**Yellowknife Ar**	**80.87**	**17**	P	**P**	**17 55 19.5**	**-0.6**
	0.4nm,0.6s,mb3.5,baz=327,slow=5.2,SNR=4.7						

IDC 12 17:43:21.4±2.3, 31.°73N×104.°27E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/25, mbtmp3.9/4, Error ellipse: s-maj=70.6km s-min=33.9km az=92.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.27**	**67**	P	P	17 47 58.1	-0.4
	3.8nm,0.9s,baz=260,slow=9.9,SNR=4.9						
WRA	**Warramunga Arr**	**58.92**	**147**	P	P	17 53 22.2	-0.2
	1.1nm,0.7s,baz=328,slow=9.0,SNR=5.7						
ASAR	**Alice Springs**	**61.95**	**149**	P	P	17 53 43.8	+0.6
	1.0nm,0.8s,baz=335,slow=6.6,SNR=5.5						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	P	17 55 37.8	-0.2
	0.5nm,0.5s,baz=329,slow=4.9,SNR=5.2						

ISCJB ***12*** *17:45:30.6±0.5, 32.°39N±0.°06×104.°73E±0.°10, h10km, mb3.9/9, Error ellipse: s-maj=12.0km s-min=8.1km az=172.4*
IDC ***12*** *17:45:31.4±1.9, 32.°43N×104.°76E, h0km, mb3.9/6, mb1 4.0/9, mb1mx3.7/29, mbtmp3.8/9, ML3.3/3, Error ellipse: s-maj=41.1km s-min=28.5km az=13.0*
BJI ***12*** *17:45:35.3, 32.°35N×104.°55E, h15km, mb4.2/1, ML4.1/5, Ms3.7/1, Ms7 3.4/1*
NEIC ***12*** *17:45:36.1±1.2, 32.°39N×104.°73E, h35km±12km, mb4.0/2, Error ellipse: s-maj=14.6km s-min=8.0km az=67.0*

ISC 12 17:45:32.4±0.5, 32.°43N±0.°05×104.°72E±0.°10, h10km, n21, σ1§16/23, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.72**	**209**	Pg	**Pg**	**17 46 03.2**	**-2.1**
CD2				Sn	**Sn**	**17 46 16.7**	**-7.6**
CD2				smax			
	comp=N,4μm,0.5s						
LZH	**Lanzhou**	**3.72**	**349**	*e*Pg	**Pg**	**17 46 43.0**	**-0.8**
LZH				Sg	**Sg**	**17 47 29.8**	**-2.2**
LZH				smax			
	comp=N,430nm,0.7s						
LZH				smax			
	comp=E,530nm,0.8s						
ENH	**Enshi**	**4.61**	**116**	P	**Pn**	**17 46 42.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**14.85**	**202**	Pn	**Pn**	**17 49 03.5**	**+1.0**
	comp=E,0.0nm,0.3s,baz=9.8,slow=11,SNR=3.0						
SONM	**Songino Array**	**15.45**	**4**	Pn	**Pn**	**17 49 11.6**	**+1.4**
	comp=E,0.1nm,0.3s,baz=185,slow=16,SNR=2.0						
KSRS	**Korea Array**	**19.66**	**69**	P	**Pn**	**17 50 01.4**	**-1.5**
	comp=E,0.2nm,0.3s,baz=258,slow=12,SNR=6.5						
MKAR	**Makanchi Array**	**22.35**	**316**	P	**P**	**17 50 31.4**	**+1.0**
	comp=E,1.0nm,0.6s,mb3.4,baz=107,slow=12,SNR=5.2						
ZAA0	**Zalesovo Array**	**25.78**	**332**	*e*P	**P**	**17 51 03.8**	**+0.6**
ZALV	**Zalesovo Beam**	**25.78**	**332**	P	**P**	**17 51 04.2**	**+0.9**
	comp=E,4.3nm,0.5s,mb4.2,baz=139,slow=9.7,SNR=16						
KURK	**Kurchatov**	**26.52**	**321**	P	**P**	**17 51 10.8**	**+0.8**
	comp=E,0.9nm,0.6s,mb3.5,baz=124,slow=11,SNR=4.2						
KURK	**Kurchatov**	**26.52**	**321**	*e*P	**P**	**17 51 09.5**	**-0.5**
	comp=E,0.9nm,0.5s,mb3.6						
FINES	**FINESS Array B**	**56.77**	**326**	P	**P**	**17 55 16.5**	**+0.3**
	comp=E,2.3nm,0.9s,mb4.2,baz=88,slow=9.7,SNR=6.4						
FINES	**FINESS Array B**	**56.77**	**326**	P	**P**	**17 55 16.5**	**+0.3**
WRAB	**Tennant Creek**	**59.28**	**147**	P	**P**	**17 55 33.7**	**-0.6**
	comp=E,2.1nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**59.29**	**147**	P	**P**	**17 55 32.5**	**-1.9**
	comp=E,0.5nm,0.6s,mb3.7,baz=5.3,slow=7.1,SNR=7.3						
WRA	**Warramunga Arr**	**59.29**	**147**	P	**P**	**17 55 32.5**	**-1.9**
ASAR	**Alice Springs**	**62.36**	**150**	P	**P**	**17 55 56.4**	**+1.1**
	comp=E,0.4nm,0.7s,mb3.7,baz=9.3,slow=6.0,SNR=6.1						
ASAR	**Alice Springs**	**62.36**	**150**	P	**P**	**17 55 56.4**	**+1.1**
INK	**Inuvik**	**70.74**	**20**	P	**P**	**17 56 48.2**	**-0.1**
	comp=E,1.0nm,0.7s,mb3.9,baz=342,slow=11,SNR=3.9						
YKA	**Yellowknife Ar**	**80.28**	**17**	P	**P**	**17 57 43.9**	**+0.8**
	comp=E,0.8nm,0.7s,mb3.8,baz=331,slow=5.2,SNR=10.0						
YKA	**Yellowknife Ar**	**80.28**	**17**	P	**P**	**17 57 43.9**	**+0.8**

JMA ***12*** *17:45:34.6±0.3, 37.°20N×142.°40E, h21km±5km, M3.8*
NEIC ***12*** *17:45:37.3±5.4, 37.°07N×142.°52E, h35km, Error ellipse: s-maj=107.0km s-min=18.1km az=141.0*
IDC ***12*** *17:45:38.3±1.5, 37.°74N×141.°90E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.6/26, mbtmp3.7/9, ML3.4/2, Error ellipse: s-maj=42.2km s-min=20.3km az=75.0*

ISC 12 17:45:38.2±1.1, 37.°25N±0.°07×142.°35E±0.°09, h35km, n22, σ0§93/28, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.19**	**276**	P	**Pn**	**17 45 56.5**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.25**	**264**	P	**Pn**	**17 45 57.1**	**-2.0**
ONAJ				*e*S	**Sn**	**17 46 14.3**	**-0.4**
JMM	**Marumori**	**1.38**	**297**	P	**Pn**	**17 45 59.5**	**-1.5**
JMM				*e*S	**Sn**	**17 46 18.1**	**+0.1**
JIO	**Ouri**	**1.44**	**327**	P	**Pn**	**17 46 00.7**	**-1.1**
JFT	**Otama**	**1.63**	**280**	P	**Pn**	**17 46 03.9**	**-0.4**
JFT				*e*S	**Sn**	**17 46 25.1**	**+1.0**
JOU	**Okura**	**1.74**	**310**	P	**P

GYA Sn **Sn** **17 54 57.8 +4.2**
GYA smax
comp=N,1μm,1.2s
GYA smax
comp=E,1μm,1.0s
KMI Kunming 6.88 194 Pn **Pn** **17 54 05.4 +0.7**
KMI Sn **Sn** **17 55 15.4 -7.6**
KMI smax
comp=N,130nm,1.0s
KMI smax
comp=E,230nm,0.8s
KMI LR LR
comp=N,610nm,3.8s
KMI LR LR
comp=E,550nm,3.8s
GTA Gaotai 8.46 334 *e*P **Pn** **17 54 27.6 +1.3**
GTA pP 17 54 32.0
GTA sP 17 54 35.3
GTA S **Sn** **17 56 03.8 +2.0**
GTA pmax pmax
comp=Z,7.0nm,0.5s
GTA pmax pmax
comp=Z,100nm,5.1s
GTA LR LR
comp=N,1μm,10.5s
GTA LR LR
comp=E,1μm,9.3s
GTA LR LR
comp=Z,1μm,9.3s
WHN Wuhan 8.52 96 P **Pn** **17 54 27.5 +0.3**
WHN S **Sn** **17 55 58.6 -4.8**
WHN LR LR
comp=N,5μm,6.4s
WHN LR LR
comp=E,8μm,7.5s
WHN LR LR
comp=Z,7μm,9.9s
BTO Baotou 9.80 25 *e*P **Pn** **17 54 44.6 -0.1**
BTO LR LR
comp=N,2μm,10.8s
BTO LR LR
comp=E,2μm,9.4s
HHC Hu-ho-hao-te 10.62 30 *e*P **Pn** **17 54 58.4 +2.4**
HHC pP 17 55 01.6
HHC PP 17 55 06.9
HHC S **Sn** **17 56 59.1 +4.2**
HHC sS 17 57 03.4
HHC SS 17 57 12.9
HHC pmax pmax
comp=Z,33nm,1.0s
HHC pmax pmax
comp=Z,290nm,4.9s
HHC LR LR
comp=N,2μm,4.6s
HHC LR LR
comp=E,2μm,5.2s
HHC LR LR
comp=Z,2μm,6.3s
TIA Tai'an 11.33 64 *e*P **Pn** **17 55 06.3 +0.7**
LSA Lhasa 11.69 263 P **Pn** **17 55 11.0 +0.3**
LSA Lhasa 11.69 263 *e*P **Pn** **17 55 10.6 -0.1**
LSA pmax pmax
comp=Z,19nm,0.7s
LSA Lhasa 11.69 263 *e*P **Pn** **17 55 10.6 0.0**
comp=Z,20nm,0.7s
NJ2 Nanjing 12.18 85 *e*P **Pn** **17 55 17.6 +0.3**
NJ2 pP 17 55 23.6
NJ2 PP 17 55 26.9
NJ2 sP 17 55 30.6
NJ2 S **Sn** **17 57 40.8 +7.6**
NJ2 pmax pmax
comp=Z,30nm,0.6s
NJ2 pmax pmax
comp=Z,180nm,4.1s
NJ2 LR LR
comp=N,680nm,9.9s
NJ2 LR LR
comp=E,440nm,9.0s
NJ2 LR LR
comp=Z,1μm,10.2s
BJI Beijing 12.48 46 P **Pn** **17 55 21.8 +0.4**
BJI LR LR
comp=N,2μm,11.2s
BJI LR LR
comp=E,1μm,8.6s
BJI LR LR
comp=Z,1μm,20.1s
CHRT Chiangrai 12.66 201 P **Pn** **17 55 25.0 +1.1**
comp=Z,113nm,0.9s
QIZ Qiongzhong 13.64 158 P **Pn** **17 55 36.5 -0.8**
QIZ S **Sn** **17 58 12.9 +4.1**
QIZ pmax pmax
comp=Z,36nm,1.6s
CHTO Chiang Mai 13.92 202 *e*P **Pn** **17 55 41.1 0.0**
CHTO pmax pmax
comp=Z,18nm,0.6s
CHTO Chiang Mai 13.92 202 *e*P **Pn** **17 55 41.1 0.0**
comp=Z,18nm,0.6s
CM31 Chiang Mai Arr 14.25 202 *e*P **Pn** **17 55 45.9 +0.2**
comp=Z,46nm,0.6s
CMAR Chiang Mai Arr 14.25 202 Pn **Pn** **17 55 46.3 +0.7**
comp=Z,0.6nm,0.3s,baz=11,slow=10,SNR=31
DL2 Dalian 15.62 58 P **Pn** **17 56 05.8 +1.9**
DL2 pmax pmax
comp=Z,50nm,1.4s
SONM Songino Array 16.03 5 Pn **Pn** **17 56 08.7 -0.4**
comp=Z,2.2nm,0.3s,baz=182,slow=10,SNR=37
ULN Ulaanbaatar 16.11 6 *e*P **Pn** **17 56 10.1 -0.1**
ULN pmax pmax
comp=Z,36nm,0.8s
ULN Ulaanbaatar 16.11 6 *e*P **Pn** **17 56 10.1 -0.1**
comp=Z,36nm,0.8s
YHNB Yeheng 16.48 112 *e*P **Pn** **17 56 17.8 +2.7**
comp=Z,22nm,0.6s
SSLB Suanglung 16.60 115 *e*P **Pn** **17 56 17.5 +0.9**
comp=Z,40nm,0.9s
TPUB Ta-pu 16.62 117 *e*P **Pn** **17 56 17.8 +1.0**
WMQ Urumqi 17.83 317 *e*P **Pn** **17 56 32.6 +0.7**
WMQ pmax pmax
comp=Z,19nm,1.0s
ZAK Zakamensk 18.54 358 *e*P **Pn** **17 56 41.0 +0.5**
ZAK pmax pmax
comp=Z,21nm,1.0s
INCN Inchon 19.03 67 *e*P **Pn** **17 56 45.2 -1.3**
comp=Z,33nm,0.7s
TLY Talaya 19.83 358 *e*P **Pn** **17 56 56.3 +0.3**
TLY pmax pmax
comp=Z,19nm,1.1s
TLY MLR MLR
comp=Z,638nm,11.0s
MOY Mondy 19.97 354 *e*P **Pn** **17 56 58.2 +0.5**
MOY pmax pmax
comp=Z,56nm,2.8s
KSRS Korea Array 20.03 67 P **P** **17 56 57.1 +0.4**
comp=Z,4.3nm,0.3s,baz=254,slow=10,SNR=186
KSRS Korea Array 20.03 67 P **P** **17 56 57.2 +0.4**
KSRS pmax pmax
comp=Z,4.0nm,0.3s
CN2 Changchun 20.33 48 *e*P **P** **17 57 09.0 +9.1**
CN2 *es*P sP 17 57 15.3 +11
CN2 *e*S **S** **18 00 57.7 +10**
CN2 pmax pmax
comp=Z,150nm,0.6s
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=N,600nm,14.0s,MS4.3
CN2 LR LR
comp=E,700nm,14.0s,MS4.3
CN2 LR LR
comp=Z,900nm,15.0s,MS4.2
IRK Irkutsk 20.38 360 *e*P **P** **17 57 01.4 +1.0**
IRK pmax pmax
comp=Z,131nm,0.8s
HIA Hailar 20.82 29 *e*P **P** **17 57 06.6 +1.3**
HIA pmax pmax
comp=Z,21nm,0.5s
HIA Hailar 20.82 29 *e*P **P** **17 57 06.6 +1.3**
comp=Z,21nm,0.5s
PTH Pithoragarh 21.01 270 *ex* **P** **17 57 06.6 -0.9**
CIT Chita 21.22 16 *e*P **P** **17 57 10.6 +1.1**
CIT pmax pmax
comp=Z,90nm,1.6s,mb4.8
MK31 Makanchi Array 22.66 318 *e*P **P** **17 57 24.8 -0.1**
MKAR Makanchi Array 22.66 318 P **P** **17 57 25.1 +0.2**
comp=Z,12nm,0.8s,mb4.4,baz=114,slow=12,SNR=55

DDI Dehra Dun 22.70 273 *ex* **P** **17 57 28.0 +2.5**
MDJ Mudanjiang 23.36 50 P **P** **17 57 31.8 -0.5**
MDJ pP 17 57 34.8
MDJ S **S** **18 01 44.9 +0.1**
MDJ sS sS 18 01 50.1 +0.1
MDJ ScP ScP 18 04 57.0 0.0
MDJ PcS PcS 18 04 58.2 +0.2
MDJ pmax pmax
comp=Z,81nm,2.2s,mb4.8
MDJ LR LR
comp=N,780nm,18.9s,MS4.4
MDJ LR LR
comp=E,690nm,14.7s,MS4.4
MDJ LR LR
comp=Z,840nm,13.6s,MS4.4
MDJ Mudanjiang 23.36 50 *e*P **P** **17 57 33.8 +1.5**
comp=Z,16nm,0.6s,mb4.6
SDNR Sundarnagar 23.43 276 *ex* **P** **17 57 38.1 +4.9**
NDI New Delhi 23.77 269 *ex* **P** **17 57 33.5 -3.0**
KSH Kashi 24.34 296 *e*P **P** **17 57 44.7 +3.0**
KSH *ep*P 17 57 48.6
KSH *es*P sP 17 57 51.6 +5.4
KSH *e*PP 17 58 20.7
KSH *e*PcP PcP 18 01 22.6 +1.5
KSH *e*S **S** **18 02 01.6 +0.7**
KSH *e*SS 18 02 57.0
KSH *e*ScP ScP 18 04 59.2 -0.6
KSH *e*PcS PcS 18 05 01.6 +0.7
KSH *e*ScS ScS 18 08 46.7 -0.5
KSH pmax pmax
comp=Z,140nm,4.1s
KSH LR LR
comp=N,890nm,8.7s
KSH LR LR
comp=E,1μm,10.9s
TKM2 Tokmak 2 25.38 304 *e*P **P** **17 57 52.4 +1.4**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
TKM2 Tokmak 2 25.38 304 *e*P **P** **17 57 52.4 +1.3**
comp=Z,5.3nm,0.8s,mb4.1
UCH Uchtor 25.97 302 *e*P **P** **17 57 58.0 +1.5**
comp=Z,24nm,1.1s,mb4.6
AAK Ala-Archa 26.09 303 P **P** **17 57 59.2 +1.8**
comp=Z,3.0nm,0.6s,mb4.0,baz=113,slow=4.3,SNR=11
AAK Ala-Archa 26.09 303⇑ *e*P **P** **17 57 59.3 +1.8**
AAK pmax pmax
comp=Z,4.0nm,1.2s,mb3.8
AAK Ala-Archa 26.09 303 *e*P **P** **17 57 57.8 +0.4**
comp=Z,4.3nm,0.8s,mb4.0
ZAA0 Zalesovo Array 26.21 333 *e*P **P** **17 57 58.0 -0.4**
ZALV Zalesovo Beam 26.21 333 P **P** **17 57 58.4 -0.1**
comp=Z,14nm,0.5s,mb4.8,baz=131,slow=9.7,SNR=68
AML Almayashu 26.54 301 *e*P **P** **17 58 02.8 +1.2**
comp=Z,10nm,0.8s,mb4.4
EKS2 Erkin-Say 26.61 303 *e*P **P** **17 58 02.2 0.0**
comp=Z,3.6nm,0.8s,mb4.0
BOD Bodaibo 26.77 11 *e*P **P** **17 58 04.0 +0.5**
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
KLR Kul'dur 26.80 42 *e*P **P** **17 58 00.0 -3.8**
KLR pmax pmax
comp=E,43nm,1.2s
KLR pmax pmax
comp=Z,47nm,1.2s,mb4.9
KLR MLR MLR
comp=E,800nm,11.0s
KLR MLR MLR
comp=Z,2μm,11.0s,MS5.0
KURK Kurchatov 26.87 322 P **P** **17 58 04.5 +0.1**
comp=Z,8.0nm,0.7s,mb4.3,baz=127,slow=8.7,SNR=39
KURK Kurchatov 26.87 322 *e*P **P** **17 58 04.7 +0.3**
KURK Kurchatov 26.87 322 *e*P **P** **17 58 03.6 -0.8**
comp=Z,8.4nm,0.8s,mb4.3
NVS Novosibirsk 27.50 333 *e*P **P** **17 58 08.6 -1.4**
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.2
NVS pmax pmax
comp=N,12nm,2.0s
NVS pmax pmax
comp=E,10.0nm,1.5s
MAT Matsushiro 28.17 71 P **P** **17 58 15.5 -0.8**
MJAR Matsushiro Arr 28.17 71 P **P** **17 58 16.0 -0.3**
comp=E,4.7nm,0.5s,mb4.3,baz=279,slow=10.0,SNR=21
HABR Khabarovsk 28.39 45 *e*P **P** **17 58 17.5 -0.6**
HABR S **S** **18 03 01.6 -3.2**
HABR *e*SS sS 18 03 16.1 +6.0
HABR *e*SS 18 04 19.0
HABR *e* 18 08 59.7
HABR MLR MLR
comp=E,851nm,21.0s,MS4.6
HABR MLR MLR
comp=Z,377nm,18.0s,MS4.0
HABR MLR MLR
comp=N,1μm,20.0s,MS4.6
NRGR Nerungri 28.50 24 *e*P Px 17 58 31.4
KBL Kabul 29.71 285 *e*P **P** **17 58 30.2 +0.2**
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.7
KBL Kabul 29.71 285 *e*P **P** **17 58 30.2 +0.1**
comp=Z,14nm,0.9s,mb4.7
ASAJ Asahikawa 32.14 57 P **P** **17 58 50.5 -0.7**
comp=Z,7.4nm,0.5s,mb4.8,baz=268,slow=9.9,SNR=14
ASAJ Asahikawa 32.14 57 P **P** **17 58 50.6 -0.7**
ASAJ pmax pmax
comp=Z,7.0nm,0.5s
BVAR Borovoye Array 32.43 321 P **P** **17 58 54.1 +0.3**
comp=Z,2.3nm,0.5s,mb4.2,baz=118,slow=9.7,SNR=14
BRVK Borovoye 32.51 321 *d iP* **P** **17 58 54.5 +0.1**
BRVK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BRVK Borovoye 32.51 321 *e*P **P** **17 58 53.4 -1.0**
YSS Yuzh-Sakhalins 32.81 51⇓ *iP* **P** **17 58 57.5 +0.3**
YSS Yuzh-Sakhalins 32.81 51 *e*P **P** **17 58 56.8 -0.4**
comp=Z,8.0nm,0.4s,mb5.0
YAK Yakutsk 34.29 21 *e*P **P** **17 59 09.1 -0.7**
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=Z,20nm,1.0s,mb5.0
YAK Yakutsk 34.29 21 *e*P **P** **17 59 09.6 -0.2**
comp=Z,22nm,0.6s,mb5.3
ABKAR Akbulak array 37.45 311 *e*P **P** **17 59 37.0 -0.1**
comp=Z,1.6nm,0.4s,mb4.2
AKTK Aktyubinsk 38.89 312 P **P** **17 59 49.4 +0.2**
AKTO Aktyubinsk 38.89 312 P **P** **17 59 49.4 +0.2**
comp=Z,1.2nm,0.4s,mb4.0,baz=89,slow=11,SNR=9.4
SVE Sverdlovsk 39.12 323 *e*P **P** **17 59 51.5 +0.5**
SVE pmax pmax
comp=Z,17nm,0.9s,mb4.8
KAPI Kappang 39.43 156 P **P** **17 59 53.9 -0.2**
comp=Z,10nm,0.8s,mb4.6,baz=185,slow=12,SNR=3.6
KAPI Kappang 39.43 156 P **P** **17 59 53.9 -0.2**
ARU Arti 40.06 322 *c iP* **P** **17 59 59.1 +0.2**
ARU *e* 18 01 29.3
ARU S **S** **18 06 04.2 -0.4**
ARU SS SS 18 08 59.7 -2.0
ARU pmax pmax
comp=Z,30nm,1.0s,mb5.0
ARU Arti 40.06 322 *e*P **P** **17 59 59.1 +0.2**
comp=Z,26nm,0.6s,mb5.1
TIXI Tiksi 41.96 11 *e*P **P** **18 00 12.3 -2.0**
TIXI pmax pmax
comp=Z,5.0nm,0.5s,mb4.4
TIXI Tiksi 41.96 11 *e*P **P** **18 00 12.3 -2.0**
comp=Z,4.9nm,0.5s,mb4.4
SOKR Solikamsk 41.98 326⇑ *iP* **P** **18 00 15.8 +1.2**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
SEY Seymchan 43.27 30⇑ *iP* **P** **18 00 25.4 +0.3**
PETK Petropavlovsk- 43.41 45 P **P** **18 00 26.0 -0.4**
comp=Z,21nm,0.7s,mb5.0,baz=298,slow=1.8,SNR=39
GNI Garni 48.27 297 *e*P **P** **18 01 08.1 +3.2**
ZEI Tsey 48.49 301 *e*P **P** **18 01 08.2 +1.6**
ZEI pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
QRN Al-Qurain 48.50 282 *e*P **P** **18 01 06.0 -0.8**
QRN AMb AMB 18 01 06.7
comp=Z,25nm,0.7s,mb5.3
MIB Mutribah 48.65 283 *e*P **P** **18 01 07.4 -0.6**
MIB AMb AMB 18 01 12.5
comp=Z,33nm,0.8s,mb5.4
RDF Al-Radifah 48.75 282 *e*P **P** **18 01 08.6 -0.2**
RDF AMb AMB 18 01 09.5
comp=Z,30nm,0.8s,mb5.4
KIV Kislovodsk 49.20 303 *e*P **P** **18 01 14.3 +2.2**

KIV pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KIV Kislovodsk 49.20 303 *e*P **P** **18 01 13.2 +1.1**
BILL Bilibino 50.35 25 *c iP* **P** **18 01 20.2 -0.2**
BILL *e* 18 03 14.5
BILL pmax pmax
comp=Z,23nm,1.7s,mb4.9
BILL Bilibino 50.35 25 *e*P **P** **18 01 20.2 -0.2**
comp=Z,8.9nm,0.8s,mb4.8
KLMR Klimovskoe 50.66 325 *e*P **P** **18 01 21.8 -1.0**
KLMR pmax pmax
comp=Z,43nm,1.5s,mb5.2
KAKA Kakadu 51.76 144 *e*P **P** **18 01 29.3 -2.3**
comp=Z,5.5nm,0.4s,mb4.8
KAKA Kakadu 51.76 144 *e*P **P** **18 01 29.7 -1.9**
OBN Obninsk 52.17 318 *c iP* **P** **18 01 33.7 -0.5**
OBN *e**PP pP 18 01 45.3 +7.8
OBN *e* 18 03 31.6
OBN pmax pmax
comp=Z,42nm,2.5s,mb4.9
MALT Malatya 53.45 296 *e*P **P** **18 01 42.5 -1.5**
FITZ Fitzroy Crossi 53.64 155 *e*P **P** **18 01 44.9 -0.5**
comp=Z,3.2nm,0.3s,mb4.7
FITZ Fitzroy Crossi 53.64 155 *e*P **P** **18 01 44.8 -0.7**
comp=Z,5.5nm,0.9s,mb4.5
JOF Joensuu 54.59 327 *e*P **P** **18 01 51.0 -0.9**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
JOF Joensuu 54.59 327 *ep* **P** **18 01 51.0 -0.9**
comp=Z,8.2nm,0.7s,mb4.9
KEV Kevo 56.20 336 *e*P **P** **18 02 01.8 -1.6**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KEV Kevo 56.20 336 *ep* **P** **18 02 01.8 -1.6**
comp=Z,9.1nm,0.6s,mb5.0
BR131 Keskin Array S 56.68 299 *e*P **P** **18 02 05.2 -2.2**
comp=Z,4.7nm,0.8s,mb4.6
BRTR Keskin Array B 56.68 299 P **P** **18 02 07.0 -0.4**
comp=Z,3.0nm,0.8s,mb4.3,baz=104,slow=6.2,SNR=12
BRTR Keskin Array B 56.68 299 *ce*P **P** **18 02 10.0 +2.7**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 56.73 336 P **P** **18 02 06.9 -0.3**
comp=Z,6.3nm,0.6s,mb4.8,baz=79,slow=7.9,SNR=34
KAF Kangasniemi 56.96 327 *e*P **P** **18 02 07.2 -1.7**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 56.96 327 *ep* **P** **18 02 07.2 -1.7**
comp=Z,4.7nm,0.6s,mb4.7
AKASG Malin Array Be 57.13 313 P **P** **18 02 09.4 -0.9**
comp=Z,1.8nm,0.3s,mb4.5,baz=68,slow=7.7,SNR=9.4
FINES FINESS Array B 57.15 326 P **P** **18 02 09.8 -0.4**
comp=Z,6.1nm,0.4s,mb5.0,baz=89,slow=7.3,SNR=56
FINES FINESS Array B 57.15 326 P **P** **18 02 09.8 -0.4**
VSU Vasula 57.22 322 *e*P **P** **18 02 11.1 +0.3**
CSS Prodhromos 58.33 294 P **P** **18 02 17.5 -1.5**
comp=Z,7.8nm,0.8s,mb4.8
SPITS Spitsbergen Ar 58.70 346 P **P** **18 02 20.6 -0.4**
comp=Z,2.4nm,0.5s,mb4.5,baz=101,slow=8.6,SNR=19
SPB4 Spitsbergen Ar 58.71 346 *e*P **P** **18 02 20.0 -1.0**
WRAB Tennant Creek 58.90 147 *e*P **P** **18 02 22.9 -0.1**
WRAB pmax pmax
comp=Z,12nm,0.6s,mb5.1
WRAB Tennant Creek 58.90 147 *e*P **P** **18 02 22.9 -0.1**
comp=Z,12nm,0.6s,mb5.1
WRA Warramunga Arr 58.90 147 P **P** **18 02 23.1 +0.2**
comp=Z,9.9nm,0.5s,mb5.1,baz=340,slow=7.8,SNR=161
WB2 Warramunga Arr 58.90 147 *e*P **P** **18 02 22.9 -0.1**
BUR08 Bucovina Ar. S 60.43 310 P **P** **18 02 33.4 +0.1**
KWP Kalwaria Pacla 61.46 313 *e*P **P** **18 02 40.4 +0.1**
KWP pmax pmax
comp=Z,19nm,0.9s,mb5.2
KWP Kalwaria Pacla 61.46 313 *e*P **P** **18 02 40.4 +0.1**
comp=Z,18nm,0.9s,mb5.2
ASAR Alice Springs 61.95 149 P **P** **18 02 44.1 +0.3**
comp=Z,7.3nm,0.5s,mb5.0,baz=334,slow=6.6,SNR=84
NIE Niedzica 63.01 313 *e*P **P** **18 02 51.9 +1.2**
OJC Ojcow 63.08 314 *e*P **P** **18 02 50.7 -0.4**
NB2 NORSAR Subarra 64.22 327 P **P** **18 02 57.2 -1.3**
comp=Z,14nm,1.1s,mb4.9,baz=73,slow=6.9
NOA NORSAR Array B 64.22 327 P **P** **18 02 57.4 -1.1**
comp=Z,4.4nm,0.6s,mb4.6,baz=73,slow=6.7,SNR=12
VYHS Vyhne 64.23 313 *e*P **P** **18 03 01.5 +2.7**
VYHS Vyhne 64.23 313 *e*P **P** **18 03 01.5 +2.7**
CTA Charters Tower 65.32 136 *e*P **P** **18 03 04.1 -2.0**
comp=Z,11nm,1.5s,mb4.7
NWAO Narrogin (SRO) 65.54 168 P **P** **18 03 08.0 +0.7**
FORT Forrest 66.16 158 *e*P **P** **18 03 11.7 +0.3**
comp=Z,9.3nm,0.5s,mb5.1
PRU Pruhonice 66.34 315 *ep*P pP 18 03 19.6 +3.8
BRG Berggiesshubel 66.37 316 *e*P **P** **18 03 15.7 +3.1**
comp=Z,5.2nm,0.8s,mb4.6
BRG Berggiesshubel 66.37 316 *e*P **P** **18 03 15.7 +3.1**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
COLD Coldfoot 66.65 24 *e*P **P** **18 03 13.9 -0.1**
comp=Z,8.8nm,0.8s,mb4.8
CLL Collm 66.76 317 *e*P **P** **18 03 14.0 -1.0**
CLL *i* 18 03 24.6
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CLL Collm 66.76 317 *e*P **P** **18 03 14.0 -1.0**
CLL *i* 18 03 24.6
CLL Collm 66.76 317 *e*P **P** **18 03 14.0 -1.0**
comp=Z,4.0nm,1.0s,mb4.4
CLL *i* pP pP 18 03 24.6 +6.2
comp=Z,12nm,1.6s
KHC Kasperske Hory 67.25 315 *e*P **P** **18 03 18.1 -0.1**
comp=Z,1.8nm,0.7s,mb4.2
KHC Kasperske Hory 67.25 315 *e*P **P** **18 03 20.9 +2.7**
KHC *ep*P pP 18 03 25.1 +3.5
GEC2 GERESS Array S 67.28 314 *e*P **P** **18 03 17.3 -1.1**
GEC2 pmax pmax
comp=Z,1μm,1.2s
GEC2 GERESS Array S 67.28 314 *e*P **P** **18 03 17.3 -1.1**
comp=Z,1μm,1.2s
GERES GERESS Array B 67.28 314 P **P** **18 03 18.0 -0.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=70,slow=5.9,SNR=13
CHUM Lake Minchumin 67.35 28 *e*P **P** **18 03 17.9 -0.7**
comp=Z,10nm,0.9s,mb4.9
BPAW Bear Paw Mtn. 67.78 27 *e*P **P** **18 03 21.3 0.0**
comp=Z,4.1nm,0.5s,mb4.7
PPLA Purkeypile 67.84 29 *e*P **P** **18 03 22.0 +0.3**
comp=Z,26nm,1.4s,mb5.1
KTH Kantishna Hill 68.06 28 *e*P **P** **18 03 22.6 -0.5**
GRA1 Grafenberg Arr 68.44 316 *e*P **P** **18 03 28.3 +2.6**
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P** **18 03 28.3 +2.6**
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P** **18 03 28.3 +2.6**
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P** **18 03 28.3 +2.6**
GRF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GRF Grafenberg Arr 68.44 316 *e*P **P** **18 03 28.3 +2.6**
comp=Z,4.0nm,0.9s,mb4.5
COLA College 68.61 26 *e*P **P** **18 03 25.3 -1.2**
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
COLA College 68.61 26 *e*P **P** **18 03 25.3 -1.2**
comp=Z,6.6nm,0.7s,mb4.7
KDAK Kodiak Island 70.03 34 *ce*P **P** **18 03 35.2 -0.2**
MEM Membach 71.07 318 P **P** **18 03 42.1 +0.2**
CDF Champ du Feu 71.33 316 *e*P **P** **18 03 43.0 -0.5**
comp=Z,7.8nm,0.8s,mb4.4
INK Inuvik 71.34 19 P **P** **18 03 42.8 -0.4**
comp=Z,8.0nm,0.8s,mb4.7,baz=329,slow=7.2,SNR=32
INK Inuvik 71.34 19 P **P** **18 03 42.8 -0.4**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 71.34 19 *e*P **P** **18 03 42.7 -0.6**
comp=Z,15nm,1.0s,mb4.9
WLF Walferdange 71.42 317 P **P** **18 03 44.6 +0.6**
comp=Z,8.0nm,1.1s,mb4.6
WLF Walferdange 71.42 317 *e*P **P** **18 03 44.2 +0.2**
WLF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
WLF Walferdange 71.42 317 *e*P **P** **18 03 44.2 +0.2**
comp=Z,9.7nm,0.8s,mb4.8
KMBO Kilima Mbogo 71.42 257 P **P** **18 03 45.5 +0.9**
comp=Z,4.0nm,0.8s,mb4.4,baz=51,slow=11,SNR=15
KMBO Kilima Mbogo 71.42 257 *ce*P **P** **18 03 47.7 +3.1**
KMBO pmax pmax
comp=Z,4.0nm,0.8s
KMBO Kilima Mbogo 71.42 257 *e*P **P** **18 03 45.3 +0.7**

comp=Z,5.6nm,1.0s,mb4.5
BCLA Clavier 71.55 318 P **P 18 03 43.5 -1.3**
BMRM Bremner River 71.92 29 *eP* **P 18 03 45.5 -1.3**
DAWY Dawson 72.12 25 *eP* **P 18 03 47.3 -0.7**
STKA Stephens Creek 72.44 147 *eP* **P 18 03 49.3 -0.9**
comp=Z,3.6nm,0.6s,mb4.5
STKA Stephens Creek 72.44 147 P **P 18 03 49.7 -0.5**
comp=Z,5.2nm,0.5s,mb4.7,baz=336,slow=6.3,SNR=18
STKA Stephens Creek 72.44 147 *eP* **P 18 03 49.0 -1.2**
comp=Z,1.1nm,0.6s,mb4.0
LPG La Plagne 73.00 313 *eP* **P 18 03 53.9 +0.3**
comp=Z,21nm,0.6s,mb4.9
SMF Signal de Mont 74.22 315 *eP* **P 18 04 00.2 -0.5**
comp=Z,12nm,0.8s,mb4.6
TCF Toulx Ste Croi 75.37 316 *eP* **P 18 04 07.9 +0.5**
SFJD Kangerlussuaq 79.67 350 *i* P **P 18 04 29.0 -2.0**
SFJD pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SFJD Kangerlussuaq 79.67 350 *i* P **P 18 04 29.0 -2.0**
comp=Z,6.1nm,0.7s,mb4.6
YKA Yellowknife Ar 80.88 17 P **P 18 04 37.3 -0.3**
comp=Z,5.2nm,0.7s,mb4.6,baz=328,slow=5.1,SNR=82
EDM Edmonton 89.11 22 *eP* **P 18 05 17.0 -2.1**
BSMT Bassoo Peak 93.18 25 *eP* **P 18 05 36.8 -1.3**
comp=Z,4.5nm,1.0s,mb4.8
SCHQ Schefferville 93.35 355 P **P 18 05 38.1 -0.7**
comp=Z,2.2nm,0.6s,mb4.8,baz=61,slow=11,SNR=6.3
TOA0 Torodi Ar. Sit 93.74 288 *eP* **P 18 05 41.2 -0.1**
TORD Torodi Ar. Bea 93.74 288 P **P 18 05 41.6 +0.3**
comp=Z,0.7nm,0.9s,mb4.1,baz=46,slow=4.1,SNR=2.6
PDAR Pinedale Array 99.43 25 LR LR 18 55 50.7
comp=Z,221nm,19.2s,MS4.7,baz=337,slow=38
QSPA South Pole Qui 121.62 180 PKP PKPdf 18 11 15.8 -0.6
comp=Z,1.7nm,0.9s,baz=279,slow=1.2,SNR=16
OTAV Otavalo 147.97 6 *e*PKPbc PKPbc 18 12 11.2 +1.2

ISCJB ***12*** *17:53:43.3±0.6,21°.95S±0°.05×67°.21W±0°.08, h186km±8km, mb3.9/5, Error ellipse: s-maj=11.9km s-min=7.9km az=8.6*
IDC ***12*** *17:53:43.6±0.8,21°.90S×67°.03W, h170km±9km, mb3.7/5, mb1 3.7/9, mb1mx3.5/19, mbtmp3.5/9, Error ellipse: s-maj=16.8km s-min=10.2km az=121.0*
NEIC ***12*** *17:53:44.2±0.6,21°.93S×67°.09W, h178km±6km, MG4.3(GUC), Error ellipse: s-maj=10.5km s-min=8.5km az=112.0*
GUC ***12*** *17:53:45.5±0.8,21°.97S×67°.55W, h200km±8km, ML4.3*
ISC 12 17:53:44.2±0.6,21°.94S±0°.05×67°.18W±0°.08,h179km±8km, n26,σ0°.97/36,mb3.9/5,3C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.73**	**247**	P	**Pn**	**17 54 19.7**	**+1.3**
	59nm,0.3s,baz=48,slow=7.2,SNR=747						
LVC				S	**Sn**	**17 54 46.4**	**+1.6**
	36nm,0.3s,baz=244,slow=22,SNR=31						
LVC	**Limon Verde**	**1.73**	**247**	P	**Pn**	**17 54 19.7**	**+1.3**
LVC				S	**Sn**	**17 54 46.4**	**+1.6**
LVC	**Limon Verde**	**1.73**	**247**	*i* P	**Pn**	**17 54 19.7**	**+1.4**
LVC				*i* S	**Sn**	**17 54 45.8**	**+1.0**
PB04	**Plate Boundary**	**2.16**	**261**	⇑*i*P	**Pn**	**17 54 30.1**	**+7.1**
PB04				*i* S	**Sn**	**17 55 04.0**	**+11**
PB04				AML	AML	17 55 05.0	
	comp=E,406nm,0.1s						
PB01	**Plate Boundary**	**2.32**	**292**	⇑*i*P	**Pn**	**17 54 25.3**	**+0.5**
PB01				*i* S	**Sn**	**17 54 55.8**	**-0.3**
PB01				AML	AML	17 54 56.9	
	comp=N,1μm,0.3s						
PECH	**Pedro de Valdi**	**2.40**	**254**	*i* P	**Pn**	**17 54 26.0**	**+0.3**
PECH				*e*S	**Sn**	**17 54 57.2**	**-0.5**
PECH				AML	AML	17 54 58.7	
	comp=E,786nm,0.2s						
MACH	**Maria Elena**	**2.40**	**263**	*i* P	**Pn**	**17 54 26.2**	**+0.6**
MACH				*i* S	**Sn**	**17 54 57.4**	**-0.3**
HMBC	**Humberston**	**3.02**	**303**	⇑*i*P	**Pn**	**17 54 32.7**	**-0.3**
HMBC				*i* S	**Sn**	**17 55 09.1**	**-1.9**
HMBC				AML	AML	17 55 11.4	
	comp=N,968nm,0.5s						
ANCH	**Antofagasta**	**3.45**	**239**	*e*P	**Pn**	**17 54 38.7**	**+0.4**
ANCH				*i* S	**Sn**	**17 55 18.3**	**-2.2**
ANCH	**Antofagasta**	**3.45**	**239**	*e*P	**Pn**	**17 54 38.7**	**+0.4**
ANCH				*i* S	**Sn**	**17 55 18.3**	**-2.2**
ANCH				AML	AML	17 55 20.6	
	comp=N,869nm,0.1s						
LPAZ	**La Paz**	**5.69**	**351**	P	**Pn**	**17 55 08.8**	**+1.6**
	comp=N,1.1nm,0.3s,baz=172,slow=5.9,SNR=14						
LPAZ				S	**Sn**	**17 56 13.2**	**+0.7**
	comp=N,0.4nm,0.3s,baz=275,slow=20,SNR=4.0						
LPAZ	**La Paz**	**5.69**	**351**	P	**Pn**	**17 55 08.8**	**+1.6**
LPAZ				S	**Sn**	**17 56 13.2**	**+0.7**
SIV	**San Ignacio**	**8.27**	**45**	P	**Pn**	**17 55 39.4**	**-1.7**
	comp=N,5.7nm,0.3s,baz=237,slow=11,SNR=80						
SIV				S	**Sn**	**17 57 06.4**	**-7.3**
	comp=N,4.5nm,0.3s,baz=144,slow=22,SNR=17						
CPUP	**Villa Florida**	**10.01**	**118**	P	**Pn**	**17 56 03.1**	**-0.7**
	comp=N,0.4nm,0.3s,baz=282,slow=8.6,SNR=4.7						
TRQA	**Tornquist**	**16.68**	**166**	*eP*	**Pn**	**17 57 27.8**	**+0.1**
PLCA	**Paso Flores**	**18.95**	**188**	P	**P**	**17 57 51.5**	**-0.2**
	comp=N,0.2nm,0.3s,baz=9.3,slow=12,SNR=6.5						
DBIC	**Dimbokro**	**67.33**	**72**	P	**P**	**18 04 20.0**	**-0.4**
	comp=N,3.0nm,1.0s,mb4.1,baz=217,slow=9.2,SNR=3.1						
QSPA	**South Pole Qui**	**68.26**	**180**	P	**P**	**18 04 26.2**	**+1.1**
	comp=N,1.2nm,0.4s,mb3.9,baz=299,slow=3.1,SNR=18						
QSPA	**South Pole Qui**	**68.26**	**180**	P	**P**	**18 04 26.2**	**+1.1**
PDAR	**Pinedale Array**	**75.30**	**329**	P	**P**	**18 05 08.4**	**+0.9**
	comp=N,0.4nm,0.6s,mb3.2,baz=126,slow=9.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**76.00**	**69**	P	**P**	**18 05 11.8**	**-0.3**
	comp=N,4.1nm,0.4s,mb4.4,baz=256,slow=5.6,SNR=74						
TORD	**Torodi Ar. Bea**	**76.00**	**69**	P	**P**	**18 05 11.8**	**-0.3**
YKA	**Yellowknife Ar**	**92.14**	**340**	P	**P**	**18 06 31.9**	**-0.8**
	comp=N,0.3nm,0.4s,mb3.6,baz=132,slow=4.8,SNR=4.1						
ASAR	**Alice Springs**	**130.24**	**206**	PKP	PKPdf	18 12 33.9	+0.1
	comp=N,0.3nm,0.7s,baz=136,slow=1.8,SNR=5.5						
WRA	**Warramunga Arr**	**133.36**	**208**	PKP	PKPdf	18 12 40.5	+0.7
	comp=N,0.3nm,0.4s,baz=147,slow=1.7,SNR=6.4						
MKAR	**Makanchi Array**	**145.02**	**38**	PKP	PKPdf	18 13 00.8	+0.7
	comp=N,1.0nm,0.8s,baz=319,slow=3.5,SNR=9.3						

IDC ***12*** *17:54:30.3±0.5,31°.04N×103°.47E, h0km, mb4.7/27, mb1 4.7/28, mb1mx4.7/31, mbtmp4.7/28, ML4.2/1, MS4.3/28, Ms1 4.3/28, ms1mx4.2/40, Error ellipse: s-maj=16.4km s-min=11.1km az=48.0*
BJI ***12*** *17:54:32.5,31°.26N×103°.62E, h17km, mB5.3/13, mb5.0/27, ML5.1/15, Ms5.1/36, Ms7 4.8/31*
ISCJB ***12*** *17:54:33.5±0.7,31°.16N±0°.03×103°.56E±0°.03, h29km±5km, mb5.0/89, MS4.6/37, Error ellipse: s-maj=4.6km s-min=3.7km az=3.2*
MOS ***12*** *17:54:34.0±1.2,31°.16N×103°.61E, h34km, mb5.2/34, MS4.8/19, Error ellipse: s-maj=8.3km s-min=4.6km az=116.2*
NEIC ***12*** *17:54:35.9±1.9,31°.18N×103°.52E, h35km±14km, mb5.0/42, MS5.0/1, Error ellipse: s-maj=6.8km s-min=4.8km az=212.0*
DJA ***12*** *17:54:44,30°.92N×103°.69E, h72km, mb5.1/16*
SZGRF ***12*** *17:54:50.4,32°.77N×101°.98E, h33km, mb5.3, Sichuan, China*
ISC 12 17:54:34.5±0.7,31°.17N±0°.03×103°.53E±0°.02,h20km±4km, h14km±2.3km:pP-P,n303,σ1°.24/309,mb5.0/89,MS4.6/37, 14C-16D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**143**	Pg	**Pg**	**17 54 40.9**	**-0.7**
CD2				Sg	**Sg**	**17 54 48.5**	**+2.0**
CD2				smax			
	comp=N,184μm,0.9s						
LZH	**Lanzhou**	**4.91**	**3**	*e*Pg	**Pg**	**17 56 05.1**	**-3.3**
LZH				Sg	**Sg**	**17 57 06.9**	**-5.1**
LZH				smax			
	comp=N,920nm,0.9s						
LZH				smax			
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=E,38μm,5.3s						
LZH				LR	LR		
	comp=Z,38μm,6.7s						
ENH	**Enshi**	**5.21**	**98**	*e*Pn	**Pn**	**17 55 51.1**	**-0.2**
GYA	**Guiyang**	**5.44**	**149**	Pn	**Pn**	**17 55 57.0**	**+2.5**
GYA				Sn	**Sn**	**17 56 53.2**	**-3.3**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,4μm,1.2s						
KMI	**Kunming**	**6.07**	**187**	Pn	**Pn**	**17 56 04.2**	**+1.1**
KMI				Sn	**Sn**	**17 57 11.8**	**-0.1**
KMI				smax			
	comp=N,540nm,1.5s						
KMI				smax			
	comp=E,470nm,1.4s						
KMI				LR	LR		
	comp=N,9μm,8.5s						
KMI				LR	LR		
	comp=E,31μm,11.3s						
KMI				LR	LR		
	comp=Z,6μm,8.5s						
LSA	**Lhasa**	**10.79**	**265**	P	**Pn**	**17 57 08.8**	**+1.0**
LSA				S	**Sn**	**17 59 06.9**	**-1.0**
LSA				LR	LR		
	comp=E,4μm,13.0s						
LSA				LR	LR		
	comp=Z,6μm,11.0s						
LSA	**Lhasa**	**10.79**	**265**	*e*Pn	**Pn**	**17 57 07.6**	**-0.2**
HHC	**Hu-ho-hao-te**	**11.64**	**32**	*eP*	**Pn**	**17 57 18.4**	**-0.9**
HHC				pP		17 57 22.9	
HHC				PP		17 57 28.1	
HHC				S	**Sn**	**17 59 29.1**	**+0.5**
HHC				sS		17 59 35.8	
HHC				SS		17 59 43.1	
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,5.0s						
HHC				LR	LR		
	comp=N,4μm,6.1s						
HHC				LR	LR		
	comp=E,4μm,5.5s						
HHC				LR	LR		
	comp=Z,2μm,5.8s						
SHL	**Shillong**	**11.67**	**244**	*eP*	**Pn**	**17 57 20.0**	**+0.1**
SHL				*ex*	x	18 00 53.0	
CHTO	**Chiang Mai**	**12.99**	**200**	P	Px	17 57 50.5	
SNR=6.4							
CHTO				P		17 57 50.5	
SNR=6.4							
CMAR	**Chiang Mai Arr**	**13.32**	**199**	Pn	**Pn**	**17 57 42.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=3.1						
CMAR				Lg		18 01 36.9	
	comp=Z,0.0nm,0.3s,baz=22,slow=27,SNR=3.3						
CMAR				LR	LR	18 03 04.5	
	comp=Z,1μm,21.5s,baz=14,slow=39						
QIZ	**Qiongzhong**	**13.37**	**153**	P	**Pn**	**17 57 43.5**	**+0.3**
QIZ				pP		17 57 48.8	
QIZ				sP		17 57 53.9	
QIZ				S	**Sn**	**18 00 15.7**	**+4.4**
QIZ				pmax	pmax		
	comp=Z,40nm,1.1s						
QIZ				LR	LR		
	comp=N,3μm,6.8s						
QIZ				LR	LR		
	comp=Z,3μm,11.0s						
BJI	**Beijing**	**13.56**	**46**	P	**Pn**	**17 57 44.8**	**-0.8**
BJI				pmax	pmax		
	comp=Z,21nm,0.8s						
BJI				LR	LR		
	comp=N,4μm,8.1s						
BJI				LR	LR		
	comp=E,910nm,8.7s						
BJI				LR	LR		
	comp=Z,1μm,18.6s						
QZH	**Quanzhou**	**14.67**	**111**	*eP*	**Pn**	**17 57 56.2**	**-4.7**
QZH				S	**Sn**	**18 00 34.1**	**-8.8**
QZH				LR	LR		
	comp=N,6μm,5.9s						
QZH				LR	LR		
	comp=E,4μm,5.8s						
QZH				LR	LR		
	comp=Z,14μm,8.2s						
SSE	**Sheshan**	**15.13**	**86**	*eP*	**Pn**	**17 58 05.8**	**-1.2**
SSE				S	**Sn**	**18 00 54.5**	**+0.5**
SSE				pmax	pmax		
	comp=Z,71nm,1.2s						
SSE				pmax	pmax		
	comp=Z,150nm,4.6s						
SSE				LR	LR		
	comp=N,2μm,13.8s						
SSE				LR	LR		
	comp=E,4μm,13.9s						
SSE				LR	LR		
	comp=Z,5μm,13.3s						
GUN	**Gumba**	**15.70**	**263**	*eP*	**Pn**	**17 58 12.2**	**-2.3**
	comp=Z,462nm,0.9s						
PKI	**Pulchoki**	**16.20**	**262**	*eP*	**Pn**	**17 58 18.3**	**-2.6**
	comp=Z,478nm,0.8s						
PKIN	**Phulchoki**	**16.21**	**262**	*eP*	**Pn**	**17 58 19.0**	**-2.0**
	comp=Z,284nm,0.6s						
KKN	**Kakani**	**16.24**	**263**	*eP*	**Pn**	**17 58 18.9**	**-2.6**
	comp=Z,891nm,1.1s						
DMN	**Daman**	**16.44**	**262**	*eP*	**Pn**	**17 58 21.4**	**-2.7**
	comp=Z,538nm,0.9s						
DL2	**Dalian**	**16.69**	**58**	P	**Pn**	**17 58 27.7**	**+0.5**
DL2				pmax	pmax		
	comp=Z,50nm,1.4s						
SONM	**Songino Array**	**16.78**	**7**	Pn	**Pn**	**17 58 26.6**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=189,slow=12,SNR=11						
SONM				Lg		18 03 26.5	
	comp=Z,0.1nm,0.3s,baz=192,slow=25,SNR=2.2						
SONM				LR	LR	18 05 58.3	
	comp=Z,580nm,21.2s,baz=188,slow=41						
ULN	**Ulaanbaatar**	**16.89**	**8**	*eP*	**Pn**	**17 58 28.6**	**-0.9**
ULN	**Ulaanbaatar**	**16.89**	**8**	P	**Pn**	**17 58 28.7**	**-0.8**
SNR=6.7							
ULN				P		17 58 28.7	
SNR=6.7							
YHNB	**Yeheng**	**17.04**	**108**	*eP*	**Pn**	**17 58 31.8**	**+0.2**
	comp=Z,540nm,1.8s						
TPUB	**Ta-pu**	**17.10**	**113**	*eP*	**Pn**	**17 58 33.2**	**+0.9**
	comp=Z,124nm,1.1s						
SSLB	**Suanglung**	**17.11**	**111**	*eP*	**Pn**	**17 58 33.4**	**+0.8**
	comp=Z,158nm,0.9s						
NACB	**Ninganchiao**	**17.45**	**109**	*eP*	**Pn**	**17 58 37.8**	**+1.2**
	comp=Z,82nm,0.9s						
TWG	**Pinlang**	**17.69**	**114**	*eP*	**Pn**	**17 58 41.0**	**+1.2**
	comp=Z,67nm,1.0s						
WMQ	**Urumqi**	**17.77**	**320**	*eP*	**Pn**	**17 58 39.4**	**-1.2**
WMQ				S	**Sn**	**18 01 54.4**	**-3.6**
WMQ				SS		18 02 15.5	
WMQ				PcP	PcP	18 03 19.3	+1.8
WMQ				pmax	pmax		
	comp=Z,42nm,1.6s						
WMQ				pmax	pmax		
	comp=Z,600nm,4.0s						
WMQ				LR	LR		
	comp=N,2μm,13.0s						
WMQ				LR	LR		
	comp=E,3μm,12.0s						
WMQ				LR	LR		
	comp=Z,2μm,23.0s						
ZAK	**Zakamensk**	**19.19**	**360**	*eP*	**Pn**	**17 58 56.3**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,32nm,1.2s						
SNY	**Shenyang**	**19.27**	**51**	⇑P	**Pn**	**17 59 00.0**	**+1.2**
SNY				pmax	pmax		
	comp=Z,53nm,1.8s						
SNY				LR	LR		
	comp=N,1μm,18.6s						
SNY				LR	LR		
	comp=E,860nm,20.7s						
SNY				LR	LR		
	comp=Z,1μm,19.8s						
INCN	**Inchon**	**20.07**	**65**	*eP*	**P**	**17 59 06.8**	**+0.3**
	comp=Z,40nm,0.8s						
TLY	**Talaya**	**20.49**	**0**	*eP*	**P**	**17 59 11.4**	**+0.4**
TLY				pmax	pmax		
	comp=Z,26nm,1.0s						
TLY				MLR	MLR		
	comp=Z,2μm,18.0s,MS4.5						
MOY	**Mondy**	**20.56**	**356**	*eP*	**P**	**17 59 12.7**	**+1.0**
MOY				*e*		18 02 56.0	
MOY				pmax	pmax		
	comp=Z,32nm,2.2s						
IRK	**Irkutsk**	**21.06**	**1**	*eP*	**P**	**17 59 17.4**	**+0.3**
IRK				pmax	pmax		
	comp=Z,163nm,1.1s,mb5.3						
KSRS	**Korea Array**	**21.07**	**66**	P	**P**	**17 59 16.8**	**-0.6**
	comp=Z,47nm,0.8s,mb4.9,baz=260,slow=10.0,SNR=20						
KSRS				LR	LR	18 07 49.6	
	comp=Z,892nm,19.8s,MS4.2,baz=274,slow=38						
KSRS	**Korea Array**	**21.07**	**66**	P	**P**	**17 59 16.8**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,47nm,0.8s,mb4.9						
KSRS				MLR	MLR		
	comp=Z,892nm,19.8s,MS4.2						
CN2	**Changchun 21.41 48**			*eP*	**P**	**17 59 21.0**	**+0.1**
CN2				*eS*	**S**	**18 03 15.0**	**-2.5**
CN2				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.1						
CN2				pmax	pmax		
	comp=Z,1μm,5.0s						
CN2				LR	LR		
	comp=N,2μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,1μm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1μm,15.0s,MS4.5						
HIA	**Hailar 21.82 29**			*eP*	**P**	**17 59 24.5**	**-0.9**
HIA				pmax	pmax		
	comp=Z,31nm,0.9s						
HIA	**Hailar 21.82 29**			*eP*	**P**	**17 59 24.5**	**-0.9**
	comp=Z,31nm,0.9s,mb4.7						
DDI	**Dehra Dun 21.90 274**			*ex*	**P**	**17 59 25.5**	**-0.8**
CIT	**Chita 22.10 17**			*eP*	**P**	**17 59 28.1**	**-0.1**
CIT				*e*		17 59 40.0	
CIT				*e*		17 59 52.5	
CIT				pmax	pmax		
	comp=Z,82nm,1.5s,mb4.9						
JBP	**Jabalpur 22.38 255**			*i* P	**P**	**17 59 31.2**	**-0.3**
JBP				*ex*	x	17 59 40.4	
	comp=Z,93nm,1.7s						
JBP				*ex*	x	18 03 41.7	
MK31	**Makanchi Array 22.61 320**			*eP*	**P**	**17 59 33.7**	**0.0**
MKAR	**Makanchi Array 22.61 320**			P	**P**	**17 59 33.2**	**-0.5**
	comp=Z,172nm,1.2s,mb5.3,baz=122,slow=10,SNR=23						
AGRA	**Agra 22.66 266**			*eP*	**P**	**17 59 34.3**	**-0.1**
AGRA				AMb	AMB	17 59 35.5	
	comp=Z,400nm,1.4s,mb5.7						
SDNR	**Sundarnagar 22.67 278**			*eP*	**P**	**17 59 34.5**	**-0.1**
BISR	**Bishrakh 22.76 270**			*eP*	**P**	**17 59 35.2**	**-0.2**
NDI	**New Delhi 22.92 271**			*eP*	**P**	**17 59 36.0**	**-1.2**
NDI				*eS*	**S**	**18 03 44.5**	**-1.8**
KKR	**Kurukshetra 23.01 274**			*eP*	**P**	**17 59 37.7**	**-0.5**
AYAN	**Aya Nagar 23.04 270**			*eP*	**P**	**17 59 37.3**	**-1.2**
AYAN				AMb	AMB	17 59 45.5	
	comp=Z,66nm,1.4s,mb4.9						
SONA	**Sohna 23.14 270**			*eP*	**P**	**17 59 38.8**	**-0.7**
BHK	**Bhakra 23.15 278**			*ex*	**P**	**17 59 36.0**	**-3.6**
THN	**Thein Dam 23.65 280**			*ex*	**P**	**17 59 41.7**	**-2.9**
KSH	**Kashi 23.90 298**			P	**P**	**17 59 49.5**	**+2.6**
KSH				*e*pP		17 59 53.5	
KSH				*e*sP	sP	17 59 56.5	+1.1
KSH				*e*PP		18 00 23.6	
KSH				*e*PcP	PcP	18 03 30.6	+1.4
KSH				*e*S	**S**	**18 04 03.1**	**+1.0**
KSH				*e*SS		18 04 56.6	
KSH				*e*ScP	ScP	18 07 08.1	+1.6
KSH				pmax	pmax		
	comp=Z,280nm,2.2s,mb5.3						
KSH				LR	LR		
	comp=N,890nm,8.7s						
KSH				LR	LR		
	comp=E,1μm,9.6s						
KHET	**Khetri 24.27 270**			*eP*	**P**	**17 59 50.6**	**+0.2**
KHET				AMb	AMB	17 59 56.9	
	comp=Z,76nm,1.6s,mb4.9						
ULHL	**Ulahol 24.41 305**			P	**P**	**17 59 53.2**	**+1.7**
SNR=26							
MDJ	**Mudanjiang 24.43 49**			P	**P**	**17 59 51.2**	**-0.5**
MDJ				pP		17 59 54.3	
MDJ				S	**S**	**18 04 11.7**	**+1.1**
MDJ				sS	sS	18 04 16.7	-3.8
MDJ				ScP	ScP	18 07 08.6	+0.7
MDJ				PcS	PcS	18 07 10.2	+0.2
MDJ				LR	LR		
	comp=N,850nm,8.6s						
MDJ				LR	LR		
	comp=E,970nm,14.2s						
MDJ				LR	LR		
	comp=Z,1μm,14.2s,MS4.5						
MDJ	**Mudanjiang 24.43 49**			*eP*	**P**	**17 59 52.0**	**+0.4**
	comp=Z,93nm,1.3s,mb5.1						
KZA	**Kyzart 25.06 304**			P	**P**	**17 59 59.4**	**+1.9**
SNR=55							
TKM2	**Tokmak 2 25.07 306**			P	**P**	**17 59 56.5**	**-1.0**
SNR=20							
TKM2	**Tokmak 2 25.07 306**			*eP*	**P**	**17 59 56.4**	**-1.1**
KBK	**Karagaybulak 25.44 305**			P	**P**	**18 00 02.7**	**+1.8**
SNR=28							
UCH	**Uchtor 25.63 304**			P	**P**	**18 00 04.5**	**+1.9**
SNR=34							
CHMS	**Chumysh 25.68 305**			P	**P**	**18 00 05.7**	**+2.6**
SNR=14							
FRU	**Bishkek 25.73 305**			*eP*	**P**	**18 00 04.0**	**+0.5**
FRU				*e*		18 04 32.0	
FRU				pmax	pmax		
	comp=Z,220nm,1.8s,mb5.4						
AAK	**Ala-Archa 25.76 304**			P	**P**	**18 00 05.8**	**+2.1**
	comp=Z,522nm,0.8s,mb6.1,SNR=12						
AAK	**Ala-Archa 25.76 304**			P	**P**	**18 00 07.6**	**+3.8**
SNR=29							
AAK	**Ala-Archa 25.76 304**			P	**P**	**18 00 04.2**	**+0.5**
	comp=Z,39nm,0.7s,mb5.0,baz=106,slow=6.5,SNR=49						
AAK				LR	LR	18 11 42.0	
	comp=Z,2μm,19.6s,MS4.7,baz=91,slow=40						
AAK	**Ala-Archa 25.76 304**			⇓*i*P	**P**	**18 00 04.3**	**+0.6**
AAK				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.9						
AAK	**Ala-Archa 25.76 304**			*eP*	**P**	**18 00 04.8**	**+1.1**
AAK	**Ala-Archa 25.76 304**			P	**P**	**18 00 05.5**	**+1.8**
SNR=31							
AAK				P		18 00 05.5	
SNR=31							
AAK				P		18 00 05.5	
SNR=31							
AAK				P		18 00 05.5	
SNR=31							
USP	**Ospenovka 25.94 306**			P	**P**	**18 00 06.3**	**+0.9**
SNR=37							
AML	**Almayashu 26.19 303**			P	**P**	**18 00 09.2**	**+1.6**
SNR=42							
AML	**Almayashu 26.19 303**			*eP*	**P**	**18 00 09.1**	**+1.5**
EKS2	**Erkin-Say 26.27 304**			P	**P**	**18 00 09.3**	**+0.9**
SNR=21							
EKS2	**Erkin-Say 26.27 304**			*eP*	**P**	**18 00 09.1**	**+0.7**
ZAA0	**Zalesovo Array 26.45 335**			*eP*	**P**	**18 00 09.2**	**-0.7**
ZALV	**Zalesovo Beam 26.45 335**			P	**P**	**18 00 09.3**	**-0.6**
	comp=Z,11nm,0.4s,mb4.7,baz=136,slow=9.1,SNR=14						
ZALV				LR	LR	18 11 01.8	
	comp=Z,887nm,20.2s,MS4.3,baz=161,slow=37						
ZALV	**Zalesovo Beam 26.45 335**			P	**P**	**18 00 09.3**	**-0.6**
ZALV				LR	LR	18 11 01.8	
HYB	**Hyderabad 26.49 245**			*i* P	**P**	**18 00 15.0**	**+4.5**
KURK	**Kurchatov 26.90 324**			P	**P**	**18 00 14.8**	**+0.9**
	comp=Z,529nm,1.2s,mb5.9,SNR=24						
KURK	**Kurchatov 26.90 324**			P	**P**	**18 00 14.0**	**+0.1**
	comp=Z,77nm,1.0s,mb5.2,baz=128,slow=9.6,SNR=29						
KURK				LR	LR	18 11 51.9	
	comp=Z,1μm,18.7s,MS4.5,baz=140,slow=39						
KURK	**Kurchatov 26.90 324**			*c i*P	**P**	**18 00 14.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,122nm,1.3s,mb5.3						
KURK	**Kurchatov 26.90 324**			*eP*	**P**	**18 00 13.8**	**-0.1**
KURK	**Kurchatov 26.90 324**			P	**P**	**18 00 14.4**	**+0.5**
SNR=30							
KURK				P		18 00 14.4	
SNR=30							
KURK				P		18 00 14.4	
SNR=30							
BOD	**Bodaibo 27.60 12**			*eP*	**P**	**18 00 20.0**	**-0.2**
BOD				pmax	pmax		
	comp=

comp=Z,24nm,1.7s,mb4.5
NVS smax
comp=N,23nm,1.7s
NVS smax
comp=E,16nm,1.9s
KLR Kul'dur 27.86 42 *e*P **P 18 00 18.2 -4.4**
KBL Kabul 29.08 286 *e*P **P 18 00 33.2 -0.4**
KBL pmax pmax
comp=Z,26nm,0.9s,mb5.0
KBL Kabul 29.08 286 *e*P **P 18 00 33.2 -0.4**
comp=Z,26nm,0.9s,mb5.0
MAT Matsushiro 29.19 70 P **P 18 00 34.6 0.0**
MJAR Matsushiro Arr 29.19 70 P **P 18 00 34.2 -0.4**
comp=Z,2.4nm,0.6s,mb4.1,baz=274,slow=9.4,SNR=4.4
MJAR LR LR 18 12 52.1
comp=Z,338nm,18.4s,MS4.0,baz=220,slow=38
NRGR Nerungri 29.45 24 *e*P **P 18 00 39.8 +3.1**
HABR Khabarovsk 29.46 45 *e*P **P 18 00 32.9 -3.9**
HABR *e**PP pP 18 00 42.2 -0.7
HABR *e*PPP 18 01 35.4
HABR 18 03 38.1
HABR *e*SS SS 18 06 52.6 -43
HABR *e* 18 11 09.4
HABR MLR MLR
comp=Z,1μm,11.0s,MS4.7
POO Poona 29.63 252 *e*x x 18 00 35.0
CLNS Chul'man 29.65 24 *e*P **P 18 00 32.4 -6.0**
CLNS pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS MLR MLR
comp=Z,1μm,14.0s,MS4.7
CLNS MLR MLR
comp=N,437nm,11.0s,MS4.6
CLNS MLR MLR
comp=E,774nm,12.0s,MS4.6
DAV Davao City (W) 31.63 135 LR LR 18 14 24.4
comp=E,1μm,18.7s,MS4.5,baz=353,slow=38
BVAR Borovoye Array 32.43 322 P **P 18 01 03.2 +0.2**
comp=E,9.1nm,0.7s,mb4.7,baz=119,slow=8.7,SNR=21
BVAR PcP PcP 18 03 48.6 -1.3
comp=E,3.6nm,0.7s,baz=118,slow=3.2,SNR=6.0
BVAR LR LR 18 15 06.4
comp=E,2μm,21.2s,MS4.7,baz=118,slow=38
BVAR Borovoye Array 32.43 322 P **P 18 01 03.2 +0.2**
BVAR 18 03 48.6
BRVK Borovoye 32.50 322 P **P 18 01 03.9 +0.3**
comp=E,161nm,1.4s,mb5.8,SNR=13
BRVK Borovoye 32.50 322 *e*P **P 18 01 03.0 -0.6**
BRVK pmax pmax
comp=Z,42nm,1.1s,mb5.3
BRVK Borovoye 32.50 322 *e*P **P 18 01 03.0 -0.6**
comp=Z,42nm,1.1s,mb5.3
BRVK Borovoye 32.50 322 P **P 18 01 03.7 +0.1**
SNR=19
BRVK P 18 01 03.7
SNR=19
BRVK P 18 01 03.7
SNR=19
BRVK P 18 01 03.7
SNR=19
ASAJ Asahikawa 33.21 56 P **P 18 01 11.3 +1.4**
comp=Z,3.3nm,0.5s,mb4.5,baz=286,slow=19,SNR=6.0
ASAJ LR LR 18 13 49.8
comp=Z,495nm,18.9s,MS4.2,baz=68,slow=35
ASAJ Asahikawa 33.21 56 P **P 18 01 11.3 +1.4**
ASAJ pmax pmax
comp=Z,3.0nm,0.5s
ASAJ MLR MLR
comp=Z,495nm,18.9s
YSS Yuzh-Sakhalins 33.89 51 *e*P **P 18 01 15.8 0.0**
YSS MLR MLR
comp=E,500nm,14.0s
YSS MLR MLR
comp=Z,700nm,14.0s,MS4.5
YSS Yuzh-Sakhalins 33.89 51 *e*P **P 18 01 16.4 +0.6**
YAK Yakutsk 35.22 21 *e*P **P 18 01 25.2 -1.9**
YAK pmax pmax
comp=Z,12nm,1.0s,mb4.8
YAK MLR MLR
comp=Z,555nm,9.0s
YAK MLR MLR
comp=N,464nm,9.0s
YAK Yakutsk 35.22 21 *e*P **P 18 01 25.2 -1.9**
ABKAR Akbulak array 37.26 312 *e*P **P 18 01 44.9 +0.2**
ABKT Ailbek 37.71 293 P **P 18 01 50.5 +1.8**
comp=N,341nm,0.9s,mb6.1,SNR=12
AKTK Aktyubinsk 38.73 313 P **P 18 01 57.3 +0.2**
AKTK LR LR 18 20 06.6
AKTO Aktyubinsk 38.73 313 P **P 18 01 57.3 +0.2**
comp=N,5.6nm,0.6s,mb4.5,baz=94,slow=9.7,SNR=12
AKTO LR LR 18 20 06.6
comp=N,336nm,18.0s,MS4.2,baz=110,slow=40
SVE Sverdlovsk 39.15 324⇓ *e*P **P 18 02 00.8 +0.3**
SVE *e*S **S 18 07 51.9 -7.3**
SVE pmax pmax
comp=Z,98nm,1.4s,mb5.3
SVE MLR MLR
comp=Z,432nm,14.0s,MS4.4
KAPI Kappang 39.18 154 P **P 18 01 58.4 -2.8**
comp=Z,9.6nm,0.4s,mb4.9,baz=297,slow=7.2,SNR=6.1
KAPI Kappang 39.18 154 P **P 18 01 58.4 -2.8**
ARU Arti 40.08 322 P **P 18 02 08.6 +0.4**
comp=Z,416nm,0.8s,SNR=15
ARU Arti 40.08 322*c i*P **P 18 02 08.3 +0.1**
ARU *e* 18 03 38.9
ARU S **S 18 08 13.7 +0.6**
ARU SS SS 18 11 10.0 -0.5
ARU pmax pmax
comp=Z,138nm,1.7s,mb5.4
ARU MLR MLR
comp=Z,779nm,21.0s,MS4.5
ARU Arti 40.08 322 *e*P **P 18 02 05.2 -3.0**
SOKR Solikamsk 42.06 326*c i*P **P 18 02 26.9 +2.4**
SOKR pmax pmax
comp=Z,80nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,440nm,19.0s,MS4.4
TIXI Tiksi 42.78 12 *e*P **P 18 02 28.9 -1.3**
TIXI pmax pmax
comp=Z,38nm,1.7s,mb4.8
TIXI MLR MLR
comp=Z,742nm,15.0s,MS4.7
TIXI Tiksi 42.78 12 *e*P **P 18 02 27.7 -2.5**
SEY Seymchan 44.27 30 *e*P **P 18 02 41.5 -0.8**
PETK Petropavlovsk- 44.48 44 P **P 18 02 43.8 -0.4**
comp=Z,2.8nm,0.8s,mb4.1,baz=210,slow=8.3,SNR=3.9
PETK LR LR 18 21 20.2
comp=Z,293nm,18.7s,MS4.2,baz=260,slow=36
MTA Mtatsminda 47.59 300 P **P 18 03 10.1 +1.3**
TBLG Delisi 47.62 300 *e*P **P 18 03 11.7 +2.6**
TBLG Delisi 47.62 300 P **P 18 03 11.7 +2.6**
GNI Garni 47.83 298 *e*P **P 18 03 12.0 +1.2**
GNI pmax pmax
comp=Z,25nm,1.5s
GNI Garni 47.83 298 *e*P **P 18 03 10.8 +0.1**
comp=Z,29nm,1.1s,mb5.2
KBD Kabd 47.87 283 *e*P **P 18 03 11.2 -0.1**
KBD AMb AMB 18 03 15.5
comp=Z,43nm,1.3s,mb5.3
MIB Mutribah 47.99 284 *e*P **P 18 03 11.6 -0.6**
MIB AMb AMB 18 03 17.0
comp=Z,128nm,1.1s,mb5.9
RDF Al-Radifah 48.07 282 *e*P **P 18 03 12.5 -0.3**
RDF AMb AMB 18 03 16.8
comp=Z,108nm,1.3s,mb5.7
ZEI Tsey 48.12 301 *e*P **P 18 03 14.9 +2.0**
ZEI *e* 18 03 28.2
ZEI pmax pmax
comp=Z,12nm,0.7s,mb5.0
KEH Kehvi 48.15 301 P **P 18 03 15.5 +2.4**
ONI Oni 48.47 301 P **P 18 03 17.1 +1.5**
KIV Kislovodsk 48.86 303 P **P 18 03 19.0 +0.4**
comp=Z,261nm,1.2s,mb6.1,SNR=6.2
KIV Kislovodsk 48.86 303 *e*P **P 18 03 19.5 +0.9**
KIV pmax pmax
comp=Z,86nm,1.3s,mb5.6
KIV Kislovodsk 48.86 303 *e*P **P 18 03 19.5 +0.9**
comp=Z,86nm,1.3s,mb5.6
KIV Kislovodsk 48.86 303 P **P 18 03 19.7 +1.0**
SNR=15
KIV P 18 03 19.7
SNR=15
KIV P 18 03 19.7
SNR=15
KIV P 18 03 19.7
SNR=15
VRHR Novokhopersk 49.13 313 *e*P **P 18 03 20.8 +0.2**
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
VRHR pmax pmax
comp=E,40nm,0.8s
VSR Storozhevoye 50.68 313 *e*P **P 18 03 33.7 +1.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.5s
KLMR Klimovskoe 50.73 325 *e*P **P 18 03 32.4 -0.1**
KLMR pmax pmax
comp=Z,108nm,1.5s,mb5.6
SOC Sochi 51.04 303*c i*P **P 18 03 34.7 -0.5**
SOC *e* 18 04 49.8
SOC *e* 18 05 34.9
SOC *e*S **S 18 10 50.6 -0.9**
SOC pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SOC MLR MLR
comp=Z,406nm,15.0s,MS4.6
BILL Bilibino 51.33 25 *e*P **P 18 03 34.6 -2.3**
BILL *e**PP pP 18 03 45.0 +1.8
BILL *e* 18 04 47.5
BILL *e* 18 05 29.6
BILL pmax pmax
comp=Z,16nm,1.1s,mb4.9
BILL Bilibino 51.33 25 *e*P **P 18 03 35.4 -1.6**
comp=Z,12nm,0.8s,mb4.9
MOS Moscow 51.49 319 *e*P **P 18 03 36.6 -1.7**
MOS *e* 18 05 35.4
MOS pmax pmax
comp=Z,155nm,1.1s,mb5.8
KAKA Kakadu 51.72 143 *e*P **P 18 03 37.7 -2.8**
comp=Z,12nm,0.7s,mb4.9
KAKA Kakadu 51.72 143 *e*P **P 18 03 37.8 -2.7**
comp=Z,29nm,0.7s,mb5.3
OBN Obninsk 52.10 318*c i*P **P 18 03 43.3 +0.4**
OBN *e* 18 04 53.3
OBN *e* 18 05 44.5
OBN pmax pmax
comp=Z,57nm,1.3s,mb5.3
OBN Obninsk 52.10 318 *e*P **P 18 03 41.6 -1.3**
comp=Z,88nm,1.4s,mb5.5
MALT Malatya 52.99 297 *e*P **P 18 03 50.3 +0.5**
MALT pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MALT Malatya 52.99 297 *e*P **P 18 03 50.3 +0.4**
comp=Z,4.5nm,0.8s,mb4.5
MALT Malatya 52.99 297⇑ *i*P **P 18 03 52.0 +2.2**
FITZ Fitzroy Crossi 53.40 154 *e*P **P 18 03 51.9 -1.0**
comp=Z,11nm,0.6s,mb5.0
FITZ Fitzroy Crossi 53.40 154 LR LR 18 28 02.8
comp=Z,209nm,21.9s,MS4.2,baz=345,slow=38
FITZ Fitzroy Crossi 53.40 154 *e*P **P 18 03 51.5 -1.3**
comp=Z,9.1nm,1.0s,mb4.7
APA Apatity 54.02 334⇓ *e*P **P 18 03 58.0 +1.1**
APA MLR MLR
comp=Z,2μm,15.0s,MS5.3
BR131 Keskin Array S 56.28 299 *e*P **P 18 04 12.8 -0.8**
comp=Z,3.0nm,0.8s,mb4.4
BRTR Keskin Array B 56.28 299 P **P 18 04 12.2 -1.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=85,slow=5.1,SNR=4.5
MMAI Mount Meron Ar 56.80 291 LR LR 18 31 38.4
comp=Z,195nm,18.7s,MS4.2,baz=80,slow=39
AKASG Malin Array Be 56.98 313 P **P 18 04 16.3 -2.1**
comp=Z,6.1nm,0.6s,mb4.8,baz=70,slow=6.7,SNR=19
AKBB Malin Array Si 56.98 313 *e*P **P 18 04 16.0 -2.4**
ARCES ARCESS Array B 56.99 336 P **P 18 04 18.0 -0.2**
comp=Z,6.8nm,0.8s,mb4.7,baz=85,slow=7.4,SNR=6.0
ARCES ARCESS Array B 56.99 336 P **P 18 04 18.0 -0.2**
MICGM Minsk 57.16 318 *e* **P 18 04 20.0 +0.4**
MNK Minsk 57.19 318 *e*P **P 18 04 20.0 +0.2**
FINES FINESS Array B 57.23 326 P **P 18 04 18.3 -1.7**
comp=Z,9.5nm,0.8s,mb4.9,baz=76,slow=8.0,SNR=7.2
VSU Vasula 57.24 323 *e*P **P 18 04 18.8 -1.3**
VSU pmax pmax
comp=Z,41nm,1.4s,mb5.3
IDID Didziasalis 57.68 319 *e*P **P 18 04 24.8 +1.4**
NACGM Naroch 57.73 318 *e* **P 18 04 21.0 -2.6**
IIGN Ignalina 57.97 319 *e*P **P 18 04 25.6 +0.3**
ISAL Salakas 57.99 319 *e*P **P 18 04 25.6 +0.2**
WRAB Tennant Creek 58.80 146 P **P 18 04 31.3 -0.2**
comp=Z,273nm,0.8s,SNR=9.1
WRAB Tennant Creek 58.80 146 *e*P **P 18 04 31.0 -0.5**
WRA Warramunga Arr 58.81 146 P **P 18 04 31.1 -0.4**
comp=Z,20nm,0.9s,mb5.2,baz=337,slow=7.5,SNR=14
WB2 Warramunga Arr 58.81 146 *e*P **P 18 04 30.9 -0.7**
SPITS Spitsbergen Ar 59.15 346 P **P 18 04 32.8 -0.5**
comp=Z,12nm,0.9s,mb4.9,baz=97,slow=11,SNR=5.2
SPITS LR LR 18 32 41.1
comp=Z,589nm,21.0s,MS4.7,baz=80,slow=39
VRI Vrincioaia 59.65 308⇓ **P 18 04 37.8 +0.6**
VRI Vrincioaia 59.65 308⇓ *i*P **P 18 04 37.8 +0.6**
PLOR Plostina 59.71 308⇑ **P 18 04 40.0 +2.4**
PLOR Plostina 59.71 308⇑ *i*P **P 18 04 40.0 +2.4**
BURAR Bucovina Array 60.21 310⇑ **P 18 04 42.3 +1.3**
BURAR Bucovina Array 60.21 310⇑ *i*P **P 18 04 42.3 +1.3**
BUR08 Bucovina Ar. S 60.22 310 *e*P **P 18 04 42.6 +1.6**
MLR Muntele Rosu 60.28 308⇓ **P 18 04 44.4 +2.9**
MLR Muntele Rosu 60.28 308⇓ *i*P **P 18 04 44.4 +2.9**
LVV L'vov 60.42 313 *e*P **P 18 04 43.8 +1.4**
VOIR 60.90 308⇑ **P 18 04 47.4 +1.6**
VOIR 60.90 308⇑ *i*P **P 18 04 47.4 +1.6**
KWP Kalwaria Pacla 61.30 313 *e*P **P 18 04 46.9 -1.5**
KWP pmax pmax
comp=Z,99nm,1.3s,mb5.8
KWP Kalwaria Pacla 61.30 313 *e*P **P 18 04 46.9 -1.5**
comp=Z,99nm,1.3s,mb5.8
KOLS Kolonicke sedl 61.76 312 *e*P **P 18 04 54.5 +3.0**
KOLS Kolonicke sedl 61.76 312 *e*P **P 18 04 54.5 +3.0**
ASAR Alice Springs 61.81 148 P **P 18 04 51.0 -1.0**
comp=Z,5.4nm,0.8s,mb4.7,baz=332,slow=6.3,SNR=8.3
UZH Uzhgorod 61.83 312 *e*P **P 18 04 49.0 -3.0**
UZH *e* pP 18 04 54.4 -4.0
UZH *e* 18 05 02.0
STHS Stebnicka Huta 62.28 313 *e*P **P 18 04 54.9 0.0**
STHS Stebnicka Huta 62.28 313 *e*P **P 18 04 54.9 0.0**
NIE Niedzica 62.86 313 *e*P **P 18 04 59.4 +0.6**
OJC Ojcow 62.94 314 *e*P **P 18 04 59.2 -0.2**
KECS Kecovo 63.02 312 *e*P **P 18 05 03.1 +3.1**
KECS Kecovo 63.02 312 *e*P **P 18 05 03.0 +3.0**
PSZ Piszkesteto 63.57 312 *e*P **P 18 05 03.7 +0.1**
PSZ Piszkesteto 63.57 312⇑ *e*P **P 18 05 06.0 +2.4**
VYHS Vyhne 64.07 313 *e*P **P 18 05 07.8 +1.0**
VYHS Vyhne 64.07 313 *e*P **P 18 05 07.8 +1.0**
OKC Ostrava-Krasne 64.07 314 *e*P **P 18 05 05.8 -1.1**
OKC MLR MLR
comp=Z,900nm,15.9s,MS5.0
OKC Ostrava-Krasne 64.07 314 *e*P **P 18 05 05.8 -1.1**
OKC *e*pP pP 18 05 10.2 -3.1
OKC AMS AMS 18 33 50.0
comp=Z,900nm,15.9s
BUD Budapest 64.27 311⇓ *e*P **P 18 05 11.1 +2.9**
KOLL Kolacno 64.31 313 *e*P **P 18 05 09.8 +1.3**
KOLL Kolacno 64.31 313 *e*P **P 18 05 09.8 +1.3**
NB2 NORSAR Subarra 64.33 327 P **P 18 05 06.2 -2.2**
comp=Z,10nm,1.0s,mb4.8,baz=73,slow=6.9
NOA NORSAR Array B 64.33 327 P **P 18 05 08.1 -0.2**
comp=Z,3.5nm,0.8s,mb4.5,baz=72,slow=6.5,SNR=4.5
MORC Moravsky Berou 64.47 314 *e*P **P 18 05 08.8 -0.6**
comp=Z,24nm,1.4s,mb5.0
MORC Moravsky Berou 64.47 314⇓ *i*P **P 18 05 13.4 +4.0**
PKSM Moragy 64.93 310⇓ **P 18 05 13.8 +1.2**
PKSM Moragy 64.93 310⇓ *i*P **P 18 05 13.8 +1.2**
DPC Dobruska-Polom 65.02 315 *e*P **P 18 05 13.8 +0.7**
DPC MLR MLR
comp=Z,1μm,18.5s,MS5.2
DPC Dobruska-Polom 65.02 315 *e*P **P 18 05 13.8 +0.7**
DPC *e*pP pP 18 05 16.8 -2.7
DPC AMS AMS 18 34 30.0
comp=Z,1μm,18.5s
NWAO Narrogin (SRO) 65.06 167 *e*P **P 18 05 13.4 +0.1**
UPC Upice 65.16 315 *e*P **P 18 05 14.6 +0.7**
UPC *e*pP pP 18 05 17.5 -2.9
VRAC Vranov 65.20 314⇓ P **P 18 05 18.4 +4.2**
VRAC Vranov 65.20 314⇓ *i*P **P 18 05 18.4 +4.2**
CTA Charters Tower 65.42 135 LR LR 18 33 06.8
comp=Z,142nm,20.9s,MS4.2,baz=225,slow=35
FORT Forrest 65.87 157 *e*P **P 18 05 18.3 -0.3**
comp=Z,14nm,0.9s,mb5.0
TREC Trest 65.89 314 *e*P **P 18 05 22.3 +3.6**
TREC MLR MLR
comp=Z,800nm,18.8s,MS5.0
TREC Trest 65.89 314 *e*pP pP 18 05 22.3 -2.8
TREC AMS AMS 18 35 00.0
comp=Z,800nm,18.8s
PVCC Panska Ves 66.02 316 *e*P **P 18 05 20.3 +0.8**
PVCC MLR MLR
comp=Z,1μm,17.2s,MS5.1
PVCC Panska Ves 66.02 316 *e*P **P 18 05 20.3 +0.8**
PVCC *e*pP pP 18 05 23.2 -2.7
PVCC AMS AMS 18 35 10.0
comp=Z,1μm,17.2s
PRU Pruhonice 66.22 315 *e*P **P 18 05 21.8 +1.0**
PRU MLR MLR
comp=Z,1μm,17.6s,MS5.2
PRU Pruhonice 66.22 315 *e*P **P 18 05 21.8 +1.0**
PRU *e*pP pP 18 05 24.8 -2.5
PRU AMS AMS 18 35 20.0
comp=Z,1μm,17.6s
BRG Berggiesshubel 66.27 316 *e*P **P 18 05 22.2 +1.1**
comp=Z,3.3nm,0.9s,mb4.4
BRG *e* 18 05 24.6
comp=Z,10nm,1.0s
BRG
comp=N,409nm,16.0s
BRG
comp=E,646nm,18.1s
BRG
comp=Z,947nm,16.7s
BRG Berggiesshubel 66.27 316 *e*P **P 18 05 22.2 +1.1**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BRG MLR MLR
comp=N,245nm,16.0s,MS4.8
BRG MLR MLR
comp=E,387nm,18.1s,MS4.8
BRG MLR MLR
comp=Z,567nm,16.7s,MS4.8
CLL Collm 66.67 317⇓ *i*P **P 18 05 23.8 +0.1**
CLL *e* 18 05 32.0
CLL pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
CLL MLR MLR
comp=Z,900nm,19.9s,MS5.0
CLL Collm 66.67 317⇓ *i*P **P 18 05 23.8 +0.1**
comp=Z,9.0nm,1.4s,mb4.6
CLL *i* 18 05 26.4
CLL *e* 18 05 32.0
CLL *e*S S 18 14 23.0 +8.9
CLL LR LR
comp=Z,900nm,19.9s,MS5.0
CLL Collm 66.67 317⇓ *i*P **P 18 05 23.8 +0.1**
comp=Z,9.0nm,1.4s,mb4.6
CLL *i* Pmax 18 05 26.4
comp=Z,14nm,1.2s
CLL *e*pP pP 18 05 32.0 +1.9
CLL *e*PcP PcP 18 05 50.0 -2.7
CLL *e*S S 18 14 23.0 +8.9
CLL *e*SS SS 18 18 32.0 +0.9
CLL *e*SSS 18 21 37.0
CLL Lm 18 35 00.0
comp=N,600nm,18.6s
CLL Lm 18 35 00.0
comp=E,500nm,20.3s
CLL Lm 18 35 00.0
comp=Z,900nm,19.9s
KHC Kasperske Hory 67.12 315 *e*P **P 18 05 26.6 +0.1**
KHC MLR MLR
comp=Z,1μm,17.0s,MS5.1
KHC Kasperske Hory 67.12 315 *e*P **P 18 05 24.1 -2.4**
comp=Z,3.9nm,1.1s,mb4.3
KHC Kasperske Hory 67.12 315 *e*P **P 18 05 26.6 +0.1**
KHC *e*pP pP 18 05 29.7 -3.3
KHC AMS AMS 18 35 40.0
comp=Z,1μm,17.0s
GERES GERESS Array B 67.14 314 P **P 18 05 27.6 +0.9**
comp=Z,3.1nm,0.9s,mb4.3,baz=67,slow=7.4,SNR=9.2
NKC Novy Kostel 67.39 316 *e*P **P 18 05 28.6 +0.3**
NKC MLR MLR
comp=Z,900nm,16.5s,MS5.1
NKC Novy Kostel 67.39 316 *e*P **P 18 05 28.6 +0.3**
NKC *e*pP pP 18 05 31.5 -3.2
NKC AMS AMS 18 36 00.0
comp=Z,900nm,16.5s
COLD Coldfoot 67.61 24 *e*P **P 18 05 27.5 -1.8**
comp=Z,14nm,0.8s,mb5.0
MOX Moxa 67.73 317 *e*P **P 18 05 30.9 +0.5**
comp=Z,19nm,1.7s,mb4.8
MOX Moxa 67.73 317 *e*P **P 18 05 30.9 +0.5**
MOX pmax pmax
comp=Z,11nm,1.7s,mb4.6
GRA1 Grafenberg Arr 68.33 316 *e*P **P 18 05 34.4 +0.2**
comp=Z,34nm,1.7s,mb5.1
GRF Grafenberg Arr 68.33 316 *e*P **P 18 05 34.4 +0.2**
comp=Z,34nm,1.7s,mb5.1
GRF Grafenberg Arr 68.33 316 *e*P **P 18 05 34.4 +0.2**
GRF pmax pmax
comp=Z,34nm,1.7s,mb5.1
GRF Grafenberg Arr 68.33 316 *e*P **P 18 05 34.4 +0.2**
GRF pmax pmax
comp=Z,34nm,1.7s,mb5.1
GRF Grafenberg Arr 68.33 316 *e*P **P 18 05 34.4 +0.2**
comp=Z,34nm,1.7s,mb5.1
CHUM Lake Minchumin 68.34 28 *e*P **P 18 05 33.1 -0.9**
BPAW Bear Paw Mtn. 68.76 27 *e*P **P 18 05 35.4 -1.3**
comp=Z,15nm,0.9s,mb4.9
PPLA Purkeyjle 68.84 28 *e*P **P 18 05 35.9 -1.2**
comp=Z,75nm,1.4s,mb5.4
KTH Kantishna Hill 69.04 28 *e*P **P 18 05 39.8 +1.4**
comp=Z,52nm,1.4s,mb5.3
COLA College 69.58 26 *e*P **P 18 05 41.2 -0.5**
COLA pmax pmax
comp=Z,19nm,0.9s,mb5.0
COLA College 69.58 26 *e*P **P 18 05 41.2 -0.5**
comp=Z,19nm,0.9s,mb5.0
CEL Celeste 69.79 303 *e*P **P 18 05 43.5 0.0**
comp=Z,68nm,1.1s,mb5.5
KMBO Kilima Mbogo 70.44 256 P **P 18 05 45.5 -2.3**
comp=Z,0.8nm,0.5s,mb3.9,baz=62,slow=15,SNR=3.7
KMBO Kilima Mbogo 70.44 256 *e*P **P 18 05 44.9 -2.9**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 70.44 256 *e*P **P 18 05 44.9 -2.9**
comp=Z,2.7nm,0.8s,mb4.2
BFO Black Forest 70.62 315 *e*P **P 18 05 48.5 +0.1**
BFO pmax pmax
comp=Z,13nm,1.3s,mb4.7
BFO Black Forest 70.62 315 *e*P **P 18 05 48.5 +0.1**
comp=Z,13nm,1.3s,mb4.7
CDF Champ du Feu 71.22 316 *e*P **P 18 05 50.8 -1.2**
comp=Z,27nm,1.1s,mb4.8
CDF Champ du Feu 71.22 316 *e*P **P 18 05 50.8 -1.2**
CDF pmax pmax
comp=Z,13nm,1.1s,mb4.8
CDF Champ du Feu 71.22 316 *e*P **P 18 05 50.8 -1.2**
comp=Z,13nm,1.1s,mb4.8
WLF Walferdange 71.34 317 P **P 18 05 52.2 -0.4**
comp=Z,22nm,1.4s,mb4.9
WLF Walferdange 71.34 317 *e*P **P 18 05 49.8 -2.9**
WLF pmax pmax
comp=Z,35nm,1.1s,mb5.2
WLF Walferdange 71.34 317 *e*P **P 18 05 49.8 -2.9**
comp=Z,35nm,1.1s,mb5.2
BCLA Clavier 71.49 318 P **P 18 05 56.0 +2.4**
comp=Z,6.9nm,1.3s,mb4.4
DOU Dourbes 72.04 318 P **P 18 05 58.1 +1.2**
INK Inuvik 72.25 19 P **P 18 05 57.1 -0.7**
comp=Z,9.7nm,0.7s,mb4.8,baz=330,slow=6.1,SNR=10.0
INK Inuvik 72.25 19 *e*P **P 18 05 56.3 -1.6**
STKA Stephens Creek 72.34 147 *e*P **P 18 05 58.1 -0.7**
comp=Z,4.4nm,0.6s,mb4.6
STKA Stephens Creek 72.34 147 P **P 18 05 57.1 -1.7**
comp=Z,5.0nm,0.6s,mb4.6,baz=323,slow=5.7,SNR=6.9
STKA Stephens Creek 72.34 147 *e*P **P 18 05 57.9 -0.8**
LPG La Plagne 72.84 313 *e*P **P 18 06 01.2 -0.6**
comp=Z,26nm,0.7s,mb5.0
LPG La Plagne 72.84 313 *e*P **P 18 06 01.2 -0.6**
LPG pmax pmax
comp=Z,13nm,0.7s,mb5.0
LPG La Plagne 72.84 313 *e*P **P 18 06 01.2 -0.6**

comp=Z,13nm,0.7s,mb5.0
BMRM Bremner River 72.91 28 *e*P **P 18 06 00.3 -1.6**
comp=Z,44nm,0.9s,mb5.4
DAWY Dawson 73.08 24 *e*P **P 18 06 01.6 -1.3**
SUMG Summit 73.28 349 *e*P **P 18 06 04.2 +0.3**
comp=Z,9.4nm,0.9s,mb4.7
RES Resolute Bay 73.71 5 *e*P **P 18 06 07.9 +1.5**
RES pmax pmax
comp=Z,14nm,1.1s,mb4.8
RES Resolute Bay 73.71 5 *e*P **P 18 06 07.9 +1.4**
comp=Z,14nm,1.1s,mb4.8
SMF Signal de Mont 74.10 315 *e*P **P 18 06 07.6 -1.6**
comp=Z,32nm,1.0s,mb4.9
SMF Signal de Mont 74.10 315 *e*P **P 18 06 07.6 -1.6**
SMF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SMF Signal de Mont 74.10 315 *e*P **P 18 06 07.6 -1.6**
comp=Z,16nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.26 315 *e*P **P 18 06 14.7 -1.2**
comp=Z,23nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.26 315 *e*P **P 18 06 14.7 -1.2**
TCF pmax pmax
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.26 315 *e*P **P 18 06 14.7 -1.2**
comp=Z,11nm,1.1s,mb4.7
CAF Calviac 76.03 314 *e*P **P 18 06 19.5 -0.8**
comp=Z,16nm,1.0s,mb4.6
CAF Calviac 76.03 314 *e*P **P 18 06 19.5 -0.8**
CAF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CAF Calviac 76.03 314 *e*P **P 18 06 19.5 -0.8**
comp=Z,7.8nm,1.0s,mb4.6
YKA Yellowknife Ar 81.77 17 P **P 18 06 50.6 -0.9**
comp=Z,3.3nm,0.7s,mb4.4,baz=328,slow=5.2,SNR=6.0
ESDC Sonseca Array 82.61 312 P **P 18 06 56.9 +0.6**
comp=Z,0.4nm,0.4s,baz=38,slow=5.2,SNR=5.0
ESDC LR LR 18 46 21.8
comp=Z,237nm,18.9s,MS4.6,baz=70,slow=38
TOA0 Torodi Ar. Sit 93.14 287 *e*P **P 18 07 47.4 -0.2**
TORD Torodi Ar. Bea 93.14 287 P **P 18 07 47.2 -0.5**
comp=Z,5.1nm,1.1s,mb4.8,baz=53,slow=2.4,SNR=11
SCHQ Schefferville 93.95 354 P **P 18 07 52.0 +1.4**
comp=Z,4.7nm,0.9s,mb4.9,baz=17,slow=8.7,SNR=4.2
SCHQ LR LR 18 53 41.6
comp=Z,176nm,19.7s,MS4.5,baz=325,slow=38
QSPA South Pole Qui 120.95 180 PKP PKPdf 18 13 22.7 -1.5
comp=Z,2.6nm,0.8s,baz=34,slow=1.6,SNR=5.6
QSPA South Pole Qui 120.95 180 PKP PKPdf 18 13 22.7 -1.5
OTAV Otavalo 148.71 4 *e*PKPbc PKPbc 18 14 20.5 -0.5
LPAZ La Paz 163.34 331 PKP PKPdf 18 14 38.0 +1.8
comp=Z,1.0nm,0.7s,baz=35,slow=6.5,SNR=3.9
PLCA Paso Flores 169.33 205 PKPab PKPab 18 15 50.1 -2.5
comp=Z,1.8nm,0.8s,baz=34,slow=1.8,SNR=5.0

ISCJB ***12*** *17:57:03.6±0.4, 38°.76N±0°.02×20°.46E±0°.03, h10km, Error ellipse: s-maj=3.9km s-min=2.4km az=155.1*
NEIC ***12*** *17:57:03.8, 38°.77N×20°.60E, h6km, MD3.7(ATH), After ATH.*
ATH ***12*** *17:57:03.8, 38°.77N×20°.60E, h6km±1km, MD3.7/21*
THE ***12*** *17:57:04.6, 38°.77N×20°.59E, h0km±3km, ML3.6/9, Error ellipse: s-maj=3.5km s-min=1.0km az=235.0*
CSEM ***12*** *17:57:04.4±0.2, 38°.80N×20°.51E, h7km, MD3.7, Error ellipse: s-maj=6.1km s-min=3.9km az=51.0*
SKO ***12*** *17:57:08.8, 39°.15N×20°.56E, h0km*
ISC 12 17:57:03.7±0.5, 38°.76N±0°.02×20°.53E±0°.03, h2km±4km, n93, σ1°31/137, 2C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.58**	**175**	*e*PG	**Pg**	**17 57 15.1**	**+0.3**
VLS				*e*SB	**Sg**	**17 57 24.3**	**+2.0**
VLS	**Valsamata**	**0.58**	**175**	P	**Pg**	**17 57 15.3**	**+0.5**
VLS				S	**Sg**	**17 57 25.3**	**+3.0**
VLS	**Valsamata**	**0.58**	**175**	P	**Pg**	**17 57 15.3**	**+0.5**
VLS				*e*Sb	**Sg**	**17 57 24.3**	**+2.0**
VLS				S	**Sg**	**17 57 25.3**	**+3.0**
KFL	**Anninata**	**0.68**	**162**	P	**Pg**	**17 57 17.2**	**+0.5**
IGT	**Igoumenitsa**	**0.79**	**349**	P	**Pg**	**17 57 18.4**	**-0.5**
IGT				S	**Sg**	**17 57 31.3**	**+2.2**
IGT	**Igoumenitsa**	**0.79**	**349**	P	**Pg**	**17 57 18.4**	**-0.5**
IGT				S	**Sg**	**17 57 31.3**	**+2.2**
JAN	**Janina**	**0.93**	**16**	*e*PB	**Pg**	**17 57 20.8**	**-0.8**
JAN				*e*SB	**Sg**	**17 57 33.0**	**-0.8**
JAN	**Janina**	**0.93**	**16**	*e*Pb	**Pg**	**17 57 20.8**	**-0.8**
JAN				*e*Sb	**Sg**	**17 57 33.0**	**-0.8**
EVR	**Evrytania**	**1.01**	**80**	*e*PB	**Pg**	**17 57 22.0**	**-1.2**
EVR				*e*SB	**Sg**	**17 57 35.0**	**-1.3**
EVR	**Evrytania**	**1.01**	**80**	*e*Pb	**Pg**	**17 57 22.0**	**-1.2**
EVR				*e*Sb	**Sg**	**17 57 35.0**	**-1.3**
RLS	**Riolos of Patr**	**1.02**	**133**	*e*PN	**Pn**	**17 57 22.9**	**-2.0**
KEK	**Kerkira**	**1.11**	**330**	*e*PB	**Pg**	**17 57 25.1**	**+0.1**
KEK	**Kerkira**	**1.11**	**330**	P	**Pg**	**17 57 25.0**	**0.0**
KEK				S	**Sg**	**17 57 42.7**	**+3.3**
KEK	**Kerkira**	**1.11**	**330**	*e*Pb	**Pg**	**17 57 25.1**	**+0.1**
KEK				S	**Sg**	**17 57 42.7**	**+3.3**
EFP	**Efpalio**	**1.13**	**106**	*e*PG	**Pg**	**17 57 23.7**	**-1.7**
EFP				*e*SB	**Sg**	**17 57 39.3**	**-0.7**
EFP	**Efpalio**	**1.13**	**106**	P	**Pg**	**17 57 23.6**	**-1.8**
EFP				S	**Sg**	**17 57 41.0**	**+1.0**
EFP	**Efpalio**	**1.13**	**106**	P	**Pg**	**17 57 23.6**	**-1.8**
EFP				*e*Sb	**Sg**	**17 57 39.3**	**-0.7**
EFP				S	**Sg**	**17 57 41.0**	**+1.0**
SRN	**Sarande**	**1.19**	**340**	*e*PN	**Pn**	**17 57 27.5**	**+0.1**
SRN				*i* SN	**Sn**	**17 57 44.8**	**+0.6**
SRN	**Sarande**	**1.19**	**340**	*e*Pn	**Pn**	**17 57 27.5**	**+0.1**
SRN				*i* Sn	**Sn**	**17 57 44.8**	**+0.6**
LAKA	**Lakka**	**1.25**	**114**	P	**Pn**	**17 57 25.9**	**-2.3**
LAKA				S	**Sg**	**17 57 45.1**	**+1.2**
LAKA	**Lakka**	**1.25**	**114**	P	**Pn**	**17 57 25.9**	**-2.3**
LAKA				S	**Sg**	**17 57 45.1**	**+1.2**
THL	**Klokotos Trika**	**1.41**	**55**	*e*PG	**Pn**	**17 57 28.7**	**-1.7**
THL				*e*SB	**Sb**	**17 57 48.3**	**-0.9**
THL	**Klokotos Trika**	**1.41**	**55**	P	**Pn**	**17 57 28.6**	**-1.8**
THL				S	**Sg**	**17 57 50.8**	**+1.7**
THL	**Klokotos Trika**	**1.41**	**55**	P	**Pn**	**17 57 28.6**	**-1.8**
THL				*e*Sb	**Sb**	**17 57 48.3**	**-0.9**
THL				S	**Sg**	**17 57 50.8**	**+1.7**
AGG	**Agios Georgios**	**1.43**	**79**	*e*PG	**Pn**	**17 57 29.3**	**-1.4**
AGG				*e*SB	**Sb**	**17 57 47.8**	**-2.0**
AGG	**Agios Georgios**	**1.43**	**79**	P	**Pn**	**17 57 29.3**	**-1.4**
AGG				S	**Sg**	**17 57 50.8**	**+1.0**
AGG	**Agios Georgios**	**1.43**	**79**	P	**Pn**	**17 57 29.3**	**-1.4**
AGG				*e*Sb	**Sb**	**17 57 47.8**	**-2.0**
AGG				S	**Sg**	**17 57 50.8**	**+1.0**
GUR	**Goura**	**1.65**	**119**	*e*PG	**Pn**	**17 57 32.8**	**-0.8**
GUR				*e*SB	**Sb**	**17 57 55.7**	**-0.2**
GUR	**Goura**	**1.65**	**119**	P	**Pn**	**17 57 32.6**	**-1.0**
GUR	**Goura**	**1.65**	**119**	P	**Pn**	**17 57 32.6**	**-1.0**
GUR				*e*Sb	**Sb**	**17 57 55.7**	**-0.2**
KZN	**Kozani**	**1.82**	**31**	*e*PN	**Pn**	**17 57 37.3**	**+1.3**
KZN	**Kozani**	**1.82**	**31**	P	**Pn**	**17 57 36.0**	**0.0**
KZN				S	**Sn**	**17 58 00.8**	**+1.1**
KZN	**Kozani**	**1.82**	**31**	P	**Pn**	**17 57 36.0**	**0.0**
KZN	**Kozani**	**1.82**	**31**	*e*Pn	**Pn**	**17 57 37.3**	**+1.3**
KZN				S	**Sn**	**17 58 00.8**	**+1.1**
KBN	**Korca**	**1.88**	**6**	*e*PN	**Pg**	**17 57 42.4**	**+2.7**
KBN				*i* SN	**Sg**	**17 58 06.4**	**+2.4**
ITM	**Ithomi**	**1.92**	**144**	*e*PG	**Pg**	**17 57 39.6**	**-1.0**
ITM	**Ithomi**	**1.92**	**144**	P	**Pn**	**17 57 39.0**	**+1.6**
ITM	**Ithomi**	**1.92**	**144**	P	**Pn**	**17 57 39.0**	**+1.6**
LKR	**Lokris**	**1.94**	**92**	*e*PN	**Pn**	**17 57 38.5**	**+0.9**
LKR	**Lokris**	**1.94**	**92**	P	**Pn**	**17 57 38.5**	**+0.9**
LKR	**Lokris**	**1.94**	**92**	P	**Pn**	**17 57 38.5**	**+0.9**
ATAL	**Atalanti**	**1.95**	**91**	P	**Pn**	**17 57 38.5**	**+0.7**
ATAL	**Atalanti**	**1.95**	**91**	P	**Pn**	**17 57 38.5**	**+0.7**
LIT	**Litokhoron**	**2.03**	**48**	*e*PN	**Pn**	**17 57 39.8**	**+0.9**
LIT	**Litokhoron**	**2.03**	**48**	P	**Pn**	**17 57 39.1**	**+0.2**
LIT				S	**Sn**	**17 58 05.4**	**+0.6**
LIT	**Litokhoron**	**2.03**	**48**	P	**Pn**	**17 57 39.1**	**+0.2**
LIT	**Litokhoron**	**2.03**	**48**	*e*Pn	**Pn**	**17 57 39.8**	**+0.9**
LIT				S	**Sn**	**17 58 05.4**	**+0.6**
LTK	**Loutraki**	**2.05**	**110**	*e*PG	**Pg**	**17 57 41.1**	**-2.0**
PYL	**PYLOS**	**2.09**	**152**	*e*PN	**Pn**	**17 57 41.9**	**+2.2**
PYL	**PYLOS**	**2.09**	**152**	*e*Pn	**Pn**	**17 57 41.9**	**+2.2**
FNA	**Florina**	**2.13**	**18**	P	**Pn**	**17 57 40.8**	**+0.6**
FNA				S	**Sn**	**17 58 08.3**	**+1.1**
FNA	**Florina**	**2.13**	**18**	P	**Pn**	**17 57 40.8**	**+0.6**
FNA				S	**Sn**	**17 58 08.3**	**+1.1**
XOR	**Xorichti**	**2.16**	**73**	P	**Pn**	**17 57 41.6**	**+0.9**
XOR				S	**Sn**	**17 58 08.4**	**+0.3**
XOR	**Xorichti**	**2.16**	**73**	P	**Pn**	**17 57 41.6**	**+0.9**
XOR				S	**Sn**	**17 58 08.4**	**+0.3**
NEO	**Neokhori**	**2.17**	**74**	*e*PG	**Pg**	**17 57 42.4**	**-2.9**
BIA	**Bitola**	**2.34**	**15**	*e*Pn	**Pn**	**17 57 43.8**	**+0.6**
BIA				*e*Sg	**Sg**	**17 58 12.7**	**-6.3**
BIA	**Bitola**	**2.34**	**15**	*e*Pn	**Pn**	**17 57 43.8**	**+0.6**
OHR	**Ohrid**	**2.36**	**5**	*e*Pn	**Pn**	**17 57 43.9**	**+0.5**
OHR	**Ohrid**	**2.36**	**5**	P	**Pn**	**17 57 44.2**	**+0.8**
OHR	**Ohrid**	**2.36**	**5**	*e*Pn	**Pn**	**17 57 43.9**	**+0.5**
OHR	**Ohrid**	**2.36**	**5**	P	**Pn**	**17 57 44.2**	**+0.8**
DID	**Didima**	**2.48**	**119**	*e*PN	**Pn**	**17 57 46.2**	**+1.2**
DID	**Didima**	**2.48**	**119**	P	**Pn**	**17 57 46.3**	**+1.3**
DID	**Didima**	**2.48**	**119**	*e*Pn	**Pn**	**17 57 46.2**	**+1.2**
NAIG	**Nisos Aigina**	**2.54**	**112**	*e*PN	**Pn**	**17 57 47.8**	**+2.0**
NAIG	**Nisos Aigina**	**2.54**	**112**	*e*Pn	**Pn**	**17 57 47.8**	**+2.0**
TIR	**Tirane**	**2.64**	**349**	*e*PB	**Pb**	**17 57 48.2**	**-3.4**
AOS	**Alonnisos**	**2.65**	**80**	P	**Pn**	**17 57 47.7**	**+0.3**
AOS	**Alonnisos**	**2.65**	**80**	P	**Pn**	**17 57 47.7**	**+0.3**
KRUS	**Krusevo**	**2.67**	**12**	*e*Pn	**Pn**	**17 57 47.2**	**-0.5**
KRUS				*e*Sg	**Sg**	**17 58 19.7**	**-10**
KRUS	**Krusevo**	**2.67**	**12**	*e*Pn	**Pn**	**17 57 47.2**	**-0.5**
PAIG	**Paliouri**	**2.71**	**63**	P	**Pn**	**17 57 48.5**	**+0.3**
PAIG	**Paliouri**	**2.71**	**63**	P	**Pn**	**17 57 48.5**	**+0.3**
VLY	**Voula,Athens**	**2.73**	**108**	*e*PB	**Pb**	**17 57 48.9**	**-4.2**
PLG	**Polygyros**	**2.78**	**53**	*e*PB	**Pb**	**17 57 49.1**	**-4.9**
PLG	**Polygyros**	**2.78**	**53**	P	**Pn**	**17 57 49.4**	**+0.3**
PLG	**Polygyros**	**2.78**	**53**	P	**Pn**	**17 57 49.4**	**+0.3**
VLI	**Veliai**	**2.79**	**136**	*e*PN	**Pn**	**17 57 51.0**	**+1.7**
VLI	**Veliai**	**2.79**	**136**	*e*Pn	**Pn**	**17 57 51.0**	**+1.7**
TAR1	**Taranto**	**3.06**	**306**	*e*Pn	**Pn**	**17 57 51.9**	**-1.2**
KYTH	**Kithira**	**3.18**	**140**	*e*PB	**Pb**	**17 57 56.9**	**-3.9**
PUK	**Puka**	**3.32**	**352**	*e*PN	**Pn**	**17 57 56.8**	**+0.2**
PUK	**Puka**	**3.32**	**352**	*e*Pn	**Pn**	**17 57 56.8**	**+0.2**
SG1	**Sgolgore (BA)**	**3.62**	**306**	*e*Pn	**Pn**	**17 58 00.7**	**0.0**
SG1				*e*Sn	**Sn**	**17 58 41.3**	**-2.7**
BCI	**Bajram Curri**	**3.62**	**355**	*e*PN	**Pn**	**17 58 01.4**	**+0.6**
BCI	**Bajram Curri**	**3.62**	**355**	*e*Pn	**Pn**	**17 58 01.4**	**+0.6**
BARS	**Barje**	**4.17**	**13**	↓*i*Pn	**Pn**	**17 58 07.9**	**-0.4**
STON	**Ston**	**4.64**	**333**	↑*i*Pn	**Pn**	**17 58 12.6**	**-2.1**
STON				Sn	**Sn**	**17 59 04.5**	**-4.6**
STON	**Ston**	**4.64**	**333**	↑*i*Pn	**Pn**	**17 58 12.6**	**-2.1**
STON				Sn	**Sn**	**17 59 04.4**	**-4.7**
BBLS	**Lazići**	**5.17**	**351**	*i* Pn	**Pn**	**17 58 21.0**	**-1.1**
DIVS	**Divibare**	**5.35**	**356**	*i* Pn	**Pn**	**17 58 23.0**	**-1.5**
NVLJ	**Novalja**	**7.18**	**326**	*e*Pn	**Pn**	**17 58 48.2**	**-1.5**
NVLJ	**Novalja**	**7.18**	**326**	*e*Pn	**Pn**	**17 58 48.2**	**-1.4**

ISCJB ***12*** *17:58:19.2±0.6, 50°.29N±0°.04×18°.75E±0°.03, h0km, Error ellipse: s-maj=5.7km s-min=2.7km az=16.2*
IPEC ***12*** *17:58:20.8±0.2, 50°.30N×18°.78E, h3km±1km, ML2.1/3, Error ellipse: s-maj=2.2km s-min=0.8km az=170.0*
CSEM ***12*** *17:58:20.7±0.2, 50°.28N×18°.81E, h5km, ML2.8/7, Error ellipse: s-maj=3.9km s-min=1.9km az=7.0*
WAR ***12*** *17:58:20.5, 50°.28N×18°.85E*
PRU ***12*** *17:58:21.2, 50°.26N×18°.80E, h0km*
ISC 12 17:58:20.5±0.5, 50°.26N±0°.04×18°.81E±0°.03, h0km, n28, σ0°95/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.60**	**225**	*e*PG	**Pg**	**17 58 33.3**	**+1.4**
OKC				*e*SG	**Sg**	**17 58 42.0**	**+2.3**
OKC	**Ostrava-Krasne**	**0.60**	**225**	*e*Pg	**Pg**	**17 58 33.1**	**+1.2**
OKC				Sg	**Sg**	**17 58 42.0**	**+2.3**
OJC	**Ojcow**	**0.64**	**93**	*e*Pg	**Pg**	**17 58 32.8**	**+0.1**
OJC				*e*Sg	**Sg**	**17 58 40.3**	**-0.6**
OJC	**Ojcow**	**0.64**	**93**	*e*Pg	**Pg**	**17 58 32.8**	**+0.1**
OJC				*e*Sg	**Sg**	**17 58 42.0**	**+1.1**
MORC	**Moravsky Berou**	**0.95**	**240**	*e*Pg	**Pg**	**17 58 38.9**	**+0.3**
MORC				*e*Sg	**Sg**	**17 58 51.8**	**+0.9**
NIE	**Niedzica**	**1.29**	**130**	*e*Pg	**Pg**	**17 58 45.1**	**0.0**
NIE				*e*Sg	**Sg**	**17 59 02.2**	**+0.4**
NIE	**Niedzica**	**1.29**	**130**	*e*Pg	**Pg**	**17 58 45.1**	**0.0**
NIE				*e*Sg	**Sg**	**17 59 02.2**	**+0.4**
JAVC	**Velka Javorina**	**1.59**	**208**	*e*Pn	**Pn**	**17 58 50.2**	**+0.4**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	**Pg**	**17 58 49.5**	**-1.5**
DPC				*e*SG	**Sg**	**17 59 10.9**	**-0.8**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*Pn	**Pn**	**17 58 49.6**	**-0.3**
DPC				Sg	**Sg**	**17 59 10.9**	**-0.8**
KOLL	**Kolacno**	**1.71**	**189**	*e*SN	**Sn**	**17 59 13.2**	**-0.7**
KOLL	**Kolacno**	**1.71**	**189**	*e*Sn	**Sn**	**17 59 13.2**	**-0.7**
KSP	**Ksiaz**	**1.71**	**291**	*e*Pg	**Pg**	**17 58 53.1**	**0.0**
KSP				*e*Sg	**Sg**	**17 59 15.8**	**+0.6**
VRAC	**Vranov**	**1.72**	**237**	*e*Pn	**Pn**	**17 58 52.3**	**+0.7**
VRAC				*e*Sg	**Sg**	**17 59 14.6**	**-1.2**
VYHS	**Vyhne**	**1.77**	**179**	*e*PN	**Pn**	**17 58 51.8**	**-0.5**
VYHS				*e*SN	**Sn**	**17 59 14.0**	**-1.4**
VYHS	**Vyhne**	**1.77**	**179**	*e*Pn	**Pn**	**17 58 52.0**	**-0.3**
VYHS				*e*Sn	**Sn**	**17 59 14.0**	**-1.4**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*PN	**Pn**	**17 58 53.0**	**+0.4**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*Pn	**Pn**	**17 58 53.0**	**+0.4**
KRUC	**Moravsky**	**1.97**	**233**	*e*Pn	**Pn**	**17 58 55.5**	**+0.4**
KECS	**Kecovo**	**2.09**	**148**	*e*PN	**Pn**	**17 58 59.8**	**+3.1**
KECS				*e*SN	**Sn**	**17 59 21.8**	**-1.6**
PRU	**Pruhonice**	**2.76**	**266**	*e*SG	**Sg**	**17 59 49.1**	**+0.1**
PRU	**Pruhonice**	**2.76**	**266**	Sg	**Sg**	**17 59 49.1**	**+0.1**
BRG	**Berggiesshubel**	**3.16**	**283**	PG	**Pg**	**17 59 20.9**	**-0.1**
BRG				SG	**Sg**	**18 00 01.6**	**-0.4**
KHC	**Kasperske Hory**	**3.58**	**254**	*e*PG	**Pg**	**17 59 25.8**	**-3.2**
KHC				*e*SG	**Sg**	**18 00 15.9**	**+0.6**
KHC	**Kasperske Hory**	**3.58**	**254**	Pg	**Pg**	**17 59 25.8**	**-3.2**
KHC				Sg	**Sg**	**18 00 15.9**	**+0.6**
CLL	**Collm**	**3.83**	**288**	*e*Sg	**Sg**	**18 00 24.0**	**+0.6**
NKC	**Novy Kostel**	**4.08**	**272**	*e*SG	**Sg**	**18 00 30.8**	**-0.7**
NKC	**Novy Kostel**	**4.08**	**272**	Sg	**Sg**	**18 00 30.8**	**-0.7**

ISCJB ***12*** *18:00:46.7±0.7, 31°.49N±0°.08×104°.2E±0°.1, h10km, mb3.6/5, Error ellipse: s-maj=17.1km s-min=7.7km az=32.4*
IDC ***12*** *18:00:47.3±1.0, 31°.61N×104°.25E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/27, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=35.4km s-min=20.6km az=60.0*
ISC 12 18:00:48.6±0.7, 31°.49N±0°.07×104°.1E±0°.1, h10km, n9, σ0°69/10, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**208**	Pg	**Pg**	**18 00 57.0**	**-4.3**
CD2				Sg	**Sg**	**18 01 09.7**	**-0.2**
CD2				smax			
	comp=N,7μm,0.7s						
CMAR	**Chiang Mai Arr**	**13.79**	**201**	Pn	**Pn**	**18 04 08.2**	**+4.0**
	comp=N,0.1nm,0.3s,baz=343,slow=14,SNR=2.6						
KSRS	**Korea Array**	**20.48**	**67**	P	**P**	**18 05 25.9**	**-0.6**
	comp=N,1.8nm,0.8s,baz=256,slow=9.9,SNR=3.6						
CN2	**Changchun**	**20.82**	**48**	*e*P	**P**	**18 05 30.8**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**18 05 50.7**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.5,baz=122,slow=12,SNR=4.5						
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**18 06 29.9**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.5,baz=126,slow=9.4,SNR=3.7						
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**18 10 47.0**	**-0.1**
	comp=Z,0.9nm,0.6s,mb4.0,baz=339,slow=7.6,SNR=8.3						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**18 11 08.6**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.6,baz=341,slow=7.0,SNR=3.9						
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**18 13 03.9**	**-1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=5.3,SNR=6.2						

IDC 12 18:07:39.2±1.6, 31°.62N×104°.62E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/28, mbtmp3.5/4, ML4.1/1, Error ellipse: s-maj=76.1km s-min=24.9km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.08**	**203**	Pn	Pn	18 11 00.3	+0.3
	0.3nm,0.3s,baz=22,slow=7.9,SNR=9.0						
MKAR	**Makanchi Array**	**22.88**	**318**	P	P	18 12 44.0	-0.3
	0.6nm,0.8s,baz=128,slow=11,SNR=4.3						
KURK	**Kurchatov**	**27.10**	**322**	P	P	18 13 23.9	+0.4
	0.5nm,0.8s,baz=128,slow=9.8,SNR=4.1						
WRA	**Warramunga Arr**	**58.66**	**147**	P	P	18 17 38.4	0.0
	0.5nm,0.8s,baz=338,slow=7.6,SNR=4.1						

ISCJB ***12*** *18:08:58.5±0.6, 32°.38N±0°.08×105°.3E±0°.1, h10km, mb3.7/11, Error ellipse: s-maj=18.1km s-min=6.9km az=147.4*
IDC ***12*** *18:08:59.1±0.8, 32°.44N×105°.26E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.7/27, mbtmp3.7/11, ML3.3/1, Error ellipse: s-maj=37.2km s-min=15.3km az=52.0*
BJI ***12*** *18:09:00.0, 32°.28N×105°.39E, h10km, ML3.9/4, Ms3.7/2, Ms7 3.7/2*
NEIC ***12*** *18:09:00.6±0.4, 32°.40N×105°.22E, h10km, mb4.5/1, Error ellipse: s-maj=16.3km s-min=6.1km az=48.0*
ISC 12 18:09:00.7±0.6, 32°.37N±0°.08×105°.2E±0°.1, h10km, n17, σ0°80/20, mb3.7/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.88**	**343**	*e*Pn	**Pn**	**18 10 03.4**	**+3.1**
LZH				Pg	**Pg**	**18 10 14.0**	**-0.9**
LZH				Sn	**Sn**	**18 10 46.5**	**+0.6**
LZH				Sg	**Sg**	**18 11 00.8**	**-4.4**
LZH				smax			
	comp=N,160nm,0.5s						
LZH				smax			
	comp=E,320nm,0.6s						
LZH				LR	LR		
	comp=N,620nm,5.1s						
LZH				LR	LR		
	comp=Z,780nm,9.0s						
ENH	**Enshi**	**4.21**	**119**	*e*Pg	**Pg**	**18 10 20.7**	**-0.7**
GTA	**Gaotai**	**8.28**	**330**	*e*P	**Pn**	**18 11 08.3**	**+7.6**
GTA				pP		18 11 12.5	
GTA				sP		18 11 15.8	
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**18 12 39.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=165,slow=7.4,SNR=3.2						
KSRS	**Korea Array**	**19.29**	**68**	P	**Pn**	**18 13 30.2**	**+3.6**
	baz=254,slow=9.5,SNR=2.9						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**18 14 01.9**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.4,baz=111,slow=14,SNR=10.0						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**18 14 33.3**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.3,baz=120,slow=10,SNR=3.2						
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**18 14 40.9**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.4,baz=131,slow=9.6,SNR=6.1						
JHJ	**Hachijo jima 2**	**29.01**	**79**	P	**P**	**18 15 00.0**	**-0.8**
	comp=Z,746nm,0.7s,baz=286,slow=18,SNR=3.1						
BVAR	**Borovoye Array**	**32.41**	**320**	P	**P**	**18 15 29.8**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.6,baz=79,slow=7.5,SNR=3.2						
BRTR	**Keskin Array B**	**56.94**	**299**	P	**P**	**18 18 46.0**	**-0.2**
	comp=Z,0.5nm,0.9s,mb3.5,baz=87,slow=3.2,SNR=3.6						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**18 18 46.5**	**-0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=27,slow=6.4,SNR=2.7						
WRAB	**Tennant Creek**	**59.02**	**148**	*e*P	**P**	**18 19 01.2**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**59.02**	**148**	P	**P**	**18 19 00.8**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=340,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**18 19 22.8**	**+1.0**
	comp=Z,0.6nm,0.8s,mb3.8,baz=330,slow=6.4,SNR=7.1						
STKA	**Stephens Creek**	**72.57**	**148**	P	**P**	**18 20 28.4**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=200,slow=4.2,SNR=3.1						
YKA	**Yellowknife Ar**	**80.21**	**18**	P	**P**	**18 21 10.6**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=328,slow=5.1,SNR=7.4						

ISCJB ***12*** *18:10:11.6±0.5, 32°.31N±0°.05×105°.10E±0°.08, h10km, mb3.6/8, Error ellipse: s-maj=9.9km s-min=6.0km az=21.9*
IDC ***12*** *18:10:12.0±1.0, 32°.29N×105°.18E, h0km, mb3.5/7, mb1 3.7/10, mb1mx3.5/29, mbtmp3.5/10, ML3.4/3, Error ellipse: s-maj=36.9km s-min=19.0km az=60.0*
NEIC ***12*** *18:10:15.8±2.9, 32°.26N×105°.04E, h25km±22km, mb4.4/1, Error ellipse: s-maj=13.9km s-min=7.9km az=66.0*
BJI ***12*** *18:

Error ellipse: s-maj=9.9km s-min=6.9km az=126.0
*NNC **12** 18:14:59.3±8.8, 36.30N×70.94E, h116km±82km, mb3.6, mpv4.9, Error ellipse: s-maj=71.8km s-min=59.9km az=33.0*
ISC 12 18:14:55.9±0.5, 35.93N±0.03×70.89E±0.06, h100km±6km, n74, σ1.30/80, mb4.0/15, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	2.05	228	eP	Pn	18 15 28.7	-0.4
CEP	**Cherat**	2.26	158	⇑P	Pn	18 15 34.0	+2.1
CEP				S	Sn	18 16 03.0	+3.6
CHCP	**Chirah Chowk**	2.99	139	P	Pn	18 15 44.2	+2.7
JMU	**Jammu**	4.61	133	eS	Sn	18 16 56.0	+0.3
THN	**Thein Dam**	5.30	130	eP	Pn	18 16 14.0	+1.3
THN				ex	Sn	18 17 14.2	+1.6
KSH	**Kashi**	5.39	47	Pn	Pn	18 16 12.6	-1.3
KSH				Sn	Sn	18 17 08.0	-6.6
KSH				smax			
	comp=N,150nm,0.5s						
KSH				smax			
	comp=E,130nm,0.4s						
DLH	**Dalhousie**	5.39	127	eS	Sn	18 17 12.0	-2.7
AML	**Almayashu**	6.57	19	P	Pn	18 16 30.7	+0.8
	SNR=74						
AML	**Almayashu**	6.57	19	eP	Pn	18 16 30.3	+0.5
	comp=E,76nm,0.6s						
SDNR	**Sundarnagar**	6.72	129	eP	Pn	18 16 32.5	+0.6
SDNR				ex	x	18 20 44.1	
UCH	**Uchtor**	6.89	23	P	Pn	18 16 35.3	+1.1
	SNR=32						
UCH	**Uchtor**	6.89	23	eP	Pn	18 16 34.9	+0.7
	comp=E,22nm,0.5s						
KZA	**Kyzart**	7.02	28	P	Pn	18 16 37.4	+1.5
	SNR=31						
EKS2	**Erkin-Say**	7.09	18	P	Pn	18 16 37.7	+0.8
	SNR=39						
EKS2	**Erkin-Say**	7.09	18	eP	Pn	18 16 37.4	+0.5
	comp=E,24nm,0.6s						
KK31	**Karatay Array**	7.17	358	⇓P	Pn	18 16 36.9	-1.1
	comp=E,25nm,0.3s,baz=180,slow=11,SNR=454						
KK31				⇓S	Sn	18 17 53.0	-4.9
	comp=E,42nm,0.7s,baz=186,slow=25,SNR=4.6						
AAK	**Ala-Archa**	7.26	22	P	Pn	18 16 40.4	+1.2
	SNR=68						
AAK	**Ala-Archa**	7.26	22	P	Pn	18 16 39.8	+0.6
	comp=E,0.2nm,0.3s,baz=170,slow=6.4,SNR=113						
AAK				S	Sn	18 17 58.3	-1.6
	comp=E,0.1nm,0.3s,baz=0.7,slow=23,SNR=7.3						
AAK	**Ala-Archa**	7.26	22	P	Pn	18 16 39.8	+0.6
AAK				S	Sn	18 17 58.3	-1.6
KBK	**Karagaybulak**	7.42	24	P	Pn	18 16 43.0	+1.6
	SNR=14						
ULHL	**Ulahol**	7.56	32	P	Pn	18 16 44.3	+1.1
	SNR=11						
CHMS	**Chumysh**	7.67	22	P	Pn	18 16 45.2	+0.4
	SNR=44						
USP	**Uspenovka**	7.84	20	P	Pn	18 16 47.3	+0.1
	SNR=19						
TKM2	**Tokmak 2**	7.88	26	P	Pn	18 16 49.0	+1.4
	SNR=26						
TKM2	**Tokmak 2**	7.88	26	eP	Pn	18 16 48.0	+0.4
	comp=E,16nm,0.6s						
DDI	**Dehra Dun**	8.20	131	ex	x	18 17 08.0	
KHET	**Khetri**	8.87	151	eP	Pn	18 17 00.5	-0.7
KHET				eS	Sn	18 18 33.4	-6.0
NDI	**New Delhi**	8.99	142	ex	Sn	18 18 40.0	-2.3
SONA	**Sohna**	9.28	144	ex	x	18 17 33.4	
SONA				eS	Sn	18 18 43.6	-5.7
AGRA	**Agra**	10.55	143	eS	Sn	18 19 12.6	-7.7
AGRA				AML	AML	18 19 44.1	
	comp=E,64nm,0.2s						
AGRA				AML	AML	18 19 46.7	
	comp=N,84nm,0.7s						
MK31	**Makanchi Array**	13.81	35	⇑P	Pn	18 18 03.8	-3.3
	comp=N,0.9nm,0.5s,baz=207,slow=11,SNR=5.5						
MK31	**Makanchi Array**	13.81	35	eP	Pn	18 18 05.2	-1.9
MKAR	**Makanchi Array**	13.81	35	P	Pn	18 18 07.2	0.0
	comp=N,0.1nm,0.3s,baz=216,slow=14,SNR=5.6						
DMN	**Daman**	14.65	120	eP	Pn	18 18 16.8	-1.3
	comp=N,7.0nm,0.2s						
KKN	**Kakani**	14.66	120	eP	Pn	18 18 16.6	-1.7
	comp=N,15nm,0.4s						
PKIN	**Phulchoki**	14.87	120	eP	Pn	18 18 19.4	-1.6
	comp=N,15nm,0.4s						
PKIN	**Phulchoki**	14.87	120	eP	Pn	18 18 19.7	-1.3
	comp=N,17nm,0.5s						
PKI	**Pulchoki**	14.89	120	eP	Pn	18 18 19.7	-1.4
	comp=N,14nm,0.5s						
GUN	**Gumba**	15.02	118	eP	Pn	18 18 21.7	-1.1
	comp=N,11nm,0.4s						
AB31	**Akbulak array**	15.55	332	P	Pn	18 18 26.3	-3.0
	comp=N,57nm,0.4s,baz=150,slow=12,SNR=872						
ABKAR	**Akbulak array**	15.55	332	eP	Pn	18 18 25.9	-3.4
	comp=N,45nm,0.4s						
KURBB	**Kurchatov Arra**	15.69	18	⇑P	Pn	18 18 27.9	-3.2
	comp=N,0.8nm,0.8s						
KURK	**Kurchatov**	15.80	18	⇓P	Pn	18 18 35.1	+2.7
	comp=N,3.6nm,1.0s						
KURK	**Kurchatov**	15.80	18	P	Pn	18 18 28.2	-4.2
	comp=N,0.1nm,0.3s,baz=210,slow=10,SNR=9.4						
KURK	**Kurchatov**	15.80	18	eP	Pn	18 18 32.0	-0.4
	comp=N,3.6nm,0.9s						
VOSK	**Vostochnaya**	16.79	0	⇓P	Pn	18 18 40.8	-3.9
	comp=N,3.9nm,0.7s						
BVA0	**Borovoye Array**	17.10	359	P	Pn	18 18 47.6	-0.8
	comp=N,0.5nm,0.6s,baz=170,slow=11,SNR=17						
BVAR	**Borovoye Array**	17.10	359	P	Pn	18 18 46.6	-1.8
	comp=N,0.8nm,0.3s,baz=160,slow=14,SNR=14						
BRVK	**Borovoye**	17.13	359	eP	Pn	18 18 47.3	-1.5
AKTK	**Aktyubinsk**	17.24	331	P	Pn	18 18 49.5	-0.6
AKTO	**Aktyubinsk**	17.24	331	⇓P	Pn	18 18 49.5	-0.6
	comp=N,4.2nm,0.8s						
AKTO	**Aktyubinsk**	17.24	331	P	Pn	18 18 49.5	-0.6
	comp=N,3.6nm,0.3s,baz=144,slow=13,SNR=108						
ZAA0	**Zalesovo Array**	20.47	24	eP	P	18 19 26.3	+0.9
ZALV	**Zalesovo Beam**	20.47	24	P	P	18 19 26.4	+1.1
	comp=N,5.2nm,0.4s,baz=217,slow=11,SNR=31						
ZALV	**Zalesovo Beam**	20.47	24	P	P	18 19 26.4	+1.1
RDF	**Al-Radifah**	20.88	257	eP	P	18 19 29.6	-0.3
RDF				AMb	AMB	18 19 34.0	
	comp=Z,20nm,0.6s						
GNI	**Garni**	20.99	289	eP	P	18 19 32.0	+0.9
	comp=Z,14nm,0.9s						
ARU	**Arti**	22.15	342	eP	P	18 19 44.4	+1.2
	comp=Z,5.1nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	29.53	289	P	P	18 20 50.2	-0.5
	comp=Z,1.0nm,0.6s,mb3.6,baz=97,slow=9.0,SNR=8.2						
AKASG	**Malin Array Be**	33.24	310	P	P	18 21 22.3	-0.9
	comp=Z,0.3nm,0.4s,mb3.5,baz=117,slow=9.0,SNR=4.9						
JOF	**Joensuu**	36.32	331	ep	P	18 21 49.7	+0.1
	comp=Z,5.9nm,0.5s,mb4.8						
FINES	**FINESS Array B**	37.91	327	P	P	18 22 03.4	+0.4
	comp=Z,3.4nm,0.7s,mb4.3,baz=95,slow=8.2,SNR=7.2						
ARCES	**ARCESS Array B**	41.64	338	P	P	18 22 35.0	+1.2
	comp=Z,4.9nm,0.6s,mb4.4,baz=107,slow=7.4,SNR=23						
NB2	**NORSAR Subarra**	44.79	323	P	P	18 22 58.4	-0.8
	comp=Z,1.2nm,0.5s,mb3.9,baz=99,slow=7.9						
NOA	**NORSAR Array B**	44.79	323	P	P	18 22 58.8	-0.4
	comp=Z,1.3nm,0.6s,mb3.8,baz=98,slow=7.8,SNR=5.2						
SPITS	**Spitsbergen Ar**	48.03	347	P	P	18 23 25.8	+1.5
	comp=Z,5.4nm,1.0s,mb4.3,baz=117,slow=12,SNR=7.9						
ESDC	**Sonseca Array**	57.65	298	P	P	18 24 35.3	-0.3
	comp=Z,0.4nm,0.4s,mb3.9,baz=56,slow=8.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	65.62	269	P	P	18 25 28.1	-1.4
	comp=Z,1.3nm,0.5s,mb4.0,baz=51,slow=6.0,SNR=18						
FITZ	**Fitzroy Crossi**	74.62	126	P	P	18 26 26.6	+2.3
	comp=Z,1.7nm,0.7s,mb3.9,baz=358,slow=20,SNR=13						
BOSA	**Boshof**	77.25	220	P	P	18 26 39.6	+0.6
	comp=Z,9.0nm,1.0s,mb4.5,baz=285,slow=3.0,SNR=12						
WRA	**Warramunga Arr**	81.76	122	P	P	18 27 04.8	+1.1
	comp=Z,1.0nm,0.7s,mb3.7,baz=324,slow=5.0,SNR=6.3						
YKA	**Yellowknife Ar**	81.82	3	P	P	18 27 04.8	+1.4
	comp=Z,0.5nm,0.4s,mb3.7,baz=350,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	81.82	3	P	P	18 27 04.8	+1.4
ASAR	**Alice Springs**	84.00	125	P	P	18 27 16.6	+1.4
	comp=Z,0.7nm,0.8s,mb3.5,baz=316,slow=5.0,SNR=6.2						

*IDC **12** 18:15:52.0±0.9, 31.06N×103.55E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/26, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=35.4km s-min=18.1km az=60.0*
*NEIC **12** 18:15:53.5±0.5, 31.12N×103.65E, h10km, mb4.3/1, Error ellipse: s-maj=15.2km s-min=9.9km az=57.0*
*BJI **12** 18:15:53.5, 31.27N×103.75E, h15km, mb4.1/2, ML3.7/11, Ms3.6/2, Ms7 3.6/2*
*ISCJB **12** 18:15:54.6±0.9, 31.15N±0.06×103.7E±0.1, h33km±8km, mb3.8/8, Error ellipse: s-maj=15.6km s-min=10.4km az=11.3*
ISC 12 18:15:54.5±0.8, 31.23N±0.03×103.7E±0.1, h17km±5km, n16, σ0.96/19, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	0.33	164	Pg	Pg	18 16 00.7	-0.8
CD2				Sg	Sg	18 16 07.3	+1.1
CD2				smax			
	comp=N,19μm,0.5s						
LZH	**Lanzhou**	4.85	2	ePn	Pn	18 17 05.0	-1.7
LZH				smax			
	comp=N,84nm,0.8s						
LZH				smax			
	comp=E,140nm,0.9s						
LZH	**Lanzhou**	4.85	2	Pg	Pg	18 17 27.7	+0.3
LZH				Sg	Sg	18 18 29.4	-0.8
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,95nm,1.0s						
ENH	**Enshi**	5.11	99	ePn	Pn	18 17 09.5	-0.8
	comp=E,190nm,0.7s						
KMI	**Kunming**	6.13	188	Pn	Pn	18 17 25.2	+0.9
KMI				Sn	Sn	18 18 33.7	-0.4
KMI				smax			
	comp=N,24nm,1.2s						
KMI				smax			
	comp=E,29nm,1.6s						
KMI				LR	LR		
	comp=N,260nm,9.1s						
KMI				LR	LR		
	comp=E,640nm,12.5s						
KMI				LR	LR		
	comp=Z,310nm,6.7s						
CMAR	**Chiang Mai Arr**	13.41	200	Pn	Pn	18 19 02.9	-1.2
	comp=Z,0.1nm,0.3s,baz=107,slow=12,SNR=4.2						
KSRS	**Korea Array**	20.95	66	P	P	18 20 37.5	+0.9
	comp=Z,2.1nm,0.6s,baz=255,slow=9.7,SNR=6.2						
CN2	**Changchun**	21.29	48	eP	P	18 20 40.7	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
MKAR	**Makanchi Array**	22.63	319	P	P	18 20 54.8	+0.4
	comp=Z,1.0nm,0.7s,mb3.4,baz=129,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	26.44	335	P	P	18 21 31.6	+1.3
	comp=Z,2.3nm,0.8s,mb3.8,baz=134,slow=6.2,SNR=4.0						
KURK	**Kurchatov**	26.92	324	P	P	18 21 34.7	+0.1
	comp=Z,0.9nm,0.8s,mb3.4,baz=128,slow=10,SNR=5.4						
KURK	**Kurchatov**	26.92	324	P	P	18 21 34.7	+0.1
WRAB	**Tennant Creek**	58.79	146	eP	P	18 25 51.3	-0.5
	comp=Z,1.8nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	58.79	146	P	P	18 25 51.3	-0.6
	comp=Z,1.2nm,0.5s,mb4.2,baz=338,slow=7.8,SNR=19						
ASAR	**Alice Springs**	61.80	148	P	P	18 26 11.8	-0.7
	comp=Z,0.3nm,0.5s,mb3.7,baz=341,slow=6.8,SNR=7.0						
YKA	**Yellowknife Ar**	81.69	17	P	P	18 28 13.8	+2.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=336,slow=5.2,SNR=4.2						

*IDC **12** 18:17:17.3±40.0, 18.52S×169.39E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=685.5km s-min=106.2km az=76.0*
ISC 12 18:17:35.9±5.2, 18.45±0.1×167.2E±0.6, h10km, n6, σ0.63/7, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	3.69	191	eP	Pg	18 18 46.7	+0.1
DZM				eS	Sg	18 19 34.4	-0.1
NOUC	**Port Laguerre**	3.75	193	eP	Pg	18 18 48.0	+0.3
STKA	**Stephens Creek**	26.68	235	P	P	18 23 13.6	-1.6
	0.7nm,0.6s,mb3.4,baz=63,slow=6.8,SNR=2.8						
WRA	**Warramunga Arr**	31.04	262	P	P	18 23 54.4	+0.3
	0.3nm,0.3s,mb3.6,baz=97,slow=8.5,SNR=10						
ASAR	**Alice Springs**	31.45	255	P	P	18 23 58.2	+0.5
	2.7nm,0.4s,mb4.5,baz=81,slow=8.7,SNR=115						
FITZ	**Fitzroy Crossi**	39.40	264	P	P	18 25 06.4	+0.3
	1.1nm,0.8s,mb3.6,baz=84,slow=19,SNR=3.6						

*NEIC **12** 18:17:42.8±3.6, 36.97N×72.14E, h181km±22km, Error ellipse: s-maj=44.5km s-min=16.3km az=176.0*
*IDC **12** 18:17:43.3±6.2, 37.19N×72.14E, h171km±46km, mb3.3/4, mb1 3.3/8, mb1mx3.1/28, mbtmp3.3/8, Error ellipse: s-maj=54.6km s-min=22.9km az=177.0*
*ISCJB **12** 18:17:49.6±2.2, 37.6N±0.2×72.1E±0.1, h230km±16km, mb3.5/4, Error ellipse: s-maj=28.8km s-min=16.6km az=12.7*
ISC 12 18:17:50.8±2.3, 37.7N±0.2×72.1E±0.1, h218km±16km, n22, σ0.94/26, mb3.5/4, 2C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	3.57	57	⇑iPn	Pn	18 18 41.5	-6.5
KSH				Sn	S	18 19 21.0	-12
KSH				smax			
	comp=N,190nm,0.4s						
KSH				smax			
	comp=E,190nm,0.6s						
AML	**Almayashu**	4.64	15	P	Pn	18 19 01.3	+0.3
	SNR=9.8						
UCH	**Uchtor**	4.93	22	P	Pn	18 19 05.4	+0.7
	SNR=11						
UCH	**Uchtor**	4.93	22	eP	Pn	18 19 04.0	-0.7
KZA	**Kyzart**	5.04	28	P	Pn	18 19 05.8	-0.3
	SNR=5.3						
EKS2	**Erkin-Say**	5.16	14	P	Pn	18 19 07.9	+0.3
	SNR=12						
AAK	**Ala-Archa**	5.30	20	P	Pn	18 19 09.9	+0.6
	SNR=7.8						
AAK	**Ala-Archa**	5.30	20	P	Pn	18 19 08.7	-0.6
	comp=E,0.1nm,0.3s,baz=161,slow=6.1,SNR=6.3						
AAK				S	S	18 20 11.3	-0.4
	comp=E,0.1nm,0.3s,baz=326,slow=21,SNR=7.2						
AAK	**Ala-Archa**	5.30	20	eP	Pn	18 19 09.6	+0.3
AAK				S	S	18 20 11.3	-0.4
KBK	**Karagaybulak**	5.45	23	P	Pn	18 19 12.1	+0.8
	SNR=7.3						
KK31	**Karatay Array**	5.57	348	⇑P	Pn	18 19 12.8	0.0
	comp=E,9.7nm,0.5s,baz=156,slow=11,SNR=8.2						
KK31				S	S	18 20 16.6	-1.2
	comp=E,19nm,0.5s,baz=158,slow=21,SNR=9.3						
CHMS	**Chumysh**	5.71	20	P	Pn	18 19 14.9	+0.4
	SNR=5.9						
USP	**Uspenovka**	5.90	17	P	Pn	18 19 17.1	+0.2
	SNR=5.0						
KURK	**Kurchatov**	13.86	18	P	Pn	18 20 54.8	-3.3
	baz=204,slow=11,SNR=2.7						
AKTK	**Aktyubinsk**	16.25	326	P	P	18 21 27.0	+0.9
AKTO	**Aktyubinsk**	16.25	326	P	P	18 21 27.0	+0.9
	comp=E,1.5nm,0.3s,baz=132,slow=10,SNR=8.3						
ZALV	**Zalesovo Beam**	18.50	24	P	P	18 21 51.3	+0.7
	comp=E,0.9nm,0.3s,baz=209,slow=9.8,SNR=7.1						
SONM	**Songino Array**	26.97	57	P	P	18 23 10.7	-1.4
	comp=E,0.5nm,0.8s,mb3.2,baz=280,slow=8.5,SNR=2.3						
SONM	**Songino Array**	26.97	57	P	P	18 23 10.7	-1.4
BRTR	**Keskin Array B**	29.93	286	P	P	18 23 35.8	-2.6
	comp=E,0.5nm,0.5s,mb3.4,baz=97,slow=8.0,SNR=3.6						
FINES	**FINESS Array B**	37.02	325	P	P	18 24 39.4	+0.2
	comp=E,1.9nm,0.8s,mb3.7,baz=106,slow=10,SNR=3.1						
ARCES	**ARCESS Array B**	40.41	337	P	P	18 25 08.4	+1.1
	comp=E,2.3nm,1.0s,mb3.6,baz=106,slow=7.7,SNR=4.4						

*IDC **12** 18:22:25.3±0.8, 31.12N×103.70E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, ML3.6/2, Error ellipse: s-maj=30.8km s-min=16.5km az=58.0*
*ISCJB **12** 18:22:27.7±0.7, 31.11N±0.05×103.73E±0.09, h30km±5km, mb3.9/10, Error ellipse: s-maj=13.5km s-min=8.6km az=177.5*
*NEIC **12** 18:22:28.7±2.4, 31.12N×103.69E, h23km±18km, mb4.6/1, Error ellipse: s-maj=10.4km s-min=6.2km az=61.0*
*BJI **12** 18:22:30.0, 31.13N×103.78E, h20km, mB4.7/1, mb4.2/3, ML3.8/10, Ms3.8/1, Ms7 3.7/1*
ISC 12 18:22:27.9±0.8, 31.18N±0.04×103.70E±0.09, h16km±5km, n20, σ0.80/22, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	0.27	169	Pg	Pg	18 22 33.2	-0.6
CD2				Sg	Sg	18 22 38.6	+0.9
CD2				smax			
	comp=N,23μm,0.6s						
LZH	**Lanzhou**	4.90	1	Pg	Pg	18 23 59.8	-2.0
LZH				Sg	Sg	18 25 03.8	-1.5
LZH				smax			
	comp=N,65nm,0.8s						
LZH				smax			
	comp=E,110nm,1.0s						
ENH	**Enshi**	5.06	99	ePn	Pn	18 23 43.4	+0.2
KMI	**Kunming**	6.09	188	Pn	Pn	18 24 00.5	+3.2
KMI				Sn	Sn	18 25 06.6	-0.1
KMI				smax			
	comp=N,32nm,0.9s						
KMI				smax			
	comp=E,27nm,0.8s						
CMAR	**Chiang Mai Arr**	13.38	200	Pn	Pn	18 25 36.2	-1.0
	comp=E,0.1nm,0.3s,baz=33,slow=17,SNR=3.2						
SONM	**Songino Array**	16.77	6	Pn	Pn	18 26 22.5	+0.5
	comp=E,0.2nm,0.3s,baz=190,slow=13,SNR=3.7						
KSRS	**Korea Array**	20.94	66	P	P	18 27 10.3	+0.2
	comp=E,2.1nm,0.6s,baz=262,slow=11,SNR=7.4						
CN2	**Changchun**	21.30	48	eP	P	18 27 14.8	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MK31	**Makanchi Array**	22.70	319	eP	P	18 27 29.1	+0.3
MKAR	**Makanchi Array**	22.70	319	P	P	18 27 29.8	+1.0
	comp=Z,1.8nm,0.8s,mb3.5,baz=121,slow=12,SNR=9.7						
ZALV	**Zalesovo Beam**	26.51	335	P	P	18 28 04.7	+0.2
	comp=Z,1.7nm,0.8s,mb3.6,baz=134,slow=8.5,SNR=5.5						
KURK	**Kurchatov**	26.98	324	P	P	18 28 09.1	+0.3
	comp=Z,1.4nm,1.0s,mb3.5,baz=129,slow=9.6,SNR=6.3						
BRTR	**Keskin Array B**	56.40	299	P	P	18 32 08.3	-0.3
	comp=Z,0.3nm,0.3s,mb3.7,baz=115,slow=8.5,SNR=4.5						
ARCES	**ARCESS Array B**	57.05	336	P	P	18 32 13.3	+0.5
	comp=Z,4.0nm,0.9s,mb4.5,baz=74,slow=7.8,SNR=6.3						
ARCES	**ARCESS Array B**	57.05	336	P	P	18 32 13.3	+0.5
WRAB	**Tennant Creek**	58.72	146	eP	P	18 32 24.3	-0.8
	comp=Z,4.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	58.73	146	P	P	18 32 24.6	-0.5
	comp=Z,2.1nm,0.6s,mb4.3,baz=338,slow=7.8,SNR=19						
WB2	**Warramunga Arr**	58.73	146	eP	P	18 32 24.6	-0.5
ASAR	**Alice Springs**	61.73	148	P	P	18 32 45.4	-0.2
	comp=Z,0.8nm,0.8s,mb3.9,baz=332,slow=6.3,SNR=7.2						
YKA	**Yellowknife Ar**	81.73	17	P	P	18 34 44.8	-0.6
	comp=Z,0.6nm,0.7s,mb3.6,baz=330,slow=5.1,SNR=8.6						

*ISCJB **12** 18:23:09.9±0.4, 31.17N±0.06×103.63E±0.09, h10km, mb4.1/17, Error ellipse: s-maj=11.6km s-min=7.6km az=153.7*
*IDC **12** 18:23:10.1±0.7, 31.18N×103.58E, h0km, mb4.1/15, mb1 4.1/17, mb1mx4.0/29, mbtmp4.0/17, ML3.3/1, Error ellipse: s-maj=28.5km s-min=13.2km az=52.0*
*BJI **12** 18:23:12.6, 31.25N×103.53E, h22km, mb4.3/3, ML3.9/5, Ms3.9/1, Ms7 3.7/1*
*NEIC **12** 18:23:14.3±3.1, 31.18N×103.57E, h28km±22km, mb4.5/2, Error ellipse: s-maj=12.8km s-min=6.3km az=66.0*
ISC 12 18:23:12.3±0.4, 31.24N±0.05×103.64E±0.09, h10km, n35, σ1.17/36, mb4.1/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	0.35	163	Pg	Pg	18 23 21.0	+1.9
CD2				Sg	Sg	18 23 28.4	+4.7
CD2				smax			
	comp=N,29μm,0.5s						
KMI	**Kunming**	6.15	188	Pn	Pn	18 24 43.9	+0.8
KMI				smax			
	comp=N,55nm,1.0s						
KMI				smax			
	comp=E,41nm,1.1s						
KMI				LR	LR		
	comp=N,320nm,6.7s						
KMI				LR	LR		
	comp=E,860nm,7.8s						
KMI				LR	LR		
	comp=Z,410nm,6.5s						
LSA	**Lhasa**	10.89	265	P	Pn	18 25 47.6	-0.5
LSA	**Lhasa**	10.89	265	eP	Pn	18 25 48.2	+0.1
	comp=Z,3.8nm,0.6s						
CMAR	**Chiang Mai Arr**	13.42	200	Pn	Pn	18 26 21.2	-1.6
	baz=6.6,slow=7.6,SNR=2.7						
SONM	**Songino Array**	16.70	6	Pn	Pn	18 27 07.5	+1.2
	comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=2.2						
KSRS	**Korea Array**	20.96	66	P	P	18 27 55.8	+0.5
	comp=Z,6.3nm,0.7s,baz=262,slow=9.9,SNR=13						
CN2	**Changchun**	21.29	48	eP	P	18 28 02.9	+4.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	**Makanchi Array**	22.62	319	eP	P	18 28 13.1	0.0
MKAR	**Makanchi Array**	22.62	319	P	P	18 28 13.2	+0.2
	comp=Z,6.6nm,0.9s,mb4.1,baz=123,slow=8.8,SNR=15						
KSH	**Kashi**	23.95	298	P	P	18 28 29.6	+3.0
KZA	**Kyzart**	25.10	303	P	P	18 28 38.7	+1.6
	SNR=8.0						
KBK	**Karagaybulak**	25.48	305	P	P	18 28 41.9	+1.3
	SNR=6.9						
UCH	**Uchtor**	25.67	303	P	P	18 28 44.1	+1.9
	SNR=8.7						
UCH	**Uchtor**	25.67	303	eP	P	18 28 43.2	+0.9
	comp=Z,6.2nm,0.9s,mb4.1						
AAK	**Ala-Archa**	25.80	304	P	P	18 28 46.7	+3.3
	SNR=5.5						
AAK	**Ala-Archa**	25.80	304	P	P	18 28 44.4	+1.0
	comp=Z,4.2nm,0.8s,mb4.0,baz=113,slow=5.0,SNR=12						
USP	**Uspenovka**	25.98	306	P	P	18 28 48.0	+3.0
	SNR=7.7						
ZAA0	**Zalesovo Array**	26.43	335	eP	P	18 28 48.6	-0.3
ZALV	**Zalesovo Beam**	26.43	335	P	P	18 28 48.5	-0.4
	comp=Z,6.0nm,0.9s,mb4.1,baz=137,slow

LZH smax
comp=E,300nm,1.0s
LZH LR LR
comp=N,2μm,6.9s
LZH LR LR
comp=Z,2μm,8.5s
ENH Enshi 4.91 102 *e*P **Pn 18 27 30.8 -0.7**
KMI Kunming 6.31 190 Pn **Pn 18 27 55.3 +4.4**
KMI Sn **Sn 18 29 03.8 +1.1**
KMI smax
comp=N,50nm,1.1s
KMI smax
comp=E,35nm,1.2s
KMI LR LR
comp=N,740nm,7.6s
KMI LR LR
comp=E,750nm,7.1s
KMI LR LR
comp=Z,620nm,8.4s
LSA Lhasa 11.14 265 *e*P **Pn 18 28 57.0 -0.1**
LSA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 11.14 265 *e*P **Pn 18 28 57.0 -0.1**
comp=Z,3.9nm,0.6s
NJ2 Nanjing 12.73 83 *e*P **Pn 18 29 18.9 +0.2**
NJ2 pP 18 29 26.9
NJ2 PP 18 29 28.5
NJ2 sP 18 29 31.0
NJ2 S **Sn 18 31 36.8 -3.3**
NJ2 sS 18 31 49.0
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,220nm,3.6s
NJ2 LR LR
comp=N,510nm,9.4s
NJ2 LR LR
comp=E,680nm,10.1s
NJ2 LR LR
comp=Z,2μm,11.3s
BJI Beijing 13.17 46 P **Pn 18 29 18.6 -6.2**
BJI pmax pmax
comp=Z,8.0nm,0.6s
CMAR Chiang Mai Arr 13.63 200 Pn **Pn 18 29 29.4 -1.8**
baz=1.9,slow=9.3,SNR=2.8
GUN Gumba 16.07 262 *e*P **Pn 18 30 02.8 -0.9**
comp=Z,21nm,0.4s
SONM Songino Array 16.55 6 Pn **Pn 18 30 08.8 -0.9**
comp=Z,0.1nm,0.3s,baz=184,slow=15,SNR=11
PKI Pulchoki 16.57 261 *e*P **Pn 18 30 08.9 -1.2**
PKIN Phulchoki 16.57 262 *e*P **Pn 18 30 09.4 -0.8**
comp=Z,39nm,0.7s
KKN Kakani 16.61 262 *e*P **Pn 18 30 09.7 -0.9**
comp=Z,26nm,0.5s
DMN Daman 16.81 262 *e*P **Pn 18 30 11.9 -1.3**
comp=Z,28nm,0.8s
ZAK Zakamensk 19.00 359 *e*P **Pn 18 30 40.9 +1.0**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
TLY Talaya 20.29 359 *e*P **P 18 30 57.7 +4.4**
TLY pmax pmax
comp=Z,5.0nm,0.9s
MOY Mondy 20.39 355 *e*P **P 18 30 56.5 +2.1**
KSRS Korea Array 20.68 66 P **P 18 30 57.0 -0.7**
comp=Z,3.8nm,0.6s,baz=247,slow=9.3,SNR=10
KSRS Korea Array 20.68 66 P **P 18 30 57.0 -0.6**
KSRS pmax pmax
comp=Z,4.0nm,0.6s
IRK Irkutsk 20.86 1 *e*P **P 18 31 00.4 +1.0**
IRK pmax pmax
comp=Z,39nm,0.7s
CN2 Changchun 21.02 48 *e*P **P 18 31 01.8 +0.6**
CN2 pmax pmax
comp=Z,40nm,0.7s,mb4.9
MK31 Makanchi Array 22.68 319 *e*P **P 18 31 19.7 +0.7**
MKAR Makanchi Array 22.68 319 P **P 18 31 19.7 +0.7**
comp=Z,8.3nm,0.7s,mb4.3,baz=117,slow=11,SNR=38
MDJ Mudanjiang 24.04 49 P **P 18 31 34.0 +1.3**
MDJ pmax pmax
comp=Z,11nm,1.3s,mb4.1
MDJ pmax pmax
comp=Z,180nm,4.4s
KSH Kashi 24.11 297 P **P 18 31 37.6 +4.2**
KSH pmax pmax
comp=Z,66nm,4.2s
AAK Ala-Archa 25.93 304 P **P 18 31 50.5 +0.7**
comp=Z,1.0nm,0.5s,mb3.6,baz=52,slow=5.6,SNR=4.7
AAK Ala-Archa 25.93 304 ⇑*i*P **P 18 31 52.3 +2.5**
AAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.4
ZAA0 Zalesovo Array 26.41 334 *e*P **P 18 31 54.3 +0.2**
ZALV Zalesovo Beam 26.41 334 P **P 18 31 54.5 +0.4**
comp=Z,9.5nm,0.7s,mb4.5,baz=133,slow=8.7,SNR=43
KURK Kurchatov 26.94 323 P **P 18 31 59.5 +0.6**
comp=Z,7.8nm,0.8s,mb4.3,baz=124,slow=9.6,SNR=30
KURK Kurchatov 26.94 323 *ce*P **P 18 31 59.3 +0.4**
KURK pmax pmax
comp=Z,15nm,1.2s,mb4.4
KURK Kurchatov 26.94 323 P **P 18 31 59.5 +0.6**
BVAR Borovoye Array 32.49 322 P **P 18 32 48.4 +0.4**
comp=Z,1.2nm,0.5s,mb4.0,baz=136,slow=9.2,SNR=4.6
ABKAR Akbulak array 37.38 311 *e*P **P 18 33 30.5 +0.1**
comp=Z,1.2nm,0.5s,mb4.0
AKTK Aktyubinsk 38.84 313 P **P 18 33 43.2 +0.6**
AKTO Aktyubinsk 38.84 313 P **P 18 33 43.2 +0.6**
comp=Z,1.9nm,0.5s,mb4.1,baz=80,slow=12,SNR=13
SVE Sverdlovsk 39.20 323 *e*P **P 18 33 46.9 +1.4**
ARU Arti 40.13 322 *d i*P **P 18 33 53.6 +0.4**
ARU *e* 18 35 25.5
ARU S **S 18 39 59.2 +0.3**
ARU SS SS 18 42 54.8 -1.6
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.5
BILL Bilibino 51.00 25⇑*e*P **P 18 35 18.1 -1.0**
BILL *e**PP pP 18 35 25.7 +1.7
BILL *e* 18 35 36.7
BILL pmax pmax
comp=Z,13nm,2.5s,mb4.4
OBN Obninsk 52.18 318 *e*P **P 18 35 28.7 +0.6**
OBN *e**PP pP 18 35 39.0 +5.9
OBN *e**SP sP 18 35 43.3 +8.3
OBN *e* 18 36 38.8
OBN *e* 18 37 27.4
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
FITZ Fitzroy Crossi 53.43 154 P **P 18 35 38.5 +0.8**
comp=Z,4.4nm,1.0s,mb4.3,baz=328,slow=6.7,SNR=7.4
JOF Joensuu 54.72 328 *e*P **P 18 35 46.2 -0.4**
JOF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
JOF Joensuu 54.72 328 *ep* **P 18 35 46.2 -0.4**
comp=Z,6.2nm,0.5s,mb4.9
KEV Kevo 56.43 336 *e*P **P 18 35 58.1 -0.7**
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KEV Kevo 56.43 336 *ep* **P 18 35 58.1 -0.7**
comp=Z,8.4nm,0.6s,mb5.0
BRTR Keskin Array B 56.48 299 P **P 18 35 59.2 -0.4**
comp=Z,0.3nm,0.5s,mb3.6,baz=98,slow=12,SNR=3.6
ARCES ARCESS Array B 56.95 336 P **P 18 36 02.6 +0.1**
comp=Z,4.7nm,0.6s,mb4.7,baz=75,slow=7.8,SNR=26
KAF Kangasniemi 57.08 327 *e*P **P 18 36 02.7 -0.9**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KAF Kangasniemi 57.08 327 *ep* **P 18 36 02.7 -0.9**
comp=Z,5.0nm,0.7s,mb4.7
AKASG Malin Array Be 57.09 313 P **P 18 36 03.2 -0.6**
comp=Z,0.6nm,0.3s,mb4.1,baz=241,slow=10,SNR=5.1
AKASG Malin Array Be 57.09 313 *ce*P **P 18 36 06.5 +2.7**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
FINES FINESS Array B 57.26 326 P **P 18 36 04.2 -0.6**
comp=Z,4.7nm,0.6s,mb4.7,baz=82,slow=8.2,SNR=20
WRAB Tennant Creek 58.78 146 *e*P **P 18 36 16.3 +0.4**
WRAB pmax pmax
comp=Z,25nm,0.6s,mb5.4
WRAB Tennant Creek 58.78 146 *e*P **P 18 36 16.3 +0.4**
comp=Z,25nm,0.6s,mb5.4
WRA Warramunga Arr 58.78 146 P **P 18 36 16.2 +0.3**
comp=Z,21nm,0.6s,mb5.4,baz=338,slow=7.5,SNR=60
WB2 Warramunga Arr 58.78 146 *e*P **P 18 36 16.2 +0.3**
ASAR Alice Springs 61.80 149 P **P 18 36 37.0 +0.5**
comp=Z,3.7nm,0.8s,mb4.6,baz=330,slow=6.3,SNR=25
NB2 NORSAR Subarra 64.35 327 P **P 18 36 52.1 -1.0**
comp=Z,1.9nm,0.5s,mb4.4,baz=73,slow=6.9
NOA NORSAR Array B 64.35 327 P **P 18 36 52.1 -1.0**
comp=Z,1.3nm,0.5s,mb4.2,baz=77,slow=6.0,SNR=11
CLL Collm 66.76 317 *e*P **P 18 37 08.0 -0.8**
CLL *e* pP 18 37 11.0 -2.9
GERES GERESS Array B 67.25 314 P **P 18 37 11.9 -0.1**
comp=Z,0.4nm,0.6s,mb3.6,baz=73,slow=4.9,SNR=5.2
COLA College 69.25 26 *e*P **P 18 37 24.3 +0.1**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 69.25 26 *e*P **P 18 37 24.3 0.0**
comp=Z,9.2nm,0.8s,mb4.8
CDF Champ du Feu 71.32 316 *e*P **P 18 37 36.9 -0.3**
INK Inuvik 71.95 19 *e*P **P 18 37 40.0 -0.7**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 71.95 19 *e*P **P 18 37 40.0 -0.6**
comp=Z,8.7nm,1.0s,mb4.6
LPG La Plagne 72.96 313⇑*i*P **P 18 37 47.6 +0.5**
comp=Z,9.4nm,0.8s,mb4.5
LPG La Plagne 72.96 313⇑*i*P **P 18 37 47.6 +0.5**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPG La Plagne 72.96 313⇑*i*P **P 18 37 47.6 +0.5**
comp=Z,4.7nm,0.8s,mb4.5
LPL La Plagne 72.96 313⇑*i*P **P 18 37 47.5 +0.4**
comp=Z,7.1nm,0.6s,mb4.5
LPL La Plagne 72.96 313⇑*i*P **P 18 37 47.5 +0.4**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 72.96 313⇑*i*P **P 18 37 47.5 +0.4**
comp=Z,3.5nm,0.6s,mb4.5
SMF Signal de Mont 74.20 315 *e*P **P 18 37 53.8 -0.6**
TCF Toulx Ste Croi 75.36 315 *e*P **P 18 38 00.8 -0.3**
CAF Calviac 76.13 314 *e*P **P 18 38 05.7 +0.2**
comp=Z,2.8nm,0.7s,mb4.0
CAF Calviac 76.13 314 *e*P **P 18 38 05.7 +0.2**
CAF pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
CAF Calviac 76.13 314 *e*P **P 18 38 05.7 +0.2**
comp=Z,1.4nm,0.7s,mb4.0
YKA Yellowknife Ar 81.48 17 P **P 18 38 34.1 -0.4**
comp=Z,1.1nm,0.6s,mb4.0,baz=329,slow=5.1,SNR=15
TORD Torodi Ar. Bea 93.41 288 P **P 18 39 31.6 -1.9**
comp=Z,0.3nm,0.8s,mb3.8,baz=75,slow=1.6,SNR=2.6

IDC ***12*** *18:32:51.1±1.5,3.°42N×127.°22E,h0km,mb3.5/6,*
mb1 3.7/6,mb1mx3.5/22,mbtmp3.6/6,Error ellipse:
s-maj=112.9km s-min=18.3km az=69.0
ISCJB ***12*** *18:32:53.6±1.3,3.°5N±0.°3×127.°3E±0.°6,h33km,mb3.5/7,*
Error ellipse: s-maj=91.3km s-min=15.7km az=158.8
NEIC ***12*** *18:32:55.7±1.0,3.°49N×127.°45E,h35km,mb4.0/2,Error*
ellipse: s-maj=69.4km s-min=13.2km az=70.0
ISC 12 18:32:55.8±1.3,3.°5N±0.°2×127.°5E±0.°5,h35km,n8,σ0.9 60/8,
mb3.5/7,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.52**	**185**	P	**P**	**18 37 42.2**	**+0.2**
	0.3nm,0.3s,mb3.2,baz=15,slow=12,SNR=2.4						
WRAB	**Tennant Creek**	**24.24**	**164**	*e*P	**P**	**18 38 08.7**	**-0.8**
	1.6nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**24.25**	**164**	P	**P**	**18 38 09.1**	**-0.5**
	0.7nm,0.6s,mb3.2,baz=341,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**27.71**	**167**	P	**P**	**18 38 40.9**	**-0.1**
	0.2nm,0.4s,mb3.1,baz=342,slow=7.1,SNR=2.4						
STKA	**Stephens Creek**	**37.65**	**160**	P	**P**	**18 40 08.9**	**+1.2**
	0.6nm,0.4s,mb3.6,baz=339,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**58.16**	**325**	P	**P**	**18 42 46.1**	**-0.1**
	0.7nm,0.6s,mb3.9,baz=118,slow=8.1,SNR=11						
KURK	**Kurchatov**	**62.33**	**327**	P	**P**	**18 43 14.9**	**+0.3**
	0.8nm,0.7s,mb4.0,baz=126,slow=6.4,SNR=7.7						
KURK	**Kurchatov**	**62.33**	**327**	*e*P	**P**	**18 43 14.5**	**-0.1**
	1.8nm,0.8s,mb4.2						

ISCJB ***12*** *18:33:12.7±0.9,32.°1N±0.°3×104.°7E±0.°3,h10km,mb3.4/6,*
Error ellipse: s-maj=50.9km s-min=13.4km az=43.4
IDC ***12*** *18:33:12.7±1.3,32.°60N×105.°57E,h0km,mb3.3/5,*
mb1 3.4/5,mb1mx3.3/27,mbtmp3.3/5,Error ellipse:
s-maj=175.4km s-min=21.1km az=55.0
BJI ***12*** *18:33:12.9,32.°24N×105.°39E,h11km,ML3.5/4,Ms3.6/2,*
Ms7 3.5/2
NEIC ***12*** *18:33:14.7±0.8,32.°17N×104.°80E,h10km,mb4.3/1,Error*
ellipse: s-maj=45.4km s-min=11.3km az=224.0
ISC 12 18:33:14.8±0.9,32.°2N±0.°3×104.°8E±0.°3,h10km,n7,
σ0.9 66/7,mb3.4/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.44**	**114**	P	**Pn**	**18 34 22.5**	**+0.3**
MKAR	**Makanchi Array**	**22.58**	**317**	P	**P**	**18 38 16.2**	**+1.0**
	0.3nm,0.5s,mb3.0,baz=119,slow=9.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**18 38 47.1**	**-0.8**
	0.4nm,0.5s,mb3.2,baz=129,slow=11,SNR=2.4						
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**18 38 54.4**	**-0.2**
	0.1nm,0.3s,mb2.8,baz=123,slow=10.0,SNR=3.0						
WRAB	**Tennant Creek**	**59.04**	**147**	P	**P**	**18 43 19.5**	**+4.4**
	2.3nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**59.04**	**147**	P	**P**	**18 43 14.3**	**-0.8**
	0.9nm,1.2s,mb3.7,baz=339,slow=7.7,SNR=3.4						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**18 43 36.2**	**+0.3**
	0.1nm,0.5s,mb3.2,baz=336,slow=6.6,SNR=3.0						

IDC 12 18:36:51.5±1.0,31.°99N×104.°69E,h0km,mb3.4/6,
mb1 3.6/7,mb1mx3.4/26,mbtmp3.4/7,ML3.4/1,Error
ellipse: s-maj=52.8km s-min=19.9km az=62.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.44**	**202**	Pn	Pn	18 40 18.1	+0.9
	0.1nm,0.3s,baz=8.5,slow=9.0,SNR=2.6						
MKAR	**Makanchi Array**	**22.65**	**317**	P	P	18 41 54.2	+0.2
	0.5nm,0.7s,baz=116,slow=11,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.15**	**333**	P	P	18 42 27.6	+0.4
	0.7nm,0.5s,baz=129,slow=10,SNR=4.1						
KURK	**Kurchatov**	**26.84**	**322**	P	P	18 42 32.9	-0.7
	0.3nm,0.6s,baz=129,slow=7.9,SNR=3.6						
WRA	**Warramunga Arr**	**58.94**	**147**	P	P	18 46 52.3	-0.4
	0.3nm,0.6s,baz=340,slow=7.8,SNR=4.7						
ASAR	**Alice Springs**	**62.00**	**150**	P	P	18 47 13.8	+0.2
	0.3nm,0.8s,baz=333,slow=6.5,SNR=5.9						
YKA	**Yellowknife Ar**	**80.70**	**17**	P	P	18 49 06.3	+0.3
	0.1nm,0.5s,baz=330,slow=4.6,SNR=3.1						

NEIC 12 18:42:44.5,60.°56N×151.°55W,h63km,ML2.8(AEIC),
ML3.5(PMR),**After AEIC.,Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	**Redoubt South**	**0.60**	**261**	*e*P	Pn	18 42 57.2	-0.6
SLKM	**Skilak Lake**	**0.66**	**94**	P	Pn	18 42 57.9	-0.6
FIB	**Fire Island**	**0.91**	**47**	P	Pn	18 43 01.9	+0.5
FIB				S	Sn	18 43 15.5	+1.6
PMR	**Palmer**	**1.57**	**48**	P	Pn	18 43 10.4	+0.3
PMR				S	Sn	18 43 29.2	-0.2
KNK	**Knik Glacier**	**1.73**	**59**	P	Pn	18 43 11.7	-0.7
GHO	**Glory Hole Cre**	**1.76**	**45**	P	Pn	18 43 12.3	-0.4
SML	**Sawmill**	**2.00**	**50**	P	Pn	18 43 15.1	-0.8
SVW2	**Sparrevohn**	**2.05**	**287**	P	Pn	18 43 14.7	-1.9
PPLA	**Purkeypile**	**2.37**	**353**	P	Pn	18 43 20.5	-0.4
KDAK	**Kodiak Island**	**2.84**	**191**	P	Pn	18 43 26.0	-1.3
DIV	**Divide**	**2.89**	**76**	P	Pn	18 43 26.3	-1.7
TRF	**Thorofare Moun**	**2.96**	**11**	P	Pn	18 43 29.3	+0.3
KTH	**Kantishna Hill**	**3.02**	**5**	P	Pn	18 43 29.8	-0.1
TT01	**Tatalina**	**3.17**	**320**	P	Pn	18 43 31.3	-0.6
TTA	**Tatalina**	**3.19**	**320**	*e*P	Pn	18 43 31.1	-1.0
CHUM	**Lake Minchumin**	**3.35**	**354**	P	Pn	18 43 34.2	-0.2
MCK	**McKinley**	**3.41**	**20**	*e*P	Pn	18 43 35.9	+0.7
BMRM	**Bremner River**	**3.43**	**80**	P	Pn	18 43 33.3	-2.2
OHAK	**Old Harbor**	**3.47**	**196**	P	Pn	18 43 34.7	-1.3
BPAW	**Bear Paw Mtn.**	**3.56**	**4**	P	Pn	18 43 36.7	-0.6
MENT	**Mentasta**	**4.42**	**54**	*e*P	Pn	18 43 48.0	-1.0
IL1	**Eielson Array**	**4.74**	**25**	P	Pn	18 43 53.0	-0.3
IM3	**Indian Mountai**	**5.53**	**351**	P	Pn	18 44 02.4	-1.8
COLD	**Coldfoot**	**6.72**	**4**	*e*P	Pn	18 44 17.4	-3.0
	2.8nm,0.7s						
BM3	**Burnt Mountain**	**7.53**	**21**	P	Pn	18 44 29.9	-1.4

IDC ***12*** *18:43:27.2±0.6,31.°14N×103.°74E,h0km,mb4.0/17,*
mb1 4.1/19,mb1mx4.0/27,mbtmp3.9/19,ML3.8/1,MS3.9/9,
Ms1 3.9/9,ms1mx3.4/44,Error ellipse: s-maj=27.6km
s-min=12.9km az=53.0
ISCJB ***12*** *18:43:29.5±0.6,31.°08N±0.°04×103.°68E±0.°05,h28km±5km,*
mb4.0/23,Error ellipse: s-maj=7.7km s-min=6.3km
az=177.1
NEIC ***12*** *18:43:30.5±2.0,31.°15N×103.°81E,h20km±15km,mb4.0/6,*
Error ellipse: s-maj=7.6km s-min=5.7km az=56.0
BJI ***12*** *18:43:30.1,31.°13N×103.°84E,h20km,mB4.9/6,mb4.3/13,*
ML4.3/14,Ms4.6/13,Ms7 4.3/11
ISC 12 18:43:30.2±0.7,31.°14N±0.°03×103.°69E±0.°05,h17km±4km,
n53,σ1.9 09/58,mb4.0/23,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**165**	Pg	**Pg**	**18 43 35.4**	**-0.2**
CD2				Sg	**Sg**	**18 43 39.7**	**+0.4**
CD2				smax			
	comp=N,64μm,1.0s						
LZH	**Lanzhou**	**4.94**	**1**	*e*Pn	**Pn**	**18 44 45.8**	**+2.2**
LZH				Sg	**Sg**	**18 46 08.0**	**-0.7**
LZH				smax			
	comp=N,170nm,0.8s						
LZH				smax			
	comp=E,220nm,1.2s						
LZH				LR	LR		
	comp=N,550nm,6.0s						
LZH				LR	LR		
	comp=Z,710nm,8.8s						
ENH	**Enshi**	**5.07**	**98**	*e*Pn	**Pn**	**18 44 43.4**	**-2.1**
KMI	**Kunming**	**6.05**	**188**	Pn	**Pn**	**18 44 59.8**	**+0.8**
KMI				Sn	**Sn**	**18 46 08.3**	**+0.5**
KMI				smax			
	comp=N,150nm,1.6s						
KMI				smax			
	comp=E,120nm,1.4s						
KMI				LR	LR		
	comp=N,2μm,6.9s						
KMI				LR	LR		
	comp=E,3μm,7.2s						
KMI				LR	LR		
	comp=Z,1μm,6.9s						
GTA	**Gaotai**	**8.84**	**340**	*e*P	**Pn**	**18 45 40.3**	**+3.2**
GTA				pP		18 45 44.7	
GTA				sP		18 45 48.1	
GTA				S	**Sn**	**18 47 14.4**	**-1.9**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,240nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,13.8s						
GTA				LR	LR		
	comp=E,1μm,12.9s						
GTA				LR	LR		
	comp=Z,2μm,14.1s						
WHN	**Wuhan**	**9.19**	**91**	P	**Pn**	**18 45 34.7**	**-7.3**
WHN				S	**Sn**	**18 47 20.6**	**-4.4**
WHN				LR	LR		
	comp=N,5μm,7.5s						
WHN				LR	LR		
	comp=E,2μm,8.6s						
WHN				LR	LR		
	comp=Z,3μm,8.1s						
LSA	**Lhasa**	**10.92**	**266**	P	**Pn**	**18 46 06.7**	**+1.0**
LSA				LR	LR		
	comp=E,1μm,12.6s						
LSA				LR	LR		
	comp=Z,2μm,11.3s						
LSA	**Lhasa**	**10.92**	**266**	*e*P	**Pn**	**18 46 08.0**	**+2.3**
	comp=Z,5.0nm,0.7s						
SHL	**Shillong**	**11.78**	**245**	*e*P	**Pn**	**18 46 18.0**	**+0.5**
NJ2	**Nanjing**	**12.96**	**82**	*e*P	**Pn**	**18 46 43.9**	**+10**
NJ2				pP		18 46 46.9	
NJ2				sP		18 46 49.5	
NJ2				PP		18 46 53.2	
NJ2				S	**Sn**	**18 49 10.6**	**+13**
NJ2				sS		18 49 16.2	
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.6s						
NJ2				LR	LR		
	comp=N,550nm,8.0s						
NJ2				LR	LR		
	comp=E,830nm,11.8s						
NJ2				LR	LR		
	comp=Z,520nm,13.6s						
CMAR	**Chiang Mai Arr**	**13.34**	**200**	Pn	**Pn**	**18 46 38.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=168,slow=22,SNR=3.7						
GUN	**Gumba**	**15.83**	**263**	*e*P	**Pn**	**18 47 10.8**	**-1.5**
	comp=Z,57nm,1.2s						
PKI	**Pulchoki**	**16.33**	**262**	*e*P	**Pn**	**18 47 16.1**	**-2.6**
	comp=Z,25nm,0.8s						
PKIN	**Phulchoki**	**16.34**	**262**	*e*P	**Pn**	**18 47 17.5**	**-1.3**
	comp=Z,30nm,0.8s						
KKN	**Kakani**	**16.38**	**263**	*e*P	**Pn**	**18 47 17.6**	**-1.7**
	comp=Z,42nm,0.9s						
DMN	**Daman**	**16.57**	**262**	*e*P	**Pn**	**18 47 20.2**	**-1.6**
	comp=Z,44nm,1.0s						
SONM	**Songino Array**	**16.80**	**6**	Pn	**Pn**	**18 47 23.7**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=191,slow=15,SNR=5.6						
ULN	**Ulaanbaatar**	**16.90**	**8**	*e*P	**Pn**	**18 47 25.6**	**-0.3**
	comp=Z,4.1nm,0.8s						
WMQ	**Urumqi**	**17.89**	**320**	P	**Pn**	**18 47 40.1**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,230nm,3.5s						
WMQ				LR	LR		
	comp=N,910nm,7.0s						
WMQ				LR	LR		
	comp=E,920nm,7.0s						
WMQ				LR	LR		
	comp=Z,390nm,15.0s						
KSRS	**Korea Array**	**20.96**	**66**	P	**P**	**18 48 11.7**	**-0.7**
	comp=Z,5.2nm,0.6s,baz=267,slow=11,SNR=28						
CN2	**Changchun**	**21.33**	**48**	*e*P	**P**	**18 48 17.2**	**+1.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
HIA	**Hailar**	**21.79**	**29**	*e*P	**P**	**18 48 22.0**	**+0.9**
DDI	**Dehra Dun**	**22.04**	**275**	*ex*	x	18 48 28.0	
MK31	**Makanchi Array**	**22.72**	**320**	*e*P	**P**	**18 48 32.2**	**+1.2**
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**18 48 31.7**	**+0.6**
	comp=Z,8.4nm,1.1s,mb4.1,baz=125,slow=10,SNR=21						
KSH	**Kashi**	**24.04**	**298**	P	**P**	**18 48 48.6**	**+4.3**
KSH				pmax	pmax		
	comp=Z,230nm,5.9s						
UCH	**Uchtor**	**25.76**	**304**	*e*P	**P**	**18 49 02.8**	**+2.8**
	comp=Z,9.4nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**25.89**	**304**	P	**P**	**18 49 02.2**	**+1.1**
	comp=Z,0.7nm,0.3s,mb3.7,baz=219,slow=17,SNR=5.4						
AAK	**Ala-Archa**	**25.89**	**304**	P	**P**	**18 49 02.2**	**+1.1**
AML	**Almayashu**	**26.32**	**303**	*e*P	**P**	**18 49 06.8**	**+1.8**
	comp=Z,13nm,1.4s,mb4.3						
ZAA0	**Zalesovo Array**	**26.54**	**335**	*e*P	**P**	**18 49 07.3**	**+0.4**
ZALV	**Zalesovo Beam**	**26.54**	**335**	P	**P**	**18 49 06.8**	**0.0**
	comp=Z,4.9nm,1.0s,mb4.0,baz=134,slow=8.4,SNR=14						
KURK	**Kurchatov**	**27.00**	**324**	P	**P**	**18 49 11.3**	**+0.2**
	comp=Z,3.8nm,1.0s,mb3.9,baz=128,slow=9.7,SNR=21						
BVAR	**Borovoye Array**	**32.54**	**322**	P	**P**	**18 50 00.2**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=105,slow=11,SNR=3.0						
ABKAR	**Akbulak array**	**37.38**	**312**	*e*P	**P**	**18 50 42.0**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.4						
TIXI	**Tiksi**	**42.79**	**11**	*e*P	**P**	**18 51 26.0**	**-0.5**
	comp=Z,0.9nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	**56.41**	**300**	P	**P**	**18 53 10.3**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=70,slow=6.6,SNR=4.2						
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**18 53 13.8**	**-1.2**
	comp=Z,5.3nm,1.0s,mb4.5,baz=77,slow=8.4,SNR=3.2						
AKASG	**Malin Array Be**	**57.10**	**313**	P	**P**	**18 53 14.3**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.9,baz=81,slow=6.0,SNR=4.3						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**18 53 16.9**	**-0.1**
	comp=Z,3.9nm,1.1s,mb4.4,baz=243,slow=4.5,SNR=2.7						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**18 53 27.3**	**+0.3**
	comp=Z,13nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**18 53 26.8**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.5,baz=338,slow=8.0,SNR=21						
WB2	**Warramunga Arr**	**58.71**	**146**	*e*P	**P**	**18 53 27.2**	**+0.1**
ASAR	**Alice Springs**	**61.71**	**148**	P	**P**	**18 53 47.5**	**-0.1**
	comp=Z,0.7nm,0.5s,mb4.0,baz=334,slow=6.7,SNR=21						
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**18 54 05.1**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.6,baz=156,slow=12,SNR=2.6						
NOA				LR	LR	19 23 11.0	
	comp=Z,42nm,18.4s,baz=95,slow=37						
NOA	**NORSAR Array B**	**64.44**

BRG	**Berggiesshubel**	**66.39**	**316**	*e*P	**P**	**18 54 22.2 +4.2**
	comp=Z,8.7nm,1.6s,mb4.5					
GERES	**GERESS Array B**	**67.27**	**314**	P	**P**	**18 54 23.8 +0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=52,slow=5.4,SNR=4.7					
STKA	**Stephens Creek**	**72.23**	**147**	*e*P	**P**	**18 54 54.1 -0.3**
	comp=Z,1.4nm,0.4s,mb4.2					
STKA	**Stephens Creek**	**72.23**	**147**	P	**P**	**18 54 53.6 -0.8**
	comp=Z,1.3nm,0.4s,mb4.2,baz=341,slow=4.7,SNR=12					
CMSA	**Cobar Meteorol**	**73.97**	**144**	*e*P	**P**	**18 55 05.4 +0.8**
YKA	**Yellowknife Ar**	**81.76**	**17**	P	**P**	**18 55 47.1 -0.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=330,slow=5.1,SNR=6.4					
TORD	**Torodi Ar. Bea**	**93.28**	**287**	P	**P**	**18 56 45.1 +0.5**
	comp=Z,0.8nm,1.0s,mb4.1,baz=62,slow=3.4,SNR=3.9					

*IDC **12** 18:44:06.5±0.7,31°.26N×103°.80E, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.1/26, mbtmp4.1/18, ML3.7/2, MS3.9/10, Ms1 3.9/10, ms1mx3.4/46, Error ellipse: s-maj=26.8km s-min=14.1km az=57.0*
*ISCJB **12** 18:44:08.8±1.2,31°.24N±0°.06×103°.81E±0°.08, h27km±9km, mb4.2/22, MS3.6/2, Error ellipse: s-maj=12.6km s-min=9.7km az=154.2*
*MOS **12** 18:44:08.4±0.8,31°.22N×103°.85E, h27km, mb4.7/6, Error ellipse: s-maj=19.5km s-min=10.3km az=111.2*
*BJI **12** 18:44:10.4,31°.21N×104°.21E, h15km, mB5.0/1, mb4.6/6, ML4.7/1, Ms4.5/2, Ms7 4.2/1*
*NEIC **12** 18:44:11.4±2.2,31°.28N×103°.79E, h31km±16km, mb4.5/6, Error ellipse: s-maj=9.7km s-min=6.2km az=68.0*

ISC 12 18:44:09.7±1.1, 31°.24N±0°.05×103°.77E±0°.08, h18km±7km, n47, σ0°78/47, mb4.2/22, MS3.6/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**181**	Pg	**Pg**	**18 44 16.3**	**-0.4**
LZH	**Lanzhou**	**4.83**	**1**	*e*Pg	**Pg**	**18 45 42.6**	**+0.4**
LZH				Sg	Sg	18 46 46.7	+1.9
LZH				smax			
	comp=N,280nm,1.0s						
LZH				smax			
	comp=E,1μm,1.3s						
LZH				LR	LR		
	comp=E,4μm,7.5s						
LZH				LR	LR		
	comp=Z,4μm,8.8s						
ENH	**Enshi**	**5.02**	**100**	*e*P	**Pn**	**18 45 24.8**	**+0.7**
WHN	**Wuhan**	**9.12**	**92**	P	**Pn**	**18 46 13.6**	**-6.8**
WHN				S	**Sn**	**18 47 57.9**	**-4.8**
WHN				LR	LR		
	comp=N,7μm,11.9s						
WHN				LR	LR		
	comp=E,5μm,6.3s						
WHN				LR	LR		
	comp=Z,4μm,7.7s						
CM31	**Chiang Mai Arr**	**13.46**	**200**	*e*P	**Pn**	**18 47 22.8**	**+3.0**
	comp=Z,5.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.46**	**200**	Pn	**Pn**	**18 47 18.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=15,slow=9.0,SNR=5.3						
SONM	**Songino Array**	**16.69**	**6**	Pn	**Pn**	**18 48 01.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=2.0						
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**18 48 48.7**	**-1.9**
	comp=Z,2.1nm,0.6s,baz=258,slow=11,SNR=3.3						
KSRS				LR	LR	18 57 33.1	
	comp=Z,225nm,18.3s,MS3.6,baz=16,slow=39						
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**18 48 48.7**	**-1.9**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS				MLR	MLR		
	comp=Z,225nm,18.3s,MS3.6						
CN2	**Changchun**	**21.21**	**48**	*e*P	**P**	**18 48 56.3**	**+2.0**
CN2				pmax	pmax		
	comp=Z,50nm,1.1s,mb4.8						
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**18 49 10.6**	**+0.5**
	comp=Z,1.5nm,0.4s,mb3.8,baz=122,slow=11,SNR=12						
ZAA0	**Zalesovo Array**	**26.47**	**334**	*e*P	**P**	**18 49 45.7**	**+0.1**
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**18 49 46.1**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.0,baz=133,slow=8.7,SNR=6.8						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**18 49 50.3**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.0,baz=131,slow=9.1,SNR=6.9						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**18 50 39.2**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=131,slow=7.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**53.37**	**154**	LR	LR	19 18 47.9	
	comp=Z,50nm,21.1s,MS3.5,baz=208,slow=39						
BRTR	**Keskin Array B**	**56.42**	**299**	P	**P**	**18 53 49.6**	**-0.5**
	comp=Z,1.1nm,0.9s,mb3.9,baz=113,slow=8.2,SNR=4.6						
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**18 53 53.1**	**-0.8**
	comp=Z,3.6nm,0.8s,mb4.5,baz=86,slow=7.7,SNR=7.3						
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**18 53 55.6**	**-0.3**
	comp=Z,3.6nm,0.9s,mb4.4,baz=100,slow=7.9,SNR=4.5						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**18 54 06.5**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**18 54 06.5**	**-0.1**
	comp=Z,5.2nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**18 54 06.7**	**0.0**
	comp=Z,9.2nm,0.8s,mb4.9,baz=339,slow=8.0,SNR=20						
WB2	**Warramunga Arr**	**58.75**	**146**	*e*P	**P**	**18 54 06.9**	**+0.2**
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**18 54 27.3**	**+0.1**
	comp=Z,2.6nm,0.8s,mb4.4,baz=342,slow=6.7,SNR=9.1						
NB2	**NORSAR Subarra**	**64.39**	**327**	P	**P**	**18 54 43.2**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**18 54 42.8**	**-1.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=72,slow=6.8,SNR=4.7						
GERES	**GERESS Array B**	**67.24**	**314**	P	**P**	**18 55 02.3**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.7,baz=72,slow=4.6,SNR=5.3						
KMBO	**Kilima Mbogo**	**70.66**	**256**	P	**P**	**18 55 25.1**	**+0.5**
	comp=Z,1.5nm,1.0s,mb3.9,baz=33,slow=20,SNR=3.6						
CDF	**Champ du Feu**	**71.32**	**316**	*e*P	**P**	**18 55 27.3**	**-0.8**
	comp=Z,5.0nm,1.0s,mb4.1						
CDF	**Champ du Feu**	**71.32**	**316**	*e*P	**P**	**18 55 27.3**	**-0.8**
CDF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CDF	**Champ du Feu**	**71.32**	**316**	*e*P	**P**	**18 55 27.3**	**-0.8**
	comp=Z,2.5nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**72.28**	**147**	P	**P**	**18 55 33.6**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.1,baz=357,slow=11,SNR=3.7						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 55 38.8**	**+0.9**
	comp=Z,7.2nm,0.7s,mb4.4						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 55 38.8**	**+0.9**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 55 38.8**	**+0.9**
	comp=Z,3.6nm,0.7s,mb4.4						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**18 55 38.7**	**+0.8**
	comp=Z,9.4nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**18 55 38.7**	**+0.8**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**18 55 38.7**	**+0.8**
	comp=Z,4.7nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**74.20**	**315**	*e*P	**P**	**18 55 45.1**	**-0.2**
	comp=Z,11nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**74.20**	**315**	*e*P	**P**	**18 55 45.1**	**-0.2**
SMF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**74.20**	**315**	*e*P	**P**	**18 55 45.1**	**-0.2**
	comp=Z,5.6nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**75.35**	**315**	*e*P	**P**	**18 55 52.0**	**0.0**
	comp=Z,5.5nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**75.35**	**315**	*e*P	**P**	**18 55 52.0**	**0.0**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**75.35**	**315**	*e*P	**P**	**18 55 52.0**	**0.0**
	comp=Z,2.8nm,0.9s,mb4.2						
CAF	**Calviac**	**76.12**	**314**	*e*P	**P**	**18 55 57.0**	**+0.6**
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**18 56 26.3**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=329,slow=5.2,SNR=12						
TORD	**Torodi Ar. Bea**	**93.32**	**287**	P	**P**	**18 57 24.1**	**+0.1**
	comp=Z,0.5nm,0.7s,mb4.1,baz=48,slow=4.8,SNR=4.8						

MAN 12 18:45:02,12°.95N×123°.71E, h50km, mb4.6, ML3.5, MS3.4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.77**	**34**	*e*P	Pn	18 45 19.4	+2.7
PVCP				*e*S	Sn	18 45 30.3	+2.9
AUQP	**San Andres**	**1.07**	**290**	*e*P	Pn	18 45 21.1	+0.4
AUQP				*e*S	Sn	18 45 36.9	+2.4
GQP	**Guinayangan**	**1.55**	**308**	*e*P	Pn	18 45 28.5	+1.3
GQP				*e*S	Sn	18 45 51.8	+5.7
RCP	**Roxas**	**1.67**	**214**	*e*P	Pn	18 45 30.4	+1.4
BOAC	**Boac**	**1.88**	**286**	*e*P	Pn	18 45 34.1	+2.4
BOAC				*e*S	Sn	18 45 50.8	-3.6

*ISCJB **12** 18:46:09.3±0.3,32°.32N±0°.03×105°.03E±0°.04, h10km, mb4.3/30, Error ellipse: s-maj=5.5km s-min=4.5km az=18.4*
*IDC **12** 18:46:09.0±0.7,32°.39N×105°.16E, h0km, mb4.2/16, mb1 4.3/19, mb1mx4.2/30, mbtmp4.2/19, ML3.2/2, Error ellipse: s-maj=28.2km s-min=13.4km az=54.0*
*NEIC **12** 18:46:10.4±0.3,32°.45N×105°.27E, h10km, mb4.6/8, Error ellipse: s-maj=10.5km s-min=5.7km az=66.0*
*MOS **12** 18:46:11.9±0.9,32°.36N×105°.18E, h36km, mb4.7/7, Error ellipse: s-maj=15.4km s-min=7.7km az=115.8*
*BJI **12** 18:46:13.3,32°.43N×104°.97E, h22km, mB4.8/10, mb4.4/16, ML4.6/8, Ms4.5/11, Ms7 4.4/12*

ISC 12 18:46:11.6±0.3, 32°.32N±0°.03×104°.94E±0°.05, h10km, n78, σ1°25/85, mb4.3/30, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.73**	**216**	Pg	**Pg**	**18 46 44.7**	**-0.2**
CD2				Sg	**Sg**	**18 47 08.2**	**+0.8**
CD2				smax			
	comp=N,32μm,0.7s						
LZH	**Lanzhou**	**3.86**	**347**	Pn	**Pn**	**18 47 13.5**	**+2.4**
LZH				Pg	**Pg**	**18 47 23.0**	**-2.6**
LZH				Sn	**Sn**	**18 47 57.7**	**+1.2**
LZH				Sg	**Sg**	**18 48 10.4**	**-5.3**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,3μm,0.7s						
LZH				LR	LR		
	comp=E,6μm,7.0s						
LZH				LR	LR		
	comp=Z,6μm,9.0s						
HHC	**Hu-ho-hao-te**	**10.03**	**30**	*e*P	**Pn**	**18 48 37.6**	**+1.9**
HHC				pP		18 48 44.7	
HHC				sP		18 48 49.5	
HHC				S	**Sn**	**18 50 29.5**	**+1.2**
HHC				sS		18 50 40.0	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.6s						
HHC				LR	LR		
	comp=N,560nm,4.6s						
HHC				LR	LR		
	comp=E,840nm,4.7s						
HHC				LR	LR		
	comp=Z,890nm,5.9s						
TIA	**Tai'an**	**10.80**	**66**	*e*P	**Pn**	**18 48 55.7**	**+9.5**
NJ2	**Nanjing**	**11.79**	**88**	*e*P	**Pn**	**18 49 01.8**	**+2.0**
NJ2				pP		18 49 08.8	
NJ2				sP		18 49 13.0	
NJ2				S	**Sn**	**18 51 12.6**	**+1.1**
NJ2				sS		18 51 23.2	
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,80nm,3.6s						
NJ2				LR	LR		
	comp=N,860nm,8.5s						
NJ2				LR	LR		
	comp=E,910nm,11.0s						
NJ2				LR	LR		
	comp=Z,5μm,10.3s						
BJI	**Beijing**	**11.89**	**47**	P	**Pn**	**18 48 53.8**	**-7.4**
QIZ	**Qiongzhong**	**13.95**	**160**	P	**Pn**	**18 49 32.2**	**+2.7**
QIZ				S	**Sn**	**18 52 09.2**	**+4.7**
QIZ				LR	LR		
	comp=N,740nm,6.9s						
QIZ				LR	LR		
	comp=Z,930nm,6.9s						
CMAR	**Chiang Mai Arr**	**14.83**	**203**	Pn	**Pn**	**18 49 42.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=7.5,slow=14,SNR=3.7						
SONM	**Songino Array**	**15.53**	**4**	Pn	**Pn**	**18 49 48.1**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=2.7						
SONM				Lg		18 54 22.8	
	comp=Z,0.4nm,0.3s,baz=209,slow=24,SNR=5.4						
SONM	**Songino Array**	**15.53**	**4**	P	**Pn**	**18 49 48.1**	**-2.5**
SONM				Lg		18 54 22.8	
ULN	**Ulaanbaatar**	**15.61**	**5**	P	**Pn**	**18 49 47.1**	**-4.4**
ZAK	**Zakamensk**	**18.08**	**357**	*e*P	**Pn**	**18 50 26.4**	**+3.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KSRS	**Korea Array**	**19.52**	**68**	P	**Pn**	**18 50 36.0**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=250,slow=10,SNR=2.5						
CN2	**Changchun**	**19.74**	**49**	*e*P	**Pn**	**18 50 47.2**	**+4.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
IRK	**Irkutsk**	**19.91**	**359**	*e*P	**Pn**	**18 50 42.8**	**-2.1**
IRK				pmax	pmax		
	comp=Z,45nm,1.5s						
HIA	**Hailar**	**20.23**	**29**	*e*P	**P**	**18 50 47.2**	**+0.4**
MK31	**Makanchi Array**	**22.56**	**316**	*e*P	**P**	**18 51 12.0**	**+0.2**
MKAR	**Makanchi Array**	**22.56**	**316**	P	**P**	**18 51 11.7**	**-0.1**
	comp=Z,11nm,0.8s,mb4.3,baz=110,slow=11,SNR=12						
KSH	**Kashi**	**24.46**	**295**	P	**P**	**18 51 34.6**	**+3.9**
KSH				pmax	pmax		
	comp=Z,140nm,4.6s						
TKM2	**Tokmak 2**	**25.42**	**303**	P	**P**	**18 51 40.7**	**+1.4**
	SNR=12						
TKM2	**Tokmak 2**	**25.42**	**303**	*e*P	**P**	**18 51 40.3**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
TKM2	**Tokmak 2**	**25.42**	**303**	*e*P	**P**	**18 51 40.3**	**+1.0**
	comp=Z,9.7nm,0.7s,mb4.4						
KZA	**Kyzart**	**25.47**	**301**	P	**P**	**18 51 42.0**	**+2.3**
	SNR=10						
KBK	**Karagaybulak**	**25.82**	**302**	P	**P**	**18 51 45.0**	**+2.0**
	SNR=14						
ZAA0	**Zalesovo Array**	**25.96**	**332**	*e*P	**P**	**18 51 43.1**	**-0.9**
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**18 51 43.5**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.0,baz=132,slow=10.0,SNR=6.5						
UCH	**Uchtor**	**26.04**	**301**	P	**P**	**18 51 46.1**	**+1.2**
	SNR=17						
UCH	**Uchtor**	**26.04**	**301**	*e*P	**P**	**18 51 46.8**	**+1.8**
	comp=Z,21nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**26.14**	**302**	P	**P**	**18 51 46.8**	**+1.0**
	comp=Z,3.2nm,0.8s,mb3.9,baz=161,slow=4.8,SNR=5.9						
AAK	**Ala-Archa**	**26.14**	**302**	P	**P**	**18 51 46.8**	**+1.0**
BOD	**Bodaibo**	**26.24**	**11**	*e*P	**P**	**18 51 48.4**	**+1.9**
USP	**Ospenovka**	**26.28**	**303**	P	**P**	**18 51 48.2**	**+1.0**
	SNR=15						
AML	**Almayashu**	**26.61**	**301**	P	**P**	**18 51 52.1**	**+2.0**
	SNR=9.0						
AML	**Almayashu**	**26.61**	**301**	*e*P	**P**	**18 51 51.6**	**+1.5**
	comp=Z,9.9nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**26.66**	**302**	P	**P**	**18 51 52.1**	**+1.6**
	SNR=5.8						
KURK	**Kurchatov**	**26.72**	**321**	P	**P**	**18 51 50.6**	**-0.4**
	comp=Z,7.7nm,0.9s,mb4.2,baz=129,slow=9.2,SNR=12						
KURK	**Kurchatov**	**26.72**	**321**	*e*P	**P**	**18 51 50.7**	**-0.3**
NVS	**Novosibirsk**	**27.24**	**332**	*e*P	**P**	**18 51 54.3**	**-1.3**
BVAR	**Borovoye Array**	**32.30**	**320**	P	**P**	**18 52 40.6**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.2,baz=116,slow=9.5,SNR=13						
ABKAR	**Akbulak array**	**37.41**	**310**	*e*P	**P**	**18 53 24.6**	**-0.1**
	comp=Z,5.2nm,0.7s,mb4.5						
AKTK	**Aktyubinsk**	**38.84**	**312**	P	**P**	**18 53 37.1**	**+0.4**
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**18 53 37.1**	**+0.4**
	comp=Z,3.5nm,0.6s,mb4.2,baz=120,slow=15,SNR=10						
ARU	**Arti**	**39.92**	**321**	P	**P**	**18 53 45.8**	**+0.2**
ARU	**Arti**	**39.92**	**321**	*e*P	**P**	**18 53 45.4**	**-0.2**
	comp=Z,15nm,0.9s,mb4.7						
ZEI	**Tsey**	**48.56**	**301**	*e*P	**P**	**18 54 54.8**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KIV	**Kislovodsk**	**49.25**	**302**	*e*P	**P**	**18 55 00.0**	**-0.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=Z,98nm,17.0s						
BILL	**Bilibino**	**49.77**	**26**	*e*P	**P**	**18 55 07.8**	**+3.9**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
OBN	**Obninsk**	**52.06**	**317**	*e*P	**P**	**18 55 20.8**	**-0.5**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
KNA	**Kununurra**	**52.97**	**151**	*e*P	**P**	**18 55 27.3**	**-1.1**
	comp=Z,12nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.92**	**155**	*e*P	**P**	**18 55 36.0**	**+0.6**
	comp=Z,5.4nm,1.1s,mb4.4						
ARCES	**ARCESS Array B**	**56.45**	**335**	P	**P**	**18 55 51.3**	**-1.8**
	comp=Z,4.1nm,0.9s,mb4.5,baz=74,slow=8.9,SNR=4.9						
BRTR	**Keskin Array B**	**56.77**	**299**	P	**P**	**18 55 55.9**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.2,baz=94,slow=6.5,SNR=9.7						
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**18 55 55.4**	**-1.5**
	comp=Z,5.3nm,0.8s,mb4.6,baz=120,slow=11,SNR=8.0						
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**18 55 56.7**	**-1.1**
	comp=Z,1.4nm,0.4s,mb4.3,baz=67,slow=6.5,SNR=5.0						
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**18 55 56.7**	**-1.1**
IDID	**Didziasalis**	**57.62**	**318**	*e*P	**P**	**18 56 01.6**	**0.0**
IIGN	**Ignalina**	**57.90**	**319**	*e*P	**P**	**18 56 03.6**	**0.0**
ISAL	**Salakas**	**57.91**	**319**	*e*P	**P**	**18 56 03.3**	**-0.3**
WRAB	**Tennant Creek**	**59.10**	**147**	*e*P	**P**	**18 56 11.1**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**59.10**	**147**	*e*P	**P**	**18 56 11.1**	**-1.1**
	comp=Z,6.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**59.10**	**147**	P	**P**	**18 56 10.4**	**-1.9**
	comp=Z,4.1nm,0.8s,mb4.5,baz=327,slow=9.1,SNR=8.9						
WRA	**Warramunga Arr**	**59.10**	**147**	P	**P**	**18 56 10.3**	**-1.9**
WB2	**Warramunga Arr**	**59.11**	**147**	*e*P	**P**	**18 56 10.8**	**-1.5**
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**18 56 31.8**	**-1.3**
	comp=Z,1.9nm,0.7s,mb4.3,baz=331,slow=5.8,SNR=7.6						
NB2	**NORSAR Subarra**	**64.02**	**327**	P	**P**	**18 56 43.4**	**-1.7**
	comp=Z,2.4nm,0.7s,mb4.3,baz=71,slow=6.5						
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**18 56 43.5**	**-1.5**
	comp=Z,2.8nm,0.7s,mb4.4,baz=71,slow=6.5,SNR=7.5						
GERES	**GERESS Array B**	**67.21**	**314**	P	**P**	**18 57 05.5**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=100,slow=4.5,SNR=4.5						
CDF	**Champ du Feu**	**71.24**	**316**	*e*P	**P**	**18 57 29.8**	**-1.1**
STKA	**Stephens Creek**	**72.65**	**148**	P	**P**	**18 57 39.5**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=13,slow=5.6,SNR=4.7						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 40.9**	**-0.2**
	comp=Z,9.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 40.9**	**-0.2**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 40.9**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 41.6**	**+0.5**
	comp=Z,6.7nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 41.6**	**+0.5**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**18 57 41.6**	**+0.5**
	comp=Z,3.3nm,0.6s,mb4.4						
SMF	**Signal de Mont**	**74.14**	**315**	*e*P	**P**	**18 57 46.8**	**-1.3**
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**18 58 21.1**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=328,slow=4.9,SNR=5.0						
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**18 58 21.1**	**-1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						

*ISCJB **12** 18:51:41.4±0.5,32°.27N±0°.05×105°.34E±0°.07, h10km, mb3.6/8, Error ellipse: s-maj=9.0km s-min=6.7km az=42.0*
*NEIC **12** 18:51:42.5±2.0,32°.34N×105°.32E, h4km±14km, mb4.4/1, Error ellipse: s-maj=14.1km s-min=10.3km az=220.0*
*IDC **12** 18:51:42.3±0.9,32°.38N×105°.30E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.5/27, mbtmp3.5/9, ML3.4/1, Error ellipse: s-maj=35.3km s-min=19.2km az=54.0*
*BJI **12** 18:51:44.4,32°.49N×105°.11E, h19km, ML3.9/5, Ms4.0/3, Ms7 3.8/4*

ISC 12 18:51:43.4±0.5, 32°.30N±0°.05×105°.30E±0°.06, h10km, n15, σ0°87/18, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.91**	**224**	Pg	**Pg**	**18 52 19.1**	**-0.9**
CD2				Sg	**Sg**	**18 52 45.2**	**+0.4**
CD2				smax			
	comp=N,11μm,0.6s						
LZH	**Lanzhou**	**3.96**	**343**	*e*Pn	**Pn**	**18 52 44.3**	**+0.1**
LZH				Pg	**Pg**	**18 52 53.9**	**-5.4**
LZH				Sg	**Sg**	**18 53 42.2**	**-8.5**
LZH				smax			
	comp=N,310nm,0.8s						
LZH				smax			
	comp=E,300nm,0.6s						
LZH				LR	LR		
	comp=N,2μm,7.8s						
LZH				LR	LR		
	comp=Z,2μm,8.8s						
ENH	**Enshi**	**4.12**	**118**	*e*Pg	**Pg**	**18 53 01.5**	**-0.7**
LSA	**Lhasa**	**12.41**	**262**	P	**Pn**	**18 54 38.0**	**-2.1**
LSA				LR	LR		
	comp=E,1μm,11.8s						
LSA				LR	LR		
	comp=Z,2μm,10.0s						
LSA	**Lhasa**	**12.41**	**262**	P	**Pn**	**18 54 40.9**	**+0.8**
	comp=Z,1.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.93**	**204**	Pn	**Pn**	**18 55 14.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=3.3						
KSRS	**Korea Array**	**19.25**	**68**	P	**Pn**	**18 56 09.0**	**+0.3**
	comp=Z,0.1

GTA S **Sn** **18 59 12.8 +17**
GTA sS 18 59 19.1
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,180nm,5.1s
GTA LR LR
comp=N,570nm,8.7s
GTA LR LR
comp=E,300nm,7.5s
GTA LR LR
comp=Z,460nm,7.2s
WHN Wuhan 8.31 99 P **Pn** **18 57 20.7 -1.0**
WHN S **Sn** **18 58 52.3 -3.4**
WHN LR LR
comp=Z,2μm,6.7s
HHC Hu-ho-hao-te 10.24 30 *e*P **Pn** **18 57 53.2 +5.1**
HHC pP 18 58 00.3
HHC S **Sn** **18 59 49.0 +6.0**
HHC sS 18 59 59.6
HHC SS 19 00 02.7
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,240nm,4.7s
HHC LR LR
comp=N,520nm,5.0s
HHC LR LR
comp=E,650nm,6.0s
HHC LR LR
comp=Z,600nm,6.4s
NJ2 Nanjing 11.91 87 *e*P Px 18 58 22.4
NJ2 pP 18 58 29.4
NJ2 PP 18 58 32.7
NJ2 sP 18 58 36.1
NJ2 pmax pmax
comp=Z,20nm,1.1s
LSA Lhasa 11.98 262 *e*P **Pn** **18 58 12.8 +0.9**
LSA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 11.98 262 *e*P **Pn** **18 58 12.8 +0.8**
comp=Z,4.5nm,0.6s
BJI Beijing 12.10 46 P **Pn** **18 58 12.1 -1.4**
BJI pmax pmax
comp=Z,14nm,0.8s
QIZ Qiongzhong 13.82 160 P **Pn** **18 58 34.2 -3.0**
QIZ S **Sn** **19 01 05.3 -5.5**
QIZ pmax pmax
comp=Z,420nm,4.7s
QIZ LR LR
comp=N,400nm,5.0s
QIZ LR LR
comp=Z,460nm,9.5s
CM31 Chiang Mai Arr 14.62 203 *e*P **Pn** **18 58 49.2 +1.2**
comp=Z,4.2nm,0.5s
CMAR Chiang Mai Arr 14.62 203 Pn **Pn** **18 58 44.9 -3.1**
comp=Z,0.1nm,0.3s,baz=6.1,slow=8.6,SNR=7.5
SONM Songino Array 15.72 4 Pn **Pn** **18 59 01.5 -0.9**
comp=Z,0.1nm,0.3s,baz=154,slow=27,SNR=1.8
ULN Ulaanbaatar 15.79 6 *e*P **Pn** **18 59 01.0 -2.4**
ULN pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 15.79 6 *e*P **Pn** **18 59 01.0 -2.4**
comp=Z,4.0nm,0.7s
GUN Gumba 16.93 260 *e*P **Pn** **18 59 15.7 -2.4**
comp=Z,20nm,0.4s
PKI Pulchoki 17.43 260 *e*P **Pn** **18 59 21.9 -2.5**
comp=Z,33nm,0.6s
PKIN Phulchoki 17.44 260 *e*P **Pn** **18 59 22.4 -2.1**
comp=Z,23nm,0.6s
KKN Kakani 17.47 261 *e*P **Pn** **18 59 22.3 -2.5**
comp=Z,30nm,0.7s
DMN Daman 17.67 260 *e*P **Pn** **18 59 24.3 -3.1**
comp=Z,33nm,0.9s
WMQ Urumqi 17.79 316 *e*P **Pn** **18 59 30.1 +1.4**
WMQ LR LR
comp=N,74nm,18.0s
WMQ LR LR
comp=E,91nm,17.0s
ZAK Zakamensk 18.25 357 *e*P **Pn** **18 59 34.8 +0.4**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 19.54 358 *e*P Px 19 00 02.4
TLY pmax pmax
comp=Z,4.0nm,0.9s
KSRS Korea Array 19.69 68 P **Pn** **18 59 49.8 -2.0**
comp=Z,0.2nm,0.3s,baz=245,slow=10,SNR=4.1
MK31 Makanchi Array 22.61 317 *e*P **P** **19 00 21.9 +0.1**
MKAR Makanchi Array 22.61 317 P **P** **19 00 21.4 -0.4**
comp=Z,2.4nm,0.4s,mb4.0,baz=111,slow=12,SNR=21
MDJ Mudanjiang 22.97 50 P **P** **19 00 23.7 -2.0**
MDJ S **S** **19 04 33.3 -2.7**
MDJ sS sS 19 04 38.3 -2.6
MDJ ScP ScP 19 07 52.7 -0.7
MDJ PcS PcS 19 07 53.9 -0.5
MDJ pmax pmax
comp=Z,5.0nm,1.7s,mb3.7
MDJ pmax pmax
comp=Z,310nm,4.9s
MDJ LR LR
comp=N,61nm,24.3s,MS3.3
MDJ LR LR
comp=E,120nm,28.5s,MS3.3
MDJ LR LR
comp=Z,82nm,24.9s,MS3.1
KSH Kashi 24.44 296 *e*P **P** **19 00 43.1 +3.2**
KSH *e*pP 19 00 47.2
KSH *e*sP sP 19 00 50.3 +6.1
KSH *e*PP 19 01 19.3
KSH *e*PcP PcP 19 04 20.2 +1.5
KSH *e*S **S** **19 05 01.4 +1.5**
KSH *e*sS sS 19 05 09.2 +4.3
KSH *e*SS 19 05 59.3
KSH *e*ScP ScP 19 07 57.3 -0.2
KSH *e*PcS PcS 19 07 59.1 +0.6
KSH *e*ScS ScS 19 11 44.2 -0.8
KSH pmax pmax
comp=Z,88nm,5.5s
KSH LR LR
comp=N,130nm,5.7s
KSH LR LR
comp=E,200nm,6.2s
TKM2 Tokmak 2 25.42 303 P **P** **19 00 50.1 +1.3**
SNR=8.0
TKM2 Tokmak 2 25.42 303 *e*P **P** **19 00 49.8 +1.0**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
TKM2 Tokmak 2 25.42 303 *e*P **P** **19 00 49.8 +1.0**
comp=Z,6.0nm,0.8s,mb4.2
KZA Kyzart 25.46 301 P **P** **19 00 51.0 +1.8**
SNR=13
KBK Karagaybulak 25.82 302 P **P** **19 00 53.6 +1.3**
SNR=10
UCH Uchtor 26.03 301 P **P** **19 00 55.9 +1.5**
SNR=9.8
UCH Uchtor 26.03 301 *e*P **P** **19 00 55.4 +1.1**
comp=Z,9.1nm,1.1s,mb4.2
ZAA0 Zalesovo Array 26.06 333 *e*P **P** **19 00 54.5 0.0**
ZALV Zalesovo Beam 26.06 333 P **P** **19 00 54.8 +0.3**
comp=Z,15nm,0.5s,mb4.8,baz=136,slow=9.8,SNR=61
AAK Ala-Archa 26.14 302 P **P** **19 00 55.5 +0.2**
comp=Z,1.9nm,0.6s,mb3.8,baz=98,slow=4.6,SNR=7.2
AAK Ala-Archa 26.14 302⇑*i*P **P** **19 00 56.1 +0.8**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
AAK Ala-Archa 26.14 302 *e*P **P** **19 00 57.0 +1.7**
comp=Z,2.1nm,0.8s,mb3.7
USP Ospenovka 26.29 304 P **P** **19 00 57.7 +1.0**
SNR=7.5
AML Almayashu 26.60 301 P **P** **19 01 01.2 +1.7**
SNR=5.3
AML Almayashu 26.60 301 *e*P **P** **19 01 00.7 +1.2**
comp=Z,9.6nm,1.1s,mb4.2
KURK Kurchatov 26.79 322 P **P** **19 01 01.3 +0.2**
comp=Z,3.3nm,0.7s,mb4.0,baz=127,slow=9.1,SNR=32
KURK PcP PcP 19 04 23.0 -0.8
comp=Z,1.5nm,0.7s,baz=118,slow=1.8,SNR=7.1
KURK Kurchatov 26.79 322 P **P** **19 01 01.3 +0.2**
KURK 19 04 23.0
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KURK Kurchatov 26.79 322 *e*P **P** **19 01 01.1 0.0**
comp=Z,11nm,1.2s,mb4.3
KBL Kabul 29.88 284 *e*P **P** **19 01 29.2 +0.3**
KBL pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KBL Kabul 29.88 284 *e*P **P** **19 01 29.2 +0.3**
comp=Z,5.0nm,0.8s,mb4.3
BVAR Borovoye Array 32.36 320 P **P** **19 01 50.9 +0.4**
comp=Z,1.3nm,0.5s,mb4.0,baz=120,slow=9.5,SNR=13
BVAR PcP PcP 19 04 36.5 -1.5
comp=Z,1.1nm,0.6s,baz=129,slow=4.6,SNR=6.1
BRVK Borovoye 32.43 320⇑*e*P **P** **19 01 51.4 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
BRVK Borovoye 32.43 320 *e*P **P** **19 01 49.6 -1.6**
comp=Z,2.2nm,0.7s,mb4.1
ABKAR Akbulak array 37.44 311 *e*P **P** **19 02 34.6 +0.2**
comp=Z,3.2nm,0.4s,mb4.5
AKTK Aktyubinsk 38.88 312 P **P** **19 02 46.6 +0.2**
AKTO Aktyubinsk 38.88 312 P **P** **19 02 46.6 +0.2**
baz=102,slow=13
SVE Sverdlovsk 39.03 323⇑*e*P **P** **19 02 48.9 +1.2**
SVE pmax pmax
comp=Z,16nm,1.1s,mb4.7
KAPI Kappang 39.60 156 P **P** **19 02 52.6 -0.2**
comp=Z,6.4nm,0.3s,mb4.9,baz=169,slow=18,SNR=5.3
KAPI Kappang 39.60 156 P **P** **19 02 52.6 -0.2**
ARU Arti 39.99 321*d i*P **P** **19 02 55.8 +0.2**
ARU *e* 19 04 25.8
ARU S **S** **19 09 00.8 -0.1**
ARU pmax pmax
comp=Z,25nm,1.2s,mb4.8
ARU Arti 39.99 321 *e*P **P** **19 02 55.8 +0.2**
comp=Z,9.7nm,0.7s,mb4.6
TIXI Tiksi 41.62 11 *e*P **P** **19 03 08.8 -0.1**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
TIXI Tiksi 41.62 11 *e*P **P** **19 03 08.8 -0.1**
comp=Z,3.6nm,0.5s,mb4.3
PETK Petropavlovsk- 43.03 45 P **P** **19 03 21.8 +1.2**
comp=Z,1.4nm,0.6s,mb3.9,baz=256,slow=5.8,SNR=4.9
ZEI Tsey 48.55 301 *e*P **P** **19 04 03.4 -1.0**
ZEI pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KIV Kislovodsk 49.25 303 *e*P **P** **19 04 10.3 +0.5**
KIV pmax pmax
comp=Z,12nm,1.1s,mb4.8
KIV Kislovodsk 49.25 303 *e*P **P** **19 04 10.5 +0.7**
comp=Z,8.4nm,0.9s,mb4.8
VRHR Novokhopersk 49.29 312 *e*P **P** **19 04 07.9 -2.0**
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.4s
BILL Bilibino 49.98 26⇑*e*P **P** **19 04 15.5 +0.5**
BILL *e**PP pP 19 04 25.5 +7.4
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
KLMR Klimovskoe 50.56 325 *e*P **P** **19 04 19.0 -0.4**
KLMR pmax pmax
comp=Z,32nm,1.4s,mb5.1
VSR Storozhevoye 50.82 312 *e*P **P** **19 04 21.3 -0.3**
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
OBN Obninsk 52.12 317⇑*i*P **P** **19 04 29.9 -1.3**
OBN *e**PP pP 19 04 41.1 +6.7
OBN *e*SS SS 19 15 32.0 0.0
OBN pmax pmax
comp=Z,30nm,2.5s,mb4.8
KNA Kununurra 52.87 151 *e*P **P** **19 04 37.6 +0.4**
comp=Z,14nm,0.6s,mb5.0
FITZ Fitzroy Crossi 53.80 155 *e*P **P** **19 04 44.0 0.0**
comp=Z,5.7nm,0.6s,mb4.7
FITZ Fitzroy Crossi 53.80 155 P **P** **19 04 43.7 -0.3**
comp=Z,4.6nm,0.8s,mb4.4,baz=348,slow=5.9,SNR=14
JOF Joensuu 54.47 327 *e*P **P** **19 04 48.0 -0.4**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
JOF Joensuu 54.47 327 *e*p **P** **19 04 48.0 -0.4**
comp=Z,5.4nm,0.6s,mb4.7
MBWA Marble Bar 54.89 163 *e*P **P** **19 04 52.5 +0.6**
KEV Kevo 56.03 336 *e*P **P** **19 04 58.3 -1.3**
KEV pmax pmax
comp=Z,13nm,0.9s,mb5.0
KEV Kevo 56.03 336 *e*p **P** **19 04 58.3 -1.3**
comp=Z,13nm,0.9s,mb5.0
ARCES ARCESS Array B 56.56 336 P **P** **19 05 02.1 -1.2**
comp=Z,4.2nm,0.7s,mb4.6,baz=85,slow=7.2,SNR=17
BR131 Keskin Array S 56.76 299 *e*P **P** **19 05 04.7 -0.5**
comp=Z,0.7nm,0.5s,mb4.0
BRTR Keskin Array B 56.76 299 P **P** **19 05 04.8 -0.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=106,slow=6.8,SNR=12
KAF Kangasniemi 56.85 327 *e*P **P** **19 05 04.7 -0.8**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 56.85 327 *e*p **P** **19 05 04.7 -0.8**
comp=Z,4.8nm,0.6s,mb4.7
FINES FINESS Array B 57.04 326 P **P** **19 05 06.8 -0.1**
comp=Z,4.8nm,0.5s,mb4.8,baz=94,slow=7.7,SNR=27
AKASG Malin Array Be 57.12 313 P **P** **19 05 06.9 -0.7**
comp=Z,2.3nm,0.4s,mb4.6,baz=67,slow=7.3,SNR=9.3
WRAB Tennant Creek 59.01 147 *e*P **P** **19 05 21.7 +0.6**
WRAB pmax pmax
comp=Z,14nm,1.0s,mb5.0
WRAB Tennant Creek 59.01 147 *e*P **P** **19 05 21.7 +0.5**
comp=Z,14nm,1.0s,mb4.9
WRA Warramunga Arr 59.01 147 P **P** **19 05 21.7 +0.6**
comp=Z,5.8nm,0.4s,mb4.9,baz=339,slow=7.7,SNR=75
WB2 Warramunga Arr 59.02 147 *e*P **P** **19 05 21.5 +0.3**
HARR Harsova 59.44 306⇑P **P** **19 05 24.2 +0.3**
HARR Harsova 59.44 306⇑*i*P **P** **19 05 24.1 +0.2**
VRI Vrincioaia 59.92 308⇓P **P** **19 05 27.8 +0.6**
VRI Vrincioaia 59.92 308⇓*i*P **P** **19 05 27.8 +0.6**
PLOR Plostina 59.98 308⇓P **P** **19 05 27.8 +0.2**
PLOR Plostina 59.98 308⇓*i*P **P** **19 05 27.8 +0.2**
BURAR Bucovina Array 60.42 310⇑P **P** **19 05 30.4 -0.3**
BURAR Bucovina Array 60.42 310⇑*i*P **P** **19 05 30.4 -0.3**
MLR Muntele Rosu 60.55 308⇑P **P** **19 05 31.8 +0.2**
MLR Muntele Rosu 60.55 308⇑*i*P **P** **19 05 31.8 +0.2**
VOIR 61.17 308⇓P **P** **19 05 36.2 +0.4**
VOIR 61.17 308⇓*i*P **P** **19 05 36.2 +0.4**
KOLS Kolonicke sedl 61.92 312 *e*P **P** **19 05 40.9 +0.1**
KOLS Kolonicke sedl 61.92 312 *e*P **P** **19 05 40.9 +0.1**
ASAR Alice Springs 62.08 150 P **P** **19 05 42.8 +0.8**
comp=Z,1.9nm,0.4s,mb4.6,baz=335,slow=6.7,SNR=32
NIE Niedzica 62.99 313 *e*P **P** **19 05 48.9 +1.0**
NB2 NORSAR Subarra 64.11 327 P **P** **19 05 54.0 -1.1**
comp=Z,3.1nm,0.7s,mb4.5,baz=72,slow=6.9
NOA NORSAR Array B 64.11 327 P **P** **19 05 54.1 -1.0**
comp=Z,2.8nm,0.8s,mb4.4,baz=72,slow=6.6,SNR=6.9
VYHS Vyhne 64.22 313 *e*P **P** **19 05 56.5 +0.5**
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
VYHS Vyhne 64.22 313 *e*P **P** **19 05 56.5 +0.5**
comp=Z,1.7nm,0.9s,mb4.1
VYHS Vyhne 64.22 313 *e*P **P** **19 05 56.5 +0.5**
MORC Moravsky Berou 64.57 314⇓P **P** **19 05 58.7 +0.4**
MORC Moravsky Berou 64.57 314⇓*i*P **P** **19 05 58.7 +0.4**
PKSM Moragy 65.14 310⇑P **P** **19 06 02.1 0.0**
PKSM Moragy 65.14 310⇑*i*P **P** **19 06 02.1 0.0**
CTAO Charters Tower 65.36 137 P **P** **19 06 04.3 +0.5**
BRG Berggiesshubel 66.33 316 *e*P **P** **19 06 10.4 +0.7**
comp=Z,1.8nm,0.8s,mb4.1
BRG Berggiesshubel 66.33 316 *e*P **P** **19 06 10.4 +0.7**
BRG pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
CLL Collm 66.71 317 *e*P **P** **19 06 12.0 -0.1**
CLL pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
CLL MLR MLR
comp=Z,100nm,19.9s,MS4.0
CLL Collm 66.71 317 *e*P **P** **19 06 12.0 -0.1**
comp=Z,4.0nm,1.3s,mb4.3
CLL *e* pP 19 06 15.0 -0.4
CLL LR LR
comp=Z,100nm,19.9s,MS4.0
CLL Collm 66.71 317 *e*P **P** **19 06 12.0 -0.1**
comp=Z,4.0nm,1.3s,mb4.3
CLL *e*pP pP 19 06 15.0 -0.4
GERES GERESS Array B 67.25 314 P **P** **19 06 15.7 +0.1**
comp=Z,1.8nm,0.9s,mb4.1,baz=72,slow=5.7,SNR=12
COLA College 68.23 26 *e*P **P** **19 06 22.5 +1.0**
COLA pmax pmax
comp=Z,16nm,1.1s,mb5.0
COLA College 68.23 26 *e*P **P** **19 06 22.5 +1.0**
comp=Z,16nm,1.1s,mb5.0
PMR Palmer 69.34 29 *e*P **P** **19 06 28.6 +0.1**
QLP Quilpie 69.44 143 *e*P **P** **19 06 30.5 +1.0**
KDAK Kodiak Island 69.64 34 *i* P **P** **19 06 31.2 +0.8**
INK Inuvik 70.98 20 *e*P **P** **19 06 38.5 +0.1**
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 70.98 20 *e*P **P** **19 06 38.5 +0.1**
comp=Z,7.3nm,0.9s,mb4.6
CDF Champ du Feu 71.29 316⇑*i*P **P** **19 06 40.4 -0.3**
comp=Z,7.0nm,0.8s,mb4.3
CDF Champ du Feu 71.29 316⇑*i*P **P** **19 06 40.4 -0.3**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 71.29 316⇑*i*P **P** **19 06 40.4 -0.3**
comp=Z,3.5nm,0.8s,mb4.3
KMBO Kilima Mbogo 71.73 257 P **P** **19 06 43.7 -0.1**
comp=Z,2.4nm,0.7s,mb4.2,baz=48,slow=11,SNR=9.0
KMBO Kilima Mbogo 71.73 257 *e*P **P** **19 06 44.2 +0.3**
KMBO pmax pmax
comp=Z,5.0nm,1.1s
KMBO Kilima Mbogo 71.73 257 *e*P **P** **19 06 44.2 +0.4**
comp=Z,5.0nm,1.1s,mb4.4
STKA Stephens Creek 72.56 148 *e*P **P** **19 06 48.6 +0.3**
comp=Z,1.4nm,0.4s,mb4.2
STKA Stephens Creek 72.56 148 P **P** **19 06 48.6 +0.3**
comp=Z,1.8nm,0.5s,mb4.3,baz=348,slow=5.8,SNR=9.5
STKA Stephens Creek 72.56 148 *e*P **P** **19 06 48.5 +0.2**
RES Resolute Bay 72.65 5 *e*P **P** **19 06 49.3 +0.9**
LPG La Plagne 72.98 313⇑*i*P **P** **19 06 51.4 +0.6**
comp=Z,23nm,0.6s,mb5.0
SMF Signal de Mont 74.18 315⇑*i*P **P** **19 06 57.4 -0.5**
comp=Z,12nm,0.9s,mb4.5
CMSA Cobar Meteorol 74.21 144 *e*P **P** **19 06 59.3 +1.2**
TCF Toulx Ste Croi 75.33 316 *e*P **P** **19 07 04.4 -0.2**
comp=Z,15nm,1.1s,mb4.5
CAF Calviac 76.13 314⇑*i*P **P** **19 07 09.4 +0.3**
comp=Z,6.1nm,0.8s,mb4.3
YKA Yellowknife Ar 80.52 17 P **P** **19 07 33.5 +0.5**
comp=Z,3.3nm,0.6s,mb4.4,baz=328,slow=5.0,SNR=39
YKA Yellowknife Ar 80.52 17 P **P** **19 07 33.5 +0.5**
ESDC Sonseca Array 82.76 313 P **P** **19 07 44.2 -1.2**
comp=Z,1.0nm,0.7s,mb4.0,baz=36,slow=6.4,SNR=4.1
MVO Moncorvo 83.75 315 *e*P **P** **19 07 51.0 +0.6**
comp=Z,11nm,1.5s,mb4.8
MTE Manteigas 84.52 315 *e*P **P** **19 07 55.3 +0.9**
comp=Z,18nm,1.4s,mb5.0
FFC Flin Flon 90.46 15 *i* P **P** **19 08 23.8 +1.0**
TORD Torodi Ar. Bea 93.89 288 P **P** **19 08 38.4 -1.0**
comp=Z,0.5nm,0.7s,mb4.1,baz=58,slow=3.1,SNR=6.7

ISCJB ***12*** *19:05:23.7±0.9,31°.6N±0°.1×104°.6E±0°.2,h10km,mb3.5/5, Error ellipse: s-maj=31.0km s-min=11.8km az=154.6*
IDC ***12*** *19:05:24.0±1.2,31°.67N×104°.71E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.4/26,mbtmp3.4/5,ML3.6/1, Error ellipse: s-maj=74.6km s-min=20.3km az=56.0*
NEIC ***12*** *19:05:25.6±0.7,31°.62N×104°.59E,h10km,mb4.3/1, Error ellipse: s-maj=24.0km s-min=11.7km az=66.0*
ISC 12 19:05:25.8±0.9,31.7N±0°.1×104.6E±0°.2,h10km,n7, σ0:51/8,mb3.5/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**5.49**	**160**	Pg	**Pg**	**19 07 11.9**	**+0.9**
GYA				Sg	**Sn**	**19 08 00.7**	**+10**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,100nm,0.7s						
GYA				LR	LR		
	comp=N,280nm,6.8s						
GYA				LR	LR		
	comp=E,270nm,8.4s						
GYA				LR	LR		
	comp=Z,280nm,8.1s						
CMAR	**Chiang Mai Arr**	**14.08**	**202**	Pn	**Pn**	**19 08 45.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=11,slow=7.1,SNR=2.9						
MKAR	**Makanchi Array**	**22.83**	**318**	P	**P**	**19 10 28.9**	**+0.1**
	comp=Z,0.1nm,0.3s,mb2.8,baz=116,slow=9.8,SNR=3.0						
KURK	**Kurchatov**	**27.05**	**322**	P	**P**	**19 11 08.7**	**+0.5**
	comp=Z,0.1nm,0.4s,mb2.7,baz=126,slow=8.3,SNR=2.5						
WRAB	**Tennant Creek**	**58.71**	**147**	*e*P	**P**	**19 15 23.3**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**58.71**	**147**	P	**P**	**19 15 23.4**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.1,baz=340,slow=7.9,SNR=27						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**19 15 44.2**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.7,baz=336,slow=6.7,SNR=9.7						

IDC ***12*** *19:05:57.6±0.8,31°.53N×104°.15E,h0km,mb3.8/14, mb1 4.0/15,mb1mx3.8/28,mbtmp3.8/15,Error ellipse: s-maj=32.5km s-min=16.2km az=51.0*
ISCJB ***12*** *19:06:00.1±3.0,31°.50N±0°.08×104°.18E±0°.09, h31km±23km,mb3.9/16,Error ellipse: s-maj=15.0km s-min=9.9km az=43.4*
NEIC ***12*** *19:06:02.9±1.0,31°.52N×104°.17E,h36km±11km,mb4.1/3, Error ellipse: s-maj=12.3km s-min=7.3km az=221.0*
ISC 12 19:06:00.1±1.9,31°.59N±0°.06×104°.22E±0°.09,h13km±12km, n28,σ0:87/29,mb3.9/16,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.50**	**356**	*e*Pg	**Pg**	**19 07 26.8**	**+0.5**
LZH				Sg	**Sg**	**19 08 23.1**	**-1.4**
LZH				smax			
	comp=N,59nm,0.9s						
LZH				smax			
	comp=E,63nm,0.8s						
ENH	**Enshi**	**4.71**	**105**	P	**Pn**	**19 07 11.9**	**+1.1**
GTA	**Gaotai**	**8.59**	**337**	*e*P	**Pn**	**19 08 05.6**	**+1.5**
GTA				pP		19 08 09.7	
GTA				sP		19 08 13.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	**Lhasa**	**11.41**	**264**	*e*Pn	**Pn**	**19 08 43.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**13.91**	**201**	Pn	**Pn**	**19 09 15.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=6.2,slow=9.3,SNR=3.3						
KSRS	**Korea Array**	**20.37**	**67**	P	**P**	**19 10 36.5**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=259,slow=8.9,SNR=4.5						
MK31	**Makanchi Array**	**22.68**	**318**	*e*P	**P**	**19 11 02.1**	**+1.0**
MKAR	**Makanchi Array**	**22.68**	**318**	P	**P**	**19 11 01.9**	**+0.8**
	comp=Z,2.5nm,0.8s,mb3.7,baz=122,slow=12,SNR=13						
UCH	**Uchtor**	**25.90**	**303**	*e*P	**P**	**19 11 33.9**	**+2.2**
	comp=Z,6.4nm,1.0s,mb4.1						
ZAA0	**Zalesovo Array**	**26.33**	**334**	*e*P	**P**	**19 11 34.9**	**-0.5**
ZALV	**Zalesovo Beam**	**26.33**	**334**	P	**P**	**19 11 35.8**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.0,baz=131,slow=8.1,SNR=16						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**19 11 40.6**	**-0.2**
	comp=Z,1.9nm,0.9s,mb3.6,baz=126,slow=9.0,SNR=11						
KURK	**Kurchatov**	**26.92**	**323**	*e*P	**P**	**19 11 39.6**	**-1.1**
BVAR	**Borovoye Array**	**32.48**	**321**	P	**P**	**19 12 30.4**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.6,baz=116,slow=12,SNR=5.1						
ABKAR	**Akbulak array**	**37.43**	**311**	*e*P	**P**	**19 13 13.2**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.7						
AKTK	**Aktyubinsk**	**38.88**	**313**	P	**P**	**19 13 24.8**	**-0.2**
AKTO	**Aktyubinsk**	**38.88**	**313**	P	**P**	**19 13 24.8**	**-0.2**
	comp=Z,1.4nm,0.8s,mb3.8,baz=95,slow=11,SNR=2.9						
BRTR	**Keskin Array B**	**56.59**	**299**	P	**P**	**19 15 41.2**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.5,baz=99,slow=7.6,SNR=2.4						
ARCES	**ARCESS Array B**	**56.86**	**336**	P	**P**	**19 15 43.7**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.4,baz=76,slow=7.7,SNR=3.3						
ARCES	**ARCESS Array B**	**56.86**	**336**	P	**P**	**19 15 43.7**	**-0.3**
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**19 15 44.4**	**-1.7**
	comp=Z,1.0nm,0.4s,mb4.2,baz=68,slow=7.6,SNR=3.8						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**19 15 46.4**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.2,baz=117,slow=8.3,SNR=3.4						
WRAB	**Tennant Creek**	**58.82**	**146**	*e*P	**P**	**19 15 58.0**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**58.82**	**147**	P	**P**	**19 15 58.2**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=338,slow=7.6,SNR=7.8						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**19 16 18.7**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.6,baz=343,slow=7.5,SNR=4.4						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**19 16 53.8**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=58,slow=5.0,SNR=4.6						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**19 16 53.8**	**-0.4**
YKA	**Yellowknife Ar**	**81.20**	**17**	P	**P**	**19 18 14.8**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=5.3,SNR=6.4						

IDC ***12*** *19:06:52.4±1.0,31°.49N×103°.95E,h0km,mb3.6/7,*

mb1 3.7/7, mb1mx3.5/26, mbtmp3.7/7, Error ellipse: s-maj=144.4km s-min=17.1km az=54.0
*ISCJB **12** 19:06:54.0±1.8, 31°.1N±0°.2×103°.4E±0°.2, h22km±14km, mb3.6/7, Error ellipse: s-maj=43.7km s-min=15.0km az=43.3*
*NEIC **12** 19:06:54.1±0.7, 31°.14N×103°.35E, h10km, Error ellipse: s-maj=30.6km s-min=10.3km az=220.0*
ISC 12 19:06:53.8±2.5, 31°.1N±0°.2×103°.3E±0°.2, h6km±17km, n10, σ0s76/11, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**122**	Pg	**Pg**	**19 07 01.2**	**-0.8**
CD2				Sg	**Sg**	**19 07 08.2**	**+0.7**
CD2				smax			
	comp=N,6μm,0.5s						
ENH	**Enshi**	**5.36**	**98**	Pn	**Pn**	**19 08 14.4**	**+0.1**
	comp=N,140nm,0.8s						
MKAR	**Makanchi Array**	**22.53**	**320**	P	**P**	**19 11 54.0**	**-0.2**
	comp=N,1.9nm,0.9s,mb3.5,baz=120,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**19 12 30.5**	**-0.4**
	comp=N,0.8nm,0.6s,mb3.4,baz=139,slow=9.6,SNR=2.7						
KURK	**Kurchatov**	**26.83**	**324**	P	**P**	**19 12 33.5**	**-1.2**
	comp=N,2.2nm,0.8s,mb3.7,baz=128,slow=9.5,SNR=9.8						
BVAR	**Borovoye Array**	**32.36**	**322**	P	**P**	**19 13 23.9**	**+0.1**
	comp=N,0.4nm,0.7s,mb3.4,baz=118,slow=12,SNR=2.9						
AKTK	**Aktyubinsk**	**38.64**	**313**	P	**P**	**19 14 18.9**	**+1.2**
AKTO	**Aktyubinsk**	**38.64**	**313**	P	**P**	**19 14 18.9**	**+1.2**
	comp=N,0.7nm,0.5s,mb3.7,baz=45,slow=2.9,SNR=3.1						
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**19 16 52.7**	**-0.8**
	comp=N,0.7nm,0.8s,mb3.7,baz=342,slow=7.8,SNR=3.4						
ASAR	**Alice Springs**	**61.86**	**148**	P	**P**	**19 17 14.0**	**+0.1**
	comp=N,0.5nm,1.0s,mb3.6,baz=335,slow=6.2,SNR=2.8						

IDC 12 19:10:04.1±1.1, 31°.70N×104°.60E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.5/26, mbtmp3.5/7, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.4/33, Error ellipse: s-maj=37.2km s-min=22.1km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.14**	**203**	Pn	Pn	19 13 26.0	+0.3
	0.1nm,0.3s,baz=21,slow=14,SNR=2.3						
SONM	**Songino Array**	**16.18**	**4**	LR	LR	19 21 26.8	
	comp=Z,207nm,18.6s,baz=256,slow=42						
KSRS	**Korea Array**	**20.03**	**67**	P	P	19 14 36.8	-1.7
	0.2nm,0.3s,baz=262,slow=9.8,SNR=6.2						
MKAR	**Makanchi Array**	**22.82**	**318**	P	P	19 15 07.0	-1.4
	0.6nm,0.7s,baz=122,slow=11,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.38**	**333**	P	P	19 15 42.2	+0.4
	0.3nm,0.4s,baz=134,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**58.74**	**147**	P	P	19 20 03.9	0.0
	0.5nm,0.5s,baz=339,slow=7.9,SNR=6.4						
ASAR	**Alice Springs**	**61.78**	**149**	P	P	19 20 24.5	-0.1
	0.4nm,0.7s,baz=334,slow=6.3,SNR=3.5						
YKA	**Yellowknife Ar**	**81.00**	**17**	P	P	19 22 21.5	+1.2
	0.1nm,0.5s,baz=329,slow=4.5,SNR=3.5						

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*NEIC **12** 19:14:46.8±4.5, 32°.38N×105°.02E, h4km±29km, mb4.3/1, Error ellipse: s-maj=14.6km s-min=7.4km az=53.0*
*IDC **12** 19:14:46.1±0.9, 32°.33N×104°.95E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.7/28, mbtmp3.7/11, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.4/32, Error ellipse: s-maj=47.9km s-min=17.5km az=59.0*
ISC 12 19:14:48.6±2.0, 32°.35N±0°.08×105°.0E±0°.1, h15km±12km, n18, σ0s52/21, mb3.7/11, MS3.0/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.78**	**217**	Pg	Px	19 15 05.2	
CD2				Sg	**Sn**	**19 15 32.9**	**-8.3**
CD2				smax			
	comp=N,2μm,0.7s						
LZH	**Lanzhou**	**3.85**	**346**	*e*Pn	**Pn**	**19 15 52.0**	**+4.8**
LZH				Pg	**Pg**	**19 16 01.6**	**-0.7**
LZH				Sn	**Sn**	**19 16 41.8**	**+10**
LZH				Sg	**Sg**	**19 16 53.0**	**+0.8**
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,110nm,0.7s						
ENH	**Enshi**	**4.36**	**117**	Pn	**Pn**	**19 15 53.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.87**	**203**	Pn	**Pn**	**19 18 18.7**	**+0.4**
	comp=E,0.0nm,0.3s,baz=8.0,slow=9.1,SNR=2.9						
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**19 19 48.0**	**-0.2**
	comp=E,0.5nm,0.6s,mb3.1,baz=116,slow=12,SNR=5.5						
MKAR				LR	LR	19 28 14.9	
	comp=E,64nm,19.1s,MS3.1,baz=197,slow=36						
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**19 19 48.0**	**-0.2**
MKAR				LR	LR	19 28 14.9	
ZAA0	**Zalesovo Array**	**25.96**	**332**	*e*P	**P**	**19 20 20.5**	**+0.3**
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**19 20 20.0**	**-0.2**
	comp=E,3.2nm,0.5s,mb4.1,baz=139,slow=10.0,SNR=14						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**19 20 27.2**	**-0.1**
	comp=E,0.4nm,0.6s,mb3.1,baz=123,slow=11,SNR=3.6						
KURK				LR	LR	19 32 25.1	
	comp=E,50nm,22.0s,MS3.0,baz=155,slow=40						
AKTK	**Aktyubinsk**	**38.86**	**312**	P	**P**	**19 22 12.8**	**-0.2**
AKTO	**Aktyubinsk**	**38.86**	**312**	P	**P**	**19 22 12.8**	**-0.2**
	comp=E,0.7nm,0.6s,mb3.6,baz=124,slow=13,SNR=4.7						
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**19 24 29.2**	**+0.1**
	comp=E,2.7nm,0.9s,mb4.3,baz=71,slow=7.8,SNR=6.1						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**19 24 32.6**	**-0.4**
	comp=E,3.2nm,1.0s,mb4.3,baz=108,slow=4.2,SNR=4.8						
WRAB	**Tennant Creek**	**59.09**	**147**	*e*P	**P**	**19 24 49.3**	**+1.0**
	comp=E,1.9nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**	**19 24 48.1**	**-0.3**
	comp=E,0.5nm,0.6s,mb3.7,baz=339,slow=7.4,SNR=6.1						
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**19 25 09.3**	**+0.1**
	comp=E,0.2nm,0.4s,mb3.6,baz=336,slow=6.8,SNR=4.5						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**19 25 20.4**	**-0.7**
	comp=E,0.7nm,0.8s,mb3.7,baz=70,slow=6.9,SNR=2.4						
YKA	**Yellowknife Ar**	**80.28**	**17**	P	**P**	**19 26 59.2**	**+0.9**
	comp=E,0.1nm,0.4s,mb3.1,baz=329,slow=5.0,SNR=3.5						

IDC 12 19:17:42.6±1.2, 31°.69N×104°.45E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.3/27, mbtmp3.5/5, Error ellipse: s-maj=194.8km s-min=19.9km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.74**	**318**	P	P	19 22 45.7	-0.3
	1.4nm,1.1s,baz=119,slow=9.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**26.33**	**333**	P	P	19 23 20.0	+0.1
	0.3nm,0.4s,baz=123,slow=7.1,SNR=3.4						
KURK	**Kurchatov**	**26.96**	**322**	P	P	19 23 25.9	+0.2
	1.1nm,0.9s,baz=132,slow=9.5,SNR=6.1						
WRA	**Warramunga Arr**	**58.80**	**147**	P	P	19 27 43.3	+0.6
	0.2nm,0.6s,baz=338,slow=7.6,SNR=5.1						
ASAR	**Alice Springs**	**61.84**	**149**	P	P	19 28 03.1	-0.4
	0.5nm,1.0s,baz=339,slow=7.1,SNR=3.5						

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*IDC **12** 19:22:48.4±1.0, 31°.28N×103°.78E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.5/28, Error ellipse: s-maj=56.5km s-min=18.5km az=61.0*
*NEIC **12** 19:22:49.6±4.6, 31°.24N×103°.74E, h7km±30km, mb4.6/1, Error ellipse: s-maj=14.1km s-min=8.4km az=53.0*
*BJI **12** 19:22:53.9, 31°.28N×103°.66E, h12km, ML3.5/10, Ms7 3.4/1*
ISC 12 19:22:51.1±1.6, 31°.36N±0°.07×103°.9E±0°.1, h15km±11km, n16, σ0s95/17, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**197**	Pg	**Pg**	**19 23 01.4**	**+1.0**
CD2				Sg	**Sg**	**19 23 06.8**	**+0.1**
CD2				smax			
	comp=N,6μm,0.6s						
LZH	**Lanzhou**	**4.71**	**359**	*e*Pg	Px	19 24 38.5	
LZH				Sg	**Sg**	**19 25 26.7**	**+4.3**
LZH				smax			
	comp=N,36nm,0.6s						
LZH				smax			
	comp=E,69nm,0.8s						
ENH	**Enshi**	**4.91**	**101**	*e*Pn	**Pn**	**19 24 05.6**	**+1.2**
GYA	**Guiyang**	**5.45**	**153**	Pg	**Pg**	**19 24 33.6**	**-1.8**
GYA				smax			
	comp=N,60nm,0.7s						
GYA				smax			
	comp=E,70nm,0.7s						
GYA				LR	LR		
	comp=Z,170nm,4.6s						
KMI	**Kunming**	**6.30**	**190**	Pn	**Pn**	**19 24 23.6**	**+0.2**
KMI				Sn	**Sn**	**19 25 38.7**	**+3.6**
KMI				smax			
	comp=N,14nm,1.2s						
KMI				smax			
	comp=E,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**13.61**	**200**	Pn	**Pn**	**19 26 00.6**	**-3.1**
	comp=E,0.1nm,0.3s,baz=16,slow=10,SNR=3.3						
SONM	**Songino Array**	**16.56**	**6**	LR	LR	19 32 56.8	
	comp=E,205nm,18.1s,baz=77,slow=36						
MK31	**Makanchi Array**	**22.68**	**319**	*e*P	**P**	**19 27 52.3**	**+0.5**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**19 27 51.6**	**-0.2**
	comp=E,1.1nm,0.9s,mb3.3,baz=126,slow=11,SNR=7.7						
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**19 28 26.3**	**-0.7**
	comp=E,1.4nm,0.7s,mb3.6,baz=137,slow=8.3,SNR=6.7						
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**19 28 26.3**	**-0.7**
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**19 28 31.4**	**-0.3**
	comp=E,0.3nm,0.3s,mb3.2,baz=124,slow=9.5,SNR=7.7						
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**19 32 48.5**	**-0.2**
	comp=E,5.3nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**19 32 48.4**	**-0.3**
	comp=E,0.6nm,0.4s,mb4.0,baz=338,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**61.79**	**149**	P	**P**	**19 33 09.3**	**0.0**
	comp=E,0.1nm,0.4s,mb3.3,baz=336,slow=6.5,SNR=4.6						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**19 35 07.8**	**+0.4**
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.3,SNR=3.4						

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*IDC **12** 19:24:15.1±4.0, 12°.70N×58°.24E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.4/28, mbtmp3.6/6, MS3.6/1, Ms1 3.6/1, ms1mx2.8/30, Error ellipse: s-maj=133.3km s-min=26.3km az=75.0*
*CSEM **12** 19:24:16.3, 12°.69N×58°.13E, h10km, mb4.0/2, After NEIC*
*NEIC **12** 19:24:16.3±2.8, 12°.69N×58°.13E, h10km, mb4.0/2, Error ellipse: s-maj=92.0km s-min=17.2km az=76.0*
ISC 12 19:24:16.6±2.6, 12°.7N±0°.2×58°.2E±0°.6, h10km, n18, σ0s72/17, mb3.6/8, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**32.77**	**21**	*e*P	**P**	**19 30 51.5**	**+1.7**
	1.3nm,0.9s,mb3.9						
EKS2	**Erkin-Say**	**32.77**	**21**	*e*P	**P**	**19 30 51.5**	**+1.7**
	1.3nm,0.9s,mb3.9						
AKTK	**Aktyubinsk**	**37.63**	**360**	P	**P**	**19 31 31.7**	**+0.2**
AKTK	**Aktyubinsk**	**37.63**	**360**	P	**P**	**19 31 31.7**	**+0.2**
AKTO	**Aktyubinsk**	**37.63**	**360**	P	**P**	**19 31 31.7**	**+0.2**
	0.5nm,0.6s,mb3.4,baz=177,slow=17,SNR=2.9						
MKAR	**Makanchi Array**	**39.58**	**26**	P	**P**	**19 31 48.3**	**+0.3**
	0.2nm,0.6s,mb3.0,baz=226,slow=7.6,SNR=2.8						
KURK	**Kurchatov**	**41.41**	**20**	P	**P**	**19 32 01.7**	**-1.4**
	0.4nm,0.9s,mb3.1,baz=211,slow=7.2,SNR=3.8						
KURK	**Kurchatov**	**41.41**	**20**	P	**P**	**19 32 01.7**	**-1.4**
ZAA0	**Zalesovo Array**	**46.22**	**22**	P	**P**	**19 32 41.2**	**-0.5**
ZAA0	**Zalesovo Array**	**46.22**	**22**	P	**P**	**19 32 41.2**	**-0.5**
ZALV	**Zalesovo Beam**	**46.22**	**22**	P	**P**	**19 32 41.2**	**-0.5**
	0.8nm,0.5s,mb3.9,baz=222,slow=8.0,SNR=4.3						
GERES	**GERESS Array B**	**51.40**	**324**	LR	LR	19 58 11.1	
	comp=Z,64nm,20.0s,baz=262,slow=40						
WRA	**Warramunga Arr**	**81.62**	**113**	P	**P**	**19 36 35.5**	**0.0**
	0.8nm,0.7s,mb3.8,baz=298,slow=4.2,SNR=7.4						
WRA	**Warramunga Arr**	**81.62**	**113**	P	**P**	**19 36 35.5**	**0.0**
WRAB	**Tennant Creek**	**81.63**	**113**	*e*P	**P**	**19 36 35.5**	**0.0**
	1.8nm,0.8s,mb4.0						
WRAB	**Tennant Creek**	**81.63**	**113**	*e*P	**P**	**19 36 35.5**	**0.0**
	1.8nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**82.33**	**116**	P	**P**	**19 36 39.1**	**+0.1**
	0.8nm,0.6s,mb3.8,baz=292,slow=5.1,SNR=16						
ASAR	**Alice Springs**	**82.33**	**116**	P	**P**	**19 36 39.2**	**+0.1**

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*ISCJB **12** 19:29:06.6±0.5, 32°.34N±0°.06×105°.3E±0°.1, h10km, mb3.7/9, Error ellipse: s-maj=15.3km s-min=6.9km az=154.8*
*IDC **12** 19:29:07.1±0.9, 32°.23N×104°.99E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/27, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=42.1km s-min=17.5km az=54.0*
*NEIC **12** 19:29:09.1±2.0, 32°.45N×105°.35E, h11km±14km, mb4.4/1, Error ellipse: s-maj=17.0km s-min=9.6km az=64.0*
*BJI **12** 19:29:10.7, 32°.30N×105°.04E, h12km, mb3.9/1, ML3.7/4, Ms3.4/3, Ms7 3.2/3*
ISC 12 19:29:08.8±0.5, 32°.38N±0°.05×105°.2E±0°.1, h10km, n16, σ0s88/18, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.88**	**343**	*e*Pg	**Pg**	**19 30 23.4**	**+0.3**
LZH				Sg	**Sg**	**19 31 12.1**	**-1.2**
LZH				smax			
	comp=N,280nm,1.0s						
LZH				smax			
	comp=E,230nm,0.9s						
LZH				LR	LR		
	comp=N,500nm,5.2s						
LZH				LR	LR		
	comp=Z,690nm,8.6s						
ENH	**Enshi**	**4.20**	**119**	*e*Pg	**Pg**	**19 30 28.7**	**-0.7**
GYA	**Guiyang**	**6.03**	**168**	Pg	**Pg**	**19 30 56.5**	**-7.8**
GYA				Sn	**Sn**	**19 31 45.7**	**-1.4**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,30nm,0.6s						
GYA				LR	LR		
	comp=N,70nm,4.2s						
GYA				LR	LR		
	comp=E,90nm,4.7s						
GYA				LR	LR		
	comp=Z,80nm,4.9s						
CMAR	**Chiang Mai Arr**	**14.97**	**204**	Pn	**Pn**	**19 32 42.9**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=14,slow=8.1,SNR=3.4						
KSRS	**Korea Array**	**19.27**	**68**	P	**Pn**	**19 33 36.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=263,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**19 34 10.0**	**-0.4**
	comp=Z,0.2nm,0.5s,mb2.8,baz=117,slow=12,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**19 34 42.5**	**+0.7**
	comp=Z,0.6nm,0.6s,mb3.3,baz=135,slow=8.9,SNR=2.9						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**19 34 49.1**	**-0.1**
	comp=Z,0.6nm,0.9s,mb3.1,baz=118,slow=10,SNR=3.9						
KURK	**Kurchatov**	**26.84**	**321**	*e*P	**P**	**19 34 49.3**	**+0.1**
ARCES	**ARCESS Array B**	**56.50**	**335**	P	**P**	**19 38 50.4**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.3,baz=90,slow=9.9,SNR=3.0						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**19 38 54.3**	**-0.4**
	comp=Z,1.1nm,0.7s,mb4.0,baz=68,slow=9.8,SNR=3.5						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	**P**	**19 39 09.0**	**+0.1**
	comp=Z,2.6nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**19 39 08.8**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=328,slow=9.1,SNR=9.1						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**19 39 29.8**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.7,baz=330,slow=6.3,SNR=6.5						
YKA	**Yellowknife Ar**	**80.20**	**18**	P	**P**	**19 41 19.8**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.1,SNR=5.9						
YKA	**Yellowknife Ar**	**80.20**	**18**	P	**P**	**19 41 19.8**	**+0.8**

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*ISCJB **12** 19:32:50.5±0.6, 30°.87N±0°.07×104°.10E±0°.06, h10km, mb3.5/7, Error ellipse: s-maj=10.7km s-min=7.0km az=15.9*
*IDC **12** 19:32:50.3±1.1, 31°.06N×103°.81E, h0km, mb3.3/6, mb1 3.5/7, mb1mx3.3/26, mbtmp3.3/7, ML3.2/1, Error ellipse: s-maj=37.7km s-min=20.6km az=58.0*
*NEIC **12** 19:32:51.8±0.8, 31°.07N×103°.83E, h10km, mb4.3/1, Error ellipse: s-maj=30.3km s-min=12.8km az=68.0*
*BJI **12** 19:32:51.9, 31°.07N×103°.62E, h12km, mb4.2/1, ML3.5/8, Ms3.2/2*
ISC 12 19:32:52.1±0.6, 31°.00N±0°.07×104°.01E±0°.07, h10km, n12, σ1s42/13, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**248**	Pg	**Pg**	**19 32 56.9**	**+0.1**
CD2				Sg	**Sg**	**19 33 01.6**	**+1.6**
CD2				smax			
	comp=N,15μm,0.6s						
GYA	**Guiyang**	**5.09**	**152**	Pg	**Pg**	**19 34 27.7**	**-1.9**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,80nm,0.8s						
GYA				LR	LR		
	comp=N,130nm,5.0s						
GYA				LR	LR		
	comp=E,120nm,5.2s						
GYA				LR	LR		
	comp=E,110nm,5.0s						
KMI	**Kunming**	**5.96**	**191**	Pn	**Pn**	**19 34 18.3**	**-2.1**
KMI				smax			
	comp=N,19nm,1.2s						
KMI				smax			
	comp=E,17nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.30**	**201**	Pn	**Pn**	**19 36 00.9**	**-0.1**
	comp=E,0.0nm,0.3s,baz=15,slow=14,SNR=2.9						
KSRS	**Korea Array**	**20.77**	**65**	P	**P**	**19 37 34.1**	**+0.9**
	comp=E,2.3nm,0.7s,baz=264,slow=11,SNR=6.2						
CN2	**Changchun**	**21.22**	**47**	*e*P	**P**	**19 37 40.2**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**23.01**	**319**	P	**P**	**19 37 56.3**	**-0.7**
	comp=Z,0.1nm,0.4s,mb2.6,baz=126,slow=7.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.78**	**334**	P	**P**	**19 38 30.8**	**-1.3**
	comp=Z,0.2nm,0.3s,mb3.1,baz=134,slow=8.5,SNR=2.1						
KURK	**Kurchatov**	**27.28**	**324**	P	**P**	**19 38 33.4**	**-3.1**
	comp=Z,0.2nm,0.7s,mb2.8,baz=127,slow=8.9,SNR=2.7						
WRAB	**Tennant Creek**	**58.43**	**146**	*e*P	**P**	**19 42 49.1**	**+1.0**
	comp=Z,2.7nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**58.43**	**146**	P	**P**	**19 42 47.9**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=338,slow=7.7,SNR=5.7						
ASAR	**Alice Springs**	**61.44**	**149**	P	**P**	**19 43 10.7**	**+1.9**
	comp=Z,0.2nm,0.5s,mb3.5,baz=333,slow=5.6,SNR=4.2						

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*BJI **12** 19:36:41.2, 31°.42N×104°.73E, h20km, ML3.6/3*
*ISCJB **12** 19:36:43.0±0.7, 31°.72N±0°.08×104°.6E±0°.2, h10km, mb3.5/5, Error ellipse: s-maj=20.0km s-min=11.0km az=175.3*
*IDC **12** 19:36:43.4±1.2, 31°.66N×104°.52E, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/28, mbtmp3.5/7, ML3.8/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/31, Error ellipse: s-maj=36.4km s-min=23.4km az=62.0*
*NEIC **12** 19:36:44.9±0.7, 31°.70N×104°.63E, h10km, mb4.2/1, Error ellipse: s-maj=22.9km s-min=10.8km az=85.0*
ISC 12 19:36:45.1±0.7, 31°.77N±0°.05×104°.5E±0°.2, h10km, n10, σ1s02/10, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.34**	**353**	*e*Pg	**Pg**	**19 38 07.7**	**-0.6**
LZH				Sg	**Sg**	**19 39 03.4**	**-1.1**
LZH				smax			
	comp=N,53nm,0.5s						
LZH				smax			
	comp=E,100nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.16**	**202**	Pn	**Pn**	**19 40 05.6**	**-0.2**
	comp=E,0.1nm,0.3s,baz=15,slow=12,SNR=4.1						
SONM	**Songino Array**	**16.11**	**5**	Pn	**Pn**	**19 40 32.7**	**+1.1**
	comp=E,0.3nm,0.3s,baz=186,slow=14,SNR=3.8						
KSRS	**Korea Array**	**20.09**	**67**	P	**P**	**19 41 19.9**	**+1.2**
	comp=E,2.5nm,0.8s,baz=258,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**19 41 47.3**	**+0.5**
	comp=E,0.2nm,0.3s,mb3.0,baz=116,slow=9.8,SNR=6.5						
TGY	**Tagaytay City**	**23.16**	**136**	LR	LR	19 49 46.2	
	comp=E,9.9nm,21.3s,baz=301,slow=34						
ZALV	**Zalesovo Beam**	**26.27**	**333**	P	**P**	**19 42 22.4**	**+2.0**
	comp=E,0.3nm,0.3s,mb3.3,baz=133,slow=10.0,SNR=3.0						
WRAB	**Tennant Creek**	**58.84**	**147**	P	**P**	**19 46 43.1**	**-0.9**
	comp=E,1.6nm,0.9s,mb4.0						
WRA	**Warramunga Arr**	**58.85**	**147**	P	**P**	**19 46 43.1**	**-0.9**
	comp=E,0.4nm,0.4s,mb3.8,baz=340,slow=7.9,SNR=5.6						
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**19 48 58.7**	**-0.8**
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=4.9,SNR=2.6						

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*ISCJB **12** 19:39:49.9±0.9, 31°.11N±0°.08×104°.0E±0°.1, h10km, mb3.4/7, Error ellipse: s-maj=16.8km s-min=10.8km az=154.0*
*IDC **12** 19:39:49.6±1.4, 31°.01N×104°.09E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.7/1, Error ellipse: s-maj=63.7km s-min=24.9km az=56.0*
*NEIC **12** 19:39:50.2±9.6, 30°.92N×103°.84E, h5km±61km, mb4.2/1, Error ellipse: s-maj=33.2km s-min=13.0km az=223.0*
ISC 12 19:39:51.5±0.8, 31°.08N±0°.08×104°.0E±0°.1, h10km, n13, σ1s11/14, mb3.4/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.84**	**98**	*e*Pn	**Pn**	**19 41 04.9**	**+0.5**
LZH	**Lanzhou**	**4.99**	**359**	*e*Pg	**Pn**	**19 41 03.8**	**-2.7**
LZH				Sg	**Sn**	**19 42 03.8**	**-0.4**
LZH				smax			
	comp=N,200nm,0.9s						
LZH				smax			
	comp=E,260nm,1.0s						
LZH				LR	LR		
	comp=E,600nm,5.2s						
LZH				LR	LR		
	comp=Z,710nm,8.6s						
SONM	**Songino Array**	**16.84**	**6**	Pn	**Pn**	**19 43 48.4**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=2.4						
MKAR	**Makanchi Array**	**22.91**	**319**	P	**P**	**19 44 56.2**	**+0.8**
	comp=Z,0.6nm,1.0s,mb3.0,baz=114,slow=9.6,SNR=3.5						
MKAR	**Makanchi Array**	**22.91**	**319**	P	**P**	**19 44 56.2**	**+0.8**
AML	**Almayashu**	**26.54**	**303**	*e*P	**P**	**19 45 28.0**	**-1.4**
	comp=Z,3.1nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**26.68**	**334**	P	**P**	**

comp=E,0.3nm,0.3s,baz=180,slow=17,SNR=3.2
CN2 Changchun 20.97 48 *e*P **P 19 45 09.6 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 22.69 319 *e*P **P 19 45 28.3 +1.7**
MKAR Makanchi Array 22.69 319 P **P 19 45 28.2 +1.6**
comp=Z,1.5nm,0.7s,mb3.5,baz=124,slow=10,SNR=11
MKAR Makanchi Array 22.69 319 P **P 19 45 28.2 +1.6**
ZAA0 Zalesovo Array 26.41 334 *e*P **P 19 46 02.4 +0.8**
ZALV Zalesovo Beam 26.41 334 P **P 19 46 02.5 +0.8**
comp=Z,1.5nm,0.7s,mb3.7,baz=135,slow=9.2,SNR=6.7
KURK Kurchatov 26.95 323 P **P 19 46 07.3 +0.8**
comp=Z,0.6nm,0.5s,mb3.4,baz=127,slow=9.3,SNR=5.5
KURK Kurchatov 26.95 323 *e*P **P 19 46 07.0 +0.5**
BVAR Borovoye Array 32.50 322 P **P 19 46 54.7 -1.0**
comp=Z,0.2nm,0.3s,mb3.4,baz=148,slow=8.5,SNR=3.0
BRTR Keskin Array B 56.51 299 P **P 19 50 06.3 -1.2**
comp=Z,0.3nm,0.7s,mb3.5,baz=108,slow=4.7,SNR=3.0
ARCES ARCESS Array B 56.95 336 P **P 19 50 08.7 -1.4**
comp=Z,3.4nm,0.8s,mb4.4,baz=87,slow=7.2,SNR=6.4
FINES FINESS Array B 57.27 326 P **P 19 50 12.6 +0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=99,slow=8.6,SNR=5.4
WRAB Tennant Creek 58.77 146 *e*P **P 19 50 22.6 -0.9**
comp=Z,3.1nm,0.6s,mb4.5
WRA Warramunga Arr 58.77 146 P **P 19 50 22.8 -0.7**
comp=Z,2.7nm,0.6s,mb4.4,baz=338,slow=7.6,SNR=22
WB2 Warramunga Arr 58.78 146 *e*P **P 19 50 22.8 -0.8**
ASAR Alice Springs 61.79 149 P **P 19 50 43.9 -0.2**
comp=Z,0.4nm,0.5s,mb3.8,baz=328,slow=6.5,SNR=3.8
NOA NORSAR Array B 64.36 327 P **P 19 51 00.1 -0.7**
comp=Z,0.6nm,0.4s,mb3.9,baz=75,slow=5.1,SNR=3.2
YKA Yellowknife Ar 81.44 17 P **P 19 52 41.9 -0.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=5.2,SNR=5.7

IDC 12 19:46:09.1±1.2,31°.10N×103°.82E,h0km,mb3.3/5, mb1 3.4/6,mb1mx3.3/25,mbtmp3.3/6,ML3.3/1,Error ellipse: s-maj=72.8km s-min=20.8km az=60.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.34**	**200**	Pn	Pn	19 49 20.1	+0.3
	0.0nm,0.3s,baz=10,slow=9.3,SNR=2.6						
MKAR	**Makanchi Array**	**22.82**	**319**	P	P	19 51 13.4	-0.1
	0.2nm,0.6s,baz=128,slow=8.7,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.62**	**335**	P	P	19 51 49.1	0.0
	0.5nm,0.6s,baz=134,slow=10,SNR=3.6						
KURK	**Kurchatov**	**27.11**	**324**	P	P	19 51 53.6	+0.1
	0.5nm,0.7s,baz=127,slow=9.5,SNR=4.9						
WRA	**Warramunga Arr**	**58.60**	**146**	P	P	19 56 08.0	+0.1
	0.3nm,0.7s,baz=333,slow=7.2,SNR=3.8						
ASAR	**Alice Springs**	**61.61**	**149**	P	P	19 56 28.5	0.0
	0.3nm,0.8s,baz=334,slow=8.2,SNR=3.6						

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*ISCJB **12** 19:50:50.6±0.6,32°.16N±0°.05×105°.20E±0°.08,h10km, mb3.7/7,Error ellipse: s-maj=9.9km s-min=6.5km az=15.7*
*IDC **12** 19:50:51.4±1.0,32°.32N×105°.32E,h0km,mb3.6/6, mb1 3.9/6,mb1mx3.6/25,mbtmp3.7/6,Error ellipse: s-maj=66.2km s-min=19.2km az=57.0*
*NEIC **12** 19:50:52.6±0.7,32°.35N×105°.40E,h10km,mb4.2/1,Error ellipse: s-maj=40.6km s-min=10.2km az=45.0*
*BJI **12** 19:50:54.0,32°.28N×105°.22E,h13km,ML3.9/5,Ms3.6/2, Ms7 3.3/2*
ISC 12 19:50:52.4±0.7,32°.18N±0°.05×105°.18E±0°.08,h10km,n14, σ1§02/18,mb3.7/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.75**	**224**	Pg	**Pg**	**19 51 27.0**	**+1.0**
CD2				Sg	**Sg**	**19 51 47.8**	**-1.0**
CD2				smax			
	comp=N,1μm,0.5s						
LZH	**Lanzhou**	**4.05**	**344**	*e*Pn	**Pn**	**19 51 55.8**	**+1.3**
LZH				Pg	**Pg**	**19 52 06.1**	**-4.0**
LZH				Sn	**Sn**	**19 52 41.5**	**-0.5**
LZH				Sg	**Sg**	**19 52 55.2**	**-7.4**
LZH				smax			
	comp=N,220nm,0.6s						
LZH				smax			
	comp=E,370nm,0.6s						
ENH	**Enshi**	**4.15**	**116**	Pn	**Pn**	**19 51 53.8**	**-1.9**
MK31	**Makanchi Array**	**22.80**	**316**	*e*P	**P**	**19 55 54.3**	**-0.9**
MKAR	**Makanchi Array**	**22.80**	**316**	P	**P**	**19 55 55.2**	**+0.1**
	comp=E,1.2nm,0.7s,mb3.4,baz=121,slow=12,SNR=12						
MKAR	**Makanchi Array**	**22.80**	**316**	P	**P**	**19 55 55.2**	**+0.1**
ZALV	**Zalesovo Beam**	**26.18**	**332**	P	**P**	**19 56 26.9**	**0.0**
	comp=E,0.8nm,0.5s,mb3.5,baz=136,slow=11,SNR=4.6						
KURK	**Kurchatov**	**26.96**	**321**	P	**P**	**19 56 34.1**	**+0.2**
	comp=E,1.0nm,0.7s,mb3.5,baz=124,slow=11,SNR=7.1						
KURK	**Kurchatov**	**26.96**	**321**	*e*P	**P**	**19 56 34.4**	**+0.4**
WRAB	**Tennant Creek**	**58.86**	**148**	*e*P	**P**	**20 00 47.5**	**-3.9**
	comp=E,1.2nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**58.87**	**148**	P	**P**	**20 00 52.1**	**+0.6**
	comp=E,0.9nm,0.6s,mb4.0,baz=340,slow=7.5,SNR=8.3						
ASAR	**Alice Springs**	**61.94**	**150**	P	**P**	**20 01 14.0**	**+1.6**
	comp=E,0.2nm,0.5s,mb3.5,baz=336,slow=7.2,SNR=5.5						
YKA	**Yellowknife Ar**	**80.40**	**18**	P	**P**	**20 03 03.6**	**-0.1**
	comp=E,0.5nm,0.5s,mb3.7,baz=328,slow=5.1,SNR=9.1						
YKA	**Yellowknife Ar**	**80.40**	**18**	P	**P**	**20 03 03.6**	**-0.1**

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*IDC **12** 19:51:51.0±0.8,31°.48N×104°.20E,h0km,mb3.8/11, mb1 4.0/12,mb1mx3.8/27,mbtmp3.8/12,Error ellipse: s-maj=29.9km s-min=17.0km az=56.0*
*BJI **12** 19:51:54.5,31°.45N×104°.42E,h23km,mb4.3/2,ML3.8/4, Ms3.8/2,Ms7 3.4/1*
*ISCJB **12** 19:51:55.0±1.2,31°.42N±0°.08×104°.26E±0°.08, h43km±13km,mb3.8/12,Error ellipse: s-maj=13.7km s-min=10.9km az=13.0*
*NEIC **12** 19:51:56.1±3.0,31°.47N×104°.27E,h34km±22km,mb4.0/2, Error ellipse: s-maj=12.8km s-min=8.0km az=225.0*
ISC 12 19:51:55.6±1.7,31°.45N±0°.08×104°.22E±0°.09,h29km±14km, n21,σ0§79/22,mb3.8/12,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.67**	**217**	Pg	**Pb**	**19 52 08.9**	**+0.2**
CD2				Sg	**Sb**	**19 52 17.5**	**-0.2**
CD2				smax			
	comp=N,6μm,0.6s						
ENH	**Enshi**	**4.68**	**103**	Pn	**Pn**	**19 53 04.1**	**-0.1**
LSA	**Lhasa**	**11.40**	**265**	*e*P	**Pn**	**19 54 39.4**	**+2.9**
	comp=N,2.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.79**	**201**	Pn	**Pn**	**19 55 08.0**	**-1.2**
	comp=N,0.1nm,0.3s,baz=8.0,slow=9.2,SNR=2.7						
KSRS	**Korea Array**	**20.42**	**66**	P	**P**	**19 56 30.1**	**-0.3**
	comp=N,2.7nm,0.8s,baz=259,slow=9.7,SNR=5.2						
CN2	**Changchun**	**20.78**	**48**	*e*P	**P**	**19 56 37.4**	**+3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.79**	**319**	*e*P	**P**	**19 56 56.0**	**+0.3**
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**19 56 55.1**	**-0.5**
	comp=Z,1.3nm,0.5s,mb3.6,baz=122,slow=11,SNR=8.5						
ZAA0	**Zalesovo Array**	**26.46**	**334**	*e*P	**P**	**19 57 30.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**19 57 28.6**	**-1.3**
	comp=Z,0.6nm,0.3s,mb3.5,baz=135,slow=8.3,SNR=5.9						
KURK	**Kurchatov**	**27.03**	**323**	P	**P**	**19 57 34.9**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.4,baz=129,slow=8.7,SNR=5.8						
ABKAR	**Akbulak array**	**37.52**	**311**	*e*P	**P**	**19 59 07.3**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.4						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**20 01 40.5**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.2,baz=76,slow=8.0,SNR=8.5						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**20 01 51.2**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**20 01 50.6**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=339,slow=7.4,SNR=8.8						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**20 02 11.7**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.9,baz=332,slow=7.0,SNR=5.6						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**20 02 27.9**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.1,baz=72,slow=6.8,SNR=3.5						
GERES	**GERESS Array B**	**67.38**	**314**	P	**P**	**20 02 48.4**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.5,baz=64,slow=6.7,SNR=4.6						
KMBO	**Kilima Mbogo**	**71.09**	**257**	P	**P**	**20 03 11.8**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=67,slow=18,SNR=4.5						
YKA	**Yellowknife Ar**	**81.33**	**17**	P	**P**	**20 04 08.7**	**-0.3**
	comp=Z,0.2nm,0.6s,mb3.3,baz=331,slow=5.3,SNR=4.4						
YKA	**Yellowknife Ar**	**81.33**	**17**	P	**P**	**20 04 08.7**	**-0.3**

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*IDC **12** 19:52:43.5±1.0,31°.71N×104°.41E,h0km,mb3.6/7, mb1 3.8/8,mb1mx3.5/27,mbtmp3.6/8,ML3.9/1,MS3.9/4, Ms1 4.0/4,ms1mx3.4/34,Error ellipse: s-maj=39.3km s-min=19.5km az=56.0*
ISC 12 19:52:46.0±2.6,31°.73N±0°.10×104°.6E±0°.1,h18km±17km, n11,σ1§03/12,mb3.5/6,MS3.7/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.06**	**220**	Pg	**Pg**	**19 53 06.9**	**+0.3**
CD2				Sg	**Sg**	**19 53 21.3**	**+0.8**
CD2				smax			
	comp=N,6μm,0.7s						
GYA	**Guiyang**	**5.56**	**160**	Pg	**Pg**	**19 54 38.2**	**+5.7**
GYA				Sg	**Sg**	**19 55 43.6**	**-1.0**
GYA				smax			
	comp=N,1μm,0.9s						
GYA				smax			
	comp=E,980nm,0.7s						
GYA				LR	LR		
	comp=N,9μm,5.3s						
GYA				LR	LR		
	comp=E,10μm,5.0s						
GYA				LR	LR		
	comp=Z,9μm,5.2s						
CMAR	**Chiang Mai Arr**	**14.15**	**202**	Pn	**Pn**	**19 56 04.6**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=6.7,slow=17,SNR=4.2						
CMAR				LR	LR	20 02 07.8	
	comp=Z,488nm,18.2s,baz=45,slow=40						
KSRS	**Korea Array**	**20.05**	**67**	P	**P**	**19 57 18.9**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=256,slow=11,SNR=5.5						
KSRS				LR	LR	20 06 48.2	
	comp=Z,127nm,18.1s,MS3.3,baz=71,slow=42						
MKAR	**Makanchi Array**	**22.77**	**318**	P	**P**	**19 57 45.1**	**-2.2**
	comp=Z,0.7nm,0.8s,mb3.2,baz=113,slow=11,SNR=2.5						
MKAR				LR	LR	20 08 22.8	
	comp=Z,129nm,18.6s,MS3.4,baz=208,slow=41						
ZALV	**Zalesovo Beam**	**26.34**	**333**	P	**P**	**19 58 20.7**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.5,baz=139,slow=11,SNR=2.6						
KURK	**Kurchatov**	**26.99**	**322**	P	**P**	**19 58 25.5**	**-1.1**
	comp=Z,0.4nm,0.7s,mb3.0,baz=130,slow=8.9,SNR=2.0						
AKTO	**Aktyubinsk**	**39.00**	**312**	LR	LR	20 18 20.4	
	comp=Z,695nm,18.3s,MS4.5,baz=106,slow=40						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**20 02 33.6**	**+1.5**
	comp=Z,2.6nm,1.0s,mb4.2,baz=57,slow=7.0,SNR=3.7						
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**20 02 43.8**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.7,baz=337,slow=7.6,SNR=3.4						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**20 03 04.7**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.6,baz=334,slow=6.9,SNR=2.6						

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*IDC **12** 19:53:16.5±0.5,31°.17N×103°.65E,h0km,mb4.4/24, mb1 4.4/26,mb1mx4.4/29,mbtmp4.4/26,ML4.1/1,MS4.0/3, Ms1 4.0/3,ms1mx3.2/41,Error ellipse: s-maj=17.7km s-min=11.3km az=48.0*
*DJA **12** 19:53:17,32°.14N×104°.73E,h10km,mb4.9/9*
*MOS **12** 19:53:18.6±0.8,31°.16N×103°.68E,h25km,mb4.8/25,Error ellipse: s-maj=9.0km s-min=5.4km az=105.1*
*BJI **12** 19:53:19.3,31°.19N×103°.80E,h25km,mB5.1/14,mb4.7/22, ML4.4/10,Ms4.6/20,Ms7 4.3/17*
*ISCJB **12** 19:53:19.3±0.6,31°.14N±0°.03×103°.73E±0°.03,h31km±4km, mb4.6/67,Error ellipse: s-maj=4.7km s-min=4.2km az=157.8*
*NEIC **12** 19:53:21.1±1.6,31°.19N×103°.76E,h30km±12km,mb4.6/23, Error ellipse: s-maj=5.6km s-min=4.4km az=62.0*
*SZGRF **12** 19:53:45.2,33°.55N×100°.73E,h33km,mb4.7,Qinghai, China*
ISC 12 19:53:20.5±0.7,31°.16N±0°.03×103°.72E±0°.03,h24km±5km, n153,σ1§01/158,mb4.6/67,6C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.25**	**173**	Pg	**Pb**	**19 53 25.9**	**-0.9**
CD2				Sg	**Sb**	**19 53 31.6**	**+0.6**
CD2				smax			
	comp=N,152μm,0.6s						
LZH	**Lanzhou**	**4.92**	**1**	*e*Pn	**Pn**	**19 54 35.7**	**+2.8**
LZH				Sg	**Sb**	**19 55 56.1**	**+12**
LZH				smax			
	comp=N,310nm,1.0s						
LZH				smax			
	comp=E,390nm,0.9s						
LZH				LR	LR		
	comp=N,8μm,8.3s						
LZH				LR	LR		
	comp=Z,8μm,8.7s						
ENH	**Enshi**	**5.04**	**99**	*e*Pn	**Pn**	**19 54 32.6**	**-2.0**
KMI	**Kunming**	**6.08**	**188**	Pn	**Pn**	**19 54 50.1**	**+1.3**
KMI				Sn	**Sn**	**19 55 59.1**	**+1.5**
KMI				smax			
	comp=N,190nm,1.9s						
KMI				smax			
	comp=E,290nm,1.5s						
KMI				LR	LR		
	comp=N,3μm,7.8s						
KMI				LR	LR		
	comp=E,5μm,8.2s						
KMI				LR	LR		
	comp=Z,3μm,10.0s						
WHN	**Wuhan**	**9.16**	**91**	P	**Pn**	**19 55 22.6**	**-8.5**
WHN				S	**Sn**	**19 57 09.7**	**-3.7**
WHN				LR	LR		
	comp=N,3μm,5.0s						
WHN				LR	LR		
	comp=E,7μm,7.8s						
WHN				LR	LR		
	comp=Z,7μm,7.6s						
LSA	**Lhasa**	**10.95**	**266**	P	**Pn**	**19 55 56.9**	**+1.2**
LSA				S	**Sn**	**19 57 57.5**	**+0.1**
LSA				LR	LR		
	comp=N,710nm,15.3s						
LSA				LR	LR		
	comp=E,1μm,10.0s						
LSA				LR	LR		
	comp=Z,1μm,11.5s						
LSA	**Lhasa**	**10.95**	**266**	*e*P	**Pn**	**19 55 57.3**	**+1.6**
LSA				pmax	pmax		
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**10.95**	**266**	*e*P	**Pn**	**19 55 57.3**	**+1.6**
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**11.56**	**31**	*e*P	**Pn**	**19 56 03.3**	**-0.7**
HHC				PP		19 56 12.8	
HHC				S	**Sn**	**19 58 13.0**	**+0.7**
HHC				SS		19 58 26.9	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,260nm,5.0s						
HHC				LR	LR		
	comp=N,750nm,5.2s						
HHC				LR	LR		
	comp=E,740nm,5.4s						
HHC				LR	LR		
	comp=Z,520nm,5.2s						
GZH	**Guangzhou**	**11.74**	**131**	P	**Pn**	**19 56 05.5**	**-1.1**
GZH				S	**Sn**	**19 58 21.5**	**+4.6**
GZH				LR	LR		
	comp=N,1μm,4.6s						
GZH				LR	LR		
	comp=E,990nm,7.8s						
SHL	**Shillong**	**11.82**	**245**	*e*P	**Pn**	**19 56 08.0**	**+0.4**
NJ2	**Nanjing**	**12.93**	**82**	*e*P	**Pn**	**19 56 22.0**	**-0.8**
NJ2				pP		19 56 28.6	
NJ2				PP		19 56 32.9	
NJ2				sP		19 56 36.2	
NJ2				S	**Sn**	**19 58 44.7**	**-1.2**
NJ2				sS		19 58 54.8	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,80nm,3.6s						
NJ2				LR	LR		
	comp=N,330nm,11.5s						
NJ2				LR	LR		
	comp=E,670nm,9.6s						
NJ2				LR	LR		
	comp=Z,190nm,10.7s						
CHTO	**Chiang Mai**	**13.03**	**200**	*e*P	**Pn**	**19 56 25.9**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**13.03**	**200**	*e*P	**Pn**	**19 56 25.9**	**+1.7**
	comp=Z,10nm,0.9s						
QIZ	**Qiongzhong**	**13.28**	**154**	P	**Pn**	**19 56 27.0**	**-0.6**
QIZ				S	**Sn**	**19 58 54.5**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,24nm,1.9s						
QIZ				LR	LR		
	comp=N,950nm,6.7s						
QIZ				LR	LR		
	comp=Z,1μm,9.6s						
CM31	**Chiang Mai Arr**	**13.37**	**200**	*e*P	**Pn**	**19 56 29.2**	**+0.5**
	comp=Z,10nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.37**	**200**	Pn	**Pn**	**19 56 28.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=208,slow=32,SNR=3.2						
CMAR				Lg		20 00 29.4	
	comp=Z,0.1nm,0.3s,baz=20,slow=27,SNR=2.7						
GUN	**Gumba**	**15.87**	**263**	*e*P	**Pn**	**19 57 03.2**	**+0.9**
	comp=Z,55nm,0.8s						
PKI	**Pulchoki**	**16.36**	**262**	*e*P	**Pn**	**19 57 06.7**	**-1.9**
	comp=Z,49nm,0.8s						
PKIN	**Phulchoki**	**16.37**	**262**	*e*P	**Pn**	**19 57 06.8**	**-1.9**
	comp=Z,48nm,0.7s						
KKN	**Kakani**	**16.41**	**263**	*e*P	**Pn**	**19 57 06.9**	**-2.3**
	comp=Z,110nm,1.1s						
DMN	**Daman**	**16.61**	**262**	*e*P	**Pn**	**19 57 09.2**	**-2.5**
	comp=Z,132nm,1.2s						
SONM	**Songino Array**	**16.78**	**6**	Pn	**Pn**	**19 57 13.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=194,slow=13,SNR=12						
SONM				LR	LR	20 04 14.4	
	comp=Z,525nm,18.7s,baz=262,slow=39						
ULN	**Ulaanbaatar**	**16.88**	**8**	*e*P	**Pn**	**19 57 14.6**	**-0.4**
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	**16.88**	**8**	*e*P	**Pn**	**19 57 14.6**	**-0.5**
	comp=Z,19nm,1.0s						
WMQ	**Urumqi**	**17.89**	**319**	*e*P	**Pn**	**19 57 27.4**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				LR	LR		
	comp=N,650nm,8.0s						
WMQ				LR	LR		
	comp=E,610nm,7.5s						
WMQ				LR	LR		
	comp=Z,270nm,15.5s						
ZAK	**Zakamensk**	**19.21**	**359**	*e*P	**Pn**	**19 57 44.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,17nm,1.5s						
TLY	**Talaya**	**20.50**	**360**	*e*P	**P**	**19 57 58.4**	**+1.8**
TLY				pmax	pmax		
	comp=Z,15nm,1.0s						
TLY				MLR	MLR		
	comp=Z,709nm,11.0s						
MOY	**Mondy**	**20.59**	**355**	*e*P	**P**	**19 57 59.6**	**+2.0**
MOY				pmax	pmax		
	comp=Z,58nm,2.4s						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**19 58 01.9**	**+0.5**
	comp=Z,24nm,0.6s,baz=262,slow=10,SNR=57						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**19 58 01.9**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,24nm,0.6s						
IRK	**Irkutsk**	**21.07**	**1⇑**	*i*P	**P**	**19 58 04.4**	**+1.6**
IRK				pmax	pmax		
	comp=N,186nm,1.1s,mb5.3						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**19 58 06.0**	**+0.8**
CN2				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.0						
HIA	**Hailar**	**21.75**	**29**	*e*P	**P**	**19 58 11.2**	**+1.1**
HIA				pmax	pmax		
	comp=Z,24nm,0.8s						
HIA	**Hailar**	**21.75**	**29**	*e*P	**P**	**19 58 11.2**	**+1.0**
	comp=Z,24nm,0.8s,mb4.7						
CIT	**Chita**	**22.06**	**16**	*e*P	**P**	**19 58 14.7**	**+1.3**
CIT				*e*		19 58 18.6	
CIT				*e*		19 58 29.4	
CIT				*e*		19 58 52.9	
CIT				pmax	pmax		
	comp=Z,69nm,1.6s,mb4.8						
DDI	**Dehra Dun**	**22.07**	**274**	*ex*	x	19 58 17.0	
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**19 58 20.1**	**-0.4**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**19 58 20.0**	**-0.5**
	comp=Z,14nm,1.0s,mb4.3,baz=124,slow=10,SNR=17						
MKAR				PcP	PcP	20 02 11.2	-0.8
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**19 58 20.0**	**-0.5**
MKAR				PcP	PcP	20 02 11.2	-0.8
KSH	**Kashi**	**24.05**	**298**	P	**P**	**19 58 37.1**	**+3.3**
KSH				pmax	pmax		
	comp=Z,31nm,2.1s,mb4.4						
MDJ	**Mudanjiang**	**24.32**	**49**	*e*P	**P**	**19 58 37.8**	**+1.7**
	comp=Z,21nm,0.9s,mb4.6						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**19 58 45.5**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.4						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**19 58 45.5**	**+1.2**
	comp=Z,17nm,1.3s,mb4.4						
UCH	**Uchtor**	**25.78**	**304**	*e*P	**P**	**19 58 50.7**	**+1.3**
	comp=Z,18nm,1.2s,mb4.5						
FRU	**Bishkek**	**25.87**	**305**	*e*P	**P**	**19 58 53.0**	**+2.7**
FRU				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.6						
AAK	**Ala-Archa**	**25.90**	**304**	P	**P**	**19 58 50.6**	**+0.1**
	comp=Z,1.7nm,0.3s,mb4.0,baz=180,slow=19,SNR=4.2						
AAK	**Ala-Archa**	**25.90**	**304**	*d*i*P*	**P**	**19 58 51.7**	**+1.2**
AML	**Almayashu**	**26.34**	**303**	*e*P	**P**	**19 58 55.5**	**+1.0**
	comp=Z,12nm,1.2s,mb4.3						
EKS2	**Erkin-Say**	**26.42**	**304**	*e*P	**P**	**19 58 56.3**	**+1.1**
	comp=Z,26nm,1.6s,mb4.5						
ZAA0	**Zalesovo Array**	**26.53**	**335**	*e*P	**P**	**19 58 55.6**	**-0.5**
ZALV	**Zalesovo Beam**	**26.53**	**335**	P	**P**	**19 58 55.7**	**-0.4**
	comp=Z,13nm,0.9s,mb4.4,baz=134,slow=8.5,SNR=26						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**19 59 00.1**	**-0.3**
	comp=Z,14nm,1.0s,mb4.4,baz=128,slow=9.6,SNR=32						
KURK				PcP	PcP	20 02 20.6	-0.8
	comp=Z,1.7nm,0.7s,baz=112,slow=2.0,SNR=6.5						
KURK	**Kurchatov**	**27.01**	**324**	*e*P	**P**	**19 58 59.9**	**-0.5**
KURK				PcP	PcP	20 02 20.6	-0.8
BOD	**Bodaibo**	**27.58**	**12**	*e*P	**P**	**19 59 05.5**	**0.0**
KLR	**Kul'dur**	**27.76**	**41**	*e*P	**P**	**19 59 02.7**	**-4.5**
NVS	**Novosibirsk**	**27.81**	**334**	*e*P	**P**	**19 59 06.8**	**-0.8**
NVS				pmax	pmax		
	comp=Z,18nm,2.1s,mb4.3						
NVS				pmax	pmax		
	comp=N,14nm,1.7s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.8s						
MJAR	**Matsushiro Arr**	**29.04**	**70**	P	**P**	**19 59 18.9**	**+0.1**
	comp=E,0.9nm,0.5s,mb3.8,baz=41,slow=7.1,SNR=4.5						
KBL	**Kabul**	**29.24**	**286**	*e*P	**P**	**19 59 21.6**	**+1.0**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
KBL	**Kabul**	**29.24**	**286**	*e*P	**P**	**19 59 21.6**	**+1.0**
	comp=Z,8.0nm,0.9s,mb4.5						
NRGR	**Nerungri**	**29.40**	**24**	*e*P	Px	19 59 37.5	

comp=Z,1.4nm,0.7s,mb3.8,baz=293,slow=9.3,SNR=2.9
MIB Mutribah 48.16 284 *e*P **P 20 01 57.8 -1.0**
MIB AMb AMB 20 01 59.3
comp=Z,37nm,0.8s,mb5.5
RDF Al-Radifah 48.23 282 *e*P **P 20 02 00.0 +0.6**
RDF AMb AMB 20 02 00.4
comp=Z,38nm,0.9s,mb5.4
ZEI Tsey 48.27 301 *e*P **P 20 01 58.1 -1.4**
ZEI pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KIV Kislovodsk 49.01 303 *e*P **P 20 02 05.5 +0.3**
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.9
KIV Kislovodsk 49.01 303 *e*P **P 20 02 06.3 +1.1**
comp=Z,14nm,1.0s,mb4.9
KLMR Klimovskoe 50.83 325 *e*P **P 20 02 17.9 -0.9**
KLMR pmax pmax
comp=Z,15nm,1.3s,mb4.8
BILL Bilibino 51.27 25*c i*P **P 20 02 21.7 -0.2**
BILL *e**PP pP 20 02 32.3 +2.8
BILL *e*SS SS 20 13 15.4 +1.3
BILL pmax pmax
comp=Z,24nm,1.7s,mb4.8
BILL Bilibino 51.27 25 *e*P **P 20 02 21.4 -0.6**
comp=Z,376nm,2.8s,mb5.8
KAKA Kakadu 51.60 143 *e*P **P 20 02 23.7 -1.4**
comp=Z,9.2nm,0.9s,mb4.7
OBN Obninsk 52.22 318 *e*P **P 20 02 28.2 -1.1**
OBN *e* 20 03 39.6
OBN *e*SS SS 20 13 30.4 +0.8
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KNA Kununurra 52.48 149⇑*i*P **P 20 02 31.6 0.0**
comp=Z,20nm,0.8s,mb5.1
FITZ Fitzroy Crossi 53.31 154 *e*P **P 20 02 37.0 -0.7**
comp=Z,5.5nm,0.6s,mb4.7
FITZ Fitzroy Crossi 53.31 154 *e*P **P 20 02 37.5 -0.2**
comp=Z,5.1nm,1.0s,mb4.4
MBWA Marble Bar 54.24 162 *e*P **P 20 02 44.5 +0.1**
BR131 Keskin Array S 56.43 300 *e*P **P 20 03 00.1 -0.1**
comp=Z,2.2nm,0.8s,mb4.2
BRTR Keskin Array B 56.43 300 P **P 20 03 00.1 -0.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=102,slow=7.1,SNR=13
BRTR PcP PcP 20 03 56.6 -0.3
comp=Z,1.0nm,0.8s,baz=102,slow=3.2,SNR=4.2
ARCES ARCESS Array B 57.08 336 P **P 20 03 03.5 -0.7**
comp=Z,2.7nm,0.7s,mb4.4,baz=76,slow=6.4,SNR=7.5
ARCES PcP PcP 20 03 58.3 -0.6
comp=Z,1.9nm,0.5s,baz=90,slow=4.9,SNR=11
AKASG Malin Array Be 57.11 313 P **P 20 03 03.4 -1.4**
comp=Z,2.0nm,0.6s,mb4.3,baz=72,slow=6.5,SNR=7.0
AKASG Malin Array Be 57.11 313 *i*P **P 20 03 03.9 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 57.11 313 P **P 20 03 03.4 -1.4**
FINES FINESS Array B 57.34 326 P **P 20 03 05.1 -1.1**
comp=Z,2.3nm,0.6s,mb4.4,baz=64,slow=4.4,SNR=5.5
WRAB Tennant Creek 58.70 146 *e*P **P 20 03 16.6 +0.4**
WRAB pmax pmax
comp=Z,40nm,0.9s,mb5.5
WRAB Tennant Creek 58.70 146 *e*P **P 20 03 16.6 +0.4**
comp=Z,40nm,0.9s,mb5.5
WRA Warramunga Arr 58.70 146 P **P 20 03 16.7 +0.5**
comp=Z,21nm,0.8s,mb5.2,baz=336,slow=7.4,SNR=51
WB2 Warramunga Arr 58.71 146 *e*P **P 20 03 16.6 +0.3**
KWP Kalwaria Pacla 61.43 313 *e*P **P 20 03 35.0 +0.3**
KWP pmax pmax
comp=Z,11nm,1.1s,mb4.9
KWP Kalwaria Pacla 61.43 313 *e*P **P 20 03 35.0 +0.3**
comp=Z,11nm,1.1s,mb4.9
ASAR Alice Springs 61.71 148 P **P 20 03 37.6 +0.9**
comp=Z,4.9nm,0.7s,mb4.7,baz=334,slow=6.5,SNR=31
VYHS Vyhne 64.20 313 *e*P **P 20 03 53.2 +0.1**
VYHS pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
VYHS Vyhne 64.20 313 *e*P **P 20 03 53.2 +0.1**
comp=Z,5.8nm,1.5s,mb4.4
VYHS Vyhne 64.20 313 *e*P **P 20 03 53.2 +0.1**
NB2 NORSAR Subarra 64.44 327 P **P 20 03 52.5 -2.0**
comp=Z,10nm,1.2s,mb4.7,baz=71,slow=6.9
NOA NORSAR Array B 64.44 327 P **P 20 03 52.7 -1.8**
comp=Z,2.2nm,0.8s,mb4.2,baz=72,slow=6.4,SNR=4.3
NOA NORSAR Array B 64.44 327 P **P 20 03 52.7 -1.8**
CTAO Charters Tower 65.29 136 *e*P **P 20 04 01.1 +0.5**
FORT Forrest 65.79 157 *e*P **P 20 04 04.7 +1.2**
comp=Z,12nm,0.8s,mb5.0
BRG Berggiesshubel 66.40 316 *e*P **P 20 04 06.8 -0.6**
comp=Z,14nm,1.7s,mb4.7
BRG Berggiesshubel 66.40 316 *e*P **P 20 04 06.8 -0.5**
BRG pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
CLL Collm 66.80 317 *i*P **P 20 04 09.0 -0.9**
CLL Collm 66.80 317 *i*P **P 20 04 09.0 -0.9**
GERES GERESS Array B 67.28 314 P **P 20 04 13.4 +0.4**
comp=Z,1.3nm,0.9s,mb4.0,baz=83,slow=4.2,SNR=9.1
MOX Moxa 67.86 317 *e*P **P 20 04 16.2 -0.4**
GRA1 Grafenberg Arr 68.46 316 *e*P **P 20 04 20.9 +0.5**
comp=Z,6.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.46 316 *e*P **P 20 04 20.9 +0.5**
comp=Z,6.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.46 316 *e*P **P 20 04 20.9 +0.5**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.46 316 *e*P **P 20 04 20.9 +0.5**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GRF Grafenberg Arr 68.46 316 *e*P **P 20 04 20.9 +0.5**
comp=Z,6.0nm,1.1s,mb4.5
PPLA Purkeypile 68.77 28 *e*P **P 20 04 22.9 +0.7**
comp=Z,51nm,1.3s,mb5.3
BBOO Buckleboo 70.59 151 *e*P **P 20 04 33.6 0.0**
comp=Z,5.8nm,1.2s,mb4.4
KMBO Kilima Mbogo 70.60 256 P **P 20 04 34.5 +0.3**
comp=Z,1.4nm,0.9s,mb3.9,baz=36,slow=12,SNR=4.1
KMBO Kilima Mbogo 70.60 256 P **P 20 04 34.5 +0.3**
KDAK Kodiak Island 70.97 33 *i*P **P 20 04 36.0 +0.3**
CDF Champ du Feu 71.35 316 *e*P **P 20 04 37.5 -0.7**
INK Inuvik 72.21 19 *e*P **P 20 04 42.4 -0.6**
INK pmax pmax
comp=Z,16nm,0.9s
INK Inuvik 72.21 19 *e*P **P 20 04 42.4 -0.6**
comp=Z,16nm,0.9s,mb5.0
STKA Stephens Creek 72.23 147 *e*P **P 20 04 43.4 -0.2**
comp=Z,3.6nm,0.6s,mb4.5
STKA Stephens Creek 72.23 147 P **P 20 04 43.6 +0.1**
comp=Z,4.1nm,0.5s,mb4.6,baz=325,slow=5.8,SNR=14
STKA Stephens Creek 72.23 147 *e*P **P 20 04 44.6 +1.0**
comp=Z,1.3nm,1.0s,mb3.8
LPG La Plagne 72.97 313 *e*P **P 20 04 48.1 +0.1**
comp=Z,27nm,1.0s,mb4.8
RES Resolute Bay 73.71 5 *e*P **P 20 04 52.0 +0.2**
RES pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
RES Resolute Bay 73.71 5 *e*P **P 20 04 52.0 +0.2**
comp=Z,5.6nm,1.0s,mb4.5
CMSA Cobar Meteorol 73.96 144 *e*P **P 20 04 54.8 +1.0**
SMF Signal de Mont 74.23 315 *e*P **P 20 04 54.4 -0.9**
comp=Z,16nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.39 315 *e*P **P 20 05 01.4 -0.6**
comp=Z,12nm,1.1s,mb4.4
CAF Calviac 76.16 314 *e*P **P 20 05 06.3 -0.2**
comp=Z,14nm,1.1s,mb4.5
ARPS Mount Arapiles 76.42 149 *e*P **P 20 05 08.5 +0.6**
comp=Z,17nm,0.8s,mb5.0
YKA Yellowknife Ar 81.74 17 P **P 20 05 36.7 0.0**
comp=Z,3.4nm,0.6s,mb4.4,baz=328,slow=5.1,SNR=43
YKA Yellowknife Ar 81.74 17 P **P 20 05 36.7 0.0**
FFC Flin Flon 91.65 15 *i*P **P 20 06 26.1 +0.7**
TORD Torodi Ar. Bea 93.31 287 P **P 20 06 33.1 -0.7**
comp=Z,1.9nm,1.0s,mb4.5,baz=56,slow=3.8,SNR=8.6
SCHQ Schefferville 93.98 355 P **P 20 06 36.2 0.0**
comp=Z,1.6nm,0.8s,mb4.5,baz=207,slow=7.3,SNR=3.7
BOSA Boshof 95.43 240 P **P 20 06 41.5 -1.7**
comp=Z,1.7nm,0.6s,mb4.7,baz=97,slow=19,SNR=4.1
BOSA Boshof 95.43 240 P **P 20 06 41.5 -1.7**
ROSC El Rosal 144.14 357 PKP PKPdf 20 12 54.5 -0.4
comp=Z,4.8nm,0.4s,baz=88,slow=21,SNR=4.2
OTAV Otavalo 148.71 4 *e*PKPbc PKPbc 20 13 06.7 +0.2
LPAZ La Paz 163.44 331 PKP PKPdf 20 13 21.9 +0.1
comp=Z,1.8nm,1.0s,baz=177,slow=18,SNR=3.5

ISCJB ***12*** *20:04:02.4±0.9, 31°.4N±0°.1×104°.35E±0°.09, h10km, mb3.1/4, Error ellipse: s-maj=16.9km s-min=10.9km az=16.6*

IDC ***12*** *20:04:03.3±1.4, 31°.45N×104°.22E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.2/27, mbtmp3.3/5, Error ellipse: s-maj=71.1km s-min=22.3km az=62.0*
ISC 12 20:04:04.7±0.9,**31°.5N**±0°.1×**104°.27E**±0°.09,**h10**km,**n6,**
σ0°**27/7,mb3.1/4,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHN	**Wuhan**	**8.70**	**93**	P	**Pn**	**20 06 02.3**	**-8.3**
WHN				S	**Sn**	**20 07 48.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**13.81**	**202**	Pn	**Pn**	**20 07 20.4**	**-0.2**
	baz=6.3,slow=9.1,SNR=3.7						
MKAR	**Makanchi Array**	**22.80**	**318**	P	**P**	**20 09 07.0**	**-0.5**
	0.4nm,0.9s,mb2.8,baz=124,slow=8.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**20 09 41.9**	**+0.2**
	0.3nm,0.5s,mb3.1,baz=128,slow=9.3,SNR=2.3						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**20 09 47.2**	**+0.2**
	0.3nm,0.7s,mb2.9,baz=130,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	**58.69**	**147**	P	**P**	**20 14 02.8**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=338,slow=7.8,SNR=6.5						

ISCJB ***12*** *20:04:29.8±0.9, 31°.7N±0°.1×104°.8E±0°.2, h10km, mb3.4/6, Error ellipse: s-maj=32.5km s-min=14.1km az=157.7*
IDC ***12*** *20:04:29.8±1.2, 31°.78N×104°.85E, h0km, mb3.3/5, mb1 3.5/6, mb1mx3.3/26, mbtmp3.3/6, ML3.5/1, Error ellipse: s-maj=72.4km s-min=19.8km az=59.0*
NEIC ***12*** *20:04:31.9±0.8, 31°.77N×104°.73E, h10km, mb4.2/1, Error ellipse: s-maj=27.4km s-min=12.1km az=68.0*
ISC 12 20:04:31.9±0.9,**31°.8N**±0°.1×**104°.7E**±0°.2,**h10**km,**n7,**
σ0°**76/7,mb3.4/6,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.25**	**203**	Pn	**Pn**	**20 07 53.8**	**0.0**
	0.1nm,0.3s,baz=11,slow=8.7,SNR=3.6						
MKAR	**Makanchi Array**	**22.84**	**317**	P	**P**	**20 09 35.5**	**+0.4**
	0.2nm,0.5s,mb2.8,baz=124,slow=11,SNR=3.3						
ZALV	**Zalesovo Beam**	**26.36**	**333**	P	**P**	**20 10 08.2**	**+0.1**
	0.4nm,0.5s,mb3.2,baz=141,slow=7.1,SNR=4.0						
KURK	**Kurchatov**	**27.04**	**322**	P	**P**	**20 10 13.6**	**-0.6**
	0.2nm,0.5s,mb2.9,baz=133,slow=9.1,SNR=3.0						
WRAB	**Tennant Creek**	**58.73**	**147**	P	**P**	**20 14 31.6**	**+1.6**
	1.9nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**58.73**	**147**	P	**P**	**20 14 29.3**	**-0.8**
	0.4nm,0.5s,mb3.7,baz=338,slow=7.8,SNR=7.0						
ASAR	**Alice Springs**	**61.79**	**150**	P	**P**	**20 14 50.2**	**-0.7**
	0.3nm,0.8s,mb3.5,baz=335,slow=6.4,SNR=3.0						

ISCJB ***12*** *20:04:59.0±0.5, 32°.30N±0°.03×105°.20E±0°.08, h10km, mb3.7/12, Error ellipse: s-maj=9.2km s-min=4.8km az=179.1*
IDC ***12*** *20:04:59.0±0.8, 32°.47N×105°.45E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.7/27, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=37.6km s-min=14.9km az=53.0*
NEIC ***12*** *20:05:01.3±0.5, 32°.32N×105°.02E, h10km, mb4.0/2, Error ellipse: s-maj=18.0km s-min=8.9km az=59.0*
BJI ***12*** *20:05:01.9, 32°.36N×105°.06E, h11km, mb4.4/2, ML4.1/7, Ms3.9/3, Ms7 3.4/3*
ISC 12 20:05:00.9±0.5,**32°.34N**±0°.03×**105°.15E**±0°.07,**h10**km,**n23,**
σ1°**05/29,mb3.7/12,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.85**	**220**	Pg	**Pg**	**20 05 35.7**	**-0.7**
CD2				Sg	**Sg**	**20 06 00.7**	**+0.3**
CD2				smax			
	comp=N,4μm,0.7s						
LZH	**Lanzhou**	**3.90**	**344**	*e*Pn	**Pn**	**20 06 02.6**	**+1.8**
LZH				Pg	**Pg**	**20 06 13.3**	**-2.3**
LZH				Sn	**Sn**	**20 06 48.0**	**+1.4**
LZH				Sg	**Sg**	**20 07 00.8**	**-5.2**
LZH				smax			
	comp=N,660nm,0.7s						
LZH				smax			
	comp=E,990nm,0.6s						
LZH				LR	LR		
	comp=N,1μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,8.3s						
ENH	**Enshi**	**4.25**	**118**	*e*P	**Pn**	**20 06 10.5**	**+4.8**
GYA	**Guiyang**	**6.00**	**167**	Pn	**Pn**	**20 06 32.2**	**+2.4**
GYA				Sn	**Sn**	**20 07 37.9**	**-0.7**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,100nm,0.9s						
GYA				LR	LR		
	comp=N,150nm,5.0s						
GYA				LR	LR		
	comp=E,140nm,5.2s						
GTA	**Gaotai**	**8.28**	**330**	*e*P	**Pn**	**20 06 58.1**	**-2.9**
GTA				pP		20 07 02.7	
GTA				sP		20 07 05.6	
GTA				S	**Sn**	**20 08 33.8**	**-0.8**
GTA				sS		20 08 38.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,280nm,9.9s						
GTA				LR	LR		
	comp=E,380nm,8.1s						
GTA				LR	LR		
	comp=Z,510nm,8.7s						
CMAR	**Chiang Mai Arr**	**14.91**	**204**	Pn	**Pn**	**20 08 32.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=11,slow=12,SNR=3.6						
SONM	**Songino Array**	**15.51**	**3**	Pn	**Pn**	**20 08 40.5**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=205,slow=6.4,SNR=2.1						
JOW	**Kunigami**	**20.83**	**99**	P	**P**	**20 09 38.7**	**-4.1**
	comp=Z,40nm,0.6s,baz=273,slow=17,SNR=4.6						
JOW	**Kunigami**	**20.83**	**99**	P	**P**	**20 09 38.7**	**-4.1**
MK31	**Makanchi Array**	**22.67**	**316**	*e*P	**P**	**20 10 02.1**	**-0.2**
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**20 10 02.3**	**0.0**
	comp=Z,2.2nm,0.7s,mb3.7,baz=120,slow=13,SNR=17						
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**20 10 34.0**	**-0.1**
	comp=Z,0.9nm,0.5s,mb3.5,baz=131,slow=11,SNR=4.4						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**20 10 41.1**	**-0.2**
	comp=Z,2.2nm,0.8s,mb3.8,baz=126,slow=10,SNR=12						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**20 11 30.5**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.2,baz=69,slow=4.8,SNR=2.7						
BRVK	**Borovoye**	**32.47**	**320**	*e*P	**P**	**20 11 31.1**	**-0.2**
ARU	**Arti**	**40.02**	**321**	*e*P	**P**	**20 12 36.6**	**+0.9**
	comp=Z,1.1nm,0.6s,mb3.8						
FITZ	**Fitzroy Crossi**	**53.85**	**156**	P	**P**	**20 14 24.6**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=320,slow=7.9,SNR=3.8						
BRTR	**Keskin Array B**	**56.91**	**299**	P	**P**	**20 14 47.8**	**+1.7**
	comp=Z,0.5nm,0.8s,mb3.6,baz=76,slow=6.1,SNR=3.5						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	**P**	**20 15 00.5**	**-0.5**
	comp=Z,2.3nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**59.02**	**148**	P	**P**	**20 15 00.7**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=340,slow=7.5,SNR=7.5						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**20 15 22.1**	**+0.1**
	comp=Z,0.4nm,0.8s,mb3.6,baz=352,slow=7.7,SNR=4.4						
STKA	**Stephens Creek**	**72.56**	**148**	P	**P**	**20 16 27.1**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=349,slow=5.2,SNR=3.5						
YKA	**Yellowknife Ar**	**80.25**	**18**	P	**P**	**20 17 10.6**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=331,slow=5.1,SNR=5.7						

ISCJB ***12*** *20:07:39.3±0.8, 32°.16N±0°.08×105°.1E±0°.1, h10km, mb3.4/6, Error ellipse: s-maj=17.4km s-min=8.2km az=30.5*
IDC ***12*** *20:07:39.6±1.1, 32°.32N×105°.25E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.3/1, MS4.3/1, Ms1 4.3/1, ms1mx3.3/32, Error ellipse: s-maj=54.2km s-min=20.7km az=61.0*
ISC 12 20:07:41.2±0.8,**32°.20N**±0°.08×**105°.0E**±0°.1,**h10**km,**n8,**
σ0°**83/9,mb3.4/6,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.67**	**220**	Pg	**Pg**	**20 08 12.3**	**-0.9**
CD2				Sg	**Sg**	**20 08 34.7**	**-0.1**
CD2				smax			
	comp=N,2μm,0.6s						
CMAR	**Chiang Mai Arr**	**14.73**	**203**	Pn	**Pn**	**20 11 12.7**	**+3.0**
	comp=N,0.0nm,0.3s,baz=11,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**22.68**	**317**	P	**P**	**20 12 43.5**	**+0.7**
	comp=N,0.4nm,0.5s,mb3.1,baz=118,slow=10.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**20 13 15.0**	**+0.1**
	comp=N,0.4nm,0.5s,mb3.2,baz=150,slow=6.0,SNR=2.5						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**20 13 21.4**	**-0.4**
	comp=N,0.9nm,0.9s,mb3.3,baz=128,slow=8.8,SNR=3.6						
WRA	**Warramunga Arr**	**58.97**	**147**	P	**P**	**20 17 40.6**	**-0.4**
	comp=N,0.6nm,0.6s,mb3.8,baz=342,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	**20 18 02.1**	**+0.2**
	comp=N,0.3nm,0.5s,mb3.6,baz=331,slow=6.5,SNR=3.5						
YKA	**Yellowknife Ar**	**80.42**	**17**	P	**P**	**20 19 52.1**	**-0.6**
	comp=N,0.2nm,0.5s,mb3.3,baz=326,slow=5.2,SNR=4.2						

IDC ***12*** *20:08:46.7±0.4, 31°.36N×103°.86E, h0km, mb5.4/34, mb1 5.4/36, mb1mx5.4/36, mbtmp5.4/36, ML4.3/1, MS5.2/25, Ms1 5.2/25, ms1mx4.9/44, Error ellipse: s-maj=11.7km s-min=8.8km az=32.0*
ISCJB ***12*** *20:08:49.0±0.1, 31°.41N±0°.02×103°.79E±0°.02, h22km, mb5.6/324, MS5.5/216, Error ellipse: s-maj=2.3km s-min=2.0km az=17.6*
MOS ***12*** *20:08:48.2±0.7, 31°.39N×103°.95E, h22km, mb5.9/103, MS5.5/74, Error ellipse: s-maj=6.2km s-min=3.3km az=120.7*
BJI ***12*** *20:08:48.8, 31°.43N×104°.06E, h21km, mB5.7/19, mb5.6/40, ML5.7/17, Ms5.8/55, Ms7 5.7/44*
GCMT ***12*** *20:08:50.4±0.2, 31°.37N×104°.11E, h28km, MW5.6/87, Moment Tensor Solution. s56,c96; s87,c173; Duration: 1*6 Moment tensor: Scale 10^17^Nm; M_{rr}2.40±.08; $M_{\theta\theta}$0.38±.05; $M_{\phi\phi}$-2.78±.06; $M_{r\theta}$-0.69±.10; $M_{\theta\phi}$-1.41±.04; $M_{\phi r}$1.43±.10; Best double couple: $M_0$3.35000×10^17^ NP1:ϕ_s227.00000°, δ41.00000°, λ132.00000°. NP2: ϕ_s357.00000°, δ61.00000°, λ60.00000°. Principal axes: T 3.1710, Plg62.0000°, Azm219.0000°; N 0.3570, Plg26.0000°, Azm13.0000°; P -3.5290, Plg11.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***12*** *20:08:50.4±0.9, 31°.41N×103°.89E, h22km±6km, mb5.7/162, MS5.5/138, MW5.5 Error ellipse: s-maj=2.9km s-min=2.3km az=204.0, Moment Tensor Solution. s57 Moment tensor: Scale 10^17^Nm; M_{rr}1.77; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-1.39; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.68; $M_{\phi r}$0.74; Best double couple: $M_0$1.90000×10^17^ NP1:ϕ_s217.00000°, δ36.00000°, λ108.00000°. NP2:ϕ_s15.00000°, δ56.00000°, λ77.00000°. Principal axes: T 1.9600, Plg75.0000°, Azm246.0000°; N -0.1200, Plg10.0000°, Azm22.0000°; P -1.8400, Plg10.0000°, Azm114.0000°;*
SZGRF ***12*** *20:08:53.2, 31°.18N×103°.67E, h33km, mb6.1, MS5.9, Sichuan, China*
DJA ***12*** *20:08:54, 31°.33N×103°.76E, h38km, Mw5.9/33*
BGS ***12*** *20:08:58.6±1.4, 32°.20N×102°.46E, h10km, mb5.4, MS5.6*
ISC 12 20:08:49.9±0.5,**31°.44N**±0°.02×**103°.86E**±0°.02,**h17**km±3km,
h23km±.8km:**pP-P,n1302,**σ0°**90**/1234,**mb5.6**/324,
MS5.5/216,**360C-83D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**189**	Pg	**Pg**	**20 09 00.7**	**+0.2**
CD2				Sg	**Sg**	**20 09 08.8**	**+1.1**
CD2				smax			
	comp=N,143μm,0.8s						
LZH	**Lanzhou**	**4.64**	**360**	*e*Pn	**Pn**	**20 10 02.1**	**+2.9**
LZH				Pg	**Pg**	**20 10 16.6**	**-2.1**
LZH				Sg	**Sg**	**20 11 19.3**	**+0.5**
LZH				smax			
	comp=N,15μm,0.8s						
LZH				smax			
	comp=E,14μm,0.5s						
LZH				LR	LR		
	comp=E,160μm,9.1s						
LZH				LR	LR		
	comp=Z,189μm,11.5s						
ENH	**Enshi**	**4.98**	**102**	*e*Pn	**Pn**	**20 10 03.7**	**-0.2**
GYA	**Guiyang**	**5.54**	**153**	Pn	**Pn**	**20 10 12.1**	**+0.5**
GYA				smax			
	comp=N,12μm,1.0s						
GYA				smax			
	comp=E,15μm,1.0s						
GYA				LR	LR		
	comp=N,66μm,13.9s						
GYA				LR	LR		
	comp=E,84μm,12.0s						
GYA				LR	LR		
	comp=E,58μm,12.0s						
KMI	**Kunming**	**6.37**	**189**	Pn	**Pn**	**20 10 23.9**	**+0.9**
KMI				Sn	**Sn**	**20 11 36.6**	**+1.2**
KMI				smax			
	comp=N,2μm,1.6s						
KMI				smax			
	comp=E,1μm,1.0s						
KMI				LR	LR		
	comp=N,33μm,5.8s						
KMI				LR	LR		
	comp=E,68μm,8.3s						
KMI				LR	LR		
	comp=Z,69μm,13.0s						
GTA	**Gaotai**	**8.61**	**339**	P	**Pn**	**20 10 56.3**	**+2.6**
GTA				pP		20 11 00.5	
GTA				sP		20 11 04.1	
GTA				S	**Sn**	**20 12 35.5**	**+5.1**
GTA				sS		20 12 40.2	
GTA				pmax	pmax		
	comp=Z,36nm,1.0s						
GTA				pmax	pmax		
	comp=Z,870nm,6.3s						
GTA				LR	LR		
	comp=N,74μm,10.5s						
GTA				LR	LR		
	comp=E,65μm,11.7s						
GTA				LR	LR		
	comp=Z,78μm,14.7s						
WHN	**Wuhan**	**9.05**	**93**	⇑P	**Pn**	**20 10 58.1**	**-1.7**
WHN				sP		20 11 08.9	
WHN				S	**Sn**	**20 12 35.8**	**-5.6**
WHN				LR	LR		
	comp=Z,129μm,9.4s						
TIY	**Taiyuan**	**9.44**	**46**	*e*P	**Pn**	**20 11 05.2**	**+0.1**
TIY				S	**Sn**	**20 12 46.2**	**-4.7**
TIY				LR	LR		
	comp=Z,8μm,5.1s						
TIY	**Taiyuan**	**9.44**	**46**	*e*P	**Pn**	**20 11 05.5**	**+0.4**
TIY				S	**Sn**	**20 12 46.2**	**-4.7**
TIY				LR	LR		
	comp=N,28μm,2.4s						
TIY				LR	LR		
	comp=E,22μm,2.0s						
TIY				LR	LR		
	comp=Z,12μm,3.5s						
BTO	**Baotou**	**10.42**	**27**	*e*P	**Pn**	**20 11 18.0**	**-0.5**
BTO				S	**Sn**	**20 13 07.8**	**-7.0**
IMP	**Imphal**	**10.98**	**235**	*e*P	**Pn**	**20 11 26.0**	**-0.3**
IMP				*ex*	x	20 14 31.0	
LSA	**Lhasa**	**11.09**	**264**	P	**Pn**	**20 11 29.0**	**+1.2**
LSA				S	**Sn**	**20 13 43.8**	**+12**
LSA				LR	LR		
	comp=N,25μm,22.2s						
LSA				LR	LR		
	comp=E,40μm,11.8s						
LSA				LR	LR		
	comp=Z,45μm,10.2s						
LSA	**Lhasa**	**11.09**	**264**	*e*P	**Pn**	**20 11 29.7**	**+1.9**
LSA				pmax	pmax		
	comp=Z,222nm,1.0s						
LSA	**Lhasa**	**11.09**	**264**	*e*Pn	**Pn**	**20 11 29.7**	**+2.0**
	comp=Z,222nm,1.0s						
HHC	**Hu-ho-hao-te**	**11.26**	**31**	*e*P	**Pn**	**20 11 30.8**	**+0.7**
HHC				pP		20 11 37.9	
HHC				sP		20 11 42.7	
HHC				S	**Sn**	**20 13 36.3**	**+0.7**
HHC				sS		20 13 47.3	
HHC				SS		20 13 50.6	
HHC				pmax	pmax		
	comp=Z,68nm,1.0s						
HHC				pmax	pmax		
	comp=Z,560nm,4.8s						
HHC				LR	LR		
	comp=N,19μm,5.5s						
HHC				LR	LR		
	comp=E,19μm,5.3s						
HHC				LR	LR		
	comp=Z,9μm,5.7s						
GZH	**Guangzhou**	**11.84**	**132**	P	**Pn**	**20 11 29.8**	**-8.3**
GZ

comp=N,30μm,10.5s
GZH LR LR
comp=E,45μm,11.5s
TIA Tai'an 12.01 63 *e*P **Pn 20 11 39.1 -1.3**
TIA S **Sn 20 13 47.0 -7.0**
TIA LR LR
comp=N,2μm,5.0s
TIA LR LR
comp=E,2μm,6.0s
SHL Shillong 12.04 244 *e*P **Pn 20 11 40.0 -0.8**
SHL *ex* x 20 15 14.0
NJ2 Nanjing 12.78 83 *e*P **Pn 20 11 48.9 -2.0**
NJ2 pP 20 11 54.6
NJ2 PP 20 11 58.0
NJ2 sP 20 12 00.6
NJ2 S **Sn 20 14 09.6 -3.2**
NJ2 sS 20 14 22.5
NJ2 SS 20 14 25.2
NJ2 pmax pmax
comp=Z,110nm,0.8s
NJ2 pmax pmax
comp=Z,500nm,3.8s
NJ2 LR LR
comp=N,22μm,12.1s
NJ2 LR LR
comp=E,32μm,11.1s
NJ2 LR LR
comp=Z,46μm,12.7s
HKC Hong Kong Obse 12.94 132 P **Pn 20 11 50.0 -3.1**
BJT Baijiatuau 13.15 46 *e*P **Pn 20 11 55.3 -0.6**
BJT pmax pmax
comp=Z,186nm,0.7s
BJT Baijiatuau 13.15 46 *e*P **Pn 20 11 55.3 -0.6**
comp=Z,186nm,0.7s
BJI Beijing 13.17 46 P **Pn 20 11 55.7 -0.5**
BJI pmax pmax
comp=Z,64nm,0.7s
BJI LR LR
comp=N,27μm,4.2s
BJI LR LR
comp=E,13μm,3.7s
BJI LR LR
comp=Z,9μm,19.2s
CHG Chiang Mai 13.33 201 ⇑P **Pn 20 12 01.4 +3.0**
comp=Z,163nm,0.7s
CHTO Chiang Mai 13.33 201 *e*P **Pn 20 11 59.8 +1.4**
CHTO Chiang Mai 13.33 201 ⇓P **Pn 20 12 00.8 +2.4**
SNR=28
CHTO ⇓P 20 12 00.8
SNR=28
AGT Agartala 13.46 239 *ex* x 20 11 52.0
AGT *ex* x 20 12 38.0
QIZ Qiongzhong 13.49 155 P **Pn 20 12 00.4 -0.2**
QIZ pP 20 12 04.7
QIZ S **Sn 20 14 31.3 +1.2**
QIZ pmax pmax
comp=Z,140nm,1.6s
QIZ LR LR
comp=E,26μm,12.9s
QIZ LR LR
comp=Z,31μm,12.7s
QIZ Qiongzhong 13.49 155 *e*P **Pn 20 11 58.3 -2.2**
comp=Z,316nm,1.4s
CM31 Chiang Mai Arr 13.67 200 *e*Pn **Pn 20 12 04.0 +1.0**
CM31 *e* 20 12 13.0
CMAR Chiang Mai Arr 13.67 200 Pn **Pn 20 12 01.9 -1.1**
comp=Z,1.4nm,0.3s,baz=11,slow=8.8,SNR=46
CMAR LR LR 20 18 12.4
comp=Z,6μm,19.5s,baz=13,slow=42
CMAR ScP ScP 20 21 00.4 -0.2
baz=338,slow=1.0,SNR=6.1
QZH Quanzhou 14.51 113 ⇑*i*P **Pn 20 12 14.1 -0.4**
QZH S **Sn 20 14 52.8 -2.2**
QZH pmax pmax
comp=Z,260nm,0.7s
QZH LR LR
comp=N,44μm,6.6s
QZH LR LR
comp=E,77μm,11.6s
QZH LR LR
comp=Z,116μm,10.6s
SSE Sheshan 14.83 87 *e*P **Pn 20 12 16.5 -2.3**
SSE pP pP 20 12 19.3 -10
SSE S **Sn 20 15 01.2 -1.5**
SSE pmax pmax
comp=Z,190nm,1.0s
SSE pmax pmax
comp=Z,140nm,3.5s
SSE LR LR
comp=N,55μm,13.2s
SSE LR LR
comp=E,15μm,13.2s
SSE LR LR
comp=Z,50μm,12.7s
KKTK Khon Kaen 15.06 184 ⇑P **Pn 20 12 22.0 0.0**
comp=Z,1μm,0.6s
RAMN Ramite 15.72 258 *e*P **Pn 20 12 28.8 -1.8**
GUN Gumba 16.02 262 *e*P **Pn 20 12 33.0 -1.4**
comp=Z,2μm,1.1s
UBT Ubonrachathani 16.15 176 P **Pn 20 12 39.9 +3.7**
DL2 Dalian 16.32 58 ⇓*i*P **Pn 20 12 37.9 -0.3**
DL2 S **Sn 20 15 41.9 +3.1**
DL2 pmax pmax
comp=Z,130nm,1.5s
DL2 LR LR
comp=E,8μm,13.8s
DL2 LR LR
comp=Z,13μm,13.9s
CAL Calcutta 16.42 241 ⇑*i*P **Pn 20 12 38.6 -1.0**
CAL *ex* x 20 15 54.0
SONM Songino Array 16.49 6 Pn **Pn 20 12 40.8 +0.4**
comp=Z,1.0nm,0.3s,baz=187,slow=13,SNR=151
SONM Lg 20 17 35.9
comp=Z,0.7nm,0.3s,baz=176,slow=26,SNR=3.2
SONM LR LR 20 19 48.7
comp=Z,24μm,19.4s,baz=191,slow=40
PKI Pulchoki 16.52 261 *e*P **Pn 20 12 39.2 -1.6**
comp=Z,742nm,0.8s
PKIN Phulchoki 16.52 261 *e*P **Pn 20 12 39.8 -1.1**
comp=Z,712nm,0.7s
KKN Kakani 16.56 262 *e*P **Pn 20 12 39.5 -1.9**
comp=Z,2μm,1.4s
ULN Ulaanbaatar 16.59 8 *e*P **Pn 20 12 41.1 -0.5**
ULN pmax pmax
comp=Z,411nm,1.1s
ULN Ulaanbaatar 16.59 8 *e*Pn **Pn 20 12 41.1 -0.5**
comp=Z,411nm,1.1s
DMN Daman 16.76 262 *e*P **Pn 20 12 42.1 -1.8**
comp=Z,1μm,1.0s
TATO Taipei 16.81 108 *e*Pn **Pn 20 12 45.1 +0.5**
comp=Z,1μm,1.6s
TPUB Ta-pu 16.95 114 *e*P **Pn 20 12 46.9 +0.6**
comp=Z,603nm,1.2s
WMQ Urumqi 17.76 319 P **Pn 20 12 56.9 +0.7**
WMQ PP 20 13 10.6
WMQ S **Sn 20 16 12.4 -1.3**
WMQ SS 20 16 34.0
WMQ PcP PcP 20 17 36.7 +3.2
WMQ pmax pmax
comp=Z,170nm,1.2s
WMQ pmax pmax
comp=Z,470nm,5.0s
WMQ LR LR
comp=N,39μm,13.0s
WMQ LR LR
comp=E,23μm,11.0s
WMQ LR LR
comp=Z,9μm,15.0s
SNY Shenyang 18.88 51 ⇑P **Pn 20 13 09.8 -0.2**
SNY S **Sn 20 16 39.5 -1.4**
SNY pmax pmax
comp=Z,35nm,0.6s
SNY LR LR
comp=N,4μm,8.4s
SNY LR LR
comp=E,18μm,15.3s
SNY LR LR
comp=Z,14μm,16.5s
ZAK Zakamensk 18.93 359 *e*P **Pn 20 13 11.2 +0.7**
ZAK pmax pmax
comp=Z,176nm,1.2s
BBP Basco 19.59 120 *e*P **Pn 20 13 19.4 +0.6**
INCN Inchon 19.70 66 *e*Pn **Pn 20 13 18.4 -1.5**
comp=Z,212nm,0.9s
TLY Talaya 20.23 360 Pn **P 20 13 26.5 +2.5**
comp=Z,710nm,1.4s,SNR=32
TLY Talaya 20.23 360 *c i*P **P 20 13 26.0 +2.0**
TLY *e*S **S 20 17 14.2 +4.0**
TLY *e*SS 20 17 42.2
TLY pmax pmax
comp=Z,354nm,2.0s
TLY MLR MLR
comp=Z,17μm,15.0s,MS5.5
TLY Talaya 20.23 360 *e*Pn **P 20 13 25.3 +1.3**
comp=Z,771nm,2.0s
TLY Talaya 20.23 360 ⇑P **P 20 13 26.4 +2.4**
SNR=60
TLY ⇑P 20 13 26.4
SNR=60
MOY Mondy 20.32 355 ⇑*i*P **P 20 13 27.1 +2.1**
MOY pmax pmax
comp=Z,436nm,2.5s
PTH Pithoragarh 20.45 271 *e*P **P 20 13 26.6 -0.1**
PTH *ex* x 20 19 22.0
ABRA Dolores 20.54 128 *e*P **P 20 13 32.4 +4.7**
KSRS Korea Array 20.71 67 P **P 20 13 29.2 -0.2**
comp=Z,134nm,0.8s,baz=256,slow=9.5,SNR=195
KSRS S **S 20 17 23.0 +3.0**
comp=Z,74nm,1.1s,baz=258,slow=19,SNR=4.8
KSRS Lg 20 19 40.3
comp=Z,9.6nm,0.9s,baz=266,slow=31,SNR=4.1
KSRS LR LR 20 21 23.7
comp=Z,5μm,18.0s,MS4.9,baz=263,slow=37
KSRS Korea Array 20.71 67 P **P 20 13 29.2 -0.2**
KSRS S **S 20 17 23.0 +3.0**
KSRS pmax pmax
comp=Z,134nm,0.8s
KSRS smax
comp=N,74nm,1.1s
KSRS MLR MLR
comp=Z,5μm,18.0s,MS4.9
APYP Conner 20.75 127 *e*P **P 20 13 32.6 +2.7**
IRK Irkutsk 20.79 1 *e*P **P 20 13 31.6 +1.5**
IRK pmax pmax
comp=Z,2μm,1.1s
JOSI Joshimath 20.84 274 *e*P **P 20 13 31.5 +0.6**
BOLP Bolinao 20.94 132 *e*P **P 20 13 24.2 -7.7**
CN2 Changchun 21.02 48 *e*P **P 20 13 40.0 +7.4**
CN2 *es*P sP 20 13 46.5 +6.9
CN2 *e*S **S 20 17 33.8 +7.7**
CN2 pmax pmax
comp=Z,1μm,0.8s,mb6.3
CN2 pmax pmax
comp=Z,2μm,5.0s
CN2 LR LR
comp=N,8μm,15.0s,MS5.4
CN2 LR LR
comp=E,9μm,15.0s,MS5.4
CN2 LR LR
comp=Z,11μm,16.0s,MS5.3
SCZP Santa Cruz 21.39 133 *e*P **P 20 13 42.7 +5.9**
HIA Hailar 21.46 29 *e*P **P 20 13 37.6 +0.3**
HIA pmax pmax
comp=Z,708nm,1.3s
HIA Hailar 21.46 29 *e*P **P 20 13 37.6 +0.3**
comp=Z,708nm,1.3s,mb5.8
CIT Chita 21.76 16 *e*P **P 20 13 41.6 +1.0**
CIT *e* 20 13 46.9
CIT *e* 20 14 08.0
CIT pmax pmax
comp=Z,137nm,1.5s,mb5.2
CAUP Cauayan 21.79 127 *e*P **P 20 13 43.7 +2.6**
JOW Kunigami 21.80 96 P **P 20 13 41.5 +0.3**
comp=Z,24nm,0.3s,mb5.2,baz=285,slow=8.9,SNR=5.5
JOW LR LR 20 22 42.8
comp=Z,6μm,19.1s,MS5.0,baz=290,slow=38
JOW Kunigami 21.80 96 P **P 20 13 41.5 +0.3**
JOW LR LR 20 22 42.8
PALP Palanan 22.12 126 *e*P **P 20 13 51.5 +6.9**
DDI Dehra Dun 22.16 274 *e*P **P 20 13 44.5 -0.5**
DDI *ex* x 20 18 06.0
PCPH Palayan 22.30 131 ⇓*e*P **P 20 13 48.4 +1.8**
BALP Baler 22.48 130 *e*P **P 20 13 51.0 +2.4**
MK31 Makanchi Array 22.59 319 *e*P **P 20 13 50.7 +1.3**
MKAR Makanchi Array 22.59 319 P **P 20 13 50.6 +1.2**
comp=Z,619nm,1.1s,mb5.9,baz=119,slow=9.9,SNR=472
MKAR ScP ScP 20 21 19.6 +0.3
comp=Z,4.1nm,1.0s,baz=87,slow=4.9,SNR=2.3
MKAR P3KPbc 20 47 26.7
comp=Z,1.1nm,1.0s,baz=296,slow=3.9,SNR=5.7
MKAR Makanchi Array 22.59 319 P **P 20 13 50.6 +1.2**
MKAR ScP ScP 20 21 19.6 +0.3
JBP Jabalpur 22.72 255 ⇑*e*P **P 20 13 50.3 -0.8**
JBP *ex* x 20 13 54.0
comp=Z,426nm,1.7s
JBP *ex* x 20 18 04.0
SDNR Sundarnagar 22.92 277 *e*P **P 20 13 55.5 +2.4**
AGRA Agra 22.96 266 *e*P **P 20 13 51.7 -1.8**
BISR Bishrakh 23.04 270 *e*P **P 20 13 54.3 -0.1**
VIS Vishakhapatnam 23.07 239 *i*P **P 20 13 54.0 -0.8**
VIS *ex* x 20 13 58.5
comp=Z,292nm,1.8s
VIS *i*x x 20 18 09.4
LUBP Lubang 23.17 136 *e*P **P 20 13 58.7 +2.9**
TGY Tagaytay City 23.30 134 P **P 20 13 58.1 +0.9**
comp=Z,94nm,0.4s,mb5.6,baz=119,slow=7.3,SNR=6.7
AYAN Aya Nagar 23.33 270 *e*P **P 20 13 55.4 -2.0**
AYAN AMb AMB 20 14 13.6
comp=Z,622nm,1.4s,mb5.8
BHK Bhakra 23.40 277 *ex* **P 20 13 55.2 -2.9**
SONA Sohna 23.42 269 *e*P **P 20 13 57.0 -1.4**
SONA AMb AMB 20 14 01.0
comp=Z,423nm,1.2s,mb5.8
POLP Polilio Island 23.46 131 *e*P **P 20 14 00.3 +1.4**
DLH Dalhousie 23.66 280 *e*P **P 20 14 00.0 -0.6**
DLH *ex* x 20 18 06.0
THN Thein Dam 23.88 280 *e*P **P 20 14 00.8 -1.9**
THN *e*S **S 20 18 18.7 +0.6**
KSH Kashi 24.03 297 ⇑*i*P **P 20 14 07.9 +4.0**
KSH *ep*P 20 14 11.9
KSH *es*P sP 20 14 16.9 +5.8
KSH *e*PP 20 14 42.9
KSH *e*PcP PcP 20 17 47.9 +2.4
KSH *e*S **S 20 18 23.8 +3.5**
KSH *es*S sS 20 18 30.9 +2.2
KSH *e*SS 20 19 17.8
KSH *e*ScP ScP 20 21 24.9 +1.7
KSH *e*PcS PcS 20 21 26.0 +0.9
KSH LR LR
comp=N,8μm,10.3s,MS5.7
KSH LR LR
comp=E,13μm,12.6s,MS5.7
MDJ Mudanjiang 24.05 50 P **P 20 14 03.6 -0.5**
MDJ pP 20 14 06.0
MDJ S **S 20 18 21.5 +0.9**
MDJ sS sS 20 18 26.8 -2.1
MDJ ScP ScP 20 21 23.6 +0.4
MDJ PcS PcS 20 21 25.0 +0.1
MDJ pmax pmax
comp=Z,46nm,1.4s,mb4.7
MDJ pmax pmax
comp=Z,480nm,2.7s,mb5.5
MDJ LR LR
comp=N,5μm,18.1s,MS5.1
MDJ LR LR
comp=E,5μm,19.8s,MS5.1
MDJ LR LR
comp=Z,9μm,15.7s,MS5.3
MDJ Mudanjiang 24.05 50 *e*P **P 20 14 03.7 -0.4**
comp=Z,543nm,1.2s,mb5.9
AAA Alma-Ata 24.33 307 *i*P **P 20 14 09.0 +2.4**
AAA pmax pmax
comp=Z,3μm,3.9s
AAA MLR MLR
comp=Z,12μm,17.0s,MS5.5
BOAC Boac 24.36 133 *e*P **P 20 14 08.5 +1.3**
GQP Guinayangan 24.40 131 *e*P **P 20 14 07.7 +0.2**
NGP Nagpur 24.43 251 *ex* **P 20 14 03.7 -4.1**
NGP *ex* x 20 14 07.5
comp=Z,836nm,1.6s
NGP *e*S **S 20 18 28.6 +1.4**
ULHL Ulahol 24.49 304 P **P 20 14 10.2 +2.1**
SNR=57
BUSP Coron 24.53 138 *e*P **P 20 14 10.0 +1.4**
KHET Khetri 24.55 269 *e*P **P 20 14 08.4 -0.5**
KHET AMb AMB 20 14 11.2
comp=Z,443nm,1.5s,mb5.8
SJMP San Jose 24.69 136 *e*P **P 20 14 10.9 +0.7**
BHPL Bhopal 24.81 257 *e*P **P 20 14 09.3 -2.0**
BHPL AMb AMB 20 14 14.2
comp=Z,313nm,1.0s,mb5.8
BHPL *e*S **S 20 18 31.4 -1.9**
BHPL *e*S **S 20 18 40.8 +7.5**
TKM2 Tokmak 2 25.15 305 P **P 20 14 16.0 +1.9**
SNR=121
KZA Kyzart 25.15 303 P **P 20 14 17.0 +2.9**
SNR=275
KBK Karagaybulak 25.53 304 P **P 20 14 19.7 +2.2**
SNR=135
UCH Uchtor 25.72 303 P **P 20 14 22.1 +2.8**
SNR=116
PVCP Virac 25.74 129 *e*P **P 20 14 22.0 +2.2**
CHMS Chumysh 25.76 305 P **P 20 14 21.1 +1.4**
SNR=28
FRU Bishkek 25.81 304 *i*P **P 20 14 22.0 +1.9**
FRU *i* pP 20 14 28.0 +2.8
FRU *i* 20 14 59.0
FRU *e*S **S 20 18 48.0 -0.8**
FRU pmax pmax
comp=Z,320nm,2.0s,mb5.5
AAK Ala-Archa 25.84 304 P **P 20 14 22.5 +2.1**
comp=Z,742nm,1.1s,mb6.1,SNR=32
AAK Ala-Archa 25.84 304 P **P 20 14 22.3 +1.9**
comp=Z,22nm,0.9s,mb4.7,baz=111,slow=4.7,SNR=65
AAK LR LR 20 26 22.4
comp=Z,14μm,20.2s,MS5.5,baz=87,slow=41
AAK P3KPbc 20 47 15.3
comp=Z,0.5nm,0.3s,baz=254,slow=3.4,SNR=11
AAK Ala-Archa 25.84 304 *e*P **P 20 14 22.1 +1.7**
comp=Z,345nm,1.5s,mb5.7
AAK LR LR
comp=Z,13μm,20.0s,MS5.5
AAK Ala-Archa 25.84 304 P **P 20 14 22.5 +2.0**
SNR=132
AAK P 20 14 22.5
SNR=132
KTGM Kuala Trenggan 25.98 182 P **P 20 14 22.4 +0.5**
AJM Ajmer 25.99 266 *e*P **P 20 14 21.1 -0.9**
AJM *ex* x 20 18 59.4
USP Ospenovka 26.02 305 P **P 20 14 23.5 +1.5**
SNR=160
KULM Kulim 26.18 187 P **P 20 14 23.8 +0.1**
KULM Kulim 26.18 187 PFAKE 20 14 40.0 +16
KULM LR LR
comp=Z,13μm,19.0s,MS5.5
AML Almayashu 26.28 302 P **P 20 14 27.0 +2.6**
SNR=29
AML Almayashu 26.28 302 PFAKE 20 14 40.0 +16
AML LR LR
comp=Z,12μm,19.0s,MS5.5
ZAA0 Zalesovo Array 26.33 334 *e*P **P 20 14 25.1 +0.4**
ZALV Zalesovo Beam 26.33 334 P **P 20 14 25.3 +0.6**
comp=Z,336nm,1.0s,mb5.8,baz=132,slow=8.2,SNR=548
ZALV P3KPbc 20 47 09.4
comp=Z,0.9nm,0.6s,baz=341,slow=4.4,SNR=3.8
ZALV Zalesovo Beam 26.33 334 P **P 20 14 25.3 +0.6**
ZALV *e* 20 47 09.4
EKS2 Erkin-Say 26.36 304 P **P 20 14 27.0 +1.9**
SNR=41
EKS2 Erkin-Say 26.36 304 PFAKE 20 14 40.0 +15
EKS2 LR LR
comp=Z,14μm,21.0s,MS5.5
HYB Hyderabad 26.85 245 *i*P **P 20 14 28.5 -1.3**
HYB *e*S **S 20 19 18.5 +13**
HYB LR LR 20 30 00.0
comp=Z,13nm,12.0s
KURK Kurchatov 26.85 323 P **P 20 14 30.0 +0.5**
comp=Z,211nm,1.0s,mb5.6,baz=127,slow=9.2,SNR=189
KURK LR LR 20 25 58.4
comp=Z,8μm,18.4s,MS5.3,baz=120,slow=38
KURK P3KPbc 20 47 08.0
comp=Z,1.7nm,1.0s,baz=307,slow=4.7,SNR=4.7
KURK Kurchatov 26.85 323 *e*P **P 20 14 30.4 +0.9**
comp=Z,409nm,1.1s,mb5.9
KURK LR LR
comp=Z,6μm,20.0s,MS5.2
KURK Kurchatov 26.85 323 ⇑P **P 20 14 30.9 +1.4**
SNR=216
KURK ⇑P 20 14 30.9
SNR=216
IPM Ipoh 26.95 186 P **P 20 14 30.2 -0.4**
BOD Bodaibo 27.29 12 ⇓*i*P **P 20 14 33.5 +0.2**
NVS Novosibirsk 27.61 334 ⇑*i*P **P 20 14 36.0 -0.2**
NVS *e*S **S 20 19 16.4 -0.5**
NVS pmax pmax
comp=N,397nm,1.8s
NVS pmax pmax
comp=E,278nm,1.8s
NVS pmax pmax
comp=Z,33nm,1.8s,mb4.7
NVS smax
comp=N,360nm,2.5s
NVS smax
comp=E,198nm,2.5s
KKM Kota Kinabalu 27.79 153 *e*P **P 20 14 37.6 -0.5**
comp=E,236nm,1.4s,mb5.6
KKM LR LR
comp=Z,2μm,20.0s,MS4.7
FRIM Kepong 28.13 185 P **P 20 14 42.6 +1.4**
MAJO Matsushiro 28.84 70 *e*P **P 20 14 45.7 -1.7**
MAJO pmax pmax
comp=Z,42nm,0.7s,mb5.3
MAJO Matsushiro 28.84 70 *e*P **P 20 14 45.1 -2.2**
comp=Z,42nm,0.7s,mb5.3
MAJO LR LR
comp=Z,3μm,20.0s,MS4.9
MAT Matsushiro 28.84 70 P **P 20 14 45.4 -2.0**
MAT *e*S **S 20 19 28.6 -8.0**
MJAR Matsushiro Arr 28.84 70 P **P 20 14 46.2 -1.2**
comp=Z,24nm,1.1s,mb4.8,baz=273,slow=9.9,SNR=28
MJAR LR LR 20 26 50.0
comp=Z,2μm,18.9s,MS4.8,baz=280,slow=38
HABR Khabarovsk 29.07 45 *c e*P **P 20 14 47.9 -1.4**
HABR *e**SP sP 20 14 51.7 -4.9
HABR *e*PPP 20 15 47.3
HABR *e* 20 17 54.1
HABR *e*S **S 20 19 40.3 +0.2**
HABR *e*SS SS 20 21 04.1 -39
HABR *e* 20 25 29.6
HABR pmax pmax
comp=Z,72nm,0.9s,mb5.4
HABR pmax pmax
comp=E,52nm,0.9s
HABR pmax pmax
comp=N,33nm,1.0s
HABR MLR MLR
comp=N,4μm,13.0s,MS5.6
HABR MLR MLR
comp=Z,7μm,11.0s,MS5.5
HABR MLR MLR
comp=E,8μm,10.0s,MS5.6
KGM Kluang 29.27 181 P **P 20 14 51.5 +0.2**
KBL Kabul 29.28 285 *e*P **P 20 14 48.0 -3.3**
KBL pmax pmax
comp=Z,330nm,1.3s,mb5.9
KBL Kabul 29.28 285 *e*P **P 20 14 52.5 +1.2**
comp=Z,334nm,1.3s,mb5.9
CLNS Chul'man 29.30 24 *c i*P **P 20 14 51.9 +0.7**
CLNS *e**PP pP 20 14 57.4 +1.1
CLNS *e*PPP 20 16 00.7
CLNS *e* 20 21 11.6
CLNS pmax pmax
comp=Z,89nm,1.4s,mb5.3
CLNS pmax pmax
comp=N,65nm,1.2s
CLNS pmax pmax
comp=E,48nm,1.1s
CLNS MLR MLR
comp=Z,12μm,12.0s,MS5.7
CLNS MLR MLR
comp=N,6μm,12.0s,MS5.7
CLNS MLR MLR
comp=E,8μm,12.0s,MS5.7
BTM Bintulu 29.40 161 P **P 20 14 53.4 +0.8**
MYKOM Kota Tinggi 29.49 180 P **P 20 14 53.7 +0.4**
SBUM Sibu 29.89 163 P **P 20 14 58.0 +1.1**
POO Poona 29.98 252 *ex* x 20 14 54.6
POO AMb AMB 20 14 59.2
comp=Z,67nm,0.9s,mb5.4
JHJ Hachijo jima 2 30.33 77 LR LR 20 28 06.2
comp=Z,9μm,18.3s,MS5.5,baz=291,slow=38
KAD Karad 30.35 249 *e*P **P 20 14 59.4 -1.6**
KAD AMb AMB 20 15 02.5
comp=Z,50nm,0.7s,mb5.4
KSM Kuching 30.42 167 P **P 20 15 01.9 +0.4**
KSM Kuching 30.42 167 *e*P **P 20 15 01.4 -0.1**

comp=Z,28nm,0.9s,mb5.0
KSM LR LR
comp=Z,3μm,20.0s,MS5.0
BHJ Bhuj 31.36 263 *e*P **P** **20 15 10.0 +0.2**
BHJ AMb AMB 20 15 29.6
comp=Z,99nm,0.9s,mb5.6
DAV Davao City (W) 31.62 136 P **P** **20 15 12.9 +0.7**
comp=Z,114nm,0.3s,mb6.2,baz=343,slow=17,SNR=3.9
DAV Davao City (W) 31.62 136 P **P** **20 15 12.9 +0.7**
DAV LR LR
comp=Z,6μm,20.0s,MS5.3
BVAR Borovoye Array 32.40 322 P **P** **20 15 19.6 +1.0**
comp=Z,24nm,0.8s,mb5.1,baz=116,slow=10,SNR=151
BVAR PcP PcP 20 18 05.7 -0.1
comp=Z,22nm,1.0s,baz=119,slow=5.1,SNR=3.7
BVAR LR LR 20 29 28.6
comp=Z,9μm,19.1s,MS5.5,baz=112,slow=38
BVAR Borovoye Array 32.40 322 P **P** **20 15 19.6 +1.0**
BVAR 20 18 05.7
BRVK Borovoye 32.47 322 P **P** **20 15 20.3 +1.1**
comp=Z,575nm,1.4s,mb6.2,SNR=61
BRVK Borovoye 32.47 322*c i*P **P** **20 15 20.2 +1.0**
BRVK pmax pmax
comp=Z,176nm,1.2s,mb5.8
BRVK MLR MLR
comp=Z,9μm,19.0s,MS5.5
BRVK Borovoye 32.47 322 *e*P **P** **20 15 19.3 0.0**
comp=Z,518nm,1.8s,mb6.1
BRVK LR LR
comp=Z,11μm,19.0s,MS5.6
BRVK Borovoye 32.47 322 ⇑P **P** **20 15 20.4 +1.1**
SNR=78
BRVK ⇑P 20 15 20.4
SNR=78
ASAJ Asahikawa 32.83 56 P **P** **20 15 21.9 -0.7**
comp=Z,60nm,1.0s,mb5.5,baz=265,slow=14,SNR=21
ASAJ LR LR 20 28 22.6
comp=Z,3μm,20.6s,MS5.0,baz=6.0,slow=36
ASAJ Asahikawa 32.83 56 P **P** **20 15 21.9 -0.6**
ASAJ pmax pmax
comp=Z,60nm,1.0s
ASAJ MLR MLR
comp=Z,3μm,20.6s
ERM Erimo 32.96 60 P **P** **20 15 23.1 -0.6**
comp=Z,466nm,0.9s,mb6.4,SNR=10
ERM Erimo 32.96 60 *e*P **P** **20 15 22.8 -0.9**
ERM pmax pmax
comp=Z,151nm,1.3s,mb5.8
ERM MLR MLR
comp=Z,3μm,19.0s,MS5.0
ERM Erimo 32.96 60 *e*P **P** **20 15 22.8 -0.9**
comp=Z,150nm,1.3s,mb5.8
ERM LR LR
comp=Z,3μm,19.0s,MS5.0
YSS Yuzh-Sakhalins 33.51 51*c e*P **P** **20 15 27.6 -0.8**
YSS *e*S **S** **20 20 46.0 -3.4**
YSS *e*SSS 20 23 23.0
YSS pmax pmax
comp=N,30nm,1.2s
YSS pmax pmax
comp=Z,210nm,1.2s,mb5.9
YSS pmax pmax
comp=E,70nm,1.0s
YSS MLR MLR
comp=E,6μm,18.0s
YSS MLR MLR
comp=Z,6μm,18.0s,MS5.3
YSS Yuzh-Sakhalins 33.51 51 *e*P **P** **20 15 27.6 -0.8**
comp=Z,178nm,1.0s,mb6.0
CBIJ Chichi jima 33.60 87 LR LR 20 30 42.8
comp=Z,3μm,18.4s,MS5.1,baz=343,slow=39
YAK Yakutsk 34.87 21*c i*P **P** **20 15 39.4 -0.6**
YAK *e**PP pP 20 15 50.5 +5.4
YAK *e* 20 16 55.2
YAK *e* 20 18 15.0
YAK *e*S **S** **20 21 07.8 -2.3**
YAK *e*SS SS 20 23 20.9 -21
YAK pmax pmax
comp=N,61nm,1.0s
YAK pmax pmax
comp=Z,190nm,1.0s,mb6.0
YAK pmax pmax
comp=E,81nm,1.3s
YAK pmax pmax
comp=Z,55nm,0.8s,mb5.5
YAK pmax pmax
comp=N,78nm,1.2s
YAK pmax pmax
comp=E,77nm,1.3s
YAK smax
comp=N,133nm,2.1s
YAK smax
comp=E,185nm,1.6s
YAK MLR MLR
comp=Z,6μm,12.0s,MS5.6
YAK MLR MLR
comp=E,2μm,10.0s,MS5.5
YAK MLR MLR
comp=N,3μm,11.0s,MS5.5
YAK Yakutsk 34.87 21 *e*P **P** **20 15 39.3 -0.7**
comp=N,300nm,0.8s,mb6.3
YUK Yuzh-Kuril'sk 35.15 57 *e*P **P** **20 15 41.4 -1.3**
YUK *e*PPP 20 17 07.0
YUK pmax pmax
comp=Z,2μm,2.7s,mb6.7
YUK pmax pmax
comp=N,3μm,2.0s
YUK pmax pmax
comp=Z,3μm,2.0s,mb6.9
YUK pmax pmax
comp=E,2μm,2.5s
YUK MLR MLR
comp=Z,5μm,15.0s,MS5.4
YUK MLR MLR
comp=E,6μm,17.0s
ABKAR Akbulak array 37.29 311 *e*P **P** **20 16 01.6 +0.7**
comp=E,42nm,1.2s,mb5.2
ABKT Ailbek 37.87 293 P **P** **20 16 08.0 +2.1**
comp=E,919nm,1.1s,mb6.4
AKTK Aktyubinsk 38.76 313 P **P** **20 16 14.0 +0.8**
AKTO Aktyubinsk 38.76 313 P **P** **20 16 14.0 +0.8**
comp=E,78nm,1.2s,mb5.3,baz=101,slow=8.6,SNR=86
SVE Sverdlovsk 39.10 323⇓*e*P **P** **20 16 17.5 +1.4**
SVE *e*S **S** **20 22 13.9 -0.8**
SVE *e*SS SS 20 25 00.6 -6.6
SVE pmax pmax
comp=Z,448nm,1.2s,mb6.1
SVE MLR MLR
comp=Z,4μm,12.0s,MS5.5
KAPI Kappang 39.29 154 P **P** **20 16 16.2 -1.9**
comp=Z,396nm,1.1s,mb6.1,SNR=11
KAPI Kappang 39.29 154 P **P** **20 16 16.3 -1.8**
comp=Z,69nm,1.1s,mb5.3,baz=317,slow=5.6,SNR=18
KAPI Kappang 39.29 154 P **P** **20 16 16.3 -1.8**
KAPI LR LR
comp=Z,2μm,20.0s,MS4.8
ARU Arti 40.04 322 P **P** **20 16 24.2 +0.4**
comp=Z,1μm,1.2s,mb6.6
ARU Arti 40.04 322*c i*P **P** **20 16 24.5 +0.7**
ARU *e* 20 17 56.2
ARU *e*PPP 20 18 19.6
ARU *e* 20 18 28.8
ARU S **S** **20 22 32.5 +3.7**
ARU 20 26 34.7
ARU pmax pmax
comp=Z,437nm,1.2s,mb6.1
ARU MLR MLR
comp=Z,3μm,17.0s,MS5.3
ARU Arti 40.04 322 *e*P **P** **20 16 24.6 +0.7**
comp=Z,516nm,1.3s,mb6.1
ARU LR LR
comp=Z,3μm,20.0s,MS5.1
GUMO Guam 41.55 106 P **P** **20 16 36.3 -0.6**
comp=Z,43nm,0.8s,mb5.1,baz=322,slow=19,SNR=1.8
GUMO LR LR 20 32 31.2
comp=Z,3μm,18.2s,MS5.2,baz=245,slow=34
BANOM Banah 41.83 275 ⇓P **P** **20 16 40.9 +1.9**
SNR=13
SOKR Solikamsk 42.00 326*c i*P **P** **20 16 41.0 +1.0**
SOKR 20 18 30.2
SOKR S **S** **20 22 58.2 +0.3**
SOKR SS SS 20 26 05.0 +0.2
SOKR pmax pmax
comp=Z,520nm,1.1s,mb6.1
SOKR MLR MLR
comp=Z,6μm,15.0s,MS5.6
BSY Bisya 42.17 270 P **P** **20 16 42.9 +1.0**
SNR=16
HATD Hatta, Dubai 42.34 273 P **P** **20 16 45.0 +1.8**
SNR=24
ASHO Ashiyiah 42.45 273 ⇓P **P** **20 16 45.4 +1.3**
SNR=35
TIXI Tiksi 42.47 11*c i*P **P** **20 16 42.5 -1.1**
TIXI *e* 20 18 19.8
TIXI *e*S **S** **20 23 00.9 -3.6**
TIXI *e*SS SS 20 26 08.5 -5.2
TIXI pmax pmax
comp=Z,166nm,1.4s,mb5.5
TIXI MLR MLR
comp=Z,13μm,16.0s,MS5.9
FAQ Al Faqa, Dubai 42.83 274 ⇑P **P** **20 16 48.5 +1.4**
SNR=22
ASUD Al Ashush, Dub 43.09 273 ⇓P **P** **20 16 50.9 +1.6**
SNR=17
COCO West Island 43.90 190 PFAKE 20 17 10.0 +14
COCO LR LR
comp=Z,4μm,22.0s,MS5.3
SEY Seymchan 43.90 30*c i*P **P** **20 16 55.0 -0.3**
PEA0B Petropavlovsk- 44.10 44 *e*P **P** **20 16 56.0 -1.0**
PETK Petropavlovsk- 44.10 44 P **P** **20 16 56.6 -0.4**
comp=Z,42nm,0.9s,mb5.2,baz=218,slow=3.0,SNR=27
PETK LR LR 20 37 23.5
comp=Z,4μm,18.6s,MS5.4,baz=254,slow=39
PET Petropavlovsk 44.66 45 *e*P **P** **20 17 03.6 +2.1**
PET *e* 20 18 51.2
PET *e*S **S** **20 23 40.0 +3.0**
PET *e*SS SS 20 27 01.6 +4.6
PET pmax pmax
comp=Z,86nm,0.9s,mb5.6
PET pmax pmax
comp=Z,800nm,4.3s
PET pmax pmax
comp=Z,400nm,8.8s
PET pmax pmax
comp=Z,700nm,4.7s
PET pmax pmax
comp=Z,400nm,6.6s
PET MLR MLR
comp=Z,6μm,17.0s,MS5.6
PET MLR MLR
comp=Z,6μm,18.0s
PET Petropavlovsk 44.66 45 *e*P **P** **20 16 58.4 -3.1**
comp=Z,138nm,1.3s,mb5.6
PET LR LR
comp=Z,5μm,19.0s,MS5.5
MAK Makhachkala 45.56 301*c i*P **P** **20 17 09.4 +0.5**
MAK *e* 20 18 45.6
MAK *e* 20 19 00.8
MAK *e*PPP 20 19 39.8
MAK *e*S **S** **20 23 53.2 +2.9**
MAK *e* 20 27 00.9
MAK *e*SSS 20 28 00.9
MAK pmax pmax
comp=Z,141nm,1.6s,mb5.7
MAK MLR MLR
comp=Z,4μm,12.0s,MS5.6
MTA Mtatsminda 47.70 300 P **P** **20 17 26.0 +0.4**
TBLG Delisi 47.73 300 P **P** **20 17 26.5 +0.6**
GNI Garni 47.96 298*c i*P **P** **20 17 29.5 +1.8**
GNI pmax pmax
comp=Z,153nm,1.7s
GNI MLR MLR
comp=Z,3μm,25.0s
GNI Garni 47.96 298 *e*P **P** **20 17 29.3 +1.7**
comp=Z,118nm,1.1s,mb5.8
GNI LR LR
comp=Z,3μm,20.0s,MS5.2
GNI Garni 47.96 298 P **P** **20 17 29.9 +2.3**
SNR=17
GNI P 20 17 29.9
SNR=17
UMR Umm Al-Rimmam 47.96 283 *e*P **P** **20 17 27.8 -0.1**
UMR AMb AMB 20 17 30.1
comp=Z,256nm,1.7s,mb6.0
KBD Kabd 48.09 283 *e*P **P** **20 17 28.8 0.0**
KBD AMb AMB 20 17 31.3
comp=Z,164nm,1.6s,mb5.8
GOR Gori 48.17 300 P **P** **20 17 30.6 +1.4**
MIB Mutribah 48.20 283 *e*P **P** **20 17 29.5 -0.1**
MIB AMb AMB 20 17 32.0
comp=Z,417nm,1.6s,mb6.2
ZEI Tsey 48.22 301 *e*P **P** **20 17 27.9 -1.7**
ZEI pmax pmax
comp=Z,54nm,1.4s,mb5.4
ZEI pmax pmax
comp=E,33nm,1.0s
ZEI pmax pmax
comp=N,11nm,0.7s
KEH Kehvi 48.25 301 P **P** **20 17 29.8 -0.1**
RDF Al-Radifah 48.29 282 *e*P **P** **20 17 30.7 +0.4**
RDF AMb AMB 20 17 33.2
comp=Z,462nm,1.8s,mb6.2
ONI Oni 48.57 301 P **P** **20 17 34.1 +1.8**
DGAR Diego Garcia 48.93 223 PFAKE 20 17 50.0 +15
DGAR LR LR
comp=Z,2μm,19.0s,MS5.1
KIV Kislovodsk 48.95 303 P **P** **20 17 36.7 +1.4**
comp=Z,764nm,1.4s,mb6.5,SNR=30
KIV Kislovodsk 48.95 303*c e*P **P** **20 17 36.2 +0.9**
KIV *e* 20 19 25.9
KIV *e*S **S** **20 24 41.3 +2.7**
KIV *e*SS SS 20 28 13.5 +4.3
KIV pmax pmax
comp=Z,189nm,1.2s,mb6.0
KIV pmax pmax
comp=Z,473nm,10.0s
KIV MLR MLR
comp=Z,4μm,16.0s,MS5.5
KIV Kislovodsk 48.95 303 *e*P **P** **20 17 36.2 +1.0**
comp=Z,268nm,1.3s,mb6.1
KIV LR LR
comp=Z,4μm,19.0s,MS5.4
KIV Kislovodsk 48.95 303 ⇑P **P** **20 17 37.6 +2.3**
SNR=61
KIV ⇑P 20 17 37.6
SNR=61
VRHR Novokhopersk 49.16 312*c i*P **P** **20 17 36.6 -0.1**
VRHR *e**PP pP 20 17 42.8 +0.8
VRHR *e* 20 19 31.7
VRHR *e*S **S** **20 24 40.7 -0.6**
VRHR *e*SS SS 20 28 15.0 +2.7
VRHR pmax pmax
comp=Z,190nm,1.3s,mb6.0
VRHR pmax pmax
comp=N,30nm,1.6s
VRHR pmax pmax
comp=E,130nm,0.9s
VRHR pmax pmax
comp=Z,250nm,7.6s
VRHR pmax pmax
comp=N,730nm,15.2s
VRHR pmax pmax
comp=E,180nm,9.1s
VRHR smax
comp=E,110nm,1.4s
VRHR smax
comp=Z,190nm,4.0s
VRHR smax
comp=N,100nm,1.3s
VRHR MLR MLR
comp=Z,2μm,14.0s,MS5.3
VRHR MLR MLR
comp=N,5μm,20.0s
VRHR MLR MLR
comp=E,2μm,13.0s
BHD Baghdad 49.68 289 *i* P **P** **20 17 38.0 -3.0**
BHD *e*S **S** **20 24 42.0 -7.1**
ARTV Artvin 49.91 299⇑*i*P **P** **20 17 44.0 +1.5**
DAGI Agillar 49.93 299⇑*i*P **P** **20 17 44.3 +1.5**
MSL Mosul 49.94 293 *e*P **P** **20 17 45.0 +2.1**
MSL *e*S **S** **20 24 55.0 +2.4**
DBOC Borcka 50.07 300⇑*i*P **P** **20 17 45.1 +1.3**
DDEM Demirkent 50.09 299⇑*i*P **P** **20 17 45.2 +1.3**
HOMI Horasan 50.12 298⇑*i*P **P** **20 17 46.4 +2.2**
VOR Voronezh 50.66 313⇑*i*P **P** **20 17 47.0 -1.1**
VOR pmax pmax
comp=Z,400nm,1.6s,mb6.1
KLMR Klimovskoe 50.67 325⇑*i*P **P** **20 17 48.2 +0.2**
KLMR *e* 20 19 44.8
KLMR *e*S **S** **20 25 02.5 +0.4**
KLMR *e*SS SS 20 28 38.4 +2.4
KLMR pmax pmax
comp=Z,595nm,1.4s,mb6.3
VSR Storozhevoye 50.70 313*c i*P **P** **20 17 48.2 -0.2**
VSR *e**PP pP 20 17 54.6 +0.8
VSR *e* 20 19 43.7
VSR *e*S **S** **20 25 03.4 +0.6**
VSR pmax pmax
comp=Z,190nm,1.4s,mb5.8
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,200nm,1.2s
VSR pmax pmax
comp=Z,430nm,11.5s
VSR pmax pmax
comp=N,40nm,5.6s
VSR pmax pmax
comp=E,320nm,14.0s
VSR smax
comp=N,480nm,5.1s
VSR smax
comp=Z,300nm,4.9s
VSR smax
comp=E,190nm,3.0s
VSR MLR MLR
comp=E,2μm,12.0s,MS5.3
VSR MLR MLR
comp=Z,3μm,12.0s,MS5.5
VSR MLR MLR
comp=N,720nm,13.0s,MS5.3
BILL Bilibino 50.97 25*c i*P **P** **20 17 49.5 -0.7**
BILL *e* pP 20 17 56.2 +0.7
BILL *e* 20 19 05.1
BILL *e* 20 19 46.1
BILL *e*S **S** **20 25 06.2 +0.2**
BILL *e*SS SS 20 28 39.8 -0.7
BILL pmax pmax
comp=Z,137nm,1.0s,mb5.8
BILL MLR MLR
comp=Z,4μm,15.0s,MS5.6
BILL Bilibino 50.97 25 *e*P **P** **20 17 49.6 -0.6**
comp=Z,168nm,1.1s,mb5.9
SOC Sochi 51.14 303*c i*P **P** **20 17 52.0 +0.2**
SOC *e**SP sP 20 17 57.1 -2.1
SOC *e* 20 19 48.8
SOC *e*PPP 20 20 46.2
SOC *e*S **S** **20 25 11.5 +2.5**
SOC *e**SS sS 20 25 17.0 -0.8
SOC pmax pmax
comp=Z,86nm,1.1s,mb5.6
SOC pmax pmax
comp=Z,263nm,4.3s
SOC MLR MLR
comp=Z,3μm,16.0s,MS5.4
MOS Moscow 51.47 319 *e*P **P** **20 17 51.1 -3.1**
MOS *e* 20 19 06.6
MOS *e* 20 19 51.5
MOS *e*S **S** **20 25 10.4 -2.9**
MOS pmax pmax
comp=E,232nm,1.6s
MOS pmax pmax
comp=N,118nm,1.1s
MOS pmax pmax
comp=Z,570nm,1.4s,mb6.3
MOS smax
comp=N,400nm,2.2s
MOS MLR MLR
comp=E,6μm,16.0s
MOS MLR MLR
comp=Z,6μm,16.0s,MS5.7
KAKA Kakadu 51.76 144 *e*P **P** **20 17 54.1 -2.6**
comp=Z,44nm,0.9s,mb5.4
KAKA Kakadu 51.76 144 *e*P **P** **20 17 53.8 -2.9**
comp=Z,174nm,0.9s,mb6.0
OBN Obninsk 52.09 318 P **P** **20 17 58.7 -0.1**
comp=Z,889nm,1.2s,mb6.6,SNR=22
OBN Obninsk 52.09 318*c i*P **P** **20 17 58.5 -0.3**
OBN *e* 20 18 05.7
OBN *e*S **S** **20 25 23.1 +1.2**
OBN *e*SS SS 20 29 02.2 +3.5
OBN pmax pmax
comp=Z,294nm,1.2s,mb6.1
OBN MLR MLR
comp=Z,6μm,19.0s,MS5.7
OBN Obninsk 52.09 318 *e*P **P** **20 17 58.8 0.0**
comp=Z,384nm,1.4s,mb6.1
OBN LR LR
comp=Z,2μm,20.0s,MS5.1
ANN Anapa 52.56 305 *e*P **P** **20 18 01.7 -0.8**
ANN *e**PP pP 20 18 12.2 +4.4
ANN *e* 20 19 11.9
ANN *e*PPP 20 21 11.3
ANN *e*S **S** **20 25 31.5 +2.8**
ANN pmax pmax
comp=Z,131nm,1.4s,mb5.7
ANN MLR MLR
comp=N,2μm,19.0s,MS5.2
ANN MLR MLR
comp=E,2μm,19.0s,MS5.2
ANN MLR MLR
comp=Z,2μm,19.0s,MS5.2
ELZG Elazig 52.66 297⇑*i*P **P** **20 18 04.6 +1.3**
GRSN GIRESUNGRSN 52.67 300⇑*i*P **P** **20 18 03.1 -0.3**
MALT Malatya 53.13 297 *e*P **P** **20 18 07.8 +1.1**
MALT pmax pmax
comp=Z,33nm,0.9s,mb5.3
MALT MLR MLR
comp=Z,3μm,19.0s,MS5.3
MALT Malatya 53.13 297 *e*P **P** **20 18 07.8 +1.1**
comp=Z,33nm,0.9s,mb5.3
MALT LR LR
comp=Z,3μm,19.0s,MS5.3
MALT Malatya 53.13 297⇑*i*P **P** **20 18 07.8 +1.1**
LVZ Lovozero 53.47 334 P **P** **20 18 08.4 -0.4**
comp=Z,605nm,1.1s,mb6.4,SNR=7.1
LVZ Lovozero 53.47 334*c i*P **P** **20 18 08.6 -0.2**
LVZ pmax pmax
comp=Z,96nm,1.0s,mb5.7
LVZ MLR MLR
comp=Z,12μm,18.0s,MS6.0
LVZ Lovozero 53.47 334 PFAKE 20 18 20.0 +11
LVZ LR LR
comp=Z,14μm,21.0s,MS6.0
FITZ Fitzroy Crossi 53.51 154 *e*P **P** **20 18 07.9 -1.7**
comp=Z,58nm,0.9s,mb5.5
FITZ Fitzroy Crossi 53.51 154 P **P** **20 18 08.6 -1.0**
comp=Z,30nm,1.1s,mb5.2,baz=350,slow=6.0,SNR=32
FITZ Fitzroy Crossi 53.51 154 *e*P **P** **20 18 08.5 -1.2**
comp=Z,49nm,1.0s,mb5.4
AKCD Akcadag 53.52 297⇓*i*P **P** **20 18 11.1 +1.5**
ERBA Erbaa 53.85 300⇑*i*P **P** **20 18 12.5 +0.5**
APA Apatity 53.91 333⇑*i*P **P** **20 18 11.2 -0.8**
APA *e*S **S** **20 25 47.0 +0.7**
APA pmax pmax
comp=Z,1μm,4.6s
APA MLR MLR
comp=Z,24μm,14.0s,MS6.4
SMY Shemya 54.00 45 *e*P **P** **20 18 12.5 -0.4**
SMY pmax pmax
comp=Z,220nm,0.9s,mb6.1
SMY MLR MLR
comp=Z,2μm,20.0s,MS5.2
SMY Shemya 54.00 45 *e*P **P** **20 18 12.5 -0.4**
comp=Z,220nm,0.9s,mb6.1
SMY LR LR
comp=Z,2μm,20.0s,MS5.2
GZT Gaziantep 54.02 296⇑*i*P **P** **20 18 14.3 +1.0**
MBWA Marble Bar 54.47 162 *e*P **P** **20 18 15.6 -1.0**
comp=Z,44nm,0.9s,mb5.4
MBWA LR LR
comp=Z,1μm,22.0s,MS5.0
MBWA Marble Bar 54.47 162 P **P** **20 18 16.8 +0.3**
SNR=5.1
MBWA P 20 18 16.8
SNR=5.1
KUZU Kuzuini 54.55 295⇑*i*P **P** **20 18 18.1 +0.9**
JOF Joensuu 54.63 328 *e*P **P** **20 18 16.4 -0.9**
JOF pmax pmax
comp=Z,77nm,0.6s,mb5.9
JOF Joensuu 54.63 328 *e*p **P** **20 18 16.4 -0.9**
comp=Z,77nm,0.6s,mb5.9
SIM Simferopol' 54.86 305*c i*P **P** **20 18 19.6 +0.3**
SIM *i* 20 20 31.0
SIM *e*PPP 20 21 42.0
SIM *e*S **S** **20 26 02.0 +2.3**
SIM *i* PS 20 26 11.0
SIM pmax pmax

comp=Z,57nm,1.0s,mb5.6
SIM MLR MLR
comp=Z,2μm,22.8s,MS5.2
PUL Pulkovo 55.23 324⇑*i*P P 20 18 22.5 +0.8
PUL pmax pmax
comp=Z,128nm,0.4s,mb6.3
PUL MLR MLR
comp=Z,5μm,16.0s,MS5.7
COBT Iskenderun 55.26 295⇑*i*P P 20 18 22.4 +0.1
CTKT Corum 55.31 300⇓*i*P P 20 18 23.6 +1.0
YAYL Yayladag 55.51 294⇑*i*P P 20 18 24.4 +0.3
YURE YUREGIR 55.66 296⇑*i*P P 20 18 26.2 +1.1
CDAG Cicekdag 55.87 299⇑*i*P P 20 18 26.9 +0.3
ILGA Ilgaz 56.00 301⇑*i*P P 20 18 28.3 +0.7
HWQ Hawqa 56.14 292 *e*P P 20 18 29.4 +0.7
GULE Gulek 56.19 296⇑*i*P P 20 18 30.1 +1.1
KEV Kevo 56.34 336 *e*P P 20 18 28.4 -1.1
KEV pmax pmax
comp=Z,150nm,1.1s,mb5.9
KEV Kevo 56.34 336 *e*P P 20 18 29.4 -0.1
comp=Z,315nm,1.4s,mb6.2
KEV LR LR
comp=Z,3μm,20.0s,MS5.4
KEV Kevo 56.34 336 *e*p P 20 18 28.4 -1.1
comp=Z,150nm,1.1s,mb5.9
ELDT Eldivan 56.35 300⇑*i*P P 20 18 30.8 +0.7
BR131 Keskin Array S 56.39 299 *e*P P 20 18 30.5 +0.1
BR131 LR LR
comp=Z,1μm,20.0s,MS4.9
BRTR Keskin Array B 56.39 299 P P 20 18 30.4 0.0
comp=Z,8.2nm,0.9s,mb4.8,baz=101,slow=6.4,SNR=56
BRTR PcP PcP 20 19 26.7 -0.7
comp=Z,14nm,0.9s,baz=64,slow=2.9,SNR=4.3
RCY Rachaya 56.48 292 *e*P P 20 18 32.1 +1.0
BHL Bhannes 56.49 292 *e*P P 20 18 31.8 +0.6
ARCES ARCESS Array B 56.87 336 P P 20 18 33.4 +0.1
comp=Z,55nm,0.9s,mb5.6,baz=77,slow=8.6,SNR=79
ARCES PcP PcP 20 19 27.7 -0.9
comp=Z,24nm,0.6s,baz=111,slow=4.0,SNR=5.9
ARCES LR LR 20 44 03.5
comp=Z,3μm,21.9s,MS5.3,baz=283,slow=37
ARCES ARCESS Array B 56.87 336 P P 20 18 33.4 +0.1
ARCES 20 19 27.7
ARE0 ARCESS Array S 56.87 336 *e*P P 20 18 33.6 +0.3
KAF Kangasniemi 56.99 327 *e*P P 20 18 32.8 -1.5
KAF pmax pmax
comp=Z,98nm,1.0s,mb5.8
KAF Kangasniemi 56.99 327 *e*p P 20 18 32.8 -1.5
comp=Z,98nm,1.0s,mb5.8
AKASG Malin Array Be 57.00 313 P P 20 18 33.9 -0.7
comp=Z,25nm,0.8s,mb5.3,baz=72,slow=6.5,SNR=110
AKASG LR LR 20 44 34.1
comp=Z,4μm,19.1s,MS5.5,baz=75,slow=38
AKASG Malin Array Be 57.00 313 *i* P P 20 18 34.0 -0.5
AKASG pmax pmax
comp=Z,25nm,0.9s
AKBB Malin Array Si 57.00 313 *e*P P 20 18 34.0 -0.5
MICGM Minsk 57.15 318⇓*e*P P 20 18 33.0 -2.5
FINES FINESS Array B 57.17 326 P P 20 18 35.5 0.0
comp=Z,156nm,1.1s,mb6.0,baz=78,slow=7.4,SNR=121
MNK Minsk 57.18 318⇓*e*P P 20 18 33.0 -2.7
MNK *e*S **S 20 26 28.0 -2.3**
MNK pmax pmax
comp=Z,450nm,1.0s,mb6.5
MNK MLR MLR
comp=Z,17μm,16.0s,MS6.2
MNK MLR MLR
comp=E,11μm,16.0s
VSU Vasula 57.20 322*c* *i*P P 20 18 35.9 +0.1
VSU pmax pmax
comp=Z,268nm,1.1s,mb6.2
VSU MLR MLR
comp=Z,4μm,17.0s,MS5.5
IDID Didziasalis 57.67 319 *e*P P 20 18 39.8 +0.6
KTK1 Kautokeino 57.70 335 *e*P P 20 18 36.8 -2.4
NACGM Naroch 57.72 318 *e*P P 20 18 36.0 -3.5
KDHN Kadinhani 57.86 298⇑*i*P P 20 18 40.5 -0.3
IZAR Zarasai 57.87 319 *e*P P 20 18 41.2 +0.6
IIGN Ignalina 57.95 319 *e*P P 20 18 41.8 +0.6
ISAL Salakas 57.97 319 *e*P P 20 18 41.7 +0.4
CSS Prodhromos 57.99 294 PFAKE 20 18 50.0 +8.3
CSS LR LR
comp=Z,2μm,19.0s,MS5.3
KIS Kishinev 58.03 309⇑*i*P P 20 18 39.0 -2.9
comp=Z,300nm,1.0s,mb6.3
KIS Kishinev 58.03 309 *e*PP PP 20 20 57.0 +6.8
KIS Kishinev 58.03 309⇑*i*P P 20 18 39.0 -2.9
KIS *i* 20 18 48.0
KIS *e* 20 20 57.0
KIS *e*PPP 20 22 12.0
KIS *e*S **S 20 26 38.0 -3.8**
KIS *e*PS 20 26 50.0
KIS pmax pmax
comp=Z,300nm,1.0s,mb6.3
KIS pmax pmax
comp=Z,900nm,2.0s,mb6.5
KIS MLR MLR
comp=N,1μm,13.0s,MS5.5
KIS MLR MLR
comp=Z,3μm,13.0s,MS5.5
KIS MLR MLR
comp=E,2μm,12.0s,MS5.5
KIS MLR MLR
comp=Z,2μm,14.0s
HENT Hendek 58.12 301⇑*i*P P 20 18 41.7 -0.9
GAZI Gazipasa 58.38 296⇑*i*P P 20 18 43.6 -0.9
MSEY Mahe Island 58.41 241 PFAKE 20 19 00.0 +15
MSEY LR LR
comp=Z,1μm,19.0s,MS5.1
TLCR 58.47 307⇓P P 20 18 45.1 +0.2
TLCR 58.47 307⇓*i*P P 20 18 45.1 +0.2
ESKT Eskisehir 58.52 300⇑*i*P P 20 18 45.0 -0.4
LEOM Leova 58.54 308⇓*i*P P 20 18 51.1 +5.7
BJO Bjornoya 58.58 342 AMS AMS 20 48 44.6
comp=Z,4μm,12.1s,MS5.7
BORA Eskisehir 58.71 300⇑*i*P P 20 18 46.2 -0.6
IAS Iasi 58.82 309 P P **20 18 47.2 -0.2**
COEN Coen 58.83 134 *e*P P 20 18 47.3 -0.4
comp=Z,784nm,1.0s,mb6.7
WRAB Tennant Creek 58.87 146 P P **20 18 47.0 -0.9**
comp=Z,1μm,1.0s,mb6.8,SNR=49
WRAB Tennant Creek 58.87 146 *e*P P 20 18 47.3 -0.6
WRAB pmax pmax
comp=Z,250nm,1.1s,mb6.2
WRAB Tennant Creek 58.87 146 *e*P P 20 18 47.3 -0.6
comp=Z,250nm,1.1s,mb6.2
WRA Warramunga Arr 58.87 146 P P **20 18 47.4 -0.5**
comp=Z,56nm,0.7s,mb5.7,baz=338,slow=7.4,SNR=215
WRA S **S 20 26 49.5 -3.6**
comp=Z,8.2nm,1.2s,baz=326,slow=14,SNR=11
WRA PKP2bc 20 48 32.8
comp=Z,2.8nm,0.9s,baz=134,slow=1.9,SNR=7.1
WRA PKP2ab 20 48 45.9
comp=Z,4.1nm,1.0s,baz=163,slow=1.9,SNR=6.3
WRA Warramunga Arr 58.87 146 P P **20 18 47.4 -0.5**
WRA S **S 20 26 49.5 -3.5**
WRA Warramunga Arr 58.87 146 P P **20 18 47.4 -0.5**
WRA S **S 20 26 49.5 -3.6**
WRA ⇑*e* 20 48 32.8
WRA P'P'ab 20 48 45.9
WB2 Warramunga Arr 58.87 146 *e*P P 20 18 47.2 -0.7
CFR Carcaliu 58.93 307⇑P P 20 18 48.6 +0.4
CFR Carcaliu 58.93 307⇑*i*P P 20 18 48.6 +0.4
SPB4 Spitsbergen Ar 58.97 346 *e*P P 20 18 46.3 -1.6
TRO Tromso 59.16 336 *e*P P 20 18 48.8 -0.6
TRO AMB AMB 20 19 04.2
comp=Z,177nm,3.6s
TRO *e*S **S 20 26 54.8 -1.0**
TRO *e*SS SS 20 30 56.0 +6.6
TRO AMS AMS 20 46 10.7
comp=Z,5μm,13.4s,MS5.8
HARR Harsova 59.20 306⇑*i*P P 20 18 56.9 +6.9
HSP Hornsund 59.25 345 *e*P P 20 18 50.3 +0.4
ISP Isparta 59.27 298 *e*P P 20 18 49.9 -0.7
ISP pmax pmax
comp=Z,124nm,1.2s,mb5.8
ISP MLR MLR
comp=Z,1μm,22.0s,MS5.0
ISP Isparta 59.27 298 *e*P P 20 18 49.9 -0.7
comp=Z,124nm,1.2s,mb5.8
ISP LR LR
comp=Z,1μm,22.0s,MS5.0
ATD Arta Tunnel 59.40 265 LR LR 20 44 33.2
comp=Z,1μm,19.4s,MS5.0,baz=267,slow=36
ULDT Uludag 59.60 301⇑*i*P P 20 18 50.3 -2.6

GDZ Gediz 59.66 300⇑*i*P P 20 18 52.7 -0.6
VRI Vrincioaia 59.71 308 P P **20 18 54.3 +0.8**
VRI Vrincioaia 59.71 308⇑*i*P P 20 18 54.4 +0.9
KBS Kingsbay 59.76 347 *e*P P 20 18 53.4 0.0
KBS *e*S **S 20 27 04.9 +1.7**
KBS AMS AMS 20 48 19.4
comp=Z,3μm,16.1s,MS5.6
KBS Kingsbay 59.76 347*c*e*P P 20 18 53.1 -0.3
KBS pmax pmax
comp=Z,76nm,1.2s,mb5.6
KBS Kingsbay 59.76 347 *e*P P 20 18 53.4 0.0
comp=Z,87nm,1.3s,mb5.6
KBS LR LR
comp=Z,3μm,20.0s,MS5.5
PLOR Plostina 59.77 308⇑P P 20 18 54.8 +0.9
PLOR Plostina 59.77 308⇑*i*P P 20 18 54.8 +0.9
KHAL Karahalli 59.87 299⇑*i*P P 20 18 54.3 -0.5
GAMB Gambell 59.88 31 *e*P P 20 18 53.4 -1.0
comp=Z,122nm,1.2s,mb5.8
GAMB *e* pP 20 19 00.2 +0.4
SUW Suwalki 59.95 318 *i* P P 20 18 54.7 -0.3
SUW LMZ 20 45 49.0
comp=Z,7μm,18.8s
SUW Suwalki 59.95 318 *e*P P 20 18 54.7 -0.3
SUW pmax pmax
comp=Z,240nm,0.9s,mb6.2
SUW Suwalki 59.95 318 *e*P P 20 18 54.7 -0.3
comp=Z,240nm,0.9s,mb6.2
ISR Istrita 60.04 307⇑*i*P P 20 18 57.6 +1.8
GOLH Golhisar 60.17 298⇑*i*P P 20 18 55.6 -1.2
DURS Dursunbey 60.25 301⇑*i*P P 20 18 57.0 -0.3
BUR01 Bucovina Ar. S 60.26 310 P P **20 18 58.1 +0.9**
BURAR Bucovina Array 60.26 310 P P **20 18 57.5 +0.3**
BURAR Bucovina Array 60.26 310⇑*i*P P 20 18 57.4 +0.1
BUR08 Bucovina Ar. S 60.26 310 *e*P P 20 18 57.2 0.0
MLR Muntele Rosu 60.34 308⇑*i*P P 20 18 58.5 +0.6
DNZL Cakiroluk 60.42 298⇑*i*P P 20 18 56.2 -2.3
LVV L'vov 60.45 313⇓*i*P P 20 18 58.6 +0.1
LVV *e* 20 21 09.6
LVV *e*S **S 20 27 11.9 -1.0**
LVV *e*SS SS 20 31 18.9 +8.5
MANT Manisa 60.53 299⇑*i*P P 20 18 58.9 -0.4
JMB Yambol 60.76 304 P P **20 19 01.5 +0.7**
BALY Balya 60.84 301⇑*i*P P 20 19 00.9 -0.5
VOIR 60.96 308 P P **20 19 02.2 +0.1**
VOIR 60.96 308⇑*i*P P 20 19 02.8 +0.7
SZH Strazhica 60.98 305 P P **20 19 02.0 -0.3**
KWP Kalwaria Pacla 61.33 313 *i* P P 20 19 05.1 +0.6
KWP LMZ 20 46 45.1
comp=Z,3μm,21.1s
KWP Kalwaria Pacla 61.33 313 *e*P P 20 19 05.0 +0.5
KWP pmax pmax
comp=Z,409nm,1.3s,mb6.4
KWP MLR MLR
comp=Z,4μm,19.0s,MS5.6
KWP Kalwaria Pacla 61.33 313 *e*P P 20 19 05.0 +0.5
comp=Z,409nm,1.3s,mb6.4
KWP LR LR
comp=Z,4μm,19.0s,MS5.6
KWP Kalwaria Pacla 61.33 313⇑*i*P P 20 19 05.2 +0.7
LOF Lofoten 61.35 335 *e*P P 20 19 05.5 +1.1
LOF AMB AMB 20 19 06.8
comp=Z,220nm,1.3s,mb6.1
BMR Baia Mare 61.36 311 P P **20 19 05.6 +0.8**
BMR Baia Mare 61.36 311⇑*i*P P 20 19 05.7 +0.9
MOR8 Moi Rana 61.46 332⇑*i*P P 20 19 03.4 -1.7
MOR8 *e*pP pP 20 19 10.0 -0.5
MOR8 *e*sP sP 20 19 13.4 +0.8
ALN Alexandroupoli 61.62 303 P P **20 19 06.1 -0.5**
WAR Warsaw 61.65 316 *e*P P 20 19 07.6 +1.0
WAR LMZ 20 46 56.6
comp=Z,6μm,19.9s
BLCB Balcova 61.70 300 P P **20 19 06.6 -0.6**
GCAM G?zelcaml? 61.78 299⇑*i*P P 20 19 07.5 -0.2
KOLS Kolonicke sedl 61.79 312 *e*P P 20 19 07.7 0.0
KOLS pmax pmax
comp=Z,33nm,1.4s,mb5.3
KOLS Kolonicke sedl 61.79 312 *e*P P 20 19 07.7 0.0
comp=Z,32nm,1.4s,mb5.3
KOLS Kolonicke sedl 61.79 312 *e*P P 20 19 07.7 0.0
KDZ Kurdzhali 61.84 304 P P **20 19 08.8 +0.7**
UZH Uzhgorod 61.87 312 *e*P P 20 19 08.2 +0.1
UZH *e* 20 19 10.6
UZH *e* 20 19 20.6
UZH *e* 20 21 30.0
UZH *e*S **S 20 27 30.0 -1.0**
UZH *e*SP 20 27 43.0
UZH *e*SS SS 20 31 37.0 +4.4
UZH *e*SSS 20 34 22.0
UZH MLR MLR
comp=N,1μm,12.5s,MS5.6
UZH MLR MLR
comp=E,2μm,12.5s,MS5.6
UZH MLR MLR
comp=Z,1μm,12.5s,MS5.3
ASAR Alice Springs 61.88 149 P P **20 19 08.2 -0.3**
comp=Z,22nm,0.8s,mb5.4,baz=328,slow=6.1,SNR=94
ASAR S **S 20 27 29.2 -2.4**
comp=Z,3.8nm,1.1s,baz=328,slow=12,SNR=7.3
ASAR PKPPKP 20 48 16.1
comp=Z,3.3nm,1.2s,baz=128,slow=2.8,SNR=7.4
ASAR PKP2bc 20 48 25.6
comp=Z,1.2nm,0.8s,baz=145,slow=2.4,SNR=6.4
ASAR Alice Springs 61.88 149 P P **20 19 08.2 -0.3**
ASAR S **S 20 27 29.3 -2.3**
ASAR Alice Springs 61.88 149 P P **20 19 08.2 -0.3**
ASAR S **S 20 27 29.2 -2.4**
ASAR P'P' 20 48 16.1
ASAR ⇑*e* 20 48 25.6
RDO Rodhopi 61.91 303 P P **20 19 08.2 -0.4**
URLA Izmir 62.03 300⇑*i*P P 20 19 06.2 -3.2
DRGR 62.13 310⇑*i*P P 20 19 10.6 +0.7
PLD Plovdiv 62.20 304 P P **20 19 10.5 0.0**
STHS Stebnicka Huta 62.30 313 *e*P P 20 19 11.4 +0.3
STHS pmax pmax
comp=Z,24nm,1.3s,mb5.2
STHS Stebnicka Huta 62.30 313 *e*P P 20 19 11.4 +0.3
comp=Z,24nm,1.3s,mb5.2
STHS Stebnicka Huta 62.30 313 *e*P P 20 19 11.4 +0.3
RZN Rozhen 62.32 304 P P **20 19 11.4 +0.1**
PGB Panagyurishte 62.44 305 P P **20 19 12.6 +0.5**
GZR Gura Zlata 62.51 308 P P **20 19 13.1 +0.6**
GZR Gura Zlata 62.51 308⇓*i*P P 20 19 13.3 +0.8
KARP Karpathos 62.56 297 *e*P P 20 19 12.7 -0.3
LIA Limnos Island 62.57 302 *e*P P 20 19 11.1 -1.9
LIA Limnos Island 62.57 302 P P **20 19 12.3 -0.7**
NIE Niedzica 62.88 313 *e*P P 20 19 15.9 +1.0
NIE *e*SP sP 20 19 22.0 -0.4
NSS Namsos 62.88 331 *e*P P 20 19 12.1 -2.6
NSS AMS AMS 20 48 24.2
comp=Z,6μm,12.7s,MS6.0
OJC Ojcow 62.96 314 *i* P P 20 19 15.6 +0.2
OJC *e*pP pP 20 19 19.8 -1.1
OJC *e*sP sP 20 19 22.1 -0.8
OJC *e*S **S 20 27 42.0 -2.7**
OJC L 20 47 59.5
comp=Z,5.6nm,20.0s
MMB Musomiste 63.05 304 P P **20 19 15.5 -0.7**
KECS Kecovo 63.06 312 *e*P P 20 19 16.4 +0.3
KECS pmax pmax
comp=Z,35nm,1.7s,mb5.2
KECS Kecovo 63.06 312 *e*P P 20 19 16.4 +0.3
comp=Z,35nm,1.7s,mb5.2
KECS Kecovo 63.06 312 *e*P P 20 19 16.3 +0.2
VTS Vitosha 63.09 305 P P **20 19 17.0 +0.5**
BZS Buzias 63.21 309 P P **20 19 17.2 0.0**
BZS Buzias 63.21 309⇑*i*P P 20 19 17.0 -0.2
OUR Ouranopolis 63.29 303 P P **20 19 17.0 -0.8**
SRS Serrai 63.31 304 P P **20 19 17.2 -0.7**
KKB Krupnik 63.42 304 P P **20 19 18.4 -0.2**
ZKR Zakros 63.44 296 *e*P P 20 19 19.5 +0.6
ZKR Zakros 63.44 296 P P **20 19 18.7 -0.2**
GKP Gorka Klasztor 63.56 318 *e*P P 20 19 19.4 0.0
GKP LMZ 20 48 16.6
comp=Z,8μm,18.5s
THR1 Thera Island 63.56 298 P P **20 19 19.1 -0.6**
SOH Sokhos 63.58 303 *e*P sP 20 19 30.5 +3.3
SOH Sokhos 63.58 303 P P **20 19 18.8 -0.9**
PSZ Piszkesteto 63.61 312 *e*P P 20 19 19.0 -0.7
comp=Z,157nm,1.6s,mb5.8
PSZ LR LR
comp=Z,3μm,19.0s,MS5.4
PSZ Piszkesteto 63.61 312⇑*e*P P 20 19 20.1 +0.3

PSZ Piszkesteto 63.61 312⇑*i*P P 20 19 19.5 -0.3
PAIG Paliouri 63.65 302 P P **20 19 19.7 -0.5**
PLG Polygyros 63.66 303 *e*P P 20 19 19.9 -0.4
PLG Polygyros 63.66 303 P P **20 19 19.4 -0.9**
AOS Alonnisos 63.76 301 P P **20 19 20.3 -0.6**
HORT Hortiatis 63.83 303 P P **20 19 20.6 -0.8**
NPS Neapolis 63.84 297 *e*P P 20 19 21.0 -0.6
THE Thessaloniki 63.92 303 P P **20 19 20.9 -1.1**
VAY Valandovo 63.97 304 *e*P P 20 19 19.6 -2.6
LAST Lasithi 63.98 297 *e*P P 20 19 22.7 +0.2
LAST Lasithi 63.98 297 P P **20 19 22.4 -0.1**
RAC Raciborz 63.98 314 *e*P P 20 19 23.1 +0.9
RAC MLR MLR
comp=Z,4μm,16.0s,MS5.7
OKC Ostrava-Krasne 64.09 314 *e*P P 20 19 23.4 +0.5
OKC *e**PP pP 20 19 30.3 +1.9
OKC *e*S **S 20 28 10.2 +11**
OKC MLR MLR
comp=Z,5μm,16.5s,MS5.8
OKC Ostrava-Krasne 64.09 314 *e*P P 20 19 23.4 +0.5
OKC *e*pP pP 20 19 30.3 +1.9
OKC *e*x x 20 19 38.5
OKC *e*S **S 20 28 10.2 +11**
OKC *e*x x 20 35 22.3
OKC AMS AMS 20 48 30.0
comp=Z,5μm,16.5s
VYHS Vyhne 64.09 313 *e*P P 20 19 23.2 +0.2
VYHS pmax pmax
comp=Z,108nm,1.6s,mb5.6
VYHS Vyhne 64.09 313 *e*P P 20 19 23.2 +0.2
comp=Z,108nm,1.6s,mb5.6
VYHS Vyhne 64.09 313 *e*P P 20 19 23.2 +0.2
STIP Stip 64.11 305 *i* P P 20 19 20.4 -2.8
PTL Penteli 64.16 300 *e*P P 20 19 22.8 -0.8
NEO Neokhori 64.19 302 *e*P P 20 19 22.0 -1.8
XOR Xorichti 64.19 302 P P **20 19 22.6 -1.2**
ATHU Athens Univers 64.25 300 P P **20 19 22.6 -1.6**
FURI Furi 64.26 265 *e*P P 20 19 26.6 +2.1
NB2 NORSAR Subarra 64.26 327 P PcP 20 19 53.6 -4.9
comp=Z,14nm,0.6s,baz=72,slow=6.9
NOA NORSAR Array B 64.26 327 P P **20 19 23.1 -0.7**
comp=Z,28nm,0.6s,mb5.5,baz=72,slow=6.6,SNR=86
NOA LR LR 20 49 03.9
comp=Z,2μm,19.1s,MS5.3,baz=75,slow=38
VLY Voula,Athens 64.28 300 *e*P P 20 19 22.6 -1.8
BSD Bornholm Skovb 64.29 320 *i* P P 20 19 30.5 +6.4
BSD pmax pmax
comp=Z,65nm,0.9s,mb5.7
BSD Bornholm Skovb 64.29 320 *i* P P **20 19 30.5 +6.4**
comp=Z,65nm,0.9s,mb5.7
BUD Budapest 64.30 311⇑*e*P P 20 19 24.7 +0.3
LIT Litokhoron 64.44 303 *e*P P 20 19 24.4 -1.0
LIT Litokhoron 64.44 303 P P **20 19 24.2 -1.2**
NAO01 NORSAR Array S 64.48 327 *e*P P 20 19 24.7 -0.6
MORC Moravsky Berou 64.48 314 *e*P P 20 19 25.6 +0.2
MORC Moravsky Berou 64.48 314⇑*i*P P 20 19 25.8 +0.3
SKO Skopje 64.54 305 *i* P P 20 19 24.5 -1.5
SIVA Sivas 64.55 297 P P **20 19 25.8 -0.4**
ATAL Atalanti 64.55 301 P P **20 19 24.6 -1.6**
LKR Lokris 64.58 301 *e*P P 20 19 25.2 -1.2
LKR Lokris 64.58 301 P P **20 19 24.8 -1.6**
DIVS Divibare 64.80 308 P P **20 19 27.5 -0.2**
DID Didima 64.82 300 *e*P P 20 19 25.4 -2.5
DID Didima 64.82 300 P P **20 19 24.9 -3.0**
LTK Loutraki 64.83 301 *e*P P 20 19 25.3 -2.7
LTK Loutraki 64.83 301 P P **20 19 25.4 -2.6**
OSL Oslo 64.86 326 *e*P P 20 19 27.6 -0.1
VAM Vamos 64.87 297 *e*P P 20 19 26.9 -1.4
KRUS Krusevo 64.88 304 *e*P P 20 19 24.3 -3.9
KZN Kozani 64.89 303 P P **20 19 27.1 -1.2**
KSP Ksiaz 64.89 316 *i* P P 20 19 28.6 +0.5
KSP LMZ 20 49 02.4
comp=Z,14μm,17.9s
KSP Ksiaz 64.89 316⇑*i*P P 20 19 28.5 +0.4
KSP *e**PP pP 20 19 34.3 +0.8
KSP *e* 20 19 43.0
KSP *e* 20 21 52.8
KSP *e*S **S 20 28 07.0 -1.6**
KSP *e*SSS 20 35 10.5
KSP MLR MLR
comp=Z,16μm,17.9s,MS6.2
BIA Bitola 64.95 304 *e*P P 20 19 25.3 -3.5
THL Klokotos Trika 64.97 302 *e*P P 20 19 27.4 -1.5
THL Klokotos Trika 64.97 302 P P **20 19 27.1 -1.8**
PKSM Moragy 64.98 310 P P **20 19 28.9 +0.1**
PKSM Moragy 64.98 310⇓*i*P P 20 19 28.5 -0.3
FNA Florina 65.00 304 P P **20 19 27.7 -1.3**
DPC Dobruska-Polom 65.03 315 *e*P P 20 19 30.0 +0.9
DPC *e**PP pP 20 19 36.9 +2.4
DPC *e*S S 20 28 21.7 +11
DPC MLR MLR
comp=Z,7μm,16.8s,MS5.9
DPC Dobruska-Polom 65.03 315 *e*P P 20 19 30.0 +0.9
DPC *e*pP pP 20 19 36.9 +2.4
DPC *e*x x 20 19 44.9
DPC *e*S S 20 28 21.7 +11
DPC *e*x x 20 35 38.0
DPC AMS AMS 20 48 50.0
comp=Z,7μm,16.8s
KARN Karanos 65.08 298 *e*P P 20 19 28.9 -0.8
KARN Karanos 65.08 298 P P **20 19 29.1 -0.6**
GVD Gavdhos 65.16 297 *e*P P 20 19 28.9 -1.3
UPC Upice 65.17 315 *e*P P 20 19 30.3 +0.4
UPC *e**PP pP 20 19 38.3 +2.9
UPC Upice 65.17 315 *e*P P 20 19 30.3 +0.4
UPC *e*pP pP 20 19 38.3 +2.9
UPC *e*x x 20 19 45.9
WNDE Wendo Genet 65.21 263 *e*P P 20 19 31.4 +0.6
VRAC Vranov 65.22 314 P P **20 19 31.1 +0.8**
VRAC Vranov 65.22 314⇑*i*P P 20 19 31.0 +0.7
NWAO Narrogin (SRO) 65.25 168 *e*P P 20 19 30.6 +0.1
NWAO MLR MLR
comp=Z,1μm,19.0s
OHR Ohrid 65.29 304 *e*P P 20 19 27.2 -3.7
IVA Berane 65.29 306⇑*i*P P 20 19 31.4 +0.5
IVA Berane 65.29 306⇑*i*P P 20 19 31.4 +0.5
GUR Goura 65.33 301 *e*P P 20 19 26.3 -4.9
GUR Goura 65.33 301 P P **20 19 28.9 -2.3**
VLI Veliai 65.33 299 *e*P P 20 19 28.2 -3.1
PVY Plav 65.34 306⇑*i*P P 20 19 30.3 -0.9
PVY Plav 65.34 306⇑*i*P P 20 19 30.3 -0.9
RGN Rugen 65.34 320 *e*P P 20 19 31.6 +0.6
comp=Z,366nm,1.5s,mb6.2
BCI Bajram Curri 65.36 306 *e*PN P 20 19 31.4 +0.1
EVR Evrytania 65.36 302 *e*P P 20 19 31.3 -0.1
MOL Molde 65.39 330 AMS AMS 20 50 03.1
comp=Z,7μm,13.8s,MS6.0
CTA Charters Tower 65.41 136 *e*P P 20 19 31.3 -0.5
comp=Z,28nm,1.2s,mb5.2
CTAO Charters Tower 65.41 136 *e*P P 20 19 31.2 -0.6
CTAO MLR MLR
comp=Z,1μm,21.0s,MS5.0
COP Copenhagen 65.44 322 *i* P P 20 19 32.7 +1.1
COP pmax pmax
comp=Z,56nm,0.9s,mb5.6
COP MLR MLR
comp=Z,2μm,18.0s,MS5.3
COP Copenhagen 65.44 322 *i* P P **20 19 32.7 +1.1**
comp=Z,56nm,0.9s,mb5.6
COP
comp=Z,2μm,18.0s
EFP Efpalio 65.47 301 *e*P P 20 19 31.2 -0.9
EFP Efpalio 65.47 301 P P **20 19 29.9 -2.2**
KBN Korca 65.47 304 *e*PN P 20 19 31.1 -1.0
PLE Pljevlja 65.48 307⇑*i*P P 20 19 32.7 +0.6
LAKA Lakka 65.48 301 P P **20 19 30.6 -1.6**
KONO Kongsberg 65.49 326 *e*P P 20 19 32.4 +0.5
KONO *e*S S 20 28 15.3 -0.4
KONO AMS AMS 20 50 27.2
comp=Z,3μm,14.6s,MS5.6
KONO Kongsberg 65.49 326 *e*P P 20 19 31.1 -0.8
KONO pmax pmax
comp=Z,117nm,1.3s,mb5.8
KONO MLR MLR
comp=Z,2μm,20.0s,MS5.3
KONO Kongsberg 65.49 326 *e*P P 20 19 31.1 -0.7
comp=Z,117nm,1.3s,mb5.8
KONO LR LR
comp=Z,2μm,20.0s,MS5.3
PUK Puka 65.59 306 *e*PN P 20 19 32.1 -0.7
RUE Ruedersdorf 65.80 318 *e*P P 20 19 34.3 +0.3
comp=Z,276nm,1.5s,mb6.1

RUE Ruedersdorf 65.80 318 *e*P **P 20 19 33.8 -0.2**
comp=Z,114nm,1.1s,mb5.8
UPM Unac-Piva 65.85 307⇑*i*P **P 20 19 34.7 +0.2**
UPM Unac-Piva 65.85 307⇑*i*P **P 20 19 34.7 +0.2**
TIR Tirane 65.86 305 *e*P **P 20 19 33.7 -0.9**
TIR pmax pmax
comp=Z,127nm,1.3s,mb5.8
TIR Tirane 65.86 305 *e*P **P 20 19 33.7 -0.9**
comp=Z,127nm,1.3s,mb5.8
TTG Podgorica 65.89 306 *e*P **P 20 19 33.9 -0.9**
TTG Podgorica 65.89 306 *e*P **P 20 19 33.9 -0.9**
TREC Trest 65.91 314 *e*P **P 20 19 35.3 +0.6**
TREC *e**PP pP 20 19 42.4 +2.2
TREC MLR MLR
comp=Z,5µm,19.3s,MS5.7
TREC Trest 65.91 314 *e*P **P 20 19 35.3 +0.6**
TREC *e*pP pP 20 19 42.4 +2.2
TREC *e*x x 20 19 50.5
TREC *e*S S 20 28 34.2 +13
TREC *e*x x 20 36 08.0
TREC AMS AMS 20 49 30.0
comp=Z,5µm,19.3s
ITM Ithomi 65.91 300 *e*P **P 20 19 33.1 -1.9**
ITM Ithomi 65.91 300 P **P 20 19 33.0 -2.0**
RLS Riolos of Patr 65.92 301 *e*P **P 20 19 34.3 -0.8**
NKY Niksic 65.93 307⇑*i*P **P 20 19 34.2 -0.8**
NKY Niksic 65.93 307⇑*i*P **P 20 19 34.3 -0.7**
FORT Forrest 66.00 157⇑*i*P **P 20 19 35.3 -0.1**
comp=Z,52nm,0.7s,mb5.7
FORT Forrest 66.00 157 *e*P **P 20 19 35.4 0.0**
comp=Z,69nm,0.8s,mb5.7
PVCC Panska Ves 66.03 316 *e*P **P 20 19 35.9 +0.4**
PVCC *e**PP pP 20 19 43.7 +2.8
PVCC MLR MLR
comp=Z,7µm,15.6s,MS6.0
PVCC Panska Ves 66.03 316 *e*P **P 20 19 35.9 +0.4**
PVCC *e*pP pP 20 19 43.7 +2.8
PVCC *e*x x 20 19 52.1
PVCC *e*S S 20 28 32.8 +10
PVCC *e*x x 20 36 00.8
PVCC AMS AMS 20 49 30.0
comp=Z,7µm,15.6s
ULC Ulcinj 66.07 306⇑*i*P **P 20 19 35.6 -0.3**
ULC Ulcinj 66.07 306⇑*i*P **P 20 19 35.7 -0.2**
ALE Alert 66.08 358 P **P 20 19 36.0 +0.6**
comp=Z,394nm,1.2s,mb6.3,SNR=15
PYL PYLOS 66.16 300 *e*P **P 20 19 34.2 -2.4**
PYL PYLOS 66.16 300 P **P 20 19 34.4 -2.2**
CONA Conrad Observa 66.16 313 *i*P **P 20 19 36.9 +0.5**
comp=Z,89nm,1.3s,mb5.6,SNR=29
BUM Brajici-Budva 66.19 306⇑*i*P **P 20 19 36.1 -0.6**
BUM Brajici-Budva 66.19 306⇑*i*P **P 20 19 36.1 -0.5**
IGT Igoumenitsa 66.20 303 P **P 20 19 34.9 -1.9**
BRY Bratogost 66.21 307⇑*i*P **P 20 19 36.2 -0.6**
BRY Bratogost 66.21 307⇑*i*P **P 20 19 36.2 -0.6**
PRU Pruhonice 66.23 315 *e*P **P 20 19 37.9 +1.1**
PRU *e**PP pP 20 19 44.8 +2.5
PRU MLR MLR
comp=Z,8µm,16.3s,MS6.0
PRU Pruhonice 66.23 315 *e*P **P 20 19 37.9 +1.1**
PRU *e*pP pP 20 19 44.8 +2.5
PRU *e*x x 20 19 52.7
PRU *e*S S 20 28 36.1 +11
PRU *e*x x 20 36 08.6
PRU AMS AMS 20 49 40.0
comp=Z,8µm,16.3s
PRA Prague 66.27 315⇑P **P 20 19 37.0 -0.1**
PRA AMS AMS 20 49 45.0
BRG Berggiesshubel 66.27 316 *e*P **P 20 19 37.3 +0.2**
comp=Z,128nm,1.4s,mb5.8
BRG Berggiesshubel 66.27 316⇑*i*P **P 20 19 37.3 +0.2**
comp=Z,127nm,1.4s,mb5.8
BRG *i* pP 20 19 44.0 +1.4
comp=Z,116nm,1.4s
BRG *i* 20 19 50.7
comp=Z,58nm,1.0s
BRG PP PP 20 22 04.0 +1.3
BRG S S 20 28 29.0 +3.4
BRG
comp=N,2µm,16.0s
BRG
comp=E,4µm,16.6s
BRG
comp=Z,6µm,16.1s
BRG Berggiesshubel 66.27 316⇑*i*P **P 20 19 37.3 +0.2**
BRG *i* pP 20 19 44.0 +1.5
BRG *i* 20 19 50.7
BRG 20 22 04.0
BRG S S 20 28 29.0 +3.4
BRG pmax pmax
comp=Z,76nm,1.4s,mb5.5
BRG MLR MLR
comp=N,1µm,16.0s,MS5.6
BRG MLR MLR
comp=E,2µm,16.6s,MS5.6
BRG MLR MLR
comp=Z,3µm,16.1s,MS5.7
SRN Sarande 66.31 303 *e*PN **P 20 19 35.6 -1.9**
HCY Herceg Novi 66.41 306⇑*i*P **P 20 19 37.4 -0.7**
KOGS Kog 66.44 311 *e*P **P 20 19 38.1 -0.2**
DAG Danmarks Havn 66.47 348⇓*i*P **P 20 19 37.0 -0.9**
DAG pmax pmax
comp=Z,52nm,1.1s,mb5.5
DAG MLR MLR
comp=Z,3µm,21.0s,MS5.5
DAG MLR MLR
comp=N,1µm,19.0s,MS5.3
DAG MLR MLR
comp=E,1µm,20.0s,MS5.3
DAG Danmarks Havn 66.47 348⇓*i*P **P 20 19 37.0 -0.9**
comp=E,52nm,1.1s,mb5.5
DAG
comp=Z,3µm,21.0s
KEK Kerkira 66.51 303 *e*P **P 20 19 37.0 -1.8**
VLS Valsamata 66.52 301 *e*P **P 20 19 37.2 -1.7**
VLS Valsamata 66.52 301 P **P 20 19 36.7 -2.2**
ARSA Arzberg 66.62 312⇑*i*P **P 20 19 39.3 0.0**
comp=Z,51nm,1.3s,mb5.4,SNR=29
CLL Collm 66.67 317 *e*P **P 20 19 39.5 -0.1**
comp=Z,140nm,1.4s,mb5.8
CLL Collm 66.67 317⇑*i*P **P 20 19 39.3 -0.3**
CLL *i* pP 20 19 46.0 +1.0
CLL *e*S S 20 28 33.0 +2.6
CLL pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
CLL MLR MLR
comp=Z,6µm,17.8s,MS5.9
CLL Collm 66.67 317⇑*i*P **P 20 19 39.3 -0.3**
comp=Z,140nm,1.4s,mb5.8
CLL *i* pP pP 20 19 46.0 +1.0
CLL *i* 20 19 54.8
CLL *e* 20 20 03.0
CLL *e*PP PP 20 22 09.0 +2.9
CLL *e*PPP 20 23 48.0
CLL *e*S S 20 28 33.0 +2.6
CLL *e*SS SS 20 32 42.0 -5.3
CLL *e* 20 33 45.0
CLL *e*SSS 20 36 07.0
FOO Floro 66.84 329 *e*P **P 20 19 40.2 -0.3**
FOO AMS AMS 20 51 04.3
comp=Z,8µm,13.8s,MS6.1
MUD Monsted U'grnd 66.86 323⇑*i*P **P 20 19 41.0 +0.3**
MUD pmax pmax
comp=Z,72nm,0.9s,mb5.7
MUD MLR MLR
comp=Z,3µm,17.0s,MS5.6
MUD Monsted U'grnd 66.86 323⇑*i*P **P 20 19 41.0 +0.3**
comp=Z,72nm,0.9s,mb5.7
MUD
comp=Z,3µm,17.0s
TTA Tatalina 66.88 29 *e*P **P 20 19 40.4 -0.3**
TTA Tatalina 66.88 29 *e*P **P 20 19 40.7 0.0**
MIDW Midway 66.99 70 PFAKE 20 19 50.0 +8.0
MIDW LR LR
comp=Z,1µm,20.0s,MS5.1
PERS Pernice 67.10 312 *i*P **P 20 19 42.3 -0.2**
PERS *e*S S 20 28 37.4 +1.7

SNART Snartemo 67.12 325⇑*i*P **P 20 19 42.2 -0.1**
SNART AMB AMB 20 19 43.5
comp=Z,108nm,1.5s,mb5.7
SNART *e*pP pP 20 19 48.8 +1.0
KHC Kasperske Hory 67.13 315 *e*P **P 20 19 43.1 +0.5**
KHC *e**PP pP 20 19 49.6 +1.6
KHC *e*S S 20 28 39.4 +3.4
KHC MLR MLR
comp=Z,6µm,17.1s,MS5.9
KHC Kasperske Hory 67.13 315 *e*P **P 20 19 42.6 0.0**
comp=Z,81nm,1.5s,mb5.5
KHC Kasperske Hory 67.13 315 *e*P **P 20 19 43.1 +0.5**
KHC *e*pP pP 20 19 49.6 +1.6
KHC *e*x x 20 19 57.8
KHC *e*S S 20 28 39.4 +3.4
KHC *e*x x 20 36 34.6
KHC AMS AMS 20 50 20.0
comp=Z,6µm,17.1s
SOKA Soboth 67.14 312⇓*i*P **P 20 19 42.7 0.0**
comp=Z,82nm,1.2s,mb5.6
GEC2 GERESS Array S 67.16 314 *e*P **P 20 19 43.2 +0.4**
comp=Z,109nm,1.4s,mb5.7
GEC2 GERESS Array S 67.16 314 *e*P **P 20 19 43.2 +0.4**
GEC2 pmax pmax
comp=Z,109nm,1.4s,mb5.7
GERES GERESS Array B 67.16 314 P **P 20 19 43.1 +0.3**
comp=Z,17nm,0.9s,mb5.0,baz=71,slow=4.5,SNR=102
GERES LR LR 20 50 39.2
comp=Z,4µm,19.9s,MS5.7,baz=327,slow=37
MOA Molln 67.19 313 *i*P **P 20 19 43.2 +0.3**
comp=Z,71nm,1.4s,mb5.5,SNR=22
BER Bergen 67.20 328 *e*P **P 20 19 43.0 +0.2**
BER *e*S S 20 28 35.7 -0.7
BER AMS AMS 20 51 19.1
comp=Z,3µm,19.0s,MS5.5
BSEG Bad Segeberg 67.21 320 *e*P **P 20 19 43.7 +0.7**
comp=Z,234nm,1.3s,mb6.1
ZAVS Zavodnje 67.24 311 *e*P **P 20 19 43.1 -0.2**
COLD Coldfoot 67.25 24 *e*P **P 20 19 42.9 -0.2**
comp=Z,209nm,1.0s,mb6.1
TANN Tannenbergstha 67.32 316 *e*P **P 20 19 44.1 +0.4**
comp=Z,115nm,1.4s,mb5.7
NKC Novy Kostel 67.40 316 *e*P **P 20 19 44.5 +0.3**
NKC *e**PP pP 20 19 51.8 +2.1
NKC *e*S S 20 28 41.7 +2.5
NKC MLR MLR
comp=Z,6µm,14.9s,MS6.0
NKC Novy Kostel 67.40 316 *e*P **P 20 19 44.5 +0.3**
NKC *e*pP pP 20 19 51.8 +2.1
NKC *e*x x 20 19 59.7
NKC *e*S S 20 28 41.7 +2.5
NKC *e*x x 20 36 18.3
NKC AMS AMS 20 50 30.0
comp=Z,6µm,14.9s
WERD Werda 67.40 316 *e*P **P 20 19 44.5 +0.2**
comp=Z,108nm,1.4s,mb5.7
GUNZ Gunzen 67.42 316 *e*P **P 20 19 44.7 +0.3**
comp=Z,143nm,1.4s,mb5.8
WERN Wernitzgruen 67.42 316 *e*P **P 20 19 44.8 +0.4**
comp=Z,125nm,1.4s,mb5.8
JMIC Jan Mayen 67.44 341 *e*P **P 20 19 44.6 +0.5**
JMIC *e*S S 20 28 41.2 +2.2
JMIC *e*SS SS 20 33 00.4 +2.0
JMIC AMS AMS 20 52 42.8
comp=Z,2µm,17.7s,MS5.3
BOJS Bojanci 67.44 310 *i*P **P 20 19 44.9 +0.3**
BOJS *i*S S 20 28 42.5 +2.6
OBKA Obir 67.51 312⇑*i*P **P 20 19 45.1 +0.1**
comp=Z,55nm,1.7s,mb5.3,SNR=18
WET Wettzell 67.55 315 *e*P **P 20 19 45.8 +0.6**
comp=Z,142nm,1.6s,mb5.8
WET Wettzell 67.55 315 *e*P **P 20 19 45.8 +0.6**
WET pmax pmax
comp=Z,142nm,1.6s,mb5.8
LJU Ljubljana 67.70 311 *i*P **P 20 19 46.2 -0.1**
LJU *e*S S 20 28 43.9 +0.9
ROTZ Rotzenmuhle 67.72 316 *e*P **P 20 19 47.1 +0.8**
comp=Z,189nm,1.4s,mb5.9
MOX Moxa 67.73 317 *e*P **P 20 19 46.4 +0.1**
comp=Z,147nm,1.6s,mb5.8
MOX
comp=Z,5µm,17.0s
MOX Moxa 67.73 317 *e*P **P 20 19 46.6 +0.3**
comp=Z,145nm,1.6s,mb5.8
SDPT Sand Point 67.80 38 *e*P **P 20 19 45.4 -1.3**
comp=Z,243nm,1.3s,mb6.1
SVW2 Sparrevohn 67.82 31 *e*P **P 20 19 47.1 +0.4**
NRDL Niedersach Rie 67.88 319 *e*P **P 20 19 48.0 +0.7**
comp=Z,289nm,1.5s,mb6.1
CEY Cerknica 67.89 311 *i*P **P 20 19 47.4 -0.1**
CEY *e*S S 20 28 29.1 -16
CHUM Lake Minchumin 67.98 28 *e*P **P 20 19 47.9 +0.3**
comp=Z,146nm,0.9s,mb6.0
CLZ Clausthal 67.99 318 *e*P **P 20 19 48.5 +0.6**
comp=Z,218nm,1.3s,mb6.0
CLZ Clausthal 67.99 318 *e*P **P 20 19 48.5 +0.6**
CLZ pmax pmax
comp=Z,218nm,1.3s,mb6.0
MYKA Terra Mystica 68.05 312⇑*i*P **P 20 19 48.1 -0.3**
comp=Z,20nm,0.8s,mb5.2
KBA Koelnbreinsper 68.06 313 *i*P **P 20 19 48.6 +0.1**
comp=Z,66nm,1.3s,mb5.5,SNR=11
VOY Vojsko 68.12 311 *e*P **P 20 19 48.3 -0.6**
VOY *e* pP 20 19 55.0 +0.7
VOY *e* 20 20 00.8
VOY *e* 20 20 24.6
RJOB Jochberg 68.15 313 *e*P **P 20 19 49.8 +0.8**
comp=Z,213nm,1.9s,mb5.8
TRI Trieste 68.33 311 *e*P **P 20 19 49.6 -0.6**
TRI pmax pmax
comp=Z,47nm,0.9s,mb5.5
TRI Trieste 68.33 311 *e*P **P 20 19 49.6 -0.6**
comp=Z,47nm,0.9s,mb5.5
GRA1 Grafenberg Arr 68.34 316 *e*P **P 20 19 50.9 +0.7**
comp=Z,303nm,1.5s,mb6.1
GRA1 LR LR
comp=Z,7µm,19.1s,MS5.9
GRF Grafenberg Arr 68.34 316 *e*P **P 20 19 50.9 +0.7**
comp=Z,303nm,1.5s,mb6.1
GRF *e*L 20 51 23.1
comp=Z,7µm,19.1s
GRF Grafenberg Arr 68.34 316 *e*P **P 20 19 50.9 +0.7**
GRF pmax pmax
comp=Z,303nm,1.5s,mb6.1
GRF MLR MLR
comp=Z,7µm,19.1s,MS5.9
GRF Grafenberg Arr 68.34 316 *e*P **P 20 19 50.9 +0.7**
GRF pmax pmax
comp=Z,303nm,1.5s,mb6.1
GRF MLR MLR
comp=Z,7µm,19.1s,MS5.9
BPAW Bear Paw Mtn. 68.40 27 *e*P **P 20 19 50.0 -0.3**
comp=Z,246nm,1.2s,mb6.1
HLG Helgoland 68.43 321 *e*P **P 20 19 51.1 +0.4**
comp=Z,181nm,1.2s,mb6.0
PPLA Purkeypile 68.47 29 *e*P **P 20 19 50.9 +0.1**
comp=Z,1µm,1.6s,mb6.6
CHGN Chignik 68.48 36 *e*P **P 20 19 49.8 -1.1**
UBBA Unterbreizbach 68.61 317 *e*P **P 20 19 51.9 +0.1**
comp=Z,121nm,1.6s,mb5.6
KTH Kantishna Hill 68.68 28 *e*P **P 20 19 51.6 -0.5**
comp=Z,501nm,1.6s,mb6.2
ABTA Abfaltersbach 68.71 312⇑*i*P **P 20 19 51.7 -0.9**
comp=Z,44nm,1.5s,mb5.2,SNR=18
TIP Timpagrande 68.89 304 *e*P **P 20 19 53.1 -0.7**
comp=Z,99nm,1.3s,mb5.6
FUR Furstenfeldbru 68.91 314 *e*P **P 20 19 54.6 +0.8**
comp=Z,440nm,1.5s,mb6.2
FUR Furstenfeldbru 68.91 314 *e*P **P 20 19 54.6 +0.8**
FUR pmax pmax
comp=Z,440nm,1.5s,mb6.2
TRF Thorofare Moun 68.98 28 *e*P **P 20 19 53.1 -0.8**
comp=Z,40nm,0.8s,mb5.4
WTTA Wattenberg 69.06 313 *i*P **P 20 19 54.7 0.0**
comp=Z,102nm,1.3s,mb5.6,SNR=13
WATA Walderalm 69.06 313⇑*i*P **P 20 19 54.6 -0.1**
comp=Z,76nm,1.3s,mb5.5,SNR=17
COLA College 69.22 26 *e*P **P 20 19 55.1 -0.3**
COLA pmax pmax
comp=Z,449nm,1.2s,mb6.3
COLA MLR MLR
comp=Z,4µm,20.0s,MS5.7
COLA College 69.22 26 *e*P **P 20 19 55.1 -0.3**
comp=Z,449nm,1.2s,mb6.3
COLA LR LR
comp=Z,4µm,20.0s,MS5.7

IBBN Ibbenburen 69.28 319 *e*P **P 20 19 56.3 +0.3**
comp=Z,210nm,1.4s,mb5.9
RSO Redoubt South 69.34 31 *e*P **P 20 19 56.0 -0.2**
MOTA Moosalm 69.35 313⇑*i*P **P 20 19 56.3 -0.3**
comp=Z,94nm,1.3s,mb5.5,SNR=34
MCK McKinley 69.37 27 *e*P **P 20 19 56.0 -0.4**
MCK pmax pmax
comp=Z,65nm,0.9s,mb5.6
MCK McKinley 69.37 27 *e*P **P 20 19 56.0 -0.3**
comp=Z,65nm,0.9s,mb5.6
RETA Reutte 69.51 314 *i*P **P 20 19 57.5 0.0**
comp=Z,53nm,1.5s,mb5.2,SNR=12
WIT Witteveen 69.66 320⇑*i*P **P 20 19 59.6 +1.2**
comp=Z,630nm,1.5s,mb6.3
WIT Witteveen 69.66 320 *ex* sP 20 20 06.3 +0.5
comp=Z,518nm,1.1s
FETA Feichten 69.72 313 *i*P **P 20 19 58.7 -0.1**
comp=Z,80nm,1.3s,mb5.5,SNR=32
RER Riviere de l'E 69.73 228 PFAKE 20 20 10.0 +11
RER LR LR
comp=Z,1µm,22.0s,MS5.1
TNS Taunus Mts 69.76 317 *e*P **P 20 19 59.3 +0.3**
comp=Z,138nm,1.4s,mb5.7
TNS Taunus Mts 69.76 317 *e*P **P 20 19 59.3 +0.3**
TNS pmax pmax
comp=Z,138nm,1.4s,mb5.7
TOD Tromm 69.81 316 *e*P **P 20 19 59.2 -0.1**
CEL Celeste 69.88 303 *e*P **P 20 19 59.6 -0.4**
comp=Z,209nm,1.4s,mb5.9
CEL LR LR
comp=Z,972nm,21.0s,MS5.0
BUG Bochum--Univer 69.92 319 *e*P **P 20 20 00.3 +0.4**
comp=Z,180nm,1.4s,mb5.8
AQU L'Aquila 69.92 308 P **P 20 20 00.7 +0.6**
AQU L'Aquila 69.92 308 *e*P **P 20 19 60.0 -0.1**
AQU LR LR
comp=Z,2µm,19.0s,MS5.3
AQU L'Aquila 69.92 308⇑*i*P **P 20 20 00.6 +0.5**
STU Stuttgart 69.92 315 *e*P **P 20 20 00.2 +0.2**
comp=Z,108nm,1.2s,mb5.7
STU Stuttgart 69.92 315 *e*P **P 20 20 00.2 +0.2**
WTSB Winterswijk 69.95 319⇑*i*P **P 20 20 00.5 +0.3**
comp=Z,150nm,1.6s,mb5.7
WTSB Winterswijk 69.95 319 *ex* pP 20 20 07.0 +1.4
comp=Z,113nm,1.3s
WTSB Winterswijk 69.95 319 *e*P PP 20 22 33.6 -1.0
comp=Z,47nm,1.8s
WTSB Winterswijk 69.95 319 *ex* PP 20 22 46.0 +11
comp=Z,49nm,1.4s
DAVA Damuels 70.14 314⇑*i*P **P 20 20 01.1 -0.3**
comp=Z,42nm,1.3s,mb5.2,SNR=16
FUORN Ofenpass-Fuorn 70.18 313⇑*i*P **P 20 20 01.8 +0.2**
comp=Z,485nm,2.4s,mb6.0
LRW Lerwick 70.22 329 *e*P **P 20 20 00.6 -1.1**
LRW AMb AMB 20 20 02.1
comp=Z,111nm,1.5s,mb5.6
LRW AMS AMS 20 53 20.5
comp=Z,4µm,14.2s,MS5.8
DAVOX Davos/Dischmat 70.35 313⇑*i*P **P 20 20 02.5 -0.2**
comp=Z,243nm,1.5s,mb5.9
PMR Palmer 70.35 29 *e*P **P 20 20 01.7 -0.7**
PMR Palmer 70.35 29 *e*P **P 20 20 01.5 -0.9**
comp=Z,255nm,1.0s,mb6.1
KTD Kalmit 70.35 316 *e*P **P 20 20 02.5 -0.2**
WAL1 Walls 70.36 329 *e*P **P 20 20 02.0 -0.5**
LIENZ Kamor/St.Gall 70.37 314⇑*i*P **P 20 20 02.7 -0.1**
comp=Z,153nm,1.9s,mb5.6
BERNI Berninapass 70.42 313⇑*i*P **P 20 20 03.1 0.0**
comp=Z,249nm,1.6s,mb5.9
ABH Altenburg 70.43 317 *e*P **P 20 20 03.3 +0.2**
SPAK Spaichingen-Ko 70.46 315 *e*P **P 20 20 03.5 +0.2**
PLONS Plons/SG 70.54 314⇑*i*P **P 20 20 03.5 -0.4**
comp=Z,242nm,1.7s,mb5.8
WEIN Weingarten 70.58 314⇑*i*P **P 20 20 03.8 -0.3**
STEIN Stein am Rhein 70.59 314⇑*i*P **P 20 20 04.0 -0.1**
OHAK Old Harbor 70.61 34 *e*P **P 20 20 03.5 -0.5**
comp=Z,215nm,0.9s,mb6.1
OHAK LR LR
comp=Z,2µm,17.0s,MS5.4
BFO Black Forest 70.63 315 P **P 20 20 04.7 +0.3**
comp=Z,292nm,1.3s,mb6.0,SNR=34
BFO Black Forest 70.63 315 *e*P **P 20 20 04.3 -0.1**
comp=Z,144nm,1.5s,mb5.7
BFO Black Forest 70.63 315 *e*P **P 20 20 04.3 -0.1**
BFO pmax pmax
comp=Z,144nm,1.5s,mb5.7
LANF Langenberg 70.67 316 *e*P **P 20 20 04.6 0.0**
KDAK Kodiak Island 70.68 33 P **P 20 20 04.0 -0.5**
comp=Z,1µm,1.5s,mb6.6,SNR=22
KDAK Kodiak Island 70.68 33 P **P 20 20 03.9 -0.5**
comp=Z,170nm,0.9s,mb6.0
KDAK Kodiak Island 70.68 33 P **P 20 20 03.9 -0.5**
WILA Wila 70.68 314⇑*i*P **P 20 20 04.4 -0.3**
comp=Z,362nm,2.5s,mb5.9
KMBO Kilima Mbogo 70.78 256 P **P 20 20 05.7 -0.1**
comp=Z,23nm,1.0s,mb5.1,baz=38,slow=8.3,SNR=62
KMBO Kilima Mbogo 70.78 256 *ce*P **P 20 20 05.6 -0.2**
KMBO pmax pmax
comp=Z,23nm,1.0s
KMBO Kilima Mbogo 70.78 256 *e*P **P 20 20 05.4 -0.4**
KMBO LR LR
comp=Z,784nm,20.0s,MS5.0
KMBO Kilima Mbogo 70.78 256 P **P 20 20 06.2 +0.4**
SNR=48
KMBO P 20 20 06.2
SNR=48
SLE Schleitheim 70.78 315⇑*i*P **P 20 20 05.1 -0.2**
comp=Z,414nm,1.6s,mb6.1
RUP Ruppelstein 70.79 317 *e*P **P 20 20 05.7 +0.4**
FLACH Flaach 70.82 314⇑*i*P **P 20 20 05.3 -0.2**
LLS Linth-Limmern 70.86 314⇑*i*P **P 20 20 05.6 -0.2**
comp=Z,215nm,3.2s
ZUR Degenried 70.90 314⇑*i*P **P 20 20 05.8 -0.2**
comp=Z,293nm,1.6s,mb6.0
SEW Seward 70.96 31 *e*P **P 20 20 05.0 -1.1**
comp=Z,254nm,1.1s,mb6.1
HGN Heimansgroeve 70.97 318⇑*i*P **P 20 20 06.3 0.0**
comp=Z,68nm,1.8s,mb5.3
HGN Heimansgroeve 70.97 318 *ex* pP 20 20 13.0 +1.1
comp=Z,27nm,1.1s
HGN Heimansgroeve 70.97 318 *e*P PP 20 22 36.5 -6.8
comp=Z,24nm,2.8s
MEM Membach 71.00 318 P **P 20 20 06.6 +0.1**
comp=Z,39nm,1.6s,mb5.1
FELD Feldberg im Sc 71.03 315 *e*P **P 20 20 06.8 0.0**
MUO Muotathal 71.04 314⇑*i*P **P 20 20 06.9 0.0**
comp=Z,376nm,1.8s,mb6.0
BEBN Eben Emael 71.10 318 P **P 20 20 07.3 +0.1**
comp=Z,21nm,1.8s,mb4.8
PAX Paxson 71.11 27 *e*P **P 20 20 06.0 -1.0**
PAX pmax pmax
comp=Z,107nm,1.4s,mb5.6
PAX Paxson 71.11 27 *e*P **P 20 20 06.0 -1.0**
comp=Z,108nm,1.4s,mb5.6
SULZ Cheisacher 71.12 315⇑*i*P **P 20 20 07.0 -0.3**
comp=Z,395nm,1.7s,mb6.1
LIBD Limburg 71.15 315 *e*P **P 20 20 07.6 +0.1**
VLC Villacollemand 71.15 311 *e*P **P 20 20 08.4 +0.8**
BNALP Bannalp 71.21 314⇑*i*P **P 20 20 07.1 -0.8**
comp=Z,172nm,1.5s,mb5.8
CDF Champ du Feu 71.23 316⇑*i*P **P 20 20 07.7 -0.3**
comp=Z,421nm,1.5s,mb5.8
CDF Champ du Feu 71.23 316⇑*i*P **P 20 20 07.7 -0.3**
CDF pmax pmax
comp=Z,210nm,1.5s,mb5.8
CDF Champ du Feu 71.23 316⇑*i*P **P 20 20 07.7 -0.3**
comp=Z,210nm,1.5s,mb5.8
MUGIO Muggio 71.24 313⇑*i*P **P 20 20 07.9 -0.2**
comp=Z,292nm,2.5s,mb5.8
FUSIO Fusio 71.25 313⇑*i*P **P 20 20 08.2 +0.1**
comp=Z,428nm,1.7s,mb6.1
SCO Scoresbysund 71.29 343⇑*i*P **P 20 20 08.1 +0.1**
SCO *i* pP 20 20 14.1 +0.6
SCO pmax pmax
comp=Z,23nm,1.0s,mb5.1
SCO MLR MLR
comp=Z,2µm,21.0s,MS5.3
SCO Scoresbysund 71.29 343⇑*i*P **P 20 20 08.1 +0.1**
comp=Z,23nm,1.0s,mb5.1
SCO *i* pP 20 20 14.1 +0.6
SCO
comp=Z,2µm,21.0s
WLF Walferdange 71.33 317 P **P 20 20 09.4 +0.8**
comp=Z,177nm,1.5s,mb5.8
WLF Walferdange 71.33 317 *e*P **P 20 20 09.5 +0.9**
comp=Z,332nm,1.3s,mb6.1
WLF Walferdange 71.33 317 *e*P **P 20 20 09.3 +0.7**

WLF pmax pmax
comp=Z,252nm,1.2s,mb6.0
WLF Walferdange 71.33 317 *eP* **P 20 20 09.3 +0.7**
comp=Z,252nm,1.2s,mb6.0
ECH Echery 71.39 316 *eP* **P 20 20 08.7 -0.3**
ECH Echery 71.39 316 *eP* **P 20 20 08.5 -0.5**
ECH pmax pmax
comp=Z,43nm,1.0s,mb5.3
ECH MLR MLR
comp=Z,4µm,21.0s,MS5.7
ECH Echery 71.39 316 *eP* **P 20 20 08.5 -0.5**
comp=Z,43nm,1.0s,mb5.3
ECH LR LR
comp=Z,4µm,21.0s,MS5.7
HASLI Hasliberg/Brie 71.43 314⇑ *iP* **P 20 20 09.0 -0.3**
comp=Z,304nm,1.7s,mb6.0
BALST Balsthal 71.45 314⇑ *iP* **P 20 20 09.1 -0.3**
comp=Z,273nm,1.6s,mb5.9
BCLA Clavier 71.48 318 P **P 20 20 09.5 0.0**
comp=Z,64nm,1.6s,mb5.3
BBS Basel-Blauen 71.51 315 *eP* **P 20 20 09.2 -0.5**
MOF Molkenrain 71.56 315 *eP* **P 20 20 10.0 0.0**
SOFL Sornfelli, Far 71.65 332 *eP* **P 20 20 10.2 -0.1**
EGAK Eagle 71.68 24 *eP* **P 20 20 09.9 -0.6**
EGAK LR LR
comp=Z,3µm,19.0s,MS5.6
BOURR Bourrignon 71.71 315⇑ *iP* **P 20 20 10.7 -0.2**
comp=Z,398nm,2.5s,mb5.9
HINF Hinteralfeld 71.75 315⇑ *iP* **P 20 20 10.5 -0.7**
comp=Z,74nm,0.9s,mb5.3
HINF Hinteralfeld 71.75 315⇑ *iP* **P 20 20 10.5 -0.7**
HINF pmax pmax
comp=Z,37nm,0.9s,mb5.3
HINF Hinteralfeld 71.75 315⇑ *iP* **P 20 20 10.5 -0.7**
comp=Z,37nm,0.9s,mb5.3
MENT Mentasta 71.80 26 *eP* **P 20 20 11.0 -0.1**
WIMIS Wimmis 71.80 314⇑ *iP* **P 20 20 11.4 -0.1**
comp=Z,332nm,1.6s,mb6.0
UCC Uccle 71.84 319 P **P 20 20 11.2 -0.5**
MMK Mattmark 71.86 313⇑ *iP* **P 20 20 12.1 +0.2**
comp=Z,419nm,1.7s,mb6.1
GIVF Givet 71.90 318⇑ *iP* **P 20 20 11.9 -0.1**
comp=Z,291nm,1.5s,mb5.7
GIVF Givet 71.90 318⇑ *iP* **P 20 20 11.9 -0.1**
GIVF pmax pmax
comp=Z,146nm,1.5s,mb5.7
GIVF Givet 71.90 318⇑ *iP* **P 20 20 11.9 -0.1**
comp=Z,146nm,1.5s,mb5.7
INK Inuvik 71.91 19 P **P 20 20 11.4 -0.3**
comp=Z,136nm,0.9s,mb5.9,baz=322,slow=7.4,SNR=203
INK Inuvik 71.91 19 *eP* **P 20 20 11.0 -0.8**
INK pmax pmax
comp=Z,284nm,1.1s
INK Inuvik 71.91 19 *eP* **P 20 20 11.0 -0.7**
comp=Z,284nm,1.1s,mb6.1
LKBD Leukerbad 71.92 314⇑ *iP* **P 20 20 12.2 0.0**
HAU Haudompre 71.97 316⇑ *iP* **P 20 20 11.9 -0.6**
comp=Z,207nm,1.6s,mb5.5
HAU *e*MLR MLR
comp=Z,5µm,18.8s,MS5.5
HAU Haudompre 71.97 316⇑ *iP* **P 20 20 11.9 -0.6**
HAU pmax pmax
comp=Z,103nm,1.6s,mb5.5
HAU MLR MLR
comp=Z,5µm,18.8s,MS5.8
HAU Haudompre 71.97 316⇑ *iP* **P 20 20 11.9 -0.6**
comp=Z,103nm,1.6s,mb5.5
HAU LR LR
comp=Z,5µm,18.8s,MS5.8
LOMF Lomont 71.97 315 *eP* **P 20 20 12.2 -0.3**
DIV Divide 71.98 29 *eP* **P 20 20 12.4 +0.1**
comp=Z,260nm,1.2s,mb6.0
SNF Seneffe 72.02 319 P **P 20 20 12.9 +0.2**
comp=Z,52nm,1.8s,mb5.2
DOU Dourbes 72.03 318 P **P 20 20 12.9 +0.1**
comp=Z,44nm,1.8s,mb5.1
THEF They Montfort 72.08 316 *eP* **P 20 20 13.1 0.0**
SENIN Lac Senin/Sane 72.13 314⇑ *iP* **P 20 20 13.4 -0.1**
comp=Z,389nm,3.0s,mb5.8
TORNY Torny/Romont 72.16 314⇑ *iP* **P 20 20 13.5 -0.1**
comp=Z,225nm,1.7s,mb5.8
ORE Reay 72.16 328⇑ *eP* **P 20 20 12.7 -0.8**
DIX Grande Dixence 72.19 313⇑ *iP* **P 20 20 14.4 +0.6**
comp=Z,699nm,3.3s
BAIF Baives 72.27 318⇑ *iP* **P 20 20 14.2 0.0**
comp=Z,257nm,1.5s,mb5.6
BAIF Baives 72.27 318⇑ *iP* **P 20 20 14.2 0.0**
BAIF pmax pmax
comp=Z,129nm,1.5s,mb5.6
BAIF Baives 72.27 318⇑ *iP* **P 20 20 14.2 0.0**
comp=Z,129nm,1.5s,mb5.6
GRYON Gryon 72.30 314⇑ *iP* **P 20 20 14.5 0.0**
EIDS Eidsvold 72.30 136 *eP* **P 20 20 14.6 0.0**
comp=Z,332nm,1.9s,mb5.9
AIGLE Aigle 72.36 314⇑ *iP* **P 20 20 14.6 -0.2**
comp=Z,298nm,1.6s,mb6.0
BRANT Les Verrieres 72.38 315⇑ *iP* **P 20 20 14.9 0.0**
comp=Z,310nm,1.6s,mb6.0
STKA Stephens Creek 72.40 147⇑ *iP* **P 20 20 14.4 -0.7**
comp=Z,16nm,0.7s,mb5.0
STKA Stephens Creek 72.40 147 P **P 20 20 14.2 -0.9**
comp=Z,21nm,0.7s,mb5.2,baz=329,slow=6.5,SNR=69
STKA Stephens Creek 72.40 147 *eP* **P 20 20 14.5 -0.6**
MCD Coleburn Disti 72.43 327 *eP* **P 20 20 14.0 -1.0**
SALAN Lac Salanfe 72.43 314⇑ *iP* **P 20 20 15.4 +0.1**
MME1 Meikle Cairn 72.44 327⇑ *eP* **P 20 20 14.1 -0.9**
MEZF Maizieres J'vi 72.51 316⇑ *iP* **P 20 20 15.6 -0.1**
comp=Z,345nm,1.6s,mb5.7
MEZF Maizieres J'vi 72.51 316⇑ *iP* **P 20 20 15.6 -0.1**
comp=Z,345nm,1.6s,mb6.0
EMV Vieux Emosson 72.52 314⇑ *iP* **P 20 20 15.9 +0.1**
comp=Z,203nm,1.6s,mb5.8
OG01 Vacheresse 72.53 314 *eP* **P 20 20 15.7 -0.1**
BMRM Bremner River 72.54 28 *eP* **P 20 20 15.5 -0.1**
comp=Z,338nm,1.0s,mb6.2
MVH1 Achvaich 72.68 328⇑ *eP* **P 20 20 16.0 -0.5**
GIMEL St. Georges / 72.69 314⇑ *iP* **P 20 20 16.7 -0.1**
comp=Z,318nm,3.1s
DAWY Dawson 72.72 24 *eP* **P 20 20 16.2 -0.4**
DAWY *e* pP 20 20 22.8 +0.6
CABF La Chapelle 72.76 314⇑ *iP* **P 20 20 16.8 -0.4**
comp=Z,111nm,1.1s,mb5.4
CABF La Chapelle 72.76 314⇑ *iP* **P 20 20 16.8 -0.4**
CABF pmax pmax
comp=Z,56nm,1.1s,mb5.4
CABF La Chapelle 72.76 314⇑ *iP* **P 20 20 16.8 -0.4**
comp=Z,56nm,1.1s,mb5.4
PGF Pioggiola 72.77 310⇑ *iP* **P 20 20 17.5 +0.1**
comp=Z,146nm,0.8s,mb5.7
PGF Pioggiola 72.77 310⇑ *iP* **P 20 20 17.5 +0.1**
PGF pmax pmax
comp=Z,73nm,0.8s,mb5.7
PGF Pioggiola 72.77 310⇑ *iP* **P 20 20 17.5 +0.1**
comp=Z,73nm,0.8s,mb5.7
LPG La Plagne 72.87 313⇑ *iP* **P 20 20 18.3 +0.4**
comp=Z,192nm,0.7s,mb5.8
LPG La Plagne 72.87 313⇑ *iP* **P 20 20 18.3 +0.4**
LPG pmax pmax
comp=Z,96nm,0.7s,mb5.8
LPG La Plagne 72.87 313⇑ *iP* **P 20 20 18.3 +0.4**
comp=Z,96nm,0.7s,mb5.8
LPL La Plagne 72.87 313⇑ *iP* **P 20 20 18.2 +0.3**
comp=Z,185nm,0.8s,mb5.8
LPL La Plagne 72.87 313⇑ *iP* **P 20 20 18.2 +0.3**
LPL pmax pmax
comp=Z,92nm,0.8s,mb5.8
LPL La Plagne 72.87 313⇑ *iP* **P 20 20 18.2 +0.3**
comp=Z,92nm,0.8s,mb5.8
ESY Stoneypath 72.99 326 *eP* **P 20 20 17.7 -0.7**
MDO Dochfour 73.02 328⇑ *eP* **P 20 20 17.6 -0.9**
SAOF Saorge 73.05 311 *eP* **P 20 20 19.3 +0.3**
SUMG Summit 73.08 349 *eP* **P 20 20 18.8 +0.1**
BNI Bardonecchia 73.12 313 *eP* **P 20 20 19.3 -0.1**
BNI MLR MLR
comp=Z,4µm,21.0s,MS5.7
AUTN L'Aution 73.13 311 *eP* **P 20 20 19.9 +0.4**
SBF Sospel 73.19 311⇑ *iP* **P 20 20 19.4 -0.4**
comp=Z,176nm,0.8s,mb5.7
SBF Sospel 73.19 311⇑ *iP* **P 20 20 19.4 -0.4**
SBF pmax pmax
comp=Z,88nm,0.8s,mb5.7
SBF Sospel 73.19 311⇑ *iP* **P 20 20 19.4 -0.4**
comp=Z,88nm,0.8s,mb5.7
MENF Mencas 73.19 319 *eP* **P 20 20 19.7 0.0**
MBDF Montbardon 73.21 312⇑ *iP* **P 20 20 19.1 -0.8**
comp=Z,86nm,0.9s,mb5.4
MBDF Montbardon 73.21 312⇑ *iP* **P 20 20 19.1 -0.8**
MBDF pmax pmax
comp=Z,43nm,0.9s,mb5.4
MBDF Montbardon 73.21 312⇑ *iP* **P 20 20 19.1 -0.8**
comp=Z,43nm,0.9s,mb5.4
LUCF Luceram 73.23 311 *eP* **P 20 20 20.3 +0.2**
TOUF Mont Tournerai 73.24 312 *eP* **P 20 20 20.4 +0.3**
EBH Black Hill 73.25 326 *eP* **P 20 20 19.3 -0.6**
EDI Edinburgh 73.26 326 *eP* **P 20 20 19.3 -0.7**
EDI AMb AMB 20 20 21.1
comp=Z,95nm,1.7s,mb5.4
EDI AMS AMS 20 51 11.0
comp=Z,1µm,17.8s,MS5.3
EBL Broad Law 73.27 326⇑ *eP* **P 20 20 19.5 -0.6**
XAL Allendale 73.34 325 *eP* **P 20 20 19.1 -1.4**
KAC Achnashellach 73.41 328⇑ *eP* **P 20 20 20.4 -0.5**
RES Resolute Bay 73.43 5 *eP* **P 20 20 20.6 -0.1**
RES pmax pmax
comp=Z,100nm,1.1s,mb5.7
RES Resolute Bay 73.43 5 *eP* **P 20 20 20.6 0.0**
comp=Z,101nm,1.1s,mb5.7
EAU Auchinoon 73.43 326⇑ *eP* **P 20 20 20.7 -0.3**
CALN Calern 73.59 311 *eP* **P 20 20 21.4 -0.8**
ESK Eskdalemuir 73.59 325 P **P 20 20 21.3 -0.7**
comp=Z,221nm,1.5s,mb5.9,SNR=5.6
ESK Eskdalemuir 73.59 325⇑ *eP* **P 20 20 21.2 -0.7**
ESK AMb AMB 20 20 23.1
comp=Z,66nm,1.6s,mb5.3
ESK AMS AMS 20 56 40.8
comp=Z,2µm,14.2s,MS5.6
ESK Eskdalemuir 73.59 325 *eP* **P 20 20 20.8 -1.1**
ESK LR LR
comp=Z,2µm,22.0s,MS5.4
ECK Cauldkaine Hil 73.62 325⇑ *eP* **P 20 20 21.6 -0.5**
KPL Plockton 73.66 328⇑ *eP* **P 20 20 21.7 -0.6**
KPL AMb AMB 20 20 29.5
comp=Z,88nm,3.3s
KPL AMS AMS 20 55 25.7
comp=Z,2µm,15.9s,MS5.6
EAB Aberfoyle 73.67 326 *eP* **P 20 20 21.3 -1.1**
ORIF Oris-en-Rattie 73.68 313⇑ *iP* **P 20 20 22.5 -0.2**
comp=Z,75nm,0.8s,mb5.4
ORIF *e*MLR MLR
comp=Z,7µm,19.5s,MS5.7
ORIF Oris-en-Rattie 73.68 313⇑ *iP* **P 20 20 22.5 -0.2**
ORIF pmax pmax
comp=Z,37nm,0.8s,mb5.4
ORIF Oris-en-Rattie 73.68 313⇑ *iP* **P 20 20 22.5 -0.2**
comp=Z,37nm,0.8s,mb5.4
LOR Lormes 73.80 316⇑ *iP* **P 20 20 22.5 -0.8**
comp=Z,154nm,1.5s,mb5.4
LOR *e*MLR MLR
comp=Z,4µm,21.0s,MS5.4
LOR Lormes 73.80 316⇑ *iP* **P 20 20 22.5 -0.8**
LOR pmax pmax
comp=Z,77nm,1.5s,mb5.4
LOR MLR MLR
comp=Z,4µm,21.0s,MS5.7
LOR Lormes 73.80 316⇑ *iP* **P 20 20 22.5 -0.8**
comp=Z,77nm,1.5s,mb5.4
LOR LR LR
comp=Z,4µm,21.0s,MS5.7
FRF La Foret Royal 73.83 311⇑ *iP* **P 20 20 23.2 -0.4**
comp=Z,202nm,1.4s,mb5.5
FRF La Foret Royal 73.83 311⇑ *iP* **P 20 20 23.2 -0.4**
FRF pmax pmax
comp=Z,101nm,1.4s,mb5.6
FRF La Foret Royal 73.83 311⇑ *iP* **P 20 20 23.2 -0.4**
comp=Z,101nm,1.4s,mb5.6
LHO Holmfirth 73.84 323⇑ *eP* **P 20 20 22.9 -0.6**
ABPO Ambohimpanom 73.94 235 *eP* **P 20 20 23.6 -0.9**
ABPO pmax pmax
comp=Z,135nm,1.7s,mb5.6
ABPO MLR MLR
comp=Z,1µm,20.0s,MS5.1
ABPO Ambohimpanom 73.94 235 *eP* **P 20 20 23.6 -0.8**
comp=Z,135nm,1.7s,mb5.6
ABPO LR LR
comp=Z,1µm,20.0s,MS5.1
PGBU Glenifferbraes 73.94 326 *eP* **P 20 20 23.4 -0.6**
PGBU AMb AMB 20 20 25.4
comp=Z,112nm,1.6s,mb5.6
PGBU AMS AMS 20 56 24.7
comp=Z,2µm,14.6s,MS5.6
KAR1 Arisaig 73.97 328⇑ *eP* **P 20 20 23.9 -0.3**
CWF Charnwood Fore 73.97 322 *eP* **P 20 20 23.2 -1.0**
CWF AMb AMB 20 20 24.2
comp=Z,43nm,1.6s,mb5.1
CWF AMS AMS 20 55 52.5
comp=Z,3µm,15.9s,MS5.7
LMR La Mourre 74.03 311⇑ *iP* **P 20 20 24.5 -0.3**
comp=Z,410nm,1.5s,mb5.8
LMR La Mourre 74.03 311⇑ *iP* **P 20 20 24.5 -0.3**
LMR pmax pmax
comp=Z,205nm,1.5s,mb5.8
LMR La Mourre 74.03 311⇑ *iP* **P 20 20 24.5 -0.3**
comp=Z,205nm,1.5s,mb5.8
KSK Scoval 74.07 328⇑ *eP* **P 20 20 24.7 0.0**
SSF Saint Saulge 74.11 316⇑ *iP* **P 20 20 24.4 -0.8**
comp=Z,170nm,1.5s,mb5.5
SSF Saint Saulge 74.11 316⇑ *iP* **P 20 20 24.4 -0.8**
SSF pmax pmax
comp=Z,85nm,1.5s,mb5.5
SSF Saint Saulge 74.11 316⇑ *iP* **P 20 20 24.4 -0.8**
comp=Z,85nm,1.5s,mb5.5
SMF Signal de Mont 74.11 315⇑ *iP* **P 20 20 24.6 -0.6**
comp=Z,432nm,1.5s,mb5.9
SMF Signal de Mont 74.11 315⇑ *iP* **P 20 20 24.6 -0.6**
SMF pmax pmax
comp=Z,216nm,1.5s,mb5.9
SMF Signal de Mont 74.11 315⇑ *iP* **P 20 20 24.6 -0.6**
comp=Z,216nm,1.5s,mb5.9
SMRF Simiane la Rot 74.32 312⇑ *iP* **P 20 20 26.5 0.0**
comp=Z,228nm,1.5s,mb5.6
SMRF Simiane la Rot 74.32 312⇑ *iP* **P 20 20 26.5 0.0**
comp=Z,228nm,1.5s,mb5.9
AVF Avril sur Loir 74.33 315⇑ *iP* **P 20 20 25.9 -0.6**
comp=Z,356nm,1.5s,mb5.8
AVF Avril sur Loir 74.33 315⇑ *iP* **P 20 20 25.9 -0.6**
AVF pmax pmax
comp=Z,178nm,1.5s,mb5.8
AVF Avril sur Loir 74.33 315⇑ *iP* **P 20 20 25.9 -0.6**
comp=Z,178nm,1.5s,mb5.8
SSB Saint Sauveur 74.34 314 *eP* **P 20 20 25.8 -0.8**
SSB Saint Sauveur 74.34 314 *eP* **P 20 20 25.5 -1.1**
SSB pmax pmax
comp=Z,56nm,1.4s,mb5.3
SSB MLR MLR
comp=Z,1µm,19.0s,MS5.2
SSB Saint Sauveur 74.34 314 *eP* **P 20 20 25.5 -1.0**
comp=Z,56nm,1.4s,mb5.3
SSB LR LR
comp=Z,1µm,19.0s,MS5.2
VIVF Saint-Julien-l 74.47 313⇑ *iP* **P 20 20 26.9 -0.4**
comp=Z,232nm,1.5s,mb5.6
VIVF Saint-Julien-l 74.47 313⇑ *iP* **P 20 20 26.9 -0.4**
VIVF pmax pmax
comp=Z,116nm,1.5s,mb5.6
VIVF Saint-Julien-l 74.47 313⇑ *iP* **P 20 20 26.9 -0.4**
comp=Z,116nm,1.5s,mb5.6
GAL1 Galloway 74.56 325 AMS AMS 20 55 50.5
comp=Z,2µm,14.8s,MS5.6
PLDF La Plantade 74.57 315 *eP* **P 20 20 27.8 -0.1**
BGF Bois d'Agland 74.75 315⇑ *iP* **P 20 20 28.3 -0.6**
comp=Z,149nm,1.5s,mb5.4
BGF Bois d'Agland 74.75 315⇑ *iP* **P 20 20 28.3 -0.6**
BGF pmax pmax
comp=Z,74nm,1.5s,mb5.4
BGF Bois d'Agland 74.75 315⇑ *iP* **P 20 20 28.3 -0.6**
comp=Z,74nm,1.5s,mb5.4
AGO Saint Agoulin 74.83 315 *eP* **P 20 20 29.4 0.0**
PYM Petit Puy Mans 75.05 315 *eP* **P 20 20 31.0 +0.3**
BORG Borgarnes 75.07 339 P **P 20 20 32.0 +1.6**
comp=Z,635nm,1.3s,mb6.4,SNR=5.9
BORG Borgarnes 75.07 339 *eP* **P 20 20 32.1 +1.7**
BORG pmax pmax
comp=Z,199nm,1.3s
BORG MLR MLR
comp=Z,2µm,19.0s
BORG Borgarnes 75.07 339 *eP* **P 20 20 32.1 +1.6**
comp=Z,199nm,1.3s,mb5.9
BORG LR LR
comp=Z,2µm,19.0s,MS5.4
LBL Lubilhac 75.17 314 *eP* **P 20 20 31.5 +0.2**
WLF1 Llynfaes 75.27 324 *eP* **P 20 20 30.5 -1.2**
WLF1 AMb AMB 20 20 32.2
comp=Z,300nm,1.5s,mb6.0
TCF Toulx Ste Croi 75.27 315⇑ *iP* **P 20 20 31.7 -0.2**
comp=Z,301nm,1.5s,mb5.7
TCF Toulx Ste Croi 75.27 315⇑ *iP* **P 20 20 31.7 -0.2**
TCF pmax pmax
comp=Z,151nm,1.5s,mb5.7
TCF Toulx Ste Croi 75.27 315⇑ *iP* **P 20 20 31.7 -0.2**
comp=Z,151nm,1.5s,mb5.7
HGH Gray Hill 75.33 322 *eP* **P 20 20 31.2 -1.0**
HTR Trewern Hill 75.34 322⇑ *eP* **P 20 20 31.8 -0.5**
LASF Ste Croix 75.36 313⇑ *iP* **P 20 20 32.5 +0.1**
comp=Z,263nm,1.5s,mb5.6
PNL Peninsula 75.41 28 *eP* **P 20 20 33.0 +0.6**
comp=Z,280nm,1.1s,mb6.1
HYT Haines Junctio 75.42 26 *eP* **P 20 20 33.4 +0.9**
LDF La Druitiere 75.46 318⇑ *iP* **P 20 20 32.4 -0.6**
comp=Z,66nm,0.9s,mb5.3
LDF La Druitiere 75.46 318⇑ *iP* **P 20 20 32.4 -0.6**
LDF pmax pmax
comp=Z,33nm,0.9s,mb5.3
LDF La Druitiere 75.46 318⇑ *iP* **P 20 20 32.4 -0.6**
comp=Z,33nm,0.9s,mb5.3
FRNF Fournols 75.51 314 *eP* **P 20 20 33.8 +0.5**
FLN La Foliniere 75.58 319⇑ *iP* **P 20 20 33.0 -0.6**
comp=Z,271nm,1.5s,mb5.7
FLN *e*MLR MLR
comp=Z,6µm,20.2s,MS5.6
FLN La Foliniere 75.58 319⇑ *iP* **P 20 20 33.0 -0.6**
FLN pmax pmax
comp=Z,135nm,1.5s,mb5.7
FLN MLR MLR
comp=Z,6µm,20.3s,MS5.9
FLN La Foliniere 75.58 319⇑ *iP* **P 20 20 33.0 -0.6**
comp=Z,135nm,1.5s,mb5.7
FLN LR LR
comp=Z,6µm,20.3s,MS5.9
KEST Kesra 75.70 303 P **P 20 20 34.5 0.0**
comp=Z,4.1nm,0.8s,mb4.4,baz=333,slow=6.8,SNR=11
GRR Gorron 75.99 318⇑ *iP* **P 20 20 35.5 -0.5**
comp=Z,85nm,0.8s,mb5.4
GRR Gorron 75.99 318⇑ *iP* **P 20 20 35.5 -0.5**
GRR pmax pmax
comp=Z,43nm,0.8s,mb5.4
GRR Gorron 75.99 318⇑ *iP* **P 20 20 35.5 -0.5**
comp=Z,43nm,0.8s,mb5.4
CAF Calviac 76.04 314⇑ *iP* **P 20 20 36.5 +0.1**
comp=Z,190nm,1.4s,mb5.5
CAF Calviac 76.04 314⇑ *iP* **P 20 20 36.5 +0.1**
CAF pmax pmax
comp=Z,95nm,1.4s,mb5.5
CAF Calviac 76.04 314⇑ *iP* **P 20 20 36.5 +0.1**
comp=Z,95nm,1.4s,mb5.5
DMUB Kingscourt 76.17 325 *eP* **P 20 20 35.6 -1.3**
HEX Exmoor 76.17 322 *eP* **P 20 20 35.8 -1.1**
RJF Les Rejaudoux 76.19 315⇑ *iP* **P 20 20 37.3 +0.1**
comp=Z,319nm,1.5s,mb5.7
RJF *e*MLR MLR
comp=Z,4µm,20.8s,MS5.4
RJF Les Rejaudoux 76.19 315⇑ *iP* **P 20 20 37.3 +0.1**
RJF pmax pmax
comp=Z,160nm,1.5s,mb5.7
RJF MLR MLR
comp=Z,4µm,20.8s,MS5.7
RJF Les Rejaudoux 76.19 315⇑ *iP* **P 20 20 37.3 +0.1**
comp=Z,160nm,1.5s,mb5.7
RJF LR LR
comp=Z,4µm,20.8s,MS5.7
DSB Dublin 76.28 325 *eP* **P 20 20 37.0 -0.5**
ARMA Armidale 76.42 139 *eP* **P 20 20 39.3 +0.8**
ARMA Armidale 76.42 139 *eP* **P 20 20 39.5 +1.0**
MFF Saint Martin d 76.51 317⇑ *iP* **P 20 20 38.7 -0.3**
comp=Z,305nm,1.6s,mb5.7
MFF Saint Martin d 76.51 317⇑ *iP* **P 20 20 38.7 -0.3**
MFF pmax pmax
comp=Z,152nm,1.6s,mb5.7
MFF Saint Martin d 76.51 317⇑ *iP* **P 20 20 38.7 -0.3**
comp=Z,152nm,1.6s,mb5.7
HTL Hartland 76.57 322 *eP* **P 20 20 38.8 -0.4**
HTL AMb AMB 20 20 39.8
comp=Z,58nm,1.5s,mb5.3
HTL AMS AMS 20 57 04.6
comp=Z,3µm,15.3s,MS5.8
DYA Yadsworthy 76.58 321 *eP* **P 20 20 37.7 -1.6**
DYA AMb AMB 20 20 39.5
comp=Z,61nm,1.7s,mb5.2
DYA AMS AMS 20 57 16.9
comp=Z,4µm,14.9s,MS5.8
CMAH Djebel Manchou 76.63 305 P **P 20 20 40.0 +0.1**
DCN Croghan 76.67 325 *eP* **P 20 20 38.5 -1.2**
MTLF Montolieu 76.75 313⇑ *iP* **P 20 20 40.4 0.0**
comp=Z,113nm,1.4s,mb5.3
MTLF Montolieu 76.75 313⇑ *iP* **P 20 20 40.4 0.0**
MTLF pmax pmax
comp=Z,56nm,1.4s,mb5.3
MTLF Montolieu 76.75 313⇑ *iP* **P 20 20 40.4 0.0**
comp=Z,56nm,1.4s,mb5.3
LRDF Laroque-de-Fa 76.76 312 *eP* **P 20 20 40.6 +0.2**
ABSA Djebel Ababsia 76.76 304 P **P 20 20 40.9 +0.3**
EJON La Jonquera 76.78 312 P **P 20 20 39.9 -0.7**
comp=Z,11nm,1.0s,mb4.7
LFF La Frestale 76.84 315⇑ *iP* **P 20 20 41.1 +0.2**
comp=Z,232nm,1.6s,mb5.6
LFF La Frestale 76.84 315⇑ *iP* **P 20 20 41.1 +0.2**
LFF pmax pmax
comp=Z,116nm,1.6s,mb5.6
LFF La Frestale 76.84 315⇑ *iP* **P 20 20 41.1 +0.2**
comp=Z,116nm,1.6s,mb5.6
FILF Fillols 76.94 312 *eP* **P 20 20 41.7 +0.2**
SGMF Saint Gilles 77.02 319⇑ *iP* **P 20 20 41.8 0.0**
comp=Z,400nm,1.5s,mb5.8
SGMF Saint Gilles 77.02 319⇑ *iP* **P 20 20 41.8 0.0**
SGMF pmax pmax
comp=Z,200nm,1.5s,mb5.8
SGMF Saint Gilles 77.02 319⇑ *iP* **P 20 20 41.8 0.0**
comp=Z,200nm,1.5s,mb5.8
SKAG Skagway 77.14 27 *eP* **P 20 20 42.4 +0.1**
comp=Z,208nm,1.0s,mb6.0
SKAG LR LR
comp=Z,2µm,17.0s,MS5.6
CKFL Kef-Lekhel 77.23 305 P **P 20 20 43.7 +0.4**
VALF Valcebollere 77.36 312 *eP* **P 20 20 44.6 +0.7**
ROSF Rostrenen 77.37 319⇑ *iP* **P 20 20 43.8 0.0**
comp=Z,308nm,1.5s,mb5.7
ROSF Rostrenen 77.37 319⇑ *iP* **P 20 20 43.8 0.0**
ROSF pmax pmax
comp=Z,154nm,1.5s,mb5.7
ROSF Rostrenen 77.37 319⇑ *iP* **P 20 20 43.8 0.0**
comp=Z,154nm,1.5s,mb5.7
CASM Ain Smara 77.46 305 P **P 20 20 44.6 0.0**
QUIF Quistinic 77.54 319⇑ *iP* **P 20 20 44.5 -0.3**
comp=Z,254nm,1.5s,mb5.6
QUIF Quistinic 77.54 319⇑ *iP* **P 20 20 44.5 -0.3**
QUIF pmax pmax
comp=Z,127nm,1.5s,mb5.6
QUIF Quistinic 77.54 319⇑ *iP* **P 20 20 44.5 -0.3**
comp=Z,127nm,1.5s,mb5.6
CTEI Djebel Teioual 77.62 305 P **P 20 20 45.7 +0.3**
MLS Moulis 77.66 313 *eP* **P 20 20 43.8 -1.7**
DFRA Djebel Bou Aff 77.75 305 P **P 20 20 46.9 +0.7**
EPF Esparros 78.09 313⇑ *iP* **P 20 20 47.3 -0.6**
comp=Z,34nm,0.9s,mb5.0
EPF Esparros 78.09 313⇑ *iP* **P 20 20 47.3 -0.6**
EPF pmax pmax
comp=Z,17nm,0.9s,mb5.0
EPF Esparros 78.09 313⇑ *iP* **P 20 20 47.3 -0.6**
comp=Z,17nm,0.9s,mb5.0
RESF Ens 78.21 313 *eP* **P 20 20 49.2 +0.6**
SET Setif 78.26 305 P **P 20 20 50.0 +1.0**
CKHR Kef el Ahmar 78.27 305 P **P 20 20 49.4 +0.3**
VIEF Viey 78.36 313 *eP* **P 20 20 50.1 +0.7**
EBIE Bielsa 78.39 313 P **P 20 20 50.7 +1.1**
comp=Z,36nm,1.2s,mb5.2
EPOB Poblet 78.50 311 P **P 20 20 50.2 0.0**
comp=Z,29nm,1.1s,mb5.1
ETSF Etsaut 78.72 313⇑ *iP* **P 20 20 51.7 +0.3**
comp=Z,37nm,0.8s,mb5.1
ETSF Etsaut 78.72 313⇑ *iP* **P 20 20 51.7 +0.3**
ETSF pmax pmax
comp=Z,19nm,0.8s,mb5.1
ETSF Etsaut 78.72 313⇑ *iP* **P 20 20 51.7 +0.3**
comp=Z,19nm,0.8s,mb5.1
CAN Canberra 78.80 144 *eP* **P 20 20 51.4 -0.3**
CAN pmax pmax
comp=Z,154nm,1.7s,mb5.7
CAN MLR MLR
comp=Z,848nm,21.0s,MS5.0

CAN Canberra 78.80 144 *e*P **P 20 20 51.4 -0.3**
comp=Z,154nm,1.7s,mb5.7
CAN LR LR
comp=Z,848nm,21.0s,MS5.0
TOO Toolangi 78.90 147⇑ *i*P **P 20 20 52.2 0.0**
OSSF Osses 78.96 314 *e*P **P 20 20 52.4 -0.3**
CNB Canberra Magne 78.98 144 *e*P **P 20 20 51.5 -1.2**
SJPF Ste Jean 79.01 314 *e*P **P 20 20 53.4 +0.4**
comp=Z,42nm,0.8s,mb5.1
SJPF Ste Jean 79.01 314 *e*P **P 20 20 53.4 +0.4**
SJPF pmax pmax
comp=Z,21nm,0.8s,mb5.1
SJPF Ste Jean 79.01 314 *e*P **P 20 20 53.4 +0.4**
comp=Z,21nm,0.8s,mb5.1
EALK Alkurruntz 79.13 314 P **P 20 20 54.1 +0.5**
comp=Z,40nm,1.3s,mb5.2
ELIZ Elizondo 79.17 314 P **P 20 20 54.8 +0.9**
ELIZ pmax pmax
comp=Z,12nm,1.0s,mb4.8
ELIZ Elizondo 79.17 314 P **P 20 20 54.8 +0.9**
comp=Z,12nm,1.0s,mb4.8
ERTA Horta de San J 79.19 311 P **P 20 20 54.4 +0.4**
comp=Z,16nm,0.7s,mb5.1
ESAC San Caprasio 79.29 312 P **P 20 20 55.4 +0.8**
comp=Z,8.3nm,0.5s,mb4.9
DLBC Dease Lake 79.84 26 *e*P **P 20 20 57.6 +0.5**
EMHD Djebel Mahouad 79.95 306 P **P 20 20 59.0 +0.7**
SFJD Kangerlussuaq 79.97 350⇑ *i*P **P 20 20 57.1 -0.7**
SFJD pmax pmax
comp=Z,90nm,0.8s,mb5.8
SFJD Kangerlussuaq 79.97 350 *e*P **P 20 20 57.2 -0.6**
comp=Z,189nm,1.0s,mb6.0
SFJD Kangerlussuaq 79.97 350⇑ *i*P **P 20 20 57.1 -0.7**
comp=Z,90nm,0.8s,mb5.8
EMOS Mosqueruela 80.03 311 P **P 20 20 59.2 +0.6**
comp=Z,22nm,0.8s,mb5.1
ECRI Cripan 80.08 314 P **P 20 20 58.9 +0.1**
comp=Z,5.3nm,0.9s,mb4.5
DZM Mont Dzumac 80.15 123 *e*P **P 20 20 56.4 -3.0**
comp=Z,168nm,1.4s,mb5.8
DZM *e*S S 20 30 58.2 -5.4
comp=Z,945nm,27.9s
DZM *e*LR LR 20 45 46.6
comp=Z,1μm,21.9s
DZM Mont Dzumac 80.15 123 *e*P **P 20 20 59.5 +0.1**
ELAN Lanestosa 80.30 315 P **P 20 21 00.6 +0.6**
comp=Z,46nm,1.1s,mb5.3
EBEN Beniarda 80.77 310 P **P 20 21 02.8 +0.3**
comp=Z,10nm,0.9s,mb4.8
ETOR Torete 80.79 312 P **P 20 21 02.0 -0.7**
comp=Z,1.5nm,1.4s
EBNR Beni Rached 80.89 307 P **P 20 21 04.0 +0.7**
EARI Arriondas 81.33 316 P **P 20 21 06.0 +0.5**
comp=Z,33nm,1.2s,mb5.1
EANR 'Ain N'Sour 81.36 307 P **P 20 21 06.5 +0.7**
YKA Yellowknife Ar 81.44 17 P **P 20 21 05.3 -0.3**
comp=Z,40nm,0.9s,mb5.3,baz=324,slow=4.7,SNR=208
YKA S S 20 31 13.2 -2.7
comp=Z,0.2nm,0.8s,baz=328,slow=12,SNR=4.0
YKA PKKPbc PKKPbc 20 39 36.4 -3.6
comp=Z,0.6nm,0.7s,baz=151,slow=2.2,SNR=7.4
YKA PKPPKP 20 47 43.4
comp=Z,0.2nm,0.6s,baz=144,slow=2.2,SNR=3.7
YKA LR LR 21 01 07.7
comp=Z,165nm,19.8s,MS4.4,baz=165,slow=38
YKA Yellowknife Ar 81.44 17 P **P 20 21 05.3 -0.4**
YKA S S 20 31 13.2 -2.8
YKA Yellowknife Ar 81.44 17 P **P 20 21 05.3 -0.3**
YKA S S 20 31 13.2 -2.7
YKA PKKPbc PKKPbc 20 39 36.4 -3.6
YKA P'P' 20 47 43.4
YKA LR LR 21 01 07.7
ETRT Tiaret 81.52 306 P **P 20 21 08.0 +1.3**
ETOB Tobarra 81.66 310 P **P 20 21 08.0 +0.7**
comp=Z,16nm,0.8s,mb5.0
FUNA Funafuti 82.09 105 PFAKE 20 21 20.0 +10
FUNA LR LR
comp=Z,6μm,20.0s,MS6.0
GUD Guadarrama 82.20 313 P **P 20 21 10.7 +0.5**
GUD pmax pmax
comp=Z,60nm,1.4s,mb5.3
GUD Guadarrama 82.20 313 P **P 20 21 10.7 +0.5**
comp=Z,60nm,1.4s,mb5.3
EVIA Vianos 82.29 311 P **P 20 21 11.0 +0.4**
EVIA pmax pmax
comp=Z,17nm,0.9s,mb5.0
EVIA Vianos 82.29 311 P **P 20 21 11.0 +0.3**
comp=Z,17nm,0.9s,mb5.0
EPON Pontenova 82.46 317 P **P 20 21 11.1 -0.4**
comp=Z,13nm,0.7s,mb5.0
ESDC Sonseca Array 82.64 312 P **P 20 21 12.6 +0.2**
comp=Z,2.5nm,0.5s,mb4.5,baz=39,slow=5.8,SNR=41
ESDC LR LR 21 00 45.5
comp=Z,2μm,18.7s,MS5.4,baz=45,slow=38
ESDC Sonseca Array 82.64 312 P **P 20 21 12.2 -0.3**
comp=Z,3.9nm,0.7s,mb4.5
ESLA Sonseca Array 82.64 312 *e*P **P 20 21 12.6 +0.2**
ESLA LR LR
comp=Z,11μm,20.0s,MS6.2
PAB San Pablo 82.95 312 *e*P **P 20 21 13.3 -0.8**
PAB pmax pmax
comp=Z,49nm,1.7s,mb5.3
PAB MLR MLR
comp=Z,2μm,21.0s,MS5.5
PAB San Pablo 82.95 312 *e*P **P 20 21 13.3 -0.8**
comp=Z,49nm,1.7s,mb5.3
PAB LR LR
comp=Z,2μm,21.0s,MS5.5
ENIJ Nijar 83.03 309 P **P 20 21 15.1 +0.6**
ENIJ pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
ENIJ Nijar 83.03 309 P **P 20 21 15.1 +0.6**
comp=Z,7.4nm,0.7s,mb4.8
ECAL Calabor 83.03 315 P **P 20 21 14.8 +0.4**
comp=Z,9.7nm,0.8s,mb4.9
EQES Quesada 83.13 310 P **P 20 21 14.4 -0.6**
comp=Z,24nm,1.0s,mb5.2
EBAN Banos Encina 83.39 311 P **P 20 21 16.7 +0.3**
EBAN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
EBAN Banos Encina 83.39 311 P **P 20 21 16.7 +0.4**
comp=Z,10.0nm,0.9s,mb4.8
EBER Berja 83.52 309 P **P 20 21 17.3 +0.2**
comp=Z,44nm,1.2s,mb5.5
MVO Moncorvo 83.67 315 *e*P **P 20 21 18.1 +0.3**
comp=Z,47nm,1.2s,mb5.5
MVO *i*P 20 21 27.1
MVO Moncorvo 83.67 315 *e*PP PP 20 24 34.2 +4.2
MVO *e*S S 20 31 40.9 +1.3
MVO *e*LQ 20 51 47.5
MVO *e*LR LR 20 54 11.9
comp=Z,2μm,18.0s
ELOB Lobios 83.87 316 P **P 20 21 19.3 +0.6**
comp=Z,25nm,1.0s,mb5.3
EADA Adamuz 83.89 311 P **P 20 21 19.1 +0.1**
comp=Z,32nm,1.3s,mb5.3
PCAB Cabril 83.94 316 *e*P **P 20 21 20.2 +1.1**
comp=Z,85nm,1.4s,mb5.7
PCAB *i*P 20 21 28.5
PVRL Vila Real 84.02 315 *e*P **P 20 21 20.1 +0.6**
comp=Z,52nm,1.4s,mb5.5
PVRL *i*P 20 21 29.0
ELUQ Luque 84.05 311 P **P 20 21 19.7 0.0**
ELUQ pmax pmax
comp=Z,24nm,0.6s,mb5.5
ELUQ Luque 84.05 311 P **P 20 21 19.7 0.0**
comp=Z,24nm,0.6s,mb5.5
TAU Tasmania Unive 84.05 149 PFAKE 20 21 30.0 +11
TAU LR LR
comp=Z,858nm,21.0s,MS5.1
ELOJ Sierra Loja 84.21 310 P **P 20 21 19.9 -0.6**
comp=Z,2.8nm,0.7s,mb4.5
MTE Manteigas 84.44 314 *e*P **P 20 21 22.5 +0.8**
comp=Z,96nm,1.5s,mb5.7
MTE *i*P pP 20 21 28.2 +0.9
MTE Manteigas 84.44 314 *e*PP PP 20 24 41.2 +4.9
MTE *e*S S 20 31 51.2 +3.8
MTE *e*LQ 20 53 22.1
MTE *e*LR LR 20 57 43.6
comp=Z,2μm,20.0s
MTE Manteigas 84.44 314 *e*P **P 20 21 22.6 +0.9**
MTE LR LR
comp=Z,2μm,19.0s,MS5.5
PVIS Viseu 84.46 315 *e*P **P 20 21 22.4 +0.6**
comp=Z,81nm,1.6s,mb5.6
PVIS *i*P pP 20 21 28.0 +0.6

PCBR Castelo Branco 84.74 314 *e*P **P 20 21 23.5 +0.3**
comp=Z,47nm,1.6s,mb5.4
PCBR *i*P 20 21 35.5
PMRV Marv??o 84.93 314 *e*P **P 20 21 24.2 0.0**
comp=Z,77nm,1.5s,mb5.6
PMRV *i*P pP 20 21 30.3 +0.5
PMRV Marv??o 84.93 314 *e*PP PP 20 24 18.3 -22
PMRV *e*S S 20 31 59.7 +7.4
PMRV *e*LQ 20 50 29.6
PMRV *e*LR LR 20 54 25.0
comp=Z,848nm,16.0s
EBAD Badajoz 85.10 313 P **P 20 21 25.1 +0.1**
comp=Z,21nm,1.2s,mb5.2
PESTR Estremoz 85.39 313 *e*P **P 20 21 26.5 0.0**
comp=Z,44nm,1.5s,mb5.4
PESTR Estremoz 85.39 313 *e*PP PP 20 24 38.5 -5.6
PESTR *e*S S 20 32 04.0 +7.2
PESTR *e*LQ 20 48 27.4
PESTR *e*LR LR 20 55 46.6
comp=Z,1μm,18.0s
PTOM Tomar 85.44 314 *e*P **P 20 21 27.2 +0.5**
comp=Z,84nm,1.9s,mb5.5
PBAR Barancos 85.46 312 *e*P **P 20 21 27.1 +0.2**
comp=Z,80nm,1.5s,mb5.6
PBAR *i*P 20 21 40.9
PBAR Barrancos 85.46 312 *e*PP PP 20 24 49.4 +4.7
PBAR *e*S S 20 32 04.2 +6.6
PBAR *e*LQ 20 49 45.7
PBAR *e*LR LR 20 57 01.9
comp=Z,2μm,20.0s
EMIN Mina Concepcio 85.47 312 P **P 20 21 25.7 -1.2**
comp=Z,60nm,1.4s,mb5.5
ESPR Espera 85.48 311 P **P 20 21 26.8 -0.2**
comp=Z,60nm,1.4s,mb5.5
EVO Evora 85.86 313 *e*P **P 20 21 28.9 +0.1**
comp=Z,83nm,1.5s,mb5.7
EVO *i*P 20 21 37.3
SFS San Fernando 85.94 311 PFAKE 20 21 40.0 +11
SFS LR LR
comp=Z,3μm,22.0s,MS5.6
PBEJ Beja 86.07 313 *e*P **P 20 21 30.5 +0.6**
comp=Z,64nm,1.4s,mb5.7
LSZ Lusaka 86.08 250 *e*P **P 20 21 30.0 -0.2**
LSZ MLR MLR
comp=Z,1μm,19.0s,MS5.3
LSZ Lusaka 86.08 250 *e*P **P 20 21 30.0 -0.1**
LSZ LR LR
comp=Z,1μm,19.0s,MS5.3
LSZ Lusaka 86.08 250 P **P 20 21 30.5 +0.3**
SNR=23
LSZ P 20 21 30.5
SNR=23
EGRO El Granado 86.12 312 P **P 20 21 30.0 -0.2**
comp=Z,6.4nm,0.9s,mb4.8
PVAQ Vaqueiros 86.35 312 *e*P **P 20 21 31.4 +0.1**
comp=Z,74nm,1.6s,mb5.7
PVAQ *i*P 20 21 44.2
PVAQ Vaqueiros 86.35 312 *e*PP PP 20 25 01.0 +9.1
PVAQ *e*S S 20 32 12.6 +6.3
PVAQ *e*LQ 20 50 21.0
PVAQ *e*LR LR 20 54 16.5
comp=Z,2μm,20.0s
PMAFR Mafra 86.38 314 *e*PP PP 20 25 02.5 +10
PMAFR *e*S S 20 32 12.1 +5.5
PMAFR *e*LQ 20 54 27.8
PMAFR *e*LR LR 20 58 37.4
comp=Z,1μm,20.0s
PCVE Castro Verde 86.42 312 *e*P **P 20 21 32.3 +0.7**
comp=Z,76nm,1.6s,mb5.7
PCVE Castro Verde 86.42 312 *e*PP PP 20 25 01.1 +8.7
PCVE *e*S S 20 32 10.6 +3.6
PCVE *e*LQ 20 50 01.8
PCVE *e*LR LR 20 56 35.7
comp=Z,1μm,20.0s
LIS Lisbon 86.45 314 *e*P **P 20 21 32.0 +0.2**
LIS *e*S S 20 31 58.5 -8.7
LIS AMS AMS 20 58 13.2
comp=N,2μm,27.9s
LIS Lisbon 86.45 314 *e*P **P 20 21 32.0 +0.3**
LIS *e*S S 20 31 58.5 -8.7
PBDV Barranco-do-Ve 86.58 312 *e*P **P 20 21 33.1 +0.7**
comp=N,98nm,1.5s,mb5.8
PBDV Barranco-do-Ve 86.58 312 *e*PP PP 20 25 01.3 +7.5
PBDV *e*S S 20 32 08.7 +0.1
PBDV *e*LQ 20 50 56.2
PBDV *e*LR LR 20 54 17.4
comp=N,1μm,20.0s
PTEO Sao Teotonio 86.90 313 *e*P **P 20 21 34.4 +0.4**
comp=N,147nm,1.5s,mb6.0
MORF Marmelete 87.00 312 *e*P **P 20 21 35.1 +0.6**
comp=N,98nm,1.4s,mb5.8
MORF Marmelete 87.00 312 *e*PP PP 20 24 59.5 +2.3
MORF *e*S S 20 32 02.7 -10
MORF *e*LR LR 20 56 19.6
comp=N,1μm,20.0s
MORF Marmelete 87.00 312 *e*P **P 20 21 34.7 +0.2**
MORF *e*S S 20 32 00.6 -12
PFVI Vila Bisbo 87.22 312 *e*P **P 20 21 36.0 +0.5**
comp=N,116nm,1.4s,mb5.9
PFVI Vila Bisbo 87.22 312 *e*PP PP 20 25 03.5 +4.6
PFVI *e*S S 20 32 15.8 +1.1
PFVI *e*LQ 20 49 17.5
PFVI *e*LR LR 20 56 27.7
comp=N,2μm,20.0s
RTC Rabat Centre 87.85 309 PFAKE 20 21 50.0 +11
RTC LR LR
comp=Z,657nm,20.0s,MS5.0
FCC Fort Churchill 88.90 9 *e*P **P 20 21 42.5 -0.6**
EDM Edmonton 89.69 21 *e*P **P 20 21 47.6 +0.7**
PGC Sidney 89.76 29 *e*P **P 20 21 47.9 +0.6**
A05A Maple Falls 90.05 28⇓P **P 20 21 48.7 0.0**
baz=90
A06A Chilliwack 90.22 28⇑P **P 20 21 49.5 0.0**
baz=90
NLWA Neilton Lookou 90.56 30⇑P **P 20 21 52.0 +0.9**
baz=90,SNR=8.7
NLWA Neilton Lookou 90.56 30 *e*P **P 20 21 52.2 +1.1**
B06A Marblemount 90.67 28⇓P **P 20 21 51.7 +0.1**
baz=90,SNR=6.2
A07A Ashnola River, 90.69 27⇓P **P 20 21 51.9 +0.2**
baz=90,SNR=17
RPW Rockport 90.72 28 P **P 20 21 52.1 +0.3**
JCW Jim Creek 90.75 29 P **P 20 21 53.1 +1.2**
GNW Green Mountain 90.87 30 *e*P **P 20 21 53.3 +0.8**
comp=Z,34nm,1.2s,mb5.6
A08A Turner Farm, O 91.20 27⇑P **P 20 21 54.5 +0.5**
baz=91,SNR=39
B07A Winthrop 91.27 28⇑P **P 20 21 54.5 +0.1**
baz=91,SNR=32
FFC Flin Flon 91.35 15 P **P 20 21 54.3 -0.3**
comp=Z,305nm,1.2s,mb6.5,SNR=26
FFC Flin Flon 91.35 15 *e*P **P 20 21 53.4 -1.2**
FFC LR LR
comp=Z,2μm,22.0s,MS5.5
E03A Lebam 91.35 31⇓P **P 20 21 55.6 +0.9**
baz=91,SNR=5.3
C06A Tall Timber Ra 91.39 28⇓P **P 20 21 55.1 +0.2**
baz=91
A09A Danville 91.44 26⇑P **P 20 21 55.6 +0.5**
baz=91,SNR=20
NLW Nelson Butte 91.49 28 P **P 20 21 56.4 +1.0**
D05A Enumclaw 91.52 29⇓P **P 20 21 56.4 +0.8**
baz=91,SNR=8.2
B08A Colville Reser 91.66 27⇑P **P 20 21 56.6 +0.5**
baz=91,SNR=28
A10A Northport 91.83 26⇓P **P 20 21 57.6 +0.7**
baz=92
F03A Seaside 91.83 31⇓P **P 20 21 57.9 +0.8**
baz=92
ETW Entiat 91.87 28 *e*P **P 20 21 57.8 +0.6**
C07A Waterville 91.91 28⇓P **P 20 21 57.2 -0.2**
baz=92,SNR=15
LON Longmire 91.94 29 *e*P **P 20 21 57.2 -0.3**
WTV Waterville 91.95 28 P **P 20 21 58.2 +0.6**
LTY Liberty 92.01 29 P **P 20 21 58.0 +0.1**
B09A Rice 92.06 26⇑P **P 20 21 58.6 +0.6**
baz=92,SNR=14
WPW White Pass 92.09 29 P **P 20 21 59.5 +1.3**
C08A Higginbotham F 92.24 27⇑P **P 20 21 59.2 +0.3**
baz=92,SNR=13
A11A Hall Mountain, 92.28 25⇑P **P 20 22 00.2 +1.2**
baz=92,SNR=15
F04A Amboy 92.33 30⇑P **P 20 21 59.8 +0.5**
baz=92,SNR=7.3
AFI Afiamalu 92.44 105 LR LR 20 58 25.0

comp=Z,450nm,19.1s,MS4.9,baz=289,slow=32
E06A Yakima 92.45 29⇓P **P 20 22 00.8 +0.9**
baz=92,SNR=23
B10A Chitwood Farm, 92.51 26⇓P **P 20 22 00.7 +0.6**
baz=92
C09A Chrisman Ranch 92.53 27⇓P **P 20 22 00.7 +0.6**
baz=92,SNR=9.2
A12A Yaak River Ran 92.56 25⇓P **P 20 22 00.9 +0.6**
baz=92,SNR=6.1
NEW Newport 92.58 26 *e*P **P 20 22 01.0 +0.6**
NEW MLR MLR
comp=Z,2μm,19.0s
OD2 Odessa Site #2 92.69 27 *e*P **P 20 22 01.3 +0.4**
B11A Sandpoint 92.72 26⇑P **P 20 22 01.4 +0.3**
baz=92,SNR=18
G04A Mulino 92.87 31⇑P **P 20 22 02.4 +0.6**
baz=93
D08A Wollman Farm, 92.88 28⇑P **P 20 22 01.8 -0.1**
baz=93,SNR=8.4
C10A Spilker Farm, 92.88 26⇑P **P 20 22 02.4 +0.5**
baz=93
E07A Sunnyside 92.91 29⇑P **P 20 22 02.8 +0.8**
baz=93
B12A Libby 92.98 25⇑P **P 20 22 03.0 +0.8**
baz=93
COR Corvallis 92.99 32 *e*P **P 20 22 03.3 +0.9**
COR pmax pmax
comp=Z,124nm,1.4s,mb6.2
COR MLR MLR
comp=Z,1μm,20.0s,MS5.4
COR Corvallis 92.99 32 *e*P **P 20 22 03.3 +0.8**
comp=Z,124nm,1.4s,mb6.2
COR LR LR
comp=Z,1μm,20.0s,MS5.4
WALA Waterton Lakes 93.07 24 *e*P **P 20 22 03.6 +0.9**
D09A Jones Farm, Ri 93.12 27⇑P **P 20 22 03.2 +0.3**
baz=93,SNR=8.9
HOOD Mount Hood Mea 93.14 30 *e*P **P 20 22 04.6 +1.5**
RSW Rattlesnake Hi 93.15 28 *e*P **P 20 22 04.1 +1.0**
HAWA Hanford 93.17 28 *e*P **P 20 22 04.0 +0.8**
HAWA LR LR
comp=Z,1μm,22.0s,MS5.3
E08A Dider Farm, El 93.28 28⇑P **P 20 22 04.4 +0.7**
baz=93
A14A Double T Ranch 93.31 24⇑P **P 20 22 03.8 0.0**
baz=93,SNR=5.8
TOA0 Torodi Ar. Sit 93.33 287 *e*P **P 20 22 03.6 -0.9**
TORD Torodi Ar. Bea 93.33 287 P **P 20 22 03.9 -0.6**
comp=Z,44nm,1.3s,mb5.7,baz=57,slow=2.3,SNR=74
TORD PP PP 20 25 47.5 -0.7
comp=Z,2.6nm,0.8s,baz=57,slow=6.7,SNR=3.7
TORD LR LR 21 09 49.8
comp=Z,1μm,20.1s,MS5.4,baz=65,slow=39
F07A Phinny Hill Vi 93.41 29⇓P **P 20 22 04.6 +0.3**
baz=93
H04A Detroit Lake 93.41 31⇓P **P 20 22 04.6 +0.3**
baz=93
B13A Whitefish 93.46 24⇓P **P 20 22 04.9 +0.4**
baz=93,SNR=14
LBTB Lobatse 93.47 243 *e*P **P 20 22 04.0 -0.8**
LBTB MLR MLR
comp=Z,645nm,20.0s,MS5.1
D10A Wagner Farm, O 93.52 27⇑P **P 20 22 04.5 -0.3**
baz=93,SNR=11
A15A Johnson Ranch, 93.54 23⇑P **P 20 22 04.4 -0.5**
baz=93
E09A Wood Farm, Sta 93.63 28⇑P **P 20 22 05.6 +0.3**
baz=93,SNR=6.3
G06A Carlson Farm, 93.64 30⇑P **P 20 22 06.1 +0.7**
baz=93
C12B Naegeli Ranch, 93.66 25⇑P **P 20 22 05.3 -0.1**
baz=93,SNR=5.5
SCHQ Schefferville 93.71 355 P **P 20 22 05.0 -0.5**
comp=Z,13nm,1.0s,mb5.3,baz=35,slow=6.8,SNR=9.9
SCHQ LR LR 21 06 54.5
comp=Z,1μm,18.7s,MS5.3,baz=8.0,slow=37
SCHQ Schefferville 93.71 355 *e*P **P 20 22 04.7 -0.8**
comp=Z,29nm,1.0s,mb5.7
BSMT Bassoo Peak 93.79 25 *e*P **P 20 22 07.2 +1.2**
D11A Klaveano Farm, 93.89 26⇓P **P 20 22 06.6 +0.1**
baz=94,SNR=9.0
A16A West Butte Ran 93.94 23⇑P **P 20 22 06.4 -0.2**
baz=94,SNR=6.8
F08A Pendleton 93.96 28⇓P **P 20 22 07.0 +0.1**
baz=94,SNR=5.7
C13A Hot Springs 94.01 25⇑P **P 20 22 06.6 -0.4**
baz=94,SNR=13
YBMT Yellow Bay 94.05 24 *e*P **P 20 22 08.5 +1.3**
JTMT Jette 94.06 25 *e*P **P 20 22 08.5 +1.3**
E10A Myers Farm, Un 94.06 27⇓P **P 20 22 07.8 +0.5**
baz=94
LNOR Lincton Mounta 94.10 28 *e*P **P 20 22 08.6 +1.1**
B15A Bradely Ranch, 94.17 23⇓P **P 20 22 06.6 -1.1**
baz=94,SNR=15
VIPM Ingram Point 94.23 30 P **P 20 22 09.5 +1.4**
G08A Pilot Rock 94.30 29⇓P **P 20 22 09.0 +0.6**
baz=94
SWMT Swartz Lake 94.36 25 *e*P **P 20 22 09.6 +1.0**
F09A S2 Ranch, Elgi 94.38 28⇑P **P 20 22 09.0 +0.2**
baz=94
F10A Beach Ranch, E 94.44 27⇑P **P 20 22 09.4 +0.4**
baz=94
E11A Bogner Ranch, 94.51 27⇑P **P 20 22 09.1 -0.3**
baz=94,SNR=21
A18A Metzger Ranch, 94.53 22⇓P **P 20 22 08.7 -0.6**
baz=94,SNR=9.4
D13A Huson 94.55 25⇑P **P 20 22 08.7 -0.8**
baz=94,SNR=7.8
C15A Salmond Ranch, 94.62 24⇓P **P 20 22 09.8 0.0**
baz=94,SNR=13
HUMO Hull Mountain 94.69 33 *e*P **P 20 22 11.9 +1.6**
comp=Z,24nm,1.3s,mb5.5
HUMO LR LR
comp=Z,1μm,20.0s,MS5.3
SLMT Seeley Lake 94.77 25 *e*P **P 20 22 10.8 +0.3**
B17A L&G Farms, Che 94.78 22⇓P **P 20 22 10.2 -0.3**
baz=94,SNR=14
G09A Cove 94.79 28⇓P **P 20 22 11.3 +0.6**
baz=94
C16A Fuhringer Ranc 94.89 23⇓P **P 20 22 10.6 -0.4**
baz=95,SNR=10.0
D14A Greenough 94.90 25⇑P **P 20 22 10.7 -0.4**
baz=95,SNR=7.6
F11A Grangeville 94.92 27⇓P **P 20 22 11.0 -0.3**
baz=95,SNR=12
MSO Missoula 94.96 25 *e*P **P 20 22 11.8 +0.4**
comp=Z,23nm,1.2s,mb5.5
MSO LR LR
comp=Z,1μm,20.0s,MS5.4
B18A Beardsley Farm 95.01 22⇑P **P 20 22 11.3 -0.3**
baz=95
H08A Prairie City 95.05 29⇓P **P 20 22 12.6 +0.7**
baz=95
I07A Izee 95.05 30⇓P **P 20 22 12.5 +0.6**
baz=95
CHMT Chamberlain Mo 95.13 25 *e*P **P 20 22 12.5 +0.4**
E13A Victor 95.20 25⇑P **P 20 22 11.7 -0.8**
baz=95,SNR=9.3
D15A Lincoln 95.28 24⇓P **P 20 22 12.9 +0.1**
baz=95
G11A Walters Elk Ra 95.29 27⇓P **P 20 22 12.8 -0.2**
baz=95
BMO Blue Mountains 95.33 28 *e*P **P 20 22 13.4 +0.3**
BMO MLR MLR
comp=Z,1μm,20.0s,MS5.4
H09A Durkee 95.34 28⇓P **P 20 22 13.3 +0.1**
baz=95
EGMT Eagleton 95.35 22⇓P **P 20 22 13.1 -0.1**
baz=95
C17A Wharram Farm, 95.36 23⇓P **P 20 22 12.8 -0.4**
baz=95
F12A Elk City 95.38 26⇑P **P 20 22 12.5 -0.8**
baz=95,SNR=9.1
K05A Summer Lake 95.53 31⇑P **P 20 22 14.6 +0.5**
baz=95
D16A Dana Ranch, Ca 95.62 23⇓P **P 20 22 14.1 -0.3**
baz=95,SNR=6.1
BOSA Boshof 95.67 240 P **P 20 22 13.1 -1.7**
comp=Z,1.5nm,0.6s,mb4.6,baz=78,slow=8.5,SNR=5.5
BOSA LR LR 21 03 00.1
comp=Z,677nm,21.3s,MS5.1,baz=54,slow=34
F13A Darby 95.70 26⇓P **P 20 22 14.4 -0.4**
baz=95,SNR=6.6
E15A Deer Lodge 95.77 24⇓P **P 20 22 15.3 +0.2**
baz=95,SNR=5.9
HRY Holter Researc 95.80 24 *e*P **P 20 22 16.1 +0.9**
I09A Lost Marbles R 95.88 29⇓P **P 20 22 15.7 +0.1**

baz=96
G12A Big Creek, Yel 95.88 27 ⇑P P 20 22 15.4 -0.2
baz=96
H11A Donnelly 95.97 27 ⇓P P 20 22 15.6 -0.4
baz=96
E16A East Helena 96.01 24 ⇑P P 20 22 16.2 0.0
baz=96
F14A Wisdom 96.03 25 ⇑P P 20 22 16.4 0.0
baz=96
D18A Linhart Farms, 96.06 22 ⇑P P 20 22 16.6 +0.2
baz=96
J08A Circle Bar Ran 96.08 30 ⇑P P 20 22 16.9 +0.3
baz=96
I10A Payette 96.17 28 ⇓P P 20 22 17.0 +0.1
baz=96
F15A Butte 96.32 25 ⇓P P 20 22 17.8 +0.2
baz=96
G13A Cobalt 96.33 26 ⇑P P 20 22 17.2 -0.5
baz=96
E17A Martinsdale 96.35 23 ⇓P P 20 22 18.2 +0.4
baz=96
LRM Limekiln Ridge 96.35 25 *e*P **P 20 22 17.6 -0.2**
J09A Fry Pan Ranch, 96.39 29 ⇑P P 20 22 18.1 +0.2
baz=96
MOD Modoc 96.46 32 *e*P **P 20 22 19.6 +1.3**
MOD LR LR
comp=Z,1μm,19.0s,MS5.4
G14A Jackson 96.48 26 ⇓P P 20 22 18.3 -0.1
baz=96
H12A Diamond D Ranc 96.55 27 ⇓P P 20 22 18.5 -0.2
baz=96
E18A Harlowton 96.58 23 ⇑P P 20 22 18.8 0.0
baz=96
DGMT Dagmar 96.58 18 ⇓P P 20 22 18.6 -0.1
baz=96
DGMT Dagmar 96.58 18 PFAKE 20 22 30.0 +11
DGMT LR LR
comp=Z,2μm,20.0s,MS5.5
I11A Placerville 96.65 28 ⇓P P 20 22 19.3 +0.2
baz=96
F16A Kennard Place, 96.68 24 ⇑P P 20 22 19.3 0.0
baz=96
DLMT Dillon 96.70 25 *e*P **P 20 22 20.1 +0.8**
J10A Berg Farm, Mel 96.73 29 ⇓P P 20 22 19.3 -0.2
baz=96
TSUM Tsumeb 96.73 252 *e*P **P 20 22 19.5 -0.4**
comp=Z,34nm,1.5s,mb5.6
WVOR Wild Horse Val 96.76 30 *e*P **P 20 22 20.2 +0.5**
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
WVOR Wild Horse Val 96.76 30 *e*P **P 20 22 20.2 +0.5**
comp=Z,9.7nm,1.1s,mb5.2
H13A Challis 96.77 26 ⇑P P 20 22 18.9 -0.7
baz=96
BOZ Bozeman (W) 96.80 24 PFAKE 20 22 30.0 +10
BOZ LR LR
comp=Z,2μm,19.0s,MS5.5
ULM Lac du Bonnet 96.81 13 P **P 20 22 17.8 -2.0**
comp=Z,6.4nm,0.8s,mb5.1,baz=289,slow=2.4,SNR=5.8
ULM LR LR 21 12 15.8
comp=Z,1μm,18.0s,MS5.5,baz=176,slow=39
ULM Lac du Bonnet 96.81 13 P **P 20 22 17.8 -2.0**
ULM LR LR 21 12 15.8
G15A Dillon 96.91 25 ⇑P P 20 22 20.2 -0.1
baz=97
F17A Fitzpatrick Pl 96.91 23 ⇑P P 20 22 20.3 0.0
baz=97
H14A Leadore 97.05 26 ⇓P P 20 22 21.0 0.0
baz=97
MCMT McKenzie Canyo 97.06 25 *e*P **P 20 22 21.4 +0.4**
comp=Z,11nm,1.3s,mb5.1
I12A Atlanta 97.08 27 ⇑P P 20 22 21.5 +0.4
baz=97
G16A Moss Hill, Enn 97.10 25 ⇓P P 20 22 21.1 0.0
baz=97
MFID Camas Ranch 97.12 28 ⇑P P 20 22 21.8 +0.5
baz=97
K10A MacKenzie Ranc 97.22 29 ⇓P P 20 22 21.9 +0.1
baz=97
F18A Big Timber 97.22 23 ⇓P P 20 22 22.2 +0.5
baz=97
H15A Lima 97.32 25 ⇓P P 20 22 22.4 +0.2
baz=97
I13A Wildhorse Cree 97.37 27 ⇓P P 20 22 22.6 +0.2
baz=97
G17A Pierce Place, 97.39 24 ⇑P P 20 22 22.6 +0.1
baz=97
HOPS Hopland 97.45 35 PFAKE 20 22 30.0 +7.1
HOPS LR LR
comp=Z,854nm,19.0s,MS5.2
CASY Casey 97.54 177 *e*P **P 20 22 20.7 -1.6**
CASY Casey 97.54 177 *e*P **P 20 22 19.9 -2.5**
comp=Z,24nm,1.4s,mb5.5
CASY LR LR
comp=Z,885nm,21.0s,MS5.2
J12A Stokes Ranch, 97.55 28 ⇓P P 20 22 23.7 +0.5
baz=97
HLID Hailey 97.55 27 ⇑P P 20 22 23.7 +0.5
baz=97
HLID Hailey 97.55 27 *e*P **P 20 22 24.0 +0.8**
comp=Z,33nm,1.4s,mb5.7
HLID LR LR
comp=Z,2μm,20.0s,MS5.5
I14A Mackay 97.61 26 ⇓P P 20 22 23.8 +0.3
baz=97
LAO LASA Array 97.63 20 PFAKE 20 22 30.0 +6.5
LAO LR LR
comp=Z,2μm,20.0s,MS5.6
H16A Russell Place, 97.75 24 ⇓P P 20 22 24.4 +0.3
baz=97
J13A Cove Ranch, Pi 97.78 27 ⇑P P 20 22 25.2 +1.0
baz=98
G18A Lazy EL Ranch, 97.79 23 ⇑P P 20 22 24.2 -0.1
baz=98
I15A Monteview 97.91 26 ⇓P P 20 22 25.0 +0.2
baz=98
OHCM Honcut 97.95 34 *e*P **P 20 22 19.5 -5.6**
L10A Juniper Basin 97.97 29 ⇓P P 20 22 25.6 +0.5
baz=98
BEKR Beckwourth 98.06 33 ⇓P P 20 22 25.4 -0.1
baz=98
RLMT Red Lodge 98.06 23 ⇑P P 20 22 25.6 +0.1
baz=98
RLMT Red Lodge 98.06 23 PFAKE 20 22 40.0 +14
RLMT LR LR
comp=Z,2μm,20.0s,MS5.7
K12A Draper Farm, C 98.14 28 ⇑P P 20 22 26.0 +0.1
baz=98
LKWY Lake 98.17 24 PFAKE 20 22 40.0 +14
LKWY LR LR
comp=Z,2μm,19.0s,MS5.6
L11A Cat Creek Ranc 98.19 29 ⇓P P 20 22 26.6 +0.4
baz=98
MCCM Marconi Confer 98.20 35 PFAKE 20 22 40.0 +14
MCCM LR LR
comp=Z,1μm,20.0s,MS5.3
H17A Grant Village 98.25 24 ⇑P P 20 22 26.9 +0.5
baz=98
I16A Newdale 98.38 25 ⇑P P 20 22 27.7 +0.8
baz=98
M10A I.L. Ranch, Tu 98.40 29 ⇑P P 20 22 27.6 +0.6
baz=98
J15A Blackfoot 98.44 26 ⇓P P 20 22 27.8 +0.5
baz=98
K13A Stover Farm, H 98.45 27 ⇑P P 20 22 28.0 +0.7
baz=98
L12A House Creek Ra 98.51 28 ⇑P P 20 22 28.1 +0.5
baz=98
AGMN Agassiz Refuge 98.68 13 PFAKE 20 22 40.0 +12
AGMN LR LR
comp=Z,2μm,20.0s,MS5.6
BMN Battle Mountai 99.01 31 PFAKE 20 22 40.0 +10
BMN LR LR
comp=Z,834nm,19.0s,MS5.3
AHID Auburn Hatcher 99.48 25 PFAKE 20 22 40.0 +8.1
AHID LR LR
comp=Z,2μm,19.0s,MS5.5
CMB Columbia Colle 99.50 34 PFAKE 20 22 40.0 +7.9
CMB LR LR
comp=Z,821nm,20.0s,MS5.2
N12A Clover Valley, 99.58 29 *e*Pdif **P 20 22 33.2 +0.8**
comp=Z,9.4nm,1.1s,mb5.1
ELK Elko 99.59 29 PFAKE 20 22 40.0 +7.6
ELK LR LR
comp=Z,2μm,19.0s,MS5.5
EYMN Ely 99.78 10 *e*Pdif Pdif 20 22 32.8 -0.4
EYMN LR LR
comp=Z,1μm,20.0s,MS5.5
SAO San Andreas Ge 99.99 35 PFAKE 20 22 50.0 +16
SAO LR LR
comp=Z,666nm,20.0s,MS5.1
BW06 Boulder Array 100.04 24 PFAKE 20 22 50.0 +16
BW06 LR LR
comp=Z,2μm,19.0s,MS5.6
PDAR Pinedale Array 100.04 24 PP PP 20 26 36.8 -1.8
comp=Z,3.1nm,1.0s,baz=357,slow=7.4,SNR=5.7
NVAR Mina Array Bea 100.16 32 P Pdif 20 22 36.1 +1.3
comp=Z,0.6nm,0.6s,baz=316,slow=2.5,SNR=3.4
NVAR PP PP 20 26 37.8 -2.0
comp=Z,2.3nm,0.7s,baz=314,slow=6.7,SNR=3.7
HWUT Hardware Ranch 100.31 26 PFAKE 20 22 50.0 +14
HWUT LR LR
comp=Z,2μm,20.0s,MS5.5
SUR Sutherland 100.90 239 PFAKE 20 22 50.0 +12
SUR LR LR
comp=Z,1μm,19.0s,MS5.4
COWI Conover 101.93 9 PFAKE 20 22 50.0 +7.3
COWI LR LR
comp=Z,2μm,20.0s,MS5.5
DAC Darwin (Calif) 102.24 33 PFAKE 20 23 00.0 +16
DAC LR LR
comp=Z,779nm,21.0s,MS5.2
DBIC Dimbokro 102.27 286 P Pdif 20 22 47.1 +2.8
comp=Z,1.8nm,0.7s,baz=56,slow=3.6,SNR=4.0
DBIC PP PP 20 26 55.5 -1.5
comp=Z,17nm,1.2s,baz=44,slow=7.8,SNR=4.9
DBIC Dimbokro 102.27 286 P Pdif 20 22 47.1 +2.8
DBIC PP PP 20 26 55.5 -1.5
DBIC LR LR
comp=Z,1μm,20.0s,MS5.4
KIC Kosan Boka 102.35 285 *e*P PP 20 26 55.3 -2.3
comp=Z,55nm,1.3s
TIC Toumodi 102.42 286 *e*P PP 20 26 55.9 -2.2
comp=Z,69nm,1.4s
LIC Lamto 102.66 285 *e*P PP 20 26 57.5 -2.4
comp=Z,86nm,1.4s
MVU Marysvale 102.73 28 PFAKE 20 23 00.0 +14
MVU LR LR
comp=Z,908nm,20.0s,MS5.3
MSU Marysvale 102.73 28 *e*P Pdif 20 22 47.4 +1.1
MSU pmax pmax
comp=Z,6.0nm,1.2s
MSU Marysvale 102.73 28 *e*Pdif Pdif 20 22 47.4 +1.1
comp=Z,6.4nm,1.2s
ECSD EROS Data Cent 102.88 15 PFAKE 20 23 00.0 +13
ECSD LR LR
comp=Z,3μm,22.0s,MS5.7
PKME Peaks-Kenny Pk 103.41 355 PFAKE 20 23 00.0 +11
PKME LR LR
comp=Z,3μm,20.0s,MS5.7
MAW Mawson 103.42 195 PKKPbc PKKPbc 20 38 40.1 -4.3
comp=Z,3.2nm,0.9s,baz=252,slow=3.2,SNR=4.1
GLMI Grayling 103.71 6 PFAKE 20 23 00.0 +9.4
GLMI LR LR
comp=Z,2μm,19.0s,MS5.7
ISCO Idaho Springs 104.03 23 PFAKE 20 23 00.0 +7.9
ISCO LR LR
comp=Z,3μm,20.0s,MS5.8
OGNE Ogallala 104.11 20 PFAKE 20 23 00.0 +7.6
OGNE LR LR
comp=Z,2μm,19.0s,MS5.6
LONY Lake Ozonia 104.29 359 PFAKE 20 23 00.0 +6.8
LONY LR LR
comp=Z,2μm,19.0s,MS5.6
LBNH Lisbon 104.59 357 PFAKE 20 23 10.0 +15
LBNH LR LR
comp=Z,2μm,21.0s,MS5.5
NCB Newcomb 104.94 359 PFAKE 20 23 10.0 +14
NCB LR LR
comp=Z,1μm,19.0s,MS5.5
PFO Pinyon Flat Ob 104.95 34 PFAKE 20 23 10.0 +14
PFO LR LR
comp=Z,346nm,20.0s,MS4.9
SDCO Great Sand Dun 105.91 24 PFAKE 20 27 20.0 +7.0
SDCO LR LR
comp=Z,1μm,21.0s,MS5.5
AAM Ann Arbor 106.30 6 PFAKE 20 27 20.0 +6.4
AAM LR LR
comp=Z,2μm,19.0s,MS5.7
ERPA Erie 106.72 3 PFAKE 20 27 30.0 +16
ERPA LR LR
comp=Z,2μm,19.0s,MS5.6
BINY Binghamton 106.73 360 PFAKE 20 27 30.0 +16
BINY LR LR
comp=Z,2μm,19.0s,MS5.6
CBKS Cedar Bluff 106.74 19 PFAKE 20 27 30.0 +16
CBKS LR LR
comp=Z,2μm,21.0s,MS5.6
KSU1 Kansas State U 107.28 17 PFAKE 20 27 30.0 +15
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.8
HDIL Hopedale 107.34 10 PFAKE 20 27 30.0 +14
HDIL LR LR
comp=Z,2μm,20.0s,MS5.6
ANMO Albuquerque 108.07 26 PFAKE 20 27 30.0 +13
ANMO LR LR
comp=Z,2μm,19.0s,MS5.6
ACSO Alum Creek Sta 108.41 6 PFAKE 20 27 30.0 +12
ACSO LR LR
comp=Z,1μm,19.0s,MS5.5
MCWV Mont Chateau 109.18 3 PFAKE 20 27 30.0 +11
MCWV LR LR
comp=Z,2μm,19.0s,MS5.7
CCM Cathedral Cave 109.44 13 PFAKE 20 27 30.0 +10
CCM LR LR
comp=Z,2μm,20.0s,MS5.6
AMTX Amarillo 109.79 22 PFAKE 20 27 30.0 +10
AMTX LR LR
comp=Z,1μm,19.0s,MS5.5
CBN Corbin 110.71 1 PFAKE 20 27 30.0 +8.1
CBN LR LR
comp=Z,2μm,20.0s,MS5.6
MNTX Cornudas Mount 111.37 27 PFAKE 20 27 30.0 +6.6
MNTX LR LR
comp=Z,1μm,21.0s,MS5.5
PPT Papeete 112.84 97 *e*PP PP 20 28 11.3 -3.4
comp=Z,94nm,28.8s
PPT Papeete 112.84 97 *e*PS PS 20 37 42.9 -6.7
comp=Z,697nm,27.0s
PPT *e*SS SS 20 43 58.4 +1.0
comp=Z,1μm,28.5s
PPT *e*LR LR 21 01 14.0
comp=Z,1μm,26.0s
PLAL Pickwick Lake 112.98 11 PFAKE 20 27 40.0 +14
PLAL LR LR
comp=Z,2μm,20.0s,MS5.7
OXF Oxford 113.22 12 PFAKE 20 27 40.0 +13
OXF LR LR
comp=Z,2μm,19.0s,MS5.7
TXAR Lajitas Array 114.14 26 PKP PKiKP 20 27 27.9 -0.8
comp=Z,2.1nm,0.9s,baz=248,slow=1.3,SNR=8.7
TXAR PKKPbc PKKPbc 20 38 07.5 -1.5
comp=Z,1.0nm,0.9s,baz=151,slow=5.7,SNR=6.6
TXAR PKKPab PKKPab 20 38 17.8 -0.8
comp=Z,1.1nm,0.8s,baz=178,slow=5.8,SNR=6.6
JCT Junction City 114.45 22 *e*PKIKP PKiKP 20 27 28.3 -1.0
NATX Nacogdoches 114.74 17 PFAKE 20 27 40.0 +10
NATX LR LR
comp=Z,2μm,19.0s,MS5.7
LRAL Lakeview Retre 115.06 10 PFAKE 20 27 40.0 +10
LRAL LR LR
comp=Z,2μm,19.0s,MS5.7
GOGA Godfrey 115.13 7 PFAKE 20 27 40.0 +9.5
GOGA LR LR
comp=Z,2μm,21.0s,MS5.6
SBA Scott Base 115.14 168 *e*PKIKP PKiKP 20 27 27.8 -1.3
BBSR BB Station 115.62 349 PFAKE 20 27 40.0 +8.5
BBSR LR LR
comp=Z,487nm,19.0s,MS5.1
NHSC New Hope 115.69 4 PFAKE 20 27 40.0 +8.4
NHSC LR LR
comp=Z,2μm,20.0s,MS5.7
HKT Hockley 116.15 19 PFAKE 20 27 40.0 +7.4
HKT LR LR
comp=Z,1μm,19.0s,MS5.6
TAOE Nuku Hiva Isla 116.72 84 *e*PS PS 20 38 13.0 -12
comp=Z,411nm,27.2s
TAOE *e*LR LR 21 02 41.9
comp=Z,851nm,25.0s
BRAL Brewton 117.03 11 PFAKE 20 27 50.0 +16
BRAL LR LR
comp=Z,2μm,19.0s,MS5.7
KVTX Kingsville 117.79 22 PFAKE 20 27 50.0 +14
KVTX LR LR
comp=Z,1μm,21.0s,MS5.5
MAIT Maitri 120.01 202 *e*PKPab PKPdf 20 27 37.3 -1.3
DWPF Disney 120.57 5 PFAKE 20 27 50.0 +8.9
DWPF LR LR
comp=Z,2μm,20.0s,MS5.7
VNA2 Neumayer--Watz 126.30 202 *e* 20 41 16.3
GRTK Grand Turk 127.14 354 PFAKE 20 28 10.0 +16
GRTK LR LR
comp=Z,1μm,20.0s,MS5.6
GTBY Guantanamo Bay 128.92 359 PFAKE 20 28 10.0 +13
GTBY LR LR
comp=Z,1μm,22.0s,MS5.5
SDDR Presa de Saban 129.65 354 *e*PKPdf PKPdf 20 27 57.9 -0.8
MTDJ Mount Denham 130.60 2 PFAKE 20 28 10.0 +9.5
MTDJ LR LR
comp=Z,1μm,19.0s,MS5.7
FDF Fort de France 131.89 340 PFAKE 20 28 10.0 +7.0
FDF LR LR
comp=Z,615nm,19.0s,MS5.3
GRGR Grenville 134.50 340 PFAKE 20 28 20.0 +12
GRGR LR LR
comp=Z,652nm,21.0s,MS5.3
JTS JuntasAbangare 137.66 13 PFAKE 20 28 30.0 +16
JTS LR LR
comp=Z,1μm,22.0s,MS5.5
BCIP Isla Barro Col 139.47 6 PFAKE 20 28 30.0 +13
BCIP LR LR
comp=Z,800nm,22.0s,MS5.4
SDV Santo Domingo 139.56 352 *e*PKPpre 20 28 07.9
ROSC El Rosal 143.87 357 PKP PKPdf 20 28 23.4 -1.7
comp=Z,29nm,0.6s,baz=56,slow=3.6,SNR=27
ROSC El Rosal 143.87 357 *e*PKPpre PKPdf 20 28 23.3 -1.8
PAYG Puerto Ayora 146.60 26 *e*PKPbc PKPbc 20 28 31.6 +0.4
PAYG LR LR
comp=Z,690nm,20.0s,MS5.4
OTAV Otavalo 148.42 4 *e*PKPdf PKPdf 20 28 33.5 +0.7
OTAV LR LR
comp=Z,480nm,19.0s,MS5.3
SPB Sao Paulo 153.42 280 PFAKE 20 28 50.0 +10
SPB LR LR
comp=Z,823nm,19.0s,MS5.6
NNA Nana 160.63 2 PFAKE 20 29 00.0 +10
NNA LR LR
comp=Z,583nm,20.0s
CPUP Villa Florida 162.76 282 PKP PKPdf 20 28 50.5 -0.9
comp=Z,14nm,1.2s,baz=32,slow=3.0,SNR=8.3
CPUP PKPab PKPab 20 29 38.5 -1.8
comp=Z,4.4nm,1.0s,baz=63,slow=6.8,SNR=3.3
CPUP Villa Florida 162.76 282 PKP PKPdf 20 28 50.5 -0.9
CPUP PKPab PKPab 20 29 38.5 -1.8
CPUP LR LR
comp=Z,154nm,21.0s
LPAZ La Paz 163.24 332 PKP PKPdf 20 28 52.5 +0.3
comp=Z,36nm,1.3s,baz=23,slow=4.3,SNR=33
LPAZ PKPab PKPab 20 29 40.9 -1.5
comp=Z,3.7nm,0.8s,baz=11,slow=5.2,SNR=3.0
LPAZ La Paz 163.24 332 PKP PKPdf 20 28 52.5 +0.3
LPAZ PKPab PKPab 20 29 40.9 -1.5
LPAZ LR LR
comp=Z,943nm,21.0s
TRQA Tornquist 166.62 237 *e*PKPdf PKPdf 20 28 53.7 -0.8
LVC Limon Verde 169.10 322 *e*PKPdf PKPdf 20 28 57.9 +1.3
LVC LR LR
comp=Z,889nm,20.0s
PLCA Paso Flores 169.68 204 PKP PKPdf 20 28 56.3 -0.1
comp=Z,31nm,1.2s,baz=30,slow=0.7,SNR=16
PLCA PKPab PKPab 20 30 08.6 -1.6
comp=Z,3.3nm,0.8s,baz=160,slow=3.6,SNR=3.2
PLCA Paso Flores 169.68 204 PKIKP PKPdf 20 28 56.3 -0.1
PLCA 20 30 08.6
PLCA pmax pmax
comp=Z,31nm,1.3s
PLCA pmax pmax
comp=Z,3.0nm,0.8s
PLCA Paso Flores 169.68 204 *e*PKPdf PKPdf 20 28 56.2 -0.2
LCO Las Campanas 174.71 296 *e*PKPdf PKPdf 20 28 59.2 +0.2
LCO LR LR
comp=Z,1μm,20.0s

ISCJB ***12*** *20:21:45.6±0.6, 51°.58N±0°.03×15°.99E±0°.04, h0km, Error ellipse: s-maj=4.8km s-min=3.6km az=32.4*
IPEC ***12*** *20:21:46.7±0.3, 51°.55N×16°.15E, h0km, ML1.9/3, Error ellipse: s-maj=3.0km s-min=1.1km az=56.0*
CSEM ***12*** *20:21:46.1±0.3, 51°.55N×16°.16E, h2km, ML3.1/7, Error ellipse: s-maj=5.5km s-min=4.1km az=53.0*
PRU ***12*** *20:21:47.3, 51°.52N×16°.13E, h0km*
WAR ***12*** *20:21:47.7, 51°.54N×16°.09E, ML2.5, Mining Induced*
ISC 12 20:21:46.3±0.6, 51°.60N±0°.03×16°.08E±0°.05, h0km, n29, σ1s03/55, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**170**	*e*Pg	**Pg**	**20 22 00.6**	**-0.3**
KSP				*e*Sg	**Sg**	**20 22 10.4**	**-0.4**
KSP	**Ksiaz**	**0.77**	**170**	*e*Pg	**Pg**	**20 22 00.4**	**-0.5**
baz=353							
KSP				*e*Sg	**Sg**	**20 22 09.8**	**-1.0**
baz=353							
UPC	**Upice**	**1.09**	**182**	*e*PG	**Pg**	**20 22 06.4**	**-0.7**
UPC	**Upice**	**1.09**	**182**	*e*Pg	**Pg**	**20 22 06.4**	**-0.7**
baz=4.6							
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*PG	**Pg**	**20 22 09.3**	**-1.0**
DPC				*e*SG	**Sg**	**20 22 25.7**	**-0.9**
comp=Z,32nm,0.6s							
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*Pg	**Pg**	**20 22 09.3**	**-1.0**
baz=355							
DPC				Sg	**Sg**	**20 22 25.7**	**-0.9**
comp=Z,32nm,0.6s							
PVCC	**Panska Ves**	**1.43**	**222**	*e*PG	**Pg**	**20 22 13.6**	**-0.1**
PVCC	**Panska Ves**	**1.43**	**222**	*e*Pn	**Pn**	**20 22 13.3**	**-0.1**
baz=44							
PVCC	**Panska Ves**	**1.43**	**222**	Pg	**Pg**	**20 22 13.6**	**-0.1**
BRG	**Berggiesshubel**	**1.52**	**243**	PG	**Pg**	**20 22 15.3**	**-0.2**
BRG				SG	**Sg**	**20 22 35.7**	**+0.5**
comp=Z,50nm,0.3s							
BRG	**Berggiesshubel**	**1.52**	**243**	*e*Pn	**Pn**	**20 22 15.2**	**+0.5**
baz=63							
PRU	**Pruhonice**	**1.88**	**212**	*e*PG	**Pg**	**20 22 21.9**	**-0.4**
PRU				*e*SG	**Sg**	**20 22 45.5**	**-1.1**
comp=Z,23nm,0.3s							
PRU	**Pruhonice**	**1.88**	**212**	Pg	**Pg**	**20 22 21.9**	**-0.4**
PRU				Sg	**Sg**	**20 22 45.5**	**-1.1**
comp=Z,23nm,0.3s							
CLL	**Collm**	**1.94**	**263**	*e*Pn	**Pn**	**20 22 20.0**	**-0.5**
CLL				*i* Pg	**Pg**	**20 22 23.9**	**+0.4**
CLL				*e*		20 22 28.0	
CLL				*e*Sg	**Sg**	**20 22 49.0**	**+0.3**
CLL	**Collm**	**1.94**	**263**	*e*Pn	**Pn**	**20 22 22.7**	**+2.2**
baz=82							
MORC	**Moravsky Berou**	**2.04**	**152**	*e*Pn	**Pn**	**20 22 21.1**	**-0.8**
baz=334							
MORC				*e*Sg	**Sn**	**20 22 49.6**	**+1.5**
comp=Z,8.4nm,0.3s,baz=334							
OKC	**Ostrava-Krasne**	**2.20**	**142**	*e*PG	**Pn**	**20 22 26.8**	**+2.8**
OKC				*e*SG	**Sn**	**20 22 54.8**	**+3.0**
comp=Z,31nm,0.8s							
OKC	**Ostrava-Krasne**	**2.20**	**142**	Pg	**Pn**	**20 22 26.8**	**+2.8**
OKC				Sg	**Sn**	**20 22 54.8**	**+3.0**
comp=Z,31nm,0.8s							
VRAC	**Vranov**	**2.31**	**172**	*e*Pn	**Pn**	**20 22 25.7**	**+0.1**
baz=353							
VRAC				*e*Sg	**Sn**	**20 22 56.7**	**+2.0**
KRUC	**Moravsky**	**2.54**	**175**	*e*Pg	**Pn**	**20 22 32.6**	**+3.9**
baz=356							
KRUC				*e*Sg	**Sn**	**20 23 05.2**	**+4.8**
comp=Z,4.6nm,0.3s,baz=356							
NKC	**Novy Kostel**	**2.67**	**241**	*e*PN	**Pn**	**20 22 30.9**	**+0.4**
NKC				*e*PG	**Pg**	**20 22 37.3**	**-0.1**
NKC				*e*SG	**Sg**	**20 23 12.9**	**+0.9**
comp=Z,35nm,0.7s							
NKC	**Novy Kostel**	**2.67**	**241**	Pn	**Pn**	**20 22 30.9**	**+0.4**
NKC	**Novy Kostel**	**2.67**	**241**	Pg	**Pg**	**20 22 37.3**	**-0.1**
NKC				Sg	**Sg**	**20 23 12.9**	**+0.9**
comp=Z,35nm,0.7s							
KHC	**Kasperske Hory**	**2.94**	**214**	*e*PN	**Pn**	**20 22 34.5**	**+0.3**
KHC				*e*PG	**Pg**	**20 22 40.0**	**-2.6**
KHC				*e*SN	**Sn**	**20 23 09.8**	**-0.3**
KHC				*e*SG	**Sg**	**20 23 19.6**	**-1.1**
comp=Z,8.6nm,0.6s							
KHC	**Kasperske Hory**	**2.94**	**214**	Pn	**Pn**	**20 22 34.5**	**+0.3**
KHC	**Kasperske Hory**	**2.94**	**214**	Pg	**Pg**	**20 22 40.0**	**-2.6**
KHC				Sn	**Sn**	**20 23 09.8**	**-0.3**

KHC				Sg	**Sg**	**20 23 19.6**	**-1.1**
	comp=Z,8.6nm,0.6s						
MOX	**Moxa**	**2.97 253**	*e*PN		**Pg**	**20 22 43.7**	**+0.6**
MOX			*e*SN		**Sg**	**20 23 22.5**	**+0.9**
BSD	**Bornholm Skovb**	**3.59 349**	*i* P		**Pn**	**20 22 42.6**	**-0.6**
BSD			*i* S		**Sn**	**20 23 25.4**	**-0.9**
BSD			*i* LG			20 23 37.7	
BSD							
	comp=Z,3μm,17.0s						
BSD	**Bornholm Skovb**	**3.59 349**	*i* P		**Pn**	**20 22 42.6**	**-0.6**
	SNR=49						
BSD			*i* S		**Sn**	**20 23 25.5**	**-0.8**
	SNR=49						
BSD			*i* Sg		**Sg**	**20 23 37.8**	**-3.8**
	SNR=90						

KRSC 12 20:24:11.9±0.1, 54°.61N×161°.55E, h40km±30km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.12**	**117**	*i* P	Pn	20 24 19.0	+0.4
MKZ				*i* S	Sn	20 24 24.1	+0.9
KII	**Karymskiy**	**1.36**	**246**	*e*P	Pn	20 24 36.1	+1.8
KII				*i* S	Sn	20 24 52.7	+1.6
KMNR	**Kamenistaya**	**1.37**	**327**	*e*P	Pn	20 24 36.3	+1.8
KMNR				*i* S	Sn	20 24 54.7	+3.2
BZMR	**Bezymyannaya**	**1.46**	**336**	*e*P	Pn	20 24 37.1	+1.4
BZMR				*i* S	Sn	20 24 56.0	+2.4
ZLN	**Zelenaya**	**1.47**	**343**	*e*P	Pn	20 24 37.4	+1.5
ZLN				*i* S	Sn	20 24 55.9	+2.0
KIRR	**Kirishev**	**1.51**	**333**	*e*P	Pn	20 24 38.3	+1.9
KPT	**Kopyto**	**1.56**	**331**	*e*P	Pn	20 24 38.9	+1.9
CIRR	**Tsirk**	**1.58**	**343**	*e*P	Pn	20 24 39.0	+1.7
CIRR				*i* S	Sn	20 24 59.1	+2.6
KOZ	**Kozyrevsk**	**1.74**	**327**	P	Pn	20 24 42.1	+2.6
KBTR	**Krutoberegovo**	**1.76**	**24**	*e*P	Pn	20 24 41.4	+1.6
KBTR				*i* S	Sn	20 25 02.7	+1.8
SPN	**Mys Shipunski**	**1.77**	**211**	*e*P	Pn	20 24 40.3	+0.4
SPN				*i* S	Sn	20 25 00.7	-0.4
KLY	**Klyuchi**	**1.78**	**344**	*e*P	Pn	20 24 40.9	+0.8
KLY				*i* S	Sn	20 25 02.5	+1.0
NLC	**Nalytchevo**	**1.94**	**223**	*e*P	Pn	20 24 43.9	+1.5
NLC				*i* S	Sn	20 25 07.5	+2.0
BDR	**Baidarnaya**	**1.97**	**354**	*e*P	Pn	20 24 44.5	+1.8
BDR				*i* S	Sn	20 25 08.1	+1.9
SMKR	**Semkarok**	**1.98**	**359**	*e*P	Pn	20 24 44.2	+1.4
SMKR				*i* S	Sn	20 25 08.3	+2.0
SRDR	**Sredinnyy**	**2.00**	**329**	*e*P	Pn	20 24 44.6	+1.4
SRKR	**Sorokina**	**2.06**	**354**	*e*P	Pn	20 24 45.4	+1.5
SDLR	**Sedlovina**	**2.06**	**231**	*e*P	Pn	20 24 46.3	+2.3
SDLR				*i* S	Sn	20 25 12.1	+3.6
GNL	**Ganaly**	**2.31**	**248**	*e*P	Pn	20 24 50.0	+2.6
PET	**Petropavlovsk**	**2.34**	**228**	*e*P	Pn	20 24 49.8	+2.0
PET				*i* S	Sn	20 25 18.0	+2.8
RUS	**Russkaya**	**2.84**	**221**	*e*P	Pn	20 24 56.1	+1.5
RUS				*i* S	Sn	20 25 29.6	+2.1

MAN 12 20:27:18, 13°.36N×120°.17E, h2km, mb4.5, ML3.4, MS3.3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**11**	*e*P	Pg	20 27 26.5	+1.2
LUBP				*e*S	Sg	20 27 30.2	-0.1
PGP	**Puerto Galera**	**0.77**	**79**	⇑*i*P	Pg	20 27 33.6	+0.8
SJMP	**San Jose**	**1.28**	**134**	*e*P	Pg	20 27 43.1	+0.5
SJMP				*e*S	Sg	20 27 59.2	-0.1
BUSP	**Coron**	**1.35**	**179**	*e*P	Pn	20 27 44.2	+0.4
BUSP				*e*S	Sg	20 28 00.3	-1.1
BOAC	**Boac**	**1.63**	**86**	*e*P	Pn	20 27 47.5	-0.2
ENPP	**El Nido**	**2.26**	**199**	*e*P	Pn	20 27 56.9	+0.4

*ISCJB **12** 20:29:24.8±1.0, 32°.47N±0°.08×105°.4E±0°.3, h10km, mb3.3/4, Error ellipse: s-maj=33.3km s-min=7.7km az=164.8*
*IDC **12** 20:29:26.0±1.3, 32°.28N×105°.18E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/26, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=77.8km s-min=21.4km az=55.0*
ISC 12 20:29:27.2±1.0, 32°.40N±0°.07×105°.3E±0°.3, h10km, n6, σ0s58/8, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.87**	**343**	*e*Pn	**Pn**	**20 30 33.2**	**+6.5**
LZH				Pg	**Pg**	**20 30 40.9**	**-0.4**
LZH				Sg	**Sg**	**20 31 31.0**	**-0.4**
LZH				smax			
	comp=N,57nm,0.6s						
LZH				smax			
	comp=E,95nm,0.5s						
CMAR	**Chiang Mai Arr**	**15.00**	**204**	Pn	**Pn**	**20 32 58.6**	**-0.7**
	comp=E,0.1nm,0.3s,baz=17,slow=9.4,SNR=3.6						
MKAR	**Makanchi Array**	**22.70**	**316**	P	**P**	**20 34 30.0**	**+1.2**
	comp=E,0.3nm,0.4s,mb3.1,baz=122,slow=10,SNR=4.7						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**20 35 08.0**	**+0.3**
	comp=E,0.3nm,0.5s,mb3.1,baz=131,slow=8.8,SNR=2.1						
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**20 39 27.6**	**+0.3**
	comp=E,0.4nm,0.7s,mb3.6,baz=327,slow=9.0,SNR=5.9						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**20 39 48.1**	**-0.2**
	comp=E,0.2nm,0.4s,mb3.6,baz=335,slow=6.6,SNR=4.1						

*ISCJB **12** 20:37:01.4±0.5, 31°.00N±0°.04×103°.57E±0°.08, h10km, mb3.7/12, Error ellipse: s-maj=9.9km s-min=6.1km az=166.1*
*IDC **12** 20:37:01.8±0.9, 31°.02N×103°.52E, h0km, mb3.6/10, mb1 3.7/11, mb1mx3.6/25, mbtmp3.6/11, Error ellipse: s-maj=35.3km s-min=17.2km az=56.0*
*NEIC **12** 20:37:06.4±2.6, 31°.05N×103°.57E, h32km±20km, mb4.2/1, Error ellipse: s-maj=11.1km s-min=6.6km az=47.0*
*BJI **12** 20:37:06.3, 30°.95N×103°.44E, h18km, mb4.1/2, ML3.6/11, Ms3.5/2, Ms7 3.3/2*
ISC 12 20:37:03.8±0.4, 31°.00N±0°.03×103°.51E±0°.06, h10km, n22, σ0s95/26, mb3.7/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**114**	Pg	**Pg**	**20 37 10.0**	**+1.4**
CD2				Sg	**Sg**	**20 37 15.7**	**+3.9**
CD2				smax			
	comp=N,23μm,0.7s						
LZH	**Lanzhou**	**5.08**	**3**	*e*Pg	**Pg**	**20 38 50.0**	**+9.0**
LZH				Sg	**Sg**	**20 39 47.7**	**+0.9**
LZH				smax			
	comp=N,76nm,1.0s						
LZH				smax			
	comp=E,64nm,1.0s						
ENH	**Enshi**	**5.20**	**97**	*e*Pn	**Pn**	**20 38 21.2**	**-0.4**
	comp=E,48nm,0.7s						
GYA	**Guiyang**	**5.31**	**148**	Pg	**Pg**	**20 38 42.6**	**-2.9**
GYA				Sg	**Sg**	**20 39 54.3**	**0.0**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,130nm,0.9s						
GYA				LR	LR		
	comp=N,70nm,4.2s						
GYA				LR	LR		
	comp=E,90nm,4.9s						
GYA				LR	LR		
	comp=Z,80nm,5.1s						
KMI	**Kunming**	**5.90**	**187**	Pn	**Pn**	**20 38 32.4**	**+1.2**
KMI				Sn	**Sn**	**20 39 38.6**	**-0.3**
KMI				smax			
	comp=N,22nm,1.2s						
KMI				smax			
	comp=E,23nm,1.1s						
LSA	**Lhasa**	**10.76**	**266**	*e*P	**Pn**	**20 39 38.8**	**+0.9**
	comp=E,1μm,1.4s						
CMAR	**Chiang Mai Arr**	**13.16**	**199**	Pn	**Pn**	**20 40 12.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=10,slow=16,SNR=4.1						
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**20 41 49.2**	**+0.2**
	comp=E,1.5nm,0.7s,mb3.5,baz=258,slow=9.6,SNR=6.1						
CN2	**Changchun**	**21.53**	**47**	*e*P	**P**	**20 41 57.9**	**+4.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
CN2	**Changchun**	**21.53**	**47**	*e*P	**P**	**20 42 02.1**	**+9.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
MK31	**Makanchi Array**	**22.72**	**320**	*e*P	**P**	**20 42 06.2**	**+0.5**
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**20 42 06.2**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.0,baz=119,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**20 42 41.6**	**-0.3**
	comp=Z,1.2nm,0.6s,mb3.6,baz=134,slow=9.8,SNR=7.0						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**20 42 45.3**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.5,baz=126,slow=9.8,SNR=6.8						
BVAR	**Borovoye Array**	**32.55**	**322**	P	**P**	**20 43 34.6**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=123,slow=5.3,SNR=2.9						
ARCES	**ARCESS Array B**	**57.14**	**336**	P	**P**	**20 46 49.1**	**-1.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=101,slow=9.4,SNR=3.1						
FINES	**FINESS Array B**	**57.37**	**326**	P	**P**	**20 46 50.6**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=94,slow=9.8,SNR=2.7						
WRAB	**Tennant Creek**	**58.67**	**146**	*e*P	**P**	**20 47 01.0**	**-0.5**
	comp=Z,1.6nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**20 47 00.5**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=337,slow=7.7,SNR=11						
WB2	**Warramunga Arr**	**58.68**	**146**	*e*P	**P**	**20 47 00.6**	**-0.9**
ASAR	**Alice Springs**	**61.67**	**148**	P	**P**	**20 47 22.5**	**+0.5**
	comp=Z,0.2nm,0.6s,mb3.5,baz=329,slow=6.8,SNR=2.9						
YKA	**Yellowknife Ar**	**81.94**	**17**	P	**P**	**20 49 22.6**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=330,slow=4.9,SNR=3.9						

*IDC **12** 20:39:55.8±0.7, 31°.44N×104°.24E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/29, mbtmp3.9/14, ML3.4/1, Error ellipse: s-maj=33.1km s-min=13.5km az=58.0*
*ISCJB **12** 20:39:57.8±1.5, 31°.38N±0°.07×104°.18E±0°.08, h27km±12km, mb4.0/13, Error ellipse: s-maj=13.7km s-min=10.2km az=38.0*
*NEIC **12** 20:39:57.7±0.5, 31°.42N×104°.19E, h10km, mb4.4/2, Error ellipse: s-maj=13.7km s-min=8.3km az=50.0*
*BJI **12** 20:39:59.2, 31°.49N×104°.18E, h15km, mB4.9/2, mb4.3/5, ML3.9/7, Ms4.1/2, Ms7 3.7/1*
ISC 12 20:39:58.6±1.0, 31°.38N±0°.04×104°.15E±0°.07, h17km±6km, n27, σ0s83/30, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**216**	Pg	**Pg**	**20 40 08.8**	**-1.2**
CD2				Sg	**Sg**	**20 40 17.6**	**-0.1**
CD2				smax			
	comp=N,6μm,0.8s						
LZH	**Lanzhou**	**4.70**	**357**	*e*Pn	**Pg**	**20 41 30.3**	**+1.6**
LZH				Pg	Px	20 41 40.6	
LZH				Sg	**Sg**	**20 42 28.9**	**-0.7**
LZH				smax			
	comp=N,93nm,0.6s						
LZH				smax			
	comp=E,110nm,0.6s						
ENH	**Enshi**	**4.72**	**102**	*e*Pn	**Pn**	**20 41 09.9**	**+0.8**
GYA	**Guiyang**	**5.37**	**155**	Pg	**Pg**	**20 41 49.5**	**+8.0**
GYA				Sg	**Sg**	**20 42 43.3**	**-7.8**
GYA				smax			
	comp=N,210nm,1.0s						
GYA				smax			
	comp=E,140nm,0.7s						
GYA				LR	LR		
	comp=N,70nm,4.2s						
GYA				LR	LR		
	comp=E,90nm,4.9s						
GYA				LR	LR		
	comp=Z,80nm,5.1s						
LSA	**Lhasa**	**11.33**	**265**	P	**Pn**	**20 42 39.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**13.70**	**201**	Pn	**Pn**	**20 43 14.4**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=9.1,slow=9.9,SNR=3.4						
SONM	**Songino Array**	**16.53**	**5**	Pn	**Pn**	**20 43 53.7**	**+4.2**
	comp=Z,0.4nm,0.3s,baz=190,slow=16,SNR=2.8						
KSRS	**Korea Array**	**20.50**	**66**	P	**P**	**20 44 34.9**	**-0.9**
	comp=Z,4.2nm,0.7s,baz=257,slow=10,SNR=9.9						
CN2	**Changchun**	**20.87**	**48**	*e*P	**P**	**20 44 39.9**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2	**Changchun**	**20.87**	**48**	*e*P	**P**	**20 44 39.7**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.80**	**319**	*e*P	**P**	**20 45 01.1**	**+0.7**
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**20 45 01.2**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.5,baz=117,slow=12,SNR=17						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**20 45 35.0**	**+0.1**
	comp=Z,1.5nm,0.7s,mb3.6,baz=137,slow=9.8,SNR=6.5						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**20 45 39.9**	**-0.1**
	comp=Z,0.9nm,0.5s,mb3.6,baz=125,slow=9.3,SNR=8.6						
KURK	**Kurchatov**	**27.05**	**323**	*e*P	**P**	**20 45 42.5**	**+2.5**
	comp=Z,1.2nm,0.4s,mb3.8						
AKTK	**Aktyubinsk**	**38.98**	**313**	P	**P**	**20 47 23.5**	**-0.3**
AKTO	**Aktyubinsk**	**38.98**	**313**	P	**P**	**20 47 23.5**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.7,baz=90,slow=13,SNR=4.8						
FITZ	**Fitzroy Crossi**	**53.35**	**154**	P	**P**	**20 49 16.6**	**-0.5**
	comp=Z,1.9nm,0.9s,mb4.0,baz=350,slow=6.8,SNR=4.7						
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**20 49 42.6**	**-0.5**
	comp=Z,3.3nm,0.9s,mb4.4,baz=96,slow=8.3,SNR=3.9						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**20 49 45.3**	**-0.3**
	comp=Z,1.9nm,0.6s,mb4.3,baz=95,slow=9.6,SNR=6.7						
WRAB	**Tennant Creek**	**58.67**	**146**	*e*P	**P**	**20 49 55.1**	**-0.1**
	comp=Z,6.6nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**20 49 55.3**	**0.0**
	comp=Z,4.5nm,0.6s,mb4.7,baz=339,slow=7.9,SNR=32						
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**20 50 16.2**	**+0.2**
	comp=Z,1.0nm,1.0s,mb3.9,baz=334,slow=5.9,SNR=6.9						
NOA	**NORSAR Array B**	**64.45**	**327**	P	**P**	**20 50 32.6**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=76,slow=4.1,SNR=3.3						
STKA	**Stephens Creek**	**72.22**	**147**	P	**P**	**20 51 22.6**	**-0.1**
	comp=Z,1.4nm,0.9s,mb3.9,baz=336,slow=3.8,SNR=3.1						
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**20 52 13.7**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.4,SNR=4.9						
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**20 52 13.7**	**-0.6**

*IDC **12** 20:45:29.8±0.4, 31°.75N×104°.49E, h0km, mb4.9/31, mb1 4.9/33, mb1mx4.9/36, mbtmp4.9/33, ML4.5/2, MS4.5/21, Ms1 4.5/21, ms1mx4.2/48, Error ellipse: s-maj=15.2km s-min=9.1km az=51.0*
*ISCJB **12** 20:45:30.0±0.1, 31°.72N±0°.02×104°.40E±0°.02, h10km, mb5.2/188, MS4.8/45, Error ellipse: s-maj=2.7km s-min=2.3km az=142.7*
*BJI **12** 20:45:31.3, 31°.73N×104°.55E, h20km, mB5.2/22, mb5.0/36, ML5.2/19, Ms5.2/57, Ms7 5.0/42*
*MOS **12** 20:45:32.8±0.7, 31°.71N×104°.52E, h34km, mb5.5/93, MS4.9/19, Error ellipse: s-maj=7.0km s-min=3.6km az=120.1*
*NEIC **12** 20:45:34.8±1.1, 31°.75N×104°.45E, h33km±7km, mb5.3/119, Error ellipse: s-maj=3.6km s-min=2.7km az=220.0*
*DJA **12** 20:45:37, 31°.72N×104°.40E, h42km, mb5.6/44*
*SZGRF **12** 20:45:48.2, 34°.44N×104°.46E, h33km, mb5.7, Gansu, China*
ISC 12 20:45:31.9±0.1, 31°.74N±0°.02×104°.43E±0°.02, h11km, h11km±.6km: pP-P, n672, σ0s97/673, mb5.2/188, MS4.8/45, 85C-54D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.00**	**215**	Pg	**Pg**	**20 45 50.8**	**-0.4**
CD2				Sg	**Sg**	**20 46 05.2**	**+0.9**
CD2				smax			
	comp=N,267μm,0.6s						
LZH	**Lanzhou**	**4.37**	**354**	Pn	**Pn**	**20 46 40.6**	**+2.5**
LZH				Sn	**Sn**	**20 47 31.5**	**+2.5**
LZH				Sg	**Sg**	**20 47 49.3**	**-2.8**
LZH				smax			
	comp=N,3μm,0.8s						
LZH				smax			
	comp=E,4μm,0.7s						
LZH				LR	LR		
	comp=N,54μm,7.2s						
LZH				LR	LR		
	comp=Z,54μm,8.4s						
XAN	**Xi'an**	**4.42**	**58**	Pg	**Pg**	**20 46 50.9**	**-5.7**
XAN				Sg	**Sg**	**20 47 51.9**	**-2.1**
XAN				smax			
	comp=N,5μm,0.8s						
XAN				smax			
	comp=E,2μm,0.8s						
XAN				LR	LR		
	comp=N,20μm,11.8s						
XAN				LR	LR		
	comp=E,5μm,12.4s						
XAN				LR	LR		
	comp=Z,1μm,8.3s						
ENH	**Enshi**	**4.58**	**107**	*e*P	**Pn**	**20 46 42.7**	**+1.5**
GYA	**Guiyang**	**5.61**	**159**	Pn	**Pn**	**20 46 55.6**	**+0.3**
GYA				Sn	**Sn**	**20 47 59.2**	**-0.6**
GYA				smax			
	comp=N,10μm,0.9s						
GYA				smax			
	comp=E,5μm,0.9s						
GYA				LR	LR		
	comp=N,26μm,13.9s						
GYA				LR	LR		
	comp=E,14μm,12.0s						
GYA				LR	LR		
	comp=E,28μm,12.0s						
KMI	**Kunming**	**6.75**	**193**	Pn	**Pn**	**20 47 11.5**	**+0.5**
KMI				Sn	**Sn**	**20 48 32.1**	**+4.1**
KMI				smax			
	comp=N,590nm,1.3s						
KMI				smax			
	comp=E,730nm,1.2s						
KMI				LR	LR		
	comp=N,15μm,6.7s						
KMI				LR	LR		
	comp=E,15μm,6.1s						
KMI				LR	LR		
	comp=Z,13μm,7.8s						
GTA	**Gaotai**	**8.53**	**335**	P	**Pn**	**20 47 36.0**	**+0.7**
GTA				pP		20 47 40.1	
GTA				sP		20 47 43.4	
GTA				S	**Sn**	**20 49 13.7**	**+2.2**
GTA				sS		20 49 19.9	
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,560nm,6.0s						
GTA				LR	LR		
	comp=N,15μm,9.6s						
GTA				LR	LR		
	comp=E,10μm,12.8s						
GTA				LR	LR		
	comp=Z,15μm,9.6s						
WHN	**Wuhan**	**8.59**	**95**	⇓P	**Pn**	**20 47 35.8**	**-0.4**
WHN				S	**Sn**	**20 49 10.8**	**-2.3**
WHN				LR	LR		
	comp=N,51μm,9.0s						
WHN				LR	LR		
	comp=E,39μm,8.1s						
WHN				LR	LR		
	comp=Z,26μm,7.2s						
BTO	**Baotou**	**9.94**	**25**	*e*P	**Pn**	**20 47 53.1**	**-1.5**
BTO				LR	LR		
	comp=N,3μm,8.8s						
BTO				LR	LR		
	comp=E,1μm,7.5s						
BTO				LR	LR		
	comp=Z,3μm,6.5s						
HHC	**Hu-ho-hao-te**	**10.76**	**30**	*e*P	**Pn**	**20 48 07.1**	**+1.2**
HHC				pP		20 48 14.3	
HHC				sP		20 48 19.1	
HHC				S	**Sn**	**20 50 07.5**	**+1.2**
HHC				sS		20 50 18.5	
HHC				SS		20 50 21.9	
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,5.0s						
HHC				LR	LR		
	comp=N,4μm,4.8s						
HHC				LR	LR		
	comp=E,4μm,4.6s						
HHC				LR	LR		
	comp=Z,4μm,4.9s						
TIA	**Tai'an**	**11.45**	**64**	*e*P	**Pn**	**20 48 15.3**	**0.0**
TIA				LR	LR		
	comp=N,3μm,9.0s						
TIA				LR	LR		
	comp=E,2μm,9.0s						
LSA	**Lhasa**	**11.61**	**263**	P	**Pn**	**20 48 17.8**	**+0.3**
LSA				LR	LR		
	comp=N,1μm,10.8s						
LSA				LR	LR		
	comp=E,4μm,10.8s						
LSA				LR	LR		
	comp=Z,6μm,10.1s						
LSA	**Lhasa**	**11.61**	**263**	*e*P	**Pn**	**20 48 19.6**	**+2.1**
LSA				pmax	pmax		
	comp=Z,68nm,1.1s						
LSA	**Lhasa**	**11.61**	**263**	*e*P	**Pn**	**20 48 19.6**	**+2.1**
	comp=Z,68nm,1.1s						
GZH	**Guangzhou**	**11.70**	**135**	P	**Pn**	**20 48 15.2**	**-3.6**
GZH				S	**Sn**	**20 50 19.5**	**-10**
GZH				LR	LR		
	comp=N,10μm,9.6s						
GZH				LR	LR		
	comp=E,10μm,10.6s						
NJ2	**Nanjing**	**12.27**	**85**	*e*P	**Pn**	**20 48 25.8**	**-0.8**
NJ2				pP		20 48 32.1	
NJ2				PP		20 48 34.5	
NJ2				sP		20 48 38.2	
NJ2				S	**Sn**	**20 50 41.2**	**-2.1**
NJ2				sS		20 50 51.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,550nm,9.7s						
NJ2				LR	LR		
	comp=N,4μm,11.5s						
NJ2				LR	LR		
	comp=E,5μm,10.6s						
NJ2				LR	LR		
	comp=Z,17μm,12.8s						
CHRT	**Chiangrai**	**12.53**	**201**	P	**Pn**	**20 48 30.0**	**-0.2**
	comp=Z,290nm,0.7s						
BJI	**Beijing**	**12.62**	**46**	P	**Pn**	**20 48 31.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,710nm,7.3s						
BJI				LR	LR		
	comp=N,5μm,10.2s						
BJI				LR	LR		
	comp=E,2μm,9.4s						
BJI				LR	LR		
	comp=Z,730nm,12.8s						
QIZ	**Qiongzhong**	**13.56**	**158**	P	**Pn**	**20 48 44.3**	**0.0**
QIZ				S	**Sn**	**20 51 14.6**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,39nm,1.1s						
QIZ				LR	LR		
	comp=N,7μm,11.0s						
QIZ				LR	LR		
	comp=Z,8μm,12.3s						
CHG	**Chiang Mai**	**13.79**	**202**	⇑P	**Pn**	**20 48 50.0**	**+2.6**
	comp=Z,146nm,1.0s						
CHTO	**Chiang Mai**	**13.79**	**202**	*e*P	**Pn**	**20 48 46.9**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,104nm,0.8s						
CHTO	**Chiang Mai**	**13.79**	**202**	*e*P	**Pn**	**20 48 46.9**	**-0.4**
	comp=Z,104nm,0.8s						
CM31	**Chiang Mai Arr**	**14.12**	**202**	*e*P	**Pn**	**20 48 53.0**	**+1.1**
	comp=Z,151nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.12**	**202**	Pn	**Pn**	**20 48 52.9**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=11,slow=10,SNR=67						
CMAR				LR	LR	20 54 59.0	
	comp=Z,2μm,20.9s,baz=8.7,slow=40						
QZH	**Quanzhou**	**14.19**	**115**	*e*P	**Pn**	**20 48 52.5**	**-0.3**
QZH				S	**Sn**	**20 51 31.6**	**+1.4**
QZH				LR	LR		
	comp=N,14μm,7.8s						
QZH				LR	LR		
	comp=E,23μm,9.2s						
QZH				LR	LR		
	comp=Z,33μm,9.6s						
KKTK	**Khon Kaen**	**15.40**	**186**	P	**Pn**	**20 49 09.3**	**+0.1**
	comp=Z,1μm,0.6s						
DL2	**Dalian**	**15.74**	**58**	P	**Pn**	**20 49 13.5**	**-0.1**
DL2				pmax	pmax		
	comp=Z,50nm,1.3s						
SONM	**Songino Array**	**16.15**	**5**	Pn	**Pn**	**20 49 18.5**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=186,slow=12,SNR=21						
SONM				LR	LR	20 56 07.2	
	comp=Z,3μm,18.2s,baz=244,slow

comp=Z,462nm,0.9s
SSLB Suanglung 16.62 114 *e*P **Pn 20 49 23.6 -1.3**
comp=Z,252nm,1.5s
TPUB Ta-pu 16.64 116 *e*P **Pn 20 49 24.3 -0.8**
comp=Z,147nm,1.3s
NACB Ninganchiao 16.93 112 *e*P **Pn 20 49 33.8 +5.0**
comp=Z,71nm,1.0s
PKI Pulchoki 17.04 261 *e*P **Pn 20 49 28.3 -1.9**
comp=Z,432nm,1.1s
PKIN Phulchoki 17.05 261 *e*P **Pn 20 49 28.4 -1.9**
comp=Z,218nm,1.0s
KKN Kakani 17.08 262 *e*P **Pn 20 49 28.7 -2.0**
comp=Z,438nm,1.2s
TWG Pinlang 17.24 117 *e*P **Pn 20 49 34.9 +2.2**
comp=Z,243nm,1.6s
DMN Daman 17.28 261 *e*P **Pn 20 49 31.4 -1.9**
comp=Z,514nm,1.1s
WMQ Urumqi 17.86 317 P **Pn 20 49 40.2 -0.1**
WMQ sP sP 20 49 47.0 +1.6
WMQ S **Sn 20 52 57.2 -2.1**
WMQ SS 20 53 18.4
WMQ PcP PcP 20 54 17.7 +1.1
WMQ pmax pmax
comp=Z,63nm,1.0s
WMQ pmax pmax
comp=Z,280nm,6.0s
WMQ LR LR
comp=N,5μm,12.0s
WMQ LR LR
comp=E,3μm,12.0s
WMQ LR LR
comp=Z,980nm,13.0s
SNY Shenyang 18.32 51 ⇑P **Pn 20 49 48.3 +2.4**
SNY S **Sn 20 53 11.3 +1.0**
SNY pmax pmax
comp=Z,16nm,0.9s
SNY LR LR
comp=N,810nm,12.6s
SNY LR LR
comp=E,2μm,14.4s
SNY LR LR
comp=Z,2μm,13.2s
ZAK Zakamensk 18.65 358 *e*P **Pn 20 49 50.4 +0.6**
ZAK pmax pmax
comp=Z,39nm,1.1s
INCN Inchon 19.14 66 *e*P **Pn 20 49 55.1 -0.9**
comp=Z,86nm,1.3s
TLY Talaya 19.94 359 Pn **Pn 20 50 06.5 +1.2**
comp=Z,240nm,1.6s,SNR=19
TLY Talaya 19.94 359 *e*P **Pn 20 50 06.3 +1.0**
TLY pmax pmax
comp=Z,101nm,1.5s
TLY MLR MLR
comp=Z,3μm,11.0s
TLY Talaya 19.94 359 *e*P **Pn 20 50 04.2 -1.1**
comp=Z,159nm,1.6s
TLY Talaya 19.94 359 P **Pn 20 50 06.0 +0.7**
SNR=54
TLY P 20 50 06.0
SNR=54
MOY Mondy 20.07 354 *e*P **P 20 50 07.1 +2.0**
MOY pmax pmax
comp=Z,162nm,2.1s
KSRS Korea Array 20.14 67 P **P 20 50 06.1 0.0**
comp=Z,54nm,0.8s,baz=256,slow=10,SNR=95
KSRS LR LR 20 59 18.0
comp=Z,853nm,18.0s,MS4.1,baz=264,slow=41
KSRS Korea Array 20.14 67 P **P 20 50 06.1 0.0**
KSRS pmax pmax
comp=Z,54nm,0.8s
KSRS MLR MLR
comp=Z,853nm,18.0s,MS4.1
CN2 Changchun 20.46 48 *e*P **P 20 50 10.7 +1.3**
CN2 *es*P sP 20 50 17.0 +3.1
CN2 *e*S **S 20 53 53.7 -4.6**
CN2 pmax pmax
comp=Z,90nm,0.6s
CN2 pmax pmax
comp=Z,600nm,3.0s
CN2 LR LR
comp=N,3μm,15.0s,MS4.8
CN2 LR LR
comp=E,2μm,15.0s,MS4.8
CN2 LR LR
comp=Z,1μm,15.0s,MS4.4
IRK Irkutsk 20.49 360 *e*P **P 20 50 11.2 +1.5**
IRK pmax pmax
comp=Z,323nm,1.8s
HIA Hailar 20.96 29 *e*P **P 20 50 15.3 +0.5**
HIA pmax pmax
comp=Z,91nm,1.3s
HIA Hailar 20.96 29 *e*P **P 20 50 15.3 +0.6**
comp=Z,91nm,1.3s
CIT Chita 21.34 16 *e*P **P 20 50 20.4 +1.5**
CIT *e* 20 50 39.0
CIT *e* 20 50 57.0
CIT pmax pmax
comp=Z,137nm,1.5s,mb5.1
JOW Kunigami 21.35 97 LR LR 20 59 20.7
comp=Z,1μm,19.5s,MS4.3,baz=283,slow=39
DDI Dehra Dun 22.63 273 *ex* **P 20 50 33.0 +0.2**
MK31 Makanchi Array 22.69 318 *e*P **P 20 50 33.5 +0.2**
MKAR Makanchi Array 22.69 318 P **P 20 50 33.8 +0.5**
comp=Z,51nm,1.0s,mb4.9,baz=116,slow=11,SNR=110
MKAR LR LR 21 01 13.3
comp=Z,139nm,20.8s,baz=119,slow=42
MKAR Makanchi Array 22.69 318 *i* P **P 20 50 33.7 +0.4**
MKAR pmax pmax
comp=Z,51nm,1.0s
TGY Tagaytay City 23.17 136 P **P 20 50 40.4 +1.7**
comp=Z,150nm,0.4s,mb5.8,baz=138,slow=8.2,SNR=3.5
SDNR Sundarnagar 23.36 277 *ex* **P 20 50 41.5 +0.9**
MDJ Mudanjiang 23.48 50 P **P 20 50 41.0 -0.7**
MDJ pP 20 50 44.0
MDJ S **S 20 54 55.0 +0.1**
MDJ sS sS 20 55 00.2 -0.1
MDJ ScP ScP 20 58 05.2 -0.1
MDJ PcS PcS 20 58 06.5 +0.1
MDJ pmax pmax
comp=Z,48nm,2.2s,mb4.5
MDJ pmax pmax
comp=Z,560nm,5.9s
MDJ LR LR
comp=N,1μm,14.4s,MS4.6
MDJ LR LR
comp=E,720nm,16.8s,MS4.6
MDJ LR LR
comp=Z,1μm,12.3s,MS4.5
MDJ Mudanjiang 23.48 50 *e*P **P 20 50 42.1 +0.4**
comp=Z,149nm,1.6s,mb5.2
THN Thein Dam 24.31 279 *ex* **P 20 50 47.4 -2.1**
KSH Kashi 24.32 297 P **P 20 50 53.5 +4.0**
KSH *ep*P 20 50 57.6
KSH *es*P sP 20 51 00.6 +6.4
KSH *e*PP 20 51 29.5
KSH *e*PcP PcP 20 54 31.6 +2.5
KSH *e*S **S 20 55 11.4 +2.8**
KSH *es*S sS 20 55 17.6 +3.6
KSH *e*SS 20 56 08.6
KSH *e*ScP ScP 20 58 09.0 +1.3
KSH *e*PcS PcS 20 58 10.5 +1.6
KSH *e*ScS ScS 21 01 55.6 +0.5
KSH pmax pmax
comp=Z,220nm,2.0s,mb5.2
KSH LR LR
comp=N,1μm,12.9s,MS4.9
KSH LR LR
comp=E,2μm,12.2s,MS4.9
ULHL Ulahol 24.73 303 P **P 20 50 55.5 +2.3**
SNR=7.6
TKM2 Tokmak 2 25.38 304 P **P 20 51 01.0 +1.9**
SNR=23
TKM2 Tokmak 2 25.38 304 *e*P **P 20 51 00.2 +1.1**
TKM2 pmax pmax
comp=Z,80nm,1.4s,mb5.1
TKM2 Tokmak 2 25.38 304 *e*P **P 20 51 00.2 +1.1**
comp=Z,80nm,1.4s,mb5.1
KZA Kyzart 25.40 302 P **P 20 51 02.3 +3.0**
SNR=76
KBK Karagaybulak 25.76 303 P **P 20 51 04.9 +2.3**
SNR=29
UCH Uchtor 25.97 302 P **P 20 51 07.3 +2.9**
SNR=46
UCH Uchtor 25.97 302 *e*P **P 20 51 06.3 +1.8**
comp=Z,87nm,1.3s,mb5.1
FRU Bishkek 26.05 304 *e*P **P 20 51 06.0 +0.8**

FRU *e* 20 55 32.0
FRU pmax pmax
comp=Z,160nm,2.0s,mb5.2
FRU MLR MLR
comp=Z,2μm,12.0s,MS4.8
AAK Ala-Archa 26.08 303 P **P 20 51 07.6 +2.1**
comp=Z,137nm,1.2s,mb5.4,SNR=5.9
AAK Ala-Archa 26.08 303 P **P 20 51 09.1 +3.6**
SNR=17
AAK Ala-Archa 26.08 303 P **P 20 51 07.5 +2.0**
comp=Z,3.1nm,0.5s,mb4.1,baz=83,slow=2.5,SNR=12
AAK LR LR 21 03 21.8
comp=Z,2μm,20.1s,MS4.6,baz=91,slow=41
AAK Ala-Archa 26.08 303 *c i*P **P 20 51 07.1 +1.6**
AAK pmax pmax
comp=Z,41nm,2.5s,mb4.5
AAK Ala-Archa 26.08 303 *e*P **P 20 51 07.3 +1.8**
comp=Z,64nm,1.4s,mb5.0
AAK Ala-Archa 26.08 303 P **P 20 51 09.4 +3.9**
SNR=25
AAK P 20 51 09.4
SNR=25
USP Ospenovka 26.25 305 P **P 20 51 08.3 +1.3**
SNR=24
ZAA0 Zalesovo Array 26.28 333 *e*P **P 20 51 06.6 -0.5**
ZALV Zalesovo Beam 26.28 333 P **P 20 51 06.9 -0.2**
comp=Z,28nm,0.7s,mb4.9,baz=132,slow=8.2,SNR=44
ZALV LR LR 21 02 13.9
comp=Z,752nm,19.9s,MS4.2,baz=159,slow=38
KTGM Kuala Trenggan 26.30 183 P **P 20 51 08.0 +0.3**
AML Almayashu 26.54 302 P **P 20 51 12.1 +2.5**
SNR=23
AML Almayashu 26.54 302 *e*P **P 20 51 11.8 +2.2**
comp=Z,106nm,1.5s,mb5.2
KULM Kulim 26.55 188 P **P 20 51 10.0 +0.2**
KULM Kulim 26.55 188 *e*P **P 20 51 08.7 -1.1**
comp=Z,91nm,1.5s,mb5.1
EKS2 Erkin-Say 26.60 303 P **P 20 51 12.1 +1.9**
SNR=15
EKS2 Erkin-Say 26.60 303 *e*P **P 20 51 11.6 +1.4**
comp=Z,51nm,1.4s,mb4.9
BOD Bodaibo 26.90 11 *e*P **P 20 51 12.4 -0.2**
BOD pmax pmax
comp=Z,17nm,1.5s,mb4.3
KURK Kurchatov 26.91 322 P **P 20 51 13.6 +0.7**
comp=Z,278nm,1.0s,mb5.7,SNR=34
KURK Kurchatov 26.91 322 P **P 20 51 13.1 +0.2**
comp=Z,18nm,0.8s,mb4.6,baz=128,slow=8.2,SNR=58
KURK PcP PcP 20 54 34.0 -0.8
comp=Z,5.4nm,0.9s,baz=104,slow=1.7,SNR=5.0
KURK LR LR 21 01 38.5
comp=Z,901nm,19.3s,MS4.3,baz=125,slow=36
KURK Kurchatov 26.91 322 P **P 20 51 13.1 +0.2**
KURK 20 54 34.0
KURK pmax pmax
comp=Z,18nm,0.8s,mb4.7
KURK MLR MLR
comp=Z,901nm,19.3s,MS4.3
KURK Kurchatov 26.91 322 *e*P **P 20 51 12.8 -0.1**
comp=Z,105nm,1.4s,mb5.2
KURK Kurchatov 26.91 322 P **P 20 51 13.6 +0.8**
SNR=35
KURK P 20 51 13.6
SNR=35
KLR Kul'dur 26.93 42 *e*P **P 20 51 09.1 -4.0**
KLR pmax pmax
comp=E,34nm,1.6s
KLR pmax pmax
comp=Z,65nm,1.6s,mb4.9
KLR MLR MLR
comp=Z,5μm,11.0s,MS5.3
KDM Kudat 27.28 152 P **P 20 51 16.8 +0.3**
IPM Ipoh 27.30 187 P **P 20 51 16.0 -0.7**
HYB Hyderabad 27.42 245 *i* P **P 20 51 16.0 -1.7**
NVS Novosibirsk 27.56 333 ⇑*i*P **P 20 51 19.2 +0.6**
NVS *e* 20 52 14.8
NVS *e* 20 54 41.0
NVS *e*S **S 20 55 52.4 -7.2**
NVS pmax pmax
comp=N,78nm,1.7s
NVS pmax pmax
comp=Z,65nm,1.7s,mb5.0
NVS pmax pmax
comp=E,40nm,1.8s
NVS smax
comp=N,26nm,1.7s
NVS smax
comp=E,28nm,1.7s
KKM Kota Kinabalu 27.84 154 P **P 20 51 22.3 +0.8**
MAJO Matsushiro 28.28 71 *e*P **P 20 51 24.3 -1.0**
MAT Matsushiro 28.28 71 P **P 20 51 23.3 -2.0**
MJAR Matsushiro Arr 28.28 71 P **P 20 51 23.8 -1.5**
comp=E,2.6nm,0.8s,baz=270,slow=13,SNR=7.2
MJAR PcP PcP 20 54 38.3 0.0
comp=E,3.7nm,0.9s,baz=271,slow=4.3,SNR=4.3
MJAR LR LR 21 01 56.0
comp=E,448nm,20.8s,MS4.0,baz=230,slow=35
MJAR Matsushiro Arr 28.28 71 P **P 20 51 23.8 -1.5**
MJAR 20 54 38.3
FRIM Kepong 28.47 186 P **P 20 51 27.7 +0.6**
HABR Khabarovsk 28.52 45 *e*P **P 20 51 24.7 -2.6**
HABR *e**SP sP 20 51 38.2 +6.3
HABR *e*PPP 20 52 23.6
HABR *e* 20 54 35.5
HABR *e*S **S 20 56 10.5 -4.4**
HABR *e**SS sS 20 56 27.2 +6.9
HABR pmax pmax
comp=Z,96nm,2.5s,mb5.1
HABR pmax pmax
comp=N,17nm,2.3s
HABR pmax pmax
comp=E,57nm,2.1s
HABR MLR MLR
comp=Z,629nm,16.0s,MS4.3
SDKM Sandakan 28.58 153 P **P 20 51 28.9 +0.7**
NRGR Nerungri 28.63 24 *e*P **P 20 51 29.2 +1.0**
BTM Bintulu 29.53 162 P **P 20 51 37.8 +1.2**
KGM Kluang 29.58 182 P **P 20 51 37.4 +0.4**
KBL Kabul 29.67 285 *e*P **P 20 51 38.1 +0.4**
KBL pmax pmax
comp=Z,138nm,1.5s,mb5.5
KBL Kabul 29.67 285 *e*P **P 20 51 38.1 +0.5**
comp=Z,138nm,1.5s,mb5.5
MYKOM Kota Tinggi 29.79 181 P **P 20 51 39.5 +0.7**
SBUM Sibu 30.04 164 P **P 20 51 42.6 +1.5**
KSM Kuching 30.61 168 P **P 20 51 47.0 +0.9**
KSM Kuching 30.61 168 *e*P **P 20 51 46.2 +0.1**
comp=Z,38nm,1.0s,mb5.2
DAV Davao City (W) 31.50 137 LR LR 21 05 08.8
comp=Z,650nm,18.8s,MS4.3,baz=13,slow=38
ASAJ Asahikawa 32.26 56 P **P 20 51 59.2 -1.2**
comp=Z,4.2nm,0.6s,mb4.5,baz=228,slow=14,SNR=6.9
ASAJ Asahikawa 32.26 56 P **P 20 51 59.2 -1.2**
ASAJ pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 32.47 321 P **P 20 52 02.4 +0.3**
comp=Z,6.2nm,0.7s,mb4.5,baz=108,slow=9.8,SNR=23
BVAR PcP PcP 20 54 46.0 -2.9
comp=Z,3.6nm,0.8s,baz=108,slow=4.8,SNR=5.2
BVAR LR LR 21 04 57.6
comp=Z,841nm,22.0s,MS4.4,baz=116,slow=36
BVAR Borovoye Array 32.47 321 P **P 20 52 02.4 +0.3**
BVAR 20 54 46.0
BRVK Borovoye 32.54 321 P **P 20 52 04.7 +1.9**
comp=Z,152nm,1.4s,mb5.7,SNR=5.1
BRVK Borovoye 32.54 321 *c i*P **P 20 52 03.7 +0.9**
BRVK pmax pmax
comp=Z,61nm,1.7s,mb5.2
BRVK Borovoye 32.54 321 *e*P **P 20 52 01.4 -1.3**
comp=Z,54nm,1.3s,mb5.3
BRVK Borovoye 32.54 321 P **P 20 52 04.2 +1.5**
SNR=18
BRVK P 20 52 04.2
SNR=18
YSS Yuzh-Sakhalins 32.94 51 ⇑*e*P **P 20 52 05.9 -0.4**
YSS *e* 20 52 19.8
YSS MLR MLR
comp=N,500nm,14.0s,MS4.5
YSS MLR MLR
comp=E,500nm,15.0s,MS4.5
YSS MLR MLR
comp=Z,500nm,15.0s,MS4.3
YSS Yuzh-Sakhalins 32.94 51 *e*P **P 20 52 05.3 -1.0**
YAK Yakutsk 34.42 21 *e*P **P 20 52 17.2 -1.8**
YAK pmax pmax
comp=Z,16nm,0.9s,mb5.0

YAK pmax pmax
comp=N,11nm,1.6s
YAK pmax pmax
comp=E,14nm,1.3s
YAK Yakutsk 34.42 21 *e*P **P 20 52 18.0 -0.9**
comp=E,25nm,0.8s,mb5.2
ABKAR Akbulak array 37.46 311 *e*P **P 20 52 45.5 +0.3**
comp=E,5.3nm,0.7s,mb4.5
ABKT Ailbek 38.20 292 P **P 20 52 53.7 +2.1**
comp=E,604nm,0.8s,mb6.4,SNR=53
AKTK Aktyubinsk 38.91 312 P **P 20 52 57.9 +0.4**
AKTK LR LR 21 09 01.8
AKTO Aktyubinsk 38.91 312 P **P 20 52 57.9 +0.4**
comp=E,4.7nm,0.6s,mb4.4,baz=102,slow=8.5,SNR=21
AKTO LR LR 21 09 01.8
comp=E,530nm,19.0s,MS4.4,baz=286,slow=36
SVE Sverdlovsk 39.16 323 ⇓*e*P **P 20 53 00.1 +0.7**
SVE pmax pmax
comp=Z,127nm,1.5s,mb5.4
KAPI Kappang 39.36 155 P **P 20 53 00.9 -0.6**
comp=Z,522nm,1.2s,mb6.1,SNR=11
KAPI Kappang 39.36 155 P **P 20 53 00.2 -1.3**
comp=Z,65nm,1.0s,mb5.3,baz=329,slow=8.2,SNR=24
ARU Arti 40.10 322 P **P 20 53 07.9 +0.6**
comp=Z,546nm,0.8s,mb6.3,SNR=38
ARU Arti 40.10 322 *c i*P **P 20 53 07.4 +0.1**
ARU S **S 20 59 11.8 -1.4**
ARU SS SS 21 02 08.3 -2.2
ARU pmax pmax
comp=Z,197nm,1.7s,mb5.6
ARU Arti 40.10 322 *e*P **P 20 53 07.3 0.0**
comp=Z,189nm,1.3s,mb5.7
GUMO Guam 41.17 107 LR LR 21 10 59.2
comp=Z,407nm,18.6s,MS4.3,baz=97,slow=37
SMDO Samad 41.82 270 ⇓P **P 20 53 22.5 +0.7**
SNR=7.8
SOKR Solikamsk 42.03 326 *d i*P **P 20 53 24.1 +1.0**
SOKR pmax pmax
comp=Z,120nm,1.4s,mb5.3
SOKR MLR MLR
comp=Z,1μm,15.0s,MS4.8
TIXI Tiksi 42.08 11 *e*P **P 20 53 21.8 -1.6**
TIXI pmax pmax
comp=Z,26nm,1.8s,mb4.6
TIXI MLR MLR
comp=Z,1μm,16.0s,MS4.9
TIXI Tiksi 42.08 11 *e*P **P 20 53 21.6 -1.7**
comp=Z,13nm,0.9s,mb4.6
BSY Bisya 42.66 270 P **P 20 53 29.9 +1.1**
SNR=11
HATD Hatta, Dubai 42.81 273 ⇑P **P 20 53 33.0 +3.1**
SNR=7.5
ASHO Ashiyiah 42.92 273 ⇓P **P 20 53 31.9 +1.1**
SNR=10
FAQ Al Faqa, Dubai 43.29 273 ⇓P **P 20 53 34.8 +1.0**
SNR=7.0
SEY Seymchan 43.41 30 ⇑*i*P **P 20 53 34.0 -0.2**
PEA0B Petropavlovsk- 43.55 45 *e*P **P 20 53 34.3 -1.2**
PETK Petropavlovsk- 43.55 45 P **P 20 53 35.0 -0.5**
comp=Z,14nm,0.8s,mb4.8,baz=225,slow=4.5,SNR=16
PETK Petropavlovsk- 43.55 45 P **P 20 53 35.0 -0.5**
ASUD Al Ashush, Dub 43.56 273 ⇑P **P 20 53 37.3 +1.3**
SNR=9.1
COCO West Island 44.28 191 *i* P **P 20 53 44.4 +2.7**
GNI Garni 48.25 298 *c i*P **P 20 54 14.1 +1.3**
GNI pmax pmax
comp=Z,78nm,1.4s
GNI Garni 48.25 298 *e*P **P 20 54 13.9 +1.0**
comp=Z,128nm,1.4s,mb5.8
UMR Umm Al-Rimmam 48.37 283 *e*P **P 20 54 13.1 -0.7**
UMR AMb AMB 20 54 18.1
comp=Z,63nm,1.5s,mb5.4
ZEI Tsey 48.48 301 *e*P **P 20 54 14.4 -0.2**
ZEI pmax pmax
comp=Z,27nm,1.5s,mb5.1
KBD Kabd 48.50 283 *e*P **P 20 54 14.0 -0.9**
KBD AMb AMB 20 54 20.1
comp=Z,50nm,1.6s,mb5.3
MIB Mutribah 48.60 283 *e*P **P 20 54 15.0 -0.7**
MIB AMb AMB 20 54 19.9
comp=Z,97nm,1.2s,mb5.7
RDF Al-Radifah 48.70 282 *e*P **P 20 54 16.4 -0.1**
RDF AMb AMB 20 54 21.9
comp=Z,111nm,1.9s,mb5.6
KIV Kislovodsk 49.20 303 P **P 20 54 21.9 +1.8**
comp=Z,356nm,1.4s,mb6.2,SNR=15
KIV Kislovodsk 49.20 303 *e*P **P 20 54 20.5 +0.4**
KIV pmax pmax
comp=Z,80nm,1.1s,mb5.7
KIV MLR MLR
comp=Z,389nm,16.0s,MS4.5
KIV Kislovodsk 49.20 303 *e*P **P 20 54 20.2 +0.1**
comp=Z,151nm,1.4s,mb5.8
KIV Kislovodsk 49.20 303 P **P 20 54 21.4 +1.4**
SNR=36
KIV P 20 54 21.4
SNR=36
BHD Baghdad 50.04 289 *e*P **P 20 54 27.0 +0.4**
BHD *e*S **S 21 01 35.0 -2.7**
BILL Bilibino 50.49 25 *c i*P **P 20 54 28.7 -0.8**
BILL *e**PP pP 20 54 39.1 +6.2
BILL *e* 20 55 47.0
BILL pmax pmax
comp=Z,38nm,1.7s,mb5.2
BILL Bilibino 50.49 25 *e*P **P 20 54 28.7 -0.8**
comp=Z,108nm,1.8s,mb5.6
KLMR Klimovskoe 50.70 325 *e*P **P 20 54 30.7 -0.5**
KLMR pmax pmax
comp=Z,158nm,1.7s,mb5.7
VORD Divnogorie 50.80 312 *e*P **P 20 54 31.9 -0.2**
VORD pmax pmax
comp=E,60nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,40nm,0.7s
VOR Voronezh 50.80 313 *e*P **P 20 54 32.0 -0.1**
VOR pmax pmax
comp=Z,160nm,1.4s,mb5.8
VSR Storozhevoye 50.86 313 *e*P **P 20 54 32.1 -0.4**
VSR pmax pmax
comp=Z,50nm,1.4s,mb5.2
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,40nm,1.5s
SOC Sochi 51.38 303 *e*P **P 20 54 38.9 +2.3**
SOC pmax pmax
comp=Z,41nm,1.2s,mb5.2
SOC MLR MLR
comp=Z,414nm,14.0s,MS4.6
MOS Moscow 51.57 318 *e*P **P 20 54 36.4 -1.4**
MOS *e* 20 55 52.7
MOS *e* 20 56 34.0
MOS *e*S **S 21 01 54.6 -3.6**
MOS pmax pmax
comp=Z,121nm,1.6s,mb5.6
MOS pmax pmax
comp=Z,108nm,1.5s,mb5.6
KAKA Kakadu 51.72 144 ⇑*i*P **P 20 54 37.3 -2.0**
comp=Z,45nm,1.0s,mb5.4
KAKA Kakadu 51.72 144 *e*P **P 20 54 37.2 -2.1**
comp=Z,147nm,1.0s,mb5.9
OBN Obninsk 52.20 318 P **P 20 54 43.4 +0.9**
comp=Z,343nm,1.6s,mb6.0,SNR=5.2
OBN Obninsk 52.20 318 *d i*P **P 20 54 42.3 -0.2**
OBN *e* 20 55 55.7
OBN *e* 20 56 38.2
OBN pmax pmax
comp=Z,129nm,1.7s,mb5.6
OBN Obninsk 52.20 318 *e*P **P 20 54 43.0 +0.5**
comp=Z,161nm,1.4s,mb5.8
ANN Anapa 52.79 305 *e*P **P 20 54 42.1 -5.0**
ANN *e* 20 55 51.8
ANN *e*S **S 21 02 06.9 -8.4**
ANN pmax pmax
comp=Z,86nm,1.1s,mb5.6
MALT Malatya 53.43 297 *e*P **P 20 54 52.5 +0.6**
MALT pmax pmax
comp=Z,65nm,1.4s,mb5.4
MALT Malatya 53.43 297 *e*P **P 20 54 52.5 +0.6**
comp=Z,65nm,1.4s,mb5.4
MALT Malatya 53.43 297 ⇑*i*P **P 20 54 52.6 +0.7**
FITZ Fitzroy Crossi 53.57 155 ⇑*i*P **P 20 54 52.3 -0.7**
comp=Z,63nm,0.9s,mb5.5
FITZ Fitzroy Crossi 53.57 155 P **P 20 54 52.4 -0.6**

comp=Z,36nm,0.9s,mb5.3,baz=351,slow=6.0,SNR=47
FITZ LR LR 21 15 44.1
FITZ Fitzroy Crossi 53.57 155 *eP* **P 20 54 52.3 -0.7**
comp=Z,48nm,1.0s,mb5.4
APA Apatity 53.86 333⇑ *iP* **P 20 54 58.0 +3.4**
APA MLR MLR
comp=Z,3μm,14.0s,MS5.5
MBWA Marble Bar 54.60 162 *eP* **P 20 54 59.6 -0.9**
comp=Z,222nm,2.0s,mb5.8
JOF Joensuu 54.64 328 *eP* **P 20 54 59.4 -0.9**
JOF pmax pmax
comp=Z,24nm,0.9s,mb5.2
JOF Joensuu 54.64 328 *ep* **P 20 54 59.4 -0.9**
comp=Z,24nm,0.9s,mb5.2
SIM Simferopol' 55.08 305 *eP* **P 20 55 04.1 +0.3**
SIM pmax pmax
comp=Z,38nm,1.5s,mb5.2
KEV Kevo 56.27 336 *eP* **P 20 55 11.8 -0.1**
KEV Kevo 56.27 336 *ep* **P 20 55 10.6 -1.3**
comp=Z,21nm,0.7s,mb5.3
BR131 Keskin Array S 56.67 299 *eP* **P 20 55 14.5 -0.8**
comp=Z,6.0nm,0.7s,mb4.7
BRTR Keskin Array B 56.67 299 P **P 20 55 14.9 -0.3**
comp=Z,7.4nm,0.9s,mb4.7,baz=98,slow=6.4,SNR=38
BRTR LR LR 21 22 09.3
comp=Z,225nm,18.2s,MS4.3,baz=164,slow=39
ARCES ARCESS Array B 56.80 336 P **P 20 55 16.3 +0.6**
comp=Z,15nm,0.8s,mb5.1,baz=75,slow=8.5,SNR=19
ARCES LR LR 21 20 37.5
comp=Z,251nm,20.2s,MS4.3,baz=198,slow=37
KAF Kangasniemi 57.01 327 *eP* **P 20 55 16.1 -1.2**
KAF pmax pmax
comp=Z,18nm,0.8s,mb5.2
KAF Kangasniemi 57.01 327 *ep* **P 20 55 16.1 -1.2**
comp=Z,18nm,0.8s,mb5.1
AKASG Malin Array Be 57.16 313 P **P 20 55 17.9 -0.7**
comp=Z,5.0nm,0.7s,mb4.6,baz=73,slow=6.1,SNR=22
AKASG LR LR 21 21 19.5
comp=Z,1μm,19.1s,MS5.0,baz=65,slow=38
AKBB Malin Array Si 57.16 313 *eP* **P 20 55 18.0 -0.5**
FINES FINESS Array B 57.20 326 P **P 20 55 18.4 -0.3**
comp=Z,18nm,0.7s,mb5.2,baz=84,slow=6.7,SNR=35
MICGM Minsk 57.26 318⇓ *eP* **P 20 55 18.0 -1.2**
VSU Vasula 57.26 322 *i P* **P 20 55 20.3 +1.1**
VSU pmax pmax
comp=Z,50nm,1.1s,mb5.5
MNK Minsk 57.29 318⇓ *eP* **P 20 55 18.0 -1.4**
MNK pmax pmax
comp=Z,170nm,1.5s,mb5.8
IDID Didziasalis 57.77 319 *eP* **P 20 55 23.2 +0.5**
NACGM Naroch 57.82 318 *e* **P 20 55 20.0 -3.1**
IIGN Ignalina 58.05 319 *eP* **P 20 55 24.9 +0.2**
ISAL Salakas 58.06 319 *eP* **P 20 55 24.9 +0.1**
KIS Kishinev 58.23 309 *eP* **P 20 55 23.0 -3.1**
CSS Prodhromos 58.31 294 *eP* **P 20 55 26.0 -0.9**
comp=Z,50nm,1.1s,mb5.5
COEN Coen 58.69 135 *eP* **P 20 55 29.7 0.0**
comp=Z,624nm,1.3s
SPITS Spitsbergen Ar 58.79 346 P **P 20 55 29.0 -0.6**
comp=Z,5.2nm,0.8s,mb4.6,baz=87,slow=9.9,SNR=7.8
WRAB Tennant Creek 58.84 147 P **P 20 55 30.0 -0.7**
comp=Z,740nm,0.8s,SNR=37
WRAB Tennant Creek 58.84 147 *eP* **P 20 55 30.5 -0.2**
WRAB pmax pmax
comp=Z,93nm,0.8s,mb5.9
WRAB Tennant Creek 58.84 147 *eP* **P 20 55 30.5 -0.2**
comp=Z,93nm,0.8s,mb5.9
WRA Warramunga Arr 58.85 147 P **P 20 55 30.4 -0.2**
comp=Z,56nm,0.8s,mb5.7,baz=338,slow=7.5,SNR=236
WB2 Warramunga Arr 58.85 147 *eP* **P 20 55 30.4 -0.3**
TIRR Tirgusor 59.15 306 *eP* **P 20 55 32.3 -0.3**
TIRR pmax pmax
comp=Z,53nm,1.4s,mb5.4
TIRR Tirgusor 59.15 306 *eP* **P 20 55 32.3 -0.3**
comp=Z,53nm,1.4s,mb5.4
HARR Harsova 59.42 306 ⇓ *P* **P 20 55 34.7 +0.3**
HARR Harsova 59.42 306 ⇓ *iP* **P 20 55 34.7 +0.3**
ISP Isparta 59.55 298 *eP* **P 20 55 34.8 -0.7**
ISP pmax pmax
comp=Z,62nm,1.0s,mb5.6
ISP Isparta 59.55 298 *eP* **P 20 55 34.8 -0.7**
comp=Z,62nm,1.0s,mb5.6
KBS Kingsbay 59.57 347 *eP* **P 20 55 39.4 +4.4**
ATD Arta Tunnel 59.91 265 P **P 20 55 38.6 +0.4**
comp=Z,19nm,1.0s,mb5.1,baz=102,slow=12,SNR=6.0
VRI Vrincioaia 59.91 308 P **P 20 55 38.4 +0.6**
VRI Vrincioaia 59.91 308 ⇓ *iP* **P 20 55 38.1 +0.2**
PLOR Plostina 59.97 308 ⇑ *P* **P 20 55 39.1 +0.9**
PLOR Plostina 59.97 308 ⇑ *iP* **P 20 55 39.1 +0.9**
SUW Suwalki 60.06 318 *eP* **P 20 55 38.7 0.0**
SUW pmax pmax
comp=Z,91nm,1.2s,mb5.7
SUW Suwalki 60.06 318 *eP* **P 20 55 38.7 0.0**
comp=Z,91nm,1.2s,mb5.7
BUR01 Bucovina Ar. S 60.44 310 P **P 20 55 41.9 +0.5**
BURAR Bucovina Array 60.44 310 ⇓ *P* **P 20 55 41.4 0.0**
BURAR Bucovina Array 60.44 310 ⇓ *iP* **P 20 55 41.4 0.0**
BUR08 Bucovina Ar. S 60.44 310 *eP* **P 20 55 40.9 -0.6**
MLR Muntele Rosu 60.55 308 ⇓ *iP* **P 20 55 42.9 +0.7**
LVV L'vov 60.60 313 *eP* **P 20 55 42.4 -0.1**
VOIR 61.16 308 ⇓ *P* **P 20 55 45.5 -0.9**
VOIR 61.16 308 ⇓ *iP* **P 20 55 45.5 -0.9**
KWP Kalwaria Pacla 61.48 313 *eP* **P 20 55 48.4 -0.1**
KWP pmax pmax
comp=Z,198nm,1.5s,mb6.0
KWP Kalwaria Pacla 61.48 313 *eP* **P 20 55 48.4 0.0**
comp=Z,198nm,1.5s,mb6.0
KWP Kalwaria Pacla 61.48 313⇑ *iP* **P 20 55 48.7 +0.2**
BMR Baia Mare 61.54 311 P **P 20 55 50.0 +1.1**
ALN Alexandroupoli 61.87 303 P **P 20 55 50.3 -1.0**
ASAR Alice Springs 61.89 149 P **P 20 55 51.4 0.0**
comp=Z,24nm,0.8s,mb5.4,baz=331,slow=6.2,SNR=190
KOLS Kolonicke sedl 61.95 312 *eP* **P 20 55 52.0 +0.3**
KOLS pmax pmax
comp=Z,11nm,1.2s,mb4.9
KOLS Kolonicke sedl 61.95 312 *eP* **P 20 55 52.0 +0.3**
comp=Z,11nm,1.2s,mb4.8
KOLS Kolonicke sedl 61.95 312 *eP* **P 20 55 52.0 +0.3**
TRPA Tarpa 62.02 311⇑ *iP* **P 20 55 53.0 +0.9**
UZH Uzhgorod 62.03 312 *eP* **P 20 55 52.2 0.0**
UZH *e* 20 56 02.0
UZH *e* 20 56 10.0
UZH *e* 20 56 33.6
RDO Rodhopi 62.15 303 P **P 20 55 52.6 -0.6**
DRGR 62.31 310 P **P 20 55 55.1 +1.0**
DRGR 62.31 310 ⇓ *iP* **P 20 55 54.9 +0.8**
STHS Stebnicka Huta 62.45 313 *eP* **P 20 55 54.4 -0.6**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.45 313 *eP* **P 20 55 54.4 -0.6**
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.45 313 *eP* **P 20 55 54.3 -0.7**
GZR Gura Zlata 62.70 308 P **P 20 55 57.5 +0.8**
GZR Gura Zlata 62.70 308 ⇓ *iP* **P 20 55 56.1 -0.6**
NIE Niedzica 63.03 313 *eP* **P 20 55 59.8 +0.9**
NIE *e*SP* sP 20 56 07.7 +4.0
OJC Ojcow 63.10 314 *eP* **P 20 55 59.4 +0.1**
KECS Kecovo 63.22 312 *eP* **P 20 56 00.7 +0.6**
KECS pmax pmax
comp=Z,13nm,1.6s,mb4.8
KECS Kecovo 63.22 312 *eP* **P 20 56 00.7 +0.6**
comp=Z,13nm,1.6s,mb4.8
KECS Kecovo 63.22 312 *eP* **P 20 56 00.7 +0.6**
BZS Buzias 63.40 309 ⇓ *P* **P 20 56 01.4 0.0**
BZS Buzias 63.40 309 ⇓ *iP* **P 20 56 01.4 0.0**
OUR Ouranopolis 63.54 303 P **P 20 56 01.2 -1.2**
SRS Serrai 63.55 304 P **P 20 56 05.8 +3.4**
PSZ Piszkesteto 63.77 312 *eP* **P 20 56 04.6 +0.8**
PSZ pmax pmax
comp=Z,77nm,1.6s,mb5.5
PSZ Piszkesteto 63.77 312 *eP* **P 20 56 04.6 +0.8**
comp=Z,77nm,1.6s,mb5.5
PSZ Piszkesteto 63.77 312⇑ *eP* **P 20 56 07.4 +3.6**
PSZ Piszkesteto 63.77 312 ⇓ *iP* **P 20 56 04.8 +1.0**
SOH Sokhos 63.82 303 P **P 20 56 02.6 -1.6**
PAIG Paliouri 63.90 302 P **P 20 56 02.4 -2.4**
PLG Polygyros 63.91 303 P **P 20 56 03.7 -1.1**
OKC Ostrava-Krasne 64.23 314 *eP* **P 20 56 07.5 +0.7**
OKC MLR MLR
comp=Z,1μm,14.7s,MS5.2
OKC Ostrava-Krasne 64.23 314 *eP* **P 20 56 07.5 +0.7**
OKC *ep*P pP 20 56 10.2 -0.1
OKC AMS AMS 21 25 10.0
comp=Z,1μm,14.7s
VYHS Vyhne 64.25 313 *eP* **P 20 56 08.4 +1.5**
VYHS pmax pmax
comp=Z,45nm,1.7s,mb5.2
VYHS Vyhne 64.25 313 *eP* **P 20 56 08.4 +1.5**
comp=Z,45nm,1.7s,mb5.2
VYHS Vyhne 64.25 313 *eP* **P 20 56 08.3 +1.4**
NB2 NORSAR Subarra 64.28 327 P **P 20 56 05.1 -1.8**
comp=Z,26nm,1.1s,mb5.2,baz=73,slow=6.9
NOA NORSAR Array B 64.28 327 P **P 20 56 05.5 -1.3**
comp=Z,10nm,0.8s,mb4.9,baz=71,slow=6.7,SNR=17
LAST Lasithi 64.28 297 P **P 20 56 07.1 -0.3**
XOR Xorichti 64.45 302 P **P 20 56 07.2 -1.2**
BUD Budapest 64.47 311⇑ *eP* **P 20 56 11.8 +3.4**
MORC Moravsky Berou 64.62 314 *eP* **P 20 56 09.3 -0.1**
comp=Z,46nm,1.5s,mb5.3
MORC Moravsky Berou 64.62 314 ⇓ *iP* **P 20 56 10.0 +0.7**
LIT Litokhoron 64.69 303 P **P 20 56 09.0 -1.0**
ATAL Atalanti 64.81 301 P **P 20 56 09.7 -1.1**
LKR Lokris 64.85 301 P **P 20 56 09.1 -1.9**
DIVS Divibare 65.00 308 P **P 20 56 11.5 -0.4**
KSP Ksiaz 65.01 316 *eP* **P 20 56 11.6 -0.3**
SMOL Smolenice 65.12 313 *eP* **P 20 56 13.4 +0.8**
SMOL Smolenice 65.12 313 *eP* **P 20 56 13.4 +0.8**
KZN Kozani 65.13 303 P **P 20 56 11.6 -1.2**
PKSM Moragy 65.16 310⇑ *P* **P 20 56 12.6 -0.3**
PKSM Moragy 65.16 310⇑ *iP* **P 20 56 12.6 -0.3**
DPC Dobruska-Polom 65.17 315 *eP* **P 20 56 13.6 +0.7**
DPC MLR MLR
comp=Z,1μm,15.0s,MS5.1
DPC Dobruska-Polom 65.17 315 *eP* **P 20 56 13.6 +0.7**
DPC *ep*P pP 20 56 16.6 +0.2
DPC AMS AMS 21 25 40.0
comp=Z,1μm,15.0s
AGG Agios Georgios 65.20 302 P **P 20 56 11.6 -1.7**
THL Klokotos Trika 65.22 302 P **P 20 56 11.6 -1.9**
CTA Charters Tower 65.29 136⇑ *iP* **P 20 56 14.2 +0.2**
comp=Z,15nm,0.9s,mb5.0
CTA Charters Tower 65.29 136 P **P 20 56 14.0 0.0**
comp=Z,17nm,0.8s,mb5.1,baz=333,slow=7.4,SNR=9.9
CTAO Charters Tower 65.29 136 *eP* **P 20 56 14.1 +0.1**
CTAO pmax pmax
comp=Z,169nm,1.9s,mb5.8
CTAO Charters Tower 65.29 136 *eP* **P 20 56 14.1 +0.1**
comp=Z,169nm,1.9s,mb5.8
UPC Upice 65.30 315 *eP* **P 20 56 14.2 +0.5**
UPC *ep*P pP 20 56 17.6 +0.4
VRAC Vranov 65.36 314 LR LR 21 26 33.5
comp=Z,758nm,19.1s,MS4.9,baz=326,slow=38
VRAC Vranov 65.36 314 P **P 20 56 14.5 +0.3**
VRAC Vranov 65.36 314 ⇓ *iP* **P 20 56 15.1 +0.9**
KARN Karanos 65.38 298 P **P 20 56 13.0 -1.5**
NWAO Narrogin (SRO) 65.44 168 P **P 20 56 15.2 +0.5**
comp=Z,33nm,1.0s,mb5.3,baz=312,slow=5.0,SNR=5.3
NWAO Narrogin (SRO) 65.44 168 *eP* **P 20 56 14.7 0.0**
BCI Bajram Curri 65.57 306 *eP* **P 20 56 17.6 +1.9**
KBN Korca 65.71 304 *eP* **P 20 56 15.8 -0.8**
LAKA Lakka 65.74 301 P **P 20 56 14.4 -2.4**
PUK Puka 65.81 306 *eP* **P 20 56 16.5 -0.7**
TREC Trest 66.05 314 *eP* **P 20 56 19.1 +0.5**
TREC MLR MLR
comp=Z,1μm,21.9s,MS5.1
TREC Trest 66.05 314 *eP* **P 20 56 19.1 +0.5**
TREC *ep*P pP 20 56 22.5 +0.4
TREC AMS AMS 21 26 10.0
comp=Z,1μm,21.9s
TIR Tirane 66.09 305 *eP* **P 20 56 18.5 -0.5**
TIR pmax pmax
comp=Z,92nm,1.5s,mb5.6
TIR Tirane 66.09 305 *eP* **P 20 56 18.5 -0.5**
comp=Z,92nm,1.5s,mb5.6
FORT Forrest 66.09 158 *eP* **P 20 56 18.9 0.0**
comp=Z,54nm,0.9s,mb5.6
FORT Forrest 66.09 158 *eP* **P 20 56 18.9 0.0**
comp=Z,110nm,1.1s,mb5.8
PVCC Panska Ves 66.15 316 *eP* **P 20 56 19.8 +0.6**
PVCC MLR MLR
comp=Z,900nm,19.7s,MS5.0
PVCC Panska Ves 66.15 316 *eP* **P 20 56 19.8 +0.6**
PVCC *ep*P pP 20 56 24.0 +1.3
PVCC AMS AMS 21 26 20.0
comp=Z,900nm,19.7s
CONA Conrad Observa 66.31 313⇑ *iP* **P 20 56 20.6 +0.3**
comp=Z,45nm,1.4s,mb5.3,SNR=25
PRU Pruhonice 66.36 315 *eP* **P 20 56 21.3 +0.7**
PRU MLR MLR
comp=Z,1μm,16.7s,MS5.1
PRU Pruhonice 66.36 315 *eP* **P 20 56 21.3 +0.7**
PRU *ep*P pP 20 56 24.4 +0.3
PRU AMS AMS 21 26 30.0
comp=Z,1μm,16.7s
BRG Berggiesshubel 66.39 316 *eP* **P 20 56 20.5 -0.3**
comp=Z,41nm,1.5s,mb5.2
BRG Berggiesshubel 66.39 316 *eP* **P 20 56 20.5 -0.3**
BRG pmax pmax
comp=Z,25nm,1.5s,mb5.0
PYL PYLOS 66.43 300 P **P 20 56 18.8 -2.5**
ARSA Arzberg 66.78 312 ⇓ *iP* **P 20 56 23.0 -0.3**
comp=Z,18nm,1.1s,mb5.0,SNR=12
COLD Coldfoot 66.78 24 *eP* **P 20 56 22.1 -0.9**
comp=Z,24nm,1.0s,mb5.2
CLL Collm 66.78 317 *i P* **P 20 56 22.5 -0.8**
CLL *e* 20 58 48.0
CLL pmax pmax
comp=Z,140nm,1.7s,mb5.7
CLL pmax pmax
comp=Z,30nm,1.4s,mb5.1
CLL MLR MLR
comp=Z,600nm,18.2s,MS4.8
CLL Collm 66.78 317 *i P* **P 20 56 22.5 -0.8**
comp=Z,30nm,1.7s,mb5.0
CLL *i* pP pP 20 56 26.0 -0.8
CLL *e*PP PP 20 58 48.0 -2.0
CLL LR LR
comp=Z,600nm,18.2s,MS4.8
CLL Collm 66.78 317 *i P* **P 20 56 22.5 -0.8**
comp=Z,30nm,1.7s,mb5.0
CLL *i* pP pP 20 56 26.0 -0.8
comp=Z,53nm,1.6s
CLL *i* 20 58 29.0
CLL *e*PP PP 20 58 48.0 -2.0
comp=Z,13nm,1.4s
CLL LmH 21 21 00.0
comp=N,700nm,20.3s
CLL LmH 21 21 00.0
comp=E,400nm,19.7s
CLL LmV 21 27 00.0
comp=Z,600nm,18.2s
MUD Monsted U'grnd 66.92 323 *i P* **P 20 56 26.5 +2.5**
MUD pmax pmax
comp=Z,19nm,1.1s,mb5.0
MUD Monsted U'grnd 66.92 323 *i P* **P 20 56 26.5 +2.5**
comp=Z,19nm,1.1s,mb5.0
KHC Kasperske Hory 67.27 315 *eP* **P 20 56 26.2 -0.2**
KHC MLR MLR
comp=Z,1μm,20.0s,MS5.2
KHC Kasperske Hory 67.27 315 *eP* **P 20 56 26.0 -0.4**
comp=Z,51nm,1.8s,mb5.2
KHC Kasperske Hory 67.27 315 *eP* **P 20 56 26.2 -0.2**
KHC *ep*P pP 20 56 29.4 -0.5
KHC AMS AMS 21 27 00.0
comp=Z,1μm,20.0s
GEC2 GERESS Array S 67.30 314 *eP* **P 20 56 24.1 -2.5**
comp=Z,7μm,1.4s
GERES GERESS Array B 67.30 314 P **P 20 56 26.6 0.0**
comp=Z,6.2nm,1.0s,mb4.6,baz=76,slow=5.6,SNR=39
GERES LR LR 21 27 33.5
comp=Z,1μm,18.7s,MS5.1,baz=60,slow=38
SOKA Soboth 67.31 312⇑ *iP* **P 20 56 26.3 -0.4**
comp=Z,49nm,1.5s,mb5.3
JMIC Jan Mayen 67.31 341 LR LR 21 27 00.8
comp=Z,292nm,20.9s,MS4.5,baz=214,slow=37
MOA Molln 67.34 313⇑ *iP* **P 20 56 26.9 0.0**
comp=Z,34nm,1.2s,mb5.2,SNR=8.9
NKC Novy Kostel 67.52 316 *eP* **P 20 56 28.3 +0.3**
NKC MLR MLR
comp=Z,1μm,17.2s,MS5.1
NKC Novy Kostel 67.52 316 *eP* **P 20 56 28.3 +0.3**
NKC *ep*P pP 20 56 31.1 -0.4
NKC AMS AMS 21 27 20.0
comp=Z,1μm,17.2s
MOX Moxa 67.85 317 *eP* **P 20 56 30.5 +0.5**
comp=Z,52nm,1.8s,mb5.3
MOX Moxa 67.85 317 *eP* **P 20 56 30.5 +0.5**
comp=Z,52nm,1.8s,mb5.3
MOX Moxa 67.85 317 *eP* **P 20 56 30.5 +0.5**
MOX pmax pmax
comp=Z,54nm,1.8s,mb5.3
MOX Moxa 67.85 317 *eP* **P 20 56 30.1 +0.1**
comp=Z,54nm,1.8s,mb5.3
MOX *eP* 20 56 30.5
PPLA Purkeypile 67.98 29 *eP* **P 20 56 30.2 -0.5**
comp=Z,50nm,1.1s,mb5.5
KBA Koelnbreinsper 68.22 313⇑ *iP* **P 20 56 32.4 0.0**
comp=Z,29nm,1.6s,mb5.1,SNR=6.9
VOY Vojsko 68.28 311 *e*(P) **P 20 56 32.7 -0.2**
VOY *e* pP 20 56 35.1 -1.3
GRA1 Grafenberg Arr 68.46 316 *eP* **P 20 56 34.0 +0.1**
comp=Z,77nm,1.6s,mb5.5
GRF Grafenberg Arr 68.46 316 *eP* **P 20 56 34.0 +0.1**
comp=Z,77nm,1.6s,mb5.5
GRF Grafenberg Arr 68.46 316 *eP* **P 20 56 34.0 +0.1**
GRF pmax pmax
comp=Z,77nm,1.6s,mb5.5
GRF Grafenberg Arr 68.46 316 *eP* **P 20 56 34.0 +0.1**
GRF pmax pmax
comp=Z,77nm,1.6s,mb5.5
GRF Grafenberg Arr 68.46 316 *eP* **P 20 56 34.0 +0.1**
comp=Z,77nm,1.6s,mb5.5
COLA College 68.74 26 *eP* **P 20 56 34.8 -0.6**
COLA pmax pmax
comp=Z,42nm,1.3s,mb5.2
COLA College 68.74 26 *eP* **P 20 56 34.8 -0.6**
comp=Z,42nm,1.3s,mb5.2
TIP Timpagrande 69.13 304 *eP* **P 20 56 37.4 -0.9**
comp=Z,65nm,1.4s,mb5.4
WTTA Wattenberg 69.20 313⇑ *iP* **P 20 56 37.7 -0.9**
comp=Z,51nm,1.3s,mb5.3,SNR=20
MOTA Moosalm 69.50 314⇑ *iP* **P 20 56 39.7 -0.7**
comp=Z,15nm,1.0s,mb4.9,SNR=12
WIT Witteveen 69.75 320 *eP* **P 20 56 42.9 +1.1**
comp=Z,137nm,1.4s,mb5.7
FETA Feichten 69.87 313 *i P* **P 20 56 42.5 -0.2**
comp=Z,36nm,1.2s,mb5.2,SNR=18
TOD Tromm 69.93 316 *eP* **P 20 56 42.8 -0.2**
WTSB Winterswijk 70.05 319⇑ *eP* **P 20 56 43.4 -0.2**
comp=Z,27nm,1.1s,mb5.1
STU Stuttgart 70.05 316 *eP* **P 20 56 43.3 -0.5**
STU pmax pmax
comp=Z,60nm,1.4s,mb5.3
STU Stuttgart 70.05 316 *eP* **P 20 56 43.3 -0.5**
comp=Z,60nm,1.4s,mb5.3
AQU L'Aquila 70.12 308 *eP* **P 20 56 44.2 -0.1**
comp=Z,101nm,1.4s,mb5.6
AQU L'Aquila 70.12 308⇑ *iP* **P 20 56 44.5 +0.2**
CEL Celeste 70.12 303 *eP* **P 20 56 41.7 -2.8**
comp=Z,98nm,1.4s,mb5.5
KDAK Kodiak Island 70.16 34 *i P* **P 20 56 50.9 +6.7**
SPAK Spaichingen-Ko 70.59 315 *eP* **P 20 56 46.7 -0.4**
BFO Black Forest 70.76 315 P **P 20 56 48.7 +0.6**
comp=Z,76nm,1.5s,mb5.4,SNR=7.1
HGN Heimansgroeve 71.07 318⇑ *eP* **P 20 56 47.9 -2.0**
comp=Z,11nm,1.4s,mb4.6
MEM Membach 71.10 318 P **P 20 56 49.9 -0.2**
comp=Z,11nm,1.8s,mb4.5
FELD Feldberg im Sc 71.16 315 *eP* **P 20 56 49.9 -0.6**
BEBN Eben Emael 71.20 319 P **P 20 56 53.9 +3.1**
KMBO Kilima Mbogo 71.32 257 P **P 20 56 52.3 +0.2**
comp=Z,12nm,1.0s,mb4.8,baz=39,slow=9.2,SNR=27
KMBO Kilima Mbogo 71.32 257 *ceP* **P 20 56 52.4 +0.4**
KMBO pmax pmax
comp=Z,12nm,1.0s
KMBO Kilima Mbogo 71.32 257 *eP* **P 20 56 52.1 0.0**
comp=Z,25nm,1.3s,mb5.0
KMBO Kilima Mbogo 71.32 257 P **P 20 56 52.7 +0.6**
SNR=14
KMBO P 20 56 52.7
SNR=14
CDF Champ du Feu 71.36 316 *eP* **P 20 56 51.1 -0.6**
comp=Z,142nm,1.6s,mb5.3
CDF Champ du Feu 71.36 316 *eP* **P 20 56 51.1 -0.6**
CDF pmax pmax
comp=Z,71nm,1.6s,mb5.3
CDF Champ du Feu 71.36 316 *eP* **P 20 56 51.1 -0.6**
comp=Z,71nm,1.6s,mb5.3
WLF Walferdange 71.44 317 P **P 20 56 52.8 +0.6**
comp=Z,48nm,1.5s,mb5.2
WLF Walferdange 71.44 317 *eP* **P 20 56 52.3 +0.1**
WLF pmax pmax
comp=Z,101nm,1.4s,mb5.6
WLF Walferdange 71.44 317 *eP* **P 20 56 52.3 0.0**
comp=Z,101nm,1.4s,mb5.6
INK Inuvik 71.47 19 *eP* **P 20 56 50.9 -1.1**
INK pmax pmax
comp=Z,19nm,0.9s
INK Inuvik 71.47 19 *eP* **P 20 56 50.9 -1.1**
comp=Z,19nm,0.9s,mb5.0
ECH Echery 71.52 316 *eP* **P 20 56 51.9 -0.8**
ECH pmax pmax
comp=Z,37nm,1.6s,mb5.1
ECH Echery 71.52 316 *eP* **P 20 56 51.9 -0.7**
comp=Z,37nm,1.6s,mb5.1
BCLA Clavier 71.58 318 P **P 20 56 53.1 0.0**
comp=Z,18nm,1.8s,mb4.7
MOF Molkenrain 71.70 315 *eP* **P 20 56 53.1 -0.7**
HINF Hinteralfeld 71.88 315 *eP* **P 20 56 54.0 -0.9**
comp=Z,112nm,1.6s,mb5.2
HINF Hinteralfeld 71.88 315 *eP* **P 20 56 54.0 -0.9**
HINF pmax pmax
comp=Z,56nm,1.6s,mb5.2
HINF Hinteralfeld 71.88 315 *eP* **P 20 56 54.0 -0.9**
comp=Z,56nm,1.6s,mb5.2
UCC Uccle 71.94 319 P **P 20 56 54.0 -1.1**
UCC AP pP 20 56 58.0 -0.7
GIVF Givet 72.00 318 *eP* **P 20 56 55.1 -0.5**
comp=Z,172nm,1.7s,mb5.4
GIVF Givet 72.00 318 *eP* **P 20 56 55.1 -0.5**
GIVF pmax pmax
comp=Z,86nm,1.7s,mb5.4
GIVF Givet 72.00 318 *eP* **P 20 56 55.1 -0.5**
comp=Z,86nm,1.7s,mb5.4
HAU Haudompre 72.09 316 *eP* **P 20 56 55.4 -0.8**
comp=Z,88nm,1.8s,mb5.1
HAU *e*MLR MLR
comp=Z,924nm,17.5s,MS4.8
HAU Haudompre 72.09 316 *eP* **P 20 56 55.4 -0.8**
HAU pmax pmax
comp=Z,44nm,1.8s,mb5.1
HAU MLR MLR
comp=Z,920nm,17.5s,MS5.1
HAU Haudompre 72.09 316 *eP* **P 20 56 55.4 -0.8**
comp=Z,44nm,1.8s,mb5.1
HAU LR LR
comp=Z,920nm,17.5s,MS5.1
SNF Seneffe 72.12 319 P **P 20 56 56.4 +0.1**
SNF AP pP 20 56 59.2 -0.6
comp=Z,16nm,1.8s
DOU Dourbes 72.14 318 P **P 20 56 56.5 +0.1**
DOU AP pP 20 56 59.2 -0.7
comp=Z,16nm,1.9s
EIDS Eidsvold 72.18 136 *eP* **P 20 56 56.9 0.0**
comp=Z,96nm,1.4s,mb5.5
DAWY Dawson 72.25 24 *eP* **P 20 56 55.7 -1.1**
BAIF Baives 72.37 318 *eP* **P 20 56 57.5 -0.3**
comp=Z,81nm,1.6s,mb5.1
BAIF Baives 72.37 318 *eP* **P 20 56 57.5 -0.3**
BAIF pmax pmax
comp=Z,40nm,1.6s,mb5.1
BAIF Baives 72.37 318 *eP* **P 20 56 57.5 -0.3**
comp=Z,40nm,1.6s,mb5.1
STKA Stephens Creek 72.39 147⇑ *iP* **P 20 56 57.5 -0.5**
comp=Z,24nm,0.9s,mb5.1
STKA Stephens Creek 72.39 147 P **P 20 56 57.8 -0.2**
comp=Z,26nm,0.8s,mb5.2,baz=328,slow=6.2,SNR=73
STKA Stephens Creek 72.39 147 *eP* **P 20 56 57.5 -0.5**
comp=Z,7.3nm,0.9s,mb4.6
MEZF Maizieres J'vi 72.63 317 *eP* **P 20 56 59.0 -0.3**
comp=Z,105nm,1.6s,mb5.2
MEZF Maizieres J'vi 72.63 317 *eP* **P 20 56 59.0 -0.3**
comp=Z,105nm,1.6s,mb5.5
SUMG Summit 72.88 349 *eP* **P 20 56 59.9 -0.5**
comp=Z,17nm,1.1s,mb4.9
CABF La Chapelle 72.90 314 *eP* **P 20 57 00.4 -0.6**
comp=Z,94nm,1.5s,mb5.2
CABF La Chapelle 72.90 314 *eP* **P 20 57 00.4 -0.6**
CABF pmax pmax
comp=Z,47nm,1.5s,mb5.2
CABF La Chapelle 72.90 314 *eP* **P 20 57 00.4 -0.6**
comp=Z,47nm,1.5s,mb5.2
PGF Pioggiola 72.95 310 *eP* **P 20 57 01.3 -0.1**
comp=Z,214nm,1.3s,mb5.6
PGF Pioggiola 72.95 310 *eP* **P 20 57 01.3 -0.1**

PGF pmax pmax
comp=Z,107nm,1.3s,mb5.6
PGF Pioggiola 72.95 310 *eP* **P 20 57 01.3 -0.1**
comp=Z,107nm,1.3s,mb5.6
RSL Roselend 73.01 313 *eP* **P 20 57 01.8 +0.2**
LPG La Plagne 73.02 313 *eP* **P 20 57 02.0 +0.3**
comp=Z,152nm,1.3s,mb5.5
LPG La Plagne 73.02 313 *eP* **P 20 57 02.0 +0.3**
LPG pmax pmax
comp=Z,76nm,1.3s,mb5.5
LPG La Plagne 73.02 313 *eP* **P 20 57 02.0 +0.3**
comp=Z,76nm,1.3s,mb5.5
LPL La Plagne 73.02 313 *eP* **P 20 57 01.8 +0.1**
comp=Z,172nm,1.3s,mb5.5
LPL La Plagne 73.02 313 *eP* **P 20 57 01.8 +0.1**
LPL pmax pmax
comp=Z,86nm,1.3s,mb5.5
LPL La Plagne 73.02 313 *eP* **P 20 57 01.8 +0.1**
comp=Z,86nm,1.3s,mb5.5
SAOF Saorge 73.22 312 *eP* **P 20 57 02.7 -0.2**
BNI Bardonecchia 73.27 313 *eP* **P 20 57 01.6 -1.6**
BNI pmax pmax
comp=Z,77nm,1.6s,mb5.4
BNI Bardonecchia 73.27 313 *eP* **P 20 57 01.6 -1.6**
comp=Z,77nm,1.6s,mb5.4
AUTN L'Aution 73.30 312 *eP* **P 20 57 03.5 +0.1**
SBF Sospel 73.36 311 *eP* **P 20 57 02.4 -1.3**
comp=Z,222nm,1.5s,mb5.6
SBF Sospel 73.36 311 *eP* **P 20 57 02.4 -1.3**
SBF pmax pmax
comp=Z,111nm,1.5s,mb5.6
SBF Sospel 73.36 311 *eP* **P 20 57 02.4 -1.3**
comp=Z,111nm,1.5s,mb5.6
MBDF Montbardon 73.37 312 *eP* **P 20 57 04.1 +0.3**
comp=Z,48nm,1.2s,mb5.0
MBDF Montbardon 73.37 312 *eP* **P 20 57 04.1 +0.3**
MBDF pmax pmax
comp=Z,24nm,1.2s,mb5.0
MBDF Montbardon 73.37 312 *eP* **P 20 57 04.1 +0.3**
comp=Z,24nm,1.2s,mb5.0
ESK Eskdalemuir 73.62 325 *i P* **P 20 57 08.3 +3.2**
ORIF Oris-en-Rattie 73.83 313 *eP* **P 20 57 06.1 -0.4**
comp=Z,103nm,1.3s,mb5.3
ORIF *e*MLR MLR
comp=Z,1µm,17.8s,MS4.9
ORIF Oris-en-Rattie 73.83 313 *eP* **P 20 57 06.1 -0.4**
ORIF pmax pmax
comp=Z,52nm,1.3s,mb5.3
ORIF Oris-en-Rattie 73.83 313 *eP* **P 20 57 06.1 -0.4**
comp=Z,52nm,1.3s,mb5.3
LOR Lormes 73.92 316 *eP* **P 20 57 05.8 -1.2**
comp=Z,51nm,1.6s,mb4.9
LOR *e*MLR MLR
comp=Z,828nm,20.0s,MS4.7
LOR Lormes 73.92 316 *eP* **P 20 57 05.8 -1.2**
LOR pmax pmax
comp=Z,25nm,1.6s,mb4.9
LOR MLR MLR
comp=Z,830nm,20.0s,MS5.0
LOR Lormes 73.92 316 *eP* **P 20 57 05.8 -1.2**
comp=Z,26nm,1.6s,mb4.9
LOR LR LR
comp=Z,830nm,20.0s,MS5.0
FRF La Foret Royal 74.00 311 *eP* **P 20 57 07.0 -0.6**
comp=Z,43nm,1.2s,mb5.0
FRF La Foret Royal 74.00 311 *eP* **P 20 57 07.0 -0.6**
FRF pmax pmax
comp=Z,22nm,1.2s,mb5.0
FRF La Foret Royal 74.00 311 *eP* **P 20 57 07.0 -0.6**
comp=Z,22nm,1.2s,mb5.0
LMR La Mourre 74.20 311 *eP* **P 20 57 08.1 -0.6**
comp=Z,292nm,1.9s,mb5.6
LMR La Mourre 74.20 311 *eP* **P 20 57 08.1 -0.6**
LMR pmax pmax
comp=Z,146nm,1.9s,mb5.6
LMR La Mourre 74.20 311 *eP* **P 20 57 08.1 -0.6**
comp=Z,146nm,1.9s,mb5.6
SSF Saint Saulge 74.24 316 *eP* **P 20 57 07.9 -1.0**
comp=Z,62nm,1.6s,mb5.0
SSF Saint Saulge 74.24 316 *eP* **P 20 57 07.9 -1.0**
SSF pmax pmax
comp=Z,31nm,1.6s,mb5.0
SSF Saint Saulge 74.24 316 *eP* **P 20 57 07.9 -1.0**
comp=Z,31nm,1.6s,mb5.0
SMF Signal de Mont 74.24 315 *eP* **P 20 57 08.1 -0.8**
comp=Z,167nm,1.5s,mb5.4
SMF Signal de Mont 74.24 315 *eP* **P 20 57 08.1 -0.8**
SMF pmax pmax
comp=Z,83nm,1.5s,mb5.4
SMF Signal de Mont 74.24 315 *eP* **P 20 57 08.1 -0.8**
comp=Z,83nm,1.5s,mb5.5
AVF Avril sur Loir 74.46 316 *eP* **P 20 57 09.4 -0.8**
comp=Z,121nm,1.6s,mb5.3
AVF Avril sur Loir 74.46 316 *eP* **P 20 57 09.4 -0.8**
AVF pmax pmax
comp=Z,61nm,1.6s,mb5.3
AVF Avril sur Loir 74.46 316 *eP* **P 20 57 09.4 -0.8**
comp=Z,60nm,1.6s,mb5.3
SMRF Simiane la Rot 74.48 312 *eP* **P 20 57 10.1 -0.2**
comp=Z,38nm,1.2s,mb4.9
SMRF Simiane la Rot 74.48 312 *eP* **P 20 57 10.1 -0.2**
comp=Z,38nm,1.2s,mb5.2
VIVF Saint-Julien-l 74.62 313 *eP* **P 20 57 10.5 -0.6**
comp=Z,82nm,1.4s,mb5.2
VIVF Saint-Julien-l 74.62 313 *eP* **P 20 57 10.5 -0.6**
VIVF pmax pmax
comp=Z,41nm,1.4s,mb5.2
VIVF Saint-Julien-l 74.62 313 *eP* **P 20 57 10.5 -0.6**
comp=Z,41nm,1.4s,mb5.2
PLDF La Plantade 74.71 315 *eP* **P 20 57 11.3 -0.3**
BGF Bois d'Agland 74.88 316 *eP* **P 20 57 11.7 -0.9**
comp=Z,38nm,1.4s,mb4.8
BGF Bois d'Agland 74.88 316 *eP* **P 20 57 11.7 -0.9**
BGF pmax pmax
comp=Z,19nm,1.4s,mb4.8
BGF Bois d'Agland 74.88 316 *eP* **P 20 57 11.7 -0.9**
comp=Z,19nm,1.4s,mb4.8
AGO Saint Agoulin 74.96 315 *eP* **P 20 57 13.0 -0.1**
PYM Petit Puy Mans 75.19 315 *eP* **P 20 57 14.3 -0.1**
LBL Lubilhac 75.31 314 *eP* **P 20 57 15.0 -0.1**
TCF Toulx Ste Croi 75.40 316 *eP* **P 20 57 15.1 -0.5**
comp=Z,86nm,1.5s,mb5.2
TCF Toulx Ste Croi 75.40 316 *eP* **P 20 57 15.1 -0.5**
TCF pmax pmax
comp=Z,43nm,1.5s,mb5.2
TCF Toulx Ste Croi 75.40 316 *eP* **P 20 57 15.1 -0.5**
comp=Z,43nm,1.5s,mb5.2
LASF Ste Croix 75.51 313 *eP* **P 20 57 16.1 -0.2**
comp=Z,113nm,1.5s,mb5.3
LDF La Druitiere 75.56 318 *eP* **P 20 57 15.7 -0.8**
comp=Z,99nm,1.5s,mb5.2
LDF La Druitiere 75.56 318 *eP* **P 20 57 15.7 -0.8**
LDF pmax pmax
comp=Z,50nm,1.5s,mb5.2
LDF La Druitiere 75.56 318 *eP* **P 20 57 15.7 -0.8**
comp=Z,50nm,1.5s,mb5.2
FLN La Foliniere 75.67 319 *eP* **P 20 57 16.4 -0.7**
comp=Z,140nm,1.6s,mb5.3
FLN *e*MLR MLR
comp=Z,599nm,18.5s,MS4.6
FLN La Foliniere 75.67 319 *eP* **P 20 57 16.4 -0.7**
FLN pmax pmax
comp=Z,70nm,1.6s,mb5.3
FLN MLR MLR
comp=Z,600nm,18.5s,MS4.9
FLN La Foliniere 75.67 319 *eP* **P 20 57 16.4 -0.7**
comp=Z,70nm,1.6s,mb5.3
FLN LR LR
comp=Z,600nm,18.5s,MS4.9
KEST Kesra 75.94 303 P **P 20 57 18.5 -0.4**
comp=Z,3.3nm,0.9s,mb4.2,baz=126,slow=0.9,SNR=6.6
GRR Gorron 76.08 319 *eP* **P 20 57 18.9 -0.6**
comp=Z,43nm,1.0s,mb5.0
GRR Gorron 76.08 319 *eP* **P 20 57 18.9 -0.6**
GRR pmax pmax
comp=Z,21nm,1.0s,mb5.0
GRR Gorron 76.08 319 *eP* **P 20 57 18.9 -0.6**
comp=Z,21nm,1.0s,mb5.0
CAF Calviac 76.18 314 *eP* **P 20 57 20.1 0.0**
comp=Z,69nm,1.4s,mb5.1
CAF Calviac 76.18 314 *eP* **P 20 57 20.1 0.0**
CAF pmax pmax
comp=Z,35nm,1.4s,mb5.1
CAF Calviac 76.18 314 *eP* **P 20 57 20.1 0.0**
comp=Z,34nm,1.4s,mb5.1
RJF Les Rejaudoux 76.32 315 *eP* **P 20 57 20.9 0.0**
comp=Z,100nm,1.4s,mb5.2
RJF *e*MLR MLR
comp=Z,832nm,18.5s,MS4.8
RJF Les Rejaudoux 76.32 315 *eP* **P 20 57 20.9 0.0**
RJF pmax pmax
comp=Z,50nm,1.4s,mb5.2
RJF MLR MLR
comp=Z,830nm,18.5s,MS5.1
RJF Les Rejaudoux 76.32 315 *eP* **P 20 57 20.9 0.0**
comp=Z,50nm,1.4s,mb5.2
RJF LR LR
comp=Z,830nm,18.5s,MS5.1
ARMA Armidale 76.33 139 ⇑*iP* **P 20 57 21.9 +0.9**
ARMA Armidale 76.33 139 *eP* **P 20 57 22.0 +1.0**
comp=Z,84nm,1.7s,mb5.4
MFF Saint Martin d 76.62 317 *eP* **P 20 57 22.2 -0.4**
comp=Z,139nm,1.6s,mb5.3
MFF Saint Martin d 76.62 317 *eP* **P 20 57 22.2 -0.4**
MFF pmax pmax
comp=Z,70nm,1.6s,mb5.3
MFF Saint Martin d 76.62 317 *eP* **P 20 57 22.2 -0.4**
comp=Z,70nm,1.6s,mb5.3
SKAG Skagway 76.65 27 *eP* **P 20 57 22.1 -0.3**
comp=Z,56nm,1.2s,mb5.4
CMAH Djebel Manchou 76.86 305 P **P 20 57 28.3 +4.2**
MTLF Montolieu 76.91 313 *eP* **P 20 57 23.8 -0.4**
comp=Z,60nm,1.5s,mb5.0
MTLF Montolieu 76.91 313 *eP* **P 20 57 23.8 -0.4**
MTLF pmax pmax
comp=Z,30nm,1.5s,mb5.0
MTLF Montolieu 76.91 313 *eP* **P 20 57 23.8 -0.4**
comp=Z,30nm,1.5s,mb5.0
LFF La Frestale 76.98 315 *eP* **P 20 57 24.6 0.0**
comp=Z,41nm,1.2s,mb4.9
LFF La Frestale 76.98 315 *eP* **P 20 57 24.6 0.0**
LFF pmax pmax
comp=Z,21nm,1.2s,mb4.9
LFF La Frestale 76.98 315 *eP* **P 20 57 24.6 0.0**
comp=Z,21nm,1.2s,mb4.9
ABSA Djebel Ababsia 77.00 305 P **P 20 57 28.3 +3.4**
SGMF Saint Gilles 77.11 319 *eP* **P 20 57 25.1 -0.2**
comp=Z,126nm,1.4s,mb5.3
SGMF Saint Gilles 77.11 319 *eP* **P 20 57 25.1 -0.2**
SGMF pmax pmax
comp=Z,63nm,1.4s,mb5.3
SGMF Saint Gilles 77.11 319 *eP* **P 20 57 25.1 -0.2**
comp=Z,63nm,1.4s,mb5.3
CKFL Kef-Lekhel 77.46 305 P **P 20 57 30.6 +3.1**
ROSF Rostrenen 77.47 319 *eP* **P 20 57 27.1 -0.2**
comp=Z,144nm,1.5s,mb5.4
ROSF Rostrenen 77.47 319 *eP* **P 20 57 27.1 -0.2**
ROSF pmax pmax
comp=Z,72nm,1.5s,mb5.4
ROSF Rostrenen 77.47 319 *eP* **P 20 57 27.1 -0.2**
comp=Z,72nm,1.5s,mb5.4
VALF Valcebollere 77.52 312 *eP* **P 20 57 27.9 +0.2**
QUIF Quistinic 77.64 319 *eP* **P 20 57 27.8 -0.4**
comp=Z,106nm,1.5s,mb5.2
QUIF Quistinic 77.64 319 *eP* **P 20 57 27.8 -0.4**
QUIF pmax pmax
comp=Z,53nm,1.5s,mb5.2
QUIF Quistinic 77.64 319 *eP* **P 20 57 27.8 -0.4**
comp=Z,53nm,1.5s,mb5.2
CASM Ain Smara 77.69 305 P **P 20 57 31.6 +2.8**
BST Brest 77.92 320 *eP* **P 20 57 26.3 -3.5**
EPF Esparros 78.24 313 *eP* **P 20 57 30.8 -0.9**
comp=Z,86nm,1.8s,mb5.1
EPF Esparros 78.24 313 *eP* **P 20 57 30.8 -0.9**
EPF pmax pmax
comp=Z,43nm,1.8s,mb5.1
EPF Esparros 78.24 313 *eP* **P 20 57 30.8 -0.9**
comp=Z,43nm,1.8s,mb5.1
RESF Ems 78.36 313 *eP* **P 20 57 32.7 +0.3**
ETSF Etsaut 78.86 314 *eP* **P 20 57 35.2 +0.1**
comp=Z,31nm,1.1s,mb4.8
ETSF Etsaut 78.86 314 *eP* **P 20 57 35.2 +0.1**
ETSF pmax pmax
comp=Z,16nm,1.1s,mb4.9
ETSF Etsaut 78.86 314 *eP* **P 20 57 35.2 +0.1**
comp=Z,16nm,1.1s,mb4.8
TOO Toolangi 78.89 148 *eP* **P 20 57 35.6 +0.5**
CNB Canberra Magne 78.93 144 *eP* **P 20 57 35.6 +0.2**
SJPF Ste Jean 79.16 314 *eP* **P 20 57 37.0 +0.3**
comp=Z,56nm,1.5s,mb5.0
SJPF Ste Jean 79.16 314 *eP* **P 20 57 37.0 +0.3**
SJPF pmax pmax
comp=Z,28nm,1.5s,mb5.0
SJPF Ste Jean 79.16 314 *eP* **P 20 57 37.0 +0.3**
comp=Z,28nm,1.5s,mb5.0
SFJD Kangerlussuaq 79.76 350 *i P* **P 20 57 37.3 -2.3**
SFJD pmax pmax
comp=Z,11nm,0.8s,mb4.8
SFJD MLR MLR
comp=Z,2µm,18.0s,MS5.6
SFJD Kangerlussuaq 79.76 350 *eP* **P 20 57 38.6 -1.0**
comp=Z,15nm,0.9s,mb4.9
SFJD Kangerlussuaq 79.76 350 *i P* **P 20 57 37.3 -2.3**
comp=Z,11nm,0.8s,mb4.8
SFJD
comp=Z,2µm,18.0s
YKA Yellowknife Ar 81.01 17 P **P 20 57 45.6 -0.8**
comp=Z,9.6nm,1.0s,mb4.7,baz=327,slow=4.7,SNR=4.4
YKA PKKPbc PKKPbc 21 16 20.6 -3.3
comp=Z,0.7nm,0.7s,baz=144,slow=2.2,SNR=9.5
ESDC Sonseca Array 82.80 312 P **P 20 57 56.0 -0.2**
comp=Z,0.4nm,0.3s,baz=48,slow=5.1,SNR=9.4
ESDC LR LR 21 37 20.6
comp=Z,440nm,18.3s,MS4.9,baz=30,slow=38
PBRG Braganca 83.25 315 *eP* **P 20 57 58.4 -0.1**
comp=Z,26nm,1.9s,mb4.9
MVO Moncorvo 83.80 315 *eP* **P 20 58 02.1 +0.7**
comp=Z,32nm,1.9s,mb5.1
PCAB Cabril 84.07 316 *eP* **P 20 58 03.6 +0.9**
comp=Z,40nm,1.8s,mb5.2
MTE Manteigas 84.58 315 *eP* **P 20 58 06.5 +1.1**
comp=Z,57nm,1.6s,mb5.5
PVIS Viseu 84.60 315 *eP* **P 20 58 07.8 +2.4**
comp=Z,46nm,1.7s,mb5.3
PCBR Castelo Branco 84.88 314 *eP* **P 20 58 07.3 +0.4**
comp=Z,30nm,1.9s,mb5.1
PMRV Marv??o 85.08 314 *eP* **P 20 58 08.1 +0.2**
comp=Z,33nm,1.7s,mb5.2
PESTR Estremoz 85.54 313 *eP* **P 20 58 10.6 +0.4**
comp=Z,24nm,1.6s,mb5.2
PTOM Tomar 85.58 314 *eP* **P 20 58 10.0 -0.4**
comp=Z,58nm,1.7s,mb5.5
PBAR Barrancos 85.62 313 *eP* **P 20 58 11.3 +0.7**
comp=Z,32nm,1.6s,mb5.3
EVO Evora 86.00 313 *eP* **P 20 58 12.9 +0.4**
comp=Z,42nm,1.7s,mb5.4
PCVE Castro Verde 86.57 313 *eP* **P 20 58 13.1 -2.2**
comp=Z,28nm,1.5s,mb5.3
LSZ Lusaka 86.64 250 *eP* **P 20 58 15.2 -0.7**
LSZ pmax pmax
comp=Z,34nm,1.4s,mb5.4
LSZ Lusaka 86.64 250 *eP* **P 20 58 15.2 -0.7**
comp=Z,34nm,1.4s,mb5.4
FCC Fort Churchill 88.53 10 *eP* **P 20 58 23.1 -1.2**
comp=Z,0.8nm,1.3s
EDM Edmonton 89.24 22 *eP* **P 20 58 28.1 +0.3**
A05A Maple Falls 89.56 29 ⇑P **P 20 58 29.7 +0.4**
baz=89
MBW Mount Baker 89.80 29 P **P 20 58 30.7 +0.2**
NLWA Neilton Lookou 90.06 30 ⇑P **P 20 58 32.9 +1.2**
baz=90
B06A Marblemount 90.18 29 ⇑P **P 20 58 32.8 +0.5**
baz=90
A07A Ashnola River, 90.20 28 ⇑P **P 20 58 32.7 +0.4**
baz=90,SNR=5.2
RPW Rockport 90.22 29 *eP* **P 20 58 32.3 -0.2**
comp=Z,13nm,1.5s,mb5.0
JCW Jim Creek 90.26 29 P **P 20 58 33.6 +1.0**
A08A Turner Farm, O 90.71 27 ⇑P **P 20 58 35.4 +0.7**
baz=90,SNR=10
B07A Winthrop 90.78 28 ⇑P **P 20 58 35.5 +0.5**
baz=90,SNR=8.3
E03A Lebam 90.85 31 ⇓P **P 20 58 36.4 +1.0**
baz=90
FFC Flin Flon 90.94 15 *eP* **P 20 58 34.9 -0.7**
FFC pmax pmax
comp=Z,84nm,2.0s,mb5.7
FFC Flin Flon 90.94 15 *eP* **P 20 58 34.9 -0.8**
comp=Z,84nm,2.0s,mb5.7
A09A Danville 90.96 27 ⇓P **P 20 58 35.9 0.0**
baz=91,SNR=5.5
B08A Colville Reser 91.17 27 ⇓P **P 20 58 37.4 +0.5**
baz=91,SNR=10
ETW Entiat 91.38 28 P **P 20 58 39.0 +1.1**
C07A Waterville 91.42 28 ⇑P **P 20 58 38.2 +0.1**
baz=91
B09A Rice 91.58 27 ⇓P **P 20 58 39.4 +0.7**
baz=91,SNR=8.7
C08A Higginbotham F 91.75 28 ⇓P **P 20 58 40.2 +0.6**
baz=91
A11A Hall Mountain, 91.81 26 ⇑P **P 20 58 40.7 +0.8**
baz=92
F04A Amboy 91.83 31 ⇑P **P 20 58 40.7 +0.7**
baz=92
E06A Yakima 91.96 29 ⇑P **P 20 58 40.8 +0.3**
baz=92
C09A Chrisman Ranch 92.04 27 ⇑P **P 20 58 41.2 +0.3**
baz=92
OD2 Odessa Site #2 92.20 28 *eP* **P 20 58 40.7 -1.0**
comp=Z,1.7nm,0.5s,mb4.6
B11A Sandpoint 92.24 26 ⇓P **P 20 58 42.7 +0.9**
baz=92
D08A Wollman Farm, 92.39 28 ⇓P **P 20 58 42.9 +0.3**
baz=92
D09A Jones Farm, Ri 92.63 28 ⇑P **P 20 58 44.4 +0.8**
baz=92
A14A Double T Ranch 92.84 24 ⇑P **P 20 58 44.2 -0.4**
baz=92
H04A Detroit Lake 92.91 31 ⇑P **P 20 58 45.3 +0.4**
baz=93
B13A Whitefish 92.98 25 ⇑P **P 20 58 45.6 +0.4**
baz=93
D10A Wagner Farm, O 93.04 27 ⇓P **P 20 58 45.6 0.0**
baz=93
A15A Johnson Ranch, 93.07 23 ⇓P **P 20 58 46.1 +0.5**
baz=93
E09A Wood Farm, Sta 93.14 28 ⇓P **P 20 58 46.6 +0.6**
baz=93
G06A Carlson Farm, 93.14 30 ⇑P **P 20 58 46.4 +0.4**
baz=93
BSMT Bassoo Peak 93.31 25 *eP* **P 20 58 47.8 +1.1**
comp=Z,7.6nm,1.0s,mb5.1
D11A Klaveano Farm, 93.41 27 ⇑P **P 20 58 47.9 +0.7**
baz=93
SCHQ Schefferville 93.46 355 P **P 20 58 46.4 -0.9**
comp=Z,4.4nm,0.7s,mb5.0,baz=347,slow=3.4,SNR=7.1
F08A Pendleton 93.47 29 ⇑P **P 20 58 47.8 +0.2**
baz=93
A16A West Butte Ran 93.48 23 ⇑P **P 20 58 47.4 -0.1**
baz=93,SNR=6.7
C13A Hot Springs 93.53 25 ⇑P **P 20 58 47.6 -0.2**
baz=93
E10A Myers Farm, Un 93.57 27 ⇑P **P 20 58 48.5 +0.4**
baz=93
YBMT Yellow Bay 93.58 25 *eP* **P 20 58 49.3 +1.3**
comp=Z,11nm,1.1s,mb5.2
JTMT Jette 93.58 25 *eP* **P 20 58 48.6 +0.6**
comp=Z,4.1nm,1.1s,mb4.8
B15A Bradely Ranch, 93.70 24 ⇑P **P 20 58 48.5 -0.1**
baz=93
TORD Torodi Ar. Bea 93.70 288 P **P 20 58 47.9 -1.2**
comp=Z,4.0nm,1.1s,mb4.8,baz=48,slow=3.5,SNR=13
TORD PP PP 21 02 33.8 -0.3
comp=Z,2.0nm,1.1s,baz=55,slow=6.0,SNR=5.0
TORD Torodi Ar. Bea 93.70 288 P **P 20 58 47.9 -1.3**
TORD PP PP 21 02 33.8 -0.3
D12A Red Ives Fores 93.77 26 ⇑P **P 20 58 49.0 +0.1**
baz=93
G08A Pilot Rock 93.80 29 ⇓P **P 20 58 49.9 +0.8**
baz=94
SWMT Swartz Lake 93.88 25 *eP* **P 20 58 49.9 +0.5**
comp=Z,6.2nm,1.0s,mb5.0
E11A Bogner Ranch, 94.03 27 ⇓P **P 20 58 50.3 +0.2**
baz=94
LBTB Lobatse 94.03 243 *eP* **P 20 58 49.1 -1.3**
D13A Huson 94.07 25 ⇓P **P 20 58 50.2 0.0**
baz=94
A18A Metzger Ranch, 94.07 22 ⇑P **P 20 58 49.8 -0.5**
baz=94
C15A Salmond Ranch, 94.15 24 ⇓P **P 20 58 50.3 -0.3**
baz=94,SNR=5.6
SLMT Seeley Lake 94.29 25 *eP* **P 20 58 52.0 +0.7**
comp=Z,20nm,1.3s,mb5.4
G09A Cove 94.30 28 ⇑P **P 20 58 51.4 +0.1**
baz=94
B17A L&G Farms, Che 94.31 23 ⇓P **P 20 58 51.4 0.0**
baz=94
C16A Fuhringer Ranc 94.42 24 ⇑P **P 20 58 51.4 -0.5**
baz=94,SNR=5.8
D14A Greenough 94.42 25 ⇓P **P 20 58 51.8 -0.1**
baz=94
F11A Grangeville 94.44 27 ⇑P **P 20 58 52.0 0.0**
baz=94
H08A Prairie City 94.55 29 ⇑P **P 20 58 53.3 +0.7**
baz=94
I07A Izee 94.55 30 ⇑P **P 20 58 52.7 +0.2**
baz=94
B18A Beardsley Farm 94.56 22 ⇑P **P 20 58 52.3 -0.2**
baz=94
E13A Victor 94.72 26 ⇑P **P 20 58 52.9 -0.4**
baz=94
G11A Walters Elk Ra 94.80 27 ⇓P **P 20 58 53.6 0.0**
baz=94
D15A Lincoln 94.81 24 ⇑P **P 20 58 53.3 -0.3**
baz=94
EGMT Eagleton 94.89 22 ⇑P **P 20 58 53.6 -0.4**
baz=94
F12A Elk City 94.90 27 ⇑P **P 20 58 54.0 -0.1**
baz=95
C17A Wharram Farm, 94.90 23 ⇑P **P 20 58 53.8 -0.3**
baz=95
K05A Summer Lake 95.03 32 ⇑P **P 20 58 55.2 +0.4**
baz=95
D16A Dana Ranch, Ca 95.16 24 ⇑P **P 20 58 55.4 +0.2**
baz=95,SNR=6.7
F13A Darby 95.22 26 ⇓P **P 20 58 55.5 0.0**
baz=95
E15A Deer Lodge 95.30 25 ⇑P **P 20 58 56.0 +0.1**
baz=95
HRY Holter Researc 95.33 24 *eP* **P 20 58 56.8 +0.7**
comp=Z,4.4nm,0.9s,mb4.9
H11A Donnelly 95.48 28 ⇓P **P 20 58 56.9 +0.1**
baz=95
E16A East Helena 95.54 24 ⇑P **P 20 58 57.0 0.0**
baz=95
D18A Linhart Farms, 95.60 23 ⇓P **P 20 58 57.4 +0.1**
baz=95
F15A Butte 95.85 25 ⇑P **P 20 58 58.2 -0.2**
baz=96
E17A Martinsdale 95.89 24 ⇓P **P 20 58 59.3 +0.7**
baz=96
J09A Fry Pan Ranch, 95.89 30 ⇑P **P 20 58 59.1 +0.4**
baz=96
E18A Harlowton 96.11 23 ⇓P **P 20 59 00.1 +0.4**
baz=96
BOZ Bozeman (W) 96.32 25 ⇓P **P 20 59 01.0 +0.4**
baz=96
G15A Dillon 96.43 25 ⇓P **P 20 59 01.2 +0.1**
baz=96
F17A Fitzpatrick Pl 96.44 24 ⇑P **P 20 59 01.0 -0.2**
baz=96
I12A Atlanta 96.59 28 ⇑P **P 20 59 02.3 +0.5**
baz=96
G16A Moss Hill, Enn 96.62 25 ⇑P **P 20 59 02.6 +0.6**
baz=96
F18A Big Timber 96.76 23 ⇓P **P 20 59 03.5 +1.0**
baz=96
I13A Wildhorse Cree 96.88 27 ⇑P **P 20 59 03.9 +0.8**
baz=96
J12A Stokes Ranch, 97.06 28 ⇓P **P 20 59 05.1 +1.1**
baz=97
HLID Hailey 97.06 27 ⇓P **P 20 59 05.2 +1.2**
baz=97
HLID Hailey 97.06 27 *eP* **P 20 59 04.7 +0.6**
comp=Z,26nm,2.0s,mb5.3
H16A Russell Place, 97.28 25 ⇑P **P 20 59 05.7 +0.7**
baz=97
G18A Lazy EL Ranch, 97.33 23 ⇑P **P 20 59 05.6 +0.4**
baz=97
L10A Juniper Basin 97.47 29 ⇓P **P 20 59 06.2 +0.3**
baz=97
RLMT Red Lodge 97.60 23 ⇓P **P 20 59 06.5 +0.2**
baz=97
H17A Grant Village 97.78 25 ⇑P **P 20 59 08.3 +1.1**
baz=97
PDAR Pinedale Array 99.56 25 PP PP 21 03 22.1 +4.1
comp=Z,0.7nm,1.0s,baz=332,slow=5.9,SNR=4.1
DBIC Dimbokro 102.66 286 P Pdif 20 59 34.0 +5.0
comp=Z,3.9nm,1.0s,baz=314,slow=4.9,SNR=3.2
DBIC Dimbokro 102.66 286 P Pdif 20 59 34.0 +5.0
SSPA Standing Stone 107.96 2 PFAKE 21 04 10.0 +10
SSPA LR LR

comp=Z,1μm,19.0s,MS5.6
TXAR Lajitas Array 113.65 27 PKiKP PKiKP 21 04 10.0 -0.8
comp=Z,0.4nm,0.8s,baz=50,slow=2.8,SNR=3.9
TXAR PP PP 21 05 02.4 +0.7
comp=Z,0.5nm,0.9s,baz=18,slow=4.5,SNR=4.0
TXAR PKKPbc PKKPbc 21 14 52.7 -0.9
comp=Z,0.6nm,0.8s,baz=114,slow=4.4,SNR=5.6
TXAR Lajitas Array 113.65 27 PKiKP PKiKP 21 04 10.0 -0.8
TXAR 21 05 02.4
TXAR Lajitas Array 113.65 27 PKPdf PKiKP 21 04 10.0 -0.8
TXAR PP PP 21 05 02.4 +0.7
TXAR PKKPbc PKKPbc 21 14 52.7 -0.9
SBA Scott Base 115.33 168 *e*PKIKP PKPdf 21 04 12.6 +0.2
SDV Santo Domingo 139.33 352 PKP PKPdf 21 05 00.5 +0.6
comp=Z,5.4nm,0.8s,baz=9.5,slow=6.1,SNR=6.8
SDV Santo Domingo 139.33 352 *e*PKPdf PKPdf 21 04 58.7 -1.2
OTAV Otavalo 148.08 5 *e*PKPdf PKPdf 21 05 16.4 +1.2
SIV San Ignacio 159.50 317 PKP PKPdf 21 05 30.4 -0.8
comp=Z,3.5nm,1.0s,baz=72,slow=3.2
SIV PKPab PKPab 21 06 08.6 -0.5
comp=Z,3.4nm,0.9s,baz=50,slow=5.5,SNR=4.1
CPUP Villa Florida 163.16 284 PKP PKPdf 21 05 33.5 -1.3
comp=Z,0.8nm,0.4s,baz=58,slow=3.0,SNR=6.3
LPAZ La Paz 163.19 335 PKP PKPdf 21 05 35.3 +0.2
comp=Z,6.1nm,1.1s,baz=28,slow=5.6,SNR=15
LPAZ La Paz 163.19 335 PKIKP PKPdf 21 05 35.3 +0.2
LPAZ pmax pmax
comp=Z,6.0nm,1.1s
LPAZ La Paz 163.19 335 *e*PKPdf PKPdf 21 05 35.0 -0.1
PLCA Paso Flores 170.15 203 PKP PKPdf 21 05 39.7 0.0
comp=Z,8.4nm,1.2s,baz=203,slow=1.4,SNR=5.2
PLCA PKPab PKPab 21 06 53.0 -2.2
comp=Z,2.5nm,0.9s,baz=214,slow=3.6,SNR=3.7
PLCA Paso Flores 170.15 203 PKP PKPdf 21 05 39.7 0.0
PLCA PKPab PKPab 21 06 53.0 -2.2

*ISCJB **12** 20:48:54.3±0.7,31°.13N±0°.09×104°.18E±0°.08,h10km, mb4.1/6,Error ellipse: s-maj=15.5km s-min=7.2km az=147.6*
*IDC **12** 20:48:54.2±1.1,31°.11N×103°.87E,h0km,mb4.0/6, mb1 4.3/7,mb1mx3.9/24,mbtmp4.1/7,Error ellipse: s-maj=37.4km s-min=23.8km az=68.0*
*NEIC **12** 20:48:55.6±0.6,31°.18N×104°.01E,h10km,mb4.6/1,Error ellipse: s-maj=15.9km s-min=10.2km az=98.0*
ISC 12 20:48:56.0±0.7,31°.19N±0°.09×104°.1E±0°.1,h10km,n11, σ0:84/12,mb4.1/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**222**	Pg	**Pg**	**20 49 03.5**	**+0.1**
CD2				Sg	**Sg**	**20 49 09.2**	**+0.8**
CD2				smax			
	comp=N,17μm,0.7s						
BJT	**Baijiatuan**	**13.21**	**45**	*e*P	**Pn**	**20 52 03.4**	**-0.2**
	comp=N,215nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.49**	**201**	Pn	**Pn**	**20 52 06.2**	**-1.5**
	baz=15,slow=12,SNR=2.2						
KSRS	**Korea Array**	**20.66**	**66**	P	**P**	**20 53 38.5**	**+2.6**
	comp=N,5.4nm,0.7s,baz=262,slow=10,SNR=6.0						
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**20 53 59.8**	**+0.2**
	comp=N,6.8nm,1.0s,mb4.0,baz=120,slow=14,SNR=3.0						
WRAB	**Tennant Creek**	**58.57**	**146**	*e*P	**P**	**20 58 53.1**	**+0.1**
	comp=N,3.5nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.57**	**146**	P	**P**	**20 58 53.0**	**0.0**
	comp=N,3.1nm,0.5s,mb4.6,baz=337,slow=7.6,SNR=7.4						
WB2	**Warramunga Arr**	**58.58**	**146**	*e*P	**P**	**20 58 53.3**	**+0.2**
ASAR	**Alice Springs**	**61.59**	**149**	P	**P**	**20 59 13.8**	**+0.1**
	comp=N,0.7nm,0.6s,mb4.0,baz=333,slow=5.3,SNR=5.1						
STKA	**Stephens Creek**	**72.11**	**147**	P	**P**	**21 00 20.1**	**-0.5**
	comp=N,1.0nm,0.6s,mb4.0,baz=342,slow=3.2,SNR=3.6						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**21 01 12.9**	**-1.0**
	comp=N,0.4nm,0.5s,mb3.6,baz=326,slow=5.0,SNR=2.9						

IDC 12 20:49:15.1±16.0,24°.58S×179°.55E,h550km±205km, mb3.2/6,mb1 3.4/6,mb1mx3.2/16,mbtmp3.2/6,Error ellipse: s-maj=91.9km s-min=67.6km az=168.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.07**	**272**	P	P	20 54 49.7	+0.8
	4.0nm,0.4s,baz=106,slow=10,SNR=6.3						
STKA	**Stephens Creek**	**34.09**	**249**	P	P	20 55 13.8	-0.5
	1.0nm,0.4s,baz=104,slow=7.1,SNR=8.3						
ASAR	**Alice Springs**	**41.52**	**261**	P	P	20 56 14.5	-0.4
	1.1nm,0.5s,baz=96,slow=7.0,SNR=7.8						
WRA	**Warramunga Arr**	**41.96**	**267**	P	P	20 56 18.1	-0.3
	1.7nm,0.3s,baz=101,slow=8.6,SNR=7.4						
FITZ	**Fitzroy Crossi**	**50.37**	**266**	P	P	20 57 22.5	+0.2
	2.6nm,0.7s,baz=84,slow=9.2,SNR=3.6						
TXAR	**Lajitas Array**	**91.14**	**58**	P	P	21 01 21.7	+0.1
	0.4nm,0.8s,baz=216,slow=9.0,SNR=5.1						

*ISCJB **12** 20:50:33.6±1.1,24°.04N×122°.23E±0°.02,h14km±7km, Error ellipse: s-maj=4.5km s-min=2.9km az=155.7*
*TAP **12** 20:50:34.0,24°.04N×122°.17E,h17km±1km,ML2.9,D*
*JMA **12** 20:50:33.9±0.2,25°.16N×122°.55E,h9km,M2.4*
ISC 12 20:50:33.4±0.6,24°.06N±0°.03×122°.22E±0°.02,h13km±3km, n30,σ0:80/51,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.57**	**273**	*e*P	**Pg**	**20 50 45.4**	**+0.8**
	baz=274						
TWD				*e*S	**Sg**	**20 50 53.1**	**+0.9**
	baz=274						
ENA	**Nanau**	**0.58**	**310**	*e*P	**Pg**	**20 50 44.5**	**-0.1**
	baz=314						
TWC	**Suao**	**0.65**	**328**	*e*P	**Pg**	**20 50 45.2**	**-0.8**
	baz=333						
TWC				*e*S	**Sg**	**20 50 53.7**	**-0.9**
	baz=333						
ESL	**Shilin**	**0.76**	**252**	*e*P	**Pg**	**20 50 48.1**	**-0.1**
	baz=250						
ESL				*e*S	**Sg**	**20 50 58.2**	**0.0**
	baz=250						
YOJ	**Yonaguni jima**	**0.82**	**60**	P	**Pg**	**20 50 49.3**	**0.0**
YOJ				*e*S	**Sg**	**20 51 00.1**	**0.0**
TWE	**Neicheng**	**0.83**	**323**	*e*P	**Pg**	**20 50 49.9**	**+0.4**
	baz=326						
TWE				*e*S	**Sg**	**20 51 01.2**	**+0.8**
	baz=326						
NNS	**Nan Shan**	**0.87**	**296**	P	**Pg**	**20 50 49.9**	**-0.2**
	baz=298						
NNS				*e*S	**Sg**	**20 51 00.7**	**-0.7**
	baz=298						
WHF	**Hehuan Shan**	**0.88**	**276**	P	**Pg**	**20 50 50.9**	**+0.5**
	baz=276						
WHF				*e*S	**Sg**	**20 51 01.9**	**0.0**
	baz=276						
EHY	**Hungye**	**0.99**	**237**	*e*P	**Pb**	**20 50 51.9**	**-0.5**
	baz=235						
EHY				*e*S	**Sb**	**20 51 03.8**	**-1.6**
	baz=235						
NSK	**Sanguang**	**1.00**	**308**	*e*P	**Pb**	**20 50 53.7**	**+1.1**
	baz=310						
NWF	**Wu-fen Shan**	**1.09**	**338**	*e*P	**Pb**	**20 50 54.5**	**+0.4**
	baz=340						
NWF				*e*S	**Sb**	**20 51 07.6**	**-0.6**
	baz=340						
TWA	**Mucha**	**1.09**	**328**	*e*P	**Pb**	**20 50 54.4**	**+0.3**
	baz=330						
TWA				*e*S	**Sb**	**20 51 09.4**	**+1.1**
	baz=330						
TWF1	**Yuli**	**1.10**	**231**	*e*P	**Pb**	**20 50 54.2**	**-0.1**
	baz=228						
TWF1				*e*S	**Sb**	**20 51 08.1**	**-0.5**
	baz=228						
SMLT	**Sun Moon Lake**	**1.22**	**262**	*e*P	**Pn**	**20 50 55.5**	**-0.6**
	baz=262						
SMLT				*e*S	**Sb**	**20 51 10.4**	**-1.7**
	baz=262						
NSTT	**Nanjuang**	**1.25**	**297**	*e*S	**Sb**	**20 51 12.3**	**-0.6**
	baz=298						
TYC	**Yuchr**	**1.26**	**263**	*e*P	**Pn**	**20 50 56.3**	**-0.4**
	baz=263						
TYC				*e*S	**Sb**	**20 51 12.3**	**-0.8**
	baz=263						
YUS	**Yu-Shan**	**1.29**	**244**	P	**Pn**	**20 50 56.8**	**-0.4**
	baz=243						
YUS				S	**Sb**	**20 51 12.8**	**-1.4**
	baz=243						
IRIF	**Iriomote-Funau**	**1.40**	**78**	P	**Pn**	**20 50 58.7**	**0.0**
IRIF				*e*S	**Sn**	**20 51 16.7**	**-0.4**
ALS	**Alishan**	**1.41**	**248**	*e*P	**Pn**	**20 50 58.7**	**-0.1**
	baz=246						
ALS				*e*S	**Sn**	**20 51 16.3**	**-0.9**
	baz=246						
WNT	**Mingjian**	**1.42**	**263**	*e*S	**Sn**	**20 51 17.7**	**+0.3**
	baz=262						
CHN5	**Tsauling**	**1.49**	**252**	*e*P	**Pn**	**20 50 59.4**	**-0.5**
	baz=251						
CHN5				*e*S	**Sn**	**20 51 19.0**	**-0.1**
	baz=251						
STYT	**Tauyuan**	**1.61**	**237**	*e*S	**Sn**	**20 51 21.4**	**-0.8**
	baz=235						
JKRS	**Kuro-shima**	**1.64**	**83**	*e*S	**Sn**	**20 51 24.4**	**+1.5**
CHN4	**Tsaushan**	**1.65**	**245**	*e*S	**Sn**	**20 51 23.9**	**+0.7**
	baz=244						
WTP	**Ta-pu**	**1.68**	**242**	*e*P	**Pn**	**20 51 03.7**	**+1.2**
	baz=240						
WTP				*e*S	**Sn**	**20 51 24.7**	**+0.8**
	baz=240						
TWK	**Hsinying**	**1.77**	**244**	*e*S	**Sn**	**20 51 27.1**	**+0.9**
	baz=243						
JIJ	**Ishigaki jima**	**1.78**	**80**	P	**Pn**	**20 51 03.0**	**-0.8**
JIJ				*e*S	**Sn**	**20 51 24.7**	**-1.6**
CHN1	**Nanshi**	**1.78**	**241**	*e*P	**Pn**	**20 51 05.7**	**+1.9**
	baz=240						
CHN1				*e*S	**Sn**	**20 51 27.7**	**+1.3**
	baz=240						
SGST	**Jiashian**	**1.79**	**238**	*e*S	**Sn**	**20 51 27.3**	**+0.7**
	baz=236						
SSD	**Sandimen**	**1.96**	**229**	*e*P	**Pn**	**20 51 07.0**	**+0.7**
	baz=227						
SSD				*e*S	**Sn**	**20 51 31.4**	**+0.7**
	baz=227						

*IDC **12** 20:51:23.5±0.5,32°.46N×105°.24E,h0km,mb4.5/24, mb1 4.6/27,mb1mx4.5/34,mbtmp4.4/27,ML4.0/3,MS3.9/1, Ms1 4.1/1,ms1mx3.0/41,Error ellipse: s-maj=19.5km s-min=10.7km az=54.0*
*ISCJB **12** 20:51:25.9±1.1,32°.37N±0°.03×105°.08E±0°.04,h25km±8km, mb4.7/69,MS4.5/2,Error ellipse: s-maj=5.0km s-min=4.4km az=3.1*
*DJA **12** 20:51:25,32°.65N×105°.55E,h10km,mb5.0/9*
*MOS **12** 20:51:26.4±0.7,32°.41N×105°.20E,h32km,mb4.9/29,Error ellipse: s-maj=10.9km s-min=5.1km az=125.0*
*BJI **12** 20:51:27.0,32°.33N×105°.17E,h22km,mB5.2/14,mb4.7/22, ML4.6/15,Ms4.7/22,Ms7 4.4/21*
*NEIC **12** 20:51:28.8±2.0,32°.38N×105°.15E,h33km±15km,mb4.7/16, Error ellipse: s-maj=6.6km s-min=5.4km az=55.0*
*SZGRF **12** 20:51:56.5,36°.09N×101°.95E,h18km,mb5.0,Qinghai, China*
ISC 12 20:51:26.0±0.8,32°.43N±0°.02×105°.17E±0°.03,h13km±5km, h18km±.8km:pP-P,n203,σ0:96/217,mb4.7/69,MS4.5/2, 21C-22D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.94**	**219**	Pn	**Pn**	**20 52 00.7**	**+2.0**
CD2				Pg	**Pg**	**20 52 03.6**	**+0.4**
CD2				Sg	**Sg**	**20 52 29.9**	**+1.6**
CD2				smax			
	comp=N,34μm,0.7s						
XAN	**Xi'an**	**3.53**	**62**	Pg	**Pb**	**20 52 27.9**	**-0.4**
XAN				Sg	**Sb**	**20 53 11.6**	**+0.5**
XAN				smax			
	comp=N,2μm,1.1s						
XAN				smax			
	comp=E,2μm,0.9s						
LZH	**Lanzhou**	**3.81**	**344**	Pn	**Pn**	**20 52 27.0**	**+2.5**
LZH				Pg	**Pg**	**20 52 37.1**	**-1.9**
LZH				Sn	**Sn**	**20 53 09.8**	**+0.6**
LZH				Sg	**Sg**	**20 53 23.4**	**-5.0**
LZH				smax			
	comp=N,5μm,1.0s						
LZH				smax			
	comp=E,8μm,1.0s						
LZH				LR	LR		
	comp=E,12μm,4.2s						
LZH				LR	LR		
	comp=Z,17μm,7.0s						
ENH	**Enshi**	**4.27**	**119**	Pn	**Pn**	**20 52 30.8**	**0.0**
ENH				*e*Pg	**Pg**	**20 52 45.8**	**-2.0**
GYA	**Guiyang**	**6.09**	**167**	Pg	**Pn**	**20 53 02.3**	**+6.5**
GYA				Sg	**Sn**	**20 54 04.4**	**-1.0**
GYA				smax			
	comp=N,940nm,1.1s						
GYA				smax			
	comp=E,850nm,1.0s						
GYA				LR	LR		
	comp=N,1μm,4.7s						
GYA				LR	LR		
	comp=E,1μm,4.9s						
GYA				LR	LR		
	comp=Z,1μm,5.1s						
KMI	**Kunming**	**7.59**	**197**	Pn	**Pn**	**20 53 17.7**	**+1.3**
KMI				Sn	**Sn**	**20 54 41.4**	**-0.9**
KMI				smax			
	comp=N,190nm,1.3s						
KMI				smax			
	comp=E,92nm,1.1s						
KMI				LR	LR		
	comp=N,850nm,8.3s						
KMI				LR	LR		
	comp=E,2μm,7.1s						
KMI				LR	LR		
	comp=Z,880nm,8.6s						
GTA	**Gaotai**	**8.21**	**330**	*e*P	Px	20 53 35.9	
GTA				pP		20 53 41.4	
GTA				sP		20 53 44.7	
GTA				S	**Sb**	**20 55 15.0**	**-11**
GTA				sS		20 55 18.6	
GTA				pmax	pmax		
	comp=Z,23nm,1.2s						
GTA				pmax	pmax		
	comp=Z,1μm,5.7s						
GTA				LR	LR		
	comp=N,2μm,10.2s						
GTA				LR	LR		
	comp=E,2μm,10.8s						
GTA				LR	LR		
	comp=Z,3μm,11.4s						
HHC	**Hu-ho-hao-te**	**9.84**	**30**	*e*P	**Pn**	**20 53 52.1**	**+4.8**
HHC				pP		20 53 56.5	
HHC				sP		20 53 59.9	
HHC				S	**Sn**	**20 55 44.1**	**+6.5**
HHC				sS		20 55 50.7	
HHC				pmax	pmax		
	comp=Z,46nm,1.0s						
HHC				pmax	pmax		
	comp=Z,2μm,4.5s						
HHC				LR	LR		
	comp=N,2μm,6.0s						
HHC				LR	LR		
	comp=E,2μm,5.3s						
HHC				LR	LR		
	comp=Z,1μm,5.7s						
NJ2	**Nanjing**	**11.59**	**88**	*e*P	**Pn**	**20 54 15.2**	**+4.0**
NJ2				pP		20 54 22.6	
NJ2				PP		20 54 24.9	
NJ2				sP		20 54 27.3	
NJ2				S	**Sn**	**20 56 26.6**	**+6.0**
NJ2				sS		20 56 36.6	
NJ2				pmax	pmax		
	comp=Z,100nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,410nm,3.6s						
NJ2				LR	LR		
	comp=N,330nm,11.6s						
NJ2				LR	LR		
	comp=E,420nm,10.4s						
NJ2				LR	LR		
	comp=Z,3μm,13.9s						
BJI	**Beijing**	**11.68**	**46**	P	**Pn**	**20 54 16.5**	**+4.1**
BJI				pmax	pmax		
	comp=Z,25nm,1.7s						
BJI				LR	LR		
	comp=N,1μm,9.0s						
BJI				LR	LR		
	comp=E,740nm,8.4s						
BJI				LR	LR		
	comp=Z,460nm,11.6s						
LSA	**Lhasa**	**12.33**	**261**	P	**Pn**	**20 54 21.5**	**+0.2**
LSA				S	**Sn**	**20 56 32.1**	**-6.5**
LSA				LR	LR		
	comp=E,670nm,15.1s						
LSA				LR	LR		
	comp=Z,660nm,15.8s						
LSA	**Lhasa**	**12.33**	**261**	*e*P	**Pn**	**20 54 21.9**	**+0.5**
QIZ	**Qiongzhong**	**13.99**	**161**	P	**Pn**	**20 54 46.0**	**+2.0**
QIZ				S	**Sn**	**20 57 22.3**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,110nm,1.9s						
QIZ				LR	LR		
	comp=E,770nm,9.7s						
QIZ				LR	LR		
	comp=Z,1μm,12.8s						
CM31	**Chiang Mai Arr**	**15.00**	**203**	*e*P	**Pn**	**20 54 57.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**15.00**	**203**	Pn	**Pn**	**20 54 58.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=13,slow=11,SNR=11						
SONM	**Songino Array**	**15.41**	**3**	P	**Pn**	**20 55 02.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=187,slow=10,SNR=2.6						
SONM				Lg		20 59 29.3	
	comp=Z,0.5nm,0.3s,baz=190,slow=25,SNR=3.8						
SNY	**Shenyang**	**17.39**	**52**	P	**Pn**	**20 55 31.2**	**+2.8**
SNY				S	**Sn**	**20 58 43.0**	**+1.3**
SNY				pmax	pmax		
	comp=Z,19nm,2.5s						
SNY				LR	LR		
	comp=N,550nm,13.5s						
SNY				LR	LR		
	comp=E,590nm,7.8s						
SNY				LR	LR		
	comp=Z,680nm,8.4s						
TLY	**Talaya**	**19.27**	**357**	P	**Pn**	**20 55 52.9**	**+1.6**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TLY	**Talaya**	**19.27**	**357**	P	**Pn**	**20 55 52.9**	**+1.6**
	comp=Z,4.0nm,0.8s						
KSRS	**Korea Array**	**19.30**	**69**	P	**Pn**	**20 55 50.6**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=251,slow=11,SNR=11						
KSRS	**Korea Array**	**19.30**	**69**	P	**Pn**	**20 55 50.6**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	**19.52**	**49**	*e*P	**Pn**	**20 55 58.6**	**+4.2**
CN2				*e*sP	sP	20 56 05.0	+6.7
CN2				*e*S	**Sn**	**20 59 35.6**	**+2.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,800nm,13.0s						
CN2				LR	LR		
	comp=E,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
HIA	**Hailar**	**20.05**	**29**	*e*P	**P**	**20 56 02.5**	**+3.7**
HIA				pmax	pmax		
	comp=Z,13nm,0.6s						
HIA	**Hailar**	**20.05**	**29**	*e*P	**P**	**20 56 02.5**	**+3.8**
	comp=Z,13nm,0.6s						
MDJ	**Mudanjiang**	**22.55**	**50**	P	**P**	**20 56 28.0**	**+2.2**
MDJ				pP		20 56 30.8	
MDJ				S	**S**	**21 00 36.3**	**+3.2**
MDJ				ScP	ScP	21 03 58.2	+1.7
MDJ				PcS	PcS	21 03 59.4	+1.6
MDJ				ScS	ScS	21 07 43.6	+1.9
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,250nm,4.2s						
MDJ				LR	LR		
	comp=N,400nm,10.6s,MS4.3						
MDJ				LR	LR		
	comp=E,540nm,11.4s,MS4.3						
MDJ				LR	LR		
	comp=Z,740nm,10.8s,MS4.4						
MDJ	**Mudanjiang**	**22.55**	**50**	*e*P	**P**	**20 56 28.4**	**+2.6**
MK31	**Makanchi Array**	**22.62**	**316**	*e*P	**P**	**20 56 26.4**	**-0.1**
MKAR	**Makanchi Array**	**22.62**	**316**	P	**P**	**20 56 27.1**	**+0.7**
	comp=Z,12nm,0.7s,mb4.4,baz=119,slow=11,SNR=19						
MKAR	**Makanchi Array**	**22.62**	**316**	*ce*P	**P**	**20 56 27.3**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH	**Kashi**	**24.60**	**295**	*e*P	**P**	**20 56 49.6**	**+3.7**
KSH				*e*pP		20 56 53.6	
KSH				*e*sP	sP	20 56 56.7	+5.4
KSH				*e*PP		20 57 25.7	
KSH				*e*PcP	PcP	21 00 26.6	+3.1
KSH				*e*S	**S**	**21 01 08.3**	**+1.6**
KSH				*e*SS		21 02 05.3	
KSH				*e*ScS	ScS	21 07 50.6	+0.8
KSH				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.2						
KSH				LR	LR		
	comp=N,610nm,7.2s						
KSH				LR	LR		
	comp=E,530nm,6.9s						
ULHL	**Ulahol**	**24.90**	**301**	P	**P**	**20 56 50.4**	**+1.8**
	SNR=7.5						
TKM2	**Tokmak 2**	**25.53**	**303**	P	**P**	**20 56 55.5**	**+1.2**
	SNR=9.3						
TKM2	**Tokmak 2**	**25.53**	**303**	*e*P	**P**	**20 56 55.0**	**+0.7**
KZA	**Kyzart**	**25.58**	**301**	P	**P**	**20 56 56.6**	**+1.8**
	SNR=8.1						
KBK	**Karagaybulak**	**25.93**	**302**	P	**P**	**20 56 59.6**	**+1.7**
	SNR=9.5						
ZAA0	**Zalesovo Array**	**25.95**	**332**	*e*P	**P**	**20 56 57.0**	**-1.1**
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**20 56 57.7**	**-0.4**
	comp=E,5.2nm,0.6s,mb4.2,baz=135,slow=8.8,SNR=8.5						
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**20 56 57.7**	**-0.4**
KLR	**Kul'dur**	**26.00**	**42**	*e*P	**P**	**20 56 54.0**	**-4.5**
BOD	**Bodaibo**	**26.10**	**11**	*e*P	**P**	**20 56 59.2**	**-0.1**
UCH	**Uchtor**	**26.15**	**301**	P	**P**	**20 57 02.0**	**+2.0**
	SNR=9.2						
UCH	**Uchtor**	**26.15**	**301**	*e*P	**P**	**20 57 01.5**	**+1.6**
FRU	**Bishkek**	**26.20**	**302**	*e*P	**P**	**20 57 07.0**	**+6.5**
AAK	**Ala-Archa**	**26.25**	**302**	P	**P**	**20 57 01.3**	**+0.4**
	comp=E,2.2nm,0.6s,mb3.9,baz=156,slow=9.3,SNR=5.2						
AAK	**Ala-Archa**	**26.25**	**302**	*e*P	**P**	**20 57 01.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.0						
AAK	**Ala-Archa**	**26.25**	**302**	*e*P	**P**	**20 57 02.0**	**+1.2**
USP	**Ospenovka**	**26.39**	**303**	P	**P**	**20 57 03.4**	**+1.2**
	SNR=13						
AML	**Almayashu**	**26.73**	**300**	P	**P**	**20 57 07.2**	**+2.0**
	SNR=13						
AML	**Almayashu**	**26.73**	**300**	*e*P	**P**	**20 57 06.8**	**+1.6**
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**20 57 05.2**	**-0.2**
	comp=Z,5.7nm,0.8s,mb4.2,baz=128,slow=10.0,SNR=12						
KURK				PcP	PcP	21 00 26.8	-1.4
	comp=Z,1.8nm,0.6s,baz=120,slow=1.9,SNR=3.8						
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**20 57 05.2**	**-0.2**
KURK						21 00 26.8	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
KURK	**Kurchatov**	**26.76**	**321**	*e*P	**P**	**20 57 04.8**	**-0.6**
EKS2	**Erkin-Say**	**26.77**	**301**	P	**P**	**20 57 06.0**	**+0.4**
	SNR=7.0						
MJAR	**Matsushiro Arr**	**27.46**	**72**	P	**P**	**20 57 11.5**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.5,baz=277,slow=9.2,SNR=2.9						
MJAR	**Matsushiro Arr**	**27.46**	**72**	P	**P**	**20 57 11.5**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NRGR	**Nerungri**	**27.75**	**23**	*e*P	**P**	**20 57 08.9**	**-5.3**
KBL	**Kabul**	**30.11**	**284**	*e*P	**P**	**20 57 36.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**32.02**	**52**	*e*P	Px	20 58 04.0	
BVAR	**Borovoye Array**	**32.34**	**320**	P	**P**	**20 57 54.8**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.2,baz=107,slow=9.3,SNR=7.0						
BRVK	**Borovoye**	**32.41**	**320**	*e*P	**P**	**20 57 55.3**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
YAK	**Yakutsk**	**33.55**	**21**	*e*P	**P**	**20 58 08.5**	**+3.2**
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK	**Yakutsk**	**33.55**	**21**	*e*P	**P**	**20 58 07.5**	**+2.3**
	comp=N,12nm,0.7s,mb4.9						
ABKAR	**Akbulak array**	**37.50**	**310**	*e*P	**P**	**20 58 39.6**	**+0.2**
AKTK	**Aktyubinsk**	**38.92**	**312**	P	**P**	**20 58 51.2**	**-0.1**
AKTO	**Aktyubinsk**	**38.92**	**312**	P	**P**	**20 58 51.2**	**-0.1**
	comp=N,3.7nm,0.8s,mb4.2,baz=87

SVE	**Sverdlovsk**	**39.00 322**	*e*P	**P**	**20 58 52.6 +0.7**
SVE			pmax	pmax	
comp=Z,18nm,1.4s,mb4.6					
KAPI	**Kappang**	**39.73 157**	P	**P**	**20 58 57.4 -1.1**
comp=Z,12nm,0.8s,mb4.7,baz=284,slow=6.8,SNR=6.8					
ARU	**Arti**	**39.96 321***c*	*i*P	**P**	**20 58 59.6 -0.4**
ARU			S	**S**	**21 05 05.2 +0.4**
ARU			pmax	pmax	
comp=Z,22nm,1.0s,mb4.8					
ARU	**Arti**	**39.96 321**	*e*P	**P**	**20 58 59.7 -0.3**
comp=Z,17nm,0.9s,mb4.8					
TIXI	**Tiksi**	**41.28 11**	*e*P	**P**	**20 59 10.2 -0.5**
TIXI			pmax	pmax	
comp=Z,8.0nm,0.8s,mb4.4					
TIXI	**Tiksi**	**41.28 11**	*e*P	**P**	**20 59 09.0 -1.7**
GNI	**Garni**	**48.50 297***c*	*i*P	**P**	**21 00 09.7 +1.1**
GNI			pmax	pmax	
comp=Z,14nm,1.3s					
ZEI	**Tsey**	**48.67 301**	*e*P	**P**	**21 00 09.2 -0.7**
ZEI			pmax	pmax	
comp=Z,6.0nm,0.7s,mb4.7					
UMR	**Umm Al-Rimmam**	**48.83 283**	*e*P	**P**	**21 00 10.9 -0.4**
UMR			AMb	AMB	21 00 11.5
comp=Z,24nm,0.9s,mb5.2					
MIB	**Mutribah**	**49.06 283**	*e*P	**P**	**21 00 12.3 -0.8**
MIB			AMb	AMB	21 00 13.7
comp=Z,38nm,0.9s,mb5.4					
RDF	**Al-Radifah**	**49.17 282**	*e*P	**P**	**21 00 13.9 -0.1**
RDF			AMb	AMB	21 00 15.1
comp=Z,40nm,0.8s,mb5.5					
VRHR	**Novokhopersk**	**49.33 312**	*e*P	**P**	**21 00 14.2 -0.6**
VRHR			pmax	pmax	
comp=Z,20nm,0.7s,mb5.3					
VRHR			pmax	pmax	
comp=N,10.0nm,0.5s					
VRHR			pmax	pmax	
comp=E,10.0nm,0.8s					
KIV	**Kislovodsk**	**49.36 302**	*e*P	**P**	**21 00 15.7 +0.5**
KIV			pmax	pmax	
comp=Z,13nm,1.0s,mb4.9					
KIV	**Kislovodsk**	**49.36 302**	*e*P	**P**	**21 00 15.5 +0.3**
comp=Z,12nm,0.9s,mb4.9					
BILL	**Bilibino**	**49.59 26**⇑	*e*P	**P**	**21 00 16.4 -0.1**
BILL			*e*	pP	21 00 21.7 +1.2
BILL			*e*SS	SS	21 10 56.5 +0.8
BILL			pmax	pmax	
comp=Z,9.0nm,1.7s,mb4.5					
BILL	**Bilibino**	**49.59 26**	P	**P**	**21 00 15.6 -1.0**
comp=Z,4.6nm,0.8s,mb4.6					
KLMR	**Klimovskoe**	**50.50 325**	*e*P	**P**	**21 00 22.9 -0.7**
KLMR			pmax	pmax	
comp=Z,38nm,1.4s,mb5.1					
VORD	**Divnogorie**	**50.80 312**	*e*P	**P**	**21 00 24.4 -1.6**
VORD			pmax	pmax	
comp=N,8.0nm,0.4s					
VORD			pmax	pmax	
comp=Z,6.0nm,0.4s,mb4.9					
VORD			pmax	pmax	
comp=E,20nm,1.1s					
VSR	**Storozhevoye**	**50.86 312**	*e*P	**P**	**21 00 25.6 -0.8**
VSR			pmax	pmax	
comp=Z,10.0nm,1.0s,mb4.7					
VSR			pmax	pmax	
comp=N,10.0nm,1.2s					
VSR			pmax	pmax	
comp=E,10.0nm,0.9s					
MOS	**Moscow**	**51.48 318**	*e*P	**P**	**21 00 26.4 -4.6**
MOS			pmax	pmax	
comp=Z,41nm,1.0s,mb5.3					
OBN	**Obninsk**	**52.12 317***c*	*i*P	**P**	**21 00 35.2 -0.6**
OBN			*e**PP	pP	21 00 45.4 +5.7
OBN			*e**SP	sP	21 00 50.1 +8.8
OBN			*e*		21 01 47.6
OBN			*e*SS	SS	21 11 35.4 -0.9
OBN			pmax	pmax	
comp=Z,24nm,1.7s,mb4.8					
APA	**Apatity**	**53.53 333**⇓	*e*P	**P**	**21 00 46.6 +0.6**
APA			*i*	pP	21 00 51.9 +1.9
APA			MLR	MLR	
comp=Z,600nm,20.0s,MS4.7					
MALT	**Malatya**	**53.69 296**	*e*P	**P**	**21 00 48.1 +0.4**
comp=Z,7.6nm,0.9s,mb4.6					
MALT	**Malatya**	**53.69 296**⇑	*i*P	**P**	**21 00 46.1 -1.6**
FITZ	**Fitzroy Crossi**	**53.93 156**	*e*P	**P**	**21 00 49.0 -0.5**
comp=Z,8.5nm,1.1s,mb4.6					
FITZ	**Fitzroy Crossi**	**53.93 156**	P	**P**	**21 00 48.8 -0.7**
comp=Z,3.6nm,0.7s,mb4.4,baz=350,slow=4.4,SNR=4.5					
JOF	**Joensuu**	**54.40 327**	*e*P	**P**	**21 00 50.5 -1.9**
JOF			pmax	pmax	
comp=Z,7.0nm,0.8s,mb4.6					
JOF	**Joensuu**	**54.40 327**	*e*p	**P**	**21 00 50.5 -1.9**
comp=Z,6.8nm,0.8s,mb4.6					
KEV	**Kevo**	**55.90 336**	*e*P	**P**	**21 01 01.3 -1.9**
KEV			pmax	pmax	
comp=Z,18nm,0.7s,mb5.2					
KEV	**Kevo**	**55.90 336**	*e*p	**P**	**21 01 01.3 -1.9**
comp=Z,18nm,0.7s,mb5.2					
ARCES	**ARCESS Array B**	**56.43 335**	P	**P**	**21 01 06.5 -0.4**
comp=Z,5.6nm,0.7s,mb4.7,baz=82,slow=7.8,SNR=13					
KAF	**Kangasniemi**	**56.78 327**	*e*P	**P**	**21 01 08.2 -1.4**
KAF			pmax	pmax	
comp=Z,5.0nm,0.7s,mb4.7					
KAF	**Kangasniemi**	**56.78 327**	*e*p	**P**	**21 01 08.2 -1.4**
comp=Z,4.9nm,0.7s,mb4.7					
BR131	**Keskin Array S**	**56.89 299**	*e*P	**P**	**21 01 10.5 -0.1**
BRTR	**Keskin Array B**	**56.89 299**	P	**P**	**21 01 10.1 -0.6**
comp=Z,4.3nm,0.8s,mb4.5,baz=103,slow=6.9,SNR=16					
FINES	**FINESS Array B**	**56.98 326**	P	**P**	**21 01 10.2 -0.8**
comp=Z,4.3nm,0.5s,mb4.7,baz=90,slow=7.0,SNR=15					
AKASG	**Malin Array Be**	**57.15 313**	P	**P**	**21 01 11.3 -1.0**
comp=Z,8.5nm,0.6s,mb4.9,baz=68,slow=7.0,SNR=14					
AKASG	**Malin Array Be**	**57.15 313**	P	**P**	**21 01 11.3 -1.0**
IDID	**Didziasalis**	**57.67 318**	*e*P	**P**	**21 01 15.7 -0.2**
IIGN	**Ignalina**	**57.95 319**	*e*P	**P**	**21 01 17.9 0.0**
ISAL	**Salakas**	**57.96 319**	*e*P	**P**	**21 01 17.8 -0.1**
SPITS	**Spitsbergen Ar**	**58.27 346**	P	**P**	**21 01 19.3 -0.6**
comp=Z,19nm,1.1s,mb5.0,baz=105,slow=8.2,SNR=6.8					
WRAB	**Tennant Creek**	**59.08 148**	*e*P	**P**	**21 01 25.5 -0.7**
WRAB			pmax	pmax	
comp=Z,22nm,1.0s,mb5.1					
WRAB	**Tennant Creek**	**59.08 148**	*e*P	**P**	**21 01 25.5 -0.6**
comp=Z,22nm,1.0s,mb5.2					
WRA	**Warramunga Arr**	**59.08 148**	P	**P**	**21 01 25.6 -0.6**
comp=Z,9.1nm,0.8s,mb4.9,baz=339,slow=7.4,SNR=20					
WB2	**Warramunga Arr**	**59.09 148**	*e*P	**P**	**21 01 25.5 -0.7**
HARR	**Harsova**	**59.52 306**	⇓P	**P**	**21 01 28.1 -0.9**
HARR	**Harsova**	**59.52 306**⇓	*i*P	**P**	**21 01 28.1 -0.9**
SUW	**Suwalki**	**59.98 318**	*e*P	**P**	**21 01 31.6 -0.4**
VRI	**Vrincioaia**	**59.99 308**	⇓P	**P**	**21 01 32.0 -0.2**
VRI	**Vrincioaia**	**59.99 308**⇓	*i*P	**P**	**21 01 32.0 -0.2**
PLOR	**Plostina**	**60.05 308**	⇓P	**P**	**21 01 32.6 0.0**
PLOR	**Plostina**	**60.05 308**⇓	*i*P	**P**	**21 01 32.6 0.0**
BURAR	**Bucovina Array**	**60.48 310**	⇓P	**P**	**21 01 35.9 +0.3**
BURAR	**Bucovina Array**	**60.48 310**⇓	*i*P	**P**	**21 01 35.9 +0.3**
ATD	**Arta Tunnel**	**60.60 265**	P	**P**	**21 01 37.9 +1.0**
comp=Z,10nm,0.8s,mb5.0,baz=76,slow=8.3,SNR=3.8					
MLR	**Muntele Rosu**	**60.63 308**	⇑P	**P**	**21 01 36.4 -0.2**
MLR	**Muntele Rosu**	**60.63 308**⇑	*i*P	**P**	**21 01 36.4 -0.2**
VOIR		**61.24 308**	⇑P	**P**	**21 01 39.9 -0.9**
VOIR		**61.24 308**⇑	*i*P	**P**	**21 01 39.9 -0.9**
KWP	**Kalwaria Pacla**	**61.47 313**	*e*P	**P**	**21 01 42.3 0.0**
KWP	**Kalwaria Pacla**	**61.47 313**	*e*P	**P**	**21 01 42.4 +0.1**
KWP			pmax	pmax	
comp=Z,37nm,0.8s,mb5.6					
KWP	**Kalwaria Pacla**	**61.47 313**	*e*P	**P**	**21 01 42.4 +0.1**
comp=Z,38nm,0.8s,mb5.6					
KWP	**Kalwaria Pacla**	**61.47 313**⇑	*i*P	**P**	**21 01 42.4 +0.1**
KOLS	**Kolonicke sedl**	**61.96 312**	*e*P	**P**	**21 01 45.3 -0.3**
KOLS			*e*	pP	21 01 50.8 +1.2
KOLS			pmax	pmax	
comp=Z,5.0nm,0.9s,mb4.6					
KOLS	**Kolonicke sedl**	**61.96 312**	*e*P	**P**	**21 01 45.3 -0.3**
comp=Z,4.7nm,0.9s,mb4.6					
KOLS			*e*	pP	21 01 50.8 +1.2
KOLS	**Kolonicke sedl**	**61.96 312**	*e*P	**P**	**21 01 45.3 -0.3**
KOLS			*e*pP	pP	21 01 50.8 +1.2
TRPA	**Tarpa**	**62.04 311**⇑	*i*P	**P**	**21 01 46.3 +0.2**
ASAR	**Alice Springs**	**62.16 150**	P	**P**	**21 01 46.9 -0.2**
comp=Z,3.9nm,0.8s,mb4.6,baz=327,slow=6.1,SNR=18					
STHS	**Stebnicka Huta**	**62.45 313**	*e*P	**P**	**21 01 48.7 -0.1**
STHS			*e*		21 01 55.2
STHS			pmax	pmax	
comp=Z,5.0nm,0.9s,mb4.6					
STHS	**Stebnicka Huta**	**62.45 313**	*e*P	**P**	**21 01 48.7 -0.1**
comp=Z,5.2nm,0.9s,mb4.7					

STHS			*e*		21 01 55.2
STHS	**Stebnicka Huta**	**62.45 313**	*e*P	**P**	**21 01 48.7 -0.1**
STHS			*e*pP	pP	21 01 55.2 +2.3
GZR	**Gura Zlata**	**62.77 308**	⇓P	**P**	**21 01 49.7 -1.4**
GZR	**Gura Zlata**	**62.77 308**⇓	*i*P	**P**	**21 01 49.7 -1.4**
NIE	**Niedzica**	**63.02 313**	*e*P	**P**	**21 01 53.4 +0.7**
NIE			*e**PP	pP	21 01 58.7 +2.0
OJC	**Ojcow**	**63.08 314**	*e*P	**P**	**21 01 52.7 -0.3**
KECS	**Kecovo**	**63.22 312**	*e*P	**P**	**21 01 54.3 +0.3**
KECS			*e*	pP	21 01 59.6 +1.5
KECS			pmax	pmax	
comp=Z,2.0nm,0.9s,mb4.2					
KECS	**Kecovo**	**63.22 312**	*e*P	**P**	**21 01 54.3 +0.3**
comp=Z,2.4nm,0.9s,mb4.3					
KECS			*e*	pP	21 01 59.6 +1.5
KECS	**Kecovo**	**63.22 312**	*e*P	**P**	**21 01 54.2 +0.2**
KECS			*e*pP	pP	21 01 59.6 +1.5
BZS	**Buzias**	**63.47 309**⇑	P	**P**	**21 01 54.1 -1.6**
BZS	**Buzias**	**63.47 309**⇑	*i*P	**P**	**21 01 54.0 -1.7**
PSZ	**Piszkesteto**	**63.79 312**⇓	*e*pP	pP	21 02 09.5 +7.7
NB2	**NORSAR Subarra**	**64.04 327**	P	**P**	**21 01 57.4 -1.8**
comp=Z,5.0nm,0.6s,mb4.7,baz=71,slow=6.9					
NOA	**NORSAR Array B**	**64.04 327**	P	**P**	**21 01 57.8 -1.4**
comp=Z,5.5nm,0.7s,mb4.7,baz=71,slow=6.6,SNR=16					
VYHS	**Vyhne**	**64.25 313**	*e*P	**P**	**21 02 00.9 +0.1**
VYHS			*e*		21 02 06.6
VYHS			pmax	pmax	
comp=Z,6.0nm,1.3s,mb4.5					
VYHS	**Vyhne**	**64.25 313**	*e*P	**P**	**21 02 00.9 +0.1**
comp=Z,5.8nm,1.3s,mb4.5					
VYHS			*e*		21 02 06.6
VYHS	**Vyhne**	**64.25 313**	*e*P	**P**	**21 02 00.9 +0.1**
VYHS			*e*pP	pP	21 02 06.6 +1.7
KOLL	**Kolacno**	**64.49 313**	*e*P	**P**	**21 02 02.8 +0.4**
KOLL	**Kolacno**	**64.49 313**	*e*P	**P**	**21 02 02.8 +0.4**
MORC	**Moravsky Berou**	**64.60 314**	*e*P	**P**	**21 02 02.8 -0.2**
comp=Z,9.2nm,0.9s,mb4.8					
MORC	**Moravsky Berou**	**64.60 314**⇓	*i*P	**P**	**21 02 03.3 +0.3**
PKSM	**Moragy**	**65.19 310**	⇓P	**P**	**21 02 06.2 -0.8**
PKSM	**Moragy**	**65.19 310**⇓	*i*P	**P**	**21 02 06.2 -0.8**
VRAC	**Vranov**	**65.34 314**	⇓P	**P**	**21 02 08.2 +0.3**
VRAC	**Vranov**	**65.34 314**⇓	*i*P	**P**	**21 02 08.2 +0.3**
ZST	**Bratislava**	**65.44 313**	*e*P	**P**	**21 02 09.0 +0.5**
ZST			pmax	pmax	
comp=Z,3.0nm,0.7s,mb4.4					
ZST	**Bratislava**	**65.44 313**	*e*P	**P**	**21 02 09.0 +0.5**
comp=Z,3.4nm,0.7s,mb4.5					
ZST	**Bratislava**	**65.44 313**	*e*P	**P**	**21 02 09.0 +0.5**
BRG	**Berggiesshubel**	**66.34 316**	*e*P	**P**	**21 02 13.9 -0.3**
comp=Z,7.0nm,0.7s,mb4.8					
BRG			*e*	pP	21 02 19.5 +1.2
comp=Z,6.0nm,0.8s					
BRG	**Berggiesshubel**	**66.34 316**	*e*P	**P**	**21 02 13.9 -0.4**
BRG			*e*	pP	21 02 19.5 +1.2
BRG			pmax	pmax	
comp=Z,4.0nm,0.7s,mb4.6					
BRG			pmax	pmax	
comp=Z,4.0nm,0.8s,mb4.5					
CLL	**Collm**	**66.71 317**⇓	*i*P	**P**	**21 02 16.3 -0.4**
CLL			*i*	pP	21 02 21.5 +0.8
CLL			pmax	pmax	
comp=Z,13nm,1.2s,mb4.8					
CLL	**Collm**	**66.71 317**⇓	*i*P	**P**	**21 02 16.3 -0.4**
CLL			*i*	pP	21 02 21.5 +0.8
CLL	**Collm**	**66.71 317**⇓	*i*P	**P**	**21 02 16.3 -0.4**
comp=Z,9.0nm,1.2s,mb4.7					
CLL			*i* pP	pP	21 02 21.5 +0.8
PPLA	**Purkeypile**	**67.07 29**	P	**P**	**21 02 19.2 +0.5**
GERES	**GERESS Array B**	**67.28 314**	P	**P**	**21 02 20.0 -0.3**
comp=Z,3.4nm,0.7s,mb4.5,baz=59,slow=5.1,SNR=18					
MOX	**Moxa**	**67.78 317**	*e*P	**P**	**21 02 23.3 -0.2**
comp=Z,8.0nm,1.4s,mb4.6					
MOX	**Moxa**	**67.78 317**	*e*P	**P**	**21 02 23.3 -0.2**
MOX			pmax	pmax	
comp=Z,52nm,1.4s,mb5.4					
GRA1	**Grafenberg Arr**	**68.41 316**	*e*P	**P**	**21 02 27.5 +0.1**
comp=Z,9.0nm,1.0s,mb4.8					
GRA1			*e*pP	pP	21 02 32.4 +0.9
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**	**21 02 27.5 +0.1**
comp=Z,9.0nm,1.0s,mb4.8					
GRF			*e*pP	pP	21 02 32.4 +0.9
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**	**21 02 27.5 +0.1**
GRF			*e**PP	pP	21 02 32.4 +0.9
GRF			pmax	pmax	
comp=Z,9.0nm,1.0s,mb4.8					
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**	**21 02 27.5 +0.1**
comp=Z,9.0nm,1.0s,mb4.8					
GRF			*e*pP	pP	21 02 32.4 +0.9
AQU	**L'Aquila**	**70.19 308**⇓	*i*P	**P**	**21 02 39.0 +0.4**
MEM	**Membach**	**71.00 318**	P	**P**	**21 02 43.5 +0.1**
comp=Z,5.2nm,1.4s,mb4.3					
CDF	**Champ du Feu**	**71.30 316**⇑	*i*P	**P**	**21 02 44.7 -0.6**
comp=Z,12nm,0.8s,mb4.6					
WLF	**Walferdange**	**71.37 317**	P	**P**	**21 02 45.9 +0.3**
WLF			AP	pP	21 02 50.6 +0.9
comp=Z,16nm,1.2s					
BCLA	**Clavier**	**71.49 318**	P	**P**	**21 02 45.8 -0.5**
BCLA			AP	pP	21 02 50.6 +0.2
DOU	**Dourbes**	**72.05 318**	P	**P**	**21 02 49.3 -0.4**
DOU			AP	pP	21 02 53.8 0.0
KMBO	**Kilima Mbogo**	**72.10 257**	P	**P**	**21 02 50.8 +0.2**
comp=Z,2.9nm,0.8s,mb4.2,baz=40,slow=9.4,SNR=8.4					
KMBO	**Kilima Mbogo**	**72.10 257***ce*P		**P**	**21 02 49.9 -0.7**
KMBO			pmax	pmax	
comp=Z,3.0nm,0.8s					
KMBO	**Kilima Mbogo**	**72.10 257**	*e*P	**P**	**21 02 50.9 +0.3**
STKA	**Stephens Creek**	**72.63 148**	*e*P	**P**	**21 02 52.5 -0.8**
comp=Z,3.3nm,0.7s,mb4.4					
STKA	**Stephens Creek**	**72.63 148**	P	**P**	**21 02 52.5 -0.7**
comp=Z,4.6nm,0.8s,mb4.4,baz=324,slow=8.7,SNR=6.9					
LPG	**La Plagne**	**73.01 313**⇑	*i*P	**P**	**21 02 55.8 +0.3**
comp=Z,39nm,0.7s,mb5.1					
SMF	**Signal de Mont**	**74.20 315**⇑	*i*P	**P**	**21 03 01.7 -0.8**
comp=Z,19nm,0.9s,mb4.8					
TCF	**Toulx Ste Croi**	**75.35 316**⇑	*i*P	**P**	**21 03 08.6 -0.6**
comp=Z,11nm,0.9s,mb4.5					
CAF	**Calviac**	**76.15 315**⇑	*i*P	**P**	**21 03 13.7 -0.1**
comp=Z,7.9nm,0.8s,mb4.4					
YKA	**Yellowknife Ar**	**80.16 18**	P	**P**	**21 03 34.7 -1.0**
comp=Z,2.2nm,0.7s,mb4.2,baz=330,slow=5.1,SNR=17					
YKA	**Yellowknife Ar**	**80.16 18**	P	**P**	**21 03 34.7 -1.0**
ESDC	**Sonseca Array**	**82.80 313**	P	**P**	**21 03 50.0 0.0**
comp=Z,0.4nm,0.4s,mb3.8,baz=38,slow=6.1,SNR=4.6					
MVO	**Moncorvo**	**83.76 315**	*e*P	**P**	**21 03 55.5 +0.5**
comp=Z,26nm,1.1s,mb5.3					
MTE	**Manteigas**	**84.54 315**	*e*P	**P**	**21 03 59.5 +0.5**
comp=Z,17nm,1.9s,mb4.8					
PMRV	**Marv??o**	**85.05 314**	*e*P	**P**	**21 04 01.7 +0.1**
comp=Z,16nm,1.4s,mb5.0					
MORF	**Marmelete**	**87.15 313**	*e*P	**P**	**21 04 12.6 +0.6**
comp=Z,35nm,1.3s,mb5.4					
FFC	**Flin Flon**	**90.10 15**	*i*P	**P**	**21 04 25.3 -0.3**
TORD	**Torodi Ar. Bea**	**94.09 288**	P	**P**	**21 04 44.0 -0.8**
comp=Z,0.4nm,0.6s,mb4.0,baz=16,slow=4.2,SNR=6.0					
OTAV	**Otavalo**	**147.33 7**	PKPdf	PKPdf	21 11 09.8 +2.0
SIV	**San Ignacio**	**159.42 319**	PKPab	PKPab	21 12 02.1 -0.5
comp=Z,2.0nm,0.9s,baz=92,slow=6.2,SNR=5.2					

BJI 12 21:00:02.7, 33°.83N×120°.14E, h24km, ML3.8/7, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**2.08**	**212**	*e*Pn	Pn	21 00 36.5	+0.5
NJ2				Pg	Pn	21 00 41.0	+5.0
NJ2				Sn	Sn	21 01 02.8	+1.7
NJ2				Sg	Sn	21 01 08.0	+6.9
NJ2				smax			
comp=N,950nm,0.3s							
NJ2				smax			
comp=E,610nm,0.4s							
TIA	**Tai'an**	**3.43**	**315**	Pn	Pn	21 00 55.8	+1.2
TIA				Pg	Pn	21 01 06.4	+12
TIA				Sg	Sn	21 01 49.0	+14
TIA				smax			
comp=N,290nm,0.8s							
TIA				smax			
comp=E,190nm,1.0s							

*CSEM **12** 21:05:36.7±0.3, 37°.07N×28°.38E, h20km, MD2.6, Error ellipse: s-maj=9.5km s-min=6.8km az=46.0*
*ISCJB **12** 21:05:37.4±0.8, 37°.06N±0°.05×28°.34E±0°.06, h13km±6km, Error ellipse: s-maj=9.5km s-min=6.1km az=41.7*
*DDA **12** 21:05:37.7, 37°.08N×28°.42E, h7km±7km, Md2.8*
*ISK **12** 21:05:37.7, 37°.14N×28°.27E, h16km, MD2.6*
ISC 12 21:05:37.2±1.4, 37°.08N±0°.05×28°.37E±0°.07, h17km±10km, n10, σ0°66/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.09**	**307**	PG	**Pg**	**21 05 40.8**	**+0.2**
YER				*e*SG	**Sg**	**21 05 43.0**	**+0.2**
YER	**Yerkesik**	**0.09**	**307**	*i* Pg	**Pg**	**21 05 40.8**	**+0.3**
YER				*e*Sg	**Sg**	**21 05 43.0**	**+0.2**
TURN	**Turunc**	**0.28**	**138**	*i* P	**Pg**	**21 05 43.2**	**0.0**
TURN				*i* S	**Sg**	**21 05 47.0**	**-0.3**
TURN	**Turunc**	**0.28**	**138**	*i* P	**Pg**	**21 05 43.2**	**-0.1**
TURN				*i* S	**Sg**	**21 05 47.0**	**-0.4**
MLSB	**Milas**	**0.52**	**294**	*e*PG	**Pg**	**21 05 46.6**	**-0.9**
MLSB				*e*SG	**Sg**	**21 05 53.1**	**-1.4**
MLSB	**Milas**	**0.52**	**294**	*e*Pg	**Pg**	**21 05 46.7**	**-0.8**
MLSB				*e*Sg	**Sg**	**21 05 53.1**	**-1.4**
AYDN	**Tasoluk**	**0.70**	**326**	*i* P	**Pg**	**21 05 51.4**	**+0.6**
AYDN				*i* S	**Sg**	**21 06 00.8**	**+0.6**
AYDN	**Tasoluk**	**0.70**	**326**	*i* P	**Pg**	**21 05 51.4**	**+0.5**
AYDN				*i* S	**Sg**	**21 06 00.8**	**+0.7**
DAT	**Datca**	**0.73**	**241**	*e*PG	**Pg**	**21 05 51.6**	**+0.2**
DAT				*e*SG	**Sg**	**21 06 01.8**	**+0.7**
DAT	**Datca**	**0.73**	**241**	*e*Pg	**Pg**	**21 05 51.6**	**+0.2**
DAT				*e*Sg	**Sg**	**21 06 01.8**	**+0.8**

*ISCJB **12** 21:07:22.5±1.1, 31°.9N±0°.1×104°.92E±0°.09, h10km, mb3.5/6, Error ellipse: s-maj=21.2km s-min=8.7km az=159.2*
*IDC **12** 21:07:22.8±1.4, 31°.87N×104°.71E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/25, mbtmp3.5/6, MS3.8/1, Ms1 3.8/1, ms1mx2.9/30, Error ellipse: s-maj=80.3km s-min=25.7km az=54.0*
ISC 12 21:07:24.5±1.1, 31°.9N±0°.1×104°.81E±0°.09, h10km, n7, σ0°84/8, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.05**	**57**	Pg	**Pg**	**21 08 41.5**	**-0.6**
XAN				Sg	**Sg**	**21 09 34.9**	**+0.3**
XAN				smax			
comp=N,91nm,0.9s							
XAN				smax			
comp=E,72nm,0.9s							
MKAR	**Makanchi Array**	**22.78**	**317**	P	**P**	**21 12 27.7**	**+0.8**
comp=E,0.4nm,0.6s,mb3.0,baz=120,slow=11,SNR=4.5							
ZALV	**Zalesovo Beam**	**26.27**	**333**	P	**P**	**21 13 00.5**	**+0.7**
comp=E,1.8nm,0.6s,mb3.8,baz=127,slow=9.4,SNR=6.7							
KURK	**Kurchatov**	**26.97**	**322**	P	**P**	**21 13 04.0**	**-2.2**
comp=E,0.4nm,0.7s,mb3.1,baz=122,slow=10,SNR=3.7							
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**21 17 11.8**	**+0.2**
comp=E,1.0nm,0.7s,mb4.0,baz=98,slow=10.0,SNR=3.1							
ASAR	**Alice Springs**	**61.88**	**150**	P	**P**	**21 17 44.2**	**+0.1**
comp=E,0.2nm,0.4s,mb3.6,baz=338,slow=7.0,SNR=3.5							
YKA	**Yellowknife Ar**	**80.74**	**17**	P	**P**	**21 19 37.9**	**+0.3**
comp=E,0.2nm,0.6s,mb3.2,baz=332,slow=5.7,SNR=4.1							

*ISCJB **12** 21:08:10.8±1.1, 31°.19N±0°.03×103°.45E±0°.03, h6km±7km, mb4.5/73, MS3.8/4, Error ellipse: s-maj=4.4km s-min=4.2km az=154.9*
*IDC **12** 21:08:11.2±0.5, 31°.12N×103°.34E, h0km, mb4.3/30, mb1 4.4/32, mb1mx4.3/40, mbtmp4.3/32, ML3.5/2, MS3.9/4, Ms1 3.9/4, ms1mx3.3/35, Error ellipse: s-maj=18.2km s-min=11.3km az=50.0*
*BJI **12** 21:08:13.0, 31°.30N×103°.56E, h11km, mB5.0/17, mb4.7/24, ML4.3/14, Ms4.5/26, Ms7 4.3/22*
*NEIC **12** 21:08:13.5±0.3, 31°.29N×103°.45E, h10km, mb4.6/33, Error ellipse: s-maj=6.5km s-min=6.0km az=69.0*
*MOS **12** 21:08:15.1±1.3, 31°.23N×103°.42E, h34km, mb4.7/35, Error ellipse: s-maj=8.3km s-min=5.0km az=113.1*
*DJA **12** 21:08:29, 31°.52N×103°.48E, h134km, mb4.3/8*
ISC 12 21:08:14.0±1.1, 31°.19N±0°.03×103°.39E±0°.03, h13km±6km, n205, σ1°08/218, mb4.5/73, MS3.8/4, 16C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**132**	Pg	**Pg**	**21 08 24.1**	**+1.8**
CD2				Sg	**Sg**	**21 08 32.7**	**+4.7**
CD2				smax			
comp=N,35μm,0.8s							
CD2	**Chengdu**	**0.42**	**132**	Pg	**Pg**	**21 08 14.2**	**-8.1**
CD2				Sg	**Sg**	**21 08 16.0**	**-12**
CD2				smax			
comp=N,6μm,0.5s							
LZH	**Lanzhou**	**4.90**	**4**	Pg	**Pb**	**21 09 35.3**	**-4.2**
LZH				Sg	**Sg**	**21 10 51.1**	**0.0**
LZH				smax			
comp=N,650nm,1.0s							
LZH				smax			
comp=E,800nm,1.0s							
LZH				LR	LR		
comp=N,6μm,5.3s							
LZH				LR	LR		
comp=Z,6μm,8.3s							
ENH	**Enshi**	**5.33**	**98**	*e*Pn	**Pn**	**21 09 34.4**	**+1.2**
comp=Z,92nm,0.8s							
ENH				*e*Sn	**Sn**	**21 10 38.9**	**+4.5**
XAN	**Xi'an**	**5.46**	**57**	Pg	**Pg**	**21

comp=Z,1μm,10.9s
LSA Lhasa 10.67 265 *e*Pn **Pn 21 10 49.7 +3.2**
SHL Shillong 11.58 244 *e*P **Pn 21 10 58.0 -0.9**
HHC Hu-ho-hao-te 11.68 32 *e*P **Pn 21 11 00.2 -0.1**
HHC pP 21 11 03.5
HHC PP 21 11 09.8
HHC S **Sn 21 13 11.3 +0.8**
HHC sS 21 13 17.8
HHC SS 21 13 25.6
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,200nm,4.8s
HHC LR LR
comp=N,640nm,5.1s
HHC LR LR
comp=E,760nm,5.9s
HHC LR LR
comp=Z,660nm,6.2s
CHTO Chiang Mai 12.96 199 *e*P **Pn 21 11 21.7 +3.8**
NJ2 Nanjing 13.21 82 *e*P **Pn 21 11 22.0 +0.8**
NJ2 pP 21 11 29.2
NJ2 PP 21 11 32.4
NJ2 S **Sn 21 13 48.8 +0.9**
NJ2 sS 21 13 59.6
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,440nm,3.8s
NJ2 LR LR
comp=N,760nm,11.0s
NJ2 LR LR
comp=E,1μm,11.8s
CM31 Chiang Mai Arr 13.30 199 *e*Pn **Pn 21 11 25.9 +3.3**
CMAR Chiang Mai Arr 13.30 199 Pn **Pn 21 11 21.9 -0.7**
comp=E,0.1nm,0.3s,baz=13,slow=13,SNR=3.6
QIZ Qiongzhong 13.44 153 P **Pn 21 11 23.8 -0.6**
QIZ S **Sn 21 13 55.0 +1.3**
QIZ pmax pmax
comp=Z,19nm,1.5s
QIZ LR LR
comp=N,620nm,6.3s
QIZ LR LR
comp=Z,540nm,8.2s
BJT Baijiatuau 13.61 46 *e*P **Pn 21 11 25.8 -0.8**
BJI Beijing 13.63 46 P **Pn 21 11 24.9 -2.0**
BJI pmax pmax
comp=Z,10.0nm,0.7s
GUN Gumba 15.59 262 *e*P **Pn 21 11 52.4 -1.0**
comp=Z,58nm,0.7s
PKI Pulchoki 16.09 262 *e*P **Pn 21 11 59.1 -0.7**
comp=Z,84nm,0.7s
PKIN Phulchoki 16.09 262 *e*P **Pn 21 11 59.5 -0.4**
comp=Z,123nm,0.6s
KKN Kakani 16.13 262 *e*P **Pn 21 11 59.4 -1.0**
comp=Z,206nm,1.1s
DMN Daman 16.33 262 *e*P **Pn 21 12 02.3 -0.7**
comp=Z,77nm,0.8s
SONM Songino Array 16.78 7 Pn **Pn 21 12 10.2 +1.6**
comp=Z,0.3nm,0.3s,baz=187,slow=12,SNR=18
SONM LR LR 21 19 23.5
comp=Z,541nm,18.0s,baz=128,slow=40
ULN Ulaanbaatar 16.89 9 *e*P **Pn 21 12 07.4 -2.5**
SSLB Suanglung 17.23 111 *e*Pn **Pn 21 12 15.8 +1.5**
WMQ Urumqi 17.68 320 *e*P **Pn 21 12 20.5 +0.7**
WMQ LR LR
comp=N,510nm,20.0s
WMQ LR LR
comp=E,160nm,25.0s
WMQ LR LR
comp=Z,350nm,22.0s
ZAK Zakamensk 19.17 360 *e*P **Pn 21 12 39.8 +1.9**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
TLY Talaya 20.47 0 *e*P **P 21 12 55.2 +4.0**
TLY pmax pmax
comp=Z,7.0nm,0.9s
TLY Talaya 20.47 0 *e*P **P 21 12 49.5 -1.7**
comp=Z,6.5nm,0.9s
TLY *e*Pn **P 21 12 49.9 -1.3**
MOY Mondy 20.53 356 *e*P **P 21 12 55.1 +3.2**
MOY pmax pmax
comp=Z,30nm,1.3s
IRK Irkutsk 21.04 2 *e*P **P 21 12 59.9 +2.5**
IRK pmax pmax
comp=Z,66nm,1.1s,mb4.9
KSRS Korea Array 21.17 66 P **P 21 12 59.8 +0.8**
comp=Z,10nm,0.6s,mb4.3,baz=246,slow=10,SNR=24
KSRS Korea Array 21.17 66 P **P 21 12 59.8 +0.9**
KSRS pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
CN2 Changchun 21.48 48 *e*P **P 21 13 03.0 +0.8**
CN2 *es*P sP 21 13 10.0 +2.4
CN2 *e*S **S 21 16 53.4 -6.6**
CN2 pmax pmax
comp=Z,70nm,0.8s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,14.0s,MS4.1
CN2 LR LR
comp=E,500nm,14.0s,MS4.1
CN2 LR LR
comp=Z,600nm,16.0s,MS4.1
CN2 Changchun 21.48 48 *e*P **P 21 12 57.3 -4.9**
CN2 Changchun 21.48 48 *e*P **P 21 13 00.2 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
HIA Hailar 21.86 30 *e*P **P 21 13 04.2 -2.0**
HIA pmax pmax
comp=Z,18nm,1.0s
HIA Hailar 21.86 30 *e*P **P 21 13 04.2 -2.0**
comp=Z,18nm,1.0s,mb4.5
MK31 Makanchi Array 22.52 320 *e*P **P 21 13 12.4 -0.8**
MKAR Makanchi Array 22.52 320 P **P 21 13 12.2 -1.0**
comp=Z,3.2nm,0.7s,mb3.8,baz=125,slow=11,SNR=18
KSH Kashi 23.79 298 *e*P **P 21 13 30.4 +4.0**
KSH *ep*P 21 13 34.5
KSH *es*P sP 21 13 37.3 +5.3
KSH *e*PP 21 14 04.0
KSH *e*PcP PcP 21 17 11.1 +1.5
KSH *e*S **S 21 17 44.2 +2.8**
KSH *es*S sS 21 17 51.4 +3.4
KSH *e*SS 21 18 37.2
KSH *e*ScP ScP 21 20 48.0 +0.3
KSH *e*PcS PcS 21 20 50.4 +1.3
KSH *e*ScS ScS 21 24 34.3 -0.1
KSH pmax pmax
comp=Z,120nm,3.9s
KSH LR LR
comp=N,360nm,9.6s
KSH LR LR
comp=E,320nm,9.6s
MDJ Mudanjiang 24.51 49 P **P 21 13 29.9 -3.0**
MDJ pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
MDJ pmax pmax
comp=Z,110nm,4.3s
MDJ Mudanjiang 24.51 49 *e*P **P 21 13 32.7 -0.2**
comp=Z,73nm,1.8s,mb4.9
KZA Kyzart 24.95 304 P **P 21 13 38.0 +1.0**
SNR=36
TKM2 Tokmak 2 24.97 306 *e*P **P 21 13 37.6 +0.5**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
TKM2 Tokmak 2 24.97 306 *e*P **P 21 13 37.6 +0.5**
comp=Z,8.1nm,0.9s,mb4.2
KBK Karagaybulak 25.34 305 P **P 21 13 42.7 +2.2**
SNR=16
UCH Uchtor 25.52 304 P **P 21 13 47.3 +5.1**
SNR=12
UCH Uchtor 25.52 304 *e*P **P 21 13 43.0 +0.9**
comp=Z,13nm,1.0s,mb4.4
FRU Bishkek 25.62 305 *e*P **P 21 13 44.0 +1.0**
FRU *e* 21 13 52.0
AAK Ala-Archa 25.65 305 P **P 21 13 44.6 +1.3**
comp=Z,5.8nm,0.7s,mb4.2,baz=118,slow=5.7,SNR=11
AAK Ala-Archa 25.65 305 *e*P **P 21 13 44.7 +1.4**
AAK pmax pmax
comp=Z,11nm,0.9s,mb4.4
AAK Ala-Archa 25.65 305 *e*P **P 21 13 44.7 +1.5**
comp=Z,11nm,0.9s,mb4.4
USP Ospenovka 25.84 306 P **P 21 13 47.7 +2.8**
SNR=9.2
AML Almayashu 26.08 303 P **P 21 13 54.8 +7.6**
SNR=9.6
AML Almayashu 26.08 303 *e*P **P 21 13 47.6 +0.4**
comp=Z,11nm,0.9s,mb4.4
EKS2 Erkin-Say 26.17 304 P **P 21 13 50.0 +2.0**
SNR=8.6
EKS2 Erkin-Say 26.17 304 *e*P **P 21 13 49.6 +1.7**
comp=Z,5.9nm,0.8s,mb4.2
EKS2 *e*PcP PcP 21 17 14.8 -0.1
ZAA0 Zalesovo Array 26.38 335 *e*P **P 21 13 49.2 -0.5**
ZALV Zalesovo Beam 26.38 335 P **P 21 13 49.1 -0.7**
comp=Z,11nm,0.9s,mb4.4,baz=138,slow=8.4,SNR=28
ZALV LR LR 21 24 54.9
comp=Z,188nm,20.9s,MS3.6,baz=155,slow=38
KURK Kurchatov 26.81 324 P **P 21 13 53.5 -0.2**
comp=Z,6.6nm,0.8s,mb4.2,baz=127,slow=9.9,SNR=30
KURK PcP PcP 21 17 15.4 -0.8
comp=Z,2.3nm,0.7s,baz=112,slow=2.0,SNR=7.9
KURK LR LR 21 25 30.1
comp=Z,202nm,18.2s,MS3.7,baz=45,slow=39
KURK Kurchatov 26.81 324 P **P 21 13 53.5 -0.2**
KURK 21 17 15.4
KURK pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KURK MLR MLR
comp=Z,203nm,18.2s,MS3.7
KURK Kurchatov 26.81 324 *e*P **P 21 13 54.2 +0.5**
comp=Z,15nm,1.1s,mb4.4
BOD Bodaibo 27.61 12 *e*P **P 21 14 01.3 +0.5**
BOD pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
NVS Novosibirsk 27.66 335 *e*P Px 21 14 13.4
KBL Kabul 28.96 286 *e*P **P 21 14 14.4 +1.3**
KBL pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KBL Kabul 28.96 286 *e*P **P 21 14 14.4 +1.2**
comp=Z,6.2nm,0.9s,mb4.3
MAT Matsushiro 29.29 70 P **P 21 14 15.9 -0.1**
PALK Pallekele 31.88 226 P **P 21 14 42.5 +3.5**
BVAR Borovoye Array 32.35 322 P **P 21 14 42.3 -0.4**
comp=Z,0.7nm,0.5s,mb3.8,baz=108,slow=12,SNR=3.3
BVAR PcP PcP 21 17 30.0 -0.3
comp=Z,4.7nm,0.7s,baz=116,slow=3.4,SNR=15
BVAR LR LR 21 28 57.2
comp=Z,190nm,19.2s,MS3.8,baz=72,slow=38
BVAR Borovoye Array 32.35 322 P **P 21 14 42.3 -0.4**
BVAR 21 17 30.0
BRVK Borovoye 32.42 322 *e*P **P 21 14 43.7 +0.3**
BRVK pmax pmax
comp=Z,5.0nm,1.5s,mb4.1
ASAJ Asahikawa 33.30 56 P **P 21 14 50.2 -1.0**
comp=Z,5.7nm,0.7s,mb4.6,baz=271,slow=7.9,SNR=5.4
ASAJ Asahikawa 33.30 56 P **P 21 14 50.2 -1.0**
ASAJ pmax pmax
comp=Z,6.0nm,0.7s
YSS Yuzh-Sakhalins 33.97 51 *e*P **P 21 14 57.7 +0.7**
ABKAR Abkulak array 37.16 312 *e*P **P 21 15 22.2 -2.2**
comp=Z,1.7nm,0.7s,mb4.0
AKTK Aktyubinsk 38.63 313 P **P 21 15 35.9 -0.9**
AKTO Aktyubinsk 38.63 313 P **P 21 15 35.9 -0.9**
comp=Z,0.5nm,0.5s,mb3.5,baz=104,slow=17,SNR=2.0
SVE Sverdlovsk 39.07 324 *e*P **P 21 15 42.5 +2.2**
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KAPI Kappang 39.25 154 P **P 21 15 40.5 -1.8**
comp=Z,7.5nm,0.9s,mb4.4,baz=41,slow=19,SNR=3.0
ARU Arti 39.99 322 *c i*P **P 21 15 47.5 -0.6**
ARU *e* 21 17 20.0
ARU S **S 21 21 54.5 +1.5**
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.6
ARU Arti 39.99 322 *e*P **P 21 15 47.7 -0.3**
comp=Z,10nm,0.8s,mb4.6
TIXI Tiksi 42.79 12 *i* P **P 21 16 10.6 -0.2**
TIXI pmax pmax
comp=Z,20nm,1.4s,mb4.7
TIXI Tiksi 42.79 12 *e*P **P 21 16 10.1 -0.8**
comp=Z,8.3nm,0.7s,mb4.6
SEY Seymchan 44.31 30 ⇑*i*P **P 21 16 23.1 -0.1**
UMR Umm Al-Rimmam 47.63 283 *e*P **P 21 16 49.4 -0.5**
UMR AMb AMB 21 16 54.6
comp=Z,21nm,1.0s,mb5.1
GNI Garni 47.72 298 *e*P **P 21 16 50.4 0.0**
KBD Kabd 47.76 283 *e*P **P 21 16 49.9 -1.0**
KBD AMb AMB 21 16 54.9
comp=Z,16nm,1.0s,mb5.0
MIB Mutribah 47.87 284 *e*P **P 21 16 50.8 -1.0**
MIB AMb AMB 21 16 55.8
comp=Z,45nm,0.9s,mb5.5
RDF Al-Radifah 47.95 282 *e*P **P 21 16 51.7 -0.6**
RDF AMb AMB 21 16 59.6
comp=Z,41nm,0.9s,mb5.5
ZEI Tsey 48.01 301 *e*P **P 21 16 53.3 +0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KIV Kislovodsk 48.76 303 *e*P **P 21 17 00.2 +1.8**
KIV pmax pmax
comp=Z,14nm,0.9s,mb5.0
KIV Kislovodsk 48.76 303 *e*P **P 21 16 58.4 +0.1**
comp=Z,14nm,0.9s,mb5.0
KLMR Klimovskoe 50.65 325 *e*P **P 21 17 12.5 0.0**
KLMR pmax pmax
comp=Z,16nm,0.9s,mb5.0
BILL Bilibino 51.36 25 ⇑*i*P **P 21 17 17.4 -0.3**
BILL *e* 21 18 32.6
BILL *e* 21 19 17.3
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.0
BILL Bilibino 51.36 25 *e*P **P 21 17 17.4 -0.4**
comp=Z,18nm,1.1s,mb4.9
OBN Obninsk 52.01 318 *e*P **P 21 17 23.4 +0.6**
OBN *e**PP pP 21 17 33.5 +6.6
OBN *e**SP sP 21 17 38.0 +9.5
OBN *e* 21 18 35.1
OBN pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 52.88 297 *e*P **P 21 17 29.9 +0.3**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 52.88 297 *e*P **P 21 17 29.9 +0.3**
comp=Z,4.5nm,1.1s,mb4.3
MALT Malatya 52.88 297 ⇓*i*P **P 21 17 33.7 +4.1**
FITZ Fitzroy Crossi 53.47 153 *e*P **P 21 17 32.1 -1.8**
comp=Z,6.8nm,1.2s,mb4.5
FITZ Fitzroy Crossi 53.47 153 P **P 21 17 32.0 -1.9**
comp=Z,2.4nm,0.7s,mb4.2,baz=316,slow=10,SNR=5.0
JOF Joensuu 54.63 328 *e*P **P 21 17 40.3 -1.6**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
JOF Joensuu 54.63 328 *ep* **P 21 17 40.3 -1.6**
comp=Z,5.0nm,0.7s,mb4.7
ASF Jabal al Asfar 55.74 290 P **P 21 17 48.9 -1.5**
comp=Z,2.7nm,0.7s,mb4.4,baz=224,slow=1.2,SNR=5.0
BR131 Keskin Array S 56.17 299 *e*P **P 21 17 54.6 +1.2**
BRTR Keskin Array B 56.17 299 P **P 21 17 52.6 -0.8**
comp=Z,2.0nm,0.8s,mb4.2,baz=116,slow=6.6,SNR=9.3
AKASG Malin Array Be 56.88 313 P **P 21 17 57.8 -0.5**
comp=Z,3.5nm,0.7s,mb4.5,baz=68,slow=6.8,SNR=5.5
ARCES ARCESS Array B 56.93 336 P **P 21 17 56.8 -1.6**
comp=Z,3.5nm,0.8s,mb4.4,baz=47,slow=7.1,SNR=4.9
KAF Kangasniemi 56.98 327 *e*P **P 21 17 58.0 -0.8**
KAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KAF Kangasniemi 56.98 327 *ep* **P 21 17 58.0 -0.8**
comp=Z,7.8nm,0.8s,mb4.8
FINES FINESS Array B 57.15 326 P **P 21 17 59.9 -0.2**
comp=Z,4.9nm,0.6s,mb4.7,baz=81,slow=8.0,SNR=13
EIL Elat 58.14 288 P **P 21 18 06.8 -0.7**
comp=Z,7.7nm,0.8s,mb4.8,baz=92,slow=6.0,SNR=4.8
TIRR Tirgusor 58.75 306 *e*P **P 21 18 12.7 +1.2**
TIRR pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
TIRR Tirgusor 58.75 306 *e*P **P 21 18 12.7 +1.1**
comp=Z,4.4nm,1.0s,mb4.4
WRAB Tennant Creek 58.88 146 *e*P **P 21 18 04.0 -8.6**
WRAB pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
WRAB Tennant Creek 58.88 146 *e*P **P 21 18 04.0 -8.6**
comp=Z,1.1nm,0.5s,mb4.1
SPITS Spitsbergen Ar 59.10 346 P **P 21 18 13.6 0.0**
comp=Z,6.5nm,0.9s,mb4.7,baz=96,slow=6.8,SNR=10
VRI Vrincioaia 59.55 308 ⇓P **P 21 18 18.4 +1.3**
VRI Vrincioaia 59.55 308 ⇓*i*P **P 21 18 18.4 +1.3**
PLOR Plostina 59.61 308 ⇑P **P 21 18 22.8 +5.4**
PLOR Plostina 59.61 308 ⇑*i*P **P 21 18 22.8 +5.4**
SUW Suwalki 59.87 318 P **P 21 18 18.5 -0.6**
BURAR Bucovina Array 60.11 310 ⇑P **P 21 18 26.0 +5.1**
BURAR Bucovina Array 60.11 310 ⇑*i*P **P 21 18 26.0 +5.1**
MLR Muntele Rosu 60.18 308 P **P 21 18 22.2 +0.8**
comp=Z,1.8nm,0.8s,mb4.2,baz=142,slow=16,SNR=4.3
MLR Muntele Rosu 60.18 308 ⇑*i*P **P 21 18 22.3 +0.9**
VOIR 60.80 308 ⇑P **P 21 18 25.5 -0.1**
VOIR 60.80 308 ⇑*i*P **P 21 18 25.5 -0.1**
KWP Kalwaria Pacla 61.20 313 *e*P **P 21 18 27.3 -1.0**
KWP pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
KWP Kalwaria Pacla 61.20 313 *e*P **P 21 18 27.3 -1.0**
comp=Z,8.6nm,0.6s,mb5.1
KWP Kalwaria Pacla 61.20 313 ⇓*i*P **P 21 18 29.0 +0.7**
TRPA Tarpa 61.71 311 ⇑*i*P **P 21 18 37.9 +6.1**
ASAR Alice Springs 61.88 148 P **P 21 18 32.9 -0.2**
comp=Z,2.1nm,0.7s,mb4.4,baz=329,slow=6.6,SNR=15
NIE Niedzica 62.76 313 *e*P **P 21 18 43.2 +4.4**
OJC Ojcow 62.85 314 *e*P **P 21 18 39.3 0.0**
BZS Buzias 63.05 309 ⇓P **P 21 18 40.4 -0.4**
BZS Buzias 63.05 309 ⇓*i*P **P 21 18 40.4 -0.4**
HFS Hagfors 63.36 326 P **P 21 18 41.8 -0.8**
comp=Z,3.1nm,0.7s,mb4.6,baz=99,slow=9.2,SNR=8.8
PSZ Piszkesteto 63.47 312 *e*P **P 21 18 44.6 +1.1**
PSZ Piszkesteto 63.47 312 ⇑*i*P **P 21 18 46.9 +3.4**
NB2 NORSAR Subarra 64.26 327 P **P 21 18 39.5 -8.9**
comp=Z,3.0nm,0.8s,mb4.4,baz=73,slow=6.9
NOA NORSAR Array B 64.26 327 P **P 21 18 47.4 -1.0**
comp=Z,3.1nm,0.9s,mb4.3,baz=72,slow=7.0,SNR=3.5
MORC Moravsky Berou 64.37 314 *e*P **P 21 18 49.8 +0.4**
comp=Z,44nm,2.4s,mb5.1
MORC Moravsky Berou 64.37 314 ⇑*i*P **P 21 18 49.4 0.0**
PKSM Moragy 64.83 310 ⇑P **P 21 18 50.7 -1.8**
PKSM Moragy 64.83 310 ⇑*i*P **P 21 18 50.7 -1.8**
FORT Forrest 65.93 157 *e*P **P 21 19 05.2 +5.6**
comp=Z,10nm,0.9s,mb4.9
BRG Berggiesshubel 66.18 316 *e*P **P 21 19 01.7 +0.6**
comp=Z,4.0nm,0.9s,mb4.4
BRG Berggiesshubel 66.18 316 *e*P **P 21 19 01.7 +0.6**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
CLL Collm 66.58 317 *e*P **P 21 19 04.0 +0.4**
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CLL Collm 66.58 317 *e*P **P 21 19 04.0 +0.4**
comp=Z,3.0nm,0.9s,mb4.3
CLL *e* pP 21 19 09.0 +1.1
CLL Collm 66.58 317 *e*P **P 21 19 04.0 +0.4**
comp=Z,3.0nm,0.9s,mb4.3
CLL *ep*P pP 21 19 09.0 +1.1
GEC2 GERESS Array S 67.05 314 *e*P **P 21 19 08.1 +1.4**
GEC2 pmax pmax
comp=Z,1μm,1.1s
GEC2 GERESS Array S 67.05 314 *e*P **P 21 19 08.1 +1.4**
comp=Z,1μm,1.1s
GERES GERESS Array B 67.05 314 P **P 21 19 06.9 +0.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=67,slow=4.5,SNR=9.1
COLD Coldfoot 67.64 24 *e*P **P 21 19 10.1 0.0**
comp=Z,11nm,0.9s,mb4.9
AQU L'Aquila 69.76 308 P **P 21 19 25.1 +1.3**
STU Stuttgart 69.82 315 P **P 21 19 24.2 +0.2**
DAVOX Davos/Dischmat 70.23 313 P **P 21 19 25.6 -1.0**
comp=Z,4.8nm,0.9s,mb4.5,baz=66,slow=6.0,SNR=6.6
CDF Champ du Feu 71.13 316 *e*P **P 21 19 31.5 -0.5**
comp=Z,6.8nm,0.8s,mb4.3
CDF Champ du Feu 71.13 316 *e*P **P 21 19 31.5 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CDF Champ du Feu 71.13 316 *e*P **P 21 19 31.5 -0.5**
comp=Z,3.4nm,0.8s,mb4.3
WLF Walferdange 71.24 317 P **P 21 19 34.4 +1.7**
comp=Z,8.6nm,1.4s,mb4.5
WLF Walferdange 71.24 317 *e*P **P 21 19 33.2 +0.5**
WLF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
WLF Walferdange 71.24 317 *e*P **P 21 19 33.2 +0.5**
comp=Z,7.9nm,0.9s,mb4.6
INK Inuvik 72.27 19 P **P 21 19 38.3 -0.3**
comp=Z,6.7nm,0.9s,mb4.6,baz=320,slow=6.9,SNR=16
INK Inuvik 72.27 19 *e*P **P 21 19 38.8 +0.2**
INK pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 72.27 19 *e*P **P 21 19 38.8 +0.2**
comp=Z,8.5nm,0.9s,mb4.7
STKA Stephens Creek 72.42 146 *e*P **P 21 19 39.7 -0.1**
comp=Z,3.0nm,0.5s,mb4.5
STKA Stephens Creek 72.42 146 P **P 21 19 39.6 -0.2**
comp=Z,3.8nm,0.5s,mb4.6,baz=338,slow=5.0,SNR=23
STKA Stephens Creek 72.42 146 *e*P **P 21 19 39.8 0.0**
comp=Z,0.8nm,0.6s,mb3.8
LPG La Plagne 72.74 313 *e*P **P 21 19 42.1 +0.3**
comp=Z,15nm,0.8s,mb4.7
LPG La Plagne 72.74 313 *e*P **P 21 19 42.1 +0.3**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 72.74 313 *e*P **P 21 19 42.1 +0.3**
comp=Z,7.6nm,0.8s,mb4.7
BNI Bardonecchia 72.99 313 *e*P **P 21 19 43.8 +0.5**
SUMG Summit 73.24 349 *e*P **P 21 19 44.3 0.0**
EKA Eskdalemuir Ar 73.53 325 P **P 21 19 46.0 -0.3**
comp=Z,1.6nm,0.9s,mb3.9,baz=94,slow=27,SNR=3.4
RES Resolute Bay 73.70 5 P **P 21 19 46.9 -0.1**
comp=Z,4.3nm,0.9s,mb4.4,baz=346,slow=6.4,SNR=16
RES Resolute Bay 73.70 5 *e*P **P 21 19 47.3 +0.3**
RES pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
RES Resolute Bay 73.70 5 *e*P **P 21 19 47.3 +0.3**
comp=Z,5.9nm,1.0s,mb4.5
SMF Signal de Mont 74.00 315 *e*P **P 21 19 48.5 -0.7**
comp=Z,21nm,1.1s,mb4.7
SMF Signal de Mont 74.00 315 *e*P **P 21 19 48.5 -0.7**
SMF pmax pmax
comp=Z,11nm,1.1s,mb4.7
SMF Signal de Mont 74.00 315 *e*P **P 21 19 48.5 -0.7**
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.16 315 *e*P **P 21 19 55.4 -0.5**
comp=Z,13nm,1.1s,mb4.5
TCF Toulx Ste Croi 75.16 315 *e*P **P 21 19 55.4 -0.5**
TCF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.16 315 *e*P **P 21 19 55.4 -0.5**
comp=Z,6.4nm,1.1s,mb4.5
CAF Calviac 75.93 314 *e*P **P 21 20 00.4 +0.1**
YKA Yellowknife Ar 81.78 17 P **P 21 20 32.3 +0.1**
comp=Z,1.5nm,0.8s,mb4.0,baz=324,slow=4.8,SNR=20
YKA Yellowknife Ar 81.78 17 P **P 21 20 32.3 +0.1**
ESLA Sonseca Array 82.51 312 P **P 21 20 37.4 +1.0**
SFS San Fernando 85.80 310 P **P 21 20 53.6 +0.4**
FCC Fort Churchill 89.21 9 *e*P **P 21 21 09.0 -0.2**
FCC pmax pmax
comp=Z,3.0nm,2.7s,mb4.2
FCC Fort Churchill 89.21 9 *e*P **P 21 21 09.0 -0.2**
comp=Z,3.0nm,2.7s,mb4.2
FFC Flin Flon 91.69 14 *e*P **P 21 21 20.8 0.0**
FFC pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
FFC Flin Flon 91.69 14 *e*P **P 21 21 20.8 0.0**
comp=Z,7.8nm,1.1s,mb5.0
TOA0 Torodi Ar. Sit 93.03 287 *e*P **P 21 21 27.3 -0.4**
TORD Torodi Ar. Bea 93.03 287 P **P 21 21 26.1 -1.7**
comp=Z,1.7nm,1.0s,mb4.4,baz=70,slow=3.3,SNR=6.0
SCHQ Schefferville 93.92 354 P **P 21 21 30.6 -0.5**
comp=Z,3.4nm,0.8s,mb4.8,baz=7.4,slow=2.6,SNR=2.9
RLMT Red Lodge 98.44 23 *e*P **P 21 21 51.7 -0.1**
comp=Z,9.6nm,0.9s,mb5.3
TXAR Lajitas Array 114.53 26 PKP PKiKP 21 26 53.5 -0.6
comp=Z,0.2nm,0.4s,baz=101,slow=1.9,SNR=3.7
QSPA South Pole Qui 120.97 180 PKP PKPdf 21 27 03.3 -1.5
comp=Z,1.0nm,0.8s,baz=123,slow=5.1,SNR=7.2

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*IDC **12** 21:09:36.4± 1.1, 36°.11N× 21°.97E, h0km, mb3.9/11, mb1 3.8/15, mb1mx3.7/34, mbtmp3.7/15, ML3.5/4, MS2.7/2, Ms1 2.7/2, ms1mx2.6/48, Error ellipse: s-maj=22.2km s-min=18.7km az=39.0*
*ISCJB **12** 21:09:37.3± 0.4, 36°.06N± 0°.03× 21°.77E± 0°.03, h10km, mb3.8/11, Error ellipse: s-maj=4.2km s-min=3.1km az=135.7*
*CSEM **12** 21:09:38.3± 0.3, 36°.05N× 21°.74E, h2km, ML4.2/7, Error ellipse: s-maj=8.1km s-min=4.6km az=52.0*
*ATH **12** 21:09:38.2, 36°.07N× 21°.87E, h7km± 1km, MD4.0/23*
*NEIC **12** 21:09:38.2, 36°.07N× 21°.87E, h7km, MD4.0(ATH), ML4.2(THE), After ATH.*

THE 12 21:09:40.8, 36°.18N×21°.79E, h2km±3km, ML4.2/7, Error ellipse: s-maj=4.8km s-min=2.7km az=53.0

ISC 12 21:09:37.9±0.9, 36°.07N±0°.03×21°.83E±0°.04, h2km±5km, n165, σ1§22/196, mb3.8/11, 4C-2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.83**	**355**	*e*PG	**Pg**	**21 09 53.6**	**-0.2**
PYL				*e*SB	**Sb**	**21 10 05.7**	**-0.9**
PYL	**PYLOS**	**0.83**	**355**	P	**Pg**	**21 09 53.5**	**-0.3**
PYL				S	**Sg**	**21 10 03.6**	**-1.0**
PYL	**PYLOS**	**0.83**	**355**	*e*Pg	**Pg**	**21 09 53.6**	**-0.2**
PYL				S	**Sg**	**21 10 03.6**	**-1.0**
PYL				*e*Sb	**Sb**	**21 10 05.7**	**-0.9**
KYTH	**Kithira**	**1.00**	**77**	*e*PN	**Pg**	**21 09 57.3**	**+0.2**
KYTH	**Kithira**	**1.00**	**77**	*e*Pn	**Pg**	**21 09 57.3**	**+0.2**
VLI	**Veliai**	**1.10**	**54**	*e*PN	**Pg**	**21 09 58.8**	**-0.3**
VLI				*e*SB	**Sg**	**21 10 13.6**	**+0.2**
VLI	**Veliai**	**1.10**	**54**	*e*Pn	**Pg**	**21 09 58.8**	**-0.3**
VLI				*e*Sb	**Sg**	**21 10 13.6**	**+0.2**
ITM	**Ithomi**	**1.11**	**4**	*e*PG	**Pg**	**21 09 58.9**	**-0.3**
ITM				*e*SB	**Sb**	**21 10 14.5**	**-0.3**
ITM	**Ithomi**	**1.11**	**4**	P	**Pg**	**21 09 58.7**	**-0.5**
ITM				S	**Sg**	**21 10 14.8**	**+1.1**
ITM	**Ithomi**	**1.11**	**4**	*e*Pg	**Pg**	**21 09 58.9**	**-0.3**
ITM				*e*Sb	**Sb**	**21 10 14.5**	**-0.3**
ITM				S	**Sg**	**21 10 14.8**	**+1.1**
VLX	**Vlachokerasia**	**1.37**	**19**	*e*PG	**Pn**	**21 10 03.3**	**-0.8**
VLX				*e*SB	**Sb**	**21 10 22.2**	**-0.1**
VLX	**Vlachokerasia**	**1.37**	**19**	P	**Pn**	**21 10 03.0**	**-1.1**
VLX				S	**Sg**	**21 10 23.5**	**+1.5**
VLX	**Vlachokerasia**	**1.37**	**19**	P	**Pn**	**21 10 03.0**	**-1.1**
VLX	**Vlachokerasia**	**1.37**	**19**	*e*Pg	**Pn**	**21 10 03.3**	**-0.8**
VLX				*e*Sb	**Sb**	**21 10 22.2**	**-0.1**
VLX				S	**Sg**	**21 10 23.5**	**+1.5**
KARN	**Karanos**	**1.82**	**111**	*e*PN	**Pb**	**21 10 11.6**	**-0.4**
KARN	**Karanos**	**1.82**	**111**	P	**Pb**	**21 10 11.3**	**-0.7**
KARN	**Karanos**	**1.82**	**111**	P	**Pb**	**21 10 11.3**	**-0.7**
KARN	**Karanos**	**1.82**	**111**	*e*Pn	**Pb**	**21 10 11.6**	**-0.4**
DID	**Didima**	**1.83**	**38**	*e*PN	**Pb**	**21 10 11.7**	**-0.3**
DID				*e*SN	**Sg**	**21 10 36.3**	**-0.3**
DID	**Didima**	**1.83**	**38**	P	**Pb**	**21 10 11.6**	**-0.4**
DID				S	**Sb**	**21 10 35.0**	**-0.3**
DID	**Didima**	**1.83**	**38**	P	**Pb**	**21 10 11.6**	**-0.4**
DID				S	**Sb**	**21 10 35.0**	**-0.3**
DID				*e*Sn	**Sg**	**21 10 36.3**	**-0.3**
GUR	**Goura**	**1.91**	**12**	*e*PN	**Pb**	**21 10 13.3**	**-0.1**
GUR	**Goura**	**1.91**	**12**	P	**Pb**	**21 10 12.9**	**-0.5**
GUR	**Goura**	**1.91**	**12**	P	**Pb**	**21 10 12.9**	**-0.5**
GUR	**Goura**	**1.91**	**12**	*e*Pn	**Pb**	**21 10 13.3**	**-0.1**
RLS	**Riolos of Patr**	**2.01**	**352**	*e*PG	**Pb**	**21 10 15.5**	**+0.4**
RLS				*e*SN	**Sb**	**21 10 40.9**	**+0.4**
RLS	**Riolos of Patr**	**2.01**	**352**	*e*Pg	**Pb**	**21 10 15.5**	**+0.4**
RLS				*e*Sn	**Sb**	**21 10 40.9**	**+0.4**
VAM	**Vamos**	**2.04**	**108**	*e*PN	**Pn**	**21 10 14.2**	**+1.0**
VAM	**Vamos**	**2.04**	**108**	*e*Pn	**Pn**	**21 10 14.2**	**+1.0**
NAIG	**Nisos Aigina**	**2.15**	**38**	*e*PN	**Pb**	**21 10 16.7**	**-0.8**
NAIG	**Nisos Aigina**	**2.15**	**38**	*e*Pn	**Pb**	**21 10 16.7**	**-0.8**
LTK	**Loutraki**	**2.15**	**25**	*e*PG	**Pb**	**21 10 17.3**	**-0.3**
LTK	**Loutraki**	**2.15**	**25**	P	**Pb**	**21 10 17.5**	**-0.1**
LTK	**Loutraki**	**2.15**	**25**	P	**Pb**	**21 10 17.5**	**-0.1**
LAKA	**Lakka**	**2.17**	**3**	P	**Pb**	**21 10 17.9**	**0.0**
LAKA	**Lakka**	**2.17**	**3**	P	**Pb**	**21 10 17.9**	**0.0**
GVD	**Gavdhos**	**2.21**	**123**	*e*PN	**Pn**	**21 10 16.8**	**+1.2**
GVD	**Gavdhos**	**2.21**	**123**	*e*Pn	**Pn**	**21 10 16.8**	**+1.2**
VLS	**Valsamata**	**2.33**	**335**	*e*PN	**Pb**	**21 10 19.2**	**-1.3**
VLS	**Valsamata**	**2.33**	**335**	P	**Pn**	**21 10 17.3**	**+0.1**
VLS				S	**Sn**	**21 10 46.5**	**+0.2**
VLS	**Valsamata**	**2.33**	**335**	P	**Pn**	**21 10 17.3**	**+0.1**
VLS	**Valsamata**	**2.33**	**335**	*e*Pn	**Pb**	**21 10 19.2**	**-1.3**
VLS				S	**Sn**	**21 10 46.5**	**+0.2**
EFP	**Efpalio**	**2.35**	**1**	*e*PN	**Pb**	**21 10 20.0**	**-1.0**
EFP	**Efpalio**	**2.35**	**1**	P	**Pb**	**21 10 19.5**	**-1.5**
EFP	**Efpalio**	**2.35**	**1**	P	**Pb**	**21 10 19.5**	**-1.5**
EFP	**Efpalio**	**2.35**	**1**	*e*Pn	**Pb**	**21 10 20.0**	**-1.0**
VLY	**Voula,Athens**	**2.38**	**41**	*e*PN	**Pb**	**21 10 20.1**	**-1.3**
VLY	**Voula,Athens**	**2.38**	**41**	*e*Pn	**Pb**	**21 10 20.1**	**-1.3**
ATHU	**Athens Univers**	**2.46**	**39**	P	**Pb**	**21 10 20.8**	**-2.0**
ATHU	**Athens Univers**	**2.46**	**39**	P	**Pb**	**21 10 20.8**	**-2.0**
PTL	**Penteli**	**2.56**	**39**	*e*PN	**Pn**	**21 10 21.7**	**+1.3**
PTL	**Penteli**	**2.56**	**39**	*e*Pn	**Pn**	**21 10 21.7**	**+1.3**
IDI	**Anoyia**	**2.61**	**106**	Pn	**Pn**	**21 10 20.6**	**-0.5**
	2.3nm,0.3s,baz=294,slow=17,SNR=23						
IDI				LR	LR	21 11 00.2	
	comp=Z,235nm,20.9s,baz=302,slow=33						
IDI	**Anoyia**	**2.61**	**106**	*e*PN	**Pn**	**21 10 22.4**	**+1.3**
IDI	**Anoyia**	**2.61**	**106**	*e*Pn	**Pn**	**21 10 22.4**	**+1.3**
SIVA	**Sivas**	**2.65**	**112**	*e*PN	**Pb**	**21 10 23.9**	**-2.1**
SIVA	**Sivas**	**2.65**	**112**	*e*Pn	**Pb**	**21 10 23.9**	**-2.1**
LKR	**Lokris**	**2.74**	**20**	*e*PB	**Pn**	**21 10 24.5**	**+1.6**
LKR	**Lokris**	**2.74**	**20**	P	**Pn**	**21 10 23.8**	**+0.9**
LKR	**Lokris**	**2.74**	**20**	P	**Pn**	**21 10 23.8**	**+0.9**
LKR	**Lokris**	**2.74**	**20**	*e*Pb	**Pn**	**21 10 24.5**	**+1.6**
ATAL	**Atalanti**	**2.79**	**20**	P	**Pn**	**21 10 23.7**	**+0.2**
ATAL	**Atalanti**	**2.79**	**20**	P	**Pn**	**21 10 23.7**	**+0.2**
EVR	**Evrytania**	**2.84**	**360**	*e*PN	**Pb**	**21 10 27.0**	**-2.4**
EVR	**Evrytania**	**2.84**	**360**	P	**Pg**	**21 10 31.4**	**-1.0**
EVR	**Evrytania**	**2.84**	**360**	*e*Pn	**Pb**	**21 10 27.0**	**-2.4**
AGG	**Agios Georgios**	**2.98**	**8**	*e*PB	**Pb**	**21 10 28.7**	**-2.9**
AGG	**Agios Georgios**	**2.98**	**8**	P	**Pb**	**21 10 28.8**	**-2.8**
AGG	**Agios Georgios**	**2.98**	**8**	P	**Pb**	**21 10 28.8**	**-2.8**
LAST	**Lasithi**	**3.11**	**106**	*e*PN	**Pn**	**21 10 29.3**	**+1.4**
LAST	**Lasithi**	**3.11**	**106**	*e*Pn	**Pn**	**21 10 29.3**	**+1.4**
APE	**Apeiranthos**	**3.14**	**70**	*e*PN	**Pn**	**21 10 29.6**	**+1.2**
APE	**Apeiranthos**	**3.14**	**70**	*e*Pn	**Pn**	**21 10 29.6**	**+1.2**
THL	**Klokotos Trika**	**3.49**	**2**	*e*PB	**Pn**	**21 10 36.5**	**+3.3**
THL	**Klokotos Trika**	**3.49**	**2**	P	**Pn**	**21 10 35.7**	**+2.5**
THL	**Klokotos Trika**	**3.49**	**2**	P	**Pn**	**21 10 35.7**	**+2.5**
THL	**Klokotos Trika**	**3.49**	**2**	*e*Pb	**Pn**	**21 10 36.5**	**+3.3**
AOS	**Alonnisos**	**3.50**	**27**	P	**Pn**	**21 10 34.8**	**+1.5**
AOS	**Alonnisos**	**3.50**	**27**	P	**Pn**	**21 10 34.8**	**+1.5**
AOS	**Alonnisos**	**3.50**	**27**	P	**Pn**	**21 10 34.8**	**+1.5**
IGT	**Igoumenitsa**	**3.66**	**342**	P	**Pn**	**21 10 36.1**	**+0.7**
IGT				S	**Sn**	**21 11 19.0**	**-0.1**
IGT	**Igoumenitsa**	**3.66**	**342**	P	**Pn**	**21 10 36.1**	**+0.7**
IGT				S	**Sn**	**21 11 19.0**	**-0.1**
IGT	**Igoumenitsa**	**3.66**	**342**	P	**Pn**	**21 10 36.1**	**+0.7**
IGT				S	**Sn**	**21 11 19.0**	**-0.1**
JAN	**Janina**	**3.67**	**348**	P	**Pb**	**21 10 39.8**	**-3.6**
JAN	**Janina**	**3.67**	**348**	P	**Pb**	**21 10 39.8**	**-3.6**
ZKR	**Zakros**	**3.70**	**104**	*e*PN	**Pn**	**21 10 37.4**	**+1.4**
ZKR	**Zakros**	**3.70**	**104**	*e*Pn	**Pn**	**21 10 37.4**	**+1.4**
KEK	**Kerkira**	**3.98**	**337**	P	**Pn**	**21 10 41.1**	**+1.2**
KEK				S	**Sn**	**21 11 27.1**	**+0.1**
KEK	**Kerkira**	**3.98**	**337**	P	**Pn**	**21 10 41.1**	**+1.2**
KEK				S	**Sn**	**21 11 27.1**	**+0.1**
KEK	**Kerkira**	**3.98**	**337**	P	**Pn**	**21 10 41.1**	**+1.2**
KEK				S	**Sn**	**21 11 27.1**	**+0.1**
LIT	**Litokhoron**	**4.06**	**7**	P	**Pn**	**21 10 43.8**	**+2.8**
LIT	**Litokhoron**	**4.06**	**7**	P	**Pn**	**21 10 43.8**	**+2.8**
LIT	**Litokhoron**	**4.06**	**7**	P	**Pn**	**21 10 43.8**	**+2.8**
KZN	**Kozani**	**4.23**	**359**	P	**Pn**	**21 10 46.4**	**+3.0**
KZN	**Kozani**	**4.23**	**359**	P	**Pn**	**21 10 46.4**	**+3.0**
KZN	**Kozani**	**4.23**	**359**	P	**Pn**	**21 10 46.4**	**+3.0**
KARP	**Karpathos**	**4.36**	**95**	P	**Pn**	**21 10 46.3**	**+1.1**
KARP	**Karpathos**	**4.36**	**95**	P	**Pn**	**21 10 46.3**	**+1.1**
PLG	**Polygyros**	**4.48**	**16**	P	**Pn**	**21 10 48.4**	**+1.6**
PLG	**Polygyros**	**4.48**	**16**	P	**Pn**	**21 10 48.4**	**+1.6**
PLG	**Polygyros**	**4.48**	**16**	P	**Pn**	**21 10 48.4**	**+1.6**
KBN	**Korca**	**4.62**	**350**	*e*PN	**Pn**	**21 10 43.0**	**-5.7**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**21 10 50.6**	**+0.5**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**21 10 50.6**	**+0.5**
FNA	**Florina**	**4.72**	**356**	P	**Pn**	**21 10 50.6**	**+0.5**
SOH	**Sokhos**	**4.89**	**14**	P	**Pn**	**21 10 53.9**	**+1.4**
SOH	**Sokhos**	**4.89**	**14**	P	**Pn**	**21 10 53.9**	**+1.4**
SOH	**Sokhos**	**4.89**	**14**	P	**Pn**	**21 10 53.9**	**+1.4**
BIA	**Bitola**	**4.96**	**356**	*e*Pn	**Pn**	**21 10 54.2**	**+0.8**
BIA	**Bitola**	**4.96**	**356**	*e*Pn	**Pn**	**21 10 54.1**	**+0.8**
TIP	**Timpagrande**	**5.08**	**309**	P	**Pn**	**21 10 58.2**	**+3.1**
TIP	**Timpagrande**	**5.08**	**309**	P	**Pn**	**21 10 58.2**	**+3.1**
OHR	**Ohrid**	**5.10**	**351**	*e*Pn	**Pn**	**21 10 56.4**	**+1.1**
OHR	**Ohrid**	**5.10**	**351**	*e*Pn	**Pn**	**21 10 56.3**	**+1.0**
VAY	**Valandovo**	**5.28**	**6**	*e*Pn	**Pn**	**21 10 59.4**	**+1.7**
VAY	**Valandovo**	**5.28**	**6**	*e*Pn	**Pn**	**21 10 59.4**	**+1.7**
KRUS	**Krusevo**	**5.31**	**355**	*e*Pn	**Pn**	**21 10 59.2**	**+1.0**
KRUS	**Krusevo**	**5.31**	**355**	*e*Pn	**Pn**	**21 10 59.1**	**+0.9**
TIR	**Tirane**	**5.49**	**344**	*e*Pn	**Pn**	**21 11 01.4**	**+0.7**
	22nm,0.6s						
TIR				*e*Sn	**Sn**	**21 12 03.9**	**-0.4**
TIR	**Tirane**	**5.49**	**344**	*e*Pn	**Pn**	**21 11 01.4**	**+0.8**
	22nm,0.6s						
TIR				*e*Sn	**Sn**	**21 12 03.9**	**-0.4**
STIP	**Stip**	**5.62**	**3**	*e*Pn	**Pn**	**21 11 03.7**	**+1.2**
TAR1	**Taranto**	**5.71**	**323**	*e*Pn	**Pn**	**21 11 04.1**	**+0.5**
SKO	**Skopje**	**5.90**	**357**	*e*Pn	**Pn**	**21 11 08.1**	**+1.8**
VAE	**Valguarnera**	**6.12**	**285**	Sn	**Sn**	**21 12 19.6**	**-0.3**
	2.6nm,0.3s,baz=152,slow=9.3,SNR=4.6						
VAE				LR	LR	21 12 51.4	
	comp=Z,53nm,20.6s,baz=285,slow=31						
PUK	**Puka**	**6.15**	**346**	*e*PN	**Pn**	**21 11 11.7**	**+2.0**
PUK	**Puka**	**6.15**	**346**	*e*Pn	**Pn**	**21 11 11.7**	**+2.0**
SG1	**Sgolgore (BA)**	**6.25**	**321**	*e*Pn	**Pn**	**21 11 11.4**	**+0.4**
BAI	**Bari**	**6.35**	**324**	*e*Pn	**Pn**	**21 11 13.6**	**+1.1**
BARS	**Barje**	**6.74**	**360**	↑*i*Pn	**Pn**	**21 11 18.3**	**+0.5**
STON	**Ston**	**7.51**	**336**	*e*Pn	**Pn**	**21 11 27.7**	**-0.6**
STON				Sn	**Sn**	**21 12 46.7**	**-7.2**
STON	**Ston**	**7.51**	**336**	*e*Pn	**Pn**	**21 11 27.7**	**-0.6**
GRUS	**Gruza**	**7.86**	**354**	*i* Pn	**Pn**	**21 11 33.0**	**-0.1**
BBLS	**Lazići**	**8.01**	**347**	*i* Pn	**Pn**	**21 11 35.0**	**-0.2**
DIVS	**Divibare**	**8.14**	**351**	*i* Pn	**Pn**	**21 11 35.7**	**-1.3**
FGSL	**Fruska Gora**	**9.21**	**351**	*e*Pn	**Pn**	**21 11 51.5**	**-0.1**
VOIR		**9.67**	**14**	↑*i*P	**Pn**	**21 12 01.6**	**+3.6**
VOIR		**9.67**	**14**	↑*i*P	**Pn**	**21 12 01.6**	**+3.6**
MLR	**Muntele Rosu**	**9.91**	**17**	Pn	**Pn**	**21 12 08.3**	**+7.0**
	0.1nm,0.3s,baz=150,slow=13,SNR=4.0						
MLR	**Muntele Rosu**	**9.91**	**17**	↑*i*P	**Pn**	**21 12 08.1**	**+6.8**
NVLJ	**Novalja**	**10.01**	**330**	*e*Pn	**Pn**	**21 12 01.9**	**-0.7**
NVLJ				Sn	**Sn**	**21 13 47.9**	**-7.5**
NVLJ	**Novalja**	**10.01**	**330**	*e*Pn	**Pn**	**21 12 01.9**	**-0.7**
BRTR	**Keskin Array B**	**10.02**	**65**	Pn	**Pn**	**21 12 08.0**	**+5.2**
	0.0nm,0.3s,baz=250,slow=21,SNR=3.9						
PKSM	**Moragy**	**10.41**	**348**	↓*i*P	**Pn**	**21 12 07.2**	**-1.0**
PKSM	**Moragy**	**10.41**	**348**	↓*i*P	**Pn**	**21 12 07.2**	**-1.0**
MMAI	**Mount Meron Ar**	**11.60**	**101**	Pn	**Pn**	**21 12 20.6**	**-3.8**
	0.4nm,0.3s,baz=268,slow=24,SNR=3.7						
GERES	**GERESS Array B**	**14.10**	**337**	Pn	**Pn**	**21 12 57.6**	**-0.9**
	0.1nm,0.3s,baz=164,slow=15,SNR=2.7						
GERES	**GERESS Array B**	**14.10**	**337**	Pn	**Pn**	**21 12 57.6**	**-0.9**
AKASG	**Malin Array Be**	**15.57**	**18**	Pn	**Pn**	**21 13 14.7**	**-3.6**
	0.7nm,0.3s,baz=209,slow=9.5,SNR=3.7						
HFS	**Hagfors**	**24.65**	**350**	P	**P**	**21 14 58.2**	**-1.3**
	2.3nm,0.8s,mb3.8,baz=146,slow=11,SNR=4.0						
HFS	**Hagfors**	**24.65**	**350**	P	**P**	**21 14 58.2**	**-1.4**
FINES	**FINESS Array B**	**25.54**	**5**	P	**P**	**21 15 05.2**	**-2.4**
	2.3nm,0.8s,mb3.7,baz=187,slow=11,SNR=4.7						
EKA	**Eskdalemuir Ar**	**25.76**	**326**	P	**P**	**21 15 10.1**	**+0.4**
	0.6nm,0.6s,mb3.3,baz=127,slow=11,SNR=4.0						
EKA	**Eskdalemuir Ar**	**25.76**	**326**	P	**P**	**21 15 10.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**29.14**	**224**	P	**P**	**21 15 39.8**	**-0.6**
	1.0nm,0.7s,mb3.6,baz=34,slow=9.1,SNR=7.5						
AKTO	**Aktyubinsk**	**29.68**	**50**	P	**P**	**21 15 42.6**	**-2.2**
	0.8nm,0.5s,mb3.7,baz=114,slow=18,SNR=4.2						
ARCES	**ARCESS Array B**	**33.58**	**2**	P	**P**	**21 16 17.1**	**-1.9**
	1.4nm,0.6s,mb4.0,baz=197,slow=7.1,SNR=6.4						
SPITS	**Spitsbergen Ar**	**42.28**	**358**	P	**P**	**21 17 31.5**	**-0.8**
	9.2nm,1.1s,mb4.3,baz=152,slow=13,SNR=3.0						
SPITS	**Spitsbergen Ar**	**42.28**	**358**	P	**P**	**21 17 31.5**	**-0.8**
KURK	**Kurchatov**	**42.73**	**52**	P	**P**	**21 17 33.3**	**-2.9**
	0.4nm,0.5s,mb3.4,baz=275,slow=8.6,SNR=3.7						
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**21 17 56.9**	**-2.0**
	0.7nm,0.4s,mb3.9,baz=268,slow=7.3,SNR=16						
MKAR	**Makanchi Array**	**45.55**	**57**	P	**P**	**21 17 56.9**	**-2.0**
ZALV	**Zalesovo Beam**	**46.35**	**47**	P	**P**	**21 18 02.8**	**-2.3**
	0.8nm,0.4s,mb4.0,baz=268,slow=8.9,SNR=4.6						
SCHQ	**Schefferville**	**60.72**	**318**	LR	LR	21 44 59.0	
	comp=Z,241nm,18.5s,baz=172,slow=35						
CMAR	**Chiang Mai Arr**	**69.15**	**82**	P	**P**	**21 20 44.0**	**-2.0**
	1.1nm,0.8s,mb3.8,baz=303,slow=6.8,SNR=5.5						
CMAR	**Chiang Mai Arr**	**69.15**	**82**	P	**P**	**21 20 44.0**	**-2.0**

IDC 12 21:15:41.3±1.1, 31°.35N×103°.96E, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/25, mbtmp3.6/6, Error ellipse: s-maj=82.6km s-min=19.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.62**	**201**	Pn	Pn	21 19 05.0	+9.3
	0.1nm,0.3s,baz=8.1,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**22.71**	**319**	P	P	21 20 45.2	+0.7
	1.2nm,1.0s,baz=126,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	P	21 21 19.0	-0.7
	1.0nm,0.8s,baz=134,slow=10,SNR=4.2						
KURK	**Kurchatov**	**26.98**	**323**	P	P	21 21 24.3	-0.2
	0.8nm,1.0s,baz=128,slow=9.4,SNR=3.8						
WRA	**Warrumunga Arr**	**58.74**	**146**	P	P	21 25 41.2	+0.1
	0.9nm,0.5s,baz=339,slow=7.7,SNR=24						
ASAR	**Alice Springs**	**61.77**	**149**	P	P	21 26 01.6	-0.1
	0.4nm,0.9s,baz=333,slow=6.4,SNR=3.2						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	P	21 28 00.7	+0.6
	0.1nm,0.3s,baz=329,slow=5.2,SNR=4.2						

ISCJB 12 21:25:14.2±0.4, 31°.17N±0°.03×103°.76E±0°.06, h10km, mb3.6/9, Error ellipse: s-maj=7.4km s-min=4.8km az=172.1

IDC 12 21:25:14.6±0.8, 31°.17N×103°.72E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/26, mbtmp3.7/10, ML3.7/1, Error ellipse: s-maj=37.9km s-min=15.8km az=62.0

NEIC 12 21:25:15.7±0.3, 31°.18N×103°.75E, h10km, mb3.6/3, Error ellipse: s-maj=9.4km s-min=6.3km az=59.0

BJI 12 21:25:18.3, 31°.19N×103°.76E, h9km, ML3.7/11, Ms3.4/4, Ms7 3.3/1

ISC 12 21:25:16.0±0.4, 31°.21N±0°.03×103°.77E±0°.06, h10km, n29, σ0§89/35, mb3.6/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**182**	Pg	**Pg**	**21 25 21.0**	**-1.1**
CD2				Sg	**Sg**	**21 25 27.1**	**+0.9**
CD2				smax			
	comp=N,2μm,0.7s						
LZH	**Lanzhou**	**4.86**	**1**	Pg	**Pg**	**21 26 54.8**	**+5.7**
LZH				Sg	**Sb**	**21 27 41.1**	**+1.4**
LZH				smax			
	comp=N,51nm,0.5s						
LZH				smax			
	comp=E,53nm,0.6s						
LZH				LR	LR		
	comp=N,330nm,7.2s						
LZH				LR	LR		
	comp=Z,480nm,9.4s						
ENH	**Enshi**	**5.01**	**99**	*e*Pn	**Pn**	**21 26 30.0**	**-1.2**
	comp=Z,72nm,1.0s						
ENH				Sn	**Sn**	**21 27 29.8**	**+0.6**
XAN	**Xi'an**	**5.18**	**56**	Pg	**Pg**	**21 26 52.4**	**-2.8**
XAN				Sg	**Sg**	**21 27 52.6**	**-10**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,54nm,0.8s						
GYA	**Guiyang**	**5.37**	**151**	Pg	**Pg**	**21 26 54.4**	**-4.6**
GYA				Sg	**Sg**	**21 27 59.0**	**-10**
GYA				smax			
	comp=N,80nm,0.7s						
GYA				smax			
	comp=E,80nm,0.7s						
GYA				LR	LR		
	comp=N,150nm,5.0s						
GYA				LR	LR		
	comp=E,140nm,5.2s						
GYA				LR	LR		
	comp=E,150nm,5.0s						
KMI	**Kunming**	**6.14**	**189**	Pn	**Pn**	**21 26 48.3**	**+1.6**
KMI				Sn	**Sn**	**21 27 57.8**	**+0.8**
KMI				smax			
	comp=N,21nm,1.9s						
KMI				smax			
	comp=E,16nm,1.4s						
CHTO	**Chiang Mai**	**13.10**	**201**	Pn	**Pn**	**21 28 20.8**	**-1.4**
SONM	**Songino Array**	**16.72**	**6**	Pn	**Pn**	**21 29 10.9**	**+0.7**
	comp=E,0.3nm,0.3s,baz=183,slow=9.7,SNR=3.0						
ULN	**Ulaanbaatar**	**16.82**	**8**	*e*Pn	**Pn**	**21 29 11.6**	**+0.1**
	comp=E,0.8nm,0.7s						
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**21 29 59.2**	**+1.1**
	comp=E,1.3nm,0.6s,baz=270,slow=9.6,SNR=3.5						
MK31	**Makanchi Array**	**22.71**	**319**	*e*P	**P**	**21 30 18.2**	**+0.4**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**21 30 18.9**	**+1.1**
	comp=E,0.8nm,0.7s,mb3.3,baz=108,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**21 30 18.9**	**+1.1**
AAK	**Ala-Archa**	**25.91**	**304**	P	**P**	**21 30 47.3**	**-0.9**
AML	**Almayashu**	**26.34**	**303**	P	**P**	**21 30 51.4**	**-0.7**
ZALV	**Zalesovo Beam**	**26.50**	**335**	P	**P**	**21 30 53.0**	**-0.4**
	comp=E,0.4nm,0.3s,mb3.4,baz=146,slow=8.7,SNR=3.0						
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**21 30 58.1**	**+0.3**
	comp=E,0.7nm,0.7s,mb3.3,baz=129,slow=9.2,SNR=5.3						
KURK	**Kurchatov**	**26.99**	**323**	*e*P	**P**	**21 30 57.3**	**-0.5**
	comp=E,0.8nm,0.6s,mb3.4						
KBL	**Kabul**	**29.27**	**286**	P	**P**	**21 31 17.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**53.34**	**154**	P	**P**	**21 34 36.5**	**+0.9**
	comp=E,1.0nm,0.9s,mb3.8,baz=270,slow=16,SNR=2.8						
CSS	**Prodhromos**	**58.01**	**294**	P	**P**	**21 35 08.3**	**-0.9**
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**21 35 14.1**	**0.0**
	comp=E,1.3nm,0.6s,mb4.2,baz=338,slow=7.8,SNR=14						
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**21 35 34.1**	**-0.5**
	comp=E,0.3nm,0.6s,mb3.6,baz=340,slow=5.9,SNR=5.6						
PSZ	**Piszkesteto**	**63.70**	**312**	*e*P	**P**	**21 35 47.1**	**-0.5**
	comp=E,1.7nm,0.8s,mb4.1						
MORC	**Moravsky Berou**	**64.59**	**314**	P	**P**	**21 35 53.5**	**+0.1**
WLF	**Walferdange**	**71.45**	**317**	P	**P**	**21 36 36.7**	**+0.2**
STKA	**Stephens Creek**	**72.25**	**147**	P	**P**	**21 36 41.4**	**-0.1**
	comp=E,0.7nm,0.8s,mb3.6,baz=301,slow=5.9,SNR=2.8						
YKA	**Yellowknife Ar**	**81.67**	**17**	P	**P**	**21 37 34.2**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.5,baz=330,slow=5.2,SNR=6.8						
YKA	**Yellowknife Ar**	**81.67**	**17**	P	**P**	**21 37 34.2**	**0.0**

IDC 12 21:26:54.2±1.8, 31°.61N×104°.64E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=346.3km s-min=21.2km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.90**	**318**	P	P	21 31 59.0	-0.4
	0.3nm,0.5s,baz=112,slow=11,SNR=3.4						
KURK	**Kurchatov**	**27.12**	**322**	P	P	21 32 39.2	+0.5
	0.7nm,0.7s,baz=126,slow=9.2,SNR=4.7						
WRA	**Warramunga Arr**	**58.64**	**147**	P	P	21 36 53.4	+0.1
	1.5nm,0.4s,baz=338,slow=7.9,SNR=20						
ASAR	**Alice Springs**	**61.69**	**149**	P	P	21 37 14.2	0.0
	0.2nm,0.4s,baz=335,slow=6.4,SNR=3.8						

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comp=Z,0.5nm,0.5s,mb3.3,baz=132,slow=8.6,SNR=2.7
KURK Kurchatov 27.04 323 P **P 21 39 49.5 -0.2**
comp=Z,1.7nm,0.9s,mb3.6,baz=128,slow=9.7,SNR=9.6
KURK Kurchatov 27.04 323 *e*P **P 21 39 48.5 -1.2**
comp=Z,1.2nm,0.7s,mb3.5
KBL Kabul 29.32 286 *e*P **P 21 40 08.9 -1.4**
comp=Z,0.6nm,0.4s,mb3.7
FINES FINESS Array B 57.37 326 P **P 21 43 56.5 +0.8**
comp=Z,3.0nm,1.0s,mb4.3,baz=96,slow=9.9,SNR=3.2
WRA Warramunga Arr 58.67 146 P **P 21 44 05.6 +0.3**
comp=Z,2.5nm,0.8s,mb4.3,baz=328,slow=9.0,SNR=19
ASAR Alice Springs 61.69 149 P **P 21 44 26.2 +0.4**
comp=Z,0.7nm,0.7s,mb3.9,baz=345,slow=7.0,SNR=7.1
STKA Stephens Creek 72.21 147 P **P 21 45 32.8 +0.1**
comp=Z,0.9nm,0.7s,mb3.8,baz=345,slow=11,SNR=3.0
YKA Yellowknife Ar 81.69 17 P **P 21 46 27.0 +1.2**
comp=Z,0.4nm,0.7s,mb3.5,baz=330,slow=5.1,SNR=5.4
TXAR Lajitas Array 114.38 26 PKP PKiKP 21 52 49.6 +1.5
comp=Z,0.2nm,0.7s,baz=55,slow=3.4,SNR=3.0

*ISCJB **12** 21:39:06.0±1.0, 32°.29N±0°.03×105°.19E±0°.05, h7km±7km, mb4.0/16, Error ellipse: s-maj=7.5km s-min=5.4km az=157.9*
*BJI **12** 21:39:06.3, 32°.21N×105°.17E, h6km, mb4.1/1, ML4.1/8, Ms3.8/2, Ms7 3.6/3*
*IDC **12** 21:39:07.4±0.8, 32°.23N×104°.96E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, ML3.6/2, Error ellipse: s-maj=36.9km s-min=15.2km az=53.0*
*NEIC **12** 21:39:08.8±0.3, 32°.20N×104°.90E, h10km, mb4.1/7, Error ellipse: s-maj=9.0km s-min=5.7km az=72.0*
ISC 12 21:39:07.3±1.1, 32°.27N±0°.03×105°.08E±0°.05, h1km±8km, n37, σ1°.20/44, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.76**	**220**	Pn	**Pn**	**21 39 39.6**	**+0.7**
CD2				Sn	**Sn**	**21 40 03.2**	**+1.2**
CD2				smax			
	comp=N,3μm,0.5s						
XAN	**Xi'an**	**3.67**	**60**	Pg	**Pg**	**21 40 18.5**	**+0.7**
XAN				Sg	**Sg**	**21 41 01.7**	**-3.7**
XAN				smax			
	comp=N,240nm,0.6s						
XAN				smax			
	comp=E,110nm,0.7s						
LZH	**Lanzhou**	**3.94**	**345**	Pn	**Pn**	**21 40 12.3**	**+3.4**
LZH				Pg	**Pg**	**21 40 23.1**	**+0.2**
LZH				Sg	**Sg**	**21 41 11.0**	**-3.0**
LZH				smax			
	comp=N,520nm,0.8s						
LZH				smax			
	comp=E,1μm,0.9s						
LZH				LR	LR		
	comp=E,1μm,6.2s						
LZH				LR	LR		
	comp=Z,1μm,7.1s						
ENH	**Enshi**	**4.27**	**117**	*e*Pn	**Pn**	**21 40 15.6**	**+2.2**
ENH				S	**Sg**	**21 41 25.4**	**+0.9**
GYA	**Guiyang**	**5.96**	**166**	Pg	**Pg**	**21 41 05.6**	**+4.1**
GYA				Sg	**Sb**	**21 42 03.0**	**-0.7**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,120nm,0.9s						
WHN	**Wuhan**	**8.11**	**100**	P	**Pn**	**21 41 03.8**	**-2.4**
WHN				S	**Sn**	**21 42 35.3**	**-3.2**
GTA	**Gaotai**	**8.31**	**331**	*e*P	**Pb**	**21 41 29.5**	**-2.4**
GTA				pP		21 41 33.7	
GTA				sP		21 41 36.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**14.49**	**204**	*e*Pn	**Pn**	**21 42 32.4**	**-1.2**
CM31	**Chiang Mai Arr**	**14.82**	**203**	*e*Pn	**Pn**	**21 42 36.4**	**-1.7**
SONM	**Songino Array**	**15.58**	**3**	Pn	**Pn**	**21 42 49.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=182,slow=9.2,SNR=4.4						
ULN	**Ulaanbaatar**	**15.65**	**5**	*e*Pn	**Pn**	**21 42 51.5**	**+2.6**
	comp=Z,13nm,1.4s						
KSRS	**Korea Array**	**19.43**	**68**	P	**Pn**	**21 43 37.4**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=252,slow=10,SNR=5.1						
MK31	**Makanchi Array**	**22.68**	**316**	*e*P	**P**	**21 44 09.8**	**-0.2**
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**21 44 10.3**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.5,baz=115,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**21 44 10.3**	**+0.3**
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**21 44 43.7**	**+1.7**
	comp=Z,1.8nm,0.8s,mb3.7,baz=138,slow=9.1,SNR=6.4						
UCH	**Uchtor**	**26.16**	**301**	*e*P	**P**	**21 44 43.0**	**0.0**
	comp=Z,1.8nm,0.9s,mb3.6						
AML	**Almayashu**	**26.74**	**301**	P	**P**	**21 44 48.8**	**+0.5**
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**21 44 50.0**	**+0.9**
	comp=Z,3.2nm,1.1s,mb3.8,baz=122,slow=11,SNR=11						
KURK	**Kurchatov**	**26.84**	**321**	*e*P	**P**	**21 44 47.6**	**-1.5**
	comp=Z,2.8nm,0.8s,mb3.8						
PALK	**Pallekele**	**33.66**	**228**	*e*P	**P**	**21 45 48.8**	**-1.1**
	comp=Z,5.7nm,0.7s,mb4.6						
ABKAR	**Akbulak array**	**37.54**	**310**	*e*P	**P**	**21 46 22.8**	**0.0**
	comp=Z,1.4nm,0.7s,mb3.8						
AKTK	**Aktyubinsk**	**38.96**	**312**	P	**P**	**21 46 35.6**	**+0.8**
AKTO	**Aktyubinsk**	**38.96**	**312**	P	**P**	**21 46 35.6**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.8,baz=140,slow=8.8,SNR=3.3						
ARU	**Arti**	**40.03**	**321**	*e*P	**P**	**21 46 43.7**	**+0.1**
	comp=Z,9.1nm,1.1s,mb4.4						
KIV	**Kislovodsk**	**49.38**	**303**	*e*P	**P**	**21 47 58.3**	**-0.1**
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**21 48 49.9**	**-1.0**
	comp=Z,2.7nm,0.7s,mb4.4,baz=72,slow=7.8,SNR=8.0						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**21 48 54.5**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=114,slow=4.8,SNR=5.9						
AKASG	**Malin Array Be**	**57.20**	**313**	P	**P**	**21 48 55.1**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.8,baz=69,slow=6.6,SNR=2.7						
WRAB	**Tennant Creek**	**58.99**	**148**	*e*P	**P**	**21 49 09.2**	**+0.6**
	comp=Z,1.7nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**21 49 09.1**	**+0.4**
	comp=Z,2.6nm,0.6s,mb4.4,baz=341,slow=7.4,SNR=23						
KWP	**Kalwaria Pacla**	**61.52**	**313**	*e*P	**P**	**21 49 25.0**	**-0.7**
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**21 49 30.2**	**+0.6**
	comp=Z,1.1nm,0.5s,mb4.2,baz=330,slow=6.5,SNR=17						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**21 49 41.4**	**-1.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=71,slow=6.6,SNR=3.1						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**21 49 41.4**	**-1.5**
YKA	**Yellowknife Ar**	**80.33**	**18**	P	**P**	**21 51 19.8**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.0,SNR=5.2						
YKA	**Yellowknife Ar**	**80.33**	**18**	P	**P**	**21 51 19.8**	**+0.1**

*ISCJB **12** 21:41:15.0±0.4, 32°.15N±0°.04×105°.38E±0°.06, h10km, mb4.1/18, Error ellipse: s-maj=7.7km s-min=4.8km az=25.3*
*IDC **12** 21:41:16.1±0.7, 32°.24N×105°.34E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/28, mbtmp4.1/16, ML3.0/2, Error ellipse: s-maj=33.1km s-min=13.7km az=52.0*
*NEIC **12** 21:41:17.2±0.4, 32°.22N×105°.35E, h10km, mb4.1/5, Error ellipse: s-maj=8.5km s-min=6.9km az=92.0*
*BJI **12** 21:41:19.6, 32°.32N×104°.85E, h10km, mB4.5/1, mb4.0/1, ML4.3/4, Ms4.0/1, Ms7 4.0/1*
ISC 12 21:41:17.1±0.4, 32°.16N±0°.04×105°.33E±0°.06, h10km, n44, σ0°.99/49, mb4.1/18, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.83**	**228**	Pn	**Pn**	**21 41 48.6**	**0.0**
CD2				Pg	**Pg**	**21 41 49.9**	**-2.3**
CD2				Sn	**Sn**	**21 42 12.3**	**+0.5**
CD2				Sg	**Sg**	**21 42 14.4**	**-1.5**
CD2				smax			
	comp=N,6μm,0.6s						
LZH	**Lanzhou**	**4.11**	**343**	Pn	**Pn**	**21 42 19.1**	**-0.8**
LZH				Pg	**Pg**	**21 42 31.0**	**-4.8**
LZH				Sg	**Sb**	**21 43 19.7**	**+0.5**
LZH				smax			
	comp=N,870nm,1.0s						
LZH				smax			
	comp=E,760nm,0.9s						
LZH				LR	LR		
	comp=E,2μm,7.3s						
LZH				LR	LR		
	comp=Z,2μm,9.4s						
GYA	**Guiyang**	**5.80**	**168**	Pg	Px	21 43 25.6	
GYA				Sg	**Sg**	**21 44 18.6**	**-4.7**
GYA				smax			
	comp=N,120nm,0.9s						
GYA				smax			
	comp=E,120nm,0.7s						
BJT	**Baijiatuau**	**11.76**	**45**	Pn	**Pn**	**21 44 04.2**	**-0.7**
CHTO	**Chiang Mai**	**14.48**	**205**	Pn	**Pn**	**21 44 42.2**	**0.0**
CM31	**Chiang Mai Arr**	**14.81**	**204**	*e*P	**Pn**	**21 44 47.5**	**+0.8**
SONM	**Songino Array**	**15.68**	**3**	Pn	**Pn**	**21 44 58.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=183,slow=8.7,SNR=3.3						
ULN	**Ulaanbaatar**	**15.74**	**4**	Pn	**Pn**	**21 44 57.7**	**-1.2**
KSRS	**Korea Array**	**19.28**	**68**	P	**Pn**	**21 45 42.8**	**-0.1**
	comp=E,0.1nm,0.3s,baz=116,slow=36,SNR=2.9						
MK31	**Makanchi Array**	**22.90**	**316**	*e*P	**P**	**21 46 17.8**	**-3.1**
MKAR	**Makanchi Array**	**22.90**	**316**	P	**P**	**21 46 19.0**	**-1.9**
	comp=E,1.3nm,0.6s,mb3.5,baz=118,slow=10,SNR=9.1						
MKAR	**Makanchi Array**	**22.90**	**316**	P	**P**	**21 46 19.0**	**-1.9**
KSH	**Kashi**	**24.83**	**295**	P	**P**	**21 46 41.8**	**+2.3**
KSH				pmax	pmax		
	comp=Z,67nm,4.2s						
TKM2	**Tokmak 2**	**25.78**	**303**	*e*P	**P**	**21 46 49.0**	**+0.8**
	comp=Z,2.4nm,0.8s,mb3.8						
ZALV	**Zalesovo Beam**	**26.25**	**332**	P	**P**	**21 46 51.8**	**-0.5**
	comp=Z,2.0nm,0.8s,mb3.7,baz=133,slow=10,SNR=6.9						
UCH	**Uchtor**	**26.40**	**301**	*e*P	**P**	**21 46 54.6**	**+0.9**
	comp=Z,4.2nm,1.0s,mb3.9						
AAK	**Ala-Archa**	**26.50**	**302**	P	**P**	**21 46 54.7**	**+0.1**
AML	**Almayashu**	**26.98**	**301**	*e*P	**P**	**21 46 59.2**	**+0.2**
KURK	**Kurchatov**	**27.05**	**321**	P	**P**	**21 46 59.0**	**-0.6**
	comp=Z,3.2nm,0.8s,mb3.9,baz=133,slow=8.4,SNR=14						
KURK	**Kurchatov**	**27.05**	**321**	*e*P	**P**	**21 47 00.4**	**+0.9**
	comp=Z,3.4nm,0.7s,mb4.0						
KBL	**Kabul**	**30.30**	**284**	P	**P**	**21 47 27.9**	**-0.7**
YSS	**Yuzh-Sakhalins**	**32.08**	**52**	P	**P**	**21 47 42.7**	**-1.5**
BVAR	**Borovoye Array**	**32.63**	**320**	P	**P**	**21 47 49.9**	**+1.0**
	comp=Z,1.5nm,0.7s,mb4.0,baz=115,slow=10,SNR=5.8						
YAK	**Yakutsk**	**33.75**	**20**	P	**P**	**21 47 56.9**	**-1.7**
ABKAR	**Akbulak array**	**37.77**	**310**	*e*P	**P**	**21 48 32.4**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.0						
AKTK	**Aktyubinsk**	**39.20**	**312**	P	**P**	**21 48 46.3**	**+1.1**
AKTO	**Aktyubinsk**	**39.20**	**312**	P	**P**	**21 48 46.3**	**+1.1**
	comp=Z,2.5nm,0.6s,mb4.1,baz=114,slow=10,SNR=7.3						
ARU	**Arti**	**40.25**	**321**	*e*P	**P**	**21 48 53.9**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.3						
KIV	**Kislovodsk**	**49.62**	**303**	P	**P**	**21 50 09.1**	**+0.5**
OBN	**Obninsk**	**52.40**	**317**	P	**P**	**21 50 29.0**	**-0.4**
ARCES	**ARCESS Array B**	**56.73**	**336**	P	**P**	**21 51 00.6**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.4,baz=69,slow=6.6,SNR=6.2						
BR131	**Keskin Array S**	**57.13**	**299**	P	**P**	**21 51 04.0**	**+0.1**
BRTR	**Keskin Array B**	**57.13**	**299**	P	**P**	**21 51 05.0**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=104,slow=7.8,SNR=4.0						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**21 51 05.5**	**+0.8**
	comp=Z,3.8nm,0.7s,mb4.5,baz=82,slow=7.0,SNR=12						
AKASG	**Malin Array Be**	**57.43**	**313**	P	**P**	**21 51 06.4**	**+0.6**
	comp=Z,1.3nm,0.5s,mb4.2,baz=70,slow=6.3,SNR=3.4						
WRA	**Warramunga Arr**	**58.79**	**148**	P	**P**	**21 51 16.5**	**+0.9**
	comp=Z,3.1nm,0.6s,mb4.5,baz=340,slow=7.4,SNR=14						
CSS	**Prodhromos**	**58.84**	**294**	P	**P**	**21 51 16.4**	**+0.4**
TIRR	**Tirgusor**	**59.52**	**306**	P	**P**	**21 51 20.5**	**-0.1**
KWP	**Kalwaria Pacla**	**61.75**	**313**	*e*P	**P**	**21 51 36.1**	**+0.4**
ASAR	**Alice Springs**	**61.87**	**150**	P	**P**	**21 51 38.0**	**+1.3**
	comp=Z,1.8nm,0.8s,mb4.3,baz=338,slow=7.1,SNR=12						
NB2	**NORSAR Subarra**	**64.33**	**327**	P	**P**	**21 51 50.2**	**-2.4**
	comp=Z,2.4nm,0.6s,mb4.4,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.33**	**327**	P	**P**	**21 51 52.9**	**+0.2**
	comp=Z,2.1nm,0.6s,mb4.3,baz=70,slow=6.5,SNR=6.1						
STKA	**Stephens Creek**	**72.33**	**148**	P	**P**	**21 52 43.6**	**+0.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=350,slow=6.1,SNR=4.6						
YKA	**Yellowknife Ar**	**80.38**	**18**	P	**P**	**21 53 27.8**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=329,slow=5.2,SNR=10						

IDC 12 21:45:45.4±1.0, 31°.19N×103°.59E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/25, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=67.5km s-min=17.6km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**13.14**	**239**	*e*P	Pn	21 48 45.0	-8.4
SONM	**Songino Array**	**16.76**	**7**	Pn	Pn	21 49 42.2	+0.7
	0.1nm,0.3s,baz=183,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**22.63**	**320**	P	P	21 50 47.5	-0.3
	0.6nm,0.7s,baz=124,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	P	21 51 24.2	+0.3
	0.9nm,0.5s,baz=127,slow=9.8,SNR=5.4						
KURK	**Kurchatov**	**26.92**	**324**	P	P	21 51 28.3	+0.2
	1.2nm,0.8s,baz=129,slow=9.9,SNR=6.9						
WRA	**Warramunga Arr**	**58.79**	**146**	P	P	21 55 45.9	+0.4
	0.8nm,0.7s,baz=328,slow=8.9,SNR=9.1						
ASAR	**Alice Springs**	**61.79**	**148**	P	P	21 56 06.0	-0.1
	0.3nm,0.5s,baz=336,slow=6.5,SNR=5.7						
STKA	**Stephens Creek**	**72.32**	**147**	P	P	21 57 12.7	-0.2
	0.3nm,0.4s,baz=244,slow=17,SNR=3.0						
YKA	**Yellowknife Ar**	**81.74**	**17**	P	P	21 58 05.2	-0.3
	0.3nm,0.6s,baz=333,slow=5.3,SNR=3.8						

IDC 12 21:47:39.6±1.3, 31°.69N×104°.96E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.5/27, mbtmp3.7/7, ML3.5/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/35, Error ellipse: s-maj=44.7km s-min=21.6km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.16**	**3**	Pn	Pn	21 51 28.9	+0.8
	0.2nm,0.3s,baz=182,slow=11,SNR=3.7						
KSRS	**Korea Array**	**19.75**	**67**	P	Pn	21 52 10.5	-1.9
	0.1nm,0.3s,baz=251,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**23.03**	**317**	P	P	21 52 46.6	+0.4
	1.5nm,0.6s,baz=112,slow=12,SNR=13						
ZALV	**Zalesovo Beam**	**26.53**	**333**	P	P	21 53 18.7	0.0
	0.8nm,0.6s,baz=142,slow=7.5,SNR=3.9						
KURK	**Kurchatov**	**27.23**	**322**	P	P	21 53 24.6	-0.4
	0.7nm,0.7s,baz=125,slow=9.1,SNR=5.6						
FINES	**FINESS Array B**	**57.49**	**326**	P	P	21 57 30.2	+0.1
	1.3nm,0.8s,baz=98,slow=10.0,SNR=4.2						
WRA	**Warramunga Arr**	**58.56**	**147**	P	P	21 57 38.2	+0.1
	0.5nm,0.8s,baz=340,slow=7.9,SNR=4.2						

*ISCJB **12** 21:50:59.1±0.7, 18°.91N±0°.05×145°.17E±0°.09, h574km±9km, mb3.9/23, Error ellipse: s-maj=12.9km s-min=8.0km az=175.3*
*NEIC **12** 21:50:60.0±0.7, 18°.90N×145°.21E, h570km±8km, mb4.1/12, Error ellipse: s-maj=8.5km s-min=5.9km az=85.0*
*IDC **12** 21:51:00.7±1.3, 18°.90N×145°.18E, h574km±15km, mb3.3/14, mb1 3.5/16, mb1mx3.4/26, mbtmp3.4/16, Error ellipse: s-maj=20.6km s-min=8.5km az=87.0*
ISC 12 21:50:59.8±0.7, 18°.91N±0°.05×145°.21E±0°.09, h566km±9km, n57, σ0°.64/52, mb3.9/23, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.30**	**184**	P	**P**	**21 52 32.9**	**-0.3**
	15nm,0.3s,baz=222,slow=8.4,SNR=4.4						
GUMO				S	**S**	**21 53 47.2**	**-2.1**
	12nm,0.3s,baz=343,slow=21,SNR=3.5						
GUMO	**Guam**	**5.30**	**184**	*e*P	**P**	**21 52 32.8**	**-0.4**
GUMO				*e*S	**S**	**21 53 50.8**	**+1.5**
MJAR	**Matsushiro Arr**	**18.61**	**342**	P	**P**	**21 54 42.0**	**-0.4**
	1.4nm,0.3s,baz=169,slow=10,SNR=16						
MAJO	**Matsushiro**	**18.62**	**342**	*e*P	**P**	**21 54 42.4**	**0.0**
	15nm,0.9s						
MAT	**Matsushiro**	**18.62**	**342**	P	**P**	**21 54 41.9**	**-0.5**
YULB	**Yu-li**	**22.73**	**285**	P	**P**	**21 55 19.2**	**-0.5**
TATO	**Taipei**	**22.80**	**290**	*e*P	**P**	**21 55 20.4**	**+0.1**
YHNB	**Yeheng**	**22.85**	**289**	*e*P	**P**	**21 55 20.1**	**-0.6**
	7.5nm,0.5s,mb4.6						
SSLB	**Suanglung**	**23.09**	**286**	P	**P**	**21 55 23.1**	**+0.2**
KSRS	**Korea Array**	**23.88**	**324**	P	**P**	**21 55 29.4**	**-0.2**
	1.8nm,0.6s,mb3.9,baz=146,slow=9.4,SNR=7.0						
KKM	**Kota Kinabalu**	**31.00**	**249**	*e*P	**P**	**21 56 33.0**	**+0.8**
	15nm,0.6s,mb4.7						
PET	**Petropavlovsk**	**35.62**	**14**	P	**P**	**21 57 10.4**	**0.0**
HIA	**Hailar**	**36.56**	**332**	*e*P	**P**	**21 57 19.1**	**+0.8**
KSM	**Kuching**	**38.33**	**247**	*e*P	**P**	**21 57 32.6**	**-0.6**
CTA	**Charters Tower**	**38.77**	**178**	*e*P	**P**	**21 57 37.4**	**+0.8**
	9.3nm,0.8s,mb4.4						
CTAO	**Charters Tower**	**38.77**	**178**	*e*P	**P**	**21 57 37.1**	**+0.5**
	14nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**40.04**	**196**	*e*P	**P**	**21 57 47.2**	**+0.4**
	12nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**40.05**	**196**	P	**P**	**21 57 47.0**	**+0.1**
	7.7nm,0.3s,mb4.7,baz=17,slow=8.3,SNR=199						
WRA	**Warramunga Arr**	**40.05**	**196**	P	**P**	**21 57 47.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**41.50**	**209**	*e*P	**P**	**21 57 58.9**	**+0.5**
	6.6nm,0.3s,mb4.6						
FITZ	**Fitzroy Crossi**	**41.50**	**209**	P	**P**	**21 57 58.9**	**+0.4**
	3.9nm,0.3s,mb4.4,baz=39,slow=9.1,SNR=62						
FITZ	**Fitzroy Crossi**	**41.50**	**209**	*e*P	**P**	**21 57 58.1**	**-0.4**
SONM	**Songino Array**	**42.69**	**321**	P	**P**	**21 58 09.1**	**+1.7**
	0.4nm,0.5s,mb3.2,baz=134,slow=8.3,SNR=2.7						
ASAR	**Alice Springs**	**43.73**	**195**	P	**P**	**21 58 15.9**	**+0.1**
	5.2nm,0.4s,mb4.5,baz=16,slow=6.9,SNR=104						
ASAR				PcP	PcP	21 59 50.4	+0.4
	0.6nm,0.4s,baz=12,slow=4.1,SNR=5.0						
ASAR				S	**S**	**22 04 04.5**	**-1.0**
	1.3nm,0.7s,baz=23,slow=20,SNR=10.0						
DZM	**Mont Dzumac**	**45.72**	**152**	*e*P	**P**	**21 58 31.3**	**+0.3**
MBWA	**Marble Bar**	**46.99**	**213**	*e*P	**P**	**21 58 40.6**	**-0.1**
	1.8nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**50.61**	**184**	*e*P	**P**	**21 59 07.4**	**+0.1**
	5.3nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**50.61**	**184**	P	**P**	**21 59 07.5**	**+0.2**
	6.1nm,0.5s,mb4.2,baz=354,slow=7.8,SNR=26						
STKA	**Stephens Creek**	**50.61**	**184**	*e*P	**P**	**21 59 07.4**	**+0.2**
	1.0nm,0.5s,mb3.4						
UNV	**Unalaska Valle**	**50.75**	**35**	P	**P**	**21 59 08.2**	**+0.2**
BILL	**Bilibino**	**50.89**	**10**	*e*P	**P**	**21 59 09.2**	**+0.4**
	3.6nm,0.4s,mb4.0						
ZALV	**Zalesovo Beam**	**57.57**	**322**	P	**P**	**21 59 56.8**	**+1.0**
	0.5nm,0.3s,mb3.1,baz=125,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**57.98**	**314**	P	**P**	**21 59 59.7**	**+0.8**
	0.7nm,0.5s,mb3.1,baz=88,slow=8.9,SNR=8.4						
MKAR	**Makanchi Array**	**57.98**	**314**	P	**P**	**21 59 59.7**	**+0.8**
KURK	**Kurchatov**	**60.81**	**318**	P	**P**	**22 00 17.9**	**+0.3**
	2.9nm,0.5s,mb3.9,baz=96,slow=7.4,SNR=18						
KURK	**Kurchatov**	**60.81**	**318**	*e*P	**P**	**22 00 16.8**	**-0.8**
	1.9nm,0.7s,mb3.5						
AML	**Almayashu**	**63.99**	**308**	*e*P	**P**	**22 00 38.4**	**+0.1**
	0.8nm,0.4s,mb3.5						
BVAR	**Borovoye Array**	**66.02**	**320**	P	**P**	**22 00 50.7**	**-0.1**
	0.9nm,0.5s,mb3.5,baz=96,slow=6.4,SNR=3.6						
KBL	**Kabul**	**68.37**	**300**	*e*P	**P**	**22 01 05.5**	**-0.1**
	1.5nm,0.5s,mb3.8						
INK	**Inuvik**	**69.36**	**23**	P	**P**	**22 01 10.9**	**+0.1**
	1.7nm,0.8s,mb3.6,baz=259,slow=8.7,SNR=4.9						
INK	**Inuvik**	**69.36**	**23**	*e*P	**P**	**22 01 11.0**	**+0.1**
INK				*e*PcP	PcP	22 01 29.1	-0.7
ARU	**Arti**	**72.63**	**324**	*e*P	**P**	**22 01 29.9**	**-0.4**
ABKAR	**Akbulak array**	**72.87**	**317**	*e*P	**P**	**22 01 31.0**	**-0.7**
	0.6nm,0.3s,mb3.5						
YKA	**Yellowknife Ar**	**78.02**	**28**	P	**P**	**22 01 59.8**	**-0.2**
	0.7nm,0.5s,mb3.2,baz=288,slow=5.2,SNR=9.1						
ARCES	**ARCESS Array B**	**82.15**	**342**	P	**P**	**22 02 21.3**	**-0.2**
	3.7nm,1.1s,mb3.7,baz=82,slow=7.4,SNR=3.5						
HLID	**Hailey**	**84.42**	**46**	P	**P**	**22 02 32.8**	**-0.5**
FINES	**FINESS Array B**	**86.50**	**335**	P	**P**	**22 02 41.0**	**-1.9**
	4.4nm,1.0s,mb4.0,baz=64,slow=4.4,SNR=7.2						
ISCO	**Idaho Springs**	**91.96**	**47**	P	**P**	**22 03 08.9**	**+0.1**
ANMO	**Albuquerque**	**93.49**	**51**	*e*P	**P**	**22 03 15.8**	**-0.1**
VNA2	**Neumayer--Watz**	**125.49**	**191**	*e*	PKPdf	22 08 55.1	-1.3
TORD	**Torodi Ar. Bea**	**131.96**	**309**	PKP	PKPdf	22 09 09.3	-1.0
	0.1nm,0.4s,baz=55,slow=0.8,SNR=7.1						
TORD				SKPbc	SKPbc	22 11 41.5	-2.7
	1.2nm,0.8s,baz=48,slow=3.0,SNR=9.4						
DBIC	**Dimbokro**	**141.06**	**308**	PKhKP		22 09 21.4	
	2.3nm,1.0s,baz=51,slow=19,SNR=4.5						
DBIC				SKPbc	SKPbc	22 12 08.3	-2.8
	1.3nm,0.7s,baz=133,slow=8.7,SNR=5.0						
PLCA	**Paso Flores**	**142.48**	**133**	PKP	PKPdf	22 09 26.8	-2.0
	4.8nm,0.7s,baz=239,slow=4.1,SNR=20						
LVC	**Limon Verde**	**147.93**	**103**	*e*PKPbc	PKPbc	22 09 43.4	+0.8
LPAZ	**La Paz**	**148.14**	**91**	PKP	PKPdf	22 09 40.5	+1.4
	3.2nm,0.5s,baz=160,slow=3.0,SNR=3.6

IDC 12 22:15:40.4±1.1, 31°.11N×103°.71E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.5/6, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/35, Error ellipse: s-maj=41.4km s-min=20.9km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.83**	**6**	Pn	Pn	22 19 37.1	-0.2
	0.2nm,0.3s,baz=180,slow=8.5,SNR=2.1						
SONM				LR	LR	22 25 23.7	
	comp=Z,50nm,19.1s,baz=238,slow=35						
KSRS	**Korea Array**	**20.96**	**66**	P	P	22 20 24.9	-0.1
	3.3nm,0.7s,baz=263,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**22.75**	**320**	P	P	22 20 44.2	+0.1
	0.2nm,0.6s,baz=122,slow=14,SNR=3.3						
KURK	**Kurchatov**	**27.04**	**324**	P	P	22 21 24.2	0.0
	0.2nm,0.3s,baz=126,slow=10.0,SNR=5.4						
WRA	**Warramunga Arr**	**58.67**	**146**	P	P	22 25 40.1	+0.4
	0.7nm,0.4s,baz=338,slow=7.9,SNR=15						
ASAR	**Alice Springs**	**61.68**	**148**	P	P	22 25 59.9	-0.4
	0.2nm,0.4s,baz=340,slow=7.2,SNR=3.0						

IDC 12 22:17:31.2±1.1, 31°.22N×103°.82E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.7/7, Error ellipse: s-maj=45.1km s-min=19.5km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.83**	**66**	P	P	22 22 15.0	+0.6
	1.5nm,0.6s,baz=258,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**22.73**	**319**	P	P	22 22 35.7	+1.0
	0.6nm,0.7s,baz=122,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	P	22 23 10.4	+0.2
	1.1nm,0.7s,baz=148,slow=8.7,SNR=3.6						
KURK	**Kurchatov**	**27.01**	**323**	P	P	22 23 14.4	-0.3
	1.1nm,0.8s,baz=126,slow=9.2,SNR=5.0						
WRA	**Warramunga Arr**	**58.71**	**146**	P	P	22 27 30.6	-0.2
	1.9nm,0.5s,baz=338,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**61.72**	**149**	P	P	22 27 51.9	+0.5
	0.5nm,0.7s,baz=331,slow=7.1,SNR=4.2						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	P	22 29 50.1	-0.8
	0.3nm,0.6s,baz=330,slow=5.4,SNR=5.4						

*IDC **12** 22:19:28.6±0.9, 31°.74N×104°.38E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.7/27, mbtmp3.9/10, ML2.8/1, Error ellipse: s-maj=37.9km s-min=16.6km az=58.0*
*NEIC **12** 22:19:30.1±0.3, 31°.77N×104°.29E, h10km, mb3.8/6, Error ellipse: s-maj=6.9km s-min=5.7km az=54.0*
*BJI **12** 22:19:30.1, 31°.75N×104°.34E, h10km, mB4.8/4, mb4.1/8, ML4.2/8, Ms4.1/4, Ms7 3.6/5*

ISC 12 22:19:28.3±1.0, 31°.81N±0°.03×104°.45E±0°.05, h0km±7km, n46, σ0°82/52, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.30**	**353**	Pn	**Pn**	**22 20 38.8**	**+3.9**
LZH				Sg	**Sg**	**22 21 46.7**	**+0.2**
LZH				smax			
	comp=N,320nm,1.0s						
LZH				smax			
	comp=E,590nm,1.0s						
LZH				LR	LR		
	comp=N,550nm,5.0s						
LZH				LR	LR		
	comp=Z,570nm,8.2s						
XAN	**Xi'an**	**4.37**	**58**	Pg	**Pg**	**22 20 50.5**	**-1.6**
XAN				Sg	**Sg**	**22 21 47.7**	**-1.0**
XAN				smax			
	comp=N,650nm,0.5s						
XAN				smax			
	comp=E,140nm,0.4s						
ENH	**Enshi**	**4.59**	**108**	*e*Pn	**Pn**	**22 20 43.3**	**+4.4**
ENH				*e*S	**Sg**	**22 21 55.6**	**-0.1**
GYA	**Guiyang**	**5.67**	**159**	Pg	**Pg**	**22 21 18.5**	**+1.6**
GYA				Sg	**Sg**	**22 22 30.6**	**+0.2**
GYA				smax			
	comp=N,240nm,0.6s						
GYA				smax			
	comp=E,200nm,0.7s						
GYA				LR	LR		
	comp=N,140nm,4.7s						
GYA				LR	LR		
	comp=E,150nm,4.9s						
GYA				LR	LR		
	comp=Z,140nm,5.1s						
KMI	**Kunming**	**6.82**	**193**	Pn	**Pn**	**22 20 59.0**	**-11**
KMI				Sn	**Sn**	**22 22 26.9**	**-1.1**
KMI				smax			
	comp=N,51nm,0.7s						
KMI				smax			
	comp=E,59nm,0.8s						
KMI				LR	LR		
	comp=N,500nm,7.0s						
KMI				LR	LR		
	comp=E,370nm,6.0s						
KMI				LR	LR		
	comp=Z,240nm,7.0s						
GTA	**Gaotai**	**8.47**	**335**	*e*P	**Pn**	**22 21 31.9**	**-0.3**
GTA				pP		22 21 36.0	
GTA				sP		22 21 39.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WHN	**Wuhan**	**8.58**	**96**	S	**Sn**	**22 22 59.5**	**-12**
WHN				LR	LR		
	comp=N,1μm,3.9s						
WHN				LR	LR		
	comp=E,1μm,7.4s						
WHN				LR	LR		
	comp=Z,2μm,6.3s						
HHC	**Hu-ho-hao-te**	**10.69**	**30**	*e*P	**Pn**	**22 22 02.5**	**-0.1**
HHC				pP		22 22 09.6	
HHC				sP		22 22 14.4	
HHC				S	**Sn**	**22 24 02.1**	**-0.9**
HHC				sS		22 24 13.2	
HHC				SS		22 24 17.4	
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
HHC				LR	LR		
	comp=N,340nm,4.3s						
HHC				LR	LR		
	comp=E,310nm,5.4s						
HHC				LR	LR		
	comp=Z,250nm,5.2s						
LSA	**Lhasa**	**11.63**	**263**	P	**Pn**	**22 22 15.8**	**+0.3**
LSA	**Lhasa**	**11.63**	**263**	*e*Pn	**Pn**	**22 22 15.3**	**-0.2**
	comp=Z,4.3nm,0.6s						
NJ2	**Nanjing**	**12.24**	**85**	*e*P	**Pn**	**22 22 24.7**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
BJI	**Beijing**	**12.55**	**46**	P	**Pn**	**22 22 26.6**	**-1.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CHTO	**Chiang Mai**	**13.86**	**202**	Pn	**Pn**	**22 22 44.8**	**-1.2**
SONM	**Songino Array**	**16.08**	**5**	Pn	**Pn**	**22 23 16.9**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=173,slow=15,SNR=4.4						
ULN	**Ulaanbaatar**	**16.16**	**6**	*e*Pn	**Pn**	**22 23 17.5**	**+0.8**
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**20.10**	**67**	P	**P**	**22 24 05.5**	**+2.0**
	comp=Z,2.7nm,0.6s,baz=255,slow=9.9,SNR=7.7						
CN2	**Changchun**	**20.40**	**48**	*e*P	**P**	**22 24 14.1**	**+7.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**20.89**	**29**	P	**P**	**22 24 12.0**	**+0.1**
MK31	**Makanchi Array**	**22.65**	**318**	*e*P	**P**	**22 24 31.0**	**+0.2**
MKAR	**Makanchi Array**	**22.65**	**318**	P	**P**	**22 24 32.3**	**+1.4**
	comp=Z,0.8nm,0.5s,mb3.5,baz=114,slow=12,SNR=8.6						
KSH	**Kashi**	**24.31**	**296**	P	**P**	**22 24 51.4**	**+4.0**
KSH				pmax	pmax		
	comp=Z,41nm,4.0s						
TKM2	**Tokmak 2**	**25.36**	**304**	*e*P	**P**	**22 24 55.6**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.0						
UCH	**Uchtor**	**25.95**	**302**	*e*P	**P**	**22 25 01.7**	**-0.6**
	comp=Z,1.8nm,0.9s,mb3.7						
AAK	**Ala-Archa**	**26.06**	**303**	P	**P**	**22 25 03.4**	**+0.1**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**22 25 05.2**	**+0.6**
	comp=Z,0.9nm,0.5s,mb3.7,baz=128,slow=10.0,SNR=4.7						
AML	**Almayashu**	**26.52**	**302**	*e*P	**P**	**22 25 07.0**	**-0.5**
	comp=Z,1.2nm,0.4s,mb4.0						
EKS2	**Erkin-Say**	**26.58**	**303**	P	**P**	**22 25 07.8**	**-0.2**
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**22 25 11.2**	**+0.7**
	comp=Z,1.8nm,0.8s,mb3.9,baz=126,slow=8.5,SNR=5.0						
KURK	**Kurchatov**	**26.87**	**322**	*e*P	**P**	**22 25 10.0**	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.8						
KBL	**Kabul**	**29.67**	**285**	P	**P**	**22 25 35.1**	**-0.6**
BRVK	**Borovoye**	**32.50**	**321**	*e*P	**P**	**22 26 00.5**	**0.0**
YSS	**Yuzh-Sakhalins**	**32.88**	**51**	P	**P**	**22 26 05.0**	**+1.1**
PALK	**Pallekele**	**32.95**	**227**	P	**P**	**22 26 04.2**	**-0.5**
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**22 27 05.6**	**+0.6**
	comp=Z,3.1nm,0.6s,mb4.1						
KIV	**Kislovodsk**	**49.18**	**303**	P	**P**	**22 28 17.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.62**	**155**	P	**P**	**22 28 51.3**	**-0.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=311,slow=10,SNR=5.1						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**22 29 16.7**	**+0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=86,slow=8.2,SNR=5.2						
WRAB	**Tennant Creek**	**58.89**	**147**	*e*P	**P**	**22 29 29.3**	**+0.2**
	comp=Z,5.8nm,0.6s,mb4.8						
KWP	**Kalwaria Pacla**	**61.45**	**313**	P	**P**	**22 29 46.6**	**+0.2**
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**22 29 50.4**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.5,baz=334,slow=6.8,SNR=21						
PSZ	**Piszkesteto**	**63.74**	**312**	*e*P	**P**	**22 30 01.4**	**-0.3**
STU	**Stuttgart**	**70.02**	**315**	*e*P	**P**	**22 30 41.9**	**+0.3**
AQU	**L'Aquila**	**70.09**	**308**	P	**P**	**22 30 42.1**	**-0.1**
STKA	**Stephens Creek**	**72.44**	**147**	P	**P**	**22 30 56.3**	**0.0**
	comp=Z,0.6nm,0.3s,mb4.2,baz=338,slow=4.3,SNR=2.8						
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**22 31 44.0**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=328,slow=5.2,SNR=6.3						
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**22 31 44.0**	**-0.1**

*IDC **12** 22:23:10.3±0.8, 31°.77N×104°.33E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.8/28, mbtmp3.9/11, Error ellipse: s-maj=40.5km s-min=15.3km az=59.0*
*NEIC **12** 22:23:11.6±0.4, 31°.78N×104°.22E, h10km, mb4.3/6, Error ellipse: s-maj=9.2km s-min=7.6km az=64.0*
*BJI **12** 22:23:17.5, 32°.02N×104°.16E, h10km, mB4.6/1, ML3.8/4, Ms3.6/2, Ms7 3.5/2*

ISC 12 22:23:11.0±1.0, 31°.86N±0°.03×104°.28E±0°.07, h5km±7km, n31, σ0°98/35, mb4.1/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.24**	**355**	Pg	**Pg**	**22 24 32.2**	**+0.1**
LZH				Sn	**Sn**	**22 25 05.0**	**-1.0**
LZH				Sg	**Sg**	**22 25 26.1**	**-0.9**
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,230nm,0.8s						
LZH				LR	LR		
	comp=E,540nm,5.1s						
LZH				LR	LR		
	comp=Z,580nm,8.2s						
ENH	**Enshi**	**4.74**	**108**	*e*Pn	**Pn**	**22 24 25.4**	**+2.3**
ENH				*e*Pg	**Pg**	**22 24 40.4**	**-1.4**
GYA	**Guiyang**	**5.77**	**158**	Pg	**Pg**	**22 25 02.9**	**+1.4**
GYA				Sg	**Sg**	**22 26 16.3**	**0.0**
GYA				smax			
	comp=N,210nm,0.9s						
GYA				smax			
	comp=E,250nm,0.7s						
GYA				LR	LR		
	comp=N,160nm,4.7s						
GYA				LR	LR		
	comp=E,170nm,4.9s						
GYA				LR	LR		
	comp=Z,180nm,5.1s						
BJT	**Baijiatuau**	**12.61**	**46**	*e*Pn	**Pn**	**22 26 11.4**	**+0.4**
CHTO	**Chiang Mai**	**13.85**	**202**	*e*Pn	**Pn**	**22 26 26.3**	**-1.7**
CM31	**Chiang Mai Arr**	**14.18**	**201**	Pn	**Pn**	**22 26 38.7**	**+6.1**
	comp=Z,4.0nm,0.3s						
SONM	**Songino Array**	**16.04**	**5**	Pn	**Pn**	**22 27 00.0**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=183,slow=14,SNR=4.4						
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**22 27 46.8**	**0.0**
	comp=Z,1.4nm,0.7s,baz=260,slow=10,SNR=3.2						
HIA	**Hailar**	**20.92**	**29**	*e*P	**P**	**22 27 53.8**	**-0.5**
MKAR	**Makanchi Array**	**22.52**	**318**	P	**P**	**22 28 13.4**	**+2.0**
	comp=Z,0.9nm,0.7s,mb3.3,baz=117,slow=14,SNR=6.3						
KSH	**Kashi**	**24.16**	**296**	P	**P**	**22 28 33.4**	**+5.4**
KSH				pmax	pmax		
	comp=Z,150nm,6.5s						
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	**P**	**22 28 46.6**	**+1.1**
	comp=Z,0.5nm,0.3s,mb3.5,baz=14,slow=41,SNR=3.3						
EKS2	**Erkin-Say**	**26.43**	**303**	*e*P	**P**	**22 28 47.5**	**-1.1**
KURK	**Kurchatov**	**26.74**	**322**	P	**P**	**22 28 52.4**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.2,baz=128,slow=8.5,SNR=4.8						
KURK	**Kurchatov**	**26.74**	**322**	*e*P	**P**	**22 28 50.3**	**-1.0**
	comp=Z,1.4nm,0.8s,mb3.5						
KBL	**Kabul**	**29.52**	**285**	*e*P	**P**	**22 29 16.8**	**+0.5**
	comp=Z,1.2nm,0.6s,mb3.8						
BRVK	**Borovoye**	**32.37**	**321**	*e*P	**P**	**22 29 41.6**	**+0.4**
	comp=Z,1.5nm,0.6s,mb4.0						
PALK	**Pallekele**	**32.88**	**227**	*e*P	**P**	**22 29 45.7**	**-0.4**
ARU	**Arti**	**39.93**	**322**	*e*P	**P**	**22 30 47.2**	**+1.3**
	comp=Z,2.5nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**49.03**	**303**	P	**P**	**22 31 59.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**53.73**	**155**	P	**P**	**22 32 33.6**	**-0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=330,slow=2.6,SNR=5.1						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**22 32 57.5**	**+0.1**
	comp=Z,2.8nm,0.9s,mb4.3,baz=83,slow=6.0,SNR=6.6						
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**22 33 11.1**	**-0.8**
	comp=Z,5.4nm,0.7s,mb4.7,baz=340,slow=7.7,SNR=32						
KWP	**Kalwaria Pacla**	**61.30**	**313**	*e*P	**P**	**22 33 26.3**	**-1.0**
ASAR	**Alice Springs**	**62.06**	**149**	P	**P**	**22 33 32.5**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.3,baz=335,slow=6.6,SNR=14						
MORC	**Moravsky Berou**	**64.45**	**314**	*e*P	**P**	**22 33 48.6**	**+0.4**
	comp=Z,8.2nm,1.6s,mb4.5						
PPLA	**Purkeypile**	**67.94**	**29**	*e*P	**P**	**22 34 10.2**	**-0.1**
	comp=Z,15nm,1.2s,mb4.9						
STKA	**Stephens Creek**	**72.56**	**147**	P	**P**	**22 34 38.4**	**-0.6**
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**22 35 25.7**	**-0.3**
	comp=Z,0.1nm,0.3s,mb3.3,baz=77,slow=37,SNR=2.6						
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**22 35 25.7**	**-0.3**
ESLA	**Sonseca Array**	**82.62**	**312**	P	**P**	**22 35 34.7**	**-0.7**

*ISCJB **12** 22:24:39.3±0.3, 32°.04N±0°.03×105°.31E±0°.04, h10km, mb4.1/28, Error ellipse: s-maj=5.3km s-min=3.9km az=152.0*
*IDC **12** 22:24:40.7±0.6, 31°.92N×105°.11E, h0km, mb4.0/17, mb1 4.1/19, mb1mx4.0/29, mbtmp4.0/19, ML3.7/2, Error ellipse: s-maj=30.4km s-min=13.2km az=52.0*
*BJI **12** 22:24:40.7, 32°.15N×105°.06E, h15km, mB4.6/4, mb4.3/4, ML4.5/8, Ms4.2/6, Ms7 4.0/5*
*NEIC **12** 22:24:41.5±0.4, 31°.93N×105°.13E, h10km, mb4.1/11, Error ellipse: s-maj=12.1km s-min=8.0km az=50.0*

ISC 12 22:24:41.8±0.3, 32°.07N±0°.03×105°.24E±0°.04, h10km, n59, σ1°36/65, mb4.1/28, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.66**	**57**	Pn	**Pn**	**22 25 35.1**	**-3.4**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,700nm,1.0s						
ENH	**Enshi**	**4.06**	**115**	*e*Pn	**Pn**	**22 25 41.4**	**-2.6**
ENH				*e*S	**Sg**	**22 26 53.1**	**+0.8**
LZH	**Lanzhou**	**4.17**	**344**	Pn	**Pn**	**22 25 42.4**	**-3.1**
LZH				Pg	**Pb**	**22 25 52.5**	**-2.7**
LZH				Sg	**Sb**	**22 26 42.9**	**-2.7**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=N,2μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,8.6s						
GYA	**Guiyang**	**5.73**	**167**	Pg	Px	22 26 49.3	
GYA				Sg	**Sg**	**22 27 46.1**	**+0.2**
GYA				smax			
	comp=N,240nm,0.7s						
GYA				smax			
	comp=E,370nm,0.7s						
GYA				LR	LR		
	comp=N,160nm,4.7s						
GYA				LR	LR		
	comp=E,170nm,4.9s						
GYA				LR	LR		
	comp=Z,180nm,5.1s						
KMI	**Kunming**	**7.26**	**198**	Pn	**Pn**	**22 26 28.4**	**+0.4**
KMI				Sn	**Sn**	**22 27 50.5**	**-0.1**
KMI				smax			
	comp=N,96nm,0.9s						
KMI				smax			
	comp=E,90nm,1.1s						
KMI				LR	LR		
	comp=N,660nm,6.5s						
KMI				LR	LR		
	comp=E,850nm,7.3s						
KMI				LR	LR		
	comp=Z,340nm,8.0s						
WHN	**Wuhan**	**7.95**	**99**	P	**Pn**	**22 26 43.6**	**+6.2**
WHN				S	**Sn**	**22 28 04.5**	**-2.8**
WHN				LR	LR		
	comp=N,2μm,6.8s						
WHN				LR	LR		
	comp=E,1μm,8.6s						
WHN				LR	LR		
	comp=Z,840nm,8.1s						
HHC	**Hu-ho-hao-te**	**10.13**	**28**	*e*P	**Pn**	**22 27 05.6**	**-1.7**
HHC				PP		22 27 13.7	
HHC				S	**Sn**	**22 29 01.4**	**+0.5**
HHC				SS		22 29 14.4	
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,4.4s						
HHC				LR	LR		
	comp=N,410nm,5.4s						
HHC				LR	LR		
	comp=E,510nm,5.0s						
HHC				LR	LR		
	comp=Z,380nm,5.4s						
BJI	**Beijing**	**11.89**	**45**	P	**Pn**	**22 27 39.8**	**+8.4**
LSA	**Lhasa**	**12.33**	**263**	P	**Pn**	**22 27 37.5**	**0.0**
LSA	**Lhasa**	**12.33**	**263**	*e*Pn	**Pn**	**22 27 35.2**	**-2.2**
	comp=Z,10nm,1.1s						
CHTO	**Chiang Mai**	**14.37**	**205**	*e*Pn	**Pn**	**22 28 02.5**	**-2.9**
SONM	**Songino Array**	**15.77**	**3**	Pn	**Pn**	**22 28 25.7**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=5.3						
KSRS	**Korea Array**	**19.38**	**68**	P	**Pn**	**22 29 09.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=250,slow=12,SNR=3.1						
HIA	**Hailar**	**20.34**	**28**	*e*P	**P**	**22 29 19.8**	**+1.7**
	comp=Z,5.5nm,0.5s						
MK31	**Makanchi Array**	**22.91**	**317**	*e*P	**P**	**22 29 43.2**	**-2.5**
MKAR	**Makanchi Array**	**22.91**	**317**	P	**P**	**22 29 47.1**	**+1.4**
	comp=Z,2.0nm,0.6s,mb3.7,baz=102,slow=11,SNR=6.4						
KSH	**Kashi**	**24.80**	**296**	P	**P**	**22 30 03.6**	**-0.3**
KSH				pmax	pmax		
	comp=Z,83nm,4.2s						
TKM2	**Tokmak 2**	**25.76**	**303**	*e*P	**P**	**22 30 10.9**	**-1.7**
	comp=Z,2.5nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**26.29**	**332**	P	**P**	**22 30 17.8**	**+0.5**
	comp=Z,2.9nm,0.6s,mb4.0,baz=128,slow=9.9,SNR=7.7						
UCH	**Uchtor**	**26.38**	**301**	*e*P	**P**	**22 30 20.7**	**+2.5**
	comp=Z,3.5nm,0.9s,mb3.9						
AAK	**Ala-Archa**	**26.48**	**302**	P	**P**	**22 30 19.2**	**0.0**
	comp=Z,0.5nm,0.3s,mb3.5,baz=270,slow=3.0,SNR=2.5						
AAK	**Ala-Archa**	**26.48**	**302**	*e*P	**P**	**22 30 19.5**	**+0.4**
AML	**Almayashu**	**26.95**	**301**	*e*P	**P**	**22 30 22.3**	**-1.1**
	comp=Z,2.0nm,0.6s,mb3.8						
KURK	**Kurchatov**	**27.07**	**321**	P	**P**	**22 30 26.4**	**+2.0**
	comp=Z,2.1nm,0.6s,mb3.9,baz=127,slow=10,SNR=7.6						
KURK	**Kurchatov**	**27.07**	**321**	*e*P	**P**	**22 30 25.1**	**+0.7**
	comp=Z,3.0nm,0.6s,mb4.0						
KBL	**Kabul**	**30.25**	**285**	*e*P	**P**	**22 30 52.2**	**-0.7**
POO	**Poona**	**31.29**	**252**	*e*P	**P**	**22 31 09.5**	**+7.3**
BVAR	**Borovoye Array**	**32.65**	**320**	P	**P**	**22 31 12.6**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=117,slow=12,SNR=3.1						
ABKAR	**Akbulak array**	**37.77**	**311**	*e*P	**P**	**22 31 54.5**	**-3.4**
	comp=Z,0.6nm,0.4s,mb3.7						
ARU	**Arti**	**40.27**	**321**	*e*P	**P**	**22 32 16.2**	**-2.5**
	comp=Z,25nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**53.59**	**156**	P	**P**	**22 34 02.5**	**-0.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=150,slow=14,SNR=2.7						
MALT	**Malatya**	**53.90**	**296**	*e*P	**P**	**22 34 05.3**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**56.78**	**336**	P	**P**	**22 34 26.6**	**+1.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=77,slow=7.6,SNR=5.2						
BR131	**Keskin Array S**	**57.11**	**299**	*e*P	**P**	**22 34 29.4**	**+1.0**
	comp=Z,0.9nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**57.11**	**299**	P	**P**	**22 34 29.8**	**+1.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=96,slow=6.9,SNR=7.1						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**22 34 30.5**	**+1.0**
	comp=Z,1.6nm,0.5s,mb4.3,baz=84,slow=9.8,SNR=6.9						
AKASG	**Malin Array Be**	**57.43**	**313**	P	**P**	**22 34 31.2**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.1,baz=68,slow=7.0,SNR=4.3						
AKASG	**Malin Array Be**	**57.43**	**313**	P	**P**	**22 34 31.2**	**+0.6**
WRAB	**Tennant Creek**	**58.75**	**148**	*e*P	**P**	**22 34 39.6**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**58.76**	**148**	P	**P**	**22 34 40.0**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.4,baz=316,slow=12,SNR=9.5						
KWP	**Kalwaria Pacla**	**61.76**	**313**	*e*P	**P**	**22 35 01.2**	**+0.9**
	comp=Z,3.3nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**61.83**	**150**	P	**P**	**22 35 01.2**	**+0.1**
	comp=Z,1.2nm,0.4s,mb4.4,baz=331,slow=6.1,SNR=9.2						
NB2	**NORSAR Subarra**	**64.36**	**327**	P	**P**	**22 35 12.3**	**-5.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**22 35 16.9**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.2,baz=71,slow=6.5,SNR=4.9						
MORC	**Moravsky Berou**	**64.88**	**314**	P	**P**	**22 35 20.5**	**-0.6**
CLL	**Collm**	**67.01**	**317**	*i* P	**P**	**22 35 35.7**	**+0.9**
	comp=Z,6.0nm,1.3s,mb4.5						
CLL				*e*		22 35 54.0	
CLL	**Collm**	**67.01**	**317**	*e*P	**P**	**22 35 36.0**	**+1.2**
CLL				Lm		22 09 00.0	
	comp=Z,100nm,21.4s						
GERES	**GERESS Array B**	**67.56**	**314**	P	**P**	**22 35 38.9**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.7,baz=76,slow=5.6,SNR=4.7						
AQU	**L'Aquila**	**70.45**	**308**	P	**P**	**22 35 55.5**	**-0.9**
CDF	**Champ du Feu**	**71.60**	**316**	*e*P	**P**	**22 36 04.3**	**+1.1**
STKA	**Stephens Creek**	**72.30**	**148**	P	**P**	**22 36 07.1**	**-0.5**
	comp=Z,1.1nm,0.5s,mb4.0,baz=317,slow=8.5,SNR=3.4						
STKA	**Stephens Creek**	**72.30**	**148**	P	**P**	**22 36 07.1**	**-0.5**

GYA LR LR
comp=Z,1μm,5.1s
XAN Xi'an 5.36 54 Pg **Pg 22 30 18.9 -0.7**
XAN Sg **Sg 22 31 22.8 -6.2**
XAN smax
comp=N,970nm,1.1s
XAN smax
comp=E,330nm,0.9s
KMI Kunming 5.93 188 Pn **Pn 22 30 04.8 +1.0**
KMI Sn **Sn 22 31 11.6 +0.3**
KMI smax
comp=N,190nm,1.9s
KMI smax
comp=E,220nm,1.4s
KMI LR LR
comp=N,3μm,9.1s
KMI LR LR
comp=E,7μm,11.7s
WHN Wuhan 9.20 90 P **Pn 22 30 53.9 +5.2**
WHN LR LR
comp=Z,3μm,5.4s
LSA Lhasa 10.90 266 P **Pn 22 31 07.4 -4.5**
LSA Lhasa 10.90 266 *e*Pn **Pn 22 31 12.8 +0.8**
comp=Z,10nm,0.8s
SHL Shillong 11.72 245 *e*P **Pn 22 31 23.0 -0.2**
CHTO Chiang Mai 12.88 200 *e*Pn **Pn 22 31 39.3 +0.1**
comp=Z,6.8nm,0.8s
NJ2 Nanjing 12.99 82 *e*P **Pn 22 31 41.0 +0.3**
NJ2 pP 22 31 48.5
NJ2 PP 22 31 50.0
NJ2 sP 22 31 53.4
NJ2 S **Sn 22 34 05.2 +0.4**
NJ2 sS 22 34 17.4
NJ2 pmax pmax
comp=Z,20nm,0.7s
NJ2 pmax pmax
comp=Z,240nm,3.5s
NJ2 LR LR
comp=N,760nm,11.8s
NJ2 LR LR
comp=E,740nm,10.9s
NJ2 LR LR
comp=Z,820nm,12.3s
CM31 Chiang Mai Arr 13.22 200 *e*Pn **Pn 22 31 44.1 +0.3**
comp=Z,6.7nm,0.5s
GUN Gumba 15.80 263 *e*P **Pn 22 32 14.9 -3.6**
comp=Z,25nm,0.5s
PKI Pulchoki 16.30 262 *e*P **Pn 22 32 21.0 -3.9**
comp=Z,35nm,0.6s
PKIN Phulchoki 16.31 262 *e*P **Pn 22 32 21.1 -3.9**
comp=Z,33nm,0.6s
KKN Kakani 16.35 263 *e*P **Pn 22 32 22.2 -3.3**
comp=Z,43nm,0.6s
DMN Daman 16.54 263 *e*P **Pn 22 32 24.8 -3.2**
comp=Z,80nm,1.1s
SONM Songino Array 16.92 6 Pn **Pn 22 32 33.0 +0.3**
comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=3.5
ULN Ulaanbaatar 17.02 8 *e*Pn **Pn 22 32 34.1 +0.2**
comp=Z,20nm,1.5s
TLY Talaya 20.64 360 *e*P **P 22 33 14.9 -0.5**
KSRS Korea Array 21.02 66 P **P 22 33 18.8 -0.8**
comp=Z,3.5nm,0.6s,mb3.9,baz=240,slow=9.7,SNR=11
KSRS LR LR 22 42 04.3
comp=Z,193nm,18.3s,MS3.5,baz=79,slow=39
CN2 Changchun 21.42 47 *e*P **P 22 33 24.9 +1.1**
CN2 pmax pmax
comp=Z,40nm,0.8s,mb4.8
HIA Hailar 21.90 29 *e*P **P 22 33 27.8 -1.1**
comp=Z,4.6nm,0.3s,mb4.4
DDI Dehra Dun 22.03 275 *ex* x 22 33 34.5
MK31 Makanchi Array 22.80 320 *e*P **P 22 33 39.2 +0.7**
MKAR Makanchi Array 22.80 320 P **P 22 33 39.5 +1.0**
comp=Z,6.7nm,1.0s,mb4.0,baz=124,slow=10,SNR=10.0
MKAR LR LR 22 42 49.1
comp=Z,98nm,21.5s,MS3.2,baz=120,slow=38
KSH Kashi 24.08 298 P **P 22 33 54.6 +3.4**
KSH pmax pmax
comp=Z,49nm,3.7s
TKM2 Tokmak 2 25.26 306 *e*P **P 22 34 01.0 -1.0**
comp=Z,6.6nm,1.1s,mb4.1
UCH Uchtor 25.82 304 *e*P **P 22 34 08.0 +1.0**
comp=Z,6.6nm,1.0s,mb4.1
AAK Ala-Archa 25.95 305 P **P 22 34 08.8 +0.6**
comp=Z,0.4nm,0.3s,mb3.4,baz=128,slow=9.1,SNR=2.2
AAK LR LR 22 45 19.9
comp=Z,416nm,18.4s,MS4.0,baz=90,slow=39
AAK Ala-Archa 25.95 305 *e*P **P 22 34 09.0 +0.8**
comp=Z,6.4nm,0.9s,mb4.2
AAK LR LR 22 45 19.9
AML Almayashu 26.38 303 *e*P **P 22 34 12.7 +0.6**
comp=Z,258nm,1.2s,mb5.6
EKS2 Erkin-Say 26.46 304 *e*P **P 22 34 13.9 +1.1**
comp=Z,3.0nm,0.8s,mb3.9
ZAA0 Zalesovo Array 26.64 335 *e*P **P 22 34 13.9 -0.4**
ZALV Zalesovo Beam 26.64 335 P **P 22 34 14.5 +0.2**
comp=Z,3.7nm,0.7s,mb4.0,baz=132,slow=9.6,SNR=8.7
KURK Kurchatov 27.09 324 P **P 22 34 18.6 +0.2**
comp=Z,3.0nm,0.8s,mb3.9,baz=129,slow=9.2,SNR=6.0
KURK LR LR 22 46 03.1
comp=Z,310nm,19.2s,MS3.9,baz=120,slow=39
KBL Kabul 29.24 286 *e*P **P 22 34 38.2 +0.5**
BVAR Borovoye Array 32.63 322 LR LR 22 48 39.8
comp=Z,196nm,19.3s,MS3.8,baz=17,slow=37
ARU Arti 40.27 322 *e*P **P 22 36 11.9 -0.7**
KIV Kislovodsk 49.05 303 *e*P **P 22 37 23.0 +0.2**
BR131 Keskin Array S 56.46 300 P **P 22 38 18.4 +0.8**
BRTR Keskin Array B 56.46 300 P **P 22 38 18.5 +0.8**
comp=Z,1.0nm,0.9s,mb3.9,baz=65,slow=7.0,SNR=5.1
AKASG Malin Array Be 57.17 313 LR LR 23 04 44.1
comp=Z,70nm,18.2s,MS3.8,baz=75,slow=38
FINES FINESS Array B 57.43 326 P **P 22 38 23.9 -0.3**
comp=Z,0.8nm,0.6s,mb3.9,baz=97,slow=7.9,SNR=3.4
WRA Warramunga Arr 58.61 146 P **P 22 38 33.0 +0.1**
comp=Z,2.7nm,0.5s,mb4.6,baz=338,slow=7.8,SNR=34
TIRR Tirgusor 59.05 306 P **P 22 38 34.3 -1.4**
ASAR Alice Springs 61.61 148 P **P 22 38 53.8 +0.3**
comp=Z,0.9nm,0.7s,mb4.0,baz=329,slow=7.3,SNR=6.3
PSZ Piszkesteto 63.77 312 P **P 22 39 07.4 -0.2**
MORC Moravsky Berou 64.66 314 *e*P **P 22 39 13.7 +0.2**
GVD Gavdhos 65.21 297 *e*P **P 22 39 16.9 -0.4**
GERES GERESS Array B 67.34 314 P **P 22 39 30.7 0.0**
comp=Z,0.3nm,0.5s,mb3.5,baz=64,slow=7.6,SNR=3.7
COLD Coldfoot 67.70 24 *e*P **P 22 39 32.0 -0.6**
comp=Z,5.6nm,0.9s,mb4.6
TIP Timpagrande 68.99 304 *e*P **P 22 39 41.4 +0.2**
KMBO Kilima Mbogo 70.53 256 P **P 22 39 50.4 -0.6**
CDF Champ du Feu 71.42 316 *e*P **P 22 39 55.6 -0.3**
comp=Z,1.4nm,0.5s,mb3.9
INK Inuvik 72.36 19 LR LR 23 13 18.5
comp=Z,97nm,19.0s,MS4.1,baz=338,slow=37
LPG La Plagne 73.04 313 *e*P **P 22 40 06.2 +0.5**
comp=Z,7.1nm,0.7s,mb4.4
LPL La Plagne 73.04 313 *e*P **P 22 40 06.0 +0.3**
SMF Signal de Mont 74.30 315 *e*P **P 22 40 12.3 -0.7**
comp=Z,6.6nm,0.8s,mb4.3
AVF Avril sur Loir 74.52 315 *e*P **P 22 40 13.7 -0.7**
comp=Z,9.6nm,1.2s,mb4.3
TCF Toulx Ste Croi 75.45 315 *e*P **P 22 40 19.5 -0.3**
YKA Yellowknife Ar 81.88 17 P **P 22 40 55.1 +0.3**
comp=Z,0.4nm,0.5s,mb3.6,baz=330,slow=5.4,SNR=6.0
TORD Torodi Ar. Bea 93.31 287 P **P 22 41 51.8 +0.6**
comp=Z,0.8nm,1.1s,mb4.1,baz=279,slow=2.9,SNR=2.7
TSUM Tsumeb 96.45 252 P **P 22 42 05.5 +0.1**

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*ISCJB **12** 22:38:58.6±0.4, 31°.59N±0°.07×104°.35E±0°.06, h10km, mb3.9/12, Error ellipse: s-maj=11.0km s-min=6.7km az=26.3*
*IDC **12** 22:38:59.5±0.9, 31°.67N×104°.35E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/28, mbtmp3.8/9, ML3.1/1, Error ellipse: s-maj=39.1km s-min=17.0km az=60.0*
*NEIC **12** 22:39:00.6±0.3, 31°.62N×104°.35E, h10km, mb4.3/5, Error ellipse: s-maj=9.4km s-min=6.9km az=53.0*
*BJI **12** 22:39:01.1, 31°.66N×104°.57E, h15km, mb4.2/1, ML3.7/5, Ms3.6/6, Ms7 3.5/6*
ISC 12 22:39:00.6±0.4, 31°.68N±0°.04×104°.37E±0°.06, h10km, n25, σ0§94/28, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.42**	**354**	Pg	**Pg**	**22 40 23.0**	**-2.3**
LZH				Sg	**Sg**	**22 41 21.5**	**-1.0**
LZH				smax			
	comp=N,100nm,0.9s						
LZH				smax			
	comp=E,120nm,1.0s						
LZH				LR	LR		
	comp=E,540nm,6.8s						
LZH				LR	LR		
	comp=Z,570nm,8.9s						
ENH	**Enshi**	**4.61**	**106**	*e*Pn	**Pn**	**22 40 08.7**	**-1.8**
ENH				*e*Sn	**Sn**	**22 41 04.3**	**+0.2**
GYA	**Guiyang**	**5.58**	**158**	Pg	**Pb**	**22 40 39.6**	**+1.5**
GYA				Sg	**Sg**	**22 41 56.7**	**-3.0**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,140nm,0.6s						
GYA				LR	LR		
	comp=N,160nm,4.7s						
GYA				LR	LR		
	comp=E,170nm,4.9s						
GYA				LR	LR		
	comp=Z,180nm,5.1s						
CHTO	**Chiang Mai**	**13.71**	**202**	*e*Pn	**Pn**	**22 42 14.3**	**-0.9**
SONM	**Songino Array**	**16.21**	**5**	Pn	**Pn**	**22 42 50.9**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=181,slow=12,SNR=5.1						
KSRS	**Korea Array**	**20.21**	**67**	P	**P**	**22 43 36.4**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=257,slow=11,SNR=7.3						
MKAR	**Makanchi Array**	**22.70**	**318**	P	**P**	**22 44 03.3**	**+1.0**
	comp=Z,0.5nm,0.7s,mb3.0,baz=110,slow=14,SNR=5.1						
TKM2	**Tokmak 2**	**25.37**	**304**	*e*P	**P**	**22 44 27.6**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.5						
ZALV	**Zalesovo Beam**	**26.31**	**333**	P	**P**	**22 44 36.5**	**+0.3**
	comp=Z,1.6nm,0.8s,mb3.6,baz=132,slow=11,SNR=5.8						
AML	**Almayashu**	**26.53**	**302**	P	**P**	**22 44 38.8**	**+0.4**
EKS2	**Erkin-Say**	**26.59**	**303**	*e*P	**P**	**22 44 38.1**	**-0.9**
	comp=Z,2.9nm,0.4s,mb4.2						
KURK	**Kurchatov**	**26.93**	**322**	P	**P**	**22 44 42.3**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.2,baz=131,slow=8.5,SNR=4.0						
PALK	**Pallekele**	**32.82**	**227**	P	**P**	**22 45 34.3**	**-0.2**
YSS	**Yuzh-Sakhalins**	**33.02**	**51**	*e*P	**P**	**22 45 36.2**	**+0.3**
ARU	**Arti**	**40.12**	**322**	*e*P	**P**	**22 46 36.5**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.1						
BR131	**Keskin Array S**	**56.66**	**299**	P	**P**	**22 48 44.0**	**0.0**
CSS	**Prodhromos**	**58.29**	**294**	*e*P	**P**	**22 48 55.9**	**+0.2**
	comp=Z,3.0nm,0.5s,mb4.6						
WRA	**Warramunga Arr**	**58.83**	**147**	P	**P**	**22 49 00.1**	**+0.7**
	comp=Z,2.6nm,0.6s,mb4.4,baz=339,slow=7.5,SNR=13						
KWP	**Kalwaria Pacla**	**61.48**	**313**	P	**P**	**22 49 17.7**	**+0.3**
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**22 49 20.8**	**+0.7**
	comp=Z,0.8nm,0.5s,mb4.1,baz=337,slow=6.7,SNR=17						
GVD	**Gavdhos**	**65.45**	**297**	P	**P**	**22 49 43.4**	**-0.4**
TIP	**Timpagrande**	**69.12**	**304**	*e*P	**P**	**22 50 06.8**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.3						
WLF	**Walferdange**	**71.46**	**317**	*e*P	**P**	**22 50 21.2**	**+0.1**
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**22 50 27.1**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=296,slow=12,SNR=4.1						
YKA	**Yellowknife Ar**	**81.08**	**17**	P	**P**	**22 51 15.3**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=327,slow=5.1,SNR=8.8						

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*ISCJB **12** 22:40:37.1±0.4, 31°.04N±0°.04×103°.56E±0°.07, h10km, mb4.0/19, Error ellipse: s-maj=8.2km s-min=5.7km az=1.0*
*IDC **12** 22:40:37.5±1.0, 31°.07N×103°.65E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.8/28, mbtmp3.8/13, ML3.6/1, Error ellipse: s-maj=33.0km s-min=18.1km az=44.0*
*NEIC **12** 22:40:38.8±0.4, 31°.09N×103°.62E, h10km, mb4.1/8, Error ellipse: s-maj=8.8km s-min=7.7km az=92.0*
*BJI **12** 22:40:39.3, 30°.99N×103°.68E, h10km, mb4.5/3, ML4.2/6, Ms4.2/2, Ms7 4.1/2*
ISC 12 22:40:39.3±0.3, 31°.06N±0°.03×103°.49E±0°.04, h10km, n38, σ1§05/44, mb4.0/19, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**123**	Pg	**Pg**	**22 40 45.5**	**+0.7**
CD2				Sg	**Sg**	**22 40 51.0**	**+2.4**
CD2				smax			
	comp=N,41μm,0.7s						
LZH	**Lanzhou**	**5.02**	**3**	Pg	**Sn**	**22 42 40.4**	**-12**
LZH				Sg	**Sg**	**22 43 25.9**	**+5.5**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,100nm,0.9s						
LZH				LR	LR		
	comp=E,340nm,6.4s						
LZH				LR	LR		
	comp=Z,440nm,8.7s						
ENH	**Enshi**	**5.23**	**97**	Pn	**Pb**	**22 42 15.9**	**+5.2**
GYA	**Guiyang**	**5.37**	**148**	Pg	**Pg**	**22 42 30.9**	**+8.8**
GYA				Sg	**Sg**	**22 43 30.3**	**-1.3**
GYA				smax			
	comp=N,180nm,1.1s						
GYA				smax			
	comp=E,230nm,0.8s						
XAN	**Xi'an**	**5.46**	**56**	Pg	**Pg**	**22 42 31.8**	**+7.9**
XAN				Sg	**Sg**	**22 43 34.9**	**+0.2**
XAN				smax			
	comp=N,290nm,0.9s						
XAN				smax			
	comp=E,140nm,1.0s						
KMI	**Kunming**	**5.95**	**187**	Pn	**Pn**	**22 42 08.8**	**+1.3**
KMI				Sn	**Sn**	**22 43 13.9**	**-1.9**
KMI				smax			
	comp=N,65nm,1.0s						
KMI				smax			
	comp=E,47nm,0.8s						
KMI				LR	LR		
	comp=N,630nm,6.3s						
KMI				LR	LR		
	comp=E,1μm,9.0s						
KMI				LR	LR		
	comp=Z,470nm,7.3s						
WHN	**Wuhan**	**9.36**	**90**	P	**Pn**	**22 42 56.2**	**+2.0**
WHN				S	**Sn**	**22 44 35.1**	**-4.3**
WHN				LR	LR		
	comp=Z,2μm,6.9s						
SONM	**Songino Array**	**16.90**	**7**	Pn	**Pn**	**22 44 35.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=20,slow=43,SNR=2.5						
ULN	**Ulaanbaatar**	**17.00**	**8**	Pn	**Pn**	**22 44 36.0**	**-1.0**
TLY	**Talaya**	**20.60**	**0**	*e*P	**P**	**22 45 16.8**	**-1.5**
KSRS	**Korea Array**	**21.15**	**66**	P	**P**	**22 45 22.4**	**-2.0**
	comp=Z,2.2nm,0.9s,mb3.5,baz=274,slow=10,SNR=2.4						
CN2	**Changchun**	**21.50**	**48**	*e*P	**P**	**22 45 32.4**	**+4.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
HIA	**Hailar**	**21.94**	**29**	P	**P**	**22 45 31.0**	**-1.7**
MK31	**Makanchi Array**	**22.67**	**320**	*e*P	**P**	**22 45 41.2**	**+0.6**
MKAR	**Makanchi Array**	**22.67**	**320**	P	**P**	**22 45 42.5**	**+1.9**
	comp=Z,2.0nm,0.9s,mb3.5,baz=123,slow=12,SNR=6.3						
UCH	**Uchtor**	**25.66**	**304**	*e*P	**P**	**22 46 10.0**	**+0.8**
	comp=Z,7.3nm,1.6s,mb4.0						
AAK	**Ala-Archa**	**25.79**	**305**	P	**P**	**22 46 12.6**	**+2.3**
	comp=Z,0.8nm,0.5s,mb3.5,baz=131,slow=4.8,SNR=4.4						
AAK	**Ala-Archa**	**25.79**	**305**	*e*P	**P**	**22 46 10.7**	**+0.3**
	comp=Z,2.7nm,0.7s,mb3.9						
AML	**Almayashu**	**26.22**	**303**	*e*P	**P**	**22 46 14.7**	**+0.4**
	comp=Z,0.9nm,0.4s,mb3.6						
ZALV	**Zalesovo Beam**	**26.53**	**335**	P	**P**	**22 46 17.6**	**+0.6**
	comp=Z,2.8nm,0.8s,mb3.9,baz=132,slow=8.8,SNR=10						
KURK	**Kurchatov**	**26.97**	**324**	P	**P**	**22 46 21.4**	**+0.6**
	comp=Z,2.3nm,0.8s,mb3.7,baz=128,slow=9.6,SNR=9.8						
KURK	**Kurchatov**	**26.97**	**324**	*e*P	**P**	**22 46 21.3**	**+0.4**
	comp=Z,1.8nm,0.7s,mb3.7						
KBL	**Kabul**	**29.08**	**286**	*e*P	**P**	**22 46 40.6**	**+0.7**
	comp=Z,6.4nm,1.5s,mb4.1						
PALK	**Pallekele**	**31.85**	**227**	P	**P**	**22 47 04.6**	**+0.1**
BRVK	**Borovoye**	**32.57**	**322**	*e*P	**P**	**22 47 10.4**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.2						
ARU	**Arti**	**40.14**	**323**	P	**P**	**22 48 14.6**	**-0.6**
KIV	**Kislovodsk**	**48.89**	**303**	*e*P	**P**	**22 49 25.7**	**+0.5**
	comp=Z,4.5nm,0.9s,mb4.5						
AKASG	**Malin Array Be**	**57.03**	**313**	P	**P**	**22 50 24.4**	**-0.8**
	comp=Z,0.2nm,0.3s,mb3.6,baz=73,slow=5.7,SNR=4.1						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**22 50 25.7**	**-1.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=39,slow=16,SNR=3.3						
CSS	**Prodhromos**	**57.85**	**294**	P	**P**	**22 50 31.8**	**+0.5**
WRA	**Warramunga Arr**	**58.73**	**146**	P	**P**	**22 50 36.7**	**-0.7**
	comp=Z,1.1nm,0.5s,mb4.1,baz=338,slow=7.5,SNR=3.8						
KWP	**Kalwaria Pacla**	**61.35**	**313**	*e*P	**P**	**22 50 55.0**	**-0.1**
	comp=Z,4.5nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**61.73**	**148**	P	**P**	**22 50 57.7**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.6,baz=333,slow=5.8,SNR=2.4						
NOA	**NORSAR Array B**	**64.41**	**327**	P	**P**	**22 51 14.8**	**-0.5**
	comp=Z,1.0nm,0.8s,mb3.9,baz=57,slow=5.9,SNR=3.5						
MORC	**Moravsky Berou**	**64.52**	**314**	P	**P**	**22 51 16.4**	**+0.3**
INK	**Inuvik**	**72.37**	**19**	P	**P**	**22 52 04.8**	**-0.2**
	comp=Z,2.0nm,1.0s,mb4.0,baz=197,slow=2.2,SNR=4.4						
YKA	**Yellowknife Ar**	**81.89**	**17**	P	**P**	**22 52 58.5**	**0.0**
	comp=Z,0.8nm,0.9s,mb3.6,baz=327,slow=4.9,SNR=5.3						
YKA	**Yellowknife Ar**	**81.89**	**17**	P	**P**	**22 52 58.5**	**0.0**

IDC 12 22:45:33.7±1.0, 31°.47N×103°.80E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=44.4km s-min=18.0km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.46**	**6**	Pn	Pn	22 49 26.1	+0.2
	0.1nm,0.3s,baz=186,slow=39,SNR=3.6						
KSRS	**Korea Array**	**20.74**	**67**	P	P	22 50 15.9	0.0
	0.5nm,0.4s,baz=52,slow=30,SNR=2.9						
MKAR	**Makanchi Array**	**22.53**	**319**	P	P	22 50 35.9	+0.8
	0.4nm,0.6s,baz=116,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	P	22 51 09.8	-0.8
	0.3nm,0.3s,baz=295,slow=11,SNR=2.3						
KURK	**Kurchatov**	**26.80**	**323**	P	P	22 51 16.6	+1.3
	0.1nm,0.3s,baz=348,slow=32,SNR=2.5						
FINES	**FINESS Array B**	**57.12**	**326**	P	P	22 55 20.6	-1.0
	1.1nm,0.7s,baz=46,slow=5.5,SNR=4.2						
WRA	**Warramunga Arr**	**58.92**	**146**	P	P	22 55 34.7	-0.1
	1.8nm,0.6s,baz=338,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**61.94**	**149**	P	P	22 55 55.5	+0.2
	0.5nm,0.5s,baz=336,slow=6.7,SNR=11						

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*ISCJB **12** 22:47:18.8±0.3, 31°.11N±0°.03×103°.56E±0°.04, h10km, mb4.0/22, Error ellipse: s-maj=4.9km s-min=4.5km az=42.2*
*IDC **12** 22:47:19.4±0.7, 31°.12N×103°.55E, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/25, mbtmp3.9/14, ML3.3/1, MS4.0/3, Ms1 4.0/3, ms1mx3.1/31, Error ellipse: s-maj=31.6km s-min=14.7km az=54.0*
*NEIC **12** 22:47:21.0±0.4, 31°.19N×103°.61E, h10km, mb4.0/10, Error ellipse: s-maj=10.3km s-min=8.0km az=50.0*
*BJI **12** 22:47:20.6, 31°.17N×103°.66E, h9km, mB4.9/4, mb4.3/11, ML4.3/17, Ms4.3/11, Ms7 4.0/9*
ISC 12 22:47:21.0±0.3, 31°.14N±0°.03×103°.53E±0°.04, h10km, n54, σ1§18/63, mb4.0/22, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**139**	‖*i*Pg	**Pg**	**22 47 30.2**	**+3.3**
CD2				Sg	**Sg**	**22 47 37.2**	**+6.3**
CD2				smax			
	comp=N,47μm,0.7s						
LZH	**Lanzhou**	**4.95**	**3**	Pn	**Pn**	**22 48 37.2**	**+1.8**
LZH				Pg	**Pg**	**22 48 52.6**	**-3.2**
LZH				Sn	**Sn**	**22 49 33.5**	**+0.9**
LZH				Sg	**Sg**	**22 49 59.4**	**-0.4**
LZH				smax			
	comp=N,470nm,1.0s						
LZH				smax			
	comp=E,250nm,1.0s						
LZH				LR	LR		
	comp=N,1μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,9.1s						
ENH	**Enshi**	**5.20**	**98**	*e*Pn	**Pn**	**22 48 39.1**	**+0.2**
ENH				S	**Sn**	**22 49 38.0**	**-0.9**
XAN	**Xi'an**	**5.39**	**56**	Pg	**Pg**	**22 49 01.2**	**-3.1**
XAN				Sg	**Sg**	**22 50 04.8**	**-9.3**
XAN				smax			
	comp=N,540nm,0.8s						
XAN				smax			
	comp=E,230nm,0.9s						
GYA	**Guiyang**	**5.41**	**149**	Pg	**Pb**	**22 48 50.0**	**-5.6**
GYA				Sg	**Sg**	**22 50 12.8**	**-1.9**
GYA				smax			
	comp=N,630nm,0.8s						
GYA				smax			
	comp=E,510nm,0.7s						
GYA				LR	LR		
	comp=N,1μm,4.7s						
GYA				LR	LR		
	comp=E,2μm,4.9s						
GYA				LR	LR		
	comp=Z,1μm,5.1s						
KMI	**Kunming**	**6.03**	**187**	Pn	**Pn**	**22 48 52.2**	**+1.9**
KMI				Sn	**Sn**	**22 50 01.5**	**+2.1**
KMI				smax			
	comp=N,66nm,0.9s						
KMI				smax			
	comp=E,68nm,0.9s						
KMI				LR	LR		
	comp=N,540nm,6.9s						
KMI				LR	LR		
	comp=E,1μm,9.2s						
KMI				LR	LR		
	comp=Z,410nm,8.4s						
GTA	**Gaotai**	**8.80**	**341**	*e*P	**Pn**	**22 49 30.8**	**+2.6**
GTA				pP		22 49 35.1	
GTA				sP		22 49 38.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WHN	**Wuhan**	**9.32**	**91**	P	**Pn**	**22 49 34.5**	**-0.9**
WHN				LR	LR		
	comp=N,2μm,13.8s						
WHN				LR	LR		
	comp=E,2μm,14.1s						
WHN				LR	LR		
	comp=Z,2μm,7.6s						
LSA	**Lhasa**	**10.79**	**266**	P	**Pn**	**22 49 56.0**	**+0.5**
LSA	**Lhasa**	**10.79**	**266**	*e*Pn	**Pn**	**22 49 57.5**	**+1.9**
	comp=Z,4.5nm,0.6s						
SHL	**Shillong**	**11.66**	**244**	*e*P	**Pn**	**22 50 08.0**	**+0.5**
HHC	**Hu-ho-hao-te**	**11.67**	**32**	*e*P	**Pn**	**22 50 08.6**	**+1.1**
HHC				pP		22 50 12.0	
HHC				PP		22 50 18.1	
HHC				S	**Sn**	**22 52 19.4**	**+1.6**
HHC				sS		22 52 24.2	
HHC				SS		22 52 32.7	
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC				LR	LR		
	comp=N,750nm,5.9s						
HHC				LR	LR		
	comp=E,690nm,4.8s						
HHC				LR	LR		
	comp=Z,460nm,5.7s						
CHTO	**Chiang Mai**	**12.95**	**200**	*e*Pn	**Pn**	**22 50 24.9**	**-0.2**
	comp=Z,5.5nm,0.9s						
NJ2	**Nanjing**	**13.10**	**82**	*e*P	**Pn**	**22 50 27.5**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GUN	**Gumba**	**15.70**	**263**	*e*P	**Pn**	**22 51 01.2**	**-1.1**
	comp=Z,51nm,0.8s						
PKI	**Pulchoki**	**16.20**	**262**	*e*P	**Pn**	**22 51 07.4**	**-1.3**
	comp=Z,32nm,0.5s						
PKIN	**Phulchoki**	**16.21**	**262**	*e*P	**Pn**	**22 51 07.3**	**-1.6**
	comp=Z,18nm,0.4s						
KKN	**Kakani**	**16.24**	**263**	*e*P	**Pn**	**22 51 07.8**	**-1.6**
	comp=Z,108nm,1.0s						
DMN	**Daman**	**16.44**	**262**	*e*P	**Pn**	**22 51 11.2**	**-0.7**
	comp=Z,61nm,0.9s						
SONM	**Songino Array**	**16.82**	**7**	Pn	**Pn**	**22 51 15.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=7.9						
SONM				LR	LR	22 58 21.7	
	comp=Z,166nm,19.6s,baz=45,slow=39						
ULN	**Ulaanbaatar**	**16.93**	**8**	*e*Pn	**Pn**	**22 51 15.8**	**-2.1**
	comp=Z,6.0nm,1.0s						
KSRS	**Korea Array**	**21.08**	**66**	P	**P**	**22 52 05.5**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.0,baz=252,slow=9.0,SNR=10						
CN2	**Changchun**	**21.43**	**48**	*e*P	**P**	**22 52 10.9**	**+1.8**
MK31	**Makanchi Array**	**22.64**	**320**	*e*P	**P**	**22 52 21.8**	**-0.3**
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**22 52 22.1**	**0.0**
	comp=Z,3.9nm,1.0s,mb3.8,baz=116,slow=11,SNR=16						
TKM2	**Tokmak 2**	**25.10**	**306**	P	**P**	**22 52 45.6**	**-0.2**
	comp=Z

ZALV Zalesovo Beam 26.48 335 P P 22 52 57.5 -0.7
comp=Z,2.6nm,0.6s,mb4.0,baz=138,slow=9.8,SNR=11
KURK Kurchatov 26.93 324 P P 22 53 01.9 -0.4
comp=Z,4.7nm,0.7s,mb4.1,baz=129,slow=9.6,SNR=20
KURK Kurchatov 26.93 324 *eP* **P 22 53 02.2 -0.1**
comp=Z,5.4nm,1.0s,mb4.0
ABKAR Akbulak array 37.29 312 *eP* **P 22 54 33.8 +0.8**
comp=Z,0.6nm,0.6s,mb3.6
ARU Arti 40.11 322 *eP* **P 22 54 56.3 -0.3**
comp=Z,5.4nm,0.9s,mb4.3
KIV Kislovodsk 48.89 303 *eP* **P 22 56 07.2 +0.3**
comp=Z,7.9nm,1.3s,mb4.6
BRTR Keskin Array B 56.30 299 P P 22 57 03.8 +1.9
comp=Z,0.3nm,0.5s,mb3.6,baz=337,slow=13,SNR=2.9
AKASG Malin Array Be 57.01 313 P P 22 57 07.9 +1.2
comp=Z,0.8nm,0.5s,mb4.0,baz=74,slow=5.1,SNR=1.7
AKASG Malin Array Be 57.01 313 P P 22 57 07.9 +1.2
FINES FINESS Array B 57.27 326 P P 22 57 07.7 -0.7
comp=Z,0.9nm,0.5s,mb4.0,baz=49,slow=5.8,SNR=7.2
WRA Warramunga Arr 58.77 146 P P 22 57 19.5 0.0
comp=Z,2.4nm,0.6s,mb4.4,baz=337,slow=7.6,SNR=15
ASAR Alice Springs 61.77 148 P P 22 57 40.4 +0.5
comp=Z,0.8nm,0.6s,mb4.0,baz=336,slow=7.0,SNR=6.8
PSZ Piszkesteto 63.60 312 P P 22 57 51.6 -0.4
NOA NORSAR Array B 64.37 327 P P 22 57 56.8 0.0
comp=Z,0.9nm,0.7s,mb3.9,baz=74,slow=6.8,SNR=3.1
TIP Timpagrande 68.83 304 *eP* **P 22 58 26.0 +0.3**
AQU L'Aquila 69.89 308 P P 22 58 30.9 -1.2
INK Inuvik 72.29 19 P P 22 58 46.9 +0.6
comp=Z,0.9nm,0.5s,mb3.9,baz=316,slow=5.9,SNR=4.6
STKA Stephens Creek 72.30 147 P P 22 58 45.0 -1.8
comp=Z,0.9nm,0.4s,mb4.0,baz=322,slow=4.5,SNR=5.5
STKA Stephens Creek 72.30 147 P P 22 58 45.0 -1.8
YKA Yellowknife Ar 81.81 17 P P 22 59 40.1 +0.2
comp=Z,0.3nm,0.6s,mb3.4,baz=324,slow=5.0,SNR=3.1
ESLA Sonseca Array 82.64 312 *eP* **P 22 59 44.3 -0.4**
TORD Torodi Ar. Bea 93.16 287 P P 23 00 39.3 +3.4
comp=Z,1.1nm,1.2s,mb4.2,baz=68,slow=4.7,SNR=3.3

ISCJB ***12*** *22:52:55.1±0.3, 30°.95N±0°.03×103°.50E±0°.04, h10km, mb3.9/17, Error ellipse: s-maj=5.3km s-min=4.3km az=147.3*
IDC ***12*** *22:52:55.7±0.8, 30°.94N×103°.56E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.8/26, mbtmp3.9/12, MS4.1/4, Ms1 4.1/4, ms1mx3.2/33, Error ellipse: s-maj=34.6km s-min=15.4km az=53.0*
NEIC ***12*** *22:52:56.6±0.3, 30°.93N×103°.54E, h10km, mb4.1/7, Error ellipse: s-maj=7.3km s-min=5.7km az=52.0*
BJI ***12*** *22:52:57.0, 30°.94N×103°.64E, h9km, mB4.6/3, mb4.6/5, ML4.0/16, Ms4.1/5, Ms7 3.8/5*
ISC 12 22:52:57.4±0.3, 30°.97N±0°.03×103°.45E±0°.04, h10km, n44, σ0°92/50, mb3.9/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**103**	Pg	**Pg**	**22 53 04.2**	**+1.3**
CD2				Sg	**Sg**	**22 53 09.8**	**+3.1**
CD2				smax			
	comp=N,80μm,0.8s						
LZH	**Lanzhou**	**5.11**	**4**	Pg	**Pg**	**22 54 40.5**	**+5.2**
LZH				Sg	**Sg**	**22 55 42.6**	**+1.1**
LZH				smax			
	comp=N,130nm,1.0s						
LZH				smax			
	comp=E,85nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,6.9s						
LZH				LR	LR		
	comp=Z,2μm,8.7s						
ENH	**Enshi**	**5.25**	**96**	*e*Pn	**Pn**	**22 54 12.7**	**-3.2**
	comp=Z,145nm,0.7s						
ENH				Sn	**Sn**	**22 55 16.6**	**0.0**
GYA	**Guiyang**	**5.31**	**147**	Pg	**Pg**	**22 54 40.7**	**+1.5**
GYA				Sg	**Sg**	**22 55 51.4**	**+3.4**
GYA				smax			
	comp=N,190nm,0.9s						
GYA				smax			
	comp=E,310nm,0.9s						
GYA				LR	LR		
	comp=N,160nm,4.7s						
GYA				LR	LR		
	comp=E,170nm,4.9s						
GYA				LR	LR		
	comp=Z,180nm,5.1s						
XAN	**Xi'an**	**5.54**	**55**	Pn	**Pn**	**22 54 21.0**	**+1.1**
XAN				Sn	**Sn**	**22 55 21.8**	**-1.9**
XAN				smax			
	comp=N,230nm,0.9s						
XAN				smax			
	comp=E,100nm,0.8s						
KMI	**Kunming**	**5.86**	**186**	Pn	**Pn**	**22 54 24.2**	**-0.2**
KMI				Sn	**Sn**	**22 55 32.2**	**+0.6**
KMI				smax			
	comp=N,62nm,1.1s						
KMI				smax			
	comp=E,68nm,1.0s						
KMI				LR	LR		
	comp=N,300nm,6.2s						
KMI				LR	LR		
	comp=E,980nm,6.7s						
KMI				LR	LR		
	comp=Z,320nm,8.3s						
WHN	**Wuhan**	**9.39**	**90**	P	**Pn**	**22 55 13.6**	**+0.8**
WHN				S	**Sn**	**22 56 51.9**	**-6.6**
WHN				LR	LR		
	comp=Z,2μm,7.2s						
LSA	**Lhasa**	**10.70**	**266**	P	**Pn**	**22 55 30.2**	**-0.6**
CHTO	**Chiang Mai**	**12.78**	**200**	Pn	**Pn**	**22 55 58.2**	**-1.0**
NJ2	**Nanjing**	**13.19**	**81**	*e*P	**Pn**	**22 56 04.1**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	**Songino Array**	**16.99**	**7**	Pn	**Pn**	**22 56 56.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=4.8						
ULN	**Ulaanbaatar**	**17.09**	**8**	Pn	**Pn**	**22 56 55.7**	**-0.6**
KSRS	**Korea Array**	**21.22**	**66**	P	**P**	**22 57 42.4**	**-1.0**
	comp=Z,3.3nm,0.7s,mb3.8,baz=253,slow=9.3,SNR=10						
MK31	**Makanchi Array**	**22.71**	**320**	*e*P	**P**	**22 57 60.0**	**+0.8**
MKAR	**Makanchi Array**	**22.71**	**320**	P	**P**	**22 57 59.9**	**+0.6**
	comp=Z,2.5nm,1.1s,mb3.6,baz=124,slow=12,SNR=6.8						
KSH	**Kashi**	**23.93**	**298**	P	**P**	**22 58 15.6**	**+4.0**
KSH				pmax	pmax		
	comp=Z,46nm,4.7s						
UCH	**Uchtor**	**25.68**	**304**	*e*Pn	**P**	**22 58 27.6**	**+0.1**
	comp=Z,17nm,1.8s,mb4.3						
AAK	**Ala-Archa**	**25.81**	**305**	P	**P**	**22 58 31.4**	**+2.7**
	comp=Z,0.8nm,0.4s,mb3.6,baz=134,slow=7.7,SNR=5.2						
AAK	**Ala-Archa**	**25.81**	**305**	*e*P	**P**	**22 58 29.1**	**+0.4**
	comp=Z,1.7nm,0.7s,mb3.7						
AML	**Almayashu**	**26.24**	**303**	*e*P	**P**	**22 58 32.9**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.6						
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**22 58 35.8**	**+0.2**
	comp=Z,3.0nm,0.7s,mb3.9,baz=136,slow=8.7,SNR=12						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**22 58 40.1**	**+0.6**
	comp=Z,1.7nm,0.8s,mb3.6,baz=130,slow=9.6,SNR=7.8						
KURK	**Kurchatov**	**27.02**	**324**	*e*P	**P**	**22 58 39.5**	**0.0**
KBL	**Kabul**	**29.07**	**286**	*e*P	**P**	**22 58 58.6**	**+0.7**
	comp=Z,1.3nm,0.4s,mb4.0						
ASAJ	**Asahikawa**	**33.38**	**56**	LR	LR	23 14 37.4	
	comp=Z,336nm,20.1s,baz=199,slow=39						
YSS	**Yuzh-Sakhalins**	**34.07**	**51**	P	**P**	**22 59 40.9**	**-0.9**
ARU	**Arti**	**40.19**	**323**	*e*P	**P**	**23 00 33.7**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.0						
KIV	**Kislovodsk**	**48.91**	**303**	*e*P	**P**	**23 01 43.8**	**+0.3**
	comp=Z,2.9nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**56.31**	**300**	P	**P**	**23 02 37.7**	**-0.8**
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**23 02 45.2**	**-0.3**
	comp=Z,2.2nm,0.9s,mb4.2,baz=145,slow=7.0,SNR=4.1						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**23 02 45.2**	**-0.3**
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**23 02 54.4**	**-0.8**
	comp=Z,1.8nm,0.5s,mb4.4,baz=338,slow=7.8,SNR=7.4						
KWP	**Kalwaria Pacla**	**61.38**	**313**	P	**P**	**23 03 12.5**	**-1.0**
ASAR	**Alice Springs**	**61.67**	**148**	P	**P**	**23 03 15.3**	**-0.4**
	comp=Z,0.4nm,0.5s,mb4.8,baz=327,slow=6.9,SNR=6.3						
NB2	**NORSAR Subarra**	**64.47**	**327**	P	**P**	**23 03 32.9**	**-0.9**
	comp=Z,0.1nm,0.6s,mb3.0,baz=76,slow=6.9						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**23 03 33.1**	**-0.6**
	comp=Z,1.1nm,0.9s,mb3.9,baz=75,slow=6.1,SNR=3.9						
MORC	**Moravsky Berou**	**64.55**	**314**	*e*P	**P**	**23 03 35.2**	**+0.6**
	comp=Z,1.6nm,0.7s,mb4.2						
TIP	**Timpagrande**	**68.85**	**304**	*e*P	**P**	**23 04 02.2**	**0.0**
KMBO	**Kilima Mbogo**	**70.33**	**256**	P	**P**	**23 04 11.2**	**-0.4**
WLF	**Walferdange**	**71.44**	**317**	P	**P**	**23 04 17.5**	**-0.3**
STKA	**Stephens Creek**	**72.21**	**147**	P	**P**	**23 04 21.9**	**-0.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=113,slow=8.9,SNR=4.6						
VSL	**Villasalto**	**73.91**	**307**	P	**P**	**23 04 32.1**	**-0.7**
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**23 05 17.4**	**+0.3**
	comp=Z,0.3nm,0.7s,mb3.3,baz=325,slow=4.8,SNR=5.3						
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**23 05 17.4**	**+0.3**

NIED ***12*** *22:57:00, 24°.00N×122°.50E, h32km, Mw4.7 Best double couple: M0=1.49000×10^16 NP1:φs=55.00000°, δ=89.00000°, λ=64.00000° NP2:φs=323.00000°, δ=26.00000°, λ=178.00000°.*
BJI ***12*** *22:57:41.3, 23°.89N×122°.79E, h29km, mB4.9/24, mb4.8/39, ML4.4/5, Ms4.7/42, Ms7 4.6/34*
MOS ***12*** *22:57:43.7±0.9, 24°.21N×122°.63E, h27km, mb5.2/52, MS4.5/21, Error ellipse: s-maj=10.2km s-min=4.5km az=120.1*
SZGRF ***12*** *22:57:44.1, 24°.75N×124°.45E, h33km, mb4.9, Southwestern Ryukyu Islands, Japan*
TAP ***12*** *22:57:44.9, 23°.99N×122°.55E, h28km, ML5.1, C*
DJA ***12*** *22:57:44, 24°.08N×122°.85E, h21km, mb5.0/12*
IDC ***12*** *22:57:45.1±2.5, 24°.16N×122°.63E, h27km±16km, mb4.6/28, mb1 4.7/30, mb1mx4.6/33, mbtmp4.5/30, ML4.1/2, MS4.1/20, Ms1 4.1/20, ms1mx3.9/32, Error ellipse: s-maj=15.7km s-min=12.4km az=58.0*
JMA ***12*** *22:57:45.5±0.2, 24°.04N×122°.51E, h32km±5km, M5.1*
JMA Felt I J1.
NEIC ***12*** *22:57:45.1±1.3, 24°.08N×122°.57E, h30km±9km, mb5.0/79, MS4.4/2, Error ellipse: s-maj=4.4km s-min=4.2km az=86.0*
NEIC Recorded [1 JMA] on Iriomote-jima and Yonaguni-jima, Ryukyu Islands.
ISCJB ***12*** *22:57:46.0±0.2, 24°.00N±0°.02×122°.54E±0°.01, h45km±1km, mb4.9/132, MS4.4/42, Error ellipse: s-maj=2.6km s-min=1.8km az=158.4*
ISC 12 22:57:46.8±0.2, 24°.00N±0°.02×122°.54E±0°.01, h41km±1km, h47km±2.5km; pP-P, n580, σ1°06/639, mb4.9/132, MS4.4/42, 104C-79D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**43**	P	**Pn**	**22 57 57.7**	**-1.6**
YOJ				S	**Sn**	**22 58 06.1**	**-2.1**
YOJ	**Yonaguni jima**	**0.63**	**43**	⇓*i*P	**Pn**	**22 57 57.8**	**-1.5**
YOJ				*i* S	**Sn**	**22 58 06.0**	**-2.3**
	baz=48						
ENA	**Nanau**	**0.84**	**300**	⇑*i*P	**Pn**	**22 58 01.1**	**-1.1**
	baz=300						
ENA				*e*S	**Sn**	**22 58 12.9**	**-0.5**
	baz=300						
HWA	**Hwalien**	**0.85**	**269**	⇓P	**Pn**	**22 58 00.8**	**-1.5**
	baz=256						
HWA				*e*S	**Sn**	**22 58 12.4**	**-1.2**
	baz=256						
TWD	**Chiawan**	**0.86**	**275**	⇓*i*P	**Pn**	**22 58 00.9**	**-1.6**
	baz=276						
TWC	**Suao**	**0.87**	**314**	⇑*i*P	**Pn**	**22 58 01.5**	**-1.1**
	baz=314						
NACB	**Ninganchiao**	**0.88**	**281**	⇑*i*P	**Pn**	**22 58 01.0**	**-1.7**
NACB				*e*S	**Sn**	**22 58 12.5**	**-1.8**
ESF	**Shoufeng Towns**	**0.95**	**262**	*e*P	**Pn**	**22 58 02.5**	**-1.2**
	baz=262						
ESF				*e*S	**Sn**	**22 58 15.3**	**-0.8**
	baz=262						
TEGC	**Jichi Village**	**0.96**	**253**	*e*P	**Pn**	**22 58 02.1**	**-1.6**
	baz=253						
TEGC				*e*S	**Sn**	**22 58 15.2**	**-1.1**
	baz=253						
EGS		**1.00**	**327**	⇑*i*P	**Pn**	**22 58 05.0**	**+0.5**
	baz=339						
ESL	**Shilin**	**1.03**	**260**	⇓*i*P	**Pn**	**22 58 02.7**	**-2.0**
	baz=249						
ESL				*e*S	**Sn**	**22 58 15.4**	**-2.6**
	baz=249						
ILA	**Ilan**	**1.05**	**317**	⇓P	**Pn**	**22 58 05.4**	**+0.3**
	baz=304						
ILA				S	**Sn**	**22 58 20.8**	**+2.4**
	baz=304						
TWE	**Neicheng**	**1.07**	**312**	⇑*i*P	**Pn**	**22 58 05.2**	**-0.1**
	baz=300						
TWE				*e*S	**Sn**	**22 58 18.7**	**-0.3**
	baz=300						
TWB1	**Santiao Chiao**	**1.12**	**334**	⇑P	**Pn**	**22 58 05.6**	**-0.5**
	baz=333						
IRIF	**Iriomote-Funau**	**1.14**	**73**	P	**Pn**	**22 58 05.9**	**-0.4**
IRIF				S	**Sn**	**22 58 20.8**	**+0.1**
NNS	**Nan Shan**	**1.15**	**293**	⇓*i*P	**Pn**	**22 58 05.9**	**-0.5**
	baz=280						
NNS				*e*S	**Sn**	**22 58 22.6**	**+1.7**
	baz=280						
HATJ	**Hateruma jima**	**1.16**	**87**	P	**Pn**	**22 58 06.1**	**-0.5**
HATJ				*e*S	**Sn**	**22 58 21.5**	**+0.3**
WHF	**Hehuan Shan**	**1.17**	**277**	⇓*i*P	**Pn**	**22 58 06.0**	**-0.8**
	baz=264						
WHF				*e*S	**Sn**	**22 58 20.0**	**-1.5**
	baz=264						
EHY	**Hungye**	**1.22**	**246**	⇓*i*P	**Pn**	**22 58 05.9**	**-1.5**
	baz=246						
EHY				S	**Sn**	**22 58 20.8**	**-1.9**
	baz=246						
YHNB	**Yeheng**	**1.25**	**302**	⇑*i*P	**Pn**	**22 58 07.5**	**-0.4**
YHNB				*e*S	**Sn**	**22 58 22.2**	**-1.3**
NSK	**Sanguang**	**1.27**	**302**	⇓*i*P	**Pn**	**22 58 08.0**	**0.0**
	baz=286						
NSK				*e*S	**Sn**	**22 58 25.8**	**+1.9**
	baz=286						
NWF	**Wu-fen Shan**	**1.27**	**327**	⇓*i*P	**Pn**	**22 58 08.1**	**+0.1**
	baz=327						
NWF				S	**Sn**	**22 58 25.7**	**+1.8**
	baz=327						
TWT	**Tachien**	**1.27**	**282**	⇓*i*P	**Pn**	**22 58 07.8**	**-0.2**
	baz=269						
TWT				*e*S	**Sn**	**22 58 24.5**	**+0.6**
	baz=269						
YULB	**Yu-li**	**1.29**	**242**	⇑*i*P	**Pn**	**22 58 06.8**	**-1.6**
YULB				*e*S	**Sn**	**22 58 19.7**	**-4.7**
TWA	**Mucha**	**1.31**	**318**	⇓P	**Pn**	**22 58 08.8**	**+0.2**
	baz=336						
TWA				S	**Sn**	**22 58 26.9**	**+2.1**
	baz=336						
TWF1	**Yuli**	**1.31**	**241**	⇓*i*P	**Pn**	**22 58 07.0**	**-1.5**
	baz=241						
TWF1				*e*S	**Sn**	**22 58 22.7**	**-2.2**
	baz=241						
TATO	**Taipei**	**1.36**	**316**	⇑*e*Pn	**Pn**	**22 58 08.8**	**-0.5**
TATO				*e*S	**Sn**	**22 58 27.0**	**+0.8**
JKRS	**Kuro-shima**	**1.36**	**80**	P	**Pn**	**22 58 09.3**	**-0.1**
JKRS				S	**Sn**	**22 58 27.7**	**+1.4**
TAP1	**Taipei**	**1.39**	**318**	P	**Pn**	**22 58 09.8**	**+0.1**
	baz=318						
TAP1				S	**Sn**	**22 58 28.5**	**+1.7**
	baz=318						
CHKT	**Chengkung**	**1.40**	**230**	P	**Pn**	**22 58 07.5**	**-2.4**
	baz=219						
CHKT				*e*S	**Sn**	**22 58 23.4**	**-3.8**
	baz=219						
SSLB	**Suanglung**	**1.47**	**262**	*e*Pn	**Pn**	**22 58 09.6**	**-1.2**
SSLB				*e*S	**Sn**	**22 58 26.8**	**-2.0**
TWS1	**Kuangyinshan**	**1.50**	**317**	*e*P	**Pn**	**22 58 11.3**	**+0.1**
	baz=334						
SMLT	**Sun Moon Lake**	**1.50**	**266**	⇓*i*P	**Pn**	**22 58 11.0**	**-0.3**
	baz=265						
SMLT				*e*S	**Sn**	**22 58 28.7**	**-1.0**
	baz=265						
JIJ	**Ishigaki jima**	**1.51**	**76**	P	**Pn**	**22 58 10.8**	**-0.6**
JIJ				S	**Sn**	**22 58 30.1**	**+0.3**
TWY	**Chenhua**	**1.53**	**326**	*e*P	**Pn**	**22 58 11.6**	**0.0**
	baz=326						
NSTT	**Nanjuang**	**1.54**	**294**	⇓*i*P	**Pn**	**22 58 12.6**	**+0.9**
	baz=294						
YUS	**Yu-Shan**	**1.54**	**251**	⇓*i*P	**Pn**	**22 58 11.5**	**-0.3**
	baz=251						
YUS				*e*S	**Sn**	**22 58 29.1**	**-1.5**
	baz=251						
TYC	**Yuchr**	**1.54**	**267**	⇓*i*P	**Pn**	**22 58 11.4**	**-0.4**
	baz=266						
TYC				*e*S	**Sn**	**22 58 29.5**	**-1.1**
	baz=266						
NCU	**National Centr**	**1.56**	**308**	*e*P	**Pn**	**22 58 12.0**	**-0.1**
	baz=308						
ELDTW	**Lidau**	**1.61**	**240**	⇓P	**Pn**	**22 58 11.3**	**-1.5**
	baz=240						
HSN	**Hsinchu**	**1.64**	**299**	*e*P	**Pn**	**22 58 12.6**	**-0.5**
	baz=300						
TWQ1	**Liyutan**	**1.65**	**282**	⇓*i*P	**Pn**	**22 58 14.4**	**+1.1**
	baz=281						
TWQ1				*e*S	**Sn**	**22 58 35.3**	**+2.0**
	baz=281						
ALS	**Alishan**	**1.66**	**253**	⇓*i*P	**Pn**	**22 58 13.6**	**+0.1**
	baz=253						
ALS				S	**Sn**	**22 58 33.1**	**-0.5**
	baz=253						
NSY	**Sanyi**	**1.67**	**285**	⇓*i*P	**Pn**	**22 58 14.9**	**+1.3**
	baz=284						
NSY				*e*S	**Sn**	**22 58 36.3**	**+2.5**
	baz=284						
PCYT	**Pengchaiyu**	**1.68**	**345**	P	**Pn**	**22 58 13.4**	**-0.3**
	baz=345						
WNT	**Mingjian**	**1.70**	**266**	P	**Pn**	**22 58 14.7**	**+0.7**
	baz=266						
WNT				S	**Sn**	**22 58 36.0**	**+1.4**
	baz=266						
TCU	**Taichung**	**1.71**	**275**	⇓*i*P	**Pn**	**22 58 15.3**	**+1.2**
	baz=274						
TCU				*e*S	**Sn**	**22 58 36.5**	**+1.8**
	baz=274						
CHN5	**Tsauling**	**1.75**	**257**	⇓*i*P	**Pn**	**22 58 15.2**	**+0.5**
	baz=257						
TTN	**Taitung**	**1.78**	**226**	*e*P	**Pn**	**22 58 12.6**	**-2.5**
	baz=226						
TWG	**Pinlang**	**1.79**	**229**	*e*Pn	**Pn**	**22 58 13.3**	**-1.9**
TWG				*e*Sn	**Sn**	**22 58 34.4**	**-2.2**
TWG	**Pinlang**	**1.79**	**229**	*e*P	**Pn**	**22 58 13.3**	**-1.9**
	baz=240						
STYT	**Tauyuan**	**1.83**	**243**	⇓*i*P	**Pn**	**22 58 15.6**	**-0.3**
	baz=243						
STYT				*e*S	**Sn**	**22 58 36.5**	**-1.4**
	baz=243						
WGK	**Gukeng**	**1.84**	**261**	*e*P	**Pn**	**22 58 16.6**	**+0.7**
	baz=260						
WGK				*e*S	**Sn**	**22 58 40.2**	**+2.3**
	baz=260						
TPUB	**Ta-pu**	**1.88**	**249**	*e*Pn	**Pn**	**22 58 16.4**	**-0.1**
TPUB				*e*S	**Sn**	**22 58 40.2**	**+1.1**
CHN4	**Tsaushan**	**1.90**	**250**	⇓*i*P	**Pn**	**22 58 17.3**	**+0.7**
	baz=250						
CHN4				S	**Sn**	**22 58 41.1**	**+1.8**
	baz=250						
WTP	**Ta-pu**	**1.92**	**247**	⇓*i*P	**Pn**	**22 58 17.4**	**+0.4**
	baz=239						
WTP				*e*S	**Sn**	**22 58 41.1**	**+1.2**
	baz=239						
CHN2	**Minshiung**	**1.95**	**257**	P	**Pn**	**22 58 18.6**	**+1.2**
	baz=256						
CHN2				S	**Sn**	**22 58 43.5**	**+3.0**
	baz=256						
CHY	**Chiayi**	**2.00**	**256**	⇓P	**Pn**	**22 58 18.9**	**+0.8**
	baz=255						
CHY				S	**Sn**	**22 58 43.3**	**+1.4**
	baz=255						
SGST	**Jiashian**	**2.01**	**243**	⇓P	**Pn**	**22 58 18.8**	**+0.5**
	baz=235						
SGST				S	**Sn**	**22 58 43.9**	**+1.6**
	baz=235						
CHN1	**Nanshi**	**2.02**	**247**	⇓*i*P	**Pn**	**22 58 19.0**	**+0.7**
	baz=247						
CHN1				S	**Sn**	**22 58 44.6**	**+2.3**
	baz=247						
TWK	**Hsinying**	**2.02**	**249**	⇓*i*P	**Pn**	**22 58 19.3**	**+1.0**
	baz=249						
TWK				*e*S	**Sn**	**22 58 44.0**	**+1.7**
	baz=249						
ECL	**Taimali**	**2.02**	**226**	P	**Pn**	**22 58 16.2**	**-2.1**
	baz=237						
WTCT	**Ta-ch'eng**	**2.07**	**267**	P	**Pn**	**22 58 20.1**	**+1.0**
	baz=279						
WTCT				*e*S	**Sn**	**22 58 46.1**	**+2.5**
	baz=279						
JTJ	**Tarama**	**2.08**	**72**	P	**Pn**	**22 58 18.9**	**-0.2**
JTJ				*e*S	**Sn**	**22 58 45.2**	**+1.4**
SSD	**Sandimen**	**2.15**	**235**	*e*P	**Pn**	**22 58 20.3**	**+0.1**
	baz=228						
SSD				*e*S	**Sn**	**22 58 47.0**	**+1.4**
	baz=228						
LAY	**Lan-yu**	**2.15**	**205**	⇑P	**Pn**	**22 58 17.6**	**-2.7**
	baz=205						
LAY				*e*S	**Sn**	**22 58 41.4**	**-4.3**
	baz=205						
CHN3	**Shinhua**	**2.20**	**246**	*e*P	**Pn**	**22 58 22.3**	**+1.5**
	baz=246						
CHN3				*e*S	**Sn**	**22 58 49.7**	**+3.0**
	baz=246						
TAW	**Tawu**	**2.23**	**223**	*e*P	**Pn**	**22 58 19.2**	**-2.0**
	baz=234						
CHN8	**Yiju**	**2.23**	**253**	*e*P	**Pn**	**22 58 21.6**	**+0.3**
	baz=253						
CHN8				*e*S	**Sn**	**22 58 48.9**	**+1.3**
	baz=253						
EAST	**Anshuo**	**2.24**	**224**	⇑*i*P	**Pn**	**22 58 19.7**	**-1.7**
	baz=224						
SGLT	**Jiouru**	**2.27**	**236**	*e*P	**Pn**	**22 58 22.7**	**+0.9**
	baz=237						
SGLT				*e*S	**Sn**	**22 58 51.1**	**+2.6**
	baz=237						
TWM1	**Shoushan**	**2.27**	**239**	*e*P	**Pn**	**22 58 24.1**	**+2.2**
	baz=239						
SCLT	**Jiali**	**2.30**	**250**	*e*P	**Pn**	**22 58 22.8**	**+0.6**
	baz=249						
SCLT				*e*S	**Sn**	**22 58 51.5**	**+2.2**
	baz=249						
TAI1	**Yung-k'ang**	**2.33**	**246**	*e*P	**Pn**	**22 58 23.9**	**+1.3**
	baz=259						
TAI1				*e*S	**Sn**	**22 58 51.1**	**+1.1**
	baz=259						
SCZT	**Fangliau**	**2.40**	**228**	*e*P	**Pn**	**22 58 22.8**	**-0.7**
	baz=221						
SCZT				*e*S	**Sn**	**22 58 51.9**	**+0.2**
	baz=221						
TSEB	**Hengchuen, Pin**	**2.58**	**216**	*e*P	**Pn**	**22 58 25.1**	**-1.0**
	baz=217						
TSEB				*e*S	**Sn**	**22 58 56.6**	**+0.4**
	baz=217						
HEN	**Hengchun**	**2.59**	**220**	*e*P	**Pn**	**22 58 25.4**	**-0.7**
	baz=220						
HEN				*e*S	**Sn**	**22 58 55.5**	**-0.9**
	baz=220						
TWP	**Hsiaoliuchiu**	**2.59**	**231**	*e*P	**Pn**	**22 58 28.5**	**+2.2**
	baz=246						
JMJ	**Miyako jima 2**	**2.64**	**72**	P	**Pn**	**22 58 27.2**	**+0.3**
JMJ				*e*S	**Sn**	**22 58 58.9**	**+1.2**
JMJ	**Miyako jima 2**	**2.64**	**72**	*e*P	**Pn**	**22 58 27.3**	**+0.4**
	baz=73						
JMJ				*e*S	**Sn**	**22 58 57.9**	**+0.2**
	baz=73						
JOGS	**Gusukube**	**2.72**	**73**	P	**Pn**	**22 58 29.4**	**+1.4**
JOGS				*e*S	**Sn**	**22 59 02.9**	**+3.2**
PNG	**Penghu**	**2.77**	**262**	P	**Pn**	**22 58 28.5**	**-0.2**
	baz=260						
PNG				*e*S	**Sn**	**22 59 00.8**	**-0.1**
	baz=260						
QZH	**Qu

comp=Z,3μm,15.3s
JAM Amami Oshima 7.72 54 P **Pn 22 59 33.6 -3.0**
NJ2 Nanjing 8.65 339 *e*P **Pn 22 59 48.1 -1.4**
NJ2 pP 22 59 52.8
NJ2 S **Sn 23 01 27.1 +1.3**
NJ2 pmax pmax
comp=Z,40nm,0.6s
NJ2 LR LR
comp=N,3μm,9.0s
NJ2 LR LR
comp=E,2μm,10.0s
NJ2 LR LR
comp=Z,23μm,13.8s
WHN Wuhan 9.77 314 P **Pn 23 00 09.2 +4.4**
WHN S **Sn 23 01 58.7 +5.5**
WHN LR LR
comp=N,7μm,15.6s
WHN LR LR
comp=E,3μm,10.7s
WHN LR LR
comp=Z,6μm,13.2s
QIZ Qiongzhong 12.81 250 P **Pn 23 00 45.6 -0.8**
QIZ S **Sn 23 03 10.1 +2.5**
QIZ pmax pmax
comp=Z,26nm,2.1s
QIZ LR LR
comp=N,730nm,15.5s
QIZ Qiongzhong 12.81 250 *e*Pn **Pn 23 00 48.0 +1.6**
QIZ *e*Sn **Sn 23 03 07.8 +0.1**
INCN Inchon 13.89 14 *e*Pn **Pn 23 01 02.3 +1.3**
KSRS Korea Array 14.18 18 Pn **Pn 23 01 05.8 +0.8**
comp=N,1.3nm,0.3s,baz=201,slow=13,SNR=36
TBP Tagbilaran 14.29 175 *e*P **Pn 23 01 09.6 +3.0**
GYA Guiyang 14.57 283 P **Pn 23 01 10.0 -0.4**
GYA pP pP 23 01 18.7 -7.4
GYA PP 23 01 22.8
GYA S **Sn 23 03 51.2 +0.5**
GYA sS 23 04 02.8
GYA SS 23 04 08.2
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,630nm,14.9s
GYA LR LR
comp=E,720nm,13.2s
GYA LR LR
comp=Z,820nm,15.0s
DL2 Dalian 14.88 357 *e*P **Pn 23 01 18.2 +3.8**
DL2 LR LR
comp=N,700nm,13.9s
DL2 LR LR
comp=Z,900nm,13.9s
BJT Baijiatuau 16.85 343 *e*P **Pn 23 01 38.1 -1.5**
BJI Beijing 16.87 343 P **Pn 23 01 39.7 -0.2**
BJI S **S 23 04 47.0 -8.3**
BJI pmax pmax
comp=Z,15nm,1.3s
BJI pmax pmax
comp=Z,360nm,5.4s
BJI LR LR
comp=N,890nm,18.4s
BJI LR LR
comp=E,620nm,17.4s
BJI LR LR
comp=Z,590nm,22.8s
DAV Davao City (W) 17.09 170 LR LR 23 08 06.5
comp=Z,522nm,20.7s,baz=349,slow=36
CBIJ Chichi jima 17.99 76 LR LR 23 08 27.2
comp=Z,579nm,21.4s,baz=321,slow=36
KMI Kunming 18.05 278 P **Pn 23 01 55.2 +0.7**
KMI pP pP 23 02 02.9 -1.7
KMI sP sP 23 02 07.7 -2.1
KMI PP 23 02 12.4
KMI S **S 23 05 11.4 -8.1**
KMI sS sS 23 05 24.8 -11
KMI SS 23 05 35.0
KMI pmax pmax
comp=Z,17nm,1.1s
KMI pmax pmax
comp=Z,210nm,5.1s
KMI LR LR
comp=N,520nm,12.4s
KMI LR LR
comp=E,2μm,14.5s
KMI LR LR
comp=Z,2μm,14.2s
MAT Matsushiro 18.39 44 P **Pn 23 01 56.6 -2.1**
MJAR Matsushiro Arr 18.39 44 P **Pn 23 01 56.1 -2.5**
comp=Z,0.4nm,0.3s,baz=244,slow=11,SNR=4.6
KKM Kota Kinabalu 18.86 200 P **Pn 23 02 04.3 -0.2**
HHC Hu-ho-hao-te 19.16 334 *e*P **Pn 23 02 08.6 +0.8**
HHC pP pP 23 02 16.8 +0.1
HHC sP sP 23 02 21.1 -0.8
HHC PP 23 02 26.3
HHC S **S 23 05 39.2 -2.5**
HHC sS sS 23 05 50.5 -7.2
HHC SS 23 06 04.9
HHC PcP PcP 23 06 31.8 +2.4
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,240nm,5.2s
HHC LR LR
comp=N,2μm,12.9s
HHC LR LR
comp=E,940nm,13.3s
HHC LR LR
comp=Z,2μm,13.1s
CN2 Changchun 19.89 6 *e*P **Pn 23 02 13.7 -2.9**
CN2 *es*P sP 23 02 28.0 -1.9
CN2 *e*S **S 23 05 50.5 -5.9**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,16.0s
CN2 LR LR
comp=E,800nm,16.0s
CN2 LR LR
comp=Z,500nm,17.0s
LZH Lanzhou 20.13 311 *e*P **P 23 02 19.5 +2.1**
LZH pP 23 02 28.6
LZH sP sP 23 02 32.5 -0.1
LZH PP 23 02 39.0
LZH S **S 23 05 56.5 -4.8**
LZH sS sS 23 06 10.7 -6.7
LZH pmax pmax
comp=Z,130nm,1.1s
LZH pmax pmax
comp=Z,320nm,4.5s
LZH LR LR
comp=E,1μm,11.5s
LZH LR LR
comp=Z,2μm,15.0s,MS4.6
MDJ Mudanjiang 21.36 14 P **P 23 02 30.5 0.0**
MDJ pP 23 02 38.6
MDJ sP sP 23 02 42.6 -3.2
MDJ S **S 23 06 26.5 +1.2**
MDJ ScP ScP 23 10 08.0 +0.8
MDJ PcS PcS 23 10 12.0 +0.6
MDJ pmax pmax
comp=Z,8.0nm,1.1s,mb4.0
MDJ pmax pmax
comp=Z,170nm,3.7s
MDJ LR LR
comp=N,650nm,16.6s,MS4.3
MDJ LR LR
comp=E,730nm,16.0s,MS4.3
MDJ LR LR
comp=Z,1μm,14.6s,MS4.4
MDJ Mudanjiang 21.36 14 *e*P **P 23 02 29.1 -1.5**
CHTO Chiang Mai 22.55 261 *e*P **P 23 02 46.1 +2.6**
CHTO pmax pmax
comp=Z,15nm,1.0s,mb4.4
CHTO Chiang Mai 22.55 261 *e*P **P 23 02 46.1 +2.6**
comp=Z,15nm,1.0s,mb4.4
GUMO Guam 23.51 112 LR LR 23 10 04.0
comp=Z,395nm,20.5s,MS3.9,baz=312,slow=32
GUMO Guam 23.51 112 *e*P **P 23 02 54.0 +0.6**
GUMO pmax pmax
comp=Z,231nm,1.3s,mb5.5
GUMO Guam 23.51 112 *e*P **P 23 02 54.0 +0.6**
comp=Z,230nm,1.3s,mb5.5
GTA Gaotai 24.59 314 *e*P **P 23 03 02.8 -0.3**
GTA pP 23 03 12.1
GTA sP sP 23 03 16.2 -2.8
GTA PcP PcP 23 06 41.3 +1.1
GTA S **S 23 07 20.2 -1.3**
GTA sS sS 23 07 35.9 -3.9
GTA SS 23 08 17.6
GTA pmax pmax
comp=Z,15nm,0.7s,mb4.6
GTA pmax pmax
comp=Z,240nm,7.2s
GTA LR LR
comp=N,470nm,12.6s,MS4.5
GTA LR LR
comp=E,950nm,15.9s,MS4.5
GTA LR LR
comp=Z,1μm,15.9s,MS4.5
HIA Hailar 25.31 356 *e*P **P 23 03 08.7 -0.8**
HIA pmax pmax
comp=Z,15nm,0.8s
HIA Hailar 25.31 356 *e*P **P 23 03 08.7 -0.8**
comp=Z,14nm,0.8s,mb4.6
KSM Kuching 25.33 210 *e*P **P 23 03 09.9 -0.1**
comp=Z,20nm,1.0s,mb4.6
ASAJ Asahikawa 25.93 34 P **P 23 03 12.9 -2.3**
comp=Z,8.6nm,0.5s,mb4.6,baz=231,slow=9.5,SNR=9.6
KLR Kul'dur 26.20 14 *e*P **P 23 03 13.0 -4.6**
KLR MLR MLR
comp=Z,2μm,13.5s,MS4.7
HABR Khabarovsk 26.36 19 *e*P **P 23 03 23.9 +4.9**
HABR *e*PPP 23 04 01.8
HABR *e* 23 06 41.8
HABR *e*S **S 23 07 45.0 -4.2**
HABR *e**SS sS 23 08 01.0 -6.7
HABR *e*SSS 23 08 59.4
HABR 23 14 08.7
HABR MLR MLR
comp=Z,411nm,18.0s,MS4.0
ULN Ulaanbaatar 26.81 337 *e*P **P 23 03 22.0 -1.1**
ULN pmax pmax
comp=Z,17nm,1.2s,mb4.5
ULN Ulaanbaatar 26.81 337 *e*P **P 23 03 22.0 -1.1**
comp=Z,17nm,1.2s,mb4.4
SONM Songino Array 27.03 336 P **P 23 03 24.1 -1.0**
comp=Z,8.2nm,0.6s,mb4.4,baz=150,slow=9.5,SNR=55
SONM PcP PcP 23 06 46.0 +0.4
comp=Z,1.5nm,0.5s,baz=172,slow=3.7,SNR=4.8
SONM ScP ScP 23 10 23.6 +0.9
comp=Z,3.0nm,1.2s,baz=149,slow=3.2,SNR=7.3
SONM LR LR 23 15 19.3
comp=Z,1μm,19.3s,MS4.5,baz=220,slow=39
SONM Songino Array 27.03 336 P **P 23 03 24.1 -0.9**
SONM 23 06 46.0
YSS Yuzh-Sakhalins 28.05 30 *e*P **P 23 03 35.0 +0.8**
YSS MLR MLR
comp=Z,400nm,17.0s,MS4.1
YSS MLR MLR
comp=N,500nm,18.0s
YSS Yuzh-Sakhalins 28.05 30 *e*P **P 23 03 33.8 -0.4**
KULM Kulim 28.10 232 P **P 23 03 35.7 +0.7**
LSA Lhasa 28.52 288 P **P 23 03 37.6 -1.0**
LSA Lhasa 28.52 288 *e*P **P 23 03 39.9 +1.3**
LSA pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
LSA Lhasa 28.52 288 *e*P **P 23 03 39.9 +1.3**
comp=Z,10nm,0.6s,mb4.7
ZAK Zakamensk 30.29 335 *e*P **P 23 03 51.4 -2.6**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb3.9
TLY Talaya 31.21 337 *e*P **P 23 04 00.7 -1.4**
TLY pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
TLY MLR MLR
comp=Z,842nm,15.0s,MS4.5
TLY Talaya 31.21 337 *e*P **P 23 04 01.1 -1.1**
comp=Z,9.3nm,0.8s,mb4.7
MOY Mondy 32.20 335 *e*P **P 23 04 10.2 -0.6**
WMQ Urumqi 34.68 313 P **P 23 04 32.8 +0.3**
WMQ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
WMQ LR LR
comp=N,88nm,27.0s,MS3.7
WMQ LR LR
comp=E,170nm,30.0s,MS3.7
WMQ Urumqi 34.68 313 P **P 23 04 32.2 -0.3**
WMQ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
WMQ LR LR
comp=N,440nm,13.0s,MS4.5
WMQ LR LR
comp=E,400nm,13.0s,MS4.5
WMQ LR LR
comp=Z,220nm,15.0s,MS4.0
KAKA Kakadu 37.75 164 *e*P **P 23 04 57.0 -2.0**
comp=Z,24nm,0.8s,mb5.0
YAK Yakutsk 38.32 5 *e*P **P 23 05 00.1 -3.2**
YAK pmax pmax
comp=Z,25nm,1.1s,mb4.9
YAK pmax pmax
comp=N,14nm,1.0s
YAK MLR MLR
comp=Z,261nm,15.0s,MS4.2
YAK MLR MLR
comp=N,219nm,17.0s,MS4.1
YAK MLR MLR
comp=E,157nm,19.0s,MS4.1
YAK Yakutsk 38.32 5 *e*P **P 23 05 00.8 -2.5**
comp=E,39nm,0.8s,mb5.2
MK31 Makanchi Array 39.33 316 *e*P **P 23 05 11.7 -0.3**
MKAR Makanchi Array 39.33 316 P **P 23 05 11.6 -0.4**
comp=E,16nm,0.7s,mb4.9,baz=101,slow=10,SNR=209
MKAR PcP PcP 23 07 19.9 -0.1
comp=E,3.4nm,0.8s,baz=114,slow=3.0,SNR=4.6
MKAR ScP ScP 23 11 06.4 +1.0
comp=E,1.2nm,0.9s,baz=111,slow=5.3,SNR=5.4
MKAR LR LR 23 22 49.1
comp=E,452nm,18.0s,MS4.3,baz=105,slow=38
MKAR Makanchi Array 39.33 316 P **P 23 05 11.6 -0.4**
MKAR 23 07 19.9
MKAR 23 11 06.4
PETK Petropavlovsk- 39.33 33 P **P 23 05 10.1 -1.8**
comp=E,2.2nm,0.7s,mb4.0,baz=176,slow=4.5,SNR=2.4
DDI Dehra Dun 39.88 289 *ex* x 23 05 18.0
NDI New Delhi 40.70 287 *e*P **P 23 05 21.0 -2.6**
ZAA0 Zalesovo Array 41.07 327 *e*P **P 23 05 24.1 -2.2**
ZALV Zalesovo Beam 41.07 327 P **P 23 05 24.5 -1.8**
comp=E,16nm,0.6s,mb4.8,baz=110,slow=8.0,SNR=72
ZALV PcP PcP 23 07 24.2 -1.2
comp=E,5.9nm,0.6s,baz=103,slow=4.7,SNR=9.3
ZALV LR LR 23 24 57.1
comp=E,94nm,18.3s,MS3.7,baz=341,slow=40
ZALV Zalesovo Beam 41.07 327 P **P 23 05 24.5 -1.8**
ZALV 23 07 24.2
FITZ Fitzroy Crossi 41.95 176 *e*P **P 23 05 32.3 -1.6**
comp=E,15nm,1.0s,mb4.6
FITZ *ep*P pP 23 05 45.0 -0.3
FITZ Fitzroy Crossi 41.95 176 *e*P **P 23 05 33.0 -0.8**
comp=E,8.7nm,0.9s,mb4.4
KSH Kashi 42.04 303 P **P 23 05 38.3 +3.9**
KSH *ep*P pP 23 05 47.0 +1.2
KSH *es*P sP 23 05 51.1 +0.5
KSH *e*PP PP 23 07 19.1 +7.0
KSH *e*PcP PcP 23 07 32.1 +3.2
KSH *e*ScP ScP 23 11 19.0 +2.8
KSH *e*PcS PcS 23 11 23.1 +2.6
KSH *e*S **S 23 11 56.0 +5.2**
KSH *es*S sS 23 12 12.1 +2.4
KSH *e*SS SS 23 14 58.0 -0.9
KSH *e*ScS ScS 23 15 35.2 +1.5
KSH pmax pmax
comp=Z,59nm,1.3s,mb5.1
KSH LR LR
comp=N,190nm,8.3s
KSH LR LR
comp=E,210nm,7.2s
ULHL Ulahol 42.26 307 P **P 23 05 37.5 +1.3**
SNR=36
NVS Novosibirsk 42.33 327 ⇑ *i*P **P 23 05 34.7 -1.9**
NVS *i* 23 07 14.0
NVS pmax pmax
comp=N,7.0nm,1.5s
NVS pmax pmax
comp=E,12nm,1.5s
NVS pmax pmax
comp=Z,15nm,1.5s,mb4.4
COEN Coen 42.78 150 *e*P **P 23 05 41.3 +0.7**
comp=Z,348nm,1.1s,mb6.0
TKM2 Tokmak 2 42.85 308 P **P 23 05 42.4 +1.4**
SNR=68
TKM2 Tokmak 2 42.85 308 *e*P **P 23 05 42.0 +1.0**
TKM2 *e* 23 07 31.7
TKM2 pmax pmax
comp=Z,53nm,0.9s,mb5.3
TKM2 Tokmak 2 42.85 308 *e*P **P 23 05 42.0 +1.0**
comp=Z,53nm,0.9s,mb5.3
TKM2 *e*PcP PcP 23 07 31.7 +0.2
KZA Kyzart 42.96 307 P **P 23 05 43.8 +1.9**
SNR=39
KURK Kurchatov 43.03 320 P **P 23 05 41.9 -0.4**
comp=Z,116nm,0.6s,mb5.8,SNR=19
KURK Kurchatov 43.03 320 P **P 23 05 41.5 -0.8**
comp=Z,15nm,1.0s,mb4.7,baz=109,slow=7.9,SNR=34
KURK PcP PcP 23 07 31.4 -0.6
comp=Z,3.2nm,0.6s,baz=112,slow=3.3,SNR=4.7
KURK Kurchatov 43.03 320 *e*P **P 23 05 41.3 -1.0**
KURK pmax pmax
comp=Z,25nm,1.1s,mb4.9
KURK Kurchatov 43.03 320 *e*P **P 23 05 41.3 -1.0**
comp=Z,25nm,1.1s,mb4.8
KBK Karagaybulak 43.27 307 P **P 23 05 46.0 +1.5**
SNR=28
CHMS Chumysh 43.48 308 P **P 23 05 46.9 +0.8**
SNR=30
UCH Uchtor 43.52 307 P **P 23 05 48.6 +2.2**
SNR=94
UCH Uchtor 43.52 307 *e*P **P 23 05 48.7 +2.2**
comp=Z,92nm,1.1s,mb5.4
UCH *e*PcP PcP 23 07 33.7 -0.1
FRU Bishkek 43.55 308 ⇑ *i*P **P 23 05 46.0 -0.6**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.1
FRU MLR MLR
comp=Z,300nm,17.0s,MS4.3
AAK Ala-Archa 43.60 307 P **P 23 05 48.8 +1.7**
comp=Z,120nm,1.1s,mb5.5,SNR=10
AAK Ala-Archa 43.60 307 P **P 23 05 48.2 +1.1**
SNR=17
AAK Ala-Archa 43.60 307 P **P 23 05 47.5 +0.5**
comp=Z,10nm,0.8s,mb4.6,baz=110,slow=5.9,SNR=39
AAK PcP PcP 23 07 34.3 +0.2
comp=Z,2.4nm,0.6s,baz=332,slow=5.8,SNR=2.6
AAK Ala-Archa 43.60 307 *c i*P **P 23 05 48.0 +0.9**
AAK pmax pmax
comp=Z,16nm,1.2s,mb4.6
AAK Ala-Archa 43.60 307 *e*P **P 23 05 47.6 +0.5**
USP Ospenovka 43.70 308 P **P 23 05 48.6 +0.7**
SNR=18
AML Almayashu 44.11 306 P **P 23 05 53.1 +1.9**
SNR=56
AML Almayashu 44.11 306 *e*P **P 23 05 52.8 +1.7**
comp=Z,45nm,0.8s,mb5.2
AML *e*PcP PcP 23 07 36.6 +0.8
EKS2 Erkin-Say 44.13 307 P **P 23 05 52.2 +0.9**
SNR=22
EKS2 Erkin-Say 44.13 307 *e*P **P 23 05 51.7 +0.4**
comp=Z,19nm,0.9s,mb4.8
MBWA Marble Bar 44.97 184 *e*P **P 23 05 56.7 -1.4**
WRAB Tennant Creek 45.16 164 P **P 23 05 59.0 -0.7**
comp=Z,297nm,0.7s,SNR=22
WRAB Tennant Creek 45.16 164 *e*P **P 23 05 58.9 -0.8**
WRAB pmax pmax
comp=Z,41nm,0.9s,mb5.3
WRAB Tennant Creek 45.16 164 *e*P **P 23 05 58.9 -0.7**
comp=Z,41nm,0.9s,mb5.3
WRA Warramunga Arr 45.16 164 P **P 23 05 59.8 +0.1**
comp=Z,33nm,0.7s,mb5.3,baz=346,slow=8.6,SNR=106
WB2 Warramunga Arr 45.17 164 *e*P **P 23 05 59.6 -0.2**
POO Poona 45.52 273 *ex* x 23 05 58.5
KBL Kabul 47.36 296 *e*P **P 23 06 18.1 +1.2**
KBL pmax pmax
comp=Z,126nm,1.4s,mb5.7
KBL Kabul 47.36 296 *e*P **P 23 06 18.1 +1.2**
comp=Z,126nm,1.4s,mb5.7
TIXI Tiksi 47.81 3 *e*P **P 23 06 17.3 -2.6**
TIXI pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
TIXI MLR MLR
comp=Z,971nm,18.0s,MS4.8
TIXI Tiksi 47.81 3 *e*P **P 23 06 17.3 -2.6**
comp=Z,9.4nm,0.6s,mb5.0
BVAR Borovoye Array 48.60 321 P **P 23 06 25.6 -0.6**
comp=Z,10nm,0.5s,mb5.1,baz=104,slow=7.8,SNR=45
BVAR PcP PcP 23 07 51.0 -0.3
comp=Z,7.6nm,0.7s,baz=108,slow=4.2,SNR=10
BVAR ScP ScP 23 11 43.2 +0.2
comp=Z,1.4nm,0.7s,baz=129,slow=4.7,SNR=8.4
BVAR LR LR 23 29 19.8
comp=Z,208nm,19.5s,MS4.1,baz=108,slow=39
BVAR Borovoye Array 48.60 321 P **P 23 06 25.6 -0.6**
BVAR 23 07 51.0
ASAR Alice Springs 48.65 166 P **P 23 06 27.6 +0.7**
comp=Z,13nm,0.5s,mb5.2,baz=353,slow=14,SNR=104
BRVK Borovoye 48.67 321 *e*P **P 23 06 26.2 -0.6**
CTA Charters Tower 49.54 150 *e*P **P 23 06 34.7 +0.9**
comp=Z,6.8nm,1.1s,mb4.6
CTA *ep*P pP 23 06 47.6 +2.2
CTA Charters Tower 49.54 150 LR LR 23 26 35.1
comp=Z,153nm,18.2s,MS4.0,baz=149,slow=35
CTAO Charters Tower 49.54 150 *e*P **P 23 06 34.1 +0.3**
CTAO pmax pmax
comp=Z,16nm,1.0s,mb5.0
CTAO Charters Tower 49.54 150 *e*P **P 23 06 34.1 +0.4**
comp=Z,16nm,1.0s,mb5.0
BILL Bilibino 51.44 19 *e*P **P 23 06 46.0 -1.5**
BILL *e* 23 08 03.4
BILL pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BILL Bilibino 51.44 19 *e*P **P 23 06 46.0 -1.6**
comp=Z,3.4nm,0.6s,mb4.5
ABKAR Akbulak array 54.45 314 *e*P **P 23 07 10.1 0.0**
comp=Z,20nm,0.6s,mb5.2
ABKAR *e*PcP PcP 23 08 11.3 -1.9
FORT Forrest 54.72 174 *e*P **P 23 07 12.7 +0.6**
comp=Z,22nm,0.8s,mb5.2
FORT *ep*P pP 23 07 25.6 +1.8
FORT Forrest 54.72 174 *e*P **P 23 07 12.8 +0.7**
comp=Z,36nm,0.6s,mb5.6
FORT *e* pP 23 07 25.4 +1.5
FORT PcP PcP 23 08 13.9 -0.4
SVE Sverdlovsk 54.92 324 ⇑ *e*P **P 23 07 12.6 -0.7**
SVE *e* 23 08 18.8
SVE *e* 23 09 24.6
SVE pmax pmax
comp=Z,16nm,0.7s,mb5.2
SVE MLR MLR
comp=Z,462nm,15.0s,MS4.7
AKTK Aktyubinsk 55.77 316 P **P 23 07 19.2 -0.3**
AKTO Aktyubinsk 55.77 316 P **P 23 07 19.2 -0.3**
comp=Z,3.3nm,0.7s,mb4.5,baz=102,slow=11,SNR=17
ABKT Ailbek 55.95 301 P **P 23 07 22.3 +1.2**
comp=Z,437nm,0.7s,SNR=18
ARU Arti 56.00 323 P **P 23 07 19.4 -1.6**
comp=Z,189nm,0.6s,SNR=10
ARU Arti 56.00 323 *c i*P **P 23 07 19.5 -1.6**
ARU *e* 23 08 16.6
ARU *e* 23 09 23.1
ARU S **S 23 15 06.6 +0.3**
ARU SS SS 23 18 48.6 -3.8
ARU pmax pmax
comp=Z,17nm,0.6s,mb5.2
ARU Arti 56.00 323 *e*P **P 23 07 19.1 -2.0**
comp=Z,18nm,0.6s,mb5.3
ARU *e*PcP PcP 23 08 18.0 -1.0
STKA Stephens Creek 58.48 161 *e*P **P 23 07 39.5 +0.7**
comp=Z,5.8nm,0.6s,mb4.8
STKA *ep*P pP 23 07 53.6 +3.0
STKA Stephens Creek 58.48 161 P **P 23 07 39.8 +1.0**
comp=Z,7.6nm,0.6s,mb4.9,baz=342,slow=6.7,SNR=37
STKA LR LR 23 33 46.0
comp=Z,174nm,21.9s,MS4.1,baz=24,slow=37
STKA Stephens Creek 58.48 161 *e*P **P 23 07 39.6 +0.8**
ARMA Armidale 60.88 151 *e*P **P 23 07 57.4 +2.0**
ARMA *ep*P pP 23 08 11.6 +4.3
DZM Mont Dzumac 62.61 134 *e*LR LR 23 26 45.3
comp=Z,595nm,24.9s
CNB Canberra Magne 64.23 156 *e*P **P 23 08 19.4 +1.8**
CNB *ep*P pP 23 08 30.8 +1.2
TOO Toolangi 64.94 160 *e*P **P 23 08 23.7 +1.5**
TOO *ep*P pP 23 08 37.4 +3.2
GNI Garni 65.92 305 *c i*P **P 23 08 30.3 +1.5**

GNI pmax pmax
comp=Z,23nm,1.2s
GNI Garni 65.92 305 *eP* **P 23 08 30.2 +1.4**
comp=Z,15nm,0.9s,mb5.0
UMR Umm Al-Rimmam 65.98 293 *eP* **P 23 08 28.7 -0.6**
UMR AMb AMB 23 08 30.8
comp=Z,49nm,1.4s,mb5.3
ZEI Tsey 66.03 308 *eP* **P 23 08 27.4 -2.0**
ZEI pmax pmax
comp=Z,21nm,1.1s,mb5.1
KBD Kabd 66.09 293 *eP* **P 23 08 29.7 -0.4**
KBD AMb AMB 23 08 31.8
comp=Z,40nm,1.0s,mb5.4
GOF Gofitskoye 66.21 310 *eP* **P 23 08 23.5 -7.0**
GOF pmax pmax
comp=Z,20nm,1.0s,mb5.1
MIB Mutribah 66.23 293 *eP* **P 23 08 30.6 -0.4**
MIB AMb AMB 23 08 32.5
comp=Z,62nm,0.9s,mb5.7
RDF Al-Radifah 66.28 292 *eP* **P 23 08 31.2 0.0**
RDF AMb AMB 23 08 33.4
comp=Z,102nm,1.1s,mb5.8
CHUM Lake Minchumin 66.61 29 *eP* **P 23 08 32.6 -0.1**
comp=Z,4.6nm,0.5s,mb4.8
KIV Kislovodsk 66.66 309 P **P 23 08 34.8 +1.4**
comp=Z,210nm,0.9s,SNR=13
KIV Kislovodsk 66.66 309 *eP* **P 23 08 33.9 +0.5**
KIV pmax pmax
comp=Z,38nm,1.1s,mb5.3
KIV MLR MLR
comp=Z,167nm,18.0s,MS4.3
KIV Kislovodsk 66.66 309 *eP* **P 23 08 33.2 -0.2**
comp=Z,53nm,1.1s,mb5.5
BPAW Bear Paw Mtn. 67.17 28 *eP* **P 23 08 36.5 +0.3**
comp=Z,4.5nm,0.5s,mb4.8
KDAK Kodiak Island 67.34 35 *ceP* **P 23 08 36.9 -0.5**
DDEM Demirkent 67.99 306 *i P* **P 23 08 42.4 +0.5**
MCK McKinley 68.12 29 *eP* **P 23 08 41.8 -0.5**
OBN Obninsk 68.41 322 *eP* **P 23 08 44.4 +0.2**
OBN *e* 23 09 10.0
OBN *e* 23 11 11.9
OBN *e*SS SS 23 22 06.3 +0.1
OBN pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
PMR Palmer 68.41 31 *eP* **P 23 08 43.6 -0.5**
SOC Sochi 68.84 309 *c iP* **P 23 08 46.2 -1.0**
SOC *e* 23 09 12.8
SOC *e* 23 11 16.3
SOC *e*PPP 23 12 57.3
SOC *e*S S 23 17 49.1 +0.8
SOC *e* 23 18 47.6
SOC *e*SS SS 23 22 16.0 +2.5
SOC pmax pmax
comp=Z,15nm,0.8s,mb5.0
SOC MLR MLR
comp=Z,381nm,22.0s,MS4.6
BEST Besiri 69.07 303 *i P* **P 23 08 49.7 +1.0**
JOF Joensuu 69.47 331 *eP* **P 23 08 49.4 -1.3**
JOF pmax pmax
comp=Z,11nm,0.4s,mb5.1
JOF Joensuu 69.47 331 *ep* **P 23 08 49.4 -1.3**
comp=Z,11nm,0.4s,mb5.2
SPB4 Spitsbergen Ar 69.93 348 *eP* **P 23 08 52.2 -1.1**
ARCES ARCESS Array B 70.17 338 P **P 23 08 53.8 -1.1**
comp=Z,4.1nm,0.7s,mb4.5,baz=42,slow=5.7,SNR=3.0
ARCES LR LR 23 44 46.4
comp=Z,173nm,19.3s,MS4.3,baz=194,slow=40
ARE0 ARCESS Array S 70.17 338 P **P 23 08 54.4 -0.4**
MALT Malatya 71.12 304 *eP* **P 23 09 02.3 +1.0**
MALT pmax pmax
comp=Z,31nm,0.7s,mb5.3
MALT Malatya 71.12 304 *eP* **P 23 09 02.3 +1.0**
comp=Z,31nm,0.7s,mb5.3
MALT Malatya 71.12 304⇑ *iP* **P 23 09 02.9 +1.6**
AKCD Akcadag 71.51 304 *i P* **P 23 09 04.9 +1.3**
KAF Kangasniemi 71.92 331 *eP* **P 23 09 02.9 -2.7**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
KAF Kangasniemi 71.92 331 *ep* **P 23 09 02.9 -2.7**
comp=Z,3.7nm,0.4s,mb4.7
GZT Gaziantep 72.05 303 *i P* **P 23 09 07.7 +0.8**
DAWY Dawson 72.13 27 *eP* **P 23 09 06.0 -0.9**
FINES FINESS Array B 72.23 330 P **P 23 09 07.2 -0.2**
comp=Z,5.7nm,0.4s,mb4.8,baz=47,slow=5.9,SNR=86
FINES LR LR 23 44 20.5
comp=Z,632nm,19.2s,MS4.9,baz=125,slow=39
INK Inuvik 72.93 22 P **P 23 09 10.8 -0.8**
comp=Z,5.9nm,0.7s,mb4.7,baz=305,slow=6.5,SNR=22
INK Inuvik 72.93 22 *eP* **P 23 09 10.1 -1.4**
INK pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 72.93 22 *eP* **P 23 09 10.1 -1.4**
comp=Z,5.7nm,0.6s,mb4.7
CTKT Corum 73.16 307 *i P* **P 23 09 13.7 +0.3**
CDAG Cicekdag 73.77 306 *i P* **P 23 09 17.0 0.0**
AKASG Malin Array Be 73.83 319 P **P 23 09 16.1 -1.0**
comp=Z,3.7nm,0.6s,mb4.5,baz=61,slow=5.7,SNR=13
BALT Daday 73.90 309 *i P* **P 23 09 18.5 +0.8**
BR131 Keskin Array S 74.28 307 *eP* **P 23 09 19.7 -0.3**
comp=Z,8.1nm,0.6s,mb4.8
BRTR Keskin Array B 74.28 307 P **P 23 09 20.4 +0.5**
comp=Z,12nm,0.8s,mb4.9,baz=104,slow=4.3,SNR=69
BRTR LR LR 23 47 13.5
comp=Z,65nm,18.4s,MS4.0,baz=197,slow=40
KDHN Kadinhani 75.78 306 *i P* **P 23 09 28.3 -0.4**
CSS Prodhromos 76.05 302 *eP* **P 23 09 29.4 -0.8**
comp=Z,37nm,0.6s,mb5.5
ATD Arta Tunnel 76.07 277 P **P 23 09 31.2 +0.5**
comp=Z,8.8nm,1.1s,mb4.6,baz=286,slow=22,SNR=3.9
CFR Carcaliu 76.33 313⇑ *iP* **P 23 09 31.3 -0.4**
CFR Carcaliu 76.33 313⇑ *iP* **P 23 09 31.3 -0.4**
SIT Sitka 76.48 33 *eP* **P 23 09 33.0 +0.7**
BOLV Bolvadin 76.58 306 *i P* **P 23 09 33.0 -0.2**
HARR Harsova 76.64 313⇓ *iP* **P 23 09 33.4 0.0**
HARR Harsova 76.64 313⇓ *iP* **P 23 09 33.4 0.0**
VRI Vrincioaia 77.02 314⇓ *iP* **P 23 09 35.6 +0.1**
VRI Vrincioaia 77.02 314⇓ *iP* **P 23 09 35.6 +0.1**
PLOR Plostina 77.07 314⇓ *iP* **P 23 09 35.4 -0.4**
PLOR Plostina 77.07 314⇓ *iP* **P 23 09 35.3 -0.5**
BUR08 Bucovina Ar. S 77.35 317 *eP* **P 23 09 36.9 -0.4**
BURAR Bucovina Array 77.35 317⇑ *iP* **P 23 09 37.1 -0.3**
BURAR Bucovina Array 77.35 317⇑ *iP* **P 23 09 37.1 -0.3**
MLR Muntele Rosu 77.67 314⇑ *iP* **P 23 09 38.6 -0.6**
MLR Muntele Rosu 77.67 314⇑ *iP* **P 23 09 38.6 -0.6**
KWP Kalwaria Pacla 78.13 319 *eP* **P 23 09 41.8 +0.2**
KWP Kalwaria Pacla 78.13 319 *eP* **P 23 09 40.9 -0.8**
comp=Z,8.0nm,0.6s,mb4.8
KWP Kalwaria Pacla 78.13 319⇓ *iP* **P 23 09 41.7 +0.1**
DLBC Dease Lake 78.47 31 P **P 23 09 43.1 -0.2**
comp=Z,7.4nm,0.7s,mb4.7,baz=305,slow=5.0,SNR=14
DLBC Dease Lake 78.47 31 *eP* **P 23 09 44.4 +1.0**
RES Resolute Bay 78.64 9 P **P 23 09 42.6 -1.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=325,slow=6.2,SNR=12
RES Resolute Bay 78.64 9 *eP* **P 23 09 42.0 -2.0**
RES pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
RES Resolute Bay 78.64 9 *eP* **P 23 09 42.0 -2.0**
comp=Z,2.0nm,0.6s,mb4.2
KOLS Kolonicke sedl 78.66 319 *eP* **P 23 09 43.9 -0.7**
KOLS pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
KOLS Kolonicke sedl 78.66 319 *eP* **P 23 09 43.9 -0.7**
comp=Z,7.4nm,1.7s,mb4.3
KOLS Kolonicke sedl 78.66 319 *eP* **P 23 09 43.9 -0.7**
NB2 NORSAR Subarra 78.96 332 P **P 23 09 44.3 -1.7**
comp=Z,6.4nm,0.8s,mb4.6,baz=61,slow=5.6
NOA NORSAR Array B 78.96 332 P **P 23 09 44.5 -1.5**
comp=Z,5.6nm,0.8s,mb4.6,baz=58,slow=5.6,SNR=16
NOA LR LR 23 48 14.4
comp=Z,319nm,19.0s,MS4.7,baz=0.0,slow=38
NOA NORSAR Array B 78.96 332 P **P 23 09 44.5 -1.5**
NOA LR LR 23 48 14.4
STHS Stebnicka Huta 79.09 319 *eP* **P 23 09 47.7 +0.8**
STHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
STHS Stebnicka Huta 79.09 319 *eP* **P 23 09 47.7 +0.8**
comp=Z,3.8nm,1.2s,mb4.2
STHS Stebnicka Huta 79.09 319 *eP* **P 23 09 47.7 +0.8**
OJC Ojcow 79.61 320 *eP* **P 23 09 49.7 0.0**
NIE Niedzica 79.64 320 *eP* **P 23 09 50.6 +0.7**
KECS Kecovo 79.93 319 *eP* **P 23 09 52.5 +1.0**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 79.93 319 *eP* **P 23 09 52.5 +1.0**
comp=Z,3.1nm,1.1s,mb4.2
KECS Kecovo 79.93 319 *eP* **P 23 09 52.5 +1.0**
PSZ Piszkesteto 80.53 318 *eP* **P 23 09 54.9 +0.1**
comp=Z,8.0nm,1.1s,mb4.6
PSZ Piszkesteto 80.53 318⇓ *iP* **P 23 09 56.0 +1.3**
OKC Ostrava-Krasne 80.73 321 *eP* **P 23 09 56.4 +0.6**
OKC MLR MLR
comp=Z,200nm,14.1s,MS4.6
OKC Ostrava-Krasne 80.73 321 *eP* **P 23 09 56.4 +0.6**
OKC AMS AMS 23 51 10.0
comp=Z,200nm,14.1s
VYHS Vyhne 80.92 319 *eP* **P 23 09 57.3 +0.5**
VYHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
VYHS Vyhne 80.92 319 *eP* **P 23 09 57.3 +0.5**
comp=Z,7.9nm,1.3s,mb4.5
VYHS Vyhne 80.92 319 *eP* **P 23 09 57.3 +0.5**
MORC Moravsky Berou 81.11 321 *eP* **P 23 09 57.8 0.0**
MORC pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
MORC Moravsky Berou 81.11 321 *eP* **P 23 09 57.8 0.0**
comp=Z,2.5nm,1.1s,mb4.1
KOLL Kolacno 81.14 319 *eP* **P 23 09 59.0 +1.0**
KOLL Kolacno 81.14 319 *eP* **P 23 09 59.0 +1.0**
DPC Dobruska-Polom 81.55 322 *eP* **P 23 10 00.6 +0.4**
DPC MLR MLR
comp=Z,300nm,23.9s,MS4.6
DPC Dobruska-Polom 81.55 322 *eP* **P 23 10 00.6 +0.4**
DPC AMS AMS 23 49 50.0
comp=Z,300nm,23.9s
VRAC Vranov 81.87 321⇑ *iP* **P 23 10 02.2 +0.3**
VRAC Vranov 81.87 321⇑ *iP* **P 23 10 02.2 +0.3**
PKSM Moragy 82.04 317⇑ *iP* **P 23 10 02.2 -0.6**
PKSM Moragy 82.04 317⇑ *iP* **P 23 10 02.2 -0.6**
ZST Bratislava 82.08 319 *eP* **P 23 10 04.2 +1.2**
ZST pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ZST Bratislava 82.08 319 *eP* **P 23 10 04.2 +1.2**
comp=Z,2.3nm,0.7s,mb4.2
ZST Bratislava 82.08 319 *eP* **P 23 10 04.2 +1.2**
PVCC Panska Ves 82.46 322 *eP* **P 23 10 05.9 +1.0**
PVCC MLR MLR
comp=Z,300nm,14.4s,MS4.8
PVCC Panska Ves 82.46 322 *eP* **P 23 10 05.9 +1.0**
PVCC AMS AMS 23 51 20.0
comp=Z,300nm,14.4s
TREC Trest 82.52 321 *eP* **P 23 10 05.3 0.0**
TREC MLR MLR
comp=Z,200nm,17.2s,MS4.5
TREC Trest 82.52 321 *eP* **P 23 10 05.3 0.0**
TREC AMS AMS 23 50 20.0
comp=Z,200nm,17.2s
BRG Berggiesshubel 82.64 323 *eP* **P 23 10 06.4 +0.6**
comp=Z,3.0nm,0.8s,mb4.4
BRG Berggiesshubel 82.64 323 *eP* **P 23 10 06.4 +0.6**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
YKA Yellowknife Ar 82.66 23 P **P 23 10 05.0 -0.7**
comp=Z,8.6nm,0.6s,mb4.9,baz=312,slow=5.0,SNR=164
YKA LR LR 23 52 07.2
comp=Z,6.4nm,18.5s,MS3.0,baz=145,slow=40
PRU Pruhonice 82.73 322 *eP* **P 23 10 07.1 +0.8**
PRU MLR MLR
comp=Z,200nm,21.0s,MS4.5
PRU Pruhonice 82.73 322 *eP* **P 23 10 07.1 +0.8**
PRU AMS AMS 23 50 50.0
comp=Z,200nm,21.0s
SUMG Summit 82.81 354 *eP* **P 23 10 06.6 +0.3**
comp=Z,9.2nm,0.8s,mb4.9
CLL Collm 82.94 323⇓ *iP* **P 23 10 07.0 -0.4**
CLL pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
CLL MLR MLR
comp=Z,300nm,17.7s,MS4.7
CLL Collm 82.94 323⇓ *iP* **P 23 10 07.0 -0.4**
comp=Z,6.0nm,0.7s,mb4.7
CLL *i* 23 10 09.1
CLL LR LR
comp=Z,300nm,17.7s,MS4.7
CLL Collm 82.94 323⇓ *iP* **P 23 10 07.0 -0.4**
comp=Z,6.0nm,0.7s,mb4.7
CLL *i* 23 10 09.1
CLL LmV 23 28 00.0
comp=Z,100nm,18.3s
CONA Conrad Observa 82.94 320⇑ *iP* **P 23 10 07.9 +0.4**
comp=Z,11nm,1.3s,mb4.8
KHC Kasperske Hory 83.70 321 *eP* **P 23 10 12.1 +0.8**
KHC MLR MLR
comp=Z,200nm,14.2s,MS4.6
KHC Kasperske Hory 83.70 321 *eP* **P 23 10 10.8 -0.5**
comp=Z,4.0nm,1.0s,mb4.5
KHC Kasperske Hory 83.70 321 *eP* **P 23 10 12.1 +0.8**
KHC AMS AMS 23 50 50.0
comp=Z,200nm,14.2s
GEC2 GERESS Array S 83.77 321 *eP* **P 23 10 11.2 -0.5**
GEC2 pmax pmax
comp=Z,3μm,1.2s
GEC2 GERESS Array S 83.77 321 *eP* **P 23 10 11.2 -0.5**
comp=Z,3μm,1.2s
GERES GERESS Array B 83.77 321 P **P 23 10 11.5 -0.2**
comp=Z,5.0nm,0.7s,mb4.7,baz=57,slow=5.2,SNR=45
NKC Novy Kostel 83.78 323 *eP* **P 23 10 12.0 +0.2**
NKC MLR MLR
comp=Z,200nm,14.7s,MS4.6
NKC Novy Kostel 83.78 323 *eP* **P 23 10 12.0 +0.2**
NKC AMS AMS 23 51 00.0
comp=Z,200nm,14.7s
MOX Moxa 84.03 323 *eP* **P 23 10 13.6 +0.6**
MOX
comp=Z,300nm,17.0s
SOKA Soboth 84.04 319⇑ *iP* **P 23 10 12.7 -0.5**
comp=Z,9.6nm,1.3s,mb4.8
BOJS Bojanci 84.47 318 *i P* **P 23 10 15.1 -0.3**
LJU Ljubljana 84.65 318 *i P* **P 23 10 16.0 -0.3**
GRA1 Grafenberg Arr 84.74 323 *eP* **P 23 10 16.5 -0.1**
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 84.74 323 *eP* **P 23 10 16.5 -0.1**
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 84.74 323 *eP* **P 23 10 16.5 -0.1**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
GRF Grafenberg Arr 84.74 323 *eP* **P 23 10 16.5 -0.1**
GRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CEY Cerknica 84.86 318 *eP* **P 23 10 16.6 -0.7**
JAVS Javornik 85.00 318 *eP* **P 23 10 17.0 -1.0**
ABTA Abfaltersbach 85.51 320⇑ *iP* **P 23 10 20.0 -0.5**
comp=Z,11nm,1.3s,mb4.9
TOD Tromm 86.12 323 *eP* pP 23 10 37.1 +1.2
KMBO Kilima Mbogo 86.14 267 *ceP* **P 23 10 25.2 +0.9**
comp=Z,6.9nm,1.1s,mb4.8,baz=49,slow=6.7,SNR=14
KMBO Kilima Mbogo 86.14 267 *ceP* **P 23 10 26.2 +1.9**
KMBO pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 86.14 267 *eP* **P 23 10 24.6 +0.3**
comp=Z,6.2nm,1.0s,mb4.8
FETA Feichten 86.42 320⇓ *iP* **P 23 10 25.0 -0.1**
comp=Z,8.8nm,1.2s,mb4.9
MEM Membach 87.05 325 P **P 23 10 28.3 +0.2**
comp=Z,4.6nm,1.2s,mb4.6
AQU L'Aquila 87.18 315 *eP* **P 23 10 28.4 -0.4**
comp=Z,28nm,1.1s,mb5.4
AQU L'Aquila 87.18 315⇑ *iP* **P 23 10 28.6 -0.2**
A05A Maple Falls 87.35 37⇓ **P 23 10 29.8 +0.2**
baz=87
FELD Feldberg im Sc 87.51 322 *eP* **P 23 10 30.4 +0.1**
WLF Walferdange 87.52 324 P **P 23 10 30.5 +0.2**
comp=Z,15nm,1.4s,mb5.0
BCLA Clavier 87.53 325 P **P 23 10 31.1 +0.7**
comp=Z,7.0nm,1.6s,mb4.6
MBW Mount Baker 87.57 37 P **P 23 10 31.4 +0.7**
CDF Champ du Feu 87.62 323 *eP* **P 23 10 30.3 -0.5**
comp=Z,15nm,0.9s,mb4.9
CDF Champ du Feu 87.62 323 *eP* **P 23 10 30.3 -0.5**
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CDF Champ du Feu 87.62 323 *eP* **P 23 10 30.3 -0.5**
comp=Z,7.5nm,0.9s,mb4.9
ECH Echery 87.79 323 *eP* **P 23 10 29.7 -2.0**
E03A Lebam 87.88 39⇓ **P 23 10 33.4 +1.2**
baz=88
JCW Jim Creek 87.89 37 P **P 23 10 32.8 +0.7**
B06A Marblemount 87.95 37⇓ **P 23 10 32.8 +0.4**
baz=88
GIVF Givet 87.96 325 *eP* **P 23 10 31.7 -0.7**
RPW Rockport 87.97 37 P **P 23 10 33.0 +0.5**
MOF Molkenrain 88.01 322 *eP* **P 23 10 31.7 -1.0**
DOU Dourbes 88.09 325 P **P 23 10 31.8 -1.3**
comp=Z,4.7nm,1.3s,mb4.6
HINF Hinteralfeld 88.19 323 *eP* **P 23 10 32.5 -1.1**
comp=Z,6.5nm,0.7s,mb4.7
HINF Hinteralfeld 88.19 323 *eP* **P 23 10 32.5 -1.1**
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
HINF Hinteralfeld 88.19 323 *eP* **P 23 10 32.5 -1.1**
comp=Z,3.3nm,0.7s,mb4.7
F03A Seaside 88.22 40⇑ **P 23 10 34.6 +0.8**
baz=88
A07A Ashnola River, 88.24 36⇑ **P 23 10 33.8 0.0**
baz=88,SNR=7.0
BAIF Baives 88.31 325 *eP* **P 23 10 33.4 -0.7**
comp=Z,17nm,1.2s,mb4.8
BAIF Baives 88.31 325 *eP* **P 23 10 33.4 -0.7**
BAIF pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
BAIF Baives 88.31 325 *eP* **P 23 10 33.4 -0.7**
comp=Z,8.6nm,1.2s,mb4.9
HAU Haudompre 88.36 323 *eP* **P 23 10 33.4 -1.0**
comp=Z,14nm,1.1s,mb4.8
HAU *e*MLR MLR
comp=Z,226nm,18.2s,MS4.3
HAU Haudompre 88.36 323 *eP* **P 23 10 33.4 -1.0**
HAU pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,230nm,18.3s,MS4.6
HAU Haudompre 88.36 323 *eP* **P 23 10 33.4 -1.0**
comp=Z,7.0nm,1.0s,mb4.8
HAU LR LR
comp=Z,230nm,18.3s,MS4.6
D05A Enumclaw 88.42 38⇓ **P 23 10 35.7 +1.0**
baz=88
LOMF Lomont 88.47 322 *eP* **P 23 10 33.8 -1.1**
B07A Winthrop 88.73 36⇑ **P 23 10 36.4 +0.3**
baz=88,SNR=7.2
MEZF Maizieres J'vi 88.78 324 *eP* **P 23 10 35.8 -0.5**
F04A Amboy 88.88 39⇑ **P 23 10 37.5 +0.6**
baz=89
A08A Turner Farm, O 88.89 36⇓ **P 23 10 37.1 +0.2**
baz=89,SNR=8.4
ETW Entiat 89.11 37 P **P 23 10 38.5 +0.6**
EDM Edmonton 89.15 30 *eP* **P 23 10 37.9 -0.1**
C07A Waterville 89.21 37⇑ **P 23 10 38.8 +0.5**
baz=89
B08A Colville Reser 89.21 36⇑ **P 23 10 39.0 +0.6**
baz=89,SNR=18
A09A Danville 89.24 35⇓ **P 23 10 39.0 +0.5**
baz=89,SNR=8.7
CABF La Chapelle 89.30 322 *eP* **P 23 10 38.3 -0.5**
E06A Yakima 89.36 38⇑ **P 23 10 39.9 +0.8**
baz=89
EBG Ellensburg 89.38 38 P **P 23 10 40.3 +1.1**
LPG La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
comp=Z,21nm,0.8s,mb5.2
LPG La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
LPG pmax pmax
comp=Z,11nm,0.8s,mb5.2
LPG La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
comp=Z,11nm,0.8s,mb5.2
LPL La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
comp=Z,18nm,0.9s,mb5.1
LPL La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
LPL pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
LPL La Plagne 89.56 321⇑ *iP* **P 23 10 39.9 -0.2**
comp=Z,8.9nm,0.9s,mb5.1
C08A Higginbotham F 89.71 36⇑ **P 23 10 40.8 +0.1**
baz=90,SNR=8.3
H04A Detroit Lake 89.72 40⇑ **P 23 10 41.6 +0.8**
baz=90
B09A Rice 89.81 36⇑ **P 23 10 41.6 +0.4**
baz=90,SNR=6.0
PGF Pioggiola 89.85 317 *eP* **P 23 10 41.1 -0.4**
comp=Z,43nm,1.0s,mb5.4
PGF Pioggiola 89.85 317 *eP* **P 23 10 41.1 -0.4**
PGF pmax pmax
comp=Z,21nm,1.0s,mb5.4
PGF Pioggiola 89.85 317 *eP* **P 23 10 41.1 -0.4**
comp=Z,21nm,1.0s,mb5.4
MBDF Montbardon 89.98 320 *eP* **P 23 10 42.0 -0.1**
comp=Z,11nm,0.9s,mb4.9
MBDF Montbardon 89.98 320 *eP* **P 23 10 42.0 -0.1**
MBDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
MBDF Montbardon 89.98 320 *eP* **P 23 10 42.0 -0.1**
comp=Z,5.4nm,0.9s,mb4.9
SBF Sospel 90.08 319 *eP* **P 23 10 41.4 -1.1**
comp=Z,69nm,1.1s,mb5.6
SBF Sospel 90.08 319 *eP* **P 23 10 41.4 -1.1**
SBF pmax pmax
comp=Z,35nm,1.1s,mb5.6
SBF Sospel 90.08 319 *eP* **P 23 10 41.4 -1.1**
comp=Z,34nm,1.1s,mb5.6
C09A Chrisman Ranch 90.11 36⇑ **P 23 10 43.3 +0.6**
baz=90
LOR Lormes 90.16 323 *eP* **P 23 10 41.7 -1.1**
comp=Z,21nm,1.4s,mb5.0
LOR *e*MLR MLR
comp=Z,204nm,17.5s,MS4.3
LOR Lormes 90.16 323 *eP* **P 23 10 41.7 -1.1**
LOR pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
LOR MLR MLR
comp=Z,200nm,17.5s,MS4.6
LOR Lormes 90.16 323 *eP* **P 23 10 41.7 -1.1**
comp=Z,10nm,1.4s,mb5.0
LOR LR LR
comp=Z,200nm,17.5s,MS4.6
D08A Wollman Farm, 90.21 37⇑ **P 23 10 43.3 +0.2**
baz=90,SNR=6.1
RSW Rattlesnake Hi 90.23 38 P **P 23 10 44.4 +1.3**
comp=Z,6.1nm,0.7s,mb5.0
G06A Carlson Farm, 90.31 39⇑ **P 23 10 44.6 +1.0**
baz=90
ORIF Oris-en-Rattie 90.40 321 *eP* **P 23 10 43.4 -0.6**
comp=Z,14nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,231nm,18.5s,MS4.3
ORIF Oris-en-Rattie 90.40 321 *eP* **P 23 10 43.4 -0.6**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
ORIF Oris-en-Rattie 90.40 321 *eP* **P 23 10 43.4 -0.6**
comp=Z,7.2nm,0.9s,mb5.0
A11A Hall Mountain, 90.41 34⇑ **P 23 10 45.2 +1.2**
baz=90,SNR=9.8
NEW Newport 90.44 35 *eP* **P 23 10 44.5 +0.4**
NEW pmax pmax
comp=Z,15nm,0.9s
NEW Newport 90.44 35 *eP* **P 23 10 44.5 +0.4**
comp=Z,15nm,0.9s,mb5.3
E08A Dider Farm, El 90.47 37⇓ **P 23 10 45.0 +0.7**
baz=90
SSF Saint Saulge 90.47 323⇑ *iP* **P 23 10 43.3 -1.0**
comp=Z,18nm,1.3s,mb4.9
SSF Saint Saulge 90.47 323⇑ *iP* **P 23 10 43.3 -1.0**
SSF pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
SSF Saint Saulge 90.47 323⇑ *iP* **P 23 10 43.3 -1.0**
comp=Z,8.8nm,1.3s,mb4.9
SMF Signal de Mont 90.54 323⇑ *iP* **P 23 10 43.7 -0.9**
comp=Z,37nm,1.1s,mb5.3
SMF Signal de Mont 90.54 323⇑ *iP* **P 23 10 43.7 -0.9**
SMF pmax pmax
comp=Z,19nm,1.1s,mb5.3
SMF Signal de Mont 90.54 323⇑ *iP* **P 23 10 43.7 -0.9**
comp=Z,19nm,1.1s,mb5.3
D09A Jones Farm, Ri 90.54 37⇑ **P 23 10 45.3 +0.7**
baz=90
AVF Avril sur Loir 90.72 323⇑ *iP* **P 23 10 44.4 -1.1**
comp=Z,32nm,1.2s,mb5.2
AVF Avril sur Loir 90.72 323⇑ *iP* **P 23 10 44.4 -1.1**
AVF pmax pmax
comp=Z,16nm,1.2s,mb5.2
AVF Avril sur Loir 90.72 323⇑ *iP* **P 23 10 44.4 -1.1**
comp=Z,16nm,1.2s,mb5.2
FRF La Foret Royal 90.72 319 *eP* **P 23 10 44.4 -1.1**
B11A Sandpoint 90.73 35⇓ **P 23 10 46.4 +0.9**
baz=90
LMR La Mourre 90.93 319 *eP* **P 23 10 45.7 -0.8**
comp=Z,21nm,1.0s,mb5.1
LMR La Mourre 90.93 319 *eP* **P 23 10 45.7 -0.8**
LMR pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
LMR La Mourre 90.93 319 *eP* **P 23 10 45.7 -0.8**

comp=Z,10nm,1.0s,mb5.1
E09A Wood Farm, Sta 90.96 37 ⇓P **P 23 10 47.5 +1.0**
baz=91
F08A Pendleton 91.04 38 ⇓P **P 23 10 48.2 +1.2**
baz=91
PLDF La Plantade 91.06 322 *e*P **P 23 10 48.0 +0.9**
D10A Wagner Farm, O 91.11 36 ⇑P **P 23 10 47.9 +0.7**
baz=91
B12A Libby 91.12 34 ⇑P **P 23 10 48.3 +1.0**
baz=91
SMRF Simiane la Rot 91.12 320 *e*P **P 23 10 46.9 -0.5**
VIVF Saint-Julien-l 91.13 321 *e*P **P 23 10 46.6 -0.8**
comp=Z,16nm,1.0s,mb5.0
VIVF Saint-Julien-l 91.13 321 *e*P **P 23 10 46.6 -0.8**
VIVF pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 91.13 321 *e*P **P 23 10 46.6 -0.8**
comp=Z,7.8nm,1.0s,mb5.0
BGF Bois d'Agland 91.14 323 *e*P **P 23 10 46.4 -1.0**
comp=Z,38nm,1.5s,mb5.2
BGF Bois d'Agland 91.14 323 *e*P **P 23 10 46.4 -1.0**
BGF pmax pmax
comp=Z,19nm,1.5s,mb5.2
BGF Bois d'Agland 91.14 323 *e*P **P 23 10 46.4 -1.0**
comp=Z,19nm,1.5s,mb5.2
G08A Pilot Rock 91.24 38 ⇑P **P 23 10 49.2 +1.3**
baz=91
A13A Flathead Natio 91.42 34 ⇑P **P 23 10 49.4 +0.8**
baz=91
LDF La Druitiere 91.44 326 *e*P **P 23 10 47.4 -1.4**
FLN La Foliniere 91.52 326 *e*P **P 23 10 47.7 -1.4**
FLN *e*MLR MLR
comp=Z,356nm,17.0s,MS4.6
FLN La Foliniere 91.52 326 *e*P **P 23 10 47.7 -1.4**
FLN LR LR
comp=Z,360nm,17.0s,MS4.9
E10A Myers Farm, Un 91.54 37 ⇑P **P 23 10 50.4 +1.1**
baz=91
WALA Waterton Lakes 91.60 33 *e*P **P 23 10 50.1 +0.6**
comp=Z,0.7nm,1.2s,mb3.9
K05A Summer Lake 91.61 41 ⇑P **P 23 10 50.9 +1.2**
baz=91
D11A Klaveano Farm, 91.62 36 ⇑P **P 23 10 49.8 +0.2**
baz=91,SNR=8.4
I07A Izee 91.64 40 ⇓P **P 23 10 50.2 +0.5**
baz=91
TCF Toulx Ste Croi 91.65 323 ⇑*i*P **P 23 10 49.2 -0.6**
comp=Z,25nm,1.3s,mb5.1
TCF Toulx Ste Croi 91.65 323 ⇑*i*P **P 23 10 49.2 -0.6**
TCF pmax pmax
comp=Z,12nm,1.3s,mb5.1
TCF Toulx Ste Croi 91.65 323 ⇑*i*P **P 23 10 49.2 -0.6**
comp=Z,12nm,1.3s,mb5.1
C12B Naegeli Ranch, 91.66 35 ⇑P **P 23 10 50.0 +0.3**
baz=91
LBL Lubilhac 91.72 322 *e*P **P 23 10 50.6 +0.5**
B13A Whitefish 91.76 34 ⇑P **P 23 10 51.0 +0.8**
baz=92,SNR=8.2
H08A Prairie City 91.86 39 ⇑P **P 23 10 51.1 +0.3**
baz=92
A14A Double T Ranch 91.90 33 ⇓P **P 23 10 51.4 +0.5**
baz=92,SNR=20
G09A Cove 91.91 38 ⇓P **P 23 10 51.4 +0.4**
baz=92
BSMT Bassoo Peak 91.92 35 *e*P **P 23 10 51.7 +0.7**
comp=Z,4.5nm,0.9s,mb4.8
GRR Gorron 91.95 326 *e*P **P 23 10 50.1 -1.0**
comp=Z,21nm,1.2s,mb5.1
GRR Gorron 91.95 326 *e*P **P 23 10 50.1 -1.0**
GRR pmax pmax
comp=Z,11nm,1.2s,mb5.1
GRR Gorron 91.95 326 *e*P **P 23 10 50.1 -1.0**
comp=Z,11nm,1.2s,mb5.0
LASF Ste Croix 92.06 321 *e*P **P 23 10 50.1 -1.6**
E11A Bogner Ranch, 92.11 36 ⇓P **P 23 10 52.5 +0.6**
baz=92
FRB Frobisher Bay 92.11 5 P **P 23 10 50.0 -1.6**
comp=Z,4.8nm,0.8s,mb4.9,baz=357,slow=6.0,SNR=14
D12A Red Ives Fores 92.14 35 ⇓P **P 23 10 52.3 +0.2**
baz=92
FCC Fort Churchill 92.14 18 *e*P **P 23 10 50.4 -1.4**
comp=Z,0.4nm,0.8s,mb3.8
C13A Hot Springs 92.15 35 ⇑P **P 23 10 52.7 +0.6**
baz=92,SNR=7.1
A15A Johnson Ranch, 92.24 33 ⇑P **P 23 10 53.1 +0.6**
baz=92
JTMT Jette 92.25 34 *e*P **P 23 10 53.0 +0.4**
comp=Z,3.3nm,0.6s,mb4.8
G10A Bishop Farm, J 92.27 38 ⇓P **P 23 10 53.2 +0.5**
baz=92
YBMT Yellow Bay 92.32 34 *e*P **P 23 10 53.4 +0.6**
comp=Z,5.8nm,1.2s,mb4.8
H09A Durkee 92.35 38 ⇑P **P 23 10 53.8 +0.8**
baz=92
E12A Beaver Dam Sad 92.42 36 ⇓P **P 23 10 53.8 +0.5**
baz=92
F11A Grangeville 92.44 37 ⇑P **P 23 10 54.3 +0.9**
baz=92
BMO Blue Mountains 92.44 38 *e*P **P 23 10 53.4 0.0**
BMO pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
BMO Blue Mountains 92.44 38 *e*P **P 23 10 53.4 0.0**
comp=Z,4.6nm,0.7s,mb4.9
C14A Swan Lake 92.52 34 ⇓P **P 23 10 54.2 +0.5**
baz=92
SWMT Swartz Lake 92.55 34 *e*P **P 23 10 54.4 +0.4**
comp=Z,1.5nm,0.5s,mb4.7
CAF Calviac 92.57 322 ⇑*i*P **P 23 10 54.0 -0.1**
comp=Z,45nm,1.3s,mb5.4
CAF Calviac 92.57 322 ⇑*i*P **P 23 10 54.0 -0.1**
CAF pmax pmax
comp=Z,22nm,1.3s,mb5.4
CAF Calviac 92.57 322 ⇑*i*P **P 23 10 54.0 -0.1**
comp=Z,22nm,1.3s,mb5.4
D13A Huson 92.58 35 ⇑P **P 23 10 54.4 +0.3**
baz=92
RJF Les Rejaudoux 92.64 323 *e*P **P 23 10 54.3 -0.1**
comp=Z,47nm,1.1s,mb5.5
RJF *e*MLR MLR
comp=Z,111nm,21.8s,MS4.0
RJF Les Rejaudoux 92.64 323 *e*P **P 23 10 54.3 -0.1**
RJF pmax pmax
comp=Z,24nm,1.1s,mb5.5
RJF MLR MLR
comp=Z,110nm,21.8s,MS4.3
RJF Les Rejaudoux 92.64 323 *e*P **P 23 10 54.3 -0.1**
comp=Z,24nm,1.1s,mb5.5
RJF LR LR
comp=Z,110nm,21.8s,MS4.3
G11A Walters Elk Ra 92.68 37 ⇓P **P 23 10 55.4 +0.9**
baz=92
I09A Lost Marbles R 92.72 39 ⇓P **P 23 10 55.7 +0.9**
baz=92
MFF Saint Martin d 92.73 324 *e*P **P 23 10 52.9 -1.8**
B15A Bradely Ranch, 92.76 33 ⇑P **P 23 10 55.4 +0.5**
baz=92
FFC Flin Flon 92.80 24 P **P 23 10 54.8 -0.1**
comp=Z,110nm,1.0s,SNR=8.8
FFC Flin Flon 92.80 24 *ce*P **P 23 10 54.4 -0.5**
FFC Flin Flon 92.80 24 *e*P **P 23 10 53.6 -1.3**
comp=Z,16nm,0.8s,mb5.5
A16A West Butte Ran 92.82 32 ⇑P **P 23 10 55.6 +0.5**
baz=92
SGMF Saint Gilles 92.90 327 *e*P **P 23 10 54.4 -1.1**
H10A Noah's Angus R 92.91 38 ⇓P **P 23 10 55.9 +0.2**
baz=93
SLMT Seeley Lake 92.99 34 *e*P **P 23 10 56.1 +0.1**
comp=Z,13nm,1.2s,mb5.2
F12A Elk City 93.01 36 ⇓P **P 23 10 56.5 +0.5**
baz=93
D14A Greenough 93.09 35 ⇑P **P 23 10 56.5 +0.1**
baz=93
C15A Salmond Ranch, 93.09 34 ⇑P **P 23 10 57.1 +0.7**
baz=93
J09A Fry Pan Ranch, 93.10 39 ⇓P **P 23 10 57.3 +0.8**
baz=93
B16A M & M Farms, S 93.12 33 ⇑P **P 23 10 56.6 +0.1**
baz=93
ROSF Rostrenen 93.20 327 *e*P **P 23 10 55.5 -1.4**
H11A Donnelly 93.25 38 ⇓P **P 23 10 57.7 +0.5**
baz=93
LFF La Frestale 93.30 323 *e*P **P 23 10 57.2 -0.2**
KEST Kesra 93.32 311 P **P 23 10 57.0 -0.8**
comp=Z,2.6nm,0.8s,mb4.7,baz=345,slow=9.4,SNR=4.8
KEST LR LR 00 00 14.1
comp=Z,47nm,18.6s,MS4.0,baz=301,slow=40
G12A Big Creek, Yel 93.37 37 ⇑P **P 23 10 57.8 +0.1**
baz=93
QUIF Quistinic 93.43 327 *e*P **P 23 10 56.7 -1.2**
MTLF Montolieu 93.45 321 *e*P **P 23 10 56.0 -2.2**
comp=Z,14nm,1.2s,mb5.0
MTLF Montolieu 93.45 321 *e*P **P 23 10 56.0 -2.2**
MTLF pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
MTLF Montolieu 93.45 321 *e*P **P 23 10 56.0 -2.2**
comp=Z,6.8nm,1.2s,mb5.0
F13A Darby 93.48 36 ⇑P **P 23 10 58.7 +0.5**
baz=93
C16A Fuhringer Ranc 93.51 33 ⇓P **P 23 10 58.2 -0.1**
baz=93,SNR=5.6
E14A Clinton 93.53 35 ⇓P **P 23 10 58.9 +0.4**
baz=93
BEKR Beckwourth 93.58 43 ⇑P **P 23 10 59.2 +0.3**
baz=93
B17A L&G Farms, Che 93.65 32 ⇓P **P 23 10 59.2 +0.3**
baz=93
A18A Metzger Ranch, 93.68 32 ⇓P **P 23 10 59.6 +0.5**
baz=93
E15A Deer Lodge 93.97 35 ⇑P **P 23 11 00.5 +0.1**
baz=94
H12A Diamond D Ranc 93.99 37 ⇓P **P 23 11 01.1 +0.5**
baz=94
B18A Beardsley Farm 94.08 32 ⇑P **P 23 11 01.3 +0.4**
baz=94
C17A Wharram Farm, 94.11 33 ⇓P **P 23 11 01.3 +0.2**
baz=94
D16A Dana Ranch, Ca 94.12 34 ⇓P **P 23 11 01.5 +0.3**
baz=94
HRY Holter Researc 94.19 34 *e*P **P 23 11 01.0 -0.5**
comp=Z,3.0nm,0.6s,mb4.9
H13A Challis 94.31 37 ⇓P **P 23 11 02.6 +0.5**
baz=94
EGMT Eagleton 94.34 32 ⇑P **P 23 11 02.7 +0.5**
baz=94
E16A East Helena 94.39 34 ⇓P **P 23 11 02.7 +0.3**
baz=94
F15A Butte 94.43 35 ⇓P **P 23 11 02.8 +0.2**
baz=94
D17A Six Diamond Ra 94.48 33 ⇑P **P 23 11 02.6 -0.2**
baz=94
DLMT Dillon 94.69 35 *e*P **P 23 11 04.0 +0.3**
comp=Z,3.3nm,0.6s,mb4.9
EPF Esparros 94.72 321 *e*P **P 23 11 02.0 -2.0**
E17A Martinsdale 94.86 34 ⇓P **P 23 11 05.1 +0.5**
baz=95
HLID Hailey 94.86 38 P **P 23 11 04.7 0.0**
G15A Dillon 94.88 36 ⇓P **P 23 11 04.8 +0.2**
baz=95
BOZ Bozeman (W) 95.01 35 ⇓P **P 23 11 05.6 +0.3**
baz=95
PPT Papeete 95.11 107 *e*PS PS 23 23 40.4 -0.2
comp=Z,49nm,25.0s
PPT *e*LR LR 23 41 45.4
comp=Z,219nm,23.5s,baz=294
PPT Papeete 95.11 107 LR LR 23 44 46.9
comp=Z,132nm,21.5s,MS4.4,baz=353,slow=30
I14A Mackay 95.16 37 ⇑P **P 23 11 06.1 +0.1**
baz=95
G16A Moss Hill, Enn 95.20 35 ⇑P **P 23 11 05.9 -0.2**
baz=95
E18A Harlowton 95.27 33 ⇑P **P 23 11 07.5 +1.1**
baz=95
ETSF Etsaut 95.32 322 *e*P **P 23 11 05.6 -1.1**
SJPF Ste Jean 95.55 322 *e*P **P 23 11 06.6 -1.2**
NVAR Mina Array Bea 95.72 44 P **P 23 11 08.2 -0.4**
comp=Z,1.4nm,0.6s,mb4.5,baz=286,slow=4.9,SNR=4.8
DGMT Dagmar 96.62 29 ⇑P **P 23 11 12.2 -0.3**
baz=96
PDAR Pinedale Array 98.05 36 P **P 23 11 19.1 -0.1**
comp=Z,0.3nm,0.5s,mb4.0,baz=243,slow=1.3,SNR=2.6
ULM Lac du Bonnet 98.62 24 LR LR 00 00 26.9
comp=Z,93nm,18.6s,MS4.3,baz=245,slow=38
TORD Torodi Ar. Bea 111.43 296 PKiKP PKiKP 23 16 16.3 -1.1
comp=Z,0.5nm,0.6s,baz=76,slow=1.7,SNR=6.8
TORD Torodi Ar. Bea 111.43 296 PKPdf PKiKP 23 16 16.3 -1.1
DBIC Dimbokro 120.33 294 PKP PKPdf 23 16 34.0 -0.5
comp=Z,2.4nm,0.7s,baz=93,slow=0.8,SNR=7.5
CMIG Matias Romero 125.21 45 PKP PKPdf 23 16 43.5 -0.3
comp=Z,2.0nm,0.8s,baz=208,slow=3.3,SNR=3.7
SDV Santo Domingo 144.87 23 *e*PKPdf PKPdf 23 17 19.4 -1.0
ROSC El Rosal 146.94 32 PKPbc PKPbc 23 17 25.5 -0.4
comp=Z,11nm,0.5s,baz=105,slow=22,SNR=7.9
ROSC El Rosal 146.94 32 *e*PKP PKPdf 23 17 25.3 +1.4
OTAV Otavalo 148.45 43 *e*PKPbc PKPbc 23 17 30.2 +0.2
LPAZ La Paz 167.39 54 PKP PKPdf 23 17 51.4 +2.2
comp=Z,3.8nm,1.1s,baz=12,slow=6.7,SNR=6.1
LPAZ La Paz 167.39 54 PKP PKPdf 23 17 51.4 +2.2

*NEIC **12** 23:05:27.0, 16°.07N×98°.56W, h13km, MD4.0(MEX), After MEX.*
MEX 12 23:05:27.0±0.8, 16°.07N×98°.56W, h13km±11km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.53**	**53**	*i* P	Pg	23 05 35.4	-2.0
PNIG				*i* S	Sg	23 05 43.6	-0.8
PNIG	**Pinotepa**	**0.53**	**53**	*i* P	Pg	23 05 35.4	-2.0
PNIG				*i* S	Sg	23 05 43.6	-0.8
ACX	**Acapulco**	**1.52**	**302**	*i* P	Pn	23 05 50.8	-3.1
ACX				*i* S	Sn	23 06 07.9	-5.7
ACX	**Acapulco**	**1.52**	**302**	*i* P	Pn	23 05 50.8	-3.1
ACX				*i* S	Sn	23 06 07.9	-5.7
UTMO	**Huajuapan**	**1.90**	**22**	*i* P	Pn	23 05 56.1	-3.0
UTMO				*i* S	Sn	23 06 18.4	-4.5
CAIG	**El Cayaco**	**1.90**	**301**	*e*P	Pn	23 05 55.9	-3.2
CAIG				*i* S	Sn	23 06 18.5	-4.5
CAIG	**El Cayaco**	**1.90**	**301**	*e*P	Pn	23 05 55.9	-3.2
CAIG				*i* S	Sn	23 06 18.5	-4.5
VHO	**Vista Hermosa**	**2.02**	**60**	*i* P	Pn	23 05 57.8	-2.9
VHO				*i* S	Sn	23 06 22.4	-3.5
VHO	**Vista Hermosa**	**2.02**	**60**	*i* P	Pn	23 05 57.8	-2.9
VHO				*i* S	Sn	23 06 22.4	-3.5
OXX	**Oaxaca**	**2.03**	**60**	*i* P	Pn	23 05 58.2	-2.7
OXX				*i* S	Sn	23 06 22.3	-3.8
OXX	**Oaxaca**	**2.03**	**60**	*i* P	Pn	23 05 58.2	-2.7
OXX				*i* S	Sn	23 06 22.3	-3.8
HUIG	**Huatulco**	**2.38**	**97**	*e*P	Pn	23 06 03.3	-2.4
HUIG				*i* S	Sn	23 06 29.6	-5.2
HUIG	**Huatulco**	**2.38**	**97**	*e*P	Pn	23 06 03.3	-2.4
HUIG				*i* S	Sn	23 06 29.6	-5.2
PPM	**Popocatepetl**	**2.98**	**359**	*i* P	Pn	23 06 11.4	-2.6
PPM				*e*P		23 06 11.9	
PPM				*i* S	Sn	23 06 44.1	-5.5
PPM				*i* S	Sn	23 06 48.2	-1.5
PPM	**Popocatepetl**	**2.98**	**359**	*i* P	Pn	23 06 11.4	-2.6
PPM				*e*P		23 06 11.9	
PPM				*i* S	Sn	23 06 44.1	-5.5
PPM				*i* S	Sn	23 06 48.2	-1.5
MZVM		**3.17**	**349**	*i* P	Pn	23 06 20.6	+4.0
MZVM				*i* S	Sn	23 06 50.4	-3.8
ZIIG	**Zihuatanejo**	**3.17**	**299**	*i* P	Pn	23 06 13.5	-3.1
ZIIG				*i* S	Sn	23 06 51.9	-2.5
ZIIG	**Zihuatanejo**	**3.17**	**299**	*i* P	Pn	23 06 13.5	-3.1
ZIIG				*i* S	Sn	23 06 51.9	-2.5
PBVM	**Pinon**	**3.39**	**352**	*e*P	Pn	23 06 14.8	-4.8
PBVM				*i* S	Sn	23 07 04.5	+4.8
PBVM	**Pinon**	**3.39**	**352**	*e*P	Pn	23 06 14.8	-4.8
PBVM				*i* S	Sn	23 07 04.5	+4.8
IIO	**Organos**	**3.51**	**358**	*i* P	Pn	23 06 19.1	-2.1
IIO				*i* S	Sn	23 07 00.2	-2.4
IIO	**Organos**	**3.51**	**358**	*i* P	Pn	23 06 19.1	-2.1
IIO				*i* S	Sn	23 07 00.2	-2.4
PTVM	**Pico Tres Padr**	**3.54**	**352**	*e*P	Pn	23 06 19.5	-2.2
PTVM				*i* S	Sn	23 07 00.1	-3.4
PTVM	**Pico Tres Padr**	**3.54**	**352**	*e*P	Pn	23 06 19.5	-2.2
PTVM				*i* S	Sn	23 07 00.1	-3.4
CMIG	**Matias Romero**	**3.67**	**73**	*i* P	Pn	23 06 20.2	-3.3
CMIG				*i* S	Sn	23 07 02.7	-3.9
CMIG	**Matias Romero**	**3.67**	**73**	*i* P	Pn	23 06 20.2	-3.3
CMIG				*i* S	Sn	23 07 02.7	-3.9

*ISCJB **12** 23:17:28.1±0.9, 23°.92N±0°.02×122°.51E±0°.02, h12km±7km, Error ellipse: s-maj=3.8km s-min=2.9km az=156.4*
*TAP **12** 23:17:29.3, 23°.98N×122°.48E, h28km±1km, ML3.3, C*
*JMA **12** 23:17:29.3±0.4, 24°.11N×122°.47E, h28km, M2.5*
ISC 12 23:17:27.9±0.6, 23°.95N±0°.02×122°.51E±0°.02, h11km±3km, n40, σ0.82/74, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**42**	P	Pg	23 17 41.2	0.0
YOJ				S	Sg	23 17 49.5	-0.7
HWA	**Hwalien**	**0.83**	**272**	*e*P	Pg	23 17 44.0	+0.1
baz=256							
TWD	**Chiawan**	**0.85**	**279**	P	Pg	23 17 44.2	-0.1
baz=277							
TWD				S	Sg	23 17 55.6	+0.3
baz=277							
ENA	**Nanau**	**0.85**	**304**	P	Pg	23 17 44.5	+0.2
baz=304							
ENA				*e*S	Sg	23 17 56.1	+0.6
baz=304							
TWC	**Suao**	**0.89**	**318**	P	Pg	23 17 44.8	-0.3
baz=318							
TWC				S	Sg	23 17 56.3	-0.5
baz=318							
ESL	**Shilin**	**0.99**	**263**	*e*P	Pg	23 17 46.5	-0.6
baz=260							
ILA	**Ilan**	**1.07**	**320**	*e*P	Pb	23 17 48.5	0.0
baz=320							
ILA				*e*S	Sg	23 18 03.3	+0.8
baz=320							
TWE	**Neicheng**	**1.09**	**315**	P	Pb	23 17 48.5	-0.3
baz=315							
TWE				S	Sb	23 18 03.2	+0.2
baz=315							
NNS	**Nan Shan**	**1.15**	**295**	*i* P	Pb	23 17 49.5	-0.3
baz=294							
NNS				*e*S	Sb	23 18 04.1	-0.7
baz=294							
WHF	**Hehuan Shan**	**1.16**	**280**	*i* P	Pb	23 17 49.4	-0.6
baz=278							
WHF				*i* S	Sb	23 18 03.8	-1.2
baz=278							
TWB1	**Santiao Chiao**	**1.16**	**336**	P	Pb	23 17 49.5	-0.5
baz=354							
TWB1				*e*S	Sb	23 18 04.4	-0.6
baz=354							
EHY	**Hungye**	**1.18**	**248**	*e*P	Pb	23 17 49.1	-1.2
baz=246							
EHY				*e*S	Sb	23 18 04.5	-1.0
baz=246							
IRIF	**Iriomote-Funau**	**1.18**	**71**	P	Pb	23 17 50.0	-0.3
IRIF				*e*S	Sb	23 18 05.7	+0.1
TWT	**Tachien**	**1.26**	**284**	*e*P	Pn	23 17 51.0	-0.5
baz=271							
TWT				S	Sb	23 18 08.1	+0.2
baz=271							
TWF1	**Yuli**	**1.26**	**242**	P	Pn	23 17 50.6	-1.0
baz=240							
TWF1				*e*S	Sb	23 18 06.4	-1.6
baz=240							
NSK	**Sanguang**	**1.28**	**305**	*i* P	Pn	23 17 51.4	-0.3
baz=291							
NSK				*e*S	Sb	23 18 08.3	-0.2
baz=291							
NWF	**Wu-fen Shan**	**1.30**	**329**	*e*P	Pn	23 17 51.8	-0.3
baz=330							
NWF				*e*S	Sb	23 18 09.3	+0.1
baz=330							
TWA	**Mucha**	**1.33**	**321**	P	Pn	23 17 53.1	+0.6
baz=321							
TWA				S	Sb	23 18 10.8	+0.8
baz=321							
JKRS	**Kuro-shima**	**1.40**	**78**	P	Pn	23 17 53.9	+0.5
JKRS				*e*S	Sn	23 18 12.0	+0.1
SMLT	**Sun Moon Lake**	**1.48**	**268**	P	Pn	23 17 54.2	-0.3
baz=266							
SMLT				*e*S	Sn	23 18 12.1	-1.7
baz=266							
YUS	**Yu-Shan**	**1.50**	**253**	P	Pn	23 17 54.9	0.0
baz=250							
YUS				*e*S	Sn	23 18 13.0	-1.4
baz=250							
TYC	**Yuchr**	**1.51**	**269**	*i* P	Pn	23 17 54.8	-0.2
baz=267							
TYC				*e*S	Sn	23 18 14.8	0.0
baz=267							
TWS1	**Kuangyinshan**	**1.52**	**319**	*e*P	Pn	23 17 54.9	-0.2
baz=336							
NSTT	**Nanjuang**	**1.54**	**297**	P	Pn	23 17 55.3	0.0
baz=296							
NSTT				*i* S	Sn	23 18 15.1	-0.2
baz=296							
JIJ	**Ishigaki jima**	**1.55**	**74**	P	Pn	23 17 54.4	-1.1
JIJ				*e*S	Sn	23 18 15.2	-0.4
ELDTW	**Lidau**	**1.56**	**241**	*e*P	Pn	23 17 55.1	-0.6
baz=239							
ELDTW				*e*S	Sn	23 18 13.6	-2.4
baz=239							
ALS	**Alishan**	**1.62**	**255**	P	Pn	23 17 56.8	+0.3
baz=253							
ALS				*e*S	Sn	23 18 16.5	-0.9
baz=253							
TWQ1	**Liyutan**	**1.64**	**284**	*e*P	Pn	23 17 57.5	+0.8
baz=283							
TWQ1				*e*S	Sn	23 18 18.3	+0.5
baz=283							
NSY	**Sanyi**	**1.66**	**287**	*e*P	Pn	23 17 58.5	+1.4
baz=285							
TCU	**Taichung**	**1.69**	**277**	*e*P	Pn	23 17 58.0	+0.6
baz=275							
TCU				*e*S	Sn	23 18 19.8	+0.8
baz=275							
CHN5	**Tsauling**	**1.71**	**259**	P	Pn	23 17 58.3	+0.6
baz=247							
CHN5				*e*S	Sn	23 18 19.9	+0.2
baz=247							
TWG	**Pinlang**	**1.73**	**230**	*e*P	Pn	23 17 59.2	+1.2
baz=239							
TWG				*e*S	Sn	23 18 18.1	-2.1
baz=239							
CHN4	**Tsaushan**	**1.86**	**252**	*e*P	Pn	23 18 01.1	+1.3
baz=250							
CHN4				*e*S	Sn	23 18 24.3	+1.1
baz=250							
WTP	**Ta-pu**	**1.88**	**249**	*e*P	Pn	23 18 00.1	+0.1
baz=237							
WTP				*e*S	Sn	23 18 24.2	+0.6
baz=237							
SGST	**Jiashian**	**1.97**	**244**	*e*P	Pn	23 18 02.7	+1.4
baz=233							
SGST				*e*S	Sn	23 18 27.0	+1.1
baz=233							
CHN1	**Nanshi**	**1.97**	**248**	*i* P	Pn	23 18 02.8	+1.4
baz=246							
CHN1				S	Sn	23 18 26.8	+0.8
baz=246							
TWK	**Hsinying**	**1.98**	**250**	*e*P	Pn	23 18 02.5	+1.2
baz=248							
TWK				*e*S	Sn	23 18 27.3	+1.1
baz=248							
SSD	**Sandimen**	**2.10**	**236**	*e*P	Pn	23 18 04.7	+1.6
baz=226							
EAST	**Anshuo**	**2.18**	**225**	*e*P	Pn	23 18 04.6	+0.4
baz=223							
SCZT	**Fangliau**	**2.34**	**228**	*e*P	Pn	23 18 07.3	+0.9
baz=220							
SCZT				*e*S	Sn	23 18 34.5	-0.7
baz=220							

IDC 12 23:17:36.3±1.4, 32°.30N×105°.06E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, MS3.7/1, Ms1 3.7/1, ms1mx2.3/37, Error ellipse: s-maj=198.8km s-min=22.9km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.65**	**316**	P	P	23 22 38.7	-0.1
0.4nm,0.8s,baz=120,slow=10,SNR=2.8							
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	P	23 23 11.2	+0.3
0.9nm,0.6s,baz=127,slow=9.1,SNR=4.5							
WRA	**Warramunga Arr**	**59.02**	**148**	P	P	23 27 37.7	-0.3
1.1nm,0.6s,baz=339,slow=7.6,SNR=2.9							
ASAR	**Alice Springs**	**62.10**	**150**	P	P	23 27 59.3	+0.3
0.3nm,0.5s,baz=338,slow=7.0,SNR=5.3							

*ISCJB **12** 23:23:18.7±0.7, 20°.37S±0°.04×69°.3W±0°.2, h117km±8km, mb3.3/2, Error ellipse: s-maj=24.4km s-min=6.4km az=170.9*
*GUC **12** 23:23:19.0±0.7, 20°.36S×69°.13W, h99km±5km, ML3.5*
*IDC **12** 23:23:20.0±1.6, 20°.36S×68°.88W, h116km±17km, mb3.2/2,*

mb1 3.3/5, mb1mx3.1/18, mbtmp3.1/5, Error ellipse: s-maj=40.6km s-min=16.2km az=101.0

ISC 12 23:23:19.6±0.7, 20°.37S±0°.04×69°.3W±0°.2, h113km±8km, n12, σ0°89/20, mb3.3/2, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.55**	**280**	⇑*i*P	**Pn**	**23 23 36.7**	**-0.4**
HMBC				*i*S	**Sn**	**23 23 50.3**	**0.0**
HMBC				AML	AML	23 23 52.9	
	comp=E,2μm,0.5s						
PB01	**Plate Boundary**	**0.69**	**194**	⇑*i*P	**Pn**	**23 23 37.0**	**-1.2**
PB01				*i*S	**Sn**	**23 23 51.1**	**-1.1**
PB01				AML	AML	23 23 51.7	
	comp=E,2μm,0.2s						
PSGC	**Pisagua**	**1.09**	**315**	⇑*i*P	**Pn**	**23 23 42.0**	**0.0**
PSGC				*i*S	**Sn**	**23 23 59.3**	**+0.4**
MNMC	**Miæe Miæ**	**1.27**	**348**	⇓*i*P	**Pn**	**23 23 43.7**	**-0.2**
MNMC				*i*S	**Sn**	**23 24 02.6**	**+0.2**
MNMC				AML	AML	23 24 07.8	
	comp=E,2μm,0.3s						
PB04	**Plate Boundary**	**1.89**	**185**	*e*P	**Pn**	**23 23 54.3**	**+2.9**
PB04				*i*S	**Sn**	**23 24 20.8**	**+5.2**
PB04				AML	AML	23 24 33.6	
	comp=N,438nm,0.5s						
PECH	**Pedro de Valdi**	**2.24**	**189**	*i*P	**Pn**	**23 23 55.5**	**-0.3**
PECH				*i*S	**Sn**	**23 24 24.0**	**+0.5**
LVC	**Limon Verde**	**2.26**	**171**	P	**Pn**	**23 23 56.1**	**+0.1**
	comp=N,4.7nm,0.3s,baz=344,slow=11,SNR=55						
LVC				S	**Sn**	**23 24 25.3**	**+1.3**
	comp=N,14nm,0.3s,baz=72,slow=22,SNR=6.8						
LVC	**Limon Verde**	**2.26**	**171**	⇓*i*P	**Pn**	**23 23 55.9**	**-0.2**
LVC				*i*S	**Sn**	**23 24 24.4**	**+0.5**
LVC				AML	AML	23 24 32.3	
	comp=N,165nm,0.3s						
LPAZ	**La Paz**	**4.21**	**16**	P	**Pn**	**23 24 23.0**	**+1.1**
	comp=N,0.9nm,0.3s,baz=203,slow=7.7,SNR=27						
SIV	**San Ignacio**	**8.96**	**62**	P	**Pn**	**23 25 19.9**	**-6.2**
	comp=N,0.7nm,0.3s,baz=254,slow=12,SNR=10						
TORD	**Torodi Ar. Bea**	**77.33**	**71**	P	**P**	**23 35 00.6**	**-1.6**
	comp=N,0.2nm,0.3s,mb3.3,baz=252,slow=5.8,SNR=9.2						
YKA	**Yellowknife Ar**	**90.00**	**341**	P	**P**	**23 36 06.2**	**+0.4**
	comp=N,0.2nm,0.7s,mb3.4,baz=130,slow=4.8,SNR=6.4						

DJA 12 23:31:30, 7°.28S×105°.62E, h120km, MLv4.3/13
ISCJB 12 23:31:33.6±0.8, 7°.49S±0°.08×106°.15E±0°.06, h78km±6km, mb4.0/16, Error ellipse: s-maj=15.4km s-min=6.3km az=35.2
NEIC 12 23:31:33.7±0.2, 7°.45S×106°.14E, mb4.1/9, Error ellipse: s-maj=10.7km s-min=4.9km az=51.0
IDC 12 23:31:33.8±0.9, 7°.46S×106°.16E, h59km±7km, mb3.8/11, mb1 3.8/11, mb1mx3.7/22, mbtmp3.8/11, MS4.2/4, Ms1 4.2/4, ms1mx3.5/33, Error ellipse: s-maj=35.3km s-min=12.8km az=55.0

ISC 12 23:31:34.6±0.8, 7°.50S±0°.08×106°.14E±0°.06, h69km±6km, h61km±1.2km: pP-P, n59, σ0°70/57, mb4.0/16, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.99**	**333**	P	**Pn**	**23 31 51.1**	**-1.8**
CGJI				S	**Sn**	**23 32 06.5**	**0.0**
TNG	**Tangerang**	**1.42**	**21**	P	**Pn**	**23 32 00.0**	**+1.6**
TNG	**Tangerang**	**1.42**	**21**	P		23 32 00.2	
LEM	**Lembang**	**1.62**	**66**	P	**Pn**	**23 32 01.8**	**+0.7**
RBSI	**Rajabasa**	**1.69**	**347**	P	**Pn**	**23 32 02.5**	**+0.4**
RBSI				S	**Sn**	**23 32 27.5**	**+4.6**
JCJI	**Jatiwangi**	**2.34**	**65**	P	**Pn**	**23 32 10.8**	**-0.1**
KASI	**Kota Agung**	**2.55**	**320**	P	**Pn**	**23 32 12.7**	**-1.0**
KLI	**Kotabumi**	**2.92**	**334**	P	**Pn**	**23 32 23.4**	**+4.8**
KLI	**Kotabumi**	**2.92**	**334**	S	**Pn**	**23 32 19.8**	**+1.2**
XMIS	**Christmas Isla**	**3.00**	**189**	P	**Pn**	**23 32 10.2**	**-10**
LWLI	**Liwa**	**3.22**	**320**	P	**Pn**	**23 32 24.6**	**+1.8**
LWLI	**Liwa**	**3.22**	**320**	S	**Pn**	**23 32 23.4**	**+0.6**
MDSI	**Maura Dua**	**3.57**	**327**	P	**Pn**	**23 32 27.2**	**-0.4**
SMRI	**Semarang**	**4.29**	**84**	P	**Pn**	**23 32 38.1**	**+0.6**
PCJI	**Pacitan**	**5.04**	**98**	P	**Pn**	**23 32 45.6**	**-2.1**
	155nm,1.6s						
KSI	**Kapahiang**	**5.20**	**317**	P	**Pn**	**23 32 50.4**	**+0.5**
PWJI	**Pagerwojo**	**5.64**	**96**	P	**Pn**	**23 32 55.3**	**-0.6**
KAPI	**Kappang**	**13.76**	**80**	LR	LR	23 40 51.8	
	comp=Z,117nm,20.3s,baz=49,slow=41						
FITZ	**Fitzroy Crossi**	**21.71**	**121**	P	**P**	**23 36 19.7**	**-0.4**
	2.4nm,0.8s,mb3.6,baz=235,slow=4.9,SNR=4.7						
FITZ	**Fitzroy Crossi**	**21.71**	**121**	*e*P	**P**	**23 36 20.2**	**0.0**
	3.5nm,0.7s,mb3.8						
CHTO	**Chiang Mai**	**27.09**	**345**	P	**P**	**23 37 10.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**27.31**	**159**	P	**P**	**23 37 13.1**	**+0.2**
WRA	**Warramunga Arr**	**30.00**	**117**	P	**P**	**23 37 37.3**	**+0.4**
	0.5nm,0.4s,mb3.5,baz=286,slow=13,SNR=2.1						
WRAB	**Tennant Creek**	**30.00**	**117**	*e*P	**P**	**23 37 37.4**	**+0.5**
	1.5nm,0.5s,mb3.9						
WRAB				*e*pP	pP	23 37 51.6	-1.9
ASAR	**Alice Springs**	**31.11**	**124**	P	**P**	**23 37 46.7**	**+0.1**
	1.0nm,0.8s,mb3.6,baz=295,slow=8.3,SNR=8.4						
CTAO	**Charters Tower**	**40.80**	**112**	P	**P**	**23 39 09.3**	**-0.2**
STKA	**Stephens Creek**	**40.95**	**131**	P	**P**	**23 39 11.0**	**+0.4**
	0.9nm,0.5s,mb3.9,baz=310,slow=10,SNR=2.6						
STKA				pP	pP	23 39 26.4	-1.3
	2.8nm,0.6s,baz=302,slow=7.5,SNR=4.9						
STKA	**Stephens Creek**	**40.95**	**131**	*e*P	**P**	**23 39 10.7**	**+0.1**
	0.4nm,0.5s,mb3.5						
STKA				*e*pP	pP	23 39 26.6	-1.1
TAU	**Tasmania Unive**	**50.49**	**141**	*e*P	**P**	**23 40 26.2**	**+0.6**
SONM	**Songino Array**	**55.10**	**0**	P	**P**	**23 40 59.0**	**-0.4**
	0.4nm,0.4s,mb3.8,baz=178,slow=9.8,SNR=3.8						
SONM				pP	pP	23 41 15.3	-1.9
	0.7nm,0.5s,baz=175,slow=8.9,SNR=3.5						
ULN	**Ulaanbaatar**	**55.13**	**1**	P	**P**	**23 40 59.5**	**-0.2**
TKM2	**Tokmak 2**	**57.36**	**334**	*e*P	**P**	**23 41 15.7**	**0.0**
	2.7nm,0.6s,mb4.5						
TKM2				*e*pP	pP	23 41 31.7	-1.9
EKS2	**Erkin-Say**	**57.98**	**332**	*e*P	**P**	**23 41 19.6**	**-0.3**
	2.4nm,1.0s,mb4.2						
EKS2				*e*pP	pP	23 41 35.8	-2.2
EKS2				*e*PcP	PcP	23 42 11.9	+0.5
MK31	**Makanchi Array**	**58.07**	**341**	*e*P	**P**	**23 41 20.5**	**-0.1**
MKAR	**Makanchi Array**	**58.07**	**341**	P	**P**	**23 41 20.3**	**-0.3**
	0.9nm,0.4s,mb4.1,baz=147,slow=8.1,SNR=16						
MKAR	**Makanchi Array**	**58.07**	**341**	P	**P**	**23 41 20.3**	**-0.3**
KURK	**Kurchatov**	**62.68**	**341**	P	**P**	**23 41 51.8**	**-0.1**
	1.3nm,0.6s,mb4.0,baz=153,slow=6.2,SNR=6.0						
KURK				pP	pP	23 42 07.2	-3.0
	0.9nm,0.5s,baz=153,slow=6.8,SNR=3.5						
KURK	**Kurchatov**	**62.68**	**341**	*e*P	**P**	**23 41 50.1**	**-1.8**
KURK				pP	pP	23 42 07.2	-3.0
YSS	**Yuzh-Sakhalins**	**63.21**	**27**	P	**P**	**23 41 55.1**	**-0.4**
ZALV	**Zalesovo Beam**	**63.81**	**346**	P	**P**	**23 41 59.5**	**+0.2**
	0.7nm,0.3s,mb3.9,baz=158,slow=5.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**63.81**	**346**	P	**P**	**23 41 59.5**	**+0.2**
MAW	**Mawson**	**66.64**	**197**	P	**P**	**23 42 17.6**	**+0.1**
	4.9nm,1.0s,mb4.3,baz=69,slow=8.2,SNR=5.2						
MAW	**Mawson**	**66.64**	**197**	*e*P	**P**	**23 42 18.0**	**+0.5**
	0.8nm,0.7s,mb3.7						
BVAR	**Borovoye Array**	**67.50**	**338**	P	**P**	**23 42 23.8**	**+0.7**
	3.3nm,0.6s,mb4.3,baz=142,slow=9.1,SNR=21						
BRVK	**Borovoye**	**67.56**	**338**	*e*P	**P**	**23 42 23.6**	**+0.1**
KMBO	**Kilima Mbogo**	**68.92**	**272**	P	**P**	**23 42 33.0**	**+0.1**
ARU	**Arti**	**74.71**	**335**	*e*P	**P**	**23 43 06.9**	**+0.3**
LSZ	**Lusaka**	**76.48**	**256**	*e*P	**P**	**23 43 16.9**	**-0.8**
	12nm,1.4s,mb4.4						
KIV	**Kislovodsk**	**76.68**	**318**	*e*P	**P**	**23 43 19.1**	**+0.9**
MALT	**Malatya**	**77.54**	**312**	P	**P**	**23 43 22.6**	**-0.5**
EIL	**Elat**	**77.62**	**302**	LR	LR	00 13 20.0	
	comp=Z,98nm,21.2s,baz=251,slow=32						
TIXI	**Tiksi**	**80.41**	**7**	*e*P	**P**	**23 43 37.0**	**-1.1**
	4.2nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**81.52**	**312**	*e*P	**P**	**23 43 45.7**	**+1.0**
	1.3nm,0.6s,mb3.9						
BR131				*e*pP	pP	23 44 01.8	-1.8
BRTR	**Keskin Array B**	**81.52**	**312**	P	**P**	**23 43 45.6**	**+0.9**
	2.4nm,0.6s,mb4.2,baz=139,slow=6.9,SNR=20						
SUW	**Suwalki**	**91.89**	**324**	*e*P	**P**	**23 44 35.0**	**-0.1**
AQU	**L'Aquila**	**97.02**	**312**	P	**P**	**23 44 59.4**	**+0.4**
RUE	**Ruedersdorf**	**97.33**	**322**	P	**P**	**23 44 59.9**	**-0.1**
RGN	**Rugen**	**97.69**	**324**	*e*P	**P**	**23 45 01.7**	**0.0**
TXAR	**Lajitas Array**	**144.54**	**48**	PKP	PKPdf	23 51 05.3	+1.5
	0.5nm,0.6s,baz=328,slow=1.9,SNR=8.1						
TXAR				pPKP	pPKPdf	23 51 21.8	-1.9
	0.4nm,0.6s,baz=302,slow=0.8,SNR=4.2						
TXAR	**Lajitas Array**	**144.54**	**48**	PKP	PKPdf	23 51 05.3	+1.5
TXAR				pPKP	pPKPdf	23 51 21.8	-1.9

IDC 12 23:38:12.3±0.6, 32°.01N×104°.55E, h0km, mb4.2/19, mb1 4.3/21, mb1mx4.2/29, mbtmp4.2/21, ML3.7/2, Error ellipse: s-maj=21.2km s-min=13.6km az=53.0
NEIC 12 23:38:13.7±0.3, 32°.02N×104°.53E, h10km, mb4.1/10, Error ellipse: s-maj=7.1km s-min=5.7km az=54.0
BJI 12 23:38:13.4, 32°.00N×104°.61E, h10km, mB4.8/9, mb4.4/15, ML4.2/1, Ms4.1/10, Ms7.3/7
MOS 12 23:38:15.5±1.0, 32°.05N×104°.59E, h35km, mb4.5/24, Error ellipse: s-maj=12.8km s-min=6.1km az=122.5

ISC 12 23:38:12.8±1.3, 32°.04N±0°.04×104°.65E±0°.05, h4km±8km, n115, σ0°91/123, mb4.3/41, 12C-7D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.09**	**351**	Pn	**Pn**	**23 39 19.5**	**+3.4**
LZH				Pg	**Pg**	**23 39 31.5**	**+0.2**
LZH				Sn	**Sn**	**23 40 06.9**	**+2.4**
LZH				Sg	**Sg**	**23 40 23.0**	**-1.4**
LZH				smax			
	comp=N,1μm,1.0s						
LZH				smax			
	comp=E,480nm,1.0s						
LZH				LR	LR		
	comp=N,2μm,8.0s						
LZH				LR	LR		
	comp=Z,2μm,9.4s						
XAN	**Xi'an**	**4.11**	**60**	Pg	**Pg**	**23 39 30.9**	**-0.6**
XAN				Sg	**Sg**	**23 40 24.4**	**-0.4**
XAN				smax			
	comp=N,380nm,1.0s						
XAN				smax			
	comp=E,220nm,0.7s						
GYA	**Guiyang**	**5.83**	**162**	Pn	**Pn**	**23 39 41.7**	**+1.7**
GYA				Sn	**Sn**	**23 40 45.9**	**-1.4**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,720nm,0.8s						
KMI	**Kunming**	**7.09**	**194**	Pn	**Pn**	**23 40 06.8**	**+9.5**
KMI				Sn	**Sn**	**23 41 20.9**	**+2.6**
KMI				smax			
	comp=N,70nm,1.0s						
KMI				smax			
	comp=E,58nm,1.4s						
KMI				LR	LR		
	comp=N,400nm,6.6s						
KMI				LR	LR		
	comp=E,630nm,6.4s						
KMI				LR	LR		
	comp=Z,380nm,10.9s						
GTA	**Gaotai**	**8.34**	**333**	*e*P	**Pn**	**23 40 15.6**	**+1.2**
GTA				pP		23 40 19.8	
GTA				sP		23 40 23.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WHN	**Wuhan**	**8.44**	**98**	P	**Pn**	**23 40 17.4**	**+1.6**
WHN				S	**Sn**	**23 41 49.7**	**-1.7**
WHN				LR	LR		
	comp=N,2μm,4.8s						
WHN				LR	LR		
	comp=E,760nm,3.6s						
WHN				LR	LR		
	comp=Z,1μm,8.4s						
HHC	**Hu-ho-hao-te**	**10.41**	**30**	*e*P	**Pn**	**23 40 49.8**	**+7.1**
HHC				PP		23 40 58.0	
HHC				S	**Sn**	**23 42 50.7**	**+11**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,290nm,4.8s						
HHC				LR	LR		
	comp=N,490nm,5.4s						
HHC				LR	LR		
	comp=E,430nm,5.4s						
HHC				LR	LR		
	comp=Z,320nm,5.4s						
BJI	**Beijing**	**12.27**	**46**	P	**Pn**	**23 41 08.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	**14.13**	**203**	P	**Pn**	**23 41 41.2**	**+7.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**14.13**	**203**	P	**Pn**	**23 41 41.2**	**+7.4**
	comp=Z,4.5nm,0.8s						
SONM	**Songino Array**	**15.84**	**4**	Pn	**Pn**	**23 41 56.7**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=21						
ULN	**Ulaanbaatar**	**15.91**	**6**	*e*P	**Pn**	**23 41 57.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ULN	**Ulaanbaatar**	**15.91**	**6**	*e*Pn	**Pn**	**23 41 57.9**	**+0.4**
	comp=Z,4.4nm,0.4s						
ZAK	**Zakamensk**	**18.36**	**357**	*e*P	**Pn**	**23 42 29.8**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MOY	**Mondy**	**19.80**	**353**	*e*P	**Pn**	**23 42 49.8**	**+4.3**
KSRS	**Korea Array**	**19.86**	**68**	P	**Pn**	**23 42 45.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=253,slow=10,SNR=2.7						
CN2	**Changchun**	**20.12**	**48**	*e*P	**P**	**23 42 55.5**	**+7.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.60**	**317**	*e*P	**P**	**23 43 14.5**	**+0.3**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**23 43 14.7**	**+0.5**
	comp=Z,3.5nm,0.7s,mb3.9,baz=117,slow=11,SNR=16						
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**23 43 14.7**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH	**Kashi**	**24.36**	**296**	P	**P**	**23 43 35.1**	**+3.3**
KSH				pmax	pmax		
	comp=Z,110nm,5.1s						
TKM2	**Tokmak 2**	**25.37**	**304**	*e*P	**P**	**23 43 41.9**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
TKM2	**Tokmak 2**	**25.37**	**304**	*e*P	**P**	**23 43 41.9**	**+1.0**
	comp=Z,2.4nm,0.8s,mb3.8						
UCH	**Uchtor**	**25.97**	**302**	*e*P	**P**	**23 43 46.0**	**-0.4**
	comp=Z,5.5nm,1.0s,mb4.0						
UCH				*e*PcP	PcP	23 47 13.6	-1.2
AAK	**Ala-Archa**	**26.08**	**303**	*e*P	**P**	**23 43 48.1**	**+0.7**
AAK	**Ala-Archa**	**26.08**	**303**	*e*P	**P**	**23 43 46.9**	**-0.5**
	comp=Z,1.4nm,0.4s,mb3.8						
ZAA0	**Zalesovo Array**	**26.09**	**333**	*e*P	**P**	**23 43 47.1**	**-0.3**
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**23 43 47.5**	**+0.2**
	comp=Z,8.6nm,0.6s,mb4.5,baz=130,slow=10.0,SNR=36						
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**23 43 47.6**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
AML	**Almayashu**	**26.54**	**301**	*e*P	**P**	**23 43 51.2**	**-0.3**
	comp=Z,3.0nm,0.9s,mb3.8						
KURK	**Kurchatov**	**26.79**	**322**	P	**P**	**23 43 53.6**	**-0.1**
	comp=Z,3.4nm,0.7s,mb4.0,baz=130,slow=8.5,SNR=16						
KURK				PcP	PcP	23 47 16.0	-0.5
	comp=Z,1.5nm,0.7s,baz=129,slow=2.0,SNR=6.3						
KURK	**Kurchatov**	**26.79**	**322**	*e*P	**P**	**23 43 53.0**	**-0.7**
KURK						23 47 16.0	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
KURK	**Kurchatov**	**26.79**	**322**	*e*P	**P**	**23 43 53.0**	**-0.7**
	comp=Z,2.5nm,0.6s,mb3.9						
KURK				PcP	PcP	23 47 16.0	-0.5
KBL	**Kabul**	**29.77**	**285**	*e*P	**P**	**23 44 19.7**	**-0.8**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
KBL	**Kabul**	**29.77**	**285**	*e*P	**P**	**23 44 19.7**	**-0.8**
	comp=Z,3.3nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**32.36**	**321**	P	**P**	**23 44 43.6**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.8,baz=110,slow=8.5,SNR=5.3						
BVAR				PcP	PcP	23 47 29.7	-0.9
	comp=Z,1.1nm,0.6s,baz=126,slow=3.1,SNR=7.5						
BVAR	**Borovoye Array**	**32.36**	**321**	P	**P**	**23 44 43.6**	**+0.5**
BVAR						23 47 29.7	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**32.43**	**321**	*e*P	**P**	**23 44 44.1**	**+0.4**
YSS	**Yuzh-Sakhalins**	**32.61**	**52**	P	**P**	**23 44 46.3**	**+1.0**
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**	**23 45 39.2**	**+0.4**
AKTK				PcP	PcP	23 47 49.0	-0.9
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**23 45 39.2**	**+0.4**
	comp=Z,1.2nm,0.5s,mb3.9,baz=94,slow=5.3,SNR=3.7						
AKTO				PcP	PcP	23 47 49.0	-0.9
	comp=Z,0.5nm,0.4s,baz=88,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**23 45 39.2**	**+0.4**
AKTO						23 47 49.0	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
SVE	**Sverdlovsk**	**39.03**	**323**	*e*P	**P**	**23 45 40.9**	**+0.6**
SVE				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
ARU	**Arti**	**39.99**	**321**	*c i*P	**P**	**23 45 48.6**	**+0.3**
ARU				S	**S**	**23 51 53.1**	**-1.0**
ARU				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
ARU	**Arti**	**39.99**	**321**	*e*P	**P**	**23 45 48.0**	**-0.3**
PETK	**Petropavlovsk-**	**43.20**	**45**	P	**P**	**23 46 15.7**	**+1.1**
	comp=Z,5.0nm,0.7s,mb4.3,baz=216,slow=4.5,SNR=5.3						
PETK	**Petropavlovsk-**	**43.20**	**45**	P	**P**	**23 46 15.7**	**+1.1**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ZEI	**Tsey**	**48.49**	**301**	*e*P	**P**	**23 46 54.0**	**-2.6**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KIV	**Kislovodsk**	**49.20**	**303**	*e*P	**P**	**23 47 02.4**	**+0.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**49.20**	**303**	*e*P	**P**	**23 47 01.2**	**-0.8**
BILL	**Bilibino**	**50.14**	**26**	⇑*e*P	**P**	**23 47 09.9**	**+1.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
OBN	**Obninsk**	**52.10**	**318**	*e*P	**P**	**23 47 22.9**	**-0.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
OBN	**Obninsk**	**52.10**	**318**	P	**P**	**23 47 22.3**	**-1.5**
MALT	**Malatya**	**53.47**	**296**	*e*P	**P**	**23 47 33.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**53.76**	**155**	P	**P**	**23 47 36.9**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.4,baz=331,slow=5.7,SNR=3.6						
JOF	**Joensuu**	**54.49**	**327**	*e*P	**P**	**23 47 40.6**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
JOF	**Joensuu**	**54.49**	**327**	*e*p	**P**	**23 47 40.6**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.3						
KEV	**Kevo**	**56.07**	**336**	*e*P	**P**	**23 47 51.1**	**-1.4**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
KEV	**Kevo**	**56.07**	**336**	*e*p	**P**	**23 47 51.1**	**-1.4**
	comp=Z,8.6nm,0.6s,mb5.0						
ARCES	**ARCESS Array B**	**56.60**	**336**	P	**P**	**23 47 56.2**	**0.0**
	comp=Z,2.4nm,0.5s,mb4.5,baz=79,slow=8.0,SNR=29						
ARCES	**ARCESS Array B**	**56.60**	**336**	P	**P**	**23 47 56.3**	**0.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BR131	**Keskin Array S**	**56.69**	**299**	*e*P	**P**	**23 47 57.0**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**56.69**	**299**	P	**P**	**23 47 57.1**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=93,slow=5.4,SNR=6.8						
BRTR	**Keskin Array B**	**56.69**	**299**	*c e*P	**P**	**23 47 57.0**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**23 47 59.5**	**-0.2**
	comp=Z,2.2nm,0.5s,mb4.5,baz=89,slow=6.8,SNR=18						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**23 47 59.5**	**-0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**23 47 59.4**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.5,baz=72,slow=5.8,SNR=7.1						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**23 47 59.4**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VRI	**Vrincioaia**	**59.88**	**308**	⇓*i*P	**P**	**23 48 18.9**	**-0.7**
VRI	**Vrincioaia**	**59.88**	**308**	⇓*i*P	**P**	**23 48 18.9**	**-0.7**
BURAR	**Bucovina Array**	**60.39**	**310**	⇓*i*P	**P**	**23 48 23.3**	**+0.2**
BURAR	**Bucovina Array**	**60.39**	**310**	⇓*i*P	**P**	**23 48 23.3**	**+0.2**
MLR	**Muntele Rosu**	**60.51**	**308**	⇓*i*P	**P**	**23 48 24.2**	**+0.3**
MLR	**Muntele Rosu**	**60.51**	**308**	⇓*i*P	**P**	**23 48 24.2**	**+0.3**
KWP	**Kalwaria Pacla**	**61.41**	**313**	*e*P	**P**	**23 48 29.1**	**-0.9**
KWP				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
KWP	**Kalwaria Pacla**	**61.41**	**313**	*e*P	**P**	**23 48 29.1**	**-0.9**
	comp=Z,18nm,1.0s,mb5.2						
KWP	**Kalwaria Pacla**	**61.41**	**313**	⇓*i*P	**P**	**23 48 28.8**	**-1.2**
KOLS	**Kolonicke sedl**	**61.89**	**312**	*e*P	**P**	**23 48 33.0**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,8.0nm,1.9s,mb4.5						
KOLS	**Kolonicke sedl**	**61.89**	**312**	*e*P	**P**	**23 48 33.0**	**-0.2**
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**23 48 35.2**	**+0.8**
	comp=Z,3.0nm,0.6s,mb4.6,baz=335,slow=6.8,SNR=17						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**23 48 35.3**	**+0.8**
ASAR				pmax

σ0°98/112, **mb4.3**/40, **8C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.69**	**356**	Pg	**Pn**	**23 45 07.5**	**+5.2**
LZH				Sg	**Sn**	**23 45 58.6**	**+1.8**
LZH				smax			
	comp=N,450nm,1.0s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,4.3s						
LZH				LR	LR		
	comp=Z,2μm,7.2s						
XAN	**Xi'an**	**4.76**	**55**	Pg	**Pn**	**23 44 58.1**	**-5.0**
XAN				Sg	**Sn**	**23 45 55.2**	**-3.1**
XAN				smax			
	comp=N,320nm,0.7s						
XAN				smax			
	comp=E,210nm,0.9s						
GYA	**Guiyang**	**5.36**	**156**	Pg	**Pb**	**23 45 25.9**	**+0.8**
GYA				Sg	**Sb**	**23 46 34.6**	**+5.1**
GYA				smax			
	comp=N,550nm,0.7s						
GYA				smax			
	comp=E,460nm,0.7s						
KMI	**Kunming**	**6.38**	**192**	Pn	**Pn**	**23 45 26.1**	**+0.6**
KMI				Sn	**Sn**	**23 46 34.3**	**-4.1**
KMI				smax			
	comp=N,56nm,1.1s						
KMI				smax			
	comp=E,64nm,1.1s						
KMI				LR	LR		
	comp=N,600nm,7.5s						
KMI				LR	LR		
	comp=E,840nm,7.3s						
KMI				LR	LR		
	comp=Z,390nm,7.3s						
LSA	**Lhasa**	**11.40**	**265**	P	**Pn**	**23 46 31.5**	**-2.8**
CHTO	**Chiang Mai**	**13.40**	**202**	*e*P	**Pn**	**23 47 01.2**	**-0.5**
GUN	**Gumba**	**16.32**	**262**	*e*P	**Pn**	**23 47 36.3**	**-4.4**
	comp=Z,21nm,0.3s						
SONM	**Songino Array**	**16.50**	**5**	Pn	**Pn**	**23 47 42.5**	**-0.4**
	baz=187,slow=13,SNR=4.3						
ULN	**Ulaanbaatar**	**16.59**	**7**	*e*P	**Pn**	**23 47 43.4**	**-0.6**
ULN				pmax	pmax		
	comp=Z,42nm,0.7s						
ULN	**Ulaanbaatar**	**16.59**	**7**	*e*Pn	**Pn**	**23 47 43.4**	**-0.6**
	comp=Z,42nm,0.7s						
PKI	**Pulchoki**	**16.82**	**262**	*e*P	**Pn**	**23 47 42.9**	**-4.2**
	comp=Z,32nm,0.5s						
KKN	**Kakani**	**16.87**	**263**	*e*P	**Pn**	**23 47 43.9**	**-3.7**
	comp=Z,21nm,0.5s						
DMN	**Daman**	**17.07**	**262**	*e*P	**Pn**	**23 47 46.5**	**-3.6**
	comp=Z,59nm,1.1s						
ZAK	**Zakamensk**	**18.98**	**358**	*e*P	**Pn**	**23 48 11.2**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MOY	**Mondy**	**20.40**	**354**	*e*P	**P**	**23 48 32.2**	**+3.9**
KSRS	**Korea Array**	**20.44**	**66**	P	**P**	**23 48 28.1**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=256,slow=9.4,SNR=4.2						
KSRS	**Korea Array**	**20.44**	**66**	P	**P**	**23 48 28.2**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CN2	**Changchun**	**20.82**	**48**	*e*P	**P**	**23 48 34.8**	**+1.9**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
MK31	**Makanchi Array**	**22.83**	**319**	*e*P	**P**	**23 48 55.0**	**+0.5**
MKAR	**Makanchi Array**	**22.83**	**319**	P	**P**	**23 48 55.3**	**+0.8**
	comp=Z,12nm,1.1s,mb4.2,baz=123,slow=10,SNR=22						
MKAR	**Makanchi Array**	**22.83**	**319**	*c*e*P	**P**	**23 48 55.2**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH	**Kashi**	**24.33**	**297**	P	**P**	**23 49 12.1**	**+2.9**
KSH				pmax	pmax		
	comp=Z,79nm,4.9s						
TKM2	**Tokmak 2**	**25.43**	**305**	*e*P	**P**	**23 49 19.1**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TKM2	**Tokmak 2**	**25.43**	**305**	*e*P	**P**	**23 49 19.1**	**-0.1**
	comp=Z,3.1nm,0.8s,mb3.9						
UCH	**Uchtor**	**26.01**	**303**	*e*P	**P**	**23 49 25.2**	**+0.8**
	comp=Z,7.9nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**26.13**	**304**	P	**P**	**23 49 29.1**	**+3.6**
	comp=Z,0.8nm,0.5s,mb3.5,baz=144,slow=10,SNR=0.8						
AAK	**Ala-Archa**	**26.13**	**304⇑**	*e*P	**P**	**23 49 26.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.5						
AAK	**Ala-Archa**	**26.13**	**304**	P	**P**	**23 49 27.8**	**+2.3**
ZAA0	**Zalesovo Array**	**26.51**	**334**	*e*P	**P**	**23 49 29.1**	**+0.2**
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**23 49 29.7**	**+0.9**
	comp=Z,5.5nm,0.7s,mb4.2,baz=134,slow=8.6,SNR=23						
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**23 49 29.7**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
AML	**Almayashu**	**26.58**	**302**	*e*P	**P**	**23 49 30.6**	**+1.0**
	comp=Z,1.6nm,0.3s,mb4.0						
EKS2	**Erkin-Say**	**26.65**	**304**	*e*P	**P**	**23 49 30.2**	**0.0**
KURK	**Kurchatov**	**27.08**	**323**	P	**P**	**23 49 34.6**	**+0.6**
	comp=Z,6.4nm,0.8s,mb4.2,baz=128,slow=9.0,SNR=30						
KURK	**Kurchatov**	**27.08**	**323**	*c i*P	**P**	**23 49 34.5**	**+0.5**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
KURK	**Kurchatov**	**27.08**	**323**	*e*P	**P**	**23 49 34.2**	**+0.2**
BOD	**Bodaibo**	**27.27**	**11**	*e*P	**P**	**23 49 34.1**	**-1.5**
KBL	**Kabul**	**29.60**	**286**	*e*P	**P**	**23 49 57.0**	**+0.3**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
KBL	**Kabul**	**29.60**	**286**	*e*P	**P**	**23 49 57.0**	**+0.4**
	comp=Z,4.3nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**32.63**	**321**	P	**P**	**23 50 23.8**	**+0.6**
	comp=Z,1.7nm,0.8s,mb4.0,baz=118,slow=9.8,SNR=11						
BVAR	**Borovoye Array**	**32.63**	**321**	P	**P**	**23 50 23.8**	**+0.6**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	**Borovoye**	**32.70**	**321⇑**	*e*P	**P**	**23 50 24.2**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BRVK	**Borovoye**	**32.70**	**321**	*e*P	**P**	**23 50 23.3**	**-0.5**
	comp=Z,7.7nm,1.3s,mb4.5						
YSS	**Yuzh-Sakhalins**	**33.29**	**51**	P	**P**	**23 50 28.6**	**-0.4**
ABKAR	**Akbulak array**	**37.56**	**311**	*e*P	**P**	**23 51 06.1**	**+0.4**
	comp=Z,2.3nm,0.7s,mb4.0						
AKTK	**Aktyubinsk**	**39.02**	**313**	P	**P**	**23 51 18.0**	**+0.1**
AKTO	**Aktyubinsk**	**39.02**	**313**	P	**P**	**23 51 18.0**	**+0.1**
	comp=Z,1.7nm,0.7s,mb3.9,baz=90,slow=13,SNR=6.7						
AKTO	**Aktyubinsk**	**39.02**	**313**	P	**P**	**23 51 18.0**	**0.0**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
SVE	**Sverdlovsk**	**39.33**	**323**	*e*P	**P**	**23 51 22.0**	**+1.5**
ARU	**Arti**	**40.27**	**322**	*c i*P	**P**	**23 51 29.1**	**+0.8**
ARU				S	**S**	**23 57 36.9**	**+1.5**
ARU				SS	SS	00 00 32.5	-1.0
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
ARU	**Arti**	**40.27**	**322**	*e*P	**P**	**23 51 28.2**	**0.0**
	comp=Z,15nm,0.9s,mb4.7						
GNI	**Garni**	**48.26**	**298**	P	**P**	**23 52 31.3**	**-1.3**
ZEI	**Tsey**	**48.52**	**301**	*e*P	**P**	**23 52 36.6**	**+2.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
GOF	**Gofitskoye**	**48.87**	**304**	*e*P	**P**	**23 52 34.1**	**-3.1**
KIV	**Kislovodsk**	**49.24**	**303**	*e*P	**P**	**23 52 40.4**	**+0.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
KIV	**Kislovodsk**	**49.24**	**303**	*e*P	**P**	**23 52 39.6**	**-0.4**
BILL	**Bilibino**	**50.87**	**25**	*e*P	**P**	**23 52 51.3**	**-0.7**
BILL				*e*		23 54 07.1	
BILL				*e*		23 54 43.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
KLMR	**Klimovskoe**	**50.89**	**325**	*e*P	**P**	**23 52 52.3**	**+0.1**
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
OBN	**Obninsk**	**52.34**	**318**	*e*P	**P**	**23 53 03.2**	**0.0**
OBN				*e*		23 54 12.2	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MALT	**Malatya**	**53.43**	**297**	*e*P	**P**	**23 53 11.1**	**-0.4**
JOF	**Joensuu**	**54.84**	**328**	*e*P	**P**	**23 53 20.8**	**-0.6**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
JOF	**Joensuu**	**54.84**	**328**	*e*p	**P**	**23 53 20.8**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.7						
KEV	**Kevo**	**56.51**	**336**	*e*P	**P**	**23 53 33.3**	**0.0**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KEV	**Kevo**	**56.51**	**336**	*e*p	**P**	**23 53 33.3**	**0.0**
	comp=Z,9.1nm,0.8s,mb4.9						
BR131	**Keskin Array S**	**56.69**	**299**	*e*P	**P**	**23 53 34.4**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**56.69**	**299**	P	**P**	**23 53 34.7**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=107,slow=7.9,SNR=5.4						
BRTR	**Keskin Array B**	**56.69**	**299**	P	**P**	**23 53 34.7**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**57.04**	**336**	P	**P**	**23 53 37.6**	**+0.6**
	comp=Z,3.4nm,0.7s,mb4.5,baz=88,slow=7.1,SNR=13						
ARCES	**ARCESS Array B**	**57.04**	**336**	P	**P**	**23 53 37.7**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	**Kangasniemi**	**57.21**	**327**	*e*P	**P**	**23 53 37.3**	**-1.1**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**57.21**	**327**	*e*p	**P**	**23 53 37.3**	**-1.1**
	comp=Z,3.3nm,0.7s,mb4.5						
AKASG	**Malin Array Be**	**57.27**	**313**	P	**P**	**23 53 38.1**	**-0.8**
	comp=Z,0.6nm,0.4s,mb4.0,baz=349,slow=19,SNR=2.0						
AKASG	**Malin Array Be**	**57.27**	**313**	P	**P**	**23 53 38.1**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**23 53 39.9**	**+0.3**
	comp=Z,5.5nm,0.8s,mb4.7,baz=96,slow=6.5,SNR=12						
FINES	**FINESS Array B**	**57.39**	**326**	P	**P**	**23 53 39.9**	**+0.3**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CSS	**Prodhromos**	**58.30**	**294**	*e*P	**P**	**23 53 44.6**	**-1.9**
WRAB	**Tennant Creek**	**58.65**	**146**	*e*P	**P**	**23 53 50.0**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
WRAB	**Tennant Creek**	**58.65**	**146**	*e*P	**P**	**23 53 50.0**	**+1.1**
	comp=Z,22nm,0.6s,mb5.4						
TIRR	**Tirgusor**	**59.21**	**306**	P	**P**	**23 53 52.3**	**-0.4**
KWP	**Kalwaria Pacla**	**61.59**	**313**	*e*P	**P**	**23 54 08.0**	**-0.8**
KWP				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
KWP	**Kalwaria Pacla**	**61.59**	**313**	*e*P	**P**	**23 54 08.0**	**-0.8**
	comp=Z,9.9nm,0.9s,mb4.9						
ASAR	**Alice Springs**	**61.68**	**149**	P	**P**	**23 54 10.9**	**+1.2**
	comp=Z,2.6nm,0.8s,mb4.4,baz=336,slow=6.8,SNR=14						
ASAR	**Alice Springs**	**61.68**	**149**	P	**P**	**23 54 10.9**	**+1.2**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	**Piszkesteto**	**63.87**	**312**	P	**P**	**23 54 23.8**	**-0.3**
NB2	**NORSAR Subarra**	**64.47**	**327**	P	**P**	**23 54 27.2**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.3,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**23 54 27.5**	**-0.3**
	comp=Z,2.1nm,0.7s,mb4.3,baz=72,slow=7.0,SNR=6.2						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**23 54 27.5**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MORC	**Moravsky Berou**	**64.74**	**314**	*e*P	**P**	**23 54 29.7**	**-0.1**
GERES	**GERESS Array B**	**67.42**	**314**	P	**P**	**23 54 47.3**	**+0.3**
	comp=Z,1.2nm,0.9s,mb3.9,baz=86,slow=4.1,SNR=8.4						
GERES	**GERESS Array B**	**67.42**	**314**	P	**P**	**23 54 47.3**	**+0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIP	**Timpagrande**	**69.18**	**304**	*e*P	**P**	**23 54 57.9**	**-0.3**
KMBO	**Kilima Mbogo**	**71.08**	**257**	P	**P**	**23 55 10.6**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=50,slow=15,SNR=4.0						
KMBO	**Kilima Mbogo**	**71.08**	**257**	P	**P**	**23 55 10.6**	**+0.4**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CDF	**Champ du Feu**	**71.48**	**316⇑**	*i*P	**P**	**23 55 12.0**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.0						
WLF	**Walferdange**	**71.58**	**317**	*e*P	**P**	**23 55 12.0**	**-0.7**
INK	**Inuvik**	**71.85**	**19**	P	**P**	**23 55 13.2**	**-0.7**
STKA	**Stephens Creek**	**72.19**	**147**	P	**P**	**23 55 17.1**	**+0.6**
	comp=Z,2.3nm,0.9s,mb4.1,baz=329,slow=6.8,SNR=4.4						
LPG	**La Plagne**	**73.13**	**313⇑**	*i*P	**P**	**23 55 22.7**	**+0.7**
	comp=Z,16nm,0.8s,mb4.7						
SUMG	**Summit**	**73.18**	**349**	*e*P	**P**	**23 55 22.1**	**+0.3**
	comp=Z,4.3nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**74.37**	**315⇑**	*i*P	**P**	**23 55 28.9**	**-0.4**
	comp=Z,11nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**75.52**	**316**	*e*P	**P**	**23 55 36.0**	**0.0**
	comp=Z,13nm,1.2s,mb4.4						
CAF	**Calviac**	**76.30**	**314**	*e*P	**P**	**23 55 40.3**	**-0.1**
	comp=Z,3.2nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**81.39**	**17**	P	**P**	**23 56 07.7**	**-0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=329,slow=5.2,SNR=18						
YKA	**Yellowknife Ar**	**81.39**	**17**	P	**P**	**23 56 07.7**	**-0.3**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**81.39**	**17**	P	**P**	**23 56 07.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**93.65**	**288**	P	**P**	**23 57 08.0**	**-0.6**
	comp=Z,0.2nm,0.6s,mb3.7,baz=304,slow=35,SNR=5.5						
TORD	**Torodi Ar. Bea**	**93.65**	**288**	P	**P**	**23 57 08.0**	**-0.6**
PDAR	**Pinedale Array**	**99.95**	**25**	LR	LR	00 49 28.3	
	comp=Z,555nm,19.9s,baz=159,slow=39						

ISCJB ***12*** *23:46:16.8±0.8, 31°.23N±0°.02×103°.47E±0°.02, h7km±5km, mb5.3/267, MS5.0/52, Error ellipse: s-maj=3.6km s-min=2.7km az=11.9*

BJI ***12*** *23:46:17.9, 31°.34N×103°.58E, h13km, mB5.2/17, mb5.3/36, ML5.3/19, Ms5.4/52, Ms7 5.2/36*

IDC ***12*** *23:46:17.3±0.4, 31°.26N×103°.57E, h0km, mb5.0/30, mb1 5.1/31, mb1mx5.1/33, mbtmp5.0/31, ML4.2/1, MS4.7/26, Ms1 4.7/26, ms1mx4.6/35, Error ellipse: s-maj=15.0km s-min=10.2km az=50.0*

MOS ***12*** *23:46:18.9±0.7, 31°.28N×103°.55E, h22km, mb5.5/109, MS5.0/34, Error ellipse: s-maj=7.2km s-min=3.4km az=122.7*

NEIC ***12*** *23:46:19.0±0.1, 31°.28N×103°.53E, h10km, mb5.3/158, Error ellipse: s-maj=3.5km s-min=2.2km az=213.0*

GCMT ***12*** *23:46:19.0±0.2, 31°.30N×103°.61E, h16km±1km, MW5.2/82, Moment Tensor Solution. s45,c59; s82,c160; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.08±.02; $M_{\theta\theta}$0.70±.02; $M_{\phi\phi}$-0.61±.02; $M_{r\theta}$0.14±.05; $M_{\theta\phi}$0.44±.02; $M_{\phi r}$0.48±.07; Best double couple: $M_0$0.93800×10^{17} NP1:ϕ_s116.00000°, δ59.00000°, λ-7.00000°. NP2: ϕ_s210.00000°, δ84.00000°, λ-149.00000°. Principal axes: T 0.9160, Plg17.0000°, Azm339.0000°; N 0.0440, Plg58.0000°, Azm220.0000°; P -0.9590, Plg26.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***12*** *23:46:23.6, 31°.73N×103°.55E, h33km, mb5.6, MS5.5, Sichuan, China*

BGS ***12*** *23:46:26.1±1.6, 32°.00N×103°.00E, h10km, mb5.1*

ISC 12 23:46:20.3±0.6, 31°.26N±0°.02×103°.51E±0°.02, h17km±3km, h22km±4.1km; pP-P, n882, σ0°.87/907, mb5.3/266, MS5.0/52, 99C-53D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**149**	Pg	**Pg**	**23 46 28.9**	**+0.2**
CD2				Sg	**Sg**	**23 46 36.5**	**+2.2**
CD2				smax			
	comp=N,231μm,0.8s						
LZH	**Lanzhou**	**4.82**	**3**	Pn	**Pn**	**23 47 33.2**	**+1.2**
LZH				Sn	**Sn**	**23 48 30.1**	**+2.8**
LZH				Sg	**Sg**	**23 48 53.0**	**-1.9**
LZH				smax			
	comp=N,3μm,0.9s						
LZH				smax			
	comp=E,7μm,1.1s						
LZH				LR	LR		
	comp=N,69μm,6.0s						
LZH				LR	LR		
	comp=Z,76μm,9.2s						
XAN	**Xi'an**	**5.33**	**57**	Pg	**Pg**	**23 47 57.2**	**-5.2**
XAN				Sg	**Sb**	**23 48 56.0**	**-0.7**
XAN				smax			
	comp=N,4μm,1.1s						
XAN				smax			
	comp=E,2μm,1.1s						
GYA	**Guiyang**	**5.53**	**149**	Pg	**Pb**	**23 47 49.6**	**-6.7**
GYA				Sg	**Sb**	**23 48 54.5**	**-7.8**
GYA				smax			
	comp=N,5μm,0.9s						
GYA				smax			
	comp=E,6μm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.9s						
GYA				LR	LR		
	comp=E,4μm,3.2s						
GYA				LR	LR		
	comp=Z,6μm,5.0s						
KMI	**Kunming**	**6.16**	**187**	Pn	**Pn**	**23 47 51.7**	**+1.3**
KMI				Sn	**Sn**	**23 49 00.6**	**+0.2**
KMI				LR	LR		
	comp=N,18μm,9.0s						
KMI				LR	LR		
	comp=E,87μm,10.6s						
KMI				LR	LR		
	comp=Z,24μm,11.8s						
GTA	**Gaotai**	**8.67**	**341**	*e*P	**Pn**	**23 48 24.0**	**-0.8**
GTA				pP		23 48 28.1	
GTA				sP		23 48 31.1	
GTA				S	**Sn**	**23 50 00.9**	**-1.3**
GTA				pmax	pmax		
	comp=Z,16nm,1.1s						
GTA				pmax	pmax		
	comp=Z,630nm,6.0s						
GTA				LR	LR		
	comp=N,8μm,13.8s						
GTA				LR	LR		
	comp=E,8μm,9.6s						
GTA				LR	LR		
	comp=Z,10μm,11.7s						
WHN	**Wuhan**	**9.34**	**92**	⇑P	**Pn**	**23 48 34.0**	**0.0**
WHN				S	**Sn**	**23 50 15.2**	**-3.5**
WHN				LR	LR		
	comp=N,59μm,8.0s						
WHN				LR	LR		
	comp=E,10μm,5.0s						
WHN				LR	LR		
	comp=Z,14μm,5.8s						
IMP	**Imphal**	**10.64**	**235**	*e*P	**Pn**	**23 48 52.0**	**+0.1**
IMP				*ex*	x	23 52 10.0	
BTO	**Baotou**	**10.71**	**28**	*e*P	**Pn**	**23 48 46.9**	**-5.8**
BTO				S	Px	23 49 57.3	
BTO				LR	LR		
	comp=N,6μm,11.4s						
BTO				LR	LR		
	comp=E,5μm,10.6s						
LSA	**Lhasa**	**10.78**	**265**	P	**Pn**	**23 48 54.8**	**+1.0**
LSA				LR	LR		
	comp=N,4μm,15.3s						
LSA				LR	LR		
	comp=E,6μm,9.5s						
LSA				LR	LR		
	comp=Z,8μm,10.0s						
HHC	**Hu-ho-hao-te**	**11.56**	**32**	*e*P	**Pn**	**23 49 10.2**	**+5.7**
HHC				pP		23 49 17.5	
HHC				sP		23 49 22.4	
HHC				S	**Sn**	**23 51 21.1**	**+7.9**
HHC				sS		23 51 31.9	
HHC				SS		23 51 35.4	
HHC				pmax	pmax		
	comp=Z,47nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,4.8s						
HHC				LR	LR		
	comp=N,7μm,4.7s						
HHC				LR	LR		
	comp=E,6μm,5.3s						
HHC				LR	LR		
	comp=Z,5μm,5.1s						
SHL	**Shillong**	**11.70**	**244**	*i* P	**Pn**	**23 49 06.0**	**-0.4**
SHL				*i* x	x	23 52 23.0	
GZH	**Guangzhou**	**11.95**	**131**	P	**Pn**	**23 49 07.1**	**-2.7**
GZH				S	**Sn**	**23 51 17.1**	**-5.6**
GZH				LR	LR		
	comp=N,12μm,8.2s						
GZH				LR	LR		
	comp=E,12μm,10.0s						
TIA	**Tai'an**	**12.35**	**63**	*e*P	**Pn**	**23 49 15.2**	**-0.1**
TIA				pmax	pmax		
	comp=Z,87nm,0.9s						
TIA				LR	LR		
	comp=N,2μm,8.0s						
TIA				LR	LR		
	comp=E,2μm,9.0s						
CHTO	**Chiang Mai**	**13.07**	**200**	*e*P	**Pn**	**23 49 28.0**	**+2.9**
CHTO				*e*		23 51 47.4	
CHTO				pmax	pmax		
	comp=Z,33nm,0.8s						
CHTO	**Chiang Mai**	**13.07**	**200**	*e*Pn	**Pn**	**23 49 27.9**	**+2.8**
	comp=Z,33nm,0.8s						
CHTO				*e*Sn	**Sn**	**23 51 47.4**	**-2.7**
CHTO	**Chiang Mai**	**13.07**	**200**	Pn	Px	23 49 35.6	
	SNR=6.9						
CHTO				Pn	Px	23 49 35.6	
	SNR=6.9						
NJ2	**Nanjing**	**13.09**	**83**	*e*P	**Pn**	**23 49 24.4**	**-1.0**
NJ2				pP		23 49 32.0	
NJ2				PP		23 49 34.9	
NJ2				sP		23 49 36.6	
NJ2				S	**Sn**	**23 51 50.7**	**0.0**
NJ2				sS		23 52 02.7	
NJ2				SS		23 52 07.2	
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,580nm,3.6s						
NJ2				LR	LR		
	comp=N,8μm,12.6s						
NJ2				LR	LR		
	comp=E,7μm,11.0s						
NJ2				LR	LR		
	comp=Z,26μm,9.2s						
CM31	**Chiang Mai Arr**	**13.41**	**199**	*e*Pn	**Pn**	**23 49 31.1**	**+1.3**
QIZ	**Qiongzhong**	**13.46**	**153**	P	**Pn**	**23 49 30.3**	**-0.2**
QIZ				S	**Sn**	**23 52 01.3**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,33nm,1.0s						
QIZ				LR	LR		
	comp=N,12μm,10.0s						
QIZ				LR	LR		
	comp=Z,16μm,10.6s						
BJI	**Beijing**	**13.50**	**46**	P	**Pn**	**23 49 30.1**	**-0.9**
BJI				pmax	pmax		
	comp=Z,16nm,0.8s						
BJI				pmax	pmax		
	comp=Z,230nm,4.3s						
BJI				LR	LR		
	comp=N,8μm,9.0s						
BJI				LR	LR		
	comp=E,4μm,9.0s						
BJI				LR	LR		
	comp=Z,2μm,16.6s						
QZH	**Quanzhou**	**14.71**	**112⇑**	*i*P	**Pn**	**23 49 49.8**	**+2.2**
QZH				S	**Sn**	**23 52 35.7**	**+5.4**
QZH				LR	LR		
	comp=N,10μm,6.6s						
QZH				LR	LR		
	comp=E,15μm,11.3s						
QZH				LR	LR		
	comp=Z,20μm,10.0s						
SSE	**Sheshan**	**15.13**	**86**	*e*P	**Pn**	**23 49 51.8**	**-1.4**
SSE				pP	pP	23 49 55.8	-7.4
SSE				S	**Sn**	**23 52 38.1**	**-2.3**
SSE				pmax	pmax		
	comp=Z,65nm,1.3s						
SSE				pmax	pmax		
	comp=Z,180nm,4.0s						
SSE				LR	LR		
	comp=Z,4μm,15.4s						
GUN	**Gumba**	**15.70**	**262**	*e*P	**Pn**	**23 49 58.5**	**-2.1**
	comp=Z,474nm,0.9s						
CAL	**Cal

comp=Z,131nm,1.0s
ULN Ulaanbaatar 16.80 8 Pn **Pn 23 50 14.8 +0.2**
SNR=62
ULN Pn **Pn 23 50 14.8 +0.2**
SNR=62
TATO Taipei 17.04 107 *e*Pn **Pn 23 50 18.2 +0.4**
YHNB Yeheng 17.08 108 *e*Pn **Pn 23 50 18.2 -0.1**
comp=Z,48nm,0.7s
TPUB Ta-pu 17.14 113 *e*Pn **Pn 23 50 19.4 +0.3**
comp=Z,120nm,1.0s
SSLB Suanglung 17.16 111 *e*Pn **Pn 23 50 19.7 +0.5**
comp=Z,118nm,1.0s
NACB Ninganchiao 17.49 109 *e*Pn **Pn 23 50 24.3 +1.0**
comp=Z,92nm,0.9s
YULB Yu-li 17.62 112 *e*Pn **Pn 23 50 25.0 0.0**
comp=Z,92nm,1.2s
YULB *e*Sn **Sn 23 53 37.8 -3.2**
WMQ Urumqi 17.70 320 P **Pn 23 50 24.6 -1.2**
WMQ pP pP 23 50 27.8 -3.7
WMQ PP 23 50 37.3
WMQ S **Sn 23 53 38.9 -3.5**
WMQ SS 23 54 00.9
WMQ PcP PcP 23 55 04.5 +0.9
WMQ pmax pmax
comp=Z,100nm,1.9s
WMQ pmax pmax
comp=Z,580nm,3.8s
WMQ LR LR
comp=N,8μm,12.0s
WMQ LR LR
comp=E,6μm,8.0s
WMQ LR LR
comp=Z,4μm,20.0s
TWG Pinlang 17.74 114 *e*Pn **Pn 23 50 27.3 +0.8**
comp=Z,91nm,0.9s
ZAK Zakamensk 19.10 360 *e*P **Pn 23 50 42.8 0.0**
ZAK pmax pmax
comp=Z,68nm,1.4s
SNY Shenyang 19.22 51 ⇓P **Pn 23 50 44.0 -0.3**
SNY pmax pmax
comp=Z,21nm,1.0s
SNY LR LR
comp=N,4μm,18.0s
SNY LR LR
comp=E,2μm,18.0s
SNY LR LR
comp=Z,1μm,9.6s
INCN Inchon 20.04 66 *e*Pn **P 23 50 53.3 +0.9**
comp=Z,148nm,1.3s
PTH Pithoragarh 20.16 271 *e*P **P 23 50 53.5 -0.3**
TLY Talaya 20.40 0 Pn **P 23 50 58.2 +2.1**
comp=Z,282nm,1.2s,SNR=16
TLY Talaya 20.40 0*c i*P **P 23 50 57.8 +1.7**
TLY *e* 23 51 11.7
TLY *e*SS 23 55 24.3
TLY pmax pmax
comp=Z,175nm,2.4s
TLY MLR MLR
comp=Z,6μm,12.0s,MS5.2
TLY Talaya 20.40 0 *e*Pn **P 23 50 57.2 +1.1**
comp=Z,577nm,2.4s
TLY Talaya 20.40 0 P **P 23 50 58.3 +2.2**
SNR=39
TLY P 23 50 58.3
SNR=39
MOY Mondy 20.47 356⇑*i*P **P 23 50 58.8 +1.9**
MOY pmax pmax
comp=Z,387nm,2.0s
IRK Irkutsk 20.97 1⇑*i*P **P 23 51 04.2 +1.9**
IRK pmax pmax
comp=Z,713nm,1.6s
KSRS Korea Array 21.05 66 P **P 23 51 03.6 +0.4**
comp=Z,68nm,0.8s,mb5.0,baz=261,slow=11,SNR=89
KSRS Korea Array 21.05 66 P **P 23 51 03.7 +0.4**
KSRS pmax pmax
comp=Z,68nm,0.8s,mb5.0
CN2 Changchun 21.35 48 *e*P **P 23 51 04.0 -2.5**
CN2 *es*P sP 23 51 11.0 -2.7
CN2 *e*S **S 23 54 53.6 -9.3**
CN2 pmax pmax
comp=Z,300nm,0.9s,mb5.6
CN2 pmax pmax
comp=Z,600nm,3.0s
CN2 LR LR
comp=N,4μm,15.0s,MS5.0
CN2 LR LR
comp=E,2μm,15.0s,MS5.0
CN2 LR LR
comp=Z,2μm,14.0s,MS4.7
HIA Hailar 21.75 30 PFAKE 23 51 20.0 +9.3
HIA LR LR
comp=Z,3μm,20.0s,MS4.6
DDI Dehra Dun 21.88 274 *e*P **P 23 51 12.0 -0.3**
DDI *ex* x 23 55 11.3
CIT Chita 22.01 17 *e*P **P 23 51 14.9 +1.4**
CIT *e* 23 51 28.3
CIT *e* 23 51 51.2
CIT pmax pmax
comp=Z,589nm,1.6s,mb5.8
JOW Kunigami 22.08 95 P **P 23 51 16.2 +1.8**
comp=Z,37nm,0.5s,mb5.1,baz=135,slow=2.9,SNR=5.8
JBP Jabalpur 22.40 255⇓*i*P **P 23 51 16.6 -1.3**
JBP *ex* x 23 51 26.4
comp=Z,126nm,1.9s
JBP *i* x x 23 55 22.1
MK31 Makanchi Array 22.53 320 *e*P **P 23 51 19.4 +0.3**
MKAR Makanchi Array 22.53 320 P **P 23 51 19.4 +0.3**
comp=Z,65nm,1.0s,mb5.0,baz=125,slow=11,SNR=80
MKAR LR LR 00 00 53.9
comp=Z,3μm,18.6s,MS4.8,baz=126,slow=39
MKAR Makanchi Array 22.53 320*ce*P **P 23 51 19.3 +0.2**
MKAR pmax pmax
comp=Z,65nm,1.0s
SDNR Sundarnagar 22.65 278 *e*P **P 23 51 20.5 0.0**
NDI New Delhi 22.91 270 *e*P **P 23 51 22.5 -0.8**
NDI *ex* x 23 55 27.0
BHK Bhakra 23.13 277 *e*P **P 23 51 24.0 -1.6**
DLH Dalhousie 23.40 280 *e*S **S 23 55 42.0 +1.5**
THN Thein Dam 23.62 280 *ex* x 23 51 26.1
KSH Kashi 23.85 298⇑*i*P **P 23 51 36.1 +3.5**
KSH *e*pP 23 51 40.1
KSH *es*P sP 23 51 43.0 +3.0
KSH *e*PP 23 52 10.0
KSH *e*PcP PcP 23 55 17.2 +1.9
KSH *e*S **S 23 55 50.5 +2.9**
KSH *es*S sS 23 55 57.1 +0.8
KSH *e*SS 23 56 43.0
KSH *e*ScP ScP 23 58 54.2 +1.3
KSH *e*ScS ScS 00 02 40.0 +0.3
KSH pmax pmax
comp=Z,510nm,2.2s,mb5.6
KSH LR LR
comp=N,2μm,9.3s
KSH LR LR
comp=E,3μm,13.4s
NGP Nagpur 24.10 251 *e*P **P 23 51 30.9 -4.1**
NGP *ex* x 23 51 38.1
comp=Z,233nm,1.0s
NGP *e*S **S 23 55 50.8 -1.3**
AAA Alma-Ata 24.20 307 *i* S **S 23 55 59.2 +6.0**
AAA pmax pmax
comp=Z,2μm,5.4s
AAA smax
comp=N,8μm,12.0s
AAA MLR MLR
comp=Z,4μm,20.0s,MS4.9
ULHL Ulahol 24.34 304 P **P 23 51 39.0 +1.9**
SNR=44
MDJ Mudanjiang 24.38 50 P **P 23 51 37.0 -0.4**
MDJ pP 23 51 40.0
MDJ sP sP 23 51 41.3 -3.6
MDJ S **S 23 55 57.4 +1.2**
MDJ sS sS 23 56 02.5 -2.4
MDJ ScP ScP 23 58 54.7 +0.4
MDJ PcS PcS 23 58 55.9 -0.2
MDJ pmax pmax
comp=Z,74nm,1.4s,mb4.9
MDJ pmax pmax
comp=Z,120nm,2.9s,mb4.8
MDJ LR LR
comp=N,2μm,16.9s
MDJ LR LR
comp=E,860nm,9.7s
MDJ LR LR
comp=Z,840nm,5.6s

KZA Kyzart 25.00 303 P **P 23 51 45.6 +2.6**
SNR=138
TKM2 Tokmak 2 25.01 306 P **P 23 51 44.6 +1.5**
SNR=55
TKM2 Tokmak 2 25.01 306 *e*P **P 23 51 43.8 +0.7**
TKM2 pmax pmax
comp=Z,51nm,1.0s,mb5.0
TKM2 MLR MLR
comp=Z,4μm,20.0s,MS4.9
TKM2 Tokmak 2 25.01 306 *e*P **P 23 51 43.8 +0.7**
comp=Z,51nm,1.0s,mb5.0
TKM2 LR LR
comp=Z,4μm,20.0s,MS4.9
KBK Karagaybulak 25.38 305 P **P 23 51 48.4 +1.9**
SNR=97
UCH Uchtor 25.57 303 P **P 23 51 50.5 +2.3**
SNR=106
UCH Uchtor 25.57 303⇑*i*P **P 23 51 50.3 +2.1**
comp=Z,112nm,1.1s,mb5.3
UCH *e*S **S 23 56 09.0 -6.2**
UCH LR LR
comp=Z,3μm,21.0s,MS4.8
CHMS Chumysh 25.62 305 P **P 23 51 49.6 +0.9**
SNR=19
FRU Bishkek 25.67 305⇑*i*P **P 23 51 50.0 +0.9**
FRU *e* 23 56 17.0
FRU pmax pmax
comp=Z,300nm,2.0s,mb5.5
AJM Ajmer 25.69 267 *e*P **P 23 51 49.2 -0.3**
AJM AMb AMB 23 51 53.5
comp=Z,133nm,1.1s,mb5.4
AJM *e*S **S 23 56 20.0 +2.6**
AJM *e*S **S 23 56 22.0 +4.6**
AAK Ala-Archa 25.70 304 P **P 23 51 51.2 +1.8**
comp=Z,622nm,0.8s,mb6.2,SNR=43
AAK Ala-Archa 25.70 304 P **P 23 51 51.1 +1.7**
SNR=69
AAK Ala-Archa 25.70 304 P **P 23 51 51.1 +1.7**
comp=Z,49nm,0.8s,mb5.1,baz=113,slow=6.1,SNR=72
AAK LR LR 00 02 45.8
comp=Z,4μm,18.3s,MS5.0,baz=91,slow=38
AAK Ala-Archa 25.70 304⇑*e*P **P 23 51 50.8 +1.4**
AAK *e*S **S 23 56 18.7 +1.5**
AAK pmax pmax
comp=Z,95nm,0.9s,mb5.3
AAK MLR MLR
comp=Z,3μm,20.0s,MS4.9
AAK Ala-Archa 25.70 304⇑*e*P **P 23 51 50.8 +1.4**
comp=Z,95nm,0.9s,mb5.3
AAK *e*S **S 23 56 18.7 +1.5**
AAK LR LR
comp=Z,3μm,20.0s,MS4.9
AAK Ala-Archa 25.70 304 P **P 23 51 51.2 +1.9**
SNR=76
AAK P 23 51 51.2
SNR=76
USP Ospenovka 25.88 306 P **P 23 51 53.5 +2.4**
SNR=62
KULM Kulim 25.98 187 *e*P **P 23 51 51.0 -1.1**
AML Almayashu 26.13 303 P **P 23 51 55.6 +2.3**
SNR=61
AML Almayashu 26.13 303⇑*e*P **P 23 51 55.3 +2.0**
comp=Z,162nm,1.3s,mb5.4
AML PcP PcP 23 55 21.0 +0.7
AML *e*S **S 23 56 33.0 +8.9**
EKS2 Erkin-Say 26.21 304 P **P 23 51 55.6 +1.5**
SNR=53
EKS2 Erkin-Say 26.21 304 *e*P **P 23 51 55.1 +1.1**
comp=Z,168nm,1.4s,mb5.4
EKS2 *e*PcP PcP 23 55 21.1 +0.6
EKS2 LR LR
comp=Z,4μm,19.0s,MS5.0
ZAA0 Zalesovo Array 26.36 335 *e*P **P 23 51 55.2 0.0**
ZALV Zalesovo Beam 26.36 335 P **P 23 51 55.3 +0.1**
comp=Z,42nm,0.8s,mb5.0,baz=135,slow=9.6,SNR=71
ZALV LR LR 00 03 03.7
comp=Z,2μm,21.1s,MS4.6,baz=159,slow=38
ZALV Zalesovo Beam 26.36 335 P **P 23 51 55.3 +0.1**
ZALV pmax pmax
comp=Z,42nm,0.8s,mb5.0
ZALV MLR MLR
comp=Z,2μm,21.1s,MS4.6
HYB Hyderabad 26.51 244 *i* P **P 23 51 58.0 +1.0**
HYB *e*S **S 23 56 34.0 +3.5**
KURK Kurchatov 26.82 324 P **P 23 52 00.6 +1.2**
comp=Z,1μm,1.0s,mb6.3,SNR=73
KURK Kurchatov 26.82 324 P **P 23 51 58.8 -0.7**
comp=Z,115nm,0.8s,mb5.4,baz=129,slow=9.5,SNR=68
KURK PcP PcP 23 55 21.8 0.0
comp=Z,3.9nm,0.9s,baz=120,slow=2.3,SNR=3.8
KURK LR LR 00 03 15.8
comp=Z,3μm,19.3s,MS4.9,baz=120,slow=38
KURK Kurchatov 26.82 324⇑*i*P **P 23 51 59.7 +0.3**
KURK *e*S **S 23 56 37.8 +3.1**
KURK pmax pmax
comp=Z,205nm,1.0s,mb5.6
KURK Kurchatov 26.82 324⇑*i*P **P 23 51 59.7 +0.3**
comp=Z,205nm,1.0s,mb5.6
KURK *e*S **S 23 56 37.8 +3.1**
KURK Kurchatov 26.82 324 P **P 23 52 00.1 +0.7**
SNR=89
KURK P 23 52 00.1
SNR=89
BOD Bodaibo 27.52 12 *e*P **P 23 52 06.0 +0.4**
BOD pmax pmax
comp=Z,65nm,1.2s,mb5.1
NVS Novosibirsk 27.64 334⇑*i*P **P 23 52 06.3 -0.4**
NVS *e*PPP 23 52 55.2
NVS *e*S **S 23 56 49.8 +2.2**
NVS pmax pmax
comp=N,135nm,1.9s
NVS pmax pmax
comp=E,88nm,1.9s
NVS pmax pmax
comp=Z,117nm,1.9s,mb5.2
NVS smax
comp=N,21nm,2.0s
NVS smax
comp=E,60nm,2.2s
KKM Kota Kinabalu 27.77 152 *e*P **P 23 52 08.0 -0.3**
KBL Kabul 29.04 286 *e*P **P 23 52 20.9 +1.4**
KBL *e*S **S 23 57 06.6 -3.6**
KBL pmax pmax
comp=Z,96nm,1.4s,mb5.3
KBL Kabul 29.04 286 *e*P **P 23 52 20.9 +1.4**
comp=Z,96nm,1.4s,mb5.3
KBL *e*S **S 23 57 06.6 -3.5**
MAJO Matsushiro 29.17 70 *e*P **P 23 52 20.9 +0.3**
MAT Matsushiro 29.17 70 P **P 23 52 18.7 -1.9**
MJAR Matsushiro Arr 29.17 70 P **P 23 52 19.8 -0.8**
comp=Z,7.9nm,0.9s,mb4.4,baz=271,slow=9.8,SNR=10.0
MJAR LR LR 00 05 42.8
comp=Z,761nm,18.2s,MS4.3,baz=250,slow=40
MJAR Matsushiro Arr 29.17 70 P **P 23 52 19.8 -0.8**
MJAR pmax pmax
comp=Z,8.0nm,0.9s
MJAR MLR MLR
comp=Z,761nm,18.2s
HABR Khabarovsk 29.41 45 *e*P **P 23 52 21.9 -0.6**
HABR *e**SP sP 23 52 34.5 +4.5
HABR 23 53 14.3
HABR *e*S **S 23 57 13.8 -1.7**
HABR *e**SS sS 23 57 28.8 +4.5
HABR *e*SS SS 23 58 40.7 -40
HABR *e* 00 02 59.7
HABR pmax pmax
comp=E,37nm,1.7s
HABR pmax pmax
comp=N,17nm,2.2s
HABR pmax pmax
comp=Z,87nm,2.3s,mb5.1
HABR MLR MLR
comp=Z,719nm,15.0s,MS4.4
CLNS Chul'man 29.58 24 *e*P **P 23 52 25.0 +1.1**
CLNS *e**PP pP 23 52 38.4 +9.1
CLNS *e* 23 53 19.8
CLNS *e* 23 55 28.5
CLNS *e*S **S 23 57 12.0 -6.0**
CLNS pmax pmax
comp=Z,26nm,1.2s,mb4.8
CLNS pmax pmax
comp=E,17nm,0.9s
CLNS pmax pmax
comp=N,19nm,1.3s
CLNS pmax pmax
comp=Z,6.0nm,1.0s,mb4.3

CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS smax
comp=N,33nm,11.5s
CLNS smax
comp=E,194nm,13.5s
CLNS MLR MLR
comp=Z,3μm,13.0s,MS5.1
CLNS MLR MLR
comp=N,2μm,13.0s,MS5.0
CLNS MLR MLR
comp=E,1μm,11.0s,MS5.0
POO Poona 29.64 252 *e*P **P 23 52 23.4 -1.6**
POO AMb AMB 23 52 30.7
comp=Z,32nm,1.4s,mb4.9
KAD Karad 30.02 249 *e*P **P 23 52 28.5 +0.2**
KAD AMb AMB 23 52 34.2
comp=Z,10nm,0.6s,mb4.8
KSM Kuching 30.32 166 *e*P **P 23 52 30.8 -0.1**
BHJ Bhuj 31.05 264 *e*P **P 23 52 35.5 -1.9**
BHJ AMb AMB 23 52 38.5
comp=Z,15nm,0.3s,mb5.3
DAV Davao City (W) 31.70 135 LR LR 00 06 12.6
comp=Z,2μm,18.8s,MS4.9,baz=353,slow=38
DAV Davao City (W) 31.70 135 *e*P **P 23 52 42.8 -0.3**
BVAR Borovoye Array 32.35 322 P **P 23 52 49.0 +0.5**
comp=Z,20nm,0.7s,mb5.1,baz=117,slow=9.4,SNR=85
BVAR PcP PcP 23 55 35.4 -0.5
comp=Z,6.5nm,0.7s,baz=140,slow=3.6,SNR=6.4
BVAR LR LR 00 06 16.0
comp=Z,2μm,18.8s,MS4.9,baz=116,slow=37
BVAR Borovoye Array 32.35 322 P **P 23 52 49.0 +0.5**
BVAR 23 55 35.4
BVAR pmax pmax
comp=Z,20nm,0.7s
BVAR MLR MLR
comp=Z,2μm,18.8s
BRVK Borovoye 32.42 322 P **P 23 52 49.3 +0.2**
comp=Z,335nm,0.8s,mb6.2,SNR=38
BRVK Borovoye 32.42 322*c i*P **P 23 52 49.7 +0.6**
BRVK pmax pmax
comp=Z,129nm,1.7s,mb5.5
BRVK Borovoye 32.42 322 *e*P **P 23 52 49.8 +0.7**
comp=Z,52nm,0.8s,mb5.4
BRVK Borovoye 32.42 322 P **P 23 52 50.1 +1.0**
SNR=29
BRVK P 23 52 50.1
SNR=29
ASAJ Asahikawa 33.17 56 P **P 23 52 55.5 -0.3**
comp=Z,15nm,1.0s,mb4.9,baz=25,slow=31,SNR=5.2
ASAJ Asahikawa 33.17 56 P **P 23 52 55.5 -0.3**
ASAJ pmax pmax
comp=Z,15nm,1.0s
YSS Yuzh-Sakhalins 33.84 51 *e*P **P 23 53 00.0 -1.6**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
YSS MLR MLR
comp=Z,1μm,15.0s,MS4.7
YSS MLR MLR
comp=N,700nm,12.0s,MS4.7
YSS MLR MLR
comp=E,700nm,13.0s,MS4.7
YSS Yuzh-Sakhalins 33.84 51 P **P 23 53 01.6 0.0**
YSS LR LR
comp=Z,363nm,20.0s,MS4.1
YAK Yakutsk 35.14 21 *e*P **P 23 53 11.4 -1.2**
YAK pmax pmax
comp=Z,46nm,1.0s,mb5.4
YAK pmax pmax
comp=N,24nm,1.1s
YAK pmax pmax
comp=E,26nm,1.3s
YAK Yakutsk 35.14 21 *e*P **P 23 53 11.7 -0.9**
comp=E,36nm,0.8s,mb5.4
ABKAR Akbulak array 37.19 312⇑*e*P **P 23 53 30.5 +0.3**
comp=E,24nm,0.9s,mb5.0
ABKAR *e*PP PP 23 54 55.6 +0.6
ABKT Ailbek 37.66 293 P **P 23 53 36.1 +1.6**
comp=E,743nm,0.7s,mb6.5,SNR=41
AKTK Aktyubinsk 38.66 313 P **P 23 53 43.2 +0.6**
AKTO Aktyubinsk 38.66 313 P **P 23 53 43.2 +0.6**
comp=E,15nm,0.9s,mb4.7,baz=102,slow=8.2,SNR=36
AKTO Aktyubinsk 38.66 313 P **P 23 53 43.3 +0.6**
AKTO pmax pmax
comp=Z,15nm,1.0s,mb4.7
SVE Sverdlovsk 39.07 324⇓*e*P **P 23 53 47.1 +1.1**
SVE *e*S **S 23 59 43.5 -0.9**
SVE *e*SS SS 00 02 32.8 -3.9
SVE pmax pmax
comp=Z,220nm,1.3s,mb5.7
SVE MLR MLR
comp=Z,857nm,13.0s,MS4.8
KAPI Kappang 39.27 154 P **P 23 53 46.3 -1.8**
comp=Z,207nm,0.9s,mb5.9,SNR=5.3
KAPI Kappang 39.27 154 P **P 23 53 46.8 -1.3**
comp=Z,25nm,0.8s,mb5.0,baz=330,slow=6.8,SNR=9.2
KAPI Kappang 39.27 154 *e*P **P 23 53 46.5 -1.6**
comp=Z,28nm,0.9s,mb5.0
ARU Arti 40.00 322 P **P 23 53 54.3 +0.5**
comp=Z,850nm,1.0s,mb6.4,SNR=54
ARU Arti 40.00 322*c i*P **P 23 53 54.0 +0.2**
ARU *e* 23 55 25.4
ARU *e*PPP 23 55 49.5
ARU *e* 23 55 59.1
ARU S **S 23 59 58.9 +0.6**
ARU pmax pmax
comp=Z,324nm,1.7s,mb5.8
ARU Arti 40.00 322 *e*P **P 23 53 53.6 -0.1**
comp=Z,203nm,1.1s,mb5.8
GUMO Guam 41.79 105 LR LR 00 10 29.5
comp=Z,545nm,19.8s,MS4.4,baz=305,slow=35
SOKR Solikamsk 41.98 326*c i*P **P 23 54 11.0 +0.9**
SOKR pmax pmax
comp=Z,270nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,1μm,19.0s,MS4.8
ASHO Ashiyiah 42.17 273 P **P 23 54 16.3 +4.2**
SNR=7.8
NAZ Nazwa, Dubai 42.40 274 P **P 23 54 18.5 +4.5**
SNR=5.0
TIXI Tiksi 42.70 12*d i*P **P 23 54 15.0 -0.7**
TIXI *e*S **S 00 00 36.4 -1.6**
TIXI *e*SS SS 00 03 48.1 -0.3
TIXI pmax pmax
comp=Z,178nm,1.5s,mb5.6
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.0
TIXI Tiksi 42.70 12 *e*P **P 23 54 15.1 -0.6**
comp=Z,86nm,0.8s,mb5.5
COCO West Island 43.68 189 *i* P **P 23 54 26.2 +2.0**
SEY Seymchan 44.20 30⇑*i*P **P 23 54 27.9 -0.1**
PETK Petropavlovsk- 44.43 44 P **P 23 54 29.8 -0.1**
comp=Z,14nm,0.9s,mb4.7,baz=228,slow=4.8,SNR=12
PETK LR LR 00 12 30.5
comp=Z,368nm,19.2s,MS4.3,baz=78,slow=35
PETK Petropavlovsk- 44.43 44 P **P 23 54 29.8 -0.1**
PETK pmax pmax
comp=Z,14nm,0.9s,mb4.7
PETK MLR MLR
comp=Z,369nm,19.2s,MS4.3
MAK Makhachkala 45.40 301 *e*P **P 23 54 38.5 +0.7**
MAK *e* 23 56 22.7
MAK *e*S **S 00 01 18.0 -0.2**
MAK *e*SS SS 00 04 35.1 -6.7
MAK *e*SSS 00 05 30.0
MAK pmax pmax
comp=Z,124nm,1.6s,mb5.5
MAK MLR MLR
comp=Z,1μm,12.0s,MS5.1
MTA Mtatsminda 47.53 300 P **P 23 54 55.2 +0.6**
TBLG Delisi 47.57 300 P **P 23 54 55.5 +0.7**
UMR Umm Al-Rimmam 47.71 283 *e*P **P 23 54 56.1 -0.1**
UMR AMb AMB 23 55 00.1
comp=Z,122nm,1.2s,mb5.8
GNI Garni 47.78 298*d i*P **P 23 54 58.0 +1.5**
GNI pmax pmax
comp=Z,93nm,1.7s
GNI Garni 47.78 298 *e*P **P 23 54 58.1 +1.6**
comp=Z,56nm,1.0s,mb5.5
GNI Garni 47.78 298 P **P 23 54 58.8 +2.3**
SNR=16
GNI P 23 54 58.8
SNR=16
KBD Kabd 47.84 283 *e*P **P 23 54 56.5 -0.7**

KBD AMb AMB 23 55 00.6
comp=Z,70nm,1.3s,mb5.5
MIB Mutribah 47.96 284 *e*P **P 23 54 57.6 -0.5**
MIB AMb AMB 23 55 01.9
comp=Z,198nm,1.3s,mb6.0
GOR Gori 48.00 300 P **P 23 54 59.8 +1.6**
RDF Al-Radifah 48.04 282 *e*P **P 23 54 58.9 +0.2**
RDF AMb AMB 23 55 01.2
comp=Z,163nm,1.4s,mb5.9
ZEI Tsey 48.06 301 *e*P **P 23 54 57.9 -0.8**
ZEI pmax pmax
comp=Z,35nm,1.0s,mb5.3
KEH Kehvi 48.09 301 P **P 23 54 59.4 +0.5**
ONI Oni 48.41 301 P **P 23 55 03.2 +1.9**
GOF Gofitskoye 48.44 304⇑ *i*P **P 23 54 55.2 -6.4**
GOF pmax pmax
comp=Z,120nm,1.3s,mb5.8
KIV Kislovodsk 48.80 303 P **P 23 55 05.8 +1.4**
comp=Z,626nm,1.2s,mb6.5,SNR=41
KIV Kislovodsk 48.80 303⇑ *i*P **P 23 55 05.3 +0.9**
KIV *e* 23 56 29.7
KIV *e* 23 56 58.5
KIV *e*PPP 23 57 49.4
KIV *e*S **S 00 02 07.8 +1.1**
KIV *e*SS SS 00 05 38.8 +1.8
KIV pmax pmax
comp=Z,118nm,1.1s,mb5.8
KIV pmax pmax
comp=Z,69nm,5.6s
KIV MLR MLR
comp=Z,683nm,16.0s,MS4.7
KIV Kislovodsk 48.80 303 *e*P **P 23 55 05.4 +1.1**
comp=Z,142nm,1.1s,mb5.9
KIV LR LR
comp=Z,877nm,20.0s,MS4.7
KIV Kislovodsk 48.80 303 P **P 23 55 05.8 +1.4**
SNR=50
KIV P 23 55 05.8
SNR=50
VRHR Novokhopersk 49.06 313 *e*P **P 23 55 06.0 -0.2**
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.9
VRHR pmax pmax
comp=N,50nm,0.6s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR pmax pmax
comp=Z,740nm,11.1s
VRHR pmax pmax
comp=N,590nm,19.6s
VRHR pmax pmax
comp=E,760nm,13.0s
BHD Baghdad 49.46 289 *i*P **P 23 55 06.0 -3.5**
BHD *e*S **S 00 02 13.0 -3.2**
MSL Mosul 49.73 293 *e*P **P 23 55 14.0 +2.4**
MSL *e*S **S 00 02 23.0 +3.0**
ARTV Artvin 49.73 300 *i*P **P 23 55 13.5 +2.0**
DAGI Agillar 49.76 299 *i*P **P 23 55 13.6 +1.8**
DBOC Borcka 49.90 300 *i*P **P 23 55 14.1 +1.2**
DDEM Demirkent 49.91 299 *i*P **P 23 55 14.5 +1.6**
DBAD Bademkaya 49.94 299 *i*P **P 23 55 14.1 +1.0**
HOMI Horasan 49.94 298 *i*P **P 23 55 15.3 +2.1**
VORD Divnogorie 50.54 312 *e*P **P 23 55 17.0 -0.5**
VORD pmax pmax
comp=Z,40nm,1.1s,mb5.3
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,70nm,0.9s
VORD pmax pmax
comp=Z,820nm,11.9s
VORD pmax pmax
comp=N,600nm,12.9s
VORD pmax pmax
comp=E,460nm,10.5s
VOR Voronezh 50.56 313 *e*P **P 23 55 17.0 -0.6**
VOR pmax pmax
comp=Z,240nm,0.8s,mb6.2
VSR Storozhevoye 50.60 313 *e*P **P 23 55 17.4 -0.6**
VSR pmax pmax
comp=Z,130nm,1.0s,mb5.8
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,110nm,0.9s
VSR pmax pmax
comp=Z,1μm,11.5s
VSR pmax pmax
comp=N,290nm,10.5s
VSR pmax pmax
comp=E,630nm,12.0s
KLMR Klimovskoe 50.65 325⇑ *i*P **P 23 55 18.2 +0.1**
KLMR *e* 23 57 13.8
KLMR *e*SS SS 00 06 07.2 +1.3
KLMR pmax pmax
comp=Z,302nm,1.5s,mb6.0
BEST Besiri 50.85 295 *i*P **P 23 55 21.1 +1.0**
SOC Sochi 50.98 303 *c i*P **P 23 55 21.1 +0.1**
SOC *e*PP pP 23 55 29.1 +2.6
SOC *e*S **S 00 02 37.1 0.0**
SOC *e*SS sS 00 02 50.8 +4.6
SOC pmax pmax
comp=Z,45nm,1.2s,mb5.3
SOC MLR MLR
comp=Z,657nm,18.0s,MS4.7
BILL Bilibino 51.25 25 *d i*P **P 23 55 21.9 -0.7**
BILL *e* 23 55 29.2
BILL *e* 23 56 39.5
BILL pmax pmax
comp=Z,112nm,1.2s,mb5.7
BILL Bilibino 51.25 25 *e*P **P 23 55 22.2 -0.3**
comp=Z,95nm,1.1s,mb5.6
BILL *e*PcP PcP 23 56 38.8 +1.3
BILL LR LR
comp=Z,1μm,19.0s,MS5.0
MACK Trabzon 51.38 300 *i*P **P 23 55 24.7 +0.7**
MOS Moscow 51.41 319 *e*P **P 23 55 22.4 -1.6**
MOS *e* 23 57 18.9
MOS *e*S **S 00 02 41.3 -1.4**
MOS *e*SS SS 00 06 14.9 -3.2
MOS pmax pmax
comp=Z,500nm,1.4s,mb6.2
MOS pmax pmax
comp=Z,308nm,1.2s,mb6.1
MOS MLR MLR
comp=Z,2μm,18.0s,MS5.3
MOS MLR MLR
comp=E,2μm,18.0s
KAKA Kakadu 51.80 143 *e*P **P 23 55 25.4 -1.9**
comp=E,22nm,0.8s,mb5.2
KAKA Kakadu 51.80 143 *e*P **P 23 55 25.4 -1.9**
comp=E,51nm,0.7s,mb5.6
OBN Obninsk 52.02 318 P **P 23 55 28.2 -0.3**
comp=E,606nm,1.4s,mb6.3,SNR=14
OBN Obninsk 52.02 318 *c i*P **P 23 55 28.4 -0.1**
OBN *e* pP 23 55 33.4 -0.7
OBN *e* 23 57 28.0
OBN pmax pmax
comp=Z,220nm,1.6s,mb5.8
OBN Obninsk 52.02 318 *e*P **P 23 55 28.5 0.0**
comp=Z,173nm,1.2s,mb5.9
OBN *e*PcP PcP 23 56 40.3 -0.3
OBN LR LR
comp=Z,3μm,21.0s,MS5.3
ANN Anapa 52.42 305 *e*P **P 23 55 30.1 -1.6**
ANN *e*PP pP 23 55 40.2 +3.0
ANN *e*S **S 00 02 53.8 -3.1**
ANN *e*SSS 00 08 17.6
ANN pmax pmax
comp=Z,116nm,1.4s,mb5.6
ANN MLR MLR
comp=Z,910nm,20.0s,MS4.8
GRSN GIRESUNGRSN 52.51 300 *i*P **P 23 55 24.3 -8.0**
MALT Malatya 52.94 297 *e*P **P 23 55 36.7 +1.1**
MALT pmax pmax
comp=Z,30nm,1.3s,mb5.1
MALT Malatya 52.94 297 *e*P **P 23 55 36.7 +1.1**
comp=Z,30nm,1.3s,mb5.1
MALT Malatya 52.94 297⇑ *i*P **P 23 55 37.2 +1.6**
ATAB Bozova 53.24 296 *i*P **P 23 55 38.5 +0.6**
AKCD Akcadag 53.33 297 *i*P **P 23 55 39.8 +1.3**
FITZ Fitzroy Crossi 53.49 154 *e*P **P 23 55 38.9 -0.8**
comp=Z,23nm,0.9s,mb5.1
FITZ Fitzroy Crossi 53.49 154 P **P 23 55 38.9 -0.8**
comp=Z,14nm,0.9s,mb4.9,baz=329,slow=6.8,SNR=21
FITZ Fitzroy Crossi 53.49 154 *e*P **P 23 55 39.1 -0.7**
comp=Z,18nm,0.9s,mb5.0
FITZ *e*PcP PcP 23 56 46.4 -0.2
LVZ Lovozero 53.50 334 *c i*P **P 23 55 39.3 +0.1**
LVZ pmax pmax
comp=Z,35nm,0.8s,mb5.3
ERBA Erbaa 53.68 300 *i*P **P 23 55 41.1 +0.1**
GZT Gaziantep 53.84 296 *i*P **P 23 55 41.8 -0.4**
APA Apatity 53.94 333⇑ *e*P **P 23 55 40.0 -2.5**
APA MLR MLR
comp=Z,5μm,14.0s,MS5.7
KUZU Kuzuini 54.36 295 *i*P **P 23 55 46.7 +0.6**
MBWA Marble Bar 54.40 161 *e*P **P 23 55 46.0 -0.4**
comp=Z,21nm,0.8s,mb5.1
MBWA LR LR
comp=Z,536nm,20.0s,MS4.6
JOF Joensuu 54.62 328 *e*P **P 23 55 46.5 -1.0**
JOF pmax pmax
comp=Z,50nm,1.0s,mb5.5
JOF Joensuu 54.62 328 *e*p **P 23 55 46.5 -1.0**
comp=Z,50nm,1.0s,mb5.5
SIM Simferopol' 54.72 305 *e*P **P 23 55 48.9 +0.4**
SIM *e*S **S 00 03 29.7 +1.6**
SIM pmax pmax
comp=Z,40nm,0.7s,mb5.6
SIM MLR MLR
comp=Z,1μm,21.1s,MS4.9
CTKT Corum 55.15 300 *i*P **P 23 55 52.7 +1.0**
CDAG Cicekdag 55.70 299 *i*P **P 23 55 55.4 -0.3**
ILGA Ilgaz 55.84 301 *i*P **P 23 55 57.6 +0.9**
BALT Daday 55.97 302 *i*P **P 23 55 58.2 +0.6**
GÜLE Gulek 56.00 296 *i*P **P 23 55 59.1 +1.2**
ELDT Eldivan 56.19 300 *i*P **P 23 55 58.7 -0.5**
BR131 Keskin Array S 56.22 299 *e*P **P 23 55 59.7 +0.3**
BRTR Keskin Array B 56.22 299 P **P 23 55 59.6 +0.2**
comp=Z,9.5nm,0.8s,mb4.8,baz=97,slow=6.5,SNR=49
BRTR Keskin Array B 56.22 299 *c e*P **P 23 55 59.5 +0.1**
BRTR pmax pmax
comp=Z,10.0nm,0.8s
KEV Kevo 56.38 336 *e*P **P 23 56 00.1 0.0**
KEV *e* 23 56 57.0
KEV pmax pmax
comp=Z,86nm,1.0s,mb5.7
KEV Kevo 56.38 336 *e*P **P 23 56 00.1 0.0**
comp=Z,86nm,1.0s,mb5.7
KEV *e*PcP PcP 23 56 57.0 -0.1
KEV Kevo 56.38 336 *e*p **P 23 55 58.5 -1.6**
comp=Z,85nm,0.9s,mb5.8
AKASG Malin Array Be 56.91 313 P **P 23 56 03.6 -0.5**
comp=Z,16nm,0.5s,mb5.3,baz=71,slow=6.4,SNR=67
AKASG Malin Array Be 56.91 313 *c e*P **P 23 56 03.5 -0.6**
AKASG pmax pmax
comp=Z,16nm,0.5s
AKBB Malin Array Si 56.91 313 *e*P **P 23 56 03.4 -0.7**
AKBB *e* 23 56 58.8
ARCES ARCESS Array B 56.91 336 P **P 23 56 03.9 +0.1**
comp=Z,40nm,0.8s,mb5.5,baz=81,slow=8.1,SNR=47
ARCES ARCESS Array B 56.91 336 P **P 23 56 03.9 +0.1**
ARCES pmax pmax
comp=Z,40nm,0.8s
ARE0 ARCESS Array S 56.91 336 *e*P **P 23 56 03.7 -0.1**
KAF Kangasniemi 56.98 327 *e*P **P 23 56 03.3 -1.1**
KAF pmax pmax
comp=Z,27nm,0.9s,mb5.3
KAF Kangasniemi 56.98 327 *e*p **P 23 56 03.3 -1.1**
comp=Z,26nm,0.9s,mb5.3
MICGM Minsk 57.08 318⇓ *e*P **P 23 56 04.0 -1.3**
MNK Minsk 57.11 318⇓ *e*P **P 23 56 04.0 -1.5**
MNK pmax pmax
comp=Z,170nm,1.5s,mb5.8
FINES FINESS Array B 57.15 326 P **P 23 56 05.5 -0.1**
comp=Z,29nm,0.8s,mb5.4,baz=81,slow=6.9,SNR=68
FINES LR LR 00 21 41.9
comp=Z,430nm,21.1s,MS4.5,baz=87,slow=37
FINES FINESS Array B 57.15 326 P **P 23 56 05.6 -0.1**
FINES pmax pmax
comp=Z,29nm,0.8s
FINES MLR MLR
comp=Z,431nm,21.1s
VSU Vasula 57.16 322 *c i*P **P 23 56 05.8 0.0**
VSU pmax pmax
comp=Z,123nm,1.1s,mb5.8
IDID Didziasalis 57.61 319 *e*P **P 23 56 09.2 +0.2**
NACGM Naroch 57.65 318 *e*P **P 23 56 07.0 -2.3**
KDHN Kadinhani 57.68 298 *i*P **P 23 56 09.5 -0.3**
CSS Prodhromos 57.79 294 *e*P **P 23 56 09.8 -0.8**
comp=Z,29nm,1.0s,mb5.3
CSS *e*PcP PcP 23 57 02.8 -0.4
CSS LR LR
comp=Z,579nm,19.0s,MS4.7
IIGN Ignalina 57.89 319 *e*P **P 23 56 11.4 +0.4**
ISAL Salakas 57.91 319 *e*P **P 23 56 11.3 +0.2**
KIS Kishinev 57.91 309 *e*P **P 23 56 10.0 -1.3**
HENT Hendek 57.96 301 *i*P **P 23 56 11.6 -0.1**
GAZI Gazipasa 58.19 296 *i*P **P 23 56 12.4 -1.0**
TLCR 58.34 307⇓ *i*P **P 23 56 14.6 +0.3**
BOLV Bolvadin 58.51 299 *i*P **P 23 56 15.9 +0.4**
BORA Eskisehir 58.55 300 *i*P **P 23 56 15.1 -0.7**
IAS Iasi 58.70 309 P **P 23 56 16.7 -0.1**
TIRR Tirgusor 58.79 306 *e*P **P 23 56 17.3 -0.2**
TIRR *e* 23 58 26.2
TIRR pmax pmax
comp=Z,23nm,0.9s,mb5.2
TIRR Tirgusor 58.79 306 *e*P **P 23 56 17.3 -0.2**
comp=Z,23nm,0.9s,mb5.2
TIRR *e*PP PP 23 58 26.2 -1.1
TIRR Tirgusor 58.79 306⇓ *i*P **P 23 56 17.6 +0.1**
WRAB Tennant Creek 58.89 146 P **P 23 56 18.0 -0.3**
comp=Z,753nm,0.9s,mb6.7,SNR=54
WRAB Tennant Creek 58.89 146 *e*P **P 23 56 18.1 -0.1**
COEN Coen 58.92 134 *e*P **P 23 56 18.7 +0.1**
comp=Z,328nm,1.0s,mb6.3
SPB4 Spitsbergen Ar 59.06 346 *e*P **P 23 56 19.1 +0.2**
HARR Harsova 59.07 306⇑⇑ *i*P **P 23 56 19.6 +0.2**
HARR Harsova 59.07 306⇑ *i*P **P 23 56 19.6 +0.2**
ISP Isparta 59.09 298 P **P 23 56 19.6 0.0**
ISP Isparta 59.09 298 *e*P **P 23 56 19.3 -0.4**
PSN Preselentsi 59.15 305 P **P 23 56 20.4 +0.4**
BRD Bordesti 59.46 308⇑ *i*P **P 23 56 24.4 +2.3**
GDZ Gediz 59.49 300 *i*P **P 23 56 22.1 -0.3**
VRI Vrincioaia 59.59 308⇑ *i*P **P 23 56 23.6 +0.6**
PLOR Plostina 59.65 308 P **P 23 56 24.2 +0.9**
PLOR Plostina 59.65 308⇓ *i*P **P 23 56 24.0 +0.7**
KHAL Karahalli 59.70 299 *i*P **P 23 56 23.1 -0.7**
PRD Provadia 59.83 305 P **P 23 56 24.8 +0.1**
SUW Suwalki 59.88 318 *e*P **P 23 56 24.5 -0.3**
SUW Suwalki 59.88 318 *e*P **P 23 56 24.1 -0.7**
DURS Dursunbey 60.09 301 *i*P **P 23 56 26.1 -0.4**
BURAR Bucovina Array 60.15 310⇑⇑ P **P 23 56 27.0 +0.2**
BURAR Bucovina Array 60.15 310⇑ *i*P **P 23 56 27.0 +0.2**
BUR01 Bucovina Ar. S 60.15 310 P **P 23 56 26.8 +0.1**
BUR08 Bucovina Ar. S 60.15 310 *e*P **P 23 56 26.8 0.0**
BUR08 *e*PcP PcP 23 57 12.5 +0.2
MLR Muntele Rosu 60.22 308 P **P 23 56 28.1 +0.8**
MLR Muntele Rosu 60.22 308⇑ *i*P **P 23 56 27.7 +0.4**
LVV L'vov 60.35 313 *e*P **P 23 56 28.3 +0.2**
MANT Manisa 60.36 299 *i*P **P 23 56 27.9 -0.5**
JMB Yambol 60.62 304 P **P 23 56 31.1 +1.0**
BALY Balya 60.67 301 *i*P **P 23 56 30.6 +0.1**
VOIR 60.84 308 P **P 23 56 31.9 +0.4**
VOIR 60.84 308⇓ *i*P **P 23 56 32.0 +0.5**
SZH Strazhica 60.84 305 P **P 23 56 31.7 +0.1**
ZIMR 61.12 306⇓ P **P 23 56 34.2 +0.7**
ZIMR 61.12 306⇓ *i*P **P 23 56 34.2 +0.7**
KWP Kalwaria Pacla 61.23 313 *e*P **P 23 56 34.6 +0.5**
KWP Kalwaria Pacla 61.23 313 *e*P **P 23 56 34.5 +0.4**
comp=Z,146nm,1.0s,mb6.1
KWP Kalwaria Pacla 61.23 313⇑ *i*P **P 23 56 34.3 +0.2**
BMR Baia Mare 61.25 311 P **P 23 56 34.9 +0.6**
ALN Alexandroupoli 61.47 303 P **P 23 56 35.8 -0.1**
GCAM G?zelcaml? 61.60 299 *i*P **P 23 56 36.9 0.0**
BDRM Kayabasi 61.65 298 *i*P **P 23 56 36.9 -0.3**
KDZ Kurdzhali 61.69 304 P **P 23 56 37.9 +0.6**
TRPA Tarpa 61.74 311⇑ *i*P **P 23 56 38.1 +0.5**
RDO Rodhopi 61.76 303 P **P 23 56 37.8 0.0**
UZH Uzhgorod 61.76 312 *e*P **P 23 56 37.8 +0.1**
UZH *e* pP 23 56 43.0 -0.3
UZH *e* 23 57 20.0
ASAR Alice Springs 61.89 148 P **P 23 56 38.8 0.0**
comp=Z,22nm,0.9s,mb5.3,baz=333,slow=6.3,SNR=64
ASAR Alice Springs 61.89 148 P **P 23 56 38.8 0.0**
ASAR pmax pmax
comp=Z,22nm,0.9s
DRGR 62.01 310 P **P 23 56 40.0 +0.5**
DRGR 62.01 310⇑ *i*P **P 23 56 40.2 +0.8**
PLD Plovdiv 62.05 304 P **P 23 56 39.8 0.0**
PGB Panagyurishte 62.30 305 P **P 23 56 42.0 +0.6**
GZR Gura Zlata 62.38 308 P **P 23 56 42.5 +0.5**
GZR Gura Zlata 62.38 308⇓ *i*P **P 23 56 42.7 +0.8**
LIA Limnos Island 62.41 302 P **P 23 56 41.9 -0.3**
NIE Niedzica 62.79 313 *e*P **P 23 56 45.6 +1.0**
OJC Ojcow 62.87 314 *e*P **P 23 56 45.2 +0.1**
OJC *e*S **S 00 05 00.8 -13**
OJC L 00 25 14.3
comp=Z,2.1nm,20.6s
MMB Musomiste 62.91 304 P **P 23 56 45.3 -0.2**
VTS Vitosha 62.95 305 P **P 23 56 46.4 +0.6**
BZS Buzias 63.09 309 P **P 23 56 47.1 +0.4**
BZS Buzias 63.09 309⇑ *i*P **P 23 56 46.9 +0.2**
OUR Ouranopolis 63.14 303 P **P 23 56 46.5 -0.6**
SRS Serrai 63.16 304 P **P 23 56 46.7 -0.5**
ZKR Zakros 63.25 296 P **P 23 56 47.8 -0.1**
KKB Krupnik 63.27 304 P **P 23 56 47.7 -0.3**
THR1 Thera Island 63.39 298 P **P 23 56 49.7 +0.9**
THR3 Thira Island, 63.42 298 P **P 23 56 48.5 -0.5**
SOH Sokhos 63.43 303 P **P 23 56 48.4 -0.6**
PAIG Paliouri 63.49 302 P **P 23 56 49.2 -0.2**
GKP Gorka Klasztor 63.49 318 *e*P **P 23 56 49.4 +0.2**
PSZ Piszkesteto 63.50 312 *e*P **P 23 56 49.8 +0.4**
PSZ *e* 23 57 26.1
PSZ MLR MLR
comp=Z,731nm,20.0s,MS4.9
PSZ Piszkesteto 63.50 312 *e*P **P 23 56 49.8 +0.4**
PSZ *e*PcP PcP 23 57 26.1 +0.1
PSZ LR LR
comp=Z,731nm,20.0s,MS4.9
PSZ Piszkesteto 63.50 312⇑ *e*P **P 23 56 49.9 +0.5**
PSZ Piszkesteto 63.50 312⇓ *i*P **P 23 56 50.0 +0.6**
PLG Polygyros 63.51 303 P **P 23 56 49.0 -0.5**
AOS Alonnisos 63.60 301 P **P 23 56 49.9 -0.2**
LAST Lasithi 63.80 297 P **P 23 56 51.7 +0.2**
VAY Valandovo 63.82 304 *i*P **P 23 56 50.4 -1.1**
RAC Raciborz 63.90 314 *e*P **P 23 56 52.5 +0.6**
STIP Stip 63.97 305 *i*P **P 23 56 51.7 -0.8**
OKC Ostrava-Krasne 64.00 314 *e*P **P 23 56 53.0 +0.4**
OKC MLR MLR
comp=Z,2μm,19.9s,MS5.2
OKC Ostrava-Krasne 64.00 314 *e*P **P 23 56 53.0 +0.4**
OKC AMS AMS 00 25 50.0
comp=Z,2μm,19.9s
XOR Xorichti 64.03 302 P **P 23 56 52.2 -0.8**
BUD Budapest 64.20 311⇑ *e*P **P 23 56 54.5 +0.6**
NB2 NORSAR Subarra 64.25 327 P **P 23 56 52.6 -1.4**
comp=Z,65nm,1.2s,mb5.5,baz=73,slow=6.9
NOA NORSAR Array B 64.25 327 P **P 23 56 53.0 -1.0**
comp=Z,21nm,0.9s,mb5.2,baz=73,slow=6.6,SNR=33
NOA PP PP 23 59 16.7 +1.7
comp=Z,17nm,1.1s,baz=69,slow=8.5,SNR=5.3
NOA NORSAR Array B 64.25 327 P **P 23 56 53.0 -1.0**
NOA 23 59 16.7
NOA pmax pmax
comp=Z,21nm,0.9s
NOA pmax pmax
comp=Z,17nm,1.1s
NOA NORSAR Array B 64.25 327 P **P 23 56 53.0 -1.0**
NOA PP PP 23 59 16.7 +1.7
LIT Litokhoron 64.29 303 P **P 23 56 53.8 -0.9**
NIKO Nikolski 64.36 42 P **P 23 56 52.9 -2.0**
SIVA Sivas 64.36 297 P **P 23 56 55.1 -0.1**
MORC Moravsky Berou 64.39 314 *e*P **P 23 56 55.4 +0.2**
MORC pmax pmax
comp=Z,36nm,1.0s,mb5.4
MORC Moravsky Berou 64.39 314 *e*P **P 23 56 55.4 +0.2**
comp=Z,36nm,1.0s,mb5.4
MORC Moravsky Berou 64.39 314⇓ *i*P **P 23 56 55.4 +0.2**
ATAL Atalanti 64.39 301 P **P 23 56 54.1 -1.3**
SKO Skopje 64.40 305 *i*P **P 23 56 56.0 +0.6**
LKR Lokris 64.42 301 P **P 23 56 54.3 -1.3**
NAO01 NORSAR Array S 64.47 327 *e*P **P 23 56 53.8 -1.6**
comp=Z,26nm,1.0s,mb5.2
NAO01 *e*PcP PcP 23 57 28.2 -1.5
NAO01 *e*PP PP 23 59 17.5 +0.6
DID Didima 64.65 300 P **P 23 56 54.4 -2.7**
LTK Loutraki 64.67 300 P **P 23 56 54.9 -2.3**
KZN Kozani 64.73 303 P **P 23 56 56.9 -0.7**
KRUS Krusevo 64.74 304 *i*P **P 23 56 56.3 -1.3**
AGG Agios Georgios 64.78 302 P **P 23 56 56.7 -1.2**
KSP Ksiaz 64.81 316 *e*P **P 23 56 58.0 +0.2**
KSP Ksiaz 64.81 316 *e*P **P 23 56 57.9 +0.1**
KSP *e*S **S 00 05 41.0 +3.2**
KSP MLR MLR
comp=Z,5μm,19.7s,MS5.7
THL Klokotos Trika 64.82 302 P **P 23 56 56.7 -1.4**
FNA Florina 64.85 304 P **P 23 56 57.2 -1.1**
PKSM Moragy 64.86 310⇑⇑ P **P 23 56 58.6 +0.3**
PKSM Moragy 64.86 310⇑ *i*P **P 23 56 58.6 +0.3**
KARN Karanos 64.90 297 P **P 23 56 58.5 -0.3**
DPC Dobruska-Polom 64.95 315 *e*P **P 23 56 59.6 +0.8**
DPC MLR MLR
comp=Z,3μm,17.9s,MS5.5
DPC Dobruska-Polom 64.95 315 *e*P **P 23 56 59.6 +0.8**
DPC AMS AMS 00 26 10.0
comp=Z,3μm,17.9s
GVD Gavdhos 64.98 297 *e*P **P 23 56 58.2 -1.1**
comp=Z,116nm,0.9s,mb5.9
GVD Gavdhos 64.98 297 P **P 23 56 58.5 -0.8**
VRAC Vranov 65.13 314 P **P 23 57 00.7 +0.7**
VRAC Vranov 65.13 314⇓ *i*P **P 23 57 00.5 +0.5**
OHR Ohrid 65.14 304 *i*P **P 23 56 59.5 -0.7**
NWAO Narrogin (SRO) 65.15 167 P **P 23 57 00.3 +0.2**
comp=Z,36nm,0.8s,mb5.4,baz=345,slow=7.2,SNR=12
NWAO Narrogin (SRO) 65.15 167 P **P 23 57 00.3 +0.2**
NWAO pmax pmax
comp=Z,36nm,0.8s
NWAO Narrogin (SRO) 65.15 167 *e*P **P 23 57 00.0 -0.1**
GUR Goura 65.16 301 P **P 23 56 58.4 -2.0**
IVA Berane 65.16 306⇑ *i*P **P 23 57 00.2 -0.1**
IVA Berane 65.16 306⇑ *i*P **P 23 57 00.2 -0.1**
PVY Plav 65.20 306 *e*P **P 23 56 59.8 -0.8**
PVY Plav 65.20 306 *e*P **P 23 56 59.9 -0.7**
EFP Efpalio 65.30 301 P **P 23 56 59.9 -1.4**
LAKA Lakka 65.32 301 P **P 23 57 00.3 -1.1**
KBN Korca 65.33 304 *e*PN **P 23 57 00.1 -1.3**
PLE Pljevlja 65.35 307⇓ *i*P **P 23 57 02.2 +0.7**
PLE Pljevlja 65.35 307⇓ *i*P **P 23 57 02.3 +0.8**
UNV Unalaska Valle 65.41 41 *e*P **P 23 57 00.6 -1.1**
KONO Kongsberg 65.47 326 *e*P **P 23 57 01.2 -0.8**
KONO pmax pmax
comp=Z,46nm,1.4s,mb5.3
KONO Kongsberg 65.47 326 *e*P **P 23 57 01.2 -0.8**
comp=Z,46nm,1.4s,mb5.3
CTA Charters Tower 65.49 135 *e*P **P 23 57 02.7 +0.1**
comp=Z,20nm,0.9s,mb5.2
CTAO Charters Tower 65.49 135 *e*P **P 23 57 02.8 +0.2**
CTAO pmax pmax
comp=Z,30nm,0.9s,mb5.3
CTAO Charters Tower 65.49 135 *e*P **P 23 57 02.8 +0.1**
comp=Z,30nm,0.9s,mb5.3
TIR Tirane 65.72 305 *e*P **P 23 57 03.2 -0.8**
TIR pmax pmax
comp=Z,30nm,0.7s,mb5.4
TIR Tirane 65.72 305 *e*P **P 23 57 03.1 -0.8**
comp=Z,30nm,0.7s,mb5.4
UPM Unac-Piva 65.72 307⇑ *i*P **P 23 57 03.7 -0.2**
UPM Unac-Piva 65.72 307⇑ *i*P **P 23 57 03.8 -0.2**
RUE Ruedersdorf 65.73 318 *e*P **P 23 57 03.7 -0.1**
comp=Z,7.1nm,1.2s,mb5.6
RUE Ruedersdorf 65.73 318 *e*P **P 23 57 04.2 +0.4**
comp=Z,18nm,0.3s,mb5.6
TTG Podgorica 65.76 306⇑ *i*P **P 23 57 02.9 -1.3**
TTG Podgorica 65.76 306⇑ *i*P **P 23 57 02.9 -1.2**
NKY Niksic 65.80 307⇑ *i*P **P 23 57 03.9 -0.5**
NKY Niksic 65.80 307⇑ *i*P **P 23 57 04.0 -0.5**
TREC Trest 65.82 314 *e*P **P 23 57 05.1 +0.7**
TREC MLR MLR
comp=Z,2μm,16.9s,MS5.4
TREC Trest 65.82 314 *e*P **P 23 57 05.1 +0.7**
TREC AMS AMS 00 26 40.0
comp=Z,2μm,16.9s
ULC Ulcinj 65.93 306⇑ *i*P **P 23 57 04.9 -0.4**
ULC Ulcinj 65.93 306⇑ *i*P **P 23 57 04.9 -0.4**
PVCC Panska Ves 65.94 316 *e*P **P 23 57 05.8 +0.6**
PVCC MLR MLR
comp=Z,2μm,19.0s,MS5.4
PVCC Panska Ves 65.94 316 *e*P **P 23 57 05.8 +0.6**
PVCC AMS AMS 00 26 40.0

comp=Z,2µm,19.0s
FORT Forrest 65.95 157 *e*P **P 23 57 05.5 +0.1**
comp=Z,40nm,0.8s,mb5.5
FORT Forrest 65.95 157 *e*P **P 23 57 04.9 -0.5**
comp=Z,53nm,0.8s,mb5.6
PYL PYLOS 65.99 300 P **P 23 57 03.8 -2.0**
IGT Igoumenitsa 66.05 303 P **P 23 57 03.9 -2.2**
BUM Brajici-Budva 66.05 306⇑*i*P **P 23 57 04.7 -1.4**
BUM Brajici-Budva 66.05 306⇑*i*P **P 23 57 04.8 -1.3**
CONA Conrad Observa 66.06 313 *i*P **P 23 57 06.5 +0.4**
comp=Z,34nm,1.0s,mb5.3,SNR=28
BRY Bratogost 66.08 307⇑*i*P **P 23 57 04.9 -1.4**
BRY Bratogost 66.08 307⇑*i*P **P 23 57 04.9 -1.3**
PRU Pruhonice 66.15 315 *e*P **P 23 57 07.3 +0.7**
PRU MLR MLR
comp=Z,2µm,17.0s,MS5.5
PRU Pruhonice 66.15 315 *e*P **P 23 57 07.3 +0.7**
PRU AMS AMS 00 27 00.0
comp=Z,2µm,17.0s
BRG Berggiesshubel 66.20 316 *e*P **P 23 57 06.7 -0.1**
comp=Z,42nm,1.1s,mb5.4
BRG Berggiesshubel 66.20 316 *i*P **P 23 57 07.0 +0.2**
comp=Z,40nm,1.1s,mb5.4
BRG Berggiesshubel 66.20 316 *i*P **P 23 57 07.1 +0.3**
BRG pmax pmax
comp=Z,24nm,1.1s,mb5.1
KFL Anninata 66.24 301 P **P 23 57 05.7 -1.7**
ALE Alert 66.24 358 P **P 23 57 07.0 +0.3**
comp=Z,183nm,1.0s,mb6.1,SNR=7.0
HCY Herceg Novi 66.28 306⇑*i*P **P 23 57 06.9 -0.6**
HCY Herceg Novi 66.28 306⇑*i*P **P 23 57 07.0 -0.5**
VLS Valsamata 66.36 301 P **P 23 57 06.3 -1.8**
KEK Kerkira 66.36 303 P **P 23 57 06.5 -1.6**
ARSA Arzberg 66.52 312 *i*P **P 23 57 09.0 0.0**
comp=Z,21nm,1.0s,mb5.1,SNR=15
DAG Danmarks Havn 66.58 348 *e*P **P 23 57 07.0 -1.9**
DAG Danmarks Havn 66.58 348 *i*P **P 23 57 07.0 -1.9**
CLL Collm 66.59 317 *e*P **P 23 57 08.9 -0.5**
comp=Z,40nm,1.2s,mb5.3
CLL Collm 66.59 317⇑*i*P **P 23 57 09.3 -0.1**
CLL *e* pP 23 57 14.0 -1.0
CLL pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
CLL MLR MLR
comp=Z,2µm,20.5s,MS5.3
CLL Collm 66.59 317⇑*i*P **P 23 57 09.3 -0.1**
comp=Z,40nm,1.2s,mb5.3
CLL *e* pP 23 57 14.0 -1.0
CLL LR LR
comp=Z,2µm,20.5s,MS5.3
CLL Collm 66.59 317⇑*i*P **P 23 57 09.3 -0.1**
comp=Z,40nm,1.2s,mb5.3
CLL *e*pP pP 23 57 14.0 -1.0
CLL *e*(PP) 23 59 24.0
CLL *e* 00 11 12.0
CLL *e*SSS 00 13 24.0
CLL Lm 00 27 00.0
comp=N,1µm,20.0s
CLL Lm 00 27 00.0
comp=E,1µm,21.4s
CLL Lm 00 27 00.0
comp=Z,2µm,20.5s
MUD Monsted U'grnd 66.82 323 *i*P **P 23 57 10.6 -0.2**
MUD pmax pmax
comp=Z,26nm,1.0s,mb5.2
MUD Monsted U'grnd 66.82 323 *i*P **P 23 57 10.6 -0.2**
comp=Z,26nm,1.0s,mb5.2
SOKA Soboth 67.04 312⇓*i*P **P 23 57 12.4 +0.1**
comp=Z,35nm,0.9s,mb5.4
KHC Kasperske Hory 67.04 314 *e*P **P 23 57 12.6 +0.3**
KHC MLR MLR
comp=Z,3µm,18.3s,MS5.5
KHC Kasperske Hory 67.04 314 *e*P **P 23 57 12.5 +0.2**
comp=Z,39nm,1.5s,mb5.2
KHC Kasperske Hory 67.04 314 *e*P **P 23 57 12.6 +0.3**
KHC AMS AMS 00 27 30.0
comp=Z,3µm,18.3s
GEC2 GERESS Array S 67.07 314 *e*P **P 23 57 12.4 -0.1**
comp=Z,7µm,1.1s
GEC2 *e*PcP PcP 23 57 41.5 +0.8
GERES GERESS Array B 67.07 314 P **P 23 57 12.9 +0.4**
comp=Z,21nm,1.0s,mb5.1,baz=76,slow=5.6,SNR=86
GERES GERESS Array B 67.07 314 P **P 23 57 12.9 +0.4**
GERES pmax pmax
comp=Z,21nm,1.0s
MOA Molln 67.09 313 *i*P **P 23 57 13.0 +0.4**
comp=Z,27nm,1.1s,mb5.2,SNR=19
BSEG Bad Segeberg 67.16 320 *e*P **P 23 57 13.2 +0.3**
comp=Z,67nm,1.0s,mb5.6
TTA Tatalina 67.17 29 *e*P **P 23 57 12.7 -0.1**
TANN Tannenbergstha 67.24 316 *e*P **P 23 57 13.5 0.0**
comp=Z,31nm,1.1s,mb5.2
NKC Novy Kostel 67.32 316 *e*P **P 23 57 14.4 +0.4**
NKC MLR MLR
comp=Z,2µm,19.6s,MS5.3
NKC Novy Kostel 67.32 316 *e*P **P 23 57 14.4 +0.4**
NKC AMS AMS 00 27 40.0
comp=Z,2µm,19.6s
WERD Werda 67.32 316 *e*P **P 23 57 13.8 -0.2**
comp=Z,28nm,1.1s,mb5.2
BOJS Bojanci 67.33 310 *e*P **P 23 57 14.6 +0.5**
GUNZ Gunzen 67.34 316 *e*P **P 23 57 14.0 -0.1**
comp=Z,40nm,1.0s,mb5.4
WERN Wernitzgruen 67.34 316 *e*P **P 23 57 14.1 0.0**
comp=Z,47nm,1.3s,mb5.4
OBKA Obir 67.41 312 *i*P **P 23 57 14.9 +0.2**
comp=Z,20nm,1.1s,mb5.1,SNR=6.5
WET Wettzell 67.47 315 *e*P **P 23 57 15.1 +0.1**
comp=Z,73nm,1.8s,mb5.4
WET Wettzell 67.47 315 *e*P **P 23 57 15.1 +0.1**
WET pmax pmax
comp=Z,73nm,1.8s,mb5.4
COLD Coldfoot 67.53 24 *e*P **P 23 57 15.2 +0.1**
comp=Z,8.4nm,0.3s,mb5.2
LJU Ljubljana 67.60 311 *e*P **P 23 57 16.0 +0.1**
ROTZ Rotzenmuhle 67.64 315 *e*P **P 23 57 16.5 +0.5**
comp=Z,63nm,1.1s,mb5.6
MOX Moxa 67.66 317 *e*P **P 23 57 16.1 0.0**
comp=Z,52nm,1.6s,mb5.3
MOX
comp=Z,1µm,21.0s
MOX Moxa 67.66 317 *e*P **P 23 57 16.0 -0.1**
comp=Z,29nm,1.2s,mb5.2
CEY Cerknica 67.78 311 *e*P **P 23 57 17.1 +0.1**
CLZ Clausthal 67.92 318 *e*P **P 23 57 17.9 +0.1**
comp=Z,67nm,1.0s,mb5.6
CLZ Clausthal 67.92 318 *e*P **P 23 57 17.9 +0.1**
CLZ pmax pmax
comp=Z,67nm,1.0s,mb5.6
JAVS Javornik 67.95 311 *i*P **P 23 57 17.7 -0.4**
KBA Koelnbreinsper 67.96 312 *i*P **P 23 57 18.4 +0.3**
comp=Z,23nm,1.0s,mb5.2,SNR=10
RJOB Jochberg 68.05 313 *e*P **P 23 57 19.0 +0.3**
comp=Z,38nm,1.3s,mb5.3
SVW2 Sparrevohn 68.12 31 *e*P **P 23 57 19.9 +1.0**
TRI Trieste 68.22 311 *e*P **P 23 57 19.4 -0.4**
TRI pmax pmax
comp=Z,89nm,1.4s,mb5.6
TRI Trieste 68.22 311 *e*P **P 23 57 19.4 -0.4**
comp=Z,89nm,1.4s,mb5.6
GRA1 Grafenberg Arr 68.26 316 *e*P **P 23 57 20.2 +0.3**
comp=Z,83nm,1.2s,mb5.6
GRF Grafenberg Arr 68.26 316 *e*P **P 23 57 20.2 +0.3**
GRF pmax pmax
comp=Z,83nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,3µm,19.6s,MS5.5
GRF Grafenberg Arr 68.26 316 *e*P **P 23 57 20.2 +0.3**
comp=Z,83nm,1.2s,mb5.6
GRF LR LR
comp=Z,3µm,19.6s,MS5.5
CHUM Lake Minchumin 68.27 28 *e*P **P 23 57 20.0 +0.3**
comp=Z,92nm,1.5s,mb5.6
ABTA Abfaltersbach 68.61 312 *i*P **P 23 57 21.7 -0.6**
comp=Z,14nm,1.1s,mb4.8,SNR=8.8
BPAW Bear Paw Mtn. 68.69 27 *e*P **P 23 57 22.3 -0.1**
comp=Z,64nm,1.2s,mb5.4
TIP Timpagrande 68.74 304 *e*P **P 23 57 23.0 -0.2**
comp=Z,52nm,1.1s,mb5.4
PPLA Purkeypile 68.76 28 *e*P **P 23 57 24.0 +1.1**
comp=Z,117nm,1.3s,mb5.7
FUR Furstenfeldbru 68.82 314 *e*P **P 23 57 23.9 +0.4**
comp=Z,112nm,1.0s,mb5.8
FUR Furstenfeldbru 68.82 314 *e*P **P 23 57 23.9 +0.4**
FUR pmax pmax
comp=Z,112nm,1.0s,mb5.8

WTTA Wattenberg 68.96 313 *i*P **P 23 57 24.4 0.0**
comp=Z,33nm,1.1s,mb5.2,SNR=15
KTH Kantishna Hill 68.97 28 *e*P **P 23 57 24.3 +0.2**
comp=Z,139nm,1.7s,mb5.6
WATA Walderalm 68.97 313⇑*i*P **P 23 57 24.3 -0.1**
comp=Z,14nm,0.8s,mb5.0
IBBN Ibbenburen 69.21 319 *e*P **P 23 57 25.8 0.0**
comp=Z,46nm,1.1s,mb5.3
MOTA Moosalm 69.26 313⇓*i*P **P 23 57 25.8 -0.4**
comp=Z,29nm,1.0s,mb5.2,SNR=20
RETA Reutte 69.41 314 *i*P **P 23 57 27.3 +0.1**
comp=Z,12nm,0.9s,mb4.8,SNR=6.2
COLA College 69.50 26 *e*P **P 23 57 27.6 +0.2**
COLA pmax pmax
comp=Z,86nm,1.0s,mb5.6
COLA College 69.50 26 *e*P **P 23 57 27.6 +0.2**
comp=Z,86nm,1.0s,mb5.6
WIT Witteveen 69.61 320⇑*i*P **P 23 57 29.5 +1.2**
comp=Z,282nm,1.6s,mb5.9
FETA Feichten 69.62 313 *i*P **P 23 57 28.3 -0.2**
comp=Z,38nm,0.9s,mb5.3,SNR=26
RSO Redoubt South 69.64 31 *e*P **P 23 57 27.9 -0.5**
MCK McKinley 69.66 27 *e*P **P 23 57 27.9 -0.5**
MCK pmax pmax
comp=Z,23nm,1.0s,mb5.1
MCK McKinley 69.66 27 *e*P **P 23 57 27.9 -0.5**
comp=Z,23nm,1.0s,mb5.1
TNS Taunus Mts 69.68 317 *e*P **P 23 57 28.7 -0.1**
comp=Z,40nm,1.1s,mb5.3
TNS Taunus Mts 69.68 317 *e*P **P 23 57 28.7 -0.1**
TNS pmax pmax
comp=Z,40nm,1.1s,mb5.3
TOD Tromm 69.73 316 *e*P **P 23 57 29.1 0.0**
CEL Celeste 69.73 303 *e*P **P 23 57 29.0 -0.3**
comp=Z,148nm,1.1s,mb5.8
AQU L'Aquila 69.79 308 *e*P **P 23 57 29.7 +0.1**
AQU pmax pmax
comp=Z,69nm,1.1s,mb5.5
AQU L'Aquila 69.79 308 *e*P **P 23 57 29.7 +0.1**
comp=Z,69nm,1.1s,mb5.5
AQU L'Aquila 69.79 308⇓*i*P **P 23 57 29.9 +0.3**
STU Stuttgart 69.84 315 *e*P **P 23 57 29.6 -0.2**
comp=Z,54nm,1.1s,mb5.4
STU Stuttgart 69.84 315 *e*P **P 23 57 29.9 +0.1**
STU pmax pmax
comp=Z,53nm,1.0s,mb5.4
STU Stuttgart 69.84 315 *e*P **P 23 57 29.9 +0.1**
comp=Z,53nm,1.0s,mb5.4
BUG Bochum-Univer 69.85 318 *e*P **P 23 57 29.7 -0.1**
comp=Z,44nm,1.2s,mb5.3
WTSB Winterswijk 69.89 319⇑*i*P **P 23 57 30.3 +0.3**
comp=Z,44nm,1.3s,mb5.2
DAVA Damuels 70.04 314 *i*P **P 23 57 31.0 0.0**
comp=Z,21nm,1.1s,mb5.0,SNR=7.6
LRW Lerwick 70.22 329 *e*P **P 23 57 31.1 -0.8**
LRW AMb AMB 23 57 36.3
comp=Z,73nm,2.3s,mb5.2
ABH Alteburg 70.35 317 *e*P **P 23 57 33.0 +0.1**
WAL1 Walls 70.36 329 *e*P **P 23 57 31.8 -0.9**
SPAK Spaichingen-Ko 70.37 315 *e*P **P 23 57 33.4 +0.3**
KMBO Kilima Mbogo 70.45 256 P **P 23 57 35.6 +1.5**
comp=Z,2.8nm,0.9s,mb4.2,baz=49,slow=10,SNR=8.1
KMBO Kilima Mbogo 70.45 256 *e*P **P 23 57 32.5 -1.6**
KMBO pmax pmax
comp=Z,5.0nm,0.8s
KMBO MLR MLR
comp=Z,254nm,19.0s
KMBO Kilima Mbogo 70.45 256 *e*P **P 23 57 32.5 -1.6**
comp=Z,4.6nm,0.8s,mb4.5
KMBO LR LR
comp=Z,254nm,19.0s,MS4.5
BFO Black Forest 70.55 315 P **P 23 57 34.6 +0.5**
comp=Z,168nm,0.9s,mb6.0,SNR=15
BFO Black Forest 70.55 315 *e*P **P 23 57 33.7 -0.4**
comp=Z,42nm,1.2s,mb5.2
BFO Black Forest 70.55 315 *e*P **P 23 57 33.7 -0.4**
BFO pmax pmax
comp=Z,42nm,1.2s,mb5.2
LANF Langenberg 70.59 316 *e*P **P 23 57 34.5 +0.2**
PMR Palmer 70.65 29 *e*P **P 23 57 33.8 -0.7**
RUP Ruppelstein 70.72 317 *e*P **P 23 57 35.6 +0.5**
HGN Heimensgroeve 70.90 318⇑*i*P **P 23 57 36.3 0.0**
comp=Z,23nm,0.9s,mb5.1
MEM Membach 70.93 318 P **P 23 57 36.4 0.0**
comp=Z,14nm,1.4s,mb4.7
FELD Feldberg im Sc 70.94 315 *e*P **P 23 57 36.6 +0.1**
KDAK Kodiak Island 70.98 33 P **P 23 57 36.0 -0.6**
comp=Z,36nm,0.9s,mb5.3
KDAK Kodiak Island 70.98 33 P **P 23 57 36.0 -0.6**
KDAK pmax pmax
comp=Z,36nm,0.9s,mb5.3
KDAK Kodiak Island 70.98 33 P **P 23 57 36.0 -0.6**
BEBN Eben Emael 71.03 318 P **P 23 57 37.4 +0.3**
comp=Z,7.8nm,1.4s,mb4.5
VLC Villacollemand 71.04 311 *e*P **P 23 57 35.5 -1.7**
comp=Z,39nm,1.1s,mb5.2
CDF Champ du Feu 71.15 316 *e*P **P 23 57 37.5 -0.3**
comp=Z,75nm,1.0s,mb5.3
CDF Champ du Feu 71.15 316 *e*P **P 23 57 37.5 -0.3**
CDF pmax pmax
comp=Z,38nm,1.0s,mb5.3
CDF Champ du Feu 71.15 316 *e*P **P 23 57 37.5 -0.3**
comp=Z,38nm,1.0s,mb5.3
WLF Walferdange 71.26 317 P **P 23 57 39.1 +0.7**
comp=Z,76nm,1.3s,mb5.5
WLF Walferdange 71.26 317 *e*P **P 23 57 38.9 +0.5**
comp=Z,116nm,1.1s,mb5.7
WLF Walferdange 71.26 317 *e*P **P 23 57 38.8 +0.4**
WLF pmax pmax
comp=Z,99nm,1.0s,mb5.7
WLF Walferdange 71.26 317 *e*P **P 23 57 38.8 +0.4**
comp=Z,99nm,1.0s,mb5.7
ECH Echery 71.31 315 *e*P **P 23 57 38.6 -0.1**
ECH Echery 71.31 315 *e*P **P 23 57 38.5 -0.2**
ECH pmax pmax
comp=Z,26nm,1.0s,mb5.1
ECH Echery 71.31 315 *e*P **P 23 57 38.5 -0.3**
comp=Z,26nm,1.0s,mb5.1
BCLA Clavier 71.42 318 P **P 23 57 39.5 +0.1**
comp=Z,20nm,1.3s,mb4.9
MOF Molkenrain 71.48 315 *e*P **P 23 57 39.7 -0.1**
HINF Hinteralfeld 71.67 315 *e*P **P 23 57 40.3 -0.6**
comp=Z,61nm,1.0s,mb5.2
HINF Hinteralfeld 71.67 315 *e*P **P 23 57 40.3 -0.6**
HINF pmax pmax
comp=Z,31nm,1.0s,mb5.2
HINF Hinteralfeld 71.67 315 *e*P **P 23 57 40.3 -0.6**
comp=Z,30nm,1.0s,mb5.2
UCC Uccle 71.78 319 P **P 23 57 41.5 -0.1**
GIVF Givet 71.83 318 *e*P **P 23 57 41.7 -0.2**
comp=Z,84nm,1.0s,mb5.3
GIVF Givet 71.83 318 *e*P **P 23 57 41.7 -0.2**
GIVF pmax pmax
comp=Z,42nm,1.0s,mb5.3
GIVF Givet 71.83 318 *e*P **P 23 57 41.7 -0.2**
comp=Z,42nm,1.0s,mb5.3
HAU Haudompre 71.89 315 *e*P **P 23 57 41.7 -0.5**
comp=Z,52nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,2µm,19.2s,MS5.1
HAU Haudompre 71.89 315 *e*P **P 23 57 41.7 -0.5**
HAU pmax pmax
comp=Z,26nm,1.1s,mb5.1
HAU MLR MLR
comp=Z,2µm,19.3s,MS5.4
HAU Haudompre 71.89 315 *e*P **P 23 57 41.7 -0.5**
comp=Z,26nm,1.1s,mb5.1
HAU LR LR
comp=Z,2µm,19.3s,MS5.4
LOMF Lomont 71.89 315 *e*P **P 23 57 42.0 -0.3**
SNF Seneffe 71.96 318 P **P 23 57 42.3 -0.3**
comp=Z,13nm,1.1s,mb4.8
EGAK Eagle 71.96 24 *e*P **P 23 57 42.0 -0.4**
comp=Z,22nm,1.1s,mb5.0
DOU Dourbes 71.97 318 P **P 23 57 42.9 +0.2**
comp=Z,14nm,1.3s,mb4.7
THEF They Montfort 72.00 316 *e*P **P 23 57 42.9 0.0**
MENT Mentasta 72.08 26 *e*P **P 23 57 43.0 -0.1**
ORE Reay 72.16 328 *e*P **P 23 57 42.7 -1.0**
INK Inuvik 72.17 19 P **P 23 57 43.3 -0.3**
comp=Z,51nm,1.0s,mb5.4,baz=323,slow=7.5,SNR=78
INK Inuvik 72.17 19 P **P 23 57 43.3 -0.3**
INK pmax pmax
comp=Z,51nm,1.0s
INK Inuvik 72.17 19 *e*P **P 23 57 43.1 -0.4**
comp=Z,3.7nm,0.8s,mb4.4

BAIF Baives 72.21 318 *e*P **P 23 57 44.0 -0.1**
comp=Z,57nm,1.1s,mb5.1
BAIF Baives 72.21 318 *e*P **P 23 57 44.0 -0.1**
BAIF pmax pmax
comp=Z,29nm,1.1s,mb5.1
BAIF Baives 72.21 318 *e*P **P 23 57 44.0 -0.1**
comp=Z,29nm,1.1s,mb5.1
EIDS Eidsvold 72.38 136 *e*P **P 23 57 44.1 -1.3**
comp=Z,40nm,1.1s,mb5.3
STKA Stephens Creek 72.42 147 *e*P **P 23 57 45.1 -0.4**
comp=Z,19nm,0.8s,mb5.1
STKA Stephens Creek 72.42 147 P **P 23 57 45.2 -0.3**
comp=Z,23nm,0.8s,mb5.2,baz=328,slow=6.4,SNR=51
STKA Stephens Creek 72.42 147 *e*P **P 23 57 45.0 -0.4**
comp=Z,0.3nm,0.6s
MCD Coleburn Disti 72.42 327 *e*P **P 23 57 44.3 -1.0**
MME1 Meikle Cairn 72.42 327 *e*P **P 23 57 44.9 -0.4**
MEZF Maizieres J'vi 72.43 316 *e*P **P 23 57 45.3 -0.2**
comp=Z,70nm,1.2s,mb5.2
MEZF Maizieres J'vi 72.43 316 *e*P **P 23 57 45.3 -0.2**
comp=Z,70nm,1.2s,mb5.5
OG01 Vacheresse 72.44 314 *e*P **P 23 57 45.7 +0.1**
PGF Pioggiola 72.66 309 *e*P **P 23 57 47.1 +0.2**
comp=Z,178nm,1.0s,mb5.6
PGF Pioggiola 72.66 309 *e*P **P 23 57 47.1 +0.2**
PGF pmax pmax
comp=Z,89nm,1.0s,mb5.7
PGF Pioggiola 72.66 309 *e*P **P 23 57 47.1 +0.2**
comp=Z,89nm,1.0s,mb5.7
CABF La Chapelle 72.67 314 *e*P **P 23 57 46.5 -0.5**
comp=Z,51nm,1.1s,mb5.1
CABF La Chapelle 72.67 314 *e*P **P 23 57 46.5 -0.5**
CABF pmax pmax
comp=Z,25nm,1.1s,mb5.1
CABF La Chapelle 72.67 314 *e*P **P 23 57 46.5 -0.5**
comp=Z,25nm,1.1s,mb5.1
RSL Roselend 72.76 313 *e*P **P 23 57 47.6 +0.1**
LPG La Plagne 72.77 313 *e*P **P 23 57 48.1 +0.5**
comp=Z,133nm,0.9s,mb5.6
LPG La Plagne 72.77 313 *e*P **P 23 57 48.1 +0.5**
LPG pmax pmax
comp=Z,67nm,0.9s,mb5.6
LPG La Plagne 72.77 313 *e*P **P 23 57 48.1 +0.5**
comp=Z,66nm,0.9s,mb5.6
LPL La Plagne 72.78 313 *e*P **P 23 57 48.0 +0.4**
comp=Z,133nm,0.9s,mb5.6
LPL La Plagne 72.78 313 *e*P **P 23 57 48.0 +0.4**
LPL pmax pmax
comp=Z,66nm,0.9s,mb5.6
LPL La Plagne 72.78 313 *e*P **P 23 57 48.0 +0.4**
comp=Z,66nm,0.9s,mb5.6
BMRM Bremner River 72.83 28 *e*P **P 23 57 47.7 0.0**
comp=Z,105nm,1.1s,mb5.7
SAOF Saorge 72.95 311 *e*P **P 23 57 49.0 +0.3**
MDO Dochfour 73.01 327 *e*P **P 23 57 47.9 -0.9**
BNI Bardonecchia 73.02 313 *e*P **P 23 57 49.3 +0.2**
BNI pmax pmax
comp=Z,25nm,0.9s,mb5.1
BNI Bardonecchia 73.02 313 *e*P **P 23 57 49.3 +0.2**
comp=Z,25nm,0.9s,mb5.1
SBF Sospel 73.08 311 *e*P **P 23 57 49.1 -0.3**
comp=Z,174nm,1.0s,mb5.6
SBF Sospel 73.08 311 *e*P **P 23 57 49.1 -0.3**
SBF pmax pmax
comp=Z,87nm,1.0s,mb5.6
SBF Sospel 73.08 311 *e*P **P 23 57 49.1 -0.3**
comp=Z,87nm,1.0s,mb5.6
MBDF Montbardon 73.11 312 *e*P **P 23 57 48.7 -0.9**
comp=Z,42nm,0.8s,mb5.1
MBDF Montbardon 73.11 312 *e*P **P 23 57 48.7 -0.9**
MBDF pmax pmax
comp=Z,21nm,0.8s,mb5.1
MBDF Montbardon 73.11 312 *e*P **P 23 57 48.7 -0.9**
comp=Z,21nm,0.8s,mb5.1
LUCF Luceram 73.13 311 *e*P **P 23 57 49.8 +0.1**
MENF Mencas 73.13 319 *e*P **P 23 57 50.0 +0.4**
TOUF Mont Tournerai 73.13 311 *e*P **P 23 57 50.3 +0.6**
SUMG Summit 73.19 349 *e*P **P 23 57 49.6 0.0**
comp=Z,42nm,1.1s,mb5.3
MVIF Mont Vial 73.25 311 *e*P **P 23 57 50.3 -0.1**
XAL Allendale 73.31 324 *e*P **P 23 57 48.9 -1.6**
EAU Auchinoon 73.41 326 *e*P **P 23 57 50.8 -0.4**
ESK Eskdalemuir 73.57 325 *e*P **P 23 57 51.5 -0.5**
ESK AMb AMB 23 57 58.6
comp=Z,33nm,3.9s
ESK Eskdalemuir 73.57 325 *i*P **P 23 57 52.3 +0.2**
ESK Eskdalemuir 73.57 325 *e*P **P 23 57 51.6 -0.5**
ORIF Oris-en-Rattie 73.58 313 *e*P **P 23 57 52.3 -0.1**
comp=Z,84nm,1.1s,mb5.3
ORIF *e*MLR MLR
comp=Z,3µm,19.2s,MS5.2
ORIF Oris-en-Rattie 73.58 313 *e*P **P 23 57 52.3 -0.1**
ORIF pmax pmax
comp=Z,42nm,1.1s,mb5.3
ORIF Oris-en-Rattie 73.58 313 *e*P **P 23 57 52.3 -0.1**
comp=Z,42nm,1.1s,mb5.3
ECK Cauldkaine Hil 73.60 325 *e*P **P 23 57 51.6 -0.6**
RES Resolute Bay 73.62 5 *e*P **P 23 57 52.1 0.0**
RES pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
RES Resolute Bay 73.62 5 *e*P **P 23 57 52.1 0.0**
comp=Z,3.7nm,0.8s,mb4.4
EAB Aberfoyle 73.66 326 *e*P **P 23 57 52.0 -0.5**
LOR Lormes 73.72 316 *e*P **P 23 57 52.2 -0.9**
comp=Z,34nm,1.1s,mb4.9
LOR *e*MLR MLR
comp=Z,2µm,19.5s,MS5.1
LOR Lormes 73.72 316 *e*P **P 23 57 52.2 -0.9**
LOR pmax pmax
comp=Z,17nm,1.1s,mb4.9
LOR MLR MLR
comp=Z,2µm,19.5s,MS5.4
LOR Lormes 73.72 316 *e*P **P 23 57 52.2 -0.9**
comp=Z,17nm,1.1s,mb4.9
LOR LR LR
comp=Z,2µm,19.5s,MS5.4
FRF La Foret Royal 73.73 311 *e*P **P 23 57 52.7 -0.6**
comp=Z,89nm,1.4s,mb5.2
FRF La Foret Royal 73.73 311 *e*P **P 23 57 52.7 -0.6**
FRF pmax pmax
comp=Z,44nm,1.4s,mb5.2
FRF La Foret Royal 73.73 311 *e*P **P 23 57 52.7 -0.6**
comp=Z,44nm,1.4s,mb5.2
VSL Villasalto 73.78 307 *e*P **P 23 57 52.8 -0.9**
comp=Z,46nm,1.2s,mb5.3
LHO Holmfirth 73.80 323 *e*P **P 23 57 52.8 -0.7**
LMR La Mourre 73.92 311 *e*P **P 23 57 54.1 -0.3**
comp=Z,96nm,1.1s,mb5.3
LMR La Mourre 73.92 311 *e*P **P 23 57 54.1 -0.3**
LMR pmax pmax
comp=Z,48nm,1.1s,mb5.3
LMR La Mourre 73.92 311 *e*P **P 23 57 54.1 -0.3**
comp=Z,48nm,1.1s,mb5.3
PGBU Glenifferbraes 73.92 326 *e*P **P 23 57 53.7 -0.5**
PGBU AMb AMB 23 57 54.8
comp=Z,65nm,1.4s,mb5.4
CWF Charnwood Fore 73.93 322 *e*P **P 23 57 53.2 -1.1**
CWF AMb AMB 23 57 53.7
comp=Z,17nm,1.2s,mb4.8
KAR1 Arisaig 73.96 327 *e*P **P 23 57 53.3 -1.1**
SMF Signal de Mont 74.03 315 *e*P **P 23 57 54.5 -0.5**
comp=Z,122nm,1.0s,mb5.5
SMF Signal de Mont 74.03 315 *e*P **P 23 57 54.5 -0.5**
SMF pmax pmax
comp=Z,61nm,1.0s,mb5.5
SMF Signal de Mont 74.03 315 *e*P **P 23 57 54.5 -0.5**
comp=Z,61nm,1.0s,mb5.5
SSF Saint Saulge 74.03 316 *e*P **P 23 57 54.3 -0.7**
comp=Z,45nm,1.1s,mb5.0
SSF Saint Saulge 74.03 316 *e*P **P 23 57 54.3 -0.7**
SSF pmax pmax
comp=Z,22nm,1.1s,mb5.0
SSF Saint Saulge 74.03 316 *e*P **P 23 57 54.3 -0.7**
comp=Z,22nm,1.1s,mb5.0
XDE Dent Fell 74.13 325 *e*P **P 23 57 54.5 -0.9**
SSB Saint Sauveur 74.25 314 *e*P **P 23 57 55.3 -1.0**
SSB Saint Sauveur 74.25 314 *e*P **P 23 57 55.9 -0.4**
SSB pmax pmax
comp=Z,21nm,1.2s,mb4.9
SSB Saint Sauveur 74.25 314 *e*P **P 23 57 55.9 -0.4**
comp=Z,21nm,1.2s,mb4.9
AVF Avril sur Loir 74.25 315 *e*P **P 23 57 55.7 -0.6**
comp=Z,125nm,1.2s,mb5.4
AVF Avril sur Loir 74.25 315 *e*P **P 23 57 55.7 -0.6**
AVF pmax pmax
comp=Z,63nm,1.2s,mb5.4

AVF Avril sur Loir 74.25 315 *e*P **P 23 57 55.7 -0.6**
comp=Z,63nm,1.2s,mb5.4
VIVF Saint-Julien-I 74.37 313 *e*P **P 23 57 56.6 -0.4**
comp=Z,54nm,1.1s,mb5.1
VIVF Saint-Julien-I 74.37 313 *e*P **P 23 57 56.6 -0.4**
VIVF pmax pmax
comp=Z,27nm,1.1s,mb5.1
VIVF Saint-Julien-I 74.37 313 *e*P **P 23 57 56.6 -0.4**
comp=Z,27nm,1.1s,mb5.1
PLDF La Plantade 74.49 315 *e*P **P 23 57 58.8 +1.2**
COLF Collangettes 74.66 314 *e*P **P 23 57 58.5 -0.2**
BGF Bois d'Agland 74.67 315 *e*P **P 23 57 58.2 -0.5**
comp=Z,52nm,1.2s,mb5.0
BGF Bois d'Agland 74.67 315 *e*P **P 23 57 58.2 -0.5**
BGF pmax pmax
comp=Z,26nm,1.2s,mb5.0
BGF Bois d'Agland 74.67 315 *e*P **P 23 57 58.2 -0.5**
comp=Z,26nm,1.2s,mb5.0
AGO Saint Agoulin 74.74 315 *e*P **P 23 58 00.4 +1.3**
SWN1 Swindon 74.82 321 *e*P **P 23 57 58.0 -1.5**
SWN1 AMb AMB 23 57 59.9
comp=Z,57nm,1.2s,mb5.4
HLM1 Long Mynd 74.86 323 *e*P **P 23 57 58.9 -0.8**
PYM Petit Puy Mans 74.97 315 *e*P **P 23 58 01.8 +1.4**
LBL Lubilhac 75.07 314 *e*P **P 23 58 02.3 +1.2**
BORG Borgarnes 75.13 339 *e*P **P 23 58 01.9 +0.9**
BORG pmax pmax
comp=Z,52nm,1.2s
BORG Borgarnes 75.13 339 *e*P **P 23 58 01.9 +0.9**
comp=Z,52nm,1.2s,mb5.3
TCF Toulx Ste Croi 75.19 315 *e*P **P 23 58 01.5 -0.2**
comp=Z,97nm,1.1s,mb5.3
TCF Toulx Ste Croi 75.19 315 *e*P **P 23 58 01.5 -0.2**
TCF pmax pmax
comp=Z,49nm,1.1s,mb5.3
TCF Toulx Ste Croi 75.19 315 *e*P **P 23 58 01.5 -0.2**
comp=Z,49nm,1.1s,mb5.3
WLF1 Llynfaes 75.23 324 *e*P **P 23 58 00.9 -0.9**
WLF1 AMb AMB 23 58 02.8
comp=Z,125nm,3.0s
LASF Ste Croix 75.26 313 *e*P **P 23 58 02.1 0.0**
comp=Z,72nm,1.1s,mb5.2
VERF Verneugheol 75.29 315 *e*P **P 23 58 02.4 +0.1**
HGH Gray Hill 75.29 322 *e*P **P 23 58 01.5 -0.7**
HTR Trewern Hill 75.30 322 *e*P **P 23 58 01.8 -0.4**
LDF La Druitiere 75.39 318 *e*P **P 23 58 02.3 -0.5**
comp=Z,46nm,1.0s,mb5.1
LDF La Druitiere 75.39 318 *e*P **P 23 58 02.3 -0.5**
LDF pmax pmax
comp=Z,23nm,1.0s,mb5.1
LDF La Druitiere 75.39 318 *e*P **P 23 58 02.3 -0.5**
comp=Z,23nm,1.0s,mb5.1
FLN La Foliniere 75.51 318 *e*P **P 23 58 03.0 -0.5**
comp=Z,70nm,1.2s,mb5.2
FLN *e*MLR MLR
comp=Z,2µm,20.5s,MS5.2
FLN La Foliniere 75.51 318 *e*P **P 23 58 03.0 -0.5**
FLN pmax pmax
comp=Z,35nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,2µm,20.5s,MS5.5
FLN La Foliniere 75.51 318 *e*P **P 23 58 03.0 -0.5**
comp=Z,35nm,1.2s,mb5.2
FLN LR LR
comp=Z,2µm,20.5s,MS5.5
KEST Kesra 75.55 303 P **P 23 58 04.2 +0.3**
comp=Z,7.4nm,1.1s,mb4.5,baz=315,slow=4.4,SNR=6.1
PNL Peninsula 75.70 28 P **P 23 58 05.1 +0.7**
GRR Gorron 75.92 318 *e*P **P 23 58 05.5 -0.3**
comp=Z,78nm,1.0s,mb5.3
GRR Gorron 75.92 318 *e*P **P 23 58 05.5 -0.3**
GRR pmax pmax
comp=Z,39nm,1.0s,mb5.3
GRR Gorron 75.92 318 *e*P **P 23 58 05.5 -0.3**
comp=Z,39nm,1.0s,mb5.3
CAF Calviac 75.95 314 *e*P **P 23 58 06.3 +0.2**
comp=Z,55nm,1.0s,mb5.1
CAF Calviac 75.95 314 *e*P **P 23 58 06.3 +0.2**
CAF pmax pmax
comp=Z,27nm,1.0s,mb5.1
CAF Calviac 75.95 314 *e*P **P 23 58 06.3 +0.2**
comp=Z,27nm,1.0s,mb5.1
RJF Les Rejaudoux 76.10 315 *e*P **P 23 58 07.2 +0.3**
comp=Z,105nm,1.2s,mb5.3
RJF *e*MLR MLR
comp=Z,1µm,20.8s,MS4.9
RJF Les Rejaudoux 76.10 315 *e*P **P 23 58 07.2 +0.3**
RJF pmax pmax
comp=Z,53nm,1.2s,mb5.3
RJF MLR MLR
comp=Z,1µm,20.8s,MS5.2
RJF Les Rejaudoux 76.10 315 *e*P **P 23 58 07.2 +0.3**
comp=Z,52nm,1.2s,mb5.3
RJF LR LR
comp=Z,1µm,20.8s,MS5.2
MFF Saint Martin d 76.43 316 *e*P **P 23 58 08.6 -0.2**
comp=Z,74nm,1.1s,mb5.2
MFF Saint Martin d 76.43 316 *e*P **P 23 58 08.6 -0.2**
MFF pmax pmax
comp=Z,37nm,1.1s,mb5.2
MFF Saint Martin d 76.43 316 *e*P **P 23 58 08.6 -0.2**
comp=Z,37nm,1.1s,mb5.2
ARMA Armidale 76.48 139 *e*P **P 23 58 10.3 +1.1**
ARMA Armidale 76.48 139 *e*P **P 23 58 09.7 +0.5**
comp=Z,35nm,1.4s,mb5.1
DYA Yadsworthy 76.53 321 *e*P **P 23 58 08.5 -0.8**
DYA AMb AMB 23 58 10.2
comp=Z,27nm,2.0s,mb4.8
MTLF Montolieu 76.66 313 *e*P **P 23 58 10.1 0.0**
comp=Z,34nm,1.1s,mb4.9
MTLF Montolieu 76.66 313 *e*P **P 23 58 10.1 0.0**
MTLF pmax pmax
comp=Z,17nm,1.1s,mb4.9
MTLF Montolieu 76.66 313 *e*P **P 23 58 10.1 0.0**
comp=Z,17nm,1.1s,mb4.9
LFF La Frestale 76.76 315 *e*P **P 23 58 10.9 +0.2**
comp=Z,65nm,1.1s,mb5.2
LFF La Frestale 76.76 315 *e*P **P 23 58 10.9 +0.2**
LFF pmax pmax
comp=Z,33nm,1.1s,mb5.2
LFF La Frestale 76.76 315 *e*P **P 23 58 10.9 +0.2**
comp=Z,33nm,1.1s,mb5.2
SGMF Saint Gilles 76.95 319 *e*P **P 23 58 11.8 +0.1**
comp=Z,96nm,1.1s,mb5.4
SGMF Saint Gilles 76.95 319 *e*P **P 23 58 11.8 +0.1**
SGMF pmax pmax
comp=Z,48nm,1.1s,mb5.3
SGMF Saint Gilles 76.95 319 *e*P **P 23 58 11.8 +0.1**
comp=Z,48nm,1.1s,mb5.3
VALF Valcebollere 77.26 312 *e*P **P 23 58 14.3 +0.8**
ROSF Rostrenen 77.31 319 *e*P **P 23 58 13.8 +0.1**
comp=Z,94nm,1.2s,mb5.3
ROSF Rostrenen 77.31 319 *e*P **P 23 58 13.8 +0.1**
ROSF pmax pmax
comp=Z,47nm,1.2s,mb5.3
ROSF Rostrenen 77.31 319 *e*P **P 23 58 13.8 +0.1**
comp=Z,47nm,1.2s,mb5.3
SKAG Skagway 77.42 27 *e*P **P 23 58 14.9 +0.8**
comp=Z,34nm,0.8s,mb5.3
QUIF Quistinic 77.48 319 *e*P **P 23 58 14.5 -0.2**
comp=Z,88nm,1.3s,mb5.2
QUIF Quistinic 77.48 319 *e*P **P 23 58 14.5 -0.2**
QUIF pmax pmax
comp=Z,44nm,1.3s,mb5.2
QUIF Quistinic 77.48 319 *e*P **P 23 58 14.5 -0.2**
comp=Z,44nm,1.3s,mb5.2
MLS Moulis 77.56 313 *e*P **P 23 58 13.8 -1.4**
EPF Esparros 77.99 313 *e*P **P 23 58 16.9 -0.7**
comp=Z,22nm,1.1s,mb4.7
EPF Esparros 77.99 313 *e*P **P 23 58 16.9 -0.7**
EPF pmax pmax
comp=Z,11nm,1.1s,mb4.7
EPF Esparros 77.99 313 *e*P **P 23 58 16.9 -0.7**
comp=Z,11nm,1.1s,mb4.7
ETOS Mallorca 78.08 309 P **P 23 58 17.9 -0.3**
comp=Z,128nm,1.4s,mb5.7
RESF Ens 78.11 313 *e*P **P 23 58 19.3 +1.0**
VIEF Viey 78.27 313 *e*P **P 23 58 20.0 +0.8**
EBIE Bielsa 78.30 313 P **P 23 58 20.2 +0.8**
comp=Z,13nm,1.1s,mb4.8
EPOB Poblet 78.40 311 P **P 23 58 20.0 +0.1**
comp=Z,17nm,0.9s,mb5.0
ETSF Etsaut 78.62 313 *e*P **P 23 58 21.6 +0.5**
comp=Z,25nm,0.9s,mb4.8
ETSF Etsaut 78.62 313 *e*P **P 23 58 21.6 +0.5**
ETSF pmax pmax
comp=Z,13nm,0.9s,mb4.9
ETSF Etsaut 78.62 313 *e*P **P 23 58 21.6 +0.5**
comp=Z,13nm,0.9s,mb4.8
TOO Toolangi 78.92 147 *e*P **P 23 58 22.9 +0.4**
SJPF Ste Jean 78.92 314 *e*P **P 23 58 23.4 +0.6**
comp=Z,43nm,1.1s,mb5.0
SJPF Ste Jean 78.92 314 *e*P **P 23 58 23.4 +0.6**
SJPF pmax pmax
comp=Z,21nm,1.1s,mb5.0
SJPF Ste Jean 78.92 314 *e*P **P 23 58 23.4 +0.6**
comp=Z,21nm,1.1s,mb5.0
CNB Canberra Magne 79.01 143 *e*P **P 23 58 23.1 0.0**
EALK Alkurruntz 79.04 314 P **P 23 58 23.4 0.0**
comp=Z,22nm,1.2s,mb5.0
ELIZ Elizondo 79.08 314 P **P 23 58 23.7 +0.1**
ELIZ pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ELIZ Elizondo 79.08 314 P **P 23 58 23.7 0.0**
comp=Z,6.8nm,0.7s,mb4.7
ERTA Horta de San J 79.09 311 P **P 23 58 23.2 -0.5**
comp=Z,21nm,1.0s,mb5.0
ESAC San Caprasio 79.19 312 P **P 23 58 24.8 +0.6**
comp=Z,12nm,0.6s,mb5.0
EMOS Mosqueruela 79.92 311 P **P 23 58 28.1 -0.2**
comp=Z,23nm,0.9s,mb5.1
ECRI Cripan 79.99 314 P **P 23 58 29.5 +0.9**
ECRI pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ECRI Cripan 79.99 314 P **P 23 58 29.5 +0.9**
comp=Z,8.2nm,0.9s,mb4.7
SFJD Kangerlussuaq 80.09 350 *i* P **P 23 58 27.9 -0.8**
SFJD pmax pmax
comp=Z,20nm,0.9s,mb5.0
SFJD Kangerlussuaq 80.09 350 *e*P **P 23 58 28.0 -0.7**
comp=Z,71nm,1.3s,mb5.4
SFJD Kangerlussuaq 80.09 350 *i* P **P 23 58 27.9 -0.8**
comp=Z,20nm,0.9s,mb5.0
DLBC Dease Lake 80.12 25 P **P 23 58 29.2 +0.2**
comp=Z,6.2nm,0.9s,mb4.5,baz=251,slow=15,SNR=3.3
DLBC Dease Lake 80.12 25 *e*P **P 23 58 29.1 +0.1**
ELAN Lanestosa 80.21 315 P **P 23 58 30.4 +0.7**
comp=Z,28nm,1.0s,mb5.1
DZM Mont Dzumac 80.30 123 *e*LR LR 00 23 32.0
comp=Z,372nm,22.5s
ETOR Torete 80.69 312 P **P 23 58 31.9 -0.5**
ETOR pmax pmax
comp=Z,11nm,1.1s,mb4.7
ETOR Torete 80.69 312 P **P 23 58 31.9 -0.5**
comp=Z,11nm,1.1s,mb4.7
EARI Arrondas 81.24 316 P **P 23 58 36.5 +1.2**
comp=Z,15nm,1.1s,mb4.8
ETOB Tobarra 81.55 310 P **P 23 58 37.3 +0.2**
comp=Z,15nm,0.8s,mb5.0
YKA Yellowknife Ar 81.69 17 P **P 23 58 36.8 -0.4**
comp=Z,21nm,1.1s,mb5.0,baz=324,slow=4.7,SNR=51
GUD Guadarrama 82.11 313 P **P 23 58 39.9 0.0**
GUD pmax pmax
comp=Z,18nm,1.0s,mb5.0
GUD Guadarrama 82.11 313 P **P 23 58 39.9 0.0**
comp=Z,18nm,1.0s,mb5.0
EVIA Vianos 82.18 311 P **P 23 58 41.1 +0.8**
EVIA pmax pmax
comp=Z,14nm,1.0s,mb4.8
EVIA Vianos 82.18 311 P **P 23 58 41.1 +0.7**
comp=Z,14nm,1.0s,mb4.8
EPON Pontenova 82.38 316 P **P 23 58 42.3 +1.0**
comp=Z,18nm,1.1s,mb4.9
ESDC Sonseca Array 82.54 312 P **P 23 58 42.4 +0.2**
comp=Z,3.0nm,0.7s,mb4.4,baz=53,slow=4.8,SNR=15
ESDC LR LR 00 38 10.4
comp=Z,474nm,18.8s,MS4.9,baz=45,slow=38
ESDC Sonseca Array 82.54 312 P **P 23 58 41.6 -0.5**
comp=Z,3.6nm,0.8s,mb4.5
ESLA Sonseca Array 82.54 312 *e*P **P 23 58 41.6 -0.5**
comp=Z,10nm,1.5s,mb4.6
EHUE Huescar 82.69 310 P **P 23 58 42.8 -0.2**
EHUE pmax pmax
comp=Z,63nm,2.1s,mb5.3
EHUE Huescar 82.69 310 P **P 23 58 42.8 -0.2**
comp=Z,63nm,2.1s,mb5.3
ENIJ Nijar 82.91 309 P **P 23 58 44.3 +0.1**
ENIJ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ENIJ Nijar 82.91 309 P **P 23 58 44.3 +0.1**
comp=Z,8.6nm,0.8s,mb4.8
ECAL Calabor 82.95 315 P **P 23 58 43.9 -0.4**
comp=Z,6.6nm,0.9s,mb4.7
EQES Quesada 83.02 310 P **P 23 58 44.6 -0.1**
comp=Z,21nm,1.0s,mb5.1
EBAN Banos Encina 83.28 311 P **P 23 58 46.3 +0.2**
EBAN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
EBAN Banos Encina 83.28 311 P **P 23 58 46.3 +0.2**
comp=Z,10nm,0.9s,mb4.8
EBER Berja 83.40 309 P **P 23 58 46.6 -0.1**
comp=Z,130nm,2.4s,mb5.5
MVO Moncorvo 83.58 315 *e*P **P 23 58 48.0 +0.4**
comp=Z,32nm,2.2s,mb5.1
MVO *e*LQ 00 29 12.9
MVO *e*LR LR 00 31 47.7
comp=Z,534nm,16.0s
MOO Moorlands 83.61 149 *e*P **P 23 58 48.6 +1.2**
EADA Adamuz 83.79 311 P **P 23 58 48.5 -0.1**
comp=Z,6.9nm,0.8s,mb4.8
ELOB Lobios 83.79 316 P **P 23 58 49.0 +0.4**
comp=Z,16nm,1.0s,mb5.1
PCAB Cabril 83.86 316 *e*P **P 23 58 49.5 +0.5**
comp=Z,33nm,1.3s,mb5.3
PCAB *i* P 23 59 00.5
EGUA Guajares 83.89 310 P **P 23 58 49.1 -0.1**
EGUA pmax pmax
comp=Z,142nm,0.9s,mb6.1
EGUA Guajares 83.89 310 P **P 23 58 49.1 -0.1**
comp=Z,142nm,0.9s,mb6.1
ELUQ Luque 83.93 310 P **P 23 58 48.6 -0.8**
ELUQ pmax pmax
comp=Z,40nm,1.1s,mb5.5
ELUQ Luque 83.93 310 P **P 23 58 48.6 -0.9**
comp=Z,40nm,1.1s,mb5.5
ERON Agron 83.94 310 P **P 23 58 48.7 -0.8**
comp=Z,8.3nm,0.9s,mb4.9
ELOJ Sierra Loja 84.09 310 P **P 23 58 49.0 -1.3**
comp=Z,2.4nm,1.0s,mb4.3
MTE Manteigas 84.35 314 *e*P **P 23 58 52.6 +1.1**
comp=Z,54nm,1.9s,mb5.3
MTE *e*S S 00 09 17.1 +0.4
MTE *e*LQ 00 30 19.8
MTE *e*LR LR 00 33 01.1
comp=Z,663nm,18.0s
PCBR Castelo Branco 84.64 314 *e*P **P 23 58 54.1 +1.1**
comp=Z,23nm,1.6s,mb5.1
PMRV Marv??o 84.84 313 *e*P **P 23 58 54.7 +0.7**
comp=Z,35nm,1.5s,mb5.3
PMRV *e*LQ 00 29 44.3
PMRV *e*LR LR 00 34 11.8
comp=Z,272nm,18.0s
EMIJ Mijas 84.84 310 P **P 23 58 53.4 -0.6**
comp=Z,18nm,1.0s,mb5.2
EBAD Badajoz 85.00 313 P **P 23 58 54.1 -0.7**
comp=Z,10nm,1.0s,mb4.9
PESTR Estremoz 85.29 313 *e*P **P 23 58 56.7 +0.4**
comp=Z,28nm,1.5s,mb5.2
PESTR *e*LQ 00 28 54.4
PESTR *e*LR LR 00 35 14.7
comp=Z,336nm,18.0s
PTOM Tomar 85.35 314 *e*P **P 23 58 57.6 +1.0**
comp=Z,35nm,2.0s,mb5.1
PBAR Barrancos 85.36 312 *e*P **P 23 58 57.2 +0.6**
comp=Z,27nm,1.2s,mb5.2
PBAR *e*LQ 00 28 56.9
PBAR *e*LR LR 00 33 51.9
comp=Z,664nm,20.0s
EMIN Mina Concepcio 85.37 312 P **P 23 58 56.5 -0.2**
comp=Z,21nm,1.2s,mb5.2
ESPR Espera 85.37 311 P **P 23 58 56.6 -0.1**
comp=Z,10nm,1.0s,mb4.9
EVO Evora 85.76 313 *e*P **P 23 58 59.1 +0.5**
comp=Z,30nm,1.6s,mb5.3
PBEJ Beja 85.97 313 *e*P **P 23 59 00.3 +0.6**
comp=Z,26nm,1.4s,mb5.3
EGRO El Granado 86.02 312 P **P 23 59 00.0 +0.1**
comp=Z,58nm,1.7s,mb5.5
PVAQ Vaqueiros 86.25 312 *e*LQ 00 29 24.8
PVAQ *e*LR LR 00 32 52.4
comp=Z,757nm,20.0s
PMAFR Mafra 86.29 314 *e*LQ 00 31 19.3
PMAFR *e*LR LR 00 32 38.1
comp=Z,443nm,18.0s
PCVE Castro Verde 86.32 312 *e*P **P 23 59 02.0 +0.6**
comp=Z,30nm,1.7s,mb5.2
PCVE *e*LQ 00 29 48.0
PCVE *e*LR LR 00 34 49.3
comp=Z,672nm,18.0s
PBDV Barranco-do-Ve 86.48 312 *e*P **P 23 59 03.2 +1.0**
comp=Z,43nm,1.6s,mb5.4
PBDV *e*S S 00 08 40.8 -57
PBDV *e*LQ 00 30 03.7
PBDV *e*LR LR 00 34 02.6
comp=Z,690nm,18.0s
MORF Marmelete 86.90 312 *e*P **P 23 59 05.2 +0.9**
comp=Z,45nm,1.2s,mb5.6
MORF *e*LQ 00 33 40.7
MORF *e*LR LR 00 36 09.3
comp=Z,597nm,18.0s
PFVI Vila Bisbo 87.12 312 *e*P **P 23 59 06.1 +0.8**
comp=Z,31nm,1.2s,mb5.4
PFVI *e*LQ 00 29 37.5
PFVI *e*LR LR 00 33 48.8
comp=Z,666nm,18.0s
FCC Fort Churchill 89.12 9 *e*P **P 23 59 12.9 -1.5**
comp=Z,1.4nm,1.6s,mb4.0
EDM Edmonton 89.96 21 *e*P **P 23 59 18.9 +0.5**
B06A Marblemount 90.97 28 ⇑P **P 23 59 23.8 +0.6**
baz=91
A07A Ashnola River, 90.98 27 ⇓P **P 23 59 23.8 +0.6**
baz=91
RPW Rockport 91.01 28 *e*P **P 23 59 23.2 -0.2**
comp=Z,9.2nm,1.2s,mb5.0
JCW Jim Creek 91.04 28 *e*P **P 23 59 28.5 +4.9**
A08A Turner Farm, O 91.48 27 ⇑P **P 23 59 26.7 +1.1**
baz=91,SNR=14
B07A Winthrop 91.56 27 ⇓P **P 23 59 25.5 -0.4**
baz=91,SNR=8.8
FFC Flin Flon 91.59 14 P **P 23 59 25.2 -0.8**
comp=Z,54nm,1.0s,mb5.8,SNR=5.2
FFC Flin Flon 91.59 14 *i* P **P 23 59 26.1 +0.1**
FFC Flin Flon 91.59 14 *e*P **P 23 59 25.4 -0.5**
comp=Z,7.5nm,0.8s,mb5.1
A09A Danville 91.73 26 ⇑P **P 23 59 27.9 +1.2**
baz=91,SNR=5.4
B08A Colville Reser 91.95 27 ⇓P **P 23 59 27.8 +0.1**
baz=92,SNR=10
F03A Seaside 92.13 31 ⇓P **P 23 59 29.2 +0.6**
baz=92
C07A Waterville 92.20 28 ⇓P **P 23 59 29.5 +0.5**
baz=92
B09A Rice 92.35 26 ⇑P **P 23 59 29.9 +0.3**
baz=92,SNR=8.1
C08A Higginbotham F 92.53 27 ⇓P **P 23 59 31.2 +0.8**
baz=92
A11A Hall Mountain, 92.57 25 ⇑P **P 23 59 31.6 +1.0**
baz=92
F04A Amboy 92.63 30 ⇑P **P 23 59 32.1 +1.2**
baz=92
E06A Yakima 92.75 29 ⇓P **P 23 59 32.4 +0.9**
baz=92
C09A Chrisman Ranch 92.81 27 ⇑P **P 23 59 33.0 +1.3**
baz=92
NEW Newport 92.87 26 *e*P **P 23 59 32.9 +0.9**
TOA0 Torodi Ar. Sit 93.10 287 *e*P **P 23 59 33.0 -0.7**
TORD Torodi Ar. Bea 93.10 287 P **P 23 59 33.2 -0.5**
comp=Z,6.7nm,1.1s,mb5.0,baz=55,slow=4.5,SNR=27
TORD Torodi Ar. Bea 93.10 287 P **P 23 59 33.2 -0.5**
LBTB Lobatse 93.13 243 *e*P **P 23 59 33.1 -0.4**
D08A Wollman Farm, 93.17 28 ⇓P **P 23 59 34.7 +1.3**
baz=93
WALA Waterton Lakes 93.35 24 *e*P **P 23 59 33.6 -0.6**
D09A Jones Farm, Ri 93.41 27 ⇑P **P 23 59 34.9 +0.4**
baz=93
HAWA Hanford 93.46 28 *e*P **P 23 59 35.1 +0.3**
comp=Z,7.1nm,1.1s,mb5.0
A14A Double T Ranch 93.59 23 ⇓P **P 23 59 36.0 +0.7**
baz=93
H04A Detroit Lake 93.71 31 ⇓P **P 23 59 36.1 +0.1**
baz=93
B13A Whitefish 93.74 24 ⇓P **P 23 59 36.6 +0.6**
baz=93,SNR=5.3
D10A Wagner Farm, O 93.81 27 ⇑P **P 23 59 36.6 +0.2**
baz=94
A15A Johnson Ranch, 93.81 23 ⇓P **P 23 59 36.8 +0.5**
baz=93
SCHQ Schefferville 93.85 354 P **P 23 59 35.9 -0.5**
comp=Z,5.1nm,0.8s,mb5.0,baz=57,slow=7.5,SNR=5.5
SCHQ Schefferville 93.85 354 *e*P **P 23 59 35.6 -0.9**
E09A Wood Farm, Sta 93.92 27 ⇓P **P 23 59 37.3 +0.4**
baz=94
C12B Naegeli Ranch, 93.94 25 ⇓P **P 23 59 37.8 +0.9**
baz=94
G06A Carlson Farm, 93.94 30 ⇑P **P 23 59 37.5 +0.5**
baz=94
D11A Klaveano Farm, 94.17 26 ⇑P **P 23 59 38.2 +0.1**
baz=94
C13A Hot Springs 94.29 25 ⇓P **P 23 59 38.8 +0.2**
baz=94
YBMT Yellow Bay 94.33 24 *e*P **P 23 59 38.2 -0.5**
comp=Z,6.1nm,1.0s,mb5.0
E10A Myers Farm, Un 94.35 27 ⇓P **P 23 59 39.1 +0.2**
baz=94
B15A Bradely Ranch, 94.45 23 ⇑P **P 23 59 38.6 -0.7**
baz=94
G08A Pilot Rock 94.59 29 ⇓P **P 23 59 40.2 +0.2**
baz=94
E11A Bogner Ranch, 94.80 26 ⇓P **P 23 59 41.2 +0.3**
baz=94
D13A Huson 94.83 25 ⇑P **P 23 59 41.0 -0.1**
baz=94
C15A Salmond Ranch, 94.89 24 ⇑P **P 23 59 41.3 0.0**
baz=94
G09A Cove 95.08 28 ⇓P **P 23 59 42.6 +0.3**
baz=95
C16A Fuhringer Ranc 95.16 23 ⇓P **P 23 59 42.7 +0.2**
baz=95
D14A Greenough 95.18 24 ⇑P **P 23 59 42.5 -0.2**
baz=95
F11A Grangeville 95.21 27 ⇑P **P 23 59 42.9 +0.1**
baz=95
B18A Beardsley Farm 95.28 22 ⇑P **P 23 59 43.1 0.0**
baz=95
H08A Prairie City 95.34 29 ⇓P **P 23 59 44.0 +0.6**
baz=95
I07A Izee 95.35 30 ⇓P **P 23 59 43.9 +0.4**
baz=95
E13A Victor 95.48 25 ⇑P **P 23 59 44.3 +0.3**
baz=95
D15A Lincoln 95.56 24 ⇓P **P 23 59 44.9 +0.5**
baz=95
G11A Walters Elk Ra 95.58 27 ⇓P **P 23 59 45.2 +0.7**
baz=95
D16A Dana Ranch, Ca 95.90 23 ⇓P **P 23 59 45.6 -0.3**
baz=96
F13A Darby 95.98 26 ⇑P **P 23 59 46.4 0.0**
baz=96
E15A Deer Lodge 96.05 24 ⇑P **P 23 59 47.1 +0.5**
baz=96
HRY Holter Researc 96.08 24 *e*P **P 23 59 46.9 +0.1**
comp=Z,7.7nm,1.2s,mb5.0
H11A Donnelly 96.26 27 ⇑P **P 23 59 47.8 +0.2**
baz=96
E16A East Helena 96.29 24 ⇓P **P 23 59 48.0 +0.3**
baz=96
J08A Circle Bar Ran 96.37 29 ⇑P **P 23 59 48.2 0.0**
baz=96
F15A Butte 96.60 24 ⇓P **P 23 59 48.8 -0.4**
baz=96
G13A Cobalt 96.61 26 ⇑P **P 23 59 49.1 -0.1**
baz=96
E17A Martinsdale 96.63 23 ⇑P **P 23 59 49.5 +0.2**
baz=96
H12A Diamond D Ranc 96.83 27 ⇑P **P 23 59 50.4 +0.1**
baz=96
E18A Harlowton 96.85 23 ⇑P **P 23 59 50.5 +0.2**
baz=96
BOZ Bozeman (W) 97.07 24 ⇓P **P 23 59 51.4 +0.1**
baz=97
BOZ Bozeman (W) 97.07 24 *e*P **P 23 59 51.6 +0.3**
I12A Atlanta 97.36 27 ⇓P **P 23 59 53.0 +0.4**
baz=97
F18A Big Timber 97.50 23 ⇑P **P 23 59 53.7 +0.4**
baz=97
HLID Hailey 97.84 27 ⇑P **P 23 59 55.6 +0.8**
baz=98
HLID Hailey 97.84 27 *e*P **P 23 59 54.1 -0.7**
comp=Z,7.0nm,1.4s,mb5.0
L11A Cat Creek Ranc 98.48 28 ⇓P **P 23 59 58.1 +0.4**
baz=98

L12A	**House Creek Ra**	**98.80**	**28**	⇑P		**P**	**23 59 59.5 +0.4**
	baz=98						
ANMO	**Albuquerque**	**108.35**	**26**	PKiKP	PKiKP		00 04 47.6 -0.3
PPT	**Papeete**	**113.11**	**97**	*e*PS	PS		00 15 15.3 -7.1
	comp=Z,72nm,29.8s						
PPT				*e*SS	SS		00 21 32.9 +1.7
	comp=Z,59nm,26.2s						
PPT				*e*LR	LR		00 38 35.5
	comp=Z,415nm,25.8s						
TAOE	**Nuku Hiva Isla**	**117.03**	**84**	*e*LR	LR		00 40 36.3
	comp=Z,214nm,34.3s						
VNA2	**Neumayer--Watz**	**126.03**	**202**	*e*	PKPdf		00 05 18.8 -1.6
SJG	**San Juan**	**129.91**	**347**	PKIKP	PKPdf		00 05 28.5 -1.0
SDV	**Santo Domingo**	**139.69**	**351**	*e*PKPpre			00 05 39.3
SDV				*e*PKPdf	PKPdf		00 05 47.1 -0.8
ROSC	**El Rosal**	**144.02**	**356**	PKP	PKPdf		00 05 54.4 -1.2
	comp=Z,16nm,0.7s,baz=82,slow=21,SNR=10						
ROSC	**El Rosal**	**144.02**	**356**	*e*PKPdf	PKPdf		00 05 54.1 -1.5
CAM4	**Nova Friburgo**	**148.55**	**278**	⇑*i*P	PKPab		00 06 09.9 -0.2
CAM4				*i*			00 06 15.8
CAM4				*i*			00 06 28.8
CAM4				*i*			00 06 40.6
CAM4				*i*			00 06 57.7
CAM4				*i*			00 07 07.8
CAM4				*i*			00 07 35.3
CPUP	**Villa Florida**	**162.51**	**282**	PKP	PKPdf		00 06 22.3 +0.8
	comp=Z,0.3nm,0.3s,baz=13,slow=1.5,SNR=1.5						
CPUP	**Villa Florida**	**162.51**	**282**	PKP	PKPdf		00 06 22.3 +0.8
LPAZ	**La Paz**	**163.26**	**331**	PKP	PKPdf		00 06 23.1 +0.7
	comp=Z,3.4nm,1.1s,baz=17,slow=4.8,SNR=9.2						
LPAZ	**La Paz**	**163.26**	**331**	*e*PKPdf	PKPdf		00 06 22.1 -0.3
PLCA	**Paso Flores**	**169.40**	**205**	PKP	PKPdf		00 06 27.4 +0.9
	comp=Z,5.2nm,1.2s,baz=96,slow=1.6,SNR=2.8						
PLCA				PKPab	PKPab		00 07 37.7 -1.5
	comp=Z,2.6nm,0.8s,baz=195,slow=6.6,SNR=4.0						
PLCA	**Paso Flores**	**169.40**	**205**	PKIKP	PKPdf		00 06 27.4 +0.9
PLCA							00 07 37.7
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.8s						

NEIC ***12*** *23:54:09.8, 16°.85N×99°.74W, h20km, MD3.6(MEX), After MEX.*

MEX 12 23:54:10.1±1.3, 16°.86N×99°.74W, h16km±15km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.17**	**272**	*i* P	Pg	23 54 13.3	-1.1
ACX				*i* S	Sg	23 54 16.8	-0.5
ACX	**Acapulco**	**0.17**	**272**	*i* P	Pg	23 54 13.3	-1.1
ACX				*i* S	Sg	23 54 16.8	-0.5
CAIG	**El Cayaco**	**0.54**	**290**	*i* P	Pg	23 54 19.7	-1.1
CAIG				*i* S	Sg	23 54 25.2	-2.8
CAIG	**El Cayaco**	**0.54**	**290**	*i* P	Pg	23 54 19.7	-1.1
CAIG				*i* S	Sg	23 54 25.2	-2.8
PNIG	**Pinotepa**	**1.61**	**107**	*i* P	Pn	23 54 33.6	-4.4
PNIG				*i* S	Sn	23 54 54.3	-4.1
PNIG	**Pinotepa**	**1.61**	**107**	*i* P	Pn	23 54 33.6	-4.4
PNIG				*i* S	Sn	23 54 54.3	-4.1
ZIIG	**Zihuatanejo**	**1.81**	**294**	*e*P	Pn	23 54 36.5	-4.2
ZIIG				*i* S	Sn	23 54 57.1	-6.1
ZIIG	**Zihuatanejo**	**1.81**	**294**	*e*P	Pn	23 54 36.5	-4.2
ZIIG				*i* S	Sn	23 54 57.1	-6.1
UTMO	**Huajuapan**	**2.08**	**62**	*i* P	Pn	23 54 40.8	-3.7
UTMO				*i* S	Sn	23 55 04.6	-5.5
MZVM		**2.37**	**12**	*e*P	Pn	23 54 45.0	-3.3
MZVM				*i* S	Sn	23 55 12.9	-4.1
PPM	**Popocatepetl**	**2.44**	**26**	*i* P	Pn	23 54 47.9	-1.4
PPM				*i* S	Sn	23 55 14.8	-4.0
PPM	**Popocatepetl**	**2.44**	**26**	*i* P	Pn	23 54 47.9	-1.4
PPM				*i* S	Sn	23 55 14.8	-4.0
IIO	**Organos**	**2.88**	**19**	*e*P	Pn	23 54 56.7	+1.3
IIO				*i* S	Sn	23 55 27.9	-1.8
IIO	**Organos**	**2.88**	**19**	*e*P	Pn	23 54 56.7	+1.3
IIO				*i* S	Sn	23 55 27.9	-1.8
VHO	**Vista Hermosa**	**2.88**	**85**	*e*P	Pn	23 54 58.1	+2.6
VHO				*i* S	Sn	23 55 26.7	-3.1
VHO	**Vista Hermosa**	**2.88**	**85**	*e*P	Pn	23 54 58.1	+2.6
VHO				*i* S	Sn	23 55 26.7	-3.1

IDC ***12*** *23:54:18.2±1.6, 31°.76N×50°.72E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/24, mbtmp3.9/8, ML2.8/1, MS4.7/2, Ms1 4.7/2, ms1mx3.2/33, Error ellipse: s-maj=40.0km s-min=24.1km az=109.0*
THR ***12*** *23:54:19.6±0.6, 31°.65N×51°.13E, h18km±5km, ML3.5*
KISR ***12*** *23:54:21.4±1.1, 31°.33N×50°.58E, h34km±128km, ML3.2*
NEIC ***12*** *23:54:23.9, 31°.95N×51°.16E, h1km, ML3.5(THR), MN3.4(TEH), After TEH.*
TEH ***12*** *23:54:23.9, 31°.95N×51°.16E, h1km*
CSEM ***12*** *23:54:23.5±0.2, 31°.76N×50°.94E, h33km, ML3.5, Error ellipse: s-maj=6.0km s-min=3.4km az=133.0*

ISC 12 23:54:21.9±0.9, 31°.75N±0°.03×50°.96E±0°.03, h18km±6km, n79, σ1§14/99, mb3.9/7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**0.93**	**356**	Pn	**Pg**	**23 54 45.2**	**+5.1**
IPIR	**Pirpir**	**0.93**	**356**	*e*Pn	**Pg**	**23 54 45.2**	**+5.1**
IPIR				*e*		23 55 08.2	
	comp=Z,14μm,0.2s						
IPIR	**Pirpir**	**0.93**	**356**	Pn	**Pg**	**23 54 45.2**	**+5.1**
IGAR	**Gharneh**	**1.12**	**54**	*e*Pg	**Pg**	**23 54 38.6**	**-5.1**
IGAR				*e*		23 54 56.1	
	comp=Z,12μm,0.1s						
IZEF	**Zefreh**	**1.62**	**45**	Pg	**Pn**	**23 54 48.6**	**-1.0**
IZEF				Sn	**Sn**	**23 55 09.5**	**-0.6**
IZEF	**Zefreh**	**1.62**	**45**	*e*Pg	**Pn**	**23 54 48.6**	**-1.0**
IZEF				*e*		23 54 52.4	
	comp=Z,4μm,0.2s						
IZEF				*e*Sn	**Sn**	**23 55 09.5**	**-0.6**
IKLH	**Kolahrood**	**1.65**	**18**	Pn	**Pn**	**23 54 50.2**	**+0.3**
IKLH				Sn	**Sn**	**23 55 10.5**	**-0.1**
IKLH	**Kolahrood**	**1.65**	**18**	*e*Pn	**Pn**	**23 54 50.3**	**+0.4**
IKLH				*e*Sn	**Sn**	**23 55 10.6**	**0.0**
IKLH				*e*		23 55 34.2	
	comp=Z,5μm,0.4s						
IKLH	**Kolahrood**	**1.65**	**18**	Pn	**Pn**	**23 54 50.2**	**+0.3**
IKLH				Sn	**Sn**	**23 55 10.5**	**-0.1**
SHGR	**Shooshtar-Gavs**	**1.87**	**281**	*e*Pn	**Pn**	**23 54 54.0**	**+0.9**
SHGR				*e*Sg	**Sg**	**23 55 23.0**	**+0.7**
SHGR	**Shooshtar-Gavs**	**1.87**	**281**	*e*Pg	**Pg**	**23 54 56.6**	**-1.4**
SHGR				*e*Sg	**Sg**	**23 55 23.6**	**+1.3**
SHGR				AML	AML	23 55 27.2	
	comp=E,326nm,0.6s						
SHGR				AML	AML	23 55 33.5	
	comp=N,412nm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.87**	**281**	*e*Pn	**Pn**	**23 54 54.0**	**+0.9**
SHGR				*e*Sg	**Sg**	**23 55 23.6**	**+1.3**
NASN	**Na'in**	**1.88**	**56**	*e*Pg	**Pn**	**23 54 53.0**	**-0.1**
NASN				*e*Sg	**Sn**	**23 55 17.0**	**+0.6**
NASN	**Na'in**	**1.88**	**56**	*e*Pg	**Pn**	**23 54 53.2**	**+0.1**
NASN				*e*Sg	**Sn**	**23 55 17.7**	**+1.4**
ISAD	**Sadrabad**	**2.32**	**85**	Pn	**Pn**	**23 55 00.8**	**+1.6**
ISAD	**Sadrabad**	**2.32**	**85**	*e*Pn	**Pn**	**23 55 00.9**	**+1.7**
ISAD				*e*		23 55 39.7	
	comp=Z,4μm,0.2s						
ISAD	**Sadrabad**	**2.32**	**85**	Pn	**Pn**	**23 55 00.8**	**+1.6**
GHVR	**GHOM**	**2.73**	**6**	*e*Sg	**Sg**	**23 55 48.0**	**-1.8**
GHVR	**GHOM**	**2.73**	**6**	*e*Sg	**Sg**	**23 55 48.8**	**-1.0**
ISFB	**Sefidab**	**2.80**	**22**	Pn	**Pn**	**23 55 06.1**	**+0.2**
ISFB				Sn	**Sn**	**23 55 38.0**	**-1.2**
ISFB	**Sefidab**	**2.80**	**22**	*e*Sn	**Sn**	**23 55 38.0**	**-1.2**
ISFB				*e*Pn	**Pn**	**23 55 06.2**	**+0.3**
ISFB				*e*		23 55 52.1	
	comp=Z,2μm,0.3s						
ASAO	**Ashtian**	**2.90**	**344**	*e*Pn	**Pn**	**23 55 08.0**	**+0.9**
ASAO	**Ashtian**	**2.90**	**344**	*e*Pn	**Pn**	**23 55 08.9**	**+1.7**
ASAO				AML	AML	23 55 56.9	
	comp=N,166nm,0.6s						
ASAO				AML	AML	23 56 12.1	
	comp=E,108nm,0.6s						
ASAO	**Ashtian**	**2.90**	**344**	*e*Pn	**Pn**	**23 55 08.0**	**+0.9**
ICHK	**Chekchek**	**2.97**	**80**	Pn	**Pn**	**23 55 08.9**	**+0.8**
ICHK				Sn	**Sn**	**23 55 42.9**	**-0.3**
ICHK	**Chekchek**	**2.97**	**80**	*e*Sn	**Sn**	**23 55 43.0**	**-0.2**
ICHK				*e*Pn	**Pn**	**23 55 08.9**	**+0.8**
ICHK				*e*		23 56 00.7	
	comp=Z,1μm,0.3s						
ICHK	**Chekchek**	**2.97**	**80**	Pn	**Pn**	**23 55 08.9**	**+0.8**
ICHK				Sn	**Sn**	**23 55 42.9**	**-0.3**
ISRV	**Sarvestan**	**3.00**	**141**	Pn	**Pb**	**23 55 13.6**	**-1.3**
ISRV	**Sarvestan**	**3.00**	**141**	*e*Pn	**Pb**	**23 55 13.7**	**-1.2**
IMOK	**Mouk**	**3.09**	**150**	Pn	**Pb**	**23 55 14.8**	**-1.6**
IMOK	**Mouk**	**3.09**	**150**	*e*Pn	**Pb**	**23 55 14.9**	**-1.5**
IMEH	**Mehriz**	**3.13**	**96**	*e*Pn	**Pn**	**23 55 12.2**	**+1.8**
IMEH				*e*		23 56 11.6	
	comp=Z,977nm,0.4s						
IVRN	**Varamin**	**3.29**	**11**	Pn	**Pn**	**23 55 13.1**	**+0.5**
IVRN	**Varamin**	**3.29**	**11**	*e*Pn	**Pn**	**23 55 13.2**	**+0.6**
IVRN				*e*		23 55 25.9	
	comp=Z,2μm,0.4s						
IVRN	**Varamin**	**3.29**	**11**	Pn	**Pn**	**23 55 13.1**	**+0.5**
UMR	**Umm Al-Rimmam**	**3.56**	**233**	*e*P	**Pn**	**23 55 16.8**	**+0.5**
UMR				*e*S	**Sn**	**23 55 59.1**	**+1.3**
UMR				AML	AML	23 56 00.0	
	comp=Z,44nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.56**	**233**	*e*P	**Pn**	**23 55 16.8**	**+0.6**
UMR				*e*S	**Sn**	**23 55 59.1**	**+1.3**
MIB	**Mutribah**	**3.68**	**239**	*e*P	**Pn**	**23 55 18.3**	**+0.4**
MIB				*e*S	**Sn**	**23 56 02.0**	**+1.2**
MIB				AML	AML	23 56 03.1	
	comp=Z,39nm,0.5s						
MIB	**Mutribah**	**3.68**	**239**	*e*P	**Pn**	**23 55 18.3**	**+0.4**
MIB				*e*S	**Sn**	**23 56 02.0**	**+1.2**
IKOM	**Komasi**	**3.78**	**311**	Pn	**Pn**	**23 55 19.8**	**+0.6**
IKOM	**Komasi**	**3.78**	**311**	*e*Pn	**Pn**	**23 55 19.9**	**+0.7**
IKOM				*e*		23 56 42.7	
	comp=Z,1μm,0.5s						
IKOM	**Komasi**	**3.78**	**311**	Pn	**Pn**	**23 55 19.8**	**+0.6**
KBD	**Kabd**	**3.82**	**229**	*e*P	**Pn**	**23 55 20.4**	**+0.6**
KBD	**Kabd**	**3.82**	**229**	*e*P	**Pn**	**23 55 20.4**	**+0.6**
IDMV	**Damavand**	**3.92**	**13**	Pn	**Pn**	**23 55 22.0**	**+0.8**
IDMV	**Damavand**	**3.92**	**13**	*e*Pn	**Pn**	**23 55 22.0**	**+0.8**
IDMV				*e*		23 56 51.0	
	comp=Z,568nm,0.5s						
IDMV	**Damavand**	**3.92**	**13**	Pn	**Pn**	**23 55 22.0**	**+0.8**
IBAF	**Bafgh**	**3.93**	**91**	Pn	**Pn**	**23 55 22.7**	**+1.4**
IBAF	**Bafgh**	**3.93**	**91**	*e*Pn	**Pn**	**23 55 22.7**	**+1.4**
IBAF				*e*		23 55 29.0	
	comp=Z,699nm,0.2s						
IBAF	**Bafgh**	**3.93**	**91**	Pn	**Pn**	**23 55 22.7**	**+1.4**
DAMV	**Damavand**	**3.96**	**12**	*e*Pn	**Pn**	**23 55 22.0**	**+0.3**
DAMV	**Damavand**	**3.96**	**12**	*e*Pn	**Pn**	**23 55 22.7**	**+1.0**
DAMV	**Damavand**	**3.96**	**12**	*e*Pn	**Pn**	**23 55 22.7**	**+1.0**
QRN	**Al-Qurain**	**3.99**	**222**	*e*P	**Pn**	**23 55 22.6**	**+0.4**
QRN				*e*S	**Sn**	**23 56 07.3**	**-1.3**
QRN				AML	AML	23 56 10.0	
	comp=Z,16nm,0.5s						
RDF	**Al-Radifah**	**4.08**	**227**	*e*P	**Pn**	**23 55 23.5**	**0.0**
RDF				AML	AML	23 56 11.9	
	comp=Z,43nm,0.6s						
RDF	**Al-Radifah**	**4.08**	**227**	*e*P	**Pn**	**23 55 23.5**	**0.0**
CHTH	**Charan**	**4.15**	**2**	*e*Pn	**Pn**	**23 55 26.0**	**+1.7**
CHTH	**Charan**	**4.15**	**2**	*e*Pn	**Pn**	**23 55 26.2**	**+1.9**
CHTH	**Charan**	**4.15**	**2**	*e*Pn	**Pn**	**23 55 26.0**	**+1.7**
IFIR	**Firoozkooh**	**4.15**	**21**	Pn	**Pn**	**23 55 25.3**	**+0.9**
IFIR	**Firoozkooh**	**4.15**	**21**	*e*Pn	**Pn**	**23 55 25.3**	**+0.9**
IFIR				*e*		23 55 49.2	
	comp=Z,255nm,0.1s						
IFIR	**Firoozkooh**	**4.15**	**21**	Pn	**Pn**	**23 55 25.3**	**+0.9**
KFJS		**4.42**	**217**	P	**Pn**	**23 55 27.4**	**-0.7**
KFJS		**4.42**	**217**	P	**Pn**	**23 55 27.4**	**-0.7**
BRTR	**Keskin Array B**	**16.14**	**304**	Pn	**Pn**	**23 58 03.8**	**-4.0**
	comp=Z,0.0nm,0.3s,baz=138,slow=9.7,SNR=2.7						
AKASG	**Malin Array Be**	**24.85**	**326**	P	**P**	**23 59 41.4**	**-1.8**
	comp=Z,0.6nm,0.3s,mb3.6,baz=134,slow=9.0,SNR=4.4						
AKASG	**Malin Array Be**	**24.85**	**326**	P	**P**	**23 59 41.4**	**-1.8**
BVAR	**Borovoye Array**	**25.49**	**28**	P	**P**	**23 59 49.4**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.3,baz=226,slow=11,SNR=3.0						
BVAR	**Borovoye Array**	**25.49**	**28**	P	**P**	**23 59 49.4**	**+0.5**
FINES	**FINESS Array B**	**33.84**	**339**	P	**P**	**00 01 01.2**	**-1.7**
	comp=Z,2.8nm,0.9s,mb4.2,baz=141,slow=9.3,SNR=3.6						
FINES	**FINESS Array B**	**33.84**	**339**	P	**P**	**00 01 01.2**	**-1.7**
FINES	**FINESS Array B**	**33.84**	**339**	P	**P**	**00 01 01.2**	**-1.7**
NOA	**NORSAR Array B**	**39.08**	**330**	P	**P**	**00 01 44.8**	**-2.8**
	comp=Z,1.0nm,0.8s,mb3.6,baz=125,slow=8.5,SNR=2.5						
ARCES	**ARCESS Array B**	**40.47**	**347**	P	**P**	**00 01 57.7**	**-1.4**
	comp=Z,6.0nm,1.2s,mb4.2,baz=147,slow=12,SNR=1.5						
ARCES	**ARCESS Array B**	**40.47**	**347**	P	**P**	**00 01 57.7**	**-1.4**
TORD	**Torodi Ar. Bea**	**48.71**	**259**	P	**P**	**00 03 04.0**	**-1.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=56,slow=8.3,SNR=9.5						
TORD	**Torodi Ar. Bea**	**48.71**	**259**	P	**P**	**00 03 04.0**	**-1.6**
BOSA	**Boshof**	**64.83**	**205**	P	**P**	**00 04 57.9**	**-1.8**
	comp=Z,2.0nm,0.8s,mb4.2,baz=272,slow=12,SNR=3.6						
BOSA	**Boshof**	**64.83**	**205**	P	**P**	**00 04 57.8**	**-1.9**

ISCJB ***12*** *23:54:31.4±0.9, 31°.6N±0°.1×104°.6E±0°.1, h10km, mb3.6/6, Error ellipse: s-maj=17.9km s-min=14.4km az=4.4*
IDC ***12*** *23:54:31.6±1.1, 31°.13N×103°.63E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.8/8, MS4.6/9, Ms1 4.6/9, ms1mx4.1/33, Error ellipse: s-maj=40.8km s-min=20.2km az=56.0*

ISC 12 23:54:33.7±0.9, 31°.6N±0°.1×104°.5E±0°.1, h10km, n14, σ1§08/14, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.25**	**5**	Pn	**Pn**	**23 58 28.9**	**+7.0**
	0.2nm,0.3s,baz=186,slow=9.6,SNR=3.8						
GUN	**Gumba**	**16.59**	**262**	*e*P	**Pn**	**23 58 26.6**	**+0.2**
	656nm,0.7s						
PKI	**Pulchoki**	**17.09**	**261**	*e*P	**Pn**	**23 58 32.5**	**-0.2**
	722nm,1.1s						
PKIN	**Phulchoki**	**17.10**	**261**	*e*P	**Pn**	**23 58 33.9**	**+1.1**
KKN	**Kakani**	**17.13**	**262**	*e*P	**Pn**	**23 58 33.4**	**+0.2**
	1μm,0.9s						
DMN	**Daman**	**17.33**	**262**	*e*P	**Pn**	**23 58 35.8**	**+0.1**
	1μm,1.0s						
KSRS	**Korea Array**	**20.13**	**67**	P	**P**	**23 59 16.9**	**+9.2**
	3.5nm,0.8s,baz=260,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**22.81**	**318**	P	**P**	**23 59 35.3**	**-1.1**
	5.5nm,1.1s,mb3.9,baz=117,slow=13,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.40**	**333**	P	**P**	**00 00 10.7**	**+0.6**
	1.2nm,0.7s,mb3.5,baz=117,slow=5.2,SNR=3.2						
KURK	**Kurchatov**	**27.03**	**322**	P	**P**	**00 00 14.9**	**-0.9**
	1.1nm,0.6s,mb3.6,baz=127,slow=9.4,SNR=4.2						
GRSN	**GIRESUNGRSN**	**53.05**	**300**	*i* P	**P**	**00 03 48.5**	**-2.4**
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**00 04 52.3**	**-0.2**
	0.9nm,0.8s,mb3.9,baz=329,slow=6.5,SNR=6.1						
STKA	**Stephens Creek**	**72.27**	**147**	P	**P**	**00 05 58.3**	**-0.9**
	1.2nm,0.6s,mb4.0,baz=287,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	**81.09**	**17**	P	**P**	**00 06 51.3**	**+2.7**
	0.1nm,0.5s,mb3.0,baz=240,slow=1.9,SNR=2.4						

IDC ***12*** *23:54:44.9±0.5, 31°.21N×103°.55E, h0km, mb4.9/32, mb1 5.0/33, mb1mx5.0/35, mbtmp5.0/33, MS4.6/9, Ms1 4.6/9, ms1mx4.1/34, Error ellipse: s-maj=14.3km s-min=10.9km az=35.0*
BJI ***12*** *23:54:45.7, 31°.28N×103°.63E, h10km, mB5.7/18, mb5.2/31, ML5.3/20, Ms5.2/41, Ms7 4.8/32*
MOS ***12*** *23:54:45.5±0.9, 31°.26N×103°.55E, h39km, mb5.5/61, MS4.7/19, Error ellipse: s-maj=7.9km s-min=4.2km az=118.4*
ISCJB ***12*** *23:54:45.1±0.1, 31°.27N±0°.02×103°.50E±0°.02, h10km, mb5.2/215, MS4.9/68, Error ellipse: s-maj=3.6km s-min=2.6km az=22.0*
GCMT ***12*** *23:54:46.9±0.3, 31°.30N×103°.58E, h21km±1km, MW5.1/71, Moment Tensor Solution. s17,c17; s71,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.00±.44; $M_{\theta\theta}$4.49±.27; $M_{\phi\phi}$-0.49±.23; $M_{r\theta}$1.43±.33; $M_{\theta\phi}$2.28±.12; $M_{\phi r}$0.25±.42; Best double couple: $M_0$4.91300×10^{16} NP1:φ§63.00000°, δ37.00000°, λ-83.00000°. NP2: φ§254.00000°, δ54.00000°, λ-83.00000°. Principal axes: T 5.5870, Plg8.0000°, Azm339.0000°; N -1.3550, Plg5.0000°, Azm70.0000°; P -4.2390, Plg80.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***12*** *23:54:46.9±0.1, 31°.30N×103°.53E, h10km, mb5.2/121 Error ellipse: s-maj=3.6km s-min=2.4km az=215.0*
SZGRF ***12*** *23:54:51.3, 31°.63N×103°.64E, h33km, mb5.4, MS5.5, Sichuan, China*
DJA ***12*** *23:54:56, 31°.10N×103°.56E, h75km, mb5.4/19*

ISC 12 23:54:47.0±0.1, 31°.30N±0°.02×103°.52E±0°.02, h10km, (h25km±2.8km:pP-P), n666, σ0§84/654, mb5.2/215,

MS4.9/68, 39C-25D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**152**	Pg	**Pg**	**23 54 56.5**	**+1.0**
CD2				Sg	**Sg**	**23 55 04.1**	**+2.8**
CD2				smax			
	comp=N,363μm,0.5s						
LZH	**Lanzhou**	**4.79**	**3**	Pn	**Pn**	**23 56 04.0**	**+4.8**
LZH				Pg	**Pg**	**23 56 19.5**	**+0.8**
LZH				Sg	**Sg**	**23 57 20.0**	**-0.7**
LZH				smax			
	comp=N,3μm,1.2s						
LZH				smax			
	comp=E,3μm,1.1s						
LZH				LR	LR		
	comp=E,46μm,8.2s						
LZH				LR	LR		
	comp=Z,49μm,9.6s						
XAN	**Xi'an**	**5.31**	**58**	Pn	**Pn**	**23 56 07.3**	**+0.9**
XAN				Sg	**Sb**	**23 57 23.2**	**-0.6**
XAN				smax			
	comp=N,4μm,1.0s						
XAN				smax			
	comp=E,1μm,1.1s						
GYA	**Guiyang**	**5.55**	**149**	Pg	**Pg**	**23 56 29.5**	**-3.9**
GYA				Sg	**Sb**	**23 57 31.5**	**+0.8**
GYA				smax			
	comp=N,4μm,0.9s						
GYA				smax			
	comp=E,4μm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.9s						
GYA				LR	LR		
	comp=E,4μm,3.2s						
GYA				LR	LR		
	comp=Z,6μm,5.0s						
KMI	**Kunming**	**6.19**	**187**	Pn	**Pn**	**23 56 19.0**	**+0.5**
KMI				Sn	**Sn**	**23 57 22.7**	**-6.6**
KMI				smax			
	comp=N,710nm,1.6s						
KMI				smax			
	comp=E,590nm,1.6s						
KMI				LR	LR		
	comp=N,10μm,9.6s						
KMI				LR	LR		
	comp=E,38μm,10.4s						
KMI				LR	LR		
	comp=Z,10μm,9.6s						
GTA	**Gaotai**	**8.64**	**341**	*e*P	**Pn**	**23 56 55.0**	**+2.9**
GTA				pP		23 56 59.5	
GTA				sP		23 57 02.8	
GTA				S	**Sn**	**23 58 37.6**	**+8.0**
GTA				sS		23 58 39.9	
GTA				pmax	pmax		
	comp=Z,41nm,1.4s						
GTA				pmax	pmax		
	comp=Z,880nm,5.1s						
GTA				LR	LR		
	comp=N,2μm,10.8s						
GTA				LR	LR		
	comp=E,4μm,9.8s						
GTA				LR	LR		
	comp=Z,2μm,10.2s						
WHN	**Wuhan**	**9.33**	**92**	⇑P	**Pn**	**23 57 01.9**	**+0.3**
WHN				S	**Sn**	**23 58 41.6**	**-5.1**
WHN				LR	LR		
	comp=N,24μm,8.2s						
WHN				LR	LR		
	comp=E,5μm,4.0s						
WHN				LR	LR		
	comp=Z,6μm,6.0s						
LSA	**Lhasa**	**10.79**	**265**	P	**Pn**	**23 57 21.8**	**+0.2**
LSA				LR	LR		
	comp=N,3μm,14.7s						
LSA				LR	LR		
	comp=E,3μm,11.0s						
LSA				LR	LR		
	comp=Z,5μm,10.6s						
HHC	**Hu-ho-hao-te**	**11.54**	**32**	*e*P	**Pn**	**23 57 31.3**	**-0.4**
HHC				pP		23 57 38.5	
HHC				sP		23 57 43.4	
HHC				S	**Sn**	**23 59 40.1**	**-0.5**
HHC				sS		23 59 51.9	
HHC				SS		23 59 55.6	
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1μm,4.7s						
HHC				LR	LR		
	comp=N,6μm,5.7s						
HHC				LR	LR		
	comp=E,5μm,5.1s						
HHC				LR	LR		
	comp=Z,3μm,5.5s						
SHL	**Shillong**	**11.72**	**244**	*i* P	**Pn**	**23 57 34.0**	**-0.4**
SHL				*i* S	Sx	00 01 00.0	
GZH	**Guangzhou**	**11.96**	**131**	P	**Pn**	**23 57 35.3**	**-2.4**
GZH				S	**Sn**	**23 59 51.1**	**-0.1**
GZH				LR	LR		
	comp=N,17μm,11.8s						
GZH				LR	LR		
	comp=E,12μm,9.5s						
NJ2	**Nanjing**	**13.08**	**83**	*e*P	**Pn**	**23 57 52.2**	**-0.8**
NJ2				pP		23 57 58.5	
NJ2				PP		23 58 01.6	
NJ2				sP		23 58 03.6	
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,610nm,3.8s						
NJ2				LR	LR		
	comp=N,11μm,10.2s						
NJ2				LR	LR		
	comp=E,12μm,12.0s						
NJ2				LR	LR		
	comp=Z,21μ

YULB	**Yu-li**	**17.63**	**112**	*e*Pn	**Pn**	**23 58 53.6**	**+0.7**
WMQ	**Urumqi**	**17.68**	**319**	P	**Pn**	**23 58 53.2**	**0.0**
WMQ				pmax	pmax		
	comp=Z,61nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,950nm,4.0s						
WMQ				LR	LR		
	comp=N,2μm,24.0s						
WMQ				LR	LR		
	comp=E,920nm,21.0s						
WMQ				LR	LR		
	comp=Z,2μm,20.0s						
TWG	**Pinlang**	**17.75**	**114**	*e*Pn	**Pn**	**23 58 53.8**	**-0.5**
	comp=Z,111nm,1.2s						
ZAK	**Zakamensk**	**19.07**	**360**	*e*P	**Pn**	**23 59 11.0**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,41nm,1.6s						
SNY	**Shenyang**	**19.19**	**51**	⇓P	**Pn**	**23 59 10.8**	**-1.0**
SNY				pmax	pmax		
	comp=Z,52nm,2.4s						
SNY				LR	LR		
	comp=N,1μm,11.1s						
SNY				LR	LR		
	comp=E,1μm,13.8s						
SNY				LR	LR		
	comp=Z,840nm,8.7s						
INCN	**Inchon**	**20.02**	**66**	*e*Pn	**P**	**23 59 21.4**	**+1.4**
	comp=Z,55nm,0.8s						
TLY	**Talaya**	**20.37**	**0**	*e*P	**P**	**23 59 26.8**	**+3.2**
TLY				pmax	pmax		
	comp=Z,68nm,1.4s						
TLY				MLR	MLR		
	comp=Z,3μm,12.0s,MS4.8						
TLY	**Talaya**	**20.37**	**0**	*e*Pn	**P**	**23 59 24.7**	**+1.1**
	comp=Z,46nm,1.1s						
MOY	**Mondy**	**20.44**	**355**	*e*P	**P**	**23 59 27.2**	**+2.8**
MOY				pmax	pmax		
	comp=Z,345nm,2.4s						
IRK	**Irkutsk**	**20.94**	**1**	*e*P	**P**	**23 59 31.8**	**+2.0**
IRK				pmax	pmax		
	comp=Z,247nm,1.9s						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**23 59 31.0**	**+0.1**
	comp=Z,75nm,0.7s,mb5.1,baz=264,slow=11,SNR=93						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**23 59 31.0**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,75nm,0.7s,mb5.1						
CN2	**Changchun**	**21.33**	**48**	*e*P	**P**	**23 59 33.0**	**-1.1**
CN2				*es*P	sP	23 59 39.5	+1.3
CN2				pmax	pmax		
	comp=Z,240nm,0.8s,mb5.6						
CN2				pmax	pmax		
	comp=Z,2μm,5.0s						
CN2				LR	LR		
	comp=N,2μm,12.0s,MS4.7						
CN2				LR	LR		
	comp=E,1μm,12.0s,MS4.7						
CN2				LR	LR		
	comp=Z,2μm,14.0s,MS4.7						
MK31	**Makanchi Array**	**22.51**	**319**	*e*P	**P**	**23 59 47.1**	**+0.4**
MKAR	**Makanchi Array**	**22.51**	**319**	P	**P**	**23 59 47.5**	**+0.9**
	comp=Z,82nm,1.0s,mb5.1,baz=124,slow=11,SNR=72						
MKAR	**Makanchi Array**	**22.51**	**319**	P	**P**	**23 59 47.5**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,82nm,1.0s						
NDI	**New Delhi**	**22.91**	**270**	*e*P	**P**	**23 59 49.0**	**-2.2**
NDI				*e*S	**S**	**00 03 56.0**	**-5.2**
KSH	**Kashi**	**23.84**	**298**	*e*P	**P**	**00 00 04.1**	**+3.7**
KSH				*ep*P		00 00 08.5	
KSH				*es*P	sP	00 00 11.2	+6.5
KSH				*e*PP		00 00 38.0	
KSH				*e*PcP	PcP	00 03 46.0	+2.6
KSH				*e*S	**S**	**00 04 18.5**	**+2.4**
KSH				*es*S	sS	00 04 25.2	+4.1
KSH				*e*SS		00 05 11.3	
KSH				*e*ScP	ScP	00 07 22.1	+0.3
KSH				*e*PcS	PcS	00 07 24.1	+1.3
KSH				*e*ScS	ScS	00 11 08.3	-0.3
KSH				pmax	pmax		
	comp=Z,390nm,2.5s,mb5.4						
KSH				LR	LR		
	comp=N,2μm,7.7s						
KSH				LR	LR		
	comp=E,2μm,10.7s						
ULHL	**Ulaho**l	**24.33**	**304**	P	**P**	**00 00 07.3**	**+2.4**
	SNR=40						
MDJ	**Mudanjiang**	**24.36**	**50**	P	**P**	**00 00 04.3**	**-0.8**
MDJ				pP		00 00 07.2	
MDJ				sP	sP	00 00 08.6	-0.8
MDJ				S	**S**	**00 04 24.1**	**-0.3**
MDJ				sS	sS	00 04 29.3	-0.1
MDJ				ScP	ScP	00 07 22.5	-0.6
MDJ				PcS	PcS	00 07 23.8	-0.3
MDJ				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,220nm,3.1s						
MDJ				LR	LR		
	comp=N,1μm,15.5s,MS4.6						
MDJ				LR	LR		
	comp=E,870nm,12.9s,MS4.6						
MDJ				LR	LR		
	comp=Z,2μm,11.3s,MS4.7						
KZA	**Kyzart**	**24.99**	**303**	P	**P**	**00 00 14.1**	**+3.2**
	SNR=65						
TKM2	**Tokmak 2**	**25.00**	**305**	P	**P**	**00 00 13.0**	**+2.2**
	SNR=34						
TKM2	**Tokmak 2**	**25.00**	**305**	PFAKE		00 00 20.0	+9.1
TKM2				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						
KBK	**Karagaybulak**	**25.37**	**305**	P	**P**	**00 00 16.7**	**+2.4**
	SNR=47						
UCH	**Uchtor**	**25.56**	**303**	P	**P**	**00 00 20.9**	**+4.9**
	SNR=44						
UCH	**Uchtor**	**25.56**	**303**	PFAKE		00 00 30.0	+14
UCH				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
CHMS	**Chumysh**	**25.61**	**305**	P	**P**	**00 00 19.9**	**+3.4**
	SNR=6.4						
FRU	**Bishkek**	**25.65**	**305**	*i* P	**P**	**00 00 20.0**	**+3.1**
FRU				pmax	pmax		
	comp=Z,60nm,1.8s,mb4.8						
FRU				MLR	MLR		
	comp=Z,1μm,10.0s,MS4.6						
AAK	**Ala-Archa**	**25.68**	**304**	P	**P**	**00 00 21.1**	**+4.0**
	comp=Z,614nm,0.8s,mb6.2,SNR=37						
AAK	**Ala-Archa**	**25.68**	**304**	P	**P**	**00 00 20.7**	**+3.6**
	SNR=57						
AAK	**Ala-Archa**	**25.68**	**304**	P	**P**	**00 00 19.3**	**+2.2**
	comp=Z,58nm,0.8s,mb5.2,baz=101,slow=6.5,SNR=102						
AAK	**Ala-Archa**	**25.68**	**304**	*c i* P	**P**	**00 00 19.6**	**+2.5**
AAK				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.0						
AAK	**Ala-Archa**	**25.68**	**304**	*e*P	**P**	**00 00 20.6**	**+3.5**
	comp=Z,94nm,0.9s,mb5.3						
AAK				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
USP	**Ospenovka**	**25.87**	**306**	P	**P**	**00 00 22.0**	**+3.2**
	SNR=53						
KULM	**Kulim**	**26.01**	**187**	*e*P	**P**	**00 00 19.6**	**-0.7**
AML	**Almayashu**	**26.12**	**303**	P	**P**	**00 00 24.5**	**+3.4**
	SNR=55						
EKS2	**Erkin-Say**	**26.20**	**304**	P	**P**	**00 00 26.4**	**+4.6**
	SNR=27						
EKS2	**Erkin-Say**	**26.20**	**304**	PFAKE		00 00 30.0	+8.2
EKS2				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
ZAA0	**Zalesovo Array**	**26.33**	**335**	*e*P	**P**	**00 00 23.5**	**+0.6**
ZALV	**Zalesovo Beam**	**26.33**	**335**	P	**P**	**00 00 23.3**	**+0.4**
	comp=Z,50nm,0.9s,mb5.0,baz=134,slow=8.5,SNR=47						
ZALV	**Zalesovo Beam**	**26.33**	**335**	P	**P**	**00 00 23.3**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.0						
HYB	**Hyderabad**	**26.53**	**244**	*i* P	**P**	**00 00 23.0**	**-2.0**
KURK	**Kurchatov**	**26.80**	**324**	P	**P**	**00 00 27.7**	**+0.6**
	comp=Z,48nm,0.9s,mb5.0,baz=127,slow=9.4,SNR=55						
KURK	**Kurchatov**	**26.80**	**324**	P	**P**	**00 00 27.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.0						
KURK	**Kurchatov**	**26.80**	**324**	*e*P	**P**	**00 00 27.8**	**+0.7**
KURK				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
KBL	**Kabul**	**29.04**	**286**	*e*P	**P**	**00 00 48.2**	**+0.8**
KBL				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
KBL	**Kabul**	**29.04**	**286**	*e*P	**P**	**00 00 48.1**	**+0.8**
	comp=Z,32nm,0.9s,mb5.0						
MAJO	**Matsushiro**	**29.15**	**70**	*e*P	**P**	**00 00 47.8**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
MAJO	**Matsushiro**	**29.15**	**70**	*e*P	**P**	**00 00 47.8**	**-0.6**
	comp=Z,10nm,0.8s,mb4.6						
MAT	**Matsushiro**	**29.15**	**70**	P	**P**	**00 00 48.0**	**-0.3**
MJAR	**Matsushiro Arr**	**29.16**	**70**	P	**P**	**00 00 47.3**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.2,baz=269,slow=9.6,SNR=7.5						
MJAR	**Matsushiro Arr**	**29.16**	**70**	P	**P**	**00 00 47.3**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HABR	**Khabarovsk**	**29.38**	**45**	P	**P**	**00 00 48.4**	**-1.8**
HABR				*e**PP	pP	00 00 58.1	+4.8
HABR				*e*		00 01 42.6	
HABR				*e*		00 03 54.1	
HABR				S	**S**	**00 05 39.7**	**-4.0**
HABR				*e*SS	SS	00 07 08.6	-40
HABR				*e*		00 11 27.3	
HABR				MLR	MLR		
	comp=Z,598nm,18.0s,MS4.3						
KSM	**Kuching**	**30.35**	**166**	*e*P	**P**	**00 00 58.9**	**-0.2**
BVAR	**Borovoye Array**	**32.33**	**322**	P	**P**	**00 01 17.2**	**+1.0**
	comp=Z,5.1nm,0.6s,mb4.5,baz=121,slow=9.0,SNR=16						
BVAR				PcP	PcP	00 04 03.3	-0.5
	comp=Z,5.2nm,0.7s,baz=131,slow=3.5,SNR=8.8						
BVAR	**Borovoye Array**	**32.33**	**322**	P	**P**	**00 01 17.2**	**+1.0**
BVAR						00 04 03.3	
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**32.40**	**322**	P	**P**	**00 01 18.1**	**+1.3**
	comp=Z,123nm,1.2s,mb5.6,SNR=5.7						
BRVK	**Borovoye**	**32.40**	**322**	*e*P	**P**	**00 01 18.1**	**+1.3**
ASAJ	**Asahikawa**	**33.15**	**56**	P	**P**	**00 01 24.6**	**+1.1**
	comp=Z,3.2nm,0.3s,mb4.7,baz=267,slow=13,SNR=7.5						
ASAJ	**Asahikawa**	**33.15**	**56**	P	**P**	**00 01 24.6**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**33.82**	**51**	*e*P	**P**	**00 01 29.0**	**-0.3**
YSS				*e*		00 01 35.0	
YSS				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.4						
YSS				MLR	MLR		
	comp=N,600nm,16.0s						
YSS	**Yuzh-Sakhalins**	**33.82**	**51**	*e*P	**P**	**00 01 29.1**	**-0.2**
YSS				LR	LR		
	comp=Z,202nm,20.0s,MS3.8						
YAK	**Yakutsk**	**35.11**	**21**	*e*P	**P**	**00 01 39.4**	**-0.8**
YAK				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.4s						
YAK				MLR	MLR		
	comp=Z,2μm,10.0s,MS5.1						
YAK				MLR	MLR		
	comp=N,790nm,10.0s,MS5.1						
YAK				MLR	MLR		
	comp=E,2μm,13.0s,MS5.1						
YAK	**Yakutsk**	**35.11**	**21**	*e*P	**P**	**00 01 40.4**	**+0.2**
	comp=E,56nm,0.7s,mb5.6						
YAK				LR	LR		
	comp=Z,986nm,20.0s,MS4.6						
ABKT	**Ailbek**	**37.66**	**293**	P	**P**	**00 02 04.3**	**+2.0**
	comp=Z,638nm,0.7s,mb6.5,SNR=36						
AKTK	**Aktyubinsk**	**38.64**	**313**	P	**P**	**00 02 11.1**	**+0.7**
AKTO	**Aktyubinsk**	**38.64**	**313**	P	**P**	**00 02 11.1**	**+0.7**
	comp=Z,6.6nm,0.5s,mb4.6,baz=108,slow=9.0,SNR=24						
AKTO	**Aktyubinsk**	**38.64**	**313**	P	**P**	**00 02 11.1**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
SVE	**Sverdlovsk**	**39.05**	**324**	⇓*e*P	**P**	**00 02 15.4**	**+1.6**
SVE				pmax	pmax		
	comp=Z,84nm,1.1s,mb5.4						
KAPI	**Kappang**	**39.29**	**154**	P	**P**	**00 02 14.5**	**-1.7**
	comp=Z,26nm,0.8s,mb5.0,baz=324,slow=5.8,SNR=14						
ARU	**Arti**	**39.98**	**322**	P	**P**	**00 02 22.0**	**+0.5**
	comp=Z,524nm,0.8s,mb6.3,SNR=26						
ARU	**Arti**	**39.98**	**322**	*d i* P	**P**	**00 02 22.1**	**+0.6**
ARU				*e*		00 03 54.1	
ARU				S	**S**	**00 08 29.8**	**+3.1**
ARU				pmax	pmax		
	comp=Z,151nm,1.7s,mb5.5						
ARU	**Arti**	**39.98**	**322**	*e*P	**P**	**00 02 22.2**	**+0.8**
	comp=Z,86nm,0.9s,mb5.5						
ARU				LR	LR		
	comp=Z,847nm,19.0s,MS4.6						
SOKR	**Solikamsk**	**41.96**	**326**	*c i* P	**P**	**00 02 39.1**	**+1.3**
SOKR				pmax	pmax		
	comp=Z,180nm,1.3s,mb5.5						
TIXI	**Tiksi**	**42.66**	**12**	*e*P	**P**	**00 02 42.7**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,679nm,14.0s,MS4.7						
TIXI	**Tiksi**	**42.66**	**12**	*e*P	**P**	**00 02 43.0**	**-0.4**
	comp=Z,32nm,0.7s,mb5.2						
SEY	**Seymchan**	**44.17**	**30**	⇓*i*P	**P**	**00 02 56.1**	**+0.5**
PETK	**Petropavlovsk-**	**44.40**	**44**	P	**P**	**00 02 57.3**	**-0.3**
	comp=Z,16nm,0.9s,mb4.7,baz=229,slow=4.1,SNR=9.4						
PETK	**Petropavlovsk-**	**44.40**	**44**	P	**P**	**00 02 57.3**	**-0.3**
PETK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MAK	**Makhachkala**	**45.39**	**301**	*e*P	**P**	**00 03 06.7**	**+1.0**
MAK				pmax	pmax		
	comp=Z,105nm,1.4s,mb5.5						
MAK				MLR	MLR		
	comp=Z,651nm,11.0s,MS4.8						
MTA	**Mtatsminda**	**47.52**	**300**	P	**P**	**00 03 22.5**	**+0.1**
TBLG	**Delisi**	**47.56**	**300**	*e*P	**P**	**00 03 23.7**	**+1.0**
TBLG	**Delisi**	**47.56**	**300**	P	**P**	**00 03 23.7**	**+1.0**
UMR	**Umm Al-Rimmam**	**47.71**	**283**	*e*P	**P**	**00 03 23.4**	**-0.7**
UMR				AMb	AMB	00 03 27.3	
	comp=Z,99nm,1.4s,mb5.7						
GNI	**Garni**	**47.77**	**298**	*de*P	**P**	**00 03 25.7**	**+1.3**
GNI				pmax	pmax		
	comp=Z,118nm,1.7s						
GNI	**Garni**	**47.77**	**298**	*e*P	**P**	**00 03 25.9**	**+1.5**
	comp=Z,86nm,1.3s,mb5.6						
GNI				LR	LR		
	comp=Z,590nm,20.0s,MS4.6						
QRN	**Al-Qurain**	**47.78**	**282**	*e*P	**P**	**00 03 23.6**	**-1.0**
QRN				AMb	AMB	00 03 27.2	
	comp=Z,91nm,1.3s,mb5.7						
KBD	**Kabd**	**47.84**	**283**	*e*P	**P**	**00 03 24.3**	**-0.8**
KBD				AMb	AMB	00 03 28.4	
	comp=Z,77nm,1.2s,mb5.6						
MIB	**Mutribah**	**47.95**	**283**	*e*P	**P**	**00 03 24.9**	**-1.0**
MIB				AMb	AMB	00 03 26.9	
	comp=Z,174nm,1.0s,mb6.0						
GOR	**Gori**	**47.99**	**300**	P	**P**	**00 03 26.8**	**+0.7**
RDF	**Al-Radifah**	**48.04**	**282**	*e*P	**P**	**00 03 26.0**	**-0.6**
RDF				AMb	AMB	00 03 30.4	
	comp=Z,172nm,1.5s,mb5.9						
ZEI	**Tsey**	**48.05**	**301**	*e*P	**P**	**00 03 25.6**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
KEH	**Kehvi**	**48.08**	**301**	P	**P**	**00 03 27.1**	**+0.4**
ONI	**Oni**	**48.40**	**301**	P	**P**	**00 03 30.6**	**+1.4**
GOF	**Gofitskoye**	**48.43**	**304**	⇑*i*P	**P**	**00 03 23.2**	**-6.2**
GOF				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.6						
DGAR	**Diego Garcia**	**48.63**	**223**	PFAKE		00 03 40.0	+8.8
DGAR				LR	LR		
	comp=Z,461nm,19.0s,MS4.5						
KIV	**Kislovodsk**	**48.79**	**303**	P	**P**	**00 03 33.6**	**+1.4**
	comp=Z,544nm,1.0s,mb6.5,SNR=19						
KIV	**Kislovodsk**	**48.79**	**303**	*e*P	**P**	**00 03 32.7**	**+0.5**
KIV				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.8						
KIV				MLR	MLR		
	comp=Z,387nm,17.0s,MS4.5						
KIV	**Kislovodsk**	**48.79**	**303**	*e*P	**P**	**00 03 32.9**	**+0.7**
KIV				LR	LR		
	comp=Z,877nm,20.0s,MS4.7						
VRHR	**Novokhopersk**	**49.05**	**313**	*e*P	**P**	**00 03 33.9**	**-0.1**
VRHR				pmax	pmax		
	comp=Z,90nm,0.6s,mb6.0						
VRHR				pmax	pmax		
	comp=N,40nm,0.4s						
VRHR				pmax	pmax		
	comp=E,20nm,0.3s						
BHD	**Baghdad**	**49.45**	**289**	*i* P	**P**	**00 03 34.0**	**-3.4**
BHD				*e*S	**S**	**00 10 40.0**	**-4.8**
ARTV	**Artvin**	**49.73**	**300**	*i* P	**P**	**00 03 40.6**	**+1.2**
DAGI	**Agillar**	**49.75**	**299**	*i* P	**P**	**00 03 39.8**	**+0.2**
DBOC	**Borcka**	**49.89**	**300**	*i* P	**P**	**00 03 41.8**	**+1.1**
DDEM	**Demirkent**	**49.91**	**299**	*i* P	**P**	**00 03 42.2**	**+1.4**
VORD	**Divnogorie**	**50.52**	**312**	*e*P	**P**	**00 03 44.7**	**-0.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VORD				pmax	pmax		
	comp=N,10.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,30nm,0.7s						
VOR	**Voronezh**	**50.55**	**313**	*e*P	**P**	**00 03 44.0**	**-1.4**
VOR				pmax	pmax		
	comp=Z,160nm,0.8s,mb6.0						
VSR	**Storozhevoye**	**50.59**	**313**	*e*P	**P**	**00 03 45.7**	**-0.1**
VSR				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
VSR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,70nm,0.8s						
KLMR	**Klimovskoe**	**50.62**	**325**	*e*P	**P**	**00 03 45.6**	**-0.3**
KLMR				pmax	pmax		
	comp=Z,155nm,1.3s,mb5.8						
SOC	**Sochi**	**50.97**	**303**	*c i* P	**P**	**00 03 49.2**	**+0.4**
SOC				*e**PP	pP	00 03 57.3	+5.3
SOC				*e*		00 05 43.4	
SOC				*e*PPP		00 06 45.1	
SOC				*e*S	**S**	**00 11 03.2**	**-2.5**
SOC				*e*SS	SS	00 14 40.5	+0.2
SOC				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
BILL	**Bilibino**	**51.22**	**25**	*d i* P	**P**	**00 03 49.9**	**-0.4**
BILL				*e*		00 03 57.8	
BILL				*e*		00 05 46.7	
BILL				pmax	pmax		
	comp=Z,71nm,1.2s,mb5.5						
BILL	**Bilibino**	**51.22**	**25**	*e*P	**P**	**00 03 50.1**	**-0.2**
	comp=Z,55nm,1.0s,mb5.4						
BILL				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
MOS	**Moscow**	**51.39**	**319**	*e*P	**P**	**00 03 50.9**	**-0.8**
MOS				*e*		00 05 48.3	
MOS				*e*S	**S**	**00 11 09.1**	**-2.0**
MOS				pmax	pmax		
	comp=Z,137nm,1.0s,mb5.8						
MOS				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.9						
MOS				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.0						
MOS				MLR	MLR		
	comp=E,800nm,18.0s						
KAKA	**Kakadu**	**51.82**	**143**	*e*P	**P**	**00 03 52.6**	**-2.8**
	comp=E,22nm,0.8s,mb5.2						
KAKA	**Kakadu**	**51.82**	**143**	*e*P	**P**	**00 03 52.3**	**-3.1**
	comp=E,57nm,0.8s,mb5.5						
OBN	**Obninsk**	**52.00**	**318**	P	**P**	**00 03 56.4**	**+0.1**
	comp=E,330nm,1.6s,mb6.0,SNR=6.4						
OBN	**Obninsk**	**52.00**	**318**	⇓*i*P	**P**	**00 03 56.1**	**-0.2**
OBN				*e*		00 04 04.4	
OBN				*e*		00 05 08.0	
OBN				*e*		00 05 54.7	
OBN				pmax	pmax		
	comp=Z,121nm,1.7s,mb5.5						
OBN	**Obninsk**	**52.00**	**318**	*e*P	**P**	**00 03 56.2**	**-0.1**
	comp=Z,86nm,1.2s,mb5.5						
OBN				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
ANN	**Anapa**	**52.41**	**305**	*e*P	**P**	**00 03 52.6**	**-6.9**
ANN				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.6						
MALT	**Malatya**	**52.94**	**297**	*e*P	**P**	**00 04 04.5**	**+1.0**
MALT				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
MALT				MLR	MLR		
	comp=Z,863nm,20.0s,MS4.8						
MALT	**Malatya**	**52.94**	**297**	*e*P	**P**	**00 04 04.5**	**+1.0**
	comp=Z,23nm,1.3s,mb5.0						
MALT				LR	LR		
	comp=Z,863nm,20.0s,MS4.8						
MALT	**Malatya**	**52.94**	**297**	⇑*i*P	**P**	**00 04 04.9**	**+1.4**
LVZ	**Lovozero**	**53.47**	**334**	*c i* P	**P**	**00 04 06.4**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**53.51**	**154**	*e*P	**P**	**00 04 06.4**	**-1.4**
	comp=Z,28nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.51**	**154**	*e*P	**P**	**00 04 07.2**	**-0.6**
	comp=Z,19nm,1.0s,mb5.0						
FITZ				*e*PcP	PcP	00 05 14.4	-0.3
ERBA	**Erbaa**	**53.67**	**300**	*i* P	**P**	**00 04 09.3**	**+0.5**
GZT	**Gaziantep**	**53.83**	**296**	*i* P	**P**	**00 04 10.9**	**+0.8**
APA	**Apatity**	**53.91**	**333**	⇓*e*P	**P**	**00 04 12.0**	**+1.8**
APA				MLR	MLR		
	comp=Z,2μm,15.0s,MS5.4						
TOKA	**Tokat**	**53.95**	**299**	*i* P	**P**	**00 04 11.6**	**+0.7**
KUZU	**Kuzuini**	**54.35**	**295**	*i* P	**P**	**00 04 14.5**	**+0.5**
MBWA	**Marble Bar**	**54.42**	**161**	*e*P	**P**	**00 04 13.6**	**-0.9**
MBWA	**Marble Bar**	**54.42**	**161**	*e*P	**P**	**00 04 13.5**	**-0.9**
	comp=Z,32nm,0.9s,mb5.2						
MBWA				LR	LR		
	comp=Z,536nm,20.0s,MS4.6						
JOF	**Joensuu**	**54.60**	**328**	*e*P	**P**	**00 04 15.0**	**-0.3**
JOF				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.4						
JOF	**Joensuu**	**54.60**	**328**	*ep*	**P**	**00 04 15.0**	**-0.3**
	comp=Z,29nm,0.7s,mb5.4						
SIM	**Simferopol'**	**54.71**	**305**	*e*P	**P**	**00 04 17.0**	**+0.6**
SIM				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.4						
COBT	**Iskenderun**	**55.06**	**295**	*i* P	**P**	**00 04 20.0**	**+0.9**
CTKT	**Corum**	**55.14**	**300**	*i* P	**P**	**00 04 19.8**	**+0.2**
CDAG	**Cicekdag**	**55.69**	**299**	*i* P	**P**	**00 04 23.4**	**-0.2**
ASF	**Jabal al Asfar**	**55.81**	**290**	P	**P**	**00 04 24.7**	**+0.1**
	comp=Z,19nm,0.8s,mb5.1,baz=316,slow=4.1,SNR=37						
ASF	**Jabal al Asfar**	**55.81**	**290**	P	**P**	**00 04 24.7**	**+0.2**
ASF				pmax	pmax		
	comp=Z,19nm,0.9s						
BALT	**Daday**	**55.96**	**302**	*i* P	**P**	**00 04 26.0**	**+0.5**
GULE	**Gulek**	**55.99**	**296**	*i* P	**P**	**00 04 26.8**	**+1.1**
ELDT	**Eldivan**	**56.18**	**300**	*i* P	**P**	**00 04 27.4**	**+0.4**
BR131	**Keskin Array S**	**56.21**	**299**	*e*P	**P**	**00 04 27.3**	**0.0**
BR131				LR	LR		
	comp=Z,370nm,21.0s,MS4.5						
BRTR	**Keskin Array B**	**56.21**	**299**	P	**P**	**00 04 27.3**	**0.0**
	comp=Z,9.1nm,0.8s,mb4.8,baz=97,slow=6.6,SNR=51						
BRTR	**Keskin Array B**	**56.21**	**299**	*ce*P	**P**	**00 04 27.2**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KEV	**Kevo**	**56.35**

CSS Prodhromos 57.78 294 PFAKE 00 04 50.0 +11
CSS LR LR
comp=Z,579nm,19.0s,MS4.7
IIGN Ignalina 57.87 319 *e*P **P** **00 04 39.2 +0.4**
ISAL Salakas 57.89 319 *e*P **P** **00 04 39.3 +0.3**
KIS Kishinev 57.90 309 *e*P **P** **00 04 38.0 -1.1**
KIS MLR MLR
comp=Z,600nm,13.0s,MS4.9
KIS MLR MLR
comp=Z,500nm,14.0s
GAZI Gazipasa 58.19 296 *i* P **P** **00 04 38.2 -3.1**
EIL Elat 58.21 288 P **P** **00 04 41.0 -0.7**
comp=Z,34nm,0.9s,mb5.4,baz=29,slow=4.0,SNR=33
TLCR 58.32 307 ⇑*i*P **P** **00 04 42.2 +0.1**
ESKT Eskisehir 58.34 300 *i* P **P** **00 04 41.7 -0.7**
BOLV Bolvadin 58.49 299 *i* P **P** **00 04 43.5 +0.1**
BORA Eskisehir 58.54 300 *i* P **P** **00 04 43.1 -0.6**
TIRR Tirgusor 58.78 306 *e*P **P** **00 04 44.4 -0.9**
TIRR pmax pmax
comp=Z,16nm,0.9s,mb5.0
TIRR Tirgusor 58.78 306 *e*P **P** **00 04 44.4 -1.0**
comp=Z,16nm,0.9s,mb5.0
WRAB Tennant Creek 58.91 146 P **P** **00 04 46.0 -0.4**
comp=Z,725nm,1.0s,mb6.7,SNR=25
WRAB Tennant Creek 58.91 146 *e*P **P** **00 04 45.6 -0.8**
WRAB LR LR
comp=Z,469nm,19.0s,MS4.6
COEN Coen 58.94 134 *e*P **P** **00 04 46.4 -0.3**
comp=Z,267nm,1.0s,mb6.2
SPITS Spitsbergen Ar 59.03 346 P **P** **00 04 46.9 +0.3**
comp=Z,15nm,0.7s,mb5.2,baz=100,slow=9.4,SNR=24
SPITS Spitsbergen Ar 59.03 346 P **P** **00 04 46.9 +0.3**
SPITS pmax pmax
comp=Z,15nm,0.7s
SPB4 Spitsbergen Ar 59.04 346 *e*P **P** **00 04 47.4 +0.8**
HARR Harsova 59.05 306 ⇓*i*P **P** **00 04 47.4 +0.2**
ISP Isparta 59.08 298 *e*P **P** **00 04 47.4 -0.1**
ISP MLR MLR
comp=Z,693nm,21.0s,MS4.8
ISP Isparta 59.08 298 *e*P **P** **00 04 47.4 -0.1**
ISP LR LR
comp=Z,693nm,21.0s,MS4.8
ISP Isparta 59.08 298 P **P** **00 04 47.4 -0.1**
PSN Preselentsi 59.14 305 P **P** **00 04 48.1 +0.3**
ULDT Uludag 59.43 301 *i* P **P** **00 04 49.8 -0.1**
VRI Vrincioaia 59.57 308 ⇑*i*P **P** **00 04 51.7 +0.9**
PLOR Plostina 59.63 308 ⇓*i*P **P** **00 04 53.2 +2.0**
KHAL Karahalli 59.69 299 *i* P **P** **00 04 51.4 -0.4**
SUW Suwalki 59.87 318 *e*P **P** **00 04 52.6 -0.1**
DEMI Demirci 60.07 300 *i* P **P** **00 04 53.0 -1.4**
DURS Dursunbey 60.08 301 *i* P **P** **00 04 53.9 -0.5**
BURAR Bucovina Array 60.13 310 ⇑*i*P **P** **00 04 54.9 +0.3**
BUR08 Bucovina Ar. S 60.13 310 *e*P **P** **00 04 54.5 -0.1**
BUR08 *e*PcP PcP 00 05 40.6 +0.4
MLR Muntele Rosu 60.20 308 ⇓*i*P **P** **00 04 55.8 +0.7**
DNZL Cakiroluk 60.23 298 *i* P **P** **00 04 54.7 -0.8**
LVV L'vov 60.33 313 *e*P **P** **00 04 56.1 +0.1**
MANT Manisa 60.35 299 *i* P **P** **00 04 55.8 -0.5**
JMB Yambol 60.60 304 P **P** **00 04 59.1 +1.2**
JMB Yambol 60.60 304 P **P** **00 04 59.0 +1.1**
BALY Balya 60.66 301 *i* P **P** **00 04 58.0 -0.4**
SART Tekirdag 60.70 302 *i* P **P** **00 04 58.4 -0.2**
VOIR 60.82 308 ⇓*i*P **P** **00 04 59.8 +0.4**
SZH Strazhica 60.83 305 P **P** **00 04 59.4 -0.1**
MORW Morawa 61.20 167 *e*P **P** **00 05 02.4 +0.5**
KWP Kalwaria Pacla 61.21 313 *e*P **P** **00 05 01.6 -0.3**
KWP pmax pmax
comp=Z,117nm,1.1s,mb5.9
KWP MLR MLR
comp=Z,694nm,19.0s,MS4.8
KWP Kalwaria Pacla 61.21 313 *e*P **P** **00 05 01.6 -0.3**
comp=Z,117nm,1.1s,mb5.9
KWP LR LR
comp=Z,694nm,19.0s,MS4.8
KWP Kalwaria Pacla 61.21 313 ⇓*i*P **P** **00 05 02.6 +0.7**
ALN Alexandroupoli 61.46 303 P **P** **00 05 03.4 -0.3**
DIM Dimitrovgrad 61.47 304 P **P** **00 05 04.0 +0.2**
KDZ Kurdzhali 61.67 304 P **P** **00 05 05.6 +0.4**
TRPA Tarpa 61.73 311 ⇑*i*P **P** **00 05 06.0 +0.5**
RDO Rodhopi 61.74 303 P **P** **00 05 05.7 0.0**
UZH Uzhgorod 61.75 312 *e*P **P** **00 05 05.8 +0.2**
UZH *e* pP 00 05 09.6 +0.8
UZH *e* 00 05 12.6
UZH *e*S **S** **00 13 24.0 -4.4**
UZH *e*SP 00 13 52.6
UZH *e*SS SS 00 17 27.6 -2.0
UZH MLR MLR
comp=N,600nm,12.0s,MS5.2
UZH MLR MLR
comp=E,900nm,12.0s,MS5.2
UZH MLR MLR
comp=Z,500nm,12.0s,MS4.9
ASAR Alice Springs 61.91 148 P **P** **00 05 06.7 -0.2**
comp=Z,22nm,0.9s,mb5.3,baz=333,slow=6.3,SNR=76
ASAR Alice Springs 61.91 148 P **P** **00 05 06.7 -0.2**
ASAR pmax pmax
comp=Z,23nm,0.9s
PLD Plovdiv 62.04 304 P **P** **00 05 07.7 0.0**
RZN Rozhen 62.16 304 P **P** **00 05 08.6 +0.1**
PGB Panagyurishte 62.28 305 P **P** **00 05 10.0 +0.7**
LIA Limnos Island 62.40 302 P **P** **00 05 09.7 -0.4**
NIE Niedzica 62.77 313 *e*P **P** **00 05 13.2 +0.8**
OJC Ojcow 62.85 314 *e*P **P** **00 05 13.1 +0.1**
VTS Vitosha 62.94 305 P **P** **00 05 13.9 +0.2**
APE Apeiranthos 63.08 299 ⇑*i*P **P** **00 05 14.3 -0.4**
OUR Ouranopolis 63.12 303 P **P** **00 05 14.3 -0.6**
SRS Serrai 63.15 304 P **P** **00 05 14.6 -0.5**
KKB Krupnik 63.26 304 P **P** **00 05 15.5 -0.3**
THR1 Thera Island 63.38 298 P **P** **00 05 15.6 -1.1**
SOH Sokhos 63.41 303 P **P** **00 05 16.1 -0.7**
PAIG Paliouri 63.48 302 P **P** **00 05 16.3 -1.0**
PSZ Piszkesteto 63.49 312 *e*P **P** **00 05 17.2 0.0**
PSZ MLR MLR
comp=Z,731nm,20.0s,MS4.9
PSZ Piszkesteto 63.49 312 *e*P **P** **00 05 17.2 0.0**
PSZ LR LR
comp=Z,731nm,20.0s,MS4.9
PSZ Piszkesteto 63.49 312 ⇑*e*P **P** **00 05 18.1 +0.9**
PLG Polygyros 63.50 303 P **P** **00 05 16.7 -0.7**
AOS Alonnisos 63.59 301 P **P** **00 05 17.6 -0.4**
HORT Hortiatis 63.67 303 P **P** **00 05 17.2 -1.4**
LAST Lasithi 63.79 297 P **P** **00 05 19.6 +0.2**
RAC Raciborz 63.88 314 *e*P **P** **00 05 19.8 +0.1**
STIP Stip 63.95 305 *i* P **P** **00 05 19.6 -0.8**
STIP Stip 63.95 305 P **P** **00 05 19.9 -0.5**
OKC Ostrava-Krasne 63.98 314 *e*P **P** **00 05 21.0 +0.6**
OKC AMS AMS 00 34 10.0
comp=Z,1μm,20.0s
XOR Xorichti 64.02 302 P **P** **00 05 20.1 -0.8**
BUD Budapest 64.18 311 ⇑*e*P **P** **00 05 22.5 +0.7**
NOA NORSAR Array B 64.23 327 P **P** **00 05 20.9 -0.9**
comp=Z,11nm,0.8s,mb5.0,baz=73,slow=6.6,SNR=25
NOA NORSAR Array B 64.23 327 P **P** **00 05 21.0 -0.9**
NOA pmax pmax
comp=Z,11nm,0.8s
LIT Litokhoron 64.28 303 P **P** **00 05 21.7 -0.9**
SIVA Sivas 64.35 297 P **P** **00 05 23.1 0.0**
MORC Moravsky Berou 64.38 314 *e*P **P** **00 05 23.4 +0.4**
MORC Moravsky Berou 64.38 314 ⇓*i*P **P** **00 05 23.5 +0.5**
ATAL Atalanti 64.38 301 P **P** **00 05 22.7 -0.6**
LKR Lokris 64.41 301 P **P** **00 05 22.1 -1.4**
NAO01 NORSAR Array S 64.44 327 *e*P **P** **00 05 21.9 -1.4**
comp=Z,8.6nm,0.8s,mb4.8
LTK Loutraki 64.66 300 P **P** **00 05 23.1 -2.0**
DIVS Divibare 64.66 308 P **P** **00 05 25.1 +0.1**
KMBL Kambalda 64.71 163 *e*P **P** **00 05 24.8 -0.4**
comp=Z,119nm,0.9s,mb5.9
KZN Kozani 64.72 303 P **P** **00 05 25.0 -0.5**
AGG Agios Georgios 64.77 302 P **P** **00 05 24.6 -1.2**
KSP Ksiaz 64.79 316 *e*P **P** **00 05 25.5 -0.2**
THL Klokotos Trika 64.81 302 P **P** **00 05 24.2 -1.8**
FNA Florina 64.84 304 P **P** **00 05 24.8 -1.4**
PKSM Moragy 64.85 310 ⇓*i*P **P** **00 05 26.1 -0.1**
KARN Karanos 64.89 297 P **P** **00 05 26.4 -0.3**
DPC Dobruska-Polom 64.93 315 *e*P **P** **00 05 27.4 +0.8**
DPC *e*pP pP 00 05 35.1 +5.2
DPC AMS AMS 00 34 40.0
comp=Z,1μm,18.2s
GVD Gavdhos 64.97 297 P **P** **00 05 26.4 -0.8**
UPC Upice 65.07 315 *e*P **P** **00 05 28.3 +0.8**
OHR Ohrid 65.13 304 *i* P **P** **00 05 27.4 -0.7**
IVA Berane 65.15 306 ⇑*i*P **P** **00 05 28.8 +0.6**
GUR Goura 65.15 301 P **P** **00 05 26.3 -2.0**
NWAO Narrogin (SRO) 65.18 167 *e*P **P** **00 05 28.3 0.0**
comp=Z,265nm,0.9s,mb6.3
NWAO Narrogin (SRO) 65.18 167 *e*P **P** **00 05 28.2 -0.1**
NWAO pmax pmax
comp=Z,29nm,0.8s
NWAO Narrogin (SRO) 65.18 167 *e*P **P** **00 05 28.2 -0.1**
comp=Z,29nm,0.8s,mb5.4
PVY Plav 65.19 306 ⇑*i*P **P** **00 05 27.4 -1.1**
PVY Plav 65.19 306 ⇑*i*P **P** **00 05 27.4 -1.0**
BCI Bajram Curri 65.20 306 *e*PN **P** **00 05 29.2 +0.6**
EFP Efpalio 65.29 301 P **P** **00 05 28.1 -1.1**
LAKA Lakka 65.31 301 P **P** **00 05 28.5 -0.8**
KBN Korca 65.31 304 *e*PN **P** **00 05 28.3 -1.0**
PLE Pljevlja 65.33 307 *e*P **P** **00 05 29.5 +0.1**
PLE Pljevlja 65.33 307 *e*P **P** **00 05 29.5 +0.1**
PLE Pljevlja 65.33 307 *e*P **P** **00 05 29.5 +0.2**
PUK Puka 65.44 306 *e*PN **P** **00 05 29.7 -0.4**
KONO Kongsberg 65.45 326 *e*P **P** **00 05 28.5 -1.3**
KONO pmax pmax
comp=Z,61nm,1.6s,mb5.4
KONO MLR MLR
comp=Z,935nm,19.0s,MS5.0
KONO Kongsberg 65.45 326 *e*P **P** **00 05 28.5 -1.3**
comp=Z,61nm,1.6s,mb5.4
KONO LR LR
comp=Z,935nm,19.0s,MS5.0
CTA Charters Tower 65.51 136 *e*P **P** **00 05 30.3 -0.4**
comp=Z,17nm,0.9s,mb5.1
CTAO Charters Tower 65.51 136 *e*P **P** **00 05 30.2 -0.5**
CTAO pmax pmax
comp=Z,17nm,0.8s,mb5.1
CTAO MLR MLR
comp=Z,419nm,22.0s,MS4.6
CTAO Charters Tower 65.51 136 *e*P **P** **00 05 30.2 -0.5**
comp=Z,17nm,0.8s,mb5.1
CTAO LR LR
comp=Z,419nm,22.0s,MS4.6
UPM Unac-Piva 65.71 307 ⇑*i*P **P** **00 05 31.1 -0.7**
UPM Unac-Piva 65.71 307 ⇑*i*P **P** **00 05 31.1 -0.7**
RUE Ruedersdorf 65.71 318 *e*P **P** **00 05 31.2 -0.4**
ITM Ithomi 65.73 300 P **P** **00 05 30.5 -1.6**
TTG Podgorica 65.74 306 ⇑*i*P **P** **00 05 31.0 -1.0**
TTG Podgorica 65.74 306 ⇑*i*P **P** **00 05 31.0 -1.0**
TTG Podgorica 65.74 306 ⇑*i*P **P** **00 05 31.0 -1.0**
NKY Niksic 65.79 307 ⇑*i*P **P** **00 05 31.5 -0.8**
NKY Niksic 65.79 307 ⇑*i*P **P** **00 05 31.5 -0.8**
NKY Niksic 65.79 307 ⇑*i*P **P** **00 05 31.5 -0.8**
TREC Trest 65.80 314 *e*P **P** **00 05 33.1 +0.8**
TREC *e*pP pP 00 05 40.9 +5.4
TREC AMS AMS 00 35 10.0
comp=Z,1μm,17.6s
ULC Ulcinj 65.92 306 ⇑*i*P **P** **00 05 32.9 -0.3**
ULC Ulcinj 65.92 306 ⇑*i*P **P** **00 05 32.9 -0.3**
ULC Ulcinj 65.92 306 ⇑*i*P **P** **00 05 32.9 -0.2**
PVCC Panska Ves 65.93 316 *e*P **P** **00 05 33.8 +0.7**
PVCC AMS AMS 00 35 10.0
comp=Z,1μm,21.9s
PYL PYLOS 65.98 300 P **P** **00 05 31.1 -2.5**
FORT Forrest 65.98 157 *e*P **P** **00 05 33.3 -0.2**
comp=Z,40nm,0.8s,mb5.5
FORT Forrest 65.98 157 *e*P **P** **00 05 33.4 -0.1**
IGT Igoumenitsa 66.03 303 P **P** **00 05 32.1 -1.9**
BUM Brajici-Budva 66.04 306 ⇑*i*P **P** **00 05 33.6 -0.4**
BUM Brajici-Budva 66.04 306 ⇑*i*P **P** **00 05 33.6 -0.4**
CONA Conrad Observa 66.04 313 ⇓*i*P **P** **00 05 34.5 +0.6**
comp=Z,46nm,1.7s,mb5.2,SNR=22
BRY Bratogost 66.07 307 ⇑*i*P **P** **00 05 33.1 -1.0**
BRY Bratogost 66.07 307 ⇑*i*P **P** **00 05 33.1 -1.0**
BRY Bratogost 66.07 307 ⇑*i*P **P** **00 05 33.1 -1.0**
PRU Pruhonice 66.13 315 *e*P **P** **00 05 35.2 +0.8**
PRU *e*pP pP 00 05 43.8 +6.1
PRU AMS AMS 00 35 30.0
comp=Z,1μm,16.7s
SRN Sarande 66.14 303 *e*PN **P** **00 05 32.0 -2.7**
BRG Berggiesshubel 66.18 316 *e*P **P** **00 05 34.6 -0.1**
comp=Z,28nm,1.1s,mb5.2
BRG Berggiesshubel 66.18 316 *i* P **P** **00 05 35.8 +1.2**
comp=Z,28nm,1.1s,mb5.2
BRG
comp=N,1μm,16.7s
BRG
comp=E,1μm,19.6s
BRG
comp=Z,2μm,18.6s
BRG Berggiesshubel 66.18 316 *i* P **P** **00 05 35.8 +1.1**
BRG pmax pmax
comp=Z,17nm,1.1s,mb5.0
BRG MLR MLR
comp=N,631nm,16.7s,MS5.0
BRG MLR MLR
comp=E,685nm,19.6s,MS5.0
BRG MLR MLR
comp=Z,1μm,18.6s,MS5.1
ALE Alert 66.21 358 P **P** **00 05 35.6 +1.1**
comp=Z,115nm,1.0s,mb5.9,SNR=15
HCY Herceg Novi 66.26 306 ⇑*i*P **P** **00 05 34.3 -1.1**
HCY Herceg Novi 66.26 306 ⇑*i*P **P** **00 05 34.3 -1.1**
HCY Herceg Novi 66.26 306 ⇑*i*P **P** **00 05 34.3 -1.1**
KOGS Kog 66.32 311 *e*P **P** **00 05 35.9 +0.2**
VLS Valsamata 66.35 301 P **P** **00 05 34.1 -1.9**
KEK Kerkira 66.35 303 P **P** **00 05 34.4 -1.6**
ARSA Arzberg 66.50 312 ⇓*i*P **P** **00 05 36.7 -0.1**
comp=Z,16nm,1.1s,mb5.0,SNR=13
DAG Danmarks Havn 66.55 348 *e*P **P** **00 05 35.0 -1.6**
DAG Danmarks Havn 66.55 348 *i* P **P** **00 05 35.0 -1.6**
CLL Collm 66.58 317 *e*P **P** **00 05 36.8 -0.4**
comp=Z,23nm,1.1s,mb5.1
CLL Collm 66.58 317 *i* P **P** **00 05 36.8 -0.4**
comp=Z,23nm,1.1s,mb5.1
CLL *i* pP pP 00 05 39.3 -1.2
CLL *i* 00 05 46.2
CLL LR LR
comp=Z,1μm,20.1s,MS5.0
CLL Collm 66.58 317 *i* P **P** **00 05 36.8 -0.4**
comp=Z,23nm,1.1s,mb5.1
CLL *i* pP pP 00 05 39.3 -1.2
comp=Z,32nm,1.3s
CLL *i* 00 05 46.2
CLL *e*PP PP 00 08 05.0 +1.5
CLL *e* 00 08 40.0
CLL *e*PPP 00 09 44.0
CLL Lm 00 35 00.0
comp=N,500nm,18.6s
CLL Lm 00 35 00.0
comp=E,700nm,21.0s
CLL Lm 00 35 00.0
comp=Z,1μm,20.1s
SISC Sisak 66.59 310 P **P** **00 05 37.7 +0.2**
SISC Sisak 66.59 310 *i* P **P** **00 05 37.7 +0.2**
STON Ston 66.66 307 P **P** **00 05 36.9 -1.0**
STON Ston 66.66 307 *i* P **P** **00 05 36.9 -1.0**
GROS Grobnik 66.80 311 *i* P **P** **00 05 38.7 -0.1**
PERS Pernice 66.98 312 *i* P **P** **00 05 39.9 0.0**
KHC Kasperske Hory 67.03 314 *e*P **P** **00 05 40.5 +0.4**
KHC *e*pP pP 00 05 49.2 +5.8
KHC AMS AMS 00 36 10.0
comp=Z,1μm,16.6s
GEC2 GERESS Array S 67.06 314 *e*P **P** **00 05 40.5 +0.2**
comp=Z,26nm,1.1s,mb5.2
GEC2 GERESS Array S 67.06 314 *e*P **P** **00 05 40.5 +0.2**
GEC2 pmax pmax
comp=Z,26nm,1.1s,mb5.2
GEC2 GERESS Array S 67.06 314 *e*P **P** **00 05 40.5 +0.2**
comp=Z,26nm,1.1s,mb5.2
GERES GERESS Array B 67.06 314 P **P** **00 05 40.3 -0.1**
comp=Z,9.2nm,0.9s,mb4.8,baz=76,slow=5.6,SNR=57
GERES GERESS Array B 67.06 314 P **P** **00 05 40.3 0.0**
GERES pmax pmax
comp=Z,9.0nm,0.9s
MOA Molln 67.07 313 *i* P **P** **00 05 40.8 +0.3**
comp=Z,37nm,1.4s,mb5.2,SNR=13
LEGS Legarje 67.11 311 *i* P **P** **00 05 40.8 +0.1**
BSEG Bad Segeberg 67.14 320 *e*P **P** **00 05 41.2 +0.5**
comp=Z,40nm,1.0s,mb5.4
BSEG Bad Segeberg 67.14 320 *e*P **P** **00 05 41.2 +0.5**
BSEG pmax pmax
comp=Z,40nm,1.0s,mb5.4
TTA Tatalina 67.14 29 *e*P **P** **00 05 40.6 0.0**
TANN Tannenbergstha 67.22 316 *e*P **P** **00 05 41.4 0.0**
comp=Z,21nm,1.1s,mb5.1
PDKS Podkum 67.27 311 *i* P **P** **00 05 41.9 +0.1**
NKC Novy Kostel 67.30 316 *e*P **P** **00 05 42.4 +0.6**
NKC *e*pP pP 00 05 50.3 +5.2
NKC AMS AMS 00 36 10.0
comp=Z,900nm,16.9s
BOJS Bojanci 67.31 310 *i* P **P** **00 05 42.4 +0.3**
OBKA Obir 67.39 312 ⇑*i*P **P** **00 05 42.5 0.0**
comp=Z,16nm,0.9s,mb5.0,SNR=8.6
WET Wettzell 67.45 315 *e*P **P** **00 05 43.1 +0.3**
comp=Z,23nm,1.2s,mb5.1
WET Wettzell 67.45 315 *e*P **P** **00 05 43.1 +0.3**
WET pmax pmax
comp=Z,23nm,1.2s,mb5.1
WET Wettzell 67.45 315 *e*P **P** **00 05 43.1 +0.3**
comp=Z,23nm,1.2s,mb5.1
COLD Coldfoot 67.50 24 *e*P **P** **00 05 43.1 +0.3**
comp=Z,52nm,1.0s,mb5.5
ROTZ Rotzenmuhle 67.62 315 *e*P **P** **00 05 44.4 +0.5**
comp=Z,39nm,1.1s,mb5.3
MOX Moxa 67.64 317 *e*P **P** **00 05 44.2 +0.2**
comp=Z,49nm,1.7s,mb5.3
MOX Moxa 67.64 317 *e*P **P** **00 05 44.0 0.0**
comp=Z,31nm,1.3s,mb5.2
NRDL Niedersach Rie 67.80 319 *e*P **P** **00 05 45.4 +0.4**
comp=Z,40nm,1.1s,mb5.4
CLZ Clausthal 67.90 318 *e*P **P** **00 05 45.9 +0.3**
comp=Z,49nm,1.1s,mb5.5
CLZ Clausthal 67.90 318 *e*P **P** **00 05 45.9 +0.3**
CLZ pmax pmax
comp=Z,49nm,1.1s,mb5.5
CLZ Clausthal 67.90 318 *e*P **P** **00 05 45.9 +0.3**
comp=Z,49nm,1.1s,mb5.5
NVLJ Novalja 67.92 310 P **P** **00 05 44.8 -1.1**
NVLJ Novalja 67.92 310 *i* P **P** **00 05 44.8 -1.1**
KBA Koelnbreinsper 67.94 312 ⇓*i*P **P** **00 05 46.1 +0.2**
comp=Z,22nm,1.2s,mb5.1,SNR=7.2
VOY Vojsko 68.00 311 *e*P **P** **00 05 45.7 -0.6**
VOY *e* pP 00 05 50.2 +0.6
CADS Cadrg 68.02 312 *i* P **P** **00 05 45.8 -0.7**
RJOB Jochberg 68.03 313 *e*P **P** **00 05 47.0 +0.5**
comp=Z,21nm,1.3s,mb5.0
SVW2 Sparrevohn 68.09 31 *e*P **P** **00 05 45.3 -1.4**
CHUM Lake Minchumin 68.24 28 *e*P **P** **00 05 47.5 0.0**
comp=Z,42nm,1.3s,mb5.3
GRA1 Grafenberg Arr 68.24 316 *e*P **P** **00 05 48.2 +0.4**
comp=Z,50nm,1.1s,mb5.5
GRA1 LR LR
comp=Z,3μm,19.6s,MS5.5
GRF Grafenberg Arr 68.24 316 *e*P **P** **00 05 48.2 +0.4**
comp=Z,50nm,1.1s,mb5.5
GRF *e*L 00 28 37.4
comp=Z,3μm,19.6s
GRF Grafenberg Arr 68.24 316 *e*P **P** **00 05 48.2 +0.4**
GRF pmax pmax
comp=Z,50nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,3μm,19.6s,MS5.5
GRF Grafenberg Arr 68.24 316 *e*P **P** **00 05 48.2 +0.4**
GRF pmax pmax
comp=Z,50nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,3μm,19.6s,MS5.5
GRF Grafenberg Arr 68.24 316 *e*P **P** **00 05 48.2 +0.4**
comp=Z,50nm,1.1s,mb5.5
GRF LR LR
comp=Z,3μm,19.6s,MS5.5
UBBA Unterbreizbach 68.52 317 *e*P **P** **00 05 49.3 -0.2**
comp=Z,22nm,1.8s,mb4.8
BPAW Bear Paw Mtn. 68.66 27 *e*P **P** **00 05 50.4 +0.2**
comp=Z,42nm,1.1s,mb5.3
TIP Timpagrande 68.73 304 *e*P **P** **00 05 51.4 +0.4**
comp=Z,53nm,1.2s,mb5.3
TIP PcP PcP 00 06 15.6 -0.2
TIP LR LR
comp=Z,305nm,20.0s,MS4.5
PPLA Purkeypile 68.73 28 *e*P **P** **00 05 51.1 +0.5**
comp=Z,138nm,1.6s,mb5.6
FUR Furstenfeldbru 68.81 314 *e*P **P** **00 05 51.9 +0.5**
comp=Z,83nm,1.0s,mb5.6
FUR Furstenfeldbru 68.81 314 *e*P **P** **00 05 51.9 +0.5**
FUR pmax pmax
comp=Z,83nm,1.0s,mb5.6
FUR Furstenfeldbru 68.81 314 *e*P **P** **00 05 51.9 +0.5**
comp=Z,83nm,1.0s,mb5.6
WTTA Wattenberg 68.94 313 *i* P **P** **00 05 52.3 0.0**
comp=Z,52nm,1.7s,mb5.2,SNR=14
WATA Walderalm 68.95 313 ⇓*i*P **P** **00 05 52.0 -0.3**
comp=Z,7.0nm,0.7s,mb4.7,SNR=6.5
IBBN Ibbenburen 69.19 319 *e*P **P** **00 05 53.7 0.0**
comp=Z,29nm,1.2s,mb5.1
MOTA Moosalm 69.24 313 ⇓*i*P **P** **00 05 53.8 -0.3**
comp=Z,38nm,1.3s,mb5.2,SNR=8.6
RETA Reutte 69.40 314 ⇓*i*P **P** **00 05 54.9 -0.2**
comp=Z,16nm,1.3s,mb4.8,SNR=7.7
COLA College 69.47 26 *e*P **P** **00 05 55.5 +0.3**
COLA pmax pmax
comp=Z,52nm,0.9s,mb5.5
COLA MLR MLR
comp=Z,942nm,20.0s,MS5.0
COLA College 69.47 26 *e*P **P** **00 05 55.5 +0.3**
comp=Z,52nm,0.9s,mb5.5
COLA LR LR
comp=Z,942nm,20.0s,MS5.0
WIT Witteveen 69.59 320 *e*P **P** **00 05 57.3 +1.2**
comp=Z,144nm,0.8s,mb5.9
FETA Feichten 69.61 313 ⇓*i*P **P** **00 05 56.3 -0.1**
comp=Z,30nm,1.0s,mb5.2,SNR=15
RSO Redoubt South 69.61 31 *e*P **P** **00 05 56.3 +0.1**
MCK McKinley 69.63 27 *e*P **P** **00 05 56.0 -0.2**
MCK *e* 00 06 18.8
TNS Taunus Mts 69.66 317 *e*P **P** **00 05 56.6 0.0**
comp=Z,31nm,1.1s,mb5.2
TNS Taunus Mts 69.66 317 *e*P **P** **00 05 56.6 0.0**
TNS pmax pmax
comp=Z,31nm,1.1s,mb5.2
TNS Taunus Mts 69.66 317 *e*P **P** **00 05 56.6 0.0**
comp=Z,31nm,1.1s,mb5.2
TOD Tromm 69.71 316 *e*P **P** **00 05 57.3 +0.4**
AQU L'Aquila 69.78 308 *e*P **P** **00 05 57.9 +0.4**
AQU pmax pmax
comp=Z,40nm,1.0s,mb5.3
AQU MLR MLR
comp=Z,493nm,19.0s,MS4.8
AQU L'Aquila 69.78 308 *e*P **P** **00 05 57.9 +0.4**
comp=Z,40nm,1.0s,mb5.3
AQU LR LR
comp=Z,493nm,19.0s,MS4.8
AQU L'Aquila 69.78 308 ⇓*i*P **P** **00 05 57.9 +0.4**
STU Stuttgart 69.83 315 *e*P **P** **00 05 57.5 -0.2**
comp=Z,37nm,1.1s,mb5.2
STU Stuttgart 69.83 315 *e*P **P** **00 05 57.9 +0.2**
STU *e* 00 06 20.2
STU pmax pmax
comp=Z,28nm,0.9s,mb5.2
STU Stuttgart 69.83 315 *e*P **P** **00 05 57.9 +0.3**
comp=Z,28nm,0.9s,mb5.2
STU *e*PcP PcP 00 06 20.2 0.0
BUG Bochum--Univer 69.83 318 *e*P **P** **00 05 57.7 +0.1**
comp=Z,30nm,1.2s,mb5.1
WTSB Winterswijk 69.87 319 *e*P **P** **00 05 58.0 +0.1**
comp=Z,25nm,1.0s,mb5.1
ABH Altenburg 70.33 317 *e*P **P** **00 06 01.2 +0.4**
SPAK Spaichingen-Ko 70.35 315 *e*P **P** **00 06 01.4 +0.5**
KMBO Kilima Mbogo 70.47 256 P **P** **00 06 01.7 -0.5**
comp=Z,1.9nm,0.7s,mb4.1,baz=49,slow=12,SNR=8.6
KMBO Kilima Mbogo 70.47 256 *e*P **P** **00 06 00.9 -1.2**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO MLR MLR
comp=Z,254nm,19.0s
KMBO Kilima Mbogo 70.47 256 *e*P **P** **00 06 00.9 -1.2**
comp=Z,4.3nm,0.9s,mb4.4
KMBO LR LR
comp=Z,254nm,19.0s,MS4.5
BFO Black Forest 70.53 315 P **P** **00 06 02.3 +0.3**
comp=Z,106nm,1.0s,mb5.7,SNR=9.1
BFO Black Forest 70.53 315 *e*P **P** **00 06 01.7 -0.3**
comp=Z,28nm,1.1s,mb5.1
BFO Black Forest 70.53 315 *e*P **P** **00 06 01.7 -0.3**
BFO pmax pmax
comp=Z,28nm,1.1s,mb5.1
BFO Black Forest 70.53 315 *e*P **P** **00 06 01.7 -0.3**
comp=Z,28nm,1.1s,mb5.1
LANF Langenberg 70.57 316 *e*P **P** **00 06 02.5 +0.3**
LANF Langenberg 70.57 316 *e*P **P** **00 06 02.5 +0.3**
PMR Palmer 70.62 29 *e*P **P** **00 06 01.6 -0.7**
PMR pmax pmax
comp=Z,28nm,0.8s,mb5.2
PMR Palmer 70.62 29 *e*P **P** **00 06 01.6 -0.7**

comp=Z,28nm,0.8s,mb5.2
RUP Ruppelstein 70.70 317 *e*P **P 00 06 03.5 +0.5**
HGN Heimansgroeve 70.88 318 *e*P **P 00 06 04.0 -0.1**
comp=Z,19nm,1.1s,mb5.0
MEM Membach 70.91 318 P **P 00 06 04.2 0.0**
comp=Z,8.6nm,1.3s,mb4.5
FELD Feldberg im Sc 70.92 315 *e*P **P 00 06 04.4 0.0**
FELD Feldberg im Sc 70.92 315 *e*P **P 00 06 04.4 0.0**
KDAK Kodiak Island 70.95 33 P **P 00 06 04.2 -0.2**
comp=Z,35nm,1.0s,mb5.3
KDAK Kodiak Island 70.95 33 P **P 00 06 04.2 -0.2**
KDAK pmax pmax
comp=Z,35nm,1.0s,mb5.2
KDAK Kodiak Island 70.95 33 P **P 00 06 04.2 -0.2**
VLC Villacollemand 71.03 311 *e*P **P 00 06 05.5 +0.4**
VLC LR LR
comp=Z,553nm,20.0s,MS4.8
CDF Champ du Feu 71.13 316 *e*P **P 00 06 05.4 -0.2**
comp=Z,54nm,1.1s,mb5.1
CDF Champ du Feu 71.13 316 *e*P **P 00 06 05.4 -0.2**
comp=Z,27nm,1.1s,mb5.1
WLF Walferdange 71.24 317 P **P 00 06 07.2 +0.9**
comp=Z,46nm,1.3s,mb5.2
WLF Walferdange 71.24 317 *e*P **P 00 06 06.9 +0.6**
comp=Z,76nm,1.1s,mb5.5
WLF Walferdange 71.24 317 *e*P **P 00 06 07.0 +0.7**
comp=Z,68nm,1.0s,mb5.5
WLF LR LR
comp=Z,1μm,20.0s,MS5.2
ECH Echery 71.29 315 *e*P **P 00 06 06.6 0.0**
ECH Echery 71.29 315 *e*P **P 00 06 06.6 0.0**
BCLA Clavier 71.40 318 P **P 00 06 07.2 0.0**
comp=Z,13nm,1.2s,mb4.7
BBS Basel-Blauen 71.41 315 *e*P **P 00 06 07.4 +0.1**
MOF Molkenrain 71.46 315 *e*P **P 00 06 07.6 -0.1**
MOF Molkenrain 71.46 315 *e*P **P 00 06 07.6 -0.1**
HINF Hinteralfeld 71.65 315 *e*P **P 00 06 08.2 -0.6**
comp=Z,34nm,1.0s,mb4.9
HINF Hinteralfeld 71.65 315 *e*P **P 00 06 08.2 -0.6**
comp=Z,17nm,1.0s,mb4.9
UCC Uccle 71.76 319 P **P 00 06 09.4 0.0**
comp=Z,21nm,2.9s,mb4.6
GIVF Givet 71.81 318 *e*P **P 00 06 09.5 -0.2**
comp=Z,69nm,1.1s,mb5.2
GIVF Givet 71.81 318 *e*P **P 00 06 09.5 -0.2**
comp=Z,34nm,1.1s,mb5.2
HAU Haudompre 71.87 315 *e*P **P 00 06 09.5 -0.6**
comp=Z,28nm,1.0s,mb4.8
HAU *e*MLR MLR
comp=Z,1μm,20.2s,MS4.8
HAU Haudompre 71.87 315 *e*P **P 00 06 09.5 -0.6**
comp=Z,14nm,1.0s,mb4.8
HAU LR LR
comp=Z,1μm,20.3s,MS5.2
LOMF Lomont 71.87 315 *e*P **P 00 06 10.0 -0.1**
LOMF Lomont 71.87 315 *e*P **P 00 06 10.0 -0.1**
SNF Seneffe 71.94 318 P **P 00 06 10.7 +0.2**
comp=Z,14nm,1.3s,mb4.7
DOU Dourbes 71.95 318 P **P 00 06 10.5 0.0**
comp=Z,8.9nm,1.3s,mb4.5
THEF They Montfort 71.98 316 *e*P **P 00 06 10.9 +0.1**
THEF They Montfort 71.98 316 *e*P **P 00 06 10.9 +0.1**
MENT Mentasta 72.05 26 P **P 00 06 10.6 -0.3**
INK Inuvik 72.14 19 P **P 00 06 11.0 -0.3**
comp=Z,33nm,0.9s,mb5.3,baz=312,slow=7.1,SNR=30
INK Inuvik 72.14 19 P **P 00 06 11.0 -0.4**
INK pmax pmax
comp=Z,33nm,0.9s
INK Inuvik 72.14 19 *e*P **P 00 06 08.7 -2.7**
comp=Z,67nm,1.0s,mb5.5
BAIF Baives 72.19 318 *e*P **P 00 06 11.9 -0.1**
comp=Z,45nm,1.1s,mb5.0
BAIF Baives 72.19 318 *e*P **P 00 06 11.9 -0.1**
comp=Z,23nm,1.1s,mb5.0
EIDS Eidsvold 72.40 136 *e*P **P 00 06 13.5 0.0**
comp=Z,39nm,1.2s,mb5.2
MEZF Maizieres J'vi 72.41 316 *e*P **P 00 06 13.1 -0.3**
comp=Z,71nm,1.3s,mb5.1
MEZF Maizieres J'vi 72.41 316 *e*P **P 00 06 13.1 -0.3**
comp=Z,71nm,1.3s,mb5.4
STKA Stephens Creek 72.44 147 *e*P **P 00 06 13.0 -0.6**
comp=Z,19nm,0.8s,mb5.1
STKA Stephens Creek 72.44 147 P **P 00 06 13.0 -0.6**
comp=Z,21nm,0.7s,mb5.2,baz=330,slow=6.4,SNR=50
STKA Stephens Creek 72.44 147 *e*P **P 00 06 13.0 -0.6**
comp=Z,5.7nm,0.8s,mb4.5
CABF La Chapelle 72.66 314 *e*P **P 00 06 14.4 -0.4**
comp=Z,46nm,1.2s,mb5.0
CABF La Chapelle 72.66 314 *e*P **P 00 06 14.4 -0.4**
comp=Z,23nm,1.2s,mb5.0
LPG La Plagne 72.75 313 *e*P **P 00 06 16.0 +0.6**
comp=Z,91nm,0.8s,mb5.5
LPG La Plagne 72.75 313 *e*P **P 00 06 16.0 +0.6**
comp=Z,46nm,0.8s,mb5.5
LPL La Plagne 72.76 313 *e*P **P 00 06 15.8 +0.3**
comp=Z,94nm,0.9s,mb5.4
LPL La Plagne 72.76 313 *e*P **P 00 06 15.8 +0.3**
comp=Z,47nm,0.9s,mb5.4
BMRM Bremner River 72.81 28 *e*P **P 00 06 15.4 0.0**
comp=Z,40nm,0.8s,mb5.4
SAOF Saorge 72.93 311 *e*P **P 00 06 17.0 +0.5**
SAOF Saorge 72.93 311 *e*P **P 00 06 17.0 +0.5**
DAWY Dawson 72.97 24 *e*P **P 00 06 16.9 +0.6**
BNI Bardonecchia 73.00 313 *e*P **P 00 06 17.1 +0.1**
comp=Z,31nm,1.0s,mb5.2
BNI LR LR
comp=Z,2μm,20.0s,MS5.3
AUTN L'Aution 73.01 311 *e*P **P 00 06 16.5 -0.5**
AUTN L'Aution 73.01 311 *e*P **P 00 06 16.5 -0.5**
SBF Sospel 73.07 311 *e*P **P 00 06 17.0 -0.3**
comp=Z,97nm,0.9s,mb5.5
SBF Sospel 73.07 311 *e*P **P 00 06 17.0 -0.3**
comp=Z,49nm,0.9s,mb5.4
MBDF Montbardon 73.09 312 *e*P **P 00 06 18.4 +0.9**
comp=Z,27nm,0.7s,mb5.0
MBDF Montbardon 73.09 312 *e*P **P 00 06 18.4 +0.9**
comp=Z,14nm,0.7s,mb5.0
LUCF Luceram 73.11 311 *e*P **P 00 06 18.0 +0.4**
MENF Mencas 73.11 319 *e*P **P 00 06 17.8 +0.3**
MENF Mencas 73.11 319 *e*P **P 00 06 17.8 +0.3**
SUMG Summit 73.16 349 *e*P **P 00 06 17.7 +0.3**
comp=Z,27nm,1.1s,mb5.1
ESK Eskdalemuir 73.54 325 *i*P **P 00 06 11.9 -8.0**
ESK Eskdalemuir 73.54 325 *e*P **P 00 06 19.4 -0.5**
ESK LR LR
comp=Z,781nm,20.0s,MS5.0
ORIF Oris-en-Rattie 73.57 313 *e*P **P 00 06 20.1 -0.2**
comp=Z,48nm,1.0s,mb5.1
ORIF *e*MLR MLR
comp=Z,2μm,19.2s,MS5.0
ORIF Oris-en-Rattie 73.57 313 *e*P **P 00 06 20.1 -0.2**
comp=Z,24nm,1.0s,mb5.1
LOR Lormes 73.70 316 *e*P **P 00 06 20.0 -1.0**
comp=Z,16nm,0.9s,mb4.6
LOR *e*MLR MLR
comp=Z,1μm,19.5s,MS4.8
LOR Lormes 73.70 316 *e*P **P 00 06 20.0 -1.0**
comp=Z,8.1nm,0.9s,mb4.7
LOR LR LR
comp=Z,1μm,19.5s,MS5.1
FRF La Foret Royal 73.71 311 *e*P **P 00 06 20.6 -0.5**
VSL Villasalto 73.77 307 P **P 00 06 21.5 0.0**
VSL LR LR
comp=Z,384nm,20.0s,MS4.7
LMR La Mourre 73.91 311 *e*P **P 00 06 21.9 -0.4**
SMF Signal de Mont 74.01 315 *e*P **P 00 06 22.3 -0.5**
comp=Z,84nm,1.0s,mb5.3
SMF Signal de Mont 74.01 315 *e*P **P 00 06 22.3 -0.5**
comp=Z,42nm,1.0s,mb5.3
SSF Saint Saulge 74.01 316 *e*P **P 00 06 22.1 -0.7**
comp=Z,40nm,1.2s,mb4.9
SSF Saint Saulge 74.01 316 *e*P **P 00 06 22.1 -0.7**
comp=Z,20nm,1.2s,mb4.9
SMRF Simiane la Rot 74.20 312 *e*P **P 00 06 23.2 -0.8**
comp=Z,50nm,1.4s,mb5.0
SMRF Simiane la Rot 74.20 312 *e*P **P 00 06 23.2 -0.8**
comp=Z,50nm,1.4s,mb5.2
AVF Avril sur Loir 74.23 315 *e*P **P 00 06 23.6 -0.5**
comp=Z,71nm,1.1s,mb5.2
AVF Avril sur Loir 74.23 315 *e*P **P 00 06 23.6 -0.5**
comp=Z,35nm,1.1s,mb5.2
VIVF Saint-Julien-l 74.35 313 *e*P **P 00 06 24.5 -0.4**
comp=Z,34nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.35 313 *e*P **P 00 06 24.5 -0.4**
comp=Z,17nm,1.0s,mb4.9
PLDF La Plantade 74.47 315 *e*P **P 00 06 25.7 +0.2**
PLDF La Plantade 74.47 315 *e*P **P 00 06 25.7 +0.2**

BGF Bois d'Agland 74.65 315 *e*P **P 00 06 25.9 -0.7**
comp=Z,37nm,1.2s,mb4.9
BGF Bois d'Agland 74.65 315 *e*P **P 00 06 25.9 -0.7**
comp=Z,18nm,1.2s,mb4.9
AGO Saint Agoulin 74.73 315 *e*P **P 00 06 27.5 +0.5**
AGO Saint Agoulin 74.73 315 *e*P **P 00 06 27.5 +0.5**
PYM Petit Puy Mans 74.95 315 *e*P **P 00 06 28.7 +0.4**
PYM Petit Puy Mans 74.95 315 *e*P **P 00 06 28.7 +0.4**
LBL Lubilhac 75.06 314 *e*P **P 00 06 29.6 +0.7**
LBL Lubilhac 75.06 314 *e*P **P 00 06 29.6 +0.7**
TCF Toulx Ste Croi 75.17 315 *e*P **P 00 06 29.3 -0.3**
comp=Z,60nm,1.1s,mb5.2
TCF Toulx Ste Croi 75.17 315 *e*P **P 00 06 29.3 -0.3**
comp=Z,30nm,1.1s,mb5.1
LASF Ste Croix 75.24 313 *e*P **P 00 06 30.0 0.0**
comp=Z,56nm,1.1s,mb5.1
LDF La Druitiere 75.38 318 *e*P **P 00 06 30.1 -0.6**
comp=Z,41nm,1.1s,mb5.0
LDF La Druitiere 75.38 318 *e*P **P 00 06 30.1 -0.6**
comp=Z,21nm,1.1s,mb5.0
FLN La Foliniere 75.49 318 *e*P **P 00 06 30.8 -0.6**
comp=Z,79nm,1.4s,mb5.1
FLN *e*MLR MLR
comp=Z,1μm,21.0s,MS4.9
FLN La Foliniere 75.49 318 *e*P **P 00 06 30.8 -0.6**
comp=Z,40nm,1.4s,mb5.2
FLN LR LR
comp=Z,1μm,21.0s,MS5.2
KEST Kesra 75.53 303 P **P 00 06 32.2 +0.4**
comp=Z,6.0nm,1.1s,mb4.5,baz=316,slow=4.1,SNR=6.4
GRR Gorron 75.90 318 *e*P **P 00 06 33.3 -0.4**
comp=Z,57nm,0.9s,mb5.2
GRR Gorron 75.90 318 *e*P **P 00 06 33.3 -0.4**
comp=Z,28nm,0.9s,mb5.2
CAF Calviac 75.94 314 *e*P **P 00 06 34.2 +0.2**
comp=Z,40nm,1.0s,mb5.0
CAF Calviac 75.94 314 *e*P **P 00 06 34.2 +0.2**
comp=Z,20nm,1.0s,mb5.0
RJF Les Rejaudoux 76.08 315 *e*P **P 00 06 35.0 +0.2**
comp=Z,60nm,1.1s,mb5.1
RJF *e*MLR MLR
comp=Z,1μm,20.2s,MS4.8
RJF Les Rejaudoux 76.08 315 *e*P **P 00 06 35.0 +0.2**
comp=Z,30nm,1.1s,mb5.1
RJF LR LR
comp=Z,1μm,20.3s,MS5.1
MFF Saint Martin d 76.41 316 *e*P **P 00 06 36.4 -0.3**
comp=Z,34nm,0.9s,mb5.0
MFF Saint Martin d 76.41 316 *e*P **P 00 06 36.4 -0.3**
comp=Z,17nm,0.9s,mb5.0
ARMA Armidale 76.50 139 *e*P **P 00 06 38.2 +1.0**
ARMA Armidale 76.50 139 *e*P **P 00 06 38.0 +0.7**
comp=Z,24nm,1.2s,mb5.0
MTLF Montolieu 76.64 313 *e*P **P 00 06 37.9 -0.1**
comp=Z,33nm,1.2s,mb4.8
MTLF Montolieu 76.64 313 *e*P **P 00 06 37.9 -0.1**
comp=Z,16nm,1.2s,mb4.8
LFF La Frestale 76.74 315 *e*P **P 00 06 38.8 +0.3**
comp=Z,51nm,1.1s,mb5.0
LFF La Frestale 76.74 315 *e*P **P 00 06 38.8 +0.3**
comp=Z,26nm,1.1s,mb5.1
SGMF Saint Gilles 76.94 319 *e*P **P 00 06 39.6 0.0**
comp=Z,97nm,1.2s,mb5.3
SGMF Saint Gilles 76.94 319 *e*P **P 00 06 39.6 0.0**
comp=Z,48nm,1.2s,mb5.3
ROSF Rostrenen 77.29 319 *e*P **P 00 06 41.5 -0.1**
comp=Z,82nm,1.3s,mb5.2
ROSF Rostrenen 77.29 319 *e*P **P 00 06 41.5 -0.1**
comp=Z,41nm,1.3s,mb5.2
SKAG Skagway 77.39 27 *e*P **P 00 06 41.6 -0.3**
comp=Z,25nm,0.8s,mb5.2
SKAG PcP PcP 00 06 52.0 -0.4
QUIF Quistinic 77.46 319 *e*P **P 00 06 42.4 -0.1**
comp=Z,53nm,1.2s,mb5.0
QUIF Quistinic 77.46 319 *e*P **P 00 06 42.4 -0.1**
comp=Z,26nm,1.2s,mb5.0
MLS Moulis 77.54 313 *e*P **P 00 06 41.9 -1.2**
MLS Moulis 77.54 313 *e*P **P 00 06 41.9 -1.2**
EPF Esparros 77.98 313 *e*P **P 00 06 46.6 +1.1**
comp=Z,40nm,1.4s,mb4.8
EPF Esparros 77.98 313 *e*P **P 00 06 46.6 +1.1**
comp=Z,20nm,1.4s,mb4.8
RESF Ens 78.09 313 *e*P **P 00 06 47.2 +1.0**
RESF Ens 78.09 313 *e*P **P 00 06 47.2 +1.0**
EBIE Bielsa 78.28 313 P **P 00 06 46.9 -0.4**
comp=Z,58nm,1.5s,mb5.3
EPOB Poblet 78.38 311 P **P 00 06 47.5 -0.3**
comp=Z,12nm,0.9s,mb4.8
ETSF Etsaut 78.61 313 *e*P **P 00 06 49.4 +0.4**
comp=Z,20nm,0.8s,mb4.8
ETSF Etsaut 78.61 313 *e*P **P 00 06 49.4 +0.4**
comp=Z,10nm,0.8s,mb4.8
SJPF Ste Jean 78.91 314 *e*P **P 00 06 51.2 +0.6**
comp=Z,28nm,1.1s,mb4.8
SJPF Ste Jean 78.91 314 *e*P **P 00 06 51.2 +0.6**
comp=Z,14nm,1.1s,mb4.8
TOO Toolangi 78.94 147 *e*P **P 00 06 50.9 +0.3**
EALK Alkurruntz 79.02 314 P **P 00 06 50.7 -0.6**
comp=Z,12nm,1.2s,mb4.7
CNB Canberra Magne 79.03 143 *e*P **P 00 06 51.5 +0.3**
ELIZ Elizondo 79.06 314 P **P 00 06 50.6 -0.9**
comp=Z,12nm,1.2s,mb4.7
ERTA Horta de San J 79.07 311 P **P 00 06 50.7 -0.9**
comp=Z,11nm,0.8s,mb4.8
EIBI Ibiza 79.43 309 P **P 00 06 54.2 +0.6**
comp=Z,152nm,2.5s,mb5.5
EMOS Mosqueruela 79.91 311 P **P 00 06 56.2 0.0**
comp=Z,15nm,0.8s,mb5.0
ECRI Cripan 79.97 314 P **P 00 06 56.5 +0.1**
comp=Z,6.6nm,1.2s,mb4.4
DLBC Dease Lake 80.09 25 P **P 00 06 56.5 -0.3**
comp=Z,4.8nm,1.0s,mb4.4,baz=329,slow=22,SNR=3.0
DLBC Dease Lake 80.09 25 *e*P **P 00 06 57.1 +0.3**
ELAN Lanestosa 80.19 315 P **P 00 06 57.2 -0.5**
comp=Z,16nm,0.9s,mb5.0
ECHE Chera 80.64 311 P **P 00 07 00.5 +0.4**
comp=Z,14nm,1.2s,mb4.8
ETOR Torete 80.67 312 P **P 00 06 59.7 -0.6**
comp=Z,2.1nm,1.7s,mb3.8
ETOB Tobarra 81.54 310 P **P 00 07 05.9 +1.0**
comp=Z,12nm,0.9s,mb4.8
YKA Yellowknife Ar 81.66 17 P **P 00 07 04.8 -0.2**
comp=Z,5.2nm,0.8s,mb4.5,baz=325,slow=4.7,SNR=44
YKA PP PP 00 10 11.0 +0.1
comp=Z,0.9nm,0.7s,baz=333,slow=8.0,SNR=4.5
YKA Yellowknife Ar 81.66 17 P **P 00 07 04.8 -0.3**
YKA 00 10 11.0
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 81.66 17 P **P 00 07 04.8 -0.2**
YKA PP PP 00 10 11.1 +0.1
GUD Guadarrama 82.09 313 P **P 00 07 08.3 +0.5**
comp=Z,10nm,0.8s,mb4.8
EVIA Vianos 82.16 311 P **P 00 07 08.4 +0.2**
comp=Z,5.3nm,0.9s,mb4.5
EPON Pontenova 82.36 316 P **P 00 07 09.8 +0.6**
comp=Z,16nm,1.0s,mb4.9
ESDC Sonseca Array 82.52 312 P **P 00 07 09.8 -0.3**
comp=Z,2.1nm,0.7s,mb4.3,baz=45,slow=4.1,SNR=12
ESDC Sonseca Array 82.52 312 P **P 00 07 10.5 +0.4**
comp=Z,3.7nm,0.9s,mb4.4
ESLA Sonseca Array 82.52 312 *e*P **P 00 07 09.9 -0.2**
comp=Z,14nm,1.7s,mb4.7
ESLA LR LR
comp=Z,4μm,21.0s,MS5.7
EHUE Huescar 82.68 310 P **P 00 07 10.5 -0.4**
comp=Z,69nm,2.2s,mb5.3
EQES Quesada 83.00 310 P **P 00 07 13.1 +0.5**
comp=Z,20nm,1.1s,mb5.1
EBAN Banos Encina 83.26 311 P **P 00 07 13.3 -0.6**
comp=Z,6.7nm,1.0s,mb4.6
MVO Moncorvo 83.57 315 *e*P **P 00 07 15.9 +0.4**
comp=Z,18nm,1.4s,mb5.0
ECOG Cogollos-Vega 83.62 310 P **P 00 07 14.8 -1.0**
comp=Z,3.4nm,0.7s,mb4.6
ELOB Lobios 83.77 316 P **P 00 07 17.1 +0.6**
comp=Z,34nm,1.5s,mb5.3
EADA Adamuz 83.77 311 P **P 00 07 17.1 +0.5**
comp=Z,4.9nm,0.9s,mb4.6
ELUQ Luque 83.92 310 P **P 00 07 17.0 -0.3**
comp=Z,41nm,1.2s,mb5.4
PCBR Castelo Branco 84.63 314 *e*P **P 00 07 21.9 +1.0**
comp=Z,15nm,1.8s,mb4.8
PMRV Marv??o 84.82 313 *e*P **P 00 07 22.2 +0.3**
comp=Z,30nm,1.8s,mb5.1

EBAD Badajoz 84.98 313 P **P 00 07 23.1 +0.4**
comp=Z,5.8nm,0.9s,mb4.7
PBAR Barrancos 85.34 312 *e*P **P 00 07 24.9 +0.4**
comp=Z,39nm,1.6s,mb5.3
EMIN Mina Concepcio 85.35 312 P **P 00 07 25.1 +0.5**
comp=Z,21nm,1.3s,mb5.1
ESPR Espera 85.35 311 P **P 00 07 24.9 +0.3**
comp=Z,6.2nm,0.8s,mb4.8
EVO Evora 85.74 313 *e*P **P 00 07 26.9 +0.4**
comp=Z,30nm,1.8s,mb5.2
LSZ Lusaka 85.76 249 PFAKE 00 07 40.0 +13
LSZ LR LR
comp=Z,432nm,20.0s,MS4.8
SFS San Fernando 85.82 310 PFAKE 00 07 40.0 +13
SFS LR LR
comp=Z,765nm,20.0s,MS5.1
PBEJ Beja 85.95 313 *e*P **P 00 07 28.1 +0.5**
comp=Z,36nm,1.7s,mb5.3
EGRO El Granado 86.01 312 P **P 00 07 29.3 +1.4**
comp=Z,42nm,1.8s,mb5.4
PVAQ Vaqueiros 86.23 312 *e*P **P 00 07 29.4 +0.4**
comp=Z,34nm,1.5s,mb5.4
PCVE Castro Verde 86.30 312 *e*P **P 00 07 30.3 +1.0**
comp=Z,33nm,1.6s,mb5.3
MORF Marmelete 86.89 312 *e*P **P 00 07 31.9 -0.3**
comp=Z,23nm,1.2s,mb5.3
PFVI Vila Bisbo 87.10 312 *e*P **P 00 07 32.5 -0.7**
comp=Z,62nm,1.9s,mb5.5
FCC Fort Churchill 89.09 9 *e*P **P 00 07 41.9 -0.4**
comp=Z,0.8nm,1.5s,mb3.8
EDM Edmonton 89.93 21 *e*P **P 00 07 46.6 +0.3**
FFC Flin Flon 91.56 14 *i*P **P 00 07 53.8 0.0**
FFC Flin Flon 91.56 14 *e*P **P 00 07 53.4 -0.4**
comp=Z,7.5nm,1.0s,mb5.0
ETW Entiat 92.13 28 *e*P **P 00 07 57.7 +1.1**
comp=Z,6.5nm,0.9s,mb5.0
NEW Newport 92.83 26 *e*P **P 00 07 59.7 -0.1**
NEW LR LR
comp=Z,601nm,19.0s,MS5.1
TOA0 Torodi Ar. Sit 93.10 287 *e*P **P 00 08 01.0 -0.7**
TORD Torodi Ar. Bea 93.10 287 P **P 00 08 00.6 -1.1**
comp=Z,5.4nm,1.1s,mb4.9,baz=55,slow=4.7,SNR=19
TORD PP PP 00 11 41.0 -3.6
comp=Z,5.0nm,1.3s,baz=57,slow=4.5,SNR=6.1
WALA Waterton Lakes 93.32 24 P **P 00 08 01.8 -0.3**
comp=Z,0.1nm,0.9s
SCHQ Schefferville 93.82 354 P **P 00 08 03.4 -0.9**
comp=Z,4.6nm,0.8s,mb5.0,baz=83,slow=6.3,SNR=4.7
BSMT Bassoo Peak 94.04 25 *e*P **P 00 08 06.2 +0.8**
comp=Z,8.8nm,1.3s,mb5.0
YBMT Yellow Bay 94.30 24 P **P 00 08 07.8 +1.2**
comp=Z,2.4nm,0.2s,mb5.3
BOSA Boshof 95.35 240 PFAKE 00 08 20.0 +8.4
BOSA LR LR
comp=Z,458nm,22.0s,MS4.9
TSUM Tsumeb 96.41 252 PFAKE 00 08 30.0 +13
TSUM LR LR
comp=Z,437nm,19.0s,MS5.0
BOZ Bozeman (W) 97.04 24 *e*P **P 00 08 17.6 -1.5**
BOZ LR LR
comp=Z,489nm,20.0s,MS5.0
HLID Hailey 97.81 27 *e*P **P 00 08 24.2 +1.6**
comp=Z,2.0nm,0.9s,mb4.7
HLID LR LR
comp=Z,405nm,20.0s,MS4.9
BW06 Boulder Array 100.28 24 PFAKE 00 08 50.0 +16
BW06 LR LR
comp=Z,867nm,19.0s,MS5.3
PDAR Pinedale Array 100.28 24 PP PP 00 12 36.3 -2.4
comp=Z,0.8nm,0.8s,baz=36,slow=5.8,SNR=5.7
DBIC Dimbokro 102.03 285 PP PP 00 12 51.4 -2.0
comp=Z,11nm,1.2s,baz=41,slow=4.8,SNR=4.4
DBIC Dimbokro 102.03 285 PFAKE 00 08 50.0 +8.6
DBIC LR LR
comp=Z,295nm,19.0s,MS4.8
ISCO Idaho Springs 104.27 23 PFAKE 00 09 00.0 +8.6
ISCO LR LR
comp=Z,724nm,22.0s,MS5.2
SDCO Great Sand Dun 106.16 24 PFAKE 00 13 20.0 +8.3
SDCO LR LR
comp=Z,584nm,22.0s,MS5.1
ACSO Alum Creek Sta 108.58 5 PFAKE 00 13 30.0 +14
ACSO LR LR
comp=Z,731nm,19.0s,MS5.3
WMOK Wichita Mounta 111.04 20 PFAKE 00 13 30.0 +9.0
WMOK LR LR
comp=Z,606nm,19.0s,MS5.2
MIAR Mount Ida 112.56 15 PFAKE 00 13 40.0 +16
MIAR LR LR
comp=Z,680nm,21.0s,MS5.2
VNA2 Neumayer--Watz 126.06 202 *e* PKPdf 00 13 46.8 -1.7
VNA2 *e* 00 13 56.4
SJG San Juan 129.89 347 PFAKE 00 14 10.0 +13
SJG LR LR
comp=Z,754nm,21.0s,MS5.4
SDV Santo Domingo 139.66 351 *e*PKPpre 00 14 07.6
SDV *e*PKPdf PKPdf 00 14 16.0 +0.2
SDV LR LR
comp=Z,197nm,22.0s,MS4.8
ROSC El Rosal 143.99 356 PKP PKPdf 00 14 22.1 -1.5
comp=Z,4.7nm,0.4s,baz=107,slow=21,SNR=5.9
ROSC El Rosal 143.99 356 *e*PKPdf PKPdf 00 14 20.4 -3.1
OTAV Otavalo 148.58 4 *e*PKPdf PKPdf 00 14 31.6 +0.3
CPUP Villa Florida 162.51 282 PKP PKPdf 00 14 48.4 -1.1
comp=Z,0.2nm,0.3s,baz=359,slow=9.3,SNR=2.9
LPAZ La Paz 163.23 331 PKP PKPdf 00 14 50.2 -0.2
comp=Z,2.8nm,1.1s,baz=9.9,slow=7.4,SNR=5.1
LPAZ La Paz 163.23 331 PKIKP PKPdf 00 14 50.2 -0.2
LPAZ pmax pmax
comp=Z,3.0nm,1.1s
LPAZ La Paz 163.23 331 *e*PKPdf PKPdf 00 14 51.0 +0.6
PLCA Paso Flores 169.43 205 PKP PKPdf 00 14 54.0 -0.5
comp=Z,2.7nm,1.0s,baz=326,slow=4.5,SNR=4.2
PLCA PKPab PKPab 00 16 06.0 -1.4
comp=Z,4.4nm,0.9s,baz=160,slow=5.0,SNR=7.9
PLCA Paso Flores 169.43 205 PKIKP PKPdf 00 14 54.0 -0.6
PLCA 00 16 06.0
PLCA pmax pmax
comp=Z,3.0nm,1.0s
PLCA pmax pmax
comp=Z,4.0nm,0.9s
PLCA Paso Flores 169.43 205 PKP PKPdf 00 14 54.0 -0.5
PLCA PKPab PKPab 00 16 06.0 -1.4

ISCJB ***13*** *00:06:02.3±1.2,23°.96N±0°.03×122°.52E±0°.02,h12km±9km,*
Error ellipse: s-maj=5.3km s-min=3.1km az=166.6
TAP ***13*** *00:06:02.9,23°.99N×122°.47E,h20km,ML2.9,D*
JMA ***13*** *00:06:03.8±0.2,23°.98N×122°.63E,h4km*
ISC 13 00:06:02.2±0.7,23°.98N±0°.04×122°.52E±0°.02,h10km±4km,
n25,σ0=85/46,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.66**	**43**	P	**Pg**	**00 06 15.5**	**+0.5**
YOJ				S	**Sg**	**00 06 23.6**	**0.0**
HWA	**Hwalien**	**0.83**	**270**	*e*P	**Pg**	**00 06 19.6**	**+1.4**
baz=253							
ENA	**Nanau**	**0.84**	**303**	*e*P	**Pg**	**00 06 18.4**	**+0.1**
baz=303							
ENA				*e*S	**Sg**	**00 06 30.1**	**+0.8**
TWD	**Chiawan**	**0.85**	**277**	*e*P	**Pg**	**00 06 17.8**	**-0.7**
baz=260							
TWD				*e*S	**Sg**	**00 06 29.6**	**0.0**
baz=260							
TWC	**Suao**	**0.87**	**316**	P	**Pg**	**00 06 18.4**	**-0.6**
baz=318							
TWC				S	**Sg**	**00 06 30.3**	**-0.2**
baz=318							
ESL	**Shilin**	**1.00**	**261**	*e*P	**Pg**	**00 06 18.6**	**-2.9**
baz=259							
TWE	**Neicheng**	**1.07**	**314**	*e*P	**Pg**	**00 06 22.3**	**-0.5**
baz=315							
NNS	**Nan Shan**	**1.14**	**294**	*e*P	**Pb**	**00 06 23.4**	**-0.6**
baz=279							
NNS				*e*S	**Sb**	**00 06 38.9**	**+0.1**
baz=279							
WHF	**Hehuan Shan**	**1.16**	**279**	P	**Pb**	**00 06 23.4**	**-0.9**
baz=277							
WHF				S	**Sb**	**00 06 38.7**	**-0.6**
baz=277							
IRIF	**Iriomote-Funau**	**1.17**	**72**	P	**Pb**	**00 06 24.1**	**-0.3**
IRIF				*e*S	**Sb**	**00 06 38.4**	**-1.2**
NSK	**Sanguang**	**1.26**	**304**	P	**Pn**	**00 06 25.2**	**-0.7**
baz=304							

NSK S **Sb** **00 06 42.3 -0.1**
baz=304
NWF Wu-fen Shan 1.28 329 *eP* **Pn** **00 06 26.5 +0.4**
baz=330
NWF *eS* **Sb** **00 06 43.5 +0.6**
baz=330
TWF1 Yuli 1.28 241 *eP* **Pn** **00 06 25.7 -0.4**
baz=238
TWF1 *eS* **Sb** **00 06 41.4 -1.5**
baz=238
TWA Mucha 1.31 320 *eP* **Pn** **00 06 26.8 +0.2**
baz=331
TWA *eS* **Sb** **00 06 44.3 +0.6**
baz=331
JKRS Kuro-shima 1.39 79 P **Pn** **00 06 27.7 +0.1**
JKRS *eS* **Sb** **00 06 45.8 -0.3**
SMLT Sun Moon Lake 1.48 267 *eP* **Pn** **00 06 28.6 -0.3**
baz=264
SMLT *eS* **Sn** **00 06 46.6 -1.7**
baz=264
YUS Yu-Shan 1.51 252 *eP* **Pn** **00 06 29.7 +0.4**
baz=249
YUS *eS* **Sn** **00 06 47.5 -1.7**
baz=249
TYC Yuchr 1.52 268 *eP* **Pn** **00 06 29.0 -0.4**
baz=266
JIJ Ishigaki jima 1.54 75 P **Pn** **00 06 30.5 +0.8**
JIJ S **Sn** **00 06 49.3 -0.4**
ALS Alishan 1.64 254 *eP* **Pn** **00 06 31.6 +0.6**
baz=251
ALS *eS* **Sn** **00 06 51.5 -0.6**
baz=251
CHN5 Tsauling 1.73 258 *eP* **Pn** **00 06 33.1 +0.8**
baz=243
CHN5 *eS* **Sn** **00 06 54.5 +0.1**
baz=243
CHN4 Tsaushan 1.87 251 *eP* **Pn** **00 06 34.9 +0.6**
baz=248
CHN4 *eS* **Sn** **00 06 59.1 +1.2**
baz=248
WTP Ta-pu 1.89 248 *eP* **Pn** **00 06 35.6 +1.1**
baz=233
WTP *eS* **Sn** **00 06 58.9 +0.5**
baz=233
SGST Jiashian 1.98 244 *eP* **Pn** **00 06 37.9 +2.0**
baz=241
SGST *eS* **Sn** **00 07 00.8 0.0**
baz=241
CHN1 Nanshi 1.99 247 *eP* **Pn** **00 06 37.8 +1.9**
baz=244
CHN1 *eS* **Sn** **00 07 01.2 +0.4**
baz=244

BJI 13 00:08:04.4, 32°.54N×105°.15E, h11km, ML3.6/7, Ms3.8/3, Ms7 3.7/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.01**	**216**	Pg	Pg	00 08 39.7	-3.3
CD2				Sg	Sg	00 09 06.7	-2.4
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	**3.50**	**64**	Pn	Pn	00 08 57.3	-1.4
XAN				Pg	Pg	00 09 06.2	-5.2
XAN				Sn	Sn	00 09 35.4	-4.6
XAN				Sg	Sg	00 09 47.8	-8.9
XAN				smax			
	comp=N,120nm,0.9s						
XAN				smax			
	comp=E,180nm,0.9s						
LZH	**Lanzhou**	**3.70**	**343**	*e*Pn	Pn	00 09 06.2	+4.7
LZH				Pg	Pg	00 09 14.0	-1.3
LZH				Sg	Sg	00 10 00.7	-2.5
LZH				smax			
	comp=N,240nm,0.7s						
LZH				smax			
	comp=E,580nm,0.8s						
LZH				LR	LR		
	comp=E,550nm,4.5s						
LZH				LR	LR		
	comp=Z,780nm,5.4s						
WHN	**Wuhan**	**8.10**	**102**	*e*P	Pn	00 09 53.9	-8.1
WHN				S	Sn	00 11 26.2	-7.3

ISCJB 13 00:13:35.2±0.9, 31°.22N±0°.07×104°.0E±0°.1, h10km, mb3.4/6, Error ellipse: s-maj=19.1km s-min=8.3km az=22.2
IDC 13 00:13:35.6±1.1, 31°.31N×104°.08E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.5/6, Error ellipse: s-maj=86.5km s-min=20.0km az=58.0
ISC 13 00:13:37.0±0.8, 31°.21N±0°.06×103°.9E±0°.2, h10km, n7, σ0°.49/8, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**201**	Pg	**Pg**	**00 13 42.8**	**-0.6**
CD2				Sg	**Sg**	**00 13 48.0**	**+0.3**
CD2				smax			
	comp=N,15μm,0.4s						
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**00 18 40.1**	**+0.6**
	comp=N,0.2nm,0.5s,mb2.9,baz=124,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	**P**	**00 19 14.0**	**-0.8**
	comp=N,0.5nm,0.5s,mb3.3,baz=132,slow=10,SNR=2.4						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**00 19 19.6**	**+0.2**
	comp=N,0.3nm,0.3s,mb3.3,baz=131,slow=8.8,SNR=3.2						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**00 23 34.4**	**-0.3**
	comp=N,1.7nm,0.7s,mb4.2,baz=339,slow=7.6						
ASAR	**Alice Springs**	**61.67**	**149**	P	**P**	**00 23 55.9**	**+0.6**
	comp=N,0.3nm,0.5s,mb3.7,baz=338,slow=7.0,SNR=3.6						
YKA	**Yellowknife Ar**	**81.64**	**17**	P	**P**	**00 25 55.0**	**0.0**
	comp=N,0.1nm,0.5s,mb3.0,baz=328,slow=4.9,SNR=3.3						

IDC 13 00:13:51.4±1.2, 31°.93N×104°.95E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.6/26, mbtmp3.8/7, ML3.2/1, Error ellipse: s-maj=43.5km s-min=21.3km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.93**	**4**	Pn	Pn	00 17 36.3	-0.4
	0.1nm,0.3s,baz=190,slow=13,SNR=5.2						
KSRS	**Korea Array**	**19.66**	**67**	P	Pn	00 18 21.4	-1.8
	0.5nm,0.3s,baz=266,slow=11,SNR=11						
MKAR	**Makanchi Array**	**22.85**	**317**	P	P	00 18 55.5	-0.6
	1.7nm,0.9s,baz=119,slow=9.9,SNR=8.5						
ZALV	**Zalesovo Beam**	**26.31**	**333**	P	P	00 19 29.5	+1.0
	1.5nm,0.6s,baz=137,slow=9.3,SNR=7.6						
KURK	**Kurchatov**	**27.04**	**322**	P	P	00 19 35.1	0.0
	1.1nm,0.7s,baz=129,slow=9.1,SNR=6.9						
FINES	**FINESS Array B**	**57.29**	**326**	P	P	00 23 40.3	-0.2
	2.9nm,1.0s,baz=109,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**61.83**	**150**	P	P	00 24 12.3	+0.1
	0.3nm,0.5s,baz=345,slow=6.7,SNR=3.0						

IDC 13 00:21:23.0±0.9, 31°.29N×103°.87E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/25, mbtmp3.9/13, ML3.3/1, MS4.0/4, Ms1 4.0/4, ms1mx3.2/38, Error ellipse: s-maj=37.8km s-min=16.4km az=53.0
NEIC 13 00:21:24.4±0.5, 31°.34N×103°.91E, h10km, mb3.9/2, Error ellipse: s-maj=15.7km s-min=8.8km az=60.0
ISCJB 13 00:21:25.3±1.0, 31°.29N±0°.08×103°.8E±0°.1, h29km±9km, mb4.0/13, MS3.8/4, Error ellipse: s-maj=15.5km s-min=11.2km az=146.4
BJI 13 00:21:27.0, 31°.28N×104°.13E, h13km, mb4.3/1, ML4.1/4
ISC 13 00:21:25.6±1.4, 31°.31N±0°.07×103°.79E±0°.1, h16km±10km, n29, σ0°.91/28, mb4.0/13, MS3.8/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**184**	Pg	**Pg**	**00 21 33.1**	**-0.6**
CD2				Sg	**Sg**	**00 21 39.1**	**0.0**
CD2				smax			
	comp=N,12μm,0.9s						
GYA	**Guiyang**	**5.45**	**152**	Pg	**Pb**	**00 23 01.7**	**+1.2**
GYA				smax			
	comp=N,1μm,0.8s						
GYA				smax			
	comp=E,690nm,0.9s						
SONM	**Songino Array**	**16.63**	**6**	Pn	**Pn**	**00 25 17.2**	**-0.7**
	comp=E,0.1nm,0.3s,baz=188,slow=8.7,SNR=3.5						
ULN	**Ulaanbaatar**	**16.72**	**8**	Pn	**Pn**	**00 25 18.3**	**-0.9**
KSRS	**Korea Array**	**20.81**	**66**	P	**P**	**00 26 06.2**	**-0.2**
	comp=E,2.0nm,0.8s,baz=262,slow=11,SNR=4.0						
CN2	**Changchun**	**21.15**	**48**	*e*P	**P**	**00 26 12.4**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
JOW	**Kunigami**	**21.84**	**96**	LR	LR	00 34 05.9	
	comp=Z,905nm,19.5s,MS4.2,baz=147,slow=35						
MK31	**Makanchi Array**	**22.65**	**319**	*e*P	**P**	**00 26 27.5**	**+1.6**
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**00 26 27.8**	**+1.9**
	comp=Z,7.7nm,1.2s,mb4.0,baz=125,slow=10,SNR=14						
AAK	**Ala-Archa**	**25.87**	**304**	LR	LR	00 39 39.4	
	comp=Z,230nm,20.1s,MS3.7,baz=260,slow=42						
AAK	**Ala-Archa**	**25.87**	**304**	P	**P**	**00 26 57.8**	**+1.3**
EKS2	**Erkin-Say**	**26.38**	**304**	*e*P	**P**	**00 27 01.4**	**+0.2**
ZAA0	**Zalesovo Array**	**26.42**	**334**	*e*P	**P**	**00 27 00.8**	**-0.6**
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**00 27 02.3**	**+0.9**
	comp=Z,1.1nm,0.5s,mb3.6,baz=135,slow=9.3,SNR=8.2						
ZALV				LR	LR	00 37 40.1	
	comp=Z,114nm,18.2s,MS3.5,baz=339,slow=37						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**00 27 07.4**	**+1.4**
	comp=Z,1.8nm,0.7s,mb3.7,baz=132,slow=8.5,SNR=12						
KURK	**Kurchatov**	**26.92**	**323**	*e*P	**P**	**00 27 04.7**	**-1.3**
	comp=Z,1.3nm,0.5s,mb3.7						
BVAR	**Borovoye Array**	**32.47**	**322**	P	**P**	**00 27 54.2**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.6,baz=100,slow=7.5,SNR=2.9						
BVAR				LR	LR	00 42 45.9	
	comp=Z,277nm,21.0s,MS3.9,baz=334,slow=39						
ARU	**Arti**	**40.11**	**322**	*e*P	**P**	**00 28 59.7**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**56.96**	**336**	P	**P**	**00 31 09.8**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.4,baz=81,slow=7.7,SNR=5.8						
FINES	**FINESS Array B**	**57.25**	**326**	P	**P**	**00 31 11.5**	**-0.5**
	comp=Z,2.9nm,0.8s,mb4.3,baz=106,slow=6.2,SNR=4.0						
CSS	**Prodhromos**	**57.99**	**294**	P	**P**	**00 31 17.2**	**-0.4**
WRAB	**Tennant Creek**	**58.79**	**146**	*e*P	**P**	**00 31 22.9**	**-0.4**
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**00 31 22.9**	**-0.3**
	comp=Z,2.9nm,0.5s,mb4.6,baz=338,slow=7.7						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**00 31 43.8**	**-0.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=330,slow=6.5,SNR=7.4						
NOA	**NORSAR Array B**	**64.34**	**327**	P	**P**	**00 32 00.2**	**-0.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=70,slow=6.2,SNR=2.8						
GERES	**GERESS Array B**	**67.21**	**314**	P	**P**	**00 32 19.0**	**0.0**
	comp=Z,0.2nm,0.5s,mb3.4,baz=70,slow=6.4,SNR=3.3						
WLF	**Walferdange**	**71.39**	**317**	P	**P**	**00 32 43.7**	**-1.2**
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**00 33 41.5**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.6,baz=330,slow=5.3,SNR=8.3						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**00 33 41.5**	**-0.8**

CSEM 13 00:22:06.6±0.8, 36°.26N×27°.57E, h2km, MD2.8, Error ellipse: s-maj=15.7km s-min=6.6km az=52.0
ISK 13 00:22:06.3, 36°.31N×27°.66E, h5km, MD2.8
DDA 13 00:22:07.3, 36°.40N×27°.98E, h4km±5km, Md3.0
ISC 13 00:22:06.7±1.6, 36°.26N±0°.06×27°.60E±0°.07, h11km±7km, n23, σ0°.69/40, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.47**	**357**	*e*PG	**Pg**	**00 22 16.0**	**+0.1**
DAT				*e*SG	**Sg**	**00 22 22.5**	**+0.3**
DAT	**Datca**	**0.47**	**357**	*e*Pg	**Pg**	**00 22 16.0**	**+0.1**
DAT				*e*Sg	**Sg**	**00 22 22.5**	**+0.3**
BDRM	**Kayabasi**	**0.82**	**351**	*i* P	**Pg**	**00 22 22.4**	**0.0**
BDRM				*i* S	**Sg**	**00 22 33.6**	**+0.4**
BDRM	**Kayabasi**	**0.82**	**351**	*i* P	**Pg**	**00 22 22.4**	**-0.1**
BDRM				*i* S	**Sg**	**00 22 33.6**	**+0.5**
TURN	**Turunc**	**1.01**	**52**	*i* P	**Pg**	**00 22 20.2**	**-6.0**
TURN				*i* S	**Sg**	**00 22 30.3**	**-9.0**
YER	**Yerkesik**	**1.03**	**32**	*e*PG	**Pg**	**00 22 26.0**	**-0.6**
YER				*e*SG	**Sg**	**00 22 40.5**	**+0.5**
YER	**Yerkesik**	**1.03**	**32**	*e*Pg	**Pg**	**00 22 26.0**	**-0.6**
YER				*e*Sg	**Sg**	**00 22 40.5**	**+0.5**
MLSB	**Milas**	**1.04**	**8**	*e*PG	**Pg**	**00 22 26.1**	**-0.7**
MLSB				*e*SG	**Sg**	**00 22 40.9**	**+0.5**
MLSB	**Milas**	**1.04**	**8**	*e*Pg	**Pg**	**00 22 26.1**	**-0.7**
MLSB				*e*Sg	**Sg**	**00 22 40.9**	**+0.5**
FETY	**Fethiye**	**1.25**	**72**	*e*PN	**Pn**	**00 22 29.9**	**-0.3**
FETY	**Fethiye**	**1.25**	**72**	*e*Pn	**Pn**	**00 22 29.9**	**-0.2**
AYDN	**Tasoluk**	**1.42**	**9**	*i* P	**Pn**	**00 22 32.4**	**-0.1**
AYDN				*i* S	**Sn**	**00 22 49.9**	**-1.2**
AYDN	**Tasoluk**	**1.42**	**9**	*i* P	**Pn**	**00 22 32.4**	**0.0**
AYDN				*i* S	**Sn**	**00 22 49.9**	**-1.2**
GCAM	**G?zelcaml?**	**1.47**	**348**	*i* P	**Pg**	**00 22 33.9**	**-1.1**
GCAM				*i* S	**Sg**	**00 22 54.8**	**+0.8**
GCAM	**G?zelcaml?**	**1.47**	**348**	*i* P	**Pg**	**00 22 33.8**	**-1.1**
GCAM				*i* S	**Sg**	**00 22 54.8**	**+0.8**
AKAS	**Kas**	**1.62**	**90**	*i* P	**Pg**	**00 22 37.6**	**-0.1**
AKAS				*i* S	**Sg**	**00 22 59.0**	**+0.3**
AKAS	**Kas**	**1.62**	**90**	*i* P	**Pg**	**00 22 37.6**	**-0.2**
AKAS				*i* S	**Sg**	**00 22 59.0**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.77**	**59**	*e*PN	**Pn**	**00 22 38.1**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.77**	**59**	*e*Pn	**Pn**	**00 22 38.2**	**+1.0**
GOLH	**Golhisar**	**1.85**	**58**	*i* P	**Pg**	**00 22 41.6**	**-0.6**
GOLH				*i* S	**Sg**	**00 23 05.5**	**-0.7**
GOLH	**Golhisar**	**1.85**	**58**	*i* P	**Pg**	**00 22 41.6**	**-0.6**
GOLH				*i* S	**Sg**	**00 23 05.6**	**-0.6**
ELL	**Elmali**	**1.92**	**75**	*e*PN	**Pn**	**00 22 40.9**	**+1.6**
ELL	**Elmali**	**1.92**	**75**	*e*Pn	**Pn**	**00 22 40.9**	**+1.6**

IDC 13 00:22:16.0±0.6, 31°.26N×103°.90E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.4/27, mbtmp4.3/20, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.1/32, Error ellipse: s-maj=28.6km s-min=13.5km az=50.0
ISCJB 13 00:22:17.4±0.8, 31°.28N±0°.03×103°.95E±0°.03, h22km±6km, mb4.6/70, MS3.6/3, Error ellipse: s-maj=4.6km s-min=4.5km az=9.6
NEIC 13 00:22:17.5±0.2, 31°.36N×104°.05E, h10km, mb4.7/34, Error ellipse: s-maj=6.0km s-min=4.0km az=73.0
MOS 13 00:22:17.8±0.8, 31°.34N×103°.96E, h23km, mb4.8/31, Error ellipse: s-maj=10.9km s-min=5.1km az=119.4
BJI 13 00:22:17.3, 31°.26N×104°.03E, h12km, mB4.9/15, mb4.5/22, ML4.1/14, Ms4.4/21, Ms7 4.1/19
ISC 13 00:22:18.8±0.8, 31°.29N±0°.02×103°.90E±0°.03, h16km±4km, n212, σ0°.92/220, mb4.6/70, MS3.6/3, 24C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**197**	Pg	**Pg**	**00 22 25.6**	**-1.3**
CD2				Sg	**Sg**	**00 22 32.4**	**0.0**
CD2				smax			
	comp=N,73μm,0.8s						
LZH	**Lanzhou**	**4.78**	**360**	*e*Pn	**Pn**	**00 23 35.0**	**+4.8**
LZH				Sg	**Sg**	**00 24 52.9**	**+0.6**
LZH				smax			
	comp=N,310nm,0.9s						
LZH				smax			
	comp=E,230nm,0.7s						
LZH				LR	LR		
	comp=E,4μm,5.3s						
LZH				LR	LR		
	comp=Z,8μm,6.8s						
XAN	**Xi'an**	**5.05**	**56**	Pn	**Pn**	**00 23 34.8**	**+1.0**
XAN				Pg	**Pg**	**00 23 50.3**	**-5.1**
XAN				Sn	**Sn**	**00 24 30.5**	**-1.3**
XAN				Sg	**Sg**	**00 24 52.1**	**-8.7**
XAN				smax			
	comp=N,690nm,1.0s						
XAN				smax			
	comp=E,420nm,0.9s						
XAN				LR	LR		
	comp=N,1μm,4.9s						
XAN				LR	LR		
	comp=E,680nm,5.8s						
XAN				LR	LR		
	comp=Z,640nm,5.6s						
KMI	**Kunming**	**6.23**	**190**	Pn	**Pn**	**00 23 51.5**	**+1.4**
KMI				Sn	**Sn**	**00 25 00.8**	**-0.2**
KMI				smax			
	comp=N,140nm,0.9s						
KMI				smax			
	comp=E,130nm,0.8s						
KMI				LR	LR		
	comp=N,1μm,6.3s						
KMI				LR	LR		
	comp=E,2μm,6.3s						
KMI				LR	LR		
	comp=Z,1μm,6.0s						
GTA	**Gaotai**	**8.76**	**339**	*e*P	**Pn**	**00 24 31.7**	**+7.0**
GTA				pP		00 24 36.2	
GTA				sP		00 24 39.2	
GTA				S	**Sn**	**00 26 08.3**	**+5.2**
GTA				sS		00 26 11.9	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,340nm,5.4s						
GTA				LR	LR		
	comp=N,820nm,12.0s						
GTA				LR	LR		
	comp=E,680nm,8.7s						
GTA				LR	LR		
	comp=Z,1μm,7.5s						
WHN	**Wuhan**	**9.01**	**92**	P	**Pn**	**00 24 29.0**	**+0.7**
WHN				pP		00 24 35.4	
WHN				LR	LR		
	comp=N,3μm,6.8s						
WHN				LR	LR		
	comp=E,5μm,7.0s						
WHN				LR	LR		
	comp=Z,4μm,7.6s						
LSA	**Lhasa**	**11.11**	**265**	P	**Pn**	**00 24 58.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**11.37**	**31**	*e*P	**Pn**	**00 25 00.7**	**+0.2**
HHC				pP		00 25 03.9	
HHC				PP		00 25 09.8	
HHC				S	**Sn**	**00 27 08.6**	**+1.4**
HHC				sS		00 27 13.7	
HHC				SS		00 27 22.6	
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,550nm,5.1s						
HHC				LR	LR		
	comp=E,430nm,6.0s						
HHC				LR	LR		
	comp=Z,430nm,5.9s						
NJ2	**Nanjing**	**12.77**	**83**	*e*P	**Pn**	**00 25 19.8**	**+0.1**
NJ2				pP		00 25 23.5	
NJ2				sP		00 25 26.4	
NJ2				PP		00 25 30.1	
NJ2				S	**Sn**	**00 27 41.2**	**-0.3**
NJ2				sS		00 27 46.3	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,30nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,17.9s						
NJ2				LR	LR		
	comp=E,1μm,15.9s						
NJ2				LR	LR		
	comp=Z,1μm,19.0s						
CHTO	**Chiang Mai**	**13.21**	**201**	*e*P	**Pn**	**00 25 28.3**	**+2.5**
QIZ	**Qiongzhong**	**13.34**	**155**	P	**Pn**	**00 25 27.9**	**+0.3**
QIZ				S	**Sn**	**00 27 57.9**	**+2.3**
QIZ				pmax	pmax		
	comp=Z,53nm,2.0s						
QIZ				pmax	pmax		
	comp=Z,120nm,2.8s						
QIZ				LR	LR		
	comp=N,620nm,8.8s						
QIZ				LR	LR		
	comp=Z,620nm,11.3s						
CM31	**Chiang Mai Arr**	**13.54**	**200**	*e*Pn	**Pn**	**00 25 31.2**	**+0.8**
GUN	**Gumba**	**16.03**	**262**	*e*Pn	**Pn**	**00 26 02.1**	**-1.5**
	comp=Z,49nm,0.5s						
PKI	**Pulchoki**	**16.53**	**262**	*e*Pn	**Pn**	**00 26 08.1**	**-1.9**
	comp=Z,60nm,0.5s						
PKIN	**Phulchoki**	**16.54**	**262**	*e*Pn	**Pn**	**00 26 08.2**	**-1.9**
	comp=Z,45nm,0.4s						
KKN	**Kakani**	**16.57**	**263**	*e*Pn	**Pn**	**00 26 08.6**	**-1.9**
	comp=Z,54nm,0.6s						
SONM	**Songino Array**	**16.63**	**6**	Pn	**Pn**	**00 26 11.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=9.5						
ULN	**Ulaanbaatar**	**16.73**	**7**	*e*P	**Pn**	**00 26 11.5**	**-0.8**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**16.73**	**7**	*e*Pn	**Pn**	**00 26 11.5**	**-0.9**
	comp=Z,6.7nm,0.9s						
DMN	**Daman**	**16.77**	**262**	*e*Pn	**Pn**	**00 26 11.1**	**-2.0**
	comp=Z,59nm,0.9s						
ZAK	**Zakamensk**	**19.07**	**359**	*e*P	**Pn**	**00 26 43.1**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
TLY	**Talaya**	**20.37**	**360**	*e*P	**P**	**00 26 59.1**	**+4.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,156nm,11.0s,MS3.6						
TLY	**Talaya**	**20.37**	**360**	*e*Pn	**P**	**00 26 53.4**	**-1.1**
MOY	**Mondy**	**20.47**	**355**	*e*P	**P**	**00 27 00.8**	**+5.2**
KSRS	**Korea Array**	**20.74**	**66**	P	**P**	**00 26 59.4**	**+0.7**
	comp=Z,10nm,0.9s,baz=259,slow=9.5,SNR=10						
KSRS				LR	LR	00 34 28.2	
	comp=Z,162nm,19.5s,MS3.4,baz=260,slow=35						
KSRS	**Korea Array**	**20.74**	**66**	P	**P**	**00 26 59.4**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,162nm,19.5s,MS3.4						
CN2	**Changchun**	**21.09**	**48**	*e*P	**P**	**00 27 02.6**	**+0.2**
CN2				*e*pP		00 27 10.7	
CN2				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.0						
CN2				pmax	pmax		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=Z,200nm,17.0s,MS3.6						
DDI	**Dehra Dun**	**22.20**	**274**	*e*x	x	00 27 18.5	
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**00 27 20.6**	**+0.8**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**00 27 20.7**	**+0.9**
	comp=Z,31nm,1.2s,mb4.6,baz=125,slow=10,SNR=29						
MDJ	**Mudanjiang**	**24.12**	**49**	P	**P**	**00 27 34.9**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,210nm,6.0s						
KSH	**Kashi**	**24.12**	**298**	P	**P**	**00 27 37.1**	**+3.3**
KSH				pmax	pmax		
	comp=Z,130nm,4.6s						
ULHL	**Ulahol**	**24.60**	**304**	P	**P**	**00 27 39.8**	**+1.6**
	SNR=8.6						
KZA	**Kyzart**	**25.26**	**303**	P	**P**	**00 27 46.5**	**+2.3**
	SNR=12						
TKM2	**Tokmak 2**	**25.26**	**305**	*e*P	**P**	**00 27 44.8**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**25.26**	**305**	*e*P	**P**	**00 27 44.8**	**+0.7**
	comp=Z,4.2nm,0.9s,mb4.0						
KBK	**Karagaybulak**	**25.63**	**304**	P	**P**	**00 27 49.6**	**+2.0**
	SNR=5.1						
UCH	**Uchtor**	**25.82**	**303**	P	**P**	**00 27 51.5**	**+2.2**
	SNR=9.7						
UCH	**Uchtor**	**25.82**	**303**	*e*P	**P**	**00 27 49.8**	**+0.5**
	comp=Z,11nm,1.1s,mb4.3						
AAK	**Ala-Archa**	**25.95**	**304**	P	**P**	**00 27 52.2**	**+1.8**
	comp=Z,0.9nm,0.4s,mb3.7,baz=127,slow=11,SNR=6.0						
AAK	**Ala-Archa**	**25.95**	**304**	*e*P	**P**	**00 27 51.4**	**+1.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
AAK	**Ala-Archa**	**25.95**	**304**	*e*P	**P**	**00 27 52.1**	**+1.7**
	comp=Z,6.2nm,1.1s,mb4.0						
USP	**Ospenovka**	**26.13**	**305**	P	**P**	**00 27 52.9**	**+0.9**
	SNR=6.7						
AML	**Almayashu**	**26.39**	**303**	*e*P	**P**	**00 27 55.6**	**+1.2**
	comp=Z,7.7nm,1.2s,mb4.1						
ZAA0	**Zalesovo Array**	**26.47**	**334**	*e*P	**P**	**00 27 55.4**	**+0.4**
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**00 27 55.1**	**+0.1**
	comp=Z,11nm,0.8s,mb4.4,baz=136,slow=9.0,SNR=24						
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**00 27 60.0**	**+0.3**
	comp=Z,10nm,0.8s,mb4.

comp=E,8.0nm,1.9s
NVS pmax pmax
comp=Z,14nm,1.9s,mb4.3
KBL Kabul 29.35 286 *eP* **P 00 28 22.4 +1.4**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KBL Kabul 29.35 286 *eP* **P 00 28 22.4 +1.4**
comp=Z,9.9nm,0.8s,mb4.6
PALK Pallekele 32.26 227 P **P 00 28 48.5 +1.7**
BVAR Borovoye Array 32.53 322 P **P 00 28 49.4 +0.6**
comp=Z,2.2nm,0.6s,mb4.2,baz=124,slow=9.6,SNR=9.9
BVAR PcP PcP 00 31 34.5 -0.6
comp=Z,2.0nm,0.7s,baz=123,slow=4.1,SNR=5.4
BRVK Borovoye 32.60 322 *ceP* **P 00 28 50.0 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BRVK Borovoye 32.60 322 *eP* **P 00 28 50.4 +0.9**
comp=Z,3.1nm,0.7s,mb4.3
AKTK Aktyubinsk 38.88 313 P **P 00 29 43.5 +0.2**
AKTO Aktyubinsk 38.88 313 P **P 00 29 43.5 +0.2**
comp=Z,2.6nm,0.6s,mb4.2,baz=95,slow=9.5,SNR=12
KAPI Kappang 39.15 154 P **P 00 29 44.6 -1.3**
comp=Z,6.9nm,0.7s,mb4.5,baz=23,slow=7.7,SNR=3.6
SVE Sverdlovsk 39.24 323 *eP* **P 00 29 46.5 +0.3**
SVE pmax pmax
comp=Z,16nm,0.9s,mb4.8
ARU Arti 40.17 322 *c iP* **P 00 29 54.1 +0.1**
ARU *e* 00 31 24.0
ARU S **S 00 35 59.9 0.0**
ARU SS SS 00 38 53.3 -4.4
ARU pmax pmax
comp=Z,20nm,1.2s,mb4.7
ARU Arti 40.17 322 *eP* **P 00 29 54.2 +0.3**
comp=Z,11nm,0.7s,mb4.7
TIXI Tiksi 42.60 11 *eP* **P 00 30 11.6 -2.1**
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
GNI Garni 48.06 298 P **P 00 30 57.8 +0.4**
QRN Al-Qurain 48.10 282 *eP* **P 00 30 57.4 -0.5**
QRN AMb AMB 00 30 57.9
comp=Z,34nm,0.6s,mb5.5
KBD Kabd 48.16 283 *eP* **P 00 30 58.1 -0.2**
MIB Mutribah 48.27 284 *eP* **P 00 30 58.8 -0.4**
MIB AMb AMB 00 30 59.9
comp=Z,44nm,0.8s,mb5.5
ZEI Tsey 48.32 301 *eP* **P 00 30 59.7 +0.2**
ZEI pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
RDF Al-Radifah 48.35 282 *eP* **P 00 31 00.0 +0.1**
RDF AMb AMB 00 31 01.0
comp=Z,52nm,0.7s,mb5.7
GOF Gofitskoye 48.70 305 *eP* **P 00 30 55.1 -7.2**
KIV Kislovodsk 49.06 303 *eP* **P 00 31 05.1 0.0**
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.8
KIV Kislovodsk 49.06 303 *eP* **P 00 31 05.4 +0.3**
comp=Z,14nm,1.2s,mb4.9
KLMR Klimovskoe 50.81 325 *eP* **P 00 31 16.8 -1.3**
KLMR pmax pmax
comp=Z,18nm,0.9s,mb5.0
BILL Bilibino 51.08 25⇑ *eP* **P 00 31 18.8 -1.3**
BILL pmax pmax
comp=Z,11nm,2.5s,mb4.3
BILL Bilibino 51.08 25 *eP* **P 00 31 18.6 -1.4**
OBN Obninsk 52.22 318 *eP* **P 00 31 27.9 -0.9**
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.7
KNA Kununurra 52.52 149 *eP* **P 00 31 30.6 -0.8**
comp=Z,16nm,0.6s,mb5.1
MALT Malatya 53.22 297 *eP* **P 00 31 36.0 -0.5**
MALT pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MALT Malatya 53.22 297 *eP* **P 00 31 36.0 -0.5**
comp=Z,2.8nm,1.0s,mb4.2
FITZ Fitzroy Crossi 53.37 154 *eP* **P 00 31 37.0 -0.6**
comp=Z,5.9nm,0.8s,mb4.6
FITZ Fitzroy Crossi 53.37 154 *eP* **P 00 31 36.8 -0.8**
comp=Z,2.9nm,0.7s,mb4.3
MBWA Marble Bar 54.32 162 P **P 00 31 44.6 0.0**
JOF Joensuu 54.77 328 *eP* **P 00 31 46.8 -0.6**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
JOF Joensuu 54.77 328 *ep* **P 00 31 46.8 -0.6**
comp=Z,8.9nm,0.6s,mb5.0
SIM Simferopol' 54.97 306 *eP* **P 00 31 49.5 +0.4**
SIM pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KEV Kevo 56.49 336 *eP* **P 00 31 58.9 -0.7**
KEV pmax pmax
comp=Z,16nm,0.7s,mb5.2
KEV Kevo 56.49 336 *ep* **P 00 31 58.9 -0.7**
comp=Z,16nm,0.7s,mb5.2
BR131 Keskin Array S 56.49 299 P **P 00 32 00.1 0.0**
comp=Z,1.5nm,0.2s,mb4.7
BRTR Keskin Array B 56.49 299 P **P 00 32 00.1 0.0**
comp=Z,1.0nm,0.5s,mb4.1,baz=112,slow=7.1,SNR=7.9
ARCES ARCESS Array B 57.01 336 P **P 00 32 03.2 -0.1**
comp=Z,4.7nm,0.8s,mb4.6,baz=87,slow=6.8,SNR=14
ARCES PcP PcP 00 32 57.2 -1.1
comp=Z,2.3nm,0.6s,baz=66,slow=3.9,SNR=8.8
AKASG Malin Array Be 57.12 313 P **P 00 32 03.6 -0.8**
comp=Z,1.6nm,0.5s,mb4.3,baz=67,slow=7.2,SNR=6.7
KAF Kangasniemi 57.13 327 *eP* **P 00 32 03.4 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KAF Kangasniemi 57.13 327 *ep* **P 00 32 03.4 -0.9**
comp=Z,6.3nm,0.7s,mb4.8
FINES FINESS Array B 57.31 326 P **P 00 32 05.2 -0.4**
comp=Z,7.1nm,0.7s,mb4.8,baz=93,slow=6.3,SNR=16
COEN Coen 58.70 134 *eP* **P 00 32 16.2 +0.3**
COEN Coen 58.70 134 *eP* **P 00 32 16.3 +0.4**
WRAB Tennant Creek 58.73 146 *eP* **P 00 32 14.7 -1.2**
WRAB pmax pmax
comp=Z,30nm,0.6s,mb5.5
WRAB Tennant Creek 58.73 146 *eP* **P 00 32 14.7 -1.2**
comp=Z,30nm,0.6s,mb5.5
TIRR Tirgusor 59.04 306 *eP* **P 00 32 17.1 -0.9**
VRI Vrincioaia 59.83 308 ⇓*P* **P 00 32 24.8 +1.4**
VRI Vrincioaia 59.83 308 ⇓*iP* **P 00 32 24.8 +1.4**
PLOR Plostina 59.88 308 ⇓*P* **P 00 32 24.9 +1.1**
PLOR Plostina 59.88 308 ⇓*iP* **P 00 32 24.9 +1.1**
BURAR Bucovina Array 60.38 310 ⇑*P* **P 00 32 27.3 +0.2**
BURAR Bucovina Array 60.38 310 ⇑*iP* **P 00 32 27.3 +0.2**
MLR Muntele Rosu 60.46 308 ⇑*P* **P 00 32 28.8 +1.1**
MLR Muntele Rosu 60.46 308 ⇑*iP* **P 00 32 28.8 +1.1**
KWP Kalwaria Pacla 61.45 313 *eP* **P 00 32 34.8 +0.4**
KWP Kalwaria Pacla 61.45 313 *eP* **P 00 32 34.3 0.0**
comp=Z,8.1nm,0.8s,mb4.9
KWP Kalwaria Pacla 61.45 313 ⇑*iP* **P 00 32 34.5 +0.2**
ASAR Alice Springs 61.74 149 P **P 00 32 36.8 +0.2**
comp=Z,4.6nm,0.7s,mb4.7,baz=331,slow=5.9,SNR=28
STHS Stebnicka Huta 62.42 313 *eP* **P 00 32 41.0 +0.1**
STHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
STHS Stebnicka Huta 62.42 313 *eP* **P 00 32 41.0 +0.1**
comp=Z,1.6nm,0.9s,mb4.2
STHS *e*PP PP 00 35 00.1 +2.1
STHS Stebnicka Huta 62.42 313 *eP* **P 00 32 41.0 +0.1**
STHS *e*PP PP 00 35 00.1 +2.1
NIE Niedzica 63.00 313 *eP* **P 00 32 46.0 +1.2**
KECS Kecovo 63.18 312 *eP* **P 00 32 46.4 +0.4**
KECS *e* 00 35 04.4
KECS Kecovo 63.18 312 *eP* **P 00 32 46.4 +0.4**
KECS *e*PP PP 00 35 04.4 -0.2
PSZ Piszkesteto 63.73 312 *eP* **P 00 32 49.8 +0.2**
LIKS Likavka 63.87 313 *eP* **P 00 32 49.8 -0.7**
LIKS pmax pmax
comp=Z,31nm,1.1s,mb5.2
LIKS Likavka 63.87 313 *eP* **P 00 32 49.8 -0.7**
comp=Z,31nm,1.1s,mb5.2
LIKS Likavka 63.87 313 *eP* **P 00 32 49.8 -0.7**
VYHS Vyhne 64.22 313 *eP* **P 00 32 53.1 +0.3**
VYHS *e* 00 35 10.7
VYHS Vyhne 64.22 313 *eP* **P 00 32 53.1 +0.3**
VYHS *e*PP PP 00 35 10.7 -3.1
NB2 NORSAR Subarra 64.40 327 P **P 00 32 52.2 -1.6**
comp=Z,2.7nm,0.6s,mb4.5,baz=72,slow=6.9
NOA NORSAR Array B 64.40 327 P **P 00 32 52.6 -1.2**
comp=Z,2.9nm,0.6s,mb4.5,baz=73,slow=6.7,SNR=10
KOLL Kolacno 64.46 313 *eP* **P 00 32 54.8 +0.4**
KOLL Kolacno 64.46 313 *eP* **P 00 32 54.8 +0.4**
MORC Moravsky Berou 64.61 314 *eP* **P 00 32 55.1 -0.2**
MORC Moravsky Berou 64.61 314 ⇑*iP* **P 00 32 55.5 +0.2**
PKSM Moragy 65.09 310 ⇓*P* **P 00 32 57.4 -1.2**
PKSM Moragy 65.09 310 ⇓*iP* **P 00 32 57.4 -1.2**
BRG Berggiesshubel 66.40 316 *eP* **P 00 33 06.6 -0.3**
comp=Z,4.0nm,0.7s,mb4.6
BRG Berggiesshubel 66.40 316 *eP* **P 00 33 06.5 -0.4**
comp=Z,4.2nm,0.7s,mb4.6
BRG *e* 00 35 17.9
comp=Z,1.5nm,0.8s
BRG *e* 00 35 25.2
comp=Z,2.8nm,1.0s
BRG Berggiesshubel 66.40 316 *eP* **P 00 33 06.5 -0.4**
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
BRG pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
CLL Collm 66.80 317 *eP* **P 00 33 09.0 -0.4**
comp=Z,6.0nm,1.3s,mb4.5
CLL Collm 66.80 317 *eP* **P 00 33 08.0 -1.4**
CLL Collm 66.80 317 *eP* **P 00 33 08.0 -1.4**
CLL Collm 66.80 317 *eP* **P 00 33 08.0 -1.4**
GROS Grobnik 67.04 311 *i P* **P 00 33 10.7 -0.4**
GEC2 GERESS Array S 67.29 314 *eP* **P 00 33 12.5 -0.1**
comp=Z,4.0nm,1.2s,mb4.3
GEC2 GERESS Array S 67.29 314 *eP* **P 00 33 12.5 -0.1**
GEC2 pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
GEC2 GERESS Array S 67.29 314 *eP* **P 00 33 12.5 -0.1**
comp=Z,4.0nm,1.2s,mb4.3
GERES GERESS Array B 67.29 314 P **P 00 33 12.8 +0.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=73,slow=4.9,SNR=13
TANN Tannenbergstha 67.45 316 *eP* **P 00 33 13.4 -0.2**
comp=Z,2.0nm,0.8s,mb4.2
WET Wettzell 67.68 315 *eP* **P 00 33 15.3 +0.2**
comp=Z,9.0nm,1.5s,mb4.6
WET Wettzell 67.68 315 *eP* **P 00 33 15.3 +0.2**
WET pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
WET Wettzell 67.68 315 *eP* **P 00 33 15.3 +0.2**
comp=Z,9.0nm,1.5s,mb4.6
ROTZ Rotzenmuhle 67.84 316 *eP* **P 00 33 16.4 +0.3**
comp=Z,5.0nm,1.1s,mb4.5
NRDL Niedersach Rie 68.01 319 *eP* **P 00 33 16.3 -0.8**
comp=Z,5.0nm,0.9s,mb4.5
CLZ Clausthal 68.12 318 *eP* **P 00 33 17.8 0.0**
comp=Z,7.0nm,1.0s,mb4.7
CLZ Clausthal 68.12 318 *eP* **P 00 33 17.8 0.0**
CLZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CLZ Clausthal 68.12 318 *eP* **P 00 33 17.8 0.0**
comp=Z,7.0nm,1.0s,mb4.7
ROBS Robic 68.40 312 *i P* **P 00 33 18.6 -1.0**
GRA1 Grafenberg Arr 68.46 316 *eP* **P 00 33 19.9 -0.1**
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.46 316 *eP* **P 00 33 19.9 -0.1**
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.46 316 *eP* **P 00 33 19.9 -0.1**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.46 316 *eP* **P 00 33 19.9 -0.1**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.46 316 *eP* **P 00 33 19.9 -0.1**
comp=Z,8.0nm,0.9s,mb4.8
FUR Furstenfeldbru 69.04 314 *eP* **P 00 33 24.0 +0.4**
comp=Z,12nm,0.9s,mb4.8
FUR Furstenfeldbru 69.04 314 *eP* **P 00 33 24.0 +0.4**
FUR pmax pmax
comp=Z,12nm,0.9s,mb4.8
FUR Furstenfeldbru 69.04 314 *eP* **P 00 33 24.0 +0.4**
comp=Z,12nm,0.9s,mb4.8
COLA College 69.33 26 *eP* **P 00 33 23.3 -1.8**
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
COLA College 69.33 26 *eP* **P 00 33 23.3 -1.9**
comp=Z,8.6nm,0.9s,mb4.7
BUG Bochum--Univer 70.05 319 *eP* **P 00 33 29.7 -0.1**
comp=Z,7.0nm,1.0s,mb4.5
BBOO Buckleboo 70.64 152 *eP* **P 00 33 33.5 0.0**
comp=Z,2.9nm,1.3s,mb4.0
BFO Black Forest 70.76 315 *eP* **P 00 33 33.7 -0.5**
comp=Z,6.0nm,1.1s,mb4.4
BFO Black Forest 70.76 315 *eP* **P 00 33 33.7 -0.5**
BFO pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BFO Black Forest 70.76 315 *eP* **P 00 33 33.7 -0.5**
comp=Z,6.0nm,1.1s,mb4.4
CDF Champ du Feu 71.36 316⇑*iP* **P 00 33 37.4 -0.4**
WLF Walferdange 71.46 317 P **P 00 33 39.0 +0.6**
comp=Z,8.1nm,1.2s,mb4.5
WLF Walferdange 71.46 317 *eP* **P 00 33 38.7 +0.3**
comp=Z,12nm,1.0s,mb4.8
WLF Walferdange 71.46 317 *eP* **P 00 33 39.1 +0.7**
WLF pmax pmax
comp=Z,13nm,1.1s,mb4.8
WLF Walferdange 71.46 317 *eP* **P 00 33 39.1 +0.7**
comp=Z,13nm,1.1s,mb4.8
BCLA Clavier 71.61 318 P **P 00 33 39.4 +0.1**
INK Inuvik 72.04 19 *eP* **P 00 33 41.0 -0.5**
INK pmax pmax
comp=Z,70nm,2.5s
INK Inuvik 72.04 19 *eP* **P 00 33 41.0 -0.5**
comp=Z,70nm,2.5s,mb5.2
DOU Dourbes 72.16 318 P **P 00 33 42.4 -0.3**
STKA Stephens Creek 72.26 147 *eP* **P 00 33 42.9 -0.4**
comp=Z,1.6nm,0.6s,mb4.1
STKA Stephens Creek 72.26 147 P **P 00 33 43.3 0.0**
comp=Z,1.3nm,0.5s,mb4.2,baz=335,slow=9.9,SNR=4.7
STKA Stephens Creek 72.26 147 *eP* **P 00 33 43.0 -0.3**
LPG La Plagne 72.99 313⇑*iP* **P 00 33 48.1 +0.5**
comp=Z,21nm,0.8s,mb4.8
LPG La Plagne 72.99 313⇑*iP* **P 00 33 48.1 +0.5**
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 72.99 313⇑*iP* **P 00 33 48.1 +0.5**
comp=Z,11nm,0.8s,mb4.8
SUMG Summit 73.22 349 *eP* **P 00 33 48.7 +0.2**
comp=Z,115nm,2.8s,mb5.3
BNI Bardonecchia 73.24 313 *eP* **P 00 33 48.8 -0.3**
RES Resolute Bay 73.57 5 *eP* **P 00 33 50.7 +0.2**
RES pmax pmax
comp=Z,22nm,2.1s,mb4.7
RES Resolute Bay 73.57 5 *eP* **P 00 33 50.6 +0.1**
comp=Z,22nm,2.1s,mb4.7
CMSA Cobar Meteorol 73.98 144 *eP* **P 00 33 54.1 +0.6**
SMF Signal de Mont 74.24 315⇑*iP* **P 00 33 54.4 -0.5**
comp=Z,16nm,0.9s,mb4.6
SMF Signal de Mont 74.24 315⇑*iP* **P 00 33 54.4 -0.5**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SMF Signal de Mont 74.24 315⇑*iP* **P 00 33 54.4 -0.5**
comp=Z,8.1nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.39 315⇑*iP* **P 00 34 01.3 -0.4**
comp=Z,16nm,1.2s,mb4.5
TCF Toulx Ste Croi 75.39 315⇑*iP* **P 00 34 01.3 -0.4**
TCF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TCF Toulx Ste Croi 75.39 315⇑*iP* **P 00 34 01.3 -0.4**
comp=Z,8.1nm,1.2s,mb4.5
CAF Calviac 76.17 314⇑*iP* **P 00 34 06.3 +0.2**
comp=Z,7.7nm,0.9s,mb4.3
CAF Calviac 76.17 314⇑*iP* **P 00 34 06.3 +0.2**
CAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CAF Calviac 76.17 314⇑*iP* **P 00 34 06.3 +0.2**
comp=Z,3.8nm,0.9s,mb4.3
YKA Yellowknife Ar 81.56 17 P **P 00 34 34.8 -0.5**
comp=Z,2.0nm,0.6s,mb4.2,baz=330,slow=5.4,SNR=33
ESDC Sonseca Array 82.76 312 P **P 00 34 42.3 +0.2**
comp=Z,0.3nm,0.5s,mb3.6,baz=36,slow=7.3,SNR=4.1
LSZ Lusaka 86.06 250 *eP* **P 00 34 58.9 -0.2**
FCC Fort Churchill 89.04 9 *eP* **P 00 35 12.2 -0.6**
comp=Z,0.1nm,0.8s
FFC Flin Flon 91.48 15 *ceP* **P 00 35 24.7 +0.5**
FFC Flin Flon 91.48 15 *eP* **P 00 35 23.8 -0.5**
comp=Z,1.8nm,0.6s,mb4.6
NEW Newport 92.70 26 *eP* **P 00 35 29.9 -0.1**
WALA Waterton Lakes 93.19 24 *eP* **P 00 35 31.7 -0.6**
TOA0 Torodi Ar. Sit 93.41 287 P **P 00 35 34.0 +0.1**
TORD Torodi Ar. Bea 93.41 287 P **P 00 35 33.4 -0.5**
comp=Z,1.4nm,0.9s,mb4.4,baz=77,slow=4.3,SNR=8.1
SCHQ Schefferville 93.86 355 *eP* **P 00 35 34.4 -0.8**
TSUM Tsumeb 96.72 252 P **P 00 35 49.6 +0.8**
TMUT Trail Mountain 102.56 27 *e*Pdif Pdif 00 36 13.2 -1.3
OTAV Otavalo 148.56 5 *e*PKPdf PKPdf 00 42 02.3 +0.2

IDC ***13*** *00:24:30.9±0.7, 31.°70N×104.°39E, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.2/29, mbtmp4.2/20, ML3.3/1, Error ellipse: s-maj=25.4km s-min=14.6km az=44.0*
NEIC ***13*** *00:24:32.3±0.3, 31.°74N×104.°40E, h10km, mb4.2/11, Error ellipse: s-maj=8.5km s-min=6.3km az=80.0*
BJI ***13*** *00:24:33.8, 31.°96N×104.°52E, h14km, mB4.9/4, mb4.5/9, ML4.2/7, Ms4.3/4, Ms7 4.1/4*
ISC 13 00:24:33.8±0.8, 31.°81N±0.°03×104.°47E±0.°05, h18km±5km, n66, σ0°81/70, mb4.3/34, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.08**	**214**	Pg	**Pg**	**00 24 54.7**	**-0.1**
CD2				Sg	**Sg**	**00 25 09.9**	**+0.8**
CD2				smax			
	comp=N,18μm,0.8s						
LZH	**Lanzhou**	**4.29**	**353**	Pn	**Pn**	**00 25 41.5**	**+3.3**
LZH				Sn	**Sn**	**00 26 24.0**	**-3.8**
LZH				Sg	**Sg**	**00 26 50.8**	**-0.9**
LZH				smax			
	comp=N,390nm,0.6s						
LZH				smax			
	comp=E,600nm,0.8s						
LZH				LR	LR		
	comp=N,3μm,6.8s						
LZH				LR	LR		
	comp=Z,4μm,9.7s						
XAN	**Xi'an**	**4.35**	**58**	Pg	**Pg**	**00 25 57.4**	**+0.2**
XAN				Sg	**Sg**	**00 26 52.5**	**-1.1**
XAN				smax			
	comp=N,610nm,0.7s						
XAN				smax			
	comp=E,310nm,0.9s						
BTO	**Baotou**	**9.85**	**26**	*e*P	**Pn**	**00 26 54.7**	**+0.2**
CHTO	**Chiang Mai**	**13.87**	**202**	*e*Pn	**Pn**	**00 27 49.7**	**+0.2**
	comp=E,7.0nm,0.4s						
CM31	**Chiang Mai Arr**	**14.20**	**202**	Pn	**Pn**	**00 27 51.1**	**-2.9**
SONM	**Songino Array**	**16.07**	**5**	Pn	**Pn**	**00 28 21.8**	**+3.2**
	comp=E,0.1nm,0.3s,baz=178,slow=14,SNR=4.5						
ULN	**Ulaanbaatar**	**16.16**	**6**	*e*Pn	**Pn**	**00 28 19.0**	**-0.7**
	comp=E,3.1nm,0.6s						
KSRS	**Korea Array**	**20.08**	**67**	P	**P**	**00 29 07.7**	**+1.4**
	comp=E,16nm,0.7s,baz=256,slow=10,SNR=16						
CN2	**Changchun**	**20.38**	**48**	*e*P	**P**	**00 29 11.1**	**+1.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.66**	**318**	*e*P	**P**	**00 29 34.2**	**+0.4**
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**00 29 34.5**	**+0.7**
	comp=Z,5.9nm,0.8s,mb4.1,baz=114,slow=13,SNR=7.2						
MKAR				PcP	PcP	00 33 26.5	+0.4
	comp=Z,0.9nm,0.8s,baz=299,slow=3.5,SNR=4.6						
KSH	**Kashi**	**24.32**	**296**	P	**P**	**00 29 54.0**	**+3.7**
KSH				pmax	pmax		
	comp=Z,190nm,5.2s						
TKM2	**Tokmak 2**	**25.36**	**304**	*e*P	**P**	**00 30 00.2**	**+0.4**
	comp=Z,2.6nm,0.6s,mb3.9						
UCH	**Uchtor**	**25.96**	**302**	*e*P	**P**	**00 30 05.2**	**0.0**
	comp=Z,4.5nm,0.9s,mb4.0						
AAK	**Ala-Archa**	**26.07**	**303**	P	**P**	**00 30 07.9**	**+1.7**
	comp=Z,0.8nm,0.4s,mb3.6,baz=82,slow=7.1,SNR=2.8						
AAK	**Ala-Archa**	**26.07**	**303**	*e*P	**P**	**00 30 05.7**	**-0.4**
	comp=Z,6.2nm,1.5s,mb3.9						
ZAA0	**Zalesovo Array**	**26.23**	**333**	*e*P	**P**	**00 30 06.4**	**-1.0**
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**00 30 08.4**	**+1.0**
	comp=Z,3.7nm,0.5s,mb4.2,baz=131,slow=11,SNR=8.4						
AML	**Almayashu**	**26.53**	**302**	*e*P	**P**	**00 30 10.7**	**+0.4**
	comp=Z,2.4nm,0.6s,mb3.9						
EKS2	**Erkin-Say**	**26.59**	**303**	*e*P	**P**	**00 30 10.6**	**-0.2**
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**00 30 13.7**	**+0.4**
	comp=Z,2.2nm,0.6s,mb3.9,baz=132,slow=8.7,SNR=5.0						
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**00 31 03.0**	**+0.5**
	comp=Z,0.9nm,0.5s,mb3.8,baz=99,slow=9.3,SNR=3.6						
BVAR				PcP	PcP	00 33 49.8	+0.3
	comp=Z,0.9nm,0.7s,baz=147,slow=8.3,SNR=4.1						
BRVK	**Borovoye**	**32.51**	**321**	*e*P	**P**	**00 31 03.0**	**-0.2**
YSS	**Yuzh-Sakhalins**	**32.87**	**51**	P	**P**	**00 31 06.6**	**+0.1**
AKTK	**Aktyubinsk**	**38.89**	**312**	P	**P**	**00 31 58.5**	**+0.5**
AKTO	**Aktyubinsk**	**38.89**	**312**	P	**P**	**00 31 58.5**	**+0.5**
	comp=Z,1.3nm,0.4s,mb4.0,baz=94,slow=12,SNR=7.7						
ARU	**Arti**	**40.07**	**322**	*e*P	**P**	**00 32 07.6**	**-0.2**
	comp=Z,15nm,0.9s,mb4.7						
PETK	**Petropavlovsk-**	**43.47**	**45**	P	**P**	**00 32 36.4**	**+0.8**
	comp=Z,2.6nm,0.7s,mb4.0,baz=235,slow=6.8,SNR=3.1						
KIV	**Kislovodsk**	**49.19**	**303**	P	**P**	**00 33 20.9**	**+0.2**
	comp=Z,9.7nm,1.1s,mb4.8						
OBN	**Obninsk**	**52.17**	**318**	*e*P	**P**	**00 33 43.1**	**+0.1**
KNA	**Kununurra**	**52.72**	**150**	*e*P	**P**	**00 33 47.1**	**-0.4**
	comp=Z,19nm,0.6s,mb5.2						
MALT	**Malatya**	**53.43**	**296**	*e*P	**P**	**00 33 52.4**	**-0.2**
	comp=Z,3.2nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.62**	**155**	*e*P	**P**	**00 33 53.3**	**-0.8**
	comp=Z,5.3nm,0.6s,mb4.7						
JOF	**Joensuu**	**54.60**	**327**	*ep*	**P**	**00 34 00.7**	**0.0**
	comp=Z,1.0nm,0.4s,mb4.2						
BR131	**Keskin Array S**	**56.66**	**299**	*e*P	**P**	**00 34 15.8**	**-0.2**
	comp=Z,1.8nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**56.66**	**299**	P	**P**	**00 34 16.0**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.1,baz=97,slow=6.7,SNR=7.6						
BRTR	**Keskin Array B**	**56.66**	**299**	P	**P**	**00 34 16.0**	**0.0**
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**00 34 17.0**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.3,baz=82,slow=7.4,SNR=4.2						
KAF	**Kangasniemi**	**56.97**	**327**	*ep*	**P**	**00 34 17.3**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.5						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**00 34 18.7**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=67,slow=7.4,SNR=4.4						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**00 34 19.0**	**-0.1**
	comp=Z,2.8nm,0.4s,mb4.6,baz=86,slow=6.9,SNR=24						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**00 34 19.0**	**-0.1**
CSS	**Prodhromos**	**58.31**	**294**	P	**P**	**00 34 26.1**	**-1.6**
COEN	**Coen**	**58.72**	**135**	*e*P	**P**	**00 34 30.7**	**+0.1**
WRAB	**Tennant Creek**	**58.89**	**147**	*e*P	**P**	**00 34 31.5**	**-0.2**
	comp=Z,19nm,0.6s,mb5.3						
KWP	**Kalwaria Pacla**	**61.45**	**313**	P	**P**	**00 34 48.9**	**-0.1**
	comp=Z,11nm,1.0s,mb4.9						
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**00 34 52.6**	**+0.1**
	comp=Z,6.1nm,0.8s,mb4.8,baz=335,slow=6.6,SNR=19						
NB2	**NORSAR Subarra**	**64.23**	**327**	P	**P**	**00 35 06.4**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**00 35 06.6**	**-0.7**
	comp=Z,1.0nm,0.5s,mb4.1,baz=63,slow=4.3,SNR=5.4						
MORC	**Moravsky Berou**	**64.60**	**314**	*e*P	**P**	**00 35 10.4**	**+0.5**
	comp=Z,1.7nm,0.8s,mb4.1						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**00 35 27.5**	**+0.3**
	comp=Z,1.4nm,0.9s,mb4.0,baz=58,slow=5.0,SNR=5.3						
TIP	**Timpagrande**	**69.11**	**304**	*e*P	**P**	**00 35 37.9**	**-1.0**
AQU	**L'Aquila**	**70.80**	**308**	P	**P**	**00 35 43.3**	**-1.6**
BBOO	**Buckleboo**	**70.86**	**152**	*e*P	**P**	**00 35 48.9**	**-0.5**
	comp=Z,1.6nm,0.3s,mb4.4						
CDF	**Champ du Feu**	**71.33**	**316**	*e*P	**P**	**00 35 52.0**	**-0.2**
	comp=Z,2.3nm,0.5s,mb4.1						
INK	**Inuvik**	**71.39**	**19**	P	**P**	**00 35 52.6**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.2,baz=315,slow=11,SNR=3.4						
WLF	**Walferdange**	**71.42**	**317**	P	**P**	**00 35 53.1**	**+0.4**
STKA	**Stephens Creek**	**72.43**	**147**	*e*P	**P**	**00 35 58.6**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**72.43**	**147**	P	**P**	**00 35 58.6**	**-0.3**
	comp=Z,4.7nm,0.6s,mb4.6,baz=327,slow=7.5,SNR=11						
CMSA	**Cobar Meteorol**	**74.11**	**144**	*e*P	**P**	**00 36 09.4**	**+0.5**
SMF	**Signal de Mont**	**74.22**	**315**	*e*P	**P**	**00 36 08.4**	**-1.0**
	comp=Z,5.3nm,0.8s,mb4.2						
TCF	**Toulx Ste Croi**	**75.37**	**316**	*e*P	**P**	**00 36 16.0**	**-0.1**
CAF	**Calviac**	**76.16**	**314**	*e*P	**P**	**00 36 20.9**	**+0.3**
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**00 36 46.7**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=329,slow=5.3,SNR=9.

MDSI	**Maura Dua**	**1.41**	**70**	P	**Pn**	**00 33 25.8**	**+0.7**
MDSI				S	**Sn**	**00 33 43.7**	**+0.7**
KASI	**Kota Agung**	**1.73**	**109**	P	**Pn**	**00 33 30.0**	**+0.2**
KASI				S	**Sn**	**00 33 50.3**	**-0.5**
ASAR	**Alice Springs**	**35.22**	**125**	P	**P**	**00 39 51.3**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=301,slow=8.2,SNR=4.3						
MKAR	**Makanchi Array**	**54.67**	**343**	P	**P**	**00 42 24.6**	**-0.3**
	0.5nm,0.5s,mb3.8,baz=151,slow=8.9,SNR=6.0						
KURK	**Kurchatov**	**59.26**	**342**	P	**P**	**00 42 56.9**	**-0.5**
	0.3nm,0.8s,mb3.4,baz=157,slow=6.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**60.62**	**348**	P	**P**	**00 43 06.4**	**-0.3**
	0.6nm,0.4s,mb4.0,baz=146,slow=6.3,SNR=3.0						
TXAR	**Lajitas Array**	**145.12**	**43**	PKP	PKPdf	00 52 34.0	+0.3
	0.1nm,0.3s,baz=296,slow=6.5,SNR=2.2						

*IDC **13** 00:34:46.1±1.2,31°.95N×104°.61E,h0km,mb3.6/9,*
mb1 3.7/10,mb1mx3.6/26,mbtmp3.6/10,ML3.4/1,Error
ellipse: s-maj=44.7km s-min=23.8km az=54.0
*NEIC **13** 00:34:47.6±0.7,31°.98N×104°.60E,h10km,mb4.0/1,Error*
ellipse: s-maj=15.5km s-min=12.9km az=64.0
*BJI **13** 00:34:47.2,31°.91N×104°.38E,h15km,ML3.7/7,Ms3.6/2,*
Ms7 3.5/2
ISC 13 00:34:46.5±1.7,32°.00N±0°.06×104°.77E±0°.08,h2km±10km,
n18,σ0§81/22,mb3.7/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.04**	**59**	Pg	**Pg**	**00 36 03.9**	**+0.1**
XAN				Sg	**Sg**	**00 36 54.9**	**-1.2**
XAN				smax			
	comp=N,110nm,0.9s						
XAN				smax			
	comp=E,47nm,0.8s						
LZH	**Lanzhou**	**4.15**	**350**	*e*Pn	**Pn**	**00 35 56.0**	**+5.3**
LZH				Pg	**Pg**	**00 36 06.3**	**+0.4**
LZH				Sn	**Sn**	**00 36 40.7**	**+0.9**
LZH				Sg	**Sg**	**00 37 00.1**	**+0.4**
LZH				smax			
	comp=N,130nm,0.6s						
LZH				smax			
	comp=E,240nm,0.7s						
LZH				LR	LR		
	comp=E,760nm,7.1s						
LZH				LR	LR		
	comp=Z,920nm,8.1s						
GYA	**Guiyang**	**5.76**	**163**	Pn	**Pn**	**00 36 14.3**	**+1.3**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,100nm,0.9s						
SONM	**Songino Array**	**15.86**	**4**	Pn	**Pn**	**00 38 31.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=182,slow=13,SNR=3.0						
ULN	**Ulaanbaatar**	**15.94**	**6**	*e*Pn	**Pn**	**00 38 32.2**	**+0.5**
MK31	**Makanchi Array**	**22.69**	**317**	P	**P**	**00 39 48.4**	**-0.8**
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**00 39 50.3**	**+1.1**
	comp=E,0.4nm,0.5s,mb3.1,baz=123,slow=13,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**00 40 21.8**	**-0.2**
	comp=E,1.4nm,0.5s,mb3.8,baz=127,slow=9.7,SNR=6.0						
EKS2	**Erkin-Say**	**26.71**	**302**	*e*P	**P**	**00 40 25.7**	**-1.3**
	comp=E,1.0nm,0.3s,mb3.8						
KURK	**Kurchatov**	**26.88**	**322**	P	**P**	**00 40 28.4**	**0.0**
	comp=E,0.6nm,0.5s,mb3.4,baz=130,slow=10,SNR=4.2						
KURK	**Kurchatov**	**26.88**	**322**	P	**P**	**00 40 27.3**	**-1.2**
ARU	**Arti**	**40.08**	**321**	P	**P**	**00 42 21.9**	**-1.1**
ARCES	**ARCESS Array B**	**56.68**	**336**	P	**P**	**00 44 30.5**	**-0.2**
	comp=E,6.6nm,1.1s,mb4.6,baz=68,slow=11,SNR=3.8						
BRTR	**Keskin Array B**	**56.80**	**299**	P	**P**	**00 44 30.9**	**-1.2**
	comp=E,0.4nm,0.7s,mb3.5,baz=64,slow=2.9,SNR=3.7						
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**00 44 33.6**	**-0.6**
	comp=E,1.2nm,0.7s,mb4.0,baz=100,slow=9.9,SNR=4.8						
ASAR	**Alice Springs**	**61.97**	**150**	P	**P**	**00 45 08.3**	**+0.5**
	comp=E,0.3nm,0.5s,mb3.7,baz=344,slow=7.0,SNR=4.9						
INK	**Inuvik**	**71.12**	**20**	P	**P**	**00 46 06.7**	**+0.8**
	comp=E,0.5nm,0.6s,mb3.6,baz=22,slow=9.6,SNR=3.6						
YKA	**Yellowknife Ar**	**80.67**	**17**	P	**P**	**00 47 01.1**	**+0.6**
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=5.1,SNR=5.5						

*ISCJB **13** 00:43:29.4±0.4,31°.51N±0°.04×104°.4E±0°.1,h10km,*
mb3.8/14,MS3.8/2,Error ellipse: s-maj=13.8km
s-min=4.8km az=167.5
*IDC **13** 00:43:30.0±0.8,31°.53N×104°.36E,h0km,mb3.9/12,*
mb1 4.0/13,mb1mx3.8/28,mbtmp3.8/13,MS3.8/2,
Ms1 3.8/2,ms1mx2.9/52,Error ellipse: s-maj=42.8km
s-min=16.6km az=56.0
*NEIC **13** 00:43:31.5±0.4,31°.51N×104°.32E,h10km,mb3.6/2,Error*
ellipse: s-maj=10.7km s-min=6.8km az=80.0
*BJI **13** 00:43:33.2,31°.42N×104°.13E,h15km,ML3.6/7*
ISC 13 00:43:31.3±0.5,31°.48N±0°.04×104°.4E±0°.1,h10km,n28,
σ0§75/29,mb3.8/14,MS3.8/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.61**	**55**	Pg	**Pg**	**00 44 54.5**	**-5.1**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,67nm,0.8s						
LZH	**Lanzhou**	**4.62**	**355**	*e*Pn	**Pn**	**00 44 46.3**	**+5.1**
LZH				Sn	**Sn**	**00 45 32.7**	**-2.1**
LZH				smax			
	comp=N,48nm,0.9s						
LZH				smax			
	comp=E,100nm,0.8s						
LZH	**Lanzhou**	**4.62**	**355**	*e*Pg	**Pg**	**00 45 03.5**	**+3.7**
LZH				Sg	**Sg**	**00 46 00.7**	**+1.1**
LZH				smax			
	comp=N,90nm,0.8s						
LZH				smax			
	comp=E,62nm,0.6s						
GYA	**Guiyang**	**5.39**	**158**	Pg	**Pb**	**00 45 01.0**	**-4.6**
GYA				Sg	**Sb**	**00 46 09.7**	**-0.6**
GYA				smax			
	comp=N,200nm,1.0s						
GYA				smax			
	comp=E,250nm,0.9s						
CHTO	**Chiang Mai**	**13.53**	**203**	Pn	**Pn**	**00 46 43.8**	**+0.4**
SONM	**Songino Array**	**16.41**	**5**	Pn	**Pn**	**00 47 22.1**	**+0.5**
	baz=180,slow=5.8,SNR=2.1						
ULN	**Ulaanbaatar**	**16.50**	**6**	Pn	**Pn**	**00 47 22.4**	**-0.4**
MK31	**Makanchi Array**	**22.85**	**318**	*e*P	**P**	**00 48 34.8**	**+0.3**
MKAR	**Makanchi Array**	**22.85**	**318**	P	**P**	**00 48 35.9**	**+1.3**
	comp=E,0.8nm,0.6s,mb3.3,baz=122,slow=12,SNR=8.9						
TKM2	**Tokmak 2**	**25.48**	**305**	P	**P**	**00 48 59.8**	**+0.2**
	comp=E,1.2nm,0.8s,mb3.5						
UCH	**Uchtor**	**26.07**	**303**	P	**P**	**00 49 05.3**	**+0.4**
AAK	**Ala-Archa**	**26.18**	**304**	*e*P	**P**	**00 49 05.1**	**-0.9**
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**00 49 08.6**	**0.0**
	comp=E,1.2nm,0.6s,mb3.6,baz=136,slow=10,SNR=6.4						
KURK	**Kurchatov**	**27.09**	**323**	P	**P**	**00 49 13.7**	**-0.3**
	comp=E,0.9nm,0.7s,mb3.4,baz=130,slow=8.6,SNR=8.1						
KURK	**Kurchatov**	**27.09**	**323**	P	**P**	**00 49 13.7**	**-0.3**
DAV	**Davao City (W)**	**31.34**	**136**	LR	LR	01 04 10.0	
	comp=E,156nm,19.3s,MS3.7,baz=217,slow=40						
BVAR	**Borovoye Array**	**32.64**	**321**	P	**P**	**00 50 03.6**	**+0.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=82,slow=11,SNR=4.6						
ABKAR	**Akbulak array**	**37.60**	**311**	*e*P	**P**	**00 50 45.4**	**-0.6**
	comp=E,0.8nm,0.8s,mb3.5						
KAPI	**Kappang**	**39.14**	**155**	LR	LR	01 06 22.3	
	comp=E,168nm,19.8s,MS3.9,baz=98,slow=35						
ARCES	**ARCESS Array B**	**57.01**	**336**	P	**P**	**00 53 16.3**	**-0.5**
	comp=E,2.5nm,1.0s,mb4.2,baz=81,slow=8.0,SNR=4.0						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**00 53 19.2**	**-0.3**
	comp=E,2.3nm,0.8s,mb4.3,baz=66,slow=6.7,SNR=4.6						
WRA	**Warramunga Arr**	**58.66**	**147**	P	**P**	**00 53 29.6**	**+0.6**
	comp=E,2.0nm,0.6s,mb4.3,baz=339,slow=7.6						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**00 53 50.8**	**+1.1**
	comp=E,0.5nm,0.5s,mb3.9,baz=336,slow=6.6,SNR=7.7						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**00 54 07.0**	**-0.8**
	comp=E,0.8nm,0.8s,mb3.8,baz=47,slow=6.6,SNR=3.0						
GERES	**GERESS Array B**	**67.45**	**314**	P	**P**	**00 54 27.0**	**-0.1**
	comp=E,0.2nm,0.4s,mb3.5,baz=57,slow=6.0,SNR=2.9						
AQU	**L'Aquila**	**70.24**	**308**	P	**P**	**00 54 44.1**	**-0.5**
INK	**Inuvik**	**71.73**	**19**	P	**P**	**00 54 53.4**	**+0.2**
	comp=E,1.5nm,0.6s,mb4.1,baz=360,slow=4.5,SNR=8.7						
YKA	**Yellowknife Ar**	**81.27**	**17**	P	**P**	**00 55 47.4**	**0.0**
	comp=E,0.4nm,0.5s,mb3.6,baz=330,slow=5.2,SNR=3.8						

*IDC **13** 00:48:10.4±0.8,36°.14N×141°.78E,h0km,mb3.6/8,*
mb1 3.8/9,mb1mx3.6/26,mbtmp3.5/9,ML5.3/1,Error
ellipse: s-maj=22.3km s-min=19.4km az=87.0
*ISCJB **13** 00:48:13.3±0.9,36°.19N±0°.04×141°.74E±0°.06,h33km±9km,*
mb3.5/9,Error ellipse: s-maj=8.3km s-min=6.3km az=9.3
*JMA **13** 00:48:13.4±0.1,36°.23N×141°.68E,h57km±4km,M3.5*
*NEIC **13** 00:48:16.4±2.8,36°.17N×141°.63E,h43km±25km,mb3.7/1,*
Error ellipse: s-maj=25.1km s-min=18.7km az=82.0
ISC 13 00:48:13.1±1.6,36°.22N±0°.04×141°.70E±0°.05,h18km±11km,
n26,σ1§06/40,mb3.5/9,1D,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.86**	**233**	⇓P	**Pb**	**00 48 29.5**	**+0.1**
CHOJ				*e*S	**Sb**	**00 48 41.6**	**+1.1**
JHO	**Hitachi**	**0.99**	**293**	P	**Pb**	**00 48 30.6**	**-1.1**
JHO				*e*S	**Sb**	**00 48 44.5**	**+0.1**
JFK	**Kawauchi**	**1.32**	**330**	P	**Pn**	**00 48 35.6**	**-1.0**
JFK				*e*S	**Sn**	**00 48 52.1**	**-1.6**
JFT	**Otama**	**1.69**	**320**	P	**Pn**	**00 48 42.0**	**+0.3**
JFT				*e*S	**Sn**	**00 49 03.1**	**+0.2**
BSO3	**Boso 3**	**1.72**	**215**	P	**Pn**	**00 48 42.0**	**0.0**
JMM	**Marumori**	**1.79**	**336**	P	**Pn**	**00 48 42.7**	**-0.4**
JMM				*e*S	**Sn**	**00 49 04.9**	**-0.5**
JAG	**Ashikaga**	**1.82**	**277**	P	**Pn**	**00 48 42.9**	**-0.6**
JAG				*e*S	**Sn**	**00 49 04.5**	**-1.6**
JFY	**Yanaizu**	**1.99**	**307**	P	**Pn**	**00 48 46.5**	**+0.7**
JFY				*e*S	**Sn**	**00 49 11.4**	**+1.2**
JKT	**Katashina**	**2.05**	**286**	P	**Pn**	**00 48 45.9**	**-0.7**
JKT				*e*S	**Sn**	**00 49 11.1**	**-0.5**
JRY	**Ryogami san**	**2.27**	**266**	P	**Pn**	**00 48 48.7**	**-1.0**
JRY				*e*S	**Sn**	**00 49 16.1**	**-1.1**
JOD2	**Odawara 2**	**2.33**	**247**	P	**Pn**	**00 48 51.1**	**+0.6**
JOD2				*e*S	**Sn**	**00 49 17.4**	**-1.2**
MJAR	**Matsushiro Arr**	**2.83**	**277**	Pn	**Pn**	**00 48 58.3**	**+0.9**
	7.3nm,0.3s,baz=86,slow=9.9,SNR=25						
MJAR				Sn	**Sn**	**00 49 33.0**	**+1.9**
	5.2nm,0.3s,baz=74,slow=13,SNR=5.9						
MJAR	**Matsushiro Arr**	**2.83**	**277**	Pn	**Pn**	**00 48 58.3**	**+0.9**
MJAR				Sn	**Sn**	**00 49 33.0**	**+1.9**
MAJO	**Matsushiro**	**2.84**	**278**	*e*Pn	**Pn**	**00 48 58.8**	**+1.4**
MAJO				Sn	**Sn**	**00 49 30.8**	**-0.3**
MAT	**Matsushiro**	**2.84**	**278**	P	**Pn**	**00 48 58.6**	**+1.2**
MAT				S	**Sn**	**00 49 34.1**	**+3.0**
CBIJ	**Chichi jima**	**9.11**	**177**	Pn	**Pn**	**00 50 21.9**	**-1.8**
	107nm,0.3s,baz=264,slow=20,SNR=4.3						
ULN	**Ulaanbaatar**	**28.00**	**305**	*e*P	**P**	**00 54 00.8**	**-2.0**
	0.9nm,0.5s,mb3.7						
SONM	**Songino Array**	**28.43**	**305**	P	**P**	**00 54 07.3**	**+0.8**
	0.3nm,0.5s,mb3.2,baz=117,slow=10,SNR=2.3						
ZALV	**Zalesovo Beam**	**42.63**	**313**	P	**P**	**00 56 09.8**	**+1.7**
	0.3nm,0.3s,mb3.5,baz=58,slow=5.4,SNR=2.3						
KURK	**Kurchatov**	**46.62**	**309**	P	**P**	**00 56 40.7**	**+0.8**
	0.5nm,0.5s,mb3.7,baz=83,slow=7.5,SNR=4.2						
INK	**Inuvik**	**55.01**	**27**	P	**P**	**00 57 44.0**	**+1.2**
	0.9nm,0.5s,mb4.0,baz=214,slow=5.4,SNR=7.7						
WRA	**Warramunga Arr**	**56.29**	**188**	P	**P**	**00 57 51.9**	**-0.7**
	0.8nm,0.9s,mb3.7,baz=3.1,slow=7.4						
ASAR	**Alice Springs**	**60.02**	**188**	P	**P**	**00 58 18.7**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=16,slow=11,SNR=2.7						
YKA	**Yellowknife Ar**	**64.39**	**30**	P	**P**	**00 58 47.0**	**-0.5**
	0.2nm,0.6s,mb3.3,baz=304,slow=7.6,SNR=4.6						
YKA	**Yellowknife Ar**	**64.39**	**30**	P	**P**	**00 58 47.0**	**-0.5**
PDAR	**Pinedale Array**	**78.07**	**45**	P	**P**	**01 00 11.8**	**+1.1**
	0.3nm,0.6s,mb3.4,baz=282,slow=2.9,SNR=3.9						

*ISCJB **13** 00:54:00.6±0.3,32°.38N±0°.04×105°.34E±0°.04,h10km,*
mb4.3/41,MS3.3/2,Error ellipse: s-maj=5.5km
s-min=5.1km az=16.5
*IDC **13** 00:54:01.0±0.6,32°.52N×105°.43E,h0km,mb4.3/19,*
mb1 4.3/21,mb1mx4.2/30,mbtmp4.2/21,ML4.0/2,MS3.4/2,
Ms1 3.4/2,ms1mx2.8/49,Error ellipse: s-maj=25.1km
s-min=11.8km az=54.0
*BJI **13** 00:54:00.5,32°.29N×105°.39E,h15km,mB4.8/14,mb4.3/17,*
ML4.4/10,Ms4.3/16,Ms7 3.9/15
*NEIC **13** 00:54:02.8±0.4,32°.37N×105°.19E,h10km,mb4.4/20,Error*
ellipse: s-maj=11.0km s-min=7.2km az=58.0
*MOS **13** 00:54:03.7±0.6,32°.49N×105°.39E,h31km,mb4.5/12,Error*
ellipse: s-maj=13.8km s-min=6.3km az=123.1
ISC 13 00:54:02.5±0.3,32°.35N±0°.03×105°.32E±0°.05,h10km,n118,
σ1§13/127,mb4.3/41,MS3.3/2,14C-4D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.46**	**60**	Sg	**Sn**	**00 55 37.5**	**+0.2**
XAN				smax			
	comp=N,1μm,1.0s						
XAN				smax			
	comp=E,550nm,0.8s						
LZH	**Lanzhou**	**3.92**	**342**	*e*Pn	**Pn**	**00 55 03.9**	**+1.2**
LZH				Pg	**Pg**	**00 55 13.4**	**-4.2**
LZH				Sn	**Sn**	**00 55 42.5**	**-6.3**
LZH				Sg	**Sg**	**00 56 00.4**	**-8.1**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=N,2μm,5.6s						
LZH				LR	LR		
	comp=Z,3μm,6.7s						
GYA	**Guiyang**	**5.99**	**168**	Pg	**Pn**	**00 55 37.6**	**+6.5**
GYA				Sg	**Sn**	**00 56 40.9**	**+1.2**
GYA				smax			
	comp=N,310nm,0.9s						
GYA				smax			
	comp=E,340nm,0.9s						
KMI	**Kunming**	**7.55**	**198**	Pn	**Pn**	**00 55 50.2**	**-2.4**
KMI				Sn	**Sn**	**00 57 14.9**	**-3.3**
KMI				smax			
	comp=N,42nm,0.8s						
KMI				smax			
	comp=E,47nm,1.1s						
KMI				LR	LR		
	comp=N,390nm,5.9s						
KMI				LR	LR		
	comp=E,690nm,9.1s						
KMI				LR	LR		
	comp=Z,340nm,5.9s						
WHN	**Wuhan**	**7.92**	**101**	⇓P	**Pn**	**00 55 53.5**	**-4.2**
WHN				S	**Sn**	**00 57 21.0**	**-6.4**
WHN				LR	LR		
	comp=N,3μm,4.8s						
WHN				LR	LR		
	comp=E,1μm,7.2s						
WHN				LR	LR		
	comp=Z,980nm,6.6s						
GTA	**Gaotai**	**8.34**	**329**	*e*P	**Pn**	**00 56 02.4**	**-1.0**
GTA				pP		00 56 11.4	
GTA				sP		00 56 15.7	
GTA				S	**Sn**	**00 57 34.1**	**-3.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,59nm,5.4s						
GTA				LR	LR		
	comp=N,530nm,9.9s						
GTA				LR	LR		
	comp=E,230nm,7.5s						
GTA				LR	LR		
	comp=Z,440nm,9.0s						
HHC	**Hu-ho-hao-te**	**9.85**	**29**	*e*P	**Pn**	**00 56 25.2**	**+1.1**
HHC				pP		00 56 32.3	
HHC				sP		00 56 37.1	
HHC				S	**Sn**	**00 58 14.6**	**-0.2**
HHC				sS		00 58 24.7	
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
HHC				LR	LR		
	comp=N,540nm,6.1s						
HHC				LR	LR		
	comp=E,500nm,4.0s						
HHC				LR	LR		
	comp=Z,370nm,4.2s						
QIZ	**Qiongzhong**	**13.87**	**162**	P	**Pn**	**00 57 17.4**	**-1.8**
QIZ				S	**Sn**	**00 59 51.2**	**-2.2**
QIZ				pmax	pmax		
	comp=Z,21nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,100nm,3.9s						
QIZ				LR	LR		
	comp=N,440nm,4.1s						
QIZ				LR	LR		
	comp=Z,460nm,6.2s						
CHTO	**Chiang Mai**	**14.65**	**205**	P	**Pn**	**00 57 25.0**	**-4.8**
CMAR	**Chiang Mai Arr**	**14.98**	**204**	Pn	**Pn**	**00 57 37.3**	**+3.0**
	baz=13,slow=12						
SONM	**Songino Array**	**15.49**	**3**	Pn	**Pn**	**00 57 39.2**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=170,slow=9.6,SNR=7.7						
ULN	**Ulaanbaatar**	**15.55**	**4**	*e*P	**Pn**	**00 57 44.8**	**+3.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**15.55**	**4**	*e*Pn	**Pn**	**00 57 44.8**	**+3.1**
	comp=Z,6.3nm,0.8s						
ZAK	**Zakamensk**	**18.08**	**356**	*e*P	**Pn**	**00 58 12.6**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSRS	**Korea Array**	**19.21**	**68**	P	**Pn**	**00 58 26.2**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=250,slow=10,SNR=11						
KSRS	**Korea Array**	**19.21**	**68**	P	**Pn**	**00 58 26.3**	**-1.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	**19.48**	**48**	*e*P	**Pn**	**00 58 33.7**	**+3.0**
CN2				*e*S	**Sn**	**01 02 04.4**	**-4.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
MK31	**Makanchi Array**	**22.76**	**316**	*e*P	**P**	**00 59 04.8**	**0.0**
MKAR	**Makanchi Array**	**22.76**	**316**	P	**P**	**00 59 04.5**	**-0.3**
	comp=Z,5.7nm,0.7s,mb4.1,baz=112,slow=13,SNR=37						
KSH	**Kashi**	**24.74**	**295**	P	**P**	**00 59 28.2**	**+4.1**
KSH				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.6						
ULHL	**Ulahol**	**25.05**	**302**	P	**P**	**00 59 28.2**	**+1.4**
	SNR=10						
TKM2	**Tokmak 2**	**25.67**	**303**	*e*P	**P**	**00 59 33.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**25.67**	**303**	*e*P	**P**	**00 59 33.0**	**+0.5**
	comp=Z,6.3nm,0.8s,mb4.2						
KZA	**Kyzart**	**25.73**	**301**	P	**P**	**00 59 35.4**	**+2.4**
	SNR=15						
KBK	**Karagaybulak**	**26.07**	**302**	P	**P**	**00 59 38.1**	**+2.0**
	SNR=9.2						
ZAA0	**Zalesovo Array**	**26.08**	**332**	*e*P	**P**	**00 59 34.6**	**-1.4**
ZALV	**Zalesovo Beam**	**26.08**	**332**	P	**P**	**00 59 35.4**	**-0.6**
	comp=Z,2.5nm,0.4s,mb4.0,baz=132,slow=9.9,SNR=14						
ZALV	**Zalesovo Beam**	**26.08**	**332**	P	**P**	**00 59 35.4**	**-0.6**
BOD	**Bodaibo**	**26.15**	**11**	⇑*i*P	**P**	**00 59 36.4**	**-0.2**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
UCH	**Uchtor**	**26.30**	**301**	P	**P**	**00 59 40.1**	**+2.0**
	SNR=7.0						
UCH	**Uchtor**	**26.30**	**301**	*e*P	**P**	**00 59 38.7**	**+0.6**
	comp=Z,13nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**26.40**	**302**	P	**P**	**00 59 40.0**	**+1.0**
	comp=Z,0.7nm,0.3s,mb3.6,baz=30,slow=8.1,SNR=2.5						
AAK	**Ala-Archa**	**26.40**	**302**	*e*P	**P**	**00 59 39.3**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**26.40**	**302**	*e*P	**P**	**00 59 39.3**	**+0.3**
	comp=Z,5.0nm,1.0s,mb4.0						
USP	**Ospenovka**	**26.54**	**303**	P	**P**	**00 59 41.5**	**+1.2**
	SNR=20						
AML	**Almayashu**	**26.87**	**300**	P	**P**	**00 59 45.2**	**+1.9**
	SNR=8.6						
AML	**Almayashu**	**26.87**	**300**	*e*P	**P**	**00 59 44.3**	**+1.0**
	comp=Z,5.3nm,0.7s,mb4.2						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**00 59 43.1**	**-0.4**
	comp=Z,5.0nm,0.9s,mb4.1,baz=124,slow=10,SNR=21						
KURK				PcP	PcP	01 03 04.7	-0.7
	comp=Z,1.3nm,0.5s,baz=124,slow=2.3,SNR=6.9						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**00 59 43.1**	**-0.4**
KURK						01 03 04.7	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KURK	**Kurchatov**	**26.90**	**321**	*e*P	**P**	**00 59 43.4**	**-0.1**
	comp=Z,11nm,1.1s,mb4.3						
EKS2	**Erkin-Say**	**26.92**	**302**	P	**P**	**00 59 42.3**	**-1.4**
KBL	**Kabul**	**30.25**	**284**	*e*P	**P**	**01 00 13.5**	**0.0**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.2						
KBL	**Kabul**	**30.25**	**284**	*e*P	**P**	**01 00 13.5**	**0.0**
	comp=Z,7.1nm,1.4s,mb4.2						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**01 00 32.7**	**-0.2**
	comp=Z,1.3nm,0.7s,mb3.9,baz=116,slow=10.0,SNR=8.6						
BVAR				PcP	PcP	01 03 19.0	-0.7
	comp=Z,1.1nm,0.6s,baz=141,slow=2.6,SNR=6.4						
BVAR				LR	LR	01 14 20.3	
	comp=Z,64nm,21.3s,MS3.3,baz=139,slow=38						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**01 00 32.7**	**-0.2**
BVAR						01 03 19.0	
BRVK	**Borovoye**	**32.55**	**320**	*e*P	**P**	**01 00 32.8**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
BRVK	**Borovoye**	**32.55**	**320**	*e*P	**P**	**01 00 32.8**	**-0.7**
	comp=Z,4.5nm,1.1s,mb4.3						
YAK	**Yakutsk**	**33.58**	**21**	P	**P**	**01 00 44.4**	**+2.0**
ABKAR	**Akbulak array**	**37.64**	**310**	*e*P	**P**	**01 01 17.4**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**39.06**	**312**	P	**P**	**01 01 29.9**	**+0.5**
AKTK				LR	LR	01 18 49.7	
AKTO	**Aktyubinsk**	**39.06**	**312**	P	**P**	**01 01 29.9**	**+0.5

VOIR		61.39 308	⇑iP	P	01 04 18.5	-0.1
KWP	Kalwaria Pacla	61.62 313	eP	P	01 04 19.8	-0.3
comp=Z,22nm,1.0s,mb5.2						
KWP	Kalwaria Pacla	61.62 313	⇑iP	P	01 04 20.5	+0.4
ASAR	Alice Springs	62.03 150	P	P	01 04 24.3	+1.2
comp=Z,5.3nm,0.7s,mb4.8,baz=335,slow=6.3,SNR=49						
NIE	Niedzica	63.17 313	eP	P	01 04 31.2	+0.7
OJC	Ojcow	63.22 314	ePX		01 04 31.3	
NB2	NORSAR Subarra	64.17 327	P	P	01 04 33.3	-3.6
comp=Z,4.2nm,1.0s,mb4.4,baz=72,slow=6.9						
NOA	NORSAR Array B	64.17 327	P	P	01 04 35.3	-1.6
comp=Z,2.6nm,0.9s,mb4.2,baz=70,slow=6.6,SNR=5.1						
MORC	Moravsky Berou	64.74 314	eP	P	01 04 40.2	-0.6
comp=Z,57nm,2.9s,mb5.1						
MORC	Moravsky Berou	64.74 314	⇑iP	P	01 04 40.6	-0.2
PKSM	Moragy	65.34 310	⇑P	P	01 04 44.5	-0.3
PKSM	Moragy	65.34 310	⇑iP	P	01 04 44.5	-0.3
GEC2	GERESS Array S	67.42 314	eP	P	01 04 57.4	-0.7
GEC2			pmax	pmax		
comp=Z,1μm,1.1s						
GEC2	GERESS Array S	67.42 314	eP	P	01 04 57.4	-0.7
comp=Z,1μm,1.1s						
GERES	GERESS Array B	67.42 314	P	P	01 04 57.6	-0.5
comp=Z,1.1nm,0.7s,mb4.0,baz=64,slow=6.2,SNR=11						
TIP	Timpagrande	69.42 304	eP	P	01 05 10.2	-0.5
comp=Z,2.4nm,0.6s,mb4.3						
AQU	L'Aquila	70.34 308	eP	P	01 05 14.1	-2.3
AQU			pmax	pmax		
comp=Z,20nm,1.3s,mb4.9						
AQU	L'Aquila	70.34 308	eP	P	01 05 14.1	-2.3
comp=Z,20nm,1.3s,mb4.9						
CDF	Champ du Feu	71.45 316	eP	P	01 05 21.7	-1.3
comp=Z,3.7nm,0.6s,mb4.2						
CDF	Champ du Feu	71.45 316	eP	P	01 05 21.7	-1.3
CDF			pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2						
CDF	Champ du Feu	71.45 316	eP	P	01 05 21.7	-1.3
comp=Z,1.9nm,0.6s,mb4.2						
WLF	Walferdange	71.51 317	eP	P	01 05 22.8	-0.5
KMBO	Kilima Mbogo	72.20 257	P	P	01 05 29.5	+1.5
comp=Z,0.6nm,0.5s,mb3.8,baz=50,slow=17,SNR=4.1						
STKA	Stephens Creek	72.50 148	P	P	01 05 30.2	+0.9
comp=Z,3.4nm,0.7s,mb4.4,baz=329,slow=7.8,SNR=8.4						
LPG	La Plagne	73.15 313	⇑iP	P	01 05 33.6	+0.4
comp=Z,9.1nm,0.6s,mb4.6						
LPG	La Plagne	73.15 313	⇑iP	P	01 05 33.6	+0.4
LPG			pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.6						
LPG	La Plagne	73.15 313	⇑iP	P	01 05 33.6	+0.4
comp=Z,4.6nm,0.6s,mb4.6						
SMF	Signal de Mont	74.34 315	eP	P	01 05 39.4	-0.8
comp=Z,16nm,1.2s,mb4.5						
SMF	Signal de Mont	74.34 315	eP	P	01 05 39.4	-0.8
SMF			pmax	pmax		
comp=Z,8.0nm,1.2s,mb4.5						
SMF	Signal de Mont	74.34 315	eP	P	01 05 39.4	-0.8
comp=Z,7.8nm,1.2s,mb4.5						
TCF	Toulx Ste Croi	75.49 316	eP	P	01 05 46.6	-0.2
YKA	Yellowknife Ar	80.20 18	P	P	01 06 11.2	-1.5
comp=Z,0.4nm,0.4s,mb3.7,baz=328,slow=5.0,SNR=11						
YKA	Yellowknife Ar	80.20 18	P	P	01 06 11.2	-1.5
TORD	Torodi Ar. Bea	94.24 288	P	P	01 07 22.4	+0.1
comp=Z,0.3nm,0.8s,mb3.8,baz=57,slow=3.5,SNR=6.7						

*ISCJB **13** 01:02:36.3±0.5, 31°.40N×0°.04×103°.60E±0°.10, h10km, mb3.8/9, Error ellipse: s-maj=12.5km s-min=4.6km az=164.7*
*BJI **13** 01:02:37.1, 31°.28N×103°.50E, h14km, mB4.4/1, mb4.5/3, ML3.6/14, Ms3.7/5, Ms7 3.6/4*
*IDC **13** 01:02:37.5±1.0, 31°.51N×103°.56E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.6/27, mbtmp3.8/10, ML3.5/1, Error ellipse: s-maj=35.9km s-min=17.1km az=49.0*
*NEIC **13** 01:02:39.1±0.7, 31°.53N×103°.57E, h10km, mb4.2/1, Error ellipse: s-maj=25.7km s-min=12.4km az=57.0*

ISC 13 01:02:37.4±0.5, 31°.39N±0°.03×103°.68E±0°.08, h10km, n20, σ1°37/24, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.48	172	Pg	Pg	01 02 46.0	-0.9
CD2				Sg	Sg	01 02 53.6	+0.3
CD2				smax			
comp=N,11μm,0.6s							
LZH	Lanzhou	4.68	2	ePg	Pg	01 04 03.3	-3.9
LZH				Sg	Sg	01 05 04.5	-3.3
LZH				smax			
comp=N,54nm,0.8s							
LZH				smax			
comp=E,82nm,0.6s							
LZH				LR	LR		
comp=E,1μm,8.1s							
LZH				LR	LR		
comp=Z,1μm,10.6s							
XAN	Xi'an	5.14	58	Pg	Pg	01 04 12.9	-3.0
XAN				smax			
comp=N,100nm,0.9s							
XAN				smax			
comp=E,58nm,0.8s							
GYA	Guiyang	5.57	151	Pg	Pg	01 04 22.6	-1.5
GYA				Sg	Sb	01 05 21.6	+0.1
GYA				smax			
comp=N,150nm,0.8s							
GYA				smax			
comp=E,170nm,0.9s							
KMI	Kunming	6.30	188	Pg	Pb	01 04 21.4	-5.8
KMI				Sg	Sb	01 05 41.3	-1.4
KMI				smax			
comp=N,46nm,0.7s							
KMI				smax			
comp=E,31nm,0.9s							
SONM	Songino Array	16.55	6	Pn	Pn	01 06 29.6	+0.1
comp=E,0.2nm,0.3s,baz=190,slow=14,SNR=2.3							
KSRS	Korea Array	20.86	67	P	P	01 07 20.9	+1.4
comp=E,3.3nm,0.6s,baz=253,slow=9.8,SNR=9.5							
CN2	Changchun	21.16	48	eP	P	01 07 24.1	+1.5
CN2				pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.4							
MK31	Makanchi Array	22.53	319	eP	P	01 07 37.0	-0.2
MKAR	Makanchi Array	22.53	319	P	P	01 07 36.3	-0.9
comp=Z,2.5nm,0.8s,mb3.7,baz=126,slow=12,SNR=18							
AAK	Ala-Archa	25.74	304	P	P	01 08 10.3	+2.2
comp=Z,0.5nm,0.3s,mb3.6,baz=104,slow=4.5,SNR=3.5							
ZAA0	Zalesovo Array	26.31	334	eP	P	01 08 12.9	-0.1
ZALV	Zalesovo Beam	26.31	334	P	P	01 08 12.8	-0.3
comp=Z,2.6nm,0.8s,mb3.8,baz=148,slow=9.7,SNR=9.5							
ZALV	Zalesovo Beam	26.31	334	P	P	01 08 12.8	-0.3
KURK	Kurchatov	26.80	323	P	P	01 08 17.3	-0.2
comp=Z,4.7nm,0.8s,mb4.1,baz=127,slow=9.7,SNR=38							
KURK	Kurchatov	26.80	323	eP	P	01 08 17.4	-0.1
comp=Z,6.4nm,1.1s,mb4.1							
BVAR	Borovoye Array	32.34	322	P	P	01 09 06.5	-0.2
comp=Z,0.9nm,0.7s,mb3.7,baz=197,slow=39,SNR=4.5							
WRA	Warramunga Arr	58.91	146	P	P	01 12 38.9	+2.0
comp=Z,0.7nm,0.8s,mb3.8,baz=337,slow=7.6							
ASAR	Alice Springs	61.92	148	P	P	01 13 00.4	+3.1
comp=Z,0.3nm,0.6s,mb3.6,baz=349,slow=6.9,SNR=4.2							
YKA	Yellowknife Ar	81.52	17	P	P	01 14 57.6	+2.8
comp=Z,0.2nm,0.7s,mb3.2,baz=326,slow=4.2,SNR=4.4							

*IDC **13** 01:07:55.5±0.8, 31°.30N×103°.82E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.8/28, mbtmp3.9/12, ML3.6/1, Error ellipse: s-maj=31.7km s-min=15.5km az=57.0*
*ISCJB **13** 01:07:56.7±1.3, 31°.35N±0°.05×103°.95E±0°.07, h15km±10km, mb4.0/11, Error ellipse: s-maj=10.2km s-min=7.3km az=29.2*
*NEIC **13** 01:07:57.2±0.5, 31°.32N×103°.87E, h10km, Error ellipse: s-maj=13.8km s-min=7.3km az=81.0*
*BJI **13** 01:07:58.8, 31°.29N×103°.78E, h14km, mB4.7/2, mb4.3/8, ML3.9/17, Ms3.8/7, Ms7 3.7/6*

ISC 13 01:07:56.8±0.8, 31°.38N±0°.03×104°.04E±0°.05, h7km±5km, n24, σ0°84/31, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.53	207	Pg	Pg	01 08 07.3	+0.4
CD2				Sg	Sg	01 08 14.3	+0.5
CD2				smax			
comp=N,24μm,0.6s							
LZH	Lanzhou	4.70	358	ePg	Pg	01 09 25.7	-1.1
LZH				Sg	Sg	01 10 28.1	+0.5
LZH				smax			
comp=N,170nm,1.1s							
LZH				smax			
comp=E,150nm,0.8s							
LZH				LR	LR		
comp=E,690nm,6.1s							
LZH				LR	LR		
comp=Z,830nm,9.5s							
XAN	Xi'an	4.90	56	Pn	Pn	01 09 16.9	+6.1
XAN				Pg	Pg	01 09 29.4	-1.2
XAN				Sn	Sb	01 10 22.7	+0.8
XAN				Sg	Sg	01 10 33.6	-0.4
XAN				smax			
comp=N,340nm,0.6s							
XAN				smax			
comp=E,120nm,0.7s							
KMI	Kunming	6.34	191	Pn	Pn	01 09 30.9	+0.3
KMI				smax			
comp=N,52nm,1.4s							
KMI				smax			
comp=E,44nm,1.6s							
KMI				LR	LR		
comp=N,330nm,6.9s							
KMI				LR	LR		
comp=E,400nm,8.8s							
WHN	Wuhan	8.89	93	eP	Pn	01 10 05.7	0.0
WHN				S	Sn	01 11 45.5	-0.6
HHC	Hu-ho-hao-te	11.23	31	eP	Pn	01 10 42.2	+4.5
HHC				pP		01 10 47.7	
HHC				sP		01 10 51.6	
HHC				S	Sn	01 12 50.0	+6.5
HHC				sS		01 12 58.2	
HHC				SS		01 13 04.7	
HHC				pmax	pmax		
comp=Z,15nm,1.0s							
HHC				LR	LR		
comp=N,220nm,5.1s							
HHC				LR	LR		
comp=E,360nm,5.2s							
HHC				LR	LR		
comp=Z,280nm,5.2s							
CMAR	Chiang Mai Arr	13.67	201	Pn	Pn	01 11 10.4	-0.7
baz=16,slow=10							
SONM	Songino Array	16.53	6	Pn	Pn	01 11 51.1	+2.1
comp=Z,0.2nm,0.3s,baz=178,slow=16,SNR=5.0							
ULN	Ulaanbaatar	16.62	7	ePn	Pn	01 11 52.0	+1.8
comp=Z,1.1nm,0.6s							
KSRS	Korea Array	20.59	66	P	P	01 12 39.4	+3.1
comp=Z,0.8nm,0.5s,baz=232,slow=11,SNR=2.6							
CN2	Changchun	20.94	48	eP	P	01 12 47.4	+7.3
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
MK31	Makanchi Array	22.73	319	eP	P	01 12 59.3	+0.1
MKAR	Makanchi Array	22.73	319	P	P	01 12 59.3	+0.1
comp=Z,0.5nm,0.5s,mb3.2,baz=118,slow=12,SNR=6.6							
AAK	Ala-Archa	26.00	304	P	P	01 13 29.4	-0.8
comp=Z,1.5nm,0.3s,mb4.0,baz=196,slow=2.6,SNR=4.2							
ZAA0	Zalesovo Array	26.45	334	eP	P	01 13 33.9	-0.2
ZALV	Zalesovo Beam	26.45	334	P	P	01 13 34.0	-0.1
comp=Z,2.0nm,0.7s,mb3.8,baz=131,slow=10,SNR=8.9							
KURK	Kurchatov	26.99	323	P	P	01 13 38.6	-0.4
comp=Z,1.0nm,0.7s,mb3.5,baz=127,slow=9.2,SNR=9.6							
ARCES	ARCESS Array B	56.98	336	P	P	01 17 42.2	-0.3
comp=Z,3.2nm,0.9s,mb4.4,baz=88,slow=6.6,SNR=3.4							
FINES	FINESS Array B	57.31	326	P	P	01 17 44.1	-0.8
comp=Z,1.9nm,0.9s,mb4.1,baz=114,slow=9.3,SNR=4.9							
FINES	FINESS Array B	57.31	326	P	P	01 17 44.1	-0.8
WRA	Warramunga Arr	58.73	146	P	P	01 17 55.3	-0.1
comp=Z,2.4nm,0.5s,mb4.5,baz=338,slow=7.7,SNR=10.0							
ASAR	Alice Springs	61.76	149	P	P	01 18 16.3	+0.3
comp=Z,0.7nm,0.5s,mb4.1,baz=340,slow=6.7,SNR=16							
HFS	Hagfors	63.51	326	P	P	01 18 26.4	-0.9
comp=Z,1.5nm,0.8s,mb4.1,baz=82,slow=10,SNR=3.8							
YKA	Yellowknife Ar	81.45	17	P	P	01 20 14.0	-0.1
comp=Z,0.4nm,0.5s,mb3.6,baz=330,slow=5.4,SNR=11							

IDC 13 01:12:46.6±1.1, 31°.13N×103°.37E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.2/25, mbtmp3.3/4, Error ellipse: s-maj=85.2km s-min=21.2km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.55	320	P	P	01 17 47.6	-0.4
0.3nm,0.6s,baz=123,slow=10,SNR=3.4							
KURK	Kurchatov	26.85	324	P	P	01 18 28.8	+0.2
0.3nm,0.8s,baz=120,slow=10.0,SNR=3.3							
WRA	Warramunga Arr	58.85	146	P	P	01 22 46.9	-0.2
baz=342,slow=7.5							
ASAR	Alice Springs	61.84	148	P	P	01 23 07.7	+0.2
0.2nm,0.4s,baz=341,slow=7.5,SNR=4.4							
YKA	Yellowknife Ar	81.85	17	P	P	01 25 07.6	+0.3
0.2nm,0.8s,baz=328,slow=3.9,SNR=4.6							

IDC 13 01:13:16.0±1.1, 31°.77N×104°.41E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/28, mbtmp3.5/6, Error ellipse: s-maj=72.8km s-min=20.5km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.12	5	Pn	Pn	01 17 05.3	+1.5
baz=173,slow=15,SNR=4.2							
ZALV	Zalesovo Beam	26.24	333	P	P	01 18 52.5	-0.1
0.5nm,0.3s,baz=134,slow=10,SNR=3.1							
KURK	Kurchatov	26.88	322	P	P	01 18 58.2	-0.1
0.4nm,0.7s,baz=128,slow=9.3,SNR=3.6							
WRA	Warramunga Arr	58.88	147	P	P	01 23 17.0	+0.2
0.5nm,0.5s,baz=340,slow=7.5							
ASAR	Alice Springs	61.92	149	P	P	01 23 37.5	0.0
0.3nm,0.5s,baz=336,slow=6.6,SNR=4.7							
YKA	Yellowknife Ar	80.98	17	P	P	01 25 32.0	-0.1
0.2nm,0.4s,baz=325,slow=4.8,SNR=5.3							

BJI 13 01:15:47.0, 31°.24N×103°.63E, h11km, ML3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.35	162	Pg	Pg	01 15 51.9	-2.0
CD2				Sg	Sg	01 15 58.5	-0.1
CD2				smax			
comp=N,6μm,0.6s							
XAN	Xi'an	5.26	57	Sg	Sg	01 18 28.0	-8.0
XAN				smax			
comp=N,42nm,0.6s							
XAN				smax			
comp=E,26nm,0.8s							

*IDC **13** 01:18:17.1±2.0, 4°.00S×152°.36E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/16, mbtmp4.0/7, MS3.2/1, Ms1 3.2/1, ms1mx2.7/31, Error ellipse: s-maj=64.9km s-min=26.4km az=104.0*
*ISCJB **13** 01:18:19.3±2.3, 4°.1S±0°.2×152°.6E±0°.5, h33km, mb3.9/8, Error ellipse: s-maj=69.8km s-min=17.4km az=14.9*
*NEIC **13** 01:18:23.3±1.1, 4°.01S×152°.16E, h35km, mb4.0/1, Error ellipse: s-maj=34.2km s-min=14.6km az=105.0*

ISC 13 01:18:20.6±2.3, 4°.2S±0°.2×152°.7E±0°.5, h35km, n16, σ0°38/13, mb3.9/8, 2C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	17.04	201	LR	LR	01 28 10.6	
comp=Z,79nm,18.2s,baz=230,slow=35							
WRAB	Tennant Creek	23.80	227	eP	P	01 23 30.3	-0.1
3.9nm,0.8s,mb3.9							
WRA	Warramunga Arr	23.82	227	P	P	01 23 30.1	-0.4
4.1nm,0.8s,mb3.9,baz=54,slow=9.1							
ASAR	Alice Springs	26.57	221	P	P	01 23 56.1	+0.6
0.5nm,0.6s,mb3.2,baz=59,slow=8.9,SNR=6.5							
CMAR	Chiang Mai Arr	57.55	295	P	P	01 28 07.0	-0.2
baz=120,slow=4.9							
CMAR	Chiang Mai Arr	57.55	295	P	P	01 28 07.0	-0.2
SONM	Songino Array	65.76	328	P	P	01 29 02.4	+0.4
0.9nm,0.6s,mb4.0,baz=144,slow=6.2,SNR=4.9							
MKAR	Makanchi Array	79.81	319	P	P	01 30 26.0	+0.6
0.3nm,0.5s,mb3.5,baz=114,slow=7.2,SNR=2.8							
MKAR	Makanchi Array	79.81	319	P	P	01 30 26.0	+0.6
ZALV	Zalesovo Beam	80.60	326	P	P	01 30 29.1	-0.4
1.3nm,0.5s,mb4.1,baz=102,slow=6.1,SNR=2.8							
KURK	Kurchatov	83.23	322	P	P	01 30 43.0	-0.4
0.3nm,0.2s,mb3.9,baz=105,slow=4.6,SNR=3.1							
BVAR	Borovoye Array	88.70	323	P	P	01 31 10.2	-0.1
2.8nm,0.7s,mb4.7,baz=101,slow=6.2,SNR=16							
SYO	Syowa Base	94.24	199	⇑eP	P	01 31 26.5	-9.3
SYO	Syowa Base	94.24	199	⇑eP	P	01 31 35.6	-0.2
LPAZ	La Paz	134.77	118	PKP	PKPdf	01 37 42.0	+5.3
1.1nm,0.8s,baz=320,slow=6.6,SNR=5.1							
TORD	Torodi Ar. Bea	150.04	289	PKPbc	PKPbc	01 38 08.6	0.0
0.6nm,0.8s,baz=350,slow=1.4,SNR=3.6							

*HLW **13** 01:22:00.7, 34°.93N×25°.63E, h33km±50km, MI3.2*
*IDC **13** 01:22:03.0±1.9, 34°.76N×25°.54E, h35km±13km, mb3.7/11, mb1 3.6/16, mb1mx3.5/31, mbtmp3.6/16, ML3.3/5, Error ellipse: s-maj=20.2km s-min=15.4km az=14.0*
*ISCJB **13** 01:22:02.2±0.3, 34°.65N±0°.03×25°.53E±0°.03, h56km±4km, mb3.8/12, Error ellipse: s-maj=5.3km s-min=3.7km az=140.0*
*CSEM **13** 01:22:04.0±0.2, 34°.69N×25°.51E, h54km±3km, MD3.7, Error ellipse: s-maj=5.9km s-min=4.0km az=44.0*
*ATH **13** 01:22:05.7, 34°.99N×25°.45E, h52km±1km, MD3.7/20*
*NEIC **13** 01:22:05.7, 34°.99N×25°.45E, h52km, MD3.7(ATH), After ATH.*

ISC 13 01:22:03.8±0.3, 34°.68N±0°.03×25°.50E±0°.03, h48km±4km, n128, σ1°15/153, mb3.8/12, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	0.48	358	eP	Pn	01 22 14.0	-0.8
LAST				eS	Sn	01 22 21.1	-1.5
LAST	Lasithi	0.48	358	eP	Pn	01 22 14.0	-0.8
LAST				eS	Sn	01 22 21.1	-1.5
NPS	Neapolis	0.59	9	eP	Pn	01 22 15.7	-0.4
NPS				eS	Sn	01 22 22.2	-2.7
NPS	Neapolis	0.59	9	eP	Pn	01 22 15.7	-0.4
NPS				eS	Sn	01 22 22.2	-2.7
SIVA	Sivas	0.66	301	eP	Pn	01 22 17.8	+0.9
SIVA				eS	Sn	01 22 26.9	+0.5
SIVA	Sivas	0.66	301	eP	Pn	01 22 17.8	+0.9
SIVA				eS	Sn	01 22 26.9	+0.5
ZKR	Zakros	0.73	53	eP	Pn	01 22 19.2	+1.3
ZKR				eS	Sn	01 22 29.4	+1.2
ZKR	Zakros	0.73	53	eP	Pn	01 22 19.2	+1.3
ZKR				eS	Sn	01 22 29.4	+1.2
IDI	Anoyia	0.79	321	Pg	Pn	01 22 18.6	0.0
41nm,0.3s,baz=150,slow=17,SNR=434							
IDI				Lg		01 22 29.8	
153nm,0.3s,baz=30,slow=21,SNR=31							
IDI	Anoyia	0.79	321	eP	Pn	01 22 18.7	+0.1
IDI				eS	Sn	01 22 27.9	-1.5
IDI	Anoyia	0.79	321	ePg	Pn	01 22 18.7	+0.1
IDI				eS	Sn	01 22 27.9	-1.5
IDI	Anoyia	0.79	321	eP	Pn	01 22 18.7	+0.1
IDI				eS	Sn	01 22 27.9	-1.5
GVD	Gavdhos	1.17	278	eP	Pn	01 22 26.5	+2.7
GVD	Gavdhos	1.17	278	ePn	Pn	01 22 25.8	+2.0
GVD	Gavdhos	1.17	278	ePn	Pn	01 22 25.8	+2.0
GVD	Gavdhos	1.17	278	eP	Pn	01 22 26.5	+2.7
VAM	Vamos	1.29	305	eP	Pn	01 22 26.7	+1.3
VAM				eS	Sn	01 22 40.4	-1.1
VAM	Vamos	1.29	305	eP	Pn	01 22 26.7	+1.3
VAM				eS	Sn	01 22 40.4	-1.1
KARN	Karanos	1.48	300	eP	Pn	01 22 29.5	+1.4
KARN	Karanos	1.48	300	eP	Pn	01 22 29.5	+1.4
KARP	Karpathos	1.62	57	eP	Pn	01 22 32.6	+2.7
KARP	Karpathos	1.62	57	eP	Pn	01 22 32.6	+2.7
APE	Apeiranthos	2.39	1	eP	Pn	01 22 40.0	-0.4
APE	Apeiranthos	2.39	1	eP	Pn	01 22 40.0	-0.4
KYTH	Kithira	2.57	309	eP	Pn	01 22 43.2	+0.3
KYTH	Kithira	2.57	309	eP	Pn	01 22 43.2	+0.3
VLI	Veliai	2.91	315	eP	Pn	01 22 47.0	-0.6
VLI	Veliai	2.91	315	eP	Pn	01 22 47.0	-0.6
SLUM		3.19	184	P	Pn	01 22 52.6	+1.2
baz=186							
SLUM		3.19	184	P	Pn	01 22 52.6	+1.2
SMG	Samos	3.21	19	eP	Pn	01 22 51.4	-0.3
SMG	Samos	3.21	19	eP	Pn	01 22 51.4	-0.3
TURN	Turunc	3.34	48	iP	Pn	01 22 50.2	-3.3
TURN	Turunc	3.34	48	iP	Pn	01 22 50.2	-3.3
DID	Didima	3.36	328	ePn	Pn	01 22 53.1	-0.7
DID	Didima	3.36	328	ePn	Pn	01 22 53.1	-0.7
AYDN	Tasoluk	3.55	32	iP	Pn	01 22 57.9	+1.6
AYDN	Tasoluk	3.55	32	iP	Pn	01 22 57.9	+1.6
AKAS	Kas	3.69	64	iP	Pn	01 22 59.2	+0.9
AKAS	Kas	3.69	64	iP	Pn	01 22 59.2	+0.8
PYL	PYLOS	3.77	307	ePn	Pn	01 23 00.3	+0.9
PYL	PYLOS	3.77	307	ePn	Pn	01 23 00.3	+0.9
HMAT	Matruh	3.82	159	P	Pn	01 23 01.1	+1.0
baz=161							
HMAT				AMP		01 23 00.0	
comp=E,30μm,0.2s,logA/T=5.1,baz=161							
HMAT				S	Sn	01 23 42.6	-1.1
baz=161							
HMAT	Matruh	3.82	159	P	Pn	01 23 01.1	+1.0
HMAT				S	Sn	01 23 42.6	-1.1
ITM	Ithomi	3.82	312	eP	Pn	01 23 00.2	+0.1
ITM	Ithomi	3.82	312	eP	Pn	01 23 00.2	+0.1
LTK	Loutraki	3.91	329	eP	Pn	01 23 00.5	-0.9
LTK	Loutraki	3.91	329	eP	Pn	01 23 00.5	-0.9
GUR	Goura	4.13	323	eP	Pn	01 23 03.8	-0.5
GUR	Goura	4.13	323	eP	Pn	01 23 03.8	-0.5
GOLH	Golhisar	4.17	51	iP	Pn	01 23 06.3	+1.4
GOLH	Golhisar	4.17	51	iP	Pn	01 23 06.3	+1.4
KORT	Korkueli	4.57	58	iP	Pn	01 23 13.7	+3.2
KORT	Korkueli	4.57	58	iP	Pn	01 23 13.7	+3.3
EFP	Efpalio	4.73	323	eP	Pn	01 23 13.7	+1.2
EFP	Efpalio	4.73	323	eP	Pn	01 23 13.7	+1.2
KHAL	Karahalli	4.89	40	iP	Pn	01 23 15.5	+0.8
KHAL	Karahalli	4.89	40	iP	Pn	01 23 15.5	+0.7
AGG	Agios Georgios	5.02	331	eP	Pn	01 23 16.3	-0.3
AGG	Agios Georgios	5.02	331	eP	Pn	01 23 16.3	-0.3
SWA2		5.42	180	P	Pn	01 23 23.1	+1.0
baz=182							
SWA2				S	Sn	01 24 21.4	-1.7
baz=182							
SWA2		5.42	180	P	Pn	01 23 23.1	+1.0
SWA2				S	Sn	01 24 21.4	-1.7
GAZI	Gazipasa	5.78	72	iP	Pn	01 23 25.7	-1.2
CSS	Prodhromos	6.45	85	ePn	Pn	01 23 37.1	+1.0
CSS	Prodhromos	6.45	85	ePn	Pn	01 23 37.1	+0.9
KDHN	Kadinhani	6.56	52	iP	Pn	01 23 38.0	+0.3
KDHN	Kadinhani	6.56	52	iP	Pn	01 23 38.0	+0.3
AWBH		6.97	154	P	Pn	01 23 43.6	+0.2
baz=156							
AWBH		6.97	154

HKAT	Jabal Katrina	9.49	128	P	Pn	01 24 17.0	-0.8
	baz=129						
HKAT	Jabal Katrina	9.49	128	P	Pn	01 24 17.0	-0.9
ASF	Jabal al Asfar	9.85	102	Sn	Sn	01 26 09.9	-2.1
	comp=E,0.2nm,0.3s,baz=46,slow=20,SNR=3.4						
STON	Ston	10.19	326	ePn	Pn	01 24 23.0	-4.4
STON				Sn	Sn	01 26 08.1	-12
STON	Ston	10.19	326	ePn	Pn	01 24 23.0	-4.4
STON				Sn	Sn	01 26 08.1	-12
NVLJ	Novalja	12.82	324	ePn	Pn	01 24 58.1	-5.1
NVLJ				Sn	Sn	01 27 11.0	-13
NVLJ	Novalja	12.82	324	ePn	Pn	01 24 58.1	-5.1
NVLJ				Sn	Sn	01 27 11.0	-13
AKASG	Malin Array Be	16.24	8	Pn	Pn	01 25 49.2	+0.8
	comp=E,1.0nm,0.3s,baz=201,slow=10,SNR=4.8						
AKASG	Malin Array Be	16.24	8	Pn	Pn	01 25 49.2	+0.8
AKASG	Malin Array Be	16.24	8	Pn	Pn	01 25 49.2	+0.7
GERES	GERESS Array B	16.64	332	Pn	Pn	01 25 55.0	+1.6
	comp=E,0.1nm,0.3s,baz=163,slow=10,SNR=3.4						
GERES	GERESS Array B	16.64	332	Pn	Pn	01 25 55.0	+1.6
HFS	Hagfors	26.61	347	P	P	01 27 36.4	-0.9
	comp=E,2.3nm,0.9s,mb3.7,baz=138,slow=11,SNR=3.0						
HFS	Hagfors	26.61	347	P	P	01 27 36.4	-0.9
FINES	FINESS Array B	26.79	1	P	P	01 27 36.7	-2.2
	comp=E,0.8nm,0.5s,mb3.5,baz=162,slow=10,SNR=4.7						
FINES	FINESS Array B	26.79	1	P	P	01 27 36.7	-2.2
AKTK	Aktyubinsk	28.38	46	P	P	01 27 53.4	+0.2
AKTK	Aktyubinsk	28.38	46	P	P	01 27 53.4	+0.1
AKTO	Aktyubinsk	28.38	46	P	P	01 27 53.4	+0.2
	comp=E,0.7nm,0.3s,mb3.8,baz=291,slow=5.4,SNR=5.1						
JOF	Joensuu	28.50	6	ep	P	01 27 51.9	-2.3
	comp=E,1.3nm,0.4s,mb3.9						
JOF	Joensuu	28.50	6	eP	P	01 27 51.9	-2.3
	comp=E,1.3nm,0.4s,mb3.9						
TORD	Torodi Ar. Bea	30.40	231	P	P	01 28 12.9	+1.4
	comp=E,0.5nm,0.3s,mb3.7,baz=35,slow=8.7,SNR=24						
ARCES	ARCESS Array B	34.91	0	P	P	01 28 48.2	-2.2
	comp=E,0.5nm,0.4s,mb3.8,baz=187,slow=9.6,SNR=7.7						
ARCES	ARCESS Array B	34.91	0	P	P	01 28 48.2	-2.2
ARCES	ARCESS Array B	34.91	0	P	P	01 28 48.2	-2.1
KURK	Kurchatov	41.27	50	P	P	01 29 44.4	+0.3
	comp=E,0.6nm,0.4s,mb3.6,baz=277,slow=8.8,SNR=4.2						
KURK	Kurchatov	41.27	50	P	P	01 29 44.4	+0.3
SPITS	Spitsbergen Ar	43.78	357	P	P	01 30 03.6	-0.5
	comp=E,5.2nm,1.0s,mb4.2,baz=148,slow=11,SNR=3.5						
SPITS	Spitsbergen Ar	43.78	357	P	P	01 30 03.6	-0.5
MKAR	Makanchi Array	43.81	56	P	P	01 30 05.7	+0.9
	comp=E,0.4nm,0.4s,mb3.5,baz=268,slow=7.1,SNR=4.2						
MKAR	Makanchi Array	43.81	56	P	P	01 30 05.7	+0.9
SONM	Songino Array	59.58	50	P	P	01 32 03.5	+1.1
	comp=E,0.4nm,0.5s,mb3.7,baz=296,slow=6.5,SNR=4.0						
SONM	Songino Array	59.58	50	P	P	01 32 03.5	+1.1
SCHQ	Schefferville	63.73	320	P	P	01 32 30.5	+0.3
	comp=E,2.1nm,0.6s,mb4.4,baz=51,slow=6.5,SNR=5.5						
SCHQ	Schefferville	63.73	320	P	P	01 32 30.5	+0.3
YKA	Yellowknife Ar	77.99	342	P	P	01 33 56.2	-0.4
	comp=E,0.2nm,0.4s,mb3.4,baz=31,slow=5.3,SNR=8.7						
YKA	Yellowknife Ar	77.99	342	P	P	01 33 56.2	-0.4
YKA	Yellowknife Ar	77.99	342	P	P	01 33 56.2	-0.4

*ISCJB **13** 01:23:30.7±0.6, 32°.28N±0°.04×104°.82E±0°.07, h10km, mb3.8/11, Error ellipse: s-maj=8.4km s-min=6.0km az=25.9*
*IDC **13** 01:23:31.9±1.0, 32°.29N×104°.66E, h0km, mb3.7/11, mb1 3.8/12, mb1mx3.7/28, mbtmp3.7/12, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=50.4km s-min=18.8km az=56.0*
*NEIC **13** 01:23:33.4±0.6, 32°.27N×104°.65E, h10km, Error ellipse: s-maj=20.4km s-min=10.3km az=60.0*
ISC 13 01:23:32.5±0.6, 32°.21N±0°.04×104°.76E±0°.07, h10km, n18, σ0=90/20, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.56	214	Pg	Pn	01 23 59.2	-1.0
CD2				Sg	Sn	01 24 18.7	-1.7
CD2				smax			
	comp=N,2μm,0.5s						
LZH	Lanzhou	3.94	349	ePg	Pg	01 24 48.5	+0.6
LZH				Sg	Sg	01 25 37.9	-1.0
LZH				smax			
	comp=N,310nm,0.7s						
LZH				smax			
	comp=E,250nm,0.5s						
LZH				LR	LR		
	comp=E,810nm,5.0s						
LZH				LR	LR		
	comp=Z,1μm,6.9s						
XAN	Xi'an	3.94	61	Pg	Pg	01 24 42.2	-5.8
XAN				Sg	Sg	01 25 37.7	-1.3
XAN				smax			
	comp=N,180nm,0.6s						
XAN				smax			
	comp=E,100nm,0.6s						
SONM	Songino Array	15.65	4	Pn	Pn	01 27 13.5	+0.5
	comp=E,0.1nm,0.3s,baz=157,slow=7.8,SNR=2.4						
MK31	Makanchi Array	22.53	317	eP	P	01 28 32.3	-0.1
MKAR	Makanchi Array	22.53	317	P	P	01 28 32.9	+0.5
	comp=E,0.7nm,0.6s,mb3.3,baz=102,slow=11,SNR=6.5						
ZALV	Zalesovo Beam	25.98	333	P	P	01 29 05.5	+0.3
	comp=E,3.2nm,0.5s,mb4.1,baz=132,slow=8.8,SNR=10						
KURK	Kurchatov	26.71	321	P	P	01 29 12.3	+0.5
	comp=E,0.6nm,0.6s,mb3.3,baz=124,slow=11,SNR=4.6						
AKTK	Aktyubinsk	38.80	312	P	P	01 30 57.9	+0.6
AKTO	Aktyubinsk	38.80	312	P	P	01 30 57.9	+0.6
	comp=E,1.0nm,0.6s,mb3.7,baz=123,slow=13,SNR=4.8						
PETK	Petropavlovsk-	43.01	45	LR	LR	01 51 17.0	
	comp=E,62nm,19.2s,baz=263,slow=39						
FITZ	Fitzroy Crossi	53.88	155	P	P	01 32 57.2	+1.1
	comp=E,1.3nm,0.7s,mb4.0,baz=37,slow=5.1,SNR=2.8						
ARCES	ARCESS Array B	56.48	336	P	P	01 33 14.1	-0.1
	comp=E,2.9nm,0.9s,mb4.3,baz=79,slow=5.9,SNR=3.3						
BRTR	Keskin Array B	56.68	299	P	P	01 33 15.4	-0.8
	comp=E,0.4nm,0.5s,mb3.7,baz=65,slow=6.8,SNR=3.4						
FINES	FINESS Array B	56.96	326	P	P	01 33 17.3	-0.4
	comp=E,1.0nm,0.6s,mb4.0,baz=104,slow=8.0,SNR=7.4						
AKASG	Malin Array Be	57.04	313	P	P	01 33 18.1	-0.4
	comp=E,1.5nm,0.7s,mb4.2,baz=63,slow=8.5,SNR=3.3						
ASAR	Alice Springs	62.16	150	P	P	01 33 56.6	+2.6
	comp=E,0.4nm,0.5s,mb3.8,baz=332,slow=6.0,SNR=4.7						
YKA	Yellowknife Ar	80.47	17	P	P	01 35 44.5	+0.3
	comp=E,0.1nm,0.5s,mb3.0,baz=330,slow=5.3,SNR=3.4						

*ISCJB **13** 01:26:19.9±0.6, 22°.17N±0°.09×145°.4E±0°.2, h10km, mb4.1/13, Error ellipse: s-maj=23.2km s-min=13.3km az=173.8*
*IDC **13** 01:26:20.0±0.7, 22°.21N×145°.41E, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/23, mbtmp4.0/12, Error ellipse: s-maj=26.0km s-min=18.1km az=79.0*
*NEIC **13** 01:26:25.3±0.4, 22°.20N×145°.37E, h35km, mb4.5/1, Error ellipse: s-maj=16.2km s-min=10.0km az=88.0*
*BJI **13** 01:26:32.2, 22°.20N×145°.40E, h35km, mB5.2/5, mb4.8/9, Ms4.1/1, Ms7 3.9/1*
ISC 13 01:26:21.6±0.6, 22°.19N±0°.09×145°.4E±0°.2, h10km, n18, σ0=55/16, mb4.1/13, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.45	319	P	P	01 31 11.2	+1.1
	3.8nm,0.9s,mb3.7,baz=137,slow=11,SNR=6.5						
SONM	Songino Array	40.32	319	P	P	01 33 58.7	-0.5
	0.4nm,0.4s,mb3.5,baz=138,slow=7.4,SNR=4.3						
WRAB	Tennant Creek	43.24	195	eP	P	01 34 23.6	+0.3
	4.7nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	44.48	207	P	P	01 34 32.8	-0.5
	3.2nm,0.6s,mb4.2,baz=31,slow=8.8,SNR=5.1						
ASAR	Alice Springs	46.94	195	P	P	01 34 53.0	+0.3
	1.9nm,0.5s,mb4.2,baz=14,slow=7.6,SNR=23						
STKA	Stephens Creek	53.88	184	P	P	01 35 44.9	-0.1
	0.7nm,0.4s,mb4.0,baz=20,slow=15,SNR=2.8						
MKAR	Makanchi Array	55.92	312	P	P	01 35 59.5	-0.3
	0.9nm,0.6s,mb4.0,baz=85,slow=10,SNR=7.8						
MKAR				PcP	PcP	01 36 57.9	-0.5
	0.8nm,0.6s,baz=72,slow=5.2,SNR=3.5						
KURK	Kurchatov	58.55	317	P	P	01 36 18.1	-0.1
	2.2nm,0.6s,mb4.4,baz=92,slow=7.7,SNR=7.6						
BVAR	Borovoye Array	63.67	319	P	P	01 36 52.6	-0.3
	2.3nm,0.5s,mb4.5,baz=88,slow=7.3,SNR=17						
YKA	Yellowknife Ar	75.04	28	P	P	01 38 02.6	-0.5
	0.5nm,0.7s,mb3.6,baz=292,slow=5.5,SNR=7.6						
YKA	Yellowknife Ar	75.04	28	P	P	01 38 02.6	-0.5

NVAR	Mina Array Bea	81.19	52	P	P	01 38 38.9	+1.1
	2.4nm,0.9s,mb4.2,baz=273,slow=5.3,SNR=6.4						
FINES	FINESS Array B	83.64	335	P	P	01 38 50.2	+0.1
	2.1nm,0.9s,mb4.3,baz=90,slow=5.7,SNR=4.0						
FINES	FINESS Array B	83.64	335	P	P	01 38 50.2	+0.1
PDAR	Pinedale Array	85.56	46	P	P	01 38 59.7	-0.6
	0.3nm,0.6s,mb3.7,baz=284,slow=3.6,SNR=2.6						
PDAR	Pinedale Array	85.56	46	P	P	01 38 59.6	-0.6
PLCA	Paso Flores	144.48	130	PKP	PKPdf	01 45 57.6	-0.8
	1.5nm,0.8s,baz=242,slow=9.6,SNR=3.7						
LPAZ	La Paz	147.81	85	PKPbc	PKPbc	01 46 09.3	+1.7
	0.5nm,0.5s,baz=4.1,slow=4.6,SNR=5.4						

*ISCJB **13** 01:28:19.2±0.4, 28°.11N±0°.04×139°.6E±0°.1, h505km±5km, mb4.0/29, Error ellipse: s-maj=14.3km s-min=5.4km az=167.6*
*IDC **13** 01:28:19.6±0.6, 28°.09N×139°.53E, h494km±8km, mb3.6/22, mb1 3.7/24, mb1mx3.6/30, mbtmp3.6/24, Error ellipse: s-maj=19.5km s-min=8.1km az=75.0*
*NEIC **13** 01:28:20.2±0.8, 28°.09N×139°.54E, h502km±9km, mb4.1/5, Error ellipse: s-maj=16.4km s-min=6.5km az=76.0*
*JMA **13** 01:28:21.2±0.1, 28°.25N×139°.89E, h500km, M4.0*
ISC 13 01:28:20.4±0.4, 28°.17N±0°.04×139°.8E±0°.1, h506km±5km, n61, σ0=10/74, mb4.0/29, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.40	116	P	P	01 29 28.3	+0.2
CBIJ				eS	S	01 30 21.7	-1.5
CBIJ	Chichi jima	2.40	116	P	P	01 29 28.2	+0.1
	110nm,0.3s,baz=271,slow=21,SNR=4.1						
CBIJ				S	S	01 30 21.9	-1.2
	83nm,0.3s,baz=325,slow=21,SNR=3.5						
JHHJ	Haha-jima-NKT	2.64	125	P	P	01 29 30.1	+0.5
JHHJ				eS	S	01 30 25.0	-0.7
BSO1	Boso 1	6.55	9	P	P	01 30 03.4	+1.3
BSO3	Boso 3	6.65	5	S	S	01 31 26.7	-0.5
JIE	Ise	6.73	338	P	P	01 30 06.0	+2.1
JIE				S	S	01 31 26.1	-2.7
JKN2	Miekihoku	6.75	335	P	P	01 30 06.6	+2.5
BSO4	Boso 4	6.82	4	P	P	01 30 06.3	+1.5
BSO4				S	S	01 31 29.4	-1.0
JOD2	Odawara 2	7.10	356	P	P	01 30 09.0	+1.4
JOD2				S	S	01 31 35.3	-0.2
JNY	Yasuok	7.35	348	P	P	01 30 11.0	+0.9
JNY				eS	S	01 31 36.9	-3.2
JHU	Hanno	7.67	357	P	P	01 30 12.8	-0.6
JHU				S	S	01 31 43.0	-3.1
JRY	Ryogami san	7.86	355	P	P	01 30 14.7	-0.6
JRY				S	S	01 31 46.2	-3.5
JJS	Sakaide	7.95	323	P	P	01 30 17.7	+1.5
JET	Tanbara	8.03	316	P	P	01 30 18.1	+1.0
JAG	Ashikaga	8.24	358	P	P	01 30 18.3	-0.9
JAG				S	S	01 31 51.9	-4.9
JHO	Hitachi	8.45	4	P	P	01 30 22.8	+1.5
JHO				S	S	01 31 59.1	-1.6
MJAR	Matsushiro Arr	8.45	351	P	P	01 30 21.0	-0.4
	1.6nm,0.3s,baz=208,slow=6.9,SNR=7.5						
MJAR				S	S	01 32 02.2	+1.4
	0.6nm,0.3s,baz=165,slow=15,SNR=4.7						
MAJO	Matsushiro	8.45	351	ePn	P	01 30 22.0	+0.6
MAT	Matsushiro	8.45	351	P	P	01 30 21.0	-0.4
MAT				eS	S	01 31 58.2	-2.7
JHS	Saijyo	8.86	322	P	P	01 30 27.0	+1.4
JHK	Hiroka	9.08	356	P	P	01 30 28.0	+0.1
JFT	Otama	9.34	3	P	P	01 30 32.7	+2.1
JFT				eS	S	01 32 17.7	-0.1
JMM	Marumori	9.71	5	P	P	01 30 36.5	+2.0
KSRS	Korea Array	13.58	316	P	P	01 31 19.7	+4.2
	1.8nm,0.3s,baz=145,slow=8.7,SNR=26						
PETK	Petropavlovsk-	28.23	23	S	S	01 37 45.5	+4.2
	1.5nm,0.4s,baz=232,slow=11,SNR=4.3						
SONM	Songino Array	32.45	316	P	P	01 34 08.0	-0.2
	2.9nm,0.6s,mb3.9,baz=140,slow=7.5,SNR=14						
SONM	Songino Array	32.45	316	P	P	01 34 08.0	-0.2
ZALV	Zalesovo Beam	47.27	319	P	P	01 36 06.2	-0.9
	2.8nm,0.4s,mb4.0,baz=98,slow=7.5,SNR=12						
ZALV				PcP	PcP	01 37 27.8	-0.5
	1.2nm,0.4s,baz=124,slow=4.8,SNR=4.4						
FITZ	Fitzroy Crossi	47.98	198	P	P	01 36 12.4	-0.5
	3.6nm,0.5s,mb4.0,baz=29,slow=6.4,SNR=10						
WRAB	Tennant Creek	48.10	187	eP	P	01 36 12.8	-1.0
	6.0nm,0.6s,mb4.1						
WRA	Warramunga Arr	48.11	187	P	P	01 36 12.9	-0.9
	6.3nm,0.5s,mb4.2,baz=3.5,slow=7.7						
MK31	Makanchi Array	48.13	309	eP	P	01 36 13.2	-0.5
MKAR	Makanchi Array	48.13	309	P	P	01 36 13.1	-0.7
	3.2nm,0.6s,mb3.8,baz=93,slow=9.3,SNR=16						
CTA	Charters Tower	48.38	172	P	P	01 36 16.4	+0.5
	5.3nm,0.8s,mb3.9,baz=18,slow=3.2,SNR=3.4						
KURK	Kurchatov	50.70	314	P	P	01 36 32.5	-0.1
	18nm,0.6s,mb4.5,baz=91,slow=8.2,SNR=31						
ASAR	Alice Springs	51.84	187	P	P	01 36 40.4	-0.8
	3.5nm,0.6s,mb3.9,baz=17,slow=12,SNR=39						
ASAR				ScP	ScP	01 40 52.8	-1.0
	0.4nm,0.8s,baz=335,slow=4.2,SNR=3.7						
AAK	Ala-Archa	53.88	304	P	P	01 36 55.4	-0.2
	2.3nm,0.4s,mb3.9,baz=105,slow=6.1,SNR=9.2						
UCH	Uchtor	53.91	303	eP	P	01 36 56.7	+0.8
	2.5nm,0.5s,mb3.8						
AML	Almayashu	54.53	303	eP	P	01 37 00.9	+0.7
	3.9nm,0.4s,mb4.1						
BVAR	Borovoye Array	55.80	317	P	P	01 37 08.7	-0.2
	14nm,0.5s,mb4.6,baz=90,slow=6.7,SNR=55						
BRVK	Borovoye	55.86	317	eP	P	01 37 09.2	-0.1
	5.4nm,0.4s,mb4.2						
STKA	Stephens Creek	59.74	178	P	P	01 37 36.0	+0.1
	2.8nm,0.7s,mb3.8,baz=338,slow=7.4,SNR=9.0						
ABKAR	Akbulak array	62.80	314	eP	P	01 37 55.2	-0.7
	5.3nm,0.5s,mb4.3						
AKTK	Aktyubinsk	63.76	315	P	P	01 38 01.3	-0.7
AKTO	Aktyubinsk	63.76	315	P	P	01 38 01.3	-0.7
	3.0nm,0.6s,mb4.0,baz=80,slow=14,SNR=8.7						
SPITS	Spitsbergen Ar	68.94	349	P	P	01 38 35.1	+1.4
	1.3nm,0.5s,mb3.7,baz=101,slow=6.9,SNR=11						
ARCES	ARCESS Array B	71.82	340	P	P	01 38 51.9	+0.9
	4.1nm,0.6s,mb4.1,baz=61,slow=7.6,SNR=16						
YKA	Yellowknife Ar	72.22	28	P	P	01 38 55.1	+1.8
	0.7nm,0.6s,mb3.4,baz=298,slow=6.0,SNR=11						
JOF	Joensuu	73.16	333	ep	P	01 38 58.5	-0.3
	7.1nm,0.6s,mb4.4						
KAF	Kangasniemi	75.57	334	ep	P	01 39 11.9	-0.5
	6.4nm,0.5s,mb4.4						
FINES	FINESS Array B	76.03	333	P	P	01 39 14.8	-0.2
	6.8nm,0.4s,mb4.5,baz=68,slow=4.9,SNR=62						
FINES	FINESS Array B	76.03	333	P	P	01 39 14.8	-0.2
AKASG	Malin Array Be	80.48	323	P	P	01 39 38.4	-0.7
	1.2nm,0.4s,mb3.8,baz=50,slow=5.8,SNR=9.4						
AKASG	Malin Array Be	80.48	323	P	P	01 39 38.4	-0.7
HFS	Hagfors	81.58	336	P	P	01 39 44.0	-0.6
	2.9nm,0.4s,mb4.2,baz=104,slow=4.7,SNR=24						
NOA	NORSAR Array B	81.81	337	P	P	01 39 45.4	-0.4
	4.5nm,0.6s,mb4.2,baz=46,slow=4.9,SNR=16						
BRTR	Keskin Array B	83.69	312	P	P	01 39 55.0	-0.7
	0.8nm,0.6s,mb3.4,baz=106,slow=3.5,SNR=5.9						
GERES	GERESS Array B	89.47	328	P	P	01 40 22.5	-0.5
	0.1nm,0.3s,mb3.2,baz=5.7,slow=5.4,SNR=4.1						
GERES	GERESS Array B	89.47	328	P	P	01 40 22.5	-0.5
EKA	Eskdalemuir Ar	90.98	340	P	P	01 40 31.1	+1.3
	1.1nm,0.9s,mb3.8,baz=32,slow=4.2,SNR=3.8						
TORD	Torodi Ar. Bea	122.25	310	PKP	PKPdf	01 46 17.4	-0.9
	0.3nm,0.6s,baz=77,slow=0.9,SNR=7.0						

*IDC **13** 01:32:00.4±0.6, 30°.92N×103°.68E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/29, mbtmp4.0/18, MS3.8/1, Ms1 3.8/1, ms1mx2.8/33, Error ellipse: s-maj=28.6km s-min=12.8km az=55.0*
*NEIC **13** 01:32:02.1±0.5, 30°.90N×103°.69E, h10km, mb4.5/3, Error ellipse: s-maj=22.6km s-min=9.2km az=57.0*
*BJI **13** 01:32:02.4, 30°.94N×103°.37E, h18km, mb4.2/5, ML4.1/12, Ms4.2/3, Ms7 3.7/1*
ISC 13 01:32:02.6±0.4, 30°.87N±0°.05×103°.47E±0°.06, h10km, n30, σ1=28/33, mb4.0/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.25	81	Pg	Pg	01 32 08.5	+0.8
CD2				Sg	Sg	01 32 14.4	+3.3
CD2				smax			
	comp=N,41μm,0.6s						
LZH	Lanzhou	5.21	3	ePg	Pg	01 33 51.3	+9.0
LZH				Sg	Sg	01 34 49.8	0.0
LZH				smax			
	comp=N,94nm,0.9s						
LZH				smax			
	comp=E,100nm,1.0s						
XAN	Xi'an	5.59	54	Pg	Pg	01 33 58.0	+8.4
XAN				Sg	Sg	01 34 53.6	-8.3
XAN				smax			
	comp=N,230nm,1.1s						
XAN				smax			
	comp=E,94nm,1.0s						
KMI	Kunming	5.76	187	Pn	Pn	01 33 30.0	+1.8
KMI				Sn	Sn	01 34 40.9	+6.5
KMI				smax			
	comp=N,99nm,1.1s						
KMI				smax			
	comp=E,76nm,1.1s						
KMI				LR	LR		
	comp=N,700nm,8.9s						
KMI				LR	LR		
	comp=E,510nm,5.1s						
WHN	Wuhan	9.37	89	eP	Pn	01 34 25.7	+8.0
SONM	Songino Array	17.09	7	P	Pn	01 36 00.9	-0.5
	comp=E,0.1nm,0.3s,baz=187,slow=15,SNR=5.7						
KSRS	Korea Array	21.24	65	P	P	01 36 46.2	-2.5
	comp=E,3.6nm,0.7s,mb3.8,baz=238,slow=9.5,SNR=9.0						
CN2	Changchun	21.64	47	eP	P	01 36 53.0	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
DDI	Dehra Dun	21.87	275	ex	P	01 36 59.0	+3.4
JOW	Kunigami	22.08	94	LR	LR	01 46 27.1	
	comp=Z,220nm,19.6s,baz=136,slow=40						
MK31	Makanchi Array	22.80	320	P	P	01 37 08.3	+3.0
MKAR	Makanchi Array	22.80	320	P	P	01 37 06.2	+0.9
	comp=Z,1.3nm,0.9s,mb3.4,baz=117,slow=5.5,SNR=2.4						
TKM2	Tokmak 2	25.21	306	eP	P	01 37 29.2	+0.9
	comp=Z,5.2nm,1.1s,mb4.0						
AAK	Ala-Archa	25.89	305	P	P	01 37 35.3	+0.8
	comp=Z,0.5nm,0.3s,mb3.5,baz=90,slow=11,SNR=3.3						
AAK	Ala-Archa	25.89	305	eP	P	01 37 35.4	+0.9
	comp=Z,8.6nm,0.9s,mb4.3						
ZALV	Zalesovo Beam	26.70	335	P	P	01 37 40.7	-1.0
	comp=Z,1.9nm,0.7s,mb3.8,baz=134,slow=8.5,SNR=6.2						
KURK	Kurchatov	27.11	324	P	P	01 37 44.3	-1.1
	comp=Z,1.1nm,0.7s,mb3.5,baz=129,slow=9.4,SNR=3.6						
BVAR	Borovoye Array	32.64	322	P	P	01 38 34.9	+0.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=125,slow=13,SNR=3.4						
BVAR				PcP	PcP	01 41 18.9	-1.3
	comp=Z,0.8nm,0.6s,baz=108,slow=3.2,SNR=3.9						
KAPI	Kappang	38.93	154	P	P	01 39 26.9	-1.9
	comp=Z,5.6nm,0.7s,mb4.4,baz=180,slow=20,SNR=3.1						
BRTR	Keskin Array B	56.38	300	P	P	01 41 43.1	-0.9
	comp=Z,0.4nm,0.8s,mb3.5,baz=148,slow=8.5,SNR=2.5						
FINES	FINESS Array B	57.45	326	P	P	01 41 49.9	-1.4
	comp=Z,3.8nm,1.0s,mb4.4,baz=182,slow=11,SNR=3.3						
WRAB	Tennant Creek	58.59	146	eP	P	01 41 59.1	-0.6
	comp=Z,8.0nm,0.8s,mb4.8						
WRA	Warramunga Arr	58.59	146	P	P	01 41 59.4	-0.3
	comp=Z,4.9nm,0.9s,mb4.6,baz=337,slow=7.5						
ASAR	Alice Springs	61.58	148	P	P	01 42 19.2	-1.0
	comp=Z,1.7nm,0.8s,mb4.2,baz=333,slow=6.5,SNR=16						
HFS	Hagfors	63.66	326	P	P	01 42 34.8	+1.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=114,slow=9.6,SNR=4.9						
NOA	NORSAR Array B	64.56	327	P	P	01 42 40.4	+0.8
	comp=Z,0.5nm,0.6s,mb3.7,baz=74,slow=4.6,SNR=3.4						
GERES	GERESS Array B	67.32	314	P	P	01 42 59.4	+1.8
	comp=Z,0.4nm,0.7s,mb3.6,baz=116,slow=3.1,SNR=3.9						
STKA	Stephens Creek	72.11	146	P	P	01 43 26.8	-0.3
	comp=Z,2.8nm,0.7s,mb4.3,baz=335,slow=5.4,SNR=8.4						
INK	Inuvik	72.55	19	P	P	01 43 27.4	-2.0
	comp=Z,1.8nm,0.8s,mb4.0,baz=320,slow=6.7,SNR=6.8						
YKA	Yellowknife Ar	82.07	17	P	P	01 44 21.6	-1.2
	comp=Z,0.6nm,0.7s,mb3.6,baz=328,slow=5.0,SNR=11						

*ISCJB **13** 01:35:44.9±0.7, 31°.93N±0°.08×104°.71E±0°.08, h10km, mb3.6/8, Error ellipse: s-maj=12.6km s-min=7.8km az=146.8*
*IDC **13** 01:35:45.2±1.2, 31°.97N×104°.77E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=49.9km s-min=23.8km az=65.0*
*NEIC **13** 01:35:46.7±0.6, 31°.98N×104°.81E, h10km, mb4.3/1, Error ellipse: s-maj=21.0km

CTEI	**Djebel Teioual**	**1.74**	**83**	P	**Pn**	**01 37 51.4**	**-0.5**
CTEI	**Djebel Teioual**	**1.74**	**83**	P	**Pn**	**01 37 51.4**	**-0.5**
CASM	**Ain Smara**	**1.84**	**77**	P	**Pn**	**01 37 53.0**	**-0.2**
CASM	**Ain Smara**	**1.84**	**77**	P	**Pn**	**01 37 53.0**	**-0.2**
CASM	**Ain Smara**	**1.84**	**77**	P	**Pn**	**01 37 53.0**	**-0.2**
CASM	**Ain Smara**	**1.84**	**77**	P	**Pn**	**01 37 53.0**	**-0.2**
CKFL	**Kef-Lekhel**	**2.05**	**74**	P	**Pn**	**01 37 57.7**	**+1.5**
CKFL	**Kef-Lekhel**	**2.05**	**74**	P	**Pn**	**01 37 57.7**	**+1.5**
CKFL	**Kef-Lekhel**	**2.05**	**74**	P	**Pn**	**01 37 57.7**	**+1.5**
CKFL	**Kef-Lekhel**	**2.05**	**74**	P	**Pn**	**01 37 57.7**	**+1.5**
EBNR	**Beni Rached**	**2.27**	**282**	P	**Pn**	**01 37 57.6**	**-1.5**
EBNR	**Beni Rached**	**2.27**	**282**	P	**Pn**	**01 37 57.6**	**-1.5**
ECHA	**Ech Chlef**	**2.38**	**278**	P	**Pn**	**01 38 02.2**	**+1.6**
ECHA	**Ech Chlef**	**2.38**	**278**	P	**Pn**	**01 38 02.2**	**+1.6**
ECHF	**Ech Chlef**	**2.40**	**278**	P	**Pn**	**01 38 02.2**	**+1.3**
ECHF	**Ech Chlef**	**2.40**	**278**	P	**Pn**	**01 38 02.2**	**+1.3**
ETRT	**Tiaret**	**2.47**	**260**	P	**Pn**	**01 38 00.0**	**-1.9**
ETRT	**Tiaret**	**2.47**	**260**	P	**Pn**	**01 38 00.0**	**-1.9**
ETRT	**Tiaret**	**2.47**	**260**	P	**Pn**	**01 38 00.0**	**-1.9**
ETRT	**Tiaret**	**2.47**	**260**	P	**Pn**	**01 38 00.0**	**-1.9**
EANR	**'Ain N'Sour**	**2.58**	**273**	P	**Pn**	**01 38 04.5**	**+1.1**
EANR	**'Ain N'Sour**	**2.58**	**273**	P	**Pn**	**01 38 04.5**	**+1.1**
EANR	**'Ain N'Sour**	**2.58**	**273**	P	**Pn**	**01 38 04.5**	**+1.1**
EANR	**'Ain N'Sour**	**2.58**	**273**	P	**Pn**	**01 38 04.5**	**+1.1**
CMAH	**Djebel Manchou**	**2.66**	**72**	P	**Pn**	**01 38 03.5**	**-1.0**
CMAH	**Djebel Manchou**	**2.66**	**72**	P	**Pn**	**01 38 03.5**	**-1.0**
CMAH	**Djebel Manchou**	**2.66**	**72**	P	**Pn**	**01 38 03.5**	**-1.0**
CMAH	**Djebel Manchou**	**2.66**	**72**	P	**Pn**	**01 38 03.5**	**-1.0**
EIBI	**Ibiza**	**3.93**	**324**	P	**Pn**	**01 38 22.4**	**+0.5**
EIBI				S	**Sn**	**01 39 07.1**	**-1.2**
EIBI	**Ibiza**	**3.93**	**324**	P	**Pn**	**01 38 22.4**	**+0.5**
	2.9nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**01 39 07.1**	**-1.2**
	2.7nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.93**	**324**	P	**Pn**	**01 38 22.4**	**+0.5**
	2.9nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**01 39 07.1**	**-1.2**
	2.7nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.93**	**324**	P	**Pn**	**01 38 22.5**	**+0.5**
EIBI				S	**Sn**	**01 39 07.1**	**-1.2**
	2.7nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**4.07**	**344**	P	**Pn**	**01 38 23.6**	**-0.4**
ETOS	**Mallorca**	**4.07**	**344**	P	**Pn**	**01 38 23.6**	**-0.4**
	3.0nm,0.3s,SNR=8.0						
ETOS	**Mallorca**	**4.07**	**344**	P	**Pn**	**01 38 23.6**	**-0.4**
	3.0nm,0.3s,SNR=8.0						
ETOS	**Mallorca**	**4.07**	**344**	P	**Pn**	**01 38 23.6**	**-0.3**
	0.2nm,0.1s,SNR=8.0						
EBEN	**Beniarda**	**4.58**	**310**	P	**Pn**	**01 38 31.4**	**+0.5**
EBEN	**Beniarda**	**4.58**	**310**	P	**Pn**	**01 38 31.4**	**+0.5**
	1.0nm,0.5s,SNR=4.0						
EBEN	**Beniarda**	**4.58**	**310**	P	**Pn**	**01 38 31.4**	**+0.5**
	1.0nm,0.5s,SNR=4.0						
EBEN	**Beniarda**	**4.58**	**310**	P	**Pn**	**01 38 31.4**	**+0.5**
	0.1nm,0.1s,SNR=4.0						
ENIJ	**Nijar**	**5.34**	**284**	P	**Pn**	**01 38 40.4**	**-1.1**
	1.3nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**5.34**	**284**	P	**Pn**	**01 38 40.4**	**-1.1**
	1.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.41**	**303**	P	**Pn**	**01 38 42.6**	**+0.2**
ETOB				S	**Sn**	**01 39 43.6**	**-1.2**
ETOB	**Tobarra**	**5.41**	**303**	P	**Pn**	**01 38 42.6**	**+0.2**
	1.8nm,0.3s,SNR=15						
ETOB				S	**Sn**	**01 39 44.6**	**-0.2**
	15nm,1.1s						
ETOB	**Tobarra**	**5.41**	**303**	P	**Pn**	**01 38 42.6**	**+0.2**
	1.8nm,0.3s,SNR=15						
ETOB				S	**Sn**	**01 39 44.6**	**-0.2**
	15nm,1.1s						
ETOB	**Tobarra**	**5.41**	**303**	P	**Pn**	**01 38 42.6**	**+0.2**
	SNR=15						
EHUE	**Huescar**	**5.84**	**292**	P	**Pn**	**01 38 50.2**	**+1.9**
EHUE				S	**Sn**	**01 39 56.1**	**+0.7**
EHUE	**Huescar**	**5.84**	**292**	P	**Pn**	**01 38 49.3**	**+1.0**
	0.9nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**01 39 56.1**	**+0.7**
	0.4nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**5.84**	**292**	P	**Pn**	**01 38 49.3**	**+1.0**
	0.9nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**01 39 56.1**	**+0.7**
	0.4nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**5.84**	**292**	P	**Pn**	**01 38 50.2**	**+1.9**
	0.1nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**01 39 56.1**	**+0.7**
	0.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**322**	P	**Pn**	**01 38 48.7**	**+0.3**
EMOS	**Mosqueruela**	**5.85**	**322**	P	**Pn**	**01 38 48.7**	**+0.3**
	2.7nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**322**	P	**Pn**	**01 38 48.7**	**+0.3**
	2.7nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**5.85**	**322**	P	**Pn**	**01 38 48.7**	**+0.3**
	SNR=7.9						
EBER	**Berja**	**5.87**	**282**	P	**Pn**	**01 38 47.6**	**-1.1**
EBER				S	**Sn**	**01 39 55.7**	**-0.4**
EBER	**Berja**	**5.87**	**282**	P	**Pn**	**01 38 47.6**	**-1.1**
	2.8nm,0.4s,SNR=8.8						
EBER				S	**Sn**	**01 39 52.3**	**-3.9**
	48nm,1.5s						
EBER	**Berja**	**5.87**	**282**	P	**Pn**	**01 38 47.6**	**-1.1**
	2.8nm,0.4s,SNR=8.8						
EBER				S	**Sn**	**01 39 52.3**	**-3.9**
	48nm,1.5s						
EBER	**Berja**	**5.87**	**282**	P	**Pn**	**01 38 47.6**	**-1.1**
	0.2nm,0.1s,SNR=8.8						
EBER				S	**Sn**	**01 39 55.7**	**-0.5**
	48nm,1.5s						
EVIA	**Vianos**	**6.08**	**299**	P	**Pn**	**01 38 52.0**	**+0.6**
EVIA				S	**Sn**	**01 40 02.9**	**+1.7**
EVIA	**Vianos**	**6.08**	**299**	P	**Pn**	**01 38 52.0**	**+0.6**
	1.4nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**01 40 02.8**	**+1.7**
	1.1nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**6.08**	**299**	P	**Pn**	**01 38 52.0**	**+0.6**
	1.4nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**01 40 02.8**	**+1.7**
	1.1nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**6.08**	**299**	P	**Pn**	**01 38 52.0**	**+0.6**
	0.3nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**01 40 02.8**	**+1.6**
	1.1nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.20**	**290**	P	**Pn**	**01 38 54.3**	**+1.1**
EQES				S	**Sn**	**01 40 05.5**	**+1.2**
EQES	**Quesada**	**6.20**	**290**	P	**Pn**	**01 38 54.3**	**+1.1**
	4.9nm,0.3s,SNR=40						
EQES				S	**Sn**	**01 40 04.3**	**0.0**
	8.2nm,1.0s						
EQES	**Quesada**	**6.20**	**290**	P	**Pn**	**01 38 54.3**	**+1.1**
	4.9nm,0.3s,SNR=40						
EQES				S	**Sn**	**01 40 04.3**	**0.0**
	8.2nm,1.0s						
EQES	**Quesada**	**6.20**	**290**	P	**Pn**	**01 38 54.3**	**+1.1**
	0.3nm,0.1s,SNR=40						
EQES				S	**Sn**	**01 40 05.5**	**+1.2**
	8.2nm,1.0s						
EQUE	**Quentar**	**6.36**	**284**	P	**Pn**	**01 38 55.4**	**0.0**
	3.2nm,0.5s,SNR=11						
EQUE				S	**Sn**	**01 40 03.2**	**-4.9**
	2.4nm,0.4s,SNR=6.7						
EQUE	**Quentar**	**6.36**	**284**	P	**Pn**	**01 38 55.4**	**0.0**
	3.2nm,0.5s,SNR=11						
EQUE				S	**Sn**	**01 40 03.2**	**-4.9**
	2.4nm,0.4s,SNR=6.7						
EQUE	**Quentar**	**6.36**	**284**	P	**Pn**	**01 38 55.4**	**+0.1**
	0.4nm,0.2s,SNR=11						
EGUA	**Guajares**	**6.40**	**281**	P	**Pn**	**01 38 54.6**	**-1.3**
EGUA	**Guajares**	**6.40**	**281**	P	**Pn**	**01 38 54.6**	**-1.3**
	16nm,0.5s,SNR=7.9						
EGUA	**Guajares**	**6.40**	**281**	P	**Pn**	**01 38 54.6**	**-1.3**
	16nm,0.5s,SNR=7.9						
EGUA	**Guajares**	**6.40**	**281**	P	**Pn**	**01 38 54.6**	**-1.4**
	0.8nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**6.67**	**351**	P	**Pn**	**01 38 53.8**	**-5.8**
	1.8nm,0.4s,SNR=7.9						
EJON				S	**Sn**	**01 40 15.0**	**-0.8**
	0.8nm,0.5s,SNR=7.9						
EJON	**La Jonquera**	**6.67**	**351**	P	**Pn**	**01 38 53.8**	**-5.8**
	1.8nm,0.4s,SNR=7.9						
EJON				S	**Sn**	**01 40 15.0**	**-0.8**
	0.8nm,0.5s,SNR=7.9						
EMIJ	**Mijas**	**7.35**	**278**	P	**Pn**	**01 39 07.5**	**-1.4**
EMIJ	**Mijas**	**7.35**	**278**	P	**Pn**	**01 39 07.5**	**-1.4**
	1.6nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**7.35**	**278**	P	**Pn**	**01 39 07.5**	**-1.4**
	1.6nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**7.35**	**278**	P	**Pn**	**01 39 07.6**	**-1.4**

*CSEM **13** 01:42:37.2±0.1, 46°.41N×15°.09E, h2km, ML1.5/4, Error ellipse: s-maj=3.9km s-min=2.6km az=99.0, Suspected Mining induced.*
*VIE **13** 01:42:37.4±0.6, 46°.41N×15°.08E, h0km, mb0.7/3, ML1.2/3, Error ellipse: s-maj=4.2km s-min=2.7km az=179.0 24 km NW of Celje Suspected Mining induced.*

LJU 13 01:42:36.9, 46°.39N×15°.07E, h0km, ML0.8, 2C-5D
Rockburst, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ZAVS	**Zavodnje**	**0.05**	**325**	⇓*i*Pg		Pg	01 42 38.2	+0.3
ZAVS								
	comp=Z,235nm,0.2s							
PERS	**Pernice**	**0.25**	**7**	*e*Pg		Pg	01 42 42.0	+0.3
PERS				*e*Sg		Sg	01 42 45.7	+0.8
PERS								
	comp=Z,16nm,0.2s							
PERS	**Pernice**	**0.25**	**7**	Pg		Pg	01 42 42.0	+0.3
PERS				*e*Sg		Sg	01 42 45.7	+0.8
	comp=Z,16nm,0.2s							
SOKA	**Soboth**	**0.29**	**355**	⇓*i*Pg		Pg	01 42 42.6	+0.2
SOKA				⇑*i*Sg		Sg	01 42 47.2	+1.0
	comp=Z,8.3nm,0.3s							
SOKA	**Soboth**	**0.29**	**355**	Pg		Pg	01 42 42.6	+0.1
SOKA				Sg		Sg	01 42 47.2	+1.0
	comp=Z,8.3nm,0.3s							
GROS	**Grobnik**	**0.31**	**76**	*i* Pg		Pg	01 42 43.1	+0.3
GROS								
	comp=Z,7.0nm,0.2s							
GROS	**Grobnik**	**0.31**	**76**	*i* Pg		Pg	01 42 43.1	+0.3
	comp=Z,7.0nm,0.2s							
PDKS	**Podkum**	**0.33**	**189**	*i* Pg		Pg	01 42 43.5	+0.3
OBKA	**Obir**	**0.38**	**288**	⇓*i*Pg		Pg	01 42 44.6	+0.4
OBKA				⇑*i*Sg		Sg	01 42 50.3	+1.2
	comp=Z,23nm,0.3s							
OBKA	**Obir**	**0.38**	**288**	Pg		Pg	01 42 44.6	+0.4
OBKA				Sg		Sg	01 42 50.3	+1.2
	comp=Z,23nm,0.3s							
ARSA	**Arzberg**	**0.92**	**20**	⇓*i*Pg		Pg	01 42 53.7	-0.8
ARSA				⇓*i*Sg		Sg	01 43 05.8	-0.5
	comp=Z,2.3nm,0.4s							
ARSA	**Arzberg**	**0.92**	**20**	Pg		Pg	01 42 53.7	-0.7
ARSA				Sg		Sg	01 43 05.8	-0.5
	comp=Z,2.3nm,0.4s							
NVLJ	**Novalja**	**1.83**	**184**	*e*Pn		Pn	01 43 10.3	+0.7
NVLJ				Sn		Sn	01 43 34.4	+0.9
NVLJ	**Novalja**	**1.83**	**184**	*e*Pn		Pn	01 43 10.2	+0.6
NVLJ				Sn		Sn	01 43 34.3	+0.9

*ISCJB **13** 01:43:04.1±0.5, 31°.62N±0°.05×104°.54E±0°.06, h10km, mb3.9/15, Error ellipse: s-maj=7.5km s-min=6.6km az=137.8*
*IDC **13** 01:43:04.9±0.8, 31°.63N×104°.37E, h0km, mb3.9/14, mb1 4.1/15, mb1mx4.0/26, mbtmp3.9/15, ML2.9/1, Error ellipse: s-maj=33.3km s-min=15.7km az=50.0*
*NEIC **13** 01:43:06.5±0.6, 31°.67N×104°.40E, h10km, mb4.1/2, Error ellipse: s-maj=21.7km s-min=11.7km az=57.0*
*BJI **13** 01:43:06.8, 31°.64N×104°.52E, h11km, mb4.1/1, ML3.9/11, Ms3.8/4, Ms7 3.7/3*

ISC 13 01:43:06.3±0.5, 31°.67N±0°.04×104°.49E±0°.05, h10km, n26, σ1°16/31, mb3.9/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CD2	**Chengdu**	**0.99**	**220**	Pg		**Pg**	**01 43 23.8**	**-1.4**
CD2				Sg		**Sg**	**01 43 28.4**	**-10**
CD2				smax				
	comp=N,3μm,0.6s							
XAN	**Xi'an**	**4.41**	**57**	Pg		**Pg**	**01 44 31.1**	**+0.3**
XAN				Sg		**Sg**	**01 45 25.8**	**-2.2**
XAN				smax				
	comp=N,220nm,0.8s							
XAN				smax				
	comp=E,100nm,0.7s							
LZH	**Lanzhou**	**4.43**	**353**	*e*Pn		**Pn**	**01 44 15.0**	**+1.4**
LZH				Pg		**Pg**	**01 44 29.2**	**-2.0**
LZH				Sn		**Sn**	**01 45 07.4**	**+2.2**
LZH				Sg		**Sg**	**01 45 26.5**	**-2.1**
LZH				smax				
	comp=N,210nm,1.2s							
LZH				smax				
	comp=E,190nm,1.0s							
LZH				LR		LR		
	comp=E,1μm,6.8s							
LZH				LR		LR		
	comp=Z,2μm,7.6s							
GYA	**Guiyang**	**5.53**	**159**	Pn		**Pn**	**01 44 27.8**	**-0.9**
GYA				smax				
	comp=N,180nm,1.1s							
GYA				smax				
	comp=E,200nm,1.0s							
WHN	**Wuhan**	**8.53**	**95**	P		**Pn**	**01 45 00.4**	**-9.4**
WHN				S		**Sn**	**01 46 46.1**	**0.0**
WHN				LR		LR		
	comp=N,1μm,5.8s							
WHN				LR		LR		
	comp=E,630nm,6.4s							
TIA	**Tai'an**	**11.43**	**63**	*e*P		PKiKP	01 59 39.8	-1.1
SONM	**Songino Array**	**16.21**	**5**	Pn		**Pn**	**01 46 54.8**	**+0.8**
	comp=E,0.1nm,0.3s,baz=182,slow=8.9,SNR=7.0							
KSRS	**Korea Array**	**20.12**	**67**	P		**P**	**01 47 41.8**	**+1.5**
	comp=E,3.8nm,0.7s,baz=255,slow=11,SNR=8.6							
MK31	**Makanchi Array**	**22.77**	**318**	*e*P		**P**	**01 48 07.4**	**-1.3**
MKAR	**Makanchi Array**	**22.77**	**318**	P		**P**	**01 48 08.6**	**-0.1**
	comp=E,1.0nm,0.7s,mb3.4,baz=116,slow=13,SNR=8.0							
UCH	**Uchtor**	**26.05**	**302**	*e*P		**P**	**01 48 41.1**	**+1.5**
	comp=E,4.6nm,1.0s,mb4.0							
ZALV	**Zalesovo Beam**	**26.36**	**333**	P		**P**	**01 48 41.8**	**-0.5**
	comp=E,2.1nm,0.6s,mb3.8,baz=132,slow=11,SNR=8.0							
KURK	**Kurchatov**	**26.99**	**322**	P		**P**	**01 48 47.5**	**-0.6**
	comp=E,1.4nm,0.8s,mb3.6,baz=128,slow=9.3,SNR=7.1							
BVAR	**Borovoye Array**	**32.55**	**321**	P		**P**	**01 49 37.4**	**0.0**
	comp=E,0.4nm,0.5s,mb3.6,baz=111,slow=7.9,SNR=3.5							
BVAR				PcP		PcP	01 52 23.1	-0.6
	comp=E,0.4nm,0.3s,baz=62,slow=3.4,SNR=2.8							
ARU	**Arti**	**40.19**	**322**	*e*P		**P**	**01 50 42.0**	**-0.4**
	comp=E,2.7nm,0.6s,mb4.2							
BRTR	**Keskin Array B**	**56.75**	**299**	P		**P**	**01 52 49.8**	**-0.6**
	comp=E,1.0nm,0.9s,mb3.9,baz=101,slow=6.4,SNR=5.0							
ARCES	**ARCESS Array B**	**56.88**	**336**	P		**P**	**01 52 52.8**	**+2.0**
	comp=E,2.6nm,1.0s,mb4.2,baz=63,slow=8.3,SNR=3.8							
AKASG	**Malin Array Be**	**57.24**	**313**	P		**P**	**01 52 54.9**	**+1.3**
	comp=E,0.2nm,0.3s,mb3.7,baz=68,slow=7.0,SNR=3.4							
FINES	**FINESS Array B**	**57.28**	**326**	P		**P**	**01 52 52.9**	**-0.8**
	comp=E,2.0nm,0.6s,mb4.3,baz=73,slow=7.3,SNR=13							
FINES	**FINESS Array B**	**57.28**	**326**	P		**P**	**01 52 52.9**	**-0.8**
ASAR	**Alice Springs**	**61.81**	**149**	P		**P**	**01 53 26.1**	**+0.7**
	comp=E,1.4nm,0.5s,mb4.4,baz=337,slow=6.7,SNR=16							
NB2	**NORSAR Subarra**	**64.36**	**327**	P		**P**	**01 53 36.8**	**-5.1**
	comp=Z,1.3nm,0.7s,mb4.1,baz=72,slow=6.5							
NOA	**NORSAR Array B**	**64.36**	**327**	P		**P**	**01 53 42.9**	**+1.0**
	comp=Z,1.8nm,0.9s,mb4.1,baz=71,slow=6.5,SNR=4.0							
GERES	**GERESS Array B**	**67.39**	**314**	P		**P**	**01 54 01.3**	**-0.4**
	comp=Z,0.9nm,0.9s,mb3.8,baz=58,slow=13,SNR=6.0							
STKA	**Stephens Creek**	**72.31**	**147**	P		**P**	**01 54 32.2**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.3,baz=340,slow=6.8,SNR=6.1							
YKA	**Yellowknife Ar**	**81.05**	**17**	P		**P**	**01 55 21.1**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.8,baz=327,slow=5.1,SNR=7.4							

*NEIC **13** 01:43:34.0, 59°.40N×136°.65W, h10km, ML2.5(PGC), ML2.5(AEIC), After PGC.*

PGC 13 01:43:34.0±0.8, 59°.40N×136°.65W, h10km, ML2.5/4, 1C-5D, 86km Wnw of Haines, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PLBC	**Pleasant Camp**	**0.16**	**67**	⇓P		Pg	01 43 37.2	-0.3
PLBC				S		Sg	01 43 39.7	-0.1
PLBC	**Pleasant Camp**	**0.16**	**67**	⇓P		Pg	01 43 37.2	-0.3
PLBC				⇓S		Sg	01 43 39.7	-0.1
SKAG	**Skagway**	**0.68**	**84**	P		Pg	01 43 45.7	-1.4
SKAG				S		Sg	01 43 54.3	-1.6
BESE	**Bessie Mountai**	**1.24**	**131**	P		Pn	01 43 55.3	-2.1
BESE				S		Sb	01 44 12.0	-1.5
PNL	**Peninsula**	**1.43**	**282**	P		Pn	01 43 59.5	-0.5
HYT	**Haines Junctio**	**1.50**	**344**	⇑Pn		Pn	01 44 01.3	+0.4
HYT				Sg		Sg	01 44 20.4	-1.7
HYT	**Haines Junctio**	**1.50**	**344**	⇑Pn		Pn	01 44 01.3	+0.4
HYT				⇑Sg		Sg	01 44 20.4	-1.7
WHY	**Whitehorse**	**1.55**	**34**	P		Pn	01 44 01.5	-0.1
WHY				S		Sn	01 44 22.1	+0.4
WHY	**Whitehorse**	**1.55**	**34**	⇓Pn		Pn	01 44 01.7	+0.1
WHY				⇓Sg		Sg	01 44 21.8	-2.0
SIT	**Sitka**	**2.45**	**163**	P		Pn	01 44 12.8	-1.1
DLBC	**Dease Lake**	**3.57**	**103**	P		Pn	01 44 27.9	-1.4
DLBC	**Dease Lake**	**3.57**	**103**	⇑Pn		Pn	01 44 29.2	-0.1

*BGS **13** 01:46:18.8±1.9, 53°.48N×161°.37E, h100km±999km, mb4.6*
*KRSC **13** 01:46:26.4±0.6, 55°.54N×161°.73E, h79km±79km, ML5.0*
*ISCJB **13** 01:46:27.6±0.1, 55°.65N±0°.02×161°.46E±0°.03, h81km, mb4.5/115, Error ellipse: s-maj=3.0km s-min=2.1km az=158.6*
*MOS **13** 01:46:27.6±0.9, 55°.62N×161°.47E, h87km, mb4.6/48, Error ellipse: s-maj=10.6km s-min=5.0km az=89.4*
*IDC **13** 01:46:28.9±0.5, 55°.73N×161°.35E, h78km±3km, mb4.2/28, mb1 4.4/29, mb1mx4.3/32, mbtmp4.2/29, MS3.4/6, Ms1 3.4/6, ms1mx3.0/39, Error ellipse: s-maj=11.0km s-min=7.7km az=146.0*
*BJI **13** 01:46:30.4, 55°.91N×161°.14E, h98km, mB5.0/13, mb4.7/19*
*SZGRF **13** 01:46:31.1, 56°.85N×160°.34E, h33km, mb4.7, Kamchatka Peninsula, Russia*
*NEIC **13** 01:46:31.6±0.6, 55°.60N×161°.27E, h108km±5km, mb4.6/64, Error ellipse: s-maj=5.5km s-min=3.2km az=177.0*

ISC 13 01:46:29.6±0.1, 55°.65N±0°.02×161°.38E±0°.03, h83km, h83km±3.1km: pP-P, n610, σ0°75/627, mb4.5/115, 145C-157D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ZLN	**Zelenaya**	**0.49**	**319**	*i* P		**Pn**	**01 46 44.2**	**+0.7**
BZMR	**Bezymyannaya**	**0.58**	**300**	*e*P		**Pn**	**01 46 44.8**	**+0.5**
BZMR				*i* S		**Sn**	**01 46 58.1**	**+2.9**
CIRR	**Tsirk**	**0.59**	**323**	*e*P		**Pn**	**01 46 45.1**	**+0.7**
CIRR				*i* S		**Sn**	**01 46 58.2**	**+2.9**
KMNR	**Kamenistaya**	**0.66**	**280**	*e*P		**Pn**	**01 46 45.8**	**+0.8**
KMNR				*i* S		**Sn**	**01 46 59.6**	**+3.1**
KIRR	**Kirishev**	**0.66**	**298**	*e*P		**Pn**	**01 46 45.6**	**+0.5**
KIRR				*i* S		**Sn**	**01 46 59.3**	**+2.7**
KPT	**Kopyto**	**0.73**	**297**	*e*P		**Pn**	**01 46 46.4**	**+0.7**
KPT				*i* S		**Sn**	**01 47 00.4**	**+2.7**
KRSR	**Krestovskiy**	**0.73**	**322**	*e*P		**Pn**	**01 46 46.4**	**+0.6**
KLY	**Klyuchi**	**0.78**	**329**	*e*P		**Pn**	**01 46 46.0**	**-0.3**
KLY				*i* S		**Sn**	**01 46 59.9**	**+1.1**
BDR	**Baidarnaya**	**0.93**	**354**	*i* P		**Pn**	**01 46 48.6**	**+0.7**
BDR				*i* S		**Sn**	**01 47 04.2**	**+2.5**
KOZR	**Kozyr**	**0.94**	**297**	PN		**Pn**	**01 46 49.5**	**+1.5**
KOZR				S		**Sn**	**01 47 05.8**	**+4.0**
SMKR	**Semkarok**	**0.94**	**3**	*e*P		**Pn**	**01 46 48.3**	**+0.2**
SMKR				*i* S		**Sn**	**01 47 04.1**	**+2.2**
KOZ	**Kozyrevsk**	**0.94**	**297**	*e*P		**Pn**	**01 46 49.5**	**+1.4**
KOZ				*i* S		**Sn**	**01 47 05.8**	**+3.8**
KBTR	**Krutoberegovo**	**0.99**	**55**	*e*P		**Pn**	**01 46 46.9**	**-1.7**
KBTR				*i* S		**Sn**	**01 47 01.6**	**-1.3**
SRKR	**Sorokina**	**1.02**	**353**	*i* P		**Pn**	**01 46 49.5**	**+0.5**
MKZ	**Mys Kozlova**	**1.11**	**169**	*e*P		**Pn**	**01 46 47.3**	**-2.8**
MKZ				*i* S		**Sn**	**01 47 02.1**	**-3.4**
SRDR	**Sredinnyy**	**1.15**	**306**	*e*P		**Pn**	**01 46 51.6**	**+1.0**
SRDR				*i* S		**Sn**	**01 47 09.4**	**+3.1**
KII	**Karymskiy**	**1.96**	**215**	*e*P		**Pn**	**01 47 01.1**	**+0.1**
KII				*i* S		**Sn**	**01 47 27.0**	**+2.0**
SPN	**Mys Shipunski**	**2.67**	**198**	*e*P		**Pn**	**01 47 08.8**	**-1.7**
SPN				*i* S		**Sn**	**01 47 39.5**	**-2.5**
NLC	**Nalytchevo**	**2.75**	**206**	*e*P		**Pn**	**01 47 10.8**	**-0.8**
NLC				*i* S		**Sn**	**01 47 43.2**	**-0.6**
SDLR	**Sedlovina**	**2.79**	**213**	*e*P		**Pn**	**01 47 12.2**	**+0.2**
SDLR				*i* S		**Sn**	**01 47 45.7**	**+1.1**
GNL	**Ganaly**	**2.79**	**227**	*e*P		**Pn**	**01 47 12.9**	**+0.8**
PET	**Petropavlovsk**	**3.08**	**212**	*c i* PN		**Pn**	**01 47 16.0**	**+0.1**
PET				*e*S		**Sn**	**01 47 52.3**	**+0.6**
PET				pmax		pmax		
	comp=Z,521nm,0.5s							

comp=Z,1.0nm,0.5s,baz=308,slow=4.3,SNR=4.4
INK LR LR 02 05 36.2
comp=Z,35nm,18.0s,baz=326,slow=37
INK Inuvik 31.41 40 P P 01 52 42.0 -0.2
INK 01 55 32.6
INK pmax pmax
comp=Z,9.0nm,0.6s
INK pmax pmax
comp=Z,1.0nm,0.5s
INK MLR MLR
comp=Z,35nm,18.0s
INK Inuvik 31.41 40 *eP* **P 01 52 41.9 -0.3**
comp=Z,10nm,0.8s,mb4.6
HYT Haines Junctio 31.54 55 *eP* **P 01 52 44.6 +1.2**
SKAG Skagway 33.03 57 *eP* **P 01 52 57.4 +1.0**
SONM Songino Array 34.12 280 P **P 01 53 05.9 -0.1**
comp=Z,1.5nm,0.6s,mb4.0,baz=58,slow=7.5,SNR=9.7
SONM PcP PcP 01 55 40.8 -0.5
comp=Z,1.6nm,0.8s,baz=85,slow=1.7,SNR=4.9
HHC Hu-ho-hao-te 35.49 267 *eP* **P 01 53 17.8 -0.1**
HHC pP pP 01 53 42.9 +5.6
HHC sP sP 01 53 56.1 +9.2
HHC PP PP 01 54 42.4 +2.6
HHC PcP PcP 01 55 46.5 +1.1
HHC S **S 01 58 43.6 -3.3**
HHC ScP ScP 01 59 19.6 -3.9
HHC sS sS 01 59 27.1 +6.8
HHC PcS PcS 01 59 31.7 -0.9
HHC SS SS 02 01 08.3 -16
HHC ScS ScS 02 03 23.1 -5.1
HHC pmax pmax
comp=Z,19nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,250nm,5.7s
HHC LR LR
comp=N,230nm,11.8s
HHC LR LR
comp=E,420nm,11.6s
HHC LR LR
comp=Z,200nm,11.7s
DLBC Dease Lake 35.96 57 P **P 01 53 22.9 +1.2**
comp=Z,11nm,0.8s,mb4.8,baz=280,slow=11,SNR=16
DLBC LR LR 02 10 37.0
comp=Z,66nm,18.1s,baz=263,slow=40
BBB Bella Bella 40.04 64 LR LR 02 11 26.1
comp=Z,47nm,18.8s,baz=256,slow=37
RES Resolute Bay 40.67 23 *eP* **P 01 54 01.0 -0.1**
RES pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
RES Resolute Bay 40.67 23 *eP* **P 01 54 01.0 -0.1**
comp=Z,7.8nm,0.8s,mb4.6
YKA Yellowknife Ar 40.80 45 P **P 01 54 01.5 -0.6**
comp=Z,6.6nm,0.8s,mb4.5,baz=300,slow=8.2,SNR=68
YKA pP pP 01 54 18.5 -3.4
comp=Z,1.3nm,0.7s,baz=301,slow=8.3,SNR=2.2
YKA PcP PcP 01 56 00.7 -0.8
comp=Z,0.8nm,0.5s,baz=311,slow=3.6,SNR=8.4
YKA Yellowknife Ar 40.80 45 P **P 01 54 01.5 -0.6**
YKA pP pP 01 54 18.5 -3.4
YKA PcP PcP 01 56 00.7 -0.8
ZALV Zalesovo Beam 42.07 301 P **P 01 54 10.8 -1.9**
comp=Z,0.7nm,0.6s,mb3.6,baz=81,slow=8.9,SNR=2.2
ZALV PcP PcP 01 56 02.9 -3.0
comp=Z,0.6nm,0.4s,baz=52,slow=2.4,SNR=3.5
NVS Novosibirsk 42.32 303 *eP* **P 01 54 14.8 +0.1**
GTA Gaotai 43.11 275 *eP* **P 01 54 23.5 +2.2**
GTA pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
GTA Gaotai 43.11 275 *eP* **P 01 54 24.0 +2.7**
GTA pP pP 01 54 28.3 -13
GTA sP sP 01 54 31.4 -19
GTA pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
GTA Gaotai 43.11 275 *eP* **P 01 54 24.0 +2.7**
GTA pP pP 01 54 28.3 -13
GTA sP sP 01 54 31.4 -19
GTA pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
SPITS Spitsbergen Ar 44.74 350 P **P 01 54 33.8 -0.1**
comp=Z,35nm,0.7s,mb5.2,baz=66,slow=8.4,SNR=140
SPITS PcP PcP 01 56 13.5 -1.0
comp=Z,1.7nm,0.6s,baz=79,slow=4.2,SNR=3.7
SPB4 Spitsbergen Ar 44.74 350 *eP* **P 01 54 33.9 0.0**
NLWA Neilton Lookou 45.11 68 ⇑P **P 01 54 37.5 +0.3**
baz=45
A06A Chilliwack 45.27 64 ⇑P **P 01 54 38.2 -0.2**
baz=45
JCW Jim Creek 45.61 66 P **P 01 54 41.0 -0.1**
B06A Marblemount 45.63 65 ⇑P **P 01 54 41.0 -0.3**
baz=46
RPW Rockport 45.66 65 P **P 01 54 41.0 -0.6**
E03A Lebam 45.81 68 ⇑P **P 01 54 42.7 -0.1**
baz=46
A07A Ashnola River, 45.86 64 ⇓P **P 01 54 42.9 -0.2**
baz=46
F03A Seaside 46.22 69 ⇑P **P 01 54 46.1 +0.2**
baz=46
D05A Enumclaw 46.23 67 ⇓P **P 01 54 46.1 +0.1**
baz=46
B07A Winthrop 46.37 64 ⇑P **P 01 54 46.9 -0.2**
baz=46
A08A Turner Farm, O 46.49 63 ⇓P **P 01 54 47.7 -0.3**
baz=46
NLW Nelson Butte 46.51 65 P **P 01 54 48.1 -0.1**
EDM Edmonton 46.66 55 *eP* **P 01 54 49.0 -0.3**
ETW Entiat 46.81 65 *eP* **P 01 54 50.2 -0.4**
F04A Amboy 46.82 68 ⇑P **P 01 54 50.3 -0.3**
baz=47
A09A Danville 46.82 63 ⇑P **P 01 54 50.4 -0.1**
baz=47,SNR=7.8
B08A Colville Reser 46.84 64 ⇑P **P 01 54 50.5 -0.3**
baz=47,SNR=7.5
WMQ Urumqi 46.87 288 P **P 01 54 52.2 +1.2**
WMQ PcP PcP 01 56 25.4 +2.9
WMQ pmax pmax
comp=Z,11nm,1.0s,mb4.5
C07A Waterville 46.90 65 ⇓P **P 01 54 50.6 -0.6**
baz=47
TBM Table Mountain 46.96 66 P **P 01 54 51.6 -0.1**
CD2 Chengdu 47.00 263 P **P 01 54 51.2 -1.0**
CD2 pP pP 01 55 17.0 +4.6
CD2 sP sP 01 55 29.9 +8.2
CD2 PP PP 01 56 42.7 -0.7
CD2 S **S 02 01 32.1 -5.3**
CD2 sS sS 02 02 17.3 +5.5
CD2 SS SS 02 04 53.3 -12
CD2 pmax pmax
comp=Z,50nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,460nm,5.1s
CD2 LR LR
comp=N,450nm,6.5s
CD2 LR LR
comp=Z,340nm,6.2s
KURK Kurchatov 47.05 301 P **P 01 54 51.6 -0.7**
comp=Z,8.0nm,0.6s,mb4.7,baz=55,slow=7.9,SNR=38
KURK pP pP 01 55 12.0 -0.5
comp=Z,2.3nm,0.5s,baz=58,slow=8.0,SNR=3.3
KURK PcP PcP 01 56 21.9 -1.2
comp=Z,1.0nm,0.6s,baz=49,slow=3.1,SNR=3.6
KURK PP PP 01 56 45.1 +1.7
comp=Z,1.4nm,0.7s,baz=56,slow=11,SNR=4.2
KURK Kurchatov 47.05 301 P **P 01 54 51.6 -0.8**
KURK *PP pP 01 55 12.0 -0.5
KURK 01 56 21.9
KURK 01 56 45.1
KURK pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
KURK pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KURK Kurchatov 47.05 301 *eP* **P 01 54 50.8 -1.6**
comp=Z,11nm,0.6s,mb4.8
EBG Ellensburg 47.15 66 P **P 01 54 53.3 +0.1**
E06A Yakima 47.17 67 ⇓P **P 01 54 53.2 -0.1**
baz=47
G04A Mulino 47.26 69 ⇓P **P 01 54 54.0 -0.1**
baz=47
A10A Northport 47.33 62 ⇓P **P 01 54 54.3 -0.3**
baz=47
C08A Higginbotham F 47.36 64 ⇑P **P 01 54 54.3 -0.5**
baz=47
B09A Rice 47.40 63 ⇓P **P 01 54 54.6 -0.4**
baz=47
HOOD Mount Hood Mea 47.62 69 *eP* **P 01 54 57.3 +0.4**
comp=Z,43nm,0.7s,mb5.4
C09A Chrisman Ranch 47.74 64 ⇓P **P 01 54 57.4 -0.4**
baz=48
MK31 Makanchi Array 47.76 294 *eP* **P 01 54 56.7 -1.2**
MKAR Makanchi Array 47.76 294 P **P 01 54 56.7 -1.1**
comp=Z,3.0nm,0.5s,mb4.4,baz=50,slow=6.4,SNR=25
MKAR pP pP 01 55 16.8 -1.3
comp=Z,1.9nm,0.7s,baz=50,slow=11,SNR=4.9
MKAR Makanchi Array 47.76 294 P **P 01 54 56.7 -1.2**
MKAR pP pP 01 55 16.8 -1.3
H04A Detroit Lake 47.77 69 ⇑P **P 01 54 57.7 -0.3**
baz=48
D08A Wollman Farm, 47.90 65 ⇓P **P 01 54 58.5 -0.4**
baz=48
A11A Hall Mountain, 47.95 62 ⇓P **P 01 54 58.9 -0.5**
baz=48
H2OWA Water 48.08 66 P **P 01 55 00.0 -0.3**
F07A Phinny Hill Vi 48.15 67 ⇑P **P 01 55 00.9 0.0**
baz=48
IRO Indian Ridge 48.19 70 P **P 01 55 01.1 -0.1**
D09A Jones Farm, Ri 48.21 65 ⇓P **P 01 55 00.8 -0.5**
baz=48
E09A Wood Farm, Sta 48.66 65 ⇑P **P 01 55 04.2 -0.6**
baz=48
VIPM Ingram Point 48.71 69 P **P 01 55 05.1 -0.2**
D10A Wagner Farm, O 48.74 64 ⇓P **P 01 55 04.8 -0.6**
baz=49
HUMO Hull Mountain 48.76 72 *eP* **P 01 55 06.2 +0.6**
GYA Guiyang 48.80 257 P **P 01 55 06.8 +0.6**
GYA pP pP 01 55 32.1 +5.6
GYA sP sP 01 55 45.8 +10
GYA PcP PcP 01 56 31.2 +1.5
GYA ScP ScP 02 00 14.5 -2.4
GYA PcS PcS 02 00 26.3 +0.1
GYA S **S 02 01 59.0 -4.0**
GYA sS sS 02 02 43.2 +5.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,90nm,4.8s
A13A Flathead Natio 48.93 60 ⇑P **P 01 55 06.7 -0.2**
baz=49
G08A Pilot Rock 49.06 67 ⇑P **P 01 55 07.6 -0.3**
baz=49
WALA Waterton Lakes 49.09 60 *eP* **P 01 55 07.9 -0.2**
comp=Z,0.2nm,0.7s
E10A Myers Farm, Un 49.21 65 ⇑P **P 01 55 08.3 -0.8**
baz=49,SNR=5.0
D11A Klaveano Farm, 49.23 63 ⇑P **P 01 55 08.3 -0.9**
baz=49,SNR=9.6
B13A Whitefish 49.27 61 ⇓P **P 01 55 08.9 -0.6**
baz=49,SNR=7.3
A14A Double T Ranch 49.39 60 ⇑P **P 01 55 09.7 -0.6**
baz=49,SNR=5.3
BVAR Borovoye Array 49.41 307 P **P 01 55 09.0 -1.5**
comp=Z,4.2nm,0.5s,mb4.6,baz=58,slow=7.6,SNR=17
BVAR Borovoye Array 49.41 307 *eP* **P 01 55 09.8 -0.7**
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BRVK Borovoye 49.44 307 *ceP* **P 01 55 09.6 -1.1**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BSMT Bassoo Peak 49.47 62 *eP* **P 01 55 11.1 +0.1**
YBH Yreka Blue Hor 49.49 73 P **P 01 55 11.8 +0.5**
comp=Z,6.4nm,0.6s,mb4.7,baz=8.0,slow=3.9,SNR=19
YBH Yreka Blue Hor 49.49 73 P **P 01 55 11.8 +0.6**
YBH pmax pmax
comp=Z,6.0nm,0.6s
YBH Yreka Blue Hor 49.49 73 *eP* **P 01 55 12.0 +0.8**
comp=Z,5.4nm,0.9s,mb4.5
F10A Beach Ranch, E 49.49 65 ⇑P **P 01 55 10.6 -0.6**
baz=49
I07A Izee 49.59 68 ⇑P **P 01 55 11.5 -0.4**
baz=50
G09A Cove 49.68 66 ⇑P **P 01 55 12.2 -0.5**
baz=50
C13A Hot Springs 49.69 62 ⇓P **P 01 55 12.5 -0.2**
baz=50,SNR=13
D12A Red Ives Fores 49.72 63 ⇑P **P 01 55 11.9 -1.0**
baz=50
A15A Johnson Ranch, 49.72 59 ⇓P **P 01 55 11.9 -1.0**
baz=50,SNR=5.9
H08A Prairie City 49.73 67 ⇑P **P 01 55 12.4 -0.6**
baz=50,SNR=6.6
E11A Bogner Ranch, 49.76 64 ⇓P **P 01 55 12.2 -1.0**
baz=50,SNR=7.8
K05A Summer Lake 49.78 71 ⇓P **P 01 55 13.9 +0.4**
baz=50
JTMT Jette 49.79 62 *eP* **P 01 55 13.4 0.0**
YBMT Yellow Bay 49.84 61 *eP* **P 01 55 13.8 0.0**
C14A Swan Lake 50.04 61 ⇓P **P 01 55 14.7 -0.6**
baz=50,SNR=6.5
E12A Beaver Dam Sad 50.04 64 ⇓P **P 01 55 14.8 -0.6**
baz=50,SNR=8.0
SWMT Swartz Lake 50.09 62 *eP* **P 01 55 15.4 -0.3**
F11A Grangeville 50.10 65 ⇓P **P 01 55 14.9 -0.9**
baz=50,SNR=7.5
D13A Huson 50.14 62 ⇓P **P 01 55 15.4 -0.6**
baz=50
H09A Durkee 50.16 67 ⇓P **P 01 55 16.3 +0.1**
baz=50
BMO Blue Mountains 50.21 66 *eP* **P 01 55 16.4 -0.3**
comp=Z,3.6nm,0.6s,mb4.5
B15A Bradely Ranch, 50.26 60 ⇑P **P 01 55 15.9 -1.0**
baz=50,SNR=6.9
A16A West Butte Ran 50.30 59 ⇑P **P 01 55 16.4 -0.8**
baz=50,SNR=13
G11A Walters Elk Ra 50.38 65 ⇑P **P 01 55 17.3 -0.6**
baz=50,SNR=11
SLMT Seeley Lake 50.52 62 *eP* **P 01 55 18.6 -0.3**
MSO Missoula 50.58 62 *eP* **P 01 55 19.2 -0.2**
comp=Z,4.2nm,0.8s,mb4.5
C15A Salmond Ranch, 50.60 61 ⇑P **P 01 55 18.9 -0.7**
baz=50,SNR=6.4
D14A Greenough 50.63 62 ⇓P **P 01 55 19.2 -0.6**
baz=50,SNR=6.9
J08A Circle Bar Ran 50.63 68 ⇑P **P 01 55 19.5 -0.3**
baz=50
KEV Kevo 50.63 341 *eP* **P 01 55 18.8 -0.7**
KEV Kevo 50.63 341 *ep* **P 01 55 18.8 -0.7**
F12A Elk City 50.65 64 ⇓P **P 01 55 19.5 -0.4**
baz=50,SNR=9.5
MOD Modoc 50.67 71 *eP* **P 01 55 20.5 +0.4**
comp=Z,9.0nm,0.6s,mb5.0
E13A Victor 50.72 63 ⇓P **P 01 55 20.1 -0.4**
baz=51
FFC Flin Flon 50.73 48 *ceP* **P 01 55 20.4 0.0**
FFC Flin Flon 50.73 48 *eP* **P 01 55 19.7 -0.7**
CHMT Chamberlain Mo 50.87 62 *eP* **P 01 55 21.1 -0.5**
H11A Donnelly 50.99 66 ⇑P **P 01 55 22.0 -0.5**
baz=51,SNR=18
C16A Fuhringer Ranc 51.01 60 ⇓P **P 01 55 21.8 -0.8**
baz=51,SNR=6.2
FCC Fort Churchill 51.03 40 *eP* **P 01 55 21.9 -0.7**
comp=Z,0.3nm,0.6s,mb3.5
G12A Big Creek, Yel 51.05 65 ⇓P **P 01 55 22.4 -0.5**
baz=51,SNR=8.4
E14A Clinton 51.09 62 ⇓P **P 01 55 22.9 -0.4**
baz=51,SNR=22
ARCES ARCESS Array B 51.09 342 P **P 01 55 23.6 +0.7**
comp=Z,1.8nm,0.5s,mb4.4,baz=17,slow=9.1,SNR=17
ARCES PcP PcP 01 56 36.5 -1.0
comp=Z,2.8nm,0.9s,baz=17,slow=3.8,SNR=3.7
F13A Darby 51.10 63 ⇑P **P 01 55 22.5 -0.8**
baz=51,SNR=5.7
D15A Lincoln 51.14 61 ⇓P **P 01 55 23.1 -0.5**
baz=51,SNR=6.2
A18A Metzger Ranch, 51.16 58 ⇓P **P 01 55 23.0 -0.8**
baz=51
SUMG Summit 51.33 8 *eP* **P 01 55 24.9 +0.2**
comp=Z,23nm,1.0s,mb5.2
J10A Berg Farm, Mel 51.48 67 ⇑P **P 01 55 25.9 -0.2**
baz=51
E15A Deer Lodge 51.51 62 ⇓P **P 01 55 26.0 -0.4**
baz=51,SNR=7.7
B18A Beardsley Farm 51.55 58 ⇑P **P 01 55 26.1 -0.5**
baz=51,SNR=12
I11A Placerville 51.56 66 ⇑P **P 01 55 26.3 -0.5**
baz=51,SNR=7.8
C17A Wharram Farm, 51.60 60 ⇑P **P 01 55 26.2 -0.8**
baz=52,SNR=12
G13A Cobalt 51.63 64 ⇓P **P 01 55 26.5 -0.7**
baz=52,SNR=9.7
D16A Dana Ranch, Ca 51.63 61 ⇓P **P 01 55 27.6 +0.3**
baz=52,SNR=8.7
H12A Diamond D Ranc 51.69 65 ⇑P **P 01 55 27.1 -0.7**
baz=52
HRY Holter Researc 51.72 61 *eP* **P 01 55 27.9 0.0**
EGMT Eagleton 51.82 59 ⇑P **P 01 55 27.8 -0.8**
baz=52
K10A MacKenzie Ranc 51.88 68 ⇓P **P 01 55 29.2 0.0**
baz=52,SNR=5.8
E16A East Helena 51.91 61 ⇓P **P 01 55 29.3 -0.1**
baz=52,SNR=13
D17A Six Diamond Ra 51.97 60 ⇑P **P 01 55 29.4 -0.4**
baz=52
MFID Camas Ranch 51.98 67 ⇓P **P 01 55 29.5 -0.4**
baz=52
H13A Challis 51.99 65 ⇑P **P 01 55 29.3 -0.7**
baz=52,SNR=14
F15A Butte 51.99 62 ⇑P **P 01 55 29.6 -0.4**
baz=52
LRM Limekiln Ridge 52.02 62 *eP* **P 01 55 30.0 -0.2**
comp=Z,12nm,0.8s,mb5.0
KMI Kunming 52.03 259 P **P 01 55 32.2 +1.7**
KMI pmax pmax
comp=Z,12nm,1.1s,mb4.8
ARU Arti 52.04 317 *cP* **P 01 55 28.8 -1.4**
ARU *e* 01 57 24.4
ARU S **S 02 02 47.6 +0.5**
ARU SS SS 02 06 20.1 -4.2
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU Arti 52.04 317 *eP* **P 01 55 29.1 -1.1**
comp=Z,1μm,1.8s
BEKR Beckwourth 52.07 73 ⇓P **P 01 55 30.5 -0.1**
baz=52
I12A Atlanta 52.07 66 ⇑P **P 01 55 30.4 -0.2**
baz=52
K11A Parker Ranch, 52.32 67 ⇑P **P 01 55 32.0 -0.4**
baz=52
E17A Martinsdale 52.37 61 ⇓P **P 01 55 32.8 0.0**
baz=52,SNR=10.0
H14A Leadore 52.40 64 ⇑P **P 01 55 32.4 -0.6**
baz=52,SNR=5.1
F16A Kennard Place, 52.46 62 ⇓P **P 01 55 33.1 -0.4**
baz=52
G15A Dillon 52.46 63 ⇓P **P 01 55 33.2 -0.2**
baz=52,SNR=9.5
J12A Stokes Ranch, 52.47 66 ⇑P **P 01 55 33.7 +0.1**
baz=52,SNR=8.4
I13A Wildhorse Cree 52.51 65 ⇓P **P 01 55 33.9 0.0**
baz=52,SNR=23
MCMT McKenzie Canyo 52.52 63 *eP* **P 01 55 33.8 -0.1**
comp=Z,2.7nm,0.9s,mb4.3
BOZ Bozeman (W) 52.56 62 ⇑P **P 01 55 34.2 0.0**
baz=52,SNR=6.4
BOZ Bozeman (W) 52.56 62 *eP* **P 01 55 34.0 -0.1**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BOZ Bozeman (W) 52.56 62 *eP* **P 01 55 34.0 -0.2**
comp=Z,3.4nm,0.8s,mb4.4
L10A Juniper Basin 52.58 68 ⇑P **P 01 55 34.4 +0.1**
baz=52,SNR=8.4
HLID Hailey 52.61 66 ⇑P **P 01 55 34.4 -0.1**
baz=52
PAHR Pah Rah Range 52.71 72 *eP* **P 01 55 36.3 +0.9**
E18A Harlowton 52.76 60 ⇓P **P 01 55 35.8 +0.1**
baz=53,SNR=5.5
G16A Moss Hill, Enn 52.76 62 ⇓P **P 01 55 35.6 -0.1**
baz=53,SNR=12
WCN Washoe City 52.80 73 ⇑P **P 01 55 36.2 +0.2**
baz=53
I14A Mackay 52.84 65 ⇑P **P 01 55 36.6 +0.3**
baz=53,SNR=5.7
J13A Cove Ranch, Pi 52.85 66 ⇓P **P 01 55 36.5 +0.2**
baz=53
F17A Fitzpatrick Pl 52.86 61 ⇑P **P 01 55 36.5 +0.2**
baz=53,SNR=5.8
L11A Cat Creek Ranc 52.90 68 ⇓P **P 01 55 36.9 +0.2**
baz=53,SNR=9.1
M10A I.L. Ranch, Tu 52.94 69 ⇑P **P 01 55 37.5 +0.5**
baz=53
G17A Pierce Place, 53.23 62 ⇓P **P 01 55 39.5 +0.4**
baz=53
QLMT Earthquake Lak 53.23 63 *eP* **P 01 55 39.4 +0.2**
F18A Big Timber 53.33 61 ⇑P **P 01 55 39.9 +0.1**
baz=53,SNR=8.9
M11A Holland Ranch, 53.40 68 ⇑P **P 01 55 40.8 +0.4**
baz=53
H16A Russell Place, 53.41 63 ⇑P **P 01 55 40.6 +0.2**
baz=53,SNR=16
J15A Blackfoot 53.74 64 ⇑P **P 01 55 43.3 +0.5**
baz=54
YFT Old Faithful 53.80 62 *eP* **P 01 55 45.5 +2.2**
G18A Lazy EL Ranch, 53.82 61 ⇓P **P 01 55 43.4 0.0**
baz=54
O10A Cortez Mining, 53.84 70 ⇓P **P 01 55 44.3 +0.7**
baz=54
M12A Wells 53.87 68 ⇓P **P 01 55 44.4 +0.6**
baz=54
TKM2 Tokmak 2 53.87 295 P **P 01 55 44.0 +0.2**
SNR=5.2
I16A Newdale 53.88 63 ⇓P **P 01 55 44.3 +0.4**
baz=54,SNR=14
L13A Double Diamond 53.90 67 ⇑P **P 01 55 44.5 +0.5**
baz=54
K14A Jones Ranch, D 53.97 66 ⇓P **P 01 55 45.2 +0.6**
baz=54,SNR=9.1
H17A Grant Village 53.97 62 ⇓P **P 01 55 45.9 +1.4**
baz=54,SNR=8.3
RLMT Red Lodge 54.10 61 ⇑P **P 01 55 45.9 +0.4**
baz=54,SNR=20
RLMT Red Lodge 54.10 61 *eP* **P 01 55 46.1 +0.6**
comp=Z,16nm,0.8s,mb5.1
DGMT Dagmar 54.14 55 ⇓P **P 01 55 45.4 -0.4**
baz=54
IMW Indian Meadow 54.14 63 *eP* **P 01 55 46.9 +1.1**
USP Ospenovka 54.19 296 P **P 01 55 45.5 -0.6**
SNR=7.8
K15A Arbon 54.20 65 ⇓P **P 01 55 46.9 +0.7**
baz=54,SNR=9.4
N12A Clover Valley, 54.21 68 ⇑P **P 01 55 47.0 +0.7**
baz=54,SNR=8.1
N12A Clover Valley, 54.21 68 *eP* **P 01 55 47.1 +0.8**
comp=Z,18nm,1.1s,mb5.0
NVAR Mina Array Bea 54.21 73 P **P 01 55 47.1 +0.7**
comp=Z,8.8nm,0.6s,mb4.9,baz=298,slow=7.4,SNR=32
DCID1 Drake Creek 54.24 63 *eP* **P 01 55 47.6 +1.1**
J16A Bone 54.25 64 ⇑P **P 01 55 47.1 +0.5**
baz=54
L14A Malta 54.30 66 ⇑P **P 01 55 47.6 +0.6**
baz=54,SNR=8.8
M13A Montello 54.30 67 ⇑P **P 01 55 47.3 +0.3**
baz=54
RRI2 Red Ridge 54.34 64 *eP* **P 01 55 48.0 +0.8**
comp=Z,3.0nm,0.7s,mb4.4
O11A Cowboy Ranch, 54.40 69 ⇓P **P 01 55 48.3 +0.6**
baz=54
TPAW Teton Pass 54.43 63 *eP* **P 01 55 48.7 +0.8**
comp=Z,6.6nm,0.7s,mb4.8
LOHW Long Hollow 54.52 63 *eP* **P 01 55 49.3 +0.8**
REDW Red Top Meadow 54.57 63 *eP* **P 01 55 49.9 +1.0**
K16A Soda Springs 54.58 64 ⇑P **P 01 55 50.1 +1.2**
baz=54
M14A Sheep Mountain 54.63 67 ⇑P **P 01 55 50.1 +0.8**
baz=54
AAK Ala-Archa 54.64 295 P **P 01 55 49.6 +0.2**
SNR=6.8
AAK Ala-Archa 54.64 295 P **P 01 55 49.5 0.0**
comp=Z,2.4nm,0.5s,mb4.5,baz=100,slow=3.2,SNR=13
AAK Ala-Archa 54.64 295 *eP* **P 01 55 49.5 +0.1**
AAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AAK Ala-Archa 54.64 295 *eP* **P 01 55 49.5 0.0**
comp=Z,8.0nm,0.9s,mb4.8
N13A Wendover, West 54.65 68 ⇑P **P 01 55 50.0 +0.5**
baz=54,SNR=5.3
KZA Kyzart 54.65 294 P **P 01 55 50.3 +0.8**
SNR=5.7
L15A Malad City 54.76 66 ⇓P **P 01 55 50.6 +0.3**
baz=55,SNR=7.0
P11A Circle Ranch, 54.77 70 ⇓P **P 01 55 51.0 +0.7**
baz=55
O12A Currie 54.78 69 ⇓P **P 01 55 51.1 +0.6**
baz=55,SNR=7.1
I18A Diamond G Ranc 54.85 62 ⇓P **P 01 55 51.5 +0.6**
baz=55
Q10A Clear Creek Ra 54.95 71 ⇓P **P 01 55 52.2 +0.5**
baz=55,SNR=5.8
EKS2 Erkin-Say 54.99 296 P **P 01 55 51.9 -0.1**
SNR=9.6
J18A Kendall Valley 55.10 63 ⇑P **P 01 55 52.9 +0.2**

baz=55
P12A McGill 55.28 69 ⇓P P 01 55 54.3 +0.3
baz=55,SNR=5.9
O13A Hicks Ranch, I 55.29 68 ⇑P P 01 55 54.8 +0.6
baz=55
Q11A Duckwater 55.34 70 ⇓P P 01 55 55.0 +0.5
baz=55
R10A Warm Springs 55.39 71 ⇓P P 01 55 55.5 +0.6
baz=55
L17A Cokeville 55.47 65 ⇑P P 01 55 55.6 +0.2
baz=55,SNR=5.7
HWUT Hardware Ranch 55.47 65 eP P 01 55 56.0 +0.6
comp=Z,6.0nm,0.7s,mb4.7
N15A Stansbury Isla 55.50 67 ⇑P P 01 55 56.4 +0.8
baz=55
K18A Toltan Ranch, 55.51 64 ⇓P P 01 55 56.5 +0.8
baz=55,SNR=13
JOF Joensuu 55.57 335 eP P 01 55 54.4 -1.4
JOF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
JOF Joensuu 55.57 335 ep P 01 55 54.4 -1.4
comp=Z,5.7nm,0.5s,mb4.9
Q12A Willow Creek R 55.63 70 ⇓P P 01 55 57.0 +0.4
baz=56
M16A Huntsville 55.65 66 ⇓P P 01 55 57.2 +0.5
baz=56
BW06 Boulder Array 55.66 63 ⇓P P 01 55 56.9 +0.1
baz=56,SNR=10
PDAR Pinedale Array 55.66 63 P P 01 55 56.9 +0.2
comp=Z,5.8nm,0.6s,mb4.8,baz=327,slow=3.1,SNR=44
VES Vestal, Richgr 55.68 75 ⇓P P 01 55 56.8 -0.1
baz=56
P13A Bates Ranch, G 55.76 69 ⇑P P 01 55 58.1 +0.6
baz=56,SNR=6.6
DUG Dugway 55.85 67 ⇑P P 01 55 58.4 +0.2
baz=56,SNR=12
DUG Dugway 55.85 67 eP P 01 55 58.8 +0.6
DUG pmax pmax
comp=Z,11nm,0.8s,mb4.9
DUG Dugway 55.85 67 eP P 01 55 58.8 +0.6
comp=Z,11nm,0.8s,mb5.0
PKM Peak Mountain 55.97 77 ⇑P P 01 55 59.6 +0.6
baz=56
K19A Absolon Red Bu 55.97 63 ⇓P P 01 55 58.5 -0.5
baz=56
L18A Fontenelle, Gr 56.03 64 ⇑P P 01 55 59.9 +0.5
baz=56
M17A Scullys Gap (B 56.03 65 ⇑P P 01 55 59.7 +0.2
baz=56,SNR=11
N16A Rees Ranch, Co 56.06 66 ⇑P P 01 56 00.0 +0.4
baz=56
Q13A Wheeler Ranch, 56.12 69 ⇓P P 01 56 00.7 +0.6
baz=56,SNR=12
KSH Kashi 56.14 292 eP P 01 56 05.1 +4.9
KSH epP pP 01 56 31.0 +10
KSH esP sP 01 56 41.1 +11
KSH ePcP PcP 01 56 59.1 +2.0
KSH ePP PP 01 58 13.1 +7.4
KSH eScP ScP 02 00 47.1 -1.4
KSH ePcS PcS 02 00 59.1 +1.5
KSH eS S 02 03 44.5 +1.8
KSH esS sS 02 04 32.1 +14
KSH eScS ScS 02 05 39.5 -1.7
KSH eSS SS 02 07 36.0 +6.5
KSH pmax pmax
comp=Z,100nm,4.4s
KSH LR LR
comp=N,99nm,5.5s
KSH LR LR
comp=E,130nm,8.2s
ISA Isabella 56.14 75 ⇓P P 01 55 59.7 -0.6
baz=56
P14A Drum Mountains 56.16 68 ⇑P P 01 56 00.8 +0.4
baz=56,SNR=5.8
S11A Rachel 56.16 71 ⇑P P 01 56 00.9 +0.4
baz=56
L19A Farson 56.24 64 ⇓P P 01 56 01.4 +0.4
baz=56
R12A Pony Springs, 56.27 70 ⇑P P 01 56 01.6 +0.4
baz=56
K20A Yellowstone Ra 56.35 62 ⇓P P 01 56 01.0 -0.7
baz=56
SBC Santa Barbara 56.37 77 ⇓P P 01 56 01.8 -0.1
baz=56
M18A Lyman 56.38 65 ⇑P P 01 56 01.2 -0.6
baz=56
MPMC Manual Prospec 56.39 74 ⇑P P 01 56 02.1 +0.1
baz=56
NLU North Lily Min 56.41 67 eP P 01 56 03.1 +1.0
FURC Furnace Creek, 56.43 73 ⇑P P 01 56 02.5 +0.2
baz=56
Q14A Sevier Lake (B 56.49 69 ⇓P P 01 56 03.4 +0.6
baz=56,SNR=6.5
DAU Daniels Canyon 56.51 66 eP P 01 56 03.9 +1.1
O16A Springville 56.53 66 ⇓P P 01 56 03.4 +0.4
baz=56
ULM Lac du Bonnet 56.54 49 P P 01 56 02.4 -0.5
comp=E,4.4nm,0.3s,mb4.9,baz=316,slow=7.0,SNR=14
ULM PcP PcP 01 56 57.3 -1.2
comp=E,1.6nm,0.5s,baz=332,slow=5.2,SNR=2.7
MPU Maple Canyon 56.60 67 eP P 01 56 04.1 +0.6
comp=E,12nm,0.9s,mb4.9
AKTK Aktyubinsk 56.66 312 P P 01 56 02.9 -0.9
AKTK PcP PcP 01 56 57.8 -1.3
AKTO Aktyubinsk 56.66 312 P P 01 56 02.9 -0.9
comp=E,3.7nm,0.5s,mb4.7,baz=52,slow=7.4,SNR=19
AKTO PcP PcP 01 56 57.8 -1.3
comp=E,1.9nm,0.5s,baz=56,slow=6.3,SNR=2.9
S12A Delamar Landin 56.67 71 ⇑P P 01 56 04.7 +0.7
baz=56
ABKAR Akbulak array 56.72 310 eP P 01 56 03.3 -0.9
comp=E,3.9nm,0.4s,mb4.8
T11A Corn Creek, Al 56.74 71 ⇑P P 01 56 04.8 +0.3
baz=57,SNR=10
L20A Wamsutter 56.83 63 ⇑P P 01 56 05.0 0.0
baz=57
N18A Larsen Ranch, 56.91 65 ⇓P P 01 56 05.7 +0.1
baz=57
Q15A Fillmore 56.96 68 ⇑P P 01 56 06.6 +0.6
baz=57
EDW2 Edwards Air Fo 56.99 75 ⇑P P 01 56 06.2 -0.1
baz=57
S13A Holt Ranch, En 57.22 70 ⇑P P 01 56 08.5 +0.6
baz=57
N19A John Jarvie Ra 57.22 64 ⇑P P 01 56 07.9 +0.1
baz=57,SNR=5.6
O18A Roosevelt 57.26 65 ⇓P P 01 56 09.4 +1.2
baz=57
M20A Sweetwater, Wa 57.28 63 ⇓P P 01 56 08.8 +0.5
baz=57
GSC Goldstone 57.32 74 ⇓P P 01 56 08.7 0.0
baz=57,SNR=6.1
GSC Goldstone 57.32 74 eP P 01 56 09.0 +0.4
GSC pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
GSC Goldstone 57.32 74 eP P 01 56 09.0 +0.4
comp=Z,7.7nm,0.9s,mb4.7
L21A Rawlins 57.35 62 ⇓P P 01 56 08.7 0.0
baz=57
RSSD Black Hills 57.39 58 eP P 01 56 09.1 +0.1
RSSD pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
RSSD Black Hills 57.39 58 eP P 01 56 09.1 +0.1
comp=Z,8.8nm,0.9s,mb4.8
KAF Kangasniemi 57.43 337 eP P 01 56 08.2 -0.8
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 57.43 337 ep P 01 56 08.2 -0.8
comp=Z,2.2nm,0.4s,mb4.5
S14A Cedar City 57.46 70 ⇓P P 01 56 09.7 +0.2
baz=57
P17A Butcher Ranch, 57.47 67 ⇑P P 01 56 09.8 +0.2
baz=57
T13A Saint George 57.61 71 ⇓P P 01 56 11.0 +0.4
baz=58
M21A Separation Pea 57.62 63 ⇓P P 01 56 10.4 -0.2
baz=58,SNR=5.5
Q16A Castle Valley 57.65 67 ⇓P P 01 56 11.5 +0.5
baz=58
V11A Goodsprings 57.67 73 ⇑P P 01 56 11.0 -0.1
baz=58
O19A Miners Draw (B 57.69 65 ⇓P P 01 56 11.1 0.0
baz=58
TUQ Turquoise Moun 57.70 73 ⇑P P 01 56 11.5 +0.2
baz=58,SNR=5.1
U12A Valley of Fire 57.71 72 ⇑P P 01 56 11.7 +0.4
baz=58

N20A Spence Gulch, 57.73 64 ⇑P P 01 56 12.0 +0.6
baz=58,SNR=12
SRU San Rafael 57.85 67 ⇑P P 01 56 12.6 +0.3
baz=58,SNR=10
SRU San Rafael 57.85 67 eP P 01 56 12.5 +0.2
SRU pmax pmax
comp=Z,17nm,0.9s,mb5.1
SRU San Rafael 57.85 67 eP P 01 56 12.5 +0.3
comp=Z,17nm,0.9s,mb5.1
R16A Teasdale 57.96 68 ⇑P P 01 56 13.8 +0.8
baz=58,SNR=7.2
T14A Hurricane 58.02 70 ⇑P P 01 56 14.2 +0.7
baz=58
U13A Pakoon Wash 58.03 71 ⇓P P 01 56 14.1 +0.5
baz=58,SNR=6.6
Q18A Rafter H Ranch 58.06 66 ⇓P P 01 56 14.2 +0.5
baz=58
V12A Nelson 58.07 72 ⇑P P 01 56 14.3 +0.5
baz=58
FINES FINESS Array B 58.07 337 P P 01 56 13.1 -0.4
comp=Z,4.0nm,0.5s,mb4.7,baz=32,slow=8.7,SNR=48
FINES pP pP 01 56 32.9 -1.4
comp=Z,2.0nm,0.6s,baz=31,slow=10,SNR=2.4
N21A Black Mountain 58.16 63 ⇓P P 01 56 14.7 +0.3
baz=58
P19A Cripple Cowboy 58.26 65 ⇓P P 01 56 15.4 +0.3
baz=58
O20A White River Ci 58.26 64 ⇓P P 01 56 15.4 +0.2
baz=58,SNR=6.7
R17A Hanksville Air 58.26 67 ⇓P P 01 56 15.3 +0.1
baz=58,SNR=5.8
GMRC Granite Mounta 58.34 74 ⇑P P 01 56 15.8 +0.1
baz=58,SNR=6.0
T15A Red Dirt Ranch 58.43 70 ⇑P P 01 56 16.5 +0.2
baz=58
V13A Grand Canyon W 58.44 72 ⇓P P 01 56 17.0 +0.5
baz=58,SNR=5.7
U14A Mt Trumbull 58.45 71 ⇑P P 01 56 17.1 +0.6
baz=58,SNR=5.3
N22A Wattenberg Ran 58.67 63 ⇑P P 01 56 18.6 +0.7
baz=58
R18A Canyonlands Na 58.71 67 ⇑P P 01 56 18.0 -0.3
baz=59,SNR=10
BELC Belle Mtn. 58.73 75 ⇓P P 01 56 18.0 -0.5
baz=59
S17A Black Ridge (B 58.80 68 ⇓P P 01 56 19.1 +0.2
baz=59
U15A North Rim 58.91 70 ⇓P P 01 56 20.3 +0.6
baz=59
W13A Hualapai Mount 59.06 72 ⇓P P 01 56 21.1 +0.4
baz=59
V14A Boquillas Ranc 59.08 71 ⇑P P 01 56 21.5 +0.7
baz=59,SNR=8.2
BC3 Big Chuckw Mtn 59.29 74 ⇓P P 01 56 22.2 -0.1
baz=59
W14A Seligman 59.40 72 ⇓P P 01 56 23.7 +0.6
baz=59
V15A Kaibab Nationa 59.44 70 ⇓P P 01 56 23.9 +0.6
baz=59
CMAR Chiang Mai Arr 59.45 258 P P 01 56 24.7 +1.0
baz=17,slow=6.8
X13A Yucca 59.47 73 ⇑P P 01 56 23.6 +0.1
baz=59
PDMCI Parker Dam,Lak 59.52 73 ⇑P P 01 56 24.2 +0.2
baz=59
R20A Redvale 59.65 66 ⇓P P 01 56 25.1 +0.3
baz=60
U17A Shonto 59.65 69 ⇓P P 01 56 25.1 +0.3
baz=60
T18A Mexican Hat 59.66 68 ⇑P P 01 56 24.7 -0.2
baz=60,SNR=8.2
U16A Tuba City 59.75 69 ⇓P P 01 56 25.7 +0.3
baz=60
Q22A Crested Butte, 59.90 64 ⇓P P 01 56 26.8 +0.4
baz=60
BORG Borgarnes 59.92 1 LR LR 02 21 47.7
comp=Z,44nm,19.4s,baz=155,slow=35
R21A Cimarron 59.94 65 ⇑P P 01 56 27.4 +0.6
baz=60
X14A Yava 60.07 72 ⇑P P 01 56 28.4 +0.7
baz=60
V17A Tonalea, Kykot 60.32 70 ⇑P P 01 56 30.0 +0.6
baz=60,SNR=12
T19A Beclabito 60.34 67 ⇓P P 01 56 29.7 +0.2
baz=60,SNR=6.5
S21A Coal Bank Pass 60.35 66 ⇑P P 01 56 30.3 +0.8
baz=60
X15A Humboldt 60.41 71 ⇑P P 01 56 30.7 +0.7
baz=60
Y14A Wickenburg 60.41 72 ⇑P P 01 56 30.1 +0.1
baz=60
VSU Vasula 60.56 335 eP P 01 56 30.4 -0.3
VSU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
Z13A Yuma Proving G 60.62 73 ⇑P P 01 56 31.6 +0.2
baz=60
V18A Ganado 60.71 69 ⇑P P 01 56 32.4 +0.4
baz=61
Y15A Casa Rosa Ranc 60.76 72 ⇓P P 01 56 32.3 -0.1
baz=61
NB2 NORSAR Subarra 61.29 344 P P 01 56 34.7 -0.9
comp=Z,10nm,0.8s,mb4.9,baz=18,slow=6.9
NOA NORSAR Array B 61.29 344 P P 01 56 34.9 -0.7
comp=Z,5.8nm,0.6s,mb4.8,baz=19,slow=6.9,SNR=26
NOA pP pP 01 56 54.8 -1.8
comp=Z,1.6nm,0.6s,baz=18,slow=6.8,SNR=2.8
T22A Edith 61.30 66 ⇓P P 01 56 36.8 +0.8
baz=61
114A Black Gap (USA 61.38 73 ⇓P P 01 56 37.1 +0.5
baz=61
X18A Snowflake 61.60 70 ⇑P P 01 56 38.8 +0.7
baz=62
Y17A Roosevelt 61.76 71 ⇑P P 01 56 39.7 +0.5
baz=62
115A Sonoran Desert 61.77 73 ⇑P P 01 56 39.8 +0.5
baz=62,SNR=5.3
V21A Milan 61.84 67 ⇓P P 01 56 39.9 +0.2
baz=62,SNR=5.1
W20A Ramah 61.91 68 ⇓P P 01 56 40.6 +0.5
baz=62
214A Organ Pipe Nat 62.02 74 ⇑P P 01 56 41.1 +0.2
baz=62
Y18A Canyon Day Jun 62.13 70 ⇓P P 01 56 42.1 +0.5
baz=62
X20A Quemado 62.36 69 ⇓P P 01 56 44.2 +1.0
baz=62
Y19A Nutrioso 62.41 70 ⇑P P 01 56 44.2 +0.7
baz=62
V23A Ortiz Mt. (NFS 62.65 66 ⇑P P 01 56 46.1 +1.1
baz=62
117A Oracle 62.67 72 ⇑P P 01 56 45.7 +0.4
baz=63
X21A Alamocita Cree 62.81 68 ⇓P P 01 56 46.9 +0.7
baz=63,SNR=9.6
Y20A Horse Springs, 62.91 69 ⇑P P 01 56 47.9 +1.1
baz=63
118A Homack Ranch, 63.03 71 ⇓P P 01 56 48.3 +0.6
baz=63
SCHQ Schefferville 63.04 29 P P 01 56 46.3 -1.1
comp=Z,7.6nm,0.7s,mb4.7,baz=355,slow=7.7,SNR=13
W23A Werner Place, 63.11 67 ⇓P P 01 56 49.0 +0.9
baz=63
Y21A Point of Rocks 63.20 69 ⇑P P 01 56 49.7 +0.9
baz=63
119A Ashpeak Ranch, 63.30 71 ⇓P P 01 56 50.0 +0.6
baz=63
Z20A Nine Sixteen R 63.41 70 ⇓P P 01 56 50.7 +0.6
baz=63
W24A Lazy 6 Ranch, 63.46 66 ⇓P P 01 56 50.9 +0.5
baz=63
218A Dragoon 63.51 72 ⇓P P 01 56 51.5 +0.7
baz=63
X23A Hourglass Bar 63.54 67 ⇓P P 01 56 51.6 +0.6
baz=63
Y22A Socorro 63.63 68 ⇑P P 01 56 52.5 +0.9
baz=64
Z21A St. Cloud Mine 63.74 69 ⇑P P 01 56 53.3 +1.0
baz=64
120A U Bar Ranch, L 63.82 70 ⇑P P 01 56 53.5 +0.6
baz=64
W25A X Bar L Ranch, 63.94 65 ⇓P P 01 56 53.8 +0.1
baz=64
X24A Lazy VL Ranch, 63.95 67 ⇓P P 01 56 54.2 +0.5
baz=64
318A Bisbee 63.95 72 ⇑P P 01 56 54.2 +0.5
baz=64
Y23A Lovelace Mesa, 64.11 67 ⇑P P 01 56 55.6 +0.8
baz=64

Z22A Elephant Butte 64.16 69 ⇓P P 01 56 55.9 +0.8
baz=64
121A Cookes Peak, D 64.28 70 ⇓P P 01 56 56.9 +1.0
baz=64
220A Playas Peak, P 64.38 71 ⇑P P 01 56 57.0 +0.5
baz=64
319A Douglas 64.38 72 ⇓P P 01 56 56.9 +0.4
baz=64
Y24A Capitan 64.44 67 ⇓P P 01 56 57.2 +0.3
baz=64
X26A CR and CF Fran 64.80 65 ⇑P P 01 56 59.0 -0.2
baz=65
320A Kipp Ranch, An 64.82 71 ⇓P P 01 56 59.8 +0.4
baz=65
Y25A Mesa, Roswell 64.83 66 ⇑P P 01 56 59.5 +0.1
baz=65
222A Williams Famil 64.98 69 ⇓P P 01 57 00.9 +0.4
baz=65
X27A F and S Farms, 65.09 65 ⇓P P 01 57 01.0 -0.1
baz=65
124A Stringfield Ra 65.39 68 ⇓P P 01 57 02.9 -0.1
baz=65
Y27A Causey 65.65 65 ⇑P P 01 57 04.6 -0.2
baz=66
Z26A Caprock 65.71 66 ⇑P P 01 57 05.0 -0.1
baz=66
MSTX Muleshoe 65.79 65 ⇓P P 01 57 05.1 -0.6
baz=66
125A Gardner Draw, 65.83 67 ⇓P P 01 57 06.2 +0.3
baz=66
224A Corundas Mount 65.84 68 ⇓P P 01 57 06.2 +0.3
baz=66
126A Clayton Basin, 66.18 67 ⇑P P 01 57 07.9 -0.2
baz=66
225A Deer Hill, Car 66.18 68 ⇑P P 01 57 08.3 +0.1
baz=66
324A Moseley Ranch, 66.35 69 ⇑P P 01 57 09.0 -0.3
baz=66
MCD Coleburn Disti 66.44 351 ⇓eP P 01 57 09.1 -0.4
226A Malaga, Loving 66.59 67 ⇑P P 01 57 10.5 -0.3
baz=66
MDO Dochfour 66.68 352 ⇓eP P 01 57 10.2 -0.7
325A Bean Ranch, Si 66.68 68 ⇓P P 01 57 11.5 +0.1
baz=66
KAC Achnashellach 66.69 352 ⇓eP P 01 57 10.5 -0.6
AKASG Malin Array Be 66.81 329 P P 01 57 10.2 -1.6
comp=Z,1.8nm,0.5s,mb4.2,baz=27,slow=6.7,SNR=5.7
AKASG pP pP 01 57 31.7 -1.4
comp=Z,0.6nm,0.4s,baz=26,slow=6.4,SNR=2.6
KPL Plockton 66.88 352 eP P 01 57 11.5 -0.8
KPL AMb AMB 01 57 14.3
comp=Z,52nm,5.0s
KSB Sheil Bridge 66.99 352 ⇓eP P 01 57 12.5 -0.4
425A Indio Mountain 67.13 69 ⇑P P 01 57 14.3 +0.1
baz=67
326A Caldwell Ranch 67.25 68 ⇓P P 01 57 14.7 -0.3
baz=67
KAR1 Arisaig 67.31 352 ⇓eP P 01 57 14.6 -0.3
426A McDonald Obser 67.73 68 ⇑P P 01 57 17.7 -0.3
baz=68
EBH Black Hill 67.79 351 eP P 01 57 16.8 -1.1
328A Wristen Ranch, 67.80 67 ⇓P P 01 57 18.2 -0.3
baz=68
427A Hayter Ranch, 67.92 68 ⇓P P 01 57 18.9 -0.3
baz=68
EAB Aberfoyle 67.92 351 ⇓eP P 01 57 18.3 -0.5
ESY Stoneypath 68.03 350 ⇓eP P 01 57 18.7 -0.7
CCM Cathedral Cave 68.16 54 eP P 01 57 19.2 -1.4
CCM pmax pmax
comp=Z,11nm,1.1s,mb4.6
CCM Cathedral Cave 68.16 54 eP P 01 57 19.2 -1.4
comp=Z,11nm,1.1s,mb4.6
526A Mary Lane Ranc 68.18 69 ⇑P P 01 57 20.9 +0.1
baz=68
EAU Auchinoon 68.18 351 ⇓eP P 01 57 20.0 -0.4
PGBU Glenifferbraes 68.31 351 ⇓eP P 01 57 20.8 -0.4
PGBU AMb AMB 01 57 21.1
comp=Z,29nm,0.8s,mb5.2
PGBU Glenifferbraes 68.31 351 P P 01 57 20.8 -0.4
PGBU AMb AMB 01 57 21.1
comp=Z,29nm,0.8s,mb5.2
527A Woodward Ranch 68.36 68 ⇓P P 01 57 21.9 0.0
baz=68
428A Kincaid Ranch, 68.39 67 ⇓P P 01 57 22.2 +0.1
baz=68
626A Big Bend Ranch 68.56 69 ⇓P P 01 57 23.0 -0.2
baz=68
FVM French Village 68.59 54 eP P 01 57 22.3 -1.0
FVM pmax pmax
comp=Z,15nm,1.0s,mb4.8
FVM French Village 68.59 54 eP P 01 57 22.3 -1.0
comp=Z,15nm,1.0s,mb4.8
ZEI Tsey 68.61 315 eP P 01 57 24.3 +1.0
ZEI pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
ESK Eskdalemuir 68.68 351 ⇓eP P 01 57 22.9 -0.7
ESK AMb AMB 01 57 26.3
comp=Z,23nm,4.7s
528A Cox Ranch, San 68.78 68 ⇓P P 01 57 24.6 0.0
baz=69
ECK Cauldkaine Hil 68.81 351 eP P 01 57 23.7 -0.7
TXAR Lajitas Array 68.98 69 P P 01 57 25.7 -0.1
comp=Z,7.0nm,0.7s,mb4.6,baz=297,slow=4.7,SNR=62
TXAR pP pP 01 57 46.2 -1.0
comp=Z,1.1nm,0.6s,baz=296,slow=3.6,SNR=2.8
TXAR Lajitas Array 68.98 69 P P 01 57 25.7 -0.1
TXAR pP pP 01 57 46.1 -1.1
627A Terlingua Ranc 69.03 68 ⇑P P 01 57 26.1 0.0
baz=69
XAL Allendale 69.04 350 eP P 01 57 24.7 -1.1
GAL1 Galloway 69.26 351 eP P 01 57 26.0 -1.2
GAL1 AMb AMB 01 57 26.9
comp=Z,36nm,2.5s,mb4.8
628A Black Gap, Mar 69.27 68 ⇑P P 01 57 27.4 -0.2
baz=69
MIAR Mount Ida 69.91 58 eP P 01 57 30.8 -0.7
MIAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
MIAR Mount Ida 69.91 58 eP P 01 57 30.8 -0.7
comp=Z,4.0nm,0.6s,mb4.4
JCT Junction City 70.08 65 eP P 01 57 31.8 -0.8
JCT pmax pmax
comp=Z,11nm,0.8s,mb4.7
JCT Junction City 70.08 65 eP P 01 57 31.8 -0.8
comp=Z,11nm,0.8s,mb4.7
IBBN Ibbenburen 70.22 343 eP P 01 57 33.2 +0.1
comp=Z,8.0nm,0.6s,mb4.7
CLL Collm 70.23 340 eP P 01 57 32.3 -0.8
comp=Z,5.0nm,0.6s,mb4.5
CLL Collm 70.23 340 i P P 01 57 32.4 -0.7
CLL pmax pmax
comp=Z,40nm,1.1s,mb5.2
CLL Collm 70.23 340 i P P 01 57 32.4 -0.7
comp=Z,7.0nm,1.1s,mb4.4
CLL Collm 70.23 340 i P P 01 57 32.4 -0.7
comp=Z,7.0nm,1.1s,mb4.4
CLL epP pP 01 57 58.0 +3.4
LHO Holmfirth 70.30 349 ⇓eP P 01 57 32.2 -1.3
BRG Berggiesshubel 70.45 339 eP P 01 57 33.8 -0.7
comp=Z,3.0nm,0.8s,mb4.2
MOX Moxa 71.13 340 eP P 01 57 38.0 -0.6
comp=Z,7.0nm,1.1s,mb4.4
MOX Moxa 71.13 340 eP P 01 57 38.2 -0.4
comp=Z,4.0nm,0.9s,mb4.2
MOX Moxa 71.13 340 eP P 01 57 38.0 -0.6
MOX pmax pmax
comp=Z,49nm,1.1s,mb5.2
ROTZ Rotzenmuhle 71.85 340 eP P 01 57 42.7 -0.3
comp=Z,4.0nm,0.9s,mb4.2
HTR Trewern Hill 71.89 350 ⇓eP P 01 57 42.5 -0.7
GRA1 Grafenberg Arr 72.11 340 eP P 01 57 44.4 -0.1
comp=Z,11nm,0.7s,mb4.8
GRF Grafenberg Arr 72.11 340 eP P 01 57 44.4 -0.1
comp=Z,11nm,0.7s,mb4.8
GRF Grafenberg Arr 72.11 340 eP P 01 57 44.4 -0.1
GRF pmax pmax
comp=Z,11nm,0.7s,mb4.8
GRF Grafenberg Arr 72.11 340 eP P 01 57 44.4 -0.1
GRF pmax pmax
comp=Z,11nm,0.7s,mb4.8
PLAL Pickwick Lake 72.13 54 eP P 01 57 43.7 -1.2
comp=Z,22nm,1.0s,mb5.0
MEM Membach 72.15 344 P P 01 57 44.3 -0.4
comp=Z,7.5nm,1.1s,mb4.4
HGH Gray Hill 72.28 350 ⇓eP P 01 57 44.8 -0.7
WET Wettzell 72.31 339 eP P 01 57 45.7 0.0
comp=Z,6.0nm,1.1s,mb4.3

WET	**Wettzell**	**72.31 339**	*e*P	**P**	**01 57 45.7**	**0.0**	
WET			pmax	pmax			
comp=Z,6.0nm,1.1s,mb4.3							
GEC2	**GERESS Array S**	**72.42 338**	*e*P	**P**	**01 57 46.0**	**-0.4**	
comp=Z,4.0nm,1.0s,mb4.2							
GEC2	**GERESS Array S**	**72.42 338**	*e*P	**P**	**01 57 46.0**	**-0.4**	
GEC2			pmax	pmax			
comp=Z,4.0nm,1.0s,mb4.2							
GERES	**GERESS Array B**	**72.42 338**	P	**P**	**01 57 46.2**	**-0.2**	
comp=Z,1.8nm,0.7s,mb4.0,baz=33,slow=5.1,SNR=19							
GERES			pP	pP	01 58 07.1	-0.8	
comp=Z,1.3nm,0.8s,baz=27,slow=6.7,SNR=3.3							
DOU	**Dourbes**	**72.86 345**	P	**P**	**01 57 48.3**	**-0.7**	
BAIF	**Baives**	**72.96 345**	*e*P	**P**	**01 57 47.8**	**-1.7**	
comp=Z,8.0nm,0.8s,mb4.3							
BAIF	**Baives**	**72.96 345**	*e*P	**P**	**01 57 47.8**	**-1.7**	
BAIF			pmax	pmax			
comp=Z,4.0nm,0.8s,mb4.3							
BAIF	**Baives**	**72.96 345**	*e*P	**P**	**01 57 47.8**	**-1.7**	
comp=Z,4.0nm,0.8s,mb4.3							
DYA	**Yadsworthy**	**73.58 350**	*e*P	**P**	**01 57 51.2**	**-2.0**	
DYA			AMb	AMB	01 57 51.9		
comp=Z,17nm,1.9s,mb4.4							
DYA	**Yadsworthy**	**73.58 350**	P	**P**	**01 57 51.2**	**-2.0**	
DYA			AMb	AMB	01 57 51.9		
comp=Z,17nm,1.9s,mb4.4							
RJOB	**Jochberg**	**73.67 338**	*e*P	**P**	**01 57 54.4**	**+0.7**	
comp=Z,5.0nm,0.8s,mb4.3							
BFO	**Black Forest**	**73.96 342**	*e*P	**P**	**01 57 54.7**	**-0.7**	
comp=Z,3.0nm,0.7s,mb4.1							
BFO	**Black Forest**	**73.96 342**	*e*P	**P**	**01 57 54.7**	**-0.7**	
BFO			pmax	pmax			
comp=Z,3.0nm,0.7s,mb4.1							
CDF	**Champ du Feu**	**74.06 342**	*e*P	**P**	**01 57 55.4**	**-0.7**	
comp=Z,13nm,0.9s,mb4.3							
CDF	**Champ du Feu**	**74.06 342**	*e*P	**P**	**01 57 55.4**	**-0.7**	
CDF			pmax	pmax			
comp=Z,6.0nm,0.9s,mb4.3							
CDF	**Champ du Feu**	**74.06 342**	*e*P	**P**	**01 57 55.4**	**-0.7**	
comp=Z,6.3nm,0.9s,mb4.3							
LRAL	**Lakeview Retre**	**74.25 54**	*e*P	**P**	**01 57 55.8**	**-1.6**	
comp=Z,7.1nm,0.5s,mb4.7							
MEZF	**Maizieres J'vi**	**74.34 344**	*e*P	**P**	**01 57 56.8**	**-0.9**	
HAU	**Haudompre**	**74.61 343**	*e*P	**P**	**01 57 58.2**	**-1.1**	
comp=Z,4.8nm,0.5s,mb4.2							
HAU	**Haudompre**	**74.61 343**	*e*P	**P**	**01 57 58.2**	**-1.1**	
HAU			pmax	pmax			
comp=Z,2.0nm,0.5s,mb4.1							
HAU	**Haudompre**	**74.61 343**	*e*P	**P**	**01 57 58.2**	**-1.1**	
comp=Z,2.4nm,0.5s,mb4.2							
JSA	**Saint Aubin**	**74.63 349**	*e*P	**P**	**01 57 57.1**	**-2.2**	
JSA			AMb	AMB	01 58 10.9		
comp=Z,24nm,1.6s,mb4.7							
ABTA	**Abfaltersbach**	**74.67 338**	‖ *i* P	**P**	**01 57 59.3**	**-0.3**	
comp=Z,5.4nm,1.0s,mb4.2							
HINF	**Hinteralfeld**	**74.71 343**	*e*P	**P**	**01 57 58.6**	**-1.2**	
comp=Z,2.6nm,0.5s,mb3.9							
HINF	**Hinteralfeld**	**74.71 343**	*e*P	**P**	**01 57 58.6**	**-1.2**	
HINF			pmax	pmax			
comp=Z,1.0nm,0.5s,mb3.8							
HINF	**Hinteralfeld**	**74.71 343**	*e*P	**P**	**01 57 58.6**	**-1.2**	
comp=Z,1.3nm,0.5s,mb3.9							
FLN	**La Foliniere**	**74.86 348**	*e*P	**P**	**01 57 59.2**	**-1.4**	
comp=Z,8.0nm,0.6s,mb4.3							
FLN	**La Foliniere**	**74.86 348**	*e*P	**P**	**01 57 59.2**	**-1.4**	
FLN			pmax	pmax			
comp=Z,4.0nm,0.6s,mb4.3							
FLN	**La Foliniere**	**74.86 348**	*e*P	**P**	**01 57 59.2**	**-1.4**	
comp=Z,4.0nm,0.6s,mb4.3							
LDF	**La Drutiere**	**74.98 347**	*e*P	**P**	**01 57 59.8**	**-1.6**	
BRTR	**Keskin Array B**	**75.12 321**	P	**P**	**01 58 01.8**	**-0.5**	
comp=Z,0.9nm,0.5s,mb3.8,baz=75,slow=2.4,SNR=7.6							
BRTR			pP	pP	01 58 22.2	-1.8	
comp=Z,0.7nm,0.7s,baz=17,slow=4.8,SNR=2.2							
GRR	**Gorron**	**75.27 348**	*e*P	**P**	**01 58 01.8**	**-1.2**	
comp=Z,18nm,0.7s,mb4.6							
GRR	**Gorron**	**75.27 348**	*e*P	**P**	**01 58 01.8**	**-1.2**	
GRR			pmax	pmax			
comp=Z,9.0nm,0.7s,mb4.6							
GRR	**Gorron**	**75.27 348**	*e*P	**P**	**01 58 01.8**	**-1.2**	
comp=Z,8.9nm,0.7s,mb4.6							
ROSF	**Rostrenen**	**75.59 349**	*e*P	**P**	**01 58 03.8**	**-1.1**	
comp=Z,5.1nm,0.6s,mb4.1							
ROSF	**Rostrenen**	**75.59 349**	*e*P	**P**	**01 58 03.8**	**-1.1**	
ROSF			pmax	pmax			
comp=Z,3.0nm,0.6s,mb4.2							
ROSF	**Rostrenen**	**75.59 349**	*e*P	**P**	**01 58 03.8**	**-1.1**	
comp=Z,2.5nm,0.6s,mb4.1							
SGMF	**Saint Gilles**	**75.60 349**	*e*P	**P**	**01 58 03.7**	**-1.2**	
comp=Z,14nm,0.8s,mb4.5							
SGMF	**Saint Gilles**	**75.60 349**	*e*P	**P**	**01 58 03.7**	**-1.2**	
SGMF			pmax	pmax			
comp=Z,7.0nm,0.8s,mb4.4							
SGMF	**Saint Gilles**	**75.60 349**	*e*P	**P**	**01 58 03.7**	**-1.2**	
comp=Z,6.9nm,0.8s,mb4.4							
LOR	**Lormes**	**75.73 344**	*e*P	**P**	**01 58 04.4**	**-1.3**	
comp=Z,7.2nm,0.6s,mb4.3							
LOR	**Lormes**	**75.73 344**	*e*P	**P**	**01 58 04.4**	**-1.3**	
LOR			pmax	pmax			
comp=Z,4.0nm,0.6s,mb4.3							
LOR	**Lormes**	**75.73 344**	*e*P	**P**	**01 58 04.4**	**-1.3**	
comp=Z,3.6nm,0.6s,mb4.3							
SSF	**Saint Saulge**	**75.98 345**	*e*P	**P**	**01 58 06.0**	**-1.1**	
comp=Z,2.4nm,0.5s,mb3.9							
SSF	**Saint Saulge**	**75.98 345**	*e*P	**P**	**01 58 06.0**	**-1.1**	
SSF			pmax	pmax			
comp=Z,1.0nm,0.5s,mb3.8							
SSF	**Saint Saulge**	**75.98 345**	*e*P	**P**	**01 58 06.0**	**-1.1**	
comp=Z,1.2nm,0.5s,mb3.9							
QUIF	**Quistinic**	**76.00 349**	*e*P	**P**	**01 58 06.0**	**-1.2**	
comp=Z,15nm,0.9s,mb4.5							
QUIF	**Quistinic**	**76.00 349**	*e*P	**P**	**01 58 06.0**	**-1.2**	
QUIF			pmax	pmax			
comp=Z,8.0nm,0.9s,mb4.5							
QUIF	**Quistinic**	**76.00 349**	*e*P	**P**	**01 58 06.0**	**-1.2**	
comp=Z,7.6nm,0.9s,mb4.4							
CABF	**La Chapelle**	**76.01 343**	*e*P	**P**	**01 58 06.7**	**-0.6**	
comp=Z,6.7nm,0.7s,mb4.2							
CABF	**La Chapelle**	**76.01 343**	*e*P	**P**	**01 58 06.7**	**-0.6**	
CABF			pmax	pmax			
comp=Z,3.0nm,0.6s,mb4.2							
CABF	**La Chapelle**	**76.01 343**	*e*P	**P**	**01 58 06.7**	**-0.6**	
comp=Z,3.3nm,0.6s,mb4.2							
AVF	**Avril sur Loir**	**76.27 345**	*e*P	**P**	**01 58 07.7**	**-1.1**	
comp=Z,8.8nm,1.0s,mb4.2							
AVF	**Avril sur Loir**	**76.27 345**	*e*P	**P**	**01 58 07.7**	**-1.1**	
AVF			pmax	pmax			
comp=Z,4.0nm,1.0s,mb4.1							
AVF	**Avril sur Loir**	**76.27 345**	*e*P	**P**	**01 58 07.7**	**-1.1**	
comp=Z,4.4nm,1.0s,mb4.1							
SMF	**Signal de Mont**	**76.34 344**	*e*P	**P**	**01 58 07.9**	**-1.2**	
TCF	**Toulx Ste Croi**	**76.93 345**	*e*P	**P**	**01 58 11.5**	**-1.0**	
MFF	**Saint Martin d**	**76.94 347**	*e*P	**P**	**01 58 11.6**	**-0.9**	
comp=Z,6.0nm,0.7s,mb4.1							
MFF	**Saint Martin d**	**76.94 347**	*e*P	**P**	**01 58 11.6**	**-0.9**	
MFF			pmax	pmax			
comp=Z,3.0nm,0.7s,mb4.1							
MFF	**Saint Martin d**	**76.94 347**	*e*P	**P**	**01 58 11.6**	**-0.9**	
comp=Z,3.0nm,0.7s,mb4.1							
LPL	**La Plagne**	**76.96 342**	*e*P	**P**	**01 58 13.0**	**+0.3**	
comp=Z,14nm,0.9s,mb4.4							
LPL	**La Plagne**	**76.96 342**	*e*P	**P**	**01 58 13.0**	**+0.3**	
LPL			pmax	pmax			
comp=Z,7.0nm,0.9s,mb4.4							
LPL	**La Plagne**	**76.96 342**	*e*P	**P**	**01 58 13.0**	**+0.3**	
comp=Z,7.2nm,0.9s,mb4.4							
LPG	**La Plagne**	**76.98 342**	*e*P	**P**	**01 58 13.1**	**+0.3**	
comp=Z,17nm,0.9s,mb4.5							
LPG	**La Plagne**	**76.98 342**	*e*P	**P**	**01 58 13.1**	**+0.3**	
LPG			pmax	pmax			
comp=Z,9.0nm,0.9s,mb4.5							
LPG	**La Plagne**	**76.98 342**	*e*P	**P**	**01 58 13.1**	**+0.3**	
comp=Z,8.5nm,0.9s,mb4.5							
ORIF	**Oris-en-Rattie**	**77.69 342**	*e*P	**P**	**01 58 16.8**	**+0.1**	
comp=Z,8.5nm,0.8s,mb4.2							
ORIF	**Oris-en-Rattie**	**77.69 342**	*e*P	**P**	**01 58 16.8**	**+0.1**	
ORIF			pmax	pmax			
comp=Z,4.0nm,0.8s,mb4.2							
ORIF	**Oris-en-Rattie**	**77.69 342**	*e*P	**P**	**01 58 16.8**	**+0.1**	
comp=Z,4.3nm,0.8s,mb4.2							
VIVF	**Saint-Julien-l**	**77.95 343**	*e*P	**P**	**01 58 17.9**	**-0.3**	
comp=Z,16nm,1.1s,mb4.4							
VIVF	**Saint-Julien-l**	**77.95 343**	*e*P	**P**	**01 58 17.9**	**-0.3**	
VIVF			pmax	pmax			
comp=Z,8.0nm,1.1s,mb4.4							
VIVF	**Saint-Julien-l**	**77.95 343**	*e*P	**P**	**01 58 17.9**	**-0.3**	
comp=Z,8.3nm,1.1s,mb4.4							
CAF	**Calviac**	**78.28 345**	*e*P	**P**	**01 58 19.8**	**-0.2**	
LFF	**La Frestale**	**78.46 346**	*e*P	**P**	**01 58 20.5**	**-0.5**	
comp=Z,5.6nm,0.6s,mb4.1							
LFF	**La Frestale**	**78.46 346**	*e*P	**P**	**01 58 20.5**	**-0.5**	
LFF			pmax	pmax			
comp=Z,3.0nm,0.6s,mb4.2							
LFF	**La Frestale**	**78.46 346**	*e*P	**P**	**01 58 20.5**	**-0.5**	
comp=Z,2.8nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**78.71 206**	P	**P**	**01 58 21.9**	**-0.6**	
comp=Z,1.7nm,0.6s,mb4.0,baz=16,slow=5.8							
WRA	**Warramunga Arr**	**78.71 206**	P	**P**	**01 58 21.9**	**-0.6**	
LASF	**Ste Croix**	**78.84 344**	*e*P	**P**	**01 58 23.1**	**0.0**	
PGF	**Pioggiola**	**79.41 340**	*e*P	**P**	**01 58 26.2**	**0.0**	
comp=Z,22nm,0.8s,mb4.7							
PGF	**Pioggiola**	**79.41 340**	*e*P	**P**	**01 58 26.2**	**0.0**	
PGF			pmax	pmax			
comp=Z,11nm,0.8s,mb4.7							
PGF	**Pioggiola**	**79.41 340**	*e*P	**P**	**01 58 26.2**	**0.0**	
comp=Z,11nm,0.8s,mb4.7							
MTLF	**Montolieu**	**79.81 345**	*e*P	**P**	**01 58 28.1**	**-0.3**	
comp=Z,5.2nm,0.8s,mb4.1							
MTLF	**Montolieu**	**79.81 345**	*e*P	**P**	**01 58 28.1**	**-0.3**	
MTLF			pmax	pmax			
comp=Z,3.0nm,0.8s,mb4.2							
MTLF	**Montolieu**	**79.81 345**	*e*P	**P**	**01 58 28.1**	**-0.3**	
comp=Z,2.6nm,0.8s,mb4.1							
SJPF	**Ste Jean**	**80.51 347**	*e*P	**P**	**01 58 31.5**	**-0.7**	
ETSF	**Etsaut**	**80.64 347**	*e*P	**P**	**01 58 32.8**	**0.0**	
comp=Z,5.9nm,0.7s,mb4.2							
ETSF	**Etsaut**	**80.64 347**	*e*P	**P**	**01 58 32.8**	**0.0**	
ETSF			pmax	pmax			
comp=Z,3.0nm,0.7s,mb4.2							
ETSF	**Etsaut**	**80.64 347**	*e*P	**P**	**01 58 32.8**	**0.0**	
comp=Z,3.0nm,0.7s,mb4.2							
ASAR	**Alice Springs**	**82.40 205**	P	**P**	**01 58 41.8**	**-0.3**	
comp=Z,2.4nm,0.6s,mb4.2,baz=11,slow=5.3,SNR=25							
ASAR			pP	pP	01 59 02.5	-1.6	
comp=Z,3.0nm,0.8s,baz=16,slow=5.7,SNR=7.5							
PVRL	**Vila Real**	**83.00 352**	*e*P	**P**	**01 58 45.1**	**-0.2**	
comp=Z,18nm,1.4s,mb4.7							
MVO	**Moncorvo**	**83.06 351**	*e*P	**P**	**01 58 45.4**	**-0.2**	
comp=Z,18nm,2.1s,mb4.5							
ESDC	**Sonseca Array**	**84.23 349**	P	**P**	**01 58 51.0**	**-0.6**	
comp=Z,2.9nm,0.8s,mb4.1,baz=1.8,slow=5.1,SNR=9.8							
PCBR	**Castelo Branco**	**84.41 351**	*e*P	**P**	**01 58 52.1**	**-0.4**	
comp=Z,17nm,1.0s,mb4.8							
PTOM	**Tomar**	**84.71 352**	*e*P	**P**	**01 58 52.8**	**-1.2**	
comp=Z,16nm,1.6s,mb4.7							
PMRV	**Marv??o**	**84.81 351**	*e*P	**P**	**01 58 54.1**	**-0.4**	
comp=Z,13nm,1.5s,mb4.7							
PESTR	**Estremoz**	**85.38 351**	*e*P	**P**	**01 58 57.2**	**-0.2**	
comp=Z,8.8nm,1.6s,mb4.4							
PBAR	**Barrancos**	**86.02 351**	*e*P	**P**	**01 59 00.5**	**-0.1**	
comp=Z,8.4nm,1.1s,mb4.6							
TORD	**Torodi Ar. Bea**	**109.37 339**	PKiKP	PKiKP	02 04 47.8	-2.4	
comp=Z,0.3nm,0.5s,baz=358,slow=1.1,SNR=7.5							
DBIC	**Dimbokro**	**116.86 345**	PKP	PKPdf	02 05 03.0	-1.6	
comp=Z,5.4nm,1.1s,baz=263,slow=6.1,SNR=5.0							
LPAZ	**La Paz**	**125.67 64**	PKP	PKPdf	02 05 20.6	-0.6	
comp=Z,1.0nm,0.8s,baz=14,slow=6.7,SNR=4.3							
BOSA	**Boshof**	**138.74 292**	PKhKP		02 05 43.0		
comp=Z,1.8nm,0.8s,baz=124,slow=3.6,SNR=2.7							
CPUP	**Villa Florida**	**139.50 60**	PKhKP		02 05 42.6		
comp=Z,0.3nm,0.3s,baz=280,slow=17,SNR=2.3							
MAW	**Mawson**	**142.47 218**	PKhKP		02 05 47.5		
comp=Z,0.9nm,0.5s,baz=59,slow=18,SNR=5.2							
PLCA	**Paso Flores**	**143.24 88**	PKhKP		02 05 49.4		
comp=Z,3.7nm,0.9s,baz=294,slow=2.3,SNR=7.6							
QSPA	**South Pole Qui**	**145.40 180**	PKPbc	PKPbc	02 05 54.8	-1.2	
comp=Z,8.6nm,0.9s,baz=329,slow=2.8,SNR=28							
QSPA			pPKPbc	pPKPbc	02 06 16.1	-2.8	
comp=Z,5.8nm,0.7s,baz=6.6,slow=0.5,SNR=5.5							
QSPA	**South Pole Qui**	**145.40 180**	*e*PKPbc	PKPbc	02 05 54.6	-1.4	

*IDC **13** 01:51:48.3±1.0, 31°.36N×103°.88E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, Error ellipse: s-maj=40.6km s-min=19.7km az=49.0*
*NEIC **13** 01:51:49.8±0.7, 31°.45N×104°.14E, h10km, mb4.0/1, Error ellipse: s-maj=45.6km s-min=13.5km az=55.0*
*BJI **13** 01:51:51.0, 31°.55N×103°.77E, h8km, mb4.2/2, ML3.8/4*
ISC 13 01:51:49.3±0.7, 31°.42N±0°.04×104°.20E±0°.06, h7km±6km, n20, σ0°.84/23, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.63**	**216**	Pg	**Pg**	**01 52 01.1**	**-0.4**
CD2				Sg	**Sg**	**01 52 09.4**	**-0.3**
CD2				smax			
comp=N,4μm,0.6s							
LZH	**Lanzhou**	**4.66**	**356**	*e*Pg	**Pg**	**01 53 19.6**	**+1.0**
LZH				Sg	**Sg**	**01 54 19.2**	**+0.2**
LZH				smax			
comp=N,48nm,0.9s							
LZH				smax			
comp=E,72nm,1.0s							
LZH				LR	LR		
comp=E,640nm,6.9s							
LZH				LR	LR		
comp=Z,760nm,7.5s							
XAN	**Xi'an**	**4.76**	**56**	Pg	**Pg**	**01 53 21.5**	**+1.0**
XAN				Sg	**Sg**	**01 54 20.4**	**-1.8**
XAN				smax			
comp=N,120nm,1.0s							
XAN				smax			
comp=E,44nm,1.0s							
XAN	**Xi'an**	**4.76**	**56**	Pg	**Pg**	**01 53 21.5**	**+1.0**
XAN				Sg	**Sg**	**01 54 20.4**	**-1.8**
XAN				smax			
comp=N,120nm,1.0s							
XAN				smax			
comp=E,44nm,1.0s							
GYA	**Guiyang**	**5.40**	**156**	Pg	**Pg**	**01 53 32.9**	**+0.2**
GYA				Sg	**Sg**	**01 54 34.7**	**-7.9**
GYA				smax			
comp=N,100nm,0.9s							
GYA				smax			
comp=E,150nm,0.9s							
WHN	**Wuhan**	**8.76**	**93**	P	Px	01 54 07.1	
KSRS	**Korea Array**	**20.45**	**66**	P	**P**	**01 56 31.0**	**+3.7**
comp=E,0.9nm,0.5s,baz=228,slow=6.9,SNR=3.1							
CN2	**Changchun**	**20.82**	**48**	*e*P	**P**	**01 56 38.3**	**+7.1**
CN2				pmax	pmax		
comp=Z,10.0nm,0.9s							
MK31	**Makanchi Array**	**22.79**	**319**	*e*P	**P**	**01 56 52.5**	**+0.2**
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**01 56 52.3**	**0.0**
comp=Z,3.8nm,1.0s,mb3.8,baz=120,slow=10,SNR=9.3							
ZAA0	**Zalesovo Array**	**26.47**	**334**	*e*P	**P**	**01 57 26.7**	**-0.1**
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**01 57 26.9**	**+0.1**
comp=Z,3.9nm,0.7s,mb4.0,baz=134,slow=9.5,SNR=13							
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**01 57 32.1**	**+0.1**
comp=Z,3.0nm,0.8s,mb3.9,baz=126,slow=10,SNR=12							
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**01 57 32.0**	**0.0**
comp=Z,4.0nm,1.1s,mb3.9							
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**02 01 35.1**	**-0.1**
comp=Z,4.9nm,1.0s,mb4.5,baz=100,slow=8.6,SNR=2.9							
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**02 01 37.1**	**-0.6**
comp=Z,2.0nm,0.9s,mb4.2,baz=69,slow=13,SNR=4.3							
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**02 02 09.7**	**+1.4**
comp=Z,0.4nm,0.7s,mb3.7,baz=332,slow=6.2,SNR=3.8							
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**02 02 24.1**	**-1.8**
comp=Z,0.7nm,0.8s,mb3.8,baz=37,slow=9.9,SNR=2.8							
YKA	**Yellowknife Ar**	**81.37**	**17**	P	**P**	**02 04 06.4**	**+0.1**
comp=Z,0.2nm,0.7s,mb3.2,baz=329,slow=5.5,SNR=4.4							
QSPA	**South Pole Qui**	**121.19**	**180**	PKP	PKPdf	02 10 41.4	-0.2
comp=Z,0.6nm,0.9s,baz=58,slow=3.3,SNR=3.1							

*DDA **13** 02:11:22.5, 36°.96N×35°.55E, h25km±1km, Md2.5*
*ISK **13** 02:11:22.8, 37°.03N×35°.51E, h18km, MD2.4*
*ISCJB **13** 02:11:23.3±0.7, 37°.01N±0°.03×35°.56E±0°.05, h19km±15km, Error ellipse: s-maj=7.2km s-min=4.8km az=143.6*
*CSEM **13** 02:11:23.0±0.2, 36°.99N×35°.54E, h20km, MD2.5, Error ellipse: s-maj=5.7km s-min=4.1km az=49.0*
ISC 13 02:11:23.1±0.6, 37°.01N±0°.03×35°.56E±0°.05, h18km±5km, n15, σ0°.71/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YURE	**YUREGIR**	**0.19**	**162**	*i* P	**Pg**	**02 11 27.4**	**-0.6**
YURE				*i* S	**Sg**	**02 11 31.8**	**+0.5**
YURE	**YUREGIR**	**0.19**	**162**	*i* P	**Pg**	**02 11 27.4**	**-0.6**
YURE				*i* S	**Sg**	**02 11 31.8**	**+0.5**
KRTS	**Karatas**	**0.46**	**199**	*e*PG	**Pg**	**02 11 32.6**	**+0.1**
KRTS				*e*SG	**Sg**	**02 11 39.9**	**+1.1**
KRTS	**Karatas**	**0.46**	**199**	*e*Pg	**Pg**	**02 11 32.6**	**+0.1**
KRTS				*e*Sg	**Sg**	**02 11 39.9**	**+1.1**
KARA	**Karaisali**	**0.47**	**302**	*e*PG	**Pg**	**02 11 31.9**	**-0.8**
KARA				*e*SG	**Sg**	**02 11 38.5**	**-0.7**
KARA	**Karaisali**	**0.47**	**302**	*e*Pg	**Pg**	**02 11 31.9**	**-0.8**
KARA				*e*Sg	**Sg**	**02 11 38.5**	**-0.7**
KOZT	**Kozan**	**0.51**	**24**	*e*PG	**Pg**	**02 11 33.4**	**0.0**
KOZT				*e*SG	**Sg**	**02 11 41.2**	**+0.8**
GULE	**Gulek**	**0.68**	**294**	*i* P	**Pb**	**02 11 36.8**	**+0.4**
GULE				*i* S	**Sb**	**02 11 46.6**	**+1.1**
GULE	**Gulek**	**0.68**	**294**	*i* P	**Pb**	**02 11 36.8**	**+0.4**
GULE				*i* S	**Sb**	**02 11 46.6**	**+1.1**
COBT	**Iskenderun**	**0.74**	**131**	*e*P	**Pb**	**02 11 37.0**	**-0.5**
COBT				*i* S	**Sb**	**02 11 47.6**	**+0.3**
COBT	**Iskenderun**	**0.74**	**131**	*e*P	**Pb**	**02 11 37.0**	**-0.5**
COBT				*i* S	**Sb**	**02 11 47.6**	**+0.3**
MERS	**Mersin**	**0.84**	**260**	*e*PG	**Pg**	**02 11 38.9**	**-0.6**
MERS	**Mersin**	**0.84**	**260**	*e*Pg	**Pg**	**02 11 38.9**	**-0.7**
YAYL	**Yayladag**	**1.07**	**156**	*i* P	**Pb**	**02 11 41.7**	**-1.4**
YAYL				*i* S	**Sb**	**02 11 56.8**	**+0.1**
YAYL	**Yayladag**	**1.07**	**156**	*i* P	**Pb**	**02 11 41.7**	**-1.3**
YAYL				*i* S	**Sb**	**02 11 56.8**	**+0.1**

*IDC **13** 02:15:14.1±0.6, 31°.48N×103°.99E, h0km, mb4.5/27, mb1 4.6/28, mb1mx4.5/35, mbtmp4.5/28, ML3.2/1, MS3.7/10, Ms1 3.7/10, ms1mx3.3/40, Error ellipse: s-maj=21.3km s-min=12.1km az=55.0*
*ISCJB **13** 02:15:14.2±0.2, 31°.51N±0°.02×104°.05E±0°.03, h10km, mb4.6/79, MS3.8/16, Error ellipse: s-maj=3.9km s-min=3.2km az=163.4*
*NEIC **13** 02:15:15.9±0.3, 31°.55N×104°.13E, h10km, mb4.7/36, Error ellipse: s-maj=8.6km s-min=5.1km az=72.0*
*BJI **13** 02:15:16.4, 31°.58N×104°.11E, h15km, mB4.9/16, mb4.6/21, ML4.5/18, Ms4.3/20, Ms7 4.1/22*
*MOS **13** 02:15:17.4±0.8, 31°.46N×104°.09E, h36km, mb4.9/41, Error ellipse: s-maj=11.2km s-min=5.0km az=117.7*
*DJA **13** 02:15:17, 31°.57N×104°.34E, h10km, mb5.0/11*
*SZGRF **13** 02:15:20.3, 31°.38N×103°.90E, h23km, mb4.9, Sichuan, China*
ISC 13 02:15:16.4±0.2, 31°.52N±0°.02×103°.99E±0°.03, h10km, (h22km±.2km:pP-P), n221, σ0°.94/227, mb4.6/79, MS3.8/16, 22C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.64**	**199**	Pg	**Pg**	**02 15 30.9**	**+2.1**
CD2				Sg	**Sg**	**02 15 41.3**	**+4.1**
CD2				smax			
comp=N,12μm,0.7s							
LZH	**Lanzhou**	**4.56**	**358**	*e*Pn	**Pn**	**02 16 27.1**	**+1.7**
LZH				Sg	**Sg**	**02 17 42.1**	**-0.7**
LZH				smax			
comp=N,140nm,0.8s							
LZH				smax			
comp=E,360nm,1.0s							
LZH				LR	LR		
comp=N,2μm,6.2s							
LZH				LR	LR		
comp=Z,3μm,7.5s							
XAN	**Xi'an**	**4.85**	**57**	Pn	**Pn**	**02 16 31.5**	**+2.0**
XAN				Sn	**Sn**	**02 17 23.3**	**-2.4**
XAN				Sg	**Sg**	**02 17 45.4**	**-6.8**
XAN				smax			
comp=N,780nm,1.0s							
XAN				smax			
comp=E,480nm,1.1s							
XAN				LR	LR		
comp=N,1μm,7.7s							
XAN				LR	LR		
comp=E,410nm,8.5s							
XAN				LR	LR		
comp=Z,350nm,10.9s							
GYA	**Guiyang**	**5.56**	**154**	Pn	**Pn**	**02 16 39.7**	**+0.5**
GYA				Sn	**Sn**	**02 17 42.4**	**-0.7**
GYA				smax			
comp=N,950nm,1.1s							
GYA				smax			
comp=E,1μm,1.0s							
GYA				LR	LR		
comp=N,3μm,2.2s							
GYA				LR	LR		
comp=E,1μm,2.0s							
GYA				LR	LR		
comp=Z,3μm,2.3s							
KMI	**Kunming**	**6.47**	**190**	Pn	**Pn**	**02 16 54.1**	**+2.4**
KMI				Sn	**Sn**	**02 18 05.5**	**0.0**

comp=Z,108nm,0.8s
NST Nakhon Sawan 16.16 193 P **Pn 02 19 02.0 -1.7**
SONM Songino Array 16.40 6 Pn **Pn 02 19 06.9 +0.3**
comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=13
SONM LR LR 02 26 10.7
comp=Z,414nm,19.2s,baz=174,slow=40
PKI Pulchoki 16.64 261 *eP* **Pn 02 19 09.0 -0.8**
comp=Z,59nm,0.7s
PKIN Phulchoki 16.65 261 *eP* **Pn 02 19 09.0 -0.9**
comp=Z,26nm,0.4s
KKN Kakani 16.68 262 *eP* **Pn 02 19 09.2 -1.2**
comp=Z,47nm,0.5s
DMN Daman 16.89 261 *eP* **Pn 02 19 12.0 -0.9**
comp=Z,123nm,0.9s
ZAK Zakamensk 18.85 359 *eP* **Pn 02 19 36.7 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 20.15 359 *eP* **P 02 19 52.5 +1.9**
TLY pmax pmax
comp=Z,4.0nm,1.2s
TLY MLR MLR
comp=Z,205nm,11.0s,MS3.7
TLY Talaya 20.15 359 *eP* **P 02 19 51.1 +0.5**
comp=Z,1.3nm,0.8s
MOY Mondy 20.25 355 *eP* **P 02 19 53.8 +2.1**
KSRS Korea Array 20.57 67 P **P 02 19 54.9 -0.4**
comp=Z,13nm,0.8s,baz=254,slow=10.0,SNR=20
KSRS LR LR 02 29 04.0
comp=Z,58nm,18.8s,MS3.0,baz=265,slow=40
KSRS Korea Array 20.57 67 P **P 02 19 54.9 -0.4**
KSRS pmax pmax
comp=Z,13nm,0.8s
KSRS MLR MLR
comp=Z,58nm,18.8s,MS3.0
IRK Irkutsk 20.71 0 *eP* **P 02 19 57.8 +1.1**
IRK pmax pmax
comp=Z,41nm,1.1s
CN2 Changchun 20.88 48 *eP* **P 02 19 58.9 +0.3**
CN2 *epP* 02 20 07.1
CN2 *esP* sP 02 20 11.6 +8.9
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,400nm,12.0s,MS4.3
CN2 LR LR
comp=E,700nm,12.0s,MS4.3
CN2 LR LR
comp=Z,300nm,13.0s,MS3.9
DDI Dehra Dun 22.27 274 *ex* x 02 20 20.2
MK31 Makanchi Array 22.61 319 *eP* **P 02 20 17.5 +0.4**
MKAR Makanchi Array 22.61 319 P **P 02 20 17.1 0.0**
comp=Z,7.9nm,0.7s,mb4.2,baz=122,slow=12,SNR=49
MKAR LR LR 02 30 02.2
comp=Z,235nm,18.2s,MS3.7,baz=131,slow=39
MKAR Makanchi Array 22.61 319 *ceP* **P 02 20 17.8 +0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
SNG Songkhla 24.42 188 P **P 02 20 34.0 -1.2**
comp=Z,140nm,0.8s,mb5.4
ULHL Ulahol 24.54 304 P **P 02 20 37.5 +1.3**
SNR=9.8
TKM2 Tokmak 2 25.20 305 P **P 02 20 43.0 +0.9**
SNR=9.7
TKM2 Tokmak 2 25.20 305 *eP* **P 02 20 42.9 +0.8**
TKM2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
TKM2 Tokmak 2 25.20 305 *eP* **P 02 20 42.9 +0.8**
comp=Z,6.2nm,0.7s,mb4.2
KZA Kyzart 25.21 303 P **P 02 20 43.6 +1.4**
SNR=25
KBK Karagaybulak 25.58 304 P **P 02 20 47.6 +2.0**
SNR=7.7
UCH Uchtor 25.77 303 P **P 02 20 49.9 +2.5**
SNR=19
UCH Uchtor 25.77 303 *eP* **P 02 20 49.7 +2.3**
comp=Z,13nm,0.9s,mb4.5
AAK Ala-Archa 25.89 304 P **P 02 20 49.0 +0.6**
comp=Z,4.5nm,0.7s,mb4.1,baz=187,slow=18,SNR=3.3
AAK Ala-Archa 25.89 304⇑ *eP* **P 02 20 50.4 +2.0**
AAK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
AAK Ala-Archa 25.89 304 *eP* **P 02 20 50.0 +1.6**
comp=Z,5.3nm,0.7s,mb4.2
USP Ospenovka 26.07 305 P **P 02 20 53.9 +3.9**
SNR=7.4
ZAA0 Zalesovo Array 26.31 334 *eP* **P 02 20 51.9 -0.2**
ZALV Zalesovo Beam 26.31 334 P **P 02 20 51.9 -0.1**
comp=Z,21nm,0.8s,mb4.7,baz=133,slow=9.0,SNR=26
ZALV LR LR 02 31 53.4
comp=Z,119nm,21.9s,MS3.4,baz=108,slow=38
AML Almayashu 26.34 302 P **P 02 20 54.8 +2.3**
SNR=9.2
AML Almayashu 26.34 302 *eP* **P 02 20 54.5 +2.0**
comp=Z,7.7nm,0.8s,mb4.3
EKS2 Erkin-Say 26.41 303 *eP* **P 02 20 54.1 +1.0**
comp=Z,4.4nm,0.9s,mb4.0
KURK Kurchatov 26.86 323 P **P 02 20 57.1 0.0**
comp=Z,12nm,0.8s,mb4.5,baz=129,slow=8.9,SNR=60
KURK LR LR 02 32 30.6
comp=Z,175nm,18.6s,MS3.6,baz=120,slow=39
KURK Kurchatov 26.86 323 *eP* **P 02 20 57.2 +0.1**
KURK pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
KURK Kurchatov 26.86 323 *eP* **P 02 20 57.2 +0.2**
comp=Z,9.9nm,0.8s,mb4.4
KLR Kul'dur 27.34 42 *eP* **P 02 21 02.0 +0.6**
KBL Kabul 29.37 285 *eP* **P 02 21 21.8 +2.1**
KBL pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KBL Kabul 29.37 285 *eP* **P 02 21 21.8 +2.1**
comp=Z,5.3nm,0.8s,mb4.3
BVAR Borovoye Array 32.41 321 P **P 02 21 46.2 0.0**
comp=Z,3.4nm,0.6s,mb4.3,baz=116,slow=10,SNR=20
BVAR LR LR 02 36 01.8
comp=Z,146nm,19.9s,MS3.7,baz=101,slow=38
BRVK Borovoye 32.48 321 *c iP* **P 02 21 47.1 +0.2**
BRVK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BRVK Borovoye 32.48 321 *eP* **P 02 21 46.6 -0.3**
comp=Z,5.7nm,0.8s,mb4.5
ABKAR Akbulak array 37.33 311 *eP* **P 02 22 29.0 +0.2**
comp=Z,6.4nm,0.8s,mb4.5
AKTK Aktyubinsk 38.79 313 P **P 02 22 41.2 +0.1**
AKTO Aktyubinsk 38.79 313 P **P 02 22 41.2 +0.1**
comp=Z,2.7nm,0.7s,mb4.1,baz=90,slow=8.9,SNR=15
SVE Sverdlovsk 39.11 323⇑ *eP* **P 02 22 44.7 +1.0**
SVE pmax pmax
comp=Z,30nm,1.1s,mb4.9
ARU Arti 40.05 322 *c iP* **P 02 22 51.7 +0.2**
ARU S **S 02 28 57.0 -0.1**
ARU SS SS 02 31 49.6 -4.5
ARU pmax pmax
comp=Z,28nm,1.0s,mb5.0
ARU Arti 40.05 322 *eP* **P 02 22 51.9 +0.4**
comp=Z,29nm,1.0s,mb5.0
KIV Kislovodsk 49.01 303 *eP* **P 02 24 04.2 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,64nm,17.0s,MS3.7
KIV Kislovodsk 49.01 303 *eP* **P 02 24 04.0 +0.8**
comp=Z,11nm,1.3s,mb4.7
KLMR Klimovskoe 50.67 325 *eP* **P 02 24 13.7 -1.9**
KLMR pmax pmax
comp=Z,31nm,1.4s,mb5.0
OBN Obninsk 52.11 318 *eP* **P 02 24 26.3 -0.2**
OBN *i* 02 24 31.9
OBN pmax pmax
comp=Z,31nm,2.5s,mb4.8
KNA Kununurra 52.67 150 *eP* **P 02 24 30.3 -0.8**
comp=Z,28nm,0.7s,mb5.3
FITZ Fitzroy Crossi 53.53 154 *eP* **P 02 24 36.3 -1.1**
comp=Z,10nm,0.7s,mb4.9
JOF Joensuu 54.63 328 *eP* **P 02 24 44.0 -0.9**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JOF Joensuu 54.63 328 *ep* **P 02 24 44.0 -0.9**
comp=Z,7.3nm,0.6s,mb4.9
SIM Simferopol' 54.91 305 *eP* **P 02 24 48.3 +1.1**
SIM pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KEV Kevo 56.32 336 *eP* **P 02 24 56.0 -0.9**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 56.32 336 *ep* **P 02 24 56.0 -0.9**
comp=Z,3.6nm,0.6s,mb4.6
BRTR Keskin Array B 56.46 299 P **P 02 24 57.4 -1.0**
comp=Z,0.9nm,0.8s,mb3.9,baz=81,slow=7.6,SNR=5.5
BRTR Keskin Array B 56.46 299 *ceP* **P 02 24 58.0 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 56.84 336 P **P 02 25 00.6 -0.1**
comp=Z,4.1nm,0.8s,mb4.5,baz=84,slow=7.7,SNR=9.2
ARCES PcP PcP 02 25 55.4 -0.9
comp=Z,1.6nm,0.6s,baz=79,slow=4.7,SNR=5.1
ARCES LR LR 02 50 53.6
comp=Z,55nm,19.5s,MS3.7,baz=189,slow=38
ARCES ARCESS Array B 56.84 336 P **P 02 25 00.6 -0.1**
ARCES 02 25 55.4
KAF Kangasniemi 56.99 327 *eP* **P 02 25 01.0 -0.9**
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KAF Kangasniemi 56.99 327 *ep* **P 02 25 01.0 -0.9**
comp=Z,7.8nm,0.6s,mb4.9
AKASG Malin Array Be 57.03 313 P **P 02 25 01.0 -1.3**
comp=Z,4.3nm,0.6s,mb4.6,baz=70,slow=6.2,SNR=12
AKASG Malin Array Be 57.03 313 P **P 02 25 01.0 -1.3**
FINES FINESS Array B 57.17 326 P **P 02 25 02.2 -0.9**
comp=Z,10nm,0.8s,mb4.9,baz=76,slow=7.3,SNR=33
IDID Didziasalis 57.69 319 *eP* **P 02 25 07.0 +0.1**
IIGN Ignalina 57.97 319 *eP* **P 02 25 09.1 +0.2**
ISAL Salakas 57.99 319 *eP* **P 02 25 08.9 0.0**
EIL Elat 58.53 288 P **P 02 25 12.8 -0.4**
comp=Z,4.8nm,0.9s,mb4.5,baz=119,slow=1.8,SNR=6.5
EIL Elat 58.53 288 P **P 02 25 12.8 -0.4**
COEN Coen 58.80 134 *eP* **P 02 25 14.8 -0.3**
COEN Coen 58.80 134 *eP* **P 02 25 14.8 -0.3**
comp=Z,113nm,0.9s,mb5.9
WRAB Tennant Creek 58.87 146 *eP* **P 02 25 14.9 -0.6**
WRAB pmax pmax
comp=Z,13nm,0.7s,mb5.1
WRAB Tennant Creek 58.87 146 *eP* **P 02 25 14.9 -0.5**
comp=Z,13nm,0.7s,mb5.1
WRA Warramunga Arr 58.87 146 P **P 02 25 14.7 -0.8**
comp=Z,6.6nm,0.6s,mb4.8,baz=318,slow=11
SPITS Spitsbergen Ar 58.91 346 P **P 02 25 14.6 -0.6**
comp=Z,5.0nm,0.8s,mb4.6,baz=130,slow=10,SNR=3.7
SPITS Spitsbergen Ar 58.91 346 P **P 02 25 14.6 -0.6**
SUW Suwalki 59.97 318 *eP* **P 02 25 22.3 -0.5**
SUW Suwalki 59.97 318 *eP* **P 02 25 22.1 -0.7**
KWP Kalwaria Pacla 61.36 313 *eP* **P 02 25 32.6 +0.3**
KWP *e* 02 25 39.2
KWP Kalwaria Pacla 61.36 313 *eP* **P 02 25 32.4 +0.1**
comp=Z,23nm,0.9s,mb5.3
KOLS Kolonicke sedl 61.83 312 *eP* **P 02 25 35.0 -0.5**
KOLS Kolonicke sedl 61.83 312 *eP* **P 02 25 34.9 -0.6**
ASAR Alice Springs 61.89 149 P **P 02 25 35.5 -0.6**
comp=Z,3.8nm,0.8s,mb4.6,baz=333,slow=6.6,SNR=33
STHS Stebnicka Huta 62.33 313 *eP* **P 02 25 39.5 +0.6**
STHS *e* 02 25 45.9
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
STHS Stebnicka Huta 62.33 313 *eP* **P 02 25 39.5 +0.6**
comp=Z,3.5nm,0.7s,mb4.6
STHS *e* 02 25 45.9
STHS Stebnicka Huta 62.33 313 *eP* **P 02 25 39.5 +0.6**
STHS *epP* pP 02 25 45.9 +3.8
HFS Hagfors 63.38 326 P **P 02 25 44.8 -0.9**
comp=Z,5.1nm,0.6s,mb4.8,baz=98,slow=6.4,SNR=24
OKC Ostrava-Krasne 64.12 314 AMS AMS 02 55 00.0
VYHS Vyhne 64.13 313 *eP* **P 02 25 51.0 +0.2**
VYHS *e* 02 25 56.9
VYHS pmax pmax
comp=Z,5.0nm,1.5s,mb4.3
VYHS Vyhne 64.13 313 *eP* **P 02 25 51.0 +0.2**
comp=Z,5.4nm,1.5s,mb4.4
VYHS *e* 02 25 56.9
VYHS Vyhne 64.13 313 *eP* **P 02 25 50.9 +0.1**
VYHS *epP* pP 02 25 56.9 +2.9
NB2 NORSAR Subarra 64.26 327 P **P 02 25 50.0 -1.4**
comp=Z,8.2nm,0.9s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 64.26 327 P **P 02 25 49.8 -1.6**
comp=Z,3.6nm,0.8s,mb4.5,baz=77,slow=6.1,SNR=18
NOA LR LR 02 55 57.0
comp=Z,45nm,18.0s,MS3.7,baz=0.0,slow=38
KOLL Kolacno 64.37 313 *eP* **P 02 25 52.7 +0.3**
KOLL Kolacno 64.37 313 *eP* **P 02 25 52.7 +0.3**
MORC Moravsky Berou 64.51 314 *eP* **P 02 25 53.4 +0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MORC Moravsky Berou 64.51 314 *eP* **P 02 25 53.4 +0.1**
comp=Z,4.7nm,0.8s,mb4.6
SMOL Smolenice 65.00 313 *eP* **P 02 25 56.3 -0.2**
SMOL Smolenice 65.00 313 *eP* **P 02 25 56.3 -0.2**
DPC Dobruska-Polom 65.06 315 *eP* **P 02 25 57.1 +0.2**
DPC *e*PP pP 02 26 03.7 +3.6
DPC MLR MLR
comp=Z,300nm,5.3s
DPC Dobruska-Polom 65.06 315 *eP* **P 02 25 57.1 +0.2**
DPC *epP* pP 02 26 03.7 +3.6
DPC AMS AMS 02 56 30.0
comp=Z,300nm,5.3s
VRAC Vranov 65.25 314 P **P 02 25 57.9 -0.2**
comp=Z,5.4nm,0.9s,mb4.6,baz=62,slow=8.6,SNR=5.8
ZST Bratislava 65.32 313 *eP* **P 02 26 00.0 +1.4**
ZST Bratislava 65.32 313 *eP* **P 02 26 00.0 +1.4**
TREC Trest 65.93 314 *eP* **P 02 26 02.9 +0.4**
TREC *e*PP pP 02 26 09.3 +3.5
TREC MLR MLR
comp=Z,200nm,22.8s,MS4.3
TREC Trest 65.93 314 *eP* **P 02 26 02.9 +0.4**
TREC *epP* pP 02 26 09.3 +3.5
TREC AMS AMS 02 56 20.0
comp=Z,200nm,22.8s
PVCC Panska Ves 66.05 316 AMS AMS 02 56 00.0
CSNA Conrad Observa 66.19 313⇑ *iP* **P 02 26 04.4 +0.2**
comp=Z,4.8nm,1.1s,mb4.4
PRU Pruhonice 66.26 315 *eP* **P 02 26 04.7 +0.1**
PRU *e*PP pP 02 26 11.5 +3.6
PRU MLR MLR
comp=Z,200nm,20.8s,MS4.3
PRU Pruhonice 66.26 315 *eP* **P 02 26 04.7 +0.1**
PRU *epP* pP 02 26 11.5 +3.6
PRU AMS AMS 02 56 20.0
comp=Z,200nm,20.8s
BRG Berggiesshubel 66.30 316 *eP* **P 02 26 04.5 -0.3**
comp=Z,7.0nm,0.9s,mb4.7
BRG *epP* pP 02 26 11.0 +2.9
BRG Berggiesshubel 66.30 316 *eP* **P 02 26 04.5 -0.3**
comp=Z,7.3nm,0.9s,mb4.7
BRG *e* 02 26 11.1
comp=Z,6.3nm,1.0s
BRG Berggiesshubel 66.30 316 *eP* **P 02 26 04.5 -0.3**
BRG *e* 02 26 11.1
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CLL Collm 66.69 317 *eP* **P 02 26 06.5 -0.8**
comp=Z,8.0nm,1.1s,mb4.7
CLL Collm 66.69 317 *i* P **P 02 26 06.4 -0.9**
CLL *i* 02 26 12.7
CLL pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
CLL MLR MLR
comp=Z,100nm,17.1s,MS4.1
CLL Collm 66.69 317 *i* P **P 02 26 06.4 -0.9**
comp=Z,8.0nm,1.1s,mb4.7
CLL *i* 02 26 12.7
CLL LR LR
comp=Z,100nm,17.1s,MS4.1
CLL Collm 66.69 317 *i* P **P 02 26 06.4 -0.9**
comp=Z,8.0nm,1.1s,mb4.7
CLL *i* pP pP 02 26 12.7 +2.1
GROS Grobnik 66.96 311 *eP* **P 02 26 08.3 -0.8**
KHC Kasperske Hory 67.16 315 *eP* **P 02 26 10.2 -0.2**
KHC *e*PP pP 02 26 16.8 +3.2
KHC MLR MLR
comp=Z,200nm,14.1s,MS4.5
KHC Kasperske Hory 67.16 315 *eP* **P 02 26 10.2 -0.2**
KHC *epP* pP 02 26 16.8 +3.2
KHC AMS AMS 02 56 50.0
comp=Z,200nm,14.1s
GEC2 GERESS Array S 67.19 314 *eP* **P 02 26 10.3 -0.3**
comp=Z,6.0nm,1.0s,mb4.6
GEC2 *epP* pP 02 26 17.0 +3.2
GEC2 GERESS Array S 67.19 314 *eP* **P 02 26 10.3 -0.3**
GEC2 *e*PP pP 02 26 17.0 +3.2
GEC2 pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GERES GERESS Array B 67.19 314 P **P 02 26 10.0 -0.6**
comp=Z,3.1nm,0.9s,mb4.3,baz=75,slow=5.7,SNR=21
GERES LR LR 02 57 23.4
comp=Z,95nm,19.9s,MS4.0,baz=272,slow=38
BSEG Bad Segeberg 67.22 320 *eP* **P 02 26 11.4 +0.7**
comp=Z,18nm,1.0s,mb5.1
BSEG Bad Segeberg 67.22 320 *eP* **P 02 26 11.4 +0.7**
BSEG pmax pmax
comp=Z,18nm,1.0s,mb5.1
CRES Cresnjev 67.22 311 *i* P **P 02 26 10.7 -0.1**
TANN Tannenbergstha 67.34 316 *eP* **P 02 26 11.2 -0.3**
comp=Z,4.0nm,0.9s,mb4.5
TANN *epP* pP 02 26 17.7 +2.9
NKC Novy Kostel 67.42 316 *eP* **P 02 26 12.1 +0.1**
NKC *e*PP pP 02 26 18.4 +3.1
NKC MLR MLR
comp=Z,200nm,6.2s
NKC Novy Kostel 67.42 316 *eP* **P 02 26 12.1 +0.1**
NKC *epP* pP 02 26 18.4 +3.1
NKC AMS AMS 02 57 10.0
comp=Z,200nm,6.2s
PDKS Podkum 67.43 311 *eP* **P 02 26 11.7 -0.4**
WET Wettzell 67.58 315 *eP* **P 02 26 12.7 -0.3**
comp=Z,5.0nm,1.1s,mb4.5
WET Wettzell 67.58 315 *eP* **P 02 26 12.7 -0.3**
WET pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
ROTZ Rotzenmuhle 67.74 316 *eP* **P 02 26 14.2 +0.2**
comp=Z,8.0nm,0.9s,mb4.8
ROTZ *epP* pP 02 26 20.9 +3.6
MOX Moxa 67.75 317 *eP* **P 02 26 14.2 +0.1**
comp=Z,12nm,1.5s,mb4.7
MOX Moxa 67.75 317 *eP* **P 02 26 13.7 -0.4**
comp=Z,8.0nm,1.3s,mb4.6
MOX Moxa 67.75 317 *eP* **P 02 26 14.2 +0.1**
MOX pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
NRDL Niedersach Rie 67.90 319 *eP* **P 02 26 14.7 -0.3**
comp=Z,9.0nm,1.0s,mb4.8
CLZ Clausthal 68.00 318 *eP* **P 02 26 15.8 +0.1**
comp=Z,12nm,0.8s,mb5.0
CLZ Clausthal 68.00 318 *eP* **P 02 26 15.8 +0.1**
CLZ pmax pmax
comp=Z,12nm,0.8s,mb5.0
RJOB Jochberg 68.18 313 *eP* **P 02 26 17.6 +0.8**
comp=Z,2.0nm,0.7s,mb4.3
ROBS Robic 68.31 312 *eP* **P 02 26 16.3 -1.4**
GRA1 Grafenberg Arr 68.36 316 *eP* **P 02 26 18.0 +0.1**
comp=Z,15nm,0.9s,mb5.0
GRA1 *epP* pP 02 26 24.5 +3.3
GRF Grafenberg Arr 68.36 316 *eP* **P 02 26 18.0 +0.1**
comp=Z,15nm,0.9s,mb5.0
GRF *epP* pP 02 26 24.5 +3.3
GRF Grafenberg Arr 68.36 316 *eP* **P 02 26 18.0 +0.1**
GRF *e*PP pP 02 26 24.5 +3.3
GRF pmax pmax
comp=Z,15nm,0.9s,mb5.0
GRF Grafenberg Arr 68.36 316 *eP* **P 02 26 18.0 +0.1**
GRF *e*PP pP 02 26 24.5 +3.3
GRF pmax pmax
comp=Z,15nm,0.9s,mb5.0
FUR Furstenfeldbru 68.94 314 *eP* **P 02 26 22.5 +0.9**
comp=Z,33nm,1.1s,mb5.2
FUR *epP* pP 02 26 28.5 +3.7
FUR Furstenfeldbru 68.94 314 *eP* **P 02 26 22.5 +0.9**
FUR *e*PP pP 02 26 28.5 +3.7
FUR pmax pmax
comp=Z,33nm,1.1s,mb5.2
WTTA Wattenberg 69.09 313⇑ *iP* **P 02 26 21.9 -0.6**
comp=Z,7.1nm,1.1s,mb4.5
FETA Feichten 69.75 313⇑ *iP* **P 02 26 25.9 -0.7**
comp=Z,8.9nm,0.9s,mb4.7
TNS Taunus Mts 69.78 317 *eP* **P 02 26 27.1 +0.4**
comp=Z,8.0nm,0.8s,mb4.7
TNS Taunus Mts 69.78 317 *eP* **P 02 26 27.1 +0.4**
TNS pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
DAVOX Davos/Dischmat 70.38 313 P **P 02 26 30.7 +0.2**
comp=Z,8.9nm,0.9s,mb4.7,baz=91,slow=6.0,SNR=9.2
BFO Black Forest 70.66 315 *eP* **P 02 26 31.2 -1.0**
comp=Z,8.0nm,1.2s,mb4.5
BFO Black Forest 70.66 315 *eP* **P 02 26 31.2 -1.0**
BFO pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BBOO Buckleboo 70.80 152 *eP* **P 02 26 31.8 -1.2**
comp=Z,5.9nm,1.3s,mb4.4
KMBO Kilima Mbogo 70.91 256 P **P 02 26 34.2 -0.1**
comp=Z,7.6nm,0.8s,mb4.7,baz=45,slow=11,SNR=28
KMBO Kilima Mbogo 70.91 256 *ceP* **P 02 26 35.0 +0.8**
KMBO pmax pmax
comp=Z,8.0nm,0.8s
KMBO Kilima Mbogo 70.91 256 *eP* **P 02 26 34.6 +0.4**
comp=Z,9.7nm,0.9s,mb4.7
CDF Champ du Feu 71.25 316⇑ *iP* **P 02 26 35.0 -0.8**
comp=Z,7.4nm,0.7s,mb4.4
CDF Champ du Feu 71.25 316⇑ *iP* **P 02 26 35.0 -0.8**
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CDF Champ du Feu 71.25 316⇑ *iP* **P 02 26 35.0 -0.8**
comp=Z,3.7nm,0.7s,mb4.4
WLF Walferdange 71.36 317 P **P 02 26 36.5 +0.2**
comp=Z,15nm,1.2s,mb4.8
WLF Walferdange 71.36 317 *eP* **P 02 26 36.5 +0.1**
comp=Z,20nm,1.0s,mb5.0
WLF *epP* pP 02 26 43.2 +3.6
WLF Walferdange 71.36 317 *eP* **P 02 26 36.4 0.0**
WLF pmax pmax
comp=Z,23nm,1.0s,mb5.1
WLF Walferdange 71.36 317 *eP* **P 02 26 36.4 0.0**
comp=Z,23nm,1.0s,mb5.0
ECH Echery 71.41 316 *eP* **P 02 26 36.0 -0.7**
ECH pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ECH Echery 71.41 316 *eP* **P 02 26 36.0 -0.7**
comp=Z,3.8nm,0.9s,mb4.3
BCLA Clavier 71.50 318 P **P 02 26 37.3 0.0**
comp=Z,8.4nm,2.1s,mb4.3
INK Inuvik 71.80 19 *eP* **P 02 26 37.5 -1.2**
INK pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 71.80 19 *eP* **P 02 26 37.5 -1.1**
comp=Z,5.8nm,0.8s,mb4.6
UCC Uccle 71.86 319 P **P 02 26 39.2 -0.1**
SNF Seneffe 72.04 319 P **P 02 26 41.2 +0.7**
DOU Dourbes 72.05 318 P **P 02 26 40.5 0.0**
STKA Stephens Creek 72.41 147 P **P 02 26 42.1 -0.6**
comp=Z,6.2nm,0.6s,mb4.7,baz=326,slow=6.8,SNR=16
LPG La Plagne 72.90 313⇑ *iP* **P 02 26 45.8 +0.1**
comp=Z,32nm,0.8s,mb5.0
LPG La Plagne 72.90 313⇑ *iP* **P 02 26 45.8 +0.1**
LPG pmax pmax
comp=Z,16nm,0.8s,mb5.0
LPG La Plagne 72.90 313⇑ *iP* **P 02 26 45.8 +0.1**
comp=Z,16nm,0.8s,mb5.0
EKA Eskdalemuir Ar 73.56 325 P **P 02 26 48.6 -0.7**
comp=Z,0.9nm,0.7s,mb3.8,baz=40,slow=6.6,SNR=3.6
CMSA Cobar Meteorol 74.11 144 *eP* **P 02 26 52.9 +0.1**
SMF Signal de Mont 74.14 315⇑ *iP* **P 02 26 52.0 -0.9**
comp=Z,17nm,0.9s,mb4.7
SMF Signal de Mont 74.14 315⇑ *iP* **P 02 26 52.0 -0.9**
SMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SMF Signal de Mont 74.14 315⇑ *iP* **P 02 26 52.0 -0.9**
comp=Z,8.7nm,0.9s,mb4.7
BORG Borgarnes 75.04 339 P **P 02 26 57.7 -0.2**
comp=Z,15nm,1.0s,mb4.9,baz=247,slow=2.9,SNR=3.8
TCF Toulx Ste Croi 75.29 315 *eP* **P 02 26 59.0 -0.7**
comp=Z,15nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.29 315 *eP* **P 02 26 59.0 -0.7**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.29 315 *eP* **P 02 26 59.0 -0.7**
comp=Z,7.7nm,1.0s,mb4.6
CAF Calviac 76.07 314⇑ *iP* **P 02 27 03.9 -0.2**
comp=Z,18nm,1.1s,mb4.6
CAF Calviac 76.07 314⇑ *iP* **P 02 27 03.9 -0.2**
CAF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CAF Calviac 76.07 314⇑ *iP* **P 02 27 03.9 -0.2**
comp=Z,9.1nm,1.1s,mb4.6
YKA Yellowknife Ar 81.33 17 P **P 02 27 31.7 -1.0**
comp=Z,1.5nm,0.8s,mb4.0,baz=330,slow=5.0,SNR=21
YKA Yellowknife Ar 81.33 17 P **P 02 27 31.7 -1.0**
LSZ Lusaka 86.22 250 *eP* **P 02 27 58.0 -0.5**
LSZ pmax pmax
comp=Z,15nm,1.1s,mb5.1

LSZ	**Lusaka**	**86.22 250**	*e*P		**P**	**02 27 58.0**	**-0.5**
	comp=Z,15nm,1.1s,mb5.1						
TORD	**Torodi Ar. Bea**	**93.42 288**	P		**P**	**02 28 31.4**	**-1.1**
	comp=Z,0.9nm,1.1s,mb4.1,baz=61,slow=3.9,SNR=5.9						
BOSA	**Boshof**	**95.81 240**	P		**P**	**02 28 40.8**	**-2.3**
	comp=Z,2.4nm,0.9s,mb4.6,baz=100,slow=3.4,SNR=4.2						
PDAR	**Pinedale Array**	**99.92 24**	LR		LR	03 15 58.9	
	comp=Z,46nm,18.3s,MS4.0,baz=260,slow=36						
VNA2	**Neumayer--Watz**	**126.42 202**	*e*		PKPdf	02 34 23.9	+5.4
VNA2			*e*			03 19 51.6	
OTAV	**Otavalo**	**148.33 5**	*e*PKPbc		PKPbc	02 35 04.6	+0.9

ISCJB ***13*** *02:22:31.9±0.4, 31°.69N±0°.04×104°.60E±0°.06, h10km, mb4.0/16, Error ellipse: s-maj=7.3km s-min=5.2km az=4.6*
IDC ***13*** *02:22:32.4±0.7, 31°.75N×104°.47E, h0km, mb3.9/14, mb1 4.1/15, mb1mx4.0/28, mbtmp3.9/15, Error ellipse: s-maj=33.1km s-min=14.2km az=51.0*
BJI ***13*** *02:22:33.7, 31°.74N×104°.26E, h12km, mB4.4/1, mb4.1/1, ML3.8/11, Ms3.8/3, Ms7 3.7/3*
NEIC ***13*** *02:22:34.1±0.6, 31°.75N×104°.49E, h10km, mb3.7/1, Error ellipse: s-maj=24.3km s-min=10.7km az=57.0*
ISC 13 02:22:34.1±0.4, 31°.72N±0°.04×104°.53E±0°.06, h10km, n24, σ1º20/30, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.05**	**220**	Pg	Px	02 23 04.8	
CD2				Sg	**Sg**	**02 23 07.6**	**-0.2**
CD2				smax			
	comp=N,9μm,0.4s						
XAN	**Xi'an**	**4.36**	**57**	Pn	**Pn**	**02 23 38.0**	**-2.4**
XAN				Pg	**Pg**	**02 23 58.1**	**+0.5**
XAN				Sg	**Sg**	**02 24 50.0**	**-4.0**
XAN				smax			
	comp=N,200nm,0.8s						
XAN				smax			
	comp=E,100nm,0.7s						
LZH	**Lanzhou**	**4.39**	**353**	*e*Pn	**Pn**	**02 23 43.1**	**+2.3**
LZH				Pg	**Pg**	**02 23 54.4**	**-3.9**
LZH				Sn	**Sn**	**02 24 34.4**	**+2.3**
LZH				Sg	**Sg**	**02 24 47.7**	**-7.5**
LZH				smax			
	comp=N,190nm,0.6s						
LZH				smax			
	comp=E,200nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,7.6s						
LZH				LR	LR		
	comp=Z,2μm,8.5s						
GYA	**Guiyang**	**5.57**	**160**	Pg	**Pb**	**02 24 06.2**	**-5.2**
GYA				Sg	**Sn**	**02 25 01.7**	**+0.7**
GYA				smax			
	comp=N,120nm,0.9s						
GYA				smax			
	comp=E,220nm,1.0s						
SONM	**Songino Array**	**16.16**	**5**	Pn	**Pn**	**02 26 21.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=178,slow=13,SNR=3.2						
KSRS	**Korea Array**	**20.07**	**67**	P	**P**	**02 27 07.7**	**+0.1**
	comp=E,4.7nm,0.9s,baz=257,slow=10,SNR=8.7						
MK31	**Makanchi Array**	**22.76**	**318**	P	**P**	**02 27 35.0**	**-1.5**
MKAR	**Makanchi Array**	**22.76**	**318**	P	**P**	**02 27 35.1**	**-1.3**
	comp=E,1.5nm,0.7s,mb3.5,baz=114,slow=12,SNR=7.7						
ZALV	**Zalesovo Beam**	**26.33**	**333**	P	**P**	**02 28 09.1**	**-0.9**
	comp=E,1.1nm,0.3s,mb3.8,baz=120,slow=10,SNR=3.9						
KURK	**Kurchatov**	**26.98**	**322**	P	**P**	**02 28 15.8**	**0.0**
	comp=E,1.4nm,0.9s,mb3.5,baz=129,slow=9.1,SNR=8.4						
BVAR	**Borovoye Array**	**32.54**	**321**	P	**P**	**02 29 05.4**	**+0.4**
	comp=E,0.8nm,0.7s,mb3.8,baz=123,slow=5.3,SNR=3.4						
ABKAR	**Akbulak array**	**37.54**	**311**	*e*P	**P**	**02 29 50.6**	**+2.3**
	comp=E,1.0nm,0.7s,mb3.6						
AKTK	**Aktyubinsk**	**38.99**	**312**	P	**P**	**02 30 00.7**	**+0.2**
AKTO	**Aktyubinsk**	**38.99**	**312**	P	**P**	**02 30 00.7**	**+0.2**
	comp=E,0.7nm,0.6s,mb3.6,baz=86,slow=10,SNR=4.6						
BRTR	**Keskin Array B**	**56.76**	**299**	P	**P**	**02 32 17.9**	**-0.3**
	comp=E,1.3nm,0.8s,mb4.0,baz=88,slow=6.2,SNR=9.3						
FINES	**FINESS Array B**	**57.26**	**326**	P	**P**	**02 32 20.6**	**-0.9**
	comp=E,1.4nm,0.6s,mb4.2,baz=72,slow=6.2,SNR=7.0						
WRA	**Warramunga Arr**	**58.78**	**147**	P	**P**	**02 32 33.0**	**+0.4**
	comp=E,4.1nm,0.6s,mb4.6,baz=338,slow=7.4,SNR=7.1						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**02 32 54.0**	**+0.6**
	comp=E,1.9nm,0.7s,mb4.3,baz=330,slow=6.1,SNR=16						
NOA	**NORSAR Array B**	**64.34**	**327**	P	**P**	**02 33 08.6**	**-1.1**
	comp=E,0.7nm,0.6s,mb3.9,baz=72,slow=6.8,SNR=3.7						
GERES	**GERESS Array B**	**67.38**	**314**	P	**P**	**02 33 28.4**	**-1.1**
	comp=E,0.4nm,0.6s,mb3.6,baz=53,slow=3.8,SNR=3.5						
STKA	**Stephens Creek**	**72.33**	**147**	P	**P**	**02 34 00.0**	**+0.1**
	comp=E,2.6nm,0.7s,mb4.2,baz=299,slow=5.6,SNR=5.7						
LPG	**La Plagne**	**73.09**	**313**	*e*P	**P**	**02 34 07.7**	**+3.1**
	comp=E,8.4nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.10**	**313**	*e*P	**P**	**02 34 07.7**	**+3.1**
	comp=E,7.0nm,0.7s,mb4.4						
YKA	**Yellowknife Ar**	**81.00**	**17**	P	**P**	**02 34 48.3**	**-0.3**
	comp=E,0.6nm,0.7s,mb3.6,baz=329,slow=5.3,SNR=8.8						

ISCJB ***13*** *02:24:51.9±0.4, 5°.65N±0°.06×77°.83W±0°.08, h23km, mb3.9/18, Error ellipse: s-maj=12.8km s-min=7.8km az=150.3*
NEIC ***13*** *02:24:51.9±0.5, 5°.67N×77°.83W, h10km, mb4.6/17, Error ellipse: s-maj=13.9km s-min=8.7km az=59.0*
IDC ***13*** *02:24:54.1±0.6, 5°.66N×77°.74W, h22km±3km, mb3.7/17, mb1 3.9/19, mb1mx3.9/25, mbtmp3.7/19, ML3.8/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/37, Error ellipse: s-maj=19.9km s-min=11.4km az=54.0*
ISC 13 02:24:54.2±0.4, 5°.64N±0°.06×77°.81W±0°.08, h25km, h25km±.5km: pP-P, n69, σ1º08/32, mb3.9/18, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.55**	**102**	Pn	**Pn**	**02 25 51.4**	**+3.6**
	5.4nm,0.3s,baz=276,slow=9.6,SNR=12						
ROSC				LR	LR	02 27 09.5	
	comp=Z,287nm,18.1s,baz=55,slow=39						
ROSC	**El Rosal**	**3.55**	**102**	*e*Pn	**Pn**	**02 25 51.3**	**+3.5**
ROSC				LR	LR	02 27 09.5	
BCIP	**Isla Barro Col**	**4.04**	**330**	*e*Pn	**Pn**	**02 25 49.5**	**-5.0**
BCIP				*e*Sn	**Sn**	**02 26 34.6**	**-6.5**
OTAV	**Otavalo**	**5.40**	**187**	*e*Pn	**Pn**	**02 26 11.9**	**-1.4**
	10nm,0.8s						
SDV	**Santo Domingo**	**7.81**	**65**	Pn	**Pn**	**02 26 44.6**	**-1.8**
	0.9nm,0.3s,baz=262,slow=10,SNR=22						
SDV				LR	LR	02 29 52.3	
	comp=Z,420nm,18.4s,baz=181,slow=38						
SDV	**Santo Domingo**	**7.81**	**65**	*e*Pn	**Pn**	**02 26 45.9**	**-0.5**
SDV				*e*		02 26 52.7	
SDV				*e*Sn	**Sn**	**02 28 07.0**	**-7.2**
SDV				LR	LR	02 29 52.3	
JTS	**JuntasAbangare**	**8.45**	**304**	Pn	**Pn**	**02 26 54.9**	**-0.2**
	1.7nm,0.3s,baz=78,slow=14,SNR=10						
JTS				LR	LR	02 30 07.1	
	comp=Z,284nm,19.7s,baz=122,slow=37						
PCRV	**Puerto La Cruz**	**13.80**	**70**	LR	LR	02 33 51.3	
	comp=Z,142nm,18.4s,baz=20,slow=39						
CMIG	**Matias Romero**	**20.22**	**306**	P	**P**	**02 29 27.3**	**-0.2**
	2.2nm,0.7s,baz=48,slow=16,SNR=3.2						
CMIG				LR	LR	02 36 21.5	
	comp=Z,36nm,21.8s,baz=8.3,slow=34						
LPAZ	**La Paz**	**23.80**	**156**	P	**P**	**02 30 05.2**	**-0.1**
	1.0nm,0.6s,mb3.4,baz=298,slow=6.5,SNR=4.6						
LPAZ	**La Paz**	**23.80**	**156**	*e*P	**P**	**02 30 02.0**	**-3.3**
	3.0nm,0.8s,mb3.8						
LPAZ				P		02 30 05.2	
SIV	**San Ignacio**	**27.14**	**143**	P	**P**	**02 30 35.7**	**+0.1**
	4.1nm,0.7s,mb4.1,baz=328,slow=10,SNR=31						
TXAR	**Lajitas Array**	**33.95**	**317**	P	**P**	**02 31 35.6**	**-0.1**
	0.3nm,0.7s,mb3.3,baz=139,slow=8.2,SNR=4.1						
TXAR				pP	pP	02 31 42.8	-0.3
	0.3nm,0.6s,baz=142,slow=8.4,SNR=4.6						
FVM	**French Village**	**34.18**	**342**	*e*P	**P**	**02 31 37.1**	**-0.5**
	7.6nm,0.8s,mb4.7						
FVM				*e*	pP	02 31 44.6	-0.4
CCM	**Cathedral Cave**	**34.51**	**341**	*e*P	**P**	**02 31 39.3**	**-1.1**
	8.1nm,1.3s,mb4.5						
CCM				*e*	pP	02 31 46.7	-1.1
CPUP	**Villa Florida**	**37.47**	**149**	P	**P**	**02 32 04.6**	**-1.4**
	1.1nm,0.6s,mb3.9,baz=321,slow=6.6,SNR=6.5						
CFAA	**Coronel Fontan**	**38.14**	**167**	P	**P**	**02 32 11.9**	**+0.3**
	0.2nm,0.5s,mb3.1,baz=0.6,slow=7.5,SNR=1.9						
JFWS	**Jewell Farm**	**38.72**	**345**	P	**P**	**02 32 14.4**	**-1.9**
JFWS				*e*	pP	02 32 21.8	-1.9
SADO	**Sadowa**	**38.99**	**358**	P	**P**	**02 32 18.1**	**-0.4**
	1.0nm,0.3s,mb4.0,baz=243,slow=6.8,SNR=2.3						
SADO				pP	pP	02 32 25.1	-0.9
	6.4nm,0.7s,baz=190,slow=8.8,SNR=4.3						
PDAR	**Pinedale Array**	**46.43**	**328**	P	**P**	**02 33 20.1**	**+1.2**
	0.7nm,0.8s,mb3.6,baz=131,slow=12,SNR=5.5						
PDAR				pP	pP	02 33 27.4	+0.9
	0.7nm,0.6s,baz=125,slow=9.8,SNR=4.6						
PLCA	**Paso Flores**	**46.62**	**172**	P	**P**	**02 33 22.6**	**+2.1**
	3.6nm,0.7s,mb4.4,baz=338,slow=8.6,SNR=7.9						
ULM	**Lac du Bonnet**	**46.98**	**344**	P	**P**	**02 33 24.4**	**+1.3**
	2.8nm,0.8s,mb4.3,baz=147,slow=3.2,SNR=4.1						
NVAR	**Mina Array Bea**	**49.09**	**318**	P	**P**	**02 33 41.3**	**+1.6**
	0.4nm,0.5s,mb3.7,baz=123,slow=9.8,SNR=2.4						
NVAR				pP	pP	02 33 48.3	+1.0
	1.1nm,0.7s,baz=124,slow=7.7,SNR=2.9						
SCHQ	**Schefferville**	**49.84**	**8**	pP	pP	02 33 52.2	-0.5
	3.3nm,0.7s,baz=210,slow=3.2,SNR=2.8						
YKA	**Yellowknife Ar**	**62.84**	**342**	P	**P**	**02 35 16.8**	**-0.8**
	0.9nm,0.8s,mb4.0,baz=131,slow=6.8,SNR=21						
YKA				pP	pP	02 35 24.0	-1.4
	0.9nm,0.8s,baz=130,slow=6.9,SNR=9.3						
YKA	**Yellowknife Ar**	**62.84**	**342**	P	**P**	**02 35 16.8**	**-0.8**
YKA				pP	pP	02 35 24.0	-1.4
DBIC	**Dimbokro**	**72.48**	**85**	P	**P**	**02 36 19.6**	**+0.1**
	5.3nm,0.9s,mb4.5,baz=228,slow=1.7,SNR=5.9						
ESDC	**Sonseca Array**	**73.99**	**50**	P	**P**	**02 36 28.2**	**+0.3**
	0.2nm,0.4s,mb3.4,baz=280,slow=5.4,SNR=3.4						
ESDC				pP	pP	02 36 35.5	-0.3
	2.0nm,0.8s,baz=265,slow=5.9,SNR=3.7						
ESDC	**Sonseca Array**	**73.99**	**50**	P	**P**	**02 36 28.2**	**+0.3**
ESDC				pP	pP	02 36 35.5	-0.3
ROSF	**Rostrenen**	**75.54**	**42**	*e*P	pP	02 36 43.9	-0.7
SGMF	**Saint Gilles**	**76.00**	**42**	*e*P	pP	02 36 46.5	-0.7
SJPF	**Ste Jean**	**76.38**	**47**	*e*P	pP	02 36 49.4	-0.1
	17nm,1.0s						
SJPF	**Ste Jean**	**76.38**	**47**	*e*P	pP	02 36 49.4	-0.1
	8.6nm,1.0s						
EKA	**Eskdalemuir Ar**	**76.67**	**34**	P	**P**	**02 36 43.8**	**+0.8**
	0.7nm,0.6s,mb3.7,baz=264,slow=4.1,SNR=2.7						
EKA				pP	pP	02 36 49.8	-1.0
	1.3nm,0.7s,baz=259,slow=5.7,SNR=3.0						
ETSF	**Etsaut**	**76.84**	**47**	*e*P	pP	02 36 52.0	-0.1
	6.7nm,0.9s						
ETSF	**Etsaut**	**76.84**	**47**	*e*P	pP	02 36 52.0	-0.1
	3.3nm,0.9s						
GRR	**Gorron**	**77.14**	**42**	*e*P	pP	02 36 52.9	-0.8
	13nm,0.8s						
GRR	**Gorron**	**77.14**	**42**	*e*P	pP	02 36 52.9	-0.8
	6.7nm,0.8s						
FLN	**La Foliniere**	**77.43**	**41**	*e*P	pP	02 36 54.7	-0.6
	18nm,0.9s						
FLN	**La Foliniere**	**77.43**	**41**	*e*P	pP	02 36 54.7	-0.6
	9.1nm,0.9s						
MFF	**Saint Martin d**	**77.45**	**44**	*e*P	pP	02 36 54.9	-0.6
	6.5nm,0.7s						
MFF	**Saint Martin d**	**77.45**	**44**	*e*P	pP	02 36 54.9	-0.6
	3.3nm,0.7s						
LDF	**La Druitiere**	**77.65**	**42**	*e*P	pP	02 36 55.8	-0.7
	12nm,0.8s						
LDF	**La Druitiere**	**77.65**	**42**	*e*P	pP	02 36 55.8	-0.7
	6.2nm,0.8s						
LFF	**La Frestale**	**77.93**	**45**	*e*P	pP	02 36 57.6	-0.6
RJF	**Les Rejaudoux**	**78.51**	**45**	*e*P	pP	02 37 00.6	-0.8
	14nm,1.2s						
RJF	**Les Rejaudoux**	**78.51**	**45**	*e*P	pP	02 37 00.6	-0.8
	7.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**78.54**	**78**	P	**P**	**02 36 54.0**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=272,slow=7.3,SNR=7.2						
TORD				pP	pP	02 37 01.3	-0.8
	1.2nm,0.7s,baz=277,slow=6.3,SNR=6.4						
CAF	**Calviac**	**78.87**	**45**	*e*P	pP	02 37 02.8	-0.6
	5.5nm,0.8s						
CAF	**Calviac**	**78.87**	**45**	*e*P	pP	02 37 02.8	-0.6
	2.8nm,0.8s						
MTLF	**Montolieu**	**78.90**	**47**	*e*P	pP	02 37 02.8	-0.8
TCF	**Toulx Ste Croi**	**79.05**	**44**	*e*P	pP	02 37 03.3	-1.0
BGF	**Bois d'Agland**	**79.50**	**44**	*e*P	pP	02 37 06.0	-0.8
	12nm,1.0s						
BGF	**Bois d'Agland**	**79.50**	**44**	*e*P	pP	02 37 06.0	-0.8
	6.2nm,1.0s						
AVF	**Avril sur Loir**	**79.86**	**44**	*e*P	pP	02 37 07.6	-1.2
	5.2nm,1.0s						
AVF	**Avril sur Loir**	**79.86**	**44**	*e*P	pP	02 37 07.6	-1.2
	2.6nm,1.0s						
LASF	**Ste Croix**	**80.12**	**46**	*e*P	pP	02 37 10.0	-0.2
	21nm,1.2s						
SMF	**Signal de Mont**	**80.19**	**44**	*e*P	pP	02 37 09.4	-1.2
	11nm,1.0s						
SMF	**Signal de Mont**	**80.19**	**44**	*e*P	pP	02 37 09.4	-1.2
	5.3nm,1.0s						
VIVF	**Saint-Julien-l**	**80.72**	**46**	*e*P	pP	02 37 13.4	0.0
	13nm,1.1s						
VIVF	**Saint-Julien-l**	**80.72**	**46**	*e*P	pP	02 37 13.4	0.0
	6.3nm,1.1s						
MEZF	**Maizieres J'vi**	**81.07**	**42**	*e*P	pP	02 37 14.3	-1.0
	8.1nm,0.7s						
MEZF	**Maizieres J'vi**	**81.07**	**42**	*e*P	pP	02 37 14.3	-1.0
	8.1nm,0.7s						
ORIF	**Oris-en-Rattie**	**81.58**	**46**	*e*P	pP	02 37 18.2	+0.2
	10nm,0.9s						
ORIF	**Oris-en-Rattie**	**81.58**	**46**	*e*P	pP	02 37 18.2	+0.2
	5.3nm,0.9s						
BRG	**Berggiesshubel**	**86.78**	**39**	*e*P	pP	02 37 44.2	-0.1
	4.2nm,1.0s						
GERES	**GERESS Array B**	**86.79**	**41**	P	**P**	**02 37 37.9**	**+1.4**
	0.2nm,0.5s,mb3.6,baz=329,slow=3.4,SNR=3.2						
GERES				pP	pP	02 37 44.5	0.0
	1.0nm,0.6s,baz=250,slow=2.7,SNR=8.1						
KURK	**Kurchatov**	**120.30**	**17**	PKP	PKPdf	02 44 43.5	+1.1
	0.5nm,0.7s,baz=338,slow=2.9,SNR=2.4						
ASAR	**Alice Springs**	**144.61**	**236**	PKP	PKPdf	02 44 28.9	-0.6
	0.7nm,0.9s,baz=114,slow=4.2,SNR=5.7						
ASAR				pPKP	pPKPdf	02 44 36.2	-1.6
	1.7nm,0.8s,baz=112,slow=3.1,SNR=8.4						

ISCJB ***13*** *02:28:10.3±1.0, 31°.40N±0°.03×103°.99E±0°.07, h10km±6km, mb4.0/11, Error ellipse: s-maj=9.5km s-min=5.7km az=1.6*
IDC ***13*** *02:28:10.6±0.9, 31°.42N×103°.91E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.8/26, mbtmp3.9/11, ML3.4/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/43, Error ellipse: s-maj=36.6km s-min=16.6km az=52.0*
BJI ***13*** *02:28:11.6, 31°.48N×103°.89E, h15km, mb4.2/2, ML4.0/9, Ms4.0/3, Ms7 3.4/2*
NEIC ***13*** *02:28:12.3±0.7, 31°.45N×104°.06E, h10km, mb3.9/2, Error ellipse: s-maj=23.3km s-min=11.4km az=57.0*
ISC 13 02:28:12.7±1.0, 31°.37N±0°.03×103°.89E±0°.07, h12km±6km, n25, σ0º92/29, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**194**	Pg	**Pg**	**02 28 21.7**	**-0.3**
CD2				Sg	**Sg**	**02 28 28.3**	**+0.1**
CD2				smax			
	comp=N,13μm,0.5s						
LZH	**Lanzhou**	**4.71**	**360**	*e*Pg	**Pg**	**02 29 49.0**	**+6.1**
LZH				Sg	**Sg**	**02 30 44.7**	**+0.8**
LZH				smax			
	comp=N,110nm,0.8s						
LZH				smax			
	comp=E,380nm,0.7s						
XAN	**Xi'an**	**5.01**	**57**	Pg	**Pg**	**02 29 57.6**	**+9.0**
XAN				Sg	**Sg**	**02 30 43.6**	**-10**
XAN				smax			
	comp=N,160nm,0.8s						
XAN				smax			
	comp=E,98nm,1.0s						
GYA	**Guiyang**	**5.46**	**153**	Pn	**Pn**	**02 29 37.8**	**+4.0**
GYA				smax			
	comp=N,180nm,0.9s						
GYA				smax			
	comp=E,130nm,1.0s						
KMI	**Kunming**	**6.30**	**190**	Pg	**Pn**	**02 29 51.6**	**+6.2**
KMI				Sg	**Sn**	**02 30 57.8**	**+0.5**
KMI				smax			
	comp=N,41nm,1.0s						
KMI				smax			
	comp=E,41nm,0.8s						
WHN	**Wuhan**	**9.02**	**93**	P	**Pn**	**02 30 20.5**	**-2.2**
WHN				S	**Sn**	**02 32 05.7**	**+1.6**
SONM	**Songino Array**	**16.56**	**6**	Pn	**Pn**	**02 32 04.1**	**-0.5**
	comp=E,0.1nm,0.3s,baz=163,slow=10,SNR=3.1						
KSRS	**Korea Array**	**20.71**	**66**	P	**P**	**02 32 52.5**	**-0.3**
	comp=E,2.3nm,0.7s,baz=256,slow=9.2,SNR=6.0						
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**02 33 14.4**	**+0.8**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**02 33 13.9**	**+0.3**
	comp=E,2.9nm,0.8s,mb3.8,baz=121,slow=11,SNR=23						
UCH	**Uchtor**	**25.78**	**303**	*e*P	**P**	**02 33 46.0**	**+2.6**
	comp=E,1.8nm,0.9s,mb3.6						
ZAA0	**Zalesovo Array**	**26.41**	**334**	*e*P	**P**	**02 33 49.1**	**+0.2**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**02 33 48.9**	**0.0**
	comp=E,3.4nm,0.8s,mb3.9,baz=134,slow=8.6,SNR=11						
KURK	**Kurchatov**	**26.93**	**323**	P	**P**	**02 33 53.4**	**-0.2**
	comp=E,3.7nm,1.0s,mb3.9,baz=124,slow=9.4,SNR=17						
KURK	**Kurchatov**	**26.93**	**323**	*e*P	**P**	**02 33 53.5**	**-0.2**
	comp=E,4.1nm,1.1s,mb3.9						
AKTK	**Aktyubinsk**	**38.83**	**313**	P	**P**	**02 35 37.2**	**-0.1**
AKTO	**Aktyubinsk**	**38.83**	**313**	P	**P**	**02 35 37.2**	**-0.1**
	comp=E,0.8nm,0.5s,mb3.7,baz=106,slow=9.3,SNR=6.3						
JOF	**Joensuu**	**54.71**	**328**	*e*p	**P**	**02 37 40.7**	**-0.7**
	comp=E,3.1nm,0.6s,mb4.5						
ASF	**Jabal al Asfar**	**56.09**	**290**	LR	LR	03 03 17.3	
	comp=E,3.5nm,20.8s,baz=132,slow=38						
FINES	**FINESS Array B**	**57.25**	**326**	P	**P**	**02 37 58.5**	**-1.0**
	comp=E,2.5nm,0.9s,mb4.3,baz=99,slow=2.5,SNR=4.6						
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**02 38 10.7**	**-0.1**
	comp=E,2.8nm,0.5s,mb4.5,baz=338,slow=7.8						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**02 38 32.1**	**+0.7**
	comp=E,1.2nm,0.9s,mb4.0,baz=319,slow=5.2,SNR=7.0						
NB2	**NORSAR Subarra**	**64.34**	**327**	P	**P**	**02 38 43.6**	**-4.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.34**	**327**	P	**P**	**02 38 46.4**	**-1.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=71,slow=9.4,SNR=3.7						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**02 40 28.5**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=328,slow=5.1,SNR=9.4						

ISCJB ***13*** *02:30:44.0±0.5, 18°.73N±0°.10×69°.65W±0°.04, h115km±6km, mb3.4/3, Error ellipse: s-maj=16.2km s-min=5.5km az=10.4*
NEIC ***13*** *02:30:44.5±0.6, 18°.82N×69°.70W, h94km±13km, MD3.8(RSPR), Error ellipse: s-maj=14.8km s-min=8.7km az=202.0*
RSPR ***13*** *02:30:44.9, 19°.04N×69°.56W, h100km±6km, MD3.8/11, MD3.8/11*
IDC ***13*** *02:30:45.1±2.1, 18°.66N×69°.73W, h104km±25km, mb3.1/4, mb1 3.6/7, mb1mx3.3/25, mbtmp3.4/7, Error ellipse: s-maj=23.3km s-min=17.4km az=175.0*
ISC 13 02:30:45.1±0.5, 18°.8N±0°.1×69°.65W±0°.04, h103km±8km, n29, σ1º20/43, mb3.4/3, 3C-8D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.23**	**103**	*e*S	**Sn**	**02 31 25.0**	**-0.9**
PCDR	**Punta Cana, DR**	**1.23**	**103**	*e*P	**Pn**	**02 31 07.2**	**-1.2**
SDDR	**Presa de Saban**	**1.57**	**277**	*e*P	**Pn**	**02 31 12.1**	**-0.2**
SDDR				*e*S	**Sn**	**02 31 34.3**	**+1.2**
IMO	**Isla Mona**	**1.78**	**112**	*e*P	**Pn**	**02 31 15.0**	**0.0**
AGP	**Aguadilla**	**2.41**	**99**	*e*Pn	**Pn**	**02 31 25.0**	**+1.9**
AGP				*e*Sn	**Sn**	**02 31 55.9**	**+3.7**
AGPR	**Aguadilla, PR**	**2.42**	**97**	*e*Pn	**Pn**	**02 31 22.4**	**-1.0**
AGPR				*e*S	**Sn**	**02 31 55.8**	**+3.2**
MPR	**Mayaguez**	**2.45**	**103**	*e*Pn	**Pn**	**02 31 23.6**	**0.0**
MPR				*e*Sn	**Sn**	**02 31 54.1**	**+0.9**
LSP	**Las Mesas**	**2.50**	**104**	*e*Pn	**Pn**	**02 31 24.6**	**+0.2**
LSP				*e*Sn	**Sn**	**02 31 56.1**	**+1.5**
CRPR	**Cabo Rojo, PR**	**2.53**	**108**	*e*Pn	**Pn**	**02 31 25.4**	**+0.6**
LRS	**Lares**	**2.70**	**100**	*e*P	**Pn**	**02 31 28.6**	**+1.6**
AOPR	**Arecibo Observ**	**2.78**	**99**	*e*P	**Pn**	**02 31 27.8**	**-0.2**
OBIP	**Obispado Ponce**	**2.98**	**104**	*e*Pn	**Pn**	**02 31 31.5**	**+0.8**
OBIP				*e*Sn	**Sn**	**02 32 07.2**	**+1.4**
CELP	**Cerrillos**	**3.00**	**103**	*e*P	**Pn**	**02 31 32.0**	**+1.1**
GRTK	**Grand Turk**	**3.05**	**333**	*e*Pn	**Pn**	**02 31 27.6**	**-4.0**
GRTK				*e*S	**Sn**	**02 31 59.8**	**-7.6**
SJG	**San Juan**	**3.38**	**101**	*e*P	**Pn**	**02 31 35.6**	**-0.5**
SJG	**San Juan**	**3.38**	**101**	P	**Pn**	**02 31 36.5**	**+0.4**
	41nm,0.3s,baz=295,slow=14,SNR=15						
SJG				S	**Sn**	**02 32 18.0**	**+2.5**
	40nm,0.3s,baz=115,slow=22,SNR=4.1						
SJG	**San Juan**	**3.38**	**101**	*e*P	**Pn**	**02 31 35.6**	**-0.5**
CPD	**Cerro la Pandu**	**3.62**	**101**	*e*P	**Pn**	**02 31 38.3**	**-1.0**
CPD				*e*

HHC				sP		02 36 37.3	
HHC				S	**Sn**	**02 38 39.7**	**+8.4**
HHC				sS		02 38 42.3	
HHC				SS		02 38 51.3	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
HHC				LR	LR		
	comp=N,480nm,6.3s						
HHC				LR	LR		
	comp=E,320nm,4.3s						
HHC				LR	LR		
	comp=Z,280nm,5.7s						
CMAR	**Chiang Mai Arr**	**13.41**	**200**	Pn	**Pn**	**02 36 49.8**	**+1.8**
	baz=7.0,slow=8.4						
SONM	**Songino Array**	**16.72**	**6**	Pn	**Pn**	**02 37 32.9**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=186,slow=11,SNR=9.8						
KSRS	**Korea Array**	**20.96**	**66**	P	**P**	**02 38 21.1**	**+0.3**
	comp=Z,8.0nm,0.6s,baz=259,slow=10,SNR=22						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**02 38 25.1**	**+0.8**
CN2				*e*pP		02 38 33.3	
CN2				*e*sP	sP	02 38 37.9	+9.4
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,12.0s,MS4.3						
CN2				LR	LR		
	comp=E,400nm,12.0s,MS4.3						
CN2				LR	LR		
	comp=Z,500nm,15.0s,MS4.0						
DDI	**Dehra Dun**	**22.00**	**274**	*ex*	**P**	**02 38 36.0**	**+4.0**
MK31	**Makanchi Array**	**22.64**	**319**	*e*P	**P**	**02 38 39.0**	**+0.4**
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**02 38 39.0**	**+0.3**
	comp=Z,6.3nm,0.9s,mb4.0,baz=122,slow=12,SNR=11						
MKAR				LR	LR	02 48 14.3	
	comp=Z,136nm,18.0s,MS3.4,baz=176,slow=39						
UCH	**Uchtor**	**25.69**	**303**	*e*P	**P**	**02 39 06.9**	**-1.0**
	comp=Z,8.3nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**02 39 09.6**	**+0.6**
	comp=Z,0.6nm,0.3s,mb3.5,baz=108,slow=6.4,SNR=2.4						
ZAA0	**Zalesovo Array**	**26.45**	**335**	*e*P	**P**	**02 39 14.8**	**+0.3**
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**02 39 13.8**	**-0.7**
	comp=Z,1.9nm,0.3s,mb4.1,baz=134,slow=10,SNR=6.6						
ZALV				LR	LR	02 50 22.0	
	comp=Z,88nm,18.7s,MS3.3,baz=50,slow=38						
KURK	**Kurchatov**	**26.92**	**324**	P	**P**	**02 39 18.8**	**0.0**
	comp=Z,2.1nm,0.7s,mb3.8,baz=128,slow=9.7,SNR=14						
KURK				LR	LR	02 50 44.9	
	comp=Z,74nm,18.9s,MS3.3,baz=105,slow=38						
KURK	**Kurchatov**	**26.92**	**324**	*e*P	**P**	**02 39 19.6**	**+0.7**
	comp=Z,5.5nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**32.46**	**322**	PcP	PcP	02 42 53.5	-1.4
	comp=Z,1.3nm,0.7s,baz=95,slow=3.7,SNR=5.1						
BVAR				LR	LR	02 52 31.4	
	comp=Z,44nm,18.2s,MS3.2,baz=193,slow=35						
AKTK	**Aktyubinsk**	**38.77**	**313**	P	**P**	**02 41 02.2**	**0.0**
AKTK				PcP	PcP	02 43 12.9	-0.6
AKTO	**Aktyubinsk**	**38.77**	**313**	P	**P**	**02 41 02.2**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=85,slow=12,SNR=5.0						
AKTO				PcP	PcP	02 43 12.9	-0.6
	comp=Z,0.5nm,0.3s,baz=108,slow=6.4,SNR=3.3						
FITZ	**Fitzroy Crossi**	**53.40**	**154**	P	**P**	**02 42 56.5**	**-1.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=336,slow=12,SNR=5.8						
BRTR	**Keskin Array B**	**56.34**	**299**	P	**P**	**02 43 18.7**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=124,slow=7.6,SNR=3.9						
BRTR				PcP	PcP	02 44 15.3	-0.8
	comp=Z,0.4nm,0.6s,baz=34,slow=5.7,SNR=2.9						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**02 43 22.3**	**-0.7**
	comp=Z,1.4nm,0.7s,mb4.1,baz=86,slow=8.9,SNR=3.8						
ARCES				PcP	PcP	02 44 17.0	-1.0
	comp=Z,3.9nm,0.9s,baz=72,slow=4.0,SNR=8.7						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**02 43 22.3**	**-0.7**
ARCES				PcP	PcP	02 44 17.0	-1.0
FINES	**FINESS Array B**	**57.25**	**326**	P	**P**	**02 43 24.3**	**-0.6**
	comp=Z,1.8nm,0.9s,mb4.1,baz=98,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**02 43 35.8**	**-0.4**
	comp=Z,3.5nm,0.6s,mb4.6,baz=338,slow=7.6						
ASAR	**Alice Springs**	**61.80**	**148**	P	**P**	**02 43 56.4**	**-0.4**
	comp=Z,1.4nm,0.5s,mb4.4,baz=341,slow=6.6,SNR=19						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**02 44 11.8**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=75,slow=5.1,SNR=2.8						
NWAO	**Narrogin (SRO)**	**65.08**	**167**	P	**P**	**02 44 17.9**	**-0.5**
	comp=Z,7.7nm,0.6s,mb4.9,baz=326,slow=8.1,SNR=3.3						
GERES	**GERESS Array B**	**67.19**	**314**	P	**P**	**02 44 32.6**	**+0.8**
	comp=Z,0.2nm,0.3s,mb3.6,baz=64,slow=6.1,SNR=4.1						
JMIC	**Jan Mayen**	**67.58**	**341**	LR	LR	03 16 23.1	
	comp=Z,44nm,19.9s,MS3.7,baz=66,slow=38						
STKA	**Stephens Creek**	**72.32**	**147**	P	**P**	**02 45 02.8**	**-0.7**
	comp=Z,2.1nm,0.5s,mb4.3,baz=324,slow=6.2,SNR=7.0						
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**02 45 55.3**	**-0.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=329,slow=5.3,SNR=18						
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**02 45 55.3**	**-0.6**
TORD	**Torodi Ar. Bea**	**93.23**	**287**	P	**P**	**02 46 50.4**	**-2.5**
	comp=Z,0.4nm,0.6s,mb4.0,baz=54,slow=3.7,SNR=9.4						
QSPA	**South Pole Qui**	**121.00**	**180**	PKP	PKPdf	02 52 27.0	-2.2
	comp=Z,0.6nm,0.6s,baz=299,slow=1.7,SNR=4.2						

*CSEM **13** 02:39:22.2,38°.54N×21°.62E,h44km,MD3.5,After ATH*
*NEIC **13** 02:39:22.2,38°.54N×21°.62E,h44km,MD3.5(ATH),After ATH.*

ATH 13 02:39:22.2,38°.54N×21°.62E,h44km±1km,MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.25**	**117**	*e*P	Pn	02 39 30.9	+0.6
EFP				*e*S	Sn	02 39 36.6	+0.6
EFP	**Efpalio**	**0.25**	**117**	*e*P	Pn	02 39 30.9	+0.6
EFP				*e*S	Sn	02 39 36.6	+0.6
EVR	**Evrytania**	**0.40**	**21**	*e*P	Pn	02 39 33.1	+1.2
EVR				*e*S	Sn	02 39 39.7	+0.9
EVR	**Evrytania**	**0.40**	**21**	*e*P	Pn	02 39 33.1	+1.2
EVR				*e*S	Sn	02 39 39.7	+0.9
AGG	**Agios Georgios**	**0.73**	**49**	*e*P	Pn	02 39 37.2	+1.0
AGG				*e*S	Sn	02 39 48.8	+2.5
AGG	**Agios Georgios**	**0.73**	**49**	*e*P	Pn	02 39 37.2	+1.0
AGG				*e*S	Sn	02 39 48.8	+2.5
GUR	**Goura**	**0.83**	**136**	*e*P	Pn	02 39 38.8	+1.4
GUR				*e*S	Sn	02 39 50.5	+2.0
GUR	**Goura**	**0.83**	**136**	*e*P	Pn	02 39 38.8	+1.4
GUR				*e*S	Sn	02 39 50.5	+2.0
THL	**Klokotos Trika**	**1.07**	**17**	*e*P	Pn	02 39 41.3	+0.6
THL	**Klokotos Trika**	**1.07**	**17**	*e*P	Pn	02 39 41.3	+0.6
LKR	**Lokris**	**1.09**	**84**	*e*P	Pn	02 39 41.3	+0.4
LKR	**Lokris**	**1.09**	**84**	*e*P	Pn	02 39 41.3	+0.4
NEO	**Neokhori**	**1.47**	**58**	*e*P	Pn	02 39 46.7	+0.6
NEO	**Neokhori**	**1.47**	**58**	*e*P	Pn	02 39 46.7	+0.6

SKHL 13 02:39:54.3±0.4,50°.62N×132°.36E,h10km,mb3.8/2, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**1.45**	**196**	*e*Pg	Pg	02 40 20.1	-1.9
KLR				*e*Sg	Sg	02 40 38.6	-2.2
EKMR	**Ekimchan**	**2.48**	**8**	*e*Pn	Pn	02 40 36.3	+1.6
EKMR				*e*Pg	Pg	02 40 38.6	-3.2
EKMR				AMB	AMB	02 40 43.2	
	18nm,0.4s						
EKMR				*e*Sg	Sg	02 41 11.1	-2.8
EKMR				A		02 41 13.1	
	25nm,0.4s						
EKMR				A		02 41 13.1	
	48nm,0.4s						
EKMR				A		02 41 13.1	
	26nm,0.4s						
GRNR	**Gornyy**	**2.59**	**85**	*e*Pg	Pg	02 40 40.7	-3.1
GRNR				*e*Sn	Sn	02 41 08.8	+1.2
GRNR				*e*Sg	Sg	02 41 14.8	-2.6
GRNR				A		02 41 17.0	
	95nm,0.4s						
ZEA	**Zeya**	**4.43**	**317**	*e*Sg	Sg	02 42 13.0	-3.5
ZEA				A		02 42 15.5	
	35nm,1.0s						
ZEA				A		02 42 15.5	
	50nm,1.0s						
ZEA				A		02 42 15.5	
	19nm,1.0s						
BMKR	**Bomnak**	**4.62**	**334**	*e*Pn	Pn	02 41 05.5	+1.4
BMKR				AMB	AMB	02 41 06.5	
	6.0nm,0.5s						
BMKR				*e*rx	rx	02 41 21.0	
BMKR				*e*Sg	Sg	02 42 19.7	-2.9
BMKR				A		02 42 25.4	
	31nm,0.5s						
KROS	**Kirovskiy**	**5.04**	**321**	*e*Pn	Pn	02 41 11.2	+1.4
KROS				*e*Sg	Sg	02 42 31.1	-4.9
KROS				A		02 42 35.0	
	19nm,0.4s						
NKL	**Nikolayevsk**	**5.74**	**61**	*e*Sg	Sg	02 42 54.0	-4.5
NKL				A		02 43 02.9	
	21nm,0.7s						

*ISCJB **13** 02:44:30.0±0.6,31°.24N±0°.06×104°.29E±0°.06,h10km, mb3.8/8,Error ellipse: s-maj=9.6km s-min=5.5km az=137.5*
*IDC **13** 02:44:30.4±1.2,31°.05N×103°.68E,h0km,mb3.7/8, mb1 3.8/9,mb1mx3.6/24,mbtmp3.7/9,ML3.6/1,Error ellipse: s-maj=40.5km s-min=21.3km az=49.0*
*NEIC **13** 02:44:32.4±0.7,31°.23N×104°.00E,h10km,mb4.7/1,Error ellipse: s-maj=27.8km s-min=11.8km az=60.0*
*BJI **13** 02:44:33.6,31°.45N×103°.63E,h13km,ML3.6/8*

ISC 13 02:44:32.3±0.5,31°.26N±0°.05×104°.15E±0°.06,h10km,n18, σ0°70/19,mb3.8/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.49**	**224**	Pg	**Pg**	**02 44 41.5**	**-0.3**
CD2				Sg	**Sg**	**02 44 48.0**	**-0.2**
CD2				smax			
	comp=N,3μm,0.7s						
LZH	**Lanzhou**	**4.82**	**357**	*e*Pg	Px	02 46 14.8	
LZH				Sg	**Sg**	**02 46 59.4**	**-7.6**
LZH				smax			
	comp=N,68nm,0.7s						
LZH				smax			
	comp=E,97nm,1.0s						
XAN	**Xi'an**	**4.89**	**54**	Sg	**Sg**	**02 47 08.5**	**-0.7**
XAN				smax			
	comp=N,98nm,0.7s						
XAN				smax			
	comp=E,41nm,0.7s						
GYA	**Guiyang**	**5.27**	**155**	Pg	**Pg**	**02 46 13.2**	**-0.1**
GYA				smax			
	comp=N,190nm,0.8s						
GYA				smax			
	comp=E,200nm,0.8s						
SONM	**Songino Array**	**16.64**	**5**	Pn	**Pn**	**02 48 26.6**	**+1.1**
	comp=E,0.2nm,0.3s,baz=188,slow=20,SNR=2.5						
KSRS	**Korea Array**	**20.55**	**66**	P	**P**	**02 49 16.8**	**+5.8**
	comp=E,2.1nm,0.8s,baz=244,slow=10.0,SNR=4.7						
MK31	**Makanchi Array**	**22.88**	**319**	*e*P	**P**	**02 49 35.9**	**-0.1**
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**02 49 36.5**	**+0.5**
	comp=E,1.7nm,1.0s,mb3.4,baz=125,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**02 49 36.5**	**+0.5**
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**02 50 10.3**	**-0.2**
	comp=E,0.8nm,0.6s,mb3.4,baz=112,slow=9.8,SNR=3.9						
KURK	**Kurchatov**	**27.14**	**323**	P	**P**	**02 50 15.4**	**-0.1**
	comp=E,1.6nm,0.9s,mb3.5,baz=128,slow=8.9,SNR=6.7						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**02 54 18.5**	**-0.1**
	comp=E,4.7nm,1.1s,mb4.4,baz=51,slow=7.9,SNR=3.7						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**02 54 18.5**	**-0.1**
WRAB	**Tennant Creek**	**58.58**	**146**	*e*P	**P**	**02 54 30.6**	**+1.2**
	comp=E,4.9nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**61.61**	**149**	P	**P**	**02 54 50.1**	**0.0**
	comp=E,0.5nm,0.6s,mb3.8,baz=340,slow=5.9,SNR=4.8						
NOA	**NORSAR Array B**	**64.55**	**327**	P	**P**	**02 55 07.5**	**-1.7**
	comp=E,0.4nm,0.7s,mb3.6,baz=74,slow=4.2,SNR=2.6						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**02 56 50.4**	**+0.7**
	comp=E,0.3nm,0.6s,mb3.4,baz=329,slow=5.2,SNR=10						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**02 56 50.4**	**+0.7**

*IDC **13** 02:55:25.6±0.7,31°.78N×104°.52E,h0km,mb4.0/15, mb1 4.1/16,mb1mx3.9/30,mbtmp4.0/16,ML3.2/1,Error ellipse: s-maj=29.3km s-min=14.5km az=58.0*
*NEIC **13** 02:55:27.2±0.3,31°.81N×104°.59E,h10km,mb4.8/1,Error ellipse: s-maj=12.7km s-min=6.4km az=72.0*
*BJI **13** 02:55:28.5,31°.68N×104°.53E,h12km,ML4.0/13,Ms3.8/2, Ms7 3.6/2*

ISC 13 02:55:26.0±0.8,31°.75N±0°.03×104°.51E±0°.05,h2km±5km, n28,σ0°97/34,mb4.0/15,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.05**	**218**	Pg	**Pg**	**02 55 46.4**	**+0.2**
CD2				Sg	**Sg**	**02 55 59.8**	**-0.1**
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	**4.36**	**57**	Pg	**Pg**	**02 56 50.5**	**+0.9**
XAN				Sg	**Sg**	**02 57 45.9**	**-0.1**
XAN				smax			
	comp=N,170nm,1.1s						
XAN				smax			
	comp=E,87nm,0.9s						
LZH	**Lanzhou**	**4.37**	**353**	*e*Pn	**Pn**	**02 56 36.1**	**+2.7**
LZH				Pg	**Pg**	**02 56 47.8**	**-1.9**
LZH				Sn	**Sn**	**02 57 27.1**	**+2.2**
LZH				Sg	**Sg**	**02 57 45.8**	**-0.5**
LZH				smax			
	comp=N,170nm,0.8s						
LZH				smax			
	comp=E,230nm,0.6s						
LZH				LR	LR		
	comp=N,930nm,7.0s						
LZH				LR	LR		
	comp=Z,1μm,8.5s						
GYA	**Guiyang**	**5.59**	**160**	Pn	**Pn**	**02 56 52.0**	**+1.7**
GYA				Sn	**Sn**	**02 57 53.7**	**-1.5**
GYA				smax			
	comp=N,170nm,0.7s						
GYA				smax			
	comp=E,170nm,0.7s						
GTA	**Gaotai**	**8.55**	**335**	*e*P	**Pn**	**02 57 26.9**	**-4.0**
GTA				pP		02 57 31.5	
GTA				sP		02 57 34.2	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.15**	**202**	Pn	**Pn**	**02 58 49.4**	**+1.8**
	baz=17,slow=12						
SONM	**Songino Array**	**16.13**	**5**	Pn	**Pn**	**02 59 13.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=3.4						
KSRS	**Korea Array**	**20.07**	**67**	P	**P**	**03 00 00.8**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=256,slow=11,SNR=4.6						
MK31	**Makanchi Array**	**22.73**	**318**	*e*P	**P**	**03 00 29.7**	**+0.5**
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**03 00 29.2**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.4,baz=117,slow=12,SNR=7.9						
ZALV	**Zalesovo Beam**	**26.30**	**333**	P	**P**	**03 01 02.9**	**0.0**
	comp=Z,1.2nm,0.3s,mb3.9,baz=128,slow=9.3,SNR=1.7						
ZALV	**Zalesovo Beam**	**26.30**	**333**	P	**P**	**03 01 02.9**	**0.0**
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**03 01 08.8**	**+0.1**
	comp=Z,0.7nm,0.2s,mb3.8,baz=129,slow=9.0,SNR=3.3						
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**03 01 08.8**	**+0.1**
BRTR	**Keskin Array B**	**56.73**	**299**	P	**P**	**03 05 10.8**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=66,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**56.82**	**336**	P	**P**	**03 05 11.9**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.9,baz=106,slow=9.4,SNR=3.2						
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**03 05 14.2**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.3,baz=93,slow=8.4,SNR=8.7						
WRAB	**Tennant Creek**	**58.81**	**147**	*e*P	**P**	**03 05 26.0**	**0.0**
	comp=Z,4.8nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.81**	**147**	P	**P**	**03 05 26.5**	**+0.4**
	comp=Z,3.9nm,0.6s,mb4.7,baz=339,slow=7.4,SNR=9.5						
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**03 05 47.3**	**+0.4**
	comp=Z,1.5nm,0.6s,mb4.3,baz=336,slow=6.6,SNR=21						
HFS	**Hagfors**	**63.44**	**326**	P	**P**	**03 05 56.0**	**-0.9**
	comp=Z,0.9nm,0.5s,mb4.2,baz=92,slow=7.4,SNR=4.8						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**03 06 02.4**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=267,slow=2.8,SNR=3.4						
INK	**Inuvik**	**71.44**	**19**	P	**P**	**03 06 47.1**	**-0.4**
	comp=Z,1.2nm,0.9s,mb3.8,baz=0.0,slow=1.0,SNR=3.3						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**03 06 52.4**	**-1.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=327,slow=6.6,SNR=4.4						
STKA	**Stephens Creek**	**72.36**	**147**	P	**P**	**03 06 52.4**	**-1.0**
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**03 07 41.3**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.8,baz=326,slow=5.1,SNR=12						
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**03 07 41.3**	**-0.6**
FRB	**Frobisher Bay**	**84.67**	**357**	P	**P**	**03 07 59.8**	**-1.3**
	comp=Z,1.0nm,0.8s,mb4.0,baz=72,slow=3.2,SNR=3.2						

*ISK **13** 02:56:25.6,36°.95N×29°.26E,h4km,MD2.8*
*ISCJB **13** 02:56:26.5±0.6,36°.94N±0°.03×29°.27E±0°.04,h4km±6km, Error ellipse: s-maj=5.9km s-min=4.6km az=28.3*
*CSEM **13** 02:56:26.4±0.1,36°.95N×29°.26E,h5km,MD2.8,Error ellipse: s-maj=2.1km s-min=1.7km az=129.0*
*DDA **13** 02:56:27.0,36°.99N×29°.26E,h7km±6km,Md2.8*

ISC 13 02:56:26.9±0.5,36°.94N±0°.03×29°.27E±0°.04,h9km±7km, n23,σ0°70/40,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**41**	*e*PG	**Pg**	**02 56 31.8**	**-0.7**
GLHS				*e*SG	**Sg**	**02 56 36.5**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.28**	**41**	*e*Pg	**Pg**	**02 56 31.8**	**-0.7**
GLHS				*e*Sg	**Sg**	**02 56 36.5**	**+0.2**
FETY	**Fethiye**	**0.34**	**206**	*e*PG	**Pg**	**02 56 33.1**	**-0.4**
FETY				*e*SG	**Sg**	**02 56 38.4**	**+0.3**
FETY	**Fethiye**	**0.34**	**206**	*e*Pg	**Pg**	**02 56 33.1**	**-0.4**
FETY				*e*Sg	**Sg**	**02 56 38.4**	**+0.3**
GOLH	**Golhisar**	**0.38**	**38**	*i* P	**Pg**	**02 56 33.7**	**-0.6**
GOLH				*i* S	**Sg**	**02 56 40.4**	**+1.1**
GOLH	**Golhisar**	**0.38**	**38**	*i* P	**Pg**	**02 56 33.7**	**-0.6**
GOLH				*i* S	**Sg**	**02 56 40.4**	**+1.2**
TURN	**Turunc**	**0.54**	**263**	*e*P	**Pg**	**02 56 42.3**	**+5.0**
TURN				*i* S	**Sg**	**02 56 54.1**	**+10**
ELL	**Elmali**	**0.55**	**110**	*e*PG	**Pg**	**02 56 37.0**	**-0.5**
ELL	**Elmali**	**0.55**	**110**	*e*Pg	**Pg**	**02 56 37.0**	**-0.5**
AKAS	**Kas**	**0.76**	**159**	*e*P	**Pg**	**02 56 41.3**	**-0.1**
AKAS				*i* S	**Sg**	**02 56 55.9**	**+4.6**
AKAS	**Kas**	**0.76**	**159**	*e*P	**Pg**	**02 56 41.3**	**-0.1**
AKAS				*i* S	**Sg**	**02 56 55.9**	**+4.6**
DNZL	**Cakiroluk**	**0.77**	**347**	*e*P	**Pg**	**02 56 40.1**	**-1.6**
DNZL				*i* S	**Sg**	**02 56 51.3**	**-0.4**
DNZL	**Cakiroluk**	**0.77**	**347**	*e*P	**Pg**	**02 56 40.1**	**-1.6**
DNZL				*i* S	**Sg**	**02 56 51.3**	**-0.4**
KORT	**Korkueli**	**0.87**	**86**	*e*P	**Pg**	**02 56 43.6**	**0.0**
KORT				*i* S	**Sg**	**02 56 55.6**	**+0.7**
KORT	**Korkueli**	**0.87**	**86**	*e*P	**Pg**	**02 56 43.6**	**0.0**
KORT				*i* S	**Sg**	**02 56 55.6**	**+0.7**
AYDN	**Tasoluk**	**1.32**	**303**	*e*P	**Pn**	**02 56 51.5**	**-0.1**
AYDN				*i* S	**Sg**	**02 57 10.9**	**+1.6**
AYDN	**Tasoluk**	**1.32**	**303**	*e*P	**Pn**	**02 56 51.5**	**0.0**
AYDN				*i* S	**Sg**	**02 57 10.9**	**+1.5**
DAT	**Datca**	**1.37**	**262**	*e*PN	**Pn**	**02 56 52.2**	**0.0**
DAT	**Datca**	**1.37**	**262**	*e*Pn	**Pn**	**02 56 52.2**	**-0.1**
KHAL	**Karahalli**	**1.44**	**7**	*e*P	**Pn**	**02 56 53.8**	**+0.7**
KHAL				*i* S	**Sb**	**02 57 11.8**	**-0.5**
KHAL	**Karahalli**	**1.44**	**7**	*e*P	**Pn**	**02 56 53.8**	**+0.7**
KHAL				*i* S	**Sb**	**02 57 11.8**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.48**	**68**	*e*PN	**Pn**	**02 56 53.9**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.48**	**68**	*e*Pn	**Pn**	**02 56 53.9**	**+0.2**

*IDC **13** 02:59:30.9±0.6,31°.00N×103°.53E,h0km,mb4.2/23, mb1 4.3/24,mb1mx4.2/32,mbtmp4.2/24,ML3.5/1,MS4.0/2, Ms1 4.0/2,ms1mx3.1/24,Error ellipse: s-maj=22.7km s-min=12.3km az=50.0*
*ISCJB **13** 02:59:31.0±0.3,31°.02N±0°.04×103°.49E±0°.05,h10km, mb4.3/41,MS3.9/2,Error ellipse: s-maj=6.2km s-min=5.3km az=37.0*
*NEIC **13** 02:59:32.8±0.3,31°.07N×103°.54E,h10km,mb4.5/16,Error ellipse: s-maj=9.8km s-min=6.2km az=60.0*
*BJI **13** 02:59:33.1,31°.16N×103°.55E,h11km,mB4.8/7,mb4.4/15, ML4.6/10,Ms4.8/8,Ms7 4.5/7*
*MOS **13** 02:59:34.4±1.0,31°.01N×103°.46E,h33km,mb4.6/12,Error ellipse: s-maj=15.7km s-min=6.8km az=113.1*

ISC 13 02:59:33.2±0.3,31°.06N±0°.04×103°.46E±0°.04,h10km,n92, σ0°96/95,mb4.3/41,MS3.9/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**120**	Pg	**Pg**	**02 59 39.7**	**+0.6**
CD2				Sg	**Sg**	**02 59 45.5**	**+2.4**
CD2				smax			
	comp=N,72μm,0.5s						
LZH	**Lanzhou**	**5.02**	**4**	*e*Pg	**Pb**	**03 00 57.4**	**-3.8**
LZH				Sg	**Sg**	**03 02 14.3**	**-0.2**
LZH				smax			
	comp=N,340nm,1.0s						
LZH				smax			
	comp=E,450nm,1.2s						
LZH				LR	LR		
	comp=N,5μm,8.2s						
LZH				LR	LR		
	comp=Z,5μm,10.5s						
GYA	**Guiyang**	**5.38**	**148**	Pn	**Pn**	**03 00 58.9**	**+5.4**
GYA				smax			
	comp=N,690nm,0.8s						
GYA				smax			
	comp=E,780nm,0.8s						
KMI	**Kunming**	**5.95**	**186**	Pg	**Pn**	**03 01 01.9**	**+0.6**
KMI				smax			
	comp=N,310nm,0.9s						
KMI				smax			
	comp=E,300nm,0.7s						
KMI				LR	LR		
	comp=N,910nm,3.8s						
KMI				LR	LR		
	comp=E,840nm,3.8s						
LSA	**Lhasa**	**10.72**	**266**	P	**Pn**	**03 02 08.8**	**+2.0**
HHC	**Hu-ho-hao-te**	**11.76**	**32**	*e*P	**Pn**	**03 02 22.6**	**+1.6**
HHC				pP		03 02

KURK	**Kurchatov**	**26.95**	**324**	P	**P**	**03 05 15.3**	**+0.6**
	comp=Z,4.0nm,0.8s,mb4.0,baz=130,slow=9.5,SNR=17						
KURK				LR	LR	03 16 15.3	
	comp=Z,243nm,20.2s,MS3.8,baz=150,slow=37						
KURK	**Kurchatov**	**26.95**	**324**	P	**P**	**03 05 15.3**	**+0.6**
KURK				LR	LR	03 16 15.3	
BOD	**Bodaibo**	**27.73**	**12**	*e*P	**P**	**03 05 21.9**	**+0.4**
BOD				*e*		03 06 24.6	
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.1						
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**03 06 04.6**	**+0.9**
	comp=Z,0.9nm,0.6s,mb3.8,baz=126,slow=7.3,SNR=5.5						
BVAR				LR	LR	03 21 25.2	
	comp=Z,408nm,19.5s,MS4.1,baz=114,slow=40						
ABKAR	**Akbulak array**	**37.29**	**312**	*e*P	**P**	**03 06 43.7**	**-1.5**
	comp=Z,1.2nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**38.77**	**313**	P	**P**	**03 06 58.1**	**+0.5**
AKTO	**Aktyubinsk**	**38.77**	**313**	P	**P**	**03 06 58.1**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.6,baz=108,slow=6.4,SNR=3.3						
ARU	**Arti**	**40.13**	**323**	*e*P	**P**	**03 07 09.1**	**+0.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ARU	**Arti**	**40.13**	**323**	*e*P	**P**	**03 07 09.1**	**+0.1**
	comp=Z,5.4nm,0.8s,mb4.3						
ZEI	**Tsey**	**48.13**	**302**	*e*P	**P**	**03 08 13.5**	**+0.2**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.32**	**153**	P	**P**	**03 08 51.2**	**-1.4**
	comp=Z,2.4nm,1.0s,mb4.1,baz=281,slow=5.2,SNR=3.6						
BR131	**Keskin Array S**	**56.28**	**300**	*e*P	**P**	**03 09 13.4**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**56.28**	**300**	P	**P**	**03 09 13.9**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.0,baz=107,slow=4.3,SNR=7.0						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**03 09 18.4**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.2,baz=74,slow=5.4,SNR=6.9						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**03 09 18.4**	**-0.5**
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**03 09 20.5**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.4,baz=72,slow=12,SNR=6.2						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**03 09 20.5**	**-0.3**
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**03 09 30.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**03 09 30.5**	**-0.9**
	comp=Z,12nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**03 09 30.8**	**-0.6**
	comp=Z,5.1nm,0.8s,mb4.6,baz=337,slow=7.5,SNR=9.7						
KWP	**Kalwaria Pacla**	**61.34**	**313**	*e*P	**P**	**03 09 49.3**	**+0.4**
KWP				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0						
KWP	**Kalwaria Pacla**	**61.34**	**313**	*e*P	**P**	**03 09 49.3**	**+0.3**
	comp=Z,12nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**03 09 50.9**	**-1.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=330,slow=6.5,SNR=15						
KOLS	**Kolonicke sedl**	**61.80**	**312**	*e*P	**P**	**03 10 01.4**	**+9.4**
KOLS	**Kolonicke sedl**	**61.80**	**312**	*e*P	**P**	**03 10 01.4**	**+9.4**
STHS	**Stebnicka Huta**	**62.31**	**313**	*e*P	**P**	**03 09 55.9**	**+0.4**
STHS	**Stebnicka Huta**	**62.31**	**313**	*e*P	**P**	**03 09 55.8**	**+0.3**
NIE	**Niedzica**	**62.89**	**313**	*e*P	**P**	**03 10 00.1**	**+0.7**
HFS	**Hagfors**	**63.50**	**326**	P	**P**	**03 10 02.6**	**-0.6**
	comp=Z,2.1nm,0.6s,mb4.4,baz=116,slow=10,SNR=6.5						
VYHS	**Vyhne**	**64.10**	**313**	*e*P	**P**	**03 10 06.2**	**-1.2**
VYHS	**Vyhne**	**64.10**	**313**	*e*P	**P**	**03 10 06.2**	**-1.2**
KOLL	**Kolacno**	**64.35**	**313**	*e*P	**P**	**03 10 08.9**	**-0.1**
KOLL	**Kolacno**	**64.35**	**313**	*e*P	**P**	**03 10 08.9**	**-0.1**
NB2	**NORSAR Subarra**	**64.40**	**327**	P	**P**	**03 10 07.5**	**-1.6**
	comp=Z,2.3nm,0.7s,mb4.3,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.40**	**327**	P	**P**	**03 10 08.5**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.3,baz=72,slow=6.4,SNR=9.4						
ZST	**Bratislava**	**65.29**	**313**	*e*P	**P**	**03 10 13.2**	**-2.0**
ZST	**Bratislava**	**65.29**	**313**	*e*P	**P**	**03 10 13.2**	**-2.0**
GERES	**GERESS Array B**	**67.18**	**314**	P	**P**	**03 10 27.5**	**+0.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=70,slow=4.4,SNR=7.5						
COLD	**Coldfoot**	**67.73**	**24**	*e*P	**P**	**03 10 30.8**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.6						
BPAW	**Bear Paw Mtn.**	**68.89**	**27**	*e*P	**P**	**03 10 37.9**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.6						
COLA	**College**	**69.71**	**26**	*e*P	**P**	**03 10 42.6**	**-0.2**
COLA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
COLA	**College**	**69.71**	**26**	*e*P	**P**	**03 10 42.6**	**-0.2**
	comp=Z,13nm,0.8s,mb4.9						
KDAK	**Kodiak Island**	**71.18**	**33**	P	**P**	**03 10 51.2**	**-0.7**
	comp=Z,11nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**71.18**	**33**	P	**P**	**03 10 51.2**	**-0.7**
CDF	**Champ du Feu**	**71.26**	**316**	*e*P	**P**	**03 10 52.2**	**-0.4**
	comp=Z,10nm,1.2s,mb4.3						
CDF	**Champ du Feu**	**71.26**	**316**	*e*P	**P**	**03 10 52.2**	**-0.4**
CDF				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
CDF	**Champ du Feu**	**71.26**	**316**	*e*P	**P**	**03 10 52.2**	**-0.4**
	comp=Z,5.2nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**72.27**	**147**	P	**P**	**03 10 57.5**	**-1.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=322,slow=7.3,SNR=6.0						
INK	**Inuvik**	**72.38**	**19**	P	**P**	**03 10 58.8**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.5,baz=330,slow=8.0,SNR=19						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**03 11 02.8**	**+0.5**
	comp=Z,14nm,0.8s,mb4.6						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**03 11 02.8**	**+0.5**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**03 11 02.8**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.6						
RES	**Resolute Bay**	**73.83**	**5**	P	**P**	**03 11 07.5**	**0.0**
	comp=Z,2.4nm,0.9s,mb4.1,baz=355,slow=7.8,SNR=9.6						
SMF	**Signal de Mont**	**74.14**	**315**	*e*P	**P**	**03 11 09.3**	**-0.4**
	comp=Z,12nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.14**	**315**	*e*P	**P**	**03 11 09.3**	**-0.4**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.14**	**315**	*e*P	**P**	**03 11 09.3**	**-0.4**
	comp=Z,6.0nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**75.30**	**315**	*e*P	**P**	**03 11 16.3**	**-0.2**
	comp=Z,6.3nm,1.0s,mb4.2						
TCF	**Toulx Ste Croi**	**75.30**	**315**	*e*P	**P**	**03 11 16.3**	**-0.2**
TCF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
TCF	**Toulx Ste Croi**	**75.30**	**315**	*e*P	**P**	**03 11 16.3**	**-0.2**
	comp=Z,3.2nm,1.0s,mb4.2						
CAF	**Calviac**	**76.06**	**314**	*e*P	**P**	**03 11 21.1**	**+0.2**
	comp=Z,3.8nm,0.8s,mb4.1						
CAF	**Calviac**	**76.06**	**314**	*e*P	**P**	**03 11 21.1**	**+0.2**
CAF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CAF	**Calviac**	**76.06**	**314**	*e*P	**P**	**03 11 21.1**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.1						
YKA	**Yellowknife Ar**	**81.89**	**17**	P	**P**	**03 11 52.1**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.2,baz=331,slow=5.4,SNR=33						
FRB	**Frobisher Bay**	**85.31**	**356**	P	**P**	**03 12 09.2**	**-0.8**
	comp=Z,2.3nm,0.7s,mb4.4,baz=358,slow=6.7,SNR=7.9						
TORD	**Torodi Ar. Bea**	**93.12**	**287**	P	**P**	**03 12 46.8**	**-1.1**
	comp=Z,0.4nm,0.9s,mb3.9,baz=54,slow=4.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**93.12**	**287**	P	**P**	**03 12 46.8**	**-1.1**
TXAR	**Lajitas Array**	**114.63**	**26**	PKP	PKiKP	03 18 13.1	-1.0
	comp=Z,0.3nm,0.6s,baz=76,slow=0.3,SNR=4.0						
ROSC	**El Rosal**	**144.22**	**356**	PKP	PKPdf	03 19 09.2	-1.0
	comp=Z,7.9nm,0.7s,baz=108,slow=9.5,SNR=7.6						

ISCJB ***13*** *03:00:36.6±0.1,31°.19N±0°.02×103°.60E±0°.03,h10km, mb4.9/122,MS4.3/19,Error ellipse: s-maj=3.1km s-min=3.0km az=172.6*

MOS ***13*** *03:00:38.8±0.8,31°.20N×103°.69E,h25km,mb5.0/52, MS4.3/16,Error ellipse: s-maj=9.4km s-min=4.7km az=117.2*

BJI ***13*** *03:00:38.1,31°.21N×103°.70E,h14km,mB5.0/23,mb4.9/30, ML4.9/13,Ms4.9/42,Ms7 4.6/32*

NEIC ***13*** *03:00:38.3±0.1,31°.21N×103°.68E,h10km,mb5.0/57,Error ellipse: s-maj=5.0km s-min=3.6km az=57.0*

IDC ***13*** *03:00:39.6±4.1,31°.17N×103°.65E,h20km±26km,mb4.6/33, mb1 4.6/34,mb1mx4.6/36,mbtmp4.6/34,ML4.4/1,MS4.1/4, Ms1 4.1/4,ms1mx3.5/26,Error ellipse: s-maj=14.9km s-min=9.8km az=52.0*

DJA ***13*** *03:00:41,30°.97N×103°.50E,h10km,mb5.3/15*

SZGRF ***13*** *03:00:46.2,31°.70N×103°.38E,h33km,mb5.0,MS4.1, Sichuan, China*

ISC 13 03:00:38.5±0.1,31°.19N±0°.02×103°.60E±0°.02,h10km,n337, σ1°.90/339,mb4.9/122,MS4.3/19,21C-8D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**154**	Pg	**Pg**	**03 00 45.8**	**+1.1**
CD2				Sg	**Sg**	**03 00 51.4**	**+2.6**
CD2					smax		
	comp=N,179μm,0.7s						
LZH	**Lanzhou**	**4.89**	**2**	*e*Pg	**Pb**	**03 02 03.5**	**-0.8**
LZH				Sg	**Sg**	**03 03 16.7**	**+1.2**
LZH					smax		
	comp=N,1μm,1.1s						
LZH					smax		
	comp=E,990nm,0.9s						
LZH				LR	LR		
	comp=N,3μm,8.0s						
LZH				LR	LR		
	comp=Z,3μm,9.5s						
XAN	**Xi'an**	**5.31**	**56**	Pg	**Pb**	**03 02 14.3**	**+2.9**
XAN				Sg	**Sb**	**03 03 15.7**	**+0.4**
XAN					smax		
	comp=N,1μm,1.0s						
XAN					smax		
	comp=E,840nm,0.9s						
XAN				LR	LR		
	comp=N,6μm,9.9s						
XAN				LR	LR		
	comp=E,890nm,8.8s						
XAN				LR	LR		
	comp=Z,2μm,9.0s						
GYA	**Guiyang**	**5.42**	**150**	Pn	**Pn**	**03 02 00.0**	**+0.6**
GYA				Sn	**Sn**	**03 03 04.3**	**+2.4**
GYA					smax		
	comp=N,3μm,0.9s						
GYA					smax		
	comp=E,2μm,1.0s						
GYA				LR	LR		
	comp=N,5μm,4.9s						
GYA				LR	LR		
	comp=E,4μm,3.2s						
GYA				LR	LR		
	comp=Z,5μm,5.0s						
KMI	**Kunming**	**6.09**	**187**	Pg	**Pb**	**03 02 21.9**	**-2.8**
KMI				Sn	**Sn**	**03 03 21.5**	**+3.1**
KMI					smax		
	comp=N,420nm,1.5s						
KMI					smax		
	comp=E,380nm,1.2s						
KMI				LR	LR		
	comp=N,6μm,9.0s						
KMI				LR	LR		
	comp=E,5μm,6.1s						
KMI	**Kunming**	**6.09**	**187**	Sg	**Pn**	**03 02 10.5**	**+1.9**
WHN	**Wuhan**	**9.26**	**91**	⇓P	**Pn**	**03 02 44.7**	**-7.4**
WHN				S	**Sn**	**03 04 30.7**	**-5.7**
WHN				LR	LR		
	comp=N,6μm,8.0s						
WHN				LR	LR		
	comp=E,12μm,5.9s						
WHN				LR	LR		
	comp=Z,12μm,6.9s						
LSA	**Lhasa**	**10.85**	**265**	P	**Pn**	**03 03 16.8**	**+2.9**
LSA				S	**Sn**	**03 05 19.3**	**+3.9**
LSA				LR	LR		
	comp=E,2μm,8.2s						
LSA				LR	LR		
	comp=Z,3μm,7.7s						
HHC	**Hu-ho-hao-te**	**11.59**	**32**	*e*P	**Pn**	**03 03 26.6**	**+2.6**
HHC				pP		03 03 30.0	
HHC				PP		03 03 36.1	
HHC				S	**Sn**	**03 05 37.4**	**+4.0**
HHC				sS		03 05 42.2	
HHC				SS		03 05 51.4	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,2μm,6.1s						
HHC				LR	LR		
	comp=E,2μm,5.5s						
HHC				LR	LR		
	comp=Z,1μm,6.0s						
SHL	**Shillong**	**11.74**	**244**	*e*P	**Pn**	**03 03 27.0**	**+0.9**
SHL				*ex*	x	03 05 41.0	
GZH	**Guangzhou**	**11.84**	**131**	P	**Pn**	**03 03 30.0**	**+2.5**
GZH				S	**Sn**	**03 05 36.8**	**-2.9**
GZH				LR	LR		
	comp=N,6μm,4.9s						
GZH				LR	LR		
	comp=E,5μm,4.3s						
CHTO	**Chiang Mai**	**13.02**	**200**	*e*P	**Pn**	**03 03 46.1**	**+2.5**
NJ2	**Nanjing**	**13.03**	**82**	*e*P	**Pn**	**03 03 41.1**	**-2.6**
NJ2				pP		03 03 44.5	
NJ2				PP		03 03 51.2	
NJ2				S	**Sn**	**03 06 03.0**	**-5.7**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,20nm,4.1s						
NJ2				LR	LR		
	comp=N,2μm,16.1s						
NJ2				LR	LR		
	comp=E,3μm,12.1s						
NJ2				LR	LR		
	comp=Z,4μm,11.8s						
QIZ	**Qiongzhong**	**13.36**	**154**	P	**Pn**	**03 03 49.8**	**+1.6**
QIZ				pP		03 03 55.0	
QIZ				S	**Sn**	**03 06 21.4**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,31nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,180nm,4.6s						
QIZ				LR	LR		
	comp=N,2μm,7.9s						
QIZ				LR	LR		
	comp=E,610nm,7.9s						
QIZ				LR	LR		
	comp=Z,2μm,11.3s						
CM31	**Chiang Mai Arr**	**13.36**	**199**	*e*Pn	**Pn**	**03 03 50.5**	**+2.3**
BJI	**Beijing**	**13.50**	**46**	P	**Pn**	**03 03 49.3**	**-0.8**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI				LR	LR		
	comp=N,2μm,10.2s						
BJI				LR	LR		
	comp=E,2μm,16.4s						
TAPN	**Taplejung**	**14.39**	**259**	*e*P	**Pn**	**03 04 02.5**	**+0.2**
	comp=E,146nm,1.2s						
ODAN	**Odare**	**14.82**	**257**	*e*P	**Pn**	**03 04 07.4**	**-0.8**
	comp=E,127nm,1.0s						
SSE	**Sheshan**	**15.06**	**86**	P	**Pn**	**03 04 07.0**	**-4.4**
SSE				S	**Sn**	**03 06 52.3**	**-6.0**
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,230nm,5.4s						
SSE				LR	LR		
	comp=N,4μm,11.6s						
SSE				LR	LR		
	comp=E,910nm,11.6s						
SSE				LR	LR		
	comp=Z,2μm,8.2s						
RAMN	**Ramite**	**15.45**	**258**	*e*P	**Pn**	**03 04 15.8**	**-0.8**
	comp=Z,104nm,0.9s						
GUN	**Gumba**	**15.77**	**263**	*e*P	**Pn**	**03 04 19.9**	**-0.8**
	comp=Z,192nm,0.8s						
PKI	**Pulchoki**	**16.26**	**262**	*e*P	**Pn**	**03 04 26.2**	**-0.9**
	comp=Z,150nm,0.9s						
PKIN	**Phulchoki**	**16.27**	**262**	*e*P	**Pn**	**03 04 26.2**	**-1.0**
	comp=Z,104nm,0.9s						
KKN	**Kakani**	**16.31**	**263**	*e*P	**Pn**	**03 04 26.6**	**-1.1**
	comp=Z,216nm,1.0s						
DMN	**Daman**	**16.51**	**262**	*e*P	**Pn**	**03 04 29.4**	**-0.8**
	comp=Z,258nm,0.9s						
DL2	**Dalian**	**16.63**	**58**	P	**Pn**	**03 04 33.9**	**+2.2**
DL2				*e*S	**Sn**	**03 07 42.2**	**+5.8**
DL2				pmax	pmax		
	comp=Z,30nm,1.4s						
DL2				pmax	pmax		
	comp=Z,230nm,7.7s						
DL2				LR	LR		
	comp=N,540nm,13.2s						
DL2				LR	LR		
	comp=E,480nm,15.9s						
DL2				LR	LR		
	comp=Z,660nm,12.0s						
SONM	**Songino Array**	**16.76**	**7**	Pn	**Pn**	**03 04 32.5**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=190,slow=5.7,SNR=18						
SONM				LR	LR	03 11 46.2	
	comp=Z,911nm,19.0s,baz=174,slow=40						
SSLB	**Suanglung**	**17.06**	**111**	*e*Pn	**Pn**	**03 04 36.8**	**-0.4**
	comp=Z,108nm,1.1s						
WMQ	**Urumqi**	**17.80**	**320**	P	**Pn**	**03 04 48.1**	**+1.8**
WMQ				sP	sP	03 04 55.1	+3.9
WMQ				PP		03 05 02.9	
WMQ				S	**Sn**	**03 08 04.1**	**-0.6**
WMQ				sS	sS	03 08 10.2	-5.9
WMQ				SS		03 08 25.3	
WMQ				PcP	PcP	03 09 26.3	+3.0
WMQ				pmax	pmax		
	comp=Z,36nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.6s						
WMQ				LR	LR		
	comp=N,1μm,8.5s						
WMQ				LR	LR		
	comp=E,2μm,10.0s						
WMQ				LR	LR		
	comp=Z,420nm,19.0s						
ZAK	**Zakamensk**	**19.18**	**359**	*e*P	**Pn**	**03 05 03.7**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s						
SNY	**Shenyang**	**19.21**	**51**	⇓P	**Pn**	**03 05 06.4**	**+3.0**
SNY				S	**Sn**	**03 08 37.9**	**-0.8**
SNY				pmax	pmax		
	comp=Z,11nm,1.0s						
SNY				pmax	pmax		
	comp=Z,490nm,6.1s						
SNY				LR	LR		
	comp=N,980nm,18.2s						
SNY				LR	LR		
	comp=Z,910nm,17.4s						
TLY	**Talaya**	**20.48**	**0**	*e*P	**P**	**03 05 17.9**	**+1.6**
TLY				pmax	pmax		
	comp=Z,33nm,1.2s						
TLY				MLR	MLR		
	comp=Z,954nm,11.0s,MS4.4						
TLY	**Talaya**	**20.48**	**0**	*e*P	**P**	**03 05 16.9**	**+0.6**
	comp=Z,21nm,0.8s						
MOY	**Mondy**	**20.55**	**355**	*e*P	**P**	**03 05 19.5**	**+2.4**
MOY				pmax	pmax		
	comp=Z,87nm,2.2s						
JOSI	**Joshimath**	**20.64**	**274**	*e*P	**P**	**03 05 19.3**	**+1.0**
KSRS	**Korea Array**	**21.01**	**66**	P	**P**	**03 05 22.0**	**-0.2**
	comp=Z,21nm,0.8s,mb4.5,baz=260,slow=10.0,SNR=14						
KSRS	**Korea Array**	**21.01**	**66**	P	**P**	**03 05 22.0**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.5						
IRK	**Irkutsk**	**21.05**	**1**	*e*P	**P**	**03 05 24.0**	**+1.6**
IRK				pmax	pmax		
	comp=Z,226nm,1.1s,mb5.4						
CN2	**Changchun**	**21.35**	**48**	⇑P	**P**	**03 05 26.2**	**+0.4**
CN2				*e*pP		03 05 30.3	
CN2				*e*sP	sP	03 05 33.2	+3.3
CN2				PP		03 05 49.7	
CN2				*e*S	**S**	**03 09 17.7**	**-5.0**
CN2				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.2						
CN2				pmax	pmax		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,11.0s,MS4.4						
CN2				LR	LR		
	comp=E,600nm,11.0s,MS4.4						
CN2				LR	LR		
	comp=Z,800nm,12.0s,MS4.3						
JOW	**Kunigami**	**21.99**	**95**	LR	LR	03 14 40.6	
	comp=Z,338nm,19.3s,MS3.8,baz=104,slow=38						
MK31	**Makanchi Array**	**22.64**	**320**	*e*P	**P**	**03 05 40.5**	**+1.0**
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**03 05 40.9**	**+1.4**
	comp=Z,45nm,1.1s,mb4.8,baz=124,slow=11,SNR=17						
MKAR				PcP	PcP	03 09 31.8	-0.4
	comp=Z,2.6nm,0.8s,baz=170,slow=2.5,SNR=4.6						
MKAR				ScP	ScP	03 13 08.1	-1.8
	comp=Z,0.6nm,0.7s,baz=108,slow=4.7,SNR=4.3						
MKAR				LR	LR	03 15 29.7	
	comp=Z,600nm,18.0s,MS4.1,baz=124,slow=39						
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**03 05 40.9**	**+1.4**
MKAR						03 09 31.8	
AGRA	**Agra**	**22.72**	**267**	*e*P	**P**	**03 05 40.1**	**-0.5**
AGRA				AMb	AMB	03 05 42.5	
	comp=Z,49nm,0.7s,mb5.0						
BISR	**Bishrakh**	**22.82**	**270**	*e*P	**P**	**03 05 42.5**	**+0.8**
NDI	**New Delhi**	**22.99**	**271**	*ex*	**P**	**03 05 41.0**	**-2.4**
KKR	**Kurukshetra**	**23.07**	**274**	*e*P	**P**	**03 05 44.9**	**+0.5**
AYAN	**Aya Nagar**	**23.11**	**270**	*e*P	**P**	**03 05 44.0**	**-0.7**
AYAN				AMb	AMB	03 05 50.8	
	comp=Z,50nm,0.9s,mb5.0						
SONA	**Sohna**	**23.20**	**270**	*e*P	**P**	**03 05 45.3**	**-0.3**
SONA				AMb	AMB	03 05 47.1	
	comp=Z,63nm,1.1s,mb5.0						
RTK	**Rohtak**	**23.60**	**272**	*ex*	x	03 05 40.9	
THN	**Thein Dam**	**23.71**	**280**	*ex*	x	03 05 54.7	
KSH	**Kashi**	**23.95**	**298**	P	**P**	**03 05 57.1**	**+4.2**
KSH				*e*pP		03 06 01.0	
KSH				*e*sP	sP	03 06 04.1	+6.9
KSH				*e*PP		03 06 31.3	
KSH				*e*PcP	PcP	03 09 38.2	+3.1
KSH				*e*S	**S**	**03 10 12.2**	**+2.8**
KSH				*e*sS	sS	03 10 18.1	+3.7
KSH				*e*SS		03 11 04.1	
KSH				*e*ScP	ScP	03 13 15.0	+1.4
KSH				*e*PcS	PcS	03 13 17.2	+2.6
KSH				*e*ScS	ScS	03 17 01.1	+0.6
KSH				pmax	pmax		
	comp=Z,180nm,2.9s,mb5.0						
KSH				LR	LR		
	comp=N,390nm,9.4s						
KSH				LR	LR		
	comp=E,690nm,8.8s						
KHET	**Khetri**	**24.34**	**270**	*e*P	**P**	**03 05 56.1**	**-0.4**
KHET				AMb	AMB	03 06 02.1	
	comp=Z,24nm,0.7s,mb4.7						
MDJ	**Mudanjiang**	**24.38**	**49**	P	**P**	**03 05 57.4**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,230nm,5.9s						
TKM2	**Tokmak 2**	**25.11**	**306**	*e*P	**P**	**03 06 05.3**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,28nm,1.3s,mb4.6						
TKM2	**Tokmak 2**	**25.11**	**306**	*e*P	**P**	**03 06 05.3**	**+1.8**
	comp=Z,28nm,1.3s,mb4.6						
AAK	**Ala-Archa**	**25.80**	**304**	P	**P**	**03 06 14.9**	**+5.2**
	comp=Z,186nm,1.2s,mb5.5,SNR=5.5						
AAK	**Ala-Archa**	**25.80**	**304**	P	**P**	**03 06 12.3**	**+2.6**
	comp=Z,14nm,0.9s,mb4.5,baz=88,slow=7.5,SNR=6.7						
AAK				PcP	PcP	03 09 39.7	+0.6
	comp=Z,1.5nm,0.4s,baz=170,slow=12,SNR=3.6						
KULM	**Kulim**	**25.91**	**187**	*e*P	**P**	**03 06 10.3**	**-0.5**
	comp=Z,19nm,0.8s,mb4.7						
AML	**Almayashu**	**26.24**	**303**	*e*P	**P**	**03 06 14.7**	**+1.1**
	comp=Z,32nm,

KBL Kabul 29.14 286 *eP* **P 03 06 40.8 +1.0**
comp=Z,19nm,0.8s,mb4.9
HABR Khabarovsk 29.41 45 *eP* **P 03 06 38.8 -3.1**
HABR *e**SP sP 03 06 52.6 +6.4
HABR *e*PPP 03 07 41.3
HABR *e* 03 09 44.9
HABR *e*S **S 03 11 29.9 -5.7**
HABR *e**SS sS 03 11 46.2 +5.5
HABR *e*SS SS 03 12 58.4 -42
HABR *e* 03 13 28.0
HABR *e* 03 17 18.3
HABR pmax pmax
comp=Z,25nm,0.9s,mb4.9
HABR pmax pmax
comp=N,17nm,1.0s
HABR pmax pmax
comp=E,26nm,1.0s
HABR MLR MLR
comp=Z,382nm,18.0s,MS4.1
POO Poona 29.69 252 *ex* x 03 06 41.0
DAV Davao City (W) 31.59 135 LR LR 03 20 08.0
comp=Z,313nm,19.8s,MS4.0,baz=260,slow=37
BVAR Borovoye Array 32.46 322 P **P 03 07 09.0 +0.2**
comp=Z,3.3nm,0.6s,mb4.3,baz=118,slow=9.1,SNR=14
BVAR PcP PcP 03 09 55.2 -0.5
comp=Z,7.1nm,0.7s,baz=146,slow=2.7,SNR=15
BRVK Borovoye 32.53 322 *eP* **P 03 07 10.1 +0.7**
BRVK *e* 03 09 55.4
BRVK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BRVK Borovoye 32.53 322 *eP* **P 03 07 10.1 +0.6**
comp=Z,7.6nm,0.8s,mb4.7
BRVK *e*PcP PcP 03 09 55.4 -0.5
ASAJ Asahikawa 33.15 56 P **P 03 07 14.7 -0.3**
comp=Z,5.6nm,0.8s,mb4.6,baz=261,slow=9.3,SNR=4.6
ASAJ Asahikawa 33.15 56 P **P 03 07 14.7 -0.3**
ASAJ pmax pmax
comp=Z,6.0nm,0.8s
ABKAR Akbulak array 37.30 312 *eP* **P 03 07 51.0 +0.4**
comp=Z,5.0nm,0.8s,mb4.4
ABKT Ailbek 37.76 293 P **P 03 07 56.1 +1.4**
comp=Z,252nm,0.7s,mb6.1,SNR=8.1
AKTK Aktyubinsk 38.77 313 P **P 03 08 03.3 +0.3**
AKTK PcP PcP 03 10 14.1 -0.2
AKTO Aktyubinsk 38.77 313 P **P 03 08 03.3 +0.3**
comp=Z,1.9nm,0.5s,mb4.1,baz=96,slow=9.9,SNR=9.6
AKTO PcP PcP 03 10 14.1 -0.2
comp=Z,4.7nm,0.8s,baz=100,slow=2.9,SNR=5.5
KAPI Kappang 39.16 154 P **P 03 08 05.8 -0.8**
comp=Z,298nm,0.6s,mb6.2,SNR=7.8
KAPI Kappang 39.16 154 P **P 03 08 05.2 -1.4**
comp=Z,42nm,0.9s,mb5.2,baz=346,slow=6.4,SNR=16
SVE Sverdlovsk 39.18 324 *eP* **P 03 08 07.5 +1.2**
SVE pmax pmax
comp=Z,28nm,1.2s,mb4.9
ARU Arti 40.10 322 *c iP* **P 03 08 14.2 +0.2**
ARU S **S 03 14 19.2 -0.9**
ARU SS SS 03 17 13.9 -3.4
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.8
ARU Arti 40.10 322 *eP* **P 03 08 14.3 +0.2**
comp=Z,15nm,0.8s,mb4.8
SOKR Solikamsk 42.09 326 *d iP* **P 03 08 31.4 +1.1**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.7
TIXI Tiksi 42.76 11 *eP* **P 03 08 34.4 -1.2**
TIXI pmax pmax
comp=Z,28nm,1.2s,mb4.9
TIXI MLR MLR
comp=Z,502nm,18.0s,MS4.5
SEY Seymchan 44.23 30⇑ *eP* **P 03 08 46.9 -0.7**
PETK Petropavlovsk- 44.43 44 P **P 03 08 49.0 -0.3**
comp=Z,7.2nm,0.9s,mb4.4,baz=270,slow=1.5,SNR=5.0
QRN Al-Qurain 47.87 282 *eP* **P 03 09 16.8 0.0**
QRN AMb AMB 03 09 17.1
comp=Z,34nm,0.8s,mb5.5
GNI Garni 47.88 298 *eP* **P 03 09 18.1 +1.3**
GNI pmax pmax
comp=Z,13nm,1.5s
MIB Mutribah 48.05 284 *eP* **P 03 09 17.9 -0.3**
MIB AMb AMB 03 09 19.1
comp=Z,102nm,0.9s,mb5.9
RDF Al-Radifah 48.13 282 *eP* **P 03 09 18.9 +0.1**
RDF AMb AMB 03 09 20.3
comp=Z,85nm,0.8s,mb5.8
ZEI Tsey 48.16 301 *eP* **P 03 09 18.8 -0.1**
ZEI pmax pmax
comp=Z,11nm,1.5s,mb4.7
KIV Kislovodsk 48.91 303 *eP* **P 03 09 25.7 +1.1**
KIV pmax pmax
comp=Z,31nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,129nm,17.0s,MS4.0
KIV Kislovodsk 48.91 303 *eP* **P 03 09 26.0 +1.4**
comp=Z,39nm,1.2s,mb5.3
KLMR Klimovskoe 50.75 325 *eP* **P 03 09 37.8 -0.5**
KLMR 03 11 39.4
KLMR S **S 03 16 55.8 +2.2**
KLMR pmax pmax
comp=Z,45nm,1.6s,mb5.2
BILL Bilibino 51.28 25 *d iP* **P 03 09 41.5 -0.7**
BILL pmax pmax
comp=Z,36nm,1.6s,mb5.0
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.2
BILL Bilibino 51.28 25 *eP* **P 03 09 41.4 -0.9**
comp=Z,16nm,0.8s,mb5.0
KAKA Kakadu 51.69 143 *eP* **P 03 09 43.7 -2.2**
comp=Z,25nm,0.8s,mb5.2
OBN Obninsk 52.13 318 *eP* **P 03 09 48.5 -0.3**
OBN pmax pmax
comp=Z,31nm,1.6s,mb5.0
MALT Malatya 53.05 297 *eP* **P 03 09 57.0 +1.2**
MALT pmax pmax
comp=Z,12nm,1.5s,mb4.6
MALT Malatya 53.05 297 *eP* **P 03 09 57.0 +1.1**
comp=Z,12nm,1.5s,mb4.6
FITZ Fitzroy Crossi 53.38 154 *eP* **P 03 09 57.5 -0.9**
comp=Z,24nm,0.6s,mb5.3
FITZ Fitzroy Crossi 53.38 154 P **P 03 09 57.6 -0.8**
comp=Z,14nm,0.7s,mb5.0,baz=333,slow=5.9,SNR=19
FITZ Fitzroy Crossi 53.38 154 *eP* **P 03 09 57.5 -0.8**
comp=Z,5.2nm,0.5s,mb4.7
APA Apatity 54.04 334⇓ *eP* **P 03 10 02.4 -0.2**
APA MLR MLR
comp=Z,400nm,13.0s,MS4.7
MBWA Marble Bar 54.30 161 *eP* **P 03 10 04.2 -0.8**
MBWA Marble Bar 54.30 161 *eP* **P 03 10 04.5 -0.5**
comp=Z,27nm,0.8s,mb5.2
JOF Joensuu 54.73 328 *eP* **P 03 10 07.0 -0.7**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
JOF Joensuu 54.73 328 *ep* **P 03 10 07.0 -0.7**
comp=Z,8.4nm,0.7s,mb4.9
SIM Simferopol' 54.83 306 *eP* **P 03 10 09.2 +0.5**
SIM pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BR131 Keskin Array S 56.33 299 *eP* **P 03 10 19.9 +0.3**
comp=Z,3.5nm,0.9s,mb4.4
BR131 PcP PcP 03 11 16.8 -0.1
BRTR Keskin Array B 56.33 299 P **P 03 10 19.8 +0.2**
comp=Z,4.2nm,0.9s,mb4.5,baz=100,slow=7.0,SNR=15
BRTR PcP PcP 03 11 16.4 -0.4
comp=Z,2.2nm,0.8s,baz=136,slow=3.7,SNR=4.1
KEV Kevo 56.48 336 *eP* **P 03 10 19.5 -0.7**
KEV pmax pmax
comp=Z,11nm,0.6s,mb5.1
KEV Kevo 56.48 336 *ep* **P 03 10 19.5 -0.7**
comp=Z,10nm,0.6s,mb5.0
ARCES ARCESS Array B 57.01 336 P **P 03 10 23.9 -0.1**
comp=Z,7.7nm,0.8s,mb4.8,baz=60,slow=7.2,SNR=8.9
ARCES PcP PcP 03 11 18.2 -0.8
comp=Z,4.5nm,0.6s,baz=90,slow=3.8,SNR=13
AKASG Malin Array Be 57.01 313 P **P 03 10 23.9 -0.4**
comp=Z,2.0nm,0.4s,mb4.5,baz=72,slow=6.4,SNR=8.4
AKASG PcP PcP 03 11 18.4 -0.9
comp=Z,2.4nm,0.8s,baz=72,slow=4.5,SNR=5.2
AKASG Malin Array Be 57.01 313 P **P 03 10 23.9 -0.4**
AKASG PcP PcP 03 11 18.4 -0.9
KAF Kangasniemi 57.09 327 *eP* **P 03 10 22.6 -2.0**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KAF Kangasniemi 57.09 327 *ep* **P 03 10 22.6 -2.0**
comp=Z,5.3nm,0.7s,mb4.7
FINES FINESS Array B 57.26 326 P **P 03 10 25.7 -0.2**
comp=Z,3.4nm,0.6s,mb4.6,baz=98,slow=8.2,SNR=8.3
FINES FINESS Array B 57.26 326 P **P 03 10 25.7 -0.2**
IDID Didziasalis 57.72 319 *eP* **P 03 10 29.7 +0.5**
comp=Z,7.0nm,1.2s,mb4.6
IZAR Zarasai 57.92 319 *eP* **P 03 10 30.7 +0.1**
IIGN Ignalina 58.00 319 *eP* **P 03 10 31.5 +0.3**
ISAL Salakas 58.02 319 *eP* **P 03 10 30.9 -0.4**
WRAB Tennant Creek 58.78 146 P **P 03 10 36.0 -1.0**
comp=Z,654nm,0.8s,SNR=21
WRAB Tennant Creek 58.78 146 *eP* **P 03 10 36.7 -0.3**
WRAB pmax pmax
comp=Z,94nm,0.9s,mb5.8
WRAB Tennant Creek 58.78 146 *eP* **P 03 10 36.7 -0.2**
comp=Z,94nm,0.9s,mb5.8
WRA Warramunga Arr 58.78 146 P **P 03 10 36.9 -0.1**
COEN Coen 58.81 134 *eP* **P 03 10 37.1 -0.2**
comp=Z,203nm,1.2s,mb6.0
SPITS Spitsbergen Ar 59.15 346 P **P 03 10 38.1 -0.8**
comp=Z,14nm,0.9s,mb5.0,baz=106,slow=11,SNR=7.0
ISP Isparta 59.19 298 *eP* **P 03 10 39.5 -0.3**
ISP Isparta 59.19 298 *eP* **P 03 10 39.0 -0.8**
ISP pmax pmax
comp=Z,17nm,0.8s,mb5.1
ISP Isparta 59.19 298 *eP* **P 03 10 39.0 -0.8**
comp=Z,17nm,0.8s,mb5.1
MEEK Meekatharra 59.26 164 *eP* **P 03 10 39.8 -0.4**
LVV L'vov 60.46 313 *eP* **P 03 10 50.5 +2.2**
KWP Kalwaria Pacla 61.34 313 *eP* **P 03 10 54.8 +0.5**
KWP Kalwaria Pacla 61.34 313 *eP* **P 03 10 54.0 -0.3**
KWP pmax pmax
comp=Z,35nm,1.1s,mb5.4
KWP Kalwaria Pacla 61.34 313 *eP* **P 03 10 54.0 -0.3**
comp=Z,35nm,1.1s,mb5.4
ASAR Alice Springs 61.79 148 P **P 03 10 57.4 -0.1**
comp=Z,14nm,0.8s,mb5.2,baz=333,slow=6.4,SNR=41
KOLS Kolonicke sedl 61.80 312 *eP* **P 03 11 01.0 +3.6**
KOLS Kolonicke sedl 61.80 312 *eP* **P 03 11 01.0 +3.6**
UZH Uzhgorod 61.87 312 *eP* **P 03 10 57.0 -0.9**
UZH *i* 03 11 38.8
STHS Stebnicka Huta 62.31 313 *eP* **P 03 11 01.3 +0.5**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
STHS Stebnicka Huta 62.31 313 *eP* **P 03 11 01.3 +0.5**
comp=Z,3.5nm,1.1s,mb4.4
STHS *e*PcP PcP 03 11 39.1 -1.4
STHS Stebnicka Huta 62.31 313 *eP* **P 03 11 01.2 +0.4**
STHS *e*PCP PcP 03 11 39.1 -1.4
KARP Karpathos 62.48 297 *eP* **P 03 11 02.3 +0.1**
NIE Niedzica 62.89 313 *eP* **P 03 11 05.7 +1.0**
OJC Ojcow 62.98 314 *eP* **P 03 11 05.5 +0.2**
OJC Ojcow 62.98 314 *eP* **P 03 11 05.6 +0.3**
KECS Kecovo 63.06 312 *eP* **P 03 11 06.0 +0.1**
KECS pmax pmax
comp=Z,5.0nm,1.3s,mb4.5
KECS Kecovo 63.06 312 *eP* **P 03 11 06.0 +0.1**
comp=Z,4.8nm,1.3s,mb4.5
KECS Kecovo 63.06 312 *eP* **P 03 11 06.0 +0.1**
ZKR Zakros 63.35 296 *eP* **P 03 11 08.3 +0.3**
HFS Hagfors 63.46 326 P **P 03 11 07.7 -0.6**
comp=Z,3.1nm,0.6s,mb4.7,baz=95,slow=9.1,SNR=7.6
NPS Neapolis 63.76 297 *eP* **P 03 11 10.4 -0.3**
KLBR Kellerberrin 63.86 167 *eP* **P 03 11 11.1 -0.1**
comp=Z,13nm,0.5s,mb5.2
LAST Lasithi 63.90 297 *eP* **P 03 11 12.0 +0.3**
VYHS Vyhne 64.10 313 *eP* **P 03 11 12.8 +0.1**
VYHS *e* 03 11 27.6
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
VYHS Vyhne 64.10 313 *eP* **P 03 11 12.8 +0.1**
comp=Z,6.0nm,1.2s,mb4.5
VYHS *e* 03 11 27.6
VYHS Vyhne 64.10 313 *eP* **P 03 11 12.8 +0.1**
VYHS *e* 03 11 27.6
OKC Ostrava-Krasne 64.11 314 *eP* **P 03 11 13.7 +0.9**
OKC MLR MLR
comp=Z,200nm,12.1s,MS4.5
OKC Ostrava-Krasne 64.11 314 *eP* **P 03 11 13.7 +0.9**
OKC AMS AMS 03 40 10.0
comp=Z,200nm,12.1s
IDI Anoyia 64.31 297 *eP* **P 03 11 13.6 -0.7**
BUD Budapest 64.31 311⇓ *eP* **P 03 11 15.0 +0.9**
KOLL Kolacno 64.35 313 *eP* **P 03 11 14.5 +0.1**
KOLL *e* 03 11 22.1
KOLL Kolacno 64.35 313 *eP* **P 03 11 14.5 +0.1**
KOLL *e*pP pP 03 11 22.1 +4.5
NB2 NORSAR Subarra 64.36 327 P **P 03 11 11.8 -2.4**
comp=Z,5.3nm,0.8s,mb4.6,baz=74,slow=6.9
NOA NORSAR Array B 64.36 327 P **P 03 11 12.8 -1.4**
comp=Z,4.4nm,0.9s,mb4.5,baz=73,slow=6.5,SNR=9.2
NOA NORSAR Array B 64.36 327 P **P 03 11 12.8 -1.4**
LIT Litokhoron 64.39 303 *eP* **P 03 11 13.9 -0.9**
SIVA Sivas 64.47 297 *eP* **P 03 11 15.2 -0.2**
DID Didima 64.76 300 *eP* **P 03 11 14.4 -2.8**
VAM Vamos 64.79 297 *eP* **P 03 11 17.0 -0.5**
AGG Agios Georgios 64.89 302 *eP* **P 03 11 16.9 -1.1**
THL Klokotos Trika 64.92 302 *eP* **P 03 11 17.0 -1.3**
SMOL Smolenice 64.98 313 *eP* **P 03 11 18.9 +0.4**
SMOL Smolenice 64.98 313 *eP* **P 03 11 18.9 +0.4**
KARN Karanos 65.00 298 *eP* **P 03 11 18.8 -0.1**
DPC Dobruska-Polom 65.06 315 *eP* **P 03 11 19.3 +0.4**
DPC MLR MLR
comp=Z,200nm,14.9s,MS4.4
DPC Dobruska-Polom 65.06 315 *eP* **P 03 11 19.3 +0.4**
DPC AMS AMS 03 40 50.0
comp=Z,200nm,14.9s
GVD Gavdhos 65.08 297 *eP* **P 03 11 18.9 -0.5**
VLI Veliai 65.26 299 *eP* **P 03 11 18.2 -2.3**
GUR Goura 65.27 301 *eP* **P 03 11 18.7 -1.8**
ZST Bratislava 65.29 313 *eP* **P 03 11 18.9 -1.6**
ZST Bratislava 65.29 313 *eP* **P 03 11 18.9 -1.6**
CTA Charters Tower 65.39 136 *eP* **P 03 11 21.0 -0.4**
comp=Z,9.4nm,0.9s,mb4.8
EFP Efpalio 65.41 301 *eP* **P 03 11 20.3 -1.1**
ITM Ithomi 65.85 300 *eP* **P 03 11 22.4 -1.9**
FORT Forrest 65.86 157 *eP* **P 03 11 24.5 +0.3**
comp=Z,43nm,0.8s,mb5.5
FORT Forrest 65.86 157 *eP* **P 03 11 24.5 +0.3**
comp=Z,37nm,0.8s,mb5.5
RLS Riolos of Patr 65.86 301 *eP* **P 03 11 23.3 -1.1**
TREC Trest 65.92 314 *eP* **P 03 11 25.3 +0.7**
TREC MLR MLR
comp=Z,200nm,17.2s,MS4.4
TREC Trest 65.92 314 *eP* **P 03 11 25.3 +0.7**
TREC AMS AMS 03 40 50.0
comp=Z,200nm,17.2s
PVCC Panska Ves 66.05 316 *eP* **P 03 11 26.1 +0.7**
PVCC MLR MLR
comp=Z,200nm,15.1s,MS4.4
PVCC Panska Ves 66.05 316 *eP* **P 03 11 26.1 +0.7**
PVCC AMS AMS 03 41 40.0
comp=Z,200nm,15.1s
PYL PYLOS 66.09 300 *eP* **P 03 11 23.8 -2.1**
PRU Pruhonice 66.26 315 *eP* **P 03 11 27.3 +0.6**
PRU MLR MLR
comp=Z,300nm,17.4s,MS4.6
PRU Pruhonice 66.26 315 *eP* **P 03 11 27.3 +0.6**
PRU AMS AMS 03 41 20.0
comp=Z,300nm,17.4s
BRG Berggiesshubel 66.30 316 *eP* **P 03 11 26.7 -0.3**
comp=Z,8.0nm,1.1s,mb4.7
BRG Berggiesshubel 66.30 316 *eP* **P 03 11 26.7 -0.3**
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
VLS Valsamata 66.46 301 *eP* **P 03 11 26.6 -1.6**
CLL Collm 66.70 317 *eP* **P 03 11 29.2 -0.3**
comp=Z,8.0nm,1.1s,mb4.7
CLL Collm 66.70 317 *i P* **P 03 11 29.4 -0.1**
CLL *i* pP 03 11 33.2 +0.4
CLL pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
CLL MLR MLR
comp=Z,200nm,17.3s,MS4.4
CLL Collm 66.70 317 *i P* **P 03 11 29.4 -0.1**
comp=Z,8.0nm,1.1s,mb4.7
CLL *i* pP 03 11 33.2 +0.4
CLL LR LR
comp=Z,200nm,17.3s,MS4.4
CLL Collm 66.70 317 *i P* **P 03 11 29.4 -0.1**
comp=Z,8.0nm,1.1s,mb4.7
CLL *i* pP pP 03 11 33.2 +0.4
CLL *e*PP PP 03 13 56.0 -0.1
KHC Kasperske Hory 67.15 315 *eP* **P 03 11 32.6 +0.2**
KHC MLR MLR
comp=Z,200nm,15.1s,MS4.5
KHC Kasperske Hory 67.15 315 *eP* **P 03 11 32.6 +0.2**
KHC AMS AMS 03 42 00.0
comp=Z,200nm,15.1s
GEC2 GERESS Array S 67.18 314 *eP* **P 03 11 32.6 0.0**
comp=Z,7.0nm,1.2s,mb4.6
GEC2 GERESS Array S 67.18 314 *eP* **P 03 11 32.6 0.0**
GEC2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
GERES GERESS Array B 67.18 314 P **P 03 11 33.0 +0.4**
comp=Z,2.3nm,0.8s,mb4.2,baz=76,slow=5.6,SNR=11
TTA Tatalina 67.20 29 *eP* **P 03 11 32.2 -0.3**
TTA pmax pmax
comp=Z,16nm,1.2s,mb4.9
TTA Tatalina 67.20 29 *eP* **P 03 11 32.2 -0.3**
comp=Z,16nm,1.2s,mb4.9
BSEG Bad Segeberg 67.26 320 *eP* **P 03 11 32.9 -0.1**
comp=Z,17nm,1.1s,mb5.0
BSEG Bad Segeberg 67.26 320 *eP* **P 03 11 32.9 -0.1**
BSEG pmax pmax
comp=Z,17nm,1.1s,mb5.0
TANN Tannenbergstha 67.35 316 *eP* **P 03 11 33.5 -0.1**
comp=Z,6.0nm,1.1s,mb4.5
PDKS Podkum 67.39 311 *eP* **P 03 11 34.0 0.0**
NKC Novy Kostel 67.42 316 *eP* **P 03 11 34.5 +0.4**
NKC MLR MLR
comp=Z,200nm,12.8s,MS4.5
NKC Novy Kostel 67.42 316 *eP* **P 03 11 34.5 +0.4**
NKC AMS AMS 03 42 10.0
comp=Z,200nm,12.8s
BOJS Bojanci 67.44 310 *i P* **P 03 11 34.4 +0.1**
COLD Coldfoot 67.57 24 *eP* **P 03 11 34.8 +0.1**
comp=Z,22nm,0.9s,mb5.2
WET Wettzell 67.57 315 *eP* **P 03 11 35.4 +0.3**
comp=Z,10.0nm,1.5s,mb4.6
WET Wettzell 67.57 315 *eP* **P 03 11 35.4 +0.3**
WET pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
ROTZ Rotzenmuhle 67.75 316 *eP* **P 03 11 36.5 +0.3**
comp=Z,11nm,1.0s,mb4.8
MOX Moxa 67.76 317 *eP* **P 03 11 36.3 0.0**
comp=Z,9.0nm,1.4s,mb4.6
MOX
comp=Z,200nm,17.0s
MOX Moxa 67.76 317 *eP* **P 03 11 35.7 -0.6**
comp=Z,6.0nm,1.3s,mb4.5
MOX Moxa 67.76 317 *eP* **P 03 11 36.3 0.0**
MOX pmax pmax
comp=Z,12nm,1.4s,mb4.7
MOX MLR MLR
comp=Z,9μm,17.0s
NRDL Niedersach Rie 67.93 319 *eP* **P 03 11 37.2 0.0**
comp=Z,18nm,1.3s,mb4.9
CLZ Clausthal 68.03 318 *eP* **P 03 11 37.8 -0.1**
comp=Z,12nm,1.0s,mb4.9
CLZ Clausthal 68.03 318 *eP* **P 03 11 37.8 -0.1**
CLZ pmax pmax
comp=Z,12nm,1.0s,mb4.9
CADS Cadrg 68.14 312 *eP* **P 03 11 37.9 -0.9**
RJOB Jochberg 68.16 313 *eP* **P 03 11 38.8 0.0**
comp=Z,5.0nm,1.1s,mb4.5
ROBS Robic 68.28 312 *eP* **P 03 11 38.5 -1.1**
GRA1 Grafenberg Arr 68.36 316 *eP* **P 03 11 40.5 +0.5**
comp=Z,24nm,1.2s,mb5.1
GRA1 LR LR
comp=Z,100nm,21.7s,MS4.0
GRF Grafenberg Arr 68.36 316 *eP* **P 03 11 40.5 +0.5**
comp=Z,24nm,1.2s,mb5.1
GRF *e*L 03 42 33.6
comp=Z,134nm,21.7s
GRF Grafenberg Arr 68.36 316 *eP* **P 03 11 40.5 +0.5**
GRF pmax pmax
comp=Z,24nm,1.2s,mb5.1
GRF MLR MLR
comp=Z,100nm,21.7s,MS4.0
GRF Grafenberg Arr 68.36 316 *eP* **P 03 11 40.5 +0.5**
GRF pmax pmax
comp=Z,24nm,1.2s,mb5.1
GRF MLR MLR
comp=Z,100nm,21.7s,MS4.0
BPAW Bear Paw Mtn. 68.72 27 *eP* **P 03 11 41.7 -0.4**
comp=Z,13nm,0.8s,mb4.9
PPLA Purkeypile 68.80 28 *eP* **P 03 11 42.5 0.0**
comp=Z,21nm,0.8s,mb5.1
FUR Furstenfeldbru 68.93 314 *eP* **P 03 11 44.2 +0.6**
comp=Z,19nm,0.8s,mb5.1
FUR Furstenfeldbru 68.93 314 *eP* **P 03 11 44.2 +0.6**
FUR pmax pmax
comp=Z,19nm,0.8s,mb5.1
COLA College 69.54 26 *eP* **P 03 11 47.1 0.0**
COLA pmax pmax
comp=Z,37nm,0.8s,mb5.4
COLA College 69.54 26 *eP* **P 03 11 47.1 0.0**
comp=Z,37nm,0.8s,mb5.4
RSO Redoubt South 69.67 31 *eP* **P 03 11 49.0 +1.0**
MCK McKinley 69.69 27 *eP* **P 03 11 48.0 -0.1**
MCK pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MCK McKinley 69.69 27 *eP* **P 03 11 48.0 -0.1**
comp=Z,10nm,0.8s,mb4.8
CEL Celeste 69.83 303 *eP* **P 03 11 49.4 0.0**
comp=Z,38nm,1.0s,mb5.3
BUG Bochum-Univer 69.96 319 *eP* **P 03 11 49.9 0.0**
comp=Z,10.0nm,1.1s,mb4.7
KMBO Kilima Mbogo 70.51 256 P **P 03 11 54.2 +0.3**
comp=Z,1.3nm,0.6s,mb4.0,baz=48,slow=16,SNR=4.7
KMBO Kilima Mbogo 70.51 256 *ceP* **P 03 11 55.7 +1.8**
KMBO pmax pmax
comp=Z,1.0nm,0.6s
KMBO Kilima Mbogo 70.51 256 P **P 03 11 54.2 +0.3**
BFO Black Forest 70.66 315 *eP* **P 03 11 54.0 -0.3**
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 70.66 315 *eP* **P 03 11 54.0 -0.3**
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KDAK Kodiak Island 71.00 33 P **P 03 11 55.8 -0.4**
comp=Z,22nm,0.8s,mb5.1
KDAK Kodiak Island 71.00 33 *i P* **P 03 11 55.7 -0.5**
CDF Champ du Feu 71.26 316⇑ *i P* **P 03 11 57.5 -0.4**
comp=Z,25nm,1.2s,mb4.7
CDF Champ du Feu 71.26 316⇑ *i P* **P 03 11 57.5 -0.4**
CDF pmax pmax
comp=Z,13nm,1.2s,mb4.7
CDF Champ du Feu 71.26 316⇑ *i P* **P 03 11 57.5 -0.4**
comp=Z,13nm,1.2s,mb4.7
WLF Walferdange 71.37 317 P **P 03 11 59.4 +0.9**
comp=Z,16nm,1.3s,mb4.8
WLF Walferdange 71.37 317 *eP* **P 03 11 59.0 +0.5**
comp=Z,23nm,1.0s,mb5.1
WLF Walferdange 71.37 317 *eP* **P 03 11 59.2 +0.7**
WLF pmax pmax
comp=Z,16nm,1.0s,mb4.9
WLF Walferdange 71.37 317 *eP* **P 03 11 59.2 +0.6**
comp=Z,16nm,1.0s,mb4.9
ECH Echery 71.41 315 *eP* **P 03 11 58.4 -0.4**
ECH pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
ECH Echery 71.41 315 *eP* **P 03 11 58.4 -0.4**
comp=Z,5.9nm,1.1s,mb4.4
BCLA Clavier 71.52 318 P **P 03 11 59.6 +0.1**
comp=Z,9.8nm,2.2s,mb4.3
SNF Seneffe 72.06 319 P **P 03 12 04.7 +2.0**
DOU Dourbes 72.08 318 P **P 03 12 02.8 +0.1**
comp=Z,5.2nm,1.7s,mb4.2
INK Inuvik 72.22 19 P **P 03 12 02.6 -0.7**
comp=Z,24nm,0.8s,mb5.2,baz=332,slow=6.4,SNR=33
INK Inuvik 72.22 19 P **P 03 12 02.7 -0.6**
INK pmax pmax
comp=Z,24nm,0.8s
INK Inuvik 72.22 19 *eP* **P 03 12 02.8 -0.5**
comp=Z,26nm,0.9s,mb5.2
STKA Stephens Creek 72.31 147 *eP* **P 03 12 03.5 -0.8**
comp=Z,10nm,0.6s,mb4.9
STKA Stephens Creek 72.31 147 P **P 03 12 03.6 -0.7**
comp=Z,12nm,0.6s,mb5.0,baz=330,slow=6.3,SNR=23
STKA Stephens Creek 72.31 147 *eP* **P 03 12 03.7 -0.6**
comp=Z,6.9nm,1.3s,mb4.4
BMRM Bremner River 72.87 28 *eP* **P 03 12 07.4 +0.1**
comp=Z,45nm,0.8s,mb5.5
LPL La Plagne 72.88 313⇑ *iP* **P 03 12 08.1 +0.4**
comp=Z,18nm,0.6s,mb4.9
LPL La Plagne 72.88 313⇑ *iP* **P 03 12 08.1 +0.4**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LPL La Plagne 72.88 313⇑ *iP* **P 03 12 08.1 +0.4**
comp=Z,8.8nm,0.6s,mb4.9
BNI Bardonecchia 73.13 313 *eP* **P 03 12 09.2 0.0**
BNI pmax pmax
comp=Z,12nm,1.1s,mb4.7
BNI Bardonecchia 73.13 313 *eP* **P 03 12 09.2 +0.1**

comp=Z,12nm,1.1s,mb4.7
EKA Eskdalemuir Ar 73.64 325 P **P** 03 12 11.7 -0.3
comp=Z,2.4nm,1.0s,mb4.1,baz=76,slow=3.5,SNR=4.8
RES Resolute Bay 73.69 5 P **P** 03 12 11.8 -0.2
comp=Z,9.3nm,0.9s,mb4.7,baz=346,slow=5.7,SNR=22
RES Resolute Bay 73.69 5 *e*P **P** 03 12 12.1 +0.1
RES pmax pmax
comp=Z,13nm,1.0s,mb4.8
RES Resolute Bay 73.69 5 *e*P **P** 03 12 12.1 +0.1
comp=Z,13nm,1.0s,mb4.8
SMF Signal de Mont 74.14 315⇑*i*P **P** 03 12 14.4 -0.6
comp=Z,32nm,1.0s,mb4.9
SMF Signal de Mont 74.14 315⇑*i*P **P** 03 12 14.4 -0.6
SMF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SMF Signal de Mont 74.14 315⇑*i*P **P** 03 12 14.4 -0.6
comp=Z,16nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.29 315⇑*i*P **P** 03 12 21.5 -0.3
comp=Z,28nm,1.2s,mb4.8
TCF Toulx Ste Croi 75.29 315⇑*i*P **P** 03 12 21.5 -0.3
TCF pmax pmax
comp=Z,14nm,1.2s,mb4.8
TCF Toulx Ste Croi 75.29 315⇑*i*P **P** 03 12 21.5 -0.3
comp=Z,14nm,1.2s,mb4.8
KEST Kesra 75.65 303 P **P** 03 12 24.1 +0.1
comp=Z,1.7nm,0.9s,mb4.0,baz=51,slow=6.5,SNR=3.1
CAF Calviac 76.06 314⇑*i*P **P** 03 12 26.3 +0.1
comp=Z,17nm,1.0s,mb4.6
CAF Calviac 76.06 314⇑*i*P **P** 03 12 26.3 +0.1
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CAF Calviac 76.06 314⇑*i*P **P** 03 12 26.3 +0.1
comp=Z,8.6nm,1.0s,mb4.6
ARPS Mount Arapiles 76.50 149 *e*P **P** 03 12 28.1 -0.5
comp=Z,34nm,0.7s,mb5.4
SKAG Skagway 77.46 27 *e*P **P** 03 12 34.1 +0.4
comp=Z,23nm,0.8s,mb5.2
TOO Toolangi 78.81 147 *e*P **P** 03 12 41.1 -0.3
SFJD Kangerlussuaq 80.18 350 P **P** 03 12 48.1 -0.5
comp=Z,11nm,0.8s,mb4.9,baz=352,slow=6.9,SNR=5.0
SFJD Kangerlussuaq 80.18 350⇓*i*P **P** 03 12 47.9 -0.7
SFJD pmax pmax
comp=Z,11nm,0.8s,mb4.8
SFJD Kangerlussuaq 80.18 350 P **P** 03 12 48.1 -0.5
SFJD Kangerlussuaq 80.18 350⇓*i*P **P** 03 12 47.9 -0.7
comp=Z,11nm,0.8s,mb4.8
YKA Yellowknife Ar 81.74 17 P **P** 03 12 56.3 -0.7
comp=Z,7.0nm,0.7s,mb4.7,baz=329,slow=5.2,SNR=33
MVO Moncorvo 83.69 315 *e*P **P** 03 13 08.1 +0.5
comp=Z,25nm,1.8s,mb5.0
FRB Frobisher Bay 85.19 357 P **P** 03 13 13.9 -0.8
comp=Z,2.9nm,0.7s,mb4.5,baz=354,slow=5.2,SNR=7.5
PBAR Barrancos 85.47 312 *e*P **P** 03 13 16.8 +0.2
comp=Z,23nm,1.8s,mb5.0
EVO Evora 85.87 313 *e*P **P** 03 13 19.1 +0.5
comp=Z,26nm,1.9s,mb5.1
EDM Edmonton 90.00 21 *e*P **P** 03 13 38.6 +0.5
FFC Flin Flon 91.64 15 P **P** 03 13 45.1 -0.6
comp=Z,59nm,0.8s,mb6.0,SNR=5.3
FFC Flin Flon 91.64 15 *i*P **P** 03 13 45.3 -0.4
FFC Flin Flon 91.64 15 *e*P **P** 03 13 45.0 -0.7
comp=Z,8.6nm,0.9s,mb5.1
TOA0 Torodi Ar. Sit 93.20 287 *e*P **P** 03 13 53.3 -0.4
TORD Torodi Ar. Bea 93.20 287 P **P** 03 13 53.0 -0.7
comp=Z,3.8nm,0.9s,mb4.8,baz=53,slow=4.4,SNR=15
TORD PP PP 03 17 40.6 +3.7
comp=Z,1.1nm,1.0s,baz=51,slow=5.2,SNR=4.0
SCHQ Schefferville 93.34 354 P **P** 03 13 55.6 -0.6
comp=Z,5.9nm,0.9s,mb5.0,baz=6.4,slow=2.5,SNR=5.4
YBMT Yellow Bay 94.37 24 *e*P **P** 03 13 59.8 +1.3
comp=Z,1.0nm,0.3s,mb4.7
SLMT Seeley Lake 95.08 24 *e*P **P** 03 14 02.7 +1.0
comp=Z,10.0nm,1.0s,mb5.2
BOSA Boshof 95.35 240 P **P** 03 14 01.6 -1.6
comp=Z,4.8nm,0.9s,mb4.9,baz=73,slow=6.4,SNR=7.2
HRY Holter Researc 96.12 24 *e*P **P** 03 14 07.1 +0.7
comp=Z,4.7nm,1.0s,mb4.9
PDAR Pinedale Array 100.35 24 P Pdif 03 14 25.0 -0.4
comp=Z,0.2nm,0.6s,baz=330,slow=6.7,SNR=2.2
TXAR Lajitas Array 114.46 26 PKP PKiKP 03 19 18.6 -0.5
comp=Z,0.4nm,0.9s,baz=95,slow=1.0,SNR=3.2
TXAR PKKPbc PKKPbc 03 29 56.3 -1.4
comp=Z,0.5nm,0.8s,baz=152,slow=5.7,SNR=5.7
QSPA South Pole Qui 120.96 180 *e*PKPdf PKPdf 03 19 29.0 -1.0
ROSC El Rosal 144.10 356 PKP PKPdf 03 20 14.3 -1.0
comp=Z,11nm,0.6s,baz=109,slow=2.2,SNR=9.7
ROSC El Rosal 144.10 356 *e*PKPdf PKPdf 03 20 13.7 -1.6
CAM4 Nova Friburgo 148.64 278⇑*i*P PKPdf 03 20 23.9 +1.3
CAM4 *i* 03 20 25.8
CAM4 *i* 03 20 32.0
CAM4 *i* 03 20 34.6
CAM4 *i* 03 20 51.9
CAM4 *i* 03 20 57.5
CAM4 *i* 03 20 59.9
OTAV Otavalo 148.69 4 *e*PKPbc PKPbc 03 20 27.5 +0.8
CPUP Villa Florida 162.60 281 PKP PKPdf 03 20 39.7 -1.4
comp=Z,0.5nm,0.4s,baz=319,slow=1.3,SNR=3.9
CPUP PKPab PKPab 03 21 27.9 -1.5
comp=Z,1.7nm,0.9s,baz=135,slow=5.7,SNR=3.7
CPUP Villa Florida 162.60 281 PKP PKPdf 03 20 39.7 -1.4
CPUP PKPab PKPab 03 21 27.9 -1.5
LPAZ La Paz 163.36 331 PKP PKPdf 03 20 42.5 +0.4
comp=Z,3.6nm,1.1s,baz=42,slow=3.7,SNR=8.6
LPAZ PKPab PKPab 03 21 31.2 -1.4
comp=Z,1.8nm,1.0s,baz=6.3,slow=9.2,SNR=2.3
LPAZ La Paz 163.36 331 PKP PKPdf 03 20 42.5 +0.4
LPAZ PKPab PKPab 03 21 31.2 -1.4
PLCA Paso Flores 169.37 205 PKP PKPdf 03 20 46.4 +0.4
comp=Z,3.5nm,1.1s,baz=198,slow=6.3,SNR=4.3
PLCA PKPab PKPab 03 21 56.5 -2.0
comp=Z,2.8nm,1.2s,baz=239,slow=7.3,SNR=2.9
PLCA Paso Flores 169.37 205 PKP PKPdf 03 20 46.4 +0.4
PLCA PKPab PKPab 03 21 56.5 -2.0

*ISCJB **13** 03:09:52.3±0.8, 31°.29N×0°.04×104°.00E±0°.09, h10km±6km, mb3.5/5, Error ellipse: s-maj=13.2km s-min=6.2km az=10.8*
*IDC **13** 03:09:52.3±1.1, 31°.15N×103°.74E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.6/6, Error ellipse: s-maj=42.7km s-min=20.2km az=55.0*
*BJI **13** 03:09:58.3, 31°.13N×103°.64E, h15km, ML3.5/9*
ISC 13 03:09:55.2±0.7, 31°.24N±0°.04×103°.86E±0°.10, h17km±6km, n10, σ0°60/13, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.34**	**195**	Pg	**Pg**	**03 10 01.8**	**-0.4**
CD2				Sg	**Sg**	**03 10 07.4**	**+0.5**
CD2				smax			
	comp=N,4μm,0.6s						
LZH	**Lanzhou**	**4.84**	**360**	*e*Pg	**Pg**	**03 11 28.4**	**+0.6**
LZH				Sg	**Sg**	**03 12 30.2**	**-0.3**
LZH				smax			
	comp=N,54nm,0.7s						
LZH				smax			
	comp=E,43nm,0.7s						
XAN	**Xi'an**	**5.10**	**55**	Pg	**Pg**	**03 11 32.4**	**-0.5**
XAN				smax			
	comp=N,92nm,0.7s						
XAN				smax			
	comp=E,61nm,0.9s						
GYA	**Guiyang**	**5.36**	**152**	Pg	**Pg**	**03 11 37.5**	**-0.3**
GYA				Sg	**Sg**	**03 12 37.3**	**-10**
GYA				smax			
	comp=N,130nm,0.7s						
GYA				smax			
	comp=E,100nm,0.7s						
KSRS	**Korea Array**	**20.79**	**66**	P	**P**	**03 14 37.0**	**+1.6**
	comp=E,1.9nm,0.7s,baz=259,slow=9.9,SNR=4.6						
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**03 14 56.8**	**+0.5**
	comp=E,0.4nm,0.6s,mb3.0,baz=124,slow=7.2,SNR=3.1						
KURK	**Kurchatov**	**27.02**	**323**	P	**P**	**03 15 35.5**	**-0.7**
	comp=E,0.3nm,0.3s,mb3.3,baz=124,slow=8.9,SNR=3.1						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**03 19 51.7**	**-0.3**
	comp=E,1.9nm,0.4s,mb4.5,baz=338,slow=7.8,SNR=56						
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**03 20 12.3**	**-0.2**
	comp=E,0.5nm,0.6s,mb3.8,baz=336,slow=6.1,SNR=6.4						
YKA	**Yellowknife Ar**	**81.63**	**17**	P	**P**	**03 22 11.6**	**-0.3**
	comp=E,0.2nm,0.6s,mb3.2,baz=326,slow=5.3,SNR=5.7						

*ISCJB **13** 03:11:37.5±0.3, 40°.32N±0°.02×42°.22E±0°.02, h5km±5km, Error ellipse: s-maj=3.3km s-min=3.0km az=43.1*
*NEIC **13** 03:11:38.0, 40°.32N×42°.20E, h6km, MD3.1(DDA), MD3.3(ISK), ML2.9(TIF), After DDA.*
*DDA **13** 03:11:37.4, 40°.30N×42°.25E, h7km±2km, Md3.1*
*ISK **13** 03:11:37.2, 40°.34N×42°.20E, h4km, MD3.3*
*CSEM **13** 03:11:38.0±0.2, 40°.31N×42°.18E, h2km, MD3.1, Error ellipse: s-maj=4.2km s-min=3.8km az=17.0*
ISC 13 03:11:38.4±0.3, 40°.31N±0°.02×42°.21E±0°.03, h10km±4km, n60, σ0°96/81, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOMI	**Horasan**	**0.35**	**221**	*i* P	**Pg**	**03 11 44.3**	**-1.0**
HOMI				*e*S	**Sg**	**03 11 50.4**	**+0.3**
DDEM	**Demirkent**	**0.68**	**329**	*i* P	**Pg**	**03 11 51.3**	**-0.2**
DDEM				*e*S	**Sg**	**03 12 01.5**	**+1.2**
DDEM	**Demirkent**	**0.68**	**329**	*i* P	**Pg**	**03 11 51.3**	**-0.2**
DDEM				*e*S	**Sg**	**03 12 01.5**	**+1.1**
KARS	**Kars**	**0.73**	**64**	PG	**Pg**	**03 11 52.0**	**-0.5**
KARS	**Kars**	**0.73**	**64**	*i* Pg	**Pg**	**03 11 52.0**	**-0.5**
ERZM	**Erzurum**	**0.77**	**238**	*i* P	**Pg**	**03 11 52.5**	**-0.6**
ERZM				*e*S	**Sg**	**03 12 01.9**	**-1.2**
ERZM	**Erzurum**	**0.77**	**238**	*i* P	**Pg**	**03 11 52.5**	**-0.6**
ERZM				*e*S	**Sg**	**03 12 01.9**	**-1.2**
EZM	**Erzurum**	**0.77**	**238**	PG	**Pg**	**03 11 52.7**	**-0.5**
EZM				*e*SG	**Sg**	**03 12 04.1**	**+1.0**
DAGI	**Agillar**	**0.80**	**344**	*i* P	**Pg**	**03 11 53.3**	**-0.5**
DAGI				*e*S	**Sg**	**03 12 05.2**	**+1.0**
DBAD	**Bademkaya**	**0.81**	**331**	*i* P	**Pg**	**03 11 53.5**	**-0.4**
DBAD	**Bademkaya**	**0.81**	**331**	*i* P	**Pg**	**03 11 53.5**	**-0.5**
DIGO	**Kars**	**0.89**	**83**	*i* P	**Pg**	**03 11 54.2**	**-1.4**
DIGO				*e*S	**Sg**	**03 12 07.5**	**+0.2**
DIGO	**Kars**	**0.89**	**83**	*i* P	**Pg**	**03 11 54.2**	**-1.4**
DIGO				*e*S	**Sg**	**03 12 07.5**	**+0.3**
ARTV	**Artvin**	**0.90**	**346**	*i* P	**Pg**	**03 11 55.0**	**-0.7**
ARTV	**Artvin**	**0.90**	**346**	*i* P	**Pg**	**03 11 55.0**	**-0.7**
AGRB	**Hanur-Agry**	**0.95**	**141**	PG	**Pg**	**03 11 56.2**	**-0.4**
AGRB				*e*SG	**Sg**	**03 12 10.3**	**+1.3**
AGRB	**Hanur-Agry**	**0.95**	**141**	*i* Pg	**Pg**	**03 11 56.2**	**-0.4**
AGRB				*e*Sg	**Sg**	**03 12 10.3**	**+1.3**
DBOC	**Borcka**	**1.11**	**338**	*i* P	**Pg**	**03 11 58.6**	**-1.1**
DBOC				*e*S	**Sg**	**03 12 14.8**	**+0.6**
DBOC	**Borcka**	**1.11**	**338**	*i* P	**Pg**	**03 11 58.6**	**-1.2**
DBOC				*e*S	**Sg**	**03 12 14.8**	**+0.6**
BCA	**Borcka**	**1.22**	**339**	*e*PN	**Pn**	**03 12 00.3**	**-1.2**
BCA	**Borcka**	**1.22**	**339**	*e*Pn	**Pn**	**03 12 00.3**	**-1.2**
PZAR	**Pazar-Rize**	**1.32**	**311**	*e*PN	**Pn**	**03 12 02.7**	**-0.2**
PZAR	**Pazar-Rize**	**1.32**	**311**	*e*Pn	**Pn**	**03 12 02.7**	**-0.2**
KOPT	**Kop Dagi**	**1.35**	**258**	*e*P	**Pn**	**03 12 03.7**	**+0.4**
KOPT	**Kop Dagi**	**1.35**	**258**	*e*P	**Pn**	**03 12 03.7**	**+0.4**
DYDN	**Diyadin**	**1.37**	**124**	*e*P	**Pg**	**03 12 04.5**	**-0.2**
DYDN				*e*S	**Sg**	**03 12 23.7**	**+1.3**
DYDN	**Diyadin**	**1.37**	**124**	*e*P	**Pg**	**03 12 04.4**	**-0.3**
DYDN				*e*S	**Sg**	**03 12 23.7**	**+1.2**
CLDR	**Caldiran**	**1.76**	**131**	*e*PN	**Pb**	**03 12 09.8**	**-0.9**
CLDR	**Caldiran**	**1.76**	**131**	*e*Pn	**Pb**	**03 12 09.8**	**-0.9**
VANB	**Van**	**1.94**	**152**	*e*PN	**Pb**	**03 12 12.7**	**-1.2**
VANB	**Van**	**1.94**	**152**	*e*Pn	**Pb**	**03 12 12.7**	**-1.2**
GNI	**Garni**	**1.94**	**94**	*e*PN	**Pb**	**03 12 12.8**	**-1.1**
GNI	**Garni**	**1.94**	**94**	*e*Pn	**Pb**	**03 12 13.2**	**-0.6**
GNI	**Garni**	**1.94**	**94**	*e*Pn	**Pb**	**03 12 12.8**	**-1.1**
BINT	**Bingol**	**1.96**	**223**	*e*PN	**Pn**	**03 12 12.0**	**+0.4**
BINT	**Bingol**	**1.96**	**223**	*e*Pn	**Pn**	**03 12 12.0**	**+0.3**
MACK	**Trabzon**	**1.96**	**290**	*e*P	**Pb**	**03 12 14.7**	**+0.5**
KTUT	**Trabzon**	**1.98**	**291**	*e*PN	**Pn**	**03 12 12.2**	**+0.2**
KTUT	**Trabzon**	**1.98**	**291**	*e*Pn	**Pn**	**03 12 12.2**	**+0.2**
GUMT	**Gumushane**	**2.09**	**275**	*e*PN	**Pn**	**03 12 13.1**	**-0.4**
GUMT	**Gumushane**	**2.09**	**275**	*e*Pn	**Pn**	**03 12 13.1**	**-0.4**
GOR	**Gori**	**2.20**	**40**	P	**Pg**	**03 12 20.7**	**+0.1**
GOR				S	**Sg**	**03 12 54.5**	**+5.4**
GOR	**Gori**	**2.20**	**40**	P	**Pg**	**03 12 20.6**	**0.0**
KEH	**Kehvi**	**2.38**	**32**	P	**Pb**	**03 12 20.8**	**-0.5**
KEH				S	**Sg**	**03 12 57.0**	**+2.2**
TBLG	**Delisi**	**2.38**	**53**	P	**Pb**	**03 12 19.9**	**-1.4**
TBLG				S	**Sg**	**03 12 57.7**	**+2.8**
TBLG	**Delisi**	**2.38**	**53**	P	**Pb**	**03 12 19.9**	**-1.4**
MTA	**Mtatsminda**	**2.39**	**54**	P	**Pg**	**03 12 24.8**	**+0.5**
MTA				S	**Sg**	**03 13 02.7**	**+7.4**
ONI	**Oni**	**2.46**	**22**	P	**Pb**	**03 12 21.3**	**-1.4**
ONI				S	**Sg**	**03 12 57.4**	**-0.1**
ONI	**Oni**	**2.46**	**22**	P	**Pb**	**03 12 21.3**	**-1.4**
ONI				S	**Sg**	**03 12 57.3**	**-0.1**
ONI	**Oni**	**2.46**	**22**	P	**Pb**	**03 12 21.3**	**-1.4**
BEST	**Besiri**	**2.53**	**197**	*e*P	**Pn**	**03 12 21.5**	**+2.0**
BEST	**Besiri**	**2.53**	**197**	*e*P	**Pn**	**03 12 21.5**	**+2.0**
PTK	**Pertek**	**2.60**	**238**	*e*PN	**Pn**	**03 12 21.6**	**+1.2**
PTK	**Pertek**	**2.60**	**238**	*e*Pn	**Pn**	**03 12 21.7**	**+1.2**
ESPY	**Espiye-Giresun**	**2.72**	**284**	*e*PN	**Pn**	**03 12 22.1**	**0.0**
ESPY	**Espiye-Giresun**	**2.72**	**284**	*e*Pn	**Pn**	**03 12 22.1**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.97**	**230**	*e*PN	**Pn**	**03 12 26.9**	**+1.3**
SVRC	**Sivrice-ELAZID**	**2.97**	**230**	*e*Pn	**Pn**	**03 12 26.9**	**+1.4**
MALT	**Malatya**	**3.55**	**237**	*e*Pn	**Pn**	**03 12 34.1**	**+0.6**
MALT	**Malatya**	**3.55**	**237**	*e*Pn	**Pn**	**03 12 34.2**	**+0.6**

IDC 13 03:13:38.7±5.0, 31°.80N×104°.70E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/28, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=100.2km s-min=52.5km az=6.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**16.06**	**4**	Pn	Pn	03 17 26.3	+0.4
	0.0nm,0.3s,baz=183,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	**22.80**	**317**	P	P	03 18 43.0	+0.1
	0.9nm,0.9s,baz=111,slow=9.2,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	P	03 19 16.3	+0.3
	0.8nm,0.3s,baz=143,slow=10,SNR=1.5						
KURK	**Kurchatov**	**27.00**	**322**	P	P	03 19 21.9	-0.3
	0.2nm,0.3s,baz=127,slow=10,SNR=1.8						
AKTO	**Aktyubinsk**	**39.04**	**312**	P	P	03 21 07.0	0.0
	0.3nm,0.3s,baz=96,slow=10,SNR=2.1						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	P	03 25 54.2	0.0
	0.1nm,0.5s,baz=332,slow=6.2,SNR=3.0						

IDC 13 03:31:54.7±1.1, 32°.16N×104°.72E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.5/26, mbtmp3.4/7, ML2.9/1, Error ellipse: s-maj=62.9km s-min=20.3km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**15.71**	**4**	Pn	Pn	03 35 36.8	-0.5
	0.1nm,0.3s,baz=181,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**22.55**	**317**	P	P	03 36 56.3	+0.1
	0.4nm,0.6s,baz=110,slow=10,SNR=5.2						
KURK	**Kurchatov**	**26.73**	**322**	P	P	03 37 36.4	+0.7
	0.4nm,0.8s,baz=126,slow=10,SNR=3.5						
BVAR	**Borovoye Array**	**32.31**	**320**	P	P	03 38 24.6	-0.6
	0.3nm,0.3s,baz=143,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**59.06**	**147**	P	P	03 41 57.6	+0.9
	0.3nm,0.4s,baz=338,slow=7.8,SNR=8.5						
ASAR	**Alice Springs**	**62.12**	**150**	P	P	03 42 16.3	-1.3
	0.4nm,0.9s,baz=0.0,slow=8.6,SNR=3.0						
YKA	**Yellowknife Ar**	**80.53**	**17**	P	P	03 44 08.6	+0.2
	0.1nm,0.5s,baz=326,slow=4.9,SNR=4.2						

NOU 13 03:36:23.0±1.2, 21°.32S×168°.60E, h30km, MD2.7, ML3.9, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**1.79**	**242**	*e*S	Sn	03 37 10.6	-3.0
DZM	**Mont Dzumac**	**2.14**	**249**	*e*P	Pn	03 36 55.6	-1.0
DZM				*e*S	Sn	03 37 20.4	-1.7
DZM				AMP		03 37 29.7	
	comp=Z,3μm,1.1s						
NORM	**Noumea**	**2.16**	**245**	*e*P	Pn	03 36 55.8	-1.1
NORM				*e*S	Sn	03 37 20.0	-2.7
ONTRN	**Noumea**	**2.22**	**243**	*e*P	Pn	03 36 57.4	-0.4
ONTRN				*e*S	Sn	03 37 21.7	-2.4
ONTRN				AMP		03 37 25.2	
	comp=Z,766nm,0.6s						
NOUC	**Port Laguerre**	**2.27**	**250**	*e*P	Pn	03 36 57.9	-0.6
NOUC				*e*S	Sn	03 37 24.9	-0.5
NOUC				AMP		03 37 30.3	
	comp=Z,202nm,5.6s						

*ISCJB **13** 03:36:53.6±0.9, 31°.23N±0°.04×104°.09E±0°.06, h11km±7km, mb3.5/7, Error ellipse: s-maj=8.8km s-min=6.6km az=33.1*
*IDC **13** 03:36:54.0±1.1, 31°.20N×104°.05E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/25, mbtmp3.6/8, Error ellipse: s-maj=40.5km s-min=19.5km az=57.0*
*NEIC **13** 03:36:55.6±0.8, 31°.25N×104°.04E, h10km, mb4.1/1, Error ellipse: s-maj=37.7km s-min=13.5km az=64.0*
*BJI **13** 03:36:56.5, 31°.17N×103°.69E, h9km, mb4.3/1, ML3.8/6*
ISC 13 03:36:55.6±0.8, 31°.27N±0°.03×103°.90E±0°.07, h10km±6km, n13, σ1°11/17, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.37**	**199**	Pg	**Pg**	**03 37 02.0**	**-1.0**
CD2				Sg	**Sg**	**03 37 07.4**	**-0.6**
CD2				smax			
	comp=N,20μm,0.9s						
LZH	**Lanzhou**	**4.81**	**359**	*e*Pg	**Pg**	**03 38 33.1**	**+5.3**
LZH				Sg	**Sg**	**03 39 30.3**	**+0.2**
LZH				smax			
	comp=N,69nm,1.0s						
LZH				smax			
	comp=E,33nm,0.9s						
LZH				LR	LR		
	comp=E,300nm,6.5s						
LZH				LR	LR		
	comp=Z,450nm,7.8s						
XAN	**Xi'an**	**5.06**	**56**	Pg	**Pg**	**03 38 40.4**	**+7.9**
XAN				Sg	**Sg**	**03 39 37.8**	**-0.2**
XAN				smax			
	comp=N,120nm,1.1s						
XAN				smax			
	comp=E,45nm,0.9s						
GYA	**Guiyang**	**5.37**	**152**	Pg	**Pg**	**03 38 39.4**	**+1.0**
GYA				Sg	**Sg**	**03 39 49.3**	**+1.4**
GYA				smax			
	comp=N,100nm,1.0s						
GYA				smax			
	comp=E,90nm,0.8s						
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**03 40 48.1**	**-1.0**
	baz=208,slow=8.2,SNR=2.9						
KSRS	**Korea Array**	**20.74**	**66**	P	**P**	**03 41 34.0**	**-2.5**
	comp=E,2.0nm,0.7s,baz=251,slow=9.8,SNR=5.8						
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**03 41 58.1**	**+0.3**
	comp=E,0.4nm,0.4s,mb3.2,baz=119,slow=13,SNR=4.8						
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**03 42 34.4**	**+1.4**
	comp=E,1.3nm,0.6s,mb3.6,baz=130,slow=10,SNR=3.4						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**03 42 38.5**	**+0.7**
	comp=E,1.0nm,0.7s,mb3.4,baz=128,slow=9.6,SNR=4.7						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**03 46 53.7**	**+0.1**
	comp=E,0.9nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**03 46 53.4**	**-0.2**
	comp=E,0.5nm,0.5s,mb3.8,baz=337,slow=7.7						
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**03 47 12.0**	**-2.2**
	comp=E,0.2nm,0.4s,mb3.6,baz=348,slow=7.1,SNR=4.0						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**03 49 14.8**	**+1.4**
	comp=E,0.2nm,0.6s,mb3.2,baz=328,slow=5.6,SNR=5.5						

*MOS **13** 03:37:09.9±1.0, 55°.72S×28°.33W, h33km, mb5.3/10, Error ellipse: s-maj=23.1km s-min=16.8km az=95.4*
*NEIC **13** 03:37:11.2±0.2, 55°.68S×28°.36W, h35km, mb5.2/19, Error ellipse: s-maj=9.4km s-min=8.0km az=164.0*
*ISCJB **13** 03:37:13.9±2.3, 55°.72S±0°.06×28°.4W±0°.1, h73km±21km, mb4.9/31, Error ellipse: s-maj=11.2km s-min=8.9km az=143.0*
*IDC **13** 03:37:14.8±0.6, 55°.70S×28°.48W, h70km±4km, mb4.7/16, mb1 4.8/7, mb1mx4.7/20, mbtmp4.7/17, MS3.9/14, Ms1 3.9/14, ms1mx3.7/24, Error ellipse: s-maj=13.5km s-min=13.5km az=159.0*
*DJA **13** 03:37:17, 56°.50S×25°.74W, h10km, mb5.4/8*
ISC 13 03:37:16.3±2.1, 55°.78S±0°.06×28°.5W±0°.1, h79km±20km, n120, σ0°87/62, mb4.9/30, 1C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.31**	**157**	*e*Pn	**Pn**	**03 41 12.5**	**+0.2**
VNA1				*e*		03 41 13.1	
VNA1				*e*		03 45 49.9	
VNA2	**Neumayer--Watz**	**17.71**	**157**	*e*Pn	**Pn**	**03 41 16.8**	**-0.4**
VNA2				*e*		03 41 17.3	
VNA2				*e*		03 41 24.5	
VNA2				*e*		03 41 30.8	
VNA2				*e*		03 45 50.2	
EFI	**East Falkland**	**17.92**	**271**	P	**Pn**	**03 41 20.5**	**+0.6**
	461nm,0.7s,SNR=9.2						
EFI	**East Falkland**	**17.92**	**271**	*e*P	**Pn**	**03 41 19.5**	**-0.4**
EFI				*e*S	**S**	**03 44 28.3**	**-12**
EFI				pmax	pmax		
	comp=Z,72nm,0.9s						
EFI	**East Falkland**	**17.92**	**271**	*e*Pn	**Pn**	**03 41 19.5**	**-0.3**
	comp=Z,72nm,0.9s						
EFI				*e*S	**S**	**03 44 28.3**	**-12**
PMSA	**Palmer Station**	**19.54**	**228**	P	**Pn**	**03 41 38.2**	**-0.9**
	baz=70,slow=12,SNR=4.6						
USHA	**Ushuaia**	**22.56**	**256**	P	**P**	**03 42 09.6**	**+0.2**
	comp=Z,21nm,0.7s,mb4.6,baz=88,slow=9.0,SNR=18						
MAIT	**Maitri**	**22.85**	**147**	*e*P	**P**	**03 42 12.5**	**+0.1**
MAIT				*e*E		03 42 16.6	
NVL	**N'lazarevskaya**	**22.88**	**147**	*e*P	**P**	**03 42 04.6**	**-8.1**
NVL				*e**PP		03 42 12.0	
NVL				*e*		03 42 37.3	
NVL				*e*PPP		03 42 52.6	
NVL				*e*SS		03 46 59.7	
NVL				pmax	pmax		
	comp=Z,29nm,0.6s,mb4.8						
NVL				MLR	MLR		
	comp=Z,423nm,20.0s						
TRQA	**Tornquist**	**28.56**	**294**	*e*P	**P**	**03 43 04.5**	**+0.2**
	comp=Z,40nm,0.7s,mb5.2						
PLCA	**Paso Flores**	**31.25**	**281**	P	**P**	**03 43 26.1**	**-2.0**
	comp=Z,3.9nm,0.8s,mb4.2,baz=135,slow=7.8,SNR=9.1						
PLCA				PcP

SUR Sutherland 41.26 76 LR LR 03 58 58.9
comp=Z,117nm,20.7s,baz=255,slow=32
SBA Scott Base 46.29 184 *e*P **P 03 45 35.5 +2.3**
SBA pmax pmax
comp=Z,33nm,1.0s,mb5.0
SBA Scott Base 46.29 184 *e*P **P 03 45 35.5 +2.3**
comp=Z,33nm,1.0s,mb5.0
BOSA Boshof 46.60 77 P **P 03 45 36.1 0.0**
comp=Z,14nm,0.9s,mb4.7,baz=208,slow=7.8,SNR=24
BOSA ScP ScP 03 50 53.8 -1.2
comp=Z,2.4nm,0.8s,baz=342,slow=2.6,SNR=3.3
BOSA LR LR 04 01 52.0
comp=Z,173nm,18.3s,baz=198,slow=32
LBTB Lobatse 49.62 75 LR LR 04 05 02.9
comp=Z,58nm,18.1s,baz=200,slow=34
LBTB Lobatse 49.62 75 *e*P **P 03 45 59.2 -0.2**
LBTB pmax pmax
comp=Z,68nm,1.2s,mb5.5
LBTB Lobatse 49.62 75 *e*P **P 03 45 59.2 -0.2**
comp=Z,68nm,1.2s,mb5.5
LPAZ La Paz 49.64 306 P **P 03 46 01.0 +1.4**
comp=Z,60nm,0.6s,mb5.7,baz=147,slow=6.1,SNR=370
LPAZ LR LR 04 06 07.4
comp=Z,103nm,18.5s,baz=328,slow=35
LPAZ La Paz 49.64 306 *e*P **P 03 46 01.1 +1.4**
LPAZ pmax pmax
comp=Z,63nm,0.8s
LPAZ La Paz 49.64 306 *e*P **P 03 46 01.1 +1.4**
comp=Z,63nm,0.8s,mb5.6
TSUM Tsumeb 50.18 62 *e*P **P 03 46 03.7 -0.1**
comp=Z,11nm,0.9s,mb4.8
CASY Casey 54.40 161 *e*P **P 03 46 35.5 +1.2**
comp=Z,23nm,0.7s,mb5.3
LSZ Lusaka 58.95 70 LR LR 04 08 23.5
comp=Z,123nm,18.2s,baz=34,slow=32
LSZ Lusaka 58.95 70 *e*P **P 03 47 06.9 -0.3**
LSZ pmax pmax
comp=Z,20nm,0.9s,mb5.2
LSZ Lusaka 58.95 70 *e*P **P 03 47 06.9 -0.3**
comp=Z,20nm,0.9s,mb5.2
LIC Lamto 64.76 26 *e*P **P 03 47 45.7 -0.4**
comp=Z,44nm,0.7s,mb5.4
KIC Kosan Boka 64.96 26 *e*P **P 03 47 46.4 -1.0**
comp=Z,24nm,0.8s,mb5.0
TIC Toumodi 65.16 26 *e*P **P 03 47 48.3 -0.4**
comp=Z,18nm,0.5s,mb5.1
TIC Toumodi 65.16 26 *e*P **P 03 47 48.3 -0.4**
TIC pmax pmax
comp=Z,18nm,0.5s,mb5.2
DBIC Dimbokro 65.23 26 P **P 03 47 48.8 -0.4**
comp=Z,7.0nm,0.6s,mb4.6,baz=168,slow=8.6,SNR=24
DBIC Dimbokro 65.23 26 *e*P **P 03 47 49.2 0.0**
DBIC pmax pmax
comp=Z,6.0nm,0.6s
DBIC Dimbokro 65.23 26 *e*P **P 03 47 49.2 0.0**
comp=Z,6.3nm,0.6s,mb4.6
ROSC El Rosal 71.18 311 LR LR 04 20 27.5
comp=Z,60nm,19.2s,baz=9.6,slow=36
TOA0 Torodi Ar. Sit 73.18 31 *e*P **P 03 48 38.4 +0.1**
TORD Torodi Ar. Bea 73.18 31 P **P 03 48 38.4 +0.2**
comp=Z,36nm,0.5s,mb5.5,baz=199,slow=6.5,SNR=902
TORD pP pP 03 48 55.0 -4.1
comp=Z,8.7nm,0.8s,baz=197,slow=5.0,SNR=4.0
TORD LR LR 04 13 21.1
comp=Z,111nm,21.9s,baz=180,slow=30
SDV Santo Domingo 73.32 316 LR LR 04 19 54.7
comp=Z,220nm,21.5s,baz=348,slow=35
SDV Santo Domingo 73.32 316 *e*P **P 03 48 39.5 +0.3**
comp=Z,11nm,0.7s,mb4.8
KMBO Kilima Mbogo 75.61 70 P **P 03 48 54.1 +1.6**
comp=Z,2.7nm,1.0s,mb3.9,baz=204,slow=4.6,SNR=6.0
KMBO LR LR 04 18 19.1
comp=Z,88nm,19.9s,baz=335,slow=33
RPZ Rata Peaks 79.50 194 P **P 03 49 14.3 +0.5**
comp=Z,11nm,0.8s,mb4.8,baz=163,slow=3.1,SNR=4.5
MOO Moorlands 82.08 177 *e*P **P 03 49 27.1 -0.4**
TAM Tamanrasset 83.43 31 *e*P **P 03 49 36.6 +2.1**
TAM pmax pmax
comp=Z,21nm,1.2s,mb4.8
TAM Tamanrasset 83.43 31 *e*P **P 03 49 36.6 +2.0**
comp=Z,21nm,1.2s,mb4.8
URZ Urewera 83.82 200 P **P 03 49 36.0 -0.6**
comp=Z,5.1nm,0.8s,mb4.4,baz=48,slow=13,SNR=4.0
NWAO Narrogin (SRO) 86.91 152 P **P 03 49 50.9 -1.2**
comp=Z,8.6nm,0.8s,mb4.7,baz=228,slow=6.6,SNR=4.8
YNG Young 90.24 177 *e*P **P 03 50 07.3 -0.5**
comp=Z,6.0nm,0.6s,mb4.9
BBOO Buckleboo 90.77 167 *e*P **P 03 50 09.4 -0.9**
comp=Z,4.4nm,0.8s,mb4.6
PPT Papeete 91.78 235 *e*LR LR 04 19 53.1
comp=Z,136nm,29.8s
PPT Papeete 91.78 235 LR LR 04 20 57.2
comp=Z,67nm,19.1s,baz=136,slow=29
STKA Stephens Creek 92.28 172 *e*P **P 03 50 16.6 -0.7**
comp=Z,3.3nm,0.7s,mb4.7
STKA Stephens Creek 92.28 172 P **P 03 50 16.6 -0.7**
comp=Z,4.5nm,0.8s,mb4.8,baz=173,slow=6.7,SNR=14
STKA Stephens Creek 92.28 172 *e*P **P 03 50 16.6 -0.7**
comp=Z,0.7nm,0.8s,mb3.9
CMSA Cobar Meteorol 92.89 175 *e*P **P 03 50 19.5 -0.6**
ESDC Sonseca Array 97.35 19 P **P 03 50 39.2 -0.7**
comp=Z,0.8nm,0.6s,mb4.3,baz=193,slow=4.6,SNR=7.1
ESDC LR LR 04 29 19.3
comp=Z,42nm,18.9s,baz=290,slow=32
ASAR Alice Springs 99.45 164 P Pdif 03 50 49.2 -0.9
comp=Z,3.5nm,0.9s,baz=190,slow=4.2,SNR=23
ASAR PP PP 03 54 50.9 -2.4
comp=Z,2.6nm,1.0s,baz=184,slow=7.0,SNR=8.1
DZM Mont Dzumac 101.43 194 *e*LR LR 04 24 14.8
comp=Z,104nm,26.5s
WRA Warramunga Arr 103.17 163 Pdiff Pdif 03 51 05.3 -1.3
comp=Z,1.0nm,0.9s,baz=197,slow=4.3,SNR=4.0
WRA PP PP 03 55 18.9 -2.4
comp=Z,1.6nm,1.0s,baz=188,slow=6.6,SNR=5.7
MSU Marysvale 117.59 298 *e*PKIKP PKPdf 03 55 53.1 +1.0
ULM Lac du Bonnet 119.56 317 PKP PKPdf 03 55 53.5 -2.0
comp=Z,2.1nm,0.5s,baz=165,slow=4.7,SNR=4.9
ULM PKKPab PKKPab 04 06 06.5 +0.2
comp=Z,1.7nm,0.7s,baz=220,slow=0.7,SNR=3.2
PDAR Pinedale Array 119.60 303 PKP PKPdf 03 55 54.5 -1.4
comp=Z,0.8nm,0.5s,baz=123,slow=4.0,SNR=11
PDAR pPKP pPKPdf 03 56 14.2 -3.9
comp=Z,0.5nm,0.6s,baz=142,slow=4.1,SNR=3.2
PDAR PKKPbc PKKPbc 04 06 05.5 -0.4
comp=Z,0.6nm,0.8s,baz=66,slow=1.8,SNR=5.2
NOA NORSAR Array B 120.61 21 PKP PKPdf 03 55 57.0 -0.2
comp=Z,1.3nm,0.8s,baz=212,slow=1.8,SNR=3.0
LOHW Long Hollow 120.74 303 *e*PKPdf PKPdf 03 55 58.0 0.0
WVOR Wild Horse Val 123.78 297 *e*PKIKP PKPdf 03 56 04.9 +1.0
CHMT Chamberlain Mo 124.44 304 *e*PKPdf PKPdf 03 56 05.3 +0.3
FINES FINESS Array B 124.48 28 PKP PKPdf 03 56 03.1 -1.5
comp=Z,3.6nm,0.5s,baz=178,slow=1.8,SNR=18
FINES pPKP pPKPdf 03 56 22.8 -4.2
comp=Z,3.6nm,0.6s,baz=192,slow=1.8,SNR=4.9
MSO Missoula 124.71 304 *e*PKPdf PKPdf 03 56 05.2 -0.3
BMO Blue Mountains 124.89 300 *e*PKIKP PKPdf 03 56 05.7 -0.2
JTMT Jette 125.53 304 *e*PKPdf PKPdf 03 56 06.3 -0.8
AKTK Aktyubinsk 127.74 54 PKP PKPdf 03 56 11.1 -0.2
AKTO Aktyubinsk 127.74 54 PKP PKPdf 03 56 11.1 -0.2
comp=Z,4.8nm,0.9s,baz=195,slow=3.0,SNR=14
JCW Jim Creek 129.50 300 *e*PKPdf PKPdf 03 56 14.8 +0.1
AAK Ala-Archa 130.56 71 PKP PKPdf 03 56 17.1 +0.3
comp=Z,1.3nm,0.4s,baz=231,slow=6.9,SNR=3.8
ARCES ARCESS Array B 130.96 22 PKP PKPdf 03 56 16.2 -0.6
comp=Z,6.1nm,0.8s,baz=192,slow=1.1,SNR=14
ARU Arti 132.05 48 PKIKP PKPdf 03 56 19.0 -0.2
ARU Arti 132.05 48 *e*P PKPdf 03 56 19.5 +0.3
ARU Arti 132.05 48 *e*PKPdf PKPdf 03 56 19.5 +0.3
KMI Kunming 133.29 110 PKP PKPdf 03 56 28.4 +5.8
BVAR Borovoye Array 135.24 58 PKP PKPdf 03 56 25.2 -0.1
comp=Z,7.6nm,1.0s,baz=248,slow=1.6,SNR=16
BVAR SKPbc SKPbc 03 59 46.8 -2.0
comp=Z,1.2nm,0.7s,baz=254,slow=3.8,SNR=3.8
YKA Yellowknife Ar 135.50 319 PKP PKPdf 03 56 24.8 -0.6
comp=Z,5.0nm,0.8s,baz=126,slow=1.4,SNR=5.5
YKA pPKP pPKPdf 03 56 44.0 -3.8
comp=Z,2.0nm,0.8s,baz=128,slow=2.2,SNR=4.4
YKA PP PP 03 58 56.6 -7.8
comp=Z,0.7nm,0.8s,baz=123,slow=5.9,SNR=6.8
YKA SKPbc SKPbc 03 59 46.5 -2.7
comp=Z,1.9nm,0.7s,baz=131,slow=3.9,SNR=16
YKA PKKP 04 06 05.6
comp=Z,0.4nm,0.7s,baz=303,slow=2.0,SNR=4.7
YKA Yellowknife Ar 135.50 319 PKP PKPdf 03 56 24.8 -0.6
YKA pPKP pPKPdf 03 56 44.0 -3.8
YKA PP PP 03 58 56.6 -7.8
YKA SKPbc SKPbc 03 59 46.5 -2.7
YKA PKKP 04 06 05.6
GYA Guiyang 136.43 113 *e*Pdif Pdif 03 53 35.0 +0.6
GYA PKP PKPdf 03 56 30.0 +1.6
GYA sPKP 03 56 44.3
GYA PP PP 03 59 14.4 +3.9
GYA PKS 04 00 04.3
GYA SKKS SKKSac 04 06 02.1 +4.5
GYA SS SS 04 17 12.4 +6.4
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,180nm,23.0s
GYA LR LR
comp=E,210nm,22.1s
GYA LR LR
comp=Z,390nm,20.9s
RES Resolute Bay 137.35 339 *e*PKIKP PKPdf 03 56 28.5 -0.1
MKAR Makanchi Array 137.48 72 PKhKP 03 56 19.1
comp=Z,0.5nm,0.6s,baz=236,slow=3.3,SNR=2.2
MKAR PKP PKPdf 03 56 30.1 +0.4
comp=Z,1.0nm,0.6s,baz=232,slow=2.2,SNR=3.8
MKAR PP PP 03 59 18.5 +1.3
comp=Z,1.1nm,0.9s,baz=235,slow=4.3,SNR=5.8
MKAR SKPbc SKPbc 03 59 53.1 -2.7
comp=Z,0.4nm,0.6s,baz=264,slow=3.3,SNR=3.5
MKAR Makanchi Array 137.48 72 PKHKP 03 56 19.1
MKAR 03 56 30.1
MKAR 03 59 18.5
KURK Kurchatov 137.94 65 PKhKP 03 56 24.6
comp=Z,0.9nm,0.6s,baz=240,slow=3.7,SNR=4.0
KURK PKP PKPdf 03 56 31.3 +0.9
comp=Z,1.7nm,0.8s,baz=226,slow=2.8,SNR=5.3
KURK SKPbc SKPbc 03 59 54.5 -2.4
comp=Z,2.1nm,0.9s,baz=234,slow=3.5,SNR=5.1
KURK Kurchatov 137.94 65 PKIKP PKPdf 03 56 24.6 -5.8
KURK 03 56 31.3
CD2 Chengdu 138.42 106 PKP PKPdf 03 56 33.4 +1.5
CD2 sPKP 03 56 47.8
CD2 PP PP 03 59 28.5 +5.6
CD2 PKS 04 00 08.1
CD2 SKS SKSdf 04 03 38.5 +3.3
CD2 SKKS SKKSac 04 06 13.5 +4.3
CD2 AMB AMB
comp=Z,560nm,6.5s
CD2 LR LR
comp=Z,510nm,7.7s
WMQ Urumqi 138.55 79 PKP PKPdf 03 56 33.0 +1.3
WMQ PP PP 03 59 27.0 +3.2
WMQ PKS 04 00 07.8
WMQ AMB AMB
comp=Z,470nm,9.0s
GTA Gaotai 142.45 94 *e*PKP PKPdf 03 56 36.9 -2.0
NVS Novosibirsk 142.55 62 *i* PKIKP PKPdf 03 56 34.7 -3.9
NVS pmax pmax
comp=Z,18nm,1.2s
NVS pmax pmax
comp=N,9.0nm,1.3s
NVS pmax pmax
comp=E,8.0nm,1.3s
ZALV Zalesovo Beam 142.89 64 PKhKP 03 56 34.9
comp=E,2.3nm,0.5s,baz=229,slow=4.2,SNR=5.3
ZALV PP PP 03 59 47.4 -2.8
comp=E,1.0nm,0.3s,baz=248,slow=7.8,SNR=4.2
INK Inuvik 145.14 321 *e*PKIKP PKPdf 03 56 42.6 -0.1
NJ2 Nanjing 147.09 122 *e*PKPbc PKPbc 03 56 49.5 +0.1
COLA College 149.83 312 *e*PKHKP PKPbc 03 56 55.0 -0.5
HHC Hu-ho-hao-te 150.00 103 *e*PKPbc PKPdf 03 56 53.0 +1.4
HHC pPKP PKPab 03 57 04.8 +2.1
HHC sPKP 03 57 07.4
HHC PKS 04 00 26.9
HHC SKS SKSdf 04 03 55.9 +3.9
HHC SKKS SKKSac 04 07 19.6 +4.6
HHC SS SS 04 19 44.5 +2.0
HHC AMB AMB
comp=Z,180nm,6.1s
HHC LR LR
comp=N,270nm,22.2s
HHC LR LR
comp=E,450nm,21.3s
HHC LR LR
comp=Z,210nm,20.1s
MCK McKinley 150.05 310 *e*PKIKP PKPbc 03 56 56.0 0.0
TRF Thorofare Moun 150.58 309 *e*PKPbc PKPbc 03 56 57.6 +0.3
KTH Kantishna Hill 150.88 309 *e*PKPbc PKPbc 03 56 58.1 +0.1
BPAW Bear Paw Mtn. 151.01 310 *e*PKPbc PKPbc 03 56 57.9 -0.4
COLD Coldfoot 151.14 317 *e*PKPbc PKPbc 03 56 58.9 +0.4
PPLA Purkeypile 151.31 308 *e*PKPbc PKPbc 03 56 59.2 +0.2
SONM Songino Array 151.42 87 PKP PKPdf 03 56 52.8 -0.8
comp=Z,1.3nm,1.0s,baz=157,slow=4.2,SNR=4.1
SONM PKPbc PKPbc 03 56 58.8 -1.0
comp=Z,20nm,0.7s,baz=221,slow=3.2,SNR=66
SONM pPKPbc pPKPbc 03 57 18.5 -3.5
comp=Z,3.1nm,0.6s,baz=223,slow=3.0,SNR=3.5
SONM Songino Array 151.42 87 PKIKP PKPdf 03 56 52.8 -0.8
SONM 03 56 58.8
CHUM Lake Minchumin 151.55 310 *e*PKPbc PKPbc 03 56 59.0 -0.6
BJI Beijing 151.93 109 PKPbc PKPbc 03 56 59.5 -1.7
KSRS Korea Array 155.72 129 PKPab PKPab 03 57 26.4 -0.6
comp=Z,1.2nm,0.7s,baz=213,slow=3.6,SNR=4.2
CN2 Changchun 159.47 115 *e*PKP PKPdf 03 57 06.8 +2.3
CN2 PP PP 04 01 28.9 +3.9

IDC 13 03:41:51.2±1.6**, 31°.32N**×**103°.72E, h0km, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/23**, mbtmp3.5**/4**, Error ellipse: s-maj=86.2km s-min=28.5km az=54.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.61**	**319**	P	P	03 46 53.7	+0.4
	0.3nm,0.4s,baz=128,slow=12,SNR=3.9						
KURK	**Kurchatov**	**26.88**	**323**	P	P	03 47 33.4	-0.2
	0.6nm,0.8s,baz=130,slow=9.6,SNR=6.2						
ASAR	**Alice Springs**	**61.84**	**148**	P	P	03 52 12.2	+0.1
	0.6nm,1.1s,baz=334,slow=6.4,SNR=3.1						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	P	03 54 10.5	0.0
	0.2nm,0.6s,baz=332,slow=5.2,SNR=4.7						

BJI 13 03:43:44.9, 31°.11N×**103°.68E, h11km, ML3.8**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**161**	Pg	Pg	03 43 48.8	-0.6
CD2				Sg	Sg	03 43 54.8	+2.5
CD2				smax			
	comp=N,15μm,0.6s						
LZH	**Lanzhou**	**4.97**	**2**	*e*Pg	Pg	03 45 14.4	-5.6
LZH				Sg	Sg	03 46 17.8	-6.5
LZH				smax			
	comp=N,27nm,0.7s						
LZH				smax			
	comp=E,48nm,1.0s						
GYA	**Guiyang**	**5.32**	**150**	Pg	Px	03 45 36.9	
GYA				Sg	Sg	03 46 39.1	+3.3
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,110nm,0.8s						

ISCJB ***13*** *03:48:44.7±0.2, 31°.27N±0°.03×103°.92E±0°.04, h10km, mb4.5/39, MS3.4/6, Error ellipse: s-maj=5.5km s-min=3.8km az=7.4*
IDC ***13*** *03:48:44.7±0.5, 31°.19N×103°.81E, h0km, mb4.3/22, mb1 4.4/23, mb1mx4.3/30, mbtmp4.3/23, ML3.6/1, MS3.3/6, Ms1 3.4/6, ms1mx2.9/39, Error ellipse: s-maj=23.8km s-min=10.4km az=57.0*
NEIC ***13*** *03:48:46.4±0.2, 31°.24N×103°.93E, h10km, mb4.5/14, Error ellipse: s-maj=8.3km s-min=4.8km az=69.0*
BJI ***13*** *03:48:46.4, 31°.25N×103°.85E, h14km, mB4.8/11, mb4.5/18, ML4.3/16, Ms4.2/13, Ms7 4.0/13*
MOS ***13*** *03:48:47.9±0.8, 31°.20N×103°.85E, h34km, mb4.6/12, Error ellipse: s-maj=15.0km s-min=7.1km az=111.4*
ISC 13 03:48:45.3±0.9**, 31°.30N**±0°.02×**103°.93E**±0°.04**, h1**km±5km**, n91,** σ1**s**.**09**/99**, mb4.6**/39**, MS3.4**/6**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**200**	Pg	**Pg**	**03 48 53.0**	**-0.2**
CD2				Sg	**Sg**	**03 48 59.4**	**+0.9**
CD2				smax			
	comp=N,64μm,0.6s						
LZH	**Lanzhou**	**4.78**	**359**	*e*Pn	**Pn**	**03 50 03.9**	**+5.5**
LZH				Pg	**Pg**	**03 50 15.3**	**-1.5**
LZH				Sg	**Sg**	**03 51 18.8**	**+0.1**
LZH				smax			
	comp=N,260nm,0.8s						
LZH				smax			
	comp=E,690nm,1.0s						
LZH				LR	LR		
	comp=N,1μm,6.7s						
LZH				LR	LR		
	comp=Z,2μm,7.8s						
XAN	**Xi'an**	**5.02**	**56**	Pn	**Pn**	**03 49 59.5**	**-2.3**
XAN				Pg	**Pg**	**03 50 17.8**	**-3.7**
XAN				Sn	**Sn**	**03 50 58.3**	**-2.1**
XAN				Sg	**Sg**	**03 51 22.8**	**-3.8**
XAN				smax			
	comp=N,440nm,0.9s						
XAN				smax			
	comp=E,240nm,0.9s						
GYA	**Guiyang**	**5.39**	**153**	Pn	**Pn**	**03 50 08.8**	**+2.0**
GYA				Sg	**Sb**	**03 51 25.8**	**+0.4**
GYA				smax			
	comp=N,630nm,0.7s						
GYA				smax			
	comp=E,360nm,0.6s						
GYA				LR	LR		
	comp=N,3μm,4.9s						
GYA				LR	LR		
	comp=E,2μm,3.2s						
GYA				LR	LR		
	comp=Z,2μm,5.0s						
KMI	**Kunming**	**6.24**	**190**	Pn	**Pn**	**03 50 18.9**	**+0.4**
KMI				Sn	**Sn**	**03 51 32.1**	**+1.6**
KMI				smax			
	comp=N,81nm,1.7s						
KMI				smax			
	comp=E,110nm,1.2s						
KMI				LR	LR		
	comp=N,920nm,5.9s						
KMI				LR	LR		
	comp=E,2μm,6.9s						
GTA	**Gaotai**	**8.76**	**339**	*e*P	**Pn**	**03 50 55.5**	**+2.4**
GTA				pP		03 51 04.9	
GTA				sP		03 51 09.3	
GTA				S	**Sn**	**03 52 27.8**	**-4.7**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,49nm,5.1s						
GTA				LR	LR		
	comp=N,520nm,11.3s						
GTA				LR	LR		
	comp=E,510nm,6.8s						
GTA				LR	LR		
	comp=Z,760nm,7.4s						
WHN	**Wuhan**	**8.99**	**92**	P	**Pn**	**03 50 56.5**	**+0.3**
WHN				S	**Sn**	**03 52 33.3**	**-4.8**
WHN				LR	LR		
	comp=N,2μm,4.8s						
WHN				LR	LR		
	comp=E,2μm,6.7s						
LSA	**Lhasa**	**11.13**	**265**	P	**Pn**	**03 51 30.8**	**+5.1**
HHC	**Hu-ho-hao-te**	**11.35**	**31**	*e*P	**Pn**	**03 51 32.3**	**+3.7**
HHC				pP		03 51 37.9	
HHC				PP		03 51 41.9	
HHC				S	**Sn**	**03 53 41.3**	**+5.2**
HHC				sS		03 53 50.3	
HHC				SS		03 53 56.4	
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
HHC				LR	LR		
	comp=N,530nm,5.0s						
HHC				LR	LR		
	comp=E,570nm,4.6s						
HHC				LR	LR		
	comp=Z,450nm,4.9s						
CHTO	**Chiang Mai**	**13.22**	**201**	*e*P	**Pn**	**03 51 53.9**	**-0.4**
CM31	**Chiang Mai Arr**	**13.56**	**201**	Pn	**Pn**	**03 51 58.7**	**-0.2**
	comp=Z,4.9nm,0.4s						
GUN	**Gumba**	**16.05**	**262**	*e*P	**Pn**	**03 52 31.0**	**-1.3**
	comp=Z,62nm,0.9s						
PKI	**Pulchoki**	**16.55**	**262**	*e*P	**Pn**	**03 52 34.5**	**-4.2**
	comp=Z,41nm,0.8s						
PKIN	**Phulchoki**	**16.56**	**262**	*e*P	**Pn**	**03 52 35.0**	**-3.8**
	comp=Z,29nm,0.7s						
KKN	**Kakani**	**16.60**	**263**	*e*P	**Pn**	**03 52 37.7**	**-1.6**
SONM	**Songino Array**	**16.62**	**6**	Pn	**Pn**	**03 52 40.3**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=21						
SONM				LR	LR	03 59 40.1	
	comp=Z,138nm,20.2s,baz=194,slow=39						
DMN	**Daman**	**16.80**	**262**	*e*P	**Pn**	**03 52 38.9**	**-2.9**
	comp=Z,45nm,0.9s						
ZAK	**Zakamensk**	**19.07**	**359**	*e*P	**Pn**	**03 53 10.9**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MOY	**Mondy**	**20.47**	**355**	*e*P	**P**	**03 53 27.1**	**+2.9**
MOY				pmax	pmax		
	comp=Z,19nm,1.5s						
KSRS	**Korea Array**	**20.71**	**66**	P	**P**	**03 53 28.4**	**+1.4**
	comp=Z,8.3nm,0.7s,baz=266,slow=11,SNR=21						
KSRS	**Korea Array**	**20.71**	**66**	P	**P**	**03 53 28.5**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CN2	**Changchun**	**21.07**	**48**	⇑P	**P**	**03 53 33.5**	**+2.7**
CN2				*e*sP	sP	03 53 40.5	+9.3
CN2				*e*S	**S**	**03 57 25.8**	**-0.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.7						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.7						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**03 53 49.0**	**+0.4**
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**03 53 49.0**	**+0.4**
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**03 53 49.0**	**+0.4**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**03 53 49.1**	**+0.5**
	comp=Z,5.3nm,0.6s,mb4.2,baz=124,slow=11,SNR=35						
MKAR				LR	LR	04 03 26.4	
	comp=Z,98nm,18.1s,MS3.3,baz=170,slow=39						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**03 53 49.1**	**+0.5**
MKAR				LR	LR	04 03 26.4	
MDJ	**Mudanjiang**	**24.09**	**49**	P	**P**	**03 54 05.8**	**+3.5**
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,98nm,5.6s						
TKM2	**Tokmak 2**	**25.28**	**305**	*e*P	**P**	**03 54 14.2**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**25.28**	**305**	*e*P	**P**	**03 54 14.2**	**+1.1**
	comp=Z,5.4nm,0.9s,mb4.3						
UCH	**Uchtor**	**25.84**	**303**	*e*P	**P**	**03 54 20.4**	**+2.1**
	comp=Z,6.9nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**03 54 20.1**	**+0.7**
	comp=Z,1.5nm,0.6s,mb3.8,baz=169,slow=10,SNR=4.5						
ZAA0	**Zalesovo Array**	**26.48**	**334**	*e*P	**P**	**03 54 24.4**	**+0.5**
ZALV	**Zalesovo Beam**	**26.48**	**334**	P	**P**	**03 54 24.1**	**+0.3**
	comp=Z,10nm,0.8s,mb4.5,baz=132,slow=8.9,SNR=21						
ZALV				LR	LR	04 05 07.6	
	comp=Z,33nm,21.5s,MS2.9,baz=72,slow=37						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**03 54 28.7**	**+0.1**
	comp=Z,12nm,1.0s,mb4.6,baz=130,slow=9.1,SNR=42						
KURK				LR	LR	04 05 22.5	
	comp=Z,28nm,21.4s,MS2.8,baz=80,slow=37						
KURK	**Kurchatov**	**27.00**	**323**	*e*P	**P**	**03 54 28.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
KURK	**Kurchatov**	**27.00**	**323**	*e*P	**P**	**03 54 28.8**	**+0.2**
	comp=Z,13nm,1.1s,mb4.6						
KURK				LR	LR	04 05 22.5	
NVS	**Novosibirsk**	**27.76**	**334**	*e*P	**P**	**03 54 36.4**	**+1.0**
BVAR	**Borovoye Array**	**32.54**	**322**	P	**P**	**03 55 17.9**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=123,slow=11,SNR=6.4						
BVAR				PcP	PcP	03 58 01.7	-2.6
	comp=Z,1.7nm,0.8s,baz=108,slow=4.7,SNR=3.6						
BRVK	**Borovoye**	**32.62**	**322**	*e*P	**P**	**03 55 19.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BRVK	**Borovoye**	**32.62**	**322**	*e*P	**P**	**03 55 19.1**	**+0.8**
	comp=Z,4.4nm,1.1s,mb4.3						
ABKAR	**Akbulak array**	**37.43**	**312**	*e*P	**P**	**03 56 00.3**	**+0.4**
	comp=Z,5.7nm,0.9s,mb4.3						

KAPI Kappang 39.14 155 P P 03 56 12.6 -2.0
comp=Z,11nm,0.9s,mb4.5,baz=86,slow=17,SNR=6.0
PETK Petropavlovsk- 44.16 44 P P 03 56 56.2 +0.9
comp=Z,2.3nm,0.8s,mb4.0,baz=151,slow=3.3,SNR=2.5
MIB Mutribah 48.29 284 *e*P **P 03 57 26.7 -1.5**
MIB AMb AMB 03 57 28.9
comp=Z,32nm,0.8s,mb5.5
RDF Al-Radifah 48.37 282 *e*P **P 03 57 27.5 -1.4**
RDF AMb AMB 03 57 30.4
comp=Z,44nm,0.8s,mb5.6
FITZ Fitzroy Crossi 53.36 154 P P 03 58 05.4 -1.1
comp=Z,5.6nm,0.9s,mb4.5,baz=339,slow=5.3,SNR=8.6
BR131 Keskin Array S 56.51 299 *e*P **P 03 58 28.9 -0.2**
comp=Z,1.4nm,0.8s,mb4.0
BRTR Keskin Array B 56.51 299 P P 03 58 28.8 -0.4
comp=Z,1.7nm,0.9s,mb4.1,baz=90,slow=6.2,SNR=7.3
BRTR PcP PcP 03 59 25.2 -0.7
comp=Z,0.7nm,0.8s,baz=95,slow=5.1,SNR=2.7
BRTR Keskin Array B 56.51 299 P P 03 58 28.8 -0.4
BRTR PcP PcP 03 59 25.2 -0.7
ARCES ARCESS Array B 57.02 336 P P 03 58 32.0 -0.2
comp=Z,7.8nm,0.9s,mb4.7,baz=88,slow=9.0,SNR=5.3
AKASG Malin Array Be 57.14 313 P P 03 58 32.7 -0.7
comp=Z,0.6nm,0.4s,mb3.9,baz=66,slow=7.4,SNR=4.2
FINES FINESS Array B 57.32 326 P P 03 58 33.9 -0.6
comp=Z,4.6nm,0.9s,mb4.5,baz=104,slow=8.0,SNR=5.4
WRAB Tennant Creek 58.72 146 *e*P **P 03 58 44.5 -0.3**
WRAB pmax pmax
comp=Z,33nm,0.6s,mb5.5
WRAB Tennant Creek 58.72 146 *e*P **P 03 58 44.5 -0.3**
comp=Z,33nm,0.6s,mb5.5
WRA Warramunga Arr 58.72 146 P P 03 58 44.4 -0.4
comp=Z,28nm,0.7s,mb5.4,baz=338,slow=7.7,SNR=190
SPITS Spitsbergen Ar 59.11 346 P P 03 58 47.6 +0.7
comp=Z,8.3nm,0.9s,mb4.7,baz=99,slow=7.7,SNR=5.7
KWP Kalwaria Pacla 61.46 313 *e*P **P 03 59 03.5 +0.1**
KWP pmax pmax
comp=Z,14nm,1.0s,mb5.0
KWP Kalwaria Pacla 61.46 313 *e*P **P 03 59 03.5 +0.1**
comp=Z,14nm,1.0s,mb5.0
ASAR Alice Springs 61.74 149 P P 03 59 05.1 -0.3
comp=Z,6.2nm,0.7s,mb4.9,baz=329,slow=6.3,SNR=60
HFS Hagfors 63.52 326 P P 03 59 15.9 -1.0
comp=Z,2.2nm,0.8s,mb4.4,baz=132,slow=8.8,SNR=6.0
NB2 NORSAR Subarra 64.41 327 P P 03 59 22.1 -0.7
comp=Z,1.7nm,0.7s,mb4.4,baz=72,slow=6.5
NOA NORSAR Array B 64.41 327 P P 03 59 22.0 -0.8
comp=Z,1.6nm,0.7s,mb4.3,baz=77,slow=6.1,SNR=9.3
NOA LR LR 04 27 55.0
comp=Z,16nm,19.4s,MS3.2,baz=200,slow=36
NWAO Narrogin (SRO) 65.11 168 P P 03 59 27.2 -0.3
comp=Z,20nm,0.8s,mb5.4,baz=322,slow=4.5,SNR=11
GERES GERESS Array B 67.30 314 P P 03 59 41.5 -0.2
comp=Z,0.6nm,0.8s,mb3.9,baz=65,slow=6.3,SNR=6.0
COLD Coldfoot 67.36 24 *e*P **P 03 59 41.8 +0.1**
comp=Z,4.2nm,0.7s,mb4.8
COLA College 69.32 26 *e*P **P 03 59 54.2 +0.2**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
COLA College 69.32 26 *e*P **P 03 59 54.2 +0.2**
comp=Z,7.8nm,0.8s,mb5.0
CDF Champ du Feu 71.37 316 *e*P **P 04 00 06.4 -0.4**
comp=Z,6.5nm,1.0s,mb4.4
CDF Champ du Feu 71.37 316 *e*P **P 04 00 06.4 -0.4**
CDF pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
CDF Champ du Feu 71.37 316 *e*P **P 04 00 06.4 -0.4**
comp=Z,3.3nm,1.0s,mb4.4
INK Inuvik 72.02 19 *e*P **P 04 00 10.5 +0.1**
STKA Stephens Creek 72.25 147 P P 04 00 11.2 -1.0
comp=Z,4.1nm,0.5s,mb4.8,baz=330,slow=6.2,SNR=22
LPG La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
comp=Z,14nm,0.8s,mb4.8
LPG La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
LPG La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
comp=Z,6.9nm,0.8s,mb4.8
LPL La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
comp=Z,9.8nm,0.8s,mb4.7
LPL La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
LPL La Plagne 73.01 313 *e*P **P 04 00 17.1 +0.4**
comp=Z,4.9nm,0.8s,mb4.7
SMF Signal de Mont 74.25 315 *e*P **P 04 00 23.4 -0.6**
comp=Z,9.1nm,0.8s,mb4.5
SMF Signal de Mont 74.25 315 *e*P **P 04 00 23.4 -0.6**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SMF Signal de Mont 74.25 315 *e*P **P 04 00 23.4 -0.6**
comp=Z,4.6nm,0.8s,mb4.6
TCF Toulx Ste Croi 75.41 315 *e*P **P 04 00 30.4 -0.3**
comp=Z,5.3nm,0.9s,mb4.2
TCF Toulx Ste Croi 75.41 315 *e*P **P 04 00 30.4 -0.3**
TCF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
TCF Toulx Ste Croi 75.41 315 *e*P **P 04 00 30.4 -0.3**
comp=Z,2.7nm,0.9s,mb4.3
YKA Yellowknife Ar 81.55 17 P P 04 01 04.2 -0.1
comp=Z,1.9nm,0.7s,mb4.4,baz=330,slow=5.2,SNR=27
TORD Torodi Ar. Bea 93.43 287 P P 04 02 02.1 -0.9
comp=Z,1.2nm,1.2s,mb4.2,baz=67,slow=4.0,SNR=6.0
ULM Lac du Bonnet 96.93 13 LR LR 04 46 15.0
comp=Z,72nm,18.2s,MS4.2,baz=204,slow=36
TXAR Lajitas Array 114.24 26 PKP PKiKP 04 07 28.5 +1.5
comp=Z,0.2nm,0.7s,baz=312,slow=4.4,SNR=2.3
ROSC El Rosal 144.01 357 PKP PKPdf 04 08 21.0 -2.5
comp=Z,3.6nm,0.6s,baz=90,slow=20,SNR=3.7
OTAV Otavalo 148.56 5 *e*PKPbc PKPbc 04 08 35.4 +0.7

NOU 13 04:00:30.5±1.0, 21°.09S×168°.53E, h30km, MD2.7, ML4.1, MS1.9, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.86**	**235**	*e*S	Sn	04 01 20.2	-2.6
DZM	**Mont Dzumac**	**2.17**	**243**	*e*P	Pn	04 01 04.2	-0.4
DZM				*e*S	Sn	04 01 28.7	-1.7
DZM				AMP		04 01 30.9	
	comp=Z,2μm,0.6s						
NORM	**Noumea**	**2.21**	**239**	*e*S	Sn	04 01 29.1	-2.5
MVNO	**Noumea**	**2.27**	**238**	*e*S	Sn	04 01 30.3	-2.5
ONTRN	**Noumea**	**2.28**	**237**	*e*P	Pn	04 01 04.8	-1.3
ONTRN				*e*S	Sn	04 01 29.9	-3.2
NOUC	**Port Laguerre**	**2.30**	**244**	*e*P	Pn	04 01 06.0	-0.4
NOUC				*e*S	Sn	04 01 32.5	-1.2
NOUC				AMP		04 01 41.2	
	comp=Z,105nm,11.8s						

*IDC **13** 04:00:57.7±1.1, 42°.14N×84°.43E, h0km, mb3.7/4, mb1 3.7/11, mb1mx3.6/29, mbtmp3.7/11, ML3.2/7, Error ellipse: s-maj=23.0km s-min=15.1km az=60.0*
*ISCJB **13** 04:00:58.7±1.8, 42°.26N±0°.08×84°.45E±0°.06, h14km±10km, mb3.8/5, Error ellipse: s-maj=13.4km s-min=6.4km az=167.9*
*NEIC **13** 04:00:59.3±0.9, 42°.11N×84°.36E, h10km, Error ellipse: s-maj=14.2km s-min=10.8km az=157.0*
*BJI **13** 04:00:59.8, 42°.03N×84°.46E, h11km, ML3.8/12, Ms3.8/1, Ms7 3.5/1*
*NNC **13** 04:01:02.3±4.7, 42°.14N×84°.22E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=42.4km s-min=27.4km az=133.0*
ISC 13 04:00:59.7±2.5, 42°.14N±0°.10×84°.42E±0°.07, h12km±15km, n31, σ1°19/32, mb3.8/5, 6C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.93**	**54**	Pn	**Pn**	**04 01 50.4**	**+4.3**
WMQ				Sg	**Sg**	**04 02 33.4**	**-0.4**
WMQ				smax			
	comp=N,440nm,0.8s						
WMQ				smax			
	comp=E,340nm,0.7s						
MK31	**Makanchi Array**	**4.89**	**343**	⇑Pn	**Pn**	**04 02 16.3**	**+3.3**
	comp=E,1.7nm,0.6s,baz=154,slow=15,SNR=100						
MK31				⇑Pg	**Pg**	**04 02 30.9**	**-2.5**
	comp=E,17nm,0.6s,baz=161,slow=17,SNR=7.8						
MK31				Lg		04 03 35.8	
	comp=E,55nm,0.6s,baz=160,slow=26,SNR=8.1						
MK31	**Makanchi Array**	**4.89**	**343**	*e*Pn	**Pn**	**04 02 14.5**	**+1.4**
MK31				*e*Pg	**Pg**	**04 02 31.8**	**-1.6**
MK31				*e*Sg	**Sg**	**04 03 37.8**	**+1.0**
MKAR	**Makanchi Array**	**4.89**	**343**	Pn	**Pn**	**04 02 13.9**	**+0.8**
	comp=E,0.4nm,0.3s,baz=160,slow=14,SNR=9.7						
MKAR				Pg	**Pg**	**04 02 28.1**	**-5.3**
	comp=E,5.2nm,0.3s,baz=150,slow=17,SNR=48						
MKAR				Lg		04 03 32.1	
	comp=E,4.2nm,0.3s,baz=165,slow=30,SNR=7.3						
TKM2	**Tokmak 2**	**6.57**	**280**	⇓Pn	**Pn**	**04 02 38.0**	**+2.0**
	comp=E,11nm,0.9s						
TKM2				⇓Lg		04 04 29.4	
	comp=E,15nm,0.8s						
TKM2	**Tokmak 2**	**6.57**	**280**	*e*Pn	**Pn**	**04 02 37.4**	**+1.3**
	comp=E,8.4nm,0.7s						
TKM2				*e*Sg	**Sg**	**04 04 38.2**	**+7.9**
KSH	**Kashi**	**6.92**	**251**	Pn	**Pn**	**04 02 47.8**	**+6.8**
KSH				smax			
	comp=N,46nm,0.9s						
UCH	**Uchtor**	**7.36**	**274**	*e*Pn	**Pn**	**04 02 47.8**	**+0.9**
	comp=N,11nm,0.8s						
AAK	**Ala-Archa**	**7.37**	**277**	Pn	**Pn**	**04 02 49.5**	**+2.4**
	comp=N,0.0nm,0.3s,baz=150,slow=14,SNR=3.0						
AAK				Lg		04 04 55.6	
	comp=N,0.0nm,0.3s,baz=17,slow=19,SNR=3.2						
AAK	**Ala-Archa**	**7.37**	**277**	*e*Pn	**Pn**	**04 02 44.3**	**-2.7**
	comp=N,3.0nm,0.7s						
AAK				*e*Pg	Px	04 03 16.9	
AAK				*e*Sg	Sx	04 05 09.1	
AML	**Almayashu**	**7.97**	**274**	*e*Pn	Px	04 03 06.0	
AML				*e*Sg	Sx	04 05 27.9	
KURBB	**Kurchatov Arra**	**9.40**	**336**	⇓Pn	**Pn**	**04 03 18.6**	**+3.6**
	comp=N,0.7nm,0.8s,baz=157,slow=12						
KURBB				⇑Lg		04 05 58.3	
	comp=N,7.8nm,0.8s,baz=152,slow=31						
KURK	**Kurchatov**	**9.46**	**337**	⇑Pn	**Pn**	**04 03 18.9**	**+3.2**
	comp=N,2.6nm,0.8s						
KURK				⇑Lg		04 05 58.9	
	comp=N,24nm,0.8s						
KURK	**Kurchatov**	**9.46**	**337**	Pn	**Pn**	**04 03 15.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=160,slow=12,SNR=3.4						
KURK				Lg		04 05 56.8	
	comp=N,0.2nm,0.3s,baz=255,slow=30,SNR=8.2						
KK31	**Karatay Array**	**10.30**	**280**	⇑Lg		04 06 29.4	
	comp=N,3.7nm,0.7s,baz=74,slow=30,SNR=3.5						
ZAA0	**Zalesovo Array**	**11.82**	**1**	*e*Pn	**Pn**	**04 03 48.3**	**+0.3**
ZALV	**Zalesovo Beam**	**11.82**	**1**	Pn	**Pn**	**04 03 47.6**	**-0.3**
	comp=N,0.3nm,0.3s,baz=179,slow=12,SNR=3.0						
VOSK	**Vostochnaya**	**13.93**	**324**	⇓Lg		04 08 20.7	
	comp=N,13nm,1.1s						
BVA0	**Borovoye Array**	**14.40**	**324**	⇓Lg		04 08 33.6	
	comp=N,2.3nm,1.1s,baz=140,slow=25,SNR=3.5						
BVAR	**Borovoye Array**	**14.40**	**324**	Pn	**Pn**	**04 04 22.2**	**-1.0**
	comp=N,0.3nm,0.3s,baz=132,slow=14,SNR=4.5						
BVAR				Lg		04 08 34.9	
	comp=N,0.2nm,0.3s,baz=140,slow=23,SNR=4.7						
SONM	**Songino Array**	**16.53**	**62**	Pn	**Pn**	**04 04 52.2**	**+1.0**
	comp=N,0.2nm,0.3s,baz=253,slow=12,SNR=17						
ABKAR	**Akbulak array**	**18.47**	**301**	*e*P	**Pn**	**04 05 14.0**	**-1.3**
	comp=N,1.7nm,0.8s						
AKTK	**Aktyubinsk**	**19.96**	**304**	P	**Pn**	**04 05 32.8**	**-0.5**
AKTO	**Aktyubinsk**	**19.96**	**304**	P	**Pn**	**04 05 32.8**	**-0.5**
	comp=N,0.1nm,0.3s,baz=103,slow=14,SNR=4.0						
KMI	**Kunming**	**22.74**	**133**	P	Px	04 06 15.9	
KMI				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.7						
KMI				LR	LR		
	comp=N,340nm,6.0s						
KMI				LR	LR		
	comp=E,260nm,6.0s						
KMI				LR	LR		
	comp=Z,220nm,9.2s						
ARCES	**ARCESS Array B**	**40.46**	**332**	P	**P**	**04 08 36.7**	**-1.0**
	comp=Z,3.2nm,0.9s,mb4.1,baz=69,slow=8.1,SNR=4.4						
ARCES	**ARCESS Array B**	**40.46**	**332**	P	**P**	**04 08 36.7**	**-1.0**
NOA	**NORSAR Array B**	**46.48**	**320**	P	**P**	**04 09 25.6**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.7,baz=79,slow=7.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**75.95**	**275**	P	**P**	**04 12 45.4**	**-1.3**
	comp=Z,0.2nm,0.6s,mb3.2,baz=38,slow=4.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**75.95**	**275**	P	**P**	**04 12 45.4**	**-1.3**
ASAR	**Alice Springs**	**79.85**	**135**	P	**P**	**04 13 08.8**	**+0.7**
	comp=Z,0.7nm,0.9s,mb3.6,baz=333,slow=5.4,SNR=3.5						

*NEIC **13** 04:02:48.2, 17°.05N×94°.23W, h157km, MD3.7(MEX), After MEX.*
MEX 13 04:02:48.2±1.0, 17°.05N×94°.23W, h157km±11km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.63**	**274**	*i* P	Pn	04 03 09.6	-1.4
CMIG				*i* S	Sn	04 03 26.0	-2.3
CMIG	**Matias Romero**	**0.63**	**274**	*i* P	Pn	04 03 09.6	-1.4
CMIG				*i* S	Sn	04 03 26.0	-2.3
TGIG		**1.09**	**104**	*i* P	Pn	04 03 13.7	-0.7
TGIG				*i* S	Sn	04 03 32.5	-1.9
PCIG		**1.66**	**144**	*e*P	Pn	04 03 18.2	-1.8
PCIG				*i* S	Sn	04 03 42.3	-2.0
CCIG	**Comitan**	**2.15**	**111**	*i* P	Pn	04 03 24.4	-1.0
CCIG				*i* S	Sn	04 03 52.8	-1.4
CCIG	**Comitan**	**2.15**	**111**	*i* P	Pn	04 03 24.4	-1.0
CCIG				*i* S	Sn	04 03 52.8	-1.4
HUIG	**Huatulco**	**2.21**	**235**	*i* P	Pn	04 03 23.7	-2.5
HUIG				*i* S	Sn	04 03 54.6	-0.8
HUIG	**Huatulco**	**2.21**	**235**	*i* P	Pn	04 03 23.7	-2.5
HUIG				*i* S	Sn	04 03 54.6	-0.8
VHO	**Vista Hermosa**	**2.39**	**271**	*i* P	Pn	04 03 27.9	-0.5
VHO				*i* S	Sn	04 03 58.7	-0.6
VHO	**Vista Hermosa**	**2.39**	**271**	*i* P	Pn	04 03 27.9	-0.5
VHO				*i* S	Sn	04 03 58.7	-0.6
TPIG	**Tehuac#an**	**3.28**	**295**	*i* P	Pn	04 03 38.4	-1.0
TPIG				*i* S	Sn	04 04 15.7	-3.3
UTMO	**Huajuapan**	**3.50**	**283**	*e*P	Pn	04 03 41.4	-0.7
UTMO				*i* S	Sn	04 04 21.4	-2.6
PNIG	**Pinotepa**	**3.79**	**261**	*e*P	Pn	04 03 49.6	+3.6
PNIG				*i* S	Sn	04 04 25.4	-5.4
PNIG	**Pinotepa**	**3.79**	**261**	*e*P	Pn	04 03 49.6	+3.6
PNIG				*i* S	Sn	04 04 25.4	-5.4

IDC 13 04:04:42.4±3.4, 32°.13N×104°.80E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=531.4km s-min=27.8km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.61**	**317**	P	P	04 09 44.7	+0.1
	0.4nm,0.5s,baz=122,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**59.01**	**147**	P	P	04 14 44.2	+0.2
	0.4nm,0.6s,baz=340,slow=7.5,SNR=5.3						
ASAR	**Alice Springs**	**62.07**	**150**	P	P	04 15 04.8	-0.1
	0.3nm,0.5s,baz=329,slow=7.0,SNR=4.5						

*IDC **13** 04:05:59.9±1.0, 31°.42N×103°.91E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/26, mbtmp3.7/8, ML3.3/1, Error ellipse: s-maj=53.7km s-min=18.0km az=62.0*
*ISCJB **13** 04:06:00.3±0.9, 31°.45N±0°.03×103°.9E±0°.1, h12km±7km, mb3.8/8, Error ellipse: s-maj=20.6km s-min=5.8km az=179.9*
*NEIC **13** 04:06:01.6±0.6, 31°.44N×103°.94E, h10km, mb4.5/1, Error ellipse: s-maj=26.9km s-min=10.4km az=65.0*
*BJI **13** 04:06:06.5, 31°.20N×103°.87E, h15km, ML3.7/12*
ISC 13 04:06:02.6±0.8, 31°.38N±0°.04×103°.8E±0°.1, h17km±6km, n13, σ0°79/15, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**189**	Pg	**Pg**	**04 06 10.8**	**-1.4**
CD2				Sg	**Sg**	**04 06 19.8**	**+1.2**
CD2				smax			
	comp=N,8μm,0.6s						
LZH	**Lanzhou**	**4.70**	**0**	Pg	**Pg**	**04 07 31.9**	**-0.7**
LZH				Sg	**Sg**	**04 08 34.3**	**+0.9**
LZH				smax			
	comp=N,64nm,0.8s						
LZH				smax			
	comp=E,76nm,0.8s						
GYA	**Guiyang**	**5.49**	**153**	Pg	**Pb**	**04 07 37.5**	**-0.6**
GYA				smax			
	comp=N,90nm,0.7s						
GYA				smax			
	comp=E,110nm,0.7s						
SONM	**Songino Array**	**16.55**	**6**	Pn	**Pn**	**04 09 53.0**	**-0.8**
	comp=E,0.1nm,0.3s,baz=189,slow=17,SNR=4.5						
CN2	**Changchun**	**21.07**	**48**	*e*P	**P**	**04 10 46.6**	**+0.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**04 11 03.6**	**+1.2**
	comp=Z,1.2nm,0.9s,mb3.3,baz=116,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**04 11 37.4**	**-0.4**
	comp=Z,1.5nm,0.3s,mb3.9,baz=124,slow=7.3,SNR=4.7						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**04 11 41.6**	**-0.9**
	comp=Z,0.6nm,0.3s,mb3.6,baz=132,slow=9.3,SNR=3.9						
WRAB	**Tennant Creek**	**58.82**	**146**	P	**P**	**04 16 00.9**	**+0.7**
	comp=Z,3.1nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.83**	**146**	P	**P**	**04 16 00.3**	**0.0**
	comp=Z,1.2nm,0.4s,mb4.3,baz=328,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**04 16 21.0**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.6,baz=327,slow=7.7,SNR=3.9						
INK	**Inuvik**	**71.97**	**19**	P	**P**	**04 17 24.2**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=341,slow=9.7,SNR=4.2						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**04 18 18.9**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=332,slow=5.2,SNR=3.8						

*BJI **13** 04:07:37.0, 40°.80N×125°.30W, h8km, mB5.4/3, mb4.8/2, Ms4.9/2, Ms7 4.8/1*
*NEIC **13** 04:07:39.8, 40°.81N×125°.34W, h8km, mb4.1/10, MW4.3(BRK), After NCEDC.*
NEIC Felt [II] at Arcata, Crescent City and Eureka. Also felt at Fortuna and Orick.
*IDC **13** 04:07:40.7±1.3, 40°.94N×125°.03W, h0km, mb3.9/5, mb1 4.2/10, mb1mx3.9/31, mbtmp4.0/10, ML3.6/5, MS3.2/5, Ms1 3.2/5, ms1mx2.8/40, Error ellipse: s-maj=16.1km s-min=13.2km az=12.0*
ISC 13 04:07:43.0±1.4, 40°.87N±0°.03×125°.35W±0°.06, h33km±12km, n106, σ1°36/117, mb4.1/8, MS3.6/4, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**1.23**	**89**	*e*Pg	**Pn**	**04 08 01.3**	**-2.5**
KRMB	**Red Mountain**	**1.27**	**58**	P	**Pn**	**04 08 01.9**	**-2.5**
KSXB	**Camp Six Broad**	**1.47**	**49**	P	**Pn**	**04 08 05.0**	**-2.1**
KBO	**Bosley Butte**	**1.59**	**32**	P	**Pn**	**04 08 06.6**	**-2.1**
KCPM	**Cahto Peak**	**1.79**	**131**	*e*Pn	**Pn**	**04 08 08.8**	**-2.8**
KTRM	**Thompson Ridge**	**1.81**	**54**	P	**Pn**	**04 08 09.9**	**-1.9**
KEBM	**Edson Butte**	**2.14**	**20**	*e*Pn	**Pn**	**04 08 14.6**	**-1.8**
WDC	**Whiskeytown Da**	**2.15**	**97**	*e*Pn	**Pn**	**04 08 14.2**	**-2.3**
WDC				*e*S	**Sn**	**04 08 41.8**	**-0.3**
YBH	**Yreka Blue Hor**	**2.17**	**66**	Pn	**Pn**	**04 08 15.2**	**-1.5**
	54nm,0.3s,baz=251,slow=13,SNR=390						
YBH				Lg		04 08 40.8	
	194nm,0.3s,baz=151,slow=19,SNR=20						
YBH				LR	LR	04 09 10.8	
	comp=Z,427nm,21.1s,baz=30,slow=47						
YBH	**Yreka Blue Hor**	**2.17**	**66**	*e*Pn	**Pn**	**04 08 15.3**	**-1.5**
YBH				*e*S	**Sn**	**04 08 38.5**	**-3.9**
LAMM	**Antelope Mount**	**2.18**	**69**	P	**Pn**	**04 08 15.3**	**-1.6**
HUMO	**Hull Mountain**	**2.50**	**45**	*e*Pn	**Pn**	**04 08 20.0**	**-1.2**
HUMO				*e*S	**Sn**	**04 08 48.9**	**-1.6**
HOPS	**Hopland**	**2.56**	**136**	*e*Pn	**Pn**	**04 08 19.1**	**-3.1**
HOPS				*e*S	**Sn**	**04 08 47.7**	**-4.5**
BUOR	**Burton Butte**	**2.72**	**58**	P	**Pn**	**04 08 24.6**	**+0.2**
LASM	**Arnica Sink**	**2.94**	**74**	P	**Pn**	**04 08 26.1**	**-1.2**
LTIM	**Timbered Crate**	**2.94**	**83**	P	**Pn**	**04 08 25.8**	**-1.5**
LBCM	**Butte Creek Ri**	**3.03**	**89**	P	**Pn**	**04 08 27.0**	**-1.6**
MCCM	**Marconi Confer**	**3.32**	**144**	*e*Pn	**Pn**	**04 08 30.1**	**-2.5**
OHCM	**Honcut**	**3.34**	**116**	*e*Pn	**Pn**	**04 08 29.4**	**-3.4**
EUO	**Eugene**	**3.58**	**27**	P	**Pn**	**04 08 35.5**	**-0.7**
MOD	**Modoc**	**3.94**	**73**	*e*Pn	**Pn**	**04 08 39.4**	**-1.6**
SAC	**San Andreas**	**3.99**	**144**	*e*Pn	**Pn**	**04 08 38.6**	**-3.3**
COR	**Corvallis**	**4.01**	**21**	*e*Pn	**Pn**	**04 08 41.4**	**-0.7**
COR				*e*S	**Sn**	**04 09 26.8**	**-1.1**
FRIS	**Frissel Point**	**4.11**	**35**	P	**Pn**	**04 08 43.6**	**+0.1**
HEBO	**Mount Hebo**	**4.50**	**15**	*e*Pn	**Pn**	**04 08 47.7**	**-1.1**
PAHR	**Pah Rah Range**	**4.71**	**102**	*e*Pn	**Pn**	**04 08 50.0**	**-1.7**
CMB	**Columbia Colle**	**4.77**	**125**	*e*Pn	**Pn**	**04 08 50.8**	**-1.7**
CMB				*e*S	**Sn**	**04 09 44.3**	**-2.3**
WAKR	**Walker**	**5.13**	**115**	*e*Pn	**Pn**	**04 08 57.3**	**-0.3**
HOOD	**Mount Hood Mea**	**5.21**	**30**	*e*Pn	**Pn**	**04 08 57.8**	**-0.7**
WVOR	**Wild Horse Val**	**5.27**	**71**	*e*Pn	**Pn**	**04 08 57.6**	**-1.7**
	25nm,0.4s						
WVOR				*e*S	**Sn**	**04 10 00.0**	**+1.2**
NVAR	**Mina Array Bea**	**5.96**	**112**	Pn	**Pn**	**04 09 08.0**	**-0.8**
	3.9nm,0.3s,baz=292,slow=14,SNR=42						
NVAR				Lg		04 10 33.9	
	2.1nm,0.3s,baz=295,slow=34,SNR=4.0						
NVAR	**Mina Array Bea**	**5.96**	**112**	Pn	**Pn**	**04 09 08.0**	**-0.8**
NVAR				Lg		04 10 33.9	
LON	**Longmire**	**6.41**	**22**	*e*Pn	**Pn**	**04 09 14.5**	**-0.5**
	18nm,0.5s						
LON				*e*S	**Sn**	**04 10 24.6**	**-2.4**
NLWA	**Neilton Lookou**	**6.61**	**9**	*e*Pn	**Pn**	**04 09 17.4**	**-0.3**
	34nm,0.8s						
NLWA				*e*S	**Sn**	**04 10 29.1**	**-2.8**
RSW	**Rattlesnake Hi**	**6.92**	**35**	*e*Pn	**Pn**	**04 09 22.8**	**+0.7**
	58nm,0.4s						
GNW	**Green Mountain**	**6.94**	**14**	*e*Pn	**Pn**	**04 09 21.9**	**-0.3**
	25nm,0.5s						
GNW				*e*S	**Sn**	**04 10 36.4**	**-3.5**
HAWA	**Hanford**	**6.95**	**35**	*e*P	**Pn**	**04 09 22.8**	**+0.4**
	42nm,0.5s						
BMO	**Blue Mountains**	**7.12**	**53**	*e*Pn	**Pn**	**04 09 25.7**	**+0.9**
	58nm,0.6s						
LNOR	**Lincton Mounta**	**7.17**	**43**	*e*P	**Pn**	**04 09 26.6**	**+1.1**
	17nm,0.6s						
ISA	**Isabella**	**7.50**	**132**	*e*Pn	**Pn**	**04 09 29.9**	**-0.1**
	40nm,0.5s						
ISA				*e*S	**Sn**	**04 10 54.5**	**+0.6**
ETW	**Entiat**	**7.64**	**26**	*e*P	**Pn**	**04 09 32.1**	**+0.3**
	8.4nm,0.6s						
ELK	**Elko**	**7.67**	**88**	Pn	**Pn**	**04 09 32.5**	**+0.2**
	0.5nm,0.3s,baz=284,slow=16

REDW	Red Top Meadow 25nm,1.3s	11.05	72	*e*Pn	Pn	04 10 20.3	+1.6
IMW	Indian Meadow 29nm,1.3s	11.08	69	*e*Pn	Pn	04 10 21.2	+2.2
BOZ	Bozeman (W) 6.0nm,0.8s	11.08	60	*e*Pn	Pn	04 10 18.9	-0.2
SNOW	Snow King Moun 30nm,1.5s	11.14	72	*e*Pn	Pn	04 10 21.8	+1.9
LOHW	Long Hollow 8.5nm,1.0s	11.27	71	*e*Pn	Pn	04 10 23.3	+1.7
HRY	Holter Researc 8.9nm,0.5s	11.38	55	*e*Pn	Pn	04 10 23.8	+0.7
WALA	Waterton Lakes 0.1nm,0.6s	11.51	41	*e*Pn	Pn	04 10 25.2	+0.3
SRU	San Rafael 21nm,1.0s	11.51	94	*e*Pn	Pn	04 10 27.7	+2.8
PDAR	Pinedale Array 0.1nm,0.3s,baz=248,slow=12,SNR=16	11.94	76	Pn	Pn	04 10 31.1	+0.3
GCMT	Greycliff 5.6nm,1.0s	12.43	61	*e*Pn	Pn	04 10 38.0	+0.5
EGMT	Eagleton 15nm,0.8s	13.23	52	*e*Pn	Pn	04 10 48.1	-0.2
MVCO	Mesa Verde 14nm,1.2s	13.60	100	*e*Pn	Pn	04 10 52.9	-0.6
SMCO	Snowmass 5.1nm,0.8s	14.19	91	*e*Pn	Pn	04 11 01.9	+0.5
ISCO	Idaho Springs 3.3nm,0.5s	15.09	88	*e*Pn	Pn	04 11 11.7	-2.0
SDCO	Great Sand Dun 10nm,0.8s	15.68	95	*e*Pn	Pn	04 11 22.6	+1.3
LAZ	Ladron 9.9nm,1.4s	15.79	108	Pn	Pn	04 11 23.5	+0.7
ANMO	Albuquerque 0.1nm,0.3s,baz=303,slow=12,SNR=14	16.02	106	Pn	Pn	04 11 26.3	+0.5
ANMO	comp=Z,59nm,19.9s,baz=120,slow=38			LR	LR	04 17 38.3	
BNM	Barren Site 20nm,1.4s	16.28	108	*e*P	Pn	04 11 30.7	+1.6
DLBC	Dease Lake 0.1nm,0.3s,baz=181,slow=14,SNR=5.0	17.84	352	P	Pn	04 11 51.3	+2.9
AMTX	Amarillo 3.5nm,0.7s	19.59	100	P	Pn	04 12 05.5	-4.2
CBKS	Cedar Bluff 17nm,0.5s	19.75	88	*e*P	Pn	04 12 10.4	-1.3
FFC	Flin Flon 8.4nm,0.8s	20.81	40	*e*P	P	04 12 21.5	+0.2
TXAR	Lajitas Array 4.0nm,0.8s,mb3.8,baz=299,slow=8.6,SNR=34	21.09	116	P	P	04 12 26.1	+1.6
ECSD	EROS Data Cent 8.1nm,0.9s,mb4.0	21.40	73	*e*P	P	04 12 25.6	-2.2
KSU1	Kansas State U 33nm,0.7s,mb4.9	22.05	85	*e*P	P	04 12 35.7	+0.9
ULM	Lac du Bonnet 13nm,0.8s,mb4.4,baz=263,slow=9.8,SNR=21	22.54	55	P	P	04 12 39.8	-0.1
ULM	comp=Z,106nm,18.4s,MS3.3,baz=318,slow=36			LR	LR	04 20 57.4	
ULM	Lac du Bonnet 12nm,0.8s,mb4.4	22.54	55	*e*P	P	04 12 39.4	-0.5
YKA	Yellowknife Ar 3.3nm,0.8s,mb3.8,baz=198,slow=11,SNR=33	22.60	13	P	P	04 12 40.1	-0.2
FCC	Fort Churchill 0.1nm,0.6s	26.60	37	*e*P	P	04 13 18.3	+0.4
INK	Inuvik 1.0nm,0.8s,mb3.5,baz=174,slow=9.2,SNR=2.9	27.85	354	P	P	04 13 32.5	+3.4
INK	comp=Z,38nm,18.4s,MS3.0,baz=286,slow=33			LR	LR	04 23 09.6	
INK	Inuvik	27.85	354	P	P	04 13 32.5	+3.4
INK				LR	LR	04 23 09.6	
RES	Resolute Bay 1.3nm,0.9s,mb3.8,baz=215,slow=9.2,SNR=7.8	36.67	13	P	P	04 14 46.1	0.0
JTS	JuntasAbangare comp=Z,52nm,21.2s,MS3.5,baz=96,slow=39	46.84	119	LR	LR	04 37 59.4	
CN2	Changchun	74.40	315	*e*P	P	04 19 18.8	+1.4
CN2				*es*P	sP	04 19 26.0	-5.7
CN2				*e*S	S	04 28 50.0	+0.5
CN2	comp=Z,10.0nm,0.6s,mb4.9			pmax	pmax		
CN2	comp=Z,200nm,4.0s			pmax	pmax		
HHC	Hu-ho-hao-te	83.65	320	*e*P	P	04 20 08.3	+0.2
HHC				pP	pP	04 20 13.3	-5.3
HHC				sP	sP	04 20 15.3	-7.2
HHC				PP	PP	04 23 22.6	+2.3
HHC				S	S	04 30 28.8	+0.7
HHC				sS	sS	04 30 37.3	-8.2
HHC				SS	SS	04 35 57.3	+3.5
HHC	comp=Z,200nm,5.7s			pmax	pmax		
HHC	comp=N,130nm,18.0s,MS4.7			LR	LR		
HHC	comp=E,290nm,19.9s,MS4.7			LR	LR		
WMQ	Urumqi	90.60	337	*e*P	P	04 20 43.3	+1.5
GYA	Guiyang	97.45	315	P	P	04 21 13.8	+0.3

KRSC 13 04:08:19.7±1.0, 51°.06N×158°.08E, h23km±22km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.40	11	*e*P	Pn	04 08 44.3	+0.5
RUS				*i* S	Sn	04 09 01.9	+0.4
MIPR	Malaya Ipel'ka	1.47	326	*e*P	Pn	04 08 45.6	+0.9
MIPR				*i* S	Sn	04 09 04.7	+1.5
ALID	Alaid	1.61	264	*e*P	Pn	04 08 46.2	-0.5
ALID				*i* S	Sn	04 09 05.2	-1.5
PET	Petropavlovsk	2.00	10	*e*P	Pn	04 08 53.4	+1.4
PET				*i* S	Sn	04 09 17.9	+1.6
NLC	Nalytchevo	2.25	20	*e*P	Pn	04 08 56.2	+0.7
NLC				*i* S	Sn	04 09 22.8	+0.2
SDLR	Sedlovina	2.28	12	*e*P	Pn	04 08 57.1	+1.3
SPN	Mys Shipunski	2.37	30	*e*P	Pn	04 08 58.7	+1.6
SPN				*i* S	Sn	04 09 27.0	+1.6
GNL	Ganaly	2.64	358	*e*P	Pn	04 09 03.0	+2.2
KII	Karymskiy	3.10	15	*e*P	Pn	04 09 09.9	+2.8
KII				*i* S	Sn	04 09 47.2	+3.9
MKZ	Mys Kozlova	4.14	31	*e*P	Pn	04 09 22.7	+1.2
MKZ				*i* S	Sn	04 10 08.5	-0.6
ZLN	Zelenaya	5.22	17	P	Pn	04 09 40.3	+4.0
KBTR	Krutoberegovo	5.88	27	*e*P	Pn	04 09 47.5	+2.3
SMKR	Semkarok	5.88	19	*e*P	Pn	04 09 49.9	+4.5

IDC 13 04:09:06.0±1.2, 8°.00N×39°.05W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=48.1km s-min=26.6km az=146.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz 0.8nm,0.5s,baz=52,slow=11,SNR=14	37.56	230	P	P	04 16 23.4	+1.1
TORD	Torodi Ar. Bea 0.6nm,0.7s,baz=269,slow=8.8,SNR=8.0	40.34	79	P	P	04 16 45.8	+0.1
PLCA	Paso Flores 1.5nm,0.9s,baz=14,slow=4.2,SNR=3.2	56.51	208	P	P	04 18 49.5	-0.5
YKA	Yellowknife Ar 0.1nm,0.6s,baz=90,slow=5.8,SNR=3.6	76.28	332	P	P	04 20 56.3	-0.1

IDC 13 04:16:21.0±1.5, 31°.26N×104°.02E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=86.4km s-min=25.0km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.4nm,0.4s,baz=125,slow=12,SNR=5.3	22.82	319	P	P	04 21 24.4	-1.0
ZALV	Zalesovo Beam 1.7nm,0.3s,baz=103,slow=3.3,SNR=2.4	26.55	334	P	P	04 22 01.8	+1.4
WRA	Warramunga Arr 0.8nm,0.8s,baz=337,slow=7.5	58.64	146	P	P	04 26 20.2	+0.1
YKA	Yellowknife Ar 0.3nm,0.6s,baz=331,slow=5.7,SNR=6.5	81.57	17	P	P	04 28 39.7	-0.5

*ISCJB **13** 04:21:58.5±1.8, 52°.69N±0°.06×166°.55W±0°.08, h10km±11km, mb3.5/7, Error ellipse: s-maj=10.3km s-min=7.7km az=173.8*
*NEIC **13** 04:22:01.8, 52°.85N×166°.72W, h7km, ML3.2(AEIC), After AEIC.*
*IDC **13** 04:22:05.4±7.0, 53°.02N×166°.71W, h43km±64km, mb3.4/7, mb1 3.7/7, mb1mx3.4/28, mbtmp3.5/7, Error ellipse: s-maj=47.6km s-min=21.6km az=9.0*

ISC 13 04:22:00.6±1.7, 52°.78N±0°.07×166°.65W±0°.08, h11km±9km, n17, σ0°89/21, mb3.5/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	0.99	310	P	Pg	04 22 19.3	-0.4
OKFG				S	Sg	04 22 33.1	+0.4
UNV	Unalaska Valle	1.08	5	*e*Pg	Pg	04 22 20.7	-0.6
UNV				S	Sb	04 22 35.7	+0.4
NIKO	Nikolski	1.35	279	*e*Pn	Pn	04 22 25.2	-0.2
NIKO				*e*S	Sb	04 22 43.8	+0.6
AKLV	Akutan Long Va	1.45	16	P	Pn	04 22 26.9	+0.2
AKUT	Akutan	1.46	21	*e*Pn	Pn	04 22 26.6	-0.2
AKUT				*e*Sn	Sn	04 22 45.8	-0.1
FALS	False Pass	2.83	41	*e*Pn	Pn	04 22 48.5	+2.8
PETK	Petropavlovsk- 2.2nm,0.6s,mb3.6,baz=83,slow=12,SNR=6.7	21.36	285	P	P	04 26 47.8	+0.3
INK	Inuvik 0.9nm,0.6s,mb3.4,baz=252,slow=8.0,SNR=5.6	22.10	33	P	P	04 26 54.0	-1.4
YKA	Yellowknife Ar 0.1nm,0.5s,mb2.8,baz=272,slow=7.6,SNR=3.8	28.72	50	P	P	04 27 57.9	+0.5
YKA	0.2nm,0.6s,baz=280,slow=2.5,SNR=4.8			PcP	PcP	04 31 07.5	+0.3
YKA	Yellowknife Ar	28.72	50	P	P	04 27 57.9	+0.5
YKA				PcP	PcP	04 31 07.5	+0.3
PDAR	Pinedale Array 0.8nm,0.9s,mb3.5,baz=322,slow=4.3,SNR=5.9	38.70	81	P	P	04 29 25.2	+1.1
TXAR	Lajitas Array 0.5nm,0.8s,mb3.5,baz=300,slow=5.5,SNR=7.4	51.09	91	P	P	04 31 03.2	+0.3
TXAR	Lajitas Array	51.09	91	P	P	04 31 03.2	+0.3
AKTK	Aktyubinsk	70.47	332	P	P	04 33 14.2	-0.4
AKTO	Aktyubinsk 1.0nm,0.5s,mb4.0,baz=43,slow=9.7,SNR=5.3	70.47	332	P	P	04 33 14.2	-0.4
AKASG	Malin Array Be 0.7nm,0.5s,mb3.9,baz=12,slow=5.9,SNR=4.4	76.03	350	P	P	04 33 44.9	-2.5
AKASG	Malin Array Be	76.03	350	P	P	04 33 44.9	-2.5

*ISCJB **13** 04:22:58.3±0.8, 31°.76N±0°.04×104°.63E±0°.05, h3km±6km, mb3.8/8, Error ellipse: s-maj=8.3km s-min=5.5km az=27.8*
*IDC **13** 04:22:59.3±1.0, 31°.80N×104°.56E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/28, mbtmp3.8/9, ML3.7/2, MS3.0/2, Ms1 3.0/2, ms1mx2.3/29, Error ellipse: s-maj=34.3km s-min=18.9km az=54.0*
*NEIC **13** 04:23:01.0±0.6, 31°.79N×104°.53E, h10km, mb4.6/1, Error ellipse: s-maj=25.8km s-min=11.5km az=63.0*
*BJI **13** 04:23:02.1, 31°.81N×104°.47E, h15km, mb4.3/4, ML3.9/12, Ms3.6/2, Ms7 3.5/1*

ISC 13 04:23:01.0±0.8, 31°.81N±0°.04×104°.50E±0°.06, h7km±6km, n18, σ1°12/22, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.10	215	Pg	Pg	04 23 22.6	+0.5
CD2				Sg	Sg	04 23 36.0	-0.3
CD2	comp=N,9μm,0.6s			smax			
LZH	Lanzhou	4.30	353	Pg	Pg	04 24 23.9	+0.5
LZH				Sg	Sg	04 25 16.0	-3.1
LZH	comp=N,200nm,0.6s			smax			
LZH	comp=E,260nm,0.9s			smax			
LZH	comp=E,1μm,6.8s			LR	LR		
LZH	comp=Z,2μm,8.0s			LR	LR		
LZH	Lanzhou	4.30	353	Pg	Pn	04 24 10.3	+3.5
LZH				Sg	Sn	04 25 00.4	+3.3
LZH	comp=N,110nm,0.8s			smax			
LZH	comp=E,110nm,1.0s			smax			
XAN	Xi'an	4.33	58	Pg	Pg	04 24 22.1	-1.9
XAN				Sg	Sg	04 25 20.8	+0.6
XAN	comp=N,250nm,0.7s			smax			
XAN	comp=E,110nm,0.8s			smax			
GYA	Guiyang	5.66	160	Pg	Pg	04 24 53.5	+4.1
GYA				Sg	Sg	04 26 03.3	+0.6
GYA	comp=N,110nm,0.9s			smax			
GYA	comp=E,90nm,0.9s			smax			
SONM	Songino Array comp=E,0.3nm,0.3s,baz=175,slow=17,SNR=3.8	16.07	5	Pn	Pn	04 26 48.4	+1.1
SONM	comp=E,27nm,19.5s,baz=115,slow=41			LR	LR	04 33 53.9	
KSRS	Korea Array comp=E,0.2nm,0.3s,baz=257,slow=10,SNR=13	20.06	67	P	P	04 27 34.2	-0.5
CN2	Changchun comp=Z,10.0nm,0.8s	20.36	48	*e*P	P	04 27 40.0	+2.0
CN2				pmax	pmax		
MKAR	Makanchi Array comp=Z,1.2nm,0.7s,mb3.4,baz=118,slow=13,SNR=9.2	22.68	318	P	P	04 28 03.1	+0.3
ZALV	Zalesovo Beam comp=Z,58nm,19.2s,baz=175,slow=41	26.24	333	LR	LR	04 40 50.4	
KURK	Kurchatov comp=Z,1.2nm,0.7s,mb3.6,baz=132,slow=8.9,SNR=6.8	26.89	322	P	P	04 28 42.5	+0.2
AKTK	Aktyubinsk	38.91	312	P	P	04 30 26.7	-0.3
AKTO	Aktyubinsk comp=Z,0.7nm,0.5s,mb3.6,baz=92,slow=12,SNR=4.3	38.91	312	P	P	04 30 26.7	-0.3
WRAB	Tennant Creek comp=Z,2.9nm,0.6s,mb4.5	58.87	147	*e*P	P	04 33 00.8	+0.3
ASAR	Alice Springs comp=Z,0.6nm,0.4s,mb4.0,baz=336,slow=6.5,SNR=11	61.92	149	P	P	04 33 21.1	-0.2
INK	Inuvik comp=Z,0.7nm,0.6s,mb3.8,baz=45,slow=6.3,SNR=4.5	71.38	19	P	P	04 34 20.4	-0.8
STKA	Stephens Creek comp=Z,0.9nm,0.4s,mb4.0,baz=295,slow=10,SNR=4.6	72.42	147	P	P	04 34 26.8	-1.0
YKA	Yellowknife Ar comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.2,SNR=7.4	80.92	17	P	P	04 35 13.9	-1.7

KRSC 13 04:26:45.8±0.4, 52°.51N×159°.85E, h6km±5km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.60	10	*e*P	Pg	04 26 59.1	+1.8
SPN				*i* S	Sg	04 27 08.2	+3.1
NLC	Nalytchevo	0.73	335	*e*P	Pg	04 27 01.0	+1.2
NLC				*i* S	Sg	04 27 11.2	+1.9
RUS	Russkaya	0.82	265	*e*P	Pg	04 27 02.3	+0.8
RUS				*i* S	Sg	04 27 13.4	+1.2
PET	Petropavlovsk	0.89	306	*e*P	Pg	04 27 03.2	+0.3
PET				*i* S	Sg	04 27 15.0	+0.6
SDLR	Sedlovina	0.97	323	*e*P	Pg	04 27 04.4	+0.1
SDLR				*i* S	Sg	04 27 17.6	+0.7
KII	Karymskiy	1.55	351	*e*P	Pn	04 27 13.2	-0.7
KII				*i* S	Sn	04 27 33.8	-0.4
GNL	Ganaly	1.65	317	*e*P	Pn	04 27 15.1	-0.2
GNL				*i* S	Sn	04 27 36.5	-0.3
MIPR	Malaya Ipel'ka	1.91	264	*e*P	Pn	04 27 19.8	+1.0
MIPR				*i* S	Sn	04 27 45.0	+1.9
MKZ	Mys Kozlova	2.34	28	*e*P	Pn	04 27 23.0	-1.7
MKZ				*i* S	Sn	04 27 50.4	-3.3
KMNR	Kamenistaya	3.26	4	*e*P	Pn	04 27 40.4	+3.0
BZMR	Bezymyannaya	3.45	6	P	Pn	04 27 42.8	+2.8
ZLN	Zelenaya	3.56	9	*e*P	Pn	04 27 42.9	+1.4
CIRR	Tsirk	3.65	8	*e*P	Pn	04 27 44.6	+1.9
KBTR	Krutoberegovo	4.09	24	*e*P	Pn	04 27 49.8	+1.0
KBTR				*i* S	Sn	04 28 37.9	+1.0
BDR	Baidarnaya	4.14	10	*e*P	Pn	04 27 54.2	+4.7
SMKR	Semkarok	4.19	12	*e*P	Pn	04 27 54.0	+3.9
SRKR	Sorokina	4.22	10	*e*P	Pn	04 27 54.0	+3.4

IDC 13 04:30:07.8±5.9, 24°.22N×108°.70W, h0km, mb3.1/1, mb1 3.7/4, mb1mx3.6/22, mbtmp3.2/4, ML3.8/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/14, Error ellipse: s-maj=87.5km s-min=30.6km az=155.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array 0.2nm,0.3s,baz=216,slow=13,SNR=14	6.79	40	Pn	Pn	04 31 48.2	-0.6
TXAR	0.5nm,0.3s,baz=221,slow=15,SNR=8.4			Pg	Pg	04 32 17.9	-0.2
TXAR	1.4nm,0.3s,baz=233,slow=29,SNR=8.4			Lg		04 33 42.4	
CMIG	Matias Romero comp=Z,126nm,19.5s,baz=16,slow=39	14.74	116	LR	LR	04 39 44.8	

NVAR	Mina Array Bea 0.2nm,0.3s,baz=160,slow=12,SNR=4.0	16.35	332	Pn	Pn	04 33 59.9	+1.1
PDAR	Pinedale Array 0.1nm,0.3s,baz=178,slow=11,SNR=3.6	18.51	358	P	Pn	04 34 27.6	+2.0
TKL	Tuckaleechee C comp=Z,67nm,20.3s,baz=297,slow=39	24.36	56	LR	LR	04 45 58.1	
YKA	Yellowknife Ar 0.1nm,0.6s,baz=172,slow=8.1,SNR=5.5	38.47	356	P	P	04 37 31.7	+0.6

*DDA **13** 04:30:41.8, 36°.87N×27°.62E, h7km±5km, Md2.8*
*ISCJB **13** 04:30:43.8±1.2, 36°.96N±0°.04×27°.45E±0°.09, h20km±13km, Error ellipse: s-maj=11.6km s-min=6.7km az=168.1*
*CSEM **13** 04:30:43.6±0.2, 36°.97N×27°.46E, h18km±1km, MD2.8, Error ellipse: s-maj=5.7km s-min=2.8km az=93.0*
*ISK **13** 04:30:43.3, 36°.98N×27°.47E, h17km, MD2.4*

ISC 13 04:30:43.8±1.0, 36°.97N±0°.05×27°.45E±0°.09, h19km±7km, n11, σ0°37/20, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.26	157	*e*PG	Pg	04 30 49.5	-0.2
DAT				*e*SG	Sg	04 30 53.9	+0.1
DAT	Datca	0.26	157	*e*Pg	Pg	04 30 49.5	-0.2
DAT				*e*Sg	Sg	04 30 53.9	+0.1
MLSB	Milas	0.41	39	*e*PG	Pg	04 30 52.1	-0.3
MLSB				*e*SG	Sg	04 30 58.0	-0.1
MLSB	Milas	0.41	39	*e*Pg	Pg	04 30 52.1	-0.2
MLSB				*e*Sg	Sg	04 30 58.0	-0.1
YER	Yerkesik	0.68	76	*e*PG	Pg	04 30 57.2	-0.1
YER				*e*SG	Sg	04 31 07.0	+0.6
YER	Yerkesik	0.68	76	*e*Pg	Pg	04 30 57.2	-0.1
YER				*e*Sg	Sg	04 31 07.0	+0.6
GCAM	G?zelcaml?	0.75	347	*i* P	Pb	04 30 58.0	-0.2
GCAM				*i* S	Sb	04 31 08.8	+0.8
AYDN	Tasoluk	0.77	26	*i* P	Pb	04 30 58.4	-0.1
AYDN				*i* S	Sb	04 31 08.1	-0.6
TURN	Turunc	0.93	96	*i* P	Pb	04 30 56.4	-4.9
TURN				*i* S	Sb	04 31 05.2	-8.0
FETY	Fethiye	1.35	104	*e*PN	Pn	04 31 07.7	0.0
FETY	Fethiye	1.35	104	*e*Pn	Pn	04 31 07.7	0.0

*DDA **13** 04:36:57.9, 40°.27N×42°.31E, h7km±1km, Md2.9*
*CSEM **13** 04:36:58.8±0.2, 40°.29N×42°.20E, h15km, MD2.7, Error ellipse: s-maj=5.2km s-min=4.3km az=80.0*
*ISK **13** 04:36:58.5, 40°.35N×42°.21E, h5km, MD2.7*
*ISCJB **13** 04:36:59.0±0.7, 40°.32N±0°.04×42°.23E±0°.05, h6km±9km, Error ellipse: s-maj=7.9km s-min=5.7km az=141.5*

ISC 13 04:36:59.5±0.6, 40°.30N±0°.03×42°.23E±0°.05, h18km±7km, n17, σ0°81/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	Horasan	0.35	225	*i* P	Pg	04 37 05.5	-1.5
HOMI				*i* S	Sg	04 37 11.8	-0.2
DDEM	Demirkent	0.70	329	*i* P	Pg	04 37 12.6	-0.6
DDEM				*i* S	Sg	04 37 23.4	+0.9
DDEM	Demirkent	0.70	329	*i* P	Pg	04 37 12.6	-0.6
DDEM				*i* S	Sg	04 37 23.4	+0.9
KARS	Kars	0.73	63	*e*PG	Pg	04 37 12.9	-0.9
KARS	Kars	0.73	63	*e*Pg	Pg	04 37 12.9	-0.9
ERZM	Erzurum	0.77	240	*i* P	Pg	04 37 13.5	-1.1
ERZM				*i* S	Sg	04 37 25.4	+0.7
ERZM	Erzurum	0.77	240	*i* P	Pg	04 37 13.5	-1.1
ERZM				*i* S	Sg	04 37 25.5	+0.7
EZM	Erzurum	0.77	240	*e*PG	Pg	04 37 14.4	-0.3
EZM				*e*SG	Sg	04 37 25.7	+0.8
DAGI	Agillar	0.81	343	*i* S	Sg	04 37 26.9	+0.6
DBAD	Bademkaya	0.83	331	*i* P	Pb	04 37 14.9	-0.4
DBAD				*i* P		04 37 15.0	
DBAD				*i* S	Sb	04 37 26.6	+0.4
DBAD	Bademkaya	0.83	331	*i* P	Pb	04 37 15.0	-0.4
DBAD				*i* S	Sb	04 37 26.6	+0.4
ARTV	Artvin	0.92	346	*i* P	Pb	04 37 16.6	-0.3
ARTV				*i* S	Sb	04 37 28.8	+0.1
ARTV	Artvin	0.92	346	*i* P	Pb	04 37 16.6	-0.3
ARTV				*i* S	Sb	04 37 28.8	+0.1
AGRB	Hanur-Agry	0.93	141	*e*PG	Pg	04 37 17.5	-0.1
AGRB				*e*SG	Sg	04 37 32.1	+2.2
AGRB	Hanur-Agry	0.93	141	*e*Pg	Pg	04 37 17.5	-0.1
AGRB				*e*Sg	Sg	04 37 32.1	+2.3
BCA	Borcka	1.23	338	*e*PN	Pn	04 37 21.6	-0.3
BCA				*e*SN	Sn	04 37 38.5	+0.3
BCA	Borcka	1.23	338	*e*Pn	Pn	04 37 21.6	-0.3
BCA				*e*Sn	Sn	04 37 38.5	+0.4

BJI 13 04:39:02.7, 30°.97N×103°.41E, h16km, ML3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.30	101	Pg	Pg	04 39 07.3	-1.9
CD2				Sg	Sg	04 39 12.8	-0.7
CD2	comp=N,27μm,0.8s			smax			
GYA	Guiyang	5.33	147	Pg	Px	04 40 29.4	
GYA				Sg	Sb	04 41 40.5	+1.4
GYA	comp=N,110nm,1.0s			smax			
GYA	comp=E,110nm,1.0s			smax			
GYA	comp=N,2μm,4.9s			LR	LR		
GYA	comp=E,920nm,3.2s			LR	LR		
GYA	comp=Z,1μm,5.0s			LR	LR		
XAN	Xi'an	5.57	55	Pg	Pn	04 40 27.3	+2.4
XAN				Sg	Sn	04 41 29.4	+0.8
XAN	comp=N,120nm,0.8s			smax			
XAN	comp=E,60nm,0.9s			smax			
KMI	Kunming	5.86	186	Pn	Pn	04 40 29.0	+0.2
KMI				Sn	Sn	04 41 35.9	+0.3
KMI	comp=N,39nm,1.1s			smax			
KMI	comp=E,40nm,1.1s			smax			

IDC 13 04:44:34.1±1.8, 31°.10N×103°.87E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/24, mbtmp3.6/4, Error ellipse: s-maj=486.6km s-min=22.0km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.5nm,0.8s,baz=116,slow=11,SNR=5.3	22.85	319	P	P	04 49 38.2	-0.5
KURK	Kurchatov 0.6nm,0.2s,baz=129,slow=9.6,SNR=2.9	27.13	324	P	P	04 50 19.1	+0.4
WRA	Warramunga Arr 0.4nm,0.4s,baz=339,slow=7.3,SNR=6.2	58.58	146	P	P	04 54 33.3	+0.5
ASAR	Alice Springs 0.3nm,0.7s,baz=336,slow=5.8,SNR=4.4	61.59	149	P	P	04 54 52.9	-0.5

JMA 13 04:45:51.0±0.2, 26°.60N×126°.48E, h104km±2km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.39	135	P	Pn	04 46 06.6	+0.1
JKE				S	Sn	04 46 18.3	+0.2
JAGN	Aguni-jima	0.68	91	P	Pn	04 46 08.8	+0.2
JAGN				S	Sn	04 46 21.9	+0.1
NAH1	Naha	1.16	110	P	Pn	04 46 13.6	+0.2
NAH1				S	Sn	04 46 29.9	-0.4
JJT2	Tamagusuku 2	1.23	112	P	Pn	04 46 14.8	+0.6
JIH	Iheya	1.40	72	P	Pn	04 46 16.6	+0.4
JIH				S	Sn	04 46 35.1	-0.2
JOW	Kunigami	1.62	81	P	Pn	04 46 19.4	+0.5
JOW				S	Sn	04 46 38.9	-1.3
JTK	Tokunoshima	2.50	61	P	Pn	04 46 29.9	-0.3
JTK	

JMZ	**Minamidaito 2**	**4.33**	**99**	P	Pn	04 46 53.2	-1.5
JMZ				*e*S	Sn	04 47 35.9	-8.2

*IDC **13** 04:45:56.2±1.1, 31°.08N×103°.88E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=39.2km s-min=18.5km az=57.0*
*ISCJB **13** 04:45:58.9±0.8, 31°.03N±0°.05×103°.71E±0°.08, h31km±5km, mb3.8/7, Error ellipse: s-maj=11.6km s-min=8.7km az=8.3*
*BJI **13** 04:45:58.2, 31°.01N×103°.42E, h13km, mb4.5/4, ML3.8/13, Ms4.1/4, Ms7 4.0/2*
ISC 13 04:45:58.5±1.1, 31°.12N±0°.04×103°.62E±0°.08, h13km±7km, n16, σ1§48/21, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**151**	Pg	**Pg**	**04 46 03.8**	**+0.3**
CD2				Sg	**Sg**	**04 46 09.9**	**+3.0**
CD2				smax			
	comp=N,67μm,0.4s						
LZH	**Lanzhou**	**4.96**	**2**	Sg	**Sg**	**04 48 36.4**	**-1.3**
LZH				smax			
	comp=N,59nm,0.8s						
LZH				smax			
	comp=E,170nm,1.0s						
XAN	**Xi'an**	**5.34**	**56**	Pg	**Pg**	**04 47 36.1**	**-4.6**
XAN				Sg	**Sg**	**04 48 41.9**	**-7.9**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,89nm,1.0s						
GYA	**Guiyang**	**5.35**	**149**	Pn	**Pn**	**04 47 21.9**	**+3.8**
GYA				Sg	**Sg**	**04 48 43.5**	**-6.9**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,150nm,0.8s						
GYA				LR	LR		
	comp=N,2μm,4.9s						
GYA				LR	LR		
	comp=E,420nm,3.2s						
GYA				LR	LR		
	comp=Z,1μm,5.0s						
KMI	**Kunming**	**6.02**	**188**	Pn	**Pn**	**04 47 25.3**	**-2.0**
KMI				Sn	**Sn**	**04 48 36.5**	**+0.3**
KMI				smax			
	comp=N,35nm,1.8s						
KMI				smax			
	comp=E,50nm,1.0s						
KMI				LR	LR		
	comp=N,460nm,7.0s						
KMI				LR	LR		
	comp=E,1μm,9.5s						
WHN	**Wuhan**	**9.24**	**91**	*e*P	Px	04 48 27.0	
WHN				S	**Sn**	**04 49 56.1**	**+0.8**
HHC	**Hu-ho-hao-te**	**11.64**	**31**	*e*P	**Pn**	**04 48 47.3**	**+3.0**
HHC				pP		04 48 52.0	
HHC				PP		04 48 57.3	
HHC				S	**Sn**	**04 51 01.3**	**+7.2**
HHC				sS		04 51 07.4	
HHC				SS		04 51 15.5	
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				LR	LR		
	comp=N,320nm,6.4s						
HHC				LR	LR		
	comp=E,310nm,4.5s						
HHC				LR	LR		
	comp=Z,190nm,4.2s						
SONM	**Songino Array**	**16.83**	**6**	Pn	**Pn**	**04 49 53.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=16,SNR=4.7						
KSRS	**Korea Array**	**21.02**	**66**	P	**P**	**04 50 39.5**	**-2.4**
	comp=Z,4.0nm,0.7s,mb3.8,baz=237,slow=9.7,SNR=7.7						
CN2	**Changchun**	**21.38**	**48**	*e*P	**P**	**04 50 47.0**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**04 51 00.6**	**+0.9**
	comp=Z,1.3nm,1.0s,mb3.3,baz=116,slow=9.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**26.53**	**335**	P	**P**	**04 51 37.6**	**+1.9**
	comp=Z,2.2nm,0.3s,mb4.1,baz=134,slow=6.2,SNR=3.0						
KURK	**Kurchatov**	**26.99**	**324**	P	**P**	**04 51 41.1**	**+1.2**
	comp=Z,1.1nm,0.2s,mb3.9,baz=130,slow=9.2,SNR=4.3						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**04 55 53.8**	**-2.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=337,slow=7.5,SNR=6.9						
ASAR	**Alice Springs**	**61.72**	**148**	P	**P**	**04 56 16.3**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.8,baz=334,slow=6.2,SNR=4.5						
YKA	**Yellowknife Ar**	**81.80**	**17**	P	**P**	**04 58 15.7**	**-1.1**
	comp=Z,0.1nm,0.6s,mb2.9,baz=330,slow=5.5,SNR=2.8						

*IDC **13** 04:50:22.3±1.1, 31°.24N×103°.61E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/25, mbtmp3.9/8, ML3.0/1, Error ellipse: s-maj=38.5km s-min=18.7km az=55.0*
*ISCJB **13** 04:50:24.5±1.0, 31°.24N±0°.04×103°.6E±0°.1, h29km±8km, mb3.8/6, Error ellipse: s-maj=15.2km s-min=7.3km az=5.8*
*BJI **13** 04:50:24.3, 31°.34N×103°.57E, h15km, mb4.1/4, ML4.0/12, Ms4.0/2, Ms7 3.8/2*
ISC 13 04:50:24.7±0.9, 31°.30N±0°.03×103°.6E±0°.1, h14km±6km, n14, σ1§04/20, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**165**	Pg	**Pg**	**04 50 31.9**	**-0.9**
CD2				Sg	**Sg**	**04 50 39.5**	**+1.2**
CD2				smax			
	comp=N,26μm,0.5s						
LZH	**Lanzhou**	**4.77**	**2**	Pg	**Pg**	**04 51 58.8**	**+2.7**
LZH				Sg	**Sg**	**04 52 56.8**	**-1.1**
LZH				smax			
	comp=N,210nm,1.0s						
LZH				smax			
	comp=E,120nm,1.0s						
LZH				LR	LR		
	comp=E,2μm,7.2s						
LZH				LR	LR		
	comp=Z,2μm,9.4s						
XAN	**Xi'an**	**5.23**	**57**	Pg	**Pg**	**04 52 03.8**	**-1.0**
XAN				Sg	**Sg**	**04 53 04.3**	**-8.2**
XAN				smax			
	comp=N,210nm,1.0s						
XAN				smax			
	comp=E,92nm,0.9s						
GYA	**Guiyang**	**5.51**	**150**	Pg	**Pn**	**04 51 47.3**	**+1.0**
GYA				Sg	**Sb**	**04 53 02.3**	**-4.3**
GYA				smax			
	comp=N,150nm,0.8s						
GYA				smax			
	comp=E,210nm,0.9s						
GYA				LR	LR		
	comp=N,3μm,4.9s						
GYA				LR	LR		
	comp=E,2μm,3.2s						
GYA				LR	LR		
	comp=Z,3μm,5.0s						
KMI	**Kunming**	**6.21**	**188**	Pg	**Pn**	**04 51 54.0**	**-1.9**
KMI				Sg	**Sn**	**04 53 06.8**	**+0.1**
KMI				smax			
	comp=N,28nm,0.9s						
KMI				smax			
	comp=E,41nm,0.9s						
HHC	**Hu-ho-hao-te**	**11.48**	**32**	*e*P	**Pn**	**04 53 09.4**	**+1.3**
HHC				pP		04 53 13.8	
HHC				PP		04 53 18.9	
HHC				S	**Sn**	**04 55 20.3**	**+4.2**
HHC				sS		04 55 27.5	
HHC				SS		04 55 34.9	
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				LR	LR		
	comp=N,250nm,5.0s						
HHC				LR	LR		
	comp=E,340nm,4.4s						
HHC				LR	LR		
	comp=Z,200nm,4.8s						
SONM	**Songino Array**	**16.64**	**7**	Pn	**Pn**	**04 54 17.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=170,slow=8.8,SNR=4.3						
KSRS	**Korea Array**	**20.94**	**66**	P	**P**	**04 55 07.0**	**0.0**
	comp=Z,4.6nm,0.6s,baz=263,slow=10,SNR=11						
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**04 55 24.9**	**+0.5**
	comp=Z,5.3nm,1.2s,mb3.9,baz=112,slow=9.5,SNR=12						
ZALV	**Zalesovo Beam**	**26.37**	**335**	P	**P**	**04 55 59.3**	**-0.9**
	comp=Z,2.5nm,0.8s,mb3.8,baz=132,slow=8.8,SNR=5.4						
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**04 56 05.2**	**+0.6**
	comp=Z,4.1nm,0.9s,mb4.0,baz=128,slow=9.4,SNR=10						
WRA	**Warramunga Arr**	**58.86**	**146**	P	**P**	**05 00 22.5**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=327,slow=9.0,SNR=7.0						
ASAR	**Alice Springs**	**61.87**	**148**	P	**P**	**05 00 43.2**	**-0.3**
	comp=Z,0.7nm,0.9s,mb3.8,baz=343,slow=7.1,SNR=4.8						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**05 02 42.6**	**+0.8**
	comp=Z,0.2nm,0.7s,mb3.2,baz=328,slow=4.8,SNR=4.7						

*ISCJB **13** 04:54:06.9±0.8, 31°.86N±0°.05×104°.72E±0°.06, h2km±8km, mb3.5/3, Error ellipse: s-maj=10.4km s-min=6.0km az=33.6*
*IDC **13** 04:54:08.2±1.4, 31°.78N×104°.58E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/24, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=66.7km s-min=26.9km az=64.0*
*BJI **13** 04:54:14.2, 31°.75N×104°.57E, h12km, ML3.8/6, Ms3.6/1*
ISC 13 04:54:09.4±0.9, 31°.80N±0°.05×104°.69E±0°.07, h8km±8km, n8, σ0§95/12, mb3.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.19**	**222**	Pg	**Pg**	**04 54 33.1**	**+0.9**
CD2				Sg	**Sg**	**04 54 46.6**	**-1.0**
CD2				smax			
	comp=N,5μm,0.7s						
XAN	**Xi'an**	**4.20**	**57**	Pg	**Pg**	**04 55 29.3**	**-0.6**
XAN				Sg	**Sg**	**04 56 24.3**	**-0.1**
XAN				smax			
	comp=N,130nm,0.6s						
XAN				smax			
	comp=E,78nm,0.7s						
LZH	**Lanzhou**	**4.33**	**351**	Pg	**Pg**	**04 55 34.6**	**+2.2**
LZH				Sg	**Sg**	**04 56 27.9**	**-0.7**
LZH				smax			
	comp=N,140nm,0.9s						
LZH				smax			
	comp=E,190nm,1.0s						
LZH				LR	LR		
	comp=E,510nm,5.4s						
GYA	**Guiyang**	**5.59**	**161**	Pg	**Pg**	**04 56 00.8**	**+4.3**
GYA				Sg	**Sg**	**04 57 02.3**	**-6.7**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,80nm,0.8s						
SONM	**Songino Array**	**16.07**	**4**	Pn	**Pn**	**04 57 54.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=180,slow=16,SNR=2.9						
MKAR	**Makanchi Array**	**22.79**	**317**	P	**P**	**04 59 11.9**	**-0.3**
	comp=E,0.4nm,0.4s,mb3.2,baz=115,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**05 04 29.2**	**+0.3**
	comp=E,0.2nm,0.5s,mb3.5,baz=316,slow=9.9,SNR=3.6						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	**P**	**05 06 24.3**	**+0.7**
	comp=E,0.6nm,0.6s,mb3.7,baz=328,slow=5.2,SNR=11						

*ISCJB **13** 04:59:35.1±0.6, 32°.62N±0°.04×105°.63E±0°.07, h10km, mb3.6/6, Error ellipse: s-maj=8.3km s-min=6.0km az=19.7*
*IDC **13** 04:59:36.5±1.0, 32°.34N×105°.18E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=62.2km s-min=19.1km az=58.0*
*BJI **13** 04:59:40.1, 32°.77N×105°.53E, h14km, mb3.7/1, ML3.8/8, Ms3.6/4, Ms7 3.2/4*
ISC 13 04:59:38.1±0.6, 32°.65N±0°.04×105°.64E±0°.06, h10km, n12, σ1§15/17, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.36**	**223**	Pg	**Sn**	**05 00 40.9**	**-5.0**
CD2				Sg	**Sg**	**05 00 54.6**	**+0.6**
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	**3.08**	**62**	Pn	**Pn**	**05 00 28.0**	**+1.2**
XAN				Pg	**Pg**	**05 00 36.8**	**-0.3**
XAN				Sg	**Sg**	**05 01 10.5**	**-6.5**
XAN				smax			
	comp=N,230nm,0.7s						
XAN				smax			
	comp=E,120nm,0.9s						
LZH	**Lanzhou**	**3.74**	**337**	Pg	**Pg**	**05 00 47.0**	**-2.8**
LZH				Sg	**Sg**	**05 01 32.1**	**-6.2**
LZH				smax			
	comp=N,480nm,0.5s						
LZH				smax			
	comp=E,900nm,0.5s						
LZH				LR	LR		
	comp=E,1μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,7.3s						
GYA	**Guiyang**	**6.23**	**172**	Pg	**Pg**	**05 01 36.9**	**-0.6**
GYA				smax			
	comp=N,70nm,0.7s						
GYA				smax			
	comp=E,40nm,0.7s						
GTA	**Gaotai**	**8.23**	**327**	*e*P	**Pn**	**05 01 37.0**	**-0.6**
GTA				pP		05 01 46.5	
GTA				sP		05 01 50.3	
GTA				S	**Sn**	**05 03 11.8**	**+1.1**
GTA				sS		05 03 24.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				LR	LR		
	comp=N,260nm,9.5s						
GTA				LR	LR		
	comp=E,220nm,6.8s						
GTA				LR	LR		
	comp=Z,140nm,8.0s						
SONM	**Songino Array**	**15.18**	**2**	Pn	**Pn**	**05 03 15.8**	**+3.3**
	baz=194,slow=10,SNR=1.7						
MKAR	**Makanchi Array**	**22.74**	**315**	P	**P**	**05 04 40.0**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.4,baz=116,slow=13,SNR=9.0						
KURK	**Kurchatov**	**26.85**	**320**	P	**P**	**05 05 18.6**	**-0.1**
	comp=Z,0.4nm,0.3s,mb3.4,baz=140,slow=8.3,SNR=3.3						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**05 09 23.3**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=90,slow=7.8,SNR=4.0						
WRA	**Warramunga Arr**	**59.06**	**148**	P	**P**	**05 09 37.5**	**-1.0**
	comp=Z,1.1nm,0.5s,mb4.1,baz=342,slow=7.4,SNR=6.9						
ASAR	**Alice Springs**	**62.16**	**151**	P	**P**	**05 09 59.7**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.9,baz=333,slow=6.5,SNR=3.8						
YKA	**Yellowknife Ar**	**79.83**	**18**	P	**P**	**05 11 49.1**	**+2.7**
	comp=Z,0.1nm,0.5s,mb3.0,baz=325,slow=4.9,SNR=4.4						

*ISCJB **13** 05:02:51.9±1.3, 31°.47N±0°.04×104°.29E±0°.09, h13km±9km, mb3.7/7, Error ellipse: s-maj=12.3km s-min=5.8km az=172.7*
*IDC **13** 05:02:52.1±1.1, 31°.67N×104°.50E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/26, mbtmp3.7/6, Error ellipse: s-maj=78.7km s-min=19.7km az=57.0*
*NEIC **13** 05:02:53.5±0.6, 31°.57N×104°.29E, h10km, mb4.3/1, Error ellipse: s-maj=20.0km s-min=9.0km az=53.0*
*BJI **13** 05:02:57.1, 31°.40N×103°.95E, h15km, ML3.7/5*
ISC 13 05:02:53.2±2.5, 31°.39N±0°.06×104°.16E±0°.10, h11km±16km, n15, σ1§23/19, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.58**	**216**	Pg	**Pg**	**05 02 58.5**	**-6.1**
CD2				Sg	**Sg**	**05 03 04.9**	**-7.4**
CD2				smax			
	comp=N,7μm,0.7s						
LZH	**Lanzhou**	**4.70**	**357**	Pg	Px	05 04 33.6	
LZH				Sg	**Sg**	**05 05 26.0**	**+2.0**
LZH				smax			
	comp=N,73nm,1.0s						
LZH				smax			
	comp=E,110nm,1.0s						
LZH				LR	LR		
	comp=E,390nm,7.6s						
LZH				LR	LR		
	comp=Z,410nm,8.6s						
ENH	**Enshi**	**4.72**	**102**	Pn	**Pn**	**05 04 04.5**	**+0.2**
XAN	**Xi'an**	**4.81**	**55**	Pg	**Pg**	**05 04 25.3**	**0.0**
XAN				Sg	**Sg**	**05 05 27.0**	**-0.6**
XAN				smax			
	comp=N,98nm,0.8s						
XAN				smax			
	comp=E,36nm,1.0s						
GYA	**Guiyang**	**5.38**	**155**	Pg	**Pg**	**05 04 41.6**	**+5.3**
GYA				Sg	**Sg**	**05 05 50.8**	**+4.8**
GYA				smax			
	comp=N,130nm,0.9s						
GYA				smax			
	comp=E,130nm,0.7s						
KMI	**Kunming**	**6.36**	**192**	Pg	**Pn**	**05 04 29.4**	**+2.5**
KMI				Sg	**Sn**	**05 05 38.0**	**-1.5**
KMI				smax			
	comp=N,20nm,0.8s						
KMI				smax			
	comp=E,18nm,0.8s						
ULN	**Ulaanbaatar**	**16.61**	**7**	*e*P	**Pn**	**05 06 43.5**	**-2.3**
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**05 07 56.4**	**+0.7**
	comp=E,0.9nm,0.6s,mb3.4,baz=115,slow=11,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**05 08 29.4**	**-0.9**
	comp=E,1.1nm,0.3s,mb3.9,baz=128,slow=9.6,SNR=3.5						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**05 08 35.3**	**0.0**
	comp=E,0.9nm,0.2s,mb3.9,baz=129,slow=8.9,SNR=4.2						
WRAB	**Tennant Creek**	**58.68**	**146**	P	**P**	**05 12 51.3**	**+0.5**
	comp=E,1.8nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**05 12 51.6**	**+0.8**
	comp=E,0.8nm,0.6s,mb3.9,baz=339,slow=7.3						
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**05 13 13.3**	**+1.9**
	comp=E,0.3nm,0.5s,mb3.7,baz=338,slow=7.1,SNR=6.1						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	**05 15 09.2**	**-0.5**
	comp=E,0.1nm,0.5s,mb3.0,baz=330,slow=5.3,SNR=4.5						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	**05 15 09.2**	**-0.5**

*IDC **13** 05:08:20.2±1.5, 31°.42N×104°.31E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/25, mbtmp3.4/3, Error ellipse: s-maj=88.6km s-min=28.7km az=59.0*
*NEIC **13** 05:08:21.5±0.7, 31°.33N×104°.14E, h10km, Error ellipse: s-maj=29.5km s-min=10.7km az=39.0*
*ISCJB **13** 05:08:22.5±0.7, 31°.11N±0°.09×104°.03E±0°.08, h31km±6km, mb3.4/3, Error ellipse: s-maj=16.9km s-min=8.5km az=146.7*
*BJI **13** 05:08:23.6, 31°.41N×103°.67E, h10km, ML3.5/6*
ISC 13 05:08:22.8±0.7, 31°.20N±0°.04×104°.01E±0°.05, h18km±6km, n11, σ0§84/14, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**217**	Pg	**Pg**	**05 08 29.8**	**-0.5**
CD2				Sg	**Sg**	**05 08 35.6**	**+0.2**
CD2				smax			
	comp=N,13μm,0.5s						
ENH	**Enshi**	**4.80**	**100**	*e*Pn	**Pn**	**05 09 33.0**	**-1.2**
ENH				*e*Sg	**Sg**	**05 10 56.2**	**-0.9**
LZH	**Lanzhou**	**4.88**	**358**	Sg	**Sg**	**05 10 59.4**	**-0.1**
LZH				smax			
	comp=N,49nm,0.9s						
LZH				smax			
	comp=E,47nm,0.8s						
LZH				LR	LR		
	comp=N,410nm,6.0s						
LZH				LR	LR		
	comp=Z,520nm,7.2s						
XAN	**Xi'an**	**5.02**	**54**	Pg	**Pb**	**05 09 52.9**	**+2.8**
XAN				Sn	**Sb**	**05 10 50.4**	**+0.3**
XAN				smax			
	comp=N,54nm,0.9s						
XAN				smax			
	comp=E,28nm,0.8s						
GYA	**Guiyang**	**5.26**	**153**	Pg	**Pg**	**05 10 04.4**	**+0.8**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,40nm,0.6s						
MK31	**Makanchi Array**	**22.86**	**319**	*e*P	**P**	**05 13 24.6**	**-0.3**
MKAR	**Makanchi Array**	**22.86**	**319**	P	**P**	**05 13 24.8**	**-0.1**
	comp=E,0.3nm,0.5s,mb3.0,baz=120,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**58.59**	**146**	P	**P**	**05 18 19.3**	**+0.7**
	comp=E,0.8nm,0.6s,mb3.9,baz=338,slow=7.9,SNR=13						
WB2	**Warramunga Arr**	**58.60**	**146**	*e*P	**P**	**05 18 19.0**	**+0.3**
YKA	**Yellowknife Ar**	**81.63**	**17**	P	**P**	**05 20 38.4**	**-0.8**
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=5.4,SNR=4.4						
YKA	**Yellowknife Ar**	**81.63**	**17**	P	**P**	**05 20 38.4**	**-0.8**

*NEIC **13** 05:15:37.9±1.0, 31°.42N×104°.40E, h10km, mb4.0/1, Error ellipse: s-maj=35.2km s-min=10.3km az=32.0*
*IDC **13** 05:15:37.5±11.0, 31°.50N×104°.24E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.6/4, Error ellipse: s-maj=307.8km s-min=48.5km az=19.0*
ISC 13 05:15:37.3±1.2, 31°.49N±0°.05×104°.41E±0°.08, h3km±9km, n10, σ0§46/12, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.80**	**224**	Sg	**Sg**	**05 16 03.3**	**+0.1**
CD2				smax			
	comp=N,480nm,0.5s						
ENH	**Enshi**	**4.53**	**104**	Pg	**Pg**	**05 17 04.2**	**0.0**
ENH				*e*Sg	**Sg**	**05 18 12.7**	**+10**
LZH	**Lanzhou**	**4.61**	**354**	Pg	**Pg**	**05 17 11.8**	**+6.2**
LZH				Sg	**Sg**	**05 18 05.3**	**-0.1**
LZH				smax			
	comp=N,40nm,0.7s						
LZH				smax			
	comp=E,59nm,1.2s						
LZH				LR	LR		
	comp=E,240nm,5.2s						
LZH				LR	LR		
	comp=Z,310nm,6.4s						
MKAR	**Makanchi Array**	**22.86**	**318**	P	**P**	**05 20 41.5**	**-0.2**
	comp=Z,1.0nm,0.9s,mb3.2,baz=124,slow=11,SNR=5.9						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**05 21 15.9**	**+0.3**
	comp=Z,1.1nm,0.3s,mb3.8,baz=145,slow=5.3,SNR=2.9						
KURK	**Kurchatov**	**27.10**	**323**	P	**P**	**05 21 20.6**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.1,baz=130,slow=8.6,SNR=3.0						
KURK	**Kurchatov**	**27.10**	**323**	P	**P**	**05 21 20.6**	**-0.5**
WRAB	**Tennant Creek**	**58.65**	**147**	*e*P	**P**	**05 25 35.4**	**-0.6**
	comp=Z,1.3nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**81.25**	**17**	P	**P**	**05 27 55.3**	**+1.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=330,slow=5.3,SNR=9.5						
YKA	**Yellowknife Ar**	**81.25**	**17**	P	**P**	**05 27 55.3**	**+1.0**

*ISCJB **13** 05:21:08.7±0.8, 36°.24N±0°.04×40°.35E±0°.05, h10km, Error ellipse: s-maj=5.8km s-min=4.6km az=41.7*
*ISK **13** 05:21:10.9, 36°.19N×40°.90E, h8km, MD3.7*
*NSSC **13** 05:21:11, 36°.29N×40°.34E, h29km±3km*
*CSEM **13** 05:21:14.7±0.2, 36°.03N×40°.51E, h10km, MD3.7, Error ellipse: s-maj=6.6km s-min=3.5km az=6.0*
ISC 13 05:21:08.6±0.9, 36°.18N±0°.05×40°.43E±0°.04, h14km±7km, n37, σ1§18/53, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFNV	**Sufian**	**0.35**	**313**	⇑P	**Pg**	**05 21 17.0**	**+1.3**
SFNV				⇑S	**Sg**	**05 21 23.0**	**+2.4**
SFNV	**Sufian**	**0.35**	**313**	⇑*i*P	**Pg**	**05 21 17.5**	**+1.8**
SFNV				⇑*i*S	**Sg**	**05 21 23.1**	**+2.5**
KBSD	**Kabsdagh**	**0.83**	**6**	⇑P	**Pg**	**05 21 25.0**	**+0.4**
KBSD				⇑S	**Sg**	**05 21 34.0**	**-1.5**
KBSD	**Kabsdagh**	**0.83**	**6**	⇑*i*P	**Pg**	**05 21 25.7**	**+1.1**
KBSD				⇑*i*S	**Sg**	**05 21 34.9**	**-0.6**
JHLN	**Al Jahlan**	**1.69**	**253**	⇑P	**Pn**	**05 21 38.0**	**+0.3**
JHLN				⇑S	**Sn**	**05 21 58.0**	**-1.2**
JHLN	**Al Jahlan**	**1.69**	**253**	⇑*i*P	**Pn**	**05 21 38.5**	**+0.8**
JHLN				⇑*i*S	**Sn**	**05 21 58.6**	**-0.6**
DIYA	**Diyarbakir**	**1.76**	**352**	*i* P	**Pn**	**05 21 40.3**	**+1.6**
BEST	**Besiri**	**1.84**	**21**	*i* P	**Pn**	**05 21 41.6**	**+1.9**
SLMH	**Al Salmeh**	**2.03**	**272**	⇑P	**Pn**	**05 21 43.0**	**+0.7**
SLMH				⇑S	**Sn**	**05 22 05.0**	**-2.5**
SLMH	**Al Salmeh**	**2.03**	**272**	⇑*i*P	**Pn**	**05 21 43.3**	**+1.0**
SLMH				⇑*i*S	**Sn**	**05 22 05.3**	**-2.2**
ATAB	**Bozova**	**2.15**	**308**	*i* P	**Pg**	**05 21 49.1**	**-0.7**
ATAB	**Bozova**	**2.15**	**308**	*i* P	**Pg**	**05 21 49.1**	**-0.6**
ATAB				*i* S	**Sg**	**05 22 17.3**	**-0.3**
MSL	**Mosul**	**2.17**	**83**	*e*Pn	**Pg**	**05 21 51.0**	**+0.7**
MSL				*e*Sn	**Sg**	**05 22 17.0**	**-1.5**
SVRC	**Sivrice-ELAZID**	**2.37**	**338**	*e*PN	**Pg**	**05 21 53.2**	**-0.9**
SVRC				*e*SN	**Sg**	**05 22 24.6**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.37**	**338**	*e*Pn	**Pg**	**05 21 53.2**	**-0.9**
ELZG	**Elazig**	**2.59**	**334**	*i* P	**Pg**	**05 21 59.4**	**+1.2**
ELZG	**Elazig

GAZ			*e*SN	**Sg**	**05 22 39.0**	**+1.3**
GAZ	**Gaziantep**	**2.77 292**	*e*Pn	**Pg**	**05 22 02.1**	**+0.4**
GAZ			*e*Sn	**Sg**	**05 22 39.0**	**+1.3**
PTK	**Pertek**	**2.83 343**	*e*PN	**Pg**	**05 21 59.9**	**-3.0**
PTK	**Pertek**	**2.83 343**	*e*Pn	**Pg**	**05 21 59.9**	**-3.0**
KMRS	**Kahramanmaras**	**3.13 296**	*e*PN	**Pg**	**05 22 06.8**	**-1.7**
KMRS	**Kahramanmaras**	**3.13 296**	*e*Pn	**Pg**	**05 22 06.8**	**-1.7**
COBT	**Iskenderun**	**3.39 277**	*i* P	**Pb**	**05 22 09.1**	**+0.7**
COBT	**Iskenderun**	**3.39 277**	*i* P	**Pb**	**05 22 09.1**	**+0.7**
YAYL	**Yayladag**	**3.51 269**	*i* P	**Pb**	**05 22 10.1**	**-0.4**
YAYL	**Yayladag**	**3.51 269**	*i* P	**Pb**	**05 22 10.1**	**-0.3**
SARI	**SarD1z-Kayseri**	**3.88 311**	*e*PN	**Pb**	**05 22 17.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**3.88 311**	*e*Pn	**Pb**	**05 22 17.4**	**+0.6**
KOZT	**Kozan**	**3.92 291**	*e*PN	**Pb**	**05 22 18.6**	**+1.2**
KOZT	**Kozan**	**3.92 291**	*e*Pn	**Pb**	**05 22 18.6**	**+1.2**

*IDC **13** 05:21:23.9±1.5, 31°.13N×103°.71E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, Error ellipse: s-maj=45.9km s-min=25.2km az=44.0*
*ISCJB **13** 05:21:24.1±0.8, 31°.21N±0°.06×103°.9E±0°.1, h10km, mb3.3/4, Error ellipse: s-maj=14.2km s-min=7.9km az=18.8*
ISC 13 05:21:25.9±0.8, 31°.18N±0°.05×103°.9E±0°.1, h10km, n7, σ1°.21/9, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**197**	Pg	**Pg**	**05 21 31.3**	**-0.3**
CD2				Sg	**Sg**	**05 21 36.3**	**+0.8**
CD2				smax			
	comp=N,12μm,0.8s						
GYA	**Guiyang**	**5.31**	**152**	Pg	**Pg**	**05 23 09.3**	**+1.6**
GYA				Sg	**Sg**	**05 24 14.5**	**-2.0**
GYA				smax			
	comp=N,40nm,0.6s						
GYA				smax			
	comp=E,30nm,0.9s						
KSRS	**Korea Array**	**20.81**	**66**	P	**P**	**05 26 09.4**	**+2.0**
	comp=E,2.6nm,0.6s,baz=264,slow=10,SNR=7.5						
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**05 26 28.6**	**+0.2**
	comp=E,0.5nm,0.7s,mb3.1,baz=119,slow=8.4,SNR=2.6						
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**05 27 07.5**	**-0.8**
	comp=E,0.3nm,0.5s,mb3.0,baz=125,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**05 31 23.5**	**-0.1**
	comp=E,0.9nm,0.8s,mb3.9,baz=338,slow=7.9,SNR=5.5						
YKA	**Yellowknife Ar**	**81.68**	**17**	P	**P**	**05 33 42.7**	**-1.4**
	comp=E,0.2nm,0.7s,mb3.2,baz=332,slow=5.3,SNR=3.1						

*ISCJB **13** 05:25:17.6±0.8, 51°.55N±0°.04×16°.10E±0°.03, h0km, Error ellipse: s-maj=6.4km s-min=2.9km az=10.4*
*IPEC **13** 05:25:20.3±0.3, 51°.51N×16°.49E, h0km, ML1.7/3, Error ellipse: s-maj=3.3km s-min=2.1km az=93.0*
*CSEM **13** 05:25:20.1±0.4, 51°.50N×16°.10E, h2km, ML3.1/6*
*WAR **13** 05:25:20.6, 51°.53N×16°.09E, ML2.4, Mining Induced*
*PRU **13** 05:25:21.5, 51°.46N×16°.09E, h0km*
ISC 13 05:25:19.6±0.8, 51°.53N±0°.04×16°.10E±0°.04, h0km, n28, σ0°.96/55, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	**Pg**	**05 25 33.4**	**+0.4**
KSP				*e*Sg	**Sg**	**05 25 42.9**	**+0.8**
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	**Pg**	**05 25 33.3**	**+0.3**
	baz=10						
KSP				*e*Sg	**Sg**	**05 25 42.4**	**+0.3**
	baz=10						
UPC	**Upice**	**1.03**	**183**	*e*PG	**Pg**	**05 25 39.5**	**+0.2**
UPC	**Upice**	**1.03**	**183**	Pg	**Pg**	**05 25 39.5**	**+0.2**
DPC	**Dobruska-Polom**	**1.19**	**173**	*e*PG	**Pg**	**05 25 42.3**	**-0.1**
DPC				*e*SG	**Sg**	**05 25 58.0**	**+0.2**
	comp=Z,17nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**173**	Pg	**Pg**	**05 25 42.3**	**-0.1**
DPC				Sg	**Sg**	**05 25 58.0**	**+0.2**
	comp=Z,17nm,0.3s						
PVCC	**Panska Ves**	**1.40**	**225**	*e*PG	**Pg**	**05 25 46.5**	**+0.2**
PVCC	**Panska Ves**	**1.40**	**225**	Pg	**Pg**	**05 25 46.5**	**+0.2**
BRG	**Berggiesshubel**	**1.51**	**245**	PG	**Pg**	**05 25 48.2**	**-0.3**
BRG				SG	**Sg**	**05 26 08.4**	**+0.3**
	comp=Z,81nm,0.4s						
PRU	**Pruhonice**	**1.84**	**213**	*e*PG	**Pg**	**05 25 54.2**	**-0.6**
PRU				*e*SG	**Sg**	**05 26 18.1**	**-0.4**
	comp=Z,30nm,0.7s						
PRU	**Pruhonice**	**1.84**	**213**	Pg	**Pg**	**05 25 54.2**	**-0.6**
PRU				Sg	**Sg**	**05 26 18.1**	**-0.4**
	comp=Z,30nm,0.7s						
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**05 25 52.0**	**-1.9**
CLL				*e*Pg	**Pg**	**05 25 56.0**	**-1.0**
CLL				*i* Sg	**Sg**	**05 26 22.1**	**-0.2**
	comp=Z,21nm,0.4s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**05 25 53.9**	**-0.4**
	baz=339						
MORC				*e*Sg	**Sg**	**05 26 18.8**	**-4.4**
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	**Pg**	**05 25 59.8**	**-0.7**
OKC				*e*SG	**Sg**	**05 26 28.1**	**-0.1**
	comp=Z,18nm,0.7s						
OKC	**Ostrava-Krasne**	**2.14**	**142**	Pg	**Pg**	**05 25 59.8**	**-0.7**
OKC				Sg	**Sg**	**05 26 28.1**	**-0.1**
	comp=Z,18nm,0.7s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**05 25 58.3**	**+0.3**
	baz=358						
VRAC				*e*Sg	**Sg**	**05 26 28.7**	**-3.1**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn	**Pn**	**05 26 01.5**	**+0.3**
	baz=1.3						
KRUC				*e*Sg	**Sg**	**05 26 36.9**	**-2.3**
	comp=Z,3.6nm,0.2s						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**05 26 04.0**	**+0.4**
NKC				*e*PG	**Pg**	**05 26 10.7**	**+0.3**
NKC				*e*SG	**Sg**	**05 26 46.8**	**+2.0**
	comp=Z,60nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**242**	Pn	**Pn**	**05 26 04.0**	**+0.4**
NKC	**Novy Kostel**	**2.66**	**242**	Pg	**Pg**	**05 26 10.7**	**+0.3**
NKC				Sg	**Sg**	**05 26 46.8**	**+2.0**
	comp=Z,60nm,0.3s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**05 26 11.3**	**+0.3**
OJC				*e*Sg	**Sg**	**05 26 46.0**	**+0.2**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**05 26 11.3**	**+0.3**
OJC				*e*Sg	**Sg**	**05 26 46.0**	**+0.2**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**05 26 06.5**	**-0.4**
KHC				*e*PG	**Pg**	**05 26 13.9**	**-1.2**
KHC				*e*SN	**Sn**	**05 26 44.6**	**+2.2**
KHC				*e*SG	**Sg**	**05 26 53.2**	**+0.6**
	comp=Z,6.8nm,0.7s						
KHC	**Kasperske Hory**	**2.90**	**215**	Pn	**Pn**	**05 26 06.5**	**-0.4**
KHC	**Kasperske Hory**	**2.90**	**215**	Pg	**Pg**	**05 26 13.9**	**-1.2**
KHC				Sn	**Sn**	**05 26 44.6**	**+2.2**
KHC				Sg	**Sg**	**05 26 53.2**	**+0.6**
	comp=Z,6.8nm,0.7s						
MOX	**Moxa**	**2.97**	**254**	*e*PG	**Pg**	**05 26 16.2**	**-0.2**
MOX				*e*SG	**Sg**	**05 26 55.5**	**+0.7**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PG	**Pg**	**05 26 35.4**	**+1.0**
STHS				*e*SG	**Sg**	**05 27 28.2**	**+3.2**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pg	**Pg**	**05 26 35.5**	**+1.1**
STHS				*e*Sg	**Sg**	**05 27 28.2**	**+3.2**

*IDC **13** 05:25:44.8±0.6, 32°.48N×105°.22E, h0km, mb4.3/23, mb1 4.4/25, mb1mx4.3/35, mbtmp4.3/25, ML3.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/39, Error ellipse: s-maj=22.5km s-min=12.5km az=52.0*
*NEIC **13** 05:25:46.5±0.3, 32°.52N×105°.29E, h10km, mb4.5/25, Error ellipse: s-maj=10.0km s-min=6.5km az=46.0*
*BJI **13** 05:25:47.2, 32°.56N×105°.27E, h13km, mB4.7/15, mb4.4/21, ML4.2/22, Ms4.3/26, Ms7 4.1/20*
*MOS **13** 05:25:48.2±0.8, 32°.47N×105°.25E, h36km, mb4.7/27, Error ellipse: s-maj=13.4km s-min=5.9km az=119.6*
ISC 13 05:25:45.4±0.7, 32°.55N±0°.03×105°.32E±0°.03, h2km±4km, n142, σ1°.07/156, mb4.5/58, MS3.7/4, 6C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.11**	**220**	Pg	**Pg**	**05 26 24.1**	**-1.8**
CD2				Sg	**Sg**	**05 26 51.3**	**-2.0**
CD2				smax			
	comp=N,7μm,0.8s						
XAN	**Xi'an**	**3.36**	**63**	Pn	**Pn**	**05 26 42.5**	**+3.6**
XAN				Pg	**Pg**	**05 26 49.4**	**-0.4**
XAN				Sg	**Sg**	**05 27 32.6**	**-0.8**
XAN				smax			
	comp=N,1μm,0.9s						
XAN				smax			
	comp=E,620nm,0.8s						
XAN				LR	LR		
	comp=N,720nm,6.3s						
XAN				LR	LR		
	comp=E,570nm,8.5s						
XAN				LR	LR		
	comp=Z,640nm,7.6s						
LZH	**Lanzhou**	**3.73**	**341**	Pn	**Pn**	**05 26 47.4**	**+3.4**
LZH				Pg	**Pg**	**05 26 57.4**	**+0.5**
LZH				Sg	**Sg**	**05 27 44.5**	**-0.8**
LZH				smax			
	comp=N,900nm,1.0s						
LZH				smax			
	comp=E,3μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,6.8s						
LZH				LR	LR		
	comp=Z,3μm,9.9s						
ENH	**Enshi**	**4.22**	**121**	*e*Pn	**Pn**	**05 26 56.0**	**+5.2**
ENH				*e*S	**Sg**	**05 28 01.2**	**+0.1**
GYA	**Guiyang**	**6.18**	**169**	Pn	**Pn**	**05 27 18.8**	**+1.1**
GYA				Sn	**Sn**	**05 28 23.8**	**-5.2**
GYA				smax			
	comp=N,150nm,0.7s						
GYA				smax			
	comp=E,220nm,0.7s						
GYA				LR	LR		
	comp=N,830nm,5.9s						
GYA				LR	LR		
	comp=E,630nm,6.5s						
GYA				LR	LR		
	comp=Z,750nm,7.7s						
KMI	**Kunming**	**7.74**	**198**	Pn	**Pn**	**05 27 43.6**	**+4.5**
KMI				Pg	**Pb**	**05 28 02.8**	**+2.5**
KMI				smax			
	comp=N,62nm,1.6s						
KMI				smax			
	comp=E,71nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,5.9s						
KMI				LR	LR		
	comp=E,1μm,7.1s						
KMI	**Kunming**	**7.74**	**198**	Pg	**Pg**	**05 28 22.3**	**+8.6**
KMI				Sg	**Sb**	**05 29 40.4**	**+7.4**
KMI				smax			
	comp=N,81nm,1.9s						
KMI				smax			
	comp=E,71nm,1.5s						
KMI				LR	LR		
	comp=N,1μm,8.9s						
KMI				LR	LR		
	comp=E,1μm,8.9s						
WHN	**Wuhan**	**7.96**	**102**	P	**Pn**	**05 27 48.8**	**+6.7**
WHN				S	**Sn**	**05 29 10.0**	**-2.7**
WHN				LR	LR		
	comp=N,4μm,4.7s						
WHN				LR	LR		
	comp=E,2μm,2.6s						
WHN				LR	LR		
	comp=Z,2μm,5.8s						
GTA	**Gaotai**	**8.17**	**328**	*e*P	**Pn**	**05 27 45.6**	**+0.7**
GTA				pP		05 27 50.1	
GTA				sP		05 27 53.4	
GTA				S	**Sn**	**05 29 16.8**	**-1.0**
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,4.2s						
GTA				LR	LR		
	comp=N,1μm,9.9s						
GTA				LR	LR		
	comp=E,490nm,10.8s						
GTA				LR	LR		
	comp=Z,1μm,9.9s						
BTO	**Baotou**	**8.88**	**24**	*e*P	**Pn**	**05 28 00.0**	**+5.4**
BTO				LR	LR		
	comp=N,190nm,7.2s						
HHC	**Hu-ho-hao-te**	**9.68**	**29**	*e*P	**Pn**	**05 28 05.9**	**+0.3**
HHC				pP		05 28 13.1	
HHC				sP		05 28 17.9	
HHC				S	**Sn**	**05 29 54.5**	**-0.3**
HHC				sS		05 30 05.8	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				LR	LR		
	comp=N,500nm,4.4s						
HHC				LR	LR		
	comp=E,800nm,5.4s						
HHC				LR	LR		
	comp=Z,520nm,5.3s						
BJI	**Beijing**	**11.50**	**46**	P	**Pn**	**05 28 32.0**	**+1.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI				LR	LR		
	comp=N,870nm,4.6s						
BJI				LR	LR		
	comp=E,920nm,5.1s						
QIZ	**Qiongzhong**	**14.07**	**162**	P	**Pn**	**05 29 07.8**	**+2.1**
QIZ				S	**Sn**	**05 31 46.0**	**+3.6**
QIZ				pmax	pmax		
	comp=Z,17nm,2.0s						
QIZ				LR	LR		
	comp=N,620nm,9.5s						
QIZ				LR	LR		
	comp=E,230nm,3.8s						
QIZ				LR	LR		
	comp=Z,670nm,10.8s						
CM31	**Chiang Mai Arr**	**15.16**	**204**	*e*P	**Pn**	**05 29 27.4**	**+6.8**
	comp=Z,5.3nm,0.3s						
SONM	**Songino Array**	**15.29**	**3**	Pn	**Pn**	**05 29 23.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=14,SNR=11						
SONM				Lg		05 33 53.3	
	comp=Z,0.0nm,0.3s,baz=186,slow=28,SNR=5.3						
GUN	**Gumba**	**17.42**	**260**	*e*P	**Pn**	**05 29 47.5**	**-2.1**
	comp=Z,49nm,0.9s						
WMQ	**Urumqi**	**17.81**	**314**	*e*P	**Pn**	**05 29 55.3**	**+1.0**
WMQ				LR	LR		
	comp=N,92nm,16.0s						
WMQ				LR	LR		
	comp=E,120nm,15.0s						
WMQ				LR	LR		
	comp=Z,82nm,13.0s						
ZAK	**Zakamensk**	**17.88**	**356**	*e*P	**Pn**	**05 29 57.9**	**+2.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PKI	**Pulchoki**	**17.93**	**259**	*e*P	**Pn**	**05 29 51.5**	**-4.4**
	comp=Z,34nm,0.8s						
KKN	**Kakani**	**17.96**	**260**	*e*P	**Pn**	**05 29 52.8**	**-3.5**
	comp=Z,56nm,1.1s						
DMN	**Daman**	**18.17**	**260**	*e*P	**Pn**	**05 29 56.2**	**-2.6**
	comp=Z,52nm,0.8s						
KSRS	**Korea Array**	**19.14**	**69**	P	**Pn**	**05 30 10.4**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=276,slow=5.6,SNR=3.4						
KSRS				LR	LR	05 38 16.2	
	comp=Z,82nm,21.1s,baz=328,slow=39						
CN2	**Changchun**	**19.35**	**49**	*e*P	**Pn**	**05 30 16.5**	**+3.4**
CN2				*e*sP	sP	05 30 23.0	+10
CN2				*e*S	**Sn**	**05 33 48.3**	**-2.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,15.0s						
CN2				LR	LR		
	comp=E,600nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
MOY	**Mondy**	**19.36**	**352**	*e*P	**Pn**	**05 30 15.6**	**+2.5**
MK31	**Makanchi Array**	**22.62**	**316**	*e*P	**P**	**05 30 47.4**	**+0.1**
MKAR	**Makanchi Array**	**22.62**	**316**	P	**P**	**05 30 47.0**	**-0.2**
	comp=Z,13nm,0.9s,mb4.3,baz=118,slow=10,SNR=39						
ULHL	**Ulahol**	**24.94**	**301**	P	**P**	**05 31 11.0**	**+1.1**
	SNR=12						
TKM2	**Tokmak 2**	**25.57**	**302**	P	**P**	**05 31 16.9**	**+1.3**
	SNR=9.8						
TKM2	**Tokmak 2**	**25.57**	**302**	*e*P	**P**	**05 31 16.6**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
TKM2	**Tokmak 2**	**25.57**	**302**	*e*P	**P**	**05 31 16.6**	**+1.0**
	comp=Z,9.6nm,0.9s,mb4.3						
KZA	**Kyzart**	**25.63**	**300**	P	**P**	**05 31 17.7**	**+1.5**
	SNR=17						
KLR	**Kul'dur**	**25.82**	**42**	*e*P	**P**	**05 31 15.4**	**-2.4**
ZAA0	**Zalesovo Array**	**25.91**	**332**	*e*P	**P**	**05 31 18.8**	**+0.3**
ZALV	**Zalesovo Beam**	**25.91**	**332**	P	**P**	**05 31 19.0**	**+0.5**
	comp=Z,7.3nm,0.9s,mb4.2,baz=137,slow=9.5,SNR=10						
ZALV	**Zalesovo Beam**	**25.91**	**332**	P	**P**	**05 31 19.0**	**+0.5**
BOD	**Bodaibo**	**25.95**	**11**	↑*i* P	**P**	**05 31 20.7**	**+1.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb3.9						
KBK	**Karagaybulak**	**25.97**	**302**	P	**P**	**05 31 20.4**	**+1.2**
	SNR=5.5						
UCH	**Uchtor**	**26.19**	**300**	P	**P**	**05 31 23.1**	**+1.8**
	SNR=20						
UCH	**Uchtor**	**26.19**	**300**	*e*P	**P**	**05 31 22.7**	**+1.4**
	comp=Z,20nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**26.29**	**301**	P	**P**	**05 31 22.8**	**+0.7**
	comp=Z,0.9nm,0.4s,mb3.7,baz=198,slow=8.7,SNR=7.5						
AAK				LR	LR	05 42 54.5	
	comp=Z,120nm,18.5s,MS3.5,baz=273,slow=39						
AAK	**Ala-Archa**	**26.29**	**301**	*c i* P	**P**	**05 31 22.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
AAK	**Ala-Archa**	**26.29**	**301**	*e*P	**P**	**05 31 23.1**	**+0.9**
	comp=Z,8.4nm,1.3s,mb4.1						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**05 31 26.6**	**+0.4**
	comp=Z,5.7nm,0.9s,mb4.1,baz=133,slow=8.6,SNR=30						
KURK				PcP	PcP	05 34 49.2	-0.1
	comp=Z,0.8nm,0.3s,baz=141,slow=2.5,SNR=3.6						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**05 31 26.6**	**+0.4**
KURK						05 34 49.2	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
KURK	**Kurchatov**	**26.75**	**321**	*e*P	**P**	**05 31 26.8**	**+0.6**
	comp=Z,11nm,1.3s,mb4.2						
AML	**Almayashu**	**26.77**	**300**	P	**P**	**05 31 28.4**	**+1.9**
	SNR=11						
AML	**Almayashu**	**26.77**	**300**	*e*P	**P**	**05 31 28.0**	**+1.5**
	comp=Z,8.5nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**26.81**	**301**	*e*P	**P**	**05 31 27.4**	**+0.5**
	comp=Z,2.9nm,0.7s,mb3.9						
KBL	**Kabul**	**30.20**	**284**	*e*P	**P**	**05 31 57.7**	**+0.5**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
KBL	**Kabul**	**30.20**	**284**	*e*P	**P**	**05 31 57.7**	**+0.5**
	comp=Z,9.2nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**05 32 16.2**	**+0.5**
	comp=Z,1.8nm,0.8s,mb4.0,baz=117,slow=9.0,SNR=7.6						
BVAR				PcP	PcP	05 35 02.6	-0.9
	comp=Z,1.3nm,0.7s,baz=107,slow=5.1,SNR=5.3						
BRVK	**Borovoye**	**32.40**	**320**	↑*e*P	**P**	**05 32 16.0**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
ABKAR	**Akbulak array**	**37.51**	**310**	*e*P	**P**	**05 33 00.8**	**+0.3**
	comp=Z,3.6nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**38.93**	**312**	P	**P**	**05 33 12.4**	**0.0**
AKTK				LR	LR	05 50 21.1	
AKTO	**Aktyubinsk**	**38.93**	**312**	P	**P**	**05 33 12.4**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.1,baz=96,slow=7.2,SNR=8.2						
AKTO				LR	LR	05 50 21.1	
	comp=Z,51nm,20.3s,MS3.3,baz=231,slow=38						
ARU	**Arti**	**39.94**	**321**	*d i* P	**P**	**05 33 21.1**	**+0.3**
ARU				S	**S**	**05 39 26.8**	**+0.3**
ARU				SS	SS	05 42 21.0	-1.7
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
ARU	**Arti**	**39.94**	**321**	*e*P	**P**	**05 33 20.6**	**-0.2**
	comp=Z,5.5nm,0.6s,mb4.5						
GNI	**Garni**	**48.56**	**297**	*e*P	**P**	**05 34 29.9**	**-0.1**
GNI				pmax	pmax		
	comp=Z,18nm,1.5s						
ZEI	**Tsey**	**48.72**	**301**	*e*P	**P**	**05 34 27.2**	**-4.0**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
MIB	**Mutribah**	**49.16**	**283**	*e*P	**P**	**05 34 33.3**	**-1.5**
MIB				AMb	AMB	05 34 34.8	
	comp=Z,24nm,0.8s,mb5.2						
RDF	**Al-Radifah**	**49.27**	**282**	*e*P	**P**	**05 34 33.8**	**-1.9**
RDF				AMb	AMB	05 34 36.5	
	comp=Z,25nm,1.2s,mb5.1						
KIV	**Kislovodsk**	**49.40**	**302**	*e*P	**P**	**05 34 36.0**	**-0.5**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=Z,41nm,17.0s,MS3.5						
BILL	**Bilibino**	**49.43**	**26**	*e*P	**P**	**05 34 36.6**	**+0.3**
BILL				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.5						
KLMR	**Klimovskoe**	**50.48**	**325**	*e*P	**P**	**05 34 42.3**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
OBN	**Obninsk**	**52.11**	**317**	*e*P	**P**	**05 34 55.5**	**-1.2**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
APA	**Apatity**	**53.48**	**333**	↑*e*P	**P**	**05 35 08.0**	**+1.4**
APA				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.6						
MALT	**Malatya**	**53.75**	**296**	*e*P	**P**	**05 35 09.5**	**+0.4**
MALT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MALT	**Malatya**	**53.75**	**296**	*e*P	**P**	**05 35 09.5**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.4						
JOF	**Joensuu**	**54.37**	**327**	*e*P	**P**	**05 35 12.5**	**-0.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
JOF	**Joensuu**	**54.37**	**327**	*e*p	**P**	**05 35 12.5**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.6						
KEV	**Kevo**	**55.84**	**336**	*e*P	**P**	**05 35 23.4**	**-0.3**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
KEV	**Kevo**	**55.84**	**336**	*e*p	**P**	**05 35 23.4**	**-0.3**
	comp=Z,8.1nm,0.7s,mb4.9						
ARCES	**ARCESS Array B**	**56.37**	**335**	P	**P**	**05 35 27.9**	**+0.4**
	comp=Z,7.9nm,0.9s,mb4.8,baz=80,slow=7.7,SNR=10						
ARCES				PcP	PcP	05 36 23.6	-1.1
	comp=Z,3.7nm,0.9s,baz=72,slow=4.0,SNR=4.2						
ARCES	**ARCESS Array B**	**56.37**	**335**	P	**P**	**05 35 27.9**	**+0.4**
ARCES				PcP	PcP	05 36 23.6	-1.1
ASF	**Jabal al Asfar**	**56.83**	**290**	P	**P**	**05 35 31.6**	**+0.2**
	comp=Z,4.8nm,0.9s,mb4.5,baz=312,slow=2.7,SNR=8.0						
BR131	**Keskin Array S**	**56.94**	**299**	*e*P	**P**	**05 35 31.1**	**-1.0**
	comp=Z,0.6nm,0.4s,mb4.0						
BRTR	**Keskin Array B**	**56.94**	**299**	P	**P**	**05 35 31.3**	**-0.7**
	comp=Z,2.8nm,0.8s,mb4.3,baz=99,slow=7.7,SNR=13						
BRTR	**Keskin Array B**	**56.94**	**299**	*ce*P	**P**	**05 35 31.7**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**56.95**	**326**	P	**P**	**05 35 31.7**	**-0.1**
	comp=Z,5.1nm,0.8s,mb4.6,baz=75,slow=10,SNR=8.0						
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**05 35 32.9**	**-0.5**

comp=Z,2.5nm,0.5s,mb4.6,baz=93,slow=5.2,SNR=8.6
NB2 NORSAR Subarra 64.00 327 P **P** 05 36 18.9 -1.1
comp=Z,5.0nm,0.8s,mb4.6,baz=71,slow=6.5
NOA NORSAR Array B 64.00 327 P **P** 05 36 19.1 -0.8
comp=Z,3.2nm,0.6s,mb4.5,baz=71,slow=6.6,SNR=11
VYHS Vyhne 64.26 313 *e*P **P** 05 36 22.6 +0.7
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
VYHS Vyhne 64.26 313 *e*P **P** 05 36 22.6 +0.7
comp=Z,4.5nm,1.3s,mb4.3
VYHS Vyhne 64.26 313 *e*P **P** 05 36 22.6 +0.7
MORC Moravsky Berou 64.60 314 *e*P **P** 05 36 23.5 -0.6
MORC pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
MORC Moravsky Berou 64.60 314 *e*P **P** 05 36 23.5 -0.5
comp=Z,5.2nm,1.0s,mb4.5
SMOL Smolenice 65.13 313 *e*P **P** 05 36 26.4 -1.1
SMOL Smolenice 65.13 313 *e*P **P** 05 36 26.4 -1.1
BRG Berggiesshubel 66.33 316 *e*P **P** 05 36 34.7 -0.5
comp=Z,4.8nm,0.8s,mb4.6
BRG Berggiesshubel 66.33 316 *e*P **P** 05 36 34.7 -0.6
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
GEC2 GERESS Array S 67.28 314 *e*P **P** 05 36 41.6 +0.3
GEC2 pmax pmax
comp=Z,928nm,1.0s
GEC2 GERESS Array S 67.28 314 *e*P **P** 05 36 41.5 +0.2
comp=Z,928nm,1.0s
GERES GERESS Array B 67.28 314 P **P** 05 36 40.6 -0.8
comp=Z,1.8nm,0.7s,mb4.2,baz=71,slow=6.2,SNR=15
PERS Pernice 67.30 312 *e*P **P** 05 36 41.2 -0.3
NKC Novy Kostel 67.46 316 *e*P **P** 05 36 36.5 -6.0
PDKS Podkum 67.60 311 *e*P **P** 05 36 43.2 -0.3
INK Inuvik 70.45 20 *e*P **P** 05 36 59.8 -0.9
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 70.45 20 *e*P **P** 05 36 59.8 -0.9
comp=Z,2.7nm,1.0s,mb4.1
CDF Champ du Feu 71.30 316 *e*P **P** 05 37 05.7 -0.6
comp=Z,13nm,0.9s,mb4.6
CDF Champ du Feu 71.30 316 *e*P **P** 05 37 05.7 -0.6
CDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CDF Champ du Feu 71.30 316 *e*P **P** 05 37 05.7 -0.6
comp=Z,6.7nm,0.9s,mb4.6
WLF Walferdange 71.36 317 *e*P **P** 05 37 06.9 +0.3
WLF pmax pmax
comp=Z,14nm,0.8s,mb4.9
WLF Walferdange 71.36 317 *e*P **P** 05 37 06.9 +0.3
comp=Z,14nm,0.8s,mb5.0
RES Resolute Bay 72.20 6 *e*P **P** 05 37 11.6 +0.3
RES pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
RES Resolute Bay 72.20 6 *e*P **P** 05 37 11.6 +0.3
comp=Z,2.1nm,0.9s,mb4.1
KMBO Kilima Mbogo 72.25 257 P **P** 05 37 11.3 -1.2
comp=Z,1.9nm,0.7s,mb4.1,baz=58,slow=8.0,SNR=5.7
KMBO Kilima Mbogo 72.25 257 *ce*P **P** 05 37 12.6 +0.1
KMBO pmax pmax
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 72.25 257 *e*P **P** 05 37 12.2 -0.3
comp=Z,1.9nm,0.7s,mb4.1
STKA Stephens Creek 72.67 148 P **P** 05 37 14.2 -0.3
comp=Z,1.1nm,0.4s,mb4.2,baz=323,slow=8.9,SNR=6.0
STKA Stephens Creek 72.67 148 *e*P **P** 05 37 14.1 -0.4
comp=Z,0.5nm,0.8s,mb3.5
LPG La Plagne 73.01 313 *e*P **P** 05 37 16.9 +0.3
comp=Z,31nm,0.8s,mb5.0
EKA Eskdalemuir Ar 73.35 326 P **P** 05 37 18.1 -0.3
comp=Z,1.0nm,0.7s,mb3.9,baz=56,slow=6.1,SNR=4.5
SMF Signal de Mont 74.20 315 *e*P **P** 05 37 22.7 -0.8
comp=Z,17nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.35 316 *e*P **P** 05 37 29.9 -0.3
comp=Z,7.8nm,1.0s,mb4.3
CAF Calviac 76.16 315 *e*P **P** 05 37 34.8 0.0
comp=Z,7.1nm,0.8s,mb4.3
YKA Yellowknife Ar 80.00 18 P **P** 05 37 55.9 0.0
comp=Z,1.4nm,0.5s,mb4.2,baz=326,slow=5.1,SNR=49
FCC Fort Churchill 87.60 10 *e*P **P** 05 38 34.7 -0.1
comp=Z,0.1nm,0.9s
FFC Flin Flon 89.95 15 *i*P **P** 05 38 46.6 +0.6
NEW Newport 91.03 27 *e*P **P** 05 38 51.7 +0.5
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 91.03 27 *e*P **P** 05 38 51.7 +0.6
comp=Z,2.9nm,0.8s,mb4.7
SCHQ Schefferville 92.71 355 P **P** 05 38 58.7 -0.1
comp=Z,2.3nm,0.7s,mb4.7,baz=204,slow=12,SNR=4.1
OTAV Otavalo 147.19 7 *e*PKPdf PKPbc 05 45 31.3 +0.5

ISCJB ***13*** *05:27:07.5±0.8, 31°.25N±0°.06×104°.0E±0°.1, h10km, mb3.9/5, MS3.1/3, Error ellipse: s-maj=18.2km s-min=7.6km az=14.6*
IDC ***13*** *05:27:08.0±1.4, 31°.46N×104°.24E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/27, mbtmp4.0/5, MS3.3/3, Ms1 3.3/3, ms1mx2.8/38, Error ellipse: s-maj=84.2km s-min=23.4km az=55.0*
NEIC ***13*** *05:27:09.6±0.7, 31°.45N×104°.17E, h10km, mb4.0/1, Error ellipse: s-maj=47.3km s-min=11.3km az=53.0*
ISC 13 05:27:09.4±0.8, 31°.23N±0°.05×103°.9E±0°.2, h10km, n9, σ0§62/10, mb3.9/5, MS3.1/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**196**	Pg	**Pg**	**05 27 15.3**	**-0.6**
CD2				Sg	**Sg**	**05 27 20.5**	**+0.1**
CD2				smax			
	comp=N,53μm,0.5s						
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**05 32 11.9**	**+0.4**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**05 32 12.1**	**+0.6**
	comp=N,3.9nm,0.9s,mb3.8,baz=119,slow=9.0,SNR=3.7						
MKAR				LR	LR	05 41 37.3	
	comp=N,107nm,18.2s,MS3.3,baz=274,slow=38						
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**05 32 46.5**	**-0.4**
	comp=N,1.8nm,0.5s,mb3.9,baz=128,slow=9.3,SNR=3.3						
ZALV				LR	LR	05 42 40.1	
	comp=N,29nm,19.5s,MS2.8,baz=159,slow=35						
KURK	**Kurchatov**	**27.02**	**323**	P	**P**	**05 32 51.6**	**+0.2**
	comp=N,2.3nm,0.8s,mb3.8,baz=130,slow=9.4,SNR=3.1						
KURK				LR	LR	05 44 09.1	
	comp=N,78nm,18.7s,MS3.3,baz=205,slow=38						
KURK	**Kurchatov**	**27.02**	**323**	*e*P	**P**	**05 32 51.4**	**0.0**
	comp=N,2.8nm,0.8s,mb3.8						
WRAB	**Tennant Creek**	**58.69**	**146**	*e*P	**P**	**05 37 08.1**	**+0.9**
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**05 37 07.5**	**+0.3**
	comp=N,2.4nm,0.7s,mb4.3,baz=335,slow=7.8						
YKA	**Yellowknife Ar**	**81.63**	**17**	P	**P**	**05 39 26.0**	**-1.2**
	comp=N,0.4nm,0.6s,mb3.5,baz=330,slow=5.4,SNR=4.3						

CSEM ***13*** *05:27:26.7±0.3, 41°.37N×45°.41E, h2km, ML3.3, Error ellipse: s-maj=5.8km s-min=4.3km az=74.0*
MOS ***13*** *05:27:26.8±1.2, 41°.29N×45°.23E, h13km, mb4.0/1, Error ellipse: s-maj=22.7km s-min=9.2km az=108.7*
TIF ***13*** *05:27:27.7, 41°.44N×45°.34E, h10km*
NSSP ***13*** *05:27:29.6, 41°.32N×45°.37E, h10km, Ms3.4*
ISC 13 05:27:26.4±0.6, 41°.39N±0°.02×45°.43E±0°.04, h1km±4km, n61, σ1§27/109, 16C-18D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTA	**Mtatsminda**	**0.57**	**302**	P	**Pg**	**05 27 37.4**	**+0.2**
MTA				S	**Sg**	**05 27 45.6**	**+1.0**
MTA	**Mtatsminda**	**0.57**	**302**	P	**Pg**	**05 27 37.4**	**+0.2**
MTA				S	**Sg**	**05 27 45.6**	**+1.1**
TBLG	**Delisi**	**0.62**	**303**	*i* PG	**Pg**	**05 27 38.4**	**+0.2**
TBLG				*i* S	**Sg**	**05 27 47.2**	**+0.9**
TBLG	**Delisi**	**0.62**	**303**	P	**Pg**	**05 27 38.4**	**+0.1**
TBLG				S	**Sg**	**05 27 47.2**	**+1.0**
TBLG	**Delisi**	**0.62**	**303**	P	**Pg**	**05 27 38.4**	**+0.2**
TBLG				S	**Sg**	**05 27 47.2**	**+0.9**
CKLZ	**Chkalov**	**0.75**	**232**	||*i*P	**Pg**	**05 27 38.6**	**-2.0**
CKLZ				||*i*S	**Sg**	**05 27 48.6**	**-1.7**
STEZ	**Stepenevan**	**0.87**	**244**	||*i*P	**Pg**	**05 27 40.5**	**-2.5**
STEZ				||*i*S	**Sg**	**05 27 52.4**	**-2.0**
STEZ	**Stepenevan**	**0.87**	**244**	||*i*P	**Pg**	**05 27 42.0**	**-1.1**
STEZ				||S	**Sg**	**05 27 54.0**	**-0.4**
STE	**Stepanavan**	**0.89**	**244**	||P	**Pg**	**05 27 42.0**	**-1.4**
STE				S	**Sg**	**05 27 54.0**	**-1.0**
GOR	**Gori**	**1.15**	**301**	P	**Pg**	**05 27 49.1**	**+0.7**
GOR				S	**Sg**	**05 28 03.8**	**+0.4**
GOR	**Gori**	**1.15**	**301**	P	**Pg**	**05 27 49.1**	**+0.6**
GOR				S	**Sg**	**05 28 03.8**	**+0.4**
KAPZ	**Kaputan**	**1.21**	**208**	*e*P	**Pg**	**05 27 55.3**	**+5.9**
KAPZ				*e*S	**Sg**	**05 28 11.7**	**+6.6**
KAPZ	**Kaputan**	**1.21**	**208**	P	**Pg**	**05 27 55.3**	**+5.8**
KAPZ				S	**Sg**	**05 28 11.7**	**+6.6**
HNAZ	**Hnaberd**	**1.23**	**232**	||*i*P	**Pg**	**05 27 51.0**	**+1.0**
HNAZ				||*i*S	**Sg**	**05 28 07.1**	**+1.1**
HNAZ	**Hnaberd**	**1.23**	**232**	||P	**Pg**	**05 27 51.0**	**+1.0**
HNAZ				S	**Sg**	**05 28 07.1**	**+1.1**
KAMZ	**Kamo**	**1.25**	**244**	||*i*P	**Pg**	**05 27 51.0**	**+0.6**
KAMZ				||*i*S	**Sg**	**05 28 07.8**	**+1.1**
KAMZ	**Kamo**	**1.25**	**244**	||P	**Pg**	**05 27 51.0**	**+0.6**
KAMZ				S	**Sg**	**05 28 07.8**	**+1.1**
TSOZ	**Tsokhamarg**	**1.26**	**250**	||*i*P	**Pg**	**05 27 51.0**	**+0.5**
TSOZ				||*i*S	**Sg**	**05 28 08.5**	**+1.6**
TSOZ	**Tsokhamarg**	**1.26**	**250**	||P	**Pg**	**05 27 51.0**	**+0.5**
TSOZ				S	**Sg**	**05 28 08.5**	**+1.6**
HARI	**Harich**	**1.34**	**235**	||*i*P	**Pg**	**05 27 52.2**	**+0.3**
HARI				||*i*S	**Sg**	**05 28 10.1**	**+0.7**
HARI	**Harich**	**1.34**	**235**	||P	**Pg**	**05 27 52.2**	**+0.2**
HARI				S	**Sg**	**05 28 10.1**	**+0.8**
AMBZ	**Amberd**	**1.34**	**222**	*e*P	**Pg**	**05 27 58.8**	**+6.7**
AMBZ				*e*S	**Sg**	**05 28 16.7**	**+7.3**
AMBZ	**Amberd**	**1.34**	**222**	P	**Pg**	**05 27 58.8**	**+6.8**
AMBZ				S	**Sg**	**05 28 16.7**	**+7.3**
GMRZ	**Gyumri**	**1.34**	**245**	*e*P	**Sg**	**05 28 09.0**	**-0.5**
GNI	**Garni**	**1.35**	**203**	*e*PG	**Pn**	**05 27 51.2**	**-1.1**
GNI				*i* S	**Sb**	**05 28 09.9**	**-0.2**
GNI				pmax	pmax		
	comp=Z,36nm,0.5s						
GNI				smax			
	comp=Z,157nm,0.3s						
GNI	**Garni**	**1.35**	**203**	*e*Pg	**Pn**	**05 27 51.2**	**-1.1**
	comp=Z,36nm,0.5s						
GNI				*i* Sg	**Sb**	**05 28 09.9**	**-0.2**
	comp=Z,157nm,0.3s						
ERE	**Yerevan**	**1.42**	**211**	*e*	**Sn**	**05 28 09.0**	**-3.7**
KEH	**Kehvi**	**1.45**	**310**	P	**Pn**	**05 27 51.5**	**-2.1**
KEH				S	**Sb**	**05 28 10.7**	**-2.2**
KEH	**Kehvi**	**1.45**	**310**	P	**Pn**	**05 27 51.5**	**-2.1**
KEH				S	**Sb**	**05 28 10.7**	**-2.2**
ARUZ	**Aruch**	**1.50**	**223**	*e*P	**Pg**	**05 28 00.9**	**+5.7**
ARUZ				*e*S	**Sg**	**05 28 20.9**	**+6.2**
ARUZ	**Aruch**	**1.50**	**223**	P	**Pg**	**05 28 00.9**	**+5.7**
ARUZ				S	**Sg**	**05 28 20.9**	**+6.2**
MTKZ	**Martakert**	**1.59**	**138**	||P	**Pg**	**05 28 00.4**	**+3.6**
MTKZ				S	**Sn**	**05 28 16.9**	**+0.1**
NARZ	**Nor Artik**	**1.60**	**235**	||*i*P	**Pg**	**05 27 57.0**	**+0.1**
NARZ				||*i*S	**Sg**	**05 28 18.0**	**+0.4**
VLKR	**Vladikavkaz**	**1.75**	**342**	||*i*PN	**Pg**	**05 27 59.8**	**0.0**
VLKR				*e*S	**Sg**	**05 28 25.0**	**+2.6**
VLKR	**Vladikavkaz**	**1.75**	**342**	*i* Pn	**Pg**	**05 27 59.8**	**0.0**
VLKR				*e*Sg	**Sg**	**05 28 25.0**	**+2.6**
ZEI	**Tsey**	**1.79**	**321**	*c i*PN	**Pn**	**05 27 58.5**	**+0.2**
ZEI				*e*S	**Sg**	**05 28 22.6**	**-1.2**
ZEI	**Tsey**	**1.79**	**321**	*i* Pn	**Pn**	**05 27 58.5**	**+0.2**
ZEI				*e*Sg	**Sg**	**05 28 22.6**	**-1.2**
DIGO	**Kars**	**1.84**	**239**	*i* P	**Pn**	**05 27 58.3**	**-0.8**
STKZ		**1.87**	**147**	||*i*P	**Pn**	**05 27 57.5**	**-2.0**
STKZ				||*i*S	**Sn**	**05 28 21.8**	**-1.9**
STKZ		**1.87**	**147**	||P	**Pn**	**05 27 57.5**	**-2.0**
STKZ				S	**Sn**	**05 28 21.8**	**-1.9**
ONI	**Oni**	**1.90**	**310**	P	**Pn**	**05 28 00.3**	**+0.4**
ONI				S	**Sg**	**05 28 26.2**	**-1.2**
ONI	**Oni**	**1.90**	**310**	P	**Pn**	**05 28 00.3**	**+0.4**
ONI				S	**Sg**	**05 28 26.2**	**-1.2**
SUSZ	**Shushi**	**1.91**	**148**	||*i*P	**Pn**	**05 28 02.1**	**+2.0**
SUSZ				||*i*S	**Sn**	**05 28 26.3**	**+1.6**
SUSZ	**Shushi**	**1.91**	**148**	||P	**Pn**	**05 28 02.1**	**+2.0**
SUSZ				S	**Sn**	**05 28 26.3**	**+1.6**
KORR	**Kora**	**1.97**	**330**	||*i*PN	**Pn**	**05 28 02.0**	**+1.1**
KORR				*i* S	**Sg**	**05 28 29.3**	**-0.4**
KORR	**Kora**	**1.97**	**330**	*i* Pn	**Pn**	**05 28 02.0**	**+1.1**
KORR				*i* Sg	**Sg**	**05 28 29.3**	**-0.4**
ARNR	**Ardon**	**1.99**	**335**	||*i*PN	**Pg**	**05 28 02.8**	**-1.7**
ARNR				*i* S	**Sg**	**05 28 30.3**	**+0.1**
ARNR	**Ardon**	**1.99**	**335**	*i* Pn	**Pg**	**05 28 02.8**	**-1.7**
ARNR				*i* Sg	**Sg**	**05 28 30.3**	**+0.1**
DIGR	**Digorskoe uzhe**	**2.04**	**318**	||*e*PN	**Pn**	**05 28 02.1**	**+0.3**
DIGR	**Digorskoe uzhe**	**2.04**	**318**	*e*Pn	**Pn**	**05 28 02.1**	**+0.3**
MAK	**Makhachkala**	**2.20**	**44**	*e*PN	**Pn**	**05 28 05.5**	**+1.5**
MAK				*e*		05 28 35.3	
MAK				pmax	pmax		
	comp=Z,30nm,0.1s						
MAK				smax			
	comp=E,208nm,0.3s						
MAK				smax			
	comp=N,295nm,0.5s						
MAK	**Makhachkala**	**2.20**	**44**	*e*Pn	**Pn**	**05 28 05.5**	**+1.5**
	comp=N,30nm,0.1s						
MAK				*e*Sn	**Sg**	**05 28 35.3**	**-1.7**
	comp=N,295nm,0.5s						
HDR	**Hadrut**	**2.23**	**146**	||P	**Pn**	**05 27 56.0**	**-8.4**
HDR				S	**Sn**	**05 28 16.9**	**-16**
DAGI	**Agillar**	**2.67**	**264**	*i* P	**Pn**	**05 28 13.3**	**+2.8**
DDEM	**Demirkent**	**2.82**	**261**	*i* P	**Pn**	**05 28 15.1**	**+2.5**
DBAD	**Bademkaya**	**2.84**	**264**	*i* P	**Pn**	**05 28 16.7**	**+3.9**
SOC	**Sochi**	**4.76**	**299**	*e*PN	**Pn**	**05 28 37.0**	**-2.2**
SOC				*e*		05 28 50.8	
SOC				*e*		05 29 35.4	
SOC				pmax	pmax		
	comp=Z,24nm,1.2s						
SOC	**Sochi**	**4.76**	**299**	*e*Pn	**Pn**	**05 28 37.0**	**-2.2**
	comp=Z,24nm,1.2s						
SOC	**Sochi**	**4.76**	**299**	*e*Pb	**Pb**	**05 28 50.8**	**+0.3**
SOC				*e*Sn	**Sn**	**05 29 35.4**	**+0.5**
ANN	**Anapa**	**6.77**	**303**	*e*P	**Pn**	**05 29 07.9**	**+1.1**
ANN	**Anapa**	**6.77**	**303**	*e*P	**Pn**	**05 29 07.9**	**+1.1**

IDC 13 05:36:06.7±1.4, 32°.04N×105°.43E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/26, mbtmp3.6/4, Error ellipse: s-maj=68.2km s-min=26.2km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.05**	**316**	P	P	05 41 14.1	+0.7
	0.8nm,0.8s,baz=112,slow=9.7,SNR=5.8						
KURK	**Kurchatov**	**27.20**	**321**	P	P	05 41 51.3	-0.6
	0.4nm,0.5s,baz=128,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**58.64**	**148**	P	P	05 46 05.8	0.0
	0.3nm,0.5s,baz=339,slow=7.4,SNR=5.2						
YKA	**Yellowknife Ar**	**80.46**	**18**	P	P	05 48 20.1	+0.2
	0.4nm,0.5s,baz=328,slow=5.1,SNR=16						

ISCJB ***13*** *05:36:27.1±0.8, 32°.57N±0°.03×105°.37E±0°.03, h5km±5km, mb4.5/59, MS4.1/6, Error ellipse: s-maj=5.0km s-min=3.8km az=143.5*
IDC ***13*** *05:36:28.4±0.6, 32°.53N×105°.20E, h0km, mb4.4/23, mb1 4.4/25, mb1mx4.3/34, mbtmp4.3/25, ML3.7/2, MS3.9/1, Ms1 3.9/1, ms1mx3.1/23, Error ellipse: s-maj=23.8km s-min=11.8km az=52.0*
NEIC ***13*** *05:36:29.7±0.2, 32°.61N×105°.43E, h10km, mb4.6/27, Error ellipse: s-maj=7.7km s-min=5.2km az=53.0*
BJI ***13*** *05:36:29.0, 32°.47N×105°.23E, h11km, mB4.9/12, mb4.5/18, ML4.6/16, Ms4.4/30, Ms7 4.2/25*
MOS ***13*** *05:36:30.4±0.9, 32°.48N×105°.26E, h27km, mb4.8/29, MS4.3/4, Error ellipse: s-maj=11.8km s-min=5.6km az=121.1*
SZGRF ***13*** *05:36:35.7, 32°.61N×105°.04E, h33km, mb4.9, Sichuan, China*
ISC 13 05:36:29.3±0.9, 32°.55N±0°.03×105°.29E±0°.04, h5km±5km, h14km±1.1km; pP-P, n172, σ1§04/183, mb4.5/59, MS4.1/6, 11C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.39**	**63**	Pn	**Pn**	**05 37 26.1**	**+3.3**
XAN				Pg	**Pg**	**05 37 32.8**	**-1.4**
XAN				Sg	**Sg**	**05 38 17.9**	**-0.2**
XAN				smax			
	comp=N,1μm,0.9s						
XAN				smax			
	comp=E,660nm,1.0s						
XAN				LR	LR		
	comp=N,1μm,6.5s						
XAN				LR	LR		
	comp=E,1μm,8.2s						
XAN				LR	LR		
	comp=Z,1μm,8.2s						
LZH	**Lanzhou**	**3.72**	**342**	Pn	**Pn**	**05 37 30.4**	**+3.0**
LZH				Pg	**Pg**	**05 37 40.8**	**+0.2**
LZH				Sg	**Sg**	**05 38 27.5**	**-1.4**
LZH				smax			
	comp=N,960nm,0.6s						
LZH				smax			
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=N,2μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,7.8s						
ENH	**Enshi**	**4.25**	**121**	*e*Pn	**Pn**	**05 37 31.0**	**-3.7**
ENH				*e*S	**Sg**	**05 38 47.2**	**+1.4**
GYA	**Guiyang**	**6.19**	**168**	Pn	**Pn**	**05 38 02.1**	**+0.8**
GYA				Sn	**Sn**	**05 39 14.3**	**+1.8**
GYA				smax			
	comp=N,630nm,0.9s						
GYA				smax			
	comp=E,500nm,0.6s						
GYA				LR	LR		
	comp=N,6μm,5.9s						
GYA				LR	LR		
	comp=E,4μm,6.5s						
GYA				LR	LR		
	comp=Z,5μm,7.7s						
KMI	**Kunming**	**7.73**	**197**	Pg	**Pb**	**05 38 42.6**	**-1.2**
KMI				Sn	**Sn**	**05 39 55.0**	**+4.5**
KMI				Sg	**Sb**	**05 40 24.6**	**+8.3**
KMI				smax			
	comp=N,250nm,1.1s						
KMI				smax			
	comp=E,200nm,1.4s						
KMI				LR	LR		
	comp=N,3μm,6.2s						
KMI				LR	LR		
	comp=E,6μm,7.9s						
WHN	**Wuhan**	**7.99**	**102**	||P	**Pn**	**05 38 30.9**	**+4.8**
WHN				S	**Sn**	**05 40 03.4**	**+6.5**
WHN				LR	LR		
	comp=N,6μm,9.7s						
WHN				LR	LR		
	comp=E,5μm,15.2s						
WHN				LR	LR		
	comp=Z,3μm,8.6s						
GTA	**Gaotai**	**8.15**	**329**	*e*P	**Pn**	**05 38 28.8**	**+0.5**
GTA				pP		05 38 38.0	
GTA				sP		05 38 42.3	
GTA				S	**Sn**	**05 39 56.6**	**-4.2**
GTA				sS		05 40 08.5	
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,160nm,6.2s						
GTA				LR	LR		
	comp=N,1μm,10.1s						
GTA				LR	LR		
	comp=E,980nm,12.5s						
GTA				LR	LR		
	comp=Z,2μm,11.0s						
BTO	**Baotou**	**8.89**	**24**	*e*P	**Pn**	**05 38 39.9**	**+1.5**
BTO				LR	LR		
	comp=N,350nm,8.8s						
BTO				LR	LR		
	comp=Z,410nm,7.1s						
HHC	**Hu-ho-hao-te**	**9.69**	**30**	*e*P	**Pn**	**05 38 57.5**	**+8.1**
HHC				S	**Sn**	**05 40 49.3**	**+11**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,4.7s						
HHC				LR	LR		
	comp=N,1μm,6.1s						
HHC				LR	LR		
	comp=E,830nm,5.2s						
HHC				LR	LR		
	comp=Z,810nm,7.5s						
TIA	**Tai'an**	**10.44**	**66**	*e*P	**Pn**	**05 39 08.4**	**+8.8**
NJ2	**Nanjing**	**11.49**	**89**	*e*P	**Pn**	**05 39 14.4**	**+0.3**
NJ2				pP		05 39 18.1	
NJ2				sP		05 39 20.3	
NJ2				PP		05 39 24.1	
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,350nm,3.8s						
NJ2				LR	LR		
	comp=N,1μm,20.0s						
NJ2				LR	LR		
	comp=E,2μm,11.0s						
NJ2				LR	LR		
	comp=Z,1μm,12.5s						
BJI	**Beijing**	**11.53**	**47**	P	**Pn**	**05 39 11.3**	**-3.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=N,1μm,4.5s						
GZH	**Guangzhou**	**11.82**	**141**	P	**Pn**	**05 39 17.9**	**-0.6**
GZH				S	**Sn**	**05 41 25.9**	**-4.9**
GZH				LR	LR		
	comp=N,2μm,6.1s						
GZH				LR	LR		
	comp=E,2μm,6.7s						
LSA	**Lhasa**	**12.44**	**261**	P	**Pn**	**05 39 26.1**	**-0.9**
LSA				S	**Sn**	**05 41 56.1**	**+10**
LSA				LR	LR		
	comp=N,570nm,14.2s						
LSA				LR	LR		
	comp=E,670nm,10.4s						
LSA				LR	LR		
	comp=Z,530nm,12.5s						
LSA	**Lhasa**	**12.44**	**261**	*e*Pn	**Pn**	**05 39 27.1**	**+0.1**
SHL	**Shillong**	**13.62**	**243**	*ex*	**Pn**	**05 39 40.0**	**-3.2**
SHL				*ex*	x	05 43 17.0	
QZH	**Quanzhou**	**13.91**	**120**	P	**Pn**	**05 39 45.3**	**-1.8**
QZH				S	**Sn**	**05 42 19.6**	**-2.4**
QZH				LR	LR		
	comp=N,2μm,5.6s						
QZH				LR	LR		
	comp=E,4μm,8.2s						
QZH				LR	LR		
	comp=Z,4μm,9.5s						
QIZ	**Qiongzhong**	**14.07**	**162**	P	**Pn**	**05 39 48.8**	**-0.6**
QIZ				S	**Sn**	**05 42 26.6**	**+0.6**
QIZ				LR	LR		
	comp=N,840nm,11.0s						
QIZ				LR	LR		
	comp=Z,1μm,10.4s						
CM31	**Chiang Mai Arr**	**15.15**	**204**	*e*P	**Pn**	**05 40 06.8**	**+2.8**
	comp=Z,3.0nm,0.3s						
SONM	**Songino Array**	**15.29**	**3**	Pn	**Pn**	**05 40 05.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=14,SNR=12						
WMQ	**Urumqi**	**17.79**	**314**	*e*P	**Pn**	**05 40 39.3**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ				LR	LR		
	comp=N,530nm,20.0s						
WMQ				LR	LR		
	comp=E,250nm,28.0s						
WMQ				LR	LR		
	comp=Z,210nm,18.0s						
ZAK	**Zakamensk**	**17.88**	**356**	*e*P	**Pn**	**05 40 41.7**	**+3.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSRS	**Korea Array**	**19.16**	**69**	P	**Pn**	**05 40 55.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=249,slow=10,SNR=4.8						
MOY	**Mondy**	**19.36**	**352**	*e*P	**Pn**	**05 40 59.4**	**+2.8**
CN2	**Changchun**	**19.37**	**49**	*e*P	**Pn**	**05 40 58.0**	**+1.1**
CN2				*ep*P	pP	05 41 06.3	+9.1
CN2				*es*P	sP	05 41 10.8	+13
CN2				*e*S	**Sn**	**05 44 27.1**	**-7.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		

SMLA Simla 23.91 274 *ex* **P 05 41 40.3 -3.8**
AGRA Agra 24.26 265 *e*P **P 05 41 46.6 -0.8**
BISR Bishrakh 24.27 268 *ex* **P 05 41 44.4 -3.1**
NDI New Delhi 24.43 268 *ex* **P 05 41 47.0 -1.9**
AYAN Aya Nagar 24.56 268 *e*P **P 05 41 49.1 -1.0**
AYAN AMb AMB 05 41 55.1
comp=Z,18nm,1.4s,mb4.4
SONA Sohna 24.67 267 *e*P **P 05 41 50.5 -0.6**
ULHL Ulahol 24.92 301 P **P 05 41 54.8 +1.6**
SNR=12
RTK Rohtak 25.01 270 *ex* x 05 41 44.7
TKM2 Tokmak 2 25.54 302 P **P 05 42 00.3 +1.5**
SNR=10.0
TKM2 Tokmak 2 25.54 302 *e*P **P 05 41 59.5 +0.6**
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.4
TKM2 Tokmak 2 25.54 302 *e*P **P 05 41 59.5 +0.7**
comp=Z,11nm,0.9s,mb4.4
KZA Kyzart 25.60 300 P **P 05 42 01.2 +1.8**
SNR=17
KHET Khetri 25.80 268 *e*P **P 05 42 01.0 -0.3**
KLR Kul'dur 25.84 42 *e*P **P 05 42 00.0 -1.5**
ZAA0 Zalesovo Array 25.89 332 *e*P **P 05 42 01.9 0.0**
ZALV Zalesovo Beam 25.89 332 P **P 05 42 02.4 +0.5**
comp=Z,3.1nm,0.4s,mb4.2,baz=128,slow=9.6,SNR=8.1
KBK Karagaybulak 25.94 302 P **P 05 42 04.1 +1.6**
SNR=7.5
BOD Bodaibo 25.96 11 *e*P **P 05 42 03.0 +0.5**
BOD pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
UCH Uchtor 26.17 300 P **P 05 42 06.5 +1.9**
SNR=29
UCH Uchtor 26.17 300 *e*P **P 05 42 06.4 +1.8**
comp=Z,28nm,1.2s,mb4.7
AAK Ala-Archa 26.27 301 P **P 05 42 05.7 +0.3**
comp=Z,2.2nm,0.6s,mb3.8,baz=182,slow=8.9,SNR=9.4
AAK Ala-Archa 26.27 301⇑ *e*P **P 05 42 03.6 -1.8**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
AAK Ala-Archa 26.27 301 *e*P **P 05 42 06.1 +0.6**
comp=Z,10nm,1.1s,mb4.3
USP Ospenovka 26.40 303 P **P 05 42 06.6 -0.1**
SNR=5.9
KURK Kurchatov 26.73 321 P **P 05 42 09.3 -0.2**
comp=Z,8.4nm,1.0s,mb4.2,baz=129,slow=8.8,SNR=32
KURK Kurchatov 26.73 321⇑ *i*P **P 05 42 09.7 +0.2**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.4
KURK Kurchatov 26.73 321 *e*P **P 05 42 10.2 +0.7**
comp=Z,29nm,1.5s,mb4.6
AML Almayashu 26.75 300 P **P 05 42 11.4 +1.7**
SNR=11
AML Almayashu 26.75 300 *e*P **P 05 42 10.9 +1.1**
comp=Z,17nm,0.9s,mb4.6
EKS2 Erkin-Say 26.79 301 *e*P **P 05 42 10.5 +0.4**
comp=Z,4.4nm,0.9s,mb4.0
NVS Novosibirsk 27.18 332 *e*P **P 05 42 13.5 0.0**
NVS pmax pmax
comp=N,8.0nm,1.6s
NVS pmax pmax
comp=Z,10.0nm,1.6s,mb4.1
NVS pmax pmax
comp=E,17nm,2.0s
KBL Kabul 30.17 284 *e*P **P 05 42 42.0 +1.6**
KBL pmax pmax
comp=Z,13nm,1.0s,mb4.6
KBL Kabul 30.17 284 *e*P **P 05 42 42.0 +1.6**
comp=Z,13nm,1.0s,mb4.6
BVAR Borovoye Array 32.31 320 P **P 05 42 59.5 +0.4**
comp=Z,1.3nm,0.5s,mb4.0,baz=116,slow=10,SNR=11
BRVK Borovoye 32.38 320 *c i*P **P 05 42 59.9 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
BRVK Borovoye 32.38 320 *e*P **P 05 42 59.7 +0.1**
comp=Z,5.9nm,0.9s,mb4.4
ABKAR Akbulak array 37.49 310 *e*P **P 05 43 44.2 +0.4**
comp=Z,0.2nm,0.5s
AKTK Aktyubinsk 38.91 312 P **P 05 43 56.1 +0.4**
AKTO Aktyubinsk 38.91 312 P **P 05 43 56.1 +0.4**
comp=Z,2.8nm,0.8s,mb4.1,baz=93,slow=9.3,SNR=9.6
KAPI Kappang 39.81 157 P **P 05 44 04.7 +1.2**
comp=Z,5.1nm,0.4s,mb4.7,baz=271,slow=3.5,SNR=4.4
ARU Arti 39.92 321 *d i*P **P 05 44 04.3 +0.2**
ARU S **S 05 50 08.2 -1.3**
ARU SS SS 05 53 03.3 -2.3
ARU pmax pmax
comp=Z,19nm,1.0s,mb4.8
ARU Arti 39.92 321 *e*P **P 05 44 04.5 +0.4**
comp=Z,18nm,1.0s,mb4.8
TIXI Tiksi 41.14 11 *e*P **P 05 44 11.1 -2.9**
TIXI pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
TIXI Tiksi 41.14 11 *e*P **P 05 44 11.1 -2.9**
comp=Z,10.0nm,1.1s,mb4.4
SEY Seymchan 42.34 30 *c e*P **P 05 44 29.0 +5.1**
ZEI Tsey 48.69 301 *e*P **P 05 45 11.6 -2.9**
ZEI pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
KIV Kislovodsk 49.38 302 *e*P **P 05 45 19.4 -0.3**
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KIV MLR MLR
comp=Z,46nm,17.0s,MS3.5
BILL Bilibino 49.44 26 *e*P **P 05 45 24.0 +4.1**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
KLMR Klimovskoe 50.46 325 *e*P **P 05 45 27.5 -0.2**
KLMR pmax pmax
comp=Z,37nm,1.5s,mb5.2
OBN Obninsk 52.09 317 *e*P **P 05 45 39.4 -0.6**
OBN pmax pmax
comp=Z,35nm,1.6s,mb5.0
APA Apatity 53.47 333⇓ *e*P **P 05 45 50.0 0.0**
APA MLR MLR
comp=Z,300nm,14.0s,MS4.5
MALT Malatya 53.72 296 *e*P **P 05 45 52.7 +0.3**
MALT pmax pmax
comp=Z,11nm,1.2s,mb4.7
MALT Malatya 53.72 296 *e*P **P 05 45 52.7 +0.3**
comp=Z,11nm,1.2s,mb4.7
JOF Joensuu 54.35 327 *e*P **P 05 45 55.5 -1.0**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JOF Joensuu 54.35 327 *e p* **P 05 45 55.5 -1.0**
comp=Z,4.8nm,0.7s,mb4.5
SIM Simferopol' 55.21 305 *e*P **P 05 46 04.5 +1.4**
SIM pmax pmax
comp=Z,18nm,0.6s,mb5.3
KEV Kevo 55.83 336 *e*P **P 05 46 06.4 -0.7**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KEV Kevo 55.83 336 *e p* **P 05 46 06.4 -0.7**
comp=Z,6.6nm,0.6s,mb4.8
ARCES ARCESS Array B 56.36 335 P **P 05 46 10.9 -0.1**
comp=Z,4.7nm,0.7s,mb4.6,baz=84,slow=8.3,SNR=12
ARCES PcP PcP 05 47 07.8 -0.3
comp=Z,4.1nm,1.0s,baz=85,slow=1.3,SNR=5.4
ASF Jabal al Asfar 56.80 290 P **P 05 46 14.8 +0.1**
comp=Z,6.4nm,1.0s,mb4.6,baz=283,slow=3.1,SNR=8.2
BR131 Keskin Array S 56.91 299 *e*P **P 05 46 15.1 -0.2**
comp=Z,0.8nm,0.4s,mb4.1
BRTR Keskin Array B 56.91 299 P **P 05 46 15.1 -0.3**
comp=Z,2.2nm,0.8s,mb4.2,baz=105,slow=7.8,SNR=11
FINES FINESS Array B 56.94 326 P **P 05 46 14.8 -0.4**
comp=Z,2.4nm,0.5s,mb4.5,baz=99,slow=7.1,SNR=9.0
FINES FINESS Array B 56.94 326 P **P 05 46 14.8 -0.4**
AKASG Malin Array Be 57.14 313 P **P 05 46 16.2 -0.5**
comp=Z,3.2nm,0.6s,mb4.5,baz=71,slow=6.1,SNR=20
AKASG Malin Array Be 57.14 313 *c e*P **P 05 46 16.2 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
SPITS Spitsbergen Ar 58.18 346 P **P 05 46 23.2 -0.5**
comp=Z,8.9nm,0.9s,mb4.8,baz=134,slow=7.1,SNR=6.2
KBS Kingsbay 58.95 347⇑ *e*P **P 05 46 29.7 +0.7**
KBS pmax pmax
comp=Z,75nm,1.7s,mb5.4
WRAB Tennant Creek 59.13 148 *e*P **P 05 46 31.1 +0.1**
WRAB pmax pmax
comp=Z,12nm,0.9s,mb4.9
WRAB Tennant Creek 59.13 148 *e*P **P 05 46 31.1 +0.1**
comp=Z,12nm,0.9s,mb4.9
WRA Warramunga Arr 59.14 148 P **P 05 46 30.4 -0.6**
comp=Z,4.7nm,0.8s,mb4.5,baz=341,slow=7.8,SNR=15
EIL Elat 59.26 288 P **P 05 46 31.1 -0.9**
comp=Z,4.2nm,0.6s,mb4.6,baz=120,slow=5.4,SNR=3.7
KWP Kalwaria Pacla 61.46 313 *e*P **P 05 46 47.2 +0.6**
KWP Kalwaria Pacla 61.46 313 *e*P **P 05 46 46.7 0.0**
KWP pmax pmax
comp=Z,37nm,1.0s,mb5.5
KWP Kalwaria Pacla 61.46 313 *e*P **P 05 46 46.7 0.0**
comp=Z,36nm,1.0s,mb5.5
KOLS Kolonicke sedl 61.95 312 *e*P **P 05 46 49.7 -0.3**
KOLS Kolonicke sedl 61.95 312 *e*P **P 05 46 49.7 -0.3**
ASAR Alice Springs 62.22 150 P **P 05 46 51.8 -0.3**
comp=Z,2.8nm,0.8s,mb4.4,baz=334,slow=6.7,SNR=11
STHS Stebnicka Huta 62.43 313 *e*P **P 05 46 52.4 -0.8**
STHS *e* 05 47 04.4
STHS *e* 05 47 33.6
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 62.43 313 *e*P **P 05 46 52.4 -0.8**
comp=Z,3.7nm,1.0s,mb4.5
STHS *e* 05 47 04.4
STHS *e*PcP PcP 05 47 33.6 +1.0
STHS Stebnicka Huta 62.43 313 *e*P **P 05 46 52.4 -0.8**
STHS *e* 05 47 04.4
STHS *e*PCP PcP 05 47 33.5 +0.9
OJC Ojcow 63.06 314 *e*P **P 05 46 57.5 +0.1**
OJC *e*pP pP 05 47 01.4 +2.4
LIKS Likavka 63.88 313 *e*P **P 05 46 57.5 -5.3**
LIKS pmax pmax
comp=Z,27nm,1.0s,mb5.2
LIKS Likavka 63.88 313 *e*P **P 05 46 57.5 -5.3**
NB2 NORSAR Subarra 63.99 327 P **P 05 47 02.2 -1.1**
comp=Z,4.0nm,0.8s,mb4.5,baz=72,slow=6.9
NOA NORSAR Array B 63.99 327 P **P 05 47 02.2 -1.1**
comp=Z,3.2nm,0.9s,mb4.4,baz=73,slow=6.2,SNR=5.9
NOA NORSAR Array B 63.99 327 P **P 05 47 02.2 -1.1**
VYHS Vyhne 64.24 313 *e*P **P 05 47 05.2 0.0**
VYHS *e* 05 47 09.2
VYHS *e* 05 47 18.4
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
VYHS Vyhne 64.24 313 *e*P **P 05 47 05.2 0.0**
comp=Z,5.8nm,1.2s,mb4.5
VYHS *e* 05 47 09.2
VYHS *e* 05 47 18.4
VYHS Vyhne 64.24 313 *e*P **P 05 47 05.2 0.0**
VYHS *e p*P pP 05 47 09.1 +2.3
VYHS *e* 05 47 18.4
MORC Moravsky Berou 64.58 314 *e*P **P 05 47 06.9 -0.5**
MORC pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MORC Moravsky Berou 64.58 314 *e*P **P 05 47 06.9 -0.5**
comp=Z,5.6nm,0.9s,mb4.6
DPC Dobruska-Polom 65.11 315 *e*P **P 05 47 11.3 +0.5**
DPC *e**PP pP 05 47 15.2 +2.8
DPC MLR MLR
comp=Z,100nm,15.2s,MS4.1
DPC Dobruska-Polom 65.11 315 *e*P **P 05 47 11.3 +0.5**
DPC *e p*P pP 05 47 15.2 +2.8
DPC AMS AMS 06 17 30.0
comp=Z,100nm,15.2s
PVCC Panska Ves 66.08 316 *e*P **P 05 47 18.0 +0.9**
PVCC MLR MLR
comp=Z,100nm,15.5s,MS4.1
PVCC Panska Ves 66.08 316 *e*P **P 05 47 18.0 +0.9**
PVCC *e p*P pP 05 47 21.1 +2.4
PVCC AMS AMS 06 18 10.0
comp=Z,100nm,15.5s
PRU Pruhonice 66.30 315 AMS AMS 06 18 10.0
comp=Z,200nm,17.0s
BRG Berggiesshubel 66.31 316 *e*P **P 05 47 19.3 +0.7**
comp=Z,5.8nm,1.0s,mb4.6
BRG Berggiesshubel 66.31 316 *e*P **P 05 47 19.3 +0.7**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CLL Collm 66.69 317 *e*P **P 05 47 21.0 0.0**
CLL *e* 05 47 25.0
CLL Collm 66.69 317 *e*P **P 05 47 21.0 0.0**
CLL *e p*P pP 05 47 25.0 +2.4
KHC Kasperske Hory 67.22 315 *e*P **P 05 47 24.6 +0.2**
KHC *e**PP pP 05 47 29.8 +3.8
KHC MLR MLR
comp=Z,200nm,14.8s,MS4.5
KHC Kasperske Hory 67.22 315 *e*P **P 05 47 24.6 +0.2**
KHC *e p*P pP 05 47 29.8 +3.8
KHC AMS AMS 06 18 40.0
comp=Z,200nm,14.8s
GEC2 GERESS Array S 67.26 314 *e*P **P 05 47 24.0 -0.7**
GEC2 pmax pmax
comp=Z,1μm,1.0s
GEC2 GERESS Array S 67.26 314 *e*P **P 05 47 24.0 -0.7**
comp=Z,1μm,1.0s
GERES GERESS Array B 67.26 314 P **P 05 47 24.7 0.0**
comp=Z,3.8nm,1.0s,mb4.4,baz=72,slow=5.9,SNR=16
NKC Novy Kostel 67.44 316 AMS AMS 06 18 50.0
GRA1 Grafenberg Arr 68.39 316 *e*P **P 05 47 32.0 +0.2**
comp=Z,8.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.39 316 *e*P **P 05 47 32.0 +0.2**
comp=Z,8.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.39 316 *e*P **P 05 47 32.0 +0.2**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
GRF Grafenberg Arr 68.39 316 *e*P **P 05 47 32.0 +0.2**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
INK Inuvik 70.46 20 *e*P **P 05 47 43.7 -0.6**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 70.46 20 *e*P **P 05 47 43.7 -0.6**
comp=Z,2.8nm,0.8s,mb4.2
CDF Champ du Feu 71.28 316 *e*P **P 05 47 49.1 -0.5**
WLF Walferdange 71.34 317 P **P 05 47 49.7 -0.2**
SNF Seneffe 71.99 319 P **P 05 47 53.6 -0.2**
comp=Z,9.2nm,2.3s,mb4.3
DOU Dourbes 72.02 318 P **P 05 47 53.5 -0.6**
RES Resolute Bay 72.21 6 *e*P **P 05 47 54.8 0.0**
RES pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
RES Resolute Bay 72.21 6 *e*P **P 05 47 54.8 +0.1**
comp=Z,4.8nm,1.0s,mb4.4
SUMG Summit 72.22 349 *e*P **P 05 47 55.0 +0.2**
comp=Z,8.0nm,1.1s,mb4.6
KMBO Kilima Mbogo 72.22 257 P **P 05 47 55.2 -0.6**
comp=Z,1.8nm,0.9s,mb4.0,baz=60,slow=16,SNR=4.8
KMBO Kilima Mbogo 72.22 257 *c e*P **P 05 47 57.2 +1.4**
KMBO pmax pmax
comp=Z,2.0nm,0.9s
KMBO Kilima Mbogo 72.22 257 *e*P **P 05 47 56.0 +0.2**
comp=Z,1.9nm,0.7s,mb4.1
STKA Stephens Creek 72.69 148 P **P 05 47 58.9 +0.8**
comp=Z,1.7nm,0.5s,mb4.3,baz=339,slow=6.1,SNR=7.8
LPG La Plagne 72.99 313⇑ *i*P **P 05 48 00.3 +0.4**
comp=Z,15nm,0.5s,mb4.9
LPG La Plagne 72.99 313⇑ *i*P **P 05 48 00.3 +0.4**
LPG pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
LPG La Plagne 72.99 313⇑ *i*P **P 05 48 00.3 +0.4**
comp=Z,7.6nm,0.5s,mb4.9
SMF Signal de Mont 74.18 315 *e*P **P 05 48 06.3 -0.6**
comp=Z,21nm,1.1s,mb4.7
SMF Signal de Mont 74.18 315 *e*P **P 05 48 06.3 -0.6**
SMF pmax pmax
comp=Z,11nm,1.1s,mb4.7
SMF Signal de Mont 74.18 315 *e*P **P 05 48 06.3 -0.6**
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.33 316 *e*P **P 05 48 13.3 -0.2**
comp=Z,7.0nm,0.7s,mb4.4
TCF Toulx Ste Croi 75.33 316 *e*P **P 05 48 13.3 -0.2**
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TCF Toulx Ste Croi 75.33 316 *e*P **P 05 48 13.3 -0.2**
comp=Z,3.5nm,0.7s,mb4.4
CAF Calviac 76.13 315 *e*P **P 05 48 18.2 0.0**
YKA Yellowknife Ar 80.02 18 P **P 05 48 39.1 -0.2**
comp=Z,1.2nm,0.6s,mb4.0,baz=327,slow=5.1,SNR=39
ESDC Sonseca Array 82.78 313 P **P 05 48 53.9 -0.6**
comp=Z,0.9nm,0.5s,mb4.1,baz=46,slow=6.4,SNR=4.3
FCC Fort Churchill 87.61 10 *e*P **P 05 49 16.7 -1.6**
comp=Z,0.2nm,1.1s
FFC Flin Flon 89.96 15 *i*P **P 05 49 29.9 +0.4**
TORD Torodi Ar. Bea 94.15 288 P **P 05 49 48.3 -1.2**
comp=Z,0.2nm,0.4s,mb3.9,baz=58,slow=3.6,SNR=7.0
URZ Urewera 97.06 131 LR LR 06 27 39.2
comp=Z,1.2nm,21.6s,baz=312,slow=32
PDAR Pinedale Array 98.52 25 LR LR 06 36 51.4
comp=Z,45nm,18.1s,MS4.0,baz=356,slow=37
OTAV Otavalo 147.20 7 *e*PKPdf PKPdf 05 56 12.6 +0.4

BJI 13 05:37:18.8, 31°01′N×103°74′E, h16km, ML4.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.10**	**171**	Pg	Pg	05 37 23.1	+0.9
CD2				Sg	Sg	05 37 27.0	+2.6
CD2				smax			
	comp=N,227μm,0.5s						
HHC	**Hu-ho-hao-te**	**11.68**	**31**	*e*P	Pn	05 40 09.6	+4.8
HHC				pP		05 40 13.0	
HHC				sP		05 40 19.6	
HHC				S	Sn	05 42 23.5	+8.7
HHC				sS		05 42 28.3	
CN2	**Changchun**	**21.38**	**47**	*e*P	P	05 42 11.3	+5.8
CN2				*e*pP	pP	05 42 19.5	+9.4
CN2				*e*S	S	05 46 06.3	+4.1
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,12.0s						
CN2				LR	LR		
	comp=E,300nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						

IDC 13 05:50:09.0±3.4, 2°95′S×150°99′E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.2/15, mbtmp3.2/2, Error ellipse: s-maj=152.2km s-min=44.3km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.44**	**223**	P	P	05 55 20.3	+0.1
	0.4nm,0.4s,baz=50,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**26.40**	**217**	P	P	05 55 48.5	+1.1
	0.1nm,0.5s,baz=51,slow=8.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**147.99**	**290**	PKPbc	PKPbc	06 09 56.1	-1.5
	0.1nm,0.3s,baz=74,slow=1.9,SNR=6.8						

*IDC **13** 06:01:25.2±0.8, 31°51′N×104°18′E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.0/27, mbtmp4.0/14, ML3.4/1, Error ellipse: s-maj=35.6km s-min=15.7km az=51.0*
*NEIC **13** 06:01:26.9±0.4, 31°50′N×104°17′E, h10km, mb4.1/4, Error ellipse: s-maj=16.0km s-min=7.2km az=46.0*
*BJI **13** 06:01:26.8, 31°53′N×104°12′E, h16km, mB4.7/2, mb4.5/3, ML3.8/9, Ms4.0/4, Ms7 3.9/3*
*ISCJB **13** 06:01:27.1±1.2, 31°48′N±0°07′×104°23′E±0°07, h27km±10km, mb4.0/16, Error ellipse: s-maj=12.5km s-min=9.4km az=10.8*
ISC 13 06:01:27.3±0.8, 31°46′N±0°04×104°23′E±0°04, h15km±5km, n32, σ0°86/37, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.68**	**217**	Pg	**Pg**	**06 01 40.1**	**-0.6**
CD2				Sg	**Sg**	**06 01 50.1**	**+0.4**
CD2				smax			
	comp=N,4μm,0.5s						
LZH	**Lanzhou**	**4.62**	**356**	Pg	**Pg**	**06 02 55.1**	**-0.8**
LZH				Sg	**Sg**	**06 03 56.8**	**+1.0**
LZH				smax			
	comp=N,120nm,0.5s						
LZH				smax			
	comp=E,130nm,0.6s						
LZH				LR	LR		
	comp=E,760nm,5.6s						
LZH				LR	LR		
	comp=Z,870nm,5.8s						
ENH	**Enshi**	**4.67**	**103**	*e*Pn	**Pn**	**06 02 39.1**	**+1.8**
ENH				*e*Sg	**Sg**	**06 03 57.0**	**-0.4**
XAN	**Xi'an**	**4.71**	**56**	Pn	**Pn**	**06 02 40.1**	**+2.2**
XAN				Pg	**Pg**	**06 02 53.3**	**-4.3**
XAN				Sn	**Sn**	**06 03 31.0**	**-1.3**
XAN				Sg	**Sg**	**06 03 51.8**	**-6.9**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,60nm,0.6s						
GYA	**Guiyang**	**5.42**	**156**	Pg	**Pb**	**06 03 00.3**	**-1.4**
GYA				smax			
	comp=N,150nm,0.9s						
GYA				smax			
	comp=E,110nm,1.0s						
GYA				LR	LR		
	comp=N,830nm,5.6s						
GYA				LR	LR		
	comp=E,630nm,6.3s						
GYA				LR	LR		
	comp=Z,750nm,7.2s						
SONM	**Songino Array**	**16.44**	**5**	Pn	**Pn**	**06 05 17.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=181,slow=12,SNR=5.5						
SONM	**Songino Array**	**16.44**	**5**	Pn	**Pn**	**06 05 17.6**	**+0.3**
KSRS	**Korea Array**	**20.41**	**67**	P	**P**	**06 06 03.9**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=254,slow=12,SNR=5.4						
MK31	**Makanchi Array**	**22.78**	**318**	*e*P	**P**	**06 06 29.8**	**+0.6**
MKAR	**Makanchi Array**	**22.78**	**318**	P	**P**	**06 06 29.2**	**+0.1**
	comp=Z,2.6nm,0.6s,mb3.8,baz=123,slow=12,SNR=21						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**06 07 03.4**	**0.0**
	comp=Z,2.5nm,0.6s,mb3.9,baz=135,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**06 07 03.4**	**0.0**
KURK	**Kurchatov**	**27.03**	**323**	P	**P**	**06 07 08.4**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.6,baz=128,slow=9.5,SNR=9.6						
KURK	**Kurchatov**	**27.03**	**323**	*e*P	**P**	**06 07 09.0**	**+0.3**
	comp=Z,2.6nm,0.9s,mb3.8						
BVAR	**Borovoye Array**	**32.58**	**321**	P	**P**	**06 07 58.5**	**+0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=116,slow=3.4,SNR=3.8						
ABKAR	**Akbulak array**	**37.52**	**311**	*e*P	**P**	**06 08 40.8**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.6						
JOF	**Joensuu**	**54.78**	**328**	*e p*	**P**	**06 10 55.7**	**-0.4**
KEV	**Kevo**	**56.45**	**336**	*e p*	**P**	**06 11 07.2**	**-0.8**
	comp=Z,2.3nm,0.4s,mb4.6						
ARCES	**ARCESS Array B**	**56.98**	**336**	P	**P**	**06 11 11.5**	**-0.2**
	comp=Z,1.9nm,0.8s,mb4.2,baz=91,slow=6.7,SNR=8.3						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**06 11 12.4**	**-1.4**
	comp=Z,0.7nm,0.4s,mb4.0,baz=68,slow=6.8,SNR=3.2						
FINES	**FINESS Array B**	**57.33**	**326**	P	**P**	**06 11 14.1**	**-0.3**
	comp=Z,3.4nm,0.7s,mb4.5,baz=96,slow=6.7,SNR=5.6						
WRAB	**Tennant Creek**	**58.71**	**146**	*e*P	**P**	**06 11 25.2**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**58.71**	**146**	P	**P**	**06 11 25.0**	**+0.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=318,slow=11,SNR=21						
ASAR	**Alice Springs**	**61.74**	**149**	P	**P**	**06 11 46.5**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.8,baz=333,slow=6.9,SNR=5.6						
NB2	**NORSAR Subarra**	**64.42**	**327**	P	**P**	**06 12 01.5**	**-1.1**
	comp=Z,0.9nm,0.5s,mb4.1,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**06 12 01.7**	**-0.9**
	comp=Z,1.2nm,0.5s,mb4.2,baz=72,slow=6.8,SNR=4.9						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**06 12 01.7**	**-0.9**
GERES	**GERESS Array B**	**67.38**	**314**	P	**P**	**06 12 22.3**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.5,baz=73,slow=6.6,SNR=3.6						
INK	**Inuvik**	**71.78**	**19**	*e*P	**P**	**06 12 47.9**	**-0.8**
	comp=Z,1.9nm,0.7s,mb4.1						
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**06 13 42.5**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=329,slow=5.3,SNR=14						
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**06 13 42.5**	**-0.2**
PPT	**Papeete**	**112.53**	**97**	*e*LR	LR	06 16 45.7	
	comp=Z,49nm,26.0s						
PPT				*e*LR	LR	06 27 10.2	
	comp=Z,51nm,24.8s						

*ISCJB **13** 06:05:14.3±0.8, 31°20N±0°07×104°1E±0°1, h10km, mb3.3/6, Error ellipse: s-maj=16.8km s-min=8.2km az=27.7*
*IDC **13** 06:05:14.7±1.1, 31°41N×104°26E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/26, mbtmp3.4/6, Error ellipse: s-maj=85.8km s-min=20.8km az=57.0*
*NEIC **13** 06:05:16.3±0.7, 31°38N×104°23E, h10km, Error ellipse: s-maj=50.4km s-min=12.2km az=54.0*
ISC 13 06:05:16.1±0.8, 31°20N±0°06×104°0E±0°1, h10km, n8, σ0°65/9, mb3.3/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**211**	Pg	**Pg**	**06 05 22.5**	**-0.4**
CD2				Sg	**Sg**	**06 05 27.4**	**0.0**
CD2				smax			
	comp=N,4μm,0.5s						
MK31	**Makanchi Array**	**22.83**	**319**	*e*P	**P**	**06 10 20.4**	**+1.2**
MKAR	**Makanchi Array**	**22.83**	**319**	P	**P**	**06 10 19.6**	**+0.4**

comp=N,0.7nm,0.6s,mb3.3,baz=118,slow=14,SNR=4.9
ZALV Zalesovo Beam 26.58 334 P **P** **06 10 53.3 -0.9**
comp=N,0.4nm,0.4s,mb3.3,baz=140,slow=9.4,SNR=2.5
KURK Kurchatov 27.09 323 P **P** **06 10 58.5 -0.4**
comp=N,0.3nm,0.3s,mb3.2,baz=127,slow=11,SNR=2.6
WRA Warramunga Arr 58.62 146 P **P** **06 15 14.0 +0.5**
comp=N,0.4nm,0.6s,mb3.6,baz=340,slow=7.5
ASAR Alice Springs 61.64 149 P **P** **06 15 34.4 +0.3**
comp=N,0.2nm,0.5s,mb3.5,baz=339,slow=6.5,SNR=2.7
YKA Yellowknife Ar 81.64 17 P **P** **06 17 33.4 -0.7**
comp=N,0.1nm,0.6s,mb2.9,baz=326,slow=4.6,SNR=3.2

IDC 13 06:06:38.7±1.1, 31°.83N×104°.42E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/26, mbtmp3.4/6, Error ellipse: s-maj=73.5km s-min=20.5km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.62**	**318**	P	P	06 11 41.1	+0.2
	0.3nm,0.3s,baz=127,slow=9.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.20**	**333**	P	P	06 12 14.8	+0.1
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.3						
KURK	**Kurchatov**	**26.84**	**322**	P	P	06 12 20.5	-0.2
	0.3nm,0.4s,baz=130,slow=8.6,SNR=4.6						
WRA	**Warramunga Arr**	**58.92**	**147**	P	P	06 16 39.3	-0.4
	0.6nm,0.9s,baz=340,slow=7.2,SNR=7.1						
ASAR	**Alice Springs**	**61.97**	**149**	P	P	06 17 01.0	+0.5
	0.3nm,0.6s,baz=335,slow=6.4,SNR=3.9						
YKA	**Yellowknife Ar**	**80.92**	**17**	P	P	06 18 54.6	+0.2
	0.1nm,0.7s,baz=330,slow=5.3,SNR=3.5						

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*ISCJB **13** 06:11:22.6±0.6, 31°.12N±0°.04×103°.46E±0°.08, h10km, mb3.8/9, MS3.0/3, Error ellipse: s-maj=10.2km s-min=6.0km az=167.0*
*IDC **13** 06:11:22.0±1.0, 31°.17N×103°.76E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, MS3.1/3, Ms1 3.1/3, ms1mx2.7/27, Error ellipse: s-maj=36.3km s-min=17.7km az=53.0*
*NEIC **13** 06:11:23.9±0.8, 31°.03N×103°.43E, h10km, mb4.0/3, Error ellipse: s-maj=25.3km s-min=13.2km az=49.0*
*BJI **13** 06:11:23.6, 31°.13N×103°.41E, h13km, mb4.2/1, ML3.8/10, Ms3.8/2, Ms7 3.7/1*

ISC 13 06:11:24.4±0.5, 31°.18N±0°.04×103°.61E±0°.06, h10km, n18, σ1§13/23, mb3.8/9, MS3.0/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**154**	Pg	**Pg**	**06 11 32.3**	**+2.0**
CD2				Sg	**Sg**	**06 11 39.1**	**+4.8**
CD2				smax			
	comp=N,28μm,0.6s						
ENH	**Enshi**	**5.14**	**99**	*e*Pn	**Pn**	**06 12 44.9**	**+3.5**
	comp=N,36nm,0.5s						
XAN	**Xi'an**	**5.32**	**56**	Pn	**Pn**	**06 12 45.1**	**+1.3**
XAN				Sn	**Sn**	**06 13 51.8**	**+6.7**
XAN				Sg	**Sg**	**06 14 14.6**	**-0.4**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,67nm,0.6s						
GYA	**Guiyang**	**5.41**	**150**	Pg	**Pn**	**06 12 45.1**	**0.0**
GYA				Sg	**Sb**	**06 14 04.1**	**+0.1**
GYA				smax			
	comp=N,170nm,0.8s						
GYA				smax			
	comp=E,240nm,0.8s						
GYA				LR	LR		
	comp=N,4μm,6.6s						
GYA				LR	LR		
	comp=E,3μm,7.3s						
GYA				LR	LR		
	comp=Z,5μm,8.2s						
KMI	**Kunming**	**6.08**	**187**	Pn	**Pn**	**06 12 53.9**	**-0.4**
KMI				Sn	**Sn**	**06 14 04.1**	**+0.1**
KMI				smax			
	comp=N,39nm,1.9s						
KMI				smax			
	comp=E,44nm,1.5s						
KMI				LR	LR		
	comp=N,350nm,8.8s						
KMI				LR	LR		
	comp=E,690nm,5.2s						
SONM	**Songino Array**	**16.77**	**7**	Pn	**Pn**	**06 15 20.0**	**+0.7**
	comp=E,0.3nm,0.3s,baz=187,slow=12,SNR=3.7						
KSRS	**Korea Array**	**21.01**	**66**	P	**P**	**06 16 05.2**	**-2.8**
	comp=E,3.0nm,0.7s,mb3.7,baz=240,slow=9.6,SNR=7.3						
KSRS				LR	LR	06 23 34.2	
	comp=E,47nm,21.6s,MS2.8,baz=165,slow=35						
MK31	**Makanchi Array**	**22.65**	**320**	*e*P	**P**	**06 16 29.6**	**+4.1**
MKAR	**Makanchi Array**	**22.65**	**320**	P	**P**	**06 16 26.1**	**+0.7**
	comp=E,2.0nm,1.0s,mb3.5,baz=130,slow=11,SNR=7.9						
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**06 16 56.0**	**+0.4**
	comp=E,0.6nm,0.3s,mb3.6,baz=139,slow=11,SNR=2.2						
AAK	**Ala-Archa**	**25.81**	**304**	*e*P	**P**	**06 16 56.8**	**+1.2**
	comp=E,1.3nm,0.5s,mb3.7						
ZALV	**Zalesovo Beam**	**26.47**	**335**	P	**P**	**06 17 01.3**	**-0.1**
	comp=E,4.1nm,1.0s,mb3.9,baz=126,slow=8.5,SNR=5.9						
ZALV				LR	LR	06 27 58.1	
	comp=E,38nm,18.3s,MS3.0,baz=60,slow=38						
KURK	**Kurchatov**	**26.93**	**324**	P	**P**	**06 17 04.8**	**-0.9**
	comp=E,2.6nm,0.9s,mb3.8,baz=126,slow=10,SNR=3.8						
KURK				LR	LR	06 28 18.3	
	comp=E,58nm,19.0s,MS3.2,baz=90,slow=38						
KURK	**Kurchatov**	**26.93**	**324**	*e*P	**P**	**06 17 09.3**	**+3.6**
	comp=E,3.8nm,1.3s,mb3.8						
KURK				LR	LR	06 28 18.3	
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**06 21 21.4**	**-1.4**
	comp=E,3.7nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**06 21 21.6**	**-1.1**
	comp=E,2.3nm,0.8s,mb4.3,baz=336,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**61.78**	**148**	P	**P**	**06 21 42.1**	**-1.1**
	comp=E,0.6nm,0.8s,mb3.8,baz=313,slow=6.0,SNR=5.3						
YKA	**Yellowknife Ar**	**81.75**	**17**	P	**P**	**06 23 41.9**	**-1.0**
	comp=E,0.1nm,0.5s,mb3.0,baz=332,slow=5.0,SNR=5.2						

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*IDC **13** 06:26:37.9±1.4, 31°.30N×103°.31E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.4/24, mbtmp3.3/5, Error ellipse: s-maj=48.7km s-min=25.1km az=48.0*
*NEIC **13** 06:26:39.4±1.2, 31°.16N×103°.14E, h10km, Error ellipse: s-maj=44.4km s-min=13.9km az=214.0*
*BJI **13** 06:26:41.7, 31°.59N×103°.39E, h14km, ML3.6/5, Ms3.4/1, Ms7 3.3/1*

ISC 13 06:26:39.6±2.2, 31°.3N±0°.2×103°.2E±0°.2, h10km±17km, n9, σ1§10/10, mb3.2/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**127**	Pg	**Pg**	**06 26 50.3**	**-0.4**
CD2				Sg	**Sg**	**06 26 58.9**	**+0.7**
CD2				smax			
	comp=N,3μm,0.7s						
ENH	**Enshi**	**5.48**	**99**	*e*Pn	**Pn**	**06 28 01.6**	**+0.4**
GYA	**Guiyang**	**5.65**	**147**	Pg	**Pg**	**06 28 27.3**	**-0.5**
GYA				smax			
	comp=N,50nm,1.0s						
GYA				smax			
	comp=E,40nm,0.7s						
KSRS	**Korea Array**	**21.28**	**66**	P	**P**	**06 31 23.4**	**-2.7**
	comp=E,0.8nm,0.7s,mb3.2,baz=260,slow=10,SNR=3.1						
MK31	**Makanchi Array**	**22.38**	**320**	*e*P	**P**	**06 31 38.5**	**+0.7**
MKAR	**Makanchi Array**	**22.38**	**320**	P	**P**	**06 31 38.5**	**+0.7**
	comp=E,0.4nm,0.7s,mb3.0,baz=131,slow=9.8,SNR=3.7						
KURK	**Kurchatov**	**26.68**	**324**	P	**P**	**06 32 16.8**	**-1.8**
	comp=E,0.6nm,0.7s,mb3.2,baz=132,slow=8.7,SNR=4.2						
WRA	**Warramunga Arr**	**59.02**	**145**	P	**P**	**06 36 39.5**	**-0.2**
	comp=E,0.6nm,0.8s,mb3.7,baz=337,slow=7.5						
YKA	**Yellowknife Ar**	**81.77**	**17**	P	**P**	**06 38 59.7**	**+1.5**
	comp=E,0.1nm,0.6s,mb2.9,baz=328,slow=5.5,SNR=3.3						

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*IDC **13** 06:32:06.2±1.3, 31°.08N×103°.70E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/24, mbtmp3.9/9, ML3.3/1, Error ellipse: s-maj=38.8km s-min=23.3km az=42.0*
*NEIC **13** 06:32:08.2±0.7, 31°.11N×103°.67E, h10km, mb4.2/1, Error ellipse: s-maj=20.9km s-min=10.3km az=43.0*
*ISCJB **13** 06:32:09.0±0.9, 31°.18N±0°.09×103°.75E±0°.08, h28km±9km, mb3.8/9, Error ellipse: s-maj=17.0km s-min=9.3km az=28.7*
*BJI **13** 06:32:09.2, 31°.26N×103°.93E, h21km, mb4.2/2, ML3.8/9, Ms3.9/2, Ms7 3.6/1*

ISC 13 06:32:09.1±1.1, 31°.24N±0°.06×103°.75E±0°.07, h12km±8km, n16, σ0§99/18, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**179**	Pg	**Pg**	**06 32 14.9**	**-0.8**
CD2				Sg	**Sg**	**06 32 20.6**	**+0.4**
CD2				smax			
	comp=N,32μm,0.6s						
ENH	**Enshi**	**5.03**	**100**	*e*Pn	**Pn**	**06 33 25.8**	**+1.3**
	comp=N,59nm,0.7s						
ENH				*e*Sn	**Sn**	**06 34 22.8**	**+0.2**
XAN	**Xi'an**	**5.18**	**56**	Pg	**Pg**	**06 33 47.8**	**-0.5**
XAN				Sg	Sg	06 34 49.8	-5.6
XAN				smax			
	comp=N,56nm,1.0s						
XAN				smax			
	comp=E,95nm,0.9s						
GYA	**Guiyang**	**5.41**	**151**	Pn	**Pn**	**06 33 31.6**	**+2.0**
GYA				smax			
	comp=N,160nm,1.0s						
GYA				smax			
	comp=E,100nm,0.9s						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**06 36 03.3**	**+0.5**
	comp=E,0.1nm,0.3s,baz=174,slow=15,SNR=3.8						
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**06 36 51.7**	**+0.7**
	comp=E,1.7nm,0.8s,baz=262,slow=10,SNR=4.3						
CN2	**Changchun**	**21.22**	**48**	*e*P	**P**	**06 36 53.4**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**22.68**	**319**	*e*P	**P**	**06 37 12.0**	**+1.8**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**06 37 10.7**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.5,baz=124,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**26.47**	**335**	P	**P**	**06 37 46.1**	**+0.2**
	comp=Z,1.6nm,0.4s,mb4.0,baz=126,slow=7.4,SNR=2.4						
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**06 37 50.7**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.7,baz=132,slow=9.2,SNR=5.9						
BRTR	**Keskin Array B**	**56.41**	**299**	P	**P**	**06 41 50.0**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=59,slow=12,SNR=2.1						
ARCES	**ARCESS Array B**	**57.01**	**336**	P	**P**	**06 41 53.5**	**-0.7**
	comp=Z,4.5nm,1.0s,mb4.5,baz=91,slow=9.1,SNR=4.9						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**06 42 05.9**	**-1.3**
	comp=Z,1.2nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**61.77**	**148**	P	**P**	**06 42 26.0**	**-1.7**
	comp=Z,0.2nm,0.7s,mb3.3,baz=343,slow=6.1,SNR=3.6						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**06 44 26.1**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=329,slow=5.2,SNR=9.1						

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*ISCJB **13** 06:35:32.6±0.5, 32°.15N±0°.05×104°.81E±0°.05, h10km, mb4.0/16, Error ellipse: s-maj=6.9km s-min=6.2km az=167.8*
*IDC **13** 06:35:32.6±0.7, 32°.06N×104°.68E, h0km, mb3.9/12, mb1 4.0/14, mb1mx3.9/27, mbtmp3.9/14, ML3.7/1, Error ellipse: s-maj=34.5km s-min=15.4km az=55.0*
*NEIC **13** 06:35:34.3±0.5, 32°.14N×104°.90E, h10km, mb4.1/2, Error ellipse: s-maj=19.1km s-min=7.6km az=45.0*
*BJI **13** 06:35:35.9, 32°.07N×104°.50E, h17km, mB4.6/2, mb4.1/3, ML4.0/11, Ms3.7/5, Ms7 3.3/4*

ISC 13 06:35:34.2±0.4, 32°.06N±0°.04×104°.78E±0°.05, h10km, n29, σ1§10/35, mb4.0/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.99**	**59**	Pg	**Pg**	**06 36 50.8**	**0.0**
XAN				Sn	**Sb**	**06 37 37.9**	**+4.9**
XAN				Sg	**Sg**	**06 37 44.1**	**+1.6**
XAN				smax			
	comp=N,170nm,0.9s						
XAN				smax			
	comp=E,380nm,0.7s						
LZH	**Lanzhou**	**4.09**	**349**	Pg	**Pg**	**06 36 51.0**	**-1.5**
LZH				Sg	**Sg**	**06 37 43.3**	**-2.2**
LZH				smax			
	comp=N,420nm,0.6s						
LZH				smax			
	comp=E,800nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,6.6s						
ENH	**Enshi**	**4.41**	**113**	*e*Pg	**Pg**	**06 36 56.6**	**-2.1**
GYA	**Guiyang**	**5.82**	**163**	Pg	**Pg**	**06 37 24.3**	**-1.5**
GYA				Sg	**Sg**	**06 38 34.9**	**-6.3**
GYA				smax			
	comp=N,380nm,0.9s						
GYA				smax			
	comp=E,250nm,0.7s						
GYA				LR	LR		
	comp=N,4μm,6.6s						
GYA				LR	LR		
	comp=E,3μm,7.3s						
WHN	**Wuhan**	**8.32**	**98**	*e*P	**Pn**	**06 37 40.3**	**+5.3**
GTA	**Gaotai**	**8.37**	**333**	*e*P	**Pn**	**06 37 36.6**	**+1.1**
GTA				pP		06 37 40.9	
GTA				sP		06 37 44.0	
GTA				S	**Sn**	**06 39 10.6**	**+0.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,240nm,5.3s						
GTA				LR	LR		
	comp=N,270nm,11.0s						
GTA				LR	LR		
	comp=E,130nm,8.9s						
GTA				LR	LR		
	comp=Z,240nm,10.1s						
BTO	**Baotou**	**9.51**	**25**	*e*P	**Pn**	**06 37 55.4**	**+4.2**
BTO				S	**Sn**	**06 39 38.4**	**+0.3**
SONM	**Songino Array**	**15.80**	**4**	Pn	**Pn**	**06 39 16.5**	**-0.2**
	baz=183,slow=14,SNR=2.3						
KSRS	**Korea Array**	**19.74**	**68**	P	**Pn**	**06 40 04.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=251,slow=11,SNR=2.9						
MK31	**Makanchi Array**	**22.66**	**317**	*e*P	**P**	**06 40 37.2**	**+1.8**
MKAR	**Makanchi Array**	**22.66**	**317**	P	**P**	**06 40 35.1**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.4,baz=122,slow=10,SNR=6.8						
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**06 41 06.9**	**-1.3**
	comp=Z,1.2nm,0.4s,mb3.8,baz=133,slow=10,SNR=3.1						
ABKAR	**Akbulak array**	**37.48**	**311**	*e*P	**P**	**06 42 48.9**	**+1.0**
	comp=Z,0.6nm,0.5s,mb3.7						
AKTK	**Aktyubinsk**	**38.92**	**312**	P	**P**	**06 42 59.0**	**-1.0**
AKTO	**Aktyubinsk**	**38.92**	**312**	P	**P**	**06 42 59.0**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.6,baz=129,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**53.74**	**155**	P	**P**	**06 44 57.4**	**+0.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=238,slow=16,SNR=5.2						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**06 45 17.2**	**+0.2**
	comp=Z,2.8nm,0.9s,mb4.3,baz=76,slow=7.8,SNR=9.2						
BRTR	**Keskin Array B**	**56.78**	**299**	P	**P**	**06 45 18.6**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=99,slow=5.9,SNR=2.9						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**06 45 20.9**	**+0.5**
	comp=Z,0.9nm,0.4s,mb4.1,baz=93,slow=8.2,SNR=3.6						
WRAB	**Tennant Creek**	**58.95**	**147**	*e*P	**P**	**06 45 35.5**	**+1.6**
	comp=Z,4.1nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**62.02**	**150**	P	**P**	**06 45 54.4**	**-0.3**
	comp=Z,0.8nm,0.5s,mb4.1,baz=339,slow=7.2,SNR=12						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**06 46 07.7**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.9,baz=71,slow=6.7,SNR=2.6						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**06 46 07.7**	**-0.9**
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**06 46 28.4**	**-0.7**
	comp=Z,0.4nm,0.2s,mb4.1,baz=50,slow=6.5,SNR=3.5						
STKA	**Stephens Creek**	**72.50**	**148**	P	**P**	**06 47 01.8**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.1,baz=301,slow=11,SNR=4.9						
LPG	**La Plagne**	**73.02**	**313**	*e*P	**P**	**06 47 05.5**	**+1.3**
	comp=Z,11nm,0.9s,mb4.5						
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**06 47 05.4**	**+1.2**
	comp=Z,6.1nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**80.61**	**17**	P	**P**	**06 47 47.3**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.8,baz=329,slow=5.2,SNR=22						
YKA	**Yellowknife Ar**	**80.61**	**17**	P	**P**	**06 47 47.3**	**+0.6**

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*ISCJB **13** 06:38:16.4±0.3, 31°.36N±0°.03×103°.86E±0°.04, h10km, mb4.3/34, MS3.8/2, Error ellipse: s-maj=5.4km s-min=3.8km az=175.1*
*IDC **13** 06:38:16.1±0.7, 31°.30N×103°.85E, h0km, mb4.2/16, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, ML3.5/1, Error ellipse: s-maj=27.4km s-min=15.6km az=45.0*
*NEIC **13** 06:38:17.8±0.3, 31°.32N×103°.80E, h10km, mb4.5/16, Error ellipse: s-maj=11.1km s-min=6.7km az=214.0*
*BJI **13** 06:38:18.8, 31°.36N×104°.04E, h13km, mB4.9/13, mb4.5/17, ML4.4/18, Ms4.2/16, Ms7 4.1/14*
*MOS **13** 06:38:19.4±0.8, 31°.30N×103°.88E, h33km, mb4.8/14, Error ellipse: s-maj=15.1km s-min=7.4km az=110.5*

ISC 13 06:38:18.3±0.3, 31°.33N±0°.03×103°.79E±0°.04, h10km, n83, σ1§06/90, mb4.3/34, MS3.8/2, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**184**	Pg	**Pg**	**06 38 27.3**	**+0.7**
CD2				Sg	**Sg**	**06 38 33.8**	**+1.6**
CD2				smax			
	comp=N,27μm,0.4s						
LZH	**Lanzhou**	**4.74**	**0**	Pg	**Pg**	**06 39 46.9**	**-2.2**
LZH				Sg	**Sg**	**06 40 53.1**	**+2.6**
LZH				smax			
	comp=N,420nm,1.1s						
LZH				smax			
	comp=E,430nm,0.7s						
LZH				LR	LR		
	comp=E,2μm,6.9s						
LZH				LR	LR		
	comp=Z,2μm,8.2s						
ENH	**Enshi**	**5.01**	**101**	*e*Pn	**Pn**	**06 39 35.4**	**+1.9**
ENH				*e*Sn	**Sn**	**06 40 30.7**	**-0.8**
XAN	**Xi'an**	**5.10**	**57**	Pg	**Pb**	**06 39 44.0**	**-3.5**
XAN				Sg	**Sb**	**06 40 52.0**	**+3.2**
XAN				smax			
	comp=N,410nm,0.7s						
XAN				smax			
	comp=E,610nm,0.7s						
GYA	**Guiyang**	**5.47**	**152**	Pg	**Pg**	**06 39 58.3**	**-4.8**
GYA				Sg	**Sg**	**06 41 07.8**	**-6.2**
GYA				smax			
	comp=N,450nm,0.8s						
GYA				smax			
	comp=E,580nm,0.7s						
GYA				LR	LR		
	comp=N,5μm,6.6s						
GYA				LR	LR		
	comp=E,5μm,7.3s						
GYA				LR	LR		
	comp=Z,6μm,8.2s						
KMI	**Kunming**	**6.26**	**189**	Pn	**Pn**	**06 39 50.8**	**+0.1**
KMI				Sn	**Sn**	**06 41 00.8**	**-1.4**
KMI				LR	LR		
	comp=N,690nm,9.7s						
KMI				LR	LR		
	comp=E,1μm,12.0s						
WHN	**Wuhan**	**9.10**	**92**	*e*P	Px	06 40 46.6	
WHN				S	**Sn**	**06 42 07.3**	**-4.9**
WHN				LR	LR		
	comp=N,2μm,4.7s						
WHN				LR	LR		
	comp=E,1μm,8.6s						
WHN				LR	LR		
	comp=Z,2μm,6.7s						
HHC	**Hu-ho-hao-te**	**11.38**	**31**	*e*P	**Pn**	**06 41 01.3**	**+0.4**
HHC				pP		06 41 05.5	
HHC				PP		06 41 10.4	
HHC				S	**Sn**	**06 43 09.0**	**+0.9**
HHC				sS		06 43 15.9	
HHC				SS		06 43 24.3	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,4.6s						
HHC				LR	LR		
	comp=N,490nm,5.3s						
HHC				LR	LR		
	comp=E,420nm,5.8s						
HHC				LR	LR		
	comp=Z,310nm,5.3s						
NJ2	**Nanjing**	**12.85**	**83**	*e*P	**Pn**	**06 41 22.6**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
QIZ	**Qiongzhong**	**13.41**	**155**	P	**Pn**	**06 41 28.3**	**-0.5**
QIZ				S	**Sn**	**06 43 59.6**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,14nm,1.2s						
QIZ				LR	LR		
	comp=N,340nm,8.3s						
QIZ				LR	LR		
	comp=Z,470nm,9.9s						
SONM	**Songino Array**	**16.60**	**6**	Pn	**Pn**	**06 42 10.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=4.6						
ZAK	**Zakamensk**	**19.03**	**359**	*e*P	**Pn**	**06 42 38.0**	**-3.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	**Talaya**	**20.33**	**360**	*e*P	**P**	**06 42 57.5**	**+3.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TLY				MLR	MLR		
	comp=Z,120nm,11.0s,MS3.5						
MOY	**Mondy**	**20.42**	**355**	*e*P	**P**	**06 42 57.6**	**+2.2**
KSRS	**Korea Array**	**20.80**	**66**	P	**P**	**06 42 59.3**	**-0.4**
	comp=Z,15nm,0.7s,baz=261,slow=10,SNR=39						
KSRS	**Korea Array**	**20.80**	**66**	P	**P**	**06 42 59.3**	**-0.4**
KSRS				pmax	pmax		
	comp=Z,15nm,0.7s						
CN2	**Changchun**	**21.13**	**48**	⇓P	**P**	**06 43 03.6**	**+0.4**
CN2				*e*pP		06 43 07.8	
CN2				*e*sP	sP	06 43 10.8	+3.5
CN2				*e*S	**S**	**06 46 57.3**	**-0.8**
CN2				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.0						
CN2				LR	LR		
	comp=N,300nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=Z,400nm,14.0s,MS4.0						
MK31	**Makanchi Array**	**22.63**	**319**	*e*P	**P**	**06 43 20.2**	**+1.0**
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	**06 43 19.9**	**+0.7**
	comp=Z,1.6nm,0.4s,mb3.8,baz=128,slow=9.6,SNR=15						
MDJ	**Mudanjiang**	**24.16**	**49**	P	**P**	**06 43 34.9**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,240nm,6.5s						
MDJ	**Mudanjiang**	**24.16**	**49**	*e*P	**P**	**06 43 35.0**	**+0.6**
	comp=Z,20nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**25.85**	**304**	*i*P	**P**	**06 43 52.3**	**+2.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
ZAA0	**Zalesovo Array**	**26.40**	**334**	*e*P	**P**	**06 43 55.3**	**+0.6**
ZALV	**Zalesovo Beam**	**26.40**	**334**	P	**P**	**06 43 55.1**	**+0.4**
	comp=Z,10.0nm,0.9s,mb4.3,baz=136,slow=9.3,SNR=9.6						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**06 43 59.9**	**+0.6**
	comp=Z,5.1nm,0.8s,mb4.1,baz=128,slow=9.1,SNR=13						
KURK	**Kurchatov**	**26.90**	**323**	⇑*i*P	**P**	**06 43 58.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.2						
KURK	**Kurchatov**	**26.90**	**323**	*e*P	**P**	**06 43 58.7**	**-0.6**
	comp=Z,3.1nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**32.45**	**322**	P	**P**	**06 44 49.0**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.9,baz=118,slow=9.3,SNR=6.5						
BVAR				PcP	PcP	06 47 34.7	-0.7
	comp=Z,1.1nm,0.5s,baz=127,slow=4.3,SNR=4.7						
BRVK	**Borovoye**	**32.52**	**322**	⇑*i*P	**P**	**06 44 49.3**	**+

ARCES PcP PcP 06 48 57.3 -1.2
AKASG Malin Array Be 57.03 313 P **P** **06 48 03.3 -0.9**
comp=Z,0.8nm,0.4s,mb4.1,baz=68,slow=6.8,SNR=3.2
FINES FINESS Array B 57.23 326 P **P** **06 48 05.0 -0.3**
comp=Z,3.2nm,0.7s,mb4.5,baz=100,slow=11,SNR=7.3
WRAB Tennant Creek 58.81 146 *eP* **P** **06 48 16.2 -0.7**
WRAB pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
WRAB Tennant Creek 58.81 146 *eP* **P** **06 48 16.2 -0.8**
comp=Z,7.7nm,0.6s,mb4.9
SUW Suwalki 59.99 318 *eP* **P** **06 48 25.8 +1.0**
SUW pmax pmax
comp=Z,62nm,0.4s
SUW Suwalki 59.99 318 *eP* **P** **06 48 25.8 +1.0**
comp=Z,62nm,0.4s
ASAR Alice Springs 61.83 149 P **P** **06 48 37.0 -0.5**
comp=Z,1.3nm,0.7s,mb4.2,baz=337,slow=6.7,SNR=12
NB2 NORSAR Subarra 64.32 327 P **P** **06 48 52.5 -1.2**
comp=Z,1.6nm,0.6s,mb4.2,baz=74,slow=6.9
NOA NORSAR Array B 64.32 327 P **P** **06 48 52.8 -0.9**
comp=Z,2.6nm,0.7s,mb4.4,baz=74,slow=6.6,SNR=8.4
GERES GERESS Array B 67.20 314 P **P** **06 49 12.4 -0.1**
comp=Z,1.1nm,0.8s,mb4.0,baz=111,slow=5.4,SNR=4.7
COLA College 69.34 26 *eP* **P** **06 49 25.0 -0.6**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
COLA College 69.34 26 *eP* **P** **06 49 25.0 -0.6**
comp=Z,7.3nm,0.8s,mb4.7
PMR Palmer 70.47 29 *eP* **P** **06 49 31.8 -0.8**
PMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PMR Palmer 70.47 29 *eP* **P** **06 49 31.8 -0.8**
comp=Z,8.8nm,0.8s,mb4.7
KDAK Kodiak Island 70.79 33 P **P** **06 49 34.0 -0.7**
comp=Z,26nm,1.1s,mb5.1
CDF Champ du Feu 71.27 316 *eP* **P** **06 49 37.2 -0.5**
INK Inuvik 72.03 19 *eP* **P** **06 49 41.2 -0.7**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 72.03 19 *eP* **P** **06 49 41.2 -0.8**
comp=Z,7.0nm,1.0s,mb4.5
STKA Stephens Creek 72.34 147 P **P** **06 49 43.5 -0.7**
comp=Z,1.8nm,0.7s,mb4.1,baz=330,slow=8.2,SNR=4.7
STKA Stephens Creek 72.34 147 *eP* **P** **06 49 43.1 -1.2**
comp=Z,0.4nm,0.6s,mb3.5
LPG La Plagne 72.90 313 *eP* **P** **06 49 47.8 +0.3**
comp=Z,10nm,0.7s,mb4.5
LPG La Plagne 72.90 313 *eP* **P** **06 49 47.8 +0.3**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 72.90 313 *eP* **P** **06 49 47.8 +0.3**
comp=Z,5.1nm,0.7s,mb4.6
LPL La Plagne 72.90 313 *eP* **P** **06 49 47.7 +0.1**
comp=Z,6.8nm,0.5s,mb4.5
LPL La Plagne 72.90 313 *eP* **P** **06 49 47.7 +0.1**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LPL La Plagne 72.90 313 *eP* **P** **06 49 47.7 +0.1**
comp=Z,3.4nm,0.5s,mb4.5
SUMG Summit 73.17 349 *eP* **P** **06 49 48.0 -0.6**
comp=Z,3.0nm,0.5s,mb4.5
RES Resolute Bay 73.53 5 *eP* **P** **06 49 50.2 -0.6**
RES pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
RES Resolute Bay 73.53 5 *eP* **P** **06 49 50.2 -0.6**
comp=Z,2.4nm,0.9s,mb4.1
SMF Signal de Mont 74.15 315 *eP* **P** **06 49 54.0 -0.9**
comp=Z,5.3nm,0.6s,mb4.3
SMF Signal de Mont 74.15 315 *eP* **P** **06 49 54.0 -0.9**
SMF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 74.15 315 *eP* **P** **06 49 54.0 -0.9**
comp=Z,2.7nm,0.6s,mb4.3
TCF Toulx Ste Croi 75.31 315 *eP* **P** **06 50 01.0 -0.6**
CAF Calviac 76.08 314 *eP* **P** **06 50 06.0 0.0**
comp=Z,4.5nm,0.7s,mb4.2
CAF Calviac 76.08 314 *eP* **P** **06 50 06.0 0.0**
CAF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CAF Calviac 76.08 314 *eP* **P** **06 50 06.0 0.0**
comp=Z,2.3nm,0.7s,mb4.2
YKA Yellowknife Ar 81.55 17 P **P** **06 50 35.0 -0.7**
comp=Z,2.4nm,0.6s,mb4.3,baz=330,slow=5.3,SNR=48
FCC Fort Churchill 89.01 9 *eP* **P** **06 51 12.1 -1.0**
comp=Z,0.1nm,1.1s
FFC Flin Flon 91.46 15 *ceP* **P** **06 51 24.8 +0.2**
TORD Torodi Ar. Bea 93.31 287 P **P** **06 51 33.4 -0.5**
comp=Z,0.4nm,0.7s,mb3.9,baz=51,slow=4.9,SNR=3.8
TXAR Lajitas Array 114.25 26 PKP PKiKP 06 56 57.4 -1.0
comp=Z,0.2nm,0.5s,baz=241,slow=0.9,SNR=3.9
ROSC El Rosal 143.97 357 PKP PKPdf 06 57 53.2 -1.6
comp=Z,3.3nm,0.5s,baz=90,slow=20,SNR=4.8
OTAV Otavalo 148.53 4 *e*PKPdf PKPdf 06 58 04.0 +1.5

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*IDC **13** 06:39:47.7±0.6,31°.48N×104°.16E,h0km,mb4.2/17, mb1 4.3/18,mb1mx4.2/29,mbtmp4.2/18,ML3.2/1,MS2.7/1, Ms1 2.7/1,ms1mx2.2/47,Error ellipse: s-maj=26.6km s-min=13.5km az=51.0*
*NEIC **13** 06:39:49.3±0.3,31°.47N×104°.12E,h10km,mb4.6/11,Error ellipse: s-maj=11.1km s-min=6.0km az=55.0*
*ISCJB **13** 06:39:50.1±1.5,31°.44N±0°.07×104°.11E±0°.10, h29km±11km,mb4.4/29,Error ellipse: s-maj=15.0km s-min=10.8km az=150.3*
*BJI **13** 06:39:51.2,31°.58N×104°.27E,h23km,mB4.6/3,mb4.5/5, ML4.2/3*
ISC 13 06:39:50.2±1.8,**31°.45N**±0°.07×**104°.10E**±0°.09,**h16**km±12km, **n48**,σ0**s69**/48,**mb4.4**/29,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.62**	**209**	Pg	**Pg**	**06 40 03.1**	**+0.7**
CD2				Sg	**Sg**	**06 40 09.9**	**-0.7**
CD2				smax			
	comp=N,8μm,0.8s						
SONM	**Songino Array**	**16.45**	**5**	Pn	**Pn**	**06 43 39.9**	**-0.4**
	comp=N,0.1nm,0.3s,baz=184,slow=12,SNR=2.2						
KSRS	**Korea Array**	**20.51**	**67**	P	**P**	**06 44 25.3**	**-2.4**
	comp=N,1.8nm,0.7s,baz=251,slow=10,SNR=2.2						
CN2	**Changchun**	**20.85**	**48**	*eP*	**P**	**06 44 33.3**	**+2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**06 44 51.4**	**+0.1**
	comp=Z,27nm,1.2s,mb4.6,baz=116,slow=11,SNR=13						
ZAA0	**Zalesovo Array**	**26.41**	**334**	*eP*	**P**	**06 45 25.9**	**0.0**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**06 45 26.5**	**+0.7**
	comp=Z,10nm,0.7s,mb4.5,baz=136,slow=9.7,SNR=10						
ZALV				LR	LR	06 56 14.9	
	comp=Z,18nm,21.0s,baz=256,slow=37						
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**06 45 26.5**	**+0.6**
ZALV				LR	LR	06 56 14.9	
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**06 45 31.6**	**+0.6**
	comp=Z,9.3nm,0.8s,mb4.4,baz=116,slow=18,SNR=13						
KURK	**Kurchatov**	**26.97**	**323**	*eP*	**P**	**06 45 31.0**	**0.0**
	comp=Z,9.1nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**32.52**	**321**	P	**P**	**06 46 21.0**	**+0.8**
	comp=Z,2.4nm,0.5s,mb4.4,baz=115,slow=9.5,SNR=11						
BVAR				PcP	PcP	06 49 06.0	-0.6
	comp=Z,0.7nm,0.5s,baz=114,slow=3.6,SNR=3.0						
BRVK	**Borovoye**	**32.59**	**321**	*eP*	**P**	**06 46 21.3**	**+0.5**
	comp=Z,2.9nm,0.6s,mb4.4						
ABKAR	**Akbulak array**	**37.44**	**311**	*eP*	**P**	**06 47 02.9**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.1						
AKTK	**Aktyubinsk**	**38.90**	**313**	P	**P**	**06 47 14.2**	**-0.8**
AKTO	**Aktyubinsk**	**38.90**	**313**	P	**P**	**06 47 14.2**	**-0.8**
	comp=Z,0.7nm,0.4s,mb3.8,baz=90,slow=7.6,SNR=4.6						
ARU	**Arti**	**40.16**	**322**	*eP*	**P**	**06 47 26.0**	**+0.7**
	comp=Z,11nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.43**	**154**	P	**P**	**06 49 09.5**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=334,slow=7.5,SNR=3.6						
JOF	**Joensuu**	**54.73**	**328**	*ep*	**P**	**06 49 18.6**	**+0.1**
	comp=Z,9.4nm,0.5s,mb5.1						
KEV	**Kevo**	**56.41**	**336**	*ep*	**P**	**06 49 29.9**	**-0.6**
	comp=Z,5.1nm,0.4s,mb4.9						
BRTR	**Keskin Array B**	**56.57**	**299**	P	**P**	**06 49 33.3**	**+1.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=90,slow=7.2,SNR=2.5						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**06 49 34.3**	**0.0**
	comp=Z,2.5nm,0.4s,mb4.5,baz=90,slow=7.6,SNR=16						
ARCES				PcP	PcP	06 50 29.5	0.0
	comp=Z,2.6nm,0.9s,baz=72,slow=4.0,SNR=5.0						
KAF	**Kangasniemi**	**57.10**	**327**	*ep*	**P**	**06 49 35.0**	**-0.5**
	comp=Z,6.6nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**06 49 35.3**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.9,baz=70,slow=7.2,SNR=3.6						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**06 49 36.7**	**-0.1**
	comp=Z,7.6nm,0.5s,mb5.0,baz=80,slow=7.0,SNR=24						
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**06 49 36.7**	**-0.1**
WRAB	**Tennant Creek**	**58.76**	**146**	*eP*	**P**	**06 49 48.2**	**+0.6**
	comp=Z,4.7nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**06 49 48.6**	**+1.0**
ASAR	**Alice Springs**	**61.79**	**149**	P	**P**	**06 50 08.0**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.1,baz=338,slow=6.8,SNR=3.9						
ASAR	**Alice Springs**	**61.79**	**149**	P	**P**	**06 50 08.0**	**-0.4**
NB2	**NORSAR Subarra**	**64.36**	**327**	P	**P**	**06 50 24.1**	**-0.9**
	comp=Z,4.1nm,0.5s,mb4.7,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**06 50 24.1**	**-1.0**
	comp=Z,3.0nm,0.5s,mb4.6,baz=73,slow=6.7,SNR=15						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**06 50 44.5**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=59,slow=5.9,SNR=3.6						
COLA	**College**	**69.11**	**26**	*eP*	**P**	**06 50 55.1**	**-0.1**
	comp=Z,4.6nm,0.7s,mb4.5						
KDAK	**Kodiak Island**	**70.55**	**34**	P	**P**	**06 51 04.2**	**+0.1**
	comp=Z,15nm,0.9s,mb4.9						
CDF	**Champ du Feu**	**71.37**	**316**	*eP*	**P**	**06 51 09.1**	**-0.2**
INK	**Inuvik**	**71.83**	**19**	*eP*	**P**	**06 51 11.5**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.5						
LPG	**La Plagne**	**73.01**	**313**	*eP*	**P**	**06 51 19.8**	**+0.6**
	comp=Z,8.8nm,0.5s,mb4.6						
LPG	**La Plagne**	**73.01**	**313**	*eP*	**P**	**06 51 19.8**	**+0.6**
	comp=Z,4.4nm,0.5s,mb4.6						
LPL	**La Plagne**	**73.01**	**313**	*eP*	**P**	**06 51 19.8**	**+0.6**
	comp=Z,7.9nm,0.5s,mb4.6						
LPL	**La Plagne**	**73.01**	**313**	*eP*	**P**	**06 51 19.8**	**+0.6**
	comp=Z,4.0nm,0.5s,mb4.6						
SUMG	**Summit**	**73.10**	**349**	*eP*	**P**	**06 51 18.7**	**-0.6**
	comp=Z,3.2nm,0.7s,mb4.4						
RES	**Resolute Bay**	**73.39**	**5**	*eP*	**P**	**06 51 20.7**	**-0.3**
	comp=Z,1.6nm,0.9s,mb4.0						
SMF	**Signal de Mont**	**74.25**	**315**	*eP*	**P**	**06 51 26.0**	**-0.5**
TCF	**Toulx Ste Croi**	**75.41**	**315**	*eP*	**P**	**06 51 33.1**	**-0.1**
YKA	**Yellowknife Ar**	**81.36**	**17**	P	**P**	**06 52 05.8**	**+0.1**
	comp=Z,1.4nm,0.5s,mb4.1,baz=329,slow=5.3,SNR=11						
YKA	**Yellowknife Ar**	**81.36**	**17**	P	**P**	**06 52 05.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**93.53**	**288**	P	**P**	**06 53 05.3**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.9,baz=67,slow=3.7,SNR=2.7						
OTAV	**Otavalo**	**148.39**	**5**	*e*PKPdf	PKPdf	06 59 33.8	+0.5

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*ISCJB **13** 06:44:06.4±1.2,30°.80N±0°.05×103°.29E±0°.06,h11km±7km, mb3.9/15,Error ellipse: s-maj=8.9km s-min=7.8km az=145.5*
*IDC **13** 06:44:06.8±0.8,31°.08N×103°.63E,h0km,mb3.9/12, mb1 4.0/13,mb1mx3.9/26,mbtmp3.9/13,ML3.7/1,Error ellipse: s-maj=32.7km s-min=16.3km az=48.0*
*NEIC **13** 06:44:09.0±0.7,31°.10N×103°.49E,h10km,mb4.1/5,Error ellipse: s-maj=22.5km s-min=11.9km az=38.0*
*BJI **13** 06:44:10.0,30°.82N×102°.95E,h13km,mb4.4/2,ML3.7/12, Ms4.0/4,Ms7 4.0/2*
ISC 13 06:44:08.0±1.2,**30°.81N**±0°.04×**103°.29E**±0°.06,**h8**km±8km, **n27**,σ0**s97**/31,**mb3.9**/15,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**76**	Pg	**Pg**	**06 44 15.9**	**-0.2**
CD2				Sg	**Sg**	**06 44 22.4**	**+0.8**
CD2				smax			
	comp=N,17μm,0.7s						
GYA	**Guiyang**	**5.25**	**145**	Pg	**Pg**	**06 45 48.5**	**-0.1**
GYA				Sg	**Sg**	**06 46 54.3**	**-2.4**
GYA				smax			
	comp=N,220nm,1.0s						
GYA				smax			
	comp=E,220nm,1.0s						
ENH	**Enshi**	**5.38**	**94**	*e*Pn	**Pn**	**06 45 29.6**	**+1.1**
	comp=E,75nm,0.8s						
ENH				*e*Sn	**Sn**	**06 46 31.0**	**+0.3**
KMI	**Kunming**	**5.68**	**185**	Pn	**Pn**	**06 45 34.4**	**+1.6**
KMI				Sn	**Sn**	**06 46 38.5**	**+0.2**
KMI				smax			
	comp=N,36nm,1.7s						
KMI				smax			
	comp=E,28nm,2.4s						
KMI				LR	LR		
	comp=N,540nm,5.6s						
KMI				LR	LR		
	comp=E,1μm,9.5s						
XAN	**Xi'an**	**5.75**	**54**	Pg	**Pg**	**06 45 58.3**	**+0.1**
XAN				smax			
	comp=N,110nm,0.9s						
XAN				smax			
	comp=E,220nm,0.9s						
TIA	**Tai'an**	**12.74**	**61**	*eP*	**Pn**	**06 47 09.4**	**-0.1**
SONM	**Songino Array**	**17.17**	**7**	Pn	**Pn**	**06 48 02.8**	**-5.4**
	comp=E,0.2nm,0.3s,baz=185,slow=12,SNR=3.3						
KSRS	**Korea Array**	**21.41**	**65**	P	**P**	**06 48 51.3**	**-5.0**
	comp=E,1.3nm,0.6s,mb3.4,baz=250,slow=9.5,SNR=3.1						
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**06 49 11.0**	**+0.5**
	comp=E,1.5nm,0.8s,mb3.5,baz=133,slow=11,SNR=7.0						
AAK	**Ala-Archa**	**25.80**	**305**	P	**P**	**06 49 40.5**	**+1.0**
	comp=E,1.0nm,0.4s,mb3.7,baz=104,slow=4.2,SNR=4.9						
AAK	**Ala-Archa**	**25.80**	**305**	*eP*	**P**	**06 49 41.5**	**+2.0**
	comp=E,4.3nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**26.69**	**335**	P	**P**	**06 49 46.9**	**-0.5**
	comp=E,2.2nm,0.7s,mb3.8,baz=128,slow=9.6,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.69**	**335**	P	**P**	**06 49 46.9**	**-0.5**
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**06 49 51.1**	**+0.2**
	comp=E,2.6nm,0.6s,mb3.9,baz=131,slow=9.5,SNR=11						
KURK	**Kurchatov**	**27.07**	**324**	*eP*	**P**	**06 49 51.1**	**+0.2**
	comp=E,3.8nm,1.0s,mb3.9						
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**06 50 39.7**	**-0.1**
	comp=E,0.7nm,0.7s,mb3.7,baz=101,slow=7.7,SNR=4.2						
BVAR				PcP	PcP	06 53 25.1	-0.8
	comp=E,1.4nm,0.6s,baz=151,slow=3.4,SNR=8.2						
ABKAR	**Akbulak array**	**37.35**	**312**	*eP*	**P**	**06 51 21.3**	**+0.4**
	comp=E,4.0nm,1.2s,mb4.1						
BRTR	**Keskin Array B**	**56.28**	**300**	P	**P**	**06 53 50.0**	**+0.9**
	comp=E,0.7nm,0.7s,mb3.8,baz=64,slow=5.6,SNR=3.9						
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**06 53 55.4**	**-1.4**
	comp=E,1.5nm,0.7s,mb4.2,baz=82,slow=10,SNR=3.8						
WRA	**Warramunga Arr**	**58.62**	**145**	P	**P**	**06 54 07.2**	**+1.4**
	comp=E,1.8nm,0.7s,mb4.2,baz=338,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**61.61**	**148**	P	**P**	**06 54 25.7**	**-0.5**
	comp=E,0.3nm,0.5s,mb3.7,baz=338,slow=7.1,SNR=4.1						
NB2	**NORSAR Subarra**	**64.53**	**327**	P	**P**	**06 54 43.4**	**-1.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=75,slow=6.9						
NOA	**NORSAR Array B**	**64.53**	**327**	P	**P**	**06 54 43.8**	**-1.4**
	comp=Z,1.3nm,0.7s,mb4.1,baz=74,slow=6.5,SNR=4.6						
INK	**Inuvik**	**72.66**	**19**	*eP*	**P**	**06 55 34.3**	**-1.6**
	comp=Z,2.8nm,1.0s,mb4.2						
RES	**Resolute Bay**	**74.09**	**5**	*eP*	**P**	**06 55 43.7**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**82.18**	**17**	P	**P**	**06 56 28.3**	**-0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=326,slow=4.9,SNR=16						
YKA	**Yellowknife Ar**	**82.18**	**17**	P	**P**	**06 56 28.3**	**-0.9**

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*IDC **13** 06:56:44.8±0.9,31°.07N×103°.91E,h0km,mb3.7/11, mb1 3.8/12,mb1mx3.7/26,mbtmp3.7/12,Error ellipse: s-maj=37.4km s-min=18.2km az=49.0*
*NEIC **13** 06:56:46.4±0.6,31°.05N×103°.83E,h10km,mb3.9/1,Error ellipse: s-maj=19.0km s-min=9.3km az=222.0*
*BJI **13** 06:56:49.2,30°.79N×102°.94E,h16km,mb4.1/1,ML3.4/8, Ms4.1/2,Ms7 4.0/1*
ISC 13 06:56:47.5±2.4,**31°.11N**±0°.10×**103°.9E**±0°.1,**h16**km±17km, **n16**,σ0**s88**/16,**mb3.7**/10,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.86**	**99**	*e*Pn	**Pn**	**06 58 00.7**	**+0.8**
XAN	**Xi'an**	**5.12**	**54**	Pg	Px	06 58 38.5	
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,41nm,0.9s						
GYA	**Guiyang**	**5.22**	**152**	Pg	**Pg**	**06 58 27.3**	**-0.2**
GYA				Sg	**Sg**	**06 59 35.3**	**+0.2**
GYA				smax			
	comp=N,10.0nm,0.8s						
GYA				smax			
	comp=E,20nm,0.9s						
SONM	**Songino Array**	**16.80**	**6**	Pn	**Pn**	**07 00 42.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=185,slow=9.8,SNR=2.3						
KSRS	**Korea Array**	**20.78**	**66**	P	**P**	**07 01 25.5**	**-2.3**
	comp=E,1.3nm,0.8s,baz=245,slow=9.8,SNR=2.7						
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**07 01 50.0**	**-0.1**
	comp=E,0.3nm,0.4s,mb3.1,baz=119,slow=12,SNR=4.0						
AAK	**Ala-Archa**	**26.08**	**304**	P	**P**	**07 02 20.3**	**+0.1**
	comp=E,1.1nm,0.5s,mb3.7,baz=108,slow=3.2,SNR=4.8						
AAK	**Ala-Archa**	**26.08**	**304**	*eP*	**P**	**07 02 20.4**	**+0.2**
	comp=E,1.9nm,0.8s,mb3.7						
ZALV	**Zalesovo Beam**	**26.65**	**334**	P	**P**	**07 02 26.7**	**+1.5**
	comp=E,1.2nm,0.3s,mb3.9,baz=128,slow=9.3,SNR=2.4						
KURK	**Kurchatov**	**27.15**	**323**	P	**P**	**07 02 29.8**	**0.0**
	comp=E,1.3nm,0.5s,mb3.7,baz=128,slow=11,SNR=4.9						
BVAR	**Borovoye Array**	**32.69**	**322**	P	**P**	**07 03 17.9**	**-0.9**
	comp=E,0.2nm,0.3s,mb3.5,baz=106,slow=9.3,SNR=2.7						
BVAR				PcP	PcP	07 06 03.6	-0.7
	comp=E,0.8nm,0.6s,baz=118,slow=2.5,SNR=4.8						
FINES	**FINESS Array B**	**57.48**	**326**	P	**P**	**07 06 35.1**	**-0.3**
	comp=E,1.4nm,0.7s,mb4.1,baz=83,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**58.56**	**146**	P	**P**	**07 06 43.3**	**-0.2**
	comp=E,0.4nm,0.4s,mb3.8,baz=338,slow=7.4,SNR=5.0						
ASAR	**Alice Springs**	**61.58**	**149**	P	**P**	**07 07 04.0**	**-0.1**
	comp=E,0.4nm,0.8s,mb3.6,baz=337,slow=7.5,SNR=3.2						
NOA	**NORSAR Array B**	**64.57**	**327**	P	**P**	**07 07 22.8**	**-0.8**
	comp=E,0.5nm,0.6s,mb3.8,baz=78,slow=6.4,SNR=2.8						
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**07 09 06.7**	**+1.8**
	comp=E,0.5nm,0.6s,mb3.6,baz=331,slow=5.2,SNR=7.1						

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*IDC **13** 07:04:58.7±1.3,31°.64N×104°.51E,h0km,mb3.5/6, mb1 3.6/7,mb1mx3.5/26,mbtmp3.5/7,ML3.3/1,Error ellipse: s-maj=43.5km s-min=22.7km az=51.0*
*ISCJB **13** 07:05:00.3±1.3,32°.03N±0°.04×104°.88E±0°.06,h1km±9km, mb3.6/6,Error ellipse: s-maj=9.7km s-min=6.4km az=150.4*
*NEIC **13** 07:05:00.7±0.9,31°.73N×104°.64E,h10km,mb3.9/2,Error ellipse: s-maj=27.2km s-min=11.2km az=221.0*
*BJI **13** 07:05:11.8,32°.42N×105°.18E,h15km,mb4.2/1,ML3.8/7, Ms3.6/4,Ms7 3.4/3*
ISC 13 07:05:02.8±1.3,**31°.99N**±0°.04×**104°.93E**±0°.07,**h13**km±9km, **n14**,σ1**s44**/20,**mb3.6**/6,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.93**	**57**	Pn	**Pn**	**07 06 03.4**	**+0.7**
XAN				Pg	**Pg**	**07 06 15.9**	**-2.1**
XAN				Sg	**Sb**	**07 06 58.4**	**-0.8**
XAN				smax			
	comp=N,320nm,0.7s						
XAN				smax			
	comp=E,150nm,0.9s						
XAN				LR	LR		
	comp=N,510nm,6.6s						
XAN				LR	LR		
	comp=E,87nm,8.8s						
LZH	**Lanzhou**	**4.19**	**348**	Pn	**Pb**	**07 06 15.3**	**-1.0**
LZH				Pg	**Pg**	**07 06 22.1**	**-0.9**
LZH				Sg	**Sb**	**07 07 09.4**	**+2.6**
LZH				smax			
	comp=N,670nm,0.8s						
LZH				smax			
	comp=E,700nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,4.1s						
LZH				LR	LR		
	comp=Z,2μm,5.7s						
ENH	**Enshi**	**4.26**	**112**	*e*Pg	**Pg**	**07 06 25.8**	**+1.3**
ENH				*e*Sg	**Sg**	**07 07 25.1**	**+5.4**
GYA	**Guiyang**	**5.71**	**164**	Pg	**Pb**	**07 06 43.4**	**+1.2**
GYA				Sg	**Sb**	**07 07 50.8**	**+0.2**
GYA				smax			
	comp=N,50nm,0.6s						
GYA				smax			
	comp=E,40nm,0.7s						
SONM	**Songino Array**	**15.87**	**4**	Pn	**Pn**	**07 08 47.2**	**+1.5**
	comp=E,0.1nm,0.3s,baz=186,slow=12,SNR=2.0						
KSRS	**Korea Array**	**19.65**	**68**	P	**P**	**07 09 34.8**	**+2.2**
	comp=E,0.5nm,0.4s,baz=257,slow=11,SNR=3.0						
MK31	**Makanchi Array**	**22.80**	**317**	P	**P**	**07 10 06.2**	**+1.2**
MKAR	**Makanchi Array**	**22.80**	**317**	P	**P**	**07 10 01.6**	**-3.3**
	comp=E,0.2nm,0.3s,mb3.0,baz=125,slow=7.2,SNR=2.4						
ZALV	**Zalesovo Beam**	**26.25**	**333**	P	**P**	**07 10 37.5**	**+0.1**
	comp=E,1.2nm,0.3s,mb3.9,baz=120,slow=8.5,SNR=2.0						
KURK	**Kurchatov**	**26.98**	**322**	P	**P**	**07 10 43.8**	**-0.2**
	comp=E,0.3nm,0.2s,mb3.4,baz=128,slow=9.9,SNR=2.1						
KURK	**Kurchatov**	**26.98**	**322**	*eP*	**P**	**07 10 43.5**	**-0.5**
	comp=E,0.8nm,0.6s,mb3.4						
WRAB	**Tennant Creek**	**58.82**	**147**	*eP*	**P**	**07 14 58.8**	**-2.1**
	comp=E,1.9nm,0.9s,mb4.1						
ASAR	**Alice Springs**	**61.88**	**150**	P	**P**	**07 15 19.2**	**-2.6**
	comp=E,0.3nm,0.5s,mb3.7,baz=336,slow=6.7,SNR=6.8						
YKA	**Yellowknife Ar**	**80.64**	**17**	P	**P**	**07 17 14.4**	**-0.4**
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.4,SNR=5.0						

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*IDC **13** 07:07:06.5±0.3,30°.84N×103°.34E,h0km,mb5.4/43, mb1 5.4/44,mb1mx5.4/44,mbtmp5.4/44,ML4.0/1,MS5.4/36, Ms1 5.4/36,ms1mx5.2/45,Error ellipse: s-maj=10.7km s-min=7.5km az=38.0*
*ISCJB **13** 07:07:07.2±0.1,30°.91N±0°.01×103°.17E±0°.01,h10km, mb5.6/363,MS5.6/274,Error ellipse: s-maj=2.1km s-min=1.6km az=6.8*
*NEIC **13** 07:07:08.5±0.1,30°.89N×103°.19E,h9km,mb5.8/232, ME6.0,MS5.6/199,MW5.6,MWS.7,Error ellipse: s-maj=3.6km s-min=2.3km az=205.0,Moment Tensor Solution. s67 Moment tensor: Scale 10^{17}Nm; M_{rr}2.47; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-2.02; $M_{r\theta}$-1.24; $M_{\theta\phi}$-2.11; $M_

KMI	**Kunming**	**5.81 184**	Pn	**Pn**	**07 08 36.6 +1.4**
KMI			Pg	**Pb**	**07 08 51.0 +0.6**
KMI			Sn	**Sn**	**07 09 42.1 +0.1**
KMI			Sg	**Sg**	**07 10 16.8 +1.2**
KMI			smax		
	comp=N,3μm,1.8s				
KMI			smax		
	comp=E,3μm,3.1s				
KMI			LR	LR	
	comp=N,176μm,8.5s				
KMI			LR	LR	
	comp=E,280μm,9.1s				
GTA	**Gaotai**	**8.89 343**	P	**Pn**	**07 09 20.6 +3.1**
GTA			pP		07 09 29.9
GTA			sP		07 09 34.3
GTA			S	**Sn**	**07 11 02.1 +4.4**
GTA			sS		07 11 13.4
GTA			pmax	pmax	
	comp=Z,2μm,5.1s				
GTA			LR	LR	
	comp=N,89μm,11.3s				
GTA			LR	LR	
	comp=E,171μm,12.6s				
GTA			LR	LR	
	comp=Z,55μm,10.1s				
WHN	**Wuhan**	**9.60 90**	⇑P	**Pn**	**07 09 26.5 -0.6**
WHN			sP		07 09 39.8
WHN			S	**Sn**	**07 11 07.8 -7.2**
WHN			LR	LR	
	comp=N,218μm,6.6s				
WHN			LR	LR	
	comp=E,404μm,6.6s				
TIY	**Taiyuan**	**10.18 46**	*e*P	**Pn**	**07 09 37.1 +1.9**
TIY			S	**Sn**	**07 11 27.3 -2.1**
TIY			LR	LR	
	comp=N,7μm,3.1s				
TIY			LR	LR	
	comp=E,23μm,6.2s				
TIY			LR	LR	
	comp=Z,16μm,7.1s				
IMP	**Imphal**	**10.24 235**	*i* P	**Pn**	**07 09 36.0 -0.1**
IMP			*ex*	x	07 11 34.0
LSA	**Lhasa**	**10.50 266**	P	**Pn**	**07 09 42.3 +2.8**
LSA			S	**Sn**	**07 11 36.8 -0.3**
LSA			LR	LR	
	comp=N,59μm,17.4s				
LSA			LR	LR	
	comp=E,58μm,10.4s				
LSA			LR	LR	
	comp=Z,82μm,9.9s				
LSA	**Lhasa**	**10.50 266**	*e*P	**Pn**	**07 09 42.2 +2.7**
LSA			pmax	pmax	
	comp=Z,370nm,0.9s				
LSA	**Lhasa**	**10.50 266**	*e*Pn	**Pn**	**07 09 42.2 +2.7**
	comp=Z,370nm,0.9s				
BTO	**Baotou**	**11.11 28**	*e*P	**Pn**	**07 09 48.3 +0.5**
BTO			S	**Sn**	**07 11 51.1 -1.0**
BTO			LR	LR	
	comp=N,35μm,9.8s				
BTO			LR	LR	
	comp=E,14μm,10.8s				
SHL	**Shillong**	**11.33 245**	⇑*i* P	**Pn**	**07 09 51.0 +0.1**
	comp=Z,92nm,1.0s				
SHL			*i* x	x	07 11 55.0
SHL			*ex*	x	07 13 10.0
GZH	**Guangzhou**	**11.95 128**	P	**Pn**	**07 09 56.9 -2.5**
GZH			S	**Sn**	**07 12 05.3 -7.4**
GZH			LR	LR	
	comp=N,81μm,7.9s				
GZH			LR	LR	
	comp=E,88μm,7.0s				
HHC	**Hu-ho-hao-te**	**11.98 32**	*e*P	**Pn**	**07 10 01.3 +1.6**
HHC			pP		07 10 08.4
HHC			PP		07 10 11.4
HHC			S	**Sn**	**07 12 13.9 +0.6**
HHC			sS		07 12 26.1
HHC			SS		07 12 29.9
HHC			pmax	pmax	
	comp=Z,32nm,1.0s				
HHC			pmax	pmax	
	comp=Z,630nm,4.8s				
HHC			LR	LR	
	comp=N,35μm,6.6s				
HHC			LR	LR	
	comp=E,45μm,5.8s				
HHC			LR	LR	
	comp=Z,30μm,6.8s				
TURI	**Tura**	**12.55 248**	*ex*	x	07 10 51.0
TURI			*ex*	x	07 11 11.0
CHTO	**Chiang Mai**	**12.68 199**	*e*P	**Pn**	**07 10 11.8 +2.4**
CHTO	**Chiang Mai**	**12.68 199**	Pn	**Pn**	**07 10 12.5 +3.1**
	SNR=21				
CHTO			Pn	**Pn**	**07 10 12.5 +3.1**
	SNR=21				
AGT	**Agartala**	**12.73 239**	*ex*	x	07 10 04.0
AGT			*ex*	x	07 10 52.0
TIA	**Tai'an**	**12.73 62**	*e*P	**Pn**	**07 10 08.8 -1.3**
TIA			S	**Sn**	**07 12 36.0 +4.1**
TIA			pmax	pmax	
	comp=Z,210nm,0.9s				
TIA			pmax	pmax	
	comp=Z,580nm,6.0s				
TIA			LR	LR	
	comp=N,39μm,8.0s				
TIA			LR	LR	
	comp=E,22μm,6.0s				
CM31	**Chiang Mai Arr**	**13.02 198**	*e*Pn	**Pn**	**07 10 16.7 +2.7**
CMAR	**Chiang Mai Arr**	**13.02 198**	LR	LR	07 15 01.0
	comp=E,15μm,20.0s,baz=104,slow=37				
HKC	**Hong Kong Obse**	**13.04 129**	P	**Pn**	**07 10 16.0 +1.7**
QIZ	**Qiongzhong**	**13.29 152**	P	**Pn**	**07 10 18.1 +0.3**
QIZ			pP		07 10 21.1
QIZ			sP		07 10 24.1
QIZ			S	**Sn**	**07 12 47.9 +2.2**
QIZ			sS		07 12 54.3
QIZ			pmax	pmax	
	comp=Z,43nm,0.8s				
QIZ			pmax	pmax	
	comp=Z,2μm,8.9s				
QIZ			LR	LR	
	comp=N,80μm,8.6s				
QIZ			LR	LR	
	comp=Z,57μm,10.7s				
QIZ	**Qiongzhong**	**13.29 152**	*e*Pn	**Pn**	**07 10 17.6 -0.1**
	comp=Z,154nm,1.1s				
NJ2	**Nanjing**	**13.40 81**	*e*P	**Pn**	**07 10 17.8 -1.4**
NJ2			pP		07 10 21.1
NJ2			sP		07 10 24.6
NJ2			PP		07 10 28.8
NJ2			S	**Sn**	**07 12 49.5 +1.3**
NJ2			sS		07 12 55.5
NJ2			LR	LR	
	comp=N,59μm,16.4s				
NJ2			LR	LR	
	comp=E,81μm,10.5s				
NJ2			LR	LR	
	comp=Z,85μm,11.5s				
BJT	**Baijiatuau**	**13.90 46**	*e*P	**Pn**	**07 10 26.2 +0.3**
BJT			pmax	pmax	
	comp=Z,146nm,0.8s				
BJT	**Baijiatuau**	**13.90 46**	*e*Pn	**Pn**	**07 10 26.2 +0.3**
	comp=Z,146nm,0.8s				
BJI	**Beijing**	**13.91 46**	P	**Pn**	**07 10 26.4 +0.2**
BJI			S	**Sn**	**07 13 02.4 +1.7**
BJI			pmax	pmax	
	comp=Z,45nm,1.0s				
BJI			LR	LR	
	comp=N,42μm,6.0s				
BJI			LR	LR	
	comp=E,41μm,6.0s				
TAPN	**Taplejung**	**14.01 259**	*e*P	**Pn**	**07 10 27.4 -0.1**
	comp=E,2μm,1.1s				
ODAN	**Odare**	**14.44 258**	*e*P	**Pn**	**07 10 32.7 -0.7**
	comp=E,2μm,1.1s				
QZH	**Quanzhou**	**14.85 110**	⇓*i*P	**Pn**	**07 10 39.0 +0.1**
QZH			S	**Sn**	**07 13 19.5 -4.0**
QZH			pmax	pmax	
	comp=Z,350nm,0.9s				
QZH			pmax	pmax	
	comp=Z,7μm,8.0s				
RAMN	**Ramite**	**15.07 259**	*e*P	**Pn**	**07 10 41.0 -1.0**
GUN	**Gumba**	**15.40 263**	*e*P	**Pn**	**07 10 45.3 -1.0**
	comp=Z,1μm,0.8s				
SSE	**Sheshan**	**15.42 85**	P	**Pn**	**07 10 45.4 -1.1**
SSE			S	**Sn**	**07 13 37.0 -0.4**
SSE			pmax	pmax	
	comp=Z,330nm,1.2s				
SSE			pmax	pmax	
	comp=Z,2μm,8.2s				
SSE			LR	LR	
	comp=N,122μm,12.0s				
SSE			LR	LR	
	comp=E,34μm,12.0s				
SSE			LR	LR	
	comp=Z,86μm,8.6s				
NST	**Nakhon Sawan**	**15.46 191**	P	**Pn**	**07 10 46.8 -0.3**
	comp=Z,245nm,1.2s				
CAL	**Calcutta**	**15.70 241**	*e*P	**Pn**	**07 10 48.9 -1.3**
CAL			*ex*	x	07 13 54.0
UBT	**Ubonrachathani**	**15.71 174**	⇓P	**Pn**	**07 10 51.5 +1.1**
PKI	**Pulchoki**	**15.89 262**	*e*P	**Pn**	**07 10 51.6 -1.2**
	comp=Z,912nm,0.7s				
PKIN	**Phulchoki**	**15.90 262**	*e*P	**Pn**	**07 10 51.8 -1.1**
	comp=Z,736nm,0.6s				
KKN	**Kakani**	**15.94 263**	*e*P	**Pn**	**07 10 52.0 -1.4**
	comp=Z,1μm,0.7s				
DMN	**Daman**	**16.14 263**	*e*P	**Pn**	**07 10 54.5 -1.5**
	comp=Z,2μm,1.1s				
SONM	**Songino Array**	**17.05 7**	P	**Pn**	**07 11 07.6 +0.3**
	comp=Z,0.6nm,0.3s,baz=187,slow=11,SNR=43				
SONM			Lg		07 16 16.9
	comp=Z,0.1nm,0.3s,baz=183,slow=26,SNR=2.8				
SONM	**Songino Array**	**17.05 7**	P	**Pn**	**07 11 07.6 +0.3**
SONM			Lg		07 16 16.9
DL2	**Dalian**	**17.05 57**	P	**Pn**	**07 11 07.9 +0.5**
DL2			S	**Sn**	**07 14 14.4 -2.5**
DL2			pmax	pmax	
	comp=Z,390nm,1.8s				
DL2			pmax	pmax	
	comp=Z,2μm,6.1s				
DL2			LR	LR	
	comp=N,16μm,18.6s				
DL2			LR	LR	
	comp=E,14μm,18.1s				
DL2			LR	LR	
	comp=Z,11μm,11.2s				
TATO	**Taipei**	**17.20 106**	*e*P	**Pn**	**07 11 11.8 +2.4**
	comp=Z,2μm,1.5s				
TATO	**Taipei**	**17.20 106**	Pn	**Pn**	**07 11 13.4 +4.0**
	SNR=13				
TATO			Pn	**Pn**	**07 11 13.4 +4.0**
	SNR=13				
YHNB	**Yeheng**	**17.23 107**	*e*P	**Pn**	**07 11 11.7 +1.9**
	comp=Z,840nm,1.4s				
TPUB	**Ta-pu**	**17.26 112**	*e*P	**Pn**	**07 11 11.6 +1.4**
	comp=Z,2μm,1.5s				
SSLB	**Suanglung**	**17.29 110**	*e*P	**Pn**	**07 11 11.5 +1.0**
	comp=Z,1μm,1.0s				
NACB	**Ninganchiao**	**17.63 108**	*e*P	**Pn**	**07 11 16.1 +1.4**
	comp=Z,2μm,1.6s				
YULB	**Yu-li**	**17.75 111**	*e*P	**Pn**	**07 11 18.2 +2.0**
	comp=Z,1μm,1.6s				
WMQ	**Urumqi**	**17.77 321**	P	**Pn**	**07 11 17.4 +1.0**
WMQ			PP		07 11 31.3
WMQ			S	**Sn**	**07 14 33.5 -0.9**
WMQ			SS		07 14 55.5
WMQ			PcP	PcP	07 15 55.3 +1.6
WMQ			pmax	pmax	
	comp=Z,190nm,1.2s				
WMQ			pmax	pmax	
	comp=Z,9μm,4.8s				
WMQ			LR	LR	
	comp=N,50μm,10.0s				
WMQ			LR	LR	
	comp=E,37μm,11.0s				
WMQ			LR	LR	
	comp=Z,23μm,15.0s				
TWG	**Pinlang**	**17.86 113**	*e*P	**Pn**	**07 11 18.8 +1.3**
	comp=Z,2μm,1.7s				
ZAK	**Zakamensk**	**19.42 0**	*e*P	**Pn**	**07 11 37.4 +1.1**
ZAK			pmax	pmax	
	comp=Z,190nm,1.5s				
SNY	**Shenyang**	**19.62 51**	⇓P	**Pn**	**07 11 38.8 -0.1**
SNY			S	**Sn**	**07 15 16.0 -3.1**
SNY			pmax	pmax	
	comp=Z,220nm,2.1s				
SNY			pmax	pmax	
	comp=Z,3μm,5.1s				
SNY			LR	LR	
	comp=N,24μm,19.0s				
SNY			LR	LR	
	comp=E,12μm,19.2s				
SNY			LR	LR	
	comp=Z,20μm,15.1s				
BBP	**Basco**	**19.85 117**	*e*P	**Pn**	**07 11 43.0 +1.3**
PTH	**Pithoragarh**	**19.91 272**	*e*P	**Pn**	**07 11 41.3 -1.1**
PTH			*ex*	x	07 15 27.8
PIP	**Pasuquin**	**20.17 124**	⇓*e*P	**P**	**07 11 46.5 +2.9**
JOSI	**Joshimath**	**20.33 275**	*e*P	**P**	**07 11 46.4 +1.1**
INCN	**Inchon**	**20.41 65**	*e*P	**P**	**07 11 47.7 +1.6**
	comp=Z,450nm,0.9s				
INCN			LR	LR	
	comp=Z,16μm,19.0s,MS5.4				
INCN	**Inchon**	**20.41 65**	P	**P**	**07 11 50.1 +4.0**
	SNR=16				
INCN			P		07 11 50.1
	SNR=16				
TLY	**Talaya**	**20.72 1**	Pn	**P**	**07 11 51.6 +2.2**
	comp=Z,647nm,1.8s,SNR=43				
TLY	**Talaya**	**20.72 1**	*c i* P	**P**	**07 11 51.7 +2.3**
TLY			*e*		07 12 27.0
TLY			*e*S	**S**	**07 15 38.7 -1.9**
TLY			*e*SS		07 16 09.3
TLY			pmax	pmax	
	comp=Z,398nm,1.9s				
TLY			MLR	MLR	
	comp=Z,24μm,11.0s,MS5.8				
TLY	**Talaya**	**20.72 1**	*e*P	**P**	**07 11 51.3 +1.9**
	comp=Z,592nm,1.8s				
TLY			LR	LR	
	comp=Z,3μm,21.0s,MS4.6				
TLY	**Talaya**	**20.72 1**	P	**P**	**07 11 51.6 +2.3**
	SNR=134				
TLY			P		07 11 51.6
	SNR=134				
MOY	**Mondy**	**20.77 356**	⇑*i*P	**P**	**07 11 52.2 +2.3**
MOY			pmax	pmax	
	comp=Z,2μm,2.5s				
APYP	**Conner**	**20.92 124**	*e*P	**P**	**07 11 54.5 +2.7**
BOLP	**Bolinao**	**21.03 130**	*e*P	**P**	**07 11 55.6 +2.6**
IRK	**Irkutsk**	**21.30 2**	*e*P	**P**	**07 11 57.8 +2.2**
IRK			pmax	pmax	
	comp=Z,1μm,1.9s,mb5.9				
KSRS	**Korea Array**	**21.42 66**	P	**P**	**07 11 56.2 -0.8**
	comp=Z,220nm,0.8s,mb5.5,baz=254,slow=9.4,SNR=115				
KSRS			S	**S**	**07 15 49.9 -4.7**
	comp=Z,2.0nm,0.9s,baz=252,slow=17,SNR=2.0				
KSRS			Lg		07 18 29.1
	comp=Z,8.3nm,1.0s,baz=270,slow=30,SNR=3.8				
KSRS			LR	LR	07 20 42.2
	comp=Z,10μm,18.1s,MS5.2,baz=261,slow=38				
KSRS	**Korea Array**	**21.42 66**	P	**P**	**07 11 56.2 -0.8**
KSRS			S	**S**	**07 15 49.9 -4.7**
KSRS			pmax	pmax	
	comp=Z,220nm,0.8s,mb5.5				
KSRS			smax		
	comp=N,2.0nm,0.9s				
KSRS			MLR	MLR	
	comp=Z,10μm,18.1s,MS5.2				
DDI	**Dehra Dun**	**21.64 275**	⇑*i*P	**P**	**07 11 58.0 -1.5**
DDI			*ex*	x	07 15 57.0
CN2	**Changchun**	**21.76 48**	*e*P	**P**	**07 12 00.9 +0.3**
CN2			*es*P	sP	07 12 14.1 +9.3
CN2			*e*S	**S**	**07 15 53.4 -7.8**
CN2			pmax	pmax	
	comp=Z,770nm,1.1s,mb6.0				
CN2			pmax	pmax	
	comp=Z,4μm,3.0s				
CN2			LR	LR	
	comp=N,8μm,12.0s,MS5.6				
CN2			LR	LR	
	comp=E,12μm,12.0s,MS5.6				
CN2			LR	LR	
	comp=Z,15μm,14.0s,MS5.5				
CAUP	**Cauayan**	**21.94 125**	*e*P	**P**	**07 12 05.5 +2.7**
JBP	**Jabalpur**	**22.06 255**	⇑*e*P	**P**	**07 12 03.8 -0.3**
JBP			*ex*	x	07 12 11.3
	comp=Z,482nm,2.1s				
JBP			*i* x	x	07 16 06.2
HIA	**Hailar**	**22.16 30**	*e*P	**P**	**07 12 05.0 +0.2**
HIA			pmax	pmax	
	comp=Z,715nm,1.4s				
HIA			MLR	MLR	
	comp=Z,5μm,21.0s				
HIA	**Hailar**	**22.16 30**	*e*P	**P**	**07 12 05.0 +0.2**
	comp=Z,716nm,1.4s,mb5.9				
HIA			LR	LR	
	comp=Z,5μm,21.0s,MS4.9				
SMLA	**Simla**	**22.30 277**	*i* P	**P**	**07 12 03.0 -3.5**
SMLA			*i* S	**S**	**07 16 08.8 -3.3**
JOW	**Kunigami**	**22.31 94**	P	**P**	**07 12 05.2 -1.5**
	comp=Z,236nm,0.8s,mb5.7,baz=275,slow=12,SNR=16				
JOW			LR	LR	07 21 20.1
	comp=Z,12μm,18.1s,MS5.4,baz=89,slow=38				
JOW	**Kunigami**	**22.31 94**	P	**P**	**07 12 05.2 -1.5**
JOW			LR	LR	07 21 20.1
VIS	**Vishakhapatnam**	**22.34 238**	*i* P	**P**	**07 12 06.9 -0.2**
VIS			*ex*	x	07 12 10.3
	comp=Z,419nm,1.3s				
VIS			*i* x	x	07 16 09.4
VIS			*i* x	x	07 16 12.8
AGRA	**Agra**	**22.37 267**	*e*P	**P**	**07 12 06.9 -0.4**
AGRA			AMb	AMB	07 12 09.6
	comp=Z,583nm,1.0s,mb6.0				
CIT	**Chita**	**22.40 17**	*e*P	**P**	**07 12 08.2 +0.9**
CIT			*e*		07 12 38.2
CIT			*e*		07 12 42.9
SDNR	**Sundarnagar**	**22.43 278**	*e*P	**P**	**07 12 08.6 +0.7**
SDNR			*e*S	**S**	**07 16 17.0 +2.5**
BALP	**Baler**	**22.60 128**	*e*P	**P**	**07 12 13.1 +3.3**
MK31	**Makanchi Array**	**22.61 320**	*e*P	**P**	**07 12 11.3 +1.7**
MKAR	**Makanchi Array**	**22.61 320**	P	**P**	**07 12 11.2 +1.6**
	comp=Z,130nm,0.9s,mb5.3,baz=125,slow=10,SNR=239				
MKAR			PcP	PcP	07 16 02.5 -0.1
	comp=Z,20nm,0.8s,baz=116,slow=4.7,SNR=3.7				
MKAR			ScP	ScP	07 19 38.2 -2.1
	comp=Z,21nm,0.9s,baz=114,slow=2.9,SNR=10				
MKAR			LR	LR	07 21 44.1
	comp=Z,11μm,18.7s,MS5.3,baz=123,slow=39				
MKAR			P3KPbc		07 45 47.7
	comp=Z,2.2nm,0.9s,baz=290,slow=4.2,SNR=8.8				
MKAR	**Makanchi Array**	**22.61 320**	P	**P**	**07 12 11.2 +1.6**
MKAR					07 16 02.5
MKAR	**Makanchi Array**	**22.61 320**	P	**P**	**07 12 11.2 +1.6**
MKAR			PcP	PcP	07 16 02.5 -0.1
MKAR			ScP	ScP	07 19 38.2 -2.1
MKAR			LR	LR	07 21 44.1
NDI	**New Delhi**	**22.65 271**	*e*P	**P**	**07 12 07.0 -3.3**
NDI			*e*S	**S**	**07 16 16.0 -2.8**
AYAN	**Aya Nagar**	**22.77 270**	*e*P	**P**	**07 12 10.7 -0.9**
AYAN			AMb	AMB	07 12 12.8
	comp=Z,244nm,1.0s,mb5.6				
SONA	**Sohna**	**22.86 270**	*e*P	**P**	**07 12 11.5 -1.0**
SONA			AMb	AMB	07 12 14.0
	comp=Z,402nm,1.1s,mb5.8				
BHK	**Bhakra**	**22.91 278**	*e*P	**P**	**07 12 10.8 -2.2**
BHK			*ex*	x	07 12 51.6
DLH	**Dalhousie**	**23.20 281**	*e*P	**P**	**07 12 16.0 -0.1**
DLH			*e*S	**S**	**07 16 30.0 +2.2**
TGY	**Tagaytay City**	**23.37 132**	P	**P**	**07 12 17.3 -0.7**
	comp=Z,380nm,0.6s,mb6.0,baz=307,slow=5.1,SNR=7.9				
THN	**Thein Dam**	**23.42 281**	*e*P	**P**	**07 12 16.8 -1.6**
THN			*e*S	**S**	**07 16 32.8 +1.4**
NGP	**Nagpur**	**23.75 252**	⇑*i*P	**P**	**07 12 17.5 -4.2**
NGP			*ex*	x	07 12 18.6
	comp=Z,655nm,1.0s				
NGP			*e*S	**S**	**07 16 34.4 -2.5**
KSH	**Kashi**	**23.77 299**	⇑*i*P	**P**	**07 12 25.4 +3.7**
KSH			*e*pP		07 12 29.1
KSH			*es*P	sP	07 12 32.4 +6.5
KSH			*e*PP		07 12 59.3
KSH			*e*PcP	PcP	07 16 06.1 +1.0
KSH			*e*S	**S**	**07 16 39.3 +2.4**
KSH			*es*S	sS	07 16 46.1 +4.2
KSH			*e*SS		07 17 32.3
KSH			*e*ScP	ScP	07 19 43.4 -0.1
KSH			*e*PcS	PcS	07 19 45.5 +0.9
KSH			*e*ScS	ScS	07 23 29.3 -0.9
KSH			pmax	pmax	
	comp=Z,3μm,2.8s,mb6.3				
KSH			LR	LR	
	comp=N,14μm,11.4s				
KSH			LR	LR	
	comp=E,12μm,9.1s				
KHET	**Khetri**	**24.00 270**	⇓*i*P	**P**	**07 12 23.5 -0.3**
KHET			AMb	AMB	07 12 25.4
	comp=Z,245nm,1.2s,mb5.5				
AAA	**Alma-Ata**	**24.18 308**	*i* P	**P**	**07 12 28.2 +2.8**
AAA			*i* S	**S**	**07 16 48.6 +5.1**
AAA			smax		
	comp=E,24μm,6.7s				
AAA			MLR	MLR	
	comp=Z,20μm,11.0s,MS5.8				
ULHL	**Ulahol**	**24.31 305**	P	**P**	**07 12 29.2 +2.6**
	SNR=183				
MDJ	**Mudanjiang**	**24.79 49**	P	**P**	**07 12 31.3 +0.4**
MDJ			pP		07 12 34.1
MDJ			sP	sP	07 12 35.3 +0.1
MDJ			S	**S**	**07 16 52.6 -0.7**
MDJ			sS	sS	07 17 01.3 +3.0
MDJ			ScP	ScP	07 19 45.0 -1.2
MDJ			PcS	PcS	07 19 47.3 +0.1
MDJ			pmax	pmax	
	comp=Z,110nm,1.6s,mb5.1				
MDJ			pmax	pmax	
	comp=Z,2μm,4.8s				
MDJ			LR	LR	
	comp=N,12μm,8.7s				
MDJ			LR	LR	
	comp=E,6μm,9.4s				
MDJ			LR	LR	
	comp=Z,11μm,8.3s				
MDJ	**Mudanjiang**	**24.79 49**	*e*P	**P**	**07 12 31.1 +0.2**
	comp=Z,506nm,1.3s,mb5.9				
MDJ			LR	LR	
	comp=Z,7μm,20.0s,MS5.2				
KZA	**Kyzart**	**24.96 304**	P	**P**	**07 12 35.6 +3.1**
	SNR=55				
TKM2	**Tokmak 2**	**24.98 306**	P	**P**	**07 12 34.9 +2.2**
	SNR=164				
TKM2	**Tokmak 2**	**24.98 306**	*e*P	**P**	**07 12 34.8 +2.1**
TKM2			pmax	pmax	
	comp=Z,543nm,1.4s,mb5.9				
TKM2			MLR	MLR	
	comp=Z,18μm,21.0s,MS5.5				
TKM2	**Tokmak 2**	**24.98 306**	*e*P	**P**	**07 12 34.8 +2.0**
	comp=Z,543nm,1.4s,mb5.9				
TKM2			LR	LR	
	comp=Z,18μm,21.0s,MS5.5				
KBK	**Karagaybulak**	**25.35 305**	P	**P**	**07 12 38.9 +2.8**
	SNR=110				
AJM	**Ajmer**	**25.41 267**	⇑*i*P	**P**	**07 12 36.3 -0.4**
AJM			AMb	AMB	07 12 42.0
	comp=Z,357nm,0.5s,mb6.2				
KTGM	**Kuala Trenggan**	**25.48 180**	P	**P**	**07 12 37.8 +0.4**
KTGM	**Kuala Trenggan**	**25.48 180**	P	**P**	**07 12 37.8 +0.4**
UCH	**Uchtor**	**25.53 304**	P	**P**	**07 12 40.8 +3.1**
	SNR=178				
UCH	**Uchtor**	**25.53 304**	*e*P	**P**	**07 12 40.5 +2.9**
	comp=Z,15nm,2.0s,mb4.2				
UCH			LR	LR	
	comp=Z,15μm,20.0s,MS5.5				
PPR	**Puerto Princes**	**25.54 142**	⇓*e*P	**P**	**07 12 37.0 -0.9**
CHMS	**Chumysh**	**25.60 306**	P	**P**	**07 12 40.1 +1.8**
	SNR=44				
KULM	**Kulim**	**25.63 186**	P	**P**	**07 12 38.7 -0.1**
KULM	**Kulim**	**25.63 186**	P	**P**	**07 12 38.7 -0.1**
KULM	**Kulim**	**25.63 186**	P	**P**	**07 12 40.0 +1.2**
KULM	**Kulim**	**25.63 186**	P	**P**	**07 12 40.0 +1.2**
KULM	**Kulim**	**25.63 186**	PFAKE		07 12 50.0 +11
KULM			LR	LR	
	comp=Z,8μm,20.0s,MS5.3				
FRU	**Bishkek**	**25.64 306**	⇑*i*P	**P**	**07 12 40.0 +1.3**
FRU			*e*		07 13 26.0
FRU			*e*S	**S**	**07 17 13.0 +6.2**
FRU			*i*		07 17 28.0
FRU			pmax	pmax	
	comp=Z,1μm,1.8s,mb6.2				
AAK	**Ala-Archa**	**25.66 305**	P	**P**	**07 12 41.9 +3.0**
	comp=Z,2μm,0.9s,mb6.6				
AAK	**Ala-Archa**	**25.66 305**	P	**P**	**07 12 41.4 +2.5**
	SNR=184				
AAK	**Ala-Archa**	**25.66 305**	P	**P**	**07 12 41.1 +2.2**
	comp=Z,129nm,0.7s,mb5.5,baz=120,slow=7.1,SNR=62				
AAK			PcP	PcP	07 16 09.4 +0.2
	comp=Z,9.5nm,0.7s,baz=90,slow=1.0,SNR=4.6				

AAK LR LR 07 23 41.0
comp=Z,20μm,18.6s,MS5.7,baz=78,slow=38
AAK P3KPbc 07 45 34.9
comp=Z,1.0nm,0.3s,baz=240,slow=4.4,SNR=6.9
AAK Ala-Archa 25.66 305c *i*P **P 07 12 41.1 +2.2**
AAK pmax pmax
comp=Z,309nm,1.7s,mb5.6
AAK MLR MLR
comp=Z,11μm,21.0s,MS5.3
AAK Ala-Archa 25.66 305 *e*P **P 07 12 41.0 +2.2**
comp=Z,2μm,2.1s,mb6.3
AAK LR LR
comp=Z,21μm,21.0s,MS5.7
AAK Ala-Archa 25.66 305 P **P 07 12 41.6 +2.7**
SNR=346
AAK P 07 12 41.6
SNR=346
VLA Vladivostok 25.79 54 *e*P **P 07 12 39.5 -0.5**
VLA *e* 07 12 49.4
VLA *e*S **S 07 17 06.8 -2.5**
VLA pmax pmax
comp=Z,219nm,1.8s,mb5.4
VLA MLR MLR
comp=Z,16μm,11.5s,MS5.8
USP Ospenovka 25.86 306 P **P 07 12 42.6 +1.9**
SNR=206
AML Almayashu 26.09 304 P **P 07 12 45.6 +2.9**
SNR=141
AML Almayashu 26.09 304 *e*P **P 07 12 45.3 +2.6**
comp=Z,777nm,1.5s,mb6.0
AML LR LR
comp=Z,13μm,22.0s,MS5.4
HYB Hyderabad 26.14 245 *i*P **P 07 12 43.0 -0.4**
comp=Z,515nm,1.0s,mb6.0
HYB *e*S **S 07 17 12.0 -3.1**
HYB LR LR 07 23 42.0
comp=Z,13nm,12.0s
EKS2 Erkin-Say 26.18 305 P **P 07 12 46.0 +2.4**
SNR=156
EKS2 Erkin-Say 26.18 305 *e*P **P 07 12 45.7 +2.1**
comp=Z,902nm,1.6s,mb6.0
EKS2 LR LR
comp=Z,22μm,19.0s,MS5.7
IPM Ipoh 26.40 185 P **P 07 12 45.0 -0.7**
IPM Ipoh 26.40 185 P **P 07 12 45.0 -0.7**
ZAA0 Zalesovo Array 26.54 335 *e*P **P 07 12 47.3 +0.6**
ZALV Zalesovo Beam 26.54 335 P **P 07 12 47.4 +0.8**
comp=Z,82nm,0.8s,mb5.3,baz=138,slow=8.8,SNR=79
ZALV ScP ScP 07 19 49.3 -1.8
comp=Z,6.8nm,1.0s,baz=111,slow=3.3,SNR=4.3
ZALV LR LR 07 24 04.6
comp=Z,6μm,18.5s,MS5.2,baz=319,slow=38
ZALV Zalesovo Beam 26.54 335 P **P 07 12 47.4 +0.8**
ZALV ScP ScP 07 19 49.3 -1.8
ZALV LR LR 07 24 04.6
KURK Kurchatov 26.92 324 P **P 07 12 51.9 +1.7**
comp=Z,1μm,1.3s,mb6.3
KURK Kurchatov 26.92 324 P **P 07 12 50.9 +0.7**
comp=Z,70nm,0.8s,mb5.2,baz=129,slow=9.8,SNR=125
KURK PcP PcP 07 16 11.6 -0.4
comp=Z,14nm,0.7s,baz=109,slow=1.9,SNR=4.4
KURK LR LR 07 24 49.8
comp=Z,8μm,20.3s,MS5.3,baz=125,slow=39
KURK P3KPbc 07 45 29.6
comp=Z,1.9nm,0.8s,baz=308,slow=4.8,SNR=6.8
KURK Kurchatov 26.92 324 *e*P **P 07 12 51.1 +0.9**
comp=Z,368nm,1.2s,mb5.8
KURK LR LR
comp=Z,9μm,21.0s,MS5.3
KURK Kurchatov 26.92 324 P **P 07 12 51.4 +1.3**
SNR=170
KURK P 07 12 51.4
SNR=170
KDM Kudat 27.10 149 P **P 07 12 51.5 -0.6**
KDM Kudat 27.10 149 P **P 07 12 51.5 -0.6**
KDM Kudat 27.10 149 P **P 07 12 52.8 +0.7**
KDM Kudat 27.10 149 P **P 07 12 51.5 -0.6**
LATR Latur 27.16 249 *e*P **P 07 12 50.5 -2.1**
FRIM Kepong 27.60 183 P **P 07 12 56.9 +0.4**
FRIM Kepong 27.60 183 P **P 07 12 56.9 +0.4**
FRIM Kepong 27.60 183 P **P 07 12 56.9 +0.4**
KKM Kota Kinabalu 27.61 151 P **P 07 12 56.7 0.0**
KKM Kota Kinabalu 27.61 151 P **P 07 12 56.7 0.0**
KKM Kota Kinabalu 27.61 151 P **P 07 12 56.7 0.0**
KKM Kota Kinabalu 27.61 151 *e*P **P 07 12 55.8 -0.9**
comp=Z,169nm,0.9s,mb5.7
KKM LR LR
comp=Z,5μm,19.0s,MS5.1
NVS Novosibirsk 27.82 335⇑ *i*P **P 07 12 58.2 +0.1**
NVS *i*S **S 07 17 39.5 -1.4**
NVS pmax pmax
comp=Z,610nm,2.1s,mb5.9
NVS pmax pmax
comp=N,746nm,2.0s
NVS pmax pmax
comp=E,340nm,2.0s
BOD Bodaibo 27.89 12 *e*P **P 07 12 58.9 +0.2**
BOD pmax pmax
comp=Z,63nm,1.3s,mb5.1
KLR Kul'dur 28.22 41 *e*P **P 07 12 57.7 -4.1**
KLR *e*S **S 07 17 42.5 -4.9**
KLR pmax pmax
comp=Z,130nm,1.8s,mb5.3
KLR MLR MLR
comp=E,14μm,12.0s
KLR MLR MLR
comp=Z,30μm,12.0s,MS6.1
SDKM Sandakan 28.39 150 P **P 07 13 02.8 -0.8**
SDKM Sandakan 28.39 150 P **P 07 13 03.0 -0.7**
SDKM Sandakan 28.39 150 P **P 07 13 02.8 -0.8**
JASL Jaisalmer 28.50 270 *e*P **P 07 13 04.4 -0.2**
KGM Kluang 28.77 180 P **P 07 13 07.0 0.0**
KGM Kluang 28.77 180 P **P 07 13 07.0 0.0**
KGM Kluang 28.77 180 P **P 07 13 07.0 0.0**
KBL Kabul 28.88 286 *e*P **P 07 13 09.2 +1.3**
KBL pmax pmax
comp=Z,139nm,0.9s,mb5.7
KBL Kabul 28.88 286 *e*P **P 07 13 09.2 +1.4**
comp=Z,138nm,0.9s,mb5.7
MYKOM Kota Tinggi 29.00 179 P **P 07 13 08.9 -0.1**
MYKOM Kota Tinggi 29.00 179 P **P 07 13 08.9 -0.1**
MYKOM Kota Tinggi 29.00 179 P **P 07 13 08.9 -0.1**
BTM Bintulu 29.13 159 P **P 07 13 11.6 +1.5**
BTM Bintulu 29.13 159 P **P 07 13 11.6 +1.5**
BTM Bintulu 29.13 159 P **P 07 13 11.6 +1.5**
BHV Bhavnagar 29.23 259 *e*P **P 07 13 10.0 -1.0**
POO Poona 29.30 252⇑ *i*P **P 07 13 10.8 -0.9**
MAJO Matsushiro 29.53 70 *e*P **P 07 13 14.1 +0.5**
MAJO pmax pmax
comp=Z,177nm,1.6s,mb5.5
MAJO MLR MLR
comp=Z,10μm,22.0s,MS5.4
MAJO Matsushiro 29.53 70 *e*P **P 07 13 14.1 +0.5**
comp=Z,178nm,1.6s,mb5.5
MAJO LR LR
comp=Z,10μm,22.0s,MS5.4
MAT Matsushiro 29.53 70 P **P 07 13 10.3 -3.3**
MAT S **S 07 18 06.0 -2.2**
MJAR Matsushiro Arr 29.53 70 P **P 07 13 13.4 -0.2**
comp=Z,17nm,1.1s,mb4.7,baz=273,slow=8.9,SNR=23
MJAR PcP PcP 07 16 18.7 0.0
comp=Z,10nm,1.0s,baz=259,slow=1.8,SNR=4.3
MJAR ScP ScP 07 19 58.8 -1.9
comp=Z,7.4nm,1.0s,baz=265,slow=3.5,SNR=6.4
MJAR LR LR 07 24 32.8
comp=Z,6μm,20.4s,MS5.2,baz=265,slow=36
MJAR Matsushiro Arr 29.53 70 P **P 07 13 13.4 -0.2**
MJAR 07 16 18.7
MJAR 07 19 58.8
SBUM Sibu 29.59 162 P **P 07 13 14.5 +0.2**
SBUM Sibu 29.59 162 P **P 07 13 14.5 +0.2**
SBUM Sibu 29.59 162 P **P 07 13 14.5 +0.2**
KAD Karad 29.66 249 *e*P **P 07 13 13.9 -1.0**
NRGR Nerungri 29.78 24 *e*P **P 07 13 17.5 +2.0**
NRGR S **S 07 18 17.8 +6.1**
NRGR smax
comp=E,27nm,0.4s
HABR Khabarovsk 29.82 45c*e*P **P 07 13 14.9 -1.1**
HABR *e* 07 14 08.7
HABR *e* 07 16 17.7
HABR *e*S **S 07 18 11.5 -1.0**
HABR SS SS 07 19 42.9 -36
HABR *e* 07 23 53.8
HABR pmax pmax
comp=Z,82nm,1.5s,mb5.2
HABR pmax pmax
comp=N,27nm,1.2s
HABR pmax pmax
comp=E,110nm,1.6s
HABR MLR MLR
comp=N,7μm,10.0s,MS5.7
HABR MLR MLR
comp=Z,11μm,9.0s
HABR MLR MLR
comp=E,6μm,10.0s,MS5.7
CLNS Chul'man 29.98 24c *i*P **P 07 13 17.7 +0.4**
CLNS *e**PP pP 07 13 30.1 +10
CLNS *e* 07 14 11.1
CLNS *e* 07 16 21.6
CLNS *e*S **S 07 18 03.8 -11**
CLNS pmax pmax
comp=Z,57nm,1.1s,mb5.2
CLNS pmax pmax
comp=E,44nm,1.3s
CLNS pmax pmax
comp=N,42nm,1.2s
CLNS pmax pmax
comp=E,22nm,1.2s
CLNS pmax pmax
comp=N,30nm,0.9s
CLNS pmax pmax
comp=Z,17nm,1.0s,mb4.7
CLNS smax
comp=N,384nm,13.3s
CLNS smax
comp=E,479nm,11.2s
CLNS MLR MLR
comp=N,5μm,9.0s
CLNS MLR MLR
comp=E,10μm,12.0s
CLNS MLR MLR
comp=Z,11μm,12.0s,MS5.7
KSM Kuching 30.07 166 P **P 07 13 18.6 +0.1**
KSM Kuching 30.07 166 P **P 07 13 18.6 +0.1**
KSM Kuching 30.07 166 P **P 07 13 18.6 +0.1**
KSM Kuching 30.07 166 *e*P **P 07 13 17.6 -0.9**
comp=Z,35nm,0.8s,mb5.1
KSM LR LR
comp=Z,6μm,21.0s,MS5.2
BHJ Bhuj 30.75 264 *e*P **P 07 13 24.5 0.0**
BHJ AMb AMB 07 13 26.6
comp=Z,115nm,1.3s,mb5.5
JHJ Hachijo jima 2 30.98 76 LR LR 07 25 48.7
comp=Z,11μm,19.8s,MS5.5,baz=49,slow=36
PALK Pallekele 31.59 226 P **P 07 13 32.9 +0.9**
comp=Z,408nm,1.4s,mb6.1,SNR=6.5
PALK Pallekele 31.59 226 *e*P **P 07 13 31.4 -0.6**
PALK pmax pmax
comp=Z,78nm,1.1s,mb5.5
PALK Pallekele 31.59 226 *e*P **P 07 13 31.4 -0.6**
comp=Z,78nm,1.1s,mb5.5
DAV Davao City (W) 31.66 134 P **P 07 13 34.2 +1.6**
comp=Z,196nm,0.4s,mb6.3,baz=25,slow=4.2,SNR=6.4
DAV LR LR 07 28 16.3
comp=Z,7μm,18.3s,MS5.4,baz=210,slow=40
DAV Davao City (W) 31.66 134 P **P 07 13 34.7 +2.1**
SNR=9.5
DAV P 07 13 34.7
SNR=9.5
DAV Davao City (W) 31.66 134⇑ *e*P **P 07 13 32.7 +0.1**
BVAR Borovoye Array 32.45 322 P **P 07 13 40.1 +1.0**
comp=Z,10nm,0.5s,mb4.9,baz=121,slow=9.7,SNR=74
BVAR PcP PcP 07 16 25.5 -0.6
comp=Z,32nm,0.7s,baz=148,slow=2.8,SNR=14
BVAR ScP ScP 07 20 08.1 -1.9
comp=Z,20nm,0.9s,baz=166,slow=3.1,SNR=9.8
BVAR LR LR 07 27 43.8
comp=Z,14μm,18.3s,MS5.7,baz=115,slow=38
BVAR Borovoye Array 32.45 322 P **P 07 13 40.1 +1.0**
BVAR 07 16 25.5
BRVK Borovoye 32.52 322 P **P 07 13 40.2 +0.5**
comp=Z,473nm,1.2s,mb6.3,SNR=45
BRVK Borovoye 32.52 322c *i*P **P 07 13 40.7 +1.0**
BRVK pmax pmax
comp=Z,115nm,1.2s,mb5.7
BRVK MLR MLR
comp=Z,16μm,23.0s,MS5.7
BRVK Borovoye 32.52 322 *e*P **P 07 13 40.5 +0.8**
comp=Z,178nm,1.4s,mb5.8
BRVK LR LR
comp=Z,16μm,21.0s,MS5.7
BRVK Borovoye 32.52 322 P **P 07 13 41.1 +1.3**
SNR=74
BRVK P 07 13 41.1
SNR=74
TRD Trivandrum 33.13 233⇑ *e*x x 07 13 50.0
TRD *e*x x 07 18 50.0
ASAJ Asahikawa 33.57 56 P **P 07 13 48.8 -0.2**
comp=Z,19nm,0.6s,mb5.2,baz=259,slow=10,SNR=14
ASAJ LR LR 07 26 29.0
comp=Z,4μm,20.3s,MS5.1,baz=77,slow=35
ASAJ Asahikawa 33.57 56 P **P 07 13 48.8 -0.2**
ASAJ pmax pmax
comp=Z,19nm,0.6s
ASAJ MLR MLR
comp=Z,4μm,20.3s
ERM Erimo 33.69 60 P **P 07 13 51.0 +0.9**
comp=Z,334nm,1.3s,mb6.1,SNR=7.8
ERM Erimo 33.69 60c *i*P **P 07 13 51.1 +1.0**
ERM MLR MLR
comp=Z,7μm,19.0s,MS5.4
ERM Erimo 33.69 60 *e*P **P 07 13 50.0 -0.1**
comp=Z,36nm,0.8s,mb5.3
ERM LR LR
comp=Z,5μm,19.0s,MS5.2
CBIJ Chichi jima 34.18 86 P **P 07 13 53.6 -0.9**
comp=Z,55nm,0.3s,mb5.9,baz=297,slow=21,SNR=3.2
CBIJ LR LR 07 26 54.5
comp=Z,9μm,21.3s,MS5.5,baz=258,slow=35
YSS Yuzh-Sakhalins 34.25 51c*e*P **P 07 13 53.6 -1.3**
YSS *e* 07 14 03.1
YSS *e* 07 14 10.0
YSS *e* 07 15 07.1
YSS *e* 07 16 25.0
YSS *e*S **S 07 19 22.0 +0.3**
YSS pmax pmax
comp=Z,560nm,2.0s,mb6.2
YSS pmax pmax
comp=E,480nm,1.9s
YSS pmax pmax
comp=E,1μm,5.0s
YSS pmax pmax
comp=Z,1μm,5.0s
YSS MLR MLR
comp=Z,6μm,14.0s,MS5.4
YSS MLR MLR
comp=N,10μm,13.0s
YSS Yuzh-Sakhalins 34.25 51 *e*P **P 07 13 54.5 -0.5**
comp=N,209nm,1.3s,mb5.9
YSS LR LR
comp=Z,2μm,20.0s,MS4.8
YAK Yakutsk 35.53 21c *i*P **P 07 14 05.3 -0.5**
YAK *e* 07 15 27.0
YAK *e* 07 16 37.0
YAK *e*S **S 07 19 31.7 -9.3**
YAK *e*SS SS 07 22 01.1 -14
YAK *e* 07 24 20.8
YAK pmax pmax
comp=Z,110nm,0.9s,mb5.8
YAK pmax pmax
comp=E,24nm,1.0s
YAK pmax pmax
comp=N,21nm,0.9s
YAK pmax pmax
comp=Z,441nm,4.0s
YAK pmax pmax
comp=E,103nm,1.6s
YAK pmax pmax
comp=N,102nm,1.6s
YAK smax
comp=N,678nm,5.8s
YAK smax
comp=E,95nm,1.9s
YAK Yakutsk 35.53 21 *e*P **P 07 14 05.8 0.0**
comp=E,181nm,1.0s,mb6.0
YAK LR LR
comp=Z,4μm,19.0s,MS5.2
YUK Yuzh-Kuril'sk 35.89 56 *e*P **P 07 14 07.0 -2.1**
YUK *e*PPP 07 15 33.0
YUK *e*S **S 07 19 48.0 +1.0**
YUK pmax pmax
comp=Z,3μm,1.7s,mb7.0
YUK pmax pmax
comp=Z,2μm,2.0s,mb6.8
YUK smax
comp=N,4μm,4.0s
YUK smax
comp=E,3μm,4.0s
YUK MLR MLR
comp=E,7μm,17.0s,MS5.6
YUK MLR MLR
comp=Z,6μm,17.0s,MS5.5
YUK MLR MLR
comp=N,4μm,13.0s,MS5.6
ISRO Mashad 36.58 290 *e*P **P 07 14 17.1 +2.0**
IDAH Dahanechah 36.68 284 *e*P **P 07 14 16.4 +0.4**
IMOG Moghan 36.70 290 *e*P **P 07 14 17.4 +1.3**
IEMG Emamgholi 37.16 292 *e*P **P 07 14 21.9 +1.9**
ABKAR Akbulak array 37.21 312 *e*P **P 07 14 21.1 +0.8**
comp=N,52nm,0.9s,mb5.4
ABKT Ailbek 37.55 293 P **P 07 14 25.8 +2.5**
comp=N,1μm,1.0s,mb6.6,SNR=64
VAN Vannovskaya 37.55 293 P **P 07 14 25.5 +2.1**
VAN S **S 07 20 04.8 -7.8**
ITEG Tejag 37.58 285 *e*P **P 07 14 24.9 +1.2**
ISFR Sfrayin 37.70 292 *e*P **P 07 14 26.7 +2.1**
AKTO Aktyubinsk 38.69 313 LR LR 07 32 14.3
comp=N,5μm,18.7s,MS5.4,baz=286,slow=39
KAPI Kappang 39.09 153 P **P 07 14 34.2 -2.3**
comp=N,1μm,0.9s,mb6.7,SNR=19
KAPI Kappang 39.09 153 P **P 07 14 34.5 -2.0**
comp=N,90nm,0.7s,mb5.6,baz=344,slow=6.6,SNR=24
SVE Sverdlovsk 39.17 324⇓ *e*P **P 07 14 38.1 +1.4**
SVE *e* 07 16 07.5
SVE *e*S **S 07 20 39.0 +2.4**
SVE pmax pmax
comp=Z,272nm,1.4s,mb5.8
SVE MLR MLR
comp=Z,7μm,17.0s,MS5.6
ARU Arti 40.09 323 P **P 07 14 45.7 +1.3**
comp=Z,1μm,1.3s,mb6.4,SNR=36
ARU Arti 40.09 323c *i*P **P 07 14 45.2 +0.8**
ARU *e* 07 16 19.0
ARU *e* 07 16 48.0
ARU S **S 07 20 52.4 +2.1**
ARU pmax pmax
comp=Z,315nm,1.2s,mb5.9
ARU MLR MLR
comp=Z,8μm,19.0s,MS5.6
ARU Arti 40.09 323 *e*P **P 07 14 45.0 +0.7**
comp=Z,208nm,1.0s,mb5.8
ARU LR LR
comp=Z,11μm,19.0s,MS5.7
IBAF Bafgh 40.47 284 *e*P **P 07 14 48.7 +0.8**
BIDO Bidbid 40.55 271 P **P 07 14 49.0 +0.4**
SNR=6.4
SMDO Samad 40.78 270 P **P 07 14 51.1 +0.7**
SNR=14
IGLO Ghaloghah 41.09 291 *e*P **P 07 14 54.6 +1.7**
IANJ Anjilo 41.15 290 *e*P **P 07 14 55.3 +1.8**
IKIA Kiasar 41.24 291 *e*P **P 07 14 55.8 +1.6**
XMIS Christmas Isla 41.25 176 *e*P **P 07 14 52.0 -2.3**
ICHK Chekchek 41.30 285 *e*P **P 07 14 55.7 +1.0**
IMEH Mehriz 41.31 284 *e*P **P 07 14 55.0 +0.2**
BANOM Banah 41.32 275 P **P 07 14 56.7 +1.8**
SNR=7.8
ISHM Shahmirzad 41.61 291 *e*P **P 07 14 58.6 +1.4**
HATD Hatta, Dubai 41.81 274 P **P 07 15 00.4 +1.4**
SNR=7.7
ASHO Ashiyiah 41.92 273 P **P 07 15 00.8 +0.9**
SNR=21
IALA Alasht 41.96 291 *e*P **P 07 15 01.1 +1.1**
GUMO Guam 41.96 105 P **P 07 14 59.7 -0.5**
comp=Z,240nm,1.0s,mb5.8,baz=171,slow=3.1,SNR=8.8
GUMO LR LR 07 30 15.8
comp=Z,3μm,19.3s,MS5.2,baz=117,slow=33
GUMO Guam 41.96 105 *e*P **P 07 14 59.7 -0.6**
GUMO pmax pmax
comp=Z,362nm,1.0s,mb6.0
GUMO MLR MLR
comp=Z,5μm,22.0s,MS5.3
GUMO Guam 41.96 105 *e*P **P 07 14 59.7 -0.6**
comp=Z,362nm,1.0s,mb6.0
GUMO LR LR
comp=Z,5μm,22.0s,MS5.3
ISAD Sadrabad 41.97 285 *e*P **P 07 15 00.2 0.0**
SOKR Solikamsk 42.11 327c *i*P **P 07 15 01.0 +0.1**
SOKR 07 16 53.5
SOKR S **S 07 21 20.0 -0.2**
SOKR SS SS 07 24 28.1 +0.7
SOKR pmax pmax
comp=Z,230nm,1.1s,mb5.7
SOKR MLR MLR
comp=Z,4μm,21.0s,MS5.3
NAZ Nazwa, Dubai 42.16 274 P **P 07 15 03.1 +1.2**
SNR=9.1
ASUD Al Ashush, Dub 42.57 274 P **P 07 15 06.2 +1.0**
SNR=10
IDMV Damavand 42.66 290 *e*P **P 07 15 07.0 +1.2**
ISFB Sefidab 42.69 289 *e*P **P 07 15 06.7 +0.7**
IZEF Zefreh 42.89 286 *e*P **P 07 15 07.5 -0.2**
IVRN Varamin 43.00 290 *e*P **P 07 15 09.3 +0.8**
TIXI Tiksi 43.06 12c *i*P **P 07 15 07.6 -0.9**
TIXI *e* 07 16 45.0
TIXI *e*S **S 07 21 29.5 -4.5**
TIXI *e*SS SS 07 24 41.5 -4.4
TIXI pmax pmax
comp=Z,434nm,6.3s
TIXI pmax pmax
comp=E,21nm,0.9s
TIXI pmax pmax
comp=N,36nm,1.1s
TIXI pmax pmax
comp=Z,194nm,1.6s,mb5.6
TIXI MLR MLR
comp=Z,14μm,18.0s,MS5.9
TIXI Tiksi 43.06 12 *e*P **P 07 15 07.5 -1.1**
comp=Z,93nm,0.8s,mb5.6
TIXI LR LR
comp=Z,13μm,20.0s,MS5.8
COCO West Island 43.32 189 *e*P **P 07 15 11.7 +0.5**
COCO pmax pmax
comp=Z,420nm,0.9s,mb6.2
COCO MLR MLR
comp=Z,4μm,19.0s,MS5.3
COCO West Island 43.32 189 *e*P **P 07 15 11.7 +0.5**
comp=Z,420nm,0.9s,mb6.2
COCO LR LR
comp=Z,4μm,19.0s,MS5.3
IR3 Iran Long-Peri 43.48 290 *e*P **P 07 15 13.4 +0.9**
SKR Severo-Kuril's 43.58 47 *e*P **P 07 15 11.0 -2.0**
SKR MLR MLR
comp=N,7μm,16.0s
SKR MLR MLR
comp=Z,8μm,16.0s,MS5.7
IMHD Mahdasht 43.74 291 *e*P **P 07 15 15.2 +0.7**
IPIR Pirpir 44.12 287 *e*P **P 07 15 25.6 +8.0**
SEY Seymchan 44.61 30⇑ *i*P **P 07 15 20.9 -0.2**
PEA0B Petropavlovsk- 44.84 44 *e*P **P 07 15 22.5 -0.5**
PETK Petropavlovsk- 44.84 44 P **P 07 15 22.8 -0.3**
comp=Z,41nm,0.9s,mb5.3,baz=222,slow=2.0,SNR=22
PETK LR LR 07 36 15.6
comp=Z,5μm,18.2s,MS5.5,baz=70,slow=39
MAK Makhachkala 45.35 302 *e*P **P 07 15 26.4 -0.8**
MAK *e* 07 17 09.6
MAK *e*PPP 07 17 52.0
MAK *e*S **S 07 22 08.8 +0.8**
MAK *i* 07 25 22.5
MAK *e*SSS 07 26 19.6
MAK pmax pmax
comp=Z,340nm,1.5s,mb6.0
MAK MLR MLR
comp=Z,7μm,13.0s,MS5.8
PET Petropavlovsk 45.40 44c *i*P **P 07 15 26.4 -1.1**
PET *e* 07 17 06.6
PET *e* 07 17 14.5
PET *e*S **S 07 22 03.2 -5.3**
PET *e*SS SS 07 25 18.0 -14
PET pmax pmax
comp=Z,121nm,1.3s,mb5.6
PET pmax pmax
comp=Z,600nm,5.8s
PET pmax pmax
comp=Z,1μm,7.2s
PET pmax pmax
comp=Z,2μm,6.9s
PET pmax pmax

comp=Z,1μm,6.8s
PET MLR MLR
comp=Z,8μm,15.0s,MS5.8
PET MLR MLR
comp=Z,8μm,15.0s
PET Petropavlovsk 45.40 44 *e*P **P 07 15 26.7 -0.8**
comp=Z,35nm,0.7s,mb5.3
PET LR LR
comp=Z,4μm,20.0s,MS5.3
ISRB Sarab 45.78 294 *e*P **P 07 15 32.2 +1.4**
IBST Bostanabad 46.41 294 *e*P **P 07 15 35.8 +0.1**
WHFO Wadi Hawf 46.50 266 P **P 07 15 35.4 -1.3**
SNR=7.7
ITBZ Tabriz 46.91 295 *e*P **P 07 15 40.3 +0.7**
IVIS Veis 47.03 290 *e*P **P 07 15 40.5 -0.1**
IMRD Marand 47.17 296 *e*P **P 07 15 43.0 +1.3**
ISHB Shabestar 47.31 295 *e*P **P 07 15 43.8 +1.1**
MTA Mtatsminda 47.47 300 P **P 07 15 44.6 +0.7**
TBLG Delisi 47.50 300 P **P 07 15 45.3 +1.1**
UMR Umm Al-Rimmam 47.53 283 *e*P **P 07 15 44.3 -0.3**
UMR AMb AMB 07 15 52.0
comp=Z,209nm,1.1s,mb6.1
KBD Kabd 47.66 283 *e*P **P 07 15 45.1 -0.5**
KBD AMb AMB 07 15 53.0
comp=Z,149nm,1.1s,mb5.9
MIB Mutribah 47.78 284 *e*P **P 07 15 46.1 -0.4**
MIB AMb AMB 07 15 48.3
comp=Z,405nm,1.1s,mb6.4
RDF Al-Radifah 47.85 282 *e*P **P 07 15 47.0 -0.1**
RDF AMb AMB 07 15 55.0
comp=Z,458nm,1.3s,mb6.4
GOR Gori 47.94 300 P **P 07 15 48.9 +1.3**
ZEI Tsey 48.01 302 *e*P **P 07 15 48.4 +0.3**
ZEI *e* 07 17 44.3
ZEI *e*S **S 07 22 46.7 +0.7**
ZEI pmax pmax
comp=Z,150nm,1.3s,mb5.9
DGAR Diego Garcia 48.19 223⇑*i*P **P 07 15 49.0 -0.8**
DGAR Diego Garcia 48.19 223 PFAKE 07 16 00.0 +10
DGAR LR LR
comp=Z,2μm,22.0s,MS5.0
ONI Oni 48.35 301 P **P 07 15 52.4 +1.7**
CLDR Caldiran 48.48 297 *e*P **P 07 15 52.9 +1.1**
DYDN Diyadin 48.59 297⇑*i*P **P 07 15 54.7 +2.0**
DIGO Kars 48.70 299⇑*i*P **P 07 15 55.2 +1.7**
KIV Kislovodsk 48.76 303 P **P 07 15 55.9 +2.0**
comp=Z,2μm,1.2s,mb6.9,SNR=54
KIV Kislovodsk 48.76 303*c i*P **P 07 15 55.2 +1.3**
KIV *e* 07 17 43.7
KIV *e*S **S 07 22 58.0 +1.3**
KIV pmax pmax
comp=Z,1μm,6.3s
KIV pmax pmax
comp=Z,357nm,1.1s,mb6.3
KIV MLR MLR
comp=Z,4μm,17.0s,MS5.5
KIV Kislovodsk 48.76 303 *e*P **P 07 15 55.0 +1.1**
comp=Z,500nm,1.3s,mb6.4
KIV LR LR
comp=Z,5μm,19.0s,MS5.5
KIV Kislovodsk 48.76 303 P **P 07 15 55.5 +1.6**
SNR=78
KIV P 07 15 55.5
SNR=78
KARS Kars 48.89 299 *e*P **P 07 15 56.6 +1.7**
VANB Van 48.98 296 *e*P **P 07 15 56.9 +1.2**
VRHR Novokhopersk 49.09 313 *e*P **P 07 15 56.3 0.0**
VRHR *e**PP pP 07 16 07.8 +8.3
VRHR *e* 07 17 49.2
VRHR *i* PPP 07 18 41.9
VRHR *e*S **S 07 23 00.9 -0.2**
VRHR *e*SSS 07 27 56.8
VRHR pmax pmax
comp=Z,130nm,1.4s,mb5.8
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,1.7s
VRHR pmax pmax
comp=Z,620nm,9.6s
VRHR pmax pmax
comp=N,1μm,12.4s
VRHR pmax pmax
comp=E,480nm,12.1s
VRHR smax
comp=N,730nm,6.4s
VRHR smax
comp=Z,320nm,4.7s
VRHR smax
comp=E,730nm,6.0s
VRHR MLR MLR
comp=Z,4μm,12.0s,MS5.6
VRHR MLR MLR
comp=N,2μm,11.0s,MS5.4
VRHR MLR MLR
comp=E,1μm,13.0s,MS5.4
AGRB Hanur-Agry 49.12 297 *e*P **P 07 15 58.5 +1.8**
MSL Mosul 49.62 293 *e*P **P 07 16 04.0 +3.4**
MSL *e*S **S 07 23 10.0 +1.0**
ARTV Artvin 49.67 300⇑*i*P **P 07 16 02.8 +1.9**
DAGI Agillar 49.69 300⇑*i*P **P 07 16 02.9 +1.8**
DBOC Borcka 49.84 300⇑*i*P **P 07 16 03.6 +1.5**
DDEM Demirkent 49.84 299⇑*i*P **P 07 16 03.9 +1.6**
BCA Borcka 49.85 300 *e*P **P 07 16 03.3 +1.0**
HOMI Horasan 49.87 298⇑*i*P **P 07 16 04.2 +1.8**
DBAD Bademkaya 49.87 300⇑*i*P **P 07 16 04.0 +1.6**
VORD Divnogorie 50.56 313 *e*P **P 07 16 07.0 -0.5**
VORD *e**PP pP 07 16 18.5 +7.8
VORD *e* 07 18 03.5
VORD *i* PPP 07 19 00.1
VORD *e*S **S 07 23 21.0 -0.7**
VORD pmax pmax
comp=Z,50nm,1.6s,mb5.2
VORD pmax pmax
comp=N,4.0nm,0.4s
VORD pmax pmax
comp=E,60nm,1.6s
VORD pmax pmax
comp=Z,430nm,8.6s
VORD pmax pmax
comp=N,60nm,6.9s
VORD pmax pmax
comp=E,220nm,7.6s
VORD smax
comp=E,540nm,7.3s
VORD smax
comp=Z,250nm,7.2s
VORD smax
comp=N,440nm,4.5s
VORD MLR MLR
comp=E,3μm,12.0s,MS5.7
VORD MLR MLR
comp=Z,4μm,12.0s,MS5.6
VORD MLR MLR
comp=N,2μm,11.0s,MS5.7
VOR Voronezh 50.59 314 *e*P **P 07 16 07.0 -0.7**
VOR pmax pmax
comp=Z,500nm,2.0s,mb6.1
VSR Storozhevoye 50.63 313 *e*P **P 07 16 07.8 -0.2**
VSR *e**PP pP 07 16 19.1 +7.9
VSR *e* 07 18 06.9
VSR *i* PPP 07 18 57.2
VSR *e*S **S 07 23 19.8 -2.9**
VSR pmax pmax
comp=Z,80nm,1.2s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,60nm,1.0s
VSR pmax pmax
comp=Z,550nm,8.7s
VSR pmax pmax
comp=N,210nm,13.8s
VSR pmax pmax
comp=E,210nm,6.5s
VSR smax
comp=E,790nm,5.5s
VSR smax
comp=Z,130nm,3.2s
VSR smax
comp=N,300nm,2.9s
VSR MLR MLR
comp=Z,5μm,13.0s,MS5.7
VSR MLR MLR
comp=N,3μm,11.0s,MS5.7
VSR MLR MLR
comp=E,3μm,12.0s,MS5.7
KLMR Klimovskoe 50.76 325⇑*i*P **P 07 16 09.0 +0.1**
KLMR *i* 07 18 06.6
KLMR *e*S **S 07 23 24.2 0.0**
KLMR pmax pmax
comp=Z,274nm,1.3s,mb6.0
KOPT Kop Dagi 50.94 298⇑*i*P **P 07 16 12.2 +1.6**
SOC Sochi 50.94 303*c i*P **P 07 16 11.1 +0.6**
SOC *e* 07 17 24.5
SOC *e* 07 18 07.3
SOC *e*S **S 07 23 26.0 -1.2**
SOC *e**SS sS 07 23 32.0 -0.4
SOC *e*SSS 07 28 37.4
SOC pmax pmax
comp=Z,215nm,1.9s,mb5.8
SOC pmax pmax
comp=Z,1μm,5.4s
KTUT Trabzon 51.31 300 *e*P **P 07 16 14.0 +0.7**
MACK Trabzon 51.32 300⇑*i*P **P 07 16 14.7 +1.3**
MOS Moscow 51.48 319 *e*P **P 07 16 10.6 -3.7**
MOS *e* 07 18 15.0
MOS *e*S **S 07 23 32.1 -2.1**
MOS pmax pmax
comp=Z,2μm,2.2s,mb6.7
MOS pmax pmax
comp=Z,705nm,1.3s,mb6.4
MOS MLR MLR
comp=E,6μm,12.0s
MOS MLR MLR
comp=Z,6μm,12.0s,MS5.9
DIYA Diyarbakir 51.63 296⇑*i*P **P 07 16 16.9 +1.2**
BILL Bilibino 51.65 25*c i*P **P 07 16 14.9 -0.5**
BILL *e*S **S 07 23 40.0 +3.7**
BILL pmax pmax
comp=Z,186nm,1.6s,mb5.8
BILL MLR MLR
comp=Z,4μm,16.0s,MS5.5
BILL Bilibino 51.65 25 *e*P **P 07 16 14.7 -0.7**
comp=Z,323nm,1.5s,mb6.0
BILL LR LR
comp=Z,2μm,19.0s,MS5.2
KAKA Kakadu 51.70 143 *e*P **P 07 16 12.5 -3.9**
comp=Z,62nm,0.7s,mb5.7
KAKA Kakadu 51.70 143 *e*P **P 07 16 13.7 -2.7**
comp=Z,198nm,0.8s,mb6.1
PTK Pertek 51.99 297 *e*P **P 07 16 19.7 +1.3**
OBN Obninsk 52.09 318 P **P 07 16 19.3 +0.4**
comp=Z,1μm,1.1s,mb6.7,SNR=13
OBN Obninsk 52.09 318*c i*P **P 07 16 18.9 0.0**
OBN *e* 07 17 24.6
OBN *e* 07 18 23.0
OBN *i* S **S 07 23 41.7 -0.9**
OBN pmax pmax
comp=Z,295nm,1.2s,mb6.1
OBN MLR MLR
comp=Z,2μm,15.0s,MS5.2
OBN Obninsk 52.09 318 *e*P **P 07 16 18.6 -0.2**
comp=Z,540nm,1.5s,mb6.3
OBN LR LR
comp=Z,8μm,19.0s,MS5.8
ESPY Espiye-Giresun 52.10 300 *e*P **P 07 16 19.2 0.0**
SVRC Sivrice-ELAZID 52.16 297 *e*P **P 07 16 20.5 +0.8**
ELZG Elazig 52.39 297⇑*i*P **P 07 16 23.0 +1.6**
ANN Anapa 52.39 305 *e*P **P 07 16 20.1 -1.2**
ANN *e*PPP 07 19 20.8
ANN *e*S **S 07 23 44.3 -2.8**
ANN *e*SS SS 07 27 16.1 -8.5
ANN pmax pmax
comp=Z,154nm,1.2s,mb5.8
MALT Malatya 52.85 297 *e*P **P 07 16 25.9 +1.0**
MALT Malatya 52.85 297 *e*P **P 07 16 25.6 +0.8**
MALT pmax pmax
comp=Z,126nm,1.5s,mb5.6
MALT MLR MLR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 52.85 297 *e*P **P 07 16 25.6 +0.8**
comp=Z,126nm,1.5s,mb5.6
MALT LR LR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 52.85 297⇑*i*P **P 07 16 25.6 +0.8**
ATAB Bozova 53.15 296⇑*i*P **P 07 16 28.0 +0.9**
DARE Darende-Malaty 53.19 298 *e*P **P 07 16 30.7 +3.4**
AKCD Akcadag 53.24 297⇑*i*P **P 07 16 29.1 +1.3**
FITZ Fitzroy Crossi 53.32 153⇑*i*P **P 07 16 26.8 -1.5**
comp=Z,97nm,0.9s,mb5.7
FITZ *i* S **S 07 23 54.4 -5.7**
FITZ Fitzroy Crossi 53.32 153 *e*P **P 07 16 26.9 -1.5**
comp=Z,142nm,1.3s,mb5.7
SVSK Karacayir 53.59 299 *e*P **P 07 16 31.3 +1.1**
LVZ Lovozero 53.67 334*c i*P **P 07 16 30.2 -0.2**
LVZ pmax pmax
comp=Z,144nm,1.9s,mb5.6
LVZ MLR MLR
comp=Z,11μm,15.0s,MS6.0
LVZ Lovozero 53.67 334 PFAKE 07 16 40.0 +10
LVZ LR LR
comp=Z,4μm,20.0s,MS5.5
KVT Kavak 54.05 301 *e*P **P 07 16 34.2 +0.6**
SARI SarD1z-Kayseri 54.09 298 *e*P **P 07 16 36.4 +2.5**
APA Apatity 54.11 334⇑*i*P **P 07 16 34.0 +0.4**
APA *i* 07 16 43.5
APA *i* S **S 07 24 09.0 -0.8**
APA *e* 07 26 19.0
APA *i* SS SS 07 27 49.0 -1.8
APA pmax pmax
comp=Z,2μm,6.4s
APA MLR MLR
comp=Z,21μm,13.0s,MS6.4
MBWA Marble Bar 54.18 161⇑*i*P **P 07 16 33.7 -0.9**
MBWA Marble Bar 54.18 161 *e*P **P 07 16 33.5 -1.1**
comp=Z,118nm,0.9s,mb5.8
MBWA LR LR
comp=Z,2μm,22.0s,MS5.2
MBWA Marble Bar 54.18 161 P **P 07 16 34.2 -0.4**
SNR=13
MBWA P 07 16 34.2
SNR=13
KMRS Kahramanmaras 54.22 296 *e*P **P 07 16 35.3 +0.4**
KUZU Kuzuini 54.26 295⇑*i*P **P 07 16 35.9 +0.7**
DIKM Dikmen 54.52 301 *e*P **P 07 16 37.0 0.0**
SIM Simferopol' 54.69 306*c i*P **P 07 16 39.1 +0.9**
SIM *e* 07 18 45.0
SIM *e*PPP 07 19 52.0
SIM *e*S **S 07 24 18.5 +0.2**
SIM pmax pmax
comp=Z,50nm,1.0s,mb5.5
SIM pmax pmax
comp=Z,190nm,11.6s
SIM MLR MLR
comp=Z,5μm,24.4s,MS5.5
SMY Shemya 54.74 45 *e*P **P 07 16 36.2 -2.2**
SMY pmax pmax
comp=Z,659nm,1.4s,mb6.5
SMY Shemya 54.74 45 *e*P **P 07 16 36.2 -2.2**
comp=Z,659nm,1.4s,mb6.5
JOF Joensuu 54.75 328 *e*P **P 07 16 38.8 +0.5**
JOF pmax pmax
comp=Z,40nm,0.5s,mb5.7
JOF Joensuu 54.75 328 *e*p **P 07 16 38.8 +0.5**
comp=Z,40nm,0.5s,mb5.7
COBT Iskenderun 54.96 295⇑*i*P **P 07 16 40.9 +0.6**
KOZT Kozan 55.05 296 *e*P **P 07 16 41.3 +0.4**
CTKT Corum 55.09 300⇑*i*P **P 07 16 42.0 +0.9**
YAYL Yayladag 55.21 295⇑*i*P **P 07 16 42.4 +0.3**
CORM Corum 55.30 300 *e*P **P 07 16 43.1 +0.4**
PUL Pulkovo 55.31 324 *e*P **P 07 16 42.2 -0.2**
PUL pmax pmax
comp=Z,89nm,0.4s,mb6.2
PUL MLR MLR
comp=Z,4μm,15.0s,MS5.6
BZK Bozkurt 55.37 302 *e*P **P 07 16 43.5 +0.4**
YURE YUREGIR 55.37 296⇑*i*P **P 07 16 44.2 +1.0**
FKH Fakeheh 55.47 292 *e*P **P 07 16 44.6 +0.7**
CDAG Cicekdag 55.63 299⇑*i*P **P 07 16 44.9 -0.1**
KRTS Karatas 55.63 295 *e*P **P 07 16 46.1 +1.0**
KARA Karaisali 55.70 296 *e*P **P 07 16 45.8 +0.2**
ILGA Ilgaz 55.78 301⇑*i*P **P 07 16 47.1 +1.0**
HWQ Hawqa 55.82 293 *e*P **P 07 16 47.0 +0.5**
GULE Gulek 55.91 296⇑*i*P **P 07 16 48.2 +1.1**
CANT Cankiri 55.96 301 *e*P **P 07 16 48.1 +0.8**
ELDT Eldivan 56.13 300⇑*i*P **P 07 16 49.2 +0.6**
RCY Rachaya 56.15 292 *e*P **P 07 16 49.5 +0.7**
BR131 Keskin Array S 56.15 300 *e*P **P 07 16 48.5 -0.3**
comp=Z,33nm,0.9s,mb5.4
BR131 LR LR
comp=Z,1μm,20.0s,MS5.1
BRTR Keskin Array B 56.15 300 P **P 07 16 48.8 0.0**
comp=Z,30nm,0.9s,mb5.3,baz=101,slow=6.4,SNR=75
BRTR LR LR 07 44 43.9
comp=Z,2μm,19.1s,MS5.1,baz=228,slow=40
BRTR PKPPKP 07 46 49.6
comp=Z,0.4nm,0.4s,baz=322,slow=4.6,SNR=3.6
BRTR PKP2bc 07 46 59.9
comp=Z,0.4nm,0.4s,baz=329,slow=1.7,SNR=3.8
BRTR Keskin Array B 56.15 300 P **P 07 16 48.8 0.0**
BRTR LR LR 07 44 43.9
BRTR P'P' 07 46 49.6
BRTR ⇑*e* 07 46 59.9
BHL Bhannes 56.16 292 *e*P **P 07 16 49.3 +0.4**
MERS Mersin 56.22 296 *e*P **P 07 16 49.4 +0.1**
KEV Kevo 56.57 336 *e*P **P 07 16 51.4 +0.1**
KEV pmax pmax
comp=Z,51nm,0.9s,mb5.5
KEV Kevo 56.57 336 *e*P **P 07 16 51.3 0.0**
comp=Z,63nm,0.8s,mb5.7
KEV LR LR
comp=Z,4μm,19.0s,MS5.5
KEV Kevo 56.57 336 *e*p **P 07 16 51.4 +0.1**
comp=Z,51nm,0.9s,mb5.5
BBAL Bala 56.58 299⇑*i*P **P 07 16 52.0 +0.1**
SULT Sultanhani-AKS 56.63 298 *e*P **P 07 16 53.0 +0.8**
LOD Lodumlu 56.77 300 *e*P **P 07 16 53.3 +0.2**
EREN Erenkoy 56.86 295 *e*P **P 07 16 52.4 -1.5**
AKASG Malin Array Be 56.94 313 P **P 07 16 53.6 -0.6**
comp=Z,18nm,0.6s,mb5.3,baz=72,slow=6.4,SNR=63
AKASG PcP PcP 07 17 49.0 -0.4
comp=Z,12nm,0.8s,baz=69,slow=5.4,SNR=4.3
AKASG PP PP 07 19 02.3 +1.8
comp=Z,16nm,1.1s,baz=68,slow=7.3,SNR=5.7
AKASG LR LR 07 42 57.6
comp=Z,4μm,20.3s,MS5.5,baz=75,slow=38
AKASG Malin Array Be 56.94 313 P **P 07 16 53.6 -0.6**
AKASG 07 17 49.0
AKASG 07 19 02.3
AKBB Malin Array Si 56.94 313 *e*P **P 07 16 53.6 -0.6**
IKL Isikli 57.04 295 *e*P **P 07 16 53.7 -1.4**
ARCES ARCESS Array B 57.09 336 P **P 07 16 55.2 +0.3**
comp=Z,25nm,0.8s,mb5.3,baz=84,slow=4.5,SNR=28
ARCES PcP PcP 07 17 50.1 +0.4
comp=Z,12nm,0.7s,baz=90,slow=4.9,SNR=5.1
ARCES LR LR 07 45 29.5
comp=Z,3μm,18.3s,MS5.4,baz=96,slow=40
ARCES ARCESS Array B 57.09 336 P **P 07 16 55.3 +0.3**
ARCES 07 17 50.1
ARE0 ARCESS Array S 57.09 336 *e*P **P 07 16 55.2 +0.2**
KAF Kangasniemi 57.11 327 *e*P **P 07 16 55.0 -0.2**
KAF pmax pmax
comp=Z,65nm,0.9s,mb5.7
KAF Kangasniemi 57.11 327 *e*p **P 07 16 55.0 -0.2**
comp=Z,65nm,0.9s,mb5.7
MICGM Minsk 57.15 318⇑*e*P **P 07 16 53.0 -2.6**
MNK Minsk 57.17 318*ce*P **P 07 16 53.0 -2.8**
MNK *e* 07 19 04.0
MNK *e*S **S 07 24 46.0 -5.1**
MNK *e*SSS 07 31 00.0
MNK pmax pmax
comp=Z,6μm,6.0s
MNK pmax pmax
comp=E,420nm,1.7s
MNK pmax pmax
comp=Z,290nm,1.5s,mb6.1
MNK MLR MLR
comp=N,6μm,12.0s,MS6.3
MNK MLR MLR
comp=Z,21μm,16.0s,MS6.3
MNK MLR MLR
comp=E,13μm,14.0s,MS6.3
VSU Vasula 57.26 323*c i*P **P 07 16 56.4 +0.1**
VSU pmax pmax
comp=Z,272nm,1.2s,mb6.2
VSU MLR MLR
comp=Z,4μm,16.0s,MS5.7
FINES FINESS Array B 57.27 326 P **P 07 16 56.3 -0.1**
comp=Z,35nm,0.6s,mb5.6,baz=88,slow=7.0,SNR=89
FINES LR LR 07 43 37.3
comp=Z,4μm,20.0s,MS5.5,baz=87,slow=38
LFK Lefkose 57.43 294 *e*P **P 07 16 56.9 -1.1**
LADK Ladik-KONYA 57.51 298 *e*P **P 07 16 58.1 -0.4**
KONT Konya--Tatoy 57.58 298 *e*P **P 07 16 58.5 -0.5**
KDHN Kadinhani 57.61 298⇑*i*P **P 07 16 58.8 -0.4**
IDID Didziasalis 57.68 319 *e*P **P 07 17 00.1 +0.8**
CSS Prodhromos 57.68 294 *e*P **P 07 16 58.5 -1.2**
comp=Z,43nm,0.8s,mb5.5
MSEY Mahe Island 57.68 241 PFAKE 07 17 10.0 +10
MSEY LR LR
comp=Z,2μm,19.0s,MS5.3
KIZT Kizilcal 57.69 299 *e*P **P 07 16 59.2 -0.5**
NACGM Naroch 57.72 318 *e*P **P 07 16 56.0 -3.6**
HDMB Hadim 57.76 297 *e*P **P 07 17 00.1 -0.1**
MDU Mudurnu 57.77 301 *e*P **P 07 17 00.5 +0.2**
SVRH Sivrihisar-ESK 57.80 300 *e*P **P 07 16 59.5 -1.1**
KIS Kishinev 57.91 309⇑*i*P **P 07 16 58.0 -3.1**
comp=Z,400nm,2.0s,mb6.1
KIS Kishinev 57.91 309 *e*PP PP 07 19 10.0 +0.8
KIS Kishinev 57.91 309⇑*i*P **P 07 16 58.0 -3.1**
KIS *e* 07 17 50.0
KIS *e* 07 19 10.0
KIS *e*S **S 07 24 57.0 -4.0**
KIS *e*PS 07 25 20.0
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.1
KIS pmax pmax
comp=Z,2μm,5.0s
KIS MLR MLR
comp=Z,4μm,13.0s,MS5.7
KIS MLR MLR
comp=E,3μm,14.0s
KIS MLR MLR
comp=Z,4μm,14.0s
WAKE Wake Island 57.94 86 PFAKE 07 17 10.0 +8.2
WAKE LR LR
comp=Z,2μm,20.0s,MS5.3
IIGN Ignalina 57.96 319 *e*P **P 07 17 02.0 +0.7**
LEF Lefka 57.98 294 *e*P **P 07 17 01.2 -0.6**
ISAL Salakas 57.98 319 *e*P **P 07 17 01.8 +0.3**
GAZI Gazipasa 58.10 296⇑*i*P **P 07 17 01.9 -0.8**
GULT Gulveren 58.29 301 *e*P **P 07 17 03.6 -0.3**
BOLV Bolvadin 58.43 299⇑*i*P **P 07 17 05.1 +0.2**
BORA Eskisehir 58.48 300⇑*i*P **P 07 17 04.8 -0.4**
SUTC Sutluce-Ispart 58.75 298 *e*P **P 07 17 06.4 -0.7**
WRAB Tennant Creek 58.77 145 P **P 07 17 06.0 -1.3**
comp=Z,2μm,1.0s
WRAB Tennant Creek 58.77 145 *e*P **P 07 17 06.6 -0.7**
WRAB pmax pmax
comp=Z,362nm,0.9s,mb6.4
WRAB MLR MLR
comp=Z,2μm,19.0s,MS5.2
WRAB Tennant Creek 58.77 145 *e*P **P 07 17 06.6 -0.8**
comp=Z,362nm,0.9s,mb6.4
WRAB LR LR
comp=Z,2μm,19.0s,MS5.2
TIRR Tirgusor 58.77 306 *e*P **P 07 17 07.1 -0.1**
comp=Z,203nm,1.6s,mb5.9
TIRR Tirgusor 58.77 306⇑*i*P **P 07 17 07.2 0.0**
WRA Warramunga Arr 58.77 145 P **P 07 17 06.6 -0.8**
comp=Z,135nm,0.8s,mb6.0,baz=338,slow=7.4
WRA S **S 07 25 07.7 -4.9**
comp=Z,3.7nm,1.1s,baz=324,slow=13,SNR=7.4
WRA PKPPKP 07 46 39.0
baz=138,slow=2.1
WRA Warramunga Arr 58.77 145 P **P 07 17 06.6 -0.8**
WRA S **S 07 25 07.7 -4.9**
SHUT Suhut-Afyon 58.78 299 *e*P **P 07 17 07.2 -0.1**
CFR Carcaliu 58.79 307 P **P 07 17 07.8 +0.5**
CFR Carcaliu 58.79 307⇓*i*P **P 07 17 07.1 -0.2**
ADVT Abdulvahap 58.86 301 *e*P **P 07 17 07.7 -0.2**
COEN Coen 58.89 133 *e*P **P 07 17 07.3 -0.9**
comp=Z,2μm,1.3s,mb6.9
ALT Altintas 58.97 300 *e*P **P 07 17 07.8 -0.8**
ISP Isparta 59.01 298 *e*P **P 07 17 08.1 -0.9**
ISP Isparta 59.01 298 *e*P **P 07 17 08.2 -0.7**
comp=Z,68nm,0.8s,mb5.7
ISP LR LR
comp=Z,2μm,21.0s,MS5.2
ISP Isparta 59.01 298⇑*i*P **P 07 17 08.5 -0.5**
ISP Isparta 59.01 298 P **P 07 17 08.3 -0.7**
HARR Harsova 59.05 306⇓P **P 07 17 09.4 +0.3**
HARR Harsova 59.05 306⇓*i*P **P 07 17 09.4 +0.3**

BCK	**Bucak**	**59.06 298**	*e*P	**P**	**07 17 07.0**	**-2.4**
MEEK	**Meekatharra**	**59.12 164**	⇑*i*P	**P**	**07 17 08.7**	**-0.9**
PSN	**Preselentsi**	**59.12 305**	*i* P	**P**	**07 17 10.1**	**+0.4**
ISK	**Istanbul-Kandi**	**59.19 302**	*e*P	**P**	**07 17 10.0**	**-0.2**
GEMT	**Gemlik**	**59.26 301**	*e*P	**P**	**07 17 09.8**	**-0.8**
SPITS	**Spitsbergen Ar**	**59.31 346**	P	**P**	**07 17 10.4**	**0.0**
	comp=Z,9.0nm,0.7s,mb4.9,baz=90,slow=11,SNR=11					
SPITS			LR	LR	07 45 13.5	
	comp=Z,9μm,21.9s,MS5.8,baz=70,slow=38					
SPB4	**Spitsbergen Ar**	**59.31 346**	*e*P	**P**	**07 17 10.4**	**0.0**
BGKT	**Bogazkoy**	**59.36 302**	*e*P	**P**	**07 17 11.2**	**-0.1**
KORT	**Korkueli**	**59.38 297**	⇑*i*P	**P**	**07 17 10.4**	**-1.1**
GDZ	**Gediz**	**59.43 300**	⇑*i*P	**P**	**07 17 11.5**	**-0.3**
CTKS	**Kestanelik-??a**	**59.54 302**	*e*P	**P**	**07 17 12.0**	**-0.6**
VRI	**Vrincioaia**	**59.58 308**	⇓P	**P**	**07 17 13.5**	**+0.7**
VRI	**Vrincioaia**	**59.58 308**	P	**P**	**07 17 13.6**	**+0.8**
VRI	**Vrincioaia**	**59.58 308**	⇓*i*P	**P**	**07 17 13.4**	**+0.6**
ELBA	**Catalca**	**59.62 302**	⇑*i*P	**P**	**07 17 12.7**	**-0.4**
KHAL	**Karahalli**	**59.63 299**	⇑*i*P	**P**	**07 17 12.4**	**-0.8**
PLOR	**Plostina**	**59.64 308**	⇑P	**P**	**07 17 14.2**	**+1.0**
PLOR	**Plostina**	**59.64 308**	⇑*i*P	**P**	**07 17 14.2**	**+1.0**
SLVT	**Silivri**	**59.76 303**	*e*P	**P**	**07 17 14.0**	**-0.1**
ELL	**Elmali**	**59.80 297**	*e*P	**P**	**07 17 13.8**	**-0.6**
PRD	**Provadia**	**59.80 305**	*i* P	**P**	**07 17 13.7**	**-0.6**
GOLH	**Golhisar**	**59.91 298**	⇑*i*P	**P**	**07 17 14.2**	**-1.0**
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**07 17 15.0**	**-0.2**
SUW			LMZ		07 44 14.2	
	comp=Z,6μm,20.5s					
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**07 17 14.6**	**-0.5**
SUW			pmax	pmax		
	comp=Z,174nm,0.8s,mb6.1					
SUW	**Suwalki**	**59.95 318**	*e*P	**P**	**07 17 14.6**	**-0.6**
	comp=Z,174nm,0.8s,mb6.1					
GLHS	**Gihisar (BURDU**	**59.98 298**	*e*P	**P**	**07 17 13.2**	**-2.5**
DURS	**Dursunbey**	**60.03 301**	⇑*i*P	**P**	**07 17 15.7**	**-0.3**
KBS	**Kingsbay**	**60.11 347**	PFAKE		07 17 30.0	+14
KBS			LR	LR		
	comp=Z,6μm,21.0s,MS5.7					
BUR01	**Bucovina Ar. S**	**60.15 310**	P	**P**	**07 17 17.6**	**+1.0**
BURAR	**Bucovina Array**	**60.15 310**	P	**P**	**07 17 17.4**	**+0.7**
BURAR	**Bucovina Array**	**60.15 310**	⇑*i*P	**P**	**07 17 16.9**	**+0.2**
BUR08	**Bucovina Ar. S**	**60.16 310**	*e*P	**P**	**07 17 16.8**	**+0.1**
DNZL	**Cakiroluk**	**60.17 298**	⇑*i*P	**P**	**07 17 16.3**	**-0.7**
AKAS	**Kas**	**60.19 297**	⇑*i*P	**P**	**07 17 15.6**	**-1.6**
MLR	**Muntele Rosu**	**60.21 308**	P	**P**	**07 17 18.0**	**+0.9**
MLR	**Muntele Rosu**	**60.21 308**	⇑*i*P	**P**	**07 17 17.8**	**+0.7**
KULA	**Kula-Manisa**	**60.21 299**	*e*P	**P**	**07 17 16.3**	**-0.9**
LVV	**L'vov**	**60.38 313**	*i* P	**P**	**07 17 17.7**	**-0.5**
LVV			*i*		07 19 32.1	
LVV			*e*S	**S**	**07 25 25.5**	**-7.4**
LVV			MLR	MLR		
	comp=N,2μm,17.0s,MS5.6					
LVV			MLR	MLR		
	comp=E,3μm,17.0s,MS5.6					
LVV			MLR	MLR		
	comp=Z,3μm,17.0s,MS5.5					
BALB	**Balikesir**	**60.45 301**	*e*P	**P**	**07 17 19.2**	**+0.3**
FETY	**Fethiye**	**60.46 297**	*e*P	**P**	**07 17 17.2**	**-1.8**
ADK	**Adak**	**60.46 45**	PFAKE		07 17 30.0	+11
ADK			LR	LR		
	comp=Z,1μm,20.0s,MS5.1					
JMB	**Yambol**	**60.58 304**	P	**P**	**07 17 20.9**	**+1.2**
BALY	**Balya**	**60.62 301**	⇑*i*P	**P**	**07 17 19.9**	**-0.1**
EDRB	**Edirne**	**60.64 304**	*e*P	**P**	**07 17 19.6**	**-0.5**
SART	**Tekirdag**	**60.66 302**	⇑*i*P	**P**	**07 17 20.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**60.66 302**	*e*P	**P**	**07 17 20.2**	**-0.1**
AKHS	**Akhisar**	**60.73 300**	⇑*i*P	**P**	**07 17 20.1**	**-0.7**
TURN	**Turunc**	**60.75 298**	⇑*i*P	**P**	**07 17 22.6**	**+1.7**
SZH	**Strazhica**	**60.81 305**	*i* P	**P**	**07 17 21.0**	**-0.3**
VOIR		**60.83 308**	⇓*i*P	**P**	**07 17 21.8**	**+0.5**
AYDN	**Tasoluk**	**61.06 299**	⇑*i*P	**P**	**07 17 23.0**	**0.0**
LPK	**Lapseki**	**61.06 302**	*e*P	**P**	**07 17 22.9**	**-0.1**
MLSB	**Milas**	**61.25 298**	*e*P	**P**	**07 17 22.9**	**-1.4**
KWP	**Kalwaria Pacla**	**61.26 313**	*e*P	**P**	**07 17 25.0**	**+0.8**
KWP			LMZ		07 44 04.8	
	comp=Z,4μm,21.8s					
KWP	**Kalwaria Pacla**	**61.26 313**	*e*P	**P**	**07 17 24.7**	**+0.5**
KWP			pmax	pmax		
	comp=Z,358nm,1.3s,mb6.3					
KWP			MLR	MLR		
	comp=Z,5μm,19.0s,MS5.7					
KWP	**Kalwaria Pacla**	**61.26 313**	*e*P	**P**	**07 17 24.7**	**+0.5**
	comp=Z,358nm,1.3s,mb6.3					
KWP			LR	LR		
	comp=Z,5μm,19.0s,MS5.7					
KWP	**Kalwaria Pacla**	**61.26 313**	⇑*i*P	**P**	**07 17 24.8**	**+0.6**
BMR	**Baia Mare**	**61.26 311**	P	**P**	**07 17 25.0**	**+0.8**
ARG	**Arkhangelos**	**61.33 297**	*e*P	**P**	**07 17 25.1**	**+0.2**
ENEZ	**Enez**	**61.39 302**	*e*P	**P**	**07 17 25.6**	**+0.4**
ALN	**Alexandroupoli**	**61.42 303**	P	**P**	**07 17 24.5**	**-0.9**
BLCB	**Balcova**	**61.46 300**	*e*P	**P**	**07 17 26.0**	**+0.2**
BLCB	**Balcova**	**61.46 300**	P	**P**	**07 17 25.8**	**+0.1**
GCAM	**G?zelcaml?**	**61.53 299**	⇑*i*P	**P**	**07 17 26.4**	**+0.1**
LOF	**Lofoten**	**61.56 335**	*e*P	**P**	**07 17 27.3**	**+1.4**
DAT	**Datca**	**61.58 298**	*e*P	**P**	**07 17 26.0**	**-0.6**
WAR	**Warsaw**	**61.62 316**	*e*P	**P**	**07 17 27.1**	**+0.5**
WAR			LMZ		07 45 21.1	
	comp=Z,7μm,21.6s					
MOR8	**Moi Rana**	**61.64 333**	*e*P	**P**	**07 17 24.8**	**-1.7**
MOR8			AMB	AMB	07 17 28.7	
	comp=Z,103nm,2.3s,mb5.6					
KDZ	**Kurdzhali**	**61.65 304**	*i* P	**P**	**07 17 27.2**	**+0.2**
RDO	**Rodhopi**	**61.71 303**	P	**P**	**07 17 26.3**	**-1.1**
KOLS	**Kolonicke sedl**	**61.71 312**	*e*P	**P**	**07 17 27.6**	**+0.3**
KOLS			pmax	pmax		
	comp=Z,61nm,1.4s,mb5.5					
KOLS	**Kolonicke sedl**	**61.71 312**	*e*P	**P**	**07 17 27.6**	**+0.3**
	comp=Z,61nm,1.4s,mb5.5					
KOLS			*e*PP	PP	07 19 46.7	+3.9
KOLS	**Kolonicke sedl**	**61.71 312**	*e*P	**P**	**07 17 27.6**	**+0.3**
KOLS			*e*PP	PP	07 19 46.7	+3.9
BOZC	**Bozcaada**	**61.74 302**	⇑*i*P	**P**	**07 17 27.2**	**-0.4**
GADA	**Gvkgeada**	**61.74 302**	*e*P	**P**	**07 17 27.7**	**0.0**
ASAR	**Alice Springs**	**61.76 148**	P	**P**	**07 17 27.3**	**-0.5**
	comp=Z,52nm,0.8s,mb5.7,baz=327,slow=6.7,SNR=92					
ASAR			S	**S**	**07 25 49.5**	**-1.3**
	comp=Z,2.7nm,1.0s,baz=326,slow=11,SNR=7.2					
ASAR			PKPPKP		07 46 35.0	
	comp=Z,1.5nm,0.9s,baz=161,slow=3.3,SNR=5.9					
ASAR	**Alice Springs**	**61.76 148**	P	**P**	**07 17 27.3**	**-0.5**
ASAR			S	**S**	**07 25 49.6**	**-1.2**
PRK	**Paraskevi**	**61.76 301**	*e*P	**P**	**07 17 27.5**	**-0.3**
PRK	**Paraskevi**	**61.76 301**	P	**P**	**07 17 26.5**	**-1.3**
TRPA	**Tarpa**	**61.76 311**	⇑*i*P	**P**	**07 17 28.0**	**+0.4**
UZH	**Uzhgorod**	**61.78 312**	⇓*i*P	**P**	**07 17 27.8**	**+0.1**
UZH			*i*		07 17 39.8	
UZH			*e*		07 18 08.8	
UZH			*e*		07 19 41.0	
UZH			*i* PPP		07 21 16.0	
UZH			*e*S	**S**	**07 25 48.0**	**-2.8**
UZH			*i* SSS		07 32 29.0	
UZH			MLR	MLR		
	comp=N,2μm,12.0s,MS5.8					
UZH			MLR	MLR		
	comp=E,3μm,12.0s,MS5.8					
UZH			MLR	MLR		
	comp=Z,2μm,12.0s,MS5.5					
URLA	**Izmir**	**61.80 300**	⇑*i*P	**P**	**07 17 27.8**	**-0.2**
TNA	**Tin City**	**61.81 28**	*e*P	**P**	**07 17 27.7**	**+0.1**
	comp=Z,51nm,1.1s,mb5.6					
DRGR		**62.02 310**	P	**P**	**07 17 30.1**	**+0.7**
DRGR		**62.02 310**	⇑*i*P	**P**	**07 17 30.2**	**+0.8**
PLD	**Plovdiv**	**62.02 304**	P	**P**	**07 17 29.8**	**+0.4**
STHS	**Stebnicka Huta**	**62.23 313**	*e*P	**P**	**07 17 31.0**	**+0.3**
STHS			*e*		07 17 39.8	
STHS			pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3					
STHS	**Stebnicka Huta**	**62.23 313**	*e*P	**P**	**07 17 31.0**	**+0.3**
	comp=Z,22nm,0.8s,mb5.3					
STHS			*e*		07 17 39.8	
STHS	**Stebnicka Huta**	**62.23 313**	*e*P	**P**	**07 17 31.0**	**+0.3**
STHS			*e*pP	pP	07 17 39.8	+5.8
PGB	**Panagyurishte**	**62.26 305**	*i* P	**P**	**07 17 31.4**	**+0.3**
LIA	**Limnos Island**	**62.35 302**	P	**P**	**07 17 31.3**	**-0.4**
GZR	**Gura Zlata**	**62.38 308**	P	**P**	**07 17 32.3**	**+0.5**
GZR	**Gura Zlata**	**62.38 308**	⇑*i*P	**P**	**07 17 32.4**	**+0.6**
NIE	**Niedzica**	**62.82 313**	*e*P	**P**	**07 17 35.8**	**+1.2**
NVR	**Nevrokopi**	**62.85 304**	*e*P	**P**	**07 17 34.6**	**-0.4**
OJC	**Ojcow**	**62.91 314**	*i* P	**P**	**07 17 35.6**	**+0.4**
OJC			*e*pP	pP	07 17 38.7	+0.2
OJC			*e*S	**S**	**07 26 05.3**	**+0.4**
OJC			*e*SS	SS	07 30 10.5	+0.9
OJC			L		07 46 14.8	
	comp=Z,9.8nm,17.7s					
VTS	**Vitosha**	**62.92 305**	P	**P**	**07 17 35.8**	**+0.3**
VTS	**Vitosha**	**62.92 305**	*i* P	**P**	**07 17 37.8**	**+2.3**
KECS	**Kecovo**	**62.98 312**	*e*P	**P**	**07 17 36.2**	**+0.5**
KECS			*e*		07 17 52.3	
KECS			pmax	pmax		
	comp=Z,28nm,1.4s,mb5.2					
KECS	**Kecovo**	**62.98 312**	*e*P	**P**	**07 17 36.2**	**+0.5**
	comp=Z,28nm,1.4s,mb5.2					
KECS			*e*		07 17 52.3	
KECS	**Kecovo**	**62.98 312**	*e*P	**P**	**07 17 36.2**	**+0.5**
KECS			*e*		07 17 52.3	
APE	**Apeiranthos**	**63.02 299**	*e*P	**P**	**07 17 36.2**	**0.0**
APE	**Apeiranthos**	**63.02 299**	⇓*i*P	**P**	**07 17 35.4**	**-0.8**
BZS	**Buzias**	**63.09 309**	P	**P**	**07 17 36.8**	**+0.3**
BZS	**Buzias**	**63.09 309**	⇑*i*P	**P**	**07 17 36.6**	**+0.1**
OUR	**Ouranopolis**	**63.09 303**	P	**P**	**07 17 34.9**	**-1.7**
SRS	**Serrai**	**63.12 304**	P	**P**	**07 17 35.7**	**-1.1**
KKB	**Krupnik**	**63.24 304**	*i* P	**P**	**07 17 37.6**	**0.0**
THR6	**Thira Island,**	**63.36 298**	P	**P**	**07 17 37.5**	**-1.0**
SOH	**Sokhos**	**63.38 303**	P	**P**	**07 17 37.0**	**-1.6**
PAIG	**Paliouri**	**63.44 302**	P	**P**	**07 17 37.9**	**-1.1**
PLG	**Polygyros**	**63.46 303**	*e*P	**P**	**07 17 38.7**	**-0.4**
PLG	**Polygyros**	**63.46 303**	P	**P**	**07 17 38.6**	**-0.5**
HFS	**Hagfors**	**63.48 326**	P	**P**	**07 17 38.5**	**-0.4**
	comp=Z,35nm,0.6s,mb5.7,baz=104,slow=6.3,SNR=84					
PSZ	**Piszkesteto**	**63.52 312**	*e*P	**P**	**07 17 39.8**	**+0.4**
	comp=Z,177nm,1.6s,mb5.8					
PSZ			LR	LR		
	comp=Z,2μm,21.0s,MS5.2					
PSZ	**Piszkesteto**	**63.52 312**	⇑*e*P	**P**	**07 17 39.8**	**+0.4**
PSZ	**Piszkesteto**	**63.52 312**	⇑*i*P	**P**	**07 17 39.7**	**+0.3**
AOS	**Alonnisos**	**63.54 301**	P	**P**	**07 17 38.2**	**-1.5**
GKP	**Gorka Klasztor**	**63.56 318**	*e*P	**P**	**07 17 39.5**	**+0.1**
GKP			LMZ		07 46 40.6	
	comp=Z,7μm,20.2s					
GKP	**Gorka Klasztor**	**63.56 318**	*e*P	**P**	**07 17 39.5**	**0.0**
GKP			MLR	MLR		
	comp=Z,7μm,20.2s,MS5.9					
HORT	**Hortiatis**	**63.64 303**	P	**P**	**07 17 38.8**	**-1.5**
KLBR	**Kellerberrin**	**63.70 166**	⇑*i*P	**P**	**07 17 40.3**	**-0.3**
	comp=Z,129nm,0.8s,mb6.0					
LAST	**Lasithi**	**63.71 297**	P	**P**	**07 17 40.8**	**0.0**
VAY	**Valandovo**	**63.78 304**	*i* P	**P**	**07 17 39.4**	**-1.8**
VAY	**Valandovo**	**63.78 304**	P	**P**	**07 17 40.5**	**-0.7**
STIP	**Stip**	**63.93 305**	*i* P	**P**	**07 17 40.9**	**-1.3**
RAC	**Raciborz**	**63.93 314**	*e*P	**P**	**07 17 40.7**	**-1.3**
RAC			*e*S	**S**	**07 26 15.5**	**-2.2**
RAC			MLR	MLR		
	comp=Z,6μm,15.0s,MS5.9					
NEO	**Neokhori**	**63.98 302**	*e*P	**P**	**07 17 41.7**	**-0.8**
XOR	**Xorichti**	**63.98 302**	P	**P**	**07 17 40.5**	**-2.0**
VYHS	**Vyhne**	**64.02 313**	*e*P	**P**	**07 17 43.4**	**+0.8**
VYHS			pmax	pmax		
	comp=Z,191nm,2.1s,mb5.8					
VYHS	**Vyhne**	**64.02 313**	*e*P	**P**	**07 17 43.4**	**+0.8**
	comp=Z,191nm,2.1s,mb5.8					
VYHS			*e*		07 18 06.4	
VYHS	**Vyhne**	**64.02 313**	*e*P	**P**	**07 17 43.4**	**+0.8**
VYHS			*e*		07 18 06.4	
OKC	**Ostrava-Krasne**	**64.04 314**	*e*P	**P**	**07 17 43.2**	**+0.5**
OKC			*e*		07 20 06.9	
OKC			*e*		07 21 44.4	
OKC			*e*S	**S**	**07 26 22.8**	**+3.8**
OKC			MLR	MLR		
	comp=Z,7μm,15.5s,MS6.0					
OKC	**Ostrava-Krasne**	**64.04 314**	*e*P	**P**	**07 17 43.2**	**+0.5**
OKC			*e*PP	PP	07 20 06.9	+3.7
OKC			*e*x	x	07 21 44.4	
OKC			*e*S	**S**	**07 26 22.8**	**+3.8**
OKC			*e*x	x	07 30 52.8	
OKC			*e*x	x	07 33 32.8	
OKC			AMS	AMS	07 46 40.0	
	comp=Z,7μm,15.5s					
ATH	**Athens Observa**	**64.07 300**	*e*P	**P**	**07 17 41.9**	**-1.2**
BUD	**Budapest**	**64.22 311**	⇑*e*P	**P**	**07 17 44.1**	**+0.2**
LIT	**Litokhoron**	**64.24 303**	*e*P	**P**	**07 17 43.8**	**-0.5**
LIT	**Litokhoron**	**64.24 303**	P	**P**	**07 17 42.5**	**-1.8**
KOLL	**Kolacno**	**64.27 313**	*e*P	**P**	**07 17 45.1**	**+0.8**
KOLL			*e*		07 17 51.0	
KOLL	**Kolacno**	**64.27 313**	*e*P	**P**	**07 17 45.1**	**+0.8**
KOLL			*e*pP	pP	07 17 51.0	+3.5
SIVA	**Sivas**	**64.27 297**	P	**P**	**07 17 44.0**	**-0.5**
NAIG	**Nisos Aigina**	**64.31 300**	*e*P	**P**	**07 17 42.7**	**-2.0**
BSD	**Bornholm Skovb**	**64.31 320**	*i* P	**P**	**07 17 43.7**	**-0.7**
BSD			*e*		07 20 04.0	
BSD			*i*		07 26 28.1	
BSD						
	comp=Z,6μm,18.0s					
ATAL	**Atalanti**	**64.33 301**	P	**P**	**07 17 42.7**	**-2.2**
LKR	**Lokris**	**64.37 301**	*e*P	**P**	**07 17 43.6**	**-1.5**
LKR	**Lokris**	**64.37 301**	P	**P**	**07 17 43.6**	**-1.5**
SKO	**Skopje**	**64.37 305**	*i* P	**P**	**07 17 44.9**	**-0.1**
SKO	**Skopje**	**64.37 305**	P	**P**	**07 17 45.5**	**+0.5**
NB2	**NORSAR Subarra**	**64.38 327**	P	**P**	**07 17 44.2**	**-0.6**
	comp=Z,555nm,2.0s,mb6.2,baz=72,slow=6.9					
NOA	**NORSAR Array B**	**64.38 327**	P	**P**	**07 17 43.9**	**-0.9**
	comp=Z,20nm,0.8s,mb5.2,baz=73,slow=6.6,SNR=113					
NOA			PP	PP	07 20 09.9	+3.9
	comp=Z,7.4nm,0.8s,baz=70,slow=8.3,SNR=3.5					
NOA			LR	LR	07 45 57.6	
	comp=Z,3μm,18.9s,MS5.5,baz=70,slow=36					
NOA	**NORSAR Array B**	**64.38 327**	P	**P**	**07 17 43.9**	**-0.9**
NOA					07 20 09.9	
MORC	**Moravsky Berou**	**64.43 314**	*e*P	**P**	**07 17 45.4**	**+0.1**
	comp=Z,48nm,0.9s,mb5.5					
MORC	**Moravsky Berou**	**64.43 314**	⇑*i*P	**P**	**07 17 45.8**	**+0.5**
NAO01	**NORSAR Array S**	**64.59 327**	*e*P	**P**	**07 17 45.1**	**-1.1**
	comp=Z,20nm,0.7s,mb5.3					
NAO01			LR	LR		
	comp=Z,3μm,19.0s,MS5.6					
LTK	**Loutraki**	**64.61 301**	P	**P**	**07 17 43.9**	**-2.8**
DIVS	**Divibare**	**64.67 308**	P	**P**	**07 17 46.7**	**-0.2**
KZN	**Kozani**	**64.69 303**	*e*P	**P**	**07 17 47.0**	**-0.2**
KZN	**Kozani**	**64.69 303**	P	**P**	**07 17 46.8**	**-0.4**
KRUS	**Krusevo**	**64.70 304**	*i* P	**P**	**07 17 44.6**	**-2.6**
AGG	**Agios Georgios**	**64.73 302**	*e*P	**P**	**07 17 46.4**	**-1.0**
AGG	**Agios Georgios**	**64.73 302**	P	**P**	**07 17 45.0**	**-2.4**
BIA	**Bitola**	**64.77 304**	*i* P	**P**	**07 17 46.0**	**-1.7**
THL	**Klokotos Trika**	**64.77 302**	*e*P	**P**	**07 17 46.3**	**-1.4**
THL	**Klokotos Trika**	**64.77 302**	P	**P**	**07 17 46.2**	**-1.5**
FNA	**Florina**	**64.81 304**	P	**P**	**07 17 44.7**	**-3.3**
KARN	**Karanos**	**64.82 297**	P	**P**	**07 17 48.0**	**-0.1**
KSP	**Ksiaz**	**64.85 316**	*e*P	**P**	**07 17 48.6**	**+0.6**
KSP			*e*PP	PP	07 20 15.5	+5.2
KSP			LMZ		07 47 33.1	
	comp=Z,18μm,19.8s					
KSP	**Ksiaz**	**64.85 316**	⇑*e*P	**P**	**07 17 48.5**	**+0.5**
KSP			*e*		07 20 11.0	
KSP			*e*PPP		07 21 44.5	
KSP			*e*S	**S**	**07 26 30.0**	**+1.0**
KSP			*e*SSS		07 33 34.0	
KSP			MLR	MLR		
	comp=Z,20μm,19.8s,MS6.3					
PKSM	**Moragy**	**64.87 310**	P	**P**	**07 17 48.5**	**+0.3**
PKSM	**Moragy**	**64.87 310**	⇑*i*P	**P**	**07 17 48.3**	**0.0**
GVD	**Gavdhos**	**64.89 297**	*e*P	**P**	**07 17 47.7**	**-0.8**
	comp=Z,124nm,0.6s,mb6.1					
GVD	**Gavdhos**	**64.89 297**	P	**P**	**07 17 48.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**64.89 167**	*e*P	**P**	**07 17 47.9**	**-0.5**
NWAO			pmax	pmax		
	comp=Z,134nm,0.8s					
NWAO			MLR	MLR		
	comp=Z,2μm,20.0s					
NWAO	**Narrogin (SRO)**	**64.89 167**	*e*P	**P**	**07 17 47.9**	**-0.5**
	comp=Z,134nm,0.8s,mb6.0					
NWAO			LR	LR		
	comp=Z,2μm,20.0s,MS5.4					
NWAO	**Narrogin (SRO)**	**64.89 167**	P	**P**	**07 17 49.1**	**+0.8**
	SNR=5.7					
NWAO			P		07 17 49.1	
	SNR=5.7					
SMOL	**Smolenice**	**64.90 313**	*e*P	**P**	**07 17 49.5**	**+1.1**
SMOL			*e*		07 18 01.6	
SMOL	**Smolenice**	**64.90 313**	*e*P	**P**	**07 17 49.5**	**+1.1**
SMOL			*e*		07 18 01.6	
DPC	**Dobruska-Polom**	**64.99 315**	*e*P	**P**	**07 17 49.8**	**+0.8**
DPC			*e*		07 20 16.6	
DPC			*e*		07 21 48.5	
DPC			MLR	MLR		
	comp=Z,10μm,15.9s,MS6.1					
DPC	**Dobruska-Polom**	**64.99 315**	*e*P	**P**	**07 17 49.8**	**+0.8**
DPC			*e*PP	PP	07 20 16.6	+5.0
DPC			*e*x	x	07 21 48.5	
DPC			*e*S	**S**	**07 26 38.5**	**+7.7**
DPC			*e*x	x	07 30 57.0	
DPC			*e*x	x	07 33 48.5	
DPC			AMS	AMS	07 47 20.0	
	comp=Z,10μm,15.9s					
DOMB	**Dombas**	**65.04 329**	*e*P	**P**	**07 17 48.4**	**-0.6**
VLI	**Veliai**	**65.09 299**	*e*P	**P**	**07 17 46.9**	**-2.9**
OHR	**Ohrid**	**65.11 304**	*i* P	**P**	**07 17 47.5**	**-2.4**
IVA	**Berane**	**65.14 306**	*e*P	**P**	**07 17 50.0**	**-0.1**
IVA	**Berane**	**65.14 306**	*e*P	**P**	**07 17 50.0**	**0.0**
EVR	**Evrytania**	**65.15 302**	*e*P	**P**	**07 17 49.5**	**-0.7**
VRAC	**Vranov**	**65.17 314**	P	**P**	**07 17 50.9**	**+0.8**
	comp=Z,24nm,0.6s,mb5.4,baz=68,slow=8.8,SNR=29					
VRAC	**Vranov**	**65.17 314**	P	**P**	**07 17 51.0**	**+0.9**
VRAC	**Vranov**	**65.17 314**	⇑*i*P	**P**	**07 17 50.8**	**+0.7**
PVY	**Plav**	**65.18 306**	⇑*i*P	**P**	**07 17 50.1**	**-0.2**
PVY	**Plav**	**65.18 306**	⇑*i*P	**P**	**07 17 50.2**	**-0.1**
BCI	**Bajram Curri**	**65.19 306**	*e*P	**P**	**07 17 50.2**	**-0.2**
ZST	**Bratislava**	**65.21 313**	*e*P	**P**	**07 17 51.3**	**+0.9**
ZST			pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0					
ZST	**Bratislava**	**65.21 313**	*e*P	**P**	**07 17 51.3**	**+0.9**
	comp=Z,16nm,0.9s,mb5.0					
ZST	**Bratislava**	**65.21 313**	*e*P	**P**	**07 17 51.3**	**+0.9**
EFP	**Efpalio**	**65.25 301**	P	**P**	**07 17 49.8**	**-1.0**
LAKA	**Lakka**	**65.26 301**	P	**P**	**07 17 50.0**	**-0.9**
VLX	**Vlachokerasia**	**65.27 300**	P	**P**	**07 17 49.8**	**-1.2**
PLE	**Pljevlja**	**65.33 307**	⇑*i*P	**P**	**07 17 51.7**	**+0.4**
RGN	**Rugen**	**65.37 320**	*e*P	**P**	**07 17 52.4**	**+1.1**
	comp=Z,96nm,0.6s,mb6.0					
PUK	**Puka**	**65.43 306**	*e*P	**P**	**07 17 51.8**	**-0.1**
CTA	**Charters Tower**	**65.45 135**	⇑*i*P	**P**	**07 17 51.5**	**-0.7**
	comp=Z,47nm,0.8s,mb5.6					
CTA	**Charters Tower**	**65.45 135**	LR	LR	07 45 41.0	
	comp=Z,2μm,21.9s,MS5.2,baz=319,slow=35					
CTAO	**Charters Tower**	**65.45 135**	*e*P	**P**	**07 17 51.4**	**-0.8**
CTAO			pmax	pmax		
	comp=Z,79nm,0.9s,mb5.7					
CTAO			MLR	MLR		
	comp=Z,2μm,22.0s,MS5.3					
CTAO	**Charters Tower**	**65.45 135**	*e*P	**P**	**07 17 51.4**	**-0.9**
	comp=Z,79nm,0.9s,mb5.7					
CTAO			LR	LR		
	comp=Z,2μm,22.0s,MS5.3					
COP	**Copenhagen**	**65.48 322**	*i* P	**P**	**07 17 52.7**	**+0.7**
COP			pmax	pmax		
	comp=Z,47nm,0.7s,mb5.6					
COP			MLR	MLR		
	comp=Z,2μm,17.0s,MS5.4					
COP	**Copenhagen**	**65.48 322**	*i* P	**P**	**07 17 52.7**	**+0.7**
	comp=Z,47nm,0.7s,mb5.6					
COP						
	comp=Z,2μm,17.0s					
KONO	**Kongsberg**	**65.59 326**	*e*P	**P**	**07 17 51.9**	**-0.8**
KONO			pmax	pmax		
	comp=Z,192nm,1.6s,mb5.9					
KONO			MLR	MLR		
	comp=Z,5μm,21.0s,MS5.7					
KONO	**Kongsberg**	**65.59 326**	*e*P	**P**	**07 17 51.9**	**-0.8**
	comp=Z,192nm,1.6s,mb5.9					
KONO			LR	LR		
	comp=Z,5μm,21.0s,MS5.7					
ITM	**Ithomi**	**65.68 300**	*e*P	**P**	**07 17 51.7**	**-1.9**
ITM	**Ithomi**	**65.68 300**	P	**P**	**07 17 52.2**	**-1.4**
TIR	**Tirane**	**65.69 305**	*e*P	**P**	**07 17 52.1**	**-1.5**
TIR			pmax	pmax		
	comp=Z,56nm,0.7s,mb5.7					
TIR			MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3					
TIR	**Tirane**	**65.69 305**	*e*P	**P**	**07 17 52.1**	**-1.5**
	comp=Z,56nm,0.7s,mb5.7					
TIR			LR	LR		
	comp=Z,2μm,20.0s,MS5.3					
TIR	**Tirane**	**65.69 305**	P	**P**	**07 17 53.2**	**-0.4**
UPM	**Unac-Piva**	**65.71 307**

BRG SS SS 07 31 02.0 +0.4
BRG pmax pmax
comp=Z,41nm,1.2s,mb5.3
BRG MLR MLR
comp=N,3µm,16.8s,MS5.8
BRG MLR MLR
comp=E,3µm,15.1s,MS5.8
BRG MLR MLR
comp=Z,4µm,15.6s,MS5.8
HCY Herceg Novi 66.26 306⇑ *i*P **P 07 17 57.1 -0.2**
HCY Herceg Novi 66.26 306⇑ *i*P **P 07 17 57.1 -0.2**
VLS Valsamata 66.30 301 *e*P **P 07 17 55.3 -2.3**
VLS Valsamata 66.30 301 P **P 07 17 56.1 -1.5**
KEK Kerkira 66.32 303 *e*P **P 07 17 57.2 -0.5**
KEK Kerkira 66.32 303 P **P 07 17 56.5 -1.2**
KOGS Kog 66.35 311⇑ *e*P **P 07 17 57.8 0.0**
KOGS *e*S S 07 26 48.1 +0.5
ARSA Arzberg 66.54 312⇑ *i*P **P 07 17 59.2 +0.2**
comp=Z,55nm,1.6s,mb5.3,SNR=16
ALE Alert 66.55 358 P **P 07 17 59.0 +0.4**
comp=Z,249nm,1.3s,mb6.1,SNR=22
CLL Collm 66.65 317 *e*P **P 07 17 59.2 -0.4**
comp=Z,79nm,1.3s,mb5.6
CLL Collm 66.65 317 *i*P **P 07 18 02.9 +3.3**
CLL *e*S S 07 26 53.0 +2.0
CLL MLR MLR
comp=Z,5µm,15.0s,MS5.9
CLL Collm 66.65 317⇑ *i*P **P 07 17 59.5 -0.1**
comp=Z,310nm,2.3s,mb5.9
CLL *i*pP pP 07 18 02.9 0.0
comp=Z,142nm,1.5s
CLL *i*Pmax pP 07 18 03.0 +0.1
CLL *e*PP PP 07 20 28.0 +2.0
comp=Z,27nm,1.2s
CLL *e*PPP 07 22 08.0
CLL *e*S S 07 26 53.0 +2.0
CLL *e*SS SS 07 31 24.0 +16
CLL *e*SSS 07 34 30.0
DAG Danmarks Havn 66.83 348⇓ *e*P **P 07 17 59.2 -1.2**
DAG pmax pmax
comp=Z,16nm,1.0s,mb5.0
DAG MLR MLR
comp=Z,4µm,17.0s,MS5.7
DAG MLR MLR
comp=E,4µm,18.0s
DAG Danmarks Havn 66.83 348⇓ *i*P **P 07 17 59.2 -1.2**
comp=E,16nm,1.0s,mb5.0
DAG
comp=Z,4µm,17.0s
MUD Monsted U'grnd 66.92 323⇑ *i*P **P 07 18 01.5 +0.2**
MUD *i* 07 26 58.0
MUD pmax pmax
comp=Z,52nm,0.8s,mb5.6
MUD MLR MLR
comp=Z,4µm,17.0s,MS5.8
MUD Monsted U'grnd 66.92 323⇑ *i*P **P 07 18 01.5 +0.2**
comp=Z,52nm,0.8s,mb5.6
MUD *i* 07 26 58.0
MUD
comp=Z,4µm,17.0s
PERS Pernice 67.02 312⇑ *e*P **P 07 18 02.1 +0.1**
SOKA Soboth 67.06 312⇑ *i*P **P 07 18 02.4 +0.1**
comp=Z,74nm,1.4s,mb5.5
KHC Kasperske Hory 67.08 315 *e*P **P 07 18 02.8 +0.4**
KHC *e* 07 18 16.5
KHC *e* 07 20 33.3
KHC *e* 07 22 09.0
KHC *e*S S 07 27 01.4 +5.1
KHC MLR MLR
comp=Z,10µm,15.9s,MS6.1
KHC Kasperske Hory 67.08 315 *e*P **P 07 18 02.4 0.0**
comp=Z,266nm,2.1s,mb5.9
KHC Kasperske Hory 67.08 315 *e*P **P 07 18 02.8 +0.4**
KHC *e*x x 07 18 08.5
KHC *e*x x 07 18 16.5
KHC *e*PP PP 07 20 33.3 +3.4
KHC *e*x x 07 22 09.0
KHC *e*S S 07 27 01.4 +5.1
KHC *e*SS SS 07 31 24.2 +10
KHC *e*x x 07 34 26.8
KHC AMS AMS 07 48 40.0
comp=Z,10µm,15.9s
GEC2 GERESS Array S 67.11 314 *e*P **P 07 18 02.8 +0.2**
comp=Z,60nm,1.3s,mb5.5
GEC2 GERESS Array S 67.11 314 *e*P **P 07 18 02.8 +0.2**
GEC2 pmax pmax
comp=Z,60nm,1.3s,mb5.5
GERES GERESS Array B 67.11 314 P **P 07 18 03.0 +0.4**
comp=Z,9.3nm,0.5s,mb5.0,baz=76,slow=5.6,SNR=70
GERES LR LR 07 49 03.4
comp=Z,6µm,18.7s,MS5.9,baz=63,slow=37
MOA Molln 67.12 313 *i*P **P 07 18 03.1 +0.5**
comp=Z,96nm,1.8s,mb5.5,SNR=27
SNART Snartemo 67.21 325 *e*P **P 07 18 03.0 0.0**
BSEG Bad Segeberg 67.23 320 *e*P **P 07 18 03.7 +0.4**
comp=Z,127nm,1.1s,mb5.9
BSEG Bad Segeberg 67.23 320 *e*P **P 07 18 03.7 +0.4**
BSEG pmax pmax
comp=Z,127nm,1.1s,mb5.9
TANN Tannenbergstha 67.29 316 *e*P **P 07 18 03.7 0.0**
comp=Z,68nm,1.3s,mb5.5
BOJS Bojanci 67.34 310⇑ *i*P **P 07 18 04.6 +0.5**
BOJS *e*S S 07 26 59.6 +0.1
NKC Novy Kostel 67.37 316 *e*P **P 07 18 04.6 +0.4**
NKC *e* 07 20 35.7
NKC MLR MLR
comp=Z,7µm,16.5s,MS6.0
NKC Novy Kostel 67.37 316 *e*P **P 07 18 04.6 +0.4**
NKC *e*PP PP 07 20 35.7 +3.4
NKC *e*S S 07 27 06.9 +7.2
NKC *e*x x 07 31 43.1
NKC *e*x x 07 34 36.3
NKC AMS AMS 07 48 50.0
comp=Z,7µm,16.5s
OBKA Obir 67.43 312 *i*P **P 07 18 04.9 +0.2**
comp=Z,49nm,1.5s,mb5.3,SNR=16
WET Wettzell 67.51 315 *e*P **P 07 18 05.4 +0.3**
comp=Z,134nm,1.8s,mb5.7
WET Wettzell 67.51 315 *e*P **P 07 18 05.4 +0.3**
WET pmax pmax
comp=Z,134nm,1.8s,mb5.7
TTA Tatalina 67.58 29 *e*P **P 07 18 04.9 -0.4**
TTA pmax pmax
comp=Z,95nm,1.2s,mb5.7
TTA Tatalina 67.58 29 *e*P **P 07 18 04.9 -0.4**
comp=Z,95nm,1.2s,mb5.7
LJU Ljubljana 67.61 311⇑ *e*P **P 07 18 05.9 +0.1**
MIDW Midway 67.68 70 PFAKE 07 18 20.0 +13
MIDW LR LR
comp=Z,2µm,21.0s,MS5.4
ROTZ Rotzenmuhle 67.68 316 *e*P **P 07 18 06.7 +0.5**
comp=Z,98nm,1.2s,mb5.7
MOX Moxa 67.71 317 *e*P **P 07 18 06.4 0.0**
comp=Z,247nm,2.1s,mb5.9
MOX *e*PP PP 07 20 41.1 +5.8
MOX *e*S S 07 27 08.0 +4.2
MOX
comp=Z,2µm,22.0s
MOX Moxa 67.71 317 *e*P **P 07 18 06.3 -0.1**
comp=Z,120nm,1.7s,mb5.7
GORS Gorjuse 67.85 312⇑ *i*P **P 07 18 07.0 -0.4**
KNDS Knezji Dol 67.90 311⇑ *i*P **P 07 18 07.8 +0.2**
KNDS *e*PP PP 07 20 37.0 -0.1
KNDS *e*S S 07 27 07.2 +1.0
COLD Coldfoot 67.93 24 *e*P **P 07 18 07.2 -0.3**
comp=Z,214nm,1.3s,mb6.0
MYKA Terra Mystica 67.96 312⇑ *i*P **P 07 18 07.8 -0.3**
comp=Z,19nm,0.7s,mb5.2
CLZ Clausthal 67.98 318 *e*P **P 07 18 08.3 +0.2**
comp=Z,119nm,1.2s,mb5.8
CLZ Clausthal 67.98 318 *e*P **P 07 18 08.3 +0.2**
CLZ pmax pmax
comp=Z,119nm,1.2s,mb5.8
KBA Koelnbreinsper 67.98 313 *i*P **P 07 18 08.4 +0.2**
comp=Z,66nm,1.4s,mb5.5,SNR=14
VOY Vojsko 68.03 311 *e*P **P 07 18 07.9 -0.5**
VOY *e* 07 18 20.0
VOY *e* 07 18 32.2
VOY *e* 07 18 38.7
CADS Cadrg 68.05 312⇑ *i*P **P 07 18 08.0 -0.6**
RJOB Jochberg 68.08 313 *e*P **P 07 18 09.2 +0.4**
comp=Z,123nm,1.6s,mb5.7
TRI Trieste 68.23 311 *e*P **P 07 18 09.2 -0.5**
TRI pmax pmax
comp=Z,86nm,1.0s,mb5.7
TRI MLR MLR
comp=Z,2µm,20.0s,MS5.4
TRI Trieste 68.23 311 *e*P **P 07 18 09.2 -0.5**
comp=Z,86nm,1.0s,mb5.7
TRI LR LR
comp=Z,2µm,20.0s,MS5.4
PTCC Patocco-Chiusa 68.23 312 P **P 07 18 09.1 -0.6**
GRA1 Grafenberg Arr 68.30 316 *e*P **P 07 18 10.5 +0.4**
comp=Z,153nm,1.3s,mb5.9
GRA1 *e*PP PP 07 20 44.0 +3.6
GRA1 *e*S S 07 27 14.6 +3.7
GRA1 LR LR
comp=Z,4µm,18.9s,MS5.7
GRF Grafenberg Arr 68.30 316 *e*P **P 07 18 10.5 +0.4**
comp=Z,153nm,1.3s,mb5.9
GRF *e*PP PP 07 20 44.0 +3.6
GRF *e*S S 07 27 14.6 +3.7
GRF *e*L 07 49 08.9
comp=Z,4µm,18.9s
GRF Grafenberg Arr 68.30 316 *e*P **P 07 18 10.5 +0.4**
GRF *e* 07 20 44.0
GRF *e*S S 07 27 14.6 +3.7
GRF pmax pmax
comp=Z,153nm,1.3s,mb5.9
GRF MLR MLR
comp=Z,4µm,18.9s,MS5.7
GRF Grafenberg Arr 68.30 316 *e*P **P 07 18 10.5 +0.4**
GRF *e* 07 20 44.0
GRF *e*S S 07 27 14.6 +3.7
GRF pmax pmax
comp=Z,153nm,1.3s,mb5.9
GRF MLR MLR
comp=Z,4µm,18.9s,MS5.7
SVW2 Sparrevohn 68.53 31 *e*P **P 07 18 12.1 +0.8**
UBBA Unterbreizbach 68.59 317 *e*P **P 07 18 11.6 -0.3**
comp=Z,145nm,2.0s,mb5.6
ABTA Abfaltersbach 68.64 312⇑ *i*P **P 07 18 11.6 -0.7**
comp=Z,53nm,1.5s,mb5.2,SNR=18
CHUM Lake Minchumin 68.67 27 *e*P **P 07 18 12.3 +0.2**
comp=Z,110nm,1.2s,mb5.7
TIP Timpagrande 68.70 304 *e*P **P 07 18 12.2 -0.6**
comp=Z,110nm,1.2s,mb5.7
TIP LR LR
comp=Z,699nm,20.0s,MS4.9
FUR Furstenfeldbru 68.86 314 *e*P **P 07 18 14.1 +0.5**
comp=Z,231nm,1.3s,mb6.0
FUR Furstenfeldbru 68.86 314 *e*P **P 07 18 14.1 +0.5**
FUR pmax pmax
comp=Z,231nm,1.3s,mb6.0
RER Riviere de l'E 68.99 227 PFAKE 07 18 30.0 +15
RER LR LR
comp=Z,2µm,21.0s,MS5.4
WTTA Wattenberg 68.99 313 *i*P **P 07 18 14.5 0.0**
comp=Z,120nm,1.6s,mb5.6,SNR=10.0
WATA Walderalm 69.00 313⇑ *i*P **P 07 18 14.5 0.0**
comp=Z,39nm,0.9s,mb5.3
BPAW Bear Paw Mtn. 69.09 27 *e*P **P 07 18 14.3 -0.4**
comp=Z,67nm,0.8s,mb5.6
PPLA Purkeypile 69.17 28 *e*P **P 07 18 15.2 0.0**
comp=Z,440nm,1.4s,mb6.2
CHGN Chignik 69.21 36 *e*P **P 07 18 14.6 -1.0**
IBBN Ibbenburen 69.29 319 *e*P **P 07 18 16.3 +0.1**
comp=Z,102nm,1.4s,mb5.6
MOTA Moosalm 69.29 313⇓ *i*P **P 07 18 16.0 -0.3**
comp=Z,113nm,1.4s,mb5.6,SNR=7.9
KTH Kantishna Hill 69.37 27 *e*P **P 07 18 16.3 -0.2**
comp=Z,366nm,1.7s,mb6.0
RETA Reutte 69.45 314 *i*P **P 07 18 17.2 -0.1**
comp=Z,68nm,1.8s,mb5.3,SNR=14
APPI Appiano 69.56 313 P **P 07 18 16.4 -1.6**
FETA Feichten 69.65 313 *i*P **P 07 18 18.5 -0.1**
comp=Z,80nm,1.3s,mb5.5,SNR=29
TRF Thorofare Moun 69.67 27 *e*P **P 07 18 17.7 -0.7**
comp=Z,29nm,0.8s,mb5.3
WIT Witteveen 69.69 320 *e*P **P 07 18 19.7 +1.1**
comp=Z,499nm,1.3s,mb6.3
CEL Celeste 69.69 303 *e*P **P 07 18 18.7 -0.3**
comp=Z,146nm,0.9s,mb5.9
CEL LR LR
comp=Z,1µm,19.0s,MS5.2
TNS Taunus Mts 69.74 317 *e*P **P 07 18 19.1 +0.1**
comp=Z,84nm,1.3s,mb5.5
TNS Taunus Mts 69.74 317 *e*P **P 07 18 19.1 +0.1**
TNS pmax pmax
comp=Z,84nm,1.3s,mb5.5
TOD Tromm 69.78 316 *e*P **P 07 18 19.3 0.0**
AQU L'Aquila 69.78 308 *e*P **P 07 18 19.6 +0.2**
comp=Z,308nm,1.5s,mb6.0
AQU LR LR
comp=Z,5µm,20.0s,MS5.7
AQU L'Aquila 69.78 308⇑ *i*P **P 07 18 19.8 +0.3**
RSM Repubblica di 69.79 310 P **P 07 18 20.3 +0.8**
STU Stuttgart 69.89 315 *e*P **P 07 18 19.9 -0.1**
comp=Z,101nm,1.2s,mb5.6
STU Stuttgart 69.89 315 *e*P **P 07 18 20.4 +0.4**
STU pmax pmax
comp=Z,73nm,0.9s,mb5.6
STU Stuttgart 69.89 315 *e*P **P 07 18 20.4 +0.4**
comp=Z,73nm,0.9s,mb5.6
PIEI Pieia 69.89 309 P **P 07 18 20.5 +0.4**
COLA College 69.91 25 *e*P **P 07 18 19.4 -0.4**
COLA pmax pmax
comp=Z,163nm,0.9s,mb6.0
COLA MLR MLR
comp=Z,3µm,19.0s,MS5.5
COLA College 69.91 25 *e*P **P 07 18 19.4 -0.4**
comp=Z,163nm,0.9s,mb6.0
COLA LR LR
comp=Z,3µm,19.0s,MS5.5
BUG Bochum--Univer 69.92 318 *e*P **P 07 18 20.2 +0.1**
comp=Z,90nm,1.2s,mb5.6
WTSB Winterswijk 69.97 319⇑ *e*P **P 07 18 20.9 +0.6**
comp=Z,168nm,2.2s,mb5.6
RSO Redoubt South 70.05 31 *e*P **P 07 18 20.9 +0.2**
MCK McKinley 70.06 27 *e*P **P 07 18 20.2 -0.6**
MCK pmax pmax
comp=Z,54nm,0.7s,mb5.6
MCK McKinley 70.06 27 *e*P **P 07 18 20.2 -0.6**
comp=Z,54nm,0.7s,mb5.6
DAVA Damuels 70.08 314 *i*P **P 07 18 21.1 -0.1**
comp=Z,49nm,1.5s,mb5.2,SNR=11
BRMO Bormio 70.10 313 P **P 07 18 21.1 -0.2**
FUORN Ofenpass-Fuorn 70.11 313⇑ *i*P **P 07 18 21.5 +0.1**
comp=Z,984nm,2.7s,mb6.3
KMBO Kilima Mbogo 70.12 256 P **P 07 18 21.1 -0.9**
comp=Z,29nm,0.9s,mb5.2,baz=43,slow=8.6,SNR=68
KMBO Kilima Mbogo 70.12 256 *e*P **P 07 18 21.1 -0.9**
KMBO pmax pmax
comp=Z,48nm,1.1s
KMBO MLR MLR
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 70.12 256 *e*P **P 07 18 21.1 -0.8**
comp=Z,48nm,1.1s,mb5.3
KMBO LR LR
comp=Z,1µm,20.0s,MS5.2
KMBO Kilima Mbogo 70.12 256 P **P 07 18 21.6 -0.4**
SNR=24
KMBO P 07 18 21.6
SNR=24
DAVOX Davos/Dischmat 70.28 313⇑ *i*P **P 07 18 22.4 0.0**
comp=Z,314nm,1.4s,mb6.1
DAVOX Davos/Dischmat 70.28 313 P **P 07 18 22.7 +0.3**
comp=Z,40nm,0.6s,mb5.5,baz=69,slow=4.6,SNR=41
LIENZ Kamor/St.Gall 70.31 314⇑ *i*P **P 07 18 22.5 -0.1**
comp=Z,672nm,3.6s
KTD Kalmit 70.33 316 *e*P **P 07 18 22.6 0.0**
BERNI Berninapass 70.35 313⇑ *i*P **P 07 18 22.9 +0.1**
comp=Z,649nm,3.0s
LRW Lerwick 70.36 329 *e*P **P 07 18 22.1 -0.6**
LRW AMb AMB 07 18 22.3
comp=Z,107nm,2.8s,mb5.3
LRW AMS AMS 07 47 48.7
comp=Z,4µm,24.1s,MS5.5
ABH Alteburg 70.41 317 *e*P **P 07 18 23.2 +0.1**
SPAK Spaichingen-Ko 70.41 315 *e*P **P 07 18 23.4 +0.2**
PLONS Plons/SG 70.48 314⇑ *i*P **P 07 18 23.3 -0.4**
comp=Z,574nm,3.6s
WAL1 Walls 70.50 329⇑ *e*P **P 07 18 22.9 -0.6**
STEIN Stein am Rhein 70.54 314⇑ *i*P **P 07 18 23.9 -0.1**
BFO Black Forest 70.59 315 P **P 07 18 24.4 +0.1**
comp=Z,344nm,1.3s,mb6.1,SNR=20
BFO Black Forest 70.59 315 *e*P **P 07 18 24.0 -0.3**
comp=Z,81nm,1.3s,mb5.5
BFO Black Forest 70.59 315 *e*P **P 07 18 24.0 -0.3**
BFO pmax pmax
comp=Z,81nm,1.3s,mb5.5
WILA Wila 70.62 314⇑ *i*P **P 07 18 24.3 -0.2**
comp=Z,669nm,2.9s,mb6.1
LANF Langenberg 70.64 316 *e*P **P 07 18 24.7 +0.2**
VDL Val di Lei 70.68 313⇑ *i*P **P 07 18 24.8 0.0**
comp=Z,1µm,3.2s
SLE Schleitheim 70.73 315⇑ *i*P **P 07 18 25.1 -0.1**
comp=Z,1µm,2.8s,mb6.3
FLACH Flaach 70.77 314⇑ *i*P **P 07 18 25.2 -0.2**
RUP Ruppelstein 70.77 317 *e*P **P 07 18 25.8 +0.4**
LLS Linth-Limmern 70.80 314⇑ *i*P **P 07 18 25.4 -0.2**
comp=Z,652nm,3.3s
ZUR Degenried 70.84 314⇑ *i*P **P 07 18 25.7 -0.1**
comp=Z,1µm,3.8s
HGN Heimansgroeve 70.97 318⇑ *e*P **P 07 18 26.3 -0.2**
comp=Z,81nm,2.2s,mb5.3
HGN Heimansgroeve 70.97 318 *e*PP PP 07 21 06.3 +2.9
HGN Heimansgroeve 70.97 318 *e*S S 07 27 45.3 +3.1
HGN Heimansgroeve 70.97 318 *e*SS SS 07 32 39.6 +25
MUO Muotathal 70.98 314⇑ *i*P **P 07 18 26.7 0.0**
comp=Z,1µm,3.2s
FELD Feldberg im Sc 70.98 315 *e*P **P 07 18 26.7 0.0**
MEM Membach 70.99 318 P **P 07 18 27.0 +0.3**
comp=Z,34nm,1.9s,mb5.0
VLC Villacollemand 71.05 311 PFAKE 07 18 40.0 +13
VLC LR LR
comp=Z,4µm,19.0s,MS5.7
PMR Palmer 71.05 29 *e*P **P 07 18 26.0 -0.8**
PMR pmax pmax
comp=Z,112nm,0.8s,mb5.8
PMR Palmer 71.05 29 *e*P **P 07 18 26.0 -0.9**
comp=Z,112nm,0.8s,mb5.8
SULZ Cheisacher 71.07 314⇑ *i*P **P 07 18 26.8 -0.4**
comp=Z,1µm,2.8s,mb6.3
BEBN Eben Emael 71.10 318 P **P 07 18 27.3 -0.1**
comp=Z,31nm,2.4s,mb4.8
LIBD Limburg 71.11 315 *e*P **P 07 18 27.3 -0.1**
BNALP Bannalp 71.15 314⇑ *i*P **P 07 18 27.7 0.0**
comp=Z,936nm,3.9s
MUGIO Muggio 71.17 313⇑ *i*P **P 07 18 26.9 -1.0**
comp=Z,437nm,2.0s,mb6.0
FUSIO Fusio 71.18 313⇑ *i*P **P 07 18 28.0 +0.1**
comp=Z,1µm,3.4s
CDF Champ du Feu 71.19 316⇑ *i*P **P 07 18 27.8 -0.2**
comp=Z,176nm,1.3s,mb5.5
CDF Champ du Feu 71.19 316⇑ *i*P **P 07 18 27.8 -0.2**
CDF pmax pmax
comp=Z,88nm,1.3s,mb5.5
CDF Champ du Feu 71.19 316⇑ *i*P **P 07 18 27.8 -0.2**
comp=Z,88nm,1.3s,mb5.5
WLF Walferdange 71.32 317 P **P 07 18 29.5 +0.8**
comp=Z,160nm,2.0s,mb5.6
WLF Walferdange 71.32 317 *e*P **P 07 18 29.2 +0.5**
comp=Z,168nm,1.2s,mb5.8
WLF Walferdange 71.32 317 *e*P **P 07 18 29.5 +0.8**
WLF pmax pmax
comp=Z,140nm,1.0s,mb5.8
WLF MLR MLR
comp=Z,3µm,20.0s,MS5.6
WLF Walferdange 71.32 317 *e*P **P 07 18 29.5 +0.8**
comp=Z,140nm,1.0s,mb5.8
WLF LR LR
comp=Z,3µm,20.0s,MS5.6
OHAK Old Harbor 71.33 34 *e*P **P 07 18 26.7 -1.9**
comp=Z,237nm,1.2s,mb6.0
ECH Echery 71.35 315 *e*P **P 07 18 28.9 0.0**
ECH Echery 71.35 315 *e*P **P 07 18 28.2 -0.7**
ECH pmax pmax
comp=Z,63nm,1.4s,mb5.3
ECH MLR MLR
comp=Z,3µm,19.0s,MS5.5
ECH Echery 71.35 315 *e*P **P 07 18 28.2 -0.7**
comp=Z,63nm,1.4s,mb5.3
ECH LR LR
comp=Z,3µm,19.0s,MS5.5
HASLI Hasliberg/Brie 71.37 314⇑ *i*P **P 07 18 28.9 -0.2**
comp=Z,1µm,3.1s
KDAK Kodiak Island 71.39 33 P **P 07 18 28.3 -0.7**
comp=Z,922nm,1.3s,mb6.5,SNR=13
KDAK Kodiak Island 71.39 33 P **P 07 18 28.5 -0.5**
comp=Z,107nm,1.0s,mb5.7
KDAK Kodiak Island 71.39 33 *ce*P **P 07 18 28.7 -0.3**
KDAK Kodiak Island 71.39 33 P **P 07 18 28.5 -0.5**
BALST Balsthal 71.40 314⇑ *i*P **P 07 18 29.0 -0.2**
comp=Z,809nm,3.0s
BBS Basel-Blauen 71.46 315 *e*P **P 07 18 29.3 -0.3**
BCLA Clavier 71.48 318 P **P 07 18 30.2 +0.6**
comp=Z,60nm,2.4s,mb5.1
MOF Molkenrain 71.52 315 *e*P **P 07 18 29.9 -0.1**
SCO Scoresbysund 71.60 343⇑ *i*P **P 07 18 30.1 +0.1**
SCO *i* 07 27 51.8
SCO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,3µm,21.0s,MS5.5
SCO Scoresbysund 71.60 343⇑ *i*P **P 07 18 30.1 +0.1**
comp=Z,9.9nm,1.0s,mb4.7
SCO *i* 07 27 51.8
SCO
comp=Z,3µm,21.0s
BOURR Bourrignon 71.66 315⇑ *i*P **P 07 18 30.6 -0.2**
comp=Z,914nm,2.8s,mb6.2
SEW Seward 71.67 30 *e*P **P 07 18 29.6 -1.0**
comp=Z,111nm,1.0s,mb5.7
WDD Wield Dalam 71.67 301 PFAKE 07 18 40.0 +8.9
WDD LR LR
comp=Z,753nm,19.0s,MS5.0
HINF Hinteralfeld 71.71 315⇑ *i*P **P 07 18 30.7 -0.4**
comp=Z,121nm,1.1s,mb5.4
HINF Hinteralfeld 71.71 315⇑ *i*P **P 07 18 30.7 -0.4**
HINF pmax pmax
comp=Z,61nm,1.1s,mb5.4
HINF Hinteralfeld 71.71 315⇑ *i*P **P 07 18 30.7 -0.4**
comp=Z,60nm,1.1s,mb5.4
WIMIS Wimmis 71.74 314⇑ *i*P **P 07 18 31.2 -0.1**
comp=Z,848nm,3.0s,mb6.2
MMK Mattmark 71.79 313⇑ *i*P **P 07 18 31.9 +0.3**
comp=Z,1µm,3.1s
PAX Paxson 71.80 27 *e*P **P 07 18 30.2 -1.1**
PAX pmax pmax
comp=Z,65nm,1.4s,mb5.4
PAX Paxson 71.80 27 *e*P **P 07 18 30.2 -1.1**
comp=Z,65nm,1.4s,mb5.4
UCC Uccle 71.85 319 P **P 07 18 32.5 +0.7**
LKBD Leukerbad 71.86 314⇑ *i*P **P 07 18 31.9 -0.1**
GIVF Givet 71.90 318⇑ *i*P **P 07 18 32.1 -0.1**
comp=Z,117nm,1.1s,mb5.4
GIVF Givet 71.90 318⇑ *i*P **P 07 18 32.1 -0.1**
GIVF pmax pmax
comp=Z,58nm,1.1s,mb5.4
GIVF Givet 71.90 318⇑ *i*P **P 07 18 32.1 -0.1**
comp=Z,58nm,1.1s,mb5.4
LOMF Lomont 71.93 315 *e*P **P 07 18 32.1 -0.3**
HAU Haudompre 71.93 315⇑ *i*P **P 07 18 32.1 -0.3**
comp=Z,138nm,1.3s,mb5.4
HAU *e*MLR MLR
comp=Z,8µm,19.5s,MS5.7
HAU Haudompre 71.93 315⇑ *i*P **P 07 18 32.1 -0.3**
HAU pmax pmax
comp=Z,69nm,1.3s,mb5.4
HAU MLR MLR
comp=Z,8µm,19.5s,MS6.0
HAU Haudompre 71.93 315⇑ *i*P **P 07 18 32.1 -0.3**
comp=Z,69nm,1.3s,mb5.4
HAU LR LR
comp=Z,8µm,19.5s,MS6.0
TARA Tarawa 71.95 100 *e*P **P 07 18 34.1 +1.1**
comp=Z,203nm,0.9s,mb6.0
TARA LR LR
comp=Z,2µm,21.0s,MS5.3
DOU Dourbes 72.03 318 P **P 07 18 33.1 +0.2**
comp=Z,44nm,2.3s,mb5.0
THEF They Montfort 72.05 316 *e*P **P 07 18 32.7 -0.4**
SENIN Lac Senin/Sane 72.07 314⇑ *i*P **P 07 18 33.3 0.0**
comp=Z,934nm,2.9s,mb6.2
TORNY Torny/Romont 72.10 314⇑ *i*P **P 07 18 33.3 -0.2**
comp=Z,971nm,3.5s
DIX Grande Dixence 72.13 313⇑ *i*P **P 07 18 34.2 +0.6**
comp=Z,1µm,3.0s
GRYON Gryon 72.24 314⇑ *i*P **P 07 18 34.3 0.0**
BAIF Baives 72.27 318⇑ *i*P **P 07 18 34.5 +0.1**
comp=Z,154nm,1.4s,mb5.5
BAIF Baives 72.27 318⇑ *i*P **P 07 18 34.5 +0.1**
BAIF pmax pmax
comp=Z,77nm,1.4s,mb5.4
BAIF Baives 72.27 318⇑ *i*P **P 07 18 34.5 +0.1**
comp=Z,77nm,1.4s,mb5.4
ORE Reay 72.29 328⇑ *e*P **P 07 18 33.8 -0.5**

STKA Stephens Creek 72.30 146 *eP* **P 07 18 33.8 -0.8**
comp=Z,47nm,0.8s,mb5.5
STKA *eS* S 07 27 54.8 -3.0
STKA Stephens Creek 72.30 146 P **P 07 18 33.9 -0.8**
comp=Z,41nm,0.6s,mb5.5,baz=326,slow=6.6,SNR=58
STKA LR LR 07 53 46.3
comp=Z,644nm,20.0s,MS4.9,baz=330,slow=39
STKA Stephens Creek 72.30 146 *eP* **P 07 18 33.8 -0.8**
comp=Z,11nm,0.8s,mb4.8
AIGLE Aigle 72.30 314⇑*iP* **P 07 18 34.4 -0.2**
comp=Z,1μm,3.1s
BRANT Les Verrieres 72.33 314⇑*iP* **P 07 18 34.7 -0.1**
comp=Z,848nm,2.8s,mb6.2
EIDS Eidsvold 72.34 135 *eP* **P 07 18 34.6 -0.4**
comp=Z,81nm,1.0s,mb5.6
EGAK Eagle 72.36 24 *eP* **P 07 18 33.5 -1.1**
comp=Z,63nm,1.1s,mb5.5
EGAK LR LR
comp=Z,3μm,20.0s,MS5.5
SALAN Lac Salanfe 72.37 314⇑*iP* **P 07 18 35.2 +0.1**
EMV Vieux Emosson 72.45 313⇑*iP* **P 07 18 35.8 +0.2**
comp=Z,1μm,3.6s
OG01 Vacheresse 72.47 314 *eP* **P 07 18 35.9 +0.2**
MENT Mentasta 72.48 26 *eP* **P 07 18 35.0 -0.4**
MEZF Maizieres J'vi 72.48 316⇑*iP* **P 07 18 35.8 +0.1**
MCD Coleburn Disti 72.55 327⇑*iP* **P 07 18 35.6 -0.3**
MME1 Meikle Cairn 72.55 327⇑*iP* **P 07 18 35.4 -0.6**
INK Inuvik 72.56 19 P **P 07 18 35.4 -0.4**
comp=Z,40nm,0.8s,mb5.4,baz=321,slow=7.7,SNR=76
INK LR LR 07 55 27.6
comp=Z,4μm,18.1s,MS5.7,baz=162,slow=40
INK Inuvik 72.56 19 *eP* **P 07 18 35.1 -0.7**
INK pmax pmax
comp=Z,78nm,0.9s
INK Inuvik 72.56 19 *eP* **P 07 18 35.1 -0.7**
comp=Z,78nm,0.9s,mb5.6
RSP Reno Superiore 72.63 312 P **P 07 18 35.1 -1.5**
GIMEL St. Georges / 72.64 314⇑*iP* **P 07 18 36.6 0.0**
comp=Z,1μm,5.3s
PGF Pioggiola 72.66 309⇑*iP* **P 07 18 37.2 +0.4**
comp=Z,183nm,0.9s,mb5.7
PGF Pioggiola 72.66 309⇑*iP* **P 07 18 37.2 +0.4**
PGF pmax pmax
comp=Z,92nm,0.9s,mb5.7
PGF Pioggiola 72.66 309⇑*iP* **P 07 18 37.2 +0.4**
comp=Z,92nm,0.9s,mb5.7
DIV Divide 72.68 28 *eP* **P 07 18 36.1 -0.5**
comp=Z,77nm,0.8s,mb5.7
CABF La Chapelle 72.71 314⇑*iP* **P 07 18 37.0 -0.1**
RSL Roselend 72.79 313 *eP* **P 07 18 37.8 +0.2**
LPG La Plagne 72.80 313⇑*iP* **P 07 18 38.3 +0.7**
comp=Z,182nm,0.7s,mb5.8
LPG La Plagne 72.80 313⇑*iP* **P 07 18 38.3 +0.7**
LPG pmax pmax
comp=Z,91nm,0.7s,mb5.8
LPG La Plagne 72.80 313⇑*iP* **P 07 18 38.3 +0.7**
comp=Z,91nm,0.7s,mb5.8
LPL La Plagne 72.80 313⇑*iP* **P 07 18 38.2 +0.5**
comp=Z,145nm,0.7s,mb5.7
LPL La Plagne 72.80 313⇑*iP* **P 07 18 38.2 +0.5**
LPL pmax pmax
comp=Z,72nm,0.7s,mb5.7
LPL La Plagne 72.80 313⇑*iP* **P 07 18 38.2 +0.5**
comp=Z,72nm,0.7s,mb5.7
STV Sant Anna di V 73.00 312 P **P 07 18 37.0 -1.8**
AUTN L'Aution 73.04 311 *eP* **P 07 18 39.7 +0.6**
BNI Bardonecchia 73.05 313 *eP* **P 07 18 38.9 -0.2**
BNI pmax pmax
comp=Z,61nm,0.9s,mb5.5
BNI MLR MLR
comp=Z,7μm,21.0s,MS5.9
BNI Bardonecchia 73.05 313 *eP* **P 07 18 38.9 -0.2**
comp=Z,61nm,0.9s,mb5.5
BNI LR LR
comp=Z,7μm,21.0s,MS5.9
ESY Stoneypath 73.08 326⇑*eP* **P 07 18 39.4 +0.3**
SBF Sospel 73.10 311⇑*iP* **P 07 18 39.3 -0.1**
comp=Z,197nm,0.8s,mb5.8
SBF Sospel 73.10 311⇑*iP* **P 07 18 39.3 -0.1**
SBF pmax pmax
comp=Z,99nm,0.8s,mb5.8
SBF Sospel 73.10 311⇑*iP* **P 07 18 39.3 -0.1**
comp=Z,98nm,0.8s,mb5.8
MBDF Montbardon 73.13 312⇑*iP* **P 07 18 39.0 -0.6**
comp=Z,84nm,0.8s,mb5.4
MBDF Montbardon 73.13 312⇑*iP* **P 07 18 39.0 -0.6**
MBDF pmax pmax
comp=Z,42nm,0.8s,mb5.4
MBDF Montbardon 73.13 312⇑*iP* **P 07 18 39.0 -0.6**
comp=Z,42nm,0.8s,mb5.4
MDO Dochfour 73.14 327⇑*iP* **P 07 18 38.4 -1.0**
LUCF Luceram 73.14 311 *eP* **P 07 18 39.9 +0.2**
TOUF Mont Tournerai 73.15 311 *eP* **P 07 18 40.2 +0.5**
ABPO Ambohimpanom 73.20 235 *eP* **P 07 18 38.7 -1.6**
ABPO pmax pmax
comp=Z,89nm,1.7s,mb5.4
ABPO MLR MLR
comp=Z,2μm,20.0s,MS5.3
ABPO Ambohimpanom 73.20 235 *eP* **P 07 18 38.7 -1.6**
comp=Z,89nm,1.7s,mb5.4
ABPO LR LR
comp=Z,2μm,20.0s,MS5.3
BMRM Bremner River 73.24 28 *eP* **P 07 18 39.7 -0.2**
comp=Z,158nm,0.8s,mb6.0
EBH Black Hill 73.35 326⇑*eP* **P 07 18 39.7 -1.0**
EDI Edinburgh 73.36 326 *eP* **P 07 18 40.2 -0.6**
EDI AMb AMB 07 18 41.1
comp=Z,75nm,2.2s,mb5.2
EDI AMS AMS 07 52 18.8
comp=Z,3μm,15.9s,MS5.7
EBL Broad Law 73.37 326⇑*eP* **P 07 18 40.3 -0.5**
DAWY Dawson 73.40 24 *eP* **P 07 18 39.8 -1.1**
XAL Allendale 73.42 324⇑*iP* **P 07 18 40.2 -0.9**
SUMG Summit 73.45 349 *eP* **P 07 18 40.9 -0.1**
comp=Z,492nm,1.9s,mb6.1
TFO1 Folkestone 73.50 320⇑*eP* **P 07 18 41.5 -0.2**
TFO1 AMb AMB 07 18 45.4
comp=Z,206nm,2.7s,mb5.6
TFO1 Folkestone 73.50 320 P **P 07 18 41.5 -0.2**
TFO1 AMb AMB 07 18 45.4
comp=Z,206nm,2.7s,mb5.6
EAU Auchinoon 73.53 326⇑*eP* **P 07 18 41.1 -0.6**
KAC Achnashellach 73.54 328 *eP* **P 07 18 41.1 -0.6**
ORIF Oris-en-Rattie 73.61 313⇑*iP* **P 07 18 42.5 +0.1**
comp=Z,114nm,0.9s,mb5.5
ORIF *e*MLR MLR
comp=Z,10μm,19.2s,MS5.8
ORIF Oris-en-Rattie 73.61 313⇑*iP* **P 07 18 42.5 +0.1**
ORIF pmax pmax
comp=Z,57nm,0.9s,mb5.5
ORIF Oris-en-Rattie 73.61 313⇑*iP* **P 07 18 42.5 +0.1**
comp=Z,57nm,0.9s,mb5.5
EKA Eskdalemuir Ar 73.65 325 P **P 07 18 42.0 -0.5**
comp=Z,18nm,0.8s,mb5.0,baz=52,slow=6.4,SNR=41
ESK Eskdalemuir 73.68 325⇑*eP* **P 07 18 42.1 -0.6**
ESK AMb AMB 07 18 46.3
comp=Z,72nm,2.2s,mb5.2
ESK Eskdalemuir 73.68 325 *eP* **P 07 18 41.9 -0.7**
ESK pmax pmax
comp=Z,42nm,1.1s,mb5.3
ESK MLR MLR
comp=Z,4μm,21.0s,MS5.7
ESK Eskdalemuir 73.68 325 *eP* **P 07 18 41.9 -0.7**
comp=Z,42nm,1.1s,mb5.3
ESK LR LR
comp=Z,4μm,21.0s,MS5.7
ECK Cauldkaine Hil 73.71 325⇑*iP* **P 07 18 41.7 -1.1**
FRF La Foret Royal 73.74 311⇑*iP* **P 07 18 42.9 -0.3**
comp=Z,117nm,1.1s,mb5.4
FRF La Foret Royal 73.74 311⇑*iP* **P 07 18 42.9 -0.3**
FRF pmax pmax
comp=Z,58nm,1.1s,mb5.4
FRF La Foret Royal 73.74 311⇑*iP* **P 07 18 42.9 -0.3**
comp=Z,58nm,1.1s,mb5.4
VSL Villasalto 73.76 306 *eP* **P 07 18 42.7 -0.7**
VSL pmax pmax
comp=Z,442nm,2.1s,mb6.0
VSL LR LR
comp=Z,2μm,21.0s,MS5.3
LOR Lormes 73.77 316⇑*iP* **P 07 18 42.6 -0.7**
comp=Z,68nm,1.1s,mb5.2
LOR *e*MLR MLR
comp=Z,6μm,20.0s,MS5.6
LOR Lormes 73.77 316⇑*iP* **P 07 18 42.6 -0.7**
LOR pmax pmax
comp=Z,34nm,1.1s,mb5.2
LOR MLR MLR
comp=Z,6μm,20.0s,MS5.9
LOR Lormes 73.77 316⇑*iP* **P 07 18 42.6 -0.7**
comp=Z,34nm,1.1s,mb5.2
LOR LR LR
comp=Z,6μm,20.0s,MS5.9
EAB Aberfoyle 73.78 326⇑*eP* **P 07 18 42.4 -0.8**
KPL Plockton 73.78 328⇑*eP* **P 07 18 42.8 -0.4**
KPL AMb AMB 07 18 48.3
comp=Z,94nm,3.3s
KPL AMS AMS 07 53 09.1
comp=Z,4μm,15.8s,MS5.8
KPL Plockton 73.78 328 P **P 07 18 42.8 -0.4**
KPL AMb AMB 07 18 48.3
comp=Z,94nm,3.3s
KPL AMS AMS 07 53 09.1
comp=Z,4μm,15.8s
LHO Holmfirth 73.90 323⇑*iP* **P 07 18 43.4 -0.6**
LMR La Mourre 73.94 311⇑*iP* **P 07 18 44.2 -0.2**
comp=Z,192nm,1.2s,mb5.6
LMR La Mourre 73.94 311⇑*iP* **P 07 18 44.2 -0.2**
LMR pmax pmax
comp=Z,96nm,1.2s,mb5.6
LMR La Mourre 73.94 311⇑*iP* **P 07 18 44.2 -0.2**
comp=Z,96nm,1.2s,mb5.6
RES Resolute Bay 73.97 5 P **P 07 18 44.0 0.0**
comp=Z,41nm,1.0s,mb5.3,baz=351,slow=6.4,SNR=92
RES LR LR 07 52 22.8
comp=Z,2μm,19.9s,MS5.4,baz=344,slow=37
RES Resolute Bay 73.97 5 *eP* **P 07 18 43.8 -0.2**
RES pmax pmax
comp=Z,82nm,1.1s,mb5.6
RES Resolute Bay 73.97 5 *eP* **P 07 18 43.8 -0.2**
comp=Z,82nm,1.1s,mb5.6
CWF Charnwood Fore 74.02 322 *eP* **P 07 18 43.9 -0.8**
CWF AMb AMB 07 18 49.5
comp=Z,66nm,3.3s
CWF AMS AMS 07 53 59.5
comp=Z,6μm,14.0s,MS6.0
CWF Charnwood Fore 74.02 322 P **P 07 18 43.9 -0.8**
CWF AMb AMB 07 18 49.5
comp=Z,66nm,3.3s
CWF AMS AMS 07 53 59.5
comp=Z,6μm,14.0s
PGBU Glenifferbraes 74.04 326 AMS AMS 07 50 55.8
comp=Z,3μm,21.6s,MS5.6
PGBU Glenifferbraes 74.04 326 AMS AMS 07 50 55.8
comp=Z,3μm,21.6s
SMF Signal de Mont 74.07 315⇑*iP* **P 07 18 44.7 -0.4**
comp=Z,251nm,1.2s,mb5.7
SMF Signal de Mont 74.07 315⇑*iP* **P 07 18 44.7 -0.4**
SMF pmax pmax
comp=Z,125nm,1.2s,mb5.7
SMF Signal de Mont 74.07 315⇑*iP* **P 07 18 44.7 -0.4**
comp=Z,125nm,1.2s,mb5.7
SSF Saint Saulge 74.08 316⇑*iP* **P 07 18 44.6 -0.5**
comp=Z,88nm,1.2s,mb5.3
SSF Saint Saulge 74.08 316⇑*iP* **P 07 18 44.6 -0.5**
SSF pmax pmax
comp=Z,44nm,1.2s,mb5.3
SSF Saint Saulge 74.08 316⇑*iP* **P 07 18 44.6 -0.5**
comp=Z,44nm,1.2s,mb5.3
KAR1 Arisaig 74.09 327⇑*iP* **P 07 18 44.8 -0.3**
OCF Saint Nazaire 74.13 313 *eP* **P 07 18 45.9 +0.4**
OG26 St.-Nazaire-De 74.13 313 *eP* **P 07 18 45.9 +0.4**
SMRF Simiane la Rot 74.24 312⇑*iP* **P 07 18 46.2 +0.1**
comp=Z,179nm,1.5s,mb5.5
SMRF Simiane la Rot 74.24 312⇑*iP* **P 07 18 46.2 +0.1**
comp=Z,179nm,1.5s,mb5.8
SSB Saint Sauveur 74.28 314 *eP* **P 07 18 45.6 -0.8**
SSB pmax pmax
comp=Z,39nm,1.3s,mb5.2
SSB MLR MLR
comp=Z,2μm,20.0s,MS5.3
SSB Saint Sauveur 74.28 314 *eP* **P 07 18 45.6 -0.8**
comp=Z,39nm,1.3s,mb5.2
SSB LR LR
comp=Z,2μm,20.0s,MS5.3
AVF Avril sur Loir 74.30 315⇑*iP* **P 07 18 46.1 -0.3**
comp=Z,237nm,1.3s,mb5.7
AVF Avril sur Loir 74.30 315⇑*iP* **P 07 18 46.1 -0.3**
AVF pmax pmax
comp=Z,119nm,1.3s,mb5.7
AVF Avril sur Loir 74.30 315⇑*iP* **P 07 18 46.1 -0.3**
comp=Z,119nm,1.3s,mb5.7
VIVF Saint-Julien-l 74.40 313⇑*iP* **P 07 18 46.9 -0.2**
PLDF La Plantade 74.52 314 *eP* **P 07 18 48.0 +0.2**
GAL1 Galloway 74.65 325⇑*eP* **P 07 18 47.8 -0.6**
GAL1 AMb AMB 07 18 52.0
comp=Z,75nm,2.7s,mb5.1
GAL1 AMS AMS 07 51 42.9
comp=Z,2μm,19.6s,MS5.4
GAL1 Galloway 74.65 325 P **P 07 18 47.8 -0.6**
GAL1 AMb AMB 07 18 52.0
comp=Z,75nm,2.7s,mb5.1
GAL1 AMS AMS 07 51 42.9
comp=Z,2μm,19.6s
COLF Collangettes 74.69 314 *eP* **P 07 18 48.9 +0.1**
WOL Wolverton 74.70 321⇑*eP* **P 07 18 48.0 -0.6**
WOL AMb AMB 07 18 53.6
comp=Z,164nm,3.0s
BGF Bois d'Agland 74.71 315⇑*iP* **P 07 18 48.5 -0.3**
comp=Z,152nm,1.4s,mb5.4
BGF Bois d'Agland 74.71 315⇑*iP* **P 07 18 48.5 -0.3**
BGF pmax pmax
comp=Z,76nm,1.4s,mb5.4
BGF Bois d'Agland 74.71 315⇑*iP* **P 07 18 48.5 -0.3**
comp=Z,76nm,1.4s,mb5.4
AGO Saint Agoulin 74.78 315 *eP* **P 07 18 49.6 +0.3**
GIM North Isle of 74.84 325⇑*eP* **P 07 18 49.1 -0.3**
HLM1 Long Mynd 74.96 323⇑*iP* **P 07 18 49.8 -0.4**
PYM Petit Puy Mans 75.01 314 *eP* **P 07 18 51.0 +0.4**
LBL Lubilhac 75.11 314 *eP* **P 07 18 51.5 +0.3**
TCF Toulx Ste Croi 75.23 315⇑*iP* **P 07 18 51.8 0.0**
comp=Z,178nm,1.3s,mb5.5
TCF Toulx Ste Croi 75.23 315⇑*iP* **P 07 18 51.8 0.0**
TCF pmax pmax
comp=Z,89nm,1.3s,mb5.5
TCF Toulx Ste Croi 75.23 315⇑*iP* **P 07 18 51.8 0.0**
comp=Z,89nm,1.3s,mb5.5
LASF Ste Croix 75.28 313⇑*iP* **P 07 18 52.4 +0.2**
comp=Z,163nm,1.2s,mb5.5
VERF Verneugheol 75.33 315 *eP* **P 07 18 52.6 +0.2**
BORG Borgarnes 75.33 339 P **P 07 18 53.7 +1.6**
comp=Z,13nm,0.8s,mb4.9,baz=55,slow=1.3,SNR=7.6
BORG Borgarnes 75.33 339 *eP* **P 07 18 53.7 +1.6**
BORG pmax pmax
comp=Z,136nm,1.5s
BORG MLR MLR
comp=Z,3μm,21.0s
BORG Borgarnes 75.33 339 *eP* **P 07 18 53.7 +1.6**
comp=Z,136nm,1.5s,mb5.7
BORG LR LR
comp=Z,3μm,21.0s,MS5.6
WLF1 Llynfaes 75.34 324⇑*eP* **P 07 18 51.9 -0.4**
WLF1 AMb AMB 07 18 56.0
comp=Z,330nm,2.6s,mb5.8
HGH Gray Hill 75.38 322⇑*eP* **P 07 18 51.9 -0.7**
HTR Trewern Hill 75.39 322⇑*eP* **P 07 18 52.2 -0.5**
FRNF Fournols 75.46 314 *eP* **P 07 18 53.9 +0.7**
LDF La Druitiere 75.46 318⇑*iP* **P 07 18 52.7 -0.4**
comp=Z,100nm,1.1s,mb5.3
LDF La Druitiere 75.46 318⇑*iP* **P 07 18 52.7 -0.4**
LDF pmax pmax
comp=Z,50nm,1.1s,mb5.4
LDF La Druitiere 75.46 318⇑*iP* **P 07 18 52.7 -0.4**
comp=Z,50nm,1.1s,mb5.4
KEST Kesra 75.50 303 P **P 07 18 53.9 +0.3**
comp=Z,7.7nm,0.9s,mb4.6,baz=82,slow=5.7,SNR=11
KEST LR LR 07 57 17.8
comp=Z,631nm,18.5s,MS5.0,baz=184,slow=40
FLN La Foliniere 75.58 318⇑*iP* **P 07 18 53.5 -0.3**
comp=Z,232nm,1.5s,mb5.6
FLN *e*MLR MLR
comp=Z,8μm,20.8s,MS5.7
FLN La Foliniere 75.58 318⇑*iP* **P 07 18 53.5 -0.3**
FLN pmax pmax
comp=Z,116nm,1.5s,mb5.6
FLN MLR MLR
comp=Z,8μm,20.8s,MS6.0
FLN La Foliniere 75.58 318⇑*iP* **P 07 18 53.5 -0.3**
comp=Z,116nm,1.5s,mb5.6
FLN LR LR
comp=Z,8μm,20.8s,MS6.0
GRR Gorron 75.98 318⇑*iP* **P 07 18 55.9 -0.2**
comp=Z,117nm,0.9s,mb5.5
GRR Gorron 75.98 318⇑*iP* **P 07 18 55.9 -0.2**
GRR pmax pmax
comp=Z,59nm,0.9s,mb5.5
GRR Gorron 75.98 318⇑*iP* **P 07 18 55.9 -0.2**
comp=Z,58nm,0.9s,mb5.5
CAF Calviac 75.99 314⇑*iP* **P 07 18 56.6 +0.4**
comp=Z,139nm,1.3s,mb5.4
CAF Calviac 75.99 314⇑*iP* **P 07 18 56.6 +0.4**
CAF pmax pmax
comp=Z,70nm,1.3s,mb5.4
CAF Calviac 75.99 314⇑*iP* **P 07 18 56.6 +0.4**
comp=Z,70nm,1.3s,mb5.4
PNL Peninsula 76.10 28 *eP* **P 07 18 56.8 +0.3**
comp=Z,251nm,1.2s,mb6.0
RJF Les Rejaudoux 76.14 315⇑*iP* **P 07 18 57.5 +0.4**
comp=Z,274nm,1.5s,mb5.7
RJF *e*MLR MLR
comp=Z,4μm,18.2s,MS5.5
RJF Les Rejaudoux 76.14 315⇑*iP* **P 07 18 57.5 +0.4**
RJF pmax pmax
comp=Z,137nm,1.5s,mb5.7
RJF MLR MLR
comp=Z,4μm,18.3s,MS5.8
RJF Les Rejaudoux 76.14 315⇑*iP* **P 07 18 57.5 +0.4**
comp=Z,137nm,1.5s,mb5.7
RJF LR LR
comp=Z,4μm,18.3s,MS5.8
DMUB Kingscourt 76.26 325 *eP* **P 07 18 56.4 -1.2**
JSA Saint Aubin 76.31 319⇑*eP* **P 07 18 58.3 +0.3**
JSA AMb AMB 07 19 01.9
comp=Z,110nm,2.4s,mb5.4
DSB Dublin 76.36 324 *eP* **P 07 18 57.7 -0.5**
comp=Z,40nm,1.3s,mb5.2
ARMA Armidale 76.42 138⇑*iP* **P 07 18 59.4 +0.7**
ARMA *e*S S 07 28 44.7 +0.6
ARMA Armidale 76.42 138 *eP* **P 07 18 59.4 +0.7**
comp=Z,57nm,1.1s,mb5.4
CMAH Djebel Manchou 76.46 305 P **P 07 18 58.7 -0.3**
MFF Saint Martin d 76.48 316⇑*iP* **P 07 18 58.9 -0.1**
comp=Z,83nm,0.9s,mb5.4
MFF Saint Martin d 76.48 316⇑*iP* **P 07 18 58.9 -0.1**
MFF pmax pmax
comp=Z,42nm,0.9s,mb5.4
MFF Saint Martin d 76.48 316⇑*iP* **P 07 18 58.9 -0.1**
comp=Z,42nm,0.9s,mb5.4
ABSA Djebel Ababsia 76.58 304 P **P 07 18 59.5 -0.3**
HTL Hartland 76.62 322⇑*eP* **P 07 18 59.3 -0.4**
HTL AMb AMB 07 19 03.4
comp=Z,101nm,3.0s,mb5.2
HTL AMS AMS 07 55 59.6
comp=Z,3μm,12.9s,MS5.8
HTL Hartland 76.62 322 P **P 07 18 59.3 -0.4**
HTL AMb AMB 07 19 03.4
comp=Z,101nm,3.0s,mb5.2
HTL AMS AMS 07 55 59.6
comp=Z,3μm,12.9s
DYA Yadsworthy 76.62 321 AMS AMS 07 55 34.4
comp=Z,4μm,16.1s,MS5.8
DYA Yadsworthy 76.62 321 AMS AMS 07 55 34.4
comp=Z,4μm,16.1s
LRDF Laroque-de-Fa 76.68 312 *eP* **P 07 19 00.3 +0.1**
MTLF Montolieu 76.68 313⇑*iP* **P 07 19 00.3 +0.1**
comp=Z,167nm,1.5s,mb5.5
MTLF Montolieu 76.68 313⇑*iP* **P 07 19 00.3 +0.1**
MTLF pmax pmax
comp=Z,84nm,1.5s,mb5.5
MTLF Montolieu 76.68 313⇑*iP* **P 07 19 00.3 +0.1**
comp=Z,84nm,1.5s,mb5.5
EJON La Jonquera 76.70 312 P **P 07 18 58.0 -2.3**
comp=Z,672nm,2.7s,mb6.1
DCN Croghan 76.75 325 *eP* **P 07 18 59.4 -1.0**
LFF La Frestale 76.80 315⇑*iP* **P 07 19 01.3 +0.5**
comp=Z,73nm,0.9s,mb5.3
LFF La Frestale 76.80 315⇑*iP* **P 07 19 01.3 +0.5**
LFF pmax pmax
comp=Z,37nm,0.9s,mb5.3
LFF La Frestale 76.80 315⇑*iP* **P 07 19 01.3 +0.5**
comp=Z,37nm,0.9s,mb5.3
FILF Fillols 76.85 312 *eP* **P 07 19 01.4 +0.2**
SGMF Saint Gilles 77.02 319⇑*iP* **P 07 19 02.2 +0.2**
comp=Z,188nm,1.1s,mb5.6
SGMF Saint Gilles 77.02 319⇑*iP* **P 07 19 02.2 +0.2**
SGMF pmax pmax
comp=Z,94nm,1.1s,mb5.6
SGMF Saint Gilles 77.02 319⇑*iP* **P 07 19 02.2 +0.2**
comp=Z,94nm,1.1s,mb5.6
CARF Carcanieres 77.06 312 *eP* **P 07 19 01.7 -0.7**
VALF Valcebollere 77.28 312 *eP* **P 07 19 03.9 +0.3**
CASM Ain Smara 77.29 305 P **P 07 19 03.5 -0.2**
ROSF Rostrenen 77.38 319⇑*iP* **P 07 19 04.2 +0.2**
comp=Z,168nm,1.3s,mb5.5
ROSF Rostrenen 77.38 319⇑*iP* **P 07 19 04.2 +0.2**
ROSF pmax pmax
comp=Z,84nm,1.3s,mb5.5
ROSF Rostrenen 77.38 319⇑*iP* **P 07 19 04.2 +0.2**
comp=Z,84nm,1.3s,mb5.5
QUIF Quistinic 77.55 319⇑*iP* **P 07 19 05.0 0.0**
comp=Z,178nm,1.3s,mb5.5
QUIF Quistinic 77.55 319⇑*iP* **P 07 19 05.0 0.0**
QUIF pmax pmax
comp=Z,89nm,1.3s,mb5.5
QUIF Quistinic 77.55 319⇑*iP* **P 07 19 05.0 0.0**
comp=Z,89nm,1.3s,mb5.5
DFRA Djebel Bou Aff 77.58 305 P **P 07 19 06.0 +0.6**
MLS Moulis 77.58 313 *eP* **P 07 19 03.3 -2.0**
SALF Salau 77.62 312 *eP* **P 07 19 04.6 -0.9**
SKAG Skagway 77.83 26 *eP* **P 07 19 06.3 0.0**
comp=Z,82nm,0.9s,mb5.7
EMIR Miracle 77.84 312 P **P 07 19 06.8 +0.1**
comp=Z,530nm,2.8s,mb6.0
BST Brest 77.85 319 *eP* **P 07 19 08.1 +1.5**
EPF Esparros 78.02 313⇑*iP* **P 07 19 07.2 -0.5**
SET Setif 78.09 305 P **P 07 19 08.0 -0.2**
RESF Ens 78.14 313 *eP* **P 07 19 09.1 +0.8**
LABF Labassere 78.18 313 *eP* **P 07 19 07.5 -1.1**
EBIE Bielsa 78.32 313 P **P 07 19 09.7 +0.3**
comp=Z,884nm,2.8s,mb6.2
EPOB Poblet 78.42 311 P **P 07 19 08.3 -1.6**
comp=Z,1μm,3.6s
REYF Montagne du Re 78.46 313 *eP* **P 07 19 11.2 +1.1**
ATE Arette 78.64 314 *eP* **P 07 19 10.6 -0.5**
ETSF Etsaut 78.65 313⇑*iP* **P 07 19 11.7 +0.5**
comp=Z,46nm,0.8s,mb5.1
ETSF Etsaut 78.65 313⇑*iP* **P 07 19 11.7 +0.5**
ETSF pmax pmax
comp=Z,23nm,0.8s,mb5.2
ETSF Etsaut 78.65 313⇑*iP* **P 07 19 11.7 +0.5**
comp=Z,23nm,0.8s,mb5.2
ORDF Ordiarp 78.72 314 *eP* **P 07 19 11.3 -0.3**
RIV Riverview 78.72 141 *eP* **P 07 19 11.8 +0.3**
CAN Canberra 78.73 143 *eP* **P 07 19 11.5 0.0**
CAN pmax pmax
comp=Z,128nm,1.4s,mb5.7
CAN MLR MLR
comp=Z,1μm,20.0s,MS5.2
CAN Canberra 78.73 143 *eP* **P 07 19 11.5 0.0**
comp=Z,128nm,1.4s,mb5.7
CAN LR LR
comp=Z,1μm,20.0s,MS5.2
TOO Toolangi 78.79 147⇑*iP* **P 07 19 11.9 +0.2**
OSSF Osses 78.90 314 *eP* **P 07 19 12.3 -0.3**
CNB Canberra Magne 78.91 143 *eP* **P 07 19 12.1 -0.4**
SJPF Ste Jean 78.96 314⇑*iP* **P 07 19 13.6 +0.7**
comp=Z,50nm,1.0s,mb5.1
SJPF Ste Jean 78.96 314⇑*iP* **P 07 19 13.6 +0.7**
SJPF pmax pmax
comp=Z,25nm,1.0s,mb5.1
SJPF Ste Jean 78.96 314⇑*iP* **P 07 19 13.6 +0.7**
comp=Z,25nm,1.0s,mb5.1
EALK Alkurruntz 79.07 314 P **P 07 19 13.6 +0.1**
comp=Z,959nm,3.2s
ERTA Horta de San J 79.10 311 P **P 07 19 13.6 -0.1**
comp=Z,978nm,3.3s
ELIZ Elizondo 79.12 314 P **P 07 19 13.1 -0.6**
ELIZ pmax pmax
comp=Z,37nm,2.0s,mb5.0
ELIZ Elizondo 79.12 314 P **P 07 19 13.1 -0.6**
comp=Z,37nm,2.0s,mb5.0
ESAC San Caprasio 79.22 312 P **P 07 19 14.2 -0.1**
comp=Z,1μm,2.9s,mb6.3
AKET Djebel Ketaf 79.23 306 P **P 07 19 15.7 +1.2**
JOHN Johnston Islan 79.30 77 PFAKE 07 19 30.0 +15
JOHN LR LR
comp=Z,2μm,20.0s,MS5.5
ABA Alger-Bouzarea 79.44 307 P **P 07 19 19.5 +3.9**
EIBI Ibiza 79.44 309 P **P 07 19 17.4 +1.8**
comp=Z,2μm,3.2s

ADJB Djebel Djouab 79.48 306 P **P** **07 19 16.6 +0.7**
EMHD Djebel Mahouad 79.80 306 P **P** **07 19 18.0 +0.4**
EMOS Mosqueruela 79.94 311 P **P** **07 19 18.0 -0.3**
comp=Z,779nm,2.9s,mb6.1
ECRI Cripan 80.02 314 P **P** **07 19 19.2 +0.5**
ECRI pmax pmax
comp=Z,259nm,2.5s,mb5.7
ECRI Cripan 80.02 314 P **P** **07 19 19.2 +0.6**
comp=Z,259nm,2.5s,mb5.7
ELAN Lanestosa 80.25 315 P **P** **07 19 20.6 +0.7**
comp=Z,1μm,3.4s
DZM Mont Dzumac 80.34 123 *e*P **P** **07 19 21.0 +0.4**
comp=Z,133nm,1.1s,mb5.8
DZM *e*LR LR 07 44 12.0
comp=Z,4μm,33.4s
DZM Mont Dzumac 80.34 123 *e*P **P** **07 19 22.1 +1.5**
DZM Mont Dzumac 80.34 123 *e*P **P** **07 19 20.8 +0.2**
comp=Z,48nm,0.9s,mb5.4
SFJD Kangerlussuaq 80.36 350 P **P** **07 19 19.4 -0.6**
comp=Z,62nm,0.7s,mb5.6,baz=17,slow=6.2,SNR=22
SFJD Kangerlussuaq 80.36 350 *e*P **P** **07 19 19.2 -0.8**
SFJD pmax pmax
comp=Z,71nm,0.8s,mb5.7
SFJD MLR MLR
comp=Z,4μm,20.0s,MS5.8
SFJD Kangerlussuaq 80.36 350 *e*P **P** **07 19 19.2 -0.8**
comp=Z,71nm,0.8s,mb5.7
SFJD LR LR
comp=Z,4μm,20.0s,MS5.8
SFJD Kangerlussuaq 80.36 350⇑ *i*P **P** **07 19 19.2 -0.8**
comp=Z,75nm,0.8s,mb5.7
SFJD *i* 07 29 22.1
SFJD
comp=Z,3μm,21.0s
DLBC Dease Lake 80.52 25 P **P** **07 19 21.5 +0.5**
comp=Z,13nm,0.9s,mb4.9,baz=307,slow=4.2,SNR=11
DLBC LR LR 07 58 50.9
comp=Z,3μm,18.5s,MS5.7,baz=303,slow=38
DLBC Dease Lake 80.52 25 *e*P **P** **07 19 21.4 +0.4**
EBEN Beniarda 80.65 310 P **P** **07 19 21.6 -0.5**
comp=Z,401nm,2.9s,mb5.8
ECHE Chera 80.67 311 P **P** **07 19 22.3 +0.1**
ECHE pmax pmax
comp=Z,11nm,0.7s,mb4.9
ECHE Chera 80.67 311 P **P** **07 19 22.3 +0.1**
comp=Z,11nm,0.7s,mb4.9
ETOR Torete 80.71 312 P **P** **07 19 21.8 -0.6**
ETOR pmax pmax
comp=Z,31nm,2.5s,mb4.8
ETOR Torete 80.71 312 P **P** **07 19 21.8 -0.6**
comp=Z,31nm,2.5s,mb4.8
EANR 'Ain N'Sour 81.21 307 P **P** **07 19 25.0 -0.2**
EARI Arriondas 81.29 316 P **P** **07 19 25.1 -0.4**
comp=Z,1μm,3.4s
ETRT Tiaret 81.37 306 P **P** **07 19 27.0 +1.0**
CRAG Craig 81.41 29 *e*P **P** **07 19 26.3 +0.4**
comp=Z,127nm,1.3s,mb5.7
ETOB Tobarra 81.56 310 P **P** **07 19 27.2 +0.2**
comp=Z,1μm,3.7s
YKA Yellowknife Ar 82.07 17 P **P** **07 19 28.8 -0.3**
comp=Z,33nm,0.7s,mb5.4,baz=329,slow=4.8,SNR=189
YKA PKKPbc PKKPbc 07 37 55.0 -3.8
comp=Z,3.8nm,0.7s,baz=157,slow=2.0,SNR=44
YKA PKPPKP 07 45 59.9
comp=Z,1.3nm,0.8s,baz=157,slow=2.4,SNR=13
YKA LR LR 08 00 41.5
comp=Z,281nm,18.1s,MS4.7,baz=290,slow=39
YKA Yellowknife Ar 82.07 17 P **P** **07 19 28.8 -0.3**
YKA PKKPbc PKKPbc 07 37 55.0 -3.8
YKA P'P' 07 45 59.9
YKA LR LR 08 00 41.5
GUD Guadarrama 82.14 313 P **P** **07 19 30.4 +0.4**
GUD pmax pmax
comp=Z,44nm,1.1s,mb5.3
GUD Guadarrama 82.14 313 P **P** **07 19 30.4 +0.5**
comp=Z,44nm,1.1s,mb5.3
EVIA Vianos 82.19 310 P **P** **07 19 30.5 +0.2**
EVIA pmax pmax
comp=Z,277nm,2.1s,mb5.8
EVIA Vianos 82.19 310 P **P** **07 19 30.5 +0.2**
comp=Z,277nm,2.1s,mb5.8
EPON Pontenova 82.43 316 P **P** **07 19 30.7 -0.8**
comp=Z,917nm,3.2s
FUNA Funafuti 82.51 105 PFAKE 07 19 40.0 +7.7
FUNA LR LR
comp=Z,5μm,20.0s,MS5.9
ESDC Sonseca Array 82.56 312 P **P** **07 19 32.2 +0.1**
comp=Z,4.2nm,0.5s,mb4.7,baz=47,slow=4.6,SNR=19
ESDC LR LR 07 59 20.2
comp=Z,3μm,18.1s,MS5.6,baz=35,slow=38
ESDC Sonseca Array 82.56 312 P **P** **07 19 31.9 -0.3**
comp=Z,167nm,2.6s,mb5.6
ESLA Sonseca Array 82.56 312 *e*P **P** **07 19 31.9 -0.3**
comp=Z,176nm,2.3s,mb5.7
ESLA LR LR
comp=Z,8μm,21.0s,MS6.1
EHUE Huescar 82.70 310 P **P** **07 19 32.5 -0.5**
EHUE pmax pmax
comp=Z,267nm,2.2s,mb5.9
EHUE Huescar 82.70 310 P **P** **07 19 32.5 -0.5**
comp=Z,267nm,2.2s,mb5.9
PAB San Pablo 82.88 312 *e*P **P** **07 19 33.5 -0.4**
PAB pmax pmax
comp=Z,119nm,2.0s,mb5.6
PAB MLR MLR
comp=Z,3μm,21.0s,MS5.6
PAB San Pablo 82.88 312 *e*P **P** **07 19 33.5 -0.3**
comp=Z,119nm,2.0s,mb5.6
PAB LR LR
comp=Z,3μm,21.0s,MS5.6
ENIJ Nijar 82.91 309 P **P** **07 19 33.4 -0.7**
ENIJ pmax pmax
comp=Z,193nm,2.0s,mb5.8
ENIJ Nijar 82.91 309 P **P** **07 19 33.4 -0.7**
comp=Z,193nm,2.0s,mb5.8
ERUA La Rua 82.97 316 P **P** **07 19 34.4 +0.1**
ERUA pmax pmax
comp=Z,480nm,3.0s
ERUA La Rua 82.97 316 P **P** **07 19 34.4 +0.1**
comp=Z,480nm,3.0s
ECAL Calabor 82.99 315 P **P** **07 19 34.5 +0.1**
comp=Z,1μm,3.5s
EQES Quesada 83.02 310 P **P** **07 19 34.2 -0.4**
comp=Z,2μm,3.6s
PBRG Braganca 83.08 315 *e*P **P** **07 19 35.0 +0.2**
comp=Z,61nm,1.9s,mb5.3
EBAN Banos Encina 83.29 311 P **P** **07 19 35.4 -0.6**
EBAN pmax pmax
comp=Z,22nm,1.0s,mb5.1
EBAN Banos Encina 83.29 311 P **P** **07 19 35.4 -0.6**
comp=Z,22nm,1.0s,mb5.1
EBER Berja 83.41 309 P **P** **07 19 33.6 -3.0**
comp=Z,1μm,4.3s
MVO Moncorvo 83.62 315 *e*P **P** **07 19 38.1 +0.4**
comp=Z,68nm,2.4s,mb5.3
MVO Moncorvo 83.62 315 *e*PP PP 07 22 52.9 +3.2
MVO *e*S S 07 30 02.0 +2.0
MVO *e*LQ 07 47 21.9
MVO *e*LR LR 07 52 41.9
comp=Z,2μm,18.0s
ECOG Cogollos-Vega 83.64 310 P **P** **07 19 36.9 -1.0**
ECOG pmax pmax
comp=Z,484nm,3.4s
ECOG Cogollos-Vega 83.64 310 P **P** **07 19 36.9 -0.9**
comp=Z,484nm,3.4s
EMAZ Mazaricos 83.74 317 P **P** **07 19 38.5 +0.3**
comp=Z,1μm,2.9s,mb6.5
EADA Adamuz 83.80 311 P **P** **07 19 36.3 -2.3**
comp=Z,872nm,3.1s
ELOB Lobios 83.84 316 P **P** **07 19 39.0 +0.2**
comp=Z,1μm,3.6s
EGUA Guajares 83.89 309 P **P** **07 19 38.5 -0.6**
EGUA pmax pmax
comp=Z,218nm,1.0s,mb6.2
EGUA Guajares 83.89 309 P **P** **07 19 38.5 -0.7**
comp=Z,218nm,1.0s,mb6.2
TAU Tasmania Unive 83.91 149 *e*P **P** **07 19 38.2 -0.6**
TAU pmax pmax
comp=Z,111nm,1.5s,mb5.8
TAU MLR MLR
comp=Z,1μm,21.0s,MS5.3
TAU Tasmania Unive 83.91 149 *e*P **P** **07 19 38.2 -0.6**
comp=Z,112nm,1.5s,mb5.8
TAU LR LR
comp=Z,1μm,21.0s,MS5.3
PCAB Cabril 83.91 315 *e*P **P** **07 19 40.3 +1.2**
comp=Z,89nm,1.7s,mb5.6

ELUQ Luque 83.94 310 P **P** **07 19 38.9 -0.5**
ELUQ pmax pmax
comp=Z,75nm,1.0s,mb5.8
ELUQ Luque 83.94 310 P **P** **07 19 38.9 -0.5**
comp=Z,75nm,1.0s,mb5.8
PVRL Vila Real 83.98 315 *e*P **P** **07 19 40.6 +1.1**
comp=Z,59nm,2.2s,mb5.3
MTE Manteigas 84.39 314 *e*PP PP 07 23 01.7 +5.7
MTE *e*S S 07 30 10.9 +3.1
MTE *e*LQ 07 46 25.5
MTE *e*LR LR 07 50 56.7
comp=Z,2μm,18.0s
MTE Manteigas 84.39 314 *e*P **P** **07 19 42.3 +0.7**
comp=Z,38nm,1.0s,mb5.5
MTE LR LR
comp=Z,2μm,21.0s,MS5.4
PVIS Viseu 84.42 315 *e*P **P** **07 19 42.4 +0.7**
comp=Z,105nm,1.9s,mb5.6
PCBR Castelo Branco 84.68 314 *e*P **P** **07 19 43.6 +0.5**
comp=Z,52nm,1.5s,mb5.4
TAM Tamanrasset 84.78 293 *e*P **P** **07 19 43.9 0.0**
TAM pmax pmax
comp=Z,57nm,1.8s,mb5.4
TAM Tamanrasset 84.78 293 *e*P **P** **07 19 43.9 0.0**
comp=Z,57nm,1.8s,mb5.4
EMIJ Mijas 84.84 310 P **P** **07 19 42.0 -1.9**
comp=Z,566nm,4.0s
PMRV Marv??o 84.87 313 *e*P **P** **07 19 44.6 +0.6**
comp=Z,95nm,1.7s,mb5.7
PMRV Marv??o 84.87 313 *e*PP PP 07 23 04.5 +4.6
PMRV *e*S S 07 30 17.7 +5.1
PMRV *e*LQ 07 48 45.0
PMRV *e*LR LR 07 52 03.6
comp=Z,3μm,20.0s
EBAD Badajoz 85.02 313 P **P** **07 19 44.2 -0.7**
comp=Z,706nm,3.1s
PAF Port-aux-Franc 85.17 201 *e*P **P** **07 19 44.3 -0.7**
PAF pmax pmax
comp=Z,186nm,0.8s,mb6.3
PAF Port-aux-Franc 85.17 201 *e*P **P** **07 19 44.3 -0.7**
comp=Z,186nm,0.8s,mb6.3
PESTR Estremoz 85.32 313 *e*P **P** **07 19 46.4 +0.1**
comp=Z,56nm,2.2s,mb5.3
PESTR Estremoz 85.32 313 *e*PP PP 07 23 09.5 +5.8
PESTR *e*S S 07 30 19.2 +2.1
PESTR *e*LQ 07 47 10.7
PESTR *e*LR LR 07 52 19.3
comp=Z,3μm,18.0s
EJIF Jimena Fronter 85.37 310 P **P** **07 19 45.3 -1.3**
EJIF pmax pmax
comp=Z,175nm,1.9s,mb5.9
EJIF Jimena Fronter 85.37 310 P **P** **07 19 45.3 -1.3**
comp=Z,175nm,1.9s,mb5.9
ESPR Espera 85.38 310 P **P** **07 19 46.3 -0.4**
comp=Z,1μm,3.7s
PBAR Barrancos 85.38 312 *e*P **P** **07 19 46.9 +0.3**
comp=Z,91nm,1.6s,mb5.7
PBAR Barrancos 85.38 312 *e*PP PP 07 23 08.3 +4.1
PBAR *e*S S 07 30 24.2 +6.5
PBAR *e*LQ 07 50 15.9
PBAR *e*LR LR 07 55 27.8
comp=Z,3μm,18.0s
EMIN Mina Concepcio 85.39 312 P **P** **07 19 46.6 -0.1**
comp=Z,1μm,3.7s
PTOM Tomar 85.39 314 *e*P **P** **07 19 47.4 +0.8**
comp=Z,123nm,2.2s,mb5.7
LSZ Lusaka 85.39 249 *e*P **P** **07 19 45.1 -1.8**
LSZ pmax pmax
comp=Z,44nm,1.4s,mb5.4
LSZ MLR MLR
comp=Z,2μm,20.0s,MS5.4
LSZ Lusaka 85.39 249 *e*P **P** **07 19 45.1 -1.8**
comp=Z,44nm,1.4s,mb5.4
LSZ LR LR
comp=Z,2μm,20.0s,MS5.4
FRB Frobisher Bay 85.41 356 P **P** **07 19 45.4 -0.9**
comp=Z,14nm,0.7s,mb5.2,baz=14,slow=6.7,SNR=38
FRB PKKPbc PKKPbc 07 37 48.1 -3.1
comp=Z,5.7nm,1.2s,baz=174,slow=4.3,SNR=7.1
EVO Evora 85.79 313 *e*P **P** **07 19 49.1 +0.4**
comp=Z,81nm,2.0s,mb5.6
BBB Bella Bella 85.84 29 LR LR 08 03 38.3
comp=Z,1μm,18.3s,MS5.4,baz=113,slow=40
SFS San Fernando 85.84 310 PFAKE 07 20 00.0 +11
SFS LR LR
comp=Z,5μm,21.0s,MS5.8
PBEJ Beja 86.00 312 *e*P **P** **07 19 50.1 +0.4**
comp=Z,72nm,1.6s,mb5.7
EGRO El Granado 86.04 312 P **P** **07 19 47.9 -2.0**
comp=Z,942nm,3.5s
PVAQ Vaqueiros 86.27 312 *e*P **P** **07 19 51.3 +0.2**
comp=Z,85nm,1.8s,mb5.7
PVAQ Vaqueiros 86.27 312 *e*PP PP 07 23 15.7 +4.3
PVAQ *e*S S 07 30 29.3 +2.8
PVAQ *e*LQ 07 49 42.1
PVAQ *e*LR LR 07 52 49.6
comp=Z,3μm,20.0s
PMAFR Mafra 86.33 314 *e*P **P** **07 19 51.8 +0.5**
comp=Z,198nm,2.1s,mb6.0
PMAFR Mafra 86.33 314 *e*PP PP 07 23 17.5 +5.7
PMAFR *e*LQ 07 47 04.9
PMAFR *e*LR LR 07 51 56.0
comp=Z,3μm,20.0s
PCVE Castro Verde 86.34 312 *e*P **P** **07 19 51.8 +0.4**
comp=Z,77nm,1.5s,mb5.7
PCVE Castro Verde 86.34 312 *e*PP PP 07 23 16.4 +4.5
PCVE *e*LQ 07 48 33.0
PCVE *e*LR LR 07 55 27.9
comp=Z,4μm,20.0s
LIS Lisbon 86.39 314 *e*P **P** **07 19 51.0 -0.7**
LIS *e*S S 07 30 17.0 -11
LIS AMS AMS 08 01 54.9
comp=Z,3μm,11.7s,MS6.0
LIS Lisbon 86.39 314 *e*P **P** **07 19 51.0 -0.6**
LIS *e*S S 07 30 17.0 -11
PBDV Barranco-do-Ve 86.50 312 *e*P **P** **07 19 52.6 +0.4**
comp=Z,99nm,1.8s,mb5.7
PBDV Barranco-do-Ve 86.50 312 *e*PP PP 07 23 15.6 +2.3
PBDV *e*S S 07 30 35.1 +6.4
PBDV *e*LQ 07 48 29.5
PBDV *e*LR LR 07 52 58.8
comp=Z,4μm,20.0s
MSVF Nonsavu 86.60 113 *e*P **P** **07 19 54.6 +1.7**
comp=Z,84nm,1.0s,mb5.9
MSVF LR LR
comp=Z,2μm,22.0s,MS5.4
MORF Marmelete 86.92 312 *e*P **P** **07 19 54.6 +0.3**
comp=Z,89nm,2.3s,mb5.6
MORF Marmelete 86.92 312 *e*PP PP 07 23 21.6 +5.0
MORF *e*S S 07 30 34.5 +1.7
MORF *e*LQ 07 50 26.6
MORF *e*LR LR 07 53 14.8
comp=Z,3μm,18.0s
MORF Marmelete 86.92 312 *e*P **P** **07 19 53.5 -0.8**
MORF *e*S S 07 30 20.2 -13
PFVI Vila Bisbo 87.14 312 *e*P **P** **07 19 56.0 +0.7**
comp=Z,109nm,1.9s,mb5.8
PFVI Vila Bisbo 87.14 312 *e*PP PP 07 23 20.1 +1.7
PFVI *e*S S 07 30 40.5 +5.6
PFVI *e*LQ 07 50 36.8
PFVI *e*LR LR 07 56 35.2
comp=Z,3μm,18.0s
RTC Rabat Centre 87.72 309 PFAKE 07 20 10.0 +12
RTC LR LR
comp=Z,1μm,19.0s,MS5.3
POHA Pohakuloa 89.20 67 *e*P **P** **07 20 05.8 +0.4**
comp=Z,466nm,1.5s,mb6.6
POHA LR LR
comp=Z,2μm,21.0s,MS5.4
FCC Fort Churchill 89.48 9 *e*P **P** **07 20 05.1 -0.9**
comp=Z,2.4nm,1.3s,mb4.4
STCH Steam Cracks 89.72 68 *e*P **P** **07 20 08.3 +0.5**
EDM Edmonton 90.36 21 *e*P **P** **07 20 10.5 +0.3**
PGC Sidney 90.47 29 *e*P **P** **07 20 10.1 -0.7**
comp=Z,2.9nm,1.0s,mb4.6
A05A Maple Falls 90.75 28⇓P **P** **07 20 11.7 -0.4**
baz=90
MBW Mount Baker 90.99 28 P **P** **07 20 13.7 +0.5**
NLWA Neilton Lookou 91.27 30⇑P **P** **07 20 15.4 +0.8**
baz=91,SNR=9.3
NLWA Neilton Lookou 91.27 30 *e*P **P** **07 20 15.7 +1.2**
comp=Z,174nm,1.6s,mb6.1
NLWA LR LR
comp=Z,2μm,20.0s,MS5.5
B06A Marblemount 91.37 28⇓P **P** **07 20 15.2 +0.2**
baz=91

A07A Ashnola River, 91.38 27⇑P **P** **07 20 15.4 +0.3**
baz=91
RPW Rockport 91.42 28 *e*P **P** **07 20 15.5 +0.3**
comp=Z,47nm,1.4s,mb5.6
JCW Jim Creek 91.45 28 P **P** **07 20 16.1 +0.7**
GNW Green Mountain 91.58 29 *e*P **P** **07 20 16.7 +0.7**
comp=Z,20nm,1.0s,mb5.4
A08A Turner Farm, O 91.89 26⇑P **P** **07 20 18.1 +0.7**
baz=92
B07A Winthrop 91.96 27⇓P **P** **07 20 18.2 +0.4**
baz=92
FFC Flin Flon 91.97 14 P **P** **07 20 17.1 -0.5**
comp=Z,268nm,0.9s,mb6.6,SNR=30
FFC Flin Flon 91.97 14 *e*P **P** **07 20 16.9 -0.7**
FFC pmax pmax
comp=Z,42nm,0.9s,mb5.8
FFC MLR MLR
comp=Z,3μm,20.0s,MS5.7
FFC Flin Flon 91.97 14 *e*P **P** **07 20 16.9 -0.8**
comp=Z,42nm,0.9s,mb5.8
FFC LR LR
comp=Z,3μm,20.0s,MS5.7
E03A Lebam 92.06 30⇓P **P** **07 20 18.8 +0.5**
baz=92,SNR=11
RMW Rattlesnake Mo 92.08 29 P **P** **07 20 19.3 +1.0**
C06A Tall Timber Ra 92.08 28⇓P **P** **07 20 18.5 +0.2**
baz=92
A09A Danville 92.13 26⇓P **P** **07 20 19.3 +0.8**
baz=92
NLW Nelson Butte 92.18 28 P **P** **07 20 19.5 +0.7**
D05A Enumclaw 92.22 29⇑P **P** **07 20 19.8 +0.8**
baz=92,SNR=13
B08A Colville Reser 92.35 27⇓P **P** **07 20 19.9 +0.4**
baz=92
A10A Northport 92.51 26⇓P **P** **07 20 20.9 +0.6**
baz=92
F03A Seaside 92.54 31⇑P **P** **07 20 21.1 +0.6**
baz=92,SNR=8.3
ETW Entiat 92.57 28 *e*P **P** **07 20 20.9 +0.4**
comp=Z,105nm,1.4s,mb6.1
C07A Waterville 92.61 28⇑P **P** **07 20 20.5 -0.2**
baz=92,SNR=20
LON Longmire 92.64 29 *e*P **P** **07 20 20.9 0.0**
LON pmax pmax
comp=Z,18nm,1.0s,mb5.5
LON Longmire 92.64 29 *e*P **P** **07 20 20.9 -0.1**
comp=Z,18nm,1.0s,mb5.5
TWW Teanaway 92.72 28 P **P** **07 20 22.6 +1.2**
LBTB Lobatse 92.75 243 *e*P **P** **07 20 19.2 -2.5**
LBTB pmax pmax
comp=Z,12nm,1.0s,mb5.3
LBTB MLR MLR
comp=Z,1μm,21.0s,MS5.3
LBTB Lobatse 92.75 243 *e*P **P** **07 20 19.2 -2.5**
comp=Z,12nm,1.0s,mb5.3
LBTB LR LR
comp=Z,1μm,21.0s,MS5.3
B09A Rice 92.75 26⇑P **P** **07 20 21.8 +0.4**
baz=92
ERK Elk Rock 92.77 30 P **P** **07 20 22.5 +0.9**
AFI Afiamalu 92.85 104 LR LR 07 56 14.3
comp=Z,986nm,21.7s,MS5.2,baz=304,slow=32
SOSW Source of Smit 92.91 30 P **P** **07 20 22.8 +0.6**
C08A Higginbotham F 92.93 27⇑P **P** **07 20 22.1 -0.1**
baz=93,SNR=12
TORD Torodi Ar. Bea 92.95 287 P **P** **07 20 21.6 -1.3**
comp=Z,4.4nm,0.8s,mb5.0,baz=53,slow=1.9,SNR=18
TORD PP PP 07 24 07.1 +1.8
comp=Z,5.2nm,1.0s,baz=57,slow=7.7,SNR=4.9
TORD PKKPbc PKKPbc 07 37 35.5 +3.8
comp=Z,0.8nm,0.7s,baz=263,slow=2.9,SNR=3.7
TORD Torodi Ar. Bea 92.95 287 P **P** **07 20 21.6 -1.3**
TORD PP PP 07 24 07.1 +1.8
TORD PKKPbc PKKPbc 07 37 35.5 +3.8
A11A Hall Mountain, 92.97 25⇑P **P** **07 20 23.0 +0.6**
baz=93
F04A Amboy 93.03 30⇓P **P** **07 20 22.6 -0.1**
baz=93,SNR=11
E06A Yakima 93.16 29⇑P **P** **07 20 23.8 +0.5**
baz=93,SNR=24
B10A Chitwood Farm, 93.20 26⇑P **P** **07 20 23.8 +0.4**
baz=93
C09A Chrisman Ranch 93.22 27⇓P **P** **07 20 23.9 +0.4**
baz=93,SNR=25
A12A Yaak River Ran 93.24 24⇓P **P** **07 20 24.1 +0.5**
baz=93
NEW Newport 93.27 26 *e*P **P** **07 20 24.2 +0.4**
NEW pmax pmax
comp=Z,24nm,0.7s
NEW MLR MLR
comp=Z,2μm,21.0s
NEW Newport 93.27 26 *e*P **P** **07 20 24.1 +0.4**
comp=Z,24nm,0.7s,mb5.7
NEW LR LR
comp=Z,2μm,21.0s,MS5.5
OD2 Odessa Site #2 93.38 27 P **P** **07 20 25.0 +0.7**
B11A Sandpoint 93.40 25⇓P **P** **07 20 25.0 +0.6**
baz=93
C10A Spilker Farm, 93.57 26⇑P **P** **07 20 25.8 +0.6**
baz=93
D08A Wollman Farm, 93.57 27⇓P **P** **07 20 25.4 +0.2**
baz=93,SNR=9.5
G04A Mulino 93.58 30⇓P **P** **07 20 25.6 +0.4**
baz=93
E07A Sunnyside 93.61 28⇓P **P** **07 20 26.1 +0.7**
baz=93
B12A Libby 93.66 25⇑P **P** **07 20 26.0 +0.5**
baz=93
A13A Flathead Natio 93.68 24⇓P **P** **07 20 25.8 +0.1**
baz=93
WRD Warden 93.69 28 P **P** **07 20 26.1 +0.3**
COR Corvallis 93.70 31 PFAKE 07 20 40.0 +14
COR LR LR
comp=Z,1μm,20.0s,MS5.3
WALA Waterton Lakes 93.74 23 *e*P **P** **07 20 26.2 +0.2**
comp=Z,0.4nm,0.8s
D09A Jones Farm, Ri 93.81 27⇑P **P** **07 20 26.8 +0.5**
baz=94
RSW Rattlesnake Hi 93.84 28 *e*P **P** **07 20 27.5 +1.0**
comp=Z,23nm,1.0s,mb5.6
HOOD Mount Hood Mea 93.85 30 *e*P **P** **07 20 26.3 -0.2**
comp=Z,432nm,1.6s,mb6.6
HAWA Hanford 93.87 28 *e*P **P** **07 20 26.3 -0.3**
comp=Z,35nm,1.2s,mb5.7
HAWA LR LR
comp=Z,841nm,19.0s,MS5.2
E08A Dider Farm, El 93.98 28⇑P **P** **07 20 27.4 +0.3**
baz=94,SNR=5.4
A14A Double T Ranch 93.98 23⇓P **P** **07 20 26.9 -0.1**
baz=94
F07A Phinny Hill Vi 94.11 29⇑P **P** **07 20 27.9 +0.2**
baz=94
H04A Detroit Lake 94.12 31⇑P **P** **07 20 27.5 -0.3**
baz=94,SNR=7.5
B13A Whitefish 94.14 24⇓P **P** **07 20 28.0 +0.2**
baz=94,SNR=29
SCHQ Schefferville 94.15 354 P **P** **07 20 26.8 -0.9**
comp=Z,10nm,0.7s,mb5.4,baz=23,slow=4.5,SNR=16
SCHQ PKKPbc PKKPbc 07 37 27.4 -2.1
comp=Z,4.9nm,0.7s,baz=257,slow=1.1,SNR=8.7
SCHQ LR LR 08 06 27.1
comp=Z,2μm,19.2s,MS5.7,baz=18,slow=38
SCHQ Schefferville 94.15 354 *e*P **P** **07 20 26.6 -1.1**
comp=Z,15nm,0.9s,mb5.4
SCHQ LR LR
comp=Z,3μm,20.0s,MS5.8
A15A Johnson Ranch, 94.21 23⇑P **P** **07 20 27.8 -0.3**
baz=94,SNR=15
D10A Wagner Farm, O 94.21 26⇑P **P** **07 20 28.2 +0.1**
baz=94,SNR=15
E09A Wood Farm, Sta 94.32 27⇓P **P** **07 20 28.6 0.0**
baz=94,SNR=6.3
C12B Naegeli Ranch, 94.34 25⇓P **P** **07 20 29.2 +0.5**
baz=94,SNR=6.2
G06A Carlson Farm, 94.35 29⇓P **P** **07 20 29.4 +0.6**
baz=94,SNR=9.8
BSMT Bassoo Peak 94.47 25 *e*P **P** **07 20 30.1 +0.8**
comp=Z,23nm,0.9s,mb5.6
D11A Klaveano Farm, 94.58 26⇑P **P** **07 20 29.4 -0.4**
baz=94,SNR=29
A16A West Butte Ran 94.61 22⇓P **P** **07 20 29.3 -0.7**
baz=94,SNR=30
F08A Pendleton 94.66 28⇑P **P** **07 20 30.5 +0.3**
baz=94
C13A Hot Springs 94.69 25⇑P **P** **07 20 30.3 -0.1**
baz=94,SNR=24
YBMT Yellow Bay 94.73 24 *e*P **P** **07 20 31.4 +0.8**
comp=Z,28nm,1.1s,mb5.6

JTMT Jette 94.73 24 *e*P P 07 20 31.0 +0.4
comp=Z,15nm,1.0s,mb5.4
E10A Myers Farm, Un 94.75 27 ⇓P P 07 20 30.8 +0.2
baz=94
LNOR Lincton Mounta 94.80 28 *e*P P 07 20 31.4 +0.5
LNOR pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LNOR Lincton Mounta 94.80 28 *e*P P 07 20 31.4 +0.6
comp=Z,5.4nm,0.8s,mb5.0
B15A Bradely Ranch, 94.84 23 ⇓P P 07 20 30.5 -0.6
baz=94,SNR=25
C14A Swan Lake 94.91 24 ⇑P P 07 20 31.4 +0.1
baz=95
D12A Red Ives Fores 94.94 25 ⇓P P 07 20 31.4 -0.1
baz=95
BOSA Boshof 94.94 240 P P 07 20 29.5 -2.2
comp=Z,7.8nm,0.9s,mb5.2,baz=112,slow=5.1,SNR=7.8
BOSA LR LR 08 04 44.4
comp=Z,954nm,19.5s,MS5.3,baz=59,slow=36
BOSA Boshof 94.94 240 *e*P P 07 20 29.0 -2.7
BOSA pmax pmax
comp=Z,11nm,0.9s,mb5.3
BOSA MLR MLR
comp=Z,1μm,19.0s,MS5.4
BOSA Boshof 94.94 240 *e*P P 07 20 29.0 -2.7
comp=Z,11nm,0.9s,mb5.3
BOSA LR LR
comp=Z,1μm,19.0s,MS5.4
G08A Pilot Rock 95.00 28 ⇓P P 07 20 32.2 +0.4
baz=95,SNR=10.0
SWMT Swartz Lake 95.04 24 *e*P P 07 20 32.5 +0.6
comp=Z,17nm,1.0s,mb5.4
B16A M & M Farms, S 95.04 23 ⇑P P 07 20 31.1 -0.8
baz=95,SNR=24
F09A S2 Ranch, Elgi 95.08 28 ⇓P P 07 20 32.0 -0.2
baz=95
F10A Beach Ranch, E 95.13 27 ⇑P P 07 20 32.1 -0.3
baz=95,SNR=18
A18A Metzger Ranch, 95.19 21 ⇓P P 07 20 31.5 -1.1
baz=95,SNR=22
E11A Bogner Ranch, 95.20 26 ⇓P P 07 20 32.9 +0.2
baz=95,SNR=30
D13A Huson 95.23 25 ⇑P P 07 20 32.7 -0.1
baz=95,SNR=11
C15A Salmond Ranch, 95.29 23 ⇑P P 07 20 32.8 -0.3
baz=95,SNR=35
E12A Beaver Dam Sad 95.39 26 ⇑P P 07 20 33.5 -0.1
baz=95
HUMO Hull Mountain 95.41 32 *e*P P 07 20 34.1 +0.4
HUMO LR LR
comp=Z,26nm,1.4s,mb5.5
B17A L&G Farms, Che 95.44 22 ⇑P P 07 20 33.3 -0.5
baz=95,SNR=33
SLMT Seeley Lake 95.44 24 *e*P P 07 20 34.0 +0.2
comp=Z,61nm,1.2s,mb5.9
G09A Cove 95.49 28 ⇑P P 07 20 34.1 0.0
baz=95,SNR=23
C16A Fuhringer Ranc 95.56 23 ⇓P P 07 20 33.8 -0.5
baz=95,SNR=21
D14A Greenough 95.58 24 ⇓P P 07 20 34.1 -0.3
baz=95,SNR=22
F11A Grangeville 95.61 26 ⇓P P 07 20 34.5 -0.1
baz=95,SNR=14
MSO Missoula 95.64 25 *e*P P 07 20 34.2 -0.4
MSO LR LR
comp=Z,25nm,1.3s,mb5.5
comp=Z,1μm,20.0s,MS5.4
B18A Beardsley Farm 95.68 21 ⇑P P 07 20 34.2 -0.6
baz=95,SNR=11
H08A Prairie City 95.75 29 ⇓P P 07 20 35.5 +0.3
baz=96,SNR=9.0
I07A Izee 95.75 29 ⇑P P 07 20 35.5 +0.3
baz=96,SNR=10
CHMT Chamberlain Mo 95.81 24 *e*P P 07 20 35.4 -0.1
comp=Z,31nm,1.6s,mb5.5
E13A Victor 95.88 25 ⇓P P 07 20 35.4 -0.4
baz=96,SNR=30
D15A Lincoln 95.96 24 ⇓P P 07 20 35.9 -0.2
baz=96,SNR=13
G11A Walters Elk Ra 95.98 27 ⇑P P 07 20 35.8 -0.5
baz=96,SNR=16
EGMT Eagleton 96.01 22 ⇓P P 07 20 35.7 -0.6
baz=96,SNR=11
EGMT Eagleton 96.01 22 *e*P P 07 20 35.7 -0.7
EGMT LR LR
comp=Z,46nm,1.4s,mb5.7
comp=Z,2μm,19.0s,MS5.6
BMO Blue Mountains 96.03 28 *e*P P 07 20 35.7 -0.8
BMO pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
BMO MLR MLR
comp=Z,2μm,19.0s,MS5.5
BMO Blue Mountains 96.03 28 *e*P P 07 20 35.7 -0.8
comp=Z,4.2nm,0.7s,mb5.0
BMO LR LR
comp=Z,2μm,19.0s,MS5.5
C17A Wharram Farm, 96.03 22 ⇑P P 07 20 35.6 -0.9
baz=96,SNR=12
TSUM Tsumeb 96.05 251 PFAKE 07 20 50.0 +13
TSUM LR LR
comp=Z,2μm,22.0s,MS5.5
F12A Elk City 96.07 26 ⇑P P 07 20 36.2 -0.5
baz=96,SNR=10
E14A Clinton 96.15 25 ⇓P P 07 20 36.8 -0.2
baz=96,SNR=16
YBH Yreka Blue Hor 96.21 33 PP PP 07 24 33.8 +4.3
comp=Z,3.4nm,1.1s,baz=335,slow=9.3,SNR=3.0
YBH Yreka Blue Hor 96.21 33 PFAKE 07 20 50.0 +13
YBH LR LR
comp=Z,1μm,19.0s,MS5.3
K05A Summer Lake 96.25 31 ⇑P P 07 20 37.7 +0.1
baz=96
D16A Dana Ranch, Ca 96.30 23 ⇑P P 07 20 37.5 -0.1
baz=96,SNR=19
F13A Darby 96.38 25 ⇑P P 07 20 37.5 -0.6
baz=96,SNR=10.0
E15A Deer Lodge 96.45 24 ⇓P P 07 20 38.1 -0.3
baz=96,SNR=10
HRY Holter Researc 96.48 23 *e*P P 07 20 38.7 +0.2
comp=Z,28nm,1.1s,mb5.6
CMLA Cha da Macela 96.55 322 PFAKE 07 20 50.0 +11
CMLA LR LR
comp=Z,3μm,20.0s,MS5.7
I09A Lost Marbles R 96.58 28 ⇓P P 07 20 39.2 +0.2
baz=96
H11A Donnelly 96.66 27 ⇑P P 07 20 39.1 -0.3
baz=96,SNR=16
E16A East Helena 96.69 23 ⇓P P 07 20 39.2 -0.3
baz=96,SNR=16
F14A Wisdom 96.71 25 ⇑P P 07 20 39.2 -0.4
baz=96
D18A Linhart Farms, 96.73 22 ⇑P P 07 20 39.2 -0.4
baz=96
J08A Circle Bar Ran 96.78 29 ⇓P P 07 20 40.0 +0.1
baz=96
I10A Payette 96.86 28 ⇓P P 07 20 40.0 -0.3
baz=97
XMAS Kiritimati 96.97 83 PFAKE 07 20 50.0 +8.7
XMAS LR LR
comp=Z,2μm,22.0s,MS5.5
F15A Butte 97.00 24 ⇓P P 07 20 40.7 -0.2
baz=97,SNR=12
G13A Cobalt 97.01 26 ⇑P P 07 20 40.2 -0.8
baz=97
E17A Martinsdale 97.03 23 ⇑P P 07 20 40.6 -0.4
baz=97,SNR=13
LRM Limekiln Ridge 97.03 24 *e*P P 07 20 40.8 -0.2
comp=Z,54nm,1.1s,mb5.9
CASY Casey 97.07 177 ⇑*i*P P 07 20 39.3 -1.1
CASY Casey 97.07 177 *e*P P 07 20 39.0 -1.4
comp=Z,137nm,1.7s,mb6.1
CASY LR LR
comp=Z,2μm,21.0s,MS5.5
J09A Fry Pan Ranch, 97.09 29 ⇑P P 07 20 40.7 -0.7
baz=97
MOD Modoc 97.17 31 *e*P P 07 20 41.8 +0.1
comp=Z,47nm,1.7s,mb5.6
MOD LR LR
comp=Z,2μm,19.0s,MS5.6
G14A Jackson 97.17 25 ⇑P P 07 20 41.5 -0.2
baz=97,SNR=9.2
WDC Whiskeytown Da 97.19 33 PFAKE 07 20 50.0 +8.2
WDC LR LR
comp=Z,1μm,20.0s,MS5.4
DGMT Dagmar 97.22 18 ⇓P P 07 20 41.7 -0.2
baz=97,SNR=11
DGMT Dagmar 97.22 18 *e*P P 07 20 41.9 0.0
comp=Z,60nm,1.1s,mb5.9
DGMT LR LR
comp=Z,2μm,21.0s,MS5.6
H12A Diamond D Ranc 97.24 26 ⇑P P 07 20 41.3 -0.7
baz=97
E18A Harlowton 97.25 22 ⇓P P 07 20 42.2 +0.2
baz=97,SNR=14
I11A Placerville 97.34 27 ⇓P P 07 20 42.2 -0.3
baz=97
F16A Kennard Place, 97.36 24 ⇑P P 07 20 42.1 -0.4
baz=97
DLMT Dillon 97.38 25 *e*P P 07 20 42.7 +0.1
comp=Z,18nm,1.0s,mb5.5
ULM Lac du Bonnet 97.41 12 P P 07 20 41.2 -1.5
comp=Z,4.8nm,0.9s,mb4.9,baz=339,slow=6.1,SNR=5.8
ULM PKKPbc PKKPbc 07 37 17.2 -3.4
comp=Z,4.8nm,0.6s,baz=150,slow=2.3,SNR=10
ULM LR LR 08 08 31.3
comp=Z,3μm,19.2s,MS5.7,baz=178,slow=38
ULM Lac du Bonnet 97.41 12 P P 07 20 41.2 -1.5
ULM PKKPbc PKKPbc 07 37 17.2 -3.4
ULM LR LR 08 08 31.3
J10A Berg Farm, Mel 97.42 28 ⇓P P 07 20 42.7 -0.2
baz=97
H13A Challis 97.45 26 ⇓P P 07 20 41.9 -1.0
baz=97
WVOR Wild Horse Val 97.46 30 *e*P P 07 20 43.4 +0.3
WVOR pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
WVOR MLR MLR
comp=Z,1μm,21.0s,MS5.4
WVOR Wild Horse Val 97.46 30 *e*P P 07 20 43.4 +0.4
comp=Z,7.7nm,0.9s,mb5.1
WVOR LR LR
comp=Z,1μm,21.0s,MS5.4
BOZ Bozeman (W) 97.47 24 ⇓P P 07 20 42.7 -0.3
baz=97,SNR=13
BOZ Bozeman (W) 97.47 24 *e*P P 07 20 42.7 -0.3
BOZ pmax pmax
comp=Z,13nm,1.2s,mb5.2
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.5
BOZ Bozeman (W) 97.47 24 *e*P P 07 20 42.7 -0.4
comp=Z,13nm,1.2s,mb5.2
BOZ LR LR
comp=Z,2μm,20.0s,MS5.5
MIR Mirnyy 97.50 184 ⇓*i*P P 07 20 41.0 -1.3
MIR pmax pmax
comp=Z,84nm,1.8s,mb5.9
SNZO South Karori 97.53 134 PFAKE 07 20 50.0 +6.9
SNZO LR LR
comp=Z,1μm,22.0s,MS5.4
F17A Fitzpatrick Pl 97.58 23 ⇓P P 07 20 43.4 -0.1
baz=97,SNR=16
G15A Dillon 97.59 25 ⇓P P 07 20 43.5 -0.1
baz=97,SNR=30
H14A Leadore 97.74 25 ⇓P P 07 20 43.4 -0.8
baz=97
MCMT McKenzie Canyo 97.75 25 *e*P P 07 20 44.6 +0.3
comp=Z,9.2nm,1.1s,mb5.2
I12A Atlanta 97.77 27 ⇑P P 07 20 43.7 -0.7
baz=98
G16A Moss Hill, Enn 97.78 24 ⇑P P 07 20 44.1 -0.3
baz=98,SNR=8.9
MFID Camas Ranch 97.81 28 ⇑P P 07 20 44.8 +0.2
baz=98
F18A Big Timber 97.89 23 ⇑P P 07 20 44.6 -0.3
baz=98,SNR=18
K10A MacKenzie Ranc 97.92 29 ⇑P P 07 20 44.4 -0.7
baz=98
H15A Lima 98.00 25 ⇓P P 07 20 45.4 -0.1
baz=98,SNR=9.7
GCMT Greycliff 98.01 23 *e*P P 07 20 45.2 -0.2
comp=Z,21nm,1.2s,mb5.5
I13A Wildhorse Cree 98.06 26 ⇓P P 07 20 45.6 -0.1
baz=98
G17A Pierce Place, 98.06 23 ⇓P P 07 20 45.0 -0.7
baz=98
HOPS Hopland 98.17 35 PFAKE 07 21 00.0 +14
HOPS LR LR
comp=Z,1μm,20.0s,MS5.3
J12A Stokes Ranch, 98.24 27 ⇑P P 07 20 46.3 -0.2
baz=98
HLID Hailey 98.24 27 ⇑P P 07 20 46.3 -0.2
baz=98
HLID Hailey 98.24 27 *e*P P 07 20 47.0 +0.5
comp=Z,66nm,1.7s,mb5.9
HLID LR LR
comp=Z,2μm,19.0s,MS5.7
QLMT Earthquake Lak 98.25 24 *e*P P 07 20 46.5 -0.1
comp=Z,2.3nm,0.6s,mb4.9
K11A Parker Ranch, 98.27 28 ⇓P P 07 20 46.0 -0.7
baz=98
LAO LASA Array 98.28 20 *e*P P 07 20 46.6 0.0
comp=Z,22nm,1.2s,mb5.6
LAO LR LR
comp=Z,2μm,21.0s,MS5.7
I14A Mackay 98.30 26 ⇑P P 07 20 46.2 -0.6
baz=98
H16A Russell Place, 98.43 24 ⇑P P 07 20 47.4 0.0
baz=98
J13A Cove Ranch, Pi 98.47 27 ⇓P P 07 20 48.0 +0.4
baz=98
YMR Madon River 98.56 24 *e*P P 07 20 48.1 +0.2
comp=Z,27nm,1.6s,mb5.5
I15A Monteview 98.59 25 ⇓P P 07 20 48.1 0.0
baz=98
L10A Juniper Basin 98.67 29 ⇑P P 07 20 48.9 +0.4
baz=98
RLMT Red Lodge 98.73 23 ⇑P P 07 20 48.6 -0.1
baz=98
RLMT Red Lodge 98.73 23 *e*P P 07 20 48.0 -0.7
comp=Z,6.2nm,0.8s,mb5.2
RLMT LR LR
comp=Z,3μm,19.0s,MS5.7
BEKR Beckwourth 98.77 32 ⇑P P 07 20 48.9 -0.1
baz=98
YFT Old Faithful 98.79 24 *e*P P 07 20 50.8 +1.9
comp=Z,19nm,1.0s,mb5.6
LKWY Lake 98.84 24 *e*P P 07 20 52.0 +2.8
LKWY pmax pmax
comp=Z,48nm,1.5s,mb5.8
LKWY MLR MLR
comp=Z,3μm,19.0s,MS5.8
LKWY Lake 98.84 24 *e*P P 07 20 52.0 +2.8
comp=Z,48nm,1.5s,mb5.8
LKWY LR LR
comp=Z,3μm,19.0s,MS5.8
L11A Cat Creek Ranc 98.89 28 ⇓P P 07 20 49.8 +0.4
baz=99
MCCM Marconi Confer 98.92 35 PFAKE 07 21 00.0 +10
MCCM LR LR
comp=Z,1μm,20.0s,MS5.3
H17A Grant Village 98.93 24 ⇑P P 07 20 50.2 +0.6
baz=99
I16A Newdale 99.06 25 ⇑P P 07 20 50.9 +0.7
baz=99
M10A I.L. Ranch, Tu 99.10 29 ⇑P P 07 20 50.7 +0.2
baz=99
J15A Blackfoot 99.13 25 ⇑P P 07 20 50.9 +0.4
baz=99
K13A Stover Farm, H 99.14 27 ⇑P P 07 20 50.7 +0.1
baz=99
L12A House Creek Ra 99.20 28 ⇓P P 07 20 51.2 +0.4
baz=99
IMW Indian Meadow 99.24 24 *e*P P 07 20 51.6 +0.6
comp=Z,10nm,0.8s,mb5.4
AGMN Agassiz Refuge 99.29 13 PFAKE 07 21 00.0 +8.9
AGMN LR LR
comp=Z,2μm,20.0s,MS5.7
M11A Holland Ranch, 99.49 29 ⇓P P 07 20 52.7 +0.6
baz=99
J16A Bone 99.54 25 ⇑P P 07 20 52.8 +0.5
baz=99
RRI2 Red Ridge 99.58 25 *e*P P 07 20 53.3 +0.8
comp=Z,7.5nm,0.8s,mb5.2
K14A Jones Ranch, D 99.58 26 ⇓P P 07 20 53.1 +0.6
baz=99
L13A Double Diamond 99.68 27 ⇓P Pdif 07 20 53.6 +0.7
baz=99
BMN Battle Mountai 99.71 30 PFAKE 07 21 00.0 +7.0
BMN LR LR
comp=Z,1μm,20.0s,MS5.5
M12A Wells 99.86 28 ⇑P Pdif 07 20 55.0 +1.3
baz=100
J18A Kendall Valley 100.16 24 ⇑P Pdif 07 20 55.8 +0.8
baz=100
AHID Auburn Hatcher 100.17 25 PFAKE 07 21 10.0 +15
AHID LR LR
comp=Z,2μm,19.0s,MS5.5
SUR Sutherland 100.17 238 PFAKE 07 21 10.0 +15
SUR LR LR
comp=Z,3μm,22.0s,MS5.7
M13A Montello 100.21 28 ⇓P Pdif 07 20 55.8 +0.5
baz=100
M13A Montello 100.21 28 *e*Pdif Pdif 07 20 55.5 +0.3
comp=Z,14nm,1.3s
CMB Columbia Colle 100.22 34 PFAKE 07 21 10.0 +15
CMB LR LR
comp=Z,844nm,20.0s,MS5.2
K17A Gardner Place, 100.24 25 ⇓P Pdif 07 20 55.7 +0.3
baz=100
N12A Clover Valley, 100.28 29 ⇑P Pdif 07 20 56.0 +0.4
baz=100
N12A Clover Valley, 100.28 29 *e*Pdif Pdif 07 20 56.3 +0.7
comp=Z,22nm,1.4s
ELK Elko 100.29 29 PFAKE 07 21 10.0 +14
ELK LR LR
comp=Z,2μm,19.0s,MS5.7
L15A Malad City 100.35 26 ⇓P Pdif 07 20 55.9 0.0
baz=100
EYMN Ely 100.37 10 PFAKE 07 21 10.0 +14
EYMN LR LR
comp=Z,3μm,19.0s,MS5.8
M14A Sheep Mountain 100.41 27 ⇑P Pdif 07 20 56.6 +0.4
baz=100
O11A Cowboy Ranch, 100.63 29 ⇑P Pdif 07 20 57.8 +0.7
baz=100
K18A Toltan Ranch, 100.66 24 ⇑P Pdif 07 20 58.4 +1.1
baz=100
L16A Fish Haven 100.70 26 ⇓P Pdif 07 20 58.6 +1.1
baz=100
BW06 Boulder Array 100.71 24 ⇑P Pdif 07 20 57.5 0.0
baz=100
BW06 Boulder Array 100.71 24 *e*Pdif Pdif 07 20 57.3 -0.2
BW06 LR LR
comp=Z,2μm,19.0s,MS5.7
PDAR Pinedale Array 100.71 24 P Pdif 07 20 56.6 -0.9
comp=Z,0.8nm,0.8s,baz=31,slow=2.0,SNR=8.4
PDAR PP PP 07 25 05.8 +2.0
comp=Z,3.0nm,1.0s,baz=350,slow=6.0,SNR=6.8
PDAR PKKPbc PKKPbc 07 37 08.5 -2.8
comp=Z,0.9nm,0.6s,baz=157,slow=2.7,SNR=6.8
PDAR PKPPKP 07 45 25.3
comp=Z,1.0nm,1.2s,baz=160,slow=2.9,SNR=3.8
SAO San Andreas Ge 100.71 35 PFAKE 07 21 10.0 +13
SAO LR LR
comp=Z,994nm,19.0s,MS5.3
L17A Cokeville 100.83 25 ⇑P Pdif 07 20 58.3 +0.3
baz=100
NVAR Mina Array Bea 100.87 32 P Pdif 07 20 58.1 -0.1
comp=Z,0.4nm,0.6s,baz=287,slow=6.3,SNR=2.6
NVAR PP PP 07 25 07.2 +1.9
comp=Z,1.7nm,0.8s,baz=310,slow=5.8,SNR=6.6
NVAR PKKPbc PKKPbc 07 37 09.2 -1.4
comp=Z,1.8nm,0.7s,baz=127,slow=3.0,SNR=11
NVAR PKPPKP 07 45 27.9
comp=Z,0.5nm,0.8s,baz=70,slow=3.9,SNR=4.4
NVAR Mina Array Bea 100.87 32 P Pdif 07 20 58.1 -0.1
NVAR PP PP 07 25 07.2 +1.9
NVAR PKKPbc PKKPbc 07 37 09.2 -1.4
NVAR P'P' 07 45 27.9
O12A Currie 100.89 29 ⇑P Pdif 07 20 58.6 +0.3
baz=101
K19A Absolon Red Bu 100.91 23 ⇓P Pdif 07 20 58.0 -0.4
baz=101
HWUT Hardware Ranch 101.00 26 *e*Pdif Pdif 07 20 59.3 +0.5
comp=Z,3.6nm,0.7s
HWUT LR LR
comp=Z,1μm,20.0s,MS5.5
N14A Grayback Hills 101.03 27 ⇑P Pdif 07 20 58.8 -0.1
baz=101
K20A Yellowstone Ra 101.23 23 ⇑P Pdif 07 20 59.5 -0.3
baz=101
DRV Dumont d'Urvil 101.26 166 SP SP 07 34 12.0 +2.6
DRV SS SS 07 40 08.0 +29
DRV L 07 49 00.0
DRV R 07 56 00.0
RSSD Black Hills 101.26 20 *e*P Pdif 07 21 00.2 +0.3
RSSD pmax pmax
comp=Z,128nm,2.0s
RSSD MLR MLR
comp=Z,2μm,19.0s,MS5.6
RSSD Black Hills 101.26 20 *e*Pdif Pdif 07 21 00.1 +0.2
comp=Z,128nm,2.0s
RSSD LR LR
comp=Z,2μm,19.0s,MS5.6
L18A Fontenelle, Gr 101.28 25 ⇓P Pdif 07 20 59.3 -0.7
baz=101
O13A Hicks Ranch, I 101.32 28 ⇓P Pdif 07 20 59.6 -0.6
baz=101
M17A Scullys Gap (B 101.45 25 ⇑P Pdif 07 21 00.0 -0.7
baz=101
P12A McGill 101.50 29 ⇑P Pdif 07 21 00.4 -0.6
baz=101
TPH Tonopah 101.65 32 PFAKE 07 21 10.0 +8.3
TPH LR LR
comp=Z,818nm,21.0s,MS5.2
M18A Lyman 101.71 25 ⇑P Pdif 07 21 01.6 -0.4
baz=101
DUG Dugway 101.74 27 ⇑P Pdif 07 21 01.2 -0.8
baz=102
DUG Dugway 101.74 27 *e*P Pdif 07 21 02.8 +0.8
DUG pmax pmax
comp=Z,4.0nm,0.8s
DUG MLR MLR
comp=Z,1μm,21.0s,MS5.4
DUG Dugway 101.74 27 *e*Pdif Pdif 07 21 02.8 +0.8
comp=Z,3.7nm,0.8s
DUG LR LR
comp=Z,1μm,21.0s,MS5.4
O15A The Old Anders 101.80 27 ⇑P Pdif 07 21 01.7 -0.6
baz=102
DBIC Dimbokro 101.87 285 PP PP 07 25 12.7 -1.4
comp=Z,9.5nm,1.1s,baz=45,slow=7.8,SNR=4.3
DBIC Dimbokro 101.87 285 PFAKE 07 21 10.0 +7.4
DBIC LR LR
comp=Z,1μm,20.0s,MS5.5
P13A Bates Ranch, G 101.88 29 ⇓P Pdif 07 21 01.7 -0.9
baz=102
R10A Warm Springs 101.88 31 ⇓P Pdif 07 21 02.5 -0.2
baz=102
Q12A Willow Creek R 101.89 29 ⇓P Pdif 07 21 03.0 +0.3
baz=102
KIC Kosan Boka 101.94 285 *e*P PP 07 25 13.4 -1.2
comp=Z,70nm,1.4s
TIC Toumodi 102.02 285 *e*P PP 07 25 14.2 -1.0
comp=Z,130nm,1.7s
S10A Tonopah Range, 102.06 31 ⇑P Pdif 07 21 03.1 -0.4
baz=102
R11A Troy Canyon, C 102.15 30 ⇑P Pdif 07 21 03.6 -0.3
baz=102
P14A Drum Mountains 102.15 28 ⇓P Pdif 07 21 03.3 -0.6
baz=102
L21A Rawlins 102.17 23 ⇓P Pdif 07 21 04.0 0.0
baz=102
O16A Springville 102.24 27 ⇑P Pdif 07 21 03.5 -0.7
baz=102
N18A Larsen Ranch, 102.25 25 ⇑P Pdif 07 21 03.7 -0.6
baz=102
LIC Lamto 102.25 285 *e*P PP 07 25 16.2 -0.8
comp=Z,87nm,1.5s
Q13A Wheeler Ranch, 102.30 29 ⇑P Pdif 07 21 04.7 +0.2
baz=102
M21A Separation Pea 102.49 23 ⇓P Pdif 07 21 04.4 -1.0
baz=102
COWI Conover 102.51 9 PFAKE 07 21 20.0 +15
COWI LR LR
comp=Z,3μm,19.0s,MS5.9
O17A Robinson Place 102.54 26 ⇓P Pdif 07 21 04.4 -1.2
baz=102
Q14A Sevier Lake (B 102.58 28 ⇑P Pdif 07 21 04.8 -0.9
baz=102
SMMC Simmler 102.58 35 ⇓P Pdif 07 21 05.3 -0.5
baz=102
O18A Roosevelt 102.75 25 ⇓P Pdif 07 21 05.7 -0.9
baz=102
MAW Mawson 102.80 195 *e*P PKiKP 07 25 23.4 -3.0
comp=Z,4.1nm,1.1s
MAW Mawson 102.80 195 PKiKP PKiKP 07 25 26.9 +0.5
comp=Z,2.8nm,0.9s,baz=73,slow=4.8,SNR=7.9
MAW PKKPbc PKKPbc 07 37 04.9 -1.5
comp=Z,4.9nm,0.8s,baz=219,slow=3.4,SNR=7.9
MAW Mawson 102.80 195 PFAKE 07 21 20.0 +13
MAW LR LR

comp=Z,2μm,21.0s,MS5.5
N20A Spence Gulch, 102.87 24 ⇓P Pdif 07 21 06.2 -0.9
baz=103
DAC Darwin (Calif) 102.95 33 PFAKE 07 21 20.0 +13
DAC LR LR
comp=Z,678nm,20.0s,MS5.2
R13A O'Grain Ranch, 102.98 29 ⇓P Pdif 07 21 07.0 -0.6
baz=103
MVU Marysvale 103.42 28 PFAKE 07 21 20.0 +10
MVU LR LR
comp=Z,2μm,19.0s,MS5.6
MSU Marysvale 103.43 28 *e*P Pdif 07 21 11.3 +1.7
MSU pmax pmax
comp=Z,3.0nm,0.9s
MSU Marysvale 103.43 28 *e*Pdif Pdif 07 21 11.3 +1.7
comp=Z,3.4nm,0.9s
O20A White River Ci 103.50 24 ⇓P Pdif 07 21 09.0 -0.9
baz=103
ECSD EROS Data Cent 103.50 15 PFAKE 07 21 20.0 +10
ECSD LR LR
comp=Z,3μm,20.0s,MS5.8
N22A Wattenberg Ran 103.52 23 ⇑P Pdif 07 21 09.6 -0.4
baz=103
P19A Cripple Cowboy 103.68 25 ⇓P Pdif 07 21 09.8 -0.9
baz=103
PKME Peaks-Kenny Pk 103.85 355 PFAKE 07 21 20.0 +8.6
PKME LR LR
comp=Z,3μm,19.0s,MS5.8
EDW2 Edwards Air Fo 103.90 34 ⇑P Pdif 07 21 11.9 +0.2
baz=104
GLMI Grayling 104.26 6 PFAKE 07 21 20.0 +6.7
GLMI LR LR
comp=Z,2μm,20.0s,MS5.7
ISCO Idaho Springs 104.70 23 *e*P Pdif 07 21 16.5 +1.3
ISCO pmax pmax
comp=Z,13nm,1.6s
ISCO MLR MLR
comp=Z,2μm,19.0s,MS5.7
ISCO Idaho Springs 104.70 23 *e*Pdif Pdif 07 21 16.5 +1.3
comp=Z,13nm,1.6s
ISCO LR LR
comp=Z,2μm,19.0s,MS5.7
OGNE Ogallala 104.76 20 PFAKE 07 21 30.0 +15
OGNE LR LR
comp=Z,2μm,20.0s,MS5.6
LONY Lake Ozonia 104.77 358 PFAKE 07 21 30.0 +14
LONY LR LR
comp=Z,2μm,20.0s,MS5.7
SMCO Snowmass 104.80 24 *e*Pdif Pdif 07 21 16.2 +0.5
comp=Z,10nm,1.2s
LBNH Lisbon 105.05 356 PFAKE 07 25 40.0 +8.6
LBNH LR LR
comp=Z,3μm,20.0s,MS5.8
NCB Newcomb 105.41 358 PFAKE 07 25 40.0 +7.9
NCB LR LR
comp=Z,4μm,21.0s,MS5.9
JFWS Jewell Farm 105.47 10 PFAKE 07 25 40.0 +7.8
JFWS LR LR
comp=Z,3μm,19.0s,MS5.8
PFO Pinyon Flat Ob 105.67 34 PFAKE 07 25 40.0 +7.1
PFO LR LR
comp=Z,392nm,20.0s,MS5.0
MVCO Mesa Verde 105.99 26 PFAKE 07 25 40.0 +6.6
MVCO LR LR
comp=Z,1μm,19.0s,MS5.5
WUAZ Wupatki 106.33 29 PFAKE 07 25 50.0 +16
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.5
SDCO Great Sand Dun 106.59 23 PFAKE 07 25 50.0 +16
SDCO LR LR
comp=Z,3μm,19.0s,MS5.8
AAM Ann Arbor 106.84 5 PFAKE 07 25 50.0 +15
AAM LR LR
comp=Z,2μm,20.0s,MS5.6
BINY Binghamton 107.22 359 PFAKE 07 25 50.0 +15
BINY LR LR
comp=Z,3μm,19.0s,MS5.8
ERPA Erie 107.24 2 PFAKE 07 25 50.0 +14
ERPA LR LR
comp=Z,2μm,20.0s,MS5.7
CBKS Cedar Bluff 107.38 19 PFAKE 07 25 50.0 +14
CBKS LR LR
comp=Z,2μm,19.0s,MS5.8
KSU1 Kansas State U 107.91 16 *e*PKPdf PKiKP 07 25 36.0 -0.9
KSU1 LR LR
comp=Z,3μm,21.0s,MS5.8
HDIL Hopedale 107.92 10 PFAKE 07 25 50.0 +13
HDIL LR LR
comp=Z,2μm,19.0s,MS5.7
ANMO Albuquerque 108.75 25 *e*PKPdf PKiKP 07 25 38.2 -0.4
ANMO *e*PP PP 07 26 02.0 -1.6
ANMO LR LR
comp=Z,2μm,19.0s,MS5.6
SSPA Standing Stone 108.78 1 PFAKE 07 25 50.0 +12
SSPA LR LR
comp=Z,2μm,21.0s,MS5.7
ACSO Alum Creek Sta 108.95 5 PFAKE 07 25 50.0 +11
ACSO LR LR
comp=Z,2μm,20.0s,MS5.8
LAZ Ladron 108.99 26 *e*PKPdf PKiKP 07 25 41.3 +2.3
LAZ *e*PP PP 07 26 04.7 -0.7
TUC Tucson 109.33 30 PFAKE 07 25 50.0 +10
TUC LR LR
comp=Z,1μm,21.0s,MS5.5
BNM Barren Site 109.40 26 *e*PKPdf PKiKP 07 25 42.2 +2.4
BNM *e*PP PP 07 26 10.2 +1.8
MCWV Mont Chateau 109.70 3 PFAKE 07 25 50.0 +10
MCWV LR LR
comp=Z,5μm,21.0s,MS6.1
CCM Cathedral Cave 110.04 12 PFAKE 07 25 50.0 +9.1
CCM LR LR
comp=Z,3μm,19.0s,MS5.8
AMTX Amarillo 110.45 22 PFAKE 07 25 50.0 +8.2
AMTX LR LR
comp=Z,2μm,21.0s,MS5.6
WCI Wyandotte Cave 110.62 8 PFAKE 07 25 50.0 +8.0
WCI LR LR
comp=Z,3μm,19.0s,MS5.8
CBN Corbin 111.21 0 PFAKE 07 25 50.0 +6.9
CBN LR LR
comp=Z,3μm,19.0s,MS6.0
WMOK Wichita Mounta 111.46 19 PFAKE 07 26 00.0 +16
WMOK LR LR
comp=Z,2μm,20.0s,MS5.7
GDL2 Guadalupe Moun 111.99 25 *e*PKPdf PKiKP 07 25 44.0 -0.8
MNTX Cornudas Mount 112.06 26 *e*PKPdf PKiKP 07 25 43.5 -1.4
MNTX LR LR
comp=Z,1μm,19.0s,MS5.5
BLA Blacksburg 112.12 3 PFAKE 07 26 00.0 +15
BLA LR LR
comp=Z,2μm,19.0s,MS5.7
WVT Waverly 112.48 10 *e*PKIKP PKiKP 07 25 45.5 -0.1
WVT MLR MLR
comp=Z,3μm,19.0s,MS5.9
MIAR Mount Ida 112.97 15 *e*PKIKP PKiKP 07 25 47.3 +0.7
MIAR MLR MLR
comp=Z,3μm,21.0s,MS5.9
PPT Papeete 113.33 97 *e*PP PP 07 26 35.6 -2.7
comp=Z,127nm,26.2s
PPT Papeete 113.33 97 *e*PS PS 07 36 08.5 -5.7
comp=Z,1μm,27.5s
PPT *e*SS SS 07 42 16.9 -7.8
comp=Z,1μm,27.8s
PPT *e*LR LR 07 59 36.0
comp=Z,6μm,35.0s
PLAL Pickwick Lake 113.57 10 PFAKE 07 26 00.0 +12
PLAL LR LR
comp=Z,2μm,20.0s,MS5.8
OXF Oxford 113.82 11 PFAKE 07 26 00.0 +12
OXF LR LR
comp=Z,2μm,19.0s,MS5.7
CNNC Cliffs of the 114.16 1 PFAKE 07 26 00.0 +11
CNNC LR LR
comp=Z,3μm,19.0s,MS5.9
SBA Scott Base 114.77 168 *e*PKIKP PKiKP 07 25 48.1 -0.5
SBA MLR MLR
comp=Z,1μm,21.0s,MS5.4
TXAR Lajitas Array 114.83 26 PKP PKiKP 07 25 49.5 -0.8
comp=Z,2.2nm,0.7s,baz=89,slow=0.3,SNR=22
TXAR PP PP 07 26 50.8 +3.6
comp=Z,1.1nm,0.7s,baz=343,slow=8.0,SNR=5.4
TXAR PKKPbc PKKPbc 07 36 25.6 -1.3
comp=Z,5.1nm,0.8s,baz=155,slow=6.6,SNR=43
JCT Junction City 115.12 22 *e*PKIKP PKiKP 07 25 50.0 -0.8
JCT MLR MLR
comp=Z,2μm,20.0s,MS5.8

NATX Nacogdoches 115.38 17 PFAKE 07 26 00.0 +8.7
NATX LR LR
comp=Z,3μm,20.0s,MS5.9
LRAL Lakeview Retre 115.64 10 PFAKE 07 26 00.0 +8.3
LRAL LR LR
comp=Z,2μm,20.0s,MS5.6
GOGA Godfrey 115.68 6 PFAKE 07 26 00.0 +8.2
GOGA LR LR
comp=Z,3μm,21.0s,MS5.9
VBMS Vicksburg 115.85 13 PFAKE 07 26 00.0 +7.8
VBMS LR LR
comp=Z,3μm,19.0s,MS6.0
BBSR BB Station 116.00 349 PFAKE 07 26 00.0 +7.6
BBSR LR LR
comp=Z,2μm,19.0s,MS5.7
NHSC New Hope 116.22 3 PFAKE 07 26 00.0 +7.2
NHSC LR LR
comp=Z,3μm,19.0s,MS5.9
HKT Hockley 116.79 18 PFAKE 07 26 10.0 +16
HKT LR LR
comp=Z,2μm,22.0s,MS5.8
TAOE Nuku Hiva Isla 117.32 84 *e*PS PS 07 36 39.3 -11
comp=Z,608nm,28.2s
TAOE *e*SS SS 07 43 08.7 -8.3
comp=Z,827nm,29.4s
TAOE *e*LQ 07 56 12.0
comp=Z,814nm,27.3s
TAOE *e*LR LR 08 00 54.6
comp=Z,2μm,22.9s
BRAL Brewton 117.62 10 PFAKE 07 26 10.0 +14
BRAL LR LR
comp=Z,3μm,20.0s,MS5.9
KVTX Kingsville 118.45 21 PFAKE 07 26 10.0 +13
KVTX LR LR
comp=Z,2μm,19.0s,MS5.7
MAIT Maitri 119.34 202 *e*PKPab PKPdf 07 25 56.5 -1.0
QSPA South Pole Qui 120.72 180 *e*PKPdf PKPdf 07 25 58.4 -1.5
QSPA LR LR
comp=Z,1μm,19.0s,MS5.6
DWPF Disney 121.11 5 PFAKE 07 26 10.0 +7.6
DWPF LR LR
comp=Z,2μm,20.0s,MS5.8
VNA2 Neumayer--Watz 125.63 202 *e* PKPdf 07 26 11.6 +2.0
VNA1 Neumayer--Stat 125.96 203 *e* PKPdf 07 26 10.4 +0.2
VNA1 *e* 07 26 11.9
GRTK Grand Turk 127.56 353 PFAKE 07 26 30.0 +15
GRTK LR LR
comp=Z,1μm,19.0s,MS5.7
GTBY Guantanamo Bay 129.40 358 PFAKE 07 26 30.0 +12
GTBY LR LR
comp=Z,2μm,21.0s,MS5.7
ANWB Willy Bob 129.56 341 PFAKE 07 26 30.0 +11
ANWB LR LR
comp=Z,1μm,21.0s,MS5.5
SDDR Presa de Saban 130.08 353 PFAKE 07 26 30.0 +10
SDDR LR LR
comp=Z,2μm,20.0s,MS5.7
SJG San Juan 130.17 347 PFAKE 07 26 30.0 +10
SJG LR LR
comp=Z,3μm,20.0s,MS6.0
MTDJ Mount Denham 131.11 1 PFAKE 07 26 30.0 +8.3
MTDJ LR LR
comp=Z,1μm,19.0s,MS5.7
FDF Fort de France 132.16 339 PFAKE 07 26 40.0 +16
FDF LR LR
comp=Z,714nm,20.0s,MS5.4
BBGH Gun Hill 133.14 337 PFAKE 07 26 40.0 +14
BBGH LR LR
comp=Z,2μm,19.0s,MS5.9
TGUH Tegucigalpa,Un 134.14 14 *e*PKPdf PKPdf 07 26 27.8 +0.3
TGUH *e*SKPbc SKPbc 07 29 56.7 -0.3
TGUH LR LR
comp=Z,1μm,21.0s,MS5.6
RCBR Riachuelo 134.25 295 PFAKE 07 26 40.0 +12
RCBR LR LR
comp=Z,1μm,19.0s,MS5.7
GRGR Grenville 134.77 339 PFAKE 07 26 40.0 +11
GRGR LR LR
comp=Z,998nm,22.0s,MS5.5
JTS JuntasAbangare 138.26 12 PFAKE 07 26 50.0 +15
JTS LR LR
comp=Z,2μm,21.0s,MS5.7
SDV Santo Domingo 139.96 351 *e*PKP PKPdf 07 26 29.7 -8.6
SDV LR LR
comp=Z,361nm,21.0s,MS5.1
BCIP Isla Barro Col 140.01 5 PFAKE 07 26 50.0 +12
BCIP LR LR
comp=Z,958nm,21.0s,MS5.5
ROSC El Rosal 144.33 356 PKP PKPdf 07 26 44.8 -1.3
comp=Z,87nm,0.8s,baz=44,slow=3.3,SNR=52
ROSC El Rosal 144.33 356 *e*PKPdf PKPdf 07 26 44.4 -1.7
PMSA Palmer Station 145.23 190 PKPbc PKPbc 07 26 44.2 -1.5
comp=Z,160nm,0.8s,baz=193,slow=0.6,SNR=21
PMSA Palmer Station 145.23 190 *e*PKPdf PKPdf 07 26 43.9 -2.1
PAYG Puerto Ayora 147.29 26 *e*PKPbc PKPbc 07 26 54.3 +0.8
PAYG LR LR
comp=Z,1μm,21.0s,MS5.7
CAM4 Nova Friburgo 148.34 277 ⇓*i*P PKPdf 07 26 51.2 -1.4
CAM4 *i* 07 26 52.2
CAM4 *i* 07 26 54.0
CAM4 *i* 07 27 01.8
CAM4 *i* 07 27 07.5
CAM4 *i* 07 27 11.4
CAM4 *i* 07 27 21.7
CAM4 *i* 07 27 35.2
CAM4 *i* 07 28 18.2
OTAV Otavalo 148.95 3 PFAKE 07 27 10.0 +16
OTAV LR LR
comp=Z,872nm,22.0s,MS5.5
SPB Sao Paulo 152.95 278 *e*PKPdf PKPdf 07 26 60.0 +0.3
SPB *e*PKPbc PKPbc 07 27 07.0 0.0
SPB LR LR
comp=Z,986nm,21.0s,MS5.6
EFI East Falkland 155.10 208 *e*PKIKP PKPdf 07 27 07.8 +6.0
EFI MLR MLR
comp=Z,1μm,22.0s,MS5.6
NNA Nana 161.14 0 *e*PKPdf PKPdf 07 27 12.3 +2.0
NNA LR LR
comp=Z,879nm,22.0s
CPUP Villa Florida 162.31 280 PKP PKPdf 07 27 10.1 -1.2
comp=Z,25nm,1.1s,baz=28,slow=1.7,SNR=28
CPUP Villa Florida 162.31 280 PKP PKPdf 07 27 10.1 -1.2
CPUP LR LR
comp=Z,190nm,21.0s
LPAZ La Paz 163.41 330 PKP PKPdf 07 27 12.8 +0.3
comp=Z,25nm,1.0s,baz=32,slow=2.9,SNR=59
LPAZ PKPab PKPab 07 28 03.4 +0.1
comp=Z,4.9nm,0.8s,baz=79,slow=2.0,SNR=3.1
LPAZ La Paz 163.41 330 PKIKP PKPdf 07 27 12.8 +0.3
LPAZ 07 28 03.4
LPAZ pmax pmax
comp=Z,25nm,1.0s
LPAZ pmax pmax
comp=Z,5.0nm,0.8s
LPAZ La Paz 163.41 330 *e*PKPdf PKPdf 07 27 12.6 0.0
LPAZ LR LR
comp=Z,2μm,21.0s
LPA La Plata 163.68 251 *ce*PKP PKPdf 07 27 12.0 -0.3
LPA La Plata 163.68 251 *ce*PKP PKPab 07 28 03.0 -1.3
LPA *e*PP PP 07 31 48.0 -2.2
TRQA Tornquist 165.88 236 *e*PKPdf PKPdf 07 27 12.8 -1.3
TRQA *e*PKPab PKPab 07 28 11.8 -2.1
TRQA LR LR
comp=Z,2μm,20.0s
PLCA Paso Flores 169.00 206 PKP PKPdf 07 27 16.3 0.0
comp=Z,26nm,1.1s,baz=216,slow=1.0,SNR=24
PLCA PKPab PKPab 07 28 25.5 -1.9
comp=Z,23nm,0.8s,baz=162,slow=4.6,SNR=20
PLCA PP PP 07 32 16.3 0.0
comp=Z,14nm,1.3s,baz=140,slow=12,SNR=4.8
PLCA Paso Flores 169.00 206 PKIKP PKPdf 07 27 16.3 +0.1
PLCA 07 28 25.5
PLCA 07 32 16.3
PLCA pmax pmax
comp=Z,26nm,1.1s
PLCA pmax pmax
comp=Z,23nm,0.8s
PLCA pmax pmax
comp=Z,14nm,1.3s
PLCA Paso Flores 169.00 206 *e*PKPdf PKPdf 07 27 16.5 +0.3
PLCA *e*PKPab PKPab 07 28 25.7 -1.7
PLCA *e*PP PP 07 32 16.7 +0.5
PLCA LR LR
comp=Z,947nm,19.0s
LCO Las Campanas 174.38 288 *e*PKPdf PKPdf 07 27 19.0 -0.2
LCO LR LR
comp=Z,992nm,20.0s
TLL Tololo Astrono 174.78 277 ⇑*i*P PKPdf 07 27 19.1 -0.2

ISCJB ***13*** *07:19:14.5±0.2,32°.37N±0°.02×105°.25E±0°.03,h10km, mb4.8/103,MS5.0/2,Error ellipse: s-maj=3.7km s-min=3.5km az=148.5*
IDC ***13*** *07:19:14.3±0.4,32°.33N×105°.16E,h0km,mb4.6/38, mb1 4.6/40,mb1mx4.6/45,mbtmp4.5/40,ML4.2/2,Error ellipse: s-maj=14.7km s-min=9.1km az=51.0*
NEIC ***13*** *07:19:16.3±0.2,32°.42N×105°.28E,h10km,mb5.0/52,Error ellipse: s-maj=5.5km s-min=4.6km az=56.0*
SZGRF ***13*** *07:19:16.1,31°.81N×105°.06E,h16km,mb5.0,Sichuan, China*
BJI ***13*** *07:19:16.0,32°.35N×105°.24E,h18km,mB5.6/12,mb4.8/17, ML5.0/11,Ms5.1/21,Ms7 4.9/17*
MOS ***13*** *07:19:17.8±0.9,32°.39N×105°.23E,h33km,mb5.2/38,Error ellipse: s-maj=8.7km s-min=5.2km az=118.0*
ISC 13 07:19:15.4±0.8,32°.37N±0°.02×105°.24E±0°.03,h4km±5km, h16km±.4km:pP-P,n250,σ1°.01/258,mb4.8/103,MS5.0/2, 15C-4D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.93**	**221**	Pn	**Pn**	**07 19 48.3**	**-0.6**
CD2				Pg	**Pg**	**07 19 50.3**	**-2.0**
CD2				Sg	**Sg**	**07 20 14.3**	**-3.0**
CD2				smax			
comp=N,51μm,0.7s							
XAN	**Xi'an**	**3.51**	**61**	Pn	**Pn**	**07 20 13.3**	**+2.6**
XAN				Sg	**Sg**	**07 21 07.6**	**-0.6**
XAN				smax			
comp=N,3μm,0.5s							
XAN				smax			
comp=E,2μm,0.5s							
LZH	**Lanzhou**	**3.88**	**343**	Pn	**Pn**	**07 20 19.3**	**+3.5**
LZH				Pg	**Pg**	**07 20 30.1**	**+0.2**
LZH				Sg	**Sg**	**07 21 17.4**	**-2.8**
LZH				smax			
comp=N,3μm,0.7s							
LZH				smax			
comp=E,5μm,0.7s							
LZH				LR	LR		
comp=N,14μm,6.2s							
LZH				LR	LR		
comp=Z,16μm,9.4s							
ENH	**Enshi**	**4.19**	**119**	*e*Pn	**Pn**	**07 20 24.9**	**+4.8**
GYA	**Guiyang**	**6.02**	**168**	Pg	**Pn**	**07 20 49.9**	**+4.7**
GYA				Sg	**Sn**	**07 21 52.3**	**-2.2**
GYA				smax			
comp=N,440nm,0.8s							
GYA				smax			
comp=E,830nm,0.7s							
GYA				LR	LR		
comp=N,5μm,3.6s							
GYA				LR	LR		
comp=E,4μm,2.3s							
GYA				LR	LR		
comp=Z,6μm,3.2s							
KMI	**Kunming**	**7.54**	**198**	Pn	**Pn**	**07 21 07.3**	**+1.2**
KMI				Pg	**Pb**	**07 21 27.3**	**+0.5**
KMI				Sg	**Sg**	**07 23 05.8**	**-12**
KMI				LR	LR		
comp=N,7μm,11.5s							
KMI				LR	LR		
comp=E,7μm,9.7s							
WHN	**Wuhan**	**7.99**	**101**	*e*P	Px	07 21 23.0	
WHN				S	**Sn**	**07 22 41.0**	**-2.2**
WHN				LR	LR		
comp=N,34μm,13.6s							
WHN				LR	LR		
comp=E,16μm,6.7s							
GTA	**Gaotai**	**8.29**	**329**	*e*P	**Pn**	**07 21 21.9**	**+5.6**
GTA				S	**Sn**	**07 23 01.0**	**+11**
GTA				pmax	pmax		
comp=Z,19nm,1.1s							
GTA				pmax	pmax		
comp=Z,2μm,5.9s							
GTA				LR	LR		
comp=N,5μm,9.5s							
GTA				LR	LR		
comp=E,5μm,12.5s							
GTA				LR	LR		
comp=Z,7μm,11.0s							
BTO	**Baotou**	**9.08**	**24**	*e*P	**Pn**	**07 21 26.4**	**-0.7**
BTO				S	**Sn**	**07 23 05.1**	**-4.6**
HHC	**Hu-ho-hao-te**	**9.87**	**29**	*e*P	**Pn**	**07 21 40.8**	**+2.8**
HHC				pP		07 21 47.9	
HHC				sP		07 21 52.6	
HHC				S	**Sn**	**07 23 33.6**	**+4.4**
HHC				sS		07 23 44.0	
HHC				SS		07 23 47.3	
HHC				pmax	pmax		
comp=Z,75nm,1.2s							
HHC				LR	LR		
comp=N,3μm,5.2s							
HHC				LR	LR		
comp=E,4μm,6.1s							
HHC				LR	LR		
comp=Z,3μm,6.9s							
LSA	**Lhasa**	**12.37**	**261**	*e*P	**Pn**	**07 22 15.9**	**+3.6**
QZH	**Quanzhou**	**13.86**	**119**	*e*P	**Pn**	**07 22 32.6**	**0.0**
QZH				S	**Sn**	**07 25 07.8**	**+0.9**
QIZ	**Qiongzhong**	**13.91**	**162**	P	**Pn**	**07 22 35.5**	**+2.1**
QIZ				S	**Sn**	**07 25 11.3**	**+3.0**
QIZ				pmax	pmax		
comp=Z,18nm,1.0s							
CHTO	**Chiang Mai**	**14.64**	**204**	*e*P	**Pn**	**07 22 46.1**	**+2.8**
CM31	**Chiang Mai Arr**	**14.97**	**204**	*e*P	**Pn**	**07 22 51.0**	**+3.2**
comp=Z,6.5nm,0.3s							
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**07 22 55.2**	**+0.9**
comp=Z,0.5nm,0.3s,baz=175,slow=10.0,SNR=5.5							
SONM				Lg		07 27 36.9	
comp=Z,0.2nm,0.3s,baz=195,slow=27,SNR=4.0							
WMQ	**Urumqi**	**17.89**	**315**	P	**Pn**	**07 23 26.3**	**+1.3**
WMQ				pmax	pmax		
comp=Z,30nm,2.0s							
KSRS	**Korea Array**	**19.27**	**68**	P	**Pn**	**07 23 42.6**	**+0.8**
comp=Z,1.1nm,0.3s,baz=253,slow=9.7,SNR=17							
KSRS	**Korea Array**	**19.27**	**68**	P	**Pn**	**07 23 42.7**	**+0.8**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
CN2	**Changchun**	**19.52**	**48**	*e*P	**Pn**	**07 23 46.5**	**+1.6**
CN2				*e*S	**Sn**	**07 27 20.5**	**-3.8**
CN2				pmax	pmax		
comp=Z,20nm,1.2s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,5μm,11.0s							
CN2				LR	LR		
comp=E,6μm,11.0s							
CN2				LR	LR		
comp=Z,5μm,13.0s							
JOSI	**Joshimath**	**21.97**	**272**	*e*P	**P**	**07 24 11.0**	**+0.8**
JOSI				*ex*	x	07 28 12.0	
MDJ	**Mudanjiang**	**22.55**	**50**	P	**P**	**07 24 15.5**	**-0.8**
MDJ				pmax	pmax		
comp=Z,62nm,2.3s,mb4.6							
MDJ				pmax	pmax		
comp=Z,5μm,7.3s							
MK31	**Makanchi Array**	**22.70**	**316**	*e*P	**P**	**07 24 18.5**	**+0.6**
MKAR	**Makanchi Array**	**22.70**	**316**	P	**P**	**07 24 18.1**	**+0.2**
comp=Z,45nm,1.1s,mb4.8,baz=110,slow=10,SNR=27							
SMLA	**Simla**	**23.88**	**275**	*ex*	x	07 24 25.8	
AGRA	**Agra**	**24.20**	**265**	*e*P	**P**	**07 24 32.8**	**-0.2**
BISR	**Bishrakh**	**24.23**	**268**	*e*P	**P**	**07 24 33.6**	**+0.3**
KKR	**Kurukshetra**	**24.41**	**272**	*e*P	**P**	**07 24 35.0**	**+0.1**
BHK	**Bhakra**	**24.46**	**276**	*e*P	**P**	**07 24 36.2**	**+0.8**
AYAN	**Aya Nagar**	**24.52**	**268**	*e*P	**P**	**07 24 35.8**	**-0.1**
AYAN				AMb	AMB	07 24 41.5	
comp=Z,52nm,1.0s,mb5.0							
SONA	**Sohna**	**24.62**	**268**	*e*P	**P**	**07 24 36.2**	**-0.6**
SONA				AMb	AMB	07 24 43.5	
comp=Z,54nm,1.3s,mb4.9							
KSH	**Kashi**	**24.67**	**295**	*e*P	**P**	**07 24 40.5**	**+3.3**
KSH				*ep*P		07 24 44.5	
KSH				*es*P	sP	07 24 47.6	+8.5
KSH				*e*PP		07 25 16.5	
KSH				*e*PcP	PcP	07 28 17.6	+3.1
KSH				*e*S	**S**	**07 28 59.6**	**+0.3**
KSH				*e*SS		07 29 56.5	

KSH eScP ScP 07 31 54.5 +0.5
KSH ePcS PcS 07 31 56.5 +2.1
KSH eScS ScS 07 35 41.6 -0.3
KSH LR LR
comp=N,3μm,8.4s
KSH LR LR
comp=E,3μm,7.3s
RTK Rohtak 24.97 270 ex x 07 24 30.9
ULHL Ulahol 24.98 302 P **P** **07 24 41.5 +1.5**
SNR=13
TKM2 Tokmak 2 25.61 303 P **P** **07 24 46.9 +1.3**
SNR=7.8
TKM2 Tokmak 2 25.61 303 eP **P** **07 24 46.7 +1.1**
TKM2 pmax pmax
comp=Z,47nm,1.2s,mb4.9
TKM2 Tokmak 2 25.61 303 eP **P** **07 24 46.7 +1.1**
comp=Z,47nm,1.2s,mb4.9
KZA Kyzart 25.66 301 P **P** **07 24 48.2 +2.1**
SNR=9.2
KHET Khetri 25.75 268 eP **P** **07 24 46.7 -0.4**
KHET AMb AMB 07 24 48.8
comp=Z,24nm,1.2s,mb4.6
NGP Nagpur 25.85 251 ex x 07 24 44.9
KBK Karagaybulak 26.00 302 P **P** **07 24 50.9 +1.6**
SNR=9.7
ZAA0 Zalesovo Array 26.03 332 eP **P** **07 24 49.4 0.0**
ZALV Zalesovo Beam 26.03 332 P **P** **07 24 49.1 -0.3**
comp=Z,4.9nm,0.7s,mb4.2,baz=133,slow=8.7,SNR=10
UCH Uchtor 26.23 301 P **P** **07 24 53.4 +2.1**
SNR=16
UCH Uchtor 26.23 301 eP **P** **07 24 53.0 +1.8**
comp=Z,49nm,1.1s,mb5.0
AAK Ala-Archa 26.33 302 P **P** **07 24 53.6 +1.4**
comp=Z,3.1nm,0.8s,mb3.9,baz=110,slow=7.6,SNR=4.2
AAK Ala-Archa 26.33 302 P **P** **07 24 53.6 +1.4**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
AAK Ala-Archa 26.33 302 eP **P** **07 24 54.2 +2.1**
comp=Z,30nm,1.2s,mb4.7
USP Ospenovka 26.47 303 P **P** **07 24 54.4 +1.0**
SNR=9.4
AML Almayashu 26.80 300 P **P** **07 24 58.3 +1.8**
SNR=7.7
AML Almayashu 26.80 300 eP **P** **07 24 57.5 +1.0**
comp=Z,51nm,1.3s,mb4.9
KURK Kurchatov 26.84 321 P **P** **07 24 56.9 +0.1**
comp=Z,20nm,1.0s,mb4.6,baz=127,slow=8.9,SNR=14
KURK PcP PcP 07 28 17.7 -1.5
comp=Z,2.3nm,0.7s,baz=112,slow=1.8,SNR=3.6
KURK Kurchatov 26.84 321 P **P** **07 24 56.9 +0.1**
KURK 07 28 17.7
KURK pmax pmax
comp=Z,20nm,1.0s,mb4.6
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KURK Kurchatov 26.84 321 eP **P** **07 24 57.5 +0.8**
comp=Z,75nm,1.3s,mb5.1
EKS2 Erkin-Say 26.85 302 eP **P** **07 24 58.0 +1.1**
comp=Z,29nm,1.4s,mb4.6
MJAR Matsushiro Arr 27.43 72 P **P** **07 25 02.2 +0.1**
comp=Z,2.5nm,0.6s,mb3.9,baz=284,slow=9.3,SNR=6.4
MJAR Matsushiro Arr 27.43 72 P **P** **07 25 02.2 0.0**
HABR Khabarovsk 27.59 46 P **P** **07 25 02.2 -1.3**
HABR e 07 25 47.8
HABR eS **S** **07 29 42.3 -3.0**
HABR eSS 07 30 55.9
HABR e 07 35 49.1
HABR MLR MLR
comp=Z,1μm,17.0s,MS4.6
KBL Kabul 30.18 284 eP **P** **07 25 27.4 +0.7**
KBL pmax pmax
comp=Z,23nm,1.0s,mb4.9
KBL Kabul 30.18 284 eP **P** **07 25 27.4 +0.8**
comp=Z,23nm,1.0s,mb4.9
JASL Jaisalmer 30.25 269 eP **P** **07 25 27.3 0.0**
YSS Yuzh-Sakhalins 32.01 52 eP **P** **07 25 43.3 +0.6**
YSS pmax pmax
comp=Z,6.0nm,0.3s,mb4.9
YSS Yuzh-Sakhalins 32.01 52 eP **P** **07 25 43.3 +0.6**
comp=Z,6.0nm,0.3s,mb4.9
BVAR Borovoye Array 32.42 320 P **P** **07 25 46.6 +0.4**
comp=Z,6.4nm,0.8s,mb4.5,baz=112,slow=9.8,SNR=8.8
BVAR PcP PcP 07 28 32.8 -0.7
comp=Z,1.3nm,0.7s,baz=134,slow=4.2,SNR=2.5
BRVK Borovoye 32.50 320⇑ eP **P** **07 25 48.0 +1.1**
BRVK pmax pmax
comp=Z,15nm,1.2s,mb4.7
BRVK Borovoye 32.50 320 eP **P** **07 25 46.7 -0.2**
PALK Pallekele 33.83 228 eP **P** **07 25 59.3 +0.4**
PALK pmax pmax
comp=Z,59nm,1.1s,mb5.4
PALK Pallekele 33.83 228 eP **P** **07 25 59.3 +0.4**
comp=Z,59nm,1.1s,mb5.4
ABKAR Akbulak array 37.58 310 eP **P** **07 26 30.7 0.0**
comp=Z,3.3nm,0.4s,mb4.4
AKTK Aktyubinsk 39.00 312 P **P** **07 26 42.9 +0.2**
AKTO Aktyubinsk 39.00 312 P **P** **07 26 42.9 +0.2**
comp=Z,2.5nm,0.3s,mb4.3,baz=113,slow=9.6,SNR=11
SVE Sverdlovsk 39.08 322⇓ eP **P** **07 26 43.8 +0.6**
SVE pmax pmax
comp=Z,54nm,1.5s,mb5.1
KAPI Kappang 39.66 157 P **P** **07 26 47.2 -1.2**
comp=Z,5.9nm,0.4s,mb4.7,baz=335,slow=19,SNR=5.5
ARU Arti 40.04 321 c iP **P** **07 26 51.4 +0.1**
ARU S **S** **07 32 57.1 -0.4**
ARU pmax pmax
comp=Z,57nm,1.2s,mb5.2
ARU Arti 40.04 321 eP **P** **07 26 51.6 +0.3**
comp=Z,65nm,1.1s,mb5.3
GUMO Guam 40.70 108 P **P** **07 26 57.8 +0.6**
comp=Z,36nm,0.4s,mb5.4,baz=330,slow=14,SNR=6.3
GUMO Guam 40.70 108 P **P** **07 26 57.8 +0.6**
TIXI Tiksi 41.33 11 eP **P** **07 27 02.5 +0.8**
TIXI pmax pmax
comp=Z,12nm,0.5s,mb4.8
TIXI Tiksi 41.33 11 eP **P** **07 27 02.5 +0.8**
comp=Z,12nm,0.5s,mb4.8
SEY Seymchan 42.52 30⇓ iP **P** **07 27 12.7 +1.2**
PETK Petropavlovsk- 42.61 45 P **P** **07 27 13.1 +0.6**
comp=Z,6.4nm,0.7s,mb4.5,baz=323,slow=2.0,SNR=21
ZEI Tsey 48.75 301 eP **P** **07 27 58.8 -2.4**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb5.0
MIB Mutribah 49.13 283 eP **P** **07 28 02.9 -1.4**
MIB AMb AMB 07 28 14.1
comp=Z,44nm,1.0s,mb5.4
KIV Kislovodsk 49.44 302 eP **P** **07 28 07.3 +0.9**
KIV pmax pmax
comp=Z,44nm,1.1s,mb5.4
KIV Kislovodsk 49.44 302 eP **P** **07 28 07.2 +0.8**
comp=Z,58nm,1.2s,mb5.5
BILL Bilibino 49.62 26 c iP **P** **07 28 05.9 -1.6**
BILL i 07 29 26.0
BILL pmax pmax
comp=Z,19nm,1.6s,mb4.9
BILL Bilibino 49.62 26 eP **P** **07 28 07.1 -0.4**
DGAR Diego Garcia 50.41 224 c iP **P** **07 28 15.3 +1.2**
DGAR Diego Garcia 50.41 224 eP **P** **07 28 16.8 +2.7**
comp=Z,556nm,1.5s
KLMR Klimovskoe 50.59 325 eP **P** **07 28 10.5 -4.4**
KLMR pmax pmax
comp=Z,63nm,1.4s,mb5.3
MOS Moscow 51.56 318 eP **P** **07 28 20.5 -1.8**
MOS e 07 30 17.6
MOS pmax pmax
comp=Z,68nm,0.9s,mb5.6
OBN Obninsk 52.20 317⇑ iP **P** **07 28 26.5 -0.5**
OBN i 07 30 31.2
OBN pmax pmax
comp=Z,49nm,1.2s,mb5.3
KNA Kununurra 52.88 151 eP **P** **07 28 32.5 0.0**
comp=Z,27nm,0.9s,mb5.2
APA Apatity 53.61 333⇑ eP **P** **07 28 37.9 +0.6**
APA MLR MLR
comp=Z,2μm,12.0s,MS5.4
MALT Malatya 53.77 296 eP **P** **07 28 39.2 +0.3**
MALT pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MALT Malatya 53.77 296 eP **P** **07 28 39.2 +0.3**
comp=Z,9.8nm,1.1s,mb4.7
MALT Malatya 53.77 296⇓ iP **P** **07 28 39.8 +0.9**
FITZ Fitzroy Crossi 53.85 156⇑ iP **P** **07 28 39.3 -0.3**
comp=Z,15nm,0.9s,mb4.9
FITZ Fitzroy Crossi 53.85 156 P **P** **07 28 39.2 -0.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=343,slow=6.1,SNR=11
FITZ Fitzroy Crossi 53.85 156 eP **P** **07 28 39.1 -0.5**
comp=Z,17nm,1.2s,mb4.9
JOF Joensuu 54.48 327 eP **P** **07 28 41.5 -2.2**
JOF Joensuu 54.48 327 ep **P** **07 28 41.5 -2.2**
MBWA Marble Bar 55.00 163 eP **P** **07 28 47.6 -0.2**
comp=Z,33nm,1.3s,mb5.2
SIM Simferopol' 55.28 305 eP **P** **07 28 53.3 +3.5**
SIM pmax pmax
comp=Z,16nm,0.7s,mb5.2
KEV Kevo 55.98 336 eP **P** **07 28 53.6 -0.8**
KEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KEV Kevo 55.98 336 ep **P** **07 28 53.6 -0.8**
comp=Z,9.6nm,0.8s,mb4.9
ARCES ARCESS Array B 56.51 335 P **P** **07 28 57.8 -0.5**
comp=Z,7.2nm,0.8s,mb4.7,baz=83,slow=6.4,SNR=12
KAF Kangasniemi 56.87 327 eP **P** **07 28 58.9 -1.9**
KAF Kangasniemi 56.87 327 ep **P** **07 28 58.9 -1.9**
BR131 Keskin Array S 56.96 299 eP **P** **07 29 01.6 -0.3**
comp=Z,4.1nm,0.7s,mb4.6
BRTR Keskin Array B 56.96 299 P **P** **07 29 01.2 -0.7**
comp=Z,2.5nm,0.8s,mb4.3,baz=98,slow=5.4,SNR=10
FINES FINESS Array B 57.06 326 P **P** **07 29 01.6 -0.6**
comp=Z,23nm,1.1s,mb5.1,baz=96,slow=8.2,SNR=17
VSU Vasula 57.19 322 c iP **P** **07 29 07.6 +4.4**
VSU pmax pmax
comp=Z,35nm,0.8s,mb5.4
AKASG Malin Array Be 57.23 313 P **P** **07 29 02.7 -0.9**
comp=Z,4.6nm,0.6s,mb4.7,baz=71,slow=6.3,SNR=10
SPITS Spitsbergen Ar 58.35 346 P **P** **07 29 10.8 -0.2**
comp=Z,3.7nm,0.9s,mb4.4,baz=94,slow=8.6,SNR=6.5
COEN Coen 58.65 136 eP **P** **07 29 14.2 +0.3**
COEN Coen 58.65 136 eP **P** **07 29 14.2 +0.2**
comp=Z,300nm,1.3s
WRAB Tennant Creek 59.00 148 P **P** **07 29 16.9 +0.6**
comp=Z,248nm,1.3s,mb6.1,SNR=9.9
WRAB Tennant Creek 59.00 148 eP **P** **07 29 16.4 +0.1**
WRAB pmax pmax
comp=Z,23nm,0.8s,mb5.3
WRAB Tennant Creek 59.00 148 eP **P** **07 29 16.4 +0.1**
comp=Z,23nm,0.8s,mb5.3
WRA Warramunga Arr 59.00 148 P **P** **07 29 16.4 0.0**
comp=Z,14nm,0.8s,mb5.1,baz=338,slow=7.5
VRI Vrincioaia 60.07 308⇑ iP **P** **07 29 23.4 -0.1**
BURAR Bucovina Array 60.56 310⇑ iP **P** **07 29 27.0 +0.2**
BUR08 Bucovina Ar. S 60.56 310 eP **P** **07 29 26.4 -0.4**
ATD Arta Tunnel 60.65 265 P **P** **07 29 27.8 -0.1**
comp=Z,3.1nm,0.3s,mb4.9,baz=60,slow=14,SNR=4.5
MLR Muntele Rosu 60.71 308⇓ iP **P** **07 29 28.4 +0.6**
KWP Kalwaria Pacla 61.55 313 eP **P** **07 29 34.1 +0.5**
KWP Kalwaria Pacla 61.55 313 eP **P** **07 29 33.4 -0.1**
KWP pmax pmax
comp=Z,29nm,0.9s,mb5.4
KWP Kalwaria Pacla 61.55 313 eP **P** **07 29 33.4 -0.1**
comp=Z,29nm,0.9s,mb5.4
KOLS Kolonicke sedl 62.04 312 eP **P** **07 29 35.3 -1.5**
KOLS e 07 30 15.7
KOLS Kolonicke sedl 62.04 312 eP **P** **07 29 35.3 -1.5**
KOLS e 07 30 15.7
ASAR Alice Springs 62.09 150 P **P** **07 29 37.6 +0.3**
comp=Z,5.4nm,0.5s,mb4.9,baz=331,slow=6.5,SNR=64
STHS Stebnicka Huta 62.53 313 eP **P** **07 29 39.0 -1.1**
STHS e 07 29 44.3
STHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.5
STHS Stebnicka Huta 62.53 313 eP **P** **07 29 39.0 -1.1**
comp=Z,5.1nm,1.3s,mb4.5
STHS e 07 29 44.3
STHS Stebnicka Huta 62.53 313 eP **P** **07 29 39.0 -1.1**
STHS epP pP 07 29 44.3 +2.8
OJC Ojcow 63.16 314 eP **P** **07 29 40.2 -4.1**
HFS Hagfors 63.27 326 P **P** **07 29 43.8 -1.0**
comp=Z,6.9nm,0.7s,mb4.9,baz=75,slow=7.8,SNR=29
KECS Kecovo 63.30 312 eP **P** **07 29 42.7 -2.6**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.30 312 eP **P** **07 29 42.7 -2.6**
comp=Z,1.9nm,0.8s,mb4.3
KECS Kecovo 63.30 312 eP **P** **07 29 42.7 -2.6**
NB2 NORSAR Subarra 64.12 327 P **P** **07 29 49.0 -1.4**
comp=Z,8.1nm,0.6s,mb4.9,baz=72,slow=6.9
NOA NORSAR Array B 64.12 327 P **P** **07 29 49.0 -1.4**
comp=Z,4.3nm,0.8s,mb4.6,baz=68,slow=6.4,SNR=10
VYHS Vyhne 64.33 313 eP **P** **07 29 52.0 0.0**
VYHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
VYHS Vyhne 64.33 313 eP **P** **07 29 52.0 0.0**
comp=Z,5.3nm,1.1s,mb4.5
VYHS e 07 29 56.9
VYHS Vyhne 64.33 313 eP **P** **07 29 52.0 0.0**
VYHS epP pP 07 29 56.9 +3.4
NAO01 NORSAR Array S 64.34 327 eP **P** **07 29 50.3 -1.6**
comp=Z,2.4nm,0.4s,mb4.6
MORC Moravsky Berou 64.68 314 eP **P** **07 29 54.4 +0.1**
MORC pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
MORC Moravsky Berou 64.68 314 eP **P** **07 29 54.4 +0.1**
comp=Z,6.0nm,1.1s,mb4.5
MORC Moravsky Berou 64.68 314⇑ iP **P** **07 29 54.3 0.0**
DPC Dobruska-Polom 65.21 315 eP **P** **07 29 58.4 +0.7**
DPC epP pP 07 30 02.9 +3.8
CTA Charters Tower 65.28 137 P **P** **07 29 57.2 -1.2**
comp=Z,1.7nm,0.5s,mb4.4,baz=304,slow=5.1,SNR=3.6
CTA Charters Tower 65.28 137 P **P** **07 29 57.2 -1.2**
VRAC Vranov 65.42 314 P **P** **07 29 59.0 -0.1**
comp=Z,1.3nm,0.3s,mb4.4,baz=111,slow=17,SNR=3.6
NWAO Narrogin (SRO) 65.92 169 P **P** **07 30 01.5 -0.9**
comp=Z,10nm,0.9s,mb4.9,baz=11,slow=10,SNR=2.6
BRG Berggiesshubel 66.42 316 eP **P** **07 30 05.9 +0.4**
comp=Z,11nm,1.2s,mb4.8
BRG epP pP 07 30 10.0 +3.1
BRG Berggiesshubel 66.42 316 eP **P** **07 30 06.4 +0.9**
comp=Z,4.5nm,0.8s,mb4.6
BRG e 07 30 10.0
comp=Z,11nm,1.3s
BRG Berggiesshubel 66.42 316 eP **P** **07 30 06.4 +0.9**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
FORT Forrest 66.42 159 eP **P** **07 30 05.7 +0.1**
comp=Z,17nm,1.9s,mb4.7
CLL Collm 66.80 317 eP **P** **07 30 07.9 0.0**
comp=Z,7.0nm,1.0s,mb4.7
CLL Collm 66.80 317 eP **P** **07 30 07.0 -0.9**
CLL e 07 30 16.0
CLL pmax pmax
comp=Z,310nm,1.7s
CLL Collm 66.80 317 eP **P** **07 30 07.0 -0.9**
comp=Z,18nm,1.7s,mb4.8
CLL e 07 30 11.0
CLL e 07 30 16.0
CLL Collm 66.80 317 eP **P** **07 30 07.0 -0.9**
comp=Z,18nm,1.7s,mb4.8
CLL epP pP 07 30 11.0 +1.7
CLL ePP PP 07 32 37.0 +2.4
PPLA Purkeypile 67.09 29 eP **P** **07 30 09.8 +0.2**
comp=Z,52nm,1.6s,mb5.3
BSEG Bad Segeberg 67.25 320 eP **P** **07 30 10.9 +0.2**
GEC2 GERESS Array S 67.36 314 eP **P** **07 30 11.3 -0.2**
comp=Z,10.0nm,1.2s,mb4.7
GEC2 epP pP 07 30 16.1 +3.1
GEC2 GERESS Array S 67.36 314 eP **P** **07 30 11.3 -0.2**
GEC2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
GERES GERESS Array B 67.36 314 P **P** **07 30 11.1 -0.4**
comp=Z,2.1nm,0.7s,mb4.3,baz=38,slow=6.8,SNR=7.8
TANN Tannenbergstha 67.47 316 eP **P** **07 30 11.8 -0.4**
comp=Z,8.0nm,1.2s,mb4.6
WET Wettzell 67.73 315 eP **P** **07 30 14.1 +0.2**
comp=Z,13nm,1.4s,mb4.8
WET Wettzell 67.73 315 eP **P** **07 30 14.1 +0.2**
WET pmax pmax
comp=Z,13nm,1.4s,mb4.8
MOX Moxa 67.86 317 eP **P** **07 30 15.2 +0.5**
MOX Moxa 67.86 317 eP **P** **07 30 15.0 +0.3**
comp=Z,16nm,1.7s,mb4.8
COLA College 67.87 26 eP **P** **07 30 14.7 +0.2**
COLA pmax pmax
comp=Z,43nm,1.4s,mb5.3
COLA College 67.87 26 eP **P** **07 30 14.7 +0.2**
comp=Z,43nm,1.4s,mb5.3
ROTZ Rotzenmuhle 67.88 316 eP **P** **07 30 14.8 0.0**
comp=Z,12nm,1.2s,mb4.8
NRDL Niedersach Rie 67.96 319 eP **P** **07 30 15.8 +0.6**
comp=Z,14nm,1.1s,mb4.9
NRDL epP pP 07 30 20.3 +3.6
MCK McKinley 68.01 27 eP **P** **07 30 15.1 -0.3**
MCK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MCK McKinley 68.01 27 eP **P** **07 30 15.1 -0.3**
comp=Z,4.4nm,0.6s,mb4.7
CLZ Clausthal 68.08 318 eP **P** **07 30 16.0 0.0**
comp=Z,25nm,1.2s,mb5.1
CLZ epP pP 07 30 21.0 +3.5
CLZ Clausthal 68.08 318 eP **P** **07 30 16.0 0.0**
CLZ e*PP pP 07 30 21.0 +3.5
CLZ pmax pmax
comp=Z,25nm,1.2s,mb5.1
GRA1 Grafenberg Arr 68.49 316 eP **P** **07 30 18.7 +0.1**
comp=Z,25nm,1.7s,mb5.0
GRA1 epP pP 07 30 23.5 +3.4
GRF Grafenberg Arr 68.49 316 eP **P** **07 30 18.7 +0.1**
comp=Z,25nm,1.7s,mb5.0
GRF epP pP 07 30 23.5 +3.4
GRF Grafenberg Arr 68.49 316 eP **P** **07 30 18.7 +0.1**
GRF pmax pmax
comp=Z,25nm,1.7s,mb5.0
GRF Grafenberg Arr 68.49 316 eP **P** **07 30 18.7 +0.1**
GRF pmax pmax
comp=Z,25nm,1.7s,mb5.0
PMR Palmer 68.97 30 eP **P** **07 30 21.0 -0.4**
PMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PMR Palmer 68.97 30 eP **P** **07 30 21.0 -0.4**
comp=Z,9.5nm,0.8s,mb4.8
KDAK Kodiak Island 69.25 34 P **P** **07 30 23.3 +0.1**
comp=Z,11nm,0.6s,mb4.9
KDAK Kodiak Island 69.25 34 ceP **P** **07 30 23.8 +0.6**
TIP Timpagrande 69.35 304 eP **P** **07 30 23.4 -0.8**
comp=Z,6.9nm,0.8s,mb4.6
DAVOX Davos/Dischmat 70.57 313 P **P** **07 30 30.7 -0.8**
comp=Z,5.2nm,0.7s,mb4.6,baz=105,slow=3.2,SNR=3.5
INK Inuvik 70.65 20 P **P** **07 30 31.5 -0.1**
comp=Z,8.5nm,1.0s,mb4.7,baz=329,slow=4.8,SNR=29
INK Inuvik 70.65 20 P **P** **07 30 31.5 -0.1**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 70.65 20 eP **P** **07 30 31.3 -0.3**
comp=Z,26nm,1.2s,mb5.0
BFO Black Forest 70.80 315 eP **P** **07 30 32.2 -0.7**
comp=Z,9.0nm,1.4s,mb4.5
BFO Black Forest 70.80 315 eP **P** **07 30 32.2 -0.7**
BFO pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
BBOO Buckleboo 71.05 153 eP **P** **07 30 33.9 -0.6**
comp=Z,8.9nm,1.2s,mb4.6
CDF Champ du Feu 71.39 316 eP **P** **07 30 35.7 -0.8**
WLF Walferdange 71.45 317 eP **P** **07 30 37.2 +0.4**
comp=Z,26nm,1.0s,mb5.1
WLF epP pP 07 30 42.0 +3.7
WLF Walferdange 71.45 317 eP **P** **07 30 37.1 +0.3**
WLF pmax pmax
comp=Z,17nm,0.8s,mb5.0
WLF Walferdange 71.45 317 eP **P** **07 30 37.0 +0.2**
comp=Z,17nm,0.8s,mb5.0
KMBO Kilima Mbogo 72.14 257 P **P** **07 30 41.3 -0.2**
comp=Z,1.8nm,0.6s,mb4.2,baz=53,slow=8.3,SNR=6.3
KMBO Kilima Mbogo 72.14 257 eP **P** **07 30 41.5 0.0**
KMBO pmax pmax
comp=Z,3.0nm,1.0s
KMBO Kilima Mbogo 72.14 257 eP **P** **07 30 41.5 0.0**
comp=Z,2.8nm,1.0s,mb4.2
SUMG Summit 72.39 349 eP **P** **07 30 42.0 -0.1**
comp=Z,2.8nm,0.6s,mb4.4
RES Resolute Bay 72.39 6 P **P** **07 30 42.1 0.0**
comp=Z,8.2nm,1.2s,mb4.5,baz=10,slow=6.1,SNR=8.2
RES Resolute Bay 72.39 6 P **P** **07 30 42.1 0.0**
RES pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
RES Resolute Bay 72.39 6 eP **P** **07 30 41.5 -0.5**
comp=Z,12nm,1.3s,mb4.7
STKA Stephens Creek 72.55 148⇑ iP **P** **07 30 43.3 -0.2**
comp=Z,8.1nm,1.0s,mb4.6
STKA Stephens Creek 72.55 148 P **P** **07 30 43.4 -0.2**
comp=Z,4.9nm,0.3s,mb4.8,baz=333,slow=5.2,SNR=27
STKA Stephens Creek 72.55 148 eP **P** **07 30 43.3 -0.2**
comp=Z,4.3nm,1.2s,mb4.2
LPG La Plagne 73.09 313 eP **P** **07 30 46.8 +0.1**
comp=Z,33nm,0.8s,mb5.0
LPG La Plagne 73.09 313 eP **P** **07 30 46.8 +0.1**
LPG pmax pmax
comp=Z,17nm,0.8s,mb5.0
LPG La Plagne 73.09 313 eP **P** **07 30 46.8 +0.1**
comp=Z,16nm,0.8s,mb5.0
EKA Eskdalemuir Ar 73.46 326 P **P** **07 30 48.1 -0.6**
comp=Z,3.0nm,0.9s,mb4.2,baz=24,slow=1.0,SNR=4.3
CMSA Cobar Meteorol 74.19 145⇑ iP **P** **07 30 53.8 +0.6**
SMF Signal de Mont 74.28 315 eP **P** **07 30 52.8 -0.9**
comp=Z,22nm,1.0s,mb4.8
SMF Signal de Mont 74.28 315 eP **P** **07 30 52.8 -0.9**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.7
SMF Signal de Mont 74.28 315 eP **P** **07 30 52.8 -0.9**
comp=Z,11nm,1.0s,mb4.7
OPO Ambohidratompo 75.16 236 P **P** **07 30 57.7 -1.4**
comp=Z,2.0nm,0.8s,mb4.1,baz=71,slow=10,SNR=3.2
TCF Toulx Ste Croi 75.43 316 eP **P** **07 30 59.8 -0.5**
CAF Calviac 76.23 315 eP **P** **07 31 05.0 0.0**
comp=Z,18nm,1.0s,mb4.6
CAF Calviac 76.23 315 eP **P** **07 31 05.0 0.0**
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CAF Calviac 76.23 315 eP **P** **07 31 05.0 0.0**
comp=Z,8.8nm,1.0s,mb4.6
SFJD Kangerlussuaq 79.26 351 P **P** **07 31 20.8 -0.6**
comp=Z,7.9nm,0.9s,mb4.6,baz=34,slow=6.3,SNR=3.8
SFJD Kangerlussuaq 79.26 351 P **P** **07 31 20.8 -0.6**
YKA Yellowknife Ar 80.20 18 P **P** **07 31 26.5 -0.1**
comp=Z,6.0nm,0.6s,mb4.7,baz=326,slow=5.1,SNR=187
YKA PKKPbc PKKPbc 07 50 06.9 -3.3
comp=Z,0.3nm,0.4s,baz=154,slow=2.3,SNR=15
ESDC Sonseca Array 82.88 313 P **P** **07 31 40.5 -0.7**
comp=Z,0.2nm,0.2s,mb3.8,baz=22,slow=7.4,SNR=4.5
FRB Frobisher Bay 84.09 357 P **P** **07 31 45.8 -1.2**
comp=Z,1.0nm,0.4s,mb4.3,baz=45,slow=6.6,SNR=7.4
FCC Fort Churchill 87.79 10 eP **P** **07 32 04.7 -0.7**
FCC pmax pmax
comp=Z,1.0nm,1.3s,mb3.9
FCC Fort Churchill 87.79 10 eP **P** **07 32 04.7 -0.7**
comp=Z,0.6nm,1.3s,mb3.7
EDM Edmonton 88.40 22 eP **P** **07 32 08.6 +0.2**
JCW Jim Creek 89.37 29 eP **P** **07 32 13.6 +0.5**
FFC Flin Flon 90.15 15 ceP **P** **07 32 16.8 +0.2**
FFC Flin Flon 90.15 15 eP **P** **07 32 16.2 -0.3**
comp=Z,9.9nm,1.1s,mb5.0
ETW Entiat 90.50 29 eP **P** **07 32 19.3 +1.0**
comp=Z,14nm,1.4s,mb5.1
NEW Newport 91.23 27 eP **P** **07 32 22.8 +1.1**
NEW pmax pmax
comp=Z,16nm,1.5s
NEW Newport 91.23 27 eP **P** **07 32 22.8 +1.1**
comp=Z,16nm,1.5s,mb5.1
WALA Waterton Lakes 91.74 25 eP **P** **07 32 24.4 +0.3**
comp=Z,0.3nm,1.3s
JTMT Jette 92.72 25 eP **P** **07 32 29.3 +0.7**
SCHQ Schefferville 92.89 355 P **P** **07 32 28.5 -0.7**
comp=Z,4.6nm,0.9s,mb4.9,baz=344,slow=4.1,SNR=3.8
SCHQ Schefferville 92.89 355 eP **P** **07 32 28.4 -0.9**
comp=Z,7.9nm,1.0s,mb5.1
TORD Torodi Ar. Bea 94.17 288 P **P** **07 32 35.0 -0.9**
comp=Z,1.5nm,1.0s,mb4.4,baz=68,slow=4.7,SNR=3.9
HRY Holter Researc 94.48 25 eP **P** **07 32 36.1 -0.6**
comp=Z,2.4nm,1.0s,mb4.6
HLID Hailey 96.19 28 eP **P** **07 32 46.5 +1.9**
comp=Z,12nm,1.8s,mb5.0
TXAR Lajitas Array 112.78 27 PKKPbc PKKPbc 07 48 40.7 -0.4
comp=Z,1.1nm,1.0s,baz=107,slow=3.1,SNR=5.9
QSPA South Pole Qui 122.14 180 ePKPdf PKPdf 07 38 08.9 -1.1
ROSC El Rosal 142.98 359 PKP PKPdf 07 38 51.8 +0.7
comp=Z,1.6nm,0.3s,baz=131,slow=21,SNR=2.7
OTAV Otavalo 147.38 7 ePKPdf PKPdf 07 39 00.9 +2.2
LPAZ La Paz 162.90 338 PKP PKPdf 07 39 19.8 +0.4
comp=Z,2.1nm,1.1s,baz=39,slow=1.2,SNR=3.6
LPAZ La Paz 162.90 338 ePKPdf PKPdf 07 39 17.8 -1.6

TAP 13 07:19:27.5,21°61′N×121°43′E,h90km,ML3.6,1C,C,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.44**	**15**	P	Pn	07 19 41.9	+0.2
	baz=21						

LAY				S	Sn	07 19 52.2	-0.1
	baz=21						
TSEB	**Hengchuen, Pin**	**0.57 300**		P	Pn	07 19 43.8	+1.1
	baz=294						
TSEB				S	Sn	07 19 56.2	+2.1
	baz=294						
HEN	**Hengchun**	**0.75 301**	*i*	P	Pn	07 19 45.5	+1.0
	baz=292						
EAST	**Anshuo**	**0.94 325**	*i*	P	Pn	07 19 46.9	+0.5
	baz=331						
EAST				S	Sn	07 20 01.2	+0.5
	baz=331						
SCZT	**Fangliau**	**1.06 315**	⇑*i*	P	Pn	07 19 48.9	+0.9
	baz=323						
SCZT				*e*S	Sn	07 20 03.9	+0.6
	baz=323						
ECL	**Taimali**	**1.07 336**	*e*	P	Pn	07 19 48.3	+0.2
	baz=336						
ECL				*e*S	Sn	07 20 02.6	-0.8
	baz=336						
TWP	**Hsiaoliuchiu**	**1.23 307**	*e*	P	Pn	07 19 51.5	+1.6
	baz=307						
TWP				*e*S	Sn	07 20 10.8	+4.1
	baz=307						
TWG	**Pinlang**	**1.25 345**		P	Pn	07 19 50.4	+0.3
	baz=339						
TWG				S	Sn	07 20 06.7	-0.4
	baz=339						
SSD	**Sandimen**	**1.35 327**		P	Pn	07 19 52.2	+0.9
	baz=327						
SSD				*e*S	Sn	07 20 10.3	+1.0
	baz=327						
CHKT	**Chengkung**	**1.48 358**	*e*	S	Sn	07 20 13.1	+0.8
	baz=358						
TWM1	**Shoushan**	**1.52 322**		P	Pn	07 19 55.8	+2.2
	baz=312						
TWM1				*e*S	Sn	07 20 17.6	+4.4
	baz=312						
SGST	**Jiashian**	**1.66 332**	*e*	P	Pn	07 19 57.5	+2.2
	baz=332						
SGST				*e*S	Sn	07 20 17.9	+1.6
	baz=332						
TWF1	**Yuli**	**1.73 356**	*e*	P	Pn	07 19 58.1	+1.8
	baz=349						
TWF1				*e*S	Sn	07 20 21.5	+3.4
	baz=349						
CHN1	**Nanshi**	**1.77 332**	*e*	P	Pn	07 19 58.1	+1.3
	baz=332						
CHN1				*e*S	Sn	07 20 19.7	+0.8
	baz=332						
WTP	**Ta-pu**	**1.79 335**	*e*	P	Pn	07 19 58.5	+1.5
	baz=335						
WTP				*e*S	Sn	07 20 20.9	+1.5
	baz=335						
TWK	**Hsinying**	**1.86 332**	*e*	S	Sn	07 20 21.8	+0.8
	baz=332						
CHN4	**Tsaushan**	**1.89 336**	*e*	P	Pn	07 19 59.8	+1.4
	baz=336						
CHN4				*e*S	Sn	07 20 23.9	+2.1
	baz=336						
YUS	**Yu-Shan**	**1.92 347**		P	Pn	07 20 00.9	+2.3
	baz=347						
YUS				*e*S	Sn	07 20 24.4	+2.1
	baz=347						
ALS	**Alishan**	**1.97 343**	*e*	P	Pn	07 20 02.4	+3.0
	baz=343						
ALS				*e*S	Sn	07 20 25.8	+2.2
	baz=343						
CHN5	**Tsauling**	**2.09 341**	*e*	P	Pn	07 20 03.8	+2.9
	baz=341						
CHN5				*e*S	Sn	07 20 24.7	-1.7
	baz=341						
ESL	**Shilin**	**2.19 0**	*e*	S	Sn	07 20 28.9	+0.1
	baz=354						
SMLT	**Sun Moon Lake**	**2.31 348**	*e*	P	Pn	07 20 08.2	+4.4
	baz=348						
TYC	**Yuchr**	**2.34 347**	*e*	P	Pn	07 20 07.5	+3.3
	baz=347						
WHF	**Hehuan Shan**	**2.52 357**	*e*	P	Pn	07 20 09.7	+3.1
	baz=345						
WHF				*e*S	Sn	07 20 39.4	+2.7
	baz=345						

NEIC ***13*** *07:25:05.7, 16°.74N×94°.71W, h110km, MD3.9(MEX), After MEX.*

MEX 13 07:25:05.6±1.1, **16°.74N×94°.71W, h111**km±10km, **MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.39 334**		*i* P	Pn	07 25 20.3	-1.6
CMIG				*i* S	Sn	07 25 32.2	-1.9
CMIG	**Matias Romero**	**0.39 334**		*i* P	Pn	07 25 20.3	-1.6
CMIG				*i* S	Sn	07 25 32.2	-1.9
TGIG		**1.52 88**		*i* P	Pn	07 25 31.5	-1.2
TGIG				*i* S	Sn	07 25 51.7	-1.7
HUIG	**Huatulco**	**1.66 234**		*i* P	Pn	07 25 32.5	-1.9
HUIG				*i* S	Sn	07 25 55.4	-0.9
HUIG	**Huatulco**	**1.66 234**		*i* P	Pn	07 25 32.5	-1.9
HUIG				*i* S	Sn	07 25 55.4	-0.9
PCIG		**1.76 126**		*i* P	Pn	07 25 34.8	-0.9
PCIG				*i* S	Sn	07 25 57.0	-1.6
OXX	**Oaxaca**	**1.96 280**		*i* P	Pn	07 25 38.3	+0.2
OXX				*i* S	Sn	07 26 02.4	-0.6
OXX	**Oaxaca**	**1.96 280**		*i* P	Pn	07 25 38.3	+0.2
OXX				*i* S	Sn	07 26 02.4	-0.6
VHO	**Vista Hermosa**	**1.97 280**		*i* P	Pn	07 25 37.4	-0.8
VHO				*i* S	Sn	07 26 01.9	-1.3
VHO	**Vista Hermosa**	**1.97 280**		*i* P	Pn	07 25 37.4	-0.8
VHO				*i* S	Sn	07 26 01.9	-1.3
CCIG	**Comitan**	**2.51 100**		*i* P	Pn	07 25 44.5	-0.6
CCIG				*i* S	Sn	07 26 14.6	-1.0
CCIG	**Comitan**	**2.51 100**		*i* P	Pn	07 25 44.5	-0.6
CCIG				*i* S	Sn	07 26 14.6	-1.0
THIG		**2.98 127**		*e*P	Pn	07 25 50.0	-1.3
THIG				*i* S	Sn	07 26 24.9	-1.7
TPIG	**Tehuac#an**	**3.03 304**		*e*P	Pn	07 25 50.2	-1.9
TPIG				*i* S	Sn	07 26 26.5	-1.4
UTMO	**Huajuapan**	**3.15 291**		*e*P	Pn	07 25 52.1	-1.5
UTMO				*i* S	Sn	07 26 28.9	-1.7
PNIG	**Pinotepa**	**3.30 264**		*i* P	Pn	07 25 52.9	-2.7
PNIG				*i* S	Sn	07 26 30.8	-3.4
PNIG	**Pinotepa**	**3.30 264**		*i* P	Pn	07 25 52.8	-2.7
PNIG				*i* S	Sn	07 26 31.5	-2.7
PPM	**Popocatepetl**	**4.39 302**		*i* P	Pn	07 26 10.3	+0.1
PPM				*i* S	Sn	07 26 59.9	-0.5
PPM	**Popocatepetl**	**4.39 302**		*i* P	Pn	07 26 10.3	+0.1
PPM				*i* S	Sn	07 26 59.9	-0.5
IIO	**Organos**	**4.75 307**		*e*P	Pn	07 26 14.2	-0.9
IIO				*i* S	Sn	07 27 13.6	+4.4
IIO	**Organos**	**4.75 307**		*e*P	Pn	07 26 14.2	-0.9
IIO				*i* S	Sn	07 27 13.6	+4.4
MZVM		**4.94 300**		*e*P	Pn	07 26 14.8	-2.9
MZVM				*i* S	Sn	07 27 13.6	-0.2
ACX	**Acapulco**	**4.99 272**		*e*P	Pn	07 26 17.5	-0.8
ACX				*i* S	Sn	07 27 11.0	-3.9
ACX	**Acapulco**	**4.99 272**		*e*P	Pn	07 26 17.5	-0.8
ACX				*i* S	Sn	07 27 11.0	-3.9

IDC ***13*** *07:28:54.0±1.1, 32°.33N×105°.46E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.4/25, mbtmp3.3/5, Error ellipse: s-maj=73.8km s-min=21.2km az=56.0*
NEIC ***13*** *07:28:55.6±0.7, 32°.22N×105°.20E, h10km, Error ellipse: s-maj=38.7km s-min=11.8km az=46.0*
ISCJB ***13*** *07:28:57.1±0.6, 31°.98N±0°.05×105°.06E±0°.09, h33km, mb3.2/5, Error ellipse: s-maj=10.4km s-min=7.3km az=1.6*

ISC 13 07:28:57.1±0.9, **31°.89N**±0°.04×**104°.88E**±0°.06, **h19**km±7km, **n11**, σ1°18/15, **mb3.2**/5, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.37 225**		Pg	**Pg**	**07 29 22.4**	**-1.1**
CD2				Sg	**Sg**	**07 29 41.9**	**+0.5**
CD2				smax			
	comp=N,4μm,0.7s						
XAN	**Xi'an**	**4.02 57**		Pg	**Pb**	**07 30 08.9**	**+1.7**
XAN				Sg	**Sg**	**07 31 05.4**	**-0.7**
XAN				smax			
	comp=N,160nm,0.6s						
XAN				smax			
	comp=E,54nm,0.8s						
ENH	**Enshi**	**4.26 111**		*e*Pn	**Pn**	**07 29 59.6**	**-1.4**
LZH	**Lanzhou**	**4.28 349**		Pg	**Pg**	**07 30 28.1**	**+9.1**
LZH				Sn	**Sb**	**07 31 02.3**	**-0.6**
LZH				Sg	**Sg**	**07 31 15.6**	**+1.1**
LZH				smax			
	comp=N,330nm,0.7s						
LZH				smax			
	comp=E,610nm,0.6s						
LZH				LR	LR		
	comp=E,4μm,5.8s						
LZH				LR	LR		
	comp=Z,3μm,6.8s						
MKAR	**Makanchi Array**	**22.84 317**		P	**P**	**07 33 57.6**	**-1.3**
	comp=Z,0.2nm,0.4s,mb2.9,baz=111,slow=11,SNR=2.1						
KURK	**Kurchatov**	**27.03 322**		P	**P**	**07 34 38.4**	**+0.5**
	comp=Z,0.3nm,1.0s,mb2.8,baz=138,slow=7.4,SNR=2.7						
WRAB	**Tennant Creek**	**58.76 147**		*e*P	**P**	**07 38 55.1**	**+1.2**
WRA	**Warramunga Arr**	**58.76 147**		P	**P**	**07 38 55.1**	**+1.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=340,slow=7.3						
ASAR	**Alice Springs**	**61.82 150**		P	**P**	**07 39 15.3**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.6,baz=331,slow=6.2,SNR=4.5						
YKA	**Yellowknife Ar**	**80.75 17**		P	**P**	**07 41 05.9**	**-2.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=327,slow=5.2,SNR=4.5						
YKA	**Yellowknife Ar**	**80.75 17**		P	**P**	**07 41 05.9**	**-2.9**

IDC ***13*** *07:44:10.0±2.2, 32°.28N×105°.12E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=370.0km s-min=22.8km az=53.0*
NEIC ***13*** *07:44:11.8±0.7, 32°.31N×105°.27E, h10km, mb3.7/1, Error ellipse: s-maj=45.1km s-min=8.9km az=220.0*
BJI ***13*** *07:44:19.1, 32°.62N×105°.10E, h24km, ML3.6/5, Ms4.0/3, Ms7 3.9/2*

ISC 13 07:44:10.8±2.1, **32°.3N**±0°.1×**105°.2E**±0°.2, **h3**km±13km, **n9**, σ0°48/11, **mb3.5**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.98 344**		Pg	**Pg**	**07 45 26.9**	**-0.1**
LZH				Sn	**Sn**	**07 45 59.8**	**+0.1**
LZH				Sg	**Sg**	**07 46 11.9**	**-6.6**
LZH				smax			
	comp=N,140nm,0.5s						
LZH				smax			
	comp=E,200nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.0s						
LZH				LR	LR		
	comp=Z,2μm,8.0s						
ENH	**Enshi**	**4.19 117**		*e*Pg	**Pg**	**07 45 31.2**	**0.0**
MK31	**Makanchi Array**	**22.74 316**		*e*P	**P**	**07 49 14.7**	**+0.9**
MKAR	**Makanchi Array**	**22.74 316**		P	**P**	**07 49 13.6**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.3,baz=123,slow=10,SNR=6.0						
MKAR	**Makanchi Array**	**22.74 316**		P	**P**	**07 49 13.6**	**-0.3**
KURK	**Kurchatov**	**26.89 321**		P	**P**	**07 49 51.5**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.3,baz=113,slow=9.6,SNR=2.7						
KURK	**Kurchatov**	**26.89 321**		*e*P	**P**	**07 49 52.9**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.5						
WRA	**Warramunga Arr**	**58.94 148**		P	**P**	**07 54 11.8**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.6,baz=338,slow=7.8,SNR=2.7						
ASAR	**Alice Springs**	**62.02 150**		P	**P**	**07 54 32.1**	**-0.4**
	comp=Z,0.8nm,0.9s,mb3.9,baz=342,slow=8.1,SNR=4.4						

ISCJB ***13*** *07:45:26.9±0.6, 28°.47N±0°.07×16°.01W±0°.04, h45km±11km, Error ellipse: s-maj=11.1km s-min=5.1km az=178.3*
CSEM ***13*** *07:45:27.9±0.2, 28°.43N×16°.04W, h36km±3km, ML3.5, Error ellipse: s-maj=8.4km s-min=4.2km az=176.0*
NEIC ***13*** *07:45:29.6, 28°.44N×16°.01W, h30km, MN3.5(MDD), After MDD.*
NEIC Felt [III] in the Santa Cruz de Tenerife area.
MDD ***13*** *07:45:29.6±0.1, 28°.44N×16°.02W, h30km±3km, mbLg3.5/9, Error ellipse: s-maj=1.7km s-min=0.7km az=7.0, PRIMO TT-MODEL: Canary*
MDD EMS: III INTENSIDAD MIMA.

ISC 13 07:45:27.1±0.6, **28°.53N**±0°.05×**16°.02W**±0°.03, **h39**km±12km, **n41**, σ1°29/75, **6C-11D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBAJ	**Bajamar**	**0.28 272**		⇑P	**Pn**	**07 45 36.4**	**+1.3**
EBAJ				S	**Sn**	**07 45 40.9**	**+0.1**
EBAJ	**Bajamar**	**0.28 272**		⇑P	**Pn**	**07 45 36.4**	**+1.3**
	SNR=18						
EBAJ				S	**Sn**	**07 45 40.9**	**+0.1**
	7μm,0.2s,SNR=7.9						
EBAJ	**Bajamar**	**0.28 272**		⇑P	**Pn**	**07 45 36.4**	**+1.3**
	SNR=18						
EBAJ				S	**Sn**	**07 45 40.9**	**+0.1**
	7μm,0.2s,SNR=7.9						
EBAJ	**Bajamar**	**0.28 272**		P	**Pn**	**07 45 36.4**	**+1.2**
	SNR=18						
EBAJ				S	**Sn**	**07 45 40.9**	**+0.2**
	7μm,0.2s,SNR=7.9						
CRAJ	**Montana Rajada**	**0.57 243**		⇓P	**Pn**	**07 45 39.4**	**+0.6**
	117nm,0.1s,SNR=18						
CRAJ				S	**Sn**	**07 45 46.1**	**-0.9**
	2μm,0.2s,SNR=7.9						
CRAJ	**Montana Rajada**	**0.57 243**		⇓P	**Pn**	**07 45 39.4**	**+0.6**
	117nm,0.1s,SNR=18						
CRAJ				S	**Sn**	**07 45 46.1**	**-0.9**
	2μm,0.2s,SNR=7.9						
CRAJ	**Montana Rajada**	**0.57 243**		P	**Pn**	**07 45 39.4**	**+0.6**
	117nm,0.1s,SNR=18						
CRAJ				S	**Sn**	**07 45 46.1**	**-0.9**
	2μm,0.2s,SNR=7.9						
CCAN	**Las Canadas**	**0.60 239**		⇓P	**Pn**	**07 45 39.7**	**+0.5**
CCAN				S	**Sn**	**07 45 46.4**	**-1.3**
CCAN	**Las Canadas**	**0.60 239**		⇓P	**Pn**	**07 45 39.7**	**+0.5**
	172nm,0.2s,SNR=18						
CCAN				S	**Sn**	**07 45 46.4**	**-1.3**
	128nm,0.1s,SNR=15						
CCAN	**Las Canadas**	**0.60 239**		⇓P	**Pn**	**07 45 39.7**	**+0.5**
	172nm,0.2s,SNR=18						
CCAN				S	**Sn**	**07 45 46.4**	**-1.3**
	128nm,0.1s,SNR=15						
CCAN	**Las Canadas**	**0.60 239**		P	**Pn**	**07 45 39.7**	**+0.5**
	172nm,0.2s,SNR=18						
CCAN				S	**Sn**	**07 45 46.4**	**-1.3**
	128nm,0.1s,SNR=15						
EOSO	**Osorio**	**0.61 138**		⇑P	**Pn**	**07 45 39.9**	**+0.5**
EOSO				S	**Sn**	**07 45 46.9**	**-1.2**
EOSO	**Osorio**	**0.61 138**		⇑P	**Pn**	**07 45 39.9**	**+0.5**
	167nm,0.1s,SNR=18						
EOSO				S	**Sn**	**07 45 46.9**	**-1.2**
	756nm,0.2s,SNR=23						
EOSO	**Osorio**	**0.61 138**		⇑P	**Pn**	**07 45 39.9**	**+0.5**
	167nm,0.1s,SNR=18						
EOSO				S	**Sn**	**07 45 46.9**	**-1.2**
	756nm,0.2s,SNR=23						
EOSO	**Osorio**	**0.61 138**		P	**Pn**	**07 45 39.9**	**+0.5**
	167nm,0.1s,SNR=18						
EOSO				S	**Sn**	**07 45 46.9**	**-1.2**
	756nm,0.2s,SNR=23						
EHIG	**Higuera**	**1.57 271**		P	**Pn**	**07 45 54.1**	**+1.6**
EHIG				S	**Sn**	**07 46 11.5**	**-0.1**
EHIG	**Higuera**	**1.57 271**		P	**Pn**	**07 45 54.1**	**+1.6**
	49nm,0.2s,SNR=4.0						
EHIG				S	**Sn**	**07 46 11.5**	**-0.1**
	315nm,0.2s,SNR=7.6						
EHIG	**Higuera**	**1.57 271**		P	**Pn**	**07 45 54.1**	**+1.6**
	49nm,0.2s,SNR=4.0						
EHIG				S	**Sn**	**07 46 11.5**	**-0.1**
	315nm,0.2s,SNR=7.6						
EHIG	**Higuera**	**1.57 271**		P	**Pn**	**07 45 54.1**	**+1.6**
	SNR=4.0						
EHIG				S	**Sn**	**07 46 11.5**	**-0.1**
	315nm,0.2s,SNR=7.6						
CFTV	**Fuerteventura**	**1.71 93**		⇓P	**Pn**	**07 45 55.4**	**+1.0**
CFTV				S	**Sn**	**07 46 13.2**	**-1.8**
CFTV	**Fuerteventura**	**1.71 93**		⇓P	**Pn**	**07 45 55.4**	**+1.0**
	13nm,0.1s,SNR=18						
CFTV				S	**Sn**	**07 46 13.2**	**-1.8**
	157nm,0.4s,SNR=49						
CFTV	**Fuerteventura**	**1.71 93**		⇓P	**Pn**	**07 45 55.4**	**+1.0**
	13nm,0.1s,SNR=18						
CFTV				S	**Sn**	**07 46 13.2**	**-1.8**
	157nm,0.4s,SNR=49						
CFTV	**Fuerteventura**	**1.71 93**		P	**Pn**	**07 45 55.4**	**+1.0**
	13nm,0.1s,SNR=18						
CHIE	**El Hierro**	**1.89 245**		P	**Pn**	**07 45 57.2**	**+0.3**
CHIE				S	**Sn**	**07 46 16.8**	**-2.6**
CHIE	**El Hierro**	**1.89 245**		P	**Pn**	**07 45 57.2**	**+0.3**
	2.3nm,0.2s,SNR=8.9						
CHIE				S	**Sn**	**07 46 16.8**	**-2.6**
	56nm,0.2s,SNR=9.2						
CHIE	**El Hierro**	**1.89 245**		P	**Pn**	**07 45 57.2**	**+0.3**
	2.3nm,0.2s,SNR=8.9						
CHIE				S	**Sn**	**07 46 16.8**	**-2.6**
	56nm,0.2s,SNR=9.2						
CHIE	**El Hierro**	**1.89 245**		P	**Pn**	**07 45 57.2**	**+0.3**
	2.3nm,0.2s,SNR=8.9						
CHIE				S	**Sn**	**07 46 16.8**	**-2.7**
	56nm,0.2s,SNR=9.2						
EFAM	**Famara**	**2.27 74**		⇓P	**Pn**	**07 46 03.7**	**+1.6**
EFAM				S	**Sn**	**07 46 28.7**	**-0.2**
EFAM	**Famara**	**2.27 74**		⇓P	**Pn**	**07 46 03.7**	**+1.6**
	69nm,0.3s,SNR=18						
EFAM				S	**Sn**	**07 46 28.7**	**-0.2**
	99nm,0.3s,SNR=13						
EFAM	**Famara**	**2.27 74**		⇓P	**Pn**	**07 46 03.7**	**+1.6**
	69nm,0.3s,SNR=18						
EFAM				S	**Sn**	**07 46 28.7**	**-0.2**
	99nm,0.3s,SNR=13						
EFAM	**Famara**	**2.27 74**		P	**Pn**	**07 46 03.7**	**+1.6**
	69nm,0.3s,SNR=18						
EFAM				S	**Sn**	**07 46 28.7**	**-0.1**
	99nm,0.3s,SNR=13						
PMAR	**Madeira**	**4.25 350**		*e*Pn	**Pn**	**07 46 31.9**	**+2.5**
PMAR				*e*Sn	**Sn**	**07 47 16.2**	**-1.5**
PMAR				A		07 47 24.5	
	56nm,0.2s						
PMAR	**Madeira**	**4.25 350**		P	**Pn**	**07 46 31.9**	**+2.5**
PMAR				S	**Sn**	**07 47 16.2**	**-1.5**
	28nm,0.2s						
PMAR	**Madeira**	**4.25 350**		P	**Pn**	**07 46 31.9**	**+2.5**
PMAR				S	**Sn**	**07 47 16.2**	**-1.5**
	28nm,0.2s						
PMAR	**Madeira**	**4.25 350**		*e*Pn	**Pn**	**07 46 31.9**	**+2.5**
PMAR				*e*Sn	**Sn**	**07 47 16.2**	**-1.5**
	56nm,0.2s						
PMPS	**Porto Santo**	**4.52 357**		*e*Sn	**Sn**	**07 47 22.1**	**-2.3**
PMPS				A		07 47 25.3	
	40nm,0.1s						
PMPS	**Porto Santo**	**4.52 357**		S	**Sn**	**07 47 22.1**	**-2.3**
	20nm,0.1s						
PMPS	**Porto Santo**	**4.52 357**		S	**Sn**	**07 47 22.1**	**-2.3**
	20nm,0.1s						

BJI ***13*** *07:46:54.5, 52°.76N×166°.22W, h29km, mB4.9/2, mb4.7/3, Ms4.8/4, Ms7 4.4/4*
IDC ***13*** *07:46:55.6±0.9, 53°.02N×166°.71W, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.2/31, mbtmp4.2/21, Error ellipse: s-maj=25.9km s-min=13.5km az=5.0*
NEIC ***13*** *07:46:57.0, 52°.74N×166°.67W, h14km, mb4.2/27, ML4.0(AEIC), After AEIC.*
ISCJB ***13*** *07:47:00.2±0.7, 52°.91N±0°.05×166°.78W±0°.04, h47km±6km, mb4.2/44, MS4.4/2, Error ellipse: s-maj=8.5km s-min=4.4km az=2.9*

ISC 13 07:47:01.2±0.7, **52°.93N**±0°.05×**166°.76W**±0°.04, **h38**km±6km, **h44**km±2.0km: **pP-P, n249**, σ0°63/253, **mb4.2**/44, **MS4.4**/2, **82C-82D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.85 306**		P	**Pn**	**07 47 15.7**	**-0.9**
OKFG				S	**Sn**	**07 47 30.2**	**+2.4**
UNV	**Unalaska Valle**	**0.94 9**		P	**Pn**	**07 47 16.5**	**-1.3**
UNV				S	**Sn**	**07 47 31.1**	**+1.1**
NIKO	**Nikolski**	**1.27 273**		P	**Pn**	**07 47 20.5**	**-1.9**
AKLV	**Akutan Long Va**	**1.33 21**		P	**Pn**	**07 47 22.7**	**-0.5**
AKUT	**Akutan**	**1.35 26**		P	**Pn**	**07 47 22.7**	**-0.8**
AKUT				S	**Sn**	**07 47 41.6**	**+1.5**
AKGG	**Akutan Green G**	**1.36 19**		P	**Pn**	**07 47 23.4**	**-0.2**
FALS	**False Pass**	**2.77 44**		P	**Pn**	**07 47 42.5**	**-0.5**
SDPT	**Sand Point**	**4.42 54**		P	**Pn**	**07 48 04.8**	**-0.9**
ATKA	**Atka Island**	**4.59 264**		P	**Pn**	**07 48 08.1**	**0.0**
SPIA	**Saint Paul Isl**	**4.71 336**		P	**Pn**	**07 48 12.3**	**+2.7**
CHGN	**Chignik**	**5.91 52**		*e*Pn	**Pn**	**07 48 29.8**	**+3.7**
ADK	**Adak**	**6.16 264**		P	**Pn**	**07 48 30.3**	**+0.7**
KDAK	**Kodiak Island**	**9.42 53**		Pn	**Pn**	**07 49 11.8**	**-2.3**
TTA	**Tatalina**	**11.52 25**		*e*Pn	**Pn**	**07 49 48.8**	**+5.9**
	29nm,1.5s						
CHUM	**Lake Minchumin**	**13.30 29**		*e*Pn	**Pn**	**07 50 12.3**	**+5.2**
	9.6nm,0.9s						
KTH	**Kantishna Hill**	**13.48 32**		*e*P	**Pn**	**07 50 15.7**	**+6.0**
	26nm,1.5s						
DIV	**Divide**	**14.02 46**		*e*Pn	**Pn**	**07 50 16.6**	**-0.4**
COLA	**College**	**15.37 31**		*e*P	**Pn**	**07 50 34.3**	**-0.6**
	3.5nm,0.9s						
MENT	**Mentasta**	**15.72 41**		*e*P	**Pn**	**07 50 42.9**	**+3.4**
COLD	**Coldfoot**	**16.46 23**		*e*P	**Pn**	**07 50 52.5**	**+3.6**
	14nm,1.2s						
HYT	**Haines Junctio**	**17.71 52**		*e*P	**Pn**	**07 51 07.9**	**+3.4**
DAWY	**Dawson**	**17.96 41**		*e*P	**Pn**	**07 51 07.9**	**+0.2**
SKAG	**Skagway**	**18.54 57**		*e*P	**Pn**	**07 51 14.9**	**+0.3**
	11nm,0.6s						
DLBC	**Dease Lake**	**21.23 60**		P	**P**	**07 51 43.0**	**-0.5**
	2.1nm,0.9s,mb3.5,baz=296,slow=18,SNR=3.1						
PETK	**Petropavlovsk-**	**21.25 285**		P	**P**	**07 51 44.1**	**+0.3**
	6.3nm,0.4s,mb4.3,baz=82,slow=12,SNR=22						
INK	**Inuvik**	**22.01 33**		P	**P**	**07 51 49.6**	**-2.2**
	4.6nm,0.8s,mb4.0,baz=243,slow=10,SNR=14						
INK	**Inuvik**	**22.01 33**		*e*P	**P**	**07 51 49.8**	**-2.0**
	7.1nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**28.67 50**		P	**P**	**07 52 54.0**	**+0.1**
	0.6nm,0.4s,mb3.6,baz=273,slow=7.4,SNR=17						
YKA				PcP	PcP	07 56 03.7	+0.1
	0.6nm,0.6s,baz=283,slow=2.4,SNR=9.1						
YKA				ScP	ScP	07 59 44.3	+2.7
	0.3nm,0.8s,baz=274,slow=3.4,SNR=4.1						
YKA	**Yellowknife Ar**	**28.67 50**		P	**P**	**07 52 54.0**	**0.0**
YKA				PcP	PcP	07 56 03.7	+0.1
YKA				ScP	ScP	07 59 44.3	+2.7
ETW	**Entiat**	**29.73 81**		*e*P	**P**	**07 53 03.7**	**+0.1**
	1.9nm,0.8s,mb3.9						
ETW				*e*	pP	07 53 12.1	-2.0
B08A	**Colville Reser**	**29.98 79**		⇑P	**P**	**07 53 06.2**	**+0.5**
	baz=30						
H04A	**Detroit Lake**	**30.07 88**		⇑P	**P**	**07 53 07.2**	**+0.6**
	baz=30						
NEW	**Newport**	**31.34 78**		*e*P	**P**	**07 53 17.7**	**0.0**
	2.3nm,0.8s,mb4.1						
EDM	**Edmonton**	**31.47 68**		*e*P	**P**	**07 53 19.1**	**+0.3**
G08A	**Pilot Rock**	**31.70 84**		⇓P	**P**	**07 53 21.1**	**+0.2**
	baz=32						
K05A	**Summer Lake**	**31.93 90**	

F13A	Darby	34.22	80	⇑P	P	07 53 43.1 +0.2
	baz=34					
C15A	Salmond Ranch,	34.24	76	⇓P	P	07 53 43.2 +0.1
	baz=34,SNR=8.4					
I11A	Placerville	34.25	84	⇑P	P	07 53 43.2 +0.1
	baz=34					
A16A	West Butte Ran	34.26	74	⇓P	P	07 53 43.0 -0.3
	baz=34					
K10A	MacKenzie Ranc	34.33	87	⇓P	P	07 53 44.3 +0.3
	baz=34					
E14A	Clinton	34.39	79	⇑P	P	07 53 44.2 -0.2
	baz=34					
H12A	Diamond D Ranc	34.56	83	⇓P	P	07 53 46.3 +0.4
	baz=34					
MFID	Camas Ranch	34.60	85	⇑P	P	07 53 46.3 +0.1
	baz=34					
PAHR	Pah Rah Range	34.64	93	eP	P	07 53 47.6 +1.0
	6.8nm,1.0s,mb4.5					
G13A	Cobalt	34.64	81	⇓P	P	07 53 46.5 0.0
	baz=34					
D15A	Lincoln	34.65	77	⇑P	P	07 53 46.3 -0.3
	baz=34					
WCN	Washoe City	34.67	94	⇑P	P	07 53 47.5 +0.6
	baz=35					
C16A	Fuhringer Ranc	34.73	76	⇓P	P	07 53 47.2 -0.1
	baz=35					
I12A	Atlanta	34.81	84	⇑P	P	07 53 48.2 +0.1
	baz=35					
K11A	Parker Ranch,	34.84	86	⇓P	P	07 53 48.8 +0.4
	baz=35					
H13A	Challis	34.91	82	⇑P	P	07 53 49.0 +0.1
	baz=35					
L10A	Juniper Basin	34.98	87	⇓P	P	07 53 49.8 +0.3
	baz=35					
B17A	L&G Farms, Che	35.04	75	⇑P	P	07 53 49.9 0.0
	baz=35					
J12A	Stokes Ranch,	35.14	85	⇑P	P	07 53 51.1 +0.3
	baz=35					
RES	Resolute Bay	35.18	26	P	P	07 53 50.0 -0.8
	0.6nm,0.6s,mb3.7,baz=255,slow=14,SNR=6.5					
RES	Resolute Bay	35.18	26	eP	P	07 53 49.9 -1.0
	1.3nm,0.8s,mb3.9					
A18A	Metzger Ranch,	35.29	73	⇓P	P	07 53 51.6 -0.6
	baz=35					
I13A	Wildhorse Cree	35.35	83	⇓P	P	07 53 52.9 +0.2
	baz=35					
L11A	Cat Creek Ranc	35.36	87	⇓P	P	07 53 53.1 +0.3
	baz=35					
HLID	Hailey	35.37	84	⇓P	P	07 53 53.2 +0.4
	baz=35					
HLID	Hailey	35.37	84	eP	P	07 53 53.2 +0.3
	2.3nm,1.3s,mb4.0					
C17A	Wharram Farm,	35.39	76	⇓P	P	07 53 52.7 -0.3
	baz=35					
E16A	East Helena	35.41	78	⇑P	P	07 53 52.8 -0.4
	baz=35					
H14A	Leadore	35.42	82	⇓P	P	07 53 53.0 -0.3
	baz=35					
B18A	Beardsley Farm	35.59	74	⇓P	P	07 53 54.2 -0.4
	baz=36					
J13A	Cove Ranch, Pi	35.61	84	⇑P	P	07 53 55.4 +0.5
	baz=36,SNR=8.1					
MCMT	McKenzie Canyo	35.61	81	eP	P	07 53 54.5 -0.4
	1.9nm,1.0s,mb4.0					
G15A	Dillon	35.65	80	⇓P	P	07 53 55.2 0.0
	baz=36,SNR=6.7					
I14A	Mackay	35.75	83	⇓P	P	07 53 56.0 0.0
	baz=36					
M11A	Holland Ranch,	35.77	88	⇑P	P	07 53 56.4 +0.1
	baz=36					
EGMT	Eagleton	35.78	74	⇑P	P	07 53 56.2 -0.2
	baz=36,SNR=6.4					
EGMT	Eagleton	35.78	74	eP	P	07 53 56.4 0.0
	183nm,2.8s					
L12A	House Creek Ra	35.82	86	⇓P	P	07 53 57.1 +0.4
	baz=36					
H15A	Lima	35.85	81	⇓P	P	07 53 57.1 +0.2
	baz=36					
BOZ	Bozeman (W)	35.90	79	⇑P	P	07 53 57.5 +0.1
	baz=36					
BOZ	Bozeman (W)	35.90	79	eP	P	07 53 57.2 -0.2
	2.6nm,1.0s,mb4.1					
E17A	Martinsdale	35.93	77	⇓P	P	07 53 57.5 -0.1
	baz=36					
G16A	Moss Hill, Enn	36.02	80	⇓P	P	07 53 58.1 -0.3
	baz=36					
NVAR	Mina Array Bea	36.10	94	P	P	07 53 59.6 +0.4
	3.3nm,0.8s,mb4.3,baz=297,slow=8.2,SNR=20					
M12A	Wells	36.31	87	⇑P	P	07 54 00.7 -0.2
	baz=36					
F17A	Fitzpatrick Pl	36.34	78	⇑P	P	07 54 01.2 +0.1
	baz=36					
L13A	Double Diamond	36.50	86	⇑P	P	07 54 03.0 +0.5
	baz=36					
N12A	Clover Valley,	36.57	88	⇑P	P	07 54 03.5 +0.3
	baz=36					
N12A	Clover Valley,	36.57	88	eP	P	07 54 04.0 +0.9
	5.6nm,1.0s,mb4.3					
G17A	Pierce Place,	36.60	79	⇓P	P	07 54 03.5 +0.1
	baz=36					
H16A	Russell Place,	36.64	80	⇓P	P	07 54 03.7 0.0
	baz=36					
J15A	Blackfoot	36.66	83	⇓P	P	07 54 04.2 +0.3
	baz=37					
I16A	Newdale	36.95	81	⇑P	P	07 54 07.3 +0.9
	baz=37					
L14A	Malta	36.96	85	⇓P	P	07 54 06.8 +0.4
	baz=37					
Q10A	Clear Creek Ra	37.00	92	⇓P	P	07 54 07.3 +0.5
	baz=37					
O12A	Currie	37.10	89	⇓P	P	07 54 08.0 +0.3
	baz=37					
H17A	Grant Village	37.21	80	⇓P	P	07 54 09.6 +1.1
	baz=37					
LKWY	Lake	37.22	80	eP	P	07 54 09.5 +0.9
	4.9nm,0.8s,mb4.4					
J16A	Bone	37.22	82	⇓P	P	07 54 09.2 +0.5
	baz=37					
IMW	Indian Meadow	37.27	81	eP	P	07 54 09.4 +0.3
	3.4nm,1.0s,mb4.1					
RRI2	Red Ridge	37.35	82	eP	P	07 54 10.3 +0.6
	7.0nm,1.0s,mb4.5					
R10A	Warm Springs	37.40	92	⇓P	P	07 54 10.7 +0.5
	baz=37					
Q11A	Duckwater	37.44	91	⇑P	P	07 54 10.9 +0.4
	baz=37					
S10A	Tonopah Range,	37.46	93	⇓P	P	07 54 10.7 0.0
	baz=37,SNR=5.1					
L15A	Malad City	37.49	85	⇑P	P	07 54 10.1 -0.8
	baz=37					
P12A	McGill	37.50	90	⇑P	P	07 54 11.1 +0.1
	baz=37					
RLMT	Red Lodge	37.59	78	⇑P	P	07 54 11.8 +0.1
	baz=38					
RLMT	Red Lodge	37.59	78	eP	P	07 54 12.1 +0.3
	10nm,1.1s,mb4.5					
RLMT				epP	pP	07 54 24.0 +1.6
REDW	Red Top Meadow	37.62	82	eP	P	07 54 13.3 +1.3
	15nm,1.8s,mb4.4					
REDW				epP	pP	07 54 25.1 +2.2
R11A	Troy Canyon, C	37.79	92	⇑P	P	07 54 13.5 0.0
	baz=38,SNR=5.1					
ISA	Isabella	37.81	97	⇓P	P	07 54 13.5 -0.2
	baz=38					
ISA	Isabella	37.81	97	eP	P	07 54 13.3 -0.4
	3.0nm,0.7s,mb4.1					
I18A	Diamond G Ranc	38.05	80	⇓P	P	07 54 15.9 +0.2
	baz=38					
L16A	Fish Haven	38.06	84	⇓P	P	07 54 16.2 +0.4
	baz=38					
J18A	Kendall Valley	38.21	81	⇑P	P	07 54 17.0 0.0
	baz=38					
DUG	Dugway	38.32	87	⇑P	P	07 54 17.9 0.0
	baz=38					
DUG	Dugway	38.32	87	eP	P	07 54 17.6 -0.3
	5.8nm,1.3s,mb4.2					
M16A	Huntsville	38.35	85	⇑P	P	07 54 18.6 +0.3
	baz=38					
K18A	Toltan Ranch,	38.53	82	⇑P	P	07 54 19.7 0.0
	baz=38					
T11A	Corn Creek, Al	38.73	93	⇑P	P	07 54 21.4 0.0
	baz=39					
BW06	Boulder Array	38.74	82	⇑P	P	07 54 21.3 -0.1
	baz=39,SNR=6.8					
BW06	Boulder Array	38.74	82	eP	P	07 54 21.0 -0.5
	4.5nm,1.1s,mb4.1					
BW06				epP	pP	07 54 33.8 +1.6
PDAR	Pinedale Array	38.74	82	P	P	07 54 21.4 -0.1
	3.3nm,0.9s,mb4.1,baz=312,slow=5.3,SNR=26					
Q14A	Sevier Lake (B	38.79	89	⇑P	P	07 54 21.9 0.0
	baz=39					
N17A	Moffit Pass	39.06	85	⇓P	P	07 54 24.1 -0.1
	baz=39					
K19A	Absolon Red Bu	39.13	81	⇑P	P	07 54 24.2 -0.5
	baz=39,SNR=8.0					
M18A	Lyman	39.23	84	⇓P	P	07 54 25.6 0.0
	baz=39					
L19A	Farson	39.25	82	⇓P	P	07 54 25.4 -0.4
	baz=39					
FCC	Fort Churchill	39.35	52	eP	P	07 54 26.4 0.0
	0.2nm,0.7s					
V11A	Goodsprings	39.53	95	⇑P	P	07 54 28.3 +0.2
	baz=40					
T13A	Saint George	39.67	92	⇑P	P	07 54 29.5 +0.2
	baz=40					
L20A	Wamsutter	39.92	82	⇓P	P	07 54 31.6 +0.3
	baz=40					
U13A	Pakoon Wash	40.03	93	⇓P	P	07 54 32.9 +0.6
	baz=40					
R16A	Teasdale	40.32	89	⇑P	P	07 54 35.3 +0.6
	baz=40					
M20A	Sweetwater, Wa	40.32	82	⇓P	P	07 54 34.7 +0.1
	baz=40					
V13A	Grand Canyon W	40.39	93	⇑P	P	07 54 35.8 +0.5
	baz=40					
O19A	Miners Draw (B	40.48	84	⇓P	P	07 54 35.6 -0.4
	baz=40,SNR=5.9					
U14A	Mt Trumbull	40.50	92	⇑P	P	07 54 36.4 +0.2
	baz=40					
L21A	Rawlins	40.53	81	⇓P	P	07 54 36.0 -0.3
	baz=40					
T15A	Red Dirt Ranch	40.59	91	⇑P	P	07 54 37.1 +0.2
	baz=40					
Q18A	Rafter H Ranch	40.62	87	⇓P	P	07 54 37.2 +0.1
	baz=40					
N20A	Spence Gulch,	40.67	83	⇓P	P	07 54 37.5 0.0
	baz=41					
R17A	Hanksville Air	40.70	88	⇑P	P	07 54 37.9 +0.1
	baz=41					
P19A	Cripple Cowboy	40.98	85	⇓P	P	07 54 39.9 -0.2
	baz=41,SNR=8.2					
U15A	North Rim	41.03	91	⇓P	P	07 54 41.2 +0.7
	baz=41					
V14A	Boquillas Ranc	41.07	93	⇓P	P	07 54 40.8 0.0
	baz=41					
O20A	White River Ci	41.11	84	⇑P	P	07 54 40.9 -0.3
	baz=41,SNR=9.9					
S17A	Black Ridge (B	41.15	89	⇓P	P	07 54 41.6 +0.1
	baz=41					
N21A	Black Mountain	41.16	83	⇓P	P	07 54 41.4 -0.2
	baz=41					
MAT	Matsushiro	41.30	269	P	P	07 54 40.7 -2.1
MJAR	Matsushiro Arr	41.30	269	P	P	07 54 42.9 +0.2
	4.3nm,1.0s,mb4.0,baz=46,slow=7.2,SNR=6.3					
M22A	Cedar Creek Ra	41.33	81	⇑P	P	07 54 43.1 +0.2
	baz=41					
P20A	De Beque	41.42	85	⇓P	P	07 54 42.8 -0.9
	baz=41					
S18A	Hurst Farm, Bl	41.60	88	⇑P	P	07 54 45.0 -0.2
	baz=42					
N22A	Wattenberg Ran	41.78	82	⇓P	P	07 54 46.4 -0.2
	baz=42					
Q20A	Ridgley Place,	41.82	85	⇓P	P	07 54 46.5 -0.5
	baz=42					
X14A	Yava	41.98	94	⇑P	P	07 54 48.2 -0.1
	baz=42					
T18A	Mexican Hat	42.03	89	⇓P	P	07 54 48.3 -0.4
	baz=42					
S19A	Harvey Farm, M	42.08	87	⇑P	P	07 54 48.5 -0.7
	baz=42					
R20A	Redvale	42.26	86	⇓P	P	07 54 50.3 -0.2
	baz=42					
ULM	Lac du Bonnet	42.48	64	P	P	07 54 50.7 -1.5
	1.1nm,0.5s,mb3.7,baz=302,slow=7.1,SNR=3.0					
ULM	Lac du Bonnet	42.48	64	P	P	07 54 50.7 -1.5
Q22A	Crested Butte,	42.71	84	⇑P	P	07 54 54.1 -0.1
	baz=43					
T19A	Beclabito	42.75	88	⇑P	P	07 54 54.4 -0.2
	baz=43,SNR=7.2					
MVCO	Mesa Verde	42.82	87	⇑P	P	07 54 55.1 -0.1
	baz=43					
X16A	Lo Mia Camp, P	42.90	93	⇑P	P	07 54 56.4 +0.6
	baz=43					
S21A	Coal Bank Pass	42.95	86	⇑P	P	07 54 56.5 +0.3
	baz=43					
U19A	Dine' College,	42.99	89	⇑P	P	07 54 56.5 0.0
	baz=43					
R22A	Saguache, Gunn	43.21	85	⇑P	P	07 54 58.4 +0.1
	baz=43					
AGMN	Agassiz Refuge	43.55	66	eP	P	07 54 59.8 -1.1
	7.5nm,1.2s,mb4.3					
T22A	Edith	43.91	86	⇑P	P	07 55 04.0 0.0
	baz=44					
SDCO	Great Sand Dun	44.28	85	eP	P	07 55 06.9 +0.1
	3.1nm,1.0s,mb4.0					
SDCO				epP	pP	07 55 19.2 +1.4
CN2	Changchun	44.39	287	eP	P	07 55 10.1 +2.4
CN2				eS	S	08 01 41.6 +2.3
X20A	Quemado	44.59	90	⇑P	P	07 55 09.8 +0.4
	baz=44					
V22A	San Miguel Ran	44.63	88	⇑P	P	07 55 09.5 -0.2
	baz=44					
X21A	Alamocita Cree	45.09	90	⇓P	P	07 55 13.7 +0.4
	baz=45,SNR=5.8					
Y20A	Horse Springs,	45.10	91	⇑P	P	07 55 13.9 +0.5
	baz=45					
Z20A	Nine Sixteen R	45.51	92	⇓P	P	07 55 17.3 +0.5
	baz=45					
X23A	Hourglass Bar	45.96	88	⇑P	P	07 55 20.2 -0.1
	baz=46					
W24A	Lazy 6 Ranch,	46.01	87	⇓P	P	07 55 20.7 0.0
	baz=46					
220A	Playas Peak, P	46.40	93	⇑P	P	07 55 23.7 -0.1
	baz=46					
Z22A	Elephant Butte	46.40	90	⇓P	P	07 55 23.9 +0.1
	baz=46					
121A	Cookes Peak, D	46.41	92	⇑P	P	07 55 24.1 +0.3
	baz=46					
Y23A	Lovelace Mesa,	46.49	89	⇑P	P	07 55 24.7 +0.3
	baz=46					
W25A	X Bar L Ranch,	46.58	86	⇓P	P	07 55 24.9 -0.2
	baz=46					
Y24A	Capitan	46.87	89	⇑P	P	07 55 27.2 -0.2
	baz=47					
KSRS	Korea Array	46.91	278	P	P	07 55 28.1 +0.4
	2.4nm,0.8s,mb4.2,baz=56,slow=7.2,SNR=5.5					
Y25A	Mesa, Roswell	47.32	88	⇓P	P	07 55 30.4 -0.4
	baz=47					
X26A	CR and CF Fran	47.42	87	⇓P	P	07 55 31.2 -0.5
	baz=47					
124A	Stringfield Ra	47.70	90	⇓P	P	07 55 33.6 -0.3
	baz=48					
Z25A	Roswell	47.74	89	⇑P	P	07 55 33.9 -0.3
	baz=48					
224A	Corundas Mount	48.09	90	⇓P	P	07 55 37.4 +0.5
	baz=48					
Z26A	Caprock	48.20	88	⇑P	P	07 55 37.4 -0.3
	baz=48,SNR=6.2					
125A	Gardner Draw,	48.21	89	⇑P	P	07 55 37.2 -0.7
	baz=48					
Y27A	Causey	48.27	87	⇑P	P	07 55 38.0 -0.2
	baz=48					
CPRX	Cap Rock	48.43	88	eP	P	07 55 38.6 -0.9
	2.4nm,0.8s,mb4.3					
MSTX	Muleshoe	48.45	86	⇓P	P	07 55 39.1 -0.5
	baz=48					
225A	Deer Hill, Car	48.49	90	⇑P	P	07 55 40.1 +0.1
	baz=48					
324A	Moseley Ranch,	48.56	91	⇓P	P	07 55 40.4 -0.1
	baz=48					
126A	Clayton Basin,	48.60	89	⇑P	P	07 55 40.6 -0.3
	baz=48					
Z27A	Tatum	48.63	87	⇑P	P	07 55 40.3 -0.7
	baz=48					
325A	Bean Ranch, Si	48.92	91	⇓P	P	07 55 43.1 -0.2
	baz=49,SNR=5.4					
226A	Malaga, Loving	48.96	89	⇑P	P	07 55 43.5 -0.2
	baz=49					
SPITS	Spitsbergen Ar	49.15	359	P	P	07 55 43.5 -0.9
	13nm,1.1s,mb4.9,baz=46,slow=3.6,SNR=5.3					
425A	Indio Mountain	49.33	91	⇓P	P	07 55 46.4 0.0
	baz=49					
SUMG	Summit	49.77	18	eP	P	07 55 50.1 +0.9
	14nm,1.1s,mb4.9					
328A	Wristen Ranch,	50.22	89	⇓P	P	07 55 52.5 -0.7
	baz=50					
427A	Hayter Ranch,	50.24	90	⇑P	P	07 55 53.1 -0.3
	baz=50					
526A	Mary Lane Ranc	50.38	91	⇓P	P	07 55 54.6 +0.1
	baz=50					
527A	Woodward Ranch	50.61	91	⇓P	P	07 55 55.7 -0.5
	baz=50					
626A	Big Bend Ranch	50.72	92	⇑P	P	07 55 56.8 -0.2
	baz=51					
428A	Kincaid Ranch,	50.76	89	⇓P	P	07 55 56.8 -0.5
	baz=51,SNR=5.1					
528A	Cox Ranch, San	51.10	90	⇑P	P	07 55 59.6 -0.3
	baz=51					
TXAR	Lajitas Array	51.16	91	P	P	07 55 59.7 -0.6
	2.7nm,0.8s,mb4.2,baz=297,slow=5.5,SNR=32					
TXAR				ScP	ScP	08 01 10.1 +1.6
	0.5nm,0.9s,baz=262,slow=4.5,SNR=3.9					
627A	Terlingua Ranc	51.24	91	⇓P	P	07 56 00.3 -0.6
	baz=51					
TLY	Talaya	51.28	307	eP	P	07 55 59.8 -1.2
	14nm,1.1s,mb4.8					
628A	Black Gap, Mar	51.52	91	⇑P	P	07 56 02.4 -0.6
	baz=51,SNR=5.8					
SCHQ	Schefferville	53.93	45	P	P	07 56 20.0 -0.4
	3.0nm,0.8s,mb4.2,baz=287,slow=11,SNR=3.4					
SCHQ	Schefferville	53.93	45	P	P	07 56 20.0 -0.4
HHC	Hu-ho-hao-te	54.19	292	eP	P	07 56 23.1 +0.5
HHC				pP	pP	07 56 35.8 +2.1
HHC				sP	sP	07 56 41.0 +2.8
HHC				PP	PP	07 58 26.3 +2.1
HHC				ScP	ScP	08 01 20.3 -1.2
HHC				PcS	PcS	08 01 25.6 -0.4
HHC				S	S	08 03 54.3 -2.5
HHC				sS	sS	08 04 15.5 +0.3
HHC				ScS	ScS	08 06 04.3 -4.2
HHC				SS	SS	08 07 35.9 -2.4
HHC				LR	LR	
	comp=N,220nm,17.9s,MS4.6					
HHC				LR	LR	
	comp=E,390nm,16.9s,MS4.6					
HHC				LR	LR	
	comp=Z,260nm,17.9s,MS4.3					
ARCES	ARCESS Array B	57.52	355	P	P	07 56 44.8 -1.2
	comp=Z,1.7nm,0.6s,mb4.2,baz=11,slow=6.6,SNR=5.7					
BVAR	Borovoye Array	64.16	326	P	P	07 57 30.8 -0.5
	comp=Z,2.6nm,0.7s,mb4.4,baz=36,slow=6.4,SNR=7.8					
WMQ	Urumqi	64.42	309	eP	P	07 57 34.4 +1.2
WMQ				LR	LR	
	comp=N,520nm,19.0s					
WMQ				LR	LR	
	comp=Z,230nm,20.0s,MS4.4					
FINES	FINESS Array B	65.52	353	P	P	07 57 39.0 -1.1
	comp=Z,2.9nm,0.7s,mb4.4,baz=15,slow=6.8,SNR=5.7					
CD2	Chengdu	65.70	289	P	P	07 57 41.1 -0.6
CD2				pP	pP	07 57 54.0 +0.9
CD2				sP	sP	07 57 59.3 +1.8
CD2				PP	PP	08 00 07.4 +1.2
CD2				S	S	08 06 20.5 -4.4
CD2				sS	sS	08 06 42.3 -1.4
CD2				pmax	pmax	
	comp=Z,230nm,4.6s					
CD2				LR	LR	
	comp=N,800nm,7.1s					
CD2				LR	LR	
	comp=Z,750nm,8.3s					
NOA	NORSAR Array B	66.37	1	P	P	07 57 45.3 -0.2
	comp=Z,1.1nm,0.8s,mb4.0,baz=360,slow=6.2,SNR=3.2					
GYA	Guiyang	67.35	284	P	P	07 57 52.9 +0.6
GYA				pmax	pmax	
	comp=Z,10.0nm,1.0s,mb4.8					
AKTK	Aktyubinsk	70.31	331	P	P	07 58 10.3 0.0
AKTO	Aktyubinsk	70.31	331	P	P	07 58 10.3 0.0
	comp=Z,3.5nm,0.6s,mb4.4,baz=39,slow=9.1,SNR=2.7					
AKASG	Malin Array Be	75.87	350	P	P	07 58 42.0 -1.1
	comp=Z,3.6nm,0.5s,mb4.6,baz=13,slow=5.8,SNR=14					
GERES	GERESS Array B	78.61	360	P	P	07 58 58.8 +0.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=336,slow=2.2,SNR=2.7					
BUR08	Bucovina Ar. S	79.29	352	eP	P	07 59 02.1 -0.2
BR131	Keskin Array S	86.05	344	eP	P	07 59 38.8 +1.3
BRTR	Keskin Array B	86.05	344	P	P	07 59 38.4 +0.9
	comp=Z,2.9nm,0.9s,mb4.5,baz=41,slow=2.5,SNR=8.7					
BRTR	Keskin Array B	86.05	344	P	P	07 59 38.4 +0.9
VNA2	Neumayer--Watz	159.71	160	ePKPdf	PKPab	08 07 31.0 -2.2
VNA2				e	pPKPab	08 07 45.0 0.0
VNA2				e	PP	08 12 09.3 +54
VNA2				e		08 39 57.1

IDC 13 07:49:12.8±1.1, 11°.57N×139°.76E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/20, mbtmp4.0/5, Error ellipse: s-maj=84.9km s-min=26.7km az=104.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.76	190	P	P	07 55 38.9	0.0
	0.5nm,0.8s,baz=14,slow=9.7,SNR=3.4						
ASAR	Alice Springs	35.48	189	P	P	07 56 11.2	0.0
	0.3nm,0.6s,baz=17,slow=13,SNR=4.5						
YKA	Yellowknife Ar	86.91	27	P	P	08 01 59.6	+0.3
	1.0nm,0.5s,baz=290,slow=4.7,SNR=23						
FINES	FINESS Array B	90.83	334	P	P	08 02 17.7	-0.2
	1.9nm,0.5s,baz=56,slow=7.4,SNR=3.3						
NVAR	Mina Array Bea	92.05	50	P	P	08 02 23.9	-0.2
	0.9nm,0.7s,baz=274,slow=5.1,SNR=5.5						
LPAZ	La Paz	152.54	103	PKPbc	PKPbc	08 09 13.0	+0.9
	0.9nm,0.6s,baz=248,slow=3.6,SNR=4.5						

ISCJB 13 07:49:49.3±0.5, 32°.77N±0°.07×105°.72E±0°.05, h10km, mb4.1/14, Error ellipse: s-maj=9.4km s-min=6.6km az=2.5
IDC 13 07:49:49.7±0.7, 32°.50N×105°.35E, h0km, mb4.0/12, mb1 4.0/14, mb1mx3.9/29, mbtmp3.9/14, ML3.6/2, Error ellipse: s-maj=37.1km s-min=14.2km az=56.0
NEIC 13 07:49:51.4±0.4, 32°.54N×105°.35E, h10km, mb4.3/2, Error ellipse: s-maj=18.9km s-min=6.9km az=51.0
BJI 13 07:49:52.4, 32°.55N×105°.71E, h21km, mB4.5/1, mb4.5/2, ML4.1/6, Ms4.1/4, Ms7 4.0/4

ISC 13 07:49:51.6±0.5, 32°.79N±0°.05×105°.68E±0°.05, h10km, n26, σ1°14/31, mb4.1/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	2.99	64	Pn	Pn	07 50 38.5	-0.5
XAN				Pg	Pg	07 50 48.1	-0.8
XAN				Sg	Sg	07 51 27.0	-0.6
XAN				smax			
	comp=N,390nm,0.8s						
XAN				smax			
	comp=E,240nm,0.9s						
LZH	Lanzhou	3.62	336	Pn	Pn	07 50 50.9	+3.1
LZH				Pg	Pg	07 51 00.5	-0.5
LZH				Sg	Sg	07 51 46.0	-2.0
LZH				smax			
	comp=N,430nm,0.5s						
LZH				smax			
	comp=E,640nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,6.7s						
LZH				LR	LR		
	comp=Z,2μm,7.8s						
ENH	Enshi	4.11	127	Pn	Pn	07 50 56.0	+1.5
ENH				ePg	Pg	07 51 04.9	-5.4
KMI	Kunming	8.06	199	Pg	Px	07 52 21.6	
KMI				Sg	Sn	07 53 31.5	+12
KMI				smax			
	comp=N,140nm,1.7s						
KMI				smax			
	comp=E,130nm,0.9s						
SONM	Songino Array	15.04	2	Pn	Pn	07 53 27.3	+3.2
	comp=E,0.2nm,0.3s,baz=182,slow=14,SNR=2.6						
KSRS	Korea Array	18.77	69	P	Pn	07 54 14.1	+2.8
	comp=E,0.2nm,0.3s,baz=260,slow=10.0,SNR=2.7						
MK31	Makanchi Array	22.66	315	eP	P	07 54 52.9	0.0
MKAR	Makanchi Array	22.66	315	P	P	07 54 53.0	+0.1
	comp=E,2.8nm,0.6s,mb3.9,baz=119,slow=13,SNR=31						
ZAL

JOF	Joensuu	54.33	327	*ep*	P	07 59 17.3 -0.6
	comp=E,3.4nm,0.7s,mb4.4					
ARCES	ARCESS Array B	56.28	335	P	P	07 59 32.2 +0.4
	comp=E,2.1nm,0.8s,mb4.2,baz=69,slow=6.8,SNR=5.3					
FINES	FINESS Array B	56.93	326	P	P	07 59 36.8 +0.2
	comp=E,1.9nm,0.4s,mb4.5,baz=90,slow=8.2,SNR=9.6					
AKASG	Malin Array Be	57.22	313	P	P	07 59 38.1 -0.7
	comp=E,0.4nm,0.3s,mb3.9,baz=66,slow=7.3,SNR=4.5					
WRAB	Tennant Creek	59.16	148	*eP*	P	07 59 52.3 -0.4
	comp=E,3.3nm,0.6s,mb4.5					
WRA	Warramunga Arr	59.16	148	P	P	07 59 51.5 -1.2
	comp=E,1.8nm,0.5s,mb4.4,baz=341,slow=7.8,SNR=34					
WRA	Warramunga Arr	59.16	148	P	P	07 59 51.5 -1.2
ASAR	Alice Springs	62.27	151	P	P	08 00 13.2 -0.6
	comp=E,1.4nm,0.5s,mb4.4,baz=330,slow=6.7,SNR=24					
ASAR	Alice Springs	62.27	151	P	P	08 00 13.2 -0.6
NB2	NORSAR Subarra	63.97	327	P	P	08 00 23.7 -1.0
	comp=Z,1.1nm,0.6s,mb4.1,baz=70,slow=6.9					
NOA	NORSAR Array B	63.97	327	P	P	08 00 24.5 -0.2
	comp=Z,1.1nm,0.6s,mb4.1,baz=70,slow=6.7,SNR=4.1					
NOA	NORSAR Array B	63.97	327	P	P	08 00 24.5 -0.2
INK	Inuvik	70.13	20	P	P	08 01 05.8 +2.1
	comp=Z,3.2nm,1.3s,mb4.1,baz=341,slow=8.4,SNR=3.8					

ISCJB ***13*** *07:51:29.7±0.3,32°.43N±0°.04×105°.22E±0°.04,h10km, mb4.3/23,Error ellipse: s-maj=5.5km s-min=5.4km az=24.8*
IDC ***13*** *07:51:29.8±0.5,32°.38N×105°.21E,h0km,mb4.2/18, mb1 4.3/20,mb1mx4.2/30,mbtmp4.2/20,ML3.8/2,Error ellipse: s-maj=22.4km s-min=11.8km az=57.0*
BJI ***13*** *07:51:30.6,32°.43N×105°.37E,h10km,mB5.0/7,mb4.5/11, ML4.6/9,Ms4.7/10,Ms7 4.4/10*
NEIC ***13*** *07:51:31.2±0.4,32°.35N×105°.37E,h10km,mb4.3/7,Error ellipse: s-maj=11.3km s-min=7.9km az=59.0*
ISC 13 07:51:31.2±0.3,32°.53N±0°.03×105°.38E±0°.04,h10km,n55, σ1§28/60,mb4.3/23,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.33**	**62**	Pg	**Pg**	**07 52 32.3**	**-2.6**
XAN				Sg	**Sg**	**07 53 14.5**	**-3.5**
XAN				smax			
	comp=N,2μm,0.9s						
XAN				smax			
	comp=E,1μm,1.0s						
LZH	**Lanzhou**	**3.77**	**341**	Pg	**Pg**	**07 52 42.1**	**-1.4**
LZH				Sg	**Sg**	**07 53 28.3**	**-4.1**
LZH				smax			
	comp=N,4μm,0.6s						
LZH				smax			
	comp=E,7μm,0.6s						
ENH	**Enshi**	**4.17**	**122**	*e*Pg	**Pb**	**07 52 46.0**	**+1.5**
GYA	**Guiyang**	**6.15**	**169**	Pg	**Pn**	**07 53 02.3**	**+0.3**
GYA				Sg	**Sn**	**07 54 06.6**	**-5.8**
GYA				smax			
	comp=N,350nm,0.8s						
GYA				smax			
	comp=E,350nm,0.8s						
GYA				LR	LR		
	comp=N,5μm,3.6s						
GYA				LR	LR		
	comp=E,3μm,2.3s						
GYA				LR	LR		
	comp=Z,4μm,3.2s						
GTA	**Gaotai**	**8.22**	**328**	*e*P	**Pn**	**07 53 30.8**	**+0.4**
GTA				pP		07 53 40.1	
GTA				sP		07 53 44.3	
GTA				S	**Sn**	**07 55 04.0**	**+0.7**
GTA				sS		07 55 14.8	
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,480nm,6.0s						
GTA				LR	LR		
	comp=N,5μm,9.2s						
GTA				LR	LR		
	comp=E,4μm,8.9s						
GTA				LR	LR		
	comp=Z,5μm,11.0s						
BTO	**Baotou**	**8.88**	**23**	*e*P	**Pn**	**07 53 34.8**	**-4.7**
BTO				S	**Sn**	**07 55 17.4**	**-2.3**
BTO				LR	LR		
	comp=N,27nm,0.9s						
BTO				LR	LR		
	comp=E,30nm,0.6s						
HHC	**Hu-ho-hao-te**	**9.67**	**29**	*e*P	**Pn**	**07 53 48.0**	**-2.4**
HHC				pP		07 53 55.1	
HHC				sP		07 53 59.9	
HHC				S	**Sn**	**07 55 37.4**	**-1.7**
HHC				sS		07 55 48.1	
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1μm,5.7s						
HHC				LR	LR		
	comp=N,1μm,5.6s						
HHC				LR	LR		
	comp=E,1μm,5.9s						
HHC				LR	LR		
	comp=Z,960nm,4.9s						
TIA	**Tai'an**	**10.38**	**66**	*e*P	**Pn**	**07 54 04.8**	**+4.8**
LSA	**Lhasa**	**12.52**	**261**	P	**Pn**	**07 54 29.8**	**+0.4**
LSA	**Lhasa**	**12.52**	**261**	*e*Pn	**Pn**	**07 54 30.2**	**+0.8**
	comp=Z,9.8nm,0.6s						
QIZ	**Qiongzhong**	**14.02**	**162**	P	**Pn**	**07 54 49.3**	**-0.7**
QIZ				S	**Sn**	**07 57 18.8**	**-6.9**
QIZ				pmax	pmax		
	comp=Z,17nm,1.2s						
QIZ				LR	LR		
	comp=E,1μm,5.2s						
QIZ				LR	LR		
	comp=Z,1μm,8.9s						
CHTO	**Chiang Mai**	**14.83**	**205**	*e*Pn	**Pn**	**07 54 59.7**	**-1.2**
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**15.31**	**3**	Pn	**Pn**	**07 55 08.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=6.1						
SONM				Lg		07 59 40.4	
	comp=Z,0.2nm,0.3s,baz=183,slow=26,SNR=2.8						
TAPN	**Taplejung**	**16.16**	**256**	*e*P	**Pn**	**07 55 20.8**	**+2.4**
	comp=Z,51nm,0.9s						
RAMN	**Ramite**	**17.23**	**256**	*e*P	**Pn**	**07 55 30.6**	**-1.3**
	comp=Z,37nm,0.8s						
GUN	**Gumba**	**17.47**	**260**	*e*P	**Pn**	**07 55 34.0**	**-0.9**
	comp=Z,29nm,0.6s						
PKI	**Pulchoki**	**17.98**	**259**	*e*P	**Pn**	**07 55 39.0**	**-2.2**
	comp=Z,32nm,0.5s						
PKIN	**Phulchoki**	**17.99**	**259**	*e*P	**Pn**	**07 55 39.0**	**-2.3**
	comp=Z,30nm,0.5s						
KKN	**Kakani**	**18.01**	**260**	*e*P	**Pn**	**07 55 39.6**	**-2.0**
	comp=Z,24nm,0.6s						
DMN	**Daman**	**18.22**	**260**	*e*P	**Pn**	**07 55 41.8**	**-2.4**
	comp=Z,48nm,0.9s						
KSRS	**Korea Array**	**19.10**	**69**	P	**Pn**	**07 55 55.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=253,slow=11,SNR=12						
CN2	**Changchun**	**19.33**	**49**	*e*P	**Pn**	**07 55 58.8**	**+1.3**
CN2				*ep*P	pP	07 56 07.3	+8.0
CN2				*e*S	**Sn**	**07 59 33.6**	**-0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,900nm,12.0s						
CN2				LR	LR		
	comp=E,800nm,12.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
HIA	**Hailar**	**19.88**	**29**	*e*P	**Pn**	**07 56 06.2**	**+2.1**
	comp=Z,6.0nm,0.6s						
MK31	**Makanchi Array**	**22.67**	**316**	*e*P	**P**	**07 56 32.9**	**+0.3**
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**07 56 32.9**	**+0.3**
	comp=Z,8.2nm,0.8s,mb4.2,baz=119,slow=9.9,SNR=18						
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**07 57 03.8**	**+0.2**
	comp=Z,4.2nm,0.7s,mb4.1,baz=133,slow=8.9,SNR=8.9						
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**07 57 11.9**	**+0.6**
	comp=Z,2.1nm,0.5s,mb4.0,baz=133,slow=8.6,SNR=7.1						
KURK	**Kurchatov**	**26.80**	**321**	*e*P	**P**	**07 57 11.8**	**+0.5**
	comp=Z,3.7nm,0.7s,mb4.0						
KAPI	**Kappang**	**39.75**	**157**	P	**P**	**07 59 03.4**	**-0.8**
	comp=Z,20nm,0.8s,mb4.9,baz=347,slow=5.4,SNR=9.9						
TIXI	**Tiksi**	**41.15**	**11**	*e*P	**P**	**07 59 18.4**	**+3.3**
	comp=Z,2.3nm,0.5s,mb4.1						
PETK	**Petropavlovsk-**	**42.42**	**45**	P	**P**	**07 59 28.3**	**+2.6**
	comp=Z,6.9nm,1.2s,mb4.2,baz=226,slow=7.4,SNR=2.8						
FITZ	**Fitzroy Crossi**	**53.95**	**156**	P	**P**	**08 00 54.7**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.2,baz=356,slow=3.5,SNR=11						
ARCES	**ARCESS Array B**	**56.42**	**335**	P	**P**	**08 01 13.0**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.5,baz=78,slow=7.6,SNR=13						
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**08 01 17.2**	**+0.2**
	comp=Z,0.8nm,0.6s,mb4.0,baz=117,slow=5.0,SNR=3.3						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**08 01 18.5**	**+1.8**
	comp=Z,3.5nm,0.7s,mb4.5,baz=73,slow=9.0,SNR=5.3						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**08 01 17.6**	**-0.8**
	comp=Z,1.4nm,0.4s,mb4.3,baz=66,slow=6.8,SNR=8.4						
WRAB	**Tennant Creek**	**59.07**	**148**	*e*P	**P**	**08 01 31.6**	**0.0**
	comp=Z,11nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**59.07**	**148**	P	**P**	**08 01 31.8**	**+0.2**
	comp=Z,9.4nm,0.7s,mb4.9,baz=340,slow=7.5,SNR=24						
KWP	**Kalwaria Pacla**	**61.54**	**313**	*e*P	**P**	**08 01 49.1**	**+0.8**
	comp=Z,8.3nm,0.6s,mb5.0						
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**08 01 52.8**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.6,baz=334,slow=6.8,SNR=24						
NB2	**NORSAR Subarra**	**64.05**	**327**	P	**P**	**08 02 04.3**	**-0.5**
	comp=Z,3.4nm,1.0s,mb4.3,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**08 02 04.7**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=70,slow=6.5,SNR=4.8						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**08 02 04.7**	**-0.1**
GERES	**GERESS Array B**	**67.34**	**314**	P	**P**	**08 02 27.1**	**+0.9**
	comp=Z,0.4nm,0.3s,mb3.9,baz=45,slow=2.9,SNR=2.9						
INK	**Inuvik**	**70.46**	**20**	P	**P**	**08 02 46.9**	**+1.6**
	comp=Z,1.8nm,0.8s,mb4.0,baz=352,slow=11,SNR=3.6						
INK	**Inuvik**	**70.46**	**20**	*e*P	**P**	**08 02 46.7**	**+1.4**
	comp=Z,3.0nm,0.9s,mb4.2						
KMBO	**Kilima Mbogo**	**72.29**	**257**	P	**P**	**08 02 57.4**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=32,slow=9.5,SNR=3.1						
STKA	**Stephens Creek**	**72.62**	**148**	P	**P**	**08 02 58.5**	**-0.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=333,slow=8.4,SNR=5.2						
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**08 03 02.4**	**+1.0**
	comp=Z,12nm,0.7s,mb4.7						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**08 03 02.2**	**+0.7**
	comp=Z,5.1nm,0.5s,mb4.4						
TCF	**Toulx Ste Croi**	**75.40**	**316**	*e*P	**P**	**08 03 16.0**	**+1.0**
YKA	**Yellowknife Ar**	**80.02**	**18**	P	**P**	**08 03 41.1**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=329,slow=5.1,SNR=12						
QSPA	**South Pole Qui**	**122.29**	**180**	PKP	PKPdf	08 10 24.7	-0.5
	comp=Z,1.1nm,0.8s,baz=314,slow=1.6,SNR=5.2						
QSPA	**South Pole Qui**	**122.29**	**180**	PKP	PKPdf	08 10 24.7	-0.5
OTAV	**Otavalo**	**147.21**	**7**	*e*PKPdf	PKPdf	08 11 13.7	+0.6

ISCJB ***13*** *07:52:59.3±1.1,32°.26N±0°.02×105°.06E±0°.03,h5km±7km, mb4.9/104,MS4.6/3,Error ellipse: s-maj=4.4km s-min=3.9km az=170.1*
IDC ***13*** *07:52:59.9±0.4,32°.26N×105°.02E,h0km,mb4.7/32, mb1 4.8/34,mb1mx4.7/39,mbtmp4.7/34,ML4.0/2,MS4.3/1, Ms1 4.3/1,ms1mx3.0/47,Error ellipse: s-maj=11.8km s-min=9.2km az=28.0*
NEIC ***13*** *07:53:01.9±0.1,32°.28N×105°.03E,h10km,mb4.9/60,Error ellipse: s-maj=4.9km s-min=3.6km az=55.0*
NEIC Felt at Chengdu.
BJI ***13*** *07:53:03.1,32°.24N×105°.10E,h23km,mB5.1/16,mb4.7/23, ML4.7/13,Ms4.7/25,Ms7 4.5/22*
MOS ***13*** *07:53:03.9±0.9,32°.29N×105°.05E,h35km,mb5.1/46,Error ellipse: s-maj=8.5km s-min=4.9km az=115.2*
DJA ***13*** *07:53:15,31°.76N×104°.53E,h85km,mb5.4/15*
ISC 13 07:53:01.3±1.1,32°.27N±0°.02×105°.04E±0°.03,h5km±7km, h16km±3.7km:pP-P,n278,σ1§05/284,mb4.9/104,MS4.6/3, 43C-12D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.70**	**60**	Pn	**Pn**	**07 53 54.3**	**-4.8**
XAN				Sg	**Sg**	**07 54 56.6**	**-3.7**
XAN				smax			
	comp=N,2μm,0.9s						
XAN				smax			
	comp=E,920nm,0.8s						
XAN				LR	LR		
	comp=N,5μm,8.9s						
XAN				LR	LR		
	comp=E,1μm,10.5s						
XAN				LR	LR		
	comp=Z,2μm,10.3s						
LZH	**Lanzhou**	**3.94**	**346**	Pg	**Pg**	**07 54 15.8**	**-0.9**
LZH				Sg	**Sg**	**07 55 04.9**	**-2.8**
LZH				smax			
	comp=N,5μm,1.0s						
LZH				smax			
	comp=E,4μm,0.6s						
LZH				LR	LR		
	comp=N,18μm,7.5s						
LZH				LR	LR		
	comp=Z,18μm,8.7s						
GYA	**Guiyang**	**5.96**	**166**	Pg	**Pn**	**07 54 36.6**	**+6.4**
GYA				Sg	**Sn**	**07 55 38.3**	**-0.5**
GYA				smax			
	comp=N,3μm,0.8s						
GYA				smax			
	comp=E,2μm,0.8s						
GYA				LR	LR		
	comp=N,12μm,6.6s						
GYA				LR	LR		
	comp=E,10μm,7.3s						
GYA				LR	LR		
	comp=Z,11μm,8.2s						
KMI	**Kunming**	**7.40**	**196**	Pn	**Pn**	**07 54 51.0**	**+1.1**
KMI				Pg	**Pb**	**07 55 09.9**	**-0.3**
KMI				Sn	**Sn**	**07 56 15.9**	**+1.6**
KMI				smax			
	comp=N,200nm,1.9s						
KMI				smax			
	comp=E,230nm,1.5s						
KMI				LR	LR		
	comp=N,2μm,8.0s						
KMI				LR	LR		
	comp=E,3μm,6.6s						
WHN	**Wuhan**	**8.14**	**100**	⇑P	**Pn**	**07 54 55.3**	**-4.8**
WHN				pP		07 54 57.3	
WHN				S	**Sn**	**07 56 26.9**	**-5.6**
WHN				LR	LR		
	comp=N,12μm,2.9s						
WHN				LR	LR		
	comp=E,6μm,4.9s						
WHN				LR	LR		
	comp=Z,6μm,8.2s						
BTO	**Baotou**	**9.23**	**24**	*e*P	Px	07 56 04.4	
BTO				S	Sx	07 57 47.0	
BTO				LR	LR		
	comp=N,770nm,7.5s						
BTO				LR	LR		
	comp=E,590nm,6.7s						
HHC	**Hu-ho-hao-te**	**10.04**	**30**	*e*P	**Pn**	**07 55 28.0**	**+1.9**
HHC				pP		07 55 35.1	
HHC				sP		07 55 39.9	
HHC				S	**Sn**	**07 57 20.5**	**+1.5**
HHC				sS		07 57 31.4	
HHC				SS		07 57 34.6	
HHC				pmax	pmax		
	comp=Z,32nm,1.1s						
HHC				pmax	pmax		
	comp=Z,740nm,5.8s						
HHC				LR	LR		
	comp=N,2μm,5.9s						
HHC				LR	LR		
	comp=E,2μm,5.3s						
HHC				LR	LR		
	comp=Z,2μm,6.2s						
NJ2	**Nanjing**	**11.71**	**87**	*e*P	**Pn**	**07 55 49.8**	**+0.8**
NJ2				pP		07 55 52.3	
NJ2				sP		07 55 56.1	
NJ2				PP		07 55 59.4	
NJ2				S	**Sn**	**07 57 59.9**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.6s						
NJ2				LR	LR		
	comp=N,1μm,11.2s						
NJ2				LR	LR		
	comp=E,880nm,17.6s						
NJ2				LR	LR		
	comp=Z,920nm,16.2s						
GZH	**Guangzhou**	**11.73**	**139**	P	**Pn**	**07 55 45.9**	**-3.4**
GZH				S	**Sn**	**07 57 47.5**	**-13**
GZH				LR	LR		
	comp=N,3μm,9.6s						
GZH				LR	LR		
	comp=E,3μm,8.6s						
BJT	**Baijiatuau**	**11.85**	**46**	P	**Pn**	**07 55 44.3**	**-6.6**
LSA	**Lhasa**	**12.19**	**262**	*e*P	**Pn**	**07 55 57.7**	**+2.1**
QIZ	**Qiongzhong**	**13.87**	**161**	P	**Pn**	**07 56 17.9**	**-0.7**
QIZ				PP		07 56 28.8	
QIZ				S	**Sn**	**07 58 48.0**	**-5.0**
QIZ				pmax	pmax		
	comp=Z,20nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,660nm,9.7s						
QIZ				LR	LR		
	comp=N,4μm,10.8s						
QIZ				LR	LR		
	comp=Z,5μm,10.9s						
QIZ	**Qiongzhong**	**13.87**	**161**	*e*Pn	**Pn**	**07 56 17.8**	**-0.8**
QZH	**Quanzhou**	**13.95**	**118**	P	Px	07 56 29.8	
QZH				S	Sx	07 59 11.5	
QZH				LR	LR		
	comp=N,6μm,7.0s						
QZH				LR	LR		
	comp=E,9μm,7.0s						
QZH				LR	LR		
	comp=Z,14μm,10.1s						
CHTO	**Chiang Mai**	**14.48**	**204**	*e*P	**Pn**	**07 56 28.4**	**+1.5**
CM31	**Chiang Mai Arr**	**14.81**	**203**	*e*Pn	**Pn**	**07 56 32.5**	**+1.1**
SONM	**Songino Array**	**15.58**	**3**	Pn	**Pn**	**07 56 41.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=183,slow=13,SNR=3.0						
SONM				Lg		08 01 15.1	
	comp=Z,0.2nm,0.3s,baz=186,slow=26,SNR=2.6						
SONM				LR	LR	08 03 16.2	
	comp=Z,1μm,18.1s,baz=179,slow=40						
SSLB	**Suanglung**	**16.38**	**117**	*e*P	**Pn**	**07 56 53.7**	**+1.7**
	comp=Z,75nm,1.1s						
YULB	**Yu-li**	**16.86**	**118**	*e*P	**Pn**	**07 57 00.0**	**+1.9**
	comp=Z,62nm,1.2s						
GUN	**Gumba**	**17.14**	**260**	*e*P	**Pn**	**07 57 00.2**	**-1.4**
	comp=Z,75nm,0.6s						
PKI	**Pulchoki**	**17.65**	**260**	*e*P	**Pn**	**07 57 06.0**	**-1.9**
	comp=Z,157nm,1.1s						
PKIN	**Phulchoki**	**17.66**	**260**	*e*P	**Pn**	**07 57 06.0**	**-2.0**
	comp=Z,56nm,0.8s						
KKN	**Kakani**	**17.68**	**261**	*e*P	**Pn**	**07 57 06.4**	**-1.9**
	comp=Z,61nm,0.7s						
WMQ	**Urumqi**	**17.84**	**315**	*e*P	**Pn**	**07 57 10.3**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				LR	LR		
	comp=N,600nm,13.0s						
WMQ				LR	LR		
	comp=E,470nm,12.0s						
WMQ				LR	LR		
	comp=Z,490nm,12.0s						
DMN	**Daman**	**17.89**	**260**	*e*P	**Pn**	**07 57 08.2**	**-2.6**
	comp=Z,79nm,0.7s						
ZAK	**Zakamensk**	**18.14**	**356**	*e*P	**Pn**	**07 57 15.6**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY	**Talaya**	**19.43**	**357**	*e*P	**Pn**	**07 57 28.5**	**-0.9**
TLY				*e*S	**Sn**	**08 00 53.1**	**-14**
TLY				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY				MLR	MLR		
	comp=Z,652nm,11.0s						
TLY	**Talaya**	**19.43**	**357**	*e*P	**Pn**	**07 57 29.6**	**+0.2**
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**19.46**	**68**	P	**Pn**	**07 57 29.0**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=256,slow=9.2,SNR=7.1						
KSRS				S	**Sn**	**08 01 07.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=268,slow=30,SNR=2.7						
KSRS	**Korea Array**	**19.46**	**68**	P	**Pn**	**07 57 29.0**	**-0.9**
KSRS				S	**Sn**	**08 01 07.8**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	**19.72**	**48**	*e*P	**Pn**	**07 57 32.6**	**-0.3**
CN2				*ep*P	pP	07 57 40.8	+7.8
CN2				*e*S	**Sn**	**08 01 07.8**	**-6.8**
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,11.0s						
CN2				LR	LR		
	comp=E,900nm,11.0s						
CN2				LR	LR		
	comp=Z,700nm,13.0s						
IRK	**Irkutsk**	**19.97**	**359**	*e*P	**Pn**	**07 57 36.1**	**+0.2**
IRK				pmax	pmax		
	comp=Z,124nm,1.0s						
HIA	**Hailar**	**20.24**	**29**	*e*P	**P**	**07 57 37.7**	**+0.5**
HIA				pmax	pmax		
	comp=Z,20nm,0.9s						
HIA	**Hailar**	**20.24**	**29**	*e*P	**P**	**07 57 37.7**	**+0.5**
	comp=Z,20nm,0.9s						
JOW	**Kunigami**	**20.91**	**99**	P	**P**	**07 57 44.9**	**+0.2**
	comp=Z,23nm,0.4s,baz=36,slow=19,SNR=3.7						
MK31	**Makanchi Array**	**22.66**	**316**	*e*P	**P**	**07 58 04.0**	**+0.8**
MKAR	**Makanchi Array**	**22.66**	**316**	P	**P**	**07 58 03.8**	**+0.6**
	comp=Z,4.8nm,0.3s,mb4.3,baz=113,slow=8.8,SNR=16						
MKAR	**Makanchi Array**	**22.66**	**316**	*ce*P	**P**	**07 58 05.5**	**+2.3**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MDJ	**Mudanjiang**	**22.75**	**50**	P	**P**	**07 58 03.6**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,500nm,5.8s						
MDJ	**Mudanjiang**	**22.75**	**50**	*e*P	**P**	**07 58 06.1**	**+2.0**
	comp=Z,57nm,1.3s,mb4.8						
KSH	**Kashi**	**24.56**	**295**	P	**P**	**07 58 25.8**	**+3.8**
KSH				*ep*P		07 58 29.8	
KSH				*es*P	sP	07 58 32.8	+8.5
KSH				*e*PP		07 59 01.8	
KSH				*e*PcP	PcP	08 02 02.8	+2.8
KSH				S	**S**	**08 02 45.3**	**+2.1**
KSH				SS		08 03 41.8	
KSH				*e*ScP	ScP	08 05 39.3	0.0
KSH				PcS	PcS	08 05 41.1	+1.2
KSH				ScS	ScS	08 09 26.8	-0.2
KSH				pmax	pmax		
	comp=Z,120nm,4.2s						
KSH				LR	LR		
	comp=N,740nm,10.0s						
KSH				LR	LR		
	comp=E,800nm,9.4s						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**07 58 35.4**	**+0.1**
	comp=E,5.1nm,0.4s,mb4.4,baz=133,slow=9.2,SNR=7.9						
KLR	**Kul'dur**	**26.19**	**42**	*e*P	**P**	**07 58 33.1**	**-3.5**
AAK	**Ala-Archa**	**26.24**	**302**	*c i*P	**P**	**07 58 39.2**	**+2.1**
AAK				pmax	pmax		
	comp=Z,15nm,1.9s,mb4.2						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 58 43.7**	**+1.4**
	comp=Z,210nm,1.1s,mb5.6,SNR=7.2						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**07 58 42.7**	**+0.4**
	comp=Z,31nm,1.0s,mb4.8,baz=128,slow=10.0,SNR=9.7						
KURK	**Kurchatov**	**26.82**	**321**	*c i*P	**P**	**07 58 42.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,43nm,1.0s,mb4.9						
KURK	**Kurchatov**	**26.82**	**321**	*e*P	**P**	**07 58 42.0**	**-0.3**
	comp=Z,59nm,1.2s,mb5.0						
NVS	**Novosibirsk**	**27.33**	**332**	*e*P	**P**	**07 58 45.7**	**-1.1**
NVS				pmax	pmax		
	comp=Z,33nm,2.2s,mb4.5						
NVS				pmax	pmax		
	comp=N,25nm,2.0s						
NVS				pmax	pmax		
	comp=E,21nm,2.0s						
MAT	**Matsushiro**	**27.61**	**72**	P	**P**	**07 58 48.4**	**-1.2**
MJAR	**Matsushiro Arr**	**27.62**	**72**	P	**P**	**07 58 49.3**	**-0.3**
	comp=E,2.8nm,0.4s,m

KSM Kuching 31.03 170 *eP* **P 07 59 20.4 +0.3**
comp=Z,15nm,0.9s,mb4.8
ASAJ Asahikawa 31.54 57 P **P 07 59 24.3 0.0**
comp=Z,5.0nm,0.7s,mb4.5,baz=237,slow=14,SNR=3.4
ASAJ Asahikawa 31.54 57 P **P 07 59 24.3 0.0**
ASAJ pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 32.39 320 P **P 07 59 31.8 +0.1**
comp=Z,8.1nm,0.8s,mb4.6,baz=116,slow=8.9,SNR=10
BVAR PcP PcP 08 02 18.2 -0.8
comp=Z,3.0nm,0.7s,baz=100,slow=2.3,SNR=5.0
BRVK Borovoye 32.47 320 P **P 07 59 33.0 +0.7**
comp=Z,87nm,0.5s,mb5.8,SNR=5.4
BRVK Borovoye 32.47 320 *ceP* **P 07 59 32.7 +0.4**
BRVK pmax pmax
comp=Z,16nm,1.0s,mb4.8
BRVK Borovoye 32.47 320 *eP* **P 07 59 32.6 +0.3**
comp=Z,11nm,0.8s,mb4.7
AKTK Aktyubinsk 38.94 312 P **P 08 00 28.3 +0.3**
AKTO Aktyubinsk 38.94 312 P **P 08 00 28.3 +0.3**
comp=Z,7.4nm,0.7s,mb4.6,baz=104,slow=8.3,SNR=8.0
SVE Sverdlovsk 39.05 322 *eP* **P 08 00 28.9 +0.1**
SVE pmax pmax
comp=Z,53nm,1.1s,mb5.2
KAPI Kappang 39.63 157 P **P 08 00 33.2 -0.8**
comp=Z,28nm,0.9s,mb5.0,baz=324,slow=5.0,SNR=7.3
ARU Arti 40.02 321 *d iP* **P 08 00 37.0 +0.2**
ARU *e* 08 02 12.3
ARU S **S 08 06 43.5 +0.8**
ARU SS SS 08 09 30.9 -8.5
ARU pmax pmax
comp=Z,81nm,1.0s,mb5.4
ARU Arti 40.02 321 *eP* **P 08 00 37.0 +0.2**
comp=Z,76nm,0.9s,mb5.4
TIXI Tiksi 41.46 11 *eP* **P 08 00 48.6 +0.1**
TIXI pmax pmax
comp=Z,17nm,1.2s,mb4.5
TIXI MLR MLR
comp=Z,882nm,14.0s,MS4.8
TIXI Tiksi 41.46 11 *eP* **P 08 00 48.2 -0.3**
comp=Z,9.8nm,0.8s,mb4.5
SOKR Solikamsk 41.88 325 *d iP* **P 08 00 55.6 +3.4**
SOKR pmax pmax
comp=Z,50nm,1.2s,mb5.0
SEY Seymchan 42.69 30 ⇑ *iP* **P 08 00 59.0 +0.3**
PETK Petropavlovsk- 42.80 45 P **P 08 01 00.0 +0.3**
comp=Z,10nm,0.7s,mb4.6,baz=326,slow=2.7,SNR=12
ZEI Tsey 48.66 301 *eP* **P 08 01 45.9 -0.3**
ZEI pmax pmax
comp=Z,15nm,1.0s,mb5.0
VRHR Novokhopersk 49.35 312 *eP* **P 08 01 53.8 +2.4**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.8s
KIV Kislovodsk 49.35 303 *eP* **P 08 01 51.8 +0.3**
KIV pmax pmax
comp=Z,44nm,1.0s,mb5.4
KIV Kislovodsk 49.35 303 *eP* **P 08 01 51.7 +0.1**
comp=Z,42nm,1.0s,mb5.4
BILL Bilibino 49.78 26 *c iP* **P 08 01 54.1 -0.3**
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.8
BILL Bilibino 49.78 26 *eP* **P 08 01 54.1 -0.3**
comp=Z,7.0nm,0.8s,mb4.7
KLMR Klimovskoe 50.57 325 ⇑ *iP* **P 08 02 00.1 -0.4**
KLMR pmax pmax
comp=Z,59nm,1.3s,mb5.4
VORD Divnogorie 50.83 312 *eP* **P 08 02 01.9 -0.7**
VORD pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,8.0nm,1.0s
VSR Storozhevoye 50.89 312 *eP* **P 08 02 02.6 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.8s
MOS Moscow 51.52 318 *eP* **P 08 02 06.5 -1.2**
MOS pmax pmax
comp=Z,123nm,1.2s,mb5.7
KAKA Kakadu 51.84 145 *eP* **P 08 02 09.7 -0.9**
comp=Z,6.5nm,0.6s,mb4.7
OBN Obninsk 52.16 317 ⇓ *iP* **P 08 02 11.3 -1.2**
OBN *i* 08 03 28.5
OBN *i* 08 04 11.0
OBN pmax pmax
comp=Z,40nm,1.0s,mb5.3
KNA Kununurra 52.88 151 ⇑ *iP* **P 08 02 18.1 -0.1**
comp=Z,47nm,0.7s,mb5.5
ANN Anapa 52.92 304 *eP* **P 08 02 16.3 -2.0**
ANN pmax pmax
comp=Z,204nm,1.2s,mb5.9
LVZ Lovozero 53.17 334 *ceP* **P 08 02 20.1 +0.3**
LVZ pmax pmax
comp=Z,23nm,1.2s,mb5.0
APA Apatity 53.63 333 ⇓ *eP* **P 08 02 24.6 +1.5**
APA MLR MLR
comp=Z,1μm,14.0s,MS5.2
MALT Malatya 53.66 296 *eP* **P 08 02 24.1 +0.2**
MALT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MALT Malatya 53.66 296 *eP* **P 08 02 24.1 +0.3**
comp=Z,8.2nm,0.9s,mb4.7
MALT Malatya 53.66 296 ⇑ *iP* **P 08 02 24.5 +0.6**
FITZ Fitzroy Crossi 53.83 156 *eP* **P 08 02 24.6 -0.6**
comp=Z,27nm,1.0s,mb5.1
FITZ Fitzroy Crossi 53.83 156 P **P 08 02 24.8 -0.3**
comp=Z,16nm,0.9s,mb5.0,baz=347,slow=5.4,SNR=17
FITZ Fitzroy Crossi 53.83 156 *eP* **P 08 02 24.4 -0.8**
comp=Z,23nm,1.0s,mb5.0
JOF Joensuu 54.48 327 *eP* **P 08 02 28.6 -0.8**
JOF pmax pmax
comp=Z,15nm,0.8s,mb5.0
JOF Joensuu 54.48 327 *ep* **P 08 02 28.6 -0.8**
comp=Z,15nm,0.8s,mb5.0
MBWA Marble Bar 54.95 163 *eP* **P 08 02 32.9 -0.3**
comp=Z,29nm,1.0s,mb5.3
SIM Simferopol' 55.20 305 *eP* **P 08 02 35.8 +0.8**
SIM pmax pmax
comp=Z,22nm,0.7s,mb5.3
KEV Kevo 56.00 336 *eP* **P 08 02 39.9 -0.4**
KEV pmax pmax
comp=Z,13nm,0.4s,mb5.3
KEV Kevo 56.00 336 *ep* **P 08 02 39.9 -0.4**
comp=Z,13nm,0.4s,mb5.3
ARCES ARCESS Array B 56.53 336 P **P 08 02 43.7 -0.4**
comp=Z,7.4nm,0.5s,mb5.0,baz=86,slow=7.0,SNR=35
ARCES ARCESS Array B 56.53 336 P **P 08 02 43.7 -0.4**
ARE0 ARCESS Array S 56.53 336 *eP* **P 08 02 43.5 -0.6**
ASF Jabal al Asfar 56.70 290 P **P 08 02 44.5 -1.4**
comp=Z,8.2nm,0.8s,mb4.8,baz=122,slow=4.2,SNR=4.4
KAF Kangasniemi 56.86 327 *eP* **P 08 02 46.1 -0.4**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KAF Kangasniemi 56.86 327 *ep* **P 08 02 46.1 -0.4**
comp=Z,8.8nm,0.6s,mb5.0
BR131 Keskin Array S 56.87 299 *eP* **P 08 02 46.9 0.0**
comp=Z,3.3nm,0.6s,mb4.5
BRTR Keskin Array B 56.87 299 P **P 08 02 46.5 -0.5**
comp=Z,3.2nm,0.7s,mb4.5,baz=92,slow=7.3,SNR=9.7
BRTR Keskin Array B 56.87 299 *ceP* **P 08 02 46.7 -0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 57.05 326 P **P 08 02 47.4 -0.5**
comp=Z,13nm,0.7s,mb5.1,baz=86,slow=7.8,SNR=21
VSU Vasula 57.16 322 ⇑ *iP* **P 08 02 48.3 -0.4**
VSU pmax pmax
comp=Z,32nm,0.7s,mb5.5
AKASG Malin Array Be 57.18 313 P **P 08 02 48.0 -1.0**
comp=Z,3.8nm,0.4s,mb4.8,baz=69,slow=7.8,SNR=12
AKBB Malin Array Si 57.18 313 *eP* **P 08 02 47.5 -1.5**
IDID Didziasalis 57.72 319 *eP* **P 08 02 53.2 +0.5**
NACGM Naroch 57.77 318 *e* **P 08 02 50.0 -3.1**
IZAR Zarasai 57.91 319 *eP* **P 08 02 52.9 -1.2**
IIGN Ignalina 58.00 319 *eP* **P 08 02 53.3 -1.4**
ISAL Salakas 58.01 319 *eP* **P 08 02 54.4 -0.4**
COEN Coen 58.69 135 *eP* **P 08 02 59.6 -0.4**
comp=Z,195nm,1.1s,mb6.0
WRAB Tennant Creek 59.01 148 P **P 08 03 02.0 -0.1**
comp=Z,444nm,0.7s,SNR=15
WRAB Tennant Creek 59.01 148 *eP* **P 08 03 02.3 +0.2**
WRAB pmax pmax
comp=Z,48nm,0.7s,mb5.6
WRAB Tennant Creek 59.01 148 *eP* **P 08 03 02.3 +0.3**
comp=Z,48nm,0.7s,mb5.6
WRA Warramunga Arr 59.01 148 P **P 08 03 02.1 +0.1**
comp=Z,28nm,0.7s,mb5.4,baz=340,slow=7.5
EIL Elat 59.15 288 P **P 08 03 02.4 -0.8**
comp=Z,16nm,1.0s,mb5.0,baz=90,slow=4.5,SNR=5.7
TIRR Tirgusor 59.26 306 *eP* **P 08 03 07.0 +3.3**
comp=Z,21nm,1.1s,mb5.1
TIRR Tirgusor 59.26 306 ⇓ *iP* **P 08 03 07.7 +4.0**
HARR Harsova 59.52 306 ⇑ *iP* **P 08 03 10.5 +5.0**
HARR Harsova 59.52 306 ⇑ *iP* **P 08 03 10.4 +4.9**
VRI Vrincioaia 60.00 308 ⇑ *iP* **P 08 03 09.7 +1.0**
VRI Vrincioaia 60.00 308 ⇑ *iP* **P 08 03 09.6 +0.9**
SUW Suwalki 60.02 318 *eP* **P 08 03 08.6 -0.1**
PLOR Plostina 60.06 308 ⇑ *iP* **P 08 03 09.3 +0.2**
PLOR Plostina 60.06 308 ⇑ *iP* **P 08 03 09.3 +0.2**
ATD Arta Tunnel 60.47 265 P **P 08 03 12.1 -0.3**
comp=Z,4.9nm,0.3s,mb5.0,baz=83,slow=2.5,SNR=3.8
BURAR Bucovina Array 60.49 310 ⇓ *iP* **P 08 03 17.1 +5.0**
BURAR Bucovina Array 60.49 310 ⇓ *iP* **P 08 03 17.0 +4.9**
BUR08 Bucovina Ar. S 60.50 310 *eP* **P 08 03 15.3 +3.2**
MLR Muntele Rosu 60.64 308 ⇓ *iP* **P 08 03 13.1 0.0**
MLR Muntele Rosu 60.64 308 ⇓ *iP* **P 08 03 13.1 0.0**
VOIR 61.25 308 ⇑ *iP* **P 08 03 21.0 +3.7**
VOIR 61.25 308 ⇑ *iP* **P 08 03 21.0 +3.7**
KWP Kalwaria Pacla 61.50 313 *eP* **P 08 03 17.0 -1.9**
KWP pmax pmax
comp=Z,54nm,0.9s,mb5.7
KWP Kalwaria Pacla 61.50 313 ⇑ *iP* **P 08 03 17.7 -1.2**
KWP Kalwaria Pacla 61.50 313 *eP* **P 08 03 17.0 -1.9**
comp=Z,54nm,0.9s,mb5.7
KWP Kalwaria Pacla 61.50 313 ⇑ *iP* **P 08 03 17.7 -1.2**
KOLS Kolonicke sedl 61.98 312 *eP* **P 08 03 23.4 +1.2**
KOLS pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
KOLS Kolonicke sedl 61.98 312 *eP* **P 08 03 23.4 +1.2**
comp=Z,7.0nm,1.3s,mb4.6
KOLS *e*PP PP 08 05 42.8 +4.6
KOLS Kolonicke sedl 61.98 312 *eP* **P 08 03 23.4 +1.2**
KOLS *e*PP PP 08 05 42.8 +4.6
UZH Uzhgorod 62.06 312 *eP* **P 08 03 25.8 +3.1**
ASAR Alice Springs 62.08 150 P **P 08 03 23.3 +0.3**
comp=Z,10nm,0.4s,mb5.3,baz=330,slow=6.5,SNR=27
STHS Stebnicka Huta 62.48 313 *eP* **P 08 03 26.4 +1.0**
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.48 313 *eP* **P 08 03 26.4 +1.0**
comp=Z,7.9nm,0.9s,mb4.8
STHS Stebnicka Huta 62.48 313 *eP* **P 08 03 26.4 +1.0**
OJC Ojcow 63.11 314 *eP* **P 08 03 33.3 +3.7**
KECS Kecovo 63.25 312 *eP* **P 08 03 30.5 -0.1**
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
KECS Kecovo 63.25 312 *eP* **P 08 03 30.5 -0.1**
comp=Z,3.2nm,0.7s,mb4.6
KECS Kecovo 63.25 312 *eP* **P 08 03 30.5 -0.1**
PSZ Piszkesteto 63.81 312 *eP* **P 08 03 34.4 +0.1**
PSZ pmax pmax
comp=Z,22nm,1.5s,mb5.0
PSZ Piszkesteto 63.81 312 *eP* **P 08 03 34.4 0.0**
comp=Z,22nm,1.5s,mb5.0
NB2 NORSAR Subarra 64.11 327 P **P 08 03 34.8 -1.3**
comp=Z,9.4nm,0.7s,mb4.9,baz=71,slow=6.5
NOA NORSAR Array B 64.11 327 P **P 08 03 34.9 -1.2**
comp=Z,11nm,0.8s,mb4.9,baz=70,slow=6.4,SNR=18
VYHS Vyhne 64.28 313 *eP* **P 08 03 37.5 +0.1**
VYHS pmax pmax
comp=Z,12nm,1.4s,mb4.7
VYHS Vyhne 64.28 313 *eP* **P 08 03 37.5 +0.1**
comp=Z,12nm,1.4s,mb4.7
VYHS Vyhne 64.28 313 *eP* **P 08 03 37.5 +0.1**
MORC Moravsky Berou 64.63 314 *eP* **P 08 03 39.2 -0.5**
MORC pmax pmax
comp=Z,11nm,0.8s,mb4.9
MORC Moravsky Berou 64.63 314 *eP* **P 08 03 39.2 -0.4**
comp=Z,11nm,0.8s,mb4.9
MORC Moravsky Berou 64.63 314 ⇑ *iP* **P 08 03 38.4 -1.3**
IDI Anoyia 64.91 297 P **P 08 03 39.9 -1.9**
comp=Z,5.7nm,0.4s,mb5.0,baz=47,slow=10.0,SNR=7.7
DPC Dobruska-Polom 65.16 315 *eP* **P 08 03 43.5 +0.4**
DPC *e*pP pP 08 03 47.8 +2.9
PKSM Moragy 65.21 310 ⇑⇑ *P* **P 08 03 46.7 +3.2**
PKSM Moragy 65.21 310 ⇑ *iP* **P 08 03 46.7 +3.2**
CTA Charters Tower 65.32 137 P **P 08 03 43.4 -1.0**
comp=Z,5.8nm,0.8s,mb4.7,baz=332,slow=8.3,SNR=4.5
BRG Berggiesshubel 66.37 316 *eP* **P 08 03 53.3 +2.3**
comp=Z,3.5nm,0.9s,mb4.4
BRG *e* pP 08 03 55.2 +2.5
comp=Z,6.0nm,0.8s
BRG *e* pP 08 03 56.6 +3.9
comp=Z,12nm,0.9s
BRG Berggiesshubel 66.37 316 *eP* **P 08 03 53.3 +2.4**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
FORT Forrest 66.39 158 *eP* **P 08 03 51.4 +0.3**
comp=Z,22nm,0.7s,mb5.3
FORT Forrest 66.39 158 *eP* **P 08 03 51.0 -0.2**
comp=Z,18nm,0.7s,mb5.2
CLL Collm 66.75 317 ⇓ *iP* **P 08 03 56.1 +2.7**
CLL *i* 08 04 02.3
CLL pmax pmax
comp=Z,18nm,1.2s,mb5.0
CLL Collm 66.75 317 ⇓ *iP* **P 08 03 56.1 +2.7**
comp=Z,12nm,1.2s,mb4.8
CLL *i* 08 04 02.3
CLL Collm 66.75 317 ⇓ *iP* **P 08 03 56.1 +2.7**
comp=Z,12nm,1.2s,mb4.8
CLL *i* pP pP 08 04 02.3 +7.2
MUD Monsted U'grnd 66.81 323 *i P* **P 08 03 55.3 +1.7**
MUD pmax pmax
comp=Z,27nm,0.9s,mb5.3
MUD Monsted U'grnd 66.81 323 *i P* **P 08 03 55.3 +1.7**
comp=Z,27nm,0.9s,mb5.3
KHC Kasperske Hory 67.27 315 *eP* **P 08 04 00.7 +4.0**
KHC *e*pP pP 08 04 03.5 +5.1
GERES GERESS Array B 67.31 314 P **P 08 03 56.7 -0.3**
comp=Z,3.9nm,0.7s,mb4.6,baz=76,slow=5.6,SNR=6.2
MOX Moxa 67.82 317 *eP* **P 08 04 03.7 +3.5**
comp=Z,12nm,1.3s,mb4.8
MOX Moxa 67.82 317 *eP* **P 08 04 03.7 +3.5**
MOX pmax pmax
comp=Z,2.0nm,1.3s,mb4.0
COLA College 68.03 26 *eP* **P 08 04 00.9 -0.3**
COLA pmax pmax
comp=Z,16nm,1.0s,mb5.0
COLA College 68.03 26 *eP* **P 08 04 00.8 -0.4**
comp=Z,16nm,1.0s,mb5.0
RSO Redoubt South 68.11 31 *eP* **P 08 04 01.4 -0.4**
MCK McKinley 68.18 27 *eP* **P 08 04 01.8 -0.3**
MCK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MCK McKinley 68.18 27 *eP* **P 08 04 01.8 -0.4**
comp=Z,5.9nm,0.8s,mb4.7
GRA1 Grafenberg Arr 68.45 316 *eP* **P 08 04 04.2 +0.1**
comp=Z,12nm,1.0s,mb4.9
GRF Grafenberg Arr 68.45 316 *eP* **P 08 04 04.2 +0.1**
GRF pmax pmax
comp=Z,12nm,1.0s,mb4.9
GRF Grafenberg Arr 68.45 316 *eP* **P 08 04 04.2 +0.1**
GRF pmax pmax
comp=Z,12nm,1.0s,mb4.9
GRF Grafenberg Arr 68.45 316 *eP* **P 08 04 04.2 +0.1**
comp=Z,12nm,1.0s,mb4.9
PMR Palmer 69.14 29 *eP* **P 08 04 07.4 -0.8**
PMR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
PMR Palmer 69.14 29 *eP* **P 08 04 07.4 -0.8**
comp=Z,9.3nm,0.6s,mb4.9
TIP Timpagrande 69.27 304 *eP* **P 08 04 10.0 +0.6**
comp=Z,12nm,0.8s,mb4.9
KDAK Kodiak Island 69.43 34 P **P 08 04 09.7 -0.3**
KDAK Kodiak Island 69.43 34 *ceP* **P 08 04 09.8 -0.2**
MENT Mentasta 70.60 27 *eP* **P 08 04 16.3 -0.9**
BFO Black Forest 70.75 315 *eP* **P 08 04 19.8 +1.4**
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BFO Black Forest 70.75 315 *eP* **P 08 04 19.8 +1.5**
comp=Z,7.9nm,1.0s,mb4.6
SCO Scoresbysund 70.79 343 *i* P **P 08 04 20.8 +2.6**
SCO pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
SCO Scoresbysund 70.79 343 *i* P **P 08 04 20.8 +2.6**
comp=Z,2.0nm,0.9s,mb4.0
INK Inuvik 70.80 20 P **P 08 04 17.6 -0.7**
comp=Z,10nm,0.8s,mb4.8,baz=342,slow=7.5,SNR=18
INK Inuvik 70.80 20 *eP* **P 08 04 17.9 -0.4**
INK pmax pmax
comp=Z,15nm,0.9s
INK Inuvik 70.80 20 *eP* **P 08 04 17.9 -0.4**
comp=Z,15nm,0.9s,mb4.9
BBOO Buckleboo 71.04 153 ⇑ *iP* **P 08 04 19.7 -0.4**
comp=Z,7.9nm,0.9s,mb4.6
CDF Champ du Feu 71.34 316 ⇑ *iP* **P 08 04 21.3 -0.6**
WLF Walferdange 71.41 317 *eP* **P 08 04 23.0 +0.7**
WLF pmax pmax
comp=Z,29nm,1.0s,mb5.2
WLF Walferdange 71.41 317 *eP* **P 08 04 23.0 +0.7**
comp=Z,29nm,1.0s,mb5.2
DAWY Dawson 71.55 25 *eP* **P 08 04 22.5 -0.4**
KMBO Kilima Mbogo 71.95 257 P **P 08 04 26.2 +0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=23,slow=13,SNR=5.6
KMBO Kilima Mbogo 71.95 257 *eP* **P 08 04 26.6 +0.5**
KMBO pmax pmax
comp=Z,5.0nm,1.2s
KMBO Kilima Mbogo 71.95 257 *eP* **P 08 04 26.6 +0.4**
comp=Z,5.0nm,1.2s,mb4.3
EIDS Eidsvold 72.20 137 *eP* **P 08 04 27.9 +0.6**
EIDS Eidsvold 72.20 137 *eP* **P 08 04 27.7 +0.4**
comp=Z,29nm,1.2s,mb5.1
SUMG Summit 72.45 349 *eP* **P 08 04 27.8 -0.4**
comp=Z,12nm,0.9s,mb4.8
RES Resolute Bay 72.51 5 *eP* **P 08 04 28.5 0.0**
RES pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
RES Resolute Bay 72.51 5 *eP* **P 08 04 28.5 0.0**
comp=Z,6.0nm,1.0s,mb4.5
STKA Stephens Creek 72.56 148 ⇑ *iP* **P 08 04 29.0 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
STKA Stephens Creek 72.56 148 P **P 08 04 28.9 -0.4**
comp=Z,8.5nm,0.5s,mb4.9,baz=329,slow=5.8,SNR=16
STKA Stephens Creek 72.56 148 *eP* **P 08 04 29.1 -0.2**
comp=Z,2.9nm,0.8s,mb4.3
LPG La Plagne 73.04 313 ⇑ *iP* **P 08 04 32.4 +0.3**
comp=Z,48nm,0.8s,mb5.2
LPG La Plagne 73.04 313 ⇑ *iP* **P 08 04 32.4 +0.3**
LPG pmax pmax
comp=Z,24nm,0.8s,mb5.2
LPG La Plagne 73.04 313 ⇑ *iP* **P 08 04 32.4 +0.3**
comp=Z,24nm,0.8s,mb5.2
BNI Bardonecchia 73.30 313 *eP* **P 08 04 36.8 +3.1**
BNI pmax pmax
comp=Z,14nm,1.0s,mb4.8
BNI Bardonecchia 73.30 313 *eP* **P 08 04 36.8 +3.2**
comp=Z,14nm,1.0s,mb4.8
HYT Haines Junctio 74.23 27 *eP* **P 08 04 40.1 +1.3**
SMF Signal de Mont 74.23 315 ⇑ *iP* **P 08 04 38.4 -0.7**
comp=Z,36nm,1.1s,mb4.9
SMF Signal de Mont 74.23 315 ⇑ *iP* **P 08 04 38.4 -0.7**
SMF pmax pmax
comp=Z,18nm,1.1s,mb4.9
SMF Signal de Mont 74.23 315 ⇑ *iP* **P 08 04 38.4 -0.7**
comp=Z,18nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.38 316 ⇑ *iP* **P 08 04 45.5 -0.3**
comp=Z,45nm,1.4s,mb4.9
TCF Toulx Ste Croi 75.38 316 ⇑ *iP* **P 08 04 45.5 -0.3**
TCF pmax pmax
comp=Z,23nm,1.4s,mb4.9
TCF Toulx Ste Croi 75.38 316 ⇑ *iP* **P 08 04 45.5 -0.3**
comp=Z,23nm,1.4s,mb4.9
SKAG Skagway 75.94 27 *eP* **P 08 04 49.5 +0.8**
comp=Z,22nm,0.9s,mb5.1
KEST Kesra 76.08 303 P **P 08 04 48.7 -1.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=345,slow=3.6,SNR=3.2
CAF Calviac 76.19 315 ⇑ *iP* **P 08 04 50.3 -0.1**
comp=Z,15nm,0.9s,mb4.6
CAF Calviac 76.19 315 ⇑ *iP* **P 08 04 50.3 -0.1**
CAF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CAF Calviac 76.19 315 ⇑ *iP* **P 08 04 50.3 -0.1**
comp=Z,7.6nm,0.9s,mb4.6
ARMA Armidale 76.39 140 *eP* **P 08 04 53.0 +1.4**
ARMA Armidale 76.39 140 *eP* **P 08 04 52.8 +1.2**
DLBC Dease Lake 78.66 26 P **P 08 05 03.0 -1.0**
comp=Z,3.1nm,1.0s,mb4.2,baz=285,slow=3.7,SNR=3.4
CAN Canberra 78.88 145 *eP* **P 08 05 05.7 +0.3**
CAN pmax pmax
comp=Z,35nm,1.3s,mb5.1
CAN Canberra 78.88 145 *eP* **P 08 05 05.7 +0.3**
comp=Z,35nm,1.3s,mb5.1
CNB Canberra Magne 79.05 144 *eP* **P 08 05 06.6 +0.3**
TOO Toolangi 79.07 148 *eP* **P 08 05 06.5 +0.1**
SFJD Kangerlussuaq 79.33 351 *i P* **P 08 05 06.9 -0.6**
YKA Yellowknife Ar 80.35 17 P **P 08 05 12.7 -0.4**
comp=Z,5.3nm,0.7s,mb4.6,baz=326,slow=5.2,SNR=21
YKA Yellowknife Ar 80.35 17 P **P 08 05 12.7 -0.4**
LSZ Lusaka 87.31 250 *eP* **P 08 05 48.9 -0.6**
LSZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
LSZ Lusaka 87.31 250 *eP* **P 08 05 48.9 -0.6**
comp=Z,2.9nm,0.7s,mb4.6
FCC Fort Churchill 87.92 10 *eP* **P 08 05 50.6 -1.1**
FCC pmax pmax
comp=Z,1.0nm,1.4s,mb3.9
FCC Fort Churchill 87.92 10 *eP* **P 08 05 50.6 -1.1**
comp=Z,1.1nm,1.4s,mb3.9
EDM Edmonton 88.55 22 *eP* **P 08 05 54.6 -0.2**
FFC Flin Flon 90.29 15 P **P 08 06 02.7 -0.2**
comp=Z,62nm,0.7s,mb6.0,SNR=5.6
FFC Flin Flon 90.29 15 *ceP* **P 08 06 02.9 0.0**
FFC Flin Flon 90.29 15 *eP* **P 08 06 02.3 -0.7**
comp=Z,7.9nm,0.8s,mb5.1
ETW Entiat 90.66 29 *eP* **P 08 06 05.1 +0.3**
comp=Z,10.0nm,1.4s,mb5.0
NEW Newport 91.39 27 *eP* **P 08 06 08.5 +0.3**
NEW pmax pmax
comp=Z,4.0nm,1.0s
NEW Newport 91.39 27 *eP* **P 08 06 08.5 +0.3**
comp=Z,4.1nm,1.0s,mb4.7
BSMT Bassoo Peak 92.61 26 *eP* **P 08 06 14.7 +0.9**
comp=Z,3.8nm,1.0s,mb4.8
SCHQ Schefferville 92.97 355 P **P 08 06 14.7 -0.7**
comp=Z,6.0nm,0.8s,mb5.1,baz=28,slow=4.5,SNR=6.6
SCHQ Schefferville 92.97 355 *eP* **P 08 06 14.5 -0.9**
comp=Z,8.0nm,0.9s,mb5.2
TORD Torodi Ar. Bea 94.04 288 P **P 08 06 20.2 -0.8**
comp=Z,1.1nm,0.7s,mb4.4,baz=48,slow=4.1,SNR=6.1
EGMT Eagleton 94.20 23 *eP* **P 08 06 20.9 -0.3**
comp=Z,2.7nm,0.6s,mb4.8
TSUM Tsumeb 97.94 252 *eP* **P 08 06 38.3 -0.3**
comp=Z,1.5nm,0.6s,mb4.7
TXAR Lajitas Array 112.95 27 PKiKP PKiKP 08 11 39.0 -0.7
comp=Z,0.2nm,0.7s,baz=136,slow=0.9,SNR=3.7
SBA Scott Base 115.73 168 *e*PKIKP PKPdf 08 11 43.7 +0.2
QSPA South Pole Qui 122.04 180 PKP PKPdf 08 11 54.8 -0.8
comp=Z,5.9nm,0.8s,baz=279,slow=0.9,SNR=17
QSPA South Pole Qui 122.04 180 *e*PKPdf PKPdf 08 11 54.6 -1.0
OTAV Otavalo 147.50 7 *e*PKPbc PKPbc 08 12 47.0 -0.1
LPAZ La Paz 162.93 337 PKP PKPdf 08 13 04.4 -0.7
comp=Z,1.4nm,0.7s,baz=333,slow=0.3,SNR=4.3
LPAZ La Paz 162.93 337 *e*PKPdf PKPdf 08 13 04.0 -1.2
CPUP Villa Florida 163.53 287 PKP PKPdf 08 13 04.2 -1.3
comp=Z,0.8nm,0.7s,baz=115,slow=2.6,SNR=3.5
PLCA Paso Flores 170.84 202 PKP PKPdf 08 13 08.2 -2.1
comp=Z,2.7nm,1.1s,baz=135,slow=2.9,SNR=2.7
PLCA PKPab PKPab 08 14 27.4 -1.2
comp=Z,2.2nm,0.9s,baz=157,slow=2.7,SNR=3.8

IDC ***13*** *07:53:24.7±2.1, 39.°25N×72.°65E, h0km, mb3.9/4, mb1 3.9/10, mb1mx3.7/29, mbtmp3.8/10, ML3.4/6, Error ellipse: s-maj=38.2km s-min=17.4km az=143.0*
ISCJB ***13*** *07:53:27.9±0.6, 39.°48N±0.°05×72.°11E±0.°08, h10km, mb3.9/4, Error ellipse: s-maj=9.9km s-min=5.9km az=33.2*
NNC ***13*** *07:53:28.8±9.1, 39.°34N×72.°55E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=75.1km s-min=42.8km az=178.0*
NEIC ***13*** *07:53:31.0±0.8, 39.°69N×72.°26E, h10km, Error ellipse: s-maj=13.8km s-min=9.1km az=131.0*
ISC 13 07:53:30.2±0.5, 39.°57N±0.°05×72.°23E±0.°08, h10km, n34, σ1§14/41, mb3.9/4, 2C-4D, Kyrgyzstan

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

AML Almayashu 2.79 23 P Pn 07 54 15.2 +0.3
SNR=186
AML Almayashu 2.79 23 *e*Pn **Pn 07 54 15.0 +0.1**
AML *e*Sn **Sn 07 54 52.7 +4.1**
KSH Kashi 2.90 90 Pn **Pn 07 54 07.0 -9.3**
KSH Sn **Sn 07 54 40.3 -11**
KSH smax
comp=N,490nm,0.5s
KSH smax
comp=E,430nm,0.3s
UCH Uchtor 3.17 32 P **Pn 07 54 20.1 0.0**
SNR=28
UCH Uchtor 3.17 32 *e*Pn **Pn 07 54 19.7 -0.4**
UCH *e*Sn **Sn 07 55 01.1 +3.2**
EKS2 Erkin-Say 3.30 20 P **Pn 07 54 22.7 +0.8**
SNR=14
KZA Kyzart 3.40 41 P **Pn 07 54 22.4 -0.9**
SNR=46
AAK Ala-Archa 3.51 28 P **Pn 07 54 25.5 +0.8**
SNR=12
AAK Ala-Archa 3.51 28 Pn **Pn 07 54 25.4 +0.7**
comp=E,0.2nm,0.3s,baz=182,slow=5.8,SNR=70
AAK Lg 07 55 09.8
comp=E,0.2nm,0.3s,baz=309,slow=18,SNR=14
AAK Ala-Archa 3.51 28 *e*Pn **Pn 07 54 25.1 +0.3**
AAK Lg 07 55 09.8
AAK *e*Sn **Sn 07 55 09.9 +3.7**
KBK Karagaybulak 3.71 33 P **Pn 07 54 28.7 +1.2**
SNR=16
KK31 Karatay Array 3.76 340 ⇓P **Pn 07 54 31.9 +3.7**
comp=E,5.1nm,0.3s,baz=152,slow=14,SNR=133
KK31 ⇓S **Sn 07 55 21.5 +9.0**
comp=E,19nm,0.3s,baz=151,slow=24,SNR=9.8
CHMS Chumysh 3.92 28 P **Pn 07 54 30.7 +0.3**
SNR=13
ULHL Ulahol 4.05 47 P **Pn 07 54 30.6 -1.6**
SNR=27
USP Ospenovka 4.07 24 P **Pn 07 54 33.0 +0.5**
SNR=11
TKM2 Tokmak 2 4.20 36 ⇑P **Pn 07 54 34.8 +0.5**
comp=E,20nm,0.6s
TKM2 ⇓S **Sn 07 55 28.8 +5.4**
comp=E,45nm,0.6s
TKM2 Tokmak 2 4.20 36 P **Pn 07 54 34.3 0.0**
SNR=19
KBL Kabul 5.63 208 *e*Pn **Pn 07 54 56.4 +2.5**
CEP Cherat 5.74 183 P **Pn 07 54 55.7 +0.2**
CEP S **Sn 07 56 07.0 +5.6**
CHCP Chirah Chowk 5.96 172 P **Pn 07 54 57.7 -0.7**
MKAR Makanchi Array 10.29 42 Pn **Pn 07 55 56.9 -0.9**
comp=E,0.1nm,0.3s,baz=225,slow=16,SNR=4.3
KURK Kurchatov 12.02 20 Pn **Pn 07 56 17.0 -4.4**
comp=E,0.1nm,0.3s,baz=205,slow=13,SNR=2.5
AB31 Akbulak array 13.06 322 ⇓P **P 07 56 35.1 -0.5**
comp=E,1.3nm,0.5s,baz=124,slow=13,SNR=53
ABKAR Akbulak array 13.06 322 *e*Pn **Pn 07 56 35.5 -0.1**
comp=E,2.1nm,0.4s
BVAR Borovoye Array 13.52 355 Pn **Pn 07 56 39.5 -2.4**
comp=E,0.2nm,0.3s,baz=162,slow=16,SNR=4.6
AKTK Aktyubinsk 14.77 322 Pn **Pn 07 56 59.3 +0.3**
AKTO Aktyubinsk 14.77 322 ⇑P **Pn 07 57 07.0 +7.9**
comp=E,1.1nm,0.7s
AKTO Aktyubinsk 14.77 322 Pn **Pn 07 56 59.3 +0.3**
comp=E,0.2nm,0.3s,baz=125,slow=15,SNR=5.3
ZALV Zalesovo Beam 16.73 27 Pn **Pn 07 57 20.3 -4.2**
comp=E,0.4nm,0.3s,baz=195,slow=9.0,SNR=3.0
ZALV Zalesovo Beam 16.73 27 Pn **Pn 07 57 20.3 -4.2**
FINES FINESS Array B 35.54 323 P **P 08 00 27.7 +0.6**
comp=E,0.7nm,0.4s,mb3.9,baz=104,slow=10,SNR=2.4
ARCES ARCESS Array B 38.71 336 P **P 08 00 54.2 +0.3**
comp=E,3.8nm,0.9s,mb4.1,baz=96,slow=8.3,SNR=4.5
NOA NORSAR Array B 42.56 321 P **P 08 01 25.1 -0.7**
comp=E,0.4nm,0.5s,mb3.4,baz=108,slow=7.4,SNR=2.8
TORD Torodi Ar. Bea 66.78 268 P **P 08 04 19.8 -2.3**
comp=E,0.8nm,0.6s,mb4.0,baz=47,slow=5.7,SNR=17

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*ISCJB **13** 08:06:55.2±0.9, 31°.46N±0°.04×103°.96E±0°.05, h7km±6km, mb3.5/6, Error ellipse: s-maj=7.7km s-min=6.7km az=175.3*
*IDC **13** 08:06:55.4±1.0, 31°.27N×103°.81E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/24, mbtmp3.6/6, Error ellipse: s-maj=40.9km s-min=19.9km az=56.0*
*NEIC **13** 08:06:57.0±0.7, 31°.17N×103°.61E, h10km, mb3.8/1, Error ellipse: s-maj=28.6km s-min=12.1km az=223.0*
*BJI **13** 08:07:00.9, 31°.38N×103°.85E, h10km, ML3.7/8, Ms3.9/2, Ms7 3.8/1*
ISC 13 08:06:58.1±0.8, 31°.38N±0°.04×103°.85E±0°.06, h14km±6km, n12, σ1°.05/17, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**190**	Pg	**Pg**	**08 07 08.9**	**+1.4**
CD2				Sg	**Sg**	**08 07 14.0**	**+0.1**
CD2				smax			
	comp=N,6μm,0.8s						
LZH	**Lanzhou**	**4.70**	**360**	*e*Pg	**Pg**	**08 08 31.9**	**+3.9**
LZH				Sg	**Sg**	**08 09 28.3**	**-0.6**
LZH				smax			
	comp=N,43nm,0.7s						
LZH				smax			
	comp=E,58nm,0.5s						
ENH	**Enshi**	**4.97**	**101**	*e*Pn	**Pn**	**08 08 14.7**	**+2.4**
	comp=E,43nm,0.6s						
ENH				*e*Pg	**Pg**	**08 08 32.5**	**-0.8**
ENH				*e*Sn	**Sn**	**08 09 10.3**	**+0.7**
ENH				*e*Sg	**Sg**	**08 09 37.8**	**+0.1**
GYA	**Guiyang**	**5.49**	**153**	Pg	**Pg**	**08 08 40.4**	**-2.8**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,90nm,0.7s						
GYA				LR	LR		
	comp=N,2μm,6.6s						
GYA				LR	LR		
	comp=E,2μm,7.3s						
KSRS	**Korea Array**	**20.74**	**66**	P	**P**	**08 11 38.8**	**+0.6**
	comp=E,2.6nm,0.7s,baz=261,slow=10.0,SNR=6.7						
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	**08 11 59.1**	**+0.7**
	comp=E,0.2nm,0.5s,mb2.9,baz=127,slow=11,SNR=2.8						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**08 12 38.4**	**0.0**
	comp=E,0.4nm,0.5s,mb3.2,baz=128,slow=9.5,SNR=3.2						
WRAB	**Tennant Creek**	**58.82**	**146**	*e*P	**P**	**08 16 55.2**	**-0.9**
	comp=E,0.6nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**08 16 55.5**	**-0.6**
	comp=E,0.7nm,0.4s,mb4.0,baz=328,slow=9.0,SNR=22						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**08 17 15.8**	**-0.9**
	comp=E,0.3nm,0.5s,mb3.7,baz=338,slow=6.6,SNR=8.0						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	**P**	**08 19 14.2**	**-0.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=329,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	**P**	**08 19 14.2**	**-0.4**

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*IDC **13** 08:09:17.0±0.8, 32°.53N×105°.20E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, Error ellipse: s-maj=54.7km s-min=16.5km az=56.0*
*NEIC **13** 08:09:18.6±0.5, 32°.61N×105°.38E, h10km, mb3.8/2, Error ellipse: s-maj=29.7km s-min=9.3km az=51.0*
*BJI **13** 08:09:20.6, 32°.27N×105°.12E, h12km, ML4.1/4, Ms3.8/2, Ms7 3.4/2*
ISC 13 08:09:19.7±2.0, 32°.7N±0°.1×105°.5E±0°.2, h16km±11km, n21, σ0°.64/23, mb3.8/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.29**	**220**	Pg	**Pn**	**08 09 49.8**	**-7.0**
CD2				smax			
	comp=N,600nm,0.5s						
LZH	**Lanzhou**	**3.65**	**339**	*e*Pg	**Pg**	**08 10 29.6**	**0.0**
LZH				Sg	**Sg**	**08 11 16.8**	**0.0**
LZH				smax			
	comp=N,360nm,0.6s						
LZH				smax			
	comp=E,730nm,0.7s						
LZH				LR	LR		
	comp=E,770nm,6.1s						
LZH				LR	LR		
	comp=Z,860nm,8.1s						
LZH	**Lanzhou**	**3.65**	**339**	*e*Pg	**Pn**	**08 10 19.5**	**+4.0**
LZH				Sg	**Sn**	**08 10 57.8**	**-0.3**
LZH				smax			
	comp=N,81nm,0.6s						
LZH				smax			
	comp=E,95nm,0.7s						
LZH				LR	LR		
	comp=E,770nm,6.1s						
LZH				LR	LR		
	comp=Z,860nm,8.1s						
LZH	**Lanzhou**	**3.65**	**339**	*e*Pg	**Sg**	**08 11 16.5**	**-0.3**
LZH				smax			
	comp=N,530nm,0.6s						
LZH				smax			
	comp=E,570nm,0.8s						
LZH				LR	LR		
	comp=N,630nm,4.9s						
LZH				LR	LR		
	comp=Z,800nm,6.7s						
MK31	**Makanchi Array**	**22.61**	**315**	*e*P	**P**	**08 14 20.2**	**+0.7**
MKAR	**Makanchi Array**	**22.61**	**315**	P	**P**	**08 14 18.9**	**-0.7**
	comp=Z,1.4nm,0.6s,mb3.6,baz=115,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**25.84**	**331**	P	**P**	**08 14 50.5**	**+0.2**
	comp=Z,1.2nm,0.5s,mb3.7,baz=129,slow=11,SNR=3.6						
UCH	**Uchtor**	**26.23**	**300**	*e*P	**P**	**08 14 54.9**	**+1.0**
	comp=Z,4.5nm,1.2s,mb3.9						
KURK	**Kurchatov**	**26.72**	**320**	P	**P**	**08 14 57.2**	**-1.0**
	comp=Z,0.6nm,0.5s,mb3.4,baz=128,slow=9.9,SNR=5.0						
ABKAR	**Akbulak array**	**37.52**	**310**	*e*P	**P**	**08 16 33.3**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.6						
ARCES	**ARCESS Array B**	**56.30**	**335**	P	**P**	**08 18 58.9**	**-0.2**
	comp=Z,2.3nm,0.9s,mb4.2,baz=95,slow=9.1,SNR=4.2						
ARCES	**ARCESS Array B**	**56.30**	**335**	P	**P**	**08 18 58.9**	**-0.2**
FINES	**FINESS Array B**	**56.91**	**326**	P	**P**	**08 19 03.7**	**+0.1**
	comp=Z,2.1nm,0.9s,mb4.2,baz=342,slow=18,SNR=2.5						
BRTR	**Keskin Array B**	**56.98**	**299**	P	**P**	**08 19 04.2**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=92,slow=7.8,SNR=2.9						
WRA	**Warramunga Arr**	**59.17**	**148**	P	**P**	**08 19 19.6**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.1,baz=341,slow=7.5,SNR=6.6						
ASAR	**Alice Springs**	**62.27**	**150**	P	**P**	**08 19 40.8**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.9,baz=328,slow=5.8,SNR=5.2						
NB2	**NORSAR Subarra**	**63.95**	**327**	P	**P**	**08 19 51.1**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**08 19 51.0**	**-0.8**
	comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.6,SNR=3.8						
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**08 19 51.0**	**-0.8**
STKA	**Stephens Creek**	**72.72**	**148**	P	**P**	**08 20 46.6**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=0.0,slow=8.1,SNR=2.8						
YKA	**Yellowknife Ar**	**79.84**	**18**	P	**P**	**08 21 28.5**	**+1.5**
	comp=Z,0.3nm,0.5s,mb3.5,baz=327,slow=5.1,SNR=11						

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*ISCJB **13** 08:10:59.8±0.3, 32°.59N±0°.03×105°.16E±0°.04, h10km, mb4.2/32, Error ellipse: s-maj=4.4km s-min=4.3km az=11.2*
*IDC **13** 08:10:59.4±0.6, 32°.61N×105°.36E, h0km, mb4.0/18, mb1 4.2/20, mb1mx4.1/31, mbtmp4.1/20, ML3.8/1, Error ellipse: s-maj=29.4km s-min=12.7km az=51.0*
*BJI **13** 08:11:00.3, 32°.51N×105°.27E, h15km, mB4.8/11, mb4.4/19, ML4.4/17, Ms4.4/21, Ms7 4.1/20*
*NEIC **13** 08:11:01.5±0.4, 32°.59N×105°.23E, h10km, mb4.2/9, Error ellipse: s-maj=12.0km s-min=7.3km az=225.0*
*MOS **13** 08:11:02.0±1.1, 32°.53N×105°.29E, h33km, mb4.4/9, Error ellipse: s-maj=13.7km s-min=8.5km az=115.0*
ISC 13 08:11:01.8±0.3, 32°.58N±0°.03×105°.16E±0°.04, h10km, n72, σ1°.15/84, mb4.2/32, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.05**	**216**	Pg	**Pn**	**08 11 36.1**	**-0.2**
CD2				smax			
	comp=N,21μm,0.7s						
XAN	**Xi'an**	**3.47**	**64**	Pg	**Pb**	**08 12 01.6**	**-1.7**
XAN				Sg	**Sb**	**08 12 45.4**	**-0.1**
XAN				smax			
	comp=N,2μm,0.5s						
XAN				smax			
	comp=E,620nm,0.7s						
XAN				LR	LR		
	comp=N,3μm,6.3s						
XAN				LR	LR		
	comp=E,610nm,6.8s						
XAN				LR	LR		
	comp=Z,670nm,7.1s						
LZH	**Lanzhou**	**3.66**	**343**	Pn	**Pn**	**08 12 01.3**	**+2.8**
LZH				Pg	**Pg**	**08 12 11.3**	**-0.7**
LZH				Sn	**Sn**	**08 12 46.0**	**+4.3**
LZH				Sg	**Sg**	**08 12 57.8**	**-1.6**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,3μm,0.7s						
LZH				LR	LR		
	comp=E,3μm,6.6s						
LZH				LR	LR		
	comp=Z,3μm,7.6s						
LZH	**Lanzhou**	**3.66**	**343**	Sg	**Pg**	**08 12 10.8**	**-1.2**
ENH	**Enshi**	**4.36**	**121**	Pn	**Pn**	**08 12 09.2**	**+1.2**
GYA	**Guiyang**	**6.24**	**168**	Pg	**Pb**	**08 12 44.9**	**-5.7**
GYA				smax			
	comp=N,340nm,0.9s						
GYA				smax			
	comp=E,260nm,0.7s						
KMI	**Kunming**	**7.73**	**197**	Pn	**Pn**	**08 12 52.3**	**-2.1**
KMI				Sn	**Sn**	**08 14 17.4**	**-4.6**
KMI				smax			
	comp=N,46nm,0.9s						
KMI				smax			
	comp=E,94nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,7.8s						
KMI				LR	LR		
	comp=E,1μm,6.5s						
KMI				LR	LR		
	comp=Z,640nm,9.5s						
KMI	**Kunming**	**7.73**	**197**	Pg	Px	08 13 05.0	
KMI				Sg	**Sn**	**08 14 17.3**	**-4.7**
KMI				smax			
	comp=N,39nm,1.6s						
KMI				smax			
	comp=E,95nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,6.6s						
KMI				LR	LR		
	comp=E,1μm,9.2s						
GTA	**Gaotai**	**8.07**	**329**	P	**Pn**	**08 12 59.8**	**+0.7**
GTA				pP		08 13 08.9	
GTA				sP		08 13 12.9	
GTA				S	**Sn**	**08 14 30.5**	**+0.1**
GTA				sS		08 14 40.9	
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,380nm,5.3s						
GTA				LR	LR		
	comp=N,930nm,9.8s						
GTA				LR	LR		
	comp=E,1μm,10.7s						
GTA				LR	LR		
	comp=Z,1μm,11.6s						
WHN	**Wuhan**	**8.10**	**102**	⇑P	**Pn**	**08 12 59.3**	**-0.2**
WHN				S	**Sn**	**08 14 25.6**	**-5.5**
WHN				LR	LR		
	comp=N,2μm,5.5s						
WHN				LR	LR		
	comp=E,2μm,8.7s						
BTO	**Baotou**	**8.91**	**25**	*e*P	**Pn**	**08 13 09.8**	**-0.7**
BTO				S	**Sn**	**08 14 52.3**	**+1.4**
BTO				LR	LR		
	comp=N,570nm,10.8s						
BTO				LR	LR		
	comp=E,460nm,8.6s						
BTO				LR	LR		
	comp=Z,550nm,6.5s						
HHC	**Hu-ho-hao-te**	**9.72**	**30**	*e*P	**Pn**	**08 13 22.8**	**+1.2**
HHC				pP		08 13 29.9	
HHC				sP		08 13 34.8	
HHC				S	**Sn**	**08 15 13.6**	**+2.8**
HHC				sS		08 15 24.0	
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,390nm,5.9s						
HHC				LR	LR		
	comp=N,670nm,5.2s						
HHC				LR	LR		
	comp=E,320nm,4.1s						
HHC				LR	LR		
	comp=Z,830nm,5.3s						
NJ2	**Nanjing**	**11.60**	**89**	*e*P	**Pn**	**08 13 49.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA	**Lhasa**	**12.34**	**260**	P	**Pn**	**08 13 57.8**	**+0.2**
LSA	**Lhasa**	**12.34**	**260**	*e*Pn	**Pn**	**08 13 58.1**	**+0.5**
QIZ	**Qiongzhong**	**14.14**	**162**	P	**Pn**	**08 14 22.8**	**+0.7**
QIZ				S	**Sn**	**08 17 00.5**	**+1.4**
QIZ				LR	LR		
	comp=N,590nm,9.5s						
QIZ				LR	LR		
	comp=Z,830nm,12.2s						
SONM	**Songino Array**	**15.26**	**3**	Pn	**Pn**	**08 14 35.5**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=187,slow=13,SNR=9.5						
ZAK	**Zakamensk**	**17.84**	**356**	*e*P	**Pn**	**08 15 06.1**	**-3.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KSRS	**Korea Array**	**19.25**	**69**	P	**Pn**	**08 15 23.4**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=252,slow=11,SNR=9.1						
CN2	**Changchun**	**19.43**	**49**	*e*P	**Pn**	**08 15 30.8**	**+1.4**
CN2				*e*S	**Sn**	**08 19 01.9**	**-5.5**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,10.0s						
CN2				LR	LR		
	comp=E,800nm,10.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
HIA	**Hailar**	**19.92**	**29**	*e*P	**Pn**	**08 15 34.2**	**-1.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	**Hailar**	**19.92**	**29**	*e*P	**Pn**	**08 15 34.2**	**-1.0**
	comp=Z,10.0nm,0.6s						
MK31	**Makanchi Array**	**22.50**	**316**	*e*P	**P**	**08 16 01.0**	**-0.3**
MKAR	**Makanchi Array**	**22.50**	**316**	P	**P**	**08 16 02.1**	**+0.8**
	comp=Z,3.0nm,0.6s,mb3.9,baz=119,slow=12,SNR=17						
ZALV	**Zalesovo Beam**	**25.81**	**332**	P	**P**	**08 16 32.2**	**-0.8**
	comp=Z,2.4nm,0.3s,mb4.2,baz=138,slow=11,SNR=2.8						
ZALV	**Zalesovo Beam**	**25.81**	**332**	P	**P**	**08 16 32.2**	**-0.8**
KLR	**Kul'dur**	**25.89**	**42**	*e*P	**P**	**08 16 31.2**	**-2.5**
BOD	**Bodaibo**	**25.95**	**11**	*e*P	**P**	**08 16 34.7**	**+0.6**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.0						
UCH	**Uchtor**	**26.06**	**300**	*e*P	**P**	**08 16 36.5**	**+1.2**
	comp=Z,7.0nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**26.16**	**301**	P	**P**	**08 16 37.1**	**+0.9**
	comp=Z,1.3nm,0.6s,mb3.7,baz=191,slow=19,SNR=2.3						
AAK	**Ala-Archa**	**26.16**	**301**	P	**P**	**08 16 37.1**	**+0.9**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
AAK	**Ala-Archa**	**26.16**	**301**	*e*P	**P**	**08 16 37.9**	**+1.7**
	comp=Z,3.4nm,1.0s,mb3.8						
KURK	**Kurchatov**	**26.64**	**321**	P	**P**	**08 16 40.7**	**+0.3**
	comp=Z,1.2nm,0.5s,mb3.7,baz=127,slow=10.0,SNR=8.9						
KURK	**Kurchatov**	**26.64**	**321**	*ce*P	**P**	**08 16 41.4**	**+1.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0						
KURK	**Kurchatov**	**26.64**	**321**	*e*P	**P**	**08 16 40.6**	**+0.2**
	comp=Z,3.8nm,0.6s,mb4.1						
AML	**Almayashu**	**26.64**	**300**	*e*P	**P**	**08 16 42.6**	**+2.1**
	comp=Z,4.1nm,0.6s,mb4.1						
NRGR	**Nerungri**	**27.61**	**24**	S	**S**	**08 21 35.0**	**+4.5**
NRGR				smax			
	comp=N,24nm,0.4s						
BVAR	**Borovoye Array**	**32.22**	**320**	P	**P**	**08 17 30.0**	**+0.1**
	comp=N,0.9nm,0.6s,mb3.8,baz=108,slow=9.7,SNR=5.2						
BRVK	**Borovoye**	**32.29**	**320**	*ce*P	**P**	**08 17 29.4**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**37.39**	**310**	*e*P	**P**	**08 18 14.8**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**38.81**	**312**	P	**P**	**08 18 25.9**	**-0.7**
AKTO	**Aktyubinsk**	**38.81**	**312**	P	**P**	**08 18 25.9**	**-0.7**
	comp=Z,1.3nm,0.6s,mb3.8,baz=88,slow=13,SNR=5.5						
ARU	**Arti**	**39.83**	**321**	*d*P	**P**	**08 18 34.6**	**-0.5**
ARU				S	**S**	**08 24 37.7**	**-1.6**
ARU				SS	SS	08 27 28.1	-7.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
MIB	**Mutribah**	**49.02**	**283**	*e*P	**P**	**08 19 49.3**	**+0.4**
MIB				AMb	AMB	08 19 50.0	
	comp=Z,12nm,0.9s,mb4.9						
RDF	**Al-Radifah**	**49.13**	**282**	*e*P	**P**	**08 19 49.9**	**+0.1**
RDF				AMb	AMB	08 19 54.7	
	comp=Z,20nm,1.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**54.08**	**156**	P	**P**	**08 20 24.8**	**-1.9**
	comp=Z,0.9nm,0.4s,mb4.0,baz=0.0,slow=1.0,SNR=2.3						
ARCES	**ARCESS Array B**	**56.29**	**335**	P	**P**	**08 20 41.9**	**-0.2**
	comp=Z,1.8nm,0.5s,mb4.3,baz=79,slow=6.9,SNR=16						
ARCES	**ARCESS Array B**	**56.29**	**335**	P	**P**	**08 20 41.9**	**-0.2**
ASF	**Jabal al Asfar**	**56.69**	**290**	P	**P**	**08 20 47.1**	**+1.5**
	comp=Z,1.1nm,0.5s,mb4.2,baz=64,slow=2.0,SNR=3.7						
BRTR	**Keskin Array B**	**56.80**	**299**	P	**P**	**08 20 46.6**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=96,slow=7.3,SNR=7.0						
FINES	**FINESS Array B**	**56.85**	**326**	P	**P**	**08 20 46.3**	**+0.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=85,slow=8.4,SNR=4.6						
AKASG	**Malin Array Be**	**57.04**	**313**	P	**P**	**08 20 46.8**	**-1.0**
	comp=Z,3.1nm,0.6s,mb4.5,baz=69,slow=6.2,SNR=6.2						
AKASG	**Malin Array Be**	**57.04**	**313**	*ce*P	**P**	**08 20 48.0**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRAB	**Tennant Creek**	**59.22**	**148**	*e*P	**P**	**08 21 01.8**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**59.22**	**148**	*e*P	**P**	**08 21 01.8**	**-1.5**
	comp=Z,4.8nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**59.22**	**148**	P	**P**	**08 21 08.0**	**+4.7**
	comp=Z,1.1nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**59.22**	**148**	P	**P**	**08 21 01.8**	**-1.5**
	comp=Z,3.4nm,0.6s,mb4.6,baz=341,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**62.30**	**150**	P	**P**	**08 21 22.9**	**-1.4**
	comp=Z,1.7nm,0.5s,mb4.4,baz=341,slow=7.9,SNR=12						
NB2	**NORSAR Subarra**	**63.90**	**327**	P	**P**	**08 21 33.4**	**-1.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**63.90**	**327**	P	**P**	**08 21 33.5**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=70,slow=6.6,SNR=5.1						
BRG	**Berggiesshubel**	**66.22**	**316**	*e*P	**P**	**08 21 50.5**	**+0.8**
	comp=Z,3.7nm,0.7s,mb4.5						
BRG	**Berggiesshubel**	**66.22**	**316**	*e*P	**P**	**08 21 50.5**	**+0.8**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
GERES	**GERESS Array B**	**67.16**	**314**	P	**P**	**08 21 55.2**	**-0.5**
	comp=Z,0.6nm,0.3s,mb4.1,baz=91,slow=11,SNR=6.0						
INK	**Inuvik**	**70.47**	**20**	*e*P	**P**	**08 22 15.0**	**-1.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**70.47**	**20**	*e*P	**P**	**08 22 15.0**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**72.77**	**148**	P	**P**	**08 22 30.3**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=310,slow=5.3,SNR=3.5						
STKA	**Stephens Creek**	**72.77**	**148**	*e*P	**P**	**08 22 31.5**	**+1.2**
	comp=Z,0.3nm,0.8s,mb3.3						
LPG	**La Plagne**	**72.89**	**313**	*e*P	**P**	**08 22 32.3**	**+1.3**
	comp=Z,16nm,0.7s,mb4.7						
LPL	**La Plagne**	**72.90**	**313**	*e*P	**P**	**08 22 32.2**	**+1.2**
	comp=Z,8.8nm,0.6s,mb4.5						
SMF	**Signal de Mont**	**74.08**	**315**	*e*P	**P**	**08 22 38.8**	**+0.8**
	comp=Z,7.1nm,0.7s,mb4.4						
YKA	**Yellowknife Ar**	**80.02**	**18**	P	**P**	**08 23 10.1**	**-0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=327,slow=5.1,SNR=10						
FFC	**Flin Flon**	**89.96**	**15**	*i*P	**P**	**08 24 01.4**	**+0.3**

**IDC 13 08:15:26.2±9

GMJI				S	Sn	08 19 25.2	+0.2
IGBI	**Denpasar**	**1.27**	**64**	P	Pn	08 19 09.8	-0.5
DNP	**Denpasar**	**1.39**	**60**	P	Sn	08 19 32.7	+3.5
	2μm,0.3s						
ABJI	**Asem Bagus**	**1.58**	**9**	P	Pn	08 19 15.6	+1.0
ABJI	**Asem Bagus**	**1.58**	**9**	P	Sn	08 19 40.9	+7.0
	324nm,0.6s						
SRBI	**Singaraja**	**1.76**	**44**	P	Pn	08 19 17.3	+0.3
SRBI				S	Sn	08 19 39.0	+0.8
SRBI	**Singaraja**	**1.76**	**44**	P	Sn	08 19 33.0	-5.2
	4μm269nm,0.6s						
KHKI	**Kahang-Kahang**	**1.89**	**58**	P	Pn	08 19 18.8	0.0
KHKI				S	Sn	08 19 41.9	+0.5
KHKI	**Kahang-Kahang**	**1.89**	**58**	P	Px	08 19 28.6	
	3μm247nm,0.7s						
KMMI	**Kalianget**	**2.31**	**359**	P	Pn	08 19 25.6	+1.1
PWJI	**Pagerwojo**	**2.54**	**302**	P	Pn	08 19 27.1	-0.7
PWJI				S	Sn	08 20 00.0	+2.5
PWJI	**Pagerwojo**	**2.54**	**302**	P	Sn	08 20 00.4	+2.9
	3μm211nm,0.6s						
SJI	**Sawahan**	**2.73**	**306**	P	Pn	08 19 30.9	+0.5
SJI	**Sawahan**	**2.73**	**306**	P	Sn	08 20 00.1	-2.2
	150nm,0.7s						
GRJI	**Gresik**	**2.86**	**328**	P	Pn	08 19 31.2	-1.0
GRJI				S	Sn	08 20 06.9	+1.5
PCJI	**Pacitan**	**3.02**	**293**	P	Pn	08 19 35.0	+0.7
PCJI				S	Sn	08 20 10.3	+1.1

IDC ***13*** *08:20:49.5±0.4,31°.33N×103°.94E,h0km,mb4.7/33, mb1 4.8/34,mb1mx4.8/36,mbtmp4.7/34,ML3.8/1,MS4.1/4, Ms1 4.1/4,ms1mx3.5/33,Error ellipse: s-maj=14.8km s-min=9.7km az=52.0*

ISCJB ***13*** *08:20:49.4±0.1,31°.33N±0°.02×103°.97E±0°.02,h10km, mb4.8/107,MS4.3/11,Error ellipse: s-maj=3.1km s-min=2.8km az=2.8*

BJI ***13*** *08:20:51.5,31°.36N×104°.05E,h17km,mB5.0/21,mb4.9/31, ML4.9/23,Ms4.8/49,Ms7 4.5/40*

NEIC ***13*** *08:20:51.3±0.2,31°.37N×103°.96E,h10km,mb4.9/49,Error ellipse: s-maj=4.4km s-min=4.0km az=56.0*

NEIC Felt at Chengdu.

SZGRF ***13*** *08:20:51.7,30°.62N×104°.16E,h18km,mb5.0,Sichuan, China*

MOS ***13*** *08:20:52.9±0.8,31°.37N×103°.99E,h33km,mb5.2/45, MS4.1/7,Error ellipse: s-maj=7.9km s-min=4.8km az=107.7*

DJA ***13*** *08:21:00,31°.19N×103°.83E,h67km,mb5.1/15*

ISC 13 08:20:51.4±0.1,31°.35N±0°.02×103°.93E±0°.02,h10km, (h16km±.9km:pP-P),n286,σ1°.04/293,mb4.8/107,MS4.3/11, 37C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**199**	Pg	**Pg**	**08 21 01.1**	**+0.6**
CD2				Sg	**Sg**	**08 21 09.3**	**+2.7**
CD2				smax			
	comp=N,40μm,0.8s						
LZH	**Lanzhou**	**4.72**	**359**	Pn	**Pn**	**08 22 05.3**	**+2.6**
LZH				Pg	**Pg**	**08 22 18.4**	**-3.5**
LZH				Sn	**Sn**	**08 22 59.8**	**+2.2**
LZH				Sg	**Sg**	**08 23 15.8**	**-7.3**
LZH				smax			
	comp=N,2μm,1.2s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,9μm,7.0s						
LZH				LR	LR		
	comp=Z,11μm,9.9s						
ENH	**Enshi**	**4.90**	**101**	*e*Pn	**Pn**	**08 22 06.6**	**+1.5**
XAN	**Xi'an**	**4.99**	**56**	Pn	**Pn**	**08 22 06.3**	**0.0**
XAN				Sn	**Sn**	**08 23 03.3**	**-0.7**
XAN				Sg	**Sg**	**08 23 25.6**	**-6.0**
XAN				smax			
	comp=N,3μm,0.8s						
XAN				smax			
	comp=E,2μm,0.9s						
XAN				LR	LR		
	comp=N,5μm,11.5s						
XAN				LR	LR		
	comp=E,840nm,10.1s						
XAN				LR	LR		
	comp=Z,850nm,10.5s						
GYA	**Guiyang**	**5.43**	**153**	Pg	**Pn**	**08 22 13.8**	**+1.4**
GYA				Sg	**Sn**	**08 23 15.5**	**+0.5**
GYA				smax			
	comp=N,890nm,0.7s						
GYA				smax			
	comp=E,3μm,0.6s						
GYA				LR	LR		
	comp=N,3μm,6.6s						
GYA				LR	LR		
	comp=E,4μm,7.3s						
GYA				LR	LR		
	comp=Z,2μm,8.2s						
KMI	**Kunming**	**6.29**	**190**	Pn	**Pn**	**08 22 25.0**	**+0.7**
KMI				Pg	**Pg**	**08 22 45.1**	**-6.9**
KMI				Sn	**Sn**	**08 23 42.4**	**+6.1**
KMI				Sg	**Sg**	**08 24 02.9**	**-11**
KMI				smax			
	comp=N,160nm,1.5s						
KMI				smax			
	comp=E,200nm,1.5s						
KMI				LR	LR		
	comp=N,2μm,7.7s						
KMI				LR	LR		
	comp=E,5μm,7.1s						
GTA	**Gaotai**	**8.71**	**338**	*e*P	**Pn**	**08 22 59.8**	**+2.3**
GTA				pP		08 23 09.0	
GTA				sP		08 23 12.9	
GTA				S	**Sn**	**08 24 43.8**	**+8.0**
GTA				sS		08 24 54.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,280nm,6.8s						
GTA				LR	LR		
	comp=N,4μm,11.9s						
GTA				LR	LR		
	comp=E,4μm,11.6s						
GTA				LR	LR		
	comp=Z,4μm,14.3s						
WHN	**Wuhan**	**8.98**	**92**	⇑P	**Pn**	**08 23 02.1**	**+0.9**
WHN				pP		08 23 05.8	
WHN				S	**Sn**	**08 24 36.3**	**-6.1**
WHN				LR	LR		
	comp=N,10μm,5.6s						
WHN				LR	LR		
	comp=E,7μm,4.5s						
WHN				LR	LR		
	comp=Z,4μm,8.3s						
BTO	**Baotou**	**10.47**	**26**	*e*P	**Pn**	**08 23 17.9**	**-3.6**
BTO				S	**Sn**	**08 25 06.8**	**-12**
BTO				LR	LR		
	comp=N,830nm,12.2s						
BTO				LR	LR		
	comp=E,380nm,8.7s						
LSA	**Lhasa**	**11.15**	**265**	P	**Pn**	**08 23 33.3**	**+2.5**
LSA				LR	LR		
	comp=N,1μm,12.5s						
LSA				LR	LR		
	comp=E,2μm,11.0s						
LSA				LR	LR		
	comp=Z,3μm,12.0s						
LSA	**Lhasa**	**11.15**	**265**	*e*P	**Pn**	**08 23 33.4**	**+2.6**
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	**Lhasa**	**11.15**	**265**	*e*Pn	**Pn**	**08 23 33.4**	**+2.6**
	comp=Z,12nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.30**	**31**	*e*P	**Pn**	**08 23 35.3**	**+2.3**
HHC				PP		08 23 44.0	
HHC				S	**Sn**	**08 25 43.6**	**+4.3**
HHC				SS		08 25 57.6	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,2μm,5.6s						
HHC				LR	LR		
	comp=E,1μm,5.3s						
HHC				LR	LR		
	comp=Z,1μm,6.3s						
TIA	**Tai'an**	**11.99**	**63**	*e*P	**Pn**	**08 23 41.8**	**-0.6**
TIA				LR	LR		
	comp=N,490nm,9.0s						
SHL	**Shillong**	**12.06**	**244**	*e*P	**Pn**	**08 23 41.0**	**-2.4**
SHL				*ex*	x	08 27 23.0	
NJ2	**Nanjing**	**12.73**	**83**	*e*P	**Pn**	**08 23 56.4**	**+3.9**
NJ2				pP		08 24 00.4	
NJ2				sP		08 24 02.4	
NJ2				PP		08 24 06.4	
NJ2				S	**Sn**	**08 26 15.4**	**+1.2**
NJ2				sS		08 26 20.8	
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,30nm,3.7s						
NJ2				LR	LR		
	comp=N,3μm,16.5s						
NJ2				LR	LR		
	comp=E,3μm,12.2s						
NJ2				LR	LR		
	comp=Z,4μm,19.7s						
BJT	**Baijiatuau**	**13.17**	**46**	*e*P	**Pn**	**08 23 57.8**	**-0.7**
BJI	**Beijing**	**13.19**	**46**	P	**Pn**	**08 23 58.4**	**-0.3**
BJI				S	**Sn**	**08 26 24.8**	**-0.6**
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
BJI				LR	LR		
	comp=N,2μm,4.8s						
BJI				LR	LR		
	comp=E,1μm,6.6s						
BJI				LR	LR		
	comp=Z,280nm,16.6s						
CHTO	**Chiang Mai**	**13.27**	**201**	*e*P	**Pn**	**08 24 02.2**	**+2.2**
QIZ	**Qiongzhong**	**13.38**	**155**	P	**Pn**	**08 24 02.8**	**+1.4**
QIZ				pP		08 24 05.3	
QIZ				sP		08 24 10.5	
QIZ				S	**Sn**	**08 26 31.0**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,26nm,1.5s						
QIZ				LR	LR		
	comp=N,1μm,8.2s						
QIZ				LR	LR		
	comp=Z,2μm,10.4s						
CM31	**Chiang Mai Arr**	**13.61**	**201**	*e*Pn	**Pn**	**08 24 06.7**	**+2.2**
	comp=Z,15nm,0.5s						
QZH	**Quanzhou**	**14.41**	**113**	*e*P	**Pn**	**08 24 14.1**	**-1.4**
QZH				S	**Sn**	**08 26 55.3**	**-0.2**
QZH				LR	LR		
	comp=N,3μm,8.9s						
QZH				LR	LR		
	comp=E,4μm,10.5s						
QZH				LR	LR		
	comp=Z,7μm,9.3s						
SSE	**Sheshan**	**14.77**	**87**	P	**Pn**	**08 24 18.8**	**-1.5**
SSE				S	**Sn**	**08 27 02.6**	**-1.5**
SSE				pmax	pmax		
	comp=Z,37nm,0.8s						
SSE				pmax	pmax		
	comp=Z,350nm,8.5s						
SSE				LR	LR		
	comp=N,4μm,12.5s						
SSE				LR	LR		
	comp=E,1μm,12.5s						
SSE				LR	LR		
	comp=Z,2μm,10.2s						
GUN	**Gumba**	**16.07**	**262**	*e*P	**Pn**	**08 24 36.4**	**-1.1**
	comp=Z,181nm,0.9s						
PKI	**Pulchoki**	**16.57**	**262**	*e*P	**Pn**	**08 24 42.6**	**-1.2**
	comp=Z,126nm,0.9s						
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**08 24 44.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=187,slow=13,SNR=29						
SONM				LR	LR	08 31 44.1	
	comp=Z,808nm,18.1s,baz=247,slow=39						
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**08 24 44.3**	**+0.6**
SONM				LR	LR	08 31 44.1	
PKIN	**Phulchoki**	**16.57**	**262**	*e*P	**Pn**	**08 24 42.6**	**-1.4**
KKN	**Kakani**	**16.61**	**262**	*e*P	**Pn**	**08 24 42.9**	**-1.5**
	comp=Z,144nm,0.9s						
DMN	**Daman**	**16.81**	**262**	*e*P	**Pn**	**08 24 45.4**	**-1.6**
	comp=Z,150nm,0.9s						
WMQ	**Urumqi**	**17.86**	**319**	P	**Pn**	**08 25 01.4**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,290nm,3.6s						
WMQ				LR	LR		
	comp=N,700nm,14.0s						
WMQ				LR	LR		
	comp=E,560nm,18.0s						
WMQ				LR	LR		
	comp=Z,610nm,15.0s						
SNY	**Shenyang**	**18.89**	**51**	⇓P	**Pn**	**08 25 14.9**	**+2.4**
SNY				S	**Sn**	**08 28 35.3**	**-8.5**
SNY				pmax	pmax		
	comp=Z,11nm,0.8s						
SNY				pmax	pmax		
	comp=Z,470nm,6.1s						
SNY				LR	LR		
	comp=N,930nm,22.1s						
SNY				LR	LR		
	comp=Z,560nm,16.8s						
ZAK	**Zakamensk**	**19.02**	**359**	*e*P	**Pn**	**08 25 14.9**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
TLY	**Talaya**	**20.32**	**359**	*e*P	**P**	**08 25 28.6**	**+1.2**
TLY				pmax	pmax		
	comp=Z,15nm,0.8s						
TLY				MLR	MLR		
	comp=Z,702nm,16.0s,MS4.1						
TLY	**Talaya**	**20.32**	**359**	*e*P	**P**	**08 25 28.4**	**+1.0**
	comp=Z,14nm,0.8s						
MOY	**Mondy**	**20.41**	**355**	*e*P	**P**	**08 25 30.2**	**+1.7**
MOY				pmax	pmax		
	comp=Z,44nm,2.4s						
KSRS	**Korea Array**	**20.68**	**66**	P	**P**	**08 25 32.0**	**+0.5**
	comp=Z,29nm,0.6s,baz=256,slow=9.8,SNR=43						
KSRS				LR	LR	08 33 25.7	
	comp=Z,300nm,18.5s,MS3.7,baz=240,slow=37						
KSRS	**Korea Array**	**20.68**	**66**	P	**P**	**08 25 32.1**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,29nm,0.6s						
KSRS				MLR	MLR		
	comp=Z,300nm,18.5s,MS3.7						
IRK	**Irkutsk**	**20.88**	**1**	⇑*i*P	**P**	**08 25 35.3**	**+1.8**
IRK				pmax	pmax		
	comp=Z,156nm,1.2s						
JOSI	**Joshimath**	**20.91**	**274**	*e*P	**P**	**08 25 35.0**	**+0.9**
CN2	**Changchun**	**21.03**	**48**	⇑P	**P**	**08 25 36.3**	**+1.1**
CN2				*e*pP		08 25 43.4	
CN2				*e*S	**S**	**08 29 24.5**	**-4.8**
CN2				pmax	pmax		
	comp=Z,170nm,0.7s,mb5.5						
CN2				pmax	pmax		
	comp=Z,500nm,8.0s						
CN2				LR	LR		
	comp=N,500nm,12.0s,MS4.4						
CN2				LR	LR		
	comp=E,800nm,12.0s,MS4.4						
CN2				LR	LR		
	comp=Z,700nm,12.0s,MS4.3						
HIA	**Hailar**	**21.50**	**29**	*e*P	**P**	**08 25 40.9**	**+0.7**
HIA				pmax	pmax		
	comp=Z,53nm,1.0s						
HIA	**Hailar**	**21.50**	**29**	*e*P	**P**	**08 25 40.9**	**+0.7**
	comp=Z,53nm,1.0s,mb4.9						
CIT	**Chita**	**21.83**	**16**	*e*P	**P**	**08 25 43.6**	**-0.2**
DDI	**Dehra Dun**	**22.23**	**274**	*ex*	x	08 25 46.5	
MK31	**Makanchi Array**	**22.70**	**319**	*e*P	**P**	**08 25 54.0**	**+0.9**
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**08 25 53.8**	**+0.8**
	comp=Z,13nm,0.7s,mb4.5,baz=124,slow=10,SNR=86						
SMLA	**Simla**	**22.87**	**276**	*e*P	**P**	**08 25 53.0**	**-2.1**
AGRA	**Agra**	**23.02**	**266**	*e*P	**P**	**08 25 54.8**	**-1.8**
BISR	**Bishrakh**	**23.10**	**270**	*e*P	**P**	**08 25 56.7**	**-0.8**
NDI	**New Delhi**	**23.27**	**270**	*e*P	**P**	**08 25 58.0**	**-1.3**
KKR	**Kurukshetra**	**23.35**	**274**	*e*P	**P**	**08 25 59.1**	**-1.0**
AYAN	**Aya Nagar**	**23.39**	**270**	*e*P	**P**	**08 25 59.2**	**-1.4**
AYAN				AMb	AMB	08 26 02.2	
	comp=Z,49nm,1.1s,mb4.8						
BHK	**Bhakra**	**23.47**	**277**	*ex*	**P**	**08 26 04.2**	**+2.8**
SONA	**Sohna**	**23.48**	**269**	*e*P	**P**	**08 25 59.8**	**-1.8**
SONA				AMb	AMB	08 26 02.2	
	comp=Z,32nm,0.7s,mb4.9						
RTK	**Rohtak**	**23.88**	**272**	*ex*	x	08 25 55.8	
MDJ	**Mudanjiang**	**24.06**	**49**	P	**P**	**08 26 07.4**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,91nm,3.4s						
MDJ	**Mudanjiang**	**24.06**	**49**	*e*P	**P**	**08 26 07.5**	**+0.8**
	comp=Z,71nm,1.1s,mb5.0						
NGP	**Nagpur**	**24.47**	**251**	*ex*	**P**	**08 26 06.2**	**-4.5**
ULHL	**Ulahol**	**24.59**	**304**	P	**P**	**08 26 13.4**	**+1.8**
	SNR=23						
KHET	**Khetri**	**24.62**	**270**	*e*P	**P**	**08 26 11.6**	**-0.4**
KHET				AMb	AMB	08 26 24.1	
	comp=Z,37nm,1.5s,mb4.7						
TKM2	**Tokmak 2**	**25.25**	**305**	P	**P**	**08 26 19.4**	**+1.8**
	SNR=11						
KZA	**Kyzart**	**25.25**	**303**	P	**P**	**08 26 20.1**	**+2.4**
	SNR=49						
KBK	**Karagaybulak**	**25.63**	**304**	P	**P**	**08 26 23.3**	**+2.3**
	SNR=7.2						
UCH	**Uchtor**	**25.82**	**303**	P	**P**	**08 26 25.0**	**+2.3**
	SNR=18						
AAK	**Ala-Archa**	**25.94**	**304**	P	**P**	**08 26 25.3**	**+1.5**
	comp=Z,2.1nm,0.4s,mb4.0,baz=99,slow=6.7,SNR=11						
AAK	**Ala-Archa**	**25.94**	**304**	*ce*P	**P**	**08 26 25.2**	**+1.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
AAK	**Ala-Archa**	**25.94**	**304**	*e*P	**P**	**08 26 25.4**	**+1.5**
	comp=Z,14nm,0.9s,mb4.5						
AJM	**Ajmer**	**26.05**	**267**	*e*P	**P**	**08 26 24.3**	**-0.8**
AJM				AMb	AMB	08 26 35.4	
	comp=Z,31nm,1.4s,mb4.7						
AML	**Almayashu**	**26.39**	**303**	P	**P**	**08 26 30.0**	**+2.1**
	SNR=13						
ZAA0	**Zalesovo Array**	**26.44**	**334**	*e*P	**P**	**08 26 28.2**	**0.0**
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**08 26 28.6**	**+0.4**
	comp=Z,30nm,0.7s,mb4.9,baz=133,slow=9.2,SNR=38						
ZALV				LR	LR	08 37 48.3	
	comp=Z,355nm,19.2s,MS3.9,baz=302,slow=38						
HYB	**Hyderabad**	**26.87**	**245**	*i* P	**P**	**08 26 31.0**	**-1.5**
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**08 26 33.3**	**+0.3**
	comp=Z,23nm,0.8s,mb4.7,baz=130,slow=8.9,SNR=57						
KURK				PcP	PcP	08 29 53.8	-0.7
	comp=Z,2.9nm,0.6s,baz=117,slow=2.0,SNR=5.2						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**08 26 33.3**	**+0.3**
KURK						08 29 53.8	
KURK				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
KURK	**Kurchatov**	**26.96**	**323**	*e*P	**P**	**08 26 32.7**	**-0.2**
	comp=Z,28nm,1.0s,mb4.8						
BOD	**Bodaibo**	**27.36**	**12**	*e*P	**P**	**08 26 36.4**	**-0.1**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
KLR	**Kul'dur**	**27.50**	**41**	*e*P	**P**	**08 26 33.8**	**-4.0**
NVS	**Novosibirsk**	**27.72**	**334**	*e*P	**P**	**08 26 38.1**	**-1.6**
NVS				pmax	pmax		
	comp=Z,18nm,1.6s,mb4.5						
NVS				pmax	pmax		
	comp=N,18nm,1.7s						
NVS				pmax	pmax		
	comp=E,14nm,1.6s						
MAT	**Matsushiro**	**28.80**	**70**	P	**P**	**08 26 48.8**	**-0.8**
MJAR	**Matsushiro Arr**	**28.81**	**70**	P	**P**	**08 26 49.1**	**-0.5**
	comp=E,2.8nm,0.7s,mb4.1,baz=276,slow=11,SNR=6.2						
HABR	**Khabarovsk**	**29.09**	**45**	*e*P	**P**	**08 26 49.3**	**-2.7**
HABR				*e*SS	SS	08 33 06.1	-41
HABR				pmax	pmax		
	comp=N,19nm,1.7s						
HABR				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
HABR				pmax	pmax		
	comp=E,24nm,1.4s						
HABR				MLR	MLR		
	comp=Z,167nm,15.0s,MS3.8						
KBL	**Kabul**	**29.36**	**286**	*e*P	**P**	**08 26 56.4**	**+1.8**
KBL				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
KBL	**Kabul**	**29.36**	**286**	*e*P	**P**	**08 26 56.4**	**+1.7**
	comp=Z,32nm,1.3s,mb4.9						
BVAR	**Borovoye Array**	**32.51**	**322**	P	**P**	**08 27 22.7**	**+0.6**
	comp=Z,6.2nm,0.7s,mb4.7,baz=115,slow=8.8,SNR=31						
BVAR				PcP	PcP	08 30 08.2	-0.6
	comp=Z,4.2nm,0.7s,baz=142,slow=3.4,SNR=9.1						
BVAR				LR	LR	08 41 23.9	
	comp=Z,398nm,19.7s,MS4.1,baz=206,slow=38						
BVAR	**Borovoye Array**	**32.51**	**322**	P	**P**	**08 27 22.7**	**+0.6**
BVAR						08 30 08.2	
BRVK	**Borovoye**	**32.58**	**322**	*ce*P	**P**	**08 27 23.6**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
BRVK	**Borovoye**	**32.58**	**322**	*e*P	**P**	**08 27 23.4**	**+0.7**
	comp=Z,11nm,0.7s,mb4.9						
ASAJ	**Asahikawa**	**32.83**	**56**	P	**P**	**08 27 23.9**	**-1.1**
	comp=Z,6.5nm,0.9s,mb4.6,baz=286,slow=18,SNR=4.7						
ASAJ	**Asahikawa**	**32.83**	**56**	P	**P**	**08 27 23.9**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**33.51**	**51**	*e*P	**P**	**08 27 31.2**	**+0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	**33.51**	**51**	*e*P	**P**	**08 27 30.8**	**-0.2**
	comp=Z,11nm,0.6s,mb5.0						
YAK	**Yakutsk**	**34.93**	**21**	*e*P	**P**	**08 27 42.0**	**-1.0**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,10.0nm,1.3s						
AKTK	**Aktyubinsk**	**38.86**	**313**	P	**P**	**08 28 16.7**	**0.0**
AKTO	**Aktyubinsk**	**38.86**	**313**	P	**P**	**08 28 16.7**	**0.0**
	comp=N,3.6nm,0.5s,mb4.3,baz=97,slow=7.9,SNR=15						
KAPI	**Kappang**	**39.19**	**155**	P	**P**	**08 28 18.5**	**-1.2**
	comp=N,24nm,1.0s,mb4.9,baz=354,slow=18,SNR=7.1						
KAPI	**Kappang**	**39.19**	**155**	P	**P**	**08 28 18.5**	**-1.2**
SVE	**Sverdlovsk**	**39.21**	**323**	⇑*e*P	**P**	**08 28 20.8**	**+1.3**
SVE				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.1						
ARU	**Arti**	**40.15**	**322**	*c i*P	**P**	**08 28 27.6**	**+0.3**
ARU				S	**S**	**08 34 33.0**	**-0.6**
ARU				SS	SS	08 37 25.2	-5.9
ARU				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.2						
ARU	**Arti**	**40.15**	**322**	*e*P	**P**	**08 28 27.1**	**-0.2**
	comp=Z,38nm,0.9s,mb5.1						
SOKR	**Solikamsk**	**42.11**	**326**	*c i*P	**P**	**08 28 44.1**	**+0.7**
SOKR				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.2						
TIXI	**Tiksi**	**42.54**	**11**	*c i*P	**P**	**08 28 45.6**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,616nm,18.0s,MS4.5						
TIXI	**Tiksi**	**42.54**	**11**	*e*P	**P**	**08 28 45.7**	**-1.1**
	comp=Z,8.1nm,0.7s,mb4.6						
SEY	**Seymchan**	**43.95**	**30**	*ce*P	**P**	**08 28 58.1**	**-0.1**
PETK	**Petropavlovsk-**	**44.12**	**44**	P	**P**	**08 28 59.4**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.3,baz=212,slow=5.3,SNR=4.6						
KBD	**Kabd**	**48.17**	**283**	*e*P	**P**	**08 29 32.5**	**+0.5**
KBD				AMb	AMB	08 29 33.0	
	comp=Z,24nm,1.0s,mb5.2						
MIB	**Mutribah**	**48.28**	**284**	*e*P	**P**	**08 29 32.7**	**-0.2**
MIB				AMb	AMB	08 29 34.4	
	comp=Z,81nm,1.0s,mb5.7						
ZEI	**Tsey**	**48.32**	**301**	*e*P	**P**	**08 29 32.2**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
RDF	**Al-Radifah**	**48.37**	**282**	*e*P	**P**	**08 29 33.8**	**+0.2**
RDF				AMb	AMB	08 29 35.0	
	comp=Z,104nm,0.9s,mb5.9						
KIV	**Kislovodsk**	**49.06**	**303**	*e*P	**P**	**08 29 39.4**	**+0.8**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
KIV				MLR	MLR		
	comp=Z,227nm,17.0s,MS4.2						
VRHR	**Novokhopersk**	**49.27**	**313**	*e*P	**P**	**08 29 39.6**	**-0.5**
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.4						
VRHR				pmax	pmax		
	comp=N,20nm,0.7s						
VRHR				pmax	pmax		
	comp=E,30nm,1.0s						
KLMR	**Klimovskoe**	**50.78**	**325**	*e*P	**P**	**08 29 50.2**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.4						
VSR	**Storozhevoye**	**50.

VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,20nm,0.7s
BILL Bilibino 51.02 25 *eP* **P 08 29 52.5 -0.6**
BILL pmax pmax
comp=Z,16nm,1.0s,mb4.9
BILL Bilibino 51.02 25 *eP* **P 08 29 52.2 -1.0**
comp=Z,6.3nm,0.6s,mb4.7
MOS Moscow 51.58 319 *eP* **P 08 29 53.3 -4.3**
MOS *e* 08 31 58.4
KAKA Kakadu 51.65 144 *eP* **P 08 29 55.1 -3.4**
comp=Z,8.9nm,0.7s,mb4.8
OBN Obninsk 52.20 318 *eP* **P 08 30 03.1 +0.9**
OBN *e* 08 31 13.3
OBN *e* 08 32 02.6
OBN pmax pmax
comp=Z,37nm,1.2s,mb5.2
MALT Malatya 53.23 297 *eP* **P 08 30 11.7 +1.7**
MALT pmax pmax
comp=Z,11nm,1.4s,mb4.6
MALT Malatya 53.23 297 *eP* **P 08 30 11.7 +1.6**
comp=Z,11nm,1.4s,mb4.6
FITZ Fitzroy Crossi 53.41 154 *eP* **P 08 30 10.8 -0.6**
comp=Z,15nm,1.0s,mb4.9
FITZ Fitzroy Crossi 53.41 154 P **P 08 30 11.0 -0.4**
comp=Z,8.5nm,0.9s,mb4.7,baz=355,slow=4.7,SNR=15
FITZ Fitzroy Crossi 53.41 154 *eP* **P 08 30 10.6 -0.8**
comp=Z,9.6nm,0.9s,mb4.7
APA Apatity 54.02 333⇑*iP* **P 08 30 16.0 +0.6**
APA *i* 08 30 21.0
APA MLR MLR
comp=Z,2μm,13.0s,MS5.2
MBWA Marble Bar 54.36 162 *eP* **P 08 30 17.8 -0.6**
comp=Z,7.5nm,0.8s,mb4.7
JOF Joensuu 54.74 328 *eP* **P 08 30 20.4 -0.3**
JOF pmax pmax
comp=Z,23nm,0.7s,mb5.3
JOF Joensuu 54.74 328 *ep* **P 08 30 20.4 -0.3**
comp=Z,23nm,0.7s,mb5.3
SIM Simferopol' 54.96 306 *eP* **P 08 30 23.8 +1.2**
SIM pmax pmax
comp=Z,11nm,0.6s,mb5.1
KEV Kevo 56.45 336 *eP* **P 08 30 32.7 -0.2**
KEV pmax pmax
comp=Z,37nm,0.8s,mb5.5
KEV Kevo 56.45 336 *ep* **P 08 30 32.7 -0.2**
comp=Z,37nm,0.8s,mb5.5
BR131 Keskin Array S 56.49 299 *eP* **P 08 30 33.8 +0.1**
comp=Z,3.3nm,0.8s,mb4.4
BRTR Keskin Array B 56.49 299 P **P 08 30 33.8 +0.1**
comp=Z,3.0nm,0.8s,mb4.4,baz=94,slow=6.3,SNR=16
BRTR Keskin Array B 56.49 299 *ceP* **P 08 30 33.7 0.0**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 56.98 336 P **P 08 30 36.4 -0.3**
comp=Z,15nm,0.8s,mb5.1,baz=74,slow=9.1,SNR=21
ARE0 ARCESS Array S 56.98 336 *eP* **P 08 30 36.3 -0.3**
KAF Kangasniemi 57.10 327 *eP* **P 08 30 36.6 -1.1**
KAF pmax pmax
comp=Z,21nm,0.9s,mb5.2
KAF Kangasniemi 57.10 327 *ep* **P 08 30 36.6 -1.1**
comp=Z,21nm,0.9s,mb5.2
AKASG Malin Array Be 57.11 313 P **P 08 30 37.1 -0.8**
comp=Z,4.2nm,0.7s,mb4.6,baz=72,slow=6.0,SNR=12
AKASG Malin Array Be 57.11 313 *ceP* **P 08 30 37.0 -0.9**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 57.11 313 *eP* **P 08 30 37.1 -0.8**
FINES FINESS Array B 57.28 326 P **P 08 30 38.6 -0.3**
comp=Z,18nm,0.8s,mb5.2,baz=90,slow=9.5,SNR=35
NACGM Naroch 57.83 318 *e* **P 08 30 40.0 -2.9**
COEN Coen 58.72 134 *eP* **P 08 30 49.6 0.0**
comp=Z,143nm,0.9s,mb6.0
WRAB Tennant Creek 58.76 146 *eP* **P 08 30 49.9 +0.2**
WRAB pmax pmax
comp=Z,29nm,0.8s,mb5.4
WRAB Tennant Creek 58.76 146 *eP* **P 08 30 49.9 +0.2**
comp=Z,29nm,0.8s,mb5.4
WRA Warramunga Arr 58.76 146 P **P 08 30 49.8 +0.1**
comp=Z,16nm,0.8s,mb5.1,baz=337,slow=7.7
SPB4 Spitsbergen Ar 59.07 346 *eP* **P 08 30 51.0 -0.2**
KWP Kalwaria Pacla 61.43 313 *eP* **P 08 31 08.1 +0.3**
ASAR Alice Springs 61.78 149 P **P 08 31 10.5 +0.2**
comp=Z,5.9nm,0.7s,mb4.8,baz=329,slow=6.2,SNR=67
KOLS Kolonicke sedl 61.90 312 *eP* **P 08 31 11.8 +0.8**
KOLS pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
KOLS Kolonicke sedl 61.90 312 *eP* **P 08 31 11.8 +0.8**
comp=Z,4.9nm,1.1s,mb4.5
KOLS Kolonicke sedl 61.90 312 *eP* **P 08 31 11.8 +0.8**
STHS Stebnicka Huta 62.41 313 *eP* **P 08 31 14.2 -0.2**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
STHS Stebnicka Huta 62.41 313 *eP* **P 08 31 14.2 -0.2**
comp=Z,2.9nm,0.9s,mb4.4
STHS Stebnicka Huta 62.41 313 *eP* **P 08 31 14.1 -0.3**
OJC Ojcow 63.07 314 *eP* **P 08 31 19.1 +0.3**
OJC *ep*P pP 08 31 23.2 +1.2
VYHS Vyhne 64.20 313 *eP* **P 08 31 26.5 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
VYHS Vyhne 64.20 313 *eP* **P 08 31 26.5 +0.2**
comp=Z,3.6nm,1.0s,mb4.4
VYHS Vyhne 64.20 313 *eP* **P 08 31 26.5 +0.2**
NB2 NORSAR Subarra 64.37 327 P **P 08 31 26.0 -1.2**
comp=Z,7.5nm,0.6s,mb4.9,baz=72,slow=6.5
NOA NORSAR Array B 64.37 327 P **P 08 31 26.0 -1.2**
comp=Z,7.5nm,0.7s,mb4.8,baz=73,slow=6.5,SNR=24
NOA NORSAR Array B 64.37 327 P **P 08 31 26.0 -1.2**
NAO01 NORSAR Array S 64.59 327 *eP* **P 08 31 26.8 -1.8**
comp=Z,1.9nm,0.6s,mb4.3
MORC Moravsky Berou 64.59 314 *eP* **P 08 31 29.3 +0.5**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MORC Moravsky Berou 64.59 314 *eP* **P 08 31 29.3 +0.5**
comp=Z,7.4nm,0.8s,mb4.8
NWAO Narrogin (SRO) 65.16 168 P **P 08 31 32.5 0.0**
comp=Z,23nm,0.9s,mb5.2,baz=66,slow=6.5,SNR=4.3
CTA Charters Tower 65.30 136 *eP* **P 08 31 33.9 +0.2**
comp=Z,7.6nm,0.9s,mb4.7
CTA Charters Tower 65.30 136 P **P 08 31 34.0 +0.2**
comp=Z,7.6nm,0.8s,mb4.8,baz=300,slow=8.1,SNR=6.1
FORT Forrest 65.89 157 *eP* **P 08 31 37.6 +0.3**
comp=Z,14nm,0.7s,mb5.1
CSNA Conrad Observa 66.27 313⇑*iP* **P 08 31 40.1 +0.4**
comp=Z,5.7nm,0.9s,mb4.6
BRG Berggiesshubel 66.38 316 *eP* **P 08 31 40.3 0.0**
comp=Z,7.5nm,0.7s,mb4.8
BRG *e* 08 31 46.6
comp=Z,2.8nm,0.6s
BRG Berggiesshubel 66.38 316 *eP* **P 08 31 40.3 -0.1**
BRG *e* 08 31 46.6
BRG pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
DAG Danmarks Havn 66.57 348 *eP* **P 08 31 40.0 -1.2**
DAG Danmarks Havn 66.57 348 *iP* **P 08 31 40.0 -1.2**
CLL Collm 66.78 317⇑*iP* **P 08 31 42.4 -0.5**
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.8
CLL MLR MLR
comp=Z,300nm,16.9s,MS4.6
CLL Collm 66.78 317⇑*iP* **P 08 31 42.4 -0.5**
comp=Z,9.0nm,1.1s,mb4.7
CLL *i* pP pP 08 31 46.8 +0.7
CLL LR LR
comp=Z,300nm,16.9s,MS4.6
CLL Collm 66.78 317⇑*iP* **P 08 31 42.4 -0.5**
comp=Z,9.0nm,1.1s,mb4.7
CLL *i* pP pP 08 31 46.8 +0.7
comp=Z,20nm,1.6s
TTA Tatalina 66.92 29 *eP* **P 08 31 43.5 -0.1**
MUD Monsted U'grnd 66.97 323 *eP* **P 08 31 44.9 +0.9**
MUD pmax pmax
comp=Z,13nm,0.8s,mb5.0
MUD Monsted U'grnd 66.97 323 *iP* **P 08 31 44.9 +0.9**
comp=Z,13nm,0.8s,mb5.0
GROS Grobnik 67.03 311 *iP* **P 08 31 44.2 -0.4**
PERS Pernice 67.21 312 *eP* **P 08 31 45.5 -0.3**
SOKA Soboth 67.25 312⇑*iP* **P 08 31 45.9 -0.1**
comp=Z,6.5nm,0.8s,mb4.7
GERES GERESS Array B 67.27 314 P **P 08 31 46.1 +0.1**
comp=Z,3.0nm,0.7s,mb4.4,baz=91,slow=6.7,SNR=9.0
CRES Cresnjev 67.29 311 *eP* **P 08 31 46.3 0.0**

PDKS Podkum 67.50 311 *iP* **P 08 31 47.4 -0.2**
MOX Moxa 67.84 317 *eP* **P 08 31 49.3 -0.3**
CADS Cadrg 68.25 312 *eP* **P 08 31 51.3 -1.0**
GRA1 Grafenberg Arr 68.44 316 *eP* **P 08 31 53.7 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
GRA1 *ep*P pP 08 31 58.7 +2.0
GRF Grafenberg Arr 68.44 316 *eP* **P 08 31 53.7 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
GRF *ep*P pP 08 31 58.7 +2.0
GRF Grafenberg Arr 68.44 316 *eP* **P 08 31 53.7 +0.2**
GRF *e**PP pP 08 31 58.7 +2.0
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.44 316 *eP* **P 08 31 53.7 +0.2**
GRF *e**PP pP 08 31 58.7 +2.0
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
COLA College 69.27 26 *eP* **P 08 31 58.1 -0.2**
COLA pmax pmax
comp=Z,34nm,0.8s,mb5.3
COLA College 69.27 26 *eP* **P 08 31 58.1 -0.2**
comp=Z,34nm,0.8s,mb5.3
RSO Redoubt South 69.39 31 *eP* **P 08 31 59.4 +0.3**
FETA Feichten 69.83 313⇑*iP* **P 08 32 01.6 -0.5**
comp=Z,9.9nm,1.0s,mb4.7
PMR Palmer 70.40 29 *eP* **P 08 32 04.3 -1.0**
PMR pmax pmax
comp=Z,31nm,0.9s,mb5.2
PMR Palmer 70.40 29 *eP* **P 08 32 04.3 -1.0**
comp=Z,31nm,0.9s,mb5.2
OHAK Old Harbor 70.64 34 *eP* **P 08 32 06.8 -0.1**
comp=Z,45nm,0.8s,mb5.5
KDAK Kodiak Island 70.71 33 P **P 08 32 07.0 -0.3**
comp=Z,23nm,0.7s,mb5.2
KDAK Kodiak Island 70.71 33 *ceP* **P 08 32 06.8 -0.5**
KDAK Kodiak Island 70.71 33 P **P 08 32 07.0 -0.3**
KMBO Kilima Mbogo 70.82 256 P **P 08 32 08.9 +0.2**
comp=Z,1.0nm,0.3s,mb4.2,baz=40,slow=11,SNR=8.7
KMBO Kilima Mbogo 70.82 256 *eP* **P 08 32 08.8 +0.1**
KMBO pmax pmax
comp=Z,20nm,1.8s
KMBO Kilima Mbogo 70.82 256 *eP* **P 08 32 08.8 +0.1**
comp=Z,20nm,1.8s,mb4.7
CDF Champ du Feu 71.34 316⇑*iP* **P 08 32 10.8 -0.5**
comp=Z,16nm,0.8s,mb4.7
CDF Champ du Feu 71.34 316⇑*iP* **P 08 32 10.8 -0.5**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CDF Champ du Feu 71.34 316⇑*iP* **P 08 32 10.8 -0.5**
comp=Z,7.8nm,0.8s,mb4.7
SCO Scoresbysund 71.39 343 *iP* **P 08 32 11.1 -0.1**
SCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SCO Scoresbysund 71.39 343 *iP* **P 08 32 11.1 -0.1**
comp=Z,4.2nm,0.8s,mb4.4
WLF Walferdange 71.44 317 P **P 08 32 12.5 +0.6**
comp=Z,18nm,1.2s,mb4.9
WLF Walferdange 71.44 317 *eP* **P 08 32 12.2 +0.3**
WLF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
WLF Walferdange 71.44 317 *eP* **P 08 32 12.2 +0.3**
comp=Z,8.7nm,0.6s,mb4.9
BCLA Clavier 71.59 318 P **P 08 32 12.7 0.0**
comp=Z,9.7nm,2.0s,mb4.4
EGAK Eagle 71.74 24 *eP* **P 08 32 13.0 -0.4**
comp=Z,93nm,2.6s,mb5.3
MENT Mentasta 71.84 26 *eP* **P 08 32 13.5 -0.5**
INK Inuvik 71.97 19 *eP* **P 08 32 14.2 -0.5**
INK pmax pmax
comp=Z,20nm,0.8s
INK Inuvik 71.97 19 *eP* **P 08 32 14.2 -0.6**
comp=Z,20nm,0.8s,mb5.1
DOU Dourbes 72.14 318 P **P 08 32 15.5 -0.6**
EIDS Eidsvold 72.19 136 *eP* **P 08 32 16.9 +0.3**
comp=Z,17nm,0.9s,mb5.0
STKA Stephens Creek 72.29 147⇑*iP* **P 08 32 16.8 -0.3**
comp=Z,6.9nm,0.8s,mb4.6
STKA Stephens Creek 72.29 147 P **P 08 32 16.9 -0.2**
comp=Z,7.5nm,0.7s,mb4.7,baz=328,slow=6.0,SNR=24
STKA Stephens Creek 72.29 147 *eP* **P 08 32 17.0 -0.1**
comp=Z,2.0nm,0.8s,mb4.1
DAWY Dawson 72.78 24 *eP* **P 08 32 19.2 -0.4**
LPG La Plagne 72.97 313⇑*iP* **P 08 32 21.6 +0.5**
comp=Z,42nm,0.8s,mb5.1
LPG La Plagne 72.97 313⇑*iP* **P 08 32 21.6 +0.5**
LPG pmax pmax
comp=Z,21nm,0.8s,mb5.1
LPG La Plagne 72.97 313⇑*iP* **P 08 32 21.6 +0.5**
comp=Z,21nm,0.8s,mb5.1
SUMG Summit 73.17 349 *eP* **P 08 32 22.0 +0.1**
comp=Z,34nm,1.3s,mb5.1
BNI Bardonecchia 73.23 313 *eP* **P 08 32 22.4 -0.2**
BNI pmax pmax
comp=Z,15nm,1.1s,mb4.8
BNI Bardonecchia 73.23 313 *eP* **P 08 32 22.4 -0.2**
comp=Z,15nm,1.1s,mb4.8
RES Resolute Bay 73.51 5 *eP* **P 08 32 23.8 0.0**
RES pmax pmax
comp=Z,12nm,1.0s,mb4.8
RES Resolute Bay 73.51 5 *eP* **P 08 32 23.8 0.0**
comp=Z,12nm,1.0s,mb4.8
OPO Ambohidratompo 73.67 236 P **P 08 32 25.1 -0.4**
comp=Z,3.5nm,0.8s,mb4.3,baz=78,slow=5.8,SNR=6.3
SMF Signal de Mont 74.22 315⇑*iP* **P 08 32 27.8 -0.6**
comp=Z,30nm,1.0s,mb4.9
SMF Signal de Mont 74.22 315⇑*iP* **P 08 32 27.8 -0.6**
SMF pmax pmax
comp=Z,15nm,1.0s,mb4.9
SMF Signal de Mont 74.22 315⇑*iP* **P 08 32 27.8 -0.6**
comp=Z,15nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.38 315⇑*iP* **P 08 32 34.8 -0.3**
comp=Z,30nm,1.2s,mb4.8
TCF Toulx Ste Croi 75.38 315⇑*iP* **P 08 32 34.8 -0.3**
TCF pmax pmax
comp=Z,15nm,1.2s,mb4.8
TCF Toulx Ste Croi 75.38 315⇑*iP* **P 08 32 34.8 -0.3**
comp=Z,15nm,1.2s,mb4.8
HYT Haines Junctio 75.47 26 *eP* **P 08 32 36.6 +1.2**
CAF Calviac 76.15 314⇑*iP* **P 08 32 39.7 +0.1**
comp=Z,17nm,1.0s,mb4.6
CAF Calviac 76.15 314⇑*iP* **P 08 32 39.7 +0.1**
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CAF Calviac 76.15 314⇑*iP* **P 08 32 39.7 +0.1**
comp=Z,8.5nm,1.0s,mb4.6
ARMA Armidale 76.31 139 *eP* **P 08 32 41.8 +1.3**
SKAG Skagway 77.19 27 *eP* **P 08 32 45.6 +0.4**
comp=Z,23nm,0.8s,mb5.2
TOO Toolangi 78.79 147 *eP* **P 08 32 53.1 -1.1**
CNB Canberra Magne 78.87 144 *eP* **P 08 32 55.3 +0.6**
SFJD Kangerlussuaq 80.07 350 *iP* **P 08 32 59.5 -1.4**
SFJD pmax pmax
comp=Z,24nm,0.8s,mb5.2
SFJD Kangerlussuaq 80.07 350 *eP* **P 08 33 00.1 -0.9**
comp=Z,18nm,0.6s,mb5.2
SFJD Kangerlussuaq 80.07 350 *iP* **P 08 32 59.5 -1.4**
comp=Z,24nm,0.8s,mb5.2
YKA Yellowknife Ar 81.50 17 P **P 08 33 08.3 -0.3**
comp=Z,5.8nm,0.6s,mb4.7,baz=330,slow=5.3,SNR=152
YKA PKKPbc PKKPbc 08 51 39.3 -3.3
comp=Z,0.3nm,0.7s,baz=164,slow=1.9,SNR=7.1
YKA Yellowknife Ar 81.50 17 P **P 08 33 08.3 -0.3**
YKA PKKPbc PKKPbc 08 51 39.3 -3.3
ESDC Sonseca Array 82.75 312 P **P 08 33 14.8 -0.8**
comp=Z,0.3nm,0.3s,mb3.8,baz=42,slow=6.1,SNR=4.1
LSZ Lusaka 86.11 250 P **P 08 33 32.6 -0.3**
comp=Z,6.0nm,0.8s,mb4.9,baz=52,slow=4.9,SNR=12
LSZ Lusaka 86.11 250 *eP* **P 08 33 32.6 -0.4**
LSZ pmax pmax
comp=Z,33nm,1.4s,mb5.4
LSZ Lusaka 86.11 250 *eP* **P 08 33 32.6 -0.4**
comp=Z,33nm,1.4s,mb5.4
FCC Fort Churchill 88.98 9 *eP* **P 08 33 45.5 -0.6**
FCC pmax pmax
comp=Z,1.0nm,1.5s,mb3.9
FCC Fort Churchill 88.98 9 *eP* **P 08 33 45.5 -0.6**
comp=Z,1.0nm,1.5s,mb3.9
EDM Edmonton 89.75 21 *eP* **P 08 33 50.4 +0.6**
FFC Flin Flon 91.42 15 *ceP* **P 08 33 57.5 0.0**
FFC Flin Flon 91.42 15 *eP* **P 08 33 56.8 -0.7**
comp=Z,7.2nm,0.8s,mb5.0
ETW Entiat 91.92 28 *eP* **P 08 34 01.0 +1.0**
NEW Newport 92.63 26 *eP* **P 08 34 03.1 -0.2**
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW Newport 92.63 26 *eP* **P 08 34 03.1 -0.2**

comp=Z,4.9nm,0.8s,mb5.0
TORD Torodi Ar. Bea 93.42 288 P **P 08 34 07.2 -0.3**
comp=Z,5.1nm,1.1s,mb4.9,baz=59,slow=3.6,SNR=17
LBTB Lobatse 93.48 243 P **P 08 34 06.2 -1.4**
comp=Z,1.3nm,0.3s,mb4.8,baz=326,slow=3.6,SNR=2.9
SCHQ Schefferville 93.80 355 P **P 08 34 07.8 -0.7**
comp=Z,2.0nm,0.8s,mb4.6,baz=41,slow=11,SNR=4.9
SCHQ Schefferville 93.80 355 P **P 08 34 07.8 -0.7**
BSMT Bassoo Peak 93.84 25 *eP* **P 08 34 09.8 +0.9**
comp=Z,4.1nm,1.0s,mb4.8
YBMT Yellow Bay 94.11 25 *eP* **P 08 34 11.0 +0.9**
comp=Z,2.9nm,1.0s,mb4.7
SLMT Seeley Lake 94.82 25 *eP* **P 08 34 12.8 -0.6**
MSO Missoula 95.01 25 *eP* **P 08 34 13.8 -0.5**
comp=Z,3.0nm,1.2s,mb4.6
BOSA Boshof 95.68 240 P **P 08 34 15.7 -1.8**
comp=Z,6.5nm,1.3s,mb4.9,baz=96,slow=12,SNR=3.5
TXAR Lajitas Array 114.19 26 PKP PKiKP 08 39 30.9 -0.6
comp=Z,0.7nm,0.6s,baz=141,slow=0.8,SNR=11
TXAR PKKPbc PKKPbc 08 50 10.7 -0.8
comp=Z,0.7nm,0.9s,baz=166,slow=7.7,SNR=7.4
QSPA South Pole Qui 121.12 180 *e*PKPdf PKPdf 08 39 42.1 -1.0
SDV Santo Domingo 139.66 352 PKhKP 08 40 11.2
comp=Z,3.9nm,0.7s,baz=5.5,slow=2.8,SNR=6.7
SDV PKP PKPdf 08 40 17.6 -2.6
comp=Z,7.7nm,0.8s,baz=42,slow=3.9,SNR=6.7
SDV Santo Domingo 139.66 352 PKP 08 40 11.2
SDV PKP PKPdf 08 40 17.6 -2.6
ROSC El Rosal 143.96 357 PKP PKPdf 08 40 26.3 -1.6
comp=Z,11nm,0.6s,baz=80,slow=4.4,SNR=12
ROSC El Rosal 143.96 357 *e*PKPdf PKPdf 08 40 26.0 -1.9
OTAV Otavalo 148.50 5 *e*PKPdf PKPdf 08 40 36.5 +0.9
OTAV *e*PKPbc PKPbc 08 40 39.8 +0.6
ATAH Atahualpa 155.68 6 PKPab PKPab 08 41 13.9 +1.7
comp=Z,5.2nm,0.7s,baz=29,slow=5.0,SNR=3.6
CPUP Villa Florida 162.84 282 PKP PKPdf 08 40 53.4 -0.8
comp=Z,0.9nm,0.6s,baz=18,slow=4.0,SNR=5.1
LPAZ La Paz 163.35 332 PKP PKPdf 08 40 55.2 +0.3
comp=Z,3.1nm,1.1s,baz=45,slow=4.4,SNR=5.6
LPAZ La Paz 163.35 332 *e*PKPdf PKPdf 08 40 54.9 0.0
PLCA Paso Flores 169.63 204 PKP PKPdf 08 40 59.2 +0.1
comp=Z,4.7nm,1.1s,baz=195,slow=8.6,SNR=5.2
PLCA Paso Flores 169.63 204 PKP PKPdf 08 40 59.2 +0.1

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*IDC **13** 08:25:52.4±1.0, 31°.33N×103°.89E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/26, mbtmp3.8/8, ML3.6/1, Error ellipse: s-maj=62.6km s-min=18.9km az=58.0*
*NEIC **13** 08:25:53.9±0.5, 31°.28N×103°.82E, h10km, Error ellipse: s-maj=18.2km s-min=8.7km az=50.0*
*ISCJB **13** 08:25:54.3±1.3, 31°.26N±0°.10×103°.9E±0°.1, h27km±12km, mb3.8/7, Error ellipse: s-maj=21.5km s-min=13.9km az=146.4*

ISC 13 08:25:54.7±1.9, **31°.29N**±0°.10×**103°.8E**±0°.1, **h14**km±13km, **n14**, σ0**944**/15, **mb3.8**/7, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**190**	Pg	**Pg**		**Pg**	**08 26 02.0**	**-0.5**
CD2				Sg	**Sg**		**Sg**	**08 26 08.1**	**+0.4**
CD2				smax					
comp=N,23μm,0.4s									
ENH	**Enshi**	**4.96**	**100**	*e*Pn	**Pn**		**Pn**	**08 27 08.8**	**+0.1**
SONM	**Songino Array**	**16.64**	**6**	Pn	**Pn**		**Pn**	**08 29 47.6**	**+0.3**
comp=N,0.2nm,0.3s,baz=196,slow=19,SNR=3.0									
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**		**P**	**08 30 55.3**	**-0.3**
comp=N,1.1nm,0.8s,mb3.3,baz=111,slow=7.9,SNR=2.7									
KURK	**Kurchatov**	**26.96**	**323**	P	**P**		**P**	**08 31 36.5**	**+0.9**
comp=N,2.0nm,0.8s,mb3.7,baz=129,slow=9.3,SNR=4.5									
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**		**P**	**08 35 41.5**	**+0.1**
comp=N,1.0nm,0.6s,mb4.0,baz=158,slow=4.5,SNR=3.4									
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**		**P**	**08 35 51.9**	**-0.4**
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**		**P**	**08 35 52.3**	**+0.1**
comp=N,1.5nm,0.6s,mb4.2,baz=338,slow=7.9,SNR=13									
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**		**P**	**08 36 13.3**	**+0.4**
comp=N,0.3nm,0.5s,mb3.7,baz=342,slow=6.5,SNR=3.5									
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**		**P**	**08 36 13.3**	**+0.4**
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**		**P**	**08 36 29.0**	**-0.7**
comp=N,0.9nm,0.5s,mb4.0,baz=72,slow=6.9,SNR=3.5									
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**		**P**	**08 36 29.0**	**-0.7**
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**		**P**	**08 38 11.2**	**-0.3**
comp=N,15nm,0.6s,mb3.7,baz=330,slow=5.3,SNR=6.6									
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**		**P**	**08 38 11.2**	**-0.3**

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*ISCJB **13** 08:29:06.1±0.7, 31°.99N±0°.05×104°.5E±0°.1, h10km, mb3.4/4, Error ellipse: s-maj=13.9km s-min=7.8km az=176.6*
*IDC **13** 08:29:07.9±1.3, 31°.78N×104°.48E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.4/4, Error ellipse: s-maj=85.2km s-min=25.5km az=59.0*
*BJI **13** 08:29:08.2, 32°.25N×104°.23E, h25km, ML3.8/6, Ms3.6/3, Ms7 3.3/3*
*NEIC **13** 08:29:09.6±0.7, 31°.81N×104°.51E, h10km, Error ellipse: s-maj=29.6km s-min=12.7km az=45.0*

ISC 13 08:29:09.4±0.8, **32°.06N**±0°.07×**104°.7E**±0°.1, **h10**km, **n10**, σ1**909**/15, **mb3.4**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.42**	**216**	Pg	**Pg**		**Pg**	**08 29 30.3**	**-6.3**
CD2				smax					
comp=N,420nm,0.4s									
XAN	**Xi'an**	**4.04**	**60**	Pn	**Pn**		**Pn**	**08 30 10.6**	**-0.7**
XAN				smax					
comp=N,160nm,0.7s									
XAN				smax					
comp=E,750nm,0.5s									
LZH	**Lanzhou**	**4.08**	**350**	*e*Pn	**Pn**		**Pn**	**08 30 10.3**	**-1.5**
LZH				Pg	**Pg**		**Pg**	**08 30 19.9**	**-7.7**
LZH				Sn	**Sn**		**Sn**	**08 30 59.9**	**+0.3**
LZH				Sg	**Sg**		**Sg**	**08 31 06.6**	**-14**
LZH				smax					
comp=N,360nm,0.4s									
LZH				smax					
comp=E,490nm,0.5s									
LZH				LR	LR				
comp=N,600nm,6.5s									
LZH				LR	LR				
comp=Z,650nm,6.8s									
ENH	**Enshi**	**4.46**	**112**	Pn	**Pn**		**Pn**	**08 30 18.3**	**+1.3**
ENH				*e*Pg	**Pg**		**Pg**	**08 30 30.8**	**-3.9**
ENH				*e*S	**Sn**		**Sn**	**08 31 24.1**	**+15**
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**		**P**	**08 34 10.9**	**+0.7**
comp=Z,0.4nm,0.7s,mb3.0,baz=110,slow=9.3,SNR=3.3									
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**		**P**	**08 39 09.2**	**0.0**
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**		**P**	**08 39 09.1**	**-0.1**
comp=Z,0.8nm,0.6s,mb3.9,baz=340,slow=7.5,SNR=7.6									
WB2	**Warramunga Arr**	**58.99**	**147**	*e*P	**P**		**P**	**08 39 09.3**	**0.0**
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**		**P**	**08 39 28.6**	**-1.5**
comp=Z,0.3nm,0.5s,mb3.7,baz=324,slow=6.9,SNR=4.2									
YKA	**Yellowknife Ar**	**80.62**	**17**	P	**P**		**P**	**08 41 24.1**	**+2.1**
comp=Z,0.1nm,0.6s,mb2.9,baz=329,slow=5.4,SNR=3.6									

IDC 13 08:30:24.3±1.2, **16°.38N**×**90°.93W**, **h0**km, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.6**/21, **mbtmp3.5**/4, **ML2.8**/2, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx3.0**/29, **Error ellipse: s-maj=25.6km s-min=12.3km az=54.0**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.44**	**162**	Pg	Pg		Pg	08 30 50.6	-1.2
11nm,0.3s,baz=308,slow=8.2,SNR=236									
APG				Lg				08 31 10.3	
13nm,0.3s,baz=39,slow=21,SNR=5.6									
CMIG	**Matias Romero**	**3.86**	**281**	Pn	Pn		Pn	08 31 25.4	+0.5
0.1nm,0.3s,baz=90,slow=10,SNR=6.3									
CMIG				Pg	Pg		Pg	08 31 38.6	+0.3
0.7nm,0.3s,baz=97,slow=16,SNR=13									
CMIG				Sn	Sn		Sn	08 32 10.3	-0.6
1.6nm,0.3s,baz=32,slow=16,SNR=8.0									
CMIG				Lg				08 32 26.4	
1.7nm,0.3s,baz=161,slow=18,SNR=4.9									
CMIG				LR	LR			08 33 14.5	
comp=Z,757nm,20.4s,baz=66,slow=44									
TXAR	**Lajitas Array**	**17.42**	**320**	P	Pn		Pn	08 34 30.6	+1.8
0.0nm,0.3s,baz=143,slow=11,SNR=6.8									
SDV	**Santo Domingo**	**21.14**	**108**	P	P		P	08 35 12.0	+0.9
3.8nm,0.8s,baz=348,slow=5.8,SNR=5.5									
NVAR	**Mina Array Bea**	**32.55**	**318**	P	P		P	08 36 58.3	+1.2
0.4nm,0.7s,baz=119,slow=10,SNR=4.1									
YKA	**Yellowknife Ar**	**48.98**	**346**	P	P		P	08 39 11.0	-1.3

0.3nm,0.6s,baz=143,slow=7.8,SNR=6.7

*NNC **13** 08:32:22.8±5.8, 49.°60N×93.°58E, $h0^{km}$, mb3.7, mpv3.3, Error ellipse: s-maj=44.7km s-min=42.0km az=63.0*
*ISCJB **13** 08:32:40.8±0.9, 49.°36N±0.°07×91.°4E±0.°1, $h10^{km}$, mb3.8/6, MS4.2/2, Error ellipse: s-maj=11.1km s-min=8.8km az=36.5*
*IDC **13** 08:32:41.6±1.0, 49.°00N×91.°30E, $h0^{km}$, mb3.9/6, mb1 3.9/9, mb1mx3.7/27, mbtmp3.7/9, ML3.4/3, MS4.2/2, Ms1 4.2/2, ms1mx3.1/33, Error ellipse: s-maj=21.4km s-min=13.2km az=23.0*
ISC 13 08:32:42.8±0.8, 49.°26N±0.°06×91.°4E±0.°1, h10km, n16, σ1°20/18, mb3.8/6, MS4.2/2, 4C-3D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**6.01**	**207**	*e*Pn	**Pn**	**08 34 09.0**	**-2.7**
WMQ				Sg	**Sb**	**08 35 41.0**	**+1.4**
WMQ				smax			
	comp=N,70nm,0.8s						
WMQ				smax			
	comp=E,64nm,0.7s						
ZALV	**Zalesovo Beam**	**6.24**	**321**	Pg	**Pg**	**08 34 38.1**	**-4.2**
	comp=E,0.8nm,0.3s,baz=135,slow=16,SNR=1.8						
ZALV				Lg		08 36 05.4	
	comp=E,2.3nm,0.3s,baz=134,slow=25,SNR=3.1						
MK31	**Makanchi Array**	**6.60**	**252**	⇑Pn	**Pn**	**08 34 19.6**	**-0.2**
	comp=E,0.6nm,0.3s,baz=83,slow=13,SNR=18						
MK31				Sn	**Sb**	**08 35 57.5**	**+0.9**
	comp=E,21nm,0.6s,baz=79,slow=30,SNR=5.8						
MKAR	**Makanchi Array**	**6.60**	**252**	Pn	**Pn**	**08 34 19.1**	**-0.7**
	comp=E,0.3nm,0.3s,baz=81,slow=14,SNR=13						
MKAR				Lg		08 36 06.6	
	comp=E,4.1nm,0.3s,baz=72,slow=37,SNR=7.3						
KURK	**Kurchatov**	**8.38**	**285**	⇑Pn	**Pn**	**08 34 43.0**	**-1.2**
	comp=E,1.5nm,0.5s						
KURK				⇑Sn	**Sn**	**08 36 35.0**	**+16**
	comp=E,6.5nm,0.6s						
KURK				⇓Lg		08 37 25.0	
	comp=E,25nm,0.7s						
KURK	**Kurchatov**	**8.38**	**285**	Pn	**Pn**	**08 34 44.9**	**+0.7**
	comp=E,0.2nm,0.3s,baz=96,slow=14,SNR=13						
KURK				Lg		08 37 08.7	
	comp=E,0.3nm,0.3s,baz=315,slow=17,SNR=4.7						
KURBB	**Kurchatov Arra**	**8.43**	**284**	⇑Pn	**Pn**	**08 34 44.4**	**-0.5**
	comp=E,0.4nm,0.5s,baz=95,slow=14						
KURBB				⇓Sn	**Sn**	**08 36 34.1**	**+14**
	comp=E,2.1nm,0.5s,baz=91,slow=29						
KURBB				⇓Lg		08 37 27.0	
	comp=E,10nm,0.6s,baz=90,slow=24						
SONM	**Songino Array**	**10.03**	**92**	Lg		08 37 54.0	
	comp=E,0.5nm,0.3s,baz=288,slow=32,SNR=8.1						
BVAR	**Borovoye Array**	**13.72**	**294**	Pn	**Pn**	**08 35 56.3**	**-0.9**
	comp=E,0.3nm,0.3s,baz=62,slow=13,SNR=3.7						
ARCES	**ARCESS Array B**	**36.75**	**328**	P	**P**	**08 39 51.2**	**+1.4**
	comp=E,2.0nm,0.8s,mb4.0,baz=71,slow=8.7,SNR=2.3						
ARCES				LR	LR	08 56 06.4	
	comp=E,149nm,20.4s,MS3.8,baz=104,slow=38						
SPITS	**Spitsbergen Ar**	**39.28**	**342**	P	**P**	**08 40 13.5**	**+2.4**
	comp=E,2.3nm,0.9s,mb3.9,baz=104,slow=14,SNR=3.8						
BRTR	**Keskin Array B**	**41.39**	**279**	P	**P**	**08 40 28.9**	**0.0**
	comp=E,0.7nm,0.4s,mb3.7,baz=79,slow=6.0,SNR=4.3						
CBIJ	**Chichi jima**	**44.62**	**101**	LR	LR	08 59 00.8	
	comp=E,871nm,21.9s,MS4.6,baz=278,slow=35						
WRA	**Warramunga Arr**	**78.74**	**139**	P	**P**	**08 44 44.8**	**-0.4**
	comp=E,1.2nm,0.6s,mb4.0,baz=338,slow=6.2,SNR=12						
TORD	**Torodi Ar. Bea**	**79.99**	**278**	P	**P**	**08 44 51.0**	**-1.4**
	comp=E,0.5nm,1.1s,mb3.3,baz=34,slow=4.4,SNR=2.4						
ASAR	**Alice Springs**	**81.86**	**141**	P	**P**	**08 45 02.7**	**+0.7**
	comp=E,0.7nm,0.6s,mb3.8,baz=333,slow=5.2,SNR=10						

GUC 13 08:37:28.3±0.5, 21.°08S×68.°73W, h145km±8km, MD3.4, ML3.6, 3C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.71**	**273**	⇓*e*P	Pn	08 37 51.0	+0.7
PB01				*i* S	Sn	08 38 07.6	+0.6
PB01				AML	AML	08 38 10.9	
	comp=N,580nm,0.2s						
HMBC	**Humberston**	**1.35**	**306**	⇓*i*P	Pn	08 37 56.6	+0.7
HMBC				*i* S	Sn	08 38 18.3	+1.3
HMBC				AML	AML	08 38 19.9	
	comp=N,1μm,0.3s						
PB04	**Plate Boundary**	**1.37**	**211**	⇑*i*P	Pn	08 38 02.8	+6.7
PB04				*i* S	Sn	08 38 28.0	+11
PB04				AML	AML	08 38 31.7	
	comp=N,368nm,0.2s						
PECH	**Pedro de Valdi**	**1.74**	**210**	⇑*i*P	Pn	08 38 01.1	+1.0
PECH				*i* S	Sn	08 38 26.3	+1.7
PECH				AML	AML	08 38 29.6	
	comp=E,408nm,0.1s						
MNMC	**Miæe Miæ**	**2.11**	**337**	⇑*i*P	Pn	08 38 05.1	+0.7
MNMC				*i* S	Sn	08 38 33.4	+1.3
MNMC				AML	AML	08 38 35.1	
	comp=E,1μm,0.7s						

TRN 13 08:38:44.3, 16.°58N×62.°23W, h29km, MD3.5, M3.0(FDF), 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.59**	**38**	*e*P	Pb	08 38 57.2	+1.0
BPA				*e*S	Sb	08 39 08.0	+3.8
LZG	**Guadaloupe-1**	**0.62**	**135**	*e*P	Pb	08 38 59.2	+2.6
LZG				*e*S	Sb	08 39 13.5	+8.4
BCG	**Bois Riant Cap**	**0.77**	**130**	*e*P	Pb	08 39 00.5	+1.3
PHG	**Guadaloupe-2**	**0.80**	**135**	*e*P	Pn	08 39 01.1	+1.4
SKI	**Saint Kitts**	**0.89**	**327**	⇑*i*P	Pn	08 39 01.6	+0.7
SKI				*e*S	Sb	08 39 16.3	+3.5
TBG	**Guadaloupe-3**	**0.92**	**142**	*e*P	Pn	08 39 02.5	+1.1

*NEIC **13** 08:39:51.7±0.5, 27.°69S×177.°22W, mb4.5/12, Error ellipse: s-maj=14.7km s-min=12.2km az=119.0*
*ISCJB **13** 08:39:53.7±1.2, 27.°56S±0.°07×177.°4W±0.°1, $h91^{km}$±10^{km}, mb4.3/22, Error ellipse: s-maj=14.8km s-min=12.1km az=174.8*
*IDC **13** 08:39:53.5±2.4, 27.°55S×177.°18W, $h79^{km}$±21^{km}, mb4.0/13, mb1 4.2/13, mb1mx4.2/15, mbtmp4.0/13, MS3.7/2, Ms1 3.7/2, ms1mx3.0/25, Error ellipse: s-maj=20.3km s-min=19.0km az=12.0*
ISC 13 08:39:54.4±1.2, 27.°57S±0.°07×177.°3W±0.°1, h84km±9km, h67km±2.7km: pP-P, n70, σ0°98/53, mb4.3/22, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.76**	**198**	P	**Pn**	**08 40 21.6**	**-1.7**
	1μm,0.3s,baz=291,slow=2.5,SNR=58						
RAO				S	**Sn**	**08 40 45.7**	**+0.5**
	2μm,0.3s,baz=102,slow=22,SNR=24						
RAO	**Raoul Island**	**1.76**	**198**	*e*Pn	**Pn**	**08 40 22.4**	**-0.9**
RAO				*e*Sn	**Sn**	**08 40 45.7**	**+0.5**
MSVF	**Nonsavu**	**10.69**	**335**	*e*Pn	**Pn**	**08 42 25.3**	**+0.6**
	12nm,0.8s						
OUZ	**Omahuta**	**10.89**	**223**	*e*Pn	**Pn**	**08 42 34.4**	**+7.1**
URZ	**Urewera**	**11.64**	**202**	P	**Pn**	**08 42 28.5**	**-9.0**
	0.4nm,0.3s,baz=54,slow=18,SNR=3.3						
URZ				S	**Sn**	**08 44 36.5**	**-9.1**
	2.2nm,0.3s,baz=164,slow=19,SNR=11						
AFI	**Afiamalu**	**14.54**	**22**	P	**Pn**	**08 43 03.2**	**-13**
	1.4nm,0.3s,baz=112,slow=19,SNR=5.0						
AFI				S	Sn	08 45 31.1	-25
	0.9nm,0.3s,baz=41,slow=19,SNR=2.4						
DZM	**Mont Dzumac**	**15.74**	**287**	*e*P	**Pn**	**08 43 39.7**	**+8.5**
DZM				*e*S	Sx	08 44 00.6	
DZM	**Mont Dzumac**	**15.74**	**287**	*e*P	**Pn**	**08 43 40.3**	**+9.0**
	28nm,0.7s						
NOUC	**Port Laguerre**	**15.85**	**286**	*e*P	**Pn**	**08 43 41.8**	**+9.2**
NOUC				*e*S	Sx	08 44 01.5	
KHZ	**Kahutara**	**16.59**	**204**	*e*P	**Pn**	**08 43 37.3**	**-4.4**
	10nm,0.6s						
RPZ	**Rata Peaks**	**18.65**	**207**	P	**Pn**	**08 44 01.6**	**-5.1**
	0.5nm,0.3s,baz=84,slow=9.2,SNR=4.7						
RPZ				S	**S**	**08 47 14.8**	**-19**
	0.3nm,0.3s,baz=163,slow=14,SNR=3.1						
RPZ	**Rata Peaks**	**18.65**	**207**	P	**Pn**	**08 44 01.6**	**-5.1**
RPZ				S	**S**	**08 47 14.8**	**-19**
ARMA	**Armidale**	**27.29**	**257**	*e*P	**P**	**08 45 34.4**	**+3.4**
ARMA	**Armidale**	**27.29**	**257**	*e*P	**P**	**08 45 34.0**	**+2.9**
	5.3nm,0.7s,mb4.2						
CMSA	**Cobar Meteorol**	**32.34**	**254**	*e*P	**P**	**08 46 16.9**	**+1.2**
CTA	**Charters Tower**	**34.07**	**275**	*e*P	**P**	**08 46 32.4**	**+1.5**
	4.3nm,0.6s,mb4.5						
CTA	**Charters Tower**	**34.07**	**275**	P	**P**	**08 46 32.5**	**+1.6**
	3.7nm,0.4s,mb4.5,baz=112,slow=15,SNR=7.0						
CTA				LR	LR	08 59 08.0	
	comp=Z,111nm,20.3s,baz=215,slow=34						
CTAO	**Charters Tower**	**34.07**	**275**	*e*P	**P**	**08 46 32.1**	**+1.2**
	4.4nm,0.6s,mb4.5						
CTAO				*e*pP	pP	08 46 47.0	-3.5
STKA	**Stephens Creek**	**35.81**	**253**	*e*P	**P**	**08 46 47.0**	**+1.3**
	1.9nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**35.81**	**253**	P	**P**	**08 46 47.1**	**+1.4**
	2.0nm,0.5s,mb4.3,baz=92,slow=11,SNR=11						
STKA				PcP	PcP	08 49 13.4	+1.8
	0.6nm,0.5s,baz=82,slow=6.0,SNR=3.3						
STKA				LR	LR	08 59 47.9	
	comp=Z,168nm,20.8s,baz=24,slow=33						
STKA	**Stephens Creek**	**35.81**	**253**	*e*P	**P**	**08 46 46.8**	**+1.1**
	0.4nm,0.5s,mb3.6						
STKA				PcP	PcP	08 49 13.4	+1.8
BBOO	**Buckleboo**	**40.40**	**251**	*e*P	**P**	**08 47 23.8**	**-0.5**
	3.3nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**43.95**	**264**	P	**P**	**08 47 53.6**	**+0.3**
	2.5nm,0.6s,mb4.1,baz=92,slow=7.3,SNR=62						
ASAR				PcP	PcP	08 49 37.3	-0.6
	0.5nm,0.5s,baz=122,slow=4.2,SNR=5.8						
WRAB	**Tennant Creek**	**44.68**	**269**	*e*P	**P**	**08 47 58.7**	**-0.5**
	4.7nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**44.69**	**269**	PcP	PcP	08 49 40.8	+0.4
	1.1nm,0.7s,baz=113,slow=3.6,SNR=4.6						
FORT	**Forrest**	**47.43**	**252**	*e*P	**P**	**08 48 19.1**	**-1.5**
	27nm,0.6s,mb5.2						
FORT	**Forrest**	**47.43**	**252**	*e*P	**P**	**08 48 19.4**	**-1.2**
	21nm,0.6s,mb5.0						
KAKA	**Kakadu**	**49.13**	**277**	*e*P	**P**	**08 48 32.3**	**-1.5**
	3.9nm,0.3s,mb4.8						
KAKA	**Kakadu**	**49.13**	**277**	*e*P	**P**	**08 48 32.1**	**-1.7**
FITZ	**Fitzroy Crossi**	**53.04**	**267**	*e*P	**P**	**08 49 03.1**	**0.0**
	3.8nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.04**	**267**	*e*P	**P**	**08 49 03.2**	**+0.1**
	3.8nm,0.9s,mb4.4						
MBWA	**Marble Bar**	**57.20**	**262**	*e*P	**P**	**08 49 31.1**	**-1.9**
	5.2nm,0.7s,mb4.7						
MBWA				*e*pP	pP	08 49 49.8	-4.4
CASY	**Casey**	**57.92**	**207**	*e*P	**P**	**08 49 36.9**	**-0.5**
CASY				*e*	pP	08 49 53.3	-5.3
CASY	**Casey**	**57.92**	**207**	*e*P	**P**	**08 49 37.0**	**-0.4**
	4.0nm,0.6s,mb4.6						
QSPA	**South Pole Qui**	**62.53**	**180**	*e*P	**P**	**08 50 10.3**	**+1.7**
	11nm,1.0s,mb4.7						
QSPA				*e*pP	pP	08 50 28.4	-1.7
MAW	**Mawson**	**75.17**	**200**	P	**P**	**08 51 26.6**	**-0.6**
	5.5nm,0.7s,mb4.4,baz=118,slow=7.2,SNR=5.6						
MAW	**Mawson**	**75.17**	**200**	*e*P	**P**	**08 51 28.1**	**+1.0**
	1.1nm,0.7s,mb3.7						
MJAR	**Matsushiro Arr**	**76.29**	**324**	P	**P**	**08 51 32.4**	**-1.5**
	1.1nm,0.5s,mb3.9,baz=48,slow=1.4,SNR=4.6						
MJAR	**Matsushiro Arr**	**76.29**	**324**	P	**P**	**08 51 32.4**	**-1.5**
ASAJ	**Asahikawa**	**80.23**	**332**	P	**P**	**08 51 55.8**	**+0.3**
	5.0nm,0.4s,mb4.7,baz=92,slow=31,SNR=6.1						
VNA2	**Neumayer--Watz**	**81.52**	**177**	*e*	**P**	**08 52 01.8**	**-0.3**
VNA1	**Neumayer--Stat**	**81.74**	**176**	*e*	**P**	**08 52 03.4**	**+0.1**
KSRS	**Korea Array**	**82.61**	**319**	P	**P**	**08 52 08.9**	**+0.7**
	1.0nm,0.5s,mb3.9,baz=135,slow=5.9,SNR=4.4						
PETK	**Petropavlovsk-**	**83.24**	**345**	P	**P**	**08 52 10.6**	**-0.5**
	5.7nm,0.7s,mb4.5,baz=130,slow=7.6,SNR=7.6						
PLCA	**Paso Flores**	**83.98**	**133**	P	**P**	**08 52 15.6**	**+0.1**
	1.2nm,0.6s,mb3.9,baz=208,slow=3.6,SNR=7.9						
NVAR	**Mina Array Bea**	**85.75**	**42**	P	**P**	**08 52 24.3**	**+0.2**
	1.8nm,0.8s,mb4.1,baz=224,slow=8.1,SNR=13						
TXAR	**Lajitas Array**	**90.34**	**57**	P	**P**	**08 52 46.0**	**-0.2**
	0.6nm,0.8s,mb3.8,baz=211,slow=7.1,SNR=6.6						
ANMO	**Albuquerque**	**91.33**	**51**	P	**P**	**08 52 51.3**	**+0.6**
	0.4nm,0.3s,mb4.0,baz=286,slow=1.8,SNR=3.8						
PDAR	**Pinedale Array**	**93.66**	**43**	P	**P**	**08 53 01.1**	**-0.2**
	0.7nm,0.9s,mb4.0,baz=256,slow=3.8,SNR=5.9						
YKA	**Yellowknife Ar**	**102.63**	**25**	PKKPbc	PKKPbc	09 09 39.3	-3.4
	0.2nm,0.6s,baz=36,slow=2.8,SNR=8.8						
MKAR	**Makanchi Array**	**116.41**	**311**	PKP	PKPdf	08 58 27.1	-1.0
	1.3nm,0.6s,baz=205,slow=0.9,SNR=12						
KURK	**Kurchatov**	**119.52**	**315**	PKP	PKPdf	08 58 33.0	-0.9
	2.3nm,0.7s,baz=100,slow=1.9,SNR=15						
KURK	**Kurchatov**	**119.52**	**315**	PKP	PKPdf	08 58 33.0	-0.9
BOSA	**Boshof**	**120.10**	**203**	PKP	PKPdf	08 58 33.9	-2.0
	3.0nm,0.8s,baz=112,slow=8.7,SNR=4.3						
BVAR	**Borovoye Array**	**124.79**	**317**	PKP	PKPdf	08 58 43.3	-0.7
	2.9nm,0.6s,baz=122,slow=1.4,SNR=14						
AKTK	**Aktyubinsk**	**132.61**	**314**	PKP	PKPdf	08 58 58.4	-0.5
AKTO	**Aktyubinsk**	**132.61**	**314**	PKP	PKPdf	08 58 58.4	-0.5
	1.7nm,0.7s,baz=25,slow=2.3,SNR=7.3						
ARCES	**ARCESS Array B**	**135.96**	**349**	PKhKP		08 58 56.8	
	3.5nm,1.0s,baz=67,slow=2.3,SNR=3.4						
ARCES				PKP	PKPdf	08 59 04.8	+0.2
	7.3nm,1.1s,baz=43,slow=2.1,SNR=9.4						
FINES	**FINESS Array B**	**142.69**	**342**	PKhKP		08 59 12.3	
	1.7nm,0.6s,baz=58,slow=4.7,SNR=8.1						
FINES	**FINESS Array B**	**142.69**	**342**	PKP	PKPdf	08 59 12.3	-4.8
NOA	**NORSAR Array B**	**146.05**	**353**	PKPbc	PKPbc	08 59 23.3	-0.7
	3.9nm,0.7s,baz=15,slow=4.7,SNR=14						
NOA	**NORSAR Array B**	**146.05**	**353**	PKPbc	PKPbc	08 59 23.3	-0.7
AKASG	**Malin Array Be**	**149.37**	**326**	PKP	PKPdf	08 59 26.0	-2.8
	0.6nm,0.4s,baz=44,slow=3.5,SNR=3.5						
AKASG				PKPbc	PKPbc	08 59 32.6	-0.6
	7.3nm,0.6s,baz=42,slow=3.5,SNR=28						
AKBB	**Malin Array Si**	**149.37**	**326**	*e*PKPbc	PKPbc	08 59 32.6	-0.6
BR131	**Keskin Array S**	**151.68**	**303**	*e*PKPbc	PKPbc	08 59 38.7	-0.4
BRTR	**Keskin Array B**	**151.68**	**303**	PKPbc	PKPbc	08 59 38.8	-0.3
	3.5nm,0.8s,baz=136,slow=4.5,SNR=14						
BUR08	**Bucovina Ar. S**	**153.35**	**325**	*e*PKPbc	PKPbc	08 59 43.5	+0.9
CLL	**Collm**	**155.05**	**345**	⇓*i*PKPab	PKPab	09 00 01.2	-0.7
	comp=Z,7.0nm,0.7s						
GERES	**GERESS Array B**	**157.12**	**341**	PKPab	PKPab	09 00 10.6	-0.3
	comp=Z,1.0nm,0.8s,baz=60,slow=5.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**165.62**	**176**	PKP	PKPdf	08 59 49.3	-0.6
	comp=Z,0.3nm,0.6s,baz=13,slow=1.0,SNR=6.2						
TORD				PKPab	PKPab	09 00 48.8	0.0
	comp=Z,1.6nm,0.7s,baz=181,slow=4.0,SNR=13						

IDC 13 08:43:59.0±1.3, 31.°13N×103.°78E, $h0^{km}$, mb3.4/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.5/5, Error ellipse: s-maj=44.1km s-min=24.5km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.89**	**66**	P	P	08 48 43.3	+0.4
	1.7nm,0.6s,baz=258,slow=9.6,SNR=5.4						
MKAR	**Makanchi Array**	**22.77**	**319**	P	P	08 49 03.5	+0.7
	0.6nm,0.9s,baz=131,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**58.66**	**146**	P	P	08 53 58.2	0.0
	0.6nm,0.4s,baz=338,slow=7.7,SNR=16						
ASAR	**Alice Springs**	**61.66**	**148**	P	P	08 54 19.0	+0.2
	0.4nm,0.8s,baz=337,slow=7.0,SNR=3.8						
YKA	**Yellowknife Ar**	**81.75**	**17**	P	P	08 56 18.6	-0.6
	0.1nm,0.6s,baz=332,slow=5.2,SNR=3.1						

*ISCJB **13** 09:00:31.1±1.0, 31.°4N±0.°1×104.°0E±0.°1, $h10^{km}$, mb3.4/4, Error ellipse: s-maj=18.4km s-min=9.9km az=150.4*
*IDC **13** 09:00:31.4±1.9, 31.°57N×104.°19E, $h0^{km}$, mb3.4/4, mb1 3.6/4, mb1mx3.3/26, mbtmp3.4/4, Error ellipse: s-maj=406.3km s-min=22.0km az=53.0*
ISC 13 09:00:33.2±1.0, 31.°4N±0.°1×103.°8E±0.°1, h10km, n5, σ0°89/6, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.06**	**57**	Pg	**Pg**	**09 02 17.6**	**+7.4**
XAN				Sg	**Sg**	**09 03 15.8**	**0.0**
XAN				smax			
	comp=N,32nm,0.7s						
XAN				smax			
	comp=E,16nm,0.7s						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**09 05 34.1**	**-0.1**
	comp=E,0.7nm,0.8s,mb3.2,baz=133,slow=12,SNR=4.9						
KURK	**Kurchatov**	**26.91**	**323**	P	**P**	**09 06 14.4**	**+0.1**
	comp=E,0.5nm,0.4s,mb3.4,baz=127,slow=10.0,SNR=4.5						
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**09 10 30.8**	**-1.0**
	comp=E,0.5nm,0.8s,mb3.6,baz=338,slow=7.5						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**09 10 53.4**	**+1.0**
	comp=E,0.3nm,0.8s,mb3.5,baz=335,slow=6.3,SNR=2.9						

*ISCJB **13** 09:07:36.4±0.6, 23.°95N±0.°02×122.°53E±0.°02, $h2^{km}$±4^{km}, Error ellipse: s-maj=4.0km s-min=2.5km az=166.5*
*TAP **13** 09:07:38.6, 23.°99N×122.°43E, $h15^{km}$±1^{km}, ML3.6, D*
*JMA **13** 09:07:38.9±0.2, 24.°05N×122.°51E, $h31^{km}$, M3.0*
*NEIC **13** 09:07:45.8±3.4, 24.°62N×120.°57E, $h10^{km}$, MG3.0(JMA), Error ellipse: s-maj=40.4km s-min=10.1km az=126.0*
ISC 13 09:07:36.7±0.5, 23.°95N±0.°03×122.°53E±0.°02, h4km±3km, n49, σ0°78/79, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.68**	**40**	P	**Pg**	**09 07 50.9**	**+1.2**
YOJ				*e*S	**Sg**	**09 07 59.3**	**+0.8**
HWA	**Hwalien**	**0.85**	**272**	*e*P	**Pg**	**09 07 53.8**	**+0.8**
	baz=269						
HWA				*e*S	**Sg**	**09 08 04.3**	**+0.4**
	baz=269						
TWD	**Chiawan**	**0.86**	**279**	P	**Pg**	**09 07 53.8**	**+0.5**
	baz=277						
TWD				*e*S	**Sg**	**09 08 04.8**	**+0.3**
	baz=277						
ENA	**Nanau**	**0.86**	**304**	P	**Pg**	**09 07 54.1**	**+0.8**
	baz=305						
ENA				*e*S	**Sg**	**09 08 05.1**	**+0.5**
	baz=305						
TWC	**Suao**	**0.91**	**317**	P	**Pg**	**09 07 54.5**	**+0.3**
	baz=319						
TWC				*i* S	**Sg**	**09 08 05.5**	**-0.4**
	baz=319						
ESL	**Shilin**	**1.01**	**263**	*e*P	**Pg**	**09 07 55.7**	**-0.5**
	baz=259						
ESL				*e*S	**Sg**	**09 08 08.8**	**-0.5**
	baz=259						
ILA	**Ilan**	**1.08**	**319**	*e*P	**Pg**	**09 07 59.4**	**+1.9**
	baz=321						
ILA				*e*S	**Sg**	**09 08 12.1**	**+0.5**
	baz=321						
TWE	**Neicheng**	**1.10**	**315**	P	**Pg**	**09 07 58.5**	**+0.6**
	baz=316						
TWE				*e*S	**Sg**	**09 08 12.5**	**+0.3**
	baz=316						
IRIF	**Iriomote-Funau**	**1.16**	**70**	*e*S	**Sg**	**09 08 13.9**	**-0.3**
NNS	**Nan Shan**	**1.17**	**295**	*e*P	**Pg**	**09 07 58.8**	**-0.3**
	baz=295						
NNS				*e*S	**Sg**	**09 08 13.5**	**-0.8**
	baz=295						
TWB1	**Santiao Chiao**	**1.17**	**335**	*i* P	**Pg**	**09 07 59.1**	**0.0**
	baz=338						
TWB1				*e*S	**Sg**	**09 08 14.9**	**+0.6**
	baz=338						
HATJ	**Hateruma jima**	**1.17**	**84**	P	**Pg**	**09 07 59.6**	**+0.4**
HATJ				*e*S	**Sg**	**09 08 15.0**	**+0.6**
WHF	**Hehuan Shan**	**1.17**	**280**	*i* P	**Pg**	**09 07 59.0**	**-0.3**
	baz=278						
WHF				*e*S	**Sg**	**09 08 13.8**	**-0.7**
	baz=278						
EHY	**Hungye**	**1.19**	**249**	*e*P	**Pg**	**09 07 59.0**	**-0.5**
	baz=244						
EHY				*e*S	**Sg**	**09 08 14.4**	**-0.6**
	baz=244						
TWT	**Tachien**	**1.27**	**284**	*e*P	**Pg**	**09 08 00.9**	**-0.3**
	baz=282						
TWT				*e*S	**Sg**	**09 08 17.3**	**-0.4**
	baz=282						
TWF1	**Yuli**	**1.27**	**243**	*e*P	**Pg**	**09 08 00.6**	**-0.6**
	baz=238						
TWF1				*e*S	**Sg**	**09 08 17.1**	**-0.7**
	baz=238						
YHNB	**Yeheng**	**1.28**	**305**	*e*Pg	**Pg**	**09 08 00.6**	**-0.6**
YHNB				*e*Sg	**Sg**	**09 08 10.5**	**-7.3**
NSK	**Sanguang**	**1.29**	**304**	*e*P	**Pg**	**09 08 01.0**	**-0.6**
	baz=305						
NSK				*e*S	**Sg**	**09 08 17.6**	**-0.7**
	baz=305						
NWF	**Wu-fen Shan**	**1.31**	**329**	P	**Pg**	**09 08 01.1**	**-0.8**
	baz=331						
NWF				*e*S	**Sg**	**09 08 19.8**	**+0.8**
	baz=331						
TWA	**Mucha**	**1.34**	**320**	*e*P	**Pn**	**09 08 02.4**	**+0.1**
	baz=322						
TWA				*e*S	**Sg**	**09 08 19.1**	**-0.8**
	baz=322						
CHKT	**Chengkung**	**1.36**	**232**	*e*P	**Pn**	**09 08 02.3**	**-0.3**
	baz=227						
JKRS	**Kuro-shima**	**1.38**	**78**	P	**Pn**	**09 08 02.7**	**-0.2**
JKRS				*e*S	**Sg**	**09 08 20.9**	**-0.3**
TATO	**Taipei**	**1.40**	**317**	*e*Pg	**Pg**	**09 08 03.0**	**-0.5**
TATO				*e*Sg	**Sg**	**09 08 16.9**	**-4.8**
TAP1	**Taipei**	**1.42**	**320**	*e*P	**Pn**	**09 08 03.1**	**-0.3**
	baz=321						
**SSLB

LZH	**Lanzhou**	**4.31**	**354**	*e*Pn	**Pn**	**09 14 28.3**	**+3.5**
LZH				Pg	**Pg**	**09 14 41.3**	**-0.2**
LZH				Sn	**Sn**	**09 15 14.9**	**-0.5**
LZH				Sg	**Sg**	**09 15 32.4**	**-5.0**
LZH				smax			
	comp=N,130nm,0.6s						
LZH				smax			
	comp=E,250nm,0.8s						
LZH				LR	LR		
	comp=N,750nm,7.2s						
LZH				LR	LR		
	comp=Z,860nm,9.8s						
XAN	**Xi'an**	**4.43**	**58**	Pn	**Pn**	**09 14 25.8**	**-0.6**
XAN				Pg	**Pg**	**09 14 38.3**	**-5.4**
XAN				Sn	**Sn**	**09 15 19.3**	**+1.1**
XAN				Sg	**Sg**	**09 15 33.3**	**-7.7**
XAN				smax			
	comp=N,340nm,0.7s						
XAN				smax			
	comp=E,190nm,0.7s						
ENH	**Enshi**	**4.63**	**108**	*e*Pg	**Pg**	**09 14 46.9**	**-0.7**
ENH				*e*Sn	**Sn**	**09 15 24.2**	**+0.9**
GYA	**Guiyang**	**5.67**	**159**	Pn	**Pn**	**09 14 44.5**	**+1.0**
GYA				Sn	**Sn**	**09 15 48.9**	**0.0**
GYA				smax			
	comp=N,180nm,0.9s						
GYA				smax			
	comp=E,170nm,0.7s						
GTA	**Gaotai**	**8.47**	**335**	*e*P	Px	09 15 39.1	
GTA				pP		09 15 43.4	
GTA				sP		09 15 46.6	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHN	**Wuhan**	**8.63**	**96**	⇑P	**Pn**	**09 15 24.3**	**+0.2**
CM31	**Chiang Mai Arr**	**14.15**	**202**	*e*Pn	**Pn**	**09 16 42.2**	**+2.4**
	comp=Z,4.6nm,0.6s						
SONM	**Songino Array**	**16.10**	**5**	Pn	**Pn**	**09 17 06.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=178,slow=11,SNR=3.7						
KSRS	**Korea Array**	**20.16**	**67**	P	**P**	**09 17 53.6**	**0.0**
	comp=Z,4.2nm,0.7s,baz=258,slow=10,SNR=11						
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**09 18 21.4**	**+1.2**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**09 18 21.1**	**+0.9**
	comp=Z,1.6nm,0.6s,mb3.6,baz=113,slow=12,SNR=9.5						
KURK	**Kurchatov**	**26.85**	**322**	P	**P**	**09 18 59.9**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.6,baz=129,slow=8.5,SNR=5.7						
KURK	**Kurchatov**	**26.85**	**322**	P	**P**	**09 18 59.9**	**+0.1**
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**	**09 20 44.8**	**+0.3**
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**09 20 44.8**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.4,baz=86,slow=15,SNR=2.9						
FITZ	**Fitzroy Crossi**	**53.63**	**155**	P	**P**	**09 22 39.6**	**-1.4**
	comp=Z,1.7nm,0.6s,mb4.2,baz=348,slow=6.6,SNR=7.9						
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**09 23 02.0**	**-0.9**
	comp=Z,4.6nm,1.0s,mb4.5,baz=95,slow=7.4,SNR=2.5						
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**09 23 04.9**	**-0.9**
	comp=Z,0.6nm,0.4s,mb4.0,baz=81,slow=9.0,SNR=3.4						
WRAB	**Tennant Creek**	**58.91**	**147**	*e*P	**P**	**09 23 18.3**	**-0.4**
	comp=Z,3.3nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.91**	**147**	P	**P**	**09 23 18.0**	**-0.7**
	comp=Z,5.5nm,0.7s,mb4.7,baz=338,slow=7.6						
ASAR	**Alice Springs**	**61.95**	**149**	P	**P**	**09 23 39.0**	**-0.4**
	comp=Z,2.5nm,0.5s,mb4.6,baz=333,slow=6.6,SNR=46						
STKA	**Stephens Creek**	**72.45**	**147**	P	**P**	**09 24 45.1**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.2,baz=333,slow=4.9,SNR=4.3						
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**09 25 32.7**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=329,slow=5.2,SNR=19						
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**09 25 32.7**	**-1.1**

*IDC **13** 09:17:58.3±1.1,31°.78N×104°.40E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, Error ellipse: s-maj=43.4km s-min=22.6km az=57.0*
*NEIC **13** 09:18:00.4±0.8,31°.94N×104°.57E, h10km, mb4.4/1, Error ellipse: s-maj=39.0km s-min=14.3km az=46.0*
*BJI **13** 09:18:01.2,31°.82N×104°.87E, h15km, mB4.6/1, mb4.4/1, ML3.8/7, Ms3.5/4, Ms7 3.4/4*
*ISCJB **13** 09:18:02.3±1.0,32°.16N±0°.04×104°.70E±0°.08, h33km±8km, mb3.8/6, Error ellipse: s-maj=12.0km s-min=6.7km az=172.5*

ISC 13 09:18:01.7±0.9,32°.13N±0°.03×104°.63E±0°.07, h16km±8km, n13,σ1°33/19, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.43**	**212**	Pg	**Pn**	**09 18 23.8**	**-3.1**
CD2				Sg	**Sg**	**09 18 46.8**	**-1.0**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**4.00**	**351**	*e*Pn	**Pb**	**09 19 09.9**	**-2.0**
LZH				Pg	**Pg**	**09 19 21.0**	**+2.6**
LZH				Sn	**Sb**	**09 20 00.1**	**+0.1**
LZH				Sg	**Sg**	**09 20 10.6**	**+0.3**
LZH				smax			
	comp=N,180nm,0.7s						
LZH				smax			
	comp=E,170nm,0.5s						
LZH				LR	LR		
	comp=E,380nm,5.7s						
LZH				LR	LR		
	comp=Z,430nm,6.9s						
XAN	**Xi'an**	**4.07**	**61**	Pg	**Pb**	**09 19 13.3**	**+0.2**
XAN				Sg	**Sg**	**09 20 08.1**	**-4.4**
XAN				smax			
	comp=N,200nm,0.6s						
XAN				smax			
	comp=E,100nm,0.8s						
ENH	**Enshi**	**4.55**	**113**	*e*Pn	**Pn**	**09 19 08.7**	**-1.2**
GYA	**Guiyang**	**5.92**	**162**	Pg	**Pg**	**09 19 56.5**	**+1.4**
GYA				Sg	**Sb**	**09 20 56.9**	**+1.7**
GYA				smax			
	comp=N,60nm,0.6s						
GYA				smax			
	comp=E,50nm,0.7s						
KSRS	**Korea Array**	**19.83**	**68**	P	**Pn**	**09 22 33.8**	**+0.4**
	comp=E,2.4nm,0.9s,baz=243,slow=8.8,SNR=3.4						
MKAR	**Makanchi Array**	**22.52**	**317**	P	**P**	**09 23 00.6**	**0.0**
	comp=E,0.2nm,0.3s,mb3.0,baz=125,slow=7.6,SNR=4.0						
ARCES	**ARCESS Array B**	**56.52**	**336**	P	**P**	**09 27 44.0**	**+1.3**
	comp=E,4.7nm,1.0s,mb4.5,baz=92,slow=8.5,SNR=4.4						
WRAB	**Tennant Creek**	**59.07**	**147**	P	**P**	**09 28 01.8**	**+0.6**
	comp=E,1.7nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**09 28 21.0**	**-1.1**
	comp=E,0.3nm,0.4s,mb3.8,baz=319,slow=5.9,SNR=4.5						
STKA	**Stephens Creek**	**72.62**	**148**	P	**P**	**09 29 25.6**	**-2.7**
	comp=E,0.9nm,0.6s,mb3.9,baz=315,slow=4.3,SNR=3.0						
YKA	**Yellowknife Ar**	**80.58**	**17**	P	**P**	**09 30 14.2**	**+1.1**
	comp=E,0.3nm,0.7s,mb3.4,baz=328,slow=5.1,SNR=5.5						
YKA	**Yellowknife Ar**	**80.58**	**17**	P	**P**	**09 30 14.2**	**+1.1**

CASC 13 09:22:23.3±1.9,12°.19N×87°.95W, h25km±8km, MD3.7, ML3.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.02**	**60**	*e*P	Pn	09 22 41.5	-0.5
CRIN				*e*S	Sb	09 22 56.7	+1.5
CRIN				AML	AML	09 22 58.6	
	comp=E,2μm,0.2s						
CNCH	**Conchagua**	**1.08**	**6**	*e*P	Pn	09 22 42.5	-0.4
MIRN	**Miramar**	**1.24**	**78**	*e*P	Pn	09 22 44.3	-0.7
CNGN	**Cerro Negro**	**1.26**	**76**	*e*P	Pn	09 22 44.9	-0.5
VSM	**San Miguel**	**1.27**	**346**	*e*P	Pn	09 22 45.6	+0.1
BLLM	**Bellamira**	**1.27**	**347**	*e*P	Pn	09 22 44.9	-0.6
COPN	**Copaltepe**	**1.33**	**90**	*e*P	Pn	09 22 45.3	-1.0
MOMN	**Momotombo**	**1.40**	**81**	*e*P	Pn	09 22 46.8	-0.5
CSAN		**1.50**	**90**	*e*P	Pn	09 22 49.1	+0.5
APYN	**Apoyeque**	**1.57**	**88**	*e*P	Pn	09 22 50.4	+0.9
APYN				*e*S	Sn	09 23 09.4	+0.3
APYN				AML	AML	09 23 14.0	
	comp=Z,386nm,0.3s						
CAHU	**Cacacuatique**	**1.59**	**351**	*e*P	Pn	09 22 49.8	-0.1
CAHU				*e*P		09 22 50.3	
CAHU				*e*S	Sn	09 23 11.2	+1.6
CAHU				*e*S	Sn	09 23 11.4	+1.7
SNVI	**San Vicente**	**1.66**	**329**	*e*P	Pn	09 22 51.3	+0.5
SNVI				*e*S	Sn	09 23 13.4	+2.2
HUEN		**1.75**	**85**	*e*P	Pn	09 22 51.3	-0.7
LFRS	**El Faro**	**1.79**	**323**	*e*P	Pn	09 22 52.1	-0.5
LFRS				*e*S	Sn	09 23 15.4	+1.0
APON	**Apoyo**	**1.86**	**98**	*e*P	Pn	09 22 53.8	+0.1
LBRS	**Las Brisas**	**1.87**	**325**	*e*P	Pn	09 22 53.5	-0.2
SNET	**Serv Nac Est T**	**1.94**	**320**	*e*P	Pn	09 22 54.6	-0.1
SNET				*e*S	Sn	09 23 18.6	+0.3
TGUH	**Tegucigalpa,Un**	**1.97**	**20**	*e*P	Pn	09 22 55.1	0.0
TGUH				*e*S	Sn	09 23 20.1	+1.1
SSN	**San Juan del S**	**2.24**	**113**	*e*P	Pn	09 22 59.8	+1.1
BOAB	**BOACO BROADBAN**	**2.25**	**83**	*e*P	Pn	09 22 59.8	+0.9
SBLS	**San Blas**	**2.31**	**315**	*e*P	Pn	09 22 59.3	-0.4
RBDL	**Robledal**	**2.55**	**319**	*e*P	Pn	09 23 03.7	+0.6
RBDL				*e*S	Sn	09 23 36.1	+2.8
JTS	**JuntasAbangare**	**3.50**	**122**	*e*P	Pn	09 23 17.4	+1.3

*IDC **13** 09:26:15.6±0.7,31°.75N×104°.50E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/42, Error ellipse: s-maj=27.4km s-min=15.3km az=53.0*
*NEIC **13** 09:26:17.4±0.5,31°.75N×104°.40E, h10km, mb4.0/2, Error ellipse: s-maj=18.0km s-min=8.6km az=47.0*
*BJI **13** 09:26:19.0,31°.72N×104°.51E, h23km, mB4.3/1, mb4.2/4, ML4.0/12, Ms3.8/2, Ms7 3.6/4*

ISC 13 09:26:18.2±1.2,31°.76N±0°.04×104°.37E±0°.07, h15km±8km, n23,σ0°99/27, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.99**	**212**	Pg	**Pg**	**09 26 36.3**	**-1.2**
CD2				Sg	**Sg**	**09 26 51.4**	**+0.9**
CD2				smax			
	comp=N,13μm,0.5s						
LZH	**Lanzhou**	**4.34**	**354**	*e*Pg	**Pg**	**09 27 41.1**	**-0.2**
LZH				Sg	**Sb**	**09 28 29.8**	**+3.5**
LZH				smax			
	comp=N,250nm,0.8s						
LZH				smax			
	comp=E,290nm,0.6s						
ENH	**Enshi**	**4.64**	**107**	*e*Pn	**Pn**	**09 27 29.1**	**+1.4**
ENH				*e*Sn	**Sn**	**09 28 22.3**	**+1.0**
GYA	**Guiyang**	**5.65**	**159**	Pn	**Pn**	**09 27 42.1**	**+0.5**
GYA				Sn	**Sn**	**09 28 46.1**	**-0.1**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,130nm,0.7s						
SONM	**Songino Array**	**16.13**	**5**	Pn	**Pn**	**09 30 04.0**	**-0.3**
	comp=E,0.2nm,0.3s,baz=190,slow=16,SNR=2.7						
SONM				LR	LR	09 36 57.8	
	comp=E,92nm,21.6s,baz=264,slow=40						
SONM	**Songino Array**	**16.13**	**5**	Pn	**Pn**	**09 30 04.0**	**-0.3**
SONM				LR	LR	09 36 57.8	
KSRS	**Korea Array**	**20.18**	**67**	P	**P**	**09 30 50.9**	**-1.3**
	comp=E,6.4nm,0.8s,baz=255,slow=11,SNR=13						
MK31	**Makanchi Array**	**22.64**	**318**	*e*P	**P**	**09 31 19.5**	**+1.0**
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**09 31 19.2**	**+0.7**
	comp=E,1.0nm,0.7s,mb3.4,baz=118,slow=13,SNR=6.6						
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**09 31 19.2**	**+0.7**
TKM2	**Tokmak 2**	**25.33**	**304**	*e*P	**P**	**09 31 41.2**	**-3.1**
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**09 31 58.3**	**+0.2**
	comp=E,0.3nm,0.4s,mb3.2,baz=132,slow=9.0,SNR=4.2						
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**09 32 46.4**	**-1.0**
	comp=E,0.3nm,0.3s,mb3.5,baz=90,slow=8.6,SNR=2.3						
ABKAR	**Akbulak array**	**37.41**	**311**	*e*P	**P**	**09 33 31.2**	**+0.8**
	comp=E,0.3nm,0.3s,mb3.6						
PETK	**Petropavlovsk-**	**43.56**	**45**	P	**P**	**09 34 20.9**	**-0.4**
	comp=E,2.7nm,0.8s,mb4.0,baz=236,slow=10,SNR=3.0						
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**09 36 02.9**	**+2.3**
	comp=E,0.7nm,0.8s,mb3.8,baz=76,slow=6.1,SNR=3.1						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**09 36 03.5**	**-0.5**
	comp=E,0.8nm,0.5s,mb4.0,baz=61,slow=20,SNR=2.1						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**09 36 03.5**	**-0.5**
WRAB	**Tennant Creek**	**58.89**	**147**	*e*P	**P**	**09 36 16.3**	**-0.3**
	comp=E,3.0nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.89**	**147**	P	**P**	**09 36 16.0**	**-0.7**
	comp=E,2.9nm,0.6s,mb4.5,baz=339,slow=7.5,SNR=40						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**09 36 36.9**	**-0.5**
	comp=E,1.1nm,0.6s,mb4.2,baz=333,slow=6.6,SNR=22						
STKA	**Stephens Creek**	**72.43**	**147**	P	**P**	**09 37 43.1**	**-0.8**
	comp=E,0.9nm,0.4s,mb4.0,baz=328,slow=8.3,SNR=6.8						
YKA	**Yellowknife Ar**	**81.00**	**17**	P	**P**	**09 38 31.2**	**-0.7**
	comp=E,0.3nm,0.5s,mb3.5,baz=329,slow=5.1,SNR=10						

*IDC **13** 09:27:05.4±0.6,32°.53N×105°.47E, h0km, mb4.2/15, mb1 4.2/17, mb1mx4.1/29, mbtmp4.1/17, ML3.6/2, Error ellipse: s-maj=33.0km s-min=13.1km az=53.0*
*NEIC **13** 09:27:06.9±0.3,32°.56N×105°.58E, h10km, mb4.3/6, Error ellipse: s-maj=14.1km s-min=6.9km az=58.0*
*BJI **13** 09:27:07.1,32°.58N×105°.73E, h13km, mB4.6/5, mb4.3/8, ML4.2/6, Ms4.0/3, Ms7 3.6/3*

ISC 13 09:27:07.6±1.2,32°.51N±0°.04×105°.52E±0°.04, h14km±8km, n43,σ0°78/50, mb4.2/23, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.19**	**224**	Pg	**Pg**	**09 27 48.0**	**-1.5**
CD2				Sg	**Sg**	**09 28 18.9**	**+1.0**
CD2				smax			
	comp=N,4μm,0.7s						
XAN	**Xi'an**	**3.23**	**61**	Pn	**Pn**	**09 27 58.4**	**+0.5**
XAN				Pg	**Pb**	**09 28 05.3**	**+0.5**
XAN				Sn	**Sn**	**09 28 37.0**	**+0.8**
XAN				Sg	**Sb**	**09 28 43.9**	**-0.1**
XAN				smax			
	comp=N,580nm,0.8s						
XAN				smax			
	comp=E,290nm,0.9s						
LZH	**Lanzhou**	**3.83**	**339**	Pn	**Pn**	**09 28 06.9**	**+0.8**
LZH				Sg	**Sb**	**09 29 02.5**	**+1.3**
LZH				smax			
	comp=N,580nm,0.5s						
LZH				smax			
	comp=E,640nm,0.5s						
LZH				LR	LR		
	comp=N,1μm,5.0s						
LZH				LR	LR		
	comp=Z,1μm,6.5s						
WHN	**Wuhan**	**7.79**	**102**	Pn	**Pn**	**09 29 00.6**	**+0.1**
WHN				Sn	**Sn**	**09 30 28.0**	**-0.4**
WHN				LR	LR		
	comp=N,1μm,3.2s						
WHN				LR	LR		
	comp=E,1μm,5.6s						
GTA	**Gaotai**	**8.30**	**328**	*e*P	**Pn**	**09 29 06.1**	**-1.3**
GTA				pP		09 29 15.3	
GTA				sP		09 29 19.4	
GTA				S	**Sn**	**09 30 40.1**	**-0.7**
GTA				sS		09 30 49.6	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,68nm,5.4s						
GTA				LR	LR		
	comp=N,240nm,8.6s						
GTA				LR	LR		
	comp=E,160nm,7.7s						
GTA				LR	LR		
	comp=Z,150nm,7.1s						
SONM	**Songino Array**	**15.33**	**2**	Pn	**Pn**	**09 30 43.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=182,slow=12,SNR=2.8						
KSRS	**Korea Array**	**19.00**	**69**	P	**Pn**	**09 31 29.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=251,slow=10,SNR=8.1						
CN2	**Changchun**	**19.26**	**48**	*e*P	**Pn**	**09 31 29.3**	**-3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**09 32 09.2**	**-0.2**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**09 32 08.6**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.0,baz=118,slow=12,SNR=16						
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**09 32 40.7**	**+0.7**
	comp=Z,2.4nm,0.3s,mb4.1,baz=129,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**09 32 40.7**	**+0.7**
KURK	**Kurchatov**	**26.89**	**321**	P	**P**	**09 32 47.0**	**-0.8**
	comp=Z,2.2nm,0.6s,mb3.9,baz=119,slow=11,SNR=9.4						
AML	**Almayashu**	**26.94**	**300**	*e*P	**P**	**09 32 50.4**	**+2.0**
	comp=Z,4.4nm,0.9s,mb4.0						
ABKAR	**Akbulak array**	**37.67**	**310**	*e*P	**P**	**09 34 22.3**	**+0.2**
	comp=Z,4.1nm,0.8s,mb4.2						
AKTK	**Aktyubinsk**	**39.09**	**312**	P	**P**	**09 34 34.5**	**+0.4**
AKTO	**Aktyubinsk**	**39.09**	**312**	P	**P**	**09 34 34.5**	**+0.4**
	comp=Z,1.5nm,0.5s,mb4.0,baz=118,slow=15,SNR=7.1						
TIXI	**Tiksi**	**41.15**	**11**	*e*P	**P**	**09 34 49.6**	**-1.3**
	comp=Z,2.2nm,0.5s,mb4.0						
FITZ	**Fitzroy Crossi**	**53.88**	**156**	P	**P**	**09 36 29.5**	**-0.8**
	comp=Z,1.3nm,0.7s,mb3.9,baz=301,slow=5.9,SNR=2.7						
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**09 36 34.2**	**-0.2**
	comp=Z,3.8nm,0.5s,mb4.6						
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**09 36 48.3**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.5,baz=74,slow=8.9,SNR=11						
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**09 36 50.5**	**-1.0**
	comp=Z,2.8nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**09 36 52.7**	**-0.3**
	comp=Z,2.3nm,0.4s,mb4.6,baz=85,slow=6.6,SNR=12						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**09 36 52.7**	**-0.3**
BRTR	**Keskin Array B**	**57.10**	**299**	P	**P**	**09 36 53.4**	**-0.1**
	comp=Z,1.2nm,0.9s,mb3.9,baz=99,slow=7.6,SNR=4.5						
AKASG	**Malin Array Be**	**57.31**	**313**	P	**P**	**09 36 54.7**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.4,baz=69,slow=7.1,SNR=6.8						
AKASG	**Malin Array Be**	**57.31**	**313**	P	**P**	**09 36 54.7**	**-0.1**
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**09 37 07.6**	**+0.8**
	comp=Z,5.1nm,0.7s,mb4.7,baz=340,slow=7.7,SNR=20						
KWP	**Kalwaria Pacla**	**61.64**	**313**	*e*P	**P**	**09 37 25.0**	**+0.4**
	comp=Z,5.4nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**09 37 28.9**	**+1.0**
	comp=Z,2.8nm,0.6s,mb4.6,baz=332,slow=6.7,SNR=23						
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**09 37 40.1**	**-0.9**
	comp=Z,1.9nm,0.5s,mb4.4,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**09 37 40.5**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.4,baz=70,slow=6.6,SNR=7.9						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**09 37 40.5**	**-0.6**
STKA	**Stephens Creek**	**72.54**	**148**	P	**P**	**09 38 34.2**	**+0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=314,slow=8.5,SNR=3.6						
STKA	**Stephens Creek**	**72.54**	**148**	P	**P**	**09 38 34.2**	**+0.2**
LPG	**La Plagne**	**73.17**	**313**	*e*P	**P**	**09 38 38.1**	**+0.4**
	comp=Z,3.9nm,0.4s,mb4.4						
LPG	**La Plagne**	**73.17**	**313**	*e*P	**P**	**09 38 38.1**	**+0.4**
	comp=Z,2.0nm,0.4s,mb4.4						
LPL	**La Plagne**	**73.17**	**313**	*e*P	**P**	**09 38 38.0**	**+0.3**
TCF	**Toulx Ste Croi**	**75.50**	**316**	*e*P	**P**	**09 38 51.8**	**+0.5**
	comp=Z,6.2nm,0.8s,mb4.3						
TCF	**Toulx Ste Croi**	**75.50**	**316**	*e*P	**P**	**09 38 51.8**	**+0.5**
	comp=Z,3.1nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**80.00**	**18**	P	**P**	**09 39 15.5**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=333,slow=5.2,SNR=4.2						
YKA	**Yellowknife Ar**	**80.00**	**18**	P	**P**	**09 39 15.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**94.35**	**288**	P	**P**	**09 40 27.2**	**0.0**
	comp=Z,0.6nm,1.1s,mb3.9,baz=60,slow=5.7,SNR=2.7						

*CSEM **13** 09:28:06.5,37°.76N×15°.02E, h4km, After ROM*

ROM 13 09:28:06.5±0.1,37°.76N×15°.02E, h4km±2km, Ml3.5/20, Error ellipse: s-maj=2.7km s-min=1.5km az=122.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESLN	**Serra La Nave**	**0.07**	**208**	Pg	Pg	09 28 07.8	-0.3
ESLN				Sg	Sg	09 28 09.5	+0.4
	75μm,0.5s						
ESLN	**Serra La Nave**	**0.07**	**208**	Pg	Pg	09 28 07.8	-0.3
ESLN				Sg	Sg	09 28 09.5	+0.4
	75μm,0.5s						
MMME	**Mongiuffi-Meli**	**0.26**	**47**	Pg	Pg	09 28 12.4	+0.9
MMME				Sg	Sg	09 28 17.0	+2.2
MMME	**Mongiuffi-Meli**	**0.26**	**47**	Pg	Pg	09 28 12.4	+0.9
MMME				Sg	Sg	09 28 17.0	+2.2
GALF	**Gagliano Caste**	**0.36**	**262**	Pg	Pg	09 28 15.3	+1.8
	8μm,0.5s						
GALF	**Gagliano Caste**	**0.36**	**262**	Pg	Pg	09 28 15.3	+1.8
	8μm,0.5s						
HAGA	**Augusta**	**0.49**	**167**	Pg	Pg	09 28 17.3	+1.5
	2μm,1.0s						
HAGA	**Augusta**	**0.49**	**167**	Pg	Pg	09 28 17.3	+1.5
	2μm,1.0s						
AGST	**Augusta-Monte**	**0.53**	**162**	Pg	Pg	09 28 18.7	+2.1
	1μm,0.8s						
AGST	**Augusta-Monte**	**0.53**	**162**	Pg	Pg	09 28 18.7	+2.1
	1μm,0.8s						
MILZ	**Milazzo**	**0.54**	**18**	Pg	Pg	09 28 17.3	+0.4
	7μm,0.9s						
MILZ	**Milazzo**	**0.54**	**18**	Pg	Pg	09 28 17.3	+0.4
	7μm,0.9s						
MTTG	**Motta San Giov**	**0.59**	**65**	Pg	Pg	09 28 19.2	+1.4
	2μm,0.7s						
MTTG	**Motta San Giov**	**0.59**	**65**	Pg	Pg	09 28 19.2	+1.4
	2μm,0.7s						
SSY	**Sortino**	**0.61**	**176**	Pg	Pg	09 28 18.6	+0.5
	2μm,0.9s						
SSY	**Sortino**	**0.61**	**176**	Pg	Pg	09 28 18.6	+0.5
	2μm,0.9s						
VPL	**Vulcano Piano**	**0.62**	**357**	Pg	Pg	09 28 18.9	+0.5
VPL	**Vulcano Piano**	**0.62**	**357**	Pg	Pg	09 28 18.9	+0.5
HVZN	**Vizzini**	**0.63**	**203**	Pg	Pg	09 28 20.3	+1.8
	2μm,0.7s						
HVZN	**Vizzini**	**0.63**	**203**	Pg	Pg	09 28 20.3	+1.8
	2μm,0.7s						
MSRU	**Castanea**	**0.64**	**37**	Pg	Pg	09 28 19.0	+0.3
	38μm,3.1s						
MSRU	**Castanea**	**0.64**	**37**	Pg	Pg	09 28 19.0	+0.3
	38μm,3.1s						
LLI	**Lipari**	**0.69**	**355**	Pg	Pg	09 28 20.5	+0.8
	10μm,0.8s						
LLI	**Lipari**

Ms1 3.5/1, ms1mx2.6/40, Error ellipse: s-maj=24.0km s-min=11.3km az=55.0
NEIC ***13*** *09:41:19.2±0.3, 32°.01N×104°.44E, h10km, mb4.2/10, Error ellipse: s-maj=11.1km s-min=6.6km az=54.0*
MOS ***13*** *09:41:20.3±1.1, 32°.03N×104°.67E, h34km, mb4.6/11, Error ellipse: s-maj=14.1km s-min=7.9km az=105.5*
BJI ***13*** *09:41:21.0, 32°.04N×104°.48E, h20km, mB4.8/11, mb4.4/19, ML4.3/22, Ms4.2/18, Ms7 4.0/16*
ISC 13 09:41:18.5±0.8, 32°.05N±0°.02×104°.60E±0°.04, h7km±5km, n79, σ1§07/90, mb4.2/35, MS3.7/2, 9C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.34**	**212**	Pg	**Pg**	**09 41 44.1**	**-0.2**
CD2				Sg	**Sg**	**09 42 01.6**	**-0.1**
CD2				smax			
	comp=N,12μm,0.7s						
LZH	**Lanzhou**	**4.07**	**351**	*e*Pn	**Pn**	**09 42 24.3**	**+3.1**
LZH				Pg	**Pg**	**09 42 35.8**	**-0.7**
LZH				Sn	**Sn**	**09 43 14.8**	**+5.7**
LZH				Sg	**Sg**	**09 43 27.8**	**-1.5**
LZH				smax			
	comp=N,600nm,0.7s						
LZH				smax			
	comp=E,690nm,0.5s						
LZH				LR	LR		
	comp=N,1μm,5.4s						
LZH				LR	LR		
	comp=Z,2μm,8.6s						
XAN	**Xi'an**	**4.14**	**60**	Pg	**Pg**	**09 42 34.4**	**-3.3**
XAN				Sg	**Sg**	**09 43 31.6**	**+0.3**
XAN				smax			
	comp=N,750nm,0.8s						
XAN				smax			
	comp=E,410nm,0.7s						
ENH	**Enshi**	**4.55**	**112**	*e*Pn	**Pn**	**09 42 32.7**	**+4.9**
ENH				*e*Sn	**Sn**	**09 43 21.6**	**+0.7**
GYA	**Guiyang**	**5.86**	**162**	Pn	**Pn**	**09 42 47.3**	**+1.6**
GYA				Sn	**Sn**	**09 43 53.6**	**+0.4**
GYA				smax			
	comp=N,520nm,0.8s						
GYA				smax			
	comp=E,320nm,0.8s						
GYA				LR	LR		
	comp=N,3μm,5.6s						
GYA				LR	LR		
	comp=E,4μm,6.3s						
GYA				LR	LR		
	comp=Z,2μm,4.2s						
KMI	**Kunming**	**7.09**	**194**	Pn	**Pn**	**09 43 03.5**	**+0.8**
KMI				Sn	**Sn**	**09 44 20.9**	**-2.7**
KMI				smax			
	comp=N,64nm,1.2s						
KMI				smax			
	comp=E,83nm,1.1s						
KMI				LR	LR		
	comp=N,440nm,6.2s						
KMI				LR	LR		
	comp=E,770nm,5.7s						
GTA	**Gaotai**	**8.31**	**333**	*e*P	**Pn**	**09 43 20.8**	**+1.5**
GTA				pP		09 43 24.8	
GTA				sP		09 43 27.9	
GTA				S	**Sn**	**09 44 58.8**	**+5.4**
GTA				sS		09 45 08.6	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=N,330nm,9.8s						
GTA				LR	LR		
	comp=E,280nm,9.8s						
GTA				LR	LR		
	comp=Z,530nm,10.4s						
WHN	**Wuhan**	**8.48**	**98**	*e*P	**Pn**	**09 43 23.3**	**+1.6**
WHN				S	**Sn**	**09 44 54.5**	**-3.2**
WHN				LR	LR		
	comp=N,2μm,6.0s						
WHN				LR	LR		
	comp=E,1μm,5.0s						
HHC	**Hu-ho-hao-te**	**10.41**	**31**	*e*P	**Pn**	**09 43 54.0**	**+5.8**
HHC				pP		09 43 57.3	
HHC				PP		09 44 02.5	
HHC				S	**Sn**	**09 45 54.1**	**+8.9**
HHC				sS		09 45 59.0	
HHC				SS		09 46 07.3	
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
HHC				LR	LR		
	comp=N,440nm,5.0s						
HHC				LR	LR		
	comp=E,500nm,5.7s						
HHC				LR	LR		
	comp=Z,370nm,5.8s						
NJ2	**Nanjing**	**12.10**	**86**	*e*P	**Pn**	**09 44 07.6**	**-3.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.46**	**202**	Pn	**Pn**	**09 44 43.8**	**+0.1**
	baz=14,slow=11						
SONM	**Songino Array**	**15.82**	**4**	Pn	**Pn**	**09 45 03.3**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=186,slow=8.4,SNR=10						
ZAK	**Zakamensk**	**18.34**	**357**	*e*P	**Pn**	**09 45 26.9**	**-6.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TLY	**Talaya**	**19.63**	**358**	*e*P	**Pn**	**09 45 55.3**	**+6.5**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TLY				MLR	MLR		
	comp=Z,149nm,13.0s						
MOY	**Mondy**	**19.78**	**353**	*e*P	**Pn**	**09 45 51.9**	**+1.3**
KSRS	**Korea Array**	**19.89**	**68**	P	**Pn**	**09 45 52.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=252,slow=10,SNR=7.8						
CN2	**Changchun**	**20.14**	**48**	*e*P	**P**	**09 45 54.5**	**+1.4**
CN2				*e*S	**S**	**09 49 47.8**	**+8.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,10.0s,MS4.2						
CN2				LR	LR		
	comp=E,400nm,10.0s,MS4.2						
CN2				LR	LR		
	comp=Z,300nm,11.0s,MS3.9						
MK31	**Makanchi Array**	**22.56**	**317**	*e*P	**P**	**09 46 19.3**	**+0.2**
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**09 46 19.4**	**+0.3**
	comp=Z,3.3nm,0.7s,mb3.9,baz=117,slow=12,SNR=16						
MKAR				PcP	PcP	09 50 11.4	-1.1
	comp=Z,0.5nm,0.8s,baz=164,slow=0.6,SNR=4.1						
MKAR				LR	LR	09 55 59.6	
	comp=Z,130nm,19.2s,MS3.4,baz=50,slow=39						
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**09 46 19.4**	**+0.3**
MKAR						09 50 11.5	
TKM2	**Tokmak 2**	**25.32**	**304**	*e*P	**P**	**09 46 47.2**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
TKM2	**Tokmak 2**	**25.32**	**304**	*e*P	**P**	**09 46 47.2**	**+1.4**
	comp=Z,3.2nm,0.7s,mb4.0						
AAK	**Ala-Archa**	**26.03**	**303**	P	**P**	**09 46 53.0**	**+0.7**
	comp=Z,0.8nm,0.3s,mb3.7,baz=0.0,slow=20,SNR=3.1						
AAK	**Ala-Archa**	**26.03**	**303**	*e*P	**P**	**09 46 52.8**	**+0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
AAK	**Ala-Archa**	**26.03**	**303**	*e*P	**P**	**09 46 52.8**	**+0.5**
	comp=Z,2.9nm,0.8s,mb3.9						
ZALV	**Zalesovo Beam**	**26.06**	**333**	P	**P**	**09 46 52.5**	**+0.1**
	comp=Z,3.3nm,0.3s,mb4.3,baz=134,slow=9.2,SNR=6.9						
AML	**Almayashu**	**26.50**	**301**	*e*P	**P**	**09 46 58.0**	**+1.6**
	comp=Z,1.9nm,0.6s,mb3.8						
KLR	**Kul'dur**	**26.60**	**42**	*e*P	**P**	**09 46 55.2**	**-2.1**
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**09 46 58.3**	**-0.3**
	comp=Z,1.0nm,0.7s,mb3.5,baz=137,slow=8.7,SNR=12						
KURK				PcP	PcP	09 50 20.6	-1.0
	comp=Z,0.9nm,0.5s,baz=122,slow=2.0,SNR=5.4						
BVAR	**Borovoye Array**	**32.32**	**321**	P	**P**	**09 47 48.0**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.6,baz=111,slow=8.1,SNR=3.6						
BVAR				PcP	PcP	09 50 34.8	-1.0
	comp=Z,1.1nm,0.7s,baz=107,slow=1.5,SNR=4.0						
BRVK	**Borovoye**	**32.39**	**321**	*ce*P	**P**	**09 47 52.0**	**+3.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ABKAR	**Akbulak array**	**37.37**	**311**	*e*P	**P**	**09 48 31.8**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**38.81**	**312**	P	**P**	**09 48 43.6**	**-0.1**
AKTK				PcP	PcP	09 50 54.2	-0.7
AKTO	**Aktyubinsk**	**38.81**	**312**	P	**P**	**09 48 43.6**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.0,baz=104,slow=11,SNR=6.5						
AKTO				PcP	PcP	09 50 54.2	-0.7
	comp=Z,0.6nm,0.4s,baz=90,slow=6.1,SNR=2.7						
KAPI	**Kappang**	**39.58**	**156**	P	**P**	**09 48 49.4**	**-1.2**
	comp=Z,3.4nm,0.3s,mb4.5,baz=315,slow=14,SNR=3.6						
ARU	**Arti**	**39.95**	**321**	*c i*P	**P**	**09 48 53.2**	**0.0**
ARU						09 50 25.1	
ARU				S	**S**	**09 54 58.7**	**+0.2**
ARU				SS	SS	09 57 54.1	-0.8
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
TIXI	**Tiksi**	**41.74**	**11**	*e*P	**P**	**09 49 06.2**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
TIXI	**Tiksi**	**41.74**	**11**	*e*P	**P**	**09 49 07.3**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.2						
SEY	**Seymchan**	**43.06**	**30**	*e*P	**P**	**09 49 16.3**	**-2.3**
PETK	**Petropavlovsk-**	**43.22**	**45**	P	**P**	**09 49 23.3**	**+3.3**
	comp=Z,5.6nm,0.9s,mb4.3,baz=248,slow=3.4,SNR=4.4						
BILL	**Bilibino**	**50.14**	**26**	*e*P	**P**	**09 50 12.2**	**-1.9**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.4						
OBN	**Obninsk**	**52.06**	**318**	*e*P	**P**	**09 50 35.9**	**+7.2**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
KNA	**Kununurra**	**52.88**	**150**	*e*P	**P**	**09 50 35.0**	**-0.1**
	comp=Z,15nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.79**	**155**	*e*P	**P**	**09 50 41.4**	**-0.4**
	comp=Z,4.2nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.79**	**155**	P	**P**	**09 50 41.5**	**-0.3**
	comp=Z,2.8nm,0.5s,mb4.4,baz=338,slow=7.6,SNR=18						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**09 51 00.9**	**-0.5**
	comp=Z,3.8nm,0.7s,mb4.5,baz=80,slow=7.6,SNR=15						
BR131	**Keskin Array S**	**56.64**	**299**	*e*P	**P**	**09 51 01.9**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.8						
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**09 51 01.9**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.9,baz=105,slow=6.3,SNR=5.4						
BRTR	**Keskin Array B**	**56.64**	**299**	*ce*P	**P**	**09 51 06.6**	**+4.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**09 51 04.3**	**-0.3**
	comp=Z,2.3nm,0.7s,mb4.3,baz=90,slow=7.6,SNR=5.8						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**09 51 04.0**	**-1.0**
	comp=Z,1.8nm,0.4s,mb4.5,baz=68,slow=7.5,SNR=6.0						
AKASG	**Malin Array Be**	**57.05**	**313**	*ce*P	**P**	**09 51 08.6**	**+3.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**09 51 04.0**	**-1.0**
WRAB	**Tennant Creek**	**59.03**	**147**	*e*P	**P**	**09 51 19.3**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**59.03**	**147**	*e*P	**P**	**09 51 19.3**	**+0.2**
	comp=Z,10nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**59.03**	**147**	P	**P**	**09 51 19.3**	**+0.2**
	comp=Z,6.4nm,0.7s,mb4.8,baz=340,slow=7.4						
ASAR	**Alice Springs**	**62.09**	**149**	P	**P**	**09 51 40.1**	**+0.2**
	comp=Z,2.4nm,0.7s,mb4.4,baz=334,slow=6.5,SNR=28						
NB2	**NORSAR Subarra**	**64.09**	**327**	P	**P**	**09 51 51.2**	**-1.7**
	comp=Z,1.4nm,0.7s,mb4.1,baz=71,slow=6.9						
NOA	**NORSAR Array B**	**64.09**	**327**	P	**P**	**09 51 51.6**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=79,slow=4.7,SNR=5.0						
GERES	**GERESS Array B**	**67.19**	**314**	P	**P**	**09 52 13.4**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=60,slow=7.9,SNR=6.7						
KDAK	**Kodiak Island**	**69.82**	**34**	*ce*P	**P**	**09 52 29.2**	**-0.2**
BFO	**Black Forest**	**70.64**	**315**	*e*P	**P**	**09 52 34.2**	**-0.4**
BFO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
BFO	**Black Forest**	**70.64**	**315**	*e*P	**P**	**09 52 34.2**	**-0.5**
	comp=Z,5.4nm,0.5s,mb4.7						
BBOO	**Buckleboo**	**71.02**	**152**	*e*P	**P**	**09 52 36.4**	**-0.5**
	comp=Z,2.6nm,1.2s,mb4.0						
INK	**Inuvik**	**71.12**	**19**	*e*P	**P**	**09 52 37.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**71.12**	**19**	*e*P	**P**	**09 52 37.0**	**-0.2**
	comp=Z,4.4nm,0.9s,mb4.4						
KMBO	**Kilima Mbogo**	**71.54**	**257**	P	**P**	**09 52 41.1**	**+0.6**
	comp=Z,3.6nm,0.8s,mb4.4,baz=49,slow=12,SNR=13						
STKA	**Stephens Creek**	**72.58**	**148**	*e*P	**P**	**09 52 45.8**	**-0.5**
	comp=Z,2.0nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**72.58**	**148**	P	**P**	**09 52 46.2**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=324,slow=7.1,SNR=6.2						
SMF	**Signal de Mont**	**74.12**	**315**	*e*P	**P**	**09 52 54.7**	**-0.7**
CMSA	**Cobar Meteorol**	**74.24**	**144**	*e*P	**P**	**09 52 56.6**	**+0.4**
CAF	**Calviac**	**76.07**	**314⇑**	*i*P	**P**	**09 53 06.7**	**0.0**
	comp=Z,6.1nm,0.7s,mb4.4						
CAF	**Calviac**	**76.07**	**314⇑**	*i*P	**P**	**09 53 06.7**	**0.0**
CAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CAF	**Calviac**	**76.07**	**314⇑**	*i*P	**P**	**09 53 06.7**	**0.0**
	comp=Z,3.0nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**80.67**	**17**	P	**P**	**09 53 31.4**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=327,slow=5.2,SNR=34						
FFC	**Flin Flon**	**90.59**	**15**	*ce*P	**P**	**09 54 22.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**93.75**	**288**	P	**P**	**09 54 35.0**	**-1.6**
	comp=Z,0.6nm,1.1s,mb4.0,baz=29,slow=3.3,SNR=2.9						
VNA2	**Neumayer--Watz**	**127.11**	**202**	*e*PKPdf	PKPdf	10 00 21.1	-1.3
VNA2				*e*		10 00 25.6	
OTAV	**Otavalo**	**147.76**	**6**	*e*PKPbc	PKPbc	10 01 05.1	+0.4
OTAV				*e*PKPab	PKPab	10 01 08.0	+1.0

ISCJB ***13*** *09:55:09.2±0.4, 51°.47N±0°.02×6°.43E±0°.04, h0km, Error ellipse: s-maj=4.1km s-min=2.4km az=137.9*
CSEM ***13*** *09:55:10.3±0.3, 51°.53N×6°.45E, h1km, ML3.3/8, Error ellipse: s-maj=5.5km s-min=3.5km az=145.0*
LDG ***13*** *09:55:11.5±0.1, 51°.53N×6°.52E, h1km, Ml3.3/21, Error ellipse: s-maj=1.3km s-min=1.0km az=12.0, Suspected Mining induced.*
BNS ***13*** *09:55:11.6±0.7, 51°.55N×6°.56E, h1km, ML2.6, GESPUERT IN RHEINBERG*
BUG ***13*** *09:55:11.3, 51°.52N×6°.60E, h1km, ML2.4*
NEIC ***13*** *09:55:11.5, 51°.53N×6°.52E, h1km, ML3.3(LDG), After LDG.*
BGR ***13*** *09:55:12.0±0.3, 51°.52N×6°.56E, h1km, ML2.7/5, Error ellipse: s-maj=3.3km s-min=2.2km az=128.0*
ISC 13 09:55:10.2±0.4, 51°.51N±0°.02×6°.41E±0°.03, h0km, n89, σ1§26/154, 1C, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.10**	**84**	Pg	**Pg**	**09 55 12.2**	**+0.1**
BRHE				Sg	**Sg**	**09 55 13.5**	**+0.2**
BRHE	**Rheinberg**	**0.10**	**84**	Pg	**Pg**	**09 55 12.2**	**+0.1**
BRHE				Sg	**Sg**	**09 55 13.5**	**+0.2**
LAUG	**Laupendahl**	**0.37**	**115**	*e*Pg	**Pg**	**09 55 17.4**	**+0.3**
LAUG	**Laupendahl**	**0.37**	**115**	Pg	**Pg**	**09 55 17.5**	**+0.3**
RODG	**Roetgen-Dahlhe**	**0.39**	**202**	*i* Sg	**Sg**	**09 55 27.4**	**+4.8**
RODG	**Roetgen-Dahlhe**	**0.39**	**202**	Sg	**Sg**	**09 55 27.4**	**+4.8**
WTSB	**Winterswijk**	**0.52**	**27**	*e*Pg	**Pg**	**09 55 21.1**	**+0.9**
	SNR=6.1						
WTSB				*e*Sg	**Sg**	**09 55 26.9**	**0.0**
	SNR=3.4						
WTSB	**Winterswijk**	**0.52**	**27**	*e*Pg	**Pg**	**09 55 20.4**	**+0.2**
	46nm,0.4s						
WTSB				*e*Sg	**Sg**	**09 55 27.0**	**+0.1**
WTSB	**Winterswijk**	**0.52**	**27**	Pg	**Pg**	**09 55 21.1**	**+1.0**
	SNR=6.1						
WTSB				Sg	**Sg**	**09 55 26.9**	**0.0**
	SNR=3.4						
BUG	**Bochum--Univer**	**0.54**	**97⇑**	*e*Pg	**Pg**	**09 55 20.3**	**-0.2**
BUG				Sg	**Sg**	**09 55 26.9**	**-0.6**
HOBG	**Hohbusch**	**0.78**	**132**	*e*Pg	**Pg**	**09 55 25.9**	**+0.8**
HOBG	**Hohbusch**	**0.78**	**132**	Pg	**Pg**	**09 55 25.9**	**+0.8**
HGN	**Heimansgroeve**	**0.80**	**202**	*e*Pg	**Pg**	**09 55 28.0**	**+2.5**
	SNR=20						
HGN				*e*Sg	**Sg**	**09 55 39.8**	**+4.0**
	SNR=12						
HGN	**Heimansgroeve**	**0.80**	**202**	*e*Pg	**Pg**	**09 55 29.1**	**+3.6**
	57nm,0.2s,baz=30						
HGN				*e*Sg	**Sg**	**09 55 41.9**	**+6.0**
HGN	**Heimansgroeve**	**0.80**	**202**	Pg	**Pg**	**09 55 28.0**	**+2.5**
	SNR=20						
HGN				Sg	**Sg**	**09 55 39.8**	**+3.9**
	SNR=12						
DREG	**Dreilaegerbach**	**0.85**	**188**	*e*Pg	**Pg**	**09 55 28.2**	**+1.7**
	SNR=27						
DREG				*e*Sg	**Sg**	**09 55 40.5**	**+3.0**
	SNR=13						
DREG	**Dreilaegerbach**	**0.85**	**188**	Pg	**Pg**	**09 55 28.2**	**+1.7**
	SNR=27						
DREG				Sg	**Sg**	**09 55 40.5**	**+3.0**
	SNR=13						
KLL	**Kalltalsperre**	**0.86**	**184**	*e*Pg	**Pg**	**09 55 28.6**	**+2.0**
KLL	**Kalltalsperre**	**0.86**	**184**	Pg	**Pg**	**09 55 28.6**	**+1.9**
MEM	**Membach**	**0.93**	**196**	P	**Pg**	**09 55 27.7**	**-0.4**
MEM	**Membach**	**0.93**	**196**	*e*Pg	**Pg**	**09 55 30.1**	**+2.1**
	SNR=7.9						
MEM				*e*Sg	**Sg**	**09 55 43.3**	**+3.2**
	SNR=12						
MEM	**Membach**	**0.93**	**196**	Pg	**Pg**	**09 55 30.1**	**+2.1**
	SNR=7.9						
MEM				Sg	**Sg**	**09 55 43.3**	**+3.2**
	SNR=12						
STB	**Steinbach**	**0.95**	**163**	*e*Pg	**Pg**	**09 55 30.1**	**+1.8**
STB				*e*Sg	**Sg**	**09 55 43.5**	**+2.8**
	157nm,0.6s						
STB	**Steinbach**	**0.95**	**163**	Pg	**Pg**	**09 55 30.1**	**+1.7**
STB				Sg	**Sg**	**09 55 43.5**	**+2.8**
	157nm,0.6s						
IBBN	**Ibbenburen**	**1.16**	**46**	*e*Sg	**Sg**	**09 55 47.0**	**-0.3**
	SNR=4.8						
IBBN	**Ibbenburen**	**1.16**	**46**	Sg	**Sg**	**09 55 47.0**	**-0.3**
	SNR=4.8						
HILG	**Hillesheim**	**1.23**	**172**	*e*Pg	**Pg**	**09 55 35.1**	**+1.4**
HILG	**Hillesheim**	**1.23**	**172**	Pg	**Pg**	**09 55 35.1**	**+1.4**
BCLA	**Clavier**	**1.29**	**213**	P	**Pg**	**09 55 37.3**	**+2.4**
BCLA	**Clavier**	**1.29**	**213**	P	**Pg**	**09 55 37.3**	**+2.4**
KOE	**Koeppel**	**1.37**	**142**	*e*Pg	**Pg**	**09 55 36.2**	**-0.1**
KOE	**Koeppel**	**1.37**	**142**	Pg	**Pg**	**09 55 36.2**	**-0.1**
BGG	**Burgeitz**	**1.43**	**155**	*e*Pg	**Pg**	**09 55 37.8**	**+0.3**
BGG	**Burgeitz**	**1.43**	**155**	Pg	**Pg**	**09 55 37.8**	**+0.3**
UCC	**Uccle**	**1.47**	**242**	*e*Sn	**Sn**	**09 55 59.6**	**+1.7**
	SNR=4.6						
UCC	**Uccle**	**1.47**	**242**	Sn	**Sn**	**09 55 59.6**	**+1.7**
	SNR=4.6						
GIVF	**Givet**	**1.73**	**216**	*e*Pg	**Pg**	**09 55 44.8**	**+1.5**
GIVF				*e*Sn	**Sn**	**09 56 04.2**	**0.0**
GIVF				*e*Sg	**Sg**	**09 56 07.8**	**+2.1**
	94nm,0.3s						
GIVF	**Givet**	**1.73**	**216**	*e*Pn	**Pn**	**09 55 42.4**	**+1.0**
GIVF				*e*Pg	**Pg**	**09 55 44.8**	**+1.5**
GIVF				*e*Sn	**Sn**	**09 56 04.2**	**0.0**
GIVF				*e*Sg	**Sg**	**09 56 07.8**	**+2.1**
GIVF	**Givet**	**1.73**	**216**	*e*Pn	**Pn**	**09 55 42.4**	**+1.0**
GIVF	**Givet**	**1.73**	**216**	*e*Pg	**Pg**	**09 55 44.8**	**+1.5**
GIVF				*e*Sn	**Sn**	**09 56 04.2**	**0.0**
GIVF				*e*Sg	**Sg**	**09 56 07.8**	**+2.1**
	47nm,0.3s						
TNS	**Taunus Mts**	**1.82**	**134**	*e*Pg	**Pg**	**09 55 44.8**	**-0.3**
	SNR=6.2						
TNS				*e*Sg	**Sg**	**09 56 08.8**	**+0.2**
	SNR=2.7						
TNS	**Taunus Mts**	**1.82**	**134**	Pg	**Pg**	**09 55 44.8**	**-0.2**
	SNR=6.2						
TNS				Sg	**Sg**	**09 56 08.8**	**+0.2**
	SNR=2.7						
WLF	**Walferdange**	**1.85**	**185**	*e*Pg	**Pg**	**09 55 48.2**	**+2.6**
	SNR=2.6						
WLF				*e*Sg	**Sg**	**09 56 10.2**	**+0.6**
	SNR=6.8						
WLF	**Walferdange**	**1.85**	**185**	Pg	**Pg**	**09 55 48.2**	**+2.6**
	SNR=2.6						
WLF				Sg	**Sg**	**09 56 10.2**	**+0.6**
	SNR=6.8						
BAIF	**Baives**	**2.01**	**225**	*e*Pg	**Pg**	**09 55 50.2**	**+1.5**
BAIF				*e*Sn	**Sn**	**09 56 10.0**	**-1.2**
BAIF				*e*Sg	**Sg**	**09 56 16.4**	**+1.6**
	37nm,0.4s						
BAIF	**Baives**	**2.01**	**225**	*e*Pn	**Pn**	**09 55 45.7**	**+0.4**
BAIF				*e*Pg	**Pg**	**09 55 50.2**	**+1.5**
BAIF				*e*Sn	**Sn**	**09 56 10.0**	**-1.2**
BAIF				*e*Sg	**Sg**	**09 56 16.4**	**+1.6**
BAIF	**Baives**	**2.01**	**225**	*e*Pn	**Pn**	**09 55 45.7**	**+0.4**
BAIF	**Baives**	**2.01**	**225**	*e*Pg	**Pg**	**09 55 50.2**	**+1.5**
BAIF				*e*Sn	**Sn**	**09 56 10.0**	**-1.2**
BAIF				*e*Sg	**Sg**	**09 56 16.4**	**+1.6**
	19nm,0.4s						
GTTG	**Gyttingen**	**2.22**	**88**	*e*Sg	**Sg**	**09 56 18.8**	**-2.6**
	SNR=2.9						
GTTG	**Gyttingen**	**2.22**	**88**	Sg	**Sg**	**09 56 18.8**	**-2.6**
	SNR=2.9						
UBBA	**Unterbreizbach**	**2.36**	**106**	*e*Pg	**Pg**	**09 55 54.8**	**-0.6**
	SNR=2.4						
UBBA	**Unterbreizbach**	**2.36**	**106**	Pg	**Pg**	**09 55 54.8**	**-0.6**
	SNR=2.4						
CLZ	**Clausthal**	**2.49**	**81**	*e*Pg	**Pg**	**09 55 56.8**	**-1.0**
	SNR=3.7						
CLZ	**Clausthal**	**2.49**	**81**	Pg	**Pg**	**09 55 56.8**	**-1.0**
	SNR=3.7						
MEZF	**Maizieres J'vi**	**3.13**	**197**	*e*Pn	**Pn**	**09 56 00.8**	**+0.1**
MEZF				*e*Sg	**Sg**	**09 56 51.2**	**+0.5**
	29nm,0.4s						
MEZF	**Maizieres J'vi**	**3.13**	**197**	*e*Pn	**Pn**	**09 56 00.8**	**+0.1**
CDF	**Champ du Feu**	**3.15**	**169**	*e*Pn	**Pn**	**09 56 00.6**	**-0.3**
CDF				*e*Sg	**Sg**	**09 56 50.2**	**-1.0**
	17nm,0.5s						
CDF	**Champ du Feu**	**3.15**	**169**	*e*Pn	**Pn**	**09 56 00.6**	**-0.3**
CDF				*e*Sg	**Sg**	**09 56 50.2**	**-1.0**
	8.6nm,0.5s						
MOX	**Moxa**	**3.39**	**103**	*e*SG	**Sg**	**09 56 54.9**	**-4.2**
BFO	**Black Forest**	**3.41**	**158**	*e*Pn	**Pn

TCF *e*Sg **Sg** **09 58 18.3 -1.6**
8.5nm,0.6s
TCF Toulx Ste Croi 5.91 210 *e*Pn **Pn** **09 56 39.1 +0.2**
MFF Saint Martin d 6.53 224 *e*Pn **Pn** **09 56 47.2 -0.2**
MFF *e*Sn **Sn** **09 57 58.8 -3.7**
3.9nm,0.4s
MFF Saint Martin d 6.53 224 *e*Pn **Pn** **09 56 47.2 -0.2**
ROSF Rostrenen 7.01 247 *e*Pn **Pn** **09 56 54.1 +0.1**
ROSF *e*Sn **Sn** **09 58 10.6 -3.7**
2.5nm,0.4s
ROSF Rostrenen 7.01 247 *e*Pn **Pn** **09 56 54.1 +0.1**
CAF Calviac 7.20 205 *e*Pn **Pn** **09 56 55.8 -0.7**
CAF *e*Sn **Sn** **09 58 14.4 -4.5**
1.9nm,0.3s
CAF Calviac 7.20 205 *e*Pn **Pn** **09 56 55.8 -0.7**

IDC 13 09:57:38.1±1.1, 32°.37N×104°.93E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, Error ellipse: s-maj=75.0km s-min=22.1km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.52**	**316**	P	P	10 02 40.5	+1.2
	0.4nm,0.6s,baz=112,slow=9.6,SNR=3.7						
KURK	**Kurchatov**	**26.68**	**321**	P	P	10 03 17.8	-0.9
	0.2nm,0.4s,baz=126,slow=9.4,SNR=2.0						
WRA	**Warramunga Arr**	**59.14**	**147**	P	P	10 07 40.4	-0.3
	0.5nm,0.6s,baz=339,slow=7.5,SNR=6.2						
ASAR	**Alice Springs**	**62.22**	**150**	P	P	10 08 02.1	+0.5
	0.3nm,0.7s,baz=333,slow=6.4,SNR=3.8						
YKA	**Yellowknife Ar**	**80.28**	**17**	P	P	10 09 50.7	+0.2
	0.2nm,0.7s,baz=329,slow=4.9,SNR=4.7						

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*ISCJB **13** 10:07:48.7±0.4, 37°.76N±0°.03×15°.07E±0°.05, h11km±4km, mb3.6/4, Error ellipse: s-maj=6.7km s-min=4.8km az=36.8*
*ROM **13** 10:07:48.3±0.1, 37°.75N×15°.07E, h1km, Ml3.6/15, Error ellipse: s-maj=2.3km s-min=1.5km az=126.0*
*CSEM **13** 10:07:49.3±0.1, 37°.75N×15°.04E, h8km, ML3.9, Error ellipse: s-maj=3.9km s-min=2.8km az=114.0*
*NEIC **13** 10:07:49.0, 37°.77N×15°.00E, h1km, ML3.9(ROM), After ROM.*
*IDC **13** 10:07:49.0±1.8, 37°.75N×15°.23E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.5/28, mbtmp3.6/7, ML3.9/2, Error ellipse: s-maj=44.6km s-min=13.0km az=146.0*
ISC 13 10:07:49.5±0.4, 37°.76N±0°.03×15°.07E±0°.04, h5km±5km, n57, σ0s92/59, mb3.6/4, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESLN	**Serra La Nave**	**0.10**	**231**	Pg	**Pg**	**10 07 50.7**	**-0.8**
ESLN				Sg	**Sg**	**10 07 52.2**	**-0.7**
	160μm,0.9s						
ESLN	**Serra La Nave**	**0.10**	**231**	Pg	**Pg**	**10 07 50.7**	**-0.8**
ESLN				Sg	**Sg**	**10 07 52.2**	**-0.7**
	160μm,0.9s						
GALF	**Gagliano Caste**	**0.40**	**264**	Pg	**Pg**	**10 07 57.5**	**+0.3**
	51μm,0.9s						
GALF	**Gagliano Caste**	**0.40**	**264**	Pg	**Pg**	**10 07 57.5**	**+0.3**
	51μm,0.9s						
HAGA	**Augusta**	**0.47**	**172**	Pg	**Pg**	**10 07 58.8**	**+0.2**
	4μm,1.7s						
HAGA	**Augusta**	**0.47**	**172**	Pg	**Pg**	**10 07 58.8**	**+0.2**
	4μm,1.7s						
AGST	**Augusta-Monte**	**0.51**	**166**	Pg	**Pg**	**10 07 59.5**	**+0.2**
AGST	**Augusta-Monte**	**0.51**	**166**	Pg	**Pg**	**10 07 59.5**	**+0.2**
MILZ	**Milazzo**	**0.53**	**14**	Pg	**Pg**	**10 07 59.7**	**0.0**
	7μm,1.0s						
MILZ	**Milazzo**	**0.53**	**14**	Pg	**Pg**	**10 07 59.7**	**0.0**
	7μm,1.0s						
VAE	**Valguarnera**	**0.59**	**242**	Pg	**Pg**	**10 08 03.7**	**+2.9**
	8.8nm,0.3s,baz=24,slow=10.0,SNR=1.8						
VAE	**Valguarnera**	**0.59**	**242**	Pg	**Pg**	**10 08 03.7**	**+2.9**
SSY	**Sortino**	**0.60**	**180**	Pg	**Pg**	**10 08 00.7**	**-0.3**
	3μm,1.0s						
SSY	**Sortino**	**0.60**	**180**	Pg	**Pg**	**10 08 00.7**	**-0.3**
	3μm,1.0s						
MSRU	**Castanea**	**0.61**	**34**	Pg	**Pg**	**10 08 01.5**	**+0.2**
	7μm,1.2s						
MSRU	**Castanea**	**0.61**	**34**	Pg	**Pg**	**10 08 01.5**	**+0.2**
	7μm,1.2s						
LLI	**Lipari**	**0.69**	**352**	Pg	**Pg**	**10 08 02.8**	**0.0**
	12μm,0.9s						
LLI	**Lipari**	**0.69**	**352**	Pg	**Pg**	**10 08 02.8**	**0.0**
	12μm,0.9s						
SCLL	**Scilla**	**0.71**	**45**	Pg	**Pg**	**10 08 03.5**	**+0.3**
	1μm,1.2s						
SCLL	**Scilla**	**0.71**	**45**	Pg	**Pg**	**10 08 03.5**	**+0.3**
	1μm,1.2s						
MSCL	**Scilla**	**0.74**	**50**	Pg	**Pg**	**10 08 04.0**	**+0.3**
MSCL	**Scilla**	**0.74**	**50**	Pg	**Pg**	**10 08 04.0**	**+0.3**
MPAZ	**Palizzi**	**0.77**	**75**	Pg	**Pg**	**10 08 05.7**	**+1.5**
	2μm,1.2s						
MPAZ	**Palizzi**	**0.77**	**75**	Pg	**Pg**	**10 08 05.7**	**+1.5**
	2μm,1.2s						
HAVL	**Avola**	**0.80**	**177**	Pg	**Pg**	**10 08 04.1**	**-0.6**
	2μm,1.1s						
HAVL	**Avola**	**0.80**	**177**	Pg	**Pg**	**10 08 04.1**	**-0.6**
	2μm,1.1s						
CEL	**Celeste**	**0.82**	**52**	*e*Pg	**Pg**	**10 08 03.7**	**-1.5**
CEL	**Celeste**	**0.82**	**52**	Pg	**Pg**	**10 08 05.2**	**-0.1**
CEL	**Celeste**	**0.82**	**52**	Pg	**Pg**	**10 08 05.2**	**-0.1**
HMDC	**Modica**	**0.83**	**196**	Pg	**Pg**	**10 08 05.1**	**-0.3**
	1μm,0.6s						
HMDC	**Modica**	**0.83**	**196**	Pg	**Pg**	**10 08 05.1**	**-0.3**
	1μm,0.6s						
SOI	**Samo**	**0.84**	**68**	Pg	**Pg**	**10 08 06.0**	**+0.4**
	805nm,1.1s						
SOI	**Samo**	**0.84**	**68**	Pg	**Pg**	**10 08 06.0**	**+0.4**
	805nm,1.1s						
GIB	**Gibilmanna**	**0.86**	**286**	Pg	**Pg**	**10 08 06.6**	**+0.7**
	14μm,1.3s						
GIB	**Gibilmanna**	**0.86**	**286**	Pg	**Pg**	**10 08 06.6**	**+0.7**
	14μm,1.3s						
IFIL	**Filicudi I Eol**	**0.90**	**334**	Pg	**Pg**	**10 08 06.5**	**-0.2**
	6μm,1.1s						
IFIL	**Filicudi I Eol**	**0.90**	**334**	Pg	**Pg**	**10 08 06.5**	**-0.2**
	6μm,1.1s						
IACL	**Alicudi**	**0.96**	**324**	Pg	**Pg**	**10 08 07.1**	**-0.8**
	3μm,0.7s						
IACL	**Alicudi**	**0.96**	**324**	Pg	**Pg**	**10 08 07.1**	**-0.8**
	3μm,0.7s						
JOPP	**Joppolo**	**1.06**	**37**	Pg	**Pg**	**10 08 08.8**	**-1.1**
	1μm,1.0s						
JOPP	**Joppolo**	**1.06**	**37**	Pg	**Pg**	**10 08 08.8**	**-1.1**
	1μm,1.0s						
PLAC	**Placanica**	**1.28**	**57**	Pg	**Pg**	**10 08 14.6**	**+0.5**
	847nm,1.1s						
PLAC	**Placanica**	**1.28**	**57**	Pg	**Pg**	**10 08 14.6**	**+0.5**
	847nm,1.1s						
TIP	**Timpagrande**	**1.94**	**42**	*e*Pn	**Pn**	**10 08 22.2**	**-0.9**
TIP	**Timpagrande**	**1.94**	**42**	*e*Pn	**Pn**	**10 08 22.2**	**-0.9**
KEST	**Kesra**	**5.02**	**248**	Pn	**Pn**	**10 09 06.2**	**+0.7**
	0.1nm,0.3s,baz=231,slow=10,SNR=4.0						
MLR	**Muntele Rosu**	**11.21**	**43**	Pn	**Pn**	**10 10 31.7**	**+1.3**
	0.1nm,0.3s,baz=275,slow=17,SNR=4.2						
MLR	**Muntele Rosu**	**11.21**	**43**	Pn	**Pn**	**10 10 31.7**	**+1.3**
AKASG	**Malin Array Be**	**16.40**	**33**	Pn	**Pn**	**10 11 37.9**	**-2.4**
	0.7nm,0.3s,baz=230,slow=12,SNR=5.5						
AKASG	**Malin Array Be**	**16.40**	**33**	Pn	**Pn**	**10 11 37.9**	**-2.4**
AKASG	**Malin Array Be**	**16.40**	**33**	Pn	**Pn**	**10 11 37.9**	**-2.4**
EKA	**Eskdalemuir Ar**	**21.48**	**331**	P	**P**	**10 12 41.0**	**+2.3**
	1.4nm,0.8s,mb3.3,baz=132,slow=9.6,SNR=4.0						
HFS	**Hagfors**	**22.41**	**358**	P	**P**	**10 12 48.5**	**-0.1**
	2.8nm,0.8s,mb3.7,baz=186,slow=13,SNR=3.3						
HFS	**Hagfors**	**22.41**	**358**	P	**P**	**10 12 48.5**	**-0.2**
FINES	**FINESS Array B**	**24.69**	**13**	P	**P**	**10 13 10.0**	**-1.1**
	3.6nm,0.8s,mb4.0,baz=190,slow=7.1,SNR=5.4						
FINES	**FINESS Array B**	**24.69**	**13**	P	**P**	**10 13 10.0**	**-1.1**
MKAR	**Makanchi Array**	**49.17**	**57**	P	**P**	**10 16 37.7**	**-0.5**
	0.4nm,0.8s,mb3.5,baz=282,slow=6.9,SNR=2.8						

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*IDC **13** 10:16:04.7±0.5, 31°.68N×104°.33E, h0km, mb4.7/28, mb1 4.7/29, mb1mx4.7/34, mbtmp4.7/29, ML3.7/1, MS3.9/8, Ms1 3.9/8, ms1mx3.5/34, Error ellipse: s-maj=17.9km s-min=11.9km az=41.0*
*ISCJB **13** 10:16:05.2±0.8, 31°.69N±0°.02×104°.37E±0°.02, h14km±4km, mb4.8/95, MS4.0/19, Error ellipse: s-maj=3.7km s-min=3.2km az=26.5*
*BJI **13** 10:16:05.7, 31°.66N×104°.47E, h12km, mB5.0/21, mb4.8/28, ML4.6/18, Ms4.8/43, Ms7 4.5/33*
*NEIC **13** 10:16:06.6±0.2, 31°.73N×104°.42E, h10km, mb4.9/47, Error ellipse: s-maj=5.0km s-min=4.0km az=38.0*
*MOS **13** 10:16:08.5±0.8, 31°.72N×104°.38E, h37km, mb5.0/44, MS4.2/10, Error ellipse: s-maj=8.7km s-min=4.8km az=116.2*
*SZGRF **13** 10:16:09.1, 31°.19N×104°.22E, h33km, mb5.0, Sichuan, China*
*DJA **13** 10:16:22, 31°.31N×103°.98E, h120km, mb5.0/11*
ISC 13 10:16:07.2±0.8, 31°.68N±0°.02×104°.32E±0°.02, h15km±5km, n261, σ0s99/278, mb4.8/95, MS4.0/19, 28C-5D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.90**	**213**	Pg	**Pg**	**10 16 23.8**	**-1.0**
CD2				Sg	**Sg**	**10 16 36.3**	**-0.3**
LZH	**Lanzhou**	**4.42**	**355**	*e*Pn	**Pn**	**10 17 16.0**	**+2.3**
LZH				Sn	**Sn**	**10 18 12.1**	**+7.2**
LZH				Sg	**Sg**	**10 18 29.1**	**0.0**
LZH				LR	LR		
	comp=E,12μm,7.4s						
LZH				LR	LR		
	comp=Z,14μm,8.2s						
XAN	**Xi'an**	**4.53**	**57**	Pn	**Pn**	**10 17 14.8**	**-0.5**
XAN				Sg	**Sg**	**10 18 26.5**	**-6.2**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,630nm,0.8s						
ENH	**Enshi**	**4.65**	**106**	*e*Pn	**Pn**	**10 17 15.9**	**-1.1**
ENH				*e*Sn	**Sn**	**10 18 12.4**	**+1.7**
GYA	**Guiyang**	**5.59**	**158**	Pg	**Pn**	**10 17 30.8**	**+1.0**
GYA				Sg	**Sn**	**10 18 34.3**	**+0.5**
GYA				smax			
	comp=N,2μm,0.9s						
GYA				smax			
	comp=E,2μm,0.7s						
GYA				LR	LR		
	comp=N,8μm,5.6s						
GYA				LR	LR		
	comp=E,7μm,6.3s						
GYA				LR	LR		
	comp=Z,9μm,4.2s						
KMI	**Kunming**	**6.67**	**192**	Pn	**Pn**	**10 17 45.9**	**+1.1**
KMI				Pg	**Pb**	**10 18 02.6**	**-0.4**
KMI				Sn	**Sn**	**10 19 06.4**	**+5.8**
KMI				Sg	**Sg**	**10 19 30.3**	**-11**
KMI				smax			
	comp=N,310nm,1.3s						
KMI				smax			
	comp=E,310nm,1.4s						
KMI				LR	LR		
	comp=N,3μm,5.9s						
KMI				LR	LR		
	comp=E,4μm,6.5s						
GTA	**Gaotai**	**8.55**	**336**	*e*P	**Pn**	**10 18 13.8**	**+3.4**
GTA				pP		10 18 23.1	
GTA				S	**Sn**	**10 19 51.5**	**+4.9**
GTA				sS		10 20 01.0	
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,210nm,5.6s						
GTA				LR	LR		
	comp=N,3μm,13.4s						
GTA				LR	LR		
	comp=E,3μm,12.5s						
GTA				LR	LR		
	comp=Z,2μm,8.6s						
WHN	**Wuhan**	**8.67**	**95**	P	**Pn**	**10 18 12.8**	**+0.6**
WHN				sP		10 18 25.6	
WHN				S	**Sn**	**10 19 47.8**	**-1.9**
WHN				LR	LR		
	comp=N,12μm,5.1s						
WHN				LR	LR		
	comp=E,9μm,8.2s						
WHN				LR	LR		
	comp=Z,6μm,10.7s						
BTO	**Baotou**	**10.03**	**26**	*e*P	**Pn**	**10 18 32.3**	**+1.6**
BTO				LR	LR		
	comp=N,490nm,4.7s						
BTO				LR	LR		
	comp=E,360nm,2.2s						
HHC	**Hu-ho-hao-te**	**10.86**	**31**	*e*P	**Pn**	**10 18 45.1**	**+3.0**
HHC				PP		10 18 53.3	
HHC				S	**Sn**	**10 20 47.9**	**+4.7**
HHC				SS		10 21 01.8	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,4.6s						
HHC				LR	LR		
	comp=E,1μm,4.8s						
HHC				LR	LR		
	comp=Z,1μm,5.2s						
LSA	**Lhasa**	**11.51**	**264**	P	**Pn**	**10 18 53.6**	**+2.5**
LSA				LR	LR		
	comp=N,420nm,12.1s						
LSA				LR	LR		
	comp=E,1μm,10.8s						
LSA				LR	LR		
	comp=Z,1μm,11.7s						
LSA	**Lhasa**	**11.51**	**264**	*e*P	**Pn**	**10 18 54.3**	**+3.2**
LSA				pmax	pmax		
	comp=Z,28nm,0.8s						
LSA	**Lhasa**	**11.51**	**264**	*e*Pn	**Pn**	**10 18 54.3**	**+3.2**
	comp=Z,28nm,0.8s						
TIA	**Tai'an**	**11.55**	**63**	*e*P	**Pn**	**10 18 51.9**	**+0.3**
TIA				LR	LR		
	comp=N,830nm,8.0s						
TIA				LR	LR		
	comp=E,310nm,7.0s						
GZH	**Guangzhou**	**11.72**	**135**	P	**Pn**	**10 18 50.3**	**-3.6**
GZH				S	**Sn**	**10 21 01.8**	**-2.7**
GZH				LR	LR		
	comp=N,2μm,5.8s						
GZH				LR	LR		
	comp=E,2μm,6.3s						
NJ2	**Nanjing**	**12.36**	**84**	*e*P	**Pn**	**10 19 03.3**	**+0.6**
NJ2				pP		10 19 06.8	
NJ2				sP		10 19 09.9	
NJ2				PP		10 19 13.3	
NJ2				S	**Sn**	**10 21 20.0**	**-0.2**
NJ2				sS		10 21 25.1	
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,1μm,17.4s						
NJ2				LR	LR		
	comp=E,2μm,11.8s						
NJ2				LR	LR		
	comp=Z,3μm,19.4s						
SHL	**Shillong**	**12.50**	**244**	*e*P	**Pn**	**10 19 03.0**	**-1.7**
SHL				*e*x	x	10 22 40.0	
BJI	**Beijing**	**12.72**	**46**	P	**Pn**	**10 19 06.3**	**-1.3**
BJI				S	**Sn**	**10 21 27.4**	**-1.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.4s						
BJI				LR	LR		
	comp=N,990nm,4.6s						
BJI				LR	LR		
	comp=E,710nm,4.3s						
BJI				LR	LR		
	comp=Z,240nm,14.1s						
QIZ	**Qiongzhong**	**13.54**	**157**	P	**Pn**	**10 19 20.1**	**+1.2**
QIZ				S	**Sn**	**10 21 51.4**	**+2.3**
QIZ				pmax	pmax		
	comp=Z,300nm,4.5s						
QIZ				LR	LR		
	comp=N,1μm,7.3s						
QIZ				LR	LR		
	comp=Z,980nm,8.3s						
CHTO	**Chiang Mai**	**13.70**	**202**	*e*P	**Pn**	**10 19 23.2**	**+2.2**
CM31	**Chiang Mai Arr**	**14.03**	**202**	*e*Pn	**Pn**	**10 19 28.2**	**+2.6**
QZH	**Quanzhou**	**14.24**	**115**	*e*P	**Pn**	**10 19 27.6**	**-0.8**
QZH				S	**Sn**	**10 22 07.0**	**+0.9**
QZH				LR	LR		
	comp=N,2μm,8.9s						
QZH				LR	LR		
	comp=E,5μm,7.5s						
QZH				LR	LR		
	comp=Z,5μm,8.9s						
SSE	**Sheshan**	**14.42**	**88**	P	**Pn**	**10 19 28.4**	**-2.4**
SSE				S	**Sn**	**10 22 08.0**	**-2.5**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,180nm,5.4s						
SSE				LR	LR		
	comp=N,3μm,12.3s						
SSE				LR	LR		
	comp=E,1μm,12.3s						
SSE				LR	LR		
	comp=Z,2μm,8.9s						
TAPN	**Taplejung**	**15.09**	**258**	*e*P	**Pn**	**10 19 38.4**	**-1.6**
	comp=Z,142nm,1.1s						
DL2	**Dalian**	**15.85**	**58**	P	**Pn**	**10 19 51.8**	**+2.0**
DL2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RAMN	**Ramite**	**16.16**	**258**	*e*P	**Pn**	**10 19 51.9**	**-1.9**
	comp=Z,97nm,0.9s						
SONM	**Songino Array**	**16.22**	**5**	Pn	**Pn**	**10 19 53.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=186,slow=14,SNR=25						
SONM				LR	LR	10 26 34.6	
	comp=Z,426nm,21.0s,baz=168,slow=39						
GUN	**Gumba**	**16.45**	**262**	*e*P	**Pn**	**10 19 55.9**	**-1.6**
	comp=Z,375nm,0.9s						
YHNB	**Yeheng**	**16.57**	**111**	*e*Pn	**Pn**	**10 19 58.3**	**-0.8**
	comp=Z,30nm,0.6s						
SSLB	**Suanglung**	**16.68**	**114**	*e*P	**Pn**	**10 20 03.8**	**+3.4**
	comp=Z,40nm,0.9s						
PKI	**Pulchoki**	**16.95**	**261**	*e*P	**Pn**	**10 20 02.1**	**-1.8**
	comp=Z,224nm,1.0s						
PKIN	**Phulchoki**	**16.95**	**261**	*e*P	**Pn**	**10 20 02.0**	**-2.0**
	comp=Z,67nm,0.5s						
KKN	**Kakani**	**16.99**	**262**	*e*P	**Pn**	**10 20 02.5**	**-1.9**
	comp=Z,213nm,0.9s						
DMN	**Daman**	**17.19**	**261**	*e*P	**Pn**	**10 20 05.1**	**-1.8**
	comp=Z,226nm,0.9s						
WMQ	**Urumqi**	**17.85**	**317**	*e*P	**Pn**	**10 20 15.6**	**+0.7**
WMQ				S	**Sn**	**10 23 31.8**	**-1.8**
WMQ				SS		10 23 53.3	
WMQ				PcP	PcP	10 24 54.4	+3.1
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.0s						
WMQ				LR	LR		
	comp=N,820nm,6.0s						
WMQ				LR	LR		
	comp=E,610nm,6.0s						
WMQ				LR	LR		
	comp=Z,450nm,24.0s						
SNY	**Shenyang**	**18.42**	**51**	⇑P	**Pn**	**10 20 28.9**	**+6.9**
SNY				S	**Sn**	**10 23 51.9**	**+4.4**
SNY				pmax	pmax		
	comp=Z,11nm,0.6s						
SNY				pmax	pmax		
	comp=Z,210nm,5.1s						
SNY				LR	LR		
	comp=N,540nm,23.3s						
SNY				LR	LR		
	comp=E,1μm,17.1s						
SNY				LR	LR		
	comp=Z,430nm,14.5s						
ZAK	**Zakamensk**	**18.70**	**358**	⇓*i*P	**Pn**	**10 20 25.6**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
TLY	**Talaya**	**20.00**	**359**	*e*P	**Pn**	**10 20 40.4**	**-0.4**
TLY				*e*S	**Sn**	**10 24 14.6**	**-11**
TLY				pmax	pmax		
	comp=Z,29nm,1.6s						
TLY				MLR	MLR		
	comp=Z,311nm,11.0s						
TLY	**Talaya**	**20.00**	**359**	*e*P	**Pn**	**10 20 41.0**	**+0.1**
	comp=Z,21nm,1.2s						
MOY	**Mondy**	**20.12**	**354**	*e*P	**P**	**10 20 42.1**	**+1.6**
MOY				pmax	pmax		
	comp=Z,51nm,1.8s						
KSRS	**Korea Array**	**20.25**	**67**	P	**P**	**10 20 42.3**	**+0.3**
	comp=Z,19nm,0.7s,baz=255,slow=10,SNR=40						
KSRS				LR	LR	10 28 26.3	
	comp=Z,223nm,18.4s,MS3.5,baz=88,slow=37						
KSRS	**Korea Array**	**20.25**	**67**	P	**P**	**10 20 42.3**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,19nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,223nm,18.4s,MS3.5						
IRK	**Irkutsk**	**20.55**	**360**	*e*P	**P**	**10 20 46.4**	**+1.3**
IRK				pmax	pmax		
	comp=Z,106nm,1.0s						
CN2	**Changchun**	**20.56**	**48**	*e*P	**P**	**10 20 46.3**	**+1.0**
CN2				*e*sP	sP	10 20 53.4	+1.9
CN2				*e*S	**S**	**10 24 28.4**	**-6.4**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,10.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,10.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,11.0s,MS3.7						
HIA	**Hailar**	**21.05**	**29**	*e*P	**P**	**10 20 51.4**	**+0.8**
HIA				pmax	pmax		
	comp=Z,25nm,0.9s						
HIA	**Hailar**	**21.05**	**29**	*e*P	**P**	**10 20 51.4**	**+0.8**
	comp=Z,24nm,0.9s,mb4.5						
JOSI	**Joshimath**	**21.23**	**273**	*e*P	**P**	**10 20 53.3**	**+0.6**
JOW	**Kunigami**	**21.43**	**97**	LR	LR	10 30 01.5	
	comp=Z,389nm,19.0s,MS3.8,baz=11,slow=39						
DDI	**Dehra Dun**	**22.54**	**273**	*e*x	**P**	**10 21 07.0**	**+0.3**
MK31	**Makanchi Array**	**22.68**	**318**	*e*P	**P**	**10 21 08.4**	**+0.4**
MKAR	**Makanchi Array**	**22.68**	**318**	P	**P**	**10 21 08.3**	**+0.4**
	comp=Z,12nm,0.8s,mb4.4,baz=116,slow=11,SNR=44						
MKAR				LR	LR	10 30 54.5	
	comp=Z,476nm,20.7s,MS3.9,baz=122,slow=39						
MKAR	**Makanchi Array**	**22.68**	**318**	P	**P**	**10 21 08.3**	**+0.4**
MKAR				LR	LR	10 30 54.5	
SMLA	**Simla**	**23.17**	**276**	*i*x	x	10 21 08.9	
AGRA	**Agra**	**23.37**	**266**	*e*P	**P**	**10 21 14.3**	**-1.2**
BISR	**Bishrakh**	**23.44**	**269**	*e*P	**P**	**10 21 16.2**	**0.0**
MDJ	**Mudanjiang**	**23.59**	**50**	*e*P	**P**	**10 21 16.3**	**-1.2**
	comp=Z,29nm,1.3s,mb4.5						
NDI	**New Delhi**	**23.60**	**270**	*e*x	x	10 21 16.0	
KKR	**Kurukshetra**	**23.66**	**273**	*e*P	**P**	**10 21 18.8**	**+0.4**
AYAN	**Aya Nagar**	**23.73**	**269**	*e*P	**P**	**10 21 18.9**	**0.0**
SONA	**Sohna**	**23.82**	**269**	*e*P	**P**	**10 21 19.8**	**0.0**
KHET	**Khetri**	**24.96**	**269**	*e*P	**P**	**10 21 29.1**	**-1.0**
KHET				AMb	AMB	10 21 31.6	
	comp=Z,44nm,1.0s,mb5.0						
BHPL	**Bhopal**	**25.26**	**257**	*e*P	**P**	**10 21 31.5**	**-1.4**
BHPL				AMb	AMB	10 21 37.6	
	comp=Z,33nm,0.8s,mb4.9						
TKM2	**Tokmak 2**	**25.34**	**304**	*e*P	**P**	**10 21 34.1**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
TKM2	**Tokmak 2**	**25.34**	**304**	*e*P	**P**	**10 21 34.1**	**+0.6**
	comp=Z,20nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**26.04**	**303**	P	**P**	**10 21 39.7**	**-0.1**
	comp=Z,5.6nm,0.7s,mb4.2,baz=24,slow=20,SNR=6.5						
AAK				LR	LR	10 33 30.2	
	comp=Z,420nm,18.9s,MS4.0,baz=24,slow=40						
AAK	**Ala-Archa**	**26.04**	**303**	*ce*P	**P**	**10 21 38.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.4						
ZAA0	**Zalesovo Array**	**26.29**	**334**	*e*P	**P**	**10 21 41.9**	**-0.1**
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	**P**	**10 21 41.6**	**-0.4**
	comp=Z,18nm,0.7s,mb4.7,baz=131,slow=9.2,SNR=27						
ZALV				LR	LR	10 31 39.5	
	comp=Z,146nm,20.1s,MS3.5,baz=224,slow=36						
AJM	**Ajmer**	**26.41**	**266**	*e*P	**P**	**10 21 43.0**	**-0.3**
AML	**Almayashu**	**26.50**	**302**	*e*P	**P**	**10 21 46.7**	**+2.7**
	comp=Z,16nm,0.9s,mb4.5						
EKS2	**Erkin-Say**	**26.56**	**303**	*e*

comp=Z,4.0nm,0.7s,mb4.1
KURK MLR MLR
comp=Z,108nm,20.0s,MS3.4
KURK Kurchatov 26.91 322 *e*P **P 10 21 48.3 +0.7**
comp=Z,30nm,1.2s,mb4.7
BOD Bodaibo 26.97 11 *e*P **P 10 21 47.6 -0.5**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
KLR Kul'dur 27.04 42 *e*P **P 10 21 45.7 -3.1**
KLR MLR MLR
comp=E,600nm,11.0s
KLR MLR MLR
comp=Z,1μm,11.0s,MS4.7
NVS Novosibirsk 27.57 333⇑*i*P **P 10 21 52.6 -0.9**
NVS *e*S **S 10 26 32.5 -1.7**
NVS pmax pmax
comp=Z,8.0nm,1.4s,mb4.2
NVS pmax pmax
comp=E,10.0nm,2.0s
NVS smax
comp=N,23nm,2.7s
NVS smax
comp=E,10.0nm,1.9s
MJAR Matsushiro Arr 28.38 71 P **P 10 22 01.1 +0.1**
comp=E,1.6nm,0.8s,mb3.7,baz=295,slow=12,SNR=4.2
HABR Khabarovsk 28.62 45 *e*P **P 10 22 01.0 -2.0**
HABR *e* 10 22 51.6
HABR *e* 10 25 11.3
HABR *e*S **S 10 26 48.0 -2.9**
HABR MLR MLR
comp=Z,150nm,15.0s,MS3.7
JASL Jaisalmer 29.46 269 *e*P **P 10 22 10.6 -0.1**
KBL Kabul 29.60 285 *e*P **P 10 22 13.3 +1.5**
KBL pmax pmax
comp=Z,17nm,0.9s,mb4.8
KBL Kabul 29.60 285 *e*P **P 10 22 13.3 +1.5**
comp=Z,17nm,0.9s,mb4.8
BVAR Borovoye Array 32.46 321 P **P 10 22 37.2 +0.4**
comp=Z,3.7nm,0.7s,mb4.4,baz=117,slow=9.0,SNR=14
BVAR PcP PcP 10 25 22.9 -0.7
comp=Z,3.1nm,0.7s,baz=114,slow=3.7,SNR=6.7
BVAR LR LR 10 36 16.4
comp=Z,169nm,19.6s,MS3.7,baz=356,slow=37
BVAR Borovoye Array 32.46 321 P **P 10 22 37.2 +0.4**
BVAR 10 25 22.9
BRVK Borovoye 32.53 321*c*e*P **P 10 22 38.3 +0.9**
BRVK pmax pmax
comp=Z,15nm,1.2s,mb4.8
BRVK Borovoye 32.53 321 *e*P **P 10 22 38.1 +0.7**
comp=Z,9.4nm,0.8s,mb4.8
YAK Yakutsk 34.51 21 *e*P **P 10 22 54.0 -0.5**
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
YAK pmax pmax
comp=E,8.0nm,1.2s
ABKAR Akbulak array 37.44 311 *e*P **P 10 23 20.0 +0.2**
comp=E,4.9nm,0.7s,mb4.5
AKTK Aktyubinsk 38.89 313 P **P 10 23 32.4 +0.4**
AKTK PcP PcP 10 25 42.0 -0.7
AKTO Aktyubinsk 38.89 313 P **P 10 23 32.4 +0.4**
comp=E,3.5nm,0.5s,mb4.3,baz=104,slow=8.5,SNR=14
AKTO PcP PcP 10 25 42.0 -0.7
comp=E,1.7nm,0.8s,baz=143,slow=7.0,SNR=3.8
SVE Sverdlovsk 39.16 323⇑*i*e*P **P 10 23 35.4 +1.3**
SVE pmax pmax
comp=Z,41nm,0.9s,mb5.2
KAPI Kappang 39.34 155 P **P 10 23 35.0 -1.1**
comp=Z,14nm,0.9s,mb4.7,baz=329,slow=8.6,SNR=5.4
ARU Arti 40.10 322*c i*P **P 10 23 42.4 +0.4**
ARU *e* 10 25 15.4
ARU S **S 10 29 47.7 +0.2**
ARU SS SS 10 32 41.3 -3.6
ARU pmax pmax
comp=Z,70nm,1.2s,mb5.3
ARU Arti 40.10 322 *e*P **P 10 23 42.8 +0.8**
comp=Z,47nm,0.8s,mb5.3
SOKR Solikamsk 42.03 326*d i*P **P 10 23 58.8 +1.0**
SOKR pmax pmax
comp=Z,50nm,1.2s,mb5.0
TIXI Tiksi 42.16 11 *e*P **P 10 23 58.0 -0.7**
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
TIXI MLR MLR
comp=Z,255nm,18.0s,MS4.2
SEY Seymchan 43.50 30*c*e*P **P 10 24 10.3 +0.6**
PETK Petropavlovsk- 43.65 45 P **P 10 24 10.7 -0.4**
comp=Z,7.7nm,0.8s,mb4.5,baz=210,slow=4.7,SNR=7.6
ZEI Tsey 48.44 301 *e*P **P 10 24 48.8 -0.2**
ZEI pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
GOF Gofitskoye 48.78 304 *e*P **P 10 24 49.6 -2.0**
GOF pmax pmax
comp=Z,60nm,1.1s,mb5.5
KIV Kislovodsk 49.16 303 *e*P **P 10 24 55.6 +1.1**
KIV pmax pmax
comp=Z,31nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,84nm,17.0s,MS3.8
KIV Kislovodsk 49.16 303 *e*P **P 10 24 56.0 +1.5**
comp=Z,33nm,1.1s,mb5.3
VRHR Novokhopersk 49.30 312 *e*P **P 10 24 54.2 -1.2**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,1.3s
BILL Bilibino 50.58 25 *e*P **P 10 25 04.5 -0.4**
BILL pmax pmax
comp=Z,17nm,1.6s,mb4.7
BILL Bilibino 50.58 25 *e*P **P 10 25 04.2 -0.7**
comp=Z,7.2nm,0.9s,mb4.6
KLMR Klimovskoe 50.70 325 *e*P **P 10 25 05.0 -0.9**
KLMR pmax pmax
comp=Z,50nm,1.2s,mb5.3
VSR Storozhevoye 50.84 313 *e*P **P 10 25 06.8 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,20nm,1.4s
MOS Moscow 51.56 318 *e*P **P 10 25 08.5 -4.0**
MOS pmax pmax
comp=Z,37nm,0.7s,mb5.4
OBN Obninsk 52.18 318 *e*P **P 10 25 17.1 0.0**
OBN *i* 10 25 25.0
OBN *e* 10 26 28.4
OBN pmax pmax
comp=Z,55nm,1.6s,mb5.2
KNA Kununurra 52.66 150 *e*P **P 10 25 21.0 -0.1**
comp=Z,30nm,0.6s,mb5.4
MALT Malatya 53.38 297 *e*P **P 10 25 27.6 +1.4**
MALT pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MALT Malatya 53.38 297 *e*P **P 10 25 27.6 +1.3**
comp=Z,8.7nm,0.9s,mb4.7
FITZ Fitzroy Crossi 53.55 155 *e*P **P 10 25 27.2 -0.4**
comp=Z,13nm,1.0s,mb4.8
FITZ Fitzroy Crossi 53.55 155 *e*P **P 10 25 27.4 -0.2**
comp=Z,11nm,1.0s,mb4.8
APA Apatity 53.88 333⇑*i*P **P 10 25 31.3 +1.9**
APA MLR MLR
comp=Z,600nm,14.0s,MS4.8
JOF Joensuu 54.65 328 *e*P **P 10 25 35.0 -0.1**
JOF pmax pmax
comp=Z,19nm,0.7s,mb5.2
JOF Joensuu 54.65 328 *e*p **P 10 25 35.0 -0.1**
comp=Z,19nm,0.7s,mb5.2
SIM Simferopol' 55.05 305 *e*P **P 10 25 39.1 +0.8**
SIM pmax pmax
comp=Z,25nm,0.8s,mb5.3
KEV Kevo 56.29 336 *e*P **P 10 25 45.9 -0.9**
KEV pmax pmax
comp=Z,19nm,0.8s,mb5.2
KEV Kevo 56.29 336 *e*P **P 10 25 49.0 +2.2**
comp=Z,11nm,0.7s,mb5.0
KEV Kevo 56.29 336 *e*p **P 10 25 45.9 -0.9**
comp=Z,19nm,0.8s,mb5.2
ASF Jabal al Asfar 56.33 290 P **P 10 25 48.2 +0.6**
comp=Z,12nm,1.0s,mb4.9,baz=345,slow=6.0,SNR=12
BR131 Keskin Array S 56.62 299 *e*P **P 10 25 49.8 +0.1**
BRTR Keskin Array B 56.62 299 P **P 10 25 49.5 -0.2**
comp=Z,8.8nm,0.8s,mb4.8,baz=104,slow=6.2,SNR=19
ARCES ARCESS Array B 56.82 336 P **P 10 25 49.9 -0.6**
comp=Z,6.5nm,0.7s,mb4.8,baz=78,slow=5.0,SNR=15
ARCES ARCESS Array B 56.82 336 P **P 10 25 49.9 -0.6**
KAF Kangasniemi 57.02 327 *e*P **P 10 25 51.3 -0.8**
KAF pmax pmax
comp=Z,14nm,0.7s,mb5.1
KAF Kangasniemi 57.02 327 *e*p **P 10 25 51.3 -0.8**
comp=Z,14nm,0.7s,mb5.1
AKASG Malin Array Be 57.13 313 P **P 10 25 51.8 -1.3**
comp=Z,11nm,0.8s,mb4.9,baz=70,slow=6.6,SNR=12
FINES FINESS Array B 57.20 326 P **P 10 25 53.3 -0.1**
comp=Z,18nm,0.6s,mb5.3,baz=97,slow=8.3,SNR=29
IDID Didziasalis 57.76 319 *e*P **P 10 25 57.7 +0.3**
IZAR Zarasai 57.95 319 *e*P **P 10 25 58.0 -0.8**
IIGN Ignalina 58.04 319 *e*P **P 10 25 59.6 +0.2**
ISAL Salakas 58.05 319 *e*P **P 10 25 59.6 +0.1**
COEN Coen 58.71 135 *e*P **P 10 26 04.8 +0.3**
COEN Coen 58.71 135 *e*P **P 10 26 05.3 +0.8**
comp=Z,66nm,0.6s,mb5.8
EIL Elat 58.75 288 P **P 10 26 04.5 -0.4**
comp=Z,15nm,0.9s,mb5.0,baz=104,slow=1.9,SNR=9.4
SPITS Spitsbergen Ar 58.83 346 P **P 10 26 04.1 -0.5**
comp=Z,2.3nm,0.6s,mb4.4,baz=99,slow=22,SNR=3.9
WRAB Tennant Creek 58.84 147 *e*P **P 10 26 05.7 +0.3**
WRAB pmax pmax
comp=Z,31nm,0.7s,mb5.5
WRAB Tennant Creek 58.84 147 *e*P **P 10 26 05.7 +0.3**
comp=Z,31nm,0.7s,mb5.5
TIRR Tirgusor 59.11 306 *e*P **P 10 26 06.3 -0.8**
TIRR pmax pmax
comp=Z,14nm,1.0s,mb5.0
TIRR Tirgusor 59.11 306 *e*P **P 10 26 06.3 -0.8**
comp=Z,14nm,1.0s,mb5.0
ISP Isparta 59.51 298 *e*P **P 10 26 09.9 0.0**
ISP pmax pmax
comp=Z,35nm,0.8s,mb5.4
ISP Isparta 59.51 298 *e*P **P 10 26 09.9 0.0**
comp=Z,35nm,0.8s,mb5.4
BUR08 Bucovina Ar. S 60.41 310 *e*P **P 10 26 16.6 +0.7**
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 26 23.6 +0.6**
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 26 23.7 +0.7**
KWP pmax pmax
comp=Z,36nm,0.9s,mb5.5
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 26 23.7 +0.7**
comp=Z,36nm,0.9s,mb5.5
ASAR Alice Springs 61.88 149 P **P 10 26 26.4 +0.3**
comp=Z,5.6nm,0.5s,mb4.9,baz=333,slow=6.3,SNR=69
KOLS Kolonicke sedl 61.93 312 *e*P **P 10 26 26.1 -0.1**
KOLS pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.93 312 *e*P **P 10 26 26.1 -0.1**
comp=Z,5.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.93 312 *e*P **P 10 26 26.1 -0.1**
STHS Stebnicka Huta 62.43 313 *e*P **P 10 26 30.6 +1.0**
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
STHS Stebnicka Huta 62.43 313 *e*P **P 10 26 30.6 +1.0**
comp=Z,5.7nm,0.8s,mb4.8
STHS *e* 10 26 32.9
STHS Stebnicka Huta 62.43 313 *e*P **P 10 26 30.6 +1.0**
STHS *e*pP pP 10 26 32.9 -1.5
OJC Ojcow 63.08 314 *e*P **P 10 26 33.8 -0.1**
KECS Kecovo 63.19 312 *e*P **P 10 26 35.5 +0.8**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 63.19 312 *e*P **P 10 26 35.5 +0.8**
comp=Z,4.8nm,0.8s,mb4.4
KECS Kecovo 63.19 312 *e*P **P 10 26 35.5 +0.8**
PSZ Piszkesteto 63.75 312⇑*e*P **P 10 26 38.5 +0.1**
OKC Ostrava-Krasne 64.21 314 *e*P **P 10 26 42.3 +0.9**
OKC MLR MLR
comp=Z,200nm,13.9s,MS4.5
OKC Ostrava-Krasne 64.21 314 *e*P **P 10 26 42.3 +0.9**
OKC AMS AMS 10 55 50.0
comp=Z,200nm,13.9s
VYHS Vyhne 64.23 313 *e*P **P 10 26 41.9 +0.4**
VYHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
VYHS Vyhne 64.23 313 *e*P **P 10 26 41.9 +0.4**
comp=Z,9.3nm,1.3s,mb4.7
VYHS Vyhne 64.23 313 *e*P **P 10 26 41.9 +0.4**
NB2 NORSAR Subarra 64.28 327 P **P 10 26 40.5 -1.1**
comp=Z,8.7nm,0.8s,mb4.8,baz=74,slow=6.9
NOA NORSAR Array B 64.28 327 P **P 10 26 40.1 -1.5**
comp=Z,6.3nm,0.7s,mb4.8,baz=72,slow=6.6,SNR=19
BUD Budapest 64.45 311⇑*e*P **P 10 26 42.2 -0.7**
KOLL Kolacno 64.47 313 *e*P **P 10 26 44.2 +1.1**
KOLL Kolacno 64.47 313 *e*P **P 10 26 44.2 +1.1**
MORC Moravsky Berou 64.60 314 *e*P **P 10 26 44.6 +0.7**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MORC Moravsky Berou 64.60 314 *e*P **P 10 26 44.6 +0.6**
comp=Z,7.0nm,0.8s,mb4.7
IDI Anoyia 64.63 297 P **P 10 26 43.9 -0.5**
comp=Z,17nm,0.8s,mb5.1,baz=36,slow=12,SNR=7.4
KSP Ksiaz 65.00 316 *e*P **P 10 26 46.8 +0.3**
DPC Dobruska-Polom 65.15 315 *e*P **P 10 26 48.5 +1.0**
DPC MLR MLR
comp=Z,300nm,21.6s,MS4.5
DPC Dobruska-Polom 65.15 315 *e*P **P 10 26 48.5 +1.0**
DPC AMS AMS 10 56 00.0
comp=Z,300nm,21.6s
TREC Trest 66.03 314 *e*P **P 10 26 53.8 +0.6**
TREC MLR MLR
comp=Z,200nm,20.8s,MS4.3
TREC Trest 66.03 314 *e*P **P 10 26 53.8 +0.6**
TREC AMS AMS 10 56 40.0
comp=Z,200nm,20.8s
PVCC Panska Ves 66.13 316 *e*P **P 10 26 54.6 +0.8**
PVCC MLR MLR
comp=Z,200nm,21.3s,MS4.3
PVCC Panska Ves 66.13 316 *e*P **P 10 26 54.6 +0.8**
PVCC AMS AMS 10 57 00.0
comp=Z,200nm,21.3s
CONA Conrad Observa 66.29 313⇑*i*P **P 10 26 55.2 +0.3**
comp=Z,13nm,1.0s,mb4.9
PRU Pruhonice 66.35 315 *e*P **P 10 26 56.2 +1.0**
PRU MLR MLR
comp=Z,200nm,17.9s,MS4.4
PRU Pruhonice 66.35 315 *e*P **P 10 26 56.2 +1.0**
PRU AMS AMS 10 57 00.0
comp=Z,200nm,17.9s
BRG Berggiesshubel 66.38 316 *e*P **P 10 26 55.5 +0.1**
comp=Z,9.2nm,1.0s,mb4.8
BRG Berggiesshubel 66.38 316 *e*P **P 10 26 55.5 +0.1**
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CLL Collm 66.77 317⇓*i*P **P 10 26 57.8 -0.1**
CLL *e* 10 27 13.0
CLL pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
CLL MLR MLR
comp=Z,100nm,20.5s,MS4.0
CLL Collm 66.77 317⇓*i*P **P 10 26 57.8 -0.1**
comp=Z,13nm,1.3s,mb4.8
CLL *e* 10 27 13.0
CLL LR LR
comp=Z,100nm,20.5s,MS4.0
CLL Collm 66.77 317⇓*i*P **P 10 26 57.8 -0.1**
comp=Z,13nm,1.3s,mb4.8
CLL *e*(pP) pP 10 27 13.0 +10
CLL Lm 10 57 00.0
comp=Z,100nm,20.5s
COLD Coldfoot 66.87 24 *e*P **P 10 26 58.3 0.0**
comp=Z,7.4nm,1.0s,mb4.7
KHC Kasperske Hory 67.25 315 *e*P **P 10 27 01.2 +0.2**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KHC Kasperske Hory 67.25 315 *e*P **P 10 27 01.2 +0.3**
comp=Z,3.4nm,0.8s,mb4.4
KHC Kasperske Hory 67.25 315 *e*P **P 10 27 01.1 +0.1**
KHC AMS AMS 10 57 30.0
comp=Z,300nm,20.5s
SOKA Soboth 67.28 312⇑*i*P **P 10 27 01.3 0.0**
comp=Z,16nm,0.9s,mb5.0
GEC2 GERESS Array S 67.28 314 *e*P **P 10 27 01.7 +0.5**
GEC2 pmax pmax
comp=Z,2μm,0.9s
GEC2 GERESS Array S 67.28 314 *e*P **P 10 27 01.7 +0.5**
comp=Z,2μm,0.9s
GERES GERESS Array B 67.28 314 P **P 10 27 01.4 +0.2**
comp=Z,4.7nm,0.8s,mb4.6,baz=57,slow=4.9,SNR=15
MOA Molln 67.32 313⇑*i*P **P 10 27 01.7 +0.3**
comp=Z,8.2nm,0.9s,mb4.8
NKC Novy Kostel 67.50 316 *e*P **P 10 27 03.1 +0.5**
NKC AMS AMS 10 56 50.0
MOX Moxa 67.83 317 *e*P **P 10 27 04.9 +0.3**
BPAW Bear Paw Mtn. 68.01 27 *e*P **P 10 27 05.4 -0.1**
comp=Z,13nm,1.2s,mb4.8
PPLA Purkeypile 68.07 29 *e*P **P 10 27 06.2 +0.3**
comp=Z,8.3nm,0.6s,mb4.9
GRA1 Grafenberg Arr 68.45 316 *e*P **P 10 27 08.7 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.45 316 *e*P **P 10 27 08.7 +0.2**
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.45 316 *e*P **P 10 27 08.7 +0.2**
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRF Grafenberg Arr 68.45 316 *e*P **P 10 27 08.7 +0.2**
GRF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
COLA College 68.83 26 *e*P **P 10 27 10.2 -0.4**
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
COLA College 68.83 26 *e*P **P 10 27 10.2 -0.5**
comp=Z,9.0nm,0.9s,mb4.7
ABTA Abfaltersbach 68.85 313⇑*i*P **P 10 27 10.8 -0.3**
comp=Z,4.0nm,0.8s,mb4.4
FETA Feichten 69.85 313⇑*i*P **P 10 27 16.8 -0.5**
comp=Z,19nm,0.9s,mb5.0
KDAK Kodiak Island 70.26 34*c*e*P **P 10 27 19.0 -0.6**
BFO Black Forest 70.75 315 *e*P **P 10 27 22.8 +0.1**
BFO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BFO Black Forest 70.75 315 *e*P **P 10 27 22.8 +0.1**
comp=Z,6.5nm,0.9s,mb4.6
BBOO Buckleboo 70.80 152 *e*P **P 10 27 22.8 -0.3**
comp=Z,2.2nm,0.3s,mb4.6
KMBO Kilima Mbogo 71.22 257 P **P 10 27 26.4 +0.2**
comp=Z,5.4nm,0.8s,mb4.5,baz=48,slow=12,SNR=18
KMBO Kilima Mbogo 71.22 257 *i* P **P 10 27 27.1 +0.9**
KMBO pmax pmax
comp=Z,5.0nm,0.8s
KMBO Kilima Mbogo 71.22 257 *e*P **P 10 27 26.7 +0.5**
CDF Champ du Feu 71.34 316⇑*i*P **P 10 27 25.9 -0.4**
comp=Z,11nm,0.7s,mb4.6
CDF Champ du Feu 71.34 316⇑*i*P **P 10 27 25.9 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CDF Champ du Feu 71.34 316⇑*i*P **P 10 27 25.9 -0.4**
comp=Z,5.4nm,0.7s,mb4.6
WLF Walferdange 71.43 317 P **P 10 27 27.1 +0.3**
comp=Z,21nm,1.3s,mb4.9
WLF Walferdange 71.43 317 *e*P **P 10 27 26.7 -0.2**
WLF pmax pmax
comp=Z,26nm,1.0s,mb5.1
WLF Walferdange 71.43 317 *e*P **P 10 27 26.7 -0.1**
comp=Z,26nm,1.0s,mb5.1
INK Inuvik 71.56 19 *e*P **P 10 27 26.6 -0.7**
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 71.56 19 *e*P **P 10 27 26.6 -0.6**
comp=Z,8.7nm,0.8s,mb4.7
BCLA Clavier 71.57 318 P **P 10 27 27.8 +0.1**
DOU Dourbes 72.12 318 P **P 10 27 30.9 -0.1**
EIDS Eidsvold 72.19 136 *e*P **P 10 27 32.5 +0.8**
comp=Z,14nm,0.9s,mb4.9
DAWY Dawson 72.34 24 *e*P **P 10 27 31.4 -0.7**
STKA Stephens Creek 72.38 147 *e*P **P 10 27 32.5 -0.1**
comp=Z,6.0nm,0.6s,mb4.7
STKA Stephens Creek 72.38 147 P **P 10 27 32.6 0.0**
comp=Z,9.9nm,0.7s,mb4.9,baz=328,slow=6.4,SNR=40
STKA Stephens Creek 72.38 147 *e*P **P 10 27 32.6 0.0**
comp=Z,2.1nm,0.8s,mb4.1
SUMG Summit 72.92 349 *e*P **P 10 27 35.6 +0.2**
comp=Z,136nm,2.9s,mb5.4
LPG La Plagne 73.00 313⇑*i*P **P 10 27 36.8 +0.5**
comp=Z,46nm,0.7s,mb5.2
LPG La Plagne 73.00 313⇑*i*P **P 10 27 36.8 +0.5**
LPG pmax pmax
comp=Z,23nm,0.7s,mb5.2
LPG La Plagne 73.00 313⇑*i*P **P 10 27 36.8 +0.5**
comp=Z,23nm,0.7s,mb5.2
RES Resolute Bay 73.15 5 *e*P **P 10 27 36.3 -0.4**
RES pmax pmax
comp=Z,19nm,1.9s,mb4.7
RES Resolute Bay 73.15 5 *e*P **P 10 27 36.3 -0.4**
comp=Z,19nm,1.9s,mb4.7
BNI Bardonecchia 73.25 313 *e*P **P 10 27 37.4 -0.4**
CMSA Cobar Meteorol 74.08 144 *e*P **P 10 27 43.4 +0.8**
SMF Signal de Mont 74.22 315⇑*i*P **P 10 27 42.9 -0.6**
comp=Z,27nm,0.9s,mb4.9
SMF Signal de Mont 74.22 315⇑*i*P **P 10 27 42.9 -0.6**
SMF pmax pmax
comp=Z,14nm,0.9s,mb4.9
SMF Signal de Mont 74.22 315⇑*i*P **P 10 27 42.9 -0.6**
comp=Z,14nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.38 316⇑*i*P **P 10 27 49.9 -0.3**
comp=Z,13nm,0.9s,mb4.6
TCF Toulx Ste Croi 75.38 316⇑*i*P **P 10 27 49.9 -0.3**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 75.38 316⇑*i*P **P 10 27 49.9 -0.3**
comp=Z,6.4nm,0.9s,mb4.5
KEST Kesra 75.90 303 P **P 10 27 54.8 +1.4**
comp=Z,2.2nm,0.9s,mb4.1,baz=329,slow=3.2,SNR=4.4
CAF Calviac 76.16 314 *e*P **P 10 27 54.8 +0.1**
comp=Z,21nm,1.0s,mb4.7
CAF Calviac 76.16 314 *e*P **P 10 27 54.8 +0.1**
CAF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CAF Calviac 76.16 314 *e*P **P 10 27 54.8 +0.1**
comp=Z,10nm,1.0s,mb4.7
YKA Yellowknife Ar 81.09 17 P **P 10 28 21.0 -0.5**
comp=Z,4.7nm,0.5s,mb4.7,baz=328,slow=5.2,SNR=141
MDT Midelt 87.20 307 P **P 10 28 53.4 +0.2**
comp=Z,3.8nm,1.0s,mb4.6,baz=104,slow=9.8,SNR=3.7
EDM Edmonton 89.33 22 *e*P **P 10 29 03.2 +0.3**
HOOD Mount Hood Mea 92.73 31 *e*P **P 10 29 14.7 -4.2**
SCHQ Schefferville 93.51 355 P **P 10 29 21.8 -0.5**
comp=Z,2.6nm,0.6s,mb4.8,baz=10,slow=9.2,SNR=6.2
SCHQ Schefferville 93.51 355 P **P 10 29 21.8 -0.5**
TORD Torodi Ar. Bea 93.64 288 P **P 10 29 23.1 -0.5**
comp=Z,1.5nm,0.9s,mb4.4,baz=28,slow=2.5,SNR=4.2
GDL2 Guadalupe Moun 110.92 26 *e*Pdif Pdif 10 30 46.7 +6.4
TXAR Lajitas Array 113.75 27 *e*Pdiff Pdif 10 30 53.7 +0.8
comp=Z,1.3nm,1.2s,baz=197,slow=2.6,SNR=4.4
QSPA South Pole Qui 121.45 180 *e*PKPdf PKPdf 10 34 58.3 -0.5
OTAV Otavalo 148.15 5 *e*PKPdf PKPdf 10 35 51.1 +1.1
OTAV *e*PKPbc PKPbc 10 35 54.1 +0.9
OTAV *e*PKPab PKPab 10 35 56.0 +0.1
LPAZ La Paz 163.21 334 PKP PKPdf 10 36 10.6 +0.8
comp=Z,2.1nm,1.0s,baz=307,slow=3.2,SNR=5.8

BJI ***13*** *10:16:39.7,34°.58N×81°.69E,h23*^{km}*,mb4.1/1,ML4.1/3*
IDC ***13*** *10:16:43.8±5.2,35°.32N×83°.14E,h0*^{km}*,mb3.7/1,*
mb1 3.6/5,mb1mx3.4/26,mbtmp3.6/5,ML3.2/4,Error
ellipse: s-maj=113.8km s-min=37.6km az=103.0
ISC 13 10:16:51.8±2.0,35°.8N±0°.2×81°.9E±0°.2,h10^{km}**,n6,σ0°49/7,**
Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.99**	**310**	Pn	**Pn**		**10 18 19.8**	**-0.6**
KSH				Sn	**Sn**		**10 19 29.1**	**+0.2**
KSH				smax				
	comp=N,72nm,0.8s							
KSH				smax				
	comp=E,130nm,0.9s							
AAK	**Ala-Archa**	**8.93**	**322**	Pn	**Pn**		**10 19 10.4**	**+10**
	comp=E,0.0nm,0.3s,baz=143,slow=8.0,SNR=3.8							
MKAR	**Makanchi Array**	**11.02**	**2**	Pn	**Pn**		**10 19 29.6**	**+0.2**
	comp=E,0.2nm,0.3s,baz=182,slow=13,SNR=8.6							
KURK	**Kurchatov**	**15.12**	**352**	Pn	**Pn**		**10 20 24.6**	**-0.7**
	comp=E,0.0nm,0.3s,baz=170,slow=12,SNR=4.0							
BVAR	**Borovoye Array**	**19.06**	**338**	P	**Pn**		**10 21 15.6**	**+0.8**
	comp=E,0.2nm,0.3s,baz=139,slow=9.5,SNR=2.9							
TORD	**Torodi Ar. Bea**	**74.52**	**275**	P	**P**		**10 28 31.1**	**+0.1**
	comp=E,0.4nm,0.6s,baz=41,slow=5.2,SNR=6.4							

IDC ***13*** *10:20:12.8±0.9,31°.72N×104°.12E,h0*^{km}*,mb3.9/9,*
mb1 4.0/9,mb1mx3.8/26,mbtmp3.9/9,Error ellipse:
s-maj=41.8km s-min=17.5km az=54.0
NEIC ***13*** *10:20:14.8±0.5,31°.72N×104°.15E,h10*^{km}*,mb4.4/3,Error*
ellipse: s-maj=43.0km s-min=10.4km az=56.0
BJI ***13*** *10:20:17.5,31°.78N×104°.45E,h18*^{km}*,mB4.8/2,mb4.3/2,*
ML4.3/7,Ms4.1/2,Ms7 3.7/2
ISC 13 10:20:14.0±0.8,31°.86N±0°.03×104°.44E±0°.07,h5^{km}**±6**^{km}**,**
n20,σ0°91/23,mb4.0/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**212**	Pg	**Pg**	**10 20 35.5**	**+0.1**
CD2				Sg	**Sg**	**10 20 50.3**	**+0.4**
CD2				smax			
	comp=N,9µm,0.8s						
LZH	**Lanzhou**	**4.24**	**353**	Pg	**Pg**	**10 21 36.8**	**+1.5**
LZH				Sg	**Sg**	**10 22 29.8**	**-0.5**
LZH				smax			
	comp=N,360nm,0.5s						
LZH				smax			
	comp=E,500nm,0.6s						
XAN	**Xi'an**	**4.34**	**59**	Pg	**Pg**	**10 21 36.6**	**-0.7**
XAN				Sg	**Sg**	**10 22 29.3**	**-4.3**
XAN				smax			
	comp=N,740nm,0.8s						
XAN				smax			
	comp=E,360nm,0.8s						
GYA	**Guiyang**	**5.72**	**160**	Sg	**Sg**	**10 23 17.3**	**-0.6**
GYA				smax			
	comp=N,480nm,0.8s						
GYA				smax			
	comp=E,380nm,0.8s						
KSRS	**Korea Array**	**20.08**	**67**	P	**P**	**10 24 50.2**	**+1.9**
	comp=E,3.3nm,0.6s,baz=256,slow=10.0,SNR=8.1						
CN2	**Changchun**	**20.36**	**48**	*e*P	**P**	**10 24 57.0**	**+5.7**
ZALV	**Zalesovo Beam**	**26.17**	**333**	P	**P**	**10 25 49.5**	**+0.3**
	comp=E,1.4nm,0.3s,mb3.9,baz=134,slow=10,SNR=2.1						
ZALV	**Zalesovo Beam**	**26.17**	**333**	P	**P**	**10 25 49.5**	**+0.3**
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**10 25 52.2**	**-2.8**
	comp=E,0.4nm,0.6s,mb3.1,baz=130,slow=9.8,SNR=1.9						
KURK	**Kurchatov**	**26.82**	**322**	*e*P	**P**	**10 25 55.9**	**+0.8**
ABKAR	**Akbulak array**	**37.39**	**311**	P	**P**	**10 27 26.6**	**-1.1**
	comp=E,1.0nm,0.7s,mb3.8						
ARCES	**ARCESS Array B**	**56.69**	**336**	P	**P**	**10 29 57.8**	**-0.2**
	comp=E,2.3nm,1.0s,mb4.2,baz=93,slow=20,SNR=2.9						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**10 30 00.6**	**-0.5**
	comp=E,1.7nm,0.8s,mb4.2,baz=118,slow=18,SNR=2.6						
WRAB	**Tennant Creek**	**58.94**	**147**	*e*P	**P**	**10 30 15.3**	**+0.8**
	comp=E,2.4nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**58.94**	**147**	P	**P**	**10 30 13.5**	**-0.9**
	comp=E,1.2nm,0.5s,mb4.2,baz=340,slow=7.9,SNR=9.5						
ASAR	**Alice Springs**	**61.99**	**149**	P	**P**	**10 30 35.7**	**+0.5**
	comp=E,0.8nm,0.5s,mb4.1,baz=335,slow=6.5,SNR=7.2						
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**10 30 49.1**	**-0.2**
	comp=E,0.4nm,0.5s,mb3.7,baz=73,slow=6.4,SNR=2.5						
BFO	**Black Forest**	**70.69**	**315**	*e*P	**P**	**10 31 29.9**	**-0.9**
	comp=E,3.6nm,0.5s,mb4.6						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	**P**	**10 32 29.8**	**+1.0**
	comp=E,0.3nm,0.5s,mb3.5,baz=327,slow=5.0,SNR=3.8						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	**P**	**10 32 29.8**	**+1.0**

BJI ***13*** *10:29:14.6, 4°.40N×94°.93E, h33km, mB5.4/31, mb5.7/51, Ms5.1/57, Ms7 4.9/48*

MOS ***13*** *10:29:17.8±0.8, 4°.84N×95°.18E, h33km, mb5.8/110, MS4.8/68, Error ellipse: s-maj=7.0km s-min=3.7km az=121.3*

GCMT ***13*** *10:29:19.3±0.1, 4°.37N×95°.05E, h51km, MW5.4/89, Moment Tensor Solution. s89,c161; s85,c161; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.22±.03; $M_{\theta\theta}$-0.92±.02; $M_{\phi\phi}$-0.30±.03; $M_{r\theta}$0.73±.02; $M_{\theta\phi}$0.93±.02; $M_{\phi r}$-0.69±.02; Best double couple: $M_0$1.73000×10^{17} NP1:ϕ_s298.00000°,δ28.00000°, λ78.00000°. NP2:ϕ_s132.00000°,δ63.00000°,λ96.00000°. Principal axes: T 1.5520, Plg71.0000°, Azm56.0000°; N 0.3550, Plg6.0000°, Azm309.0000°; P -1.9090, Plg18.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***13*** *10:29:19.3±0.1, 4°.68N×95°.09E, h35km, mb5.6/139, MS5.1/172, MW5.4 Error ellipse: s-maj=4.0km s-min=2.8km az=209.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}1.73; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$-0.67; $M_{r\theta}$0.72; $M_{\theta\phi}$0.37; $M_{\phi r}$-0.41; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s121.00000°,δ59.00000°, λ89.00000°. NP2:ϕ_s302.00000°,δ31.00000°,λ91.00000°. Principal axes: T 1.9400, Plg75.0000°, Azm28.0000°; N -0.4500, Plg0.0000°, Azm120.0000°; P -1.5000, Plg14.0000°, Azm210.0000°;*

NEIC Felt [II] at Banda Aceh.

ISCJB ***13*** *10:29:19.2±0.1, 4°.67N±0°.02×95°.15E±0°.02, h51km, mb5.6/305, MS4.9/220 Error ellipse: s-maj=3.5km s-min=2.0km az=34.8*

SZGRF ***13*** *10:29:20.3, 4°.20N×94°.72E, h52km, mb5.6, MS4.5, Off west coast of northern Sumatera, Indonesia*

DJA ***13*** *10:29:21, 4°.50N×95°.07E, h50km, Mw5.7/35*

IDC ***13*** *10:29:21.5±0.6, 4°.68N×95°.26E, h57km±4km, mb5.0/29, mb1 5.0/29, mb1mx5.0/30, mbtmp5.0/29, MS4.6/25, Ms1 4.6/25, ms1mx4.5/33, Error ellipse: s-maj=11.8km s-min=7.5km az=51.0*

ISC 13 10:29:21.2±0.1, **4°.66N**±0°.02×**95°.12E**±0°.02, **h53**km, **h53**km±1.4km**:pP-P, n1054, σ0s.91**/891, **mb5.6**/304, **MS4.9**/220, **220C-13D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**1.90**	**73**	P	**Pn**	**10 29 53.0**	**+1.8**
TSI	**Tuntungan**	**3.62**	**108**	P	**Pn**	**10 30 15.9**	**+1.1**
GSI	**Gunungsitoli**	**4.14**	**144**	P	**Pn**	**10 30 20.7**	**-1.2**
TRSI	**Tarutung**	**4.64**	**124**	P	**Pn**	**10 30 29.1**	**+0.3**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 42.5**	**+1.3**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 42.5**	**+1.3**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 47.9**	**+6.8**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 47.9**	**+6.8**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 42.5**	**+1.3**
KULM	**Kulim**	**5.54**	**83**	*e*Pn	**Pn**	**10 30 42.0**	**+0.8**
	720nm,0.7s						
KULM				*e*Sn	**Sn**	**10 31 44.0**	**+0.4**
KULM	**Kulim**	**5.54**	**83**	P	**Pn**	**10 30 41.5**	**+0.4**
	1µm,0.9s,8.5nm						
MNSI	**Mandailing Nat**	**5.88**	**131**	P	**Pn**	**10 30 46.1**	**+0.3**
	1µm,0.7s,12nm						
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.5**	**+0.7**
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.5**	**+0.7**
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.5**	**+0.7**
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.5**	**+0.7**
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.5**	**+0.7**
IPM	**Ipoh**	**5.89**	**92**	P	**Pn**	**10 30 46.3**	**+0.4**
	1µm,0.9s,6.3nm						
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.3**	**+0.1**
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.3**	**+0.1**
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.3**	**+0.1**
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.5**	**+0.3**
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.3**	**+0.1**
FRIM	**Kepong**	**6.64**	**102**	P	**Pn**	**10 30 56.5**	**+0.3**
SISI	**Saibi**	**7.15**	**146**	P	**Pn**	**10 31 02.1**	**-1.1**
	1µm,0.9s,4.5nm						
BKNI	**Bangkinang**	**7.31**	**126**	P	**Pn**	**10 31 05.2**	**-0.3**
	1µm,0.9s,9.2nm						
PPI	**Padang Panjang**	**7.32**	**134**	P	**Pn**	**10 31 05.4**	**-0.2**
	621nm,0.8s,7µm2.9nm						
PDSI	**Padang**	**7.69**	**136**	P	**Pn**	**10 31 09.7**	**-0.9**
	1µm,1.1s,4.7nm						
KTGM	**Kuala Trenggan**	**8.01**	**85**	P	**Pn**	**10 31 16.0**	**+1.0**
KTGM	**Kuala Trenggan**	**8.01**	**85**	P	**Pn**	**10 31 16.0**	**+1.0**
KTGM	**Kuala Trenggan**	**8.01**	**85**	P	**Pn**	**10 31 16.0**	**+1.0**
KTGM	**Kuala Trenggan**	**8.01**	**85**	P	**Pn**	**10 31 16.0**	**+1.0**
KTGM	**Kuala Trenggan**	**8.01**	**85**	P	**Pn**	**10 31 16.0**	**+1.0**
SDSI	**Sungai Dareh**	**8.40**	**131**	P	**Pn**	**10 31 19.3**	**-1.1**
RGRI	**Rengat**	**8.76**	**124**	P	**Pn**	**10 31 25.5**	**+0.3**
	932nm,0.9s						
PPSI	**Pulau Pagai**	**8.85**	**146**	P	**Pn**	**10 31 25.1**	**-1.4**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.7**	**+0.9**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.7**	**+0.9**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.7**	**+0.9**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.7**	**+0.9**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.7**	**+0.9**
MYKOM	**Kota Tinggi**	**9.17**	**108**	P	**Pn**	**10 31 31.2**	**+0.3**
	355nm,1.1s,3µm						
KSI	**Kapahiang**	**11.13**	**138**	P	**Pn**	**10 31 57.2**	**-0.6**
	748nm,1.0s						
MNAI	**Manna**	**11.90**	**139**	P	**Pn**	**10 32 06.0**	**-2.2**
	676nm,0.8s,7µm						
NST	**Nakhon Sawan**	**12.00**	**24**	P	**Pn**	**10 32 07.0**	**-2.6**
	167nm,0.5s						
MDSI	**Maura Dua**	**12.82**	**135**	P	**Pn**	**10 32 17.9**	**-3.0**
	433nm,0.8s,3µm						
KASI	**Kota Agung**	**13.79**	**137**	P	**Pn**	**10 32 30.3**	**-3.7**
	466nm,0.7s,4µm						
CM31	**Chiang Mai Arr**	**14.21**	**15**	*e*Pn	**Pn**	**10 32 46.1**	**+6.4**
UBT	**Ubonrachathani**	**14.33**	**42**	P	**Pn**	**10 32 46.4**	**+5.2**
TPI	**Tanjungpandan**	**14.53**	**120**	P	**Pn**	**10 32 42.9**	**-1.0**
	98nm,1.0s,1µm						
CHTO	**Chiang Mai**	**14.55**	**15**	*e*Pn	**Pn**	**10 32 45.5**	**+1.4**
CHTO	**Chiang Mai**	**14.55**	**15**	Pn	**Pn**	**10 32 50.2**	**+6.0**
	SNR=21						
CHTO				Pn	**Pn**	**10 32 50.2**	**+6.0**
	SNR=21						
CHTO	**Chiang Mai**	**14.55**	**15**	P	**Pn**	**10 32 46.8**	**+2.7**
	260nm,1.1s,2µm						
PALK	**Pallekele**	**14.57**	**281**	*e*P	**Pn**	**10 32 43.7**	**-0.8**
PALK				pmax	pmax		
	comp=Z,77nm,1.4s						
PALK	**Pallekele**	**14.57**	**281**	*e*Pn	**Pn**	**10 32 43.7**	**-0.8**
	comp=Z,77nm,1.4s						
PALK	**Pallekele**	**14.57**	**281**	P	**Pn**	**10 32 43.9**	**-0.6**
	comp=Z,44nm,1.2s						
RBSI	**Rajabasa**	**14.88**	**134**	P	**Pn**	**10 32 44.9**	**-3.6**
	comp=Z,207nm,1.0s						
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 57.4**	**+1.0**
KSM	**Kuching**	**15.49**	**101**	*e*Pn	**Pn**	**10 32 56.0**	**-0.4**
	comp=Z,284nm,0.8s						
KSM	**Kuching**	**15.49**	**101**	P	**Pn**	**10 32 56.4**	**0.0**
	comp=Z,462nm,1.0s,comp=Z,3µm						
DBJI	**Dramaga**	**16.09**	**134**	P	**Pn**	**10 33 01.5**	**-2.5**
	comp=Z,193nm,0.9s						
COCO	**West Island**	**16.83**	**174**	*e*P	**Pn**	**10 33 12.0**	**-1.3**
COCO				pmax	pmax		
	comp=Z,668nm,1.3s						
COCO	**West Island**	**16.83**	**174**	*e*Pn	**Pn**	**10 33 12.0**	**-1.3**
	comp=Z,668nm,1.3s						
LEM	**Lembang**	**16.91**	**132**	P	**Pn**	**10 33 12.5**	**-1.8**
	comp=Z,143nm,0.9s						
STKI	**Sintang**	**16.96**	**105**	P	**Pn**	**10 33 14.3**	**-0.7**
	comp=Z,246nm,0.9s						
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 18.3**	**+0.3**
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 18.3**	**+0.3**
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 18.3**	**+0.3**
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 18.3**	**+0.3**
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 18.3**	**+0.3**
SBUM	**Sibu**	**17.20**	**97**	P	**Pn**	**10 33 16.9**	**-1.1**
	comp=Z,189nm,1.2s,comp=Z,2µm						
BTM	**Bintulu**	**17.98**	**94**	P	**Pn**	**10 33 29.1**	**+1.6**
CAL	**Calcutta**	**18.95**	**340**	*ex*	x	10 34 05.0	
CAL				*ex*	x	10 34 10.7	
CAL	**Calcutta**	**18.95**	**340**	*ex*	x	10 34 05.0	
CAL				*ex*	x	10 34 10.7	
IMP	**Imphal**	**20.04**	**357**	*e*P	**P**	**10 33 49.0**	**-0.9**
IMP				*ex*	x	10 35 54.0	
NGJI	**Ngawi**	**20.21**	**126**	P	**P**	**10 33 52.1**	**+0.2**
	comp=Z,235nm,0.9s						
QIZ	**Qiongzhong**	**20.25**	**44**	P	**P**	**10 33 52.8**	**+0.5**
QIZ				pP		10 34 00.8	
QIZ				sP	sP	10 34 05.0	-5.9
QIZ				S	**S**	**10 37 40.3**	**+3.5**
QIZ				sS	sS	10 37 52.4	-3.8
QIZ				pmax	pmax		
	comp=Z,77nm,1.4s						
QIZ				LR	LR		
	comp=N,3µm,17.5s						
QIZ				LR	LR		
	comp=Z,3µm,24.7s						
QIZ	**Qiongzhong**	**20.25**	**44**	*e*P	**P**	**10 33 53.4**	**+1.1**
	comp=Z,252nm,1.3s						
QIZ				LR	LR		
	comp=Z,3µm,20.0s,MS4.7						
HYB	**Hyderabad**	**20.59**	**309**	*i*P	**P**	**10 33 57.0**	**+1.0**
	comp=Z,70nm,1.0s						
HYB				*e*S	**S**	**10 37 44.0**	**+0.5**
SJI	**Sawahan**	**20.67**	**126**	P	**P**	**10 33 57.9**	**+1.0**
	comp=Z,137nm,0.8s						
GRJI	**Gresik**	**20.79**	**123**	P	**P**	**10 33 59.5**	**+1.3**
	comp=Z,999nm,1.1s,comp=Z,8µm						
PWJI	**Pagerwojo**	**20.87**	**127**	P	**P**	**10 34 00.1**	**+1.0**
	comp=Z,94nm,0.8s						
SHL	**Shillong**	**21.02**	**352**	*ex*	**P**	**10 33 56.0**	**-4.5**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 03.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 05.4**	**+4.5**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 03.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 05.4**	**+4.5**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 03.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 05.4**	**+4.5**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 03.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 05.4**	**+4.5**
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 03.0**	**+2.0**
KKM	**Kota Kinabalu**	**21.04**	**85**	*e*P	**P**	**10 34 02.9**	**+2.0**
	comp=Z,222nm,1.0s,mb5.5						
KKM				LR	LR		
	comp=Z,3µm,19.0s,MS4.7						
KKM	**Kota Kinabalu**	**21.04**	**85**	P	**P**	**10 34 02.9**	**+2.0**
	comp=Z,243nm,1.3s,comp=Z,3µm,mb5.4						
BBKI	**Banjar Baru**	**21.29**	**112**	P	**P**	**10 34 03.9**	**+0.3**
	comp=Z,1µm,1.2s,mb6.2						
KMI	**Kunming**	**21.62**	**19**	P	**P**	**10 34 08.8**	**+1.8**
KMI				pP		10 34 19.5	
KMI				sP	sP	10 34 23.0	-2.7
KMI				PP		10 34 35.6	
KMI				S	**S**	**10 38 02.8**	**-0.7**
KMI				PcP	PcP	10 38 07.1	-0.1
KMI				sS	sS	10 38 19.3	-3.9
KMI				SS		10 38 39.8	
KMI				ScP	ScP	10 41 42.8	+2.7
KMI				PcS	PcS	10 41 46.9	+1.2
KMI				pmax	pmax		
	comp=Z,220nm,1.2s,mb5.5						
KMI				pmax	pmax		
	comp=Z,670nm,3.1s						
KMI				LR	LR		
	comp=N,4µm,12.9s,MS5.1						
KMI				LR	LR		
	comp=E,2µm,13.3s,MS5.1						
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.9**	**-0.4**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.6**	**-0.6**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.9**	**-0.4**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.6**	**-0.6**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.9**	**-0.4**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.6**	**-0.6**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.9**	**-0.4**
SDKM	**Sandakan**	**22.00**	**87**	P	**P**	**10 34 10.6**	**-0.6**
KMMI	**Kalianget**	**22.11**	**122**	P	**P**	**10 34 13.0**	**+0.6**
	comp=E,773nm,0.9s,comp=E,6µm,mb6.1						
GMJI	**Gumukmas**	**22.34**	**125**	P	**P**	**10 34 16.6**	**+1.8**
	comp=E,128nm,1.2s,mb5.2						
KBKI	**Kotabaru**	**22.46**	**110**	P	**P**	**10 34 15.8**	**-0.3**
	comp=E,166nm,0.8s,comp=E,1µm,mb5.5						
NGP	**Nagpur**	**22.63**	**318**	*e*P	**P**	**10 34 16.3**	**-1.5**
LATR	**Latur**	**22.71**	**308**	*e*P	**P**	**10 34 18.8**	**+0.1**
LATR				*ex*	x	10 38 19.5	
ABJI	**Asem Bagus**	**22.73**	**123**	P	**P**	**10 34 18.3**	**-0.6**
	comp=E,391nm,1.0s,comp=E,6µm,mb5.8						
ODAN	**Odare**	**23.28**	**342**	*e*P	**P**	**10 34 23.6**	**-0.8**
	comp=E,67nm,0.5s,mb5.3						
RAMN	**Ramite**	**23.61**	**341**	*e*P	**P**	**10 34 26.4**	**-1.1**
	comp=E,158nm,0.6s,mb5.6						
TAPN	**Taplejung**	**23.64**	**343**	*e*P	**P**	**10 34 24.9**	**-2.9**
	comp=E,59nm,0.4s,mb5.3						
SRBI	**Singaraja**	**23.71**	**122**	P	**P**	**10 34 29.1**	**+0.6**
	comp=E,1µm,1.4s,mb6.2						
DNP	**Denpasar**	**24.02**	**123**	P	**P**	**10 34 30.7**	**-0.7**
	comp=E,559nm,1.0s,mb6.0						
KAD	**Karad**	**24.05**	**303**	*i*x	**P**	**10 34 33.7**	**+2.0**
KAD				*i*x	x	10 38 56.6	
KHKI	**Kahang-Kahang**	**24.18**	**122**	P	**P**	**10 34 32.9**	**0.0**
	comp=E,548nm,0.9s,comp=E,4µm,mb6.0						
GYA	**Guiyang**	**24.32**	**26**	⇑*i*P	**P**	**10 34 33.8**	**-0.2**
GYA				pP		10 34 44.8	
GYA				sP	sP	10 34 50.3	-3.3
GYA				PP		10 35 11.0	
GYA				sS	sS	10 39 05.4	-6.8
GYA				SS		10 39 45.8	
GYA				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.2						
GYA				pmax	pmax		
	comp=Z,180nm,4.8s						
GYA				LR	LR		
	comp=N,4µm,16.8s,MS5.0						
GYA				LR	LR		
	comp=E,1µm,17.0s,MS5.0						
GYA				LR	LR		
	comp=Z,2µm,16.4s,MS4.7						
JIRN	**Jiri**	**24.40**	**341**	*e*P	**P**	**10 34 33.4**	**-1.3**
	comp=Z,123nm,0.6s,mb5.5						
PKI	**Pulchoki**	**24.59**	**339**	*e*P	**P**	**10 34 36.3**	**-0.1**
	comp=Z,76nm,0.6s,mb5.4						
PKIN	**Phulchoki**	**24.60**	**339**	*e*P	**P**	**10 34 36.1**	**-0.4**
	comp=Z,48nm,0.5s,mb5.3						
DMN	**Daman**	**24.73**	**338**	*e*P	**P**	**10 34 37.0**	**-0.7**
GUN	**Gumba**	**24.74**	**340**	*e*P	**P**	**10 34 36.4**	**-1.4**
	comp=Z,97nm,0.4s,mb5.7						
KKN	**Kakani**	**24.84**	**339**	*e*P	**P**	**10 34 37.3**	**-1.4**
	comp=Z,232nm,1.1s,mb5.6						
POO	**Poona**	**24.94**	**305**	*e*P	**P**	**10 34 39.0**	**-0.7**
BHPL	**Bhopal**	**25.16**	**319**	*e*P	**P**	**10 34 42.3**	**+0.6**
LSA	**Lhasa**	**25.18**	**352**	P	**P**	**10 34 41.0**	**-0.8**
LSA				LR	LR		
	comp=N,730nm,13.3s						
LSA				LR	LR		
	comp=E,820nm,18.5s						
LSA				LR	LR		
	comp=Z,520nm,12.3s,MS4.2						
LSA	**Lhasa**	**25.18**	**352**	*e*P	**P**	**10 34 41.8**	**0.0**
LSA				pmax	pmax		
	comp=Z,169nm,1.0s,mb5.5						
LSA				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.6						
LSA	**Lhasa**	**25.18**	**352**	*e*P	**P**	**10 34 41.8**	**0.0**
	comp=Z,169nm,1.0s,mb5.5						
LSA				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
GZH	**Guangzhou**	**25.40**	**42**	P	**P**	**10 34 49.8**	**+5.9**
GZH				S	**S**	**10 39 18.1**	**+11**
GZH				LR	LR		
	comp=N,3µm,17.5s,MS5.0						
GZH				LR	LR		
	comp=E,2µm,17.5s,MS5.0						
GZH				LR	LR		
	comp=Z,4µm,19.0s,MS5.0						
DGAR	**Diego Garcia**	**25.61**	**242**	P	**P**	**10 34 46.2**	**+0.4**
DGAR				pmax	pmax		
	comp=Z,302nm,1.3s,mb5.7						
DGAR				MLR	MLR		
	comp=Z,3µm,21.0s,MS4.8						
DGAR	**Diego Garcia**	**25.61**	**242**	P	**P**	**10 34 46.2**	**+0.3**
	comp=Z,302nm,1.3s,mb5.7						
DGAR				LR	LR		
	comp=Z,3µm,21.0s,MS4.8						
TTSI	**Tana Toraja**	**25.84**	**107**	P	**P**	**10 34 48.6**	**+0.7**
	comp=Z,263nm,1.5s,comp=Z,2µm,mb5.6						
KAPI	**Kappang**	**26.41**	**111**	P	**P**	**10 34 52.0**	**-1.1**
	comp=Z,799nm,0.9s,mb6.2,SNR=12						
KAPI	**Kappang**	**26.41**	**111**	P	**P**	**10 34 52.1**	**-1.1**
	comp=Z,41nm,0.7s,mb5.1,baz=293,slow=8.1,SNR=25						
KAPI				LR	LR	10 46 05.3	
	comp=Z,2µm,20.5s,MS4.7,baz=202,slow=38						
KAPI	**Kappang**	**26.41**	**111**	*e*P	**P**	**10 34 52.0**	**-1.2**
	comp=Z,99nm,0.8s,mb5.4						
KAPI				LR	LR		
	comp=Z,3µm,21.0s,MS4.8						
APSI	**Ampana**	**27.07**	**101**	P	**P**	**10 34 59.4**	**+0.3**
	comp=Z,453nm,1.1s,comp=Z,3µm,mb5.9						
MRSI	**Marisa**	**27.11**	**98**	P	**P**	**10 34 59.1**	**-0.3**
	comp=Z,192nm,1.0s,comp=Z,1µm,mb5.6						
TGY	**Tagaytay City**	**27.11**	**68**	P	**P**	**10 34 58.8**	**-0.6**
	comp=Z,154nm,0.5s,mb5.8,baz=161,slow=17,SNR=6.4						
CD2	**Chengdu**	**27.34**	**16**	P	**P**	**10 35 00.6**	**-0.7**
CD2				pP	pP	10 35 12.3	-2.4
CD2				sP	sP	10 35 18.0	-3.0
CD2				PP		10 35 49.8	
CD2				S	**S**	**10 39 37.3**	**-0.2**
CD2				sS	sS	10 39 57.0	-3.2
CD2				SS		10 40 58.5	
CD2				pmax	pmax		
	comp=Z,320nm,1.0s,mb5.8						
CD2				pmax	pmax		
	comp=Z,610nm,11.8s						
CD2				LR	LR		
	comp=N,3µm,20.8s						
CD2				LR	LR		
	comp=Z,3µm,20.8s,MS4.8						
AGRA	**Agra**	**27.79**	**326**	*e*P	**P**	**10 35 05.3**	**-0.1**
AGRA				AMb	AMB	10 35 06.5	
	comp=Z,65nm,0.5s,mb5.5						
BHV	**Bhavnagar**	**28.01**	**309**	*ex*	**P**	**10 35 10.5**	**+3.1**
LUWI	**Luwuk**	**28.20**	**101**	P	**P**	**10 35 09.7**	**+0.5**
	comp=Z,450nm,1.2s,comp=Z,4µm,mb6.0						
PTH	**Pithoragarh**	**28.49**	**332**	*e*P	**P**	**10 35 11.0**	**-0.5**
KDI	**Kendari**	**28.77**	**107**	P	**P**	**10 35 13.6**	**-0.7**
	comp=Z,87nm,1.2s,comp=Z,935nm,mb5.3						
ENH	**Enshi**	**28.86**	**26**	*e*P	**P**	**10 35 13.8**	**-0.9**
	comp=Z,110nm,1.0s,mb5.5						
ENH				LR	LR		
	comp=Z,4µm,21.0s,MS5.0						
SONA	**Sohna**	**29.06**	**326**	*e*P	**P**	**10 35 16.2**	**-0.4**
BISR	**Bishrakh**	**29.11**	**327**	*e*P	**P**	**10 35 15.7**	**-1.4**
AYAN	**Aya Nagar**	**29.21**	**326**	*e*P	**P**	**10 35 17.5**	**-0.5**
AJM	**Ajmer**	**29.23**	**320**	*e*P	**P**	**10 35 18.6**	**+0.5**
NDI	**New Delhi**	**29.32**	**327**	*ex*	**P**	**10 35 16.0**	**-2.9**
JOSI	**Joshimath**	**29.64**	**332**	*e*P	**P**	**10 35 22.5**	**+0.7**
JOSI				AMb	AMB	10 35 31.3	
	comp=Z,332nm,0.7s,mb6.2						
KHET	**Khetri**	**29.66**	**324**	*e*P	**P**	**10 35 22.1**	**+0.2**
KHET				AMb	AMB	10 35 24.2	
	comp=Z,52nm,1.0s,mb5.2						
MNI	**Manado**	**29.84**	**95**	P	**P**	**10 35 24.2**	**+0.4**
	comp=Z,263nm,0.9s,mb6.0						
QZH	**Quanzhou**	**30.25**	**46**	⇑*i*P	**P**	**10 35 29.0**	**+1.8**
QZH				S	**S**	**10 40 27.0**	**+3.7**
QZH				pmax	pmax		
	comp=Z,360nm,1.1s,mb6.0						
QZH				LR	LR		
	comp=N,2µm,8.9s						
QZH				LR	LR		
	comp=E,2µm,8.9s						
QZH				LR	LR		
	comp=Z,4µm,15.7s,MS5.1						
DAV	**Davao City (W)**	**30.39**	**84**	PFAKE		10 35 40.0	+11
DAV				LR			
	comp=Z,2µm,21.0s,MS4.7						
KKR	**Kurukshetra**	**30.53**	**328**	*e*P	**P**	**10 35 30.2**	**+0.5**
TWG	**Pinlang**	**30.90**	**52**	*e*P	**P**	**10 35 34.9**	**+1.9**
	comp=Z,222nm,1.3s,mb5.8						
SMLA	**Simla**	**31.28**	**329**	*ex*	**P**	**10 35 33.9**	**-2.4**
SMLA				AMb	AMB	10 35 36.7	
	comp=Z,95nm,1.3s,mb5.5						
SSLB	**Suanglung**	**31.33**	**50**	*e*P	**P**	**10 35 37.8**	**+1.0**
	comp=Z,105nm,1.1s,mb5.6						
YULB	**Yu-li**	**31.38**	**51**	*e*P	**P**	**10 35 38.8**	**+1.6**
	comp=Z,98nm,0.9s,mb5.6						
WHN	**Wuhan**	**31.48**	**33**	⇓*i*P	**P**	**10 35 38.8**	**+0.8**
XAN	**Xi'an**	**31.92**	**22**	P	**P**	**10 35 40.9**	**-0.9**
XAN				pmax	pmax		
	comp=Z,77nm,0.6s,mb5.7						
XAN				LR	LR		
	comp=N,1µm,27.5s						
XAN				LR	LR		
	comp=E,360nm,20.1s						
XAN				LR	LR		
	comp=Z,690nm,19.4s						
JASL	**Jaisalmer**	**32.01**	**316**	*ex*	**P**	**10 35 44.8**	**+2.1**
NACB	**Ninganchiao**	**32.03**	**50**	*e*P	**P**	**10 35 44.1**	**+1.2**
	comp=Z,100nm,1.0s,mb5.6						
YHNB	**Yeheng**	**32.13**	**49**	*e*P	**P**	**10 35 45.6**	**+1.8**
	comp=Z,154nm,1.2s,mb5.7						
YHNB				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
LZH	**Lanzhou**	**32.29**	**13**	*e*P	**P**	**10 35 44.1**	**-0.9**
LZH				pP	pP	10 35 54.0	-4.5
LZH				sP	sP	10 35 58.8	-6.0
LZH				PP	PP	10 36 55.0	-3.8
LZH				*e*S	**S**	**10 40 57.6**	**+2.7**
LZH				sS	sS	10 41 12.5	-5.3
LZH				SS	SS	10 42 52.4	-23
LZH				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.6						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
LZH				LR	LR		
	comp=N,2µm,16.5s						
LZH				LR	LR		
	comp=Z,2µm,17.9s,MS5.0						
TATO	**Taipei**	**32.39**	**49**	*e*P	**P**	**10 35 47.8**	**+1.8**
	comp=Z,202nm,1.3s,mb5.8						
TATO				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
LBMI	**Labuha**	**32.77**	**98**	P	**P**	**10 35 50.2**	**+0.6**
	comp=Z,186nm,1.1s,comp=Z,2µm,mb5.9						

NLAI	**Namlea**	**32.90**	**103**	P	**P**	**10 35 51.0**	**+0.3**
	comp=Z,184nm,0.9s,comp=Z,1μm,mb6.0						
THN	**Thein Dam**	**33.06**	**329**	*e*P	**P**	**10 35 50.2**	**-1.6**
AAI	**Ambon**	**34.07**	**104**	P	**P**	**10 36 00.2**	**-0.7**
	comp=Z,472nm,1.4s,comp=Z,4μm,mb6.2						
GTA	**Gaotai**	**34.85**	**6**	⇑P	**P**	**10 36 06.5**	**-0.7**
GTA				pP	pP	10 36 16.0	-4.8
GTA				sP	sP	10 36 20.3	-6.8
GTA				PP	PP	10 37 23.1	-4.0
GTA				PcP	PcP	10 38 40.3	+0.9
GTA				S	**S**	**10 41 34.3**	**-0.2**
GTA				sS	sS	10 41 48.8	-8.7
GTA				ScS	ScS	10 46 22.9	-1.1
GTA				pmax	pmax		
	comp=Z,96nm,1.1s,mb5.6						
GTA				pmax	pmax		
	comp=Z,200nm,6.5s						
GTA				LR	LR		
	comp=N,930nm,20.5s,MS4.6						
GTA				LR	LR		
	comp=E,530nm,19.0s,MS4.6						
GTA				LR	LR		
	comp=Z,1μm,26.5s						
NJ2	**Nanjing**	**35.17**	**36**	*e*P	**P**	**10 36 10.3**	**+0.2**
NJ2				PP	PP	10 37 31.8	+1.1
NJ2				S	**S**	**10 41 42.5**	**+2.9**
NJ2				SS	SS	10 44 00.0	-14
NJ2				pmax	pmax		
	comp=Z,220nm,1.2s,mb6.0						
NJ2				pmax	pmax		
	comp=Z,620nm,7.1s						
NJ2				LR	LR		
	comp=N,2μm,23.0s,MS5.0						
NJ2				LR	LR		
	comp=E,3μm,22.1s,MS5.0						
NJ2				LR	LR		
	comp=Z,3μm,23.5s,MS5.0						
MBWA	**Marble Bar**	**35.23**	**138**	*e*P	**P**	**10 36 10.0**	**-0.7**
	comp=Z,66nm,1.2s,mb5.4						
MBWA				*e*pP	pP	10 36 21.3	-3.0
MBWA				*e*PcP	PcP	10 38 41.4	+0.5
MBWA				LR	LR		
	comp=Z,1μm,22.0s,MS4.7						
MBWA	**Marble Bar**	**35.23**	**138**	P	**P**	**10 36 10.0**	**-0.7**
	comp=Z,80nm,1.6s,mb5.4						
SSE	**Sheshan**	**35.94**	**40**	P	**P**	**10 36 17.3**	**+0.5**
SSE				pP	pP	10 36 28.3	-2.1
SSE				S	**S**	**10 41 55.6**	**+4.0**
SSE				sS	sS	10 42 14.9	+0.3
SSE				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
SSE				pmax	pmax		
	comp=Z,320nm,10.7s						
SSE				LR	LR		
	comp=N,2μm,21.2s,MS4.9						
SSE				LR	LR		
	comp=E,1μm,21.2s,MS4.9						
SSE				LR	LR		
	comp=Z,2μm,15.9s						
QUE	**Quetta**	**36.76**	**317**	*e*P	**P**	**10 36 13.0**	**-11**
QUE				*e*S	**S**	**10 41 56.0**	**-8.1**
TIA	**Tai'an**	**37.35**	**30**	*e*P	**P**	**10 36 28.8**	**+0.1**
TIA				pmax	pmax		
	comp=Z,87nm,0.8s,mb5.6						
FITZ	**Fitzroy Crossi**	**37.65**	**128**	*e*P	**P**	**10 36 30.2**	**-1.2**
	comp=Z,107nm,0.7s,mb5.7						
FITZ	**Fitzroy Crossi**	**37.65**	**128**	P	**P**	**10 36 30.1**	**-1.3**
	comp=Z,82nm,0.9s,mb5.5,baz=281,slow=3.9						
FITZ	**Fitzroy Crossi**	**37.65**	**128**	*e*P	**P**	**10 36 30.2**	**-1.3**
	comp=Z,80nm,0.8s,mb5.5						
FITZ				*e*PcP	PcP	10 38 49.1	+0.9
FITZ	**Fitzroy Crossi**	**37.65**	**128**	P	**P**	**10 36 30.0**	**-1.4**
	comp=Z,268nm,1.1s,mb5.9						
BTO	**Baotou**	**38.21**	**18**	*e*P	**P**	**10 36 34.8**	**-1.1**
KBL	**Kabul**	**38.31**	**324**	*e*P	**P**	**10 36 36.4**	**-0.5**
KBL				*e*		10 42 35.0	
KBL				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
KBL	**Kabul**	**38.31**	**324**	*e*P	**P**	**10 36 36.4**	**-0.5**
	comp=Z,15nm,0.9s,mb4.7						
KBL				*e*ScP	ScP	10 42 35.0	+1.4
JOW	**Kunigami**	**38.56**	**52**	P	**P**	**10 36 39.1**	**+0.1**
	comp=Z,92nm,0.4s,mb5.9,baz=242,slow=6.2,SNR=16						
JOW				LR	LR	10 52 48.4	
	comp=Z,1μm,20.0s,MS4.8,baz=126,slow=37						
KSH	**Kashi**	**38.78**	**336**	⇑*i*P	**P**	**10 36 39.1**	**-1.6**
KSH				*e*pP	pP	10 36 48.3	-6.1
KSH				*e*sP	sP	10 36 52.1	-8.5
KSH				*e*PP	PP	10 38 11.1	+0.7
KSH				*e*PcP	PcP	10 38 52.1	+0.8
KSH				*e*S	**S**	**10 42 30.6**	**-3.9**
KSH				*e*sS	sS	10 42 48.0	-10
KSH				*e*SS	SS	10 45 11.3	-16
KSH				*e*ScS	ScS	10 46 45.0	-1.1
KSH				pmax	pmax		
	comp=Z,550nm,1.6s,mb6.0						
KSH				LR	LR		
	comp=N,230nm,7.2s						
KSH				LR	LR		
	comp=E,230nm,6.8s						
TLE	**Tual**	**38.93**	**105**	P	**P**	**10 36 41.5**	**-0.8**
HHC	**Hu-ho-hao-te**	**38.94**	**20**	⇑*i*P	**P**	**10 36 42.9**	**+0.9**
HHC				pP	pP	10 36 52.8	-2.9
HHC				sP	sP	10 36 56.9	-5.0
HHC				PP	PP	10 38 17.3	+5.2
HHC				PcP	PcP	10 38 52.3	+0.5
HHC				S	**S**	**10 42 40.8**	**+4.0**
HHC				sS	sS	10 42 57.3	-2.6
HHC				SS	SS	10 45 26.4	-3.8
HHC				ScS	ScS	10 46 48.0	+1.1
HHC				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.5						
HHC				pmax	pmax		
	comp=Z,270nm,5.9s						
HHC				LR	LR		
	comp=N,3μm,14.5s,MS5.4						
HHC				LR	LR		
	comp=E,2μm,14.5s,MS5.4						
HHC				LR	LR		
	comp=Z,3μm,15.7s,MS5.3						
WBK	**Wadi Bani Khal**	**39.23**	**300**	P	**P**	**10 36 48.0**	**+3.3**
	SNR=6.6						
WMQ	**Urumqi**	**39.54**	**352**	P	**P**	**10 36 46.9**	**-0.1**
WMQ				PP	PP	10 38 21.8	+3.2
WMQ				S	**S**	**10 42 47.5**	**+1.7**
WMQ				sS	sS	10 43 03.8	-5.2
WMQ				SS	SS	10 45 36.6	-5.7
WMQ				ScS	ScS	10 46 49.8	-0.5
WMQ				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,270nm,3.5s						
WMQ				LR	LR		
	comp=N,510nm,28.0s,MS4.8						
WMQ				LR	LR		
	comp=E,2μm,29.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,630nm,28.0s,MS4.3						
BJT	**Baijiatuau**	**39.99**	**25**	*e*P	**P**	**10 36 52.1**	**+1.3**
BJT				pmax	pmax		
	comp=Z,387nm,1.0s						
BJT				MLR	MLR		
	comp=Z,1μm,21.0s						
BJT	**Baijiatuau**	**39.99**	**25**	*e*P	**P**	**10 36 52.1**	**+1.3**
	comp=Z,387nm,1.0s,mb6.1						
BJT				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
BJI	**Beijing**	**40.01**	**25**	P	**P**	**10 36 52.1**	**+1.2**
BJI				pP	pP	10 37 01.1	-3.6
BJI				sP	sP	10 37 04.4	-6.5
BJI				S	**S**	**10 42 55.5**	**+2.6**
BJI				sS	sS	10 43 12.9	-3.3
BJI				pmax	pmax		
	comp=Z,420nm,1.0s,mb6.1						
BJI				LR	LR		
	comp=N,2μm,20.2s,MS5.0						
BJI				LR	LR		
	comp=E,1μm,18.8s,MS5.0						
BJI				LR	LR		
	comp=Z,2μm,25.4s						
BIDO	**Bidbid**	**40.29**	**301**	P	**P**	**10 36 56.6**	**+3.1**
	SNR=8.9						
MSEY	**Mahe Island**	**40.67**	**257**	PFAKE		10 37 10.0	+13
MSEY				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
BSY	**Bisya**	**40.81**	**300**	P	**P**	**10 37 00.6**	**+2.8**
	SNR=9.4						
KAKA	**Kakadu**	**40.90**	**115**	*e*P	**P**	**10 36 55.9**	**-2.7**
	comp=Z,87nm,0.8s,mb5.4						
KAKA	**Kakadu**	**40.90**	**115**	*e*P	**P**	**10 36 55.8**	**-2.8**
	comp=Z,256nm,0.8s,mb5.9						
ULHL	**Ulahol**	**41.03**	**339**	P	**P**	**10 37 00.3**	**+1.0**
	SNR=233						
KZA	**Kyzart**	**41.26**	**337**	P	**P**	**10 37 02.7**	**+1.5**
	SNR=203						
ARQ	**Araqi**	**41.60**	**300**	P	**P**	**10 37 07.4**	**+3.1**
	SNR=8.6						
UCH	**Uchtor**	**41.67**	**337**	P	**P**	**10 37 06.1**	**+1.5**
	SNR=315						
UCH	**Uchtor**	**41.67**	**337**	*e*P	**P**	**10 37 06.0**	**+1.5**
	comp=Z,299nm,1.1s,mb5.8						
UCH				LR	LR		
	comp=Z,552nm,20.0s,MS4.4						
DL2	**Dalian**	**41.72**	**32**	P	**P**	**10 37 05.8**	**+0.8**
DL2				S	**S**	**10 43 22.0**	**+3.7**
DL2				pmax	pmax		
	comp=Z,170nm,0.9s,mb5.7						
DL2				pmax	pmax		
	comp=Z,180nm,3.5s						
DL2				LR	LR		
	comp=N,540nm,15.1s,MS4.8						
DL2				LR	LR		
	comp=E,860nm,16.9s,MS4.8						
DL2				LR	LR		
	comp=Z,1μm,20.8s,MS4.8						
TKM2	**Tokmak 2**	**41.85**	**338**	P	**P**	**10 37 07.2**	**+1.2**
	SNR=232						
TKM2	**Tokmak 2**	**41.85**	**338**	*e*P	**P**	**10 37 07.1**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,472nm,1.3s,mb6.0						
TKM2				MLR	MLR		
	comp=Z,605nm,20.0s,MS4.5						
TKM2	**Tokmak 2**	**41.85**	**338**	*e*P	**P**	**10 37 07.1**	**+1.1**
	comp=Z,472nm,1.3s,mb6.0						
TKM2				LR	LR		
	comp=Z,605nm,20.0s,MS4.5						
KBK	**Karagaybulak**	**41.87**	**338**	P	**P**	**10 37 08.0**	**+1.8**
	SNR=223						
AML	**Almayashu**	**41.91**	**336**	P	**P**	**10 37 08.1**	**+1.6**
	SNR=330						
AML	**Almayashu**	**41.91**	**336**	*e*P	**P**	**10 37 08.1**	**+1.5**
	comp=Z,531nm,1.1s,mb6.1						
AML				LR	LR		
	comp=Z,573nm,20.0s,MS4.5						
KLBR	**Kellerberrin**	**42.01**	**151**	*e*P	**P**	**10 37 07.1**	**-0.4**
	comp=Z,53nm,1.0s,mb5.1						
AAK	**Ala-Archa**	**42.02**	**337**	P	**P**	**10 37 08.5**	**+1.1**
	comp=Z,1μm,1.4s,mb6.4						
AAK	**Ala-Archa**	**42.02**	**337**	P	**P**	**10 37 08.9**	**+1.5**
	SNR=165						
AAK	**Ala-Archa**	**42.02**	**337**	P	**P**	**10 37 08.8**	**+1.4**
	comp=Z,46nm,0.6s,mb5.3,baz=153,slow=6.3,SNR=257						
AAK				LR	LR	10 56 50.0	
	comp=Z,834nm,20.3s,MS4.6,baz=47,slow=39						
AAK	**Ala-Archa**	**42.02**	**337**	*e*P	**P**	**10 37 08.9**	**+1.5**
AAK				pmax	pmax		
	comp=Z,270nm,1.1s,mb5.8						
AAK				MLR	MLR		
	comp=Z,834nm,21.0s,MS4.6						
AAK	**Ala-Archa**	**42.02**	**337**	*e*P	**P**	**10 37 08.9**	**+1.5**
	comp=Z,270nm,1.1s,mb5.8						
AAK				LR	LR		
	comp=Z,834nm,21.0s,MS4.6						
AAK	**Ala-Archa**	**42.02**	**337**	P	**P**	**10 37 09.1**	**+1.7**
	SNR=192						
AAK				P		10 37 09.1	
	SNR=192						
FRU	**Bishkek**	**42.14**	**337**	⇑*i*P	**P**	**10 37 09.0**	**+0.6**
FRU				*e*		10 43 28.0	
FRU				pmax	pmax		
	comp=Z,760nm,1.6s,mb6.1						
CHMS	**Chumysh**	**42.23**	**338**	P	**P**	**10 37 09.9**	**+0.8**
	SNR=62						
EKS2	**Erkin-Say**	**42.33**	**336**	P	**P**	**10 37 11.4**	**+1.5**
	SNR=8.7						
EKS2	**Erkin-Say**	**42.33**	**336**	*e*P	**P**	**10 37 11.2**	**+1.3**
	comp=Z,243nm,1.2s,mb5.7						
EKS2				LR	LR		
	comp=Z,561nm,20.0s,MS4.5						
HATD	**Hatta, Dubai**	**42.47**	**302**	P	**P**	**10 37 14.3**	**+2.9**
	SNR=7.8						
ASHO	**Ashiyiah**	**42.48**	**302**	P	**P**	**10 37 13.9**	**+2.5**
	SNR=6.4						
USP	**Ospenovka**	**42.56**	**338**	P	**P**	**10 37 12.8**	**+1.0**
	SNR=162						
NWAO	**Narrogin (SRO)**	**42.87**	**152**	P	**P**	**10 37 13.6**	**-0.8**
	comp=Z,22nm,0.9s,mb4.9,baz=314,slow=11,SNR=5.8						
NWAO	**Narrogin (SRO)**	**42.87**	**152**	*e*P	**P**	**10 37 14.7**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,107nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,1μm,19.0s						
NWAO	**Narrogin (SRO)**	**42.87**	**152**	*e*P	**P**	**10 37 14.7**	**+0.3**
	comp=Z,107nm,1.1s,mb5.5						
NWAO				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
FAQ	**Al Faqa, Dubai**	**42.89**	**302**	P	**P**	**10 37 16.7**	**+1.8**
	SNR=5.6						
NAZ	**Nazwa, Dubai**	**42.92**	**302**	P	**P**	**10 37 17.4**	**+2.4**
	SNR=5.4						
ASUD	**Al Ashush, Dub**	**43.08**	**301**	P	**P**	**10 37 19.2**	**+2.9**
	SNR=11						
MK31	**Makanchi Array**	**43.41**	**347**	*e*P	**P**	**10 37 18.4**	**-0.2**
MKAR	**Makanchi Array**	**43.41**	**347**	P	**P**	**10 37 18.3**	**-0.3**
	comp=Z,106nm,0.9s,mb5.6,baz=161,slow=7.7,SNR=304						
MKAR				PcP	PcP	10 39 06.5	+0.3
	comp=Z,8.6nm,0.8s,baz=133,slow=2.7,SNR=2.6						
MKAR				LR	LR	10 58 09.9	
	comp=Z,741nm,21.6s,MS4.5,baz=158,slow=40						
MKAR				PKPPKP		11 09 09.3	
	comp=Z,0.4nm,0.8s,baz=0.0,slow=2.9,SNR=3.7						
MKAR	**Makanchi Array**	**43.41**	**347**	P	**P**	**10 37 18.3**	**-0.3**
MKAR						10 39 06.5	
INCN	**Inchon**	**43.54**	**37**	*e*P	**P**	**10 37 19.2**	**-0.6**
	comp=Z,118nm,1.0s,mb5.6						
INCN				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
SONM	**Songino Array**	**44.09**	**11**	P	**P**	**10 37 23.2**	**-0.8**
	comp=Z,14nm,0.8s,mb4.7,baz=195,slow=8.5,SNR=36						
SONM				PcP	PcP	10 39 09.0	+0.5
	comp=Z,28nm,0.8s,baz=194,slow=3.9,SNR=14						
SONM				pPcP		10 39 23.4	
	comp=Z,21nm,0.9s,baz=194,slow=3.8,SNR=9.8						
SONM				LR	LR	10 57 35.6	
	comp=Z,2μm,21.9s,MS4.9,baz=189,slow=38						
SONM	**Songino Array**	**44.09**	**11**	P	**P**	**10 37 23.2**	**-0.8**
SONM						10 39 09.0	
KSRS	**Korea Array**	**44.30**	**38**	P	**P**	**10 37 25.3**	**-0.6**
	comp=Z,41nm,0.8s,mb5.2,baz=222,slow=8.7,SNR=73						
KSRS				PcP	PcP	10 39 09.8	+0.2
	comp=Z,8.1nm,1.0s,baz=228,slow=5.4,SNR=4.9						
KSRS				pPcP		10 39 23.8	
	comp=Z,6.5nm,1.0s,baz=223,slow=4.4,SNR=4.1						
KSRS				LR	LR	10 59 39.6	
	comp=Z,837nm,18.8s,MS4.7,baz=192,slow=41						
KSRS	**Korea Array**	**44.30**	**38**	P	**P**	**10 37 25.3**	**-0.6**
KSRS						10 39 09.8	
KSRS				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.2						
KSRS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,837nm,18.8s,MS4.7						
SNY	**Shenyang**	**44.88**	**30**	⇑P	**P**	**10 37 29.9**	**-0.6**
SNY				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.8						
SNY				pmax	pmax		
	comp=Z,450nm,5.3s						
SNY				LR	LR		
	comp=N,1μm,23.3s						
SNY				LR	LR		
	comp=E,2μm,17.6s						
SNY				LR	LR		
	comp=Z,2μm,19.2s,MS5.0						
WRA	**Warramunga Arr**	**45.64**	**124**	P	**P**	**10 37 37.7**	**+0.9**
WRA				S	**S**	**10 44 10.6**	**-5.5**
	comp=Z,8.8nm,1.0s,baz=293,slow=16,SNR=11						
WRA				LR	LR	10 57 11.7	
	comp=Z,1μm,21.5s,MS4.8,baz=295,slow=37						
WRA	**Warramunga Arr**	**45.64**	**124**	P	**P**	**10 37 37.7**	**+0.9**
WRA				S	**S**	**10 44 10.6**	**-5.5**
WRAB	**Tennant Creek**	**45.65**	**124**	P	**P**	**10 37 36.0**	**-0.9**
	comp=Z,3μm,0.8s						
WRAB	**Tennant Creek**	**45.65**	**124**	*e*P	**P**	**10 37 36.8**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,501nm,1.0s,mb6.4						
WRAB				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.0						
WRAB	**Tennant Creek**	**45.65**	**124**	*e*P	**P**	**10 37 36.8**	**-0.1**
	comp=Z,501nm,1.0s,mb6.4						
WRAB				LR	LR		
	comp=Z,2μm,22.0s,MS5.0						
ZAK	**Zakamensk**	**46.08**	**7**	*e*P	**P**	**10 37 38.6**	**-1.2**
ZAK				*e*		10 39 15.9	
ZAK				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.9						
MOY	**Mondy**	**47.10**	**5**	*e*P	**P**	**10 37 47.1**	**-0.7**
MOY				pmax	pmax		
	comp=Z,40nm,3.1s						
ASAR	**Alice Springs**	**47.14**	**128**	P	**P**	**10 37 48.4**	**-0.2**
	comp=Z,56nm,0.7s,mb5.6,baz=298,slow=7.9,SNR=748						
ASAR				PcP	PcP	10 39 20.2	+0.5
	comp=Z,20nm,0.8s,baz=299,slow=3.4,SNR=5.4						
ASAR				S	**S**	**10 44 33.0**	**-4.5**
	comp=Z,2.8nm,0.8s,baz=294,slow=14,SNR=6.7						
ABKT	**Ailbek**	**47.24**	**320**	P	**P**	**10 37 50.6**	**+1.5**
	comp=Z,534nm,0.6s,mb6.7,SNR=12						
FORT	**Forrest**	**47.25**	**140**	*e*P	**P**	**10 37 49.4**	**+0.2**
	comp=Z,106nm,0.6s,mb6.0						
FORT	**Forrest**	**47.25**	**140**	*e*P	**P**	**10 37 49.4**	**+0.1**
	comp=Z,113nm,0.6s,mb6.0						
CN2	**Changchun**	**47.26**	**30**	*e*P	**P**	**10 37 48.8**	**-0.4**
CN2				PP	PP	10 39 37.6	-3.0
CN2				*e*S	**S**	**10 44 45.3**	**+6.7**
CN2				pmax	pmax		
	comp=Z,80nm,0.7s,mb5.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,800nm,16.0s,MS5.0						
CN2				LR	LR		
	comp=E,1μm,16.0s,MS5.0						
CN2				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
TLY	**Talaya**	**47.40**	**7**	*e*P	**P**	**10 37 49.8**	**-0.3**
TLY				*e*		10 39 45.7	
TLY				*e*PPP		10 40 21.4	
TLY				*e*S	**S**	**10 44 37.1**	**-3.2**
TLY				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
TLY				MLR	MLR		
	comp=Z,2μm,25.0s,MS5.0						
TLY	**Talaya**	**47.40**	**7**	PFAKE		10 38 00.0	+10
TLY				LR	LR		
	comp=Z,1μm,21.0s,MS4.8						
TLY	**Talaya**	**47.40**	**7**	P	**P**	**10 37 50.4**	**+0.3**
	SNR=7.2						
TLY				P		10 37 50.4	
	SNR=7.2						
KURK	**Kurchatov**	**47.94**	**346**	P	**P**	**10 37 53.3**	**-1.0**
	comp=Z,57nm,0.8s,mb5.6,baz=169,slow=6.7,SNR=23						
KURK				PcP	PcP	10 39 22.0	0.0
	comp=Z,24nm,0.9s,baz=160,slow=3.0,SNR=5.7						
KURK				LR	LR	11 02 08.3	
	comp=Z,562nm,19.1s,MS4.6,baz=165,slow=41						
KURK	**Kurchatov**	**47.94**	**346**	P	**P**	**10 37 53.3**	**-1.0**
KURK						10 39 22.0	
KURK				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.7						
KURK				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
KURK				MLR	MLR		
	comp=Z,562nm,19.1s,MS4.6						
KURK	**Kurchatov**	**47.94**	**346**	*e*P	**P**	**10 37 54.2**	**-0.1**
	comp=Z,254nm,1.4s,mb6.1						
KURK				LR	LR		
	comp=Z,626nm,19.0s,MS4.6						
KURK	**Kurchatov**	**47.94**	**346**	P	**P**	**10 37 54.7**	**+0.4**
	SNR=66						
KURK				P		10 37 54.7	
	SNR=66						
IRK	**Irkutsk**	**48.03**	**8**	⇑*i*P	**P**	**10 37 54.1**	**-0.8**
IRK				*e*	pP	10 38 09.1	+0.1
IRK				*e*		10 47 42.0	
IRK				pmax	pmax		
	comp=Z,71nm,2.2s,mb5.3						
HIA	**Hailar**	**49.11**	**21**	*e*P	**P**	**10 38 03.4**	**+0.1**
HIA				pmax	pmax		
	comp=Z,231nm,1.3s						
HIA				MLR	MLR		
	comp=Z,3μm,21.0s						
HIA	**Hailar**	**49.11**	**21**	*e*P	**P**	**10 38 03.4**	**0.0**
	comp=Z,232nm,1.3s,mb6.0						
HIA				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
ZAA0	**Zalesovo Array**	**49.85**	**352**	*e*P	**P**	**10 38 07.8**	**-1.1**
ZALV	**Zalesovo Beam**	**49.85**	**352**	P	**P**	**10 38 08.4**	**-0.5**
	comp=Z,50nm,0.5s,mb5.8,baz=183,slow=7.2,SNR=141						
ZALV				PcP	PcP	10 39 28.0	-0.8
	comp=Z,10nm,0.5s,baz=165,slow=4.3,SNR=3.4						
ZALV				S	**S**	**10 45 14.4**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=167,slow=14,SNR=7.5						
ZALV				LR	LR	11 02 12.6	
	comp=Z,321nm,21.4s,MS4.3,baz=173,slow=40						
ZALV	**Zalesovo Beam**	**49.85**	**352**	P	**P**	**10 38 08.4**	**-0.5**
ZALV						10 39 28.0	
ZALV				S	**S**	**10 45 14.4**	**-0.3**
MDJ	**Mudanjiang**	**49.95**	**32**	P	**P**	**10 38 10.3**	**+0.5**
MDJ				pP	pP	10 38 19.3	-4.7
MDJ				sP	sP	10 38 23.0	-7.1
MDJ				PP	PP	10 40 04.5	-0.7
MDJ				ScP	ScP	10 43 23.0	+2.1
MDJ				PcS	PcS	10 43 26.4	+0.2
MDJ				S	**S**	**10 45 19.6**	**+3.0**
MDJ				sS	sS	10 45 34.9	-5.5
MDJ				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.9						
MDJ				pmax	pmax		
	comp=Z,280nm,4.2s						
MDJ				LR	LR		
	comp=N,1μm,16.1s,MS5.1						
MDJ				LR	LR		
	comp=E,780nm,15.5s,MS5.1						
MDJ				LR	LR		
	comp=Z,2μm,15.5s,MS5.1						
MDJ	**Mudanjiang**	**49.95**	**32**	*e*P	**P**	**10 38 10.4**	**+0.6**
	comp=Z,203nm,1.1s,mb6.1						
MDJ				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
CBIJ	**Chichi jima**	**50.07**	**58**	LR	LR	10 56 51.5	
	comp=Z,466nm,20.1s,MS4.5,baz=281,slow=33						
VLA	**Vladivostok**	**50.24**	**35**	*e*P	**P**	**10 38 10.4**	**-1.6**
VLA				*e*	pP	10 38 27.5	+1.3
VLA				*e*S	**S**	**10 45 24.6**	**+4.1**
VLA				pmax	pmax		
	comp=Z,195nm,1.3s,mb6.0						
VLA				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.1						
JHJ	**Hachijo jima 2**	**50.29**	**50**	LR	LR	10 58 09.5	
	comp=Z,833nm,20.8s,MS4.7,baz=43,slow=34						
MAJO	**Matsushiro**	**50.65**	**45**	*e*P	**P**	**10 38 14.7**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.6						
MAJO				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.1						
MAJO	**Matsushiro**	**50.65**	**45**	*e*P	**P**	**10 38 14.7**	**-0.6**
	comp=Z,114nm,1.4s,mb5.6						
MAJO				LR	LR		
	comp=Z,2μm,22.0s,MS5.1						
MAT	**Matsushiro**	**50.65**	**45**	P	**P**	**10 38 14.2**	**-1.0**
MJAR	**Matsushiro Arr**	**50.65**	**45**	P	**P**	**10 38 15.3**	**+0.1**
	comp=Z,31nm,0.9s,mb5.2,baz=243,slow

NVS pmax pmax
comp=Z,76nm,1.5s,mb5.4
NVS pmax pmax
comp=N,83nm,1.6s
NVS pmax pmax
comp=E,34nm,1.4s
NVS smax
comp=N,61nm,1.5s
NVS smax
comp=E,13nm,1.4s
RDF Al-Radifah 51.07 304 *e*P **P 10 38 18.8 +0.2**
RDF AMb AMB 10 38 37.3
comp=Z,226nm,1.2s,mb6.0
COEN Coen 51.13 112 *e*P **P 10 38 18.3 -0.9**
comp=Z,663nm,1.0s,mb6.5
MIB Mutribah 51.53 305 *e*P **P 10 38 22.6 +0.5**
MIB AMb AMB 10 38 24.1
comp=Z,181nm,1.2s,mb5.9
BVAR Borovoye Array 52.32 341 P **P 10 38 27.1 -0.3**
comp=Z,132nm,0.9s,mb5.8,baz=147,slow=8.3,SNR=373
BVAR S **S 10 45 48.7 -0.3**
comp=Z,3.7nm,1.1s,baz=165,slow=18,SNR=6.7
BRVK Borovoye 52.38 341 P **P 10 38 27.0 -0.9**
comp=Z,1μm,0.6s,SNR=82
BRVK Borovoye 52.38 341 *ce*P **P 10 38 27.5 -0.4**
BRVK pmax pmax
comp=Z,270nm,1.2s,mb6.0
BRVK Borovoye 52.38 341 *e*P **P 10 38 27.7 -0.2**
comp=Z,231nm,1.0s,mb6.1
BRVK LR LR
comp=Z,410nm,19.0s,MS4.5
BRVK Borovoye 52.38 341 P **P 10 38 28.0 +0.1**
SNR=65
BRVK P 10 38 28.0
SNR=65
ABPO Ambohimpanom 52.69 242 *e*P **P 10 38 32.3 +1.5**
ABPO pmax pmax
comp=Z,28nm,1.4s,mb5.0
ABPO MLR MLR
comp=Z,774nm,20.0s,MS4.8
ABPO Ambohimpanom 52.69 242 *e*P **P 10 38 32.3 +1.6**
comp=Z,28nm,1.4s,mb5.0
ABPO LR LR
comp=Z,774nm,20.0s,MS4.8
ABKAR Akbulak array 53.50 332 *e*P **P 10 38 36.5 +0.2**
comp=Z,139nm,0.9s,mb5.9
BBOO Buckleboo 53.80 137 *e*P **P 10 38 37.8 -0.9**
comp=Z,21nm,1.0s,mb5.0
KLR Kul'dur 54.17 29 *e*P **P 10 38 37.5 -3.6**
KLR *e*S **S 10 46 10.0 -4.2**
KLR pmax pmax
comp=E,130nm,1.4s
KLR pmax pmax
comp=Z,250nm,1.4s,mb6.0
KLR MLR MLR
comp=Z,2μm,12.0s,MS5.3
BOD Bodaibo 55.04 12⇓*i*P **P 10 38 46.1 -1.2**
BOD pmax pmax
comp=Z,45nm,1.2s,mb5.4
AKTK Aktyubinsk 55.22 332 P **P 10 38 48.4 -0.3**
AKTO Aktyubinsk 55.22 332 P **P 10 38 48.4 -0.3**
comp=Z,28nm,0.8s,mb5.3,baz=132,slow=7.8,SNR=81
HABR Khabarovsk 55.32 31 *ce*P **P 10 38 48.5 -1.0**
HABR *e**SP sP 10 39 01.5 -8.4
HABR *e* 10 39 47.8
HABR *e* 10 40 50.4
HABR S **S 10 46 30.6 +0.9**
HABR *e* 10 46 40.6
HABR *e*SS SS 10 50 15.8 +0.9
HABR pmax pmax
comp=N,13nm,0.3s
HABR pmax pmax
comp=Z,172nm,1.1s,mb6.0
HABR pmax pmax
comp=E,58nm,0.9s
HABR MLR MLR
comp=Z,1μm,19.0s,MS5.0
CTA Charters Tower 55.92 118 *e*P **P 10 38 54.0 -0.2**
comp=Z,72nm,1.0s,mb5.7
CTA Charters Tower 55.92 118 LR LR 11 03 54.3
comp=Z,1μm,21.9s,MS5.0,baz=286,slow=37
CTAO Charters Tower 55.92 118 *e*P **P 10 38 54.0 -0.2**
CTAO pmax pmax
comp=Z,326nm,1.5s,mb6.1
CTAO MLR MLR
comp=Z,2μm,22.0s,MS5.1
CTAO Charters Tower 55.92 118 *e*P **P 10 38 54.0 -0.2**
comp=Z,326nm,1.5s,mb6.1
CTAO LR LR
comp=Z,2μm,22.0s,MS5.1
ERM Erimo 56.60 42 P **P 10 38 59.8 +1.1**
comp=Z,185nm,1.0s,mb6.1,SNR=5.2
ERM Erimo 56.60 42 *e*P **P 10 38 59.1 +0.4**
ERM LR LR
comp=Z,1μm,19.0s,MS5.0
MAK Makhachkala 56.77 320 *e*P **P 10 38 57.4 -2.5**
MAK *e* 10 39 55.7
MAK *e*PPP 10 42 24.8
MAK *e*S **S 10 46 45.8 -3.3**
MAK pmax pmax
comp=Z,166nm,1.5s,mb5.8
NRGR Nerungri 56.91 19 *e*P **P 10 39 01.2 +0.6**
NRGR S **S 10 46 56.3 +5.8**
NRGR smax
comp=N,33nm,0.5s
CLNS Chul'man 57.11 19 *e*P **P 10 39 01.6 -0.5**
CLNS *e**PP pP 10 39 10.5 -6.0
CLNS *e* 10 39 56.0
CLNS *e* 10 41 09.5
CLNS *e*PPP 10 42 27.8
CLNS *e*S **S 10 46 57.7 +4.5**
CLNS pmax pmax
comp=Z,24nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=Z,13nm,1.3s,mb4.8
CLNS pmax pmax
comp=N,11nm,1.2s
CLNS pmax pmax
comp=E,9.0nm,1.2s
CLNS smax
comp=N,76nm,12.2s
CLNS smax
comp=E,107nm,12.7s
CLNS MLR MLR
comp=E,1μm,15.0s,MS5.2
CLNS MLR MLR
comp=N,923nm,14.0s,MS5.2
CLNS MLR MLR
comp=Z,2μm,16.0s,MS5.3
MSL Mosul 57.13 311 *e*P **P 10 39 04.0 +1.4**
MSL *e*S **S 10 46 52.0 -2.2**
STKA Stephens Creek 57.21 133 *e*P **P 10 39 02.7 -0.5**
comp=Z,24nm,0.9s,mb5.2
STKA Stephens Creek 57.21 133 P **P 10 39 02.9 -0.3**
comp=Z,25nm,0.8s,mb5.3,baz=310,slow=7.3,SNR=76
STKA LR LR 11 06 39.0
comp=Z,672nm,20.4s,MS4.7,baz=306,slow=39
STKA Stephens Creek 57.21 133 *e*P **P 10 39 02.9 -0.3**
comp=Z,7.9nm,0.9s,mb4.7
ASAJ Asahikawa 57.23 39 P **P 10 39 03.3 +0.2**
comp=Z,20nm,0.5s,mb5.4,baz=253,slow=10,SNR=20
ASAJ Asahikawa 57.23 39 P **P 10 39 03.3 +0.2**
ASAJ pmax pmax
comp=Z,20nm,0.5s
GNI Garni 57.38 315 PFAKE 10 39 20.0 +16
GNI LR LR
comp=Z,246nm,19.0s,MS4.3
MTA Mtatsminda 57.99 317 P **P 10 39 08.5 -0.1**
TBLG Delisi 58.04 317 P **P 10 39 09.1 +0.1**
KMBO Kilima Mbogo 58.10 266 P **P 10 39 11.4 +1.5**
comp=Z,10nm,0.9s,mb4.8,baz=49,slow=8.9,SNR=24
KMBO LR LR 10 59 50.8
comp=Z,1μm,21.6s,MS4.9,baz=92,slow=31
KMBO Kilima Mbogo 58.10 266 *ce*P **P 10 39 11.3 +1.5**
KMBO pmax pmax
comp=Z,10.0nm,0.9s
KMBO Kilima Mbogo 58.10 266 *e*P **P 10 39 12.0 +2.2**
comp=Z,24nm,0.9s,mb5.2
KMBO LR LR
comp=Z,1μm,22.0s,MS4.9
KMBO Kilima Mbogo 58.10 266 P **P 10 39 12.4 +2.6**
SNR=13
KMBO P 10 39 12.4
SNR=13
KMBO Kilima Mbogo 58.10 266 *e*P **P 10 39 09.0 -0.9**
GOR Gori 58.58 317 P **P 10 39 13.2 +0.5**
SVE Sverdlovsk 58.73 339⇓*e*P **P 10 39 13.5 +0.1**
SVE *e* 10 40 02.0
SVE *e* 10 41 23.4
SVE *e*PPP 10 42 44.7
SVE *e*S **S 10 47 16.4 +2.1**
SVE pmax pmax
comp=Z,289nm,1.5s,mb6.1
SVE MLR MLR
comp=Z,520nm,20.0s,MS4.7
YSS Yuzh-Sakhalins 58.74 36 *e*P **P 10 39 13.9 +0.3**
YSS pmax pmax
comp=Z,244nm,1.1s,mb6.2
YSS MLR MLR
comp=Z,314nm,21.0s,MS4.4
YSS Yuzh-Sakhalins 58.74 36 *e*P **P 10 39 13.9 +0.3**
comp=Z,244nm,1.1s,mb6.2
YSS LR LR
comp=Z,314nm,21.0s,MS4.4
ZEI Tsey 59.05 318 *e*P **P 10 39 16.2 +0.3**
ZEI pmax pmax
comp=Z,32nm,0.6s,mb5.5
ARU Arti 59.21 337 P **P 10 39 16.2 -0.5**
comp=Z,536nm,1.1s,mb6.5,SNR=8.9
ARU Arti 59.21 337 *c i*P **P 10 39 16.1 -0.6**
ARU *e* 10 40 04.0
ARU *e* 10 41 27.8
ARU S **S 10 47 21.1 +0.6**
ARU SS SS 10 51 19.9 +4.3
ARU pmax pmax
comp=Z,212nm,1.7s,mb5.9
ARU MLR MLR
comp=Z,569nm,21.0s,MS4.7
ARU Arti 59.21 337 *e*P **P 10 39 16.3 -0.4**
ARU LR LR
comp=Z,570nm,21.0s,MS4.7
ONI Oni 59.27 318 P **P 10 39 16.5 -1.0**
DAGI Agillar 59.73 315 *i* P **P 10 39 17.0 -3.6**
ARTV Artvin 59.76 316⇑*i*P **P 10 39 16.8 -4.0**
DBAD Bademkaya 59.85 315 *i* P **P 10 39 15.7 -5.8**
DBOC Borcka 60.00 316 *i* P **P 10 39 13.1 -9.4**
KIV Kislovodsk 60.35 319 P **P 10 39 24.9 +0.1**
comp=Z,469nm,1.3s,mb6.4,SNR=6.3
KIV Kislovodsk 60.35 319 *c i*P **P 10 39 24.6 -0.2**
KIV *e* 10 41 37.4
KIV *e*S **S 10 47 34.2 -1.5**
KIV *e*SS SS 10 51 35.7 +1.6
KIV pmax pmax
comp=Z,103nm,1.2s,mb5.7
KIV pmax pmax
comp=Z,93nm,6.1s
KIV Kislovodsk 60.35 319 *e*P **P 10 39 24.9 +0.1**
comp=Z,98nm,1.1s,mb5.8
KIV LR LR
comp=Z,251nm,22.0s,MS4.3
KIV Kislovodsk 60.35 319 P **P 10 39 24.9 +0.1**
SNR=16
KIV P 10 39 24.9
SNR=16
ATAB Bozova 61.13 310⇑*i*P **P 10 39 30.8 +0.6**
MALT Malatya 61.29 311 *e*P **P 10 39 31.9 +0.6**
MALT pmax pmax
comp=Z,37nm,1.1s,mb5.4
MALT MLR MLR
comp=Z,287nm,21.0s,MS4.4
MALT Malatya 61.29 311 *e*P **P 10 39 31.9 +0.6**
comp=Z,37nm,1.1s,mb5.4
MALT LR LR
comp=Z,287nm,21.0s,MS4.4
MALT Malatya 61.29 311⇑*i*P **P 10 39 31.9 +0.6**
GZT Gaziantep 61.65 310⇑*i*P **P 10 39 34.6 +0.8**
AKCD Akcadag 61.66 311⇑*i*P **P 10 39 34.2 +0.4**
KUZU Kuzuini 61.86 309⇑*i*P **P 10 39 36.2 +1.0**
EIDS Eidsvold 61.94 122 *e*P **P 10 39 35.6 -0.3**
EIDS Eidsvold 61.94 122 *e*P **P 10 39 35.7 -0.2**
comp=Z,62nm,1.4s,mb5.5
HWQ Hawqa 62.08 306 *e*P **P 10 39 37.8 +1.0**
SOKR Solikamsk 62.13 339 *c i*P **P 10 39 36.2 -0.3**
SOKR pmax pmax
comp=Z,180nm,1.2s,mb6.1
SOKR MLR MLR
comp=Z,380nm,19.0s,MS4.6
SOC Sochi 62.18 317 *ce*P **P 10 39 36.1 -1.1**
SOC *e**PP pP 10 39 41.5 -10
SOC *e* 10 40 12.9
SOC *e*S **S 10 47 57.1 -1.8**
SOC *e**SS sS 10 48 08.0 -15
SOC *e* 10 49 23.4
SOC *e*SS SS 10 51 58.8 -3.9
SOC pmax pmax
comp=Z,77nm,1.1s,mb5.8
SOC MLR MLR
comp=Z,227nm,20.0s,MS4.3
BHL Bhannes 62.23 306 *e*P **P 10 39 38.9 +1.2**
GRSN GIRESUNGRSN 62.25 314 *i* P **P 10 39 37.2 -0.5**
YAYL Yayladag 62.41 308⇑*i*P **P 10 39 39.7 +0.8**
COBT Iskenderun 62.42 309⇑*i*P **P 10 39 40.0 +1.1**
YAK Yakutsk 62.73 18 *c i*P **P 10 39 39.2 -1.3**
YAK *e* 10 40 16.4
YAK *e* 10 41 58.5
YAK *e*PPP 10 43 29.6
YAK *e*S **S 10 48 02.8 -2.3**
YAK *e* 10 49 22.1
YAK *e*SSS 10 54 59.6
YAK pmax pmax
comp=Z,118nm,0.9s,mb6.0
YAK pmax pmax
comp=N,37nm,1.0s
YAK pmax pmax
comp=E,38nm,1.0s
YAK pmax pmax
comp=Z,255nm,6.6s
YAK pmax pmax
comp=N,120nm,6.4s
YAK smax
comp=N,49nm,1.5s
YAK smax
comp=E,62nm,2.3s
YAK Yakutsk 62.73 18 *e*P **P 10 39 39.2 -1.3**
comp=E,131nm,0.9s,mb6.1
YAK LR LR
comp=Z,3μm,20.0s,MS5.4
TOO Toolangi 62.86 137 *e*P **P 10 39 42.9 +1.1**
YURE YUREGIR 62.98 309⇑*i*P **P 10 39 43.7 +0.9**
ERBA Erbaa 63.26 314⇑*i*P **P 10 39 44.1 -0.3**
YNG Young 63.38 132 *e*P **P 10 39 45.2 -0.1**
comp=Z,29nm,0.9s,mb5.4
GULE Gulek 63.77 309⇑*i*P **P 10 39 48.6 +0.8**
VRHR Novokhopersk 64.12 326 *e*P **P 10 39 48.7 -1.2**
VRHR pmax pmax
comp=Z,90nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
ARMA Armidale 64.25 127 *e*P **P 10 39 52.5 +1.4**
ARMA Armidale 64.25 127 *e*P **P 10 39 52.7 +1.6**
comp=E,148nm,1.5s,mb5.8
CAN Canberra 64.28 133 *e*P **P 10 39 51.9 +0.7**
CAN pmax pmax
comp=Z,125nm,1.5s,mb5.7
CAN MLR MLR
comp=Z,1μm,21.0s,MS5.1
CAN Canberra 64.28 133 *e*P **P 10 39 51.9 +0.6**
comp=Z,125nm,1.5s,mb5.7
CAN LR LR
comp=Z,1μm,21.0s,MS5.1
CSS Prodhromos 64.34 307 *e*P **P 10 39 51.9 +0.2**
comp=Z,150nm,1.9s,mb5.7
CSS LR LR
comp=Z,676nm,20.0s,MS4.8
CTKT Corum 64.67 313⇑*i*P **P 10 39 53.8 +0.1**
CDAG Cicekdag 64.69 312⇑*i*P **P 10 39 53.4 -0.5**
BR131 Keskin Array S 65.27 312 *e*P **P 10 39 57.1 -0.5**
comp=Z,14nm,0.6s,mb5.2
BR131 LR LR
comp=Z,375nm,21.0s,MS4.6
BRTR Keskin Array B 65.27 312 P **P 10 39 57.1 -0.5**
comp=Z,15nm,0.5s,mb5.3,baz=127,slow=7.3,SNR=98
BRTR PKP2bc 11 08 41.0
comp=Z,0.8nm,0.9s,baz=233,slow=1.4,SNR=4.9
BRTR LR LR 11 09 32.5
comp=Z,168nm,21.6s,MS4.2,baz=1.2,slow=37
BRTR Keskin Array B 65.27 312 P **P 10 39 57.1 -0.5**
BRTR ⇑*e* 11 08 41.0
BRTR LR LR 11 09 32.5
VORD Divnogorie 65.38 325 *e*P **P 10 39 56.4 -1.7**
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=Z,70nm,0.8s,mb5.7
VORD pmax pmax
comp=E,70nm,1.0s
GAZI Gazipasa 65.43 308⇑*i*P **P 10 39 57.9 -0.8**
VSR Storozhevoye 65.56 325 *e*P **P 10 39 57.7 -1.6**
VSR pmax pmax
comp=Z,60nm,0.6s,mb5.8
VSR pmax pmax
comp=N,30nm,1.3s
VSR pmax pmax
comp=E,60nm,0.9s
VOR Voronezh 65.76 326⇑*i*P **P 10 40 00.0 -0.5**
VOR pmax pmax
comp=Z,400nm,2.0s,mb6.1
BALT Daday 65.94 314⇑*i*P **P 10 40 02.0 +0.1**
SIM Simferopol' 66.43 317 *c i*P **P 10 40 05.5 +0.5**
SIM *e*S S 10 48 51.5 +0.1
SIM pmax pmax
comp=Z,58nm,1.0s,mb5.6
SIM MLR MLR
comp=Z,200nm,20.7s,MS4.3
SGKT Sivrigoynuk 66.66 312 *i* P **P 10 40 05.9 -0.7**
TAU Tasmania Unive 66.79 141 *e*P **P 10 40 08.1 +0.8**
TAU MLR MLR
comp=Z,838nm,22.0s,MS4.9
BOLV Bolvadin 67.05 310⇑*i*P **P 10 40 08.7 -0.3**
ISP Isparta 67.18 309 PFAKE 10 40 20.0 +10
ISP LR LR
comp=Z,280nm,19.0s,MS4.5
ISP Isparta 67.18 309 P **P 10 40 10.3 +0.4**
ESKT Eskisehir 67.30 311 *i* P **P 10 40 09.7 -1.0**
GOLH Golhisar 67.81 308⇑*i*P **P 10 40 13.5 -0.4**
KHAL Karahalli 68.09 309⇑*i*P **P 10 40 14.8 -0.8**
MOPA Mopani 68.10 243 *e*P **P 10 40 14.5 -1.5**
MOPA AMb AMB 10 40 34.5
comp=Z,38nm,1.7s,mb5.1
GDZ Gediz 68.25 310⇑*i*P **P 10 40 15.4 -1.2**
MOS Moscow 68.31 329 *e*P **P 10 40 12.4 -4.3**
MOS *i* pP 10 40 29.3 -2.2
MOS *e* 10 42 42.4
MOS *e*S S 10 49 08.8 -4.8
MOS pmax pmax
comp=Z,162nm,0.7s,mb6.2
OBN Obninsk 68.60 328⇑*i*P **P 10 40 16.2 -2.3**
OBN *i* pP 10 40 30.5 -2.8
OBN *e* 10 40 42.0
OBN pmax pmax
comp=Z,252nm,1.6s,mb5.9
OBN MLR MLR
comp=Z,500nm,21.0s,MS4.7
OBN Obninsk 68.60 328 *e*P **P 10 40 17.8 -0.7**
comp=Z,51nm,0.6s,mb5.6
OBN LR LR
comp=Z,303nm,20.0s,MS4.5
DEMI Demirci 68.82 310⇑*i*P **P 10 40 19.6 -0.6**
POGA Pongola 69.00 238 *e*P pP 10 40 30.6 -5.7
POGA AMb AMB 10 40 38.9
comp=Z,51nm,1.4s,mb5.3
MSNA Messina 69.02 244 *e*P **P 10 40 23.1 +1.4**
MSNA AMb AMB 10 40 40.0
comp=Z,68nm,1.5s,mb5.3
DURS Dursunbey 69.11 311⇑*i*P **P 10 40 21.3 -0.7**
LSZ Lusaka 69.16 252 *e*P **P 10 40 24.4 +1.7**
LSZ pmax pmax
comp=Z,39nm,1.1s,mb5.2
LSZ MLR MLR
comp=Z,2μm,20.0s,MS5.2
LSZ Lusaka 69.16 252 *e*P **P 10 40 24.4 +1.7**
comp=Z,39nm,1.1s,mb5.2
LSZ LR LR
comp=Z,2μm,20.0s,MS5.2
LSZ Lusaka 69.16 252 *e*P **P 10 40 24.2 +1.5**
AYDN Tasoluk 69.20 308⇑*i*P **P 10 40 22.7 +0.1**
AKHS Akhisar 69.48 310⇑*i*P **P 10 40 24.2 -0.1**
KLMR Klimovskoe 69.75 334⇑*i*P **P 10 40 24.8 -0.7**
KLMR *e* 10 42 59.4
KLMR pmax pmax
comp=Z,174nm,1.5s,mb5.8
BALY Balya 69.79 311⇑*i*P **P 10 40 26.0 -0.2**
PETK Petropavlovsk- 70.05 35 P **P 10 40 26.3 -1.2**
comp=Z,12nm,0.9s,mb4.8,baz=194,slow=3.8,SNR=8.3
PETK LR LR 11 11 11.6
comp=Z,691nm,21.7s,MS4.9,baz=227,slow=36
PETK Petropavlovsk- 70.05 35 P **P 10 40 26.3 -1.2**
PETK LR LR 11 11 11.6
TLCR 70.10 316 ⇑P **P 10 40 28.1 +0.1**
TLCR 70.10 316⇑*i*P **P 10 40 28.1 +0.1**
TIXI Tiksi 70.18 11 *c i*P **P 10 40 26.2 -1.7**
TIXI *e*S S 10 49 29.3 -5.8
TIXI *e* 10 50 21.3
TIXI pmax pmax
comp=Z,184nm,1.3s,mb5.8
TIXI pmax pmax
comp=N,25nm,1.1s
TIXI pmax pmax
comp=E,27nm,1.2s
TIXI pmax pmax
comp=Z,86nm,6.4s
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.3
TIXI Tiksi 70.18 11 *e*P **P 10 40 26.3 -1.6**
comp=Z,119nm,1.0s,mb5.8
TIXI LR LR
comp=Z,2μm,19.0s,MS5.3
TIRR Tirgusor 70.21 316 *e*P **P 10 40 28.3 -0.4**
TIRR pmax pmax
comp=Z,69nm,1.0s,mb5.5
TIRR Tirgusor 70.21 316 *e*P **P 10 40 28.3 -0.4**
comp=Z,69nm,1.0s,mb5.5
TIRR Tirgusor 70.21 316⇑*i*P **P 10 40 28.3 -0.4**
KIS Kishinev 70.55 318 *e*P **P 10 40 28.0 -2.7**
PET Petropavlovsk 70.57 35 *e*P **P 10 40 29.6 -1.0**
PET *e* 10 43 10.6
PET *e*S S 10 49 39.5 -0.7
PET *e*SSS 10 57 19.1
PET pmax pmax
comp=Z,102nm,1.1s,mb5.7
PET pmax pmax
comp=Z,100nm,10.7s
PET MLR MLR
comp=Z,1μm,19.0s,MS5.1
PET MLR MLR
comp=Z,1μm,20.0s
PET Petropavlovsk 70.57 35 PFAKE 10 40 40.0 +9.4
PET LR LR
comp=Z,954nm,20.0s,MS5.0
CFR Carcaliu 70.57 316 P **P 10 40 30.5 -0.3**
CFR Carcaliu 70.57 316⇓*i*P **P 10 40 30.8 0.0**
HARR Harsova 70.60 316 ⇑P **P 10 40 30.9 -0.1**
HARR Harsova 70.60 316⇑*i*P **P 10 40 30.9 -0.1**
PRD Provadia 70.65 314 *i* P **P 10 40 30.3 -1.1**
PRK Paraskevi 70.72 310 P **P 10 40 31.9 0.0**
BOZC Bozcaada 70.99 310⇑*i*P **P 10 40 33.1 -0.5**
MIR Mirnyy 71.06 181 *e*P **P 10 40 34.0 +0.7**
MIR pmax pmax
comp=Z,34nm,1.4s,mb5.1
JMB Yambol 71.09 313 P **P 10 40 34.8 +0.8**
ALN Alexandroupoli 71.19 312 P **P 10 40 32.6 -2.1**
AKASG Malin Array Be 71.27 322 P **P 10 40 33.8 -1.1**
comp=Z,18nm,0.5s,mb5.3,baz=95,slow=4.5,SNR=90
AKASG Malin Array Be 71.27 322 *ce*P **P 10 40 33.7 -1.2**
AKASG pmax pmax
comp=Z,18nm,0.5s
AKBB Malin Array Si 71.27 322 *e*P **P 10 40 33.8 -1.1**
SLR Silverton 71.42 241 *e*P **P 10 40 36.2 -0.1**
SLR AMb AMB 10 40 54.7
comp=Z,80nm,1.4s,mb5.5
SEY Seymchan 71.43 24 *ce*P **P 10 40 34.9 -0.8**
ERPM east rand prop 71.61 240 *e*P **P 10 40 36.3 -1.2**
ERPM AMb AMB 10 41 15.8
comp=Z,36nm,1.5s,mb5.1
RDO Rodhopi 71.61 312 P **P 10 40 35.1 -2.1**
CASY Casey 71.65 173 *e*P **P 10 40 37.1 +0.2**
CASY Casey 71.65 173 *e*P **P 10 40 37.7 +0.9**
comp=Z,46nm,1.2s,mb5.3
CASY LR LR

comp=Z,2µm,20.0s,MS5.3
LIA Limnos Island 71.66 310 P **P 10 40 37.1 -0.5**
VRI Vrincioaia 71.69 317 P **P 10 40 38.1 +0.5**
VRI Vrincioaia 71.69 317⇑ *i*P **P 10 40 38.2 +0.6**
PLOR Plostina 71.74 317 P **P 10 40 38.5 +0.6**
PLOR Plostina 71.74 317⇓ *i*P **P 10 40 38.5 +0.6**
KDZ Kurdzhali 71.79 312 *i* P **P 10 40 37.2 -1.1**
MLR Muntele Rosu 72.14 316⇓ *i*P **P 10 40 40.8 +0.5**
PRYS Parys 72.52 240 *e*P **P 10 40 43.6 +0.7**
PRYS AMb AMB 10 41 00.6
comp=Z,49nm,1.5s,mb5.2
OUR Ouranopolis 72.64 311 P **P 10 40 43.1 -0.3**
SEK Senekal 72.65 239 *e*P **P 10 40 44.2 +0.5**
SEK AMb AMB 10 41 01.5
comp=Z,75nm,1.7s,mb5.3
KSR Koster 72.65 241 *e*P **P 10 40 42.6 -1.2**
KSR AMb AMB 10 41 04.2
comp=Z,29nm,1.6s,mb5.0
VOIR 72.75 316⇑ *i*P **P 10 40 43.5 -0.4**
PAIG Paliouri 72.81 310 P **P 10 40 42.9 -1.5**
MMB Musomiste 73.03 312 *i* P **P 10 40 42.8 -2.9**
BUR01 Bucovina Ar. S 73.07 318 P **P 10 40 46.5 +0.7**
BURAR Bucovina Array 73.07 318 ⇑P **P 10 40 46.5 +0.7**
BURAR Bucovina Array 73.07 318⇑ *i*P **P 10 40 46.5 +0.7**
BUR08 Bucovina Ar. S 73.09 318 *e*P **P 10 40 46.5 +0.6**
MICGM Minsk 73.11 326⇑ *e*P **P 10 40 42.0 -3.9**
MNK Minsk 73.14 326⇑ *e*P **P 10 40 42.0 -4.0**
MNK pmax pmax
comp=Z,260nm,1.5s,mb5.9
MNK pmax pmax
comp=E,190nm,1.5s
PUL Pulkovo 73.48 331 *c*e**P P 10 40 46.7 -1.2**
PUL pmax pmax
comp=Z,145nm,0.4s,mb6.3
KKB Krupnik 73.55 312 *i* P **P 10 40 47.5 -1.2**
VTS Vitosha 73.56 313 P **P 10 40 48.5 -0.3**
VTS Vitosha 73.56 313 *i* P **P 10 40 46.9 -1.9**
GUR Goura 73.58 308 P **P 10 40 47.0 -2.0**
LBTB Lobatse 73.60 242 *e*P **P 10 40 50.8 +1.5**
LBTB pmax pmax
comp=Z,25nm,1.0s,mb5.1
LBTB MLR MLR
comp=Z,2µm,22.0s,MS5.4
LBTB Lobatse 73.60 242 *e*P **P 10 40 50.8 +1.4**
comp=Z,25nm,1.0s,mb5.1
LBTB LR LR
comp=Z,2µm,22.0s,MS5.4
LBTB Lobatse 73.60 242⇑ *i*P **P 10 40 50.0 +0.7**
LBTB AMb AMB 10 41 08.2
comp=Z,78nm,1.6s,mb5.4
LIT Litokhoron 73.74 310 P **P 10 40 48.5 -1.4**
VAY Valandovo 73.85 312 *e*P **P 10 40 49.4 -1.1**
IDID Didziasalis 73.97 326 *e*P **P 10 40 50.8 -0.1**
JOF Joensuu 74.15 335 *e*P **P 10 40 50.4 -1.4**
JOF pmax pmax
comp=Z,28nm,0.4s,mb5.5
JOF Joensuu 74.15 335 *e*p **P 10 40 50.4 -1.4**
comp=Z,28nm,0.4s,mb5.5
BMR Baia Mare 74.22 318 P **P 10 40 53.4 +0.8**
IIGN Ignalina 74.26 326 *e*P **P 10 40 52.6 0.0**
LVV L'vov 74.29 320 *i* P **P 10 40 51.7 -1.2**
LVV *e* pP 10 41 01.7 -6.1
GZR Gura Zlata 74.32 316 P **P 10 40 53.0 -0.1**
GZR Gura Zlata 74.32 316⇓ *i*P **P 10 40 53.2 0.0**
SWZ Schweizer 74.33 240 *e*P **P 10 40 54.0 +0.4**
SWZ AMb AMB 10 41 13.0
comp=Z,82nm,1.8s,mb5.4
IZAR Zarasai 74.35 327 *e*P **P 10 40 52.8 -0.4**
ISAL Salakas 74.37 327 *e*P **P 10 40 53.1 -0.2**
DZM Mont Dzumac 74.58 114 *e*P **P 10 40 56.1 +1.0**
comp=Z,111nm,1.4s,mb5.6
DZM Mont Dzumac 74.58 114 *e*PP PP 10 43 44.6 +2.1
comp=Z,82nm,23.6s
DZM *e*S S 10 50 30.4 +3.3
comp=Z,598nm,31.0s
DZM *e*SS SS 10 55 17.3 +2.1
comp=Z,528nm,27.4s
DZM *e*LR LR 11 03 56.6
comp=Z,1µm,27.9s
DZM Mont Dzumac 74.58 114 *e*P **P 10 40 56.3 +1.2**
comp=Z,90nm,1.2s,mb5.6
DRGR 74.60 317⇑ *i*P **P 10 40 55.2 +0.5**
BOSA Boshof 74.74 239 P **P 10 40 56.5 +0.6**
comp=Z,9.5nm,0.8s,mb4.8,baz=89,slow=6.2,SNR=10
BOSA Boshof 74.74 239 *e*P **P 10 40 57.0 +1.1**
BOSA pmax pmax
comp=Z,91nm,1.6s,mb5.5
BOSA MLR MLR
comp=Z,863nm,20.0s,MS5.0
BOSA Boshof 74.74 239 *e*P **P 10 40 57.0 +1.1**
comp=Z,91nm,1.6s,mb5.5
BOSA LR LR
comp=Z,863nm,20.0s,MS5.0
BOSA Boshof 74.74 239 *e*P **P 10 40 55.7 -0.3**
BOSA AMb AMB 10 41 24.6
comp=Z,78nm,1.6s,mb5.4
SKO Skopje 74.77 312 *e*P **P 10 40 55.6 -0.3**
VSU Vasula 74.83 330 *c i*P **P 10 40 55.1 -0.7**
KRUS Krusevo 74.84 311 *i* P **P 10 40 54.5 -1.8**
LVZ Lovozero 74.89 340 P **P 10 40 55.8 -0.2**
comp=Z,523nm,0.5s,mb6.7,SNR=23
LVZ Lovozero 74.89 340 *c*e**P P 10 40 55.3 -0.7**
LVZ pmax pmax
comp=Z,139nm,1.7s,mb5.6
LVZ Lovozero 74.89 340 PFAKE 10 41 10.0 +14
LVZ LR LR
comp=Z,665nm,21.0s,MS4.9
TRPA Tarpa 74.94 319⇓ *i*P **P 10 40 57.0 +0.3**
VLS Valsamata 74.98 308 P **P 10 40 53.5 -3.6**
KWP Kalwaria Pacla 75.10 320 *e*P **P 10 40 57.9 +0.3**
comp=Z,300nm,1.2s,mb6.1
KWP Kalwaria Pacla 75.10 320 *e*P **P 10 40 57.9 +0.3**
comp=Z,173nm,1.1s,mb5.9
KWP LR LR
comp=Z,297nm,20.0s,MS4.6
KWP Kalwaria Pacla 75.10 320⇓ *i*P **P 10 40 57.9 +0.3**
OHR Ohrid 75.14 311 *e*P **P 10 40 56.0 -2.1**
BZS Buzias 75.16 316 P **P 10 40 57.9 -0.1**
BZS Buzias 75.16 316⇑ *i*P **P 10 40 57.8 -0.2**
APA Apatity 75.18 340⇑ *e*P **P 10 40 57.4 -0.3**
APA MLR MLR
comp=Z,700nm,19.0s,MS5.0
UZH Uzhgorod 75.19 319⇓ *i*P **P 10 40 58.2 +0.1**
UZH *i* 10 41 06.6
KOLS Kolonicke sedl 75.25 319 *e*P **P 10 40 59.3 +0.8**
KOLS pmax pmax
comp=Z,92nm,1.2s,mb5.6
KOLS Kolonicke sedl 75.25 319 *e*P **P 10 40 59.3 +0.8**
comp=Z,92nm,1.2s,mb5.6
KOLS Kolonicke sedl 75.25 319 *e*P **P 10 40 59.3 +0.8**
MAW Mawson 75.61 192 *e*P **P 10 41 03.2 +3.1**
comp=Z,8.2nm,0.9s,mb4.7
MAW Mawson 75.61 192 P **P 10 41 01.2 +1.1**
comp=Z,2.5nm,0.8s,mb4.2,baz=10.0,slow=7.9,SNR=7.2
MAW LR LR 11 07 52.7
comp=Z,559nm,20.9s,MS4.8,baz=20,slow=30
MAW Mawson 75.61 192 *e*P **P 10 41 03.4 +3.3**
MAW pmax pmax
comp=Z,3.0nm,0.9s
MAW Mawson 75.61 192 *e*P **P 10 41 03.4 +3.2**
comp=Z,2.8nm,0.9s,mb4.2
SUW Suwalki 75.67 325 *e*P **P 10 41 00.0 -0.7**
comp=Z,400nm,1.2s,mb6.2
SUW Suwalki 75.67 325⇑ *e*P **P 10 41 00.0 -0.7**
SUW pmax pmax
comp=Z,400nm,1.2s,mb6.2
SUW Suwalki 75.67 325 *e*P **P 10 41 00.0 -0.7**
comp=Z,230nm,1.0s,mb6.1
KEK Kerkira 75.75 310 P **P 10 41 00.1 -1.4**
TIR Tirane 75.87 311 PFAKE 10 41 10.0 +7.8
TIR LR LR
comp=Z,249nm,20.0s,MS4.5
FINES FINESS Array B 75.99 332 P **P 10 41 01.9 -0.5**
comp=Z,21nm,0.5s,mb5.4,baz=99,slow=5.3,SNR=148
FINES LR LR 11 18 35.1
comp=Z,310nm,19.2s,MS4.6,baz=15,slow=39
STHS Stebnicka Huta 76.00 320 *e*P **P 10 41 04.3 +1.5**
STHS pmax pmax
comp=Z,62nm,1.3s,mb5.4
STHS Stebnicka Huta 76.00 320 *e*P **P 10 41 04.3 +1.5**
comp=Z,62nm,1.3s,mb5.4
STHS Stebnicka Huta 76.00 320 *e*P **P 10 41 04.3 +1.5**
KAF Kangasniemi 76.08 333 *e*P **P 10 41 02.3 -0.6**
KAF pmax pmax
comp=Z,62nm,0.6s,mb5.7
KAF Kangasniemi 76.08 333 *e*p **P 10 41 02.3 -0.6**
comp=Z,62nm,0.6s,mb5.7
KECS Kecovo 76.35 319 *e*P **P 10 41 04.9 +0.1**
KECS *e* pP 10 41 19.6 -0.2
KECS pmax pmax
comp=Z,34nm,1.3s,mb5.1
KECS Kecovo 76.35 319 *e*P **P 10 41 04.9 +0.1**
comp=Z,34nm,1.3s,mb5.1
KECS *e* pP 10 41 19.6 -0.2
KECS Kecovo 76.35 319 *e*P **P 10 41 04.9 +0.1**
KECS *e*pP pP 10 41 19.5 -0.3
NIE Niedzica 76.60 320 *e*P **P 10 41 06.8 +0.6**
WAR Warsaw 76.61 323 *e*P **P 10 41 06.3 +0.1**
PSZ Piszkesteto 76.66 318 *e*P **P 10 41 06.6 +0.1**
comp=Z,58nm,1.0s,mb5.5
PSZ LR LR
comp=Z,219nm,20.0s,MS4.5
PSZ Piszkesteto 76.66 318⇑ *e*P **P 10 41 06.7 +0.2**
PSZ Piszkesteto 76.66 318⇑ *i*P **P 10 41 06.7 +0.2**
OJC Ojcow 77.05 320 *i* P **P 10 41 08.7 0.0**
OJC *e*sP sP 10 41 23.2 -6.4
OJC *e*S S 10 50 52.5 -0.9
OJC *e*SS SS 10 56 03.5 +12
OJC L 11 18 26.6
comp=Z,0.2nm,23.6s
OJC Ojcow 77.05 320⇑ *i*P **P 10 41 08.7 0.0**
OJC *e**SP sP 10 41 23.2 -6.4
OJC *e*S S 10 50 52.5 -0.9
OJC MLR MLR
comp=Z,200nm,23.6s,MS4.4
BUD Budapest 77.19 318⇑ *e*P **P 10 41 09.4 -0.1**
PKSM Moragy 77.30 316 P **P 10 41 10.1 0.0**
VYHS Vyhne 77.44 319 *i* P **P 10 41 11.1 +0.2**
VYHS pmax pmax
comp=Z,68nm,1.6s,mb5.3
VYHS Vyhne 77.44 319 *i* P **P 10 41 11.1 +0.2**
comp=Z,68nm,1.6s,mb5.3
VYHS Vyhne 77.44 319 *i* P **P 10 41 11.1 +0.2**
TARA Tarawa 77.73 90 PFAKE 10 41 30.0 +17
TARA LR LR
comp=Z,670nm,19.0s,MS5.0
KOLL Kolacno 77.73 319 *e*P **P 10 41 12.7 +0.2**
KOLL *e* pP 10 41 26.1 -1.5
KOLL Kolacno 77.73 319 *e*P **P 10 41 12.7 +0.2**
KOLL *e*pP pP 10 41 26.1 -1.5
DRV Dumont d'Urvil 78.04 163 P pP 10 41 26.0 -2.8
DRV S S 10 51 02.0 -1.4
DRV L 11 01 00.0
TIP Timpagrande 78.05 309 PFAKE 10 41 30.0 +15
TIP LR LR
comp=Z,244nm,20.0s,MS4.5
RAC Raciborz 78.05 320 *e*P **P 10 41 15.2 +0.9**
KEV Kevo 78.17 341 *e*P **P 10 41 14.4 -0.1**
KEV pmax pmax
comp=Z,152nm,1.4s,mb5.7
KEV MLR MLR
comp=Z,648nm,19.0s,MS5.0
KEV Kevo 78.17 341 *e*P **P 10 41 14.4 -0.1**
comp=Z,152nm,1.4s,mb5.7
KEV LR LR
comp=Z,648nm,19.0s,MS5.0
KEV Kevo 78.17 341 *e*p **P 10 41 13.7 -0.8**
comp=Z,30nm,0.6s,mb5.4
MORC Moravsky Berou 78.44 320 *e*P **P 10 41 16.5 +0.1**
comp=Z,64nm,1.1s,mb5.5
MORC Moravsky Berou 78.44 320⇑ *i*P **P 10 41 16.7 +0.3**
ZST Bratislava 78.55 318 *e*P **P 10 41 17.7 +0.6**
ZST *e* pP 10 41 33.1 +1.0
ZST pmax pmax
comp=Z,61nm,0.9s,mb5.5
ZST Bratislava 78.55 318 *e*P **P 10 41 17.7 +0.6**
comp=Z,61nm,0.9s,mb5.5
ZST *e* pP 10 41 33.1 +1.0
ZST Bratislava 78.55 318 *e*P **P 10 41 17.7 +0.6**
ZST *e*pP pP 10 41 33.1 +1.0
ARCES ARCESS Array B 78.60 340 P **P 10 41 16.9 0.0**
comp=Z,30nm,0.5s,mb5.5,baz=92,slow=5.5,SNR=269
ARCES LR LR 11 19 29.9
comp=Z,440nm,21.7s,MS4.8,baz=103,slow=38
ARE0 ARCESS Array S 78.60 340 *e*P **P 10 41 17.0 +0.1**
CEL Celeste 78.67 308 PFAKE 10 41 30.0 +12
CEL LR LR
comp=Z,214nm,21.0s,MS4.5
BILL Bilibino 78.70 21⇑ *e*P **P 10 41 16.2 -1.3**
BILL *e* 10 41 22.9
BILL pmax pmax
comp=Z,65nm,1.3s,mb5.4
BILL MLR MLR
comp=Z,2µm,15.0s,MS5.5
BILL Bilibino 78.70 21 *e*P **P 10 41 15.9 -1.5**
comp=Z,109nm,1.4s,mb5.6
BILL LR LR
comp=Z,1µm,22.0s,MS5.3
KOGS Kog 78.97 316 *i* P **P 10 41 19.6 +0.2**
KOGS *e* pP 10 41 34.6 +0.1
VRAC Vranov 79.00 319 P **P 10 41 20.0 +0.5**
GKP Gorka Klasztor 79.03 323 *e*P **P 10 41 19.3 -0.3**
KTK1 Kautokeino 79.22 340 *e*P **P 10 41 20.4 0.0**
DPC Dobruska-Polom 79.28 320 *e*P **P 10 41 21.8 +0.8**
DPC *e**PP pP 10 41 36.9 +0.8
DPC *e*S S 10 51 16.6 -0.7
DPC MLR MLR
comp=Z,200nm,33.7s,MS4.2
DPC Dobruska-Polom 79.28 320 *e*P **P 10 41 21.8 +0.8**
DPC *e*pP pP 10 41 36.9 +0.8
DPC *e*S S 10 51 16.6 -0.7
DPC AMS AMS 11 12 00.0
comp=Z,200nm,33.7s
SUR Sutherland 79.34 236 *e*P **P 10 41 24.4 +2.7**
KSP Ksiaz 79.35 321 *e*P **P 10 41 21.9 +0.6**
comp=Z,400nm,1.8s,mb6.0
KSP *e* pP 10 41 36.6 +0.2
KSP Ksiaz 79.35 321⇑ *e*P **P 10 41 21.7 +0.3**
KSP *e* 10 41 29.6
KSP *e**PP pP 10 41 36.6 +0.2
KSP *e*S S 10 51 11.0 -7.0
CONA Conrad Observa 79.36 318 *i* P **P 10 41 21.5 0.0**
comp=Z,37nm,1.8s,mb5.0,SNR=14
ARSA Arzberg 79.53 317⇑ *i*P **P 10 41 22.9 +0.4**
comp=Z,82nm,1.5s,mb5.4
BOJS Bojanci 79.59 315 *i* P **P 10 41 23.0 +0.2**
BOJS *e* pP 10 41 38.0 +0.1
WDD Wield Dalam 79.67 305 PFAKE 10 41 40.0 +17
WDD LR LR
comp=Z,275nm,19.0s,MS4.6
TREC Trest 79.72 319 *e*P **P 10 41 23.7 +0.3**
TREC *e**PP pP 10 41 39.0 +0.5
TREC MLR MLR
comp=Z,400nm,37.1s,MS4.5
TREC Trest 79.72 319 *e*P **P 10 41 23.7 +0.3**
TREC *e*pP pP 10 41 39.0 +0.5
TREC AMS AMS 11 13 10.0
comp=Z,400nm,37.1s
PERS Pernice 79.76 316 *i* P **P 10 41 24.2 +0.5**
PERS *e* pP 10 41 39.1 +0.3
TSUM Tsumeb 79.81 250 *e*P **P 10 41 27.6 +3.0**
comp=Z,20nm,1.0s,mb5.0
TSUM LR LR
comp=Z,999nm,20.0s,MS5.2
TSUM Tsumeb 79.81 250 *e*P **P 10 41 24.8 +0.3**
SOKA Soboth 79.82 316⇑ *i*P **P 10 41 24.5 +0.5**
comp=Z,117nm,1.5s,mb5.6
LJU Ljubljana 80.13 316 *e*P **P 10 41 26.2 +0.5**
OBKA Obir 80.14 316⇑ *i*P **P 10 41 26.3 +0.5**
comp=Z,74nm,1.6s,mb5.4,SNR=20
KNDS Knezji Dol 80.20 315 *i* P **P 10 41 25.6 -0.5**
PRU Pruhonice 80.39 320 *e*P **P 10 41 27.8 +0.8**
PRU *e**PP pP 10 41 42.7 +0.6
PRU *e*S S 10 51 27.5 -1.5
PRU MLR MLR
comp=Z,500nm,40.1s,MS4.6
PRU Pruhonice 80.39 320 *e*P **P 10 41 27.8 +0.8**
PRU *e*pP pP 10 41 42.7 +0.6
PRU *e*S S 10 51 27.5 -1.5
PRU AMS AMS 11 11 40.0
comp=Z,500nm,40.1s
PVCC Panska Ves 80.41 320 *e*P **P 10 41 27.7 +0.6**
PVCC *e**PP pP 10 41 43.6 +1.4
PVCC *e*S S 10 51 29.5 +0.2
PVCC MLR MLR
comp=Z,200nm,28.8s,MS4.3
PVCC Panska Ves 80.41 320 *e*P **P 10 41 27.7 +0.6**
PVCC *e*pP pP 10 41 43.6 +1.4
PVCC *e*S S 10 51 29.5 +0.2
PVCC AMS AMS 11 11 50.0
comp=Z,200nm,28.8s
MOA Molln 80.42 318 *i* P **P 10 41 27.1 -0.1**
comp=Z,44nm,1.6s,mb5.1,SNR=14
PRA Prague 80.46 320 ⇑P **P 10 41 28.0 +0.6**
PRA pP pP 10 41 43.0 +0.5
PRA S S 10 51 29.0 -0.8
VOY Vojsko 80.57 316 *e*P **P 10 41 27.9 -0.2**
VOY *e* pP 10 41 43.3 +0.1
VOY *e* 10 41 57.0
VOY *e* 10 42 23.4
BSD Bornholm Skovb 80.59 325 *e*P **P 10 41 28.3 +0.3**
BSD pmax pmax
comp=Z,43nm,1.0s,mb5.3
BSD Bornholm Skovb 80.59 325 *i* P **P 10 41 28.3 +0.3**
comp=Z,43nm,1.0s,mb5.3
TERO Teramo 80.62 312 P **P 10 41 28.1 -0.3**
TRI Trieste 80.64 315 *e*P **P 10 41 28.1 -0.4**
TRI pmax pmax
comp=Z,32nm,0.9s,mb5.2
TRI MLR MLR
comp=Z,148nm,19.0s,MS4.4
TRI Trieste 80.64 315 *e*P **P 10 41 28.1 -0.4**
comp=Z,32nm,0.9s,mb5.3
TRI LR LR
comp=Z,148nm,19.0s,MS4.4
AOI Ancona 80.66 313 P **P 10 41 28.8 +0.2**
CADS Cadrg 80.69 316 *i* P **P 10 41 28.6 -0.1**
AQU L'Aquila 80.76 312 *e*P **P 10 41 29.6 +0.4**
AQU pmax pmax
comp=Z,91nm,1.1s,mb5.6
AQU MLR MLR
comp=Z,203nm,20.0s,MS4.5
AQU L'Aquila 80.76 312 *e*P **P 10 41 29.6 +0.4**
comp=Z,91nm,1.1s,mb5.6
AQU LR LR
comp=Z,203nm,20.0s,MS4.5
MYKA Terra Mystica 80.78 316⇑ *i*P **P 10 41 29.4 +0.2**
comp=Z,40nm,1.0s,mb5.3
BRG Berggiesshubel 80.83 321 *e*P **P 10 41 29.7 +0.3**
comp=Z,134nm,1.8s,mb5.6
BRG *e*pP pP 10 41 44.6 +0.1
BRG Berggiesshubel 80.83 321⇑ *i*P **P 10 41 29.8 +0.4**
comp=Z,58nm,1.3s,mb5.3
BRG *i* pP 10 41 44.5 0.0
comp=Z,51nm,1.1s
BRG S S 10 51 33.0 -0.6
BRG *e* 11 00 10.0
comp=Z,3.0nm,0.9s
BRG *e*PKPPKP 11 08 30.7
comp=Z,2.8nm,0.6s
BRG
comp=N,402nm,29.6s
BRG
comp=E,210nm,20.3s
BRG
comp=Z,207nm,13.0s
BRG Berggiesshubel 80.83 321⇑ *i*P **P 10 41 29.8 +0.4**
BRG *i* pP 10 41 44.5 0.0
BRG S S 10 51 33.0 -0.6
BRG *e* 11 00 10.0
BRG pmax pmax
comp=Z,35nm,1.3s,mb5.1
BRG pmax pmax
comp=Z,31nm,1.1s,mb5.2
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BRG MLR MLR
comp=N,241nm,29.6s
BRG MLR MLR
comp=E,126nm,20.3s
BRG MLR MLR
comp=Z,124nm,13.0s
TRO Tromso 80.86 340 *e*P **P 10 41 28.4 -0.7**
TRO AMB AMB 10 41 29.7
comp=Z,108nm,1.4s,mb5.6
TRO *e*pP pP 10 41 39.8 -4.4
TRO *e*sP sP 10 41 45.1 -5.0
GEC2 GERESS Array S 80.86 319 *e*P **P 10 41 30.0 +0.4**
comp=Z,126nm,1.4s,mb5.7
GEC2 GERESS Array S 80.86 319 *e*P **P 10 41 30.0 +0.4**
GEC2 pmax pmax
comp=Z,126nm,1.4s,mb5.7
GERES GERESS Array B 80.86 319 P **P 10 41 29.9 +0.4**
comp=Z,35nm,1.0s,mb5.2,baz=95,slow=5.9,SNR=96
GERES pP pP 10 41 45.2 +0.5
comp=Z,27nm,0.8s,baz=95,slow=5.8,SNR=11
CING Cingoli 80.95 313 P **P 10 41 30.4 +0.2**
KHC Kasperske Hory 80.96 319 *e*P **P 10 41 30.3 +0.2**
KHC *e**PP pP 10 41 45.5 +0.3
KHC *e*S S 10 51 34.6 -0.4
KHC MLR MLR
comp=Z,200nm,30.0s,MS4.3
KHC Kasperske Hory 80.96 319 *e*P **P 10 41 30.4 +0.3**
comp=Z,25nm,0.9s,mb5.2
KHC Kasperske Hory 80.96 319 *e*P **P 10 41 30.3 +0.2**
KHC *e*pP pP 10 41 45.5 +0.3
KHC *e*x x 10 42 17.0
KHC *e*S S 10 51 34.6 -0.4
KHC AMS AMS 11 12 30.0
comp=Z,200nm,30.0s
PTCC Patocco-Chiusa 80.97 316 P **P 10 41 30.2 0.0**
comp=Z,42nm,0.7s,mb5.5
KBA Koelnbreinsper 81.00 317 *i* P **P 10 41 30.1 -0.3**
comp=Z,32nm,1.1s,mb5.2,SNR=10
RUE Ruedersdorf 81.05 322 *e*P **P 10 41 30.9 +0.5**
comp=Z,156nm,1.3s,mb5.8
SNTG Esanatoglia 81.13 313 P **P 10 41 31.4 +0.3**
comp=Z,102nm,1.1s,mb5.7
FSSB Fossombrone 81.26 313 P **P 10 41 32.5 +0.7**
RJOB Jochberg 81.41 317 *e*P **P 10 41 32.1 -0.4**
comp=Z,47nm,1.3s,mb5.3
WET Wettzell 81.42 319 *e*P **P 10 41 32.8 +0.3**
comp=Z,130nm,1.8s,mb5.6
WET *e*pP pP 10 41 47.8 +0.2
WET Wettzell 81.42 319 *e*P **P 10 41 32.8 +0.3**
WET *e**PP pP 10 41 47.8 +0.2
WET pmax pmax
comp=Z,130nm,1.8s,mb5.6
PIEI Pieia 81.43 313 P **P 10 41 33.1 +0.4**
CLL Collm 81.45 321 *e*P **P 10 41 32.4 -0.3**
comp=Z,36nm,1.2s,mb5.2
CLL Collm 81.45 321⇑ *i*P **P 10 41 32.1 -0.6**
CLL *i* pP 10 41 47.2 -0.6
CLL pmax pmax
comp=Z,13nm,1.2s,mb4.7
CLL MLR MLR
comp=Z,200nm,22.5s,MS4.4
CLL Collm 81.45 321⇑ *i*P **P 10 41 32.1 -0.6**
comp=Z,36nm,1.2s,mb5.2
CLL *i* pP 10 41 47.2 -0.6
CLL LR LR
comp=Z,200nm,22.5s,MS4.4
CLL Collm 81.45 321⇑ *i*P **P 10 41 32.1 -0.6**
comp=Z,36nm,1.2s,mb5.2
CLL *i* sP sP 10 41 47.2 -6.5
CLL *e* pP 10 41 51.0 +3.2
RSM Repubblica di 81.51 314 P **P 10 41 34.1 +1.0**
RSM pmax pmax
comp=Z,167nm,1.0s,mb5.9
RSM Repubblica di 81.51 314 P **P 10 41 34.1 +1.0**
comp=Z,167nm,1.0s,mb5.9
ABTA Abfaltersbach 81.56 316⇑ *i*P **P 10 41 32.8 -0.5**
comp=Z,32nm,1.5s,mb5.0,SNR=14
BADI Badiali 81.64 313 P **P 10 41 34.1 +0.2**
TANN Tannenbergstha 81.75 320 *e*P **P 10 41 34.4 +0.2**
comp=Z,87nm,2.0s,mb5.3
TANN *e*pP pP 10 41 49.2 -0.2
NKC Novy Kostel 81.75 320 *e*P **P 10 41 34.7 +0.5**
NKC *e**PP pP 10 41 53.4 +4.0
NKC Novy Kostel 81.75 320 *e*P **P 10 41 34.7 +0.5**
NKC *e*pP pP 10 41 53.4 +4.0
NKC *e*S S 10 51 22.5 -21
CRE Caprese Michel 81.86 313 P **P 10 41 35.0 0.0**
ROTZ Rotzenmuhle 81.88 319 *e*P **P 10 41 35.6 +0.6**
comp=Z,59nm,1.4s,mb5.3
SFI Santa Sofia 81.94 314 P **P 10 41 36.5 +1.1**
MOR8 Moi Rana 81.99 336 *e*P **P 10 41 34.3 -0.9**
MOR8 AMB AMB 10 41 35.5
comp=Z,69nm,1.2s,mb5.5
COP Copenhagen 82.05 325 *e*P **P 10 41 37.0 +1.3**
COP pmax pmax
comp=Z,18nm,0.8s,mb5.0

COP Copenhagen 82.05 325 *i* P **P 10 41 37.0 +1.3**
comp=Z,18nm,0.8s,mb5.0
CTI Castel Tesino 82.13 316 P **P 10 41 36.7 +0.3**
WTTA Wattenberg 82.17 317 *i* P **P 10 41 36.2 -0.3**
comp=Z,63nm,1.2s,mb5.4,SNR=15
WATA Walderalm 82.22 317⇑*iP* **P 10 41 36.0 -0.8**
comp=Z,14nm,0.5s,mb5.1
MOX Moxa 82.30 320 *eP* **P 10 41 37.2 +0.1**
comp=Z,37nm,1.0s,mb5.3
MOX *e* pP 10 41 52.3 0.0
MOX Moxa 82.30 320 *eP* **P 10 41 37.3 +0.2**
comp=Z,65nm,1.6s,mb5.3
MOX *ep*P pP 10 41 52.3 0.0
MOX Moxa 82.30 320 *eP* **P 10 41 37.2 +0.1**
MOX *e* pP 10 41 52.3 0.0
MOX pmax pmax
comp=Z,12nm,1.0s,mb4.8
FUR Furstenfeldbru 82.44 318 *eP* **P 10 41 37.6 -0.3**
comp=Z,63nm,1.4s,mb5.3
FUR Furstenfeldbru 82.44 318 *eP* **P 10 41 37.6 -0.3**
FUR pmax pmax
comp=Z,63nm,1.4s,mb5.3
FNVD Fontana Vidola 82.47 314 P **P 10 41 39.2 +1.0**
GRA1 Grafenberg Arr 82.52 319 *eP* **P 10 41 38.8 +0.5**
comp=Z,88nm,1.3s,mb5.6
GRA1 *ep*P pP 10 41 53.8 +0.4
GRA1 LR LR
comp=Z,200nm,21.4s,MS4.5
GRF Grafenberg Arr 82.52 319 *eP* **P 10 41 38.8 +0.5**
comp=Z,88nm,1.3s,mb5.6
GRF *ep*P pP 10 41 53.8 +0.4
GRF *e*L 11 25 05.0
comp=Z,223nm,21.4s
GRF Grafenberg Arr 82.52 319 *eP* **P 10 41 38.8 +0.5**
GRF *e**PP pP 10 41 53.8 +0.4
GRF pmax pmax
comp=Z,88nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,200nm,21.4s,MS4.5
MOTA Moosalm 82.54 317⇑*iP* **P 10 41 38.0 -0.4**
comp=Z,73nm,1.4s,mb5.5,SNR=9.1
LOF Lofoten 82.56 338 *eP* **P 10 41 39.5 +1.4**
LOF *ep*P pP 10 41 49.5 -3.7
RETA Reutte 82.77 317 *i* P **P 10 41 39.5 -0.2**
comp=Z,39nm,0.8s,mb5.5,SNR=24
FETA Feichten 82.79 317 *i* P **P 10 41 39.7 -0.1**
comp=Z,42nm,1.5s,mb5.2,SNR=12
MABI Malga Bissina 82.92 316 P **P 10 41 40.7 +0.2**
ERBM Eremo 82.98 314 P **P 10 41 42.1 +1.3**
NOA NORSAR Array B 82.99 331 P **P 10 41 39.7 -0.8**
comp=Z,40nm,1.2s,mb5.3,baz=94,slow=5.1,SNR=20
NOA PP PP 10 44 52.4 +0.8
comp=Z,10.0nm,1.1s,baz=84,slow=8.4,SNR=3.9
NOA LR LR 11 24 35.2
comp=Z,228nm,18.5s,MS4.6,baz=95,slow=40
NOA NORSAR Array B 82.99 331 P **P 10 41 39.7 -0.8**
NOA 10 44 52.4
NOA NORSAR Array B 82.99 331 P **P 10 41 39.7 -0.8**
NOA PP PP 10 44 52.4 +0.8
NOA LR LR 11 24 35.2
VLC Villacollemand 83.00 314 PFAKE 10 41 50.0 +9.1
VLC LR LR
comp=Z,230nm,21.0s,MS4.5
BRMO Bormio 83.03 316 P **P 10 41 41.5 +0.5**
FUORN Ofenpass-Fuorn 83.10 316⇑*iP* **P 10 41 41.9 +0.5**
comp=Z,329nm,2.5s,mb5.9
CLZ Clausthal 83.11 322 *eP* **P 10 41 41.4 +0.1**
comp=Z,61nm,1.3s,mb5.5
CLZ *ep*P pP 10 41 56.8 +0.3
CLZ Clausthal 83.11 322 *eP* **P 10 41 41.4 +0.1**
CLZ *e**PP pP 10 41 56.8 +0.3
CLZ pmax pmax
comp=Z,61nm,1.3s,mb5.5
NAO01 NORSAR Array S 83.14 331 *eP* **P 10 41 41.1 -0.2**
comp=Z,38nm,1.2s,mb5.3
SPB4 Spitsbergen Ar 83.16 348 *eP* **P 10 41 40.9 -0.3**
BSEG Bad Segeberg 83.19 324 *eP* **P 10 41 42.0 +0.3**
comp=Z,114nm,1.4s,mb5.7
BSEG Bad Segeberg 83.19 324 *eP* **P 10 41 42.0 +0.3**
BSEG pmax pmax
comp=Z,114nm,1.4s,mb5.7
BERNI Berninapass 83.27 316⇑*iP* **P 10 41 42.9 +0.6**
comp=Z,351nm,1.6s,mb6.2
NRDL Niedersach Rie 83.29 322 *eP* **P 10 41 42.6 +0.4**
comp=Z,127nm,1.6s,mb5.7
NRDL *ep*P pP 10 41 57.3 -0.1
UBBA Unterbreizbach 83.33 320 *eP* **P 10 41 42.5 0.0**
comp=Z,33nm,1.6s,mb5.1
DAVOX Davos/Dischmat 83.37 316⇑*iP* **P 10 41 43.2 +0.4**
comp=Z,230nm,1.5s,mb6.0
DAVA Damuels 83.37 317 *i* P **P 10 41 42.9 +0.2**
comp=Z,56nm,1.3s,mb5.4,SNR=9.7
LIENZ Kamor/St.Gall 83.64 317⇑*iP* **P 10 41 44.3 +0.2**
comp=Z,208nm,1.6s,mb6.0
PLONS Plons/SG 83.71 317⇑*iP* **P 10 41 44.6 +0.1**
comp=Z,310nm,2.0s,mb6.1
KONO Kongsberg 83.74 329 *eP* **P 10 41 44.5 +0.1**
KONO pmax pmax
comp=Z,102nm,1.4s,mb5.8
KONO MLR MLR
comp=Z,436nm,19.0s,MS4.8
KONO Kongsberg 83.74 329 *eP* **P 10 41 44.5 +0.1**
comp=Z,102nm,1.4s,mb5.8
KONO LR LR
comp=Z,436nm,19.0s,MS4.8
VSL Villasalto 83.78 309 PFAKE 10 42 00.0 +15
VSL LR LR
comp=Z,110nm,19.0s,MS4.3
STU Stuttgart 83.83 318 *eP* **P 10 41 45.0 -0.1**
comp=Z,74nm,1.8s,mb5.5
KEST Kesra 83.88 305 P **P 10 41 46.6 +1.0**
comp=Z,9.2nm,1.0s,mb4.9,baz=298,slow=1.5,SNR=13
KEST LR LR 11 18 26.8
comp=Z,143nm,21.7s,MS4.3,baz=18,slow=35
MUD Monsted U'grnd 83.90 326⇑*iP* **P 10 41 45.7 +0.4**
MUD pmax pmax
comp=Z,25nm,1.2s,mb5.2
MUD Monsted U'grnd 83.90 326⇑*iP* **P 10 41 45.7 +0.4**
comp=Z,25nm,1.2s,mb5.2
MUGIO Muggio 83.95 316⇑*iP* **P 10 41 45.9 +0.1**
comp=Z,73nm,1.5s,mb5.6
LLS Linth-Limmern 83.97 316⇑*iP* **P 10 41 44.7 -1.1**
comp=Z,184nm,2.6s,mb5.8
PGF Pioggiola 84.02 312⇑*iP* **P 10 41 46.3 +0.1**
WILA Wila 84.03 317⇑*iP* **P 10 41 45.9 -0.2**
comp=Z,191nm,2.0s,mb5.9
STEIN Stein am Rhein 84.06 317⇑*iP* **P 10 41 46.0 -0.3**
TOD Tromm 84.09 319 *eP* **P 10 41 46.2 -0.2**
SPAK Spaichingen-Ko 84.11 318 *eP* **P 10 41 46.4 -0.1**
KBS Kingsbay 84.14 349 *ceP* **P 10 41 45.5 -0.6**
KBS pmax pmax
comp=Z,55nm,1.2s,mb5.6
KBS Kingsbay 84.14 349 *eP* **P 10 41 45.4 -0.7**
comp=Z,49nm,1.3s,mb5.5
KBS LR LR
comp=Z,533nm,20.0s,MS4.9
VAI Varese 84.14 315 P **P 10 41 45.8 -0.9**
VAI pmax pmax
comp=Z,75nm,1.4s,mb5.6
VAI Varese 84.14 315 P **P 10 41 45.8 -0.9**
comp=Z,74nm,1.4s,mb5.6
MUO Muotathal 84.22 317⇑*iP* **P 10 41 47.1 0.0**
comp=Z,343nm,2.0s,mb6.1
SLE Schleitheim 84.31 317⇑*iP* **P 10 41 47.4 -0.2**
comp=Z,140nm,1.9s,mb5.8
TNS Taunus Mts 84.32 320 *eP* **P 10 41 47.7 +0.2**
comp=Z,63nm,1.3s,mb5.6
TNS *ep*P pP 10 42 02.6 -0.1
TNS Taunus Mts 84.32 320 *eP* **P 10 41 47.7 +0.2**
TNS *e**PP pP 10 42 02.6 -0.1
TNS pmax pmax
comp=Z,63nm,1.3s,mb5.6
BNALP Bannalp 84.37 317⇑*iP* **P 10 41 47.9 0.0**
comp=Z,247nm,3.4s
BFO Black Forest 84.41 318 P **P 10 41 47.3 -0.8**
comp=Z,110nm,1.3s,mb5.8,SNR=7.9
BFO Black Forest 84.41 318 *eP* **P 10 41 47.6 -0.5**
comp=Z,26nm,1.1s,mb5.3
BFO *ep*P pP 10 42 02.8 -0.5
BFO Black Forest 84.41 318 *eP* **P 10 41 47.6 -0.5**
comp=Z,26nm,1.1s,mb5.3
BFO *ep*P pP 10 42 02.8 -0.5
BFO LR LR
comp=Z,189nm,20.0s,MS4.5
HASLI Hasliberg/Brie 84.56 316⇑*iP* **P 10 41 48.7 -0.1**
comp=Z,220nm,2.7s,mb5.8

KTD Kalmit 84.56 319 *eP* **P 10 41 48.9 +0.1**
SULZ Cheisacher 84.57 317⇑*iP* **P 10 41 48.4 -0.5**
comp=Z,124nm,1.5s,mb5.8
FELD Feldberg im Sc 84.64 318 *eP* **P 10 41 48.8 -0.4**
MMK Mattmark 84.70 316⇑*iP* **P 10 41 49.5 -0.1**
comp=Z,98nm,1.6s,mb5.7
IBBN Ibbenburen 84.73 322 *eP* **P 10 41 49.8 +0.2**
comp=Z,83nm,1.4s,mb5.7
IBBN *ep*P pP 10 42 04.8 0.0
LANF Langenberg 84.75 319 *eP* **P 10 41 49.6 -0.1**
BALST Balsthal 84.86 317⇑*iP* **P 10 41 49.9 -0.4**
comp=Z,254nm,3.0s,mb5.8
ABH Alteburg 84.90 320 *eP* **P 10 41 50.4 -0.1**
LIBD Limburg 84.90 318 *eP* **P 10 41 50.8 +0.3**
WIMIS Wimmis 84.92 316⇑*iP* **P 10 41 50.6 -0.1**
comp=Z,208nm,3.9s
LKBD Leukerbad 84.93 316⇑*iP* **P 10 41 50.8 +0.1**
BBS Basel-Blauen 84.98 317 *eP* **P 10 41 50.3 -0.6**
SAOF Saorge 85.04 314 *eP* **P 10 41 51.2 -0.1**
BUG Bochum--Univer 85.05 321 *eP* **P 10 41 51.3 +0.1**
comp=Z,72nm,1.4s,mb5.6
BUG *ep*P pP 10 42 06.4 0.0
DIX Grande Dixence 85.09 316⇑*iP* **P 10 41 51.4 -0.1**
comp=Z,202nm,1.6s,mb6.0
CDF Champ du Feu 85.11 318⇑*iP* **P 10 41 51.1 -0.5**
comp=Z,46nm,1.2s,mb5.2
CDF Champ du Feu 85.11 318⇑*iP* **P 10 41 51.1 -0.5**
CDF pmax pmax
comp=Z,23nm,1.2s,mb5.2
CDF Champ du Feu 85.11 318⇑*iP* **P 10 41 51.1 -0.5**
comp=Z,23nm,1.2s,mb5.2
SBF Sospel 85.13 314⇑*iP* **P 10 41 51.8 0.0**
comp=Z,174nm,1.1s,mb5.8
SBF Sospel 85.13 314⇑*iP* **P 10 41 51.8 0.0**
SBF pmax pmax
comp=Z,87nm,1.1s,mb5.8
SBF Sospel 85.13 314⇑*iP* **P 10 41 51.8 0.0**
comp=Z,87nm,1.1s,mb5.8
AUTN L'Aution 85.13 314 *eP* **P 10 41 50.5 -1.3**
SENIN Lac Senin/Sane 85.15 316⇑*iP* **P 10 41 52.1 +0.3**
comp=Z,261nm,2.8s,mb5.9
BOURR Bourrignon 85.17 317⇑*iP* **P 10 41 52.0 +0.1**
comp=Z,131nm,2.1s,mb5.7
LUCF Luceram 85.20 314 *eP* **P 10 41 52.2 +0.1**
ECH Echery 85.20 318 *eP* **P 10 41 51.4 -0.6**
ECH Echery 85.20 318 *eP* **P 10 41 51.8 -0.2**
ECH pmax pmax
comp=Z,18nm,1.0s,mb5.2
ECH MLR MLR
comp=Z,178nm,22.0s,MS4.4
ECH Echery 85.20 318 *eP* **P 10 41 51.8 -0.2**
comp=Z,18nm,1.0s,mb5.2
ECH LR LR
comp=Z,178nm,22.0s,MS4.4
MOF Molkenrain 85.22 318 *eP* **P 10 41 51.6 -0.6**
ADK Adak 85.25 38 PFAKE 10 42 00.0 +7.8
ADK LR LR
comp=Z,405nm,20.0s,MS4.8
SNZO South Karori 85.26 132 PFAKE 10 42 00.0 +7.6
SNZO LR LR
comp=Z,826nm,22.0s,MS5.1
TOUF Mont Tournerai 85.26 314 *eP* **P 10 41 52.0 -0.4**
GRYON Gryon 85.29 316⇑*iP* **P 10 41 52.6 +0.1**
MVIF Mont Vial 85.34 314 *eP* **P 10 41 52.5 -0.3**
ABSA Djebel Ababsia 85.37 306 P **P 10 41 54.0 +0.8**
TORNY Torny/Romont 85.38 316⇑*iP* **P 10 41 52.9 0.0**
comp=Z,354nm,3.2s
SALAN Lac Salanfe 85.39 316⇑*iP* **P 10 41 52.9 -0.1**
AIGLE Aigle 85.39 316⇑*iP* **P 10 41 53.1 +0.1**
comp=Z,189nm,2.8s,mb5.7
CMAH Djebel Manchou 85.41 306 P **P 10 41 54.0 +0.7**
HINF Hinteralfeld 85.42 317⇑*iP* **P 10 41 52.3 -0.8**
EMV Vieux Emosson 85.44 316⇑*iP* **P 10 41 53.5 +0.2**
comp=Z,123nm,1.7s,mb5.8
LOMF Lomont 85.45 317 *eP* **P 10 41 52.7 -0.6**
CALN Calern 85.53 313 *eP* **P 10 41 54.1 +0.3**
LPG La Plagne 85.56 315⇑*iP* **P 10 41 54.2 +0.3**
comp=Z,63nm,0.9s,mb5.5
LPG La Plagne 85.56 315⇑*iP* **P 10 41 54.2 +0.3**
LPG pmax pmax
comp=Z,31nm,0.9s,mb5.5
LPG La Plagne 85.56 315⇑*iP* **P 10 41 54.2 +0.3**
comp=Z,32nm,0.9s,mb5.5
LPL La Plagne 85.58 315⇑*iP* **P 10 41 54.2 +0.2**
comp=Z,105nm,1.0s,mb5.7
LPL La Plagne 85.58 315⇑*iP* **P 10 41 54.2 +0.2**
LPL pmax pmax
comp=Z,53nm,1.0s,mb5.7
LPL La Plagne 85.58 315⇑*iP* **P 10 41 54.2 +0.2**
comp=Z,52nm,1.0s,mb5.7
MBDF Montbardon 85.58 314⇑*iP* **P 10 41 53.4 -0.6**
comp=Z,24nm,0.9s,mb5.1
MBDF Montbardon 85.58 314⇑*iP* **P 10 41 53.4 -0.6**
MBDF pmax pmax
comp=Z,12nm,0.9s,mb5.1
MBDF Montbardon 85.58 314⇑*iP* **P 10 41 53.4 -0.6**
comp=Z,12nm,0.9s,mb5.1
BNI Bardonecchia 85.63 315 *eP* **P 10 41 54.1 -0.1**
BNI pmax pmax
comp=Z,34nm,1.1s,mb5.5
BNI MLR MLR
comp=Z,259nm,22.0s,MS4.6
BNI Bardonecchia 85.63 315 *eP* **P 10 41 54.1 -0.2**
comp=Z,34nm,1.1s,mb5.5
BNI LR LR
comp=Z,259nm,22.0s,MS4.6
FRF La Foret Royal 85.72 313⇑*iP* **P 10 41 54.8 +0.1**
comp=Z,130nm,1.1s,mb5.8
FRF La Foret Royal 85.72 313⇑*iP* **P 10 41 54.8 +0.1**
FRF pmax pmax
comp=Z,65nm,1.1s,mb5.8
FRF La Foret Royal 85.72 313⇑*iP* **P 10 41 54.8 +0.1**
comp=Z,65nm,1.1s,mb5.8
HAU Haudompre 85.75 318⇑*iP* **P 10 41 54.3 -0.4**
comp=Z,89nm,1.1s,mb5.6
HAU *e*MLR MLR
comp=Z,199nm,22.2s,MS4.2
HAU Haudompre 85.75 318⇑*iP* **P 10 41 54.3 -0.4**
HAU pmax pmax
comp=Z,45nm,1.1s,mb5.6
HAU MLR MLR
comp=Z,200nm,22.3s,MS4.5
HAU Haudompre 85.75 318⇑*iP* **P 10 41 54.3 -0.4**
comp=Z,44nm,1.1s,mb5.6
HAU LR LR
comp=Z,200nm,22.3s,MS4.5
WLF Walferdange 85.81 319 P **P 10 41 55.9 +0.8**
comp=Z,28nm,1.7s,mb5.2
WLF Walferdange 85.81 319 *eP* **P 10 41 55.5 +0.5**
comp=Z,60nm,1.5s,mb5.6
WLF Walferdange 85.81 319 PFAKE 10 42 10.0 +15
WLF LR LR
comp=Z,235nm,22.0s,MS4.5
LMR La Mourre 85.82 313⇑*iP* **P 10 41 55.2 0.0**
comp=Z,83nm,1.2s,mb5.5
LMR La Mourre 85.82 313⇑*iP* **P 10 41 55.2 0.0**
LMR pmax pmax
comp=Z,41nm,1.2s,mb5.5
LMR La Mourre 85.82 313⇑*iP* **P 10 41 55.2 0.0**
comp=Z,41nm,1.2s,mb5.5
MEM Membach 85.87 320 P **P 10 41 55.3 0.0**
comp=Z,17nm,1.4s,mb5.1
MEM XP pP 10 42 11.5 +1.0
CABF La Chapelle 85.98 316⇑*iP* **P 10 41 56.1 +0.2**
comp=Z,77nm,1.2s,mb5.5
CABF La Chapelle 85.98 316⇑*iP* **P 10 41 56.1 +0.2**
CABF pmax pmax
comp=Z,39nm,1.2s,mb5.5
CABF La Chapelle 85.98 316⇑*iP* **P 10 41 56.1 +0.2**
comp=Z,39nm,1.2s,mb5.5
CASM Ain Smara 86.17 306 P **P 10 41 58.0 +0.9**
ORIF Oris-en-Rattie 86.20 315⇑*iP* **P 10 41 57.3 +0.2**
comp=Z,51nm,1.1s,mb5.4
ORIF *e*MLR MLR
comp=Z,302nm,21.5s,MS4.4
ORIF Oris-en-Rattie 86.20 315⇑*iP* **P 10 41 57.3 +0.2**
ORIF pmax pmax
comp=Z,26nm,1.1s,mb5.4
ORIF Oris-en-Rattie 86.20 315⇑*iP* **P 10 41 57.3 +0.2**
comp=Z,26nm,1.1s,mb5.4
CTEI Djebel Teioual 86.25 306 P **P 10 41 56.0 -1.5**
BCLA Clavier 86.33 320 P **P 10 41 58.3 +0.8**
comp=Z,22nm,2.2s,mb5.0
SMRF Simiane la Rot 86.47 314⇑*iP* **P 10 41 59.0 +0.6**
comp=Z,53nm,1.1s,mb5.4
SMRF Simiane la Rot 86.47 314⇑*iP* **P 10 41 59.0 +0.6**
comp=Z,53nm,1.1s,mb5.7
URZ Urewera 86.58 129 *eP* **P 10 41 58.0 -1.1**
comp=Z,61nm,1.1s,mb5.7
MEZF Maizieres J'vi 86.59 318⇑*iP* **P 10 41 58.6 -0.3**
comp=Z,66nm,1.2s,mb5.4
MEZF Maizieres J'vi 86.59 318⇑*iP* **P 10 41 58.6 -0.3**
comp=Z,66nm,1.2s,mb5.7
GIVF Givet 86.65 320⇑*iP* **P 10 41 59.1 0.0**
comp=Z,50nm,1.3s,mb5.3
GIVF Givet 86.65 320⇑*iP* **P 10 41 59.1 0.0**
GIVF pmax pmax
comp=Z,25nm,1.3s,mb5.3
GIVF Givet 86.65 320⇑*iP* **P 10 41 59.1 0.0**
comp=Z,25nm,1.3s,mb5.3
DOU Dourbes 86.80 320 P **P 10 41 59.9 0.0**
comp=Z,13nm,1.9s,mb4.8
DOU XP pP 10 42 15.3 +0.2
SNF Seneffe 86.97 320 P **P 10 42 00.8 +0.1**
comp=Z,26nm,1.9s,mb5.1
BAIF Baives 87.05 320⇑*iP* **P 10 42 01.3 +0.2**
comp=Z,68nm,1.1s,mb5.5
BAIF Baives 87.05 320⇑*iP* **P 10 42 01.3 +0.2**
BAIF pmax pmax
comp=Z,34nm,1.1s,mb5.5
BAIF Baives 87.05 320⇑*iP* **P 10 42 01.3 +0.2**
comp=Z,34nm,1.1s,mb5.5
VIVF Saint-Julien-I 87.06 315⇑*iP* **P 10 42 01.2 -0.1**
comp=Z,62nm,1.1s,mb5.4
VIVF Saint-Julien-I 87.06 315⇑*iP* **P 10 42 01.2 -0.1**
VIVF pmax pmax
comp=Z,31nm,1.1s,mb5.5
VIVF Saint-Julien-I 87.06 315⇑*iP* **P 10 42 01.2 -0.1**
comp=Z,31nm,1.1s,mb5.5
SSB Saint Sauveur 87.13 315 *eP* **P 10 42 01.6 0.0**
SSB Saint Sauveur 87.13 315 *eP* **P 10 42 00.8 -0.8**
SSB pmax pmax
comp=Z,27nm,1.1s,mb5.4
SSB MLR MLR
comp=Z,177nm,20.0s,MS4.5
SSB Saint Sauveur 87.13 315 *eP* **P 10 42 00.8 -0.8**
comp=Z,27nm,1.1s,mb5.4
SSB LR LR
comp=Z,177nm,20.0s,MS4.5
LOR Lormes 87.47 317⇑*iP* **P 10 42 03.0 -0.2**
comp=Z,94nm,1.2s,mb5.6
LOR *e*MLR MLR
comp=Z,179nm,21.5s,MS4.1
LOR Lormes 87.47 317⇑*iP* **P 10 42 03.0 -0.2**
LOR pmax pmax
comp=Z,47nm,1.2s,mb5.6
LOR MLR MLR
comp=Z,180nm,21.5s,MS4.5
LOR Lormes 87.47 317⇑*iP* **P 10 42 03.0 -0.2**
comp=Z,47nm,1.2s,mb5.6
LOR LR LR
comp=Z,180nm,21.5s,MS4.5
SMF Signal de Mont 87.53 316⇑*iP* **P 10 42 03.2 -0.3**
comp=Z,67nm,1.0s,mb5.5
SMF Signal de Mont 87.53 316⇑*iP* **P 10 42 03.2 -0.3**
SMF pmax pmax
comp=Z,33nm,1.0s,mb5.5
SMF Signal de Mont 87.53 316⇑*iP* **P 10 42 03.2 -0.3**
comp=Z,33nm,1.0s,mb5.5
LASF Ste Croix 87.70 314⇑*iP* **P 10 42 04.7 +0.3**
comp=Z,118nm,1.6s,mb5.6
COLF Collangettes 87.71 315 *eP* **P 10 42 04.4 0.0**
SSF Saint Saulge 87.72 317⇑*iP* **P 10 42 04.2 -0.2**
comp=Z,98nm,1.6s,mb5.5
SSF Saint Saulge 87.72 317⇑*iP* **P 10 42 04.2 -0.2**
SSF pmax pmax
comp=Z,49nm,1.6s,mb5.5
SSF Saint Saulge 87.72 317⇑*iP* **P 10 42 04.2 -0.2**
comp=Z,49nm,1.6s,mb5.5
TAM Tamanrasset 87.85 293 *eP* **P 10 42 07.3 +1.8**
TAM pmax pmax
comp=Z,32nm,1.4s,mb5.4
TAM MLR MLR
comp=Z,261nm,19.0s,MS4.7
TAM Tamanrasset 87.85 293 *eP* **P 10 42 07.3 +1.8**
comp=Z,32nm,1.4s,mb5.4
TAM LR LR
comp=Z,261nm,19.0s,MS4.7
AVF Avril sur Loir 87.85 317⇑*iP* **P 10 42 04.8 -0.2**
comp=Z,41nm,1.1s,mb5.3
AVF Avril sur Loir 87.85 317⇑*iP* **P 10 42 04.8 -0.2**
AVF pmax pmax
comp=Z,20nm,1.1s,mb5.3
AVF Avril sur Loir 87.85 317⇑*iP* **P 10 42 04.8 -0.2**
comp=Z,20nm,1.1s,mb5.3
LBL Lubilhac 88.05 315 *eP* **P 10 42 06.4 +0.4**
AGO Saint Agoulin 88.06 316 *eP* **P 10 42 06.2 +0.2**
PYM Petit Puy Mans 88.17 316 *eP* **P 10 42 06.4 -0.2**
BGF Bois d'Agland 88.22 316⇑*iP* **P 10 42 06.9 +0.1**
comp=Z,119nm,1.4s,mb5.6
BGF Bois d'Agland 88.22 316⇑*iP* **P 10 42 06.9 +0.1**
BGF pmax pmax
comp=Z,59nm,1.4s,mb5.6
BGF Bois d'Agland 88.22 316⇑*iP* **P 10 42 06.9 +0.1**
comp=Z,59nm,1.4s,mb5.6
HYF Humbligny 88.30 317⇑*iP* **P 10 42 07.5 +0.4**
MENF Mencas 88.32 320 *eP* **P 10 42 06.6 -0.6**
TCF Toulx Ste Croi 88.68 316⇑*iP* **P 10 42 09.2 +0.2**
comp=Z,63nm,1.3s,mb5.5
TCF Toulx Ste Croi 88.68 316⇑*iP* **P 10 42 09.2 +0.2**
TCF pmax pmax
comp=Z,32nm,1.3s,mb5.5
TCF Toulx Ste Croi 88.68 316⇑*iP* **P 10 42 09.2 +0.2**
comp=Z,32nm,1.3s,mb5.5
CAF Calviac 88.91 315⇑*iP* **P 10 42 10.6 +0.5**
comp=Z,59nm,1.5s,mb5.4
CAF Calviac 88.91 315⇑*iP* **P 10 42 10.6 +0.5**
CAF pmax pmax
comp=Z,30nm,1.5s,mb5.4
CAF Calviac 88.91 315⇑*iP* **P 10 42 10.6 +0.5**
comp=Z,30nm,1.5s,mb5.4
MTLF Montolieu 88.95 313⇑*iP* **P 10 42 10.6 +0.3**
comp=Z,45nm,1.2s,mb5.4
MTLF Montolieu 88.95 313⇑*iP* **P 10 42 10.6 +0.3**
MTLF pmax pmax
comp=Z,22nm,1.2s,mb5.4
MTLF Montolieu 88.95 313⇑*iP* **P 10 42 10.6 +0.3**
comp=Z,22nm,1.2s,mb5.4
RJF Les Rejaudoux 89.26 315⇑*iP* **P 10 42 12.2 +0.5**
comp=Z,66nm,1.3s,mb5.5
RJF *e*MLR MLR
comp=Z,210nm,21.8s,MS4.2
RJF Les Rejaudoux 89.26 315⇑*iP* **P 10 42 12.2 +0.5**
RJF pmax pmax
comp=Z,33nm,1.3s,mb5.5
RJF MLR MLR
comp=Z,210nm,21.8s,MS4.5
RJF Les Rejaudoux 89.26 315⇑*iP* **P 10 42 12.2 +0.5**
comp=Z,33nm,1.3s,mb5.5
RJF LR LR
comp=Z,210nm,21.8s,MS4.5
LFF La Frestale 89.84 315⇑*iP* **P 10 42 15.1 +0.7**
comp=Z,115nm,1.5s,mb5.7
LFF La Frestale 89.84 315⇑*iP* **P 10 42 15.1 +0.7**
LFF pmax pmax
comp=Z,58nm,1.5s,mb5.7
LFF La Frestale 89.84 315⇑*iP* **P 10 42 15.1 +0.7**
comp=Z,58nm,1.5s,mb5.7
NIKO Nikolski 89.94 37 *eP* **P 10 42 14.2 -0.5**
comp=Z,94nm,1.1s,mb6.0
LDF La Druitiere 90.01 319⇑*iP* **P 10 42 15.3 +0.2**
comp=Z,76nm,1.0s,mb5.7
LDF La Druitiere 90.01 319⇑*iP* **P 10 42 15.3 +0.2**
LDF pmax pmax
comp=Z,38nm,1.0s,mb5.7
LDF La Druitiere 90.01 319⇑*iP* **P 10 42 15.3 +0.2**
comp=Z,38nm,1.0s,mb5.7
FLN La Foliniere 90.22 319⇑*iP* **P 10 42 16.2 +0.1**
comp=Z,86nm,1.0s,mb5.7
FLN *e*MLR MLR
comp=Z,406nm,22.5s,MS4.5
FLN La Foliniere 90.22 319⇑*iP* **P 10 42 16.2 +0.1**
FLN pmax pmax
comp=Z,43nm,1.0s,mb5.7
FLN MLR MLR
comp=Z,410nm,22.5s,MS4.8
FLN La Foliniere 90.22 319⇑*iP* **P 10 42 16.2 +0.1**
comp=Z,43nm,1.0s,mb5.7
FLN LR LR
comp=Z,410nm,22.5s,MS4.8
MFF Saint Martin d 90.26 317⇑*iP* **P 10 42 16.6 +0.2**
comp=Z,96nm,1.2s,mb5.7
MFF Saint Martin d 90.26 317⇑*iP* **P 10 42 16.6 +0.2**

MFF pmax pmax
comp=Z,48nm,1.2s,mb5.7
MFF Saint Martin d 90.26 317⇑ *i*P P 10 42 16.6 +0.2
comp=Z,48nm,1.2s,mb5.7
EPF Esparros 90.35 313⇑ *i*P P 10 42 16.6 -0.2
GRR Gorron 90.52 318⇑ *i*P P 10 42 17.9 +0.4
comp=Z,105nm,1.3s,mb5.7
GRR Gorron 90.52 318⇑ *i*P P 10 42 17.9 +0.4
GRR pmax pmax
comp=Z,53nm,1.3s,mb5.7
GRR Gorron 90.52 318⇑ *i*P P 10 42 17.9 +0.4
comp=Z,52nm,1.3s,mb5.7
SBA Scott Base 90.71 168 *e*P P 10 42 19.6 +1.8
SBA pmax pmax
comp=Z,27nm,1.3s,mb5.4
SBA MLR MLR
comp=Z,631nm,19.0s,MS5.1
SBA Scott Base 90.71 168 *e*P P 10 42 19.6 +1.8
comp=Z,27nm,1.3s,mb5.4
SBA LR LR
comp=Z,631nm,19.0s,MS5.1
DAG Danmarks Havn 90.80 348⇓ *i*P P 10 42 17.1 -1.2
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
DAG Danmarks Havn 90.80 348⇓ *i*P P 10 42 17.1 -1.2
comp=Z,9.7nm,0.8s,mb5.2
ESK Eskdalemuir 90.93 326 PFAKE 10 42 30.0 +11
ESK LR LR
comp=Z,251nm,19.0s,MS4.7
ETSF Etsaut 91.02 313 *e*P P 10 42 21.0 +1.0
comp=Z,45nm,1.1s,mb5.4
ETSF Etsaut 91.02 313 *e*P P 10 42 21.0 +1.0
ETSF pmax pmax
comp=Z,22nm,1.1s,mb5.4
ETSF Etsaut 91.02 313 *e*P P 10 42 21.0 +1.0
comp=Z,22nm,1.1s,mb5.4
SJPF Ste Jean 91.47 313⇑ *i*P P 10 42 22.9 +0.8
comp=Z,50nm,1.2s,mb5.4
SJPF Ste Jean 91.47 313⇑ *i*P P 10 42 22.9 +0.8
SJPF pmax pmax
comp=Z,25nm,1.2s,mb5.4
SJPF Ste Jean 91.47 313⇑ *i*P P 10 42 22.9 +0.8
comp=Z,25nm,1.2s,mb5.4
SGMF Saint Gilles 91.66 319⇑ *i*P P 10 42 23.1 +0.3
comp=Z,111nm,1.4s,mb5.7
SGMF Saint Gilles 91.66 319⇑ *i*P P 10 42 23.1 +0.3
SGMF pmax pmax
comp=Z,56nm,1.4s,mb5.7
SGMF Saint Gilles 91.66 319⇑ *i*P P 10 42 23.1 +0.3
comp=Z,56nm,1.4s,mb5.7
QUIF Quistinic 92.11 318⇑ *i*P P 10 42 24.9 0.0
ROSF Rostrenen 92.12 319⇑ *i*P P 10 42 25.1 +0.2
comp=Z,70nm,1.2s,mb5.6
ROSF Rostrenen 92.12 319⇑ *i*P P 10 42 25.1 +0.2
ROSF pmax pmax
comp=Z,35nm,1.2s,mb5.6
ROSF Rostrenen 92.12 319⇑ *i*P P 10 42 25.1 +0.2
comp=Z,35nm,1.2s,mb5.6
MAIT Maitri 92.19 199 *e*P pP 10 42 41.2 +1.2
TORD Torodi Ar. Bea 92.28 283 P P 10 42 26.7 +0.3
comp=Z,4.8nm,0.9s,mb4.8,baz=88,slow=4.3,SNR=24
TORD pP pP 10 42 43.3 +1.6
comp=Z,15nm,1.1s,baz=77,slow=4.7,SNR=16
TORD PKKPbc PKKPbc 10 59 42.5 +1.5
comp=Z,0.4nm,0.7s,baz=312,slow=3.4,SNR=4.3
TORD LR LR 11 23 16.2
comp=Z,367nm,19.4s,MS4.8,baz=95,slow=35
ALE Alert 92.34 357 P P 10 42 25.0 -0.4
comp=Z,168nm,0.5s,mb6.6,SNR=23
ESDC Sonseca Array 94.02 310 P P 10 42 33.9 -0.1
comp=Z,0.7nm,0.4s,mb4.5,baz=64,slow=4.8,SNR=8.2
ESDC pP pP 10 42 50.5 +1.3
comp=Z,2.1nm,0.5s,baz=59,slow=3.9,SNR=4.4
ESDC PKKPbc PKKPbc 10 59 37.5 +0.2
comp=Z,0.2nm,0.3s,baz=294,slow=2.3,SNR=4.5
ESDC LR LR 11 29 19.4
comp=Z,129nm,19.9s,MS4.4,baz=100,slow=38
ESLA Sonseca Array 94.02 310 *e*P P 10 42 34.1 +0.2
ESLA LR LR
comp=Z,1μm,20.0s,MS5.3
PAB San Pablo 94.34 310 PFAKE 10 42 50.0 +15
PAB LR LR
comp=Z,177nm,21.0s,MS4.5
TTA Tatalina 94.34 26 *e*P P 10 42 35.4 +0.6
TTA pmax pmax
comp=Z,83nm,1.5s,mb5.9
TTA Tatalina 94.34 26 *e*P P 10 42 35.4 +0.6
comp=Z,83nm,1.5s,mb5.9
SCO Scoresbysund 94.38 343 *i*P P 10 42 34.8 -0.1
SCO pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
SCO Scoresbysund 94.38 343 *i*P P 10 42 34.8 -0.1
comp=Z,6.7nm,0.8s,mb5.1
QSPA South Pole Qui 94.58 180 P P 10 42 38.0 +2.4
comp=Z,56nm,2.0s,mb5.6
QSPA LR LR
comp=Z,2μm,20.0s,MS5.5
COLD Coldfoot 95.03 21 *e*P P 10 42 38.2 +0.3
comp=Z,69nm,1.8s,mb5.8
SVW2 Sparrevohn 95.13 27 *e*P P 10 42 39.2 +0.7
CHUM Lake Minchumin 95.56 24 *e*P P 10 42 40.9 +0.5
comp=Z,148nm,1.7s,mb6.1
BPAW Bear Paw Mtn. 96.01 24 *e*P P 10 42 42.1 -0.3
comp=Z,95nm,1.5s,mb6.0
SFS San Fernando 96.32 307 PFAKE 10 43 00.0 +16
SFS LR LR
comp=Z,383nm,19.0s,MS4.9
MTE Manteigas 96.59 311 PFAKE 10 43 00.0 +14
MTE LR LR
comp=Z,207nm,19.0s,MS4.6
PBAR Barrancos 96.65 309 *e*P pP 10 43 00.0 -1.3
comp=Z,28nm,1.6s
COLA College 96.91 23 *e*P P 10 42 44.9 -1.6
COLA MLR MLR
comp=Z,641nm,22.0s,MS5.1
MCK McKinley 96.99 24 *e*P P 10 42 46.4 -0.5
MCK *e* pP 10 43 04.7 +2.4
MCK pmax pmax
comp=Z,68nm,1.7s,mb5.8
MCK McKinley 96.99 24 *e*P P 10 42 46.4 -0.5
comp=Z,68nm,1.7s,mb5.8
MCK *e* pP 10 43 04.7 +2.5
RTC Rabat Centre 97.29 305 PFAKE 10 43 00.0 +11
RTC LR LR
comp=Z,346nm,19.0s,MS4.9
SUMG Summit 97.47 347 *e*P P 10 42 49.6 +0.7
comp=Z,14nm,1.0s,mb5.3
KDAK Kodiak Island 97.72 30 *c*eP P 10 42 52.8 +2.5
PMR Palmer 97.82 26 *e*P P 10 42 50.3 -0.4
PMR pmax pmax
comp=Z,38nm,1.5s,mb5.7
PMR Palmer 97.82 26 *e*P P 10 42 50.2 -0.4
comp=Z,38nm,1.5s,mb5.7
DBIC Dimbokro 99.34 278 LR LR 11 27 38.6
comp=Z,356nm,18.2s,MS4.9,baz=66,slow=35
DBIC Dimbokro 99.34 278 PFAKE 10 43 10.0 +11
DBIC LR LR
comp=Z,446nm,20.0s,MS5.0
MENT Mentasta 99.44 23 *e*P P 10 42 58.6 +0.7
EGAK Eagle 99.45 21 PFAKE 10 43 10.0 +12
EGAK LR LR
comp=Z,996nm,22.0s,MS5.3
INK Inuvik 99.78 16 *e*P Pdif 10 42 59.1 -0.5
INK pmax pmax
comp=Z,20nm,1.4s
INK Inuvik 99.78 16 *e*Pdif Pdif 10 42 59.1 -0.4
comp=Z,20nm,1.4s
BMRM Bremner River 100.06 25 *e*Pdif Pdif 10 43 01.1 +0.3
RES Resolute Bay 100.54 3 *e*P Pdif 10 43 03.1 +0.1
RES pmax pmax
comp=Z,14nm,1.1s
RES Resolute Bay 100.54 3 *e*Pdif Pdif 10 43 03.1 +0.1
comp=Z,14nm,1.1s
SFJD Kangerlussuaq 104.45 347 PFAKE 10 43 30.0 +10
SFJD LR LR
comp=Z,509nm,21.0s,MS5.0
YKA Yellowknife Ar 109.29 14 Pdiff Pdif 10 43 41.4 -0.5
comp=Z,0.4nm,0.9s,baz=285,slow=7.9,SNR=4.7
YKA PKiKP PKiKP 10 47 43.8 -1.3
comp=Z,1.6nm,1.1s,baz=354,slow=1.4,SNR=7.0
YKA PKKPbc PKKPbc 10 58 50.4 -3.3
comp=Z,0.4nm,0.8s,baz=152,slow=2.9,SNR=5.5
PPT Papeete 115.50 107 *e*PP PP 10 48 50.6 -10
comp=Z,79nm,27.0s
PPT Papeete 115.50 107 *e*PS PS 10 58 44.0 +2.0
comp=Z,568nm,27.2s
PPT *e*LR LR 11 22 48.6

comp=Z,414nm,24.0s
EDM Edmonton 117.54 19 *e*PKIKP PKPdf 10 48 01.0 -0.2
NLWA Neilton Lookou 117.85 29 PFAKE 10 48 10.0 +8.1
NLWA LR LR
comp=Z,526nm,21.0s,MS5.1
JCW Jim Creek 118.18 27 *e*PKPdf PKPdf 10 48 02.9 +0.4
SCHQ Schefferville 118.85 348 PKP PKPdf 10 48 03.0 -0.6
comp=Z,4.0nm,0.6s,baz=106,slow=1.0,SNR=13
SCHQ Schefferville 118.85 348 PKP PKPdf 10 48 03.0 -0.6
SCHQ LR LR
comp=Z,822nm,20.0s,MS5.4
FFC Flin Flon 119.13 11 *e*PKIKP PKPdf 10 48 03.8 -0.4
FFC MLR MLR
comp=Z,872nm,22.0s,MS5.3
ETW Entiat 119.34 27 *e*PKPdf PKPdf 10 48 04.8 0.0
ERK Elk Rock 119.36 29 P PKPdf 10 48 05.5 +0.6
COR Corvallis 120.10 31 PFAKE 10 48 20.0 +14
COR LR LR
comp=Z,412nm,21.0s,MS5.0
NEW Newport 120.21 24 *e*PKIKP PKPdf 10 48 07.1 +0.6
NEW MLR MLR
comp=Z,792nm,21.0s
WRD Warden 120.48 27 P PKPdf 10 48 07.2 +0.1
RSW Rattlesnake Hi 120.58 27 *e*PKPdf PKPdf 10 48 08.0 +0.8
HAWA Hanford 120.61 27 *e*PKPdf PKPdf 10 48 07.5 +0.2
HAWA LR LR
comp=Z,450nm,20.0s,MS5.1
BSMT Bassoo Peak 121.48 23 *e*PKPdf PKPdf 10 48 09.0 +0.1
VIPM Ingram Point 121.50 29 PKIKP PKPdf 10 48 09.9 +0.8
LNOR Lincton Mounta 121.57 27 *e*PKIKP PKPdf 10 48 09.1 -0.1
HUMO Hull Mountain 121.65 32 *e*PKPdf PKPdf 10 48 10.2 +0.7
HUMO LR LR
comp=Z,312nm,19.0s,MS5.0
YBH Yreka Blue Hor 122.39 33 PFAKE 10 48 20.0 +9.1
YBH LR LR
comp=Z,297nm,20.0s,MS4.9
SLMT Seeley Lake 122.48 23 *e*PKPdf PKPdf 10 48 10.7 -0.2
MSO Missoula 122.65 23 PFAKE 10 48 20.0 +8.8
MSO LR LR
comp=Z,487nm,20.0s,MS5.2
BMO Blue Mountains 122.80 27 PFAKE 10 48 20.0 +8.5
BMO LR LR
comp=Z,402nm,19.0s,MS5.1
EGMT Eagleton 123.17 20 PFAKE 10 48 20.0 +7.8
EGMT LR LR
comp=Z,914nm,21.0s,MS5.4
WDC Whiskeytown Da 123.27 34 PFAKE 10 48 20.0 +7.4
WDC LR LR
comp=Z,440nm,21.0s,MS5.1
LTIM Timbered Crate 123.44 33 P PKPdf 10 48 13.3 +0.4
MOD Modoc 123.55 31 *e*PKPdf PKPdf 10 48 13.9 +0.8
MOD LR LR
comp=Z,488nm,20.0s,MS5.2
HRY Holter Researc 123.56 22 *e*PKPdf PKPdf 10 48 13.0 +0.1
WVOR Wild Horse Val 124.00 30 *e*PKIKP PKPdf 10 48 14.9 +1.0
WVOR MLR MLR
comp=Z,390nm,20.0s,MS5.1
LRM Limekiln Ridge 124.06 23 *e*PKPdf PKPdf 10 48 14.1 +0.2
DLMT Dillon 124.39 23 *e*PKPdf PKPdf 10 48 14.5 -0.1
DGMT Dagmar 124.45 15 *e*PKPdf PKPdf 10 48 15.1 +0.5
DGMT LR LR
comp=Z,889nm,19.0s,MS5.5
ULM Lac du Bonnet 124.49 9 PKP PKPdf 10 48 13.9 -0.7
comp=Z,9.8nm,0.8s,baz=345,slow=3.9,SNR=12
ULM pPKP pPKPdf 10 48 29.3 -1.1
comp=Z,9.3nm,0.7s,baz=25,slow=4.0,SNR=8.4
ULM Lac du Bonnet 124.49 9 *e*PKPdf PKPdf 10 48 14.0 -0.6
ULM LR LR
comp=Z,907nm,22.0s,MS5.4
BOZ Bozeman (W) 124.53 23 *e*PKIKP PKPdf 10 48 14.9 +0.1
BOZ MLR MLR
comp=Z,539nm,21.0s,MS5.2
MCMT McKenzie Canyo 124.73 24 *e*PKPdf PKPdf 10 48 16.0 +0.7
TAOE Nuku Hiva Isla 125.00 98 *e*PP PP 10 49 55.9 -10
comp=Z,93nm,28.1s
TAOE *e*LR LR 11 27 28.4
comp=Z,302nm,24.0s
HLID Hailey 125.10 26 *e*PKPdf PKPdf 10 48 16.5 +0.5
HLID LR LR
comp=Z,551nm,22.0s,MS5.2
GCMT Greycliff 125.13 21 *e*PKPdf PKPdf 10 48 16.6 +0.6
QLMT Earthquake Lak 125.29 23 *e*PKPdf PKPdf 10 48 17.6 +1.2
LAO LASA Array 125.49 18 *e*PKPdf PKPdf 10 48 17.9 +1.3
LAO LR LR
comp=Z,574nm,19.0s,MS5.3
YMR Madison River 125.60 23 *e*PKPdf PKPdf 10 48 18.5 +1.6
YFT Old Faithful 125.84 23 *e*PKPdf PKPdf 10 48 20.0 +2.6
RLMT Red Lodge 125.85 21 PFAKE 10 48 30.0 +13
RLMT LR LR
comp=Z,622nm,20.0s,MS5.3
LKWY Lake 125.91 22 *e*PKIKP PKPdf 10 48 19.5 +2.0
LKWY MLR MLR
comp=Z,766nm,21.0s,MS5.3
BMN Battle Mountai 126.20 30 PFAKE 10 48 30.0 +12
BMN LR LR
comp=Z,346nm,21.0s,MS5.0
CMB Columbia Colle 126.24 35 PFAKE 10 48 30.0 +12
CMB LR LR
comp=Z,309nm,19.0s,MS5.0
IMW Indian Meadow 126.26 23 *e*PKPdf PKPdf 10 48 19.2 +1.0
AGMN Agassiz Refuge 126.39 9 PFAKE 10 48 30.0 +12
AGMN LR LR
comp=Z,597nm,20.0s,MS5.3
DCID1 Drake Creek 126.42 24 *e*PKPdf PKPdf 10 48 19.4 +0.8
RRI2 Red Ridge 126.57 24 *e*PKPdf PKPdf 10 48 19.7 +0.9
TPAW Teton Pass 126.60 23 *e*PKPdf PKPdf 10 48 19.9 +1.0
LOHW Long Hollow 126.63 23 *e*PKPdf PKPdf 10 48 19.8 +0.9
SNOW Snow King Moun 126.70 23 *e*PKPdf PKPdf 10 48 20.4 +1.4
REDW Red Top Meadow 126.75 23 *e*PKPdf PKPdf 10 48 20.2 +1.0
ELK Elko 126.94 29 *e*PKIKP PKPdf 10 48 20.9 +1.3
ELK MLR MLR
comp=Z,408nm,21.0s
N12A Clover Valley, 126.95 28 *e*PKPdf PKPdf 10 48 20.8 +1.2
M13A Montello 126.96 27 *e*PKPdf PKPdf 10 48 20.6 +1.0
NVAR Mina Array Bea 127.11 33 PKP PKPdf 10 48 20.5 +0.5
comp=Z,12nm,1.1s,baz=271,slow=1.6,SNR=35
NVAR pPKP pPKPdf 10 48 35.5 -0.3
comp=Z,9.8nm,0.9s,baz=221,slow=1.7,SNR=9.3
AHID Auburn Hatcher 127.14 24 PFAKE 10 48 30.0 +10
AHID LR LR
comp=Z,601nm,20.0s,MS5.3
EYMN Ely 127.29 6 PFAKE 10 48 30.0 +10
EYMN LR LR
comp=Z,852nm,22.0s,MS5.4
BW06 Boulder Array 127.76 23 PFAKE 10 48 30.0 +8.9
BW06 LR LR
comp=Z,411nm,20.0s,MS5.1
PDAR Pinedale Array 127.76 23 PKP PKPdf 10 48 21.4 +0.2
comp=Z,12nm,1.0s,baz=11,slow=1.5,SNR=51
HWUT Hardware Ranch 127.91 25 *e*PKPdf PKPdf 10 48 21.9 +0.4
HWUT LR LR
comp=Z,645nm,21.0s,MS5.3
TPH Tonopah 127.95 32 PFAKE 10 48 30.0 +8.4
TPH LR LR
comp=Z,482nm,21.0s,MS5.2
EFI East Falkland 128.11 201 PFAKE 10 48 30.0 +8.6
EFI LR LR
comp=Z,751nm,19.0s,MS5.4
RSSD Black Hills 128.47 18 *e*PKIKP PKPdf 10 48 23.3 +0.9
DUG Dugway 128.51 27 *e*PKIKP PKPdf 10 48 23.6 +1.0
DUG MLR MLR
comp=Z,457nm,19.0s,MS5.2
NLU North Lily Min 129.03 27 *e*PKPdf PKPdf 10 48 24.5 +0.9
DAC Darwin (Calif) 129.06 34 PFAKE 10 48 40.0 +16
DAC LR LR
comp=Z,251nm,19.0s,MS4.9
RWWY Rawlins 129.57 22 *e*PKPdf PKPdf 10 48 24.8 +0.2
LBNH Lisbon 129.94 348 PFAKE 10 48 40.0 +15
LBNH LR LR
comp=Z,618nm,19.0s,MS5.3
TMUT Trail Mountain 129.96 27 *e*PKPdf PKPdf 10 48 26.9 +1.5
LONY Lake Ozonia 130.08 350 PFAKE 10 48 40.0 +15
LONY LR LR
comp=Z,596nm,19.0s,MS5.3
MVU Marysvale 130.14 28 PFAKE 10 48 40.0 +14
MVU LR LR
comp=Z,360nm,20.0s,MS5.1
MSU Marysvale 130.15 28 *e*PKIKP PKPdf 10 48 27.7 +1.9
CCUT Cedar City 130.34 30 *e*PKPdf PKPdf 10 48 27.3 +1.1
SRU San Rafael 130.42 26 *e*PKIKP PKPdf 10 48 26.9 +0.6
PHWY Pilot Hill 130.54 20 *e*PKPdf PKPdf 10 48 26.6 +0.2
NCB Newcomb 130.65 350 PFAKE 10 48 40.0 +13
NCB LR LR
comp=Z,434nm,19.0s,MS5.2

ECSD EROS Data Cent 130.68 11 *e*PKPdf PKPdf 10 48 26.6 0.0
ECSD LR LR
comp=Z,455nm,20.0s,MS5.2
ISCO Idaho Springs 131.81 21 PFAKE 10 48 40.0 +11
ISCO LR LR
comp=Z,759nm,19.0s,MS5.4
SMCO Snowmass 131.84 23 *e*PKPdf PKPdf 10 48 30.7 +1.7
OGNE Ogallala 131.97 17 PFAKE 10 48 40.0 +11
OGNE LR LR
comp=Z,495nm,22.0s,MS5.2
JFWS Jewell Farm 132.40 5 PFAKE 10 48 40.0 +10
JFWS LR LR
comp=Z,543nm,19.0s,MS5.3
MVCO Mesa Verde 132.88 26 *e*PKPdf PKPdf 10 48 32.6 +1.6
MVCO LR LR
comp=Z,546nm,20.0s,MS5.3
WUAZ Wupatki 132.92 30 *e*PKPdf PKPdf 10 48 32.4 +1.3
WUAZ LR LR
comp=Z,283nm,20.0s,MS5.0
SCIA State Center 133.03 9 PFAKE 10 48 40.0 +8.9
SCIA LR LR
comp=Z,774nm,20.0s,MS5.4
ERPA Erie 133.23 355 PFAKE 10 48 40.0 +8.5
ERPA LR LR
comp=Z,636nm,20.0s,MS5.3
AAM Ann Arbor 133.25 359 PFAKE 10 48 40.0 +8.5
AAM LR LR
comp=Z,405nm,20.0s,MS5.1
SDCO Great Sand Dun 133.65 23 PFAKE 10 48 40.0 +7.6
SDCO LR LR
comp=Z,511nm,20.0s,MS5.2
SSPA Standing Stone 134.47 353 PFAKE 10 48 50.0 +16
SSPA LR LR
comp=Z,529nm,21.0s,MS5.2
CBKS Cedar Bluff 134.61 16 PFAKE 10 48 50.0 +16
CBKS LR LR
comp=Z,713nm,21.0s,MS5.4
HDIL Hopedale 134.82 5 PFAKE 10 48 50.0 +15
HDIL LR LR
comp=Z,636nm,20.0s,MS5.3
KSU1 Kansas State U 135.12 13 *e*PKPdf PKPdf 10 48 35.2 +0.1
KSU1 LR LR
comp=Z,666nm,21.0s,MS5.3
ACSO Alum Creek Sta 135.29 358 *e*PKPdf PKPdf 10 48 35.4 0.0
ACSO LR LR
comp=Z,511nm,20.0s,MS5.2
ANMO Albuquerque 135.67 26 *e*PKIKP PKPdf 10 48 37.5 +1.2
ANMO MLR MLR
comp=Z,518nm,21.0s
TUC Tucson 135.75 32 *e*PKIKP PKPdf 10 48 39.6 +3.1
TUC MLR MLR
comp=Z,374nm,20.0s,MS5.1
LAZ Ladron 135.83 27 *e*PKPdf PKPdf 10 48 38.1 +1.5
LENM Lemitar 136.10 27 *e*PKPdf PKPdf 10 48 38.4 +1.3
BNM Barren Site 136.27 26 *e*PKPdf PKPdf 10 48 39.1 +1.7
CBN Corbin 136.78 351 PFAKE 10 48 50.0 +12
CBN LR LR
comp=Z,629nm,19.0s,MS5.4
CCM Cathedral Cave 137.09 7 *e*PKIKP PKPdf 10 48 38.7 -0.1
CCM MLR MLR
comp=Z,583nm,21.0s,MS5.3
WCI Wyandotte Cave 137.31 2 *e*PKIKP PKPdf 10 48 39.0 -0.2
WCI MLR MLR
comp=Z,483nm,21.0s,MS5.2
AMTX Amarillo 137.60 21 PFAKE 10 48 50.0 +10
AMTX LR LR
comp=Z,707nm,19.0s,MS5.4
WMOK Wichita Mounta 138.68 17 PFAKE 10 48 50.0 +8.1
WMOK LR LR
comp=Z,622nm,20.0s,MS5.3
MNTX Cornudas Mount 138.90 27 PFAKE 10 48 50.0 +7.6
MNTX LR LR
comp=Z,409nm,21.0s,MS5.2
SPB Sao Paulo 139.30 239 PFAKE 10 49 00.0 +17
SPB LR LR
comp=Z,464nm,19.0s,MS5.2
WVT Waverly 139.33 4 *e*PKIKP PKPdf 10 48 43.1 +0.1
WVT MLR MLR
comp=Z,866nm,22.0s,MS5.5
MIAR Mount Ida 140.15 11 *e*PKIKP PKPdf 10 48 45.2 +0.6
MIAR MLR MLR
comp=Z,495nm,19.0s,MS5.3
PLAL Pickwick Lake 140.45 4 *e*PKPdf PKPdf 10 48 44.0 -1.1
PLAL LR LR
comp=Z,545nm,20.0s,MS5.3
TRQA Tornquist 140.75 209 PFAKE 10 49 00.0 +14
TRQA LR LR
comp=Z,773nm,19.0s,MS5.5
OXF Oxford 140.80 6 *e*PKIKP PKPdf 10 48 42.0 -3.7
OXF MLR MLR
comp=Z,522nm,22.0s,MS5.2
TXAR Lajitas Array 141.68 27 PKhKP 10 48 41.7
comp=Z,2.0nm,0.8s,baz=198,slow=0.9,SNR=16
TXAR PKP PKPdf 10 48 47.1 -0.3
comp=Z,3.1nm,0.6s,baz=21,slow=1.3,SNR=22
TXAR PP PP 10 51 50.0 -0.4
comp=Z,4.3nm,1.0s,baz=324,slow=3.6,SNR=6.5
PLCA Paso Flores 141.85 198 PKhKP 10 48 42.8
comp=Z,3.9nm,0.9s,baz=219,slow=6.7,SNR=6.6
PLCA PKP PKPdf 10 48 48.3 +0.9
comp=Z,2.9nm,0.9s,baz=178,slow=3.8,SNR=3.9
PLCA Paso Flores 141.85 198 PKP 10 48 42.8
PLCA PKP PKPdf 10 48 48.3 +0.9
PLCA LR LR
comp=Z,719nm,21.0s,MS5.4
GOGA Godfrey 142.11 358 PFAKE 10 49 00.0 +12
GOGA LR LR
comp=Z,680nm,21.0s,MS5.4
JCT Junction City 142.25 21 *e*PKHKP 10 48 43.4
JCT MLR MLR
comp=Z,572nm,20.0s,MS5.3
LRAL Lakeview Retre 142.46 3 PFAKE 10 49 00.0 +11
LRAL LR LR
comp=Z,531nm,21.0s,MS5.3
NATX Nacogdoches 142.60 14 *e*PKPdf PKPdf 10 48 45.7 -3.4
NATX LR LR
comp=Z,701nm,20.0s,MS5.4
HKT Hockley 144.02 16 *e*PKIKP PKPdf 10 48 48.9 -2.7
HKT MLR MLR
comp=Z,347nm,20.0s,MS5.1
BRAL Brewton 144.47 3 *e*PKPdf PKPdf 10 48 50.9 -1.5
BRAL LR LR
comp=Z,293nm,20.0s,MS5.0
KVTX Kingsville 145.60 21 *e*PKPdf PKPdf 10 48 56.3 +1.9
CPUP Villa Florida 145.97 228 PKPbc PKPbc 10 48 55.8 0.0
comp=Z,17nm,0.8s,baz=81,slow=3.1,SNR=50
DWPF Disney 147.25 354 *e*PKPbc PKPbc 10 49 00.0 +0.6
DWPF LR LR
comp=Z,872nm,19.0s,MS5.6
PHG Guadaloupe-2 149.17 312 *e*P PKPdf 10 49 01.3 +0.7
LZG Guadaloupe-1 149.18 313 *e*P PKPbc 10 49 05.0 +0.2
TBG Guadaloupe-3 149.27 312 *e*P PKPbc 10 49 05.2 +0.2
FDF Fort de France 149.59 310 PFAKE 10 49 10.0 +8.7
FDF LR LR
comp=Z,292nm,20.0s,MS5.1
MTP Monte Pirata 150.42 320 *e*PKPbc PKPbc 10 49 07.8 0.0
CBYP Canovanas 150.49 321 *e*PKPdf PKPdf 10 49 03.3 +0.7
CBYP *e*PKPbc PKPbc 10 49 08.1 +0.1
GRTK Grand Turk 150.71 333 *e*PKPdf PKPdf 10 49 03.0 +0.1
GRTK *e*PKPbc PKPbc 10 49 08.5 +0.1
SJG San Juan 150.79 321 PKPbc PKPbc 10 49 08.6 -0.1
comp=Z,79nm,0.7s,baz=178,slow=21,SNR=7.1
SJG San Juan 150.79 321 *e*PKPdf PKPdf 10 49 03.8 +0.7
SJG *e*PKPbc PKPbc 10 49 08.6 -0.1
SJG LR LR
comp=Z,822nm,20.0s,MS5.5
ICM Isla Caja Muer 151.18 322 *e*PKPdf PKPdf 10 49 04.0 +0.3
ICM *e*PKPbc PKPbc 10 49 09.7 +0.1
TLL Tololo Astrono 151.36 206⇑ *i*P PKPbc 10 49 09.9 +0.2
CRPR Cabo Rojo, PR 151.46 323 *e*PKPbc PKPbc 10 49 10.8 +0.5
GRGR Grenville 151.51 306 *e*PKPbc PKPbc 10 49 11.5 +1.1
GRGR LR LR
comp=Z,335nm,19.0s,MS5.2
LCO Las Campanas 152.30 207 *e*PKPdf PKPdf 10 49 06.4 +1.3
LCO *e*PKPbc PKPbc 10 49 12.6 +0.7
LCO LR LR
comp=Z,738nm,22.0s,MS5.5
SDDR Presa de Saban 152.96 331 *e*PKPdf PKPdf 10 49 07.0 +0.7
SDDR *e*PKPbc PKPbc 10 49 14.4 +0.8
SDDR *e*PKPab PKPab 10 49 25.6 +0.9
SDDR LR LR
comp=Z,430nm,20.0s,MS5.3
GTBY Guantanamo Bay 153.75 339 PFAKE 10 49 20.0 +13
GTBY LR LR
comp=Z,397nm,22.0s,MS5.2

SIV San Ignacio 154.05 243 PKP PKPdf 10 49 07.7 -0.2
comp=Z,2.9nm,0.8s,baz=98,slow=1.5,SNR=15
MTDJ Mount Denham 156.13 343 PFAKE 10 49 20.0 +9.2
MTDJ LR LR
comp=Z,353nm,21.0s,MS5.2
CMIG Matias Romero 156.23 24 PKP PKPdf 10 49 10.7 -0.2
comp=Z,5.2nm,1.1s,baz=5.4,slow=4.1,SNR=6.2
CMIG PKPab PKPab 10 49 37.7 -1.0
comp=Z,14nm,1.0s,baz=311,slow=2.3,SNR=9.3
CMIG Matias Romero 156.23 24 PKP PKPdf 10 49 10.7 -0.2
CMIG PKPab PKPab 10 49 37.7 -1.0
LVC Limon Verde 156.40 219 PKP PKPdf 10 49 11.8 +0.8
comp=Z,3.0nm,0.8s,baz=112,slow=9.5,SNR=3.8
LVC Limon Verde 156.40 219 PKP PKPdf 10 49 11.8 +0.8
LVC LR LR
comp=Z,536nm,22.0s,MS5.3
APG El Apazote 159.69 16 PKP PKPdf 10 49 14.8 -0.4
comp=Z,2.1nm,0.7s,baz=282,slow=7.2,SNR=5.6
APG PKPab PKPab 10 49 52.3 -1.3
comp=Z,26nm,1.0s,baz=341,slow=5.6,SNR=15
LPAZ La Paz 159.91 234 PKP PKPdf 10 49 16.2 +0.8
comp=Z,7.6nm,0.9s,baz=49,slow=3.7,SNR=20
LPAZ La Paz 159.91 234 PKIKP PKPdf 10 49 16.2 +0.8
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
LPAZ La Paz 159.91 234 *e*PKPdf PKPdf 10 49 16.7 +1.3
LPAZ LR LR
comp=Z,633nm,20.0s,MS5.5
SDV Santo Domingo 160.43 313 PKP PKPdf 10 49 16.0 -0.1
comp=Z,14nm,1.2s,baz=134,slow=2.7,SNR=8.6
SDV PKPab PKPab 10 49 56.8 -0.3
comp=Z,7.2nm,0.8s,baz=53,slow=7.0,SNR=4.9
SDV Santo Domingo 160.43 313 *e*PKPdf PKPdf 10 49 16.0 -0.1
SDV LR LR
comp=Z,177nm,20.0s
TGUH Tegucigalpa,Un 161.25 7 PFAKE 10 49 30.0 +13
TGUH LR LR
comp=Z,498nm,22.0s
JTS JuntasAbangare 165.15 0 PFAKE 10 49 30.0 +9.3
JTS LR LR
comp=Z,477nm,20.0s
BCIP Isla Barro Col 165.37 340 PFAKE 10 49 30.0 +9.1
BCIP LR LR
comp=Z,441nm,20.0s
ROSC El Rosal 165.84 312 PKP PKPdf 10 49 21.7 +0.4
comp=Z,15nm,0.9s,baz=256,slow=22,SNR=16
ROSC El Rosal 165.84 312 *e*PKPdf PKPdf 10 49 21.9 +0.6
NNA Nana 169.23 227 PFAKE 10 49 30.0 +6.4
NNA LR LR
comp=Z,547nm,21.0s
OTAV Otavalo 171.94 307 *e*PKPdf PKPdf 10 49 25.7 +0.5
OTAV LR LR
comp=Z,375nm,20.0s
ATAH Atahualpa 173.10 249 PKP PKPdf 10 49 26.8 +1.2
comp=Z,6.5nm,0.8s,baz=39,slow=19,SNR=6.2

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*ISCJB **13** 10:36:38.4±0.3,31°.24N±0°.03×103°.66E±0°.05,h10km, mb4.5/26,Error ellipse: s-maj=6.7km s-min=4.7km az=163.3*
*IDC **13** 10:36:38.1±0.5,31°.17N×103°.66E,h0km,mb4.4/18, mb1 4.5/19,mb1mx4.4/27,mbtmp4.4/19,Error ellipse: s-maj=26.5km s-min=11.9km az=56.0*
*NEIC **13** 10:36:39.8±0.3,31°.13N×103°.57E,h10km,mb4.9/6,Error ellipse: s-maj=12.2km s-min=6.6km az=50.0*
*MOS **13** 10:36:41.5±1.0,31°.23N×103°.69E,h33km,mb4.9/5,Error ellipse: s-maj=21.7km s-min=10.1km az=117.4*
*BJI **13** 10:36:42.0,31°.25N×103°.88E,h20km,mB4.8/6,mb4.7/9, ML4.3/16,Ms4.3/15,Ms7 4.1/13*
ISC 13 10:36:41.2±0.8,31°.30N±0°.03×103°.67E±0°.06,h15km±4km, n58,σ0§97/63,mb4.5/26,8C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**169**	Pg	**Pg**	**10 36 49.0**	**-0.2**
CD2				Sg	**Sg**	**10 36 55.1**	**+0.6**
CD2				smax			
	comp=N,20μm,0.5s						
LZH	**Lanzhou**	**4.78**	**2**	*e*Pg	**Pg**	**10 38 11.6**	**-1.1**
LZH				Sg	**Sg**	**10 39 13.9**	**-0.7**
LZH				smax			
	comp=N,300nm,1.0s						
LZH				smax			
	comp=E,460nm,1.0s						
LZH				LR	LR		
	comp=N,3μm,7.2s						
LZH				LR	LR		
	comp=Z,4μm,8.5s						
ENH	**Enshi**	**5.11**	**100**	*e*Pn	**Pn**	**10 37 58.8**	**+1.6**
	comp=Z,1.8nm,0.5s						
ENH				*e*Sn	**Sn**	**10 38 55.9**	**-0.1**
GYA	**Guiyang**	**5.49**	**151**	Pg	**Pn**	**10 38 06.4**	**+4.0**
GYA				Sg	**Sn**	**10 39 06.3**	**+1.0**
GYA				smax			
	comp=N,710nm,0.9s						
GYA				smax			
	comp=E,690nm,0.8s						
GYA				LR	LR		
	comp=N,12μm,5.6s						
GYA				LR	LR		
	comp=E,9μm,6.3s						
GYA				LR	LR		
	comp=Z,11μm,4.2s						
KMI	**Kunming**	**6.21**	**188**	⇑Pg	**Pn**	**10 38 12.6**	**+0.3**
KMI				Sg	**Sn**	**10 39 24.8**	**+1.8**
KMI				smax			
	comp=N,130nm,1.5s						
KMI				smax			
	comp=E,190nm,1.3s						
KMI				LR	LR		
	comp=N,4μm,13.6s						
KMI				LR	LR		
	comp=E,2μm,17.5s						
WHN	**Wuhan**	**9.21**	**92**	⇑P	Px	10 39 03.6	
WHN				S	**Sn**	**10 40 32.3**	**-4.5**
WHN				LR	LR		
	comp=N,1μm,8.7s						
WHN				LR	LR		
	comp=E,2μm,8.3s						
HHC	**Hu-ho-hao-te**	**11.47**	**32**	*e*P	**Pn**	**10 39 27.4**	**+3.0**
HHC				pP		10 39 30.8	
HHC				PP		10 39 36.8	
HHC				S	**Sn**	**10 41 37.1**	**+5.0**
HHC				sS		10 41 41.6	
HHC				SS		10 41 51.3	
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,250nm,5.2s						
HHC				LR	LR		
	comp=N,390nm,5.6s						
HHC				LR	LR		
	comp=E,500nm,4.7s						
HHC				LR	LR		
	comp=Z,300nm,5.3s						
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**10 40 34.7**	**+0.9**
	baz=183,slow=9.7,SNR=2.2						
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**10 41 23.3**	**+0.2**
	comp=Z,12nm,0.7s,baz=263,slow=10,SNR=30						
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**10 41 23.3**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,12nm,0.7s						
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**10 41 27.3**	**+0.8**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
MK31	**Makanchi Array**	**22.59**	**319**	*e*P	**P**	**10 41 43.0**	**+2.1**
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**10 41 41.8**	**+0.9**
	comp=Z,4.6nm,0.6s,mb4.1,baz=118,slow=11,SNR=6.3						
ZALV	**Zalesovo Beam**	**26.39**	**335**	P	**P**	**10 42 17.5**	**+0.8**
	comp=Z,9.0nm,0.8s,mb4.3,baz=135,slow=8.0,SNR=4.3						
KURK	**Kurchatov**	**26.87**	**323**	P	**P**	**10 42 22.1**	**+1.0**
	comp=Z,8.4nm,0.8s,mb4.3,baz=127,slow=9.7,SNR=7.6						
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**10 43 10.5**	**+0.2**
	comp=Z,2.1nm,0.7s,mb4.1,baz=142,slow=7.3,SNR=2.8						
KAPI	**Kappang**	**39.24**	**154**	P	**P**	**10 44 06.1**	**-3.1**
	comp=Z,8.6nm,0.8s,mb4.5,baz=285,slow=5.9,SNR=4.3						
KAPI	**Kappang**	**39.24**	**154**	P	**P**	**10 44 06.0**	**-3.1**
KNA	**Kununurra**	**52.63**	**149**	*e*P	**P**	**10 45 53.2**	**-1.5**
	comp=Z,17nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**53.46**	**154**	P	**P**	**10 45 59.3**	**-1.5**
	comp=Z,3.8nm,1.0s,mb4.3,baz=330,slow=8.1,SNR=5.8						
MBWA	**Marble Bar**	**54.39**	**161**	*e*P	**P**	**10 46 06.4**	**-1.1**
BRTR	**Keskin Array B**	**56.32**	**299**	P	**P**	**10 46 21.6**	**+0.2**
	comp=Z,2.1nm,0.9s,mb4.2,baz=96,slow=5.0,SNR=4.7						
ARCES	**ARCESS Array B**	**56.93**	**336**	P	**P**	**10 46 25.4**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.6,baz=88,slow=7.4,SNR=9.2						
ARCES				PcP	PcP	10 47 20.1	-0.4
	comp=Z,1.8nm,0.5s,baz=93,slow=4.3,SNR=9.0						
AKASG	**Malin Array Be**	**56.98**	**313**	P	**P**	**10 46 24.3**	**-1.6**
	comp=Z,0.6nm,0.3s,mb4.1,baz=67,slow=7.3,SNR=2.9						
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**10 46 26.7**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=49,slow=4.2,SNR=4.1						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**10 46 38.7**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**10 46 38.7**	**-0.5**
	comp=Z,11nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**10 46 38.2**	**-1.0**
	comp=Z,8.7nm,0.6s,mb5.0,baz=337,slow=7.5						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**10 46 59.4**	**-0.5**
	comp=Z,3.4nm,0.6s,mb4.7,baz=336,slow=6.8,SNR=28						
NB2	**NORSAR Subarra**	**64.29**	**327**	P	**P**	**10 47 14.9**	**-0.7**
	comp=Z,1.0nm,0.6s,mb4.0,baz=74,slow=6.5						
NB2	**NORSAR Subarra**	**64.29**	**327**	P	**P**	**10 47 14.6**	**-1.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=74,slow=6.5						
NB2	**NORSAR Subarra**	**64.29**	**327**	P	**P**	**10 47 14.6**	**-1.0**
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	**10 47 14.8**	**-0.8**
	comp=Z,2.9nm,0.9s,mb4.3,baz=72,slow=6.4,SNR=4.2						
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	**10 47 14.8**	**-0.8**
UNV	**Unalaska Valle**	**65.30**	**41**	*e*P	**P**	**10 47 23.6**	**+1.3**
	comp=Z,26nm,0.9s,mb5.3						
COLD	**Coldfoot**	**67.44**	**24**	*e*P	**P**	**10 47 36.7**	**+0.9**
	comp=Z,5.2nm,0.8s,mb4.6						
COLA	**College**	**69.42**	**26**	*e*P	**P**	**10 47 48.4**	**+0.2**
COLA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
COLA	**College**	**69.42**	**26**	*e*P	**P**	**10 47 48.4**	**+0.2**
	comp=Z,15nm,1.1s,mb4.8						
KMBO	**Kilima Mbogo**	**70.59**	**256**	P	**P**	**10 47 57.0**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=43,slow=14,SNR=4.4						
BBOO	**Buckleboo**	**70.73**	**151**	*e*P	**P**	**10 47 55.6**	**-1.0**
	comp=Z,1.7nm,0.4s,mb4.3						
CDF	**Champ du Feu**	**71.22**	**316**	*e*P	**P**	**10 47 59.2**	**-0.3**
STKA	**Stephens Creek**	**72.37**	**147**	*e*P	**P**	**10 48 05.6**	**-0.9**
	comp=Z,3.3nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**10 48 05.0**	**-1.6**
	comp=Z,4.1nm,0.5s,mb4.6,baz=341,slow=5.9,SNR=13						
LPG	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**10 48 09.9**	**+0.6**
	comp=Z,7.7nm,0.6s,mb4.5						
LPG	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**10 48 09.9**	**+0.6**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LPG	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**10 48 09.9**	**+0.6**
	comp=Z,3.8nm,0.6s,mb4.5						
SMF	**Signal de Mont**	**74.10**	**315**	⇑*i*P	**P**	**10 48 16.2**	**-0.5**
	comp=Z,11nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.10**	**315**	⇑*i*P	**P**	**10 48 16.2**	**-0.5**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.10**	**315**	⇑*i*P	**P**	**10 48 16.2**	**-0.5**
	comp=Z,5.6nm,0.9s,mb4.5						
CMSA	**Cobar Meteorol**	**74.10**	**144**	*e*P	**P**	**10 48 16.6**	**-0.1**
TCF	**Toulx Ste Croi**	**75.25**	**315**	*e*P	**P**	**10 48 23.2**	**-0.2**
CAF	**Calviac**	**76.03**	**314**	*e*P	**P**	**10 48 28.1**	**+0.3**
ARPS	**Mount Arapiles**	**76.57**	**149**	*e*P	**P**	**10 48 29.9**	**-0.9**
	comp=Z,9.4nm,0.6s,mb4.9						
TOO	**Toolangi**	**78.87**	**147**	*e*P	**P**	**10 48 43.4**	**-0.2**
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**10 48 58.2**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.2,baz=330,slow=5.5,SNR=19						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**10 48 58.2**	**0.0**
TORD	**Torodi Ar. Bea**	**93.22**	**287**	P	**P**	**10 49 55.0**	**-0.5**
	comp=Z,0.8nm,0.6s,mb4.3,baz=68,slow=2.9,SNR=5.4						
PLCA	**Paso Flores**	**169.49**	**205**	PKP	PKPdf	10 56 46.5	-1.3
	comp=Z,2.7nm,1.1s,baz=182,slow=7.6,SNR=3.0						

MAN 13 11:01:31,15°.41N×122°.34E,h39km,mb4.8,ML3.7,MS3.7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.78**	**210**	*e*P	Pn	11 01 46.5	+0.9
POLP				*e*S	Sn	11 01 55.7	-0.3
BALP	**Baler**	**0.81**	**294**	*e*P	Pn	11 01 48.1	+2.3
BALP				*e*S	Sn	11 01 59.1	+2.4
GQP	**Guinayangan**	**1.50**	**176**	*e*P	Pn	11 01 55.7	+0.3
GQP				*e*S	Sn	11 02 16.4	+2.7
CAUP	**Cauayan**	**1.61**	**342**	*e*P	Pn	11 01 57.7	+0.8
CAUP				*e*S	Sn	11 02 13.5	-2.9

IDC 13 11:02:06.3±1.6,2°.12N×128°.44E,h0km,mb3.7/5, mb1 3.7/5,mb1mx3.6/18,mbtmp3.7/5,Error ellipse: s-maj=135.8km s-min=19.6km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.68**	**165**	P	P	11 07 09.8	+0.3
	0.5nm,0.4s,baz=344,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**26.18**	**169**	P	P	11 07 44.0	+1.3
	0.2nm,0.5s,baz=350,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**36.04**	**161**	P	P	11 09 07.7	-1.8
	0.5nm,0.4s,baz=324,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**59.84**	**325**	P	P	11 12 14.2	+0.5
	1.3nm,0.5s,baz=115,slow=8.0,SNR=13						
KURK	**Kurchatov**	**64.01**	**327**	P	P	11 12 41.5	-0.2
	1.1nm,0.5s,baz=128,slow=6.0,SNR=6.8						

IDC 13 11:05:05.9±1.5,31°.80N×104°.68E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/25,mbtmp3.7/4,Error ellipse: s-maj=292.0km s-min=23.9km az=54.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.79**	**317**	P	P	11 10 10.1	+0.1
	0.5nm,0.5s,baz=119,slow=9.9,SNR=6.4						
KURK	**Kurchatov**	**27.00**	**322**	P	P	11 10 48.9	-0.4
	1.1nm,0.7s,baz=125,slow=9.0,SNR=5.2						
FINES	**FINESS Array B**	**57.27**	**326**	P	P	11 14 55.2	+0.3
	1.0nm,0.5s,baz=76,slow=8.0,SNR=4.2						
WRA	**Warramunga Arr**	**58.78**	**147**	P	P	11 15 06.0	0.0
	0.8nm,0.6s,baz=339,slow=7.8,SNR=8.8						

BJI 13 11:08:45.5,40°.13N×121°.81E,h20km,ML3.5/5,1D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DL2	**Dalian**	**1.23**	**187**	Pn	Pn	11 09 08.4	+0.9
DL2				Sg	Sb	11 09 24.6	+1.2
DL2				smax			
	comp=N,420nm,0.6s						
DL2				smax			
	comp=E,470nm,0.6s						
SNY	**Shenyang**	**2.16**	**38**	⇓Pn	Pn	11 09 18.0	-2.3
SNY				Pg	Pn	11 09 22.0	+1.7
SNY				Sn	Sn	11 09 43.3	-3.2
SNY				Sg	Sn	11 09 48.8	+2.3
SNY				smax			
	comp=N,400nm,0.3s						
SNY				smax			
	comp=E,220nm,0.2s						
CN2	**Changchun**	**4.56**	**35**	*e*Pg	Pn	11 10 05.8	+12
CN2				*e*Sg	Sn	11 11 04.6	+19
CN2				smax			
	comp=N,100nm,0.6s						
CN2				smax			
	comp=E,100nm,0.6s						

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*ISCJB **13** 11:10:37.8±0.5,31°.73N±0°.04×104°.45E±0°.08,h10km, mb4.0/11,Error ellipse: s-maj=9.5km s-min=6.2km az=178.3*
*IDC **13** 11:10:38.0±0.8,31°.75N×104°.42E,h0km,mb4.0/10, mb1 4.2/11,mb1mx3.9/28,mbtmp4.0/11,ML3.4/1,Error ellipse: s-maj=37.2km s-min=14.4km az=59.0*
*NEIC **13** 11:10:39.7±0.5,31°.64N×104°.17E,h10km,mb4.5/2,Error ellipse: s-maj=18.7km s-min=8.0km az=52.0*
*BJI **13** 11:10:40.0,31°.71N×104°.39E,h23km,mB4.4/1,mb4.2/2, ML3.9/10,Ms3.6/1,Ms7 3.5/1*

ISC 13 11:10:39.8±0.4,31°.75N±0°.04×104°.32E±0°.07,h10km,n22, σ1§17/26,mb4.0/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.97**	**210**	Pn	**Pg**	**11 11 02.3**	**+3.9**
CD2				Sg	**Sg**	**11 11 11.4**	**+0.4**
CD2				smax			
	comp=N,1μm,0.6s						
LZH	**Lanzhou**	**4.34**	**355**	Pg	**Pg**	**11 11 59.6**	**-3.3**
LZH				Sg	**Sg**	**11 12 51.3**	**-7.8**
LZH				smax			
	comp=N,55nm,0.5s						
LZH				smax			
	comp=E,130nm,0.7s						
XAN	**Xi'an**	**4.49**	**58**	Pg	**Pg**	**11 11 59.9**	**-5.9**
XAN				Sg	**Sg**	**11 12 58.0**	**-6.0**
XAN				smax			
	comp=N,230nm,0.8s						
XAN				smax			
	comp=E,160nm,0.6s						
ENH	**Enshi**	**4.67**	**107**	*e*Pn	**Pn**	**11 11 52.3**	**+2.0**
GYA	**Guiyang**	**5.66**	**158**	Pn	**Pn**	**11 12 04.8**	**+0.9**
GYA				Sn	**Sn**	**11 13 07.8**	**-1.2**
GYA				smax			
	comp=N,160nm,0.9s						
GYA				smax			
	comp=E,150nm,0.5s						
SONM	**Songino Array**	**16.14**	**5**	Pn	**Pn**	**11 14 28.0**	**+1.4**
	comp=E,0.1nm,0.3s,baz=187,slow=11,SNR=5.1						
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**11 15 14.0**	**-0.9**
	comp=E,3.4nm,0.8s,baz=257,slow=11,SNR=4.9						
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**	**11 15 41.4**	**+0.9**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**11 15 40.9**	**+0.3**
	comp=E,1.5nm,0.8s,mb3.5,baz=116,slow=11,SNR=6.9						
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**11 16 15.4**	**+0.9**
	comp=E,1.5nm,0.3s,mb4.0,baz=146,slow=10,SNR=2.6						
KURK	**Kurchatov**	**26.84**	**322**	P	**P**	**11 16 20.9**	**+0.6**
	comp=E,0.8nm,0.8s,mb3.3,baz=123,slow=6.8,SNR=3.5						
POO	**Poona**	**30.45**	**252**	*ex*	**P**	**11 16 50.5**	**-2.2**
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**	**11 17 09.5**	**0.0**
	comp=E,0.4nm,0.5s,mb3.5,baz=115,slow=9.7,SNR=3.1						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**11 18 13.3**	**-1.5**
	comp=E,7.8nm,1.0s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.62**	**155**	P	**P**	**11 20 01.1**	**-0.3**
	comp=E,1.8nm,0.8s,mb4.0,baz=318,slow=22,SNR=6.1						
WRAB	**Tennant Creek**	**58.91**	**147**	*e*P	**P**	**11 20 39.4**	**+0.3**
	comp=E,4.4nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**58.91**	**147**	P	**P**	**11 20 39.4**	**+0.2**
	comp=E,5.1nm,0.7s,mb4.7,baz=340,slow=7.7,SNR=33						
ASAR	**Alice Springs**	**61.95**	**149**	P	**P**	**11 20 59.6**	**-0.2**
	comp=E,1.6nm,0.5s,mb4.4,baz=333,slow=6.6,SNR=24						
RSO	**Redoubt South**	**68.87**	**31**	*e*P	**P**	**11 21 46.4**	**+2.1**
STKA	**Stephens Creek**	**72.45**	**147**	P	**P**	**11 22 05.0**	**-1.3**
	comp=E,1.7nm,0.6s,mb4.2,baz=339,slow=6.9,SNR=7.4						
YKA	**Yellowknife Ar**	**81.02**	**17**	P	**P**	**11 22 53.2**	**-1.2**
	comp=E,0.7nm,0.6s,mb3.8,baz=329,slow=5.3,SNR=12						
YKA	**Yellowknife Ar**	**81.02**	**17**	P	**P**	**11 22 53.2**	**-1.2**

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*ISCJB **13** 11:13:42.6±0.6,32°.23N±0°.05×105°.01E±0°.08,h10km, mb3.8/8,Error ellipse: s-maj=10.8km s-min=6.6km az=21.7*
*IDC **13** 11:13:42.1±0.9,32°.10N×105°.23E,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.7/25,mbtmp3.8/8,Error ellipse: s-maj=69.4km s-min=18.0km az=58.0*
ISC 13 11:13:44.7±0.6,32°.29N±0°.04×104°.94E±0°.08,h10km,n12, σ1§34/16,mb3.8/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**217**	Pg	**Pn**	**11 14 09.3**	**-5.2**
CD2				Sg	**Sg**	**11 14 39.3**	**-0.3**
CD2				smax			
	comp=N,2μm,0.5s						
XAN	**Xi'an**	**3.77**	**61**	Pg	**Pg**	**11 14 57.3**	**+0.5**
XAN				Sg	**Sg**	**11 15 38.9**	**-6.7**
XAN				smax			
	comp=N,100nm,0.6s						
XAN				smax			
	comp=E,200nm,0.4s						
LZH	**Lanzhou**	**3.89**	**347**	Pg	**Pg**	**11 14 56.8**	**-2.5**
LZH				Sg	**Sg**	**11 15 48.9**	**-0.9**
LZH				smax			
	comp=N,140nm,0.8s						
LZH				smax			
	comp=E,250nm,0.8s						
GYA	**Guiyang**	**6.00**	**165**	Pg	**Pn**	**11 15 15.1**	**+1.5**
GYA				Sg	**Sn**	**11 16 21.3**	**-1.1**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,40nm,0.6s						
MKAR	**Makanchi Array**	**22.58**	**316**	P	**P**	**11 18 48.4**	**+3.3**
	comp=E,0.8nm,0.7s,mb3.3,baz=115,slow=11,SNR=4.3						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**11 19 19.9**	**+2.6**
	comp=E,1.5nm,0.3s,mb4.0,baz=108,slow=4.7,SNR=2.0						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**11 19 25.9**	**+1.5**
	comp=E,1.2nm,0.8s,mb3.5,baz=132,slow=8.4,SNR=5.4						
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**11 23 26.4**	**0.0**
	comp=E,2.9nm,0.9s,mb4.3,baz=88,slow=8.6,SNR=3.9						
WRA	**Warramunga Arr**	**59.07**	**147**	P	**P**	**11 23 40.9**	**-4.3**
	comp=E,1.2nm,0.7s,mb4.1,baz=338,slow=7.2,SNR=3.5						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**11 24 04.6**	**-1.5**
	comp=E,0.6nm,0.5s,mb4.0,baz=334,slow=6.5,SNR=7.0						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**11 24 18.2**	**-0.1**
	comp=E,0.6nm,0.6s,mb3.8,baz=73,slow=6.0,SNR=3.1						
YKA	**Yellowknife Ar**	**80.35**	**17**	P	**P**	**11 25 55.7**	**0.0**
	comp=E,0.3nm,0.5s,mb3.5,baz=328,slow=5.1,SNR=8.1						

IDC 13 11:18:26.7±1.0,32°.40N×105°.47E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.6/25,mbtmp3.7/6,Error ellipse: s-maj=71.3km s-min=19.5km az=57.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.82**	**316**	P	P	11 23 32.0	+1.0
	0.2nm,0.4s,baz=116,slow=9.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	P	11 24 01.6	-0.4
	2.3nm,0.3s,baz=147,slow=3.4,SNR=3.0						
KURK	**Kurchatov**	**26.95**	**321**	P	P	11 24 09.1	-0.6
	0.2nm,0.4s,baz=133,slow=8.8,SNR=2.7						
WRA	**Warramunga Arr**	**58.92**	**148**	P	P	11 28 28.0	+0.2
	0.8nm,0.5s,baz=341,slow=7.4,SNR=6.4						
ASAR	**Alice Springs**	**62.01**	**150**	P	P	11 28 48.6	-0.2
	0.4nm,0.4s,baz=332,slow=6.6,SNR=4.9						
YKA	**Yellowknife Ar**	**80.11**	**18**	P	P	11 30 38.6	+0.5
	0.3nm,0.6s,baz=329,slow=5.3,SNR=5.3						

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*IDC **13** 11:21:41.0±1.5,31°.16N×103°.77E,h0km,mb3.4/4, mb1 3.5/4,mb1mx3.

n25,σ1°08/30, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.01**	**218**	Pg	**Pg**	**11 22 43.8**	**+4.9**
CD2				Sg	**Sg**	**11 22 52.3**	**+0.3**
CD2				smax			
	comp=N,5μm,0.7s						
LZH	**Lanzhou**	**4.40**	**353**	*e*Pg	**Pg**	**11 23 43.5**	**-0.3**
LZH				Sg	**Sg**	**11 24 39.8**	**-0.9**
LZH				smax			
	comp=N,200nm,0.8s						
LZH				smax			
	comp=E,150nm,0.8s						
LZH	**Lanzhou**	**4.40**	**353**	Pg	**Pn**	**11 23 29.8**	**+3.0**
LZH				Sg	**Sn**	**11 24 20.8**	**+2.5**
LZH				smax			
	comp=N,140nm,0.5s						
LZH				smax			
	comp=E,89nm,0.8s						
XAN	**Xi'an**	**4.40**	**57**	Pg	**Sn**	**11 24 05.0**	**-13**
XAN				Sg	**Sg**	**11 24 40.5**	**-0.3**
XAN				smax			
	comp=N,220nm,0.8s						
XAN				smax			
	comp=E,80nm,0.8s						
GYA	**Guiyang**	**5.57**	**159**	Pg	**Pn**	**11 23 38.6**	**-4.3**
GYA				Sg	**Sn**	**11 24 46.4**	**-0.9**
GYA				smax			
	comp=N,180nm,0.9s						
GYA				smax			
	comp=E,67nm,0.7s						
KMI	**Kunming**	**6.74**	**194**	Pg	**Pb**	**11 24 20.0**	**+2.9**
KMI				smax			
	comp=N,27nm,1.1s						
KMI				smax			
	comp=E,30nm,1.0s						
GTA	**Gaotai**	**8.57**	**335**	*e*P	**Pn**	**11 24 22.3**	**-1.8**
GTA				pP		11 24 26.6	
GTA				sP		11 24 29.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**16.17**	**5**	Pn	**Pn**	**11 26 09.4**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=7.5						
KSRS	**Korea Array**	**20.11**	**67**	P	**P**	**11 26 55.2**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=259,slow=9.7,SNR=4.7						
MK31	**Makanchi Array**	**22.74**	**318**	*e*P	**P**	**11 27 23.1**	**+0.9**
MKAR	**Makanchi Array**	**22.74**	**318**	P	**P**	**11 27 21.8**	**-0.4**
	comp=Z,2.0nm,0.7s,mb3.6,baz=119,slow=12,SNR=9.4						
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	**P**	**11 27 55.8**	**-0.1**
	comp=Z,1.8nm,0.6s,mb3.8,baz=138,slow=9.1,SNR=6.3						
KURK	**Kurchatov**	**26.96**	**322**	P	**P**	**11 28 00.9**	**-0.7**
	comp=Z,1.9nm,0.9s,mb3.6,baz=131,slow=8.5,SNR=7.5						
ABKAR	**Akbulak array**	**37.52**	**311**	*e*P	**P**	**11 29 34.5**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.4						
ARU	**Arti**	**40.15**	**322**	*e*P	**P**	**11 29 56.6**	**+0.6**
	comp=Z,4.9nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.53**	**155**	P	**P**	**11 31 40.2**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.8,baz=0.0,slow=14,SNR=3.9						
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	**11 32 03.6**	**-0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=86,slow=8.6,SNR=7.2						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**11 32 06.0**	**-1.3**
	comp=Z,2.4nm,0.6s,mb4.4,baz=65,slow=7.7,SNR=7.4						
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**11 32 06.9**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.3,baz=86,slow=5.5,SNR=7.6						
WRAB	**Tennant Creek**	**58.80**	**147**	*e*P	**P**	**11 32 19.3**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.80**	**147**	P	**P**	**11 32 19.0**	**+0.3**
	comp=Z,2.0nm,0.5s,mb4.4,baz=339,slow=7.7,SNR=6.4						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**11 32 39.8**	**+0.3**
	comp=Z,0.8nm,0.5s,mb4.1,baz=334,slow=6.5,SNR=18						
NOA	**NORSAR Array B**	**64.32**	**327**	P	**P**	**11 32 54.8**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=82,slow=4.5,SNR=3.2						
STKA	**Stephens Creek**	**72.34**	**147**	P	**P**	**11 33 45.0**	**-1.0**
	comp=Z,1.1nm,0.4s,mb4.2,baz=132,slow=22,SNR=3.7						
YKA	**Yellowknife Ar**	**81.02**	**17**	P	**P**	**11 34 34.6**	**-0.2**
	comp=Z,1.1nm,0.4s,mb4.1,baz=327,slow=5.1,SNR=31						

*ISCJB **13** 11:29:35.1±1.2, 22°.20S±0°.09×179°.48W±0°.10, h550km±19km, mb4.1/16, Error ellipse: s-maj=16.9km s-min=10.1km az=42.9*
*NEIC **13** 11:29:37.8±0.9, 22°.21S×179°.40W, h578km±9km, mb4.2/4, Error ellipse: s-maj=17.6km s-min=12.3km az=131.0*
*IDC **13** 11:29:37.0±2.2, 22°.16S×179°.43W, h564km±24km, mb3.5/8, mb1 3.7/10, mb1mx3.5/17, mbtmp3.6/10, Error ellipse: s-maj=22.5km s-min=15.2km az=138.0*
*DJA **13** 11:29:49, 22°.82S×179°.59E, h650km, mb4.6/8*
ISC 13 11:29:37.8±1.1, 22°.25±0°.1×179°.5W±0°.1, h572km±14km, n44, σ1°06/28, mb4.1/16, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.02**	**332**	*e*P	**P**	**11 31 11.3**	**+2.1**
	16nm,0.4s						
AFI	**Afiamalu**	**11.03**	**43**	P	**P**	**11 32 04.7**	**-1.9**
	3.2nm,0.3s,baz=358,slow=10,SNR=6.3						
AFI				S	**S**	**11 34 03.0**	**-5.8**
	1.3nm,0.3s,baz=90,slow=20,SNR=3.8						
URZ	**Urewera**	**16.27**	**190**	P	**P**	**11 32 56.5**	**-2.1**
	1.6nm,0.3s,baz=1.8,slow=1.3,SNR=14						
URZ				S	**S**	**11 35 36.4**	**-6.0**
	0.6nm,0.3s,baz=239,slow=21,SNR=8.6						
EIDS	**Eidsvold**	**27.10**	**257**	*e*P	**P**	**11 34 36.3**	**+0.4**
CTA	**Charters Tower**	**32.00**	**267**	*e*P	**P**	**11 35 18.6**	**+0.4**
	6.7nm,0.6s,mb4.5						
CMSA	**Cobar Meteorol**	**32.32**	**246**	*e*P	**P**	**11 35 21.5**	**+0.7**
MTSU	**Mount Surprise**	**34.18**	**270**	*e*P	**P**	**11 35 36.6**	**0.0**
	11nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**35.83**	**246**	*e*P	**P**	**11 35 50.9**	**+0.8**
	4.1nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**35.83**	**246**	P	**P**	**11 35 51.0**	**+0.8**
	4.8nm,0.5s,mb4.3,baz=90,slow=10,SNR=16						
STKA	**Stephens Creek**	**35.83**	**246**	P	**P**	**11 35 51.0**	**+0.8**
BBOO	**Buckleboo**	**40.57**	**245**	*e*P	**P**	**11 36 28.4**	**-0.2**
	5.3nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**42.81**	**259**	P	**P**	**11 36 46.4**	**0.0**
	12nm,0.8s,mb4.5,baz=93,slow=8.1,SNR=121						
ASAR				PcP	PcP	11 38 24.8	+0.4
	1.9nm,0.6s,baz=113,slow=3.7,SNR=10.0						
ASAR				S	**S**	**11 42 27.4**	**-2.5**
	0.7nm,0.6s,baz=92,slow=15,SNR=6.9						
WRA	**Warramunga Arr**	**43.03**	**264**	P	**P**	**11 36 47.4**	**-0.7**
	3.3nm,0.4s,mb4.2,baz=95,slow=7.9,SNR=13						
WRA				S	**S**	**11 42 29.1**	**-4.0**
	0.8nm,0.9s,baz=105,slow=14,SNR=4.4						
KAKA	**Kakadu**	**46.67**	**273**	*e*P	**P**	**11 37 14.2**	**-1.8**
	5.6nm,0.4s,mb4.5						
KNA	**Kununurra**	**49.18**	**268**	*e*P	**P**	**11 37 34.4**	**-0.2**
	10nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.46**	**264**	*e*P	**P**	**11 37 51.3**	**0.0**
	9.4nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**51.46**	**264**	P	**P**	**11 37 51.4**	**+0.1**
	4.7nm,0.6s,mb4.1,baz=75,slow=4.6,SNR=36						
QSPA	**South Pole Qui**	**67.87**	**180**	*e*P	**P**	**11 39 41.0**	**+1.9**
	10nm,1.2s,mb4.1						
MJAR	**Matsushiro Arr**	**70.79**	**325**	P	**P**	**11 39 56.6**	**-0.6**
	0.7nm,0.5s,mb3.4,baz=168,slow=6.4,SNR=4.1						
KSM	**Kuching**	**72.31**	**279**	*e*P	**P**	**11 40 06.8**	**+0.2**
	4.3nm,0.6s,mb4.2						
PETK	**Petropavlovsk-**	**77.58**	**346**	P	**P**	**11 40 35.5**	**+0.5**
	5.6nm,0.9s,mb4.0,baz=125,slow=5.8,SNR=8.1						
MAW	**Mawson**	**79.50**	**200**	P	**P**	**11 40 45.7**	**+0.4**
	2.1nm,0.6s,mb3.6,baz=141,slow=12,SNR=9.6						
TXAR	**Lajitas Array**	**89.13**	**58**	P	**P**	**11 41 34.4**	**+1.3**
	0.4nm,0.9s,mb3.3,baz=234,slow=4.2,SNR=4.9						
IMW	**Indian Meadow**	**90.83**	**42**	*e*P	**P**	**11 41 40.5**	**-0.2**
	0.6nm,0.5s,mb3.8						
KURK	**Kurchatov**	**114.31**	**317**	PKP	PKiKP	11 47 11.8	-0.9
	0.8nm,0.5s,baz=105,slow=1.8,SNR=6.0						
KURK	**Kurchatov**	**114.31**	**317**	PKP	PKiKP	11 47 11.8	-0.9
BVAR	**Borovoye Array**	**119.48**	**319**	PKP	PKPdf	11 47 22.0	-0.6
	1.6nm,0.4s,baz=121,slow=1.8,SNR=8.1						
ARCES	**ARCESS Array B**	**130.33**	**349**	PKP	PKPdf	11 47 41.9	-1.0
	4.6nm,0.9s,baz=42,slow=2.0,SNR=8.1						
ARCES	**ARCESS Array B**	**130.33**	**349**	PKP	PKPdf	11 47 41.9	-1.0
AKASG	**Malin Array Be**	**143.80**	**329**	PKP	PKPdf	11 48 06.5	-1.6
	3.5nm,0.5s,baz=41,slow=4.2,SNR=19						
AKBB	**Malin Array Si**	**143.80**	**329**	*e*PKPbc	PKPdf	11 48 06.8	-1.3
BR131	**Keskin Array S**	**146.91**	**309**	*e*PKPdf	PKPdf	11 48 12.7	-1.1
BR131				*e*PKPbc	PKPbc	11 48 16.7	0.0
BR131				*e*PKPab	PKPab	11 48 20.0	0.0
BRTR	**Keskin Array B**	**146.91**	**309**	PKPbc	PKPbc	11 48 16.1	-0.6
	2.5nm,0.6s,baz=144,slow=5.1,SNR=14						
UPC	**Upice**	**149.25**	**341**	*e*PKPbc	PKPbc	11 48 22.8	+0.6
DPC	**Dobruska-Polom**	**149.29**	**340**	*e*PKPbc	PKPbc	11 48 23.4	+1.1
CLL	**Collm**	**149.37**	**345**	*i*PKP	PKPbc	11 48 22.9	+0.4
CLL				*i* PKP	PKPab	11 48 29.7	0.0
CLL	**Collm**	**149.37**	**345**	*i*PKPbc	PKPbc	11 48 22.9	+0.4
	comp=Z,14nm,0.8s						
CLL				*i* PKPab	PKPab	11 48 29.7	0.0
	comp=Z,6.0nm,0.7s						
BRG	**Berggiesshubel**	**149.53**	**343**	*i* PKP	PKPbc	11 48 23.3	+0.4
	comp=Z,12nm,0.7s						
PVCC	**Panska Ves**	**149.66**	**342**	*e*PKPbc	PKPbc	11 48 24.1	+0.9
PRU	**Pruhonice**	**150.15**	**342**	*e*PKPbc	PKPbc	11 48 25.3	+0.9
KHC	**Kasperske Hory**	**151.20**	**342**	*e*PKPbc	PKPbc	11 48 27.2	+0.4
GERES	**GERESS Array B**	**151.42**	**342**	PKPbc	PKPbc	11 48 26.8	-0.5
	comp=Z,1.4nm,0.5s,baz=62,slow=3.2,SNR=9.7						
TORD	**Torodi Ar. Bea**	**170.92**	**187**	PKP	PKPdf	11 48 41.3	-0.4
	comp=Z,1.0nm,0.8s,baz=242,slow=3.1,SNR=5.5						
TORD				PKPab	PKPab	11 50 04.0	-0.2
	comp=Z,0.7nm,0.7s,baz=184,slow=3.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**170.92**	**187**	PKP	PKPdf	11 48 41.3	-0.4
TORD				PKPab	PKPab	11 50 04.0	-0.2

*ISCJB **13** 11:36:21.3±0.9, 40°.26N±0°.06×21°.76E±0°.07, h19km±7km, Error ellipse: s-maj=11.8km s-min=5.2km az=41.9*
*CSEM **13** 11:36:21.1±0.4, 40°.33N×21°.77E, h16km±4km, ML2.8/3, Error ellipse: s-maj=14.0km s-min=6.5km az=52.0*
*THE **13** 11:36:21.8, 40°.41N×21°.90E, h7km±9km, ML2.8/3, Error ellipse: s-maj=9.2km s-min=0.9km az=224.0*
*SKO **13** 11:36:21.1, 40°.24N×21°.72E, h9km, M1.8, ML2.2*
ISC 13 11:36:20.2±1.2, 40°.20N±0°.08×21°.71E±0°.09, h20km±5km, n18, σ0°92/32, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.12**	**23**	P	**Pb**	**11 36 24.5**	**+0.1**
KZN				S	**Sb**	**11 36 27.5**	**+0.2**
KZN	**Kozani**	**0.12**	**23**	P	**Pb**	**11 36 24.5**	**+0.1**
KZN				S	**Sb**	**11 36 27.5**	**+0.2**
LIT	**Litokhoron**	**0.61**	**99**	P	**Pb**	**11 36 33.1**	**+1.0**
LIT				S	**Sb**	**11 36 39.6**	**-0.6**
LIT	**Litokhoron**	**0.61**	**99**	P	**Pb**	**11 36 33.1**	**+1.0**
LIT				S	**Sb**	**11 36 39.6**	**-0.6**
FNA	**Florina**	**0.64**	**337**	P	**Pb**	**11 36 32.2**	**-0.5**
FNA				S	**Sb**	**11 36 39.9**	**-1.3**
FNA	**Florina**	**0.64**	**337**	P	**Pb**	**11 36 32.2**	**-0.5**
FNA				S	**Sb**	**11 36 39.9**	**-1.3**
THL	**Klokotos Trika**	**0.68**	**160**	P	**Pb**	**11 36 37.5**	**+4.2**
THL	**Klokotos Trika**	**0.68**	**160**	P	**Pb**	**11 36 37.5**	**+4.2**
BIA	**Bitola**	**0.87**	**340**	*e*Pg	**Pb**	**11 36 36.6**	**0.0**
BIA				*e*Sg	**Sb**	**11 36 47.6**	**-0.3**
BIA				*e*Lg		11 36 50.5	
	comp=E,17nm,0.3s						
BIA				*e*Lg		11 36 51.0	
	comp=N,11nm,0.2s						
BIA	**Bitola**	**0.87**	**340**	*e*Pg	**Pb**	**11 36 36.6**	**-0.1**
BIA				*e*Sg	**Sb**	**11 36 47.5**	**-0.4**
BIA				*e*Lg		11 36 50.5	
	comp=N,17nm,0.3s						
HORT	**Hortiatis**	**1.13**	**69**	P	**Pn**	**11 36 39.2**	**-1.7**
HORT	**Hortiatis**	**1.13**	**69**	P	**Pn**	**11 36 39.2**	**-1.7**
OHR	**Ohrid**	**1.15**	**323**	*e*Pg	**Pn**	**11 36 40.3**	**-0.8**
OHR				*e*Sg	**Sb**	**11 36 56.8**	**+1.0**
OHR				*e*Lg		11 36 59.9	
	comp=E,48nm,0.8s						
OHR				*e*Lg		11 37 01.4	
	comp=N,48nm,0.7s						
OHR	**Ohrid**	**1.15**	**323**	*e*Pg	**Pn**	**11 36 40.3**	**-0.8**
OHR				*e*Sg	**Sb**	**11 36 56.8**	**+1.0**
OHR				*e*Lg		11 36 59.8	
	comp=N,48nm,0.8s						
KRUS	**Krusevo**	**1.22**	**343**	*e*Pg	**Pn**	**11 36 41.3**	**-0.8**
KRUS				*e*Sg	**Sn**	**11 36 59.8**	**+1.7**
KRUS				*e*Lg		11 37 01.5	
	comp=N,8.1nm,0.4s						
KRUS				*e*Lg		11 37 01.6	
	comp=E,9.9nm,0.5s						
KRUS	**Krusevo**	**1.22**	**343**	*e*Pg	**Pn**	**11 36 41.3**	**-0.8**
KRUS				*e*Sg	**Sn**	**11 36 59.7**	**+1.7**
KRUS				*e*Lg		11 37 01.4	
	comp=E,8.1nm,0.4s						
VAY	**Valandovo**	**1.30**	**30**	*e*Pn	**Pn**	**11 36 44.1**	**+0.9**
VAY				*e*Sg	**Sn**	**11 37 00.6**	**+0.6**
VAY				*e*Lg		11 37 01.9	
	comp=N,49nm,0.8s						
VAY				*e*Lg		11 37 02.0	
	comp=E,59nm,1.0s						
VAY	**Valandovo**	**1.30**	**30**	*e*Pn	**Pn**	**11 36 44.0**	**+0.8**
VAY				*e*Sg	**Sn**	**11 37 00.5**	**+0.6**
VAY				*e*Lg		11 37 01.9	
	comp=E,49nm,0.8s						

IDC 13 11:37:13.6±2.7, 32°.45N×105°.66E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=441.7km s-min=21.0km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.89**	**316**	P	P	11 42 17.4	-1.3
	0.3nm,0.3s,baz=123,slow=7.1,SNR=3.0						
KURK	**Kurchatov**	**27.01**	**320**	P	P	11 42 58.2	+1.2
	0.3nm,0.5s,baz=118,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**58.88**	**148**	P	P	11 47 14.4	+0.1
	1.0nm,0.6s,baz=340,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**61.98**	**151**	P	P	11 47 35.5	0.0
	0.5nm,0.6s,baz=336,slow=6.9,SNR=6.9						

*IDC **13** 11:50:32.4±1.3, 1°.99N×128°.02E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/19, mbtmp4.1/6, ML4.4/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/29, Error ellipse: s-maj=55.2km s-min=19.2km az=71.0*
*NEIC **13** 11:50:37.8±0.8, 1°.90N×127°.99E, h35km, Error ellipse: s-maj=24.4km s-min=14.4km az=92.0*
*ISCJB **13** 11:50:47.7±1.2, 1°.6N±0°.1×127°.3E±0°.1, h143km±8km, mb3.9/4, Error ellipse: s-maj=24.4km s-min=12.6km az=30.8*
*DJA **13** 11:50:49, 2°.05N×127°.24E, h22km, MLv3.9/4*
ISC 13 11:50:49.3±1.2, 1°.6N±0°.1×127°.3E±0°.1, h138km±8km, n13, σ0°64/14, mb3.9/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.79**	**174**	P	**Pn**	**11 51 11.0**	**-0.2**
TNTI				S	**Sn**	**11 51 28.0**	**+0.2**
LBMI	**Labuha**	**2.19**	**175**	P	**Pn**	**11 51 31.2**	**+5.1**
MNI	**Manado**	**2.45**	**267**	P	**Pn**	**11 51 29.0**	**-0.2**
MNI				S	**Sn**	**11 51 59.1**	**-0.9**
SGSI	**Sangihe**	**2.75**	**320**	P	**Pn**	**11 51 26.8**	**-6.2**
MRSI	**Marisa**	**5.46**	**259**	P	**Pn**	**11 52 09.9**	**+1.3**
KAPI	**Kappang**	**9.97**	**229**	Pn	**Pn**	**11 53 09.9**	**+0.8**
	2.7nm,0.3s,baz=63,slow=6.8,SNR=7.3						
FITZ	**Fitzroy Crossi**	**19.61**	**185**	P	**P**	**11 55 05.8**	**-1.1**
	1.2nm,0.6s,baz=29,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**25.89**	**166**	P	**P**	**11 56 08.2**	**-0.1**
	0.7nm,0.4s,mb3.7,baz=347,slow=7.3,SNR=16						
NWAO	**Narrogin (SRO)**	**35.59**	**195**	LR	LR	12 12 44.9	
	comp=Z,4.7nm,20.5s,baz=137,slow=37						
STKA	**Stephens Creek**	**35.91**	**159**	P	**P**	**11 57 36.6**	**+0.3**
	4.0nm,0.7s,mb4.2,baz=343,slow=7.3,SNR=12						
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**12 00 39.2**	**+0.3**
	0.7nm,0.4s,mb3.9,baz=116,slow=8.3,SNR=9.6						
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**12 00 39.2**	**+0.3**
KURK	**Kurchatov**	**63.86**	**328**	P	**P**	**12 01 06.7**	**-0.3**
	0.9nm,0.6s,mb3.8,baz=125,slow=6.0,SNR=3.8						

*ISCJB **13** 11:52:18.9±0.4, 32°.18N±0°.04×105°.19E±0°.05, h10km, mb4.2/18, Error ellipse: s-maj=6.0km s-min=5.0km az=19.8*
*IDC **13** 11:52:19.3±0.7, 32°.18N×105°.13E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.1/27, mbtmp4.1/15, ML3.5/2, Error ellipse: s-maj=28.3km s-min=14.0km az=53.0*
*NEIC **13** 11:52:20.7±0.5, 32°.13N×105°.13E, h10km, mb4.3/5, Error ellipse: s-maj=25.6km s-min=8.7km az=48.0*
*BJI **13** 11:52:21.1, 32°.26N×105°.26E, h22km, mb4.3/4, ML4.0/12, Ms3.9/6, Ms7 3.8/5*
ISC 13 11:52:20.9±0.3, 32°.22N±0°.03×105°.19E±0°.04, h10km, n35, σ1°20/42, mb4.2/18, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.79**	**223**	Pg	**Pg**	**11 52 53.1**	**-2.2**
CD2				Sg	**Sg**	**11 53 16.8**	**-1.7**
CD2				smax			
	comp=N,7μm,0.6s						
XAN	**Xi'an**	**3.62**	**59**	Pg	**Pg**	**11 53 30.3**	**0.0**
XAN				Sg	**Sg**	**11 54 15.1**	**-2.1**
XAN				smax			
	comp=N,340nm,0.8s						
XAN				smax			
	comp=E,150nm,0.6s						
LZH	**Lanzhou**	**4.01**	**344**	*e*Pn	**Pn**	**11 53 23.3**	**+0.9**
LZH				Pg	**Pg**	**11 53 33.8**	**-4.0**
LZH				Sn	**Sn**	**11 54 05.1**	**-4.4**
LZH				Sg	**Sg**	**11 54 21.5**	**-8.3**
LZH				smax			
	comp=N,360nm,0.5s						
LZH				smax			
	comp=E,370nm,0.6s						
LZH				LR	LR		
	comp=E,800nm,4.8s						
LZH				LR	LR		
	comp=Z,1μm,8.1s						
ENH	**Enshi**	**4.16**	**117**	*e*Pn	**Pn**	**11 53 21.9**	**-2.7**
GYA	**Guiyang**	**5.89**	**167**	Pg	**Pn**	**11 53 51.3**	**+3.1**
GYA				Sg	**Sn**	**11 54 58.9**	**+3.1**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,140nm,0.8s						
KMI	**Kunming**	**7.39**	**198**	Pg	**Pn**	**11 54 17.8**	**+8.9**
KMI				Sg	**Sn**	**11 55 32.5**	**-0.4**
KMI				smax			
	comp=N,26nm,1.0s						
KMI				smax			
	comp=E,20nm,1.1s						
WHN	**Wuhan**	**8.01**	**100**	S	**Sn**	**11 55 46.8**	**-1.2**
WHN				LR	LR		
	comp=N,1μm,7.6s						
WHN				LR	LR		
	comp=E,780nm,5.0s						
SONM	**Songino Array**	**15.62**	**3**	Pn	**Pn**	**11 56 02.1**	**+1.0**
	comp=E,0.1nm,0.3s,baz=193,slow=6.1,SNR=5.6						
TPUB	**Ta-pu**	**16.29**	**119**	P	**Pn**	**11 56 11.7**	**+1.9**
KSRS	**Korea Array**	**19.36**	**68**	P	**Pn**	**11 56 47.8**	**0.0**
	comp=E,0.3nm,0.3s,baz=260,slow=11,SNR=5.6						
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**11 57 23.2**	**-0.2**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**11 57 22.4**	**-1.0**
	comp=E,2.4nm,0.7s,mb3.7,baz=123,slow=11,SNR=13						
TKM2	**Tokmak 2**	**25.65**	**303**	*e*P	**P**	**11 57 53.2**	**+2.5**
	comp=E,3.8nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**26.14**	**332**	P	**P**	**11 57 55.4**	**+0.3**
	comp=E,1.7nm,0.4s,mb3.9,baz=109,slow=7.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.14**	**332**	P	**P**	**11 57 55.4**	**+0.3**
KURK	**Kurchatov**	**26.93**	**321**	P	**P**	**11 58 01.3**	**-0.9**
	comp=E,2.2nm,0.7s,mb3.8,baz=130,slow=7.9,SNR=13						
KURK	**Kurchatov**	**26.93**	**321**	P	**P**	**11 58 01.3**	**-0.9**
BVAR	**Borovoye Array**	**32.51**	**320**	P	**P**	**11 58 51.6**	**-0.1**
	comp=E,1.5nm,0.7s,mb4.0,baz=112,slow=10,SNR=7.4						
ABKAR	**Akbulak array**	**37.64**	**310**	*e*P	**P**	**11 59 35.0**	**-0.9**
	comp=E,1.8nm,0.6s,mb4.0						
ARU	**Arti**	**40.13**	**321**	P	**P**	**11 59 57.0**	**+0.4**
	comp=E,6.7nm,0.8s,mb4.4						
PETK	**Petropavlovsk-**	**42.75**	**45**	P	**P**	**12 00 18.0**	**-0.2**
	comp=E,2.2nm,0.9s,mb3.9,baz=250,slow=4.0,SNR=5.7						
PETK	**Petropavlovsk-**	**42.75**	**45**	P	**P**	**12 00 18.0**	**-0.2**
MBWA	**Marble Bar**	**54.87**	**163**	*e*P	**P**	**12 01 47.8**	**-3.9**
	comp=E,9.4nm,1.1s,mb4.7						
ARCES	**ARCESS Array B**	**56.62**	**336**	P	**P**	**12 02 05.5**	**+1.8**
	comp=E,1.7nm,0.5s,mb4.3,baz=78,slow=7.8,SNR=14						
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**12 02 06.7**	**-0.1**
	comp=E,0.9nm,0.7s,mb3.9,baz=67,slow=9.6,SNR=5.0						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**12 02 08.0**	**+0.4**
	comp=E,6.0nm,0.8s,mb4.7,baz=76,slow=8.0,SNR=8.3						
COEN	**Coen**	**58.58**	**136**	*e*P	**P**	**12 02 18.7**	**+0.6**
WRAB	**Tennant Creek**	**58.90**	**148**	*e*P	**P**	**12 02 20.9**	**+0.7**
	comp=E,3.0nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.90**	**148**	P	**P**	**12 02 20.4**	**+0.1**
	comp=E,3.0nm,0.6s,mb4.5,baz=341,slow=7.4,SNR=30						
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**12 02 41.6**	**+0.4**
	comp=E,1.3nm,0.5s,mb4.4,baz=337,slow=6.9,SNR=24						
NB2	**NORSAR Subarra**	**64.22**	**327**	P	**P**	**12 02 56.5**	**+0.8**
	comp=Z,1.8nm,0.5s,mb4.4,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**12 02 55.6**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.3,baz=70,slow=6.6,SNR=7.4						
STKA	**Stephens Creek**	**72.45**	**148**	P	**P**	**12 03 46.8**	**-0.8**
	comp=Z,0.9nm,

PKI	Pulchoki	51.69	310	*e*P	P	12 07 36.1	-0.2
	5.0nm,0.2s,mb4.5						
PKIN	Phulchoki	51.70	310	*e*P	P	12 07 36.0	-0.4
	9.1nm,0.3s,mb4.6						
KKN	Kakani	51.90	311	*e*P	P	12 07 37.7	-0.2
	21nm,0.6s,mb4.7						
DMN	Daman	51.94	310	*e*P	P	12 07 38.1	-0.1
	15nm,0.4s,mb4.7						
SONM	Songino Array	55.21	343	P	P	12 08 01.6	+0.2
	2.2nm,0.7s,mb3.7,baz=169,slow=10,SNR=3.8						
PETK	Petropavlovsk-	62.52	20	P	P	12 08 52.4	+1.0
	2.6nm,0.9s,mb3.9,baz=224,slow=8.1,SNR=6.0						
PETK	Petropavlovsk-	62.52	20	P	P	12 08 52.4	+1.0
MKAR	Makanchi Array	64.77	327	P	P	12 09 05.8	-0.3
	4.4nm,0.5s,mb4.4,baz=116,slow=7.6,SNR=15						
AML	Almayashu	67.33	319	*e*P	P	12 09 23.1	+0.6
	2.6nm,0.6s,mb4.1						
ZALV	Zalesovo Beam	68.20	334	P	P	12 09 26.1	-1.6
	1.5nm,0.3s,mb4.2,baz=111,slow=7.9,SNR=3.9						
KURK	Kurchatov	69.08	329	P	P	12 09 31.9	-1.2
	3.0nm,0.5s,mb4.2,baz=132,slow=5.6,SNR=12						
BVAR	Borovoye Array	74.61	328	P	P	12 10 05.6	-0.3
	1.2nm,0.4s,mb3.9,baz=131,slow=8.7,SNR=6.3						
ABKAR	Akbulak array	79.03	322	*e*P	P	12 10 30.4	-0.3
	1.9nm,0.6s,mb4.0						
AKTO	Aktyubinsk	80.59	323	P	P	12 10 39.0	0.0
	2.9nm,0.6s,mb4.2,baz=110,slow=7.5,SNR=9.9						

MAN 13 11:59:21, 13°.55N×120°.31E, h1km, mb4.2, ML3.0, MS2.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.19	341	*e*P	Pg	11 59 25.8	+1.1
PGP	Puerto Galera	0.63	94	*e*P	Pg	11 59 34.6	+1.5
SJMP	San Jose	1.34	144	*e*P	Pg	11 59 48.0	+1.3
SJMP				*e*S	Sg	12 00 03.2	-0.9
BUSP	Coron	1.54	184	*e*P	Pn	11 59 50.2	+0.6
OTRP	Odiongan	2.04	125	*e*P	Sn	12 00 11.2	-12

*IDC **13** 12:03:16.1±0.9, 32°.41N×105°.18E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.9/27, mbtmp3.9/11, ML3.5/2, Error ellipse: s-maj=37.1km s-min=16.4km az=54.0*
*BJI **13** 12:03:18.1, 32°.38N×105°.25E, h9km, mB4.6/3, mb4.3/5, ML3.9/16, Ms3.7/7, Ms7 3.6/6*
*NEIC **13** 12:03:18.3±0.5, 32°.50N×105°.25E, h10km, mb4.2/4, Error ellipse: s-maj=19.2km s-min=7.6km az=48.0*
ISC 13 12:03:16.8±1.3, 32°.44N±0°.04×105°.25E±0°.04, h1km±8km, n28, σ1°.04/36, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.98	220	Pg	Pn	12 03 51.8	+0.3
CD2				Sg	Sn	12 04 16.8	-0.2
XAN	Xi'an	3.47	62	Pg	Pg	12 04 22.3	-1.0
XAN				Sg	Sg	12 05 08.9	+0.7
XAN				smax			
	comp=N,460nm,0.7s						
XAN				smax			
	comp=E,180nm,0.7s						
LZH	Lanzhou	3.82	343	*e*Pn	Pn	12 04 20.0	+3.3
LZH				Pg	Pg	12 04 30.0	0.0
LZH				Sn	Sn	12 05 02.6	+0.4
LZH				Sg	Sg	12 05 18.3	-1.1
LZH				smax			
	comp=N,400nm,0.5s						
LZH				smax			
	comp=E,670nm,0.6s						
LZH				LR	LR		
	comp=N,900nm,7.4s						
LZH				LR	LR		
	comp=Z,930nm,7.9s						
ENH	Enshi	4.22	120	Pn	Pn	12 04 24.1	+1.8
ENH				*e*Sn	Sn	12 05 13.3	+1.1
GYA	Guiyang	6.09	168	Pn	Pn	12 04 52.3	+4.4
GYA				Sn	Sn	12 05 56.3	-1.9
GYA				smax			
	comp=N,210nm,0.8s						
GYA				smax			
	comp=E,730nm,0.7s						
WHN	Wuhan	8.00	101	*e*P	Pn	12 05 14.8	+0.6
WHN				S	Sn	12 06 42.8	-2.5
WHN				LR	LR		
	comp=N,1μm,8.0s						
WHN				LR	LR		
	comp=E,1μm,7.0s						
GTA	Gaotai	8.23	329	*e*P	Pn	12 05 26.6	+9.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,88nm,5.7s						
GTA				LR	LR		
	comp=N,290nm,12.2s						
GTA				LR	LR		
	comp=E,270nm,13.1s						
GTA				LR	LR		
	comp=Z,250nm,10.1s						
SONM	Songino Array	15.40	3	Pn	Pn	12 06 55.3	+0.2
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=3.6						
KSRS	Korea Array	19.24	69	P	Pn	12 07 43.3	0.0
	comp=Z,0.3nm,0.3s,baz=256,slow=9.6,SNR=13						
MK31	Makanchi Array	22.65	316	*e*P	P	12 08 19.0	-0.2
MKAR	Makanchi Array	22.65	316	P	P	12 08 19.0	-0.2
	comp=Z,1.6nm,0.5s,mb3.8,baz=114,slow=11,SNR=16						
MKAR	Makanchi Array	22.65	316	P	P	12 08 19.0	-0.2
TKM2	Tokmak 2	25.57	303	*e*P	P	12 08 47.6	+0.4
	comp=Z,3.0nm,0.6s,mb4.1						
ZALV	Zalesovo Beam	25.97	332	P	P	12 08 49.7	-1.0
	comp=Z,1.4nm,0.3s,mb4.0,baz=213,slow=4.8,SNR=3.1						
UCH	Uchtor	26.19	301	*e*P	P	12 08 54.2	+1.3
	comp=Z,5.9nm,1.1s,mb4.1						
AML	Almayashu	26.77	300	*e*P	P	12 08 59.0	+0.9
	comp=Z,1.8nm,0.8s,mb3.9						
KURK	Kurchatov	26.79	321	P	P	12 08 58.1	-0.1
	comp=Z,1.7nm,0.8s,mb3.9,baz=124,slow=10,SNR=8.2						
KURK	Kurchatov	26.79	321	P	P	12 08 58.1	-0.1
BVAR	Borovoye Array	32.37	320	P	P	12 09 47.9	+0.3
	comp=Z,0.4nm,0.3s,mb3.8,baz=119,slow=9.7,SNR=3.2						
AKTK	Aktyubinsk	38.96	312	P	P	12 10 39.0	-5.2
WRAB	Tennant Creek	59.06	148	*e*P	P	12 13 20.5	+2.0
	comp=Z,2.4nm,0.7s,mb4.3						
WRA	Warramunga Arr	59.06	148	P	P	12 13 18.1	-0.5
	comp=Z,1.9nm,0.9s,mb4.1,baz=339,slow=7.7,SNR=5.5						
ASAR	Alice Springs	62.15	150	P	P	12 13 38.5	-1.1
	comp=Z,0.6nm,0.5s,mb4.1,baz=335,slow=6.5,SNR=5.5						
NOA	NORSAR Array B	64.06	327	P	P	12 13 50.4	-1.5
	comp=Z,0.6nm,0.6s,mb4.0,baz=335,slow=10,SNR=2.3						
STKA	Stephens Creek	72.61	148	P	P	12 14 46.2	+0.4
	comp=Z,1.5nm,0.8s,mb4.2,baz=319,slow=2.7,SNR=4.2						
STKA	Stephens Creek	72.61	148	P	P	12 14 46.2	+0.4
YKA	Yellowknife Ar	80.13	18	P	P	12 15 27.3	-0.8
	comp=Z,0.7nm,0.6s,mb3.8,baz=328,slow=5.1,SNR=12						
YKA	Yellowknife Ar	80.13	18	P	P	12 15 27.3	-0.8

*ISCJB **13** 12:03:44.1±0.6, 32°.00N±0°.07×104°.59E±0°.10, h10km, mb4.0/11, Error ellipse: s-maj=12.2km s-min=9.4km az=176.2*
*IDC **13** 12:03:44.4±0.9, 32°.02N×104°.47E, h0km, mb4.0/9, mb1 4.1/11, mb1mx3.9/27, mbtmp3.9/11, ML3.4/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/33, Error ellipse: s-maj=31.7km s-min=17.6km az=53.0*
*NEIC **13** 12:03:46.1±0.5, 32°.03N×104°.48E, h10km, mb4.3/2, Error ellipse: s-maj=17.2km s-min=9.0km az=56.0*
*BJI **13** 12:03:46.0, 31°.54N×104°.63E, h20km, mB4.6/4, mb4.4/6, ML3.9/3, Ms3.9/2, Ms7 3.9/2*
ISC 13 12:03:46.0±0.6, 31°.96N±0°.06×104°.49E±0°.10, h10km, n19, σ0°.81/19, mb4.0/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.15	353	*e*Pg	Pg	12 05 07.4	+1.9
LZH				smax			
	comp=N,280nm,0.5s						
LZH				smax			
	comp=E,600nm,0.6s						
BTO	Baotou	9.71	26	*e*P	Sn	12 07 55.0	+0.2
SONM	Songino Array	15.92	5	Pn	Pn	12 07 29.1	-0.9
	comp=E,0.2nm,0.3s,baz=185,slow=16,SNR=2.4						
KSRS	Korea Array	20.01	68	P	P	12 08 17.7	-1.1
	baz=252,slow=10.0,SNR=2.9						
CN2	Changchun	20.27	48	*e*P	P	12 08 28.4	+6.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MK31	Makanchi Array	22.56	317	*e*P	P	12 08 46.7	+0.5
MKAR	Makanchi Array	22.56	317	P	P	12 08 46.5	+0.3
	comp=Z,2.1nm,0.7s,mb3.6,baz=117,slow=13,SNR=4.2						
MKAR				LR	LR	12 18 27.8	
	comp=Z,76nm,19.6s,baz=142,slow=39						
TKM2	Tokmak 2	25.30	304	*e*P	P	12 09 12.2	-0.5
	comp=Z,1.3nm,0.7s,mb3.6						
ZALV	Zalesovo Beam	26.10	333	P	P	12 09 19.5	-0.3
	comp=Z,3.4nm,0.5s,mb4.1,baz=133,slow=10,SNR=5.7						
ZALV	Zalesovo Beam	26.10	333	P	P	12 09 19.5	-0.3
KURK	Kurchatov	26.77	322	P	P	12 09 25.9	+0.1
	comp=Z,1.4nm,0.7s,mb3.6,baz=130,slow=8.4,SNR=5.4						
KURK	Kurchatov	26.77	322	P	P	12 09 25.9	+0.1
PETK	Petropavlovsk-	43.35	45	P	P	12 11 48.6	+0.4
	comp=Z,3.3nm,0.8s,mb4.1,baz=343,slow=3.1,SNR=5.5						
ARCES	ARCESS Array B	56.62	336	P	P	12 13 27.0	-1.7
	comp=Z,3.1nm,0.9s,mb4.3,baz=88,slow=8.6,SNR=7.9						
WRAB	Tennant Creek	59.00	147	*e*P	P	12 13 46.9	+0.8
	comp=Z,5.2nm,0.6s,mb4.7						
WRA	Warramunga Arr	59.01	147	P	P	12 13 46.5	+0.5
	comp=Z,4.2nm,0.8s,mb4.5,baz=339,slow=7.5,SNR=12						
ASAR	Alice Springs	62.06	149	P	P	12 14 07.4	+0.6
	comp=Z,0.8nm,0.5s,mb4.1,baz=340,slow=6.4,SNR=4.9						
GERES	GERESS Array B	67.19	314	P	P	12 14 39.5	-0.6
	comp=Z,0.7nm,0.6s,mb3.9,baz=31,slow=8.0,SNR=2.8						
YKA	Yellowknife Ar	80.78	17	P	P	12 15 59.3	-0.1
	comp=Z,0.7nm,0.6s,mb3.8,baz=330,slow=5.3,SNR=7.4						

*IDC **13** 12:06:31.7±1.1, 31°.54N×104°.61E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/27, mbtmp3.5/7, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=69.0km s-min=19.5km az=61.0*
*NEIC **13** 12:06:33.6±0.7, 31°.60N×104°.64E, h10km, mb4.1/1, Error ellipse: s-maj=31.3km s-min=11.3km az=64.0*
*ISCJB **13** 12:06:34.5±4.3, 31°.61N±0°.09×104°.7E±0°.2, h30km±32km, mb3.5/7, Error ellipse: s-maj=30.2km s-min=14.0km az=173.0*
*BJI **13** 12:06:39.9, 31°.58N×104°.33E, h9km, ML3.8/5*
ISC 13 12:06:35.1±1.1, 31°.68N±0°.05×104°.52E±0°.09, h18km±9km, n12, σ0°.93/13, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.01	221	Pg	Pg	12 06 53.6	-1.1
CD2				Sg	Sg	12 07 08.3	+0.3
CD2				smax			
	comp=N,2μm,0.6s						
LZH	Lanzhou	4.43	353	*e*Pg	Pg	12 07 59.3	-0.7
LZH				smax			
	comp=N,130nm,1.0s						
LZH				smax			
	comp=E,170nm,0.9s						
GYA	Guiyang	5.53	160	Pg	Pg	12 08 21.5	+0.5
GYA				Sg	Sg	12 09 33.6	+0.9
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,110nm,0.6s						
SONM	Songino Array	16.20	5	Pn	Pn	12 10 22.1	+0.4
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=2.7						
MKAR	Makanchi Array	22.79	318	P	P	12 11 38.3	+1.7
	comp=E,0.3nm,0.5s,mb3.0,baz=122,slow=13,SNR=2.9						
TGY	Tagaytay City	23.07	136	LR	LR	12 19 12.5	
	comp=E,30nm,21.7s,baz=98,slow=33						
ZALV	Zalesovo Beam	26.36	333	P	P	12 12 10.2	+0.2
	comp=E,0.3nm,0.3s,mb3.2,baz=113,slow=3.3,SNR=2.1						
KURK	Kurchatov	27.01	322	P	P	12 12 16.1	+0.3
	comp=E,0.3nm,0.5s,mb3.1,baz=192,slow=3.2,SNR=2.1						
WRAB	Tennant Creek	58.75	147	P	P	12 16 32.2	+0.1
	comp=E,1.4nm,0.7s,mb4.1						
WRA	Warramunga Arr	58.75	147	P	P	12 16 30.4	-1.7
	comp=E,1.8nm,0.7s,mb4.2,baz=340,slow=7.4,SNR=13						
ASAR	Alice Springs	61.80	149	P	P	12 16 51.4	-1.5
	comp=E,0.9nm,0.8s,mb4.0,baz=336,slow=6.6,SNR=5.3						
YKA	Yellowknife Ar	81.04	17	P	P	12 18 49.1	+0.5
	comp=E,0.2nm,0.7s,mb3.2,baz=329,slow=5.0,SNR=3.7						

*IDC **13** 12:07:29.1±1.1, 31°.71N×104°.29E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/27, mbtmp3.9/8, ML3.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/31, Error ellipse: s-maj=39.4km s-min=18.9km az=57.0*
*NEIC **13** 12:07:30.9±0.6, 31°.66N×104°.27E, h10km, mb4.3/2, Error ellipse: s-maj=26.4km s-min=10.1km az=60.0*
ISC 13 12:07:30.5±1.3, 31°.74N±0°.04×104°.4E±0°.1, h6km±9km, n14, σ0°.65/16, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.97	212	Pg	Pg	12 07 49.1	-0.1
CD2				Sg	Sg	12 08 02.1	+0.2
CD2				smax			
	comp=N,3μm,0.9s						
LZH	Lanzhou	4.36	354	*e*Pg	Pg	12 08 53.9	-0.2
LZH				Sg	Sg	12 09 50.3	-0.3
LZH				smax			
	comp=N,150nm,0.6s						
LZH				smax			
	comp=E,200nm,0.6s						
SONM	Songino Array	16.15	5	Pn	Pn	12 11 19.9	+1.9
	comp=E,0.2nm,0.3s,baz=188,slow=14,SNR=5.8						
KSRS	Korea Array	20.19	67	P	P	12 12 05.9	0.0
	comp=E,1.7nm,0.7s,baz=245,slow=12,SNR=3.7						
KSRS				LR	LR	12 20 55.4	
	comp=E,145nm,18.2s,baz=154,slow=40						
MK31	Makanchi Array	22.65	318	*e*P	P	12 12 33.3	+1.1
MKAR	Makanchi Array	22.65	318	P	P	12 12 32.4	+0.1
	comp=E,2.2nm,1.0s,mb3.6,baz=116,slow=11,SNR=5.9						
ZALV	Zalesovo Beam	26.25	333	P	P	12 13 05.1	-1.1
	comp=E,1.7nm,0.6s,mb3.8,baz=127,slow=9.8,SNR=5.8						
KURK	Kurchatov	26.88	322	P	P	12 13 11.3	-0.6
	comp=E,1.0nm,0.7s,mb3.5,baz=130,slow=8.6,SNR=4.7						
ARU	Arti	40.07	322	*e*P	P	12 15 06.2	-0.2
	comp=E,4.3nm,0.8s,mb4.2						
WRAB	Tennant Creek	58.87	147	*e*P	P	12 17 30.4	+0.1
	comp=E,2.6nm,0.7s,mb4.4						
WRA	Warramunga Arr	58.88	147	P	P	12 17 30.0	-0.3
	comp=E,1.5nm,0.5s,mb4.3,baz=339,slow=7.6,SNR=9.4						
ASAR	Alice Springs	61.92	149	P	P	12 17 50.9	-0.1
	comp=E,0.8nm,0.7s,mb4.0,baz=339,slow=6.8,SNR=5.8						
YKA	Yellowknife Ar	81.02	17	P	P	12 19 45.5	-0.3
	comp=E,0.5nm,0.4s,mb3.8,baz=326,slow=5.2,SNR=12						
YKA	Yellowknife Ar	81.02	17	P	P	12 19 45.5	-0.3

*CSEM **13** 12:13:42.8, 37°.79N×15°.04E, h1km, After ROM*
ROM 13 12:13:42.8±0.1, 37°.79N×15°.04E, h1km, MI3.7/17, Error ellipse: s-maj=3.0km s-min=1.6km az=133.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESLN	Serra La Nave	0.11	209	Pg	Pg	12 13 44.8	0.0
ESLN				Sg	Sg	12 13 47.5	+1.3
	169μm,1.0s						
ESLN	Serra La Nave	0.11	209	Pg	Pg	12 13 44.8	0.0
ESLN				Sg	Sg	12 13 47.5	+1.3
	169μm,1.0s						
GALF	Gagliano Caste	0.38	259	Pg	Pg	12 13 51.3	+1.2
	66μm,0.9s						
GALF	Gagliano Caste	0.38	259	Pg	Pg	12 13 51.3	+1.2
	66μm,0.9s						
MILZ	Milazzo	0.51	17	Pg	Pg	12 13 53.7	+1.2
	8μm,1.0s						
MILZ	Milazzo	0.51	17	Pg	Pg	12 13 53.7	+1.2
	8μm,1.0s						
MTTG	Motta San Giov	0.56	67	Pg	Pg	12 13 55.3	+1.8
	5μm,0.9s						
MTTG	Motta San Giov	0.56	67	Pg	Pg	12 13 55.3	+1.8
	5μm,0.9s						
MSRU	Castanea	0.60	38	Pg	Pg	12 13 55.5	+1.1
	12μm,1.3s						
MSRU	Castanea	0.60	38	Pg	Pg	12 13 55.5	+1.1
	12μm,1.3s						
LLI	Lipari	0.66	354	Pg	Pg	12 13 56.8	+1.3
	19μm,0.9s						
LLI	Lipari	0.66	354	Pg	Pg	12 13 56.8	+1.3
	19μm,0.9s						
SCLL	Scilla	0.71	48	Pg	Pg	12 13 57.5	+1.1
	800nm,0.9s						
SCLL	Scilla	0.71	48	Pg	Pg	12 13 57.5	+1.1
	800nm,0.9s						
RAFF	Raffo Rosso	0.78	224	Pg	Pg	12 13 58.1	+0.4
	2μm,0.9s						
RAFF	Raffo Rosso	0.78	224	Pg	Pg	12 13 58.1	+0.4
	2μm,0.9s						
MPAZ	Palizzi	0.78	77	Pg	Pg	12 13 59.4	+1.6
	4μm,1.2s						
MPAZ	Palizzi	0.78	77	Pg	Pg	12 13 59.4	+1.6
	4μm,1.2s						
CEL	Celeste	0.82	55	Pg	Pg	12 13 59.2	+0.6
	2μm,0.8s						
CEL	Celeste	0.82	55	Pg	Pg	12 13 59.2	+0.6
	2μm,0.8s						
SOI	Samo	0.85	70	Pg	Pg	12 14 00.1	+1.0
	1μm,0.9s						
SOI	Samo	0.85	70	Pg	Pg	12 14 00.1	+1.0
	1μm,0.9s						
IFIL	Filicudi I Eol	0.86	334	Pg	Pg	12 14 00.5	+1.2
	6μm,0.8s						
IFIL	Filicudi I Eol	0.86	334	Pg	Pg	12 14 00.5	+1.2
	6μm,0.8s						
IACL	Alicudi	0.92	324	Pg	Pg	12 14 01.3	+0.9
	5μm,0.9s						
IACL	Alicudi	0.92	324	Pg	Pg	12 14 01.3	+0.9
	5μm,0.9s						
JOPP	Joppolo	1.06	39	Pg	Pg	12 14 03.4	+0.4
	2μm,1.0s						
JOPP	Joppolo	1.06	39	Pg	Pg	12 14 03.4	+0.4
	2μm,1.0s						
PLAC	Placanica	1.29	59	Pg	Pg	12 14 08.8	+1.3
	2μm,1.4s						
PLAC	Placanica	1.29	59	Pg	Pg	12 14 08.8	+1.3
	2μm,1.4s						
CORL	Corleone	1.38	275	Pg	Pg	12 14 10.2	+1.0
	5μm,1.4s						
CORL	Corleone	1.38	275	Pg	Pg	12 14 10.2	+1.0
	5μm,1.4s						
SERS	Sersale	1.80	46	Pg	Pg	12 14 16.6	-0.7
	1μm,1.6s						
SERS	Sersale	1.80	46	Pg	Pg	12 14 16.6	-0.7
	1μm,1.6s						
TIP	Timpagrande	1.94	44	Pg	Pg	12 14 18.4	-1.5
	1μm,1.2s						
TIP	Timpagrande	1.94	44	Pg	Pg	12 14 18.4	-1.5
	1μm,1.2s						

IDC 13 12:29:45.1±1.3, 31°.59N×104°.21E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/27, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=43.0km s-min=22.8km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.31	5	Pn	Pn	12 33 36.5	+1.0
	0.2nm,0.3s,baz=174,slow=14,SNR=2.8						
KSRS	Korea Array	20.38	67	P	P	12 34 23.4	+0.1
	1.5nm,0.8s,baz=245,slow=10,SNR=4.2						
MKAR	Makanchi Array	22.68	318	P	P	12 34 48.4	+0.4
	0.7nm,0.9s,baz=122,slow=12,SNR=4.9						
ZALV	Zalesovo Beam	26.33	334	P	P	12 35 23.2	+0.7
	0.6nm,0.4s,baz=116,slow=9.8,SNR=3.4						
KURK	Kurchatov	26.92	323	P	P	12 35 27.4	-0.4
	0.6nm,0.7s,baz=130,slow=8.4,SNR=4.0						
ASAR	Alice Springs	61.86	149	P	P	12 40 06.5	+0.2
	0.4nm,0.4s,baz=332,slow=7.3,SNR=7.4						
YKA	Yellowknife Ar	81.21	17	P	P	12 42 01.6	-0.9
	0.2nm,0.6s,baz=328,slow=5.5,SNR=4.3						

*NEIC **13** 12:34:39.9±1.4, 4°.77S×152°.46E, h10km, mb4.4/2, Error ellipse: s-maj=39.1km s-min=13.5km az=106.0*
*IDC **13** 12:34:39.7±3.7, 4°.61S×152°.17E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/17, mbtmp3.8/7, Error ellipse: s-maj=122.2km s-min=23.9km az=110.0*
*ISCJB **13** 12:34:42.0±1.8, 4°.8S±0°.1×152°.4E±0°.3, h33km, mb4.0/10, Error ellipse: s-maj=47.4km s-min=15.1km az=13.2*
ISC 13 12:34:43.8±1.8, 4°.8S±0°.1×152°.4E±0°.3, h35km, n13, σ0°.90/12, mb4.0/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	Charters Tower	16.32	201	Pn	Pn	12 38 30.4	+0.1
KAKA	Kakadu	21.24	247	*e*P	P	12 39 27.7	+0.6
	34nm,0.4s,mb5.0						
WRAB	Tennant Creek	23.14	228	*e*P	P	12 39 46.2	-0.9
	6.6nm,0.4s,mb4.4						
WRA	Warramunga Arr	23.15	228	P	P	12 39 45.7	-1.6
	5.5nm,0.5s,mb4.3,baz=50,slow=10,SNR=41						
ASAR	Alice Springs	25.88	222	P	P	12 40 15.1	+2.6
	0.7nm,0.4s,mb3.5,baz=54,slow=9.2,SNR=18						
ASAR	Alice Springs	25.88	222	P	P	12 40 15.1	+2.6
FITZ	Fitzroy Crossi	29.33	241	P	P	12 40 43.4	0.0
	1.0nm,0.3s,mb4.0,baz=62,slow=9.2,SNR=16						
KSM	Kuching	42.55	277	*e*P	P	12 42 37.0	+0.4
	5.6nm,0.9s,mb4.3						
SONM	Songino Array	66.16	328	P	P	12 45 27.5	-0.2
	0.5nm,0.5s,mb3.8,baz=113,slow=3.7,SNR=3.3						
MKAR	Makanchi Array	80.11	319	P	P	12 46 50.6	+0.4
	0.2nm,0.4s,mb3.4,baz=99,slow=8.9,SNR=3.4						
ZALV	Zalesovo Beam	80.98	326	P	P	12 46 54.2	-0.5
	0.6nm,0.4s,mb3.9,baz=99,slow=8.9,SNR=3.9						
KURK	Kurchatov	83.57	322	P	P	12 47 08.2	-0.1
	0.2nm,0.3s,mb3.8,baz=76,slow=3.9,SNR=2.4						
TORD	Torodi Ar. Bea	149.97	288	PKPbc	PKPbc	12 54 31.3	-0.3
	0.4nm,0.3s,baz=71,slow=2.8,SNR=20						

BJI 13 12:35:47.5, 32°.51N×105°.93E, h20km, ML3.6/4, Ms3.1/1, Ms7 3.1/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.44	230	Pg	Pn	12 36 06.1	-20
CD2				Sg	Sn	12 36 13.4	-42
CD2				smax			
	comp=N,3μm,0.3s						
LZH	Lanzhou	3.96	335	Pg	Pn	12 36 56.1	+9.0
LZH				Sg	Sn	12 37 41.9	+8.9
LZH				smax			
	comp=N,230nm,0.5s						
LZH				smax			
	comp=E,250nm,0.6s						

*ISCJB **13** 12:51:36.2±0.7, 32°.20N±0°.02×105°.28E±0°.02, h5km±4km, mb4.9/100, MS4.2/30, Error ellipse: s-maj=3.5km s-min=3.3km az=158.5*
*IDC **13** 12:51:36.1±0.4, 32°.34N×105°.33E, h0km, mb4.8/25, mb1 4.9/27, mb1mx4.8/31, mbtmp4.8/27, ML3.3/2, MS3.8/13, Ms1 3.8/13, ms1mx3.5/37, Error ellipse: s-maj=18.6km s-min=9.9km az=51.0*
*BJI **13** 12:51:37.2, 32°.28N×105°.18E, h14km, mB4.

LZH smax
comp=N,5μm,0.8s
LZH smax
comp=E,7μm,0.8s
LZH LR LR
comp=N,14μm,8.0s
LZH LR LR
comp=Z,14μm,9.3s
ENH Enshi 4.10 117 *e*Pn **Pn 12 52 44.4 +2.9**
ENH *e*Sg **Sg 12 53 54.3 +4.9**
GYA Guiyang 5.84 167 Pg **Pn 12 53 06.8 +1.4**
GYA Sg **Sn 12 54 13.8 +0.7**
GYA smax
comp=N,1μm,0.7s
GYA smax
comp=E,2μm,0.7s
GYA LR LR
comp=N,12μm,5.6s
GYA LR LR
comp=E,9μm,6.3s
GYA LR LR
comp=Z,11μm,4.2s
KMI Kunming 7.38 198 Pn **Pn 12 53 26.4 -0.1**
KMI Sn **Sn 12 54 55.1 +4.2**
KMI smax
comp=N,200nm,1.3s
KMI smax
comp=E,190nm,1.0s
KMI LR LR
comp=N,2μm,6.4s
KMI LR LR
comp=E,2μm,7.1s
WHN Wuhan 7.96 100 ⇑P **Pn 12 53 36.1 +1.7**
WHN S **Sn 12 55 01.9 -3.2**
WHN LR LR
comp=N,12μm,5.4s
WHN LR LR
comp=E,6μm,6.7s
WHN LR LR
comp=Z,5μm,6.8s
GTA Gaotai 8.45 330 P **Pn 12 53 38.5 -2.6**
GTA pP 12 53 42.9
GTA sP 12 53 46.4
GTA S **Sn 12 55 15.9 -1.2**
GTA sS 12 55 25.8
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,87nm,5.6s
GTA LR LR
comp=N,5μm,10.1s
GTA LR LR
comp=E,2μm,9.6s
GTA LR LR
comp=Z,5μm,11.0s
BTO Baotou 9.23 23 *e*P **Pn 12 53 52.1 +0.2**
BTO S **Sn 12 55 37.0 +0.5**
BTO LR LR
comp=N,840nm,8.2s
BTO LR LR
comp=E,500nm,9.0s
HHC Hu-ho-hao-te 10.02 29 *e*P **Pn 12 54 04.4 +1.7**
HHC PP 12 54 12.4
HHC S **Sn 12 55 58.6 +2.8**
HHC SS 12 56 11.8
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.0s
HHC LR LR
comp=N,1μm,5.8s
HHC LR LR
comp=E,2μm,5.7s
HHC LR LR
comp=Z,1μm,6.5s
TIA Tai'an 10.62 65 *e*P **Pn 12 54 14.1 +3.2**
TIA LR LR
comp=N,650nm,7.0s
NJ2 Nanjing 11.54 87 *e*P **Pn 12 54 29.0 +5.5**
NJ2 pP 12 54 32.5
NJ2 sP 12 54 35.3
NJ2 PP 12 54 39.1
NJ2 S **Sn 12 56 42.6 +10**
NJ2 sS 12 56 48.6
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,20nm,3.5s
NJ2 LR LR
comp=N,1μm,17.2s
NJ2 LR LR
comp=E,910nm,15.6s
NJ2 LR LR
comp=Z,1μm,15.2s
GZH Guangzhou 11.56 140 P **Pn 12 54 19.5 -4.3**
GZH S **Sn 12 56 26.8 -6.9**
GZH LR LR
comp=N,3μm,10.7s
GZH LR LR
comp=E,3μm,10.3s
BJI Beijing 11.80 45 P **Pn 12 54 26.5 -0.6**
BJI pmax pmax
comp=Z,17nm,0.4s
BJI LR LR
comp=N,2μm,12.7s
BJI LR LR
comp=E,1μm,12.1s
BJI LR LR
comp=Z,310nm,17.3s
LSA Lhasa 12.36 262 P **Pn 12 54 33.8 -0.9**
LSA LR LR
comp=E,780nm,7.6s
LSA LR LR
comp=Z,1μm,9.4s
LSA Lhasa 12.36 262 *e*P **Pn 12 54 35.0 +0.3**
LSA pmax pmax
comp=Z,13nm,0.6s
LSA Lhasa 12.36 262 *e*Pn **Pn 12 54 35.0 +0.3**
comp=Z,13nm,0.6s
SHL Shillong 13.44 244 *e*P **Pn 12 54 45.0 -4.5**
SHL *ex* x 12 58 36.0
SSE Sheshan 13.63 90 P **Pn 12 54 50.8 -1.2**
SSE S **Sn 12 57 22.3 -1.8**
SSE pmax pmax
comp=Z,22nm,0.7s
SSE pmax pmax
comp=Z,230nm,6.1s
SSE LR LR
comp=N,1μm,10.6s
SSE LR LR
comp=E,600nm,10.6s
SSE LR LR
comp=Z,1μm,10.4s
QIZ Qiongzhong 13.74 161 P **Pn 12 54 53.4 -0.3**
QIZ sP 12 55 00.8
QIZ S **Sn 12 57 29.1 +2.0**
QIZ pmax pmax
comp=Z,28nm,1.2s
QIZ LR LR
comp=N,4μm,10.6s
QIZ LR LR
comp=Z,5μm,10.9s
QZH Quanzhou 13.76 118 P **Pn 12 54 54.4 +0.4**
QZH S **Sn 12 57 29.0 +1.4**
QZH LR LR
comp=N,6μm,8.3s
QZH LR LR
comp=E,8μm,9.4s
QZH LR LR
comp=Z,12μm,9.7s
CHTO Chiang Mai 14.48 205 *e*P **Pn 12 55 03.8 +0.1**
CM31 Chiang Mai Arr 14.81 204 *e*Pn **Pn 12 55 08.5 +0.3**
DL2 Dalian 14.91 59 P **Pn 12 55 11.5 +1.9**
DL2 pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 15.65 3 Pn **Pn 12 55 16.1 -3.2**
comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=26
SONM Lg 12 59 46.4
comp=Z,0.1nm,0.3s,baz=175,slow=22,SNR=3.9
SSLB Suanglung 16.19 117 *e*P **Pn 12 55 28.2 +1.8**
comp=Z,58nm,0.9s
GUN Gumba 17.30 261 *e*P **Pn 12 55 36.6 -3.9**
comp=Z,150nm,1.0s
PKI Pulchoki 17.80 260 *e*P **Pn 12 55 42.4 -4.4**
comp=Z,65nm,0.6s
PKIN Phulchoki 17.81 260 *e*P **Pn 12 55 42.3 -4.6**
comp=Z,48nm,0.6s
KKN Kakani 17.84 261 *e*P **Pn 12 55 42.9 -4.3**
comp=Z,58nm,0.7s
WMQ Urumqi 18.02 315 P **Pn 12 55 48.8 -0.5**
WMQ S **Sn 12 59 06.9 -3.9**
WMQ sS sS 12 59 12.5 -4.8
WMQ SS 12 59 30.6
WMQ PcP PcP 13 00 24.0 -0.4
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ LR LR
comp=N,2μm,11.0s
WMQ LR LR
comp=E,2μm,10.0s
WMQ LR LR
comp=Z,490nm,12.0s
DMN Daman 18.05 261 *e*P **Pn 12 55 45.4 -4.3**
comp=Z,96nm,0.9s
ZAK Zakamensk 18.23 356 *e*P **Pn 12 55 52.8 +0.9**
ZAK pmax pmax
comp=Z,16nm,0.9s
KSRS Korea Array 19.33 68 P **Pn 12 56 01.4 -3.9**
comp=Z,0.1nm,0.3s,baz=251,slow=10,SNR=6.0
TLY Talaya 19.51 357 *e*P **Pn 12 56 09.1 +1.8**
TLY *e*S **Sn 12 59 46.1 -0.6**
TLY pmax pmax
comp=Z,14nm,1.0s
TLY MLR MLR
comp=Z,893nm,20.0s
CN2 Changchun 19.64 48 *e*P **Pn 12 56 09.3 +0.4**
CN2 *ep*P pP 12 56 17.8 +10
CN2 *e*S **Sn 12 59 43.0 -6.9**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,10.0s
CN2 LR LR
comp=E,700nm,10.0s
CN2 LR LR
comp=Z,200nm,10.0s
MOY Mondy 19.71 352 *e*P **Pn 12 56 09.7 0.0**
MOY pmax pmax
comp=Z,63nm,2.7s
IRK Irkutsk 20.05 358⇑*i*P **P 12 56 12.7 +0.7**
IRK pmax pmax
comp=Z,130nm,1.3s
HIA Hailar 20.23 28 *e*P **P 12 56 15.0 +1.0**
HIA pmax pmax
comp=Z,15nm,0.6s
HIA Hailar 20.23 28 *e*P **P 12 56 15.0 +1.0**
comp=Z,15nm,0.6s
MDJ Mudanjiang 22.66 50 P **P 12 56 39.8 -0.4**
MDJ pP 12 56 41.9
MDJ sP sP 12 56 43.9 +3.6
MDJ pmax pmax
comp=Z,18nm,1.0s,mb4.6
MK31 Makanchi Array 22.83 316 *e*P **P 12 56 39.7 -2.3**
MKAR Makanchi Array 22.83 316 P **P 12 56 39.6 -2.4**
comp=Z,6.9nm,0.6s,mb4.4,baz=112,slow=12,SNR=54
MKAR LR LR 13 06 27.1
comp=Z,473nm,21.6s,MS3.9,baz=120,slow=39
DDI Dehra Dun 23.30 273 *ex* **P 12 56 46.0 -1.1**
NDI New Delhi 24.39 269 *e*P **P 12 56 55.0 -2.5**
KSH Kashi 24.75 295 *e*P **P 12 57 04.8 +4.1**
KSH *ep*P 12 57 08.8
KSH *es*P sP 12 57 11.8 +11
KSH *e*PP 12 57 41.8
KSH *e*PcP PcP 13 00 39.9 +2.4
KSH *e*S **S 13 01 25.8 +2.0**
KSH *es*S sS 13 01 31.9 +7.9
KSH *e*SS 13 02 23.8
KSH *e*PcS PcS 13 04 18.8 +1.3
KSH *e*ScS ScS 13 08 04.9 -0.6
KSH pmax pmax
comp=Z,83nm,0.9s,mb5.5
KSH LR LR
comp=N,420nm,11.0s
KSH LR LR
comp=E,620nm,9.5s
ULHL Ulahol 25.08 302 P **P 12 57 05.7 +2.0**
SNR=39
TKM2 Tokmak 2 25.71 303 P **P 12 57 10.1 +0.7**
SNR=36
TKM2 Tokmak 2 25.71 303 *e*P **P 12 57 10.0 +0.7**
TKM2 pmax pmax
comp=Z,21nm,0.7s,mb4.9
TKM2 Tokmak 2 25.71 303 *e*P **P 12 57 10.0 +0.7**
comp=Z,21nm,0.7s,mb4.9
KZA Kyzart 25.76 301 P **P 12 57 11.5 +1.7**
SNR=42
KBK Karagaybulak 26.11 302 P **P 12 57 14.6 +1.6**
SNR=30
KLR Kul'dur 26.13 42 *e*P **P 12 57 09.0 -4.1**
KLR MLR MLR
comp=Z,1μm,12.0s,MS4.6
ZAA0 Zalesovo Array 26.19 332 *e*P **P 12 57 11.8 -1.8**
ZALV Zalesovo Beam 26.19 332 P **P 12 57 11.8 -1.8**
comp=Z,28nm,0.8s,mb4.9,baz=132,slow=8.6,SNR=81
ZALV LR LR 13 07 43.0
comp=Z,126nm,21.7s,MS3.4,baz=175,slow=37
ZALV Zalesovo Beam 26.19 332 P **P 12 57 11.8 -1.8**
ZALV LR LR 13 07 43.0
BOD Bodaibo 26.32 11 *e*P **P 12 57 14.3 -0.4**
BOD pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
UCH Uchtor 26.32 301 P **P 12 57 17.3 +2.4**
SNR=54
UCH Uchtor 26.32 301 *e*P **P 12 57 15.2 +0.2**
comp=Z,47nm,1.0s,mb5.1
AAK Ala-Archa 26.43 302 P **P 12 57 16.4 +0.6**
comp=Z,3.2nm,0.6s,mb4.1,baz=112,slow=9.6,SNR=12
AAK LR LR 13 09 34.7
comp=Z,485nm,19.0s,MS4.1,baz=55,slow=41
AAK Ala-Archa 26.43 302 *ce*P **P 12 57 16.9 +1.0**
AAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
AAK Ala-Archa 26.43 302 *e*P **P 12 57 16.5 +0.6**
comp=Z,8.3nm,0.7s,mb4.5
USP Ospenovka 26.57 303 P **P 12 57 18.7 +1.5**
SNR=29
AML Almayashu 26.90 301 P **P 12 57 22.7 +2.5**
SNR=20
AML Almayashu 26.90 301 *e*P **P 12 57 21.4 +1.3**
comp=Z,22nm,0.8s,mb4.9
EKS2 Erkin-Say 26.95 302 *e*P **P 12 57 22.2 +1.6**
comp=Z,10nm,0.8s,mb4.6
KURK Kurchatov 26.99 321 P **P 12 57 21.3 +0.5**
comp=Z,327nm,0.8s,mb6.1,SNR=5.9
KURK Kurchatov 26.99 321 P **P 12 57 19.3 -1.5**
comp=Z,34nm,0.8s,mb5.1,baz=133,slow=8.2,SNR=115
KURK Kurchatov 26.99 321 *ce*P **P 12 57 20.2 -0.6**
KURK pmax pmax
comp=Z,68nm,1.2s,mb5.2
KURK Kurchatov 26.99 321 *e*P **P 12 57 20.4 -0.4**
comp=Z,40nm,0.8s,mb5.2
MJAR Matsushiro Arr 27.47 72 P **P 12 57 21.7 -3.6**
comp=Z,2.4nm,0.8s,mb4.0,baz=79,slow=14,SNR=6.3
NVS Novosibirsk 27.48 332 *e*P **P 12 57 23.2 -2.0**
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.5
NVS pmax pmax
comp=N,10.0nm,1.1s
HABR Khabarovsk 27.71 45 *e*P **P 12 57 25.5 -1.8**
HABR *e**PP 12 57 33.9
HABR *e* 12 58 10.7
HABR *e* 13 00 41.2
HABR *e*S **S 13 02 05.7 -4.7**
HABR *e**SS sS 13 02 21.2 +11
HABR *e* 13 08 11.2
HABR pmax pmax
comp=N,16nm,2.3s
HABR pmax pmax
comp=E,23nm,2.3s
HABR pmax pmax
comp=Z,35nm,2.8s,mb4.7
HABR MLR MLR
comp=Z,114nm,15.0s,MS3.6
HYB Hyderabad 28.24 245 *i* P **P 12 57 36.0 +3.6**
KBL Kabul 30.23 284 *e*P **P 12 57 49.7 -0.2**
KBL pmax pmax
comp=Z,28nm,1.1s,mb5.0
KBL Kabul 30.23 284 *e*P **P 12 57 49.7 -0.2**
comp=Z,28nm,1.1s,mb5.0
KSM Kuching 30.92 170 *e*P **P 12 57 55.8 -0.4**
comp=Z,32nm,1.4s,mb5.0
DAV Davao City (W) 31.36 138 LR LR 13 11 24.1
comp=Z,150nm,20.9s,MS3.6,baz=2.7,slow=38
BVAR Borovoye Array 32.56 320 P **P 12 58 08.2 -2.0**
comp=Z,18nm,0.8s,mb5.1,baz=116,slow=10,SNR=72
BVAR PcP PcP 13 00 53.6 -3.1
comp=Z,2.1nm,0.8s,baz=132,slow=6.0,SNR=3.9
BVAR LR LR 13 12 24.1
comp=Z,365nm,18.7s,MS4.1,baz=107,slow=38
BVAR Borovoye Array 32.56 320 P **P 12 58 08.2 -2.0**
BVAR 13 00 53.6
BVAR Borovoye Array 32.56 320 P **P 12 58 08.2 -2.0**
BVAR PcP PcP 13 00 53.6 -3.1
BVAR LR LR 13 12 24.1
BRVK Borovoye 32.64 320 P **P 12 58 12.1 +1.2**
comp=Z,174nm,0.7s,mb6.1,SNR=13
BRVK Borovoye 32.64 320 *ce*P **P 12 58 11.6 +0.7**
BRVK pmax pmax
comp=Z,24nm,0.7s,mb5.2
BRVK Borovoye 32.64 320 *e*P **P 12 58 10.7 -0.1**
comp=Z,24nm,0.8s,mb5.2
PALK Pallekele 33.71 228 LR LR 13 15 01.2
comp=Z,69nm,18.1s,MS3.4,baz=299,slow=42
YAK Yakutsk 33.75 21 *e*P **P 12 58 25.3 +4.9**
YAK *e**PP 12 58 36.0
YAK *e* 12 59 43.4
YAK *e* 13 00 54.6
YAK *e* 13 08 44.8
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
YAK pmax pmax
comp=Z,37nm,3.8s
YAK pmax pmax
comp=E,111nm,6.1s
YAK pmax pmax
comp=N,58nm,6.0s
YAK MLR MLR
comp=Z,271nm,11.0s,MS4.2
YAK MLR MLR
comp=N,179nm,12.0s,MS4.1
YAK MLR MLR
comp=E,188nm,14.0s,MS4.1
ABKAR Akbulak array 37.70 310 *e*P **P 12 58 52.8 -1.7**
comp=E,14nm,0.6s,mb4.9
AKTK Aktyubinsk 39.12 312 P **P 12 59 04.3 -2.2**
AKTK LR LR 13 16 29.0
AKTO Aktyubinsk 39.12 312 P **P 12 59 04.3 -2.2**
comp=E,19nm,0.6s,mb4.9,baz=98,slow=9.8,SNR=54
AKTO LR LR 13 16 29.0
comp=E,300nm,18.6s,MS4.2,baz=103,slow=38
SVE Sverdlovsk 39.22 322⇓*e*P **P 12 59 08.8 +1.6**
SVE pmax pmax
comp=Z,70nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,350nm,18.0s,MS4.2
KAPI Kappang 39.49 157 P **P 12 59 08.7 -1.2**
comp=Z,28nm,0.8s,mb4.9,baz=329,slow=8.8,SNR=6.5
ARU Arti 40.19 321 P **P 12 59 16.5 +1.2**
comp=Z,683nm,0.8s,SNR=20
ARU Arti 40.19 321 *d*/*e*P **P 12 59 15.9 +0.6**
ARU *e* 13 00 46.8
ARU S **S 13 05 23.3 +0.5**
ARU SS SS 13 08 17.9 -2.3
ARU pmax pmax
comp=Z,116nm,1.0s,mb5.5
ARU Arti 40.19 321 *e*P **P 12 59 13.5 -1.7**
comp=Z,100nm,0.9s,mb5.5
TIXI Tiksi 41.50 11 *e*P **P 12 59 23.3 -2.6**
TIXI pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
TIXI MLR MLR
comp=Z,498nm,14.0s,MS4.5
TIXI Tiksi 41.50 11 *e*P **P 12 59 26.3 +0.4**
comp=Z,6.4nm,0.7s,mb4.5
SOKR Solikamsk 42.05 325 *c*/*i*P **P 12 59 31.9 +1.4**
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.2
SOKR MLR MLR
comp=Z,160nm,17.0s,MS4.0
SEY Seymchan 42.67 30 *ce*P **P 12 59 34.6 -0.9**
PETK Petropavlovsk- 42.73 45 P **P 12 59 33.2 -3.0**
comp=Z,8.8nm,0.8s,mb4.5,baz=214,slow=4.5,SNR=9.1
PETK Petropavlovsk- 42.73 45 P **P 12 59 33.2 -3.1**
ZEI Tsey 48.85 301 *e*P **P 13 00 25.1 +0.4**
ZEI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
MIB Mutribah 49.18 283 *e*P **P 13 00 27.4 0.0**
MIB AMb AMB 13 00 30.4
comp=Z,27nm,1.1s,mb5.2
RDF Al-Radifah 49.28 282 *e*P **P 13 00 28.4 +0.1**
RDF AMb AMB 13 00 32.4
comp=Z,35nm,1.5s,mb5.2
VRHR Novokhopersk 49.53 312 *e*P **P 13 00 30.0 +0.2**
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.8s
KIV Kislovodsk 49.54 303 *e*P **P 13 00 30.8 +0.8**
KIV pmax pmax
comp=Z,39nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,234nm,17.0s,MS4.2
KIV Kislovodsk 49.54 303 *e*P **P 13 00 32.0 +2.0**
comp=Z,28nm,0.9s,mb5.2
BILL Bilibino 49.78 26 *e*P **P 13 00 29.9 -1.5**
BILL pmax pmax
comp=Z,22nm,2.5s,mb4.6
BILL MLR MLR
comp=Z,300nm,13.0s,MS4.5
BILL Bilibino 49.78 26 *e*P **P 13 00 30.3 -1.2**
comp=Z,5.2nm,0.6s,mb4.6
KLMR Klimovskoe 50.73 325 *e*P **P 13 00 38.5 -0.3**
KLMR pmax pmax
comp=Z,95nm,1.1s,mb5.6
VSR Storozhevoye 51.07 312 *e*P **P 13 00 41.5 +0.1**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=N,9.0nm,0.6s
VSR pmax pmax
comp=E,30nm,1.6s
KAKA Kakadu 51.68 145 *e*P **P 13 00 42.9 -3.5**
comp=E,20nm,0.9s,mb5.0
KAKA Kakadu 51.68 145 *e*P **P 13 00 44.6 -1.8**
comp=E,36nm,0.9s,mb5.3
MOS Moscow 51.70 318 *e*P **P 13 00 45.1 -1.0**
MOS pmax pmax
comp=Z,95nm,1.0s,mb5.7
OBN Obninsk 52.34 317 *e*P **P 13 00 51.2 +0.4**
OBN *i* 13 02 50.0
OBN pmax pmax
comp=Z,67nm,1.6s,mb5.3
KNA Kununurra 52.73 151 *e*P **P 13 00 53.5 -0.6**
comp=Z,31nm,0.5s,mb5.5
LVZ Lovozero 53.32 334 *ce*P **P 13 00 59.4 +1.5**
LVZ pmax pmax
comp=Z,44nm,1.7s,mb5.1
FITZ Fitzroy Crossi 53.69 156⇑*i*P **P 13 01 00.2 -1.0**
comp=Z,15nm,0.6s,mb5.2
FITZ Fitzroy Crossi 53.69 156 P **P 13 01 00.5 -0.7**
comp=Z,13nm,0.9s,mb5.0,baz=336,slow=4.9,SNR=29
APA Apatity 53.77 333⇓*i*P **P 13 01 02.6 +1.3**
APA MLR MLR
comp=Z,500nm,13.0s,MS4.8
MALT Malatya 53.85 296 *e*P **P 13 01 04.0 +1.7**
JOF Joensuu 54.64 327 *e*P **P 13 01 08.1 +0.5**
JOF pmax pmax
comp=Z,32nm,0.8s,mb5.4
JOF Joensuu 54.64 327 *ep* **P 13 01 08.1 +0.5**
comp=Z,32nm,0.8s,mb5.4
MBWA Marble Bar 54.83 163 *e*P **P 13 01 09.0 -0.5**
comp=Z,24nm,1.0s,mb5.2
SIM Simferopol' 55.39 305 *e*P **P 13 01 14.7 +1.3**
SIM pmax pmax
comp=Z,34nm,0.8s,mb5.4
KEV Kevo 56.14 336 *e*P **P 13 01 18.9 +0.5**
KEV pmax pmax
comp=Z,40nm,0.7s,mb5.6
KEV Kevo 56.14 336 *ep* **P 13 01 18.9 +0.5**
comp=Z,40nm,0.7s,mb5.5
ARCES ARCESS Array B 56.67 336 P **P 13 01 20.2 -2.0**
comp=Z,28nm,0.8s,mb5.4,baz=82,slow=8.7,SNR=65
ARE0 ARCESS Array S 56.67 336 *e*P **P 13 01 22.4 +0.3**
KAF Kangasniemi 57.02 327 *e*P **P 13 01 24.8 +0.1**

KAF pmax pmax
comp=Z,22nm,0.6s,mb5.4
KAF Kangasniemi 57.02 327 *ep* **P 13 01 24.8 +0.1**
comp=Z,22nm,0.6s,mb5.4
BRTR Keskin Array B 57.06 299 P **P 13 01 22.9 -2.5**
comp=Z,7.1nm,0.6s,mb4.8,baz=99,slow=6.9,SNR=30
BRTR LR LR 13 29 34.3
comp=Z,51nm,20.2s,MS3.6,baz=214,slow=40
FINES FINESS Array B 57.21 326 P **P 13 01 24.4 -1.7**
comp=Z,41nm,0.7s,mb5.5,baz=117,slow=6.6,SNR=69
VSU Vasula 57.33 322 *eP* **P 13 01 27.7 +0.7**
AKASG Malin Array Be 57.36 313 P **P 13 01 24.7 -2.6**
comp=Z,12nm,0.5s,mb5.2,baz=69,slow=6.3,SNR=24
AKASG Malin Array Be 57.36 313 P **P 13 01 24.7 -2.6**
AKBB Malin Array Si 57.36 313 *eP* **P 13 01 27.7 +0.4**
COEN Coen 58.52 136 *eP* **P 13 01 35.9 +0.1**
comp=Z,114nm,0.9s,mb5.9
SPB4 Spitsbergen Ar 58.52 346 *eP* **P 13 01 36.7 +1.6**
WRAB Tennant Creek 58.85 148 P **P 13 01 37.0 -1.0**
comp=Z,421nm,0.6s,SNR=29
WRAB Tennant Creek 58.85 148 *eP* **P 13 01 37.7 -0.3**
WRAB pmax pmax
comp=Z,46nm,0.7s,mb5.6
WRAB Tennant Creek 58.85 148 *eP* **P 13 01 37.7 -0.3**
comp=Z,46nm,0.7s,mb5.6
WRA Warramunga Arr 58.85 148 P **P 13 01 37.6 -0.5**
comp=Z,35nm,0.9s,mb5.4,baz=341,slow=7.5,SNR=178
WRA PcP PcP 13 02 26.6 -0.9
comp=Z,3.7nm,0.7s,baz=345,slow=7.0,SNR=5.2
TIRR Tirgusor 59.45 306⇑ *iP* **P 13 01 42.7 +0.7**
VRI Vrincioaia 60.19 308⇑ *iP* **P 13 01 48.5 +1.4**
SUW Suwalki 60.20 318 *eP* **P 13 01 47.5 +0.5**
BUR08 Bucovina Ar. S 60.68 310 *eP* **P 13 01 51.3 +0.8**
MLR Muntele Rosu 60.82 308⇑ *iP* **P 13 01 52.7 +1.3**
KWP Kalwaria Pacla 61.68 313 *eP* **P 13 01 58.4 +1.2**
KWP Kalwaria Pacla 61.68 313 *eP* **P 13 01 58.5 +1.3**
comp=Z,52nm,0.9s,mb5.8
KWP Kalwaria Pacla 61.68 313⇑ *iP* **P 13 01 58.6 +1.4**
ASAR Alice Springs 61.93 150 P **P 13 01 58.8 -0.3**
comp=Z,12nm,0.7s,mb5.2,baz=333,slow=6.2,SNR=127
ASAR PcP PcP 13 02 38.4 -1.4
comp=Z,5.4nm,0.8s,baz=338,slow=4.9,SNR=5.1
KOLS Kolonicke sedl 62.16 312 *eP* **P 13 02 01.4 +1.0**
KOLS pmax pmax
comp=Z,8.0nm,1.5s,mb4.7
KOLS Kolonicke sedl 62.16 312 *eP* **P 13 02 01.4 +1.0**
comp=Z,7.9nm,1.5s,mb4.7
KOLS Kolonicke sedl 62.16 312 *eP* **P 13 02 01.4 +1.0**
STHS Stebnicka Huta 62.66 313 *eP* **P 13 02 04.7 +1.0**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
STHS Stebnicka Huta 62.66 313 *eP* **P 13 02 04.7 +1.0**
comp=Z,5.1nm,1.0s,mb4.6
STHS Stebnicka Huta 62.66 313 *eP* **P 13 02 04.7 +1.0**
NIE Niedzica 63.23 313 *eP* **P 13 02 09.1 +1.5**
OJC Ojcow 63.29 314 *eP* **P 13 02 07.7 -0.2**
KECS Kecovo 63.43 312 *eP* **P 13 02 09.5 +0.6**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
KECS Kecovo 63.43 312 *eP* **P 13 02 09.5 +0.6**
comp=Z,3.1nm,0.9s,mb4.4
KECS Kecovo 63.43 312 *eP* **P 13 02 09.5 +0.6**
PSZ Piszkesteto 63.99 312⇓ *eP* **P 13 02 12.1 -0.5**
NB2 NORSAR Subarra 64.27 327 P **P 13 02 14.0 -0.2**
comp=Z,22nm,0.6s,mb5.6,baz=71,slow=6.5
NOA NORSAR Array B 64.27 327 P **P 13 02 12.2 -2.0**
comp=Z,24nm,0.7s,mb5.5,baz=71,slow=6.6,SNR=61
NOA LR LR 13 31 59.0
comp=Z,82nm,19.3s,MS3.9,baz=105,slow=38
OKC Ostrava-Krasne 64.42 314 *eP* **P 13 02 16.6 +1.2**
OKC MLR MLR
comp=Z,300nm,17.2s,MS4.5
OKC Ostrava-Krasne 64.42 314 *eP* **P 13 02 16.6 +1.2**
OKC AMS AMS 13 31 10.0
comp=Z,300nm,17.2s
VYHS Vyhne 64.46 313 *eP* **P 13 02 15.7 0.0**
VYHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.8
VYHS Vyhne 64.46 313 *eP* **P 13 02 15.7 0.0**
comp=Z,8.7nm,1.3s,mb4.8
VYHS Vyhne 64.46 313 *eP* **P 13 02 15.7 0.0**
NAO01 NORSAR Array S 64.49 327 *eP* **P 13 02 15.5 -0.1**
comp=Z,9.6nm,0.7s,mb5.1
BUD Budapest 64.69 312⇑ *eP* **P 13 02 19.0 +1.8**
KOLL Kolacno 64.70 313 *eP* **P 13 02 18.7 +1.5**
KOLL Kolacno 64.70 313 *eP* **P 13 02 18.7 +1.5**
MORC Moravsky Berou 64.81 314 *eP* **P 13 02 19.2 +1.3**
MORC pmax pmax
comp=Z,13nm,1.1s,mb5.1
MORC Moravsky Berou 64.81 314 *eP* **P 13 02 19.2 +1.3**
comp=Z,13nm,1.1s,mb5.1
CTA Charters Tower 65.14 137 LR LR 13 33 05.9
comp=Z,27nm,21.1s,MS3.4,baz=238,slow=38
KSP Ksiaz 65.18 316 *eP* **P 13 02 21.0 +0.7**
DPC Dobruska-Polom 65.34 315 *eP* **P 13 02 22.7 +1.3**
DPC MLR MLR
comp=Z,300nm,17.0s,MS4.6
DPC Dobruska-Polom 65.34 315 *eP* **P 13 02 22.7 +1.3**
DPC AMS AMS 13 31 50.0
comp=Z,300nm,17.0s
KONO Kongsberg 65.52 326 *eP* **P 13 02 22.5 +0.1**
KONO pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
KONO Kongsberg 65.52 326 *eP* **P 13 02 22.5 +0.1**
comp=Z,8.9nm,0.7s,mb5.1
TREC Trest 66.23 314 *eP* **P 13 02 27.8 +0.7**
TREC MLR MLR
comp=Z,200nm,16.7s,MS4.4
TREC Trest 66.23 314 *eP* **P 13 02 27.8 +0.7**
TREC AMS AMS 13 32 20.0
comp=Z,200nm,16.7s
FORT Forrest 66.25 159 *eP* **P 13 02 26.9 -0.4**
comp=Z,22nm,0.8s,mb5.5
FORT Forrest 66.25 159 *eP* **P 13 02 27.3 0.0**
PVCC Panska Ves 66.31 316 *eP* **P 13 02 27.8 +0.2**
PVCC MLR MLR
comp=Z,300nm,10.3s,MS4.8
PVCC Panska Ves 66.31 316 *eP* **P 13 02 27.8 +0.2**
PVCC AMS AMS 13 32 30.0
comp=Z,300nm,10.3s
CONA Conrad Observa 66.52 313⇓ *iP* **P 13 02 30.0 +1.0**
comp=Z,9.0nm,1.3s,mb4.8
PRU Pruhonice 66.54 315 *eP* **P 13 02 30.6 +1.5**
PRU MLR MLR
comp=Z,300nm,18.4s,MS4.5
PRU Pruhonice 66.54 315 *eP* **P 13 02 30.6 +1.5**
PRU AMS AMS 13 32 30.0
comp=Z,300nm,18.4s
BRG Berggiesshubel 66.55 316 *eP* **P 13 02 29.3 +0.2**
comp=Z,9.0nm,0.9s,mb5.0
BRG Berggiesshubel 66.55 316 *eP* **P 13 02 29.3 +0.1**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
CHUM Lake Minchumin 66.76 28 *eP* **P 13 02 29.8 -0.5**
comp=Z,5.7nm,0.7s,mb4.9
CLL Collm 66.93 317 *eP* **P 13 02 32.0 +0.4**
CLL *e* 13 02 47.0
CLL MLR MLR
comp=Z,100nm,18.8s,MS4.1
CLL Collm 66.93 317 *eP* **P 13 02 32.0 +0.4**
CLL Lm 13 32 00.0
comp=Z,100nm,18.8s
MUD Monsted U'grnd 66.97 323⇓ *iP* **P 13 02 32.4 +0.6**
MUD pmax pmax
comp=Z,24nm,1.0s,mb5.4
MUD Monsted U'grnd 66.97 323⇓ *iP* **P 13 02 32.4 +0.6**
comp=Z,24nm,1.0s,mb5.4
BPAW Bear Paw Mtn. 67.19 28 *eP* **P 13 02 32.2 -0.8**
comp=Z,11nm,0.9s,mb5.1
PPLA Purkeypile 67.25 29 *eP* **P 13 02 32.6 -0.8**
comp=Z,11nm,0.7s,mb5.2
KHC Kasperske Hory 67.45 315 *eP* **P 13 02 36.1 +1.2**
KHC MLR MLR
comp=Z,300nm,20.3s,MS4.5
KHC Kasperske Hory 67.45 315 *eP* **P 13 02 36.1 +1.2**
KHC AMS AMS 13 33 00.0
comp=Z,300nm,20.3s
GEC2 GERESS Array S 67.49 314 *eP* **P 13 02 36.2 +1.1**
GEC2 pmax pmax
comp=Z,3μm,1.2s
GEC2 GERESS Array S 67.49 314 *eP* **P 13 02 36.2 +1.1**
comp=Z,3μm,1.2s
GERES GERESS Array B 67.49 314 P **P 13 02 33.4 -1.8**
comp=Z,3.4nm,0.8s,mb4.7,baz=64,slow=6.1,SNR=15
GERES LR LR 13 33 33.7
comp=Z,202nm,19.7s,MS4.3,baz=76,slow=37

SOKA Soboth 67.53 312⇓ *iP* **P 13 02 36.0 +0.5**
comp=Z,10nm,1.0s,mb5.0
NKC Novy Kostel 67.68 316 *eP* **P 13 02 37.3 +1.0**
NKC MLR MLR
comp=Z,300nm,13.9s,MS4.7
NKC Novy Kostel 67.68 316 *eP* **P 13 02 37.3 +1.0**
NKC AMS AMS 13 33 20.0
comp=Z,300nm,13.9s
MOX Moxa 68.00 317 *eP* **P 13 02 36.3 -2.0**
COLA College 68.03 26 *eP* **P 13 02 37.1 -1.2**
COLA pmax pmax
comp=Z,11nm,0.8s,mb5.1
COLA College 68.03 26 *eP* **P 13 02 37.1 -1.2**
comp=Z,11nm,0.8s,mb5.2
MCK McKinley 68.16 27 *eP* **P 13 02 38.0 -1.1**
MCK pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
MCK McKinley 68.16 27 *eP* **P 13 02 38.0 -1.1**
comp=Z,4.9nm,0.6s,mb4.9
GRA1 Grafenberg Arr 68.62 316 *eP* **P 13 02 40.8 -1.5**
comp=Z,16nm,1.4s,mb5.1
GRA1 LR LR
comp=Z,300nm,19.5s,MS4.5
GRF Grafenberg Arr 68.62 316 *eP* **P 13 02 40.8 -1.5**
comp=Z,16nm,1.4s,mb5.1
GRF *eL* 13 34 01.0
comp=Z,294nm,19.5s
GRF Grafenberg Arr 68.62 316 *eP* **P 13 02 40.8 -1.5**
GRF pmax pmax
comp=Z,16nm,1.4s,mb5.1
GRF MLR MLR
comp=Z,300nm,19.5s,MS4.5
GRF Grafenberg Arr 68.62 316 *eP* **P 13 02 40.8 -1.5**
GRF pmax pmax
comp=Z,16nm,1.4s,mb5.1
GRF MLR MLR
comp=Z,300nm,19.5s,MS4.5
GRF Grafenberg Arr 68.62 316 *eP* **P 13 02 40.8 -1.5**
comp=Z,16nm,1.4s,mb5.1
GRF LR LR
comp=Z,300nm,19.5s,MS4.5
KDAK Kodiak Island 69.39 34 *iP* **P 13 02 48.7 +1.8**
WTTA Wattenberg 69.40 313⇓ *iP* **P 13 02 47.8 +0.6**
comp=Z,5.5nm,0.5s,mb5.0
FETA Feichten 70.06 313⇓ *iP* **P 13 02 50.3 -1.0**
comp=Z,12nm,1.1s,mb4.9
EGAK Eagle 70.51 25 *eP* **P 13 02 52.1 -1.6**
comp=Z,2.9nm,0.6s,mb4.6
INK Inuvik 70.81 20 *eP* **P 13 02 53.8 -1.6**
INK pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 70.81 20 *eP* **P 13 02 53.8 -1.6**
comp=Z,8.9nm,0.9s,mb4.9
BBOO Buckleboo 70.89 153⇑ *iP* **P 13 02 55.2 -1.1**
comp=Z,9.6nm,1.3s,mb4.8
SCO Scoresbysund 70.91 344 *iP* **P 13 02 56.5 +0.5**
SCO pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
SCO Scoresbysund 70.91 344 *iP* **P 13 02 56.5 +0.5**
comp=Z,2.5nm,0.8s,mb4.4
BMRM Bremner River 71.32 29 *eP* **P 13 02 56.0 -2.7**
comp=Z,15nm,0.7s,mb5.2
CDF Champ du Feu 71.52 316 *eP* **P 13 03 00.3 +0.2**
comp=Z,6.4nm,0.5s,mb4.7
CDF Champ du Feu 71.52 316 *eP* **P 13 03 00.3 +0.2**
CDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
CDF Champ du Feu 71.52 316 *eP* **P 13 03 00.3 +0.2**
comp=Z,3.2nm,0.5s,mb4.7
DAWY Dason 71.55 25 *eP* **P 13 02 52.7 -7.3**
WLF Walferdange 71.58 317 P **P 13 03 00.4 -0.1**
comp=Z,15nm,1.3s,mb5.0
EIDS Eidsvold 72.03 137 *eP* **P 13 03 03.5 +0.2**
comp=Z,11nm,0.8s,mb5.0
KMBO Kilima Mbogo 72.11 257 P **P 13 03 02.1 -2.1**
comp=Z,2.4nm,0.9s,mb4.3,baz=34,slow=23,SNR=5.0
KMBO Kilima Mbogo 72.11 257 P **P 13 03 02.1 -2.0**
KMBO pmax pmax
comp=Z,2.0nm,0.9s
KMBO Kilima Mbogo 72.11 257 *eP* **P 13 03 03.0 -1.1**
comp=Z,5.7nm,0.9s,mb4.7
DOU Dourbes 72.27 318 P **P 13 03 05.5 +1.0**
DOU AP 13 03 07.4
STKA Stephens Creek 72.40 148 *eP* **P 13 03 04.5 -0.9**
comp=Z,7.9nm,0.7s,mb5.0
STKA Stephens Creek 72.40 148 P **P 13 03 04.9 -0.5**
comp=Z,12nm,0.8s,mb5.1,baz=326,slow=6.9,SNR=25
SUMG Summit 72.56 349 *eP* **P 13 03 07.2 +1.3**
comp=Z,15nm,1.0s,mb5.1
RES Resolute Bay 72.57 6 *eP* **P 13 03 03.8 -2.1**
RES pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
RES Resolute Bay 72.57 6 *eP* **P 13 03 03.8 -2.1**
comp=Z,4.8nm,0.9s,mb4.6
LPG La Plagne 73.22 313 *eP* **P 13 03 11.3 +1.0**
comp=Z,40nm,0.6s,mb5.4
LPG La Plagne 73.22 313 *eP* **P 13 03 11.3 +1.0**
LPG pmax pmax
comp=Z,20nm,0.6s,mb5.4
LPG La Plagne 73.22 313 *eP* **P 13 03 11.3 +1.0**
comp=Z,20nm,0.6s,mb5.4
CMSA Cobar Meteorol 74.04 145⇑ *iP* **P 13 03 15.0 -0.1**
HYT Haines Junctio 74.22 27 *eP* **P 13 03 15.8 -0.1**
SMF Signal de Mont 74.41 315 *eP* **P 13 03 17.3 0.0**
comp=Z,34nm,1.1s,mb5.0
SMF Signal de Mont 74.41 315 *eP* **P 13 03 17.3 0.0**
SMF pmax pmax
comp=Z,17nm,1.1s,mb5.0
SMF Signal de Mont 74.41 315 *eP* **P 13 03 17.3 0.0**
comp=Z,17nm,1.1s,mb5.0
TCF Toulx Ste Croi 75.56 316 *eP* **P 13 03 24.4 +0.5**
comp=Z,12nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.56 316 *eP* **P 13 03 24.4 +0.5**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.56 316 *eP* **P 13 03 24.4 +0.5**
comp=Z,6.3nm,0.9s,mb4.8
KEST Kesra 76.27 304 P **P 13 03 28.2 0.0**
comp=Z,2.0nm,0.6s,mb4.4,baz=322,slow=5.7,SNR=5.7
CAF Calviac 76.36 315 *eP* **P 13 03 29.3 +0.8**
comp=Z,7.9nm,0.7s,mb4.6
CAF Calviac 76.36 315 *eP* **P 13 03 29.3 +0.8**
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
CAF Calviac 76.36 315 *eP* **P 13 03 29.3 +0.8**
comp=Z,4.0nm,0.7s,mb4.7
TOO Toolangi 78.91 148 *eP* **P 13 03 42.4 -0.2**
SFJD Kangerlussuaq 79.43 351 *eP* **P 13 03 44.0 -1.2**
SFJD pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
SFJD Kangerlussuaq 79.43 351 *eP* **P 13 03 44.0 -1.2**
comp=Z,6.0nm,0.6s,mb4.8
SFJD Kangerlussuaq 79.43 351 *iP* **P 13 03 44.6 -0.6**
comp=Z,7.6nm,0.8s,mb4.8
YKA Yellowknife Ar 80.37 18 P **P 13 03 48.4 -1.9**
comp=Z,4.8nm,0.5s,mb4.7,baz=329,slow=5.2,SNR=74
YKA LR LR 13 44 56.4
comp=Z,8.0nm,18.9s,baz=350,slow=40
ESDC Sonseca Array 83.00 313 P **P 13 04 04.6 -0.1**
comp=Z,0.4nm,0.4s,mb4.0,baz=40,slow=6.0,SNR=4.9
ESDC Sonseca Array 83.00 313 P **P 13 04 04.6 -0.1**
NLWA Neilton Lookou 89.32 31 *eP* **P 13 04 34.1 -1.6**
FFC Flin Flon 90.32 15 P **P 13 04 38.6 -1.6**
comp=Z,64nm,0.8s,mb5.9,SNR=5.3
FFC Flin Flon 90.32 15 *eP* **P 13 04 38.4 -1.8**
FFC pmax pmax
comp=Z,11nm,0.9s,mb5.1
FFC Flin Flon 90.32 15 *eP* **P 13 04 38.4 -1.8**
comp=Z,11nm,0.9s,mb5.1
ETW Entiat 90.65 29 *eP* **P 13 04 41.4 -0.5**
SCHQ Schefferville 93.06 355 P **P 13 04 51.5 -1.4**
comp=Z,5.5nm,0.9s,mb5.0,baz=31,slow=6.4,SNR=6.7
TORD Torodi Ar. Bea 94.23 288 P **P 13 04 56.3 -2.7**
comp=Z,2.0nm,0.9s,mb4.5,baz=47,slow=4.5,SNR=8.7
PDAR Pinedale Array 98.86 25 LR LR 13 52 32.3
comp=Z,44nm,20.5s,MS3.9,baz=111,slow=37
QSPA South Pole Qui 121.96 180 *e*PKPdf PKPdf 13 10 30.9 -1.6
OTAV Otavalo 147.56 7 *e*PKPbc PKPbc 13 11 23.6 -0.8
LPAZ La Paz 163.06 338 PKP PKPdf 13 11 41.4 -1.0
comp=Z,1.1nm,0.8s,baz=60,slow=22,SNR=3.5
LPAZ La Paz 163.06 338 PKP PKPdf 13 11 41.4 -1.0

CSEM ***13*** *12:57:25.8±0.1, 38.°39N×38.°95E, h8km, MD2.8, Error ellipse: s-maj=4.2km s-min=2.0km az=174.0*
DDA ***13*** *12:57:25.4, 38.°35N×38.°94E, h11km±1km, Md2.8*

ISK ***13*** *12:57:25.2, 38.°38N×38.°94E, h9km, MD3.0*
ISCJB ***13*** *12:57:26.0±0.5, 38.°37N±0.°05×38.°94E±0.°03, h7km±5km, Error ellipse: s-maj=8.6km s-min=3.8km az=176.3*
ISC 13 12:57:26.3±0.5, 38.°37N±0.°05×38.°94E±0.°03, h6km±5km, n24, σ0.°78/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.13**	**15**	*i* P	**Pg**	**12 57 29.2**	**+0.1**
ELZG				*i* S	**Sg**	**12 57 32.0**	**+1.0**
ELZG	**Elazig**	**0.13**	**15**	*i* P	**Pg**	**12 57 29.2**	**+0.1**
ELZG				*i* S	**Sg**	**12 57 32.0**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.29**	**88**	PG	**Pg**	**12 57 31.4**	**-0.6**
SVRC				*e*SG	**Sg**	**12 57 36.0**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.29**	**88**	*i* Pg	**Pg**	**12 57 31.4**	**-0.5**
SVRC				*e*Sg	**Sg**	**12 57 36.0**	**+0.3**
MALT	**Malatya**	**0.41**	**262**	*e*PG	**Pg**	**12 57 33.6**	**-0.6**
MALT				*e*SG	**Sg**	**12 57 39.8**	**+0.2**
MALT	**Malatya**	**0.41**	**262**	*e*Pg	**Pg**	**12 57 33.6**	**-0.6**
MALT				*e*Sg	**Sg**	**12 57 39.8**	**+0.2**
MYA	**Malataya**	**0.41**	**264**	*e*PG	**Pg**	**12 57 33.8**	**-0.4**
MYA				*e*SG	**Sg**	**12 57 40.3**	**+0.7**
MYA	**Malataya**	**0.41**	**264**	*e*Pg	**Pg**	**12 57 33.8**	**-0.4**
MYA				*e*Sg	**Sg**	**12 57 40.3**	**+0.7**
PTK	**Pertek**	**0.63**	**34**	*e*PG	**Pg**	**12 57 37.6**	**-0.9**
PTK	**Pertek**	**0.63**	**34**	*e*Pg	**Pg**	**12 57 37.6**	**-0.9**
AKCD	**Akcadag**	**0.81**	**265**	*i* P	**Pg**	**12 57 41.0**	**-0.8**
AKCD				*i* S	**Sg**	**12 57 52.6**	**+0.3**
AKCD	**Akcadag**	**0.81**	**265**	*i* P	**Pg**	**12 57 41.0**	**-0.8**
AKCD				*i* S	**Sg**	**12 57 52.6**	**+0.3**
DIYA	**Diyarbakir**	**1.03**	**115**	*i* P	**Pg**	**12 57 45.9**	**-0.2**
DIYA				*i* S	**Sg**	**12 57 59.6**	**+0.1**
DIYA	**Diyarbakir**	**1.03**	**115**	*i* P	**Pg**	**12 57 45.9**	**-0.2**
DIYA				*i* S	**Sg**	**12 57 59.6**	**+0.1**
DARE	**Darende-Malaty**	**1.06**	**304**	*e*PN	**Pn**	**12 57 48.0**	**+0.3**
DARE	**Darende-Malaty**	**1.06**	**304**	*e*Pn	**Pn**	**12 57 48.0**	**+0.3**
EZC	**Erzincan**	**1.42**	**13**	*e*PN	**Pn**	**12 57 51.7**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.79**	**281**	*e*PN	**Pn**	**12 58 00.3**	**+2.6**
SARI	**SarD1z-Kayseri**	**1.79**	**281**	*e*Pn	**Pn**	**12 58 00.3**	**+2.6**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*PN	**Pn**	**12 57 57.6**	**-0.7**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*Pn	**Pn**	**12 57 57.6**	**-0.7**
BEST	**Besiri**	**1.90**	**104**	*i* P	**Pn**	**12 58 00.4**	**+1.2**
BEST				*i* S	**Sn**	**12 58 23.6**	**+0.2**
SVSK	**Karacayir**	**2.16**	**316**	*e*PN	**Pn**	**12 58 02.1**	**-0.8**
SVSK	**Karacayir**	**2.16**	**316**	*e*Pn	**Pn**	**12 58 02.1**	**-0.8**

IDC ***13*** *13:00:06.4±1.1, 31.°06N×103.°42E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.5/25, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=40.3km s-min=20.1km az=57.0*
NEIC ***13*** *13:00:08.0±0.6, 31.°05N×103.°34E, h10km, mb4.1/1, Error ellipse: s-maj=26.5km s-min=10.3km az=66.0*
ISCJB ***13*** *13:00:08.5±1.5, 31.°1N±0.°1×103.°5E±0.°2, h28km±10km, mb3.5/8, Error ellipse: s-maj=30.2km s-min=14.4km az=151.6*
BJI ***13*** *13:00:14.2, 30.°95N×103.°58E, h9km, ML3.7/4*
ISC 13 13:00:08.7±2.0, 31.°1N±0.°1×103.°4E±0.°2, h14km±12km, n12, σ0.°64/13, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**124**	Pg	**Pg**	**13 00 15.3**	**-0.4**
CD2				Sg	**Sg**	**13 00 20.8**	**+0.5**
SONM	**Songino Array**	**16.87**	**7**	Pn	**Pn**	**13 04 04.0**	**-0.3**
	0.1nm,0.3s,baz=181,slow=10,SNR=2.0						
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**13 04 52.5**	**-1.1**
	0.8nm,0.7s,mb3.2,baz=256,slow=9.0,SNR=2.9						
MKAR	**Makanchi Array**	**22.61**	**320**	P	**P**	**13 05 08.6**	**-0.2**
	0.2nm,0.3s,mb3.0,baz=113,slow=14,SNR=2.2						
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**13 05 45.2**	**0.0**
	1.2nm,0.7s,mb3.6,baz=140,slow=9.4,SNR=4.7						
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**13 05 48.7**	**-0.4**
	0.3nm,0.4s,mb3.2,baz=126,slow=9.9,SNR=2.6						
TIXI	**Tiksi**	**42.87**	**12**	*e*P	**P**	**13 08 07.0**	**+0.9**
	1.2nm,0.3s,mb4.1						
WRAB	**Tennant Creek**	**58.79**	**146**	*e*P	**P**	**13 10 06.8**	**+0.2**
WRA	**Warramunga Arr**	**58.79**	**146**	P	**P**	**13 10 06.2**	**-0.4**
	0.5nm,0.5s,mb3.9,baz=337,slow=7.6,SNR=6.9						
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**13 10 26.8**	**-0.2**
	0.1nm,0.3s,mb3.4,baz=335,slow=6.6,SNR=3.2						
YKA	**Yellowknife Ar**	**81.87**	**17**	P	**P**	**13 12 28.6**	**+1.4**
	0.2nm,0.5s,mb3.3,baz=329,slow=5.0,SNR=5.8						
YKA	**Yellowknife Ar**	**81.87**	**17**	P	**P**	**13 12 28.6**	**+1.4**

ISCJB ***13*** *13:04:46.3±0.6, 24.°24N±0.°05×122.°66E±0.°02, h62km±11km, Error ellipse: s-maj=8.2km s-min=3.3km az=174.8*
TAP ***13*** *13:04:46.5, 24.°24N×122.°64E, h55km±2km, ML3.0, D*
JMA ***13*** *13:04:46.5±0.1, 24.°53N×122.°71E, h71km±1km, M2.0*
ISC 13 13:04:46.9±0.6, 24.°24N±0.°05×122.°66E±0.°02, h59km±11km, n26, σ0.°49/51, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.39**	**55**	P	**Pn**	**13 04 57.7**	**+0.1**
YOJ				*e*S	**Sn**	**13 05 06.0**	**+0.6**
TWC	**Suao**	**0.82**	**297**	*i* P	**Pn**	**13 05 02.4**	**-0.2**
	baz=297						
TWC				*i* S	**Sn**	**13 05 13.8**	**-0.4**
	baz=297						
ENA	**Nanau**	**0.86**	**283**	*i* P	**Pn**	**13 05 03.0**	**0.0**
	baz=282						
ENA				*i* S	**Sn**	**13 05 15.1**	**+0.2**
	baz=282						
EGS		**0.90**	**312**	P	**Pn**	**13 05 03.3**	**-0.2**
	baz=313						
EGS				*e*S	**Sn**	**13 05 15.2**	**-0.6**
	baz=313						
IRIF	**Iriomote-Funau**	**0.98**	**84**	P	**Pn**	**13 05 04.6**	**0.0**
IRIF				*e*S	**Sn**	**13 05 18.3**	**+0.5**
TWD	**Chiawan**	**0.98**	**261**	P	**Pn**	**13 05 04.4**	**-0.3**
	baz=260						
TWD				S	**Sn**	**13 05 17.9**	**+0.1**
	baz=260						
TWE	**Neicheng**	**1.02**	**298**	P	**Pn**	**13 05 05.0**	**-0.2**
	baz=298						
TWE				S	**Sn**	**13 05 18.7**	**0.0**
	baz=298						
NNS	**Nan Shan**	**1.19**	**280**	P	**Pn**	**13 05 07.3**	**-0.1**
	baz=279						
NNS				S	**Sn**	**13 05 22.7**	**+0.1**
	baz=279						
ESL	**Shilin**	**1.20**	**250**	*e*P	**Pn**	**13 05 06.9**	**-0.6**
	baz=248						
ESL				S	**Sn**	**13 05 22.9**	**0.0**
	baz=248						
JKRS	**Kuro-shima**	**1.23**	**90**	P	**Pn**	**13 05 08.3**	**+0.4**
JKRS				*e*S	**Sn**	**13 05 24.0**	**+0.3**
NSK	**Sanguang**	**1.26**	**290**	P	**Pn**	**13 05 08.5**	**+0.1**
	baz=290						
NSK				S	**Sn**	**13 05 24.4**	**0.0**
	baz=290						
WHF	**Hehuan Shan**	**1.28**	**266**	*e*P	**Pn**	**13 05 08.4**	**-0.1**
	baz=265						
WHF				*e*S	**Sn**	**13 05 24.6**	**-0.1**
	baz=265						
TWT	**Tachien**	**1.35**	**271**	*e*P	**Pn**	**13 05 09.8**	**+0.2**
	baz=270						
TWT				*e*S	**Sn**	**13 05 27.0**	**+0.4**
	baz=270						
JIJ	**Ishigaki jima**	**1.36**	**85**	P	**Pn**	**13 05 09.2**	**-0.4**
JIJ				*e*S	**Sn**	**13 05 25.5**	**-1.2**
EHY	**Hungye**	**1.43**	**239**	*e*P	**Pn**	**13 05 10.7**	**+0.1**
	baz=238						
EHY				*e*S	**Sn**	**13 05 28.0**	**-0.3**
	baz=238						
TWF1	**Yuli**	**1.53**	**235**	*e*P	**Pn**	**13 05 12.1**	**+0.2**
	baz=234						
TWF1				*e*S	**Sn**	**13 05 30.9**	**+0.1**
	baz=234						
NSTT	**Nanjuang**	**1.56**	**285**	*e*P	**Pn**	**13 05 12.8**	**+0.5**
	baz=284						
NSTT				*e*S	**Sn**	**13 05 31.5**	**-0.1**
	baz=284						
SMLT	**Sun Moon Lake**	**1.65**	**258**	*e*P	**Pn**	**13 05 13.7**	**+0.2**
	baz=257						
SMLT				*e*S	**Sn**	**13 05 33.7**	**+0.1**
	baz=257						
TYC	**Yuchr**	**1.68**	**259**	*e*P	**Pn**	**13 05 14.3**	**+0.4**
	baz=258						
TYC				*e*S	**Sn**	**13 05 34.4**	**-0.1**
	baz=258						

YUS	**Yu-Shan**	**1.73**	**245**	*e*P	**Pn**	**13 05 15.8**	**+1.1**
	baz=243						
YUS				*e*S	**Sn**	**13 05 35.7**	**0.0**
	baz=243						
ELDTW	**Lidau**	**1.83**	**236**	*e*P	**Pn**	**13 05 15.2**	**-0.8**
	baz=234						
ELDTW				*e*S	**Sn**	**13 05 37.2**	**-1.0**
	baz=234						
ALS	**Alishan**	**1.85**	**247**	*e*P	**Pn**	**13 05 17.6**	**+1.4**
	baz=246						
ALS				*e*S	**Sn**	**13 05 38.3**	**-0.2**
	baz=246						
JTJ	**Tarama**	**1.90**	**77**	*e*S	**Sn**	**13 05 39.3**	**-0.6**
CHN5	**Tsauling**	**1.92**	**251**	*e*P	**Pn**	**13 05 18.8**	**+1.5**
	baz=250						
CHN5				*e*S	**Sn**	**13 05 39.7**	**-0.7**
	baz=250						
STYT	**Tauyuan**	**2.05**	**239**	*e*P	**Pn**	**13 05 19.4**	**+0.4**
	baz=237						
STYT				*e*S	**Sn**	**13 05 42.9**	**-0.5**
	baz=237						
CHN4	**Tsaushan**	**2.09**	**245**	*e*P	**Pn**	**13 05 19.3**	**-0.2**
	baz=244						
CHN4				*e*S	**Sn**	**13 05 44.5**	**0.0**
	baz=244						

ISCJB ***13*** *13:12:53.1±0.6, 32°.03N±0°.06×104°.67E±0°.07, h10km, mb3.6/4, Error ellipse: s-maj=10.4km s-min=7.6km az=42.1*
IDC ***13*** *13:12:54.1±1.9, 32°.23N×105°.24E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/25, mbtmp3.6/4, Error ellipse: s-maj=318.8km s-min=20.7km az=53.0*
BJI ***13*** *13:12:55.1, 32°.21N×104°.95E, h16km, ML4.5/7, Ms4.5/3, Ms7 4.5/3*
NEIC ***13*** *13:12:55.7±0.7, 32°.16N×105°.10E, h10km, mb3.6/1, Error ellipse: s-maj=24.1km s-min=10.9km az=75.0*
ISC 13 13:12:54.9±0.5, 32°.19N±0°.05×104°.81E±0°.07, h10km, n15, σ1§62/18, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.56**	**215**	Pg	**Pn**	**13 13 16.4**	**-6.3**
CD2				Sg	Px	13 13 30.4	
CD2				smax			
	comp=N,82μm,0.3s						
LZH	**Lanzhou**	**3.97**	**349**	Pg	**Pb**	**13 14 04.8**	**-0.1**
LZH				Sg	**Sg**	**13 15 01.1**	**-1.3**
LZH				smax			
	comp=N,2μm,0.5s						
LZH				smax			
	comp=E,3μm,0.5s						
LZH				LR	LR		
	comp=E,6μm,7.0s						
LZH				LR	LR		
	comp=Z,6μm,8.9s						
GYA	**Guiyang**	**5.94**	**164**	Pg	**Pb**	**13 14 36.8**	**-1.7**
GYA				smax			
	comp=N,570nm,0.9s						
GYA				smax			
	comp=E,660nm,0.8s						
LSA	**Lhasa**	**11.99**	**262**	P	**Pn**	**13 15 40.3**	**-5.5**
LSA				S	**Sn**	**13 17 57.8**	**-1.8**
LSA				LR	LR		
	comp=E,340nm,11.9s						
LSA				LR	LR		
	comp=Z,420nm,10.2s						
QZH	**Quanzhou**	**14.09**	**117**	*e*P	**Pn**	**13 16 16.8**	**+2.2**
QZH				S	**Sn**	**13 18 50.1**	**-1.0**
QZH				LR	LR		
	comp=N,2μm,7.8s						
QZH				LR	LR		
	comp=E,2μm,7.4s						
QZH				LR	LR		
	comp=Z,2μm,9.3s						
CM31	**Chiang Mai Arr**	**14.66**	**203**	Pn	**Pn**	**13 16 24.9**	**+2.5**
	comp=Z,2.4nm,0.5s						
TLY	**Talaya**	**19.50**	**358**	*e*P	**Pn**	**13 17 20.9**	**-2.3**
	comp=Z,2.7nm,0.7s						
MK31	**Makanchi Array**	**22.58**	**317**	*e*P	**P**	**13 17 57.8**	**+2.5**
MKAR	**Makanchi Array**	**22.58**	**317**	P	**P**	**13 17 58.6**	**+3.3**
	comp=Z,0.5nm,0.4s,mb3.3,baz=118,slow=13,SNR=6.4						
ZAA0	**Zalesovo Array**	**26.02**	**333**	P	**P**	**13 18 29.8**	**+1.8**
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**13 18 36.8**	**+2.2**
	comp=Z,0.5nm,0.6s,mb3.2,baz=129,slow=8.4,SNR=3.0						
WRAB	**Tennant Creek**	**59.04**	**147**	P	**P**	**13 22 54.1**	**-1.1**
WRA	**Warramunga Arr**	**59.05**	**147**	P	**P**	**13 22 55.6**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=338,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**62.11**	**150**	P	**P**	**13 23 15.4**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.8,baz=333,slow=6.6,SNR=14						
STKA	**Stephens Creek**	**72.59**	**148**	*e*P	**P**	**13 24 22.4**	**+0.1**

ISCJB ***13*** *13:13:01.6±0.9, 32°.48N±0°.03×105°.50E±0°.03, h10km±5km, mb4.5/39, MS4.1/5, Error ellipse: s-maj=5.0km s-min=4.3km az=26.5*
IDC ***13*** *13:13:01.9±0.6, 32°.52N×105°.36E, h0km, mb4.4/17, mb1 4.4/19, mb1mx4.3/30, mbtmp4.3/19, ML3.6/2, Error ellipse: s-maj=30.8km s-min=11.9km az=53.0*
BJI ***13*** *13:13:03.0, 32°.36N×105°.20E, h17km, mB4.7/14, mb4.4/15, ML4.5/13, Ms4.4/22, Ms7 4.3/17*
NEIC ***13*** *13:13:05.0±4.4, 32°.54N×105°.41E, h18km±28km, mb4.6/11, Error ellipse: s-maj=14.3km s-min=5.7km az=48.0*
MOS ***13*** *13:13:05.5±1.1, 32°.47N×105°.26E, h33km, mb4.8/19, MS4.0/6, Error ellipse: s-maj=13.8km s-min=6.5km az=115.5*
DJA ***13*** *13:13:45, 31°.92N×104°.75E, h383km, mb4.4/8*
ISC 13 13:13:03.6±0.8, 32°.49N±0°.03×105°.47E±0°.03, h9km±5km, h14km±.4km: pP-P, n126, σ1§15/142, mb4.5/39, MS4.1/5, 15C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.15**	**223**	Pn	**Pn**	**13 13 44.1**	**+4.5**
CD2				Pg	**Pg**	**13 13 45.3**	**+0.5**
CD2				Sn	**Sn**	**13 14 08.6**	**+2.2**
CD2				Sg	**Sg**	**13 14 12.5**	**-0.1**
CD2				smax			
	comp=N,157μm,0.3s						
XAN	**Xi'an**	**3.28**	**61**	Pn	**Pn**	**13 13 57.5**	**+2.4**
XAN				Pg	**Pg**	**13 14 03.8**	**-2.6**
XAN				Sg	**Sg**	**13 14 47.4**	**-1.5**
XAN				smax			
	comp=N,2μm,0.9s						
XAN				smax			
	comp=E,830nm,0.9s						
ENH	**Enshi**	**4.08**	**122**	*e*Pn	**Pn**	**13 14 07.5**	**+1.2**
ENH				*e*Pg	**Pg**	**13 14 21.9**	**+0.1**
KMI	**Kunming**	**7.72**	**199**	Pn	**Pn**	**13 14 56.6**	**+0.4**
KMI				Sn	**Sn**	**13 16 22.1**	**-1.7**
KMI				smax			
	comp=N,94nm,1.7s						
KMI				smax			
	comp=E,97nm,2.1s						
WHN	**Wuhan**	**7.82**	**102**	P	**Pn**	**13 14 59.1**	**+1.5**
WHN				S	**Sn**	**13 16 26.0**	**-0.3**
WHN				LR	LR		
	comp=N,8μm,9.0s						
WHN				LR	LR		
	comp=E,7μm,8.7s						
WHN				LR	LR		
	comp=Z,3μm,4.2s						
GTA	**Gaotai**	**8.29**	**328**	*e*P	**Pn**	**13 15 03.8**	**-0.2**
GTA				pP		13 15 13.0	
GTA				sP		13 15 17.1	
GTA				S	**Sn**	**13 16 39.8**	**+2.1**
GTA				sS		13 16 50.0	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,5.7s						
GTA				LR	LR		
	comp=N,2μm,10.7s						
GTA				LR	LR		
	comp=E,1μm,10.4s						
GTA				LR	LR		
	comp=Z,2μm,9.8s						
BTO	**Baotou**	**8.89**	**23**	*e*P	**Pn**	**13 15 17.6**	**+5.5**
BTO				S	**Sn**	**13 17 01.5**	**+9.1**
BTO				LR	LR		
	comp=N,540nm,10.3s						
BTO				LR	LR		
	comp=E,340nm,8.2s						
HHC	**Hu-ho-hao-te**	**9.67**	**29**	*e*P	**Pn**	**13 15 21.4**	**-1.5**
HHC				pP		13 15 28.4	
HHC				sP		13 15 33.3	
HHC				S	**Sn**	**13 17 09.3**	**-2.3**
HHC				sS		13 17 21.8	
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
HHC				LR	LR		
	comp=N,840nm,4.7s						
HHC				LR	LR		
	comp=E,1μm,6.8s						
HHC				LR	LR		
	comp=Z,900nm,5.7s						
GZH	**Guangzhou**	**11.67**	**141**	P	**Pn**	**13 15 49.1**	**-1.3**
GZH				S	**Sn**	**13 18 00.1**	**-0.7**
GZH				LR	LR		
	comp=N,1μm,9.3s						
GZH				LR	LR		
	comp=E,1μm,9.1s						
SSE	**Sheshan**	**13.44**	**92**	P	**Pn**	**13 16 17.8**	**+3.3**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,250nm,5.7s						
SSE				LR	LR		
	comp=N,450nm,11.9s						
SSE				LR	LR		
	comp=E,610nm,11.9s						
SSE				LR	LR		
	comp=Z,810nm,8.7s						
QIZ	**Qiongzhong**	**13.97**	**163**	P	**Pn**	**13 16 18.6**	**-3.2**
QIZ				S	**Sn**	**13 18 53.9**	**-3.1**
QIZ				LR	LR		
	comp=N,1μm,8.4s						
QIZ				LR	LR		
	comp=Z,1μm,10.9s						
SONM	**Songino Array**	**15.34**	**2**	Pn	**Pn**	**13 16 39.6**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=6.2						
SONM	**Songino Array**	**15.34**	**2**	Pn	**Pn**	**13 16 39.6**	**-0.6**
GUN	**Gumba**	**17.54**	**260**	*e*P	**Pn**	**13 17 09.8**	**+1.4**
	comp=Z,32nm,0.5s						
ZAK	**Zakamensk**	**17.95**	**355**	*e*P	**Pn**	**13 17 18.4**	**+5.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PKI	**Pulchoki**	**18.04**	**259**	*e*P	**Pn**	**13 17 14.9**	**+0.3**
	comp=Z,40nm,0.8s						
PKIN	**Phulchoki**	**18.05**	**259**	*e*P	**Pn**	**13 17 14.3**	**-0.4**
	comp=Z,26nm,0.5s						
KKN	**Kakani**	**18.08**	**260**	*e*P	**Pn**	**13 17 14.3**	**-0.7**
	comp=Z,23nm,0.6s						
DMN	**Daman**	**18.28**	**260**	*e*P	**Pn**	**13 17 15.9**	**-1.7**
	comp=Z,26nm,0.6s						
KSRS	**Korea Array**	**19.04**	**69**	P	**Pn**	**13 17 27.8**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=248,slow=10,SNR=9.5						
TLY	**Talaya**	**19.22**	**357**	*e*P	**Pn**	**13 17 31.3**	**+2.5**
TLY				*e*S	**Sn**	**13 20 56.6**	**-7.6**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,400nm,12.0s						
CN2	**Changchun**	**19.30**	**48**	*e*P	**Pn**	**13 17 35.3**	**+5.6**
CN2				*e*pP	pP	13 17 43.6	+12
CN2				*e*sP	sP	13 17 48.0	+16
CN2				*e*S	**Sn**	**13 20 59.9**	**-6.2**
CN2				pmax	pmax		
	comp=Z,100nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
IRK	**Irkutsk**	**19.76**	**358**	*e*P	**Pn**	**13 17 41.0**	**+5.8**
IRK				pmax	pmax		
	comp=Z,33nm,0.9s						
MK31	**Makanchi Array**	**22.75**	**316**	*e*	**P**	**13 18 05.6**	**-0.3**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 18 05.8**	**-0.2**
	comp=Z,2.4nm,0.4s,mb4.0,baz=118,slow=9.7,SNR=31						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 18 05.8**	**-0.2**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 18 05.8**	**-0.2**
ULHL	**Ulahol**	**25.08**	**301**	P	**P**	**13 18 29.1**	**+0.6**
	SNR=16						
TKM2	**Tokmak 2**	**25.71**	**302**	P	**P**	**13 18 35.3**	**+1.2**
	SNR=7.6						
KZA	**Kyzart**	**25.77**	**300**	P	**P**	**13 18 36.6**	**+1.9**
	SNR=12						
KLR	**Kul'dur**	**25.78**	**42**	*e*P	**P**	**13 18 31.2**	**-3.5**
KLR				MLR	MLR		
	comp=Z,1μm,12.0s,MS4.6						
BOD	**Bodaibo**	**25.99**	**10**	*e*P	**P**	**13 18 37.5**	**+1.0**
BOD				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
ZAA0	**Zalesovo Array**	**26.02**	**332**	*e*P	**P**	**13 18 36.4**	**-0.4**
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**13 18 36.6**	**-0.1**
	comp=Z,3.4nm,0.4s,mb4.2,baz=135,slow=9.0,SNR=22						
KBK	**Karagaybulak**	**26.11**	**302**	P	**P**	**13 18 39.0**	**+1.2**
	SNR=9.6						
UCH	**Uchtor**	**26.33**	**301**	P	**P**	**13 18 41.1**	**+1.3**
	SNR=11						
AAK	**Ala-Archa**	**26.43**	**301**	*e*P	**P**	**13 18 40.8**	**+0.2**
	comp=Z,1.3nm,0.3s,mb3.9,baz=133,slow=7.3,SNR=2.8						
AAK	**Ala-Archa**	**26.43**	**301**	*e*P	**P**	**13 18 39.6**	**-1.0**
KURK	**Kurchatov**	**26.88**	**321**	P	**P**	**13 18 44.5**	**-0.1**
	comp=Z,7.6nm,0.9s,mb4.2,baz=125,slow=8.8,SNR=25						
KURK				PcP	PcP	13 22 05.8	-0.9
	comp=Z,1.1nm,0.6s,baz=118,slow=2.1,SNR=4.7						
KURK	**Kurchatov**	**26.88**	**321**	*e*P	**P**	**13 18 43.5**	**-1.1**
KURK						13 22 05.8	
KURK	**Kurchatov**	**26.88**	**321**	*e*P	**P**	**13 18 43.5**	**-1.0**
KURK				PcP	PcP	13 22 05.8	-0.9
AML	**Almayashu**	**26.91**	**300**	P	**P**	**13 18 46.4**	**+1.4**
	SNR=11						
NVS	**Novosibirsk**	**27.31**	**331**	*e*P	**P**	**13 18 44.0**	**-4.4**
NVS				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.0						
NVS				pmax	pmax		
	comp=N,5.0nm,1.4s						
NRGR	**Nerungri**	**27.59**	**23**	*e*P	**P**	**13 18 52.8**	**+1.9**
BVAR	**Borovoye Array**	**32.46**	**320**	P	**P**	**13 19 33.1**	**-0.9**
	comp=N,0.8nm,0.4s,mb3.9,baz=113,slow=11,SNR=5.9						
BVAR				PcP	PcP	13 22 19.4	-1.5
	comp=N,0.7nm,0.6s,baz=123,slow=5.3,SNR=2.9						
BRVK	**Borovoye**	**32.53**	**320**	*e*P	**P**	**13 19 33.6**	**-1.1**
YAK	**Yakutsk**	**33.40**	**21**	*e*P	**P**	**13 19 45.6**	**+3.4**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ABKAR	**Akbulak array**	**37.65**	**310**	*e*P	**P**	**13 20 18.8**	**-0.1**
	comp=Z,1.9nm,0.4s,mb4.2						
AKTK	**Aktyubinsk**	**39.07**	**312**	P	**P**	**13 20 29.8**	**-0.9**
AKTO	**Aktyubinsk**	**39.07**	**312**	P	**P**	**13 20 29.8**	**-0.9**
	comp=Z,2.8nm,0.5s,mb4.2,baz=92,slow=13,SNR=10						
SVE	**Sverdlovsk**	**39.10**	**322**	*e*P	**P**	**13 20 31.5**	**+0.6**
SVE				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
KAPI	**Kappang**	**39.69**	**157**	P	**P**	**13 20 36.8**	**+0.5**
	comp=Z,18nm,0.8s,mb4.9,baz=346,slow=10,SNR=5.7						
ARU	**Arti**	**40.07**	**321**	*c i*P	**P**	**13 20 38.7**	**-0.3**
ARU				*e*		13 22 09.2	
ARU				S	**S**	**13 26 43.9**	**-1.1**
ARU				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.6						
ARU	**Arti**	**40.07**	**321**	*e*P	**P**	**13 20 38.3**	**-0.7**
	comp=Z,20nm,1.1s,mb4.8						
TIXI	**Tiksi**	**41.17**	**11**	*e*P	**P**	**13 20 48.0**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,326nm,19.0s,MS4.2						
TIXI	**Tiksi**	**41.17**	**11**	*e*P	**P**	**13 20 47.1**	**-0.9**
	comp=Z,16nm,1.0s,mb4.6						
SEY	**Seymchan**	**42.31**	**30**	*e*P	**P**	**13 21 00.5**	**+3.1**
ZEI	**Tsey**	**48.86**	**301**	*e*P	**P**	**13 21 48.6**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
BILL	**Bilibino**	**49.43**	**26**	*e*P	**P**	**13 21 53.3**	**-0.2**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.3						
BILL	**Bilibino**	**49.43**	**26**	*e*P	**P**	**13 21 54.0**	**+0.6**
	comp=Z,5.7nm,0.9s,mb4.6						
KIV	**Kislovodsk**	**49.54**	**302**	*e*P	**P**	**13 21 53.3**	**-1.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=Z,53nm,17.0s,MS3.6						
KLMR	**Klimovskoe**	**50.60**	**325**	P	**P**	**13 22 00.8**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
OBN	**Obninsk**	**52.24**	**317**	*e*P	**P**	**13 22 15.0**	**+0.2**
OBN				*i*		13 23 25.0	
OBN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
KNA	**Kununurra**	**52.90**	**151**	⇑*i*P	**P**	**13 22 20.9**	**+0.8**
	comp=Z,12nm,0.4s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.88**	**156**	*e*P	**P**	**13 22 27.6**	**+0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
KEV	**Kevo**	**55.95**	**336**	*e*P	**P**	**13 22 40.9**	**-0.8**
KEV	**Kevo**	**55.95**	**336**	*e*p	**P**	**13 22 40.9**	**-0.8**
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**13 22 43.7**	**-1.8**
	comp=Z,5.7nm,0.9s,mb4.6,baz=49,slow=13,SNR=8.9						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**13 22 49.0**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.6,baz=92,slow=7.0,SNR=12						
BRTR	**Keskin Array B**	**57.08**	**299**	P	**P**	**13 22 48.7**	**-1.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=108,slow=7.9,SNR=6.9						
BRTR	**Keskin Array B**	**57.08**	**299**	*ce*P	**P**	**13 22 50.5**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**57.29**	**313**	P	**P**	**13 22 50.6**	**-1.0**
	comp=Z,7.4nm,0.4s,mb5.1,baz=68,slow=7.7,SNR=19						
AKASG	**Malin Array Be**	**57.29**	**313**	*ce*P	**P**	**13 22 50.5**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.4s						
AKBB	**Malin Array Si**	**57.29**	**313**	*e*P	**P**	**13 22 50.4**	**-1.1**
COEN	**Coen**	**58.60**	**136**	*e*P	**P**	**13 23 00.8**	**-0.3**
WRAB	**Tennant Creek**	**59.00**	**148**	*e*P	**P**	**13 23 04.9**	**+1.2**
WRA	**Warramunga Arr**	**59.00**	**148**	P	**P**	**13 23 04.5**	**+0.7**
	comp=Z,7.9nm,0.6s,mb4.9,baz=341,slow=7.5,SNR=63						
WRA	**Warramunga Arr**	**59.00**	**148**	P	**P**	**13 23 04.5**	**+0.7**
WRA	**Warramunga Arr**	**59.00**	**148**	P	**P**	**13 23 04.5**	**+0.7**
KWP	**Kalwaria Pacla**	**61.62**	**313**	*e*P	**P**	**13 23 21.6**	**+0.1**
KWP				*e*	pP	13 23 25.6	+1.3
KWP	**Kalwaria Pacla**	**61.62**	**313**	*e*P	**P**	**13 23 21.4**	**0.0**
	comp=Z,44nm,0.9s,mb5.6						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**13 23 25.9**	**+1.0**
	comp=Z,3.9nm,0.6s,mb4.7,baz=331,slow=6.5,SNR=57						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**13 23 25.2**	**+0.5**
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**13 23 25.2**	**+0.5**
	comp=Z,4.1nm,1.0s,mb4.5						
KOLS	**Kolonicke sedl**	**62.10**	**312**	*e*P	**P**	**13 23 25.2**	**+0.5**
STHS	**Stebnicka Huta**	**62.59**	**313**	*e*P	**P**	**13 23 28.1**	**+0.1**
STHS				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.5						
STHS	**Stebnicka Huta**	**62.59**	**313**	*e*P	**P**	**13 23 28.1**	**+0.1**
	comp=Z,4.4nm,1.1s,mb4.5						
STHS	**Stebnicka Huta**	**62.59**	**313**	*e*P	**P**	**13 23 28.1**	**+0.1**
OJC	**Ojcow**	**63.22**	**314**	*e*P	**P**	**13 23 32.2**	**+0.1**
NB2	**NORSAR Subarra**	**64.12**	**327**	P	**P**	**13 23 36.3**	**-1.6**
	comp=Z,8.8nm,1.1s,mb4.7,baz=70,slow=6.9						
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**13 23 36.8**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=164,slow=18,SNR=3.9						
VYHS	**Vyhne**	**64.40**	**313**	*e*P	**P**	**13 23 40.8**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
VYHS	**Vyhne**	**64.40**	**313**	*e*P	**P**	**13 23 40.8**	**+0.9**
	comp=Z,6.2nm,1.4s,mb4.5						
VYHS	**Vyhne**	**64.40**	**313**	*e*P	**P**	**13 23 40.8**	**+0.9**
KOLL	**Kolacno**	**64.64**	**313**	*e*P	**P**	**13 23 45.7**	**+4.2**
KOLL	**Kolacno**	**64.64**	**313**	*e*P	**P**	**13 23 45.7**	**+4.2**
DPC	**Dobruska-Polom**	**65.26**	**315**	*e*P	**P**	**13 23 46.6**	**+1.1**
DPC	**Dobruska-Polom**	**65.26**	**315**	*e*P	**P**	**13 23 46.6**	**+1.1**
UPC	**Upice**	**65.39**	**315**	*e*P	**P**	**13 23 47.1**	**+0.8**
UPC	**Upice**	**65.39**	**315**	*e*P	**P**	**13 23 47.1**	**+0.8**
PRU	**Pruhonice**	**66.46**	**315**	*e*P	**P**	**13 23 58.1**	**+4.9**
PRU	**Pruhonice**	**66.46**	**315**	*e*P	**P**	**13 23 58.1**	**+4.9**
BRG	**Berggiesshubel**	**66.47**	**316**	*e*P	**P**	**13 23 52.1**	**-1.2**
	comp=Z,2.8nm,0.7s,mb4.4						
BRG				*e*	pP	13 23 56.6	+0.4
	comp=Z,5.2nm,0.8s						
BRG	**Berggiesshubel**	**66.47**	**316**	*e*P	**P**	**13 23 52.1**	**-1.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CLL	**Collm**	**66.84**	**317**	*e*P	**P**	**13 23 55.0**	**-0.6**
CLL				*i*	pP	13 23 59.2	+0.7
CLL	**Collm**	**66.84**	**317**	*e*P	**P**	**13 23 55.0**	**-0.6**
CLL				*i* pP	pP	13 23 59.2	+0.7
	comp=Z,11nm,1.4s						
KHC	**Kasperske Hory**	**67.37**	**315**	*e*P	**P**	**13 24 03.2**	**+4.1**
KHC	**Kasperske Hory**	**67.37**	**315**	*e*P	**P**	**13 24 03.2**	**+4.1**
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**13 23 58.7**	**-0.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=64,slow=6.1,SNR=6.8						
CDF	**Champ du Feu**	**71.44**	**316**	⇑*i*P	**P**	**13 24 23.8**	**-0.4**
STKA	**Stephens Creek**	**72.55**	**148**	*e*P	**P**	**13 24 31.3**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**72.55**	**148**	P	**P**	**13 24 30.1**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.2,baz=322,slow=7.4,SNR=7.1						
STKA	**Stephens Creek**	**72.55**	**148**	*e*P	**P**	**13 24 29.3**	**-1.7**
LPG	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.8**	**+0.3**
	comp=Z,15nm,0.5s,mb4.9						
LPG	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.8**	**+0.3**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
LPG	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.8**	**+0.3**
	comp=Z,7.3nm,0.5s,mb4.9						
LPL	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.7**	**+0.2**
	comp=Z,15nm,0.5s,mb4.9						
LPL	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.7**	**+0.2**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
LPL	**La Plagne**	**73.15**	**313**	⇑*i*P	**P**	**13 24 34.7**	**+0.2**
	comp=Z,7.6nm,0.5s,mb4.9						
CMSA	**Cobar Meteorol**	**74.17**	**145**	*e*P	**P**	**13 24 41.5**	**+1.0**
SMF	**Signal de Mont**	**74.33**	**316**	⇑*i*P	**P**	**13 24 40.6**	**-0.8**
TCF	**Toulx Ste Croi**	**75.48**	**316**	⇑*i*P	**P**	**13 24 47.6**	**-0.5**

MKAR	**Makanchi Array**	**22.43**	**319**	P	**P**	**13 29 06.1**	**+1.9**
	comp=E,0.5nm,0.7s,mb3.1,baz=123,slow=5.3,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.16**	**334**	P	**P**	**13 29 38.2**	**-1.4**
	comp=E,0.9nm,0.3s,mb3.8,baz=128,slow=9.3,SNR=2.9						
WRA	**Warramunga Arr**	**59.03**	**146**	P	**P**	**13 34 04.0**	**-1.5**
	comp=E,0.4nm,0.7s,mb3.6,baz=340,slow=7.5,SNR=6.5						
ASAR	**Alice Springs**	**62.05**	**149**	P	**P**	**13 34 24.4**	**-1.7**
	comp=E,0.1nm,0.4s,mb3.3,baz=334,slow=6.5,SNR=5.4						

IDC 13 13:26:43.1±5.7, 8.92S×119.82E, h190km±54km, mb3.5/1, mb1 3.1/4, mb1mx3.0/19, mbtmp2.9/4, Error ellipse: s-maj=123.0km s-min=39.6km az=44.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.73**	**149**	P	Pn	13 29 12.5	+0.5
	0.1nm,0.3s,baz=305,slow=16,SNR=4.3						
FITZ				S	Sn	13 31 11.9	+0.2
	0.3nm,0.3s,baz=186,slow=19,SNR=5.9						
WRA	**Warramunga Arr**	**17.81**	**130**	P	Pn	13 30 36.9	-2.6
	0.2nm,0.3s,baz=304,slow=12,SNR=15						
WRA				S	S	13 33 53.4	+0.9
	0.1nm,0.3s,baz=305,slow=25,SNR=5.1						
ASAR	**Alice Springs**	**19.91**	**139**	P	P	13 31 00.5	+0.2
	0.3nm,0.3s,baz=316,slow=9.2,SNR=31						
STKA	**Stephens Creek**	**30.50**	**142**	P	P	13 32 38.6	+0.1
	0.6nm,0.3s,baz=317,slow=12,SNR=3.8						

*ISCJB **13** 13:27:54.3±0.3, 24.83N±0.02×121.97E±0.02, h105km±2km, mb3.6/9, Error ellipse: s-maj=4.1km s-min=2.5km az=144.0*
*NEIC **13** 13:27:54.6±0.4, 24.81N×121.98E, h101km±4km, MG3.7(JMA), Error ellipse: s-maj=10.2km s-min=7.8km az=92.0*
*IDC **13** 13:27:55.4±3.8, 24.89N×122.10E, h108km±36km, mb3.5/9, mb1 3.6/11, mb1mx3.5/25, mbtmp3.5/11, Error ellipse: s-maj=28.0km s-min=14.7km az=62.0*
*TAP **13** 13:27:55.3, 24.81N×121.95E, h98km, ML4.5, B*
*JMA **13** 13:27:55.5±0.3, 24.89N×122.03E, h97km, M3.7*
ISC 13 13:27:55.2±0.3, 24.82N±0.02×121.97E±0.02, h101km±2km, n91, σ0.82/153, mb3.6/9, 3C-23D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.04**	**306**	*e*P	**Pn**	**13 28 09.1**	**0.0**
	baz=341						
TWB1	**Santiao Chiao**	**0.19**	**5**	⇓*i*P	**Pn**	**13 28 09.4**	**0.0**
	baz=10.0						
TWB1				*i* S	**Sn**	**13 28 19.2**	**-0.8**
	baz=10.0						
ILA	**Ilan**	**0.21**	**255**	⇓*i*P	**Pn**	**13 28 09.8**	**+0.3**
	baz=257						
ILA				S	**Sn**	**13 28 20.1**	**0.0**
	baz=257						
TWC	**Suao**	**0.24**	**208**	⇓*i*P	**Pn**	**13 28 09.7**	**+0.2**
	baz=206						
TWC				*e*S	**Sn**	**13 28 19.7**	**-0.6**
	baz=206						
TWE	**Neicheng**	**0.29**	**250**	⇓P	**Pn**	**13 28 10.0**	**+0.2**
	baz=252						
TWE				*e*S	**Sn**	**13 28 21.0**	**+0.3**
	baz=252						
NWF	**Wu-fen Shan**	**0.30**	**326**	⇓*i*P	**Pn**	**13 28 09.8**	**0.0**
	baz=322						
NWF				*e*S	**Sn**	**13 28 20.6**	**-0.2**
	baz=322						
TWA	**Mucha**	**0.39**	**295**	⇑P	**Pn**	**13 28 10.2**	**0.0**
	baz=301						
TWA				*e*S	**Sn**	**13 28 20.9**	**-0.7**
	baz=301						
ENA	**Nanau**	**0.44**	**208**	⇓*i*P	**Pn**	**13 28 11.1**	**+0.4**
	baz=200						
ENA				*e*S	**Sn**	**13 28 22.6**	**+0.5**
	baz=200						
TAP1	**Taipei**	**0.46**	**298**	*e*P	**Pn**	**13 28 10.6**	**-0.1**
	baz=303						
TAP1				S	**Sn**	**13 28 22.2**	**-0.2**
	baz=303						
TATO	**Taipei**	**0.46**	**290**	*e*P	**Pn**	**13 28 10.4**	**-0.4**
TATO				S	**Sn**	**13 28 22.6**	**+0.2**
YHNB	**Yeheng**	**0.56**	**255**	*e*P	**Pn**	**13 28 11.4**	**-0.1**
TWY	**Chenhua**	**0.56**	**324**	P	**Pn**	**13 28 11.4**	**-0.1**
	baz=325						
TWY				*e*S	**Sn**	**13 28 22.8**	**-1.0**
	baz=325						
NSK	**Sanguang**	**0.57**	**256**	⇓*i*P	**Pn**	**13 28 11.6**	**0.0**
	baz=256						
NSK				*i* S	**Sn**	**13 28 23.0**	**-0.8**
	baz=256						
TWS1	**Kuangyinshan**	**0.57**	**299**	⇓*i*P	**Pn**	**13 28 11.9**	**+0.3**
	baz=303						
TWS1				*e*S	**Sn**	**13 28 24.2**	**+0.4**
	baz=303						
NNS	**Nan Shan**	**0.66**	**235**	⇓*i*P	**Pn**	**13 28 12.8**	**+0.5**
	baz=241						
NNS				*e*S	**Sn**	**13 28 25.6**	**+0.4**
	baz=241						
NCU	**National Centr**	**0.73**	**282**	⇓*i*P	**Pn**	**13 28 13.2**	**+0.3**
	baz=283						
NCU				*i* S	**Sn**	**13 28 26.5**	**+0.3**
	baz=283						
NACB	**Ninganchiao**	**0.73**	**208**	*e*P	**Pn**	**13 28 12.1**	**-0.8**
PCYT	**Pengchaiyu**	**0.81**	**6**	*e*P	**Pn**	**13 28 13.7**	**-0.1**
	baz=13						
PCYT				*e*S	**Sn**	**13 28 28.4**	**+0.8**
	baz=13						
TWD	**Chiawan**	**0.81**	**205**	⇓P	**Pn**	**13 28 13.2**	**-0.5**
	baz=212						
TWD				*e*S	**Sn**	**13 28 26.7**	**-0.9**
	baz=212						
NSTT	**Nanjuang**	**0.90**	**258**	⇓*i*P	**Pn**	**13 28 14.7**	**+0.1**
	baz=253						
NSTT				S	**Sn**	**13 28 28.5**	**-0.7**
	baz=253						
HWA	**Hwalien**	**0.90**	**202**	*e*P	**Pn**	**13 28 14.4**	**-0.3**
	baz=211						
HWA				*e*S	**Sn**	**13 28 29.3**	**+0.1**
	baz=211						
HSN	**Hsinchu**	**0.91**	**269**	P	**Pn**	**13 28 14.5**	**-0.1**
	baz=264						
HSN				*e*S	**Sn**	**13 28 27.9**	**-1.4**
	baz=264						
TWT	**Tachien**	**0.92**	**232**	⇓*i*P	**Pn**	**13 28 15.8**	**+1.0**
	baz=233						
TWT				S	**Sn**	**13 28 29.9**	**+0.4**
	baz=233						
WHF	**Hehuan Shan**	**0.93**	**224**	⇓*i*P	**Pn**	**13 28 15.6**	**+0.7**
	baz=220						
WHF				S	**Sn**	**13 28 30.1**	**+0.4**
	baz=220						
YOJ	**Yonaguni jima**	**1.01**	**110**	P	**Pn**	**13 28 15.8**	**0.0**
YOJ				S	**Sn**	**13 28 31.0**	**-0.3**
YOJ	**Yonaguni jima**	**1.01**	**110**	⇓*i*P	**Pn**	**13 28 15.8**	**0.0**
	baz=115						
YOJ				*e*S	**Sn**	**13 28 30.9**	**-0.3**
	baz=115						
ESL	**Shilin**	**1.11**	**206**	⇑P	**Pn**	**13 28 15.7**	**-1.2**
	baz=206						
ESL				*e*S	**Sn**	**13 28 31.7**	**-1.6**
	baz=206						
NSY	**Sanyi**	**1.17**	**250**	⇓*i*P	**Pn**	**13 28 18.0**	**+0.5**
	baz=251						
NSY				*e*S	**Sn**	**13 28 34.2**	**-0.2**
	baz=251						
TWQ1	**Liyutan**	**1.19**	**247**	⇓*i*P	**Pn**	**13 28 18.0**	**+0.3**
	baz=247						
TWQ1				S	**Sn**	**13 28 34.1**	**-0.6**
	baz=247						
SMLT	**Sun Moon Lake**	**1.35**	**227**	⇓*i*P	**Pn**	**13 28 20.3**	**+0.7**
	baz=233						
SMLT				*e*S	**Sn**	**13 28 39.1**	**+1.0**
	baz=233						
TCU	**Taichung**	**1.35**	**241**	*e*P	**Pn**	**13 28 20.1**	**+0.4**
	baz=241						
TCU				*e*S	**Sn**	**13 28 36.8**	**-1.4**
	baz=241						
TYC	**Yuchr**	**1.36**	**228**	⇓*i*P	**Pn**	**13 28 20.2**	**+0.4**
	baz=237						
TYC				*e*S	**Sn**	**13 28 38.5**	**0.0**
	baz=237						
SSLB	**Suanglung**	**1.38**	**222**	*e*P	**Pn**	**13 28 20.3**	**+0.2**
SSLB				*e*S	**Sn**	**13 28 39.4**	**+0.5**
EHY	**Hungye**	**1.44**	**204**	*e*P	**Pn**	**13 28 19.2**	**-1.5**
	baz=198						
EHY				*e*S	**Sn**	**13 28 38.4**	**-1.6**
	baz=198						
WNT	**Mingjian**	**1.50**	**232**	*e*P	**Pn**	**13 28 21.8**	**+0.3**
	baz=240						
WNT				S	**Sn**	**13 28 41.9**	**+0.5**
	baz=240						
YULB	**Yu-li**	**1.55**	**204**	*e*P	**Pn**	**13 28 20.3**	**-1.8**
TWF1	**Yuli**	**1.58**	**203**	*e*P	**Pn**	**13 28 21.4**	**-1.1**
	baz=196						
YUS	**Yu-Shan**	**1.62**	**215**	⇓*i*P	**Pn**	**13 28 24.3**	**+1.4**
	baz=216						
YUS				S	**Sn**	**13 28 46.1**	**+2.1**
	baz=216						
IRIF	**Iriomote-Funau**	**1.67**	**106**	P	**Pn**	**13 28 23.4**	**-0.2**
IRIF				*e*S	**Sn**	**13 28 44.8**	**-0.4**
ALS	**Alishan**	**1.68**	**219**	⇓*i*P	**Pn**	**13 28 24.8**	**+1.1**
	baz=229						
ALS				*e*S	**Sn**	**13 28 46.9**	**+1.4**
	baz=229						
CHN5	**Tsauling**	**1.69**	**224**	*e*P	**Pn**	**13 28 24.0**	**+0.1**
	baz=232						
CHN5				*e*S	**Sn**	**13 28 46.7**	**+1.0**
	baz=232						
WGK	**Gukeng**	**1.71**	**229**	*e*P	**Pn**	**13 28 24.6**	**+0.5**
	baz=239						
WGK				*e*S	**Sn**	**13 28 47.0**	**+1.0**
	baz=239						
CHKT	**Chengkung**	**1.80**	**198**	*e*P	**Pn**	**13 28 24.8**	**-0.5**
	baz=199						
CHKT				*e*S	**Sn**	**13 28 46.2**	**-1.9**
	baz=199						
WTCT	**Ta-ch'eng**	**1.81**	**239**	*e*P	**Pn**	**13 28 24.9**	**-0.4**
	baz=239						
WTCT				*e*S	**Sn**	**13 28 47.7**	**-0.7**
	baz=239						
HATJ	**Hateruma jima**	**1.84**	**114**	P	**Pn**	**13 28 26.3**	**+0.6**
ELDTW	**Lidau**	**1.84**	**208**	*e*P	**Pn**	**13 28 25.7**	**0.0**
	baz=199						
CHN2	**Minshiung**	**1.87**	**227**	*e*P	**Pn**	**13 28 26.9**	**+0.7**
	baz=236						
CHN2				*e*S	**Sn**	**13 28 50.8**	**+1.1**
	baz=236						
CHN4	**Tsaushan**	**1.93**	**221**	*e*P	**Pn**	**13 28 27.7**	**+0.8**
	baz=222						
CHN4				*e*S	**Sn**	**13 28 51.7**	**+0.7**
	baz=222						
CHY	**Chiayi**	**1.93**	**227**	*e*P	**Pn**	**13 28 27.2**	**+0.3**
	baz=236						
CHY				*e*S	**Sn**	**13 28 51.3**	**+0.2**
	baz=236						
JKRS	**Kuro-shima**	**1.95**	**107**	P	**Pn**	**13 28 27.5**	**+0.4**
TPUB	**Ta-pu**	**1.95**	**219**	*e*P	**Pn**	**13 28 27.3**	**+0.2**
WSF	**Szhu**	**1.98**	**234**	*e*P	**Pn**	**13 28 27.5**	**0.0**
	baz=235						
WSF				*e*S	**Sn**	**13 28 52.0**	**-0.2**
	baz=235						
STYT	**Tauyuan**	**1.99**	**214**	P	**Pn**	**13 28 28.6**	**+0.9**
	baz=207						
STYT				*e*S	**Sn**	**13 28 52.9**	**+0.5**
	baz=207						
WTP	**Ta-pu**	**2.00**	**219**	⇓*i*P	**Pn**	**13 28 28.3**	**+0.5**
	baz=220						
WTP				*e*S	**Sn**	**13 28 52.8**	**+0.2**
	baz=220						
JIJ	**Ishigaki jima**	**2.03**	**102**	P	**Pn**	**13 28 27.8**	**-0.3**
JIJ				*e*S	**Sn**	**13 28 52.5**	**-0.8**
TWK	**Hsinying**	**2.06**	**222**	*e*P	**Pn**	**13 28 28.9**	**+0.4**
	baz=223						
TWK				*e*S	**Sn**	**13 28 53.9**	**-0.1**
	baz=223						
CHN1	**Nanshi**	**2.09**	**219**	*e*P	**Pn**	**13 28 29.1**	**+0.1**
	baz=220						
CHN1				*e*S	**Sn**	**13 28 54.8**	**0.0**
	baz=220						
SGST	**Jiashian**	**2.15**	**217**	⇓P	**Pn**	**13 28 30.3**	**+0.7**
	baz=226						
SGST				*e*S	**Sn**	**13 28 56.1**	**+0.1**
	baz=226						
TWG	**Pinlang**	**2.15**	**203**	*e*P	**Pn**	**13 28 28.1**	**-1.6**
TWG	**Pinlang**	**2.15**	**203**	*e*P	**Pn**	**13 28 28.3**	**-1.5**
	baz=196						
CHN8	**Yiju**	**2.18**	**228**	*e*P	**Pn**	**13 28 29.9**	**-0.2**
	baz=238						
CHN8				*e*S	**Sn**	**13 28 57.1**	**+0.4**
	baz=238						
CHN3	**Shinhua**	**2.27**	**221**	*e*P	**Pn**	**13 28 32.4**	**+1.0**
	baz=230						
CHN3				*e*S	**Sn**	**13 29 00.4**	**+1.4**
	baz=230						
SCLT	**Jiali**	**2.31**	**225**	*e*P	**Pn**	**13 28 31.9**	**+0.1**
	baz=226						
SCLT				*e*S	**Sn**	**13 29 00.4**	**+0.6**
	baz=226						
ECL	**Taimali**	**2.40**	**203**	*e*P	**Pn**	**13 28 32.1**	**-0.9**
	baz=198						
ECL				*e*S	**Sn**	**13 28 59.9**	**-2.1**
	baz=198						
SSD	**Sandimen**	**2.40**	**211**	*e*P	**Pn**	**13 28 33.9**	**+0.9**
	baz=212						
SSD				*e*S	**Sn**	**13 29 02.1**	**+0.1**
	baz=212						
TWM1	**Shoushan**	**2.44**	**216**	*e*P	**Pn**	**13 28 34.8**	**+1.2**
	baz=215						
SGLT	**Jiouru**	**2.49**	**213**	*e*P	**Pn**	**13 28 35.8**	**+1.7**
	baz=212						
JTJ	**Tarama**	**2.49**	**94**	P	**Pn**	**13 28 34.8**	**+0.6**
JTJ				*e*S	**Sn**	**13 29 03.8**	**-0.3**
PNG	**Penghu**	**2.53**	**241**	*e*P	**Pn**	**13 28 33.6**	**-1.1**
	baz=248						
PNG				*e*S	**Sn**	**13 29 02.2**	**-2.9**
	baz=248						
EAST	**Anshuo**	**2.63**	**203**	*e*P	**Pn**	**13 28 35.5**	**-0.6**
	baz=196						
SCZT	**Fangliau**	**2.73**	**207**	*e*P	**Pn**	**13 28 38.2**	**+0.8**
	baz=206						
LAY	**Lan-yu**	**2.79**	**188**	*e*P	**Pn**	**13 28 37.3**	**-1.0**
	baz=189						
LAY				*e*S	**Sn**	**13 29 09.0**	**-2.3**
	baz=189						
JMJ	**Miyako jima 2**	**3.02**	**89**	P	**Pn**	**13 28 41.9**	**+0.7**
JMJ				*e*S	**Sn**	**13 29 16.4**	**-0.3**
QZH	**Quanzhou**	**3.07**	**273**	⇑*i*Pn	**Pn**	**13 28 41.9**	**0.0**
QZH				Sn	**Sn**	**13 29 15.3**	**-2.6**
QZH				smax			
	comp=N,660nm,0.4s						
QZH				smax			
	comp=E,310nm,0.5s						
KNM	**Kinmen**	**3.24**	**264**	*e*P	**Pn**	**13 28 44.9**	**+0.7**
	baz=262						
JKE	**Kume jima 2**	**4.60**	**70**	P	**Pn**	**13 29 03.6**	**+1.1**
JKE				*e*S	**Sn**	**13 29 56.7**	**+1.9**
JAGN	**Aguni-jima**	**5.07**	**69**	*e*S	**Sn**	**13 30 07.9**	**+1.7**
JOW	**Kunigami**	**6.02**	**69**	P	**Pn**	**13 29 21.3**	**-0.5**
	comp=E,4.5nm,0.3s,baz=133,slow=18,SNR=4.0						
JOW				S	**Sn**	**13 30 25.8**	**-3.6**
	comp=E,2.0nm,0.3s,baz=120,slow=20,SNR=2.2						
JOW	**Kunigami**	**6.02**	**69**	P	**Pn**	**13 29 21.3**	**-0.5**
JOW				S	**Sn**	**13 30 25.8**	**-3.6**
KSRS	**Korea Array**	**13.58**	**21**	P	**Pn**	**13 31 03.2**	**-0.3**
	comp=E,0.1nm,0.3s,baz=203,slow=12,SNR=3.3						
SONM	**Songino Array**	**26.07**	**336**	P	**P**	**13 33 19.1**	**0.0**
	comp=E,0.4nm,0.7s,mb3.0,baz=155,slow=8.2,SNR=5.0						
MKAR	**Makanchi Array**	**38.39**	**315**	P	**P**	**13 35 06.4**	**-0.1**
	comp=E,0.4nm,0.4s,mb3.6,baz=106,slow=11,SNR=4.8						
ZALV	**Zalesovo Beam**	**40.11**	**326**	P	**P**	**13 35 19.9**	**-0.9**
	comp=E,0.6nm,0.4s,mb3.8,baz=120,slow=9.2,SNR=4.5						
KURK	**Kurchatov**	**42.07**	**319**	P	**P**	**13 35 36.0**	**-0.9**
	comp=E,0.3nm,0.2s,mb3.6,baz=110,slow=9.8,SNR=3.6						
WRA	**Warramunga Arr**	**46.09**	**164**	P	**P**	**13 36 08.7**	**-0.6**
	comp=E,0.9nm,0.7s,mb3.6,baz=347,slow=8.6,SNR=8.2						
ASAR	**Alice Springs**	**49.57**	**166**	P	**P**	**13 36 36.0**	**-0.1**
	comp=E,0.7nm,0.7s,mb3.7,baz=354,slow=7.4,SNR=6.7						
STKA	**Stephens Creek**	**59.41**	**161**	P	**P**	**13 37 46.7**	**-0.4**
	comp=E,1.0nm,0.6s,mb4.0,baz=348,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**59.41**	**161**	P	**P**	**13 37 46.7**	**-0.5**
YKA	**Yellowknife Ar**	**82.11**	**23**	P	**P**	**13 40 02.7**	**-1.5**
	comp=E,0.4nm,0.5s,mb3.5,baz=309,slow=5.1,SNR=9.4						
YKA	**Yellowknife Ar**	**82.11**	**23**	P	**P**	**13 40 02.7**	**-1.5**
NVAR	**Mina Array Bea**	**95.48**	**43**	P	**P**	**13 41 09.2**	**+0.4**
	comp=E,0.4nm,0.8s,mb3.9,baz=290,slow=4.3,SNR=3.8						

*IDC **13** 13:31:32.0±0.5, 32.31N×105.18E, h0km, mb4.5/23, mb1 4.6/25, mb1mx4.5/32, mbtmp4.5/25, ML4.4/1, MS3.7/9, Ms1 3.7/9, ms1mx3.3/33, Error ellipse: s-maj=15.7km s-min=11.1km az=51.0*
*ISCJB **13** 13:31:32.3±0.2, 32.31N±0.02×105.21E±0.03, h10km, mb4.7/68, MS3.9/14, Error ellipse: s-maj=3.5km s-min=3.0km az=137.1*
*BJI **13** 13:31:34.3, 32.30N×105.26E, h15km, mB4.8/23, mb4.7/30, ML4.5/17, Ms4.6/42, Ms7 4.3/30*
*NEIC **13** 13:31:34.3±0.2, 32.33N×105.16E, h10km, mb4.9/34, Error ellipse: s-maj=5.3km s-min=5.3km az=193.0*
*MOS **13** 13:31:35.0±1.0, 32.31N×105.17E, h29km, mb5.0/29, Error ellipse: s-maj=8.4km s-min=5.7km az=102.3*
*DJA **13** 13:31:44, 32.40N×105.25E, h51km, mb4.8/11*
ISC 13 13:31:34.2±0.2, 32.32N±0.02×105.15E±0.02, h10km, n183, σ1.18/202, mb4.7/68, MS3.9/14, 9C-5D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.84**	**221**	Pn	**Pn**	**13 32 06.1**	**+0.2**
CD2				Pg	**Pg**	**13 32 07.5**	**-2.0**
CD2				Sg	**Sg**	**13 32 30.5**	**-2.9**
XAN	**Xi'an**	**3.59**	**61**	Pn	**Pn**	**13 32 31.8**	**+1.8**
XAN				Pg	**Pg**	**13 32 40.1**	**-3.0**
XAN				Sg	**Sg**	**13 33 26.6**	**-3.1**
XAN				smax			
	comp=N,2μm,0.6s						
XAN				smax			
	comp=E,1μm,0.7s						
LZH	**Lanzhou**	**3.91**	**344**	Pn	**Pn**	**13 32 37.3**	**+3.0**
LZH				Pg	**Pg**	**13 32 47.1**	**-2.0**
LZH				Sg	**Sg**	**13 33 38.3**	**-1.5**
LZH				smax			
	comp=E,5μm,0.6s						
LZH				LR	LR		
	comp=N,8μm,5.6s						
LZH				LR	LR		
	comp=Z,9μm,7.7s						
ENH	**Enshi**	**4.24**	**118**	*e*P	**Pn**	**13 32 40.9**	**+2.1**
GYA	**Guiyang**	**5.99**	**167**	Pg	**Pn**	**13 33 03.3**	**+0.4**
GYA				Sg	**Sn**	**13 34 07.8**	**-3.7**
GYA				smax			
	comp=N,1μm,0.8s						
GYA				smax			
	comp=E,650nm,0.8s						
GYA				LR	LR		
	comp=N,12μm,5.6s						
GYA				LR	LR		
	comp=E,10μm,6.3s						
GYA				LR	LR		
	comp=Z,11μm,4.2s						
KMI	**Kunming**	**7.48**	**197**	Pn	**Pn**	**13 33 26.3**	**+3.0**
KMI				Sn	**Sn**	**13 34 52.9**	**+4.7**
KMI				smax			
	comp=N,120nm,1.9s						
KMI				smax			
	comp=E,180nm,2.4s						
KMI				LR	LR		
	comp=N,2μm,6.8s						
KMI				LR	LR		
	comp=E,3μm,7.9s						
WHN	**Wuhan**	**8.06**	**100**	⇓P	**Pn**	**13 33 31.3**	**0.0**
WHN				S	**Sn**	**13 34 58.8**	**-3.7**
WHN				LR	LR		
	comp=N,8μm,4.0s						
WHN				LR	LR		
	comp=E,4μm,5.0s						
WHN				LR	LR		
	comp=Z,2μm,8.0s						
GTA	**Gaotai**	**8.29**	**330**	P	**Pn**	**13 33 35.1**	**+0.6**
GTA				pP		13 33 44.8	
GTA				sP		13 33 48.8	
GTA				S	**Sn**	**13 35 11.9**	**+3.7**
GTA				sS		13 35 22.8	
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,2μm,7.7s						
GTA				LR	LR		
	comp=E,1μm,8.6s						
GTA				LR	LR		
	comp=Z,1μm,9.8s						
BTO	**Baotou**	**9.15**	**24**	*e*P	**Pn**	**13 33 46.6**	**+0.4**
BTO				S	**Sn**	**13 35 31.5**	**+2.3**
BTO				LR	LR		
	comp=N,770nm,6.8s						
BTO				LR	LR		
	comp=E,800nm,8.5s						
HHC	**Hu-ho-hao-te**	**9.95**	**29**	*e*P	**Pn**	**13 33 55.4**	**-1.8**
HHC				pP		13 34 02.4	
HHC				sP		13 34 07.3	
HHC				S	**Sn**	**13 35 47.0**	**-1.8**
HHC				sS		13 35 57.8	
HHC				SS		13 36 02.4	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,5.7s						
HHC				LR	LR		
	comp=E,1μm,5.1s						
HHC				LR	LR		
	comp=Z,1μm,5.8s						
HHC	**Hu-ho-hao-te**	**9.95**	**29**	*e*P	**Pn**	**13 33 55.3**	**-1.9**
HHC				pP		13 34 02.4	
HHC				sP		13 34 07.3	
HHC				S	**Sn**	**13 35 47.0**	**-1.8**
HHC				sS		13 35 57.8	
HHC				SS		13 36 02.4	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,5.7s						
HHC				LR	LR		
	comp=E,1μm,5.1s						
HHC				LR	LR		
	comp=Z,1μm,5.8s						
TIA	**Tai'an**	**10.64**	**65**	*e*P	**Pn**	**13 34 07.9**	**+1.3**
TIA				LR	LR		
	comp=N,510nm,7.0s						
NJ2	**Nanjing**	**11.61**	**88**	*e*P	**Pn**	**13 34 23.1**	**+3.1**
NJ2				pP		13 34 26.3	
NJ2				sP		13 34 29.4	
NJ2				PP		13 34 33.0	
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.7s						
NJ2				LR	LR		
	comp=N,980nm,17.0s						
NJ2				LR	LR		
	comp=E,1μm,16.2s						
NJ2				LR	LR		
	comp=Z,900nm,17.8s						
GZH	**Guangzhou**	**11.71**	**140**	P	**Pn**	**13 34 21.4**	**0.0**
GZH				S	**Sn**	**13 36 31.4**	**-0.8**
GZH				LR	LR		
	comp=N,1μm,6.1s						
GZH				LR	LR		
	comp=E,1μm,9.2s						
BJI	**Beijing**	**11.77**	**46**	P	**Pn**	**13 34 22.6**	**+0.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BJI				LR	LR		
	comp=N,1μm,11.7s						
BJI				LR	LR		
	comp=E,1μm,8.6s						
BJI				LR	LR		
	comp=Z,260nm,16.3s						
LSA	**Lhasa**	**12.29**	**261**	P	**Pn**	**13 34 27.4**	**-1.9**
LSA				S	Sn	13 37 17.6	+31
LSA				LR	LR		
	comp=N,520nm,15.0s						
LSA				LR	LR		
	comp=E,540nm,8.5s						
LSA				LR	LR		
	comp=Z,900nm,9.9s						
LSA	**Lhasa**	**12.29**	**261**	*e*P	**Pn**	**13 34 31.7**	**+2.4**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**12.29**	**261**	*e*P	**Pn**	**13 34 31.6**	**+2.3**
	comp=Z,8.6nm,0.6s						
SHL	**Shillong**	**13.42**	**243**	*e*P	**Pn**	**13 34 42.0**	**-2.8**

SSE Sheshan 13.71 91 P **Pn 13 34 48.0 -0.7**
SSE S **Sn 13 37 20.4 -0.6**
SSE pmax pmax
comp=Z,29nm,0.7s
SSE pmax pmax
comp=Z,270nm,5.2s
SSE LR LR
comp=N,880nm,10.1s
SSE LR LR
comp=E,760nm,10.1s
SSE LR LR
comp=Z,1μm,10.6s
QIZ Qiongzhong 13.89 161 P **Pn 13 34 52.8 +1.6**
QIZ S **Sn 13 37 28.1 +2.5**
QIZ LR LR
comp=N,2μm,9.2s
QIZ LR LR
comp=Z,2μm,9.7s
QZH Quanzhou 13.90 119 *e*P **Pn 13 34 50.8 -0.5**
QZH S **Sn 13 37 25.5 -0.1**
QZH LR LR
comp=N,4μm,8.2s
QZH LR LR
comp=E,4μm,9.6s
QZH LR LR
comp=Z,6μm,9.7s
CHTO Chiang Mai 14.56 204 *e*P **Pn 13 35 01.7 +1.3**
CHTO pmax pmax
comp=Z,9.0nm,0.8s
CHTO Chiang Mai 14.56 204 *e*P **Pn 13 35 01.7 +1.3**
comp=Z,8.7nm,0.8s
CM31 Chiang Mai Arr 14.89 204 *e*Pn **Pn 13 35 06.3 +1.4**
comp=Z,12nm,0.6s
SONM Songino Array 15.53 3 Pn **Pn 13 35 12.5 -0.6**
baz=183,slow=13,SNR=22
SONM Lg 13 39 47.2
comp=Z,0.3nm,0.3s,baz=186,slow=26,SNR=3.5
SONM LR LR 13 41 53.4
comp=Z,230nm,21.5s,baz=9.9,slow=40
GUN Gumba 17.24 260 *e*P **Pn 13 35 32.8 -2.3**
comp=Z,68nm,0.8s
SNY Shenyang 17.47 52 ⇑P **Pn 13 35 39.1 +1.2**
SNY S **Sn 13 38 45.3 -7.1**
SNY pmax pmax
comp=Z,12nm,1.4s
SNY pmax pmax
comp=Z,260nm,5.0s
SNY LR LR
comp=N,540nm,17.6s
SNY LR LR
comp=Z,420nm,20.6s
PKI Pulchoki 17.75 260 *e*P **Pn 13 35 39.3 -2.1**
comp=Z,49nm,0.8s
PKIN Phulchoki 17.76 260 *e*P **Pn 13 35 39.2 -2.3**
comp=Z,30nm,0.6s
KKN Kakani 17.78 260 *e*P **Pn 13 35 39.7 -2.2**
comp=Z,39nm,0.7s
WMQ Urumqi 17.87 315 *e*P **Pn 13 35 44.4 +1.6**
WMQ PP 13 36 00.8
WMQ S **Sn 13 39 01.0 -1.0**
WMQ SS 13 39 23.6
WMQ PcP PcP 13 40 22.0 +2.9
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,180nm,5.0s
WMQ LR LR
comp=N,860nm,9.0s
WMQ LR LR
comp=E,670nm,12.0s
WMQ LR LR
comp=Z,360nm,14.5s
DMN Daman 17.99 260 *e*P **Pn 13 35 41.7 -2.7**
comp=Z,68nm,0.9s
ZAK Zakamensk 18.10 356 *e*P **Pn 13 35 48.9 +3.3**
ZAK pmax pmax
comp=Z,21nm,1.4s
KSRS Korea Array 19.35 68 P **Pn 13 36 00.1 -0.8**
comp=Z,1.2nm,0.3s,baz=255,slow=10,SNR=30
KSRS LR LR 13 44 37.3
comp=Z,99nm,20.6s,baz=10,slow=41
KSRS Korea Array 19.35 68 P **Pn 13 36 00.2 -0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,99nm,20.6s
TLY Talaya 19.38 357 *e*P **Pn 13 36 02.6 +1.5**
TLY pmax pmax
comp=Z,14nm,1.3s
TLY MLR MLR
comp=Z,253nm,11.0s
TLY Talaya 19.38 357 *e*P **Pn 13 36 02.5 +1.4**
comp=Z,5.1nm,0.8s
MOY Mondy 19.57 352 *e*P **Pn 13 36 05.1 +1.7**
MOY pmax pmax
comp=Z,52nm,1.1s
CN2 Changchun 19.61 48 *e*P **Pn 13 36 05.1 +1.1**
CN2 *ep*P pP 13 36 13.3 +7.9
CN2 *es*P sP 13 36 17.9 +11
CN2 *eS* **Sn 13 39 34.3 -10**
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,10.0s
CN2 LR LR
comp=E,400nm,10.0s
CN2 LR LR
comp=Z,500nm,11.0s
IRK Irkutsk 19.92 358⇑*i*P **Pn 13 36 08.6 +1.1**
IRK pmax pmax
comp=Z,136nm,1.7s
HIA Hailar 20.15 29 *e*P **P 13 36 09.6 +1.1**
HIA pmax pmax
comp=Z,18nm,0.7s
HIA Hailar 20.15 29 *e*P **P 13 36 09.6 +1.2**
comp=Z,18nm,0.7s
MDJ Mudanjiang 22.64 50 P **P 13 36 37.4 +2.2**
MDJ pmax pmax
comp=Z,39nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,120nm,5.6s
MDJ Mudanjiang 22.64 50 *e*P **P 13 36 36.6 +1.4**
comp=Z,104nm,1.4s,mb5.1
MK31 Makanchi Array 22.68 316 *e*P **P 13 36 35.9 +0.2**
MKAR Makanchi Array 22.68 316 P **P 13 36 36.1 +0.4**
comp=Z,15nm,1.0s,mb4.4,baz=114,slow=11,SNR=34
DDI Dehra Dun 23.21 272 *ex* x 13 36 43.0
VLA Vladivostok 23.65 55 *e*P **P 13 36 46.6 +0.9**
VLA pmax pmax
comp=Z,21nm,1.0s,mb4.5
VLA MLR MLR
comp=Z,400nm,17.8s,MS3.9
ULHL Ulahol 24.94 302 P **P 13 37 02.5 +5.0**
SNR=13
TKM2 Tokmak 2 25.57 303 P **P 13 37 04.7 +1.4**
SNR=14
TKM2 Tokmak 2 25.57 303 *e*P **P 13 37 03.9 +0.6**
TKM2 pmax pmax
comp=Z,20nm,0.8s,mb4.7
TKM2 Tokmak 2 25.57 303 *e*P **P 13 37 03.9 +0.6**
comp=Z,20nm,0.8s,mb4.7
KZA Kyzart 25.62 301 P **P 13 37 05.7 +1.9**
SNR=13
KBK Karagaybulak 25.97 302 P **P 13 37 12.6 +5.7**
SNR=13
ZAA0 Zalesovo Array 26.04 332 *e*P **P 13 37 07.3 -0.2**
ZALV Zalesovo Beam 26.04 332 P **P 13 37 07.5 +0.1**
comp=Z,4.0nm,0.5s,mb4.2,baz=136,slow=10,SNR=15
KLR Kul'dur 26.09 42 *e*P **P 13 37 04.8 -3.1**
UCH Uchtor 26.19 301 P **P 13 37 10.5 +1.7**
SNR=11
UCH Uchtor 26.19 301 *e*P **P 13 37 10.3 +1.4**
comp=Z,29nm,1.0s,mb4.8
BOD Bodaibo 26.21 11 *e*P **P 13 37 09.5 +0.6**
BOD pmax pmax
comp=Z,8.0nm,1.2s,mb4.1
FRU Bishkek 26.25 302 *e*P **P 13 37 08.0 -1.4**
AAK Ala-Archa 26.29 302 P **P 13 37 10.7 +0.9**
comp=Z,1.4nm,0.3s,mb3.9,baz=182,slow=12,SNR=9.9
AAK LR LR 13 48 25.3
comp=Z,383nm,19.6s,MS4.0,baz=66,slow=38
AAK Ala-Archa 26.29 302 P **P 13 37 10.7 +0.9**
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
AAK MLR MLR
comp=Z,383nm,19.6s,MS4.0
AAK Ala-Archa 26.29 302 *e*P **P 13 37 11.5 +1.7**
comp=Z,12nm,1.0s,mb4.4
USP Ospenovka 26.43 303 P **P 13 37 15.1 +4.0**
SNR=16
AML Almayashu 26.77 300 P **P 13 37 19.5 +5.4**
SNR=12
AML Almayashu 26.77 300 *e*P **P 13 37 15.2 +1.1**
comp=Z,15nm,0.8s,mb4.6
EKS2 Erkin-Say 26.81 302 P **P 13 37 15.3 +0.8**
comp=Z,8.5nm,1.0s,mb4.2
KURK Kurchatov 26.84 321 P **P 13 37 14.6 -0.1**
comp=Z,11nm,0.8s,mb4.5,baz=128,slow=8.9,SNR=19
KURK PcP PcP 13 40 35.6 -1.4
comp=Z,0.8nm,0.4s,baz=118,slow=2.2,SNR=5.4
KURK LR LR 13 48 12.8
comp=Z,84nm,18.4s,MS3.3,baz=80,slow=37
KURK Kurchatov 26.84 321 P **P 13 37 14.6 0.0**
KURK 13 40 35.7
KURK pmax pmax
comp=Z,11nm,0.8s,mb4.4
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
KURK MLR MLR
comp=Z,84nm,18.4s,MS3.3
KURK Kurchatov 26.84 321 *e*P **P 13 37 14.9 +0.3**
comp=Z,22nm,0.9s,mb4.7
NVS Novosibirsk 27.33 332 *e*P **P 13 37 18.6 -0.4**
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.3
NVS pmax pmax
comp=N,18nm,1.6s
NVS pmax pmax
comp=E,15nm,1.7s
MAT Matsushiro 27.51 72 P **P 13 37 20.0 -0.8**
MJAR Matsushiro Arr 27.51 72 P **P 13 37 19.8 -1.1**
comp=E,5.6nm,0.8s,mb4.3,baz=278,slow=9.8,SNR=11
MJAR LR LR 13 49 24.2
comp=E,177nm,18.2s,MS3.7,baz=315,slow=39
MJAR Matsushiro Arr 27.51 72 P **P 13 37 19.8 -1.1**
MJAR LR LR 13 49 24.2
HABR Khabarovsk 27.67 46 *e*P **P 13 37 21.9 -0.3**
HABR *e**SP sP 13 37 33.8 +7.3
HABR *e* 13 38 06.1
HABR *e* 13 40 36.7
HABR pmax pmax
comp=N,19nm,2.1s
HABR pmax pmax
comp=Z,27nm,1.9s,mb4.5
HABR pmax pmax
comp=E,28nm,2.0s
HABR MLR MLR
comp=Z,414nm,11.0s,MS4.3
KBL Kabul 30.12 284 *e*P **P 13 37 44.5 +0.4**
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.7
KBL Kabul 30.12 284 *e*P **P 13 37 44.5 +0.4**
comp=Z,14nm,0.9s,mb4.7
ASAJ Asahikawa 31.43 57 P **P 13 37 54.5 -1.0**
comp=Z,4.8nm,0.6s,mb4.5,baz=274,slow=15,SNR=6.9
ASAJ LR LR 13 51 17.2
comp=Z,116nm,18.7s,MS3.6,baz=41,slow=38
ASAJ Asahikawa 31.43 57 P **P 13 37 54.5 -1.0**
ASAJ pmax pmax
comp=Z,5.0nm,0.6s
ASAJ MLR MLR
comp=Z,116nm,18.7s
YSS Yuzh-Sakhalins 32.10 52 *e*P **P 13 38 02.0 +0.6**
YSS Yuzh-Sakhalins 32.10 52 *e*P **P 13 38 01.9 +0.5**
comp=Z,25nm,1.1s,mb5.0
BVAR Borovoye Array 32.41 320 P **P 13 38 04.7 +0.6**
comp=Z,3.1nm,0.6s,mb4.3,baz=117,slow=9.1,SNR=15
BVAR PcP PcP 13 40 48.7 -2.5
comp=Z,1.4nm,0.5s,baz=128,slow=6.3,SNR=4.0
BVAR LR LR 13 51 01.1
comp=Z,103nm,19.0s,MS3.5,baz=130,slow=36
BVAR Borovoye Array 32.41 320 P **P 13 38 04.7 +0.6**
BVAR 13 40 48.7
BRVK Borovoye 32.49 320*ce*P **P 13 38 05.8 +1.1**
BRVK pmax pmax
comp=Z,20nm,1.7s,mb4.7
BRVK Borovoye 32.49 320 *e*P **P 13 38 04.5 -0.2**
comp=Z,23nm,1.3s,mb4.8
YAK Yakutsk 33.65 21 *e*P **P 13 38 14.5 -0.3**
YAK pmax pmax
comp=Z,11nm,1.0s,mb4.7
PALK Pallekele 33.74 228 P **P 13 38 16.6 +0.5**
comp=Z,16nm,0.8s,mb5.0,baz=32,slow=3.2,SNR=5.0
ABKAR Akbulak array 37.55 310 *e*P **P 13 38 48.7 +0.3**
comp=Z,5.7nm,0.6s,mb4.5
SVE Sverdlovsk 39.07 322 *e*P **P 13 39 02.3 +1.2**
SVE pmax pmax
comp=Z,48nm,1.4s,mb5.0
ARU Arti 40.03 321*c i*P **P 13 39 09.4 +0.3**
ARU S **S 13 45 15.0 +0.3**
ARU pmax pmax
comp=Z,42nm,1.0s,mb5.1
ARU Arti 40.03 321 *e*P **P 13 39 09.3 +0.2**
comp=Z,52nm,1.1s,mb5.2
GUMO Guam 40.75 108 LR LR 13 55 19.9
comp=Z,102nm,18.3s,MS3.7,baz=180,slow=35
TIXI Tiksi 41.39 11 *e*P **P 13 39 19.5 -0.7**
TIXI pmax pmax
comp=Z,16nm,1.9s,mb4.3
TIXI MLR MLR
comp=Z,301nm,18.0s,MS4.2
TIXI Tiksi 41.39 11 *e*P **P 13 39 19.6 -0.5**
comp=Z,5.0nm,0.6s,mb4.3
SEY Seymchan 42.59 30*ce*P **P 13 39 29.8 -0.3**
PETK Petropavlovsk- 42.70 45 P **P 13 39 30.6 -0.5**
comp=Z,16nm,0.8s,mb4.8,baz=309,slow=3.1,SNR=24
PETK LR LR 13 58 39.9
comp=Z,91nm,19.2s,MS3.7,baz=101,slow=38
PET Petropavlovsk 43.26 45 *e*P **P 13 39 34.9 -0.7**
PET MLR MLR
comp=Z,100nm,19.0s,MS3.7
ZEI Tsey 48.71 301 *e*P **P 13 40 18.5 -0.3**
ZEI pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KIV Kislovodsk 49.41 302 *e*P **P 13 40 24.8 +0.7**
KIV pmax pmax
comp=Z,26nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,45nm,18.0s,MS3.5
BILL Bilibino 49.70 26 *e*P **P 13 40 26.2 +0.3**
BILL pmax pmax
comp=Z,19nm,1.6s,mb4.9
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.4
BILL Bilibino 49.70 26 *e*P **P 13 40 25.9 0.0**
comp=Z,5.9nm,0.4s,mb5.0
KLMR Klimovskoe 50.58 325 *e*P **P 13 40 31.3 -1.4**
KLMR pmax pmax
comp=Z,58nm,1.5s,mb5.3
MOS Moscow 51.55 318 *e*P **P 13 40 38.5 -1.6**
OBN Obninsk 52.18 317 *e*P **P 13 40 44.0 -0.8**
OBN pmax pmax
comp=Z,63nm,2.5s,mb5.1
KNA Kununurra 52.88 151 *e*P **P 13 40 49.8 -0.6**
comp=Z,10nm,0.5s,mb5.0
APA Apatity 53.62 333⇓*i*P **P 13 41 00.2 +4.9**
APA MLR MLR
comp=Z,500nm,17.0s,MS4.6
FITZ Fitzroy Crossi 53.84 156 *e*P **P 13 40 55.9 -1.5**
comp=Z,4.6nm,0.5s,mb4.7
FITZ Fitzroy Crossi 53.84 156 P **P 13 40 56.0 -1.4**
comp=Z,3.4nm,0.8s,mb4.3,baz=10,slow=4.2,SNR=13
FITZ Fitzroy Crossi 53.84 156 *e*P **P 13 40 55.9 -1.5**
comp=Z,3.0nm,0.7s,mb4.3
MBWA Marble Bar 54.98 163 *e*P **P 13 41 04.7 -0.9**
comp=Z,17nm,1.1s,mb5.0
SIM Simferopol' 55.25 305 *e*P **P 13 41 10.9 +3.4**
SIM pmax pmax
comp=Z,17nm,0.9s,mb5.1
KEV Kevo 55.99 336 *e*P **P 13 41 11.6 -0.8**
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KEV Kevo 55.99 336 *ep* **P 13 41 11.6 -0.8**
comp=Z,9.1nm,0.7s,mb4.9
ARCES ARCESS Array B 56.52 335 P **P 13 41 15.9 -0.3**
comp=Z,8.1nm,0.8s,mb4.8,baz=73,slow=5.4,SNR=9.4
KAF Kangasniemi 56.87 327 *e*P **P 13 41 17.8 -0.9**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KAF Kangasniemi 56.87 327 *ep* **P 13 41 17.8 -0.9**
comp=Z,4.5nm,0.7s,mb4.6
BR131 Keskin Array S 56.92 299 P **P 13 41 18.7 -0.8**
comp=Z,3.6nm,0.7s,mb4.5
BRTR Keskin Array B 56.92 299 P **P 13 41 19.1 -0.5**
comp=Z,2.6nm,0.7s,mb4.4,baz=101,slow=6.4,SNR=8.6
FINES FINESS Array B 57.06 326 P **P 13 41 19.7 -0.4**
comp=Z,8.3nm,0.7s,mb4.9,baz=116,slow=8.7,SNR=15
FINES FINESS Array B 57.06 326 P **P 13 41 19.7 -0.4**
FINES pmax pmax
comp=Z,8.0nm,0.7s
VSU Vasula 57.18 322 *e*P **P 13 41 23.8 +2.8**
VSU pmax pmax
comp=Z,29nm,0.8s,mb5.4
AKASG Malin Array Be 57.21 313 P **P 13 41 20.5 -0.8**
comp=Z,5.2nm,0.7s,mb4.7,baz=68,slow=6.0,SNR=9.7
AKASG Malin Array Be 57.21 313 P **P 13 41 20.5 -0.9**
COEN Coen 58.67 136 *e*P **P 13 41 31.8 -0.2**
WRA Warramunga Arr 59.00 148 P **P 13 41 33.9 -0.3**
comp=Z,7.9nm,0.5s,mb5.0,baz=340,slow=7.4,SNR=87
VRI Vrincioaia 60.04 308⇓*i*P **P 13 41 45.6 +4.4**
KWP Kalwaria Pacla 61.53 313 *e*P **P 13 41 52.5 +1.2**
KWP Kalwaria Pacla 61.53 313 *e*P **P 13 41 51.2 -0.1**
KWP pmax pmax
comp=Z,23nm,0.8s,mb5.4
KWP Kalwaria Pacla 61.53 313 *e*P **P 13 41 51.2 -0.1**
comp=Z,23nm,0.8s,mb5.3
KWP Kalwaria Pacla 61.53 313⇓*i*P **P 13 41 51.6 +0.3**
ASAR Alice Springs 62.08 150 P **P 13 41 55.1 -0.1**
comp=Z,4.1nm,0.6s,mb4.8,baz=330,slow=6.5,SNR=107
OJC Ojcow 63.14 314 *e*P **P 13 42 05.2 +3.2**
NB2 NORSAR Subarra 64.12 327 P **P 13 42 07.1 -1.2**
comp=Z,7.0nm,0.7s,mb4.8,baz=73,slow=6.9
NOA NORSAR Array B 64.12 327 P **P 13 42 07.4 -0.9**
comp=Z,6.5nm,0.8s,mb4.7,baz=71,slow=6.6,SNR=12
TTA Tatalina 65.57 30 *e*P **P 13 42 18.0 +0.3**
TTA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TTA Tatalina 65.57 30 *e*P **P 13 42 18.0 +0.3**
comp=Z,5.8nm,0.8s,mb4.7
COLD Coldfoot 66.00 24 *e*P **P 13 42 20.5 +0.1**
comp=Z,5.3nm,0.9s,mb4.6
BRG Berggiesshubel 66.40 316 *e*P **P 13 42 28.5 +5.2**
comp=Z,5.0nm,0.8s,mb4.6
BRG Berggiesshubel 66.40 316 *e*P **P 13 42 28.5 +5.2**
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CHUM Lake Minchumin 66.68 28 *e*P **P 13 42 25.6 +0.7**
comp=Z,11nm,0.8s,mb4.9
CLL Collm 66.78 317 *e*P **P 13 42 28.0 +2.3**
CLL Collm 66.78 317 *e*(P) **P 13 42 28.0 +2.3**
BPAW Bear Paw Mtn. 67.11 28 *e*P **P 13 42 27.6 0.0**
comp=Z,15nm,0.9s,mb5.0
PPLA Purkeypile 67.17 29 *e*P **P 13 42 28.5 +0.5**
comp=Z,66nm,1.4s,mb5.5
GERES GERESS Array B 67.34 314 P **P 13 42 28.2 -1.1**
comp=Z,0.9nm,0.6s,mb4.0,baz=43,slow=6.0,SNR=3.9
GERES GERESS Array B 67.34 314 P **P 13 42 28.2 -1.1**
SOKA Soboth 67.38 312⇓*i*P **P 13 42 29.6 0.0**
comp=Z,1.4nm,0.7s,mb4.1
COLA College 67.95 26 *e*P **P 13 42 32.8 0.0**
COLA pmax pmax
comp=Z,25nm,1.1s,mb5.2
COLA College 67.95 26 *e*P **P 13 42 32.8 0.0**
comp=Z,25nm,1.1s,mb5.2
RSO Redoubt South 68.02 32 P **P 13 42 33.6 +0.2**
KDAK Kodiak Island 69.33 34*ce*P **P 13 42 41.7 +0.1**
INK Inuvik 70.72 20 *e*P **P 13 42 49.6 -0.3**
INK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 70.72 20 *e*P **P 13 42 49.6 -0.3**
comp=Z,11nm,0.9s,mb4.8
BBOO Buckleboo 71.04 153⇑*i*P **P 13 42 51.5 -0.8**
comp=Z,2.8nm,0.6s,mb4.4
BMRM Bremner River 71.24 29 *e*P **P 13 42 53.7 +0.4**
comp=Z,28nm,1.0s,mb5.2
CDF Champ du Feu 71.37 316 *e*P **P 13 42 53.8 -0.4**
DAWY Dawson 71.47 25 *e*P **P 13 42 54.2 -0.3**
KMBO Kilima Mbogo 72.06 257 P **P 13 42 59.7 +0.8**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 72.06 257 P **P 13 42 59.7 +0.8**
comp=Z,2.5nm,0.8s,mb4.2
STKA Stephens Creek 72.55 148 *e*P **P 13 43 00.8 -0.6**
comp=Z,6.5nm,1.2s,mb4.4
STKA Stephens Creek 72.55 148 P **P 13 43 01.0 -0.4**
comp=Z,2.7nm,0.5s,mb4.5,baz=347,slow=5.4,SNR=16
STKA Stephens Creek 72.55 148 *e*P **P 13 43 00.9 -0.4**
comp=Z,0.7nm,0.6s,mb3.8
LPG La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
comp=Z,26nm,0.8s,mb4.9
LPG La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPG La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
comp=Z,13nm,0.8s,mb4.9
LPL La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
comp=Z,21nm,0.8s,mb4.8
LPL La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
LPL pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 73.07 313 *e*P **P 13 43 04.6 +0.1**
comp=Z,11nm,0.8s,mb4.8
CMSA Cobar Meteorol 74.19 145⇑*i*P **P 13 43 11.4 +0.3**
SMF Signal de Mont 74.26 315 *e*P **P 13 43 10.7 -0.8**
OPO Ambohidratompo 75.07 236 P **P 13 43 15.9 -0.5**
comp=Z,2.0nm,0.6s,mb4.2,baz=40,slow=6.6,SNR=8.0
TCF Toulx Ste Croi 75.41 316 *e*P **P 13 43 17.7 -0.4**
SKAG Skagway 75.85 27 *e*P **P 13 43 21.2 +0.8**
comp=Z,17nm,0.8s,mb5.0
CAF Calviac 76.22 315 *e*P **P 13 43 22.8 +0.1**
YKA Yellowknife Ar 80.27 18 P **P 13 43 44.8 0.0**
comp=Z,6.4nm,0.5s,mb4.8,baz=328,slow=5.1,SNR=112
YKA Yellowknife Ar 80.27 18 P **P 13 43 44.8 0.0**
FFC Flin Flon 90.21 15*ce*P **P 13 44 34.9 +0.2**
ETW Entiat 90.57 29 *e*P **P 13 44 36.8 +0.2**
comp=Z,5.9nm,1.2s,mb4.8
SCHQ Schefferville 92.93 355 P **P 13 44 45.9 -1.4**
comp=Z,3.1nm,0.7s,mb4.8,baz=252,slow=6.1,SNR=4.9
SCHQ Schefferville 92.93 355 P **P 13 44 45.9 -1.4**
TORD Torodi Ar. Bea 94.11 288 P **P 13 44 52.6 -0.9**
comp=Z,0.6nm,0.6s,mb4.2,baz=50,slow=4.5,SNR=4.5

IDC 13 13:42:38.0±2.4,15°.81S×74°.86W,h0km,mb3.5/1, mb1 4.2/6,mb1mx3.8/20,mbtmp4.1/6,ML4.6/4,Error ellipse: s-maj=62.0km s-min=19.2km az=49.0,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.25**	**333**	Pn	Pn	13 43 42.8	-1.3
36nm,0.3s,baz=149,slow=12,SNR=52							
NNA				Sn	Sn	13 44 34.3	-0.2
372nm,0.3s,baz=228,slow=14,SNR=11							
LPAZ	**La Paz**	**6.49**	**95**	Pn	Pn	13 44 15.7	+0.8
3.5nm,0.3s,baz=287,slow=12,SNR=49							
LPAZ				Sn	Sn	13 45 31.2	+1.5
baz=238,slow=13,SNR=1.4							
LVC	**Limon Verde**	**8.80**	**141**	Pn	Pn	13 44 48.1	+1.5
3.9nm,0.3s,baz=333,slow=8.8,SNR=38							
LVC				Sn	Sn	13 46 27.5	+1.0
3.5nm,0.3s,baz=75,slow=16,SNR=3.3							
ATAH	**Atahualpa**	**9.41**	**338**	Pn	Pn	13 44 55.0	0.0
2.7nm,0.3s,baz=142,slow=4.8,SNR=9.8							
ATAH				Sn	Sn	13 46 35.0	-6.6
2.3nm,0.3s,baz=346,slow=17,SNR=3.0							
SIV	**San Ignacio**	**13.27**	**93**	Pn	Pn	13 45 39.9	-7.9
0.8nm,0.3s,baz=279,slow=12,SNR=15							
CPUP	**Villa Florida**	**19.40**	**126**	P	Pn	13 47 03.9	-2.9
0.1nm,0.3s,baz=302,slow=12,SNR=3.5							
TORD	**Torodi Ar. Bea**	**80.98**	**74**	P	P	13 54 55.8	+0.6
0.3nm,0.8s,baz=261,slow=6.8,SNR=2.1							

*IDC **13** 13:49:07.5±1.3,31°.24N×103°.87E,h0km,mb3.8/6, mb1 3.9/7,mb1mx3.6/24,mbtmp3.8/7,ML3.4/1,MS2.8/1, Ms1 2.8/1,ms1mx2.2/40,Error ellipse: s-maj=40.7km s-min=21.4km az=52.0*

*NEIC **13** 13:49:09.6±0.7,31°.32N×103°.86E,h10km,mb4.2/1,Error ellipse: s-maj=21.5km s-min=9.8km az=46.0*

*BJI **13** 13:49:11.8,31°.20N×103°.90E,h13km,mB4.8/2,mb4.0/4, ML3.9/14,Ms3.6/2*

ISC 13 13:49:09.2±1.2,31°.35N±0°.04×103°.87E±0°.08,h5km±9km, n15,σ0s.87/18,mb3.9/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**193**	Pg	**Pg**	**13 49 17.6**	**-0.2**
CD2				Sg	**Sg**	**13 49 23.8**	**+0.1**
CD2				smax			
	comp=N,54μm,0.6s						
ENH	**Enshi**	**4.95**	**101**	*e*Pn	**Pn**	**13 50 25.0**	**+0.8**
XAN	**Xi'an**	**5.03**	**56**	Pg	**Pg**	**13 50 44.6**	**-1.1**
XAN				Sg	**Sg**	**13 51 44.9**	**-6.0**
XAN				smax			
	comp=N,180nm,1.1s						
XAN				smax			
	comp=E,130nm,0.9s						
GYA	**Guiyang**	**5.45**	**153**	Pg	**Pb**	**13 50 46.6**	**+1.7**
GYA				Sg	**Sb**	**13 51 49.8**	**-0.8**
GYA				smax			
	comp=N,170nm,0.7s						
GYA				smax			
	comp=E,120nm,0.8s						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**13 53 02.1**	**-0.2**
	comp=E,0.1nm,0.3s,baz=188,slow=9.0,SNR=4.4						
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**13 53 50.9**	**+0.3**
	comp=E,2.4nm,0.7s,baz=260,slow=10,SNR=7.5						
KSRS				LR	LR	14 01 54.7	
	comp=E,27nm,20.7s,baz=125,slow=37						
CN2	**Changchun**	**21.07**	**48**	*e*P	**P**	**13 53 55.9**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.4						
MK31	**Makanchi Array**	**22.67**	**319**	*e*P	**P**	**13 54 11.2**	**-0.1**
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**13 54 11.8**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.3,baz=121,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**13 54 11.8**	**+0.5**
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**13 54 46.8**	**+0.2**
	comp=Z,1.6nm,0.7s,mb3.7,baz=132,slow=8.7,SNR=7.6						
KURK	**Kurchatov**	**26.93**	**323**	P	**P**	**13 54 51.2**	**0.0**
	comp=Z,3.2nm,0.2s,mb4.4,baz=217,slow=24,SNR=4.4						
WRAB	**Tennant Creek**	**58.78**	**146**	*e*P	**P**	**13 59 08.5**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**13 59 27.7**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=332,slow=6.9,SNR=11						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**14 01 26.0**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.3,SNR=5.1						

IGQ 13 14:06:22.2, 1°.92S×78°.53W, h158km±2km, Mb4.0, Ms3.8, 4C-12D, Error ellipse: s-maj=3.1km s-min=2.1km az=17.0, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**0.20**	**330**	⇓P	Pn	14 06 44.2	+0.7
RIOE	**Riobamba**	**0.20**	**330**	⇓S	Sn	14 06 58.8	-0.9
ARRY	**Arrayan**	**0.42**	**10**	⇑S	Sn	14 07 01.1	+0.2
ARRY	**Arrayan**	**0.42**	**10**	⇑P	Pn	14 06 44.2	+0.1
PATA	**Patacocha**	**0.43**	**13**	S	Sn	14 07 01.4	+0.3
PATA	**Patacocha**	**0.43**	**13**	P	Pn	14 06 44.5	+0.3
IGUA	**Igualata**	**0.44**	**346**	⇓P	Pn	14 06 45.0	+0.7
BIL2	**Estacion Bilba**	**0.47**	**4**	P	Pn	14 06 44.9	+0.5
MACE	**Macas**	**0.47**	**135**	⇓P	Pn	14 06 45.0	+0.6
MACE	**Macas**	**0.47**	**135**	⇓S	Sn	14 07 00.5	-0.7
ULBA	**Ulba**	**0.49**	**15**	S	Sn	14 07 01.2	-0.3
ULBA	**Ulba**	**0.49**	**15**	P	Pn	14 06 44.8	+0.3
JUI6	**Juive**	**0.50**	**7**	P	Pn	14 06 44.7	+0.2
RUN5	**Runtun**	**0.52**	**12**	P	Pn	14 06 45.0	+0.4
PISA	**Pisayambo**	**0.87**	**10**	⇑P	Pn	14 06 47.3	+0.6
TAMB	**Tambo**	**1.23**	**8**	⇓P	Pn	14 06 50.8	+1.0
TAMB	**Tambo**	**1.23**	**8**	⇓S	Sn	14 07 10.8	-0.2
COV1	**Cotopaxi Volc**	**1.27**	**9**	⇑P	Pn	14 06 51.6	+1.5
VC1	**Cotopaxi 1**	**1.28**	**6**	⇓P	Pn	14 06 51.5	+1.3
PITA	**Cotopaxi Volc**	**1.36**	**4**	P	Pn	14 06 52.1	+1.1
ANTI	**Antisana**	**1.51**	**14**	⇓P	Pn	14 06 53.5	+1.0
ANTI	**Antisana**	**1.51**	**14**	⇓S	Sn	14 07 17.9	+2.1
JUA2	**San Juan 2**	**1.70**	**358**	P	Pn	14 06 55.6	+1.1
GGP	**Refugio Guagua**	**1.74**	**358**	⇓P	Pn	14 06 56.1	+1.1
TERV	**Terraza Guagua**	**1.74**	**358**	P	Pn	14 06 56.4	+1.5
PINO	**Pino**	**1.76**	**358**	⇓P	Pn	14 06 56.2	+1.1
YANA	**Yana**	**1.79**	**359**	P	Pn	14 06 56.5	+1.0
CAYR	**Refugio Cayamb**	**2.00**	**15**	P	Pn	14 06 59.1	+1.3
CHAR	**Charly**	**2.02**	**25**	P	Pn	14 06 59.8	+1.8
CAYA	**Cayambe**	**2.06**	**15**	P	Pn	14 06 59.7	+1.2
OTAV	**Otavalo**	**2.15**	**2**	P	Pn	14 07 00.2	+0.6
COTA	**Cotacachi**	**2.25**	**5**	P	Pn	14 07 03.4	+2.6
JAMA	**Jama**	**2.35**	**315**	P	Pn	14 07 02.2	+0.3
CHIS	**Cerro-Chispas-**	**2.36**	**292**	P	Pn	14 07 03.0	+0.9

*IDC **13** 14:09:15.3±1.3, 31°.14N×103°.85E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/24, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=39.9km s-min=23.1km az=50.0*
*BJI **13** 14:09:15.7, 31°.07N×103°.78E, h11km, mB4.7/4, mb4.3/7, ML3.6/14, Ms3.7/2, Ms7 3.4/2*
*ISCJB **13** 14:09:16.3±0.6, 31°.30N±0°.04×104°.03E±0°.07, h10km, mb3.9/6, Error ellipse: s-maj=8.3km s-min=5.2km az=169.4*
*NEIC **13** 14:09:17.7±0.9, 31°.25N×103°.96E, h10km, mb4.5/1, Error ellipse: s-maj=26.0km s-min=12.3km az=46.0*
ISC 13 14:09:17.9±0.6, 31°.20N±0°.04×103°.93E±0°.07, h10km, n16, σ1§23/20, mb3.9/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.87**	**359**	Pg	**Pg**	**14 10 52.1**	**+0.9**
LZH				Sg	**Sg**	**14 11 54.6**	**+0.3**
LZH				smax			
	comp=N,830nm,0.7s						
LZH				smax			
	comp=E,71nm,0.6s						
LZH				LR	LR		
	comp=N,1μm,4.2s						
LZH				LR	LR		
	comp=Z,1μm,5.8s						
ENH	**Enshi**	**4.88**	**100**	*e*P	**Pn**	**14 10 31.7**	**+0.5**
XAN	**Xi'an**	**5.08**	**55**	Pn	**Pn**	**14 10 35.4**	**+1.4**
XAN				Pg	**Pg**	**14 10 52.4**	**-2.7**
XAN				Sg	**Sg**	**14 12 00.5**	**-0.3**
XAN				smax			
	comp=N,94nm,0.6s						
XAN				smax			
	comp=E,41nm,0.9s						
GYA	**Guiyang**	**5.30**	**152**	Pg	**Pb**	**14 10 47.5**	**-3.1**
GYA				Sg	**Sb**	**14 11 55.4**	**+1.1**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,120nm,0.8s						
KMI	**Kunming**	**6.15**	**190**	Pn	**Pn**	**14 10 42.4**	**-6.3**
KMI				smax			
	comp=N,33nm,1.1s						
KMI				smax			
	comp=E,27nm,1.3s						
SONM	**Songino Array**	**16.72**	**6**	Pn	**Pn**	**14 13 10.7**	**-1.4**
	comp=E,0.1nm,0.3s,baz=186,slow=12,SNR=7.7						
KSRS	**Korea Array**	**20.75**	**66**	P	**P**	**14 13 59.0**	**+0.2**
	comp=E,6.5nm,0.7s,baz=265,slow=11,SNR=22						
CN2	**Changchun**	**21.13**	**47**	*e*P	**P**	**14 14 04.8**	**+2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**22.81**	**319**	*e*P	**P**	**14 14 22.0**	**+1.4**
MKAR	**Makanchi Array**	**22.81**	**319**	P	**P**	**14 14 20.9**	**+0.3**
	comp=Z,1.4nm,0.8s,mb3.4,baz=125,slow=12,SNR=10						
KURK	**Kurchatov**	**27.08**	**323**	P	**P**	**14 14 58.7**	**-1.8**
	comp=Z,1.0nm,0.3s,mb3.9,baz=130,slow=8.6,SNR=4.3						
KURK	**Kurchatov**	**27.08**	**323**	P	**P**	**14 14 58.7**	**-1.8**
WRAB	**Tennant Creek**	**58.63**	**146**	*e*P	**P**	**14 19 15.8**	**+0.4**
	comp=Z,2.8nm,0.7s,mb4.4						
ASAR	**Alice Springs**	**61.65**	**149**	P	**P**	**14 19 34.9**	**-1.1**
	comp=Z,0.4nm,0.6s,mb3.8,baz=337,slow=6.9,SNR=8.5						
YKA	**Yellowknife Ar**	**81.64**	**17**	P	**P**	**14 21 35.2**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=330,slow=5.4,SNR=3.9						
YKA	**Yellowknife Ar**	**81.64**	**17**	P	**P**	**14 21 35.2**	**-0.7**

*IDC **13** 14:14:25.3±0.4, 16°.52N×122°.29E, h0km, mb4.8/24, mb1 4.9/26, mb1mx4.9/29, mbtmp4.9/26, ML4.8/2, MS4.3/25, Ms1 4.3/25, ms1mx4.2/36, Error ellipse: s-maj=19.5km s-min=10.3km az=79.0*
*BJI **13** 14:14:27.6, 16°.35N×122°.47E, h39km, mB5.2/40, mb4.9/49, Ms4.8/58, Ms7 4.7/51*
*MOS **13** 14:14:28.7±0.8, 16°.54N×122°.27E, h33km, mb5.3/47, MS4.6/17, Error ellipse: s-maj=9.7km s-min=4.8km az=112.0*
*MAN **13** 14:14:29, 16°.53N×122°.41E, h26km, mb5.9, ML4.9, MS5.4*
MAN INTENSITY V - DINAPIGUI ISABELA; INTENSITY IV - BALER & CASIGURAN ISABELA; PALANAN.
*ISCJB **13** 14:14:30.1±0.3, 16°.53N±0°.02×122°.35E±0°.03, h46km±2km, mb5.1/134, MS4.5/50, Error ellipse: s-maj=4.3km s-min=2.8km az=176.4*
*GCMT **13** 14:14:31.3±0.2, 16°.56N×122°.42E, h20km, MW5.2/87, Moment Tensor Solution. s61,c91; s87,c151; Duration: 1s0 Moment tensor: Scale 10^17^Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.05±.01; $M_{\phi\phi}$-0.72±.02; $M_{r\theta}$-0.11±.03; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$0.54±.03; Best double couple: $M_0$0.89600×10^17^ NP1:ϕ_s202.00000°, δ28.00000°, λ113.00000°. NP2: ϕ_s356.00000°, δ64.00000°, λ78.00000°. Principal axes: T 0.8810, Plg69.0000°, Azm242.0000°; N 0.0310, Plg11.0000°, Azm1.0000°; P -0.9120, Plg18.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **13** 14:14:31.3±0.5, 16°.46N×122°.26E, h44km±4km, mb5.1/60, MS4.8/3 Error ellipse: s-maj=5.1km s-min=3.8km az=95.0*
NEIC Felt [V PIVS] at Dinapigui; [IV PIVS] at Baler, Casiguran, Cauayan, Divilican, Jones, Maconacon, Palanan and San Mariano; [III PIVS] at Tuguegarao City and Tumauini; [II PIVS] at Baguio; [I PIVS] at Malate.
*DJA **13** 14:14:42, 16°.35N×122°.16E, h133km, Mw5.2/13*
ISC 13 14:14:31.6±0.3, 16°.52N±0°.02×122°.32E±0°.03, h45km±2km, h44km±4.1km:pP-P, n392, σ1§02/394, mb5.1/134, MS4.5/50, 23C-18D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**10**	*e*P	**Pn**	**14 14 42.0**	**-1.2**
CAUP	**Cauayan**	**0.64**	**312**	*e*P	**Pn**	**14 14 41.6**	**-2.8**
CAUP				*e*S	**Sn**	**14 14 49.5**	**-4.0**
BALP	**Baler**	**1.05**	**223**	*e*P	**Pn**	**14 14 48.3**	**-1.7**
BALP				*e*S	**Sn**	**14 15 03.6**	**+0.1**
CVP	**Callao Caves**	**1.27**	**338**	⇑*i*P	**Pn**	**14 14 51.2**	**-1.7**
CVP				*i* S	**Sn**	**14 15 08.5**	**-0.3**
PCPH	**Palayan**	**1.51**	**231**	⇓*e*P	**Pn**	**14 14 55.1**	**-1.1**
PCPH				*e*S	**Sn**	**14 15 17.1**	**+2.4**
BCPH	**Baguio City Da**	**1.68**	**266**	⇑*i*P	**Pn**	**14 14 58.3**	**-0.2**
BCPH				*i* S	**Sn**	**14 15 20.2**	**+1.5**
APYP	**Conner**	**1.69**	**323**	*e*P	**Pn**	**14 14 58.6**	**-0.1**
APYP				*e*S	**Sn**	**14 15 19.9**	**+0.9**
SGCP	**Mt. Cagua**	**1.73**	**351**	*e*P	**Pn**	**14 14 58.7**	**-0.5**
POLP	**Polillo Island**	**1.82**	**192**	*e*P	**Pn**	**14 14 59.4**	**-1.0**
ABRA	**Dolores**	**1.91**	**306**	*e*P	**Pn**	**14 15 01.7**	**0.0**
BOLP	**Bolinao**	**2.31**	**267**	*e*P	**Pn**	**14 15 09.4**	**+2.2**
PIP	**Pasuquin**	**2.42**	**318**	⇓*i*P	**Pn**	**14 15 07.7**	**-1.1**
SCZP	**Santa Cruz**	**2.43**	**253**	*e*P	**Pn**	**14 15 10.7**	**+1.9**
SCZP				*e*S	**Sn**	**14 15 44.4**	**+7.0**
GQP	**Guinayangan**	**2.60**	**177**	⇓*e*P	**Pn**	**14 15 10.7**	**-0.5**
GQP				*e*S	**Sn**	**14 15 41.5**	**0.0**
TGY	**Tagaytay City**	**2.75**	**209**	Pn	**Pn**	**14 15 12.3**	**-0.9**
	479nm,0.3s,baz=84,slow=3.3,SNR=39						
TGY				Lg		14 15 58.4	
	2μm,0.3s,baz=298,slow=19,SNR=8.5						
TGY	**Tagaytay City**	**2.75**	**209**	⇓*i*P	**Pn**	**14 15 14.2**	**+1.1**
BOAC	**Boac**	**3.08**	**189**	*e*P	**Pn**	**14 15 18.5**	**+0.8**
BOAC				*e*S	**Sn**	**14 15 51.4**	**-1.8**
AUQP	**San Andres**	**3.19**	**174**	*e*P	**Pn**	**14 15 20.3**	**+1.0**
PGP	**Puerto Galera**	**3.28**	**204**	⇓*e*P	**Pn**	**14 15 26.8**	**+6.4**
PVCP	**Virac**	**3.40**	**148**	*e*P	**Pn**	**14 15 20.6**	**-1.6**
LUBP	**Lubang**	**3.42**	**216**	*e*P	**Pn**	**14 15 24.8**	**+2.4**
BBP	**Basco**	**3.92**	**355**	*e*P	**Pn**	**14 15 28.5**	**-0.7**
OTRP	**Odiongan**	**4.14**	**184**	*e*P	**Pn**	**14 15 32.2**	**-0.1**
SJMP	**San Jose**	**4.20**	**196**	*e*P	**Pn**	**14 15 35.2**	**+2.1**
KALP	**Kalibo**	**4.81**	**180**	*e*P	Px	14 15 55.2	
BUSP	**Coron**	**4.94**	**205**	*e*P	**Pn**	**14 15 44.1**	**+0.8**
RCP	**Roxas**	**4.95**	**175**	⇑*e*P	**Pn**	**14 15 47.8**	**+4.4**
TWG	**Pinlang**	**6.38**	**350**	*e*Pn	**Pn**	**14 16 03.4**	**+0.4**
	111nm,0.6s						
YULB	**Yu-li**	**6.91**	**352**	*e*P	**Pn**	**14 16 09.0**	**-1.3**
	118nm,0.6s						
TPUB	**Ta-pu**	**6.93**	**347**	*e*P	**Pn**	**14 16 10.2**	**-0.4**
	318nm,1.1s						
SSLB	**Suanglung**	**7.34**	**350**	*e*P	**Pn**	**14 16 16.2**	**-0.1**
	119nm,0.8s						
NACB	**Ninganchiao**	**7.65**	**355**	*e*P	**Pn**	**14 16 20.3**	**-0.1**
	58nm,0.6s						
YHNB	**Yeheng**	**8.16**	**354**	*e*P	**Pn**	**14 16 28.5**	**+1.1**
	95nm,0.8s						
TATO	**Taipei**	**8.45**	**355**	P	**Pn**	**14 16 34.1**	**+2.6**
IPIL	**Ipil**	**8.68**	**178**	⇓*i*P	**Pn**	**14 16 36.3**	**+1.6**
QZH	**Quanzhou**	**9.08**	**338**	⇑*i*P	**Pn**	**14 16 40.9**	**+0.8**
QZH				S	**Sn**	**14 18 17.5**	**-3.4**
QZH				LR	LR		
	comp=N,3μm,12.4s						
QZH				LR	LR		
	comp=E,4μm,12.1s						
QZH				LR	LR		
	comp=Z,3μm,10.6s						
DAV	**Davao City (W)**	**9.92**	**161**	Pn	**Pn**	**14 16 55.4**	**+3.8**
	comp=Z,47nm,0.3s,baz=305,slow=12,SNR=3.4						
DAV				LR	LR	14 21 37.5	
	comp=Z,4μm,19.9s,baz=351,slow=44						
DAV	**Davao City (W)**	**9.92**	**161**	Pn	**Pn**	**14 16 55.4**	**+3.8**
DAV				LR	LR	14 21 37.5	
DAV	**Davao City (W)**	**9.92**	**161**	Pn	**Pn**	**14 16 55.0**	**+3.4**
SNR=9.4							
DAV				Pn	**Pn**	**14 16 55.0**	**+3.4**
SNR=9.4							
GZH	**Guangzhou**	**10.68**	**309**	P	**Pn**	**14 17 02.6**	**+0.6**
GZH				S	**Sn**	**14 18 57.8**	**-2.4**
GZH				LR	LR		
	comp=N,4μm,16.2s						
GZH				LR	LR		
	comp=E,4μm,15.0s						
GZH				LR	LR		
	comp=Z,7μm,15.8s						
JOW	**Kunigami**	**11.66**	**27**	Pn	**Pn**	**14 17 12.3**	**-3.0**
	comp=Z,7.9nm,0.3s,baz=190,slow=11,SNR=3.8						
JOW				LR	LR	14 21 42.0	
	comp=Z,2μm,18.8s,baz=219,slow=37						
QIZ	**Qiongzhong**	**12.15**	**284**	P	**Pn**	**14 17 20.9**	**-1.2**
QIZ				pP		14 17 28.0	
QIZ				sP		14 17 35.1	
QIZ				S	**Sn**	**14 19 35.8**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,40nm,1.2s						
QIZ				LR	LR		
	comp=N,2μm,16.7s						
QIZ				LR	LR		
	comp=E,2μm,17.9s						
QIZ				LR	LR		
	comp=Z,5μm,17.5s						
SSE	**Sheshan**	**14.55**	**356**	P	**Pn**	**14 17 55.5**	**+0.8**
SSE				S	**Sn**	**14 20 37.3**	**+2.6**
SSE				pmax	pmax		
	comp=Z,43nm,0.7s						
SSE				pmax	pmax		
	comp=Z,270nm,6.4s						
SSE				LR	LR		
	comp=N,1μm,19.3s						
SSE				LR	LR		
	comp=E,1μm,19.3s						
SSE				LR	LR		
	comp=Z,2μm,17.9s						
WHN	**Wuhan**	**15.75**	**334**	⇓P	**Pn**	**14 18 13.9**	**+3.6**
WHN				S	**S**	**14 21 12.4**	**-4.5**
WHN				LR	LR		
	comp=N,3μm,13.6s						
WHN				LR	LR		
	comp=E,4μm,13.8s						
WHN				LR	LR		
	comp=Z,3μm,15.4s						
NJ2	**Nanjing**	**15.78**	**349**	*e*P	**Pn**	**14 18 09.4**	**-1.4**
NJ2				pP	pP	14 18 18.1	-6.4
NJ2				PP		14 18 23.3	
NJ2				sP	sP	14 18 24.8	-5.5
NJ2				S	**S**	**14 21 07.0**	**-11**
NJ2				sS	sS	14 21 21.0	-13
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,270nm,6.9s						
NJ2				LR	LR		
	comp=N,1μm,14.9s						
NJ2				LR	LR		
	comp=E,2μm,12.9s						
NJ2				LR	LR		
	comp=Z,1μm,16.6s						
BTM	**Bintulu**	**16.05**	**215**	P	**Pn**	**14 18 17.8**	**+3.5**
SBUM	**Sibu**	**17.15**	**216**	P	**Pn**	**14 18 29.4**	**+1.2**
GYA	**Guiyang**	**17.59**	**307**	⇑*i*P	**Pn**	**14 18 35.5**	**+2.0**
GYA				pP	pP	14 18 43.3	-1.4
GYA				sP	sP	14 18 50.3	-0.1
GYA				S	**S**	**14 21 46.9**	**-7.7**
GYA				sS	sS	14 22 01.9	-10
GYA				SS		14 22 10.8	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,4.9s						
GYA				LR	LR		
	comp=N,530nm,13.6s						
GYA				LR	LR		
	comp=E,620nm,11.8s						
GYA				LR	LR		
	comp=Z,530nm,12.6s						
ENH	**Enshi**	**18.04**	**322**	P	**Pn**	**14 18 41.5**	**+2.5**
	comp=Z,59nm,0.7s						
KSM	**Kuching**	**19.06**	**220**	P	**Pn**	**14 18 51.5**	**0.0**
TIA	**Tai'an**	**20.15**	**348**	*e*P	**P**	**14 19 02.3**	**+0.2**
KMI	**Kunming**	**20.19**	**298**	P	**P**	**14 19 05.8**	**+3.2**
KMI				pP		14 19 15.1	
KMI				sP	sP	14 19 20.3	+1.4
KMI				PP		14 19 25.8	
KMI				S	**S**	**14 22 44.3**	**-2.5**
KMI				sS	sS	14 22 59.5	-4.6
KMI				SS		14 23 13.1	
KMI				PcP	PcP	14 23 17.6	+1.7
KMI				pmax	pmax		
	comp=Z,49nm,1.6s						
KMI				pmax	pmax		
	comp=Z,960nm,4.5s						
KMI				LR	LR		
	comp=N,2μm,9.5s						
KMI				LR	LR		
	comp=E,4μm,13.3s						
KMI				LR	LR		
	comp=Z,4μm,13.8s,MS5.0						
CBIJ	**Chichi jima**	**21.20**	**57**	LR	LR	14 25 47.2	
	comp=Z,840nm,20.3s,MS4.1,baz=280,slow=32						
INCN	**Inchon**	**21.23**	**10**	*e*P	**P**	**14 19 14.4**	**+0.7**
	comp=Z,220nm,0.8s,mb5.5						
INCN	**Inchon**	**21.23**	**10**	P	**P**	**14 19 14.9**	**+1.3**
SNR=7.1							
INCN				P		14 19 14.9	
SNR=7.1							
KSRS	**Korea Array**	**21.43**	**12**	P	**P**	**14 19 14.8**	**-1.0**
	comp=Z,30nm,0.9s,mb4.6,baz=198,slow=11,SNR=71						
KSRS				LR	LR	14 27 36.6	
	comp=Z,1μm,19.9s,MS4.2,baz=201,slow=37						
KAPI	**Kappang**	**21.54**	**187**	P	**P**	**14 19 16.7**	**-0.5**
	comp=Z,11nm,0.4s,mb4.6,baz=196,slow=18,SNR=5.7						
KTGM	**Kuala Trenggan**	**21.85**	**242**	P	**P**	**14 19 21.8**	**+1.2**
GUMO	**Guam**	**21.96**	**95**	LR	LR	14 27 23.6	
	comp=Z,737nm,18.3s,MS4.1,baz=196,slow=35						
CD2	**Chengdu**	**22.18**	**314**	P	**P**	**14 19 23.8**	**-0.1**
CD2				pP		14 19 35.3	
CD2				sP	sP	14 19 40.8	+0.4
CD2				PP		14 19 51.5	
CD2				S	**S**	**14 23 20.4**	**-5.4**
CD2				sS	sS	14 23 39.0	-4.5
CD2				SS		14 24 02.3	
CD2				pmax	pmax		
	comp=Z,150nm,0.7s,mb5.5						
CD2				pmax	pmax		
	comp=Z,740nm,4.9s						
CD2				LR	LR		
	comp=N,4μm,19.0s						
CD2				LR	LR		
	comp=Z,3μm,15.8s,MS4.8						
NNT	**Nongplab**	**22.20**	**263**	P	**P**	**14 19 27.0**	**+2.7**
BDT	**Bhumibol Dam**	**22.32**	**275**	P	**P**	**14 19 26.0**	**+0.4**
CM31	**Chiang Mai Arr**	**22.38**	**278**	*e*P	**P**	**14 19 24.8**	**-1.4**
	comp=Z,19nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**22.39**	**279**	*e*P	**P**	**14 19 25.9**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.5						
CHTO	**Chiang Mai**	**22.39**	**279**	*e*P	**P**	**14 19 25.9**	**-0.4**
	comp=Z,29nm,1.3s,mb4.5						
JHJ	**Hachijo jima 2**	**22.84**	**40**	LR	LR	14 27 15.6	
	comp=Z,858nm,19.2s,MS4.2,baz=259,slow=34						
SNG	**Songkhla**	**23.16**	**249**	P	**P**	**14 19 35.0**	**+0.6**
	comp=Z,100nm,0.8s,mb5.3						
MYKOM	**Kota Tinggi**	**23.34**	**233**	P	**P**	**14 19 36.7**	**+0.4**
KGM	**Kluang**	**23.61**	**234**	P	**P**	**14 19 39.3**	**+0.5**
KULM	**Kulim**	**24.00**	**245**	P	**P**	**14 19 42.8**	**+0.5**
KULM	**Kulim**	**24.00**	**245**	*e*P	**P**	**14 19 41.8**	**-0.5**
	comp=Z,113nm,1.4s,mb5.1						
BJT	**Baijiatuau**	**24.02**	**348**	*e*P	**P**	**14 19 41.5**	**-0.7**
BJT				pmax	pmax		
	comp=Z,46nm,0.6s						
BJT	**Baijiatuau**	**24.02**	**348**	*e*P	**P**	**14 19 41.5**	**-0.7**
	comp=Z,46nm,0.6s,mb5.1						
BJI	**Beijing**	**24.04**	**348**	P	**P**	**14 19 42.8**	**+0.4**
BJI				sP	sP	14 19 59.3	-0.3
BJI				S	**S**	**14 24 00.0**	**+3.4**
BJI				pmax	pmax		
	comp=Z,47nm,0.6s,mb5.1						
BJI				pmax	pmax		
	comp=Z,370nm,5.2s						
BJI				LR	LR		
	comp=N,540nm,15.6s						
BJI				LR	LR		
	comp=E,1μm,24.3s						
BJI				LR	LR		
	comp=Z,300nm,22.7s						
IPM	**Ipoh**	**24.08**	**243**	P	**P**	**14 19 43.1**	**0.0**
FRIM	**Kepong**	**24.25**	**239**	P	**P**	**14 19 45.0**	**+0.4**
MAT	**Matsushiro**	**24.42**	**32**	P	**P**	**14 19 43.7**	**-2.3**
MAT				*e*S	**S**	**14 23 57.0**	**-5.9**
MJAR	**Matsushiro Arr**	**24.42**	**32**	P	**P**	**14 19 44.9**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=224,slow=9.2,SNR=7.5						
MJAR				LR	LR	14 29 54.2	
	comp=Z,569nm,18.4s,MS4.1,baz=180,slow=38						
SNY	**Shenyang**	**25.25**	**2**	⇑P	**P**	**14 19 52.8**	**-0.6**
SNY				S	**S**	**14 24 18.8**	**+2.9**
SNY				pmax	pmax		
	comp=Z,46nm,1.4s,mb4.8						
SNY				pmax	pmax		
	comp=Z,490nm,4.0s						
SNY				LR	LR		
	comp=N,2μm,17.1s,MS4.7						
SNY				LR	LR		
	comp=E,490nm,13.7s,MS4.7						
SNY				LR	LR		
	comp=Z,2μ

CN2 eS S 14 24 52.4 +3.7
CN2 SS 14 26 11.5
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,15.0s,MS4.6
CN2 LR LR
comp=E,600nm,15.0s,MS4.6
CN2 LR LR
comp=Z,1μm,16.0s,MS4.6
VLA Vladivostok 27.74 15 P **P 14 20 20.0 +4.1**
VLA MLR MLR
comp=Z,700nm,15.4s,MS4.3
MDJ Mudanjiang 28.68 11 P **P 14 20 24.3 +0.1**
MDJ pP pP 14 20 35.0 -1.1
MDJ sP sP 14 20 40.1 -1.3
MDJ S **S 14 25 13.8 +3.9**
MDJ ScP ScP 14 27 11.6 -0.2
MDJ PcS PcS 14 27 16.3 -0.1
MDJ pmax pmax
comp=Z,19nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,210nm,5.6s
MDJ LR LR
comp=N,810nm,15.4s
MDJ LR LR
comp=E,630nm,20.6s
MDJ LR LR
comp=Z,850nm,17.5s,MS4.4
MDJ Mudanjiang 28.68 11 eP **P 14 20 23.4 -0.7**
comp=Z,57nm,1.3s,mb5.1
GTA Gaotai 30.09 324 P **P 14 20 37.3 +0.5**
GTA PcP PcP 14 23 39.0 +1.3
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
GTA pmax pmax
comp=Z,170nm,6.3s
GTA LR LR
comp=N,720nm,24.6s
GTA LR LR
comp=E,670nm,14.7s
GTA LR LR
comp=Z,830nm,15.0s
KAKA Kakadu 30.72 160 eP **P 14 20 39.5 -3.0**
comp=Z,14nm,1.0s,mb4.8
LSA Lhasa 31.42 300 P **P 14 20 48.4 -0.2**
LSA LR LR
comp=N,800nm,19.6s,MS4.5
LSA LR LR
comp=E,730nm,19.1s,MS4.5
LSA LR LR
comp=Z,1μm,20.0s,MS4.6
LSA Lhasa 31.42 300 eP **P 14 20 49.0 +0.4**
LSA pmax pmax
comp=Z,17nm,1.0s,mb4.8
LSA Lhasa 31.42 300 eP **P 14 20 49.0 +0.3**
comp=Z,17nm,1.0s,mb4.8
ASAJ Asahikawa 32.42 28 P **P 14 20 56.8 -0.5**
comp=Z,5.1nm,0.7s,mb4.5,baz=254,slow=21,SNR=7.9
KNA Kununurra 32.69 168 eP **P 14 20 58.8 -1.0**
comp=Z,49nm,1.3s,mb5.3
HIA Hailar 32.73 357 eP **P 14 20 59.3 -0.6**
HIA pmax pmax
comp=Z,23nm,0.9s
HIA Hailar 32.73 357 eP **P 14 20 59.3 -0.6**
comp=Z,23nm,0.9s,mb5.1
KLR Kul'dur 33.52 11 eP **P 14 21 02.7 -4.1**
KLR MLR MLR
comp=E,600nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s,MS4.8
HABR Khabarovsk 33.53 15 eP **P 14 21 05.9 -1.0**
HABR e*PP pP 14 21 18.5 -0.4
HABR eS **S 14 26 25.6 -0.2**
HABR eSS SS 14 28 33.7 -18
HABR e 14 31 26.2
HABR pmax pmax
comp=E,12nm,1.2s
HABR pmax pmax
comp=Z,20nm,1.4s,mb4.8
HABR pmax pmax
comp=N,7.0nm,1.6s
HABR MLR MLR
comp=Z,535nm,17.0s,MS4.3
TAPN Taplejung 33.76 295 eP **P 14 21 09.0 -0.2**
comp=Z,20nm,0.7s,mb5.2
SONM Songino Array 33.87 341 P **P 14 21 10.5 +0.7**
comp=Z,21nm,0.6s,mb5.2,baz=160,slow=9.8,SNR=112
SONM LR LR 14 36 19.3
comp=Z,2μm,19.4s,MS4.7,baz=151,slow=39
ODAN Odare 33.95 294 eP **P 14 21 10.6 -0.2**
comp=Z,37nm,0.5s,mb5.6
FITZ Fitzroy Crossi 34.56 174 eP **P 14 21 15.0 -1.1**
comp=Z,16nm,0.6s,mb5.1
FITZ Fitzroy Crossi 34.56 174 P **P 14 21 15.0 -1.1**
comp=Z,19nm,1.1s,mb4.9,baz=17,slow=8.0,SNR=16
FITZ Fitzroy Crossi 34.56 174 eP **P 14 21 14.9 -1.2**
comp=Z,68nm,1.5s,mb5.4
RAMN Ramite 34.66 294 eP **P 14 21 16.8 -0.2**
comp=Z,36nm,0.6s,mb5.5
YSS Yuzh-Sakhalins 34.75 25 eP **P 14 21 18.1 +0.6**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
JIRN Jiri 35.15 295 eP **P 14 21 21.1 -0.1**
comp=Z,23nm,0.4s,mb5.4
GUN Gumba 35.46 295 eP **P 14 21 23.8 -0.1**
comp=Z,53nm,0.7s,mb5.6
PKI Pulchoki 35.81 294 eP **P 14 21 26.2 -0.7**
PKIN Phulchoki 35.82 294 eP **P 14 21 26.1 -0.9**
comp=Z,14nm,0.6s,mb5.0
KKN Kakani 35.96 295 eP **P 14 21 27.4 -0.8**
DMN Daman 36.08 294 eP **P 14 21 28.5 -0.7**
comp=Z,30nm,0.7s,mb5.3
ZAK Zakamensk 37.10 340 eP **P 14 21 37.2 -0.3**
ZAK pmax pmax
comp=Z,12nm,1.0s,mb4.7
MBWA Marble Bar 37.53 184 eP **P 14 21 39.1 -2.3**
comp=Z,12nm,0.8s,mb4.7
TLY Talaya 38.10 341 P **P 14 21 46.0 0.0**
comp=Z,199nm,0.7s,mb6.0,SNR=7.9
TLY Talaya 38.10 341 ⇑ iP **P 14 21 46.7 +0.7**
TLY eS **S 14 27 34.6 -1.1**
TLY pmax pmax
comp=Z,47nm,1.7s,mb4.9
TLY MLR MLR
comp=Z,1μm,19.0s,MS4.7
TLY Talaya 38.10 341 eP **P 14 21 46.5 +0.5**
comp=Z,14nm,0.7s,mb4.8
TLY Talaya 38.10 341 P **P 14 21 47.1 +1.1**
SNR=19
TLY P 14 21 47.1
SNR=19
WRAB Tennant Creek 38.10 161 P **P 14 21 45.9 -0.4**
comp=Z,387nm,1.2s,mb6.0,SNR=11
WRAB Tennant Creek 38.10 161 eP **P 14 21 45.9 -0.4**
WRAB pmax pmax
comp=Z,92nm,1.1s,mb5.4
WRAB Tennant Creek 38.10 161 eP **P 14 21 45.9 -0.4**
comp=Z,92nm,1.1s,mb5.4
WRA Warramunga Arr 38.11 161 P **P 14 21 45.1 -1.3**
comp=Z,25nm,0.9s,mb4.9,baz=346,slow=8.9,SNR=8.1
IRK Irkutsk 38.41 342 eP **P 14 21 48.2 -0.3**
IRK pmax pmax
comp=Z,59nm,1.8s,mb5.0
MOY Mondy 38.96 339 eP **P 14 21 54.2 +1.0**
MOY pmax pmax
comp=Z,59nm,1.8s,mb5.0
WMQ Urumqi 39.98 320 eP **P 14 22 02.8 +1.0**
WMQ sP sP 14 22 18.3 -0.9
WMQ PP PP 14 23 39.8 +5.5
WMQ S **S 14 28 05.3 +1.2**
WMQ sS sS 14 28 25.6 +1.2
WMQ SS SS 14 30 57.3 -4.9
WMQ pmax pmax
comp=Z,15nm,1.2s,mb4.6
WMQ pmax pmax
comp=Z,330nm,3.8s
WMQ LR LR
comp=N,2μm,12.5s,MS5.1
WMQ LR LR
comp=E,900nm,13.0s,MS5.1
WMQ LR LR
comp=Z,550nm,15.0s,MS4.5
CLNS Chul'man 40.29 2 eP **P 14 22 03.6 -0.6**

CLNS e*PP pP 14 22 15.9 -0.5
CLNS e 14 23 37.8
CLNS e 14 24 07.3
CLNS eS **S 14 28 04.2 -4.3**
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.6
CLNS pmax pmax
comp=E,4.0nm,0.7s
CLNS pmax pmax
comp=N,10.0nm,1.3s
CLNS pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS smax
comp=N,67nm,12.7s
CLNS smax
comp=E,79nm,9.2s
CLNS MLR MLR
comp=E,427nm,13.0s,MS4.7
CLNS MLR MLR
comp=Z,895nm,17.0s,MS4.7
CLNS MLR MLR
comp=N,822nm,18.0s,MS4.7
NGP Nagpur 41.12 283 ex **P 14 22 08.1 -3.5**
NGP AMb AMB 14 22 17.8
comp=Z,42nm,0.0s
ASAR Alice Springs 41.51 164 P **P 14 22 14.1 -0.6**
comp=Z,4.3nm,0.4s,mb4.4,baz=15,slow=12,SNR=113
BOD Bodaibo 41.70 353 eP **P 14 22 15.4 -0.4**
BOD pmax pmax
comp=Z,16nm,1.5s,mb4.4
HYB Hyderabad 41.80 278 i P **P 14 22 16.5 -0.7**
DDI Dehra Dun 42.62 297 ex x 14 22 18.5
BHPL Bhopal 42.62 286 eP **P 14 22 23.3 -0.5**
BHPL AMb AMB 14 22 24.4
comp=Z,26nm,0.5s,mb5.2
KLP Kalpa 42.65 299 eP **P 14 22 23.8 -0.1**
KLP AMb AMB 14 22 26.6
comp=Z,39nm,1.1s,mb5.0
AYAN Aya Nagar 43.19 294 eP **P 14 22 25.6 -2.7**
SONA Sohna 43.20 294 eP **P 14 22 27.8 -0.7**
SIMA Simla 43.49 298 ex **P 14 22 27.0 -3.8**
KKR Kurukshetra 43.62 296 eP **P 14 22 31.2 -0.6**
KHET Khetri 44.31 293 eP **P 14 22 36.2 -1.2**
MK31 Makanchi Array 44.77 321 eP **P 14 22 41.0 +0.3**
MKAR Makanchi Array 44.77 321 P **P 14 22 40.8 +0.1**
comp=Z,24nm,0.7s,mb5.1,baz=115,slow=9.3,SNR=135
MKAR LR LR 14 43 20.3
comp=Z,447nm,18.4s,MS4.4,baz=126,slow=39
MKAR Makanchi Array 44.77 321 ceP **P 14 22 41.2 +0.5**
MKAR pmax pmax
comp=Z,24nm,0.7s
AJM Ajmer 45.24 291 eP **P 14 22 44.0 -0.8**
AJM AMb AMB 14 22 51.2
comp=Z,33nm,1.0s,mb5.1
YAK Yakutsk 45.76 5 c iP **P 14 22 47.5 -0.8**
YAK e 14 24 22.6
YAK e 14 24 37.3
YAK ePPP 14 25 24.8
YAK eS **S 14 29 30.4 +2.0**
YAK e 14 32 35.1
YAK pmax pmax
comp=Z,29nm,1.0s,mb5.2
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=Z,149nm,6.3s
YAK pmax pmax
comp=E,119nm,7.4s
YAK pmax pmax
comp=N,36nm,2.2s
YAK smax
comp=N,38nm,1.8s
YAK smax
comp=E,25nm,1.9s
YAK Yakutsk 45.76 5 eP **P 14 22 47.6 -0.7**
comp=E,17nm,0.6s,mb5.2
PEA0B Petropavlovsk- 45.81 29 eP **P 14 22 49.8 +0.8**
PETK Petropavlovsk- 45.81 29 P **P 14 22 50.0 +1.1**
comp=E,28nm,0.7s,mb5.3,baz=208,slow=3.7,SNR=38
PETK LR LR 14 41 16.8
comp=E,218nm,20.6s,MS4.1,baz=226,slow=35
POO Poona 46.16 280 eP **P 14 22 51.4 -0.7**
POO AMb AMB 14 22 59.7
comp=Z,44nm,1.0s,mb5.3
PET Petropavlovsk 46.21 30 eP **P 14 22 53.1 +1.1**
PET eS **S 14 29 35.4 +0.1**
PET pmax pmax
comp=Z,82nm,1.4s,mb5.5
PET pmax pmax
comp=Z,100nm,9.3s
PET pmax pmax
comp=Z,200nm,16.3s
PET Petropavlovsk 46.21 30 eP **P 14 22 52.3 +0.2**
comp=Z,92nm,1.2s,mb5.6
KSH Kashi 46.27 309 eP **P 14 22 55.1 +2.4**
KSH ePcP PcP 14 24 22.3 -5.4
KSH ePP PP 14 24 43.1 +1.3
KSH ePcS PcS 14 28 25.4 +3.2
KSH eS **S 14 29 38.0 +1.5**
KSH eScS ScS 14 32 47.0 +2.6
KSH eSS SS 14 32 55.8 -6.5
KSH pmax pmax
comp=Z,180nm,4.9s
KSH LR LR
comp=N,650nm,13.9s,MS5.0
KSH LR LR
comp=E,1μm,14.9s,MS5.0
ULHL Ulahol 46.90 313 P **P 14 22 58.6 +1.0**
SNR=15
ZAA0 Zalesovo Array 47.33 331 eP **P 14 23 00.1 -0.6**
ZALV Zalesovo Beam 47.33 331 P **P 14 23 00.4 -0.4**
comp=E,16nm,0.6s,mb5.1,baz=115,slow=7.3,SNR=78
ZALV LR LR 14 45 09.7
comp=E,277nm,20.7s,MS4.2,baz=128,slow=39
FORT Forrest 47.35 173 eP **P 14 23 00.8 -0.3**
comp=E,9.0nm,0.6s,mb4.9
KZA Kyzart 47.54 312 P **P 14 23 04.2 +1.6**
SNR=23
TKM2 Tokmak 2 47.56 314 P **P 14 23 03.7 +0.9**
SNR=9.9
TKM2 Tokmak 2 47.56 314 eP **P 14 23 03.4 +0.6**
TKM2 pmax pmax
comp=Z,15nm,1.3s,mb4.9
TKM2 Tokmak 2 47.56 314 eP **P 14 23 03.4 +0.6**
comp=Z,15nm,1.3s,mb4.9
KBK Karagaybulak 47.93 313 P **P 14 23 07.0 +1.4**
SNR=12
KLBR Kellerberrin 48.03 185 eP **P 14 23 05.3 -1.1**
comp=Z,62nm,1.7s,mb5.4
UCH Uchtor 48.11 312 P **P 14 23 08.9 +1.9**
SNR=22
UCH Uchtor 48.11 312 eP **P 14 23 08.4 +1.4**
comp=Z,29nm,0.9s,mb5.3
CHMS Chumysh 48.18 313 P **P 14 23 08.4 +0.9**
SNR=8.3
FRU Bishkek 48.22 313 eP **P 14 23 07.0 -0.9**
AAK Ala-Archa 48.24 313 P **P 14 23 09.1 +1.0**
SNR=5.7
AAK Ala-Archa 48.24 313 P **P 14 23 08.5 +0.5**
comp=Z,2.6nm,0.5s,mb4.5,baz=91,slow=8.2,SNR=8.4
AAK LR LR 14 45 35.5
comp=Z,714nm,18.6s,MS4.7,baz=85,slow=39
AAK Ala-Archa 48.24 313 ceP **P 14 23 09.1 +1.0**
AAK pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
AAK Ala-Archa 48.24 313 eP **P 14 23 07.9 -0.1**
comp=Z,5.4nm,0.6s,mb4.8
AAK Ala-Archa 48.24 313 P **P 14 23 09.3 +1.3**
SNR=11
AAK P 14 23 09.3
SNR=11
USP Ospenovka 48.44 314 P **P 14 23 10.0 +0.5**
SNR=13
JASL Jaisalmer 48.59 291 eP **P 14 23 10.9 -0.1**
NVS Novosibirsk 48.61 331 ⇑ iP **P 14 23 10.2 -0.4**
NVS e 14 24 33.5
NVS pmax pmax
comp=Z,42nm,1.3s,mb5.3
NVS pmax pmax
comp=N,20nm,1.2s
NVS pmax pmax
comp=E,24nm,1.1s

AML Almayashu 48.66 312 P **P 14 23 12.8 +1.5**
SNR=13
AML Almayashu 48.66 312 eP **P 14 23 11.4 +0.1**
comp=E,22nm,0.8s,mb5.2
EKS2 Erkin-Say 48.76 313 P **P 14 23 12.9 +0.9**
SNR=10
EKS2 Erkin-Say 48.76 313 eP **P 14 23 12.6 +0.6**
comp=E,5.9nm,0.7s,mb4.7
KURK Kurchatov 48.78 324 P **P 14 23 12.1 +0.1**
comp=E,711nm,0.7s,SNR=71
KURK Kurchatov 48.78 324 P **P 14 23 12.0 0.0**
comp=E,92nm,0.7s,mb6.0,baz=120,slow=8.2,SNR=226
KURK LR LR 14 45 54.4
comp=E,416nm,18.4s,MS4.5,baz=125,slow=39
KURK Kurchatov 48.78 324 eP **P 14 23 12.2 +0.2**
KURK pmax pmax
comp=Z,90nm,0.8s,mb5.8
KURK Kurchatov 48.78 324 eP **P 14 23 12.2 +0.2**
comp=Z,90nm,0.8s,mb5.8
KURK Kurchatov 48.78 324 P **P 14 23 12.5 +0.5**
SNR=39
KURK P 14 23 12.5
SNR=39
BHJ Bhuj 49.76 287 eP **P 14 23 18.6 -1.4**
BHJ AMb AMB 14 23 21.4
comp=Z,48nm,0.4s,mb5.8
KBL Kabul 50.73 301 eP **P 14 23 27.2 0.0**
BBOO Buckleboo 50.78 165 eP **P 14 23 26.9 -0.5**
comp=Z,5.4nm,0.4s,mb4.8
SEY Seymchan 50.87 17 ceP **P 14 23 28.9 +1.2**
STKA Stephens Creek 51.55 159 eP **P 14 23 32.2 -1.0**
comp=Z,5.1nm,0.7s,mb4.6
STKA Stephens Creek 51.55 159 P **P 14 23 34.0 +0.9**
comp=Z,6.5nm,0.9s,mb4.6,baz=348,slow=5.7,SNR=15
STKA Stephens Creek 51.55 159 eP **P 14 23 32.5 -0.7**
comp=Z,1.1nm,0.7s,mb3.9
CMSA Cobar Meteorol 52.79 155 eP **P 14 23 44.0 +1.6**
BVAR Borovoye Array 54.38 324 P **P 14 23 54.3 +0.5**
comp=Z,25nm,0.7s,mb5.3,baz=106,slow=8.9,SNR=129
BVAR LR LR 14 48 00.9
comp=Z,391nm,18.4s,MS4.5,baz=109,slow=37
BRVK Borovoye 54.45 324 P **P 14 23 55.1 +0.8**
comp=Z,573nm,0.7s,SNR=52
BRVK Borovoye 54.45 324 eP **P 14 23 54.8 +0.5**
BRVK pmax pmax
comp=Z,68nm,0.8s,mb5.6
BRVK Borovoye 54.45 324 eP **P 14 23 54.8 +0.5**
comp=Z,68nm,0.8s,mb5.6
BRVK Borovoye 54.45 324 P **P 14 23 55.3 +0.9**
SNR=32
BRVK P 14 23 55.3
SNR=32
TIXI Tiksi 55.26 3 c iP **P 14 23 59.4 -0.5**
TIXI eS **S 14 31 39.5 -0.6**
TIXI pmax pmax
comp=Z,80nm,1.9s,mb5.4
TIXI MLR MLR
comp=Z,1μm,18.0s,MS5.1
TIXI Tiksi 55.26 3 eP **P 14 23 59.3 -0.5**
comp=Z,33nm,0.9s,mb5.4
CNB Canberra Mage 57.58 154 eP **P 14 24 18.2 +1.3**
DZM Mont Dzumac 57.78 130 eS **S 14 32 13.5 -1.3**
comp=Z,746nm,30.1s
DZM eLR LR 14 41 13.5
comp=Z,418nm,23.8s
TOO Toolangi 58.05 158 eP **P 14 24 21.5 +1.4**
BILL Bilibino 58.56 18 eP **P 14 24 23.8 +0.5**
BILL i pP 14 24 33.9 -2.1
BILL i 14 25 14.6
BILL i S **S 14 32 27.3 +3.6**
BILL pmax pmax
comp=Z,40nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.6
BILL Bilibino 58.56 18 eP **P 14 24 23.6 +0.3**
comp=Z,30nm,0.8s,mb5.4
ABKAR Akbulak array 59.68 318 eP **P 14 24 31.1 -0.2**
comp=Z,0.9nm,0.9s
ABKT Ailbek 59.80 305 P **P 14 24 33.9 +1.5**
comp=Z,187nm,0.9s,mb6.1,SNR=8.1
SVE Sverdlovsk 60.91 326 ‖ eP **P 14 24 39.8 +0.1**
SVE eS **S 14 32 52.3 -2.0**
SVE pmax pmax
comp=Z,65nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,439nm,16.0s,MS4.7
AKTK Aktyubinsk 61.10 319 P **P 14 24 41.3 +0.2**
AKTK LR LR 14 51 32.6
AKTO Aktyubinsk 61.10 319 P **P 14 24 41.3 +0.2**
comp=Z,7.5nm,0.5s,mb5.1,baz=98,slow=9.2,SNR=28
AKTO LR LR 14 51 32.6
comp=Z,282nm,19.0s,MS4.4,baz=104,slow=36
ARU Arti 61.93 326 P **P 14 24 46.8 +0.3**
comp=Z,626nm,0.5s,SNR=28
ARU Arti 61.93 326 c iP **P 14 24 46.2 -0.3**
ARU e 14 25 24.3
ARU e 14 27 10.2
ARU S **S 14 33 09.3 +2.1**
ARU SS SS 14 37 07.2 -2.6
ARU pmax pmax
comp=Z,112nm,1.7s,mb5.7
ARU Arti 61.93 326 eP **P 14 24 46.1 -0.4**
comp=Z,53nm,0.6s,mb5.8
HATD Hatta, Dubai 61.97 290 P **P 14 24 52.9 +5.4**
SNR=5.9
SOKR Solikamsk 63.55 329 c iP **P 14 24 56.9 -0.4**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.2
SOKR MLR MLR
comp=Z,480nm,19.0s,MS4.7
MAK Makhachkala 67.89 310 eP **P 14 25 26.5 +0.9**
MAK e 14 25 53.2
MAK e 14 27 58.9
MAK S S 14 34 24.5 +3.4
MAK pmax pmax
comp=Z,224nm,1.5s,mb6.0
MAK MLR MLR
comp=Z,445nm,14.0s,MS4.8
KBD Kabd 68.94 295 eP **P 14 25 31.6 -0.8**
KBD AMb AMB 14 25 32.0
comp=Z,19nm,0.6s,mb5.2
RDF Al-Radifah 69.09 295 eP **P 14 25 32.8 -0.6**
RDF AMb AMB 14 25 40.1
comp=Z,43nm,1.1s,mb5.3
MIB Mutribah 69.16 296 eP **P 14 25 32.7 -1.1**
MIB AMb AMB 14 25 36.0
comp=Z,28nm,0.6s,mb5.4
ZEI Tsey 70.55 310 eP **P 14 25 40.4 -1.7**
ZEI pmax pmax
comp=Z,25nm,1.3s,mb5.0
KIV Kislovodsk 71.33 311 eP **P 14 25 46.8 0.0**
KIV eS S 14 35 02.0 +0.6
KIV pmax pmax
comp=Z,38nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,385nm,17.0s,MS4.7
KIV Kislovodsk 71.33 311 eP **P 14 25 47.4 +0.6**
comp=Z,46nm,1.0s,mb5.4
VRHR Novokhopersk 71.51 319 eP **P 14 25 47.4 -0.3**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,50nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.5s
TTA Tatalina 71.65 28 eP **P 14 25 49.3 +1.0**
TTA pmax pmax
comp=Z,26nm,1.1s,mb5.1
TTA Tatalina 71.65 28 eP **P 14 25 49.3 +1.0**
comp=Z,26nm,1.1s,mb5.1
SVW2 Sparrevohn 71.88 30 eP **P 14 25 51.0 +1.3**
KLMR Klimovskoe 72.23 329 eP **P 14 25 51.3 -0.5**
KLMR pmax pmax
comp=Z,64nm,1.4s,mb5.4
VORD Divnogorie 72.99 319 eP **P 14 25 55.9 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VSR Storozhevoye 73.05 319 eP **P 14 25 56.2 -0.7**
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.6s

VSR pmax pmax
comp=E,20nm,1.4s
CHUM Lake Minchumin 73.28 27 *e*P **P** **14 25 59.3 +1.3**
comp=E,20nm,1.0s,mb5.0
RSO Redoubt South 73.29 31 *e*P **P** **14 25 59.1 +1.0**
PPLA Purkeypile 73.40 28 *e*P **P** **14 25 59.9 +1.2**
comp=E,67nm,1.5s,mb5.3
SOC Sochi 73.51 311 *c*e*P **P** **14 25 56.3 -3.5**
SOC *e* 14 26 13.9
SOC *e* 14 28 42.6
SOC *e*S S 14 35 22.3 -4.1
SOC pmax pmax
comp=Z,116nm,1.1s,mb5.7
SOC MLR MLR
comp=Z,318nm,17.0s,MS4.7
MOS Moscow 73.55 324 *e*P **P** **14 25 57.9 -1.9**
MOS *e* 14 30 27.5
MOS pmax pmax
comp=Z,69nm,1.4s,mb5.4
KDAK Kodiak Island 73.59 34 *i*P **P** **14 26 00.5 +0.6**
BPAW Bear Paw Mtn. 73.85 27 *e*P **P** **14 26 02.4 +1.0**
comp=Z,137nm,1.4s,mb5.7
KTH Kantishna Hill 73.92 28 *e*P **P** **14 26 02.4 +0.6**
comp=Z,23nm,1.1s,mb5.0
COLD Coldfoot 73.94 24 *e*P **P** **14 26 03.2 +1.4**
comp=Z,16nm,0.8s,mb5.0
OBN Obninsk 74.21 323 *e*P **P** **14 26 03.0 -0.6**
OBN *i* pP 14 26 17.4 +0.7
OBN pmax pmax
comp=Z,56nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,200nm,14.0s,MS4.6
TRF Thorofare Moun 74.21 28 P **P** **14 26 03.8 +0.3**
comp=Z,55nm,1.3s,mb5.3
APA Apatity 74.46 337⇑ *e*P **P** **14 26 05.2 +0.3**
APA MLR MLR
comp=Z,400nm,21.0s,MS4.7
MCK McKinley 74.79 27 *e*P **P** **14 26 06.7 -0.1**
MCK pmax pmax
comp=Z,111nm,1.2s,mb5.7
MCK McKinley 74.79 27 *e*P **P** **14 26 06.7 -0.1**
comp=Z,111nm,1.2s,mb5.7
PMR Palmer 74.94 30 *e*P **P** **14 26 07.6 -0.1**
PMR pmax pmax
comp=Z,55nm,1.1s,mb5.4
PMR Palmer 74.94 30 *e*P **P** **14 26 07.6 -0.1**
comp=Z,55nm,1.1s,mb5.4
ANN Anapa 74.97 313 *e*P **P** **14 26 06.9 -1.4**
ANN *e**PP pP 14 26 20.7 -0.7
ANN *e*S S 14 35 42.5 -0.2
ANN pmax pmax
comp=Z,64nm,1.0s,mb5.5
COLA College 75.12 26 *e*P **P** **14 26 08.9 +0.2**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.8
COLA College 75.12 26 *e*P **P** **14 26 08.9 +0.1**
comp=Z,11nm,0.8s,mb4.8
MALT Malatya 75.24 306 *e*P **P** **14 26 10.6 +0.6**
comp=Z,13nm,1.1s,mb4.8
MALT Malatya 75.24 306⇓ *i*P **P** **14 26 11.1 +1.1**
JOF Joensuu 75.91 332 *e*P **P** **14 26 12.8 -0.5**
JOF pmax pmax
comp=Z,26nm,0.8s,mb5.2
JOF Joensuu 75.91 332 *e*p **P** **14 26 12.8 -0.5**
comp=Z,26nm,0.8s,mb5.2
PAX Paxson 76.44 28 *e*P **P** **14 26 17.0 +0.7**
PAX pmax pmax
comp=Z,18nm,1.4s,mb4.8
PAX Paxson 76.44 28 *e*P **P** **14 26 17.0 +0.7**
comp=Z,18nm,1.4s,mb4.8
KEV Kevo 76.47 339 *e*P **P** **14 26 16.6 +0.3**
KEV Kevo 76.47 339 *e*p **P** **14 26 16.6 +0.3**
DIV Divide 76.61 30 *e*P **P** **14 26 17.5 +0.2**
comp=Z,89nm,1.2s,mb5.6
ARCES ARCESS Array B 77.03 339 P **P** **14 26 20.2 +0.7**
comp=Z,21nm,0.9s,mb5.0,baz=79,slow=7.1,SNR=39
ARCES LR LR 15 06 49.2
comp=Z,275nm,18.0s,MS4.6,baz=44,slow=41
ARE0 ARCESS Array S 77.03 339 *e*P **P** **14 26 19.4 -0.1**
SPB4 Spitsbergen Ar 77.17 348 *e*P **P** **14 26 20.9 +0.8**
BMRM Bremner River 77.20 30 *e*P **P** **14 26 21.0 +0.4**
comp=Z,72nm,1.3s,mb5.4
MENT Mentasta 77.23 28 *e*P **P** **14 26 21.5 +0.8**
SIM Simferopol' 77.27 313 *e*P **P** **14 26 21.6 +0.2**
SIM pmax pmax
comp=Z,19nm,0.9s,mb5.0
ASF Jabal al Asfar 77.61 300 LR LR 15 05 05.0
comp=Z,144nm,18.2s,MS4.3,baz=178,slow=39
EGAK Eagle 77.96 26 *e*P **P** **14 26 25.3 +0.5**
comp=Z,16nm,0.8s,mb5.0
KAF Kangasniemi 78.34 331 *e*P **P** **14 26 26.3 -0.6**
KAF pmax pmax
comp=Z,20nm,0.6s,mb5.2
KAF Kangasniemi 78.34 331 *e*p **P** **14 26 26.3 -0.6**
comp=Z,20nm,0.6s,mb5.2
FINES FINESS Array B 78.60 331 P **P** **14 26 28.3 -0.1**
comp=Z,17nm,0.6s,mb5.1,baz=57,slow=5.8,SNR=76
FINES LR LR 15 04 40.7
comp=Z,339nm,20.0s,MS4.7,baz=36,slow=38
BR131 Keskin Array S 78.64 308 *e*P **P** **14 26 28.1 -0.9**
comp=Z,1.8nm,0.6s,mb4.2
BRTR Keskin Array B 78.64 308 P **P** **14 26 28.3 -0.8**
comp=Z,1.6nm,0.7s,mb4.1,baz=93,slow=3.0,SNR=6.2
BRTR LR LR 15 09 04.1
comp=Z,124nm,18.3s,MS4.3,baz=231,slow=42
DAWY Dawson 78.87 26 *e*P **P** **14 26 30.9 +1.0**
MICGM Minsk 79.27 324 *e*P **P** **14 26 30.0 -2.2**
MNK Minsk 79.30 324 *e*P **P** **14 26 30.0 -2.3**
AKASG Malin Array Be 79.33 320 P **P** **14 26 31.7 -0.9**
comp=Z,4.4nm,0.6s,mb4.5,baz=65,slow=5.1,SNR=22
AKASG LR LR 15 03 45.4
comp=Z,228nm,18.1s,MS4.5,baz=80,slow=37
AKASG Malin Array Be 79.33 320 P **P** **14 26 31.7 -0.9**
AKASG LR LR 15 03 45.4
AKBB Malin Array Si 79.33 320 *e*P **P** **14 26 31.1 -1.5**
NACGM Naroch 79.80 324 *e* **P** **14 26 32.0 -3.0**
INK Inuvik 79.92 21 *e*P **P** **14 26 35.3 -0.1**
INK pmax pmax
comp=Z,55nm,1.4s
INK Inuvik 79.92 21 *e*P **P** **14 26 35.3 -0.1**
comp=Z,55nm,1.4s,mb5.3
SUW Suwalki 82.06 324 *e*P **P** **14 26 46.5 -0.6**
SUW Suwalki 82.06 324 *e*P **P** **14 26 45.5 -1.6**
SUW pmax pmax
comp=Z,78nm,0.9s,mb5.6
SUW Suwalki 82.06 324 *e*P **P** **14 26 45.5 -1.6**
comp=Z,78nm,0.9s,mb5.6
SKAG Skagway 82.06 30 P **P** **14 26 46.7 -0.3**
comp=Z,57nm,1.2s,mb5.4
VRI Vrincioaia 82.14 315 P **P** **14 26 48.4 +0.7**
VRI Vrincioaia 82.14 315⇑ *i*P **P** **14 26 48.7 +1.0**
BURAR Bucovina Array 82.66 317⇓ P **P** **14 26 50.8 +0.4**
BURAR Bucovina Array 82.66 317⇓ *i*P **P** **14 26 50.8 +0.4**
BUR08 Bucovina Ar. S 82.66 317 *e*P **P** **14 26 49.4 -1.0**
MLR Muntele Rosu 82.77 315 P **P** **14 26 51.5 +0.5**
MLR Muntele Rosu 82.77 315⇑ *i*P **P** **14 26 51.6 +0.6**
CASY Casey 83.02 185 *e*P **P** **14 26 43.2 -8.5**
KWP Kalwaria Pacla 83.66 320 *e*P **P** **14 26 55.9 +0.4**
KWP Kalwaria Pacla 83.66 320 *e*P **P** **14 26 55.3 -0.1**
comp=Z,25nm,0.9s,mb5.3
KWP Kalwaria Pacla 83.66 320⇓ *i*P **P** **14 26 56.0 +0.5**
DAG Danmarks Havn 84.07 352⇓ *i*P **P** **14 26 56.9 -0.2**
DAG pmax pmax
comp=Z,13nm,0.6s,mb5.2
DAG Danmarks Havn 84.07 352⇓ *i*P **P** **14 26 56.9 -0.2**
comp=Z,13nm,0.6s,mb5.2
KOLS Kolonicke sedl 84.14 319 *e*P **P** **14 26 58.0 0.0**
KOLS *e* pP 14 27 06.8 -4.5
KOLS pmax pmax
comp=Z,12nm,1.5s,mb4.8
KOLS Kolonicke sedl 84.14 319 *e*P **P** **14 26 58.0 0.0**
comp=Z,12nm,1.5s,mb4.8
KOLS *e* pP 14 27 06.8 -4.5
KOLS *e*PP sP 14 27 17.5 +1.2
KOLS Kolonicke sedl 84.14 319 *e*P **P** **14 26 58.0 0.0**
KOLS *e*PCP PcP 14 27 06.8 +5.0
KOLS *e*sP sP 14 27 17.5 +1.2
UZH Uzhgorod 84.22 319 *e*P **P** **14 26 58.4 0.0**
DRGR 84.53 317 P **P** **14 27 00.4 +0.4**
STHS Stebnicka Huta 84.63 320 *e*P **P** **14 27 00.5 +0.1**
STHS *e* 14 27 07.3
STHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
STHS Stebnicka Huta 84.63 320 *e*P **P** **14 27 00.5 +0.1**
comp=Z,8.4nm,1.3s,mb4.7
STHS *e* 14 27 07.3
STHS *e*PP sP 14 27 20.7 +1.9
STHS Stebnicka Huta 84.63 320 *e*P **P** **14 27 00.5 +0.1**
STHS *e*PCP PcP 14 27 07.3 +3.4
STHS *e*sP sP 14 27 20.7 +1.9
GZR Gura Zlata 84.93 316 P **P** **14 27 02.0 0.0**
DLBC Dease Lake 84.99 30 *e*P **P** **14 27 03.8 +1.7**
NIE Niedzica 85.20 320 *e*P **P** **14 27 03.8 +0.5**
OJC Ojcow 85.24 321 *e*P **P** **14 27 03.4 -0.1**
KECS Kecovo 85.41 319 *e*P **P** **14 27 04.6 +0.2**
KECS *e* 14 27 23.0
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KECS Kecovo 85.41 319 *e*P **P** **14 27 04.6 +0.2**
comp=Z,7.9nm,0.9s,mb4.8
KECS *e* 14 27 07.8
KECS *e*PP sP 14 27 23.0 +0.3
KECS Kecovo 85.41 319 *e*P **P** **14 27 04.6 +0.2**
KECS *e*PCP PcP 14 27 07.8 +0.4
KECS *e*sP sP 14 27 23.0 +0.3
NOA NORSAR Array B 85.48 333 P **P** **14 27 04.0 -0.5**
comp=Z,18nm,0.6s,mb5.3,baz=64,slow=4.9,SNR=71
NOA PP PP 14 30 14.2 -8.6
comp=Z,0.7nm,0.9s,baz=66,slow=8.4,SNR=3.5
KMBO Kilima Mbogo 85.59 268 *c*e*P **P** **14 27 03.2 -2.7**
KMBO pmax pmax
comp=Z,178nm,0.5s
KMBO Kilima Mbogo 85.59 268 *e*P **P** **14 27 06.5 +0.6**
comp=Z,8.6nm,1.3s,mb4.8
BZS Buzias 85.63 316⇓ P **P** **14 27 05.0 -0.5**
BZS Buzias 85.63 316⇓ *i*P **P** **14 27 05.0 -0.5**
MIR Mirnyy 85.65 191 *e*P **P** **14 27 05.0 0.0**
MIR pmax pmax
comp=Z,43nm,1.4s,mb5.5
PSZ Piszkesteto 85.97 319 *e*P **P** **14 27 07.2 0.0**
comp=Z,34nm,1.4s,mb5.4
PSZ Piszkesteto 85.97 319⇑ *e*P **P** **14 27 07.2 0.0**
PSZ Piszkesteto 85.97 319⇑ *i*P **P** **14 27 07.8 +0.6**
RES Resolute Bay 86.02 9 *e*P **P** **14 27 07.1 +0.2**
RES pmax pmax
comp=Z,31nm,0.8s,mb5.6
RES Resolute Bay 86.02 9 *e*P **P** **14 27 07.1 +0.2**
comp=Z,31nm,0.8s,mb5.6
OKC Ostrava-Krasne 86.37 321 AMS AMS 15 12 10.0
comp=Z,300nm,15.0s
VYHS Vyhne 86.44 320 *e*P **P** **14 27 09.5 0.0**
VYHS *e* 14 27 16.6
VYHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
VYHS Vyhne 86.44 320 *e*P **P** **14 27 09.5 0.0**
comp=Z,7.7nm,1.3s,mb4.8
VYHS *e* 14 27 16.6
VYHS Vyhne 86.44 320 *e*P **P** **14 27 09.5 0.0**
VYHS *e*PCP PcP 14 27 16.6 +4.7
KOLL Kolacno 86.67 320 *e*P **P** **14 27 11.7 +1.1**
KOLL Kolacno 86.67 320 *e*P **P** **14 27 11.7 +1.1**
KSP Ksiaz 87.10 322 *e*P **P** **14 27 12.6 0.0**
DPC Dobruska-Polom 87.27 322 *e*P **P** **14 27 13.6 +0.1**
DPC MLR MLR
comp=Z,300nm,15.7s,MS4.8
DPC Dobruska-Polom 87.27 322 *e*P **P** **14 27 13.6 +0.1**
DPC AMS AMS 15 13 40.0
comp=Z,300nm,15.7s
PKSM Moragy 87.38 318 P **P** **14 27 14.1 0.0**
PKSM Moragy 87.38 318⇑ *i*P **P** **14 27 13.7 -0.4**
TREC Trest 88.18 321 AMS AMS 15 12 00.0
comp=Z,300nm,16.6s
PVCC Panska Ves 88.23 323 AMS AMS 15 12 10.0
comp=Z,300nm,14.0s
BRG Berggiesshubel 88.45 323 *e*P **P** **14 27 18.5 -0.6**
comp=Z,6.0nm,1.3s,mb4.7
BRG Berggiesshubel 88.45 323 *e*P **P** **14 27 18.5 -0.6**
BRG pmax pmax
comp=Z,4.0nm,1.3s,mb4.5
PRU Pruhonice 88.47 322 AMS AMS 15 10 10.0
comp=Z,300nm,15.7s
CLL Collm 88.81 324 *e*P **P** **14 27 20.0 -0.8**
CLL *e* 14 27 26.0
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
CLL MLR MLR
comp=Z,300nm,17.3s,MS4.8
CLL Collm 88.81 324 *e*P **P** **14 27 20.0 -0.8**
comp=Z,5.0nm,0.9s,mb4.8
CLL *e* 14 27 24.0
CLL *e* 14 27 26.0
CLL *e*S S 14 38 16.0 +11
CLL LR LR
comp=Z,300nm,17.3s,MS4.8
CLL Collm 88.81 324 *e*P **P** **14 27 20.0 -0.8**
comp=Z,5.0nm,0.9s,mb4.8
CLL *e*(PcP) PcP 14 27 24.0 +1.7
CLL *e* 14 27 26.0
CLL *e*PP PP 14 30 52.0 +2.2
CLL *e*S S 14 38 05.0 +0.2
KHC Kasperske Hory 89.39 322 AMS AMS 15 13 00.0
comp=Z,300nm,15.2s
GERES GERESS Array B 89.44 321 P **P** **14 27 23.7 -0.1**
comp=Z,1.3nm,0.7s,mb4.4,baz=74,slow=5.7,SNR=10
GERES LR LR 15 13 33.0
comp=Z,278nm,18.5s,MS4.7,baz=264,slow=40
CRES Cresnjev 89.58 318 *i*P **P** **14 27 24.4 0.0**
YKA Yellowknife Ar 89.59 23 P **P** **14 27 24.9 +0.8**
comp=Z,5.2nm,0.7s,mb5.0,baz=305,slow=4.4,SNR=74
YKA PKKPbc PKKPbc 14 44 57.2 -2.8
comp=Z,0.3nm,0.5s,baz=133,slow=2.5,SNR=4.9
YKA LR LR 15 15 52.0
comp=Z,16nm,18.2s,MS3.5,baz=55,slow=41
YKA Yellowknife Ar 89.59 23 P **P** **14 27 24.9 +0.8**
YKA PKKPbc PKKPbc 14 44 57.2 -2.8
YKA LR LR 15 15 52.0
NKC Novy Kostel 89.59 323 AMS AMS 15 13 00.0
comp=Z,300nm,14.3s
SCO Scoresbysund 89.75 349 *i*P **P** **14 27 24.6 -0.2**
SCO pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
SCO Scoresbysund 89.75 349 *i*P **P** **14 27 24.6 -0.2**
comp=Z,2.5nm,0.9s,mb4.5
PDKS Podkum 89.78 318 *e*P **P** **14 27 25.2 -0.2**
MOX Moxa 89.89 323 *e*P **P** **14 27 25.3 -0.5**
MOX
comp=Z,400nm,18.0s
SUMG Summit 90.20 354 *e*P **P** **14 27 27.6 +0.7**
comp=Z,27nm,1.0s,mb5.5
CEY Cerknica 90.27 318 *i*P **P** **14 27 27.3 -0.4**
JAVS Javornik 90.44 318 *i*P **P** **14 27 27.9 -0.7**
GRA1 Grafenberg Arr 90.54 323 *e*P **P** **14 27 28.6 -0.3**
comp=Z,6.0nm,1.0s,mb4.9
GRA1 LR LR
comp=Z,300nm,19.2s,MS4.7
GRF Grafenberg Arr 90.54 323 *e*P **P** **14 27 28.6 -0.3**
comp=Z,6.0nm,1.0s,mb4.9
GRF *e*L 15 13 46.7
comp=Z,285nm,19.2s
GRF Grafenberg Arr 90.54 323 *e*P **P** **14 27 28.6 -0.3**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
GRF MLR MLR
comp=Z,300nm,19.2s,MS4.7
PPT Papeete 93.12 107 *e*S S 14 38 45.1 -0.2
comp=Z,151nm,26.5s
PPT *e*LR LR 14 57 44.1
comp=Z,356nm,26.8s
PPT Papeete 93.12 107 LR LR 15 03 57.3
comp=Z,109nm,18.7s,MS4.3,baz=296,slow=32
CDF Champ du Feu 93.43 323 *e*P **P** **14 27 41.7 -0.6**
JCW Jim Creek 93.95 37 P **P** **14 27 46.2 +1.5**
HINF Hinteralfeld 93.97 322 *e*P **P** **14 27 43.8 -1.0**
HAU Haudompre 94.17 323 *e*P **P** **14 27 44.6 -1.1**
MAW Mawson 94.25 199 *e*P **P** **14 27 45.8 +0.3**
comp=Z,2.2nm,0.7s,mb4.7
MAW Mawson 94.25 199 P **P** **14 27 45.6 +0.2**
comp=Z,3.0nm,0.8s,mb4.8,baz=44,slow=5.7,SNR=7.1
MAW LR LR 15 06 28.5
comp=Z,108nm,21.0s,MS4.3,baz=146,slow=33
LPG La Plagne 95.18 320 *e*P **P** **14 27 50.4 0.0**
comp=Z,16nm,0.9s,mb5.1
LPG La Plagne 95.18 320 *e*P **P** **14 27 50.4 0.0**
LPG pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
LPG La Plagne 95.18 320 *e*P **P** **14 27 50.4 0.0**
comp=Z,8.1nm,0.9s,mb5.2
LPL La Plagne 95.19 320 *e*P **P** **14 27 50.3 -0.1**
comp=Z,13nm,0.9s,mb5.1
LPL La Plagne 95.19 320 *e*P **P** **14 27 50.3 -0.1**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
LPL La Plagne 95.19 320 *e*P **P** **14 27 50.3 -0.1**
comp=Z,6.6nm,0.9s,mb5.1
ORIF Oris-en-Rattie 96.01 320 *e*P **P** **14 27 53.7 -0.5**
comp=Z,5.2nm,0.6s,mb4.8
ORIF Oris-en-Rattie 96.01 320 *e*P **P** **14 27 53.7 -0.5**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
ORIF Oris-en-Rattie 96.01 320 *e*P **P** **14 27 53.7 -0.5**
comp=Z,2.6nm,0.6s,mb4.8
AVF Avril sur Loir 96.54 323 *e*P **P** **14 27 55.6 -1.0**
VIVF Saint-Julien-l 96.78 321 *e*P **P** **14 27 56.8 -0.9**
KEST Kesra 98.07 311 LR LR 15 23 59.4
comp=Z,53nm,18.0s,MS4.1,baz=228,slow=43
TAOE Nuku Hiva Isla 99.64 96 *e*SKSac SKSac 14 38 46.7 0.0
comp=Z,994nm,32.6s
TAOE *e*LR LR 15 00 30.7
comp=Z,467nm,32.9s
NVAR Mina Array Bea 101.22 44 P Pdif 14 28 18.9 +1.5
comp=Z,0.2nm,0.3s,baz=263,slow=7.3,SNR=3.6
SYO Syowa Base 102.70 201⇓ *e*pPdiff 14 28 38.0
TORD Torodi Ar. Bea 114.34 293 PKP PKiKP 14 33 06.9 -0.5
comp=Z,2.2nm,0.8s,baz=34,slow=1.5,SNR=14
TORD PP PP 14 33 58.5 -4.9
comp=Z,1.3nm,1.0s,baz=60,slow=6.4,SNR=4.6
TORD Torodi Ar. Bea 114.34 293 PKP PKiKP 14 33 06.9 -0.5
TORD PP PP 14 33 58.5 -4.9
TXAR Lajitas Array 116.38 45 PKP PKPdf 14 33 12.1 +1.1
comp=Z,0.8nm,0.8s,baz=187,slow=1.0,SNR=8.3
TXAR Lajitas Array 116.38 45 PKP PKPdf 14 33 12.1 +1.1
WVT Waverly 120.37 28 *e*PKIKP PKPdf 14 33 18.5 0.0
DBIC Dimbokro 122.90 290 PKP PKPdf 14 33 23.5 -0.4
comp=Z,3.1nm,0.6s,baz=337,slow=0.7,SNR=6.2
DBIC Dimbokro 122.90 290 PKP PKPdf 14 33 23.5 -0.4
KIC Kosan Boka 122.92 289 *e*PKIKP PKPdf 14 33 23.7 -0.2
comp=Z,33nm,1.0s
TIC Toumodi 123.06 290 *e*PKIKP PKPdf 14 33 23.8 -0.4
comp=Z,18nm,0.2s
LIC Lamto 123.24 289 *e*PKIKP PKPdf 14 33 23.3 -1.2
comp=Z,26nm,0.9s
MTP Monte Pirata 144.74 13 *e*PKP PKPdf 14 34 03.0 -1.4
EFI East Falkland 144.93 180 *e*PKIKP PKPdf 14 34 03.2 -0.5
SDV Santo Domingo 151.69 28 *e*PKPdf PKPdf 14 34 15.9 0.0
SDV *e*PKPbc PKPbc 14 34 22.9 +0.7
ROSC El Rosal 153.13 39 PKPbc PKPbc 14 34 26.2 +0.8
comp=Z,4.2nm,0.3s,baz=91,slow=20,SNR=5.6
PLCA Paso Flores 153.42 158 PKPbc PKPbc 14 34 26.8 +1.6
comp=Z,8.9nm,0.7s,baz=182,slow=2.3,SNR=23
LPAZ La Paz 169.97 90 PKP PKPdf 14 34 37.0 +1.7
comp=Z,3.3nm,1.0s,baz=68,slow=1.0,SNR=7.3
CPUP Villa Florida 170.23 182 PKPab PKPab 14 35 51.9 +0.9
comp=Z,3.4nm,0.7s,baz=173,slow=4.2,SNR=12

IDC 13 14:16:18.4±1.4, 31°.07N×103°.88E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/25, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=86.0km s-min=22.9km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.86**	**6**	Pn	Pn	14 20 15.9	+0.2
	0.1nm,0.3s,baz=172,slow=5.4,SNR=3.2						
MKAR	**Makanchi Array**	**22.88**	**319**	P	P	14 21 23.4	-0.1
	0.6nm,0.7s,baz=134,slow=10,SNR=5.1						
ZALV	**Zalesovo Beam**	**26.67**	**335**	P	P	14 21 58.7	-0.2
	0.4nm,0.3s,baz=127,slow=9.2,SNR=3.4						
KURK	**Kurchatov**	**27.16**	**324**	P	P	14 22 03.6	+0.3
	0.2nm,0.2s,baz=132,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**58.55**	**146**	P	P	14 26 16.9	0.0
	0.3nm,0.6s,baz=337,slow=7.7						

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*ISCJB **13** 14:19:33.9±0.4, 39°.35N±0°.02×24°.05E±0°.02, h10km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=20.6*
*CSEM **13** 14:19:34.4±0.1, 39°.34N×24°.02E, h10km, ML4.1/7, Error ellipse: s-maj=3.0km s-min=2.4km az=94.0*
*THE **13** 14:19:34.5, 39°.36N×24°.05E, h9km±1km, ML4.1/7, Error ellipse: s-maj=1.0km s-min=0.5km az=259.0*
*ATH **13** 14:19:34.4, 39°.35N×24°.04E, h32km±1km, MD3.6/15, ML3.6*
*NEIC **13** 14:19:34.4, 39°.35N×24°.04E, h32km, ML3.6(ATH), After ATH.*
*SOF **13** 14:19:36.9, 39°.76N×24°.13E, h2km, MD3.3*
*SKO **13** 14:19:36.4, 39°.49N×23°.99E, h8km*
ISC 13 14:19:34.7±0.4, 39°.35N±0°.02×24°.04E±0°.03, h12km±3km, n146, σ0°96/177, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.21**	**215**	P	**Pg**	**14 19 39.0**	**-0.3**
AOS				S	**Sg**	**14 19 42.6**	**+0.3**
AOS	**Alonnisos**	**0.21**	**215**	P	**Pg**	**14 19 39.0**	**-0.3**
AOS				S	**Sg**	**14 19 42.6**	**+0.3**
NEO	**Neokhori**	**0.63**	**267**	*e*PN	**Pg**	**14 19 47.1**	**+0.1**
NEO				*e*SN	**Sg**	**14 19 57.0**	**+1.7**
NEO	**Neokhori**	**0.63**	**267**	*e*Pn	**Pg**	**14 19 47.1**	**+0.1**
PAIG	**Paliouri**	**0.64**	**335**	P	**Pg**	**14 19 47.1**	**-0.1**
PAIG				S	**Sg**	**14 19 57.0**	**+1.3**
PAIG	**Paliouri**	**0.64**	**335**	P	**Pg**	**14 19 47.1**	**-0.1**
PAIG				S	**Sg**	**14 19 57.0**	**+1.3**
XOR	**Xorichti**	**0.66**	**272**	P	**Pg**	**14 19 46.9**	**-0.5**
XOR				S	**Sg**	**14 19 57.4**	**+1.4**
XOR	**Xorichti**	**0.66**	**272**	P	**Pg**	**14 19 46.9**	**-0.5**
XOR				S	**Sg**	**14 19 57.4**	**+1.4**
OUR	**Ouranopolis**	**0.99**	**358**	P	**Pg**	**14 19 52.8**	**-1.0**
OUR				S	**Sg**	**14 20 06.6**	**-0.1**
OUR	**Ouranopolis**	**0.99**	**358**	P	**Pg**	**14 19 52.8**	**-1.0**
OUR				S	**Sg**	**14 20 06.6**	**-0.1**
ATAL	**Atalanti**	**1.02**	**231**	P	**Pg**	**14 19 54.0**	**-0.4**
ATAL				S	**Sg**	**14 20 08.5**	**+0.7**
ATAL	**Atalanti**	**1.02**	**231**	P	**Pg**	**14 19 54.0**	**-0.4**
ATAL				S	**Sg**	**14 20 08.5**	**+0.7**
LIA	**Limnos Island**	**1.04**	**58**	*e*PN	**Pg**	**14 19 54.2**	**-0.6**
LIA				*e*SN	**Sg**	**14 20 08.8**	**+0.4**
LIA	**Limnos Island**	**1.04**	**58**	P	**Pg**	**14 19 54.1**	**-0.7**
LIA				S	**Sg**	**14 20 08.5**	**+0.1**
LIA	**Limnos Island**	**1.04**	**58**	P	**Pg**	**14 19 54.1**	**-0.7**
LIA				S	**Sg**	**14 20 08.5**	**+0.1**
LIA				*e*Sn	**Sg**	**14 20 08.8**	**+0.4**
LKR	**Lokris**	**1.06**	**230**	*e*PN	**Pg**	**14 19 54.6**	**-0.6**
LKR				*e*SN	**Sg**	**14 20 09.2**	**+0.1**
LKR	**Lokris**	**1.06**	**230**	P	**Pb**	**14 19 54.4**	**-0.7**
LKR	**Lokris**	**1.06**	**230**	P	**Pb**	**14 19 54.4**	**-0.7**
LKR				*e*Sn	**Sg**	**14 20 09.2**	**+0.1**
PLG	**Polygyros**	**1.12**	**336**	*e*PN	**Pg**	**14 19 55.3**	**-1.0**
PLG				*e*SN	**Sg**	**14 20 10.2**	**-0.8**
PLG	**Polygyros**	**1.12**	**336**	P	**Pg**	**14 19 55.1**	**-1.2**
PLG				S	**Sg**	**14 20 11.4**	**+0.4**
PLG	**Polygyros**	**1.12**	**336**	P	**Pg**	**14 19 55.1**	**-1.2**
PLG				*e*Sn	**Sg**	**14 20 10.2**	**-0.8**
PLG				S	**Sg**	**14 20 11.4**	**+0.4**
PTL	**Penteli**	**1.30**	**186**	*e*PN	**Pn**	**14 19 58.2**	**-0.5**
PTL				*e*SN	**Sn**	**14 20 14.5**	**-1.5**
PTL	**Penteli**	**1.30**	**186**	*e*Pn	**Pn**	**14 19 58.2**	**-0.5**
PTL				*e*Sn	**Sn**	**14 20 14.5**	**-1.5**
AGG	**Agios Georgios**	**1.36**	**257**	*e*PN	**Pn**	**14 19 58.9**	**-0.7**
AGG	**Agios Georgios**	**1.36**	**257**	P	**Pn**	**14 19 58.9**	**-0.7**
AGG				S	**Sb**	**14 20 18.6**	**+1.0**
AGG	**Agios Georgios**	**1.36**	**257**	P	**Pn**	**14 19 58.9**	**-0.7**
AGG				S	**Sb**	**14 20 18.6**	**+1.0**
ATHU	**Athens Univers**	**1.39**	**188**	P	**Pn**	**14 19 59.3**	**-0.7**
ATHU	**Athens Univers**	**1.39**	**188**	P	**Pn**	**14 19 59.3**	**-0.7**
ATH	**Athens Observa**	**1.39**	**190**	*e*PN	**Pn**	**14 19 59.5**	**-0.5**
ATH	**Athens Observa**	**1.39**	**190**	*e*Pn	**Pn**	**14 19 59.5**	**-0.5**
LIT	**Litokhoron**	**1.41**	**303**	*e*PN	**Pn**	**14 19 59.8**	**-0.4**
LIT				*e*SN	**Sn**	**14 20 18.1**	**-0.7**
LIT	**Litokhoron**	**1.41**	**303**	P	**Pn**	**14 19 59.5**	**-0.7**
LIT				S	**Sn**	**14 20 18.5**	**-0.3**
LIT	**Litokhoron**	**1.41**	**303**	P	**Pn**	**14 19 59.5**	**-0.7**
LIT	**Litokhoron**	**1.41**	**303**	*e*Pn	**Pn**	**14 19 59.8**	**-0.4**
LIT				*e*Sn	**Sn**	**14 20 18.1**	**-0.7**
LIT				S	**Sn**	**14 20 18.5**	**-0.3**
SIGR	**SIGRI**	**1.42**	**95**	P	**Pn**	**14 20 00.0**	**-0.3**
SIGR	**SIGRI**	**1.42**	**95**	P	**Pn**	**14 20 00.0**	**-0.3**
HORT	**Hortiatis**	**1.44**	**330**	P	**Pn**	**14 20 00.5**	**-0.2**
HORT				S	**Sn**	**14 20 19.8**	**+0.2**
HORT	**Hortiatis**	**1.44**	**330**	P	**Pn**	**14 20 00.5**	**-0.2**
HORT				S	**Sn**	**14 20 19.8**	**+0.2**
VLY	**Voula,Athens**	**1.50**	**187**	*e*PN	**Pn**	**14 20 01.0**	**-0.5**
VLY	**Voula,Athens**	**1.50**	**187**	*e*Pn	**Pn**	**14 20 01.0**	**-0.5**
LTK	**Loutraki**	**1.56**	**213**	*e*PB	**Pn**	**14 20 01.8**	**-0.5**

LTK	Loutraki	1.56 213	P	Pn	14 20 01.6	-0.7
LTK	Loutraki	1.56 213	P	Pn	14 20 01.6	-0.7
SOH	Sokhos	1.56 341	*e*PN	Pn	14 20 02.0	-0.4
SOH	Sokhos	1.56 341	P	Pn	14 20 02.0	-0.4
SOH	Sokhos	1.56 341	P	Pn	14 20 02.0	-0.4
THL	Klokotos Trika	1.58 279	*e*PN	Pn	14 20 02.0	-0.6
THL	Klokotos Trika	1.58 279	P	Pn	14 20 01.9	-0.7
THL	Klokotos Trika	1.58 279	*e*Pn	Pn	14 20 02.0	-0.6
NAIG	Nisos Aigina	1.64 195	*e*PB	Pn	14 20 02.9	-0.5
NAIG	Nisos Aigina	1.64 195	*e*Pb	Pn	14 20 02.9	-0.5
GADA	Gvkgeada	1.67 59	*e*PN	Pn	14 20 03.3	-0.4
GADA	Gvkgeada	1.67 59	*e*Pn	Pn	14 20 03.3	-0.4
PRK	Paraskevi	1.74 93	*e*PB	Pn	14 20 04.4	-0.3
PRK	Paraskevi	1.74 93	P	Pn	14 20 04.4	-0.3
PRK	Paraskevi	1.74 93	P	Pn	14 20 04.4	-0.3
EVR	Evrytania	1.78 257	*e*PB	Pb	14 20 06.3	-1.1
EVR	Evrytania	1.78 257	*e*Pb	Pb	14 20 06.3	-1.1
SRS	Serrai	1.80 349	P	Pn	14 20 04.8	-0.8
SRS	Serrai	1.80 349	P	Pn	14 20 04.8	-0.8
EZN	Ezine	1.83 74	*e*PN	Pn	14 20 07.8	+1.8
EZN	Ezine	1.83 74	*e*Pn	Pn	14 20 07.8	+1.8
EFP	Efpalio	1.90 242	*e*PB	Pn	14 20 07.3	+0.4
EFP	Efpalio	1.90 242	*e*Pb	Pn	14 20 07.3	+0.4
GUR	Goura	1.93 224	*e*PN	Pn	14 20 06.9	-0.5
GUR	Goura	1.93 224	P	Pn	14 20 07.2	-0.2
GUR	Goura	1.93 224	*e*Pn	Pn	14 20 06.9	-0.5
GUR	Goura	1.93 224	P	Pn	14 20 07.2	-0.2
KZN	Kozani	1.99 300	*e*PN	Pn	14 20 08.3	+0.1
KZN	Kozani	1.99 300	*e*Pn	Pn	14 20 08.3	+0.1
NVR	Nevrokopi	2.01 356	*e*PN	Pn	14 20 07.5	-0.9
NVR	Nevrokopi	2.01 356	*e*Pn	Pn	14 20 07.5	-0.9
RDO	Rodhopi	2.13 32	*e*PN	Pn	14 20 08.8	-1.4
RDO	Rodhopi	2.13 32	P	Pn	14 20 08.8	-1.4
RDO	Rodhopi	2.13 32	P	Pn	14 20 08.8	-1.4
ENEZ	Enez	2.14 49	*e*PN	Pn	14 20 12.2	+2.0
ENEZ	Enez	2.14 49	*e*Pn	Pn	14 20 12.2	+2.0
ALN	Alexandroupoli	2.19 44	*e*PN	Pn	14 20 09.4	-1.5
ALN	Alexandroupoli	2.19 44	P	Pn	14 20 09.3	-1.6
ALN	Alexandroupoli	2.19 44	*e*Pn	Pn	14 20 09.4	-1.5
MMB	Musomiste	2.25 354	*i* P	Pn	14 20 10.8	-1.0
MMB	Musomiste	2.25 354	*i* P	Pn	14 20 10.8	-1.0
VAY	Valandovo	2.27 331	*i* Pn	Pn	14 20 12.0	0.0
VAY	Valandovo	2.27 331	*i* Pn	Pn	14 20 12.0	0.0
LPK	Lapseki	2.33 63	*e*PN	Pg	14 20 15.6	-3.8
LPK	Lapseki	2.33 63	*e*Pn	Pg	14 20 15.6	-3.9
VLX	Vlachokerasia	2.36 214	*e*PN	Pn	14 20 13.8	+0.5
VLX	Vlachokerasia	2.36 214	*e*Pn	Pn	14 20 13.8	+0.5
RZN	Rozhen	2.40 12	*i* P	Pn	14 20 13.6	-0.2
RZN	Rozhen	2.40 12	*i* P	Pn	14 20 13.6	-0.2
JAN	Janina	2.48 278	P	Pg	14 20 19.9	-2.4
KDZ	Kurdzhali	2.53 24	*i* P	Pn	14 20 14.5	-1.1
KDZ	Kurdzhali	2.53 24	*i* P	Pn	14 20 14.5	-1.1
APE	Apeiranthos	2.56 152	*e*PN	Pn	14 20 15.8	-0.2
APE	Apeiranthos	2.56 152	P	Pn	14 20 15.5	-0.5
APE	Apeiranthos	2.56 152	P	Pn	14 20 15.5	-0.5
APE	Apeiranthos	2.56 152	*e*Pn	Pn	14 20 15.8	-0.2
KKB	Krupnik	2.62 344	*i* P	Pn	14 20 16.5	-0.4
KKB	Krupnik	2.62 344	*i* P	Pn	14 20 16.5	-0.4
BIA	Bitola	2.67 310	*e*Pn	Pn	14 20 19.2	+1.7
BIA	Bitola	2.67 310	*e*Pn	Pn	14 20 19.1	+1.6
ITM	Ithomi	2.73 218	*e*PN	Pn	14 20 19.1	+0.8
ITM	Ithomi	2.73 218	P	Pn	14 20 19.4	+1.1
ITM	Ithomi	2.73 218	*e*Pn	Pn	14 20 19.1	+0.8
ITM	Ithomi	2.73 218	P	Pn	14 20 19.4	+1.1
SMG	Samos	2.74 126	*e*PN	Pn	14 20 18.6	+0.1
SMG	Samos	2.74 126	*e*Pn	Pn	14 20 18.6	+0.1
RKY	Sarkoy-Tekirda	2.76 60	*e*P	Pn	14 20 20.7	+1.9
RKY	Sarkoy-Tekirda	2.76 60	*e*P	Pn	14 20 20.7	+1.9
VLI	Veliai	2.76 199	*e*PN	Pn	14 20 18.2	-0.6
VLI	Veliai	2.76 199	*e*Pn	Pn	14 20 18.2	-0.6
MFT	Murefte	2.88 59	*e*P	Pn	14 20 23.0	+2.7
MFT	Murefte	2.88 59	*e*P	Pn	14 20 23.0	+2.6
KRUS	Krusevo	2.94 314	*i* Pn	Pn	14 20 21.5	+0.3
KRUS	Krusevo	2.94 314	*i* Pn	Pn	14 20 21.5	+0.3
VLS	Valsamata	2.94 248	*e*PN	Pn	14 20 22.6	+1.4
VLS	Valsamata	2.94 248	*e*Pn	Pn	14 20 22.6	+1.4
PYL	PYLOS	3.04 217	*e*PN	Pn	14 20 23.0	+0.3
PYL	PYLOS	3.04 217	*e*Pn	Pn	14 20 23.0	+0.3
THR4	Thira Island,	3.08 159	P	Pn	14 20 23.3	+0.2
THR4	Thira Island,	3.08 159	P	Pn	14 20 23.3	+0.2
THR5	Thira Island,	3.10 160	P	Pn	14 20 23.6	+0.1
THR5	Thira Island,	3.10 160	P	Pn	14 20 23.6	+0.1
THR3	Thira Island,	3.12 159	P	Pn	14 20 23.7	-0.1
THR3	Thira Island,	3.12 159	P	Pn	14 20 23.7	-0.1
KYTH	Kithira	3.16 195	*e*PN	Pn	14 20 24.6	+0.3
KYTH	Kithira	3.16 195	*e*Pn	Pn	14 20 24.6	+0.3
THR6	Thira Island,	3.17 160	P	Pn	14 20 24.8	+0.3
THR6	Thira Island,	3.17 160	P	Pn	14 20 24.8	+0.3
EDRB	Edirne	3.24 39	*e*P	Pn	14 20 27.6	+2.2
EDRB	Edirne	3.24 39	*e*P	Pn	14 20 27.6	+2.2
KEK	Kerkira	3.30 278	*e*PN	Pn	14 20 26.1	-0.1
KEK	Kerkira	3.30 278	*e*Pn	Pn	14 20 26.1	-0.1
VTS	Vitosha	3.30 349	P	Pn	14 20 26.2	-0.1
VTS	Vitosha	3.30 349	P	Pn	14 20 26.2	-0.1
BARS	Barje	3.85 335	⇑*i* Pn	Pn	14 20 33.9	+0.1
YLV	Yalova	4.28 72	*e*P	Pn	14 20 42.8	+3.1
YLV	Yalova	4.28 72	*e*P	Pn	14 20 42.8	+3.1
KARP	Karpathos	4.53 146	P	Pn	14 20 44.4	+1.2
KARP	Karpathos	4.53 146	P	Pn	14 20 44.4	+1.2
XRY	Khrisi	4.66 163	*e*PN	Pn	14 20 46.1	+1.3
XRY	Khrisi	4.66 163	*e*Pn	Pn	14 20 46.1	+1.3
BOLS	Boljevac	4.74 341	*i* Pn	Pn	14 20 47.2	+1.2
GRUS	Gruza	5.18 332	*e*Pn	Pn	14 20 49.0	-3.0
DIVS	Divibare	5.63 329	*e*Pn	Pn	14 20 58.6	+0.4
BBLS	Lazići	5.70 324	*e*Pn	Pn	14 21 00.4	+1.3

*IDC **13** 14:24:51.8±0.8, 16°.44N×122°.26E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.0/26, mbtmp4.1/16, ML3.8/1, Error ellipse: s-maj=30.8km s-min=15.5km az=77.0*
*MAN **13** 14:24:55, 16°.53N×122°.44E, h21km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY III - DINAPIGUI ISABELA.
*NEIC **13** 14:24:58.5±1.0, 16°.37N×122°.14E, h49km±9km, mb4.5/4, Error ellipse: s-maj=15.6km s-min=6.7km az=79.0*
NEIC Felt [III PIVS] at Dinapigui.

ISC 13 14:24:55.6±1.1, 16°.49N±0°.03×122°.31E±0°.07, h21km±8km, n37, σ0s97/42, mb4.2/16, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.58**	**11**	*e*P		**Pb**	14 25 07.0	**-0.1**
CAUP	**Cauayan**	**0.65**	**314**	*e*P		**Pb**	14 25 07.9	**-0.3**
CAUP				*e*S		**Sb**	14 25 15.8	**-1.1**
BALP	**Baler**	**1.03**	**224**	*e*P		**Pb**	14 25 15.1	**+0.4**
BALP				*e*S		**Sb**	14 25 26.3	**-1.5**
CVP	**Callao Caves**	**1.29**	**339**	⇓*i* P		**Pn**	14 25 17.9	**-0.5**
CVP				*i* S		**Sn**	14 25 35.0	**-0.1**
PCPH	**Palayan**	**1.49**	**232**	⇑*e*P		**Pn**	14 25 21.8	**+0.6**
PCPH				*e*S		**Sn**	14 25 44.4	**+4.4**
BCPH	**Baguio City Da**	**1.67**	**266**	⇑*i* P		**Pn**	14 25 25.4	**+1.9**
APYP	**Conner**	**1.71**	**323**	*e*P		**Pn**	14 25 25.2	**+1.1**
APYP				*e*S		**Sn**	14 25 39.9	**-5.4**
SGCP	**Mt. Cagua**	**1.76**	**352**	*e*P		**Pn**	14 25 27.4	**+2.5**
POLP	**Polilio Island**	**1.79**	**192**	*e*P		**Pn**	14 25 26.1	**+0.8**
BOLP	**Bolinao**	**2.31**	**268**	*e*P		**Pn**	14 25 35.9	**+3.6**
TGY	**Tagaytay City**	**2.72**	**209**	Pn		**Pn**	14 25 36.9	**-1.2**
	18nm,0.3s,baz=304,slow=3.6,SNR=2.3						
TGY				Lg			14 26 26.3	
	137nm,0.3s,baz=306,slow=20,SNR=3.9						
PVCP	**Virac**	**3.38**	**148**	*e*P		**Pn**	14 25 47.2	**0.0**
LUBP	**Lubang**	**3.39**	**216**	*e*P		**Pn**	14 25 50.5	**+3.2**
YULB	**Yu-li**	**6.93**	**352**	*e*P		**Pn**	14 26 39.2	**+3.3**
KSRS	**Korea Array**	**21.46**	**12**	P		**P**	14 29 42.5	**-0.1**
	1.3nm,0.5s,baz=196,slow=12,SNR=6.7						
SONM	**Songino Array**	**33.89**	**341**	P		**P**	14 31 37.3	**+0.5**
	1.7nm,0.6s,mb4.2,baz=149,slow=9.9,SNR=8.2						
WRAB	**Tennant Creek**	**38.08**	**161**	*e*P		**P**	14 32 13.3	**+0.4**
	5.0nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**38.09**	**161**	P		**P**	14 32 11.6	**-1.3**
	1.5nm,0.7s,mb3.9,baz=341,slow=9.5,SNR=8.6						
ASAR	**Alice Springs**	**41.49**	**164**	P		**P**	14 32 40.9	**-0.4**
	0.6nm,0.5s,baz=344,slow=8.0,SNR=7.9						
MK31	**Makanchi Array**	**44.78**	**321**	*e*P		**P**	14 33 07.7	**0.0**
MKAR	**Makanchi Array**	**44.78**	**321**	P		**P**	14 33 07.7	**0.0**
	1.0nm,0.5s,mb3.9,baz=116,slow=9.7,SNR=10						
MKAR	**Makanchi Array**	**44.78**	**321**	P		**P**	14 33 07.7	**0.0**
PETK	**Petropavlovsk-**	**45.84**	**29**	P		**P**	14 33 16.6	**+0.7**
	1.7nm,0.7s,mb4.1,baz=204,slow=9.3,SNR=6.4						
ZALV	**Zalesovo Beam**	**47.35**	**331**	P		**P**	14 33 26.6	**-1.1**
	0.8nm,0.4s,mb4.0,baz=116,slow=6.8,SNR=6.2						
KURK	**Kurchatov**	**48.80**	**324**	P		**P**	14 33 39.1	**+0.1**
	5.6nm,0.5s,mb4.8,baz=120,slow=8.2,SNR=64						
KURK	**Kurchatov**	**48.80**	**324**	*e*P		**P**	14 33 38.7	**-0.3**
	4.4nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**54.39**	**324**	P		**P**	14 34 20.9	**0.0**
	1.7nm,0.6s,mb4.1,baz=107,slow=6.9,SNR=12						
BRVK	**Borovoye**	**54.47**	**324**	*e*P		**P**	14 34 21.2	**-0.1**
	9.2nm,1.1s,mb4.6						
ABKAR	**Akbulak array**	**59.69**	**318**	*e*P		**P**	14 34 58.1	**-0.4**
	0.7nm,0.5s,mb4.0						
AKTK	**Aktyubinsk**	**61.12**	**319**	P		**P**	14 35 08.0	**-0.2**
AKTO	**Aktyubinsk**	**61.12**	**319**	P		**P**	14 35 08.0	**-0.2**
	0.6nm,0.4s,mb4.0,baz=131,slow=8.3,SNR=4.5						
SPITS	**Spitsbergen Ar**	**77.19**	**348**	P		**P**	14 36 47.9	**+0.5**
	4.2nm,0.8s,mb4.4,baz=98,slow=10.0,SNR=4.7						
FINES	**FINESS Array B**	**78.62**	**331**	P		**P**	14 36 55.2	**-0.4**
	1.8nm,0.6s,mb4.2,baz=52,slow=7.5,SNR=6.6						
HFS	**Hagfors**	**84.78**	**332**	P		**P**	14 37 26.5	**-1.6**
	1.2nm,0.7s,mb4.2,baz=97,slow=7.6,SNR=4.4						
NB2	**NORSAR Subarra**	**85.51**	**333**	P		**P**	14 37 30.0	**-1.7**
	comp=Z,1.2nm,0.6s,mb4.3,baz=65,slow=4.8						
NOA	**NORSAR Array B**	**85.51**	**333**	P		**P**	14 37 30.8	**-1.0**
	comp=Z,1.2nm,0.6s,mb4.3,baz=64,slow=4.9,SNR=5.8						
YKA	**Yellowknife Ar**	**89.61**	**23**	P		**P**	14 37 51.6	**+0.1**
	comp=Z,0.4nm,0.6s,mb4.0,baz=309,slow=4.5,SNR=6.1						

IDC 13 14:29:27.0±1.2, 31°.02N×103°.60E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/24, mbtmp3.4/5, Error ellipse: s-maj=47.4km s-min=21.6km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.17**	**127**	Pg	Pg	14 29 23.5	-6.8
CD2				Sg	Sg	14 29 28.5	-4.1
CD2				smax			
	comp=N,4μm,0.4s						
GYA	**Guiyang**	**5.28**	**149**	Pg	Pg	14 31 07.5	-0.7
GYA				Sg	Sg	14 32 06.6	-10
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
KSRS	**Korea Array**	**21.08**	**66**	P		P	14 34 12.8	-0.2
	comp=E,1.1nm,0.6s,baz=266,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**22.77**	**320**	P		P	14 34 31.6	+0.7
	comp=E,1.2nm,0.9s,baz=125,slow=10,SNR=4.6						
KURK	**Kurchatov**	**27.06**	**324**	P		P	14 35 10.5	-0.5
	comp=E,0.3nm,0.7s,baz=132,slow=6.3,SNR=2.4						
WRA	**Warramunga Arr**	**58.64**	**146**	P		P	14 39 25.2	-1.0
	comp=E,0.4nm,0.6s,baz=336,slow=7.5,SNR=5.6						
ASAR	**Alice Springs**	**61.64**	**148**	P		P	14 39 47.6	+0.9
	comp=E,0.2nm,0.5s,baz=338,slow=7.3,SNR=3.3						

*IDC **13** 14:31:29.0±1.2, 16°.74N×122°.97E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, ML4.4/1, Error ellipse: s-maj=56.2km s-min=18.6km az=70.0*
*MAN **13** 14:31:33, 16°.52N×122°.44E, h27km, mb4.9, ML3.8, MS3.9*
MAN INTENSITY III - DINAPIGUI ISABELA.
*NEIC **13** 14:31:34.6±0.6, 16°.71N×122°.83E, h35km, mb4.2/2, Error ellipse: s-maj=21.5km s-min=10.5km az=78.0*
NEIC Felt [III PIVS] at Dinapigui.

ISC 13 14:31:33.6±1.2, 16°.56N±0°.04×122°.43E±0°.07, h23km±9km, n22, σ1s16/28, mb3.8/6, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.50**	**360**	*e*P		**Pb**	14 31 46.2	**+2.5**
CAUP	**Cauayan**	**0.69**	**303**	*e*P		**Pb**	14 31 46.0	**-1.0**
CAUP				*e*S		**Sb**	14 31 53.4	**-2.7**
BALP	**Baler**	**1.16**	**225**	*e*P		**Pn**	14 31 53.2	**-1.2**
BALP				*e*S		**Sb**	14 32 04.2	**-5.3**
CVP	**Callao Caves**	**1.27**	**333**	⇓*i* P		**Pn**	14 31 55.9	**-0.1**
CVP				*i* S		**Sn**	14 32 12.7	**+0.3**
PCPH	**Palayan**	**1.62**	**232**	⇑*i* P		**Pn**	14 32 00.6	**-0.2**
PCPH				*e*S		**Sn**	14 32 23.4	**+2.4**
APYP	**Conner**	**1.72**	**319**	*e*P		**Pn**	14 32 03.3	**+1.1**
APYP				*e*S		**Sn**	14 32 23.0	**-0.4**
BCPH	**Baguio City Da**	**1.78**	**264**	⇑*i* P		**Pn**	14 32 03.3	**+0.2**
POLP	**Polilio Island**	**1.89**	**195**	*e*P		**Pn**	14 32 04.5	**0.0**
BOLP	**Bolinao**	**2.42**	**266**	*e*P		**Pn**	14 32 14.4	**+2.6**
GQP	**Guinayangan**	**2.64**	**180**	⇓*e*P		**Pn**	14 32 15.6	**+0.7**
GQP				*e*S		**Sn**	14 32 46.0	**-0.3**
TGY	**Tagaytay City**	**2.84**	**211**	Pn		**Pn**	14 32 22.1	**+4.5**
	36nm,0.3s,baz=90,slow=1.0,SNR=2.9						
PVCP	**Virac**	**3.39**	**150**	*e*P		**Pn**	14 32 25.2	**0.0**
WRAB	**Tennant Creek**	**38.11**	**162**	P		**P**	14 38 51.9	**+0.8**
	4.7nm,1.1s,mb4.1						
WRA	**Warramunga Arr**	**38.12**	**162**	P		**P**	14 38 49.6	**-1.6**
	0.4nm,0.8s,mb3.2,baz=342,slow=9.0,SNR=3.0						
ASAR	**Alice Springs**	**41.53**	**164**	P		**P**	14 39 18.7	**-0.7**
	0.3nm,0.7s,baz=343,slow=7.4,SNR=5.2						
MKAR	**Makanchi Array**	**44.80**	**321**	P		**P**	14 39 45.1	**-0.5**
	0.2nm,0.3s,mb3.4,baz=107,slow=9.2,SNR=2.5						
KURK	**Kurchatov**	**48.80**	**324**	P		**P**	14 40 17.4	**+0.4**
	1.5nm,0.6s,mb4.2,baz=122,slow=8.2,SNR=12						
KURK	**Kurchatov**	**48.80**	**324**	*e*P		**P**	14 40 16.5	**-0.4**
	1.2nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**54.40**	**324**	P		**P**	14 40 59.3	**+0.6**
	0.5nm,0.5s,mb3.8,baz=110,slow=8.7,SNR=4.4						
BRVK	**Borovoye**	**54.47**	**324**	*e*P		**P**	14 41 00.1	**+0.8**
MENT	**Mentasta**	**77.14**	**28**	*e*P		**P**	14 43 22.6	**-2.7**
FINES	**FINESS Array B**	**78.61**	**331**	P		**P**	14 43 33.2	**-0.1**
	2.0nm,0.9s,mb4.0,baz=80,slow=8.6,SNR=2.9						

IDC 13 14:33:01.3±1.5, 31°.91N×104°.50E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=190.0km s-min=24.2km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**22.60**	**317**	P		P	14 38 03.8	+0.4
	0.4nm,0.5s,baz=117,slow=9.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.15**	**333**	P		P	14 38 37.4	+0.4
	0.6nm,0.5s,baz=132,slow=6.4,SNR=3.6						
KURK	**Kurchatov**	**26.81**	**322**	P		P	14 38 42.4	-0.6
	0.1nm,0.3s,baz=119,slow=9.6,SNR=2.8						
ASAR	**Alice Springs**	**62.01**	**149**	P		P	14 43 23.6	+0.1
	0.5nm,0.8s,baz=331,slow=6.4,SNR=5.5						

MAN 13 14:34:38, 16°.51N×122°.43E, h18km, mb4.9, ML3.8, MS3.9, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.55**	**0**	*e*P		Pg	14 34 49.8	+0.8
CAUP	**Cauayan**	**0.72**	**307**	*e*P		Pb	14 34 50.9	-1.1
BALP	**Baler**	**1.12**	**227**	*e*P		Pn	14 34 57.6	-1.1
BALP				*e*S		Sb	14 35 09.5	-3.5
CVP	**Callao Caves**	**1.32**	**334**	⇓*i* P		Pn	14 35 01.0	-0.5
CVP				*i* S		Sn	14 35 18.8	+0.1
PCPH	**Palayan**	**1.59**	**234**	⇓*i* P		Pn	14 35 05.5	+0.3
PCPH				*e*S		Sn	14 35 26.8	+1.5
APYP	**Conner**	**1.76**	**320**	*e*P		Pn	14 35 07.8	+0.3
APYP				*e*S		Sn	14 35 26.9	-2.6
BCPH	**Baguio City Da**	**1.77**	**266**	⇑*i* P		Pn	14 35 07.7	-0.1
POLP	**Polilio Island**	**1.83**	**195**	*e*P		Pn	14 35 11.6	+3.0
BOLP	**Bolinao**	**2.41**	**267**	*e*P		Pn	14 35 18.8	+2.2
PVCP	**Virac**	**3.34**	**150**	*e*P		Pn	14 35 29.9	+0.5
LUBP	**Lubang**	**3.47**	**218**	*e*P		Pn	14 35 33.5	+2.3

*IDC **13** 14:39:42.5±1.6, 31°.65N×104°.93E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.4/3, Error ellipse: s-maj=212.2km s-min=26.1km az=57.0*

ISC 13 14:39:45.7±3.0, 31°.3N±0°.2×104°.2E±0°.1, h19km±22km, n5, σ0s50/7, mb3.3/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.56**	**226**	Pg	**Pg**	**14 39 57.0**	**0.0**
CD2				Sg	**Sg**	**14 40 04.5**	**-0.1**
CD2				smax			
	comp=N,39μm,0.5s						
GYA	**Guiyang**	**5.28**	**156**	Pg	**Pg**	**14 41 26.6**	**-0.2**
GYA				Sg	**Sg**	**14 42 35.3**	**+0.2**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,40nm,0.7s						
MKAR	**Makanchi Array**	**22.90**	**319**	P		**P**	**14 44 49.0**	**+0.7**
	comp=E,0.5nm,0.8s,mb3.0,baz=122,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P		**P**	**14 45 22.0**	**-0.5**
	comp=E,0.6nm,0.5s,mb3.4,baz=128,slow=9.6,SNR=4.1						
ASAR	**Alice Springs**	**61.60**	**149**	P		**P**	**14 50 01.9**	**-0.1**
	comp=E,0.2nm,0.6s,mb3.5,baz=332,slow=7.0,SNR=7.2						

BJI 13 14:41:38.1, 32°.70N×105°.82E, h20km, mB4.7/2, mb4.1/3, ML3.7/4, Ms3.4/2, Ms7 3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**2.92**	**62**	Pn	Pn	14 42 19.1	-4.3
XAN				Sg	Sn	14 43 11.6	+14
XAN				smax			
	comp=N,270nm,0.6s						
XAN				smax			
	comp=E,160nm,0.6s						

*PGC **13** 14:43:36.4±8.5, 60°.39N×143°.17W, h1km, ML3.2/4, 191km Ese of Valdez, Ak Southern Alaska*

NEIC 13 14:43:36.4, 60°.47N×143°.15W, h4km, ML2.9(AEIC), ML3.2(PGC), 6D, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMRM	**Bremner River**	**0.87**	**305**	P		Pg	14 43 52.0	-1.1
EYAK	**Cordova Ski Ar**	**1.29**	**275**	P		Pg	14 43 59.1	-2.0
DIV	**Divide**	**1.45**	**298**	P		Pn	14 44 01.1	-2.1
PNL	**Peninsula**	**2.04**	**112**	P		Pn	14 44 10.0	-1.4
MENT	**Mentasta**	**2.49**	**354**	*e*P		Pn	14 44 17.8	+0.2
BCA3	**Beaver Creek A**	**2.68**	**13**	P		Pn	14 44 19.9	-0.3
PAX	**Paxson**	**2.74**	**337**	*e*P		Pn	14 44 23.1	+2.0
HYT	**Haines Junctio**	**2.80**	**80**	⇓Pn		Pn	14 44 22.4	+0.6
HYT				⇓Sg		Sg	14 45 03.3	-3.0
SML	**Sawmill**	**2.85**	**300**	P		Pn	14 44 21.1	-1.4
PMR	**Palmer**	**3.12**	**294**	*e*P		Pn	14 44 28.8	+2.5
PLBC	**Pleasant Camp**	**3.56**	**104**	⇑Pn		Pn	14 44 31.5	-0.7
PLBC				⇓Sn		Sn	14 45 13.1	-1.6
DAWY	**Dawson**	**4.01**	**24**	*e*P		Pn	14 44 39.0	+0.5
DAWY	**Dawson**	**4.01**	**24**	⇑Pn		Pn	14 44 39.2	+0.7
DAWY				⇓Sg		Sg	14 45 43.5	-1.6
WHY	**Whitehorse**	**4.08**	**84**	P		Pn	14 44 38.6	-0.8
WHY	**Whitehorse**	**4.08**	**84**	⇓Pn		Pn	14 44 38.7	-0.7
WHY				⇓Sn		Sn	14 45 26.3	-1.3
MCK	**McKinley**	**4.25**	**323**	*e*P		Pn	14 44 41.1	-0.7
EGAK	**Eagle**	**4.42**	**11**	*e*P		Pn	14 44 44.5	+0.4
TRF	**Thorofare Moun**	**4.50**	**315**	*e*P		Pn	14 44 45.1	-0.2
IL1	**Eielson Array**	**4.65**	**340**	P		Pn	14 44 45.1	-2.2
KTH	**Kantishna Hill**	**4.79**	**314**	*e*P		Pn	14 44 49.5	+0.3
COLA	**College**	**4.92**	**336**	*e*P		Pn	14 44 50.1	-0.9
BPAW	**Bear Paw Mtn.**	**5.16**	**318**	*e*P		Pn	14 44 53.2	-1.0
	5.3nm,0.6s						
CHUM	**Lake Minchumin**	**5.49**	**313**	*e*P		Pn	14 44 58.9	+0.2
	36nm,1.8s						
COLD	**Coldfoot**	**7.46**	**338**	*e*P		Pn	14 45 25.3	-0.4

**IDC 13 14:45:52.3±1.2, 32°.14N×105°.07E, h0km, mb3.4/4, mb1 3.6/4, mb

*ISCJB **13** 14:47:06.9±0.8, 31°.1N±0°.1×103°.7E±0°.1, h10km, mb4.0/8, Error ellipse: s-maj=20.1km s-min=11.1km az=37.8*
*IDC **13** 14:47:07.1±1.4, 31°.08N×103°.64E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/24, mbtmp3.9/7, ML3.4/1, Error ellipse: s-maj=41.3km s-min=22.9km az=46.0*
*BJI **13** 14:47:09.9, 31°.28N×103°.77E, h14km, mB4.8/2, mb4.4/4, ML4.1/2*
*NEIC **13** 14:47:11.4±6.2, 31°.16N×103°.69E, h28km±45km, mb4.6/1, Error ellipse: s-maj=31.2km s-min=10.0km az=47.0*

ISC 13 14:47:08.9±0.8, 31°.1N±0°.1×103°.6E±0°.1, h10km, n13, σ0s64/13, mb4.0/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**5.11**	**98**	*e*Pn	**Pn**	**14 48 24.8**	**-0.7**
SONM	**Songino Array**	**16.85**	**6**	Pn	**Pn**	**14 51 05.5**	**+0.8**
	0.1nm,0.3s,baz=185,slow=13,SNR=3.6						
KSRS	**Korea Array**	**21.02**	**66**	P	**P**	**14 51 53.0**	**+0.3**
	4.3nm,0.6s,mb3.9,baz=260,slow=10,SNR=11						
CN2	**Changchun**	**21.39**	**48**	*e*P	**P**	**14 51 56.9**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**22.72**	**320**	*e*P	**P**	**14 52 10.7**	**0.0**
MKAR	**Makanchi Array**	**22.72**	**320**	P	**P**	**14 52 11.1**	**+0.4**
	comp=Z,4.7nm,0.9s,mb3.9,baz=125,slow=12,SNR=10						
ZAA0	**Zalesovo Array**	**26.55**	**335**	*e*P	**P**	**14 52 46.6**	**-0.1**
ZALV	**Zalesovo Beam**	**26.55**	**335**	P	**P**	**14 52 46.4**	**-0.3**
	comp=Z,2.4nm,0.8s,mb3.8,baz=138,slow=9.3,SNR=5.6						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**14 52 51.3**	**+0.5**
	comp=Z,2.6nm,0.8s,mb3.8,baz=126,slow=11,SNR=10						
KURK	**Kurchatov**	**27.01**	**324**	*e*P	**P**	**14 52 49.3**	**-1.5**
WRAB	**Tennant Creek**	**58.69**	**146**	*e*P	**P**	**14 57 07.7**	**+1.0**
	comp=Z,4.8nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**61.70**	**148**	P	**P**	**14 57 27.2**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.9,baz=323,slow=6.3,SNR=4.6						
YKA	**Yellowknife Ar**	**81.82**	**17**	P	**P**	**14 59 26.6**	**-1.2**
	comp=Z,0.6nm,0.9s,mb3.5,baz=329,slow=5.4,SNR=2.7						

MAN 13 14:52:04, 16°.54N×122°.34E, h18km, mb4.8, ML3.7, MS3.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**9**	*e*P	Pg	14 52 15.6	+1.1
CAUP	**Cauayan**	**0.63**	**309**	*e*P	Pg	14 52 17.0	+0.5
CAUP				*e*S	Sg	14 52 23.7	-1.4
BALP	**Baler**	**1.08**	**223**	*e*P	Pb	14 52 24.2	0.0
BALP				*e*S	Sb	14 52 35.6	-2.4
CVP	**Callao Caves**	**1.25**	**337**	⇑*i*P	Pn	14 52 26.8	+0.2
CVP				*i* S	Sb	14 52 44.0	+1.1
APYP	**Conner**	**1.68**	**322**	*e*P	Pn	14 52 35.3	+2.8
APYP				*e*S	Sn	14 52 51.7	-1.9
POLP	**Polilio Island**	**1.84**	**192**	*e*P	Sn	14 52 58.2	+0.6
ABRA	**Dolores**	**1.90**	**306**	*e*P	Pn	14 52 36.5	+0.9

*ISCJB **13** 14:55:20.9±1.1, 32°.27N±0°.08×104°.6E±0°.2, h10km, mb3.3/4, Error ellipse: s-maj=22.6km s-min=11.0km az=12.6*
*IDC **13** 14:55:21.1±2.2, 32°.62N×105°.03E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/25, mbtmp3.2/4, Error ellipse: s-maj=372.1km s-min=21.7km az=53.0*

ISC 13 14:55:23.1±1.1, 32°.23N±0°.08×104°.4E±0°.2, h10km, n5, σ0s45/6, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.43**	**203**	Pg	**Pn**	**14 55 58.6**	**+10**
CD2				Sg	**Sn**	**14 56 07.9**	**0.0**
CD2				smax			
	comp=N,4μm,0.7s						
MKAR	**Makanchi Array**	**22.31**	**317**	P	**P**	**15 00 20.6**	**-0.1**
	comp=N,0.7nm,0.9s,mb3.1,baz=121,slow=11,SNR=3.7						
KURK	**Kurchatov**	**26.51**	**322**	P	**P**	**15 01 00.6**	**+0.1**
	comp=N,0.3nm,0.5s,mb3.1,baz=125,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**59.27**	**147**	P	**P**	**15 05 24.5**	**-0.5**
	comp=N,0.3nm,0.5s,mb3.6,baz=338,slow=7.5,SNR=3.7						
ASAR	**Alice Springs**	**62.33**	**149**	P	**P**	**15 05 46.2**	**+0.5**
	comp=N,0.2nm,0.7s,mb3.4,baz=338,slow=6.9,SNR=3.7						

*ISK **13** 15:04:47.2, 37°.29N×28°.15E, h5km, MD2.7*
*DDA **13** 15:04:48.3, 37°.21N×28°.21E, h7km±3km, Md2.7*
*ISCJB **13** 15:04:49.2±0.5, 37°.22N±0°.03×28°.15E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=3.9km az=135.4*
*CSEM **13** 15:04:49.1±0.3, 37°.24N×28°.17E, h2km, MD2.7, Error ellipse: s-maj=6.7km s-min=4.6km az=40.0*

ISC 13 15:04:49.5±0.5, 37°.24N±0°.03×28°.16E±0°.04, h9km±7km, n22, σ1s07/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**137**	*e*PG	**Pg**	**15 04 51.0**	**-1.6**
YER				*e*SG	**Sg**	**15 04 55.5**	**+0.8**
YER	**Yerkesik**	**0.14**	**137**	*e*Pg	**Pg**	**15 04 51.0**	**-1.6**
YER				*e*Sg	**Sg**	**15 04 55.5**	**+0.8**
MLSB	**Milas**	**0.31**	**281**	*e*PG	**Pg**	**15 04 54.4**	**-1.3**
MLSB	**Milas**	**0.31**	**281**	*e*Pg	**Pg**	**15 04 54.4**	**-1.3**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P	**Pg**	**15 04 58.5**	**-0.3**
AYDN				*i* S	**Sg**	**15 05 05.9**	**+0.8**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P	**Pg**	**15 04 58.5**	**-0.3**
AYDN				*i* S	**Sg**	**15 05 05.9**	**+0.8**
TURN	**Turunc**	**0.51**	**136**	*i* P	**Pg**	**15 04 57.6**	**-1.7**
TURN				*i* S	**Sg**	**15 05 06.8**	**+0.8**
TURN	**Turunc**	**0.51**	**136**	*i* P	**Pg**	**15 04 57.6**	**-1.7**
TURN				*i* S	**Sg**	**15 05 06.8**	**+0.8**
BDRM	**Kayabasi**	**0.60**	**253**	*i* P	**Pg**	**15 05 00.8**	**-0.3**
BDRM				*i* S	**Sg**	**15 05 10.6**	**+1.6**
BDRM	**Kayabasi**	**0.60**	**253**	*i* P	**Pg**	**15 05 00.8**	**-0.3**
BDRM				*i* S	**Sg**	**15 05 10.6**	**+1.6**
DAT	**Datca**	**0.69**	**223**	*e*PG	**Pg**	**15 05 02.6**	**-0.3**
DAT	**Datca**	**0.69**	**223**	*e*Pg	**Pg**	**15 05 02.6**	**-0.3**
FETY	**Fethiye**	**0.95**	**129**	*e*PG	**Pg**	**15 05 07.7**	**-0.1**
FETY	**Fethiye**	**0.95**	**129**	*e*Pg	**Pg**	**15 05 07.7**	**-0.1**
MANT	**Manisa**	**1.29**	**14**	*e*P	**Pn**	**15 05 12.9**	**-0.9**
MANT				*i* S	**Sg**	**15 05 32.2**	**+1.2**
MANT	**Manisa**	**1.29**	**14**	*e*P	**Pn**	**15 05 12.9**	**-0.8**
MANT				*i* S	**Sg**	**15 05 32.2**	**+1.2**
KULA	**Kula-Manisa**	**1.33**	**17**	*e*PN	**Pn**	**15 05 13.1**	**-1.2**
KULA	**Kula-Manisa**	**1.33**	**17**	*e*Pn	**Pn**	**15 05 13.1**	**-1.3**
ELL	**Elmali**	**1.48**	**109**	*e*PN	**Pn**	**15 05 17.1**	**+0.7**
ELL	**Elmali**	**1.48**	**109**	*e*Pn	**Pn**	**15 05 17.1**	**+0.7**
AKAS	**Kas**	**1.53**	**130**	*i* P	**Pn**	**15 05 18.6**	**+1.5**
AKAS				*i* S	**Sg**	**15 05 44.9**	**+6.1**
AKAS	**Kas**	**1.53**	**130**	*i* P	**Pn**	**15 05 18.6**	**+1.5**

IDC 13 15:04:56.5±1.1, 31°.24N×103°.71E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=189.3km s-min=19.1km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.66**	**319**	P	P	15 09 59.1	-0.1
	0.3nm,0.4s,baz=122,slow=9.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**26.46**	**335**	P	P	15 10 34.2	-0.8
	0.7nm,0.6s,baz=131,slow=15,SNR=2.7						
KURK	**Kurchatov**	**26.94**	**323**	P	P	15 10 40.4	+1.0
	0.3nm,0.5s,baz=126,slow=8.7,SNR=3.6						
WRA	**Warramunga Arr**	**58.77**	**146**	P	P	15 14 56.1	-0.4
	0.7nm,0.3s,baz=328,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**61.78**	**148**	P	P	15 15 17.7	+0.6
	0.3nm,0.6s,baz=334,slow=6.2,SNR=3.6						

*IDC **13** 15:05:39.1±2.1, 17°.18S×178°.83W, h506km±28km, mb3.6/7, mb1 3.9/8, mb1mx3.6/16, mbtmp3.6/8, Error ellipse: s-maj=87.6km s-min=12.8km az=152.0*
*NEIC **13** 15:05:40.8±0.7, 17°.40S×178°.70W, h534km±9km, mb3.8/4, Error ellipse: s-maj=28.8km s-min=9.5km az=152.0*
*ISCJB **13** 15:05:41.9±1.1, 17°.4S±0°.2×178°.9W±0°.1, h556km±13km, mb4.0/15, Error ellipse: s-maj=34.2km s-min=12.9km az=149.0*

ISC 13 15:05:39.2±1.3, 17°.3S±0°.2×178°.8W±0°.1, h509km±18km, n30, σ0s40/27, mb4.0/15, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.04**	**261**	⇑*e*P	**P**	**15 06 57.5**	**+6.5**
AFI	**Afiamalu**	**7.54**	**65**	P	**P**	**15 07 31.2**	**+0.1**
	3.6nm,0.3s,baz=221,slow=23,SNR=12						
AFI	**Afiamalu**	**7.54**	**65**	*e*P	**P**	**15 07 31.1**	**-0.1**
OUZ	**Omahuta**	**19.13**	**199**	*e*P	**P**	**15 09 29.0**	**-0.3**
EIDS	**Eidsvold**	**29.14**	**249**	*e*P	**P**	**15 10 58.5**	**-0.2**
ARMA	**Armidale**	**29.95**	**239**	*e*P	**P**	**15 11 06.0**	**+0.4**
RMQ	**Roma**	**31.40**	**247**	*e*P	**P**	**15 11 18.6**	**+0.5**
	12nm,0.7s,mb4.5						
CTAO	**Charters Tower**	**33.19**	**260**	*e*P	**P**	**15 11 33.7**	**+0.2**
	6.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**38.62**	**240**	*e*P	**P**	**15 12 18.5**	**+0.1**
	5.7nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**38.62**	**240**	P	**P**	**15 12 18.6**	**+0.2**
	7.8nm,0.7s,mb4.3,baz=88,slow=9.3,SNR=22						
BBOO	**Buckleboo**	**43.40**	**240**	*e*P	**P**	**15 12 55.9**	**-0.5**
	11nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**44.37**	**259**	*e*P	**P**	**15 13 04.0**	**-0.1**
WRAB	**Tennant Creek**	**44.38**	**259**	*e*P	**P**	**15 13 04.7**	**+0.5**
WRA	**Warramunga Arr**	**44.38**	**259**	P	**P**	**15 13 04.2**	**-0.1**
	2.7nm,0.5s,mb4.0,baz=94,slow=7.1,SNR=17						
ASAR	**Alice Springs**	**44.61**	**254**	P	**P**	**15 13 06.0**	**0.0**
	30nm,0.6s,mb5.0,baz=89,slow=7.9,SNR=800						
KAKA	**Kakadu**	**47.22**	**268**	*e*P	**P**	**15 13 25.1**	**-0.9**
	8.1nm,0.5s,mb4.5						
KAKA	**Kakadu**	**47.22**	**268**	*e*P	**P**	**15 13 24.9**	**-1.1**
FITZ	**Fitzroy Crossi**	**52.77**	**260**	*e*P	**P**	**15 14 07.1**	**+0.4**
	2.5nm,0.4s,mb3.9						
NVAR	**Mina Array Bea**	**79.22**	**44**	P	**P**	**15 16 51.6**	**+0.4**
	1.9nm,0.7s,mb3.5,baz=225,slow=9.0,SNR=14						
HLID	**Hailey**	**84.39**	**41**	*e*P	**P**	**15 17 17.6**	**+0.1**
	1.0nm,0.8s,mb3.4						
TXAR	**Lajitas Array**	**85.97**	**58**	P	**P**	**15 17 26.0**	**+0.5**
	1.9nm,0.7s,mb3.8,baz=217,slow=6.0,SNR=24						
TXAR	**Lajitas Array**	**85.97**	**58**	P	**P**	**15 17 26.0**	**+0.5**
RRI2	**Red Ridge**	**86.25**	**42**	*e*P	**P**	**15 17 26.9**	**+0.4**
	2.3nm,0.8s,mb3.9						
BW06	**Boulder Array**	**87.14**	**44**	*e*P	**P**	**15 17 30.1**	**-0.6**
	0.8nm,0.5s,mb3.6						
PDAR	**Pinedale Array**	**87.14**	**44**	P	**P**	**15 17 30.6**	**-0.1**
	0.8nm,0.5s,mb3.6,baz=226,slow=3.1,SNR=10						
YKA	**Yellowknife Ar**	**93.90**	**25**	P	**P**	**15 18 01.0**	**-0.5**
	0.7nm,0.9s,mb3.8,baz=240,slow=4.6,SNR=6.0						
YKA	**Yellowknife Ar**	**93.90**	**25**	P	**P**	**15 18 01.0**	**-0.5**
BR131	**Keskin Array S**	**144.06**	**315**	*e*PKP	PKPdf	15 24 16.5	-0.3
BRTR	**Keskin Array B**	**144.06**	**315**	PKP	PKPdf	15 24 16.3	-0.5
	1.3nm,0.7s,baz=138,slow=4.8,SNR=6.6						
GERES	**GERESS Array B**	**146.89**	**345**	PKPbc	PKPbc	15 24 24.4	+0.3
	0.4nm,0.4s,baz=0.0,slow=4.7,SNR=4.5						

IDC 13 15:07:25.5±2.1, 31°.98N×105°.00E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/25, mbtmp3.4/4, MS4.4/1, Ms1 4.4/1, ms1mx2.8/25, Error ellipse: s-maj=393.2km s-min=22.2km az=53.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.85**	**317**	P	P	15 12 28.8	-1.3
	0.3nm,0.5s,baz=117,slow=9.7,SNR=3.6						
KURK	**Kurchatov**	**27.03**	**322**	P	P	15 13 10.1	+0.9
	0.2nm,0.6s,baz=138,slow=8.5,SNR=2.6						
WRA	**Warramunga Arr**	**58.78**	**147**	P	P	15 17 25.4	-0.1
	0.7nm,0.6s,baz=340,slow=7.3,SNR=6.6						
ASAR	**Alice Springs**	**61.84**	**150**	P	P	15 17 46.6	+0.1
	0.4nm,0.6s,baz=337,slow=6.9,SNR=5.1						

*ISCJB **13** 15:09:55.6±0.5, 23°.92N±0°.03×122°.51E±0°.02, h15km±6km, Error ellipse: s-maj=5.9km s-min=3.2km az=162.7*
*TAP **13** 15:09:56.4, 24°.01N×122°.50E, h61km±1km, ML3.0, C*
*JMA **13** 15:09:56.9±0.1, 24°.89N×122°.55E, h44km, M1.8*

ISC 13 15:09:55.8±0.9, 23°.96N±0°.03×122°.50E±0°.02, h16km±7km, n31, σ0s96/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.68**	**43**	P	**Pg**	**15 10 09.0**	**-0.1**
YOJ				*e*S	**Sg**	**15 10 17.8**	**-0.3**
HWA	**Hwalien**	**0.82**	**271**	P	**Pb**	**15 10 12.0**	**+0.3**
	baz=261						
ENA	**Nanau**	**0.84**	**304**	P	**Pb**	**15 10 12.0**	**+0.1**
	baz=307						
ENA				*e*S	**Sb**	**15 10 23.7**	**+0.7**
	baz=307						
TWC	**Suao**	**0.88**	**317**	P	**Pb**	**15 10 12.4**	**-0.3**
	baz=316						
TWC				S	**Sb**	**15 10 23.7**	**-0.5**
	baz=316						
ESL	**Shilin**	**0.99**	**262**	P	**Pb**	**15 10 13.8**	**-0.7**
	baz=253						
ESL				*e*S	**Sb**	**15 10 27.4**	**0.0**
	baz=253						
TWE	**Neicheng**	**1.07**	**315**	*e*P	**Pb**	**15 10 15.9**	**-0.1**
	baz=314						
TWE				S	**Sb**	**15 10 29.9**	**+0.1**
	baz=314						
NNS	**Nan Shan**	**1.14**	**295**	*e*P	**Pn**	**15 10 16.8**	**-0.3**
	baz=293						
NNS				*e*S	**Sb**	**15 10 31.8**	**+0.2**
	baz=293						
WHF	**Hehuan Shan**	**1.15**	**279**	P	**Pn**	**15 10 16.4**	**-0.8**
	baz=277						
WHF				*e*S	**Sb**	**15 10 31.7**	**-0.2**
	baz=277						
EHY	**Hungye**	**1.17**	**247**	P	**Pn**	**15 10 16.8**	**-0.7**
	baz=256						
EHY				S	**Sb**	**15 10 32.0**	**-0.7**
	baz=256						
IRIF	**Iriomote-Funau**	**1.18**	**71**	P	**Pn**	**15 10 17.9**	**+0.2**
TWF1	**Yuli**	**1.26**	**241**	*e*P	**Pn**	**15 10 18.0**	**-0.8**
	baz=234						
TWF1				*e*S	**Sb**	**15 10 34.1**	**-1.2**
	baz=234						
NSK	**Sanguang**	**1.26**	**304**	P	**Pn**	**15 10 18.0**	**-0.8**
	baz=295						
NSK				*e*S	**Sb**	**15 10 35.8**	**+0.5**
	baz=295						
NWF	**Wu-fen Shan**	**1.28**	**329**	*e*P	**Pn**	**15 10 18.4**	**-0.7**
	baz=328						
TWA	**Mucha**	**1.31**	**321**	*e*P	**Pn**	**15 10 18.2**	**-1.3**
	baz=330						
CHKT	**Chengkung**	**1.35**	**231**	*e*P	**Pn**	**15 10 19.2**	**-0.9**
	baz=223						
CHKT				*e*S	**Sn**	**15 10 34.7**	**-2.9**
	baz=223						
JKRS	**Kuro-shima**	**1.40**	**78**	P	**Pn**	**15 10 21.5**	**+0.8**
JKRS				S	**Sn**	**15 10 39.5**	**+0.6**
SMLT	**Sun Moon Lake**	**1.47**	**267**	*e*P	**Pn**	**15 10 23.0**	**+1.3**
	baz=258						
YUS	**Yu-Shan**	**1.50**	**252**	*e*P	**Pn**	**15 10 22.2**	**+0.2**
	baz=250						
YUS				*e*S	**Sn**	**15 10 40.5**	**-0.8**
	baz=250						
TYC	**Yuchr**	**1.51**	**268**	*e*P	**Pn**	**15 10 23.3**	**+1.2**
	baz=266						
NSTT	**Nanjuang**	**1.52**	**296**	*e*P	**Pn**	**15 10 22.8**	**+0.4**
	baz=294						
JIJ	**Ishigaki jima**	**1.55**	**75**	P	**Pn**	**15 10 22.5**	**-0.2**
JIJ				S	**Sn**	**15 10 41.6**	**-0.9**
ELDTW	**Lidau**	**1.57**	**241**	*e*P	**Pn**	**15 10 21.5**	**-1.5**
	baz=239						
ELDTW				*e*S	**Sn**	**15 10 41.9**	**-1.0**
	baz=239						
ALS	**Alishan**	**1.62**	**254**	*e*P	**Pn**	**15 10 23.8**	**0.0**
	baz=253						
ALS				*e*S	**Sn**	**15 10 41.9**	**-2.4**
	baz=253						
CHN5	**Tsauling**	**1.71**	**258**	*e*P	**Pn**	**15 10 25.9**	**+1.0**
	baz=257						
CHN5				*e*S	**Sn**	**15 10 47.2**	**+0.7**
	baz=257						
STYT	**Tauyuan**	**1.79**	**244**	*e*P	**Pn**	**15 10 26.2**	**+0.2**
	baz=239						
STYT				*e*S	**Sn**	**15 10 46.6**	**-1.9**
	baz=239						
CHN4	**Tsaushan**	**1.85**	**251**	*e*P	**Pn**	**15 10 29.8**	**+2.8**
	baz=250						
CHN4				*e*S	**Sn**	**15 10 51.8**	**+1.7**
	baz=250						
WTP	**Ta-pu**	**1.87**	**248**	*e*P	**Pn**	**15 10 27.3**	**+0.1**
	baz=247						
WTP				*e*S	**Sn**	**15 10 50.8**	**+0.3**
	baz=247						
SGST	**Jiashian**	**1.97**	**244**	*e*P	**Pn**	**15 10 30.2**	**+1.7**
	baz=236						
SGST				*e*S	**Sn**	**15 10 54.5**	**+1.7**
	baz=236						
CHN1	**Nanshi**	**1.97**	**247**	*e*P	**Pn**	**15 10 29.9**	**+1.4**
	baz=246						
CHN1				*e*S	**Sn**	**15 10 54.2**	**+1.3**
	baz=246						
SSD	**Sandimen**	**2.10**	**235**	*e*P	**Pn**	**15 10 31.6**	**+1.2**
	baz=233						
SSD				*e*S	**Sn**	**15 10 56.6**	**+0.4**
	baz=233						
SGLT	**Jiouru**	**2.22**	**237**	*e*P	**Pn**	**15 10 32.5**	**+0.5**
	baz=235						
SGLT				*e*S	**Sn**	**15 10 58.9**	**-0.2**
	baz=235						

*IDC **13** 15:10:31.2±0.6, 32°.40N×105°.22E, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.2/28, mbtmp4.1/18, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/46, Error ellipse: s-maj=27.0km s-min=13.1km az=49.0*
*BJI **13** 15:10:32.9, 32°.55N×105°.48E, h14km, mB4.8/12, mb4.4/16, ML4.3/20, Ms4.3/17, Ms7 4.0/14*
*NEIC **13** 15:10:34.9±3.6, 32°.51N×105°.38E, h22km±26km, mb4.2/5, Error ellipse: s-maj=14.5km s-min=6.8km az=49.0*
*MOS **13** 15:10:34.0±1.1, 32°.43N×105°.33E, h33km, mb4.5/9, Error ellipse: s-maj=15.0km s-min=7.6km az=108.7*

ISC 13 15:10:31.9±0.8, 32°.60N±0°.03×105°.48E±0°.03, h1km±5km, n84, σ1s18/100, mb4.2/33, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.23**	**222**	Pn	**Pn**	**15 11 11.4**	**+1.4**
CD2				Pg	**Pg**	**15 11 13.9**	**-0.8**
CD2				Sn	**Sn**	**15 11 40.3**	**+2.1**
CD2				Sg	**Sg**	**15 11 44.0**	**+0.3**
CD2				smax			
	comp=N,6μm,0.7s						
XAN	**Xi'an**	**3.22**	**63**	Pn	**Pn**	**15 11 24.9**	**+1.3**
XAN				Pg	**Pg**	**15 11 31.8**	**-1.8**
XAN				Sg	**Sg**	**15 12 10.8**	**-4.6**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,640nm,0.9s						
LZH	**Lanzhou**	**3.73**	**339**	Pn	**Pn**	**15 11 32.9**	**+2.3**
LZH				Pg	**Pg**	**15 11 42.1**	**-1.4**
LZH				Sg	**Sg**	**15 12 28.0**	**-3.9**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,3μm,7.0s						
LZH				LR	LR		
	comp=Z,4μm,7.9s						
ENH	**Enshi**	**4.14**	**123**	*e*Pn	**Pn**	**15 11 37.4**	**+1.3**
ENH				*e*Pg	**Pg**	**15 11 48.0**	**-3.2**
ENH				*e*Sg	**Sg**	**15 12 44.8**	**0.0**
GYA	**Guiyang**	**6.21**	**170**	Pn	**Pn**	**15 12 06.1**	**+1.5**
GYA				smax			
	comp=N,450nm,0.8s						
GYA				smax			
	comp=E,270nm,0.7s						
KMI	**Kunming**	**7.83**	**199**	Pn	**Pn**	**15 12 28.5**	**+1.6**
KMI				Sn	**Sn**	**15 13 54.3**	**-1.8**
KMI				smax			
	comp=N,61nm,0.9s						
KMI				smax			
	comp=E,79nm,0.8s						
WHN	**Wuhan**	**7.84**	**103**	⇑Pn	**Pn**	**15 12 29.3**	**+2.2**
WHN				Sn	**Sn**	**15 13 53.6**	**-2.8**
WHN				LR	LR		
	comp=N,5μm,11.0s						
WHN				LR	LR		
	comp=E,7μm,8.0s						
WHN				LR	LR		
	comp=Z,1μm,10.8s						
GTA	**Gaotai**	**8.20**	**328**	*e*P	**Pn**	**15 12 31.4**	**-0.6**
GTA				pP		15 12 40.6	
GTA				sP		15 12 45.3	
GTA				S	**Sn**	**15 14 04.3**	**-0.9**
GTA				sS		15 14 15.4	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,370nm,11.4s						
GTA				LR	LR		
	comp=E,380nm,7.2s						
GTA				LR	LR		
	comp=Z,510nm,10.2s						
HHC	**Hu-ho-hao-te**	**9.57**	**29**	*e*P	**Pn**	**15 12 50.6**	**-0.1**
HHC				pP		15 12 57.8	
HHC				sP		15 13 02.6	
HHC				S	**Sn**	**15 14 38.3**	**-0.6**
HHC				sS		15 14 49.4	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.1s						
HHC				LR	LR		
	comp=N,360nm,4.7s						
HHC				LR	LR		
	comp=E,490nm,5.0s						
HHC				LR	LR		
	comp=Z,370nm,5.2s						
TIA	**Tai'an**	**10.27**	**66**	*e*P	**Pn**	**15 13 03.8**	**+3.4**
LSA	**Lhasa**	**12.61**	**261**	P	**Pn**	**15 13 36.8**	**+4.4**
QIZ	**Qiongzhong**	**14.07**	**163**	P	**Pn**	**15 13 48.8**	**-3.6**
QIZ				S	**Sn**	**15 16 25.5**	**-3.7**
QIZ				LR	LR		
	comp=Z,260nm,5.5s						
SONM	**Songino Array**	**15.23**	**2**	Pn	**Pn**	**15 14 09.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=4.4						
TAPN	**Taplejung**	**16.26**	**256**	*e*P	**Pn**	**15 14 21.1**	**-0.4**
	comp=Z,26nm,1.0s						
ODAN	**Odare**	**16.71**	**255**	*e*P	**Pn**	**15 14 26.5**	**-0.8**
	comp=Z,27nm,0.9s						
RAMN	**Ramite**	**17.32**	**256**	*e*P	**Pn**	**15 14 33.8**	**-1.2**
	comp=Z,23nm,0.7s						
JIRN	**Jiri**	**17.39**	**259**	*e*P	**Pn**	**15 14 35.3**	**-0.6**
	comp=Z,16nm,0.7s						
JIRN	**Jiri**	**17.39**	**259**	*e*P	**Pn**	**15 14 37.7**	**+1.8**
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**17.56**	**260**	*e*P	**Pn**	**15 14 37.5**	**-0.5**
	comp=Z,50nm,1.0s						
GUN	**G

BOD	**Bodaibo**	**25.88**	**10**	*eP*	**P**		**15 16 04.6**	**-0.3**
BOD				pmax	pmax			
comp=Z,3.0nm,1.3s,mb3.7								
ZAA0	**Zalesovo Array**	**25.93**	**332**	*eP*	**P**		**15 16 05.2**	**-0.2**
ZALV	**Zalesovo Beam**	**25.93**	**332**	*P*	**P**		**15 16 05.2**	**-0.2**
comp=Z,3.3nm,0.6s,mb4.0,baz=132,slow=9.6,SNR=14								
ZALV	**Zalesovo Beam**	**25.93**	**332**	*P*	**P**		**15 16 05.2**	**-0.2**
UCH	**Uchtor**	**26.29**	**300**	*eP*	**P**		**15 16 10.9**	**+2.1**
comp=Z,6.2nm,1.1s,mb4.0								
AAK	**Ala-Archa**	**26.38**	**301**	*ceP*	**P**		**15 16 08.7**	**-0.9**
AAK				pmax	pmax			
comp=Z,2.0nm,1.2s,mb3.5								
KURK	**Kurchatov**	**26.80**	**320**	*P*	**P**		**15 16 13.0**	**-0.3**
comp=Z,3.8nm,0.8s,mb4.0,baz=125,slow=11,SNR=21								
KURK				PcP	PcP		15 19 34.7	-1.4
comp=Z,0.9nm,0.6s,baz=117,slow=2.2,SNR=4.1								
KURK	**Kurchatov**	**26.80**	**320**	*P*	**P**		**15 16 13.0**	**-0.3**
KURK							15 19 34.7	
KURK				pmax	pmax			
comp=Z,4.0nm,0.8s,mb4.0								
KURK				pmax	pmax			
comp=Z,1.0nm,0.6s,mb3.5								
KURK	**Kurchatov**	**26.80**	**320**	*eP*	**P**		**15 16 13.3**	**0.0**
KURK				PcP	PcP		15 19 34.7	-1.4
AML	**Almayashu**	**26.86**	**300**	*eP*	**P**		**15 16 15.0**	**+1.0**
comp=Z,3.5nm,0.8s,mb3.9								
BVAR	**Borovoye Array**	**32.38**	**320**	*P*	**P**		**15 17 03.0**	**+0.2**
comp=Z,0.3nm,0.3s,mb3.6,baz=55,slow=5.5,SNR=2.5								
BRVK	**Borovoye**	**32.45**	**320**	*eP*	**P**		**15 17 05.1**	**+1.7**
BRVK				pmax	pmax			
comp=Z,3.0nm,1.0s,mb4.1								
YAK	**Yakutsk**	**33.30**	**21**	*eP*	**P**		**15 17 12.7**	**+2.0**
YAK				pmax	pmax			
comp=Z,8.0nm,0.8s,mb4.7								
YAK	**Yakutsk**	**33.30**	**21**	*eP*	**P**		**15 17 12.7**	**+2.0**
comp=Z,8.4nm,0.8s,mb4.7								
ABKAR	**Akbulak array**	**37.59**	**310**	*eP*	**P**		**15 17 48.1**	**+0.3**
comp=Z,1.4nm,0.4s,mb4.0								
AKTK	**Aktyubinsk**	**39.00**	**312**	*P*	**P**		**15 17 59.9**	**+0.2**
AKTO	**Aktyubinsk**	**39.00**	**312**	*P*	**P**		**15 17 59.9**	**+0.2**
comp=Z,1.8nm,0.5s,mb4.0,baz=121,slow=16,SNR=7.1								
ARU	**Arti**	**39.99**	**321**	*c iP*	**P**		**15 18 07.7**	**-0.1**
ARU				*e*			15 19 38.4	
ARU				S	**S**		**15 24 12.9**	**-1.1**
ARU				SS	SS		15 27 04.3	-6.1
ARU				pmax	pmax			
comp=Z,8.0nm,1.2s,mb4.3								
TIXI	**Tiksi**	**41.06**	**11**	*eP*	**P**		**15 18 17.3**	**+0.8**
TIXI				pmax	pmax			
comp=Z,6.0nm,0.9s,mb4.2								
TIXI	**Tiksi**	**41.06**	**11**	*eP*	**P**		**15 18 15.7**	**-0.9**
comp=Z,4.4nm,0.6s,mb4.3								
PETK	**Petropavlovsk-**	**42.31**	**45**	*P*	**P**		**15 18 29.0**	**+2.1**
comp=Z,1.8nm,0.8s,mb3.8,baz=261,slow=4.8,SNR=4.4								
BILL	**Bilibino**	**49.33**	**26**	*eP*	**P**		**15 19 22.0**	**-0.2**
BILL				pmax	pmax			
comp=Z,2.0nm,1.2s,mb4.0								
OBN	**Obninsk**	**52.17**	**317**	*eP*	**P**		**15 19 42.5**	**-1.3**
OBN				pmax	pmax			
comp=Z,5.0nm,1.2s,mb4.3								
LVZ	**Lovozero**	**53.04**	**333**	*ceP*	**P**		**15 19 51.8**	**+1.7**
LVZ				pmax	pmax			
comp=Z,101nm,2.5s,mb5.3								
FITZ	**Fitzroy Crossi**	**53.98**	**156**	*eP*	**P**		**15 19 56.9**	**-0.6**
JOF	**Joensuu**	**54.40**	**327**	*eP*	**P**		**15 19 59.2**	**-0.9**
JOF				pmax	pmax			
comp=Z,3.0nm,0.5s,mb4.5								
JOF	**Joensuu**	**54.40**	**327**	*ep*	**P**		**15 19 59.2**	**-0.9**
comp=Z,2.5nm,0.5s,mb4.4								
KEV	**Kevo**	**55.85**	**336**	*eP*	**P**		**15 20 09.6**	**-0.9**
KEV	**Kevo**	**55.85**	**336**	*ep*	**P**		**15 20 09.6**	**-0.9**
ARCES	**ARCESS Array B**	**56.38**	**335**	*P*	**P**		**15 20 13.6**	**-0.7**
comp=Z,1.5nm,0.5s,mb4.3,baz=75,slow=5.5,SNR=16								
KAF	**Kangasniemi**	**56.79**	**326**	*eP*	**P**		**15 20 16.6**	**-0.7**
KAF				pmax	pmax			
comp=Z,2.0nm,0.4s,mb4.5								
KAF	**Kangasniemi**	**56.79**	**326**	*ep*	**P**		**15 20 16.6**	**-0.7**
comp=Z,2.1nm,0.4s,mb4.5								
FINES	**FINESS Array B**	**56.99**	**326**	*P*	**P**		**15 20 18.5**	**-0.2**
comp=Z,2.6nm,0.5s,mb4.6,baz=91,slow=7.8,SNR=21								
BRTR	**Keskin Array B**	**57.03**	**299**	*P*	**P**		**15 20 19.1**	**-0.3**
comp=Z,1.0nm,0.8s,mb3.9,baz=106,slow=7.9,SNR=5.5								
AKASG	**Malin Array Be**	**57.23**	**313**	*P*	**P**		**15 20 19.7**	**-0.8**
comp=Z,1.5nm,0.3s,mb4.5,baz=67,slow=7.4,SNR=8.6								
WRAB	**Tennant Creek**	**59.09**	**148**	*eP*	**P**		**15 20 33.4**	**-0.5**
WRA	**Warramunga Arr**	**59.09**	**148**	*P*	**P**		**15 20 31.9**	**-2.0**
comp=Z,6.1nm,0.7s,mb4.8,baz=342,slow=7.8,SNR=91								
ASAR	**Alice Springs**	**62.18**	**150**	*P*	**P**		**15 20 54.9**	**0.0**
comp=Z,3.2nm,0.6s,mb4.7,baz=335,slow=6.4,SNR=111								
NB2	**NORSAR Subarra**	**64.03**	**327**	*P*	**P**		**15 21 05.6**	**-1.2**
comp=Z,1.2nm,0.4s,mb4.3,baz=70,slow=6.9								
NOA	**NORSAR Array B**	**64.03**	**327**	*P*	**P**		**15 21 05.3**	**-1.5**
comp=Z,2.1nm,0.7s,mb4.3,baz=71,slow=6.6,SNR=7.8								
GERES	**GERESS Array B**	**67.34**	**314**	*P*	**P**		**15 21 27.9**	**-0.5**
comp=Z,0.5nm,0.5s,mb3.8,baz=75,slow=11,SNR=3.1								
CDF	**Champ du Feu**	**71.36**	**316**	*eP*	**P**		**15 21 52.5**	**-0.8**
STKA	**Stephens Creek**	**72.64**	**148**	*P*	**P**		**15 22 00.5**	**-0.5**
comp=Z,2.2nm,0.8s,mb4.2,baz=282,slow=3.8,SNR=4.9								
STKA	**Stephens Creek**	**72.64**	**148**	*eP*	**P**		**15 22 00.3**	**-0.7**
LPG	**La Plagne**	**73.08**	**313**	*eP*	**P**		**15 22 03.7**	**+0.1**
comp=Z,5.6nm,0.5s,mb4.5								
LPL	**La Plagne**	**73.08**	**313**	*eP*	**P**		**15 22 03.7**	**0.0**
comp=Z,3.9nm,0.5s,mb4.3								
SMF	**Signal de Mont**	**74.26**	**315**	*eP*	**P**		**15 22 08.6**	**-2.0**
comp=Z,3.7nm,0.6s,mb4.2								
TCF	**Toulx Ste Croi**	**75.41**	**316**	*eP*	**P**		**15 22 16.4**	**-0.8**
CAF	**Calviac**	**76.22**	**315**	*eP*	**P**		**15 22 22.0**	**+0.1**
YKA	**Yellowknife Ar**	**79.92**	**18**	*P*	**P**		**15 22 44.0**	**+1.9**
comp=Z,0.5nm,0.6s,mb3.7,baz=329,slow=5.2,SNR=8.3								
YKA	**Yellowknife Ar**	**79.92**	**18**	*P*	**P**		**15 22 44.0**	**+1.9**

*NEIC **13** 15:12:19.4, 16°.64N×99°.83W, h9km, MD3.8(MEX), After MEX.*

MEX 13 15:12:19.4±0.9, 16°.64N×99°.83W, h9km±7km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.24**	**339**	*i P*	Pg	15 12 23.8	-0.5
ACX				*i S*	Sg	15 12 27.6	0.0
ACX	**Acapulco**	**0.24**	**339**	*i P*	Pg	15 12 23.8	-0.5
ACX				*i S*	Sg	15 12 27.6	0.0
CAIG	**El Cayaco**	**0.59**	**314**	*i P*	Pg	15 12 29.4	-1.4
CAIG				*i S*	Sg	15 12 38.4	-0.1
CAIG	**El Cayaco**	**0.59**	**314**	*i P*	Pg	15 12 29.4	-1.4
CAIG				*i S*	Sg	15 12 38.4	-0.1
PNIG	**Pinotepa**	**1.65**	**98**	*i P*	Pn	15 12 45.8	-2.8
PNIG				*i S*	Sn	15 13 03.9	-6.0
PNIG	**Pinotepa**	**1.65**	**98**	*i P*	Pn	15 12 45.8	-2.8
PNIG				*i S*	Sn	15 13 03.9	-6.0
PLIG	**Platanillo**	**1.77**	**10**	*eP*	Pn	15 12 47.7	-2.6
PLIG				*i S*	Sn	15 13 07.3	-5.7
PLIG	**Platanillo**	**1.77**	**10**	*eP*	Pn	15 12 47.7	-2.6
PLIG				*i S*	Sn	15 13 07.3	-5.7
ZIIG	**Zihuatanejo**	**1.84**	**302**	*eP*	Pn	15 12 47.6	-3.6
ZIIG				*i S*	Sn	15 13 11.2	-3.5
ZIIG	**Zihuatanejo**	**1.84**	**302**	*eP*	Pn	15 12 47.6	-3.6
ZIIG				*i S*	Sn	15 13 11.2	-3.5
UTMO	**Huajuapan**	**2.27**	**58**	*i P*	Pn	15 12 54.5	-2.6
UTMO				*i S*	Sn	15 13 20.9	-4.2
MZVM		**2.60**	**13**	*i P*	Pn	15 12 59.3	-2.3
MZVM				*i S*	Sn	15 13 29.2	-4.2
PPM	**Popocatepetl**	**2.67**	**25**	*eP*	Pn	15 13 01.7	-1.0
PPM				*i S*	Sn	15 13 30.9	-4.3
PPM	**Popocatepetl**	**2.67**	**25**	*eP*	Pn	15 13 01.7	-1.0
PPM				*i S*	Sn	15 13 30.9	-4.3
VHO	**Vista Hermosa**	**2.99**	**81**	*eP*	Pn	15 13 04.0	-3.1
VHO				*i S*	Sn	15 13 40.5	-2.6
VHO	**Vista Hermosa**	**2.99**	**81**	*eP*	Pn	15 13 04.0	-3.1
VHO				*i S*	Sn	15 13 40.5	-2.6
IIO	**Organos**	**3.12**	**19**	*eP*	Pn	15 13 07.8	-1.0
IIO				*i S*	Sn	15 13 43.1	-3.1
IIO	**Organos**	**3.12**	**19**	*eP*	Pn	15 13 07.8	-1.0
IIO				*i S*	Sn	15 13 43.1	-3.1

IDC 13 15:22:04.2±2.7, 17°.63S×177°.77W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.7/15, mbtmp3.6/4, Error ellipse: s-maj=257.0km s-min=26.5km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.28**	**259**	*P*	P	15 30 24.4	+0.4
0.5nm,0.7s,baz=97,slow=7.9,SNR=6.3							
ASAR	**Alice Springs**	**45.45**	**254**	*P*	P	15 30 24.9	-0.4
0.8nm,0.6s,baz=87,slow=8.8,SNR=28							
TXAR	**Lajitas Array**	**85.33**	**57**	*P*	P	15 34 44.4	+0.9
0.1nm,0.6s,baz=228,slow=6.6,SNR=5.3							
PDAR	**Pinedale Array**	**86.73**	**43**	*P*	P	15 34 49.8	-0.3
0.3nm,0.6s,baz=236,slow=6.4,SNR=2.8							

*ISCJB **13** 15:25:35.5±0.9, 23°.90N±0°.02×122°.52E±0°.02, h11km±7km, Error ellipse: s-maj=3.7km s-min=2.5km az=162.8*
*TAP **13** 15:25:36.2, 23°.97N×122°.52E, h24km, ML3.2, D*
*JMA **13** 15:25:36.7±0.3, 24°.06N×122°.45E, h31km, M2.4*

ISC 13 15:25:35.6±0.6, 23°.92N±0°.02×122°.52E±0°.02, h10km±3km, n42, σ0°.78/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**40**	*P*	**Pg**	**15 25 49.3**	**+0.1**
YOJ				*S*	**Sg**	**15 25 58.1**	**-0.3**
HWA	**Hwalien**	**0.84**	**274**	*eP*	**Pg**	**15 25 52.4**	**+0.7**
baz=257							
HWA				*eS*	**Sg**	**15 26 03.4**	**+0.7**
baz=257							
TWD	**Chiawan**	**0.86**	**281**	*eP*	**Pg**	**15 25 52.0**	**-0.1**
baz=278							
TWD				*S*	**Sg**	**15 26 03.5**	**+0.2**
baz=278							
ENA	**Nanau**	**0.87**	**306**	*i P*	**Pg**	**15 25 52.2**	**-0.1**
baz=303							
ENA				*eS*	**Sg**	**15 26 04.3**	**+0.5**
baz=303							
TWC	**Suao**	**0.92**	**319**	*i P*	**Pg**	**15 25 52.7**	**-0.6**
baz=309							
TWC				*eS*	**Sg**	**15 26 04.4**	**-0.8**
baz=309							
ESL	**Shilin**	**1.00**	**264**	*eP*	**Pg**	**15 25 53.8**	**-0.9**
baz=261							
ESL				*eS*	**Sg**	**15 26 07.4**	**-0.4**
baz=261							
ILA	**Ilan**	**1.10**	**320**	*eP*	**Pb**	**15 25 56.9**	**+0.3**
baz=309							
ILA				*S*	**Sg**	**15 26 11.8**	**+0.9**
baz=309							
TWE	**Neicheng**	**1.11**	**316**	*P*	**Pb**	**15 25 56.5**	**-0.4**
baz=314							
TWE				*eS*	**Sg**	**15 26 11.5**	**0.0**
baz=314							
NNS	**Nan Shan**	**1.17**	**297**	*P*	**Pb**	**15 25 57.2**	**-0.6**
baz=294							
NNS				*eS*	**Sb**	**15 26 12.1**	**-0.8**
baz=294							
WHF	**Hehuan Shan**	**1.17**	**281**	*P*	**Pb**	**15 25 57.3**	**-0.5**
baz=265							
WHF				*eS*	**Sb**	**15 26 13.0**	**0.0**
baz=265							
EHY	**Hungye**	**1.17**	**250**	*P*	**Pb**	**15 25 57.2**	**-0.6**
baz=256							
EHY				*eS*	**Sb**	**15 26 12.7**	**-0.4**
baz=256							
IRIF	**Iriomote-Funau**	**1.18**	**69**	*P*	**Pb**	**15 25 58.0**	**-0.1**
IRIF				*S*	**Sb**	**15 26 13.0**	**-0.4**
HATJ	**Hateruma jima**	**1.19**	**83**	*S*	**Sb**	**15 26 14.5**	**+1.0**
TWB1	**Santiao Chiao**	**1.19**	**336**	*eP*	**Pb**	**15 25 57.8**	**-0.4**
baz=353							
TWB1				*eS*	**Sb**	**15 26 12.8**	**-0.8**
baz=353							
TWF1	**Yuli**	**1.25**	**243**	*eP*	**Pn**	**15 25 58.1**	**-1.0**
baz=241							
TWF1				*eS*	**Sb**	**15 26 14.6**	**-0.8**
baz=241							
TWT	**Tachien**	**1.27**	**285**	*eP*	**Pn**	**15 25 58.8**	**-0.5**
baz=270							
TWT				*eS*	**Sb**	**15 26 16.3**	**+0.3**
baz=270							
NSK	**Sanguang**	**1.30**	**306**	*P*	**Pn**	**15 25 58.9**	**-0.8**
baz=290							
NSK				*eS*	**Sb**	**15 26 16.4**	**-0.4**
baz=290							
NWF	**Wu-fen Shan**	**1.33**	**330**	*eP*	**Pn**	**15 25 59.4**	**-0.8**
baz=329							
NWF				*S*	**Sb**	**15 26 18.2**	**+0.5**
baz=329							
TWA	**Mucha**	**1.36**	**321**	*P*	**Pn**	**15 26 00.7**	**+0.2**
baz=320							
TWA				*S*	**Sb**	**15 26 19.1**	**+0.6**
baz=320							
JKRS	**Kuro-shima**	**1.40**	**77**	*P*	**Pn**	**15 26 00.8**	**-0.3**
JKRS				*S*	**Sn**	**15 26 20.0**	**+0.4**
SMLT	**Sun Moon Lake**	**1.48**	**269**	*eP*	**Pn**	**15 26 01.8**	**-0.4**
baz=266							
SMLT				*eS*	**Sn**	**15 26 20.8**	**-0.7**
baz=266							
YUS	**Yu-Shan**	**1.50**	**254**	*eP*	**Pn**	**15 26 02.7**	**+0.2**
baz=251							
YUS				*eS*	**Sn**	**15 26 20.8**	**-1.1**
baz=251							
TYC	**Yuchr**	**1.52**	**270**	*eP*	**Pn**	**15 26 03.4**	**+0.6**
baz=267							
TWS1	**Kuangyinshan**	**1.54**	**320**	*eP*	**Pn**	**15 26 02.3**	**-0.8**
baz=338							
TWS1				*eS*	**Sn**	**15 26 24.1**	**+0.9**
baz=338							
JIJ	**Ishigaki jima**	**1.55**	**73**	*P*	**Pn**	**15 26 02.4**	**-0.8**
JIJ				*S*	**Sn**	**15 26 21.8**	**-1.5**
NSTT	**Nanjuang**	**1.55**	**297**	*P*	**Pn**	**15 26 03.4**	**+0.1**
baz=283							
NSTT				*eS*	**Sn**	**15 26 23.1**	**-0.3**
baz=283							
ELDTW	**Lidau**	**1.56**	**242**	*eP*	**Pn**	**15 26 02.3**	**-0.9**
baz=240							
ELDTW				*eS*	**Sn**	**15 26 21.9**	**-1.5**
baz=240							
TWY	**Chenhua**	**1.59**	**328**	*eP*	**Pn**	**15 26 06.3**	**+2.6**
baz=328							
TWQ1	**Liyutan**	**1.65**	**285**	*eP*	**Pn**	**15 26 04.6**	**+0.1**
baz=284							
TWQ1				*eS*	**Sn**	**15 26 25.1**	**-0.6**
baz=284							
TCU	**Taichung**	**1.70**	**278**	*eP*	**Pn**	**15 26 06.0**	**+0.8**
baz=275							
CHN5	**Tsauling**	**1.71**	**260**	*eP*	**Pn**	**15 26 06.4**	**+1.0**
baz=247							
CHN5				*eS*	**Sn**	**15 26 28.3**	**+0.9**
baz=247							
TWG	**Pinlang**	**1.72**	**231**	*eP*	**Pn**	**15 26 05.2**	**-0.4**
baz=218							
TWG				*eS*	**Sn**	**15 26 26.5**	**-1.0**
baz=218							
STYT	**Tauyuan**	**1.78**	**245**	*eP*	**Pn**	**15 26 06.6**	**+0.2**
baz=233							
STYT				*eS*	**Sn**	**15 26 28.2**	**-0.8**
baz=233							
CHN4	**Tsaushan**	**1.85**	**253**	*eP*	**Pn**	**15 26 09.2**	**+1.8**
baz=250							
CHN4				*eS*	**Sn**	**15 26 31.3**	**+0.5**
baz=250							
WTP	**Ta-pu**	**1.87**	**249**	*eP*	**Pn**	**15 26 08.2**	**+0.6**
baz=237							
WTP				*eS*	**Sn**	**15 26 33.1**	**+1.9**
baz=237							
ECL	**Taimali**	**1.95**	**228**	*eP*	**Pn**	**15 26 08.2**	**-0.5**
baz=238							
SGST	**Jiashian**	**1.96**	**245**	*eP*	**Pn**	**15 26 09.3**	**+0.5**
baz=243							
SGST				*eS*	**Sn**	**15 26 33.8**	**+0.3**
baz=243							
CHN1	**Nanshi**	**1.96**	**249**	*eP*	**Pn**	**15 26 10.2**	**+1.3**
baz=246							
CHN1				*eS*	**Sn**	**15 26 34.9**	**+1.3**
baz=246							
TWK	**Hsinying**	**1.97**	**251**	*eP*	**Pn**	**15 26 09.9**	**+1.0**
baz=249							
SSD	**Sandimen**	**2.09**	**236**	*eP*	**Pn**	**15 26 10.6**	**0.0**
baz=228							
SSD				*eS*	**Sn**	**15 26 36.0**	**-0.6**
baz=228							
JTJ	**Tarama**	**2.12**	**70**	*P*	**Pn**	**15 26 11.7**	**+0.7**
JTJ				*eS*	**Sn**	**15 26 38.0**	**+0.6**
EAST	**Anshuo**	**2.17**	**225**	*eP*	**Pn**	**15 26 13.1**	**+1.4**
baz=223							

*BJI **13** 15:26:22.5, 31°.63N×103°.82E, h10km, ML3.6/6, Ms3.3/1, Ms7 3.3/1*

*IDC **13** 15:26:24.6±1.1, 31°.71N×104°.20E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/27, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=87.9km s-min=19.6km az=57.0*
*NEIC **13** 15:26:26.1±0.7, 31°.68N×104°.14E, h10km, mb4.5/1, Error ellipse: s-maj=31.2km s-min=11.2km az=65.0*

ISC 13 15:26:27.4±3.2, 31°.9N±0°.1×104°.4E±0°.2, h17km±21km, n11, σ1°.14/12, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.24**	**354**	*eP* g	**Pg**	**15 27 51.1**	**+2.4**
LZH				Sg	**Sg**	**15 28 41.9**	**-1.7**
LZH				smax			
comp=N,46nm,0.5s							
LZH				smax			
comp=E,54nm,0.5s							
XAN	**Xi'an**	**4.41**	**59**	Pg	**Pg**	**15 27 51.1**	**-0.8**
XAN				smax			
comp=N,55nm,0.8s							
XAN				smax			
comp=E,120nm,0.8s							
ENH	**Enshi**	**4.68**	**108**	*eP* g	**Pb**	**15 27 49.9**	**+1.0**
GYA	**Guiyang**	**5.74**	**159**	Pn	**Pn**	**15 27 51.6**	**-0.3**
GYA				smax			
comp=N,50nm,0.8s							
GYA				smax			
comp=E,60nm,0.8s							
SONM	**Songino Array**	**16.04**	**5**	Pn	**Pn**	**15 30 14.3**	**+2.2**
comp=E,0.3nm,0.3s,baz=182,slow=7.9,SNR=3.6							
MKAR	**Makanchi Array**	**22.56**	**318**	*P*	**P**	**15 31 26.7**	**+0.1**
comp=E,0.1nm,0.3s,mb2.7,baz=119,slow=9.0,SNR=4.3							
KURK	**Kurchatov**	**26.78**	**322**	*P*	**P**	**15 32 06.0**	**-0.3**
comp=E,0.1nm,0.3s,mb2.9,baz=122,slow=9.2,SNR=2.5							
KURK	**Kurchatov**	**26.78**	**322**	*P*	**P**	**15 32 06.0**	**-0.3**
WRAB	**Tennant Creek**	**58.98**	**147**	*eP*	**P**	**15 36 25.3**	**-0.8**
comp=E,2.8nm,0.7s,mb4.4							
WRA	**Warramunga Arr**	**58.98**	**147**	*P*	**P**	**15 36 25.7**	**-0.4**
comp=E,2.0nm,0.7s,mb4.3,baz=339,slow=7.7,SNR=21							
ASAR	**Alice Springs**	**62.02**	**149**	*P*	**P**	**15 36 46.6**	**-0.2**
comp=E,0.8nm,0.6s,mb4.0,baz=332,slow=6.4,SNR=22							

MAN 13 15:29:23, 16°.53N×122°.45E, h19km, mb4.7, ML3.7, MS3.7, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**358**	*eP*	Pg	15 29 35.4	+1.6
CAUP	**Cauayan**	**0.73**	**305**	*eP*	Pb	15 29 36.6	-0.5
CAUP				*eS*	Sb	15 29 41.5	-5.2
BALP	**Baler**	**1.15**	**227**	*eP*	Pn	15 29 43.3	-0.7
BALP				*eS*	Sb	15 29 55.7	-3.0
CVP	**Callao Caves**	**1.31**	**333**	⇓ *iP*	Pn	15 29 46.3	-0.1
CVP				*i S*	Sn	15 30 03.9	+0.5
PCPH	**Palayan**	**1.62**	**234**	⇑ *eP*	Pn	15 29 50.9	+0.4
PCPH				*eS*	Sn	15 30 11.8	+1.0
APYP	**Conner**	**1.76**	**319**	*eP*	Pn	15 29 53.7	+1.2
APYP				*eS*	Sn	15 30 15.4	+1.0
POLP	**Polilio Island**	**1.85**	**195**	*eP*	Pn	15 29 54.6	+0.8
ABRA	**Dolores**	**2.00**	**304**	*eP*	Pn	15 29 57.4	+1.6
ABRA				*eS*	Sn	15 30 18.4	-1.9
BOLP	**Bolinao**	**2.44**	**267**	*eP*	Pn	15 30 04.7	+2.9
SCZP	**Santa Cruz**	**2.55**	**253**	*eP*	Pn	15 30 06.0	+2.6
GQP	**Guinayangan**	**2.61**	**180**	⇓ *eP*	Pn	15 30 06.7	+2.6
GQP				*eS*	Sn	15 30 36.3	+1.0
BOAC	**Boac**	**3.10**	**191**	*eP*	Pn	15 30 13.5	+2.5
PVCP	**Virac**	**3.35**	**150**	*eP*	Pn	15 30 15.5	+1.1

*ISCJB **13** 15:30:34.9±0.5, 30°.66N±0°.04×104°.46E±0°.05, h10km, mb4.0/15, Error ellipse: s-maj=6.5km s-min=4.9km az=35.0*
*IDC **13** 15:30:37.9±0.8, 30°.81N×104°.95E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/25, mbtmp4.0/12, ML3.6/1, Error ellipse: s-maj=37.4km s-min=14.6km az=57.0*
*BJI **13** 15:30:38.1, 31°.05N×104°.58E, h15km, mB4.8/2, mb4.2/7, ML4.2/20, Ms3.8/6, Ms7 3.4/4*
*NEIC **13** 15:30:41.5±3.7, 30°.59N×104°.51E, h24km±27km, mb4.1/4, Error ellipse: s-maj=16.1km s-min=9.0km az=217.0*

ISC 13 15:30:36.4±0.4, 30°.68N±0°.03×104°.50E±0°.04, h10km, n40, σ1°.84/48, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.68**	**290**	Pg	**Pg**	**15 30 52.1**	**+2.6**
CD2				Sg	**Sg**	**15 31 01.9**	**+3.5**
CD2				smax			
comp=N,26μm,0.5s							
ENH	**Enshi**	**4.32**	**94**	*e* Pn	**Pn**	**15 31 46.3**	**+4.1**
GYA	**Guiyang**	**4.62**	**155**	Pg	**Pg**	**15 32 01.0**	**-3.8**
GYA				Sg	**Sg**	**15 33 03.9**	**-0.7**
GYA				smax			
comp=N,450nm,0.9s							
GYA				smax			
comp=E,340nm,0.9s							
XAN	**Xi'an**	**5.02**	**47**	Pn	**Pn**	**15 31 47.1**	**-4.6**
XAN				Pg	**Pb**	**15 32 03.0**	**-1.3**
XAN				Sg	**Sb**	**15 33 03.5**	**-1.2**
XAN				smax			
comp=N,350nm,0.6s							
XAN				smax			
comp=E,220nm,0.7s							
LZH	**Lanzhou**	**5.42**	**354**	*e* Pn	**Pn**	**15 31 56.8**	**-0.4**
LZH				Pg	**Pb**	**15 32 09.5**	**-1.6**
LZH				Sn	**Sn**	**15 33 02.4**	**+2.8**
LZH				Sg	**Sb**	**15 33 14.5**	**-1.7**
LZH				smax			
comp=N,200nm,0.4s							
LZH				smax			
comp=E,480nm,0.7s

ZALV	Zalesovo Beam	27.25	334	P	P	15 36 23.8 +3.4
	comp=Z,5.4nm,0.7s,mb4.2,baz=131,slow=10,SNR=20					
KURK	Kurchatov	27.79	323	P	P	15 36 28.8 +3.5
	comp=Z,0.9nm,0.5s,mb3.6,baz=126,slow=9.2,SNR=7.3					
KURK	Kurchatov	27.79	323	eP	P	15 36 28.7 +3.4
BVAR	Borovoye Array	33.33	322	P	P	15 37 18.1 +3.8
	comp=Z,0.6nm,0.6s,mb3.7,baz=115,slow=9.2,SNR=4.2					
ARU	Arti	40.98	322	eP	P	15 38 22.5 +3.4
	comp=Z,2.9nm,0.7s,mb4.0					
TIXI	Tiksi	43.10	11	eP	P	15 38 38.5 +2.3
	comp=Z,1.5nm,0.4s,mb4.1					
ARCES	ARCESS Array B	57.78	336	P	P	15 40 31.6 +4.3
	comp=Z,2.1nm,0.8s,mb4.2,baz=92,slow=8.2,SNR=5.5					
WRAB	Tennant Creek	57.93	146	eP	P	15 40 31.4 +2.5
	comp=Z,8.0nm,1.0s,mb4.7					
WRA	Warramunga Arr	57.93	146	P	P	15 40 31.5 +2.6
	comp=Z,4.6nm,0.5s,mb4.8,baz=339,slow=7.9,SNR=94					
FINES	FINESS Array B	58.11	326	P	P	15 40 34.6 +5.0
	comp=Z,1.4nm,0.7s,mb4.1,baz=89,slow=9.7,SNR=4.6					
ASAR	Alice Springs	60.95	149	P	P	15 40 52.5 +2.7
	comp=Z,1.6nm,0.7s,mb4.2,baz=332,slow=6.6,SNR=25					
STKA	Stephens Creek	71.47	147	P	P	15 41 59.0 +1.9
	comp=Z,0.7nm,0.4s,mb4.0,baz=205,slow=8.5,SNR=4.2					
STKA	Stephens Creek	71.47	147	eP	P	15 41 58.9 +1.9
YKA	Yellowknife Ar	81.99	17	P	P	15 42 58.5 +2.3
	comp=Z,0.2nm,0.5s,mb3.3,baz=331,slow=5.0,SNR=2.7					

MAN 13 15:32:28,16°.52N×122°.32E,h18km,mb3.5,ML2.2,MS1.6, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	Palanan	0.55	10	eP	Pg	15 32 39.2	+0.2
PALP				eS	Sg	15 32 45.8	-0.7
CAUP	Cauayan	0.64	312	eP	Pg	15 32 39.8	-0.8
BALP	Baler	1.05	223	eP	Pb	15 32 46.6	-1.1
CVP	Callao Caves	1.27	338	↑iP	Pn	15 32 49.5	-1.5
CVP				i S	Sb	15 33 07.2	-0.3
APYP	Conner	1.69	323	eP	Pn	15 32 56.8	+0.2
POLP	Polillo Island	1.81	192	eP	Sn	15 33 20.1	-0.8
ABRA	Dolores	1.91	306	eP	Pn	15 33 00.4	+0.8

KRSC 13 15:32:58.9±1.1,49°.17N×156°.00E,h38km±37km,ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	Alaid	1.73	350	eP	Pn	15 33 28.5	+2.1
ALID				eS	Sn	15 33 50.0	+2.9
MIPR	Malaya Ipel'ka	3.15	9	eP	Pn	15 33 48.7	+2.8
RUS	Russkaya	3.63	25	P	Pn	15 33 55.7	+3.1
RUS				S	Sn	15 34 36.9	+2.7
RUS	Russkaya	3.63	25	eP	Pn	15 33 55.7	+3.1
RUS				eS	Sn	15 34 36.9	+2.7
SDLR	Sedlovina	4.50	23	eP	Pn	15 34 08.2	+3.8
NLC	Nalytchevo	4.53	26	eS	Sn	15 34 57.7	+1.6
SPN	Mys Shipunski	4.68	31	P	Pn	15 34 10.1	+3.2
SPN				S	Sn	15 35 03.4	+3.5
SPN	Mys Shipunski	4.68	31	eP	Pn	15 34 10.1	+3.2
SPN				eS	Sn	15 35 03.4	+3.5
GNL	Ganaly	4.69	14	eP	Pn	15 34 11.1	+4.0
MKZ	Mys Kozlova	6.46	31	P	Pn	15 34 34.8	+3.5
MKZ	Mys Kozlova	6.46	31	P	Pn	15 34 34.8	+3.5

*IDC **13** 15:38:21.8±1.1,32°.28N×105°.08E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/26,mbtmp3.6/7,ML3.3/1,Error ellipse: s-maj=62.8km s-min=19.3km az=59.0*
*NEIC **13** 15:38:23.0±0.6,32°.28N×105°.19E,h10km,Error ellipse: s-maj=20.6km s-min=7.7km az=224.0*
*BJI **13** 15:38:28.3,32°.37N×104°.80E,h10km,ML3.5/7,Ms3.2/2, Ms7 2.9/2*
ISC 13 15:38:22.3±0.8,32°.25N±0°.04×104°.98E±0°.05,h2km±6km, n15,σ0°81/19,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	1.69	218	Pg	Pg	15 38 55.1	+0.4
CD2				Sg	Sg	15 39 16.8	+0.1
CD2				smax			
	comp=N,2μm,0.6s						
XAN	Xi'an	3.76	61	Pg	Pg	15 39 34.8	+0.4
XAN				Sg	Sg	15 40 24.0	+0.9
XAN				smax			
	comp=N,80nm,0.5s						
XAN				smax			
	comp=E,33nm,0.4s						
LZH	Lanzhou	3.94	347	ePg	Pg	15 39 37.8	0.0
LZH				Sg	Sg	15 40 28.0	-0.9
LZH				smax			
	comp=N,150nm,0.6s						
LZH				smax			
	comp=E,180nm,0.7s						
ENH	Enshi	4.34	116	ePg	Pg	15 39 42.2	-3.2
GYA	Guiyang	5.96	165	Pg	Pg	15 40 19.5	+3.1
GYA				Sg	Sg	15 41 29.8	-3.8
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,50nm,0.7s						
SONM	Songino Array	15.61	4	Pn	Pn	15 42 03.3	+0.1
	comp=E,0.1nm,0.3s,baz=172,slow=14,SNR=2.3						
MK31	Makanchi Array	22.63	316	P	P	15 43 24.8	+0.5
MKAR	Makanchi Array	22.63	316	P	P	15 43 24.6	+0.2
	comp=E,0.3nm,0.4s,mb3.1,baz=122,slow=9.1,SNR=6.3						
ZALV	Zalesovo Beam	26.04	332	P	P	15 43 56.7	+0.1
	comp=E,0.5nm,0.4s,mb3.4,baz=127,slow=9.3,SNR=3.4						
KURK	Kurchatov	26.80	321	P	P	15 44 03.5	0.0
	comp=E,0.4nm,0.4s,mb3.3,baz=127,slow=8.9,SNR=3.8						
ABKAR	Akbulak array	37.48	310	eP	P	15 45 37.2	+0.1
WRA	Warramunga Arr	59.02	147	P	P	15 48 23.3	-0.3
	comp=E,0.9nm,0.6s,mb4.0,baz=342,slow=7.3,SNR=5.1						
ASAR	Alice Springs	62.09	150	P	P	15 48 44.6	0.0
	comp=E,0.3nm,0.4s,mb3.8,baz=329,slow=6.3,SNR=4.2						
YKA	Yellowknife Ar	80.38	17	P	P	15 50 34.2	-0.6
	comp=E,0.3nm,0.5s,mb3.5,baz=327,slow=4.9,SNR=5.6						
YKA	Yellowknife Ar	80.38	17	P	P	15 50 34.2	-0.6

*ISCJB **13** 15:40:04.3±0.6,5°.87S±0°.06×153°.7E±0°.1,h31km, mb4.5/20,Error ellipse: s-maj=18.7km s-min=8.8km az=178.7*
*IDC **13** 15:40:05.8±1.1,5°.79S×153°.64E,h30km±3km,mb4.2/12, mb1 4.3/13,mb1mx4.1/19,mbtmp4.2/13,ML3.5/1,Error ellipse: s-maj=38.8km s-min=14.6km az=104.0*
*NEIC **13** 15:40:06.2±0.5,5°.83S×153°.59E,mb4.8/8,Error ellipse: s-maj=13.6km s-min=7.0km az=92.0*
ISC 13 15:40:05.4±8.2,5°.9S±0°.1×153°.6E±0°.1,h25km±58km, h33km±.6km:pP-P,n34,σ0°79/33,mb4.5/20,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	15.85	206	Pn	Pn	15 43 48.8	+1.9
	0.1nm,0.3s,baz=22,slow=15,SNR=3.8						
CTAO	Charters Tower	15.85	206	Pn	Pn	15 43 47.1	+0.2
	23nm,1.3s						
EIDS	Eidsvold	19.56	187	eP	Pn	15 44 32.1	-0.6
DZM	Mont Dzumac	20.35	144	eP	P	15 44 39.6	-0.5
	28nm,0.9s						
RMQ	Roma	21.03	192	eP	P	15 44 48.5	+1.1
	29nm,1.0s,mb4.6						
KAKA	Kakadu	21.96	250	eP	P	15 44 56.7	-0.7
	27nm,0.6s,mb4.9						
KAKA	Kakadu	21.96	250	eP	P	15 44 56.3	-1.1
	66nm,0.6s,mb5.2						
WRAB	Tennant Creek	23.37	231	eP	P	15 45 12.2	-0.2
	4.2nm,0.6s,mb4.0						
WRA	Warramunga Arr	23.38	231	P	P	15 45 12.3	-0.2
	3.7nm,0.6s,mb4.0,baz=58,slow=9.1,SNR=34						
WRA				pP		15 45 22.2	
	3.8nm,0.7s,baz=55,slow=9.8,SNR=7.9						
WRA				PcP	PcP	15 48 59.3	+0.5
	0.9nm,0.7s,baz=55,slow=2.5,SNR=6.5						
WRA				pPcP		15 49 08.7	
	1.4nm,0.6s,baz=59,slow=2.3,SNR=5.9						
ARMA	Armidale	24.51	184	eP	P	15 45 23.3	+0.5
ARMA	Armidale	24.51	184	eP	P	15 45 23.1	+0.4
ASAR	Alice Springs	25.94	225	P	P	15 45 36.0	+0.1
	4.6nm,0.7s,mb4.1,baz=57,slow=9.2,SNR=70						
ASAR				pP	pP	15 45 46.0	+2.7
	6.3nm,0.9s,baz=60,slow=9.7,SNR=13						
ASAR				PcP	PcP	15 49 04.8	+0.4
	1.7nm,0.8s,baz=60,slow=2.4,SNR=8.8						
ASAR				pPcP		15 49 14.0	
	0.9nm,0.6s,baz=60,slow=2.4,SNR=4.4						
STKA	Stephens Creek	28.22	202	eP	P	15 45 54.9	-1.4
	2.5nm,0.9s,mb3.8						
STKA	Stephens Creek	28.22	202	P	P	15 45 55.3	-1.0
	1.7nm,0.8s,mb3.8,baz=31,slow=13,SNR=6.2						
FITZ	Fitzroy Crossi	29.88	244	eP	P	15 46 10.9	-0.3
	9.0nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	29.88	244	P	P	15 46 11.0	-0.2
	7.8nm,0.8s,mb4.5,baz=87,slow=6.8,SNR=24						
FITZ				pP	pP	15 46 20.6	+1.9
	5.2nm,0.6s,baz=87,slow=7.6,SNR=7.6						
KSRS	Korea Array	49.29	333	P	P	15 48 52.1	-0.1
	1.5nm,0.7s,mb4.1,baz=146,slow=7.3,SNR=4.8						
GTA	Gaotai	66.97	317	eP	P	15 50 57.1	+1.1
GTA				pP	pP	15 51 06.3	+2.3
GTA				sP	sP	15 51 10.6	+3.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
SONM	Songino Array	67.63	328	P	P	15 51 00.6	+0.6
	comp=Z,0.9nm,0.6s,mb4.0,baz=138,slow=5.8,SNR=4.9						
MK31	Makanchi Array	81.64	319	eP	P	15 52 21.6	+0.3
MKAR	Makanchi Array	81.64	319	P	P	15 52 21.7	+0.3
	comp=Z,4.2nm,0.8s,mb4.4,baz=106,slow=5.6,SNR=31						
MKAR	Makanchi Array	81.64	319	P	P	15 52 21.7	+0.3
ZAA0	Zalesovo Array	82.47	326	eP	P	15 52 24.8	-0.7
ZALV	Zalesovo Beam	82.47	326	P	P	15 52 24.8	-0.7
	comp=Z,3.2nm,0.7s,mb4.3,baz=108,slow=4.8,SNR=13						
MAW	Mawson	84.91	203	P	P	15 52 38.3	+0.5
	comp=Z,3.9nm,0.6s,mb4.7,baz=93,slow=5.5,SNR=25						
MAW				pP	pP	15 52 47.9	+1.9
	comp=Z,5.3nm,0.6s,baz=100,slow=4.3,SNR=7.0						
KURK	Kurchatov	85.08	322	P	P	15 52 38.0	-1.0
	comp=Z,3.6nm,0.8s,mb4.5,baz=117,slow=3.7,SNR=13						
KURK				pP	pP	15 52 48.6	+1.4
	comp=Z,3.4nm,1.0s,baz=112,slow=3.5,SNR=7.3						
KURK	Kurchatov	85.08	322	eP	P	15 52 38.4	-0.6
KURK				pP	pP	15 52 48.6	+1.4
TKM2	Tokmak 2	85.23	314	eP	P	15 52 40.5	+0.6
	comp=Z,7.9nm,0.7s,mb5.0						
TKM2				epP	pP	15 52 50.2	+2.1
UCH	Uchtor	85.87	313	eP	P	15 52 44.8	+1.6
	comp=Z,5.7nm,0.9s,mb4.8						
AAK	Ala-Archa	85.96	313	P	P	15 52 43.2	-0.4
	comp=Z,1.6nm,0.6s,mb4.4,baz=123,slow=4.5,SNR=8.2						
AML	Almayashu	86.45	313	eP	P	15 52 47.0	+1.1
	comp=Z,1.1nm,1.2s,mb5.0						
BVAR	Borovoye Array	90.56	323	P	P	15 53 04.2	-1.1
	comp=Z,2.7nm,0.8s,mb4.6,baz=101,slow=6.2,SNR=16						
BVAR				pP	pP	15 53 13.9	+0.5
	comp=Z,14nm,1.2s,baz=98,slow=6.3,SNR=5.7						
BRVK	Borovoye	90.62	323	eP	P	15 53 04.5	-1.1
	comp=Z,3.9nm,0.9s,mb4.7						
BRVK				epP	pP	15 53 14.5	+0.7
TORD	Torodi Ar. Bea	151.38	287	PKPbc	PKPbc	15 59 57.2	-0.8
	comp=Z,6.0nm,0.8s,baz=58,slow=2.2,SNR=13						
TORD				pPKPbc	pPKPbc	16 00 06.7	+0.3
	comp=Z,5.8nm,0.7s,baz=90,slow=1.6,SNR=11						

IDC 13 15:41:02.4±1.6,31°.13N×104°.01E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/23,mbtmp3.4/3,MS4.0/2,Ms1 4.0/2, ms1mx2.8/31,Error ellipse: s-maj=200.3km s-min=26.3km az=56.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	22.91	319	P	P	15 46 07.5	-0.3
	0.2nm,0.4s,baz=116,slow=13,SNR=3.3						
ZALV	Zalesovo Beam	26.66	334	P	P	15 46 43.2	+0.4
	0.4nm,0.5s,baz=156,slow=7.5,SNR=3.5						
WRA	Warramunga Arr	58.54	146	P	P	15 51 00.8	0.0
	0.7nm,0.5s,baz=338,slow=7.9,SNR=5.9						

IDC 13 15:42:19.0±1.4,31°.81N×104°.99E,h0km,mb3.5/3, mb1 3.7/4,mb1mx3.3/25,mbtmp3.4/4,ML3.1/1,Error ellipse: s-maj=96.0km s-min=26.2km az=60.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	16.04	3	Pn	Pn	15 46 06.4	+0.7
	0.1nm,0.3s,baz=194,slow=11,SNR=2.2						
MKAR	Makanchi Array	22.96	317	P	P	15 47 24.6	-0.1
	0.7nm,0.8s,baz=123,slow=8.8,SNR=3.8						
WRA	Warramunga Arr	58.65	147	P	P	15 52 17.6	-0.5
	0.5nm,0.4s,baz=341,slow=7.3,SNR=8.8						
ASAR	Alice Springs	61.71	150	P	P	15 52 39.8	+0.7
	0.6nm,0.7s,baz=331,slow=6.6,SNR=5.7						

*ISK **13** 15:48:02.0,40°.08N×40°.80E,h5km,MD2.6*
*ISCJB **13** 15:48:04.0±0.6,40°.10N±0°.05×40°.84E±0°.05,h10km,Error ellipse: s-maj=8.3km s-min=3.9km az=29.0*
*CSEM **13** 15:48:03.7±0.3,40°.09N×40°.83E,h10km,MD2.6,Error ellipse: s-maj=9.8km s-min=5.9km az=22.0*
*DDA **13** 15:48:04.1,40°.15N×40°.84E,h7km±2km,MI3.1*
ISC 13 15:48:04.1±0.6,40°.14N±0°.05×40°.84E±0°.05,h6km±8km, n22,σ0°86/32,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOPT	Kop Dagi	0.29	246	iP	Pg	15 48 10.2	+0.5
KOPT				i S	Sg	15 48 19.1	+5.6
KOPT	Kop Dagi	0.29	246	iP	Pg	15 48 10.2	+0.5
EZM	Erzurum	0.47	120	ePG	Pg	15 48 11.9	-1.2
EZM				eSG	Sg	15 48 20.2	+1.1
ERZM	Erzurum	0.47	120	iP	Pg	15 48 11.8	-1.4
ERZM				i S	Sg	15 48 20.6	+1.4
ERZM	Erzurum	0.47	120	iP	Pg	15 48 11.8	-1.4
ERZM				i S	Sg	15 48 20.6	+1.3
DDEM	Demirkent	1.03	42	eP	Pg	15 48 23.8	0.0
DDEM	Demirkent	1.03	42	eP	Pg	15 48 23.8	0.0
GUMT	Gumushane	1.09	288	ePN	Pg	15 48 23.5	-1.5
GUMT	Gumushane	1.09	288	ePn	Pg	15 48 23.5	-1.5
DBAD	Bademkaya	1.10	36	iP	Pg	15 48 24.6	-0.6
DBAD	Bademkaya	1.10	36	iP	Pg	15 48 24.6	-0.6
MACK	Trabzon	1.15	315	iP	Pg	15 48 26.9	+0.8
MACK				i S	Sg	15 48 41.9	+0.9
MACK	Trabzon	1.15	315	iP	Pg	15 48 26.9	+0.8
MACK				i S	Sg	15 48 41.9	+0.9
KTUT	Trabzon	1.18	317	ePN	Pn	15 48 26.2	-0.8
KTUT				eSN	Sn	15 48 44.0	+0.5
KTUT	Trabzon	1.18	317	ePn	Pn	15 48 26.2	-0.9
KTUT				eSn	Sn	15 48 44.0	+0.6
DAGI	Agillar	1.25	41	iP	Pb	15 48 27.6	-0.4
ARTV	Artvin	1.34	38	iP	Pn	15 48 29.6	+0.3
ARTV				i S	Sb	15 48 51.8	+4.9
ARTV	Artvin	1.34	38	iP	Pn	15 48 29.6	+0.3
ARTV				i S	Sb	15 48 51.8	+4.9
BCA	Borcka	1.44	24	ePN	Pn	15 48 31.0	+0.3
BCA	Borcka	1.44	24	ePn	Pn	15 48 31.0	+0.3
ESPY	Espiye-Giresun	1.79	297	ePN	Pn	15 48 35.5	+0.1
ESPY	Espiye-Giresun	1.79	297	ePn	Pn	15 48 35.5	0.0

*TRN **13** 15:57:23.5,18°.02N×62°.80W,h35km,M3.8(FDF)*
TRN Felt II St. Bartholomew.
*ISCJB **13** 15:57:24.1±1.2,18°.06N±0°.10×62°.78W±0°.07,h46km±9km, Error ellipse: s-maj=19.1km s-min=6.1km az=32.3*
*NEIC **13** 15:57:25.5,18°.09N×62°.78W,h38km,MD3.5(RSPR), After RSPR.*
*RSPR **13** 15:57:25.5,18°.09N×62°.78W,h38km±6km,MD3.5/5, MD3.5/5*
ISC 13 15:57:25.0±1.1,18°.05N±0°.09×62°.78W±0°.07,h38km±13km, n19,σ0°37/28,4C-12D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.28	269	↓iP	Pn	15 57 32.6	-0.3
SMRT	St. Maarten	0.28	269	↓iP	Pn	15 57 32.6	-0.3
SMRT				eS	Sn	15 57 38.5	+0.2
SABA	Saba	0.62	226	↑eP	Pn	15 57 37.4	+0.1
SABA	Saba	0.62	226	↑eP	Pn	15 57 37.4	+0.1
SABA				eS	Sn	15 57 45.8	-0.2
TBVI	Tortola	1.78	282	↓iP	Pn	15 57 52.6	-0.7
TBVI	Tortola	1.78	282	↓iP	Pn	15 57 52.6	-0.7
STVI	Saint Thomas	2.09	278	↓eP	Pn	15 57 57.0	-0.5
STVI				eS	Sn	15 58 22.1	-0.2
STVI	Saint Thomas	2.09	278	↓eP	Pn	15 57 57.0	-0.5
STVI				eS	Sn	15 58 22.5	+0.2
LZG	Guadaloupe-1	2.13	153	eP	Pn	15 57 58.0	-0.1
BCG	Bois Riant Cap	2.25	150	eP	Pn	15 57 59.5	-0.2
PHG	Guadaloupe-2	2.30	152	eP	Pn	15 58 00.5	+0.1
PHG				eS	Sn	15 58 27.7	+0.2
MTP	Monte Pirata	2.64	271	↑eP	Pn	15 58 05.2	+0.1
MTP				eS	Sn	15 58 35.3	-0.5
MTP	Monte Pirata	2.64	271	↑eP	Pn	15 58 05.2	+0.1
MTP				eS	Sn	15 58 35.3	-0.5
HUMP	Col San Antoni	2.92	272	↓eP	Pn	15 58 09.4	+0.5
HUMP	Col San Antoni	2.92	272	↓eP	Pn	15 58 09.4	+0.5
CBYP	Canovanas	2.93	275	↓eP	Pn	15 58 09.8	+0.6
CBYP				eS	Sn	15 58 43.5	+0.3
CBYP	Canovanas	2.93	275	↓eP	Pn	15 58 09.8	+0.6
CBYP				eS	Sn	15 58 43.5	+0.3
CPD	Cerro la Pandu	2.98	270	↓iP	Pn	15 58 10.3	+0.5
CPD	Cerro la Pandu	2.98	270	↓iP	Pn	15 58 10.3	+0.5

*IDC **13** 15:57:56.6±20.0,20°.61S×177°.96W,h448km±190km, mb3.1/4,mb1 3.3/4,mb1mx3.1/15,mbtmp3.1/4,Error ellipse: s-maj=124.1km s-min=95.7km az=108.0*
NEIC 13 15:58:00.6±0.8,20°.65S×178°.00W,h500km,mb4.0/1, Error ellipse: s-maj=27.3km s-min=19.9km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.05	193	eP	P	16 01 41.8	+0.5
CTAO	Charters Tower	33.48	265	eP	P	16 03 58.4	+0.5
STKA	Stephens Creek	37.73	244	P	P	16 04 33.3	+0.2
	0.7nm,0.4s,baz=95,slow=14,SNR=6.3						
STKA	Stephens Creek	37.73	244	eP	P	16 04 33.6	+0.5
ASAR	Alice Springs	44.49	257	P	P	16 05 26.9	-0.1
	1.9nm,0.5s,baz=94,slow=7.9,SNR=88						
ASAR				PcP	PcP	16 07 00.5	+0.5
	0.7nm,0.6s,baz=102,slow=3.7,SNR=8.3						
WRAB	Tennant Creek	44.58	262	eP	P	16 05 27.2	-0.6
	4.1nm,0.9s						
WRA	Warramunga Arr	44.58	262	P	P	16 05 27.2	-0.6
	0.7nm,0.3s,baz=97,slow=7.0,SNR=52						
FITZ	Fitzroy Crossi	53.01	262	P	P	16 06 30.8	+0.2
	0.7nm,0.4s,baz=134,slow=7.0,SNR=7.6						
BVAR	Borovoye Array	119.19	320	PKP	PKPdf	16 15 52.9	+0.7
	0.6nm,0.4s,baz=33,slow=1.2,SNR=4.1						
AKASG	Malin Array Be	143.15	331	PKP	PKPdf	16 16 35.8	-1.4
	2.6nm,0.5s,baz=43,slow=4.2,SNR=20						
BR131	Keskin Array S	146.94	312	ePKPbc	PKPbc	16 16 47.6	+0.8
BRTR	Keskin Array B	146.94	312	PKPbc	PKPbc	16 16 48.1	+1.3
	0.7nm,0.5s,baz=133,slow=4.3,SNR=4.3						
MMAI	Mount Meron Ar	147.89	300	PKPbc	PKPbc	16 16 51.1	+1.6
	1.1nm,0.4s,baz=75,slow=7.8,SNR=4.7						
CLL	Collm	148.21	347	ePKPbc	PKPbc	16 16 52.0	+2.3
GERES	GERESS Array B	150.34	344	PKPbc	PKPbc	16 16 56.2	+1.2
	0.6nm,0.7s,baz=76,slow=5.6,SNR=4.9						

*IDC **13** 15:59:10.1±0.8,31°.22N×103°.90E,h0km,mb4.0/10, mb1 4.1/11,mb1mx3.8/27,mbtmp3.9/11,ML3.4/1,MS3.5/1, Ms1 3.5/1,ms1mx2.2/44,Error ellipse: s-maj=37.0km s-min=15.1km az=59.0*
*ISCJB **13** 15:59:11.9±1.0,31°.22N±0°.07×103°.89E±0°.08,h25km±9km, mb4.0/12,Error ellipse: s-maj=13.5km s-min=9.2km az=136.0*
*NEIC **13** 15:59:11.7±0.5,31°.21N×103°.84E,h10km,mb4.3/2,Error ellipse: s-maj=16.2km s-min=7.2km az=52.0*
*BJI **13** 15:59:14.0,31°.07N×103°.94E,h20km,mB4.6/2,mb4.4/3, ML3.8/10,Ms3.5/1,Ms7 3.5/2*
ISC 13 15:59:11.8±0.7,31°.25N±0°.03×103°.98E±0°.05,h9km±5km, n24,σ1°08/29,mb4.0/12,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	0.39	209	Pg	Pg	15 59 19.0	-0.3
CD2				Sg	Sg	15 59 24.1	-0.4
CD2				smax			
	comp=N,21μm,0.7s						
LZH	Lanzhou	4.83	359	ePg	Pg	16 00 46.8	+2.5
LZH				Sg	Sg	16 01 47.3	+0.5
LZH				smax			
	comp=N,92nm,0.8s						
LZH				smax			
	comp=E,57nm,0.7s						
LZH				LR	LR		
	comp=E,520nm,3.4s						
LZH				LR	LR		
	comp=Z,750nm,5.6s						
ENH	Enshi	4.84	100	ePn	Pn	16 00 26.6	+1.8
XAN	Xi'an	5.01	55	Pn	Pn	16 00 28.5	+1.3
XAN				Pg	Pg	16 00 47.0	-0.8
XAN				Sn	Sn	16 01 23.8	-1.5
XAN				Sg	Sg	16 01 51.0	-1.8
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,51nm,0.9s						
GYA	Guiyang	5.32	153	Pg	Pb	16 00 43.3	-1.7
GYA				Sg	Sb	16 01 50.8	+1.8
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,140nm,0.8s						
GTA	Gaotai	8.82	338	eP	Px	16 01 57.3	
GTA				pP		16 02 01.8	
GTA				sP		16 02 04.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SONM	Songino Array	16.67	6	Pn	Pn	16 03 06.9	+1.4
	comp=Z,0.1nm,0.3s,baz=186,slow=18,SNR=4.5						
KSRS	Korea Array	20.69	66	P	P	16 03 52.4	+0.3
	comp=Z,3.1nm,0.8s,baz=254,slow=9.8,SNR=10						
CN2	Changchun	21.07	47	eP	P	16 03 57.9	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	Makanchi Array	22.80	319	eP	P	16 04 14.0	-0.7
MKAR	Makanchi Array	22.80	319

ENH	**Enshi**	**5.00**	**101**	*e*Pn	**Pn**	**16 05 10.9**	**+0.1**
XAN	**Xi'an**	**5.07**	**57**	Pg	**Pg**	**16 05 32.3**	**+0.6**
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,75nm,0.8s						
GYA	**Guiyang**	**5.48**	**152**	Pg	**Pg**	**16 05 36.8**	**-2.9**
GYA				smax			
	comp=N,230nm,0.9s						
GYA				smax			
	comp=E,230nm,0.9s						
KMI	**Kunming**	**6.28**	**189**	Pn	**Pn**	**16 05 29.1**	**+0.6**
KMI				smax			
	comp=N,26nm,0.7s						
KMI				smax			
	comp=E,24nm,0.7s						
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**16 07 48.8**	**+0.5**
	comp=E,0.1nm,0.3s,baz=184,slow=13,SNR=2.9						
KSRS	**Korea Array**	**20.77**	**66**	P	**P**	**16 08 38.7**	**+1.6**
	comp=E,1.6nm,0.7s,baz=262,slow=10,SNR=6.9						
CN2	**Changchun**	**21.10**	**48**	*e*P	**P**	**16 08 44.9**	**+4.3**
MK31	**Makanchi Array**	**22.63**	**319**	*e*P	**P**	**16 08 58.3**	**+1.4**
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	**16 08 56.2**	**-0.7**
	comp=E,1.4nm,0.9s,mb3.5,baz=125,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	**16 08 56.2**	**-0.7**
AAK	**Ala-Archa**	**25.86**	**304**	P	**P**	**16 09 27.8**	**0.0**
	comp=E,0.6nm,0.4s,mb3.6,baz=168,slow=19,SNR=2.1						
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**16 09 32.6**	**+0.2**
	comp=E,1.1nm,0.6s,mb3.7,baz=146,slow=8.2,SNR=4.3						
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**16 09 36.8**	**-0.3**
	comp=E,0.7nm,0.7s,mb3.5,baz=127,slow=9.2,SNR=6.1						
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**16 10 27.0**	**+0.8**
	comp=E,0.2nm,0.4s,mb3.4,baz=111,slow=7.9,SNR=2.6						
BVAR				PcP	PcP	16 13 13.3	-0.1
	comp=E,0.3nm,0.5s,baz=127,slow=2.2,SNR=2.6						
ARCES	**ARCESS Array B**	**56.93**	**336**	P	**P**	**16 13 41.1**	**+0.1**
	comp=E,2.6nm,0.9s,mb4.3,baz=89,slow=8.4,SNR=5.0						
WRAB	**Tennant Creek**	**58.81**	**146**	*e*P	**P**	**16 13 54.0**	**-0.9**
	comp=E,2.4nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**16 13 54.2**	**-0.7**
	comp=E,0.9nm,0.3s,mb4.2,baz=317,slow=12,SNR=29						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**16 14 15.0**	**-0.5**
	comp=E,0.3nm,0.5s,mb3.8,baz=337,slow=6.6,SNR=15						
NOA	**NORSAR Array B**	**64.32**	**327**	P	**P**	**16 14 31.1**	**-0.5**
	comp=E,0.2nm,0.3s,mb3.8,baz=98,slow=4.4,SNR=2.5						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**16 16 13.6**	**0.0**
	comp=E,0.4nm,0.6s,mb3.7,baz=330,slow=5.4,SNR=6.3						
TORD	**Torodi Ar. Bea**	**93.33**	**287**	P	**P**	**16 17 11.2**	**-0.7**
	comp=E,0.2nm,0.5s,mb3.8,baz=44,slow=4.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**93.33**	**287**	P	**P**	**16 17 11.2**	**-0.7**

*ISCJB **13** 16:07:26.9±1.0,31°.0N±0°.1×103°.8E±0°.1,h10km,mb3.2/4, Error ellipse: s-maj=18.1km s-min=15.8km az=155.9*
*IDC **13** 16:07:27.4±1.2,31°.05N×103°.83E,h0km,mb3.3/5, mb1 3.5/6,mb1mx3.3/25,mbtmp3.4/6,ML3.2/1,Error ellipse: s-maj=42.4km s-min=20.5km az=59.0*
ISC 13 16:07:29.0±1.0,31°.1N±0°.1×103°.9E±0°.2,h10km,n7, σ0°57/8,mb3.2/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.21**	**54**	Pg	**Pg**	**16 09 12.8**	**+4.0**
XAN				Sg	**Sg**	**16 10 09.5**	**-6.8**
XAN				smax			
	comp=E,30nm,0.8s						
XAN				smax			
	comp=E,13nm,1.0s						
SONM	**Songino Array**	**16.87**	**6**	Pn	**Pn**	**16 11 25.3**	**+0.1**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=3.3						
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**16 12 11.1**	**0.0**
	comp=E,2.0nm,0.7s,baz=262,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**16 12 33.2**	**+0.6**
	comp=E,0.2nm,0.4s,mb2.9,baz=120,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.67**	**335**	P	**P**	**16 13 07.1**	**-0.8**
	comp=E,0.3nm,0.3s,mb3.3,baz=122,slow=7.0,SNR=2.4						
WRA	**Warramunga Arr**	**58.55**	**146**	P	**P**	**16 17 25.7**	**-0.2**
	comp=E,0.3nm,0.5s,mb3.6,baz=337,slow=7.7,SNR=5.2						
ASAR	**Alice Springs**	**61.56**	**149**	P	**P**	**16 17 46.7**	**+0.3**
	comp=E,0.1nm,0.6s,mb3.1,baz=333,slow=6.9,SNR=5.3						

*IDC **13** 16:12:27.5±0.8,31°.31N×104°.23E,h0km,mb4.0/10, mb1 4.1/11,mb1mx3.8/27,mbtmp4.0/11,ML3.5/1,MS3.3/3, Ms1 3.3/3,ms1mx2.7/36,Error ellipse: s-maj=34.9km s-min=15.6km az=58.0*
*NEIC **13** 16:12:29.2±0.5,31°.38N×104°.45E,h10km,mb4.0/3,Error ellipse: s-maj=15.4km s-min=7.4km az=50.0*
*BJI **13** 16:12:32.7,31°.43N×104°.21E,h15km,mb4.1/4,ML4.2/12, Ms4.1/5,Ms7 4.0/6*
ISC 13 16:12:28.9±1.2,31°.38N±0°.04×104°.42E±0°.06,h6km±7km, n25,σ0°83/30,mb4.0/12,MS3.1/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.50**	**103**	*e*Pn	**Pn**	**16 13 36.8**	**-0.8**
XAN	**Xi'an**	**4.63**	**54**	Pn	**Pn**	**16 13 40.4**	**+1.0**
XAN				Pg	**Pg**	**16 13 57.8**	**+0.2**
XAN				Sn	**Sn**	**16 14 33.6**	**+0.1**
XAN				Sg	**Sg**	**16 14 56.4**	**-1.2**
XAN				smax			
	comp=N,680nm,0.7s						
XAN				smax			
	comp=E,310nm,0.9s						
LZH	**Lanzhou**	**4.72**	**354**	*e*Pn	**Pn**	**16 13 47.3**	**+6.6**
LZH				Pg	**Pg**	**16 13 58.8**	**-0.6**
LZH				Sn	**Sn**	**16 14 45.5**	**+10**
LZH				Sg	**Sg**	**16 15 01.1**	**+0.6**
LZH				smax			
	comp=N,240nm,0.6s						
LZH				smax			
	comp=E,420nm,0.9s						
LZH				LR	LR		
	comp=E,2μm,6.8s						
LZH				LR	LR		
	comp=Z,3μm,8.4s						
GYA	**Guiyang**	**5.28**	**158**	Pg	**Pg**	**16 14 10.6**	**+0.5**
GYA				smax			
	comp=N,280nm,0.9s						
GYA				smax			
	comp=E,310nm,1.0s						
WHN	**Wuhan**	**8.57**	**93**	P	**Pn**	**16 14 44.1**	**+11**
GTA	**Gaotai**	**8.85**	**336**	P	Px	16 15 15.5	
GTA				pP		16 15 24.8	
GTA				sP		16 15 29.1	
GTA				pmax	pmax		
	comp=Z,16nm,1.6s						
BTO	**Baotou**	**10.26**	**25**	*e*P	**Pn**	**16 14 48.4**	**-8.3**
BTO				S	**Sn**	**16 16 34.8**	**-17**
BTO				LR	LR		
	comp=N,100nm,11.0s						
BTO				LR	LR		
	comp=E,110nm,8.4s						
SONM	**Songino Array**	**16.51**	**5**	Pn	**Pn**	**16 16 21.8**	**+0.8**
	comp=E,0.2nm,0.3s,baz=190,slow=13,SNR=6.0						
SONM				LR	LR	16 23 26.2	
	comp=E,122nm,19.3s,baz=28,slow=40						
KSRS	**Korea Array**	**20.29**	**66**	P	**P**	**16 17 06.8**	**+1.4**
	comp=E,9.9nm,0.8s,baz=257,slow=10,SNR=29						
KSRS				LR	LR	16 25 46.5	
	comp=E,38nm,19.0s,MS2.8,baz=200,slow=39						
CN2	**Changchun**	**20.70**	**47**	*e*P	**P**	**16 17 11.3**	**+1.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.95**	**318**	*e*P	**P**	**16 17 33.7**	**-0.2**
MKAR	**Makanchi Array**	**22.95**	**318**	P	**P**	**16 17 33.9**	**+0.1**
	comp=Z,11nm,1.2s,mb4.2,baz=111,slow=9.6,SNR=15						
UCH	**Uchtor**	**26.16**	**303**	*e*P	**P**	**16 18 05.5**	**+1.5**
	comp=Z,3.8nm,1.2s,mb3.8						
AAK	**Ala-Archa**	**26.27**	**304**	LR	LR	16 29 46.9	
	comp=Z,104nm,19.3s,MS3.4,baz=339,slow=40						
ZALV	**Zalesovo Beam**	**26.60**	**334**	P	**P**	**16 18 07.2**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.5,baz=139,slow=9.7,SNR=5.4						
KURK	**Kurchatov**	**27.19**	**323**	P	**P**	**16 18 12.3**	**-0.9**
	comp=Z,1.5nm,1.0s,mb3.5,baz=130,slow=8.7,SNR=8.4						
TIXI	**Tiksi**	**42.43**	**11**	*e*P	**P**	**16 20 22.9**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.5						
FINES	**FINESS Array B**	**57.49**	**326**	P	**P**	**16 22 17.1**	**-1.5**
	comp=Z,1.7nm,0.7s,mb4.2,baz=72,slow=8.9,SNR=3.7						
WRAB	**Tennant Creek**	**58.55**	**147**	*e*P	**P**	**16 22 26.1**	**-0.3**
	comp=Z,6.0nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**58.55**	**147**	P	**P**	**16 22 26.2**	**-0.2**
	comp=Z,2.6nm,0.5s,mb4.5,baz=339,slow=7.8,SNR=58						
ASAR	**Alice Springs**	**61.58**	**149**	P	**P**	**16 22 47.2**	**0.0**
	comp=Z,0.8nm,0.6s,mb4.0,baz=339,slow=6.5,SNR=30						
INK	**Inuvik**	**71.81**	**19**	P	**P**	**16 23 51.6**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=350,slow=6.6,SNR=3.7						
STKA	**Stephens Creek**	**72.09**	**147**	P	**P**	**16 23 53.5**	**-0.5**
	comp=Z,1.1nm,0.8s,mb3.9,baz=312,slow=1.5,SNR=3.4						
YKA	**Yellowknife Ar**	**81.35**	**17**	P	**P**	**16 24 46.7**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=5.2,SNR=5.1						
YKA	**Yellowknife Ar**	**81.35**	**17**	P	**P**	**16 24 46.7**	**+0.7**

*IDC **13** 16:12:30.6±2.6,51°.48N×179°.62W,h0km,mb3.7/4, mb1 4.0/5,mb1mx3.6/28,mbtmp3.8/5,Error ellipse: s-maj=75.1km s-min=27.8km az=10.0*
*ISCJB **13** 16:12:41.9±1.3,51°.6N±0°.2×179°.20W±0°.09,h100km±9km, mb3.7/4,Error ellipse: s-maj=40.3km s-min=9.6km az=0.3*
*NEIC **13** 16:12:42.9±1.4,51°.52N×179°.21W,h95km±10km, MG3.2(AEIC),Error ellipse: s-maj=37.4km s-min=9.8km az=182.0*
ISC 13 16:12:43.1±1.4,51°.6N±0°.3×179°.19W±0°.09,h94km±10km, n11,σ1°13/13,mb3.7/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.59**	**78**	P	**Pn**	**16 13 08.8**	**-1.2**
ADK				S	**Sn**	**16 13 29.9**	**-0.6**
ATKA	**Atka Island**	**3.16**	**77**	P	**Pn**	**16 13 30.5**	**-0.2**
ATKA				S	**Sn**	**16 14 08.0**	**+0.5**
SMY	**Shemya**	**4.29**	**288**	P	**Pn**	**16 13 46.0**	**-0.1**
FX1	**Attu Island--F**	**4.88**	**289**	P	**Pn**	**16 13 55.0**	**+1.0**
NIKO	**Nikolski**	**6.50**	**74**	P	**Pn**	**16 14 16.7**	**+0.7**
SPIA	**Saint Paul Isl**	**7.66**	**39**	P	**Pn**	**16 14 33.2**	**+1.4**
KDAK	**Kodiak Island**	**16.52**	**58**	Pn	**Pn**	**16 16 25.8**	**-3.0**
PDAR	**Pinedale Array**	**46.48**	**72**	P	**P**	**16 21 01.9**	**+1.4**
	1.0nm,0.8s,mb3.6,baz=322,slow=3.3,SNR=7.2						
SPITS	**Spitsbergen Ar**	**50.16**	**356**	P	**P**	**16 21 27.6**	**-0.7**
	3.9nm,0.9s,mb4.3,baz=75,slow=7.0,SNR=4.2						
TXAR	**Lajitas Array**	**58.87**	**81**	P	**P**	**16 22 32.8**	**+0.9**
	0.2nm,0.5s,mb3.4,baz=302,slow=5.3,SNR=4.5						
MKAR	**Makanchi Array**	**59.72**	**308**	P	**P**	**16 22 35.8**	**-1.8**
	0.1nm,0.3s,mb3.3,baz=46,slow=6.7,SNR=5.8						

*HEL **13** 16:20:59.9±0.3,55°.70N×20°.74E,h0km,ML2.3, ML2.3(NAO),ML2.6(UPP),Explosion*
*ISCJB **13** 16:21:01.4±0.6,56°.00N±0°.04×20°.66E±0°.07,h0km,Error ellipse: s-maj=5.9km s-min=5.3km az=15.2*
*UPP **13** 16:21:01.3,55°.73N×20°.57E,h0km,ML2.6,Suspected Mining explosion.*
*CSEM **13** 16:21:02.6±0.3,55°.96N×20°.66E,h1km,ML2.6,Error ellipse: s-maj=6.8km s-min=5.4km az=166.0,Mining explosion.*
*BER **13** 16:21:06.2±4.9,56°.15N×20°.71E,h0km±29km, ML2.3(NAO)*
*NAO **13** 16:21:08.2±2.8,56°.38N×20°.69E,ML2.3*
ISC 13 16:21:01.8±0.7,55°.88N±0°.04×20°.65E±0°.06,h0km,n50, σ1°16/72,Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**1.97**	**27**	*e*P	**Pn**	**16 21 36.6**	**+0.2**
	SNR=50						
GOTU	**Gotland**	**2.14**	**329**	*e*P	**Pn**	**16 21 40.0**	**+1.4**
GOTU				*e*S	**Sn**	**16 22 08.4**	**+2.5**
GOTU	**Gotland**	**2.14**	**329**	P	**Pn**	**16 21 40.0**	**+1.3**
GOTU				S	**Sn**	**16 22 08.4**	**+2.5**
SUW	**Suwalki**	**2.38**	**141**	*e*P	**Pn**	**16 21 43.6**	**+1.7**
	SNR=50						
SUW				*e*S	**Sn**	**16 22 15.0**	**+3.3**
	41nm,0.2s,SNR=50						
BYXU	**Byxelkrok**	**2.46**	**307**	*e*P	**Pn**	**16 21 43.8**	**+0.8**
BYXU	**Byxelkrok**	**2.46**	**307**	P	**Pn**	**16 21 43.8**	**+0.7**
ASPU	**Aespoe**	**2.72**	**306**	*e*P	**Pn**	**16 21 47.3**	**+0.7**
ASPU	**Aespoe**	**2.72**	**306**	P	**Pn**	**16 21 47.2**	**+0.6**
OSKU	**Oskarshamn**	**2.84**	**300**	*e*P	**Pn**	**16 21 48.0**	**-0.3**
OSKU	**Oskarshamn**	**2.84**	**300**	P	**Pn**	**16 21 48.0**	**-0.3**
VSTU	**Vaesterwik**	**2.88**	**310**	*e*P	**Pn**	**16 21 49.7**	**+0.8**
VSTU	**Vaesterwik**	**2.88**	**310**	P	**Pn**	**16 21 49.6**	**+0.7**
MTSE	**Matsula**	**3.32**	**30**	*e*P	**Pn**	**16 21 54.8**	**-0.1**
MTSE				*e*S	**Sn**	**16 22 36.4**	**+1.4**
MTSE	**Matsula**	**3.32**	**30**	P	**Pn**	**16 21 54.8**	**-0.1**
MTSE				S	**Sn**	**16 22 36.3**	**+1.3**
VXJU	**Vaexsjoe**	**3.34**	**291**	*e*P	**Pn**	**16 21 54.7**	**-0.4**
VXJU	**Vaexsjoe**	**3.34**	**291**	P	**Pn**	**16 21 54.7**	**-0.4**
BSD	**Bornholm Skovb**	**3.35**	**259**	*i* P	**Pn**	**16 21 53.5**	**-1.8**
BSD				*i*		16 22 00.8	
BSD				*e*S	**Sg**	**16 22 48.1**	**-1.2**
BSD	**Bornholm Skovb**	**3.35**	**259**	*i* P	**Pn**	**16 21 53.5**	**-1.8**
VIKU	**Vikbolandet**	**3.40**	**322**	*e*P	**Pn**	**16 21 56.0**	**+0.1**
VIKU	**Vikbolandet**	**3.40**	**322**	P	**Pn**	**16 21 56.0**	**+0.1**
AAL	**Aland**	**4.33**	**356**	*e*P	**Pn**	**16 22 08.5**	**-0.1**
AAL				*e*S	**Sn**	**16 22 58.7**	**-1.1**
AAL	**Aland**	**4.33**	**356**	P	**Pn**	**16 22 08.5**	**-0.2**
AAL				S	**Sn**	**16 22 58.6**	**-1.1**
MEF	**Metsahovi**	**4.78**	**23**	*e*P	**Pn**	**16 22 15.9**	**+0.9**
MEF				*e*S	**Sn**	**16 23 13.1**	**+2.1**
MEF				MSG		16 23 31.5	
	comp=Z,3.8nm,0.3s						
MEF	**Metsahovi**	**4.78**	**23**	P	**Pn**	**16 22 15.8**	**+0.8**
MEF				S	**Sn**	**16 23 13.0**	**+2.0**
	comp=Z,3.8nm,0.3s						
RAF	**Rauma**	**5.19**	**6**	*e*P	**Pn**	**16 22 20.5**	**0.0**
RAF				*e*S	**Sn**	**16 23 20.3**	**-0.7**
RAF				MSG		16 23 46.2	
	comp=Z,2.7nm,0.3s						
RAF	**Rauma**	**5.19**	**6**	P	**Pn**	**16 22 20.5**	**-0.1**
RAF				S	**Sn**	**16 23 20.3**	**-0.8**
	comp=Z,2.7nm,0.3s						
PVF	**Pernaja**	**5.43**	**28**	*e*P	**Pn**	**16 22 23.9**	**+0.1**
PVF	**Pernaja**	**5.43**	**28**	P	**Pn**	**16 22 23.8**	**0.0**
HFS	**Hagfors**	**5.64**	**322**	Pn	**Pn**	**16 22 27.1**	**+0.4**
	baz=139,slow=11						
HFS				Sn	**Sn**	**16 23 27.1**	**-5.0**
	baz=144,slow=28						
HFS				Lg		16 23 52.0	
	baz=135,slow=37						
HFS	**Hagfors**	**5.64**	**322**	*e*P	**Pn**	**16 22 27.1**	**+0.4**
HFS				*e*		16 23 27.1	
HFS				*e*SB	**Sb**	**16 23 52.0**	**+2.9**
HFS	**Hagfors**	**5.64**	**322**	P	**Pn**	**16 22 27.1**	**+0.3**
VJF	**Virojoki**	**5.93**	**35**	*e*P	**Pn**	**16 22 30.0**	**-0.7**
VJF	**Virojoki**	**5.93**	**35**	P	**Pn**	**16 22 29.9**	**-0.8**
FIA0	**FINESS Array S**	**6.26**	**25**	Pn	**Pn**	**16 22 34.9**	**-0.3**
	baz=195,slow=14						
FIA0				Sn	**Sn**	**16 23 42.7**	**-4.6**
	baz=205,slow=22						
FIA0				Lg		16 24 08.3	
	baz=211,slow=28						
FIA0	**FINESS Array S**	**6.26**	**25**	*e*P	**Pn**	**16 22 34.5**	**-0.7**
FIA0				*e*S	**Sn**	**16 23 46.1**	**-1.2**
FIA0				MSG		16 24 23.1	
	comp=Z,2.3nm,0.3s						
FIA0	**FINESS Array S**	**6.26**	**25**	P	**Pn**	**16 22 34.5**	**-0.7**
FIA0	**FINESS Array S**	**6.26**	**25**	Pn	**Pn**	**16 22 34.9**	**-0.3**
	baz=195,slow=13,SNR=9.1						
FIA0				S	**Sn**	**16 23 46.1**	**-1.2**
	comp=Z,2.3nm,0.3s						
KEF	**Keuruu**	**6.67**	**17**	*e*P	**Pn**	**16 22 41.3**	**+0.4**
KEF				*e*S	**Sn**	**16 23 56.7**	**-0.8**
KEF	**Keuruu**	**6.67**	**17**	P	**Pn**	**16 22 41.2**	**+0.3**
KEF				S	**Sn**	**16 23 56.7**	**-0.8**
KAF	**Kangasniemi**	**6.90**	**23**	*e*P	**Pn**	**16 22 43.1**	**-0.9**
KAF				*e*S	**Sn**	**16 24 00.6**	**-2.5**
KAF	**Kangasniemi**	**6.90**	**23**	P	**Pn**	**16 22 43.1**	**-0.9**
KAF				S	**Sn**	**16 24 00.5**	**-2.6**
NB2	**NORSAR Subarra**	**7.15**	**320**	Pn	**Pn**	**16 22 46.2**	**-1.3**
	baz=140,slow=14						
NB2				Lg		16 24 43.9	
	baz=127,slow=37						
NB2	**NORSAR Subarra**	**7.15**	**320**	*e*P	**Pn**	**16 22 46.2**	**-1.3**
NB2				*e*SG	**Sg**	**16 24 43.9**	**-7.4**
NB2	**NORSAR Subarra**	**7.15**	**320**	P	**Pn**	**16 22 46.2**	**-1.3**
VAF	**Ylistaro**	**7.26**	**7**	*e*P	**Pn**	**16 22 48.6**	**-0.3**
VAF	**Ylistaro**	**7.26**	**7**	P	**Pn**	**16 22 48.5**	**-0.4**
SUF	**Sumiainen**	**7.41**	**20**	*e*P	**Pn**	**16 22 51.6**	**+0.6**
SUF	**Sumiainen**	**7.41**	**20**	P	**Pn**	**16 22 51.6**	**+0.6**
JOF	**Joensuu**	**8.90**	**33**	*e*P	**Pn**	**16 23 09.1**	**-2.3**
JOF	**Joensuu**	**8.90**	**33**	P	**Pn**	**16 23 09.1**	**-2.3**

*SZGRF **13** 16:23:43.9,30°.14N×105°.53E,h33km,mb5.0,MS4.3, Sichuan, China*

*IDC **13** 16:23:48.9±0.5,31°.69N×104°.39E,h0km,mb4.5/29, mb1 4.6/30,mb1mx4.5/38,mbtmp4.5/30,ML3.6/1,MS3.7/20, Ms1 3.7/20,ms1mx3.5/40,Error ellipse: s-maj=20.5km s-min=11.8km az=46.0*
*ISCJB **13** 16:23:50.4±1.1,31°.67N±0°.03×104°.40E±0°.03,h21km±8km, mb4.7/101,MS3.9/34,Error ellipse: s-maj=4.5km s-min=3.9km az=18.9*
*NEIC **13** 16:23:50.8±0.2,31°.73N×104°.42E,h10km,mb4.8/48, MS4.3/2,Error ellipse: s-maj=4.4km s-min=3.8km az=219.0*
*BJI **13** 16:23:50.7,31°.66N×104°.39E,h16km,mB4.8/24,mb4.8/33, ML4.8/21,Ms4.6/47,Ms7 4.4/38*
*MOS **13** 16:23:52.1±0.8,31°.69N×104°.41E,h33km,mb4.9/65,Error ellipse: s-maj=8.9km s-min=4.7km az=117.3*
*DJA **13** 16:24:07,31°.50N×104°.17E,h133km,mb4.6/12*
ISC 13 16:23:52.6±1.1,31°.74N±0°.03×104°.38E±0°.03,h20km±7km, n281,σ0°96/291,mb4.7/100,MS3.9/34,29C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.36**	**354**	*e*Pn	**Pn**	**16 25 00.6**	**+2.8**
LZH				Sn	**Sn**	**16 25 52.1**	**+4.1**
LZH				Sg	**Sg**	**16 26 11.6**	**-1.0**
LZH				smax			
	comp=N,3μm,0.8s						
LZH				smax			
	comp=E,4μm,0.6s						
LZH				LR	LR		
	comp=E,10μm,8.6s						
LZH				LR	LR		
	comp=Z,13μm,9.5s						
XAN	**Xi'an**	**4.46**	**58**	Pn	**Pn**	**16 24 57.5**	**-1.6**
XAN				Pg	**Pg**	**16 25 13.9**	**-4.1**
XAN				Sn	**Sn**	**16 25 44.5**	**-5.9**
XAN				Sg	**Sg**	**16 26 07.5**	**-8.3**
XAN				smax			
	comp=N,3μm,1.0s						
XAN				smax			
	comp=E,1μm,1.0s						
XAN				LR	LR		
	comp=N,3μm,6.6s						
XAN				LR	LR		
	comp=E,2μm,6.8s						
XAN				LR	LR		
	comp=Z,2μm,7.5s						
ENH	**Enshi**	**4.62**	**107**	*e*Pn	**Pn**	**16 25 01.4**	**0.0**
GYA	**Guiyang**	**5.63**	**159**	Pn	**Pn**	**16 25 16.5**	**+1.3**
GYA				smax			
	comp=N,1μm,1.0s						
GYA				smax			
	comp=E,750nm,0.9s						
GYA				LR	LR		
	comp=Z,7μm,3.8s						
KMI	**Kunming**	**6.75**	**193**	Pn	**Pn**	**16 25 30.1**	**-0.5**
KMI				Sn	**Sn**	**16 26 51.9**	**+5.1**
KMI				LR	LR		
	comp=N,3μm,6.0s						
KMI				LR	LR		
	comp=E,3μm,7.8s						
GTA	**Gaotai**	**8.51**	**335**	*e*P	**Pn**	**16 25 55.5**	**+0.8**
GTA				pP		16 26 05.0	
GTA				sP		16 26 09.1	
GTA				S	**Sn**	**16 27 28.9**	**-1.2**
GTA				sS		16 27 39.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,150nm,5.4s						
GTA				LR	LR		
	comp=N,2μm,12.3s						
GTA				LR	LR		
	comp=E,3μm,12.3s						
GTA				LR	LR		
	comp=Z,1μm,8.1s						
WHN	**Wuhan**	**8.63**	**95**	⇓P	**Pn**	**16 25 55.8**	**-0.6**
WHN				S	**Sn**	**16 27 25.8**	**-7.4**
WHN				LR	LR		
	comp=N,15μm,14.3s						
WHN				LR	LR		
	comp=E,7μm,8.3s						
WHN				LR	LR		
	comp=Z,6μm,10.0s						
BTO	**Baotou**	**9.95**	**26**	*e*P	**Pn**	**16 26 14.9**	**+0.4**
BTO				S	**Sn**	**16 28 00.4**	**-5.2**
BTO				LR	LR		
	comp=N,550nm,9.2s						
BTO				LR	LR		
	comp=E,390nm,9.0s						
HHC	**Hu-ho-hao-te**	**10.78**	**30**	*e*P	**Pn**	**16 26 27.6**	**+1.8**
HHC				pP		16 26 30.8	
HHC				PP		16 26 36.1	
HHC				S	**Sn**	**16 28 29.8**	**+4.0**
HHC				SS		16 28 43.5	
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,890nm,5.0s						
HHC				LR	LR		
	comp=E,860nm,4.8s						
HHC				LR	LR		
	comp=Z,810nm,5.2s						
TIA	**Tai'an**	**11.48**	**64**	*e*P	**Pn**	**16 26 36.0**	**+0.5**
TIA				LR	LR		
	comp=N,610nm,9.0s						
LSA	**Lhasa**	**11.56**	**263**	P	**Pn**	**16 26 38.3**	**+1.7**
LSA				LR	LR		
	comp=N,800nm,19.5s						
LSA				LR	LR		
	comp=E,1μm,10.6s						
LSA				LR	LR		
	comp=Z,1μm,11.5s						
LSA	**Lhasa**	**11.56**	**263**	*e*P	**Pn**	**16 26 37.7**	**+1.1**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**11.56**	**263**	*e*P	**Pn**	**16 26 37.7**	**+1.1**
	comp=Z,9.0nm,0.6s						
GZH	**Guangzhou**	**11.73**	**135**	P	**Pn**	**16 26 32.8**	**-6.1**
GZH				S	**Sn**	**16 28 42.8**	**-6.5**
GZH				LR	LR		
	comp=N,2μm,6.1s						
GZH				LR	LR		
	comp=E,2μm,5.7s						

QZH Quanzhou 14.22 115 P **Pn 16 27 14.3 +1.3**
QZH S **Sn 16 29 52.8 +2.6**
QZH LR LR
comp=N,2μm,9.2s
QZH LR LR
comp=E,5μm,6.3s
QZH LR LR
comp=Z,5μm,8.5s
SSE Sheshan 14.37 88 P **Pn 16 27 13.0 -2.0**
SSE S **Sn 16 29 53.4 -0.4**
SSE pmax pmax
comp=Z,29nm,0.7s
SSE pmax pmax
comp=Z,260nm,5.8s
SSE LR LR
comp=N,2μm,10.5s
SSE LR LR
comp=E,670nm,10.5s
SSE LR LR
comp=Z,2μm,9.0s
TAPN Taplejung 15.15 257 *e*P **Pn 16 27 20.0 -5.5**
comp=Z,46nm,1.0s
ODAN Odare 15.59 256 *e*P **Pn 16 27 26.3 -5.0**
comp=Z,26nm,0.6s
SONM Songino Array 16.15 5 Pn **Pn 16 27 38.5 +0.2**
comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=36
SONM Lg 16 32 17.1
comp=Z,0.1nm,0.3s,baz=193,slow=24,SNR=3.9
SONM LR LR 16 34 20.0
comp=Z,192nm,20.5s,baz=186,slow=39
RAMN Ramite 16.22 257 *e*P **Pn 16 27 34.1 -5.2**
comp=Z,42nm,1.1s
JIRN Jiri 16.32 260 *e*P **Pn 16 27 36.2 -4.4**
comp=Z,32nm,0.7s
GUN Gumba 16.50 261 *e*P **Pn 16 27 39.5 -3.5**
comp=Z,128nm,1.1s
PKI Pulchoki 17.00 261 *e*P **Pn 16 27 46.3 -3.0**
comp=Z,50nm,0.7s
PKIN Phulchoki 17.01 261 *e*P **Pn 16 27 46.2 -3.2**
comp=Z,56nm,0.6s
PKIN Phulchoki 17.01 261 *e*P **Pn 16 27 46.2 -3.2**
comp=Z,25nm,0.5s
KKN Kakani 17.04 262 *e*P **Pn 16 27 46.1 -3.7**
comp=Z,124nm,1.2s
DMN Daman 17.24 261 *e*P **Pn 16 27 49.2 -3.1**
comp=Z,52nm,0.7s
WMQ Urumqi 17.83 317 *e*P **Pn 16 28 00.8 +1.3**
WMQ S **Sn 16 31 16.8 -0.9**
WMQ sS sS 16 31 21.9 -11
WMQ SS 16 31 38.6
WMQ PcP PcP 16 32 39.9 +4.1
WMQ pmax pmax
comp=Z,15nm,1.2s
WMQ pmax pmax
comp=Z,250nm,5.0s
WMQ LR LR
comp=N,730nm,6.0s
WMQ LR LR
comp=E,540nm,5.4s
WMQ LR LR
comp=Z,370nm,25.0s
SNY Shenyang 18.35 51 ⇓P **Pn 16 28 07.8 +2.0**
SNY S **Sn 16 31 21.0 -9.1**
SNY pmax pmax
comp=Z,11nm,1.1s
SNY pmax pmax
comp=Z,130nm,6.1s
SNY LR LR
comp=E,490nm,16.7s
SNY LR LR
comp=Z,340nm,14.4s
TLY Talaya 19.93 359 *e*P **Pn 16 28 26.2 +1.4**
TLY *e*S **Sn 16 32 04.4 -3.9**
TLY pmax pmax
comp=Z,30nm,1.8s
TLY MLR MLR
comp=Z,219nm,11.0s
MOY Mondy 20.07 354 *e*P **P 16 28 26.7 +2.1**
MOY pmax pmax
comp=Z,44nm,2.7s
KSRS Korea Array 20.18 67 P **P 16 28 25.5 -0.4**
comp=Z,27nm,0.8s,baz=256,slow=9.8,SNR=42
KSRS LR LR 16 36 10.2
comp=Z,177nm,18.8s,MS3.4,baz=113,slow=37
KSRS Korea Array 20.18 67 P **P 16 28 25.5 -0.4**
KSRS pmax pmax
comp=Z,27nm,0.8s
KSRS MLR MLR
comp=Z,177nm,18.8s,MS3.4
CN2 Changchun 20.49 48 *e*P **P 16 28 30.6 +1.4**
CN2 *ep*P 16 28 34.6
CN2 *es*P sP 16 28 37.6 +0.2
CN2 pmax pmax
comp=Z,30nm,0.6s
CN2 LR LR
comp=N,500nm,10.0s,MS4.2
CN2 LR LR
comp=E,300nm,10.0s,MS4.2
CN2 LR LR
comp=Z,300nm,11.0s,MS3.9
IRK Irkutsk 20.49 360 *e*P **P 16 28 31.0 +1.9**
IRK pmax pmax
comp=Z,92nm,1.0s
HIA Hailar 20.98 29 *e*P **P 16 28 35.8 +1.4**
HIA pmax pmax
comp=Z,35nm,1.0s
HIA Hailar 20.98 29 *e*P **P 16 28 35.8 +1.3**
comp=Z,35nm,1.0s
MK31 Makanchi Array 22.66 318 *e*P **P 16 28 52.5 0.0**
MKAR Makanchi Array 22.66 318 P **P 16 28 52.5 0.0**
comp=Z,28nm,1.1s,mb4.6,baz=116,slow=11,SNR=102
MKAR PcP PcP 16 32 44.5 -0.2
comp=Z,1.2nm,0.6s,baz=129,slow=3.9,SNR=4.2
MKAR LR LR 16 38 28.1
comp=Z,440nm,20.9s,MS3.9,baz=123,slow=39
MKAR Makanchi Array 22.66 318 P **P 16 28 52.5 0.0**
MKAR 16 32 44.5
MKAR pmax pmax
comp=Z,28nm,1.1s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,440nm,20.9s
MDJ Mudanjiang 23.52 50 P **P 16 29 02.6 +1.1**
comp=Z,30nm,1.4s,mb4.5
NDI New Delhi 23.65 270 *ex* x 16 29 00.0
ULHL Ulaho! 24.70 303 P **P 16 29 14.1 +1.8**
SNR=8.5
TKM2 Tokmak 2 25.34 304 P **P 16 29 19.6 +1.4**
SNR=9.1
TKM2 Tokmak 2 25.34 304 *e*P **P 16 29 19.1 +0.9**
TKM2 pmax pmax
comp=Z,13nm,1.1s,mb4.4
TKM2 Tokmak 2 25.34 304 *e*P **P 16 29 19.1 +0.9**
comp=Z,13nm,1.1s,mb4.4
KZA Kyzart 25.36 302 P **P 16 29 20.3 +1.9**
SNR=42
KBK Karagaybulak 25.73 303 P **P 16 29 23.6 +2.0**
SNR=20
UCH Uchtor 25.93 302 P **P 16 29 26.0 +2.5**
SNR=56
FRU Bishkek 26.01 304 *e*P **P 16 29 26.0 +1.8**
FRU *e* 16 30 04.0
FRU pmax pmax
comp=Z,40nm,1.4s,mb4.8
AAK Ala-Archa 26.05 303 P **P 16 29 25.2 +0.7**
comp=Z,1.3nm,0.4s,mb3.8,baz=99,slow=7.0,SNR=8.9
AAK PcP PcP 16 32 52.5 +0.4
comp=Z,0.9nm,0.3s,baz=90,slow=3.0,SNR=2.9
AAK LR LR 16 41 14.6
comp=Z,310nm,20.3s,MS3.8,baz=159,slow=40
AAK Ala-Archa 26.05 303 P **P 16 29 25.2 +0.7**
AAK 16 32 52.6
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
AAK MLR MLR
comp=Z,310nm,20.3s,MS3.8
AAK Ala-Archa 26.05 303 *e*P **P 16 29 25.4 +0.9**
comp=Z,18nm,1.3s,mb4.5
USP Ospenovka 26.21 305 P **P 16 29 27.0 +0.9**
SNR=20
ZAA0 Zalesovo Array 26.26 333 *e*P **P 16 29 25.9 -0.5**
ZALV Zalesovo Beam 26.26 333 P **P 16 29 26.3 0.0**
comp=Z,15nm,0.8s,mb4.6,baz=126,slow=7.5,SNR=41
ZALV LR LR 16 40 19.6
comp=Z,81nm,21.8s,MS3.2,baz=281,slow=38
ZALV Zalesovo Beam 26.26 333 P **P 16 29 26.3 0.0**
ZALV pmax pmax
comp=Z,15nm,0.8s,mb4.6
ZALV MLR MLR
comp=Z,81nm,21.8s,MS3.2
AML Almayashu 26.50 302 P **P 16 29 30.6 +1.9**
SNR=11
AML Almayashu 26.50 302 *e*P **P 16 29 30.1 +1.4**
comp=Z,36nm,1.4s,mb4.7
EKS2 Erkin-Say 26.57 303 *e*P **P 16 29 30.2 +0.9**
comp=Z,10.0nm,1.1s,mb4.3
KURK Kurchatov 26.88 322 P **P 16 29 32.1 +0.1**
comp=Z,13nm,1.0s,mb4.4,baz=131,slow=8.2,SNR=62
KURK PcP PcP 16 32 53.0 -0.9
comp=Z,3.4nm,0.6s,baz=118,slow=2.1,SNR=8.2
KURK LR LR 16 39 41.9
comp=Z,121nm,18.5s,MS3.5,baz=120,slow=35
KURK Kurchatov 26.88 322 P **P 16 29 32.2 +0.2**
KURK 16 32 53.0
KURK pmax pmax
comp=Z,13nm,1.0s,mb4.4
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
KURK MLR MLR
comp=Z,121nm,18.5s,MS3.5
KURK Kurchatov 26.88 322 *e*P **P 16 29 32.0 0.0**
comp=Z,28nm,1.2s,mb4.7
BOD Bodaibo 26.90 11 *e*P **P 16 29 32.0 -0.1**
BOD pmax pmax
comp=Z,6.0nm,1.3s,mb4.0
KLR Kul'dur 26.96 42 *e*P **P 16 29 28.8 -3.9**
NVS Novosibirsk 27.54 333 *e*P **P 16 29 36.3 -1.5**
NVS *e* 16 30 27.8
NVS *e*S **S 16 34 12.7 -5.1**
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.3
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,7.0nm,1.3s
NVS smax
comp=N,14nm,2.0s
HABR Khabarovsk 28.55 45 P **P 16 29 44.1 -2.8**
HABR *e*S **S 16 34 29.7 -4.1**
HABR MLR MLR
comp=Z,82nm,13.0s,MS3.5
NRGR Nerungri 28.65 24 S **S 16 34 30.0 -5.2**
NRGR smax
comp=N,10.0nm,0.4s
KBL Kabul 29.63 285 *e*P **P 16 29 57.0 +0.3**
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KBL Kabul 29.63 285 *e*P **P 16 29 57.0 +0.3**
comp=Z,10nm,1.0s,mb4.5
DAV Davao City (W) 31.52 137 LR LR 16 45 15.7
comp=Z,284nm,18.5s,MS4.0,baz=279,slow=41
BVAR Borovoye Array 32.44 321 P **P 16 30 21.9 +0.7**
comp=Z,2.2nm,0.7s,mb4.1,baz=116,slow=10,SNR=16
BVAR PcP PcP 16 33 07.4 -0.7
comp=Z,3.3nm,0.6s,baz=136,slow=3.1,SNR=12
BVAR LR LR 16 45 07.9
comp=Z,76nm,21.8s,MS3.4,baz=5.7,slow=39
BVAR Borovoye Array 32.44 321 P **P 16 30 21.9 +0.6**
BVAR 16 33 07.4
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR MLR MLR
comp=Z,77nm,21.8s
BRVK Borovoye 32.52 321 *ce*P **P 16 30 22.6 +0.7**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRVK Borovoye 32.52 321 *e*P **P 16 30 22.1 +0.2**
comp=Z,18nm,1.4s,mb4.8
PALK Pallekele 32.86 227 *i* P **P 16 30 26.1 +0.8**
CBIJ Chichi jima 33.15 88 LR LR 16 43 49.4
comp=Z,113nm,18.9s,MS3.6,baz=100,slow=36
YAK Yakutsk 34.43 21 *c i*P **P 16 30 38.1 -0.4**
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK MLR MLR
comp=Z,92nm,11.0s,MS3.8
YAK MLR MLR
comp=N,78nm,12.0s,MS3.8
YAK MLR MLR
comp=E,79nm,11.0s,MS3.8
YAK Yakutsk 34.43 21 *e*P **P 16 30 38.0 -0.5**
comp=E,16nm,0.8s,mb5.0
ABKAR Akbulak array 37.43 311 *e*P **P 16 31 04.3 0.0**
comp=E,7.9nm,1.0s,mb4.5
AKTK Aktyubinsk 38.88 312 P **P 16 31 16.6 +0.1**
AKTK PcP PcP 16 33 26.4 -0.8
AKTK LR LR 16 47 25.5
AKTO Aktyubinsk 38.88 312 P **P 16 31 16.6 +0.1**
comp=E,3.4nm,1.0s,mb4.0,baz=96,slow=9.0,SNR=8.1
AKTO PcP PcP 16 33 26.4 -0.8
comp=E,1.7nm,0.8s,baz=101,slow=9.3,SNR=3.7
AKTO LR LR 16 47 25.5
comp=E,88nm,21.2s,MS3.5,baz=102,slow=36
AKTO Aktyubinsk 38.88 312 P **P 16 31 16.7 +0.2**
AKTO 16 33 26.4
AKTO pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
AKTO MLR MLR
comp=Z,88nm,21.2s,MS3.6
SVE Sverdlovsk 39.13 323 ⇑*e*P **P 16 31 19.6 +1.0**
SVE *e* 16 33 17.2
SVE pmax pmax
comp=Z,37nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,193nm,16.0s,MS4.0
ARU Arti 40.08 322 *c i*P **P 16 31 26.7 +0.3**
ARU *e* 16 32 56.6
ARU S **S 16 37 33.1 +1.8**
ARU SS SS 16 40 25.9 -2.8
ARU pmax pmax
comp=Z,50nm,1.2s,mb5.1
ARU Arti 40.08 322 *e*P **P 16 31 26.7 +0.3**
comp=Z,38nm,1.0s,mb5.1
GUMO Guam 41.21 107 LR LR 16 49 20.8
comp=Z,153nm,18.4s,MS3.9,baz=278,slow=37
SOKR Solikamsk 42.00 326 *c i*P **P 16 31 42.8 +0.6**
SOKR pmax pmax
comp=Z,40nm,1.3s,mb4.9
TIXI Tiksi 42.09 11 *i* P **P 16 31 41.4 -1.4**
TIXI pmax pmax
comp=Z,7.0nm,1.3s,mb4.1
TIXI MLR MLR
comp=Z,202nm,16.0s,MS4.1
TIXI Tiksi 42.09 11 *e*P **P 16 31 41.5 -1.3**
comp=Z,3.0nm,0.6s,mb4.1
SEY Seymchan 43.42 30 *ce*P **P 16 31 54.4 +0.7**
PETK Petropavlovsk- 43.57 45 P **P 16 31 54.4 -0.7**
comp=Z,12nm,0.8s,mb4.7,baz=278,slow=7.3,SNR=10
PETK LR LR 16 51 59.7
comp=Z,50nm,20.9s,MS3.4,baz=45,slow=39
PETK Petropavlovsk- 43.57 45 P **P 16 31 54.4 -0.7**
PETK pmax pmax
comp=Z,12nm,0.8s,mb4.7
PETK MLR MLR
comp=Z,50nm,20.9s,MS3.4
PET Petropavlovsk 44.13 45 *e*P **P 16 32 00.0 +0.4**
PET *e*S **S 16 38 33.0 +1.7**
PET pmax pmax
comp=Z,18nm,1.0s,mb4.8
PET pmax pmax
comp=Z,100nm,7.9s
PET MLR MLR
comp=Z,100nm,17.0s,MS3.8
ZEI Tsey 48.45 301 *e*P **P 16 32 33.0 -0.6**
ZEI pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
KIV Kislovodsk 49.16 303 *e*P **P 16 32 39.8 +0.7**
KIV pmax pmax
comp=Z,22nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,55nm,17.0s,MS3.6
KIV Kislovodsk 49.16 303 *e*P **P 16 32 40.4 +1.2**
comp=Z,13nm,0.9s,mb5.0
BILL Bilibino 50.51 25 *e*P **P 16 32 48.7 -0.2**
BILL pmax pmax
comp=Z,14nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,100nm,13.0s,MS4.0
BILL Bilibino 50.51 25 *e*P **P 16 32 48.2 -0.7**
comp=Z,7.6nm,0.9s,mb4.6
KLMR Klimovskoe 50.68 325 *e*P **P 16 32 49.4 -1.0**
KLMR pmax pmax
comp=Z,30nm,1.3s,mb5.1
VORD Divnogorie 50.77 312 *e*P **P 16 32 50.2 -1.0**
VORD pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VORD pmax pmax
comp=N,8.0nm,0.4s
VORD pmax pmax
comp=E,8.0nm,0.6s
VSR Storozhevoye 50.83 313 *e*P **P 16 32 50.9 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,1.0s
MOS Moscow 51.54 318 *e*P **P 16 32 54.6 -2.3**
MOS pmax pmax
comp=Z,62nm,1.1s,mb5.5
OBN Obninsk 52.17 318 *e*P **P 16 32 59.8 -1.8**
OBN *e* 16 34 17.0
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.2
KNA Kununurra 52.70 150 *e*P **P 16 33 04.8 -1.1**
comp=Z,18nm,0.7s,mb5.1
MALT Malatya 53.39 297 *e*P **P 16 33 11.3 +0.4**
MALT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MALT Malatya 53.39 297 *e*P **P 16 33 11.3 +0.4**
comp=Z,6.1nm,1.1s,mb4.4
FITZ Fitzroy Crossi 53.59 155 *e*P **P 16 33 11.0 -1.4**
comp=Z,8.8nm,0.8s,mb4.7
FITZ Fitzroy Crossi 53.59 155 *e*P **P 16 33 11.0 -1.5**
comp=Z,4.9nm,0.8s,mb4.5
APA Apatity 53.84 333 ⇑*i*P **P 16 33 14.6 +0.8**
APA MLR MLR
comp=Z,600nm,13.0s,MS4.8
JOF Joensuu 54.62 328 *e*P **P 16 33 18.7 -0.8**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JOF Joensuu 54.62 328 *ep* **P 16 33 18.7 -0.8**
comp=Z,4.6nm,0.6s,mb4.7
KEV Kevo 56.25 336 *e*P **P 16 33 30.5 -0.6**
KEV pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KEV Kevo 56.25 336 *ep* **P 16 33 30.5 -0.6**
comp=Z,9.0nm,0.7s,mb4.9
BR131 Keskin Array S 56.63 299 *e*P **P 16 33 33.6 -0.7**
comp=Z,2.3nm,0.8s,mb4.3
BRTR Keskin Array B 56.63 299 P **P 16 33 34.0 -0.4**
comp=Z,2.4nm,0.8s,mb4.3,baz=96,slow=7.6,SNR=12
BRTR Keskin Array B 56.63 299 P **P 16 33 34.0 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 56.78 336 P **P 16 33 34.8 -0.1**
comp=Z,2.8nm,0.6s,mb4.5,baz=80,slow=8.2,SNR=15
ARCES PcP PcP 16 34 30.1 -0.4
comp=Z,3.5nm,0.9s,baz=67,slow=4.3,SNR=3.8
ARCES LR LR 16 58 17.7
comp=Z,77nm,20.7s,MS3.8,baz=62,slow=36
ARCES ARCESS Array B 56.78 336 P **P 16 33 34.8 -0.1**
ARCES 16 34 30.1
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES MLR MLR
comp=Z,77nm,20.7s
KAF Kangasniemi 56.99 327 *e*P **P 16 33 34.9 -1.6**
KAF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KAF Kangasniemi 56.99 327 *ep* **P 16 33 34.9 -1.6**
comp=Z,7.4nm,0.7s,mb4.8
AKASG Malin Array Be 57.12 313 P **P 16 33 36.9 -0.8**
comp=Z,3.3nm,0.6s,mb4.6,baz=72,slow=6.2,SNR=17
AKASG LR LR 16 59 21.3
comp=Z,116nm,19.2s,MS4.0,baz=80,slow=37
AKASG Malin Array Be 57.12 313 P **P 16 33 36.9 -0.7**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG MLR MLR
comp=Z,116nm,19.2s
FINES FINESS Array B 57.17 326 P **P 16 33 37.7 -0.1**
comp=Z,5.9nm,0.6s,mb4.8,baz=82,slow=6.9,SNR=18
FINES FINESS Array B 57.17 326 P **P 16 33 37.7 -0.1**
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 57.17 326 P **P 16 33 37.7 -0.1**
MMAI Mount Meron Ar 57.27 291 LR LR 16 59 15.6
comp=Z,44nm,18.7s,MS3.6,baz=35,slow=37
COEN Coen 58.72 135 *e*P **P 16 33 49.1 -0.1**
SPITS Spitsbergen Ar 58.78 346 P **P 16 33 48.7 -0.2**
comp=Z,2.7nm,0.6s,mb4.4,baz=90,slow=5.8,SNR=17
SPITS Spitsbergen Ar 58.78 346 P **P 16 33 48.7 -0.2**
SPITS pmax pmax
comp=Z,3.0nm,0.6s
SPITS Spitsbergen Ar 58.78 346 P **P 16 33 48.7 -0.2**
WRAB Tennant Creek 58.87 147 *e*P **P 16 33 49.4 -0.7**
WRAB pmax pmax
comp=Z,13nm,0.7s,mb5.1
WRAB Tennant Creek 58.87 147 *e*P **P 16 33 49.4 -0.7**
comp=Z,13nm,0.7s,mb5.1
WRA Warramunga Arr 58.87 147 P **P 16 33 49.4 -0.7**
comp=Z,7.8nm,0.6s,mb4.9,baz=340,slow=7.8,SNR=62
WRA Warramunga Arr 58.87 147 P **P 16 33 49.4 -0.8**
WRA pmax pmax
comp=Z,8.0nm,0.6s
MLR Muntele Rosu 60.51 308 P **P 16 34 01.3 0.0**
comp=Z,2.8nm,0.7s,mb4.5,baz=44,slow=4.4,SNR=6.8
MLR Muntele Rosu 60.51 308 P **P 16 34 01.3 0.0**
MLR pmax pmax
comp=Z,3.0nm,0.7s
KWP Kalwaria Pacla 61.45 313 *e*P **P 16 34 07.8 +0.2**
KWP Kalwaria Pacla 61.45 313 *e*P **P 16 34 07.7 +0.1**
comp=Z,36nm,1.0s,mb5.5
ASAR Alice Springs 61.91 149 P **P 16 34 10.3 -0.5**
comp=Z,2.4nm,0.6s,mb4.5,baz=328,slow=6.0,SNR=30
ASAR Alice Springs 61.91 149 P **P 16 34 10.4 -0.5**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
KOLS Kolonicke sedl 61.92 312 *e*P **P 16 34 10.4 -0.4**
KOLS pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
KOLS Kolonicke sedl 61.92 312 *e*P **P 16 34 10.4 -0.4**
comp=Z,4.6nm,1.4s,mb4.4
KOLS Kolonicke sedl 61.92 312 *e*P **P 16 34 10.4 -0.4**
STHS Stebnicka Huta 62.42 313 *e*P **P 16 34 14.6 +0.5**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
STHS Stebnicka Huta 62.42 313 *e*P **P 16 34 14.6 +0.5**
comp=Z,3.3nm,1.0s,mb4.4
STHS Stebnicka Huta 62.42 313 *e*P **P 16 34 14.6 +0.5**
NIE Niedzica 63.00 313 *e*P **P 16 34 17.8 -0.2**
OJC Ojcow 63.07 314 *e*P **P 16 34 18.3 -0.1**
KECS Kecovo 63.19 312 *e*P **P 16 34 19.5 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.19 312 *e*P **P 16 34 19.5 +0.3**
comp=Z,1.9nm,0.7s,mb4.3
KECS Kecovo 63.19 312 *e*P **P 16 34 19.5 +0.3**
HFS Hagfors 63.38 326 P **P 16 34 19.7 -0.6**
comp=Z,2.4nm,0.5s,mb4.6,baz=93,slow=6.5,SNR=12
HFS Hagfors 63.38 326 P **P 16 34 19.7 -0.6**
HFS pmax pmax
comp=Z,2.0nm,0.5s
VYHS Vyhne 64.22 313 *i* P **P 16 34 26.4 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VYHS Vyhne 64.22 313 *i* P **P 16 34 26.4 +0.4**
comp=Z,3.8nm,0.9s,mb4.4
VYHS Vyhne 64.22 313 *i* P **P 16 34 26.4 +0.4**
NB2 NORSAR Subarra 64.25 327 P **P 16 34 24.9 -1.1**
comp=Z,25nm,1.4s,mb5.1,baz=73,slow=6.9
NOA NORSAR Array B 64.25 327 P **P 16 34 25.2 -0.8**
comp=Z,2.5nm,0.6s,mb4.4,baz=72,slow=6.6,SNR=9.3

NOA LR LR 17 01 60.0
comp=Z,51nm,18.7s,MS3.7,baz=310,slow=36
NOA NORSAR Array B 64.25 327 P **P 16 34 25.2 -0.8**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,51nm,18.7s
KOLL Kolacno 64.46 313 *e*P **P 16 34 28.6 +1.0**
KOLL Kolacno 64.46 313 *e*P **P 16 34 28.6 +1.0**
MORC Moravsky Berou 64.59 314 *e*P **P 16 34 28.4 0.0**
MORC pmax pmax
comp=Z,18nm,1.4s,mb4.9
MORC Moravsky Berou 64.59 314 *e*P **P 16 34 28.4 0.0**
comp=Z,18nm,1.4s,mb4.9
KSP Ksiaz 64.98 316 *e*P **P 16 34 31.5 +0.5**
DPC Dobruska-Polom 65.14 315 *e*P **P 16 34 32.3 +0.3**
DPC MLR MLR
comp=Z,200nm,15.9s,MS4.4
DPC MLR MLR
comp=E,200nm,21.0s
CTA Charters Tower 65.32 136 LR LR 17 01 29.8
comp=E,26nm,21.1s,MS3.4,baz=109,slow=35
VRAC Vranov 65.33 314 P **P 16 34 31.9 -1.4**
comp=E,3.4nm,0.3s,mb4.8,baz=334,slow=14,SNR=6.0
VRAC Vranov 65.33 314 P **P 16 34 31.9 -1.4**
VRAC pmax pmax
comp=Z,3.0nm,0.3s
ZST Bratislava 65.41 313 *e*P **P 16 34 34.2 +0.4**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ZST Bratislava 65.41 313 *e*P **P 16 34 34.2 +0.4**
comp=Z,4.7nm,0.8s,mb4.6
ZST Bratislava 65.41 313 *e*P **P 16 34 34.2 +0.4**
TREC Trest 66.02 314 AMS AMS 17 04 30.0
comp=Z,200nm,25.0s
PVCC Panska Ves 66.12 316 *e*P **P 16 34 39.0 +0.7**
PVCC MLR MLR
comp=Z,200nm,20.8s,MS4.3
PVCC Panska Ves 66.12 316 *e*P **P 16 34 39.0 +0.7**
PVCC AMS AMS 17 04 20.0
comp=Z,200nm,20.8s
CONA Conrad Observa 66.28 313⇑*i*P **P 16 34 39.7 +0.3**
comp=Z,9.9nm,1.3s,mb4.7
PRU Pruhonice 66.33 315 *e*P **P 16 34 40.3 +0.6**
PRU MLR MLR
comp=Z,200nm,16.9s,MS4.4
PRU Pruhonice 66.33 315 *e*P **P 16 34 40.3 +0.6**
PRU AMS AMS 17 04 40.0
comp=Z,200nm,16.9s
BRG Berggiesshubel 66.37 316 *e*P **P 16 34 39.5 -0.4**
comp=Z,11nm,1.4s,mb4.7
BRG Berggiesshubel 66.37 316 *e*P **P 16 34 39.9 0.0**
comp=Z,5.8nm,0.8s,mb4.7
BRG
comp=N,102nm,20.3s
BRG
comp=E,137nm,28.5s
BRG
comp=Z,187nm,27.5s
BRG Berggiesshubel 66.37 316 *e*P **P 16 34 39.9 0.0**
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRG MLR MLR
comp=N,61nm,20.3s
BRG MLR MLR
comp=E,82nm,28.5s
BRG MLR MLR
comp=Z,112nm,27.5s
TTA Tatalina 66.40 29 *e*P **P 16 34 39.5 -0.4**
TTA pmax pmax
comp=Z,13nm,1.1s,mb4.9
TTA Tatalina 66.40 29 *e*P **P 16 34 39.5 -0.4**
comp=Z,13nm,1.1s,mb4.9
CLL Collm 66.75 317 *e*P **P 16 34 41.8 -0.6**
comp=Z,7.0nm,0.9s,mb4.7
CLL Collm 66.75 317 *i*P **P 16 34 41.9 -0.5**
CLL pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
CLL Collm 66.75 317 *i*P **P 16 34 41.9 -0.5**
comp=Z,8.0nm,1.2s,mb4.6
CLL *e* pP 16 34 46.0 -2.8
CLL Collm 66.75 317 *i*P **P 16 34 41.9 -0.5**
comp=Z,8.0nm,1.2s,mb4.6
CLL LmV 16 04 00.0
comp=Z,100nm,18.7s
CLL *e*(pP) pP 16 34 46.0 -2.8
COLD Coldfoot 66.80 24 *e*P **P 16 34 42.1 -0.3**
comp=Z,8.5nm,0.9s,mb4.8
GROS Grobnik 67.06 311 *i*P **P 16 34 44.0 -0.4**
PERS Pernice 67.24 312 *e*P **P 16 34 45.3 -0.3**
KHC Kasperske Hory 67.24 315 *e*P **P 16 34 45.5 0.0**
KHC MLR MLR
comp=Z,200nm,18.7s,MS4.4
KHC Kasperske Hory 67.24 315 *e*P **P 16 34 45.5 0.0**
KHC AMS AMS 17 05 20.0
comp=Z,200nm,18.7s
BSEG Bad Segeberg 67.27 320 *e*P **P 16 34 46.1 +0.5**
comp=Z,16nm,1.0s,mb5.0
BSEG Bad Segeberg 67.27 320 *e*P **P 16 34 46.1 +0.5**
BSEG pmax pmax
comp=Z,16nm,1.0s,mb5.0
GEC2 GERESS Array S 67.27 314 *e*P **P 16 34 45.3 -0.4**
comp=Z,11nm,1.3s,mb4.7
GEC2 GERESS Array S 67.27 314 *e*P **P 16 34 45.3 -0.4**
GEC2 pmax pmax
comp=Z,11nm,1.3s,mb4.7
GERES GERESS Array B 67.27 314 P **P 16 34 45.4 -0.3**
comp=Z,2.4nm,0.7s,mb4.4,baz=77,slow=7.0,SNR=21
GERES LR LR 17 05 47.3
comp=Z,170nm,21.0s,MS4.2,baz=215,slow=37
GERES GERESS Array B 67.27 314 P **P 16 34 45.4 -0.3**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES MLR MLR
comp=Z,170nm,21.0s
SOKA Soboth 67.27 312⇑*i*P **P 16 34 45.7 -0.1**
comp=Z,16nm,1.7s,mb4.8
MOA Molln 67.31 313⇑*i*P **P 16 34 46.1 +0.1**
comp=Z,9.0nm,1.0s,mb4.8
TANN Tannenbergstha 67.41 316 *e*P **P 16 34 46.3 -0.3**
comp=Z,12nm,1.6s,mb4.7
NKC Novy Kostel 67.49 316 *e*P **P 16 34 47.4 +0.3**
NKC MLR MLR
comp=E,100nm,6.2s
PDKS Podkum 67.53 311 *i*P **P 16 34 47.1 -0.3**
BOJS Bojanci 67.59 310 *i*P **P 16 34 47.8 0.0**
WET Wettzell 67.66 315 *e*P **P 16 34 48.3 +0.2**
comp=Z,17nm,1.8s,mb4.8
WET Wettzell 67.66 315 *e*P **P 16 34 48.3 +0.2**
WET pmax pmax
comp=Z,17nm,1.8s,mb4.8
ROTZ Rotzenmuhle 67.82 316 *e*P **P 16 34 49.5 +0.4**
comp=Z,14nm,1.3s,mb4.8
MOX Moxa 67.82 317 *e*P **P 16 34 48.8 -0.3**
comp=Z,10.0nm,1.6s,mb4.6
BPAW Bear Paw Mtn. 67.93 27 *e*P **P 16 34 49.1 -0.5**
comp=Z,22nm,1.3s,mb5.0
NRDL Niedersach Rie 67.95 319 *e*P **P 16 34 49.6 -0.3**
comp=Z,36nm,1.8s,mb5.1
CEY Cerknica 68.03 311 *i*P **P 16 34 50.2 -0.3**
CLZ Clausthal 68.06 318 *e*P **P 16 34 50.8 +0.2**
comp=Z,22nm,1.5s,mb5.0
CLZ Clausthal 68.06 318 *e*P **P 16 34 50.8 +0.2**
CLZ pmax pmax
comp=Z,22nm,1.5s,mb5.0
KBA Koelnbreinsper 68.18 313⇑*i*P **P 16 34 51.4 -0.1**
comp=Z,5.1nm,0.8s,mb4.6
RJOB Jochberg 68.26 313 *e*P **P 16 34 51.7 -0.3**
comp=Z,13nm,1.7s,mb4.7
GRA1 Grafenberg Arr 68.43 316 *e*P **P 16 34 53.3 +0.3**
comp=Z,39nm,1.6s,mb5.2
GRA1 LR LR
comp=Z,200nm,21.3s,MS4.3
GRF Grafenberg Arr 68.43 316 *e*P **P 16 34 53.3 +0.3**
comp=Z,39nm,1.6s,mb5.2
GRF *e*L 17 06 10.6
comp=Z,172nm,21.3s
GRF Grafenberg Arr 68.43 316 *e*P **P 16 34 53.3 +0.3**
GRF pmax pmax
comp=Z,39nm,1.6s,mb5.2
GRF MLR MLR
comp=Z,200nm,21.3s,MS4.3
GRF Grafenberg Arr 68.43 316 *e*P **P 16 34 53.3 +0.3**
GRF pmax pmax
comp=Z,39nm,1.6s,mb5.2
GRF MLR MLR
comp=Z,200nm,21.3s,MS4.3

UBBA Unterbreizbach 68.69 317 *e*P **P 16 34 55.1 +0.5**
comp=Z,13nm,1.5s,mb4.6
COLA College 68.76 26 *e*P **P 16 34 54.1 -0.7**
COLA pmax pmax
comp=Z,12nm,1.0s,mb4.8
COLA College 68.76 26 *e*P **P 16 34 54.1 -0.6**
comp=Z,12nm,1.0s,mb4.8
FETA Feichten 69.84 313⇑*i*P **P 16 35 01.4 -0.4**
comp=Z,10nm,1.0s,mb4.7
TNS Taunus Mts 69.84 317 *e*P **P 16 35 01.2 -0.5**
comp=Z,14nm,1.4s,mb4.7
TNS Taunus Mts 69.84 317 *e*P **P 16 35 01.2 -0.5**
TNS pmax pmax
comp=Z,14nm,1.4s,mb4.7
KDAK Kodiak Island 70.18 34 *c*e**P P 16 35 03.2 -0.5**
DAVOX Davos/Dischmat 70.47 313 P **P 16 35 05.5 -0.1**
comp=Z,7.8nm,0.6s,mb4.8,baz=68,slow=5.4,SNR=8.7
BFO Black Forest 70.73 315 *e*P **P 16 35 06.5 -0.7**
comp=Z,10.0nm,1.4s,mb4.5
BFO Black Forest 70.73 315 *e*P **P 16 35 06.5 -0.7**
BFO pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
KMBO Kilima Mbogo 71.28 257 *e*P **P 16 35 10.3 -0.8**
KMBO pmax pmax
comp=Z,23nm,1.7s
KMBO Kilima Mbogo 71.28 257 *e*P **P 16 35 10.3 -0.8**
comp=Z,23nm,1.7s,mb4.8
CDF Champ du Feu 71.33 316⇑*i*P **P 16 35 10.4 -0.4**
comp=Z,10nm,0.8s,mb4.5
CDF Champ du Feu 71.33 316⇑*i*P **P 16 35 10.4 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 71.33 316⇑*i*P **P 16 35 10.4 -0.4**
comp=Z,5.1nm,0.8s,mb4.5
WLF Walferdange 71.42 317 P **P 16 35 12.2 +0.8**
comp=Z,12nm,1.2s,mb4.7
WLF Walferdange 71.42 317 *e*P **P 16 35 10.4 -0.9**
comp=Z,21nm,1.1s,mb5.0
INK Inuvik 71.48 19 P **P 16 35 10.9 -0.5**
comp=Z,12nm,0.8s,mb4.9,baz=324,slow=7.8,SNR=38
INK Inuvik 71.48 19 P **P 16 35 10.9 -0.5**
INK pmax pmax
comp=Z,12nm,0.8s
BCLA Clavier 71.56 318 P **P 16 35 12.1 -0.1**
comp=Z,7.8nm,1.9s,mb4.3
BMRM Bremner River 72.07 29 *e*P **P 16 35 15.3 +0.2**
comp=Z,13nm,0.8s,mb4.9
EIDS Eidsvold 72.21 136 *e*P **P 16 35 15.5 -0.8**
comp=Z,12nm,1.0s,mb4.8
STKA Stephens Creek 72.41 147 *e*P **P 16 35 16.4 -1.0**
comp=Z,4.5nm,0.9s,mb4.4
STKA Stephens Creek 72.41 147 *e*P **P 16 35 16.6 -0.8**
comp=Z,5.2nm,0.7s,mb4.5,baz=335,slow=6.8,SNR=16
STKA LR LR 17 06 28.0
comp=Z,89nm,18.4s,MS4.1,baz=23,slow=35
LPG La Plagne 72.99 313⇑*i*P **P 16 35 21.2 +0.4**
comp=Z,26nm,0.7s,mb5.0
LPG La Plagne 72.99 313⇑*i*P **P 16 35 21.2 +0.4**
LPG pmax pmax
comp=Z,13nm,0.7s,mb5.0
LPG La Plagne 72.99 313⇑*i*P **P 16 35 21.2 +0.4**
comp=Z,13nm,0.7s,mb5.0
EKA Eskdalemuir Ar 73.57 325 P **P 16 35 23.6 -0.4**
comp=Z,2.8nm,0.9s,mb4.2,baz=48,slow=6.8,SNR=5.5
EKA Eskdalemuir Ar 73.57 325 P **P 16 35 23.7 -0.3**
EKA pmax pmax
comp=Z,3.0nm,0.9s
CMSA Cobar Meteorol 74.10 144 *e*P **P 16 35 27.3 -0.1**
SMF Signal de Mont 74.21 315⇑*i*P **P 16 35 27.3 -0.7**
comp=Z,18nm,0.8s,mb4.7
SMF Signal de Mont 74.21 315⇑*i*P **P 16 35 27.3 -0.7**
SMF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SMF Signal de Mont 74.21 315⇑*i*P **P 16 35 27.3 -0.7**
comp=Z,8.9nm,0.8s,mb4.8
TCF Toulx Ste Croi 75.37 316⇑*i*P **P 16 35 34.4 -0.3**
comp=Z,8.4nm,0.8s,mb4.4
TCF Toulx Ste Croi 75.37 316⇑*i*P **P 16 35 34.4 -0.3**
TCF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TCF Toulx Ste Croi 75.37 316⇑*i*P **P 16 35 34.4 -0.3**
comp=Z,4.2nm,0.8s,mb4.4
CAF Calviac 76.15 314⇑*i*P **P 16 35 39.3 +0.1**
comp=Z,12nm,0.9s,mb4.5
CAF Calviac 76.15 314⇑*i*P **P 16 35 39.3 +0.1**
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CAF Calviac 76.15 314⇑*i*P **P 16 35 39.3 +0.1**
comp=Z,6.1nm,0.9s,mb4.5
DLBC Dease Lake 79.38 26 P **P 16 35 56.7 -0.2**
comp=Z,1.2nm,0.4s,mb4.2,baz=280,slow=9.4,SNR=3.9
DLBC Dease Lake 79.38 26 P **P 16 35 56.7 -0.2**
YKA Yellowknife Ar 81.02 17 P **P 16 36 05.4 -0.3**
comp=Z,5.5nm,0.4s,mb4.8,baz=328,slow=5.2,SNR=75
YKA Yellowknife Ar 81.02 17 P **P 16 36 05.4 -0.3**
YKA pmax pmax
comp=Z,6.0nm,0.4s
YKA Yellowknife Ar 81.02 17 P **P 16 36 05.4 -0.3**
ESDC Sonseca Array 82.77 312 P **P 16 36 15.3 0.0**
comp=Z,0.3nm,0.3s,mb3.8,baz=41,slow=5.7,SNR=4.0
FFC Flin Flon 90.95 15 *c*e**P P 16 36 54.8 -0.1**
ETW Entiat 91.40 28 *e*P **P 16 36 58.1 +0.9**
comp=Z,4.3nm,0.9s,mb4.8
AFI Afiamalu 92.08 105 LR LR 17 15 29.1
comp=Z,39nm,19.9s,MS3.9,baz=53,slow=34
SCHQ Schefferville 93.45 355 P **P 16 37 06.0 -0.6**
comp=Z,6.2nm,0.8s,mb4.7,baz=24,slow=7.1,SNR=6.2
SCHQ Schefferville 93.45 355 P **P 16 37 06.0 -0.6**
TORD Torodi Ar. Bea 93.67 288 P **P 16 37 07.0 -1.2**
comp=Z,0.6nm,0.7s,mb4.1,baz=43,slow=3.8,SNR=4.6
VNA2 Neumayer--Watz 126.75 202 *e*PKPdf PKPdf 16 42 52.2 -1.5
baz=62,slow=3.1
OTAV Otavalo 148.09 5 *e*PKPbc PKPbc 16 43 38.2 +0.6
LPAZ La Paz 163.18 334 PKP PKPdf 16 43 54.5 +0.2
comp=Z,2.7nm,1.1s,baz=354,slow=9.1,SNR=6.2
LPAZ La Paz 163.18 334 PKIKP PKPdf 16 43 54.5 +0.2
LPAZ pmax pmax
comp=Z,3.0nm,1.1s

IDC ***13*** *16:31:19.6±0.8, 16°.59N×122°.72E, h0km, mb3.8/15, mb1 3.9/15, mb1mx3.9/24, mbtmp3.8/15, MS3.2/1, Ms1 3.2/1, ms1mx2.3/35, Error ellipse: s-maj=50.4km s-min=16.1km az=68.0*
MAN ***13*** *16:31:22, 16°.54N×122°.59E, h15km, mb4.8, ML3.7, MS3.7*
ISCJB ***13*** *16:31:24.1±0.8, 16°.57N±0°.04×122°.61E±0°.08, h44km±7km, mb3.8/16, Error ellipse: s-maj=13.1km s-min=5.3km az=163.4*
NEIC ***13*** *16:31:24.7±0.4, 16°.68N×122°.90E, h35km, mb4.4/1, Error ellipse: s-maj=16.7km s-min=7.4km az=76.0*
ISC 13 16:31:23.7±1.2, 16°.57N±0°.04×122°.60E±0°.07, h24km±9km, n39, σ1§01/44, mb3.8/16**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.52**	**342**	*e*P	**Pb**	**16 31 34.3**	**+0.2**
CAUP	**Cauayan**	**0.83**	**297**	*e*P	**Pb**	**16 31 37.2**	**-2.2**
BALP	**Baler**	**1.28**	**230**	*e*P	**Pn**	**16 31 44.1**	**-2.0**
BALP				*e*S	**Sn**	**16 31 57.9**	**-4.6**
SGCP	**Mt. Cagua**	**1.74**	**343**	*e*P	**Pn**	**16 31 54.9**	**+2.4**
SGCP				*e*S	**Sn**	**16 32 14.4**	**+0.4**
APYP	**Conner**	**1.82**	**315**	*e*P	**Pn**	**16 31 53.5**	**-0.1**
APYP				*e*S	**Sn**	**16 32 17.1**	**+1.2**
POLP	**Polilio Island**	**1.94**	**199**	*e*P	**Pn**	**16 31 54.3**	**-0.9**
BCPH	**Baguio City Da**	**1.94**	**265**⇑	*i*P	**Pn**	**16 31 54.8**	**-0.4**
ABRA	**Dolores**	**2.10**	**301**	*e*P	**Pn**	**16 31 57.4**	**+0.1**
ABRA				*e*S	**Sn**	**16 32 20.1**	**-2.6**
BOLP	**Bolinao**	**2.58**	**266**	*e*P	**Pn**	**16 32 05.9**	**+1.9**
GQP	**Guinayangan**	**2.66**	**183**⇓	*e*P	**Pn**	**16 32 05.9**	**+0.9**
GQP				*e*S	**Sn**	**16 32 36.6**	**+0.1**
SCZP	**Santa Cruz**	**2.70**	**253**	*e*P	**Pn**	**16 32 07.1**	**+1.5**
TGY	**Tagaytay City**	**2.93**	**213**	Pn	**Pn**	**16 32 13.0**	**+4.2**
	71nm,0.3s,baz=124,slow=0.4,SNR=10						
BOAC	**Boac**	**3.18**	**193**	*e*P	**Pn**	**16 32 13.6**	**+1.4**
PVCP	**Virac**	**3.32**	**153**	*e*P	**Pn**	**16 32 14.6**	**+0.4**
LUBP	**Lubang**	**3.62**	**219**	*e*P	**Pn**	**16 32 22.1**	**+3.8**
DAV	**Davao City (W)**	**9.88**	**162**	Pn	**Pn**	**16 33 38.9**	**-5.4**
KSRS	**Korea Array**	**21.33**	**12**	P	**P**	**16 36 08.1**	**-0.8**
	0.9nm,0.7s,mb3.2,baz=198,slow=12,SNR=3.5						
SONM	**Songino Array**	**33.91**	**340**	P	**P**	**16 38 05.2**	**+0.5**
	0.5nm,0.6s,mb3.6,baz=168,slow=9.7,SNR=3.0						
WRA	**Warramunga Arr**	**38.08**	**162**	P	**P**	**16 38 39.8**	**-0.9**
	1.2nm,0.8s,mb3.7,baz=342,slow=9.3,SNR=5.4						
ASAR	**Alice Springs**	**41.49**	**164**	P	**P**	**16 39 09.3**	**+0.3**
	0.3nm,0.6s,mb3.1,baz=359,slow=8.1,SNR=5.6						
MK31	**Makanchi Array**	**44.89**	**321**	*e*P	**P**	**16 39 36.3**	**0.0**
MKAR	**Makanchi Array**	**44.89**	**321**	P	**P**	**16 39 36.2**	**-0.1**
	0.7nm,0.7s,mb3.6,baz=109,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**47.41**	**331**	P	**P**	**16 39 56.0**	**0.0**
	0.3nm,0.3s,mb3.7,baz=120,slow=8.7,SNR=2.6						
ZALV				LR	LR	17 01 53.7	
	comp=Z,23nm,19.4s,baz=84,slow=39						
ZALV	**Zalesovo Beam**	**47.41**	**331**	P	**P**	**16 39 56.0**	**0.0**
ZALV				LR	LR	17 01 53.7	
KURK	**Kurchatov**	**48.89**	**324**	P	**P**	**16 40 07.7**	**+0.2**
	2.2nm,0.7s,mb4.3,baz=121,slow=7.9,SNR=16						
KURK	**Kurchatov**	**48.89**	**324**	*e*P	**P**	**16 40 07.6**	**+0.1**
STKA	**Stephens Creek**	**51.50**	**159**	P	**P**	**16 40 26.3**	**-1.2**
	1.4nm,0.9s,mb3.9,baz=320,slow=7.9,SNR=3.0						
BVAR	**Borovoye Array**	**54.49**	**324**	P	**P**	**16 40 49.3**	**0.0**
	0.4nm,0.4s,mb3.7,baz=94,slow=8.9,SNR=3.7						
BRVK	**Borovoye**	**54.56**	**324**	*e*P	**P**	**16 40 49.8**	**0.0**
	3.8nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**59.82**	**318**	*e*P	**P**	**16 41 26.6**	**-0.5**
AKTK	**Aktyubinsk**	**61.24**	**319**	P	**P**	**16 41 37.0**	**+0.3**
AKTO	**Aktyubinsk**	**61.24**	**319**	P	**P**	**16 41 37.0**	**+0.3**
	0.6nm,0.5s,mb4.0,baz=127,slow=5.1,SNR=3.0						
ARCES	**ARCESS Array B**	**77.07**	**339**	P	**P**	**16 43 14.1**	**-0.5**
	3.2nm,1.0s,mb4.2,baz=90,slow=6.1,SNR=3.6						
FINES	**FINESS Array B**	**78.68**	**331**	P	**P**	**16 43 23.3**	**-0.3**
	2.3nm,0.8s,mb4.1,baz=46,slow=5.5,SNR=7.0						
BRTR	**Keskin Array B**	**78.82**	**308**	P	**P**	**16 43 26.0**	**+1.1**
	0.3nm,0.4s,mb3.6,baz=93,slow=7.2,SNR=2.4						
NB2	**NORSAR Subarra**	**85.56**	**333**	P	**P**	**16 43 58.3**	**-1.4**
	comp=Z,0.7nm,0.5s,mb4.2,baz=62,slow=5.3						
NOA	**NORSAR Array B**	**85.56**	**333**	P	**P**	**16 43 58.6**	**-1.1**
	comp=Z,0.8nm,0.6s,mb4.1,baz=63,slow=4.9,SNR=4.6						
YKA	**Yellowknife Ar**	**89.44**	**23**	P	**P**	**16 44 17.9**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.8,baz=304,slow=4.6,SNR=4.0						
YKA	**Yellowknife Ar**	**89.44**	**23**	P	**P**	**16 44 17.9**	**-0.4**

IDC ***13*** *16:37:53.1±0.9, 31°.53N×103°.83E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/27, mbtmp3.5/9, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/26, Error ellipse: s-maj=38.4km s-min=17.0km az=56.0*
NEIC ***13*** *16:37:54.6±0.5, 31°.53N×103°.92E, h10km, mb4.3/1, Error ellipse: s-maj=19.6km s-min=8.6km az=53.0*
BJI ***13*** *16:37:55.9, 31°.78N×104°.30E, h18km, mB4.4/1, mb4.4/1, ML3.8/12, Ms3.5/3, Ms7 3.2/3*
ISC 13 16:37:54.2±0.9, 31°.91N±0°.04×104°.45E±0°.08, h5km±7km, n19, σ1§01/26, mb3.6/8**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.16**	**211**	Pg	**Pg**	**16 38 16.4**	**-0.1**
CD2				Sg	**Sg**	**16 38 31.6**	**0.0**
CD2				smax			
	comp=N,2μm,0.7s						
LZH	**Lanzhou**	**4.20**	**353**	Pg	**Pg**	**16 39 15.6**	**+0.9**
LZH				Sn	**Sn**	**16 39 54.3**	**+5.9**
LZH				Sg	**Sg**	**16 40 09.1**	**0.0**
LZH				smax			
	comp=N,190nm,0.5s						
LZH				smax			
	comp=E,240nm,0.5s						
LZH				LR	LR		
	comp=N,380nm,5.0s						
LZH				LR	LR		
	comp=Z,460nm,6.8s						
LZH	**Lanzhou**	**4.20**	**353**	*e*Pn	**Pn**	**16 39 06.4**	**+7.5**
LZH				Pg	**Pg**	**16 39 15.6**	**+0.9**
LZH				Sn	**Sn**	**16 39 54.3**	**+5.9**
LZH				Sg	**Sg**	**16 40 09.1**	**0.0**
LZH				smax			
	comp=N,190nm,0.5s						
LZH				smax			
	comp=E,240nm,0.5s						
LZH				LR	LR		
	comp=N,380nm,5.0s						
LZH				LR	LR		
	comp=Z,460nm,6.8s						
XAN	**Xi'an**	**4.31**	**59**	Pg	**Pg**	**16 39 15.5**	**-1.4**
XAN				Sg	**Sg**	**16 40 07.6**	**-5.2**
XAN				smax			
	comp=N,250nm,1.1s						
XAN				smax			
	comp=E,120nm,0.8s						
ENH	**Enshi**	**4.62**	**109**	*e*Pn	**Pn**	**16 39 08.3**	**+3.6**
GYA	**Guiyang**	**5.76**	**160**	Pn	**Pn**	**16 39 21.3**	**+0.8**
GYA				smax			
	comp=N,200nm,0.7s						
GYA				smax			
	comp=E,150nm,0.8s						
GTA	**Gaotai**	**8.38**	**335**	*e*P	**Pb**	**16 40 14.9**	**-4.9**
GTA				pP		16 40 19.3	
GTA				sP		16 40 22.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**15.97**	**5**	Pn	**Pn**	**16 41 46.0**	**+6.3**
	comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=3.6						
KSRS	**Korea Array**	**20.06**	**68**	P	**P**	**16 42 34.8**	**+6.5**
	comp=Z,1.4nm,0.8s,baz=251,slow=11,SNR=3.7						
PALP	**Palanan**	**22.00**	**128**	*e*P	**P**	**16 42 52.5**	**+3.1**
MKAR	**Makanchi Array**	**22.58**	**318**	P	**P**	**16 42 54.9**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.1,baz=106,slow=12,SNR=4.0						
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**16 43 28.6**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.1,baz=127,slow=9.3,SNR=2.4						
KURK	**Kurchatov**	**26.79**	**322**	P	**P**	**16 43 35.4**	**+0.3**
	comp=Z,0.3nm,0.8s,mb2.9,baz=130,slow=8.7,SNR=2.7						
KURK				LR	LR	16 54 51.4	
	comp=Z,34nm,19.2s,baz=50,slow=38						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 47 40.4**	**-0.7**
	comp=Z,3.0nm,1.1s,mb4.2,baz=46,slow=8.0,SNR=2.4						
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**16 47 54.0**	**-0.9**
	comp=Z,1.5nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**16 47 54.4**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.2,baz=338,slow=7.4,SNR=15						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**16 48 15.1**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.9,baz=333,slow=6.6,SNR=10						
STKA	**Stephens Creek**	**72.52**	**147**	*e*P	**P**	**16 49 21.4**	**-0.8**
YKA	**Yellowknife Ar**	**80.84**	**17**	P	**P**	**16 50 10.9**	**+2.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=329,slow=5.2,SNR=2.8						

IDC ***13*** *16:38:16.4±0.7, 16°.60N×122°.58E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.9/24, mbtmp3.9/13, ML4.1/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/28, Error ellipse: s-maj=26.1km s-min=12.8km az=85.0*
ISCJB ***13*** *16:38:20.4±0.7, 16°.59N±0°.03×122°.52E±0°.06, h42km±7km, mb4.0/17, MS3.7/2, Error ellipse: s-maj=9.8km s-min=4.8km az=165.6*
MAN ***13*** *16:38:20, 16°.58N×122°.44E, h32km, mb5.0, ML4.0, MS4.1*
MAN INTENSITY III - DINAPIGUI ISABELA.
NEIC ***13*** *16:38:21.6±0.4, 16°.59N×122°.57E, h35km, mb4.4/5, Error ellipse: s-maj=17.7km s-min=6.9km az=75.0*
ISC 13 16:38:20.8±0.9, 16°.59N±0°.03×122°.48E±0°.05, h28km±7km, n41, σ1§01/47, mb4.0/17**, MS3.7**/2**, 1C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.48**	**354**	*e*P	**Pb**	**16 38 30.6**	**-0.1**
CAUP	**Cauayan**	**0.72**	**300**	*e*P	**Pb**	**16 38 33.6**	**-1.2**
CAUP				*e*S	**Sb**	**16 38 43.8**	**-0.6**
BALP	**Baler**	**1.21**	**226**	*e*P	**Pn**	**16 38 41.0**	**-0.8**
BALP				*e*S	**Sn**	**16 38 55.1**	**-2.2**
PCPH	**Palayan**	**1.68**	**233**⇓	*e*P	**Pn**	**16 38 48.3**	**0.0**
PCPH				*e*S	**Sn**	**16 39 10.4**	**+1.6**
SGCP	**Mt. Cagua**	**1.70**	**346**	*e*P	**Pn**	**16 38 48.7**	**+0.2**
APYP	**Conner**	**1.73**	**317**	*e*P	**Pn**	**16 38 50.7**	**+1.7**
APYP				*e*S	**Sn**	**16 39 08.2**	**-2.0**
BCPH	**Baguio City Da**	**1.83**	**264**⇑	*i*P	**Pn**	**16 38 51.6**	**+1.2**
POLP	**Polilio Island**	**1.92**	**196**	*e*P	**Pn**	**16 38 51.6**	**-0.1**
POLP				*e*S	**Sn**	**16 39 13.3**	**-1.6**
ABRA	**Dolores**	**1.99**	**302**	*e*P	**Pn**	**16 38 53.7**	**+1.1**
ABRA				*e*S	**Sn**	**16 39 15.6**	**-1.1**
BOLP	**Bolinao**	**2.47**	**266**	*e*P	**Pn**	**16 39 02.3**	**+3.1**
SCZP	**Santa Cruz**	**2.59**	**252**	*e*P	**Pn**	**16 39 03.9**	**+3.0**
GQP	**Guinayangan**	**2.67**	**181**⇓	*e*P	**Pn**	**16 39 02.6**	**+0.7**
GQP				*e*S	**Sn**	**16 39 33.0**	**-0.4**
TGY	**Tagaytay City**	**2.88**	**211**	Pn	**Pn**	**16 39 05.9**	**+1.0**
	24nm,0.3s,baz=96,slow=9.2,SNR=4.1						
TGY				Lg		16 39 49.3	
	116nm,0.3s,baz=191,slow=11,SNR=4.0						
BOAC	**Boac**	**3.17**	**191**	*e*P	**Pn**	**16 39 09.9**	**+1.0**
**A

LUBP Lubang 3.56 218 *eP* **Pn 16 39 18.7 +4.5**
KSRS Korea Array 21.34 12 P **P 16 43 05.0 -0.6**
1.2nm,0.9s,mb3.2,baz=195,slow=10,SNR=2.7
LZH Lanzhou 25.53 323 *eP* **P 16 43 41.8 -5.3**
LZH pP pP 16 43 47.0 -8.2
LZH sP sP 16 43 49.9 -8.7
LZH pmax pmax
comp=Z,18nm,1.4s,mb4.4
LZH smax
comp=N,28nm,0.6s
LZH smax
comp=E,40nm,0.6s
SONM Songino Array 33.86 340 P **P 16 45 00.3 -0.5**
comp=E,0.8nm,0.9s,mb3.6,baz=160,slow=9.8,SNR=3.2
SONM LR LR 17 00 23.7
comp=E,58nm,20.8s,MS3.3,baz=276,slow=39
FITZ Fitzroy Crossi 34.61 175 P **P 16 45 08.2 +0.6**
WRAB Tennant Creek 38.12 162 *eP* **P 16 45 36.3 -1.3**
comp=E,4.1nm,0.8s,mb4.2
WRA Warramunga Arr 38.13 162 P **P 16 45 36.5 -1.1**
comp=E,3.0nm,1.0s,mb4.0,baz=343,slow=9.3,SNR=10
ASAR Alice Springs 41.53 164 P **P 16 46 05.9 0.0**
comp=E,0.5nm,0.7s,mb3.2,baz=7.4,slow=9.0,SNR=11
MK31 Makanchi Array 44.81 321 *eP* **P 16 46 32.6 +0.4**
MKAR Makanchi Array 44.81 321 P **P 16 46 33.1 +0.9**
comp=E,2.1nm,0.9s,mb4.0,baz=111,slow=9.2,SNR=8.4
ZALV Zalesovo Beam 47.35 331 P **P 16 46 51.2 -0.8**
comp=E,0.9nm,0.7s,mb3.8,baz=121,slow=6.9,SNR=4.8
KURK Kurchatov 48.81 324 P **P 16 47 04.1 +0.7**
comp=E,5.4nm,0.8s,mb4.6,baz=122,slow=7.9,SNR=26
KURK Kurchatov 48.81 324 *eP* **P 16 47 03.7 +0.3**
comp=E,6.2nm,0.8s,mb4.7
STKA Stephens Creek 51.56 159 P **P 16 47 24.4 0.0**
comp=E,1.0nm,0.7s,mb3.8,baz=352,slow=7.1,SNR=2.9
STKA Stephens Creek 51.56 159 P **P 16 47 24.4 0.0**
BVAR Borovoye Array 54.41 324 P **P 16 47 46.0 +0.8**
comp=E,1.5nm,0.8s,mb4.0,baz=120,slow=8.8,SNR=8.8
BRVK Borovoye 54.48 324 *eP* **P 16 47 46.3 +0.5**
comp=E,6.7nm,0.9s,mb4.6
TIXI Tiksi 55.18 2 *eP* **P 16 47 50.7 +0.1**
comp=E,2.0nm,1.0s,mb4.1
ABKAR Akbulak array 59.73 318 *eP* **P 16 48 23.2 +0.2**
comp=E,2.7nm,0.9s,mb4.3
URZ Urewera 74.81 138 LR LR 17 19 09.0
comp=E,88nm,18.6s,MS4.1,baz=331,slow=33
FINES FINESS Array B 78.61 331 P **P 16 50 19.8 0.0**
comp=E,1.0nm,0.6s,mb3.9,baz=27,slow=6.4,SNR=3.6
NB2 NORSAR Subarra 85.49 333 P **P 16 50 55.6 -0.3**
comp=Z,1.0nm,0.7s,mb4.0,baz=65,slow=5.1
NOA NORSAR Array B 85.49 333 P **P 16 50 54.2 -1.6**
comp=Z,1.2nm,0.7s,mb4.1,baz=65,slow=4.6,SNR=5.0
YKA Yellowknife Ar 89.47 23 P **P 16 51 15.4 +0.4**
comp=Z,0.5nm,0.6s,mb4.0,baz=298,slow=4.7,SNR=5.6
PLCA Paso Flores 153.43 157 PKPbc PKPbc 16 58 17.1 +0.3
comp=Z,1.5nm,0.8s,baz=224,slow=0.4,SNR=2.8

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*IDC **13** 16:42:38.4±0.9, 16°.48N×122°.58E, h0km, mb3.4/8, mb1 3.6/9, mb1mx3.5/24, mbtmp3.5/9, ML3.8/1, Error ellipse: s-maj=28.1km s-min=14.2km az=95.0*
*ISCJB **13** 16:42:40.1±1.9, 16°.56N±0°.04×122°.63E±0°.09, h22km±14km, mb3.4/8, Error ellipse: s-maj=13.8km s-min=6.7km az=4.3*
*MAN **13** 16:42:40, 16°.44N×122°.51E, h1km, mb4.7, ML3.6, MS3.6*
*NEIC **13** 16:42:43.3±0.7, 16°.47N×122°.46E, h35km, mb3.9/1, Error ellipse: s-maj=26.5km s-min=11.6km az=81.0*
ISC 13 16:42:39.1±1.7, 16°.51N±0°.04×122°.58E±0°.08, h3km±10km, n22, σ1§01/26, mb3.4/8, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.84**	**301**	*eP*	**Pg**	**16 42 55.4**	**+0.1**
BALP	**Baler**	**1.23**	**232**	*eP*	**Pg**	**16 43 02.3**	**-0.5**
BALP				*eS*	**Sg**	**16 43 15.1**	**-3.7**
PCPH	**Palayan**	**1.71**	**237**	*eP*	**Pn**	**16 43 09.9**	**0.0**
PCPH				*eS*	**Sn**	**16 43 32.5**	**+0.2**
APYP	**Conner**	**1.85**	**317**	*eP*	**Pn**	**16 43 12.8**	**+1.0**
POLP	**Polilio Island**	**1.88**	**199**	*eP*	**Pn**	**16 43 11.8**	**-0.4**
POLP				*eS*	**Sn**	**16 43 35.9**	**-0.6**
BCPH	**Baguio City Da**	**1.92**	**266**	*iP*	**Pn**	**16 43 12.9**	**+0.2**
BOLP	**Bolinao**	**2.56**	**267**	*eP*	**Pn**	**16 43 24.1**	**+2.6**
GQP	**Guinayangan**	**2.60**	**183**	*eP*	**Pn**	**16 43 24.1**	**+2.1**
GQP				*eS*	**Sn**	**16 43 54.9**	**+0.8**
TGY	**Tagaytay City**	**2.88**	**214**	Pn	**Pn**	**16 43 25.8**	**-0.1**
	14nm,0.3s,baz=30,slow=20,SNR=2.3						
TGY				Lg		16 44 09.6	
	37nm,0.3s,baz=342,slow=20,SNR=3.2						
LUBP	**Lubang**	**3.57**	**220**	*eP*	**Pn**	**16 43 40.4**	**+5.0**
KSRS	**Korea Array**	**21.39**	**12**	P	**P**	**16 47 28.6**	**+0.7**
	1.2nm,0.8s,mb3.3,baz=205,slow=14,SNR=3.0						
SONM	**Songino Array**	**33.96**	**340**	P	**P**	**16 49 24.0**	**+0.3**
	0.2nm,0.5s,mb3.4,baz=148,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**38.03**	**162**	P	**P**	**16 49 57.1**	**-1.7**
	0.5nm,0.7s,mb3.4,baz=244,slow=9.4,SNR=3.6						
ASAR	**Alice Springs**	**41.44**	**164**	P	**P**	**16 50 27.6**	**+0.4**
	0.2nm,0.6s,mb2.9,baz=346,slow=8.0,SNR=4.6						
MK31	**Makanchi Array**	**44.93**	**321**	*eP*	**P**	**16 50 54.7**	**-0.6**
MKAR	**Makanchi Array**	**44.93**	**321**	P	**P**	**16 50 54.5**	**-0.8**
	0.4nm,0.7s,mb3.4,baz=120,slow=9.0,SNR=3.3						
MKAR	**Makanchi Array**	**44.93**	**321**	P	**P**	**16 50 54.5**	**-0.8**
ZALV	**Zalesovo Beam**	**47.46**	**331**	P	**P**	**16 51 15.3**	**+0.2**
	0.3nm,0.4s,mb3.5,baz=113,slow=9.6,SNR=2.6						
KURK	**Kurchatov**	**48.93**	**324**	P	**P**	**16 51 25.7**	**-0.7**
	1.1nm,0.8s,mb3.9,baz=124,slow=8.2,SNR=7.2						
KURK	**Kurchatov**	**48.93**	**324**	P	**P**	**16 51 25.3**	**-1.2**
	0.7nm,0.6s,mb3.9						
BRVK	**Borovoye**	**54.60**	**324**	*eP*	**P**	**16 52 06.0**	**-2.7**
YKA	**Yellowknife Ar**	**89.49**	**23**	P	**P**	**16 55 37.6**	**+0.1**
	0.1nm,0.5s,mb3.4,baz=301,slow=4.4,SNR=2.8						

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*ISCJB **13** 16:46:54.0±0.6, 31°.98N×104°.05×104°.77E±0°.07, h10km, mb3.5/6, Error ellipse: s-maj=8.4km s-min=7.1km az=26.1*
*IDC **13** 16:46:54.1±1.1, 31°.79N×104°.65E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/28, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=42.8km s-min=18.8km az=55.0*
*NEIC **13** 16:46:55.8±0.6, 31°.81N×104°.59E, h10km, mb4.2/1, Error ellipse: s-maj=21.4km s-min=8.9km az=53.0*
*BJI **13** 16:46:57.5, 31°.95N×104°.51E, h18km, ML3.5/7, Ms3.2/2, Ms7 3.6/1*
ISC 13 16:46:55.7±0.6, 31°.95N±0°.04×104°.68E±0°.07, h10km, n13, σ1§19/19, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.30**	**217**	Pg	**Pn**	**16 47 18.0**	**-1.9**
CD2				Sg	**Sn**	**16 47 32.3**	**-5.1**
CD2				smax			
	comp=N,7μm,0.6s						
XAN	**Xi'an**	**4.13**	**59**	Pg	**Pg**	**16 48 09.8**	**-5.0**
XAN				Sg	**Sg**	**16 49 08.1**	**-0.2**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,53nm,0.7s						
LZH	**Lanzhou**	**4.18**	**351**	*e*Pn	**Pn**	**16 48 04.8**	**+5.2**
LZH				Pg	**Pg**	**16 48 15.5**	**-0.3**
LZH				Sn	**Sn**	**16 48 54.3**	**+5.8**
LZH				Sg	**Sg**	**16 49 08.9**	**-1.1**
LZH				smax			
	comp=N,67nm,1.0s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=E,290nm,5.7s						
LZH				LR	LR		
	comp=Z,450nm,6.5s						
ENH	**Enshi**	**4.45**	**111**	P	**Pn**	**16 48 04.2**	**+1.0**
GYA	**Guiyang**	**5.74**	**162**	Pg	**Pg**	**16 48 50.0**	**+4.3**
GYA				Sg	**Sb**	**16 49 47.8**	**+3.0**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,40nm,0.8s						
SONM	**Songino Array**	**15.92**	**4**	Pn	**Pn**	**16 50 41.2**	**+1.5**
	comp=E,0.0nm,0.3s,baz=199,slow=12,SNR=2.5						
KSRS	**Korea Array**	**19.86**	**68**	P	**Pn**	**16 51 27.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=271,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**22.68**	**317**	P	**P**	**16 51 58.0**	**+0.9**
	comp=E,0.2nm,0.5s,mb2.8,baz=113,slow=12,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**16 52 31.8**	**+1.6**
	comp=E,0.7nm,0.4s,mb3.5,baz=139,slow=9.7,SNR=3.8						
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**16 52 37.3**	**+0.8**
	comp=E,0.5nm,0.8s,mb3.1,baz=124,slow=8.8,SNR=3.0						
WRAB	**Tennant Creek**	**58.91**	**147**	*eP*	**P**	**16 56 54.6**	**-0.4**
	comp=E,1.3nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**58.91**	**147**	P	**P**	**16 56 54.1**	**-0.9**
	comp=E,0.6nm,0.6s,mb3.8,baz=339,slow=8.0,SNR=10						
ASAR	**Alice Springs**	**61.96**	**150**	P	**P**	**16 57 15.3**	**-0.6**
	comp=E,0.4nm,0.7s,mb3.7,baz=332,slow=7.0,SNR=6.8						

IDC 13 16:46:57.0±78.0, 21°.33S×179°.94E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.6/14, mbtmp3.5/3, Error ellipse: s-maj=1398.0km s-min=171.7km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.70**	**245**	P	P	16 53 57.5	+0.2
	0.8nm,0.9s,baz=95,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**42.46**	**258**	P	P	16 54 54.0	0.0
	0.7nm,0.8s,baz=102,slow=7.9,SNR=11						
WRA	**Warramunga Arr**	**42.59**	**263**	P	P	16 54 54.8	-0.2
	0.3nm,0.3s,baz=98,slow=7.6,SNR=26						

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*ISCJB **13** 16:47:19.6±0.5, 37°.34N±0°.03×22°.15E±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=4.0km az=25.5*
*CSEM **13** 16:47:19.5±0.2, 37°.36N×22°.15E, h2km, ML3.4/1, Error ellipse: s-maj=3.6km s-min=3.1km az=98.0*
*THE **13** 16:47:19.4, 37°.35N×22°.15E, h0km±1km, ML3.4/1, Error ellipse: s-maj=1.7km s-min=0.4km az=192.0*
*ATH **13** 16:47:19.8, 37°.35N×22°.14E, h5km±3km, MD3.2/13, ML2.8*
*NEIC **13** 16:47:19.8, 37°.35N×22°.14E, h5km, ML2.8(ATH), After ATH.*
ISC 13 16:47:19.7±0.5, 37°.36N±0°.03×22°.15E±0°.04, h5km±7km, n49, σ0§81/61, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLX	**Vlachokerasia**	**0.18**	**85**	*e*PG	**Pg**	**16 47 23.4**	**+0.1**
VLX				*e*SG	**Sg**	**16 47 27.0**	**+1.2**
VLX	**Vlachokerasia**	**0.18**	**85**	P	**Pg**	**16 47 23.3**	**0.0**
VLX				S	**Sg**	**16 47 26.3**	**+0.5**
VLX	**Vlachokerasia**	**0.18**	**85**	*e*Pg	**Pg**	**16 47 23.4**	**+0.1**
VLX				S	**Sg**	**16 47 26.3**	**+0.5**
VLX				*e*Sg	**Sg**	**16 47 27.0**	**+1.2**
ITM	**Ithomi**	**0.25**	**225**	*e*PG	**Pg**	**16 47 24.4**	**-0.1**
ITM				*e*SG	**Sg**	**16 47 28.7**	**+0.9**
ITM	**Ithomi**	**0.25**	**225**	P	**Pg**	**16 47 24.3**	**-0.2**
ITM				S	**Sg**	**16 47 28.1**	**+0.3**
ITM	**Ithomi**	**0.25**	**225**	*e*Pg	**Pg**	**16 47 24.4**	**-0.1**
ITM				S	**Sg**	**16 47 28.1**	**+0.3**
ITM				*e*Sg	**Sg**	**16 47 28.7**	**+0.9**
PYL	**PYLOS**	**0.56**	**215**	P	**Pg**	**16 47 30.1**	**-0.4**
PYL	**PYLOS**	**0.56**	**215**	P	**Pg**	**16 47 30.1**	**-0.4**
GUR	**Goura**	**0.60**	**15**	*e*PB	**Pg**	**16 47 31.0**	**-0.2**
GUR	**Goura**	**0.60**	**15**	P	**Pg**	**16 47 30.7**	**-0.5**
GUR				S	**Sg**	**16 47 39.8**	**+0.8**
GUR	**Goura**	**0.60**	**15**	P	**Pg**	**16 47 30.7**	**-0.5**
GUR	**Goura**	**0.60**	**15**	*e*Pb	**Pg**	**16 47 31.0**	**-0.2**
GUR				S	**Sg**	**16 47 39.8**	**+0.8**
RLS	**Riolos of Patr**	**0.89**	**323**	*e*PB	**Pb**	**16 47 36.8**	**-0.8**
RLS	**Riolos of Patr**	**0.89**	**323**	*e*Pb	**Pb**	**16 47 36.8**	**-0.8**
LAKA	**Lakka**	**0.89**	**351**	P	**Pg**	**16 47 36.0**	**-0.8**
LAKA				S	**Sg**	**16 47 49.8**	**+1.3**
LAKA	**Lakka**	**0.89**	**351**	P	**Pg**	**16 47 36.0**	**-0.8**
LAKA				S	**Sg**	**16 47 49.8**	**+1.3**
VLI	**Veliai**	**0.90**	**135**	*e*PG	**Pg**	**16 47 36.4**	**-0.5**
VLI	**Veliai**	**0.90**	**135**	*e*Pg	**Pg**	**16 47 36.4**	**-0.5**
LTK	**Loutraki**	**0.93**	**44**	*e*PN	**Pn**	**16 47 38.4**	**-1.0**
LTK	**Loutraki**	**0.93**	**44**	P	**Pg**	**16 47 36.8**	**-0.7**
LTK	**Loutraki**	**0.93**	**44**	P	**Pg**	**16 47 36.8**	**-0.7**
LTK	**Loutraki**	**0.93**	**44**	*e*Pn	**Pn**	**16 47 38.4**	**-1.0**
UPR	**University Cam**	**0.97**	**343**	*e*PB	**Pb**	**16 47 38.4**	**-0.6**
UPR	**University Cam**	**0.97**	**343**	*e*Pb	**Pb**	**16 47 38.4**	**-0.6**
EFP	**Efpalio**	**1.09**	**350**	*e*PG	**Pg**	**16 47 40.0**	**-0.5**
EFP	**Efpalio**	**1.09**	**350**	P	**Pg**	**16 47 40.1**	**-0.4**
EFP	**Efpalio**	**1.09**	**350**	P	**Pg**	**16 47 40.1**	**-0.4**
KYTH	**Kithira**	**1.29**	**146**	*e*PB	**Pb**	**16 47 44.5**	**+0.1**
KYTH	**Kithira**	**1.29**	**146**	*e*Pb	**Pb**	**16 47 44.5**	**+0.1**
ATH	**Athens Observa**	**1.39**	**63**	*e*PB	**Pb**	**16 47 46.9**	**+0.8**
ATH	**Athens Observa**	**1.39**	**63**	*e*Pb	**Pb**	**16 47 46.9**	**+0.8**
VLY	**Voula,Athens**	**1.40**	**69**	*e*PG	**Pg**	**16 47 46.0**	**-0.5**
VLY	**Voula,Athens**	**1.40**	**69**	*e*Pg	**Pg**	**16 47 46.0**	**-0.5**
LKR	**Lokris**	**1.46**	**27**	*e*PB	**Pb**	**16 47 47.4**	**+0.1**
LKR	**Lokris**	**1.46**	**27**	*e*Pb	**Pb**	**16 47 47.4**	**+0.1**
VLS	**Valsamata**	**1.48**	**304**	*e*PB	**Pb**	**16 47 49.1**	**+1.4**
VLS	**Valsamata**	**1.48**	**304**	*e*Pb	**Pb**	**16 47 49.1**	**+1.4**
ATAL	**Atalanti**	**1.50**	**27**	P	**Pn**	**16 47 46.4**	**-0.9**
ATAL	**Atalanti**	**1.50**	**27**	P	**Pn**	**16 47 46.4**	**-0.9**
PTL	**Penteli**	**1.53**	**63**	*e*PB	**Pb**	**16 47 48.9**	**+0.4**
PTL	**Penteli**	**1.53**	**63**	*e*Pb	**Pb**	**16 47 48.9**	**+0.4**
EVR	**Evrytania**	**1.58**	**350**	*e*PB	**Pb**	**16 47 50.6**	**+1.2**
EVR	**Evrytania**	**1.58**	**350**	*e*Pb	**Pb**	**16 47 50.6**	**+1.2**
AGG	**Agios Georgios**	**1.67**	**5**	*e*PB	**Pb**	**16 47 51.5**	**+0.6**
AGG	**Agios Georgios**	**1.67**	**5**	*e*Pb	**Pb**	**16 47 51.5**	**+0.6**
THL	**Klokotos Trika**	**2.21**	**357**	*e*PG	**Pg**	**16 48 00.6**	**-1.4**
THL	**Klokotos Trika**	**2.21**	**357**	*e*Pg	**Pg**	**16 48 00.6**	**-1.4**
KARN	**Karanos**	**2.42**	**143**	*e*PN	**Pn**	**16 48 03.5**	**+3.7**
KARN	**Karanos**	**2.42**	**143**	*e*Pn	**Pn**	**16 48 03.5**	**+3.7**

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*ISK **13** 16:54:40.7, 37°.09N×35°.26E, h10km, MD2.6*
*ISCJB **13** 16:54:41.9±0.8, 37°.22N±0°.10×35°.19E±0°.07, h23km±6km, Error ellipse: s-maj=17.5km s-min=6.4km az=154.6*
*CSEM **13** 16:54:41.9±0.4, 37°.21N×35°.18E, h20km, MD2.6, Error ellipse: s-maj=19.5km s-min=7.2km az=153.0*
*DDA **13** 16:54:41.1, 37°.54N×35°.10E, h7km±3km, Md2.6*
ISC 13 16:54:41.8±0.9, 37°.19N±0°.09×35°.21E±0°.06, h19km±5km, n13, σ0§88/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.14**	**300**	*e*PG	**Pg**	**16 54 45.9**	**-0.2**
KARA				*e*SG	**Sg**	**16 54 50.0**	**+1.0**
KARA	**Karaisali**	**0.14**	**300**	*e*Pg	**Pg**	**16 54 45.9**	**-0.2**
KARA				*e*Sg	**Sg**	**16 54 50.0**	**+1.0**
GULE	**Gulek**	**0.36**	**285**	*i* P	**Pg**	**16 54 48.3**	**-1.2**
GULE				*i* S	**Sg**	**16 54 54.6**	**-0.1**
GULE	**Gulek**	**0.36**	**285**	*i* P	**Pg**	**16 54 48.3**	**-1.2**
GULE				*i* S	**Sg**	**16 54 54.6**	**0.0**
KOZT	**Kozan**	**0.57**	**59**	*e*PG	**Pg**	**16 54 52.7**	**-0.5**
KOZT				*e*SG	**Sg**	**16 55 01.6**	**+0.7**
MERS	**Mersin**	**0.64**	**240**	*e*PG	**Pg**	**16 54 53.4**	**-1.1**
MERS	**Mersin**	**0.64**	**240**	*e*Pg	**Pg**	**16 54 53.4**	**-1.0**
IKL	**Isikli**	**1.55**	**233**	*e*PN	**Pn**	**16 55 08.6**	**+0.2**
IKL	**Isikli**	**1.55**	**233**	*e*Pn	**Pn**	**16 55 08.6**	**+0.2**
PINB	**Pinarbasi**	**1.76**	**32**	*i* P	**Pn**	**16 55 11.9**	**+0.7**
PINB				*i* S	**Sn**	**16 55 31.9**	**-1.2**
PINB	**Pinarbasi**	**1.76**	**32**	*i* P	**Pn**	**16 55 11.9**	**+0.7**
PINB				*i* S	**Sn**	**16 55 31.9**	**-1.2**
HDMB	**Hadim**	**2.19**	**265**	*e*PN	**Pn**	**16 55 18.7**	**+1.6**
HDMB	**Hadim**	**2.19**	**265**	*e*Pn	**Pn**	**16 55 18.7**	**+1.5**

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*IDC **13** 17:01:21.7±0.7, 31°.78N×104°.32E, h0km, mb3.9/15, mb1 4.0/16, mb1mx3.9/28, mbtmp3.9/16, ML3.4/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/32, Error ellipse: s-maj=26.9km s-min=13.6km az=51.0*
*NEIC **13** 17:01:24.0±0.4, 31°.88N×104°.28E, h10km, mb4.0/2, Error ellipse: s-maj=14.1km s-min=8.2km az=57.0*
*BJI **13** 17:01:26.1, 31°.90N×104°.19E, h14km, mB4.6/4, mb4.3/7, ML3.9/16, Ms3.7/6, Ms7 3.7/5*
ISC 13 17:01:24.8±1.9, 31°.89N±0°.04×104°.38E±0°.07, h16km±12km, n36, σ1§12/42, mb4.0/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.21**	**354**	Pn	**Pn**	**17 02 32.0**	**+3.7**
LZH				Sn	**Sn**	**17 03 23.3**	**+6.2**
LZH				Sg	**Sg**	**17 03 39.3**	**-0.7**
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,210nm,1.0s						
LZH				LR	LR		
	comp=N,820nm,5.6s						
LZH				LR	LR		
	comp=Z,880nm,9.6s						
XAN	**Xi'an**	**4.38**	**59**	Pg	**Pg**	**17 02 45.3**	**-3.4**
XAN				Sg	**Sg**	**17 03 43.9**	**-1.5**
XAN				smax			
	comp=N,250nm,0.8s						
XAN				smax			
	comp=E,80nm,1.0s						
ENH	**Enshi**	**4.67**	**109**	*e*P	**Pn**	**17 02 37.7**	**+3.1**
GYA	**Guiyang**	**5.77**	**159**	Pn	**Pn**	**17 02 53.1**	**+3.4**
GYA				smax			
	comp=N,130nm,0.9s						
GYA				smax			
	comp=E,140nm,0.9s						
KMI	**Kunming**	**6.89**	**192**	Pn	**Pn**	**17 03 06.0**	**+0.8**
KMI				Sn	**Sn**	**17 04 21.4**	**-1.9**
KMI				smax			
	comp=N,18nm,1.8s						
KMI				smax			
	comp=E,20nm,1.7s						
GTA	**Gaotai**	**8.37**	**335**	*e*P	**Pn**	**17 03 28.9**	**+3.4**
GTA				pP		17 03 33.5	
GTA				sP		17 03 36.5	
GTA				S	**Sn**	**17 05 06.6**	**+7.0**
GTA				sS		17 05 16.4	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,67nm,4.5s						
GTA				LR	LR		
	comp=N,340nm,11.1s						
GTA				LR	LR		
	comp=E,270nm,13.5s						
GTA				LR	LR		
	comp=Z,320nm,12.6s						
WHN	**Wuhan**	**8.64**	**96**	*e*P	**Pn**	**17 03 38.1**	**+8.9**
WHN				S	**Sn**	**17 05 14.0**	**+7.7**
WHN				LR	LR		
	comp=N,750nm,5.4s						
WHN				LR	LR		
	comp=E,670nm,4.6s						
CM31	**Chiang Mai Arr**	**14.25**	**201**	*e*P	**Pn**	**17 04 47.5**	**+1.6**
	comp=E,6.6nm,0.7s						
SONM	**Songino Array**	**16.00**	**5**	Pn	**Pn**	**17 05 10.2**	**+1.2**
	comp=E,0.2nm,0.3s,baz=186,slow=8.7,SNR=6.1						
SONM				LR	LR	17 12 06.0	
	comp=E,108nm,19.6s,baz=343,slow=40						
KSRS	**Korea Array**	**20.12**	**68**	P	**P**	**17 05 56.3**	**-1.6**
	comp=E,2.1nm,0.7s,baz=256,slow=10,SNR=6.9						
CN2	**Changchun**	**20.39**	**48**	*e*P	**P**	**17 06 03.3**	**+2.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MK31	**Makanchi Array**	**22.55**	**318**	*e*P	**P**	**17 06 23.9**	**-0.2**
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**17 06 24.7**	**+0.7**
	comp=Z,2.0nm,0.7s,mb3.7,baz=118,slow=12,SNR=16						
ZAA0	**Zalesovo Array**	**26.12**	**333**	*e*P	**P**	**17 06 57.2**	**-0.6**
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**17 06 57.2**	**-0.6**
	comp=Z,2.6nm,0.8s,mb3.8,baz=131,slow=10.0,SNR=11						
KURK	**Kurchatov**	**26.77**	**322**	P	**P**	**17 07 03.7**	**0.0**
	comp=Z,0.6nm,0.2s,mb3.7,baz=127,slow=9.8,SNR=7.4						
BVAR	**Borovoye Array**	**32.33**	**321**	P	**P**	**17 07 53.4**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=109,slow=7.8,SNR=3.9						
BVAR				PcP	PcP	17 10 40.8	+0.2
	comp=Z,0.2nm,0.3s,baz=113,slow=1.9,SNR=3.5						
ABKAR	**Akbulak array**	**37.34**	**311**	*e*P	**P**	**17 08 36.4**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.6						
PETK	**Petropavlovsk-**	**43.47**	**45**	P	**P**	**17 09 28.0**	**+1.1**
	comp=Z,2.3nm,0.5s,mb4.2,baz=295,slow=4.4,SNR=8.9						
JOF	**Joensuu**	**54.49**	**327**	*e*p	**P**	**17 10 51.0**	**-0.3**
	comp=Z,1.6nm,0.4s,mb4.3						
BRTR	**Keskin Array B**	**56.56**	**299**	P	**P**	**17 11 06.1**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=69,slow=6.1,SNR=2.5						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**17 11 06.8**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.3,baz=81,slow=7.6,SNR=10						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**17 11 09.6**	**-0.1**
	comp=Z,2.3nm,0.4s,mb4.5,baz=96,slow=7.0,SNR=19						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**17 11 09.6**	**-0.1**
WRAB	**Tennant Creek**	**58.99**	**147**	*e*P	**P**	**17 11 23.6**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**17 11 22.1**	**-1.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=340,slow=7.5,SNR=18						
ASAR	**Alice Springs**	**62.04**	**149**	P	**P**	**17 11 44.8**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=335,slow=6.6,SNR=18						
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**17 11 57.0**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=75,slow=6.5						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**17 11 57.4**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.1,baz=71,slow=5.5,SNR=6.4						
GERES	**GERESS Array B**	**67.17**	**314**	P	**P**	**17 12 16.6**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=43,slow=7.3,SNR=3.2						
GERES				LR	LR	17 43 11.0	
	comp=Z,31nm,19.4s,baz=81,slow=37						
STKA	**Stephens Creek**	**72.54**	**147**	P	**P**	**17 12 49.7**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=326,slow=3.6,SNR=2.7						
STKA	**Stephens Creek**	**72.54**	**147**	P	**P**	**17 12 49.7**	**-1.2**
LPG	**La Plagne**	**72.89**	**313**	*e*P	**P**	**17 12 53.4**	**+0.4**
	comp=Z,5.8nm,0.6s,mb4.4						
LPL	**La Plagne**	**72.89**	**313**	*e*P	**P**	**17 12 53.3**	**

CD2	**Chengdu**	**0.34**	**167**	Pg	**Pg**	**17 21 26.0**	**-0.3**
CD2				Sg	**Sg**	**17 21 31.6**	**+0.6**
CD2				smax			
	comp=N,7μm,0.6s						
LZH	**Lanzhou**	**4.83**	**2**	*e*Pg	**Pg**	**17 22 52.3**	**+0.5**
LZH				Sg	**Sg**	**17 23 52.4**	**-1.9**
LZH				smax			
	comp=N,48nm,0.7s						
LZH				smax			
	comp=E,53nm,0.8s						
ENH	**Enshi**	**5.10**	**99**	*e*P	**Pn**	**17 22 37.8**	**+2.6**
	comp=E,26nm,0.5s						
XAN	**Xi'an**	**5.23**	**56**	Pn	**Pn**	**17 22 37.3**	**+0.3**
XAN				Pg	**Pg**	**17 22 51.8**	**-7.7**
XAN				Sn	**Sn**	**17 23 36.6**	**-0.5**
XAN				Sg	**Sg**	**17 24 02.0**	**-5.2**
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,57nm,0.8s						
GYA	**Guiyang**	**5.45**	**150**	Pg	**Pn**	**17 22 48.0**	**+8.0**
GYA				Sg	**Sb**	**17 23 56.9**	**-2.4**
GYA				smax			
	comp=N,70nm,0.6s						
GYA				smax			
	comp=E,80nm,0.9s						
KMI	**Kunming**	**6.16**	**188**	Pn	**Pn**	**17 22 50.1**	**+0.4**
KMI				Sn	**Sn**	**17 23 59.9**	**0.0**
KMI				smax			
	comp=N,20nm,1.6s						
KMI				smax			
	comp=E,22nm,1.1s						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**17 25 13.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=4.1						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**17 26 01.9**	**+0.4**
	comp=E,3.2nm,0.7s,baz=263,slow=10,SNR=11						
CN2	**Changchun**	**21.27**	**48**	*e*P	**P**	**17 26 06.3**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**22.63**	**319**	*e*P	**P**	**17 26 19.7**	**+0.2**
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	**17 26 18.4**	**-1.1**
	comp=Z,1.1nm,0.9s,mb3.3,baz=129,slow=11,SNR=6.5						
ZALV	**Zalesovo Beam**	**26.43**	**335**	P	**P**	**17 26 55.5**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.4,baz=141,slow=9.6,SNR=4.9						
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**17 26 59.9**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.5,baz=125,slow=10,SNR=7.9						
BVAR	**Borovoye Array**	**32.45**	**322**	P	**P**	**17 27 49.3**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.5,baz=148,slow=8.5,SNR=2.5						
BVAR				PcP	PcP	17 30 35.1	-0.6
	comp=Z,0.6nm,0.6s,baz=144,slow=5.4,SNR=3.5						
BVAR	**Borovoye Array**	**32.45**	**322**	P	**P**	**17 27 49.3**	**+0.5**
BVAR				PcP	PcP	17 30 35.1	-0.6
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**17 31 15.3**	**-1.9**
	comp=Z,1.4nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**61.81**	**148**	P	**P**	**17 31 37.6**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.8,baz=342,slow=6.6,SNR=13						
YKA	**Yellowknife Ar**	**81.67**	**17**	P	**P**	**17 33 36.7**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=330,slow=5.2,SNR=6.7						
YKA	**Yellowknife Ar**	**81.67**	**17**	P	**P**	**17 33 36.7**	**+0.1**

*IDC **13** 17:24:42.3±0.9, 32°.32N×104°.97E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/28, mbtmp3.7/12, ML3.5/2, Error ellipse: s-maj=38.1km s-min=16.4km az=52.0*
*NEIC **13** 17:24:44.0±0.5, 32°.36N×105°.12E, h10km, mb4.1/2, Error ellipse: s-maj=20.0km s-min=7.4km az=50.0*
*BJI **13** 17:24:48.3, 32°.57N×105°.09E, h17km, mB4.4/2, mb3.7/3, ML3.5/9, Ms3.6/3, Ms7 3.2/3*
ISC 13 17:24:43.3±1.4, 32°.51N±0°.04×105°.28E±0°.07, h4km±9km, n23, σ1°.08/27, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.05**	**219**	Pg	**Sn**	**17 25 44.0**	**-0.7**
CD2				Sg	**Sg**	**17 25 49.3**	**0.0**
CD2				smax			
	comp=N,4μm,0.6s						
LZH	**Lanzhou**	**3.76**	**342**	Pn	**Pn**	**17 25 45.6**	**+3.4**
LZH				Pg	**Pg**	**17 25 54.9**	**-0.5**
LZH				Sg	**Sg**	**17 26 42.8**	**-1.4**
LZH				smax			
	comp=N,160nm,0.8s						
LZH				smax			
	comp=E,53nm,0.8s						
ENH	**Enshi**	**4.23**	**121**	*e*P	**Pn**	**17 25 49.5**	**+0.8**
GYA	**Guiyang**	**6.15**	**168**	Pn	**Pn**	**17 26 17.6**	**+2.6**
GYA				smax			
	comp=N,50nm,0.4s						
GYA				smax			
	comp=E,70nm,0.5s						
WHN	**Wuhan**	**7.99**	**102**	P	**Pn**	**17 26 32.8**	**-7.5**
WHN				S	**Sn**	**17 28 07.3**	**-3.8**
GTA	**Gaotai**	**8.19**	**329**	*e*P	**Pn**	**17 26 44.0**	**+1.1**
GTA				pP		17 26 48.3	
GTA				sP		17 26 51.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**15.33**	**3**	Pn	**Pn**	**17 28 23.1**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=179,slow=13,SNR=4.0						
KSRS	**Korea Array**	**19.19**	**69**	P	**Pn**	**17 29 12.6**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=250,slow=11,SNR=4.1						
MK31	**Makanchi Array**	**22.62**	**316**	*e*P	**P**	**17 29 46.0**	**+0.9**
MKAR	**Makanchi Array**	**22.62**	**316**	P	**P**	**17 29 45.0**	**-0.1**
	comp=Z,1.2nm,0.6s,mb3.5,baz=109,slow=10,SNR=14						
ZALV	**Zalesovo Beam**	**25.93**	**332**	P	**P**	**17 30 16.5**	**+0.1**
	comp=Z,0.6nm,0.4s,mb3.5,baz=146,slow=11,SNR=3.9						
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**17 30 24.4**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.4,baz=133,slow=8.5,SNR=6.5						
KURK	**Kurchatov**	**26.76**	**321**	*e*P	**P**	**17 30 24.0**	**0.0**
	comp=Z,1.6nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**32.34**	**320**	P	**P**	**17 31 13.7**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=100,slow=7.9,SNR=2.9						
BVAR	**Borovoye Array**	**32.34**	**320**	P	**P**	**17 31 13.7**	**+0.1**
BRVK	**Borovoye**	**32.41**	**320**	*e*P	**P**	**17 31 15.2**	**+1.0**
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**	**17 34 25.3**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.3,baz=82,slow=8.4,SNR=2.9						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**17 34 29.2**	**-0.4**
	comp=Z,1.1nm,0.6s,mb4.1,baz=100,slow=7.3,SNR=4.6						
WRAB	**Tennant Creek**	**59.10**	**148**	*e*P	**P**	**17 34 44.3**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**59.10**	**148**	P	**P**	**17 34 44.7**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=339,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**17 35 05.5**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.9,baz=331,slow=6.6,SNR=5.0						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**17 35 37.3**	**-1.8**
	comp=Z,0.2nm,0.4s,mb3.5,baz=84,slow=4.2,SNR=4.1						
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**17 36 53.4**	**-0.5**
	comp=Z,0.1nm,0.5s,mb3.0,baz=326,slow=5.3,SNR=3.5						

*ISCJB **13** 17:41:42.5±0.9, 31°.44N±0°.06×104°.1E±0°.2, h10km, mb3.4/6, Error ellipse: s-maj=19.9km s-min=8.1km az=11.2*
*IDC **13** 17:41:42.7±1.2, 31°.72N×104°.40E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/28, mbtmp3.5/6, Error ellipse: s-maj=111.3km s-min=19.5km az=53.0*
ISC 13 17:41:44.6±1.0, 31°.43N±0°.06×104°.0E±0°.2, h10km, n7, σ0°.64/8, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**197**	Pg	**Pg**	**17 41 55.0**	**-0.1**
CD2				Sg	**Sg**	**17 42 02.0**	**-0.2**
CD2				smax			
	comp=N,19μm,0.7s						
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**17 46 45.1**	**-0.5**
	comp=N,0.8nm,0.9s,mb3.1,baz=128,slow=9.4,SNR=5.8						
AAK	**Ala-Archa**	**25.91**	**304**	P	**P**	**17 47 18.2**	**+1.5**
	comp=N,0.7nm,0.4s,mb3.6,baz=126,slow=8.7,SNR=5.3						
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**17 47 20.1**	**-0.7**
	comp=N,1.2nm,0.7s,mb3.5,baz=134,slow=10,SNR=3.9						
KURK	**Kurchatov**	**26.91**	**323**	P	**P**	**17 47 25.4**	**-0.3**
	comp=N,0.4nm,0.7s,mb3.0,baz=127,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**58.81**	**146**	P	**P**	**17 51 43.1**	**-0.2**
	comp=N,0.7nm,0.8s,mb3.7,baz=339,slow=7.7						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**17 52 04.4**	**+0.5**
	comp=N,0.2nm,0.7s,mb3.4,baz=333,slow=6.4,SNR=2.7						

*BJI **13** 17:41:51.3, 31°.64N×104°.18E, h16km, mB4.7/1, mb4.4/2, ML3.8/12, Ms3.9/6, Ms7 3.7/4*
*ISCJB **13** 17:41:52.1±0.5, 31°.92N±0°.06×104°.29E±0°.07, h10km, mb3.8/14, Error ellipse: s-maj=9.7km s-min=6.3km az=137.7*
*IDC **13** 17:41:52.1±0.7, 31°.75N×104°.21E, h0km, mb3.8/14, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, ML3.3/1, Error ellipse: s-maj=33.1km s-min=14.4km az=52.0*
*NEIC **13** 17:41:53.7±0.5, 31°.78N×104°.29E, h10km, mb4.2/1, Error ellipse: s-maj=20.7km s-min=9.0km az=47.0*
ISC 13 17:41:54.0±0.5, 31°.87N±0°.05×104°.34E±0°.09, h10km, n27, σ0°.92/31, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.23**	**355**	Pn	**Pn**	**17 43 02.8**	**+4.3**
LZH				Pg	**Pg**	**17 43 14.8**	**-0.2**
LZH				Sg	**Sg**	**17 44 08.9**	**-0.9**
LZH				smax			
	comp=N,170nm,0.6s						
LZH				smax			
	comp=E,140nm,0.6s						
LZH				LR	LR		
	comp=N,510nm,6.9s						
LZH				LR	LR		
	comp=Z,620nm,8.0s						
XAN	**Xi'an**	**4.42**	**59**	Pn	**Pn**	**17 43 01.1**	**0.0**
XAN				Pg	**Pg**	**17 43 13.8**	**-4.9**
XAN				Sg	**Sg**	**17 44 10.6**	**-5.4**
XAN				smax			
	comp=N,95nm,0.6s						
XAN				smax			
	comp=E,180nm,0.7s						
ENH	**Enshi**	**4.70**	**108**	*e*Pn	**Pn**	**17 43 04.7**	**-0.3**
GYA	**Guiyang**	**5.76**	**159**	Pg	**Pn**	**17 43 26.5**	**+7.0**
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,90nm,0.8s						
GTA	**Gaotai**	**8.38**	**335**	*e*P	Px	17 44 32.1	
GTA				pP		17 44 36.8	
GTA				sP		17 44 40.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WHN	**Wuhan**	**8.68**	**96**	*e*P	**Pn**	**17 44 05.4**	**+5.8**
WHN				S	**Sn**	**17 45 42.1**	**+4.6**
WHN				LR	LR		
	comp=N,1μm,4.1s						
WHN				LR	LR		
	comp=E,510nm,4.2s						
SONM	**Songino Array**	**16.03**	**5**	Pn	**Pn**	**17 45 40.2**	**+0.8**
	comp=E,0.1nm,0.3s,baz=179,slow=12,SNR=7.6						
KSRS	**Korea Array**	**20.17**	**67**	P	**P**	**17 46 29.2**	**+0.7**
	comp=E,2.8nm,0.7s,baz=254,slow=10,SNR=8.4						
MKAR	**Makanchi Array**	**22.54**	**318**	P	**P**	**17 46 54.3**	**+0.3**
	comp=E,0.5nm,0.5s,mb3.2,baz=121,slow=10,SNR=6.0						
MKAR	**Makanchi Array**	**22.54**	**318**	P	**P**	**17 46 54.3**	**+0.3**
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**17 47 29.4**	**+1.5**
	comp=E,1.8nm,0.6s,mb3.8,baz=136,slow=9.3,SNR=10						
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**17 47 29.4**	**+1.5**
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**17 47 32.0**	**-1.7**
	comp=E,1.9nm,0.8s,mb3.6,baz=128,slow=8.9,SNR=12						
KURK	**Kurchatov**	**26.76**	**322**	P	**P**	**17 47 32.0**	**-1.7**
BVAR	**Borovoye Array**	**32.32**	**321**	P	**P**	**17 48 21.2**	**-1.8**
	comp=E,0.4nm,0.5s,mb3.5,baz=123,slow=7.1,SNR=3.0						
BRVK	**Borovoye**	**32.39**	**321**	P	**P**	**17 48 23.8**	**+0.2**
ARU	**Arti**	**39.96**	**322**	*e*P	**P**	**17 49 30.0**	**+1.8**
	comp=E,6.7nm,1.1s,mb4.3						
BRTR	**Keskin Array B**	**56.54**	**299**	P	**P**	**17 51 36.9**	**+0.3**
	comp=E,0.2nm,0.4s,mb3.5,baz=58,slow=5.8,SNR=2.4						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**17 51 37.9**	**+1.0**
	comp=E,3.5nm,0.9s,mb4.4,baz=83,slow=7.5,SNR=2.9						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**17 51 38.5**	**-1.2**
	comp=E,0.2nm,0.3s,mb3.6,baz=74,slow=5.2,SNR=3.3						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**17 51 40.5**	**+0.6**
	comp=E,0.7nm,0.5s,mb3.9,baz=95,slow=9.6,SNR=4.5						
WRA	**Warramunga Arr**	**59.00**	**147**	P	**P**	**17 51 53.6**	**-0.4**
	comp=E,1.4nm,0.6s,mb4.1,baz=340,slow=7.5						
ASAR	**Alice Springs**	**62.04**	**149**	P	**P**	**17 52 14.2**	**-0.5**
	comp=E,0.6nm,0.5s,mb4.0,baz=336,slow=6.5,SNR=10						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**17 52 28.5**	**+0.4**
	comp=E,0.6nm,0.8s,mb3.7,baz=70,slow=6.6,SNR=2.3						
STKA	**Stephens Creek**	**72.54**	**147**	P	**P**	**17 53 20.4**	**-0.7**
	comp=E,0.8nm,0.4s,mb4.0,baz=185,slow=18,SNR=3.5						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**17 54 08.0**	**-0.1**
	comp=E,0.5nm,0.6s,mb3.6,baz=330,slow=5.2,SNR=7.4						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**17 54 08.0**	**-0.1**

*ISCJB **13** 17:44:05.1±0.9, 31°.26N±0°.03×103°.62E±0°.10, h10km±6km, mb4.0/17, Error ellipse: s-maj=14.0km s-min=4.9km az=173.2*
*IDC **13** 17:44:05.1±0.6, 31°.17N×103°.62E, h0km, mb4.0/15, mb1 4.1/16, mb1mx4.0/26, mbtmp4.0/16, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/31, Error ellipse: s-maj=25.8km s-min=14.0km az=51.0*
*NEIC **13** 17:44:06.7±2.5, 31°.18N×103°.63E, h10km, mb4.1/1, Error ellipse: s-maj=43.7km s-min=18.3km az=178.0*
*BJI **13** 17:44:07.6, 31°.24N×103°.77E, h14km, mB4.8/5, mb4.5/9, ML4.2/14, Ms3.9/2, Ms7 3.7/2*
ISC 13 17:44:08.0±0.7, 31°.25N±0°.03×103°.63E±0°.09, h15km±5km, n29, σ0°.71/34, mb4.0/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**162**	Pg	**Pg**	**17 44 14.0**	**-1.2**
CD2				Sg	**Sg**	**17 44 19.5**	**-0.6**
CD2				smax			
	comp=N,30μm,0.8s						
LZH	**Lanzhou**	**4.83**	**2**	Pg	**Pg**	**17 45 39.8**	**-0.7**
LZH				Sg	**Sg**	**17 46 43.8**	**+0.8**
LZH				smax			
	comp=N,170nm,1.0s						
LZH				smax			
	comp=E,100nm,0.9s						
GYA	**Guiyang**	**5.46**	**150**	Pg	**Pg**	**17 45 54.3**	**+1.7**
GYA				Sg	**Sb**	**17 46 52.3**	**+4.0**
GYA				smax			
	comp=N,240nm,0.9s						
GYA				smax			
	comp=E,240nm,0.9s						
KMI	**Kunming**	**6.15**	**188**	Pn	**Pn**	**17 45 37.4**	**-0.8**
KMI				Sn	**Sn**	**17 46 48.8**	**+0.5**
KMI				Sg	**Sg**	**17 47 26.4**	**+1.0**
KMI				smax			
	comp=N,56nm,1.4s						
KMI				smax			
	comp=E,54nm,1.0s						
WHN	**Wuhan**	**9.24**	**92**	P	Px	17 46 45.0	
WHN				S	**Sn**	**17 48 14.3**	**+10**
WHN				LR	LR		
	comp=N,1μm,5.2s						
WHN				LR	LR		
	comp=E,750nm,10.4s						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**17 48 01.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=6.3						
KSRS	**Korea Array**	**20.96**	**66**	P	**P**	**17 48 50.4**	**0.0**
	comp=E,6.8nm,0.7s,baz=263,slow=10,SNR=24						
KSRS				LR	LR	17 56 26.6	
	comp=E,34nm,20.0s,baz=210,slow=35						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**17 48 54.5**	**+0.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
MK31	**Makanchi Array**	**22.61**	**319**	*e*P	**P**	**17 49 07.2**	**-0.7**
MKAR	**Makanchi Array**	**22.61**	**319**	P	**P**	**17 49 08.1**	**+0.3**
	comp=Z,4.3nm,0.9s,mb3.9,baz=121,slow=12,SNR=16						
ZAA0	**Zalesovo Array**	**26.42**	**335**	*e*P	**P**	**17 49 44.1**	**+0.4**
ZALV	**Zalesovo Beam**	**26.42**	**335**	P	**P**	**17 49 44.3**	**+0.5**
	comp=Z,1.7nm,0.6s,mb3.8,baz=141,slow=9.6,SNR=6.9						
KURK	**Kurchatov**	**26.89**	**324**	P	**P**	**17 49 48.4**	**+0.4**
	comp=Z,3.2nm,0.9s,mb3.9,baz=128,slow=9.1,SNR=16						
KURK				PcP	PcP	17 53 08.7	-1.3
	comp=Z,0.2nm,0.5s,baz=118,slow=2.0,SNR=3.8						
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**17 50 36.9**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=99,slow=9.3,SNR=5.5						
BVAR				PcP	PcP	17 53 23.4	-0.7
	comp=Z,1.0nm,0.6s,baz=132,slow=2.1,SNR=7.2						
TIXI	**Tiksi**	**42.69**	**11**	*e*P	**P**	**17 52 02.5**	**-1.2**
	comp=Z,2.4nm,0.6s,mb4.1						
PETK	**Petropavlovsk-**	**44.37**	**44**	P	**P**	**17 52 17.9**	**+0.5**
	comp=Z,1.2nm,0.9s,mb3.6,baz=290,slow=6.9,SNR=3.4						
BRTR	**Keskin Array B**	**56.32**	**299**	P	**P**	**17 53 49.5**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.7,baz=55,slow=5.5,SNR=2.7						
ARCES	**ARCESS Array B**	**56.96**	**336**	P	**P**	**17 53 52.0**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.3,baz=72,slow=12,SNR=4.8						
ARCES				PcP	PcP	17 54 46.5	-0.8
	comp=Z,1.2nm,0.4s,baz=77,slow=4.7,SNR=7.9						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**17 53 53.9**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=96,slow=7.1,SNR=3.1						
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**17 54 05.2**	**-0.6**
	comp=Z,6.2nm,0.8s,mb4.7,baz=339,slow=7.8						
ASAR	**Alice Springs**	**61.82**	**148**	P	**P**	**17 54 25.6**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.3,baz=343,slow=6.7,SNR=19						
NOA	**NORSAR Array B**	**64.32**	**327**	P	**P**	**17 54 42.0**	**-0.5**
	comp=Z,0.6nm,0.8s,mb3.7,baz=74,slow=6.5,SNR=2.9						
STKA	**Stephens Creek**	**72.35**	**147**	P	**P**	**17 55 32.4**	**-0.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=340,slow=8.4,SNR=5.6						
LPG	**La Plagne**	**72.86**	**313**	*e*P	**P**	**17 55 36.4**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.2						
LPL	**La Plagne**	**72.86**	**313**	*e*P	**P**	**17 55 36.3**	**+0.2**
SMF	**Signal de Mont**	**74.11**	**315**	*e*P	**P**	**17 55 42.7**	**-0.7**
CAF	**Calviac**	**76.04**	**314**	*e*P	**P**	**17 55 54.6**	**0.0**
YKA	**Yellowknife Ar**	**81.67**	**17**	P	**P**	**17 56 24.9**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=328,slow=5.1,SNR=12						
TORD	**Torodi Ar. Bea**	**93.21**	**287**	P	**P**	**17 57 21.9**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.9,baz=42,slow=4.4,SNR=2.9						

*ISCJB **13** 17:56:30.6±0.6, 32°.16N±0°.05×105°.12E±0°.08, h10km, mb3.5/8, Error ellipse: s-maj=10.4km s-min=6.5km az=20.5*
*IDC **13** 17:56:31.3±1.1, 31°.83N×104°.39E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.4/28, mbtmp3.4/8, ML2.8/1, Error ellipse: s-maj=65.4km s-min=20.2km az=58.0*
*NEIC **13** 17:56:32.9±0.6, 31°.81N×104°.27E, h10km, mb4.1/1, Error ellipse: s-maj=21.4km s-min=8.8km az=52.0*
*BJI **13** 17:56:36.1, 32°.38N×105°.04E, h16km, ML3.6/11, Ms3.5/3, Ms7 3.3/3*
ISC 13 17:56:33.3±0.5, 32°.24N±0°.04×104°.91E±0°.07, h10km, n17, σ1°.20/22, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.66**	**217**	Pg	**Pg**	**17 57 04.8**	**-0.2**
CD2				Sg	**Sg**	**17 57 27.3**	**+0.8**
CD2				smax			
	comp=N,5μm,0.7s						
XAN	**Xi'an**	**3.81**	**61**	Pg	**Pg**	**17 57 40.9**	**-5.3**
XAN				Sn	**Sn**	**17 58 18.3**	**+1.5**
XAN				Sg	**Sg**	**17 58 31.5**	**-4.1**
XAN				smax			
	comp=N,140nm,0.9s						
XAN				smax			
	comp=E,90nm,0.7s						
LZH	**Lanzhou**	**3.93**	**347**	Pn	**Pn**	**17 57 36.0**	**+2.3**
LZH				Pg	**Pg**	**17 57 47.3**	**-1.3**
LZH				Sg	**Sg**	**17 58 36.3**	**-3.3**
LZH				smax			
	comp=N,120nm,0.9s						
LZH				smax			
	comp=E,170nm,1.0s						
LZH				LR	LR		
	comp=E,440nm,6.8s						
LZH				LR	LR		
	comp=Z,490nm,8.2s						
ENH	**Enshi**	**4.38**	**115**	*e*Pn	**Pn**	**17 57 45.0**	**+5.1**
GYA	**Guiyang**	**5.96**	**165**	Pg	**Pg**	**17 58 27.1**	**-0.4**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
GTA	**Gaotai**	**8.26**	**331**	*e*P	**Pb**	**17 58 56.0**	**-0.4**
GTA				pP		17 59 00.3	
GTA				sP		17 59 03.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**15.61**	**4**	Pn	**Pn**	**18 00 18.8**	**+5.5**
	comp=Z,0.0nm,0.3s,baz=186,slow=13,SNR=3.3						
SONM	**Songino Array**	**15.61**	**4**	Pn	**Pn**	**18 00 18.8**	**+5.5**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**18 01 33.8**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.0,baz=130,slow=10,SNR=5.1						
ZAA0	**Zalesovo Array**	**26.02**	**332**	*e*P	**P**	**18 02 06.8**	**+0.5**
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**18 02 06.2**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.1,baz=127,slow=11,SNR=2.3						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**18 02 13.4**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.0,baz=133,slow=8.0,SNR=3.9						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**18 06 19.2**	**+0.4**
	comp=Z,2.3nm,0.9s,mb4.2,baz=54,slow=7.2,SNR=2.8						
WRAB	**Tennant Creek**	**59.04**	**147**	*e*P	**P**	**18 06 32.4**	**-1.1**
	comp=Z,1.2nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**59.05**	**147**	P	**P**	**18 06 33.5**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.6,baz=339,slow=7.2,SNR=4.4						
ASAR	**Alice Springs**	**62.12**	**150**	P	**P**	**18 06 52.2**	**-2.2**
	comp=Z,0.1nm,0.3s,mb3.4,baz=315,slow=8.0,SNR=3.5						
YKA	**Yellowknife Ar**	**80.40**	**17**	P	**P**	**18 08 47.3**	**+2.7**
	comp=Z,0.2nm,0.5s,mb3.3,baz=326,slow=5.5,SNR=4.4						

*NIED **13** 18:00:00, 41°.50N×142°.00E, h47km, Mw4.3 Best double couple: M=3.20000×10^15 NP1:φs14.00000°, δ62.00000°, λ86.00000°. NP2:φs203.00000°, δ28.00000°, λ98.00000°.*
*MOS **13** 18:00:07.5±0.8, 41°.42N×141°.90E, h27km, mb4.9/46, Error ellipse: s-maj=10.2km s-min=5.8km az=111.2*
*BJI **13** 18:00:11.7, 41°.50N×142°.25E, h87km, mB5.1/21, mb4.8/38, Ms4.5/16, Ms7 4.2/17*
*ISCJB **13** 18:00:12.2±0.3, 41°.49N±0°.03×142°.01E±0°.04, h68km±

comp=N,320nm,0.4s
YUK pmax pmax
comp=Z,1μm,0.4s
YUK pmax pmax
comp=E,190μm,0.4s
YUK smax
comp=N,3μm,0.7s
YUK smax
comp=E,5μm,0.6s
YUK smax
comp=N,2μm,0.5s
YUK smax
comp=E,3μm,0.5s
YSS Yuzh-Sakhalins 5.50 5 *e*P **Pn 18 01 34.0 +1.5**
YSS *e*S **Sn 18 02 37.0 +2.6**
YSS Yuzh-Sakhalins 5.50 5 *e*Pn **Pn 18 01 33.3 +0.8**
comp=E,37nm,0.8s
KUR Kuril'sk 5.68 47 P **Pn 18 01 34.0 -0.9**
KUR *e*S **Sn 18 02 37.5 -1.1**
KUR pmax pmax
comp=N,70nm,0.6s
KUR pmax pmax
comp=E,40nm,0.6s
KUR pmax pmax
comp=Z,140nm,0.6s
KUR smax
comp=N,70nm,0.5s
KUR smax
comp=E,140nm,0.5s
MAJO Matsushiro 5.75 212 *e*P **Pn 18 01 38.2 +2.3**
MAJO pmax pmax
comp=Z,33nm,0.6s
MAJO Matsushiro 5.75 212 *e*Pn **Pn 18 01 38.2 +2.3**
comp=Z,33nm,0.6s
MAT Matsushiro 5.75 212 P **Pn 18 01 38.7 +2.8**
MAT *e*S **Sn 18 02 51.2 +11**
MJAR Matsushiro Arr 5.75 212 P **Pn 18 01 37.5 +1.6**
comp=Z,3.6nm,0.3s,baz=21,slow=15,SNR=28
MJAR Matsushiro Arr 5.75 212 P **Pn 18 01 37.5 +1.6**
MJAR pmax pmax
comp=Z,4.0nm,0.3s
VLA Vladivostok 7.69 286 *e*P **Pn 18 02 03.6 +1.2**
VLA pmax pmax
comp=Z,17nm,0.3s
HABR Khabarovsk 8.57 327 *e*P **Pn 18 02 15.4 +1.0**
HABR *e*S **Sn 18 03 48.9 -0.5**
HABR pmax pmax
comp=E,9.0nm,1.2s
HABR pmax pmax
comp=Z,21nm,1.0s
HABR pmax pmax
comp=N,20nm,1.6s
HABR MLR MLR
comp=Z,167nm,15.0s
MDJ Mudanjiang 9.63 293 P **Pn 18 02 32.6 +3.7**
MDJ pmax pmax
comp=Z,28nm,0.8s
MDJ pmax pmax
comp=Z,74nm,4.3s
MDJ Mudanjiang 9.63 293 *e*Pn **Pn 18 02 31.1 +2.2**
comp=Z,24nm,0.8s
KLR Kul'dur 10.60 321 *e*P **Pn 18 02 40.4 -1.7**
KSRS Korea Array 11.62 254 P **Pn 18 02 57.7 +1.6**
comp=Z,2.7nm,0.3s,baz=64,slow=14,SNR=31
KSRS S **Sn 18 05 11.4 +7.4**
comp=Z,1.1nm,0.3s,baz=69,slow=24,SNR=10
KSRS LR LR 18 06 36.6
comp=Z,150nm,21.1s,baz=160,slow=33
KSRS Korea Array 11.62 254 P **Pn 18 02 57.7 +1.6**
KSRS S **Sn 18 05 11.5 +7.4**
KSRS pmax pmax
comp=Z,3.0nm,0.3s
KSRS smax
comp=N,1.0nm,0.3s
KSRS MLR MLR
comp=Z,150nm,21.1s
CN2 Changchun 12.43 286 *e*P **Pn 18 03 11.0 +3.9**
CN2 *e*S **Sn 18 05 30.1 +6.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,13.0s
CN2 LR LR
comp=E,300nm,13.0s
CN2 LR LR
comp=Z,400nm,15.0s
INCN Inchon 12.54 257 *e*Pn **Pn 18 03 08.6 -0.1**
SNY Shenyang 13.80 278 ⇑P **Pn 18 03 28.5 +2.8**
SNY S **Sn 18 05 58.4 +1.1**
SNY pmax pmax
comp=Z,6.0nm,0.9s
SNY pmax pmax
comp=Z,250nm,5.3s
SNY LR LR
comp=E,320nm,12.0s
SNY LR LR
comp=Z,330nm,14.3s
PETK Petropavlovsk- 15.72 37 P **Pn 18 03 50.4 -0.1**
comp=Z,0.3nm,0.3s,baz=215,slow=12,SNR=4.4
PETK Petropavlovsk- 15.72 37 P **Pn 18 03 50.4 -0.1**
DL2 Dalian 15.80 267 P **Pn 18 03 52.8 +1.2**
DL2 pmax pmax
comp=Z,20nm,1.0s
PET Petropavlovsk 16.11 39 *e*P **Pn 18 03 56.8 +1.4**
PET *e*S **Sn 18 06 48.4 -4.5**
PET pmax pmax
comp=Z,15nm,1.0s
PET pmax pmax
comp=Z,100nm,9.6s
PET MLR MLR
comp=Z,100nm,12.0s
HIA Hailar 17.45 304 P **Pn 18 04 10.9 -1.1**
HIA pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 17.45 304 P **Pn 18 04 10.9 -1.1**
comp=Z,13nm,1.0s
CLNS Chul'man 18.94 330 *e*P **Pn 18 04 28.6 -1.4**
CLNS pmax pmax
comp=Z,14nm,0.8s
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,0.8s
BJI Beijing 19.62 274 P **Pn 18 04 36.5 -1.7**
BJI S **S 18 08 15.0 +0.8**
BJI sS sS 18 08 40.5 +4.4
BJI pmax pmax
comp=Z,31nm,0.8s
BJI pmax pmax
comp=Z,150nm,3.9s
BJI LR LR
comp=N,260nm,5.2s
BJI LR LR
comp=E,350nm,5.0s
BJI LR LR
comp=Z,120nm,25.3s
BJT Baijiatuau 19.63 274 *e*P **Pn 18 04 35.5 -2.9**
BJT pmax pmax
comp=Z,26nm,0.6s
BJT Baijiatuau 19.63 274 *e*P **Pn 18 04 35.5 -2.9**
comp=Z,26nm,0.6s
NJ2 Nanjing 20.76 251 *e*P **P 18 04 49.0 +0.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s
YAK Yakutsk 21.89 344 *e*P **P 18 04 56.8 -3.7**
YAK *e*S **S 18 08 52.2 -6.2**
YAK *e* 18 08 54.3
YAK pmax pmax
comp=Z,20nm,0.9s,mb4.5
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK smax
comp=N,27nm,1.3s
YAK smax
comp=E,26nm,1.5s
YAK Yakutsk 21.89 344 *e*P **P 18 04 57.0 -3.5**
comp=E,23nm,0.6s,mb4.8
SEY Seymchan 22.35 12 *ce*P **P 18 05 03.2 -2.3**
HHC Hu-ho-hao-te 22.89 279 *e*P **P 18 05 10.6 -0.8**
HHC pP 18 05 27.6
HHC sP sP 18 05 36.8 +3.7
HHC PcP PcP 18 08 59.3 -0.6
HHC S **S 18 09 13.0 -3.3**
HHC sS sS 18 09 43.0 +2.0
HHC SS 18 10 05.0
HHC ScP ScP 18 12 29.0 -3.0
HHC PcS PcS 18 12 36.4 -2.4
HHC pmax pmax
comp=Z,14nm,1.0s,mb4.3
HHC pmax pmax
comp=Z,230nm,5.6s
HHC LR LR
comp=N,450nm,8.0s
HHC LR LR
comp=E,530nm,6.6s
HHC LR LR
comp=Z,330nm,8.9s
TATO Taipei 23.70 232 *e*P **P 18 05 18.1 -1.0**
YHNB Yeheng 23.99 232 *e*P **P 18 05 20.0 -1.9**
comp=Z,25nm,1.0s,mb4.6
BOD Bodaibo 24.17 322 *e*P **P 18 05 21.1 -2.1**
BOD pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
NACB Ninganchiao 24.24 231 P **P 18 05 22.5 -1.6**
comp=Z,19nm,0.7s,mb4.6
WHN Wuhan 24.80 253 P **P 18 05 29.3 +0.1**
YULB Yu-li 25.02 230 P **P 18 05 28.7 -2.5**
comp=Z,23nm,1.0s,mb4.7
TPUB Ta-pu 25.48 231 *e*P **P 18 05 34.5 -0.9**
comp=Z,27nm,0.9s,mb4.8
SONM Songino Array 25.97 296 P **P 18 05 39.6 0.0**
comp=Z,6.6nm,0.6s,mb4.3,baz=87,slow=8.5,SNR=52
SONM LR LR 18 16 44.2
comp=Z,91nm,18.1s,baz=275,slow=38
SONM Songino Array 25.97 296 P **P 18 05 39.6 0.0**
SONM pmax pmax
comp=Z,7.0nm,0.6s
SONM MLR MLR
comp=Z,91nm,18.1s
GUMO Guam 27.89 174 LR LR 18 16 59.5
comp=Z,69nm,20.5s,baz=42,slow=36
TLY Talaya 27.99 305 *e*P **P 18 05 54.1 -3.6**
TLY *e* 18 11 55.3
TLY pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
TLY Talaya 27.99 305 P **P 18 05 54.0 -3.7**
comp=Z,9.4nm,0.9s,mb4.4
ZAK Zakamensk 28.11 302 *e*P **P 18 05 58.4 -0.4**
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb3.9
ENH Enshi 28.48 257 *e*P **P 18 06 01.3 -1.1**
MOY Mondy 29.63 304 *e*P **P 18 06 12.5 +0.2**
BILL Bilibino 29.65 18 *e*P **P 18 06 12.5 +0.2**
BILL pmax pmax
comp=Z,5.0nm,1.6s,mb4.0
BILL Bilibino 29.65 18 *e*P **P 18 06 11.0 -1.3**
TIXI Tiksi 30.95 352 *e*P **P 18 06 21.2 -2.6**
TIXI pmax pmax
comp=Z,6.0nm,2.3s,mb4.0
TIXI Tiksi 30.95 352 *e*P **P 18 06 20.7 -3.0**
comp=Z,1.1nm,0.5s,mb3.9
GTA Gaotai 31.97 281 *e*P **P 18 06 32.3 -0.7**
GTA pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CD2 Chengdu 32.40 263 P **P 18 06 36.5 -0.4**
CD2 pP pP 18 06 54.3 +1.9
CD2 sP sP 18 07 03.5 +3.7
CD2 PP PP 18 07 47.3 -3.7
CD2 S **S 18 11 45.0 -1.7**
CD2 sS sS 18 12 15.9 +2.8
CD2 SS SS 18 13 45.4 -23
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,110nm,6.0s
CD2 LR LR
comp=Z,280nm,8.3s
GYA Guiyang 32.68 254 P **P 18 06 40.0 +0.7**
GYA pP pP 18 06 58.6 +3.8
GYA sP sP 18 07 06.4 +4.2
GYA PP PP 18 07 51.3 -2.8
GYA PcP PcP 18 09 22.5 -1.4
GYA S **S 18 11 51.0 -0.1**
GYA sS sS 18 12 22.6 +5.1
GYA ScP ScP 18 13 00.3 -1.9
GYA PcS PcS 18 13 09.3 +0.1
GYA SS SS 18 13 53.4 -20
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.0
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,520nm,16.9s
GYA LR LR
comp=E,470nm,17.3s
GYA LR LR
comp=Z,520nm,17.9s
KMI Kunming 36.31 256 P **P 18 07 09.5 -1.3**
KMI pmax pmax
comp=Z,7.0nm,2.0s,mb4.2
ZAA0 Zalesovo Array 39.40 308 *e*P **P 18 07 35.9 -0.5**
ZAA0 *e*PcP PcP 18 09 43.4 0.0
ZALV Zalesovo Beam 39.40 308 P **P 18 07 36.5 0.0**
comp=Z,12nm,0.5s,mb4.9,baz=89,slow=8.1,SNR=68
ZALV PcP PcP 18 09 43.6 +0.2
comp=Z,3.9nm,0.6s,baz=93,slow=3.0,SNR=7.7
ZALV LR LR 18 24 52.3
comp=Z,43nm,21.0s,baz=192,slow=38
ZALV Zalesovo Beam 39.40 308 P **P 18 07 36.5 0.0**
ZALV PcP PcP 18 09 43.6 +0.2
ZALV LR LR 18 24 52.2
WMQ Urumqi 39.43 292 P **P 18 07 38.5 +1.6**
WMQ pmax pmax
comp=Z,18nm,1.2s,mb4.7
WMQ LR LR
comp=N,210nm,11.0s
WMQ LR LR
comp=E,170nm,9.0s
WMQ LR LR
comp=Z,78nm,25.0s
NVS Novosibirsk 40.23 310 *e*P **P 18 07 42.8 -0.6**
MK31 Makanchi Array 42.30 298 *e*P **P 18 08 00.0 -0.4**
MKAR Makanchi Array 42.30 298 P **P 18 08 00.3 -0.1**
comp=Z,8.8nm,0.7s,mb4.5,baz=82,slow=12,SNR=64
MKAR PcP PcP 18 09 53.1 +0.1
comp=Z,0.9nm,0.3s,baz=70,slow=5.2,SNR=5.2
MKAR Makanchi Array 42.30 298 P **P 18 08 00.3 -0.1**
MKAR 18 09 53.1
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.4s
LSA Lhasa 42.46 271 P **P 18 08 02.8 +0.9**
LSA Lhasa 42.46 271 *e*P **P 18 08 02.8 +0.9**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
LSA Lhasa 42.46 271 *e*P **P 18 08 02.8 +0.9**
comp=Z,6.2nm,0.8s,mb4.3
CHTO Chiang Mai 43.00 252 *e*P **P 18 08 06.5 +0.1**
CHTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
CHTO Chiang Mai 43.00 252 *e*P **P 18 08 06.5 +0.1**
comp=Z,5.8nm,0.6s,mb4.5
CM31 Chiang Mai Arr 43.23 251 *e*P **P 18 08 08.3 0.0**
KURK Kurchatov 43.69 305 P **P 18 08 11.5 -0.1**
comp=Z,26nm,0.6s,mb5.2,baz=78,slow=8.9,SNR=85
KURK Kurchatov 43.69 305 P **P 18 08 11.5 0.0**
KURK pmax pmax
comp=Z,26nm,0.6s,mb5.1
KURK Kurchatov 43.69 305 ⇑*i*P **P 18 08 11.0 -0.5**
comp=Z,17nm,0.6s,mb5.0
COLA College 45.11 35 P **P 18 08 19.5 -3.2**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
COLA College 45.11 35 P **P 18 08 19.5 -3.2**
comp=Z,8.2nm,0.8s,mb4.6
TAPN Taplejung 46.26 270 *e*P **P 18 08 33.1 +0.8**
comp=Z,62nm,1.0s,mb5.5
ODAN Odare 46.76 270 *e*P **P 18 08 36.7 +0.5**
comp=Z,39nm,0.9s,mb5.4
JIRN Jiri 47.24 271 *e*P **P 18 08 41.0 +1.1**
comp=Z,28nm,0.4s,mb5.5
RAMN Ramite 47.31 270 *e*P **P 18 08 40.8 +0.3**
comp=Z,72nm,0.8s,mb5.7
GUN Gumba 47.34 272 *e*P **P 18 08 41.2 +0.5**
comp=Z,91nm,0.5s
KKN Kakani 47.85 272 *e*P **P 18 08 45.0 +0.3**
comp=Z,55nm,0.7s,mb5.7
PKI Pulchoki 47.87 272 *e*P **P 18 08 45.9 +1.1**
comp=Z,18nm,0.5s,mb5.3
BVAR Borovoye Array 48.03 310 P **P 18 08 45.6 0.0**
comp=Z,8.5nm,0.4s,mb5.1,baz=76,slow=9.3,SNR=92
BVAR PcP PcP 18 10 13.1 +0.5
comp=Z,1.9nm,0.5s,baz=75,slow=3.4,SNR=4.1
BVAR Borovoye Array 48.03 310 P **P 18 08 45.6 -0.1**
BVAR 18 10 13.1
BVAR pmax pmax
comp=Z,9.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.5s
TKM2 Tokmak 2 48.06 295 P **P 18 08 47.0 +0.9**
SNR=17
TKM2 Tokmak 2 48.06 295 *e*P **P 18 08 46.6 +0.5**
TKM2 pmax pmax
comp=Z,18nm,0.8s,mb5.2
TKM2 Tokmak 2 48.06 295 *e*P **P 18 08 46.6 +0.5**
comp=Z,18nm,0.8s,mb5.2
BRVK Borovoye 48.08 310 *ce*P **P 18 08 46.4 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BRVK Borovoye 48.08 310 *e*P **P 18 08 46.0 -0.1**
comp=Z,4.7nm,0.4s,mb4.9
DMN Daman 48.08 272 *e*P **P 18 08 46.6 +0.2**
comp=Z,17nm,0.5s,mb5.3
KBK Karagaybulak 48.60 295 P **P 18 08 50.9 +0.7**
SNR=16
KZA Kyzart 48.62 294 P **P 18 08 51.7 +1.3**
SNR=7.5
USP Ospenovka 48.67 296 P **P 18 08 50.9 +0.1**
SNR=8.7
AAK Ala-Archa 48.92 295 P **P 18 08 52.9 +0.2**
comp=Z,3.7nm,0.3s,mb4.8,baz=87,slow=4.9,SNR=6.6
AAK Ala-Archa 48.92 295 P **P 18 08 52.9 +0.2**
AAK pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
AAK Ala-Archa 48.92 295 *e*P **P 18 08 52.1 -0.6**
comp=Z,4.8nm,0.4s,mb4.9
KSM Kuching 49.01 224 *e*P **P 18 08 54.4 +0.7**
EKS2 Erkin-Say 49.39 296 P **P 18 08 56.5 +0.2**
SNR=6.2
EKS2 Erkin-Say 49.39 296 *e*P **P 18 08 55.9 -0.4**
comp=Z,13nm,0.8s,mb5.0
EKS2 *e* 18 09 27.4
AML Almayashu 49.66 295 P **P 18 08 57.6 -0.7**
INK Inuvik 50.25 29 P **P 18 09 03.1 +0.7**
comp=Z,13nm,0.5s,mb5.2,baz=302,slow=6.7,SNR=111
INK Inuvik 50.25 29 P **P 18 09 03.2 +0.8**
INK pmax pmax
comp=Z,13nm,0.5s
INK Inuvik 50.25 29 *e*P **P 18 09 02.9 +0.5**
comp=Z,13nm,0.5s,mb5.2
KULM Kulim 51.54 237 *e*P **P 18 09 13.6 +0.8**
comp=Z,9.3nm,0.7s,mb4.8
KULM *e* 18 09 22.4
SVE Sverdlovsk 52.20 317 ⇑*e*P **P 18 09 17.5 +0.3**
SVE pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ARU Arti 53.41 317 *c i*P **P 18 09 25.8 -0.3**
ARU *e* 18 11 23.8
ARU S **S 18 16 54.9 +1.6**
ARU SS SS 18 20 29.1 -4.3
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ARU Arti 53.41 317 *e*P **P 18 09 25.0 -1.1**
comp=Z,6.0nm,0.6s,mb4.7
ARU *e*PcP PcP 18 10 30.5 -2.0
ABKAR Akbulak array 55.51 308 *e*P **P 18 09 41.0 -0.4**
comp=Z,8.7nm,0.5s,mb5.0
ABKAR *e* 18 09 50.5
KEV Kevo 59.48 339 *e*P **P 18 10 08.0 -1.0**
KEV Kevo 59.48 339 *e*p **P 18 10 08.0 -1.0**
YKA Yellowknife Ar 59.76 32 P **P 18 10 11.3 +0.3**
comp=Z,0.4nm,0.3s,mb3.9,baz=302,slow=6.3,SNR=11
YKA pP pP 18 10 30.1 +2.3
comp=Z,0.4nm,0.4s,baz=305,slow=6.5,SNR=3.5
YKA Yellowknife Ar 59.76 32 P **P 18 10 11.3 +0.3**
YKA pP pP 18 10 30.1 +2.3
ARCES ARCESS Array B 60.03 339 P **P 18 10 13.7 +0.9**
comp=Z,3.0nm,0.8s,mb4.4,baz=46,slow=7.0,SNR=7.2
ARCES ARCESS Array B 60.03 339 P **P 18 10 13.7 +0.9**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
WRAB Tennant Creek 61.51 188 *e*P **P 18 10 20.5 -2.8**
WRAB pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
WRAB Tennant Creek 61.51 188 *e*P **P 18 10 20.5 -2.9**
comp=Z,6.7nm,1.2s,mb4.7
WRA Warramunga Arr 61.52 188 P **P 18 10 22.8 -0.6**
comp=Z,2.1nm,0.6s,mb4.4,baz=6.3,slow=7.0,SNR=40
WRA Warramunga Arr 61.52 188 P **P 18 10 22.8 -0.6**
WRA pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 62.29 331 *e*P **P 18 10 27.5 -0.7**
JOF pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
JOF Joensuu 62.29 331 *e*p **P 18 10 27.5 -0.7**
comp=Z,5.9nm,0.5s,mb5.0
KAF Kangasniemi 64.60 332 *e*P **P 18 10 42.2 -1.2**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KAF Kangasniemi 64.60 332 *e*p **P 18 10 42.2 -1.2**
comp=Z,5.1nm,0.6s,mb4.7
OBN Obninsk 64.86 322 *e*P **P 18 10 44.0 -1.2**
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
FINES FINESS Array B 65.13 332 P **P 18 10 46.4 -0.5**
comp=Z,11nm,0.7s,mb5.0,baz=47,slow=7.6,SNR=52
FINES FINESS Array B 65.13 332 P **P 18 10 46.4 -0.5**
FINES pmax pmax
comp=Z,11nm,0.7s
ASAR Alice Springs 65.24 188 P **P 18 10 48.0 0.0**
comp=Z,1.6nm,0.9s,mb4.0,baz=12,slow=5.6,SNR=11
ASAR pP pP 18 11 05.3 +0.4
comp=Z,0.9nm,0.8s,baz=11,slow=14,SNR=4.5
ASAR Alice Springs 65.24 188 P **P 18 10 48.0 0.0**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
SUMG Summit 66.25 0 *e*P **P 18 10 54.4 +0.4**
comp=Z,3.8nm,0.8s,mb4.5
KIV Kislovodsk 68.39 310 *e*P **P 18 11 08.8 +0.8**
KIV pmax pmax
comp=Z,24nm,0.9s,mb5.2
KIV MLR MLR
comp=Z,33nm,18.0s
KIV Kislovodsk 68.39 310 *e*P **P 18 11 08.4 +0.4**
comp=Z,25nm,1.1s,mb5.2
ZEI Tsey 68.40 308 *e*P **P 18 11 06.7 -1.3**
ZEI pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
FFC Flin Flon 69.74 34 *ce*P **P 18 11 17.4 +1.3**
FFC Flin Flon 69.74 34 P **P 18 11 13.8 -2.3**
comp=Z,3.8nm,0.8s,mb4.4
NOA NORSAR Array B 70.29 337 P **P 18 11 18.9 -0.4**
comp=Z,4.8nm,0.7s,mb4.5,baz=37,slow=6.2,SNR=19
NOA NORSAR Array B 70.29 337 P **P 18 11 18.9 -0.4**
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA NORSAR Array B 70.29 337 P **P 18 11 18.9 -0.4**
AKASG Malin Array Be 71.10 322 P **P 18 11 24.0 -0.4**
comp=Z,5.7nm,0.4s,mb4.9,baz=44,slow=6.4,SNR=44
AKASG Malin Array Be 71.10 322 P **P 18 11 24.0 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKASG Malin Array Be 71.10 322 P **P 18 11 24.0 -0.4**
AKBB Malin Array Si 71.10 322 *e*P **P 18 11 23.5 -0.9**
NVAR Mina Array Bea 71.99 55 P **P 18 11 31.6 +1.6**
comp=Z,0.6nm,0.6s,mb3.7,baz=296,slow=7.0,SNR=4.6
NVAR pP pP 18 11 50.2 +3.1
comp=Z,1.4nm,0.7s,baz=294,slow=4.6,SNR=5.2
UMR Umm Al-Rimmam 74.07 295 *e*P **P 18 11 41.5 -0.9**
UMR AMb AMB 18 11 42.3
comp=Z,33nm,0.5s,mb5.5
MIB Mutribah 74.17 296 *e*P **P 18 11 41.8 -1.2**
MIB AMb AMB 18 11 42.8
comp=Z,32nm,0.7s,mb5.4
PDAR Pinedale Array 74.24 47 P **P 18 11 44.0 +0.7**
comp=Z,0.9nm,0.6s,mb3.9,baz=272,slow=1.7,SNR=7.5
PDAR pP pP 18 12 03.2 +2.7
comp=Z,0.7nm,0.6s,baz=351,slow=0.9,SNR=4.2
QRN Al-Qurain 74.43 295 *e*P **P 18 11 43.9 -0.7**
QRN AMb AMB 18 11 44.5
comp=Z,40nm,0.5s,mb5.7
MALT Malatya 74.44 307 *e*P **P 18 11 45.0 +0.5**
MALT pmax pmax

comp=Z,10.0nm,1.1s,mb4.7
MALT Malatya 74.44 307 *e*P **P 18 11 45.0 +0.6**
comp=Z,9.7nm,1.1s,mb4.7
RDF Al-Radifah 74.57 295 *e*P **P 18 11 45.1 -0.3**
RDF AMb AMB 18 11 46.0
comp=Z,41nm,0.6s,mb5.5
KWP Kalwaria Pacla 74.81 324 *e*P **P 18 11 47.3 +0.8**
KWP Kalwaria Pacla 74.81 324 ⇓*i*P **P 18 11 47.1 +0.7**
BUR08 Bucovina Ar. S 75.12 321 *e*P **P 18 11 48.3 +0.1**
BURAR Bucovina Array 75.14 321 ⇓*i*P **P 18 11 48.5 +0.2**
KOLS Kolonicke sedl 75.52 324 *e*P **P 18 11 50.5 0.0**
KOLS *e* pP 18 12 06.5 -1.3
KOLS pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
KOLS Kolonicke sedl 75.52 324 *e*P **P 18 11 50.5 0.0**
comp=Z,6.5nm,1.6s,mb4.3
KOLS *e* pP 18 12 06.5 -1.3
KOLS Kolonicke sedl 75.52 324 *e*P **P 18 11 50.5 0.0**
KOLS *e*pP pP 18 12 06.5 -1.3
STHS Stebnicka Huta 75.61 325 *e*P **P 18 11 52.4 +1.4**
STHS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
STHS Stebnicka Huta 75.61 325 *e*P **P 18 11 52.4 +1.4**
comp=Z,3.1nm,0.6s,mb4.4
STHS Stebnicka Huta 75.61 325 *e*P **P 18 11 52.4 +1.4**
OJC Ojcow 75.63 326 *e*P **P 18 11 51.5 +0.4**
NIE Niedzica 76.02 325 *e*P **P 18 11 54.2 +0.9**
BR131 Keskin Array S 76.28 311 *e*P **P 18 11 54.8 -0.2**
comp=Z,1.8nm,0.6s,mb4.2
BRTR Keskin Array B 76.28 311 P **P 18 11 55.5 +0.5**
comp=Z,3.0nm,0.6s,mb4.4,baz=78,slow=4.3,SNR=16
BRTR Keskin Array B 76.28 311 P **P 18 11 55.5 +0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.6s
MLR Muntele Rosu 76.32 319 ⇓*i*P **P 18 11 55.7 +0.6**
OKC Ostrava-Krasne 76.61 326 AMS AMS 18 50 50.0
comp=Z,200nm,5.0s
MORC Moravsky Berou 76.91 327 *e*P **P 18 11 58.8 +0.4**
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MORC Moravsky Berou 76.91 327 *e*P **P 18 11 58.8 +0.4**
comp=Z,3.7nm,0.8s,mb4.4
DPC Dobruska-Polom 76.96 328 *e*P **P 18 11 59.7 +1.1**
DPC MLR MLR
comp=Z,100nm,9.8s
DPC Dobruska-Polom 76.96 328 *e*P **P 18 11 59.7 +1.1**
DPC AMS AMS 18 49 20.0
comp=Z,100nm,9.8s
PSZ Piszkesteto 77.33 324 *e*P **P 18 12 00.1 -0.7**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ Piszkesteto 77.33 324 *e*P **P 18 12 00.1 -0.7**
comp=Z,4.0nm,0.8s,mb4.4
VYHS Vyhne 77.35 325 *i* P **P 18 12 01.6 +0.7**
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
VYHS Vyhne 77.35 325 *i* P **P 18 12 01.6 +0.7**
comp=Z,2.4nm,1.3s,mb4.0
VYHS *e* pP 18 12 20.9 +2.7
VYHS Vyhne 77.35 325 *i* P **P 18 12 01.6 +0.7**
VYHS *e*pP pP 18 12 20.9 +2.7
CLL Collm 77.49 330 *i* P **P 18 12 01.1 -0.5**
CLL pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
CLL Collm 77.49 330 *i* P **P 18 12 01.1 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.49 330 *i* P **P 18 12 01.1 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
CLL *e*pP pP 18 12 21.0 +2.0
CLL *e* 18 12 25.0
PVCC Panska Ves 77.51 329 *e*P **P 18 12 02.5 +0.8**
PVCC MLR MLR
comp=Z,200nm,4.9s
PVCC Panska Ves 77.51 329 *e*P **P 18 12 02.5 +0.8**
PVCC AMS AMS 18 51 20.0
comp=Z,200nm,4.9s
PRU Pruhonice 77.95 328 *e*P **P 18 12 05.1 +0.9**
PRU MLR MLR
comp=Z,100nm,6.6s
PRU Pruhonice 77.95 328 *e*P **P 18 12 05.1 +0.9**
PRU AMS AMS 18 51 30.0
comp=Z,100nm,6.6s
TREC Trest 78.12 327 AMS AMS 18 51 20.0
comp=Z,100nm,8.7s
NKC Novy Kostel 78.57 330 AMS AMS 18 51 40.0
comp=Z,200nm,5.3s
KHC Kasperske Hory 79.02 328 *e*P **P 18 12 10.2 +0.1**
KHC pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KHC Kasperske Hory 79.02 328 *e*P **P 18 12 10.2 +0.1**
comp=Z,2.4nm,0.6s,mb4.3
KHC *e* pP 18 12 29.3 +1.8
KHC Kasperske Hory 79.02 328 *e*P **P 18 12 10.7 +0.6**
KHC AMS AMS 18 51 50.0
comp=Z,100nm,11.8s
GERES GERESS Array B 79.20 328 P **P 18 12 11.1 0.0**
comp=Z,1.1nm,0.5s,mb4.0,baz=35,slow=4.9,SNR=13
GERES GERESS Array B 79.20 328 P **P 18 12 11.1 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.5s
MMAI Mount Meron Ar 79.80 305 P **P 18 12 15.4 +0.8**
comp=Z,6.9nm,0.7s,mb4.7,baz=50,slow=7.8,SNR=13
SOKA Soboth 80.38 326 ⇓*i*P **P 18 12 17.8 +0.3**
comp=Z,4.0nm,0.6s,mb4.5
KBA Koelnbreinsper 80.76 327 ⇑*i*P **P 18 12 20.9 +1.4**
comp=Z,4.9nm,0.7s,mb4.5
SCHQ Schefferville 80.95 16 P **P 18 12 20.6 +0.2**
comp=Z,3.8nm,0.7s,mb4.5,baz=344,slow=5.8,SNR=5.0
SCHQ Schefferville 80.95 16 *e*P **P 18 12 18.4 -1.9**
comp=Z,5.9nm,0.8s,mb4.6
CDF Champ du Feu 81.98 331 *e*P **P 18 12 25.9 -0.1**
comp=Z,7.1nm,0.9s,mb4.3
CDF Champ du Feu 81.98 331 *e*P **P 18 12 25.9 -0.1**
CDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CDF Champ du Feu 81.98 331 *e*P **P 18 12 25.9 -0.1**
comp=Z,3.5nm,0.9s,mb4.3
HAU Haudompre 82.66 332 *e*P **P 18 12 49.4 -0.4**
LOR Lormes 84.16 333 *e*P **P 18 12 36.9 -0.3**
comp=Z,12nm,1.0s,mb4.7
LOR Lormes 84.16 333 *e*P **P 18 12 36.9 -0.3**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
LOR Lormes 84.16 333 *e*P **P 18 12 36.9 -0.3**
comp=Z,6.1nm,1.0s,mb4.7
SSF Saint Saulge 84.46 333 *e*P **P 18 12 38.6 -0.1**
LPL La Plagne 84.63 330 ⇑*i*P **P 18 12 40.2 +0.6**
comp=Z,21nm,1.0s,mb4.5
LPL La Plagne 84.63 330 ⇑*i*P **P 18 12 40.2 +0.6**
LPL pmax pmax
comp=Z,11nm,1.0s,mb4.9
LPL La Plagne 84.63 330 ⇑*i*P **P 18 12 40.2 +0.6**
comp=Z,11nm,1.0s,mb4.9
LPG La Plagne 84.64 330 ⇑*i*P **P 18 12 40.4 +0.7**
comp=Z,15nm,0.8s,mb4.9
LPG La Plagne 84.64 330 ⇑*i*P **P 18 12 40.4 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
LPG La Plagne 84.64 330 ⇑*i*P **P 18 12 40.4 +0.7**
comp=Z,7.3nm,0.8s,mb4.9
SMF Signal de Mont 84.70 333 *e*P **P 18 12 39.9 -0.1**
AVF Avril sur Loir 84.75 333 ⇑*i*P **P 18 12 40.2 0.0**
comp=Z,11nm,0.7s,mb4.8
AVF Avril sur Loir 84.75 333 ⇑*i*P **P 18 12 40.2 0.0**
AVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
AVF Avril sur Loir 84.75 333 ⇑*i*P **P 18 12 40.2 0.0**
comp=Z,5.3nm,0.7s,mb4.8
MBDF Montbardon 85.28 330 ⇑*i*P **P 18 12 42.6 -0.3**
comp=Z,15nm,0.9s,mb4.8
MBDF Montbardon 85.28 330 ⇑*i*P **P 18 12 42.6 -0.3**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
MBDF Montbardon 85.28 330 ⇑*i*P **P 18 12 42.6 -0.3**
comp=Z,7.7nm,0.9s,mb4.8
ORIF Oris-en-Rattie 85.45 330 ⇑*i*P **P 18 12 44.0 +0.2**
comp=Z,13nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.45 330 ⇑*i*P **P 18 12 44.0 +0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.45 330 ⇑*i*P **P 18 12 44.0 +0.2**
comp=Z,6.3nm,0.8s,mb4.8
ROSF Rostrenen 85.46 338 *e*P **P 18 12 44.0 +0.3**
TCF Toulx Ste Croi 85.57 333 *e*P **P 18 12 44.1 -0.2**
VIVF Saint-Julien-l 85.95 331 ⇑*i*P **P 18 12 46.4 +0.2**
comp=Z,14nm,1.0s,mb4.9
VIVF Saint-Julien-l 85.95 331 ⇑*i*P **P 18 12 46.4 +0.2**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
VIVF Saint-Julien-l 85.95 331 ⇑*i*P **P 18 12 46.4 +0.2**
comp=Z,7.0nm,1.0s,mb4.8
MFF Saint Martin d 86.07 335 *e*P **P 18 12 47.2 +0.4**
comp=Z,24nm,1.0s,mb5.1
MFF Saint Martin d 86.07 335 *e*P **P 18 12 47.2 +0.4**
MFF pmax pmax
comp=Z,12nm,1.0s,mb5.1
MFF Saint Martin d 86.07 335 *e*P **P 18 12 47.2 +0.4**
comp=Z,12nm,1.0s,mb5.1
RJF Les Rejaudoux 86.67 333 *e*P **P 18 12 49.6 -0.1**
comp=Z,6.5nm,0.8s,mb4.6
RJF Les Rejaudoux 86.67 333 *e*P **P 18 12 49.6 -0.1**
RJF pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
RJF Les Rejaudoux 86.67 333 *e*P **P 18 12 49.6 -0.1**
comp=Z,3.3nm,0.8s,mb4.6
CAF Calviac 86.81 333 ⇑*i*P **P 18 12 51.4 +0.9**
comp=Z,22nm,0.8s,mb5.1
CAF Calviac 86.81 333 ⇑*i*P **P 18 12 51.4 +0.9**
CAF pmax pmax
comp=Z,11nm,0.8s,mb5.1
CAF Calviac 86.81 333 ⇑*i*P **P 18 12 51.4 +0.9**
comp=Z,11nm,0.8s,mb5.1
TXAR Lajitas Array 87.05 53 P **P 18 12 52.1 +0.2**
comp=Z,0.2nm,0.6s,mb3.5,baz=305,slow=3.9,SNR=3.5
TXAR pP pP 18 13 12.2 +2.6
comp=Z,0.8nm,0.7s,baz=290,slow=3.5,SNR=5.2
LFF La Frestale 87.25 334 *e*P **P 18 12 53.4 +0.8**
ETSF Etsaut 89.49 333 ⇑*i*P **P 18 13 04.2 +1.0**
comp=Z,5.8nm,0.7s,mb4.7
ETSF Etsaut 89.49 333 ⇑*i*P **P 18 13 04.2 +1.0**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
ETSF Etsaut 89.49 333 ⇑*i*P **P 18 13 04.2 +1.0**
comp=Z,2.9nm,0.7s,mb4.7
ESDC Sonseca Array 93.51 334 P **P 18 13 21.8 -0.1**
comp=Z,1.4nm,0.7s,mb4.5,baz=32,slow=2.2,SNR=5.9
TORD Torodi Ar. Bea 114.48 317 PKP PKiKP 18 18 45.0 -1.3
comp=Z,0.2nm,0.3s,baz=18,slow=1.9,SNR=5.1
VNA2 Neumayer--Watz 146.70 198 *e*PKPdf PKPdf 18 19 45.6 +0.9
baz=129,slow=2.5
VNA2 *e* 18 20 04.4

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*ISCJB **13** 18:09:41.6±0.6, 33°.64N±0°.03×140°.71E±0°.06, h62km±5km, mb4.2/9, Error ellipse: s-maj=8.5km s-min=5.3km az=7.1*
*JMA **13** 18:09:42.0±0.1, 33°.68N×140°.71E, h60km±3km, M3.8*
*IDC **13** 18:09:43.7±2.6, 33°.58N×140°.53E, h61km±18km, mb3.8/6, mb1 4.0/8, mb1mx3.6/26, mbtmp3.9/8, Error ellipse: s-maj=41.9km s-min=10.2km az=78.0*
*NEIC **13** 18:09:43.3±2.1, 33°.70N×140°.89E, h66km±14km, mb4.4/3, Error ellipse: s-maj=39.4km s-min=13.3km az=75.0*
ISC 13 18:09:42.6±0.6, 33°.64N±0°.03×140°.70E±0°.06, h52km±6km, n31, σ0ˢ82/42, mb4.2/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.91**	**235**	P	**Pn**	**18 09 59.4**	**+0.2**
JHJ2				S	**Sn**	**18 10 11.8**	**+0.4**
JHJ	**Hachijo jima 2**	**0.93**	**236**	P	**Pn**	**18 09 59.6**	**+0.2**
	1μm,0.3s,baz=63,slow=21,SNR=62						
JHJ				S	**Sn**	**18 10 10.8**	**-1.0**
	301nm,0.3s,baz=69,slow=22,SNR=6.1						
JHJ				LR	LR	18 10 14.9	
	comp=Z,5μm,20.7s,baz=0.0,slow=41						
BSO1	**Boso 1**	**1.03**	**13**	P	**Pn**	**18 10 00.1**	**-0.8**
BSO1				S	**Sn**	**18 10 13.8**	**-0.5**
JMY	**Miyakejima3**	**1.08**	**294**	P	**Pn**	**18 10 01.1**	**-0.3**
BSO2	**Boso 2**	**1.11**	**2**	S	**Sn**	**18 10 16.6**	**+0.5**
BSO3	**Boso 3**	**1.17**	**352**	P	**Pn**	**18 10 02.2**	**-0.5**
BSO3				S	**Sn**	**18 10 17.7**	**+0.2**
BSO4	**Boso 4**	**1.38**	**348**	P	**Pn**	**18 10 05.5**	**0.0**
JKO	**Kozu shima**	**1.41**	**293**	P	**Pn**	**18 10 06.0**	**+0.1**
JKO				S	**Sn**	**18 10 23.9**	**+0.5**
JIM2	**Oshima 3**	**1.50**	**316**	P	**Pn**	**18 10 06.8**	**-0.4**
JIM2				*e*S	**Sn**	**18 10 24.5**	**-1.2**
JIZS	**Izushimoda**	**1.85**	**306**	P	**Pn**	**18 10 12.4**	**+0.4**
JIZS				S	**Sn**	**18 10 33.8**	**-0.4**
KTJJ	**Kamata 2**	**1.86**	**314**	P	**Pn**	**18 10 11.8**	**-0.3**
KTJJ				*e*S	**Sn**	**18 10 32.9**	**-1.6**
JOD2	**Odawara 2**	**2.10**	**321**	P	**Pn**	**18 10 15.2**	**-0.1**
JOD2				S	**Sn**	**18 10 38.6**	**-1.6**
SHZ3	**Shizuoka 3**	**2.50**	**305**	P	**Pn**	**18 10 22.3**	**+1.5**
MJAR	**Matsushiro Arr**	**3.54**	**325**	P	**Pn**	**18 10 35.7**	**+0.6**
	28nm,0.3s,baz=26,slow=12,SNR=197						
MJAR				S	**Sn**	**18 11 16.4**	**+0.7**
	7.6nm,0.3s,baz=144,slow=4.4,SNR=6.5						
MAJO	**Matsushiro**	**3.54**	**325**	*e*P	**Pn**	**18 10 37.2**	**+2.1**
MAT	**Matsushiro**	**3.54**	**325**	P	**Pn**	**18 10 37.0**	**+1.9**
MAT				S	**Sn**	**18 11 16.6**	**+0.9**
CBIJ	**Chichi jima**	**6.65**	**168**	P	**Pn**	**18 11 17.4**	**-0.3**
	16nm,0.3s,baz=283,slow=19,SNR=3.6						
ENH	**Enshi**	**26.64**	**271**	P	**P**	**18 15 11.1**	**-5.3**
CHTO	**Chiang Mai**	**39.98**	**259**	*e*P	**P**	**18 17 13.2**	**+0.9**
	7.4nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**45.50**	**305**	P	**P**	**18 17 56.8**	**+0.1**
	1.1nm,0.8s,mb3.8,baz=91,slow=8.3,SNR=3.9						
KURK	**Kurchatov**	**47.63**	**311**	P	**P**	**18 18 13.4**	**+0.2**
	1.4nm,0.2s,mb4.6,baz=85,slow=8.3,SNR=3.6						
KURK	**Kurchatov**	**47.63**	**311**	P	**P**	**18 18 13.4**	**+0.2**
WRAB	**Tennant Creek**	**53.62**	**187**	*e*P	**P**	**18 18 58.3**	**-0.3**
	1.3nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**53.63**	**187**	P	**P**	**18 18 58.3**	**-0.4**
	1.7nm,0.4s,mb4.3,baz=4.8,slow=7.6,SNR=36						
WRA	**Warramunga Arr**	**53.63**	**187**	P	**P**	**18 18 58.3**	**-0.4**
ASAR	**Alice Springs**	**57.36**	**187**	P	**P**	**18 19 25.8**	**+0.3**
	0.5nm,0.4s,mb3.9,baz=0.5,slow=6.5,SNR=16						
ARU	**Arti**	**58.54**	**320**	*e*P	**P**	**18 19 33.1**	**-0.3**
	1.8nm,0.6s,mb4.3						
AKASG	**Malin Array Be**	**76.62**	**323**	P	**P**	**18 21 25.7**	**-1.9**
	0.6nm,0.3s,mb3.9,baz=51,slow=5.3,SNR=4.1						
AKASG	**Malin Array Be**	**76.62**	**323**	P	**P**	**18 21 25.7**	**-1.9**
NB2	**NORSAR Subarra**	**77.08**	**337**	P	**P**	**18 21 30.1**	**+0.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=40,slow=5.6						
NOA	**NORSAR Array B**	**77.08**	**337**	P	**P**	**18 21 30.2**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=39,slow=5.7,SNR=4.8						

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*ISCJB **13** 18:10:01.0±0.4, 32°.05N±0°.03×104°.78E±0°.05, h10km, mb4.1/20, Error ellipse: s-maj=6.3km s-min=4.1km az=16.3*
*IDC **13** 18:10:02.4±0.8, 32°.16N×104°.66E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/29, mbtmp4.0/16, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/36, Error ellipse: s-maj=31.3km s-min=15.3km az=46.0*
*NEIC **13** 18:10:04.3±0.4, 32°.23N×104°.72E, h10km, mb4.3/5, Error ellipse: s-maj=10.4km s-min=6.7km az=218.0*
*BJI **13** 18:10:05.3, 32°.27N×104°.62E, h17km, mB4.5/4, mb4.3/9, ML4.2/17, Ms4.0/9, Ms7 3.6/7*
ISC 13 18:10:03.4±0.3, 32°.07N±0°.03×104°.69E±0°.05, h10km, n47, σ1ˢ15/56, mb4.1/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.41**	**215**	Pg	**Pg**	**18 10 30.9**	**+0.5**
CD2				Sg	**Sg**	**18 10 50.8**	**+2.2**
CD2				smax			
	comp=N,15μm,0.6s						
LZH	**Lanzhou**	**4.07**	**350**	Pg	**Pn**	**18 11 08.9**	**+3.3**
LZH				Pg	**Pg**	**18 11 19.0**	**-2.3**
LZH				Sn	**Sn**	**18 11 55.3**	**+2.0**
LZH				Sg	**Sg**	**18 12 08.3**	**-5.6**
LZH				smax			
	comp=N,1μm,1.1s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,7.5s						
LZH				LR	LR		
	comp=Z,4μm,9.2s						
ENH	**Enshi**	**4.49**	**112**	*e*Pn	**Pn**	**18 11 14.1**	**+2.7**
ENH				*e*Pg	**Pg**	**18 11 28.3**	**-1.1**
GYA	**Guiyang**	**5.85**	**162**	Pg	**Pg**	**18 11 54.3**	**-1.2**
GYA				smax			
	comp=N,270nm,0.7s						
GYA				smax			
	comp=E,270nm,0.8s						
KMI	**Kunming**	**7.13**	**194**	Pn	**Pn**	**18 11 55.4**	**+7.6**
KMI				Sn	**Sn**	**18 13 10.0**	**+1.1**
KMI				Sg	**Sg**	**18 13 50.4**	**-1.9**
KMI				smax			
	comp=N,38nm,1.6s						
KMI				smax			
	comp=E,35nm,1.8s						
GTA	**Gaotai**	**8.32**	**333**	*e*P	**Pn**	**18 12 04.3**	**+0.2**
GTA				pP		18 12 09.0	
GTA				sP		18 12 12.1	
GTA				S	**Sn**	**18 13 42.6**	**+4.5**
GTA				sS		18 13 47.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,4.7s						
GTA				LR	LR		
	comp=N,460nm,12.5s						
GTA				LR	LR		
	comp=E,560nm,12.2s						
GTA				LR	LR		
	comp=Z,150nm,10.1s						
WHN	**Wuhan**	**8.41**	**98**	*e*P	**Pn**	**18 11 58.1**	**-7.2**
WHN				S	**Sn**	**18 13 32.8**	**-7.4**
WHN				LR	LR		
	comp=N,2μm,9.4s						
WHN				LR	LR		
	comp=E,2μm,11.0s						
BTO	**Baotou**	**9.54**	**25**	*e*P	**Pn**	**18 12 20.8**	**+0.1**
BTO				S	**Sn**	**18 14 07.8**	**-0.1**
BTO				LR	LR		
	comp=N,130nm,9.7s						
BTO				LR	LR		
	comp=E,110nm,6.3s						
LSA	**Lhasa**	**11.87**	**262**	P	**Pn**	**18 12 53.8**	**+1.1**
LSA	**Lhasa**	**11.87**	**262**	*e*P	**Pn**	**18 12 54.9**	**+2.2**
	comp=E,3.9nm,0.6s						
TAPN	**Taplejung**	**15.48**	**257**	*e*P	**Pn**	**18 13 40.7**	**-1.1**
	comp=E,10nm,0.5s						
SONM	**Songino Array**	**15.80**	**4**	Pn	**Pn**	**18 13 45.1**	**-0.7**
	comp=E,0.1nm,0.3s,baz=185,slow=11,SNR=8.2						
ODAN	**Odare**	**15.93**	**255**	*e*P	**Pn**	**18 13 45.7**	**-2.0**
	comp=E,14nm,0.5s						
RAMN	**Ramite**	**16.55**	**257**	*e*P	**Pn**	**18 13 53.9**	**-1.7**
	comp=E,22nm,0.7s						
JIRN	**Jiri**	**16.64**	**259**	*e*P	**Pn**	**18 13 56.3**	**-0.4**
	comp=E,7.1nm,0.3s						
GUN	**Gumba**	**16.81**	**261**	*e*P	**Pn**	**18 13 56.8**	**-2.1**
	comp=E,23nm,0.8s						
KKN	**Kakani**	**17.35**	**261**	*e*P	**Pn**	**18 14 03.9**	**-1.8**
KSRS	**Korea Array**	**19.81**	**68**	P	**Pn**	**18 14 34.9**	**-0.7**
	comp=E,0.5nm,0.3s,baz=252,slow=9.6,SNR=12						
KSRS				LR	LR	18 22 47.8	
	comp=E,56nm,20.6s,baz=125,slow=39						
MK31	**Makanchi Array**	**22.59**	**317**	*e*P	**P**	**18 15 04.1**	**+0.2**
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**18 15 04.5**	**+0.6**
	comp=E,4.2nm,0.8s,mb3.9,baz=110,slow=11,SNR=30						
DDI	**Dehra Dun**	**22.83**	**273**	*ex*	x	18 15 12.0	
UCH	**Uchtor**	**25.98**	**302**	*e*P	**P**	**18 15 38.4**	**+2.2**
	comp=E,9.1nm,1.1s,mb4.2						
ZAA0	**Zalesovo Array**	**26.08**	**333**	*e*P	**P**	**18 15 36.9**	**-0.1**
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**18 15 37.2**	**+0.2**
	comp=E,12nm,0.7s,mb4.5,baz=130,slow=10.0,SNR=46						
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**18 15 37.2**	**+0.2**
AAK	**Ala-Archa**	**26.09**	**302**	P	**P**	**18 15 37.5**	**+0.4**
	comp=E,0.9nm,0.4s,mb3.6,baz=149,slow=12,SNR=3.1						
AAK	**Ala-Archa**	**26.09**	**302**	*e*P	**P**	**18 15 38.4**	**+1.2**
	comp=E,2.0nm,0.8s,mb3.7						
KURK	**Kurchatov**	**26.78**	**322**	P	**P**	**18 15 43.5**	**+0.2**
	comp=E,2.9nm,0.7s,mb3.9,baz=126,slow=10,SNR=11						
KURK	**Kurchatov**	**26.78**	**322**	*e*P	**P**	**18 15 42.8**	**-0.6**
BVAR	**Borovoye Array**	**32.35**	**320**	P	**P**	**18 16 33.0**	**+0.3**
	comp=E,0.5nm,0.4s,mb3.7,baz=89,slow=7.5,SNR=4.6						
ABKAR	**Akbulak array**	**37.41**	**311**	*e*P	**P**	**18 17 17.0**	**+0.5**
	comp=E,3.9nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**	**18 17 29.2**	**+0.7**
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**18 17 29.2**	**+0.7**
	comp=E,2.8nm,0.7s,mb4.1,baz=94,slow=7.9,SNR=14						
ARU	**Arti**	**39.98**	**321**	*e*P	**P**	**18 17 38.1**	**+0.2**
	comp=E,16nm,1.1s,mb4.7						
TIXI	**Tiksi**	**41.71**	**11**	*e*P	**P**	**18 17 51.3**	**-0.6**
	comp=E,6.9nm,1.3s,mb4.1						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**18 19 45.5**	**-0.3**
	comp=E,4.0nm,0.9s,mb4.4,baz=72,slow=8.0,SNR=8.1						
BRTR	**Keskin Array B**	**56.70**	**299**	P	**P**	**18 19 47.4**	**+0.3**
	comp=E,0.8nm,0.6s,mb3.9,baz=96,slow=5.9,SNR=4.2						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**18 19 48.7**	**-0.5**
	comp=E,2.2nm,0.7s,mb4.3,baz=72,slow=6.2,SNR=7.2						
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**18 19 49.2**	**-0.5**
	comp=E,1.3nm,0.6s,mb4.2,baz=340,slow=7.5,SNR=9.2						
ASAR	**Alice Springs**	**62.06**	**150**	P	**P**	**18 20 26.1**	**+1.9**
	comp=E,0.4nm,0.5s,mb3.8,baz=337,slow=7.3,SNR=6.5						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**18 20 36.9**	**-0.5**
	comp=E,0.7nm,0.6s,mb3.9,baz=71,slow=5.5,SNR=4.0						
GERES	**GERESS Array B**	**67.23**	**314**	P	**P**	**18 20 57.0**	**-0.8**
	comp=E,0.5nm,0.5s,mb3.8,baz=64,slow=6.1,SNR=6.2						
GERES	**GERESS Array B**	**67.23**	**314**	P	**P**	**18 20 57.0**	**-0.8**
SMF	**Signal de Mont**	**74.16**	**315**	*e*P	**P**	**18 21 39.8**	**-0.2**
	comp=E,4.1nm,0.6s,mb4.2						
CAF	**Calviac**	**76.11**	**314**	*e*P	**P**	**18 21 51.8**	**+0.5**
YKA	**Yellowknife Ar**	**80.62**	**17**	P	**P**	**18 22 15.8**	**-0.1**
	comp=E,1.0nm,0.6s,mb3.9,baz=329,slow=5.1,SNR=13						

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*DDA **13** 18:12:15.9, 40°.29N×25°.35E, h8km±4km, Ml3.4*
*NEIC **13** 18:12:15.7, 40°.21N×25°.23E, h25km, MD3.1(ATH), After ATH.*
*ATH **13** 18:12:15.7, 40°.21N×25°.23E, h25km±1km, MD3.1/5*
*THE **13** 18:12:16.6, 40°.23N×25°.25E, h12km, ML3.5/3, Error ellipse: s-maj=0.9km s-min=0.4km az=138.0*
*ISCJB **13** 18:12:16.5±0.4, 40°.22N±0°.02×25°.25E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=3.2km az=149.6*
*CSEM **13** 18:12:16.2±0.1, 40°.23N×25°.26E, h12km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.7km az=24.0*
*ISK **13** 18:12:19.3, 40°.19N×25°.52E, h5km, MD3.0*
ISC 13 18:12:16.6±0.5, 40°.21N±0°.02×25°.27E±0°.03, h2km±4km, n51, σ1ˢ32/74, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.32**	**191**	*e*PB	**Pg**	**18 12 23.4**	**+0.7**
LIA				*e*SB	**Sg**	**18 12 28.2**	**+1.4**
LIA	**Limnos Island**	**0.32**	**191**	P	**Pg**	**18 12 23.4**	**+0.7**
LIA				S	**Sg**	**18 12 28.3**	**+1.5**
LIA	**Limnos Island**	**0.32**	**191**	P	**Pg**	**18 12 23.4**	**+0.7**
LIA				S	**Sg**	**18 12 28.3**	**+1.5**
GADA	**Gvkgeada**	**0.49**	**92**	*e*PG	**Pg**	**18 12 25.9**	**-0.1**
GADA				*e*SG	**Sg**	**18 12 31.5**	**-0.7**
GADA	**Gvkgeada**	**0.49**	**92**	*e*Pg	**Pg**	**18 12 25.9**	**0.0**
GADA				*e*Sg	**Sg**	**18 12 31.5**	**-0.7**
BOZC	**Bozcaada**	**0.71**	**121**	*i* P	**Pg**	**18 12 30.1**	**-0.1**
BOZC				*i* S	**Sg**	**18 12 39.8**	**+0.5**
ENEZ	**Enez**	**0.86**	**52**	*e*PG	**Pg**	**18 12 34.1**	**+1.0**
ENEZ	**Enez**	**0.86**	**52**	*e*Pg	**Pg**	**18 12 34.1**	**+1.0**
EZN	**Ezine**	**0.90**	**115**	*e*PG	**Pg**	**18 12 33.3**	**-0.6**
EZN				*e*SG	**Sg**	**18 12 45.1**	**-0.4**
EZN	**Ezine**	**0.90**	**115**	*e*Pg	**Pg**	**18 12 33.3**	**-0.6**
EZN				*e*Sg	**Sg**	**18 12

AYVA	**Ayvalik**	**1.42**	**129**	*i* P	**Pn**	**18 12 42.2**	**-1.3**
AYVA				*i* S	**Sb**	**18 13 00.8**	**-1.6**
RKY	**Sarkoy-Tekirda**	**1.54**	**71**	*e*PN	**Pn**	**18 12 46.6**	**+1.6**
SART	**Tekirdag**	**1.54**	**71**	*i* P	**Pn**	**18 12 42.7**	**-2.4**
SART				*i* S	**Sn**	**18 13 03.2**	**-2.5**
SART	**Tekirdag**	**1.54**	**71**	*i* P	**Pn**	**18 12 42.7**	**-2.4**
SART				*i* S	**Sn**	**18 13 03.2**	**-2.5**
NVR	**Nevrokopi**	**1.56**	**317**	*e*PN	**Pn**	**18 12 43.7**	**-1.7**
NVR	**Nevrokopi**	**1.56**	**317**	*e*Pn	**Pn**	**18 12 43.7**	**-1.7**
SRS	**Serrai**	**1.56**	**306**	P	**Pn**	**18 12 43.0**	**-2.4**
SRS	**Serrai**	**1.56**	**306**	P	**Pn**	**18 12 43.0**	**-2.4**
BALY	**Balya**	**1.87**	**104**	*i* P	**Pn**	**18 12 48.5**	**-1.2**
BALY				*i* S	**Sn**	**18 13 12.9**	**-0.9**
BALY	**Balya**	**1.87**	**104**	*i* P	**Pn**	**18 12 48.5**	**-1.1**
BALY				*i* S	**Sn**	**18 13 12.9**	**-0.9**
TKR	**Tekirdag**	**1.90**	**65**	*e*PN	**Pn**	**18 12 50.9**	**+0.8**
EDRB	**Edirne**	**1.98**	**34**	*e*PN	**Pn**	**18 12 53.8**	**+2.6**
EDC	**Edincik**	**1.99**	**85**	*e*PN	**Pn**	**18 12 52.8**	**+1.5**
BALB	**Balikesir**	**2.09**	**105**	*e*PN	**Pn**	**18 12 54.7**	**+2.0**
CRLT	**Corlu**	**2.09**	**63**	*e*PN	**Pb**	**18 12 55.1**	**-0.2**
SLVT	**Silivri**	**2.46**	**65**	*e*PN	**Pb**	**18 13 00.2**	**-1.4**
DURS	**Dursunbey**	**2.54**	**103**	*e*P	**Pb**	**18 13 02.9**	**-0.1**
ELBA	**Catalca**	**2.58**	**68**	*e*P	**Pn**	**18 12 58.4**	**-1.1**
ELBA	**Catalca**	**2.58**	**68**	*e*P	**Pn**	**18 12 58.4**	**-1.1**
CTYL	**Yal??k??y-??at**	**2.62**	**60**	*e*PN	**Pn**	**18 13 01.4**	**+1.5**
DST	**Dursunbey**	**2.66**	**102**	*e*PN	**Pn**	**18 13 02.8**	**+2.3**
CTKS	**Kestanelik-??a**	**2.67**	**66**	*e*PN	**Pn**	**18 13 02.8**	**+2.1**
BGKT	**Bogazkoy**	**2.84**	**69**	*e*PN	**Pn**	**18 13 05.2**	**+2.2**
KLYT	**Kilyos**	**3.05**	**69**	*e*PN	**Pn**	**18 13 08.4**	**+2.5**
YLV	**Yalova**	**3.16**	**82**	*e*PN	**Pn**	**18 13 10.0**	**+2.7**

ISCJB ***13*** *18:13:52.0±0.3, 31.°31N±0.°04×104.°15E±0.°05, h10km, mb4.1/24, Error ellipse: s-maj=6.8km s-min=5.8km az=20.5*

IDC ***13*** *18:13:52.6±0.7, 31.°30N×103.°96E, h0km, mb4.0/15, mb1 4.2/16, mb1mx4.0/27, mbtmp4.0/16, ML3.4/1, Error ellipse: s-maj=32.1km s-min=14.0km az=52.0*

NEIC ***13*** *18:13:54.3±0.4, 31.°23N×103.°86E, h10km, mb4.2/5, Error ellipse: s-maj=14.3km s-min=7.2km az=54.0*

BJI ***13*** *18:13:56.0, 31.°29N×104.°07E, h23km, mB4.7/6, mb4.4/9, ML3.9/15, Ms3.9/5, Ms7 3.9/5*

ISC 13 18:13:54.3±0.3, 31.°30N±0.°04×104.°04E±0.°06, h10km, n38, σ0°95/40, mb4.1/24, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**212**	Pg	**Pg**	**18 14 03.3**	**+0.1**
CD2				Sg	**Sg**	**18 14 09.8**	**+0.5**
CD2				smax			
	comp=N,3μm,1.1s						
GYA	**Guiyang**	**5.35**	**154**	Pn	**Pn**	**18 15 11.3**	**-2.8**
GYA				smax			
	comp=N,330nm,1.0s						
GYA				smax			
	comp=E,330nm,1.0s						
GYA				LR	LR		
	comp=Z,3μm,4.0s						
KMI	**Kunming**	**6.26**	**191**	Pn	**Pn**	**18 15 27.8**	**+1.1**
KMI				Sn	**Sn**	**18 16 46.4**	**+8.1**
KMI				smax			
	comp=N,45nm,1.6s						
KMI				smax			
	comp=E,53nm,1.2s						
KMI				LR	LR		
	comp=N,530nm,7.6s						
KMI				LR	LR		
	comp=E,950nm,11.9s						
WHN	**Wuhan**	**8.89**	**92**	P	Px	18 16 17.3	
WHN				S	**Sn**	**18 17 41.4**	**-1.6**
BDT	**Bhumibol Dam**	**14.72**	**199**	P	**Pn**	**18 17 28.0**	**+5.4**
NST	**Nakhon Sawan**	**15.96**	**194**	P	**Pn**	**18 17 35.5**	**-3.5**
SONM	**Songino Array**	**16.61**	**6**	Pn	**Pn**	**18 17 48.4**	**+1.3**
	comp=E,0.1nm,0.3s,baz=187,slow=10,SNR=6.9						
KSRS	**Korea Array**	**20.62**	**66**	P	**P**	**18 18 33.6**	**-0.1**
	comp=E,4.7nm,0.8s,baz=261,slow=10,SNR=14						
CN2	**Changchun**	**20.99**	**48**	*e*P	**P**	**18 18 39.8**	**+2.1**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**18 18 57.5**	**+0.6**
	comp=Z,4.9nm,0.9s,mb3.9,baz=125,slow=10,SNR=18						
MDJ	**Mudanjiang**	**24.02**	**49**	P	**P**	**18 19 11.3**	**+2.2**
UCH	**Uchtor**	**25.93**	**303**	*e*P	**P**	**18 19 29.9**	**+3.3**
	comp=Z,3.1nm,0.9s,mb3.8						
ZAA0	**Zalesovo Array**	**26.52**	**334**	*e*P	**P**	**18 19 32.2**	**+0.4**
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**18 19 31.6**	**-0.2**
	comp=Z,2.9nm,0.7s,mb3.9,baz=134,slow=8.5,SNR=11						
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**18 19 36.5**	**-0.1**
	comp=Z,2.3nm,0.8s,mb3.8,baz=131,slow=9.2,SNR=7.4						
BVAR	**Borovoye Array**	**32.60**	**322**	P	**P**	**18 20 26.0**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=117,slow=8.5,SNR=3.8						
BRVK	**Borovoye**	**32.67**	**322**	*e*P	**P**	**18 20 27.1**	**+0.7**
	comp=Z,2.1nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**37.50**	**312**	*e*P	**P**	**18 21 07.7**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.7						
AKTK	**Aktyubinsk**	**38.96**	**313**	P	**P**	**18 21 20.0**	**-0.4**
AKTO	**Aktyubinsk**	**38.96**	**313**	P	**P**	**18 21 20.0**	**-0.4**
	comp=Z,1.1nm,0.6s,mb3.8,baz=100,slow=9.2,SNR=3.7						
ARU	**Arti**	**40.24**	**322**	*e*P	**P**	**18 21 30.8**	**-0.1**
	comp=Z,9.4nm,1.2s,mb4.4						
JOF	**Joensuu**	**54.83**	**328**	*e*p	**P**	**18 23 23.7**	**-0.5**
	comp=Z,3.2nm,0.6s,mb4.5						
BRTR	**Keskin Array B**	**56.60**	**300**	P	**P**	**18 23 37.1**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.8,baz=108,slow=6.7,SNR=4.3						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**18 23 39.7**	**-0.3**
	comp=Z,4.8nm,0.9s,mb4.5,baz=74,slow=9.1,SNR=5.8						
FINES	**FINESS Array B**	**57.37**	**326**	P	**P**	**18 23 41.0**	**-1.4**
	comp=Z,2.5nm,0.7s,mb4.3,baz=101,slow=18,SNR=5.7						
WRAB	**Tennant Creek**	**58.66**	**146**	*e*P	**P**	**18 23 52.4**	**+0.5**
	comp=Z,7.0nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**18 23 51.7**	**-0.2**
	comp=Z,8.0nm,0.8s,mb4.8,baz=339,slow=7.6,SNR=79						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**18 24 13.5**	**+0.9**
	comp=Z,1.4nm,0.7s,mb4.2,baz=340,slow=6.7,SNR=11						
NB2	**NORSAR Subarra**	**64.46**	**327**	P	**P**	**18 24 29.2**	**-1.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**18 24 29.5**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=72,slow=6.9,SNR=4.8						
GERES	**GERESS Array B**	**67.37**	**314**	P	**P**	**18 24 48.4**	**-1.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=35,slow=7.2,SNR=3.5						
CDF	**Champ du Feu**	**71.44**	**316**	*e*P	**P**	**18 25 14.1**	**-0.6**
STKA	**Stephens Creek**	**72.20**	**147**	P	**P**	**18 25 19.8**	**+0.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=320,slow=11,SNR=5.2						
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**18 25 24.8**	**+0.2**
	comp=Z,4.6nm,0.6s,mb4.3						
LPL	**La Plagne**	**73.08**	**313**	*e*P	**P**	**18 25 24.7**	**+0.1**
	comp=Z,6.1nm,0.6s,mb4.4						
SMF	**Signal de Mont**	**74.32**	**315**	*e*P	**P**	**18 25 31.1**	**-0.7**
	comp=Z,4.4nm,0.7s,mb4.2						
TCF	**Toulx Ste Croi**	**75.48**	**315**	*e*P	**P**	**18 25 38.0**	**-0.5**
	comp=Z,2.7nm,0.8s,mb3.9						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**18 26 11.9**	**+0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=329,slow=5.3,SNR=11						

NIED ***13*** *18:27:00, 22.°70N×120.°90E, h68km, Mw5.5 Best double couple: M0=2.20000×10¹⁷ NP1:φs=60.00000°, δ62.00000°, λ89.00000°. NP2:φs=241.00000°, δ28.00000°, λ91.00000°.*

JMA ***13*** *18:27:52.9±0.4, 22.°66N×120.°87E, h96km, M4.4*

IDC ***13*** *18:27:53.8±0.5, 22.°63N×121.°13E, h0km, mb4.4/21, mb1 4.4/22, mb1mx4.4/30, mbtmp4.4/22, ML3.7/1, MS4.6/29, Ms1 4.6/29, ms1mx4.5/36, Error ellipse: s-maj=23.9km s-min=11.8km az=66.0*

ISCJB ***13*** *18:27:54.1±0.3, 22.°67N±0.°01×121.°18E±0.°02, h10km±2km, mb4.7/76, MS4.8/51, Error ellipse: s-maj=2.6km s-min=2.2km az=23.1*

BJI ***13*** *18:27:55.5, 22.°67N×121.°21E, h21km, mB5.3/39, mb4.6/45, ML4.5/4, Ms5.3/52, Ms7 5.0/46*

TAP ***13*** *18:27:55.3, 22.°77N×121.°04E, h7km, ML5.0, B*

NEIC ***13*** *18:27:56.8±2.1, 22.°71N×121.°24E, h20km±15km, mb4.8/35, ML5.3(TAP), Error ellipse: s-maj=7.1km s-min=5.6km az=86.0*

NEIC Felt at Kao-hsiung. Recorded [5 TAP] in T'ai-tung, [3 TAP] in P'ing-tung, [2 TAP] in Kao-hsiung and [1 TAP] in Chia-i, Nan-t'ou, T'ai-nan and Yun-lin.

MOS ***13*** *18:27:56.8±1.4, 22.°68N×121.°25E, h33km, mb5.2/34, MS5.0/21, Error ellipse: s-maj=10.0km s-min=5.1km az=112.5*

GCMT ***13*** *18:27:56.8±0.2, 22.°77N×121.°10E, h12km, MW5.2/89, Moment Tensor Solution. s62,c96; s89,c163; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.28±.10; Mθθ-2.36±.09; Mφφ2.08±.10; Mrθ4.43±.23; Mφφ-4.81±.07; Mφr-0.63±.26; Best double couple: M0=6.92900×10¹⁶ NP1:φs192.00000°, δ50.00000°, λ1.00000°. NP2: φs101.00000°, δ89.00000°, λ140.00000°. Principal axes: T 6.7120, Plg28.0000°, Azm49.0000°; N 0.4340, Plg50.0000°, Azm280.0000°; P -7.1450, Plg27.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***13*** *18:28:02.5, 23.°29N×121.°12E, h33km, mb5.3, MS5.1, Taiwan*

DJA ***13*** *18:28:04, 22.°83N×121.°20E, h62km, Mw5.4/14*

ISC 13 18:27:55.1±0.3, 22.°71N±0.°01×121.°16E±0.°02, h5km±1km, h31km±2.1km: pP-P, n308, σ1°19/358, mb4.7/76, MS4.8/51, 36C-21D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.04**	**340**	⇑*i*P	**Pg**	**18 27 58.8**	**+2.5**
	baz=98						
TWG	**Pinlang**	**0.14**	**322**	⇑*i*P	**Pg**	**18 27 57.5**	**-0.3**
	baz=27						
TWG				*i* S	**Sg**	**18 27 59.0**	**-0.7**
	baz=27						
ECL	**Taimali**	**0.23**	**239**	⇓*i*P	**Pg**	**18 27 59.4**	**-0.1**
	baz=205						
CHKT	**Chengkung**	**0.43**	**26**	⇓*i*P	**Pg**	**18 28 04.9**	**+1.6**
	baz=42						
CHKT				*e*S	**Sg**	**18 28 11.8**	**+2.9**
	baz=42						
TAW	**Tawu**	**0.43**	**215**	⇓*i*P	**Pg**	**18 28 04.1**	**+0.7**
	baz=200						
TAW				*i* S	**Sg**	**18 28 09.7**	**+0.7**
	baz=200						
EAST	**Anshuo**	**0.44**	**222**	⇓*i*P	**Pg**	**18 28 04.0**	**+0.5**
	baz=214						
SSD	**Sandimen**	**0.49**	**274**	⇓*i*P	**Pg**	**18 28 03.2**	**-1.4**
	baz=266						
SSD				*e*S	**Sg**	**18 28 07.7**	**-3.2**
	baz=266						
ELDTW	**Lidau**	**0.49**	**344**	⇑*i*P	**Pg**	**18 28 03.9**	**-0.7**
	baz=355						
ELDTW				*e*S	**Sg**	**18 28 09.4**	**-1.6**
	baz=355						
STYT	**Tauyuan**	**0.58**	**320**	⇑*i*P	**Pg**	**18 28 05.3**	**-1.0**
	baz=335						
SCZT	**Fangliau**	**0.61**	**236**	⇓*i*P	**Pg**	**18 28 06.5**	**-0.2**
	baz=233						
SCZT				*e*S	**Sg**	**18 28 13.8**	**-0.8**
	baz=233						
SGLT	**Jiouru**	**0.62**	**271**	⇓*i*P	**Pg**	**18 28 06.8**	**-0.2**
	baz=273						
SGLT				S	**Sg**	**18 28 14.0**	**-1.1**
	baz=273						
TWF1	**Yuli**	**0.65**	**11**	⇓*i*P	**Pg**	**18 28 06.7**	**-0.8**
	baz=8.0						
TWF1				*e*S	**Sg**	**18 28 15.8**	**-0.2**
	baz=8.0						
SGST	**Jiashian**	**0.65**	**305**	⇑*i*P	**Pg**	**18 28 06.8**	**-0.8**
	baz=300						
TWM1	**Shoushan**	**0.69**	**279**	⇓*i*P	**Pg**	**18 28 08.5**	**+0.1**
	baz=282						
WTP	**Ta-pu**	**0.73**	**316**	⇑*i*P	**Pg**	**18 28 08.8**	**-0.4**
	baz=327						
CHN1	**Nanshi**	**0.75**	**309**	⇑*i*P	**Pg**	**18 28 09.3**	**-0.2**
	baz=311						
LAY	**Lan-yu**	**0.76**	**152**	P	**Pg**	**18 28 10.6**	**+0.9**
	baz=148						
YUS	**Yu-Shan**	**0.80**	**346**	⇑*i*P	**Pg**	**18 28 09.8**	**-0.6**
YUS				*e*S	**Sg**	**18 28 22.3**	**+1.6**
EHY	**Hungye**	**0.80**	**10**	⇓*e*P	**Pg**	**18 28 09.0**	**-1.5**
	baz=8.0						
EHY				S	**Sg**	**18 28 21.1**	**+0.1**
	baz=8.0						
HEN	**Hengchun**	**0.81**	**209**	⇑*i*P	**Pg**	**18 28 11.4**	**+0.8**
	baz=188						
CHN3	**Shinhua**	**0.82**	**296**	⇑*i*P	**Pg**	**18 28 11.9**	**+1.1**
	baz=296						
CHN4	**Tsaushan**	**0.82**	**321**	⇑*i*P	**Pg**	**18 28 10.7**	**-0.2**
	baz=329						
CHN4				*e*S	**Sg**	**18 28 23.3**	**+1.7**
	baz=329						
TWP	**Hsiaoliuchiu**	**0.82**	**244**	⇓*i*P	**Pg**	**18 28 13.5**	**+2.6**
	baz=232						
TWK	**Hsinying**	**0.83**	**312**	⇑*i*P	**Pg**	**18 28 11.0**	**-0.1**
	baz=313						
TWK				*e*S	**Sg**	**18 28 22.2**	**+0.3**
	baz=313						
TSEB	**Hengchuen, Pin**	**0.84**	**197**	*e*P	**Pg**	**18 28 11.8**	**+0.5**
	baz=177						
ALS	**Alishan**	**0.86**	**338**	⇑*i*P	**Pg**	**18 28 10.9**	**-0.7**
	baz=342						
ALS				*e*S	**Sg**	**18 28 22.5**	**-0.3**
	baz=342						
TAI1	**Yung-k'ang**	**0.92**	**291**	⇑*i*P	**Pg**	**18 28 13.3**	**+0.6**
	baz=289						
CHN5	**Tsauling**	**0.99**	**333**	⇑*i*P	**Pg**	**18 28 13.4**	**-0.6**
	baz=338						
SCLT	**Jiali**	**1.00**	**297**	⇑P	**Pg**	**18 28 14.5**	**+0.2**
	baz=296						
SCLT				S	**Sg**	**18 28 29.4**	**+2.0**
	baz=296						
CHN2	**Minshiung**	**1.03**	**322**	⇑*i*P	**Pg**	**18 28 14.9**	**0.0**
	baz=324						
CHN2				*e*S	**Sg**	**18 28 28.7**	**+0.4**
	baz=324						
CHY	**Chiayi**	**1.04**	**319**	⇑*i*P	**Pg**	**18 28 14.8**	**-0.2**
	baz=334						
CHY				*e*S	**Sg**	**18 28 27.4**	**-1.0**
	baz=334						
CHN8	**Yiju**	**1.08**	**306**	⇑P	**Pg**	**18 28 15.4**	**-0.4**
	baz=305						
CHN8				*e*S	**Sg**	**18 28 30.6**	**+0.7**
	baz=305						
WGK	**Gukeng**	**1.11**	**330**	⇑*i*P	**Pg**	**18 28 16.6**	**+0.1**
	baz=333						
WGK				*e*S	**Sg**	**18 28 31.6**	**+0.6**
	baz=333						
ESL	**Shilin**	**1.12**	**13**	*e*P	**Pg**	**18 28 13.6**	**-3.1**
	baz=31						
ESL				*e*S	**Sg**	**18 28 31.7**	**+0.5**
	baz=31						
SMLT	**Sun Moon Lake**	**1.19**	**348**	⇑*i*P	**Pg**	**18 28 16.9**	**-1.1**
	baz=360						
SMLT				*e*S	**Sg**	**18 28 34.0**	**+0.7**
	baz=360						
ESF	**Shoufeng Towns**	**1.20**	**15**	*e*P	**Pg**	**18 28 16.7**	**-1.3**
	baz=39						
TYC	**Yuchr**	**1.22**	**347**	⇑*i*P	**Pg**	**18 28 17.5**	**-1.0**
	baz=358						
TYC				*e*S	**Sg**	**18 28 34.8**	**+0.5**
	baz=358						
WNT	**Mingjian**	**1.24**	**339**	⇑*i*P	**Pg**	**18 28 18.7**	**-0.2**
	baz=342						
WNT				S	**Sg**	**18 28 36.0**	**+1.0**
	baz=342						
WSF	**Szhu**	**1.26**	**317**	⇑*i*P	**Pg**	**18 28 18.3**	**-1.1**
	baz=318						
WSF				*e*S	**Sg**	**18 28 35.6**	**-0.2**
	baz=318						
HWA	**Hwalien**	**1.32**	**18**	*e*P	**Pn**	**18 28 19.6**	**-0.7**
	baz=41						
WTCT	**Ta-ch'eng**	**1.40**	**325**	P	**Pn**	**18 28 20.1**	**-1.3**
	baz=326						
WTCT				*e*S	**Sb**	**18 28 38.9**	**-1.2**
	baz=326						
TWD	**Chiawan**	**1.42**	**16**	*e*P	**Pn**	**18 28 18.9**	**-2.6**
	baz=40						
WHF	**Hehuan Shan**	**1.43**	**4**	⇓*e*P	**Pn**	**18 28 19.7**	**-2.0**
	baz=20						
TCU	**Taichung**	**1.50**	**343**	⇑*i*P	**Pn**	**18 28 23.1**	**+0.5**
	baz=345						
TCU				S	**Sn**	**18 28 43.2**	**+0.6**
	baz=345						
TWT	**Tachien**	**1.53**	**0**	*e*P	**Pn**	**18 28 22.4**	**-0.8**
	baz=15						
TWQ1	**Liyutan**	**1.67**	**348**	⇓P	**Pn**	**18 28 26.0**	**+1.0**
	baz=352						
TWQ1				S	**Sn**	**18 28 48.7**	**+1.9**
	baz=352						
PNG	**Penghu**	**1.71**	**300**	⇑*i*P	**Pn**	**18 28 23.5**	**-2.0**
	baz=299						
PNG				*e*S	**Sn**	**18 28 43.8**	**-4.0**
	baz=299						
NNS	**Nan Shan**	**1.73**	**6**	*e*P	**Pn**	**18 28 24.1**	**-1.8**
	baz=13						
NSY	**Sanyi**	**1.73**	**348**	P	**Pn**	**18 28 26.9**	**+1.0**
	baz=351						
NSY				*e*S	**Sn**	**18 28 51.1**	**+2.6**
	baz=351						
ENA	**Nanau**	**1.79**	**17**	*e*P	**Pn**	**18 28 23.6**	**-3.0**
	baz=40						
NSTT	**Nanjuang**	**1.92**	**356**	⇓P	**Pn**	**18 28 28.7**	**+0.3**
	baz=1.0						
NSTT				*e*S	**Sn**	**18 28 55.2**	**+2.3**
	baz=1.0						
NSK	**Sanguang**	**1.96**	**5**	*e*P	**Pn**	**18 28 28.0**	**-1.0**
	baz=13						
TWC	**Suao**	**1.99**	**18**	*e*P	**Pn**	**18 28 27.8**	**-1.7**
	baz=40						
TWE	**Neicheng**	**2.05**	**13**	*e*P	**Pn**	**18 28 30.2**	**0.0**
	baz=37						
HSN	**Hsinchu**	**2.09**	**355**	*e*P	**Pn**	**18 28 32.8**	**+2.1**
	baz=7.0						
ILA	**Ilan**	**2.11**	**15**	*e*P	**Pn**	**18 28 32.6**	**+1.5**
	baz=36						
NCU	**National Centr**	**2.25**	**1**	*e*P	**Pn**	**18 28 34.6**	**+1.6**
	baz=11						
TATO	**Taipei**	**2.27**	**7**	*e*Pn	**Pn**	**18 28 32.4**	**-0.9**
TWA	**Mucha**	**2.29**	**10**	*e*P	**Pn**	**18 28 34.2**	**+0.6**
	baz=37						
TAP1	**Taipei**	**2.34**	**8**	*e*P	**Pn**	**18 28 36.0**	**+1.8**
	baz=30						
TAP1				*e*S	**Sn**	**18 29 07.5**	**+4.2**
	baz=30						
TWS1	**Kuangyinshan**	**2.39**	**6**	*e*P	**Pn**	**18 28 35.8**	**+0.9**
	baz=352						
TWS1				*e*S	**Sn**	**18 29 08.7**	**+4.1**
	baz=352						
TWB1	**Santiao Chiao**	**2.41**	**18**	*e*P	**Pn**	**18 28 34.9**	**-0.2**
	baz=40						
NWF	**Wu-fen Shan**	**2.41**	**13**	*e*P	**Pn**	**18 28 35.4**	**+0.1**
	baz=37						
YOJ	**Yonaguni jima**	**2.43**	**44**	P	**Pn**	**18 28 34.7**	**-0.8**
YOJ				S	**Sn**	**18 29 06.9**	**+1.3**
YOJ	**Yonaguni jima**	**2.43**	**44**	*e*P	**Pn**	**18 28 34.6**	**-0.9**
	baz=46						
TWY	**Chenhua**	**2.58**	**9**	*e*P	**Pn**	**18 28 38.8**	**+1.2**
	baz=39						
HATJ	**Hateruma jima**	**2.77**	**61**	P	**Pn**	**18 28 40.1**	**-0.1**
HATJ				S	**Sn**	**18 29 15.9**	**+1.9**
IRIF	**Iriomote-Funau**	**2.86**	**55**	P	**Pn**	**18 28 41.0**	**-0.3**
IRIF				*e*S	**Sn**	**18 29 17.6**	**+1.5**
PCYT	**Pengchaiyu**	**3.02**	**16**	*e*P	**Pn**	**18 28 44.2**	**+0.6**
	baz=38						
JKRS	**Kuro-shima**	**3.02**	**59**	P	**Pn**	**18 28 43.2**	**-0.4**
JKRS				*e*S	**Sn**	**18 29 21.9**	**+1.7**
KNM	**Kinmen**	**3.02**	**305**	*e*P	**Pn**	**18 28 43.1**	**-0.6**
	baz=304						
JIJ	**Ishigaki jima**	**3.19**	**58**	P	**Pn**	**18 28 44.8**	**-1.1**
JIJ				S	**Sn**	**18 29 24.1**	**-0.3**
QZH	**Quanzhou**	**3.24**	**314**	⇓*i*Pn	**Pn**	**18 28 45.3**	**-1.3**
QZH				Sn	**Sn**	**18 29 24.4**	**-1.1**
QZH				smax			
	comp=N,2μm,0.8s						
QZH				smax			
	comp=E,2μm,0.9s						
QZH				LR	LR		
	comp=N,12μm,5.3s						
QZH				LR	LR		
	comp=E,25μm,5.0s						
QZH				LR	LR		
	comp=Z,18μm,17.2s						
JTJ	**Tarama**	**3.77**	**59**	P	**Pn**	**18 28 53.3**	**-0.6**
JTJ				*e*S	**Sn**	**18 29 39.1**	**+0.4**
JMJ	**Miyako jima 2**	**4.32**	**60**	P	**Pn**	**18 29 01.7**	**+0.2**
JMJ	**Miyako jima 2**	**4.32**	**60**	*e*P	**Pn**	**18 29 01.0**	**-0.6**
	baz=63						
JOGS	**Gusukube**	**4.39**	**62**	P	**Pn**	**18 29 02.7**	**+0.3**
JKE	**Kume jima 2**	**6.26**	**54**	P	**Pn**	**18 29 26.3**	**-1.8**
GZH	**Guangzhou**	**7.22**	**274**	Pn	**Pn**	**18 29 37.4**	**-3.9**
SSE	**Sheshan**	**8.35**	**0**	P	**Pn**	**18 29 56.8**	**0.0**
SSE				S	**Sn**	**18 31 31.9**	**+0.4**
SSE				pmax	pmax		
	comp=Z,45nm,0.8s						
SSE				pmax	pmax		
	comp=Z,290nm,8.2s						
SSE				LR	LR		
	comp=N,4μm,14.6s						
SSE				LR	LR		
	comp=E,16μm,14.6s						
SSE				LR	LR		
	comp=Z,12μm,10.3s						
NJ2	**Nanjing**	**9.53**	**348**	*e*P	**Pn**	**18 30 20.5**	**+7.5**
NJ2				pP		18 30 24.8	
NJ2				sP		18 30 28.1	
NJ2				S	**Sn**	**18 32 11.1**	**+11**
NJ2				sS		18 32 18.1	
NJ2				pmax	pmax		
	comp=Z,90nm,1.1s						
NJ2				LR	LR		
	comp=N,17μm,8.1s						
NJ2				LR	LR		
	comp=E,15μm,8.6s						
NJ2				LR	LR		
	comp=Z,19μm,9.2s						
WHN	**Wuhan**	**9.89**	**323**	⇓P	**Pn**	**18 30 19.4**	**+1.4**
WHN				pP		18 30 23.9	
WHN				S	**Sn**	**18 32 15.5**	**+6.0**
WHN				LR	LR		
	comp=N,25μm,9.8s						
WHN				LR	LR		
	comp=E,9μm,6.3s						
WHN				LR	LR		
	comp=Z,22μm,9.2s						
QIZ	**Qiongzhong**	**11.20**	**253**	P	**Pn**	**18 30 36.8**	**+0.9**
QIZ				pP		18 30 40.9	
QIZ				S	**Sn**	**18 32 41.8**	**+0.2**
QIZ				pmax	pmax		
	comp=Z,28nm,1.4s						
QIZ				LR	LR		
	comp=N,9μm,17.8s						
QIZ				LR	LR		
	comp=Z,12μm,13.2s						
QIZ	**Qiongzhong**	**11.20**	**253**	*e*Pn	**Pn**	**18 30 36.1**	**+0.2**
QIZ				*e*Sn	**Sn**	**18 32 35.0**	**-6.

KMI LR LR
comp=N,6μm,15.9s
KMI LR LR
comp=E,3μm,11.9s
KMI LR LR
comp=Z,3μm,17.4s
KKM Kota Kinabalu 17.25 197 P **Pn 18 32 01.8 +4.9**
SDKM Sandakan 17.40 193 P **Pn 18 32 03.7 +4.9**
CD2 Chengdu 17.54 301 P **Pn 18 32 01.8 +1.4**
CD2 pP pP 18 32 06.6 +3.7
CD2 sP sP 18 32 10.3 +6.8
CD2 PP 18 32 16.5
CD2 S **Sn 18 35 15.4 -0.7**
CD2 sS sS 18 35 23.1 -3.2
CD2 SS 18 35 36.5
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,510nm,6.5s
CD2 LR LR
comp=N,5μm,8.9s
CD2 LR LR
comp=Z,4μm,13.1s
BJT Baijiatuau 17.77 347 *e*P **Pn 18 32 04.8 +1.6**
BJT pmax pmax
comp=Z,50nm,0.8s
BJT Baijiatuau 17.77 347 *e*Pn **Pn 18 32 04.8 +1.7**
comp=Z,50nm,0.8s
BJI Beijing 17.79 347 P **Pn 18 32 04.9 +1.5**
BJI S **Sn 18 35 24.1 +2.2**
BJI pmax pmax
comp=Z,24nm,0.9s
BJI pmax pmax
comp=Z,2μm,6.6s
BJI LR LR
comp=N,9μm,13.9s
BJI LR LR
comp=E,6μm,10.8s
BJI LR LR
comp=Z,3μm,14.3s
SNY Shenyang 19.17 6 ⇑P **Pn 18 32 25.8 +5.5**
SNY S **Sn 18 35 51.8 -3.5**
SNY pmax pmax
comp=Z,11nm,0.9s
SNY pmax pmax
comp=Z,620nm,8.6s
SNY LR LR
comp=N,3μm,18.8s
SNY LR LR
comp=E,8μm,17.5s
SNY LR LR
comp=Z,6μm,14.9s
JHJ Hachijo jima 2 19.42 54 LR LR 18 39 29.7
comp=Z,1μm,19.8s,baz=131,slow=36
CBIJ Chichi jima 19.56 73 LR LR 18 38 05.6
comp=Z,1μm,21.2s,baz=268,slow=31
HHC Hu-ho-hao-te 19.81 338 ⇓P **Pn 18 32 29.3 +1.3**
HHC pP pP 18 32 34.4 +6.6
HHC sP sP 18 32 38.0 +10
HHC PP 18 32 48.8
HHC S **Sn 18 36 09.3 -1.6**
HHC sS sS 18 36 15.4 +3.2
HHC SS 18 36 37.3
HHC PcP PcP 18 36 44.1 -0.3
HHC pmax pmax
comp=Z,44nm,1.2s
HHC pmax pmax
comp=Z,620nm,5.2s
HHC LR LR
comp=N,7μm,16.4s
HHC LR LR
comp=E,2μm,18.6s
HHC LR LR
comp=Z,6μm,16.0s
LZH Lanzhou 20.09 315 *e*P **P 18 32 29.0 -0.6**
LZH pP 18 32 37.8
LZH sP sP 18 32 42.1 +11
LZH PP 18 32 48.6
LZH S **S 18 36 08.1 -7.6**
LZH sS sS 18 36 20.3 +2.5
LZH SS 18 36 36.5
LZH pmax pmax
comp=Z,92nm,1.2s
LZH pmax pmax
comp=Z,890nm,5.3s
LZH LR LR
comp=E,5μm,8.0s
LZH LR LR
comp=Z,6μm,10.5s,MS5.2
BTO Baotou 20.17 335 *e*P **P 18 32 30.3 -0.1**
BTO S **S 18 36 17.3 +0.1**
BTO LR LR
comp=N,4μm,10.6s,MS5.0
BTO LR LR
comp=E,2μm,12.1s,MS5.0
MAJO Matsushiro 20.19 43 *e*P **P 18 32 29.2 -1.5**
MAJO pmax pmax
comp=Z,32nm,1.3s
MAJO Matsushiro 20.19 43 *e*P **P 18 32 29.2 -1.4**
comp=Z,32nm,1.3s
MAT Matsushiro 20.19 43 P **P 18 32 31.6 +0.9**
MAT *e*S **S 18 36 27.6 +10**
MJAR Matsushiro Arr 20.19 43 P **P 18 32 31.9 +1.3**
comp=Z,3.5nm,0.9s,baz=231,slow=6.7,SNR=7.5
MJAR LR LR 18 41 08.6
comp=Z,2μm,20.3s,MS4.4,baz=230,slow=39
BTM Bintulu 20.92 203 P **P 18 32 42.9 +4.2**
CHTO Chiang Mai 21.13 264 *e*P **P 18 32 41.6 +0.6**
CHTO pmax pmax
comp=Z,31nm,1.0s,mb4.6
CHTO Chiang Mai 21.13 264 *e*P **P 18 32 41.6 +0.6**
comp=Z,30nm,1.0s,mb4.6
CM31 Chiang Mai Arr 21.22 263 P **P 18 32 42.4 +0.4**
comp=Z,16nm,0.8s,mb4.4
CN2 Changchun 21.33 9 *e*P **P 18 32 45.1 +2.2**
CN2 *e*sP sP 18 32 55.8 +11
CN2 *e*S **S 18 36 37.0 -3.1**
CN2 SS 18 37 11.6
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
CN2 pmax pmax
comp=Z,400nm,6.0s
CN2 LR LR
comp=N,3μm,12.0s,MS5.2
CN2 LR LR
comp=E,6μm,12.0s,MS5.2
CN2 LR LR
comp=Z,7μm,14.0s,MS5.2
SBUM Sibu 21.93 205 P **P 18 32 50.3 +0.7**
VLA Vladivostok 22.22 21 P **P 18 32 49.0 -3.4**
VLA MLR MLR
comp=Z,2μm,13.6s,MS4.7
MDJ Mudanjiang 22.92 16 P **P 18 32 59.6 -0.3**
MDJ pP 18 33 05.3
MDJ sP sP 18 33 07.9 +6.1
MDJ S **S 18 37 09.3 -1.1**
MDJ sS sS 18 37 19.1 +6.3
MDJ ScP ScP 18 40 25.3 -3.7
MDJ PcS PcS 18 40 27.6 -1.6
MDJ ScS ScS 18 44 12.0 -2.6
MDJ pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
MDJ pmax pmax
comp=Z,410nm,5.2s
MDJ LR LR
comp=N,2μm,17.0s,MS5.1
MDJ LR LR
comp=E,6μm,17.0s,MS5.1
MDJ LR LR
comp=Z,4μm,15.6s,MS4.9
KSM Kuching 23.60 208 P **P 18 33 07.0 -0.3**
KTGM Kuala Trenggan 24.54 228 P **P 18 33 19.9 +4.1**
GTA Gaotai 24.63 317 *e*P **P 18 33 17.3 +0.8**
GTA pP 18 33 23.3
GTA sP sP 18 33 26.5 +8.0
GTA S **S 18 37 42.1 +3.8**
GTA pmax pmax
comp=Z,8.0nm,1.1s,mb4.2
GTA pmax pmax
comp=Z,810nm,4.5s
GTA LR LR
comp=N,1μm,12.0s
GTA LR LR
comp=E,2μm,18.0s
GTA LR LR
comp=Z,2μm,15.9s,MS4.8
KULM Kulim 26.32 232 P **P 18 33 35.5 +3.4**
HIA Hailar 26.52 358 *e*P **P 18 33 34.1 +0.6**
HIA pmax pmax
comp=Z,18nm,1.4s
HIA Hailar 26.52 358 *e*P **P 18 33 34.1 +0.6**
comp=Z,18nm,1.4s,mb4.4
IPM Ipoh 26.61 230 P **P 18 33 37.6 +3.0**
ERM Erimo 26.62 39 P **P 18 33 34.4 -0.1**
ERM pmax pmax
comp=Z,33nm,1.0s,mb4.8
ERM Erimo 26.62 39 P **P 18 33 34.4 0.0**
comp=Z,33nm,1.0s,mb4.8
MYKOM Kota Tinggi 26.74 221 P **P 18 33 40.3 +4.4**
MYKOM Kota Tinggi 26.74 221 P **P 18 33 40.3 +4.5**
SHL Shillong 26.85 282 *e*P **P 18 33 38.0 +1.3**
SHL *e*S **S 18 38 16.0 +2.2**
KGM Kluang 26.90 223 P **P 18 33 41.8 +4.6**
FRIM Kepong 27.08 227 P **P 18 33 45.3 +6.4**
KAPI Kappang 27.59 183 P **P 18 33 44.9 +1.4**
comp=Z,5.5nm,0.8s,mb4.2,baz=30,slow=18,SNR=4.9
KAPI LR LR 18 45 11.7
comp=Z,984nm,20.9s,MS4.4,baz=34,slow=38
ASAJ Asahikawa 27.70 34 P **P 18 33 46.1 +1.9**
comp=Z,3.4nm,0.6s,mb4.2,baz=216,slow=7.8,SNR=5.2
SONM Songino Array 27.72 338 P **P 18 33 43.6 -0.6**
comp=Z,7.2nm,0.8s,mb4.4,baz=154,slow=9.3,SNR=22
SONM LR LR 18 45 42.4
comp=Z,5μm,18.2s,MS5.1,baz=153,slow=38
KLR Kul'dur 27.76 15 *e*P **P 18 33 44.8 +0.2**
KLR MLR MLR
comp=Z,8μm,13.0s,MS5.5
LSA Lhasa 27.76 291 *e*P **P 18 33 46.6 +1.7**
HABR Khabarovsk 27.98 20 *e*P **P 18 33 44.3 -2.4**
HABR *e**PP pP 18 33 54.5 +6.4
HABR *e* 18 34 41.9
HABR 18 36 58.3
HABR S **S 18 38 28.5 -2.7**
HABR *e**SS sS 18 38 45.4 +12
HABR *e*SS 18 39 47.6
HABR *e* 18 44 29.0
HABR pmax pmax
comp=N,23nm,3.2s
HABR pmax pmax
comp=Z,38nm,2.6s,mb4.6
HABR pmax pmax
comp=E,37nm,2.4s
HABR MLR MLR
comp=E,2μm,14.0s
HABR MLR MLR
comp=Z,2μm,17.0s,MS4.7
HABR MLR MLR
comp=N,915nm,11.0s
YSS Yuzh-Sakhalins 29.79 30 *e*P **P 18 34 06.3 +3.5**
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.1
YSS MLR MLR
comp=N,1μm,13.0s,MS4.8
YSS MLR MLR
comp=Z,1μm,13.0s,MS4.8
YSS MLR MLR
comp=E,700nm,14.0s,MS4.8
YSS Yuzh-Sakhalins 29.79 30 P **P 18 34 02.3 -0.4**
comp=E,49nm,1.2s,mb5.1
CIT Chita 29.84 351 *e*P **P 18 34 01.9 -1.2**
TAPN Taplejung 30.61 286 *e*P **P 18 34 11.6 +1.4**
comp=E,46nm,1.1s,mb5.2
ODAN Odare 30.89 285 *e*P **P 18 34 13.9 +1.2**
comp=E,36nm,1.0s,mb5.2
ZAK Zakamensk 30.96 338 *e*P **P 18 34 11.8 -1.3**
ZAK pmax pmax
comp=Z,6.0nm,1.9s,mb4.1
RAMN Ramite 31.59 285 *e*P **P 18 34 19.1 +0.2**
comp=Z,36nm,0.9s,mb5.2
TLY Talaya 31.93 339 *e*P **P 18 34 21.0 -0.6**
TLY *e* 18 35 22.9
TLY *e*S **S 18 39 30.3 -2.8**
TLY pmax pmax
comp=Z,17nm,1.7s,mb4.6
TLY MLR MLR
comp=Z,4μm,15.0s,MS5.2
TLY Talaya 31.93 339 *e*P **P 18 34 20.5 -1.1**
comp=Z,9.3nm,1.0s,mb4.6
JIRN Jiri 31.96 286 *e*P **P 18 34 23.0 +0.8**
comp=Z,37nm,0.9s,mb5.2
IRK Irkutsk 32.22 340 *e*P **P 18 34 22.3 -1.8**
IRK pmax pmax
comp=Z,74nm,2.0s,mb5.2
GUN Gumba 32.24 287 *e*P **P 18 34 25.4 +0.8**
comp=Z,48nm,1.0s,mb5.3
KKN Kakani 32.77 286 *e*P **P 18 34 30.0 +0.7**
MOY Mondy 32.84 337 *e*P **P 18 34 29.3 -0.3**
MOY pmax pmax
comp=Z,66nm,2.8s,mb5.1
DMN Daman 32.92 286 *e*P **P 18 34 31.4 +0.8**
comp=Z,54nm,1.4s,mb5.3
WMQ Urumqi 34.67 315 *e*P **P 18 34 46.8 +1.2**
WMQ pP pP 18 34 53.8 +6.7
WMQ PP PP 18 36 04.3 +0.2
WMQ S **S 18 40 15.0 -0.8**
WMQ sS sS 18 40 25.1 +6.9
WMQ SS SS 18 42 27.6 -18
WMQ ScS ScS 18 45 03.9 -4.9
WMQ pmax pmax
comp=Z,15nm,1.6s,mb4.7
WMQ pmax pmax
comp=Z,310nm,5.0s
WMQ LR LR
comp=N,1μm,13.0s,MS5.0
WMQ LR LR
comp=E,720nm,10.0s,MS5.0
WMQ LR LR
comp=Z,540nm,15.0s,MS4.4
BOD Bodaibo 35.45 353 *e*P **P 18 34 48.6 -3.5**
KAKA Kakadu 36.90 161 *e*P **P 18 34 59.9 -5.1**
comp=Z,26nm,0.8s,mb5.1
KAKA *e* 18 35 07.7
MK31 Makanchi Array 39.39 317 *e*P **P 18 35 25.7 0.0**
MKAR Makanchi Array 39.39 317 P **P 18 35 26.0 +0.4**
comp=Z,5.5nm,0.8s,mb4.4,baz=113,slow=9.7,SNR=58
MKAR LR LR 18 52 49.8
comp=Z,821nm,18.6s,MS4.6,baz=104,slow=38
MKAR Makanchi Array 39.39 317 P **P 18 35 26.0 +0.4**
MKAR LR LR 18 52 49.8
YAK Yakutsk 39.73 6 *e*P **P 18 35 27.2 -1.1**
YAK *e* 18 41 23.4
YAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
YAK MLR MLR
comp=Z,3μm,14.0s,MS5.3
YAK MLR MLR
comp=N,2μm,15.0s,MS5.1
YAK MLR MLR
comp=E,814nm,14.0s,MS5.1
FITZ Fitzroy Crossi 40.80 173 *e*P **P 18 35 37.2 -0.4**
comp=E,6.3nm,0.6s,mb4.4
FITZ Fitzroy Crossi 40.80 173 P **P 18 35 37.1 -0.5**
comp=E,3.9nm,1.0s,mb4.0,baz=21,slow=9.0,SNR=10
FITZ LR LR 18 52 46.8
comp=E,242nm,20.0s,MS4.1,baz=358,slow=37
FITZ Fitzroy Crossi 40.80 173 *e*P **P 18 35 35.9 -1.7**
comp=E,16nm,1.4s,mb4.4
PETK Petropavlovsk- 41.10 33 LR LR 18 52 44.7
comp=E,697nm,20.1s,MS4.5,baz=222,slow=36
ZAA0 Zalesovo Array 41.47 328 *e*P **P 18 35 42.1 -0.7**
ZALV Zalesovo Beam 41.47 328 P **P 18 35 42.2 -0.6**
comp=E,19nm,0.8s,mb4.8,baz=111,slow=8.1,SNR=68
ZALV LR LR 18 54 20.7
comp=E,854nm,18.3s,MS4.7,baz=132,slow=38
PET Petropavlovsk 41.54 34 *e*P **P 18 35 45.2 +1.8**
PET *e*S **S 18 41 59.9 +0.4**
PET MLR MLR
comp=E,700nm,16.0s,MS4.8
PET MLR MLR
comp=Z,900nm,17.0s,MS4.7
PET MLR MLR
comp=N,900nm,18.0s,MS4.8
COCO West Island 42.09 217 *i*P **P 18 35 45.1 -3.2**
NVS Novosibirsk 42.74 328 *i*P **P 18 35 52.2 -0.9**
NVS *e*S **S 18 42 18.0 +0.8**
NVS pmax pmax
comp=Z,100nm,1.9s,mb5.2
NVS pmax pmax
comp=N,91nm,2.0s
NVS pmax pmax
comp=E,73nm,1.8s
NVS smax
comp=E,37nm,2.9s
KURK Kurchatov 43.21 321 P **P 18 35 57.3 +0.3**
comp=E,21nm,1.1s,mb4.8,baz=122,slow=7.0,SNR=51
KURK LR LR 18 55 41.1
comp=E,601nm,18.1s,MS4.5,baz=105,slow=38
KURK Kurchatov 43.21 321 *ce*P **P 18 35 56.7 -0.3**
KURK pmax pmax
comp=Z,94nm,2.5s,mb5.1
KURK Kurchatov 43.21 321 *e*P **P 18 35 56.4 -0.7**
comp=Z,77nm,1.6s,mb5.2
FRU Bishkek 43.35 309 *e*P **P 18 36 01.0 +2.7**
AAK Ala-Archa 43.39 309 P **P 18 35 59.3 +0.7**
comp=Z,1.0nm,0.3s,mb4.0,baz=200,slow=2.7,SNR=6.7
AAK LR LR 18 54 53.3
comp=Z,896nm,21.2s,MS4.6,baz=313,slow=37
AAK Ala-Archa 43.39 309 *ce*P **P 18 35 59.0 +0.4**
AAK pmax pmax
comp=Z,9.0nm,2.5s,mb4.1
AAK Ala-Archa 43.39 309 *e*P **P 18 35 58.5 -0.1**
comp=Z,3.5nm,0.8s,mb4.1
MBWA Marble Bar 43.63 182 P **P 18 36 00.5 -0.2**
comp=Z,5.5nm,1.0s,mb4.2
WRAB Tennant Creek 44.30 162 *e*P **P 18 36 03.5 -2.6**
WRAB pmax pmax
comp=Z,37nm,1.5s,mb4.9
WRAB Tennant Creek 44.30 162 *e*P **P 18 36 03.5 -2.6**
comp=Z,38nm,1.5s,mb4.9
WRA Warramunga Arr 44.30 162 P **P 18 36 03.6 -2.5**
comp=Z,3.5nm,0.9s,mb4.1,baz=344,slow=8.7,SNR=22
SEY Seymchan 45.36 19 *ce*P **P 18 36 16.1 +2.0**
KBL Kabul 46.79 297 *e*P **P 18 36 23.9 -1.9**
KBL pmax pmax
comp=Z,12nm,0.9s,mb4.8
KBL Kabul 46.79 297 *e*P **P 18 36 23.9 -1.9**
comp=Z,12nm,0.9s,mb4.8
ASAR Alice Springs 47.74 164 P **P 18 36 31.3 -1.8**
comp=Z,1.8nm,0.5s,mb4.4,baz=342,slow=7.1,SNR=32
BVAR Borovoye Array 48.80 322 P **P 18 36 41.3 +0.2**
comp=Z,5.1nm,0.6s,mb4.8,baz=113,slow=12,SNR=27
BVAR PcP PcP 18 38 05.2 -0.7
comp=Z,3.2nm,0.8s,baz=101,slow=4.0,SNR=4.6
BVAR LR LR 18 58 12.4
comp=Z,461nm,19.2s,MS4.5,baz=104,slow=37
BVAR Borovoye Array 48.80 322 P **P 18 36 41.3 +0.2**
BVAR 18 38 05.2
BRVK Borovoye 48.87 322 *ce*P **P 18 36 41.5 -0.1**
BRVK pmax pmax
comp=Z,74nm,2.5s,mb5.3
BRVK Borovoye 48.87 322 *e*P **P 18 36 41.6 -0.1**
comp=Z,18nm,0.9s,mb5.1
CTA Charters Tower 49.09 148 P **P 18 36 43.4 -0.3**
comp=Z,5.8nm,0.8s,mb4.7,baz=258,slow=10,SNR=4.5
CTAO Charters Tower 49.09 148 P **P 18 36 42.8 -0.8**
CTAO pmax pmax
comp=Z,38nm,1.4s,mb5.2
CTAO Charters Tower 49.09 148 P **P 18 36 42.8 -0.9**
comp=Z,38nm,1.4s,mb5.2
TIXI Tiksi 49.16 3 *e*P **P 18 36 42.9 -0.7**
TIXI *e*S **S 18 43 53.0 +3.9**
TIXI pmax pmax
comp=Z,18nm,1.9s,mb4.8
TIXI Tiksi 49.16 3 *e*P **P 18 36 42.4 -1.2**
comp=Z,4.4nm,0.8s,mb4.5
BILL Bilibino 53.07 19 *e*P **P 18 37 15.3 +2.3**
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BILL MLR MLR
comp=Z,1μm,17.0s,MS5.1
BILL Bilibino 53.07 19 *e*P **P 18 37 11.8 -1.2**
comp=Z,5.6nm,1.0s,mb4.5
SVE Sverdlovsk 55.22 324 ⇓*e*P **P 18 37 29.0 +0.2**
SVE *e* 18 39 34.4
SVE *e*PPP 18 40 55.8
SVE *e*S **S 18 45 16.9 +4.2**
SVE pmax pmax
comp=Z,33nm,1.0s,mb5.3
ARU Arti 56.27 324 *c i*P **P 18 37 36.0 -0.4**
ARU *e* 18 38 31.0
ARU *e* 18 39 38.2
ARU S **S 18 45 27.2 +0.5**
ARU SS SS 18 49 10.0 -3.1
ARU pmax pmax
comp=Z,28nm,1.0s,mb5.2
ARU Arti 56.27 324 *e*P **P 18 37 35.9 -0.5**
comp=Z,11nm,0.7s,mb5.0
STKA Stephens Creek 57.70 159 *e*P **P 18 37 46.6 -0.1**
comp=Z,3.1nm,0.9s,mb4.3
STKA Stephens Creek 57.70 159 P **P 18 37 46.7 0.0**
comp=Z,1.7nm,0.7s,mb4.2,baz=22,slow=9.6,SNR=4.5
STKA LR LR 19 01 55.0
comp=Z,242nm,19.6s,MS4.3,baz=124,slow=35
STKA Stephens Creek 57.70 159 *e*P **P 18 37 46.6 -0.1**
STKA LR LR 19 01 55.0
SOKR Solikamsk 57.74 327 *c i*P **P 18 37 46.6 -0.2**
SOKR pmax pmax
comp=Z,50nm,2.4s,mb5.1
SOKR MLR MLR
comp=Z,870nm,18.0s,MS4.9
ARMA Armidale 60.39 150 *e*P **P 18 38 07.9 +2.5**
DZM Mont Dzumac 62.66 132 *e*LR LR 18 56 58.1
comp=Z,748nm,29.2s
MAK Makhachkala 63.17 308 *e*P **P 18 38 23.7 -0.5**
MAK *e* 18 39 08.2
MAK *e*PPP 18 42 15.3
MAK *i* S **S 18 46 52.5 -3.6**
MAK *i* 18 48 12.3
MAK *e*SS SS 18 50 59.1 -2.7
MAK pmax pmax
comp=Z,111nm,1.4s,mb5.8
CNB Canberra Magne 63.60 154 *e*P **P 18 38 34.0 +7.0**
TOO Toolangi 64.19 159 *e*P **P 18 38 31.8 +1.0**
MIB Mutribah 65.58 294 *e*P **P 18 38 39.4 -0.8**
MIB AMb AMB 18 38 45.2
comp=Z,21nm,0.8s,mb5.2
RDF Al-Radifah 65.60 293 *e*P **P 18 38 40.1 -0.3**
RDF AMb AMB 18 38 45.9
comp=Z,25nm,0.7s,mb5.4
ZEI Tsey 65.82 308 *e*P **P 18 38 39.7 -1.8**
ZEI pmax pmax
comp=Z,24nm,1.4s,mb5.0
VRHR Novokhopersk 66.19 317 *e*P **P 18 38 40.2 -3.6**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,60nm,1.7s
KIV Kislovodsk 66.50 309 *e*P **P 18 38 46.1 +0.2**
KIV *e*S S 18 47 34.9 -2.2
KIV pmax pmax
comp=Z,23nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,267nm,18.0s,MS4.5
KIV Kislovodsk 66.50 309 *e*P **P 18 38 45.8 -0.1**
comp=Z,24nm,1.0s,mb5.2
BHD Baghdad 67.26 298 *e*P x 18 38 36.0
BHD *e*S x 18 47 32.0
MSL Mosul 67.60 301 *e*P **P 18 38 56.0 +3.0**
MSL *e*S S 18 47 58.0 +7.3
VORD Divnogorie 67.67 317 *e*P **P 18 38 52.6 -0.6**
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
VORD pmax pmax
comp=E,30nm,0.8s
VSR Storozhevoye 67.71 318 *e*P **P 18 38 52.5 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,30nm,1.1s
MOS Moscow 67.95 323 *e*P **P 18 38 52.2 -2.7**
OBN Obninsk 68.64 322 ⇑*i*P **P 18 38 58.3 -0.9**
OBN *e* 18 39 27.5
OBN *i* 18 41 28.4
OBN pmax pmax
comp=Z,60nm,2.5s,mb5.1
OBN MLR MLR
comp=Z,500nm,19.0s,MS4.8
OBN Obninsk 68.64 322 *e*P **P 18 38 57.8 -1.4**
ANN Anapa 70.04 311 *e*P **P 18 39 05.8 -2.3**
ANN *e*S S 18 48 15.8 -3.5

ANN				MLR	MLR		
	comp=E,564nm,16.0s						
ANN				MLR	MLR		
	comp=Z,411nm,16.0s,MS4.8						
MALT	**Malatya**	**70.80**	**304**	*e*P	**P**	**18 39 13.0**	**+0.2**
MALT				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
MALT	**Malatya**	**70.80**	**304**	*e*P	**P**	**18 39 13.0**	**+0.2**
	comp=Z,11nm,1.1s,mb4.7						
ARCES	**ARCESS Array B**	**70.89**	**338**	P	**P**	**18 39 13.7**	**+0.9**
	comp=Z,4.7nm,0.9s,mb4.4,baz=358,slow=27,SNR=5.3						
ARCES				LR	LR	19 13 18.4	
	comp=Z,814nm,18.6s,MS5.0,baz=199,slow=38						
ARE0	**ARCESS Array S**	**70.89**	**338**	P	**P**	**18 39 12.5**	**-0.3**
KBS	**Kingsbay**	**71.47**	**349**	*ce*P	**P**	**18 39 17.8**	**+1.6**
KBS				pmax	pmax		
	comp=Z,48nm,2.5s,mb5.0						
FINES	**FINESS Array B**	**72.70**	**330**	P	**P**	**18 39 23.1**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.4,baz=57,slow=7.0,SNR=7.2						
FINES				LR	LR	19 14 21.0	
	comp=Z,763nm,18.2s,MS5.0,baz=244,slow=38						
FINES	**FINESS Array B**	**72.70**	**330**	P	**P**	**18 39 23.1**	**-0.7**
FINES				LR	LR	19 14 21.0	
AKASG	**Malin Array Be**	**73.95**	**319**	P	**P**	**18 39 30.8**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.2,baz=64,slow=5.0,SNR=16						
AKASG				LR	LR	19 15 26.1	
	comp=Z,380nm,18.4s,MS4.7,baz=60,slow=38						
AKBB	**Malin Array Si**	**73.95**	**319**	*e*P	**P**	**18 39 29.9**	**-1.5**
BR131	**Keskin Array S**	**74.03**	**307**	*e*P	**P**	**18 39 31.1**	**-1.0**
	comp=Z,2.2nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**74.03**	**307**	P	**P**	**18 39 31.2**	**-0.9**
	comp=Z,3.2nm,0.9s,mb4.2,baz=105,slow=7.0,SNR=16						
BRTR				LR	LR	19 19 23.9	
	comp=Z,109nm,18.6s,MS4.2,baz=281,slow=42						
MMAI	**Mount Meron Ar**	**74.60**	**300**	LR	LR	19 19 57.9	
	comp=Z,171nm,19.6s,MS4.3,baz=70,slow=42						
SUW	**Suwalki**	**76.45**	**323**	P	**P**	**18 39 44.6**	**-1.2**
SUW				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
SUW	**Suwalki**	**76.45**	**323**	P	**P**	**18 39 44.6**	**-1.2**
	comp=Z,18nm,0.8s,mb5.1						
VRI	**Vrincioaia**	**77.01**	**314**	⇑*i*P	**P**	**18 39 49.7**	**+0.6**
BURAR	**Bucovina Array**	**77.41**	**316**	⇓*i*P	**P**	**18 39 51.7**	**+0.4**
BUR08	**Bucovina Ar. S**	**77.41**	**316**	*e*P	**P**	**18 39 50.4**	**-0.9**
MLR	**Muntele Rosu**	**77.66**	**314**	⇓*i*P	**P**	**18 39 53.3**	**+0.6**
DAG	**Danmarks Havn**	**77.81**	**351**	*e*P	**P**	**18 39 52.0**	**-1.0**
DAG	**Danmarks Havn**	**77.81**	**351**	*i* P	**P**	**18 39 52.0**	**-1.0**
KWP	**Kalwaria Pacla**	**78.27**	**319**	*e*P	**P**	**18 39 56.4**	**+0.4**
KWP	**Kalwaria Pacla**	**78.27**	**319**	⇓*i*P	**P**	**18 39 56.2**	**+0.2**
KOLS	**Kolonicke sedl**	**78.78**	**318**	*e*P	**P**	**18 39 58.5**	**-0.4**
KOLS				pmax	pmax		
	comp=Z,18nm,2.4s,mb4.6						
KOLS	**Kolonicke sedl**	**78.78**	**318**	*e*P	**P**	**18 39 58.5**	**-0.4**
	comp=Z,18nm,2.4s,mb4.6						
KOLS	**Kolonicke sedl**	**78.78**	**318**	*e*P	**P**	**18 39 58.5**	**-0.4**
UZH	**Uzhgorod**	**78.88**	**318**	*e*P	**P**	**18 40 01.0**	**+1.6**
STHS	**Stebnicka Huta**	**79.23**	**319**	*e*P	**P**	**18 40 01.2**	**-0.1**
STHS				*e*		18 40 10.4	
STHS				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
STHS	**Stebnicka Huta**	**79.23**	**319**	*e*P	**P**	**18 40 01.2**	**-0.1**
	comp=Z,4.2nm,1.3s,mb4.2						
STHS				*e*		18 40 10.4	
STHS	**Stebnicka Huta**	**79.23**	**319**	*e*P	**P**	**18 40 01.2**	**-0.1**
STHS				*e*pP	pP	18 40 10.4	+7.5
NB2	**NORSAR Subarra**	**79.51**	**332**	P	**P**	**18 40 00.8**	**-1.8**
	comp=Z,3.6nm,0.7s,mb4.4,baz=63,slow=5.6						
NOA	**NORSAR Array B**	**79.51**	**332**	P	**P**	**18 40 01.2**	**-1.4**
	comp=Z,2.1nm,0.7s,mb4.2,baz=63,slow=5.2,SNR=9.4						
NOA				LR	LR	19 18 28.8	
	comp=Z,1µm,19.5s,MS5.3,baz=60,slow=38						
OJC	**Ojcow**	**79.79**	**320**	*e*P	**P**	**18 40 03.3**	**-1.0**
NIE	**Niedzica**	**79.79**	**319**	*e*P	**P**	**18 40 04.6**	**+0.2**
KECS	**Kecovo**	**80.05**	**318**	*e*P	**P**	**18 40 07.0**	**+1.2**
KECS				*e*		18 40 16.1	
KECS				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
KECS	**Kecovo**	**80.05**	**318**	*e*P	**P**	**18 40 07.0**	**+1.2**
	comp=Z,4.1nm,1.4s,mb4.2						
KECS				*e*		18 40 16.1	
KECS	**Kecovo**	**80.05**	**318**	*e*P	**P**	**18 40 07.0**	**+1.2**
KECS				*e*pP	pP	18 40 16.1	+8.7
RPZ	**Rata Peaks**	**80.39**	**146**	LR	LR	19 10 24.4	
	comp=Z,322nm,21.3s,MS4.6,baz=218,slow=32						
PSZ	**Piszkesteto**	**80.64**	**318**	P	**P**	**18 40 07.8**	**-1.2**
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
PSZ	**Piszkesteto**	**80.64**	**318**	P	**P**	**18 40 07.8**	**-1.2**
	comp=Z,6.9nm,1.1s,mb4.5						
OKC	**Ostrava-Krasne**	**80.91**	**320**	*e*P	**P**	**18 40 19.1**	**+8.7**
OKC				*e*S	S	18 50 20.8	+1.1
OKC				MLR	MLR		
	comp=Z,400nm,12.9s,MS5.0						
OKC	**Ostrava-Krasne**	**80.91**	**320**	*e*P	**P**	**18 40 19.1**	**+8.7**
OKC				*e*S	S	18 50 20.8	+1.1
OKC				AMS	AMS	19 22 10.0	
	comp=Z,400nm,12.9s						
VYHS	**Vyhne**	**81.05**	**319**	*e*P	**P**	**18 40 11.3**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,34nm,2.5s,mb4.8						
VYHS	**Vyhne**	**81.05**	**319**	*e*P	**P**	**18 40 11.3**	**+0.1**
	comp=Z,34nm,2.5s,mb4.8						
VYHS	**Vyhne**	**81.05**	**319**	*e*P	**P**	**18 40 11.3**	**+0.1**
KSP	**Ksiaz**	**81.57**	**322**	*e*P	**P**	**18 40 13.2**	**-0.7**
KSP				*e*S	S	18 50 25.5	-0.9
DPC	**Dobruska-Polom**	**81.76**	**321**	*e*P	**P**	**18 40 15.4**	**+0.5**
DPC				*e*S	S	18 50 27.6	-0.9
DPC				MLR	MLR		
	comp=Z,600nm,14.4s,MS5.1						
DPC	**Dobruska-Polom**	**81.76**	**321**	*e*P	**P**	**18 40 15.4**	**+0.5**
DPC				*e*S	S	18 50 27.6	-0.9
DPC				AMS	AMS	19 20 00.0	
	comp=Z,600nm,14.4s						
PVCC	**Panska Ves**	**82.69**	**322**	*e*P	**P**	**18 40 20.3**	**+0.5**
PVCC				MLR	MLR		
	comp=Z,700nm,15.9s,MS5.1						
PVCC	**Panska Ves**	**82.69**	**322**	*e*P	**P**	**18 40 20.3**	**+0.5**
PVCC				AMS	AMS	19 21 50.0	
	comp=Z,700nm,15.9s						
TREC	**Trest**	**82.71**	**321**	AMS	AMS	19 21 10.0	
	comp=Z,500nm,12.0s						
BRG	**Berggiesshubel**	**82.89**	**322**	*e*P	**P**	**18 40 20.4**	**-0.4**
	comp=Z,6.5nm,1.4s,mb4.5						
BRG				S	S	18 50 36.0	-4.0
BRG				PS		18 51 12.0	
BRG				SS	SS	18 55 51.0	-11
BRG							
	comp=N,544nm,14.9s						
BRG							
	comp=E,568nm,13.1s						
BRG							
	comp=Z,985nm,14.5s						
BRG	**Berggiesshubel**	**82.89**	**322**	*e*P	**P**	**18 40 20.4**	**-0.4**
BRG				S	S	18 50 36.0	-4.0
BRG				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.2						
BRG				MLR	MLR		
	comp=N,326nm,14.9s,MS5.0						
BRG				MLR	MLR		
	comp=E,340nm,13.1s,MS5.0						
BRG				MLR	MLR		
	comp=Z,590nm,14.5s,MS5.1						
PRU	**Pruhonice**	**82.95**	**321**	*e*P	**P**	**18 40 20.9**	**-0.2**
PRU				*e*S	S	18 50 39.3	-1.4
PRU				MLR	MLR		
	comp=Z,600nm,13.2s,MS5.1						
PRU	**Pruhonice**	**82.95**	**321**	*e*P	**P**	**18 40 20.9**	**-0.2**
PRU				*e*S	S	18 50 39.3	-1.4
PRU				AMS	AMS	19 21 50.0	
	comp=Z,600nm,13.2s						
CLL	**Collm**	**83.21**	**323**	*e*P	**P**	**18 40 20.0**	**-2.5**
CLL				*i*		18 40 25.1	
CLL				*e*S	S	18 50 37.0	-6.3
CLL				MLR	MLR		
	comp=Z,1µm,17.6s,MS5.4						
CLL	**Collm**	**83.21**	**323**	*e*P	**P**	**18 40 20.0**	**-2.5**
CLL				*i* PcP	PcP	18 40 25.1	-1.9
	comp=Z,11nm,1.4s						
CLL				*e*PP	PP	18 43 34.0	+0.7
CLL				*e*S	S	18 50 37.0	-6.3
CLL				*e*SS	SS	18 56 06.0	-0.8
CLL				*e*SSS		18 59 48.0	
CLL				*e*SSSS		19 02 36.0	
ABPO	**Ambohimpanom**	**83.26**	**246**	*e*P	**P**	**18 40 23.9**	**+0.7**
ABPO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ABPO	**Ambohimpanom**	**83.26**	**246**	*e*P	**P**	**18 40 23.9**	**+0.7**
	comp=Z,8.6nm,0.9s,mb4.8						
KHC	**Kasperske Hory**	**83.90**	**321**	*e*P	**P**	**18 40 25.8**	**-0.3**
KHC				*e*S	S	18 50 50.9	+0.6
KHC				MLR	MLR		
	comp=Z,700nm,16.5s,MS5.1						
KHC	**Kasperske Hory**	**83.90**	**321**	*e*P	**P**	**18 40 25.8**	**-0.3**
KHC				*e*S	S	18 50 50.9	+0.6
KHC				AMS	AMS	19 22 30.0	
	comp=Z,700nm,16.5s						
SUMG	**Summit**	**83.96**	**354**	*e*P	**P**	**18 40 24.2**	**-1.7**
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.2s						
SUMG	**Summit**	**83.96**	**354**	*e*P	**P**	**18 40 24.2**	**-1.7**
	comp=Z,6.7nm,0.2s,mb5.4						
GEC2	**GERESS Array S**	**83.96**	**321**	*e*P	**P**	**18 40 26.1**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,2µm,1.4s						
GEC2	**GERESS Array S**	**83.96**	**321**	*e*P	**P**	**18 40 26.1**	**-0.2**
	comp=Z,2µm,1.4s						
GERES	**GERESS Array B**	**83.96**	**321**	P	**P**	**18 40 26.5**	**+0.1**
	comp=Z,1.5nm,0.8s,mb4.2,baz=70,slow=4.4,SNR=9.2						
GERES				LR	LR	19 23 05.6	
	comp=Z,523nm,18.7s,MS4.9,baz=214,slow=39						
NKC	**Novy Kostel**	**84.03**	**322**	AMS	AMS	19 21 20.0	
	comp=Z,700nm,27.0s						
GCIS	**Gornji Cirnik**	**84.16**	**317**	*e*P	**P**	**18 40 27.1**	**-0.4**
CRES	**Cresnjev**	**84.28**	**317**	*e*P	**P**	**18 40 27.0**	**-1.1**
MOX	**Moxa**	**84.30**	**323**	*e*P	**P**	**18 40 28.4**	**+0.4**
MOX							
	comp=Z,1µm,18.0s						
YKA	**Yellowknife Ar**	**84.33**	**23**	P	**P**	**18 40 26.2**	**-1.7**
	comp=Z,2.4nm,0.9s,mb4.3,baz=314,slow=4.8,SNR=9.7						
YKA				LR	LR	19 20 30.8	
	comp=Z,348nm,20.1s,MS4.7,baz=25,slow=37						
KMBO	**Kilima Mbogo**	**84.81**	**267**	P	**P**	**18 40 32.8**	**+1.5**
	comp=Z,0.8nm,0.3s,mb4.3,baz=50,slow=23,SNR=5.0						
KMBO				LR	LR	19 18 12.3	
	comp=Z,219nm,18.8s,MS4.6,baz=81,slow=36						
GRA1	**Grafenberg Arr**	**84.98**	**322**	*e*P	**P**	**18 40 31.4**	**-0.1**
	comp=Z,49nm,2.5s,mb5.2						
GRA1				LR	LR		
	comp=Z,800nm,21.7s,MS5.1						
GRF	**Grafenberg Arr**	**84.98**	**322**	*e*P	**P**	**18 40 31.4**	**-0.1**
	comp=Z,49nm,2.5s,mb5.2						
GRF				*e*L		19 24 13.2	
	comp=Z,790nm,21.7s						
GRF	**Grafenberg Arr**	**84.98**	**322**	*e*P	**P**	**18 40 31.4**	**-0.1**
GRF				pmax	pmax		
	comp=Z,49nm,2.5s,mb5.2						
GRF				MLR	MLR		
	comp=Z,800nm,21.7s,MS5.1						
GRF	**Grafenberg Arr**	**84.98**	**322**	*e*P	**P**	**18 40 31.4**	**-0.1**
GRF				pmax	pmax		
	comp=Z,49nm,2.5s,mb5.2						
GRF				MLR	MLR		
	comp=Z,800nm,21.7s,MS5.1						
LPG	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.5**	**+0.9**
	comp=Z,15nm,1.1s,mb4.9						
LPG	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.5**	**+0.9**
LPG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
LPG	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.5**	**+0.9**
	comp=Z,7.4nm,1.1s,mb4.9						
LPL	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.2**	**+0.6**
	comp=Z,17nm,1.3s,mb4.9						
LPL	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.2**	**+0.6**
LPL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.9						
LPL	**La Plagne**	**89.74**	**320**	*e*P	**P**	**18 40 55.2**	**+0.6**
	comp=Z,8.4nm,1.3s,mb4.9						
KEST	**Kesra**	**93.21**	**311**	LR	LR	19 33 32.4	
	comp=Z,127nm,18.7s,MS4.4,baz=24,slow=42						
FFC	**Flin Flon**	**94.48**	**23**	*e*P	**P**	**18 41 15.1**	**-1.2**
PPT	**Papeete**	**95.96**	**106**	*e*S	S	18 52 39.1	-4.2
	comp=Z,256nm,28.5s						
PPT				*e*LR	LR	19 12 19.9	
	comp=Z,200nm,24.5s						
PPT	**Papeete**	**95.96**	**106**	LR	LR	19 24 44.4	
	comp=Z,112nm,18.2s,MS4.4,baz=288,slow=36						
MAW	**Mawson**	**99.71**	**199**	LR	LR	19 19 35.7	
	comp=Z,170nm,21.0s,MS4.5,baz=228,slow=31						
PDAR	**Pinedale Array**	**99.83**	**35**	LR	LR	19 31 30.5	
	comp=Z,165nm,18.5s,MS4.6,baz=211,slow=38						
TAOE	**Nuku Hiva Isla**	**101.34**	**95**	*e*LR	LR	19 14 51.1	
	comp=Z,186nm,23.9s						
SDV	**Santo Domingo**	**146.54**	**21**	*e*PKPdf	PKPdf	18 47 36.5	-0.6

*ISK **13** 18:29:07.2, 41°.90N×27°.12E, h10km, MD2.6*
*THE **13** 18:29:09.8, 41°.70N×26°.71E, h12km±7km, ML2.3/1, Error ellipse: s-maj=7.9km s-min=0.3km az=62.0*
*CSEM **13** 18:29:10.7±0.3, 41°.74N×26°.61E, h8km, MD2.6, Error ellipse: s-maj=8.0km s-min=5.2km az=110.0*
*DDA **13** 18:29:12.6, 41°.69N×26°.71E, h4km, Md2.8*
ISC 13 18:29:11.1±0.5, **41°.73N**±0°.03×**26°.61E**±0°.06, **h9**km±6km, **n24**, σ**0s.91**/39, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDRB	**Edirne**	**0.15**	**42**	PG	**Pg**	**18 29 13.7**	**-0.7**
EDRB				*e*SG	**Sg**	**18 29 17.5**	**+0.8**
EDRB	**Edirne**	**0.15**	**42**	*i* Pg	**Pg**	**18 29 13.7**	**-0.7**
EDRB				*e*Sg	**Sg**	**18 29 17.5**	**+0.8**
JMB	**Yambol**	**0.73**	**359**	P	**Pg**	**18 29 24.4**	**-0.8**
JMB				S	**Sg**	**18 29 35.7**	**+0.9**
JMB	**Yambol**	**0.73**	**359**	P	**Pg**	**18 29 24.4**	**-0.8**
JMB				S	**Sg**	**18 29 35.7**	**+0.9**
ALN	**Alexandroupoli**	**0.94**	**207**	P	**Pg**	**18 29 27.6**	**-1.4**
ALN				S	**Sg**	**18 29 41.8**	**+0.6**
ALN	**Alexandroupoli**	**0.94**	**207**	P	**Pg**	**18 29 27.6**	**-1.4**
ALN				S	**Sg**	**18 29 41.8**	**+0.6**
RDO	**Rodhopi**	**0.99**	**234**	P	**Pg**	**18 29 29.0**	**-1.2**
RDO				S	**Sg**	**18 29 44.1**	**+1.0**
RDO	**Rodhopi**	**0.99**	**234**	P	**Pg**	**18 29 29.0**	**-1.2**
RDO				S	**Sg**	**18 29 44.1**	**+1.0**
ENEZ	**Enez**	**1.05**	**199**	*e*PN	**Pn**	**18 29 32.7**	**+0.7**
ENEZ	**Enez**	**1.05**	**199**	*e*Pn	**Pn**	**18 29 32.7**	**+0.7**
SART	**Tekirdag**	**1.13**	**157**	*i* P	**Pg**	**18 29 32.5**	**-0.2**
SART				*i* S	**Sg**	**18 29 48.0**	**+0.6**
SART	**Tekirdag**	**1.13**	**157**	*i* P	**Pg**	**18 29 32.5**	**-0.2**
SART				*i* S	**Sg**	**18 29 48.0**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.13**	**157**	*e*PN	**Pn**	**18 29 31.3**	**-1.8**
RKY	**Sarkoy-Tekirda**	**1.13**	**157**	*e*Pn	**Pn**	**18 29 31.3**	**-1.7**
CTYL	**Yal??k??y-??at**	**1.29**	**101**	*e*PG	**Pg**	**18 29 26.4**	**-9.3**
CTYL				*e*SG	**Sg**	**18 29 39.9**	**-13**
LPK	**Lapseki**	**1.36**	**175**	*e*PN	**Pn**	**18 29 35.7**	**-0.5**
LPK	**Lapseki**	**1.36**	**175**	*e*Pn	**Pn**	**18 29 35.7**	**-0.6**
ELBA	**Catalca**	**1.49**	**112**	*i* P	**Pn**	**18 29 37.5**	**-0.5**
ELBA				*i* S	**Sn**	**18 29 58.2**	**+0.7**
ELBA	**Catalca**	**1.49**	**112**	*i* P	**Pn**	**18 29 37.5**	**-0.5**
ELBA				*i* S	**Sn**	**18 29 58.2**	**+0.6**
CTKS	**Kestanelik-??a**	**1.51**	**109**	*e*PN	**Pn**	**18 29 31.0**	**-7.2**
GADA	**Gvkgeada**	**1.63**	**199**	*e*PN	**Pn**	**18 29 41.3**	**+1.4**
GADA	**Gvkgeada**	**1.63**	**199**	*e*Pn	**Pn**	**18 29 41.3**	**+1.4**
BALY	**Balya**	**2.13**	**159**	*i* P	**Pn**	**18 29 47.2**	**+0.4**
BALY				*i* S	**Sn**	**18 30 18.3**	**+4.9**
BALY	**Balya**	**2.13**	**159**	*i* P	**Pn**	**18 29 47.2**	**+0.4**
BALY				*i* S	**Sn**	**18 30 18.3**	**+4.9**

*NEIC **13** 18:34:23.6±8.3, 6°.25S×148°.45E, h28km±57km, mb4.5/2, Error ellipse: s-maj=24.1km s-min=16.6km az=47.0*
*IDC **13** 18:34:27.9±1.1, 6°.18S×148°.30E, h55km±6km, mb4.0/7, mb1 4.2/8, mb1mx4.0/15, mbtmp4.0/8, Error ellipse: s-maj=30.9km s-min=13.1km az=113.0*
ISC 13 18:34:22.5±4.1, **6°.37S**±0°.08×**148°.7E**±0°.1, **h26**km±29km, **n28**, σ**0s.72**/24, **mb4.3**/9, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**17.18**	**247**	*e*P	**Pn**	**18 38 20.7**	**-0.2**
	15nm,0.5s						
KAKA	**Kakadu**	**17.18**	**247**	*e*P	**Pn**	**18 38 19.8**	**-1.1**
	46nm,0.6s						
EIDS	**Eidsvold**	**19.04**	**173**	*e*P	**Pn**	**18 38 43.5**	**-0.1**
	12nm,0.9s						
WRAB	**Tennant Creek**	**19.36**	**225**	*e*P	**Pn**	**18 38 47.2**	**-0.3**
WRA	**Warramunga Arr**	**19.37**	**225**	P	**Pn**	**18 38 47.4**	**-0.3**
	1.8nm,0.3s,baz=52,slow=11,SNR=41						
WRA				pP	pP	18 39 01.1	+7.6
	2.5nm,0.3s,baz=50,slow=10,SNR=7.6						
WRA				S	**Sn**	**18 42 16.8**	**-7.6**
	0.1nm,0.3s,baz=44,slow=25,SNR=4.8						
WRA				ScP	ScP	18 46 42.4	-0.2
	0.1nm,0.3s,baz=35,slow=2.2,SNR=13						
WRA	**Warramunga Arr**	**19.37**	**225**	P	**Pn**	**18 38 47.4**	**-0.3**
WRA				pP	pP	18 39 01.1	+7.6
WRA				S	**Sn**	**18 42 16.8**	**-7.6**
WRA				ScP	ScP	18 46 42.4	-0.2
ASAR	**Alice Springs**	**22.29**	**218**	P	**P**	**18 39 18.7**	**+0.7**
	11nm,0.6s,mb4.5,baz=54,slow=9.0,SNR=66						
ASAR				pP		18 39 33.0	
	22nm,0.5s,baz=53,slow=10,SNR=19						
ASAR				S	**S**	**18 43 22.2**	**0.0**
	2.8nm,0.8s,baz=36,slow=22,SNR=7.3						
ASAR				ScP	ScP	18 46 48.9	-0.7
	2.1nm,1.0s,baz=31,slow=3.1,SNR=9.1						
ARMA	**Armidale**	**24.09**	**174**	*e*P	**P**	**18 39 35.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**25.29**	**240**	*e*P	**P**	**18 39 48.4**	**+1.3**
	40nm,0.4s,mb5.3						
FITZ	**Fitzroy Crossi**	**25.29**	**240**	P	**P**	**18 39 48.5**	**+1.4**
	26nm,0.5s,mb5.0,baz=64,slow=7.7,SNR=163						
STKA	**Stephens Creek**	**26.22**	**194**	*e*P	**P**	**18 39 55.1**	**-0.3**
	5.1nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**26.22**	**194**	P	**P**	**18 39 55.2**	**-0.2**
	6.5nm,0.9s,mb4.2,baz=345,slow=11,SNR=6.3						
STKA				pP	pP	18 40 10.4	+7.4
	5.8nm,0.6s,baz=16,slow=10,SNR=6.6						
STKA	**Stephens Creek**	**26.22**	**194**	*e*P	**P**	**18 39 54.9**	**-0.4**
STKA				pP	pP	18 40 10.4	+7.4
MBWA	**Marble Bar**	**31.61**	**239**	*e*P	**P**	**18 40 43.7**	**+0.1**
KLBR	**Kellerberrin**	**38.25**	**225**	*e*P	**P**	**18 41 41.1**	**+0.4**
	92nm,1.9s,mb5.2						
KLBR				*e*		18 41 55.4	
URZ	**Urewera**	**40.91**	**145**	P	**P**	**18 42 07.7**	**+5.0**
	6.9nm,1.0s,mb4.2,baz=280,slow=11,SNR=3.3						
KSRS	**Korea Array**	**47.69**	**338**	P	**P**	**18 42 57.7**	**+0.7**
	2.1nm,0.7s,mb4.3,baz=155,slow=8.6,SNR=6.1						
PETK	**Petropavlovsk-**	**59.74**	**6**	P	**P**	**18 44 25.8**	**+0.9**
	1.6nm,0.5s,mb4.3,baz=162,slow=6.4,SNR=7.7						
MK31	**Makanchi Array**	**78.82**	**320**	*e*P	**P**	**18 46 23.3**	**0.0**
MKAR	**Makanchi Array**	**78.82**	**320**	P	**P**	**18 46 22.4**	**-0.9**
	0.3nm,0.5s,mb3.5,baz=96,slow=8.6,SNR=7.6						
BVAR	**Borovoye Array**	**88.03**	**324**	P	**P**	**18 47 08.7**	**-1.7**
	0.5nm,0.7s,mb3.9,baz=119,slow=5.2,SNR=4.3						
GERES	**GERESS Array B**	**123.13**	**326**	PKP	PKPdf	18 53 17.4	+0.5
	0.9nm,0.6s,baz=81,slow=1.8,SNR=6.7						
LPAZ	**La Paz**	**137.21**	**122**	PKP	PKPdf	18 53 46.8	+2.2
	1.0nm,0.6s,baz=249,slow=4.0,SNR=5.0						
SDV	**Santo Domingo**	**141.00**	**84**	*e*P	PKPdf	18 53 51.7	+0.2
TOA0	**Torodi Ar. Sit**	**146.77**	**284**	*e*PKPbc	PKPbc	18 54 03.9	+0.6
TORD	**Torodi Ar. Bea**	**146.77**	**284**	PKPbc	PKPbc	18 54 03.8	+0.4
	14nm,0.5s,baz=54,slow=3.3,SNR=168						
TORD				pPKPbc	pPKPbc	18 54 19.3	+7.3
	7.5nm,0.7s,baz=57,slow=3.5,SNR=9.4						
TORD	**Torodi Ar. Bea**	**146.77**	**284**	PKPbc	PKPbc	18 54 03.8	+0.4
TORD				pPKPbc	pPKPbc	18 54 19.3	+7.3
DBIC	**Dimbokro**	**153.67**	**272**	PKPbc	PKPbc	18 54 20.9	+0.6
	3.6nm,0.8s,baz=168,slow=3.6,SNR=5.2						
DBIC				PKPab	PKPab	18 54 33.9	+0.9
	3.8nm,0.8s,baz=220,slow=5.9,SNR=2.7						

*ISCJB **13** 18:36:28.8±0.4, 23°.96N±0°.03×121°.82E±0°.03, h49km±7km, Error ellipse: s-maj=6.2km s-min=3.3km az=153.5*
*TAP **13** 18:36:28.8, 23°.97N×121°.78E, h48km±1km, ML3.2, D*
*JMA **13** 18:36:29.0±0.3, 24°.06N×121°.82E, h72km, M2.5*
ISC 13 18:36:29.3±0.4, **23°.97N**±0°.03×**121°.81E**±0°.03, **h47**km±8km, **n32**, σ**0s.59**/51, **2C-2D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.22**	**301**	⇓*i*P	**Pn**	**18 36 37.4**	**-0.1**
	baz=303						
TWD				*i* S	**Sn**	**18 36 43.8**	**+0.5**
	baz=303						
ESL	**Shilin**	**0.37**	**246**	⇑*i*P	**Pn**	**18 36 38.3**	**-0.6**
	baz=242						
ESL				S	**Sn**	**18 36 45.1**	**-0.6**
	baz=242						
ENA	**Nanau**	**0.46**	**353**	⇓*i*P	**Pn**	**18 36 39.7**	**-0.3**
	baz=356						
ENA				S	**Sn**	**18 36 47.9**	**+0.3**
	baz=356						
WHF	**Hehuan Shan**	**0.53**	**290**	⇑*i*P	**Pn**	**18 36 40.4**	**-0.3**
	baz=289						
WHF				*e*S	**Sn**	**18 36 48.7**	**-0.1**
	baz=289						
NNS	**Nan Shan**	**0.61**	**320**	*i* P	**Pn**	**18 36 41.5**	**-0.3**
	baz=321						
NNS				S	**Sn**	**18 36 50.6**	**-0.3**
	baz=321						
EHY	**Hungye**	**0.64**	**224**	*e*P	**Pn**	**18 36 40.9**	**-1.2**
	baz=221						
TWC	**Suao**	**0.64**	**4**	P	**Pn**	**18 36 42.3**	**+0.1**
	baz=6.0						
TWC				S	**Sn**	**18 36 52.0**	**+0.6**
	baz=6.0						
TWT	**Tachien**	**0.64**	**297**	P	**Pn**	**18 36 42.2**	**0.0**
	baz=295						
TWT				S	**Sn**	**18 36 51.6**	**+0.1**
	baz=295						
TWE	**Neicheng**	**0.76**	**351**	P	**Pn**	**18 36 43.7**	**-0.1**
	baz=353						
TWE				S	**Sn**	**18 36 54.8**	**+0.5**
	baz=353						
TWF1	**Yuli**	**0.77**	**217**	*e*P	**Pn**	**18 36 42.4**	**-1.4**
	baz=215						
NSK	**Sanguang**	**0.82**	**330**	P	**Pn**	**18 36 44.1**	**-0.4**
	baz=331						
NSK				S	**Sn**	**18 36 54.6**	**-1.0**
	baz=331						
SMLT	**Sun Moon Lake**	**0.83**	**265**	P	**Pn**	**18 36 44.5**	**-0.2**
	baz=263						
SMLT				S	**Sn**	**18 36 56.5**	**+0.6**
	baz=263						
TYC	**Yuchr**	**0.87**	**266**	*e*P	**Pn**	**18 36 44.9**	**-0.3**
	baz=265						
YUS	**Yu-Shan**	**0.91**	**239**	P	**Pn**	**18 36 46.0**	**+0.2**
	baz=237						
NSTT	**Nanjuang**	**0.99**	**312**	*e*P	**Pn**	**18 36 46.3**	**-0.5**
	baz=312						
TWQ1	**Liyutan**	**1.02**	**292**	*e*P	**Pn**	**18 36 47.1**	**-0.1**
	baz=292						
TWQ1				*e*S	**Sn**	**18 37 00.4**	**+0.1**
	baz=292						
ALS	**Alishan**	**1.02**	**244**	P	**Pn**	**18 36 47.3**	**+0.1**
	baz=242						
ALS				*e*S	**Sn**	**18 37 01.6**	**+1.2**
	baz=242						
WNT	**Mingjian**	**1.03**	**265**	*e*P	**Pn**	**18 36 47.1**	**-0.2**
	baz=264						
ELDTW	**Lidau**	**1.06**	**223**	*e*P	**Pn**	**18 36 46.6**	**-1.2**
	baz=221						
CHN5	**Tsauling**	**1.09**	**251**	*e*P	**Pn**	**18 36 48.3**	**0.0**
	baz=249						
CHN5				*e*S	**Sn**	**18 37 03.7**	**+1.4**
	baz=249						
WGK	**Gukeng**	**1.17**	**257**	*e*P	**Pn**	**18 36 49.2**	**-0.1**
	baz=255						
YOJ	**Yonaguni jima**	**1.21**	**66**	P	**Pn**	**18 36 49.8**	**0.0**
YOJ				*e*S	**Sn**	**18 37 05.3**	**+0.3**
STYT	**Tauyuan**	**1.25**	**230**	*e*P	**Pn**	**18 36 50.3**	**0.0**
	baz=228						
CHN4	**Tsaushan**	**1.27**	**241**	*e*P	**Pn**	**18 36 51.1**	**+0.5**
	baz=240						
CHN4				*e*S	**Sn**	**18 37 08.2**	**+1.7**
	baz=240						
WTP	**Ta-pu**	**1.31**	**237**	*e*P	**Pn**	**18 36 51.6**	**+0.5**
	baz=235						
CHN1	**Nanshi**	**1.41**	**237**	*e*P	**Pn**	**18 36 51.9**	**-0.6**
	baz=235						
SGST	**Jiashian**	**1.43**	**232**	*e*P	**Pn**	**18 36 52.5**	**-0.2**
	baz=230						
IRIF	**Iriomote-Funau**	**1.80**	**78**	P	**Pn**	**18 36 58.0**	**+0.2**
IRIF				*e*S	**Sn**	**18 37 19.8**	**+0.3**
HATJ	**Hateruma jima**	**1.83**	**87**	P	**Pn**	**18 36 58.6**	**+0.3**
JKRS	**Kuro-shima**	**2.03**	**82**	P	**Pn**	**18 37 01.6**	**+0.5**
JKRS				*e*S	**Sn**	**18 37 26.2**	**+0.9**
JIJ	**Ishigaki jima**	**2.17**	**79**	P	**Pn**	**18 37 02.8**	**-0.2**
JIJ				*e*S	**Sn**	**18 37 27.9**	**-0.8**
JTJ	**Tarama**	**2.73**	**75**	P	**Pn**	**18 37 10.9**	**+0.3**
JTJ				*e*S	**Sn**	**18 37 42.1**	**-0.3**

*IDC **13** 18:39:13.9±1.0, 31°.16N×103°.88E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, Error ellipse: s-maj=40.6km s-min=18.8km az=58.0*

*ISCJB **13** 18:39:15.2±4.1,31°.01N×0°.08×103°.6E±0°.1,h22km±30km, mb3.5/8, Error ellipse: s-maj=17.9km s-min=10.2km az=141.5*
*NEIC **13** 18:39:15.7±0.9,31°.15N×103°.72E,h10km,mb3.8/1, Error ellipse: s-maj=25.2km s-min=12.6km az=49.0*
*BJI **13** 18:39:18.5,31°.07N×103°.77E,h10km,ML3.4/5*
ISC 13 18:39:17.1±1.0,31°.14N±0°.07×103°.72E±0°.09,h19km±7km, n12,σ1§10/15,mb3.5/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**172**	Pg	**Pg**	**18 39 21.6**	**-0.9**
CD2				Sg	**Sg**	**18 39 26.9**	**+0.6**
CD2				smax			
	comp=N,8μm,0.7s						
ENH	**Enshi**	**5.04**	**98**	Pn	**Pn**	**18 40 32.9**	**+1.2**
XAN	**Xi'an**	**5.25**	**55**	Pn	**Pn**	**18 40 37.1**	**+2.5**
XAN				Sn	**Sn**	**18 41 39.8**	**+5.2**
XAN				Sg	**Sg**	**18 42 05.5**	**-0.2**
XAN				smax			
	comp=N,54nm,0.9s						
XAN				smax			
	comp=E,19nm,1.0s						
SONM	**Songino Array**	**16.80**	**6**	Pn	**Pn**	**18 43 09.5**	**-1.7**
	baz=163,slow=11,SNR=3.6						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**18 43 57.0**	**-1.7**
	comp=E,1.3nm,0.6s,baz=259,slow=9.7,SNR=4.6						
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**18 44 19.7**	**+1.8**
	comp=E,0.5nm,0.9s,mb2.9,baz=141,slow=9.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.55**	**335**	P	**P**	**18 44 53.7**	**+0.2**
	comp=E,0.6nm,0.6s,mb3.3,baz=124,slow=12,SNR=3.4						
KURK	**Kurchatov**	**27.02**	**324**	P	**P**	**18 44 57.5**	**-0.3**
	comp=E,0.8nm,0.2s,mb3.9,baz=135,slow=9.2,SNR=4.9						
TIXI	**Tiksi**	**42.78**	**11**	*e*P	**P**	**18 47 13.4**	**+0.4**
	comp=E,0.6nm,0.3s,mb3.8						
WRA	**Warramunga Arr**	**58.69**	**146**	P	**P**	**18 49 12.8**	**-0.6**
	comp=E,0.4nm,0.6s,mb3.7,baz=338,slow=7.8,SNR=8.9						
ASAR	**Alice Springs**	**61.69**	**148**	P	**P**	**18 49 33.6**	**-0.3**
	comp=E,0.2nm,0.7s,mb3.3,baz=354,slow=7.8,SNR=3.4						
YKA	**Yellowknife Ar**	**81.75**	**17**	P	**P**	**18 51 33.8**	**-0.4**
	comp=E,0.3nm,0.6s,mb3.4,baz=331,slow=5.5,SNR=3.8						

*ISCJB **13** 18:42:50.2±0.9,31°.7N±0°.1×104°.45E±0°.08,h10km, mb3.4/5, Error ellipse: s-maj=15.5km s-min=9.1km az=157.6*
*IDC **13** 18:42:50.9±1.1,31°.28N×103°.74E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.4/25,mbtmp3.5/5,MS4.0/1,Ms1 4.0/1, ms1mx2.9/29, Error ellipse: s-maj=199.6km s-min=19.9km az=56.0*
*NEIC **13** 18:42:52.4±0.7,31°.37N×103°.84E,h10km,mb3.4/1, Error ellipse: s-maj=32.6km s-min=10.2km az=221.0*
ISC 13 18:42:52.4±0.9,31°.6N±0°.1×104°.30E±0°.08,h10km,n9, σ0§49/11,mb3.4/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.56**	**57**	Pg	**Pg**	**18 44 10.5**	**-9.3**
XAN				Sn	**Sn**	**18 44 58.6**	**+4.0**
XAN				Sg	**Sg**	**18 45 18.6**	**-0.4**
XAN				smax			
	comp=N,34nm,0.8s						
XAN				smax			
	comp=E,19nm,0.9s						
ENH	**Enshi**	**4.66**	**106**	Pn	**Pn**	**18 44 07.5**	**+4.8**
MK31	**Makanchi Array**	**22.69**	**318**	P	**P**	**18 47 53.8**	**-0.1**
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**18 47 54.4**	**+0.4**
	comp=E,0.8nm,1.0s,mb3.1,baz=119,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.32**	**334**	P	**P**	**18 48 28.1**	**+0.1**
	comp=E,0.7nm,0.5s,mb3.4,baz=139,slow=9.9,SNR=4.0						
KURK	**Kurchatov**	**26.93**	**323**	P	**P**	**18 48 33.7**	**+0.1**
	comp=E,0.2nm,0.3s,mb3.1,baz=127,slow=9.3,SNR=5.8						
KURK	**Kurchatov**	**26.93**	**323**	*e*P	**P**	**18 48 32.7**	**-0.9**
	comp=E,0.4nm,0.5s,mb3.2						
WRA	**Warramunga Arr**	**58.82**	**147**	P	**P**	**18 52 50.8**	**-0.3**
	comp=E,0.5nm,0.8s,mb3.6,baz=328,slow=9.0,SNR=5.8						
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**18 53 12.1**	**+0.3**
	comp=E,0.3nm,0.8s,mb3.5,baz=325,slow=6.5,SNR=3.0						

*ISCJB **13** 18:49:47.1±0.5,32°.24N±0°.05×104°.99E±0°.07,h10km, mb3.8/11, Error ellipse: s-maj=9.1km s-min=6.3km az=18.2*
*IDC **13** 18:49:47.6±0.9,32°.26N×105°.02E,h0km,mb3.7/9, mb1 3.8/11,mb1mx3.6/28,mbtmp3.6/11,ML3.4/2, Error ellipse: s-maj=40.7km s-min=16.3km az=55.0*
*NEIC **13** 18:49:49.2±0.5,32°.26N×105°.02E,h10km,mb4.2/2, Error ellipse: s-maj=20.7km s-min=7.7km az=50.0*
*BJI **13** 18:49:50.4,32°.22N×105°.08E,h12km,mb3.7/1,ML3.6/8, Ms3.8/3,Ms7 3.8/3*
ISC 13 18:49:49.0±0.5,32°.27N±0°.04×104°.97E±0°.07,h10km,n19, σ0§97/20,mb3.8/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**218**	Pg	**Pg**	**18 50 20.4**	**-1.3**
CD2				Sg	**Sg**	**18 50 43.4**	**-0.5**
CD2				smax			
	comp=N,2μm,0.5s						
LZH	**Lanzhou**	**3.92**	**347**	Pg	**Pg**	**18 51 02.4**	**-1.6**
LZH				Sg	**Sg**	**18 51 51.5**	**-3.2**
LZH				smax			
	comp=N,200nm,0.8s						
LZH				smax			
	comp=E,410nm,1.0s						
LZH				LR	LR		
	comp=E,810nm,5.6s						
LZH				LR	LR		
	comp=Z,980nm,7.2s						
ENH	**Enshi**	**4.35**	**116**	*e*Pn	**Pn**	**18 50 55.9**	**+0.7**
GYA	**Guiyang**	**5.98**	**165**	Pn	**Pn**	**18 51 18.0**	**+0.5**
GYA				smax			
	comp=N,100nm,0.7s						
GYA				smax			
	comp=E,80nm,0.7s						
GTA	**Gaotai**	**8.26**	**331**	*e*P	Px	18 51 59.5	
GTA				pP		18 52 03.8	
GTA				sP		18 52 07.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**15.58**	**4**	Pn	**Pn**	**18 53 28.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=2.9						
KSRS	**Korea Array**	**19.52**	**68**	P	**Pn**	**18 54 15.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=143,slow=40,SNR=3.2						
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	**P**	**18 54 52.4**	**+2.7**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**18 54 50.2**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.0,baz=108,slow=13,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.01**	**332**	P	**P**	**18 55 22.7**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.3,baz=125,slow=9.3,SNR=3.6						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**18 55 29.3**	**+0.4**
	comp=Z,0.5nm,0.2s,mb3.6,baz=136,slow=8.0,SNR=2.1						
BVAR	**Borovoye Array**	**32.35**	**320**	P	**P**	**18 56 19.1**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.4,baz=118,slow=5.4,SNR=2.5						
ARU	**Arti**	**39.97**	**321**	*e*P	**P**	**18 57 23.6**	**+0.3**
	comp=Z,4.1nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**56.50**	**336**	P	**P**	**18 59 30.8**	**0.0**
	comp=Z,1.9nm,0.9s,mb4.1,baz=75,slow=5.3,SNR=3.7						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**18 59 34.8**	**+0.2**
	comp=Z,1.5nm,0.8s,mb4.1,baz=146,slow=32,SNR=3.0						
WRAB	**Tennant Creek**	**59.04**	**147**	*e*P	**P**	**18 59 48.4**	**-0.8**
	comp=Z,2.0nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**59.05**	**147**	P	**P**	**18 59 49.2**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=340,slow=7.8,SNR=21						
ASAR	**Alice Springs**	**62.12**	**150**	P	**P**	**19 00 10.4**	**+0.2**
	comp=Z,0.5nm,0.4s,mb4.0,baz=335,slow=7.0,SNR=12						
YKA	**Yellowknife Ar**	**80.36**	**17**	P	**P**	**19 02 00.3**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.4,baz=318,slow=4.5,SNR=4.3						

IDC 13 19:01:05.7±3.7,30°.98S×139°.00E,h0km,mb1 3.1/3, mb1mx3.0/13,mbtmp2.9/3,ML2.7/3,Error ellipse: s-maj=83.0km s-min=15.7km az=37.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.39**	**113**	Pn	Pn	19 01 46.1	-0.1
	0.5nm,0.3s,baz=294,slow=14,SNR=12						
STKA				Pg	Pg	19 01 50.5	-1.1
	1.3nm,0.3s,baz=296,slow=15,SNR=15						
STKA				Lg		19 02 20.7	
	8.1nm,0.3s,baz=45,slow=23,SNR=10						
ASAR	**Alice Springs**	**8.58**	**327**	Pn	Pn	19 03 11.8	+0.6
	0.1nm,0.3s,baz=149,slow=13,SNR=3.8						
ASAR				Sn	Sn	19 04 48.1	-0.5
	0.1nm,0.3s,baz=152,slow=22,SNR=4.6						
WRA	**Warramunga Arr**	**11.77**	**338**	Pn	Pn	19 03 54.5	-0.4
	0.1nm,0.3s,baz=152,slow=12,SNR=11						

*ISCJB **13** 19:22:51.8±0.5,36°.96N±0°.03×29°.26E±0°.04,h10km, Error ellipse: s-maj=4.8km s-min=3.6km az=43.0*
*CSEM **13** 19:22:51.7±0.1,36°.97N×29°.24E,h5km,MD2.9, Error ellipse: s-maj=3.1km s-min=2.8km az=138.0*
*DDA **13** 19:22:51.5,37°.00N×29°.25E,h7km±2km,Md2.7*
*ISK **13** 19:22:51.2,36°.96N×29°.25E,h8km,MD2.9*
ISC 13 19:22:51.9±0.5,36°.97N±0°.03×29°.23E±0°.04,h6km±6km, n30,σ0§54/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**49**	*e*PG	**Pg**	**19 22 56.6**	**-0.9**
GLHS				*e*SG	**Sg**	**19 23 01.7**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.28**	**49**	*e*Pg	**Pg**	**19 22 56.6**	**-0.8**
GLHS				*e*Sg	**Sg**	**19 23 01.7**	**+0.5**
FETY	**Fethiye**	**0.35**	**199**	*e*PG	**Pg**	**19 22 57.8**	**-1.0**
FETY				*e*SG	**Sg**	**19 23 03.9**	**+0.6**
FETY	**Fethiye**	**0.35**	**199**	*e*Pg	**Pg**	**19 22 57.8**	**-0.9**
FETY				*e*Sg	**Sg**	**19 23 03.9**	**+0.6**
GOLH	**Golhisar**	**0.38**	**45**	*i* P	**Pg**	**19 22 58.4**	**-0.8**
GOLH				*i* S	**Sg**	**19 23 04.5**	**+0.3**
GOLH	**Golhisar**	**0.38**	**45**	*i* P	**Pg**	**19 22 58.4**	**-0.8**
GOLH				*i* S	**Sg**	**19 23 04.5**	**+0.4**
TURN	**Turunc**	**0.51**	**259**	*i* P	**Pg**	**19 23 05.9**	**+4.2**
TURN				*i* S	**Sg**	**19 23 17.8**	**+9.4**
TURN	**Turunc**	**0.51**	**259**	*i* P	**Pg**	**19 23 05.9**	**+4.2**
ELL	**Elmali**	**0.59**	**112**	*e*PG	**Pg**	**19 23 03.5**	**+0.3**
ELL	**Elmali**	**0.59**	**112**	*e*Pg	**Pg**	**19 23 03.5**	**+0.3**
DNZL	**Cakiroluk**	**0.73**	**349**	*e*P	**Pg**	**19 23 05.4**	**-0.6**
DNZL				*i* S	**Sg**	**19 23 15.2**	**-0.3**
DNZL	**Cakiroluk**	**0.73**	**349**	*e*P	**Pg**	**19 23 05.4**	**-0.6**
DNZL				*i* S	**Sg**	**19 23 15.2**	**-0.3**
YER	**Yerkesik**	**0.78**	**283**	*e*PG	**Pg**	**19 23 07.2**	**+0.4**
YER	**Yerkesik**	**0.78**	**283**	*e*Pg	**Pg**	**19 23 07.2**	**+0.4**
AKAS	**Kas**	**0.79**	**157**	*i* P	**Pg**	**19 23 07.3**	**+0.2**
AKAS				*i* S	**Sg**	**19 23 22.7**	**+5.3**
AKAS	**Kas**	**0.79**	**157**	*i* P	**Pg**	**19 23 07.3**	**+0.2**
DENT	**Denizli**	**0.80**	**349**	*e*PG	**Pg**	**19 23 08.1**	**+0.8**
DENT	**Denizli**	**0.80**	**349**	*e*Pg	**Pg**	**19 23 08.1**	**+0.9**
MLSB	**Milas**	**1.21**	**286**	*e*PN	**Pn**	**19 23 15.4**	**+0.1**
MLSB	**Milas**	**1.21**	**286**	*e*Pn	**Pn**	**19 23 15.4**	**+0.1**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**19 23 15.7**	**-0.6**
AYDN				*i* S	**Sb**	**19 23 33.8**	**+0.7**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**19 23 15.7**	**-0.6**
AYDN				*i* S	**Sb**	**19 23 33.8**	**+0.7**
DAT	**Datca**	**1.35**	**260**	*e*PN	**Pn**	**19 23 16.8**	**-0.5**
DAT	**Datca**	**1.35**	**260**	*e*Pn	**Pn**	**19 23 16.8**	**-0.4**
KHAL	**Karahalli**	**1.42**	**8**	*i* P	**Pn**	**19 23 18.3**	**+0.1**
KHAL				*i* S	**Sb**	**19 23 37.2**	**+0.2**
KHAL	**Karahalli**	**1.42**	**8**	*i* P	**Pn**	**19 23 18.3**	**+0.1**
KHAL				*i* S	**Sb**	**19 23 37.2**	**+0.2**
BDRM	**Kayabasi**	**1.43**	**274**	*i* P	**Pn**	**19 23 18.7**	**+0.3**
BDRM				*i* S	**Sb**	**19 23 37.1**	**-0.4**
BDRM	**Kayabasi**	**1.43**	**274**	*i* P	**Pn**	**19 23 18.7**	**+0.3**
BDRM				*i* S	**Sb**	**19 23 37.1**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.50**	**70**	*e*PN	**Pn**	**19 23 19.5**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.50**	**70**	*e*Pn	**Pn**	**19 23 19.5**	**+0.1**

*ISCJB **13** 19:30:15.7±0.3,30°.98N±0°.03×103°.53E±0°.04,h10km, mb4.3/37,MS3.7/3, Error ellipse: s-maj=5.4km s-min=4.6km az=7.7*
*IDC **13** 19:30:15.9±0.6,31°.03N×103°.57E,h0km,mb4.1/18, mb1 4.2/19,mb1mx4.2/27,mbtmp4.2/19,ML3.8/1,MS3.3/2, Ms1 3.3/2,ms1mx2.9/36, Error ellipse: s-maj=22.9km s-min=13.3km az=43.0*
*NEIC **13** 19:30:17.4±0.3,31°.03N×103°.57E,h10km,mb4.5/13, Error ellipse: s-maj=6.9km s-min=6.1km az=58.0*
*BJI **13** 19:30:18.2,31°.04N×103°.43E,h16km,mB4.7/13,mb4.5/19, ML4.3/19,Ms4.4/21,Ms7 4.1/16*
*MOS **13** 19:30:19.0±1.1,30°.96N×103°.56E,h36km,mb4.5/28, Error ellipse: s-maj=10.5km s-min=6.5km az=106.6*
ISC 13 19:30:17.7±0.2,31°.03N±0°.02×103°.55E±0°.04,h10km,n101, σ1§15/112,mb4.3/37,MS3.7/3,6C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**123**	Pg	**Pg**	**19 30 24.8**	**+2.7**
CD2				Sg	**Sg**	**19 30 30.9**	**+5.9**
CD2				smax			
	comp=N,48μm,0.8s						
LZH	**Lanzhou**	**5.05**	**3**	*e*Pn	**Pn**	**19 31 38.0**	**+4.5**
LZH				Sg	**Sg**	**19 32 59.8**	**-0.1**
LZH				smax			
	comp=N,120nm,0.8s						
LZH				smax			
	comp=E,160nm,1.0s						
LZH				LR	LR		
	comp=N,5μm,5.4s						
LZH				LR	LR		
	comp=Z,6μm,7.9s						
ENH	**Enshi**	**5.17**	**97**	*e*Pn	**Pn**	**19 31 34.6**	**-0.5**
	comp=Z,189nm,0.8s						
GYA	**Guiyang**	**5.31**	**148**	Pn	**Pn**	**19 31 39.1**	**+2.1**
GYA				smax			
	comp=N,370nm,0.9s						
GYA				smax			
	comp=E,430nm,1.0s						
GYA				LR	LR		
	comp=N,3μm,3.9s						
GYA				LR	LR		
	comp=E,1μm,2.8s						
GYA				LR	LR		
	comp=Z,2μm,3.4s						
XAN	**Xi'an**	**5.44**	**55**	Pn	**Pn**	**19 31 39.6**	**+0.8**
XAN				Pg	**Pg**	**19 31 58.3**	**-3.6**
XAN				Sn	**Sn**	**19 32 37.9**	**-3.5**
XAN				Sg	**Sg**	**19 33 11.5**	**-0.8**
XAN				smax			
	comp=N,580nm,1.2s						
XAN				smax			
	comp=E,250nm,1.2s						
KMI	**Kunming**	**5.92**	**187**	Pn	**Pn**	**19 31 46.1**	**+0.6**
KMI				Sn	**Sn**	**19 32 53.0**	**-0.5**
KMI				Sg	**Sg**	**19 33 26.3**	**-1.7**
KMI				smax			
	comp=N,130nm,1.5s						
KMI				smax			
	comp=E,98nm,1.8s						
KMI				LR	LR		
	comp=N,2μm,8.2s						
KMI				LR	LR		
	comp=E,2μm,6.2s						
GTA	**Gaotai**	**8.90**	**341**	*e*P	**Pn**	**19 32 28.6**	**+2.2**
GTA				pP		19 32 38.0	
GTA				sP		19 32 42.3	
GTA				S	**Sn**	**19 34 04.4**	**-2.4**
GTA				sS		19 34 14.0	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,84nm,5.1s						
GTA				LR	LR		
	comp=N,560nm,11.6s						
GTA				LR	LR		
	comp=E,700nm,10.8s						
GTA				LR	LR		
	comp=Z,510nm,10.7s						
WHN	**Wuhan**	**9.30**	**90**	⇑P	**Pn**	**19 32 33.9**	**+2.0**
WHN				S	**Sn**	**19 34 14.8**	**-1.7**
WHN				LR	LR		
	comp=N,2μm,5.2s						
WHN				LR	LR		
	comp=E,4μm,5.4s						
WHN				LR	LR		
	comp=Z,2μm,7.2s						
LSA	**Lhasa**	**10.80**	**266**	*e*P	**Pn**	**19 32 53.0**	**+0.7**
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	**10.80**	**266**	*e*P	**Pn**	**19 32 53.0**	**+0.7**
	comp=Z,18nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.75**	**31**	*e*P	**Pn**	**19 33 07.9**	**+2.6**
HHC				pP		19 33 11.3	
HHC				PP		19 33 17.5	
HHC				S	**Sn**	**19 35 21.3**	**+4.8**
HHC				sS		19 35 26.6	
HHC				SS		19 35 36.5	
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,5.5s						
HHC				LR	LR		
	comp=N,330nm,5.5s						
HHC				LR	LR		
	comp=E,310nm,5.1s						
HHC				LR	LR		
	comp=Z,380nm,5.2s						
CHTO	**Chiang Mai**	**12.86**	**200**	*e*P	**Pn**	**19 33 20.7**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**12.86**	**200**	*e*P	**Pn**	**19 33 20.7**	**+0.2**
	comp=Z,7.3nm,0.9s						
NJ2	**Nanjing**	**13.09**	**82**	*e*P	**Pn**	**19 33 23.0**	**-0.8**
NJ2				PP		19 33 33.3	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.8s						
NJ2				LR	LR		
	comp=N,330nm,18.8s						
NJ2				LR	LR		
	comp=E,920nm,17.4s						
NJ2				LR	LR		
	comp=Z,560nm,12.8s						
CM31	**Chiang Mai Arr**	**13.19**	**200**	*e*P	**Pn**	**19 33 24.8**	**-0.3**
	comp=Z,6.4nm,0.8s						
QIZ	**Qiongzhong**	**13.23**	**153**	P	**Pn**	**19 33 29.3**	**+3.6**
QIZ				S	**Sn**	**19 35 59.3**	**+6.4**
QIZ				pmax	pmax		
	comp=Z,26nm,1.8s						
QIZ				LR	LR		
	comp=N,810nm,7.5s						
QIZ				LR	LR		
	comp=Z,530nm,7.0s						
SONM	**Songino Array**	**16.93**	**7**	Pn	**Pn**	**19 34 15.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=187,slow=10,SNR=22						
SONM				LR	LR	19 41 09.6	
	comp=Z,108nm,20.4s,baz=295,slow=39						
ZAK	**Zakamensk**	**19.34**	**359**	*e*P	**Pn**	**19 34 44.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MOY	**Mondy**	**20.71**	**355**	*e*P	**P**	**19 35 00.3**	**+2.3**
MOY				pmax	pmax		
	comp=Z,27nm,2.4s						
KSRS	**Korea Array**	**21.11**	**66**	P	**P**	**19 35 03.3**	**+0.8**
	comp=Z,11nm,0.7s,mb4.3,baz=253,slow=10.0,SNR=37						
KSRS				LR	LR	19 43 17.1	
	comp=Z,86nm,19.0s,MS3.1,baz=175,slow=37						
KSRS	**Korea Array**	**21.11**	**66**	P	**P**	**19 35 03.3**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,86nm,19.0s,MS3.1						
IRK	**Irkutsk**	**21.21**	**1**	*e*P	**P**	**19 35 04.6**	**+1.3**
IRK				pmax	pmax		
	comp=Z,39nm,0.8s,mb4.8						
CN2	**Changchun**	**21.49**	**47**	*e*P	**P**	**19 35 07.9**	**+1.4**
CN2				*e*pP		19 35 12.0	
CN2				*e*sP	sP	19 35 14.0	+3.4
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,11.0s,MS4.0						
CN2				LR	LR		
	comp=Z,300nm,13.0s,MS3.9						
HIA	**Hailar**	**21.94**	**29**	*e*P	**P**	**19 35 12.4**	**+1.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	**Hailar**	**21.94**	**29**	*e*P	**P**	**19 35 12.4**	**+1.1**
	comp=Z,10nm,0.6s,mb4.4						
MK31	**Makanchi Array**	**22.73**	**320**	*e*P	**P**	**19 35 20.0**	**+0.3**
MKAR	**Makanchi Array**	**22.73**	**320**	P	**P**	**19 35 20.1**	**+0.4**
	comp=Z,4.2nm,0.9s,mb3.9,baz=124,slow=9.5,SNR=30						
MKAR	**Makanchi Array**	**22.73**	**320**	P	**P**	**19 35 20.1**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
UCH	**Uchtor**	**25.73**	**304**	*e*P	**P**	**19 35 49.8**	**+1.6**
	comp=Z,646nm,0.8s						
AAK	**Ala-Archa**	**25.86**	**305**	*e*P	**P**	**19 35 51.1**	**+1.7**
	comp=Z,5.2nm,0.8s,mb4.1,baz=78,slow=5.8,SNR=17						
AAK	**Ala-Archa**	**25.86**	**305**	*e*P	**P**	**19 35 51.3**	**+1.9**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
HYB	**Hyderabad**	**26.44**	**245**	*i* P	**P**	**19 35 55.0**	**+0.1**
ZAA0	**Zalesovo Array**	**26.59**	**335**	*e*P	**P**	**19 35 55.2**	**-0.7**
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**19 35 55.8**	**-0.1**
	comp=Z,6.1nm,0.8s,mb4.2,baz=134,slow=8.5,SNR=22						
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**19 35 55.8**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**27.03**	**324**	P	**P**	**19 35 59.8**	**-0.1**
	comp=Z,2.0nm,0.6s,mb3.8,baz=127,slow=9.8,SNR=4.6						
KURK	**Kurchatov**	**27.03**	**324**	*e*P	**P**	**19 35 59.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9						
KURK	**Kurchatov**	**27.03**	**324**	*e*P	**P**	**19 35 59.2**	**-0.7**
	comp=Z,3.3nm,0.8s,mb3.9						
BOD	**Bodaibo**	**27.74**	**12**	*e*P	**P**	**19 36 05.5**	**-0.7**
KBL	**Kabul**	**29.14**	**286**	*e*P	**P**	**19 36 19.8**	**+0.9**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
KBL	**Kabul**	**29.14**	**286**	*e*P	**P**	**19 36 19.8**	**+0.9**
	comp=Z,7.4nm,0.9s,mb4.4						
MJAR	**Matsushiro Arr**	**29.22**	**70**	P	**P**	**19 36 18.1**	**-1.6**
	comp=Z,0.6nm,0.6s,mb3.5,baz=268,slow=19,SNR=4.1						
MJAR	**Matsushiro Arr**	**29.22**	**70**	P	**P**	**19 36 18.1**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**32.56**	**322**	P	**P**	**19 36 49.1**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.5,baz=238,slow=36,SNR=3.8						
BVAR				PcP	PcP	19 39 34.2	-1.0
	comp=Z,0.8nm,0.6s,baz=125,slow=3.5,SNR=5.9						
BVAR	**Borovoye Array**	**32.56**	**322**	P	**P**	**19 36 49.1**	**+0.2**
BVAR						19 39 34.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**32.63**	**322**	*e*P	**P**	**19 36 51.1**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
YAK	**Yakutsk**	**35.34**	**21**	*e*P	**P**	**19 37 12.4**	**-0.5**
YAK				pmax	pmax		

comp=Z,3.9nm,1.1s,mb4.2,baz=342,slow=5.0,SNR=3.9
BR131 Keskin Array S 56.37 300 *e*P **P 19 39 59.9 +0.8**
BRTR Keskin Array B 56.37 300 P **P 19 39 58.0 -1.1**
comp=Z,2.1nm,1.0s,mb4.1,baz=120,slow=5.0,SNR=6.5
BRTR Keskin Array B 56.37 300*ce*P **P 19 39 59.5 +0.4**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 57.09 313 P **P 19 40 02.9 -1.2**
comp=Z,1.0nm,0.5s,mb4.1,baz=75,slow=5.9,SNR=5.6
AKASG Malin Array Be 57.09 313 *i* P **P 19 40 02.9 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 57.37 326 P **P 19 40 06.8 +1.0**
comp=Z,2.5nm,0.9s,mb4.2,baz=90,slow=7.6,SNR=4.8
FINES FINESS Array B 57.37 326 P **P 19 40 06.9 +1.1**
FINES pmax pmax
comp=Z,3.0nm,0.9s
WRAB Tennant Creek 58.67 146 *e*P **P 19 40 15.4 0.0**
WRAB pmax pmax
comp=Z,11nm,0.9s,mb4.9
WRAB Tennant Creek 58.67 146 *e*P **P 19 40 15.4 0.0**
comp=Z,12nm,0.9s,mb4.9
KWP Kalwaria Pacla 61.41 313 *e*P **P 19 40 33.1 -0.9**
KWP pmax pmax
comp=Z,13nm,1.0s,mb5.0
KWP Kalwaria Pacla 61.41 313 *e*P **P 19 40 33.1 -0.9**
comp=Z,13nm,1.0s,mb5.0
ASAR Alice Springs 61.67 148 P **P 19 40 36.2 +0.3**
comp=Z,4.5nm,1.1s,mb4.5,baz=328,slow=6.1,SNR=21
ASAR Alice Springs 61.67 148 P **P 19 40 36.2 +0.3**
ASAR pmax pmax
comp=Z,5.0nm,1.1s
NB2 NORSAR Subarra 64.47 327 P **P 19 40 47.7 -6.4**
comp=Z,0.9nm,0.7s,mb3.9,baz=74,slow=6.9
NOA NORSAR Array B 64.47 327 P **P 19 40 53.3 -0.8**
comp=Z,1.3nm,0.8s,mb4.0,baz=73,slow=6.4,SNR=3.6
NOA NORSAR Array B 64.47 327 P **P 19 40 53.3 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 67.26 314 P **P 19 41 11.9 -0.4**
comp=Z,1.2nm,0.9s,mb3.9,baz=71,slow=4.5,SNR=6.2
GERES GERESS Array B 67.26 314 P **P 19 41 11.9 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.9s
COLA College 69.70 26 *e*P **P 19 41 27.7 +0.4**
COLA pmax pmax
comp=Z,12nm,1.0s,mb4.8
COLA College 69.70 26 *e*P **P 19 41 27.7 +0.4**
comp=Z,12nm,1.0s,mb4.8
CDF Champ du Feu 71.34 316 *e*P **P 19 41 35.8 -1.8**
STKA Stephens Creek 72.20 147 P **P 19 41 42.4 -0.4**
comp=Z,2.6nm,0.7s,mb4.2,baz=335,slow=4.7,SNR=6.8
LPG La Plagne 72.96 313 *e*P **P 19 41 46.6 -0.7**
comp=Z,9.4nm,1.0s,mb4.4
LPG La Plagne 72.96 313 *e*P **P 19 41 46.6 -0.7**
LPG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LPG La Plagne 72.96 313 *e*P **P 19 41 46.6 -0.7**
comp=Z,4.7nm,1.0s,mb4.4
LPL La Plagne 72.96 313 *e*P **P 19 41 46.4 -0.9**
comp=Z,13nm,1.0s,mb4.5
LPL La Plagne 72.96 313 *e*P **P 19 41 46.4 -0.9**
LPL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LPL La Plagne 72.96 313 *e*P **P 19 41 46.4 -0.9**
comp=Z,6.6nm,1.0s,mb4.5
SMF Signal de Mont 74.22 315 *e*P **P 19 41 52.9 -1.8**
comp=Z,5.9nm,0.8s,mb4.3
SMF Signal de Mont 74.22 315 *e*P **P 19 41 52.9 -1.8**
SMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SMF Signal de Mont 74.22 315 *e*P **P 19 41 52.9 -1.8**
comp=Z,3.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 75.38 315 *e*P **P 19 42 00.0 -1.4**
comp=Z,11nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.38 315 *e*P **P 19 42 00.0 -1.4**
TCF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.38 315 *e*P **P 19 42 00.0 -1.4**
comp=Z,5.3nm,1.1s,mb4.4
YKA Yellowknife Ar 81.90 17 P **P 19 42 36.9 -0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=322,slow=4.9,SNR=9.6
YKA Yellowknife Ar 81.90 17 P **P 19 42 36.9 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 81.90 17 P **P 19 42 36.9 -0.1**
FFC Flin Flon 91.81 14*ce*P **P 19 43 25.8 +0.1**
TORD Torodi Ar. Bea 93.21 287 P **P 19 43 32.2 -0.6**
comp=Z,0.8nm,0.9s,mb4.2,baz=39,slow=4.4,SNR=4.5
TXAR Lajitas Array 114.62 26 PKP PKiKP 19 48 58.3 -0.3
comp=Z,0.2nm,0.5s,baz=338,slow=0.6,SNR=3.5

KRSC 13 19:30:39.1±1.3, 50°23N×157°25E, h47km±47km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.26**	**301**	*e*P	Pn	19 31 00.4	+0.2
ALID				*i* S	Sn	19 31 15.9	-0.1
MIPR	**Malaya Ipel'ka**	**2.07**	**352**	*e*P	Pn	19 31 14.2	+2.9
MIPR				*i* S	Sn	19 31 39.8	+3.9
RUS	**Russkaya**	**2.34**	**19**	*e*P	Pn	19 31 18.1	+3.0
RUS				*i* S	Sn	19 31 46.2	+3.6
GRL	**Gorelyy**	**2.38**	**12**	*e*P	Pn	19 31 19.6	+4.0
SDLR	**Sedlovina**	**3.22**	**18**	*e*P	Pn	19 31 30.6	+3.6
NLC	**Nalytchevo**	**3.22**	**23**	*e*P	Pn	19 31 29.3	+2.2
NLC				*i* S	Sn	19 32 06.0	+1.8
SPN	**Mys Shipunski**	**3.35**	**30**	*e*P	Pn	19 31 32.3	+3.4
SPN				*i* S	Sn	19 32 11.3	+3.9
GNL	**Ganaly**	**3.50**	**7**	*e*P	Pn	19 31 34.5	+3.6
MKZ	**Mys Kozlova**	**5.13**	**31**	*e*P	Pn	19 31 55.7	+2.5
MKZ				*i* S	Sn	19 32 52.0	+1.0
KMNR	**Kamenistaya**	**5.82**	**17**	P	Pn	19 32 08.2	+5.5
KBTR	**Krutoberegovo**	**6.86**	**27**	*e*P	Pn	19 32 19.2	+2.3

NIED ***13*** *19:37:00, 23°.50N×125°.10E, h17km, Mw4.3 Best double couple: M0=3.37000×10^15 NP1:φs=25.00000°, δ=87.00000°, λ=176.00000°. NP2:φs=115.00000°, δ=86.00000°, λ=3.00000°.*
ISCJB ***13*** *19:37:36.3±0.8, 23°.47N±0°.05×125°.19E±0°.03, h33km±7km, mb4.1/15, Error ellipse: s-maj=9.0km s-min=4.4km az=165.1*
JMA ***13*** *19:37:37.9±0.2, 23°.48N×125°.07E, h52km, M4.3*
NEIC ***13*** *19:37:39.9±1.5, 23°.36N×124°.93E, h45km±14km, mb4.5/5, MW4.3(NIED), Error ellipse: s-maj=12.3km s-min=10.4km az=58.0*
IDC ***13*** *19:37:39.8±0.7, 23°.41N×124°.99E, h43km±6km, mb3.8/11, mb1 4.0/13, mb1mx3.8/26, mbtmp3.9/13, ML3.4/2, Error ellipse: s-maj=27.2km s-min=11.3km az=71.0*
ISC 13 19:37:37.6±1.6, 23°.52N±0°.04×125°.15E±0°.03, h29km±12km, h43km±1.8km: pP-P, n43, σ1°.04/62, mb4.1/15, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.19**	**340**	P	**Pn**	**19 37 58.8**	**+0.5**
JTJ				S	**Sn**	**19 38 14.4**	**+0.9**
JIJ	**Ishigaki jima**	**1.24**	**313**	P	**Pn**	**19 37 58.9**	**-0.2**
JIJ				S	**Sn**	**19 38 13.9**	**-1.0**
JOGS	**Gusukube**	**1.26**	**11**	P	**Pn**	**19 38 00.0**	**+0.7**
JOGS				*e*S	**Sn**	**19 38 17.0**	**+1.8**
JKRS	**Kuro-shima**	**1.26**	**305**	P	**Pn**	**19 37 59.3**	**0.0**
JKRS				S	**Sn**	**19 38 14.8**	**-0.5**
JMJ	**Miyako jima 2**	**1.29**	**6**	P	**Pn**	**19 38 00.8**	**+1.0**
JMJ				*e*S	**Sn**	**19 38 17.6**	**+1.4**
HATJ	**Hateruma jima**	**1.34**	**294**	P	**Pn**	**19 37 59.9**	**-0.5**
HATJ				*e*S	**Sn**	**19 38 15.4**	**-1.8**
IRIF	**Iriomote-Funau**	**1.53**	**302**	P	**Pn**	**19 38 02.8**	**-0.2**
IRIF				*e*S	**Sn**	**19 38 21.0**	**-0.9**
YOJ	**Yonaguni jima**	**2.17**	**296**	P	**Pn**	**19 38 11.9**	**+0.1**
YOJ				*e*S	**Sn**	**19 38 36.5**	**-1.1**
JKE	**Kume jima 2**	**3.17**	**28**	P	**Pn**	**19 38 25.3**	**-0.2**
JKE				*e*S	**Sn**	**19 39 01.2**	**-1.1**
JJT2	**Tamagusuku 2**	**3.52**	**42**	P	**Pn**	**19 38 30.7**	**+0.3**
JJT2				*e*S	**Sn**	**19 39 10.4**	**-0.7**
NAH1	**Naha**	**3.53**	**40**	P	**Pn**	**19 38 31.4**	**+0.8**
NAH1				*e*S	**Sn**	**19 39 11.2**	**-0.2**
JAGN	**Aguni-jima**	**3.60**	**31**	P	**Pn**	**19 38 32.6**	**+1.1**
JAGN				*e*S	**Sn**	**19 39 12.3**	**-0.7**
TATO	**Taipei**	**3.64**	**294**	*e*P	**Pn**	**19 38 32.3**	**+0.2**
JIH	**Iheya**	**4.33**	**36**	P	**Pn**	**19 38 41.3**	**-0.3**
JIH				*e*S	**Sn**	**19 39 28.8**	**-2.3**
JOW	**Kunigami**	**4.35**	**40**	P	**Pn**	**19 38 41.9**	**+0.1**
JOW				*e*S	**Sn**	**19 39 28.4**	**-3.1**
JOW	**Kunigami**	**4.35**	**40**	P	**Pn**	**19 38 42.0**	**+0.2**
54nm,0.3s,baz=216,slow=14,SNR=24							
JOW				S	**Sn**	**19 39 29.4**	**-2.1**
23nm,0.3s,baz=114,slow=25,SNR=5.9							
JTK	**Tokunoshima**	**5.46**	**38**	P	**Pn**	**19 38 56.2**	**-0.9**
JTK				*e*S	**Sn**	**19 39 53.1**	**-5.9**
JMZ	**Minamidaito 2**	**5.98**	**66**	P	**Pn**	**19 39 01.6**	**-2.6**
JMZ				*e*S	**Sn**	**19 40 04.5**	**-7.3**
QZH	**Quanzhou**	**6.15**	**285**	Pn	**Pn**	**19 39 06.4**	**-0.1**
QZH				Sn	**Sn**	**19 40 08.6**	**-7.3**
QZH				smax			
comp=N,190nm,0.3s							
QZH				smax			
comp=E,130nm,0.7s							
JAM	**Amami Oshima**	**6.31**	**39**	P	**Pn**	**19 39 07.5**	**-1.3**
JAM				*e*S	**Sn**	**19 40 14.4**	**-5.5**
KSRS	**Korea Array**	**14.09**	**9**	P	**Pn**	**19 40 56.2**	**+0.9**
comp=E,0.1nm,0.3s,baz=88,slow=40,SNR=3.5							
MAJO	**Matsushiro**	**17.19**	**38**	*e*P	**Pn**	**19 41 40.4**	**+4.7**
comp=E,70nm,1.9s							
MAT	**Matsushiro**	**17.19**	**38**	P	**Pn**	**19 41 40.2**	**+4.5**
MJAR	**Matsushiro Arr**	**17.19**	**38**	P	**Pn**	**19 41 39.6**	**+3.9**
comp=E,0.2nm,0.3s,baz=229,slow=10,SNR=18							
ASAJ	**Asahikawa**	**25.05**	**31**	P	**P**	**19 43 01.0**	**+1.7**
comp=E,5.2nm,0.9s,mb4.1,baz=252,slow=13,SNR=4.5							
SONM	**Songino Array**	**28.50**	**333**	P	**P**	**19 43 30.5**	**+0.2**
comp=E,1.0nm,0.7s,mb3.5,baz=155,slow=9.6,SNR=5.7							
MK31	**Makanchi Array**	**41.35**	**315**	*e*P	**P**	**19 45 21.5**	**+0.6**
MKAR	**Makanchi Array**	**41.35**	**315**	P	**P**	**19 45 21.9**	**+0.9**
comp=E,1.3nm,0.5s,mb3.8,baz=100,slow=9.7,SNR=18							
FITZ	**Fitzroy Crossi**	**41.37**	**179**	P	**P**	**19 45 19.4**	**-1.9**
comp=E,2.7nm,0.7s,mb4.0,baz=20,slow=8.0,SNR=7.1							
ZAA0	**Zalesovo Array**	**42.80**	**326**	*e*P	**P**	**19 45 31.7**	**-1.0**
ZALV	**Zalesovo Beam**	**42.80**	**326**	P	**P**	**19 45 32.3**	**-0.3**
comp=E,1.0nm,0.4s,mb3.9,baz=118,slow=8.7,SNR=6.0							
ZALV				pP	pP	19 45 43.9	+2.6
comp=E,3.4nm,0.6s,baz=111,slow=8.4,SNR=9.8							
WRA	**Warramunga Arr**	**44.12**	**168**	P	**P**	**19 45 43.1**	**-0.5**
comp=E,7.1nm,0.8s,mb4.4,baz=348,slow=8.8,SNR=35							
WRA				pP	pP	19 45 55.4	+3.2
comp=E,6.0nm,0.7s,baz=348,slow=8.9,SNR=14							
KURK	**Kurchatov**	**44.94**	**319**	P	**P**	**19 45 51.0**	**+1.1**
comp=E,3.2nm,0.8s,mb4.2,baz=111,slow=8.4,SNR=25							
KURK				pP	pP	19 46 02.5	+4.0
comp=E,3.7nm,0.9s,baz=111,slow=8.1,SNR=12							
KURK	**Kurchatov**	**44.94**	**319**	*e*P	**P**	**19 45 49.1**	**-0.8**
comp=E,7.5nm,1.0s,mb4.5							
KURK				pP	pP	19 46 02.5	+4.0
ASAR	**Alice Springs**	**47.67**	**169**	P	**P**	**19 46 11.8**	**+0.2**
comp=E,0.8nm,0.5s,mb4.0,baz=353,slow=12,SNR=18							
ASAR				pP	pP	19 46 24.4	+4.2
comp=E,1.3nm,0.7s,baz=354,slow=11,SNR=7.9							
KBL	**Kabul**	**49.72**	**296**	*e*P	**P**	**19 46 28.9**	**+1.6**
comp=E,3.9nm,0.8s,mb4.5							
BVAR	**Borovoye Array**	**50.49**	**320**	P	**P**	**19 46 33.3**	**+0.4**
comp=E,0.9nm,0.6s,mb4.0,baz=109,slow=7.3,SNR=7.5							
BVAR				pP	pP	19 46 46.1	+4.5
comp=E,1.4nm,0.5s,baz=105,slow=7.7,SNR=8.7							
BRVK	**Borovoye**	**50.56**	**320**	*e*P	**P**	**19 46 34.8**	**+1.4**
comp=E,7.3nm,1.2s,mb4.5							
ARU	**Arti**	**57.82**	**323**	*e*P	**P**	**19 47 26.9**	**+0.6**
comp=E,2.0nm,0.5s,mb4.4							
ARU				*e*		19 47 38.2	
FINES	**FINESS Array B**	**73.83**	**330**	P	**P**	**19 49 09.9**	**+0.6**
comp=E,2.5nm,1.0s,mb4.1,baz=71,slow=12,SNR=3.3							
BRTR	**Keskin Array B**	**76.47**	**308**	P	**P**	**19 49 29.6**	**+4.7**
comp=E,0.7nm,0.8s,mb3.7,baz=54,slow=5.9,SNR=3.7							
YKA	**Yellowknife Ar**	**82.14**	**24**	P	**P**	**19 49 57.2**	**+1.8**
comp=E,0.7nm,0.7s,mb3.7,baz=306,slow=5.3,SNR=8.6							
YKA	**Yellowknife Ar**	**82.14**	**24**	P	**P**	**19 49 57.2**	**+1.8**

ISCJB ***13*** *19:51:51.1±0.2, 30°.97N±0°.02×103°.41E±0°.03, h10km, mb4.6/68, MS3.7/4, Error ellipse: s-maj=3.5km s-min=3.0km az=30.8*
IDC ***13*** *19:51:51.1±0.9, 30°.89N×103°.37E, h0km, mb4.4/19, mb1 4.5/20, mb1mx4.3/29, mbtmp4.4/20, ML3.5/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/36, Error ellipse: s-maj=27.1km s-min=16.1km az=19.0*
NEIC ***13*** *19:51:52.8±0.2, 30°.97N×103°.43E, h10km, mb4.7/40, Error ellipse: s-maj=5.7km s-min=5.0km az=182.0*
MOS ***13*** *19:51:52.2±0.9, 30°.89N×103°.45E, h20km, mb4.8/47, Error ellipse: s-maj=9.2km s-min=5.4km az=109.7*
BJI ***13*** *19:51:53.9, 30°.98N×103°.41E, h15km, mB4.8/15, mb4.5/25, ML4.3/20, Ms4.3/29, Ms7 4.0/21*
ISC 13 19:51:53.3±0.2, 30°.97N±0°.02×103°.39E±0°.03, h10km, n205, σ1°.09/220, mb4.6/68, MS3.7/4, 22C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.32**	**101**	Pg	**Pg**	**19 52 01.0**	**+1.3**
CD2				Sg	**Sg**	**19 52 07.8**	**+3.7**
CD2				smax			
comp=N,96μm,0.6s							
LZH	**Lanzhou**	**5.11**	**4**	*e*Pn	**Pn**	**19 53 15.9**	**+6.0**
LZH				Pg	**Pg**	**19 53 31.9**	**+0.7**
LZH				Sn	**Sn**	**19 54 17.9**	**+8.9**
LZH				Sg	**Sg**	**19 54 39.1**	**+1.6**
LZH				smax			
comp=N,240nm,0.8s							
LZH				smax			
comp=E,200nm,0.6s							
LZH				LR	LR		
comp=N,3μm,6.2s							
LZH				LR	LR		
comp=Z,4μm,7.5s							
ENH	**Enshi**	**5.30**	**96**	*e*Pn	**Pn**	**19 53 12.7**	**+0.2**
comp=Z,326nm,1.0s							
ENH				*e*Sn	**Sn**	**19 54 07.1**	**-6.6**
GYA	**Guiyang**	**5.34**	**147**	Pn	**Pn**	**19 53 14.3**	**+1.2**
GYA				smax			
comp=N,610nm,0.9s							
GYA				smax			
comp=E,490nm,1.0s							
GYA				LR	LR		
comp=N,5μm,3.9s							
GYA				LR	LR		
comp=E,4μm,2.8s							
GYA				LR	LR		
comp=Z,5μm,3.4s							
XAN	**Xi'an**	**5.58**	**55**	Pn	**Pn**	**19 53 15.8**	**-0.6**
XAN				Sn	**Sn**	**19 54 21.8**	**+1.2**
XAN				Sg	**Sg**	**19 54 47.5**	**-5.1**
XAN				smax			
comp=N,1μm,0.9s							
XAN				smax			
comp=E,460nm,0.8s							
KMI	**Kunming**	**5.86**	**186**	Pn	**Pn**	**19 53 21.4**	**+1.2**
KMI				Sn	**Sn**	**19 54 28.3**	**+0.9**
KMI				Sg	**Sg**	**19 55 04.3**	**+2.9**
KMI				smax			
comp=N,91nm,1.6s							
KMI				smax			
comp=E,130nm,1.2s							
KMI				LR	LR		
comp=N,1μm,7.9s							
KMI				LR	LR		
comp=E,2μm,7.5s							
GTA	**Gaotai**	**8.91**	**342**	*e*P	**Pn**	**19 53 56.5**	**-5.5**
GTA				pP		19 54 00.8	
GTA				sP		19 54 04.3	
GTA				S	**Sn**	**19 55 30.6**	**-12**
GTA				sS		19 55 35.4	
GTA				pmax	pmax		
comp=Z,3.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,66nm,5.4s							
GTA				LR	LR		
comp=N,540nm,9.5s							
GTA				LR	LR		
comp=E,750nm,9.8s							
GTA				LR	LR		
comp=Z,470nm,10.7s							
WHN	**Wuhan**	**9.44**	**90**	⇑P	**Pn**	**19 54 13.1**	**+3.7**
WHN				S	**Sn**	**19 55 52.3**	**-3.3**
WHN				LR	LR		
comp=N,2μm,5.4s							
WHN				LR	LR		
comp=E,2μm,8.6s							
WHN				LR	LR		
comp=Z,3μm,7.4s							
LSA	**Lhasa**	**10.65**	**266**	*e*P	**Pn**	**19 54 27.8**	**+1.9**
LSA				pmax	pmax		
comp=Z,16nm,0.8s							
LSA	**Lhasa**	**10.65**	**266**	*e*Pn	**Pn**	**19 54 27.8**	**+1.9**
comp=Z,16nm,0.8s							
SHL	**Shillong**	**11.48**	**245**	*e*P	**Pn**	**19 54 38.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**11.87**	**32**	*e*P	**Pn**	**19 54 43.0**	**+0.5**
HHC				pP		19 54 48.6	
HHC				PP		19 54 53.3	
HHC				S	**Sn**	**19 56 56.8**	**+1.8**
HHC				sS		19 57 04.5	
HHC				SS		19 57 10.9	
HHC				pmax	pmax		
comp=Z,8.0nm,1.1s							
HHC				pmax	pmax		
comp=Z,200nm,5.5s							
HHC				LR	LR		
comp=N,210nm,4.7s							
HHC				LR	LR		
comp=E,500nm,5.6s							
HHC				LR	LR		
comp=Z,220nm,5.5s							
CHTO	**Chiang Mai**	**12.76**	**199**	*e*P	**Pn**	**19 54 55.7**	**+0.9**
CHTO				pmax	pmax		
comp=Z,5.0nm,0.8s							
CHTO	**Chiang Mai**	**12.76**	**199**	*e*Pn	**Pn**	**19 54 55.7**	**+0.9**
comp=Z,4.9nm,0.8s							
CM31	**Chiang Mai Arr**	**13.10**	**199**	*e*P	**Pn**	**19 54 58.8**	**-0.7**
comp=Z,4.4nm,0.6s							
QIZ	**Qiongzhong**	**13.25**	**152**	P	**Pn**	**19 55 01.8**	**+0.3**
QIZ				S	**Sn**	**19 57 30.9**	**+1.9**
QIZ				LR	LR		
comp=N,600nm,5.6s							
QIZ				LR	LR		
comp=Z,440nm,5.9s							
BJI	**Beijing**	**13.78**	**45**	P	**Pn**	**19 55 07.5**	**-1.2**
BJI				S	**Sn**	**19 57 41.5**	**-0.3**
BJI				pmax	pmax		
comp=Z,10.0nm,0.4s							
BJI				LR	LR		
comp=N,420nm,5.5s							
BJI				LR	LR		
comp=E,390nm,5.7s							
TAPN	**Taplejung**	**14.17**	**259**	*e*P	**Pn**	**19 55 13.8**	**-0.2**
comp=E,60nm,0.9s							
ODAN	**Odare**	**14.60**	**258**	*e*P	**Pn**	**19 55 19.3**	**-0.6**
comp=E,46nm,0.8s							
QZH	**Quanzhou**	**14.71**	**110**	*e*P	**Pn**	**19 55 20.3**	**-1.2**
QZH				S	**Sn**	**19 58 02.3**	**-2.3**
QZH				LR	LR		
comp=N,830nm,4.2s							
QZH				LR	LR		
comp=E,1μm,5.6s							
QZH				LR	LR		
comp=Z,2μm,4.3s							
RAMN	**Ramite**	**15.23**	**259**	*e*P	**Pn**	**19 55 27.0**	**-1.5**
comp=Z,26nm,0.8s							
JIRN	**Jiri**	**15.36**	**262**	*e*P	**Pn**	**19 55 29.6**	**-0.6**
GUN	**Gumba**	**15.56**	**263**	*e*P	**Pn**	**19 55 31.7**	**-1.0**
comp=Z,37nm,0.7s							
PKI	**Pulchoki**	**16.05**	**262**	*e*P	**Pn**	**19 55 37.5**	**-1.6**
comp=Z,33nm,0.6s							
KKN	**Kakani**	**16.10**	**263**	*e*P	**Pn**	**19 55 38.4**	**-1.4**
comp=Z,67nm,0.8s							
DMN	**Daman**	**16.30**	**263**	*e*P	**Pn**	**19 55 40.5**	**-1.8**
comp=Z,46nm,1.0s							
SONM	**Songino Array**	**17.00**	**7**	Pn	**Pn**	**19 55 51.7**	**+0.7**
comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=14							
SONM				LR	LR	20 02 47.8	
comp=Z,166nm,18.2s,baz=79,slow=38							
WMQ	**Urumqi**	**17.85**	**320**	*e*P	**Pn**	**19 56 02.5**	**+0.9**
WMQ				pmax	pmax		
comp=Z,14nm,1.1s							
WMQ				LR	LR		
comp=N,260nm,6.0s							
WMQ				LR	LR		
comp=E,160nm,7.0s							
ZAK	**Zakamensk**	**19.39**	**360**	*e*P	**Pn**	**19 56 20.1**	**-0.2**
ZAK				pmax	pmax		
comp=Z,5.0nm,1.1s							
SNY	**Shenyang**	**19.48**	**51**	⇑P	**Pn**	**19 56 22.8**	**+1.3**
SNY				S	**Sn**	**19 59 51.3**	**-8.8**
SNY				pmax	pmax		
comp=Z,10.0nm,0.8s							
SNY				pmax	pmax		
comp=Z,1μm,5.6s							
INCN	**Inchon**	**20.26**	**65**	P	**P**	**19 56 30.0**	**+1.1**
comp=Z,26nm,0.7s							
TLY	**Talaya**	**20.69**	**0**	*e*P	**P**	**19 56 35.9**	**+2.6**
TLY				pmax	pmax		
comp=Z,6.0nm,1.2s							
TLY				MLR	MLR		
comp=Z,148nm,10.0s,MS3.6							
TLY	**Talaya**	**20.69**	**0**	P	**P**	**19 56 35.3**	**+1.9**
comp=Z,7.9nm,1.2s							
MOY	**Mondy**	**20.75**	**356**	*e*P	**P**	**19 56 36.7**	**+2.7**
MOY				pmax	pmax		
comp=Z,18nm,1.8s							
IRK	**Irkutsk**	**21.26**	**1**	*e*P	**P**	**19 56 41.1**	**+1.6**
IRK				pmax	pmax		
comp=Z,28nm,1.5s,mb4.4							
KSRS	**Korea Array**	**21.26**	**66**	P	**P**	**19 56 40.0**	**+0.3**
comp=Z,27nm,0.7s,mb4.7,baz=244,slow=9.6,SNR=74							
KSRS				LR	LR	20 05 37.8	
comp=Z,46nm,19.1s,baz=153,slow=39							
KSRS	**Korea Array**	**21.26**	**66**	P	**P**	**19 56 40.0**	**+0.3**
KSRS				pmax	pmax		
comp=Z,27nm,0.7s,mb4.7							
KSRS				MLR	MLR		
comp=Z,46nm,19.1s							
CN2	**Changchun**	**21.63**	**48**	*e*P	**P**	**19 56 44.3**	**+0.8**
CN2				*ep*P		19 56 48.5	
CN2				*es*P	sP	19 56 51.0	+3.3
CN2				*e*S	**S**	**20 00 38.4**	**-4.6**
CN2				pmax	pmax		
comp=Z,50nm,0.7s,mb5.0							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,300nm,11.0s,MS4.1							
CN2				LR	LR		
comp=E,300nm,11.0s,MS4.1							
CN2				LR	LR		
comp=Z,400nm,12.0s,MS4.0							
HIA	**Hailar**	**22.06**	**29**	*e*P	**P**	**19 56 48.7**	**+0.6**
HIA				pmax	pmax		
comp=Z,20nm,0.6s							
HIA	**Hailar**	**22.06**	**29**	*e*P	**P**	**19 56 48.7**	**+0.6**
comp=Z,20nm,0.6s,mb4.7							
MK31	**Makanchi Array**	**22.68**	**320**	*e*P	**P**	**19 56 55.4**	**+0.7**
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**19 56 55.8**	**+1.1**
comp=Z,16nm,1.1s,mb4.4,baz=119,slow=13,SNR=34							
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**19 56 55.8**	**+1.1**
MKAR				pmax	pmax		
comp=Z,16nm,1.1s							
ULHL	**Ulahol**	**24.42**	**305**	P	**P**	**19 57 14.0**	**+2.0**
SNR=8.3							
MDJ	**Mudanjiang**	**24.66**	**49**	*e*P	**P**	**19 57 13.3**	**-0.7**
comp=Z,34nm,1.3s,mb4.7							
KZA	**Kyzart**	**25.07**	**304**	P	**P**	**19 57 20.5**	**+2.7**
SNR=8.3							
TKM2	**Tokmak 2**	**25.09**	**306**	P	**P**	**19 57 18.6**	**+0.6**
SNR=7.8							
KBK	**Karagaybulak**	**25.46**	**305**	P	**P**	**19 57 23.5**	**+2.2**
SNR=18							
UCH	**Uchtor**	**25.64**	**304**	P	**P**	**19 57 25.8**	**+2.8**
SNR=8.4							
UCH	**Uchtor**	**25.64**	**304**	*e*P	**P**	**19 57 24.1**	**+1.1**
comp

ZALV pmax pmax
comp=Z,11nm,0.7s,mb4.5
KURK Kurchatov 26.99 324 P P 19 57 35.3 +0.2
comp=Z,3.9nm,0.5s,mb4.2,baz=128,slow=9.5,SNR=55
KURK Kurchatov 26.99 324 *ce*P **P 19 57 35.6 +0.5**
KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
KURK Kurchatov 26.99 324 *e*P **P 19 57 34.4 -0.6**
comp=Z,16nm,1.4s,mb4.4
BOD Bodaibo 27.82 12 *e*P **P 19 57 40.9 -1.6**
BOD pmax pmax
comp=Z,3.0nm,1.3s,mb3.8
NVS Novosibirsk 27.85 335 *e*P **P 19 57 44.9 +2.1**
KBL Kabul 29.02 286 *e*P **P 19 57 53.2 -0.2**
KBL pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
KBL Kabul 29.02 286 *e*P **P 19 57 53.2 -0.2**
comp=Z,3.0nm,0.5s,mb4.3
BTM Bintulu 29.10 160 P **P 19 57 48.6 -5.7**
MJAR Matsushiro Arr 29.37 70 LR LR 20 10 32.5
comp=Z,120nm,18.3s,MS3.6,baz=40,slow=38
SBUM Sibu 29.57 162 P **P 19 58 00.3 +1.8**
BVAR Borovoye Array 32.52 322 P **P 19 58 24.4 +0.4**
comp=Z,2.1nm,0.6s,mb4.2,baz=116,slow=9.5,SNR=9.7
BVAR PcP PcP 20 01 09.7 -0.9
comp=Z,1.7nm,0.6s,baz=154,slow=2.4,SNR=8.0
BVAR LR LR 20 11 29.2
comp=Z,72nm,18.2s,MS3.4,baz=94,slow=36
BVAR Borovoye Array 32.52 322 P **P 19 58 24.4 +0.3**
BVAR 20 01 09.7
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR MLR MLR
comp=Z,72nm,18.2s
BRVK Borovoye 32.59 322 *ce*P **P 19 58 25.6 +0.9**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BRVK Borovoye 32.59 322 *e*P **P 19 58 24.1 -0.6**
comp=Z,3.9nm,0.6s,mb4.5
ASAJ Asahikawa 33.42 56 P **P 19 58 32.3 +0.2**
comp=Z,4.8nm,0.6s,mb4.6,baz=255,slow=7.6,SNR=5.8
ASAJ Asahikawa 33.42 56 P **P 19 58 32.3 +0.2**
ASAJ pmax pmax
comp=Z,5.0nm,0.6s
YSS Yuzh-Sakhalins 34.11 51 P **P 19 58 37.6 -0.5**
YSS pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
YSS Yuzh-Sakhalins 34.11 51 P **P 19 58 37.6 -0.5**
comp=Z,8.6nm,0.5s,mb4.9
YAK Yakutsk 35.45 21 *e*P **P 19 58 48.9 -0.5**
YAK pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
YAK Yakutsk 35.45 21 *e*P **P 19 58 48.9 -0.4**
comp=Z,9.2nm,0.5s,mb5.0
AKTK Aktyubinsk 38.78 313 P **P 19 59 17.4 -0.5**
AKTO Aktyubinsk 38.78 313 P **P 19 59 17.4 -0.5**
comp=Z,0.8nm,0.4s,mb3.8,baz=95,slow=6.9,SNR=5.1
AKTO Aktyubinsk 38.78 313 P **P 19 59 17.4 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
SVE Sverdlovsk 39.24 324⇑ *e*P **P 19 59 22.6 +1.0**
SVE pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
ARU Arti 40.16 323 *c i*P **P 19 59 29.4 +0.1**
ARU S **S 20 05 33.6 -2.1**
ARU SS SS 20 08 24.4 -8.8
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.6
ARU Arti 40.16 323 *e*P **P 19 59 29.2 -0.1**
comp=Z,7.7nm,0.8s,mb4.5
TIXI Tiksi 43.00 12 *i*P **P 19 59 51.3 -1.1**
TIXI pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
TIXI Tiksi 43.00 12 *e*P **P 19 59 50.6 -1.8**
comp=Z,5.5nm,0.6s,mb4.5
SEY Seymchan 44.51 30 *e*P **P 20 00 03.3 -1.3**
PETK Petropavlovsk- 44.71 44 P **P 20 00 06.0 -0.3**
comp=Z,5.4nm,0.8s,mb4.4,baz=203,slow=5.1,SNR=6.4
PETK Petropavlovsk- 44.71 44 P **P 20 00 06.0 -0.4**
PETK pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
MIB Mutribah 47.92 284 *e*P **P 20 00 30.9 -1.0**
MIB AMb AMB 20 00 37.5
comp=Z,20nm,1.4s,mb5.0
RDF Al-Radifah 47.99 283 *e*P **P 20 00 32.4 -0.1**
RDF AMb AMB 20 00 32.8
comp=Z,17nm,0.7s,mb5.2
ZEI Tsey 48.12 302 *e*P **P 20 00 33.5 +0.2**
ZEI pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KIV Kislovodsk 48.87 303 *e*P **P 20 00 40.9 +1.8**
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KIV Kislovodsk 48.87 303 *e*P **P 20 00 39.9 +0.8**
comp=Z,9.8nm,0.8s,mb4.9
KLMR Klimovskoe 50.82 325 *e*P **P 20 00 52.5 -1.2**
KLMR pmax pmax
comp=Z,13nm,0.9s,mb4.9
BILL Bilibino 51.56 25 *e*P **P 20 00 58.7 -0.4**
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BILL Bilibino 51.56 25 *e*P **P 20 00 58.0 -1.1**
comp=Z,5.4nm,0.8s,mb4.5
OBN Obninsk 52.16 318⇓ *i*P **P 20 01 01.7 -2.1**
OBN pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MALT Malatya 52.98 297 P **P 20 01 11.1 +1.0**
JOF Joensuu 54.81 328 *e*P **P 20 01 22.4 -0.7**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
JOF Joensuu 54.81 328 *ep* **P 20 01 22.4 -0.7**
comp=Z,5.0nm,0.6s,mb4.7
BR131 Keskin Array S 56.27 300 *e*P **P 20 01 32.4 -1.6**
comp=Z,2.1nm,0.9s,mb4.2
BRTR Keskin Array B 56.27 300 P **P 20 01 33.8 -0.2**
comp=Z,1.6nm,0.9s,mb4.1,baz=98,slow=5.8,SNR=8.0
BRTR Keskin Array B 56.27 300 P **P 20 01 33.8 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
KEV Kevo 56.60 336 P **P 20 01 35.7 -0.2**
comp=Z,16nm,1.1s,mb5.0
KEV Kevo 56.60 336 *ep* **P 20 01 35.7 -0.2**
AKASG Malin Array Be 57.03 313 P **P 20 01 38.3 -0.9**
comp=Z,2.3nm,0.5s,mb4.5,baz=68,slow=7.0,SNR=9.6
AKASG Malin Array Be 57.03 313 P **P 20 01 38.3 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 57.13 336 P **P 20 01 39.7 +0.1**
comp=Z,3.8nm,0.8s,mb4.5,baz=88,slow=7.6,SNR=13
ARCES PcP PcP 20 02 33.5 -0.7
comp=Z,2.0nm,0.6s,baz=76,slow=5.1,SNR=7.2
ARCES ARCESS Array B 57.13 336 P **P 20 01 39.7 +0.1**
ARCES 20 02 33.5
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 57.16 327 *e*P **P 20 01 38.9 -1.0**
KAF Kangasniemi 57.16 327 *ep* **P 20 01 38.9 -1.0**
FINES FINESS Array B 57.33 326 P **P 20 01 40.7 -0.5**
comp=Z,4.5nm,0.7s,mb4.6,baz=96,slow=6.1,SNR=14
FINES FINESS Array B 57.33 326 P **P 20 01 40.7 -0.5**
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 57.33 326 P **P 20 01 40.7 -0.5**
WRAB Tennant Creek 58.71 145 P **P 20 01 50.2 -1.1**
WRAB pmax pmax
comp=Z,15nm,0.9s,mb5.0
WRAB Tennant Creek 58.71 145 P **P 20 01 50.1 -1.1**
comp=Z,15nm,0.9s,mb5.0
WRA Warramunga Arr 58.71 146 P **P 20 01 50.9 -0.3**
comp=Z,4.9nm,0.5s,mb4.8,baz=338,slow=7.6,SNR=4.8
WRA Warramunga Arr 58.71 146 P **P 20 01 50.9 -0.4**
WRA pmax pmax
comp=Z,5.0nm,0.5s
SUW Suwalki 60.03 318 *e*P **P 20 01 59.2 -0.8**
SUW Suwalki 60.03 318 *e*P **P 20 01 59.4 -0.6**
SUW pmax pmax
comp=Z,15nm,0.7s,mb5.1
SUW Suwalki 60.03 318 *e*P **P 20 01 59.4 -0.6**
comp=Z,15nm,0.7s,mb5.1
KWP Kalwaria Pacla 61.35 313 *e*P **P 20 02 09.6 +0.5**
KWP Kalwaria Pacla 61.35 313 *e*P **P 20 02 09.1 0.0**
KWP pmax pmax
comp=Z,14nm,0.9s,mb5.1
KWP Kalwaria Pacla 61.35 313 *e*P **P 20 02 09.1 0.0**
comp=Z,14nm,0.9s,mb5.1
KOLS Kolonicke sedl 61.81 312 *e*P **P 20 02 11.9 -0.3**
KOLS pmax pmax
comp=Z,29nm,2.8s,mb4.9
KOLS Kolonicke sedl 61.81 312 *e*P **P 20 02 11.9 -0.3**
comp=Z,29nm,2.8s,mb4.9
KOLS Kolonicke sedl 61.81 312 *e*P **P 20 02 11.9 -0.3**
STHS Stebnicka Huta 62.32 313 *e*P **P 20 02 15.5 -0.2**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
STHS Stebnicka Huta 62.32 313 *e*P **P 20 02 15.5 -0.2**
comp=Z,1.9nm,0.7s,mb4.3
STHS Stebnicka Huta 62.32 313 *e*P **P 20 02 15.5 -0.2**
NIE Niedzica 62.91 313 *e*P **P 20 02 20.2 +0.6**
OJC Ojcow 63.00 314 *e*P **P 20 02 20.4 +0.2**
KECS Kecovo 63.07 312 *e*P **P 20 02 21.3 +0.6**
KECS pmax pmax
comp=Z,3.0nm,1.4s,mb4.2
KECS Kecovo 63.07 312 *e*P **P 20 02 21.3 +0.6**
comp=Z,3.0nm,1.4s,mb4.2
KECS Kecovo 63.07 312 *e*P **P 20 02 21.3 +0.6**
VYHS Vyhne 64.11 313 *e*P **P 20 02 27.6 0.0**
VYHS pmax pmax
comp=Z,58nm,3.8s
VYHS Vyhne 64.11 313 *e*P **P 20 02 27.6 0.0**
comp=Z,58nm,3.8s
VYHS Vyhne 64.11 313 *e*P **P 20 02 27.6 0.0**
KOLL Kolacno 64.36 313 *e*P **P 20 02 29.4 +0.2**
KOLL Kolacno 64.36 313 *e*P **P 20 02 29.4 +0.2**
NB2 NORSAR Subarra 64.44 327 P **P 20 02 28.0 -1.5**
comp=Z,3.2nm,0.7s,mb4.5,baz=73,slow=6.9
NOA NORSAR Array B 64.44 327 P **P 20 02 28.5 -1.0**
comp=Z,2.0nm,0.5s,mb4.4,baz=73,slow=6.7,SNR=9.7
NOA NORSAR Array B 64.44 327 P **P 20 02 28.5 -1.0**
NOA pmax pmax
comp=Z,2.0nm,0.5s
MORC Moravsky Berou 64.52 314 *e*P **P 20 02 30.0 -0.2**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MORC Moravsky Berou 64.52 314 *e*P **P 20 02 29.9 -0.3**
comp=Z,3.5nm,0.7s,mb4.5
NAO01 NORSAR Array S 64.65 327 *e*P **P 20 02 29.1 -1.8**
CTAO Charters Tower 65.36 135 *e*P **P 20 02 33.1 -2.9**
CTAO pmax pmax
comp=Z,20nm,1.2s,mb5.0
CTAO Charters Tower 65.36 135 *e*P **P 20 02 33.1 -2.9**
comp=Z,20nm,1.2s,mb5.0
CONA Conrad Observa 66.18 313⇑ *i*P **P 20 02 41.1 +0.1**
comp=Z,2.1nm,0.6s,mb4.4
BRG Berggiesshubel 66.33 316 *e*P **P 20 02 41.6 -0.3**
comp=Z,5.3nm,1.1s,mb4.5
BRG Berggiesshubel 66.33 316 *e*P **P 20 02 41.6 -0.3**
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
CLL Collm 66.73 317 *e*P **P 20 02 44.0 -0.5**
CLL *e* 20 02 53.0
CLL Collm 66.73 317 *e*P **P 20 02 44.0 -0.5**
SOKA Soboth 67.15 312⇓ *i*P **P 20 02 47.0 -0.2**
comp=Z,3.3nm,0.7s,mb4.5
GERES GERESS Array B 67.20 314 P **P 20 02 47.4 -0.1**
comp=Z,1.3nm,0.7s,mb4.1,baz=76,slow=5.6,SNR=13
GERES GERESS Array B 67.20 314 P **P 20 02 47.4 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.7s
CHUM Lake Minchumin 68.57 27 *e*P **P 20 02 55.7 -0.2**
comp=Z,6.8nm,0.8s,mb4.6
TIP Timpagrande 68.81 304 *e*P **P 20 02 56.9 -0.9**
PPLA Purkeypile 69.07 28 *e*P **P 20 02 59.0 0.0**
comp=Z,9.4nm,0.6s,mb4.9
COLA College 69.81 26 *e*P **P 20 03 03.2 -0.3**
COLA pmax pmax
comp=Z,15nm,0.8s,mb5.0
COLA College 69.81 26 *e*P **P 20 03 03.2 -0.4**
comp=Z,15nm,0.8s,mb5.0
STU Stuttgart 69.97 315 P **P 20 03 04.9 +0.1**
KMBO Kilima Mbogo 70.28 256 P **P 20 03 07.5 +0.2**
KMBO pmax pmax
comp=Z,3.0nm,1.1s
KMBO Kilima Mbogo 70.28 256 P **P 20 03 07.5 +0.2**
comp=Z,3.1nm,1.1s,mb4.2
PMR Palmer 70.95 29 P **P 20 03 08.4 -2.2**
PMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PMR Palmer 70.95 29 P **P 20 03 08.4 -2.2**
comp=Z,9.1nm,0.8s,mb4.8
CDF Champ du Feu 71.28 316⇑ *i*P **P 20 03 12.2 -0.6**
comp=Z,4.6nm,0.7s,mb4.2
CDF Champ du Feu 71.28 316⇑ *i*P **P 20 03 12.2 -0.6**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CDF Champ du Feu 71.28 316⇑ *i*P **P 20 03 12.2 -0.6**
comp=Z,2.3nm,0.7s,mb4.2
KDAK Kodiak Island 71.28 33 *ce*P **P 20 03 12.1 -0.5**
WLF Walferdange 71.40 317 P **P 20 03 13.1 -0.5**
BCLA Clavier 71.56 318 P **P 20 03 14.3 -0.2**
comp=Z,12nm,2.9s,mb4.3
DOU Dourbes 72.11 318 P **P 20 03 17.8 0.0**
INK Inuvik 72.48 19 *e*P **P 20 03 19.0 -0.7**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 72.48 19 *e*P **P 20 03 19.0 -0.7**
comp=Z,6.9nm,0.8s,mb4.6
LPG La Plagne 72.89 313⇑ *i*P **P 20 03 22.8 +0.3**
comp=Z,14nm,0.8s,mb4.7
LPG La Plagne 72.89 313⇑ *i*P **P 20 03 22.8 +0.3**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPG La Plagne 72.89 313⇑ *i*P **P 20 03 22.8 +0.3**
comp=Z,7.0nm,0.8s,mb4.6
SUMG Summit 73.45 349 *e*P **P 20 03 24.6 -0.8**
comp=Z,3.7nm,0.6s,mb4.5
SMF Signal de Mont 74.16 315⇑ *i*P **P 20 03 29.1 -0.8**
comp=Z,8.7nm,0.7s,mb4.5
SMF Signal de Mont 74.16 315⇑ *i*P **P 20 03 29.1 -0.8**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SMF Signal de Mont 74.16 315⇑ *i*P **P 20 03 29.1 -0.8**
comp=Z,4.3nm,0.7s,mb4.5
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 20 03 36.3 -0.4**
comp=Z,12nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 20 03 36.3 -0.4**
TCF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TCF Toulx Ste Croi 75.32 315⇑ *i*P **P 20 03 36.3 -0.4**
comp=Z,6.2nm,1.1s,mb4.5
CAF Calviac 76.08 314 *e*P **P 20 03 41.0 -0.1**
comp=Z,6.0nm,0.8s,mb4.2
CAF Calviac 76.08 314 *e*P **P 20 03 41.0 -0.1**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CAF Calviac 76.08 314 *e*P **P 20 03 41.0 -0.1**
comp=Z,3.0nm,0.8s,mb4.3
SFJD Kangerlussuaq 80.36 350 *e*P **P 20 04 02.3 -2.1**
SFJD pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SFJD Kangerlussuaq 80.36 350 *e*P **P 20 04 02.3 -2.1**
comp=Z,6.8nm,0.7s,mb4.7
YKA Yellowknife Ar 82.00 17 P **P 20 04 12.7 -0.4**
comp=Z,3.7nm,0.7s,mb4.4,baz=329,slow=5.1,SNR=44
YKA Yellowknife Ar 82.00 17 P **P 20 04 12.7 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 82.00 17 P **P 20 04 12.7 -0.4**
FFC Flin Flon 91.90 14 *ce*P **P 20 05 01.6 -0.1**
FFC Flin Flon 91.90 14 *e*P **P 20 05 00.8 -0.8**
comp=Z,4.5nm,0.8s,mb4.8
TORD Torodi Ar. Bea 93.09 287 P **P 20 05 07.2 -0.7**
comp=Z,0.4nm,0.7s,mb3.9,baz=66,slow=4.7,SNR=3.1
NEW Newport 93.17 26 *e*P **P 20 05 06.7 -1.0**
SCHQ Schefferville 94.13 354 P **P 20 05 11.3 -0.6**
comp=Z,2.9nm,0.8s,mb4.8,baz=353,slow=6.0,SNR=3.6
SCHQ Schefferville 94.13 354 P **P 20 05 10.0 -1.9**
BSMT Bassoo Peak 94.37 25 *e*P **P 20 05 14.1 +0.9**
comp=Z,3.3nm,1.0s,mb4.7
TXAR Lajitas Array 114.73 26 PKP PKiKP 20 10 34.0 -0.4
comp=Z,0.3nm,0.6s,baz=209,slow=0.5,SNR=3.7
LVC Limon Verde 169.20 319 *e*PKPdf PKPdf 20 12 01.7 +0.4

MOS ***13*** *19:54:34.9±1.1,5°.73N×126°.03E,h129km,mb5.0/26,Error ellipse: s-maj=15.9km s-min=6.4km az=114.7*
MAN ***13*** *19:54:35,5°.40N×126°.22E,h101km,mb5.5,ML4.5,MS4.8*
BJI ***13*** *19:54:35.1,5°.37N×126°.21E,h154km,mB4.9/21,mb4.7/32*
DJA ***13*** *19:54:35,5°.65N×126°.82E,h118km,Mw5.4/4*
ISCJB ***13*** *19:54:36.3±0.4,5°.68N±0°.03×126°.24E±0°.05,h147km±3km, mb4.8/82,Error ellipse: s-maj=8.1km s-min=5.0km az=164.8*
NEIC ***13*** *19:54:37.7±0.7,5°.68N×126°.06E,h144km±6km,mb4.8/31, Error ellipse: s-maj=9.3km s-min=4.5km az=72.0*
IDC ***13*** *19:54:38.6±0.6,5°.69N×125°.99E,h147km±5km,mb4.3/26, mb1 4.4/27,mb1mx4.4/28,mbtmp4.3/27,MS3.2/1, Ms1 3.2/1,ms1mx2.5/30,Error ellipse: s-maj=17.8km s-min=7.0km az=75.0*
ISC 13 19:54:37.3±0.4,5°.67N±0°.03×126°.23E±0°.05,h142km±3km, h144km±3.1km:pP-P,n195,∞0s98/196,mb4.8/82,16C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.27**	**1**	*e*P	**Pn**	**19 55 03.2**	**-0.6**
MATI				*e*S	**Sn**	**19 55 22.7**	**-1.5**
DAV	**Davao City (W)**	**1.54**	**335**	P	**Pn**	**19 55 06.7**	**+0.1**
	160nm,0.3s,baz=115,slow=1.7,SNR=50						
DAV				S	**Sn**	**19 55 29.3**	**+0.2**
	407nm,0.3s,baz=343,slow=23,SNR=14						
DAV	**Davao City (W)**	**1.54**	**335**	*e*Pn	**Pn**	**19 55 06.5**	**-0.1**
DAV				*e*Sn	**Sn**	**19 55 27.5**	**-1.6**
DMPH	**Davao City--Mi**	**1.58**	**333**⇑	*e*P	**Pn**	**19 55 06.8**	**-0.3**
DMPH				*e*S	**Sn**	**19 55 29.8**	**-0.2**
BUKP	**Musuan**	**2.48**	**332**	*e*P	**Pn**	**19 55 18.1**	**+0.3**
BUKP				*e*S	**Sn**	**19 55 49.9**	**+0.8**
CTBH	**Cotabato--PC H**	**2.50**	**308**⇓	*e*P	**Pn**	**19 55 16.9**	**-1.1**
CTBH				*i* S	**Sn**	**19 56 08.6**	**+19**
CGP	**Cagayan de Oro**	**3.16**	**331**⇓	*e*P	**Pn**	**19 55 27.7**	**+1.2**
CGP				*i* S	**Sn**	**19 56 07.4**	**+3.0**
BUTP	**Butuan**	**3.33**	**350**	*e*P	**Pn**	**19 55 29.2**	**+0.5**
BUTP				*e*S	**Sn**	**19 56 15.7**	**+7.2**
PAGZ	**Pagadian**	**3.56**	**308**	*e*P	**Pn**	**19 55 31.3**	**-0.4**
IPIL	**Ipil**	**4.20**	**300**	*e*P	**Pn**	**19 55 40.7**	**+0.7**
ZMPH	**Zamboanga City**	**4.33**	**287**⇓	*i*P	**Pn**	**19 55 41.1**	**-0.7**
ZMPH				*i* S	**Sn**	**19 56 28.8**	**-3.1**
TBP	**Tagbilaran**	**4.63**	**330**	*e*P	**Pn**	**19 55 45.7**	**0.0**
SNPH	**Sibulan**	**4.71**	**321**⇓	*e*P	**Pn**	**19 55 51.1**	**+4.4**
LLP	**Lapu-Lapu**	**5.13**	**334**	*e*P	**Pn**	**19 55 52.1**	**-0.3**
RCP	**Roxas**	**6.79**	**330**⇑	*e*P	**Pn**	**19 56 16.0**	**+1.4**
KAPI	**Kappang**	**12.43**	**211**	P	**Pn**	**19 57 28.9**	**-0.6**
	2.8nm,0.3s,baz=34,slow=8.8,SNR=47						
KAKA	**Kakadu**	**19.27**	**161**	*e*P	**P**	**19 58 51.0**	**-0.2**
	32nm,0.6s						
KAKA	**Kakadu**	**19.27**	**161**	*e*P	**P**	**19 58 50.6**	**-0.6**
	98nm,0.6s						
MYKOM	**Kota Tinggi**	**22.66**	**261**	P	**P**	**19 59 27.9**	**+0.9**
KTGM	**Kuala Trenggan**	**22.99**	**270**	P	**P**	**19 59 31.1**	**+1.2**
KGM	**Kluang**	**23.14**	**262**	P	**P**	**19 59 32.8**	**+1.4**
FITZ	**Fitzroy Crossi**	**23.62**	**181**	*e*P	**P**	**19 59 35.8**	**+0.2**
	15nm,0.5s,mb4.8						
FITZ				*e*S	**S**	**20 03 47.5**	**+7.7**
FITZ	**Fitzroy Crossi**	**23.62**	**181**	P	**P**	**19 59 36.5**	**+0.9**
	4.0nm,0.5s,mb4.2,baz=358,slow=5.3,SNR=37						
FITZ				S	**S**	**20 03 43.6**	**+3.7**
	2.1nm,0.7s,baz=294,slow=17,SNR=2.9						
FITZ	**Fitzroy Crossi**	**23.62**	**181**	*e*P	**P**	**19 59 35.9**	**+0.2**
	22nm,1.0s,mb4.6						
FITZ				*e*S	**S**	**20 03 37.4**	**-2.4**
FRIM	**Kepong**	**24.65**	**265**	P	**P**	**19 59 47.2**	**+2.1**
IPM	**Ipoh**	**25.13**	**268**	P	**P**	**19 59 50.0**	**+0.5**
KULM	**Kulim**	**25.46**	**270**	P	**P**	**19 59 53.3**	**+0.8**
COEN	**Coen**	**25.75**	**139**	*e*P	**P**	**19 59 55.5**	**+0.5**
	153nm,0.8s,mb5.7						
WRAB	**Tennant Creek**	**26.66**	**163**	*e*P	**P**	**20 00 02.7**	**-0.4**
WRAB				*e*S	**S**	**20 04 25.8**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**26.66**	**163**	*e*P	**P**	**20 00 02.6**	**-0.5**
	comp=Z,14nm,0.8s,mb4.7						
WRAB				*e*S	**S**	**20 04 25.8**	**-2.2**
WRA	**Warramunga Arr**	**26.67**	**163**	P	**P**	**20 00 03.3**	**+0.1**
	comp=Z,2.9nm,0.4s,mb4.2,baz=342,slow=10,SNR=29						
WRA				S	**S**	**20 04 37.7**	**+10**
	comp=Z,3.8nm,1.0s,baz=335,slow=17,SNR=4.8						
WRA	**Warramunga Arr**	**26.67**	**163**	P	**P**	**20 00 03.3**	**+0.1**
WRA				S	**S**	**20 04 37.6**	**+10**
MBWA	**Marble Bar**	**27.41**	**193**	*e*P	**P**	**20 00 09.7**	**-0.1**
	comp=Z,27nm,1.2s,mb4.8						
GYA	**Guiyang**	**27.86**	**320**	P	**P**	**20 00 14.8**	**+1.0**
GYA				pP	pP	20 00 46.5	+2.7
GYA				sP	sP	20 01 02.8	+2.6
GYA				PP	PP	20 01 10.1	-9.4
GYA				PcP	PcP	20 03 26.8	+0.5
GYA				S	**S**	**20 04 45.0**	**-1.8**
GYA				sS	sS	20 05 40.3	+0.6
GYA				SS	SS	20 06 18.4	-32
GYA				ScP	ScP	20 06 52.3	-1.8
GYA				PcS	PcS	20 07 08.3	-0.2
GYA				ScS	ScS	20 10 44.9	-1.8
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
ENH	**Enshi**	**29.11**	**329**	*e*P	**P**	**20 00 23.1**	**-1.7**
	comp=Z,24nm,1.0s,mb4.9						
CM31	**Chiang Mai Arr**	**29.50**	**298**	*e*P	**P**	**20 00 28.0**	**-0.4**
	comp=Z,6.8nm,0.6s,mb4.5						
CM31				*e*PcP	PcP	20 03 31.3	+0.8
CMAR	**Chiang Mai Arr**	**29.50**	**298**	P	**P**	**20 00 27.6**	**-0.8**
	comp=Z,6.8nm,0.6s,mb4.5,baz=117,slow=7.1,SNR=21						
CMAR				PcP	PcP	20 03 31.5	+0.9
	baz=102,slow=1.1						
CHTO	**Chiang Mai**	**29.63**	**299**	*e*P	**P**	**20 00 28.7**	**-0.9**
CHTO				*e*		20 03 32.1	
CHTO				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.2						
CHTO	**Chiang Mai**	**29.63**	**299**	*e*P	**P**	**20 00 28.7**	**-0.8**
	comp=Z,70nm,1.4s,mb5.2						
CHTO				*e*PcP	PcP	20 03 32.1	+1.2
KMI	**Kunming**	**29.68**	**313**	P	**P**	**20 00 31.6**	**+1.6**
KMI				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**30.10**	**166**	P	**P**	**20 00 34.1**	**+0.5**
	comp=Z,4.2nm,0.5s,mb4.4,baz=345,slow=7.1,SNR=84						
ASAR				PcP	PcP	20 03 32.9	+0.9
	comp=Z,4.8nm,0.6s,baz=347,slow=2.8,SNR=11						
ASAR				S	**S**	**20 05 22.3**	**+0.3**
	comp=Z,2.5nm,1.1s,baz=348,slow=22,SNR=7.0						
KSRS	**Korea Array**	**31.68**	**3**	P	**P**	**20 00 48.8**	**+1.4**
	comp=Z,4.3nm,0.7s,mb4.3,baz=187,slow=9.3,SNR=15						
KSRS				PcP	PcP	20 03 37.0	+1.1
	comp=Z,2.6nm,0.8s,baz=193,slow=3.3,SNR=7.4						
KSRS				LR	LR	20 15 03.8	
	comp=Z,42nm,18.2s,baz=155,slow=39						
CTA	**Charters Tower**	**32.29**	**143**	*e*P	**P**	**20 00 57.5**	**+4.6**
	comp=Z,7.6nm,1.2s,mb4.3						
CTA	**Charters Tower**	**32.29**	**143**	P	**P**	**20 00 56.6**	**+3.7**
	comp=Z,6.6nm,0.8s,mb4.4,baz=317,slow=9.7,SNR=3.9						
CTAO	**Charters Tower**	**32.29**	**143**	P	**P**	**20 00 56.3**	**+3.4**
CTAO				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
CTAO	**Charters Tower**	**32.29**	**143**	P	**P**	**20 00 56.3**	**+3.4**
	comp=Z,17nm,1.1s,mb4.7						
XAN	**Xi'an**	**32.47**	**333**	P	**P**	**20 00 54.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**32.63**	**18**	P	**P**	**20 00 52.9**	**-2.8**
MJAR	**Matsushiro Arr**	**32.63**	**18**	P	**P**	**20 00 55.2**	**-0.5**
	comp=Z,2.4nm,0.9s,mb3.9,baz=193,slow=9.5,SNR=4.7						
MJAR				PcP	PcP	20 03 39.4	+0.8
	comp=Z,2.7nm,0.7s,baz=184,slow=3.0,SNR=5.0						
CD2	**Chengdu**	**32.80**	**323**	P	**P**	**20 00 58.9**	**+1.6**
CD2				pP	pP	20 01 28.6	+0.9
CD2				sP	sP	20 01 45.6	+1.6
CD2				PP	PP	20 02 13.9	-0.4
CD2				S	**S**	**20 06 04.5**	**+0.5**
CD2				sS	sS	20 06 57.3	0.0
CD2				SS	SS	20 08 13.3	-18
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,200nm,6.5s						
CD2				LR	LR		
	comp=N,530nm,5.9s						
CD2				LR	LR		
	comp=Z,320nm,8.9s						
DL2	**Dalian**	**33.35**	**353**	P	**P**	**20 01 03.6**	**+1.7**
DL2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
BJT	**Baijiatuau**	**35.38**	**347**	*e*P	**P**	**20 01 19.9**	**+0.5**

BJT pmax pmax
comp=Z,40nm,0.5s
BJT Baijiatuau 35.38 347 *e*P **P 20 01 19.9 +0.5**
comp=Z,40nm,0.5s,mb5.3
BJI Beijing 35.40 347 P **P 20 01 20.1 +0.6**
BJI pmax pmax
comp=Z,75nm,0.6s,mb5.5
LZH Lanzhou 36.59 329 *e*P **P 20 01 30.8 +1.0**
LZH pmax pmax
comp=Z,57nm,1.1s,mb5.1
HHC Hu-ho-hao-te 37.41 342 ⇑P **P 20 01 37.8 +1.2**
HHC pP pP 20 02 08.8 +1.2
HHC sP sP 20 02 25.1 +1.4
HHC PP PP 20 03 11.6 +6.6
HHC PcP PcP 20 03 53.8 +1.4
HHC S **S 20 07 15.8 +1.4**
HHC ScP ScP 20 07 26.4 -0.3
HHC sS sS 20 08 10.3 +1.9
HHC SS SS 20 09 58.5 -6.1
HHC pmax pmax
comp=Z,20nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,150nm,5.2s
HHC LR LR
comp=N,210nm,7.6s
HHC LR LR
comp=E,210nm,8.6s
HHC LR LR
comp=Z,140nm,9.6s
KLBR Kellerberrin 37.92 192 *e*P **P 20 01 41.5 +0.5**
comp=Z,57nm,1.3s,mb5.0
CN2 Changchun 37.98 359 *e*P **P 20 01 41.3 -0.1**
CN2 *e*sP sP 20 02 28.5 0.0
CN2 *e*S **S 20 07 23.3 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
SHL Shillong 38.35 305 *e*P **P 20 01 44.0 -0.7**
MDJ Mudanjiang 38.91 4 P **P 20 01 50.5 +1.4**
MDJ pmax pmax
comp=Z,16nm,0.9s,mb4.7
MDJ pmax pmax
comp=Z,110nm,5.1s
MDJ Mudanjiang 38.91 4 *e*P **P 20 01 50.4 +1.3**
comp=Z,4.2nm,0.6s,mb4.2
NWAO Narrogin (SRO) 39.32 192 P **P 20 01 53.7 +1.0**
comp=Z,15nm,0.9s,mb4.6,baz=35,slow=23,SNR=11
NWAO Narrogin (SRO) 39.32 192 *e*P **P 20 01 52.9 +0.2**
NWAO pmax pmax
comp=Z,20nm,1.1s
NWAO Narrogin (SRO) 39.32 192 *e*P **P 20 01 52.9 +0.3**
comp=Z,20nm,1.1s,mb4.7
STKA Stephens Creek 40.11 160 *e*P **P 20 02 00.4 +1.2**
comp=Z,7.7nm,0.4s,mb4.7
STKA Stephens Creek 40.11 160 P **P 20 02 00.3 +1.2**
comp=Z,12nm,0.5s,mb4.8,baz=338,slow=8.2,SNR=49
STKA PcP PcP 20 04 01.9 +0.9
comp=Z,12nm,0.6s,baz=325,slow=4.5,SNR=6.8
STKA Stephens Creek 40.11 160 *e*P **P 20 01 59.9 +0.7**
STKA *e* 20 04 01.7
STKA pmax pmax
comp=Z,3.0nm,0.7s
STKA Stephens Creek 40.11 160 *e*P **P 20 01 59.9 +0.7**
comp=Z,3.0nm,0.7s,mb4.0
STKA *e*PcP PcP 20 04 01.7 +0.6
LSA Lhasa 40.80 310 *e*P **P 20 02 05.9 +0.9**
LSA *e* 20 04 05.0
LSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LSA Lhasa 40.80 310 *e*P **P 20 02 05.9 +0.9**
comp=Z,8.6nm,0.8s,mb4.4
LSA *e*PcP PcP 20 04 05.0 +1.6
GTA Gaotai 41.19 328 *e*P **P 20 02 08.3 +0.3**
GTA pP pP 20 02 39.8 +0.4
GTA sP sP 20 02 55.8 +0.3
GTA PcP PcP 20 04 06.5 +2.0
GTA S **S 20 08 10.9 0.0**
GTA sS sS 20 09 10.3 +4.7
GTA SS SS 20 11 19.3 -0.5
GTA pmax pmax
comp=Z,11nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,120nm,5.4s
GTA LR LR
comp=N,88nm,12.8s
GTA LR LR
comp=E,90nm,12.8s
GTA LR LR
comp=Z,90nm,11.3s
TAPN Taplejung 42.49 305 *e*P **P 20 02 19.1 +0.3**
comp=Z,48nm,0.7s,mb5.3
ODAN Odare 42.56 304 *e*P **P 20 02 19.4 0.0**
comp=Z,67nm,0.7s,mb5.4
RAMN Ramite 43.25 304 *e*P **P 20 02 25.1 +0.2**
comp=Z,92nm,0.7s,mb5.5
ARMA Armidale 43.35 147 *e*P **P 20 02 27.3 +1.7**
ARMA Armidale 43.35 147 *e*P **P 20 02 26.5 +0.8**
comp=Z,8.5nm,0.8s,mb4.4
KLR Kul'dur 43.66 5 *e*P **P 20 02 25.7 -2.1**
HIA Hailar 43.79 354 *e*P **P 20 02 30.3 +1.4**
HIA pmax pmax
comp=Z,4.0nm,0.4s
HIA Hailar 43.79 354 *e*P **P 20 02 30.3 +1.4**
comp=Z,3.8nm,0.4s,mb4.4
JIRN Jiri 43.85 305 *e*P **P 20 02 30.1 +0.4**
comp=Z,108nm,0.7s,mb5.6
GUN Gumba 44.20 305 *e*P **P 20 02 32.7 +0.2**
comp=Z,121nm,0.7s,mb5.7
PKI Pulchoki 44.46 304 *e*P **P 20 02 34.3 -0.3**
comp=Z,39nm,0.7s,mb5.2
PKIN Phulchoki 44.47 304 *e*P **P 20 02 34.0 -0.7**
comp=Z,34nm,0.6s,mb5.1
KKN Kakani 44.65 304 *e*P **P 20 02 35.7 -0.4**
comp=Z,71nm,0.9s,mb5.3
DMN Daman 44.73 304 *e*P **P 20 02 36.8 +0.1**
comp=Z,55nm,0.8s,mb5.2
SONM Songino Array 45.31 341 P **P 20 02 41.3 +0.3**
comp=Z,2.1nm,0.4s,mb4.1,baz=159,slow=8.5,SNR=18
SONM PcP PcP 20 04 19.3 +1.1
comp=Z,6.4nm,0.8s,baz=160,slow=3.6,SNR=16
TLY Talaya 49.54 342 *e*P **P 20 03 14.7 +1.1**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
TLY Talaya 49.54 342 *e*P **P 20 03 14.1 +0.5**
comp=Z,5.9nm,0.7s,mb4.3
MOY Mondy 50.40 340 *e*P **P 20 03 21.0 +0.9**
WMQ Urumqi 50.86 324 *e*P **P 20 03 24.0 +0.3**
WMQ pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
DDI Dehra Dun 51.45 305 *ex* x 20 03 26.5
BOD Bodaibo 52.89 352 ⇓*i*P **P 20 03 38.9 +0.5**
BOD pmax pmax
comp=Z,17nm,1.1s,mb4.7
PETK Petropavlovsk- 53.84 23 P **P 20 03 47.2 +1.8**
comp=Z,3.3nm,0.7s,mb4.2,baz=198,slow=4.2,SNR=6.5
PETK PcP PcP 20 04 49.5 +0.2
comp=Z,5.0nm,0.8s,baz=160,slow=3.5,SNR=4.2
MK31 Makanchi Array 55.69 325 ⇑*i*P **P 20 03 58.6 -0.3**
MK31 *e* 20 04 56.1
MKAR Makanchi Array 55.69 325 P **P 20 03 58.7 -0.2**
comp=Z,12nm,0.4s,mb5.1,baz=118,slow=7.3,SNR=200
MKAR PcP PcP 20 04 56.7 +0.1
comp=Z,8.7nm,0.8s,baz=127,slow=5.0,SNR=11
MKAR Makanchi Array 55.69 325 P **P 20 03 58.7 -0.2**
MKAR PcP PcP 20 04 56.7 +0.1
YAK Yakutsk 56.30 2 *e*P **P 20 04 03.4 +0.5**
YAK pmax pmax
comp=Z,66nm,0.8s,mb5.5
YAK pmax pmax
comp=N,21nm,1.0s
YAK Yakutsk 56.30 2 *e*P **P 20 04 03.8 +0.8**
comp=N,99nm,0.8s,mb5.7
ULHL Ulahol 57.26 317 P **P 20 04 10.8 +0.7**
SNR=7.9
KZA Kyzart 57.86 317 P **P 20 04 15.2 +0.9**
SNR=21
TKM2 Tokmak 2 57.98 318 P **P 20 04 15.4 +0.3**
SNR=13
KBK Karagaybulak 58.30 317 P **P 20 04 18.0 +0.6**
SNR=6.6
UCH Uchtor 58.42 317 P **P 20 04 19.1 +0.9**
SNR=25
UCH Uchtor 58.42 317 *e*P **P 20 04 18.7 +0.5**
UCH pmax pmax
comp=Z,20nm,0.9s,mb5.0
UCH Uchtor 58.42 317 *e*P **P 20 04 18.7 +0.5**
comp=Z,20nm,0.9s,mb5.0
AAK Ala-Archa 58.60 317 P **P 20 04 19.6 +0.2**
SNR=5.0
AAK Ala-Archa 58.60 317 P **P 20 04 19.7 +0.3**
comp=Z,2.4nm,0.4s,mb4.4,baz=138,slow=4.7,SNR=9.3
AAK Ala-Archa 58.60 317 ⇓*i*P **P 20 04 20.2 +0.8**
AAK pmax pmax
comp=Z,230nm,1.1s,mb5.9
AAK Ala-Archa 58.60 317 ⇓*i*P **P 20 04 20.2 +0.8**
comp=Z,230nm,1.1s,mb5.9
ZAA0 Zalesovo Array 58.65 333 *e*P **P 20 04 18.0 -1.5**
ZAA0 *e* 20 05 06.4
ZALV Zalesovo Beam 58.65 333 P **P 20 04 18.6 -1.0**
comp=Z,7.4nm,0.5s,mb4.8,baz=133,slow=6.6,SNR=33
ZALV PcP PcP 20 05 07.4 -0.6
comp=Z,6.2nm,0.9s,baz=134,slow=4.3,SNR=6.4
USP Ospenovka 58.85 318 P **P 20 04 21.1 -0.1**
SNR=16
AML Almayashu 58.95 316 P **P 20 04 22.7 +0.8**
SNR=19
AML Almayashu 58.95 316 *e*P **P 20 04 22.2 +0.4**
AML *e* 20 05 10.2
AML pmax pmax
comp=Z,19nm,0.8s,mb5.0
AML Almayashu 58.95 316 *e*P **P 20 04 22.2 +0.4**
comp=Z,19nm,0.8s,mb5.0
AML *e*PcP PcP 20 05 10.2 +0.7
EKS2 Erkin-Say 59.09 317 P **P 20 04 23.1 +0.2**
SNR=20
KURK Kurchatov 59.85 327 P **P 20 04 27.3 -0.6**
comp=Z,14nm,0.6s,mb5.0,baz=129,slow=6.5,SNR=98
KURK Kurchatov 59.85 327 *c*e**P 20 04 27.4 -0.5**
KURK pmax pmax
comp=Z,22nm,0.7s,mb5.1
KURK Kurchatov 59.85 327 ⇑*i*P **P 20 04 27.1 -0.7**
comp=Z,21nm,0.6s,mb5.2
NVS Novosibirsk 59.93 333 *e*P **P 20 04 26.5 -1.8**
NVS *e* 20 05 10.3
KBL Kabul 59.96 307 ⇑*i*P **P 20 04 28.4 -0.6**
KBL pmax pmax
comp=Z,14nm,0.7s,mb4.9
KBL Kabul 59.96 307 ⇑*i*P **P 20 04 28.4 -0.6**
comp=Z,14nm,0.7s,mb4.9
SEY Seymchan 60.27 13 *c*e**P 20 04 33.3 +2.8**
BVAR Borovoye Array 65.44 327 P **P 20 05 04.4 -0.5**
comp=Z,6.5nm,0.8s,mb4.5,baz=120,slow=8.8,SNR=33
BVAR PcP PcP 20 05 35.2 -0.4
comp=Z,2.7nm,0.8s,baz=129,slow=5.9,SNR=3.6
BRVK Borovoye 65.51 327 *c*e**P 20 05 05.1 -0.2**
BRVK pmax pmax
comp=Z,15nm,0.8s,mb4.9
BRVK Borovoye 65.51 327 *e*P **P 20 05 04.7 -0.6**
comp=Z,14nm,0.8s,mb4.8
TIXI Tiksi 65.92 1 *e*P **P 20 05 07.8 +0.1**
TIXI pmax pmax
comp=Z,21nm,0.8s,mb5.0
TIXI Tiksi 65.92 1 ⇑*i*P **P 20 05 07.7 0.0**
comp=Z,236nm,0.6s
BILL Bilibino 67.82 15 ⇑*e*P **P 20 05 23.8 +4.1**
BILL *e* 20 05 44.6
BILL pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
BILL MLR MLR
comp=Z,200nm,16.0s
AKTK Aktyubinsk 71.84 321 P **P 20 05 44.1 -0.5**
AKTO Aktyubinsk 71.84 321 P **P 20 05 44.1 -0.5**
comp=Z,14nm,0.8s,mb4.8,baz=103,slow=8.1,SNR=41
SVE Sverdlovsk 72.06 328 ⇑*e*P **P 20 05 45.7 -0.1**
SVE *e*S S 20 14 58.1 +2.1
SVE pmax pmax
comp=Z,17nm,0.8s,mb4.8
UNV Unalaska Valle 72.13 35 P **P 20 05 45.4 -0.9**
ARU Arti 73.04 328 *c i*P **P 20 05 50.7 -0.9**
ARU S S 20 15 03.6 -3.6
ARU pmax pmax
comp=Z,12nm,0.6s,mb4.8
ARU Arti 73.04 328 ⇑*i*P **P 20 05 50.4 -1.3**
comp=Z,13nm,0.8s,mb4.7
ZEI Tsey 80.55 312 *e*P **P 20 06 33.3 -0.8**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb4.6
GOF Gofitskoye 81.21 315 *e*P **P 20 06 40.9 +3.4**
KIV Kislovodsk 81.45 313 *e*P **P 20 06 39.1 +0.3**
KIV pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
KIV MLR MLR
comp=Z,33nm,19.0s
KIV Kislovodsk 81.45 313 *e*P **P 20 06 38.9 +0.1**
comp=Z,11nm,0.8s,mb4.5
VRHR Novokhopersk 82.23 321 *e*P **P 20 06 41.6 -1.1**
VRHR pmax pmax
comp=Z,60nm,0.8s,mb5.3
VRHR pmax pmax
comp=N,20nm,1.2s
VRHR pmax pmax
comp=E,30nm,0.7s
COLA College 83.17 25 P **P 20 06 46.6 -0.7**
KLMR Klimovskoe 83.48 331 *e*P **P 20 06 47.9 -1.1**
KLMR pmax pmax
comp=Z,28nm,1.3s,mb4.8
VORD Divnogorie 83.71 321 *e*P **P 20 06 49.1 -1.2**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 83.78 321 *e*P **P 20 06 49.8 -0.9**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.1
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,9.0nm,0.4s
MALT Malatya 84.80 308 *e*P **P 20 06 56.2 +0.1**
MALT pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
MALT Malatya 84.80 308 *e*P **P 20 06 56.2 +0.1**
comp=Z,2.0nm,0.7s,mb4.0
OBN Obninsk 85.20 325 ⇑*i*P **P 20 06 55.5 -2.2**
OBN pmax pmax
comp=Z,47nm,1.2s,mb5.1
OBN Obninsk 85.20 325 P **P 20 06 55.8 -1.9**
comp=Z,45nm,0.9s,mb5.2
MAW Mawson 85.39 200 P **P 20 06 59.2 +0.9**
comp=Z,1.8nm,0.6s,mb4.0,baz=26,slow=7.4,SNR=11
JOF Joensuu 87.24 333 *e*P **P 20 07 06.7 -0.9**
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
JOF Joensuu 87.24 333 *e*p **P 20 07 06.7 -0.9**
comp=Z,7.2nm,0.4s,mb4.9
MMAI Mount Meron Ar 87.64 303 P **P 20 07 09.4 -0.7**
comp=Z,1.2nm,0.5s,mb4.0,baz=64,slow=14,SNR=4.4
KEV Kevo 87.91 340 *e*P **P 20 07 10.2 -0.4**
KEV Kevo 87.91 340 *e*p **P 20 07 10.2 -0.4**
BR131 Keskin Array S 88.41 310 *e*P **P 20 07 11.8 -1.8**
comp=Z,2.6nm,0.8s,mb4.1
BRTR Keskin Array B 88.41 310 P **P 20 07 12.3 -1.3**
comp=Z,3.8nm,0.9s,mb4.2,baz=104,slow=5.0,SNR=17
ARCES ARCESS Array B 88.47 340 P **P 20 07 13.2 -0.1**
comp=Z,16nm,0.8s,mb4.9,baz=84,slow=6.3,SNR=53
ARE0 ARCESS Array S 88.47 340 *e*P **P 20 07 12.7 -0.6**
SPB4 Spitsbergen Ar 88.50 349 *e*P **P 20 07 13.1 -0.2**
INK Inuvik 88.56 21 *e*P **P 20 07 14.1 +0.4**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 88.56 21 *e*P **P 20 07 14.1 +0.4**
comp=Z,7.2nm,1.0s,mb4.6
KMBO Kilima Mbogo 89.09 269 P **P 20 07 16.9 -0.4**
comp=Z,1.9nm,0.8s,mb4.1,baz=57,slow=11,SNR=6.2
KMBO Kilima Mbogo 89.09 269 *i*P **P 20 07 18.0 +0.6**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 89.09 269 *e*P **P 20 07 16.5 -0.9**
comp=Z,2.3nm,0.9s,mb4.1
KAF Kangasniemi 89.66 332 *e*P **P 20 07 18.3 -0.7**
KAF pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
KAF Kangasniemi 89.66 332 *e*p **P 20 07 18.3 -0.7**
comp=Z,9.0nm,0.5s,mb5.0
FINES FINESS Array B 89.90 332 P **P 20 07 19.6 -0.5**
comp=Z,6.6nm,0.6s,mb4.7,baz=50,slow=5.0,SNR=43
AKASG Malin Array Be 90.08 321 P **P 20 07 19.1 -2.2**
comp=Z,2.5nm,0.8s,mb4.2,baz=68,slow=4.6,SNR=9.3
SUW Suwalki 93.06 325 P **P 20 07 32.7 -2.2**
SUW pmax pmax
comp=Z,19nm,0.8s,mb5.3
SUW Suwalki 93.06 325 P **P 20 07 32.7 -2.2**
comp=Z,19nm,0.8s,mb5.3
BUR08 Bucovina Ar. S 93.24 318 *e*P **P 20 07 34.9 -1.0**
NB2 NORSAR Subarra 96.84 334 P **P 20 07 50.7 -1.3**
comp=Z,4.7nm,0.8s,mb4.9,baz=65,slow=4.6
NOA NORSAR Array B 96.84 334 P **P 20 07 51.0 -1.0**
comp=Z,3.6nm,0.7s,mb4.8,baz=65,slow=4.5,SNR=16
YKA Yellowknife Ar 97.95 24 P **P 20 07 57.4 +0.5**
comp=Z,1.9nm,0.8s,mb4.6,baz=300,slow=4.8,SNR=17
YKA Yellowknife Ar 97.95 24 P **P 20 07 57.4 +0.5**
BRG Berggiesshubel 99.39 324 *e*P Pdif 20 08 03.8 +0.2
comp=Z,4.5nm,0.9s
BRG Berggiesshubel 99.39 324 *e*P Pdif 20 08 03.8 +0.2
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
GERES GERESS Array B 100.27 322 P Pdif 20 08 07.4 -0.1
comp=Z,1.0nm,0.8s,baz=74,slow=5.7,SNR=8.4
SCHQ Schefferville 118.74 9 PKP PKPdf 20 13 09.7 +1.0
comp=Z,2.7nm,0.6s,baz=65,slow=7.6,SNR=6.5
TXAR Lajitas Array 120.80 51 PKP PKPdf 20 13 15.0 +1.6
comp=Z,1.1nm,0.6s,baz=207,slow=0.9,SNR=9.3
WMOK Wichita Mounta 121.59 43 *e*PKIKP PKPdf 20 13 15.1 +0.3
TOA0 Torodi Ar. Sit 121.83 289 *e*PKPdf PKPdf 20 13 15.6 -0.1
TORD Torodi Ar. Bea 121.83 289 PKP PKPdf 20 13 15.8 +0.1
comp=Z,4.7nm,0.4s,baz=71,slow=1.7,SNR=71
JCT Junction City 123.16 48 *e*PKIKP PKPdf 20 13 19.1 +1.2
KIC Kosan Boka 129.62 283 *e*PKP1 PKPdf 20 13 31.1 +0.4
comp=Z,15nm,0.7s
DBIC Dimbokro 129.67 283 PKP PKPdf 20 13 31.3 +0.5
comp=Z,3.8nm,0.6s,baz=91,slow=1.5,SNR=9.0
TIC Toumodi 129.83 283 *e*PKP1 PKPdf 20 13 31.3 +0.2
comp=Z,29nm,1.1s
LIC Lamto 129.93 283 *e*PKP1 PKPdf 20 13 32.2 +0.9
comp=Z,25nm,0.8s
PLCA Paso Flores 141.98 159 PKhKP 20 13 49.1
comp=Z,2.1nm,0.7s,baz=242,slow=3.5,SNR=6.6
JTS JuntasAbangare 145.13 63 *e*PKIKP PKPdf 20 13 59.8 +0.7
TRQA Tornquist 146.91 168 *e*PKPbc PKPbc 20 14 04.4 +0.8
LCO Las Campanas 151.79 147 *e*PKPbc PKPbc 20 14 17.5 +1.5
CPUP Villa Florida 159.17 171 PKPab PKPab 20 14 58.6 +1.8
comp=Z,5.9nm,0.7s,baz=169,slow=5.3,SNR=18
LPAZ La Paz 162.41 128 PKP PKPdf 20 14 25.7 +2.5
comp=Z,2.0nm,1.0s,baz=29,slow=2.6,SNR=5.5
LPAZ La Paz 162.41 128 *e*PKPdf PKPdf 20 14 25.1 +1.9

SKHL 13 20:02:18.7±0.5, 52°.93N×143°.78E, h10km, mb3.9/2, 2C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.80**	**321**	⇑*i*P	g	Pg	20 02 35.2	+1.0
OKH					AMB	AMB	20 02 36.1	
	300nm,0.5s							
OKH				⇑*i*S	g	Sg	20 02 47.1	+2.5
OKH					A		20 02 49.0	
	300nm,0.6s							
OKH					A		20 02 49.0	
	700nm,0.6s							
NKL	**Nikolayevsk**	**1.89**	**278**	*e*S	g	Sg	20 03 26.0	+6.8
TYV	**Tymovskoe**	**2.18**	**199**	*e*P		Pn	20 02 56.0	+1.0
TYV				*e*P	g	Pg	20 03 02.0	+1.5
TYV					AMB	AMB	20 03 03.5	
	16nm,0.8s							
TYV				*e*S	g	Sg	20 03 32.0	+3.2
TYV					A		20 03 33.5	
	12nm,0.6s							
EKMR	**Ekimchan**	**6.54**	**276**	*e*Sb		Sb	20 05 27.5	-3.1
EKMR					A		20 05 28.5	
	6.0nm,0.7s							

GUC 13 20:05:11.1±1.1, 22°.93S×66°.96W, h248km±16km, ML3.6, 4C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.83**	**280**	⇑*i*P		Pn	20 05 53.8	+1.9
LVC				*i*S		S	20 06 26.7	+2.6
LVC					AML	AML	20 06 27.6	
	comp=E,33nm,0.6s							
PB04	**Plate Boundary**	**2.43**	**285**	⇑*i*P		Pn	20 06 06.1	+8.6
PB04				*i*S		S	20 06 47.9	+14
PB04					AML	AML	20 06 52.2	
	comp=E,111nm,0.2s							
PECH	**Pedro de Valdi**	**2.53**	**277**	*e*S		S	20 06 38.8	+2.9
PECH					AML	AML	20 06 39.4	
	comp=E,216nm,0.2s							
PB01	**Plate Boundary**	**3.01**	**308**	⇑*i*P		Pn	20 06 05.6	+2.0
PB01				*i*S		S	20 06 47.7	+2.6
PB01					AML	AML	20 06 48.8	
	comp=N,76nm,0.2s							
ANCH	**Antofagasta**	**3.26**	**256**	⇑*i*P		Pn	20 06 08.8	+2.5
ANCH				*i*S		S	20 06 51.8	+1.7
MNMC	**Miæe Miæ**	**4.51**	**326**	⇓*i*P		Pn	20 06 23.1	+2.1
MNMC				*i*S		S	20 07 18.3	+1.7

*ISCJB **13** 20:05:26.0±0.5, 36°.97N±0°.02×29°.18E±0°.04, h2km±5km, Error ellipse: s-maj=4.8km s-min=4.0km az=19.9*
*CSEM **13** 20:05:25.7±0.2, 36°.96N×29°.14E, h8km, MD2.8, Error ellipse: s-maj=4.4km s-min=4.1km az=51.0*
*ISK **13** 20:05:25.1, 37°.00N×29°.13E, h10km, MD2.8*
*DDA **13** 20:05:26.7, 37°.02N×29°.23E, h23km±1km, Md3.1*
ISC 13 20:05:26.5±0.5, 36°.97N±0°.02×29°.18E±0°.03, h7km±4km, n43, σ1°.15/66, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**54**	*e*PG		**Pg**	**20 05 32.4**	**-0.3**
GLHS				*e*SG		**Sg**	**20 05 37.0**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.32**	**54**	*e*Pg		**Pg**	**20 05 32.4**	**-0.3**
GLHS				*e*Sg		**Sg**	**20 05 37.1**	**+0.2**
FETY	**Fethiye**	**0.34**	**193**	*e*PG		**Pg**	**20 05 32.7**	**-0.4**
FETY				*e*SG		**Sg**	**20 05 38.2**	**+0.5**
FETY	**Fethiye**	**0.34**	**193**	*e*Pg		**Pg**	**20 05 32.7**	**-0.4**
FETY				*e*Sg		**Sg**	**20 05 38.2**	**+0.6**
GOLH	**Golhisar**	**0.41**	**49**	*i*P		**Pg**	**20 05 33.6**	**-0.8**
GOLH				*i*S		**Sg**	**20 05 40.4**	**+0.6**
GOLH	**Golhisar**	**0.41**	**49**	*i*P		**Pg**	**20 05 33.6**	**-0.8**
GOLH				*i*S		**Sg**	**20 05 40.3**	**+0.6**
TURN	**Turunc**	**0.47**	**258**	*i*P		**Pg**	**20 05 41.5**	**+6.0**
TURN				*i*S		**Sg**	**20 05 52.5**	**+11**
ELL	**Elmali**	**0.63**	**110**	*e*PG		**Pg**	**20 05 39.1**	**+0.5**
ELL	**Elmali**	**0.63**	**110**	*e*Pg		**Pg**	**20 05 39.1**	**+0.5**
DNZL	**Cakiroluk**	**0.72**	**352**	*i*P		**Pg**	**20 05 39.5**	**-0.9**
DNZL				*i*S		**Sg**	**20 05 51.2**	**+1.3**
DNZL	**Cakiroluk**	**0.72**	**352**	*i*P		**Pg**	**20 05 39.5**	**-0.9**
DNZL				*i*S		**Sg**	**20 05 51.2**	**+1.3**
YER	**Yerkesik**	**0.73**	**283**	*e*PG		**Pg**	**20 05 38.9**	**-1.7**
YER	**Yerkesik**	**0.73**	**283**	*e*Pg		**Pg**	**20 05 38.9**	**-1.7**
DENT	**Denizli**	**0.79**	**352**	*e*PG		**Pg**	**20 05 40.3**	**-1.4**
DENT	**Denizli**	**0.79**	**352**	*e*Pg		**Pg**	**20 05 40.3**	**-1.4**
AKAS	**Kas**	**0.81**	**155**	*i*P		**Pg**	**20 05 41.7**	**-0.3**
AKAS				*i*S		**Sg**	**20 05 55.2**	**+2.6**
AKAS	**Kas**	**0.81**	**155**	*i*P		**Pg**	**20 05 41.7**	**-0.4**
AKAS				*i*S		**Sg**	**20 05 55.2**	**+2.6**
KORT	**Korkueli**	**0.94**	**88**	*i*P		**Pg**	**20 05 44.5**	**0.0**
KORT				*i*S		**Sg**	**20 06 00.5**	**+3.8**
KORT	**Korkueli**	**0.94**	**88**	*i*P		**Pg**	**20 05 44.5**	**0.0**
KORT				*i*S		**Sg**	**20 06 00.5**	**+3.8**
MLSB	**Milas**	**1.17**	**287**	*e*PN		**Pn**	**20 05 46.9**	**-2.3**
MLSB	**Milas**	**1.17**	**287**	*e*Pn		**Pn**	**20 05 46.9**	**-2.3**
BCK	**Bucak**	**1.23**	**66**	*e*PN		**Pn**	**20 05 48.8**	**-1.3**
BCK	**Bucak**	**1.23**	**66**	*e*Pn		**Pn**	**20 05 48.8**	**-1.3**
AYDN	**Tasoluk**	**1.24**	**304**	*i*P		**Pb**	**20 05 50.6**	**+0.3**
AYDN				*i*S		**Sg**	**20 06 07.6**	**+1.2**
AYDN	**Tasoluk**	**1.24**	**304**	*i*P		**Pb**	**20 05 50.6**	**+0.3**
AYDN				*i*S		**Sg**	**20 06 07.6**	**+1.2**
DAT	**Datca**	**1.30**	**260**	*e*PN		**Pn**	**20 05 49.1**	**-2.0**
DAT	**Datca**	**1.30**	**260**	*e*Pn		**Pn**	**20 05 49.1**	**-2.0**
KHL	**Karahalli**	**1.38**	**11**	*e*PN		**Pn**	**20 05 50.7**	**-1.4**
KHL	**Karahalli**	**1.38**	**11**	*e*Pn		**Pn**	**20 05 50.7**	**-1.5**
BDRM	**Kayabasi**	**1.39**	**274**	*i*P		**Pn**	**20 05 53.6**	**+1.3**
BDRM				*i*S		**Sb**	**20 06 13.3**	**+2.5**
BDRM	**Kayabasi**	**1.39**	**274**	*i*P		**Pn**	**20 05 53.6**	**+1.3**
BDRM				*i*S		**Sb**	**20 06 13.3**	**+2.6**
KHAL	**Karahalli**	**1.42**	**10**	*i*P		**Pn**	**20 05 52.9**	**+0.2**
KHAL				*i*S		**Sb**	**20 06 12.7**	**+1.1**
KHAL	**Karahalli**	**1.42**	**10**	*i*P		**Pn**	**20 05 52.9**	**+0.2**
KHAL				*i*S		**Sb**	**20 06 12.7**	**+1.1**

SUTC	**Sutluce-Ispart**	**1.54**	**70**	*e*PN	**Pn**	**20 05 54.3**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.54**	**70**	*e*Pn	**Pn**	**20 05 54.3**	**-0.1**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*PN	**Pn**	**20 05 53.4**	**-1.7**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*Pn	**Pn**	**20 05 53.4**	**-1.7**
MANT	**Manisa**	**1.59**	**342**	*i* P	**Pn**	**20 05 55.2**	**+0.1**
MANT				*i* S	**Sn**	**20 06 16.6**	**+0.6**
MANT	**Manisa**	**1.59**	**342**	*i* P	**Pn**	**20 05 55.2**	**+0.1**
MANT				*i* S	**Sn**	**20 06 16.6**	**+0.6**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**20 06 02.1**	**+0.1**
DEMI				*i* S	**Sn**	**20 06 29.9**	**+1.4**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**20 06 02.2**	**+0.1**
DEMI				*i* S	**Sn**	**20 06 29.9**	**+1.4**
HDMB	**Hadim**	**2.65**	**89**	*e*PN	**Pn**	**20 06 10.0**	**+0.3**
HDMB	**Hadim**	**2.65**	**89**	*e*Pn	**Pn**	**20 06 10.0**	**+0.4**

PRU ***13*** *20:20:36.6, 50.°16N×19.°05E, h0km*
WAR 13 20:20:36.0, 50.°11N×19.°17E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.42**	**74**	*e*Pg	Pg	20 20 44.4	+0.3
OJC				*e*Sg	Sg	20 20 50.6	+1.1
OKC	**Ostrava-Krasne**	**0.71**	**248**	*e*PG	Pg	20 20 50.3	+0.7
OKC				*e*SG	Sg	20 20 59.4	+0.6
	comp=Z,4.6nm,0.5s						
NIE	**Niedzica**	**1.01**	**132**	*e*Pg	Pg	20 20 56.3	+0.9
NIE				*e*Sg	Sg	20 21 10.2	+1.7
STHS	**Stebnicka Huta**	**1.51**	**116**	*e*PN	Pn	20 21 05.6	+1.3
STHS				*e*SN	Sn	20 21 27.6	+2.9
KOLL	**Kolacno**	**1.61**	**198**	*e*	Pn	20 21 09.0	+3.4
KOLL	**Kolacno**	**1.61**	**198**	*e*SN	Sn	20 21 27.3	+0.3
VYHS	**Vyhne**	**1.63**	**188**	*e*PN	Pn	20 21 05.0	-0.9
VYHS				*e*SN	Sn	20 21 26.8	-0.7
KECS	**Kecovo**	**1.84**	**152**	*e*PN	Pn	20 21 11.1	+2.3
KECS				*e*SN	Sn	20 21 34.1	+1.4
DPC	**Dobruska-Polom**	**1.84**	**279**	*e*PG	Pg	20 21 09.1	-2.2
DPC				*e*SG	Sg	20 21 33.4	-1.8
	comp=Z,3.8nm,0.6s						
KHC	**Kasperske Hory**	**3.76**	**257**	*e*SG	Sg	20 22 34.8	-2.0

NIED ***13*** *20:20:00, 46.°30N×153.°40E, h11km, Mw4.5 Best double couple: M0=7.39000×10^15 NP1:φs=115.00000°, δ65.00000°, λ82.00000°. NP2:φs=313.00000°, δ26.00000°, λ107.00000°.*
SKHL ***13*** *20:20:41.2±1.7, 46.°14N×153.°73E, h77km±42km, mb5.2/6, Ms4.5/4*
JMA ***13*** *20:20:41.0±0.7, 46.°26N×153.°37E, h30km, M4.9*
BJI ***13*** *20:20:42.4, 46.°47N×153.°35E, h43km, mB5.0/22, mb4.7/28, Ms4.5/23, Ms7 4.1/22*
ISCJB ***13*** *20:20:43.2±0.1, 46.°01N±0.°04×153.°21E±0.°02, h47km, mb4.9/190, MS4.0/37, Error ellipse: s-maj=5.3km s-min=1.8km az=167.2*
NEIC ***13*** *20:20:45.8±0.2, 46.°25N×153.°22E, mb4.9/117, MS4.1/1, Error ellipse: s-maj=7.0km s-min=3.8km az=172.0*
IDC ***13*** *20:20:45.5±0.5, 46.°21N×153.°12E, h46km±3km, mb4.3/26, mb1 4.5/27, mb1mx4.4/29, mbtmp4.3/27, MS3.9/16, Ms1 3.9/16, ms1mx3.6/46, Error ellipse: s-maj=13.1km s-min=10.5km az=174.0*
SZGRF ***13*** *20:20:46.2, 46.°25N×153.°19E, h34km, mb4.9, Kuril Islands, Russia*
MOS ***13*** *20:20:46.3±1.3, 46.°14N×152.°99E, h67km, mb5.0/97, Error ellipse: s-maj=7.5km s-min=4.5km az=108.3*
ISC 13 20:20:45.7±0.1, 46.°12N±0.°03×153.°15E±0.°02, h49km, h49km±1.1km:pP-P, n788, σ0s78/802, mb4.8/190, MS4.0/37, 147C-176D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.81**	**258**	⇓*i*PN	**Pn**	**20 21 41.5**	**-0.3**
KUR				*e*S	**Sn**	**20 22 26.6**	**+1.3**
KUR				pmax	pmax		
	comp=N,340nm,0.5s						
KUR				pmax	pmax		
	comp=E,170nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1μm,0.5s						
KUR				pmax	pmax		
	comp=N,2μm,0.8s						
KUR				smax			
	comp=N,4μm,1.4s						
KUR				smax			
	comp=E,6μm,1.4s						
KUR				smax			
	comp=N,2μm,0.8s						
KUR				smax			
	comp=E,2μm,0.8s						
KUR	**Kuril'sk**	**3.81**	**258**	⇓*i*P	**Pn**	**20 21 41.5**	**-0.3**
KUR				AMB	AMB	20 21 42.2	
	comp=E,2μm,0.8s						
KUR				AMB	AMB	20 21 42.2	
	comp=E,340nm,0.5s						
KUR				AMB	AMB	20 21 42.2	
	comp=E,170nm,0.5s						
KUR				AMB	AMB	20 21 42.2	
	comp=E,1μm,0.5s						
KUR				*e*S	**Sn**	**20 22 26.6**	**+1.3**
KUR				A		20 22 32.0	
	comp=E,4μm,1.4s						
KUR				A		20 22 32.0	
	comp=E,6μm,1.4s						
KUR				A		20 22 32.5	
	comp=E,2μm,0.8s						
KUR				A		20 22 32.5	
	comp=E,2μm,0.8s						
SKR	**Severo-Kuril's**	**4.97**	**22**	*e*PN	**Pn**	**20 21 49.5**	**-8.2**
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,110nm,0.4s						
SKR				pmax	pmax		
	comp=E,90nm,0.3s						
SKR				MLR	MLR		
	comp=Z,3μm,10.0s						
SKR				MLR	MLR		
	comp=N,3μm,12.0s						
SKR				MLR	MLR		
	comp=E,4μm,12.0s						
SKR	**Severo-Kuril's**	**4.97**	**22**	*e*P	**Pn**	**20 21 49.5**	**-8.2**
SKR				AMB	AMB	20 21 52.0	
	comp=E,90nm,0.3s						
SKR				AMB	AMB	20 21 52.0	
	comp=E,80nm,0.4s						
SKR				AMB	AMB	20 21 52.0	
	comp=E,110nm,0.4s						
SKR				*e*S	**Sn**	**20 22 42.5**	**-11**
SKR				A		20 23 04.0	
	comp=E,3μm,8.0s						
SKR				A		20 23 07.2	
	comp=E,540nm,0.9s						
SKR				A		20 23 07.2	
	comp=E,310nm,0.9s						
SKR				A		20 23 07.2	
	comp=E,400nm,0.9s						
SKR				AMS	AMS	20 24 32.0	
	comp=E,4μm,12.0s						
SKR				AMS	AMS	20 24 32.0	
	comp=E,3μm,12.0s						
SKR				AMS	AMS	20 24 32.0	
	comp=E,4μm,12.0s						
SKR				AMS	AMS	20 24 32.0	
	comp=E,3μm,10.0s						
SKR				AMS	AMS	20 24 32.0	
	comp=E,3μm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.57**	**251**	*e*PN	**Pn**	**20 22 05.5**	**-0.4**
YUK				*e*S	**Sn**	**20 23 07.5**	**-1.0**
YUK				pmax	pmax		
	comp=Z,530nm,0.4s						
YUK				pmax	pmax		
	comp=N,380nm,0.6s						
YUK				pmax	pmax		
	comp=E,230nm,0.6s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				smax			
	comp=N,2μm,0.8s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,3μm,1.2s						
YUK				smax			
	comp=E,3μm,1.0s						
YUK				MLR	MLR		
	comp=Z,2μm,13.0s						
YUK				MLR	MLR		
	comp=N,12μm,9.0s						
YUK				MLR	MLR		
	comp=E,1μm,9.0s						
YUK	**Yuzh-Kuril'sk**	**5.57**	**251**	*e*P	**Pn**	**20 22 05.5**	**-0.4**
YUK				AMB	AMB	20 22 13.4	
	comp=E,530nm,0.3s						
YUK				AMB	AMB	20 22 13.4	
	comp=E,380nm,0.6s						
YUK				AMB	AMB	20 22 13.4	
	comp=E,230nm,0.6s						
YUK				AMB	AMB	20 22 26.0	
	comp=E,2μm,1.0s						
YUK				*e*S	**Sn**	**20 23 07.5**	**-1.0**
YUK				A		20 23 22.0	
	comp=E,2μm,0.8s						
YUK				A		20 23 22.0	
	comp=E,2μm,0.8s						
YUK				A		20 23 24.0	
	comp=E,3μm,1.1s						
YUK				A		20 23 24.0	
	comp=E,3μm,1.1s						
YUK				AMS	AMS	20 25 12.0	
	comp=E,2μm,13.0s						
YUK				AMS	AMS	20 25 12.0	
	comp=E,2μm,9.0s						
YUK				AMS	AMS	20 25 12.0	
	comp=E,1μm,9.0s						
NEM2	**Nemuro 2**	**5.95**	**245**	P	**Pn**	**20 22 08.7**	**-2.5**
NEM2				*e*S	**Sn**	**20 23 14.0**	**-4.0**
JRA	**Rausu**	**6.09**	**252**	P	**Pn**	**20 22 13.2**	**+0.1**
JNK	**Nakash**	**6.51**	**250**	P	**Pn**	**20 22 18.2**	**-0.6**
JNK				*e*S	**Sn**	**20 23 30.4**	**-1.2**
JAK	**Akkeshi**	**6.80**	**246**	P	**Pn**	**20 22 20.6**	**-2.2**
JAK				*e*S	**Sn**	**20 23 34.1**	**-4.7**
JTKR	**Abashiri--Toko**	**6.89**	**255**	P	**Pn**	**20 22 24.4**	**+0.3**
YSS	**Yuzh-Sakhalins**	**7.22**	**280**	*e*PN	**Pn**	**20 22 31.6**	**+3.1**
YSS				*e*S	**Sn**	**20 23 54.0**	**+4.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.22**	**280**	Pn	**Pn**	**20 22 26.0**	**-2.5**
	comp=E,76nm,1.1s						
YSS	**Yuzh-Sakhalins**	**7.22**	**280**	*e*P	**Pn**	**20 22 31.6**	**+3.1**
YSS				AMB	AMB	20 22 32.9	
	comp=E,30nm,0.9s						
YSS				*e*S	**Sn**	**20 23 54.0**	**+4.9**
YSS				*e*LQ		20 24 08.0	
YSS				AMS	AMS	20 25 16.0	
	comp=E,500nm,17.0s						
YSS				AMS	AMS	20 25 16.0	
	comp=E,500nm,16.0s						
YSS				AMS	AMS	20 25 16.0	
	comp=E,400nm,16.0s						
JMP	**Maruseppu**	**7.25**	**257**	P	**Pn**	**20 22 29.7**	**+0.8**
JAR	**Ashorobuto**	**7.25**	**250**	P	**Pn**	**20 22 28.5**	**-0.5**
JAR				*e*S	**Sn**	**20 23 49.1**	**-0.9**
JOB	**Onbets**	**7.39**	**248**	P	**Pn**	**20 22 29.6**	**-1.4**
JOB				*e*S	**Sn**	**20 23 49.9**	**-3.5**
JSE	**Soyaes**	**7.51**	**265**	P	**Pn**	**20 22 34.8**	**+2.3**
PEA0B	**Petropavlovsk-**	**7.59**	**21**	*e*Pn	**Pn**	**20 22 29.9**	**-3.7**
PETK	**Petropavlovsk-**	**7.59**	**21**	P	**Pn**	**20 22 29.8**	**-3.8**
	comp=E,2.5nm,0.3s,baz=167,slow=12,SNR=81						
PETK				LR	LR	20 25 20.1	
	comp=E,326nm,18.6s,baz=60,slow=36						
PETK	**Petropavlovsk-**	**7.59**	**21**	PN	**Pn**	**20 22 29.8**	**-3.8**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,326nm,18.6s						
PETK	**Petropavlovsk-**	**7.59**	**21**	P	**Pn**	**20 22 29.8**	**-3.8**
PETK				LR	LR	20 25 20.1	
JKK2	**Kamakawa 2**	**7.71**	**257**	P	**Pn**	**20 22 36.0**	**+0.7**
ASAJ	**Asahikawa**	**7.73**	**259**	P	**Pn**	**20 22 36.8**	**+1.3**
ASAJ	**Asahikawa**	**7.73**	**259**	P	**Pn**	**20 22 35.4**	**-0.2**
	comp=Z,5.8nm,0.3s,baz=89,slow=17,SNR=32						
ASAJ	**Asahikawa**	**7.73**	**259**	PN	**Pn**	**20 22 35.4**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
PET	**Petropavlovsk**	**7.78**	**25**	*e*PN	**Pn**	**20 22 28.0**	**-8.1**
PET				pmax	pmax		
	comp=Z,16nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET	**Petropavlovsk**	**7.78**	**25**	*e*Pn	**Pn**	**20 22 30.9**	**-5.2**
	comp=Z,40nm,0.8s						
PET				*e*Sn	**Sn**	**20 23 52.1**	**-11**
JCH	**Churui**	**7.84**	**247**	P	**Pn**	**20 22 35.0**	**-2.1**
JCH				*e*S	**Sn**	**20 23 59.3**	**-5.1**
JWK2	**Keihoku**	**7.92**	**268**	P	**Pn**	**20 22 41.7**	**+3.6**
JFR	**Furan**	**8.09**	**252**	P	**Pn**	**20 22 41.2**	**+0.7**
JAB	**Ashibetsu**	**8.20**	**255**	P	**Pn**	**20 22 43.3**	**+1.3**
JEM	**Erimo**	**8.28**	**244**	P	**Pn**	**20 22 42.7**	**-0.4**
ERM	**Erimo**	**8.28**	**244**	Pn	**Pn**	**20 22 43.1**	**0.0**
	comp=Z,637nm,0.7s,SNR=13						
ERM	**Erimo**	**8.28**	**244**	*e*PN	**Pn**	**20 22 42.5**	**-0.6**
ERM				pmax	pmax		
	comp=Z,67nm,0.6s						
ERM	**Erimo**	**8.28**	**244**	*e*Pn	**Pn**	**20 22 42.5**	**-0.6**
	comp=Z,67nm,0.6s						
ERM				*e*Sn	**Sn**	**20 24 10.0**	**-5.3**
JNBK	**Urakawa-nobuka**	**8.40**	**246**	P	**Pn**	**20 22 42.2**	**-2.5**
JBT2	**Biratori 2**	**8.41**	**250**	P	**Pn**	**20 22 43.3**	**-1.6**
TYV	**Tymovskoe**	**8.43**	**308**	*e*P	**Pn**	**20 22 47.5**	**+2.4**
TYV				AMB	AMB	20 22 54.0	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	20 22 54.0	
	comp=Z,26nm,1.0s						
TYV				AMB	AMB	20 22 54.0	
	comp=Z,44nm,1.0s						
TYV				AMS	AMS	20 26 20.0	
	comp=Z,800nm,14.0s						
TYV				AMS	AMS	20 26 20.0	
	comp=Z,2μm,14.0s						
TYV				AMS	AMS	20 26 20.0	
	comp=Z,1μm,14.0s						
JEW	**Eniwo**	**8.98**	**253**	P	**Pn**	**20 22 53.6**	**+0.9**
JNB	**Noboribetsu**	**9.42**	**252**	P	**Pn**	**20 22 57.5**	**-1.2**
JKB	**Kayabe**	**9.70**	**248**	P	**Pn**	**20 23 00.3**	**-2.2**
JKB				*e*S	**Sn**	**20 24 43.5**	**-6.5**
JYM2	**Yakumo 2**	**10.02**	**251**	P	**Pn**	**20 23 05.6**	**-1.3**
JANG	**Nango**	**10.24**	**240**	P	**Pn**	**20 23 05.7**	**-4.3**
JANG				*e*S	**Sn**	**20 24 53.0**	**-10**
JTM	**Tenmabayashi**	**10.27**	**243**	P	**Pn**	**20 23 07.2**	**-3.2**
JTH	**Tanohata**	**10.31**	**237**	P	**Pn**	**20 23 06.3**	**-4.6**
JTH				*e*S	**Sn**	**20 24 54.2**	**-11**
NKL	**Nikolayevsk**	**10.71**	**316**	*e*P	**Pn**	**20 23 12.0**	**-4.2**
NKL				AMB	AMB	20 23 21.5	
	comp=Z,30nm,1.1s						
NKL				AMB	AMB	20 23 21.5	
	comp=Z,97nm,1.5s						
NKL				AMB	AMB	20 23 21.5	
	comp=Z,100nm,1.5s						
NKL				*e*L		20 26 24.0	
NKL				AMS	AMS	20 28 05.0	
	comp=Z,700nm,14.0s						
NKL				AMS	AMS	20 28 05.0	
	comp=Z,1μm,14.0s						
OFUJ	**Ofunato**	**11.00**	**234**	*e*S	**Sn**	**20 25 12.0**	**-10**
JIO	**Ouri**	**11.61**	**233**	P	**Pn**	**20 23 24.3**	**-4.4**
JIO				*e*S	**Sn**	**20 25 25.1**	**-12**
TEY	**Ternei**	**11.65**	**271**	*e*P	**Pn**	**20 23 33.0**	**+3.8**
JYA	**Atsumi**	**12.45**	**238**	*e*S	**Sn**	**20 25 49.6**	**-7.7**
HABR	**Khabarovsk**	**12.51**	**287**	*ce*PN	**Pn**	**20 23 39.1**	**-1.8**
HABR				MLR	MLR		
	comp=Z,238nm,17.0s						
JFK	**Kawauchi**	**12.66**	**231**	*e*S	**Sn**	**20 25 51.3**	**-11**
MJAR	**Matsushiro Arr**	**14.73**	**235**	P	**Pn**	**20 24 07.5**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=34,slow=12,SNR=15						
MJAR				LR	LR	20 30 56.4	
	comp=Z,242nm,18.6s,baz=105,slow=41						
MJAR	**Matsushiro Arr**	**14.73**	**235**	P	**Pn**	**20 24 07.5**	**-3.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,242nm,18.7s						
MAJO	**Matsushiro**	**14.73**	**235**	*e*P	**Pn**	**20 24 06.3**	**-4.6**
MAJO				*e*		20 27 01.4	
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAJO	**Matsushiro**	**14.73**	**235**	*e*Pn	**Pn**	**20 24 06.3**	**-4.6**
	comp=Z,26nm,0.8s						
MAJO				*e*Sn	**Sn**	**20 27 01.4**	**+8.7**
MAT	**Matsushiro**	**14.73**	**235**	P	**Pn**	**20 24 07.3**	**-3.6**
MAT				*e*S	**Sn**	**20 26 57.8**	**+5.0**
KLR	**Kul'dur**	**14.74**	**290**	*e*P	**Pn**	**20 24 07.8**	**-3.2**
VLA	**Vladivostok**	**15.43**	**266**	*e*P	**Pn**	**20 24 18.1**	**-1.8**
MDJ	**Mudanjiang**	**16.61**	**273**	P	**Pn**	**20 24 34.0**	**-1.0**
MDJ				pP	pP	20 24 42.0	-6.0
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,160nm,5.2s						
MDJ	**Mudanjiang**	**16.61**	**273**	*e*Pn	**Pn**	**20 24 34.4**	**-0.6**
	comp=Z,24nm,1.0s						
SEY	**Seymchan**	**16.85**	**359**	*ce*P	**Pn**	**20 24 36.7**	**-1.1**
ZEA	**Zeya**	**18.26**	**304**	*e*P	**Pn**	**20 24 51.0**	**-4.2**
ZEA				AMB	AMB	20 24 53.5	
	comp=Z,28nm,1.2s						
CN2	**Changchun**	**19.70**	**273**	*e*P	**Pn**	**20 25 12.5**	**-0.1**
CN2				*e*pP	pP	20 25 18.9	-3.2
CN2				*e*sP	sP	20 25 22.9	-5.3
CN2				*e*S	**S**	**20 28 46.5**	**-3.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CLNS	**Chul'man**	**20.45**	**312**	*e*P	**P**	**20 25 18.9**	**+0.1**
CLNS				*e*		20 29 26.4	
CLNS				pmax	pmax		
	comp=Z,17nm,0.9s						
CLNS				pmax	pmax		
	comp=E,12nm,1.0s						
CLNS				pmax	pmax		
	comp=N,11nm,0.8s						
CLNS				MLR	MLR		
	comp=E,362nm,16.0s,MS3.9						
CLNS				MLR	MLR		
	comp=Z,372nm,15.0s,MS3.9						
CLNS				MLR	MLR		
	comp=N,185nm,13.0s,MS3.9						
KSRS	**Korea Array**	**20.64**	**254**	P	**P**	**20 25 21.1**	**+0.1**
	comp=N,8.3nm,0.7s,baz=59,slow=11,SNR=20						
KSRS				LR	LR	20 33 21.6	
	comp=N,210nm,18.1s,MS3.5,baz=36,slow=37						
KSRS	**Korea Array**	**20.64**	**254**	P	**P**	**20 25 21.1**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,210nm,18.1s,MS3.5						
YAK	**Yakutsk**	**20.87**	**328**	*e*P	**P**	**20 25 20.9**	**-2.3**
YAK				*e*S	**S**	**20 29 14.9**	**+2.0**
YAK				*e*		20 29 27.7	
YAK				*e*SS		20 29 39.9	
YAK				*e*SSS		20 29 52.0	
YAK				*e*		20 36 43.7	
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				smax			
	comp=N,88nm,3.3s						
YAK				smax			
	comp=E,37nm,2.2s						
YAK				MLR	MLR		
	comp=Z,191nm,18.0s,MS3.5						
YAK				MLR	MLR		
	comp=N,174nm,18.0s,MS3.6						
YAK				MLR	MLR		
	comp=E,139nm,17.0s,MS3.6						
YAK	**Yakutsk**	**20.87**	**328**	⇓*e*P	**P**	**20 25 21.4**	**-1.8**
	comp=E,29nm,0.6s						
CBIJ	**Chichi jima**	**20.89**	**208**	LR	LR	20 32 19.7	
	comp=E,156nm,19.3s,MS3.4,baz=5,8,slow=33						
SNY	**Shenyang**	**21.65**	**269**	⇓P	**P**	**20 25 35.0**	**+3.2**
SNY				S	**S**	**20 29 27.8**	**-0.8**
SNY				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
SNY				pmax	pmax		
	comp=Z,150nm,3.9s						
SNY				LR	LR		
	comp=E,410nm,14.5s						
SNY				LR	LR		
	comp=Z,340nm,15.1s,MS3.9						
BILL	**Bilibino**	**23.00**	**13**	*e*P	**P**	**20 25 44.7**	**-1.2**
BILL				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.5						
BILL	**Bilibino**	**23.00**	**13**	⇑*i*P	**P**	**20 25 42.8**	**-3.1**
	comp=Z,25nm,1.1s,mb4.5						
BOD	**Bodaibo**	**26.41**	**311**	*e*P	**P**	**20 26 14.3**	**-3.1**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.2						
BJI	**Beijing**	**27.50**	**271**	P	**P**	**20 26 30.5**	**+3.2**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
BJI				LR	LR		
	comp=N,270nm,11.4s,MS4.3						
BJI				LR	LR		
	comp=E,390nm,11.4s,MS4.3						
BJI				LR	LR		
	comp=Z,150nm,18.8s						
BJT	**Baijiatuau**	**27.52**	**271**	*e*P	**P**	**20 26 29.4**	**+1.9**
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT	**Baijiatuau**	**27.52**	**271**	*e*P	**P**	**20 26 29.4**	**+2.0**
	comp=Z,18nm,0.8s,mb4.7						
JOW	**Kunigami**	**27.57**	**234**	LR	LR	20 35 45.8	
	comp=Z,2μm,21.9s,MS4.7,baz=306,slow=33						
TIXI	**Tiksi**	**28.08**	**344**	*e*P	**P**	**20 26 29.6**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,381nm,19.0s,MS4.0						
TIXI	**Tiksi**	**28.08**	**344**	*e*P	**P**	**20 26 28.8**	**-3.3**
	comp=Z,7.2nm,1.0s,mb4.3						
TIXI				*e*PcP	PcP	20 29 45.6	+0.3
TIXI				*e*		20 29 59.2	
NJ2	**Nanjing**	**29.84**	**254**	*e*P	**P**	**20 26 50.0**	**+1.8**
NJ2				pP	pP	20 26 57.3	-3.6
NJ2				PP	PP	20 27 47.4	-8.7
NJ2				S	**S**	**20 31 43.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,230nm,4.6s						
NJ2				LR	LR		
	comp=N,520nm,18.8s						
NJ2				LR	LR		
	comp=E,420nm,12.3s						
NJ2				LR	LR		
	comp=Z,310nm,13.4s						
HHC	**Hu-ho-hao-te**	**30.37**	**275**	⇑P	**P**	**20 26 54.3**	**+1.5**
HHC				pP	pP	20 27 01.6	-3.8
HHC				sP	sP	20 27 04.9	-6.3
HHC				PP	PP	20 27 53.5	-8.3
HHC				PcP	PcP	20 29 53.8	+2.2
HHC				S	**S**	**20 31 52.3**	**+2.6**
HHC				SS	SS	20 33 32.5	-28
HHC				ScS	ScS	20 37 27.3	+1.6
HHC				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
HHC				LR	LR		
	comp=N,350nm,10.5s,MS4.5						
HHC				LR	LR		
	comp=E,420nm,10.0s,MS4.5						
HHC				LR	LR		
	comp=Z,300nm,11.8s,MS4.2						
SONM	**Songino Array**	**31.57**	**290**	P	**P**	**20 27 02.6**	**-0.7**
	comp=Z,1.0nm,0.5s,mb3.9,baz=76,slow=7.8,SNR=9.2						
SONM				PcP	PcP	20 29 55.6	+0.9
	comp=Z,2.0nm,0.9s,baz=96,slow=2.0,SNR=5.0						
SONM				LR	LR	20 40 41.5	
	comp=Z,168nm,18.6s,MS3.8,baz=340,slow=38						
SONM	**Songino Array**	**31.57**	**290**	P	**P**	**20 27 02.6**	**-0.7**
SONM						20 29 55.6	

SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,168nm,18.6s
TLY Talaya 32.49 298 *e*P **P 20 27 10.3 -1.0**
TLY *e* 20 32 16.9
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,215nm,15.0s,MS4.0
TTA Tatalina 32.88 41 *e*P **P 20 27 14.0 -0.6**
TTA pmax pmax
comp=Z,26nm,1.2s,mb5.0
TTA Tatalina 32.88 41 *e*P **P 20 27 14.0 -0.5**
comp=Z,26nm,1.2s,mb5.0
ZAK Zakamensk 32.97 296 *e*P **P 20 27 14.5 -1.0**
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GUMO Guam 33.17 195 LR LR 20 40 21.7
comp=Z,253nm,18.2s,MS4.0,baz=2.5,slow=35
KDAK Kodiak Island 34.48 50 P **P 20 27 26.6 -2.0**
comp=Z,4.8nm,0.7s,mb4.5
KDAK Kodiak Island 34.48 50 P **P 20 27 26.6 -2.0**
KDAK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
PPLA Purkeypile 34.62 41 *e*P **P 20 27 29.8 +0.1**
comp=Z,70nm,1.4s,mb5.4
KTH Kantishna Hill 35.22 40 *e*P **P 20 27 34.5 -0.4**
comp=Z,82nm,1.3s,mb5.5
KTH *e* pP 20 27 48.1 +0.5
BPAW Bear Paw Mtn. 35.23 39 *e*P **P 20 27 34.2 -0.6**
comp=Z,25nm,1.3s,mb5.0
TRF Thorofare Moun 35.50 40 *e*P **P 20 27 36.1 -1.2**
comp=Z,32nm,1.5s,mb5.0
COLA College 36.62 38 *e*P **P 20 27 46.0 -0.8**
COLA pmax pmax
comp=Z,46nm,1.3s,mb5.2
COLA College 36.62 38 *e*P **P 20 27 46.0 -0.8**
comp=Z,46nm,1.3s,mb5.2
EGAK Eagle 39.48 38 *e*P **P 20 28 09.3 -1.6**
comp=Z,47nm,1.2s,mb5.1
CD2 Chengdu 40.86 266 P **P 20 28 23.3 +0.6**
CD2 pP pP 20 28 30.6 -5.1
CD2 PP PP 20 30 01.0 +3.6
CD2 S **S 20 34 31.8 +1.3**
CD2 SS SS 20 37 27.1 -5.9
CD2 pmax pmax
comp=Z,60nm,0.8s,mb5.3
CD2 pmax pmax
comp=Z,220nm,7.1s
CD2 LR LR
comp=N,750nm,6.0s
CD2 LR LR
comp=Z,420nm,8.9s
GYA Guiyang 41.61 258 P **P 20 28 30.6 +1.7**
GYA pP pP 20 28 38.8 -3.1
GYA PP PP 20 30 10.0 +4.3
GYA PcP PcP 20 30 28.3 +3.1
GYA ScP ScP 20 34 15.0 +3.9
GYA SS SS 20 37 44.0 -4.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=N,650nm,17.9s,MS4.7
GYA LR LR
comp=E,630nm,18.0s,MS4.7
GYA LR LR
comp=Z,720nm,17.3s,MS4.6
INK Inuvik 42.17 32 *e*P **P 20 28 32.7 -0.3**
INK *e* pP 20 28 45.8 -0.2
INK pmax pmax
comp=Z,29nm,1.2s
INK Inuvik 42.17 32 *e*P **P 20 28 32.7 -0.2**
comp=Z,29nm,1.2s,mb4.8
INK *e* pP 20 28 45.8 -0.2
ZAA0 Zalesovo Array 43.00 306⇑*e*P **P 20 28 37.2 -2.7**
ZAA0 *e*PcP PcP 20 30 29.7 +0.4
ZAA0 *e* 20 30 43.2
ZALV Zalesovo Beam 43.00 306 P **P 20 28 38.0 -1.9**
comp=Z,4.9nm,0.7s,mb4.4,baz=66,slow=7.1,SNR=22
ZALV PcP PcP 20 30 30.1 +0.8
comp=Z,3.6nm,0.8s,baz=87,slow=2.3,SNR=8.1
ZALV pPcP 20 30 42.9
comp=Z,2.9nm,0.7s,baz=77,slow=3.3,SNR=5.8
NVS Novosibirsk 43.59 308 *e*P **P 20 28 42.6 -2.1**
KMI Kunming 45.16 260 P **P 20 28 57.9 +0.4**
KMI S **S 20 35 37.9 +4.3**
KMI pmax pmax
comp=Z,12nm,1.1s,mb4.6
KMI LR LR
comp=Z,66nm,22.1s,MS3.5
WMQ Urumqi 45.18 292 P **P 20 28 58.0 +0.5**
WMQ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WMQ LR LR
comp=N,91nm,17.0s,MS3.9
WMQ LR LR
comp=E,39nm,14.0s,MS3.9
WMQ LR LR
comp=Z,59nm,19.0s,MS3.5
MK31 Makanchi Array 47.26 298⇑*i*P **P 20 29 12.6 -1.1**
MKAR Makanchi Array 47.26 298 P **P 20 29 12.8 -0.9**
comp=Z,12nm,0.8s,mb4.9,baz=67,slow=7.7,SNR=86
MKAR PcP PcP 20 30 44.8 +0.6
comp=Z,0.5nm,0.3s,baz=170,slow=19,SNR=6.0
MKAR pPcP 20 30 58.5
comp=Z,1.8nm,0.7s,baz=61,slow=5.7,SNR=3.8
MKAR LR LR 20 50 10.0
comp=Z,204nm,18.2s,MS4.1,baz=296,slow=37
KURK Kurchatov 47.73 304 P **P 20 29 16.5 -0.9**
comp=Z,17nm,0.8s,mb5.1,baz=67,slow=8.3,SNR=34
KURK Kurchatov 47.73 304*e*P **P 20 29 15.7 -1.7**
KURK pmax pmax
comp=Z,24nm,1.0s,mb5.2
KURK Kurchatov 47.73 304⇑*i*P **P 20 29 15.2 -2.2**
comp=Z,19nm,0.8s,mb5.2
LSA Lhasa 50.34 274 *e*P **P 20 29 40.1 +2.5**
LSA pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LSA Lhasa 50.34 274 *e*P **P 20 29 40.1 +2.5**
comp=Z,5.6nm,0.6s,mb4.8
BVAR Borovoye Array 51.28 310 P **P 20 29 43.4 -1.0**
comp=Z,4.3nm,0.4s,mb4.8,baz=51,slow=7.4,SNR=35
BVAR PcP PcP 20 30 59.3 +0.6
comp=Z,2.3nm,0.6s,baz=64,slow=3.4,SNR=4.9
BVAR Borovoye Array 51.28 310 P **P 20 29 43.4 -0.9**
BVAR 20 30 59.3
BVAR pmax pmax
comp=Z,4.0nm,0.4s
BRVK Borovoye 51.32 310 P **P 20 29 43.4 -1.3**
comp=Z,84nm,0.5s,mb5.9,SNR=8.4
BRVK Borovoye 51.32 310*e*P **P 20 29 43.9 -0.8**
BRVK pmax pmax
comp=Z,19nm,1.7s,mb4.8
BRVK Borovoye 51.32 310⇑*i*P **P 20 29 43.2 -1.4**
comp=Z,7.3nm,0.5s,mb4.9
YKA Yellowknife Ar 51.41 36 P **P 20 29 44.8 -0.4**
comp=Z,7.4nm,0.7s,mb4.7,baz=297,slow=7.4,SNR=57
YKA pP pP 20 29 58.4 -0.1
comp=Z,7.4nm,0.9s,baz=298,slow=7.3,SNR=11
YKA PcP PcP 20 30 59.2 +0.1
comp=Z,1.1nm,0.7s,baz=307,slow=3.6,SNR=6.2
YKA LR LR 20 53 24.3
comp=Z,76nm,19.9s,MS3.7,baz=185,slow=38
YKA Yellowknife Ar 51.41 36 P **P 20 29 44.8 -0.4**
YKA *PP pP 20 29 58.4 -0.1
YKA 20 30 59.2
YKA pmax pmax
comp=Z,7.0nm,0.7s
YKA MLR MLR
comp=Z,76nm,19.9s
YKA Yellowknife Ar 51.41 36 P **P 20 29 44.8 -0.4**
YKA pP pP 20 29 58.4 -0.1
YKA PcP PcP 20 30 59.2 +0.1
YKA LR LR 20 53 24.3
CHTO Chiang Mai 52.00 257 *e*P **P 20 29 51.6 +1.4**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CHTO Chiang Mai 52.00 257 *e*P **P 20 29 51.5 +1.4**
comp=Z,6.0nm,0.8s,mb4.6
ULHL Ulahol 53.26 296 P **P 20 30 00.1 +1.0**
SNR=15
TKM2 Tokmak 2 53.30 297 P **P 20 30 00.0 +0.5**
SNR=7.0
TKM2 Tokmak 2 53.30 297 *e*P **P 20 29 59.3 -0.2**
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TKM2 Tokmak 2 53.30 297 *e*P **P 20 29 59.2 -0.2**
comp=Z,3.3nm,0.6s,mb4.4
USP Ospenovka 53.80 297 P **P 20 30 03.8 +0.6**
SNR=8.1
KBK Karagaybulak 53.84 297 P **P 20 30 04.3 +0.8**
SNR=7.8
KZA Kyzart 53.97 296 P **P 20 30 05.9 +1.5**
SNR=12
AAK Ala-Archa 54.14 297 P **P 20 30 06.3 +0.7**
comp=Z,80nm,0.7s,mb5.8,SNR=6.6
AAK Ala-Archa 54.14 297 P **P 20 30 06.3 +0.7**
SNR=11
AAK Ala-Archa 54.14 297 P **P 20 30 06.1 +0.5**
comp=Z,7.4nm,0.7s,mb4.7,baz=116,slow=4.4,SNR=24
AAK Ala-Archa 54.14 297*e*P **P 20 30 05.7 +0.1**
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AAK Ala-Archa 54.14 297 *e*P **P 20 30 05.3 -0.3**
comp=Z,9.4nm,0.8s,mb4.8
AAK *e* pP 20 30 19.1 0.0
TAPN Taplejung 54.16 274 *e*P **P 20 30 08.1 +2.1**
SVE Sverdlovsk 54.31 317⇑*e*P **P 20 30 05.7 -0.9**
SVE pmax pmax
comp=Z,16nm,0.8s,mb5.0
SVE MLR MLR
comp=Z,135nm,14.0s,MS4.2
EKS2 Erkin-Say 54.57 297 P **P 20 30 09.5 +0.8**
SNR=14
ODAN Odare 54.69 273 *e*P **P 20 30 12.6 +2.7**
AML Almayashu 54.91 297 P **P 20 30 12.6 +1.4**
SNR=6.3
AML Almayashu 54.91 297 *e*P **P 20 30 11.9 +0.7**
comp=Z,4.7nm,0.9s,mb4.5
KSH Kashi 54.92 293 *e*P **P 20 30 16.1 +4.8**
KSH *e*pP pP 20 30 23.1 -1.7
KSH *e*PcP PcP 20 31 16.8 +4.0
KSH *e*PP PP 20 32 21.3 +6.9
KSH *e*ScP ScP 20 35 12.1 +5.0
KSH *e*PcS PcS 20 35 15.1 +2.5
KSH *e*S **S 20 37 55.0 +5.8**
KSH *e*ScS ScS 20 40 00.3 +4.2
KSH *e*SS SS 20 41 40.0 +7.3
KSH pmax pmax
comp=Z,120nm,4.1s
KSH LR LR
comp=N,140nm,6.5s
KSH LR LR
comp=E,140nm,4.8s
GUN Gumba 55.08 275 *e*P **P 20 30 14.2 +1.5**
comp=E,16nm,0.5s,mb5.3
RAMN Ramite 55.18 274 *e*P **P 20 30 15.0 +1.6**
A07A Ashnola River, 55.30 53 ⇓P **P 20 30 13.7 -0.3**
baz=55
ARU Arti 55.49 318*d i*P **P 20 30 13.9 -1.3**
ARU *e**PP pP 20 30 27.7 -0.9
ARU *e* 20 31 13.7
ARU *e* 20 32 17.1
ARU S **S 20 37 55.7 -0.7**
ARU SS SS 20 41 37.8 -3.2
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.9
ARU Arti 55.49 318 *e*P **P 20 30 13.8 -1.4**
comp=Z,19nm,1.1s,mb5.0
ARU *e*pP PcP 20 31 14.6 -0.1
KKN Kakani 55.57 276 *e*P **P 20 30 18.0 +1.8**
comp=Z,20nm,0.7s,mb5.2
PKI Pulchoki 55.62 275 *e*P **P 20 30 18.1 +1.6**
B07A Winthrop 55.77 53 ⇓P **P 20 30 16.9 -0.3**
baz=55
DMN Daman 55.81 276 *e*P **P 20 30 19.9 +2.0**
comp=Z,30nm,0.8s,mb5.4
F04A Amboy 55.83 57 ⇓P **P 20 30 17.5 -0.3**
baz=56
A08A Turner Farm, O 55.97 53 ⇓P **P 20 30 18.5 -0.3**
baz=56,SNR=6.2
ETW Entiat 56.11 54 *e*P **P 20 30 18.8 -1.0**
comp=Z,23nm,1.5s,mb5.0
ETW *e* pP 20 30 33.7 +0.4
A09A Danville 56.34 52 ⇓P **P 20 30 21.2 -0.1**
baz=56,SNR=8.2
H04A Detroit Lake 56.66 58 ⇓P **P 20 30 23.7 0.0**
baz=56,SNR=8.2
EDM Edmonton 56.73 46 *e*P **P 20 30 23.7 -0.4**
EDM *e* pP 20 30 37.1 -0.5
C08A Higginbotham F 56.74 54 ⇓P **P 20 30 23.8 -0.4**
baz=56
B09A Rice 56.88 53 ⇓P **P 20 30 24.8 -0.4**
baz=56
OD2 Odessa Site #2 57.15 54 *e*P **P 20 30 26.1 -1.0**
comp=Z,3.6nm,0.8s,mb4.5
C09A Chrisman Ranch 57.16 53 ⇑P **P 20 30 26.6 -0.6**
baz=57
G06A Carlson Farm, 57.26 57 ⇓P **P 20 30 27.8 -0.2**
baz=57
DAG Danmarks Havn 57.27 358⇑*i*P **P 20 30 26.9 -0.7**
DAG pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
DAG Danmarks Havn 57.27 358⇑*i*P **P 20 30 26.9 -0.7**
comp=Z,10nm,1.1s,mb4.8
D09A Jones Farm, Ri 57.56 54 ⇓P **P 20 30 29.5 -0.6**
baz=57
A11A Hall Mountain, 57.56 51 ⇑P **P 20 30 30.0 0.0**
baz=57,SNR=7.3
E09A Wood Farm, Sta 57.96 55 ⇓P **P 20 30 32.6 -0.2**
baz=58
F08A Pendleton 58.01 56 ⇑P **P 20 30 33.6 +0.4**
baz=58
YBH Yreka Blue Hor 58.02 61 LR LR 20 49 13.9
comp=Z,58nm,21.4s,MS3.7,baz=355,slow=30
D10A Wagner Farm, O 58.14 54 ⇓P **P 20 30 34.0 -0.1**
baz=58
G08A Pilot Rock 58.20 56 ⇓P **P 20 30 34.5 -0.1**
baz=58,SNR=6.7
ARCES ARCESS Array B 58.45 341 P **P 20 30 35.4 -0.6**
comp=Z,2.1nm,0.6s,mb4.3,baz=22,slow=7.8,SNR=16
ARCES ARCESS Array B 58.45 341 P **P 20 30 35.4 -0.6**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
K05A Summer Lake 58.54 60 ⇓P **P 20 30 37.4 +0.4**
baz=58,SNR=6.8
F09A S2 Ranch, Elgi 58.56 55 ⇓P **P 20 30 36.8 -0.2**
baz=58
E10A Myers Farm, Un 58.56 54 ⇓P **P 20 30 37.0 -0.1**
baz=58
I07A Izee 58.58 58 ⇑P **P 20 30 37.4 +0.1**
baz=58,SNR=6.4
D11A Klaveano Farm, 58.67 53 ⇑P **P 20 30 37.6 -0.2**
baz=58
C12B Naegeli Ranch, 58.76 52 ⇓P **P 20 30 38.1 -0.3**
baz=58
H08A Prairie City 58.81 57 ⇑P **P 20 30 39.1 +0.2**
baz=58,SNR=11
ABKAR Akbulak array 58.85 310 *e*P **P 20 30 37.7 -1.3**
comp=Z,6.7nm,0.4s,mb5.0
G09A Cove 58.88 56 ⇓P **P 20 30 39.4 +0.1**
baz=58,SNR=5.2
B13A Whitefish 58.92 51 ⇓P **P 20 30 39.5 0.0**
baz=58,SNR=11
BSMT Bassoo Peak 59.06 52 *e*P **P 20 30 40.3 -0.2**
comp=Z,14nm,1.4s,mb4.8
A14A Double T Ranch 59.13 50 ⇑P **P 20 30 40.8 -0.2**
baz=59
E11A Bogner Ranch, 59.15 54 ⇓P **P 20 30 40.5 -0.6**
baz=59
AKTK Aktyubinsk 59.16 312 P **P 20 30 40.3 -0.8**
AKTO Aktyubinsk 59.16 312 P **P 20 30 40.3 -0.8**
comp=Z,4.3nm,0.6s,mb4.6,baz=69,slow=5.9,SNR=19
AKTO Aktyubinsk 59.16 312 P **P 20 30 40.3 -0.9**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
D12A Red Ives Fores 59.21 53 ⇑P **P 20 30 40.9 -0.7**
baz=59
C13A Hot Springs 59.27 52 ⇓P **P 20 30 41.7 -0.3**
baz=59,SNR=5.6
H09A Durkee 59.31 56 ⇓P **P 20 30 42.5 +0.2**
baz=59
F11A Grangeville 59.45 54 ⇑P **P 20 30 42.6 -0.6**
baz=59,SNR=8.9
A15A Johnson Ranch, 59.50 50 ⇓P **P 20 30 42.5 -0.9**
baz=59,SNR=9.3
J08A Circle Bar Ran 59.61 58 ⇓P **P 20 30 44.4 +0.1**
baz=59
I09A Lost Marbles R 59.67 57 ⇑P **P 20 30 44.9 +0.2**
baz=59
G11A Walters Elk Ra 59.68 55 ⇑P **P 20 30 44.6 -0.2**
baz=59,SNR=12
D13A Huson 59.68 52 ⇓P **P 20 30 44.4 -0.4**
baz=59,SNR=8.2
SWMT Swartz Lake 59.69 52 *e*P **P 20 30 44.2 -0.6**
comp=Z,21nm,1.4s,mb5.0
SWMT *e* pP 20 30 59.4 +1.0
B15A Bradely Ranch, 59.98 50 ⇓P **P 20 30 46.3 -0.5**
baz=60,SNR=11
F12A Elk City 60.04 54 ⇓P **P 20 30 47.3 0.0**
baz=60,SNR=16
J09A Fry Pan Ranch, 60.04 57 ⇓P **P 20 30 47.3 0.0**
baz=60,SNR=9.5
WVOR Wild Horse Val 60.06 59 *e*P **P 20 30 47.3 -0.2**
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.8
WVOR Wild Horse Val 60.06 59 *e*P **P 20 30 47.3 -0.2**
comp=Z,12nm,1.1s,mb4.8
A16A West Butte Ran 60.12 49 ⇓P **P 20 30 47.0 -0.8**
baz=60,SNR=6.7
SLMT Seeley Lake 60.12 52 *e*P **P 20 30 47.2 -0.6**
comp=Z,41nm,1.3s,mb5.3
SLMT *e* pP 20 31 01.3 -0.1
MSO Missoula 60.12 52 *e*P **P 20 30 46.5 -1.3**
comp=Z,20nm,1.3s,mb5.0
MSO *e* pP 20 31 01.7 +0.2
D14A Greenough 60.21 52 ⇓P **P 20 30 48.0 -0.5**
baz=60,SNR=10
E13A Victor 60.22 53 ⇓P **P 20 30 48.1 -0.4**
baz=60,SNR=5.5
H11A Donnelly 60.24 55 ⇑P **P 20 30 48.5 -0.2**
baz=60,SNR=13
C15A Salmond Ranch, 60.28 51 ⇓P **P 20 30 48.9 0.0**
baz=60,SNR=28
G12A Big Creek, Yel 60.37 54 ⇓P **P 20 30 49.0 -0.5**
baz=60,SNR=11
B16A M & M Farms, S 60.38 50 ⇑P **P 20 30 48.9 -0.6**
baz=60,SNR=9.4
CHMT Chamberlain Mo 60.45 52 *e*P **P 20 30 49.3 -0.8**
comp=Z,5.4nm,0.9s,mb4.6
CHMT *e* pP 20 31 02.5 -1.2
F13A Darby 60.53 53 ⇓P **P 20 30 50.0 -0.7**
baz=60,SNR=11
BEKR Beckwourth 60.56 62 ⇓P **P 20 30 51.0 +0.1**
baz=60
E14A Clinton 60.62 52 ⇓P **P 20 30 50.8 -0.4**
baz=60,SNR=6.0
KLMR Klimovskoe 60.66 329 P **P 20 30 49.4 -1.8**
KLMR pmax pmax
comp=Z,13nm,1.0s,mb5.0
C16A Fuhringer Ranc 60.73 50 ⇑P **P 20 30 51.6 -0.4**
baz=60,SNR=10.0
D15A Lincoln 60.77 51 ⇓P **P 20 30 51.9 -0.4**
baz=60
K10A MacKenzie Ranc 60.90 57 ⇑P **P 20 30 53.2 +0.1**
baz=60,SNR=9.1
B17A L&G Farms, Che 60.94 49 ⇑P **P 20 30 53.0 -0.3**
baz=60,SNR=9.5
H12A Diamond D Ranc 60.99 55 ⇓P **P 20 30 53.4 -0.3**
baz=61,SNR=5.5
G13A Cobalt 61.01 54 ⇓P **P 20 30 53.4 -0.5**
baz=61,SNR=23
A18A Metzger Ranch, 61.05 48 ⇑P **P 20 30 53.4 -0.7**
baz=61,SNR=11
E15A Deer Lodge 61.08 52 ⇑P **P 20 30 54.1 -0.3**
baz=61,SNR=11
MFID Camas Ranch 61.12 56 ⇓P **P 20 30 54.6 0.0**
baz=61
FFC Flin Flon 61.20 40 P **P 20 30 55.1 +0.1**
comp=Z,171nm,0.6s,SNR=9.4
FFC Flin Flon 61.20 40 *e*P **P 20 30 54.1 -0.9**
FFC *e* pP 20 31 08.4 -0.3
FFC pmax pmax
comp=Z,19nm,0.9s,mb5.2
FFC Flin Flon 61.20 40 *e*P **P 20 30 54.1 -0.9**
comp=Z,19nm,0.9s,mb5.2
FFC *e* pP 20 31 08.4 -0.3
WCN Washoe City 61.27 62 ⇓P **P 20 30 55.9 +0.1**
baz=61
I12A Atlanta 61.29 56 ⇓P **P 20 30 56.0 +0.2**
baz=61,SNR=10
H13A Challis 61.32 54 ⇓P **P 20 30 55.8 -0.2**
baz=61,SNR=14
SUMG Summit 61.33 4 *e*P **P 20 30 55.2 -0.4**
comp=Z,31nm,0.8s,mb5.5
HRY Holter Researc 61.35 51 *e*P **P 20 30 56.2 +0.1**
comp=Z,9.8nm,0.7s,mb5.0
HRY *e* pP 20 31 05.9 -3.9
G14A Jackson 61.35 53 ⇑P **P 20 30 55.6 -0.6**
baz=61
C17A Wharram Farm, 61.36 50 ⇓P **P 20 30 55.8 -0.4**
baz=61,SNR=15
K11A Parker Ranch, 61.39 57 ⇓P **P 20 30 56.4 -0.1**
baz=61,SNR=6.2
B18A Beardsley Farm 61.41 49 ⇑P **P 20 30 56.2 -0.3**
baz=61,SNR=6.8
F15A Butte 61.52 52 ⇓P **P 20 30 57.1 -0.3**
baz=61,SNR=17
E16A East Helena 61.54 51 ⇑P **P 20 30 57.5 +0.1**
baz=61,SNR=8.1
LRM Limekiln Ridge 61.56 52 *e*P **P 20 30 57.4 -0.2**
comp=Z,139nm,1.0s,mb6.0
LRM *e* pP 20 31 11.3 +0.1
L10A Juniper Basin 61.56 58 ⇑P **P 20 30 57.6 -0.1**
baz=61,SNR=7.8
J12A Stokes Ranch, 61.64 56 ⇑P **P 20 30 58.4 +0.2**
baz=61,SNR=13
EGMT Eagleton 61.65 49 ⇓P **P 20 30 57.9 -0.2**
baz=61,SNR=5.9
EGMT Eagleton 61.65 49 *e*P **P 20 30 58.1 0.0**
comp=Z,50nm,1.4s,mb5.5
EGMT *e* pP 20 31 11.2 -0.6
D17A Six Diamond Ra 61.70 50 ⇓P **P 20 30 58.4 -0.1**
baz=61
I13A Wildhorse Cree 61.80 55 ⇑P **P 20 30 59.2 0.0**
baz=61,SNR=12
HLID Hailey 61.84 55 ⇑P **P 20 30 59.7 +0.1**
baz=62,SNR=8.7
HLID Hailey 61.84 55 *e*P **P 20 30 59.7 +0.2**
comp=Z,18nm,1.4s,mb5.0
HLID *e* pP 20 31 14.0 +0.8
M10A I.L. Ranch, Tu 61.86 58 ⇓P **P 20 31 00.2 +0.5**
baz=62,SNR=8.7
JOF Joensuu 61.91 334 *e*P **P 20 30 58.7 -1.0**
JOF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
JOF Joensuu 61.91 334 *e*p **P 20 30 58.7 -1.0**
comp=Z,6.9nm,0.5s,mb5.0
L11A Cat Creek Ranc 61.92 57 ⇓P **P 20 31 00.3 +0.2**
baz=62,SNR=14
G15A Dillon 61.94 53 ⇓P **P 20 30 59.9 -0.2**
baz=62,SNR=7.8
MCMT McKenzie Canyo 61.95 54 *e*P **P 20 31 00.2 -0.1**
comp=Z,2.6nm,0.9s,mb4.4
MCMT *e* pP 20 31 14.3 +0.4
E17A Martinsdale 62.03 51 ⇑P **P 20 31 01.3 +0.5**
baz=62,SNR=18
F16A Kennard Place, 62.03 52 ⇑P **P 20 31 00.6 -0.2**
baz=62,SNR=8.5
J13A Cove Ranch, Pi 62.08 55 ⇓P **P 20 31 01.4 +0.3**
baz=62,SNR=7.8
BOZ Bozeman (W) 62.12 52 ⇓P **P 20 31 01.5 +0.1**
baz=62,SNR=15
BOZ Bozeman (W) 62.12 52 *e*P **P 20 31 01.4 +0.1**
BOZ *e* pP 20 31 15.3 +0.3
BOZ pmax pmax
comp=Z,39nm,1.4s,mb5.3
BOZ Bozeman (W) 62.12 52 *e*P **P 20 31 01.4 +0.1**
comp=Z,39nm,1.4s,mb5.3
BOZ *e* pP 20 31 15.3 +0.3
D18A Linhart Farms, 62.14 50 ⇓P **P 20 31 01.5 0.0**
baz=62
I14A Mackay 62.16 55 ⇑P **P 20 31 02.1 +0.4**
baz=62,SNR=10.0
H15A Lima 62.19 54 ⇓P **P 20 31 01.7 -0.2**
baz=62
G16A Moss Hill, Enn 62.28 53 ⇑P **P 20 31 02.4 0.0**
baz=62,SNR=22
KBL Kabul 62.32 292 *e*P **P 20 31 02.6 -0.3**
KBL pmax pmax
comp=Z,18nm,0.8s,mb5.2
KBL Kabul 62.32 292 *e*P **P 20 31 02.6 -0.3**
comp=Z,18nm,0.8s,mb5.3
M11A Holland Ranch, 62.36 58 ⇑P **P 20 31 03.4 +0.4**
baz=62,SNR=6.6
L12A House Creek Ra 62.37 57 ⇓P **P 20 31 03.3 +0.2**
baz=62

E18A **Harlowton** 62.48 51 ⇑P P 20 31 03.8 +0.1
baz=62
F17A **Fitzpatrick Pl** 62.49 52 ⇓P P 20 31 03.9 +0.1
baz=62,SNR=6.7
O10A **Cortez Mining,** 62.64 59 ⇑P P 20 31 05.6 +0.7
baz=62
NVAR **Mina Array Bea** 62.70 62 P P 20 31 05.6 +0.2
comp=Z,5.2nm,0.7s,mb4.8,baz=294,slow=7.1,SNR=31
NVAR pP pP 20 31 20.3 +1.2
comp=Z,4.2nm,0.9s,baz=310,slow=8.8,SNR=7.6
QLMT **Earthquake Lak** 62.74 53 *e*P P 20 31 05.5 0.0
QLMT *e* pP 20 31 19.6 +0.4
G17A **Pierce Place,** 62.81 52 ⇑P P 20 31 06.1 +0.2
baz=62
M12A **Wells** 62.88 58 ⇑P P 20 31 06.9 +0.4
baz=62,SNR=14
H16A **Russell Place,** 62.92 53 ⇓P P 20 31 07.0 +0.3
baz=62,SNR=13
F18A **Big Timber** 63.00 51 ⇓P P 20 31 07.6 +0.4
baz=63,SNR=8.8
L13A **Double Diamond** 63.03 57 ⇓P P 20 31 08.0 +0.5
baz=63
J15A **Blackfoot** 63.07 55 ⇓P P 20 31 08.0 +0.3
baz=63,SNR=6.7
P10A **Eureka** 63.08 60 ⇑P P 20 31 08.2 +0.4
baz=63
N12A **Clover Valley,** 63.16 58 ⇓P P 20 31 08.7 +0.4
baz=63,SNR=5.5
K14A **Jones Ranch, D** 63.19 56 ⇓P P 20 31 09.1 +0.6
baz=63,SNR=7.6
O11A **Cowboy Ranch,** 63.25 59 ⇑P P 20 31 08.9 0.0
baz=63,SNR=5.8
M13A **Montello** 63.36 57 ⇓P P 20 31 09.9 +0.3
baz=63,SNR=6.6
M13A **Montello** 63.36 57 *e*P P 20 31 09.5 -0.1
comp=Z,20nm,1.3s,mb5.1
G18A **Lazy EL Ranch,** 63.45 51 ⇓P P 20 31 10.2 0.0
baz=63
K15A **Arbon** 63.47 55 ⇓P P 20 31 10.6 +0.3
baz=63,SNR=7.4
L14A **Malta** 63.47 56 ⇓P P 20 31 10.8 +0.4
baz=63,SNR=10
H17A **Grant Village** 63.48 53 ⇑P P 20 31 11.2 +0.7
baz=63,SNR=6.1
IMW **Indian Meadow** 63.60 53 *e*P P 20 31 12.0 +0.8
comp=Z,18nm,1.2s,mb5.0
IMW *e* pP 20 31 26.4 +1.5
J16A **Bone** 63.62 54 ⇑P P 20 31 12.0 +0.7
baz=63,SNR=14
Q10A **Clear Creek Ra** 63.62 61 ⇑P P 20 31 11.8 +0.4
baz=63
N13A **Wendover, West** 63.65 58 ⇑P P 20 31 11.6 0.0
baz=63,SNR=6.7
N13A **Wendover, West** 63.65 58 *e*P P 20 31 11.0 -0.6
comp=Z,26nm,1.0s,mb5.2
SCO **Scoresbysund** 63.65 358 *i* P P 20 31 11.1 -0.1
SCO pmax pmax
comp=Z,14nm,1.0s,mb5.0
SCO **Scoresbysund** 63.65 358 *i* P P 20 31 11.1 -0.1
comp=Z,14nm,1.0s,mb4.9
O12A **Currie** 63.70 59 ⇑P P 20 31 12.2 +0.2
baz=63,SNR=12
RRI2 **Red Ridge** 63.73 54 *e*P P 20 31 12.7 +0.6
comp=Z,23nm,0.8s,mb5.3
RRI2 *e* pP 20 31 26.4 +0.6
RLMT **Red Lodge** 63.74 51 ⇓P P 20 31 12.6 +0.4
baz=63,SNR=12
RLMT **Red Lodge** 63.74 51 *e*P P 20 31 12.5 +0.4
comp=Z,15nm,0.9s,mb5.0
RLMT *e* pP 20 31 26.8 +1.0
M14A **Sheep Mountain** 63.74 57 ⇓P P 20 31 12.7 +0.5
baz=63,SNR=7.9
I17A **Pilgrim Ck.** 63.79 53 ⇑P P 20 31 13.7 +1.2
baz=63,SNR=5.6
TPAW **Teton Pass** 63.85 54 *e*P P 20 31 13.8 +1.0
comp=Z,47nm,1.3s,mb5.3
TPAW *e* pP 20 31 27.5 +0.9
K16A **Soda Springs** 63.91 55 ⇑P P 20 31 14.0 +0.8
baz=64,SNR=9.0
BHPL **Bhopal** 63.92 277 *e*P P 20 31 15.2 +1.6
PKM **Peak Mountain** 63.97 66 ⇑P P 20 31 14.9 +1.1
baz=64
L15A **Malad City** 63.98 56 ⇑P P 20 31 14.1 +0.3
baz=64
REDW **Red Top Meadow** 63.99 54 *e*P P 20 31 14.1 +0.3
comp=Z,40nm,1.3s,mb5.3
KAF **Kangasniemi** 64.02 335 *e*P P 20 31 12.2 -1.5
KAF pmax pmax
comp=Z,13nm,0.7s,mb5.1
KAF **Kangasniemi** 64.02 335 *e*p P 20 31 12.2 -1.5
comp=Z,13nm,0.7s,mb5.1
Q11A **Duckwater** 64.06 60 ⇑P P 20 31 14.4 +0.1
baz=64
J17A **Brown Place, J** 64.07 54 ⇓P P 20 31 14.8 +0.5
baz=64,SNR=6.6
S10A **Tonopah Range,** 64.07 62 ⇓P P 20 31 14.4 0.0
baz=64,SNR=7.9
P12A **McGill** 64.11 59 ⇓P P 20 31 14.8 +0.1
baz=64,SNR=6.3
GRAC **Grapevine Rang** 64.18 63 ⇓P P 20 31 15.2 +0.1
baz=64,SNR=5.2
DGMT **Dagmar** 64.22 46 ⇑P P 20 31 15.0 -0.2
baz=64
N14A **Grayback Hills** 64.25 57 ⇑P P 20 31 15.7 +0.2
baz=64
M15A **Larsen Ranch,** 64.29 56 ⇑P P 20 31 15.8 0.0
baz=64,SNR=12
ISA **Isabella** 64.34 65 ⇓P P 20 31 15.7 -0.5
baz=64
ISA **Isabella** 64.34 65 *e*P P 20 31 15.0 -1.2
ISA pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
ISA **Isabella** 64.34 65 *e*P P 20 31 15.0 -1.2
comp=Z,6.8nm,1.1s,mb4.6
I18A **Diamond G Ranc** 64.35 53 ⇑P P 20 31 16.8 +0.6
baz=64
R11A **Troy Canyon, C** 64.41 61 ⇑P P 20 31 16.8 +0.1
baz=64
Q12A **Willow Creek R** 64.43 60 ⇓P P 20 31 16.9 +0.1
baz=64
L16A **Fish Haven** 64.52 55 ⇓P P 20 31 17.2 -0.1
baz=64
J18A **Kendall Valley** 64.55 54 ⇓P P 20 31 17.8 +0.4
baz=64
N15A **Stansbury Isla** 64.61 57 ⇓P P 20 31 18.4 +0.5
baz=64
FINES **FINESS Array B** 64.62 335 P P 20 31 16.7 -0.9
comp=Z,20nm,0.7s,mb5.2,baz=34,slow=7.5,SNR=63
FINES LR LR 21 02 48.4
comp=Z,100nm,18.9s,MS4.0,baz=309,slow=39
FINES **FINESS Array B** 64.62 335 P P 20 31 16.7 -0.9
FINES pmax pmax
comp=Z,20nm,0.7s
FINES MLR MLR
comp=Z,100nm,18.9s
P13A **Bates Ranch, G** 64.65 59 ⇓P P 20 31 18.2 0.0
baz=64,SNR=6.2
MPMC **Manual Prospec** 64.70 64 ⇓P P 20 31 18.3 -0.2
baz=64,SNR=5.4
HWUT **Hardware Ranch** 64.71 56 *e*P P 20 31 18.5 -0.1
comp=Z,19nm,1.3s,mb5.0
HWUT *e* pP 20 31 33.0 +0.8
S11A **Rachel** 64.77 61 ⇑P P 20 31 19.1 +0.2
baz=64,SNR=5.7
FURC **Furnace Creek,** 64.83 63 ⇓P P 20 31 19.6 +0.1
baz=64
M16A **Huntsville** 64.86 56 ⇑P P 20 31 19.5 0.0
baz=64,SNR=6.6
DUG **Dugway** 64.89 58 ⇓P P 20 31 20.0 +0.3
baz=64,SNR=9.3
DUG **Dugway** 64.89 58 *e*P P 20 31 19.4 -0.3
DUG *e* pP 20 31 33.9 +0.4
DUG pmax pmax
comp=Z,27nm,1.3s,mb5.1
DUG **Dugway** 64.89 58 *e*P P 20 31 19.4 -0.3
comp=Z,27nm,1.3s,mb5.1
DUG *e* pP 20 31 33.9 +0.5
K18A **Toltan Ranch,** 64.91 54 ⇑P P 20 31 20.2 +0.4
baz=64,SNR=9.2
Q13A **Wheeler Ranch,** 64.97 59 ⇓P P 20 31 20.4 +0.1
baz=65
R12A **Pony Springs,** 65.02 60 ⇑P P 20 31 20.7 +0.1
baz=65
O15A **The Old Anders** 65.04 57 ⇑P P 20 31 21.0 +0.3
baz=65
BW06 **Boulder Array** 65.10 54 ⇓P P 20 31 20.8 -0.2
baz=65,SNR=17

PDAR **Pinedale Array** 65.10 54 P P 20 31 21.0 0.0
comp=Z,9.0nm,0.8s,mb4.8,baz=281,slow=2.0,SNR=67
PDAR pP pP 20 31 34.7 -0.1
comp=Z,7.0nm,0.9s,baz=286,slow=2.6,SNR=12
P14A **Drum Mountains** 65.13 58 ⇑P P 20 31 21.5 +0.2
baz=65,SNR=6.5
EDW2 **Edwards Air Fo** 65.14 65 ⇑P P 20 31 21.2 -0.3
baz=65,SNR=5.2
N16A **Rees Ranch, Co** 65.25 56 ⇑P P 20 31 22.1 +0.1
baz=65
M17A **Scullys Gap (B** 65.31 55 ⇑P P 20 31 22.4 -0.1
baz=65,SNR=6.3
S12A **Delamar Landin** 65.33 61 ⇓P P 20 31 23.1 +0.5
baz=65
T11A **Corn Creek, Al** 65.34 61 ⇑P P 20 31 22.7 0.0
baz=65,SNR=12
L18A **Fontenelle, Gr** 65.38 55 ⇓P P 20 31 22.8 -0.1
baz=65
Q14A **Sevier Lake (B** 65.39 59 ⇓P P 20 31 23.1 +0.1
baz=65,SNR=10
K19A **Absolon Red Bu** 65.46 53 ⇓P P 20 31 22.9 -0.5
baz=65,SNR=7.5
N17A **Moffit Pass** 65.56 56 ⇑P P 20 31 23.9 -0.1
baz=65,SNR=6.6
P15A **Leamington** 65.61 58 ⇓P P 20 31 24.6 +0.2
baz=65
GSC **Goldstone** 65.61 64 ⇑P P 20 31 24.5 0.0
baz=65
L19A **Farson** 65.64 54 ⇓P P 20 31 24.5 -0.1
baz=65
O16A **Springville** 65.65 57 ⇓P P 20 31 24.7 +0.1
baz=65
DAU **Daniels Canyon** 65.66 57 *e*P P 20 31 24.9 +0.2
DAU *e* pP 20 31 39.6 +1.2
DAU pmax pmax
comp=Z,18nm,1.3s,mb4.9
DAU **Daniels Canyon** 65.66 57 *e*P P 20 31 24.9 +0.2
comp=Z,18nm,1.3s,mb4.9
DAU *e* pP 20 31 39.6 +1.2
SFJD **Kangerlussuaq** 65.77 10 *e*P P 20 31 23.7 -1.2
SFJD pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SFJD **Kangerlussuaq** 65.77 10 *i* P P 20 31 23.7 -1.2
comp=Z,4.2nm,0.9s,mb4.5
OBN **Obninsk** 65.84 326 *e*P P 20 31 25.3 -0.3
OBN pmax pmax
comp=Z,30nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.1
K20A **Yellowstone Ra** 65.85 53 ⇓P P 20 31 25.2 -0.6
baz=66,SNR=6.4
S13A **Holt Ranch, En** 65.95 60 ⇑P P 20 31 26.6 -0.1
baz=66,SNR=5.0
O17A **Robinson Place** 66.10 56 ⇓P P 20 31 27.9 +0.4
baz=66
N18A **Larsen Ranch,** 66.20 55 ⇑P P 20 31 28.2 +0.1
baz=66
HEC **Hector,Ludlow** 66.22 64 ⇓P P 20 31 27.9 -0.5
baz=66,SNR=7.1
L20A **Wamsutter** 66.28 54 ⇑P P 20 31 28.5 -0.2
baz=66
T13A **Saint George** 66.29 61 ⇓P P 20 31 29.6 +0.8
baz=66
MSU **Marysvale** 66.35 59 *e*P P 20 31 25.5 -3.7
MSU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
MSU **Marysvale** 66.35 59 *e*P P 20 31 25.5 -3.7
comp=Z,6.1nm,1.0s,mb4.6
O18A **Roosevelt** 66.47 56 ⇑P P 20 31 30.2 +0.3
baz=66,SNR=6.0
R15A **Junction** 66.49 59 ⇓P P 20 31 30.7 +0.6
baz=66
P17A **Butcher Ranch,** 66.57 57 ⇓P P 20 31 31.0 +0.4
baz=66
U13A **Pakoon Wash** 66.65 61 ⇓P P 20 31 31.4 +0.3
baz=66,SNR=7.5
GMRC **Granite Mounta** 66.67 64 ⇓P P 20 31 30.7 -0.6
baz=66,SNR=6.0
Q16A **Castle Valley** 66.68 58 ⇑P P 20 31 31.8 +0.5
baz=66
M20A **Sweetwater, Wa** 66.70 54 ⇑P P 20 31 31.7 +0.4
baz=66,SNR=8.0
T14A **Hurricane** 66.76 60 ⇑P P 20 31 32.3 +0.5
baz=66
L21A **Rawlins** 66.85 53 ⇓P P 20 31 32.2 -0.1
baz=66
R16A **Teasdale** 66.92 58 ⇓P P 20 31 33.4 +0.6
baz=67,SNR=9.1
SRU **San Rafael** 66.94 57 ⇓P P 20 31 32.8 -0.1
baz=67,SNR=11
SRU **San Rafael** 66.94 57 *e*P P 20 31 32.2 -0.7
SRU pmax pmax
comp=Z,20nm,0.9s,mb5.2
SRU **San Rafael** 66.94 57 *e*P P 20 31 32.2 -0.7
comp=Z,20nm,0.9s,mb5.1
O19A **Miners Draw (B** 66.96 55 ⇑P P 20 31 33.0 0.0
baz=67
ULM **Lac du Bonnet** 66.98 41 P P 20 31 31.9 -1.0
comp=Z,5.1nm,0.8s,mb4.6,baz=326,slow=8.5,SNR=5.0
V13A **Grand Canyon W** 67.00 62 ⇓P P 20 31 33.4 +0.1
baz=67
HYB **Hyderabad** 67.04 272 *i* P P 20 31 35.0 +1.2
M21A **Separation Pea** 67.09 53 ⇑P P 20 31 33.4 -0.4
baz=67,SNR=5.9
N20A **Spence Gulch,** 67.10 55 ⇑P P 20 31 34.0 +0.1
baz=67,SNR=12
U14A **Mt Trumbull** 67.12 61 ⇓P P 20 31 34.2 +0.1
baz=67,SNR=6.0
Q18A **Rafter H Ranch** 67.17 57 ⇑P P 20 31 34.3 -0.1
baz=67
RSSD **Black Hills** 67.21 50 *e*P P 20 31 33.9 -0.7
RSSD *e* pP 20 31 47.8 -0.5
RSSD pmax pmax
comp=Z,35nm,1.3s,mb5.2
RSSD **Black Hills** 67.21 50 *e*P P 20 31 33.9 -0.7
comp=Z,35nm,1.3s,mb5.2
RSSD *e* pP 20 31 47.8 -0.6
T15A **Red Dirt Ranch** 67.21 60 ⇑P P 20 31 34.8 +0.1
baz=67
R17A **Hanksville Air** 67.28 58 ⇓P P 20 31 34.8 -0.3
baz=67,SNR=9.3
IRM **Iron Mountain** 67.39 64 ⇓P P 20 31 35.7 -0.2
baz=67
P19A **Cripple Cowboy** 67.48 56 ⇑P P 20 31 36.1 -0.3
baz=67,SNR=11
BC3 **Big Chuckw Mtn** 67.53 64 ⇓P P 20 31 36.7 -0.1
baz=67
W13A **Hualapai Mount** 67.56 62 ⇑P P 20 31 36.9 0.0
baz=67
N21A **Black Mountain** 67.57 54 ⇓P P 20 31 36.8 0.0
baz=67
U15A **North Rim** 67.65 60 ⇑P P 20 31 37.8 +0.3
baz=67,SNR=7.8
V14A **Boquillas Ranc** 67.68 61 ⇑P P 20 31 38.1 +0.5
baz=67,SNR=12
S17A **Black Ridge (B** 67.75 59 ⇓P P 20 31 38.3 +0.2
baz=67
R18A **Canyonlands Na** 67.78 57 ⇑P P 20 31 37.8 -0.4
baz=67,SNR=9.7
P20A **De Beque** 67.91 56 ⇓P P 20 31 38.9 -0.2
baz=68
X13A **Yucca** 67.92 63 ⇓P P 20 31 38.6 -0.6
baz=68,SNR=6.7
WRA **Warramunga Arr** 67.93 199 P P 20 31 38.6 -0.6
comp=Z,2.2nm,0.8s,mb4.2,baz=16,slow=6.7,SNR=15
O21A **Pagoda** 67.96 55 ⇑P P 20 31 39.1 -0.2
baz=68
W14A **Seligman** 67.97 62 ⇑P P 20 31 39.7 +0.2
baz=68,SNR=9.1
V15A **Kaibab Nationa** 68.13 61 ⇑P P 20 31 40.9 +0.4
baz=68,SNR=12
N22A **Wattenberg Ran** 68.14 54 ⇓P P 20 31 40.7 +0.2
baz=68
S18A **Hurst Farm, Bl** 68.19 58 ⇑P P 20 31 40.3 -0.5
baz=68,SNR=6.5
R19A **Curley Farm, L** 68.22 57 ⇓P P 20 31 40.9 -0.1
baz=68
Q20A **Ridgley Place,** 68.33 56 ⇓P P 20 31 41.7 0.0
baz=68
W15A **Williams** 68.50 61 ⇑P P 20 31 43.6 +0.8
baz=68
U17A **Shonto** 68.52 59 ⇓P P 20 31 43.3 +0.4
baz=68
U16A **Tuba City** 68.54 60 ⇑P P 20 31 43.3 +0.2
baz=68,SNR=6.8
FITZ **Fitzroy Crossi** 68.60 208 P P 20 31 43.8 +0.4
comp=Z,2.5nm,0.8s,mb4.2,baz=65,slow=6.3,SNR=6.4
T18A **Mexican Hat** 68.63 58 ⇓P P 20 31 42.8 -0.8
baz=68,SNR=8.9

R20A **Redvale** 68.80 57 ⇓P P 20 31 44.3 -0.4
baz=68,SNR=6.8
WUAZ **Wupatki** 68.81 61 ⇓P P 20 31 45.3 +0.5
baz=68
WUAZ **Wupatki** 68.81 61 *e*P P 20 31 43.9 -0.9
comp=Z,29nm,1.5s,mb5.0
Q21A **Lamborn Mesa,** 68.83 56 ⇑P P 20 31 44.6 -0.3
baz=68,SNR=5.8
NB2 **NORSAR Subarra** 68.83 341 P P 20 31 43.9 -0.5
comp=Z,7.5nm,0.6s,mb4.8,baz=26,slow=6.5
NOA **NORSAR Array B** 68.83 341 P P 20 31 43.9 -0.5
comp=Z,6.1nm,0.6s,mb4.7,baz=27,slow=6.4,SNR=37
NOA **NORSAR Array B** 68.83 341 P P 20 31 43.9 -0.5
NOA pmax pmax
comp=Z,6.0nm,0.6s
SMCO **Snowmass** 68.94 55 *e*P P 20 31 45.2 -0.3
comp=Z,30nm,1.4s,mb5.0
Z13A **Yuma Proving G** 68.96 64 ⇑P P 20 31 45.4 -0.3
baz=69
X15A **Humboldt** 68.98 62 ⇑P P 20 31 46.1 +0.3
baz=69,SNR=8.7
U18A **Rough Rock, Ch** 69.11 59 ⇑P P 20 31 46.9 +0.3
baz=69
R21A **Cimarron** 69.16 56 ⇑P P 20 31 46.9 0.0
baz=69,SNR=9.3
Q22A **Crested Butte,** 69.19 55 ⇓P P 20 31 47.4 +0.3
baz=69
Y15A **Casa Rosa Ranc** 69.27 62 ⇓P P 20 31 48.1 +0.4
baz=69
ISCO **Idaho Springs** 69.29 54 *e*P P 20 31 47.8 +0.2
ISCO pmax pmax
comp=Z,20nm,1.3s,mb4.9
ISCO **Idaho Springs** 69.29 54 *e*P P 20 31 47.8 +0.2
comp=Z,20nm,1.3s,mb4.9
T19A **Beclabito** 69.34 58 ⇓P P 20 31 48.2 +0.2
baz=69
MVCO **Mesa Verde** 69.39 58 ⇑P P 20 31 48.4 0.0
baz=69,SNR=7.1
MVCO **Mesa Verde** 69.39 58 *e*P P 20 31 48.1 -0.2
comp=Z,9.5nm,0.8s,mb4.8
S21A **Coal Bank Pass** 69.50 57 ⇓P P 20 31 49.3 +0.3
baz=69,SNR=7.6
X16A **Lo Mia Camp, P** 69.51 61 ⇑P P 20 31 49.6 +0.5
baz=69,SNR=9.0
V18A **Ganado** 69.55 60 ⇑P P 20 31 49.5 +0.2
baz=69,SNR=6.5
U19A **Dine' College,** 69.59 59 ⇑P P 20 31 50.1 +0.5
baz=69
X17A **Forest Lakes** 69.95 61 ⇓P P 20 31 52.3 +0.5
baz=70
W19A **Sanders** 70.29 60 ⇑P P 20 31 54.1 +0.2
baz=70
V20A **Brimhall** 70.37 59 ⇓P P 20 31 54.6 +0.3
baz=70
T22A **Edith** 70.46 57 ⇓P P 20 31 55.1 +0.2
baz=70,SNR=5.8
OGNE **Ogallala** 70.47 51 *e*P P 20 31 54.3 -0.6
comp=Z,48nm,0.8s,mb5.5
OGNE *e* pP 20 32 06.8 -1.9
Y18A **Canyon Day Jun** 70.80 61 ⇓P P 20 31 57.4 +0.4
baz=70
W20A **Ramah** 70.81 59 ⇓P P 20 31 57.0 -0.1
baz=70,SNR=7.0
X19A **St. Johns** 70.81 60 ⇓P P 20 31 57.3 +0.3
baz=70,SNR=6.1
V21A **Milan** 70.86 58 ⇓P P 20 31 57.8 +0.5
baz=70
Y19A **Nutrioso** 71.15 61 ⇓P P 20 31 59.3 +0.1
baz=71
117A **Oracle** 71.19 62 ⇓P P 20 31 59.3 -0.1
baz=71
X20A **Quemado** 71.21 60 ⇓P P 20 31 59.6 +0.2
baz=71,SNR=7.6
V22A **San Miguel Ran** 71.21 58 ⇑P P 20 31 59.9 +0.5
baz=71
KIV **Kislovodsk** 71.26 314 *e*P P 20 32 00.0 +0.4
KIV pmax pmax
comp=Z,21nm,0.9s,mb5.1
KIV MLR MLR
comp=Z,125nm,18.0s,MS4.2
KIV **Kislovodsk** 71.26 314 *e*P P 20 32 00.6 +1.0
comp=Z,14nm,0.8s,mb4.9
ECSD **EROS Data Cent** 71.30 46 *e*P P 20 31 58.4 -1.4
comp=Z,28nm,1.3s,mb5.0
ECSD *e* pP 20 32 11.2 -2.6
ZEI **Tsey** 71.50 313 *e*P P 20 31 58.8 -2.3
ZEI pmax pmax
comp=Z,14nm,1.0s,mb4.8
SUW **Suwalki** 71.56 332 *e*P P 20 32 00.3 -0.9
Z19A **T-Link Ranch,** 71.60 61 ⇓P P 20 32 02.2 +0.4
baz=71
118A **Homack Ranch,** 71.62 62 ⇓P P 20 32 02.4 +0.4
baz=71
ASAR **Alice Springs** 71.62 199 P P 20 32 02.8 +1.0
comp=Z,2.5nm,0.8s,mb4.2,baz=13,slow=5.8,SNR=17
ASAR **Alice Springs** 71.62 199 P P 20 32 02.8 +1.0
ASAR pmax pmax
comp=Z,3.0nm,0.8s
X21A **Alamocita Cree** 71.70 59 ⇓P P 20 32 02.8 +0.3
baz=71,SNR=8.7
Y20A **Horse Springs,** 71.72 60 ⇓P P 20 32 02.7 +0.2
baz=71,SNR=5.7
119A **Ashpeak Ranch,** 71.94 61 ⇑P P 20 32 03.9 +0.1
baz=72
218A **Dragoon** 72.03 63 ⇓P P 20 32 04.7 +0.2
baz=72
AKASG **Malin Array Be** 72.08 326 P P 20 32 03.8 -0.6
comp=Z,18nm,0.6s,mb5.2,baz=33,slow=6.3,SNR=73
AKASG pP pP 20 32 16.9 -1.5
comp=Z,12nm,0.6s,baz=34,slow=6.1,SNR=8.7
AKBB **Malin Array Si** 72.08 326 *e*P P 20 32 03.6 -0.8
AKBB *e* pP 20 32 15.9 -2.4
LAZ **Ladron** 72.12 59 *e*P P 20 32 05.2 +0.2
LAZ *e* pP 20 32 16.5 -2.3
Z20A **Nine Sixteen R** 72.13 61 ⇑P P 20 32 05.4 +0.4
baz=72
ANMO **Albuquerque** 72.14 58 *e*P P 20 32 04.4 -0.7
ANMO *e* pP 20 32 18.5 -0.5
ANMO pmax pmax
comp=Z,16nm,1.4s
ANMO **Albuquerque** 72.14 58 *e*P P 20 32 04.4 -0.6
comp=Z,16nm,1.4s,mb4.8
ANMO *e* pP 20 32 18.5 -0.4
318A **Bisbee** 72.43 63 ⇑P P 20 32 06.9 +0.1
baz=72
219A **White Tail Can** 72.49 62 ⇑P P 20 32 07.3 +0.1
baz=72
Y22A **Socorro** 72.54 59 ⇓P P 20 32 07.6 +0.1
baz=72
Z21A **St. Cloud Mine** 72.56 60 ⇑P P 20 32 07.9 +0.3
baz=72,SNR=5.9
W24A **Lazy 6 Ranch,** 72.58 57 ⇑P P 20 32 08.0 +0.3
baz=72,SNR=7.0
319A **Douglas** 72.91 63 ⇓P P 20 32 09.9 +0.2
baz=73
220A **Playas Peak, P** 73.01 62 ⇑P P 20 32 10.5 +0.2
baz=73
Z22A **Elephant Butte** 73.02 60 ⇑P P 20 32 10.6 +0.3
baz=73
121A **Cookes Peak, D** 73.03 61 ⇓P P 20 32 10.8 +0.5
baz=73
Y23A **Lovelace Mesa,** 73.09 59 ⇓P P 20 32 11.0 +0.3
baz=73,SNR=5.7
W25A **X Bar L Ranch,** 73.12 57 ⇓P P 20 32 10.7 -0.3
baz=73,SNR=9.6
MUD **Monsted U'grnd** 73.42 340 *i* P P 20 32 13.4 +1.1
MUD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MUD **Monsted U'grnd** 73.42 340 *i* P P 20 32 13.4 +1.1
comp=Z,10.0nm,1.0s,mb4.7
Y24A **Capitan** 73.46 58 ⇓P P 20 32 12.9 0.0
baz=73,SNR=5.5
SCHQ **Schefferville** 73.88 23 LR LR 21 05 38.2
comp=Z,58nm,19.0s,MS3.9,baz=207,slow=36
Y25A **Mesa, Roswell** 73.90 58 ⇓P P 20 32 15.0 -0.5
baz=74,SNR=5.6
X26A **CR and CF Fran** 73.97 57 ⇓P P 20 32 15.9 0.0
baz=74
124A **Stringfield Ra** 74.31 59 ⇓P P 20 32 17.9 0.0
baz=74
X27A **F and S Farms,** 74.32 56 ⇓P P 20 32 17.9 -0.1
baz=74
SCIA **State Center** 74.34 45 *e*P P 20 32 16.7 -1.2
comp=Z,10nm,0.5s,mb5.0
SCIA *e* pP 20 32 30.3 -1.6
Y26A **Elida** 74.41 57 ⇓P P 20 32 18.3 -0.1
baz=74

SIM Simferopol' 74.56 320 *eP* **P 20 32 19.6 +0.5**
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.9
LVV L'vov 74.74 329 *eP* **P 20 32 19.5 -0.6**
LVV *e* pP 20 32 33.7 -0.4
Z26A Caprock 74.78 58 ⇓P **P 20 32 20.5 -0.2**
baz=74
125A Gardner Draw, 74.81 59 ⇓P **P 20 32 20.9 0.0**
baz=74
Y27A Causey 74.82 57 ⇓P **P 20 32 20.4 -0.5**
baz=74,SNR=9.4
MSTX Muleshoe 74.99 57 ⇓P **P 20 32 21.7 -0.1**
baz=75
MNTX Cornudas Mount 75.06 60 *eP* **P 20 32 21.8 -0.5**
comp=Z,12nm,1.4s,mb4.6
MNTX *e* pP 20 32 35.8 -0.5
324A Moseley Ranch, 75.18 60 ⇑P **P 20 32 22.7 -0.3**
baz=75
Z27A Tatum 75.20 57 ⇑P **P 20 32 22.6 -0.4**
baz=75
KWP Kalwaria Pacla 75.38 329 *eP* **P 20 32 24.5 +0.8**
KWP Kalwaria Pacla 75.38 329 *eP* **P 20 32 23.5 -0.3**
comp=Z,49nm,1.1s,mb5.3
KWP Kalwaria Pacla 75.38 329 ⇑*i*P **P 20 32 24.0 +0.3**
BSEG Bad Segeberg 75.42 338 *eP* **P 20 32 22.9 -1.0**
comp=Z,9.0nm,0.9s,mb4.7
BSEG Bad Segeberg 75.42 338 *eP* **P 20 32 22.9 -1.0**
BSEG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
325A Bean Ranch, Si 75.54 60 ⇓P **P 20 32 24.5 -0.5**
baz=75,SNR=5.4
LEOM Leova 75.86 324 ⇑P **P 20 32 27.0 +0.4**
LEOM Leova 75.86 324 ⇑*i*P **P 20 32 27.0 +0.4**
OJC Ojcow 75.88 331 *eP* **P 20 32 26.5 -0.1**
OJC *e*PcP PcP 20 32 41.3 +2.3
425A Indio Mountain 75.94 60 ⇑P **P 20 32 27.2 -0.2**
baz=76,SNR=14
STHS Stebnicka Huta 76.07 330 *eP* **P 20 32 29.0 +1.3**
STHS *e* pP 20 32 42.0 +0.3
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
STHS Stebnicka Huta 76.07 330 *eP* **P 20 32 29.0 +1.3**
comp=Z,5.6nm,0.8s,mb4.5
STHS *e* pP 20 32 42.0 +0.3
STHS Stebnicka Huta 76.07 330 *eP* **P 20 32 29.0 +1.3**
STHS *e*pP pP 20 32 41.9 +0.2
BUR08 Bucovina Ar. S 76.11 327 *eP* **P 20 32 28.1 +0.2**
KOLS Kolonicke sedl 76.12 329 *eP* **P 20 32 28.0 0.0**
KOLS *e* pP 20 32 43.1 +1.1
KOLS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KOLS Kolonicke sedl 76.12 329 *eP* **P 20 32 28.0 0.0**
comp=Z,4.6nm,0.9s,mb4.4
KOLS *e* pP 20 32 43.1 +1.1
KOLS Kolonicke sedl 76.12 329 *eP* **P 20 32 28.0 0.0**
KOLS *e*pP pP 20 32 43.1 +1.1
BURAR Bucovina Array 76.13 327 ⇓P **P 20 32 27.6 -0.5**
BURAR Bucovina Array 76.13 327 ⇓*i*P **P 20 32 27.6 -0.5**
326A Caldwell Ranch 76.17 59 ⇑P **P 20 32 28.4 -0.2**
baz=76
UZH Uzhgorod 76.36 329 *eP* **P 20 32 28.7 -0.7**
UZH *i* pP 20 32 43.0 -0.4
NIE Niedzica 76.39 330 *eP* **P 20 32 29.3 -0.2**
426A McDonald Obser 76.61 60 ⇑P **P 20 32 31.0 -0.1**
baz=76
TLCR 76.67 323 ⇓P **P 20 32 31.9 +0.7**
TLCR 76.67 323 ⇓*i*P **P 20 32 31.9 +0.7**
TRPA Tarpa 76.70 328 ⇓*i*P **P 20 32 32.0 +0.7**
OKC Ostrava-Krasne 76.76 332 *eP* **P 20 32 31.4 -0.2**
OKC *e**PP pP 20 32 45.2 -0.4
OKC MLR MLR
comp=Z,100nm,18.9s,MS4.2
OKC Ostrava-Krasne 76.76 332 *eP* **P 20 32 31.4 -0.2**
OKC *e*pP pP 20 32 45.2 -0.4
OKC AMS AMS 21 11 40.0
comp=Z,100nm,18.9s
NRDL Niedersach Rie 76.78 338 *eP* **P 20 32 31.5 -0.2**
comp=Z,10.0nm,1.0s,mb4.7
328A Wristen Ranch, 76.82 58 ⇑P **P 20 32 32.2 -0.1**
baz=76
427A Hayter Ranch, 76.85 59 ⇓P **P 20 32 32.1 -0.4**
baz=76
UPC Upice 76.86 334 *eP* **P 20 32 32.5 +0.4**
UPC *e*pP pP 20 32 45.7 -0.5
DPC Dobruska-Polom 76.90 333 *eP* **P 20 32 33.1 +0.7**
DPC *e**PP pP 20 32 47.5 +1.1
DPC MLR MLR
comp=Z,100nm,16.1s,MS4.2
DPC Dobruska-Polom 76.90 333 *eP* **P 20 32 33.1 +0.7**
DPC *e*pP pP 20 32 47.5 +1.1
DPC AMS AMS 21 11 00.0
comp=Z,100nm,16.1s
526A Mary Lane Ranc 77.00 60 ⇓P **P 20 32 33.1 -0.2**
baz=77,SNR=10
MORC Moravsky Berou 77.01 332 *eP* **P 20 32 32.7 -0.3**
MORC *e* pP 20 32 45.3 -1.7
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MORC Moravsky Berou 77.01 332 *eP* **P 20 32 32.7 -0.3**
comp=Z,6.7nm,0.8s,mb4.6
MORC *e* pP 20 32 45.3 -1.7
MORC Moravsky Berou 77.01 332 ⇓*i*P **P 20 32 33.5 +0.5**
PLOR Plostina 77.02 325 ⇓*i*P pP 20 32 43.5 -3.7
CLL Collm 77.05 336 *eP* **P 20 32 32.7 -0.5**
comp=Z,14nm,0.7s,mb5.0
CLL Collm 77.05 336 ⇑*i*P **P 20 32 32.6 -0.6**
CLL *e**PP pP 20 32 46.0 -1.2
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.05 336 ⇑*i*P **P 20 32 32.6 -0.6**
comp=Z,15nm,0.7s,mb5.0
CLL *e*pP pP 20 32 46.0 -1.2
CLL Collm 77.05 336 ⇑*i*P **P 20 32 32.6 -0.6**
comp=Z,15nm,0.7s,mb5.0
CLL *e*(PcP) PcP 20 32 42.0 -2.0
CLL *e*pP pP 20 32 46.0 -1.2
comp=Z,12nm,0.8s
CLL *i* pP 20 32 48.7 +1.5
CLL *e*sP sP 20 32 52.0 -0.7
CLL *e*PP PP 20 35 21.0 -5.3
LIKS Likavka 77.12 331 *eP* **P 20 32 34.2 +0.6**
LIKS Likavka 77.12 331 *eP* **P 20 32 34.2 +0.6**
KECS Kecovo 77.13 330 *eP* **P 20 32 34.4 +0.7**
KECS *e* pP 20 32 47.3 -0.4
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 77.13 330 *eP* **P 20 32 34.4 +0.7**
comp=Z,3.4nm,0.9s,mb4.3
KECS *e* pP 20 32 47.3 -0.4
KECS Kecovo 77.13 330 *eP* **P 20 32 34.4 +0.7**
KECS *e*pP pP 20 32 47.3 -0.4
BRG Berggiesshubel 77.16 335 *eP* **P 20 32 33.5 -0.3**
comp=Z,6.0nm,1.1s,mb4.4
BRG Berggiesshubel 77.16 335 *eP* **P 20 32 33.6 -0.3**
comp=Z,3.3nm,1.0s,mb4.2
BRG *e* pP 20 32 49.5 +1.6
comp=Z,5.3nm,1.1s
BRG Berggiesshubel 77.16 335 *eP* **P 20 32 33.6 -0.2**
BRG *e* pP 20 32 49.5 +1.6
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
527A Woodward Ranch 77.23 60 ⇑P **P 20 32 34.5 -0.1**
baz=77
PVCC Panska Ves 77.28 334 *eP* **P 20 32 34.9 +0.4**
PVCC *e**PP pP 20 32 48.0 -0.5
PVCC MLR MLR
comp=Z,100nm,6.3s
PVCC Panska Ves 77.28 334 *eP* **P 20 32 34.9 +0.4**
PVCC *e*pP pP 20 32 48.0 -0.5
PVCC AMS AMS 21 14 40.0
comp=Z,100nm,6.3s
CLZ Clausthal 77.30 337 *eP* **P 20 32 34.9 +0.3**
comp=Z,23nm,1.2s,mb5.0
CLZ *e*sP sP 20 32 48.4 -5.7
CLZ Clausthal 77.30 337 *eP* **P 20 32 34.9 +0.3**
CLZ *e**SP sP 20 32 48.4 -5.7
CLZ pmax pmax
comp=Z,23nm,1.2s,mb5.0
626A Big Bend Ranch 77.34 61 ⇓P **P 20 32 35.0 -0.2**
baz=77
428A Kincaid Ranch, 77.37 59 ⇑P **P 20 32 35.4 0.0**
baz=77
HARR Harsova 77.44 323 ⇓P **P 20 32 36.1 +0.6**
HARR Harsova 77.44 323 ⇓*i*P **P 20 32 36.1 +0.6**

IBBN Ibbenburen 77.55 339 *eP* **P 20 32 36.0 0.0**
comp=Z,21nm,0.7s,mb5.2
MLR Muntele Rosu 77.59 325 LR LR 21 13 34.0
comp=Z,69nm,18.5s,MS4.0,baz=193,slow=41
MLR Muntele Rosu 77.59 325 ⇑P **P 20 32 37.4 +1.0**
MLR Muntele Rosu 77.59 325 ⇑*i*P **P 20 32 37.4 +1.0**
MALT Malatya 77.60 313 *eP* **P 20 32 37.9 +1.4**
comp=Z,18nm,1.3s,mb4.8
MALT Malatya 77.60 313 ⇓*i*P **P 20 32 38.5 +2.0**
VYHS Vyhne 77.69 331 *eP* **P 20 32 37.4 +0.6**
VYHS *e* pP 20 32 50.6 -0.3
VYHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
VYHS Vyhne 77.69 331 *eP* **P 20 32 37.4 +0.6**
comp=Z,4.7nm,1.1s,mb4.3
VYHS *e* pP 20 32 50.6 -0.3
VYHS Vyhne 77.69 331 *eP* **P 20 32 37.4 +0.6**
VYHS *e*pP pP 20 32 50.6 -0.3
528A Cox Ranch, San 77.71 59 ⇑P **P 20 32 37.3 0.0**
baz=77
VRAC Vranov 77.72 333 ⇓*i*P **P 20 32 37.9 +0.9**
PRU Pruhonice 77.76 334 *eP* **P 20 32 38.0 +0.8**
PRU *e**PP pP 20 32 51.2 -0.1
PRU MLR MLR
comp=Z,100nm,17.5s,MS4.2
PRU Pruhonice 77.76 334 *eP* **P 20 32 38.0 +0.8**
PRU *e*pP pP 20 32 51.2 -0.1
PRU AMS AMS 21 15 10.0
comp=Z,100nm,17.5s
TXAR Lajitas Array 77.78 60 P **P 20 32 37.8 +0.1**
comp=Z,12nm,0.7s,mb4.9,baz=300,slow=4.3,SNR=113
TXAR pP pP 20 32 50.3 -1.5
comp=Z,7.6nm,0.7s,baz=301,slow=4.1,SNR=15
TXAR Lajitas Array 77.78 60 P **P 20 32 37.8 +0.1**
TXAR *PP pP 20 32 50.3 -1.4
TXAR pmax pmax
comp=Z,12nm,0.7s
PSZ Piszkesteto 77.82 330 *eP* **P 20 32 36.5 -1.1**
PSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PSZ Piszkesteto 77.82 330 *eP* **P 20 32 36.5 -1.1**
comp=Z,5.0nm,0.8s,mb4.5
627A Terlingua Ranc 77.86 60 ⇑P **P 20 32 37.8 -0.3**
baz=78
VOIR 77.99 325 P **P 20 32 39.6 +1.0**
TANN Tannenbergstha 78.00 336 *eP* **P 20 32 38.6 +0.1**
comp=Z,3.0nm,1.0s,mb4.2
TANN *e*pP pP 20 32 48.6 -4.0
TANN *e*sP sP 20 32 53.1 -4.9
MOX Moxa 78.03 336 *eP* **P 20 32 38.8 +0.1**
comp=Z,17nm,1.2s,mb4.8
TREC Trest 78.08 333 *eP* **P 20 32 39.1 +0.1**
TREC *e*pP pP 20 32 52.3 -0.8
WTSB Winterswijk 78.10 339 *eP* **P 20 32 39.5 +0.5**
comp=Z,30nm,1.3s,mb5.0
628A Black Gap, Mar 78.14 60 ⇑P **P 20 32 39.5 -0.2**
baz=78
SMOL Smolenice 78.14 332 *eP* **P 20 32 40.7 +1.4**
SMOL Smolenice 78.14 332 *eP* **P 20 32 40.7 +1.4**
NKC Novy Kostel 78.17 335 *eP* **P 20 32 39.7 +0.2**
NKC MLR MLR
comp=Z,100nm,19.5s,MS4.2
NKC Novy Kostel 78.17 335 *eP* **P 20 32 39.7 +0.2**
NKC AMS AMS 21 12 10.0
comp=Z,100nm,19.5s
UBBA Unterbreizbach 78.32 337 *eP* **P 20 32 40.2 -0.1**
comp=Z,4.0nm,0.9s,mb4.3
STKA Stephens Creek 78.34 190 P **P 20 32 40.9 +0.5**
comp=Z,2.3nm,0.9s,mb4.1,baz=21,slow=4.6,SNR=3.9
STKA LR LR 21 07 01.7
comp=Z,148nm,18.7s,MS4.3,baz=26,slow=35
STKA Stephens Creek 78.34 190 P **P 20 32 40.9 +0.5**
STKA LR LR 21 07 01.6
BUG Bochum--Univer 78.47 339 *eP* **P 20 32 41.0 -0.1**
comp=Z,11nm,0.6s,mb5.0
ZST Bratislava 78.53 332 *eP* **P 20 32 42.5 +1.0**
ZST *e* pP 20 32 56.2 +0.7
ZST pmax pmax
comp=Z,11nm,1.0s,mb4.7
ZST Bratislava 78.53 332 *eP* **P 20 32 42.5 +1.0**
comp=Z,11nm,1.0s,mb4.7
ZST *e* pP 20 32 56.2 +0.7
ZST Bratislava 78.53 332 *eP* **P 20 32 42.5 +1.0**
ZST *e*pP pP 20 32 56.2 +0.7
ROTZ Rotzenmuhle 78.65 335 *eP* **P 20 32 42.7 +0.6**
comp=Z,10.0nm,1.1s,mb4.7
ROTZ *e*sP sP 20 32 55.9 -5.8
KHC Kasperske Hory 78.81 334 *eP* **P 20 32 43.5 +0.5**
KHC *e**PP pP 20 32 56.8 -0.3
KHC MLR MLR
comp=Z,100nm,12.3s,MS4.4
KHC Kasperske Hory 78.81 334 *eP* **P 20 32 43.1 +0.1**
comp=Z,15nm,0.9s,mb4.9
KHC *e* pP 20 32 56.6 -0.5
KHC Kasperske Hory 78.81 334 *eP* **P 20 32 43.5 +0.5**
KHC *e*pP pP 20 32 56.8 -0.3
KHC AMS AMS 21 11 30.0
comp=Z,100nm,12.3s
BR131 Keskin Array S 78.86 317 *eP* **P 20 32 44.0 +0.5**
comp=Z,7.2nm,1.1s,mb4.5
BRTR Keskin Array B 78.86 317 P **P 20 32 44.3 +0.8**
comp=Z,4.4nm,1.1s,mb4.3,baz=40,slow=2.1,SNR=15
BRTR Keskin Array B 78.86 317 P **P 20 32 44.3 +0.8**
BRTR pmax pmax
comp=Z,4.0nm,1.1s
GZR Gura Zlata 78.91 327 ⇑P **P 20 32 44.1 +0.5**
GZR Gura Zlata 78.91 327 P **P 20 32 44.3 +0.6**
GZR Gura Zlata 78.91 327 ⇑*i*P **P 20 32 44.0 +0.4**
UMR Umm Al-Rimmam 78.97 301 *eP* **P 20 32 44.9 +0.6**
UMR AMb AMb 20 32 48.6
comp=Z,36nm,0.9s,mb5.3
GRA1 Grafenberg Arr 79.00 336 *eP* **P 20 32 44.6 +0.5**
comp=Z,24nm,0.8s,mb5.2
GRA1 *e*pP pP 20 32 54.4 -3.7
GRA1 *e*sP sP 20 32 59.0 -4.6
GRF Grafenberg Arr 79.00 336 *eP* **P 20 32 44.6 +0.5**
comp=Z,24nm,0.8s,mb5.2
GRF *e*pP pP 20 32 54.4 -3.7
GRF *e*sP sP 20 32 59.0 -4.6
GRF Grafenberg Arr 79.00 336 *eP* **P 20 32 44.6 +0.5**
GRF *e**PP pP 20 32 54.4 -3.7
GRF *e**SP sP 20 32 59.0 -4.6
GRF pmax pmax
comp=Z,24nm,0.8s,mb5.2
GRF Grafenberg Arr 79.00 336 *eP* **P 20 32 44.6 +0.5**
GRF *e**PP pP 20 32 54.4 -3.7
GRF *e**SP sP 20 32 59.0 -4.6
GRF pmax pmax
comp=Z,24nm,0.8s,mb5.2
WET Wettzell 79.01 335 *eP* **P 20 32 44.7 +0.6**
comp=Z,12nm,0.9s,mb4.8
WET Wettzell 79.01 335 *eP* **P 20 32 44.7 +0.6**
WET pmax pmax
comp=Z,12nm,0.9s,mb4.8
MIB Mutribah 79.01 302 *eP* **P 20 32 45.5 +1.0**
MIB AMb AMb 20 32 47.2
comp=Z,52nm,0.8s,mb5.5
GEC2 GERESS Array S 79.03 334 *eP* **P 20 32 44.3 +0.1**
comp=Z,6.0nm,0.8s,mb4.6
GEC2 *e*pP pP 20 32 53.9 -4.4
GEC2 *e*sP sP 20 32 59.8 -4.0
GEC2 GERESS Array S 79.03 334 *eP* **P 20 32 44.3 +0.1**
GEC2 *e**PP pP 20 32 53.9 -4.4
GEC2 *e**SP sP 20 32 59.8 -4.0
GEC2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
GERES GERESS Array B 79.03 334 P **P 20 32 43.9 -0.4**
comp=Z,4.2nm,0.8s,mb4.4,baz=46,slow=5.8,SNR=28
GERES GERESS Array B 79.03 334 P **P 20 32 43.9 -0.3**
GERES pmax pmax
comp=Z,4.0nm,0.8s
BZS Buzias 79.16 328 ⇑P **P 20 32 44.9 -0.1**
BZS Buzias 79.16 328 ⇑*i*P **P 20 32 44.9 -0.1**
CONA Conrad Observa 79.16 332 ⇑*i*P **P 20 32 45.7 +0.7**
comp=Z,12nm,0.8s,mb4.9,SNR=13
JCT Junction City 79.25 57 *eP* **P 20 32 44.4 -1.4**
JCT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
JCT Junction City 79.25 57 *eP* **P 20 32 44.4 -1.4**
comp=Z,8.0nm,0.9s,mb4.7
TNS Taunus Mts 79.28 338 *eP* **P 20 32 45.9 +0.3**
comp=Z,18nm,0.8s,mb5.0
TNS Taunus Mts 79.28 338 *eP* **P 20 32 45.9 +0.3**
TNS pmax pmax
comp=Z,18nm,0.8s,mb5.0

HGN Heimansgroeve 79.42 340 *eP* **P 20 32 47.6 +1.3**
comp=Z,25nm,1.5s,mb4.9
QRN Al-Qurain 79.44 300 *eP* **P 20 32 47.8 +1.0**
BEBN Eben Emael 79.45 340 P **P 20 32 44.3 -2.2**
RDF Al-Radifah 79.53 301 *eP* **P 20 32 48.7 +1.4**
RDF AMb AMB 20 32 50.3
comp=Z,53nm,0.9s,mb5.5
MEM Membach 79.54 339 P **P 20 32 45.2 -1.8**
comp=Z,21nm,1.3s,mb4.9
MIAR Mount Ida 79.71 50 *eP* **P 20 32 47.2 -1.0**
MIAR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MIAR Mount Ida 79.71 50 *eP* **P 20 32 47.2 -1.0**
comp=Z,4.2nm,0.8s,mb4.4
PKSM Moragy 79.72 330 P **P 20 32 47.8 -0.2**
PKSM Moragy 79.72 330 ⇑*i*P **P 20 32 48.1 0.0**
MOA Molln 79.74 333 ⇑*i*P **P 20 32 48.5 +0.4**
comp=Z,7.6nm,0.9s,mb4.6
TOD Tromm 79.75 337 *eP* **P 20 32 48.1 0.0**
UCC Uccle 79.76 340 P **P 20 32 46.9 -1.3**
BCLA Clavier 79.89 340 P **P 20 32 47.6 -1.3**
comp=Z,10nm,1.4s,mb4.6
SNF Seneffe 80.05 340 P **P 20 32 47.9 -1.9**
RUP Ruppelstein 80.12 338 *eP* **P 20 32 50.7 +0.6**
RJOB Jochberg 80.29 334 *eP* **P 20 32 51.3 +0.2**
comp=Z,7.0nm,0.9s,mb4.6
GIVF Givet 80.30 340 *eP* **P 20 32 50.6 -0.5**
DOU Dourbes 80.36 340 P **P 20 32 51.6 +0.1**
comp=Z,6.7nm,1.6s,mb4.3
FUR Furstenfeldbru 80.36 335 *eP* **P 20 32 52.0 +0.5**
comp=Z,17nm,1.1s,mb4.9
FUR Furstenfeldbru 80.36 335 *eP* **P 20 32 52.0 +0.5**
FUR pmax pmax
comp=Z,17nm,1.1s,mb4.9
STU Stuttgart 80.40 337 *eP* **P 20 32 51.9 +0.2**
comp=Z,17nm,1.1s,mb4.9
BAIF Baives 80.49 340 *eP* **P 20 32 51.9 -0.2**
SOKA Soboth 80.53 332 ⇓*i*P **P 20 32 53.1 +0.7**
comp=Z,18nm,0.9s,mb5.0
PERS Pernice 80.54 332 *eP* **P 20 32 52.5 0.0**
GROS Grobnik 80.57 332 *eP* **P 20 32 52.3 -0.3**
KBA Koelnbreinsper 80.71 333 ⇑*i*P **P 20 32 54.3 +0.9**
comp=Z,34nm,0.8s,mb5.3,SNR=24
BFO Black Forest 81.04 337 P **P 20 32 55.0 -0.1**
comp=Z,77nm,1.0s,mb5.6,SNR=6.4
BFO Black Forest 81.04 337 *eP* **P 20 32 55.3 +0.2**
comp=Z,13nm,1.0s,mb4.8
BFO Black Forest 81.04 337 *eP* **P 20 32 55.3 +0.2**
BFO pmax pmax
comp=Z,13nm,1.0s,mb4.8
WTTA Wattenberg 81.07 335 *i* P **P 20 32 56.5 +1.2**
comp=Z,26nm,0.5s,mb5.4,SNR=14
LEGS Legarje 81.08 332 *eP* **P 20 32 55.0 -0.3**
RETA Reutte 81.12 335 ⇓*i*P **P 20 32 56.2 +0.7**
comp=Z,9.9nm,0.8s,mb4.8,SNR=6.6
SPAK Spaichingen-Ko 81.12 337 *eP* **P 20 32 57.2 +1.7**
CRES Cresnjev 81.14 332 *eP* **P 20 32 55.7 0.0**
MOTA Moosalm 81.15 335 ⇓*i*P **P 20 32 56.5 +0.8**
comp=Z,34nm,1.2s,mb5.2,SNR=13
CDF Champ du Feu 81.25 338 *eP* **P 20 32 56.2 0.0**
comp=Z,45nm,1.1s,mb5.0
CDF Champ du Feu 81.25 338 *eP* **P 20 32 56.2 0.0**
CDF pmax pmax
comp=Z,23nm,1.1s,mb5.0
CDF Champ du Feu 81.25 338 *eP* **P 20 32 56.2 0.0**
comp=Z,23nm,1.1s,mb5.0
WVT Waverly 81.45 46 *eP* **P 20 32 56.1 -1.4**
WVT pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
WVT Waverly 81.45 46 *eP* **P 20 32 56.1 -1.4**
comp=Z,6.7nm,0.8s,mb4.6
ECH Echery 81.46 338 *eP* **P 20 32 57.3 0.0**
ECH Echery 81.46 338 *eP* **P 20 32 56.7 -0.6**
ECH *e* pP 20 33 10.3 -1.1
ECH pmax pmax
comp=Z,14nm,0.8s,mb4.9
ECH Echery 81.46 338 *eP* **P 20 32 56.7 -0.6**
comp=Z,14nm,0.8s,mb4.9
ECH *e* pP 20 33 10.3 -1.1
FELD Feldberg im Sc 81.55 337 *eP* **P 20 32 58.0 +0.2**
FETA Feichten 81.56 335 ⇓*i*P **P 20 32 58.9 +1.1**
comp=Z,11nm,1.2s,mb4.7
CEY Cerknica 81.56 332 *eP* **P 20 32 57.1 -0.8**
DAVA Damuels 81.56 336 ⇑*i*P **P 20 32 58.1 +0.3**
comp=Z,10nm,0.8s,mb4.8
MEZF Maizieres J'vi 81.73 339 *eP* **P 20 32 58.9 +0.2**
comp=Z,20nm,0.6s,mb4.9
MEZF Maizieres J'vi 81.73 339 *eP* **P 20 32 58.9 +0.2**
comp=Z,20nm,0.6s,mb5.2
THEF They Montfort 81.75 339 *eP* **P 20 32 58.8 -0.1**
PPT Papeete 81.77 126 LR LR 21 05 02.2
comp=Z,122nm,18.6s,MS4.3,baz=334,slow=32
MOF Molkenrain 81.80 338 *eP* **P 20 32 59.1 0.0**
HAU Haudompre 81.86 338 *eP* **P 20 32 59.2 -0.3**
comp=Z,21nm,0.9s,mb4.8
HAU *e*MLR MLR
comp=Z,92nm,22.2s,MS3.8
HAU Haudompre 81.86 338 *eP* **P 20 32 59.2 -0.3**
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,90nm,22.3s,MS4.1
HAU Haudompre 81.86 338 *eP* **P 20 32 59.2 -0.3**
comp=Z,10nm,0.9s,mb4.8
HAU LR LR
comp=Z,90nm,22.3s,MS4.1
HINF Hinteralfeld 81.91 338 *eP* **P 20 32 59.3 -0.4**
comp=Z,14nm,0.9s,mb4.6
HINF Hinteralfeld 81.91 338 *eP* **P 20 32 59.3 -0.4**
HINF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
HINF Hinteralfeld 81.91 338 *eP* **P 20 32 59.3 -0.4**
comp=Z,6.9nm,0.9s,mb4.6
BBS Basel-Blauen 82.06 337 *eP* **P 20 33 00.5 0.0**
VAY Valandovo 82.43 325 *eP* **P 20 33 02.5 0.0**
FLN La Foliniere 82.74 343 *eP* **P 20 33 03.7 -0.3**
FLN *e*MLR MLR
comp=Z,66nm,22.2s,MS3.7
FLN La Foliniere 82.74 343 *eP* **P 20 33 03.7 -0.3**
FLN LR LR
comp=Z,70nm,22.3s,MS4.0
LDF La Druitiere 82.83 342 *eP* **P 20 33 04.4 -0.1**
KRUS Krusevo 82.91 326 *i* P **P 20 33 04.2 -0.8**
LOR Lormes 83.17 339 *eP* **P 20 33 06.2 -0.1**
comp=Z,18nm,0.6s,mb5.0
LOR *e*MLR MLR
comp=Z,80nm,22.5s,MS3.7
LOR Lormes 83.17 339 *eP* **P 20 33 06.2 -0.1**
LOR pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
LOR MLR MLR
comp=Z,80nm,22.5s,MS4.0
LOR Lormes 83.17 339 *eP* **P 20 33 06.2 -0.1**
comp=Z,8.9nm,0.6s,mb5.0
LOR LR LR
comp=Z,80nm,22.5s,MS4.0
GRR Gorron 83.17 343 *eP* **P 20 33 06.2 -0.1**
comp=Z,19nm,0.8s,mb4.9
GRR Gorron 83.17 343 *eP* **P 20 33 06.2 -0.1**
GRR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
GRR Gorron 83.17 343 *eP* **P 20 33 06.2 -0.1**
comp=Z,9.7nm,0.8s,mb4.9
CABF La Chapelle 83.22 338 *eP* **P 20 33 06.6 +0.1**
comp=Z,8.9nm,0.8s,mb4.6
CABF La Chapelle 83.22 338 *eP* **P 20 33 06.6 +0.1**
CABF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CABF La Chapelle 83.22 338 *eP* **P 20 33 06.6 +0.1**
comp=Z,4.4nm,0.8s,mb4.5
MMAI Mount Meron Ar 83.25 312 P **P 20 33 08.1 +1.2**
comp=Z,3.4nm,0.5s,mb4.6,baz=34,slow=6.1,SNR=12
MMAI pP pP 20 33 22.4 +1.3
comp=Z,3.4nm,0.6s,baz=42,slow=5.1,SNR=5.6
SSF Saint Saulge 83.45 340 *eP* **P 20 33 07.8 +0.1**
comp=Z,8.0nm,0.6s,mb4.6
SSF Saint Saulge 83.45 340 *eP* **P 20 33 07.8 +0.1**
SSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
SSF Saint Saulge 83.45 340 *eP* **P 20 33 07.8 +0.1**
comp=Z,4.0nm,0.6s,mb4.6
HYF Humbligny 83.47 340 *eP* **P 20 33 08.3 +0.5**
SGMF Saint Gilles 83.64 344 *eP* **P 20 33 08.6 -0.1**
comp=Z,8.5nm,0.5s,mb4.8
SGMF Saint Gilles 83.64 344 *eP* **P 20 33 08.6 -0.1**
SGMF pmax pmax

comp=Z,4.0nm,0.5s,mb4.8
SGMF Saint Gilles 83.64 344 *e*P **P 20 33 08.6 -0.1**
comp=Z,4.3nm,0.5s,mb4.8
ROSF Rostrenen 83.70 344 *e*P **P 20 33 08.8 -0.2**
comp=Z,12nm,0.7s,mb4.8
ROSF Rostrenen 83.70 344 *e*P **P 20 33 08.8 -0.2**
ROSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
ROSF Rostrenen 83.70 344 *e*P **P 20 33 08.8 -0.2**
comp=Z,5.8nm,0.6s,mb4.9
AVF Avril sur Loir 83.74 340 *e*P **P 20 33 09.3 +0.1**
comp=Z,23nm,0.8s,mb5.0
AVF Avril sur Loir 83.74 340 *e*P **P 20 33 09.3 +0.1**
AVF pmax pmax
comp=Z,12nm,0.8s,mb5.1
AVF Avril sur Loir 83.74 340 *e*P **P 20 33 09.3 +0.1**
comp=Z,12nm,0.8s,mb5.1
SMF Signal de Mont 83.76 339 *e*P **P 20 33 09.4 +0.1**
comp=Z,76nm,1.2s,mb5.4
SMF Signal de Mont 83.76 339 *e*P **P 20 33 09.4 +0.1**
SMF pmax pmax
comp=Z,38nm,1.2s,mb5.4
SMF Signal de Mont 83.76 339 *e*P **P 20 33 09.4 +0.1**
comp=Z,38nm,1.2s,mb5.4
LPL La Plagne 84.06 337 *e*P **P 20 33 11.7 +0.8**
comp=Z,12nm,0.7s,mb4.9
LPL La Plagne 84.06 337 *e*P **P 20 33 11.7 +0.8**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
LPL La Plagne 84.06 337 *e*P **P 20 33 11.7 +0.8**
comp=Z,6.2nm,0.7s,mb4.8
LPG La Plagne 84.07 337 *e*P **P 20 33 12.0 +1.1**
comp=Z,40nm,1.1s,mb5.2
LPG La Plagne 84.07 337 *e*P **P 20 33 12.0 +1.1**
LPG pmax pmax
comp=Z,20nm,1.1s,mb5.2
LPG La Plagne 84.07 337 *e*P **P 20 33 12.0 +1.1**
comp=Z,20nm,1.1s,mb5.2
QUIF Quistinic 84.08 344 *e*P **P 20 33 11.8 +0.9**
BGF Bois d'Agland 84.08 340 *e*P **P 20 33 11.2 +0.2**
comp=Z,7.7nm,0.6s,mb4.7
BGF Bois d'Agland 84.08 340 *e*P **P 20 33 11.2 +0.2**
BGF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BGF Bois d'Agland 84.08 340 *e*P **P 20 33 11.2 +0.2**
comp=Z,3.8nm,0.6s,mb4.7
PLDF La Plantade 84.45 339 *e*P **P 20 33 14.1 +1.3**
TCF Toulx Ste Croi 84.49 340 *e*P **P 20 33 13.5 +0.5**
comp=Z,22nm,0.9s,mb5.0
TCF Toulx Ste Croi 84.49 340 *e*P **P 20 33 13.5 +0.5**
TCF pmax pmax
comp=Z,11nm,0.9s,mb5.0
TCF Toulx Ste Croi 84.49 340 *e*P **P 20 33 13.5 +0.5**
comp=Z,11nm,0.9s,mb5.0
AGO Saint Agoulin 84.49 340 *e*P **P 20 33 14.6 +1.6**
MFF Saint Martin d 84.72 342 *e*P **P 20 33 15.0 +0.8**
comp=Z,16nm,0.7s,mb5.0
MFF Saint Martin d 84.72 342 *e*P **P 20 33 15.0 +0.8**
MFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
MFF Saint Martin d 84.72 342 *e*P **P 20 33 15.0 +0.8**
comp=Z,7.8nm,0.7s,mb5.0
MBDF Montbardon 84.78 337 *e*P **P 20 33 15.2 +0.7**
comp=Z,11nm,0.7s,mb4.8
MBDF Montbardon 84.78 337 *e*P **P 20 33 15.2 +0.7**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
MBDF Montbardon 84.78 337 *e*P **P 20 33 15.2 +0.7**
comp=Z,5.5nm,0.7s,mb4.8
ORIF Oris-en-Rattie 84.84 337 *e*P **P 20 33 15.6 +0.8**
comp=Z,13nm,0.7s,mb4.9
ORIF *e*MLR MLR
comp=Z,87nm,20.2s,MS3.8
ORIF Oris-en-Rattie 84.84 337 *e*P **P 20 33 15.6 +0.8**
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ORIF Oris-en-Rattie 84.84 337 *e*P **P 20 33 15.6 +0.8**
comp=Z,6.5nm,0.7s,mb4.9
SSB Saint Sauveur 84.86 338 *e*P **P 20 33 14.7 -0.2**
SSB pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
SSB Saint Sauveur 84.86 338 *e*P **P 20 33 14.7 -0.2**
comp=Z,6.3nm,0.8s,mb4.8
VIVF Saint-Julien-l 85.22 338 *e*P **P 20 33 17.4 +0.7**
comp=Z,15nm,0.8s,mb4.9
VIVF Saint-Julien-l 85.22 338 *e*P **P 20 33 17.4 +0.7**
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
VIVF Saint-Julien-l 85.22 338 *e*P **P 20 33 17.4 +0.7**
comp=Z,7.7nm,0.8s,mb4.9
SBF Sospel 85.39 336 *e*P **P 20 33 18.1 +0.5**
comp=Z,42nm,0.8s,mb5.3
SBF Sospel 85.39 336 *e*P **P 20 33 18.1 +0.5**
SBF pmax pmax
comp=Z,21nm,0.8s,mb5.3
SBF Sospel 85.39 336 *e*P **P 20 33 18.1 +0.5**
comp=Z,21nm,0.8s,mb5.3
RJF Les Rejaudoux 85.58 340 *e*P **P 20 33 19.4 +0.9**
comp=Z,28nm,1.1s,mb5.1
RJF *e*MLR MLR
comp=Z,77nm,19.5s,MS3.8
RJF Les Rejaudoux 85.58 340 *e*P **P 20 33 19.4 +0.9**
RJF pmax pmax
comp=Z,14nm,1.1s,mb5.1
RJF MLR MLR
comp=Z,80nm,19.5s,MS4.1
RJF Les Rejaudoux 85.58 340 *e*P **P 20 33 19.4 +0.9**
comp=Z,14nm,1.1s,mb5.1
RJF LR LR
comp=Z,80nm,19.5s,MS4.1
CAF Calviac 85.81 340 *e*P **P 20 33 20.9 +1.3**
comp=Z,19nm,0.9s,mb5.0
CAF Calviac 85.81 340 *e*P **P 20 33 20.9 +1.3**
CAF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
CAF Calviac 85.81 340 *e*P **P 20 33 20.9 +1.3**
comp=Z,9.6nm,0.9s,mb5.0
FRF La Foret Royal 85.89 336 *e*P **P 20 33 19.7 -0.4**
comp=Z,18nm,0.9s,mb5.0
FRF La Foret Royal 85.89 336 *e*P **P 20 33 19.7 -0.4**
FRF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
FRF La Foret Royal 85.89 336 *e*P **P 20 33 19.7 -0.4**
comp=Z,8.9nm,0.9s,mb5.0
LFF La Frestale 86.10 341 *e*P **P 20 33 22.3 +1.2**
comp=Z,9.3nm,0.5s,mb4.9
LFF La Frestale 86.10 341 *e*P **P 20 33 22.3 +1.2**
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb5.0
LFF La Frestale 86.10 341 *e*P **P 20 33 22.3 +1.2**
comp=Z,4.7nm,0.5s,mb5.0
LMR La Mourre 86.14 336 *e*P **P 20 33 21.6 +0.3**
comp=Z,25nm,1.1s,mb5.1
LMR La Mourre 86.14 336 *e*P **P 20 33 21.6 +0.3**
LMR pmax pmax
comp=Z,12nm,1.1s,mb5.0
LMR La Mourre 86.14 336 *e*P **P 20 33 21.6 +0.3**
comp=Z,12nm,1.1s,mb5.0
LASF Ste Croix 86.16 338 *e*P **P 20 33 22.6 +1.2**
comp=Z,15nm,1.0s,mb4.9
MTLF Montolieu 87.26 339 *e*P **P 20 33 28.2 +1.4**
comp=Z,7.9nm,0.8s,mb4.7
MTLF Montolieu 87.26 339 *e*P **P 20 33 28.2 +1.4**
MTLF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
MTLF Montolieu 87.26 339 *e*P **P 20 33 28.2 +1.4**
comp=Z,4.0nm,0.8s,mb4.7
EPF Esparros 88.00 340 *e*P **P 20 33 31.3 +1.0**
comp=Z,3.8nm,0.7s,mb4.5
EPF Esparros 88.00 340 *e*P **P 20 33 31.3 +1.0**
EPF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
EPF Esparros 88.00 340 *e*P **P 20 33 31.3 +1.0**
comp=Z,1.9nm,0.7s,mb4.4
ESDC Sonseca Array 92.16 343 P **P 20 33 48.9 -0.9**
comp=Z,0.1nm,0.3s,mb3.7,baz=358,slow=4.3,SNR=4.3
ESDC LR LR 21 17 27.3
comp=Z,44nm,18.8s,MS3.9,baz=295,slow=37
KEST Kesra 92.23 331 P **P 20 33 52.3 +2.1**
comp=Z,2.1nm,0.8s,mb4.5,baz=333,slow=2.9,SNR=5.9
TORD Torodi Ar. Bea 115.64 329 PKP PKPdf 20 39 22.3 -0.4
comp=Z,0.6nm,0.5s,baz=20,slow=1.6,SNR=5.8
DBIC Dimbokro 123.90 333 PKP PKPdf 20 39 38.5 -0.1
comp=Z,1.8nm,0.9s,baz=270,slow=17,SNR=3.9
DBIC Dimbokro 123.90 333 PKIKP PKPdf 20 39 38.5 -0.2
DBIC pmax pmax
comp=Z,2.0nm,0.9s

LPAZ La Paz 134.61 63 PKP PKPdf 20 40 00.8 +1.9
comp=Z,1.4nm,0.7s,baz=360,slow=6.3,SNR=6.2
LPAZ La Paz 134.61 63 PKIKP PKPdf 20 40 00.8 +2.0
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
PLCA Paso Flores 148.12 96 PKPbc PKPbc 20 40 25.6 +0.2
comp=Z,15nm,0.9s,baz=281,slow=3.4,SNR=22
PLCA pPKPbc pPKPbc 20 40 38.8 -1.4
comp=Z,12nm,0.9s,baz=291,slow=3.3,SNR=9.7
CPUP Villa Florida 148.75 61 PKPbc PKPbc 20 40 27.4 -0.1
comp=Z,10nm,0.8s,baz=316,slow=3.0,SNR=24
CPUP pPKPbc pPKPbc 20 40 40.4 -1.9
comp=Z,8.9nm,0.9s,baz=324,slow=4.0,SNR=7.3
VNA2 Neumayer--Watz 153.40 194 *e*PKPdf PKPbc 20 40 36.3 -0.7
VNA2 *e* 20 40 48.9

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*IDC **13** 20:25:41.2±0.9, 31°.78N×104°.36E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.7/28, mbtmp3.8/9, ML2.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/36, Error ellipse: s-maj=34.5km s-min=17.5km az=54.0*
*ISCJB **13** 20:25:42.4±1.5, 31°.77N±0°.05×104°.38E±0°.07, h23km±12km, mb4.0/9, Error ellipse: s-maj=11.7km s-min=7.0km az=143.7*
*NEIC **13** 20:25:42.9±0.4, 31°.80N×104°.31E, h10km, mb4.4/2, Error ellipse: s-maj=12.9km s-min=7.5km az=45.0*
*BJI **13** 20:25:44.1, 31°.67N×104°.51E, h20km, ML3.7/10, Ms3.7/3, Ms7 3.4/3*
ISC 13 20:25:42.4±1.5, 31°.83N±0°.04×104°.44E±0°.05, h7km±9km, n23, σ0°.98/31, mb4.0/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.28**	**354**	Pg	**Pg**	**20 27 06.1**	**+1.7**
LZH				Sn	**Sb**	**20 27 48.6**	**-1.1**
LZH				Sg	**Sg**	**20 27 58.8**	**-1.0**
LZH				smax			
	comp=N,76nm,0.8s						
LZH				smax			
	comp=E,140nm,1.0s						
LZH				LR	LR		
	comp=N,910nm,4.2s						
LZH				LR	LR		
	comp=Z,2μm,5.3s						
LZH	**Lanzhou**	**4.28**	**354**	*e*Pn	**Pb**	**20 26 59.6**	**+1.7**
LZH				Pg	**Pg**	**20 27 06.1**	**+1.7**
LZH				Sn	**Sb**	**20 27 48.6**	**-1.1**
LZH				Sg	**Sg**	**20 27 58.8**	**-1.0**
LZH				smax			
	comp=N,76nm,0.8s						
LZH				smax			
	comp=E,140nm,1.0s						
LZH				LR	LR		
	comp=N,910nm,4.2s						
LZH				LR	LR		
	comp=Z,2μm,5.3s						
XAN	**Xi'an**	**4.37**	**58**	Pn	**Pn**	**20 26 50.8**	**+1.7**
XAN				Pg	**Pg**	**20 27 04.3**	**-1.8**
XAN				Sn	**Sb**	**20 27 52.3**	**0.0**
XAN				Sg	**Sg**	**20 28 02.1**	**-0.6**
XAN				smax			
	comp=N,170nm,0.5s						
XAN				smax			
	comp=E,99nm,0.5s						
ENH	**Enshi**	**4.60**	**108**	*e*Pn	**Pn**	**20 26 55.3**	**+2.9**
GYA	**Guiyang**	**5.69**	**159**	Pn	**Pn**	**20 27 07.8**	**+0.4**
GYA				Sn	**Sn**	**20 28 11.6**	**-1.3**
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,100nm,0.8s						
LSA	**Lhasa**	**11.63**	**263**	*e*Pn	**Pn**	**20 28 28.6**	**-0.2**
SONM	**Songino Array**	**16.06**	**5**	Pn	**Pn**	**20 29 29.0**	**+0.4**
	comp=E,0.0nm,0.3s,baz=181,slow=11,SNR=2.3						
KSRS	**Korea Array**	**20.10**	**67**	P	**P**	**20 30 17.1**	**+0.5**
	comp=E,4.5nm,0.7s,baz=255,slow=10,SNR=12						
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**20 30 42.0**	**-1.7**
DDI	**Dehra Dun**	**22.63**	**273**	*e*x	x	20 30 40.5	
ZAA0	**Zalesovo Array**	**26.20**	**333**	*e*P	**P**	**20 31 17.2**	**-0.2**
ZALV	**Zalesovo Beam**	**26.20**	**333**	P	**P**	**20 31 17.3**	**-0.2**
	comp=E,1.3nm,0.6s,mb3.6,baz=120,slow=8.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.20**	**333**	P	**P**	**20 31 17.3**	**-0.2**
KURK	**Kurchatov**	**26.85**	**322**	P	**P**	**20 31 23.7**	**+0.4**
	comp=E,0.7nm,0.6s,mb3.4,baz=126,slow=9.3,SNR=3.4						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**20 33 18.6**	**+0.8**
	comp=E,5.5nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**20 35 26.0**	**-0.2**
	comp=E,0.7nm,0.7s,mb3.8,baz=72,slow=9.3,SNR=4.2						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**20 35 29.1**	**-0.2**
	comp=E,1.1nm,0.4s,mb4.2,baz=81,slow=5.8,SNR=9.8						
WRAB	**Tennant Creek**	**58.91**	**147**	*e*P	**P**	**20 35 42.0**	**-0.2**
	comp=E,3.3nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**58.92**	**147**	P	**P**	**20 35 42.1**	**-0.1**
	comp=E,2.0nm,0.6s,mb4.3,baz=339,slow=7.6,SNR=36						
WRA	**Warramunga Arr**	**58.92**	**147**	P	**P**	**20 35 42.1**	**-0.1**
WB2	**Warramunga Arr**	**58.92**	**147**	*e*P	**P**	**20 35 41.7**	**-0.6**
ASAR	**Alice Springs**	**61.96**	**149**	P	**P**	**20 36 03.1**	**+0.1**
	comp=E,0.8nm,0.5s,mb4.1,baz=334,slow=6.7,SNR=15						
YKA	**Yellowknife Ar**	**80.92**	**17**	P	**P**	**20 37 57.4**	**+0.4**
	comp=E,0.3nm,0.5s,mb3.5,baz=332,slow=4.8,SNR=4.1						

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*IDC **13** 20:31:18.8±1.0, 35°.10N×81°.23E, h0km, mb4.0/14, mb1 4.1/19, mb1mx4.0/29, mbtmp4.0/19, ML3.5/5, MS3.4/4, Ms1 3.4/4, ms1mx2.9/34, Error ellipse: s-maj=22.3km s-min=19.3km az=103.0*
*ISCJB **13** 20:31:19.1±0.3, 35°.26N±0°.04×81°.23E±0°.07, h10km, mb4.1/19, MS3.4/2, Error ellipse: s-maj=8.8km s-min=4.3km az=152.6*
*NEIC **13** 20:31:21.3±0.5, 35°.24N×81°.14E, h10km, mb4.4/6, Error ellipse: s-maj=10.2km s-min=9.0km az=53.0*
*BJI **13** 20:31:21.1, 35°.27N×81°.50E, h15km, mB4.8/1, mb4.4/4, ML4.2/5, Ms3.9/2, Ms7 3.7/1*
ISC 13 20:31:21.4±0.3, 35°.27N±0°.04×81°.19E±0°.07, h10km, n57, σ0°.94/56, mb4.1/19, MS3.4/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.93**	**317**	Pn	**Pn**	**20 32 53.6**	**+4.3**
KSH				Sn	**Sb**	**20 34 10.0**	**-5.9**
KSH				smax			
	comp=N,110nm,1.0s						
KSH				smax			
	comp=E,160nm,1.1s						
NDI	**New Delhi**	**7.38**	**208**	*e*P	**Pn**	**20 33 09.0**	**-0.3**
KKN	**Kakani**	**8.24**	**154**	*e*P	**Pn**	**20 33 21.2**	**+0.2**
	comp=E,23nm,0.6s						
DMN	**Daman**	**8.34**	**155**	*e*P	**Pn**	**20 33 22.3**	**-0.1**
	comp=E,12nm,0.5s						
GUN	**Gumba**	**8.36**	**150**	*e*P	**Pn**	**20 33 23.4**	**+0.7**
	comp=E,21nm,0.4s						
PKIN	**Phulchoki**	**8.47**	**154**	*e*P	**Pn**	**20 33 24.4**	**+0.2**
	comp=E,31nm,0.6s						
PKIN	**Phulchoki**	**8.47**	**154**	*e*P	**Pn**	**20 33 24.7**	**+0.5**
	comp=E,53nm,0.6s						
PKI	**Pulchoki**	**8.48**	**154**	*e*P	**Pn**	**20 33 24.9**	**+0.5**
	comp=E,28nm,0.6s						
JIRN	**Jiri**	**8.71**	**149**	*e*P	**Pn**	**20 33 28.2**	**+0.8**
	comp=E,57nm,0.6s						
TKM2	**Tokmak 2**	**8.78**	**332**	*e*P	**Pn**	**20 33 29.4**	**+1.0**
	comp=E,7.9nm,0.4s						
AAK	**Ala-Archa**	**9.01**	**327**	Pn	**Pn**	**20 33 35.5**	**+4.0**
	comp=E,0.0nm,0.3s,baz=130,slow=7.2,SNR=8.3						
AAK				Pg	Pn	20 34 07.0	+36
	comp=E,0.0nm,0.3s,baz=138,slow=12,SNR=8.5						
AAK				Lg		20 36 02.1	
	comp=E,0.0nm,0.3s,baz=277,slow=19,SNR=2.9						
AAK				LR	LR	20 37 16.1	
	comp=E,192nm,18.9s,baz=173,slow=39						
AAK	**Ala-Archa**	**9.01**	**327**	*e*Pn	**Pn**	**20 33 32.4**	**+0.9**
AAK				Pg	Pn	20 34 07.0	+36
AAK				Lg		20 36 02.1	
AAK				LR	LR	20 37 16.1	
RAMN	**Ramite**	**9.50**	**149**	*e*P	**Pn**	**20 33 37.4**	**-1.0**
	comp=E,75nm,0.8s						
TAPN	**Taplejung**	**9.67**	**143**	*e*P	**Pn**	**20 33 40.5**	**-0.1**
	comp=E,15nm,0.6s						
WMQ	**Urumqi**	**9.90**	**28**	*e*P	**Pn**	**20 33 43.0**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
ODAN	**Odare**	**9.93**	**146**	*e*P	**Pn**	**20 33 43.1**	**-1.1**
	comp=Z,31nm,0.7s						
KBL	**Kabul**	**10.00**	**269**	*e*P	**Pn**	**20 33 45.2**	**+0.1**
	comp=Z,5.6nm,0.6s						
LSA	**Lhasa**	**10.08**	**121**	*e*P	**Pn**	**20 33 48.8**	**+2.5**
	comp=Z,14nm,1.3s						
MK31	**Makanchi Array**	**11.54**	**4**	*e*P	**Pn**	**20 34 06.2**	**+0.1**
MKAR	**Makanchi Array**	**11.54**	**4**	Pn	**Pn**	**20 34 06.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=185,slow=13,SNR=17						
KURK	**Kurchatov**	**15.55**	**354**	Pn	**Pn**	**20 34 57.8**	**-2.7**
	comp=Z,0.0nm,0.3s,baz=175,slow=12,SNR=24						
KURK				LR	LR	20 41 36.2	
	comp=Z,130nm,19.3s,baz=165,slow=40						
KURK	**Kurchatov**	**15.55**	**354**	*e*P	**Pn**	**20 34 58.7**	**-1.8**
KURK				LR	LR	20 41 36.2	
ZALV	**Zalesovo Beam**	**18.85**	**7**	P	**Pn**	**20 35 40.6**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=193,slow=11,SNR=21						
BVAR	**Borovoye Array**	**19.32**	**340**	P	**Pn**	**20 35 47.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=146,slow=11,SNR=24						
BRVK	**Borovoye**	**19.38**	**340**	*e*P	**Pn**	**20 35 48.6**	**+0.2**
	comp=Z,14nm,0.9s						
ABKAR	**Akbulak array**	**20.94**	**318**	*e*P	**P**	**20 36 04.8**	**+0.6**
SONM	**Songino Array**	**22.54**	**48**	P	**P**	**20 36 22.4**	**+1.1**
	comp=Z,1.2nm,0.7s,mb3.4,baz=227,slow=11,SNR=3.3						
AKTK	**Aktyubinsk**	**22.63**	**319**	P	**P**	**20 36 23.5**	**+1.2**
AKTO	**Aktyubinsk**	**22.63**	**319**	P	**P**	**20 36 23.5**	**+1.2**
	comp=Z,2.2nm,0.7s,mb3.7,baz=114,slow=12,SNR=4.5						
ARU	**Arti**	**26.16**	**331**	*e*P	**P**	**20 36 53.4**	**-2.2**
	comp=Z,7.2nm,1.0s,mb4.2						
PALK	**Pallekele**	**27.87**	**181**	LR	LR	20 48 46.1	
	comp=Z,79nm,18.8s,MS3.3,baz=186,slow=38						
BRTR	**Keskin Array B**	**37.64**	**291**	P	**P**	**20 38 36.4**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.4,baz=92,slow=8.7,SNR=4.0						
MMAI	**Mount Meron Ar**	**37.70**	**280**	P	**P**	**20 38 37.6**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.8,baz=226,slow=42,SNR=4.7						
EIL	**Elat**	**39.13**	**275**	LR	LR	20 58 07.7	
	comp=Z,64nm,18.6s,MS3.5,baz=81,slow=41						
AKASG	**Malin Array Be**	**40.16**	**309**	P	**P**	**20 38 56.5**	**-1.0**
	comp=Z,0.9nm,0.7s,mb3.6,baz=78,slow=8.1,SNR=5.3						
FINES	**FINESS Array B**	**43.19**	**325**	P	**P**	**20 39 22.5**	**+0.4**
	comp=Z,2.9nm,0.6s,mb4.2,baz=123,slow=7.0,SNR=4.6						
ARCES	**ARCESS Array B**	**45.54**	**336**	P	**P**	**20 39 42.2**	**+1.3**
	comp=Z,4.6nm,0.7s,mb4.5,baz=94,slow=7.3,SNR=9.9						
ARCES	**ARCESS Array B**	**45.54**	**336**	P	**P**	**20 39 42.2**	**+1.3**
VYHS	**Vyhne**	**47.01**	**306**	*e*P	**P**	**20 39 53.7**	**+1.0**
VYHS				*e*		20 40 22.9	
VYHS	**Vyhne**	**47.01**	**306**	*e*	**P**	**20 39 53.7**	**+1.0**
VYHS				*e*		20 40 22.9	
NOA	**NORSAR Array B**	**50.31**	**324**	P	**P**	**20 40 17.7**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=88,slow=7.4,SNR=3.3						
GERES	**GERESS Array B**	**50.31**	**308**	P	**P**	**20 40 18.3**	**+0.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=74,slow=7.1,SNR=8.8						
CDF	**Champ du Feu**	**54.56**	**308**	*e*P	**P**	**20 40 49.4**	**-0.2**
HINF	**Hinteralfeld**	**55.00**	**308**	*e*P	**P**	**20 40 52.3**	**-0.5**
	comp=Z,5.2nm,0.7s,mb4.3						
HINF	**Hinteralfeld**	**55.00**	**308**	*e*P	**P**	**20 40 52.3**	**-0.5**
	comp=Z,2.6nm,0.7s,mb4.4						
LPG	**La Plagne**	**55.73**	**305**	*e*P	**P**	**20 40 58.4**	**+0.3**
	comp=Z,9.8nm,0.8s,mb4.6						
LPG	**La Plagne**	**55.73**	**305**	*e*P	**P**	**20 40 58.4**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.6						
LPL	**La Plagne**	**55.74**	**305**	*e*P	**P**	**20 40 58.4**	**+0.2**
	comp=Z,9.5nm,0.7s,mb4.6						
LPL	**La Plagne**	**55.74**	**305**	*e*P	**P**	**20 40 58.4**	**+0.2**
	comp=Z,4.8nm,0.7s,mb4.6						
SSF	**Saint Saulge**	**57.39**	**308**	*e*P	**P**	**20 41 11.2**	**+1.3**
	comp=Z,11nm,1.0s,mb4.5						
SSF	**Saint Saulge**	**57.39**	**308**	*e*P	**P**	**20 41 11.2**	**+1.3**
	comp=Z,5.6nm,1.0s,mb4.5						
TORD	**Torodi Ar. Bea**	**74.02**	**275**	P	**P**	**20 42 56.8**	**-0.9**
	comp=Z,2.6nm,0.6s,mb4.3,baz=45,slow=5.1,SNR=16						
ASAR	**Alice Springs**	**77.00**	**132**	P	**P**	**20 43 13.7**	**-0.8**
	comp=Z,0.7nm,0.8s,mb3.7,baz=326,slow=6.5,SNR=2.5						
YKA	**Yellowknife Ar**	**81.75**	**7**	P	**P**	**20 43 38.9**	**-0.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=340,slow=5.1,SNR=15						
YKA	**Yellowknife Ar**	**81.75**	**7**	P	**P**	**20 43 38.9**	**-0.9**
BOSA	**Boshof**	**82.58**	**227**	P	**P**	**20 43 43.0**	**-1.7**
	comp=Z,4.7nm,0.8s,mb4.6,baz=356,slow=4.3,SNR=7.8						
DBIC	**Dimbokro**	**82.97**	**273**	P	**P**	**20 43 45.7**	**-1.4**
	comp=Z,3.8nm,0.7s,mb4.5,baz=70,slow=3.3,SNR=4.6						

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*IDC **13** 20:32:07.1±0.6, 31°.56N×104°.31E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/28, mbtmp4.0/18, MS3.7/1, Ms1 3.7/1, ms1mx2.9/34, Error ellipse: s-maj=26.6km s-min=13.7km az=55.0*
*NEIC **13** 20:32:08.8±0.3, 31°.58N×104°.30E, h10km, mb4.5/4, Error ellipse: s-maj=12.3km s-min=6.4km az=48.0*
*BJI **13** 20:32:09.2, 31°.54N×104°.35E, h20km, mB4.9/5, mb4.4/9, ML4.1/17, Ms4.1/10, Ms7 3.8/7*
ISC 13 20:32:08.6±0.8, 31°.60N±0°.03×104°.30E±0°.05, h8km±5km, n40, σ0°.92/51, mb4.1/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**214**	Pg	**Pg**	**20 32 25.8**	**+1.4**
CD2				Sg	**Sg**	**20 32 35.1**	**0.0**
CD2				smax			
	comp=N,5μm,0.6s						
LZH	**Lanzhou**	**4.49**	**355**	*e*Pn	**Pn**	**20 33 20.0**	**+3.0**
LZH				Pg	**Pg**	**20 33 33.9**	**-0.8**
LZH				Sn	**Sn**	**20 34 16.3**	**+6.8**
LZH				Sg	**Sg**	**20 34 31.4**	**-1.5**
LZH				smax			
	comp=N,580nm,1.0s						
LZH				smax			
	comp=E,330nm,0.5s						
LZH				LR	LR		
	comp=N,1μm,5.3s						
LZH				LR	LR		
	comp=Z,2μm,6.1s						
XAN	**Xi'an**	**4.59**	**57**	Pn	**Pn**	**20 33 18.4**	**0.0**
XAN				Pg	**Pg**	**20 33 32.5**	**-4.1**
XAN				Sn	**Sn**	**20 34 16.3**	**+4.4**
XAN				Sg	**Sg**	**20 34 32.0**	**-4.1**
XAN				smax			
	comp=N,460nm,0.8s						
XAN				smax			
	comp=E,210nm,1.0s						
ENH	**Enshi**	**4.65**	**105**	*e*P	**Pn**	**20 33 20.4**	**+1.3**
ENH				*e*S	**Sg**	**20 34 37.9**	**-0.1**
GYA	**Guiyang**	**5.52**	**157**	Pn	**Pn**	**20 33 34.5**	**+3.3**
GYA				smax			
	comp=N,510nm,1.0s						
GYA				smax			
	comp=E,370nm,0.9s						
GYA				LR	LR		
	comp=N,2μm,3.9s						
GYA				LR	LR		
	comp=E,3μm,2.8s						
KMI	**Kunming**	**6.59**	**192**	Pn	**Pn**	**20 33 44.4**	**-1.5**
KMI				Sn	**Sn**	**20 35 00.0**	**-1.3**
KMI				Sg	**Sg**	**20 35 34.4**	**-5.9**
KMI				LR	LR		
	comp=N,580nm,5.7s						
KMI				LR	LR		
	comp=E,560nm,10.8s						
GTA	**Gaotai**	**8.61**	**336**	*e*P	**Pn**	**20 34 18.3**	**+4.8**
GTA				pP		20 34 23.1	
GTA				sP		20 34 26.1	
GTA				S	**Sn**	**20 35 56.6**	**+5.8**
GTA				sS		20 36 05.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,49nm,5.6s						
GTA				LR	LR		
	comp=N,390nm,13.4s						
GTA				LR	LR		
	comp=E,500nm,13.1s						
GTA				LR	LR		
	comp=Z,230nm,9.2s						
SONM	**Songino Array**

KURK	Kurchatov	26.95 323	P	P	20 37 50.3	-0.1
BVAR	Borovoye Array	32.51 321	P	P	20 38 40.3	+0.7
	comp=Z,0.4nm,0.5s,mb3.6,baz=116,slow=6.6,SNR=3.2					
BVAR			PcP	PcP	20 41 25.7	-0.6
	comp=Z,0.6nm,0.6s,baz=48,slow=2.1,SNR=3.7					
BVAR			LR	LR	20 53 14.5	
	comp=Z,122nm,18.1s,baz=65,slow=39					
ABKAR	Akbulak array	37.47 311	*e*P	P	20 39 22.9	+0.4
ARU	Arti	40.15 322	*e*P	P	20 39 44.7	-0.1
	comp=Z,5.4nm,0.9s,mb4.3					
TIXI	Tiksi	42.24 11	*e*P	P	20 40 00.3	-1.5
BRTR	Keskin Array B	56.64 299	P	P	20 41 53.1	+0.8
	comp=Z,0.7nm,0.8s,mb3.7,baz=93,slow=6.2,SNR=3.9					
ARCES	ARCESS Array B	56.88 336	P	P	20 41 53.1	-0.4
	comp=Z,2.5nm,0.8s,mb4.3,baz=92,slow=7.3,SNR=4.6					
AKASG	Malin Array Be	57.17 313	P	P	20 41 55.0	-0.8
	comp=Z,0.9nm,0.4s,mb4.1,baz=67,slow=7.5,SNR=5.3					
FINES	FINESS Array B	57.25 326	P	P	20 41 55.0	-1.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=66,slow=9.4,SNR=4.4					
FINES	FINESS Array B	57.25 326	P	P	20 41 55.0	-1.3
WRAB	Tennant Creek	58.79 147	*e*P	P	20 42 07.0	-0.5
	comp=Z,6.0nm,0.6s,mb4.8					
WRA	Warramunga Arr	58.79 147	P	P	20 42 07.0	-0.5
	comp=Z,4.2nm,0.5s,mb4.8,baz=339,slow=7.9,SNR=101					
ASAR	Alice Springs	61.83 149	P	P	20 42 27.9	-0.3
	comp=Z,1.8nm,0.5s,mb4.4,baz=336,slow=6.7,SNR=26					
NOA	NORSAR Array B	64.33 327	P	P	20 42 45.1	+0.7
	comp=Z,0.4nm,0.5s,mb3.7,baz=78,slow=4.6,SNR=3.7					
GERES	GERESS Array B	67.32 314	P	P	20 43 04.0	0.0
	comp=Z,0.4nm,0.5s,mb3.7,baz=84,slow=6.8,SNR=3.8					
KMBO	Kilima Mbogo	71.18 257	P	P	20 43 28.3	-0.1
	comp=Z,1.4nm,1.0s,mb3.9,baz=66,slow=19,SNR=3.0					
CDF	Champ du Feu	71.38 316	*e*P	P	20 43 28.6	-0.5
STKA	Stephens Creek	72.33 147	P	P	20 43 34.1	-0.8
	comp=Z,2.0nm,0.8s,mb4.1,baz=352,slow=14,SNR=5.1					
LPG	La Plagne	73.03 313	*e*P	P	20 43 39.5	+0.5
	comp=Z,7.3nm,0.8s,mb4.4					
LPG	La Plagne	73.03 313	*e*P	P	20 43 39.5	+0.5
	comp=Z,3.7nm,0.8s,mb4.4					
LPL	La Plagne	73.04 313	*e*P	P	20 43 39.3	+0.3
	comp=Z,7.3nm,0.8s,mb4.3					
LPL	La Plagne	73.04 313	*e*P	P	20 43 39.3	+0.3
	comp=Z,3.7nm,0.8s,mb4.4					
SMF	Signal de Mont	74.26 315	*e*P	P	20 43 45.7	-0.5
CAF	Calviac	76.20 314	*e*P	P	20 43 56.6	-0.8
YKA	Yellowknife Ar	81.17 17	P	P	20 44 24.2	-0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=328,slow=5.2,SNR=8.2					
TORD	Torodi Ar. Bea	93.64 288	P	P	20 45 27.4	+1.3
	comp=Z,0.8nm,1.2s,mb4.0,baz=41,slow=4.6,SNR=2.5					

*IDC **13** 20:36:42.1±1.9, 42°.82N×77°.55E, h0km, mb1 3.6/5, mb1mx3.3/30, mbtmp3.6/5, ML3.3/5, Error ellipse: s-maj=27.6km s-min=9.4km az=150.0*
*ISCJB **13** 20:36:45.5±1.0, 43°.12N±0°.05×77°.50E±0°.06, h10km±6km, Error ellipse: s-maj=10.4km s-min=5.6km az=147.1*
*KNET **13** 20:36:46.8±0.8, 42°.96N×77°.22E, h5km±3km, ml3.1, Error ellipse: s-maj=4.4km s-min=4.3km az=93.0*
*NNC **13** 20:36:46.0±1.3, 42°.92N×77°.34E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=8.2km s-min=6.2km az=81.0*
*NEIC **13** 20:36:48.4±1.4, 43°.24N×77°.31E, h10km, Error ellipse: s-maj=29.4km s-min=8.5km az=141.0*
*BJI **13** 20:36:54.8, 42°.98N×77°.99E, h10km, ML2.8/4*
ISC 13 20:36:47.4±1.0, 43°.15N±0°.06×77°.43E±0°.06, h9km±6km, n27, σ1§16/39, 18C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	0.35	282	⇑P	Pg	20 36 54.1	0.0
	49nm,0.3s						
KNDC				⇑S	Sg	20 36 59.7	+0.9
	1μm,0.3s						
ULHL	Ulahol	1.26	225	⇑P	Pn	20 37 06.7	-4.4
	54nm,0.1s,SNR=411						
ULHL				⇑S	Sb	20 37 21.2	-6.2
	352nm,0.1s						
TKM2	Tokmak 2	1.36	261	⇓P	Pn	20 37 10.2	-2.3
	5.0nm,0.2s						
TKM2				⇑S	Sb	20 37 27.4	-3.1
	127nm,0.4s						
TKM2	Tokmak 2	1.36	261	⇓P	Pn	20 37 10.1	-2.4
	20nm,0.1s,SNR=208						
TKM2				⇓S	Sb	20 37 27.8	-2.7
	328nm,0.1s						
TKM2	Tokmak 2	1.36	261	P	Pn	20 37 10.2	-2.3
TKM2				S	Sb	20 37 27.4	-3.1
KBK	Karagaybulak	1.89	256	⇑P	Pn	20 37 19.1	-0.6
	45nm,0.1s,SNR=10						
KBK				⇓S	Sn	20 37 44.4	+0.8
	322nm,0.2s						
KZA	Kyzart	1.93	237	⇑P	Pn	20 37 19.0	-1.3
	27nm,0.2s,SNR=100						
KZA				⇓S	Sn	20 37 43.7	-0.9
	63nm,0.2s						
CHMS	Chumysh	1.97	267	⇑P	Pn	20 37 20.5	-0.3
	21nm,0.1s,SNR=42						
CHMS				⇑S	Sn	20 37 45.7	+0.1
	132nm,0.2s						
USP	Ospenovka	2.15	274	⇑P	Pn	20 37 23.0	-0.2
	35nm,0.2s,SNR=9.9						
AAK	Ala-Archa	2.22	258	⇓P	Pn	20 37 24.7	+0.5
	23nm,0.2s,SNR=34						
AAK	Ala-Archa	2.22	258	Pn	Pn	20 37 24.9	+0.7
	0.2nm,0.3s,baz=95,slow=8.6,SNR=44						
AAK				Lg		20 37 53.5	
	0.4nm,0.3s,baz=261,slow=21,SNR=16						
UCH	Uchtor	2.34	248	⇑P	Pn	20 37 26.5	+0.6
	29nm,0.3s,SNR=58						
UCH	Uchtor	2.34	248	*e*Pn	Pn	20 37 26.4	+0.5
AML	Almayashu	2.94	251	*e*P	Pn	20 37 35.8	+1.7
AML				*e*S	Sn	20 38 15.2	+5.8
KSH	Kashi	3.79	197	*e*Pn	Pg	20 38 00.3	+0.4
KSH				Sn	Sg	20 38 55.3	+6.3
KSH				smax			
	comp=N,25nm,0.6s						
KSH				smax			
	comp=E,33nm,0.6s						
MK31	Makanchi Array	5.02	42	⇑Pn	Pn	20 38 05.3	+2.6
	comp=E,0.7nm,0.3s,baz=221,slow=16,SNR=7.4						
MK31				⇑Lg		20 39 27.4	
	comp=E,1.7nm,0.3s,baz=220,slow=28,SNR=5.3						
MK31	Makanchi Array	5.02	42	*e*Pn	Pn	20 38 04.9	+2.2
MK31				*e*Sg	Sg	20 39 26.6	-1.9
MKAR	Makanchi Array	5.02	42	Pn	Pn	20 38 02.6	-0.1
	comp=E,0.4nm,0.3s,baz=217,slow=15,SNR=11						
MKAR				Sn	Sn	20 39 04.6	+3.8
	comp=E,0.8nm,0.3s,baz=215,slow=22,SNR=3.3						
MKAR				Lg		20 39 28.8	
	comp=E,1.8nm,0.3s,baz=221,slow=29,SNR=6.4						
MKAR	Makanchi Array	5.02	42	Pn	Pn	20 38 02.6	-0.1
MKAR				Sn	Sn	20 39 04.6	+3.8
MKAR				Lg		20 39 28.8	
KK31	Karatay Array	5.06	272	⇑Pn	Pn	20 38 05.2	+1.8
	comp=E,1.0nm,0.6s,baz=107,slow=8.7,SNR=9.9						
KK31				⇓Pg	Pg	20 38 19.1	-5.2
	comp=E,0.6nm,0.3s,baz=83,slow=17,SNR=14						
KK31				⇑Lg		20 39 21.5	
	comp=E,4.0nm,0.4s,baz=84,slow=27,SNR=12						
KURBB	Kurchatov Arra	7.52	5	⇓Pn	Pn	20 38 36.7	-0.2
	comp=E,0.4nm,0.5s						
KURBB				⇑Lg		20 40 51.8	
	comp=E,1.6nm,0.6s						
KURK	Kurchatov	7.62	6	⇓Pn	Pn	20 38 39.9	+1.6
	comp=E,3.6nm,0.8s						
KURK				⇓Lg		20 40 54.7	
	comp=E,14nm,0.7s						
KURK	Kurchatov	7.62	6	Pn	Pn	20 38 38.0	-0.4
	comp=E,0.2nm,0.3s,baz=191,slow=13,SNR=6.5						
KURK				Lg		20 40 47.3	
	comp=E,0.3nm,0.3s,baz=189,slow=30,SNR=8.1						
VOSK	Vostochnaya	10.51	338	⇑Lg		20 42 24.5	
	comp=E,6.1nm,0.9s						
BVA0	Borovoye Array	10.94	337	⇑Lg		20 42 32.7	
	comp=E,1.5nm,1.1s						
BVAR	Borovoye Array	10.94	337	Pn	Pn	20 39 23.0	-0.9
	comp=E,0.4nm,0.3s,baz=149,slow=13,SNR=6.0						
BVAR				Lg		20 42 39.0	
	comp=E,0.5nm,0.3s,baz=156,slow=25,SNR=4.5						
ZALV	Zalesovo Beam	11.86	22	Pn	Pn	20 39 36.6	+0.2
	comp=E,0.5nm,0.3s,baz=211,slow=14,SNR=5.0						

IDC 13 20:42:35.9±1.1, 31°.22N×104°.20E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/25, mbtmp3.4/5, Error ellipse: s-maj=196.8km s-min=19.6km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.49	231	Pg	Pg	20 42 43.9	-1.4
CD2				Sg	Sg	20 42 49.8	-1.9
CD2				smax			
	comp=N,9μm,0.8s						
MKAR	Makanchi Array	22.94	319	P	P	20 47 41.2	-0.3
	comp=N,0.7nm,0.9s,baz=123,slow=9.5,SNR=3.5						
ZALV	Zalesovo Beam	26.65	334	P	P	20 48 15.7	-0.4
	comp=N,0.2nm,0.3s,baz=142,slow=11,SNR=3.7						
KURK	Kurchatov	27.20	323	P	P	20 48 21.9	+0.8
	comp=N,0.6nm,1.0s,baz=131,slow=8.0,SNR=3.9						
WRA	Warramunga Arr	58.53	146	P	P	20 52 34.2	0.0
	comp=N,0.3nm,0.4s,baz=336,slow=7.6,SNR=6.1						
ASAR	Alice Springs	61.55	149	P	P	20 52 54.9	0.0
	comp=N,0.3nm,0.8s,baz=347,slow=8.1,SNR=2.6						

*IDC **13** 20:44:41.1±1.0, 26°.66N×91°.93E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.4/27, mbtmp3.7/7, Error ellipse: s-maj=58.9km s-min=19.9km az=58.0*
*ISCJB **13** 20:44:46.1±0.7, 27°.18N±0°.06×93°.0E±0°.1, h33km, mb3.6/11, Error ellipse: s-maj=15.0km s-min=9.1km az=1.8*
*NEIC **13** 20:44:54.3±1.3, 27°.00N×92°.54E, h106km±14km, mb3.5/5, Error ellipse: s-maj=34.2km s-min=9.8km az=55.0*
ISC 13 20:44:48.3±0.8, 27°.1N±0°.2×92°.9E±0°.2, h35km, n18, σ1§15/19, mb3.6/11, 1D, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	1.77	211	⇓*i*PG	Pn	20 45 09.0	-7.5
SHL	Shillong	1.77	211	*e*SG	Sn	20 45 40.0	+2.2
LSA	Lhasa	3.02	330	*e*Pn	Pn	20 45 40.2	+6.6
LSA				*e*Sn	Sn	20 46 16.0	+7.6
CHTO	Chiang Mai	9.95	145	*e*Pn	Pn	20 47 15.0	+6.1
TKM2	Tokmak 2	21.15	323	*e*P	P	20 49 31.7	+1.5
	1.5nm,0.7s,mb3.4						
UCH	Uchtor	21.30	320	*e*P	P	20 49 32.7	+0.8
	1.9nm,0.8s,mb3.5						
MK31	Makanchi Array	21.37	340	*e*P	P	20 49 31.4	-1.2
MKAR	Makanchi Array	21.37	340	P	P	20 49 32.9	+0.3
	3.0nm,0.8s,mb3.7,baz=141,slow=12,SNR=20						
KBL	Kabul	21.75	296	*e*P	P	20 49 35.6	-1.2
	3.8nm,0.6s,mb4.0						
EKS2	Erkin-Say	21.99	320	P	P	20 49 41.1	+1.8
	1.7nm,0.8s,mb3.5						
KURK	Kurchatov	25.98	339	P	P	20 50 16.2	-1.4
	1.1nm,0.6s,mb3.6,baz=160,slow=9.8,SNR=9.7						
KURK	Kurchatov	25.98	339	*e*P	P	20 50 16.6	-0.9
	1.9nm,0.8s,mb3.7						
ZALV	Zalesovo Beam	27.48	350	P	P	20 50 30.1	-0.9
	0.5nm,0.4s,mb3.4,baz=154,slow=7.7,SNR=4.1						
WRA	Warramunga Arr	61.64	135	P	P	20 55 03.1	+0.4
	0.6nm,0.7s,mb3.8,baz=328,slow=7.4,SNR=6.4						
WRAB	Tennant Creek	61.64	135	*e*P	P	20 55 03.0	+0.2
GERES	GERESS Array B	63.22	313	P	P	20 55 09.0	-4.1
	0.2nm,0.4s,mb3.6,baz=81,slow=6.2,SNR=3.3						
ASAR	Alice Springs	64.15	138	P	P	20 55 19.5	+0.1
	0.3nm,0.8s,mb3.4,baz=321,slow=6.9,SNR=4.3						
TORD	Torodi Ar. Bea	85.17	282	P	P	20 57 16.1	-5.5
	0.5nm,0.8s,mb3.7,baz=50,slow=4.7,SNR=4.8						

*ISK **13** 20:46:22.5, 37°.00N×29°.12E, h6km, MD2.7*
*CSEM **13** 20:46:23.9±0.2, 36°.96N×29°.17E, h2km, MD2.7, Error ellipse: s-maj=4.3km s-min=3.9km az=10.0*
*ISCJB **13** 20:46:24.1±0.4, 36°.95N±0°.03×29°.19E±0°.03, h10km, Error ellipse: s-maj=4.1km s-min=3.7km az=157.3*
*DDA **13** 20:46:24.1, 36°.99N×29°.21E, h7km±4km, Md3.0*
ISC 13 20:46:24.1±0.5, 36°.96N±0°.03×29°.16E±0°.03, h7km±7km, n27, σ0§95/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.33	190	*e*PG	Pg	20 46 29.8	-0.8
FETY				*e*SG	Sg	20 46 35.4	+0.4
FETY	Fethiye	0.33	190	*e*Pg	Pg	20 46 29.8	-0.8
FETY				*e*Sg	Sg	20 46 35.4	+0.4
GLHS	Glhisar (BURDU	0.33	55	*e*PG	Pg	20 46 29.6	-1.1
GLHS				*e*SG	Sg	20 46 34.7	-0.4
GLHS	Glhisar (BURDU	0.33	55	*e*Pg	Pg	20 46 29.6	-1.1
GLHS				*e*Sg	Sg	20 46 34.7	-0.4
GOLH	Golhisar	0.42	50	*i* P	Pg	20 46 31.1	-1.2
GOLH				*i* S	Sg	20 46 37.8	-0.2
GOLH	Golhisar	0.42	50	*i* P	Pg	20 46 31.1	-1.3
GOLH				*i* S	Sg	20 46 37.8	-0.1
TURN	Turunc	0.45	259	*i* P	Pg	20 46 38.7	+5.8
TURN				*i* S	Sg	20 46 50.1	+11
ELL	Elmali	0.64	109	*e*PG	Pg	20 46 36.7	+0.2
ELL				*e*SG	Sg	20 46 46.1	+1.3
ELL	Elmali	0.64	109	*e*Pg	Pg	20 46 36.7	+0.2
ELL				*e*Sg	Sg	20 46 46.1	+1.3
YER	Yerkesik	0.72	284	*e*PG	Pg	20 46 36.2	-1.7
YER	Yerkesik	0.72	284	*e*Pg	Pg	20 46 36.3	-1.7
DNZL	Cakiroluk	0.73	353	*e*P	Pg	20 46 38.5	+0.4
DNZL				*i* S	Sg	20 46 47.8	+0.1
DNZL	Cakiroluk	0.73	353	*e*P	Pg	20 46 38.5	+0.3
DNZL				*i* S	Sg	20 46 47.8	+0.1
AKAS	Kas	0.81	153	*i* P	Pg	20 46 39.8	0.0
AKAS				*i* S	Sg	20 46 54.9	+4.6
AKAS	Kas	0.81	153	*i* P	Pg	20 46 39.8	0.0
MLSB	Milas	1.15	287	*e*PN	Pn	20 46 44.1	-2.6
AYDN	Tasoluk	1.23	305	*i* P	Pg	20 46 48.2	+0.4
AYDN				*i* S	Sg	20 47 04.0	+0.2
AYDN	Tasoluk	1.23	305	*i* P	Pg	20 46 48.2	+0.4
AYDN				*i* S	Sg	20 47 04.1	+0.3
DAT	Datca	1.29	260	*e*PN	Pn	20 46 47.0	-1.5
BDRM	Kayabasi	1.37	275	*i* P	Pn	20 46 50.7	+1.0
BDRM				*i* S	Sg	20 47 09.7	+1.4
BDRM	Kayabasi	1.37	275	*i* P	Pn	20 46 50.7	+1.0
BDRM				*i* S	Sg	20 47 09.7	+1.4
KHAL	Karahalli	1.43	11	*i* P	Pn	20 46 51.5	+1.0
KHAL				*i* S	Sg	20 47 10.7	+0.6
KHAL	Karahalli	1.43	11	*i* P	Pn	20 46 51.5	+1.0
KHAL				*i* S	Sg	20 47 10.7	+0.6
SUTC	Sutluce-Ispart	1.56	70	*e*PN	Pn	20 46 52.4	+0.1
SUTC	Sutluce-Ispart	1.56	70	*e*Pn	Pn	20 46 52.4	+0.1
HDMB	Hadim	2.67	89	*e*PN	Pn	20 47 07.6	+0.1
HDMB	Hadim	2.67	89	*e*Pn	Pn	20 47 07.6	+0.1

*IDC **13** 20:48:59.0±0.9, 31°.66N×104°.45E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/28, mbtmp3.6/9, Error ellipse: s-maj=38.9km s-min=17.7km az=57.0*
*NEIC **13** 20:49:00.5±0.5, 31°.65N×104°.46E, h10km, mb4.2/1, Error ellipse: s-maj=28.3km s-min=9.5km az=63.0*
ISC 13 20:48:59.1±2.8, 31°.65N±0°.08×104°.4E±0°.2, h0km±17km, n13, σ0§57/14, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.46	354	*e*Pg	Pg	20 50 24.4	-0.1
LZH				Sg	Sb	20 51 12.3	-0.2
LZH				smax			
	comp=N,70nm,0.9s						
LZH				smax			
	comp=E,58nm,0.7s						
SONM	Songino Array	16.24	5	Pn	Pn	20 52 49.1	+0.7
	baz=170,slow=8.8,SNR=2.3						
KSRS	Korea Array	20.17	67	P	P	20 53 35.1	+0.1
	comp=E,1.5nm,0.8s,baz=273,slow=15,SNR=3.3						
MKAR	Makanchi Array	22.77	318	P	P	20 54 03.0	+0.1
	comp=E,0.5nm,0.7s,mb3.1,baz=113,slow=9.3,SNR=6.1						
ZALV	Zalesovo Beam	26.36	333	P	P	20 54 36.1	-0.6
	comp=E,0.3nm,0.3s,mb3.3,baz=159,slow=12,SNR=2.5						
KURK	Kurchatov	26.99	322	P	P	20 54 41.7	-0.6
	comp=E,0.2nm,0.6s,baz=150,slow=8.4,SNR=4.6						
KURK	Kurchatov	26.99	322	P	P	20 54 41.7	-0.6
FINES	FINESS Array B	57.28	326	P	P	20 58 49.6	+1.5
	comp=E,1.8nm,0.9s,mb4.1,baz=74,slow=10,SNR=2.4						
WRAB	Tennant Creek	58.76	147	*e*P	P	20 58 58.8	-0.1
	comp=E,1.2nm,0.6s,mb4.1						
WRA	Warramunga Arr	58.76	147	P	P	20 58 58.8	-0.1
	comp=E,1.5nm,0.7s,mb4.1,baz=339,slow=7.5,SNR=16						
WB2	Warramunga Arr	58.77	147	*e*P	P	20 58 58.8	-0.2
ASAR	Alice Springs	61.80	149	P	P	20 59 19.9	+0.2
	comp=E,0.5nm,0.7s,mb3.9,baz=333,slow=6.9,SNR=8.4						
YKA	Yellowknife Ar	81.09	17	P	P	21 01 14.9	-0.8
	comp=E,0.2nm,0.6s,mb3.3,baz=326,slow=5.7,SNR=3.4						

*ISCJB **13** 20:50:30.1±0.4, 31°.14N±0°.04×103°.86E±0°.06, h10km, mb3.9/13, Error ellipse: s-maj=7.6km s-min=5.0km az=14.6*
*IDC **13** 20:50:30.5±0.9, 31°.06N×103°.61E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.7/27, mbtmp3.8/11, ML3.3/1, Error ellipse: s-maj=33.8km s-min=16.3km az=50.0*
*NEIC **13** 20:50:32.5±0.5, 31°.15N×103°.72E, h10km, mb3.9/4, Error ellipse: s-maj=14.1km s-min=8.7km az=223.0*
*BJI **13** 20:50:32.2, 31°.15N×103°.68E, h7km, mB4.7/4, mb4.1/7, ML3.9/11, Ms4.0/7, Ms7 3.6/5*
ISC 13 20:50:32.7±0.4, 31°.15N±0°.03×103°.71E±0°.06, h10km, n31, σ1§07/35, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.24	169	Pg	Pg	20 50 38.9	+1.3
CD2				Sg	Sg	20 50 43.9	+3.0
CD2				smax			
	comp=N,88μm,0.8s						
LZH	Lanzhou	4.93	1	*e*Pg	Pg	20 52 01.1	-6.0
LZH				Sg	Sg	20 53 13.3	+2.3
LZH				smax			
	comp=N,160nm,1.0s						
LZH				smax			
	comp=E,140nm,0.6s						
LZH				LR	LR		
	comp=E,910nm,5.4s						
LZH				LR	LR		
	comp=Z,1μm,5.6s						
ENH	Enshi	5.05	98	*e*Pn	Pn	20 51 50.7	+2.2
	comp=Z,112nm,0.9s						
XAN	Xi'an	5.26	55	Pg	Pg	20 52 08.8	-4.7
XAN				Sg	Sg	20 53 21.4	-0.3
XAN				smax			
	comp=N,360nm,0.8s						
XAN				smax			
	comp=E,170nm,0.8s						
KMI	Kunming	6.06	188	Pn	Pn	20 52 01.3	-1.1
KMI				Sn	Sn	20 53 11.8	0.0
KMI				LR	LR		
	comp=N,380nm,4.8s						
KMI				LR	LR		
	comp=E,1μm,6.8s						
GTA	Gaotai	8.84	340	*e*P	Pn	20 52 46.5	+6.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
LSA	Lhasa	10.94	266	*e*P	Pn	20 53 10.9	+1.7
SONM	Songino Array	16.80	6	Pn	Pn	20 54 27.8	-0.1
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=3.5						
KSRS	Korea Array	20.94	66	P	P	20 55 16.6	+0.9
	comp=Z,3.3nm,0.6s,baz=265,slow=11,SNR=10						
CN2	Changchun	21.31	48	*e*P	P	20 55 14.5	-5.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	Makanchi Array	22.73	320	*e*P	P	20 55 36.0	+1.4
MKAR	Makanchi Array	22.73	320	P	P	20 55 35.3	+0.6
	comp=Z,3.2nm,0.9s,mb3.7,baz=131,slow=9.5,SNR=12						
UCH	Uchtor	25.77	304	P	P	20 56 04.6	+1.0
	comp=Z,2.7nm,0.9s,mb3.8						
AAK	Ala-Archa	25.90	304	P	P	20 56 04.7	0.0
	comp=Z,0.7nm,0.4s,mb3.5,baz=131,slow=9.3,SNR=1.9						
AAK	Ala-Archa	25.90	304	*e*P	P	20 56 08.8	+4.1
	comp=Z,2.8nm,0.6s,mb4.0						
ZAA0	Zalesovo Array	26.54	335	*e*P	P	20 56 09.9	-0.5
ZALV	Zalesovo Beam	26.54	335	P	P	20 56 10.0	-0.4
	comp=Z,1.3nm,0.7s,mb3.5,baz=148,slow=8.7,SNR=5.8						
KURK	Kurchatov	27.01	324	P	P	20 56 14.1	-0.6
	comp=Z,1.7nm,0.8s,mb3.6,baz=127,slow=9.5,SNR=12						
KURK	Kurchatov	27.01	324	*e*P	P	20 56 14.3	-0.4
	comp=Z,2.3nm,0.9s,mb3.7						
TIXI	Tiksi	42.78	11	*e*P	P	20 58 28.6	-1.4
	comp=Z,1.4nm,0.5s,mb4.0						
ARCES	ARCESS Array B	57.08	336	P	P	21 00 17.8	-0.9
	comp=Z,2.7nm,0.8s,mb4.3,baz=100,slow=9.2,SNR=3.4						
WRAB	Tennant Creek	58.69	146	*e*P	P	21 00 29.8	-0.8
WRA	Warramunga Arr	58.70	146	P	P	21 00 29.8	-0.8
	comp=Z,1.9nm,0.7s,mb4.2,baz=337,slow=7.6,SNR=22						
WB2	Warramunga Arr	58.70	146	*e*P	P	21 00 30.0	-0.7
ASAR	Alice Springs	61.70	148	P	P	21 00 50.4	-0.8
	comp=Z,0.6nm,0.7s,mb3.8,baz=329,slow=6.4,SNR=6.6						
GERES	GERESS Array B	67.28	314	P	P	21 01 26.2	-1.2
	comp=Z,0.4nm,0.7s,mb3.6,baz=68,slow=3.6,SNR=3.8						
CDF	Champ du Feu	71.35	316	*e*P	P	21 01 51.5	-1.1
LPG	La Plagne	72.97	313	*e*P	P	21 02 02.1	-0.3
	comp=Z,3.9nm,0.7s,mb4.1						
LPL	La Plagne	72.98	313	*e*P	P	21 02 02.1	-0.3
YKA	Yellowknife Ar	81.75	17	P	P	21 02 50.9	-0.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=329,slow=5.1,SNR=7.9						
YKA	Yellowknife Ar	81.75	17	P	P	21 02 50.9	-0.3

IDC 13 20:52:48.2±1.1, 32°.12N×105°.09E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, Error ellipse: s-maj=78.2km s-min=20.6km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.80	317	P	P	20 57 52.4	+0.1
	0.8nm,0.6s,baz=121,slow=9.5,SNR=3.4						
ZALV	Zalesovo Beam	26.20	332	P	P

comp=Z,128nm,0.2s
BOQSS 4.85 240 P Pn 20 56 25.5 +1.2
IPIR Pirpir 5.10 329 e Sg 20 57 51.2 -3.9
comp=Z,164nm,0.2s
BTHS 5.17 215 P Pn 20 56 29.2 +0.5
BTHS 5.17 215 P Pn 20 56 29.2 +0.5
QRN Al-Qurain 5.41 276 eP Pn 20 56 32.9 +0.9
QRN eS Sn 20 57 29.6 -4.8
UMR Umm Al-Rimmam 5.68 284 eP Pn 20 56 35.8 +0.1
UMR Umm Al-Rimmam 5.68 284 eP Pn 20 56 35.8 +0.1
RDF Al-Radifah 5.74 277 eP Pn 20 56 37.0 +0.5
RDF eS Sn 20 57 38.6 -3.9
RDF AML AML 20 57 40.0
comp=Z,7.3nm,0.5s
RDF Al-Radifah 5.74 277 eP Pn 20 56 37.0 +0.4
RDF eS Sn 20 57 38.6 -3.9
comp=Z,7.0nm,0.5s
MIB Mutribah 6.05 285 eP Pn 20 56 40.7 -0.1
MIB eS Sn 20 57 44.9 -5.2
MIB AML AML 20 57 45.7
comp=Z,9.0nm,0.7s
MIB Mutribah 6.05 285 eP Pn 20 56 40.7 -0.1
MIB eS Sn 20 57 44.9 -5.2
ASYS 8.63 267 P Pn 20 57 14.2 -2.0
LYLS 8.80 226 P Pn 20 57 18.5 -0.1
BRTR Keskin Array B 20.31 309 P P 20 59 49.9 +2.4
comp=Z,0.6nm,0.6s,baz=137,slow=12,SNR=5.0
BRTR Keskin Array B 20.31 309 P P 20 59 49.8 +2.4
AKTK Aktyubinsk 22.25 7 P P 21 00 08.2 0.0
AKTK Aktyubinsk 22.25 7 P P 21 00 08.2 0.0
AKTO Aktyubinsk 22.25 7 P P 21 00 08.2 0.0
comp=Z,0.8nm,0.6s,mb3.3,baz=184,slow=14,SNR=3.3
IDI Anoyia 25.66 293 P P 21 00 41.3 0.0
comp=Z,3.0nm,0.8s,mb3.9,baz=96,slow=18,SNR=2.9
IDI Anoyia 25.66 293 P P 21 00 41.3 0.0
MKAR Makanchi Array 28.75 43 P P 21 01 07.5 -1.4
comp=Z,0.3nm,0.5s,mb3.3,baz=235,slow=11,SNR=7.3
MKAR Makanchi Array 28.75 43 P P 21 01 07.5 -1.4
KURK Kurchatov 29.04 33 P P 21 01 10.0 -1.4
comp=Z,0.2nm,0.5s,mb3.1,baz=237,slow=8.6,SNR=2.7
KURK Kurchatov 29.04 33 P P 21 01 10.0 -1.4
ZALV Zalesovo Beam 34.03 33 P P 21 01 54.2 -1.0
comp=Z,0.8nm,0.5s,mb3.9,baz=245,slow=9.5,SNR=4.7
FINES FINESS Array B 37.97 339 P P 21 02 27.9 -1.0
comp=Z,2.2nm,0.9s,mb3.9,baz=152,slow=8.6,SNR=4.0
FINES FINESS Array B 37.97 339 P P 21 02 27.9 -1.0
ARCES ARCESS Array B 44.39 346 P P 21 03 21.3 -0.3
comp=Z,1.0nm,0.7s,mb3.6,baz=167,slow=8.3,SNR=3.9
ARCES ARCESS Array B 44.39 346 P P 21 03 21.3 -0.3
TORD Torodi Ar. Bea 50.86 264 P P 21 04 10.2 -2.5
comp=Z,0.9nm,0.6s,mb3.9,baz=63,slow=8.0,SNR=11
YKA Yellowknife Ar 89.01 355 P P 21 08 05.1 -1.0
comp=Z,0.2nm,0.6s,mb3.6,baz=6.1,slow=5.0,SNR=5.3
YKA Yellowknife Ar 89.01 355 P P 21 08 05.1 -1.0
YKA Yellowknife Ar 89.01 355 P P 21 08 05.1 -1.0

IDC 13 20:57:26.5±1.0, 31°.76N×104°.59E, h_0^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=71.7km s-min=18.3km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.77	318	P	P	21 02 30.7	+0.4
	0.5nm,0.5s,baz=123,slow=8.8,SNR=5.8						
ZALV	Zalesovo Beam	26.32	333	P	P	21 03 04.2	+0.4
	0.8nm,0.6s,baz=123,slow=11,SNR=4.5						
KURK	Kurchatov	26.98	322	P	P	21 03 09.8	0.0
	0.9nm,0.7s,baz=126,slow=9.5,SNR=8.5						
FINES	FINESS Array B	57.26	326	P	P	21 07 14.8	-0.7
	0.8nm,0.6s,baz=106,slow=6.2,SNR=6.0						
WRA	Warramunga Arr	58.78	147	P	P	21 07 25.2	-1.4
	0.3nm,0.5s,baz=316,slow=12,SNR=7.7						
ASAR	Alice Springs	61.83	149	P	P	21 07 48.8	+1.4
	0.4nm,0.9s,baz=340,slow=6.9,SNR=2.9						
YKA	Yellowknife Ar	80.95	17	P	P	21 09 42.6	+0.1
	0.2nm,0.6s,baz=334,slow=6.2,SNR=3.6						

IDC 13 21:08:29.0±1.4, 31°.11N×103°.69E, h_0^{km}, mb3.2/3, mb1 3.5/4, mb1mx3.2/26, mbtmp3.3/4, Error ellipse: s-maj=86.3km s-min=23.8km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.83	6	Pn	Pn	21 12 26.4	+0.5
	baz=189,slow=10,SNR=6.6						
MKAR	Makanchi Array	22.74	320	P	P	21 13 32.9	+0.3
	0.2nm,0.7s,baz=122,slow=10.0,SNR=3.1						
KURK	Kurchatov	27.03	324	P	P	21 14 12.4	-0.3
	0.4nm,0.7s,baz=129,slow=9.3,SNR=2.8						
WRA	Warramunga Arr	58.68	146	P	P	21 18 28.4	0.0
	0.4nm,0.5s,baz=338,slow=7.7,SNR=9.2						

*ISCJB **13** 21:16:29.0±1.3, 31°.96N±0°.04×104°.32E±0°.06, $h4^{km}$±9km, mb3.4/8, Error ellipse: s-maj=8.9km s-min=6.3km az=141.5*
*IDC **13** 21:16:30.3±1.1, 31°.85N×104°.26E, $h0^{km}$, mb3.5/6, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, Error ellipse: s-maj=195.9km s-min=19.7km az=56.0*
*NEIC **13** 21:16:31.6±0.5, 31°.86N×104°.23E, $h10^{km}$, mb3.7/2, Error ellipse: s-maj=12.7km s-min=8.1km az=52.0*
*BJI **13** 21:16:34.3, 31°.94N×104°.50E, $h10^{km}$, ML3.4/7, Ms3.3/2, Ms7 3.0/2*
ISC 13 21:16:32.7±1.4, 31°.98N±0°.04×104°.39E±0°.06, $h17^{km}$±10km, n17, σ1s06/21, mb3.4/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.12	354	ePg	Pg	21 17 51.8	+0.2
LZH				Sg	Sg	21 18 38.5	-6.5
LZH				smax			
	comp=N,160nm,0.5s						
LZH				smax			
	comp=E,160nm,0.6s						
XAN	Xi'an	4.33	60	Pg	Pb	21 17 47.3	-1.0
XAN				Sg	Sb	21 18 38.0	-2.2
XAN				smax			
	comp=N,84nm,0.6s						
XAN				smax			
	comp=E,56nm,0.6s						
ENH	Enshi	4.69	110	Pn	Pn	21 17 43.6	+0.8
ENH				eSn	Sb	21 18 51.5	+0.8
GYA	Guiyang	5.85	160	Pg	Pg	21 18 25.4	+0.7
GYA				Sg	Sb	21 19 23.8	-0.3
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
CM31	Chiang Mai Arr	14.33	201	Pn	Pn	21 19 52.4	-2.5
HIA	Hailar	20.76	29	P	P	21 21 14.1	+1.6
MK31	Makanchi Array	22.49	317	eP	P	21 21 31.2	+0.1
MKAR	Makanchi Array	22.49	317	P	P	21 21 29.8	-1.4
	comp=E,0.1nm,0.3s,mb2.7,baz=108,slow=9.3,SNR=3.5						
MKAR	Makanchi Array	22.49	317	P	P	21 21 29.8	-1.4
TKM2	Tokmak 2	25.22	304	P	P	21 21 57.0	-0.5
	comp=E,0.4nm,0.4s,mb3.3						
AAK	Ala-Archa	25.92	303	eP	P	21 22 03.8	-0.2
	comp=E,0.7nm,0.3s,mb3.7						
ZALV	Zalesovo Beam	26.05	333	P	P	21 22 05.8	+0.9
	comp=E,0.6nm,0.4s,mb3.5,baz=136,slow=9.6,SNR=4.6						
KURK	Kurchatov	26.70	322	P	P	21 22 12.3	+1.5
	comp=E,0.2nm,0.6s,mb2.8,baz=122,slow=8.8,SNR=2.8						
ARU	Arti	39.89	322	P	P	21 24 04.5	-0.9
FINES	FINESS Array B	56.98	326	P	P	21 26 18.1	+1.2
	comp=E,3.8nm,1.0s,mb4.4,baz=79,slow=9.9,SNR=4.7						
WRA	Warramunga Arr	59.07	147	P	P	21 26 31.7	-0.4
	comp=E,0.3nm,0.4s,mb3.7,baz=339,slow=7.5,SNR=7.8						
ASAR	Alice Springs	62.11	149	P	P	21 26 53.1	+0.4
	comp=E,0.2nm,0.6s,mb3.5,baz=338,slow=6.6,SNR=3.6						

*ISCJB **13** 21:20:23.2±3.0, 31°.97N±0°.04×104°.60E±0°.06, $h2^{km}$±19km, mb4.0/20, Error ellipse: s-maj=9.4km s-min=6.0km az=143.2*
*IDC **13** 21:20:25.2±0.7, 32°.02N×104°.59E, $h0^{km}$, mb3.9/12, mb1 4.0/14, mb1mx3.8/29, mbtmp3.9/14, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.1/42, Error ellipse: s-maj=34.6km s-min=14.0km az=53.0*
*NEIC **13** 21:20:26.7±0.3, 32°.01N×104°.49E, $h10^{km}$, mb4.0/6, Error ellipse: s-maj=7.9km s-min=5.5km az=64.0*
*BJI **13** 21:20:27.1, 32°.17N×104°.75E, $h10^{km}$, mB4.7/1, mb4.3/1, ML3.8/14, Ms3.9/5, Ms7 3.6/5*
ISC 13 21:20:25.2±1.3, 32°.14N±0°.04×104°.69E±0°.05, $h0^{km}$±8km, n46, σ1s08/54, mb4.0/20, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.46	213	Pg	Pg	21 20 56.1	+2.9
CD2				Sg	Sg	21 21 17.0	+4.9
CD2				smax			
	comp=N,7μm,0.5s						
LZH	Lanzhou	4.00	350	ePn	Pn	21 21 31.8	+4.1
LZH				Sn	Sn	21 22 22.8	+7.5
LZH				Sg	Sg	21 22 32.6	-1.2
LZH				smax			
	comp=N,170nm,0.5s						
LZH				smax			
	comp=E,760nm,1.4s						
LZH				LR	LR		
	comp=N,1μm,5.8s						
LZH				LR	LR		
	comp=Z,2μm,6.9s						
XAN	Xi'an	4.03	61	Pn	Pn	21 21 27.8	-0.3
XAN				Pg	Pg	21 21 36.3	-6.1
XAN				Sn	Sn	21 22 23.3	+7.3
XAN				Sg	Sg	21 22 32.5	-2.1
XAN				smax			
	comp=N,300nm,0.7s						
XAN				smax			
	comp=E,110nm,0.8s						
ENH	Enshi	4.51	113	ePn	Pn	21 21 37.8	+3.0
ENH				eSn	Sn	21 22 28.6	+0.7
GYA	Guiyang	5.92	163	Pg	Pb	21 22 02.4	-6.8
GYA				Sg	Sb	21 23 14.6	-6.0
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,100nm,0.8s						
GTA	Gaotai	8.27	333	eP	Pb	21 22 50.5	+1.3
GTA				pP		21 22 54.8	
GTA				sP		21 22 58.0	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	14.24	203	Pn	Pn	21 23 45.8	-2.4
CM31	Chiang Mai Arr	14.57	202	Pn	Pn	21 23 50.8	-1.9
SONM	Songino Array	15.73	4	Pn	Pn	21 24 10.7	+2.7
	baz=180,slow=12,SNR=4.3						
KSRS	Korea Array	19.79	68	P	Pn	21 24 59.6	+1.2
	comp=Z,0.1nm,0.3s,baz=253,slow=9.8,SNR=2.9						
HIA	Hailar	20.50	29	P	P	21 25 05.7	+1.0
MK31	Makanchi Array	22.55	317	eP	P	21 25 26.6	0.0
MKAR	Makanchi Array	22.55	317	P	P	21 25 27.6	+0.9
	comp=Z,1.2nm,0.7s,mb3.5,baz=103,slow=10,SNR=14						
TKM2	Tokmak 2	25.34	303	eP	P	21 25 53.0	-0.6
	comp=Z,1.0nm,0.6s,mb3.7						
UCH	Uchtor	25.95	301	eP	P	21 25 57.3	-1.9
	comp=Z,3.6nm,1.1s,mb3.9						
ZAA0	Zalesovo Array	26.02	333	eP	P	21 25 60.0	+0.2
ZALV	Zalesovo Beam	26.02	333	P	P	21 26 00.4	+0.7
	comp=Z,2.7nm,0.7s,mb4.0,baz=133,slow=9.9,SNR=9.6						
AAK	Ala-Archa	26.05	302	P	P	21 25 59.6	-0.5
AML	Almayashu	26.52	301	eP	P	21 26 04.0	-0.4
KURK	Kurchatov	26.73	322	P	P	21 26 06.4	+0.2
	comp=Z,1.2nm,0.7s,mb3.7,baz=128,slow=8.2,SNR=9.1						
KBL	Kabul	29.78	284	eP	P	21 26 32.6	-1.0
	comp=Z,1.6nm,0.7s,mb4.0						
ABKAR	Abkulak array	37.37	311	eP	P	21 27 38.2	-1.2
	comp=Z,1.4nm,0.6s,mb3.9						
AKTK	Aktyubinsk	38.81	312	P	P	21 27 52.7	+1.2
AKTO	Aktyubinsk	38.81	312	P	P	21 27 52.7	+1.2
	comp=Z,1.0nm,0.6s,mb3.6,baz=112,slow=12,SNR=5.9						
ARU	Arti	39.93	321	eP	P	21 28 01.3	+0.5
	comp=Z,4.5nm,0.7s,mb4.2						
JOF	Joensuu	54.42	327	ep	P	21 29 54.0	+0.2
ARCES	ARCESS Array B	56.53	336	P	P	21 30 08.6	-0.2
	comp=Z,2.0nm,0.7s,mb4.3,baz=92,slow=6.1,SNR=5.6						
BR131	Keskin Array S	56.67	299	P	P	21 30 10.6	+0.3
BRTR	Keskin Array B	56.67	299	P	P	21 30 10.9	+0.6
	comp=Z,0.3nm,0.7s,mb3.4,baz=79,slow=6.4,SNR=3.6						
FINES	FINESS Array B	56.99	326	P	P	21 30 12.4	+0.2
	comp=Z,1.6nm,0.5s,mb4.3,baz=91,slow=9.5,SNR=9.2						
CSS	Prodhromos	58.35	294	P	P	21 30 21.7	-0.5
WRA	Warramunga Arr	59.06	147	P	P	21 30 26.9	-0.2
	comp=Z,2.7nm,0.6s,mb4.3,baz=340,slow=7.6,SNR=21						
TIRR	Tirgusor	59.09	306	eP	P	21 30 26.4	-0.8
	comp=Z,2.1nm,0.6s,mb4.3						
KWP	Kalwaria Pacla	61.37	313	eP	P	21 30 42.9	+0.1
ASAR	Alice Springs	62.12	150	P	P	21 30 47.9	-0.2
	comp=Z,1.3nm,0.7s,mb4.3,baz=336,slow=6.9,SNR=17						
PSZ	Piszkesteto	63.67	312	eP	P	21 30 57.3	-0.9
NOA	NORSAR Array B	64.06	327	P	P	21 31 00.5	0.0
	comp=Z,0.7nm,0.6s,mb4.0,baz=71,slow=6.6,SNR=3.2						
AQU	L'Aquila	70.05	308	eP	P	21 31 38.9	0.0
STKA	Stephens Creek	72.61	148	P	P	21 31 53.8	-0.5
	comp=Z,1.6nm,0.6s,mb4.3,baz=296,slow=15,SNR=5.4						
LPG	La Plagne	72.91	313	eP	P	21 31 57.3	+1.2
	comp=Z,7.5nm,0.8s,mb4.6						
LPL	La Plagne	72.91	313	eP	P	21 31 57.2	+1.1
	comp=Z,3.2nm,0.6s,mb4.4						
SMF	Signal de Mont	74.12	315	eP	P	21 32 04.0	+0.8
YKA	Yellowknife Ar	80.56	17	P	P	21 32 38.8	-0.2
	comp=Z,0.3nm,0.5s,mb3.6,baz=328,slow=5.1,SNR=4.7						
YKA	Yellowknife Ar	80.56	17	P	P	21 32 38.8	-0.2
ESLA	Sonseca Array	82.69	313	eP	P	21 32 49.5	-1.2
TSUM	Tsumeb	97.62	252	P	P	21 34 00.5	-1.4

*ISCJB **13** 21:24:55.2±0.3, 32°.72N±0°.04×105°.49E±0°.04, $h10^{km}$, mb4.3/41, MS4.0/2, Error ellipse: s-maj=5.5km s-min=4.9km az=29.5*
*IDC **13** 21:24:55.5±0.5, 32°.69N×105°.51E, $h0^{km}$, mb4.2/21, mb1 4.3/23, mb1mx4.2/31, mbtmp4.2/23, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/38, Error ellipse: s-maj=19.8km s-min=12.0km az=45.0*
*BJI **13** 21:24:56.5, 32°.72N×105°.49E, $h14^{km}$, mB4.5/6, mb4.3/10, ML4.2/12, Ms3.9/8, Ms7 3.9/7*
*NEIC **13** 21:24:56.6±0.2, 32°.69N×105°.47E, $h10^{km}$, mb4.2/14, Error ellipse: s-maj=5.7km s-min=4.1km az=224.0*
*MOS **13** 21:24:57.5±0.9, 32°.72N×105°.54E, $h28^{km}$, mb4.5/10, Error ellipse: s-maj=10.3km s-min=6.8km az=113.1*
ISC 13 21:24:57.0±0.2, 32°.71N±0°.03×105°.51E±0°.04, $h10^{km}$, n98, σ0s89/103, mb4.3/41, MS4.0/2, 4C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.15	64	Pn	Pn	21 25 47.8	+1.2
LZH	Lanzhou	3.64	338	ePn	Pn	21 25 55.8	+2.4
LZH				Pg	Pg	21 26 04.8	-1.9
LZH				Sn	Sn	21 26 40.1	+3.7
LZH				Sg	Sg	21 26 50.3	-3.6
LZH				smax			
	comp=N,2μm,1.2s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,1μm,4.1s						
LZH				LR	LR		
	comp=Z,1μm,4.2s						
ENH	Enshi	4.17	125	ePn	Pn	21 26 01.7	+1.0
ENH				eSg	Sg	21 27 08.4	-2.7
GYA	Guiyang	6.31	171	Pn	Pn	21 26 31.4	+1.3
GYA				smax			
	comp=N,310nm,0.8s						
GYA				smax			
	comp=E,310nm,0.9s						
GYA				LR	LR		
	comp=N,1μm,3.9s						
GYA				LR	LR		
	comp=E,1μm,2.8s						
KMI	Kunming	7.94	199	P	Pn	21 26 53.9	+1.4
KMI				smax			
	comp=N,56nm,1.0s						
KMI				smax			
	comp=E,27nm,0.5s						
GTA	Gaotai	8.12	327	eP	Pn	21 26 55.3	+0.4
GTA				pP		21 27 04.4	
GTA				sP		21 27 08.9	
GTA				S	Sn	21 28 37.1	+10
GTA				pmax	pmax		
	comp=Z,13nm,0.7s						
GTA				pmax	pmax		
	comp=Z,41nm,5.1s						
GTA				LR	LR		
	comp=N,260nm,10.1s						
GTA				LR	LR		
	comp=E,300nm,12.6s						
GTA				LR	LR		
	comp=Z,230nm,10.1s						
BTO	Baotou	8.67	23	eP	Px	21 27 19.8	
BTO				S	Sx	21 29 06.0	
BTO				LR	LR		
	comp=N,230nm,9.5s						
BTO				LR	LR		
	comp=E,130nm,10.9s						
BJT	Baijiatuau	11.26	47	P	Pn	21 27 37.1	-0.8
LSA	Lhasa	12.66	260	P	Pn	21 28 02.3	+5.2
CHTO	Chiang Mai	15.04	205	P	Pn	21 28 28.5	-1.2
SONM	Songino Array	15.12	2	Pn	Pn	21 28 29.2	-1.4
	comp=E,0.2nm,0.3s,baz=184,slow=13,SNR=8.3						
SONM				LR	LR	21 34 44.5	
	comp=E,154nm,19.1s,baz=154,slow=39						
CM31	Chiang Mai Arr	15.37	204	ePn	Pn	21 28 31.3	-2.7
SSLB	Suanglung	16.24	119	ePn	Pn	21 28 44.5	-0.7
	comp=E,35nm,0.6s						
TPUB	Ta-pu	16.30	121	Pn	Pn	21 28 46.1	+0.1
	comp=E,63nm,0.4s						
GUN	Gumba	17.61	259	eP	Pn	21 29 02.4	-0.1
	comp=E,43nm,0.9s						
PKI	Pulchoki	18.12	259	eP	Pn	21 29 08.1	-0.7
	comp=E,16nm,0.8s						
PKIN	Phulchoki	18.13	259	eP	Pn	21 29 09.6	+0.7
	comp=E,32nm,0.7s						
KKN	Kakani	18.15	260	eP	Pn	21 29 08.5	-0.6
	comp=E,33nm,0.9s						
DMN	Daman	18.36	259	eP	Pn	21 29 10.7	-1.0
	comp=E,19nm,0.8s						
KSRS	Korea Array	18.93	69	P	Pn	21 29 19.1	+0.6
	comp=E,0.3nm,0.3s,baz=256,slow=10,SNR=20						
CN2	Changchun	19.12	49	eP	Pn	21 29 22.4	+1.5
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
HIA	Hailar	19.66	29	P	Pn	21 29 25.5	-1.8
MK31	Makanchi Array	22.62	315	eP	P	21 29 57.0	-0.8
MKAR	Makanchi Array	22.62	315	P	P	21 29 58.1	+0.3
	comp=Z,3.4nm,0.6s,mb3.9,baz=119,slow=12,SNR=27						
KLR	Kul'dur	25.60	42	eP	P	21 30 22.7	-3.5
TKM2	Tokmak 2	25.62	302	eP	P	21 30 26.4	-0.1
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
TKM2	Tokmak 2	25.62	302	eP	P	21 30 26.4	0.0
	comp=Z,4.4nm,0.7s,mb4.1						
BOD	Bodaibo	25.77	10	eP	P	21 30 26.7	-1.0
ZALV	Zalesovo Beam	25.84	331	P	P	21 30 28.9	+0.6
	comp=Z,1.2nm,0.6s,mb3.6,baz=138,slow=10,SNR=7.6						
UCH	Uchtor	26.25	300	eP	P	21 30 32.0	-0.2
	comp=Z,6.7nm,1.3s,mb4.0						
AAK	Ala-Archa	26.35	301	P	P	21 30 35.1	+2.0
	comp=Z,0.6nm,0.3s,mb3.6,baz=255,slow=2.7,SNR=3.7						
AAK	Ala-Archa	26.35	301	Pn	P	21 30 32.0	-1.1
KURK	Kurchatov	26.73	320	P	P	21 30 36.7	+0.3
	comp=Z,3.0nm,0.7s,mb3.9,baz=139,slow=8.6,SNR=18						
KURK				PcP	PcP	21 33 59.2	-0.3
	comp=Z,1.1nm,0.7s,baz=111,slow=1.7,SNR=5.9						
KURK	Kurchatov	26.73	320	ceP	P	21 30 36.9	+0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
KURK	Kurchatov	26.73	320	eP	P	21 30 36.2	-0.3
	comp=Z,3.9nm,0.7s,mb4.0						
AML	Almayashu	26.84	300	eP	P	21 30 37.8	+0.3
	comp=Z,2.8nm,0.7s,mb3.9						
AML				ePcP	PcP	21 34 01.2	+1.3
EKS2	Erkin-Say	26.87	301	eP	P	21 30 36.7	-1.1
	comp=Z,1.3nm,0.6s,mb3.6						
MJAR	Matsushiro Arr	27.10	73	P	P	21 30 40.7	+0.8
	comp=Z,1.8nm,0.8s,mb3.7,baz=280,slow=12,SNR=5.2						
KBL	Kabul	30.32	284	eP	P	21 31 09.1	+0.5
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KBL	Kabul	30.32	284	eP	P	21 31 09.1	+0.4
	comp=Z,2.9nm,0.8s,mb4.1						
BVAR	Borovoye Array	32.31	319	P	P	21 31 26.9	+1.0
	comp=Z,1.0nm,0.7s,mb3.8,baz=104,slow=11,SNR=6.6						
BVAR				PcP	PcP	21 34 13.5	-0.3
	comp=Z,0.8nm,0.8s,baz=126,slow=3.8,SNR=4.1						
BRVK	Borovoye	32.39	319	eP	P	21 31 26.4	-0.2
ABKAR	Abkulak array	37.54	310	eP	P	21 32 10.4	-0.7
	comp=Z,3.0nm,0.7s,mb4.1						
AKTK	Aktyubinsk	38.95	311	P	P	21 32 23.9	+0.9
AKTO	Aktyubinsk	38.95	311	P	P	21 32 23.9	+0.9
	comp=Z,1.5nm,0.6s,mb3.9,baz=99,slow=7.9,SNR=6.7						
KAPI	Kappang	39.88	158	P	P	21 32 30.6	-0.5
	comp=Z,5.8nm,0.7s,mb4.4,baz=267,slow=6.9,SNR=4.3						
ARU	Arti	39.92	321	c iP	P	21 32 31.0	0.0
ARU				e		21 34 00.6	
ARU				S	S	21 38 34.8	-1.0
ARU				SS	SS	21 41 29.1	-3.1
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
ARU	Arti	39.92	321	eP	P	21 32 29.9	-1.1
	comp=Z,3.3nm,0.8s,mb4.1						
TIXI	Tiksi	40.95	11	eP	P	21 32 39.0	-0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,158nm,15.0s,MS4.0						
TIXI	Tiksi	40.95	11	eP	P	21 32 38.6	-0.7
	comp=Z,2.5nm,0.5s,mb4.1						
SEY	Seymchan	42.11	30	ceP	P	21 32 49.0	+0.1
PETK	Petropavlovsk-	42.21	45	P	P	21 32 50.2	+0.3
	comp=Z,5.0nm,0.7s,mb4.2,baz=344,slow=3.2,SNR=10						
BILL	Bilibino	49.22	26	eP	P	21 33 44.7	-0.3
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
MIB	Mutribah	49.28	283	eP	P	21 33 46.2	+0.1
MIB				AMb	AMB	21 33 47.7	
	comp=Z,21nm,1.0s,mb5.1						
RDF	Al-Radifah	49.40	282	eP	P	21 33 47.6	+0.6
RDF				AMb	AMB	21 33 49.0	
	comp=Z,22nm,0.9s,mb5.2						
KIV	Kislovodsk	49.45	302	P	P	21 33 46.8	-0.4
KIV	Kislovodsk	49.45	302	P	P	21 33 46.8	-0.4
OBN	Obninsk	52.11	317	eP	P	21 34 06.9	-0.1
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
MALT	Malatya	53.83	296	P	P	21 34 20.0	0.0
JOF	Joensuu	54.32	327	eP	P	21 34 23.1	-0.1
JOF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
JOF	Joensuu	54.32	327	ep	P	21 34 23.1	-0.1
	comp=Z,8.3nm,0.7s,mb4.8						
ARCES	ARCESS Array B	56.30	335	P	P	21 34 36.6	-0.8
	comp=Z,3.2nm,0.8s,mb4.4,baz=94,slow=14,SNR=3.8						
KAF	Kangasniemi	56.71	326	eP	P	21 34 40.2	-0.2
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KAF	Kangasniemi	56.71	326	ep	P	21 34 40.2	-0.2
	comp=Z,5.2nm,

CLL	Collm	66.70	317	⇓iP		P	21 35 48.1	+0.1
GERES	GERESS Array B	67.28	314	P		P	21 35 52.6	+0.9
	comp=Z,1.2nm,0.7s,mb4.0,baz=66,slow=6.6,SNR=10.0							
CDF	Champ du Feu	71.30	316	eP		P	21 36 16.6	0.0
	comp=Z,10nm,1.0s,mb4.4							
WLF	Walferdange	71.36	317	P		P	21 36 17.0	+0.1
WLF				e			21 36 35.7	
KMBO	Kilima Mbogo	72.44	257	P		P	21 36 24.8	+0.8
	comp=Z,2.5nm,0.8s,mb4.2,baz=47,slow=12,SNR=10.0							
KMBO	Kilima Mbogo	72.44	257	eP		P	21 36 24.2	+0.2
KMBO				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KMBO	Kilima Mbogo	72.44	257	eP		P	21 36 24.2	+0.2
	comp=Z,2.0nm,0.7s,mb4.2							
STKA	Stephens Creek	72.72	148	P		P	21 36 25.6	+0.4
	comp=Z,1.9nm,0.9s,mb4.0,baz=296,slow=3.2,SNR=3.2							
LPG	La Plagne	73.02	313	eP		P	21 36 27.8	+0.8
	comp=Z,12nm,0.8s,mb4.6							
SMF	Signal de Mont	74.20	315	eP		P	21 36 33.8	0.0
TCF	Toulx Ste Croi	75.35	316	eP		P	21 36 40.6	+0.1
	comp=Z,14nm,1.2s,mb4.5							
CAF	Calviac	76.16	315	eP		P	21 36 45.6	+0.4
	comp=Z,10nm,1.2s,mb4.3							
YKA	Yellowknife Ar	79.81	18	P		P	21 37 05.1	0.0
	comp=Z,1.3nm,0.8s,mb3.9,baz=326,slow=4.8,SNR=15							
YKA	Yellowknife Ar	79.81	18	P		P	21 37 05.1	0.0
FFC	Flin Flon	89.76	16	ceP		P	21 37 56.8	+1.4
TORD	Torodi Ar. Bea	94.28	288	P		P	21 38 16.6	-0.4
	comp=Z,0.5nm,0.9s,mb3.9,baz=43,slow=5.1,SNR=4.3							

*TAP **13** 21:27:26.5, 24°.41N×118°.39E, h2km±5km, ML3.5, C*
ISC 13 21:27:28.0±2.2, 24°.40N±0°.06×118°.4E±0°.2, h5km±7km, n22, σ0°77/24, 2C, Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNM	Kinmen	0.05	67	⇑iP	Pg	21 27 28.5	-0.9
	baz=268						
QZH	Quanzhou	0.57	19	iPg	Pg	21 27 39.5	+0.4
QZH				Sg	Sg	21 27 47.3	+0.7
QZH				smax			
	comp=N,560nm,0.1s						
QZH				smax			
	comp=E,1μm,0.3s						
PNG	Penghu	1.35	128	i P	Pn	21 27 53.4	-0.1
	baz=128						
PNG				S	Sg	21 28 12.0	+0.5
	baz=128						
TCU	Taichung	2.10	96	eP	Pn	21 28 03.2	-0.7
	baz=97						
TWQ1	Liyutan	2.18	91	eP	Pn	21 28 02.7	-2.2
	baz=91						
TWK	Hsinying	2.23	120	eP	Pn	21 28 06.2	+0.6
	baz=120						
CHN5	Tsauling	2.24	110	eP	Pn	21 28 05.3	-0.5
	baz=111						
CHN4	Tsaushan	2.27	117	eP	Pn	21 28 09.2	+3.1
	baz=117						
CHN1	Nanshi	2.30	121	eP	Pn	21 28 06.4	-0.2
	baz=121						
TYC	Yuchr	2.31	102	eP	Pn	21 28 06.7	0.0
	baz=102						
WTP	Ta-pu	2.34	119	eP	Pn	21 28 07.5	+0.4
	baz=119						
SMLT	Sun Moon Lake	2.35	102	eP	Pn	21 28 07.3	0.0
	baz=102						
ALS	Alisham	2.38	111	eP	Pn	21 28 08.1	+0.4
	baz=112						
NSTT	Nanjuang	2.39	84	eP	Pn	21 28 07.4	-0.4
	baz=84						
SGST	Jiashian	2.40	123	eP	Pn	21 28 08.9	+1.0
	baz=123						
STYT	Tauyuan	2.50	119	eP	Pn	21 28 08.3	-0.9
	baz=119						
YUS	Yu-Shan	2.52	111	eP	Pn	21 28 10.0	+0.5
	baz=111						
WHF	Hehuan Shan	2.64	95	eP	Pn	21 28 11.8	+0.6
	baz=95						
NSK	Sanguang	2.72	84	eP	Pn	21 28 11.5	-0.8
	baz=84						
NNS	Nan Shan	2.72	89	eP	Pn	21 28 12.4	0.0
	baz=89						
EHY	Hungye	2.83	108	eP	Pn	21 28 14.0	+0.2
	baz=108						
TWF1	Yuli	2.86	111	eP	Pn	21 28 14.1	-0.2
	baz=111						

IDC 13 21:27:50.6±1.2, 31°.67N×104°.49E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, Error ellipse: s-maj=192.3km s-min=20.0km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.77	318	P	P	21 32 54.5	+0.1
	1.0nm,0.8s,baz=121,slow=12,SNR=3.4						
ZALV	Zalesovo Beam	26.36	333	P	P	21 33 28.6	+0.4
	1.2nm,0.7s,baz=128,slow=9.3,SNR=4.0						
KURK	Kurchatov	26.99	322	P	P	21 33 33.7	-0.2
	1.1nm,0.8s,baz=124,slow=9.9,SNR=4.1						
WRA	Warramunga Arr	58.77	147	P	P	21 37 50.9	+0.3
	0.5nm,0.5s,baz=338,slow=7.4,SNR=8.5						
ASAR	Alice Springs	61.81	149	P	P	21 38 11.0	-0.3
	0.2nm,0.5s,baz=340,slow=6.5,SNR=4.3						

*IDC **13** 21:33:07.2±2.0, 36°.05N×141°.49E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/26, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=49.7km s-min=26.4km az=57.0*
*ISCJB **13** 21:33:08.8±1.4, 36°.03N±0°.06×141°.51E±0°.08, h30km±9km, mb3.8/6, Error ellipse: s-maj=10.8km s-min=10.1km az=154.4*
*JMA **13** 21:33:11.1±0.1, 36°.04N×141°.29E, h42km±2km, M3.3*
*NEIC **13** 21:33:12.4±1.1, 36°.07N×141°.36E, h35km, mb4.2/3, Error ellipse: s-maj=17.9km s-min=11.4km az=83.0*
ISC 13 21:33:08.9±1.3, 36°.10N±0°.05×141°.45E±0°.07, h12km±7km, n21, σ0°78/27, mb3.8/6, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.62	231	P	Pg	21 33 21.6	+0.6
CHOJ				S	Sg	21 33 29.2	0.0
JHO	Hitachi	0.88	306	⇓P	Pg	21 33 26.2	+0.3
JYT	Yasato	1.02	278	⇓P	Pb	21 33 27.5	-1.1
JYT				S	Sb	21 33 39.2	-2.8
JFK	Kawauchi	1.35	340	P	Pn	21 33 33.7	+0.1
JFK				eS	Sb	21 33 50.9	-0.4
JAG	Ashikaga	1.65	282	P	Pn	21 33 36.5	-1.1
MJAR	Matsushiro Arr	2.65	281	Pn	Pn	21 33 51.9	+0.4
	2.2nm,0.3s,baz=99,slow=7.5,SNR=19						
MJAR				Sn	Sn	21 34 24.7	+1.1
	2.3nm,0.3s,baz=99,slow=21,SNR=5.8						
MAJO	Matsushiro	2.66	281	ePn	Pn	21 33 51.8	+0.2
MAJO				eSn	Sn	21 34 23.6	0.0
MAT	Matsushiro	2.66	281	P	Pn	21 33 52.2	+0.7
MAT				S	Sn	21 34 24.5	+0.9
MDJ	Mudanjiang	12.41	317	P	Pn	21 36 05.8	+0.6
BJT	Baijiatuan	20.27	289	P	P	21 37 43.8	-0.4
TATO	Taipei	20.42	243	eP	P	21 37 46.1	+0.2
NACB	Ninganchiao	20.84	241	P	P	21 37 49.4	-1.1
YULB	Yu-li	21.55	240	eP	P	21 37 58.1	0.0
ZALV	Zalesovo Beam	42.57	313	P	P	21 41 05.2	+0.9
	0.4nm,0.4s,mb3.5,baz=79,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	44.65	303	P	P	21 41 22.0	+0.8
	0.4nm,0.7s,mb3.4,baz=92,slow=9.1,SNR=5.7						
MKAR	Makanchi Array	44.65	303	P	P	21 41 22.0	+0.8
KURK	Kurchatov	46.54	309	P	P	21 41 36.4	+0.3
	1.2nm,0.5s,mb4.1,baz=84,slow=7.6,SNR=7.0						
KURK	Kurchatov	46.54	309	eP	P	21 41 36.5	+0.4
	1.5nm,0.6s,mb4.1						
TKM2	Tokmak 2	50.10	299	eP	P	21 42 03.5	-0.3
	3.2nm,1.6s,mb4.1						
WRA	Warramunga Arr	56.14	188	P	P	21 42 48.2	-0.2
	0.1nm,0.3s,mb3.3,baz=5.6,slow=7.6,SNR=6.5						
ARU	Arti	57.08	319	eP	P	21 42 53.4	-1.3
	6.7nm,1.3s,mb4.5						

*IDC **13** 21:39:38.8±1.5, 16°.53N×122°.48E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, Error ellipse: s-maj=146.4km s-min=18.9km az=66.0*
*MAN **13** 21:39:41, 16°.49N×122°.46E, h8km, mb4.9, ML3.9, MS3.9*

ISC 13 21:39:42.2±1.0, 16°.51N±0°.04×122°.34E±0°.07, h16km±6km, n19, σ0°98/26, mb3.6/6, 3C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.55	8	eP	Pg	21 39 53.4	+0.3
CAUP	Cauayan	0.66	311	eP	Pg	21 39 55.0	-0.2
BALP	Baler	1.06	224	eP	Pg	21 40 02.1	-0.7
BALP				eS	Sg	21 40 12.9	-3.9
CVP	Callao Caves	1.28	337	⇑iP	Pn	21 40 04.6	-0.9
CVP				i S	Sb	21 40 30.8	+8.5
BCPH	Baguio City Da	1.70	266	⇑iP	Pn	21 40 12.3	+1.0
APYP	Conner	1.70	322	eP	Pn	21 40 13.1	+1.7
APYP				eS	Sn	21 40 27.6	-5.3
POLP	Polilio Island	1.82	192	eP	Pn	21 40 13.2	+0.3
POLP				eS	Sn	21 40 30.7	-4.9
ABRA	Dolores	1.93	306	eP	Pn	21 40 15.5	+1.1
ABRA				eS	Sn	21 40 37.7	-0.6
BOLP	Bolinao	2.34	267	eP	Pn	21 40 23.6	+3.5
GQP	Guinayangan	2.60	178	⇓eP	Pn	21 40 24.9	+1.3
GQP				eS	Sn	21 40 55.0	+0.2
PVCP	Virac	3.39	149	eP	Pn	21 40 34.1	-0.4
LUBP	Lubang	3.43	217	eP	Pn	21 40 38.5	+3.5
SNPH	Sibulan	7.18	173	⇑iP	Pb	21 41 47.6	+1.0
SNPH				i S	Sb	21 43 01.5	-11
SONM	Songino Array	33.88	341	P	P	21 46 24.1	-0.1
	0.3nm,0.5s,mb3.5,baz=156,slow=7.3,SNR=3.1						
WRA	Warramunga Arr	38.10	162	P	P	21 46 58.9	-1.6
	1.1nm,0.9s,mb3.6,baz=343,slow=9.2,SNR=5.6						
ASAR	Alice Springs	41.50	164	P	P	21 47 28.3	-0.5
	0.4nm,0.6s,mb3.2,baz=354,slow=9.0,SNR=4.2						
MKAR	Makanchi Array	44.78	321	P	P	21 47 54.4	-0.8
	0.5nm,0.7s,mb3.5,baz=114,slow=9.7,SNR=6.1						
KURK	Kurchatov	48.79	324	P	P	21 48 26.0	-0.5
	1.8nm,0.5s,mb4.3,baz=122,slow=8.5,SNR=22						
BVAR	Borovoye Array	54.39	324	P	P	21 49 07.8	-0.6
	0.7nm,0.5s,mb3.8,baz=96,slow=6.0,SNR=4.5						

*MAN **13** 21:48:27, 16°.45N×122°.38E, h1km, mb5.8, ML4.8, MS5.3*
MAN INTENSITY IV - DINAPIGUI ISABELA; INTENSITY III-PALANA.
*MOS **13** 21:48:28.8±0.9, 16°.55N×122°.29E, h33km, mb5.4/58, MS4.8/28, Error ellipse: s-maj=8.8km s-min=4.4km az=115.7*
*IDC **13** 21:48:28.0±2.7, 16°.53N×122°.20E, h16km±16km, mb4.7/27, mb1 4.9/28, mb1mx4.8/30, mbtmp4.8/28, MS4.5/29, Ms1 4.5/29, ms1mx4.4/40, Error ellipse: s-maj=16.7km s-min=10.1km az=75.0*
*ISCJB **13** 21:48:30.5±0.3, 16°.51N±0°.02×122°.35E±0°.03, h49km±2km, mb5.2/170, MS4.7/71, Error ellipse: s-maj=4.4km s-min=2.7km az=178.2*
*BJI **13** 21:48:30.5, 16°.30N×122°.23E, h53km, mB5.1/39, mb4.8/53, Ms5.0/59, Ms7 4.9/50*
*NEIC **13** 21:48:32.6±0.4, 16°.48N×122°.24E, h54km±3km, mb5.2/75, Error ellipse: s-maj=4.1km s-min=3.0km az=84.0*
NEIC Felt [IV PIVS] at Dinapigui, [III PIVS] at Palanan and [II PIVS] at Baguio and Urdaneta. Also felt at Manila.
*GCMT **13** 21:48:32.6±0.1, 16°.54N×122°.41E, h18km, MW5.3/88, Moment Tensor Solution. s77,c133; s88,c174; Duration: 1ŝ1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.87±.02; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-0.97±.02; $M_{r\theta}$-0.12±.03; $M_{\theta\phi}$-0.21±.01; $M_{\phi r}$0.82±.04; Best double couple: $M_0$1.25500×10^{17} NP1:ϕ_s206.00000°, δ27.00000°, λ116.00000°. NP2:ϕ_{ss}357.00000°, δ66.00000°, λ77.00000°. Principal axes: T 1.2130, Plg67.0000°, Azm245.0000°; N 0.0840, Plg11.0000°, Azm2.0000°; P -1.2970, Plg20.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **13** 21:48:35, 16°.61N×122°.29E, h72km, Mw5.5/32*
ISC 13 21:48:32.6±0.3, 16°.48N±0°.02×122°.32E±0°.03, h55km±2km, h56km±2.5km: pP-P, n517, σ1ŝ00/527, mb5.2/170, MS4.7/71, 42C-23D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.59	10	eP	Pn	21 48 39.9	-5.4
CAUP	Cauayan	0.66	315	eP	Pn	21 48 41.5	-4.6
BALP	Baler	1.02	224	eP	Pn	21 48 48.9	-1.8
BALP				eS	Sn	21 49 04.0	-0.1
CVP	Callao Caves	1.31	339	⇑iP	Pn	21 48 51.1	-3.4
CVP				i S	Sn	21 49 08.5	-2.5
PCPH	Palayan	1.48	232	⇓eP	Pn	21 48 56.2	-0.7
PCPH				i S	Sn	21 49 17.7	+2.5
BCPH	Baguio City Da	1.67	267	⇑iP	Pn	21 48 58.2	-1.2
BCPH				i S	Sn	21 49 21.2	+1.4
APYP	Conner	1.72	323	eP	Pn	21 48 59.4	-0.7
APYP				eS	Sn	21 49 15.7	-5.3
SGCP	Mt. Cagua	1.77	352	eP	Pn	21 48 59.3	-1.6
SGCP				eS	Sn	21 49 25.1	+2.7
POLP	Polilio Island	1.78	192	eP	Pn	21 48 59.9	-1.0
ABRA	Dolores	1.93	307	eP	Pn	21 49 02.2	-0.7
BOLP	Bolinao	2.31	268	eP	Pn	21 49 09.9	+1.7
SCZP	Santa Cruz	2.42	254	eP	Pn	21 49 11.7	+2.1
SCZP				eS	Sn	21 49 32.6	-5.4
PIP	Pasuquin	2.45	319	⇓iP	Pn	21 49 09.9	-0.2
GQP	Guinayangan	2.56	177	⇓eP	Pn	21 49 11.6	0.0
GQP				eS	Sn	21 49 42.2	+0.7
TGY	Tagaytay City	2.71	210	Pn	Pn	21 49 12.8	-0.9
	194nm,0.3s,baz=6.4,slow=6.0,SNR=21						
TGY				Lg		21 49 51.6	
	1μm,0.3s,baz=285,slow=22,SNR=7.0						
TGY	Tagaytay City	2.71	210	⇓iP	Pn	21 49 14.5	+0.8
AUQP	San Andres	3.15	174	eP	Pn	21 49 28.9	+9.2
PGP	Puerto Galera	3.24	204	⇓eP	Pn	21 49 27.8	+6.9
PVCP	Virac	3.37	148	eP	Pn	21 49 21.1	-1.6
LUBP	Lubang	3.38	217	eP	Pn	21 49 26.6	+3.7
BBP	Basco	3.96	355	eP	Pn	21 49 32.3	+1.5
OTRP	Odiongan	4.10	184	eP	Pn	21 49 33.1	+0.4
RCP	Roxas	4.91	175	⇑eP	Pn	21 49 44.2	+0.5
TWG	Pinlang	6.42	350	ePn	Pn	21 50 03.8	-0.7
	102nm,0.6s						
TWG				eS	Sn	21 51 15.2	-1.3
YULB	Yu-li	6.95	352	ePn	Pn	21 50 11.2	-0.5
	58nm,0.6s						
YULB				eS	Sn	21 51 24.4	-5.0
TPUB	Ta-pu	6.97	347	ePn	Pn	21 50 12.1	0.0
	250nm,1.0s						
TPUB				eSn	Sn	21 51 32.2	+2.2
SSLB	Suanglung	7.38	350	ePn	Pn	21 50 18.2	+0.4
	298nm,1.3s						
SSLB				eSn	Sn	21 51 40.9	+0.7
NACB	Ninganchiao	7.69	355	ePn	Pn	21 50 22.3	+0.4
	79nm,0.8s						
NACB				eSn	Sn	21 51 46.5	-1.1
YHNB	Yeheng	8.20	354	ePn	Pn	21 50 29.4	+0.5
	96nm,0.8s						
YHNB				eSn	Sn	21 52 00.3	+0.2
TATO	Taipei	8.49	355	ePn	Pn	21 50 31.2	-1.7
TATO				Sn	Sn	21 52 06.4	-0.9
QZH	Quanzhou	9.12	338	P	Pn	21 50 45.3	+3.9
QZH				S	Sn	21 52 24.0	+1.4
QZH				LR	LR		
	comp=N,7μm,16.1s						
QZH				LR	LR		
	comp=E,3μm,11.6s						
QZH				LR	LR		
	comp=Z,7μm,14.6s						
DAV	Davao City (W)	9.88	161	Pn	Pn	21 50 53.1	+1.1
	comp=Z,58nm,0.3s,baz=28,slow=6.9,SNR=3.1						
DAV				LR	LR	21 55 46.8	
	comp=Z,8μm,18.0s,baz=351,slow=44						
DAV	Davao City (W)	9.88	161	ePn	Pn	21 50 53.0	+1.1
DAV	Davao City (W)	9.88	161	Pn	Pn	21 50 55.3	+3.3
	SNR=6.2						
DAV				Pn	Pn	21 50 55.3	+3.3
	SNR=6.2						
GZH	Guangzhou	10.70	309	P	Pn	21 51 02.8	-0.4
GZH				S	Sn	21 53 08.8	+7.3
GZH				LR	LR		
	comp=N,6μm,14.9s						
GZH				LR	LR		
	comp=E,6μm,15.6s						
JOW	Kunigami	11.70	27	LR	LR	21 55 41.0	
	comp=E,3μm,18.1s,baz=190,slow=37						
KKM	Kota Kinabalu	11.97	211	P	Pn	21 51 26.2	+5.7
QIZ	Qiongzhong	12.15	284	P	Pn	21 51 22.4	-0.6
QIZ				pP		21 51 29.4	
QIZ				sP		21 51 35.8	
QIZ				S	Sn	21 53 36.5	-0.5
QIZ				pmax	pmax		
	comp=Z,33nm,0.8s						
QIZ				LR	LR		
	comp=N,3μm,14.8s						
QIZ				LR	LR		
	comp=E,3μm,18.0s						
QIZ				LR	LR		
	comp=Z,7μm,17.5s						
QIZ	Qiongzhong	12.15	284	ePn	Pn	21 51 22.0	-1.0
	comp=Z,101nm,1.1s						
QIZ				eSn	Sn	21 53 35.9	-1.1
SSE	Sheshan	14.59	356	P	Pn	21 51 57.4	+1.6
SSE				S	Sn	21 54 39.0	+2.7
SSE				pmax	pmax		
	comp=Z,35nm,0.7s						
SSE				pmax	pmax		
	comp=Z,240nm,6.9s						
SSE				LR	LR		
	comp=N,2μm,19.8s						
SSE				LR	LR		
	comp=E,2μm,19.8s						
SSE				LR	LR		
	comp=Z,2μm,19.5s						
WHN	Wuhan	15.78	334	⇑P	Pn	21 52 13.3	+2.0
WHN				S	S	21 55 07.6	-10
WHN				LR	LR		
	comp=N,6μm,15.8s						
WHN				LR	LR		
	comp=E,5μm,12.0s						
WHN				LR	LR		
	comp=Z,5μm,15.0s						
NJ2	Nanjing	15.82	349	eP	Pn	21 52 12.8	+1.0
NJ2				pP	pP	21 52 21.6	-5.1
NJ2				PP		21 52 26.4	
NJ2				sP	sP	21 52 28.1	-5.6
NJ2				S	S	21 55 10.5	-7.5
NJ2				sS	sS	21 55 24.0	-13
NJ2				pmax	pmax		
	comp=Z,30nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,270nm,9.5s						
NJ2				LR	LR		
	comp=N,2μm,21.0s						
NJ2				LR	LR		
	comp=E,3μm,16.2s						
NJ2				LR	LR		
	comp=Z,2μm,22.0s						
SBUM	Sibu	17.12	217	P	Pn	21 52 29.7	+1.6
GYA	Guiyang	17.61	307	⇑iP	Pn	21 52 35.4	+1.2
GYA				pP	pP	21 52 46.5	-0.2
GYA				PP		21 52 50.9	
GYA				S	S	21 55 47.0	-7.7
GYA				sS	sS	21 56 04.3	-10
GYA				SS		21 56 12.9	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,4.3s						
GYA				LR	LR		
	comp=N,830nm,14.3s						
GYA				LR	LR		
	comp=E,730nm,13.5s						
GYA				LR	LR		
	comp=Z,730nm,15.0s						
ENH	Enshi	18.07	322	ePn	Pn	21 52 40.0	+0.3
	comp=Z,78nm,0.9s						
KSM	Kuching	19.03	220	P	Pn	21 52 51.9	+0.5
KSM	Kuching	19.03	220	eP	Pn	21 52 51.5	+0.1
	comp=Z,131nm,1.1s						
KMI	Kunming	20.20	298	⇑P	P	21 53 05.8	+2.9
KMI				pP		21 53 18.3	
KMI				sP	sP	21 53 25.8	+3.7
KMI				PP		21 53 27.3	
KMI				S	S	21 56 43.8	-3.0
KMI				sS	sS	21 57 03.3	-3.4
KMI				SS		21 57 15.0	
KMI				PcP	PcP	21 57 17.8	+2.2
KMI				ScP	ScP	22 00 48.1	+0.6
KMI				PcS	PcS	22 00 54.3	+1.0
KMI				pmax	pmax		
	comp=Z,97nm,1.1s						
KMI				pmax	pmax		
	comp=Z,1μm,4.8s						
KMI				LR	LR		
	comp=N,3μm,13.1s,MS5.2						
KMI				LR	LR		
	comp=E,6μm,12.4s,MS5.2						
KMI				LR	LR		
	comp=Z,7μm,12.4s,MS5.2						
CBIJ	Chichi jima	21.23	57	LR	LR	22 00 05.4	
	comp=Z,1μm,18.1s,MS4.3,baz=248,slow=33						
XAN	Xi'an	21.24	328	P	P	21 53 14.8	+0.8
XAN				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.6						
INCN	Inchon	21.27	10	eP	P	21 53 15.0	+0.7
	comp=Z,87nm,0.8s,mb5.1						
INCN	Inchon	21.27	10	P	P	21 53 14.1	-0.1
	SNR=8.7						
INCN				P		21 53 14.1	
	SNR=8.7						
KSRS	Korea Array	21.48	12	P	P	21 53 14.2	-2.3
	comp=Z,7.2nm,0.4s,mb4.3,baz=196,slow=11,SNR=25						
KSRS				LR	LR	22 01 35.6	
	comp=Z,1μm,20.1s,MS4.4,baz=203,slow=37						
KAPI	Kappang	21.50	187	P	P	21 53 16.8	-0.2
	comp=Z,459nm,0.9s,mb5.9,SNR=9.9						
KAPI	Kappang	21.50	187	P	P	21 53 16.6	-0.3
	comp=Z,50nm,1.0s,mb4.9,baz=359,slow=6.9,SNR=18						
KAPI	Kappang	21.50	187	eP	P	21 53 16.1	-0.8
	comp=Z,141nm,1.3s,mb5.2						
KTGM	Kuala Trenggan	21.83	242	P	P	21 53 22.2	+1.7
GUMO	Guam	21.97	94	P	P	21 53 23.4	+1.5
	comp=Z,52nm,0.7s,mb5.1,baz=210,slow=14,SNR=2.8						
GUMO				LR	LR	22 00 44.4	
	comp=Z,1μm,18.7s,MS4.3,baz=96,slow=33						
NNT	Nongplab	22.20	263	P	P	21 53 26.0	+1.6
CD2	Chengdu	22.20	314	P	P	21 53 25.4	+1.0
CD2				pP		21 53 39.4	
CD2				sP	sP	21 53 46.9	+3.2
CD2				PP		21 53 54.3	
CD2				S	S	21 57 21.0	-4.9
CD2				sS	sS	21 57 44.4	-1.9
CD2				SS		21 58 04.4	
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.7						
CD2				pmax	pmax		
	comp=Z,150nm,5.5s						
CD2				LR	LR		
	comp=N,5μm,17.8s						
CD2				LR	LR		
	comp=Z,4μm,17.3s,MS4.9						
BDT	Bhumibol Dam	22.32	275	P	P	21 53 25.0	-0.7
	comp=Z,22nm,0.8s,mb4.6						
DL2	Dalian	22.35	359	P	P	21 53 25.4	-0.4
DL2				sP	sP	21 53 45.6	+0.4
DL2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
DL2				pmax	pmax		
	comp=Z,210nm,7.1s						
DL2				LR	LR		
	comp=N,610nm,19.5s,MS4.4						
DL2				LR	LR		
	comp=E,1μm,16.2s,MS4.4						
DL2				LR	LR		
	comp=Z,870nm,18.6s,MS4.2						
CM31	Chiang Mai Arr	22.38	279	eP	P	21 53 27.1	+0.7
CHTO	Chiang Mai	22.39	279	eP	P	21 53 26.2	-0.3
CHTO				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.7						
CHTO	Chiang Mai	22.39	279	eP	P	21 53 26.2	-0.2
	comp=Z,36nm,1.2s,mb4.7						
CHTO	Chiang Mai	22.39	279	P	P	21 53 26.8	+0.3
	SNR=6.4						
CHTO				P	

BJT pmax pmax
comp=Z,30nm,0.5s
BJT Baijiatuau 24.06 348 *e*P **P** **21 53 42.1 -0.5**
comp=Z,30nm,0.5s,mb5.0
BJI Beijing 24.08 348 P **P** **21 53 42.8 0.0**
BJI pP 21 53 57.1
BJI sP sP 21 54 03.4 +0.3
BJI S **S** **21 57 56.0 -0.5**
BJI sS sS 21 58 21.8 +2.1
BJI pmax pmax
comp=Z,49nm,1.1s,mb4.8
BJI pmax pmax
comp=Z,350nm,5.5s
BJI LR LR
comp=N,760nm,16.4s,MS4.6
BJI LR LR
comp=E,2μm,19.3s,MS4.6
BJI LR LR
comp=Z,550nm,23.7s,MS4.0
FRIM Kepong 24.22 239 P **P** **21 53 45.8 +1.4**
MAJO Matsushiro 24.46 32 *e*P **P** **21 53 48.6 +2.3**
MAJO pmax pmax
comp=Z,118nm,1.7s,mb5.0
MAJO Matsushiro 24.46 32 *e*P **P** **21 53 48.6 +2.3**
comp=Z,118nm,1.7s,mb5.0
MAT Matsushiro 24.46 32 P **P** **21 53 45.1 -1.2**
MAT S **S** **21 58 02.6 -0.1**
MJAR Matsushiro Arr 24.46 32 P **P** **21 53 46.0 -0.3**
comp=Z,3.7nm,0.9s,baz=214,slow=8.2,SNR=6.2
MJAR LR LR 22 03 53.1
comp=Z,871nm,18.2s,MS4.3,baz=190,slow=38
SNY Shenyang 25.29 2 ⇑P **P** **21 53 52.9 -0.9**
SNY S **S** **21 58 19.3 +3.5**
SNY pmax pmax
comp=Z,53nm,1.5s,mb4.8
SNY pmax pmax
comp=Z,320nm,8.2s
SNY LR LR
comp=N,3μm,17.0s,MS4.9
SNY LR LR
comp=E,2μm,15.6s,MS4.9
SNY LR LR
comp=Z,3μm,17.6s,MS4.8
LZH Lanzhou 25.52 323 *e*P **P** **21 53 57.0 +1.0**
LZH pP pP 21 54 08.0 -1.7
LZH sP sP 21 54 12.5 -3.8
LZH PP 21 54 37.0
LZH PcP PcP 21 57 29.0 +2.6
LZH *e*S **S** **21 58 22.0 +2.4**
LZH sS sS 21 58 42.4 -0.7
LZH SS 21 59 19.3
LZH pmax pmax
comp=Z,62nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,390nm,4.5s
LZH LR LR
comp=E,2μm,15.8s
LZH LR LR
comp=Z,2μm,18.6s,MS4.6
HHC Hu-ho-hao-te 26.01 341 ⇑P **P** **21 54 01.3 +1.0**
HHC pP pP 21 54 15.6 +1.5
HHC sP sP 21 54 22.9 +2.3
HHC PP 21 54 45.5
HHC PcP PcP 21 57 27.4 0.0
HHC S **S** **21 58 26.5 -0.7**
HHC sS sS 21 58 51.8 +1.1
HHC SS 21 59 38.6
HHC ScP ScP 22 01 00.6 -1.9
HHC PcS PcS 22 01 06.9 -1.2
HHC pmax pmax
comp=Z,76nm,1.4s,mb5.0
HHC pmax pmax
comp=Z,440nm,6.0s
HHC LR LR
comp=N,3μm,14.8s,MS5.0
HHC LR LR
comp=E,2μm,14.9s,MS5.0
HHC LR LR
comp=Z,3μm,16.7s,MS4.8
BTO Baotou 26.30 339 *e*P **P** **21 54 02.3 -0.7**
BTO pmax pmax
comp=Z,38nm,1.7s,mb4.7
CN2 Changchun 27.37 5 *e*P **P** **21 54 11.8 -0.7**
CN2 *e*pP pP 21 54 26.4 +0.1
CN2 *e*sP sP 21 54 33.8 +1.0
CN2 *e*S **S** **21 58 46.5 -2.0**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,15.0s,MS5.0
CN2 LR LR
comp=E,3μm,15.0s,MS5.0
CN2 LR LR
comp=Z,3μm,15.0s,MS5.0
MDJ Mudanjiang 28.72 11 P **P** **21 54 24.6 +0.1**
MDJ pP pP 21 54 37.4 -1.0
MDJ sP sP 21 54 43.1 -1.8
MDJ S **S** **21 59 13.4 +3.6**
MDJ sS sS 21 59 32.3 -1.0
MDJ ScP ScP 22 01 10.6 0.0
MDJ PcS PcS 22 01 14.3 -1.9
MDJ pmax pmax
comp=Z,14nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,170nm,7.1s
MDJ LR LR
comp=N,1μm,17.9s,MS4.6
MDJ LR LR
comp=E,880nm,19.9s,MS4.6
MDJ LR LR
comp=Z,1μm,13.9s
MDJ Mudanjiang 28.72 11 *e*P **P** **21 54 24.4 -0.1**
comp=Z,14nm,0.8s,mb4.8
SHL Shillong 29.75 293 *e*P **P** **21 54 34.0 0.0**
GTA Gaotai 30.12 324 P **P** **21 54 37.0 -0.1**
GTA pP pP 21 54 51.8 +0.8
GTA sP sP 21 54 59.0 +1.5
GTA PcP PcP 21 57 39.1 +1.6
GTA S **S** **21 59 33.1 +1.0**
GTA sS sS 21 59 59.0 +3.4
GTA SS SS 22 01 18.4 -24
GTA pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
GTA pmax pmax
comp=Z,140nm,5.9s
GTA LR LR
comp=N,1μm,14.6s,MS5.0
GTA LR LR
comp=E,2μm,12.5s,MS5.0
GTA LR LR
comp=Z,1μm,11.9s,MS4.8
KAKA Kakadu 30.68 160 *e*P **P** **21 54 39.9 -2.3**
comp=Z,12nm,0.6s,mb4.9
LSA Lhasa 31.43 300 P **P** **21 54 48.6 -0.2**
LSA S **S** **21 59 55.8 +3.0**
LSA LR LR
comp=N,1μm,20.4s,MS4.7
LSA LR LR
comp=E,1μm,17.2s,MS4.7
LSA LR LR
comp=Z,2μm,18.8s,MS4.8
LSA Lhasa 31.43 300 *e*P **P** **21 54 49.4 +0.6**
LSA *e* 21 57 43.2
LSA pmax pmax
comp=Z,24nm,1.1s,mb4.9
LSA Lhasa 31.43 300 *e*P **P** **21 54 49.4 +0.6**
comp=Z,24nm,1.1s,mb4.9
LSA *e*PcP PcP 21 57 43.2 +2.0
ASAJ Asahikawa 32.46 28 LR LR 22 09 51.9
comp=Z,778nm,18.4s,MS4.4,baz=74,slow=40
KNA Kununurra 32.65 168 *e*P **P** **21 54 59.0 -0.4**
comp=Z,55nm,1.1s,mb5.4
HIA Hailar 32.77 357 *e*P **P** **21 54 59.0 -1.2**
HIA pmax pmax
comp=Z,6.0nm,0.4s
HIA Hailar 32.77 357 *e*P **P** **21 54 59.0 -1.2**
comp=Z,5.9nm,0.4s,mb4.9
KLR Kul'dur 33.56 11 *e*P **P** **21 55 03.5 -3.6**
TAPN Taplejung 33.77 295 *e*P **P** **21 55 09.2 -0.1**
SONM Songino Array 33.91 341 P **P** **21 55 10.4 +0.2**
comp=Z,10nm,0.4s,mb5.1,baz=159,slow=10,SNR=90
SONM LR LR 22 10 28.6
comp=Z,3μm,19.1s,MS5.0,baz=154,slow=39

ODAN Odare 33.96 294 *e*P **P** **21 55 10.8 -0.1**
comp=Z,41nm,0.5s,mb5.6
FITZ Fitzroy Crossi 34.52 174 *e*P **P** **21 55 15.1 -0.6**
comp=Z,30nm,0.8s,mb5.3
FITZ Fitzroy Crossi 34.52 174 *e*P **P** **21 55 15.5 -0.2**
comp=Z,35nm,1.1s,mb5.2
RAMN Ramite 34.67 294 *e*P **P** **21 55 17.1 0.0**
comp=Z,54nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 34.79 25 *e*P **P** **21 55 17.6 -0.2**
YSS *e*S **S** **22 00 47.0 +2.6**
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.4
YSS MLR MLR
comp=N,400nm,13.0s,MS4.4
YSS MLR MLR
comp=E,300nm,13.0s,MS4.4
YSS Yuzh-Sakhalins 34.79 25 *e*P **P** **21 55 18.3 +0.5**
JIRN Jiri 35.16 295 *e*P **P** **21 55 21.3 0.0**
GUN Gumba 35.48 295 *e*P **P** **21 55 23.9 -0.1**
comp=E,96nm,0.8s,mb5.8
PKI Pulchoki 35.83 294 *e*P **P** **21 55 26.2 -0.8**
PKIN Phulchoki 35.84 294 *e*P **P** **21 55 26.3 -0.8**
KKN Kakani 35.98 295 *e*P **P** **21 55 27.6 -0.7**
DMN Daman 36.10 294 *e*P **P** **21 55 28.7 -0.6**
comp=E,93nm,1.2s,mb5.6
MBWA Marble Bar 37.49 184 *e*P **P** **21 55 40.6 -0.4**
comp=E,16nm,0.8s,mb4.9
MBWA *e*PcP PcP 21 57 58.7 +0.1
WRAB Tennant Creek 38.06 161 P **P** **21 55 45.9 0.0**
comp=E,419nm,1.2s,mb6.0,SNR=20
WRAB Tennant Creek 38.06 161 *e*P **P** **21 55 45.1 -0.8**
WRAB pmax pmax
comp=Z,72nm,1.0s,mb5.4
WRAB Tennant Creek 38.06 161 *e*P **P** **21 55 45.1 -0.8**
comp=Z,72nm,1.0s,mb5.4
WRA Warramunga Arr 38.07 161 P **P** **21 55 45.1 -0.9**
comp=Z,49nm,1.0s,mb5.2,baz=341,slow=9.6,SNR=120
TLY Talaya 38.14 341 P **P** **21 55 46.8 +0.5**
comp=Z,178nm,1.0s,mb5.8,SNR=11
TLY Talaya 38.14 341 *e*P **P** **21 55 46.6 +0.3**
TLY *e* 21 57 10.9
TLY *e*S **S** **22 01 38.2 +2.8**
TLY pmax pmax
comp=Z,90nm,1.8s,mb5.2
TLY MLR MLR
comp=Z,2μm,19.0s,MS4.9
TLY Talaya 38.14 341 *e*P **P** **21 55 46.6 +0.4**
comp=Z,195nm,1.9s,mb5.5
TLY Talaya 38.14 341 P **P** **21 55 47.0 +0.8**
SNR=27
TLY P 21 55 47.0
SNR=27
IRK Irkutsk 38.44 342 *e*P **P** **21 55 48.9 +0.1**
IRK *e* 22 01 38.4
IRK pmax pmax
comp=Z,91nm,2.0s,mb5.2
MOY Mondy 39.00 339 *e*P **P** **21 55 54.1 +0.6**
MOY pmax pmax
comp=Z,99nm,1.6s,mb5.3
WMQ Urumqi 40.01 320 *e*P **P** **21 56 03.3 +1.3**
WMQ pP pP 21 56 17.3 +1.1
WMQ PP PP 21 57 37.1 +2.3
WMQ PcP PcP 21 58 05.1 -1.1
WMQ S **S** **22 02 04.8 +1.1**
WMQ sS sS 22 02 28.8 +1.1
WMQ SS SS 22 04 56.3 -6.1
WMQ ScS ScS 22 06 02.8 -1.1
WMQ pmax pmax
comp=Z,16nm,1.5s,mb4.5
WMQ LR LR
comp=N,2μm,14.5s,MS5.2
WMQ LR LR
comp=E,1μm,14.0s,MS5.2
WMQ LR LR
comp=Z,680nm,15.0s,MS4.6
NRGR Nerungri 40.15 2 *e*P **P** **21 56 03.4 +0.4**
NRGR S **S** **22 02 09.8 +4.4**
NRGR smax
comp=N,19nm,0.6s
CLNS Chul'man 40.34 2 *e*P **P** **21 56 03.1 -1.4**
CLNS pmax pmax
comp=Z,22nm,1.6s,mb4.6
CLNS pmax pmax
comp=N,16nm,1.4s
CLNS pmax pmax
comp=E,5.0nm,1.3s
CLNS MLR MLR
comp=Z,1μm,15.0s,MS4.8
CLNS MLR MLR
comp=N,1μm,17.0s,MS4.8
CLNS MLR MLR
comp=E,330nm,14.0s,MS4.8
NGP Nagpur 41.13 283 *e*P **P** **21 56 08.0 -3.5**
NGP AMb AMB 21 56 15.7
comp=Z,80nm,1.7s,mb5.1
ASAR Alice Springs 41.47 164 P **P** **21 56 13.8 -0.4**
comp=Z,8.2nm,0.9s,mb4.4,baz=351,slow=7.9,SNR=54
ASAR ScP ScP 22 02 03.2 +6.5
comp=Z,1.5nm,1.0s,baz=20,slow=4.0,SNR=4.7
PALK Pallekele 41.66 262 LR LR 22 13 52.7
comp=Z,716nm,18.4s,MS4.6,baz=59,slow=37
PALK Pallekele 41.66 262 *e*P **P** **21 56 15.8 -0.2**
BOD Bodaibo 41.74 353 *e*P **P** **21 56 14.4 -1.6**
BOD pmax pmax
comp=Z,25nm,1.7s,mb4.6
HYB Hyderabad 41.81 278 *i* P **P** **21 56 17.0 -0.2**
HYB *e* 21 56 23.0
BHPL Bhopal 42.62 287 *e*P **P** **21 56 23.0 -0.8**
BHPL AMb AMB 21 56 24.5
comp=Z,72nm,1.3s,mb5.2
CTA Charters Tower 43.28 146 P **P** **21 56 31.2 +2.2**
comp=Z,8.3nm,0.9s,mb4.5,baz=321,slow=11,SNR=4.9
CTA Charters Tower 43.28 146 P **P** **21 56 31.2 +2.2**
CTAO Charters Tower 43.28 146 *e*P **P** **21 56 28.2 -0.8**
SMLA Simla 43.51 298 *e*P **P** **21 56 28.8 -2.1**
SMLA AMb AMB 21 56 36.9
comp=Z,92nm,1.7s,mb5.2
MK31 Makanchi Array 44.80 321 *e*P **P** **21 56 41.3 +0.4**
MKAR Makanchi Array 44.80 321 P **P** **21 56 41.2 +0.3**
comp=Z,22nm,0.8s,mb5.1,baz=115,slow=9.3,SNR=218
MKAR PcP PcP 21 58 23.0 +0.9
comp=Z,13nm,1.0s,baz=112,slow=5.9,SNR=6.0
MKAR ScP ScP 22 02 13.9 +4.0
comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=4.1
MKAR LR LR 22 17 20.4
comp=Z,728nm,18.3s,MS4.6,baz=127,slow=39
MKAR Makanchi Array 44.80 321 P **P** **21 56 41.2 +0.3**
MKAR 21 58 23.0
MKAR Makanchi Array 44.80 321 P **P** **21 56 41.2 +0.3**
MKAR PcP PcP 21 58 23.0 +0.9
MKAR ScP ScP 22 02 13.9 +4.0
MKAR LR LR 22 17 20.4
AJM Ajmer 45.25 291 *e*P **P** **21 56 44.0 -0.8**
YAK Yakutsk 45.80 5 *e*P **P** **21 56 46.7 -1.8**
YAK pmax pmax
comp=Z,16nm,1.1s,mb4.9
YAK pmax pmax
comp=N,11nm,1.4s
YAK MLR MLR
comp=Z,1μm,21.0s,MS4.8
YAK MLR MLR
comp=N,1μm,23.0s
YAK MLR MLR
comp=E,321nm,17.0s
PEA0B Petropavlovsk- 45.85 29 *e*P **P** **21 56 48.7 -0.4**
PETK Petropavlovsk- 45.85 29 P **P** **21 56 49.5 +0.3**
comp=E,13nm,0.6s,mb5.0,baz=204,slow=4.6,SNR=22
PETK LR LR 22 17 12.0
comp=E,202nm,18.8s,MS4.1,baz=230,slow=38
KAD Karad 45.97 278 *e*P **P** **21 56 48.9 -1.7**
POO Poona 46.16 280 *e*P **P** **21 56 51.3 -0.8**
POO AMb AMB 21 57 01.6
comp=Z,89nm,2.0s,mb5.3
PET Petropavlovsk 46.25 30 *e*P **P** **21 56 53.1 +0.9**
PET *e* 21 58 41.3
PET *e*S **S** **22 03 37.5 +2.6**
PET *e*SS SS 22 06 50.0 -11
PET pmax pmax
comp=Z,37nm,1.6s,mb5.1
PET pmax pmax
comp=Z,100nm,6.1s
PET pmax pmax
comp=Z,300nm,2.3s,mb5.8
PET smax
comp=N,600nm,3.9s

PET smax
comp=N,700nm,17.8s
PET MLR MLR
comp=Z,200nm,18.0s,MS4.1
PET Petropavlovsk 46.25 30 *e*P **P** **21 56 52.6 +0.3**
KSH Kashi 46.29 309 P **P** **21 56 55.0 +2.2**
KSH *e*pP pP 21 57 10.1 +2.8
KSH *e*sP sP 21 57 17.1 +3.4
KSH *e*PcP PcP 21 58 29.1 +1.6
KSH *e*PP PP 21 58 44.0 +1.8
KSH *e*ScP ScP 22 02 16.1 -0.2
KSH *e*PcS PcS 22 02 22.4 +0.4
KSH *e*S **S** **22 03 36.4 +0.5**
KSH *e*sS sS 22 04 04.3 +4.0
KSH *e*ScS ScS 22 06 41.1 -2.2
KSH *e*SS SS 22 06 56.1 -5.8
KSH LR LR
comp=N,900nm,15.0s,MS5.2
KSH LR LR
comp=E,2μm,15.3s,MS5.2
ULHL Ulahol 46.92 313 P **P** **21 56 59.3 +1.6**
SNR=10.0
FORT Forrest 47.30 173 *e*P **P** **21 57 02.7 +2.0**
comp=E,26nm,0.7s,mb5.3
ZAA0 Zalesovo Array 47.37 331 *e*P **P** **21 57 00.4 -0.6**
ZAA0 *e*PcP PcP 21 58 30.2 -0.7
ZALV Zalesovo Beam 47.37 331 P **P** **21 56 59.9 -1.0**
comp=E,18nm,0.8s,mb5.0,baz=116,slow=6.8,SNR=85
ZALV ScP ScP 22 02 23.2 +2.7
comp=E,0.9nm,0.6s,baz=112,slow=3.5,SNR=4.1
ZALV LR LR 22 18 47.3
comp=E,477nm,18.4s,MS4.5,baz=123,slow=38
ZALV Zalesovo Beam 47.37 331 P **P** **21 56 59.9 -1.0**
ZALV ScP ScP 22 02 23.2 +2.7
ZALV LR LR 22 18 47.3
KZA Kyzart 47.57 312 P **P** **21 57 04.5 +1.7**
SNR=35
TKM2 Tokmak 2 47.59 314 P **P** **21 57 03.6 +0.7**
SNR=16
TKM2 Tokmak 2 47.59 314 *e*P **P** **21 57 03.6 +0.7**
TKM2 *e* 21 58 31.7
TKM2 pmax pmax
comp=Z,28nm,1.2s,mb5.2
TKM2 Tokmak 2 47.59 314 *e*P **P** **21 57 03.6 +0.7**
comp=Z,28nm,1.2s,mb5.2
TKM2 *e*PcP PcP 21 58 31.7 -0.3
KBK Karagaybulak 47.96 313 P **P** **21 57 07.0 +1.3**
SNR=23
KLBR Kellerberrin 47.99 185 *e*P **P** **21 57 05.5 -0.5**
comp=Z,55nm,1.2s,mb5.5
UCH Uchtor 48.13 312 P **P** **21 57 09.0 +1.9**
SNR=54
UCH Uchtor 48.13 312 *e*P **P** **21 57 08.4 +1.3**
comp=Z,306nm,1.1s,mb6.2
CHMS Chumysh 48.20 313 P **P** **21 57 08.2 +0.6**
SNR=19
FRU Bishkek 48.25 313 *e*P **P** **21 57 08.0 0.0**
FRU pmax pmax
comp=Z,60nm,1.4s,mb5.4
AAK Ala-Archa 48.27 313 P **P** **21 57 09.9 +1.8**
comp=Z,79nm,1.1s,mb5.7,SNR=7.1
AAK Ala-Archa 48.27 313 P **P** **21 57 09.1 +1.0**
SNR=8.5
AAK Ala-Archa 48.27 313 LR LR 22 19 26.6
comp=Z,1μm,19.1s,MS4.8,baz=84,slow=39
AAK Ala-Archa 48.27 313*c*e**P** **P** **21 57 07.1 -1.0**
AAK pmax pmax
comp=Z,12nm,1.7s,mb4.7
AAK Ala-Archa 48.27 313 *e*P **P** **21 57 09.0 +0.8**
comp=Z,44nm,1.5s,mb5.3
AAK Ala-Archa 48.27 313 P **P** **21 57 09.4 +1.3**
SNR=18
AAK P 21 57 09.4
SNR=18
USP Ospenovka 48.46 314 P **P** **21 57 10.2 +0.6**
SNR=12
NVS Novosibirsk 48.64 331 ⇑*i*P **P** **21 57 10.1 -0.7**
NVS *e* PcP 21 58 33.1 -2.4
NVS *e*S ScS 22 06 55.5 -2.7
NVS pmax pmax
comp=Z,70nm,1.4s,mb5.5
NVS pmax pmax
comp=N,58nm,1.6s
NVS pmax pmax
comp=E,53nm,1.4s
NVS smax
comp=N,21nm,1.8s
AML Almayashu 48.69 312 P **P** **21 57 13.0 +1.6**
SNR=29
AML Almayashu 48.69 312 *e*P **P** **21 57 12.7 +1.3**
comp=N,46nm,1.2s,mb5.4
AML *e*PcP PcP 21 58 37.2 +1.3
EKS2 Erkin-Say 48.78 313 P **P** **21 57 13.0 +0.9**
SNR=28
EKS2 Erkin-Say 48.78 313 *e*P **P** **21 57 12.6 +0.5**
comp=N,29nm,1.1s,mb5.2
EKS2 *e*PcP PcP 21 58 37.7 +1.4
KURK Kurchatov 48.81 324 P **P** **21 57 12.7 +0.6**
comp=N,701nm,0.8s,mb6.7
KURK Kurchatov 48.81 324 LR LR 22 19 45.8
comp=N,557nm,18.7s,MS4.6,baz=110,slow=39
KURK Kurchatov 48.81 324*c*e**P** **P** **21 57 12.2 +0.1**
KURK pmax pmax
comp=Z,177nm,1.2s,mb6.0
KURK Kurchatov 48.81 324 *e*P **P** **21 57 12.3 +0.1**
comp=Z,108nm,0.9s,mb5.9
KURK Kurchatov 48.81 324 P **P** **21 57 12.7 +0.6**
SNR=45
KURK P 21 57 12.7
SNR=45
NWAO Narrogin (SRO) 49.36 186 *e*P **P** **21 57 16.4 -0.1**
BHJ Bhuj 49.77 287 *e*P **P** **21 57 19.3 -0.6**
BHJ AMb AMB 21 57 23.4
comp=Z,150nm,2.1s,mb5.7
BBOO Buckleboo 50.74 165 *e*P **P** **21 57 26.5 -0.5**
comp=Z,16nm,0.9s,mb5.0
KBL Kabul 50.75 301 *e*P **P** **21 57 27.5 +0.3**
KBL pmax pmax
comp=Z,58nm,0.9s,mb5.5
KBL Kabul 50.75 301 *e*P **P** **21 57 27.5 +0.3**
comp=Z,58nm,0.9s,mb5.5
SEY Seymchan 50.91 17*c*e**P** **P** **21 57 26.8 -1.1**
STKA Stephens Creek 51.51 159 *e*P **P** **21 57 32.8 0.0**
comp=Z,5.4nm,0.8s,mb4.5
STKA Stephens Creek 51.51 159 P **P** **21 57 32.8 +0.1**
comp=Z,3.7nm,0.6s,mb4.5,baz=337,slow=7.5,SNR=8.6
STKA Stephens Creek 51.51 159 *e*P **P** **21 57 33.4 +0.7**
comp=Z,2.5nm,0.9s,mb4.1
CMSA Cobar Meteorol 52.75 155 *e*P **P** **21 57 42.1 +0.1**
BVAR Borovoye Array 54.41 324 P **P** **21 57 54.3 +0.4**
comp=Z,12nm,0.4s,mb5.2,baz=105,slow=8.1,SNR=139
BVAR LR LR 22 22 01.3
comp=Z,564nm,18.1s,MS4.7,baz=109,slow=37
BVAR Borovoye Array 54.41 324 P **P** **21 57 54.3 +0.4**
BVAR LR LR 22 22 01.3
BRVK Borovoye 54.48 324 P **P** **21 57 55.4 +1.0**
comp=Z,636nm,0.8s,mb6.6,SNR=53
BRVK Borovoye 54.48 324*c*e**P** **P** **21 57 54.8 +0.4**
BRVK pmax pmax
comp=Z,149nm,1.2s,mb5.8
BRVK Borovoye 54.48 324 *e*P **P** **21 57 54.6 +0.2**
comp=Z,82nm,0.8s,mb5.7
BRVK Borovoye 54.48 324 P **P** **21 57 55.2 +0.8**
SNR=52
BRVK P 21 57 55.2
SNR=52
TIXI Tiksi 55.30 3 *e*P **P** **21 57 59.0 -1.0**
TIXI *e*S **S** **22 05 39.1 -0.6**
TIXI *e*SS SS 22 09 24.6 +0.2
TIXI pmax pmax
comp=Z,49nm,1.3s,mb5.4
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.2
TIXI Tiksi 55.30 3 *e*P **P** **21 57 59.2 -0.9**
comp=Z,152nm,1.9s,mb5.7
DZM Mont Dzumac 57.76 130 *e*S **S** **22 06 21.1 +7.6**
comp=Z,1μm,30.1s
DZM *e*LR LR 22 15 23.2
comp=Z,635nm,24.4s
BILL Bilibino 58.60 18 *e*P **P** **21 58 23.8 +0.3**
BILL pmax pmax
comp=Z,19nm,0.8s,mb5.2
BILL Bilibino 58.60 18 *e*P **P** **21 58 24.0 +0.5**
BILL *e* 21 59 13.2
BILL *i* S **S** **22 06 24.9 +1.6**
BILL pmax pmax

comp=Z,52nm,1.6s,mb5.3
BILL MLR MLR
comp=Z,500nm,17.0s,MS4.7
BILL Biiibino 58.60 18 *e*P **P 21 58 23.8 +0.3**
comp=Z,19nm,0.8s,mb5.2
ABKAR Akbulak array 59.71 318 *e*P **P 21 58 31.3 -0.1**
comp=Z,20nm,0.7s,mb5.3
ABKAR *e*PcP PcP 21 59 17.1 -0.8
ABKT Ailbek 59.82 305 P **P 21 58 33.5 +1.1**
comp=Z,305nm,1.2s,mb6.2,SNR=19
SVE Sverdlovsk 60.94 326⇓*e*P **P 21 58 40.2 +0.5**
SVE *e* 21 59 27.3
SVE *e* 22 00 53.9
SVE *e*PPP 22 02 31.9
SVE *e*S **S 22 06 56.5 +2.8**
SVE *e* 22 08 28.6
SVE pmax pmax
comp=Z,134nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,604nm,16.0s,MS4.8
HOQ Hoqain 61.05 288 P **P 21 58 41.2 +0.1**
SNR=6.7
AKTO Aktyubinsk 61.13 319 LR LR 22 25 31.9
comp=Z,416nm,19.2s,MS4.6,baz=282,slow=36
ARU Arti 61.96 326 P **P 21 58 46.4 -0.2**
comp=Z,475nm,0.5s,SNR=38
ARU Arti 61.96 326*c i*P **P 21 58 46.2 -0.4**
ARU *e* 21 59 26.6
ARU *e* 22 01 02.7
ARU S **S 22 07 09.9 +3.3**
ARU SS SS 22 11 12.4 +2.9
ARU pmax pmax
comp=Z,150nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,537nm,17.0s,MS4.8
ARU Arti 61.96 326 *e*P **P 21 58 45.9 -0.7**
ASHO Ashiyiah 62.07 290 P **P 21 58 54.5 +6.6**
SNR=6.4
SOKR Solikamsk 63.58 329*c i*P **P 21 58 57.4 +0.1**
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.5
SOKR MLR MLR
comp=Z,780nm,18.0s,MS4.9
NIKO Nikolski 64.28 39 P **P 21 59 02.8 +0.8**
MAK Makhachkala 67.92 310 *e*P **P 21 59 24.0 -1.6**
MAK *e* 21 59 54.0
MAK *e* 22 02 00.4
MAK *e*S S 22 08 21.6 +1.3
MAK *e* 22 09 23.6
MAK pmax pmax
comp=Z,64nm,1.5s,mb5.4
KBD Kabd 68.95 295 *e*P **P 21 59 31.4 -0.9**
KBD AMb AMB 21 59 39.0
comp=Z,40nm,1.1s,mb5.2
RDF Al-Radifah 69.11 295 *e*P **P 21 59 32.7 -0.5**
RDF AMb AMB 21 59 40.2
comp=Z,89nm,1.4s,mb5.5
MIB Mutribah 69.17 296 *e*P **P 21 59 32.5 -1.1**
MIB AMb AMB 21 59 40.0
comp=Z,45nm,1.4s,mb5.2
ZEI Tsey 70.58 310 *e*P **P 21 59 40.6 -1.4**
ZEI pmax pmax
comp=Z,33nm,1.5s,mb5.0
KIV Kislovodsk 71.36 311 P **P 21 59 47.1 +0.4**
comp=Z,278nm,0.9s,mb6.2,SNR=11
KIV Kislovodsk 71.36 311 *e*P **P 21 59 47.4 +0.7**
KIV *e* pP 22 00 06.4 +4.3
KIV *e*S S 22 09 03.2 +2.6
KIV pmax pmax
comp=Z,53nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,32nm,4.0s
KIV MLR MLR
comp=Z,590nm,20.0s,MS4.8
KIV Kislovodsk 71.36 311 *e*P **P 21 59 47.7 +1.0**
comp=Z,45nm,0.9s,mb5.4
KIV Kislovodsk 71.36 311 P **P 21 59 48.1 +1.3**
SNR=9.5
KIV P 21 59 48.1
SNR=9.5
VRHR Novokhopersk 71.54 319 *e*P **P 21 59 47.3 -0.4**
VRHR pmax pmax
comp=Z,30nm,0.3s,mb5.7
VRHR pmax pmax
comp=N,10.0nm,0.2s
VRHR pmax pmax
comp=E,20nm,0.7s
TTA Tatalina 71.69 28 *e*P **P 21 59 49.5 +1.2**
SVW2 Sparrevohn 71.92 30 *e*P **P 21 59 51.4 +1.7**
KLMR Klimovskoe 72.26 329 *e*P **P 21 59 50.0 -1.8**
KLMR pmax pmax
comp=Z,156nm,1.5s,mb5.7
VOR Voronezh 73.01 320 *e*P **P 21 59 57.0 +0.6**
VOR pmax pmax
comp=Z,180nm,1.0s,mb6.0
VORD Divnogorie 73.02 319 *e*P **P 21 59 55.5 -1.0**
VORD pmax pmax
comp=Z,40nm,1.1s,mb5.3
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,50nm,1.0s
VSR Storozhevoye 73.08 319 *e*P **P 21 59 56.2 -0.6**
VSR pmax pmax
comp=Z,80nm,1.3s,mb5.5
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,30nm,0.8s
CHUM Lake Minchumin 73.32 27 *e*P **P 21 59 59.1 +1.1**
comp=E,18nm,0.7s,mb5.1
RSO Redoubt South 73.33 31 *e*P **P 21 59 55.5 -2.7**
PPLA Purkeypile 73.44 28 *e*P **P 22 00 00.1 +1.3**
comp=E,65nm,1.5s,mb5.3
SOC Sochi 73.53 311 *e*P **P 21 59 56.6 -3.1**
SOC *e*PPP 22 04 24.6
SOC *e*S S 22 09 22.7 -2.8
SOC *e* 22 10 03.9
SOC MLR MLR
comp=Z,408nm,18.0s,MS4.8
MOS Moscow 73.58 324⇓*i*P **P 21 59 58.3 -1.4**
MOS *e*S S 22 09 25.2 -0.4
MOS pmax pmax
comp=Z,400nm,2.1s,mb6.0
MOS pmax pmax
comp=Z,126nm,1.4s,mb5.7
MOS MLR MLR
comp=Z,600nm,18.0s,MS4.9
KDAK Kodiak Island 73.63 34 P **P 22 00 00.7 +0.7**
comp=Z,18nm,0.7s,mb5.1
KDAK Kodiak Island 73.63 34*c*P **P 22 00 00.8 +0.9**
BPAW Bear Paw Mtn. 73.89 27 *e*P **P 22 00 02.3 +0.9**
comp=Z,64nm,1.2s,mb5.4
KTH Kantishna Hill 73.96 28 *e*P **P 22 00 02.9 +1.1**
comp=Z,20nm,1.0s,mb5.0
COLD Coldfoot 73.98 24 *e*P **P 22 00 02.9 +1.1**
comp=Z,28nm,1.1s,mb5.1
OBN Obninsk 74.24 323 P **P 22 00 03.3 -0.3**
comp=Z,338nm,1.1s,mb6.2,SNR=9.1
OBN Obninsk 74.24 323 *e*P **P 22 00 03.1 -0.5**
OBN *i* 22 00 09.1
OBN *i* pP 22 00 16.9 -2.1
OBN *i* 22 02 44.6
OBN *i*S S 22 09 42.4 +9.3
OBN pmax pmax
comp=Z,118nm,1.6s,mb5.6
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.7
OBN Obninsk 74.24 323 *e*P **P 22 00 03.1 -0.5**
comp=Z,136nm,1.4s,mb5.7
TRF Thorofare Moun 74.25 28 *e*P **P 22 00 03.8 +0.3**
comp=Z,65nm,1.5s,mb5.3
MCK McKinley 74.83 27 *e*P **P 22 00 06.3 -0.5**
MCK pmax pmax
comp=Z,153nm,1.5s,mb5.7
MCK McKinley 74.83 27 *e*P **P 22 00 06.3 -0.5**
comp=Z,153nm,1.5s,mb5.7
URZ Urewera 74.83 138 P **P 22 00 09.1 +1.9**
comp=Z,12nm,1.0s,mb4.8,baz=96,slow=18,SNR=4.5
PMR Palmer 74.98 30 *e*P **P 22 00 07.5 -0.3**
ANN Anapa 75.00 313 *e*P **P 22 00 07.8 -0.4**
ANN *e*S S 22 09 44.0 +2.1
ANN pmax pmax
comp=Z,113nm,1.2s,mb5.7
ANN MLR MLR
comp=Z,497nm,16.0s,MS4.9

COLA College 75.16 26 *e*P **P 22 00 09.2 +0.5**
COLA pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
COLA College 75.16 26 *e*P **P 22 00 09.2 +0.4**
comp=Z,9.3nm,0.7s,mb4.8
MALT Malatya 75.26 306 *e*P **P 22 00 10.6 +0.7**
MALT pmax pmax
comp=Z,45nm,1.4s,mb5.2
MALT Malatya 75.26 306 *e*P **P 22 00 10.6 +0.7**
comp=Z,45nm,1.4s,mb5.2
MALT Malatya 75.26 306⇓*i*P **P 22 00 11.2 +1.3**
JOF Joensuu 75.94 332 *e*P **P 22 00 12.6 -0.6**
JOF pmax pmax
comp=Z,41nm,1.0s,mb5.3
JOF Joensuu 75.94 332 *e*p **P 22 00 12.6 -0.6**
comp=Z,41nm,1.0s,mb5.3
KEV Kevo 76.51 339 *e*P **P 22 00 16.3 0.0**
KEV pmax pmax
comp=Z,32nm,0.9s,mb5.2
KEV Kevo 76.51 339 *e*p **P 22 00 16.3 0.0**
comp=Z,32nm,0.9s,mb5.2
DIV Divide 76.65 30 *e*P **P 22 00 17.2 -0.1**
comp=Z,52nm,1.2s,mb5.3
ARCES ARCESS Array B 77.07 339 P **P 22 00 19.9 +0.4**
comp=Z,30nm,1.0s,mb5.2,baz=77,slow=7.0,SNR=40
ARCES LR LR 22 39 00.3
comp=Z,396nm,18.2s,MS4.8,baz=229,slow=39
ARE0 ARCESS Array S 77.07 339 *e*P **P 22 00 19.9 +0.4**
SPB4 Spitsbergen Ar 77.21 348 *e*P **P 22 00 21.0 +0.8**
BMRM Bremner River 77.24 30 *e*P **P 22 00 21.7 +1.1**
comp=Z,53nm,1.3s,mb5.3
SIM Simferopol' 77.30 313 *e*P **P 22 00 21.8 +0.5**
SIM pmax pmax
comp=Z,19nm,1.0s,mb5.0
SIM MLR MLR
comp=Z,410nm,20.2s,MS4.7
KBS Kingsbay 77.76 349 *e*P **P 22 00 24.9 +1.6**
KBS *e*S S 22 10 14.0 +2.9
KBS AMS AMS 22 39 16.9
comp=Z,1μm,22.6s,MS5.1
KBS Kingsbay 77.76 349*ce*P **P 22 00 24.3 +1.0**
KBS pmax pmax
comp=Z,38nm,1.2s,mb5.2
KBS Kingsbay 77.76 349 *e*P **P 22 00 22.9 -0.4**
comp=Z,33nm,1.1s,mb5.2
HSP Hornsund 77.76 347 *e*P **P 22 00 24.3 +1.0**
EGAK Eagle 78.00 26 *e*P **P 22 00 25.4 +0.6**
KAF Kangasniemi 78.37 331 *e*P **P 22 00 26.4 -0.5**
KAF pmax pmax
comp=Z,30nm,0.8s,mb5.3
KAF Kangasniemi 78.37 331 *e*p **P 22 00 26.4 -0.5**
comp=Z,30nm,0.8s,mb5.3
FINES FINESS Array B 78.63 331 P **P 22 00 28.3 0.0**
comp=Z,15nm,0.5s,mb5.2,baz=60,slow=5.5,SNR=151
BR131 Keskin Array S 78.67 308 *e*P **P 22 00 28.6 -0.4**
comp=Z,4.0nm,0.9s,mb4.3
BRTR Keskin Array B 78.67 308 P **P 22 00 28.2 -0.8**
comp=Z,1.0nm,0.5s,mb4.0,baz=117,slow=1.7,SNR=9.6
BRTR LR LR 22 40 01.2
comp=Z,198nm,20.1s,MS4.4,baz=233,slow=39
BRTR Keskin Array B 78.67 308*ce*P **P 22 00 28.8 -0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
MMAI Mount Meron Ar 78.68 301 P **P 22 00 28.9 -0.3**
comp=Z,2.4nm,0.8s,mb4.2,baz=125,slow=7.2,SNR=6.6
MMAI LR LR 22 41 44.7
comp=Z,309nm,18.2s,MS4.7,baz=60,slow=41
DAWY Dawson 78.91 26 *e*P **P 22 00 30.9 +1.1**
TRO Tromso 79.27 340 *e*P **P 22 00 31.9 +0.2**
TRO *e*S S 22 10 28.5 +1.1
MICGM Minsk 79.30 324⇑*e*P **P 22 00 30.0 -2.1**
MNK Minsk 79.33 324⇑*e*P **P 22 00 30.0 -2.3**
MNK pmax pmax
comp=Z,150nm,1.5s,mb5.7
AKASG Malin Array Be 79.36 320 P **P 22 00 31.6 -0.9**
comp=Z,7.5nm,0.8s,mb4.7,baz=66,slow=5.4,SNR=44
AKASG LR LR 22 42 40.0
comp=Z,301nm,18.2s,MS4.7,baz=85,slow=41
AKASG Malin Array Be 79.36 320*ce*P **P 22 00 31.6 -0.9**
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 79.36 320 *e*P **P 22 00 31.4 -1.1**
CSS Prodhromos 79.94 303 *e*P **P 22 00 35.6 -0.4**
comp=Z,19nm,0.9s,mb5.0
INK Inuvik 79.96 21 P **P 22 00 35.7 +0.2**
comp=Z,6.4nm,0.9s,mb4.5,baz=291,slow=6.9,SNR=12
INK LR LR 22 41 26.4
comp=Z,217nm,19.5s,MS4.5,baz=128,slow=40
INK Inuvik 79.96 21 *e*P **P 22 00 36.2 +0.7**
ISAL Salakas 80.03 325 *e*P **P 22 00 35.5 -0.6**
KIS Kishinev 80.48 316 *e*P **P 22 00 35.0 -3.7**
KIS LRM 22 41 36.0
comp=Z,500nm,17.0s
KIS Kishinev 80.48 316 *e*P **P 22 00 35.0 -3.7**
KIS *e* pP 22 00 48.0 -6.3
ALE Alert 81.15 1 P **P 22 00 42.9 +1.2**
comp=Z,112nm,1.6s,mb5.5,SNR=5.0
CFR Carcaliu 81.39 314⇓P **P 22 00 44.1 +0.6**
CFR Carcaliu 81.39 314⇓*i*P **P 22 00 44.1 +0.6**
HARR Harsova 81.65 314⇓P **P 22 00 45.5 +0.6**
HARR Harsova 81.65 314⇓*i*P **P 22 00 45.5 +0.6**
ABPO Ambohimpanom 81.82 247 *e*P **P 22 00 45.5 -0.7**
ABPO *e* 22 00 52.5
ABPO pmax pmax
comp=Z,33nm,1.5s,mb5.0
ABPO Ambohimpanom 81.82 247 *e*P **P 22 00 45.5 -0.7**
comp=Z,33nm,1.5s,mb5.0
ABPO *e*PcP PcP 22 00 52.5 +0.7
SUW Suwalki 82.09 324 *i*P **P 22 00 46.6 -0.4**
SUW LMZ 22 42 00.9
comp=Z,400nm,19.4s
SUW Suwalki 82.09 324 *e*P **P 22 00 46.4 -0.6**
SUW *e* pP 22 01 01.5 -1.2
SUW pmax pmax
comp=Z,123nm,1.1s,mb5.8
SUW Suwalki 82.09 324 *e*P **P 22 00 46.4 -0.7**
comp=Z,122nm,1.1s,mb5.8
SUW *e* pP 22 01 01.5 -1.2
VRI Vrincioaia 82.16 315 P **P 22 00 48.6 +1.0**
VRI Vrincioaia 82.16 315⇑*i*P **P 22 00 48.0 +0.4**
PLOR Plostina 82.22 315⇑P **P 22 00 48.9 +1.0**
PLOR Plostina 82.22 315⇑*i*P **P 22 00 48.9 +1.0**
BURAR Bucovina Array 82.69 317⇑P **P 22 00 50.4 +0.1**
BURAR Bucovina Array 82.69 317⇑*i*P **P 22 00 50.4 +0.1**
BUR01 Bucovina Ar. S 82.69 317 P **P 22 00 51.3 +1.0**
BUR08 Bucovina Ar. S 82.69 317 *e*P **P 22 00 50.2 -0.1**
BUR08 *e*PcP PcP 22 00 55.5 +0.4
MLR Muntele Rosu 82.79 315 P **P 22 00 51.6 +0.7**
MLR Muntele Rosu 82.79 315⇓*i*P **P 22 00 51.4 +0.5**
LVV L'vov 82.81 320 *e*P **P 22 00 50.6 -0.3**
CASY Casey 82.98 185 *e*P **P 22 00 52.2 +1.0**
comp=Z,12nm,0.6s,mb5.1
KWP Kalwaria Pacla 83.69 320 *i*P **P 22 00 55.6 +0.2**
KWP LMZ 22 44 45.4
comp=Z,500nm,16.7s
KWP Kalwaria Pacla 83.69 320 *e*P **P 22 00 55.6 +0.2**
comp=Z,134nm,1.6s,mb5.8
KWP *e*PP PP 22 04 08.9 +0.5
KWP Kalwaria Pacla 83.69 320⇑*i*P **P 22 00 55.4 0.0**
NSS Namsos 83.69 336 *e*P **P 22 00 53.2 -1.9**
BMR Baia Mare 83.78 318 P **P 22 00 57.1 +1.2**
ALN Alexandroupoli 84.01 311 P **P 22 00 56.1 -1.2**
DAG Danmarks Havn 84.11 352⇓*i*P **P 22 00 57.0 -0.1**
DAG pmax pmax
comp=Z,16nm,0.6s,mb5.3
DAG Danmarks Havn 84.11 352⇓*i*P **P 22 00 57.0 -0.1**
comp=Z,16nm,0.6s,mb5.3
KOLS Kolonicke sedl 84.17 319 *e*P **P 22 00 58.1 +0.2**
KOLS pmax pmax
comp=Z,39nm,2.0s,mb5.2
KOLS Kolonicke sedl 84.17 319 *e*P **P 22 00 58.1 +0.2**
comp=Z,39nm,2.0s,mb5.2
KOLS Kolonicke sedl 84.17 319 *e*P **P 22 00 58.0 +0.1**
UZH Uzhgorod 84.25 319⇓*i*P **P 22 00 58.5 +0.2**
UZH *i* 22 01 04.5
RDO Rodhopi 84.31 311 P **P 22 00 58.0 -0.8**
DRGR 84.56 317⇓P **P 22 01 00.6 +0.7**
DRGR 84.56 317⇓*i*P **P 22 01 00.6 +0.7**
STHS Stebnicka Huta 84.66 320 *e*P **P 22 01 01.0 +0.7**
STHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
STHS Stebnicka Huta 84.66 320 *e*P **P 22 01 01.0 +0.7**
comp=Z,9.4nm,1.2s,mb4.8
STHS Stebnicka Huta 84.66 320 *e*P **P 22 01 01.0 +0.7**
RZN Rozhen 84.74 312 *i*P **P 22 00 00.5 -0.4**

GZR Gura Zlata 84.95 316 P **P 22 01 02.7 +0.7**
GZR Gura Zlata 84.95 316⇓*i*P **P 22 01 03.2 +1.3**
DLBC Dease Lake 85.03 30 P **P 22 01 03.8 +1.8**
comp=Z,5.8nm,0.9s,mb4.7,baz=283,slow=6.4,SNR=7.4
DLBC LR LR 22 43 58.9
comp=Z,229nm,19.2s,MS4.6,baz=303,slow=39
NIE Niedzica 85.23 320 *e*P **P 22 01 03.9 +0.7**
OJC Ojcow 85.27 321 *e*P **P 22 01 03.3 -0.1**
OJC *e*PcP PcP 22 01 08.1 +1.6
OJC Ojcow 85.27 321 *e*P **P 22 01 03.4 0.0**
KECS Kecovo 85.44 319 *e*P **P 22 01 04.8 +0.5**
KECS pmax pmax
comp=Z,17nm,1.2s,mb5.0
KECS Kecovo 85.44 319 *e*P **P 22 01 04.8 +0.5**
comp=Z,17nm,1.2s,mb5.0
KECS Kecovo 85.44 319 *e*P **P 22 01 04.8 +0.5**
MMB Musomiste 85.47 312 *i*P **P 22 01 00.7 -3.9**
NB2 NORSAR Subarra 85.52 333 P **P 22 01 04.0 -0.4**
comp=Z,28nm,0.8s,mb5.5,baz=64,slow=4.8
NOA NORSAR Array B 85.52 333 P **P 22 01 04.1 -0.3**
comp=Z,16nm,0.7s,mb5.4,baz=64,slow=4.9,SNR=67
NOA NORSAR Array B 85.52 333 P **P 22 01 04.1 -0.3**
VTS Vitosha 85.53 313 P **P 22 01 05.0 +0.1**
VTS Vitosha 85.53 313 *i*P **P 22 01 05.0 +0.1**
KMBO Kilima Mbogo 85.58 268 P **P 22 01 06.9 +1.2**
comp=Z,4.7nm,1.0s,mb4.7,baz=44,slow=5.2,SNR=12
KMBO LR LR 22 40 51.8
comp=Z,268nm,18.5s,MS4.7,baz=94,slow=37
KMBO Kilima Mbogo 85.58 268 *e*P **P 22 01 06.5 +0.8**
KMBO pmax pmax
comp=Z,25nm,1.5s
KMBO Kilima Mbogo 85.58 268 *e*P **P 22 01 06.5 +0.8**
comp=Z,25nm,1.5s,mb5.2
MIR Mirnyy 85.61 191⇓*i*P **P 22 01 05.8 +1.3**
MIR pmax pmax
comp=Z,192nm,1.4s,mb6.1
BZS Buzias 85.66 316⇑P **P 22 01 05.4 0.0**
BZS Buzias 85.66 316 P **P 22 01 05.5 0.0**
BZS Buzias 85.66 316⇑*i*P **P 22 01 05.3 -0.1**
GKP Gorka Klasztor 85.67 324 *e*P **P 22 01 05.8 +0.5**
GKP LMZ 22 42 00.4
comp=Z,600nm,18.1s
GKP Gorka Klasztor 85.67 324 *e*P **P 22 01 05.8 +0.5**
GKP MLR MLR
comp=Z,600nm,18.1s,MS5.0
OUR Ouranopolis 85.68 311 P **P 22 01 04.3 -1.3**
SRS Serrai 85.72 312 P **P 22 01 04.5 -1.3**
NAO01 NORSAR Array S 85.75 333 *e*P **P 22 01 05.0 -0.6**
comp=Z,25nm,1.0s,mb5.4
KKB Krupnik 85.85 312 *i*P **P 22 01 05.8 -0.7**
PSZ Piszkesteto 86.00 319 *e*P **P 22 01 07.0 -0.1**
comp=Z,69nm,1.5s,mb5.7
PSZ Piszkesteto 86.00 319⇑*e*P **P 22 01 07.2 +0.1**
PSZ Piszkesteto 86.00 319⇑*i*P **P 22 01 07.2 +0.1**
PAIG Paliouri 86.02 310 P **P 22 01 06.2 -1.2**
PLG Polygyros 86.05 311 P **P 22 01 06.3 -1.2**
BSD Bornholm Skovb 86.22 327 *i*P **P 22 01 07.8 -0.2**
BSD pmax pmax
comp=Z,17nm,1.1s,mb5.2
BSD Bornholm Skovb 86.22 327 *i*P **P 22 01 07.8 -0.2**
comp=Z,17nm,1.1s,mb5.2
OSL Oslo 86.23 332 *e*P **P 22 01 07.9 -0.1**
HORT Hortiatis 86.23 311 P **P 22 01 07.2 -1.2**
VAY Valandovo 86.39 312 *e*P **P 22 01 07.9 -1.3**
VAY Valandovo 86.39 312 P **P 22 01 07.5 -1.6**
OKC Ostrava-Krasne 86.40 321 *e*P **P 22 01 08.9 -0.1**
OKC *e*S S 22 11 36.7 -4.0
OKC MLR MLR
comp=Z,300nm,14.6s,MS4.8
OKC Ostrava-Krasne 86.40 321 *e*P **P 22 01 08.9 -0.1**
OKC *e*S S 22 11 36.7 -4.0
OKC AMS AMS 22 44 30.0
comp=Z,300nm,14.6s
VYHS Vyhne 86.46 320 *e*P **P 22 01 09.7 +0.3**
VYHS pmax pmax
comp=Z,21nm,1.5s,mb5.2
VYHS Vyhne 86.46 320 *e*P **P 22 01 09.7 +0.3**
comp=Z,21nm,1.5s,mb5.2
VYHS Vyhne 86.46 320 *e*P **P 22 01 09.7 +0.3**
KOLL Kolacno 86.70 320 *e*P **P 22 01 11.1 +0.6**
KOLL Kolacno 86.70 320 *e*P **P 22 01 11.1 +0.6**
BUD Budapest 86.70 319⇓*e*P **P 22 01 11.3 +0.7**
MORC Moravsky Berou 86.79 321 *e*P **P 22 01 10.8 -0.1**
comp=Z,16nm,1.4s,mb5.1
MORC Moravsky Berou 86.79 321⇓*i*P **P 22 01 11.5 +0.6**
LIT Litokhoron 86.83 311 P **P 22 01 09.5 -1.9**
SKO Skopje 86.97 313 *e*P **P 22 01 12.1 +0.1**
KSP Ksiaz 87.13 322 *e*P **P 22 01 12.2 -0.3**
KSP *e*S S 22 11 49.0 +1.3
KSP MLR MLR
comp=Z,1μm,17.5s,MS5.3
DPC Dobruska-Polom 87.30 322 *e*P **P 22 01 13.8 +0.4**
DPC *e*S S 22 11 47.6 -1.7
DPC MLR MLR
comp=Z,400nm,14.4s,MS5.0
DPC Dobruska-Polom 87.30 322 *e*P **P 22 01 13.8 +0.4**
DPC *e*S S 22 11 47.6 -1.7
DPC AMS AMS 22 46 00.0
comp=Z,400nm,14.4s
KRUS Krusevo 87.31 312 *e*P **P 22 01 12.0 -1.6**
SMOL Smolenice 87.33 320 *e*P **P 22 01 14.9 +1.3**
SMOL Smolenice 87.33 320 *e*P **P 22 01 14.9 +1.3**
PKSM Moragy 87.40 318 P **P 22 01 14.4 +0.4**
PKSM Moragy 87.40 318⇑*i*P **P 22 01 13.6 -0.4**
VRAC Vranov 87.54 321 P **P 22 01 15.2 +0.6**
VRAC Vranov 87.54 321⇓*i*P **P 22 01 15.0 +0.4**
ZST Bratislava 87.65 320 *e*P **P 22 01 15.7 +0.6**
ZST pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ZST Bratislava 87.65 320 *e*P **P 22 01 15.7 +0.6**
comp=Z,5.2nm,0.7s,mb4.9
ZST Bratislava 87.65 320 *e*P **P 22 01 15.7 +0.6**
FOO Floro 87.86 335 AMS AMS 22 44 59.8
comp=Z,583nm,14.5s,MS5.1
TREC Trest 88.21 321 AMS AMS 22 46 10.0
comp=Z,500nm,16.7s
PVCC Panska Ves 88.26 323 *e*P **P 22 01 17.5 -0.5**
PVCC MLR MLR
comp=Z,600nm,16.2s,MS5.1
PVCC Panska Ves 88.26 323 *e*P **P 22 01 17.5 -0.5**
PVCC AMS AMS 22 46 10.0
comp=Z,600nm,16.2s
BER Bergen 88.37 334 AMS AMS 22 44 02.2
comp=Z,602nm,23.6s,MS4.9
BRG Berggiesshubel 88.48 323 *e*P **P 22 01 18.8 -0.2**
comp=Z,14nm,1.3s,mb5.0
BRG S S 22 11 59.0 -1.6
BRG PS 22 12 56.0
BRG SS SS 22 17 41.0 -10
BRG
comp=N,362nm,15.3s
BRG
comp=E,230nm,15.6s
BRG
comp=Z,479nm,21.4s
BRG Berggiesshubel 88.48 323 *e*P **P 22 01 18.8 -0.2**
BRG S S 22 11 59.0 -1.6
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
BRG MLR MLR
comp=N,217nm,15.3s,MS4.8
BRG MLR MLR
comp=E,138nm,15.6s,MS4.8
BRG MLR MLR
comp=Z,287nm,21.4s
PRU Pruhonice 88.50 322 *e*P **P 22 01 19.8 +0.7**
PRU *e*S S 22 12 04.4 +3.7
PRU MLR MLR
comp=Z,300nm,15.0s,MS4.8
PRU Pruhonice 88.50 322 *e*P **P 22 01 19.8 +0.7**
PRU *e*S S 22 12 04.4 +3.7
PRU AMS AMS 22 46 50.0
comp=Z,300nm,15.0s
CONA Conrad Observa 88.52 320⇑*i*P **P 22 01 19.5 +0.2**
comp=Z,14nm,1.4s,mb5.1,SNR=8.8
MUD Monsted U'grnd 88.56 329 *i*P **P 22 01 17.6 -1.7**
MUD pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
MUD Monsted U'grnd 88.56 329 *i*P **P 22 01 17.6 -1.7**
comp=Z,10nm,1.1s,mb5.1
BBB Bella Bella 88.61 35 LR LR 22 41 21.1
comp=Z,99nm,18.3s,MS4.3,baz=109,slow=36
CLL Collm 88.84 324⇑*i*P **P 22 01 20.0 -0.7**
CLL *i* 22 01 26.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CLL				eS	S	22 12 02.0	-1.9
CLL				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.2						
CLL				MLR	MLR		
	comp=Z,600nm,17.8s,MS5.1						
CLL	Collm	88.84	324⇑	iP	P	22 01 20.0	-0.7
	comp=Z,13nm,1.2s,mb5.1						
CLL				i		22 01 26.1	
CLL				eS	S	22 12 02.0	-1.9
CLL				LR	LR		
	comp=Z,600nm,17.8s,MS5.1						
CLL	Collm	88.84	324⇑	iP	P	22 01 20.0	-0.7
	comp=Z,13nm,1.2s,mb5.1						
CLL				i pP	pP	22 01 26.1	-10
CLL				ePP	PP	22 04 47.0	-3.0
	comp=Z,14nm,1.5s						
CLL				eS	S	22 12 02.0	-1.9
CLL				e(SP)		22 12 54.0	
CLL				eSS	SS	22 18 30.0	+34
CLL				LH		22 46 00.0	
	comp=N,300nm,20.9s						
CLL				LH		22 46 00.0	
	comp=E,200nm,20.2s						
KOGS	Kog	88.85	318	i P	P	22 01 20.5	-0.3
KHC	Kasperske Hory	89.42	322	eP	P	22 01 23.8	+0.3
KHC				eS	SKSac	22 11 53.9	+4.8
KHC				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.9						
KHC	Kasperske Hory	89.42	322	eP	P	22 01 23.8	+0.3
	comp=Z,7.2nm,1.3s,mb4.8						
KHC	Kasperske Hory	89.42	322	eP	P	22 01 23.8	+0.3
KHC				eSKS	SKSac	22 11 53.9	+4.8
KHC				AMS	AMS	22 47 00.0	
	comp=Z,400nm,18.0s						
GEC2	GERESS Array S	89.47	321	eP	P	22 01 23.9	+0.2
GEC2				pmax	pmax		
	comp=Z,2µm,1.1s						
GEC2	GERESS Array S	89.47	321	eP	P	22 01 23.9	+0.2
	comp=Z,2µm,1.1s						
GERES	GERESS Array B	89.47	321	P	P	22 01 24.0	+0.3
	comp=Z,3.7nm,1.0s,mb4.7,baz=72,slow=5.7,SNR=20						
GCIS	Gornji Cirnik	89.48	318	i P	P	22 01 24.1	+0.3
PERS	Pernice	89.50	319	i P	P	22 01 23.5	-0.3
SOKA	Soboth	89.53	319⇑	iP	P	22 01 23.7	-0.3
	comp=Z,10.0nm,1.3s,mb5.0						
MOA	Molln	89.54	320⇑	iP	P	22 01 24.2	+0.2
	comp=Z,21nm,1.2s,mb5.3						
NKC	Novy Kostel	89.62	323	eP	P	22 01 24.8	+0.5
NKC				MLR	MLR		
	comp=Z,500nm,17.8s,MS5.0						
NKC	Novy Kostel	89.62	323	eP	P	22 01 24.8	+0.5
NKC				AMS	AMS	22 47 10.0	
	comp=Z,500nm,17.8s						
YKA	Yellowknife Ar	89.63	23	P	P	22 01 24.8	+0.7
	comp=Z,4.0nm,0.7s,mb4.9,baz=304,slow=4.3,SNR=65						
YKA				LR	LR	22 43 45.7	
	comp=Z,177nm,21.3s,MS4.5,baz=100,slow=37						
YKA	Yellowknife Ar	89.63	23	P	P	22 01 24.8	+0.7
YKA				LR	LR	22 43 45.7	
BOJS	Bojanci	89.86	318	eP	P	22 01 25.6	0.0
MOX	Moxa	89.92	323	eP	P	22 01 26.4	+0.7
	comp=Z,12nm,1.6s,mb5.0						
MOX							
	comp=Z,500nm,19.0s						
MOX	Moxa	89.92	323	eP	P	22 01 26.4	+0.7
MOX				pmax	pmax		
	comp=Z,17nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,12µm,19.0s						
LJU	Ljubljana	90.11	318	i P	P	22 01 26.6	-0.1
SUMG	Summit	90.24	354	eP	P	22 01 27.4	+0.6
	comp=Z,34nm,1.0s,mb5.6						
KBA	Koelnbreinsper	90.43	320	i P	P	22 01 27.8	-0.4
	comp=Z,13nm,1.2s,mb5.1,SNR=6.6						
CADS	Cadrg	90.54	319	eP	P	22 01 27.7	-1.0
GRA1	Grafenberg Arr	90.57	323	eP	P	22 01 28.9	+0.1
	comp=Z,12nm,1.2s,mb5.1						
GRA1				LR	LR		
	comp=Z,300nm,21.7s,MS4.7						
GRF	Grafenberg Arr	90.57	323	eP	P	22 01 28.9	+0.1
	comp=Z,12nm,1.2s,mb5.1						
GRF				eL		22 44 31.5	
	comp=Z,325nm,21.7s						
GRF	Grafenberg Arr	90.57	323	eP	P	22 01 28.9	+0.1
GRF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,21.7s,MS4.7						
GRF	Grafenberg Arr	90.57	323	eP	P	22 01 28.9	+0.1
GRF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,21.7s,MS4.7						
ABTA	Abfaltersbach	91.08	320⇓	iP	P	22 01 30.2	-1.1
	comp=Z,16nm,1.2s,mb5.2						
WTTA	Wattenberg	91.40	320⇑	iP	P	22 01 32.3	-0.4
	comp=Z,28nm,1.3s,mb5.4						
MOTA	Moosalm	91.69	321⇑	iP	P	22 01 33.6	-0.4
	comp=Z,17nm,1.3s,mb5.2,SNR=8.6						
FETA	Feichten	92.06	320⇑	iP	P	22 01 35.6	-0.1
	comp=Z,17nm,1.3s,mb5.2,SNR=7.5						
MEM	Membach	93.08	325	P	P	22 01 40.5	+0.1
	comp=Z,6.7nm,1.7s,mb4.8						
PPT	Papeete	93.11	107	eLR	LR	22 31 08.2	
	comp=Z,548nm,26.5s						
PPT	Papeete	93.11	107	LR	LR	22 35 27.4	
	comp=Z,148nm,20.0s,MS4.4,baz=198,slow=30						
CDF	Champ du Feu	93.46	323	eP	P	22 01 41.7	-0.5
	comp=Z,18nm,1.1s,mb5.1						
CDF	Champ du Feu	93.46	323	eP	P	22 01 41.7	-0.5
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
CDF	Champ du Feu	93.46	323	eP	P	22 01 41.7	-0.5
	comp=Z,9.0nm,1.1s,mb5.1						
WLF	Walferdange	93.48	324	P	P	22 01 40.0	-2.2
	comp=Z,7.6nm,1.1s,mb5.0						
BCLA	Clavier	93.56	325	P	P	22 01 42.4	-0.2
	comp=Z,9.4nm,1.6s,mb5.0						
UCC	Uccle	93.88	326	P	P	22 01 43.2	-0.9
	comp=Z,22nm,2.3s,mb5.2						
HINF	Hinteralfeld	94.00	322	eP	P	22 01 43.8	-0.9
MAW	Mawson	94.21	199	eP	P	22 01 44.7	-0.3
	comp=Z,6.7nm,1.2s,mb5.0						
MAW	Mawson	94.21	199	P	P	22 01 45.8	+0.8
	comp=Z,9.8nm,1.1s,mb5.2,baz=53,slow=8.1,SNR=9.3						
MEZF	Maizieres J'vi	94.69	324	eP	P	22 01 47.5	-0.4
	comp=Z,32nm,1.2s,mb5.3						
MEZF	Maizieres J'vi	94.69	324	eP	P	22 01 47.5	-0.4
	comp=Z,32nm,1.2s,mb5.6						
PGF	Pioggiola	95.21	317	eP	P	22 01 49.0	-1.3
	comp=Z,13nm,0.8s,mb5.1						
PGF	Pioggiola	95.21	317	eP	P	22 01 49.0	-1.3
PGF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
PGF	Pioggiola	95.21	317	eP	P	22 01 49.0	-1.3
	comp=Z,6.6nm,0.8s,mb5.1						
LPG	La Plagne	95.21	320	eP	P	22 01 50.3	0.0
	comp=Z,16nm,1.0s,mb5.1						
LPG	La Plagne	95.21	320	eP	P	22 01 50.3	0.0
LPG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
LPG	La Plagne	95.21	320	eP	P	22 01 50.3	0.0
	comp=Z,8.3nm,1.0s,mb5.1						
LPL	La Plagne	95.22	320	eP	P	22 01 50.3	0.0
	comp=Z,20nm,1.0s,mb5.2						
LPL	La Plagne	95.22	320	eP	P	22 01 50.3	0.0
LPL				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
LPL	La Plagne	95.22	320	eP	P	22 01 50.3	0.0
	comp=Z,9.9nm,1.0s,mb5.2						
LOR	Lormes	96.03	323	eP	P	22 01 53.0	-1.0
	comp=Z,20nm,1.3s,mb5.1						
LOR				eMLR	MLR		
	comp=Z,344nm,18.0s,MS4.6						
LOR	Lormes	96.03	323	eP	P	22 01 53.0	-1.0
LOR				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.1						
LOR				MLR	MLR		
	comp=Z,340nm,18.0s,MS4.9						
LOR	Lormes	96.03	323	eP	P	22 01 53.0	-1.0
	comp=Z,10nm,1.3s,mb5.1						
LOR				LR	LR		
	comp=Z,340nm,18.0s,MS4.9						
ORIF	Oris-en-Rattie	96.03	320	eP	P	22 01 53.7	-0.4
	comp=Z,11nm,1.0s,mb5.0						
ORIF	Oris-en-Rattie	96.03	320	eP	P	22 01 53.7	-0.4
ORIF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
ORIF	Oris-en-Rattie	96.03	320	eP	P	22 01 53.7	-0.4
	comp=Z,5.7nm,1.0s,mb5.0						
FRF	La Foret Royal	96.23	319	eP	P	22 01 55.4	+0.4
	comp=Z,21nm,1.1s,mb5.2						
FRF	La Foret Royal	96.23	319	eP	P	22 01 55.4	+0.4
FRF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.2						
FRF	La Foret Royal	96.23	319	eP	P	22 01 55.4	+0.4
	comp=Z,10nm,1.1s,mb5.2						
SSF	Saint Saulge	96.34	323	eP	P	22 01 54.7	-0.7
	comp=Z,18nm,1.2s,mb5.1						
SSF	Saint Saulge	96.34	323	eP	P	22 01 54.7	-0.7
SSF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.1						
SSF	Saint Saulge	96.34	323	eP	P	22 01 54.7	-0.7
	comp=Z,8.8nm,1.2s,mb5.1						
SMF	Signal de Mont	96.37	322	eP	P	22 01 54.8	-0.7
AVF	Avril sur Loir	96.57	323	eP	P	22 01 55.6	-0.9
	comp=Z,45nm,1.6s,mb5.3						
AVF	Avril sur Loir	96.57	323	eP	P	22 01 55.6	-0.9
AVF				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.3						
AVF	Avril sur Loir	96.57	323	eP	P	22 01 55.6	-0.9
	comp=Z,22nm,1.6s,mb5.3						
YBH	Yreka Blue Hor	96.68	43	LR	LR	22 37 57.8	
	comp=Z,293nm,21.3s,MS4.7,baz=321,slow=31						
SMRF	Simiane la Rot	96.70	320	eP	P	22 01 55.6	-1.5
	comp=Z,23nm,1.3s,mb5.2						
SMRF	Simiane la Rot	96.70	320	eP	P	22 01 55.6	-1.5
	comp=Z,23nm,1.3s,mb5.4						
VIVF	Saint-Julien-l	96.81	321	eP	P	22 01 57.0	-0.6
	comp=Z,25nm,1.3s,mb5.2						
VIVF	Saint-Julien-l	96.81	321	eP	P	22 01 57.0	-0.6
VIVF				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.2						
VIVF	Saint-Julien-l	96.81	321	eP	P	22 01 57.0	-0.6
	comp=Z,13nm,1.3s,mb5.2						
TCF	Toulx Ste Croi	97.51	323	eP	P	22 02 00.2	-0.5
	comp=Z,7.5nm,1.1s,mb4.8						
TCF	Toulx Ste Croi	97.51	323	eP	P	22 02 00.2	-0.5
TCF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	97.51	323	eP	P	22 02 00.2	-0.5
	comp=Z,3.8nm,1.1s,mb4.8						
LDF	La Druitiere	97.52	326	eP	P	22 02 00.0	-0.7
	comp=Z,56nm,1.5s,mb5.6						
LDF	La Druitiere	97.52	326	eP	P	22 02 00.0	-0.7
LDF				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.6						
LDF	La Druitiere	97.52	326	eP	P	22 02 00.0	-0.7
	comp=Z,28nm,1.5s,mb5.6						
LASF	Ste Croix	97.71	320	eP	P	22 02 01.3	-0.4
	comp=Z,34nm,1.3s,mb5.4						
CAF	Calviac	98.34	322	eP	P	22 02 04.4	-0.1
RJF	Les Rejaudoux	98.45	322	eP	P	22 02 05.0	0.0
MFF	Saint Martin d	98.68	324	eP	P	22 02 04.7	-1.2
FRB	Frobisher Bay	99.59	5	LR	LR	22 54 17.3	
	comp=Z,174nm,18.2s,MS4.6,baz=203,slow=40						
TAOE	Nuku Hiva Isla	99.64	96	eSS	SS	22 20 40.5	+7.7
	comp=Z,114nm,25.1s						
TAOE				eLR	LR	22 34 26.9	
	comp=Z,555nm,32.9s						
FFC	Flin Flon	99.72	24	P	Pdif	22 02 10.9	+0.5
NVAR	Mina Array Bea	101.26	44	P	Pdif	22 02 19.2	+2.0
	comp=Z,0.3nm,0.4s,baz=283,slow=7.4,SNR=4.6						
TORD	Torodi Ar. Bea	114.35	293	PKP	PKiKP	22 07 06.0	-1.1
	comp=Z,3.2nm,0.9s,baz=48,slow=1.6,SNR=14						
TORD				PP	PP	22 07 58.4	-4.9
	comp=Z,1.4nm,0.9s,baz=64,slow=4.1,SNR=4.6						
TXAR	Lajitas Array	116.41	45	PKP	PKPdf	22 07 12.1	+1.4
	comp=Z,1.0nm,0.8s,baz=221,slow=1.3,SNR=10						
DBIC	Dimbokro	122.91	289	PKP	PKPdf	22 07 23.2	-0.4
	comp=Z,8.1nm,1.1s,baz=63,slow=1.5,SNR=4.4						
CMIG	Matias Romero	130.43	49	PKP	PKPdf	22 07 38.3	+0.5
	comp=Z,0.7nm,0.3s,baz=108,slow=3.8,SNR=4.1						
SJG	San Juan	144.63	14	PKP	PKPdf	22 08 03.1	-0.9
	comp=Z,18nm,0.3s,baz=109,slow=24,SNR=5.6						
MTP	Monte Pirata	144.78	13	ePKPdf	PKPdf	22 08 03.4	-0.7
EFI	East Falkland	144.88	180	ePKIKP	PKPdf	22 08 04.1	+0.8
SDV	Santo Domingo	151.73	28	ePKPdf	PKPdf	22 08 16.6	+1.0
SDV				ePKPbc	PKPbc	22 08 23.1	+1.1
ROSC	El Rosal	153.16	39	PKP	PKPdf	22 08 19.2	+1.4
	comp=Z,5.1nm,0.3s,baz=279,slow=23,SNR=5.2						
ROSC				PKPbc	PKPbc	22 08 26.2	+1.0
	comp=Z,3.7nm,0.4s,baz=289,slow=23,SNR=6.4						
PLCA	Paso Flores	153.38	158	PKPbc	PKPbc	22 08 26.9	+2.1
	comp=Z,13nm,1.0s,baz=201,slow=3.6,SNR=17						
OTAV	Otavalo	153.63	53	ePKPdf	PKPdf	22 08 19.5	+1.1
LVC	Limon Verde	167.78	122	ePKPdf	PKPdf	22 08 34.1	+0.7
LPAZ	La Paz	169.97	90	PKP	PKPdf	22 08 37.7	+2.8
	comp=Z,6.3nm,1.2s,baz=26,slow=1.8,SNR=10						
LPAZ	La Paz	169.97	90	ePKPdf	PKPdf	22 08 37.1	+2.1
CPUP	Villa Florida	170.19	182	PKP	PKPdf	22 08 35.2	+0.4
	comp=Z,0.3nm,0.4s,baz=124,slow=6.6,SNR=2.7						
CPUP				PKPab	PKPab	22 09 52.4	+1.9
	comp=Z,10nm,1.0s,baz=164,slow=3.8,SNR=13						
CPUP	Villa Florida	170.19	182	PKP	PKPdf	22 08 35.2	+0.4
CPUP				PKPab	PKPab	22 09 52.4	+1.9

GUC 13 21:53:53.8±0.8, 23.°16S×70.°58W, h34km±3km, ML3.8, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.13	65	eP	Pb	21 53 59.5	-0.5
MECH				i S	Sb	21 54 03.6	-0.6
MECH				AML	AML	21 54 05.1	
	comp=E,19µm,0.5s						
ANCH	Antofagasta	0.54	164⇓	iP	Pn	21 54 04.5	-0.6
ANCH				i S	Sb	21 54 12.1	-0.8
PECH	Pedro de Valdi	1.00	56	i P	Pn	21 54 12.0	+0.6
PECH				i S	Sn	21 54 25.6	+1.2
PECH				AML	AML	21 54 27.5	
	comp=N,8µm,0.6s						
MACH	Maria Elena	1.22	38⇑	iP	Pn	21 54 15.7	+1.2
MACH				eS	Sn	21 54 32.0	+2.2
PB04	Plate Boundary	1.34	49⇓	iP	Pn	21 54 10.7	-5.5
LVC	Limon Verde	1.63	71	eP	Pn	21 54 22.7	+2.6
LVC				i S	Sn	21 54 43.9	+4.0
LVC				AML	AML	21 54 45.0	
	comp=N,1µm,0.5s						
PB01	Plate Boundary	2.34	26	eP	Pn	21 54 31.2	+1.4
PB01				AML	AML	21 55 09.2	
	comp=E,520nm,0.4s						
HMBC	Humberston	2.94	13	eP	Pn	21 54 39.6	+1.5
HMBC				i S	Sn	21 55 15.2	+3.0
HMBC				AML	AML	21 55 36.3	
	comp=E,430nm,0.6s						
MNMC	Miæe Miæ	4.11	13	eP	Pn	21 54 55.7	+1.5
MNMC				i S	Sn	21 55 44.4	+3.2

IDC 13 21:56:19.5±3.8, 2.°78N×96.°14E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, Error ellipse: s-maj=148.4km s-min=30.6km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.77	123	P	P	22 04 27.1	-0.1
	0.2nm,0.6s,baz=302,slow=9.2,SNR=2.9						
MKAR	Makanchi Array	45.46	347	P	P	22 04 40.2	-0.2
	0.7nm,0.4s,baz=156,slow=8.9,SNR=16						
SONM	Songino Array	45.75	10	P	P	22 04 43.1	+0.5
	0.6nm,0.6s,baz=193,slow=9.5,SNR=4.4						
KURK	Kurchatov	50.00	346	P	P	22 05 15.3	-0.2
	0.5nm,0.5s,baz=160,slow=7.3,SNR=4.1						
ZALV	Zalesovo Beam	51.84	352	P	P	22 05 28.9	-0.5
	0.7nm,0.4s,baz=167,slow=6.6,SNR=5.6						

*ISCJB **13** 22:03:29.4±1.3, 31.°19N±0.°03×103.°77E±0.°03, h6km±8km, mb4.5/43, MS3.9/3, Error ellipse: s-maj=4.5km s-min=4.4km az=9.4*

*IDC **13** 22:03:30.3±0.6, 31.°17N×103.°70E, h0km, mb4.3/19, mb1 4.5/20, mb1mx4.2/31, mbtmp4.4/20, ML3.1/1, MS3.8/2, Ms1 3.8/2, ms1mx3.2/33, Error ellipse: s-maj=27.3km s-min=11.6km az=56.0*

*BJI **13** 22:03:31.8, 31.°25N×103.°82E, h16km, mB5.0/11, mb4.7/24, ML4.4/21, Ms4.5/26, Ms7 4.3/21*

*NEIC **13** 22:03:32.2±0.2, 31.°30N×103.°84E, h10km, mb4.6/22, Error ellipse: s-maj=5.6km s-min=4.5km az=52.0*

*MOS **13** 22:03:33.5±0.9, 31.°24N×103.°84E, h33km, mb4.6/15, Error ellipse: s-maj=10.7km s-min=6.4km az=103.6*

ISC 13 22:03:32.7±0.7, 31.°21N±0.°03×103.°75E±0.°03, h13km±4km, n127, σ1.s06/139, mb4.5/43, MS3.9/3, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.30	179	Pn	Pg	22 03 38.4	-0.5
CD2				Sg	Sg	22 03 44.0	+0.9
CD2				smax			
	comp=N,131µm,0.7s						
LZH	Lanzhou	4.86	1	Pg	Pb	22 04 52.5	-5.1
LZH				Sn	Sn	22 05 48.1	+6.5
LZH				smax			
	comp=N,550nm,1.0s						
LZH				smax			
	comp=E,570nm,0.9s						
LZH				LR	LR		
	comp=E,5µm,7.6s						
LZH				LR	LR		
	comp=Z,5µm,8.5s						
ENH	Enshi	5.03	99	ePn	Pn	22 04 48.2	+0.5
ENH				eS	Sg	22 06 12.1	-2.0
XAN	Xi'an	5.19	56	Pn	Pn	22 04 50.3	+0.3
XAN				Pg	Pg	22 05 06.5	-5.6
XAN				Sn	Sn	22 05 52.9	+3.1
XAN				Sg	Sg	22 06 19.1	-0.3
XAN				smax			
	comp=N,670nm,0.9s						
XAN				smax			
	comp=E,360nm,0.9s						
GYA	Guiyang	5.38	151	Pn	Pn	22 04 53.8	+1.1
GYA				smax			
	comp=N,840nm,1.0s						
GYA				smax			
	comp=E,580nm,1.0s						
GYA				LR	LR		
	comp=N,6µm,3.9s						
GYA				LR	LR		
	comp=E,4µm,2.8s						
KMI	Kunming	6.13	189	Pn	Pn	22 05 03.8	+0.8
KMI				Sn	Sn	22 06 13.0	0.0
KMI				smax			
	comp=N,97nm,1.9s						
KMI				smax			
	comp=E,140nm,1.0s						
KMI				LR	LR		
	comp=N,2µm,9.9s						
KMI				LR	LR		
	comp=E,4µm,9.3s						
KMI				LR	LR		
	comp=Z,2µm,10.9s						
GTA	Gaotai	8.79	340	eP	Pn	22 05 41.3	+2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WHN	Wuhan	9.13	91	P	Pn	22 05 36.0	-8.1
WHN				S	Sn	22 07 21.4	-5.4
WHN				LR	LR		
	comp=N,3µm,6.8s						
WHN				LR	LR		
	comp=E,4µm,7.3s						
WHN				LR	LR		
	comp=Z,4µm,7.4s						
BTO	Baotou	10.66	27	eP	Pn	22 06 04.0	-1.0
BTO				LR	LR		
	comp=N,470nm,9.4s						
BTO				LR	LR		
	comp=E,290nm,10.0s						
LSA	Lhasa	10.98	265	P	Pn	22 06 11.6	+2.2
LSA	Lhasa	10.98	265	eP	Pn	22 06 10.7	+1.3
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LSA	Lhasa	10.98	265	ePn	Pn	22 06 10.7	+1.3
	comp=Z,6.5nm,0.8s						
HHC	Hu-ho-hao-te	11.50	31	eP	Pn	22 06 18.9	+2.4
HHC				pP		22 06 22.3	
HHC				PP		22 06 28.3	
HHC				S	Sn	22 08 30.3	+5.5
HHC				sS		22 08 34.3	
HHC				SS		22 08 43.8	
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,680nm,5.7s						
HHC				LR	LR		
	comp=N,660nm,5.8s						
HHC				LR	LR		
	comp=E,500nm,5.4s						
HHC				LR	LR		
	comp=Z,490nm,5.4s						
NJ2	Nanjing	12.90	82	eP	Pn	22 06 36.6	+0.9
NJ2				pP		22 06 40.1	
NJ2				sP		22 06 43.3	
NJ2				PP		22 06 46.8	
NJ2				S	Sn	22 08 59.1	0.0
NJ2				sS		22 09 04.8	
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.5s						
NJ2				LR	LR		
	comp=N,2µm,18.9s						
NJ2				LR	LR		
	comp=E,860nm,19.4s						
NJ2				LR	LR		
	comp=Z,1µm,11.4s						
CHTO	Chiang Mai	13.09	201	eP	Pn	22 06 41.0	+2.7
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	Chiang Mai	13.09	201	ePn	Pn	22 06 41.0	+2.7
	comp=Z,8.7nm,0.9s						
QIZ	Qiongzhong	13.32	154	P	Pn	22 06 42.3	+0.8
QIZ				S	Sn	22 09 10.3	+0.8
QIZ				pmax	pmax		
	comp=Z,37nm,1.5s						
QIZ				LR	LR		
	comp=N,1µm,7.8s						
QIZ				LR	LR		
	comp=Z,1µm,7.8s						
BJT	Baijiatuau	13.38	46	P	Pn	22 06 39.9	-2.2
CM31	Chiang Mai Arr	13.43	200	ePn	Pn	22 06 46.6	+3.6
TAPN	Taplejung	14.52	259	eP	Pn	22 06 57.7	-0.1
	comp=Z,33nm,1.2s						
ODAN	Odare	14.95	257	eP	Pn	22 07 03.4	-0.3
	comp=Z,19nm,0.6s						
RAMN	Ramite	15.58	258	eP	Pn	22 07 10.9	-1.1
	comp=Z,18nm,0.9s						
JIRN	Jiri	15.70	261	eP	Pn	22 07 11.6	-2.0
GUN	Gumba	15.89	263	eP	Pn	22 07 14.2	-1.9
	comp=Z,38nm,0.8s						
PKI	Pulchoki	16.39	262	eP	Pn	22 07 19.7	-2.8
	comp=Z,23nm,0.5s						
KKN	Kakani	16.44	263	eP	Pn	22 07 20.2	-2.9
DMN	Daman	16.64	262	eP	Pn	22 07 23.3	-2.3
	comp=Z,65nm,0.8s						
SONM	Songino Array	16.72	6	Pn	Pn	22 07 26.6	+0.1
	comp=Z,0.1nm,0.3s,baz=188,slow=14,SNR=27						
SSLB	Suanglung	16.95	112	Pn	Pn	22 07 29.7	+0.1
	comp=Z,99nm,1.3s						
WMQ	Urumqi	17.86	319	eP	Pn	22 07 40.6	-0.2
WMQ				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ				LR	LR		
	comp=N,280nm,14.0s						
WMQ				LR	LR		
	comp=E,660nm,15.0s						
WMQ				LR	LR		
	comp=Z,680nm,15.0s						
ZAK	Zakamensk	19.15	359	eP	Pn	22 07 56.4	0.0
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s						
TLY	Talaya	20.45	360	eP	P	22 08 11.3	+1.6
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY	Talaya	20.45	360	ePn	P	22 08 09.9	+0.2
	comp=Z,8.6nm,1.0s						
MOY	Mondy	20.54	355	eP	P	22 08 12.1	+1.5
MOY				pmax	pmax		
	comp=Z,36nm,1.8s						
KSRS	Korea Array	20.88	66	P	P	22 08 15.3	+0.9
	comp=Z,7.2nm,0.7s,baz=261,slow=10,SNR=17						
KSRS				LR	LR	22 16 02.6	
	comp=Z,155nm,20.0s,MS3.4,baz=200,slow=36						
KSRS	Korea Array	20.88	66	P	P	22 08 15.4	+0.9
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s						

KSRS MLR MLR
comp=Z,155nm,20.0s,MS3.4
IRK Irkutsk 21.02 1 *eP* **P 22 08 17.4 +1.6**
IRK pmax pmax
comp=Z,119nm,1.0s,mb5.2
CN2 Changchun 21.24 48 *eP* **P 22 08 19.8 +1.5**
CN2 *ep*P 22 08 23.8
CN2 *eS* **S 22 12 13.8 -0.1**
CN2 pmax pmax
comp=Z,30nm,0.8s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,500nm,12.0s,MS4.3
CN2 LR LR
comp=E,500nm,12.0s,MS4.3
CN2 LR LR
comp=Z,500nm,13.0s,MS4.1
HIA Hailar 21.70 29 *eP* **P 22 08 23.2 +0.1**
HIA pmax pmax
comp=Z,18nm,0.9s
HIA Hailar 21.70 29 *eP* **P 22 08 23.2 +0.1**
comp=Z,18nm,0.9s,mb4.5
MK31 Makanchi Array 22.70 319 *eP* **P 22 08 34.4 +0.6**
MKAR Makanchi Array 22.70 319 P **P 22 08 34.1 +0.2**
comp=Z,20nm,1.1s,mb4.5,baz=126,slow=11,SNR=29
MKAR ScP ScP 22 16 02.8 -0.5
comp=Z,0.6nm,0.9s,baz=130,slow=4.3,SNR=3.8
TKM2 Tokmak 2 25.20 306 *eP* **P 22 08 59.1 +1.2**
TKM2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
TKM2 Tokmak 2 25.20 306 *eP* **P 22 08 59.1 +1.2**
comp=Z,5.0nm,0.9s,mb4.0
UCH Uchtor 25.77 303 *eP* **P 22 09 04.5 +1.4**
comp=Z,517nm,0.6s
UCH *e*PcP PcP 22 12 33.4 +0.8
AAK Ala-Archa 25.89 304 P **P 22 09 05.1 +0.9**
comp=Z,0.9nm,0.5s,mb3.6,baz=108,slow=3.2,SNR=4.4
AAK Ala-Archa 25.89 304 *eP* **P 22 09 04.8 +0.7**
comp=Z,6.1nm,0.9s,mb4.1
AML Almayashu 26.33 303 *eP* **P 22 09 10.1 +1.9**
comp=Z,7.1nm,1.0s,mb4.2
EKS2 Erkin-Say 26.41 304 *eP* **P 22 09 09.4 +0.6**
comp=Z,12nm,1.5s,mb4.2
ZAA0 Zalesovo Array 26.49 335 *eP* **P 22 09 09.2 -0.3**
ZALV Zalesovo Beam 26.49 335 P **P 22 09 09.4 -0.1**
comp=Z,8.8nm,0.8s,mb4.3,baz=136,slow=8.6,SNR=37
KURK Kurchatov 26.98 323 P **P 22 09 14.0 +0.2**
comp=Z,12nm,0.9s,mb4.4,baz=127,slow=9.4,SNR=35
KURK Kurchatov 26.98 323 *eP* **P 22 09 13.5 -0.4**
KURK pmax pmax
comp=Z,19nm,1.2s,mb4.5
KURK Kurchatov 26.98 323 *eP* **P 22 09 13.9 0.0**
comp=Z,16nm,1.1s,mb4.5
BOD Bodaibo 27.52 12 *eP* **P 22 09 17.5 -1.2**
KLR Kul'dur 27.71 41 *eP* **P 22 09 18.0 -2.4**
KBL Kabul 29.25 286 *eP* **P 22 09 36.1 +1.7**
KBL pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
KBL Kabul 29.25 286 *eP* **P 22 09 36.1 +1.7**
comp=Z,6.1nm,1.1s,mb4.2
BVAR Borovoye Array 32.52 322 P **P 22 10 02.6 -0.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=89,slow=14,SNR=4.6
BVAR PcP PcP 22 12 47.9 -1.6
comp=Z,1.0nm,0.7s,baz=177,slow=5.5,SNR=4.4
BRVK Borovoye 32.59 322 *eP* **P 22 10 04.1 +0.5**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRVK Borovoye 32.59 322 P **P 22 10 04.4 +0.8**
ABKAR Akbulak array 37.37 312 *eP* **P 22 10 44.3 -0.6**
comp=Z,2.5nm,0.9s,mb4.0
KAPI Kappang 39.13 154 P **P 22 10 58.0 -2.0**
comp=Z,12nm,0.9s,mb4.7,baz=330,slow=11,SNR=8.4
KAPI Kappang 39.13 154 *eP* **P 22 10 59.0 -1.0**
comp=Z,15nm,0.9s,mb4.7
ARU Arti 40.16 322 *d iP* **P 22 11 08.2 0.0**
ARU *e* 22 12 38.6
ARU S **S 22 17 13.1 -1.1**
ARU SS SS 22 20 06.9 -5.0
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ARU Arti 40.16 322 *eP* **P 22 11 07.6 -0.5**
comp=Z,4.5nm,0.8s,mb4.2
TIXI Tiksi 42.70 11 *eP* **P 22 11 26.6 -2.2**
TIXI pmax pmax
comp=Z,14nm,1.8s,mb4.4
TIXI Tiksi 42.70 11 *eP* **P 22 11 27.9 -1.0**
comp=Z,14nm,1.3s,mb4.5
SEY Seymchan 44.14 30 *cP* **P 22 11 39.1 -1.5**
ZEI Tsey 48.26 301 *eP* **P 22 12 14.1 +0.8**
ZEI pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KIV Kislovodsk 49.00 303 *eP* **P 22 12 20.3 +1.4**
KIV Kislovodsk 49.00 303 *eP* **P 22 12 20.3 +1.3**
BILL Bilibino 51.21 25 *eP* **P 22 12 34.1 -1.2**
BILL *e* 22 13 52.1
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BILL Bilibino 51.21 25 *eP* **P 22 12 35.1 -0.1**
comp=Z,5.1nm,0.8s,mb4.5
BILL *e*PcP PcP 22 13 52.9 +2.5
KAKA Kakadu 51.63 143 *eP* **P 22 12 37.1 -2.0**
comp=Z,8.6nm,0.8s,mb4.7
OBN Obninsk 52.20 318 *eP* **P 22 12 43.9 +1.0**
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
KNA Kununurra 52.52 149 *eP* **P 22 12 45.2 -0.5**
comp=Z,20nm,0.8s,mb5.1
FITZ Fitzroy Crossi 53.35 154 *eP* **P 22 12 50.7 -1.1**
comp=Z,8.5nm,0.9s,mb4.7
FITZ Fitzroy Crossi 53.35 154 *eP* **P 22 12 51.3 -0.5**
MBWA Marble Bar 54.28 162 *eP* **P 22 12 58.2 -0.3**
BR131 Keskin Array S 56.42 299 *eP* **P 22 13 13.5 -0.4**
ARCES ARCESS Array B 57.03 336 P **P 22 13 17.7 -0.1**
comp=Z,3.5nm,0.8s,mb4.5,baz=72,slow=12,SNR=5.2
ARCES PcP PcP 22 14 12.4 -0.3
comp=Z,1.8nm,0.7s,baz=86,slow=3.8,SNR=6.4
FINES FINESS Array B 57.31 326 P **P 22 13 19.5 -0.4**
comp=Z,1.6nm,0.8s,mb4.1,baz=91,slow=13,SNR=1.6
WRAB Tennant Creek 58.73 146 *eP* **P 22 13 30.4 +0.1**
WRAB pmax pmax
comp=Z,32nm,0.8s,mb5.4
WRAB Tennant Creek 58.73 146 *eP* **P 22 13 30.4 +0.1**
comp=Z,32nm,0.8s,mb5.4
WRA Warramunga Arr 58.73 146 P **P 22 13 30.2 -0.1**
comp=Z,21nm,0.8s,mb5.2,baz=336,slow=7.6,SNR=84
SPB4 Spitsbergen Ar 59.16 346 P **P 22 13 32.7 +0.1**
KWP Kalwaria Pacla 61.41 313 *eP* **P 22 13 48.3 -0.1**
KWP pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
KWP Kalwaria Pacla 61.41 313 *eP* **P 22 13 48.3 -0.1**
comp=Z,6.0nm,0.8s,mb4.8
ASAR Alice Springs 61.74 148 P **P 22 13 51.2 +0.4**
comp=Z,2.8nm,0.5s,mb4.7,baz=330,slow=6.6,SNR=30
NOA NORSAR Array B 64.40 327 P **P 22 14 06.7 -1.4**
comp=Z,0.7nm,0.6s,mb3.9,baz=73,slow=6.5,SNR=3.4
MORC Moravsky Berou 64.57 314 P **P 22 14 08.8 -0.6**
GVD Gavdhos 65.18 297 P **P 22 14 13.8 +0.1**
CTA Charters Tower 65.32 136 P **P 22 14 14.7 +0.2**
comp=Z,2.5nm,0.3s,mb4.7,baz=3.4,slow=2.4,SNR=2.6
CLL Collm 66.77 317 *eP* **P 22 14 21.0 -2.6**
GERES GERESS Array B 67.25 314 P **P 22 14 26.9 +0.2**
comp=Z,1.3nm,1.0s,mb3.9,baz=34,slow=5.0,SNR=5.5
COLD Coldfoot 67.49 24 *eP* **P 22 14 27.8 -0.1**
comp=Z,6.8nm,0.9s,mb4.7
PPLA Purkeypile 68.71 28 *eP* **P 22 14 36.1 +0.5**
comp=Z,6.0nm,0.7s,mb4.6
CHGN Chignik 68.71 36 *eP* **P 22 14 32.2 -3.6**
COLA College 69.46 26 *eP* **P 22 14 40.0 -0.2**
COLA pmax pmax
comp=Z,14nm,1.0s,mb4.8
COLA College 69.46 26 *eP* **P 22 14 40.0 -0.2**
comp=Z,14nm,1.0s,mb4.8
MCK McKinley 69.61 27 *eP* **P 22 14 40.6 -0.6**
KMBO Kilima Mbogo 70.64 256 *eP* **P 22 14 48.8 +0.5**
CDF Champ du Feu 71.33 316 *eP* **P 22 14 51.2 -0.7**
WLF Walferdange 71.44 317 P **P 22 14 52.2 -0.4**
comp=Z,10nm,1.7s,mb4.5
WLF AP pP 22 14 55.6 -1.2
BCLA Clavier 71.59 318 P **P 22 14 53.6 +0.1**
comp=Z,14nm,3.0s
INK Inuvik 72.15 19 P **P 22 14 56.5 0.0**
comp=Z,5.4nm,0.8s,mb4.5,baz=331,slow=9.6,SNR=9.5
INK Inuvik 72.15 19 *eP* **P 22 14 56.7 +0.2**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 72.15 19 *eP* **P 22 14 56.6 +0.1**
comp=Z,8.9nm,1.0s,mb4.7
STKA Stephens Creek 72.27 147 *eP* **P 22 14 57.3 -0.3**
comp=Z,3.2nm,0.5s,mb4.5
STKA Stephens Creek 72.27 147 P **P 22 14 57.7 +0.1**
comp=Z,4.0nm,0.5s,mb4.6,baz=328,slow=5.0,SNR=17
BMRM Bremner River 72.78 28 *eP* **P 22 15 00.7 +0.3**
comp=Z,17nm,0.9s,mb5.0
LPG La Plagne 72.95 313 *eP* **P 22 15 01.8 +0.1**
LPL La Plagne 72.96 313 *eP* **P 22 15 01.8 +0.1**
comp=Z,6.2nm,0.7s,mb4.4
LPL La Plagne 72.96 313 *eP* **P 22 15 01.8 +0.1**
LPL pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
LPL La Plagne 72.96 313 *eP* **P 22 15 01.8 +0.1**
comp=Z,3.1nm,0.7s,mb4.3
BNI Bardonecchia 73.20 313 *eP* **P 22 15 04.5 +1.3**
SUMG Summit 73.28 349 *eP* **P 22 15 03.6 +0.5**
CMSA Cobar Meteorol 73.99 144 *eP* **P 22 15 08.4 +0.5**
SMF Signal de Mont 74.21 315 *eP* **P 22 15 08.3 -0.8**
TCF Toulx Ste Croi 75.36 315 *eP* **P 22 15 15.3 -0.5**
KEST Kesra 75.74 303 LR LR 22 57 23.8
comp=Z,73nm,18.1s,MS4.0,baz=71,slow=43
YKA Yellowknife Ar 81.68 17 P **P 22 15 50.1 -0.2**
comp=Z,1.3nm,0.6s,mb4.1,baz=328,slow=5.2,SNR=23
FRB Frobisher Bay 85.17 357 P **P 22 16 07.5 -0.7**
comp=Z,0.9nm,0.6s,mb4.1,baz=30,slow=13,SNR=2.2
SFS San Fernando 86.02 311 *eP* **P 22 16 13.7 +0.7**
TORD Torodi Ar. Bea 93.31 287 P **P 22 16 47.5 -0.2**
comp=Z,0.6nm,0.8s,mb4.1,baz=71,slow=2.5,SNR=3.9
TORD Torodi Ar. Bea 93.31 287 P **P 22 16 47.5 -0.2**

IDC ***13*** *22:04:52.9±1.7, 16°.63N×122°.71E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, Error ellipse: s-maj=180.4km s-min=20.1km az=66.0*
ISCJB ***13*** *22:04:57.1±1.1, 16°.56N±0°.04×122°.51E±0°.10, h40km±10km, mb3.8/7, Error ellipse: s-maj=15.3km s-min=7.5km az=178.1*
MAN ***13*** *22:04:57, 16°.55N×122°.31E, h21km, mb4.6, ML3.4, MS3.4*
ISC 13 22:04:57.2±1.3, 16°.56N±0°.04×122°.46E±0°.08, h24km±9km, n16, σ1°.02/20, mb3.8/7, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.50**	**356**	*eP*	**Pb**	**22 05 08.9**	**+1.5**
CAUP	**Cauayan**	**0.72**	**302**	*eP*	**Pb**	**22 05 09.1**	**-1.9**
BALP	**Baler**	**1.18**	**226**	*eP*	**Pn**	**22 05 16.6**	**-1.6**
BALP				*eS*	**Sn**	**22 05 28.2**	**-5.2**
CVP	**Callao Caves**	**1.29**	**332**	*eP*	**Pn**	**22 05 18.8**	**-0.9**
CVP				*i S*	**Sn**	**22 05 35.0**	**-1.2**
PCPH	**Palayan**	**1.65**	**233**	*eP*	**Pn**	**22 05 24.0**	**-0.6**
PCPH				*eS*	**Sn**	**22 05 45.8**	**+0.9**
APYP	**Conner**	**1.74**	**318**	*eP*	**Pn**	**22 05 27.2**	**+1.3**
APYP				*eS*	**Sn**	**22 05 47.9**	**+0.6**
BCPH	**Baguio City Da**	**1.81**	**265**	*iP*	**Pn**	**22 05 26.6**	**-0.2**
BOLP	**Bolinao**	**2.45**	**266**	*eP*	**Pn**	**22 05 37.8**	**+2.2**
GQP	**Guinayangan**	**2.64**	**180**	*eP*	**Pn**	**22 05 38.9**	**+0.7**
SONM	**Songino Array**	**33.88**	**340**	P	**P**	**22 11 37.8**	**-0.1**
0.7nm,0.8s,mb3.7,baz=158,slow=8.9,SNR=1.8							
WRA	**Warramunga Arr**	**38.10**	**162**	P	**P**	**22 12 13.0**	**-1.3**
0.9nm,0.8s,mb3.5,baz=342,slow=9.2,SNR=5.5							
ASAR	**Alice Springs**	**41.51**	**164**	P	**P**	**22 12 43.0**	**+0.4**
0.3nm,0.6s,mb3.1,baz=355,slow=8.9,SNR=1.7							
MKAR	**Makanchi Array**	**44.82**	**321**	P	**P**	**22 13 09.2**	**+0.1**
0.4nm,0.5s,mb3.5,baz=117,slow=10,SNR=2.4							
KURK	**Kurchatov**	**48.82**	**324**	P	**P**	**22 13 40.4**	**0.0**
1.7nm,0.5s,mb4.3,baz=121,slow=8.3,SNR=12							
BVAR	**Borovoye Array**	**54.42**	**324**	P	**P**	**22 14 22.6**	**+0.4**
0.7nm,0.5s,mb3.8,baz=110,slow=6.8,SNR=3.9							
FINES	**FINESS Array B**	**78.63**	**331**	P	**P**	**22 16 56.6**	**-0.2**
14nm,1.4s,mb4.7,baz=61,slow=6.5,SNR=5.1							

IDC 13 22:17:21.0±1.6, 31°.01N×103°.75E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/26, mbtmp3.4/5, Error ellipse: s-maj=44.9km s-min=26.0km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.93**	**6**	Pn	Pn	22 21 19.7	+0.6
baz=195,slow=10,SNR=1.6							
KSRS	**Korea Array**	**20.96**	**66**	P	P	22 22 05.2	-0.4
1.8nm,0.6s,baz=263,slow=11,SNR=6.1							
MKAR	**Makanchi Array**	**22.86**	**320**	P	P	22 22 25.3	-0.5
0.1nm,0.4s,baz=117,slow=8.4,SNR=2.6							
KURK	**Kurchatov**	**27.15**	**324**	P	P	22 23 06.1	+0.4
0.1nm,0.3s,baz=124,slow=11,SNR=1.4							
WRA	**Warramunga Arr**	**58.56**	**146**	P	P	22 27 19.5	0.0
0.4nm,0.7s,baz=338,slow=7.6,SNR=5.0							

ISCJB ***13*** *22:27:57.1±0.9, 31°.27N±0°.03×103°.6E±0°.1, h12km±6km, mb3.8/11, Error ellipse: s-maj=14.9km s-min=4.8km az=167.9*
IDC ***13*** *22:27:58.8±1.1, 31°.28N×103°.78E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.6/10, Error ellipse: s-maj=39.2km s-min=19.7km az=51.0*
NEIC ***13*** *22:27:59.3±0.7, 30°.76N×102°.64E, h10km, mb4.2/3, Error ellipse: s-maj=23.9km s-min=12.1km az=216.0*
ISC 13 22:27:59.3±0.8, 31°.20N±0°.03×103°.59E±0°.09, h11km±6km, n25, σ1°.35/29, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**153**	Pg	**Pg**	**22 28 05.9**	**+0.1**
CD2				Sg	**Sg**	**22 28 10.9**	**+0.7**
CD2				smax			
comp=N,15μm,0.6s							
LZH	**Lanzhou**	**4.88**	**2**	*e*Pg	**Pg**	**22 29 33.1**	**+0.4**
LZH				Sg	**Sg**	**22 30 35.9**	**+0.1**
LZH				smax			
comp=N,77nm,0.8s							
LZH				smax			
comp=E,96nm,0.6s							
ENH	**Enshi**	**5.17**	**99**	Pn	**Pn**	**22 29 26.3**	**+10**
comp=E,28nm,0.7s							
GYA	**Guiyang**	**5.44**	**149**	Pg	**Pb**	**22 29 31.0**	**-3.3**
GYA				Sg	**Sb**	**22 30 38.5**	**-1.1**
GYA				smax			
comp=N,110nm,0.8s							
GYA				smax			
comp=E,110nm,0.7s							
KMI	**Kunming**	**6.10**	**187**	Pn	**Pn**	**22 29 31.3**	**+1.9**
KMI				Sn	**Sn**	**22 30 40.0**	**+0.8**
KMI				Sg	**Sg**	**22 31 13.9**	**-1.3**
KMI				smax			
comp=N,27nm,1.8s							
KMI				smax			
comp=E,30nm,1.4s							
KMI				LR	LR		
comp=N,250nm,5.8s							
KMI				LR	LR		
comp=E,500nm,6.6s							
SONM	**Songino Array**	**16.75**	**7**	Pn	**Pn**	**22 31 52.7**	**-1.0**
baz=188,slow=18,SNR=4.4							
TLY	**Talaya**	**20.46**	**0**	*eP*	**P**	**22 32 41.4**	**+4.7**
KSRS	**Korea Array**	**21.02**	**66**	P	**P**	**22 32 42.0**	**-0.8**
comp=E,2.5nm,0.6s,mb3.7,baz=264,slow=10,SNR=9.9							
CN2	**Changchun**	**21.35**	**48**	*eP*	**P**	**22 32 46.4**	**+0.1**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.2							
MK31	**Makanchi Array**	**22.61**	**320**	*eP*	**P**	**22 32 59.6**	**-0.2**
MKAR	**Makanchi Array**	**22.61**	**320**	P	**P**	**22 33 02.9**	**+3.0**
comp=Z,0.4nm,0.5s,mb3.1,baz=123,slow=12,SNR=8.0							
UCH	**Uchtor**	**25.65**	**304**	P	**P**	**22 33 25.2**	**-3.7**
ZALV	**Zalesovo Beam**	**26.44**	**335**	P	**P**	**22 33 38.2**	**+2.4**
comp=Z,0.8nm,0.5s,mb3.5,baz=120,slow=8.8,SNR=4.6							
KURK	**Kurchatov**	**26.90**	**324**	P	**P**	**22 33 40.8**	**+0.7**
comp=Z,1.0nm,0.9s,mb3.4,baz=126,slow=9.4,SNR=6.3							
KURK	**Kurchatov**	**26.90**	**324**	*eP*	**P**	**22 33 37.4**	**-2.7**
comp=Z,0.7nm,0.6s,mb3.4							
KBL	**Kabul**	**29.12**	**286**	P	**P**	**22 33 53.5**	**-6.6**
ARU	**Arti**	**40.08**	**322**	P	**P**	**22 35 33.0**	**-1.4**
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**22 37 47.6**	**+1.4**
comp=Z,7.8nm,1.2s,mb4.6,baz=350,slow=5.8,SNR=2.3							
NACGM	**Naroch**	**57.74**	**318**	*e*LR	LR	22 37 48.0	
ASAR	**Alice Springs**	**61.81**	**148**	P	**P**	**22 38 18.5**	**+0.3**
comp=Z,0.4nm,0.7s,mb3.7,baz=321,slow=9.7,SNR=3.4							
PSZ	**Piszkesteto**	**63.59**	**312**	P	**P**	**22 38 27.8**	**-2.1**
comp=Z,1.2nm,0.5s,mb4.2							
NOA	**NORSAR Array B**	**64.34**	**327**	P	**P**	**22 38 35.0**	**+0.4**
comp=Z,0.7nm,0.8s,mb3.7,baz=212,slow=12,SNR=1.8							
MORC	**Moravsky Berou**	**64.48**	**314**	P	**P**	**22 38 33.7**	**-2.0**
comp=Z,2.6nm,1.2s,mb4.1							
STKA	**Stephens Creek**	**72.33**	**147**	P	**P**	**22 39 27.5**	**+2.5**
comp=Z,1.3nm,0.7s,mb4.0,baz=325,slow=8.0,SNR=3.3							
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**22 40 18.0**	**+0.5**
comp=Z,0.2nm,0.5s,mb3.3,baz=327,slow=4.9,SNR=3.6							

BJI ***13*** *22:30:14.1, 32°.56N×105°.29E, h25km, ML3.6/5, Ms3.5/3, Ms7 3.2/2*
ISCJB ***13*** *22:30:17.8±1.2, 32°.2N±0°.1×105°.2E±0°.2, h10km, mb3.4/4, Error ellipse: s-maj=24.2km s-min=14.4km az=136.2*
IDC ***13*** *22:30:18.2±1.6, 32°.09N×105°.13E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, ML4.0/1, Error ellipse: s-maj=46.3km s-min=25.1km az=45.0*
ISC 13 22:30:19.8±1.2, 32°.2N±0°.1×105°.2E±0°.2, h10km, n8, σ0°.61/8, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.03**	**344**	*e*Pg	**Pn**	**22 31 20.5**	**-1.1**
LZH				smax			
comp=N,190nm,0.6s							
LZH				smax			
comp=E,320nm,0.6s							
GTA	**Gaotai**	**8.42**	**330**	*eP*	**Pn**	**22 32 21.3**	**-0.6**
GTA				pP		22 32 25.8	
GTA				sP		22 32 29.0	
GTA				pmax	pmax		
comp=Z,6.0nm,0.6s							
SONM	**Songino Array**	**15.63**	**3**	Pn	**Pn**	**22 34 00.5**	**+0.5**
comp=Z,0.1nm,0.3s,baz=190,slow=15,SNR=3.3							
KSRS	**Korea Array**	**19.33**	**68**	P	**Pn**	**22 34 46.4**	**+0.2**
comp=Z,0.5nm,0.3s,baz=253,slow=12,SNR=3.3							
MKAR	**Makanchi Array**	**22.81**	**316**	P	**P**	**22 35 23.6**	**+0.9**
comp=Z,0.8nm,0.7s,mb3.3,baz=120,slow=10.0,SNR=4.9							
ZALV	**Zalesovo Beam**	**26.17**	**332**	P	**P**	**22 35 54.5**	**+0.4**
comp=Z,0.5nm,0.4s,mb3.4,baz=129,slow=13,SNR=1.9							
KURK	**Kurchatov**	**26.96**	**321**	P	**P**	**22 36 01.5**	**+0.1**
comp=Z,0.6nm,0.7s,mb3.2,baz=128,slow=11,SNR=4.2							
ASAR	**Alice Springs**	**61.95**	**150**	P	**P**	**22 40 39.5**	**-0.5**
comp=Z,0.2nm,0.4s,mb3.6,baz=328,slow=6.4,SNR=2.7							

MAN 13 22:34:31, 15°.04N×121°.17E, h43km, mb3.7, ML2.5, MS2.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.80**	**29**	*eP*	Pn	22 34 47.5	+1.7
BALP				*eS*	Sn	22 34 58.5	+1.9
POLP	**Polilio Island**	**0.80**	**113**	*eP*	Pn	22 34 46.9	+1.0
POLP				*eS*	Sn	22 34 59.2	+2.5
GQP	**Guinayangan**	**1.67**	**132**	*eP*	Pn	22 34 58.6	+0.8
GQP				*eS*	Sn	22 35 19.2	+1.2

BJI ***13*** *22:44:39.3, 0°.50N×126°.05E, h87km, mB5.1/25, mb5.0/36, Ms4.8/16, Ms7 4.4/16*
MOS ***13*** *22:44:41.0±1.0, 1°.48N×125°.64E, h33km, mb5.3/36, Error ellipse: s-maj=13.2km s-min=6.3km az=112.2*
IDC ***13*** *22:44:47.3±2.0, 1°.37N×125°.60E, h75km±17km, mb4.6/19, mb1 4.6/22, mb1mx4.6/24, mbtmp4.6/22, MS3.8/5, Ms1 3.8/5, ms1mx3.2/28, Error ellipse: s-maj=17.7km s-min=8.6km az=84.0*
ISCJB ***13*** *22:44:47.5±0.4, 1°.37N±0°.02×125°.85E±0°.03, h99km±3km, mb5.0/101, Error ellipse: s-maj=5.3km s-min=3.6km az=173.4*
NEIC ***13*** *22:44:48.3±1.0, 1°.37N×125°.69E, h88km±8km, mb5.1/42, Error ellipse: s-maj=8.7km s-min=5.2km az=75.0*
NEIC Felt [IV] at Bitung and [III] at Manado and Tondano, Indonesia.
DJA ***13*** *22:44:48, 1°.39N×125°.95E, h93km, mb5.0/25*
ISC 13 22:44:48.8±0.3, 1°.35N±0°.02×125°.85E±0°.03, h96km±3km, h105km±3.7km: pP-P, n293, σ1°.24/271, mb5.0/101, 11C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.62**	**111**	P	**Pn**	**22 45 14.6**	**-1.7**
SGSI	**Sangihe**	**2.35**	**352**	P	**Pn**	**22 45 23.9**	**-1.9**
SGSI				S	**Sn**	**22 45 54.4**	**+0.3**
LBMI	**Labuha**	**2.57**	**140**	P	**Pn**	**22 45 27.4**	**-1.3**
LUWI	**Luwuk**	**3.89**	**232**	P	**Pn**	**22 45 47.1**	**+0.7**
MRSI	**Marisa**	**4.01**	**258**	P	**Pn**	**22 45 47.4**	**-0.6**
NLAI	**Namlea**	**4.72**	**165**	P	**Pn**	**22 45 56.5**	**-1.3**
NLAI				S	**Sn**	**22 46 47.0**	**-4.4**
APSI	**Ampana**	**4.76**	**242**	P	**Pn**	**22 45 59.4**	**+1.1**
AAI	**Ambon**	**5.52**	**155**	P	**Pn**	**22 46 08.0**	**-0.6**
430nm,0.6s,6μm1.7nm							
AAI				S	**Sn**	**22 47 08.1**	**-2.7**
430nm,0.6s,6μm1.7nm							
MATI	**Mati**	**5.58**	**4**	*e*P	**Pn**	**22 46 14.1**	**+4.8**
MSAI	**Masohi**	**5.58**	**147**	P	**Pn**	**22 46 10.2**	**+0.7**
317nm,0.6s,3μm1.1nm							
DAV	**Davao City (W)**	**5.69**	**357**	P	**Pn**	**22 46 09.6**	**-1.3**
26nm,0.3s,baz=297,slow=9.0,SNR=2.1							
DAV				S	**Sn**	**22 47 16.4**	**+1.4**
60nm,0.3s,baz=277,slow=16,SNR=1.7							
DAV				LR	LR	22 48 28.2	
comp=Z,703nm,19.1s,baz=140,slow=39							
DAV	**Davao City (W)**	**5.69**	**357**	*e*Pn	**Pn**	**22 46 11.8**	**+0.9**
DAV				*e*Sn	**Sn**	**22 47 16.8**	**+1.9**
DAV	**Davao City (W)**	**5.69**	**357**	P	**Pn**	**22 46 18.3**	**+7.4**
DMPH	**Davao City--Mi**	**5.71**	**357**	*i*P	**Pn**	**22 46 12.8**	**+1.6**
DMPH				*e*S	**Sn**	**22 47 20.1**	**+4.7**
CTBH	**Cotabato--PC H**	**6.05**	**345**	*e*P	**Pn**	**22 46 14.9**	**-1.0**
CTBH				*i* S	**Sn**	**22 47 21.7**	**-2.0**
KDI	**Kendari**	**6.18**	**212**	P	**Pn**	**22 46 16.2**	**-1.4**
106nm,0.7s,2μm0.6nm							
PCI	**Palu**	**6.42**	**250**	P	**Pn**	**22 46 21.2**	**+0.4**
3.2nm,0.7s,59nm0.0nm							
BUKP	**Musuan**	**6.54**	**353**	*e*P	**Pn**	**22 46 24.6**	**+2.1**
PAGZ	**Pagadian**	**6.91**	**339**	*e*P	**Pn**	**22 46 20.8**	**-6.8**
IPIL	**Ipil**	**7.19**	**333**	*e*P	**Pn**	**22 46 30.3**	**-0.9**
TTSI	**Tana Toraja**	**7.44**	**234**	P	**Pn**	**22 46 34.7**	**-0.1**
250nm,1.2s,2μm							
KAPI	**Kappang**	**8.78**	**224**	Pn	**Pn**	**22 46 52.3**	**-0.7**
564nm,0.5s,SNR=27							
KAPI	**Kappang**	**8.78**	**224**	P	**Pn**	**22 46 50.2**	**-2.8**
9.7nm,0.3s,baz=57,slow=4.7,SNR=29							
KAPI				S	**Sn**	**22 48 26.4**	**-3.9**
6.6nm,0.3s,baz=2.6,slow=22,SNR=3.7							
KAPI	**Kappang**	**8.78**	**224**	*e*Pn	**Pn**	**22 46 51.3**	**-1.7**
46nm,0.6s							
KAPI				*e*Sn	**Sn**	**22 48 28.5**	**-1.8**
SDKM	**Sandakan**	**9.64**	**296**	P	**Pn**	**22 47 04.2**	**-0.4**
TLE	**Tual**	**9.77**	**135**	P	**Pn**	**22 47 05.7**	**-0.7**
204nm,0.8s							
CUYO	**Cuyo Island**	**10.59**	**333**	*e*P	**Pn**	**22 47 18.5**	**+0.8**
KKM	**Kota Kinabalu**	**10.69**	**296**	P	**Pn**	**22 47 21.0**	**+2.1**
KKM	**Kota Kinabalu**	**10.69**	**296**	*e*Pn	**Pn**	**22 47 20.3**	**+1.4**
60nm,0.6s							
KKM	**Kota Kinabalu**	**10.69**	**296**	P	**Pn**	**22 47 20.7**	**+1.7**
166nm,1.0s,1μm							
KBKI	**Kotabaru**	**10.72**	**244**	P	**Pn**	**22

PWJI	**Pagerwojo**	**16.82 236**	P	**Pn**	**22 48 38.8 +0.3**
	47nm,1.0s				
PCJI	**Pacitan**	**17.43 237**	P	**Pn**	**22 48 46.8 +0.8**
	108nm,0.9s				
FITZ	**Fitzroy Crossi**	**19.33 181**	*e*P	**Pn**	**22 49 06.5 -2.1**
	22nm,0.8s				
FITZ	**Fitzroy Crossi**	**19.33 181**	P	**Pn**	**22 49 06.6 -1.9**
	1.3nm,0.3s,baz=25,slow=7.6,SNR=22				
FITZ	**Fitzroy Crossi**	**19.33 181**	*e*P	**Pn**	**22 49 05.9 -2.6**
	17nm,0.8s				
FITZ			*e*S	**S**	**22 52 36.3 -3.9**
FITZ	**Fitzroy Crossi**	**19.33 181**	P	**Pn**	**22 49 06.8 -1.8**
	47nm,1.0s				
MYKOM	**Kota Tinggi**	**22.00 271**	P	**P**	**22 49 37.1 +1.8**
MYKOM	**Kota Tinggi**	**22.00 271**	P	**P**	**22 49 35.9 +0.5**
	68nm,1.2s,mb4.8				
YULB	**Yu-li**	**22.36 349**	*e*P	**P**	**22 49 34.1 -4.9**
KASI	**Kota Agung**	**22.39 252**	P	**P**	**22 49 38.7 -0.8**
	52nm,0.7s,mb5.0				
TPUB	**Ta-pu**	**22.40 347**	*e*P	**P**	**22 49 35.9 -3.6**
	39nm,0.6s,mb4.9				
KGM	**Kluang**	**22.53 272**	P	**P**	**22 49 42.8 +1.8**
WRAB	**Tennant Creek**	**22.73 159**	P	**P**	**22 49 42.0 -1.0**
	657nm,1.1s,mb5.9,SNR=78				
WRAB	**Tennant Creek**	**22.73 159**	*e*P	**P**	**22 49 42.5 -0.5**
WRAB			pmax	pmax	
	comp=Z,109nm,1.1s,mb5.1				
WRAB	**Tennant Creek**	**22.73 159**	*e*P	**P**	**22 49 42.5 -0.4**
	comp=Z,109nm,1.1s,mb5.1				
WRAB	**Tennant Creek**	**22.73 159**	P	**P**	**22 49 42.7 -0.3**
	comp=Z,112nm,0.9s,mb5.2				
WRA	**Warramunga Arr**	**22.73 159**	P	**P**	**22 49 42.6 -0.4**
	baz=341,slow=10				
COEN	**Coen**	**22.93 132**	*e*P	**P**	**22 49 43.3 -1.7**
COEN	**Coen**	**22.93 132**	*e*P	**P**	**22 49 44.0 -0.9**
	comp=Z,183nm,0.8s,mb5.5				
COEN			*e*S	**S**	**22 53 52.2 +4.6**
COEN	**Coen**	**22.93 132**	P	**P**	**22 49 44.6 -0.4**
	comp=Z,127nm,1.2s,mb5.1				
KTGM	**Kuala Trenggan**	**23.02 280**	P	**P**	**22 49 46.6 +0.8**
MBWA	**Marble Bar**	**23.15 195**	*e*P	**P**	**22 49 46.3 -0.6**
	comp=Z,17nm,0.8s,mb4.4				
MBWA			*e*PcP	PcP	22 53 34.3 +1.7
MBWA	**Marble Bar**	**23.15 195**	P	**P**	**22 49 46.0 -0.9**
	comp=Z,28nm,0.7s,mb4.7				
QIZ	**Qiongzhong**	**23.56 319**	P	**P**	**22 49 50.8 +0.1**
QIZ			S	**S**	**22 54 01.0 +3.2**
QIZ			pmax	pmax	
	comp=Z,15nm,1.0s,mb4.3				
QIZ			LR	LR	
	comp=Z,280nm,30.5s				
FRIM	**Kepong**	**24.28 275**	P	**P**	**22 49 58.3 +0.9**
IPM	**Ipoh**	**24.99 278**	P	**P**	**22 50 03.7 -0.1**
IPM	**Ipoh**	**24.99 278**	P	**P**	**22 50 03.3 -0.5**
	comp=Z,46nm,0.8s,mb4.9				
JOW	**Kunigami**	**25.45 5**	P	**P**	**22 50 08.1 +0.3**
	comp=Z,85nm,0.8s,mb5.2,baz=221,slow=8.5,SNR=7.0				
KULM	**Kulim**	**25.46 279**	P	**P**	**22 50 08.2 +0.1**
PDSI	**Padang**	**25.49 265**	P	**P**	**22 50 07.4 -0.9**
	comp=Z,39nm,0.8s,mb4.9				
PPI	**Padang Panjang**	**25.52 266**	P	**P**	**22 50 09.0 +0.4**
	comp=Z,21nm,0.5s,mb4.8				
ASAR	**Alice Springs**	**26.07 163**	P	**P**	**22 50 14.6 +1.2**
	comp=Z,26nm,0.6s,mb4.8,baz=342,slow=7.7,SNR=125				
ASAR			PcP	PcP	22 53 41.0 +1.9
	comp=Z,5.9nm,0.6s,baz=350,slow=2.3,SNR=13				
ASAR			S	**S**	**22 54 38.9 +1.3**
	comp=Z,2.2nm,0.7s,baz=348,slow=22,SNR=5.3				
MNSI	**Mandailing Nat**	**26.27 269**	P	**P**	**22 50 15.1 -0.4**
	comp=Z,30nm,1.1s,mb4.6				
GYA	**Guiyang**	**31.05 325**⇑	*i*P	**P**	**22 51 01.0 +3.3**
GYA			pP	pP	22 51 23.8 +4.3
GYA			PP	PP	22 52 06.3 -3.3
GYA			PcP	PcP	22 53 52.0 +0.6
GYA			sS	sS	22 56 39.5 +5.8
GYA			ScP	ScP	22 57 23.4 -2.3
GYA			ScS	ScS	23 01 20.0 -3.0
GYA			pmax	pmax	
	comp=Z,20nm,1.0s,mb4.8				
GYA			pmax	pmax	
	comp=Z,130nm,4.9s				
GYA			LR	LR	
	comp=N,740nm,16.9s				
GYA			LR	LR	
	comp=E,580nm,17.8s				
GYA			LR	LR	
	comp=Z,620nm,16.4s				
NJ2	**Nanjing**	**31.25 348**	*e*P	**P**	**22 51 01.0 +1.6**
NJ2			pP	pP	22 51 25.4 +4.2
NJ2			S	**S**	**22 55 57.5 -1.4**
NJ2			sS	sS	22 56 42.0 +5.3
NJ2			pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.7				
NJ2			pmax	pmax	
	comp=Z,140nm,4.6s				
NJ2			LR	LR	
	comp=N,260nm,17.2s				
NJ2			LR	LR	
	comp=E,230nm,17.6s				
NJ2			LR	LR	
	comp=Z,330nm,15.2s				
CHTO	**Chiang Mai**	**31.58 305**	*e*P	**P**	**22 51 02.7 +0.2**
CHTO			pmax	pmax	
	comp=Z,30nm,1.6s,mb4.8				
CHTO	**Chiang Mai**	**31.58 305**	*e*P	**P**	**22 51 02.7 +0.3**
	comp=Z,30nm,1.6s,mb4.8				
CHTO	**Chiang Mai**	**31.58 305**	P	**P**	**22 51 03.0 +0.5**
FORT	**Forrest**	**32.02 176**	*e*P	**P**	**22 51 06.3 +0.2**
	comp=Z,32nm,1.0s,mb5.0				
FORT	**Forrest**	**32.02 176**	*e*P	**P**	**22 51 07.0 +0.9**
	comp=Z,45nm,0.9s,mb5.2				
KMI	**Kunming**	**32.50 319**	P	**P**	**22 51 11.4 +0.9**
KMI			S	**S**	**22 56 17.5 -1.2**
KMI			pmax	pmax	
	comp=Z,12nm,0.8s,mb4.8				
KMI			pmax	pmax	
	comp=Z,100nm,5.1s				
KMI			LR	LR	
	comp=N,180nm,10.3s				
KMI			LR	LR	
	comp=E,240nm,15.2s				
KMI			LR	LR	
	comp=Z,200nm,12.2s				
ENH	**Enshi**	**32.70 333**	*e*P	**P**	**22 51 10.3 -1.8**
	comp=Z,16nm,0.8s,mb4.9				
KLBR	**Kellerberrin**	**33.65 193**	*e*P	**P**	**22 51 20.9 +0.6**
	comp=Z,25nm,0.5s,mb5.3				
NWAO	**Narrogin (SRO)**	**35.05 193**	*e*P	**P**	**22 51 33.5 +1.1**
NWAO			pmax	pmax	
	comp=Z,24nm,0.9s				
NWAO	**Narrogin (SRO)**	**35.05 193**	*e*P	**P**	**22 51 33.5 +1.1**
	comp=Z,24nm,0.9s,mb5.0				
KSRS	**Korea Array**	**35.98 3**	P	**P**	**22 51 41.0 +0.6**
	comp=Z,9.6nm,0.7s,mb4.8,baz=180,slow=9.9,SNR=30				
KSRS			PcP	PcP	22 54 07.5 +2.4
	comp=Z,3.6nm,0.7s,baz=182,slow=2.8,SNR=10.0				
CD2	**Chengdu**	**36.09 327**	P	**P**	**22 51 43.8 +2.4**
CD2			PP	PP	22 53 09.9 +4.5
CD2			S	**S**	**22 57 14.9 +1.1**
CD2			sS	sS	22 57 58.5 +6.5
CD2			pmax	pmax	
	comp=Z,70nm,0.6s,mb5.8				
CD2			pmax	pmax	
	comp=Z,130nm,5.7s				
CD2			LR	LR	
	comp=N,480nm,5.9s				
CD2			LR	LR	
	comp=Z,370nm,7.7s				
XAN	**Xi'an**	**36.18 336**	P	**P**	**22 51 40.6 -1.5**
XAN			pmax	pmax	
	comp=Z,6.0nm,0.7s,mb4.6				
STKA	**Stephens Creek**	**36.26 157**	*e*P	**P**	**22 51 43.9 +1.1**
	comp=Z,19nm,1.0s,mb5.0				
STKA	**Stephens Creek**	**36.26 157**	P	**P**	**22 51 44.4 +1.6**
	comp=Z,27nm,0.9s,mb5.2,baz=326,slow=9.0,SNR=28				
STKA	**Stephens Creek**	**36.26 157**	*e*P	**P**	**22 51 44.5 +1.7**
	comp=Z,5.0nm,0.9s,mb4.4				
MAJO	**Matsushiro**	**36.84 17**	*e*P	**P**	**22 51 47.0 -0.7**
MAJO			pmax	pmax	
	comp=Z,55nm,1.5s,mb5.3				
MAJO	**Matsushiro**	**36.84 17**	*e*P	**P**	**22 51 47.0 -0.7**
	comp=Z,55nm,1.5s,mb5.3				
MAT	**Matsushiro**	**36.84 17**	P	**P**	**22 51 47.1 -0.6**
MJAR	**Matsushiro Arr**	**36.84 17**	P	**P**	**22 51 47.6 -0.1**
	comp=Z,9.5nm,0.8s,mb4.8,baz=194,slow=9.0,SNR=24				
MJAR			PcP	PcP	22 54 09.1 +1.3
	comp=Z,4.0nm,0.8s,baz=183,slow=3.0,SNR=8.0				
BJI	**Beijing**	**39.51 348**	P	**P**	**22 52 09.1 -0.9**
BJI			pmax	pmax	
	comp=Z,21nm,0.7s,mb5.1				
BJI			LR	LR	
	comp=N,210nm,8.2s				
BJI			LR	LR	
	comp=E,180nm,10.5s				
BJI			LR	LR	
	comp=Z,100nm,29.0s				
ARMA	**Armidale**	**40.01 144**⇑	*i*P	**P**	**22 52 16.8 +2.4**
ARMA	**Armidale**	**40.01 144**	*e*P	**P**	**22 52 16.9 +2.6**
	comp=Z,25nm,0.8s,mb5.1				
LZH	**Lanzhou**	**40.14 332**	*e*P	**P**	**22 52 15.6 +0.3**
LZH			pP	pP	22 52 34.0 -3.8
LZH			sP	sP	22 52 48.8 0.0
LZH			PP	PP	22 53 50.3 +0.7
LZH			*e*S	**S**	**22 58 13.0 -1.8**
LZH			pmax	pmax	
	comp=Z,24nm,1.1s,mb4.9				
LZH			pmax	pmax	
	comp=Z,100nm,5.0s				
SHL	**Shillong**	**40.63 309**	*e*P	**P**	**22 52 19.5 -0.1**
HHC	**Hu-ho-hao-te**	**41.40 344**	*e*P	**P**	**22 52 27.8 +2.2**
HHC			PP	PP	22 54 09.0 +5.9
HHC			PcP	PcP	22 54 23.4 +1.4
HHC			ScP	ScP	22 58 01.8 -1.7
HHC			PcS	PcS	22 58 13.8 +0.5
HHC			S	**S**	**22 58 35.1 +1.8**
HHC			sS	sS	22 59 18.3 +6.2
HHC			ScS	ScS	23 02 17.9 -1.8
HHC			pmax	pmax	
	comp=Z,17nm,1.1s,mb4.8				
HHC			pmax	pmax	
	comp=Z,200nm,5.5s				
HHC			LR	LR	
	comp=N,310nm,10.3s				
HHC			LR	LR	
	comp=E,720nm,15.2s				
HHC			LR	LR	
	comp=Z,220nm,15.7s				
CN2	**Changchun**	**42.27 360**	*e*P	**P**	**22 52 32.4 -0.3**
CN2			*e*pP	pP	22 52 57.9 +2.6
CN2			PcP	PcP	22 54 26.3 +1.5
CN2			*e*S	**S**	**22 58 45.3 -0.9**
CN2			pmax	pmax	
	comp=Z,10.0nm,1.1s,mb4.5				
CN2			pmax	pmax	
	comp=Z,300nm,5.0s				
CAN	**Canberra**	**42.41 152**	*e*P	**P**	**22 52 34.1 +0.1**
CAN			pmax	pmax	
	comp=Z,21nm,1.0s,mb4.8				
CAN	**Canberra**	**42.41 152**	*e*P	**P**	**22 52 34.1 +0.1**
	comp=Z,21nm,1.0s,mb4.8				
CNB	**Canberra Magne**	**42.58 151**	*e*P	**P**	**22 52 38.8 +3.5**
MDJ	**Mudanjiang**	**43.21 4**	P	**P**	**22 52 41.4 +1.1**
MDJ			pP	pP	22 53 02.8 -0.1
MDJ			sP	sP	22 53 13.8 -0.1
MDJ			pmax	pmax	
	comp=Z,32nm,0.9s,mb5.0				
MDJ			pmax	pmax	
	comp=Z,100nm,5.4s				
MDJ	**Mudanjiang**	**43.21 4**	*e*P	**P**	**22 52 40.8 +0.5**
	comp=Z,32nm,0.9s,mb5.0				
LSA	**Lhasa**	**43.40 314**	P	**P**	**22 52 43.0 +1.0**
LSA	**Lhasa**	**43.40 314**	*e*P	**P**	**22 52 42.4 +0.4**
LSA			*e*		22 54 31.1
LSA			pmax	pmax	
	comp=Z,18nm,0.6s,mb5.0				
LSA	**Lhasa**	**43.40 314**	*e*P	**P**	**22 52 42.4 +0.4**
	comp=Z,18nm,0.6s,mb5.0				
LSA			*e*PcP	PcP	22 54 31.1 +2.1
GTA	**Gaotai**	**44.71 331**	*e*P	**P**	**22 52 51.8 -0.6**
GTA			pP	pP	22 53 16.8 +1.6
GTA			S	**S**	**22 59 19.4 -2.5**
GTA			sS	sS	23 00 03.0 +1.9
GTA			pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.3				
GTA			pmax	pmax	
	comp=Z,72nm,6.0s				
GTA			LR	LR	
	comp=N,110nm,11.1s				
GTA			LR	LR	
	comp=E,110nm,10.2s				
GTA			LR	LR	
	comp=Z,140nm,14.7s				
ASAJ	**Asahikawa**	**45.11 17**	P	**P**	**22 52 57.2 +1.8**
	baz=214,slow=9.6				
PALK	**Pallekele**	**45.38 279**	*e*P	**P**	**22 52 57.9 -0.2**
PALK			*e*		22 54 36.6
GUN	**Gumba**	**46.46 308**	*e*P	**P**	**22 53 04.5 -1.8**
	comp=Z,115nm,0.7s,mb5.7				
MDRS	**Chennai**	**46.63 287**	*e*P	**P**	**22 53 07.8 0.0**
PKI	**Pulchoki**	**46.67 308**	*e*P	**P**	**22 53 07.1 -0.9**
	comp=Z,22nm,0.5s,mb5.1				
PKIN	**Phulchoki**	**46.69 308**	*e*P	**P**	**22 53 07.0 -1.1**
	comp=Z,29nm,0.6s,mb5.2				
KKN	**Kakani**	**46.88 308**	*e*P	**P**	**22 53 08.6 -1.0**
	comp=Z,27nm,0.5s,mb5.2				
DMN	**Daman**	**46.93 308**	*e*P	**P**	**22 53 09.2 -0.8**
	comp=Z,43nm,0.9s,mb5.2				
HABR	**Khabarovsk**	**47.61 8**	*e*P	**P**	**22 53 14.3 -0.6**
HABR			*e*		22 54 43.0
HABR			pmax	pmax	
	comp=Z,42nm,1.2s,mb5.1				
HABR			pmax	pmax	
	comp=E,19nm,1.2s				
HABR			pmax	pmax	
	comp=N,27nm,1.7s				
HABR			MLR	MLR	
	comp=Z,68nm,18.0s				
KLR	**Kul'dur**	**47.97 5**	*e*P	**P**	**22 53 13.8 -3.9**
HIA	**Hailar**	**48.03 355**	*e*P	**P**	**22 53 18.6 +0.5**
HIA			pmax	pmax	
	comp=Z,50nm,1.4s				
HIA	**Hailar**	**48.03 355**	*e*P	**P**	**22 53 18.6 +0.5**
	comp=Z,50nm,1.4s,mb5.2				
HYB	**Hyderabad**	**49.14 292**	*i* P	**P**	**22 53 26.0 -1.2**
	comp=Z,80nm,1.0s,mb5.6				
SONM	**Songino Array**	**49.28 343**	P	**P**	**22 53 27.2 -0.5**
	comp=Z,4.7nm,0.8s,mb4.5,baz=161,slow=8.5,SNR=29				
SONM			PcP	PcP	22 54 50.4 +1.1
	comp=Z,3.3nm,0.8s,baz=158,slow=4.2,SNR=6.5				
SONM			LR	LR	23 15 12.1
	comp=Z,81nm,20.0s,baz=146,slow=37				
SONM	**Songino Array**	**49.28 343**	P	**P**	**22 53 27.2 -0.5**
SONM					22 54 50.4
NGP	**Nagpur**	**49.67 297**	*e*P	**P**	**22 53 28.3 -2.9**
BHPL	**Bhopal**	**51.73 299**	*e*P	**P**	**22 53 45.2 -1.5**
BHPL			AMb	AMB	22 53 47.2
	comp=Z,26nm,0.9s,mb5.3				
ZAK	**Zakamensk**	**52.49 342**	*e*P	**P**	**22 53 50.3 -1.4**
ZAK			*e*		22 54 57.2
ZAK			pmax	pmax	
	comp=Z,3.0nm,0.9s,mb4.3				
KAD	**Karad**	**53.19 291**	*e*P	**P**	**22 53 56.2 -1.3**
KAD			AMb	AMB	22 53 57.1
	comp=Z,30nm,0.7s,mb5.5				
POO	**Poona**	**53.75 292**	*e*P	**P**	**22 53 59.9 -1.7**
POO			AMb	AMB	22 54 01.4
	comp=Z,25nm,0.7s,mb5.4				
MOY	**Mondy**	**54.32 341**	*e*P	**P**	**22 54 05.6 +0.4**
SMLA	**Simla**	**54.69 308**	*ex*	x	22 54 05.0
CLNS	**Chul'man**	**55.33 359**	*e*P	**P**	**22 54 13.6 +1.3**
CLNS			pmax	pmax	
	comp=Z,19nm,0.8s,mb5.2				
CLNS			pmax	pmax	
	comp=E,7.0nm,0.8s				
CLNS			pmax	pmax	
	comp=N,13nm,0.9s				
BOD	**Bodaibo**	**57.09 352**⇓	*i*P	**P**	**22 54 25.4 +0.6**
BOD			pmax	pmax	
	comp=Z,54nm,1.0s,mb5.5				
PETK	**Petropavlovsk-**	**57.95 22**	P	**P**	**22 54 33.2 +2.2**
	comp=Z,12nm,0.7s,mb5.1,baz=196,slow=4.9,SNR=17				
PETK			PcP	PcP	22 55 23.8 +1.7
	comp=Z,3.1nm,0.6s,baz=304,slow=0.7,SNR=2.8				
PETK	**Petropavlovsk-**	**57.95 22**	P	**P**	**22 54 33.2 +2.2**
PETK			PcP	PcP	22 55 23.8 +1.7
MK31	**Makanchi Array**	**59.02 326**	*e*P	**P**	**22 54 37.9 -0.6**
MKAR	**Makanchi Array**	**59.02 326**	P	**P**	**22 54 37.8 -0.7**
	comp=Z,9.9nm,0.6s,mb5.1,baz=121,slow=7.4,SNR=153				
MKAR			PcP	PcP	22 55 27.0 +0.5
	comp=Z,9.4nm,0.6s,baz=130,slow=4.3,SNR=13				
MKAR			LR	LR	23 20 17.1
	comp=Z,78nm,18.1s,baz=263,slow=36				
MKAR	**Makanchi Array**	**59.02 326**	P	**P**	**22 54 37.8 -0.7**
MKAR					22 55 27.0
KSH	**Kashi**	**59.13 316**	*e*P	**P**	**22 54 39.6 +0.2**
KSH			*e*pP	pP	22 55 06.1 +2.8
KSH			*e*PcP	PcP	22 55 27.6 +0.5
KSH			*e*PP	PP	22 56 52.6 +1.4
KSH			*e*ScP	ScP	22 59 16.1 -3.1
KSH			*e*S	**S**	**23 02 33.0 -6.4**
KSH			*e*sS	sS	23 03 21.1 +0.8
KSH			*e*ScS	ScS	23 04 14.8 -5.7
KSH			pmax	pmax	
	comp=Z,91nm,4.7s				
KSH			LR	LR	
	comp=N,120nm,5.6s				
KSH			LR	LR	
	comp=E,140nm,5.9s				
YAK	**Yakutsk**	**60.60 2**	*e*P	**P**	**22 54 49.4 +0.3**
YAK			pmax	pmax	
	comp=Z,63nm,0.8s,mb5.7				
YAK			pmax	pmax	
	comp=N,17nm,1.0s				
YAK			pmax	pmax	
	comp=E,3.0nm,0.9s				
YAK	**Yakutsk**	**60.60 2**	*e*P	**P**	**22 54 49.9 +0.8**
	comp=E,64nm,0.8s,mb5.7				
KZA	**Kyzart**	**60.79 319**	P	**P**	**22 54 50.9 +0.2**
	SNR=19				
TKM2	**Tokmak 2**	**60.96 320**	P	**P**	**22 54 51.5 -0.4**
	SNR=14				
TKM2	**Tokmak 2**	**60.96 320**	*e*P	**P**	**22 54 51.3 -0.6**
TKM2			*e*		22 55 35.0
TKM2			pmax	pmax	
	comp=Z,9.0nm,0.6s,mb5.0				
TKM2	**Tokmak 2**	**60.96 320**	*e*P	**P**	**22 54 51.3 -0.6**
	comp=Z,9.3nm,0.6s,mb5.0				
TKM2			*e*PcP	PcP	22 55 35.0 +0.6
UCH	**Uchtor**	**61.35 319**	P	**P**	**22 54 55.3 +0.8**
	SNR=22				
UCH	**Uchtor**	**61.35 319**	*e*P	**P**	**22 54 55.2 +0.6**
	comp=Z,12nm,0.7s,mb5.0				
UCH			*e*PcP	PcP	22 55 37.2 +1.2
AAK	**Ala-Archa**	**61.55 319**	P	**P**	**22 54 55.7 -0.2**
	comp=Z,2.5nm,0.5s,mb4.5,baz=111,slow=11,SNR=7.9				
AAK			PcP	PcP	22 55 38.1 +1.3
	comp=Z,4.2nm,0.5s,baz=87,slow=4.7,SNR=8.0				
AAK	**Ala-Archa**	**61.55 319**	*e*P	**P**	**22 54 55.2 -0.6**
AAK			*e*		22 55 37.9
AAK			pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.9				
AAK	**Ala-Archa**	**61.55 319**	*e*P	**P**	**22 54 55.2 -0.6**
	comp=Z,7.8nm,0.7s,mb4.8				
AAK			*e*PcP	PcP	22 55 37.9 +1.1
USP	**Ospenovka**	**61.84 320**	P	**P**	**22 54 57.0 -0.8**
	SNR=14				
AML	**Almayashu**	**61.85 318**	P	**P**	**22 54 58.1 +0.2**
	SNR=22				
AML	**Almayashu**	**61.85 318**	*e*P	**P**	**22 54 58.0 +0.1**
	comp=Z,16nm,0.7s,mb5.2				
AML			*e*PcP	PcP	22 55 39.2 +1.3
EKS2	**Erkin-Say**	**62.03 319**	P	**P**	**22 54 59.0 -0.1**
	SNR=19				
KBL	**Kabul**	**62.29 309**	*e*P	**P**	**22 54 59.9 -1.1**
KBL			pmax	pmax	
	comp=Z,52nm,1.6s,mb5.3				
KBL	**Kabul**	**62.29 309**	*e*P	**P**	**22 54 59.9 -1.2**
	comp=Z,52nm,1.6s,mb5.3				
ZAA0	**Zalesovo Array**	**62.32 334**	*e*P	**P**	**22 54 58.8 -1.9**
ZALV	**Zalesovo Beam**	**62.32 334**	P	**P**	**22 54 59.2 -1.5**
	comp=Z,2.7nm,0.4s,mb4.6,baz=130,slow=6.5,SNR=12				
KURK	**Kurchatov**	**63.28 329**	P	**P**	**22 55 06.6 -0.7**
	comp=Z,234nm,0.5s,SNR=21				
KURK	**Kurchatov**	**63.28 329**	P	**P**	**22 55 06.1 -1.1**
	comp=Z,13nm,0.7s,mb5.0,baz=131,slow=6.0,SNR=24				
KURK	**Kurchatov**	**63.28 329**	*ce*P	**P**	**22 55 06.5 -0.8**
KURK			pmax	pmax	
	comp=Z,45nm,1.2s,mb5.3				
KURK	**Kurchatov**	**63.28 329**	*e*P	**P**	**22 55 06.4 -0.9**
NVS	**Novosibirsk**	**63.60 334**	*e*P	**P**	**22 55 06.7 -2.6**
NVS			*e*		22 55 42.3
NVS			pmax	pmax	
	comp=N,5.0nm,0.6s				
NVS			pmax	pmax	
	comp=E,4.0nm,0.6s				
NVS			pmax	pmax	
	comp=Z,7.0nm,0.6s,mb4.7				
SEY	**Seymchan**	**64.54 13**	*ce*P	**P**	**22 55 15.5 +0.3**
CASY	**Casey**	**68.36 187**	*e*P	**P**	**22 55 41.4 +1.9**
CASY	**Casey**	**68.36 187**	*e*P	**P**	**22 55 41.3 +1.8**
	comp=Z,12nm,0.6s,mb4.9				
BVAR	**Borovoye Array**	**68.84 328**	P	**P**	**22 55 41.7 -1.1**
	comp=Z,5.4nm,0.7s,mb4.5,baz=134,slow=11,SNR=12				
BRVK	**Borovoye**	**68.91 328**	*ce*P	**P**	**22 55 42.8 -0.4**
BRVK			pmax	pmax	
	comp=Z,15nm,1.2s,mb4.7				
BRVK	**Borovoye**	**68.91 328**	*e*P	**P**	**22 55 42.9 -0.4**
TIXI	**Tiksi**	**70.22 1**	*e*P	**P**	**22 55 51.3 +0.4**
TIXI			pmax	pmax	
	comp=Z,11nm,0.4s,mb5.0				
TIXI	**Tiksi**	**70.22 1**	*e*P	**P**	**22 55 49.9 -1.0**
BILL	**Biiibino**	**72.07 15**	*e*P	**P**	**22 56 03.1 +1.0**
BILL			pmax	pmax	
	comp=Z,8.0nm,1.6s,mb4.3				
ABKAR	**Akbulak array**	**73.44 321**	*e*P	**P**	**22 56 09.8 -0.9**
	comp=Z,4.8nm,0.5s,mb4.6				
AKTO	**Aktyubinsk**	**74.98 322**	LR	LR	23 33 05.6
	comp=Z,62nm,19.1s,baz=321,slow=39				
SVE	**Sverdlovsk**	**75.53 329**⇑	*e*P	**P**	**22 56 22.4 -0.2**
SVE			pmax	pmax	
	comp=Z,25nm,1.1s,mb4.9				
ARU	**Arti**	**76.48 328**	P	**P**	**22 56 27.8 -0.2**
	comp=Z,78nm,0.4s,mb5.8,SNR=6.3				
ARU	**Arti**	**76.48 328**	*ci*P	**P**	**22 56 26.9 -1.1**
ARU			*e*		22 59 15.1
ARU			S	S	23 06 10.1 +4.3
ARU			SS	SS	23 11 00.7 -1.7
ARU			pmax	pmax	
	comp=Z,17nm,1.2s,mb4.7				
ARU	**Arti**	**76.48 328**	*e*P	**P**	**22 56 26.3 -1.7**
	comp=Z,5.5nm,0.4s,mb4.6				
UMR	**Umm Al-Rimmam**	**79.02 300**	*e*P	**P**	**22 56 41.2 -1.4**
UMR			AMb	AMB	22 56 42.0
	comp=Z,25nm,0.6s,mb5.2				
RDF	**Al-Radifah**	**79.11 299**	*e*P	**P**	**22 56 41.9 -1.3**
RDF			AMb	AMB	22 56 47.0
	comp=Z,21nm,0.7s,mb5.1				
MIB	**Mutribah**	**79.36 300**	*e*P	**P**	**22 56 43.0 -1.6**
MIB			AMb	AMB	22 56 45.8
	comp=Z,41nm,0.7s,mb5.4				
ABPO	**Ambohimpanom**	**79.69 251**	*e*P	**P**	**22 56 47.2 +0.7**
ABPO			pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.8				
ABPO	**Ambohimpanom**	**79.69 251**	*e*P	**P**	**22 56 47.2 +0.7**
	comp=Z,9.9nm,0.6s,mb4.8				
MAW	**Mawson**	**81.23 200**	*e*P	**P**	**22 56 55.4 +1.7**
	comp=Z,6.8nm,1.0s,mb4.4				
MAW	**Mawson**	**81.23 200**	P	**P**	**22 56 55.8 +2.1**
	comp=Z,3.5nm,0.6s,mb4.4,baz=51,slow=6.1,SNR=16				
ZEI	**Tsey**	**83.18 313**	*e*P	**P**	**22 57 02.2 -2.2**
ZEI			pmax	pmax	
	comp=Z,33nm,1.4s,mb5.0				
SVW2	**Sparrevohn**	**83.30 29**	*e*P	**P**	**22 57 07.7 +3.1**
TTA	**Tatalina**	**83.41 27**	*e*P	**P**	**22 57 07.9 +2.7**
KIV	**Kislovodsk**	**84.14 314**	*e*P	**P**	**22 57 09.8 +0.4**
KIV			pmax	pmax	
	comp=Z,10.0nm,1.2s,mb4.5				
KIV	**Kislovodsk**	**84.14 314**	*e*P	**P**	**22 57 09.8 +0.4**
KDAK	**Kodiak Island**	**84.36 32**	*i* P	**P**	**22 57 12.6 +2.5**
RSO	**Redoubt South**	**84.58 29**	*e*P	**P**	**22 57 13.6 +2.4**
VRHR	**Novokhopersk**	**85.33 321**	*e*P

VOR pmax pmax
comp=Z,160nm,1.0s,mb5.9
VSR Storozhevoye 86.88 321 *eP* **P 22 57 22.3 -0.5**
VSR pmax pmax
comp=Z,70nm,0.8s,mb5.6
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,30nm,0.7s
MALT Malatya 87.15 308 *eP* **P 22 57 24.9 +0.5**
MALT pmax pmax
comp=Z,20nm,1.2s,mb4.9
MALT Malatya 87.15 308 *eP* **P 22 57 24.9 +0.5**
comp=Z,20nm,1.2s,mb4.9
OBN Obninsk 88.49 325 P **P 22 57 30.8 +0.4**
comp=Z,363nm,0.7s,SNR=7.8
OBN Obninsk 88.49 325 *eP* **P 22 57 28.9 -1.5**
OBN pmax pmax
comp=Z,77nm,1.2s,mb5.6
OBN Obninsk 88.49 325 *eP* **P 22 57 30.1 -0.2**
comp=Z,37nm,0.7s,mb5.5
KMBO Kilima Mbogo 88.63 269 P **P 22 57 33.9 +1.9**
comp=Z,26nm,0.9s,mb5.3,baz=61,slow=6.7,SNR=63
KMBO Kilima Mbogo 88.63 269 *eP* **P 22 57 33.7 +1.8**
KMBO pmax pmax
comp=Z,36nm,1.0s
KMBO Kilima Mbogo 88.63 269 *eP* **P 22 57 33.7 +1.7**
comp=Z,36nm,1.0s,mb5.4
MMAI Mount Meron Ar 89.65 303 P **P 22 57 37.3 +1.0**
comp=Z,7.2nm,0.6s,mb5.0,baz=83,slow=7.1,SNR=25
SIM Simferopol' 90.29 315 *eP* **P 22 57 41.0 +2.0**
SIM pmax pmax
comp=Z,20nm,0.9s,mb5.2
BR131 Keskin Array S 90.86 310 *eP* **P 22 57 41.0 -0.8**
comp=Z,1.9nm,0.6s,mb4.4
BRTR Keskin Array B 90.86 310 P **P 22 57 41.0 -0.8**
comp=Z,3.4nm,0.9s,mb4.5,baz=116,slow=4.4,SNR=15
BRTR Keskin Array B 90.86 310 *ceP* **P 22 57 41.0 -0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
JOF Joensuu 90.89 333 *eP* **P 22 57 40.3 -1.1**
JOF pmax pmax
comp=Z,11nm,0.5s,mb5.2
JOF Joensuu 90.89 333 *ep* **P 22 57 40.3 -1.1**
comp=Z,11nm,0.5s,mb5.3
DAWY Dawson 90.89 26 *eP* **P 22 57 43.4 +2.0**
CSS Prodhromos 91.31 305 *eP* **P 22 57 42.1 -1.9**
comp=Z,25nm,0.8s,mb5.4
ARCES ARCESS Array B 92.37 340 P **P 22 57 47.9 -0.3**
comp=Z,4.7nm,0.6s,mb4.9,baz=80,slow=3.3,SNR=22
INK Inuvik 92.69 21 *eP* **P 22 57 51.0 +1.4**
AKASG Malin Array Be 93.17 321 P **P 22 57 51.3 -0.9**
comp=Z,3.6nm,0.5s,mb4.9,baz=73,slow=4.1,SNR=19
AKASG Malin Array Be 93.17 321 *ceP* **P 22 57 51.2 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 93.29 332 *eP* **P 22 57 51.5 -1.0**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
KAF Kangasniemi 93.29 332 *ep* **P 22 57 51.5 -1.0**
comp=Z,10.0nm,0.6s,mb5.3
FINES FINESS Array B 93.50 332 P **P 22 57 52.8 -0.8**
comp=Z,7.1nm,0.6s,mb5.2,baz=47,slow=5.6,SNR=18
BUR08 Bucovina Ar. S 96.19 318 *eP* **P 22 58 06.3 +0.2**
SUW Suwalki 96.35 325 *eP* **P 22 58 06.5 -0.2**
SUW Suwalki 96.35 325 *eP* **P 22 58 06.1 -0.6**
comp=Z,30nm,0.9s,mb5.7
KWP Kalwaria Pacla 97.48 320 *eP* **P 22 58 12.2 +0.4**
KWP Kalwaria Pacla 97.48 320 *eP* **P 22 58 11.6 -0.3**
comp=Z,20nm,1.0s,mb5.5
LSZ Lusaka 97.75 255 *eP* **P 22 58 13.9 +0.1**
LSZ pmax pmax
comp=Z,3.0nm,0.6s,mb5.0
LSZ Lusaka 97.75 255 *eP* **P 22 58 13.9 0.0**
comp=Z,3.0nm,0.6s,mb5.0
KOLS Kolonicke sedl 97.89 320 *eP* **P 22 58 14.1 +0.3**
KOLS *e* 23 20 01.1
KOLS pmax pmax
comp=Z,8.0nm,1.0s,mb5.2
KOLS Kolonicke sedl 97.89 320 *eP* **P 22 58 14.1 +0.3**
comp=Z,8.4nm,1.0s,mb5.2
KOLS *e* 23 20 01.1
KOLS Kolonicke sedl 97.89 320 *eP* **P 22 58 14.1 +0.3**
KOLS *e* 23 20 01.1
UZH Uzhgorod 97.94 319 ⇑*iP* **P 22 58 14.5 +0.5**
UZH *i* 22 58 22.5
STHS Stebnicka Huta 98.45 320 *eP* **P 22 58 17.1 +0.8**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb5.0
STHS Stebnicka Huta 98.45 320 *eP* **P 22 58 17.1 +0.8**
comp=Z,4.6nm,0.9s,mb5.0
STHS Stebnicka Huta 98.45 320 PDIF **P 22 58 17.1 +0.8**
NIE Niedzica 99.05 320 *eP* **P 22 58 19.8 +0.9**
KECS Kecovo 99.14 319 *eP* **P 22 58 19.7 +0.3**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb5.0
KECS Kecovo 99.14 319 *eP* **P 22 58 19.7 +0.3**
comp=Z,4.3nm,0.9s,mb5.0
KECS Kecovo 99.14 319 PDIF **P 22 58 19.7 +0.3**
PSZ Piszkesteto 99.65 319 *eP* Pdif 22 58 21.4 -0.1
PSZ pmax pmax
comp=Z,6.0nm,1.0s,mb5.2
PSZ Piszkesteto 99.65 319 *e*Pdif Pdif 22 58 21.4 -0.1
comp=Z,5.6nm,1.0s
BOSA Boshof 99.95 241 LR LR 23 37 45.3
comp=Z,47nm,18.4s,baz=256,slow=32
VYHS Vyhne 100.21 320 *eP* Pdif 22 58 24.1 +0.1
VYHS pmax pmax
comp=Z,5.0nm,1.8s
VYHS Vyhne 100.21 320 *eP* Pdif 22 58 24.1 +0.1
comp=Z,5.1nm,1.8s
VYHS Vyhne 100.21 320 PDIF Pdif 22 58 24.1 +0.1
NB2 NORSAR Subarra100.51 333 P Pdif 22 58 23.8 -1.5
comp=Z,17nm,0.7s,baz=71,slow=4.4
NB2 NORSAR Subarra100.51 333 P Pdif 22 58 23.8 -1.5
NB2 NORSAR Subarra100.51 333 P Pdif 22 58 23.8 -1.5
NOA NORSAR Array B 100.51 333 P Pdif 22 58 24.2 -1.1
comp=Z,1.8nm,0.7s,baz=69,slow=4.4,SNR=7.0
YKA Yellowknife Ar 102.02 24 P Pdif 22 58 33.7 +1.7
comp=Z,1.1nm,0.7s,baz=299,slow=4.5,SNR=15
YKA PP PP 23 02 41.5 -2.5
comp=Z,0.2nm,0.5s,baz=144,slow=5.0,SNR=3.7
YKA PKiKP PKiKP 23 02 56.2 +2.3
comp=Z,0.6nm,0.8s,baz=295,slow=1.5,SNR=7.4
YKA PKKPbc PKKPbc 23 14 35.6 -2.7
comp=Z,0.4nm,0.7s,baz=113,slow=2.5,SNR=5.3
YKA Yellowknife Ar 102.02 24 P Pdif 22 58 33.7 +1.7
YKA PP PP 23 02 41.5 -2.5
BRG Berggiesshubel 102.61 323 *eP* Pdif 22 58 35.1 +0.5
comp=Z,3.5nm,0.9s
BRG Berggiesshubel 102.61 323 *eP* Pdif 22 58 35.1 +0.5
BRG pmax pmax
comp=Z,2.0nm,0.9s
CLL Collm 103.03 324 *eP* Pdif 22 58 36.0 -0.5
CLL Collm 103.03 324 *e*Pdif Pdif 22 58 36.0 -0.5
GERES GERESS Array B 103.39 321 Pdiff Pdif 22 58 37.2 -0.9
comp=Z,0.6nm,0.7s,baz=33,slow=3.2,SNR=6.1
PDAR Pinedale Array 113.71 41 PKiKP PKiKP 23 03 20.6 +4.2
comp=Z,0.4nm,0.6s,baz=262,slow=1.0,SNR=4.4
PDAR PKKPbc PKKPbc 23 13 59.4 -1.5
comp=Z,0.3nm,0.5s,baz=90,slow=1.5,SNR=3.7
PDAR PKKPab PKKPab 23 14 07.7 +0.2
comp=Z,1.5nm,0.8s,baz=116,slow=5.0,SNR=14
RSSD Black Hills 116.60 38 *e*PKIKP PKPdf 23 03 21.8 -0.1
ULM Lac du Bonnet 117.46 29 PKP PKPdf 23 03 24.2 +0.8
comp=Z,4.1nm,0.6s,baz=318,slow=3.5,SNR=8.8
ULM Lac du Bonnet 117.46 29 PKP PKPdf 23 03 24.2 +0.8
TOA0 Torodi Ar. Sit 122.79 286 *e*PKPdf PKPdf 23 03 35.5 +0.9
TORD Torodi Ar. Bea 122.79 286 PKP PKPdf 23 03 35.1 +0.6
comp=Z,6.2nm,0.7s,baz=63,slow=1.7,SNR=46
TORD PKKPbc PKKPbc 23 13 29.7 +2.3
comp=Z,0.6nm,0.8s,baz=252,slow=2.4,SNR=4.9
SCHQ Schefferville 123.04 9 PKP PKPdf 23 03 35.8 +1.8
comp=Z,6.0nm,0.7s,baz=333,slow=3.3,SNR=12
TXAR Lajitas Array 123.73 53 PKP PKPdf 23 03 38.5 +2.4
comp=Z,1.0nm,0.7s,baz=256,slow=1.2,SNR=6.1
KSU1 Kansas State U 124.00 39 *e*PKPdf PKPdf 23 03 37.6 +1.3
JFWS Jewell Farm 125.28 32 *e*PKIKP PKPdf 23 03 39.2 +0.6
JCT Junction City 126.26 50 *e*PKIKP PKPdf 23 03 41.4 +0.5
CCM Cathedral Cave 127.96 37 *e*PKIKP PKPdf 23 03 44.5 +0.6
FVM French Village 128.50 37 *e*PKIKP PKPdf 23 03 45.9 +1.0
MIAR Mount Ida 128.63 42 *e*PKIKP PKPdf 23 03 45.3 0.0
OLIL Olney 129.35 34 *e*PKPdf PKPdf 23 03 47.9 +1.4
DBIC Dimbokro 130.16 280 PKP PKPdf 23 03 50.4 +1.6
comp=Z,5.0nm,0.8s,baz=224,slow=0.9,SNR=6.2
PLAL Pickwick Lake 131.90 38 *e*PKPdf PKPdf 23 03 52.0 +0.6
TKL Tuckaleechee C 133.96 34 *e*PKIKP PKPdf 23 03 55.6 +0.3
PLCA Paso Flores 138.07 161 PKP PKPdf 23 04 05.0 +2.2
comp=Z,4.2nm,1.0s,baz=173,slow=3.1,SNR=4.9
JTS JuntasAbangare 147.24 69 *e*PKIKP PKPdf 23 04 20.3 +0.6
JTS *e* 23 04 23.3
JTS *e* 23 04 25.1
LCO Las Campanas 148.28 152 *e*PKPdf PKPdf 23 04 22.4 +1.3
LCO *e*PKPbc PKPbc 23 04 27.2 +2.7
CPUP Villa Florida 154.97 173 PKP PKPdf 23 04 33.0 +1.8
comp=Z,1.4nm,0.6s,baz=111,slow=2.4,SNR=7.0
LPAZ La Paz 159.75 138 PKP PKPdf 23 04 40.5 +3.1
comp=Z,4.0nm,1.0s,baz=250,slow=2.2,SNR=10.0
SDV Santo Domingo 160.68 58 *e*PKPdf PKPdf 23 04 40.6 +2.0

MOS ***13*** *22:46:07.5±1.0, 49°.88N×157°.65E, h58km, mb4.3/1, Error ellipse: s-maj=47.2km s-min=11.3km az=80.7*
ISCJB ***13*** *22:46:18.0±1.2, 50°.68N±0°.08×157°.58E±0°.09, h33km, Error ellipse: s-maj=12.5km s-min=6.4km az=149.2*
KRSC ***13*** *22:46:18.7±0.8, 50°.76N×157°.70E, h47km±47km, ML4.2*
ISC 13 22:46:19.8±1.2, 50.71N±0°.08×157.48E±0°.10, h35km, n21, σ1§09/31, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.87**	**269**	*e*PN	**Pn**	**22 46 30.0**	**-5.5**
SKR				*e*S	**Sn**	**22 46 41.7**	**-5.2**
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,170nm,0.5s						
SKR				pmax	pmax		
	comp=N,50nm,0.2s						
SKR				smax			
	comp=E,1μm,0.2s						
SKR				smax			
	comp=N,1μm,0.4s						
ALID	**Alaid**	**1.23**	**278**	*e*P	**Pn**	**22 46 39.9**	**-0.6**
ALID				*i* S	**Sn**	**22 46 55.2**	**-0.7**
MIPR	**Malaya Ipel'ka**	**1.64**	**344**	*e*P	**Pn**	**22 46 45.8**	**-0.2**
MIPR				*i* S	**Sn**	**22 47 05.9**	**+0.1**
RUS	**Russkaya**	**1.84**	**20**	*e*P	**Pn**	**22 46 48.0**	**-0.9**
RUS				*i* S	**Sn**	**22 47 09.4**	**-1.6**
GRL	**Gorelyy**	**1.89**	**11**	*e*P	**Pn**	**22 46 50.1**	**+0.6**
GRL				*i* S	**Sn**	**22 47 12.5**	**+0.5**
PET	**Petropavlovsk**	**2.43**	**17**	*e*PN	**Pn**	**22 46 56.5**	**-0.5**
PET				pmax	pmax		
	comp=Z,37nm,0.4s						
PET	**Petropavlovsk**	**2.43**	**17**	*e*P	**Pn**	**22 46 57.1**	**+0.1**
PET				*i* S	**Sn**	**22 47 25.3**	**-0.2**
SDLR	**Sedlovina**	**2.72**	**18**	*e*P	**Pn**	**22 47 00.8**	**-0.1**
NLC	**Nalytchevo**	**2.73**	**24**	*e*P	**Pn**	**22 46 59.5**	**-1.5**
NLC				*i* S	**Sn**	**22 47 29.6**	**-3.1**
SPN	**Mys Shipunski**	**2.87**	**32**	*e*P	**Pn**	**22 47 02.8**	**-0.2**
SPN				*i* S	**Sn**	**22 47 34.9**	**-1.3**
GNL	**Ganaly**	**3.01**	**5**	*e*P	**Pn**	**22 47 05.4**	**+0.5**
KII	**Karymskiy**	**3.55**	**19**	*e*P	**Pn**	**22 47 13.5**	**+1.2**
KII				*i* S	**Sn**	**22 47 54.0**	**+1.1**
MKZ	**Mys Kozlova**	**4.64**	**32**	*e*P	**Pn**	**22 47 25.9**	**-1.5**
MKZ				*i* S	**Sn**	**22 48 15.2**	**-4.8**
KMNR	**Kamenistaya**	**5.32**	**17**	*e*P	**Pn**	**22 47 37.9**	**+1.2**
BZMR	**Bezymyannaya**	**5.54**	**18**	*e*P	**Pn**	**22 47 41.3**	**+1.6**
ZLN	**Zelenaya**	**5.68**	**19**	*e*P	**Pn**	**22 47 42.6**	**+1.0**
CIRR	**Tsirk**	**5.76**	**19**	*e*P	**Pn**	**22 47 44.3**	**+1.6**
SRDR	**Sredinnyy**	**5.78**	**12**	*e*P	**Pn**	**22 47 45.4**	**+2.5**
SMKR	**Semkarok**	**6.34**	**20**	*e*P	**Pn**	**22 47 50.3**	**-0.4**
SRKR	**Sorokina**	**6.35**	**19**	*e*P	**Pn**	**22 47 51.0**	**+0.3**
KBTR	**Krutoberegovo**	**6.37**	**28**	*e*P	**Pn**	**22 47 50.0**	**-1.0**

CSEM ***13*** *22:49:05.7±0.1, 46°.13N×14°.06E, h10km, ML1.6/4, Error ellipse: s-maj=3.1km s-min=2.5km az=39.0*
VIE ***13*** *22:49:05.5±0.1, 46°.12N×14°.07E, h7km, ML1.2/1, Error ellipse: s-maj=1.3km s-min=1.0km az=175.0 13 km NNE of Idrija*
LJU 13 22:49:05.0, 46°.12N×14°.05E, h17km, ML1.2, 3C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOJS	**Vojsko**	**0.15**	**232**	⇑*iPg*	Pg	22 49 09.3	+0.2
VOJS				*i* Sg	Sg	22 49 12.4	+0.5
VOJS	**Vojsko**	**0.15**	**232**	Pg	Pg	22 49 09.3	+0.2
VOJS				*i* Sg	Sg	22 49 12.4	+0.5
GORS	**Gorjuse**	**0.20**	**348**	*i* Pg	Pg	22 49 10.0	+0.1
GORS				*i* Sg	Sg	22 49 13.4	+0.3
GORS							
	comp=Z,10.0nm,0.1s						
GORS	**Gorjuse**	**0.20**	**348**	*i* Pg	Pg	22 49 10.0	+0.2
GORS				*i* Sg	Sg	22 49 13.4	+0.3
	comp=Z,10.0nm,0.1s						
JAVS	**Javornik**	**0.23**	**178**	*i* Pg	Pg	22 49 10.5	+0.2
JAVS				*i* Sg	Sg	22 49 14.6	+0.7
JAVS							
	comp=Z,5.0nm,0.1s						
JAVS	**Javornik**	**0.23**	**178**	*i* Pg	Pg	22 49 10.5	+0.2
JAVS				*i* Sg	Sg	22 49 14.6	+0.7
	comp=Z,5.0nm,0.1s						
CADS	**Cadrg**	**0.24**	**296**	*i* Pg	Pg	22 49 10.7	+0.1
CADS				*i* Sg	Sg	22 49 14.9	+0.6
CADS							
	comp=Z,32nm,0.2s						
CADS	**Cadrg**	**0.24**	**296**	*i* Pg	Pg	22 49 10.7	+0.2
CADS				*i* Sg	Sg	22 49 14.9	+0.6
	comp=Z,32nm,0.2s						
DRE	**Drenchia**	**0.29**	**280**	⇑*iPg*	Pg	22 49 11.4	+0.2
DRE				*e*Sg	Sg	22 49 16.2	+0.7
DRE	**Drenchia**	**0.29**	**280**	*i* Pg	Pg	22 49 11.4	+0.1
DRE				*e*Sg	Sg	22 49 16.2	+0.7
MOZS	**Mozjanca**	**0.32**	**58**	*i* Pg	Pg	22 49 12.4	+0.5
MOZS				*i* Sg	Sg	22 49 17.4	+1.0
LJU	**Ljubljana**	**0.34**	**103**	*i* Pg	Pg	22 49 12.4	+0.3
LJU				*i* Sg	Sg	22 49 17.6	+0.6
LJU	**Ljubljana**	**0.34**	**103**	*i* Pg	Pg	22 49 12.4	+0.2
LJU				*i* Sg	Sg	22 49 17.6	+0.6
ROBS	**Robic**	**0.40**	**288**	*e*Sg	Sg	22 49 19.5	+0.9
ROBS	**Robic**	**0.40**	**288**	*e*Sg	Sg	22 49 19.5	+0.9
VNDS	**Vrh nad Dolski**	**0.45**	**92**	*i* Pg	Pg	22 49 14.4	+0.2
VNDS							
	comp=Z,2.0nm,0.1s						
CEY	**Cerknica**	**0.47**	**146**	*i* Pg	Pg	22 49 14.4	0.0
CEY				*i* Sg	Sg	22 49 22.0	+1.3
CEY	**Cerknica**	**0.47**	**146**	*i* Pg	Pg	22 49 14.4	0.0
CEY				*i* Sg	Sg	22 49 22.0	+1.3
OBKA	**Obir**	**0.52**	**42**	⇓*iPg*	Pg	22 49 15.5	+0.1
OBKA				⇑*i*Sg	Sg	22 49 22.9	+0.5
	comp=Z,2.6nm,0.1s						
OBKA	**Obir**	**0.52**	**42**	Pg	Pg	22 49 15.5	+0.2
OBKA				Sg	Sg	22 49 22.9	+0.6
	comp=Z,2.6nm,0.1s						
SKDS	**Skadanscina**	**0.58**	**183**	*i* Pg	Pg	22 49 16.4	0.0
SKDS				*i* Sg	Sg	22 49 25.0	+0.9
VISS	**Visnje**	**0.64**	**120**	*i* Pg	Pg	22 49 17.5	0.0
VISS	**Visnje**	**0.64**	**120**	*i* Pg	Pg	22 49 17.5	0.0
PDKS	**Podkum**	**0.66**	**95**	*i* Pg	Pg	22 49 18.4	+0.4
ZAVS	**Zavodnje**	**0.74**	**65**	*e*Pg	Pg	22 49 19.4	-0.1
NVLJ	**Novalja**	**1.66**	**159**	*e*Pn	Pn	22 49 34.3	+1.1
NVLJ				Sn	Sn	22 49 58.9	+4.7
NVLJ	**Novalja**	**1.66**	**159**	*e*Pn	Pn	22 49 34.3	+1.0
NVLJ				Sn	Sn	22 49 58.9	+4.7

ISCJB ***13*** *23:15:06.6±0.4, 28°.42N±0°.07×104°.26E±0°.05, h10km, mb4.0/19, Error ellipse: s-maj=9.8km s-min=6.5km az=168.2*
IDC ***13*** *23:15:07.3±0.7, 28°.47N×104°.21E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.8/26, mbtmp3.8/13, Error ellipse: s-maj=31.8km s-min=15.0km az=54.0*
NEIC ***13*** *23:15:08.7±0.4, 28°.45N×104°.16E, h10km, mb4.5/7, Error ellipse: s-maj=9.4km s-min=8.8km az=89.0*
BJI ***13*** *23:15:10.2, 28°.66N×104°.52E, h18km, mB4.6/4, mb4.6/6, ML4.0/11, Ms4.1/7, Ms7 4.0/6*
ISC 13 23:15:09.2±0.4, 28°.54N±0°.05×104°.21E±0°.05, h10km, n42, σ1§25/44, mb4.0/19, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**3.01**	**133**	Pg	**Pn**	**23 15 58.8**	**+1.9**
GYA				Sg	**Sn**	**23 16 34.8**	**+1.8**
GYA				smax			
	comp=N,910nm,0.5s						
GYA				smax			
	comp=E,1μm,0.7s						
ENH	**Enshi**	**4.92**	**68**	*e*Pn	**Pn**	**23 16 23.2**	**0.0**
ENH				*e*Sn	**Sn**	**23 17 19.2**	**-1.0**
WHN	**Wuhan**	**9.06**	**75**	P	**Pn**	**23 17 19.8**	**-0.2**
WHN				S	**Sn**	**23 18 52.3**	**-10**
WHN				LR	LR		
	comp=N,2μm,6.3s						
WHN				LR	LR		
	comp=E,2μm,7.3s						
WHN				LR	LR		
	comp=Z,3μm,10.3s						
CHTO	**Chiang Mai**	**10.81**	**208**	Pn	**Pn**	**23 17 41.7**	**-2.4**
BJT	**Baijiatuau**	**15.11**	**38**	Pn	**Pn**	**23 18 43.0**	**+0.2**
SONM	**Songino Array**	**19.34**	**4**	P	**Pn**	**23 19 34.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=187,slow=11,SNR=9.1						
KSRS	**Korea Array**	**21.75**	**60**	P	**P**	**23 19 59.2**	**-1.6**
	comp=Z,4.5nm,0.9s,mb3.9,baz=237,slow=12,SNR=8.8						
CN2	**Changchun**	**22.84**	**43**	*e*P	**P**	**23 20 11.6**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.6						
MK31	**Makanchi Array**	**25.02**	**323**	*e*P	**P**	**23 20 34.1**	**+0.9**
MKAR	**Makanchi Array**	**25.02**	**323**	P	**P**	**23 20 32.1**	**-1.1**
	comp=Z,0.5nm,0.8s,mb3.1,baz=111,slow=7.9,SNR=3.4						
UCH	**Uchtor**	**27.64**	**308**	P	**P**	**23 20 56.5**	**-0.4**
AML	**Almayashu**	**28.18**	**307**	P	**P**	**23 21 02.5**	**+0.7**
ZALV	**Zalesovo Beam**	**29.08**	**336**	P	**P**	**23 21 10.9**	**+1.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=22,slow=29,SNR=2.4						
KURK	**Kurchatov**	**29.39**	**326**	P	**P**	**23 21 13.2**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.6,baz=129,slow=10.0,SNR=4.4						
KURK	**Kurchatov**	**29.39**	**326**	*e*P	**P**	**23 21 11.4**	**-1.0**
PALK	**Pallekele**	**30.66**	**231**	P	**P**	**23 21 22.7**	**-1.3**
BVAR	**Borovoye Array**	**34.89**	**324**	PcP	PcP	23 24 33.8	+0.6
	comp=Z,0.5nm,0.6s,baz=146,slow=3.1,SNR=3.6						
KIV	**Kislovodsk**	**50.82**	**305**	*e*P	**P**	**23 24 08.2**	**-1.6**
	comp=Z,9.3nm,1.0s,mb4.7						
OBN	**Obninsk**	**54.46**	**319**	*e*P	**P**	**23 24 35.0**	**-1.6**
	comp=Z,11nm,0.6s,mb5.0						
MALT	**Malatya**	**54.73**	**299**	P	**P**	**23 24 39.0**	**+0.2**
WRA	**Warramunga Arr**	**56.30**	**145**	P	**P**	**23 24 49.8**	**-0.5**
	comp=Z,5.9nm,0.8s,mb4.7,baz=336,slow=8.2,SNR=15						
BR131	**Keskin Array S**	**58.11**	**301**	*e*P	**P**	**23 25 02.3**	**-0.6**
	comp=Z,0.2nm,0.4s,mb3.5						
BRTR	**Keskin Array B**	**58.11**	**301**	P	**P**	**23 25 01.9**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.6,baz=104,slow=6.1,SNR=3.1						
AKASG	**Malin Array Be**	**59.22**	**314**	P	**P**	**23 25 09.0**	**-1.4**
	comp=Z,0.4nm,0.3s,mb3.9,baz=64,slow=8.1,SNR=2.0						
AKASG	**Malin Array Be**	**59.22**	**314**	P	**P**	**23 25 09.0**	**-1.4**
ASAR	**Alice Springs**	**59.26**	**148**	P	**P**	**23 25 10.4**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.4,baz=328,slow=6.4,SNR=26						
TIRR	**Tirgusor**	**60.90**	**307**	*e*P	**P**	**23 25 21.1**	**-1.0**
	comp=Z,5.0nm,0.8s,mb4.7						
NOA	**NORSAR Array B**	**66.87**	**328**	P	**P**	**23 26 02.0**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.8,baz=88,slow=7.3,SNR=3.2						
GERES	**GERESS Array B**	**69.41**	**315**	P	**P**	**23 26 18.7**	**+1.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=73,slow=6.3,SNR=5.4						
STKA	**Stephens Creek**	**69.82**	**147**	P	**P**	**23 26 19.0**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.0,baz=318,slow=8.0,SNR=3.8						
KMBO	**Kilima Mbogo**	**70.42**	**258**	P	**P**	**23 26 23.5**	**-0.6**
AQU	**L'Aquila**	**71.95**	**309**	P	**P**	**23 26 32.5**	**-0.4**
CDF	**Champ du Feu**	**73.52**	**316**	*e*P	**P**	**23 26 43.2**	**+1.1**
	comp=Z,2.7nm,0.7s,mb4.0						
CDF	**Champ du Feu**	**73.52**	**316**	*e*P	**P**	**23 26 43.2**	**+1.1**
	comp=Z,1.4nm,0.7s,mb4.0						
LPG	**La Plagne**	**75.08**	**314**	*e*P	**P**	**23 26 53.7**	**+2.5**
	comp=Z,8.1nm,0.9s,mb4.4						
LPG	**La Plagne**	**75.08**	**314**	*e*P	**P**	**23 26 53.7**	**+2.5**
	comp=Z,4.1nm,0.9s,mb4.4						
LPL	**La Plagne**	**75.08**	**314**	*e*P	**P**	**23 26 53.7**	**+2.4**
	comp=Z,2.9nm,0.4s,mb4.2						
LPL	**La Plagne**	**75.08**	**314**	*e*P	**P**	**23 26 53.7**	**+2.4**
	comp=Z,1.5nm,0.4s,mb4.3						
SMF	**Signal de Mont**	**76.39**	**316**	*e*P	**P**	**23 27 00.2**	**+1.5**
TCF	**Toulx Ste Croi**	**77.55**	**316**	*e*P	**P**	**23 27 07.2**	**+1.9**
CAF	**Calviac**	**78.29**	**315**	*e*P	**P**	**23 27 12.3**	**+2.9**
YKA	**Yellowknife Ar**	**84.11**	**17**	P	**P**	**23 27 40.7**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.5,baz=326,slow=5.2,SNR=4.8						

ISCJB ***13*** *23:17:10.7±0.3, 11°.42N±0°.06×85°.74W±0°.07, h196km±3km, mb3.9/11, Error ellipse: s-maj=14.6km s-min=4.3km az=138.5*
IDC ***13*** *23:17:10.9±0.5, 11°.52N×85°.54W, h185km±12km, mb3.5/7, mb1 3.8/10, mb1mx3.5/23, mbtmp3.5/10, Error ellipse: s-maj=31.2km s-min=14.7km az=36.0*
NEIC ***13*** *23:17:11.7±0.7, 11°.47N×85°.71W, h195km±7km, mb4.1/4, Error ellipse: s-maj=15.4km s-min=8.3km az=218.0*
CASC ***13*** *23:17:12.0±2.1, 11°.31N×85°.84W, h183km±6km, MD3.8, ML3.3, mb4.1(NEIC)*
ISC 13 23:17:11.6±0.3, 11°.43N±0°.06×85°.73W±0°.07, h191km±3km, n71, σ0§86/86, mb3.9/11, 9C-3D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONN	**Concepcion**	**0.17**	**36**	*e*P	**Pn**	**23 17 37.4**	**+0.6**
SSN	**San Juan del S**	**0.18**	**224**	*e*P	**Pn**	**23 17 36.6**	**-0.3**
APON	**Apoyo**	**0.59**	**325**	*e*P	**Pn**	**23 17 39.0**	**+1.0**
GB1A	**Borinquen Arri**	**0.69**	**152**	*i* P	**Pn**	**23 17 38.5**	**0.0**
MASN	**Masaya**	**0.69**	**323**	*e*P	**Pn**	**23 17 38.4**	**-0.1**
GPS1	**Guardaparques**	**0.75**	**150**	*i* P	**Pn**	**23 17 39.0**	**+0.1**
GPS1				*i* S	**Sn**	**23 17 59.7**	**-0.3**
GPS3	**Bodega del ICE**	**0.76**	**152**	*i* P	**Pn**	**23 17 38.3**	**-0.7**
GPS3				*i* S	**Sn**	**23 17 59.7**	**-0.4**
GPS2	**Hotel Rinc^‡n**	**0.77**	**151**	*i* P	**Pn**	**23 17 38.9**	**-0.1**
TICN	**Ticuantepe**	**0.78**	**321**	*e*P	**Pn**	**23 17 39.4**	**+0.3**
CRUN	**El Crucero**	**0.79**	**314**	*e*P	**Pn**	**23 17 40.1**	**+1.1**
MESS	**Mesas**	**0.86**	**143**	⇑*i*P	**Pn**	**23 17 39.8**	**+0.3**
MESS				*i* S	**Sn**	**23 18 00.5**	**-0.6**
LIM1	**Limonal**	**0.86**	**147**	*i* P	**Pn**	**23 17 48.9**	**+9.3**
LIM1				*i* S	**Sn**	**23 18 09.9**	**+8.7**
GUAB	**Guayabo de Bag**	**0.87**	**146**	*i* P	**Pn**	**23 17 39.5**	**-0.1**
GUAB				*i

comp=E,1.2nm,0.3s,baz=135,slow=10.0,SNR=6.4
BCIP Isla Barro Col 6.22 111 *e*Pn **Pn 23 18 42.6 +1.1**
CMIG Matias Romero 10.51 303 P **Pn 23 19 37.5 0.0**
comp=E,1.1nm,0.3s,baz=133,slow=9.2,SNR=6.7
CMIG S **Sn 23 21 25.7 -9.0**
comp=E,0.3nm,0.3s,baz=28,slow=20,SNR=3.1
SDV Santo Domingo 15.07 98 P **Pn 23 20 34.8 -0.3**
comp=E,0.1nm,0.3s,baz=308,slow=7.6,SNR=4.5
SDV Santo Domingo 15.07 98 P **Pn 23 20 34.8 -0.3**
SJG San Juan 20.05 68 P **P 23 21 31.5 +1.3**
comp=E,6.6nm,0.3s,baz=70,slow=21,SNR=2.3
PCRV Puerto La Cruz 20.75 91 P **P 23 21 39.5 +1.7**
comp=E,7.8nm,0.6s,baz=31,slow=19,SNR=1.7
GOGA Godfrey 21.98 5 *e*P **P 23 21 50.6 +0.3**
comp=E,4.9nm,0.5s,mb4.2
JSC Jenkinsville 23.11 9 *e*P **P 23 22 01.1 +0.5**
OXF Oxford 23.22 352 *e*P **P 23 22 00.4 -1.3**
comp=E,9.3nm,0.3s,mb4.7
TKL Tuckaleechee C 24.18 4 P **P 23 22 10.9 +0.6**
comp=E,11nm,1.0s,mb4.4,baz=354,slow=4.1,SNR=6.8
TKL Tuckaleechee C 24.18 4 *e*P **P 23 22 11.0 +0.6**
TXAR Lajitas Array 24.43 319 P **P 23 22 13.7 +1.0**
comp=E,2.1nm,0.5s,mb3.9,baz=141,slow=9.9,SNR=26
TXAR pP 23 22 52.5
comp=E,0.6nm,0.7s,baz=140,slow=12,SNR=4.3
TXAR PcP PcP 23 25 47.0 +0.5
comp=E,0.2nm,0.5s,baz=133,slow=5.3,SNR=3.6
SIUC Southern Illin 26.36 354 *e*P **P 23 22 28.7 -1.3**
BBSR BB Station 28.44 40 P **P 23 22 46.8 -1.8**
PDAR Pinedale Array 37.47 331 P **P 23 24 06.0 -0.7**
comp=E,0.4nm,0.5s,mb3.3,baz=133,slow=9.4,SNR=4.4
HWUT Hardware Ranch 37.63 328 *e*P **P 23 24 07.9 -0.1**
comp=E,1.3nm,0.5s,mb3.8
NVAR Mina Array Bea 39.58 318 P **P 23 24 26.0 +1.7**
comp=E,1.3nm,0.7s,mb3.7,baz=126,slow=7.4,SNR=9.4
NVAR PcP PcP 23 26 28.1 +0.4
comp=E,0.9nm,0.7s,baz=139,slow=5.3,SNR=4.0
LCO Las Campanas 42.74 160 P **P 23 24 50.4 +0.3**
SCHQ Schefferville 45.79 15 P **P 23 25 12.7 -1.2**
comp=E,8.2nm,0.5s,mb4.6,baz=212,slow=5.8,SNR=31
CPUP Villa Florida 46.60 144 PcP PcP 23 26 51.9 +0.4
comp=E,0.9nm,0.5s,baz=305,slow=2.8,SNR=5.1
YKA Yellowknife Ar 55.04 344 P **P 23 26 21.3 -1.8**
comp=E,0.5nm,0.3s,mb3.7,baz=143,slow=6.9,SNR=17
YKA pP pP 23 27 06.7 +0.4
comp=E,0.8nm,0.9s,baz=135,slow=7.9,SNR=7.8
YKA PcP PcP 23 27 21.5 -0.6
comp=E,0.3nm,0.7s,baz=152,slow=4.6,SNR=4.0
INK Inuvik 64.68 342 *e*P **P 23 27 27.8 -0.9**
comp=E,1.7nm,0.8s,mb3.9
SUMG Summit 67.16 14 P **P 23 27 42.7 -1.7**
TORD Torodi Ar. Bea 84.98 78 P **P 23 29 24.9 -1.2**
comp=E,0.2nm,0.4s,mb3.2,baz=285,slow=6.7,SNR=8.4
ASAR Alice Springs 140.44 247 PKhKP 23 36 09.9
comp=E,0.4nm,0.4s,baz=113,slow=2.9,SNR=4.8
ASAR PKP PKPdf 23 36 19.0 +0.3
comp=E,1.4nm,0.5s,baz=106,slow=1.8,SNR=17
ASAR Alice Springs 140.44 247 PKP PKPdf 23 36 19.0 +0.3

CASC 13 23:20:30.8±2.2, 11°38N×85°72W, h185km±15km, MD3.7, ML2.8, 2C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.15**	**241**	*e*P	Pn	23 20 55.4	+0.2
SSN				*e*S	Sn	23 21 14.9	+0.9
SSN				AML	AML	23 21 18.6	
	comp=Z,97nm,0.1s						
CONN	**Concepcion**	**0.21**	**26**	*e*P	Pn	23 20 56.7	+1.4
TICN	**Ticuantepe**	**0.82**	**322**	*e*P	Pn	23 20 58.6	+0.8
MGAN	**Managua**	**0.93**	**326**	*e*P	Pn	23 20 59.0	+0.6
TISN	**Laguna Tiscapa**	**0.94**	**325**	*e*P	Pn	23 20 59.0	+0.5
XAVN	**Gruta Xavier**	**0.97**	**322**	*e*P	Pn	23 20 58.3	-0.5
CSAN		**1.06**	**319**	*e*P	Pn	23 20 59.5	+0.1
VCR	**Vista de Mar**	**1.24**	**176**	⇑*i*P	Pn	23 21 01.7	+0.7
VCR				*e*S	Sn	23 21 25.0	+0.8
JTS	**JuntasAbangare**	**1.31**	**145**	*e*P	Pn	23 21 02.2	+0.7
JCR	**Jicaral**	**1.63**	**158**	*e*P	Pn	23 21 05.3	+0.9
JCR				*e*S	Sn	23 21 31.6	+1.1
CGA2	**Cerro Gallo 2**	**1.83**	**138**	*e*P	Pn	23 21 08.0	+1.6
LAJ	**Bijagual**	**2.17**	**134**	*e*P	Pn	23 21 09.8	-0.3
BUS	**Buena Vista**	**2.64**	**133**	⇑*e*P	Pn	23 21 17.7	+2.2
BUS				*e*S	Sn	23 21 52.0	+1.8
BAR1		**3.18**	**132**	*e*P	Pn	23 21 23.3	+1.4
BAR1				*e*S	Sn	23 22 02.4	+0.7

NIED ***13*** *23:20:00.36°.00N×141°.30E, h23km, Mw3.6 Best double couple: M₀3.03000×10¹⁴ NP1:φ₀50.00000°, δ55.00000°, λ136.00000°. NP2:φ₀170.00000°, δ55.00000°, λ44.00000°.*
JMA ***13*** *23:20:38.2±0.2, 36°.04N×141°.29E, h43km±2km, M3.5*
IDC ***13*** *23:20:39.1±1.1, 36°.68N×141°.19E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=30.7km s-min=22.5km az=72.0*
NEIC ***13*** *23:20:44.2±0.9, 36°.71N×140°.96E, h35km, mb4.0/4, Error ellipse: s-maj=17.3km s-min=15.5km az=58.0*
ISC 13 23:20:37.8±1.3, 36°.10N±0°.05×141°.32E±0°.07, h19km±7km, n25, σ1°.03/29, mb3.8/9, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.55**	**224**	P	**Pg**	**23 20 48.8**	**0.0**
CHOJ				S	**Sg**	**23 20 56.1**	**0.0**
JHO	**Hitachi**	**0.80**	**310**	⇓P	**Pb**	**23 20 53.4**	**+0.3**
JYT	**Yasato**	**0.92**	**278**	⇓P	**Pb**	**23 20 54.6**	**-0.6**
JYT				*e*S	**Sb**	**23 21 07.2**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.09**	**337**	P	**Pb**	**23 20 57.7**	**-0.3**
ONAJ				*e*S	**Sb**	**23 21 11.9**	**+0.1**
BSO1	**Boso 1**	**1.47**	**191**	P	**Pn**	**23 21 03.9**	**+0.7**
JAG	**Ashikaga**	**1.55**	**283**	⇓P	**Pn**	**23 21 03.7**	**-0.6**
MJAR	**Matsushiro Arr**	**2.56**	**281**	Pn	**Pn**	**23 21 18.2**	**+0.1**
	6.7nm,0.3s,baz=272,slow=3.7,SNR=36						
MJAR				Sn	**Sn**	**23 21 56.8**	**+8.1**
	4.2nm,0.3s,baz=101,slow=25,SNR=5.3						
MAJO	**Matsushiro**	**2.56**	**281**	*e*Pn	**Pn**	**23 21 18.6**	**+0.4**
MAJO				Sn	**Sn**	**23 21 46.5**	**-2.3**
MAT	**Matsushiro**	**2.56**	**281**	P	**Pn**	**23 21 19.0**	**+0.8**
MAT				*e*S	**Sn**	**23 21 50.6**	**+1.8**
MDJ	**Mudanjiang**	**12.34**	**317**	Pn	**Pn**	**23 23 28.8**	**-3.5**
TPUB	**Ta-pu**	**21.98**	**240**	*e*P	**P**	**23 25 31.3**	**+0.6**
ZALV	**Zalesovo Beam**	**42.50**	**313**	P	**P**	**23 28 32.8**	**+1.2**
	0.7nm,0.5s,mb3.6,baz=107,slow=6.4,SNR=4.1						
MKAR	**Makanchi Array**	**44.56**	**303**	P	**P**	**23 28 49.6**	**+1.3**
	0.4nm,0.7s,mb3.4,baz=88,slow=11,SNR=5.8						
KURK	**Kurchatov**	**46.46**	**309**	P	**P**	**23 29 04.5**	**+1.3**
	1.3nm,0.6s,mb4.0,baz=87,slow=8.2,SNR=5.2						
KURK	**Kurchatov**	**46.46**	**309**	*e*P	**P**	**23 29 01.1**	**-2.2**
	1.0nm,0.6s,mb3.9						
AAK	**Ala-Archa**	**50.88**	**299**	P	**P**	**23 29 36.9**	**-0.5**
	1.0nm,0.6s,mb3.9						
BVAR	**Borovoye Array**	**51.15**	**313**	P	**P**	**23 29 39.7**	**+0.4**
	0.3nm,0.6s,mb3.4,baz=69,slow=9.9,SNR=2.2						
BRVK	**Borovoye**	**51.21**	**313**	P	**P**	**23 29 38.7**	**-1.0**
	0.7nm,0.4s,mb3.9						
AML	**Almayashu**	**51.59**	**299**	*e*P	**P**	**23 29 42.0**	**-0.7**
	1.4nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**56.11**	**188**	*e*P	**P**	**23 30 14.1**	**-1.8**
WRA	**Warramunga Arr**	**56.12**	**188**	P	pP	23 30 24.2	+2.1
	1.0nm,0.7s,baz=4.8,slow=7.2,SNR=3.9						
ARU	**Arti**	**57.02**	**319**	*e*P	**P**	**23 30 20.2**	**-1.8**
ASAR	**Alice Springs**	**59.85**	**188**	P	pP	23 30 50.6	+2.4
	0.4nm,0.6s,baz=20,slow=11,SNR=6.3						
YKA	**Yellowknife Ar**	**64.66**	**30**	P	**P**	**23 31 14.9**	**+1.0**
	0.3nm,0.7s,mb3.4,baz=303,slow=6.5,SNR=5.1						
FINES	**FINESS Array B**	**69.61**	**332**	P	**P**	**23 31 46.3**	**+0.9**
	1.9nm,0.9s,mb4.0,baz=211,slow=3.3,SNR=3.4						

IDC ***13*** *23:31:04.8±1.0, 31°.23N×103°.90E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.5/26, mbtmp3.7/8, Error ellipse: s-maj=65.5km s-min=18.4km az=60.0*
ISCJB ***13*** *23:31:05.8±1.3, 31°.22N±0°.07×103°.98E±0°.09, h22km±10km, mb3.7/8, Error ellipse: s-maj=13.0km s-min=11.7km az=148.8*
NEIC ***13*** *23:31:06.0±0.3, 31°.23N×103°.91E, h10km, mb3.6/1, Error ellipse: s-maj=8.1km s-min=6.2km az=55.0*
ISC 13 23:31:06.5±1.5, 31°.25N±0°.07×103°.94E±0°.09, h12km±11km, n19, σ0°.49/20, mb3.7/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**205**	Pg	**Pg**	**23 31 13.4**	**-0.5**
CD2				Sg	**Sg**	**23 31 19.4**	**+0.6**
CD2				smax			
	comp=N,14μm,0.7s						
ENH	**Enshi**	**4.87**	**100**	Pn	**Pn**	**23 32 19.1**	**-0.4**
CHTO	**Chiang Mai**	**13.18**	**201**	*e*Pn	**Pn**	**23 34 12.7**	**-0.7**
BJT	**Baijiatuan**	**13.24**	**45**	*e*Pn	**Pn**	**23 34 13.7**	**-0.5**
SONM	**Songino Array**	**16.68**	**6**	Pn	**Pn**	**23 35 01.1**	**+1.3**
	baz=186,slow=12,SNR=5.4						
MK31	**Makanchi Array**	**22.78**	**319**	*e*P	**P**	**23 36 08.4**	**-0.3**
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**23 36 08.7**	**0.0**
	comp=N,0.7nm,0.7s,mb3.2,baz=120,slow=7.2,SNR=6.6						
UCH	**Uchtor**	**25.89**	**303**	P	**P**	**23 36 38.2**	**+0.1**
AML	**Almayashu**	**26.45**	**303**	*e*P	**P**	**23 36 43.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	**P**	**23 36 43.8**	**0.0**
	comp=N,0.8nm,0.5s,mb3.5,baz=128,slow=9.6,SNR=5.0						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**23 36 48.9**	**+0.4**
	comp=N,1.0nm,0.7s,mb3.5,baz=123,slow=11,SNR=4.4						
KURK	**Kurchatov**	**27.05**	**323**	*e*P	**P**	**23 36 47.9**	**-0.6**
	comp=N,0.8nm,0.6s,mb3.4						
BRVK	**Borovoye**	**32.67**	**322**	*e*P	**P**	**23 37 37.6**	**-0.6**
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**23 41 04.0**	**+0.2**
	comp=N,1.7nm,0.7s,mb4.2,baz=339,slow=7.9,SNR=4.8						
ASAR	**Alice Springs**	**61.68**	**149**	P	**P**	**23 41 25.1**	**+0.6**
	comp=N,0.2nm,0.5s,mb3.5,baz=337,slow=7.0,SNR=4.3						
STU	**Stuttgart**	**70.11**	**315**	*e*P	**P**	**23 42 18.3**	**-0.3**
	comp=N,4.8nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**72.20**	**147**	P	**P**	**23 42 31.4**	**+0.1**
	comp=N,1.3nm,0.7s,mb4.0,baz=336,slow=7.4,SNR=2.9						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**23 43 24.1**	**+0.2**
	comp=N,0.3nm,0.7s,mb3.3,baz=331,slow=5.5,SNR=5.4						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**23 43 24.1**	**+0.2**

ISCJB ***13*** *23:31:20.6±0.5, 21°.56S±0°.04×68°.29W±0°.07, h130km±6km, mb3.6/5, Error ellipse: s-maj=11.2km s-min=6.0km az=179.2*
IDC ***13*** *23:31:21.3±0.7, 21°.45S×68°.16W, h112km±9km, mb3.7/4, mb1 3.7/7, mb1mx3.5/17, mbtmp3.4/7, Error ellipse: s-maj=20.9km s-min=11.1km az=115.0*
GUC ***13*** *23:31:22.3±0.8, 21°.61S×68°.47W, h131km±5km, ML4.0*
NEIC ***13*** *23:31:22.3, 21°.61S×68°.47W, h131km, mb3.7/2, After GUC.*
ISC 13 23:31:21.5±0.5, 21°.56S±0°.04×68°.28W±0°.07, h124km±5km, n28, σ0°.89/41, mb3.7/5, 5C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.21**	**209**	P	**Pn**	**23 31 47.7**	**+1.7**
	28nm,0.3s,baz=11,slow=7.8,SNR=91						
LVC				S	**Sn**	**23 32 05.8**	**+1.2**
	61nm,0.3s,baz=190,slow=18,SNR=31						
LVC	**Limon Verde**	**1.21**	**209**	⇓*i*P	**Pn**	**23 31 47.0**	**+1.1**
LVC				*i* S	**Sn**	**23 32 05.5**	**+1.0**
LVC				AML	AML	23 32 07.2	
	comp=E,463nm,0.2s						
PB01	**Plate Boundary**	**1.24**	**294**	⇑*i*P	**Pn**	**23 31 46.8**	**+0.4**
PB01				*i* S	**Sn**	**23 32 05.4**	**+0.3**
PB01				AML	AML	23 32 07.2	
	comp=E,3μm,0.2s						
PB04	**Plate Boundary**	**1.33**	**238**	⇑*i*P	**Pn**	**23 31 53.8**	**+6.5**
PB04				*i* S	**Sn**	**23 32 17.3**	**+10**
PB04				AML	AML	23 32 19.3	
	comp=N,3μm,0.2s						
MACH	**Maria Elena**	**1.52**	**245**	⇑*i*P	**Pn**	**23 31 49.7**	**+0.3**
MACH				*i* S	**Sn**	**23 32 10.4**	**-0.2**
PECH	**Pedro de Valdi**	**1.66**	**231**	*e*P	**Pn**	**23 31 51.2**	**+0.1**
PECH				*i* S	**Sn**	**23 32 13.4**	**-0.2**
PECH				AML	AML	23 32 14.9	
	comp=N,3μm,0.2s						
HMBC	**Humberston**	**1.97**	**310**	⇑*i*P	**Pn**	**23 31 54.7**	**-0.1**
HMBC				*i* S	**Sn**	**23 32 19.8**	**-0.5**
HMBC				AML	AML	23 32 23.0	
	comp=N,2μm,0.5s						
MECH	**Mejillones**	**2.54**	**232**	*e*P	**Pn**	**23 32 01.6**	**-0.4**
MECH				*i* S	**Sn**	**23 32 31.6**	**-1.3**
MECH				AML	AML	23 32 39.8	
	comp=E,442nm,0.1s						
MNMC	**Miæe Miæ**	**2.71**	**333**	⇑*i*P	**Pn**	**23 32 04.9**	**+0.7**
MNMC				*i* S	**Sn**	**23 32 38.1**	**+1.1**
MNMC				AML	AML	23 32 39.7	
	comp=N,1μm,0.3s						
ANCH	**Antofagasta**	**2.89**	**223**	*e*P	**Pn**	**23 32 06.0**	**-0.5**
ANCH				S	**Sn**	**23 32 37.9**	**-3.4**
ANCH	**Antofagasta**	**2.89**	**223**	*e*P	**Pn**	**23 32 06.0**	**-0.5**
ANCH				*i* S	**Sn**	**23 32 37.9**	**-3.4**
ANCH				AML	AML	23 32 40.7	
	comp=E,480nm,0.2s						
LPAZ	**La Paz**	**5.24**	**2**	P	**Pn**	**23 32 38.5**	**+0.6**
	comp=E,1.3nm,0.3s,baz=168,slow=4.4,SNR=28						
LPAZ				S	**Sn**	**23 33 35.0**	**-2.2**
	comp=E,0.7nm,0.3s,baz=240,slow=6.8,SNR=2.0						
LPAZ	**La Paz**	**5.24**	**2**	P	**Pn**	**23 32 38.5**	**+0.6**
LPAZ				S	**Sn**	**23 33 35.0**	**-2.2**
LCO	**Las Campanas**	**7.74**	**196**	Pn	**Pn**	**23 33 11.5**	**0.0**
SIV	**San Ignacio**	**8.78**	**52**	P	**Pn**	**23 33 24.0**	**-1.7**
	comp=E,1.1nm,0.3s,baz=243,slow=11,SNR=20						
SIV				S	**Sn**	**23 34 57.3**	**-5.7**
	comp=E,0.2nm,0.3s,baz=311,slow=22,SNR=8.7						
CPUP	**Villa Florida**	**11.08**	**118**	P	**Pn**	**23 33 57.1**	**+0.7**
	comp=E,0.1nm,0.3s,baz=262,slow=14,SNR=3.5						
TRQA	**Tornquist**	**17.32**	**163**	*e*P	**Pn**	**23 35 14.8**	**-0.8**
	comp=E,3.7nm,0.6s						
OTAV	**Otavalo**	**23.83**	**344**	*e*P	**P**	**23 36 23.9**	**+0.5**
	comp=E,0.9nm,0.4s,mb3.5						
JTS	**JuntasAbangare**	**35.63**	**331**	P	**P**	**23 38 06.9**	**-0.7**
BBSR	**BB Station**	**53.73**	**4**	*e*P	**P**	**23 40 30.6**	**-0.2**
HWUT	**Hardware Ranch**	**74.54**	**328**	P	**P**	**23 42 46.0**	**-0.6**
ULM	**Lac du Bonnet**	**75.55**	**342**	P	**P**	**23 42 52.5**	**+0.3**
	comp=E,1.0nm,0.5s,mb3.8,baz=167,slow=7.9,SNR=4.2						
ULM	**Lac du Bonnet**	**75.55**	**342**	P	**P**	**23 42 52.5**	**+0.3**
NVAR	**Mina Array Bea**	**75.90**	**322**	P	**P**	**23 42 56.3**	**+1.9**
	comp=E,0.3nm,0.3s,mb3.5,baz=210,slow=34,SNR=2.5						
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P	**P**	**23 43 00.2**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.4,baz=255,slow=5.5,SNR=16						
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P	**P**	**23 43 00.2**	**+0.1**
YKA	**Yellowknife Ar**	**91.43**	**340**	P	**P**	**23 44 13.6**	**+0.5**
	comp=E,1.0nm,0.5s,mb4.2,baz=134,slow=4.5,SNR=37						
MKAR	**Makanchi Array**	**145.33**	**36**	PKPbc	PKPbc	23 50 45.5	+0.8
	comp=E,0.2nm,0.4s,baz=336,slow=3.1,SNR=4.7						

NIED ***13*** *23:54:00, 45°.60N×142°.40E, h320km, Mw4.3 Best double couple: M₀3.07000×10¹⁵ NP1:φ₀311.00000°, δ83.00000°, λ-65.00000°. NP2:φ₀57.00000°, δ26.00000°, λ-163.00000°.*
MOS ***13*** *23:54:24.7±1.1, 45°.67N×142°.21E, h298km, mb4.1/16, Error ellipse: s-maj=10.0km s-min=6.7km az=98.3*
BJI ***13*** *23:54:25.6, 45°.82N×142°.38E, h315km, mB4.7/11, mb4.7/29*
ISCJB ***13*** *23:54:25.6±0.2, 45°.61N±0°.03×142°.28E±0°.04, h311km±2km, mb4.2/48, Error ellipse: s-maj=4.8km s-min=4.5km az=40.5*
IDC ***13*** *23:54:26.3±0.5, 45°.70N×142°.27E, h300km±6km, mb3.7/17, mb1 3.8/20, mb1mx3.7/26, mbtmp3.7/20, Error ellipse: s-maj=14.2km s-min=11.1km az=172.0*
JMA ***13*** *23:54:26.3±0.2, 45°.56N×142°.37E, h313km±2km, M4.0*
NEIC ***13*** *23:54:26.0±0.4, 45°.53N×142°.31E, h307km±4km, mb4.2/23, Error ellipse: s-maj=7.2km s-min=4.6km az=151.0*
SKHL ***13*** *23:54:27.4±0.9, 45°.58N×142°.25E, h294km±8km, mb4.9/9, msh5.1/1*
ISC 13 23:54:26.4±0.2, 45°.61N±0°.03×142°.29E±0°.04, h306km±2km, n176, σ1°.01/203, mb4.2/48, 14C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.40**	**223**	P	**Pn**	**23 55 06.4**	**+0.9**
JWK2				*e*S	**S**	**23 55 37.1**	**+0.6**
JSE	**Soyaes**	**0.68**	**162**	⇓P	**Pn**	**23 55 06.6**	**+0.4**
JSE				*e*S	**S**	**23 55 37.7**	**-0.2**
JRR	**Rishiri**	**0.83**	**236**	P	**Pn**	**23 55 07.8**	**+1.1**
JRR				*e*S	**S**	**23 55 40.2**	**+1.5**
JSS	**Shosan**	**1.25**	**194**	⇑P	**Pn**	**23 55 09.4**	**+0.7**
JSS				*e*S	**S**	**23 55 43.0**	**+0.7**
JYG	**Yagishiri**	**1.33**	**208**	⇑P	**Pn**	**23 55 09.9**	**+0.8**
JYG				*e*S	**S**	**23 55 43.6**	**+0.5**
YSS	**Yuzh-Sakhalins**	**1.39**	**13**	*e*PN	**Pn**	**23 55 10.0**	**+0.7**
YSS				*e*S	**S**	**23 55 40.2**	**-3.2**
YSS	**Yuzh-Sakhalins**	**1.39**	**13**	⇓*i*P	**Pn**	**23 55 10.0**	**+0.7**
YSS				AMB	AMB	23 55 10.3	
	520nm,0.4s						
YSS				*e*S	**S**	**23 55 42.4**	**-1.0**
YSS				A		23 55 44.4	
	500nm,0.8s						
ASAJ	**Asahikawa**	**1.51**	**171**	⇑P	**Pn**	**23 55 10.8**	**+0.6**
ASAJ				*e*S	**S**	**23 55 45.7**	**+0.6**
ASAJ	**Asahikawa**	**1.51**	**171**	P	**Pn**	**23 55 10.1**	**-0.1**
	24nm,0.3s,baz=315,slow=5.4,SNR=83						
ASAJ				S	**S**	**23 55 45.5**	**+0.3**
	6.9nm,0.3s,baz=97,slow=29,SNR=37						
ASAJ	**Asahikawa**	**1.51**	**171**	PN	**Pn**	**23 55 10.1**	**-0.1**
ASAJ				S	**S**	**23 55 45.5**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,24nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
JKK2	**Kamakawa 2**	**1.77**	**169**	⇑P	**Pn**	**23 55 12.5**	**+0.5**
JKK2				*e*S	**S**	**23 55 49.0**	**+0.7**
JMP	**Maruseppu**	**1.77**	**154**	⇓P	**Pn**	**23 55 12.3**	**+0.3**
JMP				*e*S	**S**	**23 55 48.4**	**+0.1**
JHR	**Hokuryu**	**1.91**	**192**	⇑P	**Pn**	**23 55 13.6**	**+0.6**
JTKR	**Abashiri--Toko**	**2.00**	**144**	⇓P	**Pn**	**23 55 14.0**	**+0.3**
JTKR				*e*S	**S**	**23 55 51.1**	**-0.3**
JAB	**Ashibetsu**	**2.10**	**181**	⇑P	**Pn**	**23 55 14.9**	**+0.4**
JFR	**Furan**	**2.45**	**175**	⇑P	**Pn**	**23 55 17.4**	**-0.1**
JFR				*e*S	**S**	**23 55 58.4**	**+0.1**
JAR	**Ashorobuto**	**2.54**	**155**	⇑P	**Pn**	**23 55 18.5**	**+0.2**
JAR				*e*S	**S**	**23 55 59.5**	**-0.2**
JSK	**Shakotan**	**2.60**	**211**	P	**Pn**	**23 55 19.3**	**+0.5**
JRA	**Rausu**	**2.62**	**129**	⇓P	**Pn**	**23 55 19.5**	**+0.6**
JEW	**Eniwo**	**2.83**	**193**	⇑P	**Pn**	**23 55 21.6**	**+0.7**
JEW				*e*S	**S**	**23 56 04.6**	**+0.1**
JCH	**Churui**	**3.09**	**165**	P	**Pn**	**23 55 21.6**	**-1.9**
JCH				*e*S	**S**	**23 56 03.9**	**-5.2**
JAK	**Akkeshi**	**3.13**	**146**	P	**Pn**	**23 55 22.9**	**-1.0**
JAK				*e*S	**S**	**23 56 05.7**	**-4.1**
NEM2	**Nemuro 2**	**3.34**	**131**	P	**Pn**	**23 55 23.6**	**-2.3**
NEM2				*e*S	**S**	**23 56 08.6**	**-4.9**
JNBK	**Urakawa-nobuka**	**3.34**	**174**	P	**Pn**	**23 55 24.8**	**-1.2**
JNBK				*e*S	**S**	**23 56 09.6**	**-4.1**
UGL	**Uglegorsk**	**3.48**	**358**	*e*P	**Pn**	**23 55 28.5**	**+1.4**
UGL				AMB	AMB	23 55 29.0	
	comp=N,120nm,0.5s						
UGL				*e*S	**S**	**23 56 15.5**	**-0.3**
UGL				A		23 56 19.0	
	comp=N,2μm,4.0s						
UGL				A		23 56 19.0	
	comp=N,2μm,4.0s						
UGL				A		23 56 19.0	
	comp=N,180nm,0.8s						
UGL				A		23 56 19.0	
	comp=N,150nm,0.8s						
ERM	**Erimo**	**3.65**	**170**	*d i*PN	**Pn**	**23 55 28.2**	**-1.0**
ERM	**Erimo**	**3.65**	**170**	*e*Pn	**Pn**	**23 55 28.2**	**-1.0**
ERM				*e*S	**S**	**23 56 15.3**	**-4.1**
JKB	**Kayabe**	**3.83**	**194**	⇑P	**Pn**	**23 55 29.9**	**-1.2**
JKB				*e*S	**S**	**23 56 18.0**	**-4.9**
KUR	**Kuril'sk**	**3.95**	**93**	⇓*i*P	**Pn**	**23 55 32.6**	**+0.3**
KUR				AMB	AMB	23 55 33.0	
	comp=N,140nm,0.9s						
KUR				AMB	AMB	23 55 33.0	
	comp=N,130nm,0.9s						
KUR				AMB	AMB	23 55 33.0	
	comp=N,330nm,0.9s						
KUR				*e*S	**S**	**23 56 25.0**	**-0.1**
KUR				A		23 56 26.0	
	comp=N,80nm,0.8s						
KUR				A		23 56 26.0	
	comp=N,50nm,0.8s						
TEY	**Ternei**	**4.05**	**264**	*e*P	**Pn**	**23 55 33.5**	**+0.1**
TEY				AMB	AMB	23 55 34.0	
	comp=N,31nm,0.8s						
TEY				*e*S	**S**	**23 56 26.0**	**-1.1**
TEY				A		23 56 27.0	
	comp=N,60nm,1.0s						
TYV	**Tymovskoe**	**5.26**	**3**	*e*P	**Pn**	**23 55 47.5**	**+0.5**
TYV				AMB	AMB	23 55 50.0	
	comp=N,149nm,1.0s						
TYV				AMB	AMB	23 55 50.0	
	comp=N,242nm,1.0s						
HABR	**Khabarovsk**	**5.71**	**303**	*e*PN	**Pn**	**23 55 49.9**	**-2.4**
HABR				*e*S	**S**	**23 56 58.8**	**-2.8**
HABR				pmax	pmax		
	comp=N,21nm,1.2s						
HABR				pmax	pmax		
	comp=Z,42nm,2.3s						
HABR				pmax	pmax		
	comp=E,9.0nm,0.9s						
HABR				MLR	MLR		
	comp=Z,54nm,6.0s						
NKL	**Nikolayevsk**	**7.62**	**353**	*i* P	**Pn**	**23 56 10.0**	**-5.2**
NKL				AMB	AMB	23 56 11.0	
	comp=Z,30nm,1.0s						
NKL				AMB	AMB	23 56 11.0	
	comp=Z,43nm,1.0s						

YAK pmax pmax
comp=E,3.0nm,1.2s
SEY Seymchan 18.29 15 *eP* **P 23 58 18.2 -0.2**
BJT Baijiatuau 19.91 263 *eP* **P 23 58 35.3 -0.6**
BJT pmax pmax
comp=Z,33nm,0.6s
BJT Baijiatuau 19.91 263 *eP* **P 23 58 35.3 -0.6**
comp=Z,33nm,0.6s
NJ2 Nanjing 22.62 241 *eP* **P 23 59 02.4 +0.9**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb4.6
SONM Songino Array 24.57 288 P **P 23 59 19.7 +0.7**
comp=Z,20nm,0.5s,mb4.8,baz=81,slow=8.9,SNR=154
SONM ScP ScP 00 05 56.1 -0.5
comp=Z,0.8nm,0.6s,baz=147,slow=2.7,SNR=6.0
TPUB Ta-pu 28.36 226 P **P 23 59 51.8 -1.1**
GTA Gaotai 31.63 274 *eP* **P 00 00 22.9 +1.5**
GTA pmax pmax
comp=Z,21nm,0.6s,mb4.8
ZALV Zalesovo Beam 37.10 304 P **P 00 01 07.6 -0.2**
comp=Z,1.3nm,0.3s,mb3.8,baz=83,slow=9.6,SNR=8.8
ZALV PcP PcP 00 03 20.8 0.0
comp=Z,0.8nm,0.6s,baz=64,slow=3.4,SNR=4.8
ZALV Zalesovo Beam 37.10 304 P **P 00 01 07.6 -0.2**
ZALV PcP PcP 00 03 20.8 0.0
MK31 Makanchi Array 40.65 294 *eP* **P 00 01 37.4 +0.2**
MKAR Makanchi Array 40.65 294 P **P 00 01 37.1 -0.1**
comp=Z,1.3nm,0.5s,mb3.4,baz=79,slow=9.3,SNR=19
MKAR PcP PcP 00 03 32.4 +0.1
comp=Z,0.5nm,0.5s,baz=45,slow=2.9,SNR=4.4
MKAR ScP ScP 00 06 52.1 +0.3
comp=Z,0.5nm,0.7s,baz=60,slow=3.3,SNR=5.1
MKAR Makanchi Array 40.65 294 *eP* **P 00 01 37.1 -0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MCK McKinley 41.33 39 *eP* **P 00 01 41.2 -1.2**
KURK Kurchatov 41.61 301 *ceP* **P 00 01 44.1 -0.7**
KURK pmax pmax
comp=Z,4.0nm,0.5s,mb3.9
KURK Kurchatov 41.61 301 *eP* **P 00 01 44.3 -0.5**
comp=Z,6.9nm,0.5s,mb4.1
COLA College 41.65 37 *eP* **P 00 01 43.9 -1.1**
COLA pmax pmax
comp=Z,9.0nm,0.6s,mb4.2
COLA College 41.65 37 *eP* **P 00 01 43.9 -1.1**
comp=Z,9.3nm,0.6s,mb4.2
EGAK Eagle 44.48 36 *eP* **P 00 02 06.5 -1.0**
comp=Z,13nm,0.7s,mb4.3
CHTO Chiang Mai 44.61 248 *eP* **P 00 02 08.1 -1.0**
CHTO pmax pmax
comp=Z,5.0nm,0.6s,mb3.9
CHTO Chiang Mai 44.61 248 *eP* **P 00 02 08.1 -1.1**
comp=Z,4.9nm,0.6s,mb3.9
BVAR Borovoye Array 45.63 307 P **P 00 02 16.3 -0.3**
comp=Z,1.8nm,0.4s,mb3.7,baz=89,slow=14,SNR=7.7
BVAR Borovoye Array 45.63 307 *eP* **P 00 02 16.2 -0.4**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
ULHL Ulahol 46.47 291 P **P 00 02 24.5 +1.2**
SNR=5.4
INK Inuvik 46.56 31 *eP* **P 00 02 22.8 -0.8**
INK pmax pmax
comp=Z,11nm,0.4s
INK Inuvik 46.56 31 *eP* **P 00 02 22.8 -0.8**
comp=Z,11nm,0.4s,mb4.5
TKM2 Tokmak 2 46.58 292 P **P 00 02 25.3 +1.2**
SNR=11
TKM2 Tokmak 2 46.58 292 *eP* **P 00 02 24.8 +0.7**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
TKM2 Tokmak 2 46.58 292 *eP* **P 00 02 24.8 +0.6**
comp=Z,9.4nm,0.8s,mb4.2
KBK Karagaybulak 47.13 292 P **P 00 02 29.5 +1.1**
SNR=15
USP Ospenovka 47.14 293 P **P 00 02 29.2 +0.8**
SNR=16
KZA Kyzart 47.20 291 P **P 00 02 31.1 +2.2**
SNR=14
HYT Haines Junctio 47.21 41 *eP* **P 00 02 30.6 +2.0**
AAK Ala-Archa 47.44 292 P **P 00 02 31.5 +0.8**
SNR=5.6
AAK Ala-Archa 47.44 292 *ceP* **P 00 02 30.1 -0.6**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.3
AAK Ala-Archa 47.44 292 *eP* **P 00 02 31.4 +0.7**
comp=Z,5.1nm,0.5s,mb4.1
GUN Gumba 47.52 268 *eP* **P 00 02 32.4 +0.9**
comp=Z,30nm,0.4s,mb5.0
EKS2 Erkin-Say 47.89 292 P **P 00 02 35.0 +0.9**
SNR=12
EKS2 Erkin-Say 47.89 292 *eP* **P 00 02 34.8 +0.7**
KKN Kakani 48.01 269 *eP* **P 00 02 36.8 +1.5**
comp=Z,10.0nm,0.5s,mb4.4
PKI Pulchoki 48.06 268 *eP* **P 00 02 36.2 +0.6**
comp=Z,18nm,0.6s,mb4.6
PKIN Phulchoki 48.06 268 *eP* **P 00 02 35.7 0.0**
comp=Z,18nm,0.5s,mb4.7
AML Almayashu 48.20 292 P **P 00 02 38.0 +1.5**
SNR=8.6
AML Almayashu 48.20 292 *eP* **P 00 02 38.1 +1.6**
comp=Z,3.6nm,0.5s,mb4.0
DMN Daman 48.24 269 *eP* **P 00 02 38.3 +1.2**
comp=Z,14nm,0.5s,mb4.5
SIT Sitka 49.66 45 P **P 00 02 46.9 -0.4**
ARU Arti 50.59 314 *eP* **P 00 02 54.3 +0.1**
ARU Arti 50.59 314 *eP* **P 00 02 54.3 +0.1**
DLBC Dease Lake 51.64 42 *eP* **P 00 03 03.7 +1.8**
ABKAR Akbulak array 53.18 306 *eP* **P 00 03 12.7 -0.6**
comp=Z,2.2nm,0.3s,mb4.0
KULM Kulim 54.01 235 *eP* **P 00 03 18.6 -1.2**
KBL Kabul 55.32 286 *eP* **P 00 03 28.6 -0.2**
KBL pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
KBL Kabul 55.32 286 *eP* **P 00 03 28.6 -0.3**
comp=Z,6.6nm,0.6s,mb4.2
YKA Yellowknife Ar 56.16 33 P **P 00 03 34.0 -0.3**
comp=Z,4.6nm,0.5s,mb4.2,baz=306,slow=6.9,SNR=61
YKA Yellowknife Ar 56.16 33 P **P 00 03 34.0 -0.3**
ARCES ARCESS Array B 56.26 338 P **P 00 03 33.9 -1.0**
comp=Z,2.8nm,0.8s,mb3.8,baz=42,slow=8.2,SNR=4.0
JOF Joensuu 58.79 330 *eP* **P 00 03 50.8 -1.7**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
JOF Joensuu 58.79 330 *ep* **P 00 03 50.8 -1.7**
comp=Z,1.0nm,0.3s,mb3.7
KAF Kangasniemi 61.05 331 *eP* **P 00 04 06.2 -1.6**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
KAF Kangasniemi 61.05 331 *ep* **P 00 04 06.2 -1.6**
comp=Z,1.4nm,0.4s,mb3.8
FINES FINESS Array B 61.60 331 P **P 00 04 10.5 -1.0**
comp=Z,2.2nm,0.4s,mb4.1,baz=49,slow=7.0,SNR=29
FINES PcP PcP 00 04 49.0 -0.9
comp=Z,1.3nm,0.6s,baz=54,slow=5.5,SNR=3.5
FINES FINESS Array B 61.60 331 P **P 00 04 10.5 -1.0**
FINES PcP PcP 00 04 49.0 -0.9
SUMG Summit 62.12 0 *eP* **P 00 04 15.2 +0.5**
WRAB Tennant Creek 65.62 188 *eP* **P 00 04 36.5 -1.6**
WRAB pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
WRAB Tennant Creek 65.62 188 *eP* **P 00 04 36.5 -1.6**
comp=Z,3.1nm,0.8s,mb4.1
KIV Kislovodsk 65.92 309 *eP* **P 00 04 40.3 +0.5**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.6
KIV Kislovodsk 65.92 309 *eP* **P 00 04 39.7 -0.1**
comp=Z,7.4nm,0.6s,mb4.6
ZEI Tsey 66.02 307 *eP* **P 00 04 38.7 -1.7**
ZEI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
FCC Fort Churchill 66.09 28 *eP* **P 00 04 40.4 -0.2**
comp=Z,0.1nm,0.5s
FFC Flin Flon 66.22 35 *ceP* **P 00 04 42.0 +0.5**
FFC Flin Flon 66.22 35 *eP* **P 00 04 40.5 -1.0**
comp=Z,10nm,1.1s,mb4.5
NB2 NORSAR Subarra 66.57 336 P **P 00 04 42.7 -0.9**
comp=Z,0.5nm,0.4s,mb3.6,baz=41,slow=5.9
NOA NORSAR Array B 66.57 336 P **P 00 04 43.1 -0.4**
comp=Z,0.6nm,0.5s,mb3.6,baz=34,slow=6.4,SNR=4.5
HRY Holter Researc 67.38 46 *eP* **P 00 04 46.0 -2.9**
AKASG Malin Array Be 67.99 321 *ceP* **P 00 04 53.0 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 69.36 188 P **P 00 05 02.2 +1.0**
comp=Z,3.0nm,0.8s,mb4.1,baz=5.5,slow=5.4,SNR=24
ASAR Alice Springs 69.36 188 *eP* **P 00 05 02.2 +1.0**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
NVAR Mina Array Bea 69.47 56 P **P 00 05 03.4 +1.4**
comp=Z,2.4nm,0.7s,mb4.0,baz=303,slow=5.7,SNR=11
RRI2 Red Ridge 69.97 48 *eP* **P 00 05 05.2 +0.4**
comp=Z,3.7nm,0.7s,mb4.2
PDAR Pinedale Array 71.29 48 P **P 00 05 13.4 +0.6**
comp=Z,1.7nm,0.9s,mb3.7,baz=352,slow=1.7,SNR=13
ULM Lac du Bonnet 72.04 35 P **P 00 05 16.9 -0.2**
comp=Z,3.5nm,0.5s,mb4.2,baz=316,slow=8.2,SNR=8.1
ULM Lac du Bonnet 72.04 35 P **P 00 05 16.3 -0.8**
comp=Z,2.4nm,0.6s,mb4.0
MALT Malatya 72.10 307 P **P 00 05 18.7 +1.0**
UMR Umm Al-Rimmam 72.50 294 *eP* **P 00 05 19.6 -0.6**
UMR AMb AMB 00 05 20.2
comp=Z,20nm,0.6s,mb5.0
QRN Al-Qurain 72.92 294 *eP* **P 00 05 22.4 -0.2**
QRN AMb AMB 00 05 23.2
comp=Z,14nm,0.3s,mb5.0
RDF Al-Radifah 73.03 294 *eP* **P 00 05 23.5 +0.2**
RDF AMb AMB 00 05 24.4
comp=Z,17nm,0.9s,mb4.7
MORC Moravsky Berou 73.57 326 *eP* **P 00 05 25.7 -0.3**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
MORC Moravsky Berou 73.57 326 *eP* **P 00 05 25.7 -0.3**
comp=Z,2.0nm,0.7s,mb3.9
BR131 Keskin Array S 73.72 310 *eP* **P 00 05 27.1 -0.1**
comp=Z,1.5nm,0.7s,mb3.7
BRTR Keskin Array B 73.72 310 P **P 00 05 27.8 +0.6**
comp=Z,1.8nm,0.7s,mb3.8,baz=75,slow=4.4,SNR=13
KHC Kasperske Hory 75.60 328 *eP* **P 00 05 38.6 +1.0**
KHC Kasperske Hory 75.60 328 *eP* **P 00 05 38.6 +1.0**
GERES GERESS Array B 75.79 328 P **P 00 05 39.2 +0.5**
comp=Z,0.4nm,0.3s,mb3.5,baz=46,slow=5.8,SNR=6.8
SCHQ Schefferville 76.93 17 P **P 00 05 44.8 -0.2**
comp=Z,3.1nm,0.7s,mb4.2,baz=336,slow=4.1,SNR=6.7
MMAI Mount Meron Ar 77.59 305 P **P 00 05 50.4 +1.4**
comp=Z,1.6nm,0.4s,mb4.1,baz=27,slow=5.6,SNR=13
CDF Champ du Feu 78.44 331 *eP* **P 00 05 53.8 +0.4**
CABF La Chapelle 80.41 331 *eP* **P 00 06 04.2 +0.2**
LOR Lormes 80.57 333 *eP* **P 00 06 04.8 0.0**
SSF Saint Saulge 80.86 333 *eP* **P 00 06 06.3 -0.1**
SMF Signal de Mont 81.12 332 *eP* **P 00 06 07.9 +0.2**
LPL La Plagne 81.14 330 *eP* **P 00 06 08.0 +0.2**
LPG La Plagne 81.15 330 *eP* **P 00 06 08.8 +0.9**
comp=Z,5.3nm,0.7s,mb4.1
LPG La Plagne 81.15 330 *eP* **P 00 06 08.8 +0.9**
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
LPG La Plagne 81.15 330 *eP* **P 00 06 08.8 +0.9**
comp=Z,2.7nm,0.7s,mb4.1
AVF Avril sur Loir 81.15 333 *eP* **P 00 06 07.5 -0.4**
comp=Z,2.7nm,0.5s,mb3.9
AVF Avril sur Loir 81.15 333 *eP* **P 00 06 07.5 -0.4**
AVF pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
AVF Avril sur Loir 81.15 333 *eP* **P 00 06 07.5 -0.4**
comp=Z,1.4nm,0.5s,mb4.0
MBDF Montbardon 81.81 330 *eP* **P 00 06 11.2 -0.1**
comp=Z,3.9nm,0.7s,mb3.9
MBDF Montbardon 81.81 330 *eP* **P 00 06 11.2 -0.1**
MBDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
MBDF Montbardon 81.81 330 *eP* **P 00 06 11.2 -0.1**
comp=Z,2.0nm,0.7s,mb4.0
ORIF Oris-en-Rattie 81.95 330 *eP* **P 00 06 12.6 +0.5**
TCF Toulx Ste Croi 81.96 333 *eP* **P 00 06 12.6 +0.5**
VIVF Saint-Julien-l 82.42 331 *eP* **P 00 06 14.4 -0.1**
FRF La Foret Royal 82.86 329 *eP* **P 00 06 17.5 +0.7**
LASF Ste Croix 83.39 331 *eP* **P 00 06 20.0 +0.6**
TXAR Lajitas Array 84.41 53 P **P 00 06 25.9 +1.0**
comp=Z,1.3nm,0.8s,mb3.8,baz=277,slow=3.7,SNR=10
MTLF Montolieu 84.59 332 *eP* **P 00 06 25.8 +0.3**

IDC ***14*** *00:08:11.1±0.8,30°.94N×103°.45E,h0km,mb4.1/17,*
mb1 4.2/18,mb1mx4.1/24,mbtmp4.1/18,ML3.8/1,MS3.6/7,
Ms1 3.6/7,ms1mx3.2/30,Error ellipse: s-maj=29.4km
s-min=16.3km az=45.0
ISCJB ***14*** *00:08:13.1±0.6,30°.93N±0°.03×103°.48E±0°.04,h28km±5km,*
mb4.3/46,MS3.5/10,Error ellipse: s-maj=5.3km
s-min=4.9km az=18.7
NEIC ***14*** *00:08:13.1±2.1,30°.93N×103°.48E,h15km±13km,mb4.5/23,*
Error ellipse: s-maj=5.8km s-min=4.3km az=215.0
MOS ***14*** *00:08:13.5±0.8,30°.87N×103°.51E,h33km,mb4.6/25,Error*
ellipse: s-maj=11.5km s-min=6.7km az=122.0
BJI ***14*** *00:08:13.4,30°.96N×103°.68E,h15km,mB4.6/7,mb4.4/11,*
ML4.3/16,Ms4.2/16,Ms7 4.0/14
ISC 14 00:08:13.7±0.7,30°.96N±0°.02×103°.48E±0°.03,h17km±4km,
n133,σ0s93/141,mb4.3/46,MS3.5/10,11C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**101**	Pg	**Pg**	**00 08 19.1**	**-0.1**
CD2				Sg	**Sg**	**00 08 25.0**	**+2.0**
CD2				smax			
comp=N,101μm,1.0s							
LZH	**Lanzhou**	**5.13**	**3**	*e*Pg	**Pg**	**00 09 47.9**	**-4.0**
LZH				Sg	**Sg**	**00 10 58.3**	**0.0**
LZH				smax			
comp=N,130nm,0.9s							
LZH				smax			
comp=E,96nm,1.0s							
LZH				LR	LR		
comp=E,2μm,6.5s							
LZH				LR	LR		
comp=Z,2μm,7.7s							
LZH	**Lanzhou**	**5.13**	**3**	*e*Pg	**Pg**	**00 09 55.1**	**+3.2**
LZH				Sg	**Sg**	**00 10 58.3**	**0.0**
LZH				smax			
comp=N,140nm,0.9s							
LZH				smax			
comp=E,260nm,1.3s							
LZH				LR	LR		
comp=E,2μm,6.5s							
LZH				LR	LR		
comp=Z,2μm,7.7s							
ENH	**Enshi**	**5.22**	**96**	*e*Pn	**Pn**	**00 09 31.5**	**+0.5**
ENH				*e*Sn	**Sg**	**00 10 58.8**	**-2.6**
GYA	**Guiyang**	**5.28**	**147**	Pn	**Pn**	**00 09 32.8**	**+1.0**
GYA				Sn	**Sn**	**00 10 33.4**	**+1.1**
GYA				smax			
comp=N,1μm,1.0s							
GYA				smax			
comp=E,970nm,1.1s							
XAN	**Xi'an**	**5.53**	**55**	Pn	**Pn**	**00 09 34.1**	**-1.1**
XAN				Pg	**Pg**	**00 09 53.4**	**-6.2**
XAN				Sn	**Sn**	**00 10 38.1**	**-0.3**
XAN				Sg	**Sg**	**00 11 07.4**	**-3.8**
XAN				smax			
comp=N,560nm,1.3s							
XAN				smax			
comp=E,250nm,1.1s							
KMI	**Kunming**	**5.85**	**187**	||Pn	**Pn**	**00 09 42.4**	**+2.8**
KMI				Sn	**Sn**	**00 10 47.9**	**+1.7**
KMI				Sg	**Sg**	**00 11 20.6**	**-0.8**
KMI				smax			
comp=N,150nm,1.6s							
KMI				smax			
comp=E,140nm,2.0s							
KMI				LR	LR		
comp=N,820nm,3.8s							
KMI				LR	LR		
comp=E,2μm,9.6s							
GTA	**Gaotai**	**8.95**	**341**	*e*P	**Pn**	**00 10 17.3**	**-4.9**
GTA				pP		00 10 21.4	
GTA				sP		00 10 24.8	
GTA				S	**Sn**	**00 11 53.5**	**-9.1**
GTA				sS		00 12 03.1	
GTA				pmax	pmax		
comp=Z,2.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,42nm,5.4s							
GTA				LR	LR		
comp=N,670nm,11.4s							
GTA				LR	LR		
comp=E,800nm,10.8s							
GTA				LR	LR		
comp=Z,690nm,9.9s							
WHN	**Wuhan**	**9.36**	**90**	P	**Pn**	**00 10 26.8**	**-1.0**
WHN				S	**Sn**	**00 12 08.5**	**-4.2**
WHN				LR	LR		
comp=N,2μm,8.4s							
WHN				LR	LR		
comp=E,3μm,6.7s							
WHN				LR	LR		
comp=Z,5μm,6.7s							
LSA	**Lhasa**	**10.73**	**266**	P	**Pn**	**00 10 46.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**11.84**	**31**	*e*P	**Pn**	**00 11 03.8**	**+2.1**
HHC				pP		00 11 07.0	
HHC				PP		00 11 13.3	
HHC				S	**Sn**	**00 13 16.9**	**+3.5**
HHC				sS		00 13 22.3	
HHC				SS		00 13 33.3	
HHC				pmax	pmax		
comp=Z,16nm,1.1s							
HHC				pmax	pmax		
comp=Z,140nm,4.8s							
HHC				LR	LR		
comp=N,290nm,5.8s							
HHC				LR	LR		
comp=E,340nm,5.8s							
HHC				LR	LR		
comp=Z,210nm,5.2s							
CHTO	**Chiang Mai**	**12.77**	**200**	*e*P	**Pn**	**00 11 13.7**	**-0.8**
CHTO						00 13 35.6	
CHTO				pmax	pmax		
comp=Z,8.0nm,0.7s							
CHTO	**Chiang Mai**	**12.77**	**200**	*e*Pn	**Pn**	**00 11 13.7**	**-0.8**
comp=Z,8.1nm,0.7s							
CHTO				Sn	**Sn**	**00 13 35.6**	**-0.7**
QIZ	**Qiongzhong**	**13.20**	**153**	P	Px	00 11 35.8	
QIZ				S	Sx	00 14 08.1	
QIZ				pmax	pmax		
comp=Z,22nm,1.5s							
QIZ				LR	LR		
comp=N,650nm,6.0s							
QIZ				LR	LR		
comp=Z,810nm,11.0s							
GUN	**Gumba**	**15.63**	**263**	*e*P	**Pn**	**00 11 52.7**	**-0.5**
comp=Z,21nm,0.5s							
PKI	**Pulchoki**	**16.13**	**262**	*e*P	**Pn**	**00 11 58.7**	**-0.9**
comp=Z,25nm,0.6s							
PKIN	**Phulchoki**	**16.14**	**262**	*e*P	**Pn**	**00 11 58.6**	**-1.1**
KKN	**Kakani**	**16.18**	**263**	*e*P	**Pn**	**00 11 59.5**	**-0.8**
comp=Z,40nm,0.7s							
DMN	**Daman**	**16.38**	**263**	*e*P	**Pn**	**00 12 02.1**	**-0.7**
comp=Z,29nm,0.7s							
SONM	**Songino Array**	**17.00**	**7**	Pn	**Pn**	**00 12 11.9**	**+1.3**
comp=Z,0.4nm,0.3s,baz=190,slow=12,SNR=11							
YULB	**Yu-li**	**17.54**	**111**	*e*Pn	**Pn**	**00 12 16.7**	**-0.8**
WMQ	**Urumqi**	**17.91**	**320**	P	**Pn**	**00 12 21.5**	**-0.4**
WMQ				LR	LR		
comp=N,240nm,24.0s							
WMQ				LR	LR		
comp=E,140nm,20.0s							
WMQ				LR	LR		
comp=Z,130nm,19.0s							
ZAK	**Zakamensk**	**19.41**	**360**	*e*P	Px	00 12 59.8	
ZAK				pmax	pmax		
comp=Z,3.0nm,1.1s							
TLY	**Talaya**	**20.71**	**0**	*e*P	**P**	**00 12 58.3**	**+5.4**
TLY				*e*S	**S**	**00 16 58.9**	**+15**
TLY				*e*SS		00 17 29.2	
TLY				pmax	pmax		
comp=Z,4.0nm,0.7s							
TLY				MLR	MLR		
comp=Z,95nm,10.0s,MS3.5							
KSRS	**Korea Array**	**21.20**	**66**	P	**P**	**00 12 58.5**	**+0.1**
comp=Z,5.2nm,0.7s,mb4.0,baz=254,slow=9.6,SNR=13							
KSRS				LR	LR	00 21 00.9	
comp=Z,78nm,20.4s,MS3.1,baz=240,slow=36							
KSRS	**Korea Array**	**21.20**	**66**	P	**P**	**00 12 58.5**	**+0.1**
KSRS				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.0							
KSRS				MLR	MLR		
comp=Z,78nm,20.4s,MS3.1							
CN2	**Changchun**	**21.58**	**47**	*e*P	**P**	**00 13 02.9**	**+0.5**
CN2				pmax	pmax		
comp=Z,10.0nm,0.4s,mb4.6							
DDI	**Dehra Dun**	**21.88**	**275**	*ex*	x	00 13 10.0	
HIA	**Hailar**	**22.03**	**29**	P	**P**	**00 13 07.0**	**-0.2**
JOW	**Kunigami**	**22.08**	**94**	LR	LR	00 22 29.5	
comp=Z,293nm,19.3s,MS3.7,baz=297,slow=39							
MK31	**Makanchi Array**	**22.75**	**320**	*e*P	**P**	**00 13 14.4**	**-0.4**
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**00 13 16.1**	**+1.2**
comp=Z,1.1nm,0.4s,mb3.7,baz=121,slow=9.9,SNR=20							
MKAR				LR	LR	00 22 50.9	
comp=Z,165nm,21.1s,MS3.5,baz=358,slow=39							
MKAR	**Makanchi Array**	**22.75**	**320**	*ce*P	**P**	**00 13 16.7**	**+1.9**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
TKM2	**Tokmak 2**	**25.17**	**306**	*e*P	**P**	**00 13 37.6**	**-0.4**
TKM2				pmax	pmax		
comp=Z,9.0nm,1.4s,mb4.1							
TKM2	**Tokmak 2**	**25.17**	**306**	*e*P	**P**	**00 13 37.5**	**-0.5**
comp=Z,8.9nm,1.4s,mb4.1							
UCH	**Uchtor**	**25.72**	**304**	*e*P	**P**	**00 13 43.4**	**+0.4**
comp=Z,8.0nm,1.2s,mb4.1							
AAK	**Ala-Archa**	**25.85**	**305**	P	**P**	**00 13 45.8**	**+1.6**
comp=Z,1.3nm,0.3s,mb3.9,baz=338,slow=5.8,SNR=6.9							
AAK				LR	LR	00 25 52.3	
comp=Z,140nm,19.3s,MS3.5,baz=344,slow=41							
AAK	**Ala-Archa**	**25.85**	**305**	*ce*P	**P**	**00 13 45.2**	**+1.0**
AAK				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.7							
AAK	**Ala-Archa**	**25.85**	**305**	*e*P	**P**	**00 13 43.7**	**-0.5**
AAK				LR	LR	00 25 52.3	
AML	**Almayashu**	**26.27**	**303**	*e*P	**P**	**00 13 49.2**	**+1.1**
comp=Z,8.2nm,1.4s,mb4.1							
HYB	**Hyderabad**	**26.36**	**245**	*i* P	**P**	**00 13 53.0**	**+4.0**
EKS2	**Erkin-Say**	**26.36**	**305**	*e*P	**P**	**00 13 48.2**	**-0.6**
comp=Z,2.5nm,0.8s,mb3.8							
ZAA0	**Zalesovo Array**	**26.63**	**335**	*e*P	**P**	**00 13 51.5**	**+0.4**
ZALV	**Zalesovo Beam**	**26.63**	**335**	P	**P**	**00 13 51.4**	**+0.3**
comp=Z,3.8nm,0.6s,mb4.1,baz=140,slow=9.2,SNR=23							
ZALV				LR	LR	00 25 09.8	
comp=Z,67nm,21.8s,MS3.1,baz=120,slow=38							
ZALV	**Zalesovo Beam**	**26.63**	**335**	P	**P**	**00 13 51.4**	**+0.3**
ZALV				LR	LR	00 25 09.8	
KURK	**Kurchatov**	**27.05**	**324**	P	**P**	**00 13 55.5**	**+0.5**
comp=Z,4.9nm,0.8s,mb4.1,baz=126,slow=10,SNR=14							
KURK	**Kurchatov**	**27.05**	**324**	*ce*P	**P**	**00 13 55.4**	**+0.4**
KURK				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.1							
KURK	**Kurchatov**	**27.05**	**324**	*e*P	**P**	**00 13 54.6**	**-0.3**
KBL	**Kabul**	**29.10**	**286**	*e*P	**P**	**00 14 13.6**	**+0.1**
MAJO	**Matsushiro**	**29.30**	**70**	P	**P**	**00 14 13.4**	**-1.8**
PALK	**Pallekele**	**31.77**	**227**	*e*P	**P**	**00 14 36.4**	**-0.8**
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**00 14 44.8**	**+0.9**
comp=Z,1.1nm,0.5s,mb4.0,baz=120,slow=8.8,SNR=5.4							
BVAR				PcP	PcP	00 17 29.8	-0.2
comp=Z,0.6nm,0.4s,baz=268,slow=40,SNR=3.4							
BVAR				LR	LR	00 29 03.0	
comp=Z,114nm,20.2s,MS3.6,baz=206,slow=38							
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**00 14 44.8**	**+0.9**
BVAR						00 17 29.8	
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**00 14 44.8**	**+0.9**
BVAR				PcP	PcP	00 17 29.8	-0.2
BVAR				LR	LR	00 29 03.0	
BRVK	**Borovoye**	**32.65**	**322**	P	**P**	**00 14 44.2**	**-0.3**
ABKAR	**Akbulak array**	**37.37**	**312**	*e*P	**P**	**00 15 25.3**	**0.0**
comp=Z,0.6nm,0.5s,mb3.7							
ARU	**Arti**	**40.22**	**323**	*c i*P	**P**	**00 15 49.6**	**+0.5**
ARU				*e*		00 17 19.8	
ARU				S	**S**	**00 21 52.8**	**-2.4**
ARU				SS	SS	00 24 48.4	-4.9
ARU				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.3							
ARU	**Arti**	**40.22**	**323**	*e*P	**P**	**00 15 48.5**	**-0.7**
comp=Z,8.0nm,1.0s,mb4.4							
TIXI	**Tiksi**	**43.00**	**11**	*e*P	**P**	**00 16 09.7**	**-2.0**
TIXI				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.2							
ZEI	**Tsey**	**48.20**	**302**	*e*P	**P**	**00 16 56.4**	**+3.2**
ZEI				pmax	pmax		
comp=Z,3.0nm,1.2s,mb4.2							
KIV	**Kislovodsk**	**48.95**	**303**	*e*P	**P**	**00 17 00.5**	**+1.6**
KIV				pmax	pmax		
comp=Z,11nm,1.2s,mb4.8							
KIV				MLR	MLR		
comp=Z,53nm,17.0s,MS3.6							
KIV	**Kislovodsk**	**48.95**	**303**	*e*P	**P**	**00 16 58.7**	**-0.2**
comp=Z,3.9nm,0.6s,mb4.6							
KLMR	**Klimovskoe**	**50.88**	**325**	*e*P	**P**	**00 17 12.8**	**-0.6**
KLMR				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.7							

OBN	**Obninsk**	**52.23 318**	⇓*e*P	**P**	**00 17 23.3**	**-0.3**
OBN			*e*		00 19 20.0	
OBN			pmax	pmax		
	comp=Z,21nm,2.5s,mb4.6					
OBN			MLR	MLR		
	comp=Z,100nm,22.0s,MS3.8					
OBN	**Obninsk**	**52.23 318**	P	**P**	**00 17 23.2**	**-0.3**
MALT	**Malatya**	**53.06 297**	P	**P**	**00 17 30.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**53.22 153**	*e*P	**P**	**00 17 30.7**	**-0.5**
JOF	**Joensuu**	**54.87 328**	*e*P	**P**	**00 17 42.0**	**-0.8**
JOF			pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3					
JOF	**Joensuu**	**54.87 328**	*e*p	**P**	**00 17 42.0**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.2					
BR131	**Keskin Array S**	**56.35 300**	*e*P	**P**	**00 17 54.2**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.9					
BRTR	**Keskin Array B**	**56.35 300**	P	**P**	**00 17 52.6**	**-1.2**
	comp=Z,1.0nm,0.8s,mb3.9,baz=88,slow=6.6,SNR=5.5					
BRTR	**Keskin Array B**	**56.35 300**	*i* P	**P**	**00 17 53.0**	**-0.8**
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.9s					
KEV	**Kevo**	**56.65 336**	*e*P	**P**	**00 17 52.0**	**-3.5**
KEV			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7					
KEV	**Kevo**	**56.65 336**	*e*p	**P**	**00 17 52.0**	**-3.5**
	comp=Z,6.4nm,0.8s,mb4.7					
MMAI	**Mount Meron Ar**	**56.84 291**	PcP	PcP	00 18 54.0	+1.0
	comp=Z,0.6nm,0.5s,baz=58,slow=12,SNR=2.1					
AKASG	**Malin Array Be**	**57.10 313**	P	**P**	**00 17 58.5**	**-0.4**
	comp=Z,2.5nm,0.5s,mb4.5,baz=69,slow=7.0,SNR=7.3					
AKASG	**Malin Array Be**	**57.10 313**	*e*P	**P**	**00 17 58.7**	**-0.2**
AKASG			pmax	pmax		
	comp=Z,3.0nm,0.5s					
ARCES	**ARCESS Array B**	**57.17 336**	P	**P**	**00 17 58.5**	**-0.7**
	comp=Z,3.1nm,0.8s,mb4.4,baz=90,slow=7.7,SNR=15					
ARCES			PcP	PcP	00 18 53.9	+0.2
	comp=Z,1.1nm,0.4s,baz=92,slow=3.9,SNR=10.0					
FINES	**FINESS Array B**	**57.39 326**	P	**P**	**00 18 00.9**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.3,baz=99,slow=7.2,SNR=13					
WRAB	**Tennant Creek**	**58.65 146**	*e*P	**P**	**00 18 09.9**	**-0.2**
WRAB			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9					
WRAB	**Tennant Creek**	**58.65 146**	*e*P	**P**	**00 18 09.9**	**-0.2**
	comp=Z,12nm,1.0s,mb4.9					
TIRR	**Tirgusor**	**58.95 306**	*e*P	**P**	**00 18 12.1**	**+0.1**
TIRR			pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5					
TIRR	**Tirgusor**	**58.95 306**	*e*P	**P**	**00 18 12.1**	**+0.1**
	comp=Z,4.7nm,0.9s,mb4.5					
KWP	**Kalwaria Pacla**	**61.42 313**	*e*P	**P**	**00 18 29.4**	**+0.6**
KWP			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9					
KWP	**Kalwaria Pacla**	**61.42 313**	*e*P	**P**	**00 18 29.4**	**+0.5**
	comp=Z,7.6nm,0.8s,mb4.9					
ASAR	**Alice Springs**	**61.64 148**	P	**P**	**00 18 31.1**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.9,baz=340,slow=7.0,SNR=6.5					
KOLS	**Kolonicke sedl**	**61.88 312**	*e*P	**P**	**00 18 32.1**	**+0.1**
KOLS			pmax	pmax		
	comp=Z,23nm,2.7s,mb4.8					
KOLS	**Kolonicke sedl**	**61.88 312**	*e*P	**P**	**00 18 32.1**	**+0.1**
	comp=Z,23nm,2.7s,mb4.8					
KOLS	**Kolonicke sedl**	**61.88 312**	*e*P	**P**	**00 18 32.1**	**+0.1**
STHS	**Stebnicka Huta**	**62.40 313**	*e*P	**P**	**00 18 35.3**	**-0.1**
STHS			pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2					
STHS	**Stebnicka Huta**	**62.40 313**	*e*P	**P**	**00 18 35.3**	**-0.1**
	comp=Z,1.9nm,0.9s,mb4.2					
STHS	**Stebnicka Huta**	**62.40 313**	*e*P	**P**	**00 18 35.3**	**-0.1**
VYHS	**Vyhne**	**64.18 313**	*e*P	**P**	**00 18 48.1**	**+0.8**
VYHS			pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9					
VYHS	**Vyhne**	**64.18 313**	*e*P	**P**	**00 18 48.1**	**+0.8**
	comp=Z,1.4nm,0.8s,mb4.0					
VYHS	**Vyhne**	**64.18 313**	*e*P	**P**	**00 18 48.1**	**+0.8**
KOLL	**Kolacno**	**64.43 313**	*e*P	**P**	**00 18 49.0**	**+0.1**
KOLL			*e*		00 27 04.0	
KOLL	**Kolacno**	**64.43 313**	*e*P	**P**	**00 18 49.0**	**+0.1**
KOLL			*e*		00 27 04.0	
NB2	**NORSAR Subarra**	**64.50 327**	P	**P**	**00 18 48.3**	**-0.8**
	comp=Z,0.9nm,0.5s,mb4.1,baz=73,slow=6.5					
NOA	**NORSAR Array B**	**64.50 327**	P	**P**	**00 18 48.2**	**-0.9**
	comp=Z,1.5nm,0.7s,mb4.2,baz=72,slow=6.7,SNR=6.7					
NOA	**NORSAR Array B**	**64.50 327**	P	**P**	**00 18 48.2**	**-0.9**
MORC	**Moravsky Berou**	**64.59 314**	*e*P	**P**	**00 18 49.8**	**-0.1**
MORC			pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4					
MORC	**Moravsky Berou**	**64.59 314**	*e*P	**P**	**00 18 49.8**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.4					
CLL	**Collm**	**66.80 317**	*e*P	**P**	**00 19 04.0**	**-0.2**
CLL	**Collm**	**66.80 317**	*e*P	**P**	**00 19 04.0**	**-0.2**
GERES	**GERESS Array B**	**67.27 314**	P	**P**	**00 19 07.7**	**+0.5**
	comp=Z,0.7nm,0.5s,mb3.9,baz=69,slow=7.3,SNR=8.8					
GERES			LR	LR	00 50 11.2	
	comp=Z,66nm,20.2s,MS3.9,baz=71,slow=38					
COLD	**Coldfoot**	**67.82 24**	*e*P	**P**	**00 19 10.0**	**-0.4**
	comp=Z,4.3nm,0.9s,mb4.5					
CDF	**Champ du Feu**	**71.35 316**	*e*P	**P**	**00 19 32.8**	**+0.3**
	comp=Z,2.2nm,0.5s,mb4.0					
CDF	**Champ du Feu**	**71.35 316**	*e*P	**P**	**00 19 32.8**	**+0.3**
CDF			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0					
CDF	**Champ du Feu**	**71.35 316**	*e*P	**P**	**00 19 32.8**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.0					
WLF	**Walferdange**	**71.47 317**	*e*P	**P**	**00 19 32.9**	**-0.3**
WLF			pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6					
WLF	**Walferdange**	**71.47 317**	*e*P	**P**	**00 19 32.9**	**-0.3**
	comp=Z,5.7nm,0.7s,mb4.6					
STKA	**Stephens Creek**	**72.18 147**	P	**P**	**00 19 38.0**	**+0.5**
	comp=Z,2.1nm,0.7s,mb4.2,baz=320,slow=14,SNR=2.9					
INK	**Inuvik**	**72.47 19**	*e*P	**P**	**00 19 38.7**	**-0.1**
INK			pmax	pmax		
	comp=Z,2.0nm,0.6s					
INK	**Inuvik**	**72.47 19**	*e*P	**P**	**00 19 38.6**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.2					
LPG	**La Plagne**	**72.96 313**	*e*P	**P**	**00 19 43.3**	**+1.1**
	comp=Z,12nm,0.7s,mb4.6					
LPG	**La Plagne**	**72.96 313**	*e*P	**P**	**00 19 43.3**	**+1.1**
LPG			pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6					
LPG	**La Plagne**	**72.96 313**	*e*P	**P**	**00 19 43.3**	**+1.1**
	comp=Z,5.8nm,0.7s,mb4.6					
LPL	**La Plagne**	**72.97 313**	⇑*i*P	**P**	**00 19 43.3**	**+1.1**
	comp=Z,12nm,0.8s,mb4.6					
LPL	**La Plagne**	**72.97 313**	⇑*i*P	**P**	**00 19 43.3**	**+1.1**
LPL			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6					
LPL	**La Plagne**	**72.97 313**	⇑*i*P	**P**	**00 19 43.3**	**+1.1**
	comp=Z,5.9nm,0.8s,mb4.6					
SMF	**Signal de Mont**	**74.22 315**	⇑*i*P	**P**	**00 19 49.7**	**+0.1**
	comp=Z,13nm,1.0s,mb4.5					
SMF	**Signal de Mont**	**74.22 315**	⇑*i*P	**P**	**00 19 49.7**	**+0.1**
SMF			pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5					
SMF	**Signal de Mont**	**74.22 315**	⇑*i*P	**P**	**00 19 49.7**	**+0.1**
	comp=Z,6.3nm,1.0s,mb4.5					
TCF	**Toulx Ste Croi**	**75.39 315**	*e*P	**P**	**00 19 56.7**	**+0.4**
	comp=Z,15nm,1.2s,mb4.5					
TCF	**Toulx Ste Croi**	**75.39 315**	*e*P	**P**	**00 19 56.7**	**+0.4**
TCF			pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5					
TCF	**Toulx Ste Croi**	**75.39 315**	*e*P	**P**	**00 19 56.7**	**+0.4**
	comp=Z,7.3nm,1.2s,mb4.5					
CAF	**Calviac**	**76.15 314**	*e*P	**P**	**00 20 01.7**	**+1.0**
YKA	**Yellowknife Ar**	**81.99 17**	P	**P**	**00 20 32.1**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=330,slow=5.3,SNR=17					
ESDC	**Sonseca Array**	**82.72 312**	P	**P**	**00 20 37.1**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=31,slow=6.1,SNR=3.1					
TORD	**Torodi Ar. Bea**	**93.17 287**	P	**P**	**00 21 26.7**	**-0.8**
	comp=Z,0.8nm,1.0s,mb4.1,baz=51,slow=2.9,SNR=6.3					
ULM	**Lac du Bonnet**	**97.35 12**	PKiKP	PKiKP	00 26 21.9	+1.1
	comp=Z,1.7nm,1.0s,baz=61,slow=8.7,SNR=3.8					
ROSC	**El Rosal**	**144.33 356**	PKP	PKPdf	00 27 49.0	-0.6
	comp=Z,5.4nm,0.5s,baz=251,slow=19,SNR=2.3					
CPUP	**Villa Florida**	**162.54 281**	PKP	PKPdf	00 28 16.0	+1.0
	comp=Z,0.2nm,0.3s,baz=254,slow=19,SNR=1.6					

*IDC **14** 00:09:56.0±1.5, 32°.21N×105°.26E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/27, mbtmp3.7/7, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/27, Error ellipse: s-maj=69.2km s-min=26.8km az=55.0*

ISC 14 00:09:56.6±3.9, 32°.3N±0°.2×105°.3E±0°.3, h3km±21km, n9, σ0s85/9, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.00**	**342**	Pg	**Pg**	**00 11 13.5**	**+0.2**
LZH				Sg	**Sg**	**00 12 04.9**	**-0.3**
LZH				smax			
	comp=N,650nm,0.7s						
LZH				smax			
	comp=E,860nm,0.6s						
LZH				LR	LR		
	comp=N,990nm,8.4s						
LZH				LR	LR		
	comp=Z,2μm,9.6s						
SONM	**Songino Array**	**15.57**	**3**	Pn	**Pn**	**00 13 36.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=2.0						
MKAR	**Makanchi Array**	**22.82**	**316**	P	**P**	**00 15 02.5**	**+1.8**
	comp=Z,1.1nm,0.6s,mb3.5,baz=119,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**26.16**	**332**	P	**P**	**00 15 31.6**	**-0.4**
	comp=Z,1.2nm,0.6s,mb3.6,baz=135,slow=9.6,SNR=2.0						
KURK	**Kurchatov**	**26.97**	**321**	P	**P**	**00 15 37.9**	**-1.4**
	comp=Z,0.5nm,0.7s,mb3.2,baz=132,slow=9.1,SNR=1.3						
MJAR	**Matsushiro Arr**	**27.38**	**72**	LR	LR	00 25 47.0	
	comp=Z,102nm,18.5s,baz=245,slow=35						
FINES	**FINESS Array B**	**57.19**	**326**	P	**P**	**00 19 44.3**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=106,slow=5.1,SNR=3.6						
WRA	**Warramunga Arr**	**58.88**	**148**	P	**P**	**00 19 56.5**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=328,slow=9.1,SNR=2.0						
YKA	**Yellowknife Ar**	**80.27**	**18**	P	**P**	**00 22 09.4**	**+0.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=326,slow=5.1,SNR=1.7						

*ISCJB **14** 00:21:34.0±0.6, 31°.08N±0°.07×104°.08E±0°.07, h10km, mb3.6/6, Error ellipse: s-maj=10.5km s-min=7.6km az=144.8*

*IDC **14** 00:21:33.6±1.0, 31°.00N×103°.75E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/26, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=40.2km s-min=19.2km az=60.0*

*BJI **14** 00:21:36.8, 31°.23N×103°.60E, h7km, ML3.9/5, Ms3.3/1, Ms7 3.3/1*

ISC 14 00:21:35.8±0.6, 31°.13N±0°.06×103°.94E±0°.09, h10km, n11, σ0s94/13, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.27**	**215**	Pg	**Pg**	**00 21 40.8**	**-0.4**
CD2				Sg	**Sg**	**00 21 46.0**	**+1.2**
CD2				smax			
	comp=N,26μm,0.6s						
XAN	**Xi'an**	**5.11**	**54**	Pg	**Pg**	**00 23 19.3**	**+5.5**
XAN				Sg	**Sg**	**00 24 14.8**	**-5.2**
XAN				smax			
	comp=N,39nm,0.9s						
XAN				smax			
	comp=E,12nm,1.2s						
GYA	**Guiyang**	**5.23**	**152**	Pg	**Pg**	**00 23 16.3**	**+0.2**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,110nm,0.9s						
SONM	**Songino Array**	**16.79**	**6**	Pn	**Pn**	**00 25 33.0**	**+2.0**
	comp=E,0.1nm,0.3s,baz=180,slow=10,SNR=5.2						
KSRS	**Korea Array**	**20.77**	**66**	P	**P**	**00 26 18.3**	**+1.4**
	comp=E,1.6nm,0.7s,baz=268,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**22.87**	**319**	P	**P**	**00 26 38.8**	**-0.5**
	comp=E,0.6nm,0.7s,mb3.1,baz=122,slow=14,SNR=5.4						
KURK	**Kurchatov**	**27.14**	**323**	P	**P**	**00 27 18.4**	**-0.6**
	comp=E,0.8nm,0.8s,mb3.3,baz=127,slow=9.5,SNR=6.3						
WRA	**Warramunga Arr**	**58.57**	**146**	P	**P**	**00 31 32.3**	**-0.5**
	comp=E,2.3nm,0.6s,mb4.4,baz=338,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**61.59**	**149**	P	**P**	**00 31 52.7**	**-0.8**
	comp=E,0.7nm,0.8s,mb3.9,baz=334,slow=6.8,SNR=6.4						
STKA	**Stephens Creek**	**72.11**	**147**	P	**P**	**00 32 59.6**	**-0.8**
	comp=E,1.4nm,0.6s,mb4.0,baz=356,slow=15,SNR=3.2						
YKA	**Yellowknife Ar**	**81.71**	**17**	P	**P**	**00 33 53.3**	**-0.8**
	comp=E,0.1nm,0.8s,mb2.8,baz=323,slow=5.0,SNR=2.4						

IDC 14 00:24:59.2±1.1, 31°.32N×103°.98E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, ML3.3/1, Error ellipse: s-maj=63.6km s-min=19.8km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.60**	**6**	Pn	Pn	00 28 54.3	+1.2
	0.1nm,0.3s,baz=182,slow=8.2,SNR=3.5						
MKAR	**Makanchi Array**	**22.75**	**319**	P	P	00 30 03.7	+0.9
	0.5nm,0.6s,baz=122,slow=10,SNR=5.2						
KURK	**Kurchatov**	**27.01**	**323**	P	P	00 30 42.5	-0.3
	0.8nm,0.7s,baz=129,slow=10,SNR=4.2						
ARCES	**ARCESS Array B**	**57.02**	**336**	P	P	00 34 45.6	-0.7
	1.4nm,0.8s,baz=85,slow=7.6,SNR=1.5						
WRA	**Warramunga Arr**	**58.71**	**146**	P	P	00 34 59.0	+0.1
	1.3nm,0.3s,baz=338,slow=7.9,SNR=28						
ASAR	**Alice Springs**	**61.73**	**149**	P	P	00 35 19.5	0.0
	0.6nm,0.9s,baz=200,slow=28,SNR=3.3						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	P	00 37 18.2	0.0
	0.3nm,0.6s,baz=329,slow=5.4,SNR=10.0						

*ISCJB **14** 00:26:31.9±0.5, 50°.14N±0°.03×18°.37E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.4km az=4.1*

*CSEM **14** 00:26:33.8±0.3, 50°.10N×18°.40E, h1km, ML2.5/4, Error ellipse: s-maj=5.8km s-min=2.9km az=174.0*

*IPEC **14** 00:26:34.2±0.2, 50°.04N×18°.47E, h1km±4km, ML1.8/4, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*

*WAR **14** 00:26:34.2, 50°.05N×18°.46E*

*PRU **14** 00:26:35.5, 50°.07N×18°.37E, h0km*

ISC 14 00:26:34.0±0.5, 50°.08N±0°.03×18°.41E±0°.03, h0km, n29, σ0s93/49, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.14**	**272**	*e*Sg	**Sg**	**00 26 41.5**	**+3.1**
OKC	**Ostrava-Krasne**	**0.29**	**215**	*e*PG	**Pg**	**00 26 40.3**	**+0.6**
OKC				*e*SG	**Sg**	**00 26 44.9**	**+1.4**
	comp=Z,58nm,0.9s						
OKC	**Ostrava-Krasne**	**0.29**	**215**	*e*Pg	**Pg**	**00 26 40.1**	**+0.4**
	baz=46						
MORC	**Moravsky Berou**	**0.64**	**242**	*e*Pg	**Pg**	**00 26 47.0**	**+0.8**
	baz=66						
MORC				*e*Sg	**Sg**	**00 26 54.9**	**+0.5**
	comp=Z,13nm,0.3s,baz=66						
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	**Pg**	**00 26 50.9**	**-0.5**
OJC				*e*Sg	**Sg**	**00 27 03.8**	**+0.7**
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	**Pg**	**00 26 50.8**	**-0.6**
	baz=259						
OJC				*e*Sg	**Sg**	**00 27 03.8**	**+0.7**
JAVC	**Velka Javorina**	**1.31**	**202**	*e*Pg	**Pg**	**00 26 59.2**	**0.0**
JAVC				*e*Sg	**Sg**	**00 27 17.4**	**+1.2**
	comp=Z,13nm,0.5s						
DPC	**Dobruska-Polom**	**1.37**	**282**	*e*PG	**Pg**	**00 27 00.4**	**+0.2**
DPC				*e*SG	**Sg**	**00 27 19.2**	**+1.3**
	comp=Z,11nm,0.6s						
DPC	**Dobruska-Polom**	**1.37**	**282**	*e*Pg	**Pg**	**00 27 00.3**	**+0.1**
	baz=102						
DPC				*e*Sg	**Sg**	**00 27 18.6**	**+0.7**
	baz=102						
NIE	**Niedzica**	**1.40**	**117**	*e*Pg	**Pg**	**00 27 00.3**	**-0.6**
NIE				*e*Sg	**Sg**	**00 27 19.9**	**+0.8**
NIE	**Niedzica**	**1.40**	**117**	*e*Pg	**Pg**	**00 27 00.3**	**-0.6**
NIE				*e*Sg	**Sg**	**00 27 20.0**	**+0.9**
VRAC	**Vranov**	**1.41**	**237**	*e*Pg	**Pg**	**00 27 00.6**	**-0.4**
	baz=58						
VRAC				*e*Sg	**Sg**	**00 27 18.7**	**-0.5**
	comp=Z,10.0nm,0.3s,baz=58						
KOLL	**Kolacno**	**1.50**	**180**	*e*SN	**Sn**	**00 27 22.1**	**-0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*Sn	**Sn**	**00 27 22.1**	**-0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*Sn	**Sn**	**00 27 22.1**	**-0.3**
VYHS	**Vyhne**	**1.61**	**170**	*e*PN	**Pn**	**00 27 03.1**	**-0.6**
VYHS				*e*SN	**Sn**	**00 27 24.3**	**-0.8**
VYHS	**Vyhne**	**1.61**	**170**	*e*Pn	**Pn**	**00 27 03.1**	**-0.6**
VYHS				*e*Sn	**Sn**	**00 27 24.3**	**-0.8**
KRUC	**Moravsky**	**1.66**	**233**	*e*Pg	**Pg**	**00 27 04.6**	**-1.2**
	baz=53						
KRUC				*e*Sg	**Sg**	**00 27 26.5**	**-0.8**
	comp=Z,8.8nm,0.4s,baz=53						
SMOL	**Smolenice**	**1.69**	**203**	*e*SN	**Sn**	**00 27 27.1**	**0.0**
SMOL	**Smolenice**	**1.69**	**203**	*e*Sn	**Sn**	**00 27 27.1**	**0.0**
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	**Pg**	**00 27 11.1**	**-0.4**
STHS				*e*SN	**Sg**	**00 27 37.0**	**+0.1**
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*Pn	**Pg**	**00 27 11.1**	**-0.4**
KECS	**Kecovo**	**2.10**	**139**	*e*PG	**Pg**	**00 27 15.5**	**+1.3**
KECS				*e*SN	**Sg**	**00 27 39.1**	**-2.3**
PRU	**Pruhonice**	**2.49**	**269**	*e*PG	**Pg**	**00 27 21.3**	**-0.5**
PRU				*e*SG	**Sg**	**00 27 53.8**	**-0.3**
	comp=Z,2.9nm,0.5s						
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*PG	**Pg**	**00 27 26.8**	**-0.3**
KOLS				*e*SG	**Sg**	**00 28 05.8**	**+2.8**
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*Pg	**Pg**	**00 27 26.8**	**-0.3**
KOLS				*e*Sg	**Sg**	**00 28 05.8**	**+2.8**
BRG	**Berggiesshubel**	**2.96**	**287**	PG	**Pg**	**00 27 30.5**	**-0.2**
BRG				SG	**Sg**	**00 28 08.5**	**-0.6**
	comp=Z,2.8nm,0.6s						
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PG	**Pg**	**00 27 35.3**	**-1.6**
KHC				*e*SG	**Sg**	**00 28 19.4**	**0.0**
	comp=Z,3.0nm,0.6s						
NKC	**Novy Kostel**	**3.83**	**275**	*e*SG	**Sg**	**00 28 37.5**	**+0.3**
	comp=Z,3.8nm,0.7s						

*CSEM **14** 00:36:17.9±0.4, 36°.14N×21°.88E, h2km, ML3.1/1, Error ellipse: s-maj=10.2km s-min=6.8km az=35.0*

*NEIC **14** 00:36:17.0, 36°.08N×21°.84E, h11km, MD3.4(ATH), ML3.1(THE), After ATH.*

*ATH **14** 00:36:17.0, 36°.08N×21°.84E, h11km±4km, MD3.4/8*

*THE **14** 00:36:27.4, 36°.67N×21°.96E, h5km±1km, ML3.1/1, Error ellipse: s-maj=2.5km s-min=1.5km az=345.0*

ISC 14 00:36:19.4±1.2, 36°.24N±0°.06×21°.88E±0°.07, h11km±7km, n42, σ1s36/54, 2C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.66**	**351**	P	**Pg**	**00 36 32.1**	**-0.1**
PYL				S	**Sg**	**00 36 37.3**	**-3.6**
PYL	**PYLOS**	**0.66**	**351**	P	**Pg**	**00 36 32.1**	**-0.1**
ITM	**Ithomi**	**0.94**	**2**	*e*Pg	**Pg**	**00 36 37.1**	**-0.4**
ITM				S	**Sg**	**00 36 44.7**	**-5.0**
ITM				*e*Sb	**Sb**	**00 36 53.9**	**+3.8**
ITM	**Ithomi**	**0.94**	**2**	P	**Pg**	**00 36 37.2**	**-0.3**
ITM				S	**Sg**	**00 36 44.7**	**-5.0**
ITM	**Ithomi**	**0.94**	**2**	P	**Pg**	**00 36 37.2**	**-0.3**
ITM				*e*Sb	**Sb**	**00 36 53.9**	**+3.8**
KYTH	**Kithira**	**0.94**	**87**	*e*PB	**Pg**	**00 36 36.0**	**-1.5**
KYTH	**Kithira**	**0.94**	**87**	*e*Pb	**Pg**	**00 36 36.0**	**-1.5**
VLI	**Veliai**	**0.98**	**61**	*e*PB	**Pg**	**00 36 37.7**	**-0.6**
VLI				*e*SB	**Sg**	**00 36 52.7**	**+1.7**
VLI	**Veliai**	**0.98**	**61**	*e*Pb	**Pg**	**00 36 37.7**	**-0.6**
VLI				*e*Sb	**Sg**	**00 36 52.7**	**+1.7**
VLX	**Vlachokerasia**	**1.20**	**20**	*e*PG	**Pg**	**00 36 42.1**	**-0.3**
VLX	**Vlachokerasia**	**1.20**	**20**	P	**Pg**	**00 36 42.0**	**-0.4**
VLX				S	**Sn**	**00 36 53.0**	**-5.3**
VLX	**Vlachokerasia**	**1.20**	**20**	P	**Pg**	**00 36 42.0**	**-0.4**
GUR	**Goura**	**1.73**	**12**	*e*PG	**Pg**	**00 36 52.2**	**-0.4**
GUR	**Goura**	**1.73**	**12**	P	**Pb**	**00 36 51.6**	**+0.4**
GUR	**Goura**	**1.73**	**12**	P	**Pb**	**00 36 51.6**	**+0.4**
GUR	**Goura**	**1.73**	**12**	*e*Pg	**Pg**	**00 36 52.2**	**-0.4**
RLS	**Riolos of Patr**	**1.84**	**350**	P	**Pb**	**00 36 54.6**	**+1.5**
RLS	**Riolos of Patr**	**1.84**	**350**	P	**Pb**	**00 36 54.6**	**+1.5**
KARN	**Karanos**	**1.86**	**116**	*e*PN	**Pn**	**00 36 50.1**	**-1.1**
KARN	**Karanos**	**1.86**	**116**	*e*Pn	**Pn**	**00 36 50.1**	**-1.1**
LTK	**Loutraki**	**1.98**	**26**	*e*PN	**Pn**	**00 36 54.5**	**+1.7**
LTK	**Loutraki**	**1.98**	**26**	P	**Pn**	**00 36 54.7**	**+1.9**
LTK	**Loutraki**	**1.98**	**26**	*e*Pn	**Pn**	**00 36 54.5**	**+1.7**
LAKA	**Lakka**	**2.00**	**2**	P	**Pn**	**00 36 55.6**	**+2.5**
LAKA				S	**Sn**	**00 37 16.1**	**-1.9**
LAKA	**Lakka**	**2.00**	**2**	P	**Pn**	**00 36 55.6**	**+2.5**
VAM	**Vamos**	**2.06**	**113**	*e*PN	**Pn**	**00 36 53.8**	**-0.2**
VAM	**Vamos**	**2.06**	**113**	*e*Pn	**Pn**	**00 36 53.8**	**-0.2**
LKR	**Lokris**	**2.56**	**20**	P	**Pb**	**00 37 05.0**	**-0.4**
LKR	**Lokris**	**2.56**	**20**	P	**Pb**	**00 37 05.0**	**-0.4**
JAN	**Janina**	**3.50**	**347**	P	**Pn**	**00 37 16.4**	**+2.6**
JAN	**Janina**	**3.50**	**347**	P	**Pn**	**00 37 16.4**	**+2.6**
TIP	**Timpagrande**	**5.00**	**307**	P	**Pn**	**00 37 34.9**	**+0.5**
TIP	**Timpagrande**	**5.00**	**307**	P	**Pn**	**00 37 34.9**	**+0.5**
KRUS	**Krusevo**	**5.14**	**355**	*e*Pn	**Pn**	**00 37 38.1**	**+1.8**
KRUS				*e*Sg	**Sn**	**00 38 33.3**	**-2.3**
KRUS	**Krusevo**	**5.14

ISCJB ***14*** *00:53:21.0±0.5,31°.20N±0°.05×104°.33E±0°.05,h10km, mb3.4/5,Error ellipse: s-maj=7.8km s-min=6.2km az=171.2*
IDC ***14*** *00:53:23.5±1.5,31°.56N×104°.50E,h0km,mb3.5/4, mb1 3.6/5,mb1mx3.3/26,mbtmp3.4/5,ML3.5/1,MS3.1/1, Ms1 3.1/1,ms1mx2.5/28,Error ellipse: s-maj=72.1km s-min=25.7km az=60.0*
NEIC ***14*** *00:53:24.8±0.7,31°.63N×104°.58E,h10km,mb3.7/1,Error ellipse: s-maj=15.9km s-min=9.5km az=208.0*
BJI ***14*** *00:53:27.4,31°.14N×103°.50E,h16km,ML3.7/7,Ms3.4/2, Ms7 3.3/2*
ISC 14 00:53:22.7±0.6,31°.18N±0°.05×104°.30E±0°.06,h10km,n17, σ1§14/20,mb3.4/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**240**	Pg	**Pg**	**00 53 32.8**	**-0.3**
CD2				Sg	**Sg**	**00 53 37.8**	**-2.4**
CD2				smax			
	comp=N,22μm,0.6s						
ENH	**Enshi**	**4.56**	**100**	Pn	**Pn**	**00 54 31.7**	**0.0**
ENH				Sn	**Sn**	**00 55 24.6**	**-0.2**
XAN	**Xi'an**	**4.83**	**53**	Pg	**Pg**	**00 55 04.1**	**+8.9**
XAN				smax			
	comp=N,67nm,0.8s						
XAN				smax			
	comp=E,25nm,0.7s						
LZH	**Lanzhou**	**4.91**	**356**	Pg	**Pg**	**00 54 56.1**	**-0.5**
LZH				Sg	**Sg**	**00 55 59.8**	**-0.4**
LZH				smax			
	comp=N,55nm,0.9s						
LZH				smax			
	comp=E,49nm,0.8s						
GYA	**Guiyang**	**5.14**	**156**	Pn	**Pb**	**00 54 49.3**	**-3.5**
GYA				Sn	**Sb**	**00 55 47.8**	**-6.8**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,130nm,0.9s						
KMI	**Kunming**	**6.19**	**193**	Pn	**Pn**	**00 54 57.5**	**+3.4**
BJT	**Baijiatuan**	**13.07**	**44**	Pn	**Pn**	**00 56 23.3**	**-5.0**
SONM	**Songino Array**	**16.71**	**5**	Pn	**Pn**	**00 57 12.7**	**-4.1**
	comp=E,0.2nm,0.3s,baz=228,slow=19,SNR=1.6						
MK31	**Makanchi Array**	**23.03**	**319**	*e*P	**P**	**00 58 28.1**	**+0.3**
MKAR	**Makanchi Array**	**23.03**	**319**	P	**P**	**00 58 27.6**	**-0.3**
	comp=E,1.2nm,0.7s,mb3.4,baz=121,slow=11,SNR=11						
UCH	**Uchtor**	**26.17**	**303**	P	**P**	**00 58 58.8**	**+1.6**
AAK	**Ala-Archa**	**26.30**	**304**	LR	LR	01 11 34.1	
	comp=E,37nm,18.1s,baz=187,slow=42						
ZALV	**Zalesovo Beam**	**26.72**	**334**	P	**P**	**00 59 03.1**	**+1.1**
	comp=E,0.4nm,0.4s,mb3.3,baz=95,slow=13,SNR=3.0						
KURK	**Kurchatov**	**27.28**	**323**	*e*P	**P**	**00 59 07.1**	**0.0**
	comp=E,0.8nm,0.4s,mb3.6						
YSS	**Yuzh-Sakhalins**	**33.37**	**51**	*e*P	**P**	**00 59 59.5**	**-1.5**
ASAR	**Alice Springs**	**61.47**	**149**	P	**P**	**01 03 43.5**	**+4.0**
	comp=E,0.6nm,0.8s,mb3.8,baz=337,slow=6.6,SNR=4.6						
YKA	**Yellowknife Ar**	**81.57**	**17**	P	**P**	**01 05 40.8**	**+0.6**
	comp=E,0.1nm,0.6s,mb2.9,baz=328,slow=5.2,SNR=2.4						

CASC 14 00:58:11.5±3.2,8°.27N×82°.82W,h31km±14km,MD3.5, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.53**	**13**	*e*P	Pb	00 58 22.8	+0.3
BRU2				*e*S	Sb	00 58 31.4	+1.4
TBS2		**0.54**	**17**	*e*P	Pb	00 58 28.3	+5.6
TBS2				*e*S	Sb	00 58 37.2	+7.0
BAR1		**1.08**	**333**	*e*P	Pn	00 58 31.2	+0.6
BAR1				*e*S	Sn	00 58 46.5	+2.0
BUS	**Buena Vista**	**1.58**	**324**	*e*P	Pn	00 58 36.9	-0.5
BUS				*e*S	Sn	00 59 00.2	+3.4
QCR	**Quepos**	**1.76**	**311**	*e*S	Sn	00 58 59.3	-1.9
URSC	**Urasca**	**1.82**	**329**	*e*P	Pn	00 58 43.2	+2.5
URSC				*e*S	Sn	00 59 03.5	+0.7

ISCJB ***14*** *01:07:36.1±2.0,30°.4N±0°.2×114°.0W±0°.1,h10km,Error ellipse: s-maj=25.5km s-min=8.7km az=25.9*
NEIC ***14*** *01:07:40.9±1.6,30°.57N×113°.74W,h10km,mb3.6/1,Error ellipse: s-maj=21.0km s-min=8.6km az=23.0*
IDC ***14*** *01:07:40.1±4.0,30°.62N×113°.61W,h0km,mb3.7/1, mb1 3.6/4,mb1mx3.4/24,mbtmp3.3/4,ML3.5/3,MS3.1/1, Ms1 3.1/1,ms1mx2.7/34,Error ellipse: s-maj=62.5km s-min=16.3km az=33.0*
ISC 14 01:07:39.8±3.1,30°.4N±0°.2×113°.9W±0°.1,h11km±18km,n18, σ1§38/19,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLA	**Glamis**	**2.72**	**344**	*e*Pn	**Pn**	**01 08 19.9**	**-3.6**
BAR	**Barrett**	**3.25**	**314**	*e*Pn	**Pn**	**01 08 32.9**	**+2.2**
TUC	**Tucson**	**3.26**	**54**	*e*Pn	**Pn**	**01 08 29.5**	**-1.4**
PFO	**Pinyon Flat Ob**	**3.83**	**326**	*e*Pn	**Pn**	**01 08 38.2**	**-0.5**
MWC	**Mount Wilson**	**5.16**	**318**	*e*Pn	**Pn**	**01 08 53.9**	**-3.0**
	22nm,0.9s						
MWC				*e*Pg	**Pg**	**01 09 12.9**	**-5.7**
GSC	**Goldstone**	**5.43**	**334**	*e*Pg	**Pg**	**01 09 23.5**	**-0.2**
	27nm,1.0s						
WUAZ	**Wupatki**	**5.50**	**22**	*e*Pn	**Pn**	**01 09 01.2**	**-0.4**
	11nm,0.7s						
CCUT	**Cedar City**	**7.11**	**3**	*e*Pn	**Pn**	**01 09 24.3**	**+0.5**
	6.6nm,0.8s						
MNTX	**Cornudas Mount**	**7.42**	**78**	*e*Pn	**Pn**	**01 09 29.5**	**+1.4**
ANMO	**Albuquerque**	**7.72**	**52**	*e*Pn	**Pn**	**01 09 32.9**	**+0.8**
MSU	**Marysvale**	**8.18**	**10**	*e*Pn	**Pn**	**01 09 40.4**	**+2.0**
	3.1nm,0.6s						
NVAR	**Mina Array Bea**	**8.76**	**337**	Pn	**Pn**	**01 09 48.2**	**+1.8**
	0.1nm,0.3s,baz=161,slow=15,SNR=5.8						
TXAR	**Lajitas Array**	**8.96**	**94**	Pn	**Pn**	**01 09 48.7**	**-0.5**
	0.2nm,0.3s,baz=271,slow=16,SNR=2.9						
TXAR				Lg		01 12 13.2	
	0.1nm,0.3s,baz=252,slow=14,SNR=2.0						
TXAR				LR	LR	01 13 29.6	
	comp=Z,123nm,20.5s,baz=5.0,slow=40						
SRU	**San Rafael**	**9.09**	**17**	*e*Pn	**Pn**	**01 09 50.1**	**-0.8**
	3.8nm,0.7s						
ELK	**Elko**	**10.34**	**354**	*e*Pn	**Pn**	**01 10 07.0**	**-1.1**
PDAR	**Pinedale Array**	**12.79**	**15**	Pn	**Pn**	**01 10 44.0**	**+2.5**
	0.1nm,0.3s,baz=202,slow=8.8,SNR=4.5						
RSSD	**Black Hills**	**15.74**	**27**	*e*P	**Pn**	**01 11 19.6**	**-1.7**
	3.3nm,1.0s						
ULM	**Lac du Bonnet**	**23.98**	**29**	P	**P**	**01 12 53.6**	**-0.5**
	1.6nm,0.7s,baz=212,slow=6.2,SNR=3.8						

IDC ***14*** *01:09:18.1±0.6,31°.29N×103°.84E,h0km,mb4.2/19, mb1 4.3/20,mb1mx4.2/27,mbtmp4.2/20,ML3.9/1,MS3.6/6, Ms1 3.6/6,ms1mx3.2/33,Error ellipse: s-maj=26.0km s-min=13.4km az=51.0*
NEIC ***14*** *01:09:19.9±0.3,31°.36N×103°.91E,h10km,mb4.4/26,Error ellipse: s-maj=8.9km s-min=6.0km az=38.0*
MOS ***14*** *01:09:20.8±0.8,31°.31N×103°.95E,h31km,mb4.5/21,Error ellipse: s-maj=12.8km s-min=6.7km az=110.1*
BJI ***14*** *01:09:20.5,31°.43N×104°.05E,h14km,mB4.7/10,mb4.5/16, ML4.3/15,Ms4.2/14,Ms7 3.9/12*
ISC 14 01:09:21.0±0.7,31°.32N±0°.02×103°.93E±0°.04,h17km±4km, n122,σ1§03/136,mb4.3/52,MS3.6/7,22C-3D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.44**	**200**	Pg	**Pg**	**01 09 30.4**	**+0.5**
CD2				Sg	**Sg**	**01 09 37.4**	**+1.6**
CD2				smax			
	comp=N,13μm,0.7s						
LZH	**Lanzhou**	**4.75**	**359**	*e*Pg	**Pb**	**01 10 41.5**	**-2.3**
LZH				Sn	**Sn**	**01 11 30.6**	**+4.2**
LZH				Sg	**Sg**	**01 11 52.8**	**-0.7**
LZH				smax			
	comp=N,610nm,0.9s						
LZH				smax			
	comp=E,280nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,4.2s						
LZH				LR	LR		
	comp=Z,2μm,5.4s						
ENH	**Enshi**	**4.89**	**101**	*e*Pn	**Pn**	**01 10 36.5**	**+2.8**
ENH				*e*Pg	**Pg**	**01 10 54.0**	**-0.6**
XAN	**Xi'an**	**5.00**	**56**	Pn	**Pn**	**01 10 35.1**	**-0.1**
XAN				Pg	**Pg**	**01 10 49.6**	**-7.2**
XAN				Sn	**Sn**	**01 11 31.3**	**-1.4**
XAN				Sg	**Sg**	**01 11 52.4**	**-9.2**
XAN				smax			
	comp=N,700nm,1.2s						
XAN				smax			
	comp=E,360nm,1.0s						
GYA	**Guiyang**	**5.41**	**153**	Pg	**Pn**	**01 10 42.4**	**+1.6**
GYA				Sg	**Sn**	**01 11 43.1**	**+0.5**
GYA				smax			
	comp=N,520nm,0.8s						
GYA				smax			
	comp=E,640nm,0.9s						
KMI	**Kunming**	**6.27**	**190**	Pn	**Pn**	**01 10 54.5**	**+1.9**
KMI				Sn	**Sn**	**01 12 03.1**	**-0.7**
KMI				Sg	**Sg**	**01 12 35.9**	**-6.2**
KMI				smax			
	comp=N,55nm,2.0s						
KMI				smax			
	comp=E,75nm,1.9s						
KMI				LR	LR		
	comp=N,620nm,6.8s						
KMI				LR	LR		
	comp=E,750nm,7.7s						
GTA	**Gaotai**	**8.74**	**339**	*e*P	**Pn**	**01 11 30.8**	**+4.3**
GTA				pP		01 11 35.3	
GTA				sP		01 11 38.4	
GTA				S	**Sn**	**01 13 06.3**	**+1.7**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,91nm,5.1s						
GTA				LR	LR		
	comp=N,990nm,11.1s						
GTA				LR	LR		
	comp=E,660nm,9.3s						
GTA				LR	LR		
	comp=Z,1μm,14.1s						
WHN	**Wuhan**	**8.98**	**92**	P	**Pn**	**01 11 29.0**	**-0.9**
WHN				S	**Sn**	**01 13 05.6**	**-5.1**
WHN				LR	LR		
	comp=Z,3μm,6.8s						
HHC	**Hu-ho-hao-te**	**11.33**	**31**	*e*P	**Pn**	**01 12 04.4**	**+2.4**
HHC				pP		01 12 07.8	
HHC				sP		01 12 13.9	
HHC				S	**Sn**	**01 14 13.3**	**+5.2**
HHC				sS		01 14 20.1	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
HHC				LR	LR		
	comp=N,430nm,5.2s						
HHC				LR	LR		
	comp=E,470nm,4.2s						
HHC				LR	LR		
	comp=Z,540nm,5.5s						
CHTO	**Chiang Mai**	**13.25**	**201**	*e*P	**Pn**	**01 12 29.1**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	**Chiang Mai**	**13.25**	**201**	*e*Pn	**Pn**	**01 12 29.1**	**+0.8**
	comp=Z,9.1nm,1.0s						
QIZ	**Qiongzhong**	**13.36**	**155**	P	**Pn**	**01 12 27.3**	**-2.5**
QIZ				S	**Sn**	**01 14 54.5**	**-3.4**
QIZ				LR	LR		
	comp=N,380nm,6.4s						
QIZ				LR	LR		
	comp=Z,530nm,6.4s						
GUN	**Gumba**	**16.06**	**262**	*e*P	**Pn**	**01 13 05.0**	**-1.1**
	comp=Z,70nm,0.8s						
PKI	**Pulchoki**	**16.56**	**262**	*e*P	**Pn**	**01 13 11.3**	**-1.1**
	comp=Z,27nm,0.7s						
PKIN	**Phulchoki**	**16.57**	**262**	*e*P	**Pn**	**01 13 10.9**	**-1.6**
SONM	**Songino Array**	**16.60**	**6**	Pn	**Pn**	**01 13 13.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=13						
SONM				LR	LR	01 20 12.5	
	comp=Z,263nm,18.1s,baz=159,slow=39						
KKN	**Kakani**	**16.61**	**262**	*e*P	**Pn**	**01 13 12.2**	**-0.8**
	comp=Z,62nm,0.8s						
DMN	**Daman**	**16.81**	**262**	*e*P	**Pn**	**01 13 14.2**	**-1.3**
	comp=Z,71nm,0.9s						
SSLB	**Suanglung**	**16.85**	**112**	*e*Pn	**Pn**	**01 13 16.3**	**+0.2**
ZAK	**Zakamensk**	**19.05**	**359**	*e*P	**Pn**	**01 13 42.5**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**20.34**	**359**	*e*P	**P**	**01 14 02.8**	**+6.6**
TLY				*e*		01 14 18.5	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,165nm,16.0s,MS3.5						
MOY	**Mondy**	**20.44**	**355**	*e*P	**P**	**01 13 59.2**	**+1.9**
KSRS	**Korea Array**	**20.70**	**66**	P	**P**	**01 14 01.0**	**+0.8**
	comp=Z,8.7nm,0.7s,baz=256,slow=9.7,SNR=19						
KSRS				LR	LR	01 21 54.7	
	comp=Z,62nm,18.2s,MS3.0,baz=220,slow=36						
KSRS	**Korea Array**	**20.70**	**66**	P	**P**	**01 14 01.0**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,62nm,18.2s,MS3.0						
CN2	**Changchun**	**21.05**	**48**	*e*P	**P**	**01 14 05.3**	**+1.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.6s,mb4.8						
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**01 14 22.5**	**+0.7**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**01 14 22.1**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.0,baz=124,slow=10,SNR=37						
TKM2	**Tokmak 2**	**25.27**	**305**	*e*P	**P**	**01 14 47.6**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0						
TKM2	**Tokmak 2**	**25.27**	**305**	*e*P	**P**	**01 14 47.6**	**+1.4**
	comp=Z,5.9nm,1.2s,mb4.0						
UCH	**Uchtor**	**25.84**	**303**	*e*P	**P**	**01 14 53.1**	**+1.8**
	comp=Z,6.5nm,1.0s,mb4.1						
AAK	**Ala-Archa**	**25.96**	**304**	P	**P**	**01 14 52.7**	**+0.2**
	comp=Z,1.2nm,0.4s,mb3.8,baz=355,slow=3.0,SNR=4.5						
AAK				LR	LR	01 26 52.9	
	comp=Z,134nm,18.6s,MS3.5,baz=204,slow=41						
AAK	**Ala-Archa**	**25.96**	**304**	*e*P	**P**	**01 14 52.6**	**+0.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.2						
AAK	**Ala-Archa**	**25.96**	**304**	*e*P	**P**	**01 14 54.3**	**+1.9**
	comp=Z,4.4nm,0.9s,mb4.0						
AAK				LR	LR	01 26 52.9	
AML	**Almayashu**	**26.40**	**303**	*e*P	**P**	**01 14 58.1**	**+1.6**
	comp=Z,5.4nm,1.0s,mb4.0						
ZAA0	**Zalesovo Array**	**26.46**	**334**	*e*P	**P**	**01 14 57.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**01 14 57.0**	**+0.2**
	comp=Z,7.6nm,0.7s,mb4.3,baz=135,slow=9.0,SNR=34						
EKS2	**Erkin-Say**	**26.48**	**304**	*e*P	**P**	**01 14 58.0**	**+0.8**
	comp=Z,1.8nm,0.7s,mb3.7						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**01 15 02.0**	**+0.4**
	comp=Z,6.2nm,0.8s,mb4.2,baz=128,slow=8.8,SNR=38						
KURK				PcP	PcP	01 18 22.2	-0.8
	comp=Z,1.0nm,0.6s,baz=111,slow=2.0,SNR=4.5						
KURK	**Kurchatov**	**26.98**	**323**	*c*eP	**P**	**01 15 02.1**	**+0.5**
KURK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
KURK	**Kurchatov**	**26.98**	**323**	*e*P	**P**	**01 15 00.5**	**-1.1**
	comp=Z,12nm,1.1s,mb4.3						
KURK				PcP	PcP	01 18 22.2	-0.8
BOD	**Bodaibo**	**27.39**	**12**	*e*P	**P**	**01 15 04.8**	**-0.3**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
KLR	**Kul'dur**	**27.52**	**41**	*e*P	**P**	**01 15 05.8**	**-0.7**
NVS	**Novosibirsk**	**27.74**	**334**	*e*P	**P**	**01 15 11.7**	**+3.3**
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**01 15 51.1**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=106,slow=11,SNR=7.5						
BVAR				PcP	PcP	01 18 36.6	-0.5
	comp=Z,1.0nm,0.5s,baz=117,slow=5.2,SNR=6.0						
ABKAR	**Akbulak array**	**37.42**	**312**	*e*P	**P**	**01 16 33.2**	**+0.2**
	comp=Z,2.1nm,0.7s,mb4.1						
SVE	**Sverdlovsk**	**39.23**	**323**	⇑*e*P	**P**	**01 16 49.5**	**+1.4**
SVE				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
ARU	**Arti**	**40.17**	**322**	*d*iP	**P**	**01 16 56.7**	**+0.8**
ARU				*e*		01 18 25.8	
ARU				S	**S**	**01 23 04.5**	**+2.8**
ARU				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
ARU	**Arti**	**40.17**	**322**	*e*P	**P**	**01 16 56.1**	**+0.1**
	comp=Z,10nm,0.9s,mb4.6						
KLMR	**Klimovskoe**	**50.80**	**325**	*e*P	**P**	**01 18 18.9**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
BILL	**Bilibino**	**51.04**	**25**	⇓*i*P	**P**	**01 18 21.5**	**-0.2**
BILL				*e*		01 20 20.7	
BILL				*e*S	**S**	**01 25 39.7**	**+1.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BILL	**Bilibino**	**51.04**	**25**	*e*P	**P**	**01 18 21.1**	**-0.6**
	comp=Z,2.6nm,0.7s,mb4.3						
OBN	**Obninsk**	**52.22**	**318**	⇓*e*P	**P**	**01 18 30.8**	**+0.1**
OBN				*e*		01 20 31.5	
OBN				*e*S	**S**	**01 25 55.7**	**+1.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
JOF	**Joensuu**	**54.76**	**328**	*e*P	**P**	**01 18 48.8**	**-0.5**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
JOF	**Joensuu**	**54.76**	**328**	*e*P	**P**	**01 18 48.8**	**-0.5**
	comp=Z,6.8nm,0.7s,mb4.8						
KEV	**Kevo**	**56.47**	**336**	*e*P	**P**	**01 18 55.2**	**-6.3**
KEV				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
KEV	**Kevo**	**56.47**	**336**	*e*p	**P**	**01 18 55.2**	**-6.3**
	comp=Z,12nm,0.8s,mb5.0						
BRTR	**Keskin Array B**	**56.51**	**299**	P	**P**	**01 19 01.9**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=79,slow=6.4,SNR=6.7						
BRTR				PcP	PcP	01 19 58.0	-0.8
	comp=Z,0.8nm,0.8s,baz=72,slow=4.0,SNR=3.7						
BRTR	**Keskin Array B**	**56.51**	**299**	*c*eP	**P**	**01 19 02.0**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**01 19 05.3**	**+0.1**
	comp=Z,4.7nm,0.8s,mb4.6,baz=79,slow=8.4,SNR=10						
ARCES				PcP	PcP	01 19 59.6	-0.6
	comp=Z,3.4nm,0.8s,baz=63,slow=5.6,SNR=6.4						
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**01 19 05.3**	**+0.1**
ARCES				PcP	PcP	01 19 59.6	-0.6
KAF	**Kangasniemi**	**57.13**	**327**	*e*P	**P**	**01 19 04.8**	**-1.4**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**57.13**	**327**	*e*p	**P**	**01 19 04.8**	**-1.4**
	comp=Z,3.6nm,0.8s,mb4.5						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**01 19 05.7**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.1,baz=70,slow=7.3,SNR=4.4						
AKASG	**Malin Array Be**	**57.13**	**313**	*c*eP	**P**	**01 19 05.6**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**01 19 05.7**	**-0.7**
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**01 19 07.0**	**-0.5**
	comp=Z,6.0nm,0.8s,mb4.7,baz=86,slow=7.2,SNR=12						
COEN	**Coen**	**58.70**	**134**	*e*P	**P**	**01 19 18.3**	**+0.4**
	comp=Z,51nm,0.8s,mb5.6						
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**01 19 18.4**	**+0.4**
	comp=Z,4.8nm,0.6s,mb4.7,baz=337,slow=7.6						
BUR08	**Bucovina Ar. S**	**60.38**	**310**	*e*P	**P**	**01 19 27.4**	**-1.7**
KWP	**Kalwaria Pacla**	**61.45**	**313**	*e*P	**P**	**01 19 36.3**	**0.0**
KWP				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
KWP	**Kalwaria Pacla**	**61.45**	**313**	*e*P	**P**	**01 19 36.3**	**0.0**
	comp=Z,5.5nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**01 19 39.0**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.3,baz=335,slow=6.7,SNR=18						
NB2	**NORSAR Subarra**	**64.39**	**327**	P	**P**	**01 19 54.7**	**-1.0**
	comp=Z,1.3nm,0.5s,mb4.2,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**01 19 54.7**	**-1.0**
	comp=Z,2.1nm,0.6s,mb4.3,baz=73,slow=6.5,SNR=9.1						
NOA				LR	LR	01 51 36.4	
	comp=Z,25nm,21.7s,MS3.4,baz=0.0,slow=39						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**01 19 54.7**	**-1.0**
NOA				LR	LR	01 51 36.4	
MORC	**Moravsky Berou**	**64.61**	**314**	*e*P	**P**	**01 19 56.1**	**-1.2**
MORC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
MORC	**Moravsky Berou**	**64.61**	**314**	*e*P	**P**	**01 19 56.1**	**-1.2**
	comp=Z,1.1nm,0.5s,mb4.1						
VRAC	**Vranov**	**65.35**	**314**	LR	LR	01 49 55.4	
	comp=Z,54nm,18.4s,MS3.8,baz=246,slow=37						
BRG	**Berggiesshubel**	**66.40**	**316**	*e*P	**P**	**01 20 08.7**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.5						
BRG	**Berggiesshubel**	**66.40**	**316**	*e*P	**P**	**01 20 08.6**	**-0.3**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**01 20 14.0**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=76,slow=5.6,SNR=8.1						
GERES				LR	LR	01 51 12.0	
	comp=Z,83nm,19.2s,MS4.0,baz=74,slow=37						
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**01 20 14.0**	**-0.5**
GERES				LR	LR	01 51 12.0	
COLD	**Coldfoot**	**67.33**	**24**	*e*P	**P**	**01 20 14.5**	**0.0**
	comp=Z,6.3nm,0.8s,mb4.7						
BPAW	**Bear Paw Mtn.**	**68.47**	**27**	*e*P	**P**	**01 20 22.0**	**+0.3**
	comp=Z,14nm,1.3s,mb4.8						
PPLA	**Purkeypile**	**68.54**	**29**	*e*P	**P**	**01 20 22.6**	**+0.4**
	comp=Z,7.0nm,0.6s,mb4.8						
TRF	**Thorofare Moun**	**69.05**	**28**	*e*P	**P**	**01 20 26.5**	**+1.1**
	comp=Z,3.9nm,0.8s,mb4.4						
COLA	**College**	**69.29**	**26**	*e*P	**P**	**01 20 26.3**	**-0.6**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
COLA	**College**	**69.29**	**26**	*e*P	**P**	**01 20 26.3**	**-0.5**
	comp=Z,6.2nm,0.4s,mb4.9						
PMR	**Palmer**	**70.42**	**29**	*e*P	**P**	**01 20 33.5**	**-0.3**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
PMR	**Palmer**	**70.42**	**29**	*e*P	**P**	**01 20 33.5**	**-0.3**
	comp=Z,7.3nm,0.6s,mb4.8						
KDAK	**Kodiak Island**	**70.74**	**33**	*c*eP	**P**	**01 20 35.9**	**+0.1**
KMBO	**Kilima Mbogo**	**70.81**	**256**	P	**P**	**01 20 37.1**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=228,slow=23,SNR=4.2						
KMBO	**Kilima Mbogo**	**70.81**	**256**	*c*eP	**P**	**01 20 37.0**	**0.0**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CDF	**

TAM	Tamanrasset	85.19	294	eP	P	01 21 56.4	-0.4
	comp=Z,0.6nm,0.6s,mb3.9						
TORD	Torodi Ar. Bea	93.43	288	P	P	01 22 34.4	-1.6
	comp=Z,1.2nm,1.1s,mb4.2,baz=56,slow=2.8,SNR=3.9						
ROSC	El Rosal	143.99	357	PKP	PKPdf	01 28 54.3	-1.9
	comp=Z,3.9nm,0.5s,baz=102,slow=22,SNR=2.2						
OTAV	Otavalo	148.53	5	ePKPbc	PKPbc	01 29 08.4	+0.9

*ISCJB **14** 01:33:35.4±0.2, 44°.31N±0°.01×17°.98E±0°.02, h10km, Error ellipse: s-maj=2.6km s-min=1.6km az=149.8*
*BEO **14** 01:33:35.0±0.3, 44°.24N×17°.86E, h13km±2km, ML3.0/8*
*PDG **14** 01:33:35.2±0.6, 44°.29N×18°.04E, h8km±1km, ML3.1/10, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*
*NEIC **14** 01:33:35.2, 44°.29N×18°.04E, h8km, ML3.1(ZAG), ML3.1(PDG), After PDG.*
NEIC Felt at Zenica.
*CSEM **14** 01:33:35.2±0.1, 44°.26N×17°.96E, h2km, ML3.0, Error ellipse: s-maj=3.9km s-min=2.3km az=54.0*
*PRU **14** 01:33:38.1, 44°.41N×18°.10E, h0km*
*VIE **14** 01:33:39.2±0.5, 44°.52N×17°.91E, h11km±2km, mb2.5/4, ML2.7/4, Error ellipse: s-maj=3.1km s-min=2.1km az=157.0 71 km S of Slavonski Brod*

ISC 14 01:33:35.5±0.4,**44°.25N**±0°.01×**17°.92E**±0°.02,**h2**km±3km, **n107**,σ1°.**22**/195,**31C-16D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	0.72	313	⇑iPg	Pg	01 33 49.6	+0.3
BLY				eSg	Sg	01 33 58.4	-0.3
BLY	Banja Luka	0.72	313	⇑iPg	Pg	01 33 49.6	+0.3
BLY				eSg	Sg	01 33 58.4	-0.3
BBLS	Lazići	1.14	109	⇑iPg	Pg	01 33 55.2	-2.0
BBLS				i Sg	Sg	01 34 12.7	+0.7
BBLS	Lazići	1.14	109	⇑iPg	Pg	01 33 55.2	-2.0
BBLS				i Sg	Sg	01 34 12.7	+0.7
UPM	Unac-Piva	1.27	145	ePg	Pn	01 33 57.6	-2.6
UPM				eSg	Sg	01 34 18.0	+1.7
UPM	Unac-Piva	1.27	145	ePg	Pn	01 33 57.6	-2.6
UPM				eSg	Sg	01 34 18.0	+1.7
STON	Ston	1.39	187	i Pg	Pn	01 33 59.2	-2.6
STON				Sg	Sg	01 34 17.7	-2.4
STON	Ston	1.39	187	i Pg	Pn	01 33 59.2	-2.6
STON				Sg	Sg	01 34 17.7	-2.4
PLE	Pljevlja	1.41	130	⇓iPg	Pn	01 34 01.3	-0.8
PLE				eSg	Sg	01 34 22.0	+1.2
PLE	Pljevlja	1.41	130	⇓iPg	Pn	01 34 01.3	-0.8
PLE				eSg	Sg	01 34 22.0	+1.2
BRY	Bratogost	1.43	161	⇓iPg	Pn	01 34 01.2	-1.1
BRY				eSg	Sg	01 34 24.1	+2.8
BRY	Bratogost	1.43	161	⇓iPg	Pn	01 34 01.2	-1.1
BRY				eSg	Sg	01 34 24.1	+2.8
DIVS	Divibare	1.50	95	⇑iPg	Pn	01 34 02.6	-0.7
DIVS				i Sg	Sg	01 34 24.1	+0.5
DIVS	Divibare	1.50	95	⇑iPg	Pn	01 34 02.6	-0.7
DIVS				i Sg	Sg	01 34 24.1	+0.5
TREB	Trebinje	1.57	168	⇑iPg	Pn	01 34 02.9	-1.3
TREB				i Sg	Sg	01 34 24.4	-1.4
FGSL	Fruska Gora	1.62	56	i Pn	Pn	01 34 03.5	-1.5
FGSL				eSg	Sg	01 34 27.7	+0.2
FRGS	Fruska Gora	1.62	55	i Pn	Pn	01 34 03.5	-1.5
FRGS				eSg	Sg	01 34 27.7	+0.2
NKY	Niksic	1.64	151	⇑iPn	Pn	01 34 04.9	-0.3
NKY				eSn	Sn	01 34 29.3	+2.5
NKY	Niksic	1.64	151	⇑iPn	Pn	01 34 04.9	-0.3
NKY				eSn	Sn	01 34 29.3	+2.5
SISC	Sisak	1.64	318	ePn	Pn	01 34 06.5	+1.2
SISC				Sn	Sn	01 34 30.7	+3.8
SISC	Sisak	1.64	318	ePn	Pn	01 34 06.4	+1.1
SISC				Sn	Sn	01 34 30.6	+3.7
RHK3	Tenkes	1.65	8	eSn	Sn	01 34 29.8	+2.7
SJES	Sjenica	1.79	123	ePg	Pn	01 34 07.2	-0.1
SJES				eSg	Sg	01 34 32.7	-0.2
HCY	Herceg Novi	1.85	167	⇑iPn	Pn	01 34 08.1	-0.1
HCY				eSn	Sn	01 34 34.7	+2.6
HCY	Herceg Novi	1.85	167	⇑iPn	Pn	01 34 08.1	-0.1
HCY				eSn	Sn	01 34 34.7	+2.6
BEO	Beograd	1.91	72	ePg	Pn	01 34 10.9	+2.0
BEO				eSg	Sg	01 34 35.8	-0.9
BEY	Berane	1.99	133	⇑iPn	Pn	01 34 10.3	+0.2
BEY				eSn	Sn	01 34 37.1	+1.5
IVA	Berane	1.99	133	⇑iPn	Pn	01 34 10.3	+0.2
IVA				eSn	Sn	01 34 37.1	+1.5
IVA	Berane	1.99	133	⇑iPn	Pn	01 34 10.3	+0.2
IVA				eSn	Sn	01 34 37.1	+1.5
PKSM	Moragy	2.02	14	⇑iPn	Pn	01 34 09.3	-1.2
PKSM				i Sg	Sg	01 34 40.9	+0.5
PKSM	Moragy	2.02	14	⇑iPn	Pn	01 34 09.3	-1.2
PKSM				eSn	Sn	01 34 37.0	+0.7
PKSM				i Sg	Sg	01 34 40.9	+0.5
GRUS	Gruza	2.05	99	ePn	Pn	01 34 08.7	-2.1
GRUS				i Sg	Sg	01 34 42.4	+1.2
PDG	Podgorica	2.07	151	⇓iPn	Pn	01 34 10.8	-0.3
PDG				eSn	Sn	01 34 39.9	+2.5
TTG	Podgorica	2.07	151	⇓iPn	Pn	01 34 10.8	-0.3
TTG				eSn	Sn	01 34 39.9	+2.5
TTG	Podgorica	2.07	151	⇓iPn	Pn	01 34 10.8	-0.3
TTG				eSn	Sn	01 34 39.9	+2.5
BUM	Brajici-Budva	2.08	160	⇑iPn	Pn	01 34 11.2	-0.1
BUM				eSn	Sn	01 34 39.9	+2.2
BUM	Brajici-Budva	2.08	160	⇑iPn	Pn	01 34 11.2	-0.1
BUM				eSn	Sn	01 34 39.9	+2.2
NVLJ	Novalja	2.21	279	ePn	Pn	01 34 13.6	+0.5
NVLJ				Sn	Sn	01 34 44.4	+3.5
NVLJ	Novalja	2.21	279	ePn	Pn	01 34 13.5	+0.5
NVLJ				Sn	Sn	01 34 44.3	+3.4
PVY	Plav	2.23	137	⇑iPn	Pn	01 34 12.7	-0.7
PVY				eSn	Sn	01 34 43.5	+2.0
PVY	Plav	2.23	137	⇑iPn	Pn	01 34 12.7	-0.7
PVY				eSn	Sn	01 34 43.5	+2.0
PKS9	Tamasi	2.35	6	⇓ePn	Pn	01 34 14.4	-0.5
BEHE	Becsehely	2.36	340	⇑ePn	Pn	01 34 15.3	+0.2
SVIS	Svilajnac	2.37	89	ePn	Pn	01 34 14.3	-0.9
SVIS	Svilajnac	2.37	89	ePn	Pn	01 34 14.3	-0.9
ULC	Ulcinj	2.49	157	⇑iPn	Pn	01 34 16.9	0.0
ULC				eSn	Sn	01 34 49.9	+2.1
ULC	Ulcinj	2.49	157	⇑iPn	Pn	01 34 16.9	0.0
ULC				eSn	Sn	01 34 49.9	+2.1
PKS6	Bocsa	2.62	26	ePn	Pn	01 34 19.6	+1.0
PKS6				eSn	Sn	01 34 49.6	-1.3
BOLS	Boljevac	2.94	97	i Pn	Pn	01 34 22.6	-0.5
BOLS	Boljevac	2.94	97	i Pn	Pn	01 34 22.6	-0.5
BZS	Buzias	2.96	61	⇑iPn	Pn	01 34 21.6	-1.7
BZS				i Sn	Sn	01 34 56.6	-2.7
BZS	Buzias	2.96	61	⇑iPn	Pn	01 34 21.6	-1.7
BZS				i Sn	Sn	01 34 56.6	-2.7
PKSG		3.15	6	⇓ePn	Pn	01 34 25.9	-0.2
PKSG				eSn	Sn	01 35 04.5	+0.3
SOKA	Soboth	3.16	321	⇑iPn	Pn	01 34 26.0	-0.2
SOKA				⇑iSn	Sn	01 35 02.8	-1.6
SOKA	Soboth	3.16	321	Pn	Pn	01 34 26.0	-0.2
SOKA				Sn	Sn	01 35 02.8	-1.6
BARS	Barje	3.17	116	i Pn	Pn	01 34 24.8	-1.5
BARS				i Sn	Sn	01 35 04.3	-0.4
BARS	Barje	3.17	116	i Pn	Pn	01 34 24.8	-1.5
BARS				i Sn	Sn	01 35 04.3	-0.4
TIR	Tirane	3.24	153	ePn	Pn	01 34 26.2	-1.0
TIR	Tirane	3.24	153	ePn	Pn	01 34 26.2	-1.0
OBKA	Obir	3.28	315	⇓iPn	Pn	01 34 28.2	+0.5
OBKA				⇑iSg	Sg	01 35 21.4	+0.7
	24nm,0.4s						
OBKA	Obir	3.28	315	Pn	Pn	01 34 28.2	+0.5
OBKA				Sg	Sg	01 35 21.4	+0.8
	24nm,0.4s						
TRI	Trieste	3.29	298	ePn	Pn	01 34 28.1	+0.2
TRI				ePg	Pg	01 34 37.0	-1.4
TRI	Trieste	3.29	298	ePn	Pn	01 34 28.1	+0.2
BUD	Budapest	3.32	13	ePn	Pn	01 34 26.9	-1.4
BUD				eSg	Sg	01 35 23.5	+1.4
BUD	Budapest	3.32	13	ePn	Pn	01 34 26.9	-1.4
VOY	Vojsko	3.36	303	ePn	Pn	01 34 29.5	+0.7
VOY				e		01 34 38.3	
VOY				e		01 34 40.8	
VOY				eSn	Sn	01 35 11.3	+2.1
VOY				e		01 35 16.7	
VOY	Vojsko	3.36	303	ePn	Pn	01 34 29.5	+0.7
VOY				eSn	Sn	01 35 11.3	+2.1
ARSA	Arzberg	3.44	332	⇑iPn	Pn	01 34 30.0	+0.1
ARSA				⇓iSn	Sn	01 35 08.3	-2.8
ARSA	Arzberg	3.44	332	Pn	Pn	01 34 30.0	+0.1
ARSA				Sn	Sn	01 35 08.3	-2.8
ZAPS	Zavoj	3.55	104	i Pn	Pn	01 34 30.5	-1.0
ZAPS				eSn	Sn	01 35 12.9	-1.1
SOP	Sopron	3.56	345	⇓ePn	Pn	01 34 31.5	-0.1
SOP				eSn	Sn	01 35 14.3	+0.1
PENC	Penc	3.66	15	⇓ePn	Pn	01 34 32.7	-0.3
PENC				eSn	Sn	01 35 15.9	-0.8
AQU	L'Aquila	3.81	242	ePn	Pn	01 34 35.6	+0.6
AQU	L'Aquila	3.81	242	ePn	Pn	01 34 35.6	+0.6
PSZ	Piszkesteto	3.91	20	ePn	Pn	01 34 34.7	-1.8
PSZ	Piszkesteto	3.91	20	⇓ePn	Pn	01 34 35.4	-1.1
PSZ				eSg	Sg	01 35 41.8	+0.7
PSZ	Piszkesteto	3.91	20	ePn	Pn	01 34 34.7	-1.8
CONA	Conrad Observa	3.94	339	⇓iPn	Pn	01 34 37.0	+0.1
CONA				⇑iSn	Sn	01 35 20.6	-3.1
CONA	Conrad Observa	3.94	339	Pn	Pn	01 34 37.0	+0.1
CONA				Sn	Sn	01 35 20.6	-3.1
ZST	Bratislava	3.98	352	ePn	Pn	01 34 37.8	+0.4
ZST				ePg	Pg	01 34 47.5	-4.3
ZST				eSg	Sn	01 35 25.0	+0.4
ZST	Bratislava	3.98	352	ePN	Pn	01 34 37.8	+0.4
ZST				ePG	Pg	01 34 47.5	-4.3
ZST				eSG	Sn	01 35 25.0	+0.4
ZST	Bratislava	3.98	352	ePn	Pn	01 34 37.8	+0.4
SMOL	Smolenice	4.27	356	ePn	Pn	01 34 41.5	+0.1
SMOL				eSg	Sn	01 35 32.4	+0.6
SMOL	Smolenice	4.27	356	ePN	Pn	01 34 41.5	+0.1
SMOL				eSG	Sn	01 35 32.4	+0.6
SMOL	Smolenice	4.27	356	ePn	Pn	01 34 41.5	+0.1
VYHS	Vyhne	4.29	8	ePn	Pn	01 34 41.1	-0.5
VYHS				eSg	Sn	01 35 32.8	+0.7
VYHS				eSg	Sg	01 35 53.1	0.0
VYHS	Vyhne	4.29	8	ePN	Pn	01 34 41.1	-0.5
VYHS				eSG	Sg	01 35 53.1	0.0
VYHS	Vyhne	4.29	8	ePn	Pn	01 34 41.1	-0.5
VYHS				eSg	Sg	01 35 53.1	0.0
KOLL	Kolacno	4.34	4	ePn	Pn	01 34 42.3	0.0
KOLL				eSg	Sn	01 35 34.2	+0.8
KOLL	Kolacno	4.34	4	ePN	Pn	01 34 42.3	0.0
KOLL				eSG	Sn	01 35 34.2	+0.8
KOLL	Kolacno	4.34	4	ePn	Pn	01 34 42.3	0.0
MOA	Molln	4.41	326	⇑iPn	Pn	01 34 44.1	+0.9
MOA				⇓iSn	Sn	01 35 34.4	-0.6
MOA	Molln	4.41	326	Pn	Pn	01 34 44.1	+0.9
MOA				Sn	Sn	01 35 34.4	-0.6
KECS	Kecovo	4.59	22	ePn	Pn	01 34 46.9	+1.2
KECS				eSg	Sg	01 36 04.0	+1.3
KECS	Kecovo	4.59	22	ePN	Pn	01 34 46.8	+1.1
KECS				eSG	Sg	01 36 04.0	+1.3
MORC	Moravsky Berou	5.53	357	ePn	Pn	01 34 59.3	+0.6
KOLS	Kolonicke sedl	5.56	31	ePn	Pn	01 35 00.1	+1.1
KOLS				eSg	Sg	01 36 43.2	+9.3
KOLS	Kolonicke sedl	5.56	31	ePN	Pn	01 35 00.0	+0.9
KOLS				eSG	Sg	01 36 43.2	+9.3
KOLS	Kolonicke sedl	5.56	31	ePn	Pn	01 35 00.1	+1.1
STHS	Stebnicka Huta	5.64	23	ePn	Pn	01 35 02.0	+1.8
STHS				eSg	Sg	01 36 45.0	+8.4
STHS	Stebnicka Huta	5.64	23	ePN	Pn	01 35 02.0	+1.8
STHS				eSG	Sg	01 36 45.0	+8.4
STHS	Stebnicka Huta	5.64	23	ePn	Pn	01 35 02.0	+1.8
KHC	Kasperske Hory	5.72	330	ePn	Pn	01 35 01.5	+0.3
	2.3nm,0.5s						
KHC	Kasperske Hory	5.72	330	ePN	Pn	01 35 01.8	+0.5
KHC				ex	x	01 35 09.5	
KHC				ex	x	01 35 18.5	
KHC				eSN	Sn	01 36 07.1	-0.3
KHC	Kasperske Hory	5.72	330	ePn	Pn	01 35 01.5	+0.2
	2.3nm,0.5s						
PRU	Pruhonice	6.18	339	ePN	Pn	01 35 07.2	-0.4
PRU				eSN	Sn	01 36 16.8	-2.0
CLL	Collm	7.79	337	eSb	Sb	01 37 27.0	+2.6
CLL				eSg	Sg	01 37 53.0	+7.5

*NEIC **14** 01:38:28.8±0.6, 32°.38N×105°.34E, h10km, mb3.7/4, Error ellipse: s-maj=32.4km s-min=8.2km az=219.0*
*IDC **14** 01:38:28.0±1.0, 32°.57N×105°.88E, h0km, mb3.5/9, mb1 3.7/9, mb1mx3.5/25, mbtmp3.5/9, Error ellipse: s-maj=63.3km s-min=20.6km az=52.0*
*BJI **14** 01:38:30.8, 32°.26N×105°.02E, h9km, ML3.6/8, Ms3.5/3, Ms7 3.5/2*

ISC 14 01:38:27.9±0.8,**32°.28N**±0°.04×**105°.19E**±0°.05,**h1**km±6km, **n22**,σ1°.**28**/27,**mb3.6**/12,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.83	222	Pg	Pg	01 39 01.8	-1.2
CD2				Sg	Sg	01 39 28.3	+1.6
CD2				smax			
	comp=N,3μm,0.8s						
XAN	Xi'an	3.59	60	Pn	Pn	01 39 27.4	+2.7
XAN				Pg	Pg	01 39 37.4	+0.7
XAN				Sg	Sg	01 40 23.6	+0.3
XAN				smax			
	comp=N,170nm,0.8s						
XAN				smax			
	comp=E,87nm,1.0s						
LZH	Lanzhou	3.96	344	ePn	Pn	01 39 34.8	+5.0
LZH				Pg	Pg	01 39 42.5	-1.3
LZH				Sg	Sg	01 40 29.0	-6.1
LZH				smax			
	comp=N,170nm,0.5s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,550nm,7.4s						
LZH				LR	LR		
	comp=Z,860nm,8.4s						
ENH	Enshi	4.19	117	ePg	Pg	01 39 47.5	-0.6
GYA	Guiyang	5.94	167	Pg	Pn	01 40 02.9	+5.8
GYA				Sg	Sn	01 41 05.3	-0.5
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,100nm,0.9s						
MK31	Makanchi Array	22.73	316	eP	P	01 43 29.2	-2.0
MKAR	Makanchi Array	22.73	316	P	P	01 43 32.9	+1.7
	comp=E,0.5nm,0.5s,mb3.3,baz=112,slow=9.3,SNR=5.8						
MKAR	Makanchi Array	22.73	316	P	P	01 43 32.9	+1.7
TKM2	Tokmak 2	25.62	303	eP	P	01 43 59.0	+0.2
	comp=E,1.5nm,0.7s,mb3.7						
ZALV	Zalesovo Beam	26.09	332	P	P	01 44 02.4	-0.6
	comp=E,0.6nm,0.4s,mb3.5,baz=111,slow=7.9,SNR=1.7						
UCH	Uchtor	26.23	301	eP	P	01 44 05.4	+1.0
	comp=E,3.6nm,1.1s,mb3.9						
KURK	Kurchatov	26.89	321	P	P	01 44 10.0	-0.2
	comp=E,0.5nm,0.6s,mb3.4,baz=126,slow=7.9,SNR=2.7						
KURK	Kurchatov	26.89	321	eP	P	01 44 09.4	-0.8
	comp=E,1.2nm,0.7s,mb3.7						
ABKAR	Akbulak array	37.60	310	eP	P	01 45 43.0	-1.0
	comp=E,0.3nm,0.4s,mb3.4						
BRTR	Keskin Array B	56.97	299	P	P	01 48 18.8	+3.8
	comp=E,0.4nm,0.6s,mb3.6,baz=97,slow=5.2,SNR=2.7						
AKASG	Malin Array Be	57.26	313	P	P	01 48 19.7	+2.8
	comp=E,1.0nm,0.6s,mb4.1,baz=67,slow=6.9,SNR=2.1						
ASAR	Alice Springs	62.03	150	P	P	01 48 49.8	-0.2
	comp=E,0.3nm,0.5s,mb3.8,baz=328,slow=6.3,SNR=2.4						
GERES	GERESS Array B	67.39	314	P	P	01 49 28.3	+3.4
	comp=E,0.2nm,0.4s,mb3.7,baz=76,slow=8.2,SNR=2.2						
STKA	Stephens Creek	72.50	148	P	P	01 49 55.5	-0.7
	comp=E,0.6nm,0.5s,mb4.0,baz=335,slow=14,SNR=3.8						
YKA	Yellowknife Ar	80.30	18	P	P	01 50 38.9	-1.3
	comp=E,0.1nm,0.3s,mb3.2,baz=128,slow=30,SNR=2.6						
YKA	Yellowknife Ar	80.30	18	P	P	01 50 38.9	-1.3
ROSC	El Rosal	143.07	359	PKP	PKPdf	01 58 04.6	+0.2
	comp=E,2.1nm,0.4s,baz=116,slow=23,SNR=1.9						

*ISCJB **14** 01:42:38.3±1.1, 30°.75N±0°.08×103°.1E±0°.2, h10km, mb3.6/2, Error ellipse: s-maj=23.8km s-min=11.2km az=178.1*
*IDC **14** 01:42:39.0±1.3, 30°.92N×103°.49E, h0km, mb3.7/2, Error ellipse: s-maj=93.6km s-min=24.8km az=61.0*

ISC 14 01:42:40.3±1.1,**30°.74N**±0°.08×**103°.1E**±0°.2,**h10**km,**n6**, σ0°.**59**/9,**mb3.6**/2,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	5.37	6	ePn	Pn	01 44 05.5	+5.0
LZH				Pg	Pg	01 44 16.6	-6.6
LZH				Sg	Sn	01 45 02.4	+0.1
LZH				smax			
	comp=N,91nm,0.5s						
LZH				smax			
	comp=E,110nm,0.7s						
LZH				LR	LR		
	comp=N,930nm,8.5s						
LZH				LR	LR		
	comp=Z,1μm,9.4s						
XAN	Xi'an	5.92	55	Pg	Pn	01 44 08.4	+0.3
XAN				Sg	Pg	01 44 51.3	+18
XAN				smax			
	comp=N,190nm,0.8s						
XAN				smax			
	comp=E,61nm,0.8s						
KURK	Kurchatov	27.03	325	P	P	01 48 23.1	+0.6
	baz=133,slow=8.8						
WRA	Warramunga Arr	58.66	145	P	P	01 52 38.2	+0.2
	comp=E,0.4nm,0.4s,mb3.8,baz=328,slow=9.0,SNR=4.8						
ASAR	Alice Springs	61.64	148	P	P	01 52 58.4	+0.1
	baz=333,slow=6.5						
YKA	Yellowknife Ar	82.29	17	P	P	01 55 00.4	-1.3
	comp=E,0.3nm,0.6s,mb3.4,baz=328,slow=5.2,SNR=5.5						

*ISCJB **14** 01:51:46.9±0.8, 31°.54N±0°.03×104°.35E±0°.05, h4km±5km, mb4.0/23, Error ellipse: s-maj=6.9km s-min=5.2km az=24.6*
*IDC **14** 01:51:48.2±0.9, 31°.51N×104°.14E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/28, mbtmp4.0/13, ML2.7/1, Error ellipse: s-maj=31.3km s-min=18.8km az=50.0*
*BJI **14** 01:51:49.2, 31°.44N×104°.32E, h10km, mB4.5/4, mb4.5/4, ML3.8/11, Ms3.9/4, Ms7 3.9/3*
*NEIC **14** 01:51:49.3±0.3, 31°.54N×104°.35E, h10km, mb4.1/14, Error ellipse: s-maj=9.3km s-min=6.1km az=32.0*

ISC 14 01:51:49.4±0.8,**31°.45N**±0°.04×**104°.33E**±0°.05,**h12**km±5km, **n38**,σ0°.**95**/43,**mb4.0**/23,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.73	223	Pg	Pg	01 52 03.3	-0.2
CD2				Sg	Sg	01 52 13.3	+0.3
CD2				smax			
	comp=N,8μm,1.0s						
ENH	Enshi	4.59	103	ePn	Pn	01 52 57.4	-1.2
LZH	Lanzhou	4.64	355	Pn	Pn	01 53 01.0	+1.6
LZH				Pg	Pg	01 53 12.3	-6.1
LZH				Sg	Sg	01 54 19.0	+0.4
LZH				smax			
	comp=N,120nm,0.9s						
LZH				smax			
	comp=E,160nm,0.8s						
LZH				LR	LR		
	comp=N,930nm,8.5s						
LZH				LR	LR		
	comp=Z,1μm,9.4s						
XAN	Xi'an	4.65	55	Pg	Pg	01 53 19.8	+1.3
XAN				Sg	Sg	01 54 17.4	-1.4
XAN				smax			
	comp=N,310nm,0.9s						
XAN				smax			
	comp=E,160nm,1.1s						
GYA	Guiyang	5.37	157	Pn	Pn	01 53 06.8	-2.6
GYA				Sn	Sn	01 54 15.8	+4.6
GYA				smax			
	comp=N,150nm,0.7s						
GYA				smax			
	comp=E,170nm,0.7s						
WHN	Wuhan	8.65	93	P	Pn	01 53 48.3	-6.0
WHN				S	Sn	01 55 20.4	-11
WHN				LR	LR		
	comp=N,880nm,8.8s						
WHN				LR	LR		
	comp=E,650nm,6.0s						
WHN				LR	LR		
	comp=Z,3μm,6.8s						
SONM	Songino Array	16.44	5	Pn	Pn	01 55 40.0	+0.1
	comp=Z,0.0nm,0.3s,baz=189,slow=14,SNR=11						
ULN	Ulaanbaatar	16.53	6	eP	Pn	01 55 40.2	-0.7
	comp=Z,4.0nm,1.0s						
KSRS	Korea Array	20.33	66	P	P	01 56 28.1	+2.7
	comp=Z,2.8nm,0.8s,baz=255,slow=8.8,SNR=4.6						
CN2	Changchun	20.71	48	eP	P	01 56 32.5	+3.0
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
MK31	Makanchi Array	22.85	318	eP	P	01 56 51.8	-0.5
MKAR	Makanchi Array	22.85	318	P	P	01 56 51.8	-0.6
	comp=Z,4.9nm,0.7s,mb4.0,baz=118,slow=12,SNR=34						
TKM2	Tokmak 2	25.47	305	eP	P	01 57 17.2	-0.1
	comp=Z,1.7nm,0.8s,mb3.6						
UCH	Uchtor	26.05	303	eP	P	01 57 23.3	+0.7
	comp=Z,4.2nm,1.0s,mb3.9						
AAK	Ala-Archa	26.17	304	eP	P	01 57 23.9	+0.3
	comp=Z,1.7nm,0.7s,mb3.7						
ZAA0	Zalesovo Array	26.50	334	eP	P	01 57 25.6	-0.8
ZALV	Zalesovo Beam	26.50	334	P	P	01 57 26.0	-0.4
	comp=Z,4.8nm,0.8s,mb4.1,baz=133,slow=9.6,SNR=19						
AML	Almayashu	26.62	302	eP	P	01 57 28.0	+0.3
	comp=Z,1.9nm,0.7s,mb3.7						
EKS2	Erkin-Say	26.69	303	eP	P	01 57 28.3	0.0
	comp=Z,0.9nm,0.4s,mb3.6						
KURK	Kurchatov	27.09	323	P	P	01 57 31.5	-0.3
	comp=Z,3.2nm,0.8s,mb3.9,baz=273,slow=20,SNR=13						
KURK	Kurchatov	27.09	323	eP	P	01 57 31.8	0.0
	comp=Z,1.7nm,0.6s,mb3.8						
BVAR	Borovoye Array	32.64	321	P	P	01 58 21.0	0.0
	comp=Z,1.0nm,0.7s,mb3.9,baz=108,slow=9.5,SNR=6.3						
BRVK	Borovoye	32.72	321	eP	P	01 58 21.3	-0.3
ABKAR	Akbul

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**174**	Pg	**Pg**	**01 56 48.9**	**+2.6**
CD2				Sg	**Sg**	**01 56 55.0**	**+5.1**
CD2				smax			
	comp=N,73μm,0.5s						
ENH	**Enshi**	**5.04**	**99**	*e*Pn	**Pn**	**01 57 58.2**	**+1.6**
ENH				*e*Sg	**Sg**	**01 59 22.0**	**-0.9**
XAN	**Xi'an**	**5.23**	**55**	Pn	**Pn**	**01 57 59.3**	**0.0**
XAN				Sg	**Sg**	**01 59 24.1**	**-5.0**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,960nm,1.0s						
GYA	**Guiyang**	**5.36**	**151**	Pn	**Pn**	**01 58 03.5**	**+2.5**
GYA				Sn	**Sn**	**01 59 07.3**	**+4.6**
GYA				smax			
	comp=N,1μm,0.8s						
GYA				smax			
	comp=E,870nm,0.9s						
KMI	**Kunming**	**6.09**	**188**	Pn	**Pn**	**01 58 12.8**	**+1.7**
KMI				Sn	**Sn**	**01 59 20.9**	**+0.1**
KMI				Sg	**Sg**	**01 59 53.3**	**-3.2**
KMI				smax			
	comp=N,190nm,0.8s						
KMI				smax			
	comp=E,160nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,4.4s						
KMI				LR	LR		
	comp=E,2μm,5.7s						
GTA	**Gaotai**	**8.82**	**340**	*e*P	**Pn**	**01 58 53.6**	**+5.0**
GTA				S	**Sn**	**02 00 28.6**	**+0.6**
GTA				pmax	pmax		
	comp=Z,58nm,6.0s						
GTA				LR	LR		
	comp=N,490nm,12.9s						
GTA				LR	LR		
	comp=E,790nm,12.6s						
GTA				LR	LR		
	comp=Z,720nm,10.5s						
WHN	**Wuhan**	**9.15**	**91**	P	**Pn**	**01 58 53.3**	**+0.1**
WHN				S	**Sn**	**02 00 33.8**	**-2.4**
WHN				LR	LR		
	comp=N,2μm,4.2s						
WHN				LR	LR		
	comp=E,3μm,4.8s						
WHN				LR	LR		
	comp=Z,3μm,8.0s						
HHC	**Hu-ho-hao-te**	**11.55**	**31**	*e*P	**Pn**	**01 59 31.4**	**+5.5**
HHC				pP		01 59 38.6	
HHC				S	**Sn**	**02 01 41.8**	**+6.9**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
HHC				LR	LR		
	comp=N,440nm,5.2s						
HHC				LR	LR		
	comp=E,650nm,6.4s						
HHC				LR	LR		
	comp=Z,440nm,5.3s						
SHL	**Shillong**	**11.83**	**245**	*e*P	**Pn**	**01 59 30.0**	**+0.2**
NJ2	**Nanjing**	**12.93**	**82**	*e*P	**Pn**	**01 59 51.3**	**+6.5**
NJ2				pP		01 59 54.5	
NJ2				sP		01 59 57.8	
NJ2				PP		02 00 01.8	
NJ2				S	**Sn**	**02 02 17.5**	**+8.8**
NJ2				sS		02 02 22.3	
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,250nm,5.7s						
NJ2				LR	LR		
	comp=N,580nm,10.2s						
NJ2				LR	LR		
	comp=E,1μm,10.7s						
NJ2				LR	LR		
	comp=Z,1μm,10.8s						
CHTO	**Chiang Mai**	**13.04**	**200**	*e*P	Px	01 59 57.1	
QIZ	**Qiongzhong**	**13.29**	**154**	P	**Pn**	**01 59 42.8**	**-7.1**
QIZ				S	**Sn**	**02 02 06.3**	**-11**
QIZ				pmax	pmax		
	comp=Z,14nm,1.2s						
QIZ				LR	LR		
	comp=N,500nm,9.3s						
QIZ				LR	LR		
	comp=Z,510nm,8.8s						
GUN	**Gumba**	**15.87**	**263**	*e*P	**Pn**	**02 00 21.9**	**-2.6**
	comp=Z,26nm,0.4s						
PKI	**Pulchoki**	**16.37**	**262**	*e*P	**Pn**	**02 00 28.4**	**-2.5**
	comp=Z,27nm,0.5s						
PKIN	**Phulchoki**	**16.38**	**262**	*e*P	**Pn**	**02 00 28.3**	**-2.7**
	comp=Z,34nm,0.6s						
KKN	**Kakani**	**16.41**	**263**	*e*P	**Pn**	**02 00 29.4**	**-2.1**
	comp=Z,44nm,0.7s						
DMN	**Daman**	**16.61**	**262**	*e*P	**Pn**	**02 00 31.2**	**-2.9**
	comp=Z,90nm,1.0s						
SONM	**Songino Array**	**16.77**	**6**	Pn	**Pn**	**02 00 36.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=183,slow=12,SNR=12						
ULN	**Ulaanbaatar**	**16.87**	**8**	*e*P	**Pn**	**02 00 36.4**	**-0.7**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**16.87**	**8**	*e*Pn	**Pn**	**02 00 36.4**	**-0.8**
	comp=Z,7.2nm,1.0s						
SSLB	**Suanglung**	**16.95**	**111**	*e*Pn	**Pn**	**02 00 41.2**	**+2.9**
	comp=Z,45nm,0.9s						
WMQ	**Urumqi**	**17.89**	**319**	*e*P	**Pn**	**02 00 59.0**	**+9.2**
WMQ				LR	LR		
	comp=N,170nm,23.0s						
WMQ				LR	LR		
	comp=E,120nm,20.0s						
WMQ				LR	LR		
	comp=Z,120nm,16.0s						
SNY	**Shenyang**	**19.13**	**51**	⇑P	**Pn**	**02 01 05.6**	**+0.5**
SNY				pmax	pmax		
	comp=Z,15nm,0.4s						
SNY				LR	LR		
	comp=N,180nm,9.8s						
SNY				LR	LR		
	comp=E,400nm,13.7s						
SNY				LR	LR		
	comp=Z,170nm,15.2s						
TLY	**Talaya**	**20.49**	**360**	*e*P	Px	02 01 30.3	
TLY				*e*S	PcP	02 05 43.3	+13
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,265nm,11.0s,MS3.9						
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**02 01 24.1**	**+0.3**
	comp=Z,29nm,0.6s,baz=262,slow=10,SNR=99						
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**02 01 24.1**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,29nm,0.6s						
CN2	**Changchun**	**21.28**	**48**	*e*P	**P**	**02 01 28.3**	**+0.7**
CN2				*es*P	sP	02 01 35.0	+3.3
CN2				pmax	pmax		
	comp=Z,40nm,0.7s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,11.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,11.0s,MS3.8						
JOW	**Kunigami**	**21.89**	**95**	LR	LR	02 10 35.0	
	comp=Z,143nm,20.0s,MS3.4,baz=146,slow=38						
DDI	**Dehra Dun**	**22.07**	**274**	*ex*	**P**	**02 01 37.0**	**+0.8**
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**02 01 43.5**	**+0.6**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**02 01 43.6**	**+0.7**
	comp=Z,19nm,1.0s,mb4.5,baz=123,slow=10,SNR=36						
MKAR				LR	LR	02 11 13.3	
	comp=Z,138nm,19.4s,MS3.4,baz=233,slow=38						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**02 02 09.6**	**+2.7**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**25.21**	**306**	*e*P	**P**	**02 02 09.6**	**+2.8**
	comp=Z,5.2nm,0.9s,mb4.1						
UCH	**Uchtor**	**25.77**	**304**	*e*P	**P**	**02 02 16.6**	**+4.6**
	comp=Z,14nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**25.90**	**304**	LR	LR	02 13 53.9	
	comp=Z,151nm,18.1s,MS3.6,baz=21,slow=40						
AAK	**Ala-Archa**	**25.90**	**304**	*ce*P	**P**	**02 02 18.8**	**+5.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
AAK	**Ala-Archa**	**25.90**	**304**	*e*P	**P**	**02 02 17.5**	**+4.4**
	comp=Z,12nm,1.0s,mb4.4						
AML	**Almayashu**	**26.34**	**303**	*e*P	**P**	**02 02 21.6**	**+4.6**
	comp=Z,12nm,1.0s,mb4.4						
EKS2	**Erkin-Say**	**26.41**	**304**	*e*P	**P**	**02 02 22.4**	**+4.6**
	comp=Z,7.1nm,1.0s,mb4.2						
ZAA0	**Zalesovo Array**	**26.52**	**335**	*e*P	**P**	**02 02 19.0**	**+0.4**
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**02 02 19.7**	**+1.1**
	comp=Z,5.3nm,0.8s,mb4.1,baz=137,slow=7.5,SNR=15						
KURK	**Kurchatov**	**27.00**	**324**	P	**P**	**02 02 22.2**	**-0.7**
	comp=Z,10nm,0.8s,mb4.4,baz=273,slow=20,SNR=37						
KURK	**Kurchatov**	**27.00**	**324**	*ce*P	**P**	**02 02 25.5**	**+2.5**
KURK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.4						
KURK	**Kurchatov**	**27.00**	**324**	*e*P	**P**	**02 02 23.6**	**+0.7**
	comp=Z,19nm,1.2s,mb4.5						
BOD	**Bodaibo**	**27.57**	**12**	*e*P	**P**	**02 02 28.7**	**+0.7**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
KLR	**Kul'dur**	**27.75**	**41**	*e*P	**P**	**02 02 31.0**	**+1.3**
MJAR	**Matsushiro Arr**	**29.03**	**70**	P	**P**	**02 02 41.0**	**-0.3**
	comp=Z,0.7nm,0.3s,mb3.9,baz=275,slow=11,SNR=4.5						
BVAR	**Borovoye Array**	**32.54**	**322**	P	**P**	**02 03 12.4**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=120,slow=9.3,SNR=9.5						
BVAR				PcP	PcP	02 05 57.0	-1.4
	comp=Z,0.8nm,0.5s,baz=114,slow=5.4,SNR=3.6						
BRVK	**Borovoye**	**32.61**	**322**	*ce*P	**P**	**02 03 16.9**	**+4.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**32.61**	**322**	*e*P	**P**	**02 03 15.2**	**+2.6**
	comp=Z,2.4nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**37.39**	**312**	*e*P	**P**	**02 03 54.5**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.0						
ARU	**Arti**	**40.18**	**322**	*d i*P	**P**	**02 04 20.4**	**+3.2**
ARU				*e*		02 05 51.9	
ARU				S	**S**	**02 10 29.2**	**+5.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
ARU	**Arti**	**40.18**	**322**	*e*P	**P**	**02 04 20.5**	**+3.3**
	comp=Z,5.0nm,0.6s,mb4.4						
PETK	**Petropavlovsk-**	**44.37**	**44**	P	**P**	**02 04 51.1**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.2,baz=240,slow=5.4,SNR=5.0						
ZEI	**Tsey**	**48.27**	**301**	*e*P	Px	02 05 33.5	
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
KIV	**Kislovodsk**	**49.01**	**303**	*e*P	**P**	**02 05 32.6**	**+4.7**
KIV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KIV				MLR	MLR		
	comp=Z,36nm,16.0s,MS3.5						
BILL	**Bilibino**	**51.25**	**25**	⇑*e*P	**P**	**02 05 42.9**	**-1.6**
BILL				*e*		02 07 42.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
BILL	**Bilibino**	**51.25**	**25**	*e*P	**P**	**02 05 43.3**	**-1.2**
	comp=Z,3.9nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.32**	**154**	*e*P	**P**	**02 06 00.0**	**-0.4**
	comp=Z,3.9nm,0.7s,mb4.5						
ASF	**Jabal al Asfar**	**56.02**	**290**	LR	LR	02 33 59.0	
	comp=Z,27nm,20.4s,MS3.3,baz=74,slow=40						
MMAI	**Mount Meron Ar**	**56.96**	**291**	LR	LR	02 36 13.7	
	comp=Z,31nm,18.1s,MS3.4,baz=160,slow=42						
ARCES	**ARCESS Array B**	**57.07**	**336**	P	**P**	**02 06 25.5**	**-1.4**
	comp=Z,4.6nm,1.2s,mb4.4,baz=91,slow=9.1,SNR=1.5						
AKASG	**Malin Array Be**	**57.10**	**313**	P	**P**	**02 06 26.9**	**-0.6**
	comp=Z,1.7nm,0.6s,mb4.3,baz=70,slow=6.9,SNR=5.0						
FINES	**FINESS Array B**	**57.33**	**326**	P	**P**	**02 06 29.7**	**+0.8**
	comp=Z,1.7nm,0.5s,mb4.3,baz=69,slow=6.3,SNR=3.6						
FINES	**FINESS Array B**	**57.33**	**326**	P	**P**	**02 06 29.7**	**+0.8**
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**02 06 38.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**02 06 38.9**	**-0.1**
	comp=Z,12nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**58.71**	**146**	P	**P**	**02 06 39.0**	**0.0**
	comp=Z,8.3nm,0.6s,mb4.9,baz=338,slow=7.6,SNR=71						
KWP	**Kalwaria Pacla**	**61.43**	**313**	*e*P	**P**	**02 06 59.4**	**+2.0**
KWP				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KWP	**Kalwaria Pacla**	**61.43**	**313**	*e*P	**P**	**02 06 59.4**	**+2.0**
	comp=Z,8.8nm,1.0s,mb4.8						
ASAR	**Alice Springs**	**61.72**	**148**	P	**P**	**02 06 59.6**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.5,baz=342,slow=6.9,SNR=25						
HFS	**Hagfors**	**63.54**	**326**	P	**P**	**02 07 10.4**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=82,slow=3.2,SNR=4.9						
IDI	**Anoyia**	**64.41**	**297**	LR	LR	02 41 59.2	
	comp=Z,24nm,21.8s,MS3.3,baz=276,slow=42						
NB2	**NORSAR Subarra**	**64.43**	**327**	P	**P**	**02 07 18.1**	**+0.9**
	comp=Z,1.1nm,0.6s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.43**	**327**	P	**P**	**02 07 15.6**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=294,slow=8.6,SNR=1.9						
GERES	**GERESS Array B**	**67.27**	**314**	P	**P**	**02 07 36.7**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.5,baz=287,slow=29,SNR=2.8						
COLD	**Coldfoot**	**67.54**	**24**	*e*P	**P**	**02 07 36.8**	**-0.3**
	comp=Z,4.1nm,0.8s,mb4.5						
BPAW	**Bear Paw Mtn.**	**68.69**	**27**	*e*P	**P**	**02 07 43.9**	**-0.5**
	comp=Z,4.8nm,0.7s,mb4.5						
COLA	**College**	**69.51**	**26**	*e*P	**P**	**02 07 48.8**	**-0.6**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
COLA	**College**	**69.51**	**26**	*e*P	**P**	**02 07 48.8**	**-0.6**
	comp=Z,6.0nm,0.8s,mb4.6						
KMBO	**Kilima Mbogo**	**70.61**	**256**	P	**P**	**02 07 58.4**	**+1.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=48,slow=23,SNR=1.9						
PMR	**Palmer**	**70.64**	**29**	*e*P	**P**	**02 07 55.8**	**-0.6**
PMR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
PMR	**Palmer**	**70.64**	**29**	*e*P	**P**	**02 07 55.8**	**-0.6**
	comp=Z,6.0nm,0.6s,mb4.7						
KDAK	**Kodiak Island**	**70.96**	**33**	*ce*P	**P**	**02 07 57.5**	**-0.9**
CDF	**Champ du Feu**	**71.34**	**316**	*e*P	**P**	**02 07 59.4**	**-1.5**
	comp=Z,3.5nm,0.6s,mb4.1						
CDF	**Champ du Feu**	**71.34**	**316**	*e*P	**P**	**02 07 59.4**	**-1.5**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CDF	**Champ du Feu**	**71.34**	**316**	*e*P	**P**	**02 07 59.4**	**-1.5**
	comp=Z,1.8nm,0.6s,mb4.2						
INK	**Inuvik**	**72.20**	**19**	*e*P	**P**	**02 08 03.9**	**-1.8**
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	**Inuvik**	**72.20**	**19**	*e*P	**P**	**02 08 03.9**	**-1.8**
	comp=Z,6.6nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**72.24**	**147**	*e*P	**P**	**02 08 06.1**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**72.24**	**147**	P	**P**	**02 08 06.1**	**-0.3**
	comp=Z,2.2nm,0.4s,mb4.4,baz=334,slow=4.6,SNR=10						
STKA	**Stephens Creek**	**72.24**	**147**	P	**P**	**02 08 06.1**	**-0.3**
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
	comp=Z,8.5nm,0.8s,mb4.4						
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.4						
LPL	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
	comp=Z,6.2nm,0.7s,mb4.3						
LPL	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
LPL	**La Plagne**	**72.97**	**313**	*e*P	**P**	**02 08 10.0**	**-0.7**
	comp=Z,3.1nm,0.7s,mb4.3						
BGF	**Bois d'Agland**	**74.86**	**315**	*e*P	**P**	**02 08 19.1**	**-2.7**
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**02 08 58.4**	**-1.0**
	comp=Z,1.3nm,0.7s,mb4.0,baz=328,slow=5.1,SNR=17						
TORD	**Torodi Ar. Bea**	**93.31**	**287**	P	**P**	**02 09 56.9**	**+0.2**
	comp=Z,0.7nm,1.0s,mb4.0,baz=127,slow=2.2,SNR=3.9						

*ISCJB **14** 01:58:03.7±0.7, 32°.8N±0°.1×105°.4E±0°.2, h10km, mb4.1/26, Error ellipse: s-maj=26.6km s-min=13.1km az=43.1*
*IDC **14** 01:58:04.3±1.0, 32°.74N×105°.26E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.9/26, mbtmp3.9/13, MS3.5/2, Ms1 3.5/2, ms1mx2.7/36, Error ellipse: s-maj=61.0km s-min=20.1km az=52.0*
*NEIC **14** 01:58:05.8±0.5, 32°.78N×105°.35E, h10km, mb4.3/13, Error ellipse: s-maj=18.3km s-min=8.9km az=43.0*
ISC 14 01:58:05.9±0.7, 32°.8N±0°.1×105°.4E±0°.2, h10km, n36, σ0°66/35, mb4.1/26, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.99**	**70**	LR	LR	02 09 25.3	
	comp=Z,84nm,21.0s,baz=225,slow=36						
MK31	**Makanchi Array**	**22.48**	**315**	*e*P	**P**	**02 03 04.3**	**-0.8**
MKAR	**Makanchi Array**	**22.48**	**315**	P	**P**	**02 03 06.3**	**+1.2**
	3.2nm,0.6s,mb4.0,baz=119,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**22.48**	**315**	P	**P**	**02 03 06.3**	**+1.2**
TKM2	**Tokmak 2**	**25.48**	**302**	*e*P	**P**	**02 03 35.0**	**+0.9**
	3.4nm,0.5s,mb4.1						
ZAA0	**Zalesovo Array**	**25.71**	**331**	*e*P	**P**	**02 03 36.7**	**+0.6**
UCH	**Uchtor**	**26.11**	**300**	*e*P	**P**	**02 03 40.1**	**+0.2**
	5.6nm,1.0s,mb4.0						
KURK	**Kurchatov**	**26.59**	**320**	P	**P**	**02 03 45.3**	**+1.3**
	2.2nm,0.7s,mb3.8,baz=125,slow=10,SNR=2.8						
AML	**Almayashu**	**26.70**	**300**	*e*P	**P**	**02 03 45.9**	**+0.8**
	5.1nm,0.5s,mb4.3						
EKS2	**Erkin-Say**	**26.73**	**301**	*e*P	**P**	**02 03 45.3**	**-0.1**
	2.6nm,0.7s,mb3.9						
BVAR	**Borovoye Array**	**32.17**	**319**	P	**P**	**02 04 34.2**	**+0.5**
	1.2nm,0.6s,mb3.9,baz=106,slow=11,SNR=3.7						
ABKAR	**Akbulak array**	**37.39**	**310**	*e*P	**P**	**02 05 18.6**	**-0.1**
	1.5nm,0.6s,mb4.0						
ARU	**Arti**	**39.78**	**321**	*e*P	**P**	**02 05 38.5**	**-0.2**
	4.6nm,0.8s,mb4.3						
ARCES	**ARCESS Array B**	**56.16**	**335**	P	**P**	**02 07 46.2**	**+0.9**
	1.8nm,0.7s,mb4.2,baz=72,slow=8.1,SNR=1.7						
FINES	**FINESS Array B**	**56.77**	**326**	P	**P**	**02 07 49.5**	**-0.2**
	0.6nm,0.3s,mb4.0,baz=91,slow=6.7,SNR=1.2						
BRTR	**Keskin Array B**	**56.86**	**299**	P	**P**	**02 07 50.0**	**-0.8**
	1.0nm,0.7s,mb3.9,baz=98,slow=6.7,SNR=4.3						
AKASG	**Malin Array Be**	**57.03**	**313**	P	**P**	**02 07 50.5**	**-1.2**
	1.4nm,0.5s,mb4.3,baz=67,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**59.31**	**148**	P	**P**	**02 08 09.2**	**+1.2**
	2.8nm,0.6s,mb4.5,baz=340,slow=7.6,SNR=2.6						
KWP	**Kalwaria Pacla**	**61.35**	**313**	*e*P	**P**	**02 08 21.4**	**-0.3**
	4.8nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**62.40**	**150**	P	**P**	**02 08 28.6**	**-0.3**
	1.1nm,0.6s,mb4.1,baz=328,slow=6.7,SNR=3.1						
NOA	**NORSAR Array B**	**63.82**	**327**	P	**P**	**02 08 37.2**	**-0.8**
	0.9nm,0.6s,mb4.0,baz=70,slow=6.5,SNR=2.7						
MORC	**Moravsky Berou**	**64.46**	**314**	*e*P	**P**	**02 08 42.4**	**0.0**
	1.4nm,0.6s,mb4.2						
COLD	**Coldfoot**	**65.47**	**24**	*e*P	**P**	**02 08 48.4**	**-0.3**
	1.7nm,0.7s,mb4.2						
GERES	**GERESS Array B**	**67.14**	**314**	P	**P**	**02 08 59.1**	**-0.6**
	0.4nm,0.6s,mb3.7,baz=44,slow=5.8,SNR=2.4						
CDF	**Champ du Feu**	**71.16**	**316**	*e*P	**P**	**02 09 24.8**	**+0.2**
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**02 09 35.2**	**+0.2**
	7.5nm,0.6s,mb4.5						
LPG	**La Plagne**	**72.88**	**313**	*e*P	**P**	**02 09 35.2**	**+0.2**
	3.8nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.88**	**313**	*e*P	**P**	**02 09 35.1**	**+0.1**
	5.5nm,0.5s,mb4.5						
LPL	**La Plagne**	**72.88**	**313**	*e*P	**P**	**02 09 35.1**	**+0.1**
	2.8nm,0.5s,mb4.5						
ORIF	**Oris-en-Rattie**	**73.70**	**313**	*e*P	**P**	**02 09 39.3**	**-0.6**
	4.6nm,0.7s,mb4.2						
ORIF	**Oris-en-Rattie**	**73.70**	**313**	*e*P	**P**	**02 09 39.3**	**-0.6**
	2.3nm,0.7s,mb4.2						
SMF	**Signal de Mont**	**74.06**	**315**	*e*P	**P**	**02 09 41.1**	**-0.8**
AVF	**Avril sur Loir**	**74.27**	**316**	*e*P	**P**	**02 09 42.4**	**-0.8**
	6.3nm,0.9s,mb4.2						
AVF	**Avril sur Loir**	**74.27**	**316**	*e*P	**P**	**02 09 42.4**	**-0.8**
	3.2nm,0.9s,mb4.2						
YKA	**Yellowknife Ar**	**79.75**	**18**	P	**P**	**02 10 13.9**	**+0.3**
	0.7nm,0.7s,mb3.7,baz=328,slow=5.5,SNR=2.9						
YKA				LR	LR	02 49 01.4	
	comp=Z,38nm,18.0s,baz=340,slow=38						
ESDC	**Sonseca Array**	**82.67**	**313**	P	**P**	**02 10 29.4**	**-0.3**
	0.1nm,0.3s,mb3.3,baz=41,slow=4.6,SNR=1.4						

*ISCJB **14** 02:01:56.8±1.0, 31°.13N±0°.06×104°.2E±0°.1, h10km, mb3.6/8, Error ellipse: s-maj=14.1km s-min=6.5km az=26.9*
*IDC **14** 02:01:57.0±1.4, 31°.33N×104°.10E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=83.8km s-min=24.3km az=55.0*
*NEIC **14** 02:01:58.8±0.9, 31°.41N×104°.26E, h10km, mb3.8/2, Error ellipse: s-maj=38.9km s-min=15.3km az=46.0*
ISC 14 02:01:58.6±1.0, 31°.21N±0°.07×104°.1E±0°.1, h10km, n12, σ0°93/13, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**220**	Pg	**Pg**	**02 02 05.9**	**-0.4**
CD2				Sg	**Sg**	**02 02 11.3**	**-0.1**
CD2				smax			
	comp=N,9μm,0.6s						
LZH	**Lanzhou**	**4.87**	**358**	Sg	**Sg**	**02 04 42.5**	**+7.6**
LZH				smax			
	comp=N,92nm,1.0s						
LZH				smax			
	comp=E,67nm,0.8s						
MK31	**Makanchi Array**	**22.87**	**319**	*e*P	**P**	**02 07 02.2**	**+0.1**
MKAR	**Makanchi Array**	**22.87**	**319**	P	**P**	**02 07 01.9**	**-0.1**
	comp=E,1.1nm,0.8s,mb3.3,baz=123,slow=10,SNR=3.9						
UCH	**Uchtor**	**25.98**	**303**	*e*P	**P**	**02 07 33.3**	**+1.8**
	comp=E,2.0nm,1.0s,mb3.6						
AAK	**Ala-Archa**	**26.11**	**304**	*e*P	**P**	**02 07 33.4**	**+0.8**
	comp=E,1.5nm,0.7s,mb3.6						
ZALV	**Zalesovo Beam**	**26.61**	**334**	P	**P**	**02 07 36.2**	**-0.8**
	comp=E,0.7nm,0.4s,mb3.5,baz=110,slow=13,SNR=1.9						
KURK	**Kurch

KMI LR LR
comp=E,340nm,12.4s
GTA Gaotai 8.70 340 *e*P **Pn** **02 10 05.3 +4.7**
GTA pP 02 10 10.1
GTA sP 02 10 13.1
GTA pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 16.67 6 Pn **Pn** **02 11 48.5 +0.2**
comp=Z,0.3nm,0.3s,baz=186,slow=12,SNR=4.3
SONM LR LR 02 18 59.1
comp=Z,94nm,18.8s,baz=19,slow=40
KSRS Korea Array 20.93 66 P **P** **02 12 37.9 +0.4**
comp=Z,3.2nm,0.6s,baz=265,slow=11,SNR=11
MK31 Makanchi Array 22.60 319 *e*P **P** **02 12 55.9 +0.6**
MKAR Makanchi Array 22.60 319 P **P** **02 12 56.2 +0.9**
comp=Z,3.2nm,0.9s,mb3.8,baz=125,slow=12,SNR=20
MKAR Makanchi Array 22.60 319 P **P** **02 12 56.2 +0.9**
UCH Uchtor 25.66 303 *e*P **P** **02 13 23.6 -1.0**
comp=Z,6.9nm,1.5s,mb4.0
AAK Ala-Archa 25.79 304 LR LR 02 25 17.7
comp=Z,106nm,21.9s,MS3.3,baz=45,slow=40
ZALV Zalesovo Beam 26.40 335 P **P** **02 13 29.9 -1.2**
comp=Z,0.8nm,0.5s,mb3.5,baz=138,slow=9.1,SNR=4.2
ZALV LR LR 02 24 33.4
comp=Z,43nm,21.0s,MS3.0,baz=234,slow=38
KURK Kurchatov 26.88 323 P **P** **02 13 34.9 -0.7**
comp=Z,1.1nm,0.7s,mb3.5,baz=126,slow=10.0,SNR=7.6
KURK Kurchatov 26.88 323 *e*P **P** **02 13 35.7 +0.2**
comp=Z,5.0nm,1.2s,mb3.9
BVAR Borovoye Array 32.42 322 LR LR 02 28 38.6
comp=Z,71nm,20.1s,MS3.4,baz=302,slow=38
ASAR Alice Springs 61.84 148 P **P** **02 18 12.9 -1.1**
comp=Z,0.9nm,0.7s,mb4.0,baz=345,slow=6.9,SNR=9.8
STKA Stephens Creek 72.36 147 P **P** **02 19 19.4 -1.3**
comp=Z,1.4nm,0.6s,mb4.1,baz=315,slow=5.7,SNR=4.0
YKA Yellowknife Ar 81.64 17 P **P** **02 20 11.9 -0.8**
comp=Z,0.3nm,0.9s,mb3.2,baz=320,slow=4.6,SNR=4.2

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*IDC **14** 02:17:46.2±0.7, 31°.63N×104°.20E, h0km, mb4.1/16, mb1 4.3/17, mb1mx4.1/30, mbtmp4.1/17, ML3.4/1, Error ellipse: s-maj=28.9km s-min=15.0km az=47.0*
*NEIC **14** 02:17:48.0±0.3, 31°.66N×104°.21E, h10km, mb4.4/21, Error ellipse: s-maj=10.1km s-min=6.5km az=215.0*
*MOS **14** 02:17:48.9±0.7, 31°.62N×104°.22E, h31km, mb4.6/23, Error ellipse: s-maj=16.7km s-min=6.6km az=119.5*
*BJI **14** 02:17:48.9, 31°.67N×104°.35E, h17km, mB4.4/1, mb4.2/4, ML4.0/11, Ms3.6/3, Ms7 3.4/3*
ISC 14 02:17:47.0±0.8, 31°.63N±0°.04×104°.28E±0°.04, h7km±5km, n102, σ1s07/113, mb4.3/42, 21C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.84**	**212**	Pg	**Pg**	**02 18 06.6**	**+3.3**
CD2				Sg	**Sg**	**02 18 23.4**	**+9.2**
CD2				smax			
	comp=N,8μm,0.5s						
LZH	**Lanzhou**	**4.46**	**355**	*e*Pn	**Pn**	**02 18 57.6**	**+2.5**
LZH				Pg	**Pg**	**02 19 12.5**	**-0.1**
LZH				Sn	**Sn**	**02 19 50.0**	**+2.7**
LZH				Sg	**Sg**	**02 20 09.8**	**-0.6**
LZH				smax			
	comp=N,230nm,0.8s						
LZH				smax			
	comp=E,140nm,0.7s						
LZH				LR	LR		
	comp=E,860nm,5.6s						
LZH				LR	LR		
	comp=Z,1μm,6.7s						
XAN	**Xi'an**	**4.59**	**57**	Pn	**Pn**	**02 18 56.9**	**+0.1**
XAN				Pg	**Pg**	**02 19 12.5**	**-2.4**
XAN				Sg	**Sg**	**02 20 09.8**	**-4.6**
XAN				smax			
	comp=N,360nm,0.9s						
XAN				smax			
	comp=E,160nm,0.9s						
ENH	**Enshi**	**4.67**	**105**	*e*Pn	**Pn**	**02 19 01.2**	**+3.3**
ENH				*e*Pg	**Pg**	**02 19 16.9**	**+0.3**
ENH				*e*Sg	**Sg**	**02 20 15.6**	**-1.5**
GTA	**Gaotai**	**8.58**	**336**	*e*P	**Pn**	**02 19 56.6**	**+5.1**
GTA				pP		02 20 01.0	
GTA				sP		02 20 04.5	
GTA				S	**Sn**	**02 21 34.3**	**+5.8**
GTA				sS		02 21 42.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,84nm,4.8s						
GTA				LR	LR		
	comp=N,280nm,9.9s						
GTA				LR	LR		
	comp=E,170nm,10.5s						
GTA				LR	LR		
	comp=Z,300nm,13.2s						
SONM	**Songino Array 16.27 5**			Pn	**Pn**	**02 21 36.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=17						
ULN	**Ulaanbaatar 16.36 7**			*e*P	**Pn**	**02 21 37.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar 16.36 7**			*e*P	**Pn**	**02 21 37.8**	**+0.7**
	comp=Z,2.2nm,0.6s						
GUN	**Gumba 16.40**		**262**	*e*P	**Pn**	**02 21 36.2**	**-1.5**
	comp=Z,27nm,0.6s						
PKI	**Pulchoki 16.90**		**261**	*e*P	**Pn**	**02 21 42.8**	**-1.3**
	comp=Z,23nm,0.7s						
PKIN	**Phulchoki 16.91**		**261**	*e*P	**Pn**	**02 21 43.0**	**-1.2**
	comp=Z,18nm,0.5s						
KKN	**Kakani 16.94**		**262**	*e*P	**Pn**	**02 21 43.1**	**-1.5**
	comp=Z,31nm,0.8s						
DMN	**Daman 17.15**		**261**	*e*P	**Pn**	**02 21 45.1**	**-2.0**
	comp=Z,28nm,0.8s						
ZAK	**Zakamensk 18.75**		**358**	*e*P	**Pn**	**02 22 08.3**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSRS	**Korea Array 20.30 67**			P	**P**	**02 22 25.2**	**+1.8**
	comp=Z,6.7nm,0.8s,baz=254,slow=11,SNR=4.8						
KSRS	**Korea Array 20.30 67**			P	**P**	**02 22 25.2**	**+1.8**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	**Makanchi Array 22.69**		**318**	*e*P	**P**	**02 22 49.6**	**+0.6**
MKAR	**Makanchi Array 22.69**		**318**	P	**P**	**02 22 49.2**	**+0.3**
	comp=Z,1.4nm,0.5s,mb3.7,baz=119,slow=12,SNR=17						
MKAR	**Makanchi Array 22.69**		**318**	*ce*P	**P**	**02 22 49.5**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
UCH	**Uchtor 25.92**		**302**	*e*P	**P**	**02 23 22.1**	**+2.3**
	comp=Z,8.3nm,1.0s,mb4.2						
AAK	**Ala-Archa 26.04**		**303**	*e*P	**P**	**02 23 19.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.1						
ZAA0	**Zalesovo Array 26.32**		**334**	*e*P	**P**	**02 23 23.1**	**-0.1**
ZALV	**Zalesovo Beam 26.32**		**334**	P	**P**	**02 23 23.5**	**+0.3**
	comp=Z,7.1nm,0.8s,mb4.2,baz=129,slow=9.6,SNR=14						
AML	**Almayashu 26.49**		**302**	*e*P	**P**	**02 23 26.6**	**+1.7**
	comp=Z,3.3nm,0.8s,mb3.9						
KURK	**Kurchatov 26.92**		**323**	P	**P**	**02 23 29.0**	**+0.3**
	comp=Z,2.8nm,0.8s,mb3.9,baz=132,slow=8.7,SNR=14						
KURK				PcP	PcP	02 26 49.5	-1.0
	comp=Z,0.8nm,0.4s,baz=125,slow=2.2,SNR=4.3						
KURK	**Kurchatov 26.92**		**323**	*ce*P	**P**	**02 23 29.6**	**+0.9**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.0						
BVAR	**Borovoye Array 32.48**		**321**	P	**P**	**02 24 18.6**	**+0.7**
	comp=Z,1.4nm,0.5s,mb4.0,baz=114,slow=8.8,SNR=10						
BVAR				PcP	PcP	02 27 04.4	-0.4
	comp=Z,0.8nm,0.5s,baz=143,slow=5.2,SNR=4.2						
BRVK	**Borovoye 32.55**		**321**	*ce*P	**P**	**02 24 18.4**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
BRVK	**Borovoye 32.55**		**321**	*e*P	**P**	**02 24 19.0**	**+0.5**
	comp=Z,1.4nm,0.6s,mb4.1						
ABKAR	**Akbulak array 37.44**		**311**	*e*P	**P**	**02 25 01.2**	**+0.5**
	comp=Z,2.4nm,0.8s,mb4.1						
AKTK	**Aktyubinsk 38.89**		**313**	P	**P**	**02 25 13.2**	**+0.2**
AKTO	**Aktyubinsk 38.89**		**313**	P	**P**	**02 25 13.2**	**+0.2**
	comp=Z,1.3nm,0.5s,mb3.9,baz=92,slow=11,SNR=8.3						
ARU	**Arti 40.11**		**322**	*d*iP	**P**	**02 25 23.4**	**+0.3**
ARU				*e*		02 26 54.7	
ARU				S	**S**	**02 31 26.9**	**-2.6**
ARU				SS	SS	02 34 20.7	-6.0
ARU				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
ARU	**Arti 40.11**		**322**	*e*P	**P**	**02 25 23.3**	**+0.2**
	comp=Z,24nm,1.1s,mb4.8						
ZEI	**Tsey 48.43**		**301**	*e*P	**P**	**02 26 26.9**	**-3.0**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BILL	**Bilibino 50.64**		**25**	⇑*e*P	**P**	**02 26 50.8**	**+4.4**
BILL				*e*		02 28 45.1	
BILL				*e*S	**S**	**02 34 00.2**	**-0.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
KLMR	**Klimovskoe 50.72**		**325**	*e*P	**P**	**02 26 45.7**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
JOF	**Joensuu 54.67**		**328**	*e*P	**P**	**02 27 15.4**	**-0.9**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
JOF	**Joensuu 54.67**		**328**	*ep*	**P**	**02 27 15.4**	**-0.9**
	comp=Z,4.7nm,0.5s,mb4.8						
ASF	**Jabal al Asfar 56.31**		**290**	P	**P**	**02 27 29.7**	**+1.1**
	comp=Z,3.0nm,0.9s,mb4.3,baz=5.0,slow=1.1						
KEV	**Kevo 56.32**		**336**	*e*P	**P**	**02 27 26.9**	**-1.1**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KEV	**Kevo 56.32**		**336**	*ep*	**P**	**02 27 26.9**	**-1.1**
	comp=Z,5.6nm,0.6s,mb4.8						
BR131	**Keskin Array S 56.62**		**299**	*e*P	**P**	**02 27 30.5**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.1						
BRTR	**Keskin Array B 56.62**		**299**	P	**P**	**02 27 30.8**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.2,baz=94,slow=7.5,SNR=14						
BRTR	**Keskin Array B 56.62**		**299**	*ce*P	**P**	**02 27 30.7**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B 56.85**		**336**	P	**P**	**02 27 31.6**	**-0.1**
	comp=Z,2.1nm,0.5s,mb4.4,baz=80,slow=8.0,SNR=18						
KAF	**Kangasniemi 57.04**		**327**	*e*P	**P**	**02 27 30.7**	**-2.5**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KAF	**Kangasniemi 57.04**		**327**	*ep*	**P**	**02 27 30.7**	**-2.5**
	comp=Z,4.8nm,0.6s,mb4.7						
AKASG	**Malin Array Be 57.14**		**313**	P	**P**	**02 27 33.5**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.5,baz=68,slow=7.2,SNR=7.0						
AKASG	**Malin Array Be 57.14**		**313**	*ce*P	**P**	**02 27 33.7**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	**Malin Array Si 57.14**		**313**	*e*P	**P**	**02 27 33.5**	**-0.7**
FINES	**FINESS Array B 57.22**		**326**	P	**P**	**02 27 34.3**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.6,baz=78,slow=7.5,SNR=17						
WRA	**Warramunga Arr 58.82**		**147**	P	**P**	**02 27 47.2**	**+0.9**
	comp=Z,2.2nm,0.7s,mb4.3,baz=340,slow=7.6						
BUR08	**Bucovina Ar. S 60.42**		**310**	*e*P	**P**	**02 27 56.8**	**-0.2**
KWP	**Kalwaria Pacla 61.46**		**313**	*e*P	**P**	**02 28 04.5**	**+0.4**
KWP				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
KWP	**Kalwaria Pacla 61.46**		**313**	*e*P	**P**	**02 28 04.5**	**+0.4**
	comp=Z,13nm,0.9s,mb5.1						
ASAR	**Alice Springs 61.86**		**149**	P	**P**	**02 28 07.7**	**+0.7**
	comp=Z,0.7nm,0.5s,mb4.1,baz=337,slow=6.6,SNR=11						
KOLS	**Kolonicke sedl 61.93**		**312**	*e*P	**P**	**02 28 07.1**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
KOLS	**Kolonicke sedl 61.93**		**312**	*e*P	**P**	**02 28 07.1**	**-0.2**
	comp=Z,1.9nm,0.9s,mb4.2						
KOLS	**Kolonicke sedl 61.93**		**312**	*e*P	**P**	**02 28 07.1**	**-0.2**
STHS	**Stebnicka Huta 62.44**		**313**	*e*P	**P**	**02 28 11.3**	**+0.6**
STHS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.3						
STHS	**Stebnicka Huta 62.44**		**313**	*e*P	**P**	**02 28 11.3**	**+0.6**
	comp=Z,2.7nm,1.1s,mb4.3						
STHS	**Stebnicka Huta 62.44**		**313**	*e*P	**P**	**02 28 11.3**	**+0.6**
KECS	**Kecovo 63.20**		**312**	*e*P	**P**	**02 28 16.4**	**+0.7**
KECS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
KECS	**Kecovo 63.20**		**312**	*e*P	**P**	**02 28 16.4**	**+0.7**
	comp=Z,2.2nm,1.0s,mb4.2						
KECS	**Kecovo 63.20**		**312**	*e*P	**P**	**02 28 16.3**	**+0.6**
VYHS	**Vyhne 64.23**		**313**	*e*P	**P**	**02 28 23.2**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
VYHS	**Vyhne 64.23**		**313**	*e*P	**P**	**02 28 23.2**	**+0.6**
	comp=Z,1.0nm,0.7s,mb4.0						
VYHS	**Vyhne 64.23**		**313**	*e*P	**P**	**02 28 23.2**	**+0.6**
NB2	**NORSAR Subarra 64.30**		**327**	P	**P**	**02 28 21.8**	**-1.0**
	comp=Z,0.9nm,0.5s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B 64.30**		**327**	P	**P**	**02 28 21.6**	**-1.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=73,slow=6.5,SNR=7.2						
KOLL	**Kolacno 64.48**		**313**	*e*P	**P**	**02 28 25.1**	**+0.9**
KOLL	**Kolacno 64.48**		**313**	*e*P	**P**	**02 28 25.1**	**+0.9**
MORC	**Moravsky Berou 64.61**		**314**	*e*P	**P**	**02 28 25.0**	**0.0**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MORC	**Moravsky Berou 64.61**		**314**	*e*P	**P**	**02 28 25.0**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.4						
IDI	**Anoyia 64.62**		**297**	P	**P**	**02 28 24.5**	**-0.9**
	baz=354,slow=14						
ZST	**Bratislava 65.42**		**313**	*e*P	**P**	**02 28 29.1**	**-1.2**
ZST				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ZST	**Bratislava 65.42**		**313**	*e*P	**P**	**02 28 29.1**	**-1.2**
	comp=Z,3.6nm,0.6s,mb4.6						
ZST	**Bratislava 65.42**		**313**	*e*P	**P**	**02 28 29.1**	**-1.2**
BRG	**Berggiesshubel 66.39**		**316**	*e*P	**P**	**02 28 36.5**	**0.0**
	comp=Z,4.3nm,0.7s,mb4.6						
BRG	**Berggiesshubel 66.39**		**316**	*e*P	**P**	**02 28 36.5**	**0.0**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
GERES	**GERESS Array B 67.29**		**314**	P	**P**	**02 28 42.8**	**+0.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=64,slow=6.1,SNR=14						
BPAW	**Bear Paw Mtn. 68.07**		**27**	*e*P	**P**	**02 28 46.7**	**-0.2**
	comp=Z,2.1nm,0.8s,mb4.2						
CDF	**Champ du Feu 71.35**		**316**	⇑*i*P	**P**	**02 29 07.2**	**-0.2**
	comp=Z,4.3nm,0.6s,mb4.2						
CDF	**Champ du Feu 71.35**		**316**	⇑*i*P	**P**	**02 29 07.2**	**-0.2**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CDF	**Champ du Feu 71.35**		**316**	⇑*i*P	**P**	**02 29 07.2**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.3						
INK	**Inuvik 71.61**		**19**	*e*P	**P**	**02 29 08.1**	**-0.6**
INK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
INK	**Inuvik 71.61**		**19**	*e*P	**P**	**02 29 08.1**	**-0.6**
	comp=Z,4.3nm,1.1s,mb4.3						
LPG	**La Plagne 73.00**		**313**	⇑*i*P	**P**	**02 29 18.1**	**+0.7**
	comp=Z,14nm,0.7s,mb4.7						
LPG	**La Plagne 73.00**		**313**	⇑*i*P	**P**	**02 29 18.1**	**+0.7**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
LPG	**La Plagne 73.00**		**313**	⇑*i*P	**P**	**02 29 18.1**	**+0.7**
	comp=Z,7.2nm,0.7s,mb4.7						
LPL	**La Plagne 73.01**		**313**	⇑*i*P	**P**	**02 29 18.0**	**+0.6**
	comp=Z,12nm,0.6s,mb4.7						
LPL	**La Plagne 73.01**		**313**	⇑*i*P	**P**	**02 29 18.0**	**+0.6**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LPL	**La Plagne 73.01**		**313**	⇑*i*P	**P**	**02 29 18.0**	**+0.6**
	comp=Z,6.3nm,0.6s,mb4.7						
SMF	**Signal de Mont 74.23**		**315**	⇑*i*P	**P**	**02 29 24.2**	**-0.4**
	comp=Z,17nm,1.1s,mb4.6						
SMF	**Signal de Mont 74.23**		**315**	⇑*i*P	**P**	**02 29 24.2**	**-0.4**
SMF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
SMF	**Signal de Mont 74.23**		**315**	⇑*i*P	**P**	**02 29 24.2**	**-0.4**
	comp=Z,8.6nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi 75.39**		**316**	⇑*i*P	**P**	**02 29 31.1**	**-0.2**
	comp=Z,6.4nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi 75.39**		**316**	⇑*i*P	**P**	**02 29 31.1**	**-0.2**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi 75.39**		**316**	⇑*i*P	**P**	**02 29 31.1**	**-0.2**
	comp=Z,3.2nm,0.9s,mb4.2						
CAF	**Calviac 76.17**		**314**	*e*P	**P**	**02 29 36.2**	**+0.4**
YKA	**Yellowknife Ar 81.15**		**17**	P	**P**	**02 30 02.8**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=328,slow=5.2,SNR=8.8						

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*IDC **14** 02:20:45.7±1.0, 31°.07N×103°.82E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/26, mbtmp3.8/8, ML2.5/1, Error ellipse: s-maj=38.6km s-min=18.5km az=56.0*
*BJI **14** 02:20:47.5, 31°.33N×103°.65E, h12km, ML3.8/10, Ms3.7/2, Ms7 3.7/2*
*NEIC **14** 02:20:47.4±0.7, 31°.13N×103°.95E, h10km, mb3.7/1, Error ellipse: s-maj=24.6km s-min=11.8km az=58.0*
*ISCJB **14** 02:20:48.5±0.6, 31°.14N±0°.05×103°.93E±0°.08, h29km±5km, mb3.7/7, Error ellipse: s-maj=11.3km s-min=8.4km az=163.1*
ISC 14 02:20:48.9±0.8, 31°.13N±0°.04×103°.96E±0°.07, h19km±6km, n17, σ0s95/22, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**218**	Pg	**Pg**	**02 20 54.0**	**-1.1**
CD2				Sg	**Sg**	**02 21 00.5**	**+1.2**
CD2				smax			
	comp=N,12μm,0.5s						
LZH	**Lanzhou**	**4.95**	**359**	*e*Pg	**Pb**	**02 22 14.0**	**-0.9**
LZH				Sg	**Sb**	**02 23 18.3**	**+4.3**
LZH				smax			
	comp=N,41nm,0.5s						
LZH				smax			
	comp=E,92nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,6.8s						
LZH				LR	LR		
	comp=Z,2μm,8.1s						
LZH	**Lanzhou**	**4.95**	**359**	*e*Pn	**Pb**	**02 22 14.3**	**-0.6**
LZH				Pg	**Pg**	**02 22 25.3**	**+1.7**
LZH				Sg	**Sg**	**02 23 18.5**	**-9.1**
LZH				smax			
	comp=N,65nm,0.9s						
LZH				smax			
	comp=E,84nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,6.8s						
LZH				LR	LR		
	comp=Z,2μm,8.1s						
XAN	**Xi'an**	**5.10**	**54**	Pg	**Pb**	**02 22 17.3**	**-0.2**
XAN				smax			
	comp=N,240nm,0.8s						
XAN				smax			
	comp=E,110nm,0.9s						
GYA	**Guiyang**	**5.22**	**152**	Pg	**Pg**	**02 22 26.4**	**-2.6**
GYA				Sn	**Sb**	**02 23 23.3**	**+1.2**
GYA				smax			
	comp=N,210nm,1.1s						
GYA				smax			
	comp=E,170nm,1.0s						
SONM	**Songino Array 16.79 6**			Pn	**Pn**	**02 24 42.1**	**-0.7**
	comp=E,0.0nm,0.3s,baz=186,slow=12,SNR=3.6						
KSRS	**Korea Array 20.75 66**			P	**P**	**02 25 29.0**	**+0.4**
	comp=E,6.3nm,0.7s,baz=261,slow=10,SNR=18						
CN2	**Changchun 21.16 47**			*e*P	**P**	**02 25 33.4**	**+0.5**
MK31	**Makanchi Array 22.88 319**			*e*P	**P**	**02 25 52.3**	**+1.1**
MKAR	**Makanchi Array 22.88 319**			P	**P**	**02 25 51.1**	**-0.1**
	comp=E,1.6nm,0.9s,mb3.5,baz=130,slow=10,SNR=6.9						
UCH	**Uchtor 25.96 303**			*e*P	**P**	**02 26 19.9**	**-0.2**
	comp=E,1.3nm,0.8s,mb3.5						
ZAA0	**Zalesovo Array 26.64 334**			*e*P	**P**	**02 26 26.2**	**0.0**
ZALV	**Zalesovo Beam 26.64 334**			P	**P**	**02 26 25.8**	**-0.5**
	comp=E,1.5nm,0.7s,mb3.6,baz=144,slow=10,SNR=4.2						
KURK	**Kurchatov 27.15 323**			P	**P**	**02 26 29.6**	**-1.2**
	comp=E,1.7nm,0.8s,mb3.6,baz=130,slow=9.1,SNR=7.9						
WRA	**Warramunga Arr 58.56 146**			P	**P**	**02 30 44.5**	**0.0**
	comp=E,1.2nm,0.6s,mb4.1,baz=338,slow=7.9,SNR=11						
STKA	**Stephens Creek 72.10 147**			P	**P**	**02 32 11.7**	**-0.3**
	comp=E,1.4nm,0.8s,mb4.0,baz=338,slow=11,SNR=2.6						
YKA	**Yellowknife Ar 81.70 17**			P	**P**	**02 33 06.7**	**+0.9**
	comp=E,0.3nm,0.6s,mb3.4,baz=330,slow=5.6,SNR=4.9						

IDC 14 02:24:26.2±6.1, 31°.42N×103°.70E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=122.6km s-min=34.8km az=10.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array 16.52 6**			Pn	Pn	02 28 19.3	+0.1
	0.1nm,0.3s,baz=188,slow=8.7,SNR=2.9						
KSRS	**Korea Array 20.84 67**			P	P	02 29 09.1	-0.4
	1.4nm,0.7s,baz=252,slow=10,SNR=4.3						
MKAR	**Makanchi Array 22.51 319**			P	P	02 29 27.0	-0.3
	1.2nm,1.0s,baz=134,slow=8.7,SNR=5.3						
KURK	**Kurchatov 26.79 323**			P	P	02 30 08.1	+0.3
	0.9nm,0.9s,baz=128,slow=9.8,SNR=4.5						

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*ISCJB **14** 02:27:28.4±0.4, 37°.12N±0°.03×71°.94E±0°.08, h153km±8km, mb3.5/3, Error ellipse: s-maj=10.8km s-min=4.9km az=17.2*
*NEIC **14** 02:27:29.5±0.8, 37°.07N×71°.95E, h155km±8km, mb3.6/2, Error ellipse: s-maj=16.1km s-min=8.8km az=127.0*
*NNC **14** 02:27:33.6±3.5, 37°.89N×71°.47E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=27.0km s-min=23.9km az=17.0*
*IDC **14** 02:27:35.5±8.2, 37°.48N×72°.12E, h188km±52km, mb3.3/3, mb1 3.3/7, mb1mx3.0/26, mbtmp3.2/7, MS2.6/1, Ms1 2.6/1, ms1mx2.1/28, Error ellipse: s-maj=73.9km s-min=33.1km az=10.0*
ISC 14 02:27:29.5±0.4, 37°.13N±0°.03×71°.90E±0°.09, h145km±8km, n32, σ1s13/43, mb3.5/3, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat 3.30**		**180**	⇑P	**Pn**	**02 28 20.7**	**+0.2**
CEP				S	**Sn**	**02 28 59.0**	**-1.0**
KBL	**Kabul 3.47**		**223**	*e*Pn	**Pn**	**02 28 22.9**	**+0.2**
KBL				*e*Sn	**Sn**	**02 29 03.4**	**-0.7**
CHCP	**Chirah Chowk 3.64**		**162**	P	**Pn**	**02 28 25.7**	**+0.8**
KSH	**Kashi 3.99**		**52**	⇓*i*Pn	**Pn**	**02 28 26.1**	**-3.3**
KSH				Sn	**Sn**	**02 29 07.8**	**-8.2**
KSH				smax			
	comp=N,190nm,0.5s						
KSH				smax			
	comp=E,140nm,0.3s						
AML	**Almayashu 5.18**		**15**	P	**Pn**	**02 28 46.1**	**+0.9**
	SNR=132						
AML	**Almayashu 5.18**		**15**	*e*Pn	**Pn**	**02 28 46.1**	**+0.9**
	comp=E,93nm,0.4s						
AML				*e*Sn	**Sn**	**02 29 42.9**	**-1.3**
SARP	**Sargodha 5.23**		**173**	P	**

SONM	**Songino Array**	**27.38**	**56**	P	**P**	**02 33 00.8**	**-0.3**
	comp=E,0.2nm,0.3s,mb3.2,baz=248,slow=7.8,SNR=1.9						
ARCES	**ARCESS Array B**	**40.84**	**337**	P	**P**	**02 34 56.4**	**-0.1**
	comp=E,3.7nm,1.0s,mb4.0,baz=121,slow=8.9,SNR=7.1						
YKA	**Yellowknife Ar**	**80.58**	**3**	P	**P**	**02 39 24.1**	**-1.3**
	comp=E,0.3nm,0.5s,mb3.1,baz=350,slow=5.3,SNR=6.6						
YKA	**Yellowknife Ar**	**80.58**	**3**	P	**P**	**02 39 24.1**	**-1.3**

IDC 14 02:44:28.7±1.0, 32°.39N×105°.16E, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, Error ellipse: s-maj=68.0km s-min=18.8km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.64**	**316**	P	P	02 49 30.9	-0.2
	0.4nm,0.5s,baz=118,slow=13,SNR=5.1						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	P	02 50 03.2	+0.3
	0.5nm,0.4s,baz=126,slow=7.3,SNR=2.0						
KURK	**Kurchatov**	**26.78**	**321**	P	P	02 50 10.3	+0.1
	0.2nm,0.3s,baz=128,slow=9.4,SNR=3.8						
WRA	**Warramunga Arr**	**59.06**	**148**	P	P	02 54 30.7	0.0
	1.2nm,0.8s,baz=339,slow=7.2,SNR=8.7						
ASAR	**Alice Springs**	**62.14**	**150**	P	P	02 54 51.8	+0.1
	0.4nm,0.5s,baz=330,slow=6.8,SNR=7.4						
YKA	**Yellowknife Ar**	**80.20**	**18**	P	P	02 56 40.6	0.0
	0.2nm,0.5s,baz=321,slow=5.3,SNR=4.0						

GUC 14 02:54:35.1±0.5, 22°.98S×69°.31W, h79km±4km, MD3.6, ML3.5, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**0.50**	**319**	*e*P	Pn	02 54 49.2	+0.4
PECH				*i* S	Sn	02 55 00.0	+1.1
PECH				AML	AML	02 55 00.2	
	comp=N,4μm,0.3s						
LVC	**Limon Verde**	**0.52**	**46**	*e*P	Pn	02 54 49.7	+0.7
LVC				*i* S	Sn	02 55 00.8	+1.7
LVC				AML	AML	02 55 01.7	
	comp=N,2μm,0.4s						
PB04	**Plate Boundary**	**0.72**	**347**	*e*P	Pn	02 54 54.5	+3.5
PB04				*i* S	Sn	02 55 09.7	+7.0
PB04				AML	AML	02 55 15.0	
	comp=N,1μm,0.3s						
MACH	**Maria Elena**	**0.88**	**332**	*e*P	Pn	02 54 53.4	+0.7
MACH				*i* S	Sn	02 55 07.6	+1.9
MECH	**Mejillones**	**1.05**	**263**	⇑*i*P	Pn	02 54 55.1	+0.4
MECH				*i* S	Sn	02 55 10.0	+0.6
MECH				AML	AML	02 55 12.2	
	comp=N,3μm,0.3s						
ANCH	**Antofagasta**	**1.23**	**235**	*i* P	Pn	02 54 57.4	+0.5
ANCH				*i* S	Sn	02 55 14.0	+0.8
ANCH				AML	AML	02 55 17.1	
	comp=N,1μm,0.2s						
PB01	**Plate Boundary**	**1.93**	**355**	*e*P	Pn	02 55 07.5	+1.4
PB01				*i* S	Sn	02 55 31.5	+1.9
PB01				AML	AML	02 55 38.2	
	comp=E,404nm,0.4s						
HMBC	**Humberston**	**2.74**	**349**	AML	AML	02 55 59.1	
	comp=N,234nm,0.8s						
PSGC	**Pisagua**	**3.45**	**347**	AML	AML	02 56 24.9	
	comp=E,87nm,0.2s						

*IDC **14** 02:54:36.7±0.4, 31°.30N×103°.47E, h0km, mb5.3/39, mb1 5.3/40, mb1mx5.3/41, mbtmp5.3/40, ML3.7/1, MS5.2/29, Ms1 5.2/29, ms1mx5.1/35, Error ellipse: s-maj=14.2km s-min=9.1km az=35.0*

*ISCJB **14** 02:54:36.7±0.1, 31°.29N±0°.02×103°.51E±0°.02, h10km, mb5.3/322, MS5.4/259, Error ellipse: s-maj=2.6km s-min=2.1km az=4.0*

*BJI **14** 02:54:37.3, 31°.34N×103°.63E, h16km, mB5.4/20, mb5.3/32, ML5.4/20, Ms5.8/64, Ms7 5.5/49*

*NEIC **14** 02:54:40.0±1.3, 31°.33N×103°.52E, h19km±8km, mb5.3/200, MS5.4/177, MW5.3, Error ellipse: s-maj=4.1km s-min=2.8km az=208.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^17^Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^17^ NP1:ϕ_s111.00000°, δ78.00000°, λ15.00000°. NP2:ϕ_s17.00000°, δ75.00000°, λ168.00000°. Principal axes: T 1.1400, Plg19.0000°, Azm334.0000°; N -0.0300, Plg70.0000°, Azm148.0000°; P -1.1100, Plg1.0000°, Azm243.0000°;*

NEIC Felt at Chengdu and Tongchuan.

*GCMT **14** 02:54:40.0±0.1, 31°.28N×103°.59E, h12km, MW5.5/97, Moment Tensor Solution. s76,c127; s97,c205; Duration: 1s3 Moment tensor: Scale 10^17^Nm; M_{rr}-0.57±.03; $M_{\theta\theta}$1.99±.02; $M_{\phi\phi}$-1.41±.03; $M_{r\theta}$-0.26±.05; $M_{\theta\phi}$0.65±.02; $M_{\phi r}$0.11±.06; Best double couple: $M_0$1.84300×10^17^ NP1:ϕ_s215.00000°, δ80.00000°, λ-177.00000°. NP2:ϕ_s124.00000°, δ87.00000°, λ-10.00000°. Principal axes: T 2.1310, Plg5.0000°, Azm170.0000°; N -0.5690, Plg80.0000°, Azm288.0000°; P -1.5560, Plg9.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **14** 02:54:40.1±0.8, 31°.34N×103°.57E, h33km, mb5.6/120, MS5.4/71 Error ellipse: s-maj=6.5km s-min=3.2km az=122.2*

*DJA **14** 02:54:41, 31°.30N×103°.47E, h16km, Mw5.7/28*

*SZGRF **14** 02:54:46.3, 31°.85N×102°.77E, h33km, mb5.7, MS5.5, Sichuan, China*

*BGS **14** 02:54:55.0±2.2, 32°.78N×102°.10E, h10km, mb5.4, MS5.6*

ISC 14 02:54:37.6±0.6, 31°.31N±0°.02×103°.51E±0°.02, h3km±3km, h8km±2.3km: pP-P, n1037, σ1s 03/959, mb5.3/322, MS5.4/259, 71C-31D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**152**	Pg	**Pg**	**02 54 47.4**	**+1.1**
CD2				Sg	**Sg**	**02 54 55.9**	**+3.7**
CD2				smax			
	comp=N,681μm,0.8s						
LZH	**Lanzhou**	**4.77**	**3**	*e*Pn	**Pn**	**02 55 51.8**	**+1.4**
LZH				Sn	**Sn**	**02 56 45.8**	**-0.4**
LZH				Sg	**Sg**	**02 57 08.3**	**-2.6**
LZH				smax			
	comp=N,2μm,1.0s						
LZH				smax			
	comp=E,3μm,1.0s						
LZH				LR	LR		
	comp=E,28μm,7.4s						
LZH				LR	LR		
	comp=Z,50μm,8.2s						
XAN	**Xi'an**	**5.31**	**58**	Pn	**Pn**	**02 55 57.5**	**-0.3**
XAN				Sg	**Sg**	**02 57 20.5**	**-7.8**
XAN				smax			
	comp=N,4μm,1.0s						
XAN				smax			
	comp=E,2μm,1.1s						
XAN				LR	LR		
	comp=N,106μm,8.4s						
XAN				LR	LR		
	comp=E,19μm,7.7s						
XAN				LR	LR		
	comp=Z,24μm,6.6s						
GYA	**Guiyang**	**5.57**	**149**	Pn	**Pn**	**02 56 01.6**	**+0.3**
GYA				Sn	**Sn**	**02 57 09.5**	**+3.6**
GYA				smax			
	comp=N,6μm,1.1s						
GYA				smax			
	comp=E,6μm,1.2s						
GYA				LR	LR		
	comp=N,53μm,8.7s						
GYA				LR	LR		
	comp=E,80μm,7.8s						
GYA				LR	LR		
	comp=Z,109μm,11.3s						
KMI	**Kunming**	**6.20**	**186**	Pn	**Pn**	**02 56 10.8**	**+0.8**
KMI				Sn	**Sn**	**02 57 20.3**	**-1.1**
KMI				Sg	**Sg**	**02 57 53.8**	**-3.0**
KMI				smax			
	comp=N,3μm,1.9s						
KMI				smax			
	comp=E,2μm,1.7s						
KMI				LR	LR		
	comp=N,90μm,11.6s						
KMI				LR	LR		
	comp=E,191μm,7.8s						
GTA	**Gaotai**	**8.62**	**341**	P	**Pn**	**02 56 44.6**	**+1.3**
GTA				pP		02 56 54.0	
GTA				sP		02 56 58.3	
GTA				S	**Sn**	**02 58 25.0**	**+4.0**
GTA				sS		02 58 35.3	
GTA				pmax	pmax		
	comp=Z,800nm,6.3s						
GTA				LR	LR		
	comp=N,37μm,15.3s						
GTA				LR	LR		
	comp=E,24μm,12.6s						
GTA				LR	LR		
	comp=Z,44μm,10.5s						
WHN	**Wuhan**	**9.35**	**92**	P	**Pn**	**02 56 52.9**	**-0.3**
WHN				S	**Sn**	**02 58 34.8**	**-4.0**
WHN				LR	LR		
	comp=N,111μm,7.4s						
WHN				LR	LR		
	comp=E,96μm,6.9s						
WHN				LR	LR		
	comp=Z,83μm,8.4s						
IMP	**Imphal**	**10.66**	**235**	*ex*	x	02 57 58.0	
IMP				*ex*	x	02 59 10.0	
BTO	**Baotou**	**10.67**	**28**	*e*P	**Pn**	**02 57 10.6**	**-0.6**
BTO				S	**Sn**	**02 59 06.9**	**-4.3**
BTO				LR	LR		
	comp=N,19μm,11.4s						
BTO				LR	LR		
	comp=E,19μm,12.3s						
LSA	**Lhasa**	**10.78**	**265**	P	**Pn**	**02 57 13.1**	**+0.3**
LSA				LR	LR		
	comp=E,17μm,9.5s						
LSA				LR	LR		
	comp=Z,24μm,10.4s						
HHC	**Hu-ho-hao-te**	**11.53**	**32**	*e*P	**Pn**	**02 57 22.0**	**-1.0**
HHC				pP		02 57 29.3	
HHC				sP		02 57 34.0	
HHC				S	**Sn**	**02 59 31.5**	**-0.8**
HHC				sS		02 59 42.5	
HHC				SS		02 59 46.3	
HHC				pmax	pmax		
	comp=Z,51nm,1.1s						
HHC				pmax	pmax		
	comp=Z,330nm,4.9s						
HHC				LR	LR		
	comp=N,13μm,5.7s						
HHC				LR	LR		
	comp=E,12μm,5.7s						
HHC				LR	LR		
	comp=Z,12μm,5.5s						
SHL	**Shillong**	**11.72**	**244**	*i* P	**Pn**	**02 57 24.5**	**-1.2**
SHL				*ex*	x	03 00 50.0	
CHRT	**Chiangrai**	**11.88**	**197**	⇑P	**Pn**	**02 57 28.5**	**+0.6**
	comp=Z,263nm,1.0s						
GZH	**Guangzhou**	**11.98**	**131**	P	**Pn**	**02 57 26.4**	**-2.9**
GZH				S	**Sn**	**02 59 34.3**	**-9.2**
GZH				LR	LR		
	comp=N,102μm,11.3s						
GZH				LR	LR		
	comp=E,90μm,11.1s						
TIA	**Tai'an**	**12.34**	**63**	*e*P	**Pn**	**02 57 34.3**	**+0.2**
TIA				LR	LR		
	comp=N,15μm,8.0s						
TIA				LR	LR		
	comp=E,10μm,8.0s						
NJ2	**Nanjing**	**13.09**	**83**	*e*P	**Pn**	**02 57 45.6**	**+1.1**
NJ2				pP		02 57 48.9	
NJ2				sP		02 57 52.0	
NJ2				PP		02 57 56.0	
NJ2				S	**Sn**	**03 00 09.0**	**-1.6**
NJ2				sS		03 00 14.3	
NJ2				pmax	pmax		
	comp=Z,100nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,520nm,4.4s						
NJ2				LR	LR		
	comp=N,11μm,12.4s						
NJ2				LR	LR		
	comp=E,14μm,12.2s						
NJ2				LR	LR		
	comp=Z,16μm,10.2s						
CHG	**Chiang Mai**	**13.11**	**199**	⇓P	**Pn**	**02 57 46.0**	**+1.3**
	comp=Z,124nm,1.2s						
CHTO	**Chiang Mai**	**13.11**	**199**	*e*P	**Pn**	**02 57 46.0**	**+1.3**
BJI	**Beijing**	**13.47**	**46**	P	**Pn**	**02 57 48.8**	**-0.8**
BJI				S	**Sn**	**03 00 20.9**	**+1.0**
BJI				pmax	pmax		
	comp=Z,62nm,0.6s						
BJI				pmax	pmax		
	comp=Z,230nm,3.1s						
BJI				LR	LR		
	comp=N,44μm,13.0s						
BJI				LR	LR		
	comp=E,37μm,13.5s						
BJI				LR	LR		
	comp=Z,6μm,17.7s						
QIZ	**Qiongzhong**	**13.50**	**153**	P	**Pn**	**02 57 50.9**	**+0.8**
QIZ				S	**Sn**	**03 00 14.0**	**-6.7**
QIZ				pmax	pmax		
	comp=Z,62nm,1.6s						
QIZ				LR	LR		
	comp=N,25μm,11.7s						
QIZ				LR	LR		
	comp=E,7μm,6.8s						
QIZ				LR	LR		
	comp=Z,40μm,12.9s						
TAPN	**Taplejung**	**14.33**	**258**	*e*P	**Pn**	**02 57 59.3**	**-2.1**
	comp=Z,562nm,1.1s						
QZH	**Quanzhou**	**14.74**	**112**	*e*P	**Pn**	**02 58 05.6**	**-1.3**
QZH				S	**Sn**	**03 00 52.6**	**+1.8**
QZH				LR	LR		
	comp=N,97μm,11.8s						
QZH				LR	LR		
	comp=E,62μm,13.1s						
QZH				LR	LR		
	comp=Z,35μm,8.9s						
ODAN	**Odare**	**14.77**	**257**	*e*P	**Pn**	**02 58 05.0**	**-2.4**
	comp=Z,485nm,0.9s						
KKTK	**Khon Kaen**	**14.92**	**183**	P	**Pn**	**02 58 11.0**	**+1.6**
SSE	**Sheshan**	**15.13**	**86**	P	**Pn**	**02 58 11.8**	**-0.5**
SSE				S	**Sn**	**03 01 00.0**	**-0.4**
SSE				pmax	pmax		
	comp=Z,87nm,1.0s						
SSE				pmax	pmax		
	comp=Z,300nm,6.8s						
SSE				LR	LR		
	comp=N,7μm,11.5s						
SSE				LR	LR		
	comp=E,18μm,11.5s						
SSE				LR	LR		
	comp=Z,22μm,13.6s						
RAMN	**Ramite**	**15.40**	**258**	*e*P	**Pn**	**02 58 12.9**	**-2.9**
	comp=Z,473nm,0.9s						
JIRN	**Jiri**	**15.51**	**261**	*e*P	**Pn**	**02 58 14.5**	**-2.8**
	comp=Z,410nm,0.8s						
GUN	**Gumba**	**15.70**	**262**	*e*P	**Pn**	**02 58 16.5**	**-3.3**
	comp=Z,2μm,0.9s						
NST	**Nakhon Sawan**	**15.87**	**192**	⇑P	**Pn**	**02 58 22.3**	**+0.3**
	comp=Z,258nm,1.0s						
CAL	**Calcutta**	**16.10**	**241**	*e*P	**Pn**	**02 58 24.9**	**0.0**
CAL				*ex*	x	03 01 37.9	
PKI	**Pulchoki**	**16.20**	**261**	*e*P	**Pn**	**02 58 22.9**	**-3.3**
	comp=Z,857nm,0.7s						
PKIN	**Phulchoki**	**16.21**	**261**	*e*P	**Pn**	**02 58 22.9**	**-3.4**
KKN	**Kakani**	**16.25**	**262**	*e*P	**Pn**	**02 58 23.1**	**-3.7**
	comp=Z,2μm,0.8s						
DMN	**Daman**	**16.45**	**262**	*e*P	**Pn**	**02 58 25.8**	**-3.6**
	comp=Z,2μm,1.0s						
DL2	**Dalian**	**16.64**	**58**	⇑P	**Pn**	**02 58 32.8**	**+1.1**
DL2				S	**Sn**	**03 01 37.1**	**+0.3**
DL2				pmax	pmax		
	comp=Z,200nm,1.1s						
DL2				pmax	pmax		
	comp=Z,360nm,3.7s						
DL2				LR	LR		
	comp=N,8μm,16.2s						
DL2				LR	LR		
	comp=E,7μm,16.9s						
DL2				LR	LR		
	comp=Z,7μm,14.2s						
SONM	**Songino Array**	**16.65**	**7**	Pn	**Pn**	**02 58 31.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=187,slow=11,SNR=104						
SONM				LR	LR	03 05 38.4	
	comp=Z,22μm,19.4s,baz=187,slow=40						
ULN	**Ulaanbaatar**	**16.75**	**8**	*e*P	**Pn**	**02 58 32.5**	**-0.6**
ULN				pmax	pmax		
	comp=Z,283nm,1.5s						
ULN	**Ulaanbaatar**	**16.75**	**8**	*e*Pn	**Pn**	**02 58 32.5**	**-0.6**
	comp=Z,283nm,1.5s						
YHNB	**Yeheng**	**17.10**	**108**	*e*Pn	**Pn**	**02 58 39.7**	**+2.0**
	comp=Z,90nm,0.9s						
TPUB	**Ta-pu**	**17.17**	**114**	*e*Pn	**Pn**	**02 58 38.4**	**-0.1**
	comp=Z,114nm,1.0s						
SSLB	**Suanglung**	**17.18**	**112**	*e*Pn	**Pn**	**02 58 40.1**	**+1.5**
	comp=Z,256nm,1.1s						
NACB	**Ninganchiao**	**17.51**	**110**	*e*Pn	**Pn**	**02 58 43.4**	**+0.7**
	comp=Z,225nm,1.3s						
WMQ	**Urumqi**	**17.66**	**319**	P	**Pn**	**02 58 43.5**	**-1.0**
WMQ				PP		02 58 58.3	
WMQ				S	**Sn**	**03 01 57.8**	**-3.7**
WMQ				SS		03 02 19.8	
WMQ				PcP	PcP	03 03 23.5	+0.2
WMQ				pmax	pmax		
	comp=Z,87nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,450nm,3.2s						
WMQ				LR	LR		
	comp=N,21μm,10.0s						
WMQ				LR	LR		
	comp=E,12μm,13.0s						
WMQ				LR	LR		
	comp=Z,16μm,21.0s						
ZAK	**Zakamensk**	**19.05**	**360**	*e*P	**Pn**	**02 59 00.7**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,94nm,1.5s						
SNY	**Shenyang**	**19.19**	**51**	⇑P	**Pn**	**02 59 03.3**	**0.0**
SNY				S	**Sn**	**03 02 34.8**	**-3.9**
SNY				pmax	pmax		
	comp=Z,120nm,2.6s						
SNY				LR	LR		
	comp=N,4μm,13.4s						
SNY				LR	LR		
	comp=E,6μm,10.7s						
SNY				LR	LR		
	comp=Z,7μm,11.9s						
INCN	**Inchon**	**20.03**	**66**	*e*P	**P**	**02 59 12.4**	**+0.8**
	comp=Z,148nm,1.1s						
INCN				LR	LR		
	comp=Z,7μm,19.0s,MS5.0						
INCN	**Inchon**	**20.03**	**66**	P	**P**	**02 59 14.3**	**+2.8**
	SNR=7.7						
INCN				P		02 59 14.3	
	SNR=7.7						
INCN	**Inchon**	**20.03**	**66**	P	**P**	**02 59 14.3**	**+2.8**
	SNR=7.7						
INCN				P		02 59 14.3	
	SNR=7.7						
PTH	**Pithoragarh**	**20.16**	**271**	*e*P	**P**	**02 59 12.1**	**-0.9**
PTH				*ex*	x	03 03 10.0	
TLY	**Talaya**	**20.35**	**0**	P	**P**	**02 59 16.8**	**+1.8**
	comp=Z,309nm,1.2s,SNR=15						
TLY	**Talaya**	**20.35**	**0**	***c*** *i*P	**P**	**02 59 15.8**	**+0.8**
TLY				*e*		02 59 33.5	
TLY				*e*S	**S**	**03 03 05.4**	**+1.9**
TLY				*e*SS		03 03 33.1	
TLY				pmax	pmax		
	comp=Z,84nm,1.2s						
TLY				MLR	MLR		
	comp=Z,13μm,11.0s,MS5.6						
TLY	**Talaya**	**20.35**	**0**	*e*P	**P**	**02 59 15.0**	**0.0**
	comp=Z,85nm,1.2s						
TLY				LR	LR		
	comp=Z,24μm,19.0s,MS5.6						
MOY	**Mondy**	**20.42**	**356**	*e*P	**P**	**02 59 16.8**	**+1.1**
MOY				pmax	pmax		
	comp=Z,279nm,1.8s						
JOSI	**Joshimath**	**20.55**	**274**	*e*P	**P**	**02 59 19.2**	**+1.9**
IRK	**Irkutsk**	**20.92**	**1**	⇑*i*P	**P**	**02 59 22.2**	**+1.1**
IRK				*e*S	**S**	**03 03 26.7**	**+12**
IRK				pmax	pmax		
	comp=Z,691nm,1.7s						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**02 59 22.8**	**+0.3**
	comp=Z,85nm,0.8s,mb5.1,baz=260,slow=11,SNR=165						
KSRS				LR	LR	03 07 56.5	
	comp=Z,5μm,21.2s,MS4.8,baz=265,slow=38						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**02 59 22.8**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,85nm,0.8s,mb5.1						
KSRS				MLR	MLR		
	comp=Z,5μm,21.2s,MS4.8						
CN2	**Changchun**	**21.33**	**48**	⇑P	**P**	**02 59 26.5**	**+0.9**
CN2				*es*P	sP	02 59 33.0	+6.1
CN2				*e*S	**S**	**03 03 17.8**	**-5.1**
CN2				pmax	pmax		
	comp=Z,400nm,1.1s,mb5.7						
CN2				pmax	pmax		
	comp=Z,2μm,3.0s						
CN2				LR	LR		
	comp=N,10μm,13.0s,MS5.5						
CN2				LR	LR		
	comp=E,8μm,13.0s,MS5.5						
CN2				LR	LR		
	comp=Z,10μm,10.0s,MS5.5						
KLP	**Kalpa**	**21.55**	**277**	*e*P	**P**	**02 59 28.2**	**+0.2**
DDI	**Dehra Dun**	**21.87**	**274**	⇑*i*P	**P**	**02 59 30.0**	**-1.6**
DDI				*ex*	x	03 03 39.0	
CIT	**Chita**	**21.97**	**17**	*e*P	**P**	**02 59 33.3**	**+0.9**
CIT				*e*		02 59 54.7	
CIT				pmax	pmax		
	comp=Z,795nm,1.9s,mb5.8						
JOW	**Kunigami**	**22.09**	**95**	P	**P**	**02 59 35.8**	**+1.9**
	comp=Z,29nm,0.4s,mb5.0,baz=254,slow=7.6,SNR=6.1						
JBP	**Jabalpur**	**22.40**	**255**	⇓*e*P	**P**	**02 59 36.0**	**-1.3**
JBP				*ex*	x	02 59 42.3	
	comp=Z,257nm,1.3s						
JBP				*i* S	**S**	**03 03 45.9**	**+1.7**
MK31	**Makanchi Array**	**22.49**	**319**	*e*P	**P**	**02 59 38.3**	**+0.3**
MKAR	**Makanchi Array**	**22.49**	**319**	P	**P**	**02 59 39.0**	**+1.0**
	comp=Z,104nm,1.0s,mb5.2,baz=125,slow=12,SNR=150						
MKAR				LR	LR	03 09 16.9	
	comp=Z,10μm,19.6s,MS5.3,baz=124,slow=39						
MKAR	**Makanchi Array**	**22.49**	**319**	P	**P**	**02 59 39.0**	**+1.0**
MKAR				LR	LR	03 09 16.9	
SMLA	**Simla**	**22.51**	**276**	*i* x	**P**	**02 59 34.5**	**-3.9**
SMLA				*i* x	x	03 03 36.4	
SDNR	**Sundarnagar**	**22.64**	**277**	*e*P	**P**	**02 59 40.1**	**+0.4**
SDNR				*ex*	x	03 03 53.1	
AGRA	**Agra**	**22.65**	**266**	*e*P	**P**	**02 59 38.7**	**-1.2**
BISR	**Bishrakh**	**22.74**	**270**	*e*P	**P**	**02 59 42.5**	**+1.6**
VIS	**Vishakhapatnam**	**22.75**	**238**	*i* P	**P**	**02 59 40.0**	**-1.1**
VIS				*ex*	x	02 59 53.9	
	comp=Z,126nm,1.5s						
VIS				*i* x	x	03 03 46.2	
NDI	**New Delhi**	**22.90**	**270**	*e*P	**P**	**02 59 39.0**	**-3.6**
NDI				*e*S	**S**	**03 03 50.0**	**-3.3**
KKR	**Kurukshetra**	**22.99**	**274**	*e*P	**P**	**02 59 43.5**	**0.0**
AYAN	**Aya Nagar**	**23.03**	**270**	*e*P	**P**	**02 59 43.0**	**-0.9**
BHK	**Bhakra**	**23.12**	**277**	*ex*	**P**	**02 59 41.4**	**-3.4**
BHK				*ex*	x	03 00 10.2	
SONA	**Sohna**	**23.12**	**269**	*e*P	**P**	**02 59 42.5**	**-2.3**
TGY	**Tagaytay City**	**23.43**	**133**	P	**P**	**02 59 50.0**	**+1.7**
	comp=Z,233nm,0.4s,mb6.0,baz=85,slow=12,SNR=3.2						
KSH	**Kashi**	**23.82**	**298**	⇓*i*P	**P**	**02 59 54.0**	**+2.2**
KSH				*ep*P		02 59 58.6	
KSH				*es*P	sP	03 00 01.6	+8.4
KSH				*e*PP		03 00 28.6	
KSH				*e*PcP	PcP	03 03 37.6	+2.6
KSH				*e*S	**S**	**03 04 06.6**	**-1.5**
KSH				*es*S	sS	03 04 14.6	+4.9
KSH				*e*ScP	ScP	03 07 14.0	-0.2
KSH				*e*PcS	PcS	03 07 16.1	+1.6
KSH				pmax	pmax		
	comp=Z,1μm,3.4s						
KSH				LR	LR		
	comp=N,12μm,15.1s,MS5.6						
KSH				LR	LR		
	comp=E,9μm,12.1s,MS5.6						
NGP	**Nagpur**	**24.11**	**251**	*i* P	**P**	**02 59 50.0**	**-4.6**
NGP				*ex*	x	02 59 51.7	
	comp=Z,220nm,1.2s						
NGP				*e*S	**S**	**03 04 08.4**	**-4.7**
AAA	**Alma-Ata**	**24.16**	**307**	*i* P	**P**	**02 59 56.2**	**+1.3**
AAA				*i* S	**S**	**03 04 13.1**	**-0.4**
AAA				pmax	pmax		
	comp=Z,2μm,3.8s						
AAA				smax			
	comp=N,6μm,7.6s						
AAA				MLR	MLR		
	comp=Z,14μm,18.0s,MS5.5						
KHET	**Khetri**	**24.25**	**269**	*e*P	**P**	**02 59 55.3**	**-0.5**

ULHL Ulahol 24.32 304 P **P 02 59 58.5 +2.3**
SNR=41
MDJ Mudanjiang 24.36 50 P **P 02 59 56.0 -0.7**
MDJ pP 02 59 58.9
MDJ sP sP 03 00 00.4 +2.3
MDJ PcP PcP 03 03 37.4 +1.3
MDJ S **S 03 04 15.0 -1.7**
MDJ ScP ScP 03 07 15.8 +0.2
MDJ PcS PcS 03 07 17.5 +1.7
MDJ ScS ScS 03 11 03.3 +0.4
MDJ pmax pmax
comp=Z,190nm,1.7s,mb5.2
MDJ pmax pmax
comp=Z,490nm,3.2s
MDJ LR LR
comp=N,7μm,9.1s
MDJ LR LR
comp=E,6μm,10.1s
MDJ LR LR
comp=Z,6μm,10.5s,MS5.4
BHPL Bhopal 24.50 257 *e*P **P 02 59 56.5 -1.6**
BHPL AMb AMB 03 00 02.0
comp=Z,305nm,1.6s,mb5.5
BHPL *e*x x 03 04 13.8
KZA Kyzart 24.97 303 P **P 03 00 04.0 +1.8**
SNR=189
TKM2 Tokmak 2 24.98 305 P **P 03 00 03.2 +0.8**
SNR=68
TKM2 Tokmak 2 24.98 305 *e*P **P 03 00 03.2 +0.9**
TKM2 pmax pmax
comp=Z,154nm,1.4s,mb5.3
TKM2 MLR MLR
comp=Z,12μm,21.0s,MS5.4
TKM2 Tokmak 2 24.98 305 *e*P **P 03 00 03.2 +0.9**
comp=Z,154nm,1.4s,mb5.3
TKM2 LR LR
comp=Z,12μm,21.0s,MS5.4
KBK Karagaybulak 25.35 305 P **P 03 00 07.5 +1.8**
SNR=41
VLA Vladivostok 25.37 54 *e*P **P 03 00 05.6 -0.3**
VLA *e*S **S 03 04 25.4 -7.5**
VLA pmax pmax
comp=Z,111nm,1.3s,mb5.2
VLA MLR MLR
comp=Z,4μm,13.5s,MS5.1
UCH Uchtor 25.54 303 P **P 03 00 09.1 +1.6**
SNR=49
UCH Uchtor 25.54 303 *e*P **P 03 00 09.1 +1.7**
comp=Z,133nm,1.1s,mb5.4
UCH LR LR
comp=Z,9μm,21.0s,MS5.3
CHMS Chumysh 25.59 305 P **P 03 00 08.4 +0.5**
SNR=15
FRU Bishkek 25.64 305 *e*P **P 03 00 09.0 +0.7**
FRU pmax pmax
comp=Z,292nm,1.8s,mb5.5
FRU MLR MLR
comp=Z,8μm,22.0s,MS5.2
AAK Ala-Archa 25.66 304 P **P 03 00 10.6 +2.0**
comp=Z,711nm,0.8s,mb6.2,SNR=42
AAK Ala-Archa 25.66 304 P **P 03 00 12.8 +4.2**
SNR=88
AAK Ala-Archa 25.66 304 P **P 03 00 09.2 +0.6**
comp=Z,63nm,0.7s,mb5.2,baz=121,slow=6.7,SNR=71
AAK LR LR 03 11 03.7
comp=Z,12μm,18.8s,MS5.5,baz=89,slow=38
AAK Ala-Archa 25.66 304 *ce*P **P 03 00 10.4 +1.8**
AAK pmax pmax
comp=Z,56nm,0.9s,mb5.1
AAK MLR MLR
comp=Z,6μm,18.0s,MS5.2
AAK Ala-Archa 25.66 304 *e*P **P 03 00 09.9 +1.4**
comp=Z,128nm,1.0s,mb5.4
AAK LR LR
comp=Z,11μm,20.0s,MS5.4
AAK Ala-Archa 25.66 304 ⇑P **P 03 00 09.7 +1.1**
SNR=83
AAK ⇑P pP 03 00 09.7 +0.1
SNR=83
AAK Ala-Archa 25.66 304 ⇑P **P 03 00 09.7 +1.1**
SNR=83
AAK ⇑P pP 03 00 09.7 +0.1
SNR=83
AJM Ajmer 25.69 267 *e*P **P 03 00 07.6 -1.3**
AJM *e*x x 03 04 33.5
USP Ospenovka 25.85 306 P **P 03 00 11.5 +1.3**
SNR=54
KULM Kulim 26.02 186 *e*P **P 03 00 11.0 -1.0**
comp=Z,52nm,1.1s,mb5.0
KULM LR LR
comp=Z,15μm,20.0s,MS5.5
AML Almayashu 26.10 303 P **P 03 00 14.2 +1.6**
SNR=74
AML Almayashu 26.10 303 *e*P **P 03 00 14.0 +1.4**
comp=Z,229nm,1.4s,mb5.5
AML LR LR
comp=Z,8μm,19.0s,MS5.3
EKS2 Erkin-Say 26.18 304 P **P 03 00 14.5 +1.3**
SNR=58
EKS2 Erkin-Say 26.18 304 *e*P **P 03 00 14.2 +0.9**
comp=Z,196nm,1.4s,mb5.5
EKS2 *e*PcP PcP 03 03 40.4 +0.1
EKS2 LR LR
comp=Z,12μm,20.0s,MS5.4
ZAA0 Zalesovo Array 26.32 335 *e*P **P 03 00 13.4 -0.9**
ZALV Zalesovo Beam 26.32 335 P **P 03 00 14.1 -0.2**
comp=Z,82nm,0.8s,mb5.3,baz=133,slow=6.5,SNR=100
ZALV LR LR 03 11 06.5
comp=Z,9μm,19.4s,MS5.3,baz=138,slow=38
ZALV Zalesovo Beam 26.32 335 P **P 03 00 14.1 -0.2**
ZALV LR LR 03 11 06.5
HYB Hyderabad 26.53 244 *i*P **P 03 00 15.5 -1.1**
comp=Z,80nm,1.0s,mb5.2
HYB *e*S **S 03 04 54.0 +2.4**
KURK Kurchatov 26.78 324 P **P 03 00 18.7 +0.2**
comp=Z,940nm,1.1s,mb6.2
KURK Kurchatov 26.78 324 P **P 03 00 18.8 +0.3**
comp=Z,103nm,0.9s,mb5.3,baz=128,slow=9.5,SNR=139
KURK PcP PcP 03 03 41.0 -0.5
comp=Z,7.9nm,0.9s,baz=113,slow=1.9,SNR=3.7
KURK LR LR 03 11 29.7
comp=Z,9μm,20.1s,MS5.3,baz=125,slow=38
KURK Kurchatov 26.78 324 *de*P **P 03 00 18.6 +0.1**
KURK pmax pmax
comp=Z,200nm,1.0s,mb5.6
KURK MLR MLR
comp=Z,9μm,18.0s,MS5.4
KURK Kurchatov 26.78 324 *e*P **P 03 00 17.8 -0.7**
comp=Z,215nm,1.1s,mb5.6
KURK LR LR
comp=Z,8μm,22.0s,MS5.2
IPM Ipoh 26.79 185 P **P 03 00 17.2 -1.7**
BOD Bodaibo 27.47 12 *e*P **P 03 00 24.7 0.0**
BOD pmax pmax
comp=Z,64nm,1.3s,mb5.0
LATR Latur 27.53 249 *e*P **P 03 00 25.0 -0.6**
NVS Novosibirsk 27.59 334 *e*P **P 03 00 24.4 -1.4**
NVS *e*S **S 03 05 01.0 -6.8**
NVS pmax pmax
comp=Z,88nm,2.0s,mb5.0
NVS pmax pmax
comp=N,63nm,1.7s
NVS pmax pmax
comp=E,34nm,1.6s
NVS smax
comp=N,137nm,3.8s
NVS smax
comp=E,197nm,3.3s
KLR Kul'dur 27.77 42 *e*P **P 03 00 23.3 -4.2**
KLR *e*S **S 03 04 57.0 -14**
KLR pmax pmax
comp=E,80nm,1.4s
KLR pmax pmax
comp=Z,120nm,1.4s,mb5.3
KLR MLR MLR
comp=E,5μm,11.5s
KLR MLR MLR
comp=Z,12μm,11.5s,MS5.7
KKM Kota Kinabalu 27.82 152 *e*P **P 03 00 27.8 -0.4**
comp=Z,206nm,1.3s,mb5.6
KKM LR LR
comp=Z,5μm,22.0s,MS5.1
JASL Jaisalmer 28.76 270 *e*P **P 03 00 36.0 -0.5**
KBL Kabul 29.03 286 *e*P **P 03 00 39.8 +1.0**
KBL pmax pmax
comp=Z,182nm,1.3s,mb5.7
KBL Kabul 29.03 286 *e*P **P 03 00 39.8 +0.9**
comp=Z,182nm,1.3s,mb5.7
MAJO Matsushiro 29.16 70 *e*P **P 03 00 39.7 -0.3**
MAJO pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
MAJO MLR MLR
comp=Z,3μm,22.0s,MS4.9
MAJO Matsushiro 29.16 70 *e*P **P 03 00 39.7 -0.3**
comp=Z,8.3nm,0.7s,mb4.6
MAJO LR LR
comp=Z,3μm,22.0s,MS4.9
MAT Matsushiro 29.16 70 P **P 03 00 38.2 -1.8**
MAT S **S 03 05 34.0 +1.2**
MJAR Matsushiro Arr 29.16 70 P **P 03 00 39.6 -0.4**
comp=Z,5.1nm,0.8s,mb4.3,baz=272,slow=11,SNR=8.0
MJAR LR LR 03 14 00.3
comp=Z,2μm,18.5s,MS4.7,baz=265,slow=40
NRGR Nerungri 29.34 24 *e*P **P 03 00 43.7 +2.4**
HABR Khabarovsk 29.38 45 *e*P **P 03 00 40.4 -1.4**
HABR *e**SP sP 03 00 53.1 +10
HABR *e* 03 01 33.5
HABR *e*S **S 03 05 32.0 -4.0**
HABR *e**SS sS 03 05 47.3 +10
HABR *e*SS SS 03 06 59.7 -41
HABR *e* 03 07 29.0
HABR *e* 03 11 17.5
HABR pmax pmax
comp=Z,118nm,1.9s,mb5.3
HABR pmax pmax
comp=E,94nm,1.9s
HABR pmax pmax
comp=N,25nm,1.6s
HABR MLR MLR
comp=N,3μm,9.0s
HABR MLR MLR
comp=E,5μm,10.0s
HABR MLR MLR
comp=Z,5μm,10.0s,MS5.5
CLNS Chul'man 29.54 24 *e*P **P 03 00 44.0 +0.9**
CLNS *e**PP pP 03 00 52.2 +8.1
CLNS *e* 03 01 37.6
CLNS *e* 03 03 48.3
CLNS *e*S **S 03 05 35.4 -2.9**
CLNS pmax pmax
comp=Z,25nm,1.1s,mb4.9
CLNS pmax pmax
comp=N,23nm,1.1s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CLNS pmax pmax
comp=E,2.0nm,0.7s
CLNS smax
comp=N,149nm,12.8s
CLNS smax
comp=E,213nm,12.5s
CLNS MLR MLR
comp=E,5μm,13.0s,MS5.5
CLNS MLR MLR
comp=N,3μm,10.0s,MS5.5
CLNS MLR MLR
comp=Z,7μm,12.0s,MS5.5
POO Poona 29.65 252 *e*P **P 03 00 42.9 -1.6**
POO AMb AMB 03 00 46.0
comp=Z,57nm,1.3s,mb5.1
SBUM Sibu 29.86 162 P **P 03 00 46.8 +0.5**
KAD Karad 30.03 249 *e*P **P 03 00 46.4 -1.5**
KAD AMb AMB 03 00 49.1
comp=Z,47nm,1.2s,mb5.1
KSM Kuching 30.36 166 *e*P **P 03 00 50.8 0.0**
comp=Z,19nm,0.9s,mb4.8
KSM LR LR
comp=Z,5μm,21.0s,MS5.1
JHJ Hachijo jima 2 30.65 77 LR LR 03 14 10.0
comp=Z,5μm,18.8s,MS5.2,baz=274,slow=38
QUE Quetta 31.35 278 *e*S **S 03 06 15.0 +7.7**
DAV Davao City (W) 31.74 135 LR LR 03 14 31.9
comp=Z,7μm,18.6s,MS5.4,baz=198,slow=38
DAV Davao City (W) 31.74 135 PFAKE 03 01 20.0 +17
DAV LR LR
comp=Z,8μm,19.0s,MS5.4
PALK Pallekele 32.03 226 LR LR 03 14 23.9
comp=Z,20nm,0.7s,mb5.1,baz=116,slow=10,SNR=58
BVAR Borovoye Array 32.31 322 P **P 03 01 08.0 +0.4**
comp=Z,20nm,0.7s,mb5.1,baz=116,slow=10,SNR=58
BVAR PcP PcP 03 03 54.6 -0.9
comp=Z,8.8nm,0.7s,baz=112,slow=4.0,SNR=7.1
BVAR LR LR 03 14 59.6
comp=Z,11μm,20.5s,MS5.5,baz=115,slow=38
BVAR Borovoye Array 32.31 322 P **P 03 01 08.0 +0.4**
BVAR 03 03 54.6
BRVK Borovoye 32.39 322 P **P 03 01 08.8 +0.5**
comp=Z,303nm,1.0s,mb6.1,SNR=31
BRVK Borovoye 32.39 322 *de*P **P 03 01 08.6 +0.3**
BRVK pmax pmax
comp=Z,67nm,1.0s,mb5.4
BRVK MLR MLR
comp=Z,15μm,25.0s,MS5.6
BRVK Borovoye 32.39 322 *e*P **P 03 01 07.8 -0.5**
comp=Z,88nm,1.2s,mb5.5
BRVK LR LR
comp=Z,13μm,21.0s,MS5.6
ASAJ Asahikawa 33.15 56 P **P 03 01 14.9 -0.2**
comp=Z,30nm,0.9s,mb5.2,baz=260,slow=13,SNR=11
ASAJ LR LR 03 13 55.7
comp=Z,3μm,20.1s,MS5.0,baz=258,slow=35
ASAJ Asahikawa 33.15 56 P **P 03 01 14.9 -0.2**
ASAJ pmax pmax
comp=Z,30nm,0.9s
ASAJ MLR MLR
comp=Z,3μm,20.2s
ERM Erimo 33.29 60 PFAKE 03 01 30.0 +14
ERM LR LR
comp=Z,3μm,19.0s,MS5.0
YSS Yuzh-Sakhalins 33.82 51⇑*e*P **P 03 01 20.3 -0.6**
YSS *e*S **S 03 06 43.0 -2.4**
YSS 03 11 44.0
YSS pmax pmax
comp=Z,100nm,1.2s,mb5.6
YSS MLR MLR
comp=Z,4μm,15.0s,MS5.2
YSS MLR MLR
comp=N,3μm,14.0s,MS5.2
YSS MLR MLR
comp=E,2μm,16.0s,MS5.2
YSS Yuzh-Sakhalins 33.82 51 *e*P **P 03 01 21.2 +0.3**
comp=E,78nm,1.2s,mb5.5
CBIJ Chichi jima 33.90 87 LR LR 03 14 12.9
comp=E,2μm,22.0s,MS4.9,baz=293,slow=35
YAK Yakutsk 35.10 21 *e*P **P 03 01 30.1 -1.6**
YAK *e**PP pP 03 01 36.6 +3.9
YAK *e* 03 02 53.8
YAK *e*S **S 03 07 08.8 +4.1**
YAK *e* 03 11 45.2
YAK pmax pmax
comp=E,28nm,1.3s
YAK pmax pmax
comp=N,16nm,1.2s
YAK pmax pmax
comp=Z,65nm,1.2s,mb5.4
YAK pmax pmax
comp=Z,110nm,2.8s,mb5.3
YAK pmax pmax
comp=N,114nm,3.3s
YAK pmax pmax
comp=E,12nm,1.3s
YAK smax
comp=E,150nm,3.0s
YAK smax
comp=N,100nm,2.7s
YAK MLR MLR
comp=Z,4μm,12.0s,MS5.3
YAK MLR MLR
comp=N,2μm,11.0s,MS5.2
YAK MLR MLR
comp=E,978nm,10.0s,MS5.2
YAK Yakutsk 35.10 21 *e*P **P 03 01 31.0 -0.8**
comp=E,50nm,0.8s,mb5.5
IDAH Dahanechah 36.83 284 *e*Pn **P 03 01 47.4 +0.4**
KUR Kuril'sk 37.03 55 *e*P **P 03 01 47.2 -1.3**
KUR S **S 03 07 32.0 -2.8**
KUR pmax pmax
comp=Z,190nm,1.0s,mb5.9
KUR smax
comp=N,3μm,5.0s
ABKAR Akbulak array 37.15 312 *e*P **P 03 01 49.6 +0.1**
comp=N,34nm,0.8s,mb5.2
ABKT Ailbek 37.64 293 P **P 03 01 54.5 +0.7**
comp=N,2μm,0.7s,SNR=55
SVE Sverdlovsk 39.03 324⇓*e*P **P 03 02 06.5 +1.3**
SVE *e* 03 03 36.5
SVE *e*S **S 03 08 02.5 -2.3**
SVE pmax pmax
comp=Z,153nm,1.2s,mb5.6
SVE MLR MLR
comp=Z,3μm,14.0s,MS5.3
KAPI Kappang 39.31 154 P **P 03 02 07.5 -0.5**
comp=Z,378nm,1.1s,mb6.0,SNR=12
KAPI Kappang 39.31 154 P **P 03 02 06.5 -1.5**
baz=283,slow=8.6
KAPI Kappang 39.31 154 P **P 03 02 06.5 -1.5**
KAPI LR LR
comp=Z,1μm,20.0s,MS4.7
ARU Arti 39.96 322 P **P 03 02 13.4 +0.4**
comp=Z,777nm,0.8s,mb6.5,SNR=14
ARU Arti 39.96 322 *d i*P **P 03 02 13.3 +0.3**
ARU *e* 03 03 47.3
ARU *e*PPP 03 04 10.1
ARU S **S 03 08 19.3 +0.6**
ARU SSS 03 11 39.1
ARU 03 12 15.9
ARU pmax pmax
comp=Z,128nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,6μm,20.0s,MS5.4
ARU Arti 39.96 322 *e*P **P 03 02 13.1 +0.1**
comp=Z,94nm,0.8s,mb5.6
ARU LR LR
comp=Z,6μm,20.0s,MS5.4
IANJ Anjilo 41.27 290 *e*Pn **P 03 02 25.0 +0.9**
GUMO Guam 41.81 105 LR LR 03 17 40.5
comp=Z,1μm,21.5s,MS4.8,baz=296,slow=33
SOKR Solikamsk 41.94 326 *d i*P **P 03 02 29.8 +0.5**
SOKR S **S 03 08 47.7 -0.4**
SOKR SS SS 03 11 44.6 -10
SOKR pmax pmax
comp=Z,160nm,1.0s,mb5.6
SOKR MLR MLR
comp=Z,3μm,18.0s,MS5.2
TIXI Tiksi 42.65 12 *c i*P **P 03 02 33.1 -1.8**
TIXI *e*S **S 03 08 55.9 -2.5**
TIXI pmax pmax
comp=Z,165nm,1.6s,mb5.5
TIXI MLR MLR
comp=Z,8μm,18.0s,MS5.7
TIXI Tiksi 42.65 12 *e*P **P 03 02 33.4 -1.6**
comp=Z,173nm,1.4s,mb5.6
ASUD Al Ashush, Dub 42.80 273 P **P 03 02 40.2 +3.5**
SNR=7.0
ASUD Al Ashush, Dub 42.80 273 P **P 03 02 40.2 +3.5**
SNR=7.0
COCO West Island 43.72 189 PFAKE 03 03 00.0 +16
COCO LR LR
comp=Z,4μm,22.0s,MS5.2
SEY Seymchan 44.16 30 *ce*P **P 03 02 46.7 -0.5**
PEA0B Petropavlovsk- 44.40 44 *e*P **P 03 02 48.4 -0.9**
PETK Petropavlovsk- 44.40 44 P **P 03 02 48.5 -0.7**
comp=Z,23nm,0.8s,mb5.0,baz=213,slow=1.8,SNR=25
PETK PcP PcP 03 04 33.1 +0.1
comp=Z,6.3nm,0.9s,baz=257,slow=5.8,SNR=3.4
PETK LR LR 03 22 50.0
comp=Z,1μm,18.1s,MS4.9,baz=81,slow=38
PETK Petropavlovsk- 44.40 44 P **P 03 02 48.5 -0.7**
PETK 03 04 33.1
PET Petropavlovsk 44.96 45 *e*P **P 03 02 54.0 +0.3**
PET *e* 03 04 32.0
PET *e*S **S 03 09 28.7 -3.8**
PET *e*SS SS 03 12 48.9 -4.7
PET 03 13 43.6
PET pmax pmax
comp=Z,56nm,1.2s,mb5.3
PET MLR MLR
comp=Z,2μm,17.0s,MS5.0
PET MLR MLR
comp=Z,2μm,18.0s
PET Petropavlovsk 44.96 45 *e*P **P 03 02 53.8 0.0**
comp=Z,55nm,1.0s,mb5.3
PET LR LR
comp=Z,3μm,19.0s,MS5.2
MAK Makhachkala 45.37 301 *e*P **P 03 02 58.6 +1.4**
MAK *e* 03 04 45.5
MAK *e*PPP 03 05 28.4
MAK *e*S **S 03 09 42.0 +3.2**
MAK pmax pmax
comp=Z,202nm,1.6s,mb5.7
MAK MLR MLR
comp=Z,4μm,16.0s,MS5.4
MTA Mtatsminda 47.50 300 P **P 03 03 15.1 +1.2**
TBLG Delisi 47.54 300 *e*P **P 03 03 15.5 +1.3**
TBLG Delisi 47.54 300 P **P 03 03 15.5 +1.3**
UMR Umm Al-Rimmam 47.70 283 *e*P **P 03 03 15.0 -0.6**
UMR AMb AMB 03 03 17.8
comp=Z,350nm,1.1s,mb6.3
QRN Al-Qurain 47.77 282 *e*P **P 03 03 15.4 -0.7**
QRN AMb AMB 03 03 18.2
comp=Z,268nm,0.9s,mb6.3
MIB Mutribah 47.94 283 *e*P **P 03 03 17.0 -0.5**
MIB AMb AMB 03 03 19.6
comp=Z,723nm,1.0s,mb6.6
GOR Gori 47.97 300 P **P 03 03 18.6 +1.1**
RDF Al-Radifah 48.02 282 *e*P **P 03 03 18.0 -0.1**
RDF AMb AMB 03 03 20.7
comp=Z,597nm,1.1s,mb6.5
ZEI Tsey 48.03 301 *e*P **P 03 03 17.5 -0.5**
ZEI pmax pmax
comp=Z,62nm,0.9s,mb5.6
KEH Kehvi 48.06 301 P **P 03 03 19.4 +1.2**
ONI Oni 48.38 301 P **P 03 03 21.4 +0.7**
DGAR Diego Garcia 48.63 223 PFAKE 03 03 30.0 +7.1
DGAR LR LR
comp=Z,2μm,19.0s,MS5.1
KIV Kislovodsk 48.77 303 P **P 03 03 26.8 +3.1**
comp=Z,1μm,0.9s,SNR=19
KIV Kislovodsk 48.77 303 *e*P **P 03 03 23.6 -0.1**
KIV *e* 03 05 16.0
KIV *e*S **S 03 10 24.9 -2.4**
KIV *e*SS SS 03 13 56.7 -0.7
KIV pmax pmax
comp=Z,59nm,3.7s
KIV pmax pmax
comp=Z,200nm,1.1s,mb6.1
KIV MLR MLR
comp=Z,2μm,17.0s,MS5.3
KIV Kislovodsk 48.77 303 *e*P **P 03 03 25.9 +2.2**
comp=Z,210nm,1.0s,mb6.1
KIV LR LR
comp=Z,3μm,20.0s,MS5.3
KIV Kislovodsk 48.77 303 P **P 03 03 26.2 +2.5**
SNR=32
KIV P pP 03 03 26.2 +1.5
SNR=32
KIV Kislovodsk 48.77 303 P **P 03 03 26.2 +2.5**
SNR=32
KIV P pP 03 03 26.2 +1.5
SNR=32
VRHR Novokhopersk 49.03 313 *e*P **P 03 03 25.6 +0.1**
VRHR *e**PP pP 03 03 33.3 +6.7
VRHR *e*S **S 03 10 30.0 -0.6**
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.9
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,50nm,0.9s
VRHR smax
comp=N,430nm,3.7s
VRHR smax
comp=Z,80nm,3.2s
VRHR smax
comp=E,140nm,2.2s
VRHR MLR MLR
comp=Z,2μm,12.0s,MS5.3
VRHR MLR MLR
comp=N,2μm,16.0s,MS5.3
VRHR MLR MLR
comp=E,2μm,11.0s,MS5.3
BHD Baghdad 49.44 289 *e*P **P 03 03 27.0 -1.9**
BHD *e*S **S 03 10 34.0 -2.9**
MSL Mosul 49.71 293 *e*P **P 03 03 33.0 +2.0**

MSL *e*S **S** **03 10 44.0 +3.4**
VORD Divnogorie 50.50 312 *e*P **P** **03 03 36.2 -0.6**
VORD pmax pmax
comp=Z,20nm,0.7s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,30nm,0.8s
VORD MLR MLR
comp=E,1μm,12.0s,MS5.3
VORD MLR MLR
comp=Z,2μm,12.0s,MS5.3
VORD MLR MLR
comp=N,1μm,15.0s,MS5.3
VOR Voronezh 50.53 313 *e*P **P** **03 03 36.0 -0.9**
VOR pmax pmax
comp=Z,200nm,1.2s,mb5.9
VSR Storozhevoye 50.57 313 *e*P **P** **03 03 36.7 -0.6**
VSR *e**PP pP 03 03 43.0 +4.7
VSR *e*S **S** **03 10 49.6 -2.6**
VSR pmax pmax
comp=E,40nm,0.7s
VSR pmax pmax
comp=Z,70nm,0.7s,mb5.7
VSR pmax pmax
comp=N,20nm,1.0s
VSR smax
comp=N,290nm,4.6s
VSR smax
comp=Z,160nm,5.1s
VSR smax
comp=E,60nm,2.1s
VSR MLR MLR
comp=E,1μm,12.0s,MS5.2
VSR MLR MLR
comp=Z,2μm,12.0s,MS5.4
VSR MLR MLR
comp=N,1μm,14.0s,MS5.2
KLMR Klimovskoe 50.60 325⇓ *i*P **P** **03 03 37.0 -0.4**
KLMR *i* 03 05 34.3
KLMR pmax pmax
comp=Z,151nm,1.0s,mb5.9
SOC Sochi 50.95 303 *e*P **P** **03 03 39.8 -0.5**
SOC *e**PP pP 03 03 46.2 +4.9
SOC *e* 03 05 03.4
SOC *e* 03 05 30.2
SOC *e*S **S** **03 10 58.3 +0.5**
SOC *e**SS sS 03 11 10.0 +11
SOC pmax pmax
comp=Z,58nm,0.9s,mb5.5
BILL Bilibino 51.21 25⇑ *i*P **P** **03 03 40.6 -1.2**
BILL *e* 03 05 37.6
BILL *e*S **S** **03 11 02.8 +2.2**
BILL pmax pmax
comp=Z,107nm,1.2s,mb5.7
BILL MLR MLR
comp=Z,7μm,17.0s,MS5.8
BILL Bilibino 51.21 25 *e*P **P** **03 03 41.0 -0.9**
comp=Z,173nm,1.4s,mb5.8
BILL LR LR
comp=Z,5μm,19.0s,MS5.6
MOS Moscow 51.37 319 *e*P **P** **03 03 41.8 -1.4**
MOS *e* 03 05 40.1
MOS *i* S **S** **03 11 01.2 -2.0**
MOS pmax pmax
comp=Z,243nm,1.1s,mb6.0
MOS pmax pmax
comp=Z,300nm,1.3s,mb6.1
MOS MLR MLR
comp=Z,8μm,18.0s,MS5.8
MOS MLR MLR
comp=E,9μm,20.0s
KAKA Kakadu 51.84 143 *e*P **P** **03 03 44.7 -2.4**
comp=E,30nm,0.8s,mb5.3
KAKA Kakadu 51.84 143 *e*P **P** **03 03 45.4 -1.8**
comp=E,89nm,0.8s,mb5.8
OBN Obninsk 51.98 318 P **P** **03 03 48.3 +0.5**
comp=E,533nm,1.0s,mb6.4,SNR=5.7
OBN Obninsk 51.98 318⇑ *e*P **P** **03 03 47.4 -0.4**
OBN *e* 03 05 51.0
OBN *i* S **S** **03 11 13.3 +1.7**
OBN pmax pmax
comp=Z,212nm,1.7s,mb5.8
OBN MLR MLR
comp=Z,12μm,25.0s,MS5.8
OBN Obninsk 51.98 318 *e*P **P** **03 03 47.1 -0.7**
comp=Z,159nm,1.2s,mb5.8
OBN LR LR
comp=Z,10μm,19.0s,MS5.8
ANN Anapa 52.39 305 *e*P **P** **03 03 48.7 -2.3**
ANN *e*S **S** **03 11 13.0 -4.5**
ANN pmax pmax
comp=Z,129nm,1.3s,mb5.7
ANN MLR MLR
comp=E,3μm,16.0s
ANN MLR MLR
comp=Z,2μm,16.0s,MS5.2
MALT Malatya 52.92 297 *e*P **P** **03 03 55.3 +0.3**
comp=Z,33nm,1.0s,mb5.2
MALT LR LR
comp=Z,2μm,20.0s,MS5.2
MALT Malatya 52.92 297⇑ *i*P **P** **03 03 56.9 +1.9**
LVZ Lovozero 53.45 334 P **P** **03 03 59.7 +1.2**
comp=Z,234nm,1.2s,mb6.0,SNR=7.9
LVZ Lovozero 53.45 334 PFAKE 03 04 10.0 +12
LVZ LR LR
comp=Z,13μm,21.0s,MS6.0
FITZ Fitzroy Crossi 53.53 154 *e*P **P** **03 03 58.9 -0.7**
comp=Z,18nm,0.6s,mb5.2
APA Apatity 53.89 333⇑ *i*P **P** **03 04 02.0 +0.3**
APA *e*S **S** **03 11 37.0 -0.3**
APA MLR MLR
comp=Z,18μm,15.0s,MS6.2
MBWA Marble Bar 54.44 161 *e*P **P** **03 04 05.7 -0.5**
MBWA Marble Bar 54.44 161 *e*P **P** **03 04 05.5 -0.8**
comp=Z,38nm,1.0s,mb5.3
MBWA LR LR
comp=Z,2μm,19.0s,MS5.2
JOF Joensuu 54.58 328 *e*P **P** **03 04 05.9 -0.9**
JOF pmax pmax
comp=Z,26nm,0.7s,mb5.4
JOF Joensuu 54.58 328 *e*p **P** **03 04 05.9 -0.9**
comp=Z,26nm,0.7s,mb5.4
SIM Simferopol' 54.69 305 *de*P **P** **03 04 09.2 +1.3**
SIM *e*S **S** **03 11 51.0 +2.3**
SIM pmax pmax
comp=Z,28nm,0.7s,mb5.4
SIM MLR MLR
comp=Z,3μm,22.7s,MS5.4
FKH Fakeheh 55.57 292 *e*P **P** **03 04 14.3 -0.1**
ASF Jabal al Asfar 55.79 290 P **P** **03 04 16.4 +0.3**
comp=Z,57nm,0.8s,mb5.6,baz=312,slow=7.1,SNR=80
HWQ Hawqa 55.91 292 *e*P **P** **03 04 16.6 -0.3**
BR131 Keskin Array S 56.20 299 *e*P **P** **03 04 17.9 -1.0**
comp=Z,20nm,0.9s,mb5.2
BR131 LR LR
comp=Z,694nm,20.0s,MS4.7
BRTR Keskin Array B 56.20 299 P **P** **03 04 18.4 -0.5**
comp=Z,22nm,0.9s,mb5.2,baz=110,slow=6.4,SNR=78
BRTR PcP PcP 03 05 15.1 -1.5
comp=Z,4.5nm,0.7s,baz=92,slow=4.5,SNR=2.6
BRTR LR LR 03 33 45.4
comp=Z,880nm,18.4s,MS4.9,baz=259,slow=42
BRTR Keskin Array B 56.20 299 P **P** **03 04 18.4 -0.4**
BRTR 03 05 15.1
RCY Rachaya 56.25 292 *e*P **P** **03 04 19.3 -0.1**
BHL Bhannes 56.26 292 *e*P **P** **03 04 18.9 -0.4**
KEV Kevo 56.34 336 *e*P **P** **03 04 17.8 -1.6**
KEV pmax pmax
comp=Z,63nm,0.8s,mb5.7
KEV Kevo 56.34 336 *e*P **P** **03 04 18.9 -0.4**
comp=Z,84nm,1.0s,mb5.7
KEV LR LR
comp=Z,6μm,22.0s,MS5.6
KEV Kevo 56.34 336 *e*p **P** **03 04 17.8 -1.6**
comp=Z,63nm,0.8s,mb5.7
MMAI Mount Meron Ar 56.73 291 P **P** **03 04 23.5 +0.7**
comp=Z,26nm,0.8s,mb5.3,baz=76,slow=10,SNR=31
MMAI PcP PcP 03 05 18.4 -0.4
comp=Z,7.6nm,0.8s,baz=93,slow=2.9,SNR=2.8
MMAI LR LR 03 31 41.8
comp=Z,1μm,20.5s,MS4.9,baz=60,slow=39
ARCES ARCESS Array B 56.86 336 P **P** **03 04 22.4 -0.7**
comp=Z,52nm,1.0s,mb5.5,baz=87,slow=7.4,SNR=74
ARCES PcP PcP 03 05 17.1 -1.5
comp=Z,11nm,0.8s,baz=94,slow=4.9,SNR=5.3
ARCES LR LR 03 32 03.9
comp=Z,3μm,18.5s,MS5.4,baz=97,slow=40
ARCES ARCESS Array B 56.86 336 P **P** **03 04 22.4 -0.7**
ARCES 03 05 17.1
ARE0 ARCESS Array S 56.86 336 *e*P **P** **03 04 22.6 -0.5**
AKASG Malin Array Be 56.87 313 P **P** **03 04 22.7 -0.8**
comp=Z,30nm,0.6s,mb5.5,baz=71,slow=6.4,SNR=49
AKASG PcP PcP 03 05 18.2 -0.8
comp=Z,6.4nm,0.7s,baz=70,slow=4.1,SNR=5.2
AKASG LR LR 03 30 03.6
comp=Z,5μm,18.4s,MS5.7,baz=65,slow=37
AKASG Malin Array Be 56.87 313 *ce*P **P** **03 04 22.7 -0.8**
AKASG pmax pmax
comp=Z,30nm,0.6s
AKBB Malin Array Si 56.87 313 *e*P **P** **03 04 21.9 -1.6**
KAF Kangasniemi 56.94 327 *e*P **P** **03 04 22.5 -1.2**
KAF pmax pmax
comp=Z,19nm,0.8s,mb5.2
KAF Kangasniemi 56.94 327 *e*p **P** **03 04 22.5 -1.2**
comp=Z,19nm,0.8s,mb5.2
MICGM Minsk 57.05 318⇑ *e*P **P** **03 04 23.0 -1.6**
MNK Minsk 57.07 318⇑ *e*P **P** **03 04 23.0 -1.8**
MNK *e*S **S** **03 12 16.0 -4.2**
MNK pmax pmax
comp=Z,150nm,1.2s,mb5.9
MNK MLR MLR
comp=Z,22μm,17.0s,MS6.3
MNK MLR MLR
comp=E,16μm,16.0s
FINES FINESS Array B 57.11 326 P **P** **03 04 24.5 -0.5**
comp=E,35nm,0.8s,mb5.5,baz=86,slow=7.5,SNR=57
FINES LR LR 03 30 08.7
comp=E,2μm,18.4s,MS5.2,baz=86,slow=37
CSS Prodhromos 57.77 294 *e*P **P** **03 04 28.5 -1.5**
comp=E,44nm,0.9s,mb5.5
CSS LR LR
comp=Z,2μm,20.0s,MS5.1
ISAL Salakas 57.87 319 *e*P **P** **03 04 30.2 -0.3**
KIS Kishinev 57.88 309 *e*P **P** **03 04 27.0 -3.6**
KIS *e*S **S** **03 12 25.0 -6.0**
KIS LRM 03 30 36.0
comp=Z,1μm,13.0s
KIS Kishinev 57.88 309 *e*P **P** **03 04 27.0 -3.6**
KIS *e*S **S** **03 12 25.0 -6.0**
KIS MLR MLR
comp=N,1μm,13.0s,MS5.3
KIS MLR MLR
comp=E,1μm,13.0s,MS5.3
KIS MLR MLR
comp=Z,2μm,13.0s,MS5.5
MSEY Mahe Island 58.08 241 PFAKE 03 04 40.0 +7.5
MSEY LR LR
comp=Z,1μm,20.0s,MS5.0
EIL Elat 58.20 288 P **P** **03 04 32.3 -0.9**
comp=Z,90nm,0.8s,mb5.8,baz=38,slow=2.2,SNR=68
LEOM Leova 58.38 308⇓ *i*P **P** **03 04 34.8 +0.6**
LEOM Leova 58.38 308⇓ *i*P **P** **03 04 34.8 +0.6**
BJO Bjornoya 58.61 342 AMS AMS 03 33 57.6
comp=Z,5μm,16.9s,MS5.7
TIRR Tirgusor 58.76 306 *e*P **P** **03 04 36.5 -0.4**
TIRR pmax pmax
comp=Z,21nm,0.9s,mb5.2
TIRR Tirgusor 58.76 306 *e*P **P** **03 04 36.5 -0.3**
comp=Z,21nm,0.9s,mb5.2
WRAB Tennant Creek 58.93 146 P **P** **03 04 38.0 -0.2**
comp=Z,818nm,0.9s,mb6.8,SNR=63
WRAB Tennant Creek 58.93 146 *e*P **P** **03 04 37.6 -0.6**
WRAB pmax pmax
comp=Z,143nm,1.0s,mb6.0
WRAB MLR MLR
comp=Z,887nm,21.0s,MS4.9
WRAB Tennant Creek 58.93 146 *e*P **P** **03 04 37.6 -0.6**
comp=Z,143nm,1.0s,mb6.0
WRAB LR LR
comp=Z,887nm,21.0s,MS4.9
WRA Warramunga Arr 58.93 146 P **P** **03 04 37.8 -0.4**
comp=Z,49nm,0.7s,mb5.6,baz=338,slow=7.7,SNR=22
COEN Coen 58.95 134 *e*P **P** **03 04 38.4 -0.1**
comp=Z,219nm,0.8s,mb6.2
SPB4 Spitsbergen Ar 59.02 346 *e*P **P** **03 04 37.3 -0.9**
HARR Harsova 59.04 306⇓ *i*P **P** **03 04 39.4 +0.6**
HARR Harsova 59.04 306⇓ *i*P **P** **03 04 39.4 +0.6**
ISP Isparta 59.06 298 *e*P **P** **03 04 39.6 +0.5**
comp=Z,122nm,0.9s,mb5.9
ISP LR LR
comp=Z,1μm,20.0s,MS5.1
ISP Isparta 59.06 298⇑ *i*P **P** **03 04 39.9 +0.8**
ATD Arta Tunnel 59.09 265 P **P** **03 04 39.4 -0.1**
comp=Z,4.6nm,0.3s,mb4.9,baz=147,slow=22,SNR=5.2
ATD Arta Tunnel 59.09 265 P **P** **03 04 39.4 -0.1**
PSN Preselentsi 59.12 305 P **P** **03 04 39.0 -0.4**
TRO Tromso 59.16 336 *e*S **S** **03 12 47.5 +0.5**
TRO *e*SS SS 03 16 44.2 +3.7
TRO AMS AMS 03 31 55.8
comp=Z,5μm,16.1s,MS5.7
HSP Hornsund 59.30 345 *e*P **P** **03 04 40.5 +0.4**
VRI Vrincioaia 59.56 308 P **P** **03 04 43.0 +0.7**
VRI Vrincioaia 59.56 308⇑ *i*P **P** **03 04 43.3 +1.0**
PLOR Plostina 59.61 308 P **P** **03 04 43.6 +0.9**
PLOR Plostina 59.61 308⇑ *i*P **P** **03 04 43.4 +0.7**
PRD Provadia 59.80 305 P **P** **03 04 44.7 +0.6**
KBS Kingsbay 59.81 347 *e* **P** **03 04 47.1 +3.5**
KBS *e*S **S** **03 12 53.2 -2.0**
KBS *e*SS SS 03 16 52.7 +2.2
KBS AMS AMS 03 31 33.1
comp=Z,2μm,25.0s,MS5.2
KBS Kingsbay 59.81 347 *d i*P **P** **03 04 43.5 -0.1**
KBS Kingsbay 59.81 347 *e*P **P** **03 04 43.5 -0.1**
comp=Z,20nm,1.0s,mb5.1
KBS *e* 03 04 47.1
KBS LR LR
comp=Z,2μm,21.0s,MS5.2
SUW Suwalki 59.85 318 *e*P **P** **03 04 43.6 -0.6**
SUW LMZ 03 31 33.6
comp=Z,8μm,20.9s
SUW Suwalki 59.85 318 *e*P **P** **03 04 43.3 -0.9**
comp=Z,135nm,0.9s,mb6.0
ADK Adak 60.02 45 *e*P **P** **03 04 44.2 -1.2**
ADK pmax pmax
comp=Z,48nm,0.6s,mb5.7
ADK MLR MLR
comp=Z,2μm,20.0s,MS5.1
ADK Adak 60.02 45 *e*P **P** **03 04 44.2 -1.2**
comp=Z,48nm,0.6s,mb5.7
ADK LR LR
comp=Z,2μm,20.0s,MS5.1
BUR01 Bucovina Ar. S 60.11 310 P **P** **03 04 46.4 +0.2**
BURAR Bucovina Array 60.11 310⇓ *i*P **P** **03 04 46.4 +0.3**
BUR08 Bucovina Ar. S 60.12 310 *e*P **P** **03 04 45.5 -0.6**
MLR Muntele Rosu 60.18 308 P **P** **03 04 46.8 +0.1**
comp=Z,22nm,0.8s,mb5.2,baz=152,slow=4.1,SNR=47
MLR Muntele Rosu 60.18 308 P **P** **03 04 46.8 +0.1**
MLR Muntele Rosu 60.18 308⇑ *i*P **P** **03 04 47.9 +1.2**
LVV L'vov 60.32 313 *e*P **P** **03 04 48.0 +0.5**
LVV *e* 03 05 29.0
LVV *e* 03 06 58.6
LVV *e*S **S** **03 13 01.8 -0.7**
LVV MLR MLR
comp=Z,2μm,15.0s,MS5.3
LVV MLR MLR
comp=N,1μm,19.0s,MS5.3
LVV MLR MLR
comp=E,2μm,16.0s,MS5.3
JMB Yambol 60.59 304 P **P** **03 04 51.2 +1.7**
VOIR 60.80 308 P **P** **03 04 51.0 +0.1**
VOIR 60.80 308⇑ *i*P **P** **03 04 50.8 -0.1**
ZIMR 61.09 306⇓ P **P** **03 04 53.8 +0.9**
ZIMR 61.09 306⇓ *i*P **P** **03 04 53.8 +0.9**
KWP Kalwaria Pacla 61.19 313 *e*P **P** **03 04 53.9 +0.4**
KWP *e*S **S** **03 13 14.9 +1.2**
KWP LMZ 03 30 58.5
comp=E,3μm,25.5s
KWP Kalwaria Pacla 61.19 313 *e*P **P** **03 04 53.4 -0.1**
comp=E,247nm,1.3s,mb6.2
KWP LR LR
comp=Z,3μm,20.0s,MS5.5
KWP Kalwaria Pacla 61.19 313⇑ *i*P **P** **03 04 53.7 +0.2**
BMR Baia Mare 61.22 311⇓ *i*P **P** **03 04 55.0 +1.3**
LOF Lofoten 61.34 335 *e*P **P** **03 04 54.5 +0.3**
LOF AMb AMB 03 04 58.3
comp=Z,106nm,1.1s,mb5.9
LOF Lofoten 61.34 335 *e*P **P** **03 04 54.5 +0.3**
comp=Z,106nm,1.1s,mb5.9
DIM Dimitrovgrad 61.45 304 P **P** **03 04 55.9 +0.5**
KOLS Kolonicke sedl 61.66 312 *e*P **P** **03 04 56.1 -0.5**
comp=Z,26nm,1.3s,mb5.2
KOLS *e*S **S** **03 13 20.3 +0.7**
KOLS LR LR
comp=Z,2μm,19.5s,MS5.2
KOLS Kolonicke sedl 61.66 312 *e*P **P** **03 04 56.1 -0.5**
KOLS *e*S **S** **03 13 20.3 +0.7**
KDZ Kurdzhali 61.66 304 P **P** **03 04 56.6 -0.2**
TRPA Tarpa 61.71 311⇑ *i*P **P** **03 04 58.1 +1.1**
UZH Uzhgorod 61.73 312 *e*P **P** **03 04 57.0 -0.1**
UZH *e*S **S** **03 13 17.0 -3.5**
UZH MLR MLR
comp=Z,1μm,15.0s,MS5.1
ASAR Alice Springs 61.93 148 P **P** **03 04 58.6 -0.1**
comp=Z,16nm,0.7s,mb5.2,baz=332,slow=6.1,SNR=114
ASAR PKPPKP 03 34 09.3
comp=Z,1.0nm,0.9s,baz=150,slow=3.4,SNR=4.9
DRGR 61.98 310⇑ P **P** **03 04 59.5 +0.7**
DRGR 61.98 310⇑ *i*P **P** **03 04 59.5 +0.7**
PLD Plovdiv 62.02 304 P **P** **03 04 59.6 +0.4**
RZN Rozhen 62.15 304 P **P** **03 05 00.4 +0.4**
STHS Stebnicka Huta 62.17 313 *e*P **P** **03 05 00.4 +0.3**
STHS pmax pmax
comp=Z,20nm,1.2s,mb5.1
STHS Stebnicka Huta 62.17 313 *e*P **P** **03 05 00.4 +0.3**
comp=Z,20nm,1.2s,mb5.1
STHS Stebnicka Huta 62.17 313 *e*P **P** **03 05 00.4 +0.3**
PGB Panagyurishte 62.26 305 P **P** **03 05 01.6 +0.8**
GZR Gura Zlata 62.35 308 P **P** **03 05 02.0 +0.7**
GZR Gura Zlata 62.35 308⇑ *i*P **P** **03 05 02.1 +0.8**
NIE Niedzica 62.75 313 *e*P **P** **03 05 04.5 +0.6**
OJC Ojcow 62.84 314 *i* P **P** **03 05 04.5 0.0**
OJC *e*S **S** **03 13 33.3 -1.1**
OJC L 03 33 20.5
comp=Z,8.2nm,19.4s
NSS Namsos 62.85 331 AMS AMS 03 33 40.2
comp=Z,4μm,15.5s,MS5.7
NVR Nevrokopi 62.86 304 *e*P **P** **03 05 05.5 +0.7**
MMB Musomiste 62.88 304 P **P** **03 05 04.5 -0.4**
MMB P 03 05 09.2
KECS Kecovo 62.92 312 *e*P **P** **03 05 05.1 0.0**
KECS pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
KECS Kecovo 62.92 312 *e*P **P** **03 05 05.1 0.0**
comp=Z,7.7nm,0.8s,mb4.9
KECS Kecovo 62.92 312 *e*P **P** **03 05 05.1 0.0**
VTS Vitosha 62.92 305 P **P** **03 05 05.9 +0.7**
ZKR Zakros 63.23 296 *e*P **P** **03 05 08.1 +0.7**
KKB Krupnik 63.24 304 P **P** **03 05 07.8 +0.4**
HFS Hagfors 63.31 326 P **P** **03 05 06.9 -0.6**
comp=Z,58nm,1.0s,mb5.7,baz=90,slow=5.9,SNR=50
SOH Sokhos 63.40 303 *e*P **P** **03 05 08.7 +0.3**
GKP Gorka Klasztor 63.46 318 *e*P **P** **03 05 08.3 -0.2**
GKP *e*S **S** **03 13 43.2 +1.1**
GKP LMZ 03 34 00.4
comp=Z,11μm,19.9s
PSZ Piszkesteto 63.47 312 P **P** **03 05 09.9 +1.2**
PSZ Piszkesteto 63.47 312 *e*P **P** **03 05 09.3 +0.6**
comp=Z,37nm,1.3s,mb5.4
PSZ LR LR
comp=Z,3μm,20.0s,MS5.5
PSZ Piszkesteto 63.47 312⇓ *e*P **P** **03 05 09.1 +0.4**
PSZ Piszkesteto 63.47 312⇓ *i*P **P** **03 05 08.9 +0.2**
PLG Polygyros 63.48 303 *e*P **P** **03 05 09.0 0.0**
LIKS Likavka 63.62 313 *e*P **P** **03 05 11.1 +1.4**
LIKS pmax pmax
comp=Z,44nm,1.1s,mb5.4
LIKS Likavka 63.62 313 *e*P **P** **03 05 11.1 +1.4**
comp=Z,44nm,1.1s,mb5.4
LIKS Likavka 63.62 313 *e*P **P** **03 05 11.1 +1.4**
NPS Neapolis 63.63 297 *e*P **P** **03 05 10.4 +0.3**
LAST Lasithi 63.77 297 *e*P **P** **03 05 10.8 -0.2**
VAY Valandovo 63.79 304 *e*P **P** **03 05 10.1 -0.9**
STIP Stip 63.94 304 *e*P **P** **03 05 11.5 -0.4**
VYHS Vyhne 63.96 313 *e*P **P** **03 05 12.1 +0.1**
VYHS *e* 03 05 25.9
VYHS *e*S **S** **03 13 49.8 +1.3**
VYHS pmax pmax
comp=Z,22nm,1.1s,mb5.1
VYHS MLR MLR
comp=Z,2μm,22.9s,MS5.1
VYHS Vyhne 63.96 313 *e*P **P** **03 05 12.1 +0.1**
comp=Z,22nm,1.1s,mb5.1
VYHS *e* 03 05 25.9
VYHS *e*S **S** **03 13 49.8 +1.3**
VYHS LR LR
comp=Z,2μm,22.9s,MS5.1
VYHS Vyhne 63.96 313 *e*P **P** **03 05 12.1 +0.1**
VYHS *e* 03 05 25.9
VYHS *e*S **S** **03 13 49.8 +1.3**
OKC Ostrava-Krasne 63.97 314 *e*P **P** **03 05 12.3 +0.3**
OKC *e*S **S** **03 13 49.9 +1.3**
OKC MLR MLR
comp=Z,6μm,17.5s,MS5.8
OKC Ostrava-Krasne 63.97 314 *e*P **P** **03 05 12.3 +0.3**
OKC *ep*P pP 03 05 13.8 +0.8
OKC *e*S **S** **03 13 49.9 +1.3**
OKC *ex* x 03 20 59.4
OKC AMS AMS 03 34 00.0
comp=Z,6μm,17.5s
PTL Penteli 63.97 300 *e*P **P** **03 05 11.6 -0.6**
KLBR Kellerberrin 64.00 166 *e*P **P** **03 05 12.1 -0.2**
comp=Z,30nm,0.7s,mb5.4
NEO Neokhori 64.00 302 *e*P **P** **03 05 12.3 -0.1**
ATH Athens Observa 64.11 300 *e*P **P** **03 05 12.9 -0.2**
BUD Budapest 64.17 311⇑ *e*P **P** **03 05 14.4 +1.1**
IDI Anoyia 64.18 297 P **P** **03 05 12.5 -1.1**
comp=Z,112nm,0.7s,mb6.0,baz=34,slow=9.1,SNR=83
BSD Bornholm Skovb 64.19 320 *i* P **P** **03 05 15.3 +1.9**
BSD pmax pmax
comp=Z,24nm,0.9s,mb5.2
BSD MLR MLR
comp=Z,4μm,19.0s,MS5.7
BSD Bornholm Skovb 64.19 320 *i* P **P** **03 05 09.5 -3.9**
BSD Bornholm Skovb 64.19 320 *i* P **P** **03 05 15.3 +1.9**
comp=Z,24nm,0.9s,mb5.2
BSD
comp=Z,4μm,19.0s
KOLL Kolacno 64.21 313 *e*P **P** **03 05 14.2 +0.6**
KOLL Kolacno 64.21 313 *e*P **P** **03 05 14.2 +0.6**
NOA NORSAR Array B 64.21 327 P **P** **03 05 12.2 -1.2**
comp=Z,36nm,1.0s,mb5.4,baz=73,slow=6.5,SNR=32
NOA PP PP 03 07 34.6 +0.4
comp=Z,7.9nm,0.9s,baz=71,slow=8.0,SNR=4.3
NOA LR LR 03 35 32.3
comp=Z,2μm,18.7s,MS5.4,baz=90,slow=38
NOA NORSAR Array B 64.21 327 P **P** **03 05 12.2 -1.2**
NOA 03 07 34.6
NOA NORSAR Array B 64.21 327 P **P** **03 05 12.2 -1.2**
NOA PP PP 03 07 34.6 +0.4
NOA LR LR 03 35 32.3
LIT Litokhoron 64.26 303 *e*P **P** **03 05 14.0 -0.1**
SIVA Sivas 64.34 297 *e*P **P** **03 05 14.2 -0.5**
NAIG Nisos Aigina 64.35 300 *e*P **P** **03 05 12.8 -1.9**
MORC Moravsky Berou 64.36 314 *e*P **P** **03 05 14.2 -0.3**
comp=Z,43nm,1.0s,mb5.4
MORC Moravsky Berou 64.36 314⇓ *i*P **P** **03 05 14.7 +0.1**
SKO Skopje 64.37 305 *e*P **P** **03 05 14.5 -0.3**
LKR Lokris 64.39 301 *e*P **P** **03 05 14.4 -0.6**
NAO01 NORSAR Array S 64.42 327 *e*P **P** **03 05 13.2 -1.6**
comp=Z,31nm,1.1s,mb5.2
NAO01 LR LR
comp=Z,2μm,21.0s,MS5.3
LTK Loutraki 64.64 300 *e*P **P** **03 05 15.3 -1.3**
KRUS Krusevo 64.71 304 *e*P **P** **03 05 16.0 -1.0**
AGG Agios Georgios 64.75 302 *e*P **P** **03 05 15.7 -1.6**
KSP Ksiaz 64.77 316 *e*P **P** **03 05 17.6 +0.3**
KSP *e*S **S** **03 13 58.6 +0.1**
KSP LMZ 03 34 45.2
comp=Z,17μm,19.0s
KSP Ksiaz 64.77 316 *e*P **P** **03 05 17.4 +0.2**
KSP *e*S **S** **03 13 56.0 -2.5**
KSP *e*SSS 03 20 59.0
KSP MLR MLR
comp=Z,20μm,19.0s,MS6.3
BIA Bitola 64.78 304 *e*P **P** **03 05 16.6 -0.8**
THL Klokotos Trika 64.79 302 *e*P **P** **03 05 15.7 -1.9**
OSL Oslo 64.80 326 *e*P **P** **03 05 16.0 -1.2**
PKSM Moragy 64.83 310 P **P** **03 05 17.7 0.0**
PKSM Moragy 64.83 310⇑ *i*P **P** **03 05 17.3 -0.4**
SMOL Smolenice 64.84 313 *e*P **P** **03 05 19.5 +1.8**
SMOL Smolenice 64.84 313 *e*P **P** **03 05 19.5 +1.8**
KARN Karanos 64.88 297 *e*P **P** **03 05 17.6 -0.6**
DPC Dobruska-Polom 64.91 315 *e*P **P** **03 05 18.4 +0.2**

DPC eS S 03 14 02.4 +2.1
DPC e 03 21 06.0
DPC MLR MLR
comp=Z,10µm,18.2s,MS6.0
DPC Dobruska-Polom 64.91 315 eP P 03 05 18.4 +0.2
DPC epP pP 03 05 20.4 +1.2
DPC eS S 03 14 02.4 +2.1
DPC ex x 03 21 06.0
DPC AMS AMS 03 34 30.0
comp=Z,10µm,18.2s
GVD Gavdhos 64.95 297 eP P 03 05 18.3 -0.4
GVD Gavdhos 64.95 297 eP P 03 05 16.7 -2.0
comp=Z,276nm,0.6s,mb6.5
UPC Upice 65.05 315 eP P 03 05 19.9 +0.8
UPC epP pP 03 05 21.5 +1.4
VRAC Vranov 65.09 314 P P 03 05 19.5 +0.1
comp=Z,22nm,0.8s,mb5.2,baz=76,slow=7.5,SNR=26
VRAC Vranov 65.09 314 ⇑iP P 03 05 20.4 +1.0
VRAC Vranov 65.09 314 ⇑iP P 03 05 20.1 +0.7
OHR Ohrid 65.11 304 eP P 03 05 18.9 -0.8
IVA Berane 65.13 306 ⇑iP P 03 05 19.9 +0.2
IVA Berane 65.13 306 ⇑iP P 03 05 20.0 +0.3
GUR Goura 65.13 301 eP P 03 05 18.4 -1.4
VLI Veliai 65.13 299 eP P 03 05 17.5 -2.4
ZST Bratislava 65.15 313 eP P 03 05 20.3 +0.5
comp=Z,14nm,1.0s,mb4.9
ZST eS S 03 14 02.1 -1.2
ZST LR LR
comp=Z,5µm,17.8s,MS5.8
ZST Bratislava 65.15 313 eP P 03 05 20.2 +0.4
ZST eS S 03 14 02.1 -1.2
EVR Evrytania 65.17 302 eP P 03 05 20.3 +0.2
PVY Plav 65.17 306 ⇑iP P 03 05 19.7 -0.3
PVY Plav 65.17 306 ⇑iP P 03 05 19.8 -0.3
NWAO Narrogin (SRO) 65.19 167 eP P 03 05 20.0 0.0
comp=Z,461nm,1.1s,mb6.4
NWAO Narrogin (SRO) 65.19 167 eP P 03 05 19.4 -0.6
NWAO pmax pmax
comp=Z,61nm,1.0s
NWAO MLR MLR
comp=Z,2µm,22.0s
NWAO Narrogin (SRO) 65.19 167 eP P 03 05 19.4 -0.6
comp=Z,61nm,1.0s,mb5.6
NWAO LR LR
comp=Z,2µm,22.0s,MS5.3
EFP Efpalio 65.28 301 eP P 03 05 20.6 -0.2
VLX Vlachokerasia 65.31 300 eP P 03 05 19.7 -1.3
PLE Pljevlja 65.31 307 ⇑iP P 03 05 21.0 +0.1
PLE Pljevlja 65.31 307 ⇑iP P 03 05 21.0 +0.1
MOL Molde 65.34 330 AMS AMS 03 35 32.4
comp=Z,5µm,16.3s,MS5.8
COP Copenhagen 65.35 321 eP P 03 05 21.4 +0.5
COP pmax pmax
comp=Z,22nm,0.9s,mb5.2
COP MLR MLR
comp=Z,1µm,20.0s,MS5.2
COP Copenhagen 65.35 321 *i* P P 03 05 21.4 +0.5
comp=Z,22nm,0.9s,mb5.2
COP
comp=Z,1µm,20.0s
KONO Kongsberg 65.43 326 eS S 03 14 06.0 -0.3
KONO AMS AMS 03 35 31.9
comp=Z,1µm,12.1s,MS5.4
KONO Kongsberg 65.43 326 eP P 03 05 21.2 -0.1
KONO pmax pmax
comp=Z,43nm,1.2s,mb5.3
KONO MLR MLR
comp=Z,1µm,20.0s,MS5.1
KONO Kongsberg 65.43 326 eP P 03 05 21.1 -0.2
comp=Z,43nm,1.2s,mb5.3
KONO LR LR
comp=Z,1µm,20.0s,MS5.1
CTA Charters Tower 65.53 135 eP P 03 05 22.9 +0.4
comp=Z,12nm,0.9s,mb4.9
CTAO Charters Tower 65.53 135 eP P 03 05 22.8 +0.3
CTAO pmax pmax
comp=Z,23nm,1.0s,mb5.2
CTAO MLR MLR
comp=Z,719nm,20.0s,MS4.9
CTAO Charters Tower 65.53 135 eP P 03 05 22.8 +0.3
comp=Z,23nm,1.0s,mb5.2
CTAO LR LR
comp=Z,719nm,20.0s,MS4.9
TIR Tirane 65.69 305 eP P 03 05 21.8 -1.6
TIR pmax pmax
comp=Z,39nm,0.8s,mb5.5
TIR MLR MLR
comp=Z,1µm,21.0s,MS5.2
TIR Tirane 65.69 305 eP P 03 05 21.8 -1.6
comp=Z,39nm,0.8s,mb5.5
TIR LR LR
comp=Z,1µm,21.0s,MS5.2
UPM Unac-Piva 65.69 307 ⇑iP P 03 05 22.2 -1.2
UPM Unac-Piva 65.69 307 ⇑iP P 03 05 22.2 -1.1
RUE Ruedersdorf 65.69 318 eP P 03 05 24.9 +1.7
comp=Z,27nm,0.6s,mb5.5
TTG Podgorica 65.72 306 ⇓iP P 03 05 22.4 -1.2
NKY Niksic 65.77 307 ⇑iP P 03 05 22.8 -1.1
NKY Niksic 65.77 307 ⇑iP P 03 05 22.9 -1.0
TREC Trest 65.78 314 eP P 03 05 24.0 +0.2
TREC eS S 03 14 13.9 +3.0
TREC MLR MLR
comp=Z,6µm,17.7s,MS5.9
TREC Trest 65.78 314 eP P 03 05 24.0 +0.2
TREC epP pP 03 05 25.8 +0.9
TREC eS S 03 14 13.9 +3.0
TREC ex x 03 21 26.8
TREC AMS AMS 03 34 50.0
comp=Z,6µm,17.7s
ULC Ulcinj 65.90 306 ⇑iP P 03 05 23.9 -0.8
ULC Ulcinj 65.90 306 ⇑iP P 03 05 23.9 -0.8
PVCC Panska Ves 65.91 316 eP P 03 05 25.5 +0.9
PVCC eS S 03 14 13.7 +1.3
PVCC MLR MLR
comp=Z,8µm,18.3s,MS6.0
PVCC Panska Ves 65.91 316 eP P 03 05 25.5 +0.9
PVCC epP pP 03 05 26.6 +0.9
PVCC eS S 03 14 13.7 +1.3
PVCC ex x 03 21 35.4
PVCC AMS AMS 03 35 10.0
comp=Z,8µm,18.3s
FORT Forrest 66.00 157 eP P 03 05 25.3 0.0
comp=Z,34nm,0.7s,mb5.5
FORT Forrest 66.00 157 eP P 03 05 25.4 +0.1
comp=Z,44nm,0.8s,mb5.5
BUM Brajici-Budva 66.02 306 ⇑iP P 03 05 24.5 -1.0
BUM Brajici-Budva 66.02 306 ⇑iP P 03 05 24.5 -1.0
CONA Conrad Observa 66.03 313 ⇑iP P 03 05 25.7 +0.3
comp=Z,36nm,1.0s,mb5.4,SNR=30
BRY Bratogost 66.05 307 ⇑iP P 03 05 24.6 -1.1
BRY Bratogost 66.05 307 ⇑iP P 03 05 24.6 -1.1
PRU Pruhonice 66.11 315 eP P 03 05 26.5 +0.6
PRU eS S 03 14 17.2 +2.2
PRU MLR MLR
comp=Z,10µm,17.7s,MS6.1
PRU Pruhonice 66.11 315 eP P 03 05 26.5 +0.6
PRU epP pP 03 05 28.1 +1.1
PRU eS S 03 14 17.2 +2.2
PRU ex x 03 21 41.6
PRU AMS AMS 03 35 10.0
comp=Z,10µm,17.7s
PRA Prague 66.15 315 ⇑P P 03 05 27.0 +0.8
PRA AMS AMS 03 35 15.0
BRG Berggiesshubel 66.16 316 eP P 03 05 26.0 -0.3
comp=Z,11nm,0.9s,mb4.9
BRG *i* pP 03 05 27.9 +0.7
comp=Z,46nm,1.1s
BRG S S 03 14 15.0 -0.5
BRG SS SS 03 18 30.0 -0.5
BRG
comp=N,3µm,17.5s
BRG
comp=E,5µm,17.5s
BRG
comp=Z,7µm,17.6s
BRG Berggiesshubel 66.16 316 eP P 03 05 26.0 -0.2
BRG S S 03 14 15.0 -0.5
BRG SS SS 03 18 30.0 -0.5
BRG pmax pmax
comp=Z,28nm,1.1s,mb5.2
BRG MLR MLR
comp=N,2µm,17.5s,MS5.6
BRG MLR MLR
comp=E,3µm,17.5s,MS5.6

BRG MLR MLR
comp=Z,4µm,17.6s,MS5.7
ALE Alert 66.19 358 P P 03 05 26.0 0.0
comp=Z,172nm,1.0s,mb6.0,SNR=27
HCY Herceg Novi 66.24 306 ⇑iP P 03 05 26.6 -0.3
HCY Herceg Novi 66.24 306 ⇑iP P 03 05 26.7 -0.3
VLS Valsamata 66.33 301 eP P 03 05 24.0 -3.6
ARSA Arzberg 66.48 312 ⇓iP P 03 05 28.4 0.0
comp=Z,20nm,0.9s,mb5.2,SNR=9.3
DAG Danmarks Havn 66.53 348 eP P 03 05 26.0 -2.2
DAG MLR MLR
comp=Z,4µm,17.0s,MS5.8
DAG Danmarks Havn 66.53 348 *i* P P 03 05 26.0 -2.2
DAG
comp=Z,4µm,17.0s
CLL Collm 66.56 317 eP P 03 05 28.7 -0.1
comp=Z,47nm,1.1s,mb5.4
CLL Collm 66.56 317 *i* P P 03 05 28.8 0.0
CLL eS S 03 14 16.0 -4.3
CLL pmax pmax
comp=Z,13nm,1.1s,mb4.9
CLL MLR MLR
comp=Z,7µm,20.4s,MS5.9
CLL Collm 66.56 317 *i* P P 03 05 28.8 0.0
comp=Z,47nm,1.1s,mb5.4
CLL eS S 03 14 16.0 -4.3
CLL LR LR
comp=Z,7µm,20.4s,MS5.9
CLL Collm 66.56 317 *i* P P 03 05 28.8 0.0
comp=Z,47nm,1.1s,mb5.4
CLL *e* 03 05 40.0
CLL *e* 03 06 14.0
CLL ePP PP 03 07 54.0 -0.9
CLL eS S 03 14 16.0 -4.3
CLL eSS SS 03 18 36.0 -0.7
CLL eSSS 03 21 46.0
CLL Lm 03 35 00.0
comp=N,4µm,19.0s
CLL Lm 03 35 00.0
comp=E,4µm,20.0s
CLL Lm 03 35 00.0
comp=Z,7µm,20.4s
MUD Monsted U'grnd 66.78 323 ⇓iP P 03 05 30.0 -0.1
MUD pmax pmax
comp=Z,44nm,1.0s,mb5.4
MUD MLR MLR
comp=Z,4µm,18.0s,MS5.7
MUD Monsted U'grnd 66.78 323 ⇓iP P 03 05 30.0 -0.1
comp=Z,44nm,1.0s,mb5.5
MUD
comp=Z,4µm,18.0s
FOO Floro 66.80 329 AMS AMS 03 36 33.9
comp=Z,5µm,16.1s,MS5.8
PERS Pernice 66.96 312 *i* P P 03 05 31.0 -0.5
PERS eS S 03 14 24.5 -0.9
SOKA Soboth 67.00 312 ⇑iP P 03 05 31.4 -0.3
comp=Z,46nm,1.0s,mb5.5
KHC Kasperske Hory 67.01 314 eP P 03 05 31.9 +0.2
KHC eS S 03 14 27.3 +1.5
KHC *e* 03 21 39.0
KHC MLR MLR
comp=Z,9µm,18.8s,MS6.0
KHC Kasperske Hory 67.01 314 eP P 03 05 31.7 0.0
comp=Z,17nm,1.1s,mb5.0
KHC Kasperske Hory 67.01 314 eP P 03 05 31.9 +0.2
KHC epP pP 03 05 33.2 +0.5
KHC eS S 03 14 27.3 +1.5
KHC ex x 03 21 39.0
KHC AMS AMS 03 35 40.0
comp=Z,9µm,18.8s
GEC2 GERESS Array S 67.04 314 eP P 03 05 31.8 -0.1
comp=Z,45nm,1.2s,mb5.4
GEC2 GERESS Array S 67.04 314 eP P 03 05 31.8 -0.1
GEC2 pmax pmax
comp=Z,45nm,1.2s,mb5.4
GERES GERESS Array B 67.04 314 P P 03 05 31.8 -0.1
comp=Z,30nm,1.0s,mb5.3,baz=76,slow=5.6,SNR=61
GERES LR LR 03 36 19.2
comp=Z,6µm,19.3s,MS5.8,baz=62,slow=37
MOA Molln 67.06 313 ⇓iP P 03 05 32.3 +0.3
comp=Z,36nm,1.2s,mb5.3,SNR=17
BSEG Bad Segeberg 67.12 320 eP P 03 05 32.4 +0.1
comp=Z,96nm,1.3s,mb5.7
BSEG Bad Segeberg 67.12 320 eP P 03 05 32.4 +0.1
BSEG pmax pmax
comp=Z,96nm,1.3s,mb5.7
TTA Tatalina 67.13 29 eP P 03 05 31.4 -0.8
TTA pmax pmax
comp=Z,85nm,1.4s,mb5.6
TTA Tatalina 67.13 29 eP P 03 05 31.4 -0.8
comp=Z,85nm,1.4s,mb5.6
BER Bergen 67.15 328 eS S 03 14 29.3 +2.1
BER AMS AMS 03 37 04.8
comp=Z,3µm,17.2s,MS5.6
TANN Tannenbergstha 67.20 316 eP P 03 05 32.8 -0.1
comp=Z,34nm,1.0s,mb5.3
NKC Novy Kostel 67.28 316 eP P 03 05 33.6 +0.2
NKC eS S 03 14 29.5 +0.4
NKC MLR MLR
comp=Z,7µm,17.6s,MS5.9
NKC Novy Kostel 67.28 316 eP P 03 05 33.6 +0.2
NKC epP pP 03 05 35.1 +0.6
NKC eS S 03 14 29.5 +0.4
NKC ex x 03 22 04.9
NKC AMS AMS 03 36 10.0
comp=Z,7µm,17.6s
BOJS Bojanci 67.30 310 *i* P P 03 05 33.8 +0.2
BOJS eS S 03 14 29.4 0.0
OBKA Obir 67.38 312 ⇑iP P 03 05 33.8 -0.3
comp=Z,23nm,0.8s,mb5.2,SNR=11
WET Wettzell 67.43 315 eP P 03 05 34.6 +0.2
comp=Z,27nm,1.1s,mb5.2
WET Wettzell 67.43 315 eP P 03 05 34.6 +0.2
WET pmax pmax
comp=Z,27nm,1.1s,mb5.2
VISS Visnje 67.45 311 *i* P P 03 05 34.2 -0.4
VISS eS S 03 14 33.2 +1.9
VISS *e* 03 15 34.9
JMIC Jan Mayen 67.46 341 eS S 03 14 28.7 -1.9
JMIC eSS SS 03 18 52.0 +2.1
COLD Coldfoot 67.49 24 eP P 03 05 34.0 -0.4
comp=Z,87nm,0.9s,mb5.8
ROTZ Rotzenmuhle 67.60 315 eP P 03 05 35.8 +0.4
comp=Z,68nm,1.0s,mb5.6
MOX Moxa 67.62 317 eP P 03 05 36.6 +1.1
comp=Z,34nm,1.3s,mb5.2
MOX eS S 03 14 31.0 -2.1
MOX
comp=Z,5µm,20.0s
MOX Moxa 67.62 317 eP P 03 05 35.8 +0.3
comp=Z,24nm,1.0s,mb5.2
MOX Moxa 67.62 317 eP P 03 05 36.6 +1.1
MOX eS S 03 14 31.0 -2.1
MOX pmax pmax
comp=Z,34nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,5µm,20.0s,MS5.8
NRDL Niedersach Rie 67.78 319 eP P 03 05 36.9 +0.4
comp=Z,66nm,1.1s,mb5.6
CLZ Clausthal 67.88 318 eP P 03 05 37.4 +0.2
comp=Z,78nm,0.9s,mb5.7
CLZ Clausthal 67.88 318 eP P 03 05 37.4 +0.2
CLZ pmax pmax
comp=Z,78nm,0.9s,mb5.7
JAVS Javornik 67.92 311 *i* P P 03 05 36.9 -0.6
JAVS eS S 03 14 34.4 -2.5
JAVS *e* 03 15 37.9
KBA Koelnbreinsper 67.92 312 ⇓iP P 03 05 37.5 -0.1
comp=Z,32nm,0.9s,mb5.4,SNR=17
VOY Vojsko 67.98 311 eP P 03 05 37.2 -0.7
VOY *e* 03 05 50.2
VOY *e* 03 06 02.7
SVW2 Sparrevohn 68.08 31 eP P 03 05 38.1 -0.2
PTCC Patocco-Chiusa 68.18 312 P P 03 05 38.4 -0.7
TRI Trieste 68.19 311 eP P 03 05 37.9 -1.3
TRI pmax pmax
comp=Z,53nm,1.0s,mb5.5
TRI MLR MLR
comp=Z,2µm,20.0s,MS5.2
TRI Trieste 68.19 311 eP P 03 05 37.9 -1.3
comp=Z,53nm,1.0s,mb5.5
TRI LR LR
comp=Z,2µm,20.0s,MS5.2
GRA1 Grafenberg Arr 68.22 316 eP P 03 05 39.6 +0.3
comp=Z,81nm,1.0s,mb5.7

GRA1 eS S 03 14 38.4 -2.0
GRA1 LR LR
comp=Z,3µm,20.7s,MS5.5
GRF Grafenberg Arr 68.22 316 eP P 03 05 39.6 +0.3
comp=Z,81nm,1.0s,mb5.7
GRF eS S 03 14 38.4 -2.0
GRF eL 03 33 20.5
comp=Z,3µm,20.7s
GRF Grafenberg Arr 68.22 316 eP P 03 05 39.6 +0.3
GRF eS S 03 14 38.4 -2.0
GRF pmax pmax
comp=Z,81nm,1.0s,mb5.7
GRF MLR MLR
comp=Z,3µm,20.7s,MS5.5
CHUM Lake Minchumin 68.23 28 eP P 03 05 39.1 0.0
comp=Z,27nm,0.7s,mb5.4
UBBA Unterbreizbach 68.50 317 eP P 03 05 40.8 -0.2
comp=Z,24nm,1.5s,mb5.0
RGNG Rignano Grg 68.54 306 P P 03 05 41.1 -0.4
ABTA Abfaltersbach 68.58 312 ⇓iP P 03 05 40.7 -0.9
comp=Z,12nm,0.9s,mb4.8,SNR=11
BPAW Bear Paw Mtn. 68.65 27 eP P 03 05 41.6 -0.2
comp=Z,121nm,1.3s,mb5.7
TIP Timpagrande 68.71 304 eP P 03 05 41.8 -0.8
comp=Z,80nm,1.1s,mb5.6
TIP LR LR
comp=Z,649nm,19.0s,MS4.9
PPLA Purkeypile 68.73 28 eP P 03 05 41.4 -0.8
comp=Z,48nm,0.6s,mb5.6
CHGN Chignik 68.76 36 eP P 03 05 41.8 -0.8
FUR Furstenfeldbru 68.79 314 eP P 03 05 43.4 +0.5
comp=Z,142nm,1.2s,mb5.8
FUR Furstenfeldbru 68.79 314 eP P 03 05 43.4 +0.5
FUR pmax pmax
comp=Z,142nm,1.2s,mb5.8
WTTA Wattenberg 68.92 313 ⇑iP P 03 05 43.4 -0.4
comp=Z,39nm,1.1s,mb5.3,SNR=20
KTH Kantishna Hill 68.93 28 eP P 03 05 43.6 +0.1
comp=Z,195nm,1.6s,mb5.8
WATA Walderalm 68.93 313 ⇓iP P 03 05 43.7 -0.1
comp=Z,26nm,1.0s,mb5.1,SNR=8.2
MOTA Moosalm 69.22 313 *i* P P 03 05 45.3 -0.3
comp=Z,63nm,1.3s,mb5.4,SNR=27
TRF Thorofare Moun 69.23 27 eP P 03 05 45.8 +0.4
comp=Z,20nm,0.8s,mb5.1
CSSN Cassano Irpino 69.26 306 P P 03 05 46.6 +0.6
RETA Reutte 69.38 314 ⇑iP P 03 05 46.7 +0.1
comp=Z,11nm,0.9s,mb4.8,SNR=6.1
CTI Castel Tesino 69.41 312 P P 03 05 46.8 0.0
COLA College 69.46 26 eP P 03 05 46.4 -0.4
COLA pmax pmax
comp=Z,87nm,0.9s,mb5.7
COLA MLR MLR
comp=Z,2µm,21.0s,MS5.3
COLA College 69.46 26 eP P 03 05 46.4 -0.4
comp=Z,88nm,0.9s,mb5.7
COLA LR LR
comp=Z,2µm,21.0s,MS5.3
MIDA Miranda 69.47 307 P P 03 05 47.5 +0.2
CING Cingoli 69.48 309 P P 03 05 47.5 +0.2
WIT Witteveen 69.57 320 eP P 03 05 49.8 +2.1
comp=Z,365nm,1.6s,mb6.1
FETA Feichten 69.59 313 ⇑iP P 03 05 47.3 -0.6
comp=Z,43nm,0.9s,mb5.4,SNR=31
RSO Redoubt South 69.61 31 eP P 03 05 48.0 +0.2
MCK McKinley 69.62 27 eP P 03 05 46.9 -0.9
MCK pmax pmax
comp=Z,22nm,0.9s,mb5.1
MCK McKinley 69.62 27 eP P 03 05 46.9 -0.9
comp=Z,22nm,0.9s,mb5.1
TOD Tromm 69.69 316 eP P 03 05 48.8 +0.3
CEL Celeste 69.70 303 eP P 03 05 47.4 -1.3
comp=Z,201nm,1.1s,mb6.0
CEL LR LR
comp=Z,1µm,21.0s,MS5.0
AQU L'Aquila 69.76 308 eP P 03 05 48.5 -0.6
AQU pmax pmax
comp=Z,114nm,1.3s,mb5.6
AQU MLR MLR
comp=Z,1µm,19.0s,MS5.2
AQU L'Aquila 69.76 308 eP P 03 05 48.5 -0.6
comp=Z,114nm,1.3s,mb5.6
AQU LR LR
comp=Z,1µm,19.0s,MS5.2
STU Stuttgart 69.81 315 eP P 03 05 49.0 -0.2
comp=Z,51nm,0.9s,mb5.5
STU Stuttgart 69.81 315 eP P 03 05 48.9 -0.3
STU pmax pmax
comp=Z,57nm,0.9s,mb5.5
STU Stuttgart 69.81 315 eP P 03 05 48.9 -0.3
comp=Z,57nm,0.9s,mb5.5
BUG Bochum--Univer 69.81 318 eP P 03 05 49.7 +0.5
comp=Z,50nm,1.0s,mb5.4
WTSB Winterswijk 69.86 319 eP P 03 05 49.5 0.0
comp=Z,5.4nm,1.1s,mb4.4
MURB Monte Urbino 69.98 309 P P 03 05 51.6 +1.2
BRMO Bormio 70.04 313 P P 03 05 51.3 +0.6
BADI Badiali 70.06 309 P P 03 05 52.0 +1.1
LRW Lerwick 70.18 329 eP P 03 05 50.0 -1.2
LRW AMb AMB 03 05 54.0
comp=Z,38nm,1.2s,mb5.2
LRW AMS AMS 03 38 57.2
comp=Z,3µm,15.1s,MS5.6
CERT Cerreto 70.21 308 P P 03 05 51.3 -0.5
DAVOX Davos/Dischmat 70.22 313 P P 03 05 52.1 +0.3
comp=Z,40nm,0.9s,mb5.3,baz=83,slow=5.8,SNR=28
MNS Montasola 70.24 308 P P 03 05 51.6 -0.4
WAL1 Walls 70.31 329 eP P 03 05 51.8 -0.3
SPAK Spaichingen-Ko 70.33 315 eP P 03 05 52.3 -0.2
KMBO Kilima Mbogo 70.46 256 P P 03 05 53.4 -0.4
comp=Z,9.8nm,0.9s,mb4.8,baz=48,slow=10,SNR=18
KMBO Kilima Mbogo 70.46 256 *c*eP P 03 05 53.7 -0.1
KMBO pmax pmax
comp=Z,10.0nm,0.9s
KMBO Kilima Mbogo 70.46 256 eP P 03 05 53.2 -0.6
comp=Z,14nm,1.0s,mb4.9
KMBO LR LR
comp=Z,506nm,19.0s,MS4.8
BFO Black Forest 70.51 315 P P 03 05 53.8 +0.2
comp=Z,208nm,1.0s,mb6.0,SNR=16
BFO Black Forest 70.51 315 eP P 03 05 53.2 -0.4
comp=Z,43nm,1.1s,mb5.3
BFO Black Forest 70.51 315 eP P 03 05 53.2 -0.4
BFO pmax pmax
comp=Z,43nm,1.1s,mb5.3
FNVD Fontana Vidola 70.52 310 P P 03 05 55.9 +2.2
LANF Langenberg 70.55 316 eP P 03 05 54.7 +0.9
RC01 Rabbit Creek A 70.61 30 eP P 03 05 53.0 -0.9
comp=Z,40nm,1.1s,mb5.3
PMR Palmer 70.61 29 eP P 03 05 52.6 -1.3
PMR pmax pmax
comp=Z,45nm,0.8s,mb5.5
PMR Palmer 70.61 29 eP P 03 05 52.6 -1.3
comp=Z,45nm,0.8s,mb5.5
RUP Ruppelstein 70.68 317 eP P 03 05 54.9 +0.4
CSNT Castellina Chi 70.71 310 P P 03 05 54.3 -0.5
HGN Heimansgroeve 70.87 318 eP P 03 05 55.3 -0.4
comp=Z,26nm,0.9s,mb5.2
HGN Heimansgroeve 70.87 318 eS S 03 15 12.4 +0.9
OHAK Old Harbor 70.88 34 eP P 03 05 54.8 -0.8
comp=Z,79nm,1.0s,mb5.6
MEM Membach 70.89 318 P P 03 05 57.2 +1.4
comp=Z,17nm,1.3s,mb4.8
FELD Feldberg im Sc 70.91 315 eP P 03 05 56.2 +0.2
KDAK Kodiak Island 70.95 33 P P 03 05 55.0 -1.0
comp=Z,393nm,0.9s,mb6.3,SNR=12
KDAK Kodiak Island 70.95 33 *c*eP P 03 05 55.2 -0.8
BEBN Eben Emael 71.00 318 P P 03 05 55.9 -0.6
comp=Z,9.0nm,1.3s,mb4.5
VLC Villacollemand 71.01 311 eP P 03 05 58.0 +1.4
comp=Z,46nm,1.1s,mb5.3
VLC LR LR
comp=Z,3µm,19.0s,MS5.5
VAE Valguarnera 71.09 303 P P 03 05 58.2 +0.9
comp=Z,42nm,1.1s,mb5.3,baz=288,slow=19,SNR=4.1
PII Pisa 71.10 310 P P 03 05 56.6 -0.6
CDF Champ du Feu 71.11 316 eP P 03 05 56.7 -0.5
comp=Z,77nm,1.0s,mb5.3
CDF Champ du Feu 71.11 316 eP P 03 05 56.7 -0.5
CDF pmax pmax
comp=Z,39nm,1.0s,mb5.3
CDF Champ du Feu 71.11 316 eP P 03 05 56.7 -0.5
comp=Z,39nm,1.0s,mb5.3
SEW Seward 71.22 30 eP P 03 05 56.4 -1.2
comp=Z,58nm,1.0s,mb5.5
WLF Walferdange 71.22 317 P P 03 05 57.9 +0.1

comp=Z,82nm,1.1s,mb5.6
WLF Walferdange 71.22 317 *e*P **P 03 05 58.4 +0.5**
comp=Z,144nm,1.1s,mb5.8
WLF Walferdange 71.22 317 *e*P **P 03 05 58.1 +0.2**
WLF pmax pmax
comp=Z,118nm,1.0s,mb5.8
WLF MLR MLR
comp=Z,4µm,20.0s,MS5.7
WLF Walferdange 71.22 317 *e*P **P 03 05 58.1 +0.2**
comp=Z,118nm,1.0s,mb5.8
WLF LR LR
comp=Z,4µm,20.0s,MS5.7
ECH Echery 71.27 315 *e*P **P 03 05 59.0 +0.8**
ECH Echery 71.27 315 *e*P **P 03 05 57.6 -0.6**
ECH pmax pmax
comp=Z,30nm,1.0s,mb5.2
ECH MLR MLR
comp=Z,7µm,19.0s,MS5.9
ECH Echery 71.27 315 *e*P **P 03 05 57.6 -0.6**
comp=Z,30nm,1.0s,mb5.2
ECH LR LR
comp=Z,7µm,19.0s,MS5.9
VAI Varese 71.31 313 P **P 03 05 57.4 -1.0**
SCO Scoresbysund 71.33 343 *i* P **P 03 05 58.3 +0.2**
SCO pmax pmax
comp=Z,11nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,3µm,22.0s,MS5.5
SCO Scoresbysund 71.33 343 *i* P **P 03 05 58.3 +0.2**
comp=Z,11nm,1.0s,mb4.7
SCO
comp=Z,3µm,22.0s
BOB Bobbio (Coli) 71.35 311 P **P 03 05 59.1 +0.4**
BCLA Clavier 71.38 318 P **P 03 05 57.9 -0.8**
comp=Z,26nm,1.1s,mb5.1
MOF Molkenrain 71.44 315 *e*P **P 03 05 58.6 -0.6**
HINF Hinteralfeld 71.63 315 *e*P **P 03 05 59.5 -0.8**
comp=Z,56nm,0.9s,mb5.2
HINF Hinteralfeld 71.63 315 *e*P **P 03 05 59.5 -0.8**
HINF pmax pmax
comp=Z,28nm,0.9s,mb5.2
HINF Hinteralfeld 71.63 315 *e*P **P 03 05 59.5 -0.8**
comp=Z,28nm,0.9s,mb5.2
UCC Uccle 71.74 319 P **P 03 06 00.8 -0.1**
comp=Z,19nm,1.4s,mb4.8
GIVF Givet 71.80 318 *e*P **P 03 06 00.9 -0.4**
comp=Z,92nm,1.1s,mb5.3
GIVF Givet 71.80 318 *e*P **P 03 06 00.9 -0.4**
GIVF pmax pmax
comp=Z,46nm,1.1s,mb5.3
GIVF Givet 71.80 318 *e*P **P 03 06 00.9 -0.4**
comp=Z,46nm,1.1s,mb5.3
HAU Haudompre 71.85 315 *e*P **P 03 06 00.8 -0.9**
comp=Z,36nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,8µm,19.2s,MS5.7
HAU Haudompre 71.85 315 *e*P **P 03 06 00.8 -0.9**
HAU pmax pmax
comp=Z,18nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,8µm,19.3s,MS6.0
HAU Haudompre 71.85 315 *e*P **P 03 06 00.8 -0.9**
comp=Z,18nm,0.9s,mb5.0
HAU LR LR
comp=Z,8µm,19.3s,MS6.0
LOMF Lomont 71.85 315 *e*P **P 03 06 01.5 -0.2**
ORO Oropa 71.91 313 P **P 03 06 02.6 +0.6**
SNF Seneffe 71.92 318 P **P 03 06 01.9 -0.2**
comp=Z,17nm,1.4s,mb4.8
EGAK Eagle 71.92 24 *e*P **P 03 06 00.9 -0.8**
comp=Z,17nm,0.9s,mb5.0
EGAK LR LR
comp=Z,3µm,19.0s,MS5.6
DOU Dourbes 71.93 318 P **P 03 06 01.7 -0.4**
comp=Z,14nm,1.1s,mb4.8
THEF They Montfort 71.97 316 *e*P **P 03 06 02.0 -0.4**
MENT Mentasta 72.04 26 *e*P **P 03 06 01.7 -0.9**
ORE Reay 72.12 328 *e*P **P 03 06 02.3 -0.8**
INK Inuvik 72.13 19 *e*P **P 03 06 02.2 -0.8**
INK pmax pmax
comp=Z,98nm,1.1s
INK Inuvik 72.13 19 *e*P **P 03 06 02.2 -0.8**
comp=Z,98nm,1.1s,mb5.7
BAIF Baives 72.17 318 *e*P **P 03 06 03.2 -0.3**
comp=Z,68nm,1.1s,mb5.2
BAIF Baives 72.17 318 *e*P **P 03 06 03.2 -0.3**
BAIF pmax pmax
comp=Z,34nm,1.1s,mb5.2
BAIF Baives 72.17 318 *e*P **P 03 06 03.2 -0.3**
comp=Z,34nm,1.1s,mb5.2
DIV Divide 72.23 28 *e*P **P 03 06 03.4 -0.4**
comp=Z,29nm,0.6s,mb5.4
MCD Coleburn Disti 72.38 327 *e*P **P 03 06 05.1 +0.5**
MME1 Meikle Cairn 72.38 327⇑ *e*P **P 03 06 04.1 -0.5**
MEZF Maizieres J'vi 72.39 316 *e*P **P 03 06 04.5 -0.4**
comp=Z,61nm,1.1s,mb5.1
MEZF Maizieres J'vi 72.39 316 *e*P **P 03 06 04.5 -0.4**
comp=Z,61nm,1.1s,mb5.5
EIDS Eidsvold 72.42 136 *e*P **P 03 06 05.3 +0.1**
comp=Z,15nm,0.8s,mb5.0
STKA Stephens Creek 72.46 147 *e*P **P 03 06 05.4 0.0**
comp=Z,19nm,0.6s,mb5.2
STKA Stephens Creek 72.46 147 P **P 03 06 05.4 0.0**
comp=Z,24nm,0.7s,mb5.3,baz=323,slow=6.1,SNR=68
STKA Stephens Creek 72.46 147 *e*P **P 03 06 04.4 -1.0**
comp=Z,5.0nm,0.7s,mb4.5
PGF Pioggiola 72.62 309 *e*P **P 03 06 06.4 0.0**
comp=Z,166nm,1.1s,mb5.6
PGF Pioggiola 72.62 309 *e*P **P 03 06 06.4 0.0**
PGF pmax pmax
comp=Z,83nm,1.1s,mb5.6
PGF Pioggiola 72.62 309 *e*P **P 03 06 06.4 0.0**
comp=Z,83nm,1.1s,mb5.6
CABF La Chapelle 72.64 314 *e*P **P 03 06 05.7 -0.7**
comp=Z,54nm,1.2s,mb5.1
CABF La Chapelle 72.64 314 *e*P **P 03 06 05.7 -0.7**
CABF pmax pmax
comp=Z,27nm,1.2s,mb5.0
CABF La Chapelle 72.64 314 *e*P **P 03 06 05.7 -0.7**
comp=Z,27nm,1.2s,mb5.1
IMI Imperia 72.73 311 P **P 03 06 06.6 -0.4**
LPG La Plagne 72.74 313 *e*P **P 03 06 07.3 +0.3**
comp=Z,104nm,0.8s,mb5.5
LPG La Plagne 72.74 313 *e*P **P 03 06 07.3 +0.3**
LPG pmax pmax
comp=Z,52nm,0.8s,mb5.5
LPG La Plagne 72.74 313 *e*P **P 03 06 07.3 +0.3**
comp=Z,52nm,0.8s,mb5.5
LPL La Plagne 72.74 313 *e*P **P 03 06 07.2 +0.2**
comp=Z,96nm,0.7s,mb5.5
LPL La Plagne 72.74 313 *e*P **P 03 06 07.2 +0.2**
LPL pmax pmax
comp=Z,48nm,0.7s,mb5.5
LPL La Plagne 72.74 313 *e*P **P 03 06 07.2 +0.2**
comp=Z,48nm,0.7s,mb5.5
BMRM Bremner River 72.80 28 *e*P **P 03 06 06.9 -0.2**
comp=Z,200nm,1.3s,mb5.9
SAOF Saorge 72.91 311 *e*P **P 03 06 07.5 -0.6**
DAWY Dawson 72.96 24 *e*P **P 03 06 05.9 -2.1**
MDO Dochfour 72.97 327⇑ *e*P **P 03 06 07.5 -0.7**
BNI Bardonecchia 72.99 313 *e*P **P 03 06 07.8 -0.7**
BNI pmax pmax
comp=Z,38nm,0.9s,mb5.3
BNI MLR MLR
comp=Z,5µm,20.0s,MS5.8
BNI Bardonecchia 72.99 313 *e*P **P 03 06 07.8 -0.7**
comp=Z,38nm,0.9s,mb5.3
BNI LR LR
comp=Z,5µm,20.0s,MS5.8
AUTN L'Aution 72.99 311 *e*P **P 03 06 09.5 +0.9**
SBF Sospel 73.05 311 *e*P **P 03 06 08.4 -0.5**
comp=Z,77nm,0.7s,mb5.4
SBF Sospel 73.05 311 *e*P **P 03 06 08.4 -0.5**
SBF pmax pmax
comp=Z,38nm,0.7s,mb5.4
SBF Sospel 73.05 311 *e*P **P 03 06 08.4 -0.5**
comp=Z,38nm,0.7s,mb5.4
MBDF Montbardon 73.08 312 *e*P **P 03 06 09.3 +0.3**
comp=Z,36nm,0.7s,mb5.1
MBDF Montbardon 73.08 312 *e*P **P 03 06 09.3 +0.3**
MBDF pmax pmax
comp=Z,18nm,0.7s,mb5.1
MBDF Montbardon 73.08 312 *e*P **P 03 06 09.3 +0.3**
comp=Z,18nm,0.7s,mb5.1
LUCF Luceram 73.09 311 *e*P **P 03 06 08.9 -0.2**
MENF Mencas 73.09 319 *e*P **P 03 06 11.2 +2.2**
TOUF Mont Tournerai 73.10 311 *e*P **P 03 06 09.6 +0.4**

SUMG Summit 73.14 349 *e*P **P 03 06 08.6 -0.4**
comp=Z,43nm,0.9s,mb5.4
REVF Revere 73.15 311 *e*P **P 03 06 09.1 -0.4**
EDI Edinburgh 73.20 326 *e*P **P 03 06 11.0 +1.5**
EDI AMb AMB 03 06 12.3
comp=Z,26nm,1.0s,mb5.1
EDI AMS AMS 03 40 46.8
comp=Z,2µm,16.8s,MS5.5
MVIF Mont Vial 73.21 311 *e*P **P 03 06 09.8 -0.1**
XAL Allendale 73.27 324 *e*P **P 03 06 10.3 +0.3**
EAU Auchinoon 73.37 326 *e*P **P 03 06 10.0 -0.6**
TFO1 Folkestone 73.39 320 AMS AMS 03 40 48.4
comp=Z,3µm,18.4s,MS5.6
CALN Calern 73.45 311 *e*P **P 03 06 08.9 -2.4**
EKA Eskdalemuir Ar 73.49 325 P **P 03 06 10.8 -0.4**
comp=Z,26nm,0.9s,mb5.1,baz=52,slow=6.7,SNR=34
ESK Eskdalemuir 73.53 325 P **P 03 06 13.6 +2.1**
comp=Z,183nm,1.0s,mb6.0,SNR=5.0
ESK Eskdalemuir 73.53 325⇑ *e*P **P 03 06 12.0 +0.5**
ESK AMb AMB 03 06 14.3
comp=Z,32nm,1.1s,mb5.2
ESK AMS AMS 03 43 04.8
comp=Z,2µm,15.8s,MS5.4
ESK Eskdalemuir 73.53 325 *e*P **P 03 06 11.9 +0.4**
ESK pmax pmax
comp=Z,37nm,1.0s,mb5.3
ESK MLR MLR
comp=Z,2µm,19.0s,MS5.4
ESK Eskdalemuir 73.53 325 *e*P **P 03 06 11.9 +0.4**
comp=Z,37nm,1.0s,mb5.3
ESK LR LR
comp=Z,2µm,19.0s,MS5.4
ORIF Oris-en-Rattie 73.55 313 *e*P **P 03 06 11.5 -0.3**
comp=Z,69nm,1.0s,mb5.2
ORIF *e*MLR MLR
comp=Z,9µm,18.8s,MS5.8
ORIF Oris-en-Rattie 73.55 313 *e*P **P 03 06 11.5 -0.3**
ORIF pmax pmax
comp=Z,34nm,1.0s,mb5.2
ORIF Oris-en-Rattie 73.55 313 *e*P **P 03 06 11.5 -0.3**
comp=Z,34nm,1.0s,mb5.2
ECK Cauldkaine Hil 73.56 325⇑ *e*P **P 03 06 11.2 -0.5**
KPL Plockton 73.61 328 AMS AMS 03 41 20.4
comp=Z,2µm,14.9s,MS5.6
EAB Aberfoyle 73.61 326⇑ *e*P **P 03 06 13.3 +1.3**
ABPO Ambohimpanom 73.62 235 PFAKE 03 06 20.0 +7.5
ABPO LR LR
comp=Z,902nm,20.0s,MS5.0
LOR Lormes 73.68 316 *e*P **P 03 06 11.3 -1.3**
comp=Z,38nm,1.0s,mb5.0
LOR *e*MLR MLR
comp=Z,6µm,19.5s,MS5.6
LOR Lormes 73.68 316 *e*P **P 03 06 11.3 -1.3**
LOR pmax pmax
comp=Z,19nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,6µm,19.5s,MS5.9
LOR Lormes 73.68 316 *e*P **P 03 06 11.3 -1.3**
comp=Z,19nm,1.0s,mb5.0
LOR LR LR
comp=Z,6µm,19.5s,MS5.9
FRF La Foret Royal 73.69 311 *e*P **P 03 06 11.9 -0.8**
comp=Z,58nm,1.2s,mb5.1
FRF La Foret Royal 73.69 311 *e*P **P 03 06 11.9 -0.8**
FRF pmax pmax
comp=Z,29nm,1.2s,mb5.1
FRF La Foret Royal 73.69 311 *e*P **P 03 06 11.9 -0.8**
comp=Z,29nm,1.2s,mb5.1
VSL Villasalto 73.75 306 *e*P **P 03 06 14.3 +1.2**
comp=Z,41nm,1.1s,mb5.3
VSL LR LR
comp=Z,760nm,22.0s,MS4.9
LHO Holmfirth 73.76 323 *e*P **P 03 06 12.5 -0.4**
PGBU Glenifferbraes 73.88 326 *e*P **P 03 06 13.3 -0.3**
PGBU AMb AMB 03 06 16.1
comp=Z,55nm,1.1s,mb5.4
PGBU AMS AMS 03 41 27.6
comp=Z,2µm,16.5s,MS5.4
LMR La Mourre 73.89 311 *e*P **P 03 06 13.3 -0.6**
comp=Z,57nm,1.0s,mb5.2
LMR La Mourre 73.89 311 *e*P **P 03 06 13.3 -0.6**
LMR pmax pmax
comp=Z,29nm,1.0s,mb5.2
LMR La Mourre 73.89 311 *e*P **P 03 06 13.3 -0.6**
comp=Z,29nm,1.0s,mb5.2
CWF Charnwood Fore 73.89 322 AMS AMS 03 40 47.0
comp=Z,3µm,18.7s,MS5.6
KAR1 Arisaig 73.92 327⇑ *e*P **P 03 06 13.6 -0.2**
SMF Signal de Mont 73.99 315 *e*P **P 03 06 13.7 -0.7**
comp=Z,121nm,1.0s,mb5.5
SMF Signal de Mont 73.99 315 *e*P **P 03 06 13.7 -0.7**
SMF pmax pmax
comp=Z,60nm,1.0s,mb5.5
SMF Signal de Mont 73.99 315 *e*P **P 03 06 13.7 -0.7**
comp=Z,60nm,1.0s,mb5.5
SSF Saint Saulge 73.99 316 *e*P **P 03 06 13.5 -0.9**
comp=Z,66nm,1.1s,mb5.2
SSF Saint Saulge 73.99 316 *e*P **P 03 06 13.5 -0.9**
SSF pmax pmax
comp=Z,33nm,1.1s,mb5.2
SSF Saint Saulge 73.99 316 *e*P **P 03 06 13.5 -0.9**
comp=Z,33nm,1.1s,mb5.2
OCF Saint Nazaire 74.07 313 *e*P **P 03 06 15.0 +0.1**
OG26 St.-Nazaire-De 74.07 313 *e*P **P 03 06 15.0 +0.1**
SMRF Simiane la Rot 74.19 312 *e*P **P 03 06 15.3 -0.3**
comp=Z,59nm,1.3s,mb5.1
SMRF Simiane la Rot 74.19 312 *e*P **P 03 06 15.3 -0.3**
comp=Z,59nm,1.3s,mb5.4
SSB Saint Sauveur 74.22 314 *e*P **P 03 06 14.9 -0.8**
SSB Saint Sauveur 74.22 314 *e*P **P 03 06 14.7 -1.0**
SSB pmax pmax
comp=Z,19nm,1.1s,mb4.9
SSB MLR MLR
comp=Z,3µm,19.0s,MS5.6
SSB Saint Sauveur 74.22 314 *e*P **P 03 06 14.7 -1.0**
comp=Z,19nm,1.1s,mb4.9
SSB LR LR
comp=Z,3µm,19.0s,MS5.6
AVF Avril sur Loir 74.22 315 *e*P **P 03 06 15.0 -0.7**
comp=Z,120nm,1.1s,mb5.5
AVF Avril sur Loir 74.22 315 *e*P **P 03 06 15.0 -0.7**
AVF pmax pmax
comp=Z,60nm,1.1s,mb5.4
AVF Avril sur Loir 74.22 315 *e*P **P 03 06 15.0 -0.7**
comp=Z,60nm,1.1s,mb5.4
VIVF Saint-Julien-l 74.34 313 *e*P **P 03 06 15.9 -0.5**
comp=Z,50nm,1.1s,mb5.0
VIVF Saint-Julien-l 74.34 313 *e*P **P 03 06 15.9 -0.5**
VIVF pmax pmax
comp=Z,25nm,1.1s,mb5.1
VIVF Saint-Julien-l 74.34 313 *e*P **P 03 06 15.9 -0.5**
comp=Z,25nm,1.1s,mb5.1
HYF Humbligny 74.41 316 *e*P **P 03 06 16.5 -0.3**
GAL1 Galloway 74.50 325 AMS AMS 03 43 17.4
comp=Z,2µm,15.9s,MS5.5
BGF Bois d'Agland 74.63 315 *e*P **P 03 06 17.3 -0.8**
comp=Z,61nm,1.1s,mb5.1
BGF Bois d'Agland 74.63 315 *e*P **P 03 06 17.3 -0.8**
BGF pmax pmax
comp=Z,30nm,1.1s,mb5.1
BGF Bois d'Agland 74.63 315 *e*P **P 03 06 17.3 -0.8**
comp=Z,30nm,1.1s,mb5.1
GIM North Isle of 74.69 325 *e*P **P 03 06 19.7 +1.4**
SWN1 Swindon 74.78 321 *e*P **P 03 06 20.2 +1.4**
SWN1 AMb AMB 03 06 22.9
comp=Z,107nm,2.4s,mb5.3
SWN1 AMS AMS 03 41 46.2
comp=Z,4µm,17.4s,MS5.7
HLM1 Long Mynd 74.83 323 *e*P **P 03 06 18.7 -0.4**
BORG Borgarnes 75.08 339 P **P 03 06 24.9 +4.5**
comp=Z,239nm,1.0s,mb6.1,SNR=5.6
BORG Borgarnes 75.08 339 *e*P **P 03 06 20.1 -0.3**
BORG pmax pmax
comp=Z,40nm,1.0s
BORG MLR MLR
comp=Z,2µm,20.0s
BORG Borgarnes 75.08 339 *e*P **P 03 06 20.1 -0.3**
comp=Z,40nm,1.0s,mb5.3
BORG LR LR
comp=Z,2µm,20.0s,MS5.4
TCF Toulx Ste Croi 75.15 315 *e*P **P 03 06 20.7 -0.4**
comp=Z,39nm,1.0s,mb5.4
TCF Toulx Ste Croi 75.15 315 *e*P **P 03 06 20.7 -0.4**
TCF pmax pmax
comp=Z,50nm,1.0s,mb5.4
TCF Toulx Ste Croi 75.15 315 *e*P **P 03 06 20.7 -0.4**
comp=Z,50nm,1.0s,mb5.4

WLF1 Llynfaes 75.19 324 *e*P **P 03 06 21.5 +0.2**
WLF1 AMb AMB 03 06 23.6
comp=Z,140nm,1.0s,mb5.9
LASF Ste Croix 75.22 313 *e*P **P 03 06 21.4 -0.2**
comp=Z,64nm,1.0s,mb5.2
HGH Gray Hill 75.25 322⇑ *e*P **P 03 06 22.9 +1.3**
VERF Verneugheol 75.25 315 *e*P **P 03 06 20.5 -1.2**
HTR Trewern Hill 75.26 322 *e*P **P 03 06 21.3 -0.3**
LDF La Druitiere 75.36 318 *e*P **P 03 06 21.5 -0.8**
comp=Z,67nm,1.0s,mb5.2
LDF La Druitiere 75.36 318 *e*P **P 03 06 21.5 -0.8**
LDF pmax pmax
comp=Z,34nm,1.0s,mb5.2
LDF La Druitiere 75.36 318 *e*P **P 03 06 21.5 -0.8**
comp=Z,34nm,1.0s,mb5.2
FRNF Fournols 75.38 314 *e*P **P 03 06 23.0 +0.5**
FLN La Foliniere 75.47 318 *e*P **P 03 06 22.2 -0.7**
comp=Z,68nm,1.0s,mb5.2
FLN *e*MLR MLR
comp=Z,8µm,20.5s,MS5.7
FLN La Foliniere 75.47 318 *e*P **P 03 06 22.2 -0.7**
FLN pmax pmax
comp=Z,34nm,1.0s,mb5.2
FLN MLR MLR
comp=Z,8µm,20.5s,MS6.0
FLN La Foliniere 75.47 318 *e*P **P 03 06 22.2 -0.7**
comp=Z,34nm,1.0s,mb5.2
FLN LR LR
comp=Z,8µm,20.5s,MS6.0
KEST Kesra 75.52 303 P **P 03 06 21.3 -2.2**
comp=Z,6.0nm,0.8s,mb4.5,baz=129,slow=1.5,SNR=13
KEST LR LR 03 44 58.6
comp=Z,245nm,19.7s,MS4.5,baz=188,slow=40
PNL Peninsula 75.66 28 *e*P **P 03 06 24.1 +0.4**
comp=Z,88nm,1.1s,mb5.6
GRR Gorron 75.88 318 *e*P **P 03 06 24.6 -0.7**
comp=Z,100nm,1.0s,mb5.4
GRR Gorron 75.88 318 *e*P **P 03 06 24.6 -0.7**
GRR pmax pmax
comp=Z,50nm,1.0s,mb5.4
GRR Gorron 75.88 318 *e*P **P 03 06 24.6 -0.7**
comp=Z,50nm,1.0s,mb5.4
CAF Calviac 75.92 314 *e*P **P 03 06 25.6 0.0**
comp=Z,76nm,1.1s,mb5.2
CAF Calviac 75.92 314 *e*P **P 03 06 25.6 0.0**
CAF pmax pmax
comp=Z,38nm,1.1s,mb5.2
CAF Calviac 75.92 314 *e*P **P 03 06 25.6 0.0**
comp=Z,38nm,1.1s,mb5.2
RJF Les Rejaudoux 76.06 315 *e*P **P 03 06 26.4 0.0**
comp=Z,103nm,1.1s,mb5.4
RJF *e*MLR MLR
comp=Z,5µm,20.0s,MS5.5
RJF Les Rejaudoux 76.06 315 *e*P **P 03 06 26.4 0.0**
RJF pmax pmax
comp=Z,51nm,1.1s,mb5.4
RJF MLR MLR
comp=Z,5µm,20.0s,MS5.8
RJF Les Rejaudoux 76.06 315 *e*P **P 03 06 26.4 0.0**
comp=Z,51nm,1.1s,mb5.4
RJF LR LR
comp=Z,5µm,20.0s,MS5.8
MFF Saint Martin d 76.39 316 *e*P **P 03 06 27.7 -0.5**
comp=Z,81nm,1.1s,mb5.3
MFF Saint Martin d 76.39 316 *e*P **P 03 06 27.7 -0.5**
MFF pmax pmax
comp=Z,40nm,1.1s,mb5.3
MFF Saint Martin d 76.39 316 *e*P **P 03 06 27.7 -0.5**
comp=Z,40nm,1.1s,mb5.3
HTL Hartland 76.49 322 AMS AMS 03 42 38.9
comp=Z,3µm,15.9s,MS5.7
DYA Yadsworthy 76.50 321 AMS AMS 03 42 57.5
comp=Z,3µm,15.5s,MS5.7
ARMA Armidale 76.52 139 *e*P **P 03 06 30.0 +1.0**
ARMA Armidale 76.52 139 *e*P **P 03 06 30.1 +1.1**
comp=Z,15nm,0.9s,mb4.9
ABSA Djebel Ababsia 76.59 304 P **P 03 06 31.0 +1.5**
MTLF Montolieu 76.62 313 *e*P **P 03 06 29.3 -0.3**
comp=Z,23nm,0.9s,mb4.8
MTLF Montolieu 76.62 313 *e*P **P 03 06 29.3 -0.3**
MTLF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MTLF Montolieu 76.62 313 *e*P **P 03 06 29.3 -0.3**
comp=Z,11nm,0.9s,mb4.8
LRDF Laroque-de-Fa 76.62 312 *e*P **P 03 06 28.8 -0.8**
EJON La Jonquera 76.64 312 P **P 03 06 31.7 +2.0**
comp=Z,6.6nm,0.9s,mb4.6
LFF La Frestale 76.72 315 *e*P **P 03 06 30.1 0.0**
comp=Z,61nm,1.0s,mb5.2
LFF La Frestale 76.72 315 *e*P **P 03 06 30.1 0.0**
LFF pmax pmax
comp=Z,30nm,1.0s,mb5.2
LFF La Frestale 76.72 315 *e*P **P 03 06 30.1 0.0**
comp=Z,30nm,1.0s,mb5.2
FILF Fillols 76.80 312 *e*P **P 03 06 30.5 -0.1**
SGMF Saint Gilles 76.92 319 *e*P **P 03 06 31.0 -0.2**
comp=Z,147nm,1.1s,mb5.5
SGMF Saint Gilles 76.92 319 *e*P **P 03 06 31.0 -0.2**
SGMF pmax pmax
comp=Z,73nm,1.1s,mb5.5
SGMF Saint Gilles 76.92 319 *e*P **P 03 06 31.0 -0.2**
comp=Z,73nm,1.1s,mb5.5
CARF Carcanieres 77.01 312 *e*P **P 03 06 30.4 -1.4**
CKFL Kef-Lekhel 77.06 305 P **P 03 06 34.0 +1.8**
VALF Valcebollere 77.22 312 *e*P **P 03 06 32.9 -0.1**
ROSF Rostrenen 77.28 319 *e*P **P 03 06 32.9 -0.3**
comp=Z,112nm,1.1s,mb5.4
ROSF Rostrenen 77.28 319 *e*P **P 03 06 32.9 -0.3**
ROSF pmax pmax
comp=Z,56nm,1.1s,mb5.4
ROSF Rostrenen 77.28 319 *e*P **P 03 06 32.9 -0.3**
comp=Z,56nm,1.1s,mb5.4
CASM Ain Smara 77.29 305 P **P 03 06 35.0 +1.5**
SKAG Skagway 77.38 27 *e*P **P 03 06 33.6 +0.1**
comp=Z,47nm,0.9s,mb5.4
QUIF Quistinic 77.44 319 *e*P **P 03 06 33.6 -0.5**
comp=Z,117nm,1.2s,mb5.4
QUIF Quistinic 77.44 319 *e*P **P 03 06 33.6 -0.5**
QUIF pmax pmax
comp=Z,58nm,1.2s,mb5.4
QUIF Quistinic 77.44 319 *e*P **P 03 06 33.6 -0.5**
comp=Z,58nm,1.2s,mb5.4
MLS Moulis 77.52 313 *e*P **P 03 06 32.5 -2.2**
DFRA Djebel Bou Aff 77.58 305 P **P 03 06 38.5 +3.4**
BST Brest 77.73 319 *e*P **P 03 06 38.0 +2.3**
EMIR Miracle 77.79 312 P **P 03 06 36.3 +0.1**
comp=Z,32nm,1.3s,mb5.1
EPF Esparros 77.96 313 *e*P **P 03 06 36.1 -1.0**
comp=Z,18nm,0.9s,mb4.7
EPF Esparros 77.96 313 *e*P **P 03 06 36.1 -1.0**
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
EPF Esparros 77.96 313 *e*P **P 03 06 36.1 -1.0**
comp=Z,8.9nm,0.9s,mb4.7
RESF Ens 78.08 313 *e*P **P 03 06 37.5 -0.3**
SET Setif 78.09 305 P **P 03 06 40.0 +2.1**
VIEF Viey 78.23 313 *e*P **P 03 06 38.5 -0.1**
EBIE Bielsa 78.26 313 P **P 03 06 39.4 +0.6**
comp=Z,9.4nm,0.8s,mb4.8
EPOB Poblet 78.37 311 P **P 03 06 40.7 +1.3**
comp=Z,14nm,0.9s,mb4.9
AKF Akfadou 78.45 306 P **P 03 06 41.5 +1.5**
ETSF Etsaut 78.59 313 *e*P **P 03 06 40.7 +0.1**
comp=Z,24nm,0.8s,mb4.9
ETSF Etsaut 78.59 313 *e*P **P 03 06 40.7 +0.1**
ETSF pmax pmax
comp=Z,12nm,0.8s,mb4.9
ETSF Etsaut 78.59 313 *e*P **P 03 06 40.7 +0.1**
comp=Z,12nm,0.8s,mb4.9
CAN Canberra 78.87 144 *e*P **P 03 06 41.7 -0.3**
CAN pmax pmax
comp=Z,13nm,0.9s,mb4.9
CAN MLR MLR
comp=Z,867nm,19.0s,MS5.1
CAN Canberra 78.87 144 *e*P **P 03 06 41.7 -0.4**
comp=Z,13nm,0.9s,mb4.9
CAN LR LR
comp=Z,867nm,19.0s,MS5.1
SJPF Ste Jean 78.89 314 *e*P **P 03 06 42.7 +0.5**
comp=Z,35nm,0.9s,mb5.0
SJPF Ste Jean 78.89 314 *e*P **P 03 06 42.7 +0.5**
SJPF pmax pmax
comp=Z,18nm,0.9s,mb5.0
SJPF Ste Jean 78.89 314 *e*P **P 03 06 42.7 +0.5**
comp=Z,18nm,0.9s,mb5.0
TOO Toolangi 78.96 147 *e*P **P 03 06 43.3 +0.9**

EALK Alkurruntz 79.00 314 P **P** **03 06 44.5 +1.7**
comp=Z,20nm,1.1s,mb5.0
ATAF Djebel Tarf 79.04 305 P **P** **03 06 46.0 +2.8**
CNB Canberra Magne 79.05 143 *e*P **P** **03 06 42.9 -0.1**
ERTA Horta de San J 79.05 311 P **P** **03 06 44.8 +1.7**
comp=Z,16nm,1.0s,mb4.9
ESAC San Caprasio 79.16 312 P **P** **03 06 44.9 +1.1**
comp=Z,20nm,0.8s,mb5.1
AKET Djebel Ketaf 79.22 306 P **P** **03 06 47.2 +3.0**
EIBI Ibiza 79.41 309 P **P** **03 06 45.7 +0.6**
comp=Z,230nm,2.0s,mb5.8
ABA Alger-Bouzarea 79.42 307 P **P** **03 06 48.0 +2.7**
EMHD Djebel Mahouad 79.79 306 P **P** **03 06 49.0 +1.7**
EMOS Mosqueruela 79.89 311 P **P** **03 06 48.3 +0.5**
comp=Z,101nm,1.8s,mb5.5
ECRI Cripan 79.95 314 P **P** **03 06 50.8 +2.7**
comp=Z,1.3nm,0.9s,mb3.9
SFJD Kangerlussuaq 80.05 350 P **P** **03 06 47.3 -0.8**
comp=Z,38nm,0.9s,mb5.3,baz=5.6,slow=5.2,SNR=20
SFJD Kangerlussuaq 80.05 350 *i* P **P** **03 06 47.8 -0.3**
SFJD pmax pmax
comp=Z,35nm,0.9s,mb5.3
SFJD MLR MLR
comp=Z,3μm,22.0s,MS5.5
SFJD Kangerlussuaq 80.05 350 *e*P **P** **03 06 47.0 -1.1**
comp=Z,66nm,1.1s,mb5.5
SFJD LR LR
comp=Z,3μm,20.0s,MS5.7
SFJD Kangerlussuaq 80.05 350 *i* P **P** **03 06 47.8 -0.3**
comp=Z,35nm,0.9s,mb5.3
SFJD
comp=Z,3μm,22.0s
ELAN Lanestosa 80.17 315 P **P** **03 06 52.3 +3.1**
comp=Z,35nm,0.9s,mb5.3
DZM Mont Dzumac 80.33 123 *e*P **P** **03 06 52.1 +1.9**
comp=Z,58nm,1.4s,mb5.3
DZM *e*LR LR 03 31 53.0
comp=Z,668nm,23.8s
ECHE Chera 80.62 311 P **P** **03 06 53.9 +2.2**
ECHE pmax pmax
comp=Z,11nm,1.0s,mb4.7
ECHE Chera 80.62 311 P **P** **03 06 53.9 +2.2**
comp=Z,11nm,1.0s,mb4.7
ETOR Torete 80.65 312 P **P** **03 06 53.7 +1.8**
ETOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ETOR Torete 80.65 312 P **P** **03 06 53.7 +1.9**
comp=Z,8.0nm,0.8s,mb4.7
EBNR Beni Rached 80.72 307 P **P** **03 06 54.0 +1.7**
EANR 'Ain N'Sour 81.20 307 P **P** **03 06 56.0 +1.1**
EARI Arriondas 81.21 316 P **P** **03 06 56.5 +1.7**
comp=Z,17nm,1.0s,mb4.9
ETRT Tiaret 81.36 306 P **P** **03 06 58.0 +2.3**
ETOB Tobarra 81.52 310 P **P** **03 06 58.2 +1.6**
comp=Z,15nm,0.8s,mb5.0
YKA Yellowknife Ar 81.64 17 P **P** **03 06 56.2 -0.5**
comp=Z,13nm,0.8s,mb4.9,baz=326,slow=4.7,SNR=40
YKA PKKPbc PKKPbc 03 25 27.4 -2.2
comp=Z,0.3nm,0.6s,baz=159,slow=1.8,SNR=6.8
YKA LR LR 03 48 52.5
comp=Z,720nm,18.6s,MS5.1,baz=275,slow=40
YKA Yellowknife Ar 81.64 17 P **P** **03 06 56.2 -0.5**
YKA PKKPbc PKKPbc 03 25 27.4 -2.2
YKA LR LR 03 48 52.5
CART Cartagena 81.74 309 *e*P **P** **03 06 56.9 -0.8**
comp=Z,101nm,1.4s,mb5.6
GUD Guadarrama 82.07 313 P **P** **03 06 59.1 -0.3**
GUD pmax pmax
comp=Z,21nm,2.4s,mb4.6
GUD Guadarrama 82.07 313 P **P** **03 06 59.1 -0.3**
comp=Z,21nm,2.4s,mb4.6
EVIA Vianos 82.14 311 P **P** **03 07 01.1 +1.3**
EVIA pmax pmax
comp=Z,12nm,0.8s,mb4.9
EVIA Vianos 82.14 311 P **P** **03 07 01.1 +1.3**
comp=Z,12nm,0.8s,mb4.9
EPON Pontenova 82.34 316 P **P** **03 07 03.6 +2.8**
comp=Z,27nm,1.1s,mb5.1
FUNA Funafuti 82.35 105 PFAKE 03 07 10.0 +8.8
FUNA LR LR
comp=Z,4μm,20.0s,MS5.8
ESDC Sonseca Array 82.50 312 P **P** **03 07 00.9 -0.7**
comp=Z,2.5nm,0.7s,mb4.4,baz=43,slow=5.3,SNR=12
ESDC LR LR 03 46 16.5
comp=Z,1μm,20.5s,MS5.3,baz=45,slow=38
ESDC Sonseca Array 82.50 312 P **P** **03 07 01.8 +0.1**
comp=Z,1.5nm,0.6s,mb4.2
ESLA Sonseca Array 82.50 312 *e*P **P** **03 07 02.0 +0.3**
comp=Z,38nm,2.0s,mb5.1
ESLA LR LR
comp=Z,10μm,20.0s,MS6.2
EHUE Huescar 82.66 310 P **P** **03 07 02.8 +0.3**
EHUE pmax pmax
comp=Z,53nm,2.3s,mb5.2
EHUE Huescar 82.66 310 P **P** **03 07 02.8 +0.2**
comp=Z,53nm,2.3s,mb5.2
PAB San Pablo 82.82 312 PFAKE 03 07 10.0 +6.7
PAB LR LR
comp=Z,2μm,21.0s,MS5.5
ENIJ Nijar 82.88 309 P **P** **03 07 03.8 +0.1**
ENIJ pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ENIJ Nijar 82.88 309 P **P** **03 07 03.8 +0.1**
comp=Z,8.2nm,0.8s,mb4.8
ECAL Calabor 82.91 315 P **P** **03 07 05.6 +1.9**
comp=Z,31nm,2.0s,mb5.0
EQES Quesada 82.98 310 P **P** **03 07 05.1 +0.9**
comp=Z,21nm,0.9s,mb5.2
EBAN Banos Encina 83.24 311 P **P** **03 07 05.4 -0.2**
EBAN pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EBAN Banos Encina 83.24 311 P **P** **03 07 05.4 -0.2**
comp=Z,4.5nm,0.6s,mb4.7
EBER Berja 83.37 309 P **P** **03 07 07.6 +1.4**
comp=Z,17nm,0.9s,mb5.1
MVO Moncorvo 83.55 315 *e*P **P** **03 07 07.3 +0.2**
comp=Z,16nm,1.4s,mb5.0
MVO *e*LQ 03 37 24.6
MVO *e*LR LR 03 39 44.5
comp=Z,2μm,12.8s
ECOG Cogollos-Vega 83.60 310 P **P** **03 07 07.3 -0.1**
comp=Z,4.4nm,0.8s,mb4.6
ELOB Lobios 83.75 316 P **P** **03 07 09.2 +1.1**
comp=Z,20nm,0.9s,mb5.2
EADA Adamuz 83.75 311 P **P** **03 07 09.2 +1.0**
comp=Z,15nm,1.2s,mb5.0
PCAB Cabril 83.83 316 *e*P **P** **03 07 11.8 +3.3**
comp=Z,45nm,1.3s,mb5.4
EGUA Guajares 83.86 310 P **P** **03 07 08.2 -0.5**
EGUA pmax pmax
comp=Z,66nm,1.0s,mb5.7
EGUA Guajares 83.86 310 P **P** **03 07 08.2 -0.5**
comp=Z,66nm,1.0s,mb5.7
ELUQ Luque 83.90 310 P **P** **03 07 08.1 -0.8**
ELUQ pmax pmax
comp=Z,45nm,1.3s,mb5.4
ELUQ Luque 83.90 310 P **P** **03 07 08.1 -0.8**
comp=Z,45nm,1.3s,mb5.4
ERON Agron 83.91 310 P **P** **03 07 08.7 -0.3**
ELOJ Sierra Loja 84.06 310 P **P** **03 07 08.9 -0.9**
comp=Z,1.3nm,0.5s,mb4.3
TAU Tasmania Unive 84.09 149 PFAKE 03 07 20.0 +11
TAU LR LR
comp=Z,668nm,21.0s,MS5.0
MTE Manteigas 84.32 314 *e*P **P** **03 07 14.0 +3.0**
comp=Z,42nm,1.2s,mb5.4
MTE *e*LQ 03 38 54.8
MTE *e*LR LR 03 41 19.5
comp=Z,2μm,23.2s
MTE Manteigas 84.32 314 PFAKE 03 07 20.0 +9.0
MTE LR LR
comp=Z,2μm,19.0s,MS5.5
PCBR Castelo Branco 84.61 314 *e*P **P** **03 07 14.1 +1.6**
comp=Z,27nm,1.6s,mb5.1
PMRV Marv??o 84.80 313 *e*P **P** **03 07 15.4 +1.9**
comp=Z,29nm,1.8s,mb5.1
PMRV *e*LQ 03 39 27.8
PMRV *e*LR LR 03 41 46.9
comp=Z,2μm,13.3s
TAM Tamanrasset 84.87 293 *e*P **P** **03 07 14.0 -0.1**
TAM pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
TAM MLR MLR
comp=Z,535nm,22.0s,MS4.9
TAM Tamanrasset 84.87 293 *e*P **P** **03 07 14.0 -0.1**
comp=Z,6.6nm,0.8s,mb4.8
TAM LR LR
comp=Z,535nm,22.0s,MS4.9
EBAD Badajoz 84.96 313 P **P** **03 07 15.3 +1.0**
comp=Z,15nm,1.2s,mb5.0
PESTR Estremoz 85.26 313 *e*P **P** **03 07 16.1 +0.3**
comp=Z,20nm,1.8s,mb4.9
PESTR *e*LQ 03 35 28.0
PESTR *e*LR LR 03 42 39.3
comp=Z,2μm,13.9s
PTOM Tomar 85.32 314 *e*P **P** **03 07 18.9 +2.8**
comp=Z,47nm,1.3s,mb5.5
PBAR Barrancos 85.32 312 *e*P **P** **03 07 16.0 -0.1**
comp=Z,35nm,1.4s,mb5.3
PBAR *e*LQ 03 36 01.8
PBAR *e*LR LR 03 42 41.3
comp=Z,3μm,17.8s
EJIF Jimena Fronter 85.33 310 P **P** **03 07 16.1 -0.1**
EJIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
EJIF Jimena Fronter 85.33 310 P **P** **03 07 16.1 0.0**
comp=Z,6.0nm,0.8s,mb4.8
EMIN Mina Concepcio 85.33 312 P **P** **03 07 17.7 +1.5**
comp=Z,17nm,1.0s,mb5.1
ESPR Espera 85.33 311 P **P** **03 07 17.8 +1.6**
comp=Z,6.9nm,0.7s,mb4.9
EVO Evora 85.72 313 *e*P **P** **03 07 16.8 -1.3**
comp=Z,51nm,1.3s,mb5.3
EVO *e*MLR MLR
comp=Z,2μm,18.2s,MS5.3
EVO Evora 85.72 313 *e*P **P** **03 07 18.5 +0.4**
comp=Z,32nm,1.6s,mb5.3
LSZ Lusaka 85.76 249 *e*P **P** **03 07 17.5 -1.0**
LSZ pmax pmax
comp=Z,14nm,1.2s,mb5.1
LSZ MLR MLR
comp=Z,1μm,19.0s,MS5.3
LSZ Lusaka 85.76 249 *e*P **P** **03 07 17.5 -1.0**
comp=Z,14nm,1.2s,mb5.1
LSZ LR LR
comp=Z,1μm,19.0s,MS5.3
SFS San Fernando 85.80 310 PFAKE 03 07 30.0 +11
SFS LR LR
comp=Z,2μm,20.0s,MS5.6
PBEJ Beja 85.94 312 *e*P **P** **03 07 18.8 -0.4**
comp=Z,29nm,1.4s,mb5.3
PVAQ Vaqueiros 86.22 312 *e*P **P** **03 07 20.8 +0.2**
comp=Z,45nm,1.8s,mb5.4
PVAQ *e*LQ 03 37 33.5
PVAQ *e*LR LR 03 46 18.3
comp=Z,3μm,13.9s
PMAFR Mafra 86.26 314 *e*P **P** **03 07 22.8 +2.1**
comp=Z,102nm,1.7s,mb5.8
PMAFR *e*LQ 03 36 02.5
PMAFR *e*LR LR 03 40 49.8
comp=Z,1μm,16.0s
PCVE Castro Verde 86.28 312 *e*P **P** **03 07 20.8 -0.1**
comp=Z,34nm,1.5s,mb5.3
PCVE *e*LQ 03 36 03.5
PCVE *e*LR LR 03 43 10.2
comp=Z,2μm,15.2s
LIS Lisbon 86.32 314 *e*P **P** **03 07 20.1 -1.0**
PBDV Barranco-do-Ve 86.45 312 *e*P **P** **03 07 23.8 +2.1**
comp=Z,47nm,1.7s,mb5.4
PBDV *e*LQ 03 37 50.9
PBDV *e*LR LR 03 43 42.8
comp=Z,3μm,17.5s
MDT Midelt 86.86 307 P **P** **03 07 23.9 +0.1**
comp=Z,26nm,1.1s,mb5.4,baz=66,slow=5.1,SNR=22
MORF Marmelete 86.87 312 *e*P **P** **03 07 25.5 +1.7**
comp=Z,60nm,1.3s,mb5.7
MORF *e*LQ 03 41 29.4
MORF *e*LR LR 03 44 10.8
comp=Z,2μm,20.0s
PFVI Vila Bisbo 87.08 312 *e*P **P** **03 07 26.9 +2.1**
RTC Rabat Centre 87.69 309 PFAKE 03 07 40.0 +12
RTC LR LR
comp=Z,460nm,22.0s,MS4.8
FCC Fort Churchill 89.08 9 *e*P **P** **03 07 33.3 -0.6**
comp=Z,0.9nm,1.3s,mb3.9
EDM Edmonton 89.92 21 *e*P **P** **03 07 37.7 -0.2**
NLWA Neilton Lookou 90.83 30 PFAKE 03 07 50.0 +7.7
NLWA LR LR
comp=Z,1μm,22.0s,MS5.4
RPW Rockport 90.97 28 *e*P **P** **03 07 42.3 -0.7**
comp=Z,3.0nm,0.8s,mb4.7
JCW Jim Creek 91.01 28 P **P** **03 07 43.8 +0.7**
FFC Flin Flon 91.55 14 P **P** **03 07 46.8 +1.3**
comp=Z,61nm,1.1s,mb5.8,SNR=5.5
FFC Flin Flon 91.55 14 *e*P **P** **03 07 45.4 -0.1**
FFC Flin Flon 91.55 14 *e*P **P** **03 07 44.6 -0.8**
comp=Z,11nm,1.0s,mb5.2
FFC *e*PP PP 03 11 20.8 -1.6
FFC LR LR
comp=Z,1μm,19.0s,MS5.4
ETW Entiat 92.12 28 *e*P **P** **03 07 48.4 +0.1**
comp=Z,13nm,1.0s,mb5.2
WTV Waterville 92.20 28 P **P** **03 07 49.2 +0.6**
TBM Table Mountain 92.37 28 P **P** **03 07 51.0 +1.6**
EBG Ellensburg 92.59 29 P **P** **03 07 52.2 +1.7**
NEW Newport 92.83 26 *e*P **P** **03 07 52.2 +0.7**
NEW pmax pmax
comp=Z,8.0nm,0.9s
NEW MLR MLR
comp=Z,1μm,21.0s
NEW Newport 92.83 26 *e*P **P** **03 07 52.2 +0.7**
comp=Z,7.6nm,0.9s,mb5.1
NEW LR LR
comp=Z,1μm,21.0s,MS5.4
OD2 Odessa Site #2 92.94 27 *e*P **P** **03 07 52.5 +0.4**
comp=Z,7.2nm,1.0s,mb5.1
TOA0 Torodi Ar. Sit 93.08 287 *e*P **P** **03 07 51.6 -1.7**
TORD Torodi Ar. Bea 93.08 287 P **P** **03 07 52.4 -0.9**
comp=Z,11nm,0.9s,mb5.3,baz=52,slow=3.3,SNR=40
TORD PP PP 03 11 25.0 -11
comp=Z,1.8nm,0.9s,baz=55,slow=5.9,SNR=3.8
TORD LR LR 03 54 58.3
comp=Z,534nm,21.1s,MS5.0,baz=40,slow=39
TORD Torodi Ar. Bea 93.08 287 P **P** **03 07 52.4 -0.9**
TORD PP PP 03 11 25.0 -11
TORD LR LR 03 54 58.3
LBTB Lobatse 93.14 243 *e*P **P** **03 07 52.9 -0.4**
LBTB pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
LBTB MLR MLR
comp=Z,667nm,20.0s,MS5.1
LBTB Lobatse 93.14 243 *e*P **P** **03 07 52.9 -0.4**
comp=Z,5.0nm,0.9s,mb4.9
LBTB LR LR
comp=Z,667nm,20.0s,MS5.1
COR Corvallis 93.26 31 PFAKE 03 08 00.0 +6.4
COR LR LR
comp=Z,1μm,19.0s,MS5.4
HAWA Hanford 93.43 28 PFAKE 03 08 10.0 +16
HAWA LR LR
comp=Z,1μm,21.0s,MS5.4
SCHQ Schefferville 93.81 354 P **P** **03 07 54.7 -1.2**
comp=Z,7.6nm,1.0s,mb5.1,baz=49,slow=11,SNR=7.1
SCHQ LR LR 03 52 43.1
comp=Z,2μm,19.5s,MS5.6,baz=350,slow=37
BSMT Bassoo Peak 94.03 25 *e*P **P** **03 07 57.9 +0.8**
comp=Z,12nm,1.2s,mb5.2
YBMT Yellow Bay 94.29 24 *e*P **P** **03 07 58.9 +0.7**
comp=Z,14nm,1.2s,mb5.3
JTMT Jette 94.30 25 *e*P **P** **03 07 59.2 +0.9**
comp=Z,9.1nm,1.2s,mb5.1
SWMT Swartz Lake 94.60 24 *e*P **P** **03 08 00.0 +0.3**
comp=Z,5.5nm,1.1s,mb4.9
HUMO Hull Mountain 94.96 32 PFAKE 03 08 10.0 +8.5
HUMO LR LR
comp=Z,911nm,19.0s,MS5.3
SLMT Seeley Lake 95.01 24 *e*P **P** **03 08 01.8 +0.2**
comp=Z,10nm,0.8s,mb5.3
MSO Missoula 95.20 25 *e*P **P** **03 08 02.1 -0.3**
comp=Z,8.2nm,1.1s,mb5.1
MSO LR LR
comp=Z,1μm,21.0s,MS5.3
BOSA Boshof 95.34 240 LR LR 03 47 40.3
comp=Z,797nm,21.8s,MS5.2,baz=59,slow=33
BOSA Boshof 95.34 240 PFAKE 03 08 10.0 +6.7
BOSA LR LR
comp=Z,1μm,21.0s,MS5.4
CHMT Chamberlain Mo 95.37 24 *e*P **P** **03 08 03.5 +0.3**
comp=Z,3.0nm,1.0s,mb4.7
EGMT Eagleton 95.58 22 PFAKE 03 08 20.0 +16
EGMT LR LR
comp=Z,1μm,21.0s,MS5.4
YBH Yreka Blue Hor 95.76 33 PFAKE 03 08 20.0 +15
YBH LR LR
comp=Z,904nm,20.0s,MS5.2
HRY Holter Researc 96.04 24 *e*P **P** **03 08 06.5 +0.2**
comp=Z,4.1nm,0.7s,mb5.0
MOD Modoc 96.72 31 PFAKE 03 08 20.0 +11
MOD LR LR
comp=Z,1μm,20.0s,MS5.3
WDC Whiskeytown Da 96.74 34 PFAKE 03 08 20.0 +10
WDC LR LR
comp=Z,870nm,20.0s,MS5.2
DGMT Dagmar 96.80 18 PFAKE 03 08 20.0 +10
DGMT LR LR
comp=Z,2μm,20.0s,MS5.5
DLMT Dillon 96.94 25 *e*P **P** **03 08 09.9 -0.5**
comp=Z,7.3nm,1.1s,mb5.0
ULM Lac du Bonnet 97.00 12 P **P** **03 08 13.6 +3.1**
comp=Z,2.1nm,0.9s,mb4.6,baz=359,slow=4.5,SNR=3.9
ULM PKPPKP 03 33 01.3
comp=Z,1.6nm,0.8s,baz=179,slow=6.7,SNR=3.2
ULM LR LR 03 53 52.1
comp=Z,1μm,21.7s,MS5.4,baz=345,slow=37
BOZ Bozeman (W) 97.03 24 *e*P **P** **03 08 10.1 -0.7**
BOZ pmax pmax
comp=Z,2.0nm,1.0s,mb4.5
BOZ MLR MLR
comp=Z,1μm,22.0s,MS5.4
BOZ Bozeman (W) 97.03 24 *e*P **P** **03 08 10.1 -0.7**
comp=Z,2.4nm,1.0s,mb4.6
BOZ LR LR
comp=Z,1μm,22.0s,MS5.4
MCMT McKenzie Canyo 97.31 25 *e*P **P** **03 08 12.5 +0.4**
comp=Z,2.1nm,0.9s,mb4.6
CASY Casey 97.43 177 PFAKE 03 08 20.0 +8.2
CASY LR LR
comp=Z,1μm,20.0s,MS5.5
SNZO South Karori 97.60 134 PFAKE 03 08 20.0 +6.8
SNZO LR LR
comp=Z,667nm,19.0s,MS5.2
HOPS Hopland 97.72 35 PFAKE 03 08 30.0 +16
HOPS LR LR
comp=Z,922nm,20.0s,MS5.3
HLID Hailey 97.80 27 *e*P **P** **03 08 14.2 -0.1**
comp=Z,6.7nm,1.5s,mb5.0
HLID LR LR
comp=Z,1μm,19.0s,MS5.5
LAO LASA Array 97.85 20 PFAKE 03 08 30.0 +16
LAO LR LR
comp=Z,1μm,19.0s,MS5.4
RLMT Red Lodge 98.30 23 PFAKE 03 08 30.0 +13
RLMT LR LR
comp=Z,1μm,19.0s,MS5.5
LKWY Lake 98.40 24 PFAKE 03 08 30.0 +13
LKWY LR LR
comp=Z,2μm,19.0s,MS5.6
MCCM Marconi Confer 98.48 35 PFAKE 03 08 30.0 +13
MCCM LR LR
comp=Z,842nm,20.0s,MS5.2
AGMN Agassiz Refuge 98.87 13 PFAKE 03 08 30.0 +11
AGMN LR LR
comp=Z,1μm,20.0s,MS5.5
BMN Battle Mountai 99.27 30 PFAKE 03 08 30.0 +9.0
BMN LR LR
comp=Z,940nm,19.0s,MS5.3
AHID Auburn Hatcher 99.73 25 PFAKE 03 08 30.0 +7.1
AHID LR LR
comp=Z,888nm,20.0s,MS5.3
CMB Columbia Colle 99.77 34 PFAKE 03 08 30.0 +6.9
CMB LR LR
comp=Z,756nm,22.0s,MS5.2
ELK Elko 99.84 29 PFAKE 03 08 30.0 +6.6
ELK LR LR
comp=Z,1μm,20.0s,MS5.4
EYMN Ely 99.96 10 PFAKE 03 08 40.0 +16
EYMN LR LR
comp=Z,2μm,19.0s,MS5.7
SAO San Andreas Ge 100.27 35 PFAKE 03 08 40.0 +15
SAO LR LR
comp=Z,866nm,21.0s,MS5.2
BW06 Boulder Array 100.28 24 PFAKE 03 08 40.0 +15
BW06 LR LR
comp=Z,2μm,20.0s,MS5.5
PDAR Pinedale Array 100.28 24 P Pdif 03 08 26.7 +1.4
comp=Z,0.3nm,0.4s,baz=352,slow=5.0,SNR=3.7
PDAR PP PP 03 12 22.3 -8.0
comp=Z,0.9nm,1.1s,baz=320,slow=3.9,SNR=3.9
NVAR Mina Array Bea 100.43 32 PP PP 03 12 24.9 -6.8
comp=Z,0.2nm,0.3s,baz=313,slow=11,SNR=2.2
HWUT Hardware Ranch 100.56 26 *e*Pdif Pdif 03 08 27.0 +0.4
HWUT LR LR
comp=Z,2μm,20.0s,MS5.5
SUR Sutherland 100.58 239 PFAKE 03 08 40.0 +13
SUR LR LR
comp=Z,2μm,22.0s,MS5.5
RSSD Black Hills 100.83 20 *e*P Pdif 03 08 28.8 +1.0
RSSD pmax pmax
comp=Z,5.0nm,1.1s
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.4
RSSD Black Hills 100.83 20 *e*Pdif Pdif 03 08 28.8 +1.0
comp=Z,5.4nm,1.1s
RSSD LR LR
comp=Z,1μm,21.0s,MS5.4
TPH Tonopah 101.20 32 PFAKE 03 08 40.0 +11
TPH LR LR
comp=Z,645nm,19.0s,MS5.2
DUG Dugway 101.29 28 PFAKE 03 08 40.0 +10
DUG LR LR
comp=Z,2μm,21.0s,MS5.5
DRV Dumont d'Urvil 101.55 166 SP SP 03 21 43.0 0.0
DRV SS SS 03 27 17.0 +3.4
DRV R 03 44 00.0
DBIC Dimbokro 102.02 285 PP PP 03 12 42.5 -2.5
comp=Z,14nm,1.0s,baz=43,slow=11,SNR=5.8
KIC Kosan Boka 102.09 285 *e*P PP 03 12 41.8 -3.7
comp=Z,70nm,1.3s
COWI Conover 102.11 9 PFAKE 03 08 40.0 +6.5
COWI LR LR
comp=Z,2μm,20.0s,MS5.5
TIC Toumodi 102.17 286 *e*P PP 03 12 42.6 -3.4
comp=Z,70nm,1.4s
LIC Lamto 102.41 285 *e*P PP 03 12 44.8 -3.0
comp=Z,82nm,1.3s
DAC Darwin (Calif) 102.51 33 PFAKE 03 08 50.0 +15
DAC LR LR
comp=Z,630nm,19.0s,MS5.2
MVU Marysvale 102.98 28 PFAKE 03 08 50.0 +13
MVU LR LR
comp=Z,1μm,20.0s,MS5.3
ECSD EROS Data Cent 103.08 15 PFAKE 03 08 50.0 +12
ECSD LR LR
comp=Z,1μm,20.0s,MS5.5
MAW Mawson 103.22 195 PKKPbc PKKPbc 03 24 32.4 -2.6
comp=Z,2.2nm,1.0s,baz=312,slow=1.9,SNR=3.7
PKME Peaks-Kenny Pk 103.51 355 PFAKE 03 08 50.0 +10
PKME LR LR
comp=Z,3μm,19.0s,MS5.8
GLMI Grayling 103.87 6 PFAKE 03 08 50.0 +8.7
GLMI LR LR
comp=Z,2μm,19.0s,MS5.6
ISCO Idaho Springs 104.26 23 PFAKE 03 08 50.0 +6.9
ISCO LR LR
comp=Z,2μm,22.0s,MS5.5
OGNE Ogallala 104.33 20 PFAKE 03 08 50.0 +6.7
OGNE LR LR
comp=Z,1μm,19.0s,MS5.5
LONY Lake Ozonia 104.42 359 PFAKE 03 08 50.0 +6.3
LONY LR LR
comp=Z,2μm,22.0s,MS5.6
LBNH Lisbon 104.70 357 PFAKE 03 09 00.0 +15
LBNH LR LR
comp=Z,2μm,22.0s,MS5.7
NCB Newcomb 105.06 358 PFAKE 03 13 10.0 +8.8
NCB LR LR
comp=Z,2μm,20.0s,MS5.6
JFWS Jewell Farm 105.07 10 PFAKE 03 13 10.0 +8.7
JFWS LR LR
comp=Z,1μm,20.0s,MS5.4
PFO Pinyon Flat Ob 105.22 34 PFAKE 03 13 10.0 +8.2
PFO LR LR
comp=Z,251nm,20.0s,MS4.8
SCIA State Center 105.53 13 PFAKE 03 13 10.0 +7.8
SCIA LR LR
comp=Z,1μm,21.0s,MS5.5
MVCO Mesa Verde 105.55 26 PFAKE 03 13 10.0 +7.7
MVCO LR LR
comp=Z,951nm,20.0s,MS5.3
SDCO Great Sand Dun 106.15 24 PFAKE 03 13 10.0 +6.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SDCO				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
AAM	Ann Arbor	106.46	6	PFAKE		03 13 10.0	+6.1
AAM				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
BINY	Binghamton	106.85	360	PFAKE		03 13 20.0	+15
BINY				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
ERPA	Erie	106.86	3	PFAKE		03 13 20.0	+15
ERPA				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
CBKS	Cedar Bluff	106.95	19	PFAKE		03 13 20.0	+15
CBKS				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
KSU1	Kansas State U	107.49	16	PFAKE		03 13 20.0	+14
KSU1				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
HDIL	Hopedale	107.52	10	PFAKE		03 13 20.0	+14
HDIL				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
ANMO	Albuquerque	108.31	26	PFAKE		03 13 20.0	+12
ANMO				LR	LR		
	comp=Z,835nm,20.0s,MS5.3						
ACSO	Alum Creek Sta	108.57	5	PFAKE		03 13 20.0	+12
ACSO				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
MCWV	Mont Chateau	109.32	3	PFAKE		03 13 20.0	+11
MCWV				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
CCM	Cathedral Cave	109.63	12	PFAKE		03 13 20.0	+10
CCM				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
AMTX	Amarillo	110.02	22	PFAKE		03 13 20.0	+9.2
AMTX				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
CBN	Corbin	110.84	1	PFAKE		03 13 20.0	+7.8
CBN				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
WMOK	Wichita Mounta	111.03	20	*e*PKIKP	PKiKP	03 13 13.4	+0.7
MNTX	Cornudas Mount	111.62	26	PFAKE		03 13 30.0	+16
MNTX				LR	LR		
	comp=Z,940nm,19.0s,MS5.4						
BLA	Blacksburg	111.74	3	PFAKE		03 13 30.0	+16
BLA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
WVT	Waverly	112.08	10	*e*PKIKP	PKiKP	03 13 13.9	-0.7
MIAR	Mount Ida	112.55	15	PFAKE		03 13 30.0	+14
MIAR				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
PPT	Papeete	113.12	97	*e*SP	SP	03 23 39.2	-2.5
	comp=Z,189nm,28.2s						
PPT				*e*SS	SS	03 29 52.1	-0.3
	comp=Z,269nm,28.2s						
PPT				*e*LQ		03 42 20.6	
	comp=Z,1µm,36.0s						
PPT				*e*LR	LR	03 47 06.3	
	comp=Z,734nm,26.0s						
PLAL	Pickwick Lake	113.17	10	PFAKE		03 13 30.0	+13
PLAL				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
OXF	Oxford	113.41	12	PFAKE		03 13 30.0	+13
OXF				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
CNNC	Cliffs of the	113.79	1	PFAKE		03 13 30.0	+12
CNNC				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
TXAR	Lajitas Array	114.38	26	PKP	PKiKP	03 13 19.9	+0.7
	comp=Z,0.3nm,0.5s,baz=270,slow=4.5,SNR=2.5						
TXAR				PP	PP	03 14 09.9	-3.9
	comp=Z,1.0nm,0.9s,baz=342,slow=4.7,SNR=2.7						
TXAR				PKKPab	PKKPab	03 24 07.5	0.0
	comp=Z,0.9nm,0.9s,baz=142,slow=4.6,SNR=3.6						
JCT	Junction City	114.68	22	PFAKE		03 13 30.0	+10
JCT				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
NATX	Nacogdoches	114.95	17	PFAKE		03 13 30.0	+10
NATX				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
SBA	Scott Base	115.07	168	PFAKE		03 13 30.0	+11
SBA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
LRAL	Lakeview Retre	115.24	10	PFAKE		03 13 30.0	+9.3
LRAL				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
GOGA	Godfrey	115.29	6	PFAKE		03 13 30.0	+9.2
GOGA				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
VBMS	Vicksburg	115.44	13	PFAKE		03 13 30.0	+8.8
VBMS				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
NHSC	New Hope	115.84	3	PFAKE		03 13 30.0	+8.1
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
HKT	Hockley	116.36	19	PFAKE		03 13 30.0	+7.0
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
TAOE	Nuku Hiva Isla	117.03	84	*e*SKSac	SKSac	03 20 16.0	-1.6
	comp=Z,186nm,34.4s						
TAOE	Nuku Hiva Isla	117.03	84	*e*PS	PS	03 24 11.3	-6.3
	comp=Z,171nm,29.4s						
TAOE				*e*SS	SS	03 30 52.6	+9.0
	comp=Z,148nm,25.3s						
TAOE				*e*LR	LR	03 48 56.9	
	comp=Z,393nm,24.0s						
TAOE	Nuku Hiva Isla	117.03	84	*e*SKSac	SKSac	03 20 16.0	-1.6
TAOE				*e*PS	PS	03 24 11.3	-6.3
TAOE				*e*SS	SS	03 30 52.6	+9.0
BRAL	Brewton	117.22	10	PFAKE		03 13 40.0	+15
BRAL				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
ASCN	Ascension	117.85	278	PFAKE		03 13 40.0	+14
ASCN				LR	LR		
	comp=Z,987nm,20.0s,MS5.4						
KVTX	Kingsville	118.02	22	PFAKE		03 13 40.0	+14
KVTX				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
DWPF	Disney	120.72	5	PFAKE		03 13 40.0	+8.6
DWPF				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
QSPA	South Pole Qui	121.08	180	*e*PKPdf	PKPdf	03 13 29.2	-1.3
QSPA				LR	LR		
	comp=Z,999nm,20.0s,MS5.5						
GRTK	Grand Turk	127.23	354	PFAKE		03 14 00.0	+16
GRTK				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
GTBY	Guantanamo Bay	129.04	358	PFAKE		03 14 00.0	+12
GTBY				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
ANWB	Willy Bob	129.29	342	PFAKE		03 14 00.0	+12
ANWB				LR	LR		
	comp=Z,854nm,21.0s,MS5.4						
SDDR	Presa de Saban	129.75	354	PFAKE		03 14 00.0	+11
SDDR				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SJG	San Juan	129.87	347	PFAKE		03 14 00.0	+11
SJG				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
MTDJ	Mount Denham	130.74	1	PFAKE		03 14 00.0	+9.2
MTDJ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
FDF	Fort de France	131.91	340	PFAKE		03 14 00.0	+6.9
FDF				LR	LR		
	comp=Z,830nm,22.0s,MS5.4						
BBGH	Gun Hill	132.91	337	PFAKE		03 14 10.0	+15
BBGH				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
RCBR	Riachuelo	134.33	295	PFAKE		03 14 10.0	+12
RCBR				LR	LR		
	comp=Z,814nm,22.0s,MS5.4						
GRGR	Grenville	134.52	339	PFAKE		03 14 10.0	+12
GRGR				LR	LR		
	comp=Z,877nm,22.0s,MS5.4						
JTS	JuntasAbangare	137.85	12	PFAKE		03 14 20.0	+16
JTS				LR	LR		
	comp=Z,940nm,20.0s,MS5.5						
BCIP	Isla Barro Col	139.63	5	PFAKE		03 14 20.0	+13
BCIP				LR	LR		
	comp=Z,792nm,19.0s,MS5.5						
SDV	Santo Domingo	139.64	351	*e*PKPpre		03 13 59.5	
SDV				*e*PKPdf	PKPdf	03 14 07.1	-0.4
SDV				LR	LR		
	comp=Z,225nm,19.0s,MS4.9						
ROSC	El Rosal	143.98	356	PKP	PKPdf	03 14 14.5	-0.8
	comp=Z,21nm,0.8s,baz=99,slow=5.8,SNR=20						
ROSC	El Rosal	143.98	356	*e*PKPdf	PKPdf	03 14 14.1	-1.2
PMSA	Palmer Station	145.63	189	*e*PKPbc	PKPbc	03 14 16.4	-0.3
PAYG	Puerto Ayora	146.85	26	PFAKE		03 14 30.0	+10
PAYG				LR	LR		
	comp=Z,887nm,21.0s,MS5.5						
CAM4	Nova Friburgo	148.54	278⇓	*i*P	PKPdf	03 14 25.8	+3.1
CAM4				*i*		03 14 28.6	
CAM4				*i*		03 14 32.9	
CAM4				*i*		03 14 39.7	
CAM4				*i*		03 14 42.9	
CAM4				*i*		03 14 51.3	
CAM4				*i*		03 14 55.1	
CAM4				*i*		03 15 06.5	
CAM4				*i*		03 15 11.8	
CAM4				*i*		03 15 15.6	
CAM4				*i*		03 15 25.5	
CAM4				*i*		03 15 41.2	
CAM4				*i*		03 15 50.2	
CAM4				*i*		03 16 05.7	
CAM4				*i*		03 16 35.4	
OTAV	Otavalo	148.57	4	*e*PKPdf	PKPdf	03 14 23.3	+0.3
OTAV				*e*PKPab	PKPab	03 14 29.5	-0.4
OTAV				LR	LR		
	comp=Z,451nm,19.0s,MS5.3						
SPB	Sao Paulo	153.15	279	PFAKE		03 14 40.0	+10
SPB				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
EFI	East Falkland	155.54	208	PFAKE		03 14 40.0	+7.8
EFI				LR	LR		
	comp=Z,355nm,19.0s,MS5.2						
NNA	Nana	160.77	1	PFAKE		03 14 50.0	+10
NNA				LR	LR		
	comp=Z,571nm,19.0s						
CPUP	Villa Florida	162.50	282	PKP	PKPdf	03 14 40.0	-1.2
	comp=Z,3.8nm,1.0s,baz=150,slow=1.7,SNR=5.5						
CPUP				PKPab	PKPab	03 15 27.0	-2.1
	comp=Z,1.9nm,0.7s,baz=78,slow=5.6,SNR=4.4						
LPAZ	La Paz	163.21	331	PKP	PKPdf	03 14 42.8	+0.6
	comp=Z,8.7nm,1.2s,baz=15,slow=5.5,SNR=12						
LPAZ				PKPab	PKPab	03 15 31.7	-0.5
	comp=Z,4.3nm,1.1s,baz=54,slow=5.3,SNR=3.5						
LPAZ	La Paz	163.21	331	*e*PKPdf	PKPdf	03 14 42.6	+0.4
LPAZ				*e*PKPab	PKPab	03 15 31.6	-0.6
LPAZ				LR	LR		
	comp=Z,693nm,21.0s						
LVC	Limon Verde	169.01	320	PFAKE		03 15 00.0	+13
LVC				LR	LR		
	comp=Z,1µm,22.0s						
PLCA	Paso Flores	169.44	205	PKP	PKPdf	03 14 47.1	+0.8
	comp=Z,6.2nm,1.1s,baz=101,slow=1.7,SNR=4.0						
PLCA				PKPab	PKPab	03 15 57.6	-1.5
	comp=Z,3.6nm,0.8s,baz=181,slow=4.6,SNR=8.3						
LCO	Las Campanas	174.49	293	*e*PKPdf	PKPdf	03 14 49.2	+0.2
LCO				LR	LR		
	comp=Z,1µm,19.0s						

ISCJB ***14*** *03:01:56.2±0.8, 11.°08N±0.°05×61.°92W±0.°03, h27km±8km, Error ellipse: s-maj=9.0km s-min=4.8km az=167.9*
NEIC ***14*** *03:01:56.2, 11.°04N×61.°92W, h56km, MD2.9(TRN), After TRN.*
TRN ***14*** *03:01:56.1, 11.°04N×61.°93W, h56km, MD2.9*
FUNV ***14*** *03:01:58.2, 11.°05N×62.°05W, h11km, MW2.3*
ISC 14 03:01:56.8±0.8**, 11.°06N**±0.°04×**61.°91W**±0.°03**, h31**km±6km**,**
n21, σ0.s89/35**, 1C, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	Chacachacare	0.39	157	*e*P	Pb	03 02 06.8	+1.2
TCE	Chacachacare	0.39	157	*e*P	Pb	03 02 06.8	+1.2
TCE	Chacachacare	0.39	157	*e*	Pb	03 02 12.2	+6.6
GUIV	Guiria	0.51	217⇑	*e*P	Pb	03 02 06.9	-0.6
GUIV				*e*S	Sb	03 02 12.8	-2.0
TRN	Trinidad (W)	0.64	129	*e*P	Pb	03 02 11.1	+1.5
TRN				*e*S	Sb	03 02 19.3	+1.0
TRN	Trinidad (W)	0.64	129	*e*P	Pb	03 02 10.1	+0.5
TRN	Trinidad (W)	0.64	129	*e*	Pb	03 02 13.0	+3.4
TRN				*e*S	Sb	03 02 19.3	+1.0
TPP	Pointe-a-Pierr	0.86	149	*e*P	Pn	03 02 12.7	-0.1
TPP				*e*S	Sn	03 02 23.6	-0.8
TPP	Pointe-a-Pierr	0.86	149	*e*P	Pn	03 02 12.7	-0.1
TPP				*e*S	Sn	03 02 23.6	-0.8
TBH	Brigand Hill	1.01	125	*e*P	Pn	03 02 14.3	-0.4
TBH				*e*S	Sn	03 02 27.1	-0.8
TBH	Brigand Hill	1.01	125	*e*P	Pn	03 02 14.3	-0.4
TBH				*e*S	Sn	03 02 27.1	-0.8
TPR	Prospect	1.12	83	*e*P	Pn	03 02 15.9	-0.4
TPR				*e*S	Sn	03 02 31.7	+1.0
TPR	Prospect	1.12	83	*e*P	Pn	03 02 15.9	-0.4
TPR				*e*S	Sn	03 02 31.6	+0.9
GRW	Mount Saint Ca	1.12	13	*e*P	Pn	03 02 16.7	+0.3
GRW				*e*S	Sn	03 02 30.2	-0.5
GRW	Mount Saint Ca	1.12	13	*e*P	Pn	03 02 16.7	+0.3
GRW				*e*S	Sn	03 02 30.2	-0.5
BOT	Bacolet	1.18	85	*e*P	Pn	03 02 15.8	-1.3
BOT	Bacolet	1.18	85	*e*P	Pn	03 02 15.8	-1.3
ITEV	Isla Los Testi	1.23	284	*e*P	Pn	03 02 18.4	+0.5
ITEV				*e*S	Sn	03 02 33.3	-0.2
GUNV	Guanoco	1.35	229	*e*P	Pn	03 02 20.6	+1.1
GUNV				*e*S	Sn	03 02 38.0	+1.6
CRUV	Carupano	1.36	254	*e*P	Pn	03 02 19.9	+0.2
CRUV				*e*S	Sn	03 02 36.1	-0.5
PCRV	Puerto La Cruz	2.82	252	*e*P	Pn	03 02 40.0	+0.3

ISCJB ***14*** *03:07:45.2±0.3, 31.°02N±0.°03×103.°38E±0.°05, h10km, mb4.2/41, Error ellipse: s-maj=6.6km s-min=4.4km az=166.5*
IDC ***14*** *03:07:45.1±0.6, 30.°93N×103.°31E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.1/30, mbtmp4.1/21, ML3.4/1, Error ellipse: s-maj=24.1km s-min=13.0km az=46.0*
NEIC ***14*** *03:07:46.6±0.3, 30.°96N×103.°42E, h10km, mb4.4/19, Error ellipse: s-maj=8.3km s-min=5.4km az=50.0*
BJI ***14*** *03:07:47.7, 31.°01N×103.°36E, h16km, mb4.4/3, ML4.3/17, Ms4.3/3, Ms7 4.3/2*
MOS ***14*** *03:07:48.1±0.9, 30.°91N×103.°33E, h33km, mb4.5/19, Error ellipse: s-maj=13.9km s-min=7.1km az=112.3*
ISC 14 03:07:47.3±0.2**, 30.°98N**±0.°03×**103.°31E**±0.°05**, h10**km**, n88,**
σ0.s90/97**, mb4.2**/41**, 7C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.39	101	Pg	Pg	03 07 57.0	+2.0
CD2				Sg	Sg	03 08 04.3	+4.1
CD2				smax			
	comp=N,41µm,0.6s						
LZH	Lanzhou	5.11	5	*e*Pn	Pb	03 09 12.8	-3.9
LZH				Pg	Pg	03 09 25.3	+0.2
LZH				Sn	Sb	03 10 12.6	-5.6
LZH				Sg	Sg	03 10 30.9	-0.4
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,140nm,1.1s						
LZH				LR	LR		
	comp=N,3µm,5.4s						
LZH				LR	LR		
	comp=Z,4µm,7.3s						
GYA	Guiyang	5.38	146	Pn	Pn	03 09 08.3	+0.6
GYA				Sn	Sn	03 10 03.1	-6.6
GYA				Sg	Sb	03 10 27.5	+1.4
GYA				smax			
	comp=N,620nm,0.8s						
GYA				smax			
	comp=E,390nm,0.9s						
XAN	Xi'an	5.64	56	Pn	Pn	03 09 11.8	+0.7
XAN				Sn	Sn	03 10 11.3	-4.6
XAN				Sg	Sg	03 10 40.3	-7.9
XAN				smax			
	comp=N,460nm,0.7s						
XAN				smax			
	comp=E,220nm,0.8s						
KMI	Kunming	5.86	185	Pn	Pn	03 09 15.8	+1.6
KMI				Sn	Sn	03 10 22.0	+0.6
KMI				Sg	Sg	03 10 53.3	-2.1
KMI				smax			
	comp=N,73nm,1.8s						
KMI				smax			
	comp=E,100nm,1.4s						
KMI				LR	LR		
	comp=N,3µm,8.1s						
KMI				LR	LR		
	comp=E,2µm,12.7s						
WHN	Wuhan	9.51	90	P	Pn	03 10 04.8	+0.5
CHTO	Chiang Mai	12.74	199	*e*P	Pn	03 10 47.6	-1.0
SONM	Songino Array	17.00	7	Pn	Pn	03 11 44.9	-0.1
	comp=E,0.1nm,0.3s,baz=196,slow=14,SNR=2.7						
TPUB	Ta-pu	17.20	112	*e*P	Pn	03 11 46.7	-1.0
	comp=E,109nm,1.5s						
ZAK	Zakamensk	19.38	360	*e*P	Pn	03 12 13.7	-0.5
ZAK				pmax	pmax		
	comp=Z,9.0nm,2.3s						
KSRS	Korea Array	21.32	66	P	P	03 12 35.0	+0.8
	comp=Z,5.4nm,0.7s,mb4.0,baz=248,slow=9.5,SNR=14						
KSRS	Korea Array	21.32	66	P	P	03 12 35.1	+0.8
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
CN2	Changchun	21.67	48	*e*P	P	03 12 43.3	+5.3
CN2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
MK31	Makanchi Array	22.63	320	*e*P	P	03 12 49.2	+1.0
MKAR	Makanchi Array	22.63	320	P	P	03 12 49.5	+1.3
	comp=Z,3.1nm,0.9s,mb3.8,baz=132,slow=11,SNR=15						
MKAR	Makanchi Array	22.63	320*c*	*e*P	P	03 12 49.5	+1.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	22.63	320	P	P	03 12 49.5	+1.3
TKM2	Tokmak 2	25.03	306	*e*P	P	03 13 13.2	+1.8
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
TKM2	Tokmak 2	25.03	306	*e*P	P	03 13 13.2	+1.7
	comp=Z,5.6nm,0.9s,mb4.1						
UCH	Uchtor	25.58	304	*e*P	P	03 13 17.1	+0.7
	comp=Z,5.8nm,1.0s,mb4.1						
AAK	Ala-Archa	25.71	305	P	P	03 13 19.4	+1.7
	comp=Z,5.7nm,0.8s,mb4.2,baz=128,slow=1.8,SNR=12						
AAK	Ala-Archa	25.71	305	*e*P	P	03 13 20.4	+2.8
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
AAK	Ala-Archa	25.71	305	*e*P	P	03 13 20.4	+2.8
	comp=Z,7.4nm,0.8s,mb4.3						
AML	Almayashu	26.14	303	*e*P	P	03 13 23.2	+1.8
	comp=Z,3.5nm,0.7s,mb4.0						
EKS2	Erkin-Say	26.22	305	*e*P	P	03 13 23.3	+1.0
	comp=Z,3.7nm,0.8s,mb4.0						
ZAA0	Zalesovo Array	26.54	335	*e*P	P	03 13 25.2	+0.3
ZALV	Zalesovo Beam	26.54	335	P	P	03 13 25.6	+0.6
	comp=Z,2.9nm,0.7s,mb3.9,baz=136,slow=9.8,SNR=9.0						
KURK	Kurchatov	26.94	324	P	P	03 13 28.9	+0.3
	comp=Z,3.4nm,0.8s,mb3.9,baz=130,slow=9.5,SNR=18						
KURK	Kurchatov	26.94	324*c*	*e*P	P	03 13 29.4	+0.8
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
KURK	Kurchatov	26.94	324	*e*P	P	03 13 28.7	+0.1
	comp=Z,3.4nm,0.7s,mb4.0						
BVAR	Borovoye Array	32.47	322	P	P	03 14 17.7	+0.1
	comp=Z,1.1nm,0.5s,mb3.9,baz=120,slow=8.5,SNR=6.8						
BVAR				PcP	PcP	03 17 03.2	-1.2
	comp=Z,1.1nm,0.7s,baz=114,slow=3.7,SNR=5.9						
ABKAR	Akbulak array	37.24	312	*e*P	P	03 14 59.3	+0.4
	comp=Z,1.5nm,0.6s,mb4.0						
ARU	Arti	40.11	323*c*	*i*P	P	03 15 24.0	+1.1
ARU						03 16 57.6	
ARU				S	S	03 21 31.4	+2.5
ARU				SS	SS	03 24 24.7	-1.5
ARU				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.2						
ARU	Arti	40.11	323	*e*P	P	03 15 23.1	+0.2
	comp=Z,4.7nm,0.6s,mb4.4						
TIXI	Tiksi	43.01	12	*e*P	P	03 15 44.9	-1.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.1s,mb5.3						
TIXI	Tiksi	43.01	12	*e*P	P	03 15 44.9	-1.5
	comp=Z,6.8nm,0.1s,mb5.3						
PETK	Petropavlovsk-	44.75	44	P	P	03 16 00.3	-0.4
	comp=Z,0.8nm,0.4s,mb4.0,baz=317,slow=7.6,SNR=8.8						
ZEI	Tsey	48.06	302	*e*P	P	03 16 26.1	-0.7
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KIV	Kislovodsk	48.81	303	*e*P	P	03 16 33.1	+0.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BILL	Bilibino	51.58	25⇑	*e*P	P	03 16 53.2	0.0
BILL				*e*S	S	03 24 07.4	-6.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
ASF	Jabal al Asfar	55.74	290	P	P	03 17 24.9	+0.6
	comp=Z,0.7nm,0.5s,mb4.0,baz=344,slow=4.0,SNR=3.9						
BRTR	Keskin Array B	56.21	300	P	P	03 17 26.9	-0.7
	comp=Z,1.4nm,1.0s,mb4.0,baz=94,slow=6.4,SNR=5.3						
BRTR	Keskin Array B	56.21	300*c*	*e*P	P	03 17 26.8	-0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	Malin Array Be	56.97	313	P	P	03 17 31.9	-0.8
	comp=Z,0.5nm,0.4s,mb3.9,baz=78,slow=4.9,SNR=4.4						
AKASG	Malin Array Be	56.97	313*c*	*e*P	P	03 17 32.7	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	57.09	336	P	P	03 17 32.7	-0.6
	comp=Z,2.7nm,0.9s,mb4.3,baz=76,slow=6.4,SNR=5.4						
ARCES	ARCESS Array B	57.09	336	P	P	03 17 32.7	-0.6
FINES	FINESS Array B	57.29	326	P	P	03 17 34.4	-0.4
	comp=Z,4.3nm,0.9s,mb4.5,baz=104,slow=6.1,SNR=7.8						
WRAB	Tennant Creek	58.75	145	*e*P	P	03 17 44.8	-0.8
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WRAB	Tennant Creek	58.75	145	*e*P	P	03 17 44.8	-0.8
	comp=Z,6.5nm,0.8s,mb4.7						
WRA	Warramunga Arr	58.76	145	P	P	03 17 45.1	-0.4
	comp=Z,4.8nm,0.8s,mb4.6,baz=338,slow=7.4						
BUR08	Bucovina Ar. S	60.20	310	*e*P	P	03 17 55.5	+0.3
KWP	Kalwaria Pacla	61.29	313	*e*P	P	03 18 02.5	-0.2
KWP				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
KWP	Kalwaria Pacla	61.29	313	*e*P	P	03 18 02.5	-0.2
	comp=Z,11nm,1.0s,mb4.9						
ASAR	Alice Springs	61.75	148	P	P	03 18 05.7	-0.3
	comp=Z,1.2nm,0.6s,mb4.2,baz=338,slow=6.7,SNR=18						
HFS	Hagfors	63.49	326	P	P	03 18 16.5	-0.8
	comp=Z,1.1nm,0.6s,mb4.2,baz=76,slow=6.3,SNR=6.1						
NB2	NORSAR Subarra	64.39	327	P	P	03 18 22.0	-1.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=73,slow=6.9						
NOA	NORSAR Array B	64.39	327	P	P	03 18 22.4	-0.8
	comp=Z,0.5nm,0.5s,mb3.8,baz=75,slow=6.9,SNR=4.0						
MORC	Moravsky Berou	64.46	314	*e*P	P	03 18 22.9	-0.9
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
MORC	Moravsky Berou	64.46	314	*e*P	P	03 18 22.9	-0.9
	comp=Z,2.2nm,0.7s,mb4.3						
BRG	Berggiesshubel	66.28	316	*e*P	P	03 18 35.2	-0.3
	comp=Z,3.2nm,0.7s,mb4.5						
BRG	Berggiesshubel	66.28	316	*e*P	P	03 18 35.2	-0.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
GERES	GERESS Array B	67.14	314	P	P	03 18 40.9	-0.2
	comp=Z,0.8nm,0.7s,mb3.9,baz=69,slow=7.6,SNR=8.0						
BPAW	Bear Paw Mtn.	69.02	27	*e*P	P	03 18 51.8	-0.8
	comp=Z,4.8nm,1.1s,mb4.3						
COLA	College	69.83	25	*e*P	P	03 18 56.9	-0.7
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
COLA	College	69.83	25	*e*P	P	03 18 56.9	-0.7
	comp=Z,6.0nm,0.9s,mb4.5						
CDF	Champ du Feu	71.23	316	*e*P	P	03 19 05.7	-0.7
	comp=Z,5.1nm,0.7s,mb4.2						
CDF	Champ du Feu	71.23	316	*e*P	P	03 19 05.7	-0.7
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CDF	Champ du Feu	71.23	316	*e*P	P	03 19 05.7	-0.7
	comp=Z,2.5nm,0.7s,mb4.2						
STKA	Stephens Creek	72.28	146	P	P	03 19 11.9	-1.0
	comp=Z,1.5nm,0.6s,mb4.1,baz=327,slow=5.3,SNR=6.5						
INK	Inuvik	72.49	19	*e*P	P	03 19 12.7	-1.0
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	72.49	19	*e*P	P	03 19 12.7	-1.0
	comp=Z,2.0nm,0.7s,mb4.2						
LPG	La Plagne	72.83	313	*e*P	P	03 19 16.2	+0.1
	comp=Z,10nm,0.9s,mb4.5						
LPG	La Plagne	72.83	313	*e*P	P	03 19 16.2	+0.1
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
LPG	La Plagne	72.83	313	*e*P	P	03 19 16.2	+0.1
	comp=Z,5.2nm,0.9s,mb4.5						
LPL	La Plagne	72.84	313	*e*P	P	03 19 16.2	0.0
EKA	Eskdalemuir Ar	73.66	325	P	P	03 19 19.8	-1.0
	comp=Z,1.3nm,0.9s,mb3.9,baz=76,slow=6.6,SNR=3.1						
SMF	Signal de Mont	74.10	315	*e*P	P	03 19 22.7	-0.9
	comp=Z,11nm,1.0s,mb4.4						

SMF	**Signal de Mont**	**74.10**	**315**	*e*P	**P**	**03 19 22.7**	**-0.9**
SMF				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.5							
SMF	**Signal de Mont**	**74.10**	**315**	*e*P	**P**	**03 19 22.7**	**-0.9**
comp=Z,5.6nm,1.0s,mb4.5							
TCF	**Toulx Ste Croi**	**75.26**	**315**	*e*P	**P**	**03 19 29.8**	**-0.5**
CAF	**Calviac**	**76.02**	**314**	*e*P	**P**	**03 19 34.5**	**-0.2**
YKA	**Yellowknife Ar**	**82.01**	**17**	P	**P**	**03 20 06.6**	**-0.5**
comp=Z,1.5nm,0.7s,mb4.0,baz=328,slow=5.1,SNR=18							
YKA	**Yellowknife Ar**	**82.01**	**17**	P	**P**	**03 20 06.6**	**-0.5**
FFC	**Flin Flon**	**91.91**	**14**	*ce*P	**P**	**03 20 55.9**	**+0.2**
ROSC	**El Rosal**	**144.29**	**356**	PKP	PKPdf	03 27 22.9	-1.5
comp=Z,2.4nm,0.4s,baz=112,slow=19,SNR=4.8							
OTAV	**Otavalo**	**148.91**	**3**	*e*PKPdf	PKPdf	03 27 31.4	-0.7
OTAV				*e*PKPbc	PKPbc	03 27 35.7	-0.3
CPUP	**Villa Florida**	**162.39**	**280**	PKP	PKPdf	03 27 47.8	-1.8
comp=Z,0.4nm,0.5s,baz=90,slow=20,SNR=3.0							

IDC 14 04:06:06.1±0.8, 21°.29S×68°.30W, h115km±12km, mb3.3/2, mb1 3.5/4, mb1mx3.3/16, mbtmp3.3/4, Error ellipse: s-maj=35.3km s-min=11.1km az=102.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.43**	**203**	P	Pn	04 06 32.8	+0.4
21nm,0.3s,baz=17,slow=9.8,SNR=277							
LVC				S	Sn	04 06 52.8	+0.4
35nm,0.3s,baz=87,slow=24,SNR=8.6							
LPAZ	**La Paz**	**4.98**	**2**	P	Pn	04 07 19.6	+0.9
1.2nm,0.3s,baz=219,slow=6.0,SNR=30							
LPAZ				S	Sn	04 08 17.0	+1.7
0.2nm,0.3s,baz=246,slow=18,SNR=2.9							
SIV	**San Ignacio**	**8.64**	**54**	P	Pn	04 08 07.1	-1.2
3.1nm,0.3s,baz=259,slow=12,SNR=49							
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	P	04 17 45.3	0.0
0.4nm,0.6s,baz=251,slow=5.7,SNR=12							
YKA	**Yellowknife Ar**	**91.18**	**340**	P	P	04 18 56.4	-1.1
0.2nm,0.6s,baz=133,slow=4.7,SNR=4.8							
MKAR	**Makanchi Array**	**145.13**	**36**	PKPbc	PKPbc	04 25 30.2	+0.5
0.4nm,0.4s,baz=324,slow=3.0,SNR=6.2							

*ISCJB **14** 04:22:27.3±0.9, 31°.59N±0°.04×104°.0E±0°.2, h10km, mb3.6/4, Error ellipse: s-maj=24.2km s-min=5.5km az=5.6*
*IDC **14** 04:22:29.1±1.6, 31°.34N×103°.75E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/24, mbtmp3.7/4, Error ellipse: s-maj=366.7km s-min=21.5km az=54.0*
*BJI **14** 04:22:32.2, 31°.34N×103°.43E, h15km, ML3.5/10, Ms7 3.1/1*

ISC 14 04:22:29.9±0.8, 31°.52N±0°.04×103°.9E±0°.2, h10km, n6, σ0.94/8, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.63**	**194**	Pg	**Pg**	**04 22 41.3**	**-0.7**
CD2				Sg	**Sg**	**04 22 50.0**	**-0.2**
CD2				smax			
comp=N,3μm,0.8s							
LZH	**Lanzhou**	**4.55**	**359**	*e*Pg	**Pg**	**04 23 55.6**	**-1.5**
LZH				Sg	**Sg**	**04 24 56.1**	**0.0**
LZH				smax			
comp=N,20nm,0.6s							
LZH				smax			
comp=E,55nm,0.8s							
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**04 27 30.1**	**-0.1**
comp=E,0.8nm,0.9s,mb3.1,baz=127,slow=9.6,SNR=3.6							
KURK	**Kurchatov**	**26.83**	**323**	P	**P**	**04 28 12.4**	**+2.2**
comp=E,1.1nm,0.7s,mb3.5,baz=130,slow=9.6,SNR=6.3							
WRA	**Warramunga Arr**	**58.90**	**146**	P	**P**	**04 32 29.6**	**+0.4**
comp=E,1.7nm,0.6s,mb4.3,baz=338,slow=7.6,SNR=41							
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**04 32 50.1**	**+0.3**
comp=E,0.2nm,0.5s,mb3.5,baz=340,slow=6.9,SNR=6.1							

*ISCJB **14** 04:24:01.3±0.3, 32°.61N±0°.03×105°.63E±0°.03, h10km, mb4.3/42, MS3.9/2, Error ellipse: s-maj=5.1km s-min=4.0km az=20.6*
*IDC **14** 04:24:02.2±0.7, 32°.72N×105°.50E, h0km, mb4.1/17, mb1 4.2/19, mb1mx4.1/31, mbtmp4.1/19, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/37, Error ellipse: s-maj=31.2km s-min=14.9km az=48.0*
*BJI **14** 04:24:02.7, 32°.67N×105°.58E, h13km, mB4.5/6, mb4.3/8, ML4.2/10, Ms4.0/8, Ms7 3.7/8*
*NEIC **14** 04:24:03.9±0.3, 32°.75N×105°.58E, h10km, mb4.4/20, Error ellipse: s-maj=8.3km s-min=5.3km az=219.0*
*MOS **14** 04:24:05.5±0.8, 32°.75N×105°.58E, h33km, mb4.4/20, Error ellipse: s-maj=13.9km s-min=6.6km az=115.4*

ISC 14 04:24:03.7±0.3, 32°.69N±0°.04×105°.59E±0°.03, h10km, n97, σ0.95/110, mb4.3/42, MS3.9/2, 12C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.36**	**222**	Pg	**Pg**	**04 24 46.3**	**-2.8**
CD2				Sg	**Sg**	**04 25 19.0**	**-0.7**
CD2				smax			
comp=N,7μm,0.8s							
XAN	**Xi'an**	**3.09**	**63**	Pn	**Pn**	**04 24 54.4**	**+1.8**
XAN				Pg	**Pg**	**04 24 59.1**	**-3.9**
XAN				Sn	**Sn**	**04 25 29.9**	**+0.2**
XAN				Sg	**Sg**	**04 25 39.0**	**-4.1**
XAN				smax			
comp=N,550nm,0.9s							
XAN				smax			
comp=E,250nm,1.0s							
XAN				LR	LR		
comp=N,280nm,4.3s							
XAN				LR	LR		
comp=E,260nm,7.4s							
XAN				LR	LR		
comp=Z,290nm,9.9s							
LZH	**Lanzhou**	**3.68**	**337**	*e*Pn	**Pn**	**04 25 01.8**	**+1.1**
LZH				Pg	**Pg**	**04 25 11.3**	**-3.0**
LZH				Sn	**Sn**	**04 25 40.1**	**-4.1**
LZH				Sg	**Sg**	**04 25 55.1**	**-6.9**
LZH				smax			
comp=N,830nm,0.8s							
LZH				smax			
comp=E,1μm,0.9s							
LZH				LR	LR		
comp=E,1μm,4.2s							
LZH				LR	LR		
comp=Z,2μm,5.1s							
ENH	**Enshi**	**4.11**	**125**	*e*Pn	**Pn**	**04 25 08.0**	**+1.4**
ENH				*e*Pg	**Pg**	**04 25 20.2**	**-2.3**
ENH				*e*Sg	**Sg**	**04 26 15.1**	**-0.6**
WHN	**Wuhan**	**7.77**	**104**	Pn	**Pn**	**04 25 51.3**	**-5.6**
WHN				Sn	**Sn**	**04 27 25.5**	**+0.6**
WHN				LR	LR		
comp=N,930nm,5.2s							
WHN				LR	LR		
comp=E,1μm,6.4s							
WHN				LR	LR		
comp=Z,750nm,9.3s							
GTA	**Gaotai**	**8.17**	**327**	*e*P	**Pn**	**04 26 01.5**	**-0.9**
GTA				pP		04 26 10.6	
GTA				sP		04 26 15.1	
GTA				S	**Sn**	**04 27 39.5**	**+4.7**
GTA				sS		04 27 44.3	
GTA				pmax	pmax		
comp=Z,13nm,0.8s							
GTA				pmax	pmax		
comp=Z,130nm,6.0s							
GTA				LR	LR		
comp=N,160nm,7.5s							
GTA				LR	LR		
comp=E,190nm,9.6s							
GTA				LR	LR		
comp=Z,170nm,7.2s							
BTO	**Baotou**	**8.66**	**23**	*e*P	Px	04 26 44.6	
SONM	**Songino Array**	**15.14**	**2**	Pn	**Pn**	**04 27 37.7**	**+0.2**
baz=186,slow=13,SNR=3.7							
SONM				LR	LR	04 33 52.5	
comp=Z,110nm,18.1s,baz=90,slow=39							
ULN	**Ulaanbaatar**	**15.20**	**4**	*e*P	**Pn**	**04 27 38.3**	**0.0**
ULN				pmax	pmax		
comp=Z,9.0nm,1.1s							
ULN	**Ulaanbaatar**	**15.20**	**4**	*e*Pn	**Pn**	**04 27 38.3**	**0.0**
comp=Z,8.6nm,1.1s							
ZAK	**Zakamensk**	**17.76**	**355**	*e*P	**Pn**	**04 28 10.5**	**-0.4**
ZAK				pmax	pmax		
comp=Z,3.0nm,1.2s							
KSRS	**Korea Array**	**18.87**	**69**	P	**Pn**	**04 28 25.7**	**+1.0**
comp=Z,0.2nm,0.3s,baz=256,slow=10,SNR=6.9							
MK31	**Makanchi Array**	**22.68**	**315**	*e*P	**P**	**04 29 04.7**	**-0.5**
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**04 29 04.8**	**-0.3**
comp=Z,4.8nm,0.9s,mb3.9,baz=116,slow=11,SNR=20							
MKAR	**Makanchi Array**	**22.68**	**315**	*ce*P	**P**	**04 29 05.3**	**+0.1**
MKAR				pmax	pmax		
comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**04 29 04.8**	**-0.3**
KLR	**Kular**	**25.57**	**42**	*e*P	**P**	**04 29 29.6**	**-3.1**
TKM2	**Tokmak 2**	**25.68**	**302**	P	**P**	**04 29 35.0**	**+1.2**
SNR=6.7							
TKM2	**Tokmak 2**	**25.68**	**302**	*e*P	**P**	**04 29 34.8**	**+1.0**
TKM2				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.1							
TKM2	**Tokmak 2**	**25.68**	**302**	*e*P	**P**	**04 29 34.8**	**+0.9**
comp=Z,4.5nm,0.8s,mb4.0							
KZA	**Kyzart**	**25.75**	**300**	P	**P**	**04 29 36.3**	**+1.9**
SNR=8.0							
BOD	**Bodaibo**	**25.78**	**10**	*e*P	**P**	**04 29 34.0**	**-0.5**
BOD				pmax	pmax		
comp=Z,2.0nm,0.9s,mb3.6							
ZALV	**Zalesovo Beam**	**25.89**	**331**	P	**P**	**04 29 34.7**	**-0.9**
comp=Z,1.4nm,0.3s,mb4.0,baz=127,slow=9.5,SNR=6.2							
ZALV	**Zalesovo Beam**	**25.89**	**331**	P	**P**	**04 29 34.7**	**-0.9**
KBK	**Karagaybulak**	**26.09**	**301**	P	**P**	**04 29 39.4**	**+1.9**
SNR=7.2							
UCH	**Uchtor**	**26.32**	**300**	P	**P**	**04 29 41.6**	**+2.0**
SNR=11							
UCH	**Uchtor**	**26.32**	**300**	*e*P	**P**	**04 29 41.2**	**+1.6**
comp=Z,13nm,1.3s,mb4.3							
AAK	**Ala-Archa**	**26.41**	**301**	P	**P**	**04 29 40.9**	**+0.5**
comp=Z,0.8nm,0.3s,mb3.7,baz=150,slow=11,SNR=5.0							
AAK	**Ala-Archa**	**26.41**	**301**	*e*P	**P**	**04 29 40.9**	**+0.5**
AAK				pmax	pmax		
comp=Z,4.0nm,1.0s,mb3.9							
AAK	**Ala-Archa**	**26.41**	**301**	*e*P	**P**	**04 29 40.9**	**+0.4**
comp=Z,4.4nm,1.0s,mb3.9							
USP	**Ospenovka**	**26.55**	**302**	P	**P**	**04 29 43.0**	**+1.4**
SNR=5.3							
KURK	**Kurchatov**	**26.79**	**320**	P	**P**	**04 29 43.5**	**-0.2**
comp=Z,6.2nm,1.1s,mb4.1,baz=127,slow=9.6,SNR=20							
KURK	**Kurchatov**	**26.79**	**320**	*ce*P	**P**	**04 29 44.7**	**+1.0**
KURK				pmax	pmax		
comp=Z,8.0nm,1.2s,mb4.1							
AML	**Almayashu**	**26.90**	**300**	*e*P	**P**	**04 29 45.9**	**+1.0**
comp=Z,7.7nm,1.2s,mb4.1							
BRVK	**Borovoye**	**32.44**	**319**	*ce*P	**P**	**04 30 33.6**	**-0.3**
BRVK				pmax	pmax		
comp=Z,2.0nm,1.1s,mb3.9							
ABKAR	**Akbulak array**	**37.60**	**310**	*e*P	**P**	**04 31 18.5**	**+0.2**
comp=Z,2.8nm,0.9s,mb4.0							
AKTK	**Aktyubinsk**	**39.01**	**311**	P	**P**	**04 31 30.2**	**0.0**
AKTO	**Aktyubinsk**	**39.01**	**311**	P	**P**	**04 31 30.2**	**0.0**
comp=Z,1.2nm,0.8s,mb3.6,baz=90,slow=13,SNR=3.6							
ARU	**Arti**	**39.98**	**321**	*d iP*	**P**	**04 31 38.3**	**+0.1**
ARU				S	**S**	**04 37 40.9**	**-2.5**
ARU				SS	SS	04 40 35.5	-4.5
ARU				pmax	pmax		
comp=Z,12nm,1.2s,mb4.5							
ARU	**Arti**	**39.98**	**321**	*e*P	**P**	**04 31 38.2**	**0.0**
comp=Z,3.0nm,0.6s,mb4.2							
TIXI	**Tiksi**	**40.96**	**11**	*e*P	**P**	**04 31 44.8**	**-1.3**
TIXI				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.1							
BILL	**Bilibino**	**49.20**	**26**↑	*e*P	**P**	**04 32 51.3**	**-0.4**
BILL				*e*S	**S**	**04 40 00.9**	**+3.9**
BILL				pmax	pmax		
comp=Z,2.0nm,1.2s,mb4.0							
BILL				MLR	MLR		
comp=Z,100nm,18.0s,MS3.9							
KIV	**Kislovodsk**	**49.52**	**302**	*e*P	**P**	**04 32 54.8**	**+0.3**
KIV				pmax	pmax		
comp=Z,8.0nm,1.0s,mb4.7							
OBN	**Obninsk**	**52.16**	**317**↓	*e*P	**P**	**04 33 15.0**	**+0.8**
OBN				*e*		04 35 10.9	
OBN				*e*S	**S**	**04 40 33.7**	**-4.7**
OBN				pmax	pmax		
comp=Z,9.0nm,0.5s,mb5.0							
OBN				MLR	MLR		
comp=Z,100nm,18.0s,MS3.9							
JOF	**Joensuu**	**54.37**	**327**	*e*P	**P**	**04 33 29.1**	**-1.2**
JOF				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.7							
JOF	**Joensuu**	**54.37**	**327**	*e*p	**P**	**04 33 29.1**	**-1.2**
comp=Z,8.3nm,0.9s,mb4.7							
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**04 33 44.5**	**0.0**
comp=Z,5.8nm,1.1s,mb4.5,baz=96,slow=8.2,SNR=3.9							
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**04 33 44.5**	**0.0**
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**04 33 48.6**	**-0.3**
comp=Z,2.5nm,0.4s,mb4.6,baz=94,slow=7.8,SNR=18							
BRTR	**Keskin Array B**	**57.07**	**299**	P	**P**	**04 33 50.0**	**-0.1**
comp=Z,0.8nm,0.6s,mb3.9,baz=100,slow=6.9,SNR=5.2							
BRTR	**Keskin Array B**	**57.07**	**299**	*ce*P	**P**	**04 33 50.0**	**-0.1**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**04 33 50.4**	**-0.6**
comp=Z,2.8nm,0.7s,mb4.4,baz=69,slow=6.0,SNR=10							
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**04 33 50.4**	**-0.6**
WRA	**Warramunga Arr**	**59.12**	**148**	P	**P**	**04 34 04.8**	**+0.3**
comp=Z,3.1nm,0.7s,mb4.5,baz=342,slow=7.3,SNR=20							
BUR08	**Bucovina Ar. S**	**60.58**	**310**	*e*P	**P**	**04 34 14.3**	**0.0**
MLR	**Muntele Rosu**	**60.75**	**308**	P	**P**	**04 34 14.5**	**-1.0**
comp=Z,1.4nm,0.5s,mb4.3,baz=283,slow=14,SNR=3.5							
KWP	**Kalwaria Pacla**	**61.56**	**313**	*e*P	**P**	**04 34 21.2**	**+0.3**
KWP				pmax	pmax		
comp=Z,18nm,1.0s,mb5.2							
KWP	**Kalwaria Pacla**	**61.56**	**313**	*e*P	**P**	**04 34 21.2**	**+0.2**
comp=Z,18nm,1.0s,mb5.2							
KOLS	**Kolonicke sedl**	**62.04**	**312**	*e*P	**P**	**04 34 24.6**	**+0.3**
KOLS				pmax	pmax		
comp=Z,4.0nm,1.4s,mb4.4							
KOLS	**Kolonicke sedl**	**62.04**	**312**	*e*P	**P**	**04 34 24.6**	**+0.3**
comp=Z,4.0nm,1.4s,mb4.4							
KOLS	**Kolonicke sedl**	**62.04**	**312**	*e*P	**P**	**04 34 24.6**	**+0.3**
ASAR	**Alice Springs**	**62.22**	**151**	P	**P**	**04 34 26.4**	**+0.8**
comp=Z,1.9nm,0.6s,mb4.4,baz=334,slow=6.8,SNR=16							
STHS	**Stebnicka Huta**	**62.53**	**313**	*e*P	**P**	**04 34 28.1**	**+0.6**
STHS				pmax	pmax		
comp=Z,2.0nm,0.9s,mb4.2							
STHS	**Stebnicka Huta**	**62.53**	**313**	*e*P	**P**	**04 34 28.1**	**+0.6**
comp=Z,1.7nm,0.9s,mb4.2							
STHS	**Stebnicka Huta**	**62.53**	**313**	*e*P	**P**	**04 34 28.1**	**+0.6**
HFS	**Hagfors**	**63.17**	**326**	P	**P**	**04 34 30.7**	**-0.8**
comp=Z,1.9nm,0.4s,mb4.5,baz=92,slow=7.2,SNR=8.5							
KECS	**Kecovo**	**63.31**	**312**	*e*P	**P**	**04 34 33.2**	**+0.5**
KECS				pmax	pmax		
comp=Z,2.0nm,1.4s,mb4.0							
KECS	**Kecovo**	**63.31**	**312**	*e*P	**P**	**04 34 33.2**	**+0.5**
comp=Z,1.8nm,1.4s,mb4.0							
KECS	**Kecovo**	**63.31**	**312**	*e*P	**P**	**04 34 33.2**	**+0.5**
comp=Z,3.6nm,1.0s,mb4.4							
NB2	**NORSAR Subarra**	**64.01**	**327**	P	**P**	**04 34 35.8**	**-1.3**
comp=Z,8.7nm,1.1s,mb4.7,baz=70,slow=6.5							
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**04 34 36.0**	**-1.0**
comp=Z,3.5nm,0.9s,mb4.4,baz=69,slow=6.5,SNR=6.2							
VYHS	**Vyhne**	**64.33**	**313**	*e*P	**P**	**04 34 40.5**	**+1.0**
VYHS				pmax	pmax		
comp=Z,3.0nm,1.2s,mb4.2							
VYHS	**Vyhne**	**64.33**	**313**	*e*P	**P**	**04 34 40.5**	**+1.0**
comp=Z,2.6nm,1.2s,mb4.1							
VYHS	**Vyhne**	**64.33**	**313**	*e*P	**P**	**04 34 40.5**	**+1.0**
MORC	**Moravsky Berou**	**64.67**	**314**	*e*P	**P**	**04 34 40.6**	**-1.0**
MORC				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.4							
MORC	**Moravsky Berou**	**64.67**	**314**	*e*P	**P**	**04 34 40.6**	**-1.0**
comp=Z,3.6nm,1.0s,mb4.4							
COLD	**Coldfoot**	**65.51**	**25**	*e*P	**P**	**04 34 46.1**	**-0.7**
comp=Z,5.1nm,1.0s,mb4.5							
BPAW	**Bear Paw Mtn.**	**66.61**	**28**	*e*P	**P**	**04 34 54.3**	**+0.3**
comp=Z,8.5nm,1.2s,mb4.7							
GERES	**GERESS Array B**	**67.35**	**314**	P	**P**	**04 34 59.1**	**+0.2**
comp=Z,1.2nm,0.9s,mb3.9,baz=77,slow=6.0,SNR=8.2							
COLA	**College**	**67.45**	**26**	*e*P	**P**	**04 34 59.3**	**+0.1**
COLA				pmax	pmax		
comp=Z,3.0nm,0.9s,mb4.3							
COLA	**College**	**67.45**	**26**	*e*P	**P**	**04 34 59.3**	**+0.1**
comp=Z,2.9nm,0.9s,mb4.3							
INK	**Inuvik**	**70.24**	**20**	*e*P	**P**	**04 35 16.4**	**-0.2**
INK				pmax	pmax		
comp=Z,5.0nm,1.1s							
INK	**Inuvik**	**70.24**	**20**	*e*P	**P**	**04 35 16.4**	**-0.2**
comp=Z,4.6nm,1.1s,mb4.3							
LPG	**La Plagne**	**73.08**	**313**↑	*iP*	**P**	**04 35 34.6**	**+0.5**
comp=Z,11nm,0.9s,mb4.5							
LPG	**La Plagne**	**73.08**	**313**↑	*iP*	**P**	**04 35 34.6**	**+0.5**
LPG				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.4							
LPG	**La Plagne**	**73.08**	**313**↑	*iP*	**P**	**04 35 34.6**	**+0.5**
comp=Z,5.3nm,0.9s,mb4.5							
LPL	**La Plagne**	**73.09**	**313**↑	*iP*	**P**	**04 35 34.5**	**+0.4**
comp=Z,7.2nm,0.7s,mb4.4							
LPL	**La Plagne**	**73.09**	**313**↑	*iP*	**P**	**04 35 34.5**	**+0.4**
LPL				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.5							
LPL	**La Plagne**	**73.09**	**313**↑	*iP*	**P**	**04 35 34.5**	**+0.4**
comp=Z,3.6nm,0.7s,mb4.4							
BNI	**Bardonecchia**	**73.35**	**313**	*e*P	**P**	**04 35 35.5**	**-0.2**
BNI				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.4							
BNI	**Bardonecchia**	**73.35**	**313**	*e*P	**P**	**04 35 35.5**	**-0.1**
comp=Z,5.0nm,1.1s,mb4.4							
AVF	**Avril sur Loir**	**74.47**	**316**	*e*P	**P**	**04 35 41.7**	**-0.5**
TCF	**Toulx Ste Croi**	**75.41**	**316**	*e*P	**P**	**04 35 47.4**	**-0.2**
YKA	**Yellowknife Ar**	**79.80**	**18**	P	**P**	**04 36 11.4**	**-0.4**
comp=Z,0.8nm,0.9s,mb3.7,baz=321,slow=5.0,SNR=7.1							
YKA	**Yellowknife Ar**	**79.80**	**18**	P	**P**	**04 36 11.4**	**-0.4**
FFC	**Flin Flon**	**89.76**	**16**	*ce*P	**P**	**04 37 03.2**	**+1.1**
TORD	**Torodi Ar. Bea**	**94.35**	**288**	P	**P**	**04 37 23.5**	**-0.6**
comp=Z,0.3nm,0.8s,mb3.8,baz=51,slow=4.9,SNR=3.3							

*IDC **14** 04:26:18.7±0.6, 31°.58N×104°.20E, h0km, mb4.0/18, mb1 4.1/19, mb1mx4.0/29, mbtmp4.0/19, ML3.5/1, Error ellipse: s-maj=27.9km s-min=13.2km az=50.0*
*NEIC **14** 04:26:20.4±0.3, 31°.56N×104°.16E, h10km, mb4.2/12, Error ellipse: s-maj=10.0km s-min=5.5km az=219.0*
*BJI **14** 04:26:22.5, 31°.73N×104°.15E, h12km, mB4.4/2, mb4.2/2, ML3.9/10, Ms3.9/2*

ISC 14 04:26:19.6±0.8, 31°.77N±0°.03×104°.32E±0°.04, h0km±5km, n46, σ0.99/49, mb4.1/27, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.98**	**210**	Pg	**Pg**	**04 26 38.8**	**+0.4**
CD2				Sg	**Sg**	**04 26 51.9**	**+0.8**
CD2				smax			
comp=N,6μm,0.7s							
LZH	**Lanzhou**	**4.33**	**355**	*e*Pg	**Pg**	**04 27 41.9**	**-0.7**
LZH				Sg	**Sg**	**04 28 38.3**	**-0.4**
LZH				smax			
comp=N,410nm,1.1s							
LZH				smax			
comp=E,300nm,0.8s							
LZH				LR	LR		
comp=N,1μm,6.2s							
XAN	**Xi'an**	**4.48**	**58**	Pg	**Pg**	**04 27 44.3**	**-1.3**
XAN				smax			
comp=N,140nm,0.8s							
XAN				smax			
comp=E,53nm,0.7s							
ENH	**Enshi**	**4.68**	**107**	*e*Pn	**Pn**	**04 27 33.8**	**+2.4**
ENH				*e*Pg	**Pg**	**04 27 48.3**	**-1.0**
ENH	**Enshi**	**4.68**	**107**	*e*Sg	**Sg**	**04 28 51.0**	**+1.1**
SONM	**Songino Array**	**16.13**	**5**	Pn	**Pn**	**04 30 10.2**	**+2.7**
comp=E,0.2nm,0.3s,baz=178,slow=12,SNR=4.5							
ULN	**Ulaanbaatar**	**16.21**	**7**	*e*Pn	**Pn**	**04 30 11.3**	**+2.7**
NACB	**Ninganchiao**	**17.02**	**112**	*e*Pn	**Pn**	**04 30 17.5**	**-1.5**
TLY	**Talaya**	**19.91**	**359**	*e*P	**Pn**	**04 30 53.6**	**-0.4**
comp=E,1.0nm,0.4s							
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**04 30 56.0**	**-0.1**
comp=E,2.6nm,0.6s,baz=257,slow=10,SNR=5.9							
MK31	**Makanchi Array**	**22.61**	**318**	*e*P	**P**	**04 31 22.2**	**+0.5**
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**04 31 22.2**	**+0.5**
comp=E,1.9nm,0.7s,mb3.7,baz=116,slow=11,SNR=5.6							
TKM2	**Tokmak 2**	**25.29**	**304**	*e*P	**P**	**04 31 47.4**	**-0.2**
comp=E,1.2nm,0.6s,mb3.8							
UCH	**Uchtor**	**25.88**	**302**	*e*P	**P**	**04 31 52.7**	**-0.3**
comp=E,4.7nm,1.0s,mb4.1							
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**04 31 56.3**	**+0.5**
comp=E,1.5nm,0.3s,mb4.1,baz=131,slow=11,SNR=5.0							
AML	**Almayashu**	**26.45**	**302**	*e*P	**P**	**04 31 58.5**	**+0.4**
comp=E,2.0nm,0.8s,mb3.8							
KURK	**Kurchatov**	**26.83**	**322**	P	**P**	**04 32 01.9**	**+0.5**
comp=E,1.4nm,0.8s,mb3.7,baz=131,slow=8.8,SNR=4.1							
KURK				PcP	PcP	04 35 23.2	-0.9
comp=E,0.7nm,0.6s,baz=124,slow=2.5,SNR=3.6							
KURK	**Kurchatov**	**26.83**	**322**	*e*P	**P**	**04 32 01.3**	**-0.2**
comp=E,2.9nm,1.0s,mb4.0							
KURK				PcP	PcP	04 35 23.2	-0.9
BVAR	**Borovoye Array**	**32.39**	**321**	P	**P**	**04 32 51.7**	**+0.9**
comp=E,0.7nm,0.5s,mb3.8,baz=110,slow=12,SNR=2.8							
ABKAR	**Akbulak array**	**37.38**	**311**	*e*P	**P**	**04 33 34.2**	**+0.4**
comp=E,0.7nm,0.8s,mb3.4							
AKTK	**Aktyubinsk**	**38.83**	**312**	P	**P**	**04 33 45.5**	**-0.6**
AKTO	**Aktyubinsk**	**38.83**	**312**	P	**P**	**04 33 45.5**	**-0.6**
comp=E,0.5nm,0.3s,mb3.6,baz=92,slow=16,SNR=3.8							
ARU	**Arti**	**40.03**	**322**	*e*P	**P**	**04 33 56.4**	**+0.4**
PETK	**Petropavlovsk-**	**43.59**	**45**	P	**P**	**04 34 27.4**	**+2.2**

SNVI **San Vicente** 1.01 66 eP Pn 04 40 14.3 +0.6
SNVI eS Sn 04 40 31.6 +4.7
IXG Ixpaco 1.16 326⇑ iP Pn 04 40 12.6 -3.1
MTO2 Montecristo 2 1.26 19 eP Pn 04 40 17.5 +0.5
MTO2 eS Sn 04 40 37.6 +4.7
PCG Pacaya 1.43 326 eP Pn 04 40 16.9 -2.3
PCG eS Sn 04 40 34.1 -2.7
NBG Las Nubes 1.48 339 eP Pn 04 40 19.5 -0.5
NBG eS Sn 04 40 39.5 +1.4
VSM San Miguel 1.50 81 eP Pn 04 40 21.0 +0.9
BLLM Bellamira 1.53 81 eP Pn 04 40 21.7 +1.1
FUG Fuego 3 1.60 321⇑ eP Pn 04 40 18.1 -3.5
FUG eS Sn 04 40 40.9 -0.4
CAHU Cacacuatique 1.64 70 eP Pn 04 40 23.4 +1.3
FG6 1.72 322 eP Pn 04 40 19.8 -3.4
FG6 eS Sn 04 40 41.3 -2.7
MRL Marmol 1.86 3 eP Pn 04 40 26.5 +1.3
MRL eS Sn 04 40 52.6 +5.2
APG El Apazote 1.91 340 P Pn 04 40 24.6 -1.3
122nm,0.3s,baz=154,slow=6.9,SNR=1324
APG S Sn 04 40 49.8 +1.1
301nm,0.3s,baz=108,slow=17,SNR=11
CNCH Conchagua 1.91 88 eP Pn 04 40 26.4 +0.6
TP2 Tecpan 2 1.98 323 eP Pn 04 40 24.8 -2.0
TP2 eS Sn 04 40 49.5 -0.8
TGUH Tegucigalpa,Un 2.59 71 ePn Pn 04 40 36.2 +1.0
TGUH Tegucigalpa,Un 2.59 71 eP Pn 04 40 36.3 +1.1
CRIN San Cristobal 2.72 100 eP Pn 04 40 37.3 +0.4
CRIN AML AML 04 41 22.8
comp=N,3µm,0.7s
TEL3 Telica 3 2.94 102 eP Pn 04 40 39.4 -0.5
TELN Telica 2.95 101 eP Pn 04 40 40.3 +0.3
CNGN Cerro Negro 3.10 103 eP Pn 04 40 41.3 -0.7
CNGN AML AML 04 41 32.2
comp=N,570nm,0.6s
MIRN Miramar 3.10 104 eP Pn 04 40 41.9 -0.2
MOMN Momotombo 3.27 104 eP Pn 04 40 44.6 +0.2
COPN Copaltepe 3.28 108 eP Pn 04 40 43.8 -0.9
COPN eS Sn 04 41 25.1 +2.6
CSAN 3.44 107 eP Pn 04 40 46.7 -0.1
APYN Apoyeque 3.49 106 eP Pn 04 40 46.8 -0.8
XAVN Gruta Xavier 3.54 107 eP Pn 04 40 48.6 +0.5
TISN Laguna Tiscapa 3.59 107 eP Pn 04 40 49.3 +0.4
MGAN Managua 3.62 106 eP Pn 04 40 49.4 +0.2
HUEN 3.63 103 eP Pn 04 40 50.3 +0.8
TICN Ticuantepe 3.66 108 eP Pn 04 40 49.6 -0.3
APON Apoyo 3.85 109 eP Pn 04 40 52.3 -0.2
BOAB BOACO BROADBAN 4.09 100 eP Pn 04 40 55.1 -0.6
BUEV Buena Vista 4.91 119 i P Pn 04 41 08.3 +1.3
BUEV i S Sn 04 42 00.1 -2.4
GPS3 Bodega del ICE 4.97 119 i P Pn 04 41 09.2 +1.5
GPS3 i S Sn 04 42 02.9 -1.1
VCR Vista de Mar 5.09 126 eP Pn 04 41 09.5 0.0
JTS JuntasAbangare 5.55 121 P Pn 04 41 15.8 0.0
comp=N,2.9nm,0.3s,baz=301,slow=22,SNR=44
JTS S Sn 04 42 12.7 -5.7
comp=N,1.3nm,0.3s,baz=302,slow=22,SNR=1.1
JTS LR LR 04 43 49.8
comp=N,721nm,21.9s,baz=326,slow=43
JTS JuntasAbangare 5.55 121 ePn Pn 04 41 16.8 +1.0
JTS eSn Sn 04 42 19.7 +1.4
JCR Jicaral 5.67 125 eP Pn 04 41 17.5 +0.1
FORC Fortuna 5.70 118 eP Pn 04 41 19.7 +1.9
CGA2 Cerro Gallo 2 6.10 121 eP Pn 04 41 23.6 +0.3
CMIG Matias Romero 6.25 309 P Pn 04 41 24.0 -1.4
comp=N,6.0nm,0.3s,baz=103,slow=9.9,SNR=50
CMIG S Sn 04 42 30.2 -5.4
comp=N,3.2nm,0.3s,baz=58,slow=24,SNR=4.5
CMIG Matias Romero 6.25 309 P Pn 04 41 24.0 -1.4
CMIG S Sn 04 42 30.2 -5.4
LAJ Bijagual 6.47 120 eP Pn 04 41 25.8 -2.6
QCR Quepos 6.67 124 eP Pn 04 41 32.8 +1.6
QCR eS Sn 04 42 43.0 -2.9
URSC Urasca 6.78 119 eP Pn 04 41 34.4 +1.8
BAR1 7.47 121⇓ eP Pn 04 41 43.6 +1.4
OTAV Otavalo 17.09 138 eP Pn 04 43 48.4 -2.8
comp=N,3.3nm,1.2s
ROSC El Rosal 17.36 117 eP Pn 04 43 58.4 +3.8
VBMS Vicksburg 18.94 358 eP Pn 04 44 14.4 +0.8
comp=N,76nm,0.8s
SDV Santo Domingo 19.28 101 P Pn 04 44 15.5 -2.3
comp=N,0.5nm,0.3s,baz=262,slow=5.6,SNR=9.7
SDV Santo Domingo 19.28 101 eP Pn 04 44 17.5 -0.4
comp=N,8.1nm,0.7s
JCT Junction City 19.52 333 eP Pn 04 44 21.1 +0.5
comp=N,15nm,1.1s
LRAL Lakeview Retre 19.91 7 eP Pn 04 44 25.4 +0.4
comp=N,65nm,2.1s
628A Black Gap, Mar 20.25 325 ⇓P P 04 44 28.0 +1.2
baz=20
TXAR Lajitas Array 20.58 323 P P 04 44 31.1 +0.7
comp=N,9.0nm,0.8s,baz=148,slow=10,SNR=52
TXAR PcP PcP 04 48 39.9 0.0
comp=N,0.4nm,0.6s,baz=145,slow=4.6,SNR=3.6
GOGA Godfrey 20.93 15 eP P 04 44 36.7 +2.6
comp=N,14nm,1.0s
626A Big Bend Ranch 21.01 323 ⇑P P 04 44 35.6 +0.6
baz=21,SNR=11
527A Woodward Ranch 21.16 325 ⇑P P 04 44 36.7 +0.1
baz=21
OXF Oxford 21.22 1 eP P 04 44 37.2 0.0
comp=N,22nm,0.6s,mb4.7
526A Mary Lane Ranc 21.37 324 ⇑P P 04 44 39.7 +0.8
baz=22,SNR=11
MIAR Mount Ida 21.53 351 eP P 04 44 40.4 -0.1
comp=N,34nm,1.5s,mb4.6
328A Wristen Ranch, 21.70 329 ⇓P P 04 44 42.8 +0.4
baz=22,SNR=13
PLAL Pickwick Lake 21.74 4 eP P 04 44 43.3 +0.5
comp=N,10.0nm,0.7s,mb4.3
426A McDonald Obser 21.79 325 ⇑P P 04 44 43.8 +0.4
baz=22,SNR=13
SWET Sewanee 22.20 8 eP P 04 44 47.8 +0.2
326A Caldwell Ranch 22.26 326 ⇓P P 04 44 48.1 -0.3
baz=22,SNR=6.5
425A Indio Mountain 22.42 324 ⇓P P 04 44 49.6 -0.5
baz=23,SNR=14
227A Bennet, Jal 22.45 329 ⇑P P 04 44 49.6 -0.8
baz=23
CPCT Cooper Cave 22.66 11 eP P 04 44 52.3 -0.3
325A Bean Ranch, Si 22.85 325 ⇑P P 04 44 53.9 -0.6
baz=23,SNR=8.3
226A Malaga, Loving 22.91 327 ⇓P P 04 44 54.1 -1.1
baz=23
WMOK Wichita Mounta 22.94 341 eP P 04 44 54.9 -0.6
comp=N,13nm,0.9s,mb4.4
WMOK epP 04 45 10.3
TKL Tuckaleechee C 23.01 13 P P 04 44 55.7 -0.5
comp=N,5.8nm,0.7s,mb4.1,baz=178,slow=12,SNR=8.5
TKL LR LR 04 54 25.9
comp=N,318nm,19.3s,MS3.8,baz=11,slow=38
TKL Tuckaleechee C 23.01 13 P P 04 44 55.7 -0.5
TKL LR LR 04 54 25.9
127A Arkansas Junct 23.02 330 ⇓P P 04 44 55.5 -0.9
baz=23
324A Moseley Ranch, 23.19 324 ⇓P P 04 44 57.2 -1.0
baz=23,SNR=10
MNTX Cornudas Mount 23.32 325 eP P 04 44 58.6 -0.8
comp=N,5.7nm,1.0s,mb4.0
PARMO Parma 23.36 0 eP P 04 45 01.2 +1.4
Z27A Tatum 23.47 331 ⇑P P 04 44 59.5 -1.3
baz=24
CPRX Cap Rock 23.55 329 eP P 04 45 02.2 +0.6
comp=N,31nm,0.8s,mb4.8
125A Gardner Draw, 23.66 327 ⇑P P 04 45 01.5 -1.1
baz=24
Z26A Caprock 23.80 329 ⇑P P 04 45 02.8 -1.0
baz=24
Y27A Causey 23.91 332 ⇓P P 04 45 04.7 -0.1
baz=24
124A Stringfield Ra 24.12 326 ⇑P P 04 45 05.9 -0.8
baz=24
AMTX Amarillo 24.12 336 eP P 04 45 07.0 +0.3
comp=N,6.4nm,0.6s,mb4.2
Z25A Roswell 24.18 328 ⇓P P 04 45 06.3 -1.0
baz=24
SIUC Southern Illin 24.42 1 eP P 04 45 09.5 +0.1
comp=N,55nm,1.1s,mb4.9
X27A F and S Farms, 24.52 333 ⇓P P 04 45 10.2 -0.2
baz=25
Y25A Mesa, Roswell 24.68 329 ⇑P P 04 45 11.2 -0.6
baz=25
USIN University of 24.74 4 eP P 04 45 12.8 +0.6
comp=N,25nm,0.7s,mb4.9
CCM Cathedral Cave 24.79 357 eP P 04 45 11.8 -1.0
comp=N,8.1nm,0.8s,mb4.3
320A Kipp Ranch, An 24.96 319 ⇑P P 04 45 14.4 0.0
baz=25
Y24A Capitan 25.06 328 ⇑P P 04 45 14.9 -0.4
baz=25
WCI Wyandotte Cave 25.12 6 eP P 04 45 15.0 -0.8
comp=N,17nm,0.9s,mb4.6
X25A Clemmons Ranch 25.15 330 ⇑P P 04 45 15.3 -0.8
baz=25
121A Cookes Peak, D 25.32 322 ⇓P P 04 45 17.8 +0.1
baz=26,SNR=7.9
220A Playas Peak, P 25.34 320 ⇓P P 04 45 18.1 +0.2
baz=26,SNR=12
Z22A Elephant Butte 25.37 325 ⇓P P 04 45 17.6 -0.6
baz=26
Y23A Lovelace Mesa, 25.39 327 ⇑P P 04 45 17.8 -0.5
baz=26
319A Douglas 25.46 318 ⇑P P 04 45 18.6 -0.4
baz=26
120A U Bar Ranch, L 25.84 321 ⇓P P 04 45 22.0 -0.4
baz=26
BNM Barren Site 25.86 327 eP P 04 45 23.4 +0.8
219A White Tail Can 25.86 320 ⇑P P 04 45 22.7 +0.1
baz=26
Y22A Socorro 25.88 326 ⇓P P 04 45 22.2 -0.5
baz=26
318A Bisbee 25.97 318 ⇓P P 04 45 23.8 +0.3
baz=26,SNR=6.1
Y21A Point of Rocks 26.33 325 ⇑P P 04 45 26.2 -0.6
baz=27
ANMO Albuquerque 26.39 328 P P 04 45 27.6 +0.3
comp=N,0.5nm,0.4s,mb3.4,baz=145,slow=14,SNR=3.6
ANMO Albuquerque 26.39 328 eP P 04 45 28.4 +1.1
comp=N,0.8nm,0.6s,mb3.4
W23A Werner Place, 26.39 329 ⇑P P 04 45 27.6 +0.3
baz=27
119A Ashpeak Ranch, 26.41 321 ⇓P P 04 45 27.7 +0.2
baz=27
Y20A Horse Springs, 26.65 324 ⇓P P 04 45 29.8 +0.1
baz=27,SNR=8.9
X21A Alamocita Cree 26.71 325 ⇑P P 04 45 29.7 -0.5
baz=27
CBKS Cedar Bluff 26.99 343 eP P 04 45 32.3 -0.4
comp=N,16nm,0.9s,mb4.5
TUC Tucson 27.04 318 eP P 04 45 36.4 +3.1
comp=N,3.6nm,1.0s,mb3.9
Y18A Canyon Day Jun 27.54 321 ⇓P P 04 45 37.2 -0.5
baz=28
116A Eloy 27.80 317 ⇓P P 04 45 40.5 +0.5
baz=28
X18A Snowflake 28.01 323 ⇓P P 04 45 41.3 -0.6
baz=28
W19A Sanders 28.10 324 ⇓P P 04 45 42.3 -0.3
baz=28
214A Organ Pipe Nat 28.18 315 ⇑P P 04 45 44.3 +0.9
baz=28
Y16A Circle Bar Ran 28.50 320 ⇑P P 04 45 46.2 -0.1
baz=29
X16A Lo Mia Camp, P 28.84 321 ⇓P P 04 45 49.6 +0.4
baz=29
S21A Coal Bank Pass 29.17 330 ⇑P P 04 45 52.2 0.0
baz=29
V17A Tonalea, Kykot 29.27 323 ⇓P P 04 45 53.2 +0.2
baz=30
X15A Humboldt 29.37 320 ⇓P P 04 45 54.5 +0.5
baz=30
WUAZ Wupatki 29.54 323 ⇓P P 04 45 55.7 +0.3
baz=30
WUAZ Wupatki 29.54 323 eP P 04 45 56.8 +1.4
comp=N,3.2nm,0.8s,mb4.1
X14A Yava 29.77 319 ⇑P P 04 45 57.8 +0.3
baz=30
R20A Redvale 29.88 330 ⇓P P 04 45 58.6 +0.3
baz=30
S19A Harvey Farm, M 29.91 328 ⇑P P 04 45 58.9 +0.2
baz=30
ISCO Idaho Springs 29.94 335 eP P 04 46 01.0 +2.1
comp=N,2.5nm,0.9s,mb3.9
V15A Kaibab Nationa 30.22 322 ⇑P P 04 46 01.4 0.0
baz=30,SNR=6.1
T17A Navajo Res., N 30.25 325 ⇑P P 04 46 02.2 +0.5
baz=30
W14A Seligman 30.37 320 ⇑P P 04 46 02.8 0.0
baz=31
X13A Yucca 30.46 318 ⇓P P 04 46 04.2 +0.7
baz=31
PDMCI Parker Dam,Lak 30.48 318 ⇑P P 04 46 04.1 +0.3
baz=31
V14A Boquillas Ranc 30.66 321 ⇓P P 04 46 05.6 +0.3
baz=31,SNR=5.6
U15A North Rim 30.70 323 ⇓P P 04 46 05.9 +0.2
baz=31,SNR=6.3
S17A Black Ridge (B 30.71 326 ⇓P P 04 46 05.8 0.0
baz=31
W13A Hualapai Mount 30.81 319 ⇑P P 04 46 07.3 +0.6
baz=31
BC3 Big Chuckw Mtn 30.98 315 ⇑P P 04 46 08.6 +0.4
baz=31
ECSD EROS Data Cent 30.99 350 eP P 04 46 05.8 -2.3
comp=N,4.8nm,0.7s,mb4.4
IRM Iron Mountain 31.06 317 ⇑P P 04 46 09.3 +0.4
baz=31
N22A Wattenberg Ran 31.13 335 ⇓P P 04 46 09.6 +0.2
baz=31
T15A Red Dirt Ranch 31.16 324 ⇓P P 04 46 10.6 +0.9
baz=31
U14A Mt Trumbull 31.22 322 ⇓P P 04 46 10.7 +0.4
baz=32
V13A Grand Canyon W 31.35 320 ⇑P P 04 46 11.4 -0.1
baz=32
O20A White River Ci 31.35 332 ⇓P P 04 46 11.2 -0.2
baz=32
LDFC Landfair 31.58 318 eP P 04 46 14.1 +0.6
comp=N,14nm,1.0s,mb4.7
T14A Hurricane 31.60 323 ⇓P P 04 46 14.1 +0.5
baz=32
S15A Panguitch 31.61 324 ⇑P P 04 46 14.4 +0.7
baz=32
GMRC Granite Mounta 31.77 317 ⇑P P 04 46 16.0 +0.9
baz=32
V12A Nelson 31.81 319 ⇓P P 04 46 15.6 +0.1
baz=32,SNR=12
N20A Spence Gulch, 31.93 333 ⇑P P 04 46 17.0 +0.6
baz=32
CCUT Cedar City 32.09 323 eP P 04 46 20.1 +2.2
comp=N,6.8nm,1.5s,mb4.3
CCUT ePcP PcP 04 49 07.3 +0.9
RWWY Rawlins 32.18 335 eP P 04 46 20.4 +1.7
comp=N,5.8nm,0.8s,mb4.5
HEC Hector,Ludlow 32.24 316 ⇑P P 04 46 19.4 +0.1
baz=32
V11A Goodsprings 32.25 319 ⇑P P 04 46 19.7 +0.3
baz=32
O18A Roosevelt 32.28 330 ⇑P P 04 46 19.6 0.0
baz=32
TUQ Turquoise Moun 32.33 318 ⇑P P 04 46 20.9 +0.8
baz=33
N19A Jon Jarvie Ra 32.39 332 ⇓P P 04 46 20.6 +0.1
baz=33
S13A Holt Ranch, En 32.41 323 ⇑P P 04 46 21.7 +1.0
baz=33,SNR=9.1
L21A Rawlins 32.48 335 ⇑P P 04 46 21.8 +0.6
baz=33
N18A Larsen Ranch, 32.68 332 ⇓P P 04 46 23.3 +0.2
baz=33
SADO Sadowa 32.75 14 P P 04 46 22.0 -1.6
comp=N,3.8nm,0.6s,mb4.5,baz=225,slow=6.7,SNR=6.8
SADO LR LR 05 00 27.4
comp=N,172nm,19.1s,MS3.8,baz=33,slow=38
COWI Conover 32.80 1 eP P 04 46 21.8 -2.2
comp=N,9.3nm,0.9s,mb4.7
R13A O'Grain Ranch, 32.87 324 ⇓P P 04 46 24.8 0.0
baz=33
T11A Corn Creek, Al 33.00 321 ⇑P P 04 46 26.1 +0.2
baz=33
Q14A Seer Lake (B 33.04 325 ⇑P P 04 46 26.9 +0.7
baz=33
RSSD Black Hills 33.15 341 eP P 04 46 27.5 +0.4
comp=N,2.0nm,0.7s,mb4.2
JLU Jordanelle 33.25 329 eP P 04 46 30.9 +2.9
comp=N,28nm,2.3s,mb4.8
R12A Pony Springs, 33.34 323 ⇑P P 04 46 29.6 +0.7
baz=34,SNR=5.8
Q13A Wheeler Ranch, 33.43 324 ⇓P P 04 46 30.1 +0.5
baz=34
LRMC Laurel Mountai 33.53 316 ⇑P P 04 46 31.0 +0.5
baz=34
FURC Furnace Creek, 33.56 318 ⇑P P 04 46 30.6 -0.1
baz=34
S11A Rachel 33.58 321 ⇑P P 04 46 32.0 +1.1
baz=34,SNR=6.1
MPMC Manual Prospec 33.73 317 ⇑P P 04 46 32.6 +0.3
baz=34,SNR=6.6
P13A Bates Ranch, G 33.77 325 ⇑P P 04 46 33.5 +1.0
baz=34
R11A Troy Canyon, C 33.94 322 ⇑P P 04 46 34.9 +0.9
baz=34
PDAR Pinedale Array 34.06 334 P P 04 46 34.4 -0.6
comp=N,0.9nm,1.0s,mb3.7,baz=118,slow=8.6,SNR=4.3
PDAR PcP PcP 04 49 11.7 -0.1
comp=N,0.7nm,0.6s,baz=113,slow=6.7,SNR=5.5
PDAR ScP ScP 04 52 53.4 +0.9
comp=N,0.9nm,1.0s,baz=134,slow=3.9,SNR=3.4
ISA Isabella 34.16 316 ⇓P P 04 46 36.8 +0.7
baz=34
ISA Isabella 34.16 316 eP P 04 46 38.1 +2.1
comp=N,7.4nm,1.2s,mb4.5
K18A Toltan Ranch, 34.17 333 ⇓P P 04 46 36.1 +0.1
baz=34,SNR=5.2
GRAC Grapevine Rang 34.20 319 ⇑P P 04 46 37.2 +0.9
baz=34
S10A Tonopah Range, 34.28 321 ⇓P P 04 46 37.8 +0.8
baz=34,SNR=11
Q11A Duckwater 34.30 323 ⇓P P 04 46 37.8 +0.6
baz=34,SNR=7.6
L16A Fish Haven 34.32 331 ⇓P P 04 46 36.9 -0.3
baz=34
N14A Grayback Hills 34.32 328 ⇑P P 04 46 37.4 +0.1
baz=34
J18A Kendall Valley 34.62 334 ⇑P P 04 46 39.7 -0.2
baz=35
VES Vestal, Richgr 34.67 316 ⇑P P 04 46 40.7 +0.3
baz=35
PKM Peak Mountain 34.68 314 ⇓P P 04 46 41.1 +0.6
baz=35
Q10A Clear Creek Ra 34.73 322 ⇓P P 04 46 42.1 +1.2
baz=35,SNR=6.8
M14A Sheep Mountain 34.88 328 ⇑P P 04 46 42.4 +0.3
baz=35
SMMC Simmler 35.02 314 ⇓P P 04 46 44.4 +1.0
baz=35
RCTC Rector, Farmer 35.03 316 ⇑P P 04 46 44.5 +0.9
baz=35
J17A Brown Place, J 35.04 333 ⇓P P 04 46 43.0 -0.5
baz=35,SNR=5.8
REDW Red Top Meadow 35.10 333 eP P 04 46 44.4 +0.3
comp=N,5.2nm,0.8s,mb4.5
SNOW Snow King Moun 35.14 333 eP P 04 46 44.6 +0.3
comp=N,7.4nm,0.8s,mb4.7
O11A Cowboy Ranch, 35.16 324 ⇓P P 04 46 45.7 +1.1
baz=35
LOHW Long Hollow 35.20 333 eP P 04 46 45.7 +0.9
comp=N,48nm,2.6s,mb5.0
M13A Montello 35.20 327 ⇓P P 04 46 44.7 -0.2
baz=35,SNR=6.5
M13A Montello 35.20 327 eP P 04 46 45.2 +0.3
comp=N,26nm,2.1s,mb4.8
ELK Elko 35.34 326 P P 04 46 47.0 +0.8
comp=N,1.8nm,0.7s,mb4.1,baz=107,slow=8.0,SNR=8.7
ELK PcP PcP 04 49 16.2 +0.7
comp=N,0.3nm,0.3s,baz=109,slow=5.9,SNR=3.6
ELK LR LR 05 03 15.1
comp=N,133nm,19.8s,MS3.7,baz=336,slow=40
AGMN Agassiz Refuge 35.35 353 eP P 04 46 44.0 -2.1
comp=N,15nm,0.6s,mb5.1
L13A Double Diamond 35.61 328 ⇑P P 04 46 47.7 -0.7
baz=36
NVAR Mina Array Bea 35.65 320 P P 04 46 50.0 +1.1
comp=N,12nm,0.8s,mb4.9,baz=135,slow=6.9,SNR=68
NVAR PcP PcP 04 49 17.2 +0.7
comp=N,1.5nm,0.7s,baz=133,slow=3.6,SNR=6.8
RLMT Red Lodge 35.87 336 ⇓P P 04 46 50.7 0.0
baz=36
G18A Lazy EL Ranch, 36.15 336 ⇑P P 04 46 53.0 0.0
baz=36
LPAZ La Paz 36.29 143 P P 04 46 54.1 -0.4
comp=N,1.2nm,0.7s,mb3.9,baz=324,slow=9.0,SNR=6.4
LPAZ LR LR 05 00 08.6
comp=N,116nm,21.7s,MS3.6,baz=116,slow=34
LPAZ La Paz 36.29 143 eP P 04 46 53.8 -0.7
comp=N,1.3nm,0.7s,mb4.0
L11A Cat Creek Ranc 36.61 327 ⇑P P 04 46 57.1 +0.1
baz=37
F18A Big Timber 36.70 337 ⇓P P 04 46 57.7 0.0
baz=37
I14A Mackay 36.73 331 ⇑P P 04 46 58.5 +0.5
baz=37
CMB Columbia Colle 36.75 318 eP P 04 46 59.2 +0.9
comp=N,3.2nm,0.8s,mb4.2
H15A Lima 36.89 332 ⇓P P 04 47 00.0 +0.7
baz=37
HLID Hailey 36.92 330 eP P 04 47 00.1 +0.4
comp=N,1.1nm,0.7s,mb3.8
L10A Juniper Basin 36.93 326 ⇑P P 04 47 00.7 +1.0
baz=37
G16A Moss Hill, Enn 37.00 334 ⇑P P 04 47 00.8 +0.6
baz=37
F17A Fitzpatrick Pl 37.07 336 ⇓P P 04 47 01.3 +0.5
baz=37
WCN Washoe City 37.08 320 ⇓P P 04 47 02.2 +1.2
baz=37
PAHR Pah Rah Range 37.09 321 eP P 04 47 02.5 +1.5
comp=N,5.4nm,0.9s,mb4.4
DGMT Dagmar 37.14 344 ⇑P P 04 47 01.0 -0.4
baz=37
DGMT Dagmar 37.14 344 eP P 04 47 02.6 +1.2
comp=N,15nm,0.6s,mb5.0
MCMT McKenzie Canyo 37.15 333 eP P 04 47 01.7 +0.3
comp=N,2.0nm,0.7s,mb4.1
K11A Parker Ranch, 37.18 327 ⇓P P 04 47 02.2 +0.5
baz=37
H14A Leadore 37.22 332 ⇑P P 04 47 03.2 +1.1
baz=37
G15A Dillon 37.25 333 ⇑P P 04 47 03.3 +0.9
baz=38
BOZ Bozeman (W) 37.26 334 ⇑P P 04 47 02.8 +0.4
baz=38
BOZ Bozeman (W) 37.26 334 eP P 04 47 02.4 0.0
comp=N,1.5nm,0.7s,mb3.9
ULM Lac du Bonnet 37.28 354 P P 04 46 60.0 -2.5
comp=N,7.5nm,0.6s,mb4.7,baz=171,slow=9.1,SNR=22
ULM Lac du Bonnet 37.28 354 eP P 04 46 59.8 -2.7
comp=N,7.4nm,0.7s,mb4.6
E18A Harlowton 37.33 337 ⇓P P 04 47 02.9 0.0
baz=38
I12A Atlanta 37.45 329 ⇓P P 04 47 04.3 +0.3
baz=38
MFID Camas Ranch 37.53 328 ⇑P P 04 47 04.6 -0.1
baz=38
H13A Challis 37.59 331 ⇓P P 04 47 05.4 +0.1
baz=38
E17A Martinsdale 37.61 336 ⇑P P 04 47 05.2 -0.2
baz=38
LRM Limekiln Ridge 37.75 334 eP P 04 47 07.8 +1.2
F15A Butte 37.78 334 ⇓P P 04 47 06.4 -0.5
baz=38
BEKR Beckwourth 37.79 320 ⇓P P 04 47 06.9 -0.1
baz=38,SNR=12
I11A Placerville 37.95 329 ⇑P P 04 47 08.3 0.0
baz=38
E16A East Helena 37.99 335 ⇓P P 04 47 07.6 -1.0
baz=38
D17A Six Diamond Ra 38.11 337 ⇑P P 04 47 09.1 -0.5
baz=38
WVOR Wild Horse Val 38.36 325 eP P 04 47 13.1 +1.3
comp=N,4.0nm,1.0s,mb4.1
J09A Fry Pan Ranch, 38.49 327 ⇑P P 04 47 12.6 -0.2
baz=39
C17A Wharram Farm, 38.54 337 ⇓P P 04 47 12.5 -0.6
baz=39
H11A Donnelly 38.54 330 ⇓P P 04 47 13.1 -0.2
baz=39
F13A Darby 38.55 332 ⇓P P 04 47 13.1 -0.2
baz=39
E14A Clinton 38.66 334 ⇑P P 04 47 14.1 -0.1
baz=39
D15A Lincoln 38.75 335 ⇓P P 04 47 14.5 -0.4
baz=39
J08A Circle Bar Ran 38.88 326 ⇓P P 04 47 15.8 -0.3
baz=39
F12A Elk City 38.95 331 ⇓P P 04 47 16.1 -0.6
baz=39
E13A Victor 38.99 333 ⇑P P 04 47 16.6 -0.4
baz=39
C16A Fuhringer Ranc 39.05 336 ⇓P P 04 47 17.2 -0.2
baz=39

D14A	Greenough	39.19 334	⇓P	P	04 47 17.8	-0.8
	baz=39					
A18A	Metzger Ranch,	39.28 339	⇑P	P	04 47 19.1	-0.3
	baz=40					
C15A	Salmond Ranch,	39.37 336	⇑P	P	04 47 20.0	-0.1
	baz=40					
E12A	Beaver Dam Sad	39.59 332	⇑P	P	04 47 21.0	-1.0
	baz=40					
D13A	Huson	39.61 333	⇑P	P	04 47 22.1	-0.1
	baz=40					
H08A	Prairie City	39.77 327	⇓P	P	04 47 22.8	-0.7
	baz=40					
B15A	Bradely Ranch,	39.79 336	⇑P	P	04 47 23.7	+0.1
	baz=40					
G09A	Cove	39.83 329	⇑P	P	04 47 23.6	-0.5
	baz=40					
E11A	Bogner Ranch,	39.84 331	⇑P	P	04 47 23.7	-0.4
	baz=40					
I07A	Izee	39.92 326	⇑P	P	04 47 24.6	-0.2
	baz=40					
D12A	Red Ives Fores	39.97 333	⇓P	P	04 47 24.2	-0.9
	baz=40					
YBH	Yreka Blue Hor	40.32 321	P	P	04 47 27.3	-0.9
	comp=N,2.6nm,0.7s,mb4.0,baz=84,slow=5.4,SNR=6.7					
YBH			LR	LR	05 06 23.7	
	comp=N,115nm,18.3s,MS3.8,baz=144,slow=39					
KHMM	Horse Mountain	40.48 319	eP	P	04 47 31.0	+1.5
	comp=N,11nm,0.8s,mb4.6					
SIV	San Ignacio	40.59 135	P	P	04 47 30.1	-0.5
	comp=N,2.6nm,0.8s,mb3.9,baz=315,slow=8.6,SNR=13					
B13A	Whitefish	40.61 335	⇑P	P	04 47 29.9	-0.5
	baz=41					
A14A	Double T Ranch	40.66 336	⇓P	P	04 47 30.2	-0.6
	baz=41					
FFC	Flin Flon	42.52 350	eP	P	04 47 44.7	-1.2
	comp=N,12nm,1.4s,mb4.4					
EDM	Edmonton	44.10 340	eP	P	04 47 59.9	+1.2
SCHQ	Schefferville	45.26 19	P	P	04 48 05.4	-2.5
	comp=N,13nm,0.6s,mb5.0,baz=215,slow=6.8,SNR=51					
SCHQ	Schefferville	45.26 19	eP	P	04 48 05.2	-2.7
	comp=N,50nm,1.5s,mb5.1					
FCC	Fort Churchill	45.59 357	eP	P	04 48 08.3	-2.1
	comp=N,0.2nm,0.8s,mb3.1					
CFAA	Coronel Fontan	49.11 156	P	P	04 48 37.8	-0.4
	comp=N,0.2nm,0.5s,mb3.4,baz=342,slow=5.1,SNR=7.1					
CPUP	Villa Florida	50.41 141	P	P	04 48 45.4	-2.7
	comp=N,0.2nm,0.4s,mb3.5,baz=285,slow=2.5,SNR=3.7					
CPUP	Villa Florida	50.41 141	P	P	04 48 45.4	-2.7
YKA	Yellowknife Ar	52.31 346	P	P	04 48 59.6	-2.2
	comp=N,1.1nm,0.5s,mb4.1,baz=138,slow=7.4,SNR=47					
YKA			PcP	PcP	04 50 11.1	-1.3
	comp=N,0.2nm,0.6s,baz=149,slow=3.9,SNR=5.5					
PLCA	Paso Flores	56.55 163	P	P	04 49 31.1	-1.7
	comp=N,2.4nm,0.9s,mb4.2,baz=229,slow=2.2,SNR=3.9					
RES	Resolute Bay	61.54 358	P	P	04 50 04.4	-2.6
	comp=N,5.8nm,0.6s,mb4.9,baz=356,slow=19					
INK	Inuvik	61.82 343	eP	P	04 50 06.4	-2.5
	comp=N,3.7nm,1.0s,mb4.5					
EKA	Eskdalemuir Ar	77.36 36	P	P	04 51 41.2	-3.7
	comp=N,0.9nm,0.7s,mb3.8,baz=258,slow=6.7,SNR=3.6					
ESDC	Sonseca Array	78.52 52	P	P	04 51 48.2	-3.6
	comp=N,0.2nm,0.3s,mb3.5,baz=286,slow=4.1,SNR=4.2					
ESDC	Sonseca Array	78.52 52	P	P	04 51 48.2	-3.6
PMSA	Palmer Station	80.16 169	eP	P	04 51 58.4	-1.6
DBIC	Dimbokro	83.59 85	P	P	04 52 18.9	-0.3
	comp=N,3.6nm,0.8s,mb4.5,baz=339,slow=8.6,SNR=3.6					
NOA	NORSAR Array B	83.82 29	P	P	04 52 17.5	-1.9
	comp=N,0.9nm,1.0s,mb3.9,baz=284,slow=5.5,SNR=2.7					
NOA			LR	LR	05 26 38.1	
	comp=N,45nm,21.8s,MS3.8,baz=0.0,slow=34					
NOA	NORSAR Array B	83.82 29	P	P	04 52 17.6	-1.9
NOA			LR	LR	05 26 38.1	
HFS	Hagfors	85.25 29	P	P	04 52 24.6	-2.1
	comp=N,1.9nm,0.9s,mb4.2,baz=353,slow=10,SNR=3.1					
ARCES	ARCESS Array B	86.21 19	P	P	04 52 28.7	-2.6
	comp=N,3.0nm,0.9s,mb4.5,baz=316,slow=3.3,SNR=4.7					
TORD	Torodi Ar. Bea	88.47 77	P	P	04 52 41.1	-2.1
	comp=N,0.3nm,0.6s,mb3.7,baz=293,slow=5.3,SNR=5.3					
KURK	Kurchatov	115.56 8	PKP	PKPdf	04 58 31.3	-0.8
	comp=N,0.2nm,0.4s,baz=338,slow=1.4,SNR=2.4					
HHC	Hu-ho-hao-te	122.70 341	ePKP	PKPdf	04 58 44.0	-2.1
HHC			sPKP		04 59 21.8	
HHC			PP	PP	05 00 25.8	+2.9
HHC			PKS		05 02 19.5	
HHC			SKS	SKSdf	05 05 44.3	-10
HHC			SKKS	SKKSac	05 07 07.4	-11
HHC			SS	SS	05 16 57.4	-3.2
HHC			AMB	AMB		
	comp=Z,110nm,6.0s					
HHC			LR	LR		
	comp=N,250nm,20.2s,MS5.4					
HHC			LR	LR		
	comp=E,710nm,18.4s,MS5.4					
HHC			LR	LR		
	comp=Z,160nm,18.0s,MS4.7					
WMQ	Urumqi	123.21 2	ePKP	PKPdf	04 58 45.3	-1.7
NJ2	Nanjing	127.30 329	ePKP	PKPdf	04 58 54.8	-0.4
CD2	Chengdu	134.25 344	PKP	PKPdf	04 59 07.6	-0.8
WRA	Warramunga Arr	137.27 255	PKP	PKPdf	04 59 14.3	+0.1
	comp=Z,0.9nm,0.6s,baz=87,slow=2.3,SNR=11					
WRA	Warramunga Arr	137.27 255	PKP	PKPdf	04 59 14.3	+0.1
ASAR	Alice Springs	137.41 249	PKhKP		04 59 08.6	
	comp=Z,0.2nm,0.5s,baz=112,slow=3.6,SNR=3.6					
ASAR			PKP	PKPdf	04 59 13.4	-0.9
	comp=Z,0.5nm,0.8s,baz=106,slow=3.0,SNR=3.7					
GYA	Guiyang	137.46 338	ePdif	Pdif	04 56 18.9	-2.8
GYA			PKP	PKPdf	04 59 11.0	-3.5
GYA			sPKP		04 59 54.0	
GYA			PP	PP	05 02 01.4	+2.5
GYA			AMB	AMB		
	comp=Z,90nm,8.7s					
FITZ	Fitzroy Crossi	145.57 257	PKPbc	PKPbc	04 59 28.6	-0.8
	comp=Z,3.6nm,0.9s,baz=149,slow=7.0,SNR=9.5					
FITZ	Fitzroy Crossi	145.57 257	ePKPbc	PKPbc	04 59 28.1	-1.2

IDC 14 04:46:27.5±1.6, 30°.32N×103°.21E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.3/25, mbtmp3.5/4, ML3.7/1, MS3.8/2, Ms1 3.8/2, ms1mx3.0/30, Error ellipse: s-maj=77.0km s-min=27.5km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	17.66	7	P	Pn	04 50 35.6	+0.9
	0.2nm,0.3s,baz=188,slow=11,SNR=3.8						
KURK	Kurchatov	27.43	325	P	P	04 52 14.9	+0.2
	0.2nm,0.3s,baz=131,slow=9.4,SNR=6.3						
DAV	Davao City (W)	31.24	133	LR	LR	05 06 07.4	
	comp=Z,203nm,20.3s,baz=52,slow=38						
WRA	Warramunga Arr	58.26	145	P	P	04 56 24.2	+0.2
	0.8nm,0.8s,baz=327,slow=8.9,SNR=7.2						
WRA	Warramunga Arr	58.26	145	P	P	04 56 24.2	+0.2
GERES	GERESS Array B	67.54	314	LR	LR	05 31 25.3	
	comp=Z,62nm,19.2s,baz=272,slow=40						
YKA	Yellowknife Ar	82.66	17	P	P	04 58 52.0	-0.5
	0.1nm,0.5s,baz=331,slow=6.0,SNR=2.4						

IDC 14 05:01:35.9±1.3, 2°.76N×127°.79E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/21, mbtmp3.9/8, Error ellipse: s-maj=110.1km s-min=15.9km az=71.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.84	186	P	P	05 06 19.5	+0.1
	1.6nm,0.7s,baz=62,slow=10,SNR=7.1						
WRA	Warramunga Arr	23.46	164	P	P	05 06 47.0	-0.4
	0.9nm,0.5s,baz=342,slow=10,SNR=16						
ASAR	Alice Springs	26.93	168	P	P	05 07 20.1	+1.0
	0.3nm,0.3s,baz=342,slow=7.7,SNR=5.7						
STKA	Stephens Creek	36.86	160	P	P	05 08 45.5	-0.7
	0.9nm,0.3s,baz=343,slow=6.5,SNR=3.0						
SONM	Songino Array	48.55	341	P	P	05 10 21.7	+0.9
	0.9nm,0.6s,baz=155,slow=9.4,SNR=6.1						
MKAR	Makanchi Array	58.95	325	P	P	05 11 37.7	+0.7
	1.7nm,0.6s,baz=121,slow=8.5,SNR=11						
KURK	Kurchatov	63.12	327	P	P	05 12 05.2	-0.2
	3.2nm,0.8s,baz=128,slow=5.9,SNR=16						
BVAR	Borovoye Array	68.70	327	P	P	05 12 40.0	-1.3
	0.6nm,0.5s,baz=103,slow=6.2,SNR=3.8						

ISCJB 14 05:27:26.2±0.4, 32°.26N±0°.03×105°.36E±0°.04, h10km, mb3.7/13, Error ellipse: s-maj=4.6km s-min=4.3km az=177.4

IDC 14 05:27:27.1±0.8, 32°.33N×105°.33E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/28, mbtmp3.8/13, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/45, Error ellipse: s-maj=33.0km s-min=15.3km az=49.0

BJI 14 05:27:28.1, 32°.36N×105°.29E, h16km, mB4.4/2, mb3.7/2, ML4.2/13, Ms4.1/6, Ms7 3.7/6

NEIC 14 05:27:29.8±0.7, 32°.46N×105°.18E, h10km, mb3.5/3, Error ellipse: s-maj=18.4km s-min=10.5km az=43.0

ISC 14 05:27:28.3±0.4, 32°.29N±0°.03×105°.29E±0°.04, h10km, n29, σ1§13/39, mb3.7/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.90	224	Pn	Pn	05 28 01.1	+0.3
CD2				Pg	Pg	05 28 03.0	-1.8
CD2				Sg	Sg	05 28 29.3	-0.1
CD2				smax			
	comp=N,3μm,0.7s						
XAN	Xi'an	3.51	59	Pn	Pn	05 28 22.4	-0.4
XAN				Pg	Pg	05 28 30.8	-4.7
XAN				Sn	Sn	05 29 10.8	+6.4
XAN				Sg	Sg	05 29 21.0	+0.1
XAN				smax			
	comp=N,410nm,0.9s						
XAN				smax			
	comp=E,230nm,0.9s						
XAN				LR	LR		
	comp=N,1μm,8.1s						
XAN				LR	LR		
	comp=E,280nm,7.7s						
XAN				LR	LR		
	comp=Z,270nm,12.1s						
LZH	Lanzhou	3.97	343	ePn	Pn	05 28 30.8	+1.6
LZH				Pg	Pg	05 28 41.0	-3.3
LZH				Sn	Sn	05 29 14.8	-1.0
LZH				Sg	Sg	05 29 27.5	-8.3
LZH				smax			
	comp=N,800nm,0.8s						
LZH				smax			
	comp=E,2μm,1.1s						
LZH				LR	LR		
	comp=N,2μm,5.5s						
LZH				LR	LR		
	comp=Z,3μm,5.7s						
ENH	Enshi	4.12	118	ePn	Pn	05 28 36.0	+4.8
ENH				eSn	Sg	05 29 41.1	+0.6
GYA	Guiyang	5.94	168	Pn	Pn	05 29 01.6	+5.3
GYA				Sn	Sn	05 30 03.1	-1.2
GYA				smax			
	comp=N,150nm,1.1s						
GYA				smax			
	comp=E,210nm,1.1s						
WHN	Wuhan	7.94	100	P	Pn	05 29 25.3	+1.6
WHN				S	Sn	05 30 52.3	-1.2
WHN				LR	LR		
	comp=N,2μm,11.5s						
WHN				LR	LR		
	comp=E,1μm,6.6s						
WHN				LR	LR		
	comp=Z,910nm,8.3s						
GTA	Gaotai	8.38	329	eP	Pn	05 29 35.0	+5.3
GTA				sP		05 29 45.8	
GTA				S	Sn	05 31 12.4	+8.1
GTA				sS		05 31 16.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,82nm,5.1s						
GTA				LR	LR		
	comp=N,430nm,11.4s						
GTA				LR	LR		
	comp=E,570nm,11.4s						
GTA				LR	LR		
	comp=Z,380nm,9.6s						
BTO	Baotou	9.13	23	eP	Px	05 30 15.5	
SONM	Songino Array	15.55	3	Pn	Pn	05 31 05.9	-1.5
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=9.5						
SONM				LR	LR	05 37 50.2	
	comp=Z,95nm,18.5s,baz=2.5,slow=40						
ULN	Ulaanbaatar	15.61	4	ePn	Pn	05 31 08.4	+0.2
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	19.25	68	P	Pn	05 31 51.5	-2.3
	comp=Z,0.2nm,0.3s,baz=254,slow=10,SNR=3.3						
MK31	Makanchi Array	22.79	316	eP	P	05 32 30.4	-0.4
MKAR	Makanchi Array	22.79	316	P	P	05 32 29.8	-1.0
	comp=Z,1.7nm,0.8s,mb3.6,baz=112,slow=11,SNR=17						
KSH	Kashi	24.75	295	P	P	05 32 54.6	+4.7
KSH				pmax	pmax		
	comp=Z,83nm,5.4s						
TKM2	Tokmak 2	25.68	303	eP	P	05 33 00.1	+1.8
	comp=Z,2.2nm,0.8s,mb3.7						
ZALV	Zalesovo Beam	26.12	332	P	P	05 33 02.6	+0.4
	comp=Z,1.0nm,0.5s,mb3.6,baz=132,slow=10.0,SNR=4.8						
AAK	Ala-Archa	26.41	302	P	P	05 33 05.3	+0.4
	comp=Z,0.6nm,0.3s,mb3.6,baz=124,slow=3.6,SNR=2.1						
KURK	Kurchatov	26.93	321	P	P	05 33 10.0	+0.5
	comp=Z,1.0nm,0.7s,mb3.5,baz=122,slow=12,SNR=7.8						
KURK	Kurchatov	26.93	321	P	P	05 33 10.0	+0.5
BVAR	Borovoye Array	32.51	320	P	P	05 33 59.9	+0.9
	comp=Z,0.5nm,0.5s,mb3.7,baz=108,slow=4.7,SNR=3.3						
ABKAR	Akbulak array	37.66	310	eP	P	05 34 42.0	-1.4
	comp=Z,0.4nm,0.5s,mb3.4						
BRTR	Keskin Array B	57.04	299	P	P	05 37 15.8	+1.4
	comp=Z,0.5nm,0.6s,mb3.7,baz=94,slow=6.5,SNR=3.0						
FINES	FINESS Array B	57.15	326	P	P	05 37 15.7	+0.9
	comp=Z,1.9nm,0.8s,mb4.2,baz=82,slow=10.0,SNR=3.0						
WRAB	Tennant Creek	58.91	148	eP	P	05 37 28.8	+1.2
WRA	Warramunga Arr	58.92	148	P	P	05 37 28.0	+0.3
	comp=Z,2.3nm,0.7s,mb4.3,baz=340,slow=7.8,SNR=26						
ASAR	Alice Springs	62.00	150	P	P	05 37 49.2	+0.5
	comp=Z,0.9nm,0.7s,mb4.0,baz=333,slow=6.4,SNR=9.3						
HFS	Hagfors	63.35	326	LR	LR	06 07 40.7	
	comp=Z,34nm,20.4s,baz=324,slow=38						
NOA	NORSAR Array B	64.20	327	P	P	05 38 01.8	-1.2
	comp=Z,0.5nm,0.7s,mb3.7,baz=71,slow=6.6,SNR=2.8						
YKA	Yellowknife Ar	80.26	18	P	P	05 39 40.3	+1.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=329,slow=5.2,SNR=7.2						

IDC 14 05:32:08.0±0.7, 31°.70N×104°.27E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, Error ellipse: s-maj=36.9km s-min=14.7km az=54.0

NEIC 14 05:32:09.6±0.4, 31°.74N×104°.36E, h10km, mb4.6/1, Error ellipse: s-maj=19.9km s-min=6.5km az=47.0

BJI 14 05:32:14.5, 31°.53N×104°.47E, h20km, ML3.6/6

ISC 14 05:32:09.5±2.2, 31°.81N±0°.07×104°.43E±0°.09, h8km±14km, n17, σ0§80/20, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.30	354	ePg	Pg	05 33 33.0	+1.1
LZH				Sn	Sg	05 34 26.8	-0.8
LZH				smax			
	comp=N,81nm,0.8s						
LZH				smax			
	comp=E,120nm,0.7s						
XAN	Xi'an	4.38	58	Pg	Pg	05 33 32.0	-1.5
XAN				Sg	Sg	05 34 30.4	+0.1
XAN				smax			
	comp=N,13nm,0.6s						
XAN				smax			
	comp=E,64nm,0.6s						
ENH	Enshi	4.60	108	ePn	Pn	05 33 20.0	+0.6
GYA	Guiyang	5.67	159	Pn	Pn	05 33 35.5	+1.4
GYA				Sn	Sn	05 34 38.6	-0.8
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,110nm,0.8s						
KSRS	Korea Array	20.11	67	P	P	05 36 45.8	+2.0
	comp=E,3.8nm,0.9s,baz=250,slow=9.4,SNR=5.0						
MK31	Makanchi Array	22.64	318	eP	P	05 37 11.3	+0.4
MKAR	Makanchi Array	22.64	318	P	P	05 37 11.4	+0.6
	comp=E,0.6nm,0.6s,mb3.2,baz=113,slow=9.3,SNR=5.2						
ZALV	Zalesovo Beam	26.22	333	P	P	05 37 44.5	-0.1
	comp=E,0.4nm,0.3s,mb3.4,baz=128,slow=9.5,SNR=2.1						
KURK	Kurchatov	26.86	322	P	P	05 37 50.5	0.0
	comp=E,0.3nm,0.5s,mb3.1,baz=129,slow=8.8,SNR=3.3						
FITZ	Fitzroy Crossi	53.63	155	P	P	05 41 31.0	-0.5
	comp=E,0.9nm,0.8s,mb3.8,baz=348,slow=9.3,SNR=4.6						
BRTR	Keskin Array B	56.64	299	P	P	05 41 52.7	-0.4
	comp=E,0.4nm,0.5s,mb3.7,baz=117,slow=5.0,SNR=3.3						
FINES	FINESS Array B	57.15	326	P	P	05 41 55.4	-1.0
	comp=E,1.3nm,0.7s,mb4.1,baz=18,slow=6.2,SNR=3.3						
WRAB	Tennant Creek	58.90	147	eP	P	05 42 08.8	-0.3
	comp=E,3.4nm,0.6s,mb4.5						
WRA	Warramunga Arr	58.90	147	P	P	05 42 08.9	-0.3
	comp=E,2.7nm,0.5s,mb4.5,baz=340,slow=7.7,SNR=59						
ASAR	Alice Springs	61.95	149	P	P	05 42 29.9	0.0
	comp=E,0.8nm,0.5s,mb4.1,baz=335,slow=6.8,SNR=11						
STKA	Stephens Creek	72.44	147	P	P	05 43 35.9	-0.5
	comp=E,1.2nm,0.5s,mb4.1,baz=320,slow=7.9,SNR=3.9						
YKA	Yellowknife Ar	80.94	17	P	P	05 44 24.2	+0.1
	comp=E,0.1nm,0.4s,mb3.1,baz=327,slow=4.8,SNR=5.4						

ISCJB 14 05:37:05.6±0.5, 32°.69N±0°.04×105°.36E±0°.06, h10km, mb3.7/5, Error ellipse: s-maj=7.1km s-min=5.1km az=15.6

IDC 14 05:37:07.2±1.2, 31°.33N×103°.18E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=44.9km s-min=21.8km az=52.0

NEIC 14 05:37:08.5±0.6, 31°.79N×103°.87E, h10km, mb4.2/1, Error ellipse: s-maj=34.9km s-min=10.0km az=222.0

ISC 14 05:37:08.0±0.5, 32°.66N±0°.04×105°.38E±0°.05, h10km, n13, σ1§25/20, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.23	219	Pg	Pg	05 37 50.1	-0.6
CD2				Sg	Sg	05 38 20.1	+0.5
CD2				smax			
	comp=N,3μm,0.7s						
XAN	Xi'an	3.27	64	Pn	Pn	05 38 01.1	+1.9
XAN				Pg	Pg	05 38 08.3	-2.3
XAN				Sn	Sn	05 38 38.3	+0.2
XAN				Sg	Sg	05 38 47.6	-5.3
XAN				smax			
	comp=N,13nm,0.6s						
XAN				smax			
	comp=E,100nm,0.7s						
LZH	Lanzhou	3.65	340	ePn	Pn	05 38 09.4	+4.9
LZH				Pg	Pg	05 38 18.8	+0.9
LZH				Sn	Sn	05 38 49.9	+2.3
LZH				Sg	Sg	05 39 05.4	+0.2
LZH				smax			
	comp=N,280nm,0.5s						
LZH				smax			
	comp=E,710nm,0.8s						
LZH				LR	LR		
	comp=N,600nm,5.9s						
LZH				LR	LR		
	comp=Z,620nm,8.2s						
ENH	Enshi	4.24	123	ePn	Pg	05 38 24.5	-4.7
	comp=Z,84nm,0.7s						
GYA	Guiyang	6.28	169	Pg	Pn	05 38 42.0	+1.3
GYA				Sg	Sn	05 39 45.5	-7.0
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,70nm,0.7s						
GTA	Gaotai	8.11	328	eP	Pn	05 39 01.8	-3.9
GTA				pP		05 39 06.0	
GTA				sP		05 39 09.0	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	Korea Array	19.05	69	P	Px	05 41 55.3	
	comp=Z,1.4nm,0.8s,baz=117,slow=38,SNR=5.2						
MK31	Makanchi Array	22.58	315	P	P	05 42 06.7	-1.7
MKAR	Makanchi Array	22.58	315	P	P	05 42 07.0	-1.4
	comp=Z,0.5nm,0.5s,mb3.2,baz=123,slow=5.3,SNR=3.5						
KURK	Kurchatov	26.70	320	P	P	05 42 45.8	-1.4
	comp=Z,0.2nm,0.3s,mb3.1,baz=118,slow=11,SNR=2.9						
WRAB	Tennant Creek	59.18	148	eP	P	05 47 09.7	+0.5
	comp=Z,1.2nm,0.6s,mb4.1						
WRA	Warramunga Arr	59.18	148	P	P	05 47 08.9	-0.4
	comp=Z,0.9nm,0.5s,mb4.0,baz=340,slow=7.1,SNR=17						
ASAR	Alice Springs	62.28	150	P	P	05 47 30.8	+0.5
	comp=Z,0.7nm,0.6s,mb3.9,baz=335,slow=7.1,SNR=7.7						

ISCJB 14 05:54:55.9±0.7, 31°.99N±0°.02×104°.07E±0°.02, h9km±4km, mb5.1/177, MS4.4/51, Error ellipse: s-maj=3.8km s-min=3.1km az=161.2

IDC 14 05:54:55.6±0.4, 31°.88N×104°.07E, h0km, mb4.9/36, mb1 5.0/37, mb1mx4.9/39, mbtmp4.9/37, ML3.9/1, MS4.1/23, Ms1 4.1/23, ms1mx3.9/38, Error ellipse: s-maj=13.4km s-min=9.3km az=20.0

BJI 14 05:54:57.2, 31°.95N×104°.24E, h15km, mB4.9/20, mb5.0/34, ML5.1/20, Ms4.7/56, Ms7 4.5/45

NEIC 14 05:54:58.0±0.1, 32°.00N×104°.03E, h10km, mb5.1/98, MS4.7/7, Error ellipse: s-maj=5.0km s-min=3.4km az=211.0

TEH 14 05:54:59.0, 32°.11N×104°.00E, h10km

MOS 14 05:54:59.7±0.8, 31°.98N×104°.06E, h34km, mb5.3/81, MS4.6/25, Error ellipse: s-maj=7.5km s-min=3.6km az=121.9

SZGRF 14 05:55:05.8, 32°.31N×103°.43E, h33km, mb5.3, MS4.9, Sichuan, China

DJA 14 05:55:09, 32°.12N×103°.83E, h83km, mb5.3/29

ISC 14 05:54:57.8±0.7, 31°.92N±0°.02×104°.08E±0°.02, h10km±4km, h29km±3.4km; pP-P, n556, σ0§93/563, mb5.1/177, MS4.4/51, 124C-20D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.04	195	Pg	Pg	05 55 17.9	+0.1
CD2				Sg	Sg	05 55 31.9	+0.6
CD2				smax			
	comp=N,40μm,0.7s						
LZH	Lanzhou	4.17	357	ePn	Pn	05 56 04.3	+2.9
LZH				Sn	Sn	05 56 53.1	+3.0
LZH				Sg	Sg	05 57 10.5	-1.1
LZH				smax			
	comp=N,3μm,0.6s						
LZH				smax			
	comp=E,4μm,0.7s						
LZH				LR	LR		
	comp=E,5μm,8.4s						
LZH				LR	LR		
	comp=Z,7μm,8.6s						
XAN	Xi'an	4.59	61	Pn	Pn	05 56 07.1	0.0
XAN				Pg	Pg	05 56 20.6	-5.1
XAN				Sg	Sg	05 57 23.1	-2.0
XAN				smax			
	comp=N,3μm,0.9s						
XAN				smax			
	comp=E,6μm,1.1s						
XAN				LR	LR		
	comp=N,7μm,8.5s						
XAN				LR	LR		
	comp=E,2μm,8.2s						
XAN				LR	LR		
	comp=Z,2μm,11.8s						
ENH	Enshi	4.92	108	ePn	Pn	05 56 12.5	+0.8
GYA	Guiyang	5.89	157	Pn	Pn	05 56 26.3	+1.2
GYA				Sn	Sn	05 57 30.4	-2.2
GYA				smax			
	comp=N,2μm,1.1s						
GYA				smax			
	comp=E,9μm,1.1s						
KMI	Kunming	6.87	190	Pn	Pn	05 56 44.3	+5.7
KMI				Pg	Pg	05 57 16.3	+6.9
KMI				Sn	Sn	05 58 06.0	+9.2
KMI				Sg	Sg	05 58 49.4	+11
KMI				smax			
	comp=N,470nm,1.9s						
KMI				smax			
	comp=E,280nm,1.3s						
KMI				LR	LR		
	comp=N,5μm,6.3s						
KMI				LR	LR		
	comp=E,5μm,6.1s						
GTA	Gaotai	8.24	336	P	Pn	05 56 58.6	+1.2
GTA				pP		05 57 07.8	
G

WHN	**Wuhan**	**8.90**	**96**	P	**Pn**	**05 57 05.0**	**-1.4**
WHN				S	**Sn**	**05 58 38.3**	**-8.4**
WHN				LR	LR		
	comp=N,24μm,9.7s						
WHN				LR	LR		
	comp=E,13μm,11.5s						
WHN				LR	LR		
	comp=Z,9μm,11.7s						
TIY	**Taiyuan**	**8.97**	**48**	*e*P	**Pn**	**05 57 08.4**	**+1.0**
TIY				S	**Sn**	**05 58 47.3**	**-1.2**
BTO	**Baotou**	**9.91**	**27**	*e*P	**Pn**	**05 57 19.4**	**-0.7**
BTO				LR	LR		
	comp=N,2μm,9.8s						
HHC	**Hu-ho-hao-te**	**10.76**	**32**	*e*P	**Pn**	**05 57 32.1**	**+0.3**
HHC				pP		05 57 39.3	
HHC				sP		05 57 44.0	
HHC				S	**Sn**	**05 59 31.8**	**-0.4**
HHC				sS		05 59 42.8	
HHC				SS		05 59 46.0	
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
HHC				LR	LR		
	comp=N,3μm,5.4s						
HHC				LR	LR		
	comp=E,2μm,5.1s						
HHC				LR	LR		
	comp=Z,3μm,6.9s						
LSA	**Lhasa**	**11.34**	**262**	P	**Pn**	**05 57 41.3**	**+1.5**
LSA				LR	LR		
	comp=E,3μm,9.7s						
LSA				LR	LR		
	comp=Z,3μm,11.5s						
LSA	**Lhasa**	**11.34**	**262**	*e*P	**Pn**	**05 57 41.3**	**+1.5**
LSA				pmax	pmax		
	comp=Z,33nm,0.8s						
LSA	**Lhasa**	**11.34**	**262**	*e*Pn	**Pn**	**05 57 41.3**	**+1.5**
	comp=Z,33nm,0.8s						
TIA	**Tai'an**	**11.63**	**65**	*e*P	**Pn**	**05 57 43.6**	**-0.2**
TIA				LR	LR		
	comp=N,330nm,8.0s						
TIA				LR	LR		
	comp=E,400nm,8.0s						
GZH	**Guangzhou**	**12.03**	**135**	P	**Pn**	**05 57 45.5**	**-3.8**
GZH				LR	LR		
	comp=N,3μm,9.7s						
GZH				LR	LR		
	comp=E,3μm,9.5s						
SHL	**Shillong**	**12.43**	**242**	*e*P	**Pn**	**05 57 54.5**	**-0.2**
SHL				*ex*	x	06 01 31.5	
NJ2	**Nanjing**	**12.54**	**85**	*e*P	**Pn**	**05 57 54.1**	**-2.2**
NJ2				pP		05 57 57.4	
NJ2				sP		05 58 00.5	
NJ2				PP		05 58 03.8	
NJ2				S	**Sn**	**06 00 07.6**	**-8.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.6s						
NJ2				LR	LR		
	comp=N,3μm,11.6s						
NJ2				LR	LR		
	comp=E,4μm,12.1s						
NJ2				LR	LR		
	comp=Z,4μm,10.3s						
CHRT	**Chiangrai**	**12.60**	**199**	⇑P	**Pn**	**05 58 04.0**	**+6.9**
	comp=Z,132nm,1.0s						
BJT	**Baijiatuau**	**12.69**	**47**	*e*P	**Pn**	**05 57 57.5**	**-0.7**
BJT				pmax	pmax		
	comp=Z,35nm,0.6s						
BJT	**Baijiatuau**	**12.69**	**47**	*e*Pn	**Pn**	**05 57 57.5**	**-0.7**
	comp=Z,35nm,0.6s						
BJI	**Beijing**	**12.71**	**47**	P	**Pn**	**05 57 57.1**	**-1.4**
BJI				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI				pmax	pmax		
	comp=Z,69nm,3.4s						
BJI				LR	LR		
	comp=N,4μm,3.9s						
BJI				LR	LR		
	comp=E,3μm,5.2s						
BJI				LR	LR		
	comp=Z,810nm,17.4s						
QIZ	**Qiongzhong**	**13.84**	**157**	P	**Pn**	**05 58 18.8**	**+4.7**
QIZ				S	**Sn**	**06 00 54.8**	**+6.9**
QIZ				pmax	pmax		
	comp=Z,130nm,5.1s						
QIZ				LR	LR		
	comp=N,2μm,15.6s						
QIZ				LR	LR		
	comp=Z,2μm,14.5s						
QIZ	**Qiongzhong**	**13.84**	**157**	*e*Pn	**Pn**	**05 58 15.8**	**+1.7**
CHG	**Chiang Mai**	**13.84**	**201**	⇓P	**Pn**	**05 58 21.6**	**+7.5**
	comp=Z,55nm,0.9s						
CHTO	**Chiang Mai**	**13.84**	**201**	*e*P	**Pn**	**05 58 16.0**	**+1.9**
QZH	**Quanzhou**	**14.53**	**115**	*e*P	**Pn**	**05 58 22.0**	**-1.4**
QZH				S	**Sn**	**06 00 59.6**	**-4.9**
QZH				LR	LR		
	comp=N,6μm,11.2s						
QZH				LR	LR		
	comp=E,8μm,9.2s						
QZH				LR	LR		
	comp=Z,14μm,10.4s						
SSE	**Sheshan**	**14.62**	**89**	P	**Pn**	**05 58 26.3**	**+1.7**
SSE				S	**Sn**	**06 01 09.9**	**+3.2**
SSE				pmax	pmax		
	comp=Z,60nm,0.8s						
SSE				pmax	pmax		
	comp=Z,270nm,5.6s						
SSE				LR	LR		
	comp=N,1μm,15.3s						
SSE				LR	LR		
	comp=E,3μm,15.3s						
SSE				LR	LR		
	comp=Z,4μm,14.2s						
TAPN	**Taplejung**	**14.94**	**256**	*e*P	**Pn**	**05 58 27.9**	**-1.2**
	comp=Z,332nm,1.2s						
KKTK	**Khon Kaen**	**15.55**	**185**	P	**Pn**	**05 58 42.0**	**+4.9**
DL2	**Dalian**	**15.90**	**59**	⇑P	**Pn**	**05 58 41.9**	**+0.3**
DL2				S	**Sn**	**06 01 39.3**	**+1.4**
DL2				pmax	pmax		
	comp=Z,30nm,0.8s						
DL2				pmax	pmax		
	comp=Z,110nm,5.3s						
DL2				LR	LR		
	comp=N,500nm,14.5s						
DL2				LR	LR		
	comp=E,810nm,13.7s						
DL2				LR	LR		
	comp=Z,1μm,15.2s						
SONM	**Songino Array**	**16.00**	**6**	Pn	**Pn**	**05 58 43.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=188,slow=12,SNR=30						
SONM				LR	LR	06 05 53.4	
	comp=Z,462nm,21.1s,baz=186,slow=41						
RAMN	**Ramite**	**16.01**	**256**	*e*P	**Pn**	**05 58 42.0**	**-1.1**
	comp=Z,160nm,0.8s						
ULN	**Ulaanbaatar**	**16.09**	**7**	*e*P	**Pn**	**05 58 44.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,36nm,0.9s						
ULN	**Ulaanbaatar**	**16.09**	**7**	*e*Pn	**Pn**	**05 58 44.1**	**+0.1**
	comp=Z,36nm,0.9s						
ULN	**Ulaanbaatar**	**16.09**	**7**	Pn	**Pn**	**05 58 45.6**	**+1.6**
	SNR=16						
ULN				Pn	**Pn**	**05 58 45.6**	**+1.6**
	SNR=16						
GUN	**Gumba**	**16.28**	**260**	*e*P	**Pn**	**05 58 44.6**	**-1.9**
	comp=Z,280nm,0.9s						
NST	**Nakhon Sawan**	**16.57**	**193**	P	**Pn**	**05 58 51.0**	**+0.8**
PKI	**Pulchoki**	**16.78**	**260**	*e*P	**Pn**	**05 58 51.8**	**-1.1**
	comp=Z,349nm,1.0s						
PKIN	**Phulchoki**	**16.79**	**260**	*e*P	**Pn**	**05 58 51.6**	**-1.4**
	comp=Z,264nm,1.1s						
KKN	**Kakani**	**16.82**	**261**	*e*P	**Pn**	**05 58 51.8**	**-1.6**
	comp=Z,267nm,1.1s						
YHNB	**Yeheng**	**16.84**	**111**	*e*P	**Pn**	**05 58 57.5**	**+3.7**
	comp=Z,116nm,0.8s						
SSLB	**Suanglung**	**16.96**	**114**	*e*Pn	**Pn**	**05 58 58.4**	**+3.2**
	comp=Z,102nm,0.9s						
TPUB	**Ta-pu**	**16.98**	**116**	*e*Pn	**Pn**	**05 58 58.4**	**+2.9**
DMN	**Daman**	**17.02**	**260**	*e*P	**Pn**	**05 58 54.8**	**-1.2**
	comp=Z,243nm,1.0s						
NACB	**Ninganchiao**	**17.26**	**112**	*e*Pn	**Pn**	**05 59 02.6**	**+3.7**
	comp=Z,94nm,0.9s						
WMQ	**Urumqi**	**17.53**	**317**	P	**Pn**	**05 59 02.5**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,35nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.5s						
WMQ				LR	LR		
	comp=N,2μm,12.0s						
WMQ				LR	LR		
	comp=E,2μm,10.0s						
WMQ				LR	LR		
	comp=Z,870nm,26.0s						
SNY	**Shenyang**	**18.43**	**52**	⇓P	**Pn**	**05 59 13.3**	**0.0**
SNY				pmax	pmax		
	comp=Z,14nm,0.7s						
SNY				LR	LR		
	comp=N,420nm,9.2s						
SNY				LR	LR		
	comp=E,990nm,15.2s						
SNY				LR	LR		
	comp=Z,1μm,16.1s						
ZAK	**Zakamensk**	**18.46**	**358**	*e*P	**Pn**	**05 59 13.6**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s						
TLY	**Talaya**	**19.75**	**359**	Pn	**Pn**	**05 59 29.4**	**+0.3**
	comp=Z,133nm,0.9s,SNR=5.1						
TLY	**Talaya**	**19.75**	**359**	*c i*P	**Pn**	**05 59 29.5**	**+0.4**
TLY				pmax	pmax		
	comp=Z,27nm,1.0s						
TLY				MLR	MLR		
	comp=Z,968nm,10.0s						
TLY	**Talaya**	**19.75**	**359**	*e*Pn	**Pn**	**05 59 29.7**	**+0.6**
	comp=Z,21nm,0.9s						
TLY	**Talaya**	**19.75**	**359**	P	**Pn**	**05 59 30.4**	**+1.3**
	SNR=14						
TLY				P		05 59 30.4	
	SNR=14						
IRK	**Irkutsk**	**20.31**	**0**	*e*P	**P**	**05 59 34.8**	**+1.1**
IRK				pmax	pmax		
	comp=Z,125nm,1.0s						
KSRS	**Korea Array**	**20.35**	**68**	P	**P**	**05 59 34.5**	**+0.3**
	comp=Z,78nm,0.7s,baz=255,slow=10,SNR=160						
KSRS				S	**S**	**06 03 24.4**	**+2.3**
	comp=Z,9.7nm,1.2s,baz=253,slow=15,SNR=5.9						
KSRS				LR	LR	06 07 59.6	
	comp=Z,612nm,18.7s,MS4.0,baz=262,slow=38						
CN2	**Changchun**	**20.56**	**49**	⇓P	**P**	**05 59 37.5**	**+1.0**
CN2				*es*P	sP	05 59 44.0	+3.2
CN2				*e*S	**S**	**06 03 21.5**	**-4.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,21.0s,MS4.1						
CN2				LR	LR		
	comp=E,700nm,21.0s,MS4.1						
CN2				LR	LR		
	comp=Z,800nm,17.0s,MS4.2						
PTH	**Pithoragarh**	**20.64**	**270**	*e*P	**P**	**05 59 38.5**	**+1.0**
HIA	**Hailar**	**20.95**	**30**	*e*P	**P**	**05 59 41.0**	**+0.4**
HIA				pmax	pmax		
	comp=Z,38nm,0.8s						
HIA	**Hailar**	**20.95**	**30**	*e*P	**P**	**05 59 41.0**	**+0.4**
	comp=Z,38nm,0.8s						
JOSI	**Joshimath**	**21.01**	**273**	*e*P	**P**	**05 59 42.2**	**+0.8**
KLP	**Kalpa**	**21.96**	**276**	*e*P	**P**	**05 59 52.4**	**+0.6**
KLP				AMb	AMB	05 59 54.9	
	comp=Z,113nm,1.0s,mb5.2						
DDI	**Dehra Dun**	**22.32**	**273**	*e*P	**P**	**05 59 55.0**	**-0.6**
DDI				*ex*	x	06 02 25.5	
MK31	**Makanchi Array**	**22.36**	**318**	*e*P	**P**	**05 59 56.5**	**+0.7**
MKAR	**Makanchi Array**	**22.36**	**318**	P	**P**	**05 59 56.4**	**+0.6**
	comp=Z,39nm,0.9s,mb4.8,baz=116,slow=11,SNR=197						
MKAR				LR	LR	06 09 30.7	
	comp=Z,1μm,18.1s,MS4.5,baz=106,slow=39						
SMLA	**Simla**	**22.94**	**275**	*i* P	**P**	**05 59 58.3**	**-3.8**
SMLA				*i* S	**S**	**06 04 10.7**	**-1.6**
SDNR	**Sundarnagar**	**23.05**	**276**	*e*P	**P**	**06 00 03.0**	**-0.3**
AGRA	**Agra**	**23.18**	**265**	*e*P	**P**	**06 00 04.7**	**0.0**
NDI	**New Delhi**	**23.40**	**269**	*ex*	x	06 00 04.0	
KKR	**Kurukshetra**	**23.44**	**272**	*e*P	**P**	**06 00 06.9**	**-0.5**
AYAN	**Aya Nagar**	**23.52**	**269**	*e*P	**P**	**06 00 07.5**	**-0.8**
AYAN				AMb	AMB	06 00 09.3	
	comp=Z,49nm,0.9s,mb5.0						
BHK	**Bhakra**	**23.53**	**276**	*ex*	**P**	**06 00 05.8**	**-2.5**
MDJ	**Mudanjiang**	**23.60**	**50**	P	**P**	**06 00 09.5**	**+0.7**
MDJ				pP		06 00 12.3	
MDJ				sP	sP	06 00 14.3	+1.1
MDJ				PcP	PcP	06 03 54.0	+0.6
MDJ				S	**S**	**06 04 22.5**	**-0.2**
MDJ				ScP	ScP	06 07 32.8	+1.2
MDJ				PcS	PcS	06 07 35.0	+2.3
MDJ				ScS	ScS	06 11 18.8	+0.8
MDJ				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.2						
MDJ				pmax	pmax		
	comp=Z,160nm,3.8s						
MDJ				LR	LR		
	comp=N,320nm,10.0s,MS4.2						
MDJ				LR	LR		
	comp=E,440nm,14.0s,MS4.2						
MDJ				LR	LR		
	comp=Z,640nm,13.1s,MS4.3						
MDJ	**Mudanjiang**	**23.60**	**50**	*e*P	**P**	**06 00 09.9**	**+1.1**
	comp=Z,147nm,1.0s,mb5.4						
SONA	**Sohna**	**23.62**	**268**	*e*P	**P**	**06 00 07.5**	**-1.7**
SONA				AMb	AMB	06 00 16.7	
	comp=Z,106nm,0.5s,mb5.6						
KSH	**Kashi**	**23.98**	**296**	P	**P**	**06 00 16.3**	**+3.9**
KSH				*e*pP		06 00 20.4	
KSH				*es*P	sP	06 00 23.5	+6.6
KSH				*e*PP		06 00 50.4	
KSH				*e*PcP	PcP	06 03 57.1	+2.7
KSH				*e*S	**S**	**06 04 30.8**	**+1.7**
KSH				*es*S	sS	06 04 37.6	+3.3
KSH				*e*SS		06 05 23.3	
KSH				*e*ScP	ScP	06 07 34.1	+1.3
KSH				*e*PcS	PcS	06 07 37.0	+3.1
KSH				*e*ScS	ScS	06 11 20.4	+0.6
KSH				pmax	pmax		
	comp=Z,310nm,1.9s,mb5.4						
KSH				LR	LR		
	comp=N,600nm,10.9s,MS4.5						
KSH				LR	LR		
	comp=E,730nm,12.6s,MS4.5						
THN	**Thein Dam**	**23.99**	**279**	*e*P	**P**	**06 00 10.9**	**-1.6**
RTK	**Rohtak**	**23.99**	**270**	*ex*	x	06 00 03.0	
ULHL	**Ulahol**	**24.39**	**303**	P	**P**	**06 00 17.8**	**+1.7**
	SNR=11						
VLA	**Vladivostok**	**24.62**	**55**	*i* P	**P**	**06 00 22.1**	**+3.9**
VLA				pmax	pmax		
	comp=Z,125nm,1.0s,mb5.4						
VLA				MLR	MLR		
	comp=Z,700nm,15.2s,MS4.3						
KHET	**Khetri**	**24.75**	**268**	*e*P	**P**	**06 00 19.4**	**-0.1**
KHET				AMb	AMB	06 00 21.9	
	comp=Z,68nm,1.0s,mb5.1						
NGP	**Nagpur**	**24.77**	**250**	*ex*	**P**	**06 00 15.4**	**-4.3**
NGP				AMb	AMB	06 00 18.5	
	comp=Z,88nm,1.1s,mb5.2						
TKM2	**Tokmak 2**	**25.04**	**304**	P	**P**	**06 00 23.4**	**+1.5**
	SNR=43						
KZA	**Kyzart**	**25.06**	**302**	P	**P**	**06 00 24.5**	**+2.3**
	SNR=151						
BHPL	**Bhopal**	**25.11**	**257**	*e*P	**P**	**06 00 21.1**	**-1.7**
BHPL				AMb	AMB	06 00 38.1	
	comp=Z,56nm,0.6s,mb5.3						
UCH	**Uchtor**	**25.62**	**302**	P	**P**	**06 00 29.6**	**+2.2**
	SNR=89						
UCH	**Uchtor**	**25.62**	**302**	*e*P	**P**	**06 00 29.3**	**+2.0**
FRU	**Bishkek**	**25.70**	**303**	*e*P	**P**	**06 00 29.0**	**+1.0**
FRU				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.0						
AAK	**Ala-Archa**	**25.74**	**303**	P	**P**	**06 00 29.4**	**+1.1**
	SNR=15						
AAK	**Ala-Archa**	**25.74**	**303**	P	**P**	**06 00 29.8**	**+1.5**
	comp=Z,17nm,0.9s,mb4.6,baz=83,slow=5.0,SNR=24						
AAK				LR	LR	06 12 28.4	
	comp=Z,1μm,20.2s,MS4.4,baz=98,slow=41						
AAK	**Ala-Archa**	**25.74**	**303**	*e*P	**P**	**06 00 29.4**	**+1.1**
AAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**25.74**	**303**	*e*P	**P**	**06 00 29.4**	**+1.0**
	comp=Z,32nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**25.74**	**303**	P	**P**	**06 00 30.2**	**+1.9**
	SNR=16						
AAK				P		06 00 30.2	
	SNR=16						
USP	**Ospenovka**	**25.90**	**304**	P	**P**	**06 00 30.8**	**+1.0**
	SNR=54						
ZAA0	**Zalesovo Array**	**25.99**	**334**	*e*P	**P**	**06 00 30.2**	**-0.2**
ZALV	**Zalesovo Beam**	**25.99**	**334**	P	**P**	**06 00 30.5**	**+0.1**
	comp=Z,51nm,0.8s,mb5.1,baz=128,slow=9.6,SNR=132						
ZALV				LR	LR	06 10 22.1	
	comp=Z,280nm,19.1s,MS3.8,baz=177,slow=36						
AML	**Almayashu**	**26.19**	**302**	P	**P**	**06 00 34.4**	**+2.0**
	SNR=53						
AJM	**Ajmer**	**26.22**	**266**	*e*P	**P**	**06 00 32.8**	**-0.1**
KURK	**Kurchatov**	**26.59**	**322**	P	**P**	**06 00 36.7**	**+0.8**
	comp=Z,245nm,1.1s,mb5.7,SNR=35						
KURK	**Kurchatov**	**26.59**	**322**	P	**P**	**06 00 36.1**	**+0.2**
	comp=Z,32nm,1.0s,mb4.8,baz=125,slow=9.0,SNR=107						
KURK				PcP	PcP	06 03 59.0	-1.0
	comp=Z,2.9nm,0.6s,baz=112,slow=2.0,SNR=4.0						
KURK				LR	LR	06 11 57.6	
	comp=Z,539nm,19.1s,MS4.1,baz=120,slow=38						
KURK	**Kurchatov**	**26.59**	**322**	*ce*P	**P**	**06 00 35.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.0						
KURK	**Kurchatov**	**26.59**	**322**	*e*P	**P**	**06 00 36.1**	**+0.2**
	comp=Z,54nm,1.1s,mb5.0						
KURK	**Kurchatov**	**26.59**	**322**	P	**P**	**06 00 36.4**	**+0.5**
	SNR=26						
KURK				P		06 00 36.4	
	SNR=26						
BOD	**Bodaibo**	**26.78**	**12**	*e*P	**P**	**06 00 38.2**	**+0.6**
BOD				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
KLR	**Kul'dur**	**27.00**	**42**	*e*P	**P**	**06 00 37.1**	**-2.5**
KLR				MLR	MLR		
	comp=E,1μm,11.5s						
KLR				MLR	MLR		
	comp=Z,3μm,11.5s,MS5.0						
HYB	**Hyderabad**	**27.23**	**244**	*i* P	**P**	**06 00 41.5**	**-0.5**
NVS	**Novosibirsk**	**27.27**	**333**	*e*P	**P**	**06 00 40.7**	**-1.3**
NVS				*e*S	**S**	**06 05 13.5**	**-7.5**
NVS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.4						
NVS				pmax	pmax		
	comp=N,25nm,1.4s						
NVS				pmax	pmax		
	comp=E,21nm,1.3s						
NVS				smax			
	comp=N,15nm,1.6s						
MAJO	**Matsushiro**	**28.50**	**71**	*e*P	**P**	**06 00 54.2**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
MAJO	**Matsushiro**	**28.50**	**71**	*e*P	**P**	**06 00 54.2**	**+1.0**
	comp=Z,15nm,0.7s,mb4.7						
MAT	**Matsushiro**	**28.50**	**71**	P	**P**	**06 00 53.7**	**+0.5**
MJAR	**Matsushiro Arr**	**28.50**	**71**	P	**P**	**06 00 52.2**	**-1.1**
	comp=Z,8.3nm,0.7s,mb4.5,baz=276,slow=10,SNR=7.6						
MJAR				LR	LR	06 12 34.2	
	comp=Z,267nm,18.2s,MS3.9,baz=275,slow=37						
NRGR	**Nerungri**	**28.59**	**24**	*e*P	**P**	**06 00 55.5**	**+1.7**
NRGR				S	**S**	**06 05 46.5**	**+4.7**
NRGR				smax			
	comp=N,19nm,0.4s						
JASL	**Jaisalmer**	**29.25**	**269**	*e*P	**P**	**06 01 00.7**	**+0.7**
KBL	**Kabul**	**29.34**	**285**	*e*P	**P**	**06 01 02.4**	**+1.7**
KBL				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
KBL	**Kabul**	**29.34**	**285**	*e*P	**P**	**06 01 02.4**	**+1.6**
	comp=Z,28nm,0.9s,mb5.0						
POO	**Poona**	**30.31**	**251**	AMb	AMB	06 01 56.8	
	comp=Z,17nm,0.7s,mb4.9						
KAD	**Karad**	**30.70**	**249**	AMb	AMB	05 59 11.5	
	comp=Z,11nm,0.9s,mb4.7						
DAV	**Davao City (W)**	**31.83**	**136**	LR	LR	06 15 52.6	
	comp=Z,447nm,18.4s,MS4.2,baz=322,slow=40						
BVAR	**Borovoye Array**	**32.15**	**321**	P	**P**	**06 01 25.8**	**+0.5**
	comp=Z,10nm,1.0s,mb4.6,baz=116,slow=10,SNR=31						
BVAR				PcP	PcP	06 04 13.2	-0.9
	comp=Z,5.9nm,0.9s,baz=134,slow=4.3,SNR=6.6						
BVAR				LR	LR	06 15 02.1	
	comp=Z,308nm,21.3s,MS4.0,baz=115,slow=38						
BVAR	**Borovoye Array**	**32.15**	**321**	P	**P**	**06 01 25.8**	**+0.5**
BVAR						06 04 13.2	
BRVK	**Borovoye**	**32.22**	**321**	P	**P**	**06 01 26.4**	**+0.5**
	comp=Z,95nm,0.9s,mb5.6,SNR=5.4						
BRVK	**Borovoye**	**32.22**	**321**	*ce*P	**P**	**06 01 25.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.9						
BRVK	**Borovoye**	**32.22**	**321**	*e*P	**P**	**06 01 26.2**	**+0.3**
	comp=Z,15nm,0.9s,mb4.8						
BRVK	**Borovoye**	**32.22**	**321**	P	**P**	**06 01 26.9**	**+1.0**
	SNR=7.7						
BRVK				P		06 01 26.9	
	SNR=7.7						
ASAJ	**Asahikawa**	**32.41**	**57**	P	**P**	**06 01 28.2**	**+0.5**
	comp=Z,43nm,1.0s,mb5.2,baz=267,slow=12,SNR=14						
ASAJ	**Asahikawa**	**32.41**	**57**	P	**P**	**06 01 28.3**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,43nm,1.0s						
ERM	**Erimo**	**32.56**	**61**	*e*P	**P**	**06 01 32.7**	**+3.6**
ERM				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
ERM	**Erimo**	**32.56**	**61**	*e*P	**P**	**06 01 32.7**	**+3.6**
	comp=Z,30nm,0.6s,mb5.4						
PALK	**Pallekele**	**32.80**	**227**	LR	LR	06 16 34.4	
	comp=Z,236nm,18.7s,MS3.9,baz=213,slow=40						
YSS	**Yuzh-Sakhalins**	**33.06**	**52**	*e*P	**P**	**06 01 36.0**	**+2.6**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.3						
YSS				MLR	MLR		
	comp=N,600nm,14.0s						
YSS	**Yuzh-Sakhalins**	**33.06**	**52**	*e*P	**P**	**06 01 35.7**	**+2.4**
	comp=N,70nm,1.1s,mb5.5						
YAK	**Yakutsk**	**34.36**	**21**	*e*P	**P**	**06 01 47.8**	**+3.4**
YAK				*e**PP	pP	06 01 57.7	+10
YAK				*e*		06 02 54.6	
YAK				*e*S	**S**	**06 07 09.8**	**-1.9**
YAK				*e*SSS		06 09 39.2	
YAK				*e*		06 12 02.8	
YAK				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				smax			
	comp=E,29nm,1.8s						
YAK				smax			
	comp=N,27nm,1.9s						
YAK				MLR	MLR		
	comp=Z,456nm,11.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,179nm,10.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,176nm,10.0s,MS4.2						
IMYA	**Miami**	**36.44**	**289**	*e*P	**P**	**06 02 04.2**	**+1.5**
ISRO	**Mashad**	**36.95**	**289**	*e*P	**P**	**06 02 09.6**	**+2.6**
ABKAR	**Akbulak array**	**37.12**	**311**	*e*P	**P**	**06 02 08.6**	**+0.3**
	comp=E,13nm,0.7s,mb4.9						
IDAH	**Dahanechah**	**37.17**	**283**	*e*P	**P**	**06 02 09.2**	**+0.3**
IPAY	**Payeh**	**37.31**	**290**	*e*P	**P**	**06 02 12.7**	**+2.6**
IEMG	**Emamgholi**	**37.49**	**291**	*e*P	**P**	**06 02 13.2**	**+1.6**
IAKL	**Akhelmad**	**37.49**	**290**	*e*P	**P**	**06 02 11.6**	**0.0**
IKRD	**Kardeh**	**37.66**	**290**	*e*P	**P**	**06 02 06.5**	**-6.6**
ABKT	**Ailbek**	**37.86**	**292**	P	**P**	**06 02 16.9**	**+2.2**
	comp=E,335nm,0.9s,mb6.1,SNR=11						
IKOO	**Kooshah**	**37.94**	**283**	*e*P	**P**	**06 02 16.6**	**+1.1**
ISFR	**Sfrayin**	**38.04**	**291**	*e*P	**P**	**06 02

ARU Arti 39.78 322 P **P 06 02 31.8 +1.2**
comp=Z,512nm,0.9s,mb6.3,SNR=16
ARU Arti 39.78 322*c i*P **P 06 02 31.0 +0.4**
ARU *e* 06 04 02.1
ARU S **S 06 08 36.8 +2.4**
ARU pmax pmax
comp=Z,124nm,1.2s,mb5.5
ARU Arti 39.78 322 *e*P **P 06 02 30.7 +0.1**
comp=Z,79nm,0.9s,mb5.4
IGLO Ghaloghah 41.43 291 *e*P **P 06 02 45.1 +0.6**
IANJ Anjilo 41.53 289 *e*P **P 06 02 46.9 +1.5**
SOKR Solikamsk 41.71 326*c i*P **P 06 02 47.2 +0.7**
SOKR pmax pmax
comp=Z,130nm,1.3s,mb5.4
IMEH Mehriz 41.81 283 *e*P **P 06 02 48.3 +0.6**
TIXI Tiksi 41.96 11 *e*P **P 06 02 47.6 -0.8**
TIXI pmax pmax
comp=Z,15nm,1.0s,mb4.6
TIXI MLR MLR
comp=Z,366nm,12.0s,MS4.5
TIXI Tiksi 41.96 11 *e*P **P 06 02 47.2 -1.2**
comp=Z,14nm,1.0s,mb4.5
ISAD Sadrabad 42.45 284 *e*P **P 06 02 52.4 -0.5**
IDMV Damavand 43.02 290 *e*P **P 06 02 58.4 +0.9**
IZEF Zefreh 43.34 286 *e*P **P 06 03 00.7 +0.6**
IVRN Varamin 43.38 289 *e*P **P 06 03 00.2 -0.2**
SEY Seymchan 43.40 30*c e*P **P 06 02 59.7 -0.4**
IPAR Pars 43.52 281 *e*P **P 06 03 01.7 +0.1**
ISRV Sarvestan 43.60 281 *e*P **P 06 02 59.8 -2.4**
PEA0B Petropavlovsk- 43.63 45 *e*P **P 06 03 03.8 +1.7**
PETK Petropavlovsk- 43.63 45 P **P 06 03 01.9 -0.2**
comp=Z,13nm,0.8s,mb4.8,baz=223,slow=3.5,SNR=22
PETK LR LR 06 23 06.8
comp=Z,344nm,19.2s,MS4.3,baz=258,slow=39
IR3 Iran Long-Peri 43.85 290 *e*P **P 06 03 04.4 +0.2**
IMOK Mouk 44.03 280 *e*P **P 06 03 03.0 -2.7**
IPIR Pirpir 44.57 286 *e*P **P 06 03 11.8 +1.8**
IRAZ Razeghan 44.74 290 *e*P **P 06 03 11.9 +0.6**
UMR Umm Al-Rimmam 48.04 283 *e*P **P 06 03 37.3 -0.1**
UMR AMb AMB 06 03 38.2
comp=Z,36nm,0.9s,mb5.4
QRN Al-Qurain 48.12 282 *e*P **P 06 03 37.3 -0.7**
QRN AMb AMB 06 03 38.3
comp=Z,38nm,0.8s,mb5.5
ZEI Tsey 48.14 301 *e*P **P 06 03 38.0 +0.1**
ZEI pmax pmax
comp=Z,11nm,0.9s,mb4.9
MIB Mutribah 48.28 283 *e*P **P 06 03 39.1 -0.1**
MIB AMb AMB 06 03 40.1
comp=Z,101nm,0.8s,mb5.9
RDF Al-Radifah 48.37 282 *e*P **P 06 03 39.8 -0.1**
RDF AMb AMB 06 03 41.3
comp=Z,83nm,0.8s,mb5.8
KIV Kislovodsk 48.86 303 *e*P **P 06 03 44.2 +0.8**
KIV pmax pmax
comp=Z,42nm,0.9s,mb5.5
KIV Kislovodsk 48.86 303 *e*P **P 06 03 44.6 +1.2**
comp=Z,28nm,0.8s,mb5.3
KIV Kislovodsk 48.86 303 P **P 06 03 44.9 +1.5**
SNR=6.0
KIV P 06 03 44.9
SNR=6.0
KLMR Klimovskoe 50.39 325 *e*P **P 06 03 54.0 -0.8**
KLMR pmax pmax
comp=Z,69nm,1.1s,mb5.6
BILL Bilibino 50.45 26⇑*e*P **P 06 03 58.4 +3.2**
BILL *e*S **S 06 11 08.1 -0.3**
BILL pmax pmax
comp=Z,21nm,1.0s,mb5.1
BILL MLR MLR
comp=Z,300nm,13.0s,MS4.5
BILL Bilibino 50.45 26 *e*P **P 06 03 54.5 -0.7**
comp=Z,17nm,0.9s,mb5.1
VSR Storozhevoye 50.52 312 *e*P **P 06 03 55.6 -0.4**
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,20nm,1.0s
SOC Sochi 51.04 303 *e*P **P 06 03 59.0 -1.0**
SOC *e**PP pP 06 04 07.7 +4.4
SOC *e*S **S 06 11 12.5 -4.8**
SOC pmax pmax
comp=Z,25nm,0.8s,mb5.2
MOS Moscow 51.24 318 *e*P **P 06 04 00.3 -1.0**
MOS *e* 06 05 57.0
MOS pmax pmax
comp=Z,143nm,0.9s,mb5.9
MOS pmax pmax
comp=Z,200nm,1.0s,mb6.0
MOS MLR MLR
comp=Z,900nm,21.0s,MS4.8
OBN Obninsk 51.87 318⇑*e*P **P 06 04 05.6 -0.4**
OBN *e* 06 06 02.0
OBN *e*S **S 06 11 20.8 -7.5**
OBN pmax pmax
comp=Z,45nm,1.0s,mb5.3
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.5
KAKA Kakadu 52.03 144 *e*P **P 06 04 03.8 -3.9**
comp=Z,18nm,0.8s,mb5.1
KAKA Kakadu 52.03 144 *e*P **P 06 04 08.7 +1.0**
comp=Z,100nm,1.1s,mb5.7
ANN Anapa 52.45 304 *e*P sP 06 04 23.9 +8.8
ANN pmax pmax
comp=Z,83nm,1.1s,mb5.6
MALT Malatya 53.09 296 *e*P **P 06 04 15.9 +0.6**
comp=Z,12nm,0.9s,mb4.8
MALT Malatya 53.09 296⇑*i*P **P 06 04 16.3 +1.0**
APA Apatity 53.57 333⇓*e*P **P 06 04 19.6 +1.2**
APA *i* 06 04 26.4
APA MLR MLR
comp=Z,1μm,14.0s,MS5.1
FITZ Fitzroy Crossi 53.86 154 *e*P **P 06 04 20.1 -1.0**
comp=Z,18nm,0.8s,mb5.0
FITZ Fitzroy Crossi 53.86 154 P **P 06 04 20.2 -0.8**
comp=Z,15nm,0.9s,mb4.9,baz=352,slow=6.9
FITZ LR LR 06 27 48.2
comp=Z,75nm,21.8s,MS3.7,baz=343,slow=37
FITZ Fitzroy Crossi 53.86 154 *e*P **P 06 04 20.0 -1.1**
comp=Z,17nm,1.0s,mb4.9
JOF Joensuu 54.33 327 *e*P **P 06 04 23.2 -0.9**
JOF pmax pmax
comp=Z,22nm,0.8s,mb5.1
JOF Joensuu 54.33 327 *e*p **P 06 04 23.2 -0.9**
comp=Z,22nm,0.8s,mb5.1
SIM Simferopol' 54.74 305*de*P **P 06 04 28.4 +1.1**
SIM pmax pmax
comp=Z,94nm,0.8s,mb5.9
SIM MLR MLR
comp=Z,110nm,15.1s,MS4.0
KEV Kevo 55.98 336 *e*P **P 06 04 34.5 -1.4**
KEV pmax pmax
comp=Z,22nm,1.0s,mb5.1
KEV Kevo 55.98 336 *e*p **P 06 04 34.5 -1.4**
comp=Z,22nm,1.0s,mb5.1
ASF Jabal al Asfar 56.05 290 P **P 06 04 37.4 +0.4**
comp=Z,14nm,1.0s,mb5.0,baz=326,slow=5.7,SNR=19
BR131 Keskin Array S 56.33 299 *e*P **P 06 04 38.8 -0.1**
BRTR Keskin Array B 56.33 299 P **P 06 04 38.6 -0.2**
comp=Z,9.5nm,0.8s,mb4.9,baz=100,slow=6.9,SNR=44
BRTR LR LR 06 32 37.6
comp=Z,57nm,19.0s,MS3.7,baz=217,slow=40
BRTR Keskin Array B 56.33 299 P **P 06 04 38.6 -0.2**
BRTR LR LR 06 32 37.6
ARCES ARCESS Array B 56.51 336 P **P 06 04 39.1 -0.5**
comp=Z,9.9nm,1.0s,mb4.8,baz=85,slow=7.6,SNR=18
ARCES PcP PcP 06 05 35.1 -1.1
comp=Z,3.9nm,0.6s,baz=96,slow=5.6,SNR=4.5
ARCES LR LR 06 29 14.7
comp=Z,108nm,18.1s,MS4.0,baz=276,slow=36
ARCES ARCESS Array B 56.51 336 P **P 06 04 39.2 -0.5**
ARCES 06 05 35.1
KAF Kangasniemi 56.70 327 *e*P **P 06 04 39.8 -1.3**
KAF pmax pmax
comp=Z,19nm,0.8s,mb5.2
KAF Kangasniemi 56.70 327 *e*p **P 06 04 39.8 -1.3**
comp=Z,19nm,0.8s,mb5.2
AKASG Malin Array Be 56.82 313 P **P 06 04 40.9 -1.3**
comp=Z,14nm,0.6s,mb5.2,baz=70,slow=6.4,SNR=33
FINES FINESS Array B 56.88 326 P **P 06 04 41.9 -0.5**
comp=Z,34nm,0.9s,mb5.4,baz=78,slow=6.8,SNR=61
MMAI Mount Meron Ar 56.97 291 P **P 06 04 43.5 0.0**
comp=Z,1.1nm,0.3s,mb4.3,baz=71,slow=8.1,SNR=7.3

SPITS Spitsbergen Ar 58.55 346 P **P 06 04 53.5 -0.4**
comp=Z,3.9nm,0.6s,mb4.6,baz=92,slow=10,SNR=19
SPITS Spitsbergen Ar 58.55 346 P **P 06 04 53.5 -0.4**
SPB4 Spitsbergen Ar 58.55 346 *e*P **P 06 04 53.5 -0.5**
CFR Carcaliu 58.80 307 ⇓P **P 06 04 55.9 -0.3**
CFR Carcaliu 58.80 307⇓*i*P **P 06 04 55.9 -0.3**
COEN Coen 59.02 134 *e*P **P 06 05 01.8 +3.8**
comp=Z,139nm,0.6s,mb6.2
HARR Harsova 59.07 306⇑P **P 06 04 58.0 -0.1**
HARR Harsova 59.07 306⇑*i*P **P 06 04 58.0 -0.1**
WRAB Tennant Creek 59.16 146 P **P 06 04 58.0 -0.8**
comp=Z,462nm,0.8s,SNR=13
WRAB Tennant Creek 59.16 146 *e*P **P 06 04 58.8 0.0**
WRA Warramunga Arr 59.16 146 P **P 06 04 58.4 -0.4**
comp=Z,54nm,1.0s,mb5.5,baz=337,slow=7.6,SNR=13
ISP Isparta 59.22 298 P **P 06 04 58.7 -0.5**
ISP pmax pmax
comp=Z,26nm,0.8s,mb5.3
ISP Isparta 59.22 298 P **P 06 04 58.7 -0.4**
comp=Z,26nm,0.8s,mb5.3
VRI Vrincioaia 59.57 308 P **P 06 05 02.3 +0.8**
VRI Vrincioaia 59.57 308⇑*i*P **P 06 05 02.0 +0.5**
PLOR Plostina 59.63 308 ⇓P **P 06 05 02.5 +0.6**
PLOR Plostina 59.63 308⇓*i*P **P 06 05 02.5 +0.6**
SUW Suwalki 59.73 318 *e*P **P 06 05 01.9 -0.6**
BUR01 Bucovina Ar. S 60.10 310 P **P 06 05 05.6 +0.5**
BURAR Bucovina Array 60.10 310 ⇓P **P 06 05 05.2 +0.1**
BURAR Bucovina Array 60.10 310⇓*i*P **P 06 05 05.2 +0.1**
BUR08 Bucovina Ar. S 60.10 310 *e*P **P 06 05 05.2 +0.1**
MLR Muntele Rosu 60.20 308 P **P 06 05 05.8 0.0**
comp=Z,6.8nm,0.8s,mb4.7,baz=59,slow=2.3,SNR=12
MLR Muntele Rosu 60.20 308 P **P 06 05 07.0 +1.2**
MLR Muntele Rosu 60.20 308⇑*i*P **P 06 05 06.2 +0.4**
LVV L'vov 60.27 313 *e*P **P 06 05 05.8 -0.4**
VOIR 60.82 308 ⇑P **P 06 05 10.2 +0.1**
VOIR 60.82 308⇑*i*P **P 06 05 10.2 +0.1**
KWP Kalwaria Pacla 61.14 313 *e*P **P 06 05 12.6 +0.5**
KWP Kalwaria Pacla 61.14 313 *e*P **P 06 05 12.4 +0.2**
comp=Z,82nm,0.9s,mb5.9
KWP Kalwaria Pacla 61.14 313⇑*i*P **P 06 05 12.5 +0.3**
KOLS Kolonicke sedl 61.61 312 *e*P **P 06 05 15.4 0.0**
KOLS pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
KOLS Kolonicke sedl 61.61 312 *e*P **P 06 05 15.4 0.0**
comp=Z,6.8nm,0.8s,mb4.8
KOLS Kolonicke sedl 61.61 312 *e*P **P 06 05 15.4 0.0**
TRPA Tarpa 61.68 311⇑*i*P **P 06 05 16.6 +0.8**
UZH Uzhgorod 61.69 312 *e*P **P 06 05 08.7 -7.2**
DRGR 61.97 310 P **P 06 05 18.4 +0.6**
DRGR 61.97 310⇑*i*P **P 06 05 18.1 +0.3**
STHS Stebnicka Huta 62.12 313 *e*P **P 06 05 18.8 +0.1**
STHS pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
STHS Stebnicka Huta 62.12 313 *e*P **P 06 05 18.8 +0.1**
comp=Z,8.5nm,0.9s,mb4.9
STHS Stebnicka Huta 62.12 313 *e*P **P 06 05 18.8 +0.1**
ASAR Alice Springs 62.19 149 P **P 06 05 19.1 -0.3**
comp=Z,12nm,1.0s,mb5.0,baz=331,slow=6.1,SNR=35
GZR Gura Zlata 62.36 308 P **P 06 05 19.9 -0.5**
GZR Gura Zlata 62.36 308⇓*i*P **P 06 05 21.0 +0.6**
NIE Niedzica 62.70 313 *e*P **P 06 05 23.1 +0.5**
OJC Ojcow 62.77 314 *e*P **P 06 05 22.9 -0.2**
KECS Kecovo 62.88 312 *e*P **P 06 05 24.0 +0.1**
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
KECS Kecovo 62.88 312 *e*P **P 06 05 24.0 +0.1**
comp=Z,4.4nm,0.7s,mb4.7
KECS Kecovo 62.88 312 *e*P **P 06 05 23.9 0.0**
HFS Hagfors 63.09 326 P **P 06 05 24.2 -0.8**
comp=Z,20nm,0.8s,mb5.3,baz=107,slow=7.9,SNR=33
PSZ Piszkesteto 63.43 312⇑*e*P **P 06 05 27.9 +0.4**
PSZ Piszkesteto 63.43 312⇓*i*P **P 06 05 28.3 +0.8**
OKC Ostrava-Krasne 63.90 314 *e*P **P 06 05 30.7 +0.1**
OKC MLR MLR
comp=Z,500nm,19.8s,MS4.7
OKC Ostrava-Krasne 63.90 314 *e*P **P 06 05 30.7 +0.1**
OKC AMS AMS 06 34 20.0
comp=Z,500nm,19.8s
VYHS Vyhne 63.91 312 *e*P **P 06 05 31.2 +0.5**
VYHS *e* 06 05 37.7
VYHS pmax pmax
comp=Z,13nm,1.3s,mb4.8
VYHS Vyhne 63.91 312 *e*P **P 06 05 31.2 +0.5**
comp=Z,13nm,1.3s,mb4.8
VYHS *e* 06 05 37.7
VYHS Vyhne 63.91 312 *e*P **P 06 05 31.2 +0.5**
VYHS *e*pP pP 06 05 37.7 +3.6
NB2 NORSAR Subarra 63.97 327 P **P 06 05 29.4 -1.4**
comp=Z,39nm,1.1s,mb5.3,baz=73,slow=6.9
NOA NORSAR Array B 63.97 327 P **P 06 05 29.7 -1.2**
comp=Z,18nm,0.9s,mb5.1,baz=70,slow=6.5,SNR=33
NOA PP PP 06 07 51.7 +0.6
comp=Z,2.1nm,0.8s,baz=66,slow=6.3,SNR=3.3
NOA LR LR 06 34 56.5
comp=Z,217nm,18.1s,MS4.4,baz=10.0,slow=38
NOA NORSAR Array B 63.97 327 P **P 06 05 29.7 -1.1**
NOA 06 07 51.7
NOA NORSAR Array B 63.97 327 P **P 06 05 29.7 -1.2**
NOA PP PP 06 07 51.7 +0.6
NOA LR LR 06 34 56.5
BSD Bornholm Skovb 64.04 320 *e*P **P 06 05 30.6 -0.8**
BSD pmax pmax
comp=Z,14nm,0.9s,mb5.0
BSD Bornholm Skovb 64.04 320 *i* P **P 06 05 30.6 -0.8**
comp=Z,14nm,0.9s,mb5.0
KOLL Kolacno 64.16 313 *e*P **P 06 05 33.2 +0.9**
KOLL Kolacno 64.16 313 *e*P **P 06 05 33.1 +0.8**
MORC Moravsky Berou 64.29 314 *e*P **P 06 05 33.4 +0.3**
comp=Z,20nm,1.0s,mb5.1
MORC Moravsky Berou 64.29 314⇓*i*P **P 06 05 33.3 +0.2**
IDI Anoyia 64.34 297 P **P 06 05 32.3 -1.4**
comp=Z,21nm,0.8s,mb5.2,baz=63,slow=9.6,SNR=10
KLBR Kellerberrin 64.47 167 *e*P **P 06 05 34.7 +0.3**
comp=Z,19nm,0.8s,mb5.2
KSP Ksiaz 64.68 316 *e*P **P 06 05 35.7 0.0**
KSP Ksiaz 64.68 316 *e*P **P 06 05 35.4 -0.3**
SMOL Smolenice 64.79 313 *e*P **P 06 05 36.6 +0.2**
SMOL Smolenice 64.79 313 *e*P **P 06 05 36.6 +0.2**
PKSM Moragy 64.82 310 ⇑P **P 06 05 36.5 -0.2**
PKSM Moragy 64.82 310⇑*i*P **P 06 05 36.5 -0.2**
DPC Dobruska-Polom 64.83 315 *e*P **P 06 05 37.1 +0.4**
DPC MLR MLR
comp=Z,700nm,18.3s,MS4.9
DPC Dobruska-Polom 64.83 315 *e*P **P 06 05 37.1 +0.4**
DPC AMS AMS 06 34 50.0
comp=Z,700nm,18.3s
VRAC Vranov 65.03 314 P **P 06 05 37.9 -0.1**
comp=Z,9.8nm,0.7s,mb4.9,baz=77,slow=8.3,SNR=12
VRAC Vranov 65.03 314⇑*i*P **P 06 05 38.2 +0.2**
ZST Bratislava 65.10 313 *e*P **P 06 05 39.7 +1.2**
ZST pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ZST Bratislava 65.10 313 *e*P **P 06 05 39.7 +1.2**
comp=Z,6.8nm,0.6s,mb4.8
ZST Bratislava 65.10 313 *e*P **P 06 05 39.7 +1.2**
COP Copenhagen 65.18 321 *e*P **P 06 05 38.2 -0.7**
COP pmax pmax
comp=Z,18nm,0.9s,mb5.1
COP Copenhagen 65.18 321 *i* P **P 06 05 38.2 -0.7**
comp=Z,18nm,0.9s,mb5.1
CTA Charters Tower 65.62 136 *e*P **P 06 05 45.3 +3.2**
comp=Z,8.7nm,0.6s,mb5.0
CTA Charters Tower 65.62 136 P **P 06 05 44.3 +2.2**
comp=Z,9.5nm,0.5s,mb5.1,baz=318,slow=10,SNR=14
CTA LR LR 06 34 12.0
comp=Z,128nm,19.3s,MS4.1,baz=231,slow=36
CTAO Charters Tower 65.62 136 *e*P **P 06 05 45.2 +3.1**
CTAO pmax pmax
comp=Z,20nm,1.2s,mb5.0
CTAO Charters Tower 65.62 136 *e*P **P 06 05 45.1 +3.0**
comp=Z,20nm,1.2s,mb5.0
TREC Trest 65.71 314 *e*P **P 06 05 43.1 +0.7**
TREC MLR MLR
comp=Z,500nm,22.0s,MS4.7
TREC Trest 65.71 314 *e*P **P 06 05 43.1 +0.7**
TREC AMS AMS 06 35 20.0
comp=Z,500nm,22.0s
PVCC Panska Ves 65.82 316 *e*P **P 06 05 43.7 +0.6**
PVCC MLR MLR
comp=Z,500nm,20.5s,MS4.7
PVCC Panska Ves 65.82 316 *e*P **P 06 05 43.7 +0.6**
PVCC AMS AMS 06 35 30.0
comp=Z,500nm,20.5s
CONA Conrad Observa 65.98 313⇑*i*P **P 06 05 44.4 +0.3**

comp=Z,18nm,1.2s,mb5.0
PRU Pruhonice 66.03 315 *e*P **P 06 05 45.1 +0.6**
PRU MLR MLR
comp=Z,700nm,19.5s,MS4.9
PRU Pruhonice 66.03 315 *e*P **P 06 05 45.1 +0.6**
PRU AMS AMS 06 35 40.0
comp=Z,700nm,19.5s
DAG Danmarks Havn 66.04 348 *e*P **P 06 05 43.0 -1.1**
DAG Danmarks Havn 66.04 348 *i* P **P 06 05 43.0 -1.1**
BRG Berggiesshubel 66.06 316 *e*P **P 06 05 44.5 -0.1**
comp=Z,24nm,1.2s,mb5.1
BRG
comp=N,207nm,21.7s
BRG
comp=E,304nm,18.7s
BRG
comp=Z,416nm,14.9s
BRG Berggiesshubel 66.06 316 *e*P **P 06 05 44.5 -0.1**
BRG pmax pmax
comp=Z,15nm,1.2s,mb4.9
BRG MLR MLR
comp=N,124nm,21.7s,MS4.4
BRG MLR MLR
comp=E,182nm,18.7s,MS4.4
BRG MLR MLR
comp=Z,249nm,14.9s,MS4.5
FORT Forrest 66.37 158 *e*P **P 06 05 47.1 +0.4**
comp=Z,22nm,0.7s,mb5.3
TTA Tatalina 66.37 29 *e*P **P 06 05 45.6 -0.8**
CLL Collm 66.45 317 *e*P **P 06 05 46.6 -0.5**
comp=Z,17nm,1.0s,mb5.0
CLL Collm 66.45 317⇑*i*P **P 06 05 46.7 -0.4**
CLL *e* 06 05 57.0
CLL pmax pmax
comp=Z,47nm,1.0s,mb5.5
CLL Collm 66.45 317⇑*i*P **P 06 05 46.7 -0.4**
comp=Z,17nm,1.0s,mb5.0
CLL *e* 06 05 57.0
CLL Collm 66.45 317⇑*i*P **P 06 05 46.7 -0.4**
comp=Z,17nm,1.0s,mb5.0
CLL *e* 06 05 57.0
MUD Monsted U'grnd 66.60 323 *i* P **P 06 05 48.3 +0.3**
MUD pmax pmax
comp=Z,21nm,1.0s,mb5.1
MUD Monsted U'grnd 66.60 323 *i* P **P 06 05 48.3 +0.3**
comp=Z,21nm,1.0s,mb5.1
COLD Coldfoot 66.74 24 *e*P **P 06 05 48.2 -0.5**
comp=Z,18nm,0.9s,mb5.1
PERS Pernice 66.93 312 *i* P **P 06 05 50.0 -0.3**
KHC Kasperske Hory 66.93 314 *e*P **P 06 05 50.2 0.0**
KHC MLR MLR
comp=Z,600nm,19.0s,MS4.8
KHC Kasperske Hory 66.93 314 *e*P **P 06 05 50.1 -0.2**
comp=Z,12nm,1.4s,mb4.7
KHC Kasperske Hory 66.93 314 *e*P **P 06 05 50.2 0.0**
KHC AMS AMS 06 36 10.0
comp=Z,600nm,19.0s
BSEG Bad Segeberg 66.97 320 *e*P **P 06 05 50.7 +0.3**
comp=Z,40nm,1.0s,mb5.4
BSEG Bad Segeberg 66.97 320 *e*P **P 06 05 50.7 +0.3**
BSEG pmax pmax
comp=Z,40nm,1.0s,mb5.4
GEC2 GERESS Array S 66.97 314 *e*P **P 06 05 50.4 -0.1**
comp=Z,22nm,1.2s,mb5.1
GEC2 GERESS Array S 66.97 314 *e*P **P 06 05 50.4 -0.1**
GEC2 pmax pmax
comp=Z,22nm,1.2s,mb5.1
GERES GERESS Array B 66.97 314 P **P 06 05 50.6 +0.1**
comp=Z,14nm,1.0s,mb4.9,baz=71,slow=5.8,SNR=49
GERES LR LR 06 36 49.8
comp=Z,492nm,19.8s,MS4.7,baz=68,slow=38
SOKA Soboth 66.97 312⇑*i*P **P 06 05 50.4 -0.1**
comp=Z,20nm,1.0s,mb5.1
MOA Molln 67.00 313⇓*i*P **P 06 05 50.7 0.0**
comp=Z,20nm,1.2s,mb5.0
TANN Tannenbergstha 67.11 316 *e*P **P 06 05 51.2 -0.1**
comp=Z,22nm,1.3s,mb5.0
NKC Novy Kostel 67.19 316 *e*P **P 06 05 52.3 +0.5**
NKC MLR MLR
comp=Z,500nm,16.0s,MS4.8
NKC Novy Kostel 67.19 316 *e*P **P 06 05 52.3 +0.5**
NKC AMS AMS 06 36 20.0
comp=Z,500nm,16.0s
BOJS Bojanci 67.28 310 *i* P **P 06 05 52.5 0.0**
SVW2 Sparrevohn 67.31 31 *e*P **P 06 05 52.5 0.0**
OBKA Obir 67.34 312⇑*i*P **P 06 05 52.8 -0.1**
comp=Z,7.7nm,0.9s,mb4.7
WET Wettzell 67.35 315 *e*P **P 06 05 52.9 0.0**
comp=Z,16nm,1.3s,mb4.9
WET Wettzell 67.35 315 *e*P **P 06 05 52.9 0.0**
WET pmax pmax
comp=Z,16nm,1.3s,mb4.9
VISS Visnje 67.43 311 *i* P **P 06 05 53.2 -0.3**
ROTZ Rotzenmuhle 67.51 315 *e*P **P 06 05 54.1 +0.2**
comp=Z,32nm,1.2s,mb5.2
MOX Moxa 67.52 316 *e*P **P 06 05 53.7 -0.2**
comp=Z,21nm,1.4s,mb5.0
MOX
comp=Z,300nm,18.0s
MOX Moxa 67.52 316 *e*P **P 06 05 53.6 -0.3**
comp=Z,9.0nm,1.0s,mb4.8
MOX Moxa 67.52 316 *e*P **P 06 05 53.7 -0.2**
MOX pmax pmax
comp=Z,21nm,1.4s,mb5.0
MOX MLR MLR
comp=Z,300nm,18.0s,MS4.6
NRDL Niedersach Rie 67.65 319 *e*P **P 06 05 54.9 +0.2**
comp=Z,33nm,1.2s,mb5.2
CLZ Clausthal 67.76 318 *e*P **P 06 05 55.5 +0.1**
comp=Z,35nm,1.1s,mb5.3
CLZ Clausthal 67.76 318 *e*P **P 06 05 55.5 +0.1**
CLZ pmax pmax
comp=Z,35nm,1.1s,mb5.3
KBA Koelnbreinsper 67.88 312⇑*i*P **P 06 05 56.1 -0.1**
comp=Z,8.7nm,0.9s,mb4.8
BPAW Bear Paw Mtn. 67.89 27 *e*P **P 06 05 55.0 -1.1**
comp=Z,13nm,0.9s,mb5.0
JAVS Javornik 67.89 311 *i* P **P 06 05 55.5 -0.9**
VOY Vojsko 67.95 311 *e*P **P 06 05 55.8 -0.9**
PPLA Purkeypile 67.96 29 *e*P **P 06 05 56.0 -0.5**
comp=Z,28nm,1.0s,mb5.2
GRA1 Grafenberg Arr 68.13 316 *e*P **P 06 05 57.8 0.0**
comp=Z,48nm,1.3s,mb5.4
GRA1 LR LR
comp=Z,600nm,19.0s,MS4.8
GRF Grafenberg Arr 68.13 316 *e*P **P 06 05 57.8 0.0**
comp=Z,48nm,1.3s,mb5.4
GRF *e*L 06 37 25.1
comp=Z,637nm,19.0s
GRF Grafenberg Arr 68.13 316 *e*P **P 06 05 57.8 0.0**
GRF pmax pmax
comp=Z,48nm,1.3s,mb5.4
GRF MLR MLR
comp=Z,600nm,19.0s,MS4.8
GRF Grafenberg Arr 68.13 316 *e*P **P 06 05 57.8 0.0**
GRF pmax pmax
comp=Z,48nm,1.3s,mb5.4
GRF MLR MLR
comp=Z,600nm,19.0s,MS4.8
TRI Trieste 68.16 311 *e*P **P 06 05 57.0 -1.0**
TRI pmax pmax
comp=Z,24nm,1.1s,mb5.1
TRI Trieste 68.16 311 *e*P **P 06 05 57.0 -1.1**
comp=Z,24nm,1.1s,mb5.1
UBBA Unterbreizbach 68.39 317 *e*P **P 06 05 58.8 -0.6**
comp=Z,16nm,1.5s,mb4.8
ABTA Abfaltersbach 68.53 312⇓*i*P **P 06 05 59.5 -0.9**
comp=Z,12nm,1.3s,mb4.7
COLA College 68.71 26 *e*P **P 06 06 00.2 -0.9**
COLA pmax pmax
comp=Z,32nm,1.0s,mb5.2
COLA College 68.71 26 *e*P **P 06 06 00.2 -0.9**
comp=Z,32nm,1.0s,mb5.2
FUR Furstenfeldbru 68.72 314 *e*P **P 06 06 02.0 +0.5**
comp=Z,72nm,0.9s,mb5.6
FUR Furstenfeldbru 68.72 314 *e*P **P 06 06 02.0 +0.5**
FUR pmax pmax
comp=Z,72nm,0.9s,mb5.6
TIP Timpagrande 68.78 304 *e*P **P 06 06 01.0 -1.1**
comp=Z,31nm,1.3s,mb5.1
WTTA Wattenberg 68.87 313⇓*i*P **P 06 06 02.1 -0.3**
comp=Z,28nm,1.2s,mb5.1
MOTA Moosalm 69.17 313⇓*i*P **P 06 06 04.0 -0.3**
comp=Z,24nm,1.0s,mb5.1
FETA Feichten 69.53 313⇑*i*P **P 06 06 06.1 -0.4**
comp=Z,29nm,1.0s,mb5.2
TNS Taunus Mts 69.54 317 *e*P **P 06 06 06.5 -0.1**

comp=Z,16nm,0.9s,mb5.0
TNS Taunus Mts 69.54 317 *e*P **P 06 06 06.5 -0.1**
TNS pmax pmax
comp=Z,16nm,0.9s,mb5.0
TOD Tromm 69.59 316 *e*P **P 06 06 06.7 -0.2**
BUG Bochum--Univer 69.69 318 *e*P **P 06 06 07.4 0.0**
comp=Z,44nm,1.4s,mb5.2
STU Stuttgart 69.72 315 *e*P **P 06 06 07.5 -0.2**
comp=Z,25nm,1.0s,mb5.1
AQU L'Aquila 69.78 308 ⇓*i*P **P 06 06 08.5 +0.3**
AQU L'Aquila 69.78 308 ⇓*i*P **P 06 06 08.4 +0.2**
PMR Palmer 69.84 29 *e*P **P 06 06 08.6 +0.4**
DAVOX Davos/Dischmat 70.16 313 P **P 06 06 10.1 -0.4**
comp=Z,21nm,0.9s,mb5.1,baz=92,slow=6.2,SNR=18
DAVOX Davos/Dischmat 70.16 313 P **P 06 06 10.1 -0.4**
KDAK Kodiak Island 70.17 34 *i* P **P 06 06 09.6 -0.7**
SPAK Spaichingen-Ko 70.26 315 *e*P **P 06 06 10.8 -0.2**
BFO Black Forest 70.43 315 *e*P **P 06 06 11.6 -0.5**
comp=Z,20nm,1.2s,mb4.9
BFO Black Forest 70.43 315 *e*P **P 06 06 11.6 -0.5**
BFO pmax pmax
comp=Z,20nm,1.2s,mb4.9
RUP Ruppelstein 70.57 317 *e*P **P 06 06 13.2 +0.3**
FELD Feldberg im Sc 70.83 315 *e*P **P 06 06 13.7 -0.8**
BEBN Eben Emael 70.87 318 P **P 06 06 15.0 +0.3**
CDF Champ du Feu 71.02 316⇑*i*P **P 06 06 15.4 -0.3**
comp=Z,49nm,1.1s,mb5.0
CDF Champ du Feu 71.02 316⇑*i*P **P 06 06 15.4 -0.3**
CDF pmax pmax
comp=Z,25nm,1.1s,mb5.1
CDF Champ du Feu 71.02 316⇑*i*P **P 06 06 15.4 -0.3**
comp=Z,24nm,1.1s,mb5.0
KMBO Kilima Mbogo 71.08 256 P **P 06 06 17.2 +0.6**
comp=Z,18nm,0.8s,mb5.1,baz=44,slow=9.2,SNR=53
KMBO Kilima Mbogo 71.08 256 P **P 06 06 17.2 +0.7**
KMBO pmax pmax
comp=Z,18nm,0.8s
KMBO Kilima Mbogo 71.08 256 *e*P **P 06 06 16.8 +0.2**
comp=Z,20nm,0.8s,mb5.1
WLF Walferdange 71.11 317 P **P 06 06 17.0 +0.8**
comp=Z,36nm,1.4s,mb5.1
WLF Walferdange 71.11 317 *e*P **P 06 06 16.7 +0.5**
comp=Z,64nm,1.2s,mb5.4
WLF Walferdange 71.11 317 *e*P **P 06 06 16.8 +0.6**
WLF pmax pmax
comp=Z,53nm,1.2s,mb5.3
WLF Walferdange 71.11 317 *e*P **P 06 06 16.8 +0.5**
comp=Z,53nm,1.2s,mb5.3
EGAK Eagle 71.17 24 *e*P **P 06 06 14.7 -1.6**
comp=Z,7.7nm,1.0s,mb4.6
ECH Echery 71.18 315 *e*P **P 06 06 16.1 -0.5**
ECH pmax pmax
comp=Z,14nm,1.1s,mb4.8
ECH Echery 71.18 315 *e*P **P 06 06 16.1 -0.5**
comp=Z,14nm,1.1s,mb4.8
BCLA Clavier 71.26 318 P **P 06 06 17.3 +0.2**
comp=Z,17nm,1.9s,mb4.7
MOF Molkenrain 71.36 315 *e*P **P 06 06 16.8 -0.9**
INK Inuvik 71.40 19 *e*P **P 06 06 16.7 -0.9**
HINF Hinteralfeld 71.55 315⇑*i*P **P 06 06 18.2 -0.7**
comp=Z,30nm,1.0s,mb4.9
HINF Hinteralfeld 71.55 315⇑*i*P **P 06 06 18.2 -0.7**
HINF pmax pmax
comp=Z,15nm,1.0s,mb4.9
HINF Hinteralfeld 71.55 315⇑*i*P **P 06 06 18.2 -0.7**
comp=Z,15nm,1.0s,mb4.9
UCC Uccle 71.61 319 P **P 06 06 19.5 +0.3**
GIVF Givet 71.68 318⇑*i*P **P 06 06 19.4 -0.2**
HAU Haudompre 71.76 316⇑*i*P **P 06 06 19.6 -0.5**
comp=Z,20nm,1.0s,mb4.7
HAU *e*MLR MLR
comp=Z,468nm,19.8s,MS4.5
HAU Haudompre 71.76 316⇑*i*P **P 06 06 19.6 -0.5**
HAU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
HAU MLR MLR
comp=Z,470nm,19.8s,MS4.8
HAU Haudompre 71.76 316⇑*i*P **P 06 06 19.6 -0.5**
comp=Z,9.8nm,1.0s,mb4.7
HAU LR LR
comp=Z,470nm,19.8s,MS4.8
SNF Seneffe 71.79 319 P **P 06 06 19.8 -0.4**
DOU Dourbes 71.81 318 P **P 06 06 20.0 -0.4**
THEF They Montfort 71.87 316 *e*P **P 06 06 19.8 -1.0**
BMRM Bremner River 72.03 29 *e*P **P 06 06 21.0 -0.5**
comp=Z,31nm,1.0s,mb5.2
BAIF Baives 72.05 318⇑*i*P **P 06 06 21.8 0.0**
comp=Z,22nm,0.9s,mb4.8
BAIF Baives 72.05 318⇑*i*P **P 06 06 21.8 0.0**
BAIF pmax pmax
comp=Z,11nm,0.9s,mb4.8
BAIF Baives 72.05 318⇑*i*P **P 06 06 21.8 0.0**
comp=Z,11nm,0.9s,mb4.8
DAWY Dawson 72.21 24 *e*P **P 06 06 19.8 -2.7**
EIDS Eidsvold 72.51 136 *e*P **P 06 06 27.7 +2.9**
comp=Z,28nm,0.9s,mb5.2
CABF La Chapelle 72.57 314⇑*i*P **P 06 06 24.6 -0.4**
comp=Z,34nm,1.0s,mb4.9
CABF La Chapelle 72.57 314⇑*i*P **P 06 06 24.6 -0.4**
CABF pmax pmax
comp=Z,17nm,1.0s,mb4.9
CABF La Chapelle 72.57 314⇑*i*P **P 06 06 24.6 -0.4**
comp=Z,17nm,1.0s,mb4.9
PGF Pioggiola 72.61 310⇑*i*P **P 06 06 25.5 +0.1**
comp=Z,92nm,1.0s,mb5.4
PGF Pioggiola 72.61 310⇑*i*P **P 06 06 25.5 +0.1**
PGF pmax pmax
comp=Z,46nm,1.0s,mb5.4
PGF Pioggiola 72.61 310⇑*i*P **P 06 06 25.5 +0.1**
comp=Z,46nm,1.0s,mb5.4
SUMG Summit 72.64 349 *e*P **P 06 06 24.3 -0.7**
comp=Z,9.1nm,0.8s,mb4.8
LPG La Plagne 72.68 313⇑*i*P **P 06 06 26.2 +0.5**
comp=Z,93nm,0.9s,mb5.4
LPG La Plagne 72.68 313⇑*i*P **P 06 06 26.2 +0.5**
LPG pmax pmax
comp=Z,47nm,0.9s,mb5.4
LPG La Plagne 72.68 313⇑*i*P **P 06 06 26.2 +0.5**
comp=Z,47nm,0.9s,mb5.4
LPL La Plagne 72.69 313⇑*i*P **P 06 06 26.1 +0.4**
comp=Z,96nm,0.9s,mb5.4
LPL La Plagne 72.69 313⇑*i*P **P 06 06 26.1 +0.4**
LPL pmax pmax
comp=Z,48nm,0.9s,mb5.4
LPL La Plagne 72.69 313⇑*i*P **P 06 06 26.1 +0.4**
comp=Z,48nm,0.9s,mb5.4
STKA Stephens Creek 72.70 147 *e*P **P 06 06 25.0 -0.8**
comp=Z,11nm,0.7s,mb4.9
STKA Stephens Creek 72.70 147 P **P 06 06 25.2 -0.6**
comp=Z,7.4nm,0.8s,mb4.7,baz=337,slow=6.9,SNR=12
STKA Stephens Creek 72.70 147 *e*P **P 06 06 25.0 -0.8**
comp=Z,3.6nm,0.8s,mb4.3
SAOF Saorge 72.88 311 *e*P **P 06 06 26.4 -0.5**
BNI Bardonecchia 72.94 313 *e*P **P 06 06 26.5 -0.7**
BNI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BNI Bardonecchia 72.94 313 *e*P **P 06 06 26.5 -0.7**
comp=Z,10nm,0.8s,mb4.8
AUTN L'Aution 72.96 311 *e*P **P 06 06 27.3 -0.1**
SBF Sospel 73.02 311⇑*i*P **P 06 06 27.4 -0.3**
comp=Z,87nm,0.9s,mb5.4
SBF Sospel 73.02 311⇑*i*P **P 06 06 27.4 -0.3**
SBF pmax pmax
comp=Z,43nm,0.9s,mb5.4
SBF Sospel 73.02 311⇑*i*P **P 06 06 27.4 -0.3**
comp=Z,43nm,0.9s,mb5.4
MBDF Montbardon 73.03 312⇑*i*P **P 06 06 28.2 +0.4**
comp=Z,22nm,0.8s,mb4.8
MBDF Montbardon 73.03 312⇑*i*P **P 06 06 28.2 +0.4**
MBDF pmax pmax
comp=Z,11nm,0.8s,mb4.8
MBDF Montbardon 73.03 312⇑*i*P **P 06 06 28.2 +0.4**
comp=Z,11nm,0.8s,mb4.8
LUCF Luceram 73.06 311 *e*P **P 06 06 27.7 -0.3**
TOUF Mont Tournerai 73.07 312 *e*P **P 06 06 27.9 -0.1**
MVIF Mont Vial 73.18 311 *e*P **P 06 06 28.4 -0.3**
EKA Eskdalemuir Ar 73.28 325 P **P 06 06 28.3 -0.7**
comp=Z,6.6nm,0.9s,mb4.6,baz=46,slow=5.3,SNR=12
ESK Eskdalemuir 73.31 325 *i* P **P 06 06 29.4 +0.2**
ORIF Oris-en-Rattie 73.50 313⇑*i*P **P 06 06 30.4 -0.2**
comp=Z,40nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,559nm,17.5s,MS4.6
ORIF Oris-en-Rattie 73.50 313⇑*i*P **P 06 06 30.4 -0.2**
ORIF pmax pmax
comp=Z,20nm,0.9s,mb5.0
ORIF Oris-en-Rattie 73.50 313⇑*i*P **P 06 06 30.4 -0.2**
comp=Z,20nm,0.9s,mb5.0
LOR Lormes 73.59 316⇑*i*P **P 06 06 30.1 -1.0**
comp=Z,17nm,1.0s,mb4.7
LOR *e*MLR MLR
comp=Z,421nm,20.2s,MS4.4
LOR Lormes 73.59 316⇑*i*P **P 06 06 30.1 -1.0**
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LOR MLR MLR
comp=Z,420nm,20.3s,MS4.7
LOR Lormes 73.59 316⇑*i*P **P 06 06 30.1 -1.0**
comp=Z,8.6nm,1.0s,mb4.6
LOR LR LR
comp=Z,420nm,20.3s,MS4.7
FRF La Foret Royal 73.66 311 *e*P **P 06 06 31.0 -0.6**
LMR La Mourre 73.86 311⇑*i*P **P 06 06 32.3 -0.4**
comp=Z,37nm,1.0s,mb5.0
LMR La Mourre 73.86 311⇑*i*P **P 06 06 32.3 -0.4**
LMR pmax pmax
comp=Z,19nm,1.0s,mb5.0
LMR La Mourre 73.86 311⇑*i*P **P 06 06 32.3 -0.4**
comp=Z,18nm,1.0s,mb5.0
SSF Saint Saulge 73.91 316⇑*i*P **P 06 06 32.2 -0.7**
comp=Z,25nm,1.1s,mb4.8
SSF Saint Saulge 73.91 316⇑*i*P **P 06 06 32.2 -0.7**
SSF pmax pmax
comp=Z,13nm,1.1s,mb4.8
SSF Saint Saulge 73.91 316⇑*i*P **P 06 06 32.2 -0.7**
comp=Z,13nm,1.1s,mb4.8
SMF Signal de Mont 73.91 315⇑*i*P **P 06 06 32.4 -0.5**
comp=Z,72nm,1.0s,mb5.2
SMF Signal de Mont 73.91 315⇑*i*P **P 06 06 32.4 -0.5**
SMF pmax pmax
comp=Z,36nm,1.0s,mb5.3
SMF Signal de Mont 73.91 315⇑*i*P **P 06 06 32.4 -0.5**
comp=Z,36nm,1.0s,mb5.2
AVF Avril sur Loir 74.13 315⇑*i*P **P 06 06 33.7 -0.5**
comp=Z,64nm,1.1s,mb5.2
AVF Avril sur Loir 74.13 315⇑*i*P **P 06 06 33.7 -0.5**
AVF pmax pmax
comp=Z,32nm,1.1s,mb5.2
AVF Avril sur Loir 74.13 315⇑*i*P **P 06 06 33.7 -0.5**
comp=Z,32nm,1.1s,mb5.2
SMRF Simiane la Rot 74.14 312⇑*i*P **P 06 06 34.4 0.0**
comp=Z,17nm,1.1s,mb4.6
SMRF Simiane la Rot 74.14 312⇑*i*P **P 06 06 34.4 0.0**
comp=Z,17nm,1.1s,mb4.9
VIVF Saint-Julien-I 74.28 313⇑*i*P **P 06 06 34.8 -0.3**
comp=Z,54nm,1.1s,mb5.1
VIVF Saint-Julien-I 74.28 313⇑*i*P **P 06 06 34.8 -0.3**
VIVF pmax pmax
comp=Z,27nm,1.1s,mb5.1
VIVF Saint-Julien-I 74.28 313⇑*i*P **P 06 06 34.8 -0.3**
comp=Z,27nm,1.1s,mb5.1
HYF Humbligny 74.31 316 *e*P **P 06 06 35.2 -0.1**
BGF Bois d'Agland 74.55 315⇑*i*P **P 06 06 36.0 -0.7**
BORG Borgarnes 74.70 335 P **P 06 06 37.6 +0.4**
comp=Z,8.7nm,0.9s,mb4.7,baz=68,slow=9.9,SNR=4.2
PYM Petit Puy Mans 74.86 315 *e*P **P 06 06 38.4 -0.1**
LBL Lubilhac 74.97 314 *e*P **P 06 06 39.2 +0.1**
TCF Toulx Ste Croi 75.06 315⇑*i*P **P 06 06 39.4 -0.2**
comp=Z,55nm,1.1s,mb5.1
TCF Toulx Ste Croi 75.06 315⇑*i*P **P 06 06 39.4 -0.2**
TCF pmax pmax
comp=Z,27nm,1.1s,mb5.1
TCF Toulx Ste Croi 75.06 315⇑*i*P **P 06 06 39.4 -0.2**
comp=Z,28nm,1.1s,mb5.1
LASF Ste Croix 75.17 313⇑*i*P **P 06 06 40.3 0.0**
comp=Z,47nm,1.1s,mb5.0
LDF La Druitiere 75.23 318⇑*i*P **P 06 06 40.1 -0.5**
FLN La Foliniere 75.35 319⇑*i*P **P 06 06 40.7 -0.5**
comp=Z,47nm,1.1s,mb5.0
FLN *e*MLR MLR
comp=Z,352nm,21.2s,MS4.3
FLN La Foliniere 75.35 319⇑*i*P **P 06 06 40.7 -0.5**
FLN pmax pmax
comp=Z,23nm,1.1s,mb5.0
FLN MLR MLR
comp=Z,350nm,21.3s,MS4.6
FLN La Foliniere 75.35 319⇑*i*P **P 06 06 40.7 -0.5**
comp=Z,23nm,1.1s,mb5.0
FLN LR LR
comp=Z,350nm,21.3s,MS4.6
KEST Kesra 75.60 303 P **P 06 06 42.7 -0.2**
comp=Z,4.0nm,0.8s,mb4.4,baz=281,slow=2.3,SNR=11
GRR Gorron 75.76 318⇑*i*P **P 06 06 43.3 -0.3**
comp=Z,37nm,0.7s,mb5.1
GRR Gorron 75.76 318⇑*i*P **P 06 06 43.3 -0.3**
GRR pmax pmax
comp=Z,18nm,0.7s,mb5.1
GRR Gorron 75.76 318⇑*i*P **P 06 06 43.3 -0.3**
comp=Z,18nm,0.7s,mb5.1
CAF Calviac 75.85 314⇑*i*P **P 06 06 44.3 +0.1**
comp=Z,40nm,1.0s,mb5.0
CAF Calviac 75.85 314⇑*i*P **P 06 06 44.3 +0.1**
CAF pmax pmax
comp=Z,20nm,1.0s,mb5.0
CAF Calviac 75.85 314⇑*i*P **P 06 06 44.3 +0.1**
comp=Z,20nm,1.0s,mb5.0
RJF Les Rejaudoux 75.99 315⇑*i*P **P 06 06 45.1 +0.1**
comp=Z,33nm,1.1s,mb4.9
RJF *e*MLR MLR
comp=Z,286nm,19.2s,MS4.3
RJF Les Rejaudoux 75.99 315⇑*i*P **P 06 06 45.1 +0.1**
RJF pmax pmax
comp=Z,17nm,1.1s,mb4.9
RJF MLR MLR
comp=Z,290nm,19.3s,MS4.6
RJF Les Rejaudoux 75.99 315⇑*i*P **P 06 06 45.1 +0.1**
comp=Z,17nm,1.1s,mb4.9
RJF LR LR
comp=Z,290nm,19.3s,MS4.6
MFF Saint Martin d 76.29 317⇑*i*P **P 06 06 46.4 -0.3**
comp=Z,34nm,0.9s,mb5.0
MFF Saint Martin d 76.29 317⇑*i*P **P 06 06 46.4 -0.3**
MFF pmax pmax
comp=Z,17nm,0.9s,mb5.0
MFF Saint Martin d 76.29 317⇑*i*P **P 06 06 46.4 -0.3**
comp=Z,17nm,0.9s,mb5.0
MTLF Montolieu 76.57 313⇑*i*P **P 06 06 48.1 -0.2**
comp=Z,23nm,1.1s,mb4.7
MTLF Montolieu 76.57 313⇑*i*P **P 06 06 48.1 -0.2**
MTLF pmax pmax
comp=Z,11nm,1.1s,mb4.7
MTLF Montolieu 76.57 313⇑*i*P **P 06 06 48.1 -0.2**
comp=Z,11nm,1.1s,mb4.7
SKAG Skagway 76.62 27 *e*P **P 06 06 48.6 +0.3**
comp=Z,30nm,1.0s,mb5.2
LFF La Frestale 76.64 315⇑*i*P **P 06 06 48.9 +0.2**
comp=Z,23nm,0.8s,mb4.9
LFF La Frestale 76.64 315⇑*i*P **P 06 06 48.9 +0.2**
LFF pmax pmax
comp=Z,12nm,0.8s,mb4.9
LFF La Frestale 76.64 315⇑*i*P **P 06 06 48.9 +0.2**
comp=Z,12nm,0.8s,mb4.9
ARMA Armidale 76.66 139 *e*P **P 06 06 53.8 +5.0**
ARMA Armidale 76.66 139 *e*P **P 06 06 53.5 +4.7**
comp=Z,4.5nm,0.8s,mb4.5
SGMF Saint Gilles 76.78 319⇑*i*P **P 06 06 49.5 +0.1**
comp=Z,47nm,1.0s,mb5.1
SGMF Saint Gilles 76.78 319⇑*i*P **P 06 06 49.5 +0.1**
SGMF pmax pmax
comp=Z,24nm,1.0s,mb5.1
SGMF Saint Gilles 76.78 319⇑*i*P **P 06 06 49.5 +0.1**
comp=Z,24nm,1.0s,mb5.1
ROSF Rostrenen 77.14 319⇑*i*P **P 06 06 51.5 +0.1**
QUIF Quistinic 77.31 319 *e*P **P 06 06 52.3 -0.1**
comp=Z,88nm,1.3s,mb5.2
QUIF Quistinic 77.31 319 *e*P **P 06 06 52.3 -0.1**
QUIF pmax pmax
comp=Z,44nm,1.3s,mb5.2
QUIF Quistinic 77.31 319 *e*P **P 06 06 52.3 -0.1**
comp=Z,44nm,1.3s,mb5.2
EPF Esparros 77.90 313 *e*P **P 06 06 55.1 -0.7**
ETSF Etsaut 78.53 313⇑*i*P **P 06 06 59.7 +0.4**
SJPF Ste Jean 78.82 314⇑*i*P **P 06 07 01.5 +0.6**
comp=Z,19nm,0.9s,mb4.7
SJPF Ste Jean 78.82 314⇑*i*P **P 06 07 01.5 +0.6**
SJPF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SJPF Ste Jean 78.82 314⇑*i*P **P 06 07 01.5 +0.6**
comp=Z,9.6nm,0.9s,mb4.7
SFJD Kangerlussuaq 79.54 350⇑*i*P **P 06 07 03.4 -0.9**
SFJD pmax pmax
comp=Z,11nm,0.7s,mb4.9
SFJD Kangerlussuaq 79.54 350 *e*P **P 06 07 02.8 -1.5**
comp=Z,9.1nm,0.6s,mb4.9
SFJD Kangerlussuaq 79.54 350⇑*i*P **P 06 07 03.4 -0.9**
comp=Z,11nm,0.7s,mb4.9
DZM Mont Dzumac 80.25 124 *e*LR LR 06 32 49.5
comp=Z,171nm,24.2s
YKA Yellowknife Ar 80.92 17 P **P 06 07 11.1 -0.7**
comp=Z,4.4nm,0.8s,mb4.5,baz=330,slow=5.2,SNR=52
YKA PKKPbc PKKPbc 06 25 46.4 -3.6
comp=Z,0.3nm,0.7s,baz=153,slow=2.0,SNR=6.5
YKA LR LR 06 47 32.4
comp=Z,150nm,18.2s,MS4.4,baz=325,slow=39
YKA Yellowknife Ar 80.92 17 P **P 06 07 11.2 -0.7**
YKA PKKPbc PKKPbc 06 25 46.4 -3.6
YKA LR LR 06 47 32.4
ESDC Sonseca Array 82.46 312 P **P 06 07 20.1 -0.4**
comp=Z,2.2nm,0.7s,mb4.2,baz=48,slow=6.7,SNR=4.9
LSZ Lusaka 86.43 250 *e*P **P 06 07 40.1 -0.7**
LSZ pmax pmax
comp=Z,22nm,1.1s,mb5.3
LSZ Lusaka 86.43 250 *e*P **P 06 07 40.1 -0.7**
comp=Z,22nm,1.1s,mb5.3
FCC Fort Churchill 88.40 9 *e*P **P 06 07 48.8 -0.9**
comp=Z,0.5nm,1.1s
EDM Edmonton 89.18 21 *e*P **P 06 07 53.6 +0.1**
FFC Flin Flon 90.84 15 *i* P **P 06 08 01.1 -0.1**
FFC Flin Flon 90.84 15 *e*P **P 06 08 00.6 -0.6**
comp=Z,12nm,1.1s,mb5.1
ETW Entiat 91.36 28 *e*P **P 06 08 03.9 +0.1**
comp=Z,9.3nm,1.0s,mb5.1
NEW Newport 92.07 26 *e*P **P 06 08 07.1 +0.1**
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 92.07 26 *e*P **P 06 08 07.1 +0.1**
comp=Z,6.8nm,0.9s,mb5.0
AFI Afiamalu 92.37 105 LR LR 06 51 01.5
comp=Z,56nm,18.7s,MS4.0,baz=228,slow=36
SCHQ Schefferville 93.25 355 P **P 06 08 11.1 -1.2**
comp=Z,8.5nm,0.9s,mb5.2,baz=30,slow=5.7,SNR=12
SCHQ Schefferville 93.25 355 *e*P **P 06 08 10.9 -1.5**
comp=Z,6.5nm,0.8s,mb5.1
BSMT Bassoo Peak 93.27 25 *e*P **P 06 08 13.4 +0.8**
comp=Z,5.4nm,0.9s,mb5.0
TORD Torodi Ar. Bea 93.37 288 P **P 06 08 12.5 -1.1**
comp=Z,5.5nm,0.9s,mb5.0,baz=43,slow=3.7,SNR=26
TORD PP PP 06 11 58.1 +0.7
comp=Z,1.4nm,1.0s,baz=61,slow=6.4,SNR=3.9
TORD LR LR 06 53 36.7
comp=Z,57nm,18.8s,MS4.0,baz=45,slow=38
JTMT Jette 93.54 25 *e*P **P 06 08 14.1 +0.2**
comp=Z,3.5nm,1.0s,mb4.7
SLMT Seeley Lake 94.25 25 *e*P **P 06 08 17.2 +0.1**
comp=Z,9.4nm,1.0s,mb5.2
MSO Missoula 94.45 25 P **P 06 08 14.9 -3.1**
comp=Z,2.5nm,1.0s,mb4.6
ULM Lac du Bonnet 96.30 13 LR LR 06 54 13.4
comp=Z,86nm,19.5s,MS4.2,baz=33,slow=37
PDAR Pinedale Array 99.52 24 PP PP 06 12 43.8 +0.1
comp=Z,0.2nm,0.5s,baz=335,slow=4.1,SNR=3.7
PDAR LR LR 06 56 51.5
comp=Z,102nm,18.4s,MS4.4,baz=197,slow=37
PPT Papeete 112.71 97 *e*LR LR 06 47 52.4
comp=Z,196nm,26.2s
TXAR Lajitas Array 113.63 26 PKiKP PKiKP 06 13 35.6 -1.1
comp=Z,0.3nm,0.7s,baz=11,slow=1.5,SNR=3.5
TAOE Nuku Hiva Isla 116.48 84 *e*LR LR 06 49 38.1
comp=Z,130nm,31.0s
QSPA South Pole Qui 121.69 180 *e*PKPdf PKPdf 06 13 49.0 -1.5
SDV Santo Domingo 139.12 352 *e*PKPdf PKPdf 06 14 23.3 -2.2
ROSC El Rosal 143.40 357 PKP PKPdf 06 14 31.4 -1.9
comp=Z,11nm,1.1s,baz=56,slow=3.4,SNR=6.1
ROSC El Rosal 143.40 357 *e*PKPdf PKPdf 06 14 31.2 -2.1
OTAV Otavalo 147.93 5 *e*PKPdf PKPdf 06 14 41.6 +0.6
OTAV *e*PKPbc PKPbc 06 14 43.9 0.0
CPUP Villa Florida 162.84 284 PKP PKPdf 06 14 58.9 -1.6
comp=Z,1.9nm,0.8s,baz=46,slow=1.5,SNR=6.9
CPUP PKPab PKPab 06 15 47.9 -1.7
comp=Z,0.7nm,0.7s,baz=52,slow=6.2,SNR=3.4
CPUP Villa Florida 162.84 284 PKP PKPdf 06 14 58.9 -1.6
CPUP PKPab PKPab 06 15 47.9 -1.7
LPAZ La Paz 162.91 334 PKP PKPdf 06 15 00.8 0.0
comp=Z,3.7nm,1.0s,baz=23,slow=4.2,SNR=11
LPAZ La Paz 162.91 334 *e*PKPdf PKPdf 06 15 00.8 0.0
PLCA Paso Flores 170.20 205 PKP PKPdf 06 15 05.4 -0.3
comp=Z,3.4nm,1.1s,baz=163,slow=8.7,SNR=2.7
PLCA PKPab PKPab 06 16 24.2 +2.8
comp=Z,1.2nm,0.6s,baz=166,slow=5.3,SNR=4.9

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*ISCJB **14** 06:02:11.5±0.8, 30°.41N±0°.08×103°.24E±0°.08, h10km, mb3.5/7, Error ellipse: s-maj=13.2km s-min=7.4km az=139.1*
*IDC **14** 06:02:12.1±1.0, 30°.53N×103°.25E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/30, Error ellipse: s-maj=39.1km s-min=18.2km az=58.0*
*BJI **14** 06:02:19.6, 31°.11N×103°.45E, h14km, ML3.8/8*
ISC 14 06:02:13.7±0.8, 30°.51N±0°.09×103°.22E±0°.08, h10km, n11, σ0s92/14, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.61**	**49**	Pg	**Pg**	**06 02 27.0**	**+1.6**
CD2				Sg	**Sg**	**06 02 33.8**	**+0.4**
CD2				smax			
	comp=N,19μm,0.5s						
LZH	**Lanzhou**	**5.58**	**5**	*e*Pg	**Pb**	**06 03 45.1**	**-6.1**
LZH				Sg	**Sn**	**06 04 46.8**	**+5.8**
LZH				smax			
	comp=N,63nm,0.6s						
LZH				smax			
	comp=E,88nm,0.8s						
XAN	**Xi'an**	**5.97**	**52**	Pg	**Pg**	**06 04 18.8**	**+11**
XAN				Sg	**Sb**	**06 05 08.3**	**-1.0**
XAN				smax			
	comp=N,64nm,0.7s						
XAN				smax			
	comp=E,110nm,0.9s						
SONM	**Songino Array**	**17.47**	**7**	P	**Pn**	**06 06 16.9**	**-0.4**
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=2.4						
KSRS	**Korea Array**	**21.59**	**65**	P	**P**	**06 07 03.2**	**-0.3**
	comp=E,1.9nm,0.6s,mb3.7,baz=238,slow=8.6,SNR=5.9						
KSRS				LR	LR	06 16 19.7	
	comp=E,132nm,18.9s,baz=274,slow=39						
MKAR	**Makanchi Array**	**22.95**	**321**	P	**P**	**06 07 19.0**	**+1.1**
	comp=E,0.8nm,0.9s,mb3.1,baz=140,slow=9.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.93**	**336**	P	**P**	**06 07 54.6**	**-0.3**
	comp=E,0.6nm,0.4s,mb3.4,baz=140,slow=9.2,SNR=2.7						
KURK	**Kurchatov**	**27.28**	**325**	P	**P**	**06 07 57.5**	**-0.6**
	comp=E,0.3nm,0.5s,mb3.1,baz=126,slow=9.4,SNR=3.0						
WRA	**Warramunga Arr**	**58.41**	**145**	P	**P**	**06 12 11.0**	**+1.5**
	comp=E,2.0nm,0.8s,mb4.2,baz=336,slow=7.7,SNR=3.6						
ASAR	**Alice Springs**	**61.39**	**148**	P	**P**	**06 12 28.8**	**-1.2**
	comp=E,0.2nm,0.7s,mb3.4,baz=334,slow=6.2,SNR=2.9						
YKA	**Yellowknife Ar**	**82.48**	**17**	P	**P**	**06 14 35.5**	**-0.5**
	comp=E,0.3nm,0.6s,mb3.4,baz=330,slow=5.8,SNR=4.2						

IDC 14 06:16:20.2±1.0, 32°.70N×105°.93E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, Error ellipse: s-maj=65.1km s-min=20.6km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.87**	**315**	P	P	06 21 25.2	+0.1
	0.2nm,0.5s,baz=121,slow=10,SNR=3.6						
KURK	**Kurchatov**	**26.96**	**320**	P	P	06 22 03.1	-0.2
	0.4nm,0.8s,baz=120,slow=9.5,SNR=2.5						
WRA	**Warramunga Arr**	**58.98**	**149**	P	P	06 26 21.5	-0.1
	0.6nm,0.5s,baz=341,slow=7.5,SNR=9.8						
ASAR	**Alice Springs**	**62.09**	**151**	P	P	06 26 43.0	+0.2
	0.4nm,0.5s,baz=338,slow=7.1,SNR=5.0						
YKA	**Yellowknife Ar**	**79.71**	**18**	P	P	06 28 29.6	+0.2
	0.1nm,0.6s,baz=328,slow=5.1,SNR=2.7						

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*ISCJB **14** 06:23:11.8±0.5, 32°.32N±0°.04×105°.19E±0°.06, h10km, mb3.7/9, Error ellipse: s-maj=8.4km s-min=4.7km az=38.2*
*IDC **14** 06:23:12.3±1.2, 32°.43N×105°.26E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, Error ellipse: s-maj=73.5km s-min=21.0km az=54.0*
*BJI **14** 06:23:13.1, 32°.46N×105°.18E, h4km, mb4.5/1, ML3.7/6, Ms3.4/3, Ms7 3.3/3*
*NEIC **14** 06:23:14.2±0.6, 32°.50N×105°.32E, h10km, mb4.2/1, Error ellipse: s-maj=41.2km s-min=10.8km az=52.0*

ISC 14 06:23:14.0±0.5, 32°31′N±0′.04×105°.12E±0°.05, h10km, n19, σ1§03/26, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.82**	**220**	Pn	**Pn**	**06 23 43.5**	**-1.8**
CD2				Sg	**Sg**	**06 24 14.3**	**+1.9**
CD2				smax			
	comp=N,2μm,0.5s						
CD2	**Chengdu**	**1.82**	**220**	Pg	**Sn**	**06 24 07.4**	**-1.0**
CD2				Sg	**Sg**	**06 24 14.3**	**+1.9**
CD2				smax			
	comp=N,8μm,0.4s						
XAN	**Xi'an**	**3.63**	**61**	Pn	**Pg**	**06 24 22.3**	**-1.2**
XAN				Pg	**Pg**	**06 24 28.8**	**+5.3**
XAN				Sn	**Sn**	**06 25 01.0**	**+7.9**
XAN				Sg	**Sg**	**06 25 10.9**	**+0.4**
XAN				smax			
	comp=N,86nm,0.8s						
XAN				smax			
	comp=E,46nm,0.8s						
LZH	**Lanzhou**	**3.91**	**345**	*e*Pg	**Pb**	**06 24 18.8**	**-4.3**
LZH				Sn	**Sn**	**06 25 01.8**	**+1.7**
LZH				Sg	**Sg**	**06 25 13.6**	**-6.0**
LZH				smax			
	comp=N,130nm,0.8s						
LZH				smax			
	comp=E,190nm,0.5s						
LZH				LR	LR		
	comp=E,430nm,3.9s						
LZH				LR	LR		
	comp=Z,460nm,5.2s						
GYA	**Guiyang**	**5.99**	**167**	Sg	**Sg**	**06 26 26.5**	**+0.2**
GYA				smax			
	comp=N,60nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
CN2	**Changchun**	**19.64**	**48**	*e*P	**Pn**	**06 27 48.0**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MK31	**Makanchi Array**	**22.67**	**316**	*e*P	**P**	**06 28 16.2**	**+0.8**
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**06 28 15.4**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.3,baz=119,slow=10,SNR=7.9						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**06 28 46.5**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=120,slow=8.5,SNR=3.3						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**06 28 54.1**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.4,baz=133,slow=8.0,SNR=6.2						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**06 29 43.9**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=126,slow=7.3,SNR=3.1						
ARCES	**ARCESS Array B**	**56.52**	**335**	P	**P**	**06 32 55.2**	**-0.8**
	comp=Z,0.8nm,0.6s,mb4.0,baz=74,slow=6.7,SNR=6.1						
ARCES	**ARCESS Array B**	**56.52**	**335**	P	**P**	**06 32 55.2**	**-0.8**
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**06 32 58.8**	**-1.1**
	comp=Z,1.8nm,0.7s,mb4.2,baz=68,slow=7.7,SNR=3.0						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	**P**	**06 33 15.5**	**+1.4**
	comp=Z,1.2nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**06 33 14.2**	**+0.2**
	comp=Z,0.8nm,0.6s,mb4.0,baz=341,slow=7.4,SNR=11						
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**06 33 14.2**	**+0.2**
YKA	**Yellowknife Ar**	**80.29**	**18**	P	**P**	**06 35 24.2**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=328,slow=5.1,SNR=3.9						
YKA	**Yellowknife Ar**	**80.29**	**18**	P	**P**	**06 35 24.2**	**-0.6**

*ISCJB **14** 06:23:57.5±0.8, 31°.2N±0°.1×103°.8E±0°.2, h10km, mb3.7/7, Error ellipse: s-maj=24.5km s-min=11.3km az=138.9*
*IDC **14** 06:23:57.9±1.0, 31°.15N×103°.72E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, ML3.8/1, Error ellipse: s-maj=64.7km s-min=18.5km az=61.0*
*NEIC **14** 06:23:59.4±0.6, 31°.22N×103°.82E, h10km, mb4.6/1, Error ellipse: s-maj=19.5km s-min=8.8km az=49.0*

ISC 14 06:23:59.5±0.8, 31°.2N±0°.1×103°.8E±0°.2, h10km, n11, σ0§59/11, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.97**	**99**	*e*Pn	**Pn**	**06 25 14.5**	**+0.3**
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**06 27 52.6**	**-1.0**
	0.3nm,0.3s,baz=186,slow=13,SNR=3.7						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**06 29 01.7**	**+0.3**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**06 29 01.7**	**+0.2**
	0.5nm,0.8s,mb3.0,baz=121,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**06 29 01.7**	**+0.2**
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**06 29 36.6**	**-0.3**
	0.6nm,0.5s,mb3.4,baz=134,slow=11,SNR=4.5						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**06 29 41.5**	**0.0**
	0.8nm,0.7s,mb3.3,baz=127,slow=9.7,SNR=4.2						
WRAB	**Tennant Creek**	**58.70**	**146**	*e*P	**P**	**06 33 56.8**	**-0.6**
	3.4nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**58.71**	**146**	P	**P**	**06 33 57.2**	**-0.2**
	3.0nm,0.5s,mb4.6,baz=338,slow=7.9,SNR=24						
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**06 34 18.0**	**0.0**
	0.3nm,0.4s,mb3.7,baz=344,slow=6.2,SNR=2.8						
YKA	**Yellowknife Ar**	**81.65**	**17**	P	**P**	**06 36 18.9**	**+1.4**
	0.1nm,0.5s,mb3.0,baz=328,slow=4.9,SNR=2.8						

IDC 14 06:30:06.8±3.9, 30°.48S×138°.26E, h0km, mb1 3.0/3, mb1mx3.0/12, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=91.1km s-min=16.7km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.18**	**117**	Pn	Pn	06 31 00.0	+1.9
	0.2nm,0.3s,baz=295,slow=13,SNR=3.1						
STKA				Pg	Pg	06 31 05.0	-2.8
	0.6nm,0.3s,baz=299,slow=15,SNR=8.4						
STKA				Sn	Sn	06 31 35.1	-1.6
	1.1nm,0.3s,baz=342,slow=20,SNR=4.8						
STKA				Lg		06 31 46.1	
	2.3nm,0.3s,baz=207,slow=23,SNR=9.4						
ASAR	**Alice Springs**	**7.82**	**329**	Pn	Pn	06 32 02.0	+0.2
	0.1nm,0.3s,baz=151,slow=12,SNR=4.8						
ASAR				Sn	Sn	06 33 32.9	+1.8
	0.1nm,0.3s,baz=154,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**11.07**	**340**	Pn	Pn	06 32 45.3	-1.2
	0.1nm,0.3s,baz=162,slow=12,SNR=5.0						

*ISCJB **14** 06:33:54.8±0.4, 31°.25N±0°.05×103°.99E±0°.06, h10km, mb4.0/13, MS3.4/2, Error ellipse: s-maj=8.3km s-min=6.8km az=38.6*
*IDC **14** 06:33:54.9±0.8, 31°.21N×103°.97E, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.9/25, mbtmp4.0/12, MS3.5/2, Ms1 3.5/2, ms1mx2.6/36, Error ellipse: s-maj=31.9km s-min=14.9km az=56.0*
*NEIC **14** 06:33:56.5±0.4, 31°.30N×103°.96E, h10km, mb4.8/2, Error ellipse: s-maj=12.2km s-min=7.1km az=219.0*
*BJI **14** 06:33:58.0, 31°.33N×104°.07E, h17km, mB4.7/3, mb4.4/4, ML3.9/12, Ms4.0/5, Ms7 3.7/5*

ISC 14 06:33:56.8±0.4, 31°.25N±0°.04×103°.98E±0°.06, h10km, n28, σ1§00/37, mb4.0/13, MS3.4/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**209**	Pg	**Pg**	**06 34 05.3**	**+0.9**
CD2				Sg	**Sg**	**06 34 14.0**	**+4.4**
CD2				smax			
	comp=N,10μm,0.7s						
LZH	**Lanzhou**	**4.82**	**359**	*e*Pg	**Pg**	**06 35 25.5**	**-3.6**
LZH				Sg	**Sg**	**06 36 25.3**	**-6.3**
LZH				smax			
	comp=N,150nm,1.0s						
LZH				smax			
	comp=E,130nm,1.0s						
ENH	**Enshi**	**4.84**	**100**	*e*Pn	**Pn**	**06 35 10.3**	**+0.6**
XAN	**Xi'an**	**5.01**	**55**	Pn	**Pn**	**06 35 11.3**	**-0.7**
XAN				Pg	**Pb**	**06 35 23.6**	**-1.0**
XAN				Sn	**Sn**	**06 36 18.6**	**+8.6**
XAN				Sg	**Sg**	**06 36 29.4**	**-8.3**
XAN				smax			
	comp=N,200nm,0.9s						
XAN				smax			
	comp=E,130nm,1.0s						
XAN				LR	LR		
	comp=N,370nm,5.4s						
XAN				LR	LR		
	comp=E,270nm,5.4s						
XAN				LR	LR		
	comp=Z,250nm,6.0s						
GYA	**Guiyang**	**5.33**	**153**	Pg	**Pg**	**06 35 36.3**	**-2.5**
GYA				Sg	**Sb**	**06 36 36.5**	**+2.5**
GYA				smax			
	comp=N,350nm,1.0s						
GYA				smax			
	comp=E,360nm,1.1s						
KMI	**Kunming**	**6.20**	**190**	Pn	**Pn**	**06 35 20.3**	**-8.1**
KMI				Pg	**Pg**	**06 35 55.4**	**-0.2**
KMI				Sn	**Sb**	**06 36 50.6**	**-8.6**
KMI				Sg	**Sg**	**06 37 32.1**	**+16**
KMI				smax			
	comp=N,41nm,2.5s						
KMI				smax			
	comp=E,35nm,2.1s						
KMI				LR	LR		
	comp=N,620nm,4.8s						
KMI				LR	LR		
	comp=E,670nm,10.9s						
LSA	**Lhasa**	**11.18**	**265**	Pn	**Pn**	**06 36 36.8**	**+0.2**
HHC	**Hu-ho-hao-te**	**11.37**	**31**	*e*P	**Pn**	**06 36 40.3**	**+1.1**
HHC				pP		06 36 43.5	
HHC				sP		06 36 49.4	
HHC				S	**Sn**	**06 38 47.9**	**+1.6**
HHC				SS		06 39 01.3	
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.0s						
HHC				LR	LR		
	comp=N,220nm,5.8s						
HHC				LR	LR		
	comp=E,350nm,5.6s						
HHC				LR	LR		
	comp=Z,250nm,5.8s						
KSRS	**Korea Array**	**20.69**	**66**	P	**P**	**06 38 37.3**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=261,slow=10,SNR=12						
MK31	**Makanchi Array**	**22.80**	**319**	*e*P	**P**	**06 38 60.0**	**+0.5**
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**06 38 59.9**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.3,baz=116,slow=11,SNR=9.0						
MKAR				LR	LR	06 48 46.8	
	comp=Z,58nm,18.6s,MS3.0,baz=150,slow=39						
ZAA0	**Zalesovo Array**	**26.54**	**334**	*e*P	**P**	**06 39 33.9**	**-0.5**
ZALV	**Zalesovo Beam**	**26.54**	**334**	P	**P**	**06 39 34.1**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.0,baz=130,slow=9.7,SNR=11						
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**06 39 38.9**	**-0.3**
	comp=Z,1.8nm,0.9s,mb3.6,baz=126,slow=9.1,SNR=10.0						
PETK	**Petropavlovsk-**	**44.16**	**44**	P	**P**	**06 42 05.3**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.6,baz=220,slow=9.1,SNR=3.7						
PETK	**Petropavlovsk-**	**44.16**	**44**	P	**P**	**06 42 05.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**53.30**	**154**	P	**P**	**06 43 15.0**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.9,baz=306,slow=14,SNR=4.5						
ARCES	**ARCESS Array B**	**57.08**	**336**	P	**P**	**06 43 44.0**	**+1.3**
	comp=Z,4.4nm,1.1s,mb4.4,baz=74,slow=9.2,SNR=4.4						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**06 43 43.9**	**-1.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=119,slow=11,SNR=2.7						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**06 43 43.9**	**-1.1**
WRAB	**Tennant Creek**	**58.65**	**146**	*e*P	**P**	**06 43 53.0**	**-1.3**
	comp=Z,12nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**06 43 54.1**	**-0.3**
	comp=Z,4.7nm,0.6s,mb4.7,baz=338,slow=8.0,SNR=59						
WRA	**Warramunga Arr**	**58.66**	**146**	P	**P**	**06 43 54.1**	**-0.3**
ASAR	**Alice Springs**	**61.67**	**149**	P	**P**	**06 44 14.9**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.9,baz=318,slow=5.8,SNR=7.7						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**06 44 34.0**	**+0.8**
	comp=Z,1.2nm,0.9s,mb3.9,baz=72,slow=6.9,SNR=2.4						
COLA	**College**	**69.34**	**26**	*e*P	**P**	**06 45 04.6**	**+0.5**
	comp=Z,6.5nm,1.1s,mb4.5						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**06 46 13.4**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=329,slow=5.1,SNR=7.8						
ESDC	**Sonseca Array**	**82.84**	**312**	LR	LR	07 25 57.9	
	comp=Z,43nm,20.3s,MS3.8,baz=135,slow=38						

*NEIC **14** 06:44:48.7, 15°.06N×93°.02W, h74km, MD3.8(MEX), After MEX.*

MEX 14 06:44:48.7±0.4, 15°.06N×93°.02W, h74km±4km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.67**	**344**	*i* P	Pn	06 45 02.5	-1.2
PCIG				*i* S	Sn	06 45 12.8	-1.8
THIG		**0.75**	**101**	*i* P	Pn	06 45 02.9	-1.5
THIG				*i* S	Sn	06 45 14.2	-1.8
CCIG	**Comitan**	**1.49**	**35**	*i* P	Pn	06 45 12.7	-0.9
CCIG				*i* S	Sn	06 45 31.0	-1.4
CCIG	**Comitan**	**1.49**	**35**	*i* P	Pn	06 45 12.7	-0.9
CCIG				*i* S	Sn	06 45 31.0	-1.4
SCX	**San Cristobal**	**1.71**	**13**	*e*P	Pn	06 45 15.3	-1.3
SCX				*i* S	Sn	06 45 36.8	-0.9
SCX	**San Cristobal**	**1.71**	**13**	*e*P	Pn	06 45 15.3	-1.3
SCX				*i* S	Sn	06 45 36.8	-0.9
TGIG		**1.71**	**357**	*i* P	Pn	06 45 15.3	-1.4
TGIG				*i* S	Sn	06 45 35.6	-2.2
CMIG	**Matias Romero**	**2.70**	**319**	*i* P	Pn	06 45 28.7	-1.2
CMIG				*i* S	Sn	06 46 00.1	-1.5
CMIG	**Matias Romero**	**2.70**	**319**	*i* P	Pn	06 45 28.7	-1.2
CMIG				*i* S	Sn	06 46 00.1	-1.5
HUIG	**Huatulco**	**3.06**	**284**	*e*P	Pn	06 45 33.9	-0.9
HUIG				*i* S	Sn	06 46 08.3	-2.0
HUIG	**Huatulco**	**3.06**	**284**	*e*P	Pn	06 45 33.9	-0.9
HUIG				*i* S	Sn	06 46 08.3	-2.0
VHO	**Vista Hermosa**	**4.09**	**300**	*e*P	Pn	06 45 48.4	-0.5
VHO				*i* S	Sn	06 46 33.8	-1.8
VHO	**Vista Hermosa**	**4.09**	**300**	*e*P	Pn	06 45 48.4	-0.5
VHO				*i* S	Sn	06 46 33.8	-1.8
UTMO	**Huajuapan**	**5.35**	**302**	*e*P	Pn	06 46 09.1	+3.0
UTMO				*i* S	Sn	06 47 10.7	+4.3

MEX 14 06:53:30.7±0.4, 15°.41N×93°.57W, h45km±7km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.45**	**49**	*i* P	Pn	06 53 39.6	-1.4
PCIG				*i* S	Sn	06 53 46.4	-1.9
TGIG		**1.43**	**17**	*i* P	Pn	06 53 52.7	-1.4
TGIG				*i* S	Sn	06 54 09.6	-2.2
SCX	**San Cristobal**	**1.60**	**34**	*e*P	Pn	06 53 55.5	-1.0
SCX				*i* S	Sn	06 54 14.7	-1.2
CCIG	**Comitan**	**1.63**	**58**	*i* P	Pn	06 53 55.3	-1.7
CCIG				*i* S	Sn	06 54 13.9	-2.8
CMIG	**Matias Romero**	**2.09**	**323**	*i* P	Pn	06 54 01.5	-1.8
CMIG				*i* S	Sn	06 54 26.3	-1.8
UTMO	**Huajuapan**	**4.72**	**301**	*e*P	Pn	06 54 39.5	+0.1
UTMO				*i* S	Sn	06 55 30.7	-2.2

*ISCJB **14** 07:02:33.8±0.3, 31°.02N±0°.03×103°.67E±0°.05, h10km, mb4.1/20, MS3.3/2, Error ellipse: s-maj=5.6km s-min=3.9km az=1.6*
*IDC **14** 07:02:33.7±0.7, 30°.86N×103°.47E, h0km, mb4.0/16, mb1 4.2/17, mb1mx4.1/26, mbtmp4.1/17, ML3.8/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/31, Error ellipse: s-maj=29.5km s-min=14.5km az=48.0*
*NEIC **14** 07:02:35.3±0.3, 30°.93N×103°.59E, h10km, mb4.6/3, Error ellipse: s-maj=8.4km s-min=5.8km az=54.0*
*BJI **14** 07:02:36.6, 30°.82N×103°.65E, h14km, mB4.6/3, mb4.2/7, ML4.1/18, Ms4.0/6, Ms7 3.6/6*

ISC 14 07:02:36.0±0.3, 30°.98N±0°.03×103°.56E±0°.04, h10km, n49, σ0§96/59, mb4.1/20, MS3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.18**	**114**	Pg	**Pg**	**07 02 40.8**	**+0.8**
CD2				Sg	**Sg**	**07 02 45.3**	**+2.7**
CD2				smax			
	comp=N,106μm,0.6s						
LZH	**Lanzhou**	**5.09**	**3**	Pg	**Pg**	**07 04 13.5**	**-0.1**
LZH				Sn	**Sb**	**07 05 02.3**	**-4.2**
LZH				Sg	**Sg**	**07 05 20.5**	**+0.9**
LZH				smax			
	comp=N,150nm,1.0s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,4.7s						
LZH				LR	LR		
	comp=Z,2μm,5.8s						
LZH	**Lanzhou**	**5.09**	**3**	*e*Pn	**Pb**	**07 04 01.3**	**-4.0**
LZH				Pg	**Pg**	**07 04 13.5**	**-0.1**
LZH				Sn	**Sb**	**07 05 02.3**	**-4.2**
LZH				Sg	**Sg**	**07 05 20.5**	**+0.9**
LZH				smax			
	comp=N,150nm,1.0s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,4.7s						
LZH				LR	LR		
	comp=Z,2μm,5.8s						
LZH	**Lanzhou**	**5.09**	**3**	Pg	**Pg**	**07 04 13.6**	**0.0**
LZH				Sg	**Sg**	**07 05 24.6**	**+5.0**
LZH				smax			
	comp=N,150nm,1.0s						
LZH				smax			
	comp=E,170nm,0.8s						
ENH	**Enshi**	**5.16**	**96**	*e*Pn	**Pn**	**07 03 51.7**	**-1.6**
	comp=E,132nm,0.7s						
GYA	**Guiyang**	**5.27**	**148**	Pn	**Pn**	**07 03 55.0**	**+0.2**
GYA				Sn	**Sn**	**07 04 54.1**	**-1.5**
GYA				smax			
	comp=N,400nm,1.0s						
GYA				smax			
	comp=E,470nm,1.0s						
XAN	**Xi'an**	**5.46**	**55**	Pn	**Pn**	**07 03 56.9**	**-0.5**
XAN				Pg	**Pg**	**07 04 14.4**	**-6.1**
XAN				Sg	**Sg**	**07 05 31.5**	**+0.3**
XAN				smax			
	comp=N,270nm,0.9s						
XAN				smax			
	comp=E,160nm,0.8s						
XAN				LR	LR		
	comp=N,680nm,4.0s						
XAN				LR	LR		
	comp=E,170nm,5.0s						
XAN				LR	LR		
	comp=Z,150nm,5.3s						
KMI	**Kunming**	**5.88**	**187**	Pn	**Pn**	**07 04 03.8**	**+0.5**
KMI				Sn	**Sn**	**07 05 13.0**	**+2.2**
KMI				smax			
	comp=N,67nm,1.8s						
KMI				smax			
	comp=E,69nm,2.3s						
KMI				LR	LR		
	comp=N,600nm,7.1s						
KMI				LR	LR		
	comp=E,840nm,5.2s						
GTA	**Gaotai**	**8.95**	**341**	*e*P	**Pn**	**07 04 53.3**	**+8.0**
GTA				pP		07 04 57.8	
GTA				sP		07 05 01.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WHN	**Wuhan**	**9.29**	**90**	P	**Pn**	**07 04 58.1**	**+8.0**
WHN				S	**Sn**	**07 06 29.3**	**-5.4**
WHN				LR	LR		
	comp=N,2μm,5.0s						
WHN				LR	LR		
	comp=E,2μm,6.3s						
WHN				LR	LR		
	comp=Z,3μm,5.7s						
LSA	**Lhasa**	**10.80**	**266**	P	**Pn**	**07 05 12.4**	**+1.6**
SHL	**Shillong**	**11.62**	**245**	*e*P	Px	07 05 35.0	
CHTO	**Chiang Mai**	**12.82**	**200**	*e*Pn	**Pn**	**07 05 37.8**	**-0.6**
SONM	**Songino Array**	**16.97**	**7**	P	**Pn**	**07 06 34.7**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=190,slow=11,SNR=5.8						
KSRS	**Korea Array**	**21.12**	**66**	P	**P**	**07 07 22.1**	**+1.2**
	comp=Z,4.4nm,0.6s,mb3.9,baz=245,slow=9.1,SNR=12						
KSRS				LR	LR	07 15 13.3	
	comp=Z,155nm,21.8s,MS3.4,baz=57,slow=36						
CN2	**Changchun**	**21.51**	**47**	*e*P	**P**	**07 07 26.3**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
DDI	**Dehra Dun**	**21.94**	**275**	*ex*	**P**	**07 07 32.0**	**+2.2**
HIA	**Hailar**	**21.97**	**29**	P	**P**	**07 07 30.0**	**0.0**
MK31	**Makanchi Array**	**22.77**	**320**	*e*P	**P**	**07 07 38.4**	**0.0**
MKAR	**Makanchi Array**	**22.77**	**320**	P	**P**	**07 07 39.4**	**+0.9**
	comp=Z,1.8nm,0.6s,mb3.7,baz=126,slow=9.5,SNR=13						
TKM2	**Tokmak 2**	**25.21**	**306**	P	**P**	**07 08 02.4**	**+0.6**
AAK	**Ala-Archa**	**25.89**	**305**	P	**P**	**07 08 08.3**	**+0.3**
	comp=Z,0.9nm,0.3s,mb3.8,baz=85,slow=2.1,SNR=4.6						
AAK				LR	LR	07 20 05.8	
	comp=Z,66nm,18.8s,MS3.2,baz=203,slow=41						
ZAA0	**Zalesovo Array**	**26.63**	**335**	*e*P	**P**	**07 08 14.2**	**-0.4**
ZALV	**Zalesovo Beam**	**26.63**	**335**	P	**P**	**07 08 14.6**	**+0.1**
	comp=Z,3.6nm,0.6s,mb4.1,baz=135,slow=8.8,SNR=12						
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**07 08 18.7**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.0,baz=128,slow=9.6,SNR=17						
BVAR	**Borovoye Array**	**32.60**	**322**	P	**P**	**07 09 07.7**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=120,slow=8.8,SNR=6.3						
AKTK	**Aktyubinsk**	**38.88**	**313**	P	**P**	**07 10 02.0**	**+0.5**
AKTO	**Aktyubinsk**	**38.88**	**313**	P	**P**	**07 10 02.0**	**+0.5**
	baz=97,slow=14,SNR=1.6						
BRTR	**Keskin Array B**	**56.40**	**300**	P	**P**	**07 12 17.2**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.8,baz=67,slow=11,SNR=3.7						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**07 12 20.7**	**-1.9**
	comp=Z,1.8nm,0.4s,mb4.5,baz=65,slow=7.5,SNR=4.1						
ARCES	**ARCESS Array B**	**57.18**	**336**	P	**P**	**07 12 21.8**	**-0.9**
	comp=Z,1.1nm,0.7s,mb4.0,baz=92,slow=7.3,SNR=9.4						
ARCES				PcP	PcP	07 13 16.5	-0.7
	comp=Z,1.7nm,0.7s,baz=88,slow=4.3,SNR=11						
FINES	**FINESS Array B**	**57.41**	**326**	P	**P**	**07 12 23.6**	**-0.9**
	comp=Z,1.9nm,0.6s,mb4.3,baz=76,slow=8.0,SNR=6.1						
WRAB	**Tennant Creek**	**58.63**	**146**	*e*P	**P**	**07 12 32.8**	**-0.7**
	comp=Z,3.0nm,0.5s,mb4.6						
WRA	**Warramunga Arr**	**58.63**	**146**	P	**P**	**07 12 32.6**	**-0.9**
	comp=Z,1.8nm,0.4s,mb4.5,baz=328,slow=9.0,SNR=19						
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**07 12 53.2**	**-0.8**
	comp=Z,0.5nm,0.3s,mb4.1,baz=335,slow=6.9,SNR=11						
NB2	**NORSAR Subarra**	**64.51**	**327**	P	**P**	**07 13 11.5**	**-1.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**64.51**	**327**	P	**P**	**07 13 11.8**	**-0.9**
	comp=Z,1.3nm,0.6s,mb4.2,baz=264,slow=3.2,SNR=8.6						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**07 13 30.0**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.8,baz=90,slow=6.9,SNR=4.4						
CDF	**Champ du Feu**	**71.38**	**316**	*e*P	**P**	**07 13 55.6**	**-0.6**
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**07 14 06.2**	**+0.3**
	comp=Z,8.9nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**07 14 06.2**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**07 14 06.1**	**+0.2**
SMF	**Signal de Mont**	**74.25**	**315**	*e*P	**P**	**07 14 12.6**	**-0.7**
AVF	**Avril sur Loir**	**74.48**	**315**	*e*P	**P**	**07 14 13.9**	**-0.7**
	comp=Z,8.0nm,0.8s,mb4.4						

*CSEM **14** 07:08:33.5±0.3,36°.23N×21°.30E,h2km,ML3.6/1,Error ellipse: s-maj=6.7km s-min=4.2km az=58.0*
*ISCJB **14** 07:08:34.2±1.3,36°.21N±0°.04×21°.23E±0°.07,h17km±9km, Error ellipse: s-maj=10.4km s-min=7.0km az=160.0*
*THE **14** 07:08:37.9,36°.39N×21°.35E,h11km,ML3.6/1,Error ellipse: s-maj=1.8km s-min=0.9km az=145.0*

ISC 14 07:08:34.7±1.2,36°.24N±0°.04×21°.27E±0°.07,h11km±5km, n54,σ0°80/76,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**30**	*e*PN	**Pg**	**07 08 49.5**	**+0.2**
PYL				*e*SN	**Sg**	**07 09 00.7**	**+1.5**
PYL	**PYLOS**	**0.76**	**30**	P	**Pg**	**07 08 49.4**	**+0.1**
PYL				S	**Sg**	**07 08 58.0**	**-1.2**
PYL	**PYLOS**	**0.76**	**30**	*e*Pn	**Pg**	**07 08 49.5**	**+0.2**
PYL				S	**Sg**	**07 08 58.0**	**-1.2**
ITM	**Ithomi**	**1.08**	**29**	*e*Pn	**Pg**	**07 08 55.0**	**-0.4**
ITM				*e*SN	**Sn**	**07 09 10.9**	**+0.2**
ITM	**Ithomi**	**1.08**	**29**	P	**Pg**	**07 08 54.9**	**-0.5**
ITM				S	**Sg**	**07 09 08.4**	**-1.0**
ITM	**Ithomi**	**1.08**	**29**	*e*Pn	**Pg**	**07 08 55.0**	**-0.4**
ITM				S	**Sg**	**07 09 08.4**	**-1.0**
ITM				*e*Sn	**Sn**	**07 09 10.9**	**+0.2**
VLI	**Veliai**	**1.43**	**70**	*e*PN	**Pn**	**07 08 59.9**	**-0.6**
VLI				*e*SN	**Sn**	**07 09 21.7**	**+2.5**
VLI	**Veliai**	**1.43**	**70**	*e*Pn	**Pn**	**07 08 59.9**	**-0.6**
VLI				*e*Sn	**Sn**	**07 09 21.7**	**+2.5**
KYTH	**Kithira**	**1.43**	**88**	*e*PN	**Pn**	**07 09 00.4**	**-0.1**
KYTH	**Kithira**	**1.43**	**88**	*e*Pn	**Pn**	**07 09 00.4**	**-0.1**
VLX	**Vlachokerasia**	**1.44**	**38**	*e*PB	**Pn**	**07 09 22.2**	**+0.9**
VLX				*e*SN	**Sg**	**07 09 22.2**	**+1.3**
VLX	**Vlachokerasia**	**1.44**	**38**	P	**Pn**	**07 09 00.6**	**-0.1**
VLX				S	**Sn**	**07 09 18.9**	**-0.7**
VLX	**Vlachokerasia**	**1.44**	**38**	*e*Pb	**Pn**	**07 08 59.8**	**-0.9**
VLX	**Vlachokerasia**	**1.44**	**38**	P	**Pn**	**07 09 00.6**	**-0.1**
VLX				S	**Sn**	**07 09 18.9**	**-0.7**
VLX				*e*Sn	**Sg**	**07 09 22.2**	**+1.3**
RLS	**Riolos of Patr**	**1.82**	**5**	*e*PN	**Pn**	**07 09 06.0**	**0.0**
RLS	**Riolos of Patr**	**1.82**	**5**	*e*Pn	**Pn**	**07 09 06.0**	**0.0**
GUR	**Goura**	**1.90**	**26**	*e*PN	**Pn**	**07 09 07.4**	**+0.4**
GUR	**Goura**	**1.90**	**26**	P	**Pn**	**07 09 07.3**	**+0.3**
GUR				S	**Sn**	**07 09 30.1**	**-0.8**
GUR	**Goura**	**1.90**	**26**	P	**Pn**	**07 09 07.3**	**+0.3**
GUR				S	**Sn**	**07 09 30.1**	**-0.8**
VLS	**Valsamata**	**2.01**	**344**	*e*PN	**Pn**	**07 09 08.7**	**+0.1**
VLS	**Valsamata**	**2.01**	**344**	P	**Pn**	**07 09 09.3**	**+0.7**
VLS				S	**Sn**	**07 09 33.5**	**-0.2**
VLS	**Valsamata**	**2.01**	**344**	*e*Pn	**Pn**	**07 09 08.7**	**+0.1**
VLS	**Valsamata**	**2.01**	**344**	P	**Pn**	**07 09 09.3**	**+0.7**
VLS				S	**Sn**	**07 09 33.5**	**-0.2**
LAKA	**Lakka**	**2.08**	**16**	P	**Pn**	**07 09 10.4**	**+0.9**
LAKA				S	**Sn**	**07 09 34.6**	**-0.7**
LAKA	**Lakka**	**2.08**	**16**	P	**Pn**	**07 09 10.4**	**+0.9**
LAKA				S	**Sn**	**07 09 34.6**	**-0.7**
LTK	**Loutraki**	**2.24**	**37**	*e*PN	**Pn**	**07 09 11.2**	**-0.5**
LTK	**Loutraki**	**2.24**	**37**	P	**Pn**	**07 09 11.4**	**-0.3**
LTK				S	**Sn**	**07 09 38.8**	**-0.5**
LTK	**Loutraki**	**2.24**	**37**	P	**Pn**	**07 09 11.4**	**-0.3**
LTK				S	**Sn**	**07 09 38.8**	**-0.5**
EFP	**Efpalio**	**2.24**	**13**	*e*PB	**Pn**	**07 09 12.9**	**+1.2**
EFP	**Efpalio**	**2.24**	**13**	P	**Pn**	**07 09 12.3**	**+0.6**
EFP	**Efpalio**	**2.24**	**13**	P	**Pn**	**07 09 12.3**	**+0.6**
EFP	**Efpalio**	**2.24**	**13**	*e*Pb	**Pn**	**07 09 12.9**	**+1.2**
KARN	**Karanos**	**2.31**	**110**	*e*PN	**Pn**	**07 09 12.0**	**-0.6**
KARN	**Karanos**	**2.31**	**110**	*e*Pn	**Pn**	**07 09 12.0**	**-0.6**
NAIG	**Nisos Aigina**	**2.33**	**49**	*e*PN	**Pn**	**07 09 13.4**	**+0.4**
NAIG	**Nisos Aigina**	**2.33**	**49**	*e*Pn	**Pn**	**07 09 13.4**	**+0.4**
VAM	**Vamos**	**2.52**	**108**	*e*PN	**Pn**	**07 09 14.8**	**-0.7**
VAM	**Vamos**	**2.52**	**108**	*e*Pn	**Pn**	**07 09 14.8**	**-0.7**
VLY	**Voula,Athens**	**2.58**	**51**	*e*PN	**Pn**	**07 09 16.0**	**-0.4**
VLY	**Voula,Athens**	**2.58**	**51**	*e*Pn	**Pn**	**07 09 16.0**	**-0.4**
EVR	**Evrytania**	**2.71**	**9**	*e*PB	**Pn**	**07 09 19.8**	**+1.7**
EVR	**Evrytania**	**2.71**	**9**	*e*Pb	**Pn**	**07 09 19.8**	**+1.7**
LKR	**Lokris**	**2.77**	**29**	*e*PN	**Pn**	**07 09 19.9**	**+0.9**
LKR	**Lokris**	**2.77**	**29**	*e*Pn	**Pn**	**07 09 19.9**	**+0.9**
AGG	**Agios Georgios**	**2.90**	**16**	*e*PN	**Pn**	**07 09 20.8**	**0.0**
AGG	**Agios Georgios**	**2.90**	**16**	P	**Pn**	**07 09 21.4**	**+0.6**
AGG	**Agios Georgios**	**2.90**	**16**	*e*Pn	**Pn**	**07 09 20.8**	**0.0**
AGG	**Agios Georgios**	**2.90**	**16**	P	**Pn**	**07 09 21.4**	**+0.6**
THL	**Klokotos Trika**	**3.37**	**10**	*e*PN	**Pn**	**07 09 27.3**	**0.0**
THL	**Klokotos Trika**	**3.37**	**10**	*e*Pn	**Pn**	**07 09 27.3**	**0.0**
LAST	**Lasithi**	**3.59**	**106**	*e*PN	**Pn**	**07 09 30.0**	**-0.2**
LAST	**Lasithi**	**3.59**	**106**	*e*Pn	**Pn**	**07 09 30.0**	**-0.2**
STON	**Ston**	**7.18**	**338**	*e*Pn	**Pn**	**07 10 18.5**	**-1.0**
STON				Sn	**Sn**	**07 11 32.8**	**-8.2**
STON	**Ston**	**7.18**	**338**	*e*Pn	**Pn**	**07 10 18.5**	**-1.0**

*IDC **14** 07:32:15.2±0.6,31°.82N×104°.19E,h0km,mb4.1/19, mb1 4.2/20,mb1mx4.1/29,mbtmp4.1/20,ML3.5/1,MS3.2/2, Ms1 3.2/2,ms1mx2.6/41,Error ellipse: s-maj=26.3km s-min=13.0km az=51.0*
*NEIC **14** 07:32:17.0±0.3,31°.83N×104°.19E,h10km,mb4.3/8,Error ellipse: s-maj=8.0km s-min=6.1km az=57.0*
*BJI **14** 07:32:17.5,31°.86N×104°.33E,h11km,mB4.1/3,mb4.2/5, ML4.1/17,Ms3.9/9,Ms7 3.7/8*

ISC 14 07:32:17.3±0.8,31°.87N±0°.03×104°.29E±0°.05,h12km±5km, n51,σ1°09/60,mb4.2/25,MS3.0/2,7C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.06**	**206**	Pg	**Pg**	**07 32 38.6**	**+0.8**
CD2				Sg	**Sg**	**07 32 53.3**	**+1.6**
CD2				smax			
	comp=N,12μm,0.6s						
LZH	**Lanzhou**	**4.22**	**355**	Pn	**Pn**	**07 33 24.9**	**+3.5**
LZH				Sn	**Sn**	**07 34 14.1**	**+3.5**
LZH				Sg	**Sg**	**07 34 31.1**	**-1.7**
LZH				smax			
	comp=N,250nm,1.1s						
LZH				smax			
	comp=E,330nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,8.5s						
LZH				LR	LR		
	comp=Z,2μm,9.4s						
XAN	**Xi'an**	**4.45**	**60**	Pn	**Pn**	**07 33 26.4**	**+1.8**
XAN				Pg	**Pg**	**07 33 39.5**	**-3.1**
XAN				Sn	**Sn**	**07 34 22.0**	**+5.7**
XAN				Sg	**Sg**	**07 34 38.6**	**-1.6**
XAN				smax			
	comp=N,430nm,0.6s						
XAN				smax			
	comp=E,210nm,0.6s						
XAN				LR	LR		
	comp=N,430nm,11.2s						
XAN				LR	LR		
	comp=E,190nm,10.3s						
XAN				LR	LR		
	comp=Z,200nm,11.7s						
ENH	**Enshi**	**4.73**	**108**	*e*Pn	**Pn**	**07 33 31.2**	**+2.7**
GYA	**Guiyang**	**5.78**	**158**	Pn	**Pn**	**07 33 43.5**	**+0.6**
GYA				Sn	**Sn**	**07 34 45.9**	**-3.3**
GYA				smax			
	comp=N,320nm,0.8s						
GYA				smax			
	comp=E,320nm,0.8s						
KMI	**Kunming**	**6.86**	**192**	Pn	**Pn**	**07 34 06.8**	**+9.0**
KMI				Sn	**Sn**	**07 35 14.9**	**-0.9**
KMI				smax			
	comp=N,25nm,1.6s						
KMI				smax			
	comp=E,33nm,1.6s						
KMI				LR	LR		
	comp=N,350nm,7.8s						
KMI				LR	LR		
	comp=E,460nm,7.1s						
GTA	**Gaotai**	**8.36**	**335**	*e*P	**Pn**	**07 34 23.5**	**+5.3**
GTA				pP		07 34 28.4	
GTA				sP		07 34 31.5	
GTA				S	**Sn**	**07 36 01.1**	**+8.6**
GTA				sS		07 36 07.3	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,26nm,6.2s						
GTA				LR	LR		
	comp=N,450nm,9.5s						
GTA				LR	LR		
	comp=E,230nm,9.8s						
GTA				LR	LR		
	comp=Z,420nm,11.0s						
LSA	**Lhasa**	**11.51**	**263**	*e*Pn	**Pn**	**07 35 00.8**	**-0.7**
SHL	**Shillong**	**12.57**	**243**	*e*P	**Pn**	**07 35 14.5**	**-1.5**
CHTO	**Chiang Mai**	**13.87**	**202**	*e*Pn	**Pn**	**07 35 31.8**	**-2.0**
	comp=Z,4.8nm,0.7s						
SONM	**Songino Array**	**16.02**	**5**	Pn	**Pn**	**07 36 03.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=6.9						
ULN	**Ulaanbaatar**	**16.11**	**7**	*e*Pn	**Pn**	**07 36 03.9**	**+0.4**
	comp=Z,5.1nm,1.0s						
KSRS	**Korea Array**	**20.20**	**68**	P	**P**	**07 36 53.6**	**+1.8**
	comp=Z,7.6nm,0.7s,baz=255,slow=10,SNR=22						
KSRS				LR	LR	07 44 29.5	
	comp=Z,28nm,19.8s,MS2.6,baz=155,slow=36						
HIA	**Hailar**	**20.89**	**29**	P	**P**	**07 36 59.8**	**+0.5**
MK31	**Makanchi Array**	**22.51**	**318**	*e*P	**P**	**07 37 16.3**	**-0.4**
MKAR	**Makanchi Array**	**22.51**	**318**	P	**P**	**07 37 17.5**	**+0.8**
	comp=Z,3.5nm,0.7s,mb3.9,baz=117,slow=12,SNR=30						
MKAR				PcP	PcP	07 41 09.8	-0.6
	comp=Z,0.5nm,0.6s,baz=91,slow=0.2,SNR=4.2						
MKAR	**Makanchi Array**	**22.51**	**318**	P	**P**	**07 37 17.5**	**+0.8**
MKAR				PcP	PcP	07 41 09.8	-0.6
TKM2	**Tokmak 2**	**25.21**	**304**	*e*P	**P**	**07 37 44.2**	**+1.4**
	comp=Z,2.4nm,0.8s,mb3.8						
UCH	**Uchtor**	**25.80**	**302**	*e*P	**P**	**07 37 47.3**	**-0.9**
	comp=Z,9.3nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**25.91**	**303**	P	**P**	**07 37 50.6**	**+1.4**
	comp=Z,0.7nm,0.3s,mb3.7,baz=74,slow=7.4,SNR=4.1						
ZAA0	**Zalesovo Array**	**26.10**	**333**	*e*P	**P**	**07 37 50.6**	**-0.2**
ZALV	**Zalesovo Beam**	**26.10**	**333**	P	**P**	**07 37 51.1**	**+0.3**
	comp=Z,2.4nm,0.4s,mb4.1,baz=130,slow=9.4,SNR=13						
AML	**Almayashu**	**26.37**	**302**	*e*P	**P**	**07 37 54.4**	**+1.1**
	comp=Z,2.6nm,0.7s,mb3.9						
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**07 37 56.9**	**+0.4**
	comp=Z,3.1nm,0.8s,mb3.9,baz=128,slow=10.0,SNR=19						
KURK				PcP	PcP	07 41 18.7	-0.9
	comp=Z,0.5nm,0.6s,baz=114,slow=2.1,SNR=6.0						
KURK				LR	LR	07 49 21.6	
	comp=Z,130nm,19.8s,MS3.5,baz=90,slow=38						
KURK	**Kurchatov**	**26.73**	**322**	P	**P**	**07 37 56.9**	**+0.4**
KURK				PcP	PcP	07 41 18.7	-0.9
KURK				LR	LR	07 49 21.6	
BVAR	**Borovoye Array**	**32.29**	**321**	P	**P**	**07 38 46.0**	**+0.2**
	comp=Z,0.5nm,0.3s,mb3.8,baz=110,slow=9.6,SNR=4.0						
ABKAR	**Akbulak array**	**37.29**	**311**	*e*P	**P**	**07 39 29.1**	**+0.1**
	comp=Z,2.9nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	**56.50**	**299**	P	**P**	**07 41 58.9**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=105,slow=7.1,SNR=6.9						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**07 41 59.4**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.4,baz=82,slow=7.9,SNR=15						
AKASG	**Malin Array Be**	**56.98**	**313**	P	**P**	**07 42 01.0**	**-1.5**
	comp=Z,2.0nm,0.5s,mb4.4,baz=69,slow=6.9,SNR=4.5						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**07 42 02.4**	**-0.3**
	comp=Z,3.2nm,0.4s,mb4.7,baz=98,slow=6.7,SNR=15						
WRAB	**Tennant Creek**	**59.02**	**147**	*e*P	**P**	**07 42 17.4**	**+0.3**
	comp=Z,5.0nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**07 42 17.1**	**-0.1**
	comp=Z,1.7nm,0.5s,mb4.3,baz=318,slow=11,SNR=23						
ASAR	**Alice Springs**	**62.07**	**149**	P	**P**	**07 42 38.1**	**+0.2**
	comp=Z,0.7nm,0.5s,mb4.1,baz=337,slow=6.9,SNR=12						
NB2	**NORSAR Subarra**	**64.10**	**327**	P	**P**	**07 42 49.7**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.3,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**07 42 49.6**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.2,baz=40,slow=4.9,SNR=7.7						
GERES	**GERESS Array B**	**67.13**	**314**	P	**P**	**07 43 10.6**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.9,baz=69,slow=7.4,SNR=5.1						
CDF	**Champ du Feu**	**71.18**	**316**	*i*P	**P**	**07 43 35.6**	**-0.3**
KMBO	**Kilima Mbogo**	**71.24**	**256**	P	**P**	**07 43 36.7**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=45,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**72.57**	**147**	P	**P**	**07 43 44.3**	**0.0**
	comp=Z,0.8nm,0.3s,mb4.1,baz=313,slow=12,SNR=2.2						
LPG	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**07 43 46.6**	**+0.7**
	comp=Z,11nm,0.6s,mb4.6						
LPG	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**07 43 46.6**	**+0.7**
	comp=Z,5.4nm,0.6s,mb4.7						
LPL	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**07 43 46.4**	**+0.5**
	comp=Z,10nm,0.5s,mb4.7						
LPL	**La Plagne**	**72.84**	**313**	⇑*i*P	**P**	**07 43 46.4**	**+0.5**
	comp=Z,5.2nm,0.5s,mb4.7						
SMF	**Signal de Mont**	**74.06**	**315**	⇑*i*P	**P**	**07 43 52.7**	**-0.4**
CAF	**Calviac**	**76.01**	**314**	⇑*i*P	**P**	**07 44 04.7**	**-0.4**
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**07 44 31.3**	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=325,slow=5.1,SNR=17						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**07 44 31.3**	**+0.3**
SCHQ	**Schefferville**	**93.31**	**355**	P	**P**	**07 45 30.3**	**-1.5**
	comp=Z,2.5nm,0.8s,mb4.7,baz=231,slow=17,SNR=4.3						
TORD	**Torodi Ar. Bea**	**93.55**	**288**	P	**P**	**07 45 32.4**	**-1.3**
	comp=Z,1.0nm,1.0s,mb4.2,baz=29,slow=3.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**93.55**	**288**	P	**P**	**07 45 32.4**	**-1.3**

*ISCJB **14** 07:39:49.5±0.3,31°.46N±0°.03×104°.16E±0°.05,h10km, mb4.3/24,Error ellipse: s-maj=6.1km s-min=4.2km az=11.4*
*IDC **14** 07:39:49.7±0.7,31°.54N×104°.28E,h0km,mb4.2/14, mb1 4.3/15,mb1mx4.1/30,mbtmp4.2/15,MS3.2/1, Ms1 3.2/1,ms1mx2.2/39,Error ellipse: s-maj=30.8km s-min=13.1km az=53.0*
*NEIC **14** 07:39:51.3±0.3,31°.50N×104°.19E,h10km,mb4.5/8,Error ellipse: s-maj=8.2km s-min=5.2km az=58.0*
*BJI **14** 07:39:51.3,31°.46N×104°.16E,h8km,mB4.8/7,mb4.4/10, ML4.2/17,Ms4.2/8,Ms7 4.0/5*

ISC 14 07:39:51.3±0.3,31°.48N±0°.03×104°.17E±0°.04,h10km,n47, σ1°02/57,mb4.3/24,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.67**	**212**	Pg	**Pg**	**07 40 03.1**	**-1.1**
CD2				Sg	**Sg**	**07 40 11.6**	**-1.3**
CD2				smax			
	comp=N,12μm,0.8s						
LZH	**Lanzhou**	**4.60**	**357**	*e*Pn	**Pn**	**07 41 04.8**	**+3.9**
LZH				Sn	**Sn**	**07 41 59.3**	**+4.9**
LZH				Sg	**Sg**	**07 42 17.5**	**-1.6**
LZH				smax			
	comp=N,270nm,1.0s						
LZH				smax			
	comp=E,500nm,1.4s						
LZH				LR	LR		
	comp=N,3μm,5.9s						
LZH				LR	LR		
	comp=Z,4μm,8.0s						
ENH	**Enshi**	**4.73**	**103**	*e*Pn	**Pn**	**07 41 02.8**	**+0.1**
XAN	**Xi'an**	**4.75**	**56**	Pn	**Pn**	**07 41 04.5**	**+1.6**
XAN				Pg	**Pg**	**07 41 20.6**	**-1.7**
XAN				Sn	**Sn**	**07 41 59.4**	**+1.3**
XAN				Sg	**Sg**	**07 42 19.8**	**-4.1**
XAN				smax			
	comp=N,340nm,0.8s						
XAN				smax			
	comp=E,160nm,0.8s						
XAN				LR	LR		
	comp=N,770nm,8.6s						
XAN				LR	LR		
	comp=E,410nm,8.6s						
XAN				LR	LR		
	comp=Z,460nm,9.1s						
GYA	**Guiyang**	**5.46**	**156**	Pn	**Pn**	**07 41 15.3**	**+2.6**
GYA				Sn	**Sn**	**07 42 16.3**	**+0.7**
GYA				smax			
	comp=N,260nm,1.0s						
GYA				smax			
	comp=E,250nm,1.1s						
KMI	**Kunming**	**6.46**	**192**	Pn	**Pn**	**07 41 27.3**	**+0.9**
KMI				Sn	**Sn**	**07 42 38.8**	**-1.3**
KMI				Sg	**Sg**	**07 43 11.4**	**-7.1**
KMI				smax			
	comp=N,49nm,1.7s						
KMI				smax			
	comp=E,43nm,2.4s						
KMI				LR	LR		
	comp=N,1μm,8.0s						
KMI				LR	LR		
	comp=E,1μm,10.8s						
WHN	**Wuhan**	**8.79**	**93**	P	**Pn**	**07 41 51.1**	**-7.3**
WHN				S	**Sn**	**07 43 35.0**	**-2.6**
WHN				LR	LR		
	comp=N,520nm,6.3s						
WHN				LR	LR		
	comp=E,2μm,8.3s						
WHN				LR	LR		
	comp=Z,2μm,8.8s						
CHTO	**Chiang Mai**	**13.46**	**202**	Pn	**Pn**	**07 43 02.4**	**-0.1**
SONM	**Songino Array**	**16.42**	**5**	Pn	**Pn**	**07 43 42.1**	**+0.3**
	baz=186,slow=13,SNR=7.6						
SONM				Lg		07 48 30.8	
	comp=Z,0.2nm,0.3s,baz=183,slow=29,SNR=2.6						
ULN	**Ulaanbaatar**	**16.51**	**7**	*e*Pn	**Pn**	**07 43 41.1**	**-1.8**
KSRS	**Korea Array**	**20.45**	**67**	P	**P**	**07 44 26.2**	**-2.7**
	comp=Z,1.6nm,0.7s,baz=256,slow=9.9,SNR=4.6						
CN2	**Changchun**	**20.80**	**48**	*e*P	**P**	**07 44 35.3**	**+2.7**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**07 44 52.7**	**-0.6**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**07 44 54.3**	**+1.0**
	comp=Z,4.2nm,0.6s,mb4.0,baz=116,slow=11,SNR=53						
TKM2	**Tokmak 2**	**25.34**	**305**	*e*P	**P**	**07 45 19.5**	**+1.2**
	comp=Z,4.0nm,1.2s,mb3.8						
UCH	**Uchtor**	**25.92**	**303**	*e*P	**P**	**07 45 25.2**	**+1.7**
	comp=Z,4.8nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**26.04**	**304**	P	**P**	**07 45 24.9**	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.5,baz=135,slow=10.0,SNR=2.6						
ZAA0	**Zalesovo Array**	**26.41**	**334**	*e*P	**P**	**07 45 27.9**	**+0.1**
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**07 45 28.0**	**+0.2**
	comp=Z,8.9nm,0.5s,mb4.6,baz=134,slow=9.5,SNR=39						
ZALV				LR	LR	07 56 50.6	
	comp=Z,58nm,20.5s,baz=86,slow=39						
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**07 45 28.0**	**+0.2**
ZALV				LR	LR	07 56 50.6	
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**07 45 33.3**	**+0.3**
	comp=Z,4.8nm,0.5s,mb4.2,baz=124,slow=9.9,SNR=47						
BVAR	**Borovoye Array**	**32.53**	**321**	P	**P**	**07 46 22.6**	**+0.4**
	comp=Z,1.7nm,0.5s,mb4.2,baz=127,slow=9.4,SNR=7.9						
ABKAR	**Akbulak array**	**37.47**	**311**	*e*P	**P**	**07 47 05.1**	**+0.3**
	comp=Z,1.8nm,0.5s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.43**	**154**	P	**P**	**07 49 11.3**	**-0.2**
	comp=Z,1.3nm,0.9s,mb3.9,baz=334,slow=12						
JOF	**Joensuu**	**54.74**	**328**	*e*p	**P**	**07 49 20.1**	**-0.5**
	comp=Z,9.4nm,0.5s,mb5.1						
KEV	**Kevo**	**56.41**	**336**	*e*p	**P**	**07 49 31.9**	**-0.6**
	comp=Z,4.6nm,0.4s,mb4.9						
BRTR	**Keskin Array B**	**56.60**	**299**	P	**P**	**07 49 35.1**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.7,baz=67,slow=4.8,SNR=2.5						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**07 49 36.1**	**-0.2**
	comp=Z,2.5nm,0.5s,mb4.5,baz=82,slow=7.6,SNR=26						
ARCES				PcP	PcP	07 50 31.2	-0.3
	comp=Z,1.5nm,0.8s,baz=75,slow=6.4,SNR=3.7						
KAF	**Kangasniemi**	**57.11**	**327**	*e*p	**P**	**07 49 37.3**	**-0.2**
	comp=Z,4.6nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**07 49 38.5**	**-0.3**
	comp=Z,5.8nm,0.6s,mb4.8,baz=76,slow=8.0,SNR=17						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**07 49 50.1**	**+0.6**
	comp=Z,8.6nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**58.76**	**146**	P	**P**	**07 49 49.8**	**+0.2**
	comp=Z,5.3nm,0.7s,mb4.7,baz=338,slow=7.9,SNR=98						
ASAR	**Alice Springs**	**61.78**	**149**	P	**P**	**07 50 10.6**	**+0.3**
	comp=Z,0.8nm,0.5s,mb4.1,baz=340,slow=6.7,SNR=15						
NB2	**NORSAR Subarra**	**64.37**	**327**	P	**P**	**07 50 25.9**	**-1.1**
	comp=Z,2.2nm,0.5s,mb4.4,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.37**	**327**	P	**P**	**07 50 25.9**	**-1.2**
	comp=Z,1.6nm,0.4s,mb4.4,baz=62,slow=4.2,SNR=13						
COLA	**College**	**69.07**	**26**	*e*P	**P**	**07 50 57.6**	**+0.7**
	comp=Z,4.8nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**71.39**	**316**	*e*P	**P**	**07 51 11.0**	**-0.4**
INK	**Inuvik**	**71.79**	**19**	*e*P	**P**	**07 51 13.6**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 51 21.6**	**+0.3**
	comp=Z,5.8nm,0.6s,mb4.4						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**07 51 21.6**	**+0.3**
	comp=Z,2.9nm,0.6s,mb4.4						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**07 51 21.5**	**+0.1**
	comp=Z,4.3nm,0.4s,mb4.4						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**07 51 21.5**	**+0.1**
	comp=Z,2.2nm,0.4s,mb4.4						
SMF	**Signal de Mont**	**74.27**	**315**	*e*P	**P**	**07 51 27.9**	**-0.7**
TCF	**Toulx Ste Croi**	**75.42**	**315**	*e*P	**P**	**07 51 35.0**	**-0.3**
CAF	**Calviac**	**76.20**	**314**	*e*P	**P**	**07 51 39.8**	**0.0**
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**07 52 07.9**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=330,slow=5.2,SNR=17						
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**07 52 07.9**	**+0.3**

*IDC **14** 07:50:46.8±2.9,2°.70S×127°.53E,h0km,mb3.8/1, mb1 4.0/4,mb1mx3.7/21,mbtmp3.9/4,ML3.8/

XAN			Pg	Pg	07 56 34.6	-4.3
XAN			Sn	Sn	07 57 07.9	-0.2
XAN			Sg	Sg	07 57 20.0	-5.0
LZH	**Lanzhou**	**4.00 343**	*e*Pn	Pn	07 56 32.3	+0.2
LZH			Pg	Pg	07 56 41.3	-6.1
LZH			Sn	Sn	07 57 20.5	+1.5
LZH			Sg	Sg	07 57 31.1	-8.1
LZH			smax			
	comp=N,500nm,0.7s					
LZH			smax			
	comp=E,620nm,0.9s					
LZH			LR	LR		
	comp=E,890nm,5.3s					
LZH			LR	LR		
	comp=Z,930nm,7.2s					
ENH	**Enshi**	**4.13 118**	*e*Pn	Pn	07 56 37.7	+3.7
GYA	**Guiyang**	**5.91 168**	Pn	Pn	07 57 03.9	+5.5
GYA			Sn	Sn	07 58 07.0	+0.9
GYA			smax			
	comp=N,150nm,0.9s					
GYA			smax			
	comp=E,180nm,1.0s					
SONM	**Songino Array**	**15.59 3**	Pn	Pn	07 59 08.6	-1.9
	comp=E,0.2nm,0.3s,baz=185,slow=12,SNR=4.3					
SONM			Lg		08 03 39.5	
	comp=E,0.2nm,0.3s,baz=189,slow=26,SNR=2.9					
KSRS	**Korea Array**	**19.30 68**	P	Pn	07 59 55.5	-1.4
	comp=E,0.0nm,0.3s,baz=252,slow=10.0,SNR=7.7					
MK31	**Makanchi Array**	**22.79 316**	*e*P	P	08 00 31.7	-1.8
MKAR	**Makanchi Array**	**22.79 316**	P	P	08 00 32.0	-1.4
	comp=E,0.5nm,0.5s,mb3.2,baz=123,slow=11,SNR=7.0					
TKM2	**Tokmak 2**	**25.68 303**	*e*P	P	08 01 00.8	-0.1
ZALV	**Zalesovo Beam**	**26.14 332**	P	P	08 01 04.9	0.0
	comp=E,0.5nm,0.3s,mb3.5,baz=148,slow=8.7,SNR=3.9					
UCH	**Uchtor**	**26.30 301**	*e*P	P	08 01 07.8	+1.3
	comp=E,4.5nm,1.2s,mb3.9					
KURK	**Kurchatov**	**26.94 321**	P	P	08 01 13.6	+1.4
	comp=E,1.3nm,0.8s,mb3.5,baz=122,slow=11,SNR=7.6					
BRTR	**Keskin Array B**	**57.03 299**	P	P	08 05 17.4	+0.4
	comp=E,0.6nm,0.7s,mb3.8,baz=80,slow=8.9,SNR=4.0					
FINES	**FINESS Array B**	**57.16 326**	P	P	08 05 18.9	+1.4
	comp=E,0.9nm,0.4s,mb4.1,baz=100,slow=10,SNR=5.5					
WRAB	**Tennant Creek**	**58.90 148**	*e*P	P	08 05 30.4	+0.3
WRA	**Warramunga Arr**	**58.90 148**	P	P	08 05 30.0	-0.1
	comp=E,1.7nm,0.6s,mb4.3,baz=340,slow=7.2,SNR=23					
ASAR	**Alice Springs**	**61.98 150**	P	P	08 05 51.3	+0.2
	comp=E,0.8nm,0.8s,mb3.9,baz=329,slow=6.2,SNR=8.0					
NOA	**NORSAR Array B**	**64.22 327**	P	P	08 06 06.3	+0.8
	comp=E,0.7nm,0.6s,mb3.9,baz=71,slow=6.7,SNR=3.2					
YKA	**Yellowknife Ar**	**80.30 18**	P	P	08 07 40.2	-1.5
	comp=E,0.8nm,0.6s,mb3.8,baz=327,slow=5.1,SNR=16					
YKA	**Yellowknife Ar**	**80.30 18**	P	P	08 07 40.2	-1.5

IDC 14 08:01:17.8±1.3, 32°.43N×105°.60E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/25, mbtmp3.5/4, MS3.1/1, Ms1 3.1/1, ms1mx2.0/35, Error ellipse: s-maj=74.3km s-min=25.5km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.87 316**		P	P	08 06 22.7	+0.1
	0.3nm,0.3s,baz=112,slow=11,SNR=5.0						
BVAR	**Borovoye Array**	**32.58 320**		LR	LR	08 21 59.5	
	comp=Z,29nm,19.7s,baz=306,slow=38						
WRA	**Warramunga Arr**	**58.89 148**		P	P	08 11 19.0	+0.5
	0.6nm,0.6s,baz=340,slow=7.7,SNR=9.2						
ASAR	**Alice Springs**	**61.99 150**		P	P	08 11 39.2	-0.4
	0.4nm,0.7s,baz=331,slow=6.2,SNR=4.5						
YKA	**Yellowknife Ar**	**80.05 18**		P	P	08 13 28.9	0.0
	0.3nm,0.5s,baz=326,slow=4.9,SNR=6.7						

IDC 14 08:18:42.6±0.9, 31°.35N×103°.94E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/40, Error ellipse: s-maj=37.8km s-min=16.6km az=54.0
NEIC 14 08:18:44.2±0.5, 31°.34N×103°.96E, h10km, Error ellipse: s-maj=16.9km s-min=7.5km az=50.0
BJI 14 08:18:46.8, 31°.10N×104°.22E, h20km, ML3.8/5

ISC 14 08:18:45.1±0.8, 31°.41N±0°.03×103°.96E±0°.09, h14km±6km, n18, σ0°.83/21, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53 199**		Pg	Pg	08 18 53.0	-2.6
CD2				Sg	Sg	08 19 03.3	+0.6
CD2				smax			
	comp=N,2μm,0.9s						
LZH	**Lanzhou**	**4.66 359**		*e*Pg	Pg	08 20 15.6	+1.2
LZH				Sg	Sg	08 21 14.0	-0.8
LZH				smax			
	comp=N,62nm,0.8s						
LZH				smax			
	comp=E,58nm,0.8s						
ENH	**Enshi**	**4.88 102**		*e*Pn	Pn	08 19 57.4	-0.8
XAN	**Xi'an**	**4.93 57**		Pg	Pg	08 20 13.8	-5.7
XAN				Sg	Sg	08 21 15.4	-8.0
XAN				smax			
	comp=N,150nm,0.8s						
XAN				smax			
	comp=E,110nm,0.9s						
GYA	**Guiyang**	**5.47 154**		Pg	Pg	08 20 30.3	+0.3
GYA				Sg	Sb	08 21 27.4	+1.3
GYA				smax			
	comp=N,100nm,1.0s						
GYA				smax			
	comp=E,120nm,0.9s						
SONM	**Songino Array**	**16.50 6**		Pn	Pn	08 22 37.2	+1.1
	comp=E,0.1nm,0.3s,baz=194,slow=10,SNR=5.2						
KSRS	**Korea Array**	**20.63 66**		P	P	08 23 24.1	-0.1
	comp=E,1.8nm,0.6s,baz=257,slow=10,SNR=8.4						
MKAR	**Makanchi Array**	**22.67 319**		P	P	08 23 47.0	+1.0
	comp=E,0.4nm,0.4s,mb3.2,baz=114,slow=11,SNR=7.3						
AAK	**Ala-Archa**	**25.93 304**		LR	LR	08 36 12.8	
	comp=E,46nm,20.0s,baz=357,slow=40						
ZALV	**Zalesovo Beam**	**26.39 334**		P	P	08 24 21.1	+0.2
	comp=E,1.5nm,0.6s,mb3.7,baz=134,slow=13,SNR=5.7						
KURK	**Kurchatov**	**26.93 323**		P	P	08 24 25.9	+0.1
	comp=E,1.1nm,0.8s,mb3.5,baz=125,slow=9.2,SNR=8.0						
ARCES	**ARCESS Array B**	**56.93 336**		P	P	08 28 29.6	+0.2
	comp=E,3.5nm,0.9s,mb4.4,baz=64,slow=5.5,SNR=4.2						
FINES	**FINESS Array B**	**57.24 326**		P	P	08 28 31.5	-0.2
	comp=E,2.6nm,0.9s,mb4.2,baz=104,slow=10.0,SNR=3.6						
WRAB	**Tennant Creek**	**58.79 146**		*e*P	P	08 28 42.4	-0.7
WRA	**Warramunga Arr**	**58.80 146**		P	P	08 28 42.5	-0.6
	comp=E,0.5nm,0.2s,mb4.1,baz=328,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**61.82 149**		P	P	08 29 03.5	-0.3
	comp=E,0.6nm,0.7s,mb3.8,baz=331,slow=6.8,SNR=7.1						
NOA	**NORSAR Array B**	**64.33 327**		P	P	08 29 19.3	-0.7
	comp=E,0.6nm,0.7s,mb3.8,baz=69,slow=6.2,SNR=2.4						
YKA	**Yellowknife Ar**	**81.43 17**		P	P	08 31 01.2	-0.2
	comp=E,0.4nm,0.6s,mb3.5,baz=330,slow=5.3,SNR=8.3						

ISCJB 14 08:22:09.6±1.1, 17°.8S±0°.4×178°.6W±0°.2, h622km±12km, mb3.3/8, Error ellipse: s-maj=59.4km s-min=16.5km az=154.6
IDC 14 08:22:09.5±1.9, 17°.73S×178°.57W, h602km±24km, mb2.9/8, mb1 3.2/9, mb1mx3.1/16, mbtmp2.9/9, Error ellipse: s-maj=43.0km s-min=14.0km az=150.0
NEIC 14 08:22:10.2±1.0, 17°.80S×178°.49W, h615km±9km, Error ellipse: s-maj=51.4km s-min=14.1km az=155.0

ISC 14 08:22:10.4±1.1, 17°.8S±0°.4×178°.5W±0°.2, h615km±11km, n15, σ0°.98/11, mb3.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.30 271**		*e*Pn	P	08 23 33.6	+1.2
AFI	**Afiamalu**	**7.53 60**		P	P	08 24 04.5	-1.4
	2.0nm,0.3s,baz=285,slow=7.9,SNR=4.8						
AFI	**Afiamalu**	**7.53 60**		P	P	08 24 04.5	-1.4
STKA	**Stephens Creek**	**38.61 241**		P	P	08 28 43.0	+0.2
	1.9nm,0.5s,mb3.9,baz=83,slow=9.7,SNR=7.9						
WRA	**Warramunga Arr**	**44.57 259**		P	P	08 29 27.9	-1.8
	0.2nm,0.4s,mb3.0,baz=93,slow=7.6,SNR=6.7						
WRA				PcP	PcP	08 30 58.8	-0.2
	0.2nm,0.3s,baz=89,slow=3.8,SNR=9.7						
ASAR	**Alice Springs**	**44.74 254**		P	P	08 29 31.0	0.0
	1.3nm,0.5s,mb3.7,baz=88,slow=8.5,SNR=25						
ASAR				PcP	PcP	08 30 59.4	-0.2
	0.6nm,0.5s,baz=99,slow=3.8,SNR=7.8						
MJAR	**Matsushiro Arr**	**67.77 323**		P	P	08 32 08.5	+0.1
	0.6nm,0.4s,mb3.4,baz=93,slow=7.4,SNR=3.4						
NVAR	**Mina Array Bea**	**79.40 44**		P	P	08 33 15.0	+0.9
	0.3nm,0.7s,mb2.8,baz=249,slow=6.7,SNR=3.3						
TXAR	**Lajitas Array**	**86.00 58**		P	P	08 33 48.8	+1.4
	0.5nm,0.7s,mb3.3,baz=216,slow=6.2,SNR=4.9						
PDAR	**Pinedale Array**	**87.33 43**		P	P	08 33 53.0	-0.2
	0.4nm,0.6s,mb3.3,baz=206,slow=4.1,SNR=4.9						
YKA	**Yellowknife Ar**	**94.27 25**		P	P	08 34 24.2	-0.5
	0.1nm,0.5s,mb3.2,baz=244,slow=4.4,SNR=3.2						
BRTR	**Keskin Array B**	**144.65 315**		PKP	PKPdf	08 40 39.0	+0.6
	0.9nm,0.6s,baz=90,slow=2.5,SNR=5.7						
CLL	**Collm**	**145.34 347**		*i* PKPbc	PKPbc	08 40 40.6	+0.1
	comp=Z,4.0nm,0.8s						
MMAI	**Mount Meron Ar**	**146.02 303**		PKPbc	PKPbc	08 40 41.3	-1.7
	comp=Z,0.5nm,0.3s,baz=124,slow=2.4,SNR=3.5						
GERES	**GERESS Array B**	**147.49 345**		PKPbc	PKPbc	08 40 46.5	+0.1
	comp=Z,1.8nm,0.7s,baz=29,slow=3.0,SNR=7.9						

IDC 14 08:26:00.5±1.4, 31°.84N×104°.76E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/25, mbtmp3.2/3, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=91.7km s-min=25.1km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.02 4**		Pn	Pn	08 29 47.4	+0.3
	0.1nm,0.3s,baz=182,slow=14,SNR=3.4						
KSRS	**Korea Array**	**19.84 67**		LR	LR	08 38 22.2	
	comp=Z,69nm,19.0s,baz=346,slow=37						
MKAR	**Makanchi Array**	**22.80 317**		P	P	08 31 04.7	0.0
	0.1nm,0.4s,baz=119,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**58.78 147**		P	P	08 36 00.7	+0.2
	0.3nm,0.4s,baz=338,slow=7.6,SNR=7.6						
ASAR	**Alice Springs**	**61.83 150**		P	P	08 36 21.3	-0.1
	0.1nm,0.5s,baz=333,slow=6.5,SNR=5.4						

IDC 14 08:34:07.9±0.7, 22°.56S×173°.40E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.2/18, mbtmp4.2/13, ML3.2/1, MS3.6/6, Ms1 3.6/6, ms1mx3.4/18, Error ellipse: s-maj=23.6km s-min=18.2km az=128.0
ISCJB 14 08:34:09.6±2.9, 22°.57S±0°.06×173°.39E±0°.06, h20km±22km, mb4.3/17, MS3.6/3, Error ellipse: s-maj=11.1km s-min=7.6km az=151.2
NEIC 14 08:34:13.9±1.1, 22°.59S×173°.36E, h42km±10km, mb4.7/4, Error ellipse: s-maj=10.2km s-min=9.3km az=129.0

ISC 14 08:34:13.5±3.0, 22°.59S±0°.06×173°.40E±0°.06, h33km±22km, n42, σ0°.88/32, mb4.3/17, MS3.6/3, 2C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.46 273**		*e*Pn	Pn	08 35 46.6	+0.4
DZM	9.6nm,0.2s			*e*Sn	Sn	08 36 59.9	+1.1
	23nm,0.2s						
DZM				*e*LR	LR	08 37 20.4	
	612nm,22.7s						
DZM	**Mont Dzumac**	**6.46 273**		*e*Pn	Pn	08 35 46.7	+0.5
DZM				*e*Sn	Sn	08 36 58.0	-0.7
MSVF	**Nonsavu**	**6.52 43**		*e*Pn	Pn	08 35 47.7	+0.7
	78nm,1.0s						
MSVF				*e*Sn	Sn	08 36 59.7	-0.6
RAO	**Raoul Island**	**10.25 132**		LR	LR	08 39 44.8	
	comp=Z,514nm,21.0s,baz=41,slow=33						
OUZ	**Omahuta**	**12.59 179**		Pn	Pn	08 37 09.6	-0.5
URZ	**Urewera**	**15.94 169**		Pn	Pn	08 37 54.6	-0.6
	0.1nm,0.3s,baz=171,slow=14,SNR=2.0						
URZ				LR	LR	08 41 45.5	
	comp=Z,109nm,21.2s,baz=100,slow=29						
AFI	**Afiamalu**	**16.51 61**		LR	LR	08 43 04.9	
	comp=Z,200nm,18.2s,baz=95,slow=33						
EIDS	**Eidsvold**	**20.57 258**		*e*P	P	08 38 50.9	+1.3
EIDS	**Eidsvold**	**20.57 258**		*e*P	P	08 38 48.7	-0.9
	11nm,0.9s						
ARMA	**Armidale**	**20.96 244**		*e*P	P	08 38 58.6	+4.9
RPZ	**Rata Peaks**	**21.16 185**		P	P	08 38 55.3	-0.4
	5.5nm,0.6s,mb4.1,baz=207,slow=14,SNR=3.5						
RPZ				LR	LR	08 45 58.5	
	comp=Z,223nm,20.4s,MS3.5,baz=15,slow=34						
RMQ	**Roma**	**22.73 255**		*e*P	P	08 39 14.2	+1.5
	16nm,0.7s,mb4.6						
CTA	**Charters Tower**	**25.39 271**		P	P	08 39 38.9	+0.9
	1.7nm,0.4s,mb3.9,baz=0.4,slow=14,SNR=6.4						
CMSA	**Cobar Meteorol**	**26.17 244**		*e*P	P	08 39 45.3	+0.4
STKA	**Stephens Creek**	**29.66 245**		*e*P	P	08 40 16.4	+0.3
	3.1nm,1.2s,mb3.9						
STKA	**Stephens Creek**	**29.66 245**		P	P	08 40 16.1	0.0
	1.5nm,0.7s,mb3.9,baz=101,slow=10,SNR=6.4						
STKA				LR	LR	08 51 49.3	
	comp=Z,150nm,20.2s,MS3.6,baz=209,slow=36						
BBOO	**Buckleboo**	**34.43 245**		*e*P	P	08 40 57.9	-0.1
	5.8nm,0.7s,mb4.6						
PPT	**Papeete**	**35.07 89**		*e*LR	LR	08 50 15.8	
	83nm,24.0s						
ASAR	**Alice Springs**	**36.26 260**		P	P	08 41 12.6	-1.2
	2.8nm,0.9s,mb4.2,baz=84,slow=8.8,SNR=20						
WRA	**Warramunga Arr**	**36.42 267**		P	P	08 41 13.1	-2.1
	0.7nm,0.3s,mb4.0,baz=96,slow=8.5,SNR=29						
KAKA	**Kakadu**	**40.13 277**		*e*P	P	08 41 44.6	-1.9
FITZ	**Fitzroy Crossi**	**44.85 267**		*e*P	P	08 42 24.8	-0.1
	14nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**44.85 267**		P	P	08 42 24.7	-0.2
	8.6nm,0.9s,mb4.6,baz=127,slow=8.0,SNR=16						
TAOE	**Nuku Hiva Isla**	**46.56 81**		*e*LR	LR	08 55 44.9	
	88nm,25.4s						
SBA	**Scott Base**	**55.41 182**		*e*P	P	08 43 45.5	+1.5
	14nm,1.2s,mb4.9						
QSPA	**South Pole Qui**	**67.48 180**		*e*P	P	08 45 05.6	+0.1
	10nm,1.0s,mb4.8						
MJAR	**Matsushiro Arr**	**67.55 330**		P	P	08 45 05.4	-1.1
	1.4nm,0.7s,mb4.1,baz=163,slow=8.7,SNR=3.8						
KSRS	**Korea Array**	**73.47 324**		P	P	08 45 42.9	+0.3
	0.7nm,0.5s,mb3.9,baz=150,slow=7.5,SNR=4.8						
PETK	**Petropavlovsk-**	**76.60 350**		P	P	08 46 00.9	+0.6
	4.5nm,0.8s,mb4.4,baz=134,slow=6.4,SNR=6.7						
MAW	**Mawson**	**76.78 202**		P	P	08 46 01.7	+0.4
	1.8nm,0.6s,mb4.2,baz=137,slow=11,SNR=9.0						
ISA	**Isabella**	**86.64 49**		*e*P	P	08 46 53.8	+0.1
	3.4nm,0.8s,mb4.6						
YBH	**Yreka Blue Hor**	**87.07 42**		P	P	08 46 56.3	+0.6
	2.2nm,0.9s,mb4.4,baz=330,slow=1.1,SNR=4.8						
NVAR	**Mina Array Bea**	**88.17 47**		P	P	08 47 01.1	+0.1
	0.6nm,0.6s,mb4.0,baz=218,slow=6.3,SNR=6.0						
TXAR	**Lajitas Array**	**94.99 60**		LR	LR	09 21 31.8	
	comp=Z,30nm,19.1s,MS3.8,baz=0.0,slow=30						
ARCES	**ARCESS Array B**	**129.26 346**		PKP	PKPdf	08 53 15.0	-2.6
	2.4nm,0.8s,baz=46,slow=5.2,SNR=5.1						
MLR	**Muntele Rosu**	**145.03 319**		PKPbc	PKPbc	08 53 46.8	+0.1
	2.2nm,0.6s,baz=132,slow=6.1,SNR=4.3						
EKA	**Eskdalemuir Ar**	**147.20 356**		PKPbc	PKPbc	08 53 51.5	-1.4
	2.2nm,0.7s,baz=0.5,slow=2.9,SNR=7.6						
BRG	**Berggiesshubel**	**147.54 336**		*e*P	PKPdf	08 53 53.5	+2.1
	4.0nm,0.8s						
BRG				*e*		08 54 03.3	
	5.7nm,0.8s						
CLL	**Collm**	**147.54 337**	⇑	*i* P	PKPbc	08 53 54.9	+0.9
CLL				*i*		08 54 03.3	
CLL	**Collm**	**147.54 337**	⇑	*i* PKPbc	PKPbc	08 53 54.9	+0.9
	comp=Z,6.0nm,0.9s						
CLL				*i* pPKPdf	pPKPdf	08 54 03.3	+1.0
	comp=Z,11nm,1.0s						
GERES	**GERESS Array B**	**149.24 333**		PKPbc	PKPbc	08 53 57.0	-1.5
	comp=Z,1.4nm,0.7s,baz=245,slow=2.8,SNR=9.8						
TORD	**Torodi Ar. Bea**	**167.73 221**		PKP	PKPdf	08 54 15.8	-1.3
	comp=Z,0.6nm,1.0s,baz=213,slow=5.1,SNR=3.7						
TORD				PKPab	PKPab	08 55 21.9	-1.6
	comp=Z,0.7nm,0.8s,baz=127,slow=3.9,SNR=5.0						

ISCJB 14 08:57:23.1±0.5, 30°.79N±0°.05×103°.33E±0°.06, h10km, mb3.7/9, Error ellipse: s-maj=8.0km s-min=6.9km az=152.7
IDC 14 08:57:23.6±0.9, 30°.92N×103°.41E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/26, mbtmp3.7/10, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/44, Error ellipse: s-maj=38.4km s-min=17.1km az=54.0
NEIC 14 08:57:25.4±0.6, 30°.91N×103°.45E, h10km, Error ellipse: s-maj=20.2km s-min=9.4km az=48.0
BJI 14 08:57:26.5, 30°.94N×103°.54E, h10km, mb4.3/1, ML3.7/9, Ms7 3.3/1

ISC 14 08:57:25.2±0.5, 30°.84N±0°.05×103°.37E±0°.06, h10km, n19, σ0°.80/21, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34 77**		Pg	Pg	08 57 31.9	-0.1
CD2				Sg	Sg	08 57 36.9	+0.3
CD2				smax			
	comp=N,22μm,0.6s						
ENH	**Enshi**	**5.31 95**		*e*Pn	Pn	08 58 43.8	-0.7
	comp=N,148nm,1.0s						
XAN	**Xi'an**	**5.68 54**		Pn	Pn	08 58 50.3	+0.7
XAN				Sn	Sn	08 59 49.8	-5.0
XAN				smax			
	comp=N,93nm,0.8s						
XAN				smax			
	comp=E,43nm,0.7s						
KMI	**Kunming**	**5.72 186**		Pn	Pn	08 58 44.8	-5.4
KMI				Sn	Sn	08 59 55.5	-0.4
KMI				smax			
	comp=N,47nm,1.7s						
KMI				smax			
	comp=E,36nm,1.3s						
SONM	**Songino Array**	**17.14 7**		Pn	Pn	09 01 24.8	+0.1
	comp=E,0.2nm,0.3s,baz=180,slow=14,SNR=4.7						
KSRS	**Korea Array**	**21.34 65**		P	P	09 02 11.4	-0.9
	comp=E,2.0nm,0.8s,mb3.5,baz=270,slow=11,SNR=3.6						
MK31	**Makanchi Array**	**22.78 320**		*e*P	P	09 02 29.4	+1.8
MKAR	**Makanchi Array**	**22.78 320**		P	P	09 02 28.1	+0.5
	comp=E,0.7nm,0.6s,mb3.3,baz=138,slow=9.7,SNR=6.7						
AAK	**Ala-Archa**	**25.84 305**		LR	LR	09 14 38.4	
	comp=E,49nm,19.2s,baz=150,slow=40						
ZALV	**Zalesovo Beam**	**26.70 335**		P	P	09 03 04.1	-0.2
	comp=E,2.7nm,0.7s,mb3.9,baz=136,slow=8.0,SNR=8.0						
KURK	**Kurchatov**	**27.09 324**		P	P	09 03 07.8	-0.1
	comp=E,1.4nm,0.8s,mb3.5,baz=131,slow=9.3,SNR=9.1						
KURK	**Kurchatov**	**27.09 324**		P	P	09 03 07.8	-0.1
FINES	**FINESS Array B**	**57.44 326**		P	P	09 07 13.3	-0.5
	comp=E,1.4nm,0.7s,mb4.1,baz=74,slow=7.4,SNR=3.8						
WRAB	**Tennant Creek**	**58.60 145**		P	P	09 07 23.4	+1.0
WRA	**Warramunga Arr**	**58.61 145**		P	P	09 07 22.8	+0.4
	comp=E,0.8nm,0.5s,mb4.0,baz=344,slow=6.9,SNR=14						
ASAR	**Alice Springs**	**61.59 148**		P	P	09 07 43.8	+0.9
	comp=E,0.2nm,0.3s,mb3.7,baz=339,slow=6.9,SNR=4.5						
NOA	**NORSAR Array B**	**64.55 327**		P	P	09 08 00.5	-1.6
	comp=E,0.8nm,0.6s,mb3.9,baz=73,slow=6.2,SNR=4.1						
NOA	**NORSAR Array B**	**64.55 327**		P	P	09 08 00.5	-1.6
YKA	**Yellowknife Ar**	**82.13 17**		P	P	09 09 44.6	-1.1
	comp=E,0.2nm,0.9s,mb3.0,baz=326,slow=4.9,SNR=3.6						

ISCJB 14 09:09:36.9±0.4, 32°.12N±0°.04×104°.79E±0°.04, h10km, mb3.8/11, Error ellipse: s-maj=5.8km s-min=5.1km az=143.4
IDC 14 09:09:38.4±0.9, 32°.24N×104°.60E, h0km, mb3.8/10, mb1 3.8/12, mb1mx3.7/29, mbtmp3.7/12, ML3.4/2, Error ellipse: s-maj=36.6km s-min=16.4km az=51.0
NEIC 14 09:09:39.8±0.5, 32°.22N×104°.61E, h10km, mb4.2/1, Error ellipse: s-maj=21.7km s-min=8.8km az=59.0
BJI 14 09:09:41.2, 32°.27N×104°.60E, h13km, ML3.8/10, Ms3.6/4, Ms7 3.3/3

ISC 14 09:09:39.0±0.4, 32°.20N±0°.04×104°.69E±0°.04, h10km, n22, σ1°.08/28, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.51 212**		Pg	Pg	09 10 06.0	-2.0
CD2				Sg	Sg	09 10 25.8	-1.8
CD2				smax			
	comp=N,2μm,1.0s						
LZH	**Lanzhou**	**3.94 350**		*e*Pn	Pn	09 10 43.6	+4.0
LZH				Pg	Pg	09 10 53.3	-1.2
LZH				Sn	Sn	09 11 29.8	+3.9
LZH				Sg	Sg	09 11 44.3	-1.3
LZH				smax			
	comp=N,270nm,0.6s						
LZH				smax			
	comp=E,280nm,0.5s						
LZH				LR	LR		
	comp=N,400nm,5.3s						
LZH				LR	LR		
	comp=Z,430nm,5.8s						
XAN	**Xi'an**	**4.00 61**		Pg	Pg	09 10 53.0	-2.5
XAN				Sg	Sg	09 11 46.8	-0.5
XAN				smax			
	comp=N,120nm,1.0s						
XAN				smax			
	comp=E,47nm,0.9s						
ENH	**Enshi**	**4.53 114**		Pn	Pn	09 10 56.1	+8.4
ENH				*e*Sg	Sg	09 12 04.6	0.0
SONM	**Songino Array**	**15.67 4**		Pn	Pn	09 13 20.5	+0.7
	comp=E,0.1nm,0.3s,baz=184,slow=11,SNR=2.3						
KSRS	**Korea Array**	**19.76 68**		P	Pn	09 14 10.2	-0.4
	comp=E,0.2nm,0.3s,baz=268,slow=11,SNR=3.0						
MK31	**Makanchi Array**	**22.51 317**		*e*P	P	09 14 38.9	+0.3
MKAR	**Makanchi Array**	**22.51 317**		P	P	09 14 39.4	+0.8
	comp=E,0.9nm,0.6s,mb3.4,baz=111,slow=12,SNR=8.0						
ZAA0	**Zalesovo Array**	**25.97 333**		*e*P	P	09 15 12.4	+0.8
ZALV	**Zalesovo Beam**	**25.97 333**		P	P	09 15 12.2	+0.6
	comp=E,3.9nm,0.4s,mb4.3,baz=135,slow=9.8,SNR=15						
KURK	**Kurchatov**	**26.69 322**		P	P	09 15 18.3	+0.2
	comp=E,0.7nm,0.5s,mb3.4,baz=124,slow=11,SNR=6.1						
AKTK	**Aktyubinsk**	**38.77 312**		P	P	09 17 03.6	+0.2
AKTO	**A

4.6640, Plg77.0000°, Azm36.0000°; N 0.4230, Plg12.0000°, Azm196.0000°; P -5.0860, Plg4.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

TEH ***14*** *09:26:44.0, 31.40N×104.02E, h10km*

SZGRF ***14*** *09:26:46.7, 31.41N×103.20E, h16km, mb5.3, MS5.2, Sichuan, China*

DJA ***14*** *09:26:51, 31.44N×104.12E, h60km, mb5.5/39*

ISC 14 09:26:45.3±0.1, 31.39N±0.02×104.00E±0.02, h16km, h16km±1.4km: pP-P, n507, σ0.92/521, mb5.0/169, MS4.6/72, 73C-20D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**203**	Pg	**Pg**	**09 26 55.1**	**-0.5**
CD2				Sg	**Sg**	**09 27 02.8**	**+0.2**
CD2				smax			
	comp=N,105μm,0.8s						
LZH	**Lanzhou**	**4.69**	**358**	*e*Pn	**Pn**	**09 27 57.8**	**+2.5**
LZH				Pg	**Pg**	**09 28 10.3**	**-4.7**
LZH				Sn	**Sn**	**09 28 56.5**	**+7.2**
LZH				Sg	**Sg**	**09 29 10.8**	**-4.9**
LZH				smax			
	comp=N,3μm,0.9s						
LZH				smax			
	comp=E,4μm,1.0s						
LZH				LR	LR		
	comp=E,11μm,5.9s						
LZH				LR	LR		
	comp=Z,13μm,8.6s						
ENH	**Enshi**	**4.85**	**102**	*e*Pn	**Pn**	**09 27 58.4**	**+0.8**
ENH				*e*Sn	**Sn**	**09 28 54.7**	**+1.3**
XAN	**Xi'an**	**4.92**	**56**	Pn	**Pn**	**09 27 58.5**	**0.0**
XAN				Sn	**Sn**	**09 28 50.8**	**-4.3**
XAN				Sg	**Sg**	**09 29 14.3**	**-9.0**
XAN				smax			
	comp=N,6μm,1.0s						
XAN				smax			
	comp=E,4μm,1.0s						
XAN				LR	LR		
	comp=Z,6μm,8.2s						
GYA	**Guiyang**	**5.44**	**154**	Pn	**Pn**	**09 28 05.8**	**+0.1**
GYA				Sn	**Sn**	**09 29 09.6**	**+1.7**
GYA				smax			
	comp=N,2μm,0.8s						
GYA				smax			
	comp=E,4μm,0.8s						
GYA				LR	LR		
	comp=N,8μm,4.9s						
GYA				LR	LR		
	comp=E,6μm,5.3s						
GYA				LR	LR		
	comp=Z,6μm,6.2s						
KMI	**Kunming**	**6.34**	**190**	Pn	**Pn**	**09 28 19.1**	**+1.1**
KMI				Sn	**Sn**	**09 29 31.3**	**+1.2**
KMI				Sg	**Sg**	**09 30 10.9**	**+2.1**
KMI				smax			
	comp=N,410nm,1.0s						
KMI				smax			
	comp=E,660nm,0.8s						
KMI				LR	LR		
	comp=N,9μm,8.0s						
KMI				LR	LR		
	comp=E,12μm,9.6s						
GTA	**Gaotai**	**8.70**	**338**	*e*P	**Pn**	**09 28 52.4**	**+2.0**
GTA				pP		09 29 01.5	
GTA				sP		09 29 06.0	
GTA				S	**Sn**	**09 30 28.4**	**+0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=N,10μm,12.0s						
GTA				LR	LR		
	comp=E,13μm,13.2s						
GTA				LR	LR		
	comp=Z,13μm,12.0s						
WHN	**Wuhan**	**8.93**	**93**	P	**Pn**	**09 28 54.0**	**+0.4**
WHN				S	**Sn**	**09 30 28.8**	**-5.0**
WHN				LR	LR		
	comp=N,12μm,6.1s						
WHN				LR	LR		
	comp=E,36μm,7.0s						
WHN				LR	LR		
	comp=Z,36μm,7.9s						
TIY	**Taiyuan**	**9.39**	**46**	*e*P	**Pn**	**09 29 00.3**	**+0.5**
TIY				S	**Sn**	**09 30 48.4**	**+3.4**
TIY				LR	LR		
	comp=N,2μm,4.0s						
TIY				LR	LR		
	comp=Z,610nm,3.1s						
BTO	**Baotou**	**10.41**	**26**	*e*P	**Pn**	**09 29 12.3**	**-1.5**
BTO				LR	LR		
	comp=N,3μm,10.3s						
BTO				LR	LR		
	comp=E,610nm,5.4s						
IMP	**Imphal**	**11.05**	**236**	*e*P	**Pn**	**09 29 22.0**	**-0.7**
IMP				*ex*	x	09 33 02.0	
LSA	**Lhasa**	**11.20**	**265**	P	**Pn**	**09 29 27.0**	**+2.3**
LSA				S	**Sn**	**09 31 25.8**	**-3.8**
LSA				LR	LR		
	comp=N,3μm,10.7s						
LSA				LR	LR		
	comp=E,7μm,10.3s						
LSA				LR	LR		
	comp=Z,9μm,10.0s						
LSA	**Lhasa**	**11.20**	**265**	*e*P	**Pn**	**09 29 27.1**	**+2.4**
LSA				pmax	pmax		
	comp=Z,32nm,0.6s						
LSA	**Lhasa**	**11.20**	**265**	*e*Pn	**Pn**	**09 29 27.1**	**+2.4**
	comp=Z,32nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.24**	**31**	*e*P	**Pn**	**09 29 24.8**	**-0.4**
HHC				pP		09 29 28.0	
HHC				PP		09 29 33.6	
HHC				S	**Sn**	**09 31 31.3**	**+0.8**
HHC				sS		09 31 36.6	
HHC				SS		09 31 44.6	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.0s						
HHC				LR	LR		
	comp=N,3μm,5.6s						
HHC				LR	LR		
	comp=E,3μm,5.0s						
HHC				LR	LR		
	comp=Z,3μm,6.4s						
GZH	**Guangzhou**	**11.72**	**133**	P	**Pn**	**09 29 26.8**	**-5.1**
GZH				S	**Sn**	**09 31 30.9**	**-11**
GZH				LR	LR		
	comp=N,7μm,8.9s						
GZH				LR	LR		
	comp=E,7μm,8.3s						
TIA	**Tai'an**	**11.93**	**63**	*e*P	**Pn**	**09 29 35.0**	**+0.4**
TIA				pmax	pmax		
	comp=Z,45nm,0.8s						
TIA				LR	LR		
	comp=N,2μm,8.0s						
CHRT	**Chiangrai**	**12.08**	**199**	⇓P	**Pn**	**09 29 37.0**	**+0.2**
	comp=N,124nm,0.9s						
SHL	**Shillong**	**12.13**	**244**	*e*P	**Pn**	**09 29 36.5**	**-0.9**
SHL				*ex*	x	09 32 48.0	
NJ2	**Nanjing**	**12.67**	**83**	*e*P	**Pn**	**09 29 49.3**	**+4.5**
NJ2				pP		09 29 52.6	
NJ2				sP		09 29 55.9	
NJ2				PP		09 29 59.8	
NJ2				S	**Sn**	**09 32 14.0**	**+8.5**
NJ2				sS		09 32 19.0	
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,420nm,4.3s						
NJ2				LR	LR		
	comp=N,11μm,10.2s						
NJ2				LR	LR		
	comp=E,14μm,11.5s						
NJ2				LR	LR		
	comp=Z,16μm,11.7s						
BJT	**Baijiatuau**	**13.10**	**46**	*e*P	**Pn**	**09 29 50.8**	**+0.2**
BJT				pmax	pmax		
	comp=Z,76nm,1.0s						
BJT	**Baijiatuau**	**13.10**	**46**	*e*Pn	**Pn**	**09 29 50.8**	**+0.1**
	comp=Z,76nm,1.0s						
BJI	**Beijing**	**13.12**	**46**	P	**Pn**	**09 29 50.6**	**-0.3**
BJI				pmax	pmax		
	comp=Z,32nm,0.6s						
BJI				pmax	pmax		
	comp=Z,300nm,9.8s						
BJI				LR	LR		
	comp=N,6μm,13.9s						
BJI				LR	LR		
	comp=E,4μm,11.1s						
BJI				LR	LR		
	comp=Z,860nm,18.4s						
CHG	**Chiang Mai**	**13.33**	**201**	⇑P	**Pn**	**09 29 55.8**	**+2.0**
	comp=Z,47nm,0.9s						
QIZ	**Qiongzhong**	**13.39**	**155**	P	**Pn**	**09 29 54.4**	**-0.3**
QIZ				S	**Sn**	**09 32 24.1**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,30nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,160nm,3.4s						
QIZ				LR	LR		
	comp=N,5μm,11.1s						
QIZ				LR	LR		
	comp=E,2μm,8.0s						
QIZ				LR	LR		
	comp=Z,7μm,11.9s						
QIZ	**Qiongzhong**	**13.39**	**155**	*e*Pn	**Pn**	**09 29 53.5**	**-1.2**
	comp=Z,46nm,0.9s						
QIZ				*e*Sn	**Sn**	**09 32 08.2**	**-15**
SSE	**Sheshan**	**14.71**	**87**	P	**Pn**	**09 30 11.5**	**-1.2**
SSE				S	**Sn**	**09 32 55.0**	**-0.4**
SSE				pmax	pmax		
	comp=Z,59nm,0.7s						
SSE				pmax	pmax		
	comp=Z,150nm,4.6s						
SSE				LR	LR		
	comp=N,10μm,12.3s						
SSE				LR	LR		
	comp=E,3μm,12.3s						
SSE				LR	LR		
	comp=Z,8μm,12.3s						
KKTK	**Khon Kaen**	**15.02**	**184**	P	**Pn**	**09 30 18.0**	**+1.1**
NST	**Nakhon Sawan**	**16.04**	**194**	P	**Pn**	**09 30 30.6**	**+0.4**
GUN	**Gumba**	**16.13**	**262**	*e*P	**Pn**	**09 30 30.0**	**-1.3**
	comp=Z,227nm,0.7s						
DL2	**Dalian**	**16.24**	**58**	⇑P	**Pn**	**09 30 31.4**	**-1.3**
DL2				pP	pP	09 30 38.1	-2.2
DL2				S	**Sn**	**09 33 29.8**	**-2.6**
DL2				SS		09 33 46.3	
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
DL2				pmax	pmax		
	comp=Z,170nm,5.6s						
DL2				LR	LR		
	comp=N,1μm,14.7s						
DL2				LR	LR		
	comp=E,1μm,13.4s						
DL2				LR	LR		
	comp=Z,2μm,13.0s						
CAL	**Calcutta**	**16.50**	**242**	*e*P	**Pn**	**09 30 35.0**	**-1.0**
CAL				*ex*	x	09 34 32.4	
SONM	**Songino Array**	**16.53**	**6**	Pn	**Pn**	**09 30 36.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=188,slow=13,SNR=90						
SONM				LR	LR	09 37 35.9	
	comp=Z,2μm,19.1s,baz=180,slow=40						
ULN	**Ulaanbaatar**	**16.62**	**7**	*e*P	**Pn**	**09 30 37.6**	**+0.2**
ULN				pmax	pmax		
	comp=Z,41nm,1.0s						
ULN	**Ulaanbaatar**	**16.62**	**7**	*e*Pn	**Pn**	**09 30 37.6**	**+0.2**
	comp=Z,41nm,1.0s						
ULN	**Ulaanbaatar**	**16.62**	**7**	Pn	**Pn**	**09 30 38.1**	**+0.7**
	SNR=33						
ULN				Pn	**Pn**	**09 30 38.1**	**+0.7**
	SNR=33						
PKI	**Pulchoki**	**16.62**	**261**	*e*P	**Pn**	**09 30 36.0**	**-1.6**
	comp=Z,178nm,0.7s						
PKIN	**Phulchoki**	**16.63**	**262**	*e*P	**Pn**	**09 30 36.1**	**-1.6**
	comp=Z,115nm,0.6s						
KKN	**Kakani**	**16.67**	**262**	*e*P	**Pn**	**09 30 36.5**	**-1.7**
	comp=Z,143nm,0.5s						
YHNB	**Yeheng**	**16.73**	**109**	*e*Pn	**Pn**	**09 30 37.6**	**-1.4**
	comp=Z,80nm,0.9s						
SSLB	**Suanglung**	**16.82**	**113**	*e*P	**Pn**	**09 30 44.6**	**+4.5**
	comp=Z,72nm,0.8s						
DMN	**Daman**	**16.87**	**262**	*e*P	**Pn**	**09 30 38.9**	**-1.8**
	comp=Z,289nm,0.8s						
NACB	**Ninganchiao**	**17.14**	**110**	*e*P	**Pn**	**09 30 46.4**	**+2.2**
	comp=Z,178nm,1.3s						
TWG	**Pinlang**	**17.42**	**115**	Pn	**Pn**	**09 30 36.7**	**-11**
WMQ	**Urumqi**	**17.87**	**319**	P	**Pn**	**09 30 54.3**	**+1.2**
WMQ				sP	sP	09 31 00.0	-0.4
WMQ				S	**Sn**	**09 34 10.3**	**-1.6**
WMQ				sS	sS	09 34 16.0	-10
WMQ				SS		09 34 31.8	
WMQ				PcP	PcP	09 35 31.8	+2.7
WMQ				pmax	pmax		
	comp=Z,39nm,1.8s						
WMQ				pmax	pmax		
	comp=Z,260nm,7.0s						
WMQ				LR	LR		
	comp=N,8μm,10.0s						
WMQ				LR	LR		
	comp=E,6μm,10.0s						
WMQ				LR	LR		
	comp=Z,2μm,15.0s						
SNY	**Shenyang**	**18.82**	**51**	⇓P	**Pn**	**09 31 00.8**	**-3.9**
SNY				S	**Sn**	**09 34 25.8**	**-9.0**
SNY				pmax	pmax		
	comp=Z,26nm,1.9s						
SNY				LR	LR		
	comp=N,930nm,11.3s						
SNY				LR	LR		
	comp=E,2μm,14.9s						
SNY				LR	LR		
	comp=Z,2μm,14.3s						
ZAK	**Zakamensk**	**18.98**	**359**	*e*P	**Pn**	**09 31 06.8**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,46nm,1.2s						
INCN	**Inchon**	**19.62**	**66**	*e*Pn	**Pn**	**09 31 14.5**	**+0.2**
	comp=Z,84nm,1.0s						
TLY	**Talaya**	**20.28**	**359**	Pn	**P**	**09 31 22.1**	**+2.2**
	comp=Z,141nm,1.6s,SNR=8.2						
TLY	**Talaya**	**20.28**	**359**	*e*P	**P**	**09 31 21.7**	**+1.8**
TLY				*e*S	**S**	**09 35 11.1**	**+4.5**
TLY				*e*		09 35 24.5	
TLY				*e*SS		09 35 37.9	
TLY				pmax	pmax		
	comp=Z,61nm,1.6s						
TLY				MLR	MLR		
	comp=Z,2μm,13.0s,MS4.6						
TLY	**Talaya**	**20.28**	**359**	*e*Pn	**P**	**09 31 21.8**	**+1.8**
	comp=Z,75nm,1.5s						
TLY	**Talaya**	**20.28**	**359**	P	**P**	**09 31 22.1**	**+2.2**
	SNR=21						
TLY				P		09 31 22.1	
	SNR=21						
MOY	**Mondy**	**20.38**	**355**	*e*P	**P**	**09 31 22.7**	**+1.6**
MOY				pmax	pmax		
	comp=Z,157nm,1.6s						
PTH	**Pithoragarh**	**20.57**	**271**	*e*P	**P**	**09 31 23.6**	**+0.2**
KSRS	**Korea Array**	**20.62**	**66**	P	**P**	**09 31 24.1**	**+0.3**
	comp=Z,52nm,0.8s,baz=260,slow=10,SNR=148						
KSRS				S	**S**	**09 35 15.8**	**+2.0**
	comp=Z,8.0nm,1.2s,baz=257,slow=16,SNR=5.0						
KSRS				LR	LR	09 40 46.5	
	comp=Z,908nm,21.6s,MS4.1,baz=262,slow=41						
KSRS	**Korea Array**	**20.62**	**66**	P	**P**	**09 31 24.1**	**+0.3**
KSRS				S	**S**	**09 35 15.8**	**+2.1**
KSRS				pmax	pmax		
	comp=Z,52nm,0.8s						
KSRS				smax			
	comp=N,8.0nm,1.2s						
KSRS				MLR	MLR		
	comp=Z,908nm,21.6s,MS4.1						
IRK	**Irkutsk**	**20.84**	**0**	⇑*i*P	**P**	**09 31 27.5**	**+1.5**
IRK				pmax	pmax		
	comp=Z,202nm,1.1s						
CN2	**Changchun**	**20.96**	**48**	*e*P	**P**	**09 31 28.8**	**+1.3**
CN2				*es*P	sP	09 31 35.0	+0.7
CN2				pmax	pmax		
	comp=Z,600nm,1.1s						
CN2				pmax	pmax		
	comp=Z,1μm,4.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,1μm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1μm,17.0s,MS4.3						
JOSI	**Joshimath**	**20.96**	**274**	*e*P	**P**	**09 31 27.7**	**+0.1**
HIA	**Hailar**	**21.44**	**29**	*e*P	**P**	**09 31 33.4**	**+0.9**
HIA				pmax	pmax		
	comp=Z,101nm,1.0s						
HIA	**Hailar**	**21.44**	**29**	*e*P	**P**	**09 31 33.4**	**+0.8**
	comp=Z,101nm,1.0s,mb5.1						
JOW	**Kunigami**	**21.68**	**96**	P	**P**	**09 31 34.8**	**-0.6**
	comp=Z,35nm,0.7s,mb4.9,baz=346,slow=6.6,SNR=5.3						
JOW				LR	LR	09 40 21.7	
	comp=Z,1μm,20.4s,MS4.2,baz=324,slow=38						
CIT	**Chita**	**21.78**	**16**	*e*P	**P**	**09 31 37.2**	**+1.1**
CIT				pmax	pmax		
	comp=Z,283nm,1.7s,mb5.4						
KLP	**Kalpa**	**21.95**	**277**	*e*P	**P**	**09 31 38.3**	**+0.1**
DDI	**Dehra Dun**	**22.28**	**274**	*ex*	x	09 31 47.0	
DDI				*ex*	x	09 35 05.5	
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**09 31 46.8**	**+0.7**
	comp=Z,78nm,1.1s,mb5.0,baz=116,slow=12,SNR=50						
MKAR				LR	LR	09 41 31.1	
	comp=Z,2μm,18.8s,MS4.5,baz=122,slow=39						
JBP	**Jabalpur**	**22.83**	**255**	⇑*e*P	**P**	**09 31 47.5**	**-0.1**
JBP				*ex*	x	09 31 52.9	
	comp=Z,65nm,0.8s						
JBP				*i* x	x	09 35 54.2	
SMLA	**Simla**	**22.92**	**276**	*i* P	**P**	**09 31 43.9**	**-4.6**
SMLA				*i* S	**S**	**09 35 54.0**	**-4.0**
SDNR	**Sundarnagar**	**23.04**	**277**	*e*P	**P**	**09 31 48.9**	**-0.9**
AGRA	**Agra**	**23.07**	**266**	*e*P	**P**	**09 31 49.1**	**-1.0**
NDI	**New Delhi**	**23.32**	**270**	*e*P	**P**	**09 31 53.0**	**+0.3**
NDI				*ex*	x	09 36 00.0	
AYAN	**Aya Nagar**	**23.44**	**270**	*e*P	**P**	**09 31 52.6**	**-1.5**
AYAN				AMb	AMB	09 31 56.0	
	comp=Z,48nm,0.7s,mb5.0						
BHK	**Bhakra**	**23.52**	**277**	*ex*	x	09 32 04.2	
MDJ	**Mudanjiang**	**23.99**	**49**	P	**P**	**09 31 58.6**	**-0.4**
MDJ				pP		09 32 01.6	
MDJ				sP	sP	09 32 03.1	-2.9
MDJ				PcP	PcP	09 35 39.6	-1.1
MDJ				S	**S**	**09 36 14.9**	**-0.2**
MDJ				ScP	ScP	09 39 18.0	-0.5
MDJ				PcS	PcS	09 39 20.3	+0.1
MDJ				ScS	ScS	09 43 06.3	+0.9
MDJ				pmax	pmax		
	comp=Z,220nm,1.5s,mb5.4						
MDJ				pmax	pmax		
	comp=Z,310nm,2.8s,mb5.2						
MDJ				LR	LR		
	comp=N,920nm,13.2s,MS4.5						
MDJ				LR	LR		
	comp=E,460nm,10.7s,MS4.5						
MDJ				LR	LR		
	comp=Z,1μm,14.0s,MS4.5						
MDJ	**Mudanjiang**	**23.99**	**49**	*e*P	**P**	**09 31 59.3**	**+0.3**
	comp=Z,352nm,1.3s,mb5.6						
MDJ				*e*Sn	S	09 36 39.3	+24
THN	**Thein Dam**	**24.00**	**280**	*ex*	x	09 32 05.1	
KSH	**Kashi**	**24.15**	**297**	*e*P	**P**	**09 32 04.1**	**+3.6**
KSH				*e*pP		09 32 06.1	
KSH				*es*P	sP	09 32 11.1	+3.5
KSH				*e*PP		09 32 40.1	
KSH				*e*PcP	PcP	09 35 42.1	+0.9
KSH				*e*S	**S**	**09 36 21.1**	**+3.3**
KSH				*es*S	sS	09 36 28.1	+2.0
KSH				*e*ScP	ScP	09 39 19.1	+0.1
KSH				*e*PcS	PcS	09 39 21.6	+0.8
KSH				pmax	pmax		
	comp=Z,450nm,3.5s						
KSH				LR	LR		
	comp=N,2μm,10.9s						
KSH				LR	LR		
	comp=E,1μm,8.4s						
AAA	**Alma-Ata**	**24.45**	**307**	*e*P	**P**	**09 32 10.3**	**+7.1**
AAA				pmax	pmax		
	comp=Z,700nm,4.1s						
AAA				MLR	MLR		
	comp=Z,4μm,23.0s,MS4.8						
NGP	**Nagpur**	**24.53**	**251**	*e*P	**P**	**09 31 59.3**	**-4.8**
NGP				*ex*	x	09 31 60.0	
	comp=Z,77nm,0.5s						
NGP				*e*S	**S**	**09 36 18.6**	**-5.6**
KHET	**Khetri**	**24.67**	**270**	*e*P	**P**	**09 32 04.3**	**-1.1**
KHET				AMb	AMB	09 32 13.2	
	comp=Z,54nm,0.6s,mb5.2						
BHPL	**Bhopal**	**24.92**	**258**	*e*P	**P**	**09 32 06.4**	**-1.3**
BHPL				AMb	AMB	09 32 10.0	
	comp=Z,46nm,0.8s,mb5.1						
TKM2	**Tokmak 2**	**25.27**	**305**	*e*P	**P**	**09 32 12.2**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,46nm,1.1s,mb4.9						
TKM2	**Tokmak 2**	**25.27**	**305**	*e*P	**P**	**09 32 12.2**	**+1.6**
	comp=Z,46nm,1.1s,mb4.9						
UCH	**Uchtor**	**25.84**	**303**	*e*P	**P**	**09 32 17.9**	**+2.1**
	comp=Z,136nm,1.6s,mb5.2						
FRU	**Bishkek**	**25.93**	**304**	*e*P	**P**	**09 32 20.0**	**+3.3**
FRU				*i*		09 32 28.0	
FRU				pmax	pmax		
	comp=Z,45nm,1.8s,mb4.7						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**09 32 21.7**	**+4.7**
	comp=Z,136nm,1.1s,mb5.4,SNR=6.6						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**09 32 18.7**	**+1.7**
	comp=Z,3.8nm,0.6s,mb4.1,baz=148,slow=9.4,SNR=12						
AAK				LR	LR	09 44 36.1	
	comp=Z,2μm,19.1s,MS4.7,baz=72,slow=41						
AAK	**Ala-Archa**	**25.97**	**304**	*e*P	**P**	**09 32 18.5**	**+1.5**
AAK				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**25.97**	**304**	*e*P	**P**	**09 32 18.5**	**+1.5**
	comp=Z,27nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**09 32 21.6**	**+4.6**
	SNR=22						
AAK				P		09 32 21.6	
	SNR=22						
AJM	**Ajmer**	**26.11**	**267**	*e*P	**P**	**09 32 17.4**	**-1.0**
KULM	**Kulim**	**26.15**	**188**	*e*P	**P**	**09 32 18.1**	**-0.8**
	comp=Z,11nm,0.6s,mb4.6						
AML	**Almayashu**	**26.41**	**302**	*e*P	**P**	**09 32 23.1**	**+2.1**
	comp=Z,42nm,1.0s,mb4.9						
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**	**09 32 21.4**	**+0.4**
	comp=Z,25nm,0.6s,mb5.0,baz=135,slow=9.6,SNR=95						
ZALV				LR	LR	09 43 38.0	
	comp=Z,832nm,19.7s,MS4.3,baz=305,slow=38						
EKS2	**Erkin-Say**	**26.48**	**304**	*e*P	**P**	**09 32 23.1**	**+1.5**
	comp=Z,27nm,1.1s,mb4.7						
HYB	**Hyderabad**	**26.94**	**245**	*i* P	**P**	**09 32 20.5**	**-5.5**
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**09 32 26.2**	**+0.3**
	comp=Z,274nm,1.4s,mb5.6,SNR=24						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**09 32 26.3**	**+0.5**
	comp=Z,26nm,0.9s,mb4.8,baz=127,slow=8.8,SNR=68						
KURK				LR	LR	09 44 28.7	
	comp=Z,913nm,19.1s,MS4.3,baz=120,slow=40						
KURK	**Kurchatov**	**26.96**	**323**	*c i*P	**P**	**09 32 26.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,149nm,2.5s,mb5.1						
KURK	**Kurchatov**	**26.96**	**323**	*e*P	**P**	**09 32 26.1**	**+0.2**
	comp=Z,87nm,1.3s,mb5.1						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**09 32 26.8**	**+0.9**
	SNR=29						
KURK				P		09 32 26.8	
	SNR=29						
BOD	**Bodaibo**	**27.31**	**12**	*e*P	**P**	**09 32 29.1**	**+0.2**
BOD				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.3						
KLR	**Kul'dur**	**27.44**	**41**	*e*P	**P**	**09 32 26.0**	**-4.1**
KLR				*es*S	**S**	**09 37 07.0**	**-2.8**
KLR				pmax	pmax		
	comp=E,96nm,1.4s						
KLR				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.2						
KLR				MLR	MLR		
	comp=E,2μm,12.0s						
KLR				MLR	MLR		
	comp=Z,4μm,12.0s,MS5.2						
NVS	**Novosibirsk**	**27.70**	**334**	*e*P	**P**	**09 32 32.1**	**-0.4**
NVS				*es*S	**S**	**09 37 14.5**	**+0.6**
NVS				pmax	pmax		
	comp=Z,37nm,1.7s,mb4.7						
NVS				pmax	pmax		
	comp=N,38nm,1.9s						
NVS				pmax	pmax		
	comp=E,35nm,1.9s						
NVS				smax			
	comp=E,46nm,1.9s						
MDRS	**Chennai**	**28.45**	**235**	*e*P	**P**	**09 32 37.8**	**-1.8**
MDRS				AMb	AMB	09 32 38.3	

comp=Z,24nm,0.2s,mb5.5
MAJO Matsushiro 28.74 70 *e*P **P 09 32 40.7 -1.2**
MAJO pmax pmax
comp=Z,169nm,2.4s,mb5.3
MAJO Matsushiro 28.74 70 *e*P **P 09 32 40.7 -1.2**
comp=Z,168nm,2.4s,mb5.3
MAT Matsushiro 28.74 70 P **P 09 32 40.5 -1.4**
MAT S **S 09 37 28.8 -1.8**
MJAR Matsushiro Arr 28.74 70 P **P 09 32 41.2 -0.7**
comp=Z,12nm,1.1s,mb4.5,baz=273,slow=9.7,SNR=20
MJAR LR LR 09 44 38.3
comp=Z,468nm,20.1s,MS4.1,baz=275,slow=37
MJAR Matsushiro Arr 28.74 70 P **P 09 32 41.2 -0.7**
MJAR LR LR 09 44 38.3
HABR Khabarovsk 29.02 45 *e*P **P 09 32 42.7 -1.6**
HABR *e**SP sP 09 32 56.1 +4.7
HABR 09 33 35.4
HABR *e*S **S 09 37 32.7 -2.1**
HABR *e**SS sS 09 37 49.2 +6.1
HABR *e*SS SS 09 38 58.1 -40
HABR 09 43 22.5
HABR pmax pmax
comp=E,43nm,1.8s
HABR pmax pmax
comp=Z,65nm,2.0s,mb5.0
HABR pmax pmax
comp=N,14nm,1.3s
HABR MLR MLR
comp=N,569nm,11.0s,MS4.7
HABR MLR MLR
comp=E,749nm,11.0s,MS4.7
HABR MLR MLR
comp=Z,1µm,11.0s,MS4.7
NRGR Nerungri 29.10 24 *e*P **P 09 32 45.8 +1.0**
JASL Jaisalmer 29.18 270 *e*x x 09 32 49.5
CLNS Chul'man 29.30 24 *e*P **P 09 32 47.2 +0.6**
CLNS *e**PP pP 09 32 55.4 +3.8
CLNS *e* 09 33 41.3
CLNS *e*PPP 09 33 50.2
CLNS *e* 09 35 51.1
CLNS *e*S **S 09 37 40.1 +1.2**
CLNS *e*SS SS 09 39 08.7 -34
CLNS *e* 09 43 31.8
CLNS pmax pmax
comp=Z,14nm,1.0s,mb4.7
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=N,5.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
CLNS smax
comp=E,115nm,11.7s
CLNS smax
comp=N,66nm,13.4s
CLNS MLR MLR
comp=N,765nm,12.0s,MS4.7
CLNS MLR MLR
comp=E,888nm,12.0s,MS4.7
CLNS MLR MLR
comp=Z,1µm,12.0s,MS4.7
JHJ Hachijo jima 2 30.23 77 LR LR 09 45 54.4
comp=Z,837nm,19.9s,MS4.4,baz=14,slow=38
KSM Kuching 30.35 167 *e*P **P 09 32 56.3 0.0**
comp=Z,22nm,0.7s,mb5.0
DAV Davao City (W) 31.50 136 LR LR 09 48 00.1
comp=Z,803nm,18.3s,MS4.4,baz=15,slow=41
PALK Pallekele 32.39 227 LR LR 09 48 11.7
comp=Z,496nm,20.0s,MS4.2,baz=38,slow=40
BVAR Borovoye Array 32.51 322 P **P 09 33 15.6 +0.6**
comp=Z,5.8nm,0.6s,mb4.7,baz=114,slow=9.5,SNR=32
BVAR PcP PcP 09 36 00.9 -0.6
comp=Z,2.2nm,0.5s,baz=150,slow=5.0,SNR=4.2
BVAR LR LR 09 47 32.8
comp=Z,1µm,20.0s,MS4.7,baz=356,slow=38
BVAR Borovoye Array 32.51 322 P **P 09 33 15.6 +0.6**
BVAR 09 36 00.9
BRVK Borovoye 32.58 322 P **P 09 33 16.0 +0.4**
comp=Z,171nm,0.8s,mb6.0,SNR=7.7
BRVK Borovoye 32.58 322*c i*P **P 09 33 16.3 +0.7**
BRVK pmax pmax
comp=Z,66nm,2.5s,mb5.1
BRVK Borovoye 32.58 322 P **P 09 33 16.9 +1.2**
SNR=15
BRVK P 09 33 16.9
SNR=15
ASAJ Asahikawa 32.76 56 P **P 09 33 16.8 -0.6**
comp=Z,13nm,0.8s,mb4.9,baz=263,slow=12,SNR=8.4
ASAJ LR LR 09 47 53.7
comp=Z,375nm,18.2s,MS4.1,baz=219,slow=39
ASAJ Asahikawa 32.76 56 P **P 09 33 16.8 -0.5**
ASAJ pmax pmax
comp=Z,13nm,0.8s
ASAJ MLR MLR
comp=Z,375nm,18.2s
YSS Yuzh-Sakhalins 33.45 51 *e*P **P 09 33 22.0 -1.3**
YSS *e* 09 33 31.2
YSS pmax pmax
comp=Z,100nm,1.1s,mb5.7
YSS MLR MLR
comp=Z,600nm,17.0s,MS4.4
YSS MLR MLR
comp=N,1µm,16.0s
YSS Yuzh-Sakhalins 33.45 51 *e*P **P 09 33 23.6 +0.3**
comp=N,124nm,1.3s,mb5.7
CBIJ Chichi jima 33.48 87 LR LR 09 46 48.2
comp=N,574nm,19.6s,MS4.3,baz=329,slow=36
YAK Yakutsk 34.87 21*c i*P **P 09 33 35.1 -0.3**
YAK *e**PP pP 09 33 43.7 +3.2
YAK *e* 09 34 53.0
YAK *e*PPP 09 35 04.4
YAK *e*S **S 09 39 03.9 -1.7**
YAK *e*SS SS 09 41 21.5 -15
YAK *e* 09 43 50.7
YAK pmax pmax
comp=Z,37nm,0.9s,mb5.3
YAK pmax pmax
comp=N,16nm,1.2s
YAK pmax pmax
comp=E,16nm,1.1s
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.8
YAK smax
comp=E,56nm,2.2s
YAK smax
comp=N,25nm,2.0s
YAK MLR MLR
comp=Z,693nm,12.0s,MS4.6
YAK MLR MLR
comp=N,322nm,12.0s
YAK MLR MLR
comp=E,320nm,9.0s
IMYA Miami 36.55 290 *e*P **P 09 33 51.7 +1.6**
ISRO Mashad 37.06 290 *e*P **P 09 33 55.9 +1.4**
ABKAR Akbulak array 37.41 311 *e*P **P 09 33 57.8 +0.5**
comp=E,5.4nm,0.6s,mb4.5
ABKT Ailbek 37.99 293 P **P 09 34 04.5 +2.1**
comp=E,199nm,0.8s,mb5.9,SNR=5.9
ISFR Sfrayin 38.16 291 *e*P **P 09 34 05.9 +2.1**
AKTK Aktyubinsk 38.88 313 P **P 09 34 08.4 -1.2**
AKTO Aktyubinsk 38.88 313 P **P 09 34 08.4 -1.2**
comp=E,3.0nm,0.5s,mb4.3,baz=88,slow=12,SNR=4.5
KAPI Kappang 39.20 155 P **P 09 34 11.0 -1.7**
comp=E,402nm,0.7s,SNR=5.2
KAPI Kappang 39.20 155 P **P 09 34 11.1 -1.6**
comp=E,37nm,0.7s,mb5.2,baz=306,slow=8.7
SVE Sverdlovsk 39.22 323⇑*e*P **P 09 34 13.8 +1.4**
SVE pmax pmax
comp=Z,84nm,1.4s,mb5.3
SVE MLR MLR
comp=Z,998nm,12.0s,MS4.9
ARU Arti 40.15 322 P **P 09 34 20.3 +0.1**
comp=Z,288nm,1.4s,mb5.8,SNR=6.0
ARU Arti 40.15 322*c i*P **P 09 34 20.6 +0.4**
ARU *e* 09 35 55.2
ARU S **S 09 40 26.9 +1.0**
ARU SS SS 09 43 19.6 -4.0
ARU pmax pmax
comp=Z,42nm,1.0s,mb5.1
GUMO Guam 41.43 106 LR LR 09 50 17.6
comp=Z,502nm,18.1s,MS4.4,baz=333,slow=34
IMEH Mehriz 41.86 283 *e*P **P 09 34 34.3 -0.3**

TIXI Tiksi 42.49 11*c i*P **P 09 34 38.2 -1.0**
TIXI *e*S **S 09 40 58.0 -2.3**
TIXI *e*SS SS 09 44 09.7 +0.1
TIXI pmax pmax
comp=Z,21nm,1.2s,mb4.6
TIXI MLR MLR
comp=Z,1µm,19.0s,MS4.8
ISAD Sadrabad 42.51 284 *e*P **P 09 34 40.7 +0.8**
SEY Seymchan 43.89 30*c i*P **P 09 34 50.8 +0.2**
PEA0B Petropavlovsk- 44.05 44 *e*P **P 09 34 51.6 -0.5**
PETK Petropavlovsk- 44.05 44 P **P 09 34 51.7 -0.4**
comp=Z,15nm,1.0s,mb4.7,baz=238,slow=4.1,SNR=16
PETK PcP PcP 09 36 35.7 -1.5
comp=Z,2.8nm,0.9s,baz=274,slow=4.2,SNR=4.1
PETK LR LR 09 55 03.3
comp=Z,560nm,18.4s,MS4.5,baz=88,slow=39
PETK Petropavlovsk- 44.05 44 P **P 09 34 51.7 -0.4**
PETK 09 36 35.7
PETK Petropavlovsk- 44.05 44 P **P 09 34 51.7 -0.4**
PETK PcP PcP 09 36 35.7 -1.5
PETK LR LR 09 55 03.3
PET Petropavlovsk 44.61 45 *e*P **P 09 34 56.6 0.0**
PET *e*S **S 09 41 31.3 -0.4**
PET *e*SS SS 09 44 45.1 -6.4
PET pmax pmax
comp=Z,29nm,1.4s,mb4.9
PET pmax pmax
comp=Z,500nm,3.9s
PET pmax pmax
comp=Z,200nm,5.0s
PET MLR MLR
comp=Z,900nm,17.0s,MS4.8
PET MLR MLR
comp=Z,500nm,20.0s
MAK Makhachkala 45.69 301 *e*P **P 09 35 04.6 -0.7**
MAK *e*PPP 09 37 34.9
MAK S **S 09 41 47.6 0.0**
MAK pmax pmax
comp=Z,300nm,1.0s,mb6.2
MAK MLR MLR
comp=Z,786nm,12.0s,MS4.9
UMR Umm Al-Rimmam 48.09 283 *e*P **P 09 35 23.3 -1.0**
UMR AMb AMB 09 35 28.8
comp=Z,58nm,0.9s,mb5.6
QRN Al-Qurain 48.16 282 *e*P **P 09 35 24.1 -0.7**
QRN AMb AMB 09 35 25.6
comp=Z,41nm,0.7s,mb5.6
KBD Kabd 48.22 283 *e*P **P 09 35 24.9 -0.3**
KBD AMb AMB 09 35 29.8
comp=Z,35nm,1.0s,mb5.4
MIB Mutribah 48.33 284 *e*P **P 09 35 25.8 -0.3**
MIB AMb AMB 09 35 31.2
comp=Z,101nm,0.8s,mb5.9
ZEI Tsey 48.35 301 *e*P **P 09 35 21.7 -4.3**
ZEI pmax pmax
comp=Z,17nm,1.3s,mb4.9
RDF Al-Radifah 48.41 282 *e*P **P 09 35 26.7 0.0**
RDF AMb AMB 09 35 28.1
comp=Z,73nm,1.0s,mb5.7
ONI Oni 48.70 301 P **P 09 35 29.2 +0.5**
GOF Gofitskoye 48.71 304 *e*P sP 09 35 40.6 +4.6
KIV Kislovodsk 49.08 303 *e*P **P 09 35 32.0 +0.4**
KIV *e*S **S 09 42 34.2 -1.6**
KIV pmax pmax
comp=Z,33nm,1.1s,mb5.3
KIV MLR MLR
comp=Z,556nm,16.0s,MS4.7
VRHR Novokhopersk 49.28 313 *e*P **P 09 35 33.0 -0.1**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 50.82 313 *e*P **P 09 35 44.3 -0.5**
VSR pmax pmax
comp=N,9.0nm,0.5s
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=E,30nm,1.3s
BILL Bilibino 50.96 25⇑*e*P **P 09 35 45.2 -0.3**
BILL *e*S **S 09 42 55.4 -6.0**
BILL pmax pmax
comp=Z,43nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,400nm,15.0s,MS4.6
BILL Bilibino 50.96 25 *e*P **P 09 35 45.1 -0.4**
comp=Z,50nm,1.3s,mb5.3
MOS Moscow 51.59 319 *e*P **P 09 35 49.3 -1.1**
MOS *e* 09 37 47.2
MOS pmax pmax
comp=Z,115nm,1.0s,mb5.8
MOS pmax pmax
comp=Z,100nm,1.0s,mb5.7
MOS MLR MLR
comp=Z,1µm,19.0s,MS4.9
KAKA Kakadu 51.65 144 *e*P **P 09 35 49.2 -2.1**
comp=Z,16nm,0.7s,mb5.1
KAKA Kakadu 51.65 144 *e*P **P 09 35 49.0 -2.3**
comp=Z,34nm,0.6s,mb5.5
OBN Obninsk 52.21 318⇑*e*P **P 09 35 54.9 -0.2**
OBN *e* 09 37 52.2
OBN pmax pmax
comp=Z,29nm,1.1s,mb5.1
OBN MLR MLR
comp=Z,900nm,17.0s,MS4.9
ANN Anapa 52.69 305 *e*P **P 09 35 58.9 +0.1**
ANN pmax pmax
comp=Z,100nm,1.5s,mb5.5
MALT Malatya 53.26 297 *e*P **P 09 36 04.2 +1.1**
comp=Z,6.1nm,1.0s,mb4.5
MALT Malatya 53.26 297⇑*i*P **P 09 36 04.9 +1.8**
FITZ Fitzroy Crossi 53.42 154 *e*P **P 09 36 03.7 -0.7**
comp=Z,25nm,0.6s,mb5.3
FITZ Fitzroy Crossi 53.42 154 P **P 09 36 03.8 -0.6**
comp=Z,18nm,0.9s,mb5.0,baz=346,slow=6.1,SNR=37
FITZ LR LR 09 59 21.8
comp=Z,169nm,19.2s,MS4.1,baz=96,slow=37
FITZ Fitzroy Crossi 53.42 154 *e*P **P 09 36 03.8 -0.6**
comp=Z,14nm,0.7s,mb5.0
APA Apatity 54.01 333⇓*e*P **P 09 36 08.6 +0.5**
APA *i* pP 09 36 14.0 +0.6
APA MLR MLR
comp=Z,4µm,12.0s,MS5.7
MBWA Marble Bar 54.38 162 *e*P **P 09 36 10.9 -0.5**
MBWA Marble Bar 54.38 162 *e*P **P 09 36 10.9 -0.5**
comp=Z,18nm,0.8s,mb5.0
JOF Joensuu 54.74 328 *e*P **P 09 36 12.4 -1.1**
JOF pmax pmax
comp=Z,19nm,0.6s,mb5.3
JOF Joensuu 54.74 328 *e*p **P 09 36 12.4 -1.1**
comp=Z,19nm,0.6s,mb5.3
SIM Simferopol' 54.98 305*c e*P **P 09 36 24.7 +9.1**
SIM pmax pmax
comp=Z,20nm,0.7s,mb5.3
SIM MLR MLR
comp=Z,190nm,16.2s,MS4.3
ASF Jabal al Asfar 56.16 290 LR LR 10 04 40.1
comp=Z,348nm,18.4s,MS4.5,baz=308,slow=41
KEV Kevo 56.43 336 *e*P **P 09 36 24.3 -1.3**
KEV pmax pmax
comp=Z,21nm,0.5s,mb5.4
KEV Kevo 56.43 336 *e*P **P 09 36 25.6 -0.1**
comp=Z,43nm,0.9s,mb5.5
KEV Kevo 56.43 336 *e*p **P 09 36 24.3 -1.3**
comp=Z,21nm,0.5s,mb5.4
BRTR Keskin Array B 56.52 299 P **P 09 36 26.8 0.0**
comp=Z,2.3nm,0.9s,mb4.2,baz=100,slow=6.4,SNR=11
BRTR LR LR 10 05 54.8
comp=Z,158nm,18.6s,MS4.1,baz=240,slow=42
ARCES ARCESS Array B 56.96 336 P **P 09 36 29.5 +0.2**
comp=Z,9.4nm,0.5s,mb5.1,baz=77,slow=8.0,SNR=81
ARCES PcP PcP 09 37 24.2 -0.3
comp=Z,4.5nm,0.5s,baz=83,slow=4.2,SNR=4.9
ARCES LR LR 10 01 57.5
comp=Z,419nm,20.6s,MS4.5,baz=98,slow=37
ARCES ARCESS Array B 56.96 336 P **P 09 36 29.5 +0.1**
ARCES 09 37 24.2
ARCES ARCESS Array B 56.96 336 P **P 09 36 29.5 +0.2**
ARCES PcP PcP 09 37 24.2 -0.3
ARCES LR LR 10 01 57.5
MMAI Mount Meron Ar 57.09 291 P **P 09 36 30.5 -0.4**
comp=Z,0.9nm,0.4s,mb4.2,baz=122,slow=12,SNR=4.9
MMAI LR LR 10 05 29.7
comp=Z,244nm,20.3s,MS4.3,baz=30,slow=41

KAF Kangasniemi 57.10 327 *e*P **P 09 36 29.6 -0.9**
KAF pmax pmax
comp=Z,16nm,0.7s,mb5.2
KAF Kangasniemi 57.10 327 *e*p **P 09 36 29.6 -0.9**
comp=Z,16nm,0.7s,mb5.2
AKASG Malin Array Be 57.12 313 P **P 09 36 29.3 -1.5**
comp=Z,4.0nm,0.7s,mb4.6,baz=71,slow=6.5,SNR=13
AKASG LR LR 10 02 18.4
comp=Z,516nm,18.7s,MS4.7,baz=85,slow=37
AKBB Malin Array Si 57.12 313 *e*P **P 09 36 30.4 -0.4**
MICGM Minsk 57.27 318 *e*P **P 09 36 33.0 +1.2**
FINES FINESS Array B 57.28 326 P **P 09 36 31.6 -0.1**
comp=Z,14nm,0.7s,mb5.1,baz=92,slow=9.5,SNR=41
MNK Minsk 57.30 318 *e*P **P 09 36 33.0 +1.0**
COEN Coen 58.71 134 *e*P **P 09 36 42.5 +0.2**
comp=Z,174nm,0.6s
WRAB Tennant Creek 58.76 146 P **P 09 36 42.0 -0.6**
comp=Z,713nm,0.7s,SNR=44
WRA Warramunga Arr 58.76 146 P **P 09 36 42.5 0.0**
comp=Z,46nm,0.5s,mb5.7,baz=338,slow=7.9,SNR=186
SPITS Spitsbergen Ar 59.04 346 P **P 09 36 44.1 +0.2**
comp=Z,5.4nm,0.5s,mb4.9,baz=94,slow=11,SNR=48
SPB4 Spitsbergen Ar 59.04 346 *e*P **P 09 36 43.9 +0.1**
CFR Carcaliu 59.06 307 ⇓P **P 09 36 44.7 +0.2**
CFR Carcaliu 59.06 307 ⇓*i*P **P 09 36 44.7 +0.2**
HARR Harsova 59.33 306 ⇓P **P 09 36 46.5 +0.2**
HARR Harsova 59.33 306 ⇓*i*P **P 09 36 46.5 +0.2**
VRI Vrincioaia 59.84 308 ⇓P **P 09 36 50.2 +0.4**
VRI Vrincioaia 59.84 308 ⇓*i*P **P 09 36 50.2 +0.4**
PLOR Plostina 59.89 308 ⇓P **P 09 36 50.6 +0.4**
PLOR Plostina 59.89 308 ⇓*i*P **P 09 36 50.6 +0.4**
BURAR Bucovina Array 60.38 310 ⇑P **P 09 36 53.5 0.0**
BURAR Bucovina Array 60.38 310 ⇑*i*P **P 09 36 53.5 0.0**
MLR Muntele Rosu 60.47 308 P **P 09 36 55.0 +0.9**
comp=Z,4.2nm,0.7s,mb4.6,baz=146,slow=15,SNR=8.4
MLR Muntele Rosu 60.47 308 ⇓*i*P **P 09 36 55.9 +1.8**
LVV L'vov 60.57 313 *e*P **P 09 36 58.0 +3.2**
VOIR 61.09 308 ⇑P **P 09 36 58.6 +0.2**
VOIR 61.09 308 ⇑*i*P **P 09 36 58.6 +0.2**
KWP Kalwaria Pacla 61.45 313 *e*P **P 09 37 01.1 +0.4**
KWP Kalwaria Pacla 61.45 313 *e*P **P 09 37 01.0 +0.3**
KWP pmax pmax
comp=Z,53nm,0.6s,mb5.8
KWP Kalwaria Pacla 61.45 313 *e*P **P 09 37 01.0 +0.3**
comp=Z,53nm,0.6s,mb5.8
ASAR Alice Springs 61.78 149 P **P 09 37 03.3 +0.1**
comp=Z,8.8nm,0.6s,mb5.1,baz=336,slow=6.8,SNR=121
KOLS Kolonicke sedl 61.91 312 *e*P **P 09 37 03.8 -0.1**
KOLS *e* pP 09 37 10.3 +1.1
KOLS pmax pmax
comp=Z,18nm,1.7s,mb4.9
KOLS Kolonicke sedl 61.91 312 *e*P **P 09 37 03.8 -0.1**
comp=Z,18nm,1.7s,mb4.9
KOLS *e* pP 09 37 10.3 +1.1
KOLS Kolonicke sedl 61.91 312 *e*P **P 09 37 03.8 -0.1**
KOLS *e*pP pP 09 37 10.3 +1.1
UZH Uzhgorod 61.99 312 *e*P **P 09 37 01.5 -2.9**
UZH *e* 09 37 09.3
DRGR 62.25 310 ⇑P **P 09 37 05.4 -0.8**
DRGR 62.25 310 ⇑*i*P **P 09 37 05.4 -0.8**
STHS Stebnicka Huta 62.42 313 *e*P **P 09 37 07.4 +0.1**
STHS *e* pP 09 37 13.9 +1.3
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
STHS Stebnicka Huta 62.42 313 *e*P **P 09 37 07.4 +0.1**
comp=Z,5.6nm,0.8s,mb4.8
STHS *e* pP 09 37 13.9 +1.3
STHS Stebnicka Huta 62.42 313 *e*P **P 09 37 07.4 +0.1**
STHS *e*pP pP 09 37 13.9 +1.3
GZR Gura Zlata 62.63 308 ⇓P **P 09 37 10.1 +1.4**
GZR Gura Zlata 62.63 308 ⇓*i*P **P 09 37 10.1 +1.4**
OJC Ojcow 63.08 314 *e*P **P 09 37 11.6 -0.1**
KECS Kecovo 63.18 312 *e*P **P 09 37 13.2 +0.9**
KECS *e* pP 09 37 17.4 -0.2
KECS pmax pmax
comp=Z,7.0nm,1.6s,mb4.5
KECS Kecovo 63.18 312 *e*P **P 09 37 13.2 +0.9**
comp=Z,6.6nm,1.6s,mb4.5
KECS *e* pP 09 37 17.4 -0.2
KECS Kecovo 63.18 312 *e*P **P 09 37 13.1 +0.8**
KECS *e*pP pP 09 37 17.4 -0.2
HFS Hagfors 63.48 326 P **P 09 37 13.6 -0.6**
comp=Z,14nm,0.5s,mb5.3,baz=102,slow=6.2,SNR=55
PSZ Piszkesteto 63.73 312⇓*e*P **P 09 37 19.3 +3.3**
KLBR Kellerberrin 63.98 167 *e*P **P 09 37 17.8 +0.1**
comp=Z,18nm,0.7s,mb5.2
OKC Ostrava-Krasne 64.21 314 *e*P **P 09 37 19.6 +0.5**
OKC MLR MLR
comp=Z,700nm,13.9s,MS5.0
OKC Ostrava-Krasne 64.21 314 *e*P **P 09 37 19.6 +0.5**
OKC *e*pP pP 09 37 22.9 -1.6
OKC AMS AMS 10 06 30.0
comp=Z,700nm,13.9s
VYHS Vyhne 64.22 313 *e*P **P 09 37 19.5 +0.3**
VYHS pmax pmax
comp=Z,16nm,1.5s,mb4.8
VYHS Vyhne 64.22 313 *e*P **P 09 37 19.5 +0.3**
comp=Z,16nm,1.5s,mb4.8
VYHS Vyhne 64.22 313 *e*P **P 09 37 19.5 +0.3**
NB2 NORSAR Subarra 64.37 327 P **P 09 37 18.8 -1.2**
comp=Z,22nm,0.9s,mb5.2,baz=73,slow=6.9
NOA NORSAR Array B 64.37 327 P **P 09 37 19.0 -0.9**
comp=Z,7.5nm,0.6s,mb4.9,baz=72,slow=6.8,SNR=38
NOA NORSAR Array B 64.37 327 P **P 09 37 19.0 -0.9**
BUD Budapest 64.42 311⇓*e*P **P 09 37 23.7 +3.1**
KOLL Kolacno 64.46 313 *e*P **P 09 37 21.8 +1.0**
KOLL Kolacno 64.46 313 *e*P **P 09 37 21.8 +1.0**
IDI Anoyia 64.51 297 P **P 09 37 20.2 -1.2**
comp=Z,12nm,0.8s,mb5.0,baz=34,slow=15,SNR=3.9
IDI LR LR 10 10 33.0
comp=Z,127nm,20.8s,MS4.1,baz=273,slow=41
MORC Moravsky Berou 64.60 314 ⇓P **P 09 37 20.9 -0.8**
MORC Moravsky Berou 64.60 314 ⇓*i*P **P 09 37 20.9 -0.8**
KSP Ksiaz 65.00 316 *e*P **P 09 37 23.7 -0.6**
KSP *e**PP pP 09 37 27.7 -1.9
KSP MLR MLR
comp=Z,2µm,17.0s,MS5.5
PKSM Moragy 65.10 310 ⇓P **P 09 37 24.7 -0.3**
PKSM Moragy 65.10 310 ⇓*i*P **P 09 37 24.6 -0.4**
DPC Dobruska-Polom 65.15 315 *e*P **P 09 37 25.9 +0.6**
DPC *e**PP pP 09 37 29.9 -0.7
DPC MLR MLR
comp=Z,1µm,16.3s,MS5.1
DPC Dobruska-Polom 65.15 315 *e*P **P 09 37 25.9 +0.6**
DPC *e*pP pP 09 37 29.9 -0.7
DPC AMS AMS 10 06 50.0
comp=Z,1µm,16.3s
NWAO Narrogin (SRO) 65.18 168 P **P 09 37 25.9 +0.4**
comp=Z,29nm,0.8s,mb5.4,baz=326,slow=4.9,SNR=12
NWAO Narrogin (SRO) 65.18 168 P **P 09 37 25.9 +0.4**
CTA Charters Tower 65.30 136 *e*P **P 09 37 26.5 0.0**
comp=Z,8.8nm,0.6s,mb5.0
CTA Charters Tower 65.30 136 P **P 09 37 26.7 +0.2**
comp=Z,10nm,0.6s,mb5.1,baz=323,slow=7.7,SNR=21
VRAC Vranov 65.34 314 P **P 09 37 26.9 +0.4**
comp=Z,5.4nm,0.4s,mb5.0,baz=0.9,slow=4.2,SNR=5.7
COP Copenhagen 65.55 322 *e*P **P 09 37 29.3 +1.6**
COP pmax pmax
comp=Z,18nm,0.8s,mb5.2
COP MLR MLR
comp=Z,220nm,17.0s,MS4.4
COP Copenhagen 65.55 322 *i* P **P 09 37 29.3 +1.6**
comp=Z,18nm,0.8s,mb5.2
COP
comp=Z,220nm,17.0s
KONO Kongsberg 65.59 326 *e*P **P 09 37 28.0 0.0**
KONO pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KONO Kongsberg 65.59 326 *e*P **P 09 37 28.0 +0.1**
comp=Z,9.7nm,0.7s,mb4.9
FORT Forrest 65.91 157 *e*P **P 09 37 28.4 -1.9**
comp=Z,37nm,0.7s,mb5.5
TREC Trest 66.02 314 *e*P **P 09 37 30.8 -0.1**
TREC MLR MLR
comp=Z,500nm,17.5s,MS4.8
TREC Trest 66.02 314 *e*P **P 09 37 30.8 -0.1**
TREC AMS AMS 10 07 20.0
comp=Z,500nm,17.5s
ALE Alert 66.13 358 P **P 09 37 31.9 +0.8**
comp=Z,66nm,1.4s,mb5.5,SNR=8.4
PVCC Panska Ves 66.14 316 *e*P **P 09 37 31.9 +0.2**
PVCC *e**PP pP 09 37 36.8 -0.2
PVCC MLR MLR
comp=Z,1µm,15.3s,MS5.1

PVCC Panska Ves 66.14 316 *e*P **P** **09 37 31.9 +0.2**
PVCC *e*pP pP 09 37 36.8 -0.2
PVCC AMS AMS 10 07 30.0
comp=Z,1µm,15.3s
CSNA Conrad Observa 66.28 313⇑ *i*P **P** **09 37 33.0 +0.4**
comp=Z,16nm,1.4s,mb4.9
PRU Pruhonice 66.35 315 *e*P **P** **09 37 33.8 +0.8**
PRU *e**PP pP 09 37 38.3 0.0
PRU MLR MLR
comp=Z,1µm,16.4s,MS5.2
PRU Pruhonice 66.35 315 *e*P **P** **09 37 33.8 +0.8**
PRU *e*pP pP 09 37 38.3 0.0
PRU AMS AMS 10 07 40.0
comp=Z,1µm,16.4s
BRG Berggiesshubel 66.39 316 *e*P **P** **09 37 32.2 -1.0**
comp=Z,16nm,1.2s,mb4.9
BRG Berggiesshubel 66.39 316 *e*P **P** **09 37 33.2 0.0**
comp=Z,12nm,1.3s,mb4.8
BRG *e* pP 09 37 37.0 -1.5
comp=Z,16nm,1.2s
BRG *e* 09 37 41.6
comp=Z,18nm,1.2s
BRG S S 09 46 24.0 +1.5
BRG
comp=N,294nm,15.7s
BRG
comp=E,588nm,14.8s
BRG
comp=Z,967nm,16.8s
BRG Berggiesshubel 66.39 316 *e*P **P** **09 37 33.2 0.0**
BRG *e* 09 37 41.6
BRG S S 09 46 24.0 +1.5
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BRG pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
BRG pmax pmax
comp=Z,11nm,1.2s,mb4.8
BRG MLR MLR
comp=N,176nm,15.7s,MS4.7
BRG MLR MLR
comp=E,352nm,14.8s,MS4.7
BRG MLR MLR
comp=Z,579nm,16.8s,MS4.9
DAG Danmarks Havn 66.54 348 *e*P **P** **09 37 33.0 -0.8**
DAG Danmarks Havn 66.54 348 *i*P **P** **09 37 33.0 -0.8**
CLL Collm 66.79 317 *e*P **P** **09 37 34.6 -1.2**
comp=Z,13nm,1.2s,mb4.8
CLL Collm 66.79 317 *e*P **P** **09 37 35.0 -0.8**
CLL *i* 09 37 43.8
CLL *e* 09 38 01.0
CLL *e*S S 09 46 29.0 +1.8
CLL MLR MLR
comp=Z,1µm,17.6s,MS5.1
CLL Collm 66.79 317 *e*P **P** **09 37 35.0 -0.8**
CLL *e*(pP) pP 09 37 39.0 -2.1
CLL *i* 09 37 43.8
CLL *e*PcP PcP 09 38 01.0 -3.6
CLL *e*S S 09 46 29.0 +1.8
CLL *e* 09 51 54.0
CLL LR LR
comp=Z,1µm,17.6s,MS5.1
CLL Collm 66.79 317 *e*P **P** **09 37 35.0 -0.8**
CLL *e*(pP) pP 09 37 39.0 -2.1
CLL *i* 09 37 43.8
CLL *e*PcP PcP 09 38 01.0 -3.6
CLL *e*PP PP 09 40 02.0 -0.5
CLL *e*PPP 09 41 54.0
CLL *e*S S 09 46 29.0 +1.8
CLL *e*(SS) 09 50 36.0
CLL *e* 09 51 54.0
CLL *e*SSS 09 53 54.0
MUD Monsted U'grnd 66.97 323 *i*P **P** **09 37 37.7 +0.8**
MUD pmax pmax
comp=Z,24nm,0.8s,mb5.3
MUD MLR MLR
comp=Z,580nm,17.0s,MS4.9
MUD Monsted U'grnd 66.97 323 *i*P **P** **09 37 37.7 +0.8**
comp=Z,24nm,0.8s,mb5.3
MUD
comp=Z,570nm,17.0s
PERS Pernice 67.22 312 *i*P **P** **09 37 38.7 0.0**
COLD Coldfoot 67.25 24 *e*P **P** **09 37 38.3 -0.1**
comp=Z,41nm,1.1s,mb5.4
KHC Kasperske Hory 67.25 315 *e*P **P** **09 37 38.9 +0.2**
KHC *e**PP pP 09 37 43.0 -1.1
KHC MLR MLR
comp=Z,800nm,17.5s,MS5.0
KHC Kasperske Hory 67.25 315 *e*P **P** **09 37 38.8 +0.1**
comp=Z,9.2nm,1.2s,mb4.7
KHC Kasperske Hory 67.25 315 *e*P **P** **09 37 38.9 +0.2**
KHC *e*pP pP 09 37 43.0 -1.1
KHC AMS AMS 10 08 10.0
comp=Z,800nm,17.5s
SOKA Soboth 67.26 312⇑ *i*P **P** **09 37 38.8 -0.1**
comp=Z,15nm,1.1s,mb5.0
GEC2 GERESS Array S 67.28 314 *e*P **P** **09 37 38.1 -0.9**
comp=Z,19nm,1.5s,mb4.9
GEC2 GERESS Array S 67.28 314 *e*P **P** **09 37 38.1 -0.9**
GEC2 pmax pmax
comp=Z,19nm,1.5s,mb4.9
GERES GERESS Array B 67.28 314 P **P** **09 37 38.9 0.0**
comp=Z,1.8nm,0.5s,mb4.3,baz=77,slow=5.9,SNR=13
GERES LR LR 10 08 42.8
comp=Z,565nm,20.1s,MS4.8,baz=64,slow=38
BSEG Bad Segeberg 67.32 320 *e*P **P** **09 37 38.8 -0.3**
comp=Z,28nm,1.0s,mb5.2
BSEG Bad Segeberg 67.32 320 *e*P **P** **09 37 38.8 -0.3**
BSEG pmax pmax
comp=Z,28nm,1.0s,mb5.2
TANN Tannenbergstha 67.44 316 *e*P **P** **09 37 39.1 -0.8**
comp=Z,26nm,1.6s,mb5.0
NKC Novy Kostel 67.51 316 *e*P **P** **09 37 40.7 +0.3**
NKC *e**PP pP 09 37 44.7 -1.0
NKC MLR MLR
comp=Z,1µm,13.6s,MS5.2
NKC Novy Kostel 67.51 316 *e*P **P** **09 37 40.7 +0.3**
NKC *e*pP pP 09 37 44.7 -1.0
NKC AMS AMS 10 08 20.0
comp=Z,1µm,13.6s
BOJS Bojanci 67.56 310 *i*P **P** **09 37 40.9 +0.1**
WET Wettzell 67.67 315 *e*P **P** **09 37 40.9 -0.5**
comp=Z,30nm,1.9s,mb5.0
WET Wettzell 67.67 315 *e*P **P** **09 37 40.9 -0.5**
WET pmax pmax
comp=Z,30nm,1.9s,mb5.0
ROTZ Rotzenmuhle 67.84 316 *e*P **P** **09 37 42.0 -0.4**
comp=Z,41nm,1.6s,mb5.2
MOX Moxa 67.85 317 *e*P **P** **09 37 43.0 +0.5**
comp=Z,24nm,1.5s,mb5.0
MOX
comp=Z,800nm,17.0s
MOX Moxa 67.85 317 *e*P **P** **09 37 42.1 -0.4**
comp=Z,28nm,1.7s,mb5.0
MOX Moxa 67.85 317 *e*P **P** **09 37 43.0 +0.5**
MOX pmax pmax
comp=Z,24nm,1.5s,mb5.0
MOX MLR MLR
comp=Z,800nm,17.0s,MS5.0
CHUM Lake Minchumin 67.97 28 *e*P **P** **09 37 43.4 +0.4**
comp=Z,15nm,0.7s,mb5.1
NRDL Niedersach Rie 68.00 319 *e*P **P** **09 37 42.9 -0.5**
comp=Z,63nm,1.7s,mb5.4
CLZ Clausthal 68.10 318 *e*P **P** **09 37 43.4 -0.7**
comp=Z,21nm,1.3s,mb5.0
CLZ Clausthal 68.10 318 *e*P **P** **09 37 43.4 -0.7**
CLZ pmax pmax
comp=Z,21nm,1.3s,mb5.0
JAVS Javornik 68.18 311 *i*P **P** **09 37 43.7 -1.0**
VOY Vojsko 68.24 311 *e*P **P** **09 37 44.2 -0.8**
VOY *e* pP 09 37 48.4 -2.0
VOY *e* 09 38 00.7
BPAW Bear Paw Mtn. 68.39 27 *e*P **P** **09 37 45.6 0.0**
comp=Z,49nm,1.2s,mb5.4
GRA1 Grafenberg Arr 68.45 316 *e*P **P** **09 37 45.8 -0.5**
comp=Z,45nm,1.3s,mb5.3
GRA1 *e*pP pP 09 37 50.3 -1.4
GRA1 LR LR
comp=Z,1µm,18.0s,MS5.2
GRF Grafenberg Arr 68.45 316 *e*P **P** **09 37 45.8 -0.5**
GRF *e*pP pP 09 37 50.3 -1.4
GRF *e*L 10 09 17.1
comp=Z,1µm,18.0s
GRF Grafenberg Arr 68.45 316 *e*P **P** **09 37 45.8 -0.5**
GRF *e**PP pP 09 37 50.3 -1.4
GRF pmax pmax
comp=Z,45nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,1µm,18.0s,MS5.2
GRF Grafenberg Arr 68.45 316 *e*P **P** **09 37 45.8 -0.5**
GRF *e**PP pP 09 37 50.3 -1.4
GRF pmax pmax
comp=Z,45nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,1µm,18.0s,MS5.2
PPLA Purkeypile 68.46 29 *e*P **P** **09 37 46.5 +0.4**
comp=Z,139nm,1.5s,mb5.8
KTH Kantishna Hill 68.67 28 *e*P **P** **09 37 47.7 +0.3**
comp=Z,72nm,1.5s,mb5.4
UBBA Unterbreizbach 68.72 317 *e*P **P** **09 37 46.9 -1.1**
comp=Z,8.0nm,1.1s,mb4.6
TRF Thorofare Moun 68.97 28 *e*P **P** **09 37 49.4 +0.1**
comp=Z,11nm,0.8s,mb4.8
FUR Furstenfeldbru 69.03 314 *e*P **P** **09 37 49.5 -0.5**
comp=Z,30nm,0.5s,mb5.5
FUR Furstenfeldbru 69.03 314 *e*P **P** **09 37 49.5 -0.5**
FUR pmax pmax
comp=Z,30nm,0.5s,mb5.5
WTTA Wattenberg 69.17 313⇑ *i*P **P** **09 37 50.7 -0.2**
comp=Z,19nm,1.4s,mb4.8
COLA College 69.21 26 *e*P **P** **09 37 50.7 -0.1**
COLA pmax pmax
comp=Z,57nm,1.0s,mb5.5
COLA College 69.21 26 *e*P **P** **09 37 50.7 0.0**
comp=Z,58nm,1.0s,mb5.5
RSO Redoubt South 69.33 31 *e*P **P** **09 37 52.1 +0.5**
MCK McKinley 69.36 27 *e*P **P** **09 37 51.4 -0.3**
MCK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MCK McKinley 69.36 27 *e*P **P** **09 37 51.4 -0.3**
comp=Z,10nm,0.7s,mb4.9
IBBN Ibbenburen 69.39 319 *e*P **P** **09 37 52.0 -0.1**
comp=Z,12nm,0.9s,mb4.8
AOI Ancona 69.42 309 P **P** **09 37 56.1 +3.7**
FETA Feichten 69.84 313⇑ *i*P **P** **09 37 54.6 -0.4**
comp=Z,12nm,1.0s,mb4.8
TNS Taunus Mts 69.87 317 *e*P **P** **09 37 54.2 -0.9**
comp=Z,12nm,0.9s,mb4.8
TNS Taunus Mts 69.87 317 *e*P **P** **09 37 54.2 -0.9**
TNS pmax pmax
comp=Z,12nm,0.9s,mb4.8
SNTG Esanatoglia 69.98 309 P **P** **09 37 56.5 +0.6**
BUG Bochum--Univer 70.03 319 *e*P **P** **09 37 55.7 -0.4**
comp=Z,24nm,1.1s,mb5.0
NRCA Noria 70.04 309 P **P** **09 37 56.8 +0.5**
STU Stuttgart 70.04 315 *e*P **P** **09 37 55.0 -1.2**
comp=Z,15nm,0.7s,mb5.0
MURB Monte Urbino 70.25 309 P **P** **09 38 01.7 +4.1**
RC01 Rabbit Creek A 70.33 30 *e*P **P** **09 37 57.2 -0.6**
comp=Z,21nm,0.9s,mb5.1
BADI Badiali 70.33 309 P **P** **09 37 53.9 -4.2**
SFI Santa Sofia 70.43 310 P **P** **09 37 59.8 +1.2**
DAVOX Davos/Dischmat 70.47 313 P **P** **09 37 58.6 -0.2**
comp=Z,5.2nm,0.5s,mb4.7,baz=63,slow=7.0,SNR=7.8
DAVOX LR LR 10 11 00.3
comp=Z,608nm,18.6s,MS4.9,baz=262,slow=38
KDAK Kodiak Island 70.65 34 P **P** **09 37 59.0 -0.7**
comp=Z,297nm,1.4s,mb6.0,SNR=6.4
KDAK Kodiak Island 70.65 34 *i*P **P** **09 37 59.5 -0.2**
BFO Black Forest 70.75 315 *e*P **P** **09 37 59.3 -1.2**
comp=Z,18nm,1.4s,mb4.8
BFO Black Forest 70.75 315 *e*P **P** **09 37 59.3 -1.2**
BFO pmax pmax
comp=Z,18nm,1.4s,mb4.8
KMBO Kilima Mbogo 70.88 256 P **P** **09 38 01.7 -0.1**
comp=Z,5.1nm,0.9s,mb4.5,baz=47,slow=13,SNR=9.1
KMBO LR LR 10 11 07.8
comp=Z,122nm,19.4s,MS4.2,baz=108,slow=38
KMBO Kilima Mbogo 70.88 256 *e*P **P** **09 38 01.9 0.0**
KMBO pmax pmax
comp=Z,20nm,1.4s
KMBO Kilima Mbogo 70.88 256 *e*P **P** **09 38 01.9 +0.1**
comp=Z,20nm,1.4s,mb4.8
KMBO Kilima Mbogo 70.88 256 P **P** **09 38 03.2 +1.3**
SNR=6.2
KMBO P 09 38 03.2
SNR=6.2
SEW Seward 70.94 31 *e*P **P** **09 38 01.0 -0.4**
comp=Z,11nm,0.7s,mb4.9
MEM Membach 71.11 318 P **P** **09 38 02.8 +0.1**
comp=Z,7.0nm,1.4s,mb4.4
CDF Champ du Feu 71.35 316⇑ *i*P **P** **09 38 04.0 -0.1**
comp=Z,43nm,1.1s,mb5.0
CDF Champ du Feu 71.35 316⇑ *i*P **P** **09 38 04.0 -0.1**
CDF pmax pmax
comp=Z,22nm,1.1s,mb5.0
CDF Champ du Feu 71.35 316⇑ *i*P **P** **09 38 04.0 -0.1**
comp=Z,22nm,1.1s,mb5.0
WLF Walferdange 71.45 317 P **P** **09 38 05.6 +0.9**
comp=Z,32nm,1.7s,mb5.0
WLF Walferdange 71.45 317 *e*P **P** **09 38 04.5 -0.2**
comp=Z,55nm,1.2s,mb5.4
ECH Echery 71.50 316 *e*P **P** **09 38 04.8 -0.3**
ECH pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ECH Echery 71.50 316 *e*P **P** **09 38 04.8 -0.3**
comp=Z,2.0nm,1.0s,mb4.0
BOB Bobbio (Coli) 71.61 312 P **P** **09 38 06.5 +0.7**
MENT Mentasta 71.79 26 *e*P **P** **09 38 06.5 0.0**
HINF Hinteralfeld 71.87 315⇑ *i*P **P** **09 38 06.8 -0.5**
comp=Z,31nm,1.0s,mb4.9
HINF Hinteralfeld 71.87 315⇑ *i*P **P** **09 38 06.8 -0.5**
HINF pmax pmax
comp=Z,15nm,1.0s,mb4.9
HINF Hinteralfeld 71.87 315⇑ *i*P **P** **09 38 06.8 -0.5**
comp=Z,15nm,1.0s,mb4.9
INK Inuvik 71.92 19 LR LR 10 14 33.8
comp=Z,414nm,18.1s,MS4.7,baz=313,slow=40
DIV Divide 71.96 29 *e*P **P** **09 38 07.7 +0.1**
comp=Z,19nm,0.8s,mb5.1
GIVF Givet 72.02 318 *e*P **P** **09 38 08.2 +0.1**
comp=Z,65nm,1.2s,mb5.1
GIVF Givet 72.02 318 *e*P **P** **09 38 08.2 +0.1**
GIVF pmax pmax
comp=Z,32nm,1.2s,mb5.1
GIVF Givet 72.02 318 *e*P **P** **09 38 08.2 +0.1**
comp=Z,32nm,1.2s,mb5.1
HAU Haudompre 72.08 316 *e*P **P** **09 38 08.2 -0.4**
HAU *e*MLR MLR
comp=Z,815nm,17.2s,MS4.8
HAU Haudompre 72.08 316 *e*P **P** **09 38 08.2 -0.4**
HAU LR LR
comp=Z,810nm,17.3s,MS5.0
DOU Dourbes 72.15 318 P **P** **09 38 09.3 +0.4**
EIDS Eidsvold 72.18 136 *e*P **P** **09 38 09.7 +0.3**
STKA Stephens Creek 72.30 147 *e*P **P** **09 38 09.5 -0.4**
comp=Z,13nm,0.6s,mb5.0
STKA Stephens Creek 72.30 147 P **P** **09 38 09.5 -0.4**
comp=Z,14nm,0.6s,mb5.0,baz=331,slow=6.6,SNR=40
STKA Stephens Creek 72.30 147 *e*P **P** **09 38 09.7 -0.2**
comp=Z,2.0nm,0.6s,mb4.2
BAIF Baives 72.39 318 *e*P **P** **09 38 10.4 0.0**
comp=Z,35nm,1.0s,mb4.9
BAIF Baives 72.39 318 *e*P **P** **09 38 10.4 0.0**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.0
BAIF Baives 72.39 318 *e*P **P** **09 38 10.4 0.0**
comp=Z,18nm,1.0s,mb4.9
BMRM Bremner River 72.53 28 *e*P **P** **09 38 11.3 +0.3**
comp=Z,54nm,0.9s,mb5.5
MEZF Maizieres J'vi 72.63 316 *e*P **P** **09 38 11.8 0.0**
CABF La Chapelle 72.88 314 *e*P **P** **09 38 13.3 -0.1**
comp=Z,20nm,0.9s,mb4.7
CABF La Chapelle 72.88 314 *e*P **P** **09 38 13.3 -0.1**
CABF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CABF La Chapelle 72.88 314 *e*P **P** **09 38 13.3 -0.1**
comp=Z,10nm,0.9s,mb4.8
PGF Pioggiola 72.89 310⇑ *i*P **P** **09 38 13.7 +0.2**
comp=Z,59nm,1.1s,mb5.1
PGF Pioggiola 72.89 310⇑ *i*P **P** **09 38 13.7 +0.2**
PGF pmax pmax
comp=Z,30nm,1.1s,mb5.1
PGF Pioggiola 72.89 310⇑ *i*P **P** **09 38 13.7 +0.2**
comp=Z,30nm,1.1s,mb5.1
LPG La Plagne 72.99 313⇑ *i*P **P** **09 38 14.6 +0.6**
comp=Z,41nm,0.8s,mb5.1
LPG La Plagne 72.99 313⇑ *i*P **P** **09 38 14.6 +0.6**
LPG pmax pmax
comp=Z,20nm,0.8s,mb5.1
LPG La Plagne 72.99 313⇑ *i*P **P** **09 38 14.6 +0.6**
comp=Z,20nm,0.8s,mb5.1
LPL La Plagne 72.99 313⇑ *i*P **P** **09 38 14.5 +0.5**
comp=Z,42nm,0.8s,mb5.1
LPL La Plagne 72.99 313⇑ *i*P **P** **09 38 14.5 +0.5**
LPL pmax pmax
comp=Z,21nm,0.8s,mb5.1
LPL La Plagne 72.99 313⇑ *i*P **P** **09 38 14.5 +0.5**
comp=Z,21nm,0.8s,mb5.1
SBF Sospel 73.31 311⇑ *i*P **P** **09 38 15.7 -0.2**
comp=Z,30nm,0.7s,mb5.0
SBF Sospel 73.31 311⇑ *i*P **P** **09 38 15.7 -0.2**
SBF pmax pmax
comp=Z,15nm,0.7s,mb5.0
SBF Sospel 73.31 311⇑ *i*P **P** **09 38 15.7 -0.2**
comp=Z,15nm,0.7s,mb5.0
MBDF Montbardon 73.33 312 *e*P **P** **09 38 17.0 +0.9**
comp=Z,19nm,0.8s,mb4.8
MBDF Montbardon 73.33 312 *e*P **P** **09 38 17.0 +0.9**
MBDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MBDF Montbardon 73.33 312 *e*P **P** **09 38 17.0 +0.9**
comp=Z,9.5nm,0.8s,mb4.8
EKA Eskdalemuir Ar 73.67 325 P **P** **09 38 17.1 -0.7**
comp=Z,4.0nm,0.9s,mb4.3,baz=72,slow=6.1,SNR=8.1
ESK Eskdalemuir 73.70 325 *i*P **P** **09 38 27.0 +9.0**
ORIF Oris-en-Rattie 73.80 313⇑ *i*P **P** **09 38 18.8 0.0**
comp=Z,35nm,1.1s,mb4.9
ORIF *e*MLR MLR
comp=Z,931nm,18.2s,MS4.8
ORIF Oris-en-Rattie 73.80 313⇑ *i*P **P** **09 38 18.8 0.0**
ORIF pmax pmax
comp=Z,18nm,1.1s,mb4.9
ORIF Oris-en-Rattie 73.80 313⇑ *i*P **P** **09 38 18.8 0.0**
comp=Z,18nm,1.1s,mb4.9
LOR Lormes 73.92 316 *e*P **P** **09 38 18.7 -0.8**
LOR *e*MLR MLR
comp=Z,659nm,17.0s,MS4.7
LOR Lormes 73.92 316 *e*P **P** **09 38 18.7 -0.8**
LOR LR LR
comp=Z,660nm,17.0s,MS5.0
FRF La Foret Royal 73.96 311 *e*P **P** **09 38 19.5 -0.2**
ABPO Ambohimpanom 74.01 235 *e*P **P** **09 38 19.9 -0.4**
ABPO pmax pmax
comp=Z,16nm,1.4s,mb4.8
ABPO Ambohimpanom 74.01 235 *e*P **P** **09 38 19.9 -0.4**
comp=Z,16nm,1.4s,mb4.8
LMR La Mourre 74.15 311⇑ *i*P **P** **09 38 20.7 -0.2**
comp=Z,18nm,0.8s,mb4.7
LMR La Mourre 74.15 311⇑ *i*P **P** **09 38 20.7 -0.2**
LMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LMR La Mourre 74.15 311⇑ *i*P **P** **09 38 20.7 -0.2**
comp=Z,9.3nm,0.8s,mb4.8
SSF Saint Saulge 74.23 316 *e*P **P** **09 38 20.7 -0.6**
comp=Z,34nm,1.2s,mb4.8
SSF Saint Saulge 74.23 316 *e*P **P** **09 38 20.7 -0.6**
SSF pmax pmax
comp=Z,17nm,1.2s,mb4.8
SSF Saint Saulge 74.23 316 *e*P **P** **09 38 20.7 -0.6**
comp=Z,17nm,1.2s,mb4.8
SMF Signal de Mont 74.23 315⇑ *i*P **P** **09 38 20.9 -0.4**
comp=Z,46nm,1.0s,mb5.1
SMF Signal de Mont 74.23 315⇑ *i*P **P** **09 38 20.9 -0.4**
SMF pmax pmax
comp=Z,23nm,1.0s,mb5.1
SMF Signal de Mont 74.23 315⇑ *i*P **P** **09 38 20.9 -0.4**
comp=Z,23nm,1.0s,mb5.1
SMRF Simiane la Rot 74.44 312⇑ *i*P **P** **09 38 18.7 -3.9**
comp=Z,27nm,0.9s,mb4.9
SMRF Simiane la Rot 74.44 312⇑ *i*P **P** **09 38 18.7 -3.9**
comp=Z,27nm,0.9s,mb5.2
AVF Avril sur Loir 74.45 315⇑ *i*P **P** **09 38 22.2 -0.4**
comp=Z,57nm,1.1s,mb5.1
AVF Avril sur Loir 74.45 315⇑ *i*P **P** **09 38 22.2 -0.4**
AVF pmax pmax
comp=Z,29nm,1.1s,mb5.1
AVF Avril sur Loir 74.45 315⇑ *i*P **P** **09 38 22.2 -0.4**
comp=Z,29nm,1.1s,mb5.1
VIVF Saint-Julien-l 74.59 313⇑ *i*P **P** **09 38 23.3 -0.1**
comp=Z,12nm,0.8s,mb4.6
VIVF Saint-Julien-l 74.59 313⇑ *i*P **P** **09 38 23.3 -0.1**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VIVF Saint-Julien-l 74.59 313⇑ *i*P **P** **09 38 23.3 -0.1**
comp=Z,5.9nm,0.8s,mb4.6
BGF Bois d'Agland 74.87 315⇑ *i*P **P** **09 38 24.5 -0.5**
BORG Borgarnes 75.16 339 P **P** **09 38 27.9 +1.6**
comp=Z,24nm,1.0s,mb5.1,baz=79,slow=2.9,SNR=4.1
BORG Borgarnes 75.16 339 P **P** **09 38 27.2 +0.8**
BORG pmax pmax
comp=Z,32nm,1.1s
BORG Borgarnes 75.16 339 P **P** **09 38 27.2 +0.8**
comp=Z,32nm,1.1s,mb5.2
TCF Toulx Ste Croi 75.39 315⇑ *i*P **P** **09 38 27.9 -0.1**
comp=Z,26nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.39 315⇑ *i*P **P** **09 38 27.9 -0.1**
TCF pmax pmax
comp=Z,13nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.39 315⇑ *i*P **P** **09 38 27.9 -0.1**
comp=Z,13nm,0.9s,mb4.9
LASF Ste Croix 75.48 313⇑ *i*P **P** **09 38 28.7 +0.1**
comp=Z,35nm,1.1s,mb4.9
LDF La Druitiere 75.58 318 *e*P **P** **09 38 28.7 -0.3**
comp=Z,49nm,1.2s,mb5.0
LDF La Druitiere 75.58 318 *e*P **P** **09 38 28.7 -0.3**
LDF pmax pmax
comp=Z,25nm,1.2s,mb5.0
LDF La Druitiere 75.58 318 *e*P **P** **09 38 28.7 -0.3**
comp=Z,25nm,1.2s,mb5.0
FLN La Foliniere 75.69 319 *e*P **P** **09 38 30.1 +0.4**
FLN *e*MLR MLR
comp=Z,870nm,18.8s,MS4.8
FLN La Foliniere 75.69 319 *e*P **P** **09 38 30.1 +0.4**
FLN LR LR
comp=Z,870nm,18.8s,MS5.1
GRR Gorron 76.10 318 *e*P **P** **09 38 31.8 -0.2**
comp=Z,39nm,0.8s,mb5.1
GRR Gorron 76.10 318 *e*P **P** **09 38 31.8 -0.2**
GRR pmax pmax
comp=Z,19nm,0.8s,mb5.1
GRR Gorron 76.10 318 *e*P **P** **09 38 31.8 -0.2**
comp=Z,19nm,0.8s,mb5.1
CAF Calviac 76.16 314⇑ *i*P **P** **09 38 32.8 +0.3**
comp=Z,34nm,1.1s,mb4.9
CAF Calviac 76.16 314⇑ *i*P **P** **09 38 32.8 +0.3**
CAF pmax pmax
comp=Z,17nm,1.1s,mb4.9
CAF Calviac 76.16 314⇑ *i*P **P** **09 38 32.8 +0.3**
comp=Z,17nm,1.1s,mb4.9
RJF Les Rejaudoux 76.30 315 *e*P **P** **09 38 33.7 +0.5**
RJF *e*MLR MLR
comp=Z,595nm,20.8s,MS4.6
RJF Les Rejaudoux 76.30 315 *e*P **P** **09 38 33.7 +0.5**
RJF LR LR
comp=Z,590nm,20.8s,MS4.9
ARMA Armidale 76.31 139 *e*P **P** **09 38 34.4 +1.1**
ARPS Mount Arapiles 76.50 150 *e*P **P** **09 38 33.7 -0.6**
comp=Z,28nm,0.6s,mb5.4
MFF Saint Martin d 76.62 317 *e*P **P** **09 38 35.0 0.0**
comp=Z,47nm,1.3s,mb5.0
MFF Saint Martin d 76.62 317 *e*P **P** **09 38 35.0 0.0**
MFF pmax pmax
comp=Z,24nm,1.3s,mb5.0
MFF Saint Martin d 76.62 317 *e*P **P** **09 38 35.0 0.0**
comp=Z,24nm,1.3s,mb5.0
MTLF Montolieu 76.87 313 *e*P **P** **09 38 36.6 +0.1**
LFF La Frestale 76.96 315 *e*P **P** **09 38 37.4 +0.4**
SGMF Saint Gilles 77.13 319 *e*P **P** **09 38 38.4 +0.5**
ROSF Rostrenen 77.49 319 *e*P **P** **09 38 40.0 +0.1**
comp=Z,83nm,1.3s,mb5.2
ROSF Rostrenen 77.49 319 *e*P **P** **09 38 40.0 +0.1**
ROSF pmax pmax
comp=Z,41nm,1.3s,mb5.2
ROSF Rostrenen 77.49 319 *e*P **P** **09 38 40.0 +0.1**
comp=Z,42nm,1.3s,mb5.2
QUIF Quistinic 77.66 319 *e*P **P** **09 38 41.0 +0.2**
MGCD Mangrove Creek 78.15 141 *e*P **P** **09 38 44.7 +1.1**
comp=Z,19nm,0.6s,mb5.2
EPF Esparros 78.21 313 *e*P **P** **09 38 43.6 -0.4**
CAN Canberra 78.69 144 *e*P **P** **09 38 46.9 +0.4**
CAN pmax pmax
comp=Z,13nm,0.7s,mb5.0
CAN Canberra 78.69 144 *e*P **P** **09 38 46.9 +0.4**
comp=Z,13nm,0.7s,mb5.0
ETSF Etsaut 78.84 314⇑ *i*P **P** **09 38 48.0 +0.5**
comp=Z,15nm,0.9s,mb4.6
ETSF Etsaut 78.84 314⇑ *i*P **P** **09 38 48.0 +0.5**

ETSF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ETSF	**Etsaut**	**78.84**	**314**	⇑*i*P	**P**	**09 38 48.0**	**+0.5**
	comp=Z,7.6nm,0.9s,mb4.6						
CNB	**Canberra Magne**	**78.87**	**144**	*e*P	**P**	**09 38 47.7**	**+0.2**
SJPF	**Ste Jean**	**79.13**	**314**	*e*P	**P**	**09 38 49.8**	**+0.7**
	comp=Z,18nm,1.0s,mb4.7						
SJPF	**Ste Jean**	**79.13**	**314**	*e*P	**P**	**09 38 49.8**	**+0.7**
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
SJPF	**Ste Jean**	**79.13**	**314**	*e*P	**P**	**09 38 49.8**	**+0.7**
	comp=Z,8.9nm,1.0s,mb4.7						
DLBC	**Dease Lake**	**79.83**	**26**	LR	LR	10 17 19.5	
	comp=Z,278nm,19.6s,MS4.6,baz=116,slow=38						
DZM	**Mont Dzumac**	**80.02**	**123**	*e*LR	LR	10 03 50.8	
	comp=Z,253nm,22.1s						
SFJD	**Kangerlussuaq**	**80.04**	**350**	⇑*i*P	**P**	**09 38 53.1**	**-0.5**
SFJD				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
SFJD	**Kangerlussuaq**	**80.04**	**350**	*e*P	**P**	**09 38 53.3**	**-0.3**
	comp=Z,23nm,0.5s,mb5.4						
SFJD	**Kangerlussuaq**	**80.04**	**350**	⇑*i*P	**P**	**09 38 53.1**	**-0.5**
	comp=Z,25nm,0.8s,mb5.2						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**09 39 01.3**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.7,baz=330,slow=5.2,SNR=141						
YKA				PKKPbc	PKKPbc	09 57 32.2	-3.2
	comp=Z,0.4nm,0.6s,baz=157,slow=2.0,SNR=7.8						
YKA				LR	LR	10 18 34.6	
	comp=Z,149nm,18.9s,MS4.4,baz=120,slow=38						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**09 39 01.3**	**+0.1**
YKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,149nm,18.9s						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**09 39 01.4**	**+0.2**
YKA				PKKPbc	PKKPbc	09 57 32.2	-3.2
YKA				LR	LR	10 18 34.6	
ESDC	**Sonseca Array**	**82.76**	**312**	LR	LR	10 18 30.4	
	comp=Z,149nm,19.4s,MS4.4,baz=255,slow=38						
BBB	**Bella Bella**	**85.12**	**29**	LR	LR	10 20 54.1	
	comp=Z,120nm,18.6s,MS4.3,baz=293,slow=38						
TAM	**Tamanrasset**	**85.22**	**294**	*e*P	**P**	**09 39 22.0**	**+0.7**
TAM				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
TAM	**Tamanrasset**	**85.22**	**294**	*e*P	**P**	**09 39 22.0**	**+0.7**
	comp=Z,2.0nm,0.5s,mb4.5						
LSZ	**Lusaka**	**86.18**	**250**	P	**P**	**09 39 26.6**	**+0.5**
	SNR=5.3						
LSZ				P		09 39 26.6	
	SNR=5.3						
RPW	**Rockport**	**90.71**	**28**	*e*P	**P**	**09 39 47.7**	**+0.5**
FFC	**Flin Flon**	**91.36**	**15**	P	**P**	**09 39 49.2**	**-0.9**
	comp=Z,55nm,1.5s,mb5.7,SNR=5.5						
FFC	**Flin Flon**	**91.36**	**15**	*e*P	**P**	**09 39 49.7**	**-0.4**
FFC				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.2						
FFC	**Flin Flon**	**91.36**	**15**	*e*P	**P**	**09 39 49.7**	**-0.4**
	comp=Z,14nm,1.2s,mb5.2						
AFI	**Afiamalu**	**92.31**	**105**	LR	LR	10 17 06.0	
	comp=Z,122nm,19.2s,MS4.4,baz=289,slow=33						
TORD	**Torodi Ar. Bea**	**93.46**	**288**	P	**P**	**09 39 59.7**	**-0.8**
	comp=Z,3.4nm,1.0s,mb4.7,baz=56,slow=4.5,SNR=12						
SCHQ	**Schefferville**	**93.77**	**355**	P	**P**	**09 39 59.6**	**-1.6**
	comp=Z,1.7nm,0.6s,mb4.7,baz=15,slow=8.6,SNR=7.0						
SCHQ				LR	LR	10 27 39.5	
	comp=Z,139nm,18.2s,MS4.5,baz=232,slow=39						
BOSA	**Boshof**	**95.75**	**240**	P	**P**	**09 40 08.8**	**-1.8**
	comp=Z,1.4nm,0.5s,mb4.7,baz=104,slow=12,SNR=5.5						
BOSA				LR	LR	10 21 59.9	
	comp=Z,110nm,18.8s,MS4.4,baz=237,slow=35						
BOSA	**Boshof**	**95.75**	**240**	P	**P**	**09 40 08.8**	**-1.8**
BOSA				LR	LR	10 21 59.9	
ULM	**Lac du Bonnet**	**96.83**	**13**	LR	LR	10 25 57.8	
	comp=Z,162nm,20.1s,MS4.5,baz=25,slow=37						
PDAR	**Pinedale Array**	**100.03**	**24**	P	Pdif	09 40 30.3	+0.6
	comp=Z,0.2nm,0.7s,baz=339,slow=2.2,SNR=2.3						
PPT	**Papeete**	**112.72**	**97**	*e*SP	SP	09 55 42.4	+0.4
	comp=Z,80nm,28.0s						
PPT				*e*SS	SS	10 01 54.6	+3.4
	comp=Z,47nm,23.8s						
PPT				*e*LR	LR	10 18 59.5	
	comp=Z,206nm,23.8s						
TXAR	**Lajitas Array**	**114.13**	**26**	PKiKP	PKiKP	09 45 23.9	-0.2
	comp=Z,0.4nm,0.5s,baz=245,slow=0.3,SNR=9.4						
TXAR				PKKPbc	PKKPbc	09 56 02.9	-1.6
	comp=Z,0.6nm,0.8s,baz=169,slow=7.0,SNR=3.9						
TAOE	**Nuku Hiva Isla**	**116.61**	**84**	*e*LR	LR	10 20 50.0	
	comp=Z,119nm,23.9s						
QSPA	**South Pole Qui**	**121.16**	**180**	*e*PKPdf	PKPdf	09 45 35.4	-0.6
SDV	**Santo Domingo**	**139.63**	**352**	*e*PKPdf	PKPdf	09 46 04.0	-8.9
ROSC	**El Rosal**	**143.92**	**357**	PKP	PKPdf	09 46 18.2	-2.4
	comp=Z,10nm,0.5s,baz=101,slow=22,SNR=8.7						
OTAV	**Otavalo**	**148.46**	**5**	*e*PKPdf	PKPdf	09 46 29.0	+0.8
OTAV				*e*PKPbc	PKPbc	09 46 32.8	+1.0
CPUP	**Villa Florida**	**162.89**	**282**	PKP	PKPdf	09 46 46.2	-0.8
	comp=Z,0.5nm,0.3s,baz=311,slow=2.2,SNR=3.8						
CPUP	**Villa Florida**	**162.89**	**282**	PKP	PKPdf	09 46 46.2	-0.8
LPAZ	**La Paz**	**163.34**	**333**	PKP	PKPdf	09 46 48.0	+0.4
	comp=Z,3.1nm,1.2s,baz=34,slow=3.7,SNR=4.7						

IDC 14 09:31:58.5±1.3, 31°.24N×103°.69E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/24, mbtmp4.0/5, Error ellipse: s-maj=48.4km s-min=23.9km az=68.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.92**	**66**	P	P	09 36 42.7	+0.1
	2.9nm,0.7s,baz=265,slow=10,SNR=7.1						
ZALV	**Zalesovo Beam**	**26.44**	**335**	P	P	09 37 37.3	+0.5
	2.8nm,0.8s,baz=126,slow=9.7,SNR=3.1						
WRA	**Warramunga Arr**	**58.79**	**146**	P	P	09 41 58.3	-0.4
	2.0nm,0.7s,baz=327,slow=9.1,SNR=8.0						
ASAR	**Alice Springs**	**61.79**	**148**	P	P	09 42 19.8	+0.7
	1.1nm,0.8s,baz=334,slow=6.2,SNR=4.7						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	P	09 44 17.6	-0.7
	0.8nm,0.6s,baz=329,slow=5.3,SNR=7.2						

*ISCJB **14** 09:36:48.7±0.5, 59°.63N±0°.03×24°.37E±0°.07, h0km, Error ellipse: s-maj=5.7km s-min=3.7km az=33.8*
*UPP **14** 09:36:50.3, 59°.64N×24°.36E, h0km, ML2.9, Suspected Mining explosion.*
*CSEM **14** 09:36:50.3±0.2, 59°.65N×24°.35E, h2km, ML2.8, Error ellipse: s-maj=5.1km s-min=3.1km az=130.0, Mining explosion.*
*BER **14** 09:36:52.0±3.2, 59°.70N×24°.18E, h0km±15km, ML2.7(NAO)*
*IDC **14** 09:36:52.6±1.0, 59°.75N×24°.23E, h0km, mb1 3.6/4, mb1mx3.2/26, mbtmp3.5/4, ML3.7/4, Error ellipse: s-maj=11.0km s-min=6.3km az=139.0*
*NAO **14** 09:36:53.9±2.4, 59°.86N×23°.97E, ML2.7*
ISC 14 09:36:50.1±0.4, 59°.65N±0°.03×24°.33E±0°.07, h0km, n29, σ0=84/40, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.57**	**3**	P	**Pg**	**09 37 01.7**	**+0.6**
MEF				*e*S	**Sg**	**09 37 08.8**	**+0.3**
	SNR=90						
MTSE	**Matsula**	**0.97**	**196**	P	**Pg**	**09 37 07.9**	**-0.8**
MTSE				S	**Sg**	**09 37 20.5**	**-0.8**
PVF	**Pernaja**	**1.18**	**40**	P	**Pg**	**09 37 13.0**	**+0.2**
PVF				S	**Sg**	**09 37 28.6**	**+0.5**
VJF	**Virojoki**	**1.84**	**60**	P	**Pn**	**09 37 23.9**	**+0.9**
VJF				Sg	**Sg**	**09 37 49.1**	**-0.2**
	84nm,0.2s						
RAF	**Rauma**	**1.88**	**318**	P	**Pn**	**09 37 24.2**	**+0.7**
RAF				S	**Sn**	**09 37 47.8**	**-0.1**
FIA0	**FINESS Array S**	**2.00**	**25**	Pg	**Pg**	**09 37 27.2**	**-1.2**
	baz=199,slow=16						
FIA0				Lg		09 37 53.8	
	baz=196,slow=28						
FIA0	**FINESS Array S**	**2.00**	**25**	Pg	**Pg**	**09 37 27.2**	**-1.2**
	baz=199,slow=14,SNR=300						
FIA0				Lg		09 37 53.8	
	baz=196,slow=23,SNR=4.3						
FINES	**FINESS Array B**	**2.00**	**25**	Pg	**Pg**	**09 37 27.4**	**-1.0**
	22nm,0.3s,baz=205,slow=14,SNR=218						
FINES				Lg		09 37 52.8	
	30nm,0.3s,baz=206,slow=24,SNR=18						
AAL	**Aland**	**2.25**	**286**	P	**Pn**	**09 37 29.7**	**+1.2**
SLIT	**Slitere, Latvi**	**2.29**	**209**	*e*P	**Pn**	**09 37 30.5**	**+1.4**
	SNR=50						
SLIT				*e*S	**Sn**	**09 38 00.8**	**+2.9**
	1μm,0.3s,SNR=50						
NRTU	**Norrtaelje**	**2.89**	**273**	P	**Pn**	**09 37 37.9**	**+0.5**
GRAU	**Graesoe**	**2.99**	**286**	P	**Pn**	**09 37 38.2**	**-0.5**
FLYU	**Flymyra**	**3.29**	**281**	P	**Pn**	**09 37 42.8**	**0.0**
GOTU	**Gotland**	**3.60**	**239**	P	**Pn**	**09 37 47.2**	**+0.2**
OSTU	**Oestervaala**	**3.67**	**282**	P	**Pn**	**09 37 47.9**	**-0.1**
IGGU	**Iggoen**	**3.71**	**292**	P	**Pn**	**09 37 48.9**	**+0.4**
ARNU	**Arnoeviken**	**3.99**	**304**	P	**Pn**	**09 37 52.6**	**+0.2**
HFS	**Hagfors**	**5.38**	**280**	Pn	**Pn**	**09 38 11.5**	**0.0**
	baz=96,slow=10						
HFS				Sn	**Sn**	**09 39 10.3**	**-3.8**
	baz=82,slow=28						
HFS				Lg		09 39 33.8	
	baz=86,slow=37						
HFS	**Hagfors**	**5.38**	**280**	Pn	**Pn**	**09 38 11.0**	**-0.5**
	1.6nm,0.3s,baz=88,slow=15,SNR=21						
HFS				Sn	**Sn**	**09 39 12.6**	**-1.5**
	1.9nm,0.3s,baz=90,slow=26,SNR=8.8						
HFS	**Hagfors**	**5.38**	**280**	Pn	**Pn**	**09 38 11.5**	**0.0**
	baz=96,slow=9.4,SNR=2.2						
NB2	**NORSAR Subarra**	**6.66**	**288**	Pn	**Pn**	**09 38 28.0**	**-1.1**
	baz=96,slow=14						
NB2				Lg		09 40 14.6	
	baz=102,slow=37						
NB2	**NORSAR Subarra**	**6.66**	**288**	Pn	**Pn**	**09 38 28.0**	**-1.1**
	baz=96,slow=14,SNR=5.3						
NOA	**NORSAR Array B**	**6.66**	**288**	Pn	**Pn**	**09 38 27.6**	**-1.4**
	1.6nm,0.3s,baz=92,slow=14,SNR=7.6						
NOA				Sn	**Sn**	**09 39 40.7**	**-4.8**
	0.8nm,0.3s,baz=69,slow=6.4,SNR=3.4						
NOA				Lg		09 40 17.9	
	2.1nm,0.3s,baz=72,slow=20,SNR=5.0						
AKASG	**Malin Array Be**	**9.39**	**161**	Pn	**Pn**	**09 39 05.5**	**-1.0**
	2.1nm,0.3s,baz=338,slow=12,SNR=5.3						
ARA0	**ARCESS Array S**	**9.94**	**2**	Pn	**Pn**	**09 39 13.2**	**-0.8**
	baz=174,slow=14						
ARA0				Sn	**Sn**	**09 40 58.3**	**-7.8**
	baz=182,slow=28						
ARA0	**ARCESS Array S**	**9.94**	**2**	Pn	**Pn**	**09 39 13.2**	**-0.8**
	baz=174,slow=13,SNR=1.2						
ARCES	**ARCESS Array B**	**9.94**	**2**	Pn	**Pn**	**09 39 12.9**	**-1.1**
	0.8nm,0.3s,baz=177,slow=14,SNR=17						
ARCES				Sn	**Sn**	**09 41 00.2**	**-5.9**
	0.4nm,0.3s,baz=182,slow=21,SNR=3.0						
SPA0	**Spitsbergen Ar**	**18.80**	**355**	P	**Pn**	**09 41 11.1**	**0.0**
	baz=153,slow=11						
SPA0	**Spitsbergen Ar**	**18.80**	**355**	P	**Pn**	**09 41 11.1**	**0.0**
	baz=153,slow=11,SNR=4.4						

*ISCJB **14** 09:45:33.7±0.5, 41°.47N±0°.04×142°.03E±0°.05, h70km±4km, mb3.6/7, Error ellipse: s-maj=7.7km s-min=4.6km az=43.2*
*JMA **14** 09:45:34.5±0.1, 41°.49N×142°.03E, h62km±2km, M3.3*
*NEIC **14** 09:45:35.1±0.8, 41°.95N×141°.81E, h35km, MG3.3(JMA), Error ellipse: s-maj=14.2km s-min=13.5km az=118.0*
*IDC **14** 09:45:37.0±1.9, 41°.59N×142°.34E, h98km±16km, mb3.5/7, mb1 3.4/10, mb1mx3.3/27, mbtmp3.4/10, Error ellipse: s-maj=34.0km s-min=15.2km az=99.0*
ISC 14 09:45:34.6±0.5, 41°.47N±0°.04×142°.02E±0°.05, h63km±5km, n26, σ0=72/36, mb3.7/7, 2C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.74**	**263**	⇓P	**Pn**	**09 45 49.4**	**-0.1**
JOT				*e*S	**Sn**	**09 46 00.5**	**+0.1**
JKB	**Kayabe**	**0.85**	**300**	⇓P	**Pn**	**09 45 50.4**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.97**	**34**	⇑P	**Pn**	**09 45 51.8**	**-0.6**
JNBK				*e*S	**Sn**	**09 46 04.7**	**-0.9**
JTM	**Tenmabayashi**	**0.99**	**227**	⇓P	**Pn**	**09 45 53.2**	**+0.5**
JTM				*e*S	**Sn**	**09 46 06.5**	**+0.4**
ERM	**Erimo**	**1.01**	**57**	*e*Pn	**Pn**	**09 45 52.7**	**-0.1**
ERM				*e*Sn	**Sn**	**09 46 06.2**	**-0.1**
JEM	**Erimo**	**1.01**	**57**	⇑P	**Pn**	**09 45 52.7**	**-0.2**
JEM				*e*S	**Sn**	**09 46 05.8**	**-0.6**
JANG	**Nango**	**1.16**	**199**	P	**Pn**	**09 45 55.1**	**+0.2**
JANG				*e*S	**Sn**	**09 46 09.5**	**-0.5**
JSR	**Shiriuchi**	**1.21**	**273**	P	**Pn**	**09 45 55.6**	**+0.2**
JNB	**Noboribetsu**	**1.24**	**324**	⇓P	**Pn**	**09 45 55.3**	**-0.5**
JNB				*e*S	**Sn**	**09 46 10.5**	**-1.2**
JBT2	**Biratori 2**	**1.33**	**11**	⇓P	**Pn**	**09 45 57.3**	**+0.2**
JYM2	**Yakumo 2**	**1.39**	**298**	⇓P	**Pn**	**09 45 58.5**	**+0.6**
JEW	**Eniwo**	**1.43**	**343**	P	**Pn**	**09 45 58.5**	**+0.1**
JEW				*e*S	**Sn**	**09 46 16.4**	**+0.1**
JCH	**Churui**	**1.52**	**41**	P	**Pn**	**09 46 00.2**	**+0.6**
JCH				*e*S	**Sn**	**09 46 19.5**	**+1.2**
JFR	**Furan**	**1.74**	**14**	P	**Pn**	**09 46 02.6**	**0.0**
JOSM	**Okushiri--Mats**	**2.00**	**289**	P	**Pn**	**09 46 06.0**	**-0.1**
ASAJ	**Asahikawa**	**2.68**	**9**	P	**Pn**	**09 46 16.3**	**+1.0**
	6.0nm,0.3s,baz=210,slow=12,SNR=31						
ASAJ				S	**Sn**	**09 46 47.5**	**+1.0**
	6.0nm,0.3s,baz=125,slow=33,SNR=9.8						
MAJO	**Matsushiro**	**5.75**	**212**	*e*Pn	**Pn**	**09 47 02.4**	**+5.1**
MJAR	**Matsushiro Arr**	**5.75**	**212**	P	**Pn**	**09 47 02.5**	**+5.2**
	0.4nm,0.3s,baz=32,slow=13,SNR=4.1						
KSRS	**Korea Array**	**11.61**	**254**	P	**Pn**	**09 48 24.0**	**+6.5**
	0.2nm,0.3s,baz=69,slow=14,SNR=4.2						
SONM	**Songino Array**	**25.96**	**296**	P	**P**	**09 51 02.4**	**+1.3**
	0.4nm,0.6s,mb3.1,baz=76,slow=7.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**39.40**	**308**	P	**P**	**09 52 55.8**	**-2.1**
	0.7nm,0.4s,mb3.8,baz=79,slow=9.2,SNR=4.6						
MKAR	**Makanchi Array**	**42.30**	**298**	P	**P**	**09 53 21.7**	**-0.2**
	0.8nm,0.7s,mb3.4,baz=85,slow=14,SNR=4.1						
KURK	**Kurchatov**	**43.68**	**305**	P	**P**	**09 53 33.8**	**+0.8**
	1.7nm,0.4s,mb4.1,baz=78,slow=8.8,SNR=10						
BVAR	**Borovoye Array**	**48.02**	**310**	P	**P**	**09 54 07.7**	**+0.6**
	0.7nm,0.4s,mb4.0,baz=82,slow=9.0,SNR=4.3						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**09 55 44.7**	**-0.2**
	0.2nm,0.4s,mb3.6,baz=6.6,slow=7.0,SNR=5.7						
FINES	**FINESS Array B**	**65.13**	**332**	P	**P**	**09 56 06.9**	**-1.4**
	0.8nm,0.6s,mb4.0,baz=40,slow=11,SNR=3.2						

IDC 14 09:55:04.9±10.0, 5°.28N×117°.53E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/21, mbtmp3.7/3, MS3.6/1, Ms1 3.6/1, ms1mx2.5/41, Error ellipse: s-maj=344.6km s-min=29.8km az=89.0, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.02**	**147**	P	P	10 01 16.7	+1.0
	0.7nm,0.6s,baz=330,slow=8.7,SNR=20						
ASAR	**Alice Springs**	**32.91**	**152**	P	P	10 01 39.8	-1.3
	0.2nm,0.7s,baz=335,slow=6.4,SNR=4.3						
MJAR	**Matsushiro Arr**	**36.44**	**29**	P	P	10 02 11.6	+0.1
	0.7nm,0.3s,baz=219,slow=7.3,SNR=4.9						
MJAR				LR	LR	10 16 22.8	
	comp=Z,93nm,18.8s,baz=310,slow=35						

*ISCJB **14** 10:00:27.1±0.7, 32°.34N±0°.02×105°.13E±0°.02, h1km±4km, mb4.9/94, MS4.1/32, Error ellipse: s-maj=4.3km s-min=3.3km az=155.8*
*IDC **14** 10:00:28.5±0.5, 32°.37N×105°.12E, h0km, mb4.7/32, mb1 4.7/34, mb1mx4.7/36, mbtmp4.6/34, ML4.0/2, MS3.9/18, Ms1 3.9/18, ms1mx3.6/46, Error ellipse: s-maj=16.3km s-min=12.1km az=35.0*
*BJI **14** 10:00:29.8, 32°.34N×105°.15E, h12km, mB4.9/25, mb4.6/31, ML4.9/23, Ms4.5/48, Ms7 4.3/38*
*NEIC **14** 10:00:30.4±0.2, 32°.37N×105°.12E, h10km, mb4.8/40, Error ellipse: s-maj=6.2km s-min=4.5km az=6.0*
*MOS **14** 10:00:31.3±0.7, 32°.32N×105°.15E, h30km, mb5.0/38, MS4.3/16, Error ellipse: s-maj=8.5km s-min=4.7km az=117.2*
ISC 14 10:00:29.1±0.7, 32°.35N±0°.02×105°.10E±0°.02, h1km±4km, n278, σ0=96/296, mb4.9/94, MS4.1/32, 33C-17D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.84**	**219**	Pg	**Pg**	**10 01 03.5**	**-0.9**
CD2				Sg	**Sg**	**10 01 28.0**	**-0.2**
CD2				smax			
	comp=N,30μm,0.8s						
XAN	**Xi'an**	**3.62**	**61**	Pn	**Pn**	**10 01 27.9**	**+1.6**
XAN				Pg	**Pg**	**10 01 38.5**	**+0.1**
XAN				Sg	**Sg**	**10 02 24.0**	**-1.3**
XAN				smax			
	comp=N,5μm,0.7s						
XAN				smax			
	comp=E,1μm,1.1s						
XAN				LR	LR		
	comp=N,4μm,7.2s						
XAN				LR	LR		
	comp=E,6μm,8.2s						
XAN				LR	LR		
	comp=Z,2μm,7.5s						
LZH	**Lanzhou**	**3.87**	**345**	*e*Pn	**Pn**	**10 01 32.8**	**+3.1**
LZH				Pg	**Pg**	**10 01 43.0**	**-0.2**
LZH				Sn	**Sn**	**10 02 16.3**	**+0.5**
LZH				Sg	**Sg**	**10 02 32.3**	**-1.1**
LZH				smax			
	comp=N,5μm,0.8s						
LZH				smax			
	comp=E,15μm,0.7s						
LZH				LR	LR		
	comp=E,8μm,6.7s						
LZH				LR	LR		
	comp=Z,7μm,9.8s						
ENH	**Enshi**	**4.29**	**118**	*e*Pn	**Pn**	**10 01 37.8**	**+2.3**
ENH				*e*Sg	**Sg**	**10 02 45.2**	**-1.7**
GYA	**Guiyang**	**6.03**	**167**	Pn	**Pn**	**10 02 00.8**	**+1.4**
GYA				Sn	**Sn**	**10 03 04.8**	**-4.3**
GYA				smax			
	comp=N,1μm,0.8s						
GYA				smax			
	comp=E,1μm,0.9s						
GYA				LR	LR		
	comp=N,8μm,3.8s						
GYA				LR	LR		
	comp=E,5μm,4.2s						
GYA				LR	LR		
	comp=Z,6μm,3.7s						
KMI	**Kunming**	**7.50**	**197**	Pn	**Pn**	**10 02 20.1**	**+0.5**
KMI				Sn	**Sn**	**10 03 45.8**	**+0.6**
KMI				smax			
	comp=N,130nm,1.8s						
KMI				smax			
	comp=E,120nm,1.9s						
KMI				LR	LR		
	comp=N,1μm,7.4s						
KMI				LR	LR		
	comp=E,2μm,9.6s						
WHN	**Wuhan**	**8.10**	**100**	P	**Pn**	**10 02 27.8**	**-0.1**
WHN				S	**Sn**	**10 03 55.3**	**-4.9**
WHN				LR	LR		
	comp=N,11μm,3.9s						
WHN				LR	LR		
	comp=E,8μm,5.1s						
WHN				LR	LR		
	comp=Z,2μm,7.7s						
GTA	**Gaotai**	**8.24**	**330**	P	**Pn**	**10 02 30.6**	**+0.8**
GTA				pP		10 02 39.8	
GTA				sP		10 02 44.3	
GTA				S	**Sn**	**10 04 02.5**	**-1.1**
GTA				pmax	pmax		
	comp=Z,15nm,0.7s						
GTA				pmax	pmax		
	comp=Z,84nm,5.1s						
GTA				LR	LR		
	comp=N,3μm,10.8s						
GTA				LR	LR		
	comp=E,2μm,9.9s						
GTA				LR	LR		
	comp=Z,4μm,9.9s						
BTO	**Baotou**	**9.14**	**24**	*e*P	**Pn**	**10 02 42.1**	**+0.1**
BTO				LR	LR		
	comp=N,660nm,5.1s						
HHC	**Hu-ho-hao-te**	**9.94**	**30**	*e*P	**Pn**	**10 02 58.3**	**+5.2**
HHC				pP		10 03 01.6	
HHC				PP		10 03 06.8	
HHC				S	**Sn**	**10 04 55.0**	**+10**
HHC				sS		10 04 59.8	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
HHC				LR	LR		
	comp=N,2μm,5.0s						
HHC				LR	LR		
	comp=E,1μm,4.9s						
HHC				LR	LR		
	comp=Z,2μm,5.7s						
TIA	**Tai'an**	**10.66**	**66**	*e*P	**Pn**	**10 03 04.5**	**+1.5**
NJ2	**Nanjing**	**11.65**	**88**	*e*P	**Pn**	**10 03 19.1**	**+2.5**
NJ2				pP		10 03 22.4	
NJ2				sP		10 03 25.8	
NJ2				PP		10 03 29.1	
NJ2				S	**Sn**	**10 05 28.0**	**+0.7**
NJ2				sS		10 05 34.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,270nm,3.5s						
NJ2				LR	LR		
	comp=N,640nm,10.0s						
NJ2				LR	LR		
	comp=E,880nm,5.8s						
NJ2				LR	LR		
	comp=Z,680nm,9.5s						
GZH	**Guangzhou**	**11.76**	**140**	P	**Pn**	**10 03 14.3**	**-3.8**
GZH				S	**Sn**	**10 05 17.6**	**-12**
GZH				LR	LR		
	comp=N,2μm,10.0s						
GZH				LR	LR		
	comp=E,2μm,10.1s						
BJI	**Beijing**	**11.78**	**46**	P	**Pn**	**10 03 17.6**	**-0.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,260nm,4.8s						
BJI				LR	LR		
	comp=N,2μm,11.0s						
BJI				LR	LR		
	comp=E,1μm,6.8s						
BJI				LR	LR		
	comp=Z,510nm,18.2s						
LSA	**Lhasa**	**12.26**	**261**	P	**Pn**	**10 03 26.3**	**+1.5**
LSA				S	**Sn**	**10 05 39.0**	**-3.1**
LSA				LR	LR		
	comp=N,330nm,13.5s						
LSA				LR	LR		
	comp=E,640nm,10.2s						
LSA				LR	LR		
	comp=Z,680nm,8.6s						
LSA	**Lhasa**	**12.26**	**261**	*e*P	**Pn**	**10 03 26.8**	**+2.0**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	**Lhasa**	**12.26**	**261**	*e*Pn	**Pn**	**10 03 26.8**	**+2.0**
	comp=Z,9.9nm,0.6s						
SSE	**Sheshan**	**13.75**	**91**	P	**Pn**	**10 03 44.1**	**-1.1**
SSE				S	**Sn**	**10 06 17.5**	**-1.1**
SSE				pmax	pmax		
	comp=Z,33nm,0.7s						
SSE				pmax	p

comp=Z,9.1nm,0.7s
ULN *e*Sn **Sn** **10 07 00.9 -1.7**
JIRN Jiri 17.03 259 *e*P **Pn** **10 04 27.7 -0.9**
comp=Z,63nm,1.0s
GUN Gumba 17.20 260 *e*P **Pn** **10 04 30.2 -0.5**
comp=Z,97nm,0.9s
NST Nakhon Sawan 17.21 196 P **Pn** **10 04 30.8 0.0**
PKI Pulchoki 17.71 260 *e*P **Pn** **10 04 35.8 -1.3**
comp=Z,72nm,0.8s
PKIN Phulchoki 17.72 260 *e*P **Pn** **10 04 35.8 -1.4**
KKN Kakani 17.75 260 *e*P **Pn** **10 04 36.1 -1.4**
WMQ Urumqi 17.82 315 *e*P **Pn** **10 04 38.8 +0.6**
WMQ pmax pmax
comp=Z,23nm,1.2s
WMQ LR LR
comp=N,950nm,14.0s
WMQ LR LR
comp=E,1μm,9.0s
WMQ LR LR
comp=Z,310nm,13.0s
DMN Daman 17.95 260 *e*P **Pn** **10 04 38.8 -1.2**
comp=Z,138nm,1.0s
ZAK Zakamensk 18.07 356 *e*P **Pn** **10 04 43.6 +2.4**
ZAK pmax pmax
comp=Z,8.0nm,1.5s
TLY Talaya 19.34 357 *e*P **Pn** **10 05 03.5 +6.7**
TLY pmax pmax
comp=Z,14nm,1.0s
TLY MLR MLR
comp=Z,591nm,16.0s
KSRS Korea Array 19.38 68 P **Pn** **10 04 57.3 0.0**
comp=Z,0.7nm,0.3s,baz=255,slow=10,SNR=18
KSRS LR LR 10 12 18.4
comp=Z,153nm,21.6s,baz=250,slow=37
KSRS Korea Array 19.38 68 P **Pn** **10 04 57.3 -0.1**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,153nm,21.6s
MOY Mondy 19.53 352 *e*P **Pn** **10 05 00.8 +1.7**
MOY pmax pmax
comp=Z,32nm,1.6s
CN2 Changchun 19.62 49 *e*P **Pn** **10 05 01.1 +0.9**
CN2 *es*P sP 10 05 07.0 +7.7
CN2 *e*S **Sn** **10 08 34.9 -6.0**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,11.0s
CN2 LR LR
comp=E,400nm,11.0s
CN2 LR LR
comp=Z,500nm,12.0s
IRK Irkutsk 19.89 358 *e*P **Pn** **10 05 03.8 +0.5**
IRK pmax pmax
comp=Z,93nm,1.7s
HIA Hailar 20.14 29 *e*P **P** **10 05 05.9 +1.4**
HIA pmax pmax
comp=Z,17nm,0.6s
HIA Hailar 20.14 29 *e*Pn **P** **10 05 05.9 +1.3**
comp=Z,17nm,0.6s
JOSI Joshimath 21.85 272 *e*P **P** **10 05 24.5 +1.3**
MK31 Makanchi Array 22.63 316 *e*P **P** **10 05 32.1 +0.8**
MKAR Makanchi Array 22.63 316 P **P** **10 05 32.3 +0.9**
comp=Z,17nm,0.5s,mb4.8,baz=105,slow=12,SNR=75
MKAR PcP PcP 10 09 23.3 -1.0
comp=Z,1.8nm,0.7s,baz=114,slow=5.4,SNR=5.2
MKAR LR LR 10 15 10.1
comp=Z,447nm,18.5s,MS3.9,baz=122,slow=39
MKAR Makanchi Array 22.63 316 P **P** **10 05 32.3 +1.0**
MKAR 10 09 23.3
MDJ Mudanjiang 22.65 50 P **P** **10 05 30.8 -0.8**
MDJ pP 10 05 33.5
MDJ PcP PcP 10 09 24.1 -0.3
MDJ S **S** **10 09 36.6 -4.1**
MDJ ScP ScP 10 13 01.8 -1.4
MDJ PcS PcS 10 13 03.3 +0.2
MDJ ScS ScS 10 16 46.1 -2.3
MDJ pmax pmax
comp=Z,14nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,150nm,5.1s
MDJ LR LR
comp=N,300nm,11.3s,MS4.0
MDJ LR LR
comp=E,180nm,12.6s,MS4.0
MDJ LR LR
comp=Z,240nm,8.1s
KLP Kalpa 22.78 275 *e*P **P** **10 05 33.8 +0.7**
DDI Dehra Dun 23.17 272 *ex* **P** **10 05 36.0 -1.2**
SMLA Simla 23.77 275 *i x* **P** **10 05 39.8 -3.5**
AGRA Agra 24.09 265 *e*P **P** **10 05 45.7 -0.4**
NDI New Delhi 24.27 269 *e*P **P** **10 05 46.0 -1.9**
AYAN Aya Nagar 24.40 268 *e*P **P** **10 05 48.8 -0.2**
AYAN AMb AMB 10 05 50.7
comp=Z,41nm,1.0s,mb4.9
SONA Sohna 24.50 268 *e*P **P** **10 05 49.6 -0.3**
KSH Kashi 24.57 295 *e*P **P** **10 05 54.6 +4.1**
KSH *ep*P 10 05 58.5
KSH *es*P sP 10 06 01.6 +11
KSH *e*PP 10 06 31.1
KSH *e*PcP PcP 10 09 31.5 +3.0
KSH *e*S **S** **10 10 14.0 +1.7**
KSH *es*S sS 10 10 20.5 +7.7
KSH *e*SS 10 11 11.3
KSH *e*ScP ScP 10 13 08.5 +0.1
KSH *e*PcS PcS 10 13 10.6 +2.2
KSH *e*ScS ScS 10 16 55.6 -0.5
KSH pmax pmax
comp=Z,55nm,0.7s,mb5.4
KSH LR LR
comp=N,210nm,10.9s
KSH LR LR
comp=E,410nm,9.2s
RTK Rohtak 24.86 270 *ex* x 10 05 43.1
ULHL Ulahol 24.89 302 P **P** **10 05 54.8 +1.5**
SNR=5.4
TKM2 Tokmak 2 25.52 303 P **P** **10 06 00.6 +1.5**
SNR=29
TKM2 Tokmak 2 25.52 303 *e*P **P** **10 06 00.3 +1.2**
TKM2 pmax pmax
comp=Z,19nm,0.6s,mb4.9
TKM2 Tokmak 2 25.52 303 *e*P **P** **10 06 00.3 +1.2**
comp=Z,19nm,0.6s,mb4.9
KZA Kyzart 25.57 301 P **P** **10 06 01.8 +2.3**
SNR=27
KHET Khetri 25.63 268 *e*P **P** **10 06 00.2 -0.1**
NGP Nagpur 25.73 251 *e*P **P** **10 05 59.5 -1.7**
KBK Karagaybulak 25.92 302 P **P** **10 06 04.2 +1.5**
SNR=18
ZALV Zalesovo Beam 25.99 332 P **P** **10 06 02.6 -0.6**
comp=Z,12nm,0.5s,mb4.8,baz=131,slow=9.3,SNR=31
ZALV LR LR 10 16 35.3
comp=Z,127nm,19.3s,MS3.5,baz=266,slow=37
BHPL Bhopal 26.05 257 *e*P **P** **10 06 04.0 -0.1**
KLR Kul'dur 26.09 42 *e*P **P** **10 06 02.7 -1.5**
KLR MLR MLR
comp=E,600nm,11.0s
KLR MLR MLR
comp=Z,2μm,11.0s,MS4.8
UCH Uchtor 26.14 301 P **P** **10 06 07.0 +2.3**
SNR=35
BOD Bodaibo 26.18 11 *e*P **P** **10 06 05.5 +0.6**
BOD pmax pmax
comp=Z,382nm,0.8s
AAK Ala-Archa 26.24 302 P **P** **10 06 06.2 +0.6**
comp=Z,2.0nm,0.4s,mb4.1,baz=122,slow=9.9,SNR=8.8
AAK LR LR 10 18 40.6
comp=Z,389nm,20.0s,MS3.9,baz=293,slow=42
AAK Ala-Archa 26.24 302 *e*P **P** **10 06 06.1 +0.5**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
AAK Ala-Archa 26.24 302 *e*P **P** **10 06 06.1 +0.5**
comp=Z,7.1nm,0.8s,mb4.3
USP Ospenovka 26.38 303 P **P** **10 06 08.0 +1.2**
SNR=12
AML Almayashu 26.71 300 P **P** **10 06 12.0 +2.1**
SNR=22
EKS2 Erkin-Say 26.76 302 P **P** **10 06 11.7 +1.4**
SNR=6.8
KURK Kurchatov 26.79 321 P **P** **10 06 10.6 +0.1**
comp=Z,15nm,0.6s,mb4.9,baz=133,slow=8.4,SNR=58
KURK PcP PcP 10 09 32.4 -1.0
comp=Z,2.8nm,0.5s,baz=118,slow=2.0,SNR=5.5
KURK Kurchatov 26.79 321 P **P** **10 06 10.6 +0.2**
KURK 10 09 32.4
KURK pmax pmax
comp=Z,15nm,0.6s,mb4.9
KURK pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
KURK Kurchatov 26.79 321 *e*P **P** **10 06 10.7 +0.2**
comp=Z,27nm,1.0s,mb4.9
AJM Ajmer 27.11 265 *e*P **P** **10 06 13.4 -0.3**
NVS Novosibirsk 27.28 332 *e*P **P** **10 06 14.4 -0.4**
NVS pmax pmax
comp=Z,16nm,1.3s,mb4.6
NVS pmax pmax
comp=N,7.0nm,0.8s
MJAR Matsushiro Arr 27.54 72 P **P** **10 06 16.2 -1.2**
comp=N,1.6nm,0.7s,mb4.0,baz=268,slow=11,SNR=4.0
KBL Kabul 30.07 284 *e*P **P** **10 06 41.4 +1.5**
KBL pmax pmax
comp=Z,15nm,0.9s,mb4.8
KBL Kabul 30.07 284 *e*P **P** **10 06 41.4 +1.5**
comp=Z,16nm,0.9s,mb4.8
ASAJ Asahikawa 31.45 57 LR LR 10 19 14.3
comp=Z,141nm,21.5s,MS3.6,baz=144,slow=36
BVAR Borovoye Array 32.36 320 P **P** **10 07 00.5 +0.6**
comp=Z,7.5nm,0.6s,mb4.8,baz=118,slow=9.8,SNR=40
BVAR PcP PcP 10 09 46.8 -0.7
comp=Z,2.7nm,0.8s,baz=99,slow=4.5,SNR=5.7
BVAR LR LR 10 21 09.5
comp=Z,153nm,19.8s,MS3.7,baz=109,slow=38
BVAR Borovoye Array 32.36 320 P **P** **10 07 00.5 +0.6**
BVAR 10 09 46.8
BRVK Borovoye 32.43 320 *c i*P **P** **10 07 01.1 +0.6**
BRVK pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
BRVK Borovoye 32.43 320 *e*P **P** **10 07 01.2 +0.6**
comp=Z,15nm,0.9s,mb4.9
YAK Yakutsk 33.64 21 *e*P **P** **10 07 14.1 +3.2**
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK MLR MLR
comp=Z,344nm,14.0s,MS4.2
YAK MLR MLR
comp=N,170nm,13.0s,MS4.0
YAK MLR MLR
comp=E,116nm,12.0s,MS4.0
ABKAR Akbulak array 37.50 310 *e*P **P** **10 07 44.9 +0.7**
AKTK Aktyubinsk 38.92 312 P **P** **10 07 56.9 +0.6**
AKTO Aktyubinsk 38.92 312 P **P** **10 07 56.9 +0.6**
comp=E,14nm,0.5s,mb4.9,baz=107,slow=12,SNR=4.1
SVE Sverdlovsk 39.02 322 *e*P **P** **10 07 56.7 -0.3**
SVE pmax pmax
comp=Z,28nm,0.9s,mb4.9
ARU Arti 39.98 321 *c i*P **P** **10 08 05.4 +0.4**
ARU *e* 10 09 35.3
ARU S **S** **10 14 07.5 -3.6**
ARU SS SS 10 16 55.3 -12
ARU pmax pmax
comp=Z,55nm,1.0s,mb5.1
ARU Arti 39.98 321 *e*P **P** **10 08 05.6 +0.6**
comp=Z,45nm,0.9s,mb5.1
TIXI Tiksi 41.37 11 *e*P **P** **10 08 15.5 -0.8**
TIXI pmax pmax
comp=Z,11nm,1.3s,mb4.4
TIXI MLR MLR
comp=Z,461nm,15.0s,MS4.5
TIXI Tiksi 41.37 11 *e*P **P** **10 08 15.5 -0.8**
comp=Z,17nm,1.4s,mb4.6
SEY Seymchan 42.59 30 *ce*P **P** **10 08 26.6 +0.3**
PEA0B Petropavlovsk- 42.71 45 *e*P **P** **10 08 28.0 +0.5**
PETK Petropavlovsk- 42.71 45 P **P** **10 08 27.6 +0.2**
comp=Z,6.5nm,0.7s,mb4.4,baz=294,slow=1.3,SNR=13
PETK LR LR 10 28 22.9
comp=Z,114nm,18.5s,MS3.8,baz=74,slow=39
PET Petropavlovsk 43.27 45 *e*P **P** **10 08 31.2 -0.8**
PET MLR MLR
comp=Z,200nm,18.0s,MS4.1
ZEI Tsey 48.66 301 *e*P **P** **10 09 14.6 -0.1**
ZEI pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRHR Novokhopersk 49.33 312 *e*P **P** **10 09 19.5 -0.2**
VRHR pmax pmax
comp=Z,40nm,0.4s,mb5.8
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.6s
KIV Kislovodsk 49.35 302 *e*P **P** **10 09 21.3 +1.3**
KIV pmax pmax
comp=Z,33nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,128nm,18.0s,MS4.0
BILL Bilibino 49.69 26⇓ *e*P **P** **10 09 22.1 -0.1**
BILL *es*S **S** **10 16 25.2 -6.3**
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.4
BILL Bilibino 49.69 26 *e*P **P** **10 09 22.0 -0.2**
comp=Z,5.0nm,0.7s,mb4.5
VSR Storozhevoye 50.87 312 *e*P **P** **10 09 30.9 -0.5**
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,30nm,1.2s
MOS Moscow 51.50 318 *e*P **P** **10 09 33.5 -2.5**
MOS pmax pmax
comp=Z,78nm,1.1s,mb5.5
OBN Obninsk 52.13 317⇑ *e*P **P** **10 09 40.5 -0.3**
OBN *e* 10 11 37.7
OBN *es*S **S** **10 17 04.8 -0.9**
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.1
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.2
ANN Anapa 52.92 304 *e*P **P** **10 09 44.7 -2.1**
ANN pmax pmax
comp=Z,138nm,1.8s,mb5.6
APA Apatity 53.57 333⇑ *e*P **P** **10 09 52.0 +0.8**
APA *i* 10 09 57.0
APA MLR MLR
comp=Z,400nm,13.0s,MS4.7
MALT Malatya 53.67 296 *e*P **P** **10 09 53.3 +0.9**
comp=Z,6.0nm,0.6s,mb4.8
MALT Malatya 53.67 296⇓ *i*P **P** **10 09 53.2 +0.8**
JOF Joensuu 54.43 327 *e*P **P** **10 09 56.8 -0.8**
JOF pmax pmax
comp=Z,16nm,0.7s,mb5.2
JOF Joensuu 54.43 327 *ep* **P** **10 09 56.8 -0.8**
comp=Z,16nm,0.7s,mb5.2
SIM Simferopol' 55.20 305 *ce*P **P** **10 10 04.5 +1.1**
SIM pmax pmax
comp=Z,21nm,0.7s,mb5.3
KEV Kevo 55.94 336 *e*P **P** **10 10 07.0 -1.4**
KEV pmax pmax
comp=Z,19nm,0.7s,mb5.2
KEV Kevo 55.94 336 *ep* **P** **10 10 07.0 -1.4**
comp=Z,19nm,0.7s,mb5.2
ARCES ARCESS Array B 56.48 335 P **P** **10 10 11.4 -0.8**
comp=Z,8.3nm,0.7s,mb4.9,baz=77,slow=7.8,SNR=39
ARE0 ARCESS Array S 56.48 335 *e*P **P** **10 10 12.1 -0.1**
KAF Kangasniemi 56.82 327 *e*P **P** **10 10 13.8 -0.9**
KAF pmax pmax
comp=Z,12nm,0.6s,mb5.1
KAF Kangasniemi 56.82 327 *ep* **P** **10 10 13.8 -0.9**
comp=Z,12nm,0.6s,mb5.1
BRTR Keskin Array B 56.87 299 P **P** **10 10 15.2 -0.2**
comp=Z,6.6nm,0.7s,mb4.8,baz=99,slow=6.8,SNR=22
FINES FINESS Array B 57.01 326 P **P** **10 10 15.4 -0.7**
comp=Z,19nm,0.7s,mb5.2,baz=90,slow=7.6,SNR=41
AKASG Malin Array Be 57.16 313 P **P** **10 10 16.2 -1.1**
comp=Z,9.3nm,0.4s,mb5.2,baz=67,slow=7.4,SNR=20
MMAI Mount Meron Ar 57.62 291 P **P** **10 10 21.7 +0.8**
comp=Z,0.9nm,0.4s,mb4.2,baz=79,slow=9.4,SNR=4.8
SPITS Spitsbergen Ar 58.33 346 P **P** **10 10 24.6 -0.6**
comp=Z,6.2nm,0.8s,mb4.7,baz=95,slow=10,SNR=15
SPITS LR LR 10 38 37.8
comp=Z,98nm,18.4s,MS4.0,baz=115,slow=39
WRA Warramunga Arr 59.05 148 P **P** **10 10 30.8 -0.1**
comp=Z,16nm,0.7s,mb5.2,baz=340,slow=7.3,SNR=6.9
CFR Carcaliu 59.24 307⇓ *i*P **P** **10 10 32.8 +0.8**
CFR Carcaliu 59.24 307⇓ *i*P **P** **10 10 32.8 +0.8**
TIRR Tirgusor 59.25 306 *e*P **P** **10 10 31.7 -0.4**
TIRR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
TIRR Tirgusor 59.25 306 *e*P **P** **10 10 31.6 -0.5**
comp=Z,6.8nm,0.8s,mb4.7
HARR Harsova 59.52 306⇑ P **P** **10 10 34.6 +0.7**
HARR Harsova 59.52 306⇑ *i*P **P** **10 10 34.6 +0.7**
ISP Isparta 59.78 298 *e*P **P** **10 10 34.4 -1.4**
comp=Z,29nm,0.6s,mb5.5
ISP Isparta 59.78 298⇑ *i*P **P** **10 10 35.3 -0.5**
VRI Vrincioaia 59.99 308⇓ P **P** **10 10 38.0 +0.8**
VRI Vrincioaia 59.99 308⇓ *i*P **P** **10 10 38.0 +0.8**
SUW Suwalki 59.99 318 *e*P **P** **10 10 36.7 -0.4**
PLOR Plostina 60.05 308⇑ P **P** **10 10 38.3 +0.7**
PLOR Plostina 60.05 308⇑ *i*P **P** **10 10 38.3 +0.7**
BURAR Bucovina Array 60.48 310⇓ P **P** **10 10 40.8 +0.3**
BURAR Bucovina Array 60.48 310⇓ *i*P **P** **10 10 40.8 +0.3**
BUR08 Bucovina Ar. S 60.48 310 *e*P **P** **10 10 40.5 0.0**
MLR Muntele Rosu 60.62 308 LR LR 10 39 14.8
comp=Z,156nm,20.7s,MS4.1,baz=54,slow=38
MLR Muntele Rosu 60.62 308⇓ P **P** **10 10 42.4 +0.9**
MLR Muntele Rosu 60.62 308⇓ *i*P **P** **10 10 42.4 +0.9**
VOIR 61.24 308⇑ P **P** **10 10 46.0 +0.3**
VOIR 61.24 308⇑ *i*P **P** **10 10 46.0 +0.3**
KWP Kalwaria Pacla 61.48 313 *e*P **P** **10 10 48.0 +0.7**
KWP Kalwaria Pacla 61.48 313 *e*P **P** **10 10 47.6 +0.3**
comp=Z,52nm,1.0s,mb5.6
KWP Kalwaria Pacla 61.48 313⇑ *i*P **P** **10 10 47.9 +0.6**
KOLS Kolonicke sedl 61.97 312 *e*P **P** **10 10 50.4 -0.1**
KOLS pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.97 312 *e*P **P** **10 10 50.4 -0.1**
comp=Z,3.8nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.97 312 *e*P **P** **10 10 50.4 -0.1**
ASAR Alice Springs 62.13 150 P **P** **10 10 51.6 -0.2**
comp=Z,5.1nm,0.4s,mb5.1,baz=339,slow=7.4,SNR=2.3
STHS Stebnicka Huta 62.46 313 *e*P **P** **10 10 54.4 +0.6**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.46 313 *e*P **P** **10 10 54.4 +0.6**
comp=Z,5.3nm,0.9s,mb4.8
STHS Stebnicka Huta 62.46 313 *e*P **P** **10 10 54.4 +0.6**
OJC Ojcow 63.09 314 *e*P **P** **10 10 57.9 -0.1**
HFS Hagfors 63.22 326 LR LR 10 40 08.2
comp=Z,66nm,19.1s,MS3.8,baz=241,slow=38
KECS Kecovo 63.23 312 *e*P **P** **10 10 58.2 -0.8**
KECS pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
KECS Kecovo 63.23 312 *e*P **P** **10 10 58.2 -0.8**
comp=Z,1.0nm,0.8s,mb4.0
KECS Kecovo 63.23 312 *e*P **P** **10 10 58.2 -0.8**
NB2 NORSAR Subarra 64.07 327 P **P** **10 11 02.9 -1.4**
comp=Z,11nm,0.6s,mb5.3,baz=72,slow=6.9
NOA NORSAR Array B 64.07 327 P **P** **10 11 03.2 -1.1**
comp=Z,14nm,0.8s,mb5.2,baz=71,slow=6.6,SNR=33
NOA LR LR 10 40 30.6
comp=Z,78nm,18.7s,MS3.9,baz=65,slow=38
NOA NORSAR Array B 64.07 327 P **P** **10 11 03.2 -1.1**
NOA LR LR 10 40 30.6
OKC Ostrava-Krasne 64.22 314 *e*P **P** **10 11 05.7 +0.2**
OKC MLR MLR
comp=Z,200nm,12.9s,MS4.5
OKC Ostrava-Krasne 64.22 314 *e*P **P** **10 11 05.7 +0.2**
OKC *ep*P 10 11 09.4
OKC AMS AMS 10 40 10.0
comp=Z,200nm,12.9s
VYHS Vyhne 64.26 313 *e*P **P** **10 11 06.3 +0.5**
VYHS *e* 10 11 11.1
VYHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.7
VYHS Vyhne 64.26 313 *e*P **P** **10 11 06.3 +0.5**
comp=Z,6.5nm,1.4s,mb4.7
VYHS *e* 10 11 11.1
VYHS Vyhne 64.26 313 *e*P **P** **10 11 06.3 +0.5**
VYHS *ep*P 10 11 11.1
KOLL Kolacno 64.50 313 *e*P **P** **10 11 08.4 +1.0**
KOLL Kolacno 64.50 313 *e*P **P** **10 11 08.4 +1.0**
MORC Moravsky Berou 64.61 314 *e*P **P** **10 11 07.7 -0.3**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
MORC Moravsky Berou 64.61 314 *e*P **P** **10 11 07.7 -0.3**
comp=Z,7.2nm,0.8s,mb5.0
MORC Moravsky Berou 64.61 314⇓ *i*P **P** **10 11 08.1 +0.1**
IDI Anoyia 64.91 297 P **P** **10 11 08.8 -1.5**
comp=Z,15nm,0.6s,mb5.4,baz=38,slow=5.5,SNR=11
IDI LR LR 10 41 02.3
comp=Z,44nm,19.3s,MS3.7,baz=111,slow=38
DPC Dobruska-Polom 65.14 315 *e*P **P** **10 11 12.1 +0.6**
DPC *e**PP 10 11 16.9
DPC MLR MLR
comp=Z,200nm,21.0s,MS4.3
DPC Dobruska-Polom 65.14 315 *e*P **P** **10 11 12.1 +0.6**
DPC *ep*P 10 11 16.9
DPC AMS AMS 10 40 40.0
comp=Z,200nm,21.0s
PKSM Moragy 65.20 310 P **P** **10 11 12.1 +0.1**
PKSM Moragy 65.20 310⇓ *i*P **P** **10 11 12.1 +0.1**
VRAC Vranov 65.35 314 LR LR 10 41 27.9
comp=Z,130nm,18.8s,MS4.2,baz=326,slow=38
DAG Danmarks Havn 65.80 348 *e*P **P** **10 11 14.0 -1.4**
DAG Danmarks Havn 65.80 348 *i* P **P** **10 11 14.0 -1.4**
NWAO Narrogin (SRO) 65.93 169 P **P** **10 11 16.8 +0.2**
comp=Z,22nm,0.9s,mb5.4,baz=314,slow=5.6,SNR=7.4
TREC Trest 66.03 314 *e*P **P** **10 11 17.7 +0.4**
TREC *e**PP 10 11 22.6
TREC Trest 66.03 314 *e*P **P** **10 11 17.7 +0.4**
TREC *ep*P 10 11 22.6
TREC AMS AMS 10 41 20.0
PVCC Panska Ves 66.11 316 *e*P **P** **10 11 18.2 +0.4**
PVCC MLR MLR
comp=Z,200nm,15.1s,MS4.4
PVCC Panska Ves 66.11 316 *e*P **P** **10 11 18.2 +0.4**
PVCC AMS AMS 10 41 20.0
comp=Z,200nm,15.1s
CONA Conrad Observa 66.32 313⇑ *i*P **P** **10 11 19.0 -0.1**
comp=Z,5.0nm,1.1s,mb4.7
PRU Pruhonice 66.33 315 *e*P **P** **10 11 20.0 +0.8**
PRU *e**PP 10 11 24.7
PRU MLR MLR
comp=Z,200nm,13.1s,MS4.5
PRU Pruhonice 66.33 315 *e*P **P** **10 11 20.0 +0.8**
PRU *ep*P 10 11 24.7
PRU AMS AMS 10 41 30.0
comp=Z,200nm,13.1s
BRG Berggiesshubel 66.35 316 *e*P **P** **10 11 19.2 -0.1**
comp=Z,6.7nm,0.9s,mb4.9
BRG Berggiesshubel 66.35 316 *e*P **P** **10 11 19.2 -0.1**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
CLL Collm 66.73 317⇓ *i*P **P** **10 11 21.5 -0.2**
CLL *e* 10 11 26.0
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
CLL Collm 66.73 317⇓ *i*P **P** **10 11 21.5 -0.2**
comp=Z,7.0nm,0.9s,mb4.9
CLL *e* 10 11 26.0
CLL Collm 66.73 317⇓ *i*P **P** **10 11 21.5 -0.2**
comp=Z,7.0nm,0.9s,mb4.9
CLL *ep*P 10 11 26.0
CLL *e*PP PP 10 13 46.0 -2.2
MUD Monsted U'grnd 66.77 323 *i* P **P** **10 11 22.4 +0.5**
MUD pmax pmax
comp=Z,15nm,1.0s,mb5.2
MUD Monsted U'grnd 66.77 323 *i* P **P** **10 11 22.4 +0.5**
comp=Z,15nm,1.0s,mb5.2
JMIC Jan Mayen 66.92 341 LR LR 10 43 48.3
comp=Z,132nm,18.7s,MS4.2,baz=61,slow=39
BPAW Bear Paw Mtn. 67.10 28 *e*P **P** **10 11 24.0 +0.1**
comp=Z,10.0nm,0.9s,mb5.0
PPLA Purkeypile 67.16 29 *e*P **P** **10 11 24.6 +0.4**
comp=Z,9.4nm,0.8s,mb5.1
KHC Kasperske Hory 67.25 315 *e*P **P** **10 11 25.0 -0.1**
KHC *e**PP 10 11 30.0
KHC MLR MLR
comp=Z,200nm,14.3s,MS4.5
KHC Kasperske Hory 67.25 315 *e*P **P** **10 11 25.0 -0.1**
KHC *ep*P 10 11 30.0
KHC AMS AMS 10 42 00.0
comp=Z,200nm,14.3s
GERES GERESS Array B 67.29 314 P **P** **10 11 24.8 -0.6**
comp=Z,2.6nm,0.7s,mb4.6,baz=76,slow=6.1,SNR=15
GERES LR LR 10 42 27.0
comp=Z,132nm,20.1s,MS4.2,baz=263,slow=37

SOKA Soboth 67.33 312 ⇓ *i* P P 10 11 25.4 -0.2
comp=Z,7.2nm,1.0s,mb4.9
NKC Novy Kostel 67.48 316 *e*P P 10 11 26.2 -0.3
NKC MLR MLR
comp=Z,100nm,10.8s,MS4.3
NKC Novy Kostel 67.48 316 *e*P P 10 11 26.2 -0.3
NKC AMS AMS 10 42 10.0
comp=Z,100nm,10.8s
COLA College 67.94 26 *e*P P 10 11 28.8 -0.3
COLA pmax pmax
comp=Z,16nm,1.1s,mb5.2
COLA College 67.94 26 *e*P P 10 11 28.8 -0.3
comp=Z,16nm,1.1s,mb5.2
MCK McKinley 68.08 27 *e*P P 10 11 29.4 -0.6
MCK pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
MCK McKinley 68.08 27 *e*P P 10 11 29.4 -0.7
comp=Z,2.3nm,0.5s,mb4.7
KBA Koelnbreinsper 68.22 313 ⇑ *i*P P 10 11 31.0 -0.3
comp=Z,7.3nm,0.7s,mb5.0
PMR Palmer 69.04 30 *e*P P 10 11 35.3 -0.8
WTTA Wattenberg 69.20 313 ⇑ *i*P P 10 11 37.0 -0.4
comp=Z,12nm,1.1s,mb5.0
KDAK Kodiak Island 69.33 34 *i* P P 10 11 38.0 0.0
FETA Feichten 69.86 313 ⇑ *i*P P 10 11 40.7 -0.8
comp=Z,10nm,0.9s,mb5.0
DAVOX Davos/Dischmat 70.49 313 P P 10 11 45.0 -0.3
comp=Z,8.2nm,0.6s,mb5.0,baz=97,slow=4.5,SNR=13
DAVOX LR LR 10 42 45.9
comp=Z,106nm,18.7s,MS4.1,baz=73,slow=36
INK Inuvik 70.70 20 P P 10 11 44.9 -1.3
comp=Z,8.3nm,0.8s,mb4.9,baz=331,slow=5.8,SNR=29
INK LR LR 10 47 07.2
comp=Z,99nm,19.1s,MS4.1,baz=8.4,slow=40
INK Inuvik 70.70 20 *e*P P 10 11 45.7 -0.5
INK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 70.70 20 *e*P P 10 11 45.7 -0.5
comp=Z,11nm,0.9s,mb5.0
BFO Black Forest 70.73 315 *e*P P 10 11 45.9 -0.8
BFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
BFO Black Forest 70.73 315 *e*P P 10 11 45.9 -0.8
comp=Z,5.5nm,0.9s,mb4.7
MEM Membach 71.02 318 P P 10 11 48.4 0.0
BMRM Bremner River 71.23 29 *e*P P 10 11 49.6 +0.1
comp=Z,11nm,0.7s,mb5.1
CDF Champ du Feu 71.32 316 ⇑ *i*P P 10 11 49.9 -0.4
comp=Z,8.9nm,0.7s,mb4.7
CDF Champ du Feu 71.32 316 ⇑ *i*P P 10 11 49.9 -0.4
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
CDF Champ du Feu 71.32 316 ⇑ *i*P P 10 11 49.9 -0.4
comp=Z,4.4nm,0.7s,mb4.7
WLF Walferdange 71.38 317 P P 10 11 50.3 -0.3
comp=Z,19nm,1.6s,mb5.0
WLF Walferdange 71.38 317 *e*P P 10 11 51.3 +0.6
WLF pmax pmax
comp=Z,24nm,0.9s,mb5.3
WLF Walferdange 71.38 317 *e*P P 10 11 51.3 +0.6
comp=Z,24nm,0.9s,mb5.3
DAWY Dawson 71.46 25 *e*P P 10 11 46.5 -4.3
BCLA Clavier 71.51 318 P P 10 11 51.5 +0.1
KMBO Kilima Mbogo 72.02 257 P P 10 11 55.5 +0.4
comp=Z,4.1nm,1.1s,mb4.5,baz=43,slow=11,SNR=5.8
KMBO Kilima Mbogo 72.02 257 P P 10 11 55.5 +0.4
KMBO pmax pmax
comp=Z,4.0nm,1.1s
KMBO Kilima Mbogo 72.02 257 *e*P P 10 11 54.9 -0.2
DOU Dourbes 72.06 318 P P 10 11 54.8 0.0
comp=Z,8.5nm,2.6s,mb4.4
SUMG Summit 72.38 349 *e*P P 10 11 56.2 -0.1
comp=Z,11nm,1.3s,mb4.8
LPG La Plagne 73.02 313 ⇑ *i*P P 10 12 01.0 +0.5
comp=Z,34nm,0.6s,mb5.3
LPG La Plagne 73.02 313 ⇑ *i*P P 10 12 01.0 +0.5
LPG pmax pmax
comp=Z,17nm,0.6s,mb5.3
LPG La Plagne 73.02 313 ⇑ *i*P P 10 12 01.0 +0.5
comp=Z,17nm,0.6s,mb5.3
LPL La Plagne 73.02 313 ⇑ *i*P P 10 12 00.8 +0.3
comp=Z,28nm,0.6s,mb5.3
LPL La Plagne 73.02 313 ⇑ *i*P P 10 12 00.8 +0.3
LPL pmax pmax
comp=Z,14nm,0.6s,mb5.3
LPL La Plagne 73.02 313 ⇑ *i*P P 10 12 00.8 +0.3
comp=Z,14nm,0.6s,mb5.3
BNI Bardonecchia 73.28 313 *e*P P 10 12 01.4 -0.7
HYT Haines Junctio 74.13 27 *e*P P 10 12 07.5 +0.7
SMF Signal de Mont 74.21 315 ⇑ *i*P P 10 12 06.9 -0.6
comp=Z,22nm,0.9s,mb4.9
SMF Signal de Mont 74.21 315 ⇑ *i*P P 10 12 06.9 -0.6
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.9
SMF Signal de Mont 74.21 315 ⇑ *i*P P 10 12 06.9 -0.6
comp=Z,11nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.36 316 *e*P P 10 12 13.9 -0.3
SKAG Skagway 75.84 27 *e*P P 10 12 16.8 +0.1
comp=Z,16nm,0.8s,mb5.2
KEST Kesra 76.08 303 P P 10 12 17.9 -0.6
comp=Z,1.4nm,0.7s,mb4.2,baz=348,slow=5.2,SNR=4.2
MFF Saint Martin d 76.57 317 ⇑ *i*P P 10 12 20.9 -0.2
comp=Z,22nm,1.0s,mb4.9
MFF Saint Martin d 76.57 317 ⇑ *i*P P 10 12 20.9 -0.2
MFF pmax pmax
comp=Z,11nm,1.0s,mb4.9
MFF Saint Martin d 76.57 317 ⇑ *i*P P 10 12 20.9 -0.2
comp=Z,11nm,1.0s,mb4.9
DLBC Dease Lake 78.56 26 P P 10 12 30.8 -1.2
comp=Z,1.5nm,0.6s,mb4.2,baz=300,slow=16,SNR=4.5
DLBC Dease Lake 78.56 26 P P 10 12 30.8 -1.2
SFJD Kangerlussuaq 79.25 351 *e*P P 10 12 34.8 -0.8
SFJD pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
SFJD MLR MLR
comp=Z,310nm,18.0s,MS4.7
SFJD Kangerlussuaq 79.25 351 *i* P P 10 12 34.8 -0.8
comp=Z,6.8nm,0.7s,mb4.8
SFJD
comp=Z,300nm,18.0s
YKA Yellowknife Ar 80.25 18 P P 10 12 40.7 -0.4
comp=Z,6.2nm,0.5s,mb4.8,baz=328,slow=5.1,SNR=109
YKA Yellowknife Ar 80.25 18 P P 10 12 40.7 -0.4
ESDC Sonseca Array 82.81 313 P P 10 12 55.1 0.0
comp=Z,0.4nm,0.3s,mb4.1,baz=42,slow=6.3,SNR=3.6
TAM Tamanrasset 85.69 294 *e*P P 10 13 10.4 +0.3
TAM pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
TAM Tamanrasset 85.69 294 *e*P P 10 13 10.4 +0.4
comp=Z,2.4nm,0.8s,mb4.4
FCC Fort Churchill 87.83 10 *e*P P 10 13 19.1 -0.7
FCC pmax pmax
comp=Z,1.0nm,1.4s,mb4.0
FCC Fort Churchill 87.83 10 *e*P P 10 13 19.1 -0.8
comp=Z,0.6nm,1.4s
FFC Flin Flon 90.19 15 *i* P P 10 13 30.8 -0.2
FFC Flin Flon 90.19 15 *e*P P 10 13 30.4 -0.6
comp=Z,17nm,1.2s,mb5.1
ETW Entiat 90.56 29 *e*P P 10 13 32.2 -0.7
comp=Z,7.1nm,1.2s,mb4.9
BSMT Bassoo Peak 92.51 26 *e*P P 10 13 41.8 -0.1
comp=Z,2.9nm,0.9s,mb4.7
SCHQ Schefferville 92.89 355 P P 10 13 42.9 -0.7
comp=Z,4.8nm,0.7s,mb5.0,baz=12,slow=6.1,SNR=6.7
SLMT Seeley Lake 93.49 25 *e*P P 10 13 46.2 -0.3
comp=Z,3.0nm,0.6s,mb4.9
TORD Torodi Ar. Bea 94.06 288 P P 10 13 48.9 -0.8
comp=Z,1.1nm,0.8s,mb4.3,baz=48,slow=4.0,SNR=9.8
HRY Holter Researc 94.54 25 *e*P P 10 13 51.6 +0.3
BOSA Boshof 97.04 241 P P 10 14 01.1 -1.8
comp=Z,1.3nm,0.6s,mb4.8,baz=321,slow=22,SNR=3.9
PDAR Pinedale Array 98.77 25 P P 10 14 09.0 -1.5
comp=Z,0.3nm,0.7s,mb4.1,baz=22,slow=5.1,SNR=2.6
NVAR Mina Array Bea 98.82 33 P P 10 14 12.0 +1.1
comp=Z,0.2nm,0.5s,mb4.1,baz=60,slow=15,SNR=2.5
OTAV Otavalo 147.41 7 *e*PKPbc PKPbc 10 20 15.7 +0.3

NEIC ***14*** *10:01:51.6, 18.°66N×102.°17W, h16km, MD4.0(MEX), After MEX.*
MEX 14 10:01:51.6±0.9, 18.°66N×102.°17W, h16km±65km, MD4.0, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.17**	**252**	*i* P		Pn	10 02 09.8	-3.6
MMIG				*i* S		Sb	10 02 23.4	-5.1
ZIIG	**Zihuatanejo**	**1.25**	**147**	*i* P		Pn	10 02 10.5	-3.9
ZIIG				*i* S		Sb	10 02 25.0	-5.6
ZIIG	**Zihuatanejo**	**1.25**	**147**	*i* P		Pn	10 02 10.5	-3.9
ZIIG				*i* S		Sb	10 02 25.0	-5.6
MOIG	**Morelia**	**1.37**	**42**	*i* P		Pn	10 02 12.1	-4.0
MOIG				*i* S		Sn	10 02 29.3	-4.6
MOIG	**Morelia**	**1.37**	**42**	*i* P		Pn	10 02 12.1	-4.0
MOIG				*i* S		Sn	10 02 29.3	-4.6
SFJM	**Santa Fe**	**1.99**	**336**	*i* P		Pn	10 02 21.1	-3.6
SFJM				*i* S		Sn	10 02 45.3	-3.9
SFJM	**Santa Fe**	**1.99**	**336**	*i* P		Pn	10 02 21.1	-3.6
SFJM				*i* S		Sn	10 02 45.3	-3.9
CAIG	**El Cayaco**	**2.42**	**131**	*i* P		Pn	10 02 28.7	-1.8
CAIG				*i* S		Sn	10 02 55.1	-4.8
CAIG	**El Cayaco**	**2.42**	**131**	*i* P		Pn	10 02 28.7	-1.8
CAIG				*i* S		Sn	10 02 55.1	-4.8
ACX	**Acapulco**	**2.79**	**129**	*e*P		Pn	10 02 33.5	-2.2
ACX				*i* S		Sn	10 03 04.8	-4.2
ACX	**Acapulco**	**2.79**	**129**	*e*P		Pn	10 02 33.5	-2.2
ACX				*i* S		Sn	10 03 04.8	-4.2
MZVM		**2.83**	**79**	*i* P		Pn	10 02 36.7	+0.5
MZVM				*i* S		Sn	10 03 13.2	+3.1
ANIG	**Ahuacatlan**	**3.25**	**317**	*e*P		Pn	10 02 39.7	-2.2
IIO	**Organos**	**3.39**	**74**	*e*P		Pn	10 02 46.9	+3.0
IIO				*i* S		Sn	10 03 27.5	+3.8
IIO	**Organos**	**3.39**	**74**	*e*P		Pn	10 02 46.9	+3.0
IIO				*i* S		Sn	10 03 27.5	+3.8
UTMO	**Huajuapan**	**4.23**	**101**	*e*P		Pn	10 02 51.4	-4.1
UTMO				*i* S		Sn	10 03 41.4	-3.2
PNIG	**Pinotepa**	**4.47**	**120**	*i* P		Pn	10 02 55.9	-2.9
PNIG				*i* S		Sn	10 03 46.8	-3.7
PNIG	**Pinotepa**	**4.47**	**120**	*i* P		Pn	10 02 55.9	-2.9
PNIG				*i* S		Sn	10 03 46.8	-3.7

NEIC ***14*** *10:04:03.6, 31.°66S×69.°42W, h156km, MD3.5(GUC), MD3.7(SJA), After GUC.*
NEIC Felt [III] at San Juan.
GUC 14 10:04:03.6±0.5, 31.°66S×69.°42W, h156km±6km, MD3.5, ML3.5, 6C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.42**	**224**	*i* P		Pn	10 04 33.4	+0.7
JACH				*i* S		Sn	10 04 55.9	+0.8
CHNG	**Los Chungos**	**1.78**	**262**	*e*P		Pn	10 04 37.0	+0.4
CHNG				*i* S		Sn	10 05 02.0	+0.1
CHNG					AML	AML	10 05 12.1	
	comp=N,305nm,0.3s							
FCH	**Farellones**	**1.81**	**204**	*e*P		Pn	10 04 38.2	+1.3
FCH				*i* S		Sn	10 05 04.1	+1.5
PEL	**Peldehue**	**1.82**	**216**	⇑ *i*P		Pn	10 04 37.2	+0.3
PEL				*i* S		Sn	10 05 03.1	+0.4
PEL					AML	AML	10 05 16.2	
	comp=E,247nm,0.5s							
OVCH	**Ovalle**	**1.85**	**304**	*i* P		Pn	10 04 37.8	+0.4
OVCH				*i* S		Sn	10 05 03.7	+0.4
OVCH	**Ovalle**	**1.85**	**304**	*i* P		Pn	10 04 37.8	+0.4
OVCH				*i* S		Sn	10 05 03.7	+0.4
OVCH					AML	AML	10 05 07.5	
	comp=N,430nm,0.3s							
TLL	**Tololo Astrono**	**1.91**	**321**	⇑ *i*P		Pn	10 04 38.8	+0.8
TLL				*i* S		Sn	10 05 05.8	+1.4
TLL	**Tololo Astrono**	**1.91**	**321**	⇑ *i*P		Pn	10 04 38.8	+0.8
TLL				*i* S		Sn	10 05 05.8	+1.4
TLL					AML	AML	10 05 16.4	
	comp=N,193nm,0.3s							
CLCH	**Cerro Calan**	**1.97**	**208**	⇑ *i*P		Pn	10 04 39.3	+0.7
CLCH				*i* S		Sn	10 05 06.4	+0.8
CLCH					AML	AML	10 05 09.8	
	comp=E,171nm,0.8s							
PCH	**Pirque**	**2.16**	**205**	*i* P		Pn	10 04 41.3	+0.5
PCH				*i* S		Sn	10 05 10.3	+0.7
TACH	**Talagante**	**2.36**	**212**	⇑ *i*P		Pn	10 04 43.5	+0.3
TACH				*i* S		Sn	10 05 14.2	+0.3
CHCH	**Chadas Angostu**	**2.49**	**204**	*i* P		Pn	10 04 45.5	+0.7
CHCH				*i* S		Sn	10 05 17.3	+0.6
LCO	**Las Campanas**	**2.86**	**337**	⇑ *i*P		Pn	10 04 49.8	+0.3
LCO				*i* S		Sn	10 05 25.4	+0.4
LCO					AML	AML	10 05 25.5	
	comp=E,244nm,0.2s							

NEIC ***14*** *10:05:24.9±1.5, 5.°27S×129.°16E, h220km±15km, mb4.8/3, Error ellipse: s-maj=14.1km s-min=8.4km az=62.0*
ISCJB ***14*** *10:05:25.5±0.4, 5.°30S×129.°20E±0.°06, h242km±4km, mb4.2/26, Error ellipse: s-maj=10.3km s-min=4.6km az=153.4*
DJA ***14*** *10:05:26, 5.°30S×129.°34E, h235km, Mw5.3/7*
IDC ***14*** *10:05:29.1±2.7, 5.°38S×129.°13E, h260km±26km, mb3.8/16, mb1 3.9/17, mb1mx3.8/24, mbtmp3.8/17, Error ellipse: s-maj=20.7km s-min=8.0km az=74.0*
ISC 14 10:05:26.3±0.4, 5.°32S×129.°27E±0.°05, h234km±5km, n73, σ1°11/71, mb4.2/25, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.94**	**326**	P		**Pn**	**10 06 07.1**	**+0.2**
MSAI	**Masohi**	**1.98**	**350**	P		**Pn**	**10 06 06.7**	**-0.7**
NLAI	**Namlea**	**2.99**	**313**	P		**Pn**	**10 06 18.9**	**+1.2**
TLE	**Tual**	**3.46**	**95**	P		**Pn**	**10 06 23.8**	**+0.7**
SWI	**Sorong**	**4.85**	**24**	P		**Pn**	**10 06 38.5**	**-1.2**
LBMI	**Labuha**	**4.97**	**339**	P		**Pn**	**10 06 40.6**	**-0.7**
TNTI	**Ternate**	**6.34**	**342**	P		**Pn**	**10 06 57.6**	**-0.8**
	467nm,0.8s,4μm1.4nm							
KDI	**Kendari**	**6.77**	**281**	P		**Pn**	**10 07 05.5**	**+1.6**
	32nm,1.4s,880nm0.2nm							
KAKA	**Kakadu**	**7.99**	**157**	⇓ *i*P		**Pn**	**10 07 17.4**	**-2.0**
	264nm,0.2s							
KAKA				*e*S		**S**	**10 08 42.0**	**-8.3**
KAKA	**Kakadu**	**7.99**	**157**	*e*Pn		**Pn**	**10 07 17.5**	**-1.9**
	627nm,0.2s							
KAKA				*e*S		**S**	**10 08 42.9**	**-7.4**
KAKA	**Kakadu**	**7.99**	**157**	P		**Pn**	**10 07 17.5**	**-1.9**
	489nm,0.5s,5.5nm							
MNI	**Manado**	**8.04**	**326**	P		**Pn**	**10 07 19.5**	**-0.6**
	856nm,0.8s,8μm2.4nm							
APSI	**Ampana**	**8.78**	**300**	P		**Pn**	**10 07 30.5**	**+0.9**
	117nm,1.1s,2μm							
MRSI	**Marisa**	**9.31**	**308**	P		**Pn**	**10 07 29.0**	**-7.4**
SGSI	**Sangihe**	**9.69**	**337**	P		**Pn**	**10 07 41.6**	**+0.4**
	494nm,0.6s,8μm							
TTSI	**Tana Toraja**	**9.69**	**283**	P		**Pn**	**10 07 43.8**	**+2.6**
	32nm,0.9s							
FITZ	**Fitzroy Crossi**	**13.20**	**195**	*e*P		**Pn**	**10 08 23.1**	**-2.0**
	64nm,0.4s							
FITZ	**Fitzroy Crossi**	**13.20**	**195**	P		**Pn**	**10 08 24.0**	**-1.1**
	12nm,0.3s,baz=30,slow=10,SNR=162							
FITZ				S		**S**	**10 10 51.7**	**-0.2**
	2.5nm,0.3s,baz=208,slow=5.7,SNR=5.6							
FITZ	**Fitzroy Crossi**	**13.20**	**195**	P		**Pn**	**10 08 23.8**	**-1.3**
	112nm,0.8s							
WRAB	**Tennant Creek**	**15.35**	**162**	*e*P		**Pn**	**10 08 50.6**	**-0.7**
	268nm,0.8s							
WRAB				*e*S		**S**	**10 11 36.3**	**-4.6**
WRAB	**Tennant Creek**	**15.35**	**162**	P		**Pn**	**10 08 49.8**	**-1.5**
	347nm,1.1s,3μm							
WRA	**Warramunga Arr**	**15.35**	**162**	P		**Pn**	**10 08 50.5**	**-0.9**
	32nm,0.3s,baz=341,slow=12,SNR=1203							
WRA				S		**S**	**10 11 37.1**	**-3.8**
	6.9nm,0.3s,baz=344,slow=21,SNR=13							
COEN	**Coen**	**16.16**	**123**	*e*P		**Pn**	**10 09 01.4**	**+1.4**
	259nm,0.6s							
COEN				*e*S		**S**	**10 11 55.7**	**-1.8**
COEN	**Coen**	**16.16**	**123**	P		**Pn**	**10 09 01.4**	**+1.5**
	213nm,1.0s							
MBWA	**Marble Bar**	**18.27**	**210**	*e*P		**P**	**10 09 22.3**	**-0.5**
MBWA	**Marble Bar**	**18.27**	**210**	*e*P		**P**	**10 09 22.4**	**-0.4**
	20nm,0.3s							
MBWA				*e*PcP		PcP	10 13 40.2	-4.0
MBWA	**Marble Bar**	**18.27**	**210**	P		**P**	**10 09 22.3**	**-0.5**
	46nm,0.7s							
SBUM	**Sibu**	**18.70**	**294**	P		**P**	**10 09 27.2**	**-0.4**
ASAR	**Alice Springs**	**18.78**	**167**	P		**P**	**10 09 29.6**	**+1.3**
	18nm,0.3s,baz=349,slow=12,SNR=1519							
ASAR				S		**S**	**10 12 48.1**	**-1.4**
	6.1nm,0.3s,baz=348,slow=22,SNR=54							
CTA	**Charters Tower**	**22.10**	**133**	*e*P		**P**	**10 10 04.9**	**+2.3**
	11nm,1.5s,mb4.2							
CTA	**Charters Tower**	**22.10**	**133**	P		**P**	**10 10 04.9**	**+2.3**
	6.2nm,0.6s,mb4.3,baz=308,slow=12,SNR=8.3							
KMBL	**Kambalda**	**26.83**	**194**	*e*P		**P**	**10 10 45.3**	**+0.1**
	77nm,0.3s							
KLBR	**Kellerberrin**	**28.28**	**201**	*e*P		**P**	**10 10 58.1**	**0.0**
	34nm,1.5s,mb4.8							
STKA	**Stephens Creek**	**28.84**	**158**	*e*P		**P**	**10 11 03.9**	**+0.9**
	2.1nm,0.4s,mb4.1							
STKA	**Stephens Creek**	**28.84**	**158**	P		**P**	**10 11 04.0**	**+1.0**
	1.3nm,0.3s,mb4.0,baz=328,slow=8.7,SNR=8.0							
TPUB	**Ta-pu**	**29.67**	**344**	*e*P		**P**	**10 11 08.9**	**-1.5**
	37nm,1.1s,mb4.9							
NWAO	**Narrogin (SRO)**	**29.68**	**201**	P		**P**	**10 11 10.7**	**+0.3**
	3.9nm,0.4s,mb4.4,baz=237,slow=22,SNR=10.0							
NWAO	**Narrogin (SRO)**	**29.68**	**201**	P		**P**	**10 11 10.7**	**+0.3**
ARMA	**Armidale**	**32.66**	**142**	*e*P		**P**	**10 11 38.3**	**+1.7**
ARMA	**Armidale**	**32.66**	**142**	*e*P		**P**	**10 11 38.1**	**+1.6**
	3.1nm,0.6s,mb4.0							
YNG	**Young**	**33.85**	**151**	*e*P		**P**	**10 11 48.5**	**+1.7**
	4.7nm,0.6s,mb4.2							
TOO	**Toolangi**	**35.35**	**157**	*e*P		**P**	**10 12 01.5**	**+1.9**
KSRS	**Korea Array**	**42.56**	**358**	P		**P**	**10 12 59.5**	**+0.4**
	1.3nm,0.6s,mb3.6,baz=169,slow=10.0,SNR=5.0							
ASAJ	**Asahikawa**	**50.65**	**12**	P		**P**	**10 14 02.4**	**+0.7**
	1.5nm,0.4s,mb3.8,baz=229,slow=14,SNR=5.1							
ODAN	**Odare**	**51.62**	**310**	*e*P		**P**	**10 14 08.7**	**-0.5**
	8.6nm,0.5s,mb4.4							
RAMN	**Ramite**	**52.26**	**310**	*e*P		**P**	**10 14 13.3**	**-0.6**
	26nm,0.5s,mb4.9							
JIRN	**Jiri**	**52.94**	**311**	*e*P		**P**	**10 14 17.8**	**-1.1**
	8.8nm,0.4s,mb4.5							
RPZ	**Rata Peaks**	**53.00**	**143**	P		**P**	**10 14 20.4**	**+1.4**
	3.7nm,0.5s,mb4.1,baz=0.3,slow=17,SNR=6.6							
GUN	**Gumba**	**53.31**	**311**	*e*P		**P**	**10 14 20.6**	**-1.0**
	17nm,0.4s,mb4.8							
PKI	**Pulchoki**	**53.49**	**310**	*e*P		**P**	**10 14 20.9**	**-2.0**
	6.9nm,0.3s,mb4.5							
KKN	**Kakani**	**53.70**	**310**	*e*P		**P**	**10 14 22.4**	**-2.0**
	8.6nm,0.4s,mb4.6							
SONM	**Songino Array**	**56.62**	**342**	P		**P**	**10 14 45.7**	**+0.9**
	1.0nm,0.4s,mb3.8,baz=168,slow=7.1,SNR=6.9							
PETK	**Petropavlovsk-**	**62.96**	**19**	P		**P**	**10 15 28.8**	**+0.9**
	0.9nm,0.5s,mb3.7,baz=169,slow=5.5,SNR=12							
PETK					PcP	PcP	10 16 03.7	+0.1
	2.0nm,0.6s,baz=205,slow=3.0,SNR=8.2							
PETK	**Petropavlovsk-**	**62.96**	**19**	P		**P**	**10 15 28.8**	**+0.9**
PETK					PcP	PcP	10 16 03.7	+0.1
MK31	**Makanchi Array**	**66.43**	**327**	*e*P		**P**	**10 15 50.4**	**+0.1**
MKAR	**Makanchi Array**	**66.43**	**327**	P		**P**	**10 15 50.6**	**+0.3**
	4.4nm,0.4s,mb4.4,baz=115,slow=7.9,SNR=62							
AAK	**Ala-Archa**	**68.79**	**320**	P		**P**	**10 16 05.2**	**0.0**
	1.1nm,0.4s,mb3.9,baz=171,slow=0.9,SNR=3.8							
ZALV	**Zalesovo Beam**	**69.76**	**334**	P		**P**	**10 16 10.6**	**-0.3**
	1.0nm,0.3s,mb3.9,baz=108,slow=4.8,SNR=6.5							
KURK	**Kurchatov**	**70.71**	**329**	P		**P**	**10 16 16.7**	**0.0**
	3.6nm,0.5s,mb4.2,baz=118,slow=4.8,SNR=19							
BVAR	**Borovoye Array**	**76.26**	**328**	P		**P**	**10 16 49.5**	**+0.5**
	0.7nm,0.4s,mb3.6,baz=118,slow=9.2,SNR=5.0							
AKTK	**Aktyubinsk**	**82.31**	**322**	P		**P**	**10 17 22.0**	**+0.4**
AKTO	**Aktyubinsk**	**82.31**	**322**	P		**P**	**10 17 22.0**	**+0.4**
	0.8nm,0.3s,mb3.8,baz=100,slow=7.5,SNR=6.5							
INK	**Inuvik**	**97.58**	**22**	P		**P**	**10 18 32.7**	**-0.7**
	0.8nm,0.5s,mb4.3,baz=187,slow=3.2,SNR=5.0							
INK	**Inuvik**	**97.58**	**22**	P		**P**	**10 18 32.7**	**-0.7**
ARCES	**ARCESS Array B**	**99.76**	**340**	P		Pdif	10 18 42.0	-1.6
	1.8nm,0.9s,baz=76,slow=6.4,SNR=5.2							
YKA	**Yellowknife Ar**	**106.56**	**26**	PKiKP		PKiKP	10 23 22.4	-0.5
	0.2nm,0.5s,baz=296,slow=1.8,SNR=6.7							
YKA	**Yellowknife Ar**	**106.56**	**26**	PKPdf		PKiKP	10 23 22.4	-0.5
ULM	**Lac du Bonnet**	**121.43**	**32**	PKP		PKPdf	10 23 50.0	-1.7
	1.2nm,0.4s,baz=321,slow=1.0,SNR=5.8							
TXAR	**Lajitas Array**	**124.67**	**58**	PKP		PKPdf	10 23 58.4	-0.2
	0.3nm,0.4s,baz=199,slow=3.2,SNR=7.8							
TORD	**Torodi Ar. Bea**	**127.76**	**282**	PKP		PKPdf	10 24 04.7	-0.1
	0.4nm,0.5s,baz=111,slow=2.7,SNR=8.3							
TORD	**Torodi Ar. Bea**	**127.76**	**282**	PKP		PKPdf	10 24 04.7	-0.1
CPUP	**Villa Florida**	**147.90**	**169**	PKPbc		PKPbc	10 24 44.8	+0.3
	2.4nm,0.5s,baz=197,slow=2.8,SNR=13							
LPAZ	**La Paz**	**152.48**	**142**	PKPbc		PKPbc	10 24 56.5	+0.9
	1.6nm,0.4s,baz=18,slow=4.2,SNR=13							

ISCJB ***14*** *10:10:23.5±1.6, 20.°1S±0.°3×177.°7W±0.°2, h479km±18km, mb3.8/11, Error ellipse: s-maj=45.8km s-min=11.4km az=149.9*
IDC ***14*** *10:10:24.2±2.2, 20.°16S×177.°71W, h479km±23km, mb3.4/9, mb1 3.7/10, mb1mx3.5/17, mbtmp3.5/10, Error ellipse: s-maj=34.5km s-min=12.5km az=149.0*
NEIC ***14*** *10:10:25.5±1.2, 20.°18S×177.°71W, h495km±12km, mb4.2/3, Error ellipse: s-maj=32.3km s-min=9.2km az=151.0*
ISC 14 10:10:25.2±1.6, 20.°2S±0.°3×177.°7W±0.°2, h487km±18km, n21, σ0°62/19, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.46**	**43**	P		**P**	**10 12 25.8**	**-0.5**
	9.2nm,0.3s,baz=65,slow=20,SNR=20							
AFI				S		**S**	**10 14 00.3**	**-5.3**
	8.9nm,0.3s,baz=35,slow=20,SNR=14							
AFI	**Afiamalu**	**8.46**	**43**	P		**P**	**10 12 25.8**	**-0.5**
AFI				S		**S**	**10 14 00.3**	**-5.3**
DZM	**Mont Dzumac**	**14.90**	**260**	*e*P		**P**	**10 13 35.6**	**+0.9**
EIDS	**Eidsvold**	**29.18**	**254**	*e*P		**P**	**10 15 47.0**	**+0.7**
	7.5nm,1.0s,mb4.1							
ARMA	**Armidale**	**29.43**	**244**	P		**P**	**10 15 48.3**	**-0.1**
	2.1nm,0.6s,mb3.7							
CTA	**Charters Tower**	**33.79**	**264**	P		**P**	**10 16 26.2**	**+0.3**
	11nm,0.3s,mb4.7,baz=81,slow=12,SNR=7.6							
CTAO	**Charters Tower**	**33.79**	**264**	*e*P		**P**	**10 16 26.6**	**+0.6**
	82nm,1.9s,mb4.8							
ASAR	**Alice Springs**	**44.85**	**256**	P		**P**	**10 17 55.2**	**-0.2**
	9.1nm,0.8s,mb4.3,baz=83,slow=8.8,SNR=23							
WRAB	**Tennant Creek**	**44.90**	**262**	*e

comp=N,1μm,0.6s
LZH smax
comp=E,990nm,0.8s
LZH LR LR
comp=E,2μm,6.5s
LZH LR LR
comp=Z,3μm,6.9s
ENH Enshi 4.36 114 *e*Pn **Pn 10 12 25.8 +4.2**
ENH *e*Sn **Sg 10 13 34.6 -0.1**
GYA Guiyang 5.86 164 Pg **Pb 10 12 52.5 -4.7**
GYA Sg **Sn 10 13 49.4 -0.4**
GYA smax
comp=N,170nm,0.6s
GYA smax
comp=E,180nm,0.9s
WHN Wuhan 8.26 98 *e*P **Pn 10 13 20.8 +5.7**
WHN S **Sn 10 14 49.9 +1.0**
WHN LR LR
comp=N,2μm,9.4s
WHN LR LR
comp=E,940nm,10.2s
WHN LR LR
comp=Z,670nm,12.2s
GTA Gaotai 8.35 332 *e*P **Pn 10 13 25.8 +9.4**
GTA pP 10 13 35.0
GTA sP 10 13 39.3
GTA S **Sn 10 15 03.4 +12**
GTA sS 10 15 09.1
GTA pmax pmax
comp=Z,4.0nm,0.6s
GTA pmax pmax
comp=Z,120nm,4.2s
GTA LR LR
comp=N,330nm,11.7s
GTA LR LR
comp=E,240nm,9.6s
GTA LR LR
comp=Z,210nm,11.4s
HHC Hu-ho-hao-te 10.24 30 *e*P **Pn 10 13 42.3 +0.1**
HHC PP 10 13 50.8
HHC S **Sn 10 15 38.6 +1.2**
HHC SS 10 15 52.3
HHC pmax pmax
comp=Z,130nm,4.9s
HHC LR LR
comp=E,260nm,4.2s
HHC LR LR
comp=Z,140nm,4.0s
LSA Lhasa 12.03 262 *e*Pn **Pn 10 14 02.5 -4.4**
KSRS Korea Array 19.64 68 P **Pn 10 15 43.2 -2.4**
comp=Z,0.2nm,0.3s,baz=252,slow=11,SNR=3.1
HIA Hailar 20.44 29 *e*P **P 10 15 54.7 +1.9**
comp=Z,6.2nm,0.4s
UCH Uchtor 26.09 301 *e*P **P 10 16 50.5 +1.2**
comp=Z,2.8nm,1.0s,mb3.8
ZALV Zalesovo Beam 26.11 333 P **P 10 16 49.0 -0.4**
comp=Z,2.7nm,0.6s,mb3.9,baz=130,slow=8.7,SNR=6.0
AML Almayashu 26.66 301 P **P 10 16 55.0 +0.5**
comp=Z,1.6nm,0.6s,mb3.7
KURK Kurchatov 26.84 321 P **P 10 16 55.8 -0.2**
comp=Z,1.3nm,0.8s,mb3.5,baz=123,slow=11,SNR=3.7
ERM Erimo 31.87 61 *e*P **P 10 17 44.6 +3.8**
comp=Z,22nm,0.6s
ABKAR Akbulak array 37.50 311 P **P 10 18 29.1 -0.2**
ARCES ARCESS Array B 56.61 336 P **P 10 20 57.0 -1.2**
comp=Z,1.2nm,0.6s,mb4.1,baz=67,slow=9.3,SNR=7.7
BRTR Keskin Array B 56.82 299 P **P 10 20 59.1 -1.1**
comp=Z,0.5nm,0.7s,mb3.7,baz=52,slow=5.7,SNR=2.8
FINES FINESS Array B 57.09 326 P **P 10 21 00.6 -1.1**
comp=Z,0.8nm,0.3s,mb4.3,baz=98,slow=9.8,SNR=6.0
WRA Warramunga Arr 58.96 147 P **P 10 21 15.7 +0.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=339,slow=7.9,SNR=9.1
ASAR Alice Springs 62.03 150 P **P 10 21 35.9 -0.2**
comp=Z,0.3nm,0.5s,mb3.7,baz=334,slow=6.9,SNR=4.7
NOA NORSAR Array B 64.16 327 P **P 10 21 48.3 -1.6**
comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=5.2,SNR=3.2
INK Inuvik 70.98 20 P **P 10 22 30.8 -2.1**
comp=Z,1.5nm,0.7s,mb4.0,baz=133,slow=8.0,SNR=4.3
YKA Yellowknife Ar 80.53 17 P **P 10 23 28.1 +0.5**
comp=Z,0.2nm,0.4s,mb3.4,baz=328,slow=5.1,SNR=4.2

OTT 14 10:11:43.5±0.6, 79°.04N×114°.68W, h18km, ML3.7/7, Queen Elizabeth Slope. 242km west from Isachsen, Nu, Arctic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**5.21**	**65**	PN	Pn	10 12 59.8	-0.5
EUNU				SN	Sn	10 13 56.1	-3.6
EUNU				Trac		10 14 06.0	
comp=Z,11nm,1.0s							
RES	**Resolute Bay**	**6.24**	**124**	PN	Pn	10 13 14.1	-0.3
RES				SN	Sn	10 14 25.0	-0.1
RES				Trac		10 14 33.0	
comp=Z,5.5nm,0.3s							
INK	**Inuvik**	**11.90**	**216**	PN	Pn	10 14 29.2	-2.7
INK				SN	Sn	10 16 27.3	-17
INK				Trac		10 16 47.3	
comp=E,0.8nm,0.4s							
GIFN	**Gifford Fjord,**	**12.37**	**119**	PN	Pn	10 14 37.4	-0.9
GIFN				SN	Sn	10 16 47.6	-7.9
GIFN				Trac		10 16 54.6	
comp=Z,3.3nm,0.7s							
AP3N	**Apex site 3 Nu**	**12.39**	**124**	PN	Pn	10 14 37.7	-0.8
AP3N				SN	Sn	10 16 47.6	-8.2
AP3N				Trac		10 16 58.1	
comp=Z,5.0nm,1.1s							
LAIN	**Lailor River,**	**12.85**	**123**	PN	Pn	10 14 42.5	-2.4
LAIN				SN	Sn	10 16 58.8	-8.3
LAIN				Trac		10 17 35.3	
comp=Z,5.3nm,1.1s							
ILON	**Igloolik, Nuna**	**12.89**	**120**	PN	Pn	10 14 44.6	-0.8
ILON				SN	Sn	10 17 03.1	-5.1
ILON				Trac		10 17 09.3	
comp=Z,2.0nm,0.6s							
JERN	**Jeri Cho Mine,**	**13.12**	**174**	PN	Pn	10 14 45.1	-3.4
JERN				SN	Sn	10 17 04.0	-10
STLN	**Stellar Camp,**	**13.19**	**141**	PN	Pn	10 14 47.1	-2.3
STLN				SN	Sn	10 17 09.1	-6.2
CTLN	**Castor Lake**	**14.69**	**182**	PN	Pn	10 15 06.5	-3.4
CTLN				SN	Sn	10 17 39.5	-12
WAGN	**Wager Bay**	**14.99**	**137**	SN	Sn	10 17 49.0	-10
NUNN	**Nunuq Camp, NU**	**15.43**	**141**	PN	Pn	10 15 18.2	-1.5
NUNN				SN	Sn	10 18 04.1	-5.7
YKW3	**Yellowknife Ar**	**16.56**	**180**	PN	Pn	10 15 29.6	-4.8
YKW3				SN	Sn	10 18 24.2	-13
YKW3				Trac		10 18 32.8	
comp=Z,0.8nm,0.4s							

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*ISCJB **14** 10:18:10.0±2.1, 30°.52N±0°.09×103°.07E±0°.08, h3km±13km, mb3.5/9, Error ellipse: s-maj=14.7km s-min=10.8km az=166.2*
*IDC **14** 10:18:11.0±0.9, 30°.61N×103°.01E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.6/27, mbtmp3.6/9, ML2.7/1, Error ellipse: s-maj=36.4km s-min=18.0km az=55.0*
*NEIC **14** 10:18:12.8±0.7, 30°.59N×103°.07E, h10km, mb3.9/1, Error ellipse: s-maj=21.7km s-min=11.9km az=222.0*
*BJI **14** 10:18:16.4, 30°.77N×103°.16E, h16km, ML3.3/7*
ISC 14 10:18:12.4±2.1, 30°.56N±0°.09×103°.11E±0°.07, h6km±12km, n15, σ1§24/18, mb3.5/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**58**	Pg	**Pg**	**10 18 24.8**	**-0.3**
CD2				Sg	**Sg**	**10 18 32.5**	**-1.2**
CD2				smax			
comp=N,6μm,0.6s							
ENH	**Enshi**	**5.52**	**91**	*e*Pn	**Pn**	**10 19 36.0**	**+0.9**
comp=N,38nm,0.7s							
ENH				*e*Sn	**Sn**	**10 20 35.7**	**-3.2**
XAN	**Xi'an**	**6.02**	**53**	Pg	**Pb**	**10 19 59.9**	**+2.2**
XAN				Sg	**Sb**	**10 21 10.8**	**+0.7**
XAN				smax			
comp=N,60nm,0.9s							
XAN				smax			
comp=E,41nm,1.0s							
SONM	**Songino Array**	**17.43**	**7**	P	**Pn**	**10 22 16.8**	**+0.7**
comp=E,0.0nm,0.3s,baz=179,slow=12,SNR=2.4							
KSRS	**Korea Array**	**21.66**	**65**	P	**P**	**10 23 04.5**	**+0.9**
comp=E,0.8nm,0.5s,mb3.4,baz=248,slow=9.3,SNR=4.4							
MKAR	**Makanchi Array**	**22.84**	**321**	P	**P**	**10 23 15.0**	**-1.1**
comp=E,0.3nm,0.4s,mb3.0,baz=126,slow=12,SNR=4.2							
AAK	**Ala-Archa**	**25.81**	**306**	P	**P**	**10 23 44.0**	**-0.2**
comp=E,0.8nm,0.4s,mb3.6,baz=63,slow=9.0,SNR=2.2							
AML	**Almayashu**	**26.23**	**304**	*e*P	**P**	**10 23 49.6**	**+1.6**
comp=E,1.4nm,0.5s,mb3.8							
KURK	**Kurchatov**	**27.18**	**325**	P	**P**	**10 23 55.4**	**-1.1**
comp=E,0.4nm,0.5s,mb3.2,baz=126,slow=9.5,SNR=5.5							
KURK	**Kurchatov**	**27.18**	**325**	P	**P**	**10 23 55.4**	**-1.1**
WRA	**Warramunga Arr**	**58.51**	**145**	P	**P**	**10 28 11.0**	**+1.4**
comp=E,0.6nm,0.4s,mb4.0,baz=337,slow=7.4,SNR=14							
ASAR	**Alice Springs**	**61.48**	**148**	P	**P**	**10 28 29.1**	**-0.9**
comp=E,0.3nm,0.8s,mb3.5,baz=339,slow=7.1,SNR=5.4							
STKA	**Stephens Creek**	**72.03**	**146**	P	**P**	**10 29 37.0**	**-0.2**
comp=E,0.7nm,0.7s,mb3.7,baz=67,slow=13,SNR=3.1							
YKA	**Yellowknife Ar**	**82.46**	**17**	P	**P**	**10 30 33.0**	**-2.3**
comp=E,0.6nm,0.7s,mb3.7,baz=329,slow=5.6,SNR=6.4							
YKA	**Yellowknife Ar**	**82.46**	**17**	P	**P**	**10 30 33.0**	**-2.3**

IDC 14 10:27:10.9±3.8, 31°.04N×103°.35E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.2/25, mbtmp3.5/3, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/30, Error ellipse: s-maj=88.9km s-min=38.4km az=98.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.93**	**7**	Pn	Pn	10 31 09.2	+0.1
0.1nm,0.3s,baz=197,slow=19,SNR=7.0							
KSRS	**Korea Array**	**21.27**	**66**	P	P	10 31 58.5	-0.3
1.8nm,0.8s,baz=263,slow=11,SNR=5.8							
JOW	**Kunigami**	**22.20**	**95**	LR	LR	10 40 46.1	
comp=Z,168nm,19.3s,baz=113,slow=37							
WRA	**Warramunga Arr**	**58.79**	**146**	P	P	10 37 11.0	0.0
0.2nm,0.4s,baz=337,slow=7.8,SNR=5.3							

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*IDC **14** 10:31:40.9±0.9, 35°.97N×142°.01E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.7/29, mbtmp3.6/11, ML3.2/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/34, Error ellipse: s-maj=21.6km s-min=21.0km az=92.0*
*ISCJB **14** 10:31:41.6±2.1, 36°.17N±0°.05×142°.20E±0°.06, h15km±14km, mb3.7/9, Error ellipse: s-maj=9.3km s-min=7.0km az=135.5*
*JMA **14** 10:31:43.5±0.3, 36°.18N×142°.16E, h61km, M3.3*
*NEIC **14** 10:31:46.0±0.7, 35°.97N×141°.97E, h35km, MG3.3(JMA), Error ellipse: s-maj=18.9km s-min=13.7km az=188.0*
ISC 14 10:31:42.5±1.6, 36°.14N±0°.05×142°.12E±0°.07, h9km±9km, n28, σ1§02/31, mb3.7/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.12**	**247**	P	**Pg**	**10 32 04.0**	**+0.1**
CHOJ				*e*S	**Sg**	**10 32 19.0**	**+0.5**
JHO	**Hitachi**	**1.34**	**291**	P	**Pn**	**10 32 06.3**	**-1.1**
JHO				*e*S	**Sb**	**10 32 24.2**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.43**	**312**	P	**Pn**	**10 32 07.8**	**-0.8**
JFK	**Kawauchi**	**1.58**	**321**	P	**Pn**	**10 32 10.0**	**-0.7**
BSO1	**Boso 1**	**1.76**	**213**	P	**Pn**	**10 32 12.7**	**-0.4**
BSO1				*e*S	**Sn**	**10 32 35.9**	**+0.3**
BSO3	**Boso 3**	**1.88**	**225**	P	**Pn**	**10 32 14.9**	**+0.1**
JAG	**Ashikaga**	**2.17**	**278**	P	**Pn**	**10 32 18.7**	**-0.2**
JRY	**Ryogami san**	**2.61**	**268**	P	**Pn**	**10 32 24.9**	**0.0**
JOD2	**Odawara 2**	**2.62**	**251**	P	**Pn**	**10 32 25.8**	**+0.8**
JMK	**Ichinoseki**	**2.89**	**346**	P	**Pn**	**10 32 28.8**	**+0.1**
MJAR	**Matsushiro Arr**	**3.19**	**278**	Pn	**Pn**	**10 32 31.2**	**-1.6**
1.8nm,0.3s,baz=108,slow=7.2,SNR=13							
MAJO	**Matsushiro**	**3.19**	**278**	*e*Pn	**Pn**	**10 32 34.4**	**+1.6**
MAT	**Matsushiro**	**3.19**	**278**	P	**Pn**	**10 32 33.9**	**+1.1**
MAT				S	**Sn**	**10 33 12.0**	**+1.1**
ASAJ	**Asahikawa**	**7.97**	**2**	Pn	**Pn**	**10 33 38.4**	**-0.1**
0.4nm,0.3s,baz=199,slow=16,SNR=4.0							
ASAJ				LR	LR	10 37 37.0	
comp=Z,201nm,18.9s,baz=208,slow=44							
KSRS	**Korea Array**	**11.46**	**281**	Pn	**Pn**	**10 34 26.5**	**+0.1**
0.1nm,0.3s,baz=80,slow=15,SNR=2.8							
KSRS				LR	LR	10 38 54.7	
comp=Z,159nm,18.4s,baz=155,slow=38							
SONM	**Songino Array**	**28.76**	**305**	P	**P**	**10 37 41.6**	**+1.3**
0.5nm,0.4s,mb3.6,baz=105,slow=9.1,SNR=6.3							
ZALV	**Zalesovo Beam**	**42.94**	**313**	P	**P**	**10 39 39.1**	**-2.3**
0.5nm,0.4s,mb3.6,baz=119,slow=8.6,SNR=2.4							
MKAR	**Makanchi Array**	**45.08**	**303**	P	**P**	**10 39 58.1**	**-0.6**
0.5nm,0.9s,mb3.4,baz=84,slow=10,SNR=2.4							
KURK	**Kurchatov**	**46.93**	**309**	P	**P**	**10 40 13.0**	**-0.2**
1.5nm,0.8s,mb4.0,baz=81,slow=8.3,SNR=3.8							
INK	**Inuvik**	**54.92**	**27**	P	**P**	**10 41 14.8**	**+1.7**
1.0nm,0.6s,mb4.0,baz=146,slow=19,SNR=5.8							
INK	**Inuvik**	**54.92**	**27**	P	**P**	**10 41 14.8**	**+1.6**
WRA	**Warramunga Arr**	**56.26**	**189**	P	**P**	**10 41 21.8**	**-1.4**
3.2nm,1.1s,mb4.2,baz=3.7,slow=7.3,SNR=7.3							
ASAR	**Alice Springs**	**59.99**	**189**	P	**P**	**10 41 47.4**	**-1.9**
0.8nm,1.0s,mb3.7,baz=29,slow=9.8,SNR=4.2							
ASAR	**Alice Springs**	**59.99**	**189**	P	**P**	**10 41 47.4**	**-1.9**
YKA	**Yellowknife Ar**	**64.29**	**30**	P	**P**	**10 42 18.9**	**+1.1**
0.4nm,0.8s,mb3.5,baz=301,slow=6.7,SNR=4.2							
YKA	**Yellowknife Ar**	**64.29**	**30**	P	**P**	**10 42 18.9**	**+1.1**
PDAR	**Pinedale Array**	**77.88**	**46**	P	**P**	**10 43 41.9**	**+1.3**
0.4nm,0.8s,mb3.4,baz=239,slow=0.9,SNR=3.9							
LPAZ	**La Paz**	**146.63**	**62**	PKPbc	PKPbc	10 51 25.8	+0.8
0.8nm,0.7s,baz=214,slow=4.0,SNR=4.2							

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*ISCJB **14** 10:35:11.7±1.0, 59°.30N±0°.06×26°.9E±0°.1, h0km, Error ellipse: s-maj=9.3km s-min=8.0km az=2.6*
*BER **14** 10:35:12.8±4.7, 59°.32N×27°.08E, h0km±24km, ML2.4(NAO)*
*NAO **14** 10:35:12.6±2.0, 59°.30N×27°.08E, ML2.4*
*CSEM **14** 10:35:13.4±0.5, 59°.29N×26°.80E, h2km, ML1.8, Error ellipse: s-maj=9.4km s-min=6.5km az=144.0, Mining explosion.*
*IDC **14** 10:35:14.9±1.9, 59°.48N×27°.06E, h0km, mb1 3.1/4, mb1mx2.9/26, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=16.7km s-min=9.8km az=120.0*
*UPP **14** 10:35:25.0, 59°.98N×26°.26E, h0km, ML1.9, Suspected Mining explosion.*
ISC 14 10:35:13.3±1.0, 59°.31N±0°.06×26°.9E±0°.1, h0km, n30, σ1§05/38, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**1.34**	**338**	Pg	**Pg**	**10 35 38.1**	**-0.8**
PVF				Sg	**Sg**	**10 35 56.2**	**-0.1**
MEF	**Metsahovi**	**1.55**	**307**	Pg	**Pg**	**10 35 42.7**	**-0.2**
MEF				Sg	**Sg**	**10 36 03.0**	**0.0**
MEF				*e*S	**Sn**	**10 36 03.3**	**+0.5**
SNR=50							
MTSE	**Matsula**	**1.69**	**251**	SG	**Pn**	**10 35 44.2**	**+0.2**
MTSE	**Matsula**	**1.69**	**251**	Sg	**Pn**	**10 35 44.1**	**+0.1**
MTSE	**Matsula**	**1.69**	**251**	Pn	**Pn**	**10 35 44.1**	**+0.1**
FIA0	**FINESS Array S**	**2.18**	**350**	Pn	**Pn**	**10 35 50.5**	**-0.2**
baz=164,slow=18							
FIA0				Pg	**Pg**	**10 35 51.9**	**-3.1**
baz=165,slow=16							
FIA0				Lg		10 36 22.2	
baz=161,slow=28							
FIA0				Rg		10 36 33.4	
baz=184,slow=22							
FIA0	**FINESS Array S**	**2.18**	**350**	Pn	**Pn**	**10 35 50.5**	**-0.2**
baz=164,slow=16,SNR=50							
FIA0	**FINESS Array S**	**2.18**	**350**	Pg	**Pg**	**10 35 51.9**	**-3.1**
baz=165,slow=16,SNR=90							
FIA0				Lg		10 36 22.2	
baz=161,slow=27,SNR=50							
FINES	**FINESS Array B**	**2.18**	**350**	Pn	**Pn**	**10 35 50.5**	**-0.2**
2.2nm,0.3s,baz=167,slow=15,SNR=29							
FINES				Lg		10 36 19.0	
3.7nm,0.3s,baz=163,slow=28,SNR=20							
FINES				Rg		10 36 33.8	
102nm,1.1s,baz=171,slow=25,SNR=14							
FIA1	**FINESS Array S**	**2.18**	**350**	Pn	**Pn**	**10 35 50.6**	**-0.1**
KAF	**Kangasniemi**	**2.83**	**355**	Pn	**Pn**	**10 36 00.0**	**+0.4**
KEF	**Keuruu**	**3.03**	**342**	Pn	**Pn**	**10 36 04.1**	**+1.7**
RAF	**Rauma**	**3.08**	**306**	*e*P	**Pn**	**10 36 05.2**	**+2.1**
SNR=50							
SUF	**Sumiainen**	**3.44**	**354**	Pn	**Pn**	**10 36 08.5**	**+0.5**
JOF	**Joensuu**	**4.21**	**29**	Pn	**Pn**	**10 36 18.0**	**-0.7**
UMAU	**Umeaa**	**5.46**	**330**	P	**Pn**	**10 36 37.1**	**+1.4**
BURU	**Burvik**	**5.89**	**336**	P	**Pn**	**10 36 41.7**	**0.0**
BREU	**Bredtraesk**	**6.06**	**323**	P	**Pn**	**10 36 44.8**	**+0.8**
SVAU	**Svanoeiden**	**6.24**	**330**	P	**Pn**	**10 36 46.9**	**+0.5**
SJUU	**Sjulsmark**	**6.68**	**341**	P	**Pn**	**10 36 53.0**	**+0.5**
HFS	**Hagfors**	**6.72**	**283**	Pn	**Pn**	**10 36 51.5**	**-1.5**
baz=116,slow=14							
HFS				Sn	**Sn**	**10 38 07.1**	**-3.0**
baz=87,slow=28							
HFS				Lg		10 38 44.3	
baz=94,slow=37							
HFS	**Hagfors**	**6.72**	**283**	Pn	**Pn**	**10 36 52.8**	**-0.2**
0.2nm,0.3s,baz=67,slow=11,SNR=3.6							
HFS				Sn	**Sn**	**10 38 09.7**	**-0.4**
0.3nm,0.3s,baz=96,slow=26,SNR=6.1							
HFS				Lg		10 38 44.4	
1.0nm,0.3s,baz=91,slow=30,SNR=8.6							
HFS	**Hagfors**	**6.72**	**283**	Pn	**Pn**	**10 36 51.5**	**-1.5**
baz=116,slow=13,SNR=50							
HFS				Sn	**Sn**	**10 38 07.1**	**-3.0**
baz=87,slow=26,SNR=50							
KALU	**Kalix**	**6.77**	**348**	P	**Pn**	**10 36 54.2**	**+0.5**
LILU	**Lilltraesk**	**6.83**	**334**	P	**Pn**	**10 36 54.8**	**+0.3**
NB2	**NORSAR Subarra**	**8.00**	**289**	Pn	**Pn**	**10 37 09.5**	**-1.0**
NB2				Lg		10 39 21.0	
baz=107,slow=37							
NB2	**NORSAR Subarra**	**8.00**	**289**	Pn	**Pn**	**10 37 09.5**	**-1.0**
SNR=50							
NOA	**NORSAR Array B**	**8.00**	**289**	Pn	**Pn**	**10 37 09.3**	**-1.2**
0.1nm,0.3s,baz=202,slow=12,SNR=2.4							
NOA				Lg		10 39 23.6	
0.4nm,0.3s,baz=92,slow=14,SNR=5.7							
ARA0	**ARCESS Array S**	**10.29**	**357**	Pn	**Pn**	**10 37 38.9**	**-3.0**
baz=173,slow=16							
ARA0				Sn	**Sn**	**10 39 29.6**	**-8.1**
baz=171,slow=28							
ARA0				Lg		10 40 27.7	
baz=185,slow=22							
ARCES	**ARCESS Array B**	**10.29**	**357**	Pn	**Pn**	**10 37 38.3**	**-3.6**
0.1nm,0.3s,baz=174,slow=14,SNR=8.1							
ARCES				Lg		10 40 29.9	
0.5nm,0.3s,baz=172,slow=33,SNR=7.4							

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*IDC **14** 10:44:35.8±0.6, 32°.14N×104°.87E, h0km, mb4.3/21, mb1 4.4/23, mb1mx4.3/32, mbtmp4.3/23, ML3.6/2, MS3.6/7, Ms1 3.6/7, ms1mx3.1/36, Error ellipse: s-maj=20.3km s-min=12.4km az=50.0*
*ISCJB **14** 10:44:36.1±0.9, 32°.09N±0°.03×104°.85E±0°.03, h15km±5km, mb4.5/54, MS3.8/9, Error ellipse: s-maj=4.4km s-min=4.2km az=171.1*
*NEIC **14** 10:44:37.2±0.2, 32°.14N×104°.93E, h10km, mb4.6/27, Error ellipse: s-maj=6.3km s-min=5.0km az=51.0*
*MOS **14** 10:44:37.6±0.9, 32°.13N×104°.87E, h24km, mb4.9/22, Error ellipse: s-maj=11.3km s-min=6.0km az=111.3*
*BJI **14** 10:44:38.0, 32°.11N×104°.90E, h18km, mB4.7/18, mb4.4/21, ML4.3/20, Ms4.2/22, Ms7 3.9/22*
ISC 14 10:44:37.6±0.8, 32°.13N±0°.02×104°.81E±0°.03, h11km±5km, n150, σ1§16/161, mb4.5/54, MS3.8/9, 20C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.51**	**217**	Pg	**Pg**	**10 45 06.8**	**+0.2**
CD2				Sg	**Sg**	**10 45 27.3**	**+1.1**
CD2				smax			
comp=N,9μm,0.8s							
XAN	**Xi'an**	**3.94**	**60**	Pn	**Pn**	**10 45 38.5**	**+0.4**
XAN				Sg	**Sg**	**10 46 37.4**	**-6.9**
XAN				smax			
comp=N,520nm,1.0s							
XAN				smax			
comp=E,360nm,1.0s							
LZH	**Lanzhou**	**4.03**	**349**	*e*Pn	**Pn**	**10 45 41.6**	**+2.3**
LZH				Pg	**Pg**	**10 45 52.4**	**-2.5**
LZH				Sn	**Sn**	**10 46 24.8**	**-1.8**
LZH				Sg	**Sg**	**10 46 41.4**	**-5.7**
LZH				smax			
comp=N,1μm,0.9s							
LZH				smax			
comp=E,2μm,1.1s							
LZH				LR	LR		
comp=N,4μm,5.3s							
LZH				LR	LR		
comp=Z,4μm,5.7s							
ENH	**Enshi**	**4.41**	**114**	*e*Pn	**Pn**	**10 45 41.8**	**-2.8**
ENH				*e*Sg	**Sg**	**10 47 00.7**	**+1.4**
GYA	**Guiyang**	**5.87**	**164**	Pn	**Pn**	**10 46 05.5**	**+0.8**
GYA				Sn	**Sn**	**10 47 13.1**	**+1.1**
GYA				smax			
comp=N,360nm,0.8s							
GYA				smax			
comp=E,320nm,0.8s							
GYA				LR	LR		
comp=N,3μm,3.8s							
GYA				LR	LR		
comp=E,1μm,4.2s							
GYA				LR	LR		
comp=Z,3μm,3.7s							
KMI	**Kunming**	**7.21**	**195**	Pn	**Pn**	**10 46 25.1**	**+2.1**
KMI				Sn	**Sn**	**10 47 42.9**	**-2.0**
KMI				smax			
comp=N,46nm,1.6s							
KMI				smax			
comp=E,54nm,1.8s							
KMI				LR	LR		
comp=N,630nm,6.2s							
KMI				LR	LR		
comp=E,930nm,9.7s							
KMI				LR	LR		
comp=Z,280nm,7.6s							
WHN	**Wuhan**	**8.31**	**98**	⇓P	**Pn**	**10 46 40.6**	**+2.5**
WHN				S	**Sn**	**10 48 06.6**	**-5.4**
WHN				LR	LR		
comp=N,2μm,3.5s							
WHN				LR	LR		
comp=E,2μm,2.9s							
WHN				LR	LR		
comp=Z,2μm,5.9s							
GTA	**Gaotai**	**8.32**	**332**	*e*P	**Pn**	**10 46 46.5**	**+8.2**
GTA				S	**Sn**	**10 48 19.1**	**+6.8**
GTA				sS		10 48 29.0	
GTA				pmax	pmax		
comp=Z,3.0nm,0.7s							
GTA				pmax	pmax		
comp=Z,33nm,4.8s							
GTA				LR	LR		
comp=N,560nm,8.1s							
GTA				LR	LR		
comp=E,390nm,7.2s							
GTA				LR	LR		
comp=Z,420nm,6.3s							
BTO	**Baotou**	**9.45**	**25**	*e*P	Px	10 47 33.4	
HHC	**Hu-ho-hao-te**	**10.26**	**30**	*e*P	**Pn**	**10 47 04.1**	**-0.7**
HHC				PP		10 47 12.4	
HHC				S	**Sn**	**10 48 59.5**	**-0.3**
HHC				SS		10 49 12.3	
HHC				pmax	pmax		
comp=Z,16nm,1.0s							
HHC				pmax	pmax		
comp=Z,100nm,5.8s							
HHC				LR	LR		
comp=N,450nm,3.6s							
HHC				LR	LR		
comp=E,500nm,3.4s							
HHC				LR	LR		
comp=Z,300nm,3.6s							
NJ2	**Nanjing**	**11.91**	**87**	*e*P	**Pn**	**10 47 27.8**	**+0.4**
LSA	**Lhasa**	**11.98**	**262**	P	**Pn**	**10 47 29.6**	**+1.2**
SHL	**Shillong**	**13.07**	**243**	*e*P	**Pn**	**10 47 43.0**	**-0.4**
QIZ	**Qiongzhong**	**13.80**	**160**	P	**Pn**	**10 47 52.8**	**-0.6**
QIZ				S	**Sn**	**10 50 25.5**	**-1.2**
QIZ				pmax	pmax		
comp=Z,16nm,1.4s							
QIZ				pmax	pmax		
comp=Z,210nm,5.1s							
QIZ				LR	LR		
comp=N,420nm,6.6s							
QIZ				LR	LR		
comp=Z,390nm,6.1s							
CMAR	**Chiang Mai Arr**	**14.60**	**203**	Pn	**Pn**	**10 48 06.1**	**+1.8**
baz=12,slow=9.5							
TAPN	**Taplejung**	**15.60**	**257**	*e*P	**Pn**	**10 48 15.5**	**-2.0**
comp=Z,17nm,0.5s							
SONM	**Songino Array**	**15.74**	**4**	Pn	**Pn**	**10 48 19.8**	**+0.7**
comp=Z,0.2nm,0.3

comp=Z,6.7nm,1.0s
ODAN Odare 16.05 255 *e*P **Pn 10 48 21.6 -1.7**
comp=Z,18nm,0.5s
RAMN Ramite 16.66 257 *e*P **Pn 10 48 29.1 -2.1**
comp=Z,26nm,0.7s
JIRN Jiri 16.75 259 *e*P **Pn 10 48 31.0 -1.3**
comp=Z,31nm,0.7s
GUN Gumba 16.92 261 *e*P **Pn 10 48 33.0 -1.5**
comp=Z,42nm,0.9s
PKI Pulchoki 17.43 260 *e*P **Pn 10 48 38.5 -2.3**
comp=Z,27nm,0.6s
PKIN Phulchoki 17.44 260 *e*P **Pn 10 48 39.6 -1.3**
comp=Z,76nm,0.7s
KKN Kakani 17.46 261 *e*P **Pn 10 48 39.5 -1.8**
comp=Z,26nm,0.7s
DMN Daman 17.67 260 *e*P **Pn 10 48 41.9 -1.9**
comp=Z,33nm,0.9s
WMQ Urumqi 17.80 316 *e*P **Pn 10 48 47.0 +1.6**
WMQ LR LR
comp=N,320nm,10.0s
WMQ LR LR
comp=E,170nm,8.0s
WMQ LR LR
comp=Z,170nm,18.0s
ZAK Zakamensk 18.28 357 *e*P **Pn 10 48 52.2 +1.1**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
TLY Talaya 19.56 358 *e*P **Pn 10 49 06.6 0.0**
TLY pmax pmax
comp=Z,5.0nm,0.8s
TLY Talaya 19.56 358 *e*P **Pn 10 49 06.6 0.0**
comp=Z,5.5nm,0.8s
KSRS Korea Array 19.69 68 P **Pn 10 49 07.0 -1.3**
comp=Z,0.2nm,0.3s,baz=253,slow=8.9,SNR=10
CN2 Changchun 19.96 48 *e*P **Pn 10 49 10.8 -0.6**
CN2 *es*P sP 10 49 17.0 +2.9
CN2 *e*S **Sn 10 52 48.8 -6.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,11.0s
CN2 LR LR
comp=E,300nm,11.0s
CN2 LR LR
comp=Z,300nm,12.0s
JOW Kunigami 21.08 98 LR LR 10 57 50.3
comp=Z,200nm,19.8s,MS3.5,baz=22,slow=38
MK31 Makanchi Array 22.63 317 *e*P **P 10 49 39.1 +0.7**
MKAR Makanchi Array 22.63 317 P **P 10 49 39.1 +0.7**
comp=Z,6.7nm,0.8s,mb4.2,baz=114,slow=12,SNR=34
MKAR PcP PcP 10 53 31.4 +0.2
comp=Z,1.1nm,0.9s,baz=54,slow=2.5,SNR=3.5
MKAR LR LR 10 59 21.4
comp=Z,193nm,21.0s,MS3.5,baz=174,slow=39
MKAR Makanchi Array 22.63 317 P **P 10 49 39.1 +0.7**
MKAR 10 53 31.4
DDI Dehra Dun 22.93 273 *ex* x 10 49 46.0
MDJ Mudanjiang 22.98 50 P **P 10 49 39.6 -2.6**
MDJ pmax pmax
comp=Z,9.0nm,1.5s,mb4.0
MDJ pmax pmax
comp=Z,47nm,3.9s
KSH Kashi 24.45 296 *e*P **P 10 50 00.0 +3.6**
KSH *ep*P 10 50 04.3
KSH *es*P sP 10 50 07.3 +6.3
KSH *e*PP 10 50 33.0
KSH *e*S **S 10 54 17.3 +0.9**
KSH *e*ScS ScS 11 01 06.1 +4.7
KSH pmax pmax
comp=Z,120nm,3.7s
KSH LR LR
comp=N,110nm,6.3s
KSH LR LR
comp=E,110nm,5.9s
TKM2 Tokmak 2 25.43 303 P **P 10 50 07.1 +1.7**
SNR=6.0
TKM2 Tokmak 2 25.43 303 *e*P **P 10 50 06.8 +1.4**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
TKM2 Tokmak 2 25.43 303 *e*P **P 10 50 06.8 +1.4**
comp=Z,6.2nm,0.8s,mb4.2
KZA Kyzart 25.48 301 P **P 10 50 08.3 +2.6**
SNR=12
KBK Karagaybulak 25.83 303 P **P 10 50 10.9 +2.0**
SNR=11
UCH Uchtor 26.04 301 P **P 10 50 13.4 +2.6**
SNR=20
UCH Uchtor 26.04 301 *e*P **P 10 50 13.2 +2.3**
comp=Z,16nm,1.1s,mb4.5
ZAA0 Zalesovo Array 26.08 333 *e*P **P 10 50 11.0 -0.1**
ZALV Zalesovo Beam 26.08 333 P **P 10 50 11.5 +0.4**
comp=Z,6.3nm,0.5s,mb4.4,baz=130,slow=9.7,SNR=30
AAK Ala-Archa 26.15 302 P **P 10 50 13.2 +1.4**
comp=Z,1.3nm,0.6s,mb3.6,baz=115,slow=8.2,SNR=4.9
AAK LR LR 11 02 24.0
comp=Z,159nm,18.2s,MS3.6,baz=278,slow=41
AAK Ala-Archa 26.15 302 *e*P **P 10 50 13.5 +1.7**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
AAK Ala-Archa 26.15 302 *e*P **P 10 50 13.5 +1.7**
comp=Z,4.6nm,1.0s,mb4.0
AML Almayashu 26.62 301 P **P 10 50 18.1 +2.0**
SNR=8.9
AML Almayashu 26.62 301 *e*P **P 10 50 17.2 +1.1**
comp=Z,4.4nm,0.6s,mb4.2
KURK Kurchatov 26.81 322 P **P 10 50 18.3 +0.6**
comp=Z,6.8nm,0.8s,mb4.2,baz=128,slow=8.6,SNR=38
KURK PcP PcP 10 53 39.8 -0.5
comp=Z,1.8nm,0.7s,baz=136,slow=1.6,SNR=6.1
KURK LR LR 11 01 15.3
comp=Z,112nm,18.7s,MS3.5,baz=105,slow=37
KURK Kurchatov 26.81 322 *ce*P **P 10 50 17.1 -0.6**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.4
KURK Kurchatov 26.81 322 *e*P **P 10 50 17.9 +0.2**
comp=Z,9.0nm,0.9s,mb4.3
KBL Kabul 29.89 284 *e*P **P 10 50 47.2 +1.8**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
KBL Kabul 29.89 284 *e*P **P 10 50 47.2 +1.8**
comp=Z,9.7nm,0.8s,mb4.6
BVAR Borovoye Array 32.38 320 P **P 10 51 07.7 +0.6**
comp=Z,2.5nm,0.7s,mb4.2,baz=108,slow=9.1,SNR=12
BVAR PcP PcP 10 53 54.1 -0.3
comp=Z,1.8nm,0.7s,baz=116,slow=3.4,SNR=5.7
BRVK Borovoye 32.45 320 *ce*P **P 10 51 08.4 +0.7**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
BRVK Borovoye 32.45 320 *e*P **P 10 51 08.0 +0.3**
comp=Z,5.1nm,0.8s,mb4.4
ABKAR Akbulak array 37.46 311 *e*P **P 10 51 51.6 +0.6**
comp=Z,9.2nm,0.8s,mb4.7
AKTK Aktyubinsk 38.89 312 P **P 10 52 03.6 +0.6**
AKTO Aktyubinsk 38.89 312 P **P 10 52 03.6 +0.6**
comp=Z,3.4nm,0.7s,mb4.2,baz=94,slow=9.6,SNR=14
SVE Sverdlovsk 39.05 323⇑ *e*P **P 10 52 05.6 +1.4**
SVE pmax pmax
comp=Z,17nm,0.9s,mb4.8
ARU Arti 40.01 321 *c i*P **P 10 52 12.5 +0.3**
ARU *e* 10 53 43.7
ARU S **S 10 58 19.9 +2.4**
ARU SS SS 11 01 12.6 -1.7
ARU pmax pmax
comp=Z,34nm,1.0s,mb5.0
ARU Arti 40.01 321 *e*P **P 10 52 12.8 +0.6**
comp=Z,24nm,0.7s,mb5.0
GUMO Guam 40.97 107 LR LR 11 08 13.4
comp=Z,90nm,20.2s,MS3.6,baz=91,slow=35
TIXI Tiksi 41.64 11 *e*P **P 10 52 24.6 -0.9**
TIXI pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
TIXI Tiksi 41.64 11 *e*P **P 10 52 24.7 -0.8**
comp=Z,5.1nm,0.8s,mb4.2
PETK Petropavlovsk- 43.04 45 P **P 10 52 36.0 -1.2**
comp=Z,3.0nm,0.6s,mb4.2,baz=277,slow=1.9,SNR=10
ZEI Tsey 48.56 301 *e*P **P 10 53 19.1 -1.9**
ZEI pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KIV Kislovodsk 49.27 303 *e*P **P 10 53 27.7 +1.4**
KIV pmax pmax
comp=Z,16nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,51nm,17.0s,MS3.6
BILL Bilibino 50.00 26⇑ *e*P **P 10 53 31.3 -0.2**
BILL *e* 10 55 26.2
BILL *eS* **S 11 00 43.6 +1.8**
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.0
BILL Bilibino 50.00 26 *e*P **P 10 53 30.2 -1.3**
comp=Z,5.1nm,1.0s,mb4.5
APA Apatity 53.66 333⇓ *i*P **P 10 54 00.1 +1.2**
APA MLR MLR
comp=Z,400nm,14.0s,MS4.6
JOF Joensuu 54.49 327 *e*P **P 10 54 04.4 -0.6**
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
JOF Joensuu 54.49 327 *ep* **P 10 54 04.4 -0.6**
comp=Z,6.3nm,0.6s,mb4.7
KEV Kevo 56.05 336 *e*P **P 10 54 13.6 -2.5**
KEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KEV Kevo 56.05 336 *ep* **P 10 54 13.6 -2.5**
comp=Z,10nm,0.8s,mb4.9
ASF Jabal al Asfar 56.57 290 P **P 10 54 21.4 +0.9**
comp=Z,5.7nm,0.6s,mb4.8,baz=263,slow=2.9,SNR=5.2
ARCES ARCESS Array B 56.58 336 P **P 10 54 19.8 -0.1**
comp=Z,4.8nm,0.7s,mb4.6,baz=90,slow=8.5,SNR=13
BRTR Keskin Array B 56.77 299 P **P 10 54 21.6 -0.1**
comp=Z,2.2nm,0.9s,mb4.2,baz=100,slow=6.4,SNR=6.6
KAF Kangasniemi 56.87 327 *e*P **P 10 54 21.4 -0.7**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 56.87 327 *ep* **P 10 54 21.4 -0.7**
comp=Z,6.1nm,0.6s,mb4.8
FINES FINESS Array B 57.06 326 P **P 10 54 23.3 -0.1**
comp=Z,3.7nm,0.4s,mb4.7,baz=90,slow=7.6,SNR=16
AKASG Malin Array Be 57.13 313 P **P 10 54 23.4 -0.8**
comp=Z,4.4nm,0.7s,mb4.6,baz=69,slow=6.5,SNR=9.1
SPITS Spitsbergen Ar 58.49 346 P **P 10 54 33.0 -0.3**
comp=Z,1.9nm,0.6s,mb4.3,baz=91,slow=5.8,SNR=9.2
SPB4 Spitsbergen Ar 58.50 346 P **P 10 54 32.0 -1.4**
WRAB Tennant Creek 58.99 147 *e*P **P 10 54 37.9 +0.5**
WRAB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WRAB Tennant Creek 58.99 147 *e*P **P 10 54 37.9 +0.5**
comp=Z,8.5nm,0.8s,mb4.8
WRA Warramunga Arr 58.99 147 P **P 10 54 37.5 0.0**
comp=Z,6.2nm,0.8s,mb4.7,baz=339,slow=7.3,SNR=36
TIRR Tirgusor 59.19 306 *e*P **P 10 54 38.3 -0.3**
TIRR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TIRR Tirgusor 59.19 306 *e*P **P 10 54 38.3 -0.3**
comp=Z,6.0nm,0.9s,mb4.6
BUR08 Bucovina Ar. S 60.44 310 *e*P **P 10 54 47.3 +0.1**
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 54 54.9 +0.8**
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 54 52.4 -1.7**
KWP pmax pmax
comp=Z,9.0nm,0.3s,mb5.4
KWP Kalwaria Pacla 61.46 313 *e*P **P 10 54 52.4 -1.7**
comp=Z,9.1nm,0.3s,mb5.4
ASAR Alice Springs 62.06 150 P **P 10 54 58.5 +0.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=337,slow=6.7,SNR=23
NB2 NORSAR Subarra 64.13 327 P **P 10 55 10.6 -1.1**
comp=Z,1.8nm,0.6s,mb4.3,baz=73,slow=6.9
NOA NORSAR Array B 64.13 327 P **P 10 55 10.8 -0.8**
comp=Z,3.4nm,0.8s,mb4.4,baz=72,slow=6.7,SNR=9.9
NOA NORSAR Array B 64.13 327 P **P 10 55 10.8 -0.8**
OKC Ostrava-Krasne 64.20 314 *e*P **P 10 55 09.9 -2.4**
OKC Ostrava-Krasne 64.20 314 *e*P **P 10 55 09.9 -2.4**
DPC Dobruska-Polom 65.12 315 *e*P **P 10 55 19.6 +1.2**
DPC Dobruska-Polom 65.12 315 *e*P **P 10 55 19.6 +1.2**
UPC Upice 65.25 315 *e*P **P 10 55 22.6 +3.4**
UPC Upice 65.25 315 *e*P **P 10 55 22.6 +3.4**
CLL Collm 66.72 317 *e*P **P 10 55 29.0 +0.3**
CLL *e* 10 55 37.0
CLL Collm 66.72 317 *e*P **P 10 55 29.0 +0.3**
CLL *e*PP PP 10 57 58.0 +2.8
GERES GERESS Array B 67.27 314 P **P 10 55 31.9 -0.2**
comp=Z,1.1nm,0.6s,mb4.0,baz=70,slow=5.8,SNR=8.1
GERES LR LR 11 26 19.4
comp=Z,82nm,18.4s,MS4.0,baz=306,slow=37
SOKA Soboth 67.29 312⇑ *i*P **P 10 55 32.4 0.0**
comp=Z,7.8nm,1.0s,mb4.7
BPAW Bear Paw Mtn. 67.42 27 *e*P **P 10 55 32.7 -0.1**
comp=Z,6.8nm,0.9s,mb4.7
PPLA Purkeypile 67.48 29 *e*P **P 10 55 33.6 +0.3**
comp=Z,49nm,1.5s,mb5.3
KBA Koelnbreinsper 68.19 313⇓ *i*P **P 10 55 38.1 +0.1**
comp=Z,3.8nm,0.8s,mb4.5
MCK McKinley 68.39 27 *e*P **P 10 55 38.9 -0.1**
MCK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MCK McKinley 68.39 27 *e*P **P 10 55 38.9 -0.1**
comp=Z,3.7nm,0.6s,mb4.6
PMR Palmer 69.36 29 *e*P **P 10 55 44.6 -0.4**
KDAK Kodiak Island 69.66 34 *i*P **P 10 55 47.2 +0.3**
FETA Feichten 69.84 313⇑ *i*P **P 10 55 48.1 -0.2**
comp=Z,5.7nm,0.8s,mb4.5
INK Inuvik 71.00 20 *e*P **P 10 55 54.4 -0.5**
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 71.00 20 *e*P **P 10 55 54.4 -0.5**
comp=Z,6.5nm,0.9s,mb4.6
CDF Champ du Feu 71.31 316 *e*P **P 10 55 56.9 -0.3**
KMBO Kilima Mbogo 71.73 257 P **P 10 55 59.9 -0.3**
comp=Z,2.1nm,0.7s,mb4.2,baz=53,slow=13,SNR=4.4
KMBO Kilima Mbogo 71.73 257 P **P 10 55 59.9 -0.3**
STKA Stephens Creek 72.54 148 P **P 10 56 04.3 -0.3**
comp=Z,2.1nm,0.6s,mb4.2,baz=322,slow=8.7,SNR=6.8
LPG La Plagne 72.99 313⇑ *i*P **P 10 56 07.9 +0.6**
comp=Z,23nm,0.7s,mb4.9
LPG La Plagne 72.99 313⇑ *i*P **P 10 56 07.9 +0.6**
LPG pmax pmax
comp=Z,11nm,0.7s,mb4.9
LPG La Plagne 72.99 313⇑ *i*P **P 10 56 07.9 +0.6**
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 73.00 313⇑ *i*P **P 10 56 07.8 +0.5**
comp=Z,19nm,0.6s,mb4.9
LPL La Plagne 73.00 313⇑ *i*P **P 10 56 07.8 +0.5**
LPL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPL La Plagne 73.00 313⇑ *i*P **P 10 56 07.8 +0.5**
comp=Z,9.5nm,0.6s,mb4.9
BNI Bardonecchia 73.25 313 *e*P **P 10 56 08.0 -0.9**
BNI pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BNI Bardonecchia 73.25 313 *e*P **P 10 56 08.0 -0.9**
comp=Z,7.1nm,1.1s,mb4.5
SMF Signal de Mont 74.20 315⇑ *i*P **P 10 56 13.8 -0.6**
comp=Z,18nm,1.1s,mb4.6
SMF Signal de Mont 74.20 315⇑ *i*P **P 10 56 13.8 -0.6**
SMF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SMF Signal de Mont 74.20 315⇑ *i*P **P 10 56 13.8 -0.6**
comp=Z,9.1nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.35 316⇑ *i*P **P 10 56 20.9 -0.2**
CAF Calviac 76.15 314⇑ *i*P **P 10 56 25.9 +0.2**
comp=Z,3.3nm,0.4s,mb4.3
CAF Calviac 76.15 314⇑ *i*P **P 10 56 25.9 +0.2**
CAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
CAF Calviac 76.15 314⇑ *i*P **P 10 56 25.9 +0.2**
comp=Z,1.6nm,0.4s,mb4.3
SKAG Skagway 76.16 27 *e*P **P 10 56 25.8 +0.4**
comp=Z,49nm,1.9s,mb5.1
YKA Yellowknife Ar 80.54 17 P **P 10 56 49.3 -0.3**
comp=Z,2.9nm,0.6s,mb4.4,baz=328,slow=5.1,SNR=59
YKA Yellowknife Ar 80.54 17 P **P 10 56 49.3 -0.3**
FCC Fort Churchill 88.09 10 *e*P **P 10 57 27.3 -0.7**
FCC pmax pmax
comp=Z,2.0nm,2.3s,mb3.9
FCC Fort Churchill 88.09 10 *e*P **P 10 57 27.3 -0.7**
comp=Z,1.6nm,2.3s,mb3.8
FFC Flin Flon 90.48 15 *i*P **P 10 57 39.8 +0.5**
TORD Torodi Ar. Bea 93.90 288 P **P 10 57 55.5 -0.3**
comp=Z,0.8nm,0.9s,mb4.2,baz=44,slow=3.6,SNR=3.2
QSPA South Pole Qui 121.90 180 *e*PKPdf PKPdf 11 03 30.3 -0.4

*IDC **14** 11:04:11.9±0.9, 3°.78N×126°.11E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, Error ellipse: s-maj=52.4km s-min=17.0km az=76.0*
*NEIC **14** 11:04:17.1±0.6, 3°.78N×126°.18E, h35km, mb4.2/1, Error ellipse: s-maj=36.2km s-min=10.7km az=76.0*
*ISCJB **14** 11:04:27.9±0.9, 3°.6N±0°.1×126°.1E±0°.2, h161km±7km, mb3.7/8, Error ellipse: s-maj=44.2km s-min=10.5km az=156.4*

*DJA **14** 11:04:36.2°.72N×125°.36E, h15km, MLv4.2/4*
ISC 14 11:04:29.4±0.8, 3°.6N±0°.1×126°.1E±0°.2, h155km±7km, n13, σ0.87/16, mb3.7/8, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.54**	**283**	P	**Pn**	**11 04 52.2**	**+0.6**
SGSI				S	**Sn**	**11 05 08.0**	**-0.4**
TNTI	**Ternate**	**3.07**	**155**	P	**Pn**	**11 05 19.1**	**+1.1**
LBMI	**Labuha**	**4.42**	**161**	P	**Pn**	**11 05 36.2**	**+0.8**
LBMI				S	**Sn**	**11 06 25.0**	**-1.8**
NLAI	**Namlea**	**6.84**	**171**	P	**Pn**	**11 06 07.3**	**-0.1**
NLAI				S	**Sn**	**11 07 17.5**	**-6.9**
FITZ	**Fitzroy Crossi**	**21.54**	**181**	P	**P**	**11 09 05.3**	**-1.2**
	1.6nm,0.5s,mb3.7,baz=6.9,slow=7.8,SNR=14						
WRAB	**Tennant Creek**	**24.74**	**161**	*e*P	**P**	**11 09 37.3**	**+0.7**
	2.2nm,0.3s,mb4.2						
WRA	**Warramunga Arr**	**24.74**	**161**	P	**P**	**11 09 37.5**	**+0.8**
	2.2nm,0.4s,mb4.0,baz=337,slow=10,SNR=37						
ASAR	**Alice Springs**	**28.13**	**165**	P	**P**	**11 10 07.8**	**+0.9**
	0.3nm,0.4s,mb3.4,baz=342,slow=6.9,SNR=9.4						
STKA	**Stephens Creek**	**38.22**	**158**	P	**P**	**11 11 34.0**	**-0.3**
	0.9nm,0.5s,mb3.7,baz=353,slow=10,SNR=5.6						
PETK	**Petropavlovsk-**	**55.83**	**22**	P	**P**	**11 13 49.1**	**-1.3**
	1.1nm,0.7s,mb3.8,baz=237,slow=6.5,SNR=3.0						
MKAR	**Makanchi Array**	**57.30**	**326**	P	**P**	**11 14 01.0**	**+0.1**
	0.3nm,0.4s,mb3.5,baz=121,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**57.30**	**326**	P	**P**	**11 14 01.0**	**+0.1**
KURK	**Kurchatov**	**61.52**	**328**	P	**P**	**11 14 29.6**	**-0.1**
	0.3nm,0.5s,mb3.4,baz=132,slow=5.0,SNR=4.2						

*IDC **14** 11:04:52.3±1.9, 31°.94N×104°.11E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.6/4, Error ellipse: s-maj=419.1km s-min=20.9km az=53.0*
ISC 14 11:04:54.0±1.2, 31°.9N±0°.4×104°.0E±0°.8, h10km, n5, σ0.88/6, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**5.88**	**156**	Pg	**Pg**	**11 06 47.4**	**+0.7**
GYA				Sg	**Sb**	**11 07 46.9**	**-0.4**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,60nm,0.7s						
MKAR	**Makanchi Array**	**22.33**	**318**	P	**P**	**11 09 51.7**	**-0.1**
	comp=E,0.4nm,0.5s,mb3.1,baz=120,slow=12,SNR=3.5						
KURK	**Kurchatov**	**26.57**	**323**	P	**P**	**11 10 32.1**	**+0.1**
	comp=E,0.9nm,0.6s,mb3.5,baz=128,slow=10,SNR=7.9						
WRA	**Warramunga Arr**	**59.17**	**146**	P	**P**	**11 14 56.0**	**+0.8**
	comp=E,0.7nm,0.6s,mb3.9,baz=338,slow=7.3,SNR=11						
ASAR	**Alice Springs**	**62.20**	**149**	P	**P**	**11 15 14.7**	**-1.1**
	comp=E,0.4nm,0.8s,mb3.6,baz=343,slow=7.1,SNR=3.8						

*IDC **14** 11:05:49.8±0.9, 32°.30N×105°.19E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML3.2/2, Error ellipse: s-maj=37.8km s-min=17.2km az=54.0*
*NEIC **14** 11:05:51.3±0.8, 32°.42N×105°.40E, h10km, Error ellipse: s-maj=17.7km s-min=13.0km az=59.0*
*BJI **14** 11:05:53.0, 32°.34N×105°.21E, h11km, ML3.7/4, Ms3.5/1*
ISC 14 11:05:49.8±1.7, 32°.30N±0°.06×105°.25E±0°.06, h2km±10km, n15, σ1.18/20, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.88**	**223**	Pg	**Sn**	**11 06 44.3**	**-3.0**
CD2				Sg	**Sn**	**11 06 48.0**	**+0.7**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**3.54**	**60**	Pg	**Pg**	**11 06 59.3**	**+1.7**
XAN				Sg	**Sg**	**11 07 43.8**	**+0.3**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,80nm,0.7s						
LZH	**Lanzhou**	**3.95**	**343**	Pn	**Pn**	**11 06 55.6**	**+4.1**
LZH				Pg	**Pg**	**11 07 05.8**	**+0.3**
LZH				Sn	**Sn**	**11 07 40.5**	**+2.1**
LZH				Sg	**Sg**	**11 07 55.8**	**-0.9**
LZH				smax			
	comp=N,210nm,0.5s						
LZH				smax			
	comp=E,340nm,0.6s						
LZH				LR	LR		
	comp=E,440nm,5.4s						
BJT	**Baijiatuau**	**11.71**	**46**	*e*Pn	**Pn**	**11 08 35.2**	**-2.7**
BJI	**Beijing**	**11.72**	**46**	Pg	**Pn**	**11 08 35.6**	**-2.5**
BJI				smax			
	comp=N,20nm,0.7s						
BJI				smax			
	comp=E,29nm,0.7s						
SONM	**Songino Array**	**15.54**	**3**	Pn	**Pn**	**11 09 29.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=185,slow=10,SNR=3.3						
KSRS	**Korea Array**	**19.29**	**68**	P	**Pn**	**11 10 16.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=253,slow=9.2,SNR=2.6						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**11 10 52.5**	**-0.8**
	comp=E,1.6nm,0.9s,mb3.5,baz=119,slow=9.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	**P**	**11 11 26.2**	**+1.4**
	comp=E,0.6nm,0.3s,mb3.6,baz=157,slow=8.4,SNR=2.5						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**11 11 31.9**	**-0.2**
	comp=E,0.9nm,0.8s,mb3.4,baz=127,slow=8.9,SNR=6.4						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**11 11 31.9**	**-0.2**
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**11 12 21.6**	**0.0**
	comp=E,0.5nm,0.5s,mb3.6,baz=89,slow=8.8,SNR=2.5						
WRA	**Warramunga Arr**	**58.94**	**148**	P	**P**	**11 15 51.1**	**+0.4**
	comp=E,0.5nm,0.4s,mb3.9,baz=318,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**62.02**	**150**	P	**P**	**11 16 12.2**	**+0.5**
	comp=E,0.4nm,0.5s,mb3.8,baz=335,slow=7.0,SNR=7.5						
YKA	**Yellowknife Ar**	**80.26**	**18**	P	**P**	**11 18 02.0**	**+0.2**
	comp=E,0.7nm,0.5s,mb3.9,baz=326,slow=5.1,SNR=26						

*IDC **14** 11:09:42.4±1.0, 31°.43N×103°.98E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/27, mbtmp3.5/7, ML3.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/31, Error ellipse: s-maj=39.3km s-min=19.5km az=58.0*
*NEIC **14** 11:09:44.7±0.7, 31°.53N×103°.91E, h10km, mb4.3/1, Error ellipse: s-maj=18.8km s-min=12.7km az=217.0*
*BJI **14** 11:09:45.5, 31°.35N×104°.08E, h14km, ML3.6/6*
ISC 14 11:09:44.6±1.2, 31°.50N±0°.05×103°.90E±0°.06, h9km±9km, n17, σ1.12/19, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.60**	**192**	Pg	**Pg**	**11 09 55.8**	**-0.5**
CD2				Sg	**Sg**	**11 10 03.4**	**-0.8**
CD2				smax			
	comp=N,4μm,0.6s						
LZH	**Lanzhou**	**4.57**	**359**	Sg	**Sg**	**11 12 20.8**	**+9.3**
LZH				smax			
	comp=N,35nm,0.5s						
LZH				smax			
	comp=E,84nm,1.1s						
LZH				LR	LR		
	comp=E,290nm,4.4s						
LZH				LR	LR		
	comp=Z,370nm,7.4s						
XAN	**Xi'an**	**4.93**	**58**	Pg	**Pb**	**11 11 11.9**	**+0.9**
XAN				Sg	**Sb**	**11 12 10.5**	**+0.1**
XAN				smax			
	comp=N,56nm,0.7s						
XAN				smax			
	comp=E,27nm,0.8s						
ENH	**Enshi**	**4.96**	**103**	*e*Pn	**Pn**	**11 11 01.1**	**+2.0**
ENH				*e*Sn	**Sn**	**11 11 55.7**	**-0.9**
GYA	**Guiyang**	**5.58**	**154**	Pg	**Pg**	**11 11 31.5**	**0.0**
GYA				Sg	**Sb**	**11 12 31.1**	**+2.0**
GYA				smax			
	comp=N,60nm,1.0s						
GYA				smax			
	comp=E,50nm,1.0s						
LSA	**Lhasa**	**11.13**	**264**	*e*Pn	**Pn**	**11 12 25.2**	**+1.3**
SONM	**Songino Array**	**16.42**	**6**	Pn	**Pn**	**11 13 34.3**	**-0.8**
	comp=E,0.3nm,0.3s,baz=205,slow=6.4,SNR=3.6						
KSRS	**Korea Array**	**20.65**	**67**	P	**P**	**11 14 23.6**	**-0.9**
	comp=E,1.0nm,0.8s,baz=253,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**11 14 46.1**	**+1.2**
	comp=E,1.1nm,0.7s,mb3.4,baz=124,slow=11,SNR=7.5						
AAK	**Ala-Archa**	**25.84**	**304**	LR	LR	11 27 29.0	
	comp=E,47nm,19.6s,baz=329,slow=41						
KURK	**Kurchatov**	**26.82**	**323**	P	**P**	**11 15 24.6**	**-0.4**
	comp=E,1.4nm,0.8s,mb3.5,baz=127,slow=9.5,SNR=8.4						
WRAB	**Tennant Creek**	**58.90**	**146**	*e*P	**P**	**11 19 45.4**	**+1.4**

comp=E,2.2nm,0.8s,mb4.2
WRA Warramunga Arr 58.90 146 P **P 11 19 42.1 -1.9**
comp=E,0.2nm,0.3s,mb3.6,baz=328,slow=9.1,SNR=13
ASAR Alice Springs 61.92 149 P **P 11 20 03.7 -0.8**
comp=E,0.4nm,0.8s,mb3.6,baz=354,slow=8.4,SNR=3.2
YKA Yellowknife Ar 81.36 17 P **P 11 22 00.2 -1.0**
comp=E,0.2nm,0.6s,mb3.2,baz=330,slow=5.1,SNR=5.0
YKA Yellowknife Ar 81.36 17 P **P 11 22 00.2 -1.0**
TXAR Lajitas Array 114.06 26 PKP PKiKP 11 28 24.8 +0.3
comp=E,0.1nm,0.4s,baz=64,slow=8.2,SNR=3.5

DJA 14 11:21:04,2°31S×100°28E,h24km,MLv3.5/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.53**	**211**	P	Pb	11 21 15.8	+1.2
PDSI	**Padang**	**1.40**	**7**	P	Pn	11 21 27.8	-0.3
SISI	**Saibi**	**1.54**	**309**	P	Pn	11 21 30.3	+0.3
SDSI	**Sungai Dareh**	**1.79**	**40**	P	Pn	11 21 34.3	+0.9
PPI	**Padang Panjang**	**1.84**	**4**	P	Pn	11 21 35.0	+0.8
MNAI	**Manna**	**3.36**	**127**	P	Pn	11 21 55.9	+0.9

*IDC **14** 11:25:25.1±1.0,31°.30N×103°.49E,h0km,mb3.9/8, mb1 4.0/9,mb1mx3.8/26,mbtmp3.9/9,MS3.4/4,Ms1 3.4/4, ms1mx2.8/31,Error ellipse: s-maj=37.0km s-min=17.1km az=53.0*
*NEIC **14** 11:25:27.5±0.6,31°.35N×103°.57E,h10km,mb4.2/5,Error ellipse: s-maj=16.4km s-min=8.9km az=47.0*
*BJI **14** 11:25:28.6,31°.40N×103°.50E,h11km,mB4.7/3,mb4.2/4, ML4.1/15,Ms3.9/4,Ms7 3.9/4*
ISC 14 11:25:26.0±1.0,31°.24N±0°.03×103°.58E±0°.07,h1km±7km, n27,σ1°19/34,mb4.1/13,MS3.3/4,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**156**	Pg	**Pg**	**11 25 37.0**	**+4.0**
CD2				Sg	**Sg**	**11 25 44.8**	**+7.1**
CD2				smax			
	comp=N,16μm,0.8s						
LZH	**Lanzhou**	**4.83**	**3**	Pg	**Pb**	**11 26 51.4**	**-0.1**
LZH				Sg	**Sg**	**11 28 01.3**	**0.0**
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,370nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.7s						
LZH				LR	LR		
	comp=Z,2μm,7.7s						
ENH	**Enshi**	**5.17**	**99**	*e*Pn	**Pn**	**11 26 47.1**	**+2.6**
	comp=Z,192nm,0.9s						
XAN	**Xi'an**	**5.30**	**57**	Pg	**Pg**	**11 27 03.5**	**-4.0**
XAN				Sg	**Sg**	**11 28 09.0**	**-7.1**
XAN				smax			
	comp=N,260nm,1.1s						
XAN				smax			
	comp=E,120nm,0.8s						
GYA	**Guiyang**	**5.48**	**150**	Pg	**Pg**	**11 27 12.3**	**+1.3**
GYA				Sn	**Sb**	**11 28 05.0**	**-3.7**
GYA				smax			
	comp=N,210nm,0.8s						
GYA				smax			
	comp=E,910nm,0.8s						
KMI	**Kunming**	**6.14**	**187**	Pn	**Pn**	**11 26 58.8**	**+1.0**
KMI				Pg	**Pg**	**11 27 23.5**	**-0.2**
KMI				Sn	**Sn**	**11 28 08.9**	**+0.1**
KMI				Sg	**Sg**	**11 28 42.4**	**-0.9**
KMI				smax			
	comp=N,43nm,1.2s						
KMI				smax			
	comp=E,44nm,1.4s						
GTA	**Gaotai**	**8.71**	**340**	*e*P	**Pn**	**11 27 35.8**	**+2.8**
GTA				pP		11 27 44.8	
GTA				S	**Sn**	**11 29 14.3**	**+2.4**
GTA				sS		11 29 19.4	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,54nm,4.8s						
GTA				LR	LR		
	comp=N,310nm,8.1s						
GTA				LR	LR		
	comp=E,210nm,9.3s						
GTA				LR	LR		
	comp=Z,170nm,7.5s						
WHN	**Wuhan**	**9.28**	**92**	P	**Pn**	**11 27 40.1**	**-0.8**
WHN				S	**Sn**	**11 29 17.3**	**-8.6**
WHN				LR	LR		
	comp=N,920nm,11.5s						
WHN				LR	LR		
	comp=E,1μm,9.2s						
WHN				LR	LR		
	comp=Z,910nm,5.8s						
SONM	**Songino Array**	**16.71**	**7**	Pn	**Pn**	**11 29 20.3**	**-0.9**
	baz=188,slow=9.9,SNR=6.4						
ULN	**Ulaanbaatar**	**16.81**	**8**	*e*Pn	**Pn**	**11 29 21.8**	**-0.7**
	comp=Z,1.5nm,0.5s						
KSRS	**Korea Array**	**21.00**	**66**	P	**P**	**11 30 11.1**	**+0.2**
	comp=Z,7.2nm,0.7s,mb4.1,baz=263,slow=11,SNR=31						
KSRS				LR	LR	11 38 10.0	
	comp=Z,39nm,19.5s,MS2.8,baz=190,slow=36						
CN2	**Changchun**	**21.32**	**48**	⇑P	**P**	**11 30 14.9**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**22.58**	**319**	*e*P	**P**	**11 30 27.5**	**-0.1**
MKAR	**Makanchi Array**	**22.58**	**319**	P	**P**	**11 30 26.1**	**-1.6**
	comp=Z,6.0nm,1.0s,mb4.1,baz=130,slow=8.8,SNR=22						
UCH	**Uchtor**	**25.63**	**303**	*e*P	**P**	**11 30 58.6**	**+1.7**
	comp=Z,4.8nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**25.75**	**304**	LR	LR	11 41 54.0	
	comp=Z,122nm,18.3s,MS3.5,baz=89,slow=38						
AML	**Almayashu**	**26.19**	**303**	*e*P	**P**	**11 31 03.8**	**+1.7**
	comp=Z,4.3nm,0.9s,mb4.1						
ZAA0	**Zalesovo Array**	**26.40**	**335**	*e*P	**P**	**11 31 03.2**	**-0.6**
ZALV	**Zalesovo Beam**	**26.40**	**335**	P	**P**	**11 31 02.5**	**-1.2**
	comp=Z,2.4nm,0.6s,mb4.0,baz=138,slow=9.7,SNR=7.7						
KURK	**Kurchatov**	**26.87**	**324**	P	**P**	**11 31 06.5**	**-1.5**
	comp=Z,5.3nm,0.8s,mb4.3,baz=128,slow=9.5,SNR=34						
KURK				LR	LR	11 42 57.7	
	comp=Z,66nm,20.0s,MS3.2,baz=175,slow=39						
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**11 31 56.1**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=122,slow=11,SNR=5.1						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**11 35 26.8**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.4						
WRAB				*e*		11 35 31.9	
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**11 35 26.5**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.8,baz=339,slow=7.4,SNR=7.3						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**11 35 46.6**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.7,baz=332,slow=6.8,SNR=4.3						
KHC	**Kasperske Hory**	**67.10**	**315**	*e*P	**P**	**11 36 21.1**	**+0.2**
	comp=Z,6.7nm,0.5s,mb5.1						
GERES	**GERESS Array B**	**67.13**	**314**	LR	LR	12 07 11.7	
	comp=Z,32nm,18.6s,MS3.6,baz=90,slow=37						
YKA	**Yellowknife Ar**	**81.69**	**17**	P	**P**	**11 37 43.9**	**-1.8**
	comp=Z,0.4nm,0.9s,mb3.5,baz=330,slow=5.4,SNR=2.8						

IDC 14 11:34:24.4±5.0,31°.14N×103°.82E,h0km,mb3.5/5, mb1 3.6/6,mb1mx3.4/26,mbtmp3.5/6,ML2.9/1,MS3.1/1, Ms1 3.1/1,ms1mx2.3/30,Error ellipse: s-maj=107.2km s-min=31.4km az=13.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.79**	**6**	Pn	Pn	11 38 21.7	+0.9
	0.0nm,0.3s,baz=181,slow=9.9,SNR=2.1						
KSRS	**Korea Array**	**20.86**	**66**	P	P	11 39 06.6	-1.2
	0.3nm,0.4s,baz=225,slow=43,SNR=2.9						
MKAR	**Makanchi Array**	**22.79**	**319**	P	P	11 39 29.1	+0.6
	1.1nm,0.9s,baz=133,slow=12,SNR=4.1						
AAK	**Ala-Archa**	**25.98**	**304**	LR	LR	11 51 40.6	
	comp=Z,42nm,18.4s,baz=205,slow=40						
ZALV	**Zalesovo Beam**	**26.58**	**335**	P	P	11 40 03.9	-0.1
	2.2nm,0.8s,baz=148,slow=8.4,SNR=2.7						
KURK	**Kurchatov**	**27.07**	**324**	P	P	11 40 07.5	-0.9
	1.4nm,0.9s,baz=127,slow=10,SNR=4.6						
YKA	**Yellowknife Ar**	**81.73**	**17**	P	P	11 46 45.3	+0.9
	0.2nm,0.6s,baz=333,slow=5.4,SNR=4.8						

*MOS **14** 11:35:09.4±0.9,4°.58S×153°.17E,h33km,mb5.0/8,Error ellipse: s-maj=15.8km s-min=9.7km az=84.0*

*ISCJB **14** 11:35:10.4±1.8,4°.58S±0°.05×153°.03E±0°.07,h39km±16km, mb4.7/36,MS3.9/7,Error ellipse: s-maj=12.6km s-min=7.9km az=13.9*
*BJI **14** 11:35:13.5,4°.60S×153°.00E,h72km,mB5.1/8,mb4.8/9, Ms5.0/2,Ms7 4.6/2*
*NEIC **14** 11:35:15.5±0.3,4°.65S×152°.97E,mb4.7/15,Error ellipse: s-maj=9.6km s-min=6.1km az=99.0*
*IDC **14** 11:35:16.3±2.6,4°.65S×152°.92E,h79km±23km,mb4.1/15, mb1 4.3/17,mb1mx4.2/20,mbtmp4.2/17,MS3.9/8, Ms1 3.9/8,ms1mx3.5/25,Error ellipse: s-maj=18.5km s-min=10.1km az=103.0*
*DJA **14** 11:35:36,5°.29S×151°.72E,h151km,mb5.0/5*
ISC 14 11:35:14.5±1.4,4°.62S±0°.05×152°.93E±0°.07,h59km±12km, n89,σ1°02/79,mb4.7/36,MS3.9/7,3C,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**13.36**	**225**	*e*Pn	**Pn**	**11 38 22.0**	**+0.6**
	261nm,1.0s						
CTA	**Charters Tower**	**16.69**	**202**	*e*P	**Pn**	**11 39 06.2**	**+1.7**
	10nm,0.8s						
CTA	**Charters Tower**	**16.69**	**202**	P	**Pn**	**11 39 04.8**	**+0.3**
	0.9nm,0.3s,baz=38,slow=11,SNR=8.3						
CTA				LR	LR	11 44 40.6	
	comp=Z,331nm,21.1s,baz=24,slow=34						
CTAO	**Charters Tower**	**16.69**	**202**	*e*P	**Pn**	**11 39 04.7**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,25nm,1.1s						
CTAO	**Charters Tower**	**16.69**	**202**	*e*Pn	**Pn**	**11 39 04.7**	**+0.2**
	comp=Z,25nm,1.1s						
GUMO	**Guam**	**19.78**	**336**	P	**Pn**	**11 39 41.4**	**-0.6**
	comp=Z,6.2nm,0.3s,baz=355,slow=23,SNR=3.9						
EIDS	**Eidsvold**	**20.71**	**185**	*e*P	**P**	**11 39 53.2**	**+3.3**
	comp=Z,14nm,0.8s						
DZM	**Mont Dzumac**	**21.73**	**144**	*e*P	**P**	**11 39 59.6**	**-1.4**
	comp=Z,90nm,1.1s,mb5.1						
DZM				*e*LR	LR	11 45 29.0	
	comp=Z,591nm,25.7s						
DZM	**Mont Dzumac**	**21.73**	**144**	*e*P	**P**	**11 39 59.9**	**-1.1**
	comp=Z,136nm,1.3s,mb5.2						
DZM				*e*pP		11 40 15.9	
KAKA	**Kakadu**	**21.78**	**247**	*e*P	**P**	**11 39 59.9**	**-1.7**
	comp=Z,174nm,0.5s,mb5.7						
KAKA	**Kakadu**	**21.78**	**247**	*e*P	**P**	**11 39 59.9**	**-1.7**
	comp=Z,414nm,0.5s						
KAKA				*e*S	**S**	**11 43 58.4**	**-0.8**
WRAB	**Tennant Creek**	**23.65**	**228**	*e*P	**P**	**11 40 20.8**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,118nm,0.6s,mb5.5						
WRAB	**Tennant Creek**	**23.65**	**228**	*e*P	**P**	**11 40 20.8**	**+0.2**
	comp=Z,118nm,0.6s,mb5.5						
WRA	**Warramunga Arr**	**23.66**	**228**	P	**P**	**11 40 20.7**	**0.0**
	comp=Z,82nm,0.5s,mb5.4,baz=52,slow=9.8,SNR=584						
WRA				S	**S**	**11 44 30.9**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=52,slow=16,SNR=5.4						
ARMA	**Armidale**	**25.69**	**183**	*e*P	**P**	**11 40 40.0**	**+0.9**
ARMA	**Armidale**	**25.69**	**183**	*e*P	**P**	**11 40 40.1**	**+1.0**
	comp=Z,12nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**26.37**	**222**	P	**P**	**11 40 45.1**	**-0.2**
	comp=Z,13nm,0.7s,mb4.6,baz=55,slow=9.1,SNR=166						
ASAR				S	**S**	**11 45 12.9**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=41,slow=17,SNR=2.6						
STKA	**Stephens Creek**	**29.13**	**200**	*e*P	**P**	**11 41 09.4**	**-0.4**
	comp=Z,4.5nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**29.13**	**200**	P	**P**	**11 41 08.7**	**-1.2**
	comp=Z,6.1nm,0.6s,mb4.5,baz=31,slow=13,SNR=19						
STKA				LR	LR	11 51 32.5	
	comp=Z,205nm,19.0s,MS3.8,baz=22,slow=34						
STKA	**Stephens Creek**	**29.13**	**200**	*e*P	**P**	**11 41 09.5**	**-0.3**
STKA				*e*PP	pP	11 41 26.8	+2.3
STKA	**Stephens Creek**	**29.13**	**200**	*e*P	**P**	**11 41 09.5**	**-0.3**
STKA				*e*pP	pP	11 41 26.8	+2.3
STKA				LR	LR	11 51 32.5	
DAV	**Davao City (W)**	**29.66**	**293**	LR	LR	11 50 41.2	
	comp=Z,155nm,20.4s,MS3.6,baz=294,slow=31						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	*e*P	**P**	**11 41 15.9**	**-0.6**
	comp=Z,61nm,0.4s,mb5.7						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**11 41 16.1**	**-0.4**
	comp=Z,48nm,0.5s,mb5.5,baz=64,slow=6.5,SNR=312						
FITZ				LR	LR	11 54 43.7	
	comp=Z,376nm,18.5s,MS4.1,baz=61,slow=39						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**11 41 16.1**	**-0.4**
FITZ				LR	LR	11 54 43.7	
TOO	**Toolangi**	**33.49**	**191**	*e*P	**P**	**11 41 48.8**	**+0.6**
FORT	**Forrest**	**35.01**	**219**	*e*P	**P**	**11 42 01.1**	**-0.3**
	comp=Z,34nm,0.6s,mb5.5						
AFI	**Afiamalu**	**35.99**	**107**	LR	LR	11 54 18.9	
	comp=Z,121nm,18.7s,MS3.7,baz=236,slow=32						
MBWA	**Marble Bar**	**36.17**	**240**	*e*P	**P**	**11 42 10.8**	**-0.7**
MBWA	**Marble Bar**	**36.17**	**240**	*e*P	**P**	**11 42 11.1**	**-0.4**
	comp=Z,32nm,0.4s,mb5.6						
URZ	**Urewera**	**40.08**	**150**	P	**P**	**11 42 44.8**	**+0.6**
	comp=Z,3.9nm,0.4s,mb4.5,baz=185,slow=8.5,SNR=5.9						
RPZ	**Rata Peaks**	**42.10**	**160**	P	**P**	**11 43 00.4**	**-0.2**
	comp=Z,11nm,0.5s,mb4.7,baz=39,slow=12,SNR=9.3						
KLBR	**Kellerberrin**	**42.52**	**227**	*e*P	**P**	**11 43 03.2**	**-1.1**
	comp=Z,6.7nm,0.3s,mb4.8						
KSM	**Kuching**	**43.01**	**277**	*e*P	**P**	**11 43 08.9**	**+0.3**
	comp=Z,9.3nm,0.6s,mb4.7						
MJAR	**Matsushiro Arr**	**43.20**	**343**	P	**P**	**11 43 08.3**	**-1.4**
	comp=Z,1.1nm,0.6s,mb3.8,baz=171,slow=9.1,SNR=4.0						
MJAR	**Matsushiro Arr**	**43.20**	**343**	P	**P**	**11 43 08.3**	**-1.4**
KSRS	**Korea Array**	**47.90**	**333**	P	**P**	**11 43 47.0**	**+0.2**
	comp=Z,3.5nm,0.8s,mb4.4,baz=148,slow=7.6,SNR=15						
KLR	**Kul'dur**	**56.71**	**344**	*e*P	**P**	**11 44 47.3**	**-4.6**
PETK	**Petropavlovsk-**	**57.65**	**3**	P	**P**	**11 44 58.3**	**-0.2**
	comp=Z,4.2nm,0.6s,mb4.7,baz=150,slow=6.2,SNR=7.7						
PPT	**Papeete**	**57.66**	**108**	*e*S	**S**	**11 52 56.5**	**+2.9**
	comp=Z,55nm,30.2s						
PPT				*e*LR	LR	12 02 00.5	
	comp=Z,78nm,23.5s						
PPT	**Papeete**	**57.66**	**108**	LR	LR	12 04 42.6	
	comp=Z,104nm,20.2s,MS3.9,baz=286,slow=31						
GTA	**Gaotai**	**65.61**	**317**	*e*P	**P**	**11 45 53.9**	**+1.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
SONM	**Songino Array**	**66.24**	**328**	P	**P**	**11 45 57.8**	**+1.5**
	comp=Z,1.3nm,0.5s,mb4.2,baz=143,slow=6.3,SNR=9.0						
TAOE	**Nuku Hiva Isla**	**66.52**	**98**	*e*LR	LR	12 06 04.6	
	comp=Z,140nm,30.4s						
SEY	**Seymchan**	**67.37**	**360**	*ce*P	**P**	**11 46 02.5**	**-0.6**
LSA	**Lhasa**	**68.24**	**304**	P	**P**	**11 46 10.5**	**+1.2**
ZAK	**Zakamensk**	**69.41**	**329**	*e*P	**P**	**11 46 16.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BILL	**Bilibino**	**73.10**	**5**	*e*P	**P**	**11 46 37.7**	**-0.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BILL	**Bilibino**	**73.10**	**5**	*e*P	**P**	**11 46 37.7**	**-0.4**
	comp=Z,3.8nm,0.7s,mb4.4						
CHUM	**Lake Minchumin**	**79.46**	**22**	*e*P	**P**	**11 47 13.5**	**-0.7**
	comp=Z,1.1nm,1.2s,mb4.7						
MK31	**Makanchi Array**	**80.28**	**319**	*e*P	**P**	**11 47 19.1**	**+0.1**
MKAR	**Makanchi Array**	**80.28**	**319**	P	**P**	**11 47 19.1**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.0,baz=88,slow=9.3,SNR=9.0						
MCK	**McKinley**	**80.65**	**23**	*e*P	**P**	**11 47 18.3**	**-2.3**
MCK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MCK	**McKinley**	**80.65**	**23**	*e*P	**P**	**11 47 18.3**	**-2.3**
	comp=Z,7.2nm,1.0s,mb4.6						
ZAA0	**Zalesovo Array**	**81.08**	**326**	P	**P**	**11 47 13.6**	**-9.4**
NVS	**Novosibirsk**	**82.25**	**327**	*e*P	**P**	**11 47 27.8**	**-1.5**
KURK	**Kurchatov**	**83.71**	**322**	P	**P**	**11 47 35.3**	**-1.5**
	comp=Z,1.2nm,0.5s,mb4.3,baz=105,slow=4.0,SNR=5.9						
KURK	**Kurchatov**	**83.71**	**322**	*c i*P	**P**	**11 47 37.0**	**+0.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
TKM2	**Tokmak 2**	**83.90**	**314**	*e*P	**P**	**11 47 38.9**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**83.90**	**314**	*e*P	**P**	**11 47 38.9**	**+0.8**
	comp=Z,3.7nm,0.6s,mb4.7						
KZA	**Kyzart**	**83.98**	**313**	P	**P**	**11 47 40.1**	**+1.7**
	SNR=9.2						
UCH	**Uchtor**	**84.54**	**313**	*e*P	**P**	**11 47 43.2**	**+1.8**
UCH				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
UCH	**Uchtor**	**84.54**	**313**	*e*P	**P**	**11 47 43.2**	**+1.8**
	comp=Z,9.0nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**84.64**	**313**	P	**P**	**11 47 43.0**	**+1.2**
	SNR=6.8						
AAK	**Ala-Archa**	**84.64**	**313**	P	**P**	**11 47 42.9**	**+1.1**
	comp=Z,4.2nm,0.6s,mb4.8,baz=118,slow=4.1,SNR=12						
USP	**Ospenovka**	**84.76**	**314**	P	**P**	**11 47 43.3**	**+0.9**
	SNR=7.7						
AML	**Almayashu**	**85.12**	**313**	P	**P**	**11 47 46.2**	**+1.9**
	SNR=8.4						
AML	**Almayashu**	**85.12**	**313**	*e*P	**P**	**11 47 45.9**	**+1.6**
AML				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
AML	**Almayashu**	**85.12**	**313**	*e*P	**P**	**11 47 45.9**	**+1.6**
	comp=Z,6.7nm,0.6s,mb5.0						
EKS2	**Erkin-Say**	**85.16**	**313**	P	**P**	**11 47 45.4**	**+1.0**
	SNR=8.1						
EKS2	**Erkin-Say**	**85.16**	**313**	*e*P	**P**	**11 47 45.1**	**+0.7**
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
EKS2	**Erkin-Say**	**85.16**	**313**	*e*P	**P**	**11 47 45.1**	**+0.6**
	comp=Z,5.2nm,0.6s,mb4.8						
QSPA	**South Pole Qui**	**85.34**	**180**	*e*P	**P**	**11 47 45.1**	**+0.5**
	comp=Z,15nm,1.1s,mb5.0						
MAW	**Mawson**	**85.78**	**203**	*e*P	**P**	**11 47 46.6**	**-0.4**
	comp=Z,3.4nm,0.5s,mb4.8						
MAW	**Mawson**	**85.78**	**203**	P	**P**	**11 47 46.4**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.6,baz=102,slow=5.5,SNR=28						
BVAR	**Borovoye Array**	**89.17**	**323**	P	**P**	**11 48 02.6**	**-1.0**
	comp=Z,5.4nm,0.6s,mb5.0,baz=107,slow=5.6,SNR=28						
BRVK	**Borovoye**	**89.24**	**323**	*c i*P	**P**	**11 48 02.7**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.9						
NVAR	**Mina Array Bea**	**91.87**	**52**	P	**P**	**11 48 16.3**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.8,baz=263,slow=7.2,SNR=2.4						
YKA	**Yellowknife Ar**	**95.21**	**28**	P	**P**	**11 48 29.9**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.9,baz=270,slow=4.7,SNR=8.8						
YKA				LR	LR	12 26 03.1	
	comp=Z,58nm,19.2s,MS4.1,baz=15,slow=32						
YKA	**Yellowknife Ar**	**95.21**	**28**	P	**P**	**11 48 29.9**	**-1.3**
YKA				LR	LR	12 26 03.1	
PDAR	**Pinedale Array**	**98.63**	**48**	LR	LR	12 25 06.7	
	comp=Z,81nm,19.8s,MS4.2,baz=80,slow=30						
CLL	**Collm**	**122.76**	**331**	*e*PKPdf	PKPdf	11 54 04.0	+0.3
GERES	**GERESS Array B**	**123.97**	**329**	PKP	PKPdf	11 54 05.6	-0.5
	comp=Z,1.4nm,0.6s,baz=90,slow=1.5,SNR=12						
LPAZ	**La Paz**	**134.39**	**118**	PKP	PKPdf	11 54 26.2	-0.6
	comp=Z,0.8nm,0.5s,baz=225,slow=6.2,SNR=5.4						
CPUP	**Villa Florida**	**137.51**	**138**	PKP	PKPdf	11 54 31.9	-0.5
	comp=Z,0.3nm,0.4s,baz=50,slow=1.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.37**	**289**	PKPbc	PKPbc	11 54 59.6	-0.7
	comp=Z,9.2nm,0.7s,baz=72,slow=2.2,SNR=50						
KIC	**Kosan Boka**	**157.71**	**275**	*e*PKP2	PKPab	11 55 37.7	-0.3
	comp=Z,37nm,1.2s						
TIC	**Toumodi**	**157.97**	**276**	*e*PKP2	PKPab	11 55 39.2	+0.1
	comp=Z,5.7nm,0.2s						
LIC	**Lamto**	**158.00**	**275**	*e*PKP2	PKPab	11 55 38.6	-0.7
	comp=Z,36nm,1.4s						

*ISCJB **14** 11:45:35.5±1.2,23°.63N±0°.05×102°.58E±0°.07,h11km±7km, mb4.0/13,MS3.6/4,Error ellipse: s-maj=12.2km s-min=6.7km az=23.8*
*IDC **14** 11:45:35.5±0.9,23°.73N×102°.59E,h0km,mb4.0/9, mb1 4.0/10,mb1mx3.8/27,mbtmp3.9/10,MS3.6/4, Ms1 3.6/4,ms1mx3.0/30,Error ellipse: s-maj=40.1km s-min=16.5km az=64.0*
*BJI **14** 11:45:36.1,23°.69N×102°.67E,h7km,mB4.5/2,mb4.4/5, ML4.1/11,Ms4.3/4,Ms7 3.9/4*
*NEIC **14** 11:45:37.4±0.5,23°.67N×102°.55E,h10km,mb4.2/4,Error ellipse: s-maj=13.8km s-min=9.8km az=80.0*
ISC 14 11:45:36.3±1.0,23°.61N±0°.04×102°.55E±0°.07,h3km±7km, n26,σ0°95/26,mb4.0/13,MS3.6/4,2D,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.51**	**6**	Pg	**Pg**	**11 46 05.1**	**-0.2**
KMI				Sg	**Sg**	**11 46 25.6**	**+0.7**
KMI				smax			
	comp=N,2μm,0.9s						
KMI				smax			
	comp=E,2μm,0.8s						
CHRT	**Chiangrai**	**4.53**	**215**	⇓PN	**Pg**	**11 47 02.0**	**-1.1**
CHRT	**Chiangrai**	**4.53**	**215**	PG	**Pg**	**11 47 09.5**	**+6.4**
CHRT				SG	**Sg**	**11 48 01.0**	**-0.8**
GYA	**Guiyang**	**4.68**	**52**	Pn	**Pn**	**11 46 47.6**	**-0.2**
GYA				Sn	**Sn**	**11 47 41.8**	**-0.9**
GYA				smax			
	comp=N,330nm,0.9s						
GYA				smax			
	comp=E,290nm,0.9s						
CHG	**Chiang Mai**	**5.84**	**216**	⇓P	**Pg**	**11 47 32.7**	**+4.5**
	comp=E,21nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.14**	**214**	Pn	**Pn**	**11 47 09.1**	**+1.3**
	baz=30,slow=12						
CMAR				LR	LR	11 49 29.8	
	comp=E,11μm,20.6s,baz=138,slow=38						
CMAR	**Chiang Mai Arr**	**6.14**	**214**	Pn	**Pn**	**11 47 09.1**	**+1.3**
CMAR				LR	LR	11 49 29.8	
KKTK	**Khon Kaen**	**7.24**	**178**	P	**Pg**	**11 47 55.0**	**-0.1**
UBT	**Ubonrachathani**	**8.64**	**164**	P	Px	11 47 53.0	
	comp=E,1μm,1.0s						
ENH	**Enshi**	**9.07**	**42**	*e*Pn	**Pn**	**11 47 48.8**	**+0.8**
	comp

ENH				*e*Sn	**Sn**	11 53 23.1	-4.4
SONM	**Songino Array**	**24.39**	**6**	P	**P**	11 54 50.4	-1.3
	comp=E,1.9nm,0.7s,mb3.6,baz=194,slow=9.9,SNR=8.1						
ULN	**Ulaanbaatar**	**24.49**	**7**	*e*P	**P**	11 54 53.5	+0.9
	comp=E,3.1nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	**28.28**	**330**	P	**P**	11 55 27.2	+0.4
	comp=E,1.2nm,0.6s,mb3.7,baz=137,slow=9.8,SNR=8.1						
AAK	**Ala-Archa**	**29.97**	**316**	P	**P**	11 55 43.3	+1.4
	comp=E,1.0nm,0.3s,mb4.0,baz=70,slow=6.8,SNR=5.5						
AML	**Almayashu**	**30.24**	**315**	*e*P	**P**	11 55 43.9	-0.4
	comp=E,3.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**32.81**	**332**	P	**P**	11 56 06.8	0.0
	comp=E,1.2nm,0.6s,mb4.0,baz=132,slow=10.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**33.10**	**341**	P	**P**	11 56 09.1	-0.2
	comp=E,0.8nm,0.4s,mb4.0,baz=147,slow=8.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**33.10**	**341**	P	**P**	11 56 09.1	-0.2
WRA	**Warramunga Arr**	**53.25**	**142**	P	**P**	11 58 51.4	-1.0
	comp=E,0.8nm,0.6s,mb3.8,baz=331,slow=8.1,SNR=9.4						
ASAR	**Alice Springs**	**56.01**	**145**	P	**P**	11 59 13.3	+1.0
	comp=E,0.5nm,0.9s,mb3.5,baz=324,slow=6.7,SNR=5.9						
AKASG	**Malin Array Be**	**61.64**	**316**	P	**P**	11 59 50.2	-1.0
	comp=E,1.0nm,0.7s,mb4.1,baz=67,slow=8.6,SNR=3.2						

*CSEM **14** 11:56:22.9±0.2, 37°.89N×27°.64E, h20km, MD2.9, Error ellipse: s-maj=6.8km s-min=2.7km az=137.0*

DDA 14 11:56:22.3, 38°.01N×27°.55E, h7km±4km, Md2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.40**	**219**	*i* P	Pg	11 56 31.0	+1.0
GCAM				*i* S	Sg	11 56 35.6	+0.4
GCAM	**G?zelcaml?**	**0.40**	**219**	*i* P	Pg	11 56 31.0	+1.0
GCAM				*i* S	Sg	11 56 35.6	+0.4
AKS	**Akhisar**	**0.89**	**13**	*e*PG	Pg	11 56 42.5	+3.0
AKS				*e*SG	Sg	11 56 55.0	+3.9
AKS	**Akhisar**	**0.89**	**13**	*e*Pg	Pg	11 56 42.5	+3.0
AKS				*e*Sg	Sg	11 56 55.0	+3.9
MANT	**Manisa**	**0.93**	**59**	*i* P	Pg	11 56 40.4	+0.2
MANT				*i* S	Sg	11 56 53.1	+0.9
MANT	**Manisa**	**0.93**	**59**	*i* P	Pg	11 56 40.4	+0.2
MANT				*i* S	Sg	11 56 53.1	+0.8
KULA	**Kula-Manisa**	**1.01**	**60**	*e*PG	Pg	11 56 42.9	+1.1
KULA	**Kula-Manisa**	**1.01**	**60**	*e*Pg	Pg	11 56 42.9	+1.1

*MOS **14** 11:56:28.7±0.7, 55°.00N×163°.04E, h11km, mb4.2/1, Error ellipse: s-maj=22.8km s-min=12.8km az=71.4*

KRSC 14 11:56:28.4±0.1, 55°.02N×163°.05E, h10km±10km, ML4.0, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.90**	**239**	*i* P	Pg	11 56 45.7	+0.1
MKZ				*i* S	Sg	11 56 58.5	+1.3
KBTR	**Krutoberegovo**	**1.20**	**354**	*i* P	Pb	11 56 51.5	+0.3
KBTR				*i* S	Sb	11 57 07.8	+1.1
ZLN	**Zelenaya**	**1.62**	**309**	*i* P	Pn	11 56 57.6	+0.6
ZLN				*i* S	Sn	11 57 19.3	+1.4
BZGR	**Bezymyannyi-Gr**	**1.63**	**305**	*i* P	Pn	11 56 57.7	+0.6
BZGR				*i* S	Sn	11 57 20.0	+2.0
BKI	**Bering**	**1.69**	**83**	*e*P	Pn	11 56 59.0	+1.1
BKI				*i* S	Sn	11 57 21.9	+2.3
KMNR	**Kamenistaya**	**1.77**	**296**	*i* P	Pn	11 56 59.4	+0.4
KMNR				*i* S	Sn	11 57 22.2	+0.7
KRSR	**Krestovskiy**	**1.85**	**311**	*e*P	Pn	11 57 00.7	+0.6
KRSR				*i* S	Sn	11 57 23.9	+0.3
KPT	**Kopyto**	**1.87**	**302**	*e*P	Pn	11 57 01.3	+0.9
KPT				*i* S	Sn	11 57 24.5	+0.5
KLY	**Klyuchi**	**1.88**	**315**	*e*P	Pn	11 57 00.4	-0.1
KLY				*i* S	Sn	11 57 23.1	-1.1
SRKR	**Sorokina**	**1.95**	**328**	*i* P	Pn	11 57 02.5	+1.0
SRKR				*e*S	Sn	11 57 27.2	+1.2
KOZR	**Kozyr**	**2.08**	**302**	PN	Pn	11 57 04.8	+1.6
KOZR				S	Sn	11 57 31.8	+2.7
KOZ	**Kozyrevsk**	**2.08**	**301**	*e*P	Pn	11 57 04.8	+1.5
KOZ				*i* S	Sn	11 57 31.8	+2.5
SRDR	**Sredinnyy**	**2.29**	**306**	*e*P	Pn	11 57 08.0	+1.8
SRDR				*i* S	Sn	11 57 37.2	+2.8
KII	**Karymskiy**	**2.32**	**246**	*e*P	Pn	11 57 08.2	+1.6
KII				*i* S	Sn	11 57 36.7	+1.6
SPN	**Mys Shipunski**	**2.62**	**224**	*e*P	Pn	11 57 11.3	+0.5
SPN				*i* S	Sn	11 57 42.0	-0.6
NLC	**Nalytchevo**	**2.86**	**231**	*e*P	Pn	11 57 15.5	+1.5
NLC				*i* S	Sn	11 57 49.8	+1.3
SDLR	**Sedlovina**	**3.01**	**236**	*e*P	Pn	11 57 18.1	+2.1
SDLR				*i* S	Sn	11 57 54.8	+2.7
GNL	**Ganaly**	**3.27**	**248**	*i* P	Pn	11 57 21.6	+2.0
PET	**Petropavlovsk**	**3.27**	**234**	⇓*i*PN	Pn	11 57 22.7	+3.0
PET				*e*S	Sn	11 58 02.5	+3.8
PET				pmax	pmax		
	comp=Z,44nm,0.5s						
PET				smax			
	comp=N,114nm,0.5s						
PET				smax			
	comp=E,65nm,0.4s						
PET	**Petropavlovsk**	**3.27**	**234**	*e*P	Pn	11 57 22.0	+2.3
PET				*i* S	Sn	11 58 00.2	+1.5
RUS	**Russkaya**	**3.74**	**228**	*e*P	Pn	11 57 27.7	+1.6
RUS				*i* S	Sn	11 58 09.6	-0.5
MIPR	**Malaya Ipel'ka**	**4.64**	**236**	P	Pn	11 57 41.4	+2.9

*CSEM **14** 12:00:43.9±0.3, 38°.18N×11°.50E, h10km, ML3.2/9, Error ellipse: s-maj=9.1km s-min=5.4km az=45.0*
*ISCJB **14** 12:00:43.3±0.4, 38°.31N±0°.04×11°.32E±0°.05, h10km, Error ellipse: s-maj=7.4km s-min=3.4km az=139.8*
*ROM **14** 12:00:44.4±0.4, 38°.21N×11°.49E, h5km, Ml3.2/3, Error ellipse: s-maj=9.3km s-min=4.6km az=33.0*
*NEIC **14** 12:00:45.0, 38°.24N×11°.51E, h10km, ML3.2(ROM), ML3.3(LDG), After ROM.*
*LDG **14** 12:00:46.1±0.3, 38°.02N×11°.32E, h10km, Ml3.3/9, Error ellipse: s-maj=13.3km s-min=3.5km az=87.0*
*TUN **14** 12:00:53.1, 37°.11N×10°.46E, h2km, MD3.0*

ISC 14 12:00:44.7±0.4, 38°.24N±0°.04×11°.40E±0°.05, h10km, n46, σ1§42/72, Scily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERC	**Erice**	**0.96**	**101**	Pg	**Pg**	**12 01 02.5**	**-0.6**
ERC	**Erice**	**0.96**	**101**	Pg	**Pg**	**12 01 02.5**	**-0.6**
USI	**Ustica**	**1.48**	**71**	Pg	**Pn**	**12 01 10.3**	**-1.0**
	291nm,0.2s						
USI	**Ustica**	**1.48**	**71**	Pg	**Pn**	**12 01 10.3**	**-1.0**
	291nm,0.2s						
PTS	**Pantelleria**	**1.50**	**161**	Pg	**Pn**	**12 01 11.1**	**-0.5**
	161nm,0.2s						
PTS	**Pantelleria**	**1.50**	**161**	Pg	**Pn**	**12 01 11.1**	**-0.5**
	161nm,0.2s						
CORL	**Corleone**	**1.54**	**102**	Pg	**Pn**	**12 01 11.7**	**-0.5**
	460nm,0.6s						
CORL	**Corleone**	**1.54**	**102**	Pg	**Pn**	**12 01 11.7**	**-0.5**
	460nm,0.6s						
KCHT	**Kechabta**	**1.61**	**226**	*i* P	**Pn**	**12 01 12.0**	**-1.2**
MBZ	**Menzel Bouzelf**	**1.66**	**201**	*i* P	**Pn**	**12 01 13.0**	**-0.8**
VSL	**Villasalto**	**2.02**	**309**	*e*Pn	**Pn**	**12 01 21.1**	**+2.3**
VSL				*e*Sn	**Sn**	**12 01 45.7**	**+1.6**
VSL	**Villasalto**	**2.02**	**309**	Pg	**Pn**	**12 01 21.1**	**+2.3**
VSL				Sg	**Sg**	**12 01 46.4**	**-3.2**
	164nm,0.2s						
VSL	**Villasalto**	**2.02**	**309**	Pg	**Pn**	**12 01 21.1**	**+2.3**
VSL				*e*Sn	**Sn**	**12 01 45.7**	**+1.7**
VSL				Sg	**Sg**	**12 01 46.4**	**-3.2**
	164nm,0.2s						
FAVR	**Favara**	**2.04**	**118**	Pg	**Pn**	**12 01 20.3**	**+1.2**
	126nm,0.9s						
FAVR	**Favara**	**2.04**	**118**	Pg	**Pn**	**12 01 20.3**	**+1.2**
	126nm,0.9s						
GIB	**Gibilmanna**	**2.09**	**96**	Pg	**Pn**	**12 01 18.5**	**-1.2**
GIB	**Gibilmanna**	**2.09**	**96**	Pg	**Pn**	**12 01 18.5**	**-1.2**
CSLB	**Castelbuono**	**2.12**	**97**	Pg	**Pn**	**12 01 19.0**	**-1.2**
	38nm,0.2s						
RESU	**Resuttano**	**2.18**	**105**	Pg	**Pn**	**12 01 22.9**	**+1.9**
RESU	**Resuttano**	**2.18**	**105**	Pg	**Pn**	**12 01 22.9**	**+1.9**
DGI	**Dorgali Grotta**	**2.50**	**327**	Pg	**Pn**	**12 01 28.8**	**+3.4**
DGI				Sg	**Sg**	**12 01 58.3**	**-6.8**
	45nm,0.2s						
DGI	**Dorgali Grotta**	**2.50**	**327**	Pg	**Pn**	**12 01 28.8**	**+3.4**
DGI				Sg	**Sg**	**12 01 58.3**	**-6.8**
	45nm,0.2s						
KRIT	**Krib**	**2.65**	**225**	*i* P	**Pn**	**12 01 26.0**	**-1.4**
PGF	**Pioggiola**	**4.68**	**338**	*e*Pn	**Pn**	**12 01 57.5**	**+2.1**
PGF	**Pioggiola**	**4.68**	**338**	*e*P	**Pn**	**12 02 00.7**	**+5.3**
PGF				*e*Sn	**Sn**	**12 02 49.9**	**+0.2**
	15nm,0.3s						
PGF	**Pioggiola**	**4.68**	**338**	*e*P	**Pn**	**12 02 00.7**	**+5.3**
PGF				*e*Sn	**Sn**	**12 02 49.9**	**+0.2**
PGF	**Pioggiola**	**4.68**	**338**	*e*Pn	**Pn**	**12 01 57.5**	**+2.1**
PGF	**Pioggiola**	**4.68**	**338**	*e*P	**Pn**	**12 02 00.7**	**+5.3**
PGF				*e*Sn	**Sn**	**12 02 49.9**	**+0.2**
	7.6nm,0.3s						
LMR	**La Mourre**	**6.30**	**325**	*e*Pn	**Pn**	**12 02 18.8**	**+1.2**
LMR				*e*Sn	**Sn**	**12 03 28.7**	**-0.9**
	2.9nm,0.3s						
LMR	**La Mourre**	**6.30**	**325**	*e*Pn	**Pn**	**12 02 18.8**	**+1.2**
LMR				*e*Sn	**Sn**	**12 03 28.7**	**-0.9**
	1.5nm,0.3s						
SBF	**Sospel**	**6.37**	**333**	*e*Pn	**Pn**	**12 02 20.2**	**+1.6**
SBF				*e*Sn	**Sn**	**12 03 30.5**	**-0.8**
	6.0nm,0.3s						
SBF	**Sospel**	**6.37**	**333**	*e*Pn	**Pn**	**12 02 20.2**	**+1.6**
SBF				*e*Sn	**Sn**	**12 03 30.5**	**-0.8**
	3.0nm,0.3s						
FRF	**La Foret Royal**	**6.42**	**327**	*e*Pn	**Pn**	**12 02 20.7**	**+1.4**
FRF				*e*Sn	**Sn**	**12 03 31.6**	**-1.0**
	5.3nm,0.5s						
FRF	**La Foret Royal**	**6.42**	**327**	*e*Pn	**Pn**	**12 02 20.7**	**+1.4**
FRF				*e*Sn	**Sn**	**12 03 31.6**	**-1.0**
	2.7nm,0.5s						
SMRF	**Simiane la Rot**	**7.22**	**324**	*e*Pn	**Pn**	**12 02 31.7**	**+1.4**
SMRF				*e*Sn	**Sn**	**12 03 50.9**	**-1.5**
	3.6nm,0.6s						
SMRF	**Simiane la Rot**	**7.22**	**324**	*e*Pn	**Pn**	**12 02 31.7**	**+1.4**
SMRF				*e*Sn	**Sn**	**12 03 50.9**	**-1.5**
	1.8nm,0.6s						
MBDF	**Montbardon**	**7.36**	**333**	*e*P	**Pn**	**12 02 38.8**	**+6.7**
MBDF				*e*Sn	**Sn**	**12 03 54.5**	**-1.1**
	4.3nm,0.4s						
MBDF	**Montbardon**	**7.36**	**333**	*e*Pn	**Pn**	**12 02 33.9**	**+1.8**
MBDF				*e*Sn	**Sn**	**12 03 54.5**	**-1.1**
MBDF	**Montbardon**	**7.36**	**333**	*e*Pn	**Pn**	**12 02 33.9**	**+1.8**
MBDF	**Montbardon**	**7.36**	**333**	*e*P	**Pn**	**12 02 38.8**	**+6.7**
MBDF				*e*Sn	**Sn**	**12 03 54.5**	**-1.1**
	2.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.85**	**330**	*e*Pn	**Pn**	**12 02 40.5**	**+1.6**
ORIF				*e*Sn	**Sn**	**12 04 05.8**	**-2.0**
	2.8nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.85**	**330**	*e*Pn	**Pn**	**12 02 40.5**	**+1.6**
ORIF				*e*Sn	**Sn**	**12 04 05.8**	**-2.0**
	1.4nm,0.4s						
LPG	**La Plagne**	**8.04**	**336**	*e*Pn	**Pn**	**12 02 43.3**	**+1.8**
LPG				*e*Sn	**Sn**	**12 04 11.0**	**-1.4**
	2.0nm,0.5s						
LPG	**La Plagne**	**8.04**	**336**	*e*Pn	**Pn**	**12 02 43.3**	**+1.8**
LPG				*e*Sn	**Sn**	**12 04 11.0**	**-1.4**
	1.0nm,0.5s						
LPL	**La Plagne**	**8.06**	**336**	*e*Pn	**Pn**	**12 02 43.5**	**+1.7**
LPL				*e*Sn	**Sn**	**12 04 11.2**	**-1.8**
	2.1nm,0.5s						
LPL	**La Plagne**	**8.06**	**336**	*e*Pn	**Pn**	**12 02 43.5**	**+1.7**
LPL				*e*Sn	**Sn**	**12 04 11.2**	**-1.8**
	1.0nm,0.5s						

*ISCJB **14** 12:07:28.6±0.6, 32°.37N±0°.05×105°.42E±0°.05, h10km, mb3.4/6, Error ellipse: s-maj=7.0km s-min=5.9km az=165.3*
*IDC **14** 12:07:29.4±1.1, 32°.42N×105°.13E, h0km, mb3.3/5, mb1 3.5/7, mb1mx3.4/27, mbtmp3.3/7, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/20, Error ellipse: s-maj=42.6km s-min=20.3km az=61.0*
*NEIC **14** 12:07:30.4±0.9, 32°.48N×105°.34E, h10km, mb4.1/1, Error ellipse: s-maj=30.2km s-min=11.0km az=49.0*
*BJI **14** 12:07:32.7, 32°.65N×105°.23E, h7km, mb3.7/2, ML3.7/8, Ms3.5/3, Ms7 3.4/4*

ISC 14 12:07:30.2±0.5, 32°.47N±0°.04×105°.32E±0°.05, h10km, n14, σ1§22/16, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**221**	Pg	**Pg**	**12 08 08.1**	**-1.3**
CD2				Sg	**Sg**	**12 08 36.6**	**+0.7**
CD2				smax			
	comp=N,3μm,1.2s						
XAN	**Xi'an**	**3.40**	**62**	Pg	**Pg**	**12 08 35.6**	**+0.2**
LZH	**Lanzhou**	**3.81**	**342**	Pg	**Pg**	**12 08 40.9**	**-2.4**
LZH				Sg	**Sg**	**12 09 27.4**	**-5.3**
LZH				smax			
	comp=N,190nm,0.5s						
LZH				smax			
	comp=E,300nm,1.0s						
LZH				LR	LR		
	comp=E,380nm,5.2s						
LZH				LR	LR		
	comp=Z,440nm,7.0s						
ENH	**Enshi**	**4.18**	**120**	*e*Pg	**Pg**	**12 08 49.1**	**-1.2**
ENH				*e*Sg	**Sg**	**12 09 43.3**	**-1.2**
GTA	**Gaotai**	**8.24**	**329**	*e*P	**Pn**	**12 09 34.8**	**+5.0**
GTA				pP		12 09 39.1	
GTA				sP		12 09 42.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**15.37**	**3**	Pn	**Pn**	**12 11 07.5**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=190,slow=7.3,SNR=2.6						
KSRS	**Korea Array**	**19.17**	**69**	P	**Pn**	**12 11 56.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=255,slow=9.8,SNR=4.7						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**12 12 31.9**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.0,baz=110,slow=11,SNR=3.8						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**12 13 03.2**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.2,baz=164,slow=7.3,SNR=2.3						
BRVK	**Borovoye**	**32.47**	**320**	P	**P**	**12 13 58.5**	**-2.0**
	comp=Z,2.0nm,0.7s,mb4.1						
MMAI	**Mount Meron Ar**	**57.75**	**291**	LR	LR	12 46 33.0	
	comp=Z,32nm,20.1s,baz=55,slow=41						
WRA	**Warramunga Arr**	**59.05**	**148**	P	**P**	**12 17 31.5**	**+1.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=340,slow=7.6,SNR=6.3						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**12 17 52.8**	**+1.3**
	comp=Z,0.4nm,0.9s,mb3.5,baz=333,slow=5.4,SNR=8.1						
YKA	**Yellowknife Ar**	**80.09**	**18**	P	**P**	**12 19 41.4**	**+1.5**
	comp=Z,0.1nm,0.7s,mb2.8,baz=333,slow=5.1,SNR=2.8						

*CSEM **14** 12:11:34.1, 46°.26N×7°.01E, h-0km, ML0.8, Suspected Mining explosion. After ZUR*

ZUR 14 12:11:34.1, 46°.26N×7°.01E, h-0km±3km, ML0.8/5, 8C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRYON	**Gryon**	**0.07**	**99**	⇑*i*Pg		12 11 35.8	
	36nm,0.6s						
GRYON	**Gryon**	**0.07**	**99**	⇑*i*Pg		12 11 35.8	
	36nm,0.6s						
AIGLE	**Aigle**	**0.09**	**335**	⇑*i*Pg		12 11 36.1	
	228nm,0.7s						
AIGLE				*e*Sg		12 11 37.7	
	228nm,0.7s						
AIGLE	**Aigle**	**0.09**	**335**	⇑*i*Pg		12 11 36.1	
	228nm,0.7s						
AIGLE				*e*Sg		12 11 37.7	
	228nm,0.7s						
SALAN	**Lac Salanfe**	**0.12**	**191**	⇑*i*Pg		12 11 36.8	
	36nm,1.0s						
SALAN	**Lac Salanfe**	**0.12**	**191**	⇑*i*Pg		12 11 36.8	
	36nm,1.0s						
EMV	**Vieux Emosson**	**0.21**	**201**	⇑*i*Pg		12 11 38.5	
	67nm,0.7s						
EMV				*e*Sg		12 11 41.9	
	67nm,0.7s						
EMV	**Vieux Emosson**	**0.21**	**201**	⇑*i*Pg		12 11 38.5	
	67nm,0.7s						
EMV				*e*Sg		12 11 41.9	
	67nm,0.7s						
SENIN	**Lac Senin/Sane**	**0.23**	**63**	*e*Pg		12 11 38.8	
	31nm,1.0s						
SENIN				*e*Sg		12 11 42.5	
	31nm,1.0s						
SENIN	**Lac Senin/Sane**	**0.23**	**63**	*e*Pg		12 11 38.8	
	31nm,1.0s						
SENIN				*e*Sg		12 11 42.5	
	31nm,1.0s						

*ISCJB **14** 12:13:28.9±0.8, 32°.33N±0°.06×105°.0E±0°.2, h10km, mb3.3/3, Error ellipse: s-maj=20.6km s-min=7.2km az=164.9*

*IDC **14** 12:13:30.4±2.8, 31°.82N×104°.43E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/26, mbtmp3.3/3, Error ellipse: s-maj=461.5km s-min=29.3km az=52.0*
*BJI **14** 12:13:33.4, 32°.42N×105°.15E, h17km, ML3.6/8, Ms3.3/3, Ms7 3.2/3*

ISC 14 12:13:31.0±0.8, 32°.41N±0°.05×105°.2E±0°.1, h10km, n6, σ1§02/11, mb3.3/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.53**	**61**	Pn	**Pn**	**12 14 27.6**	**+1.7**
XAN				Pg	**Pg**	**12 14 37.6**	**-1.0**
XAN				Sn	**Sn**	**12 15 15.9**	**+8.3**
XAN				smax			
	comp=N,160nm,0.9s						
XAN				smax			
	comp=E,76nm,0.8s						
LZH	**Lanzhou**	**3.84**	**344**	Pg	**Pg**	**12 14 42.8**	**-1.7**
LZH				Sn	**Sn**	**12 15 16.0**	**+0.8**
LZH				Sg	**Sg**	**12 15 29.9**	**-4.3**
LZH				smax			
	comp=N,210nm,0.5s						
LZH				smax			
	comp=E,270nm,0.5s						
LZH				LR	LR		
	comp=E,340nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,5.5s						
GYA	**Guiyang**	**6.06**	**167**	Pn	**Pn**	**12 15 05.5**	**+4.8**
GYA				Sn	**Sn**	**12 16 09.9**	**-0.3**
GYA				smax			
	comp=N,30nm,0.7s						
GYA				smax			
	comp=E,30nm,0.8s						
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**12 18 32.8**	**+0.7**
	comp=E,0.4nm,0.6s,mb3.0,baz=108,slow=8.9,SNR=4.0						
WRA	**Warramunga Arr**	**59.06**	**148**	P	**P**	**12 23 31.5**	**+0.1**
	comp=E,0.3nm,0.6s,mb3.5,baz=337,slow=7.6,SNR=7.1						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**12 23 52.1**	**-0.2**
	comp=E,0.1nm,0.4s,mb3.3,baz=330,slow=6.8,SNR=5.1						

IDC 14 12:14:53.3±1.4, 32°.21N×104°.52E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=82.4km s-min=25.1km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.40**	**317**	P	P	12 19 54.2	+1.0
	0.2nm,0.4s,baz=116,slow=12,SNR=3.0						
ZALV	**Zalesovo Beam**	**25.89**	**333**	P	P	12 20 25.6	-1.0
	1.4nm,0.5s,baz=142,slow=8.4,SNR=5.2						
WRA	**Warramunga Arr**	**59.20**	**147**	P	P	12 24 56.3	+0.1
	0.5nm,0.9s,baz=329,slow=8.8,SNR=3.3						
YKA	**Yellowknife Ar**	**80.54**	**17**	P	P	12 27 07.2	+0.2
	0.1nm,0.5s,baz=328,slow=5.3,SNR=4.9						

*IDC **14** 12:27:58.0±0.6, 31°.71N×104°.15E, h0km, mb4.3/21, mb1 4.4/22, mb1mx4.4/29, mbtmp4.3/22, ML3.2/1, MS3.5/7, Ms1 3.6/7, ms1mx3.2/30, Error ellipse: s-maj=20.4km s-min=12.7km az=41.0*
*NEIC **14** 12:27:59.7±0.3, 31°.75N×104°.15E, h10km, mb4.6/21, Error ellipse: s-maj=7.3km s-min=5.4km az=211.0*
*BJI **14** 12:27:59.2, 31°.74N×104°.36E, h13km, mB4.7/15, mb4.5/24, ML4.2/21, Ms4.2/29, Ms7 4.0/23*
*ISCJB **14** 12:28:00.0±0.9, 31°.70N±0°.03×104°.17E±0°.04, h27km±7km, mb4.5/50, MS3.8/13, Error ellipse: s-maj=5.4km s-min=5.1km az=164.8*
*MOS **14** 12:28:01.0±0.8, 31°.74N×104°.18E, h33km, mb4.8/27, MS4.0/6, Error ellipse: s-maj=10.3km s-min=5.8km az=115.4*

ISC 14 12:28:00.8±0.7, 31°.69N±0°.03×104°.19E±0°.03, h18km±5km, n153, σ1§15/166, mb4.5/50, MS3.8/13, 13C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.86**	**206**	Pg	**Pg**	**12 28 17.5**	**-0.1**
CD2				Sg	**Sg**	**12 28 30.1**	**+1.1**
CD2				smax			
	comp=N,20μm,0.7s						
LZH	**Lanzhou**	**4.39**	**356**	Pn	**Pn**	**12 29 08.3**	**+1.8**
LZH				Sn	**Sn**	**12 30 00.4**	**+3.2**
LZH				Sg	**Sg**	**12 30 21.4**	**-0.4**
LZH				smax			
	comp=N,400nm,1.0s						
LZH				smax			
	comp=E,380nm,0.7s						
LZH				LR	LR		
	comp=E,3μm,6.4s						
LZH				LR	LR		
	comp=Z,3μm,8.5s						
XAN	**Xi'an**	**4.62**	**58**	Pn	**Pn**	**12 29 09.3**	**-0.3**
XAN				Sg	**Sg**	**12 30 20.4**	**-8.6**
XAN				smax			
	comp=N,780nm,0.8s						
XAN				smax			
	comp=E,340nm,0.8s						
ENH	**Enshi**	**4.76**	**106**	*e*Pn	**Pn**	**12 29 12.0**	**+0.5**
ENH				*e*Sg	**Sg**	**12 30 31.9**	**-1.7**
GYA	**Guiyang**	**5.64**	**157**	Pn	**Pn**	**12 29 24.3**	**+0.6**
GYA				Sn	**Sn**	**12 30 26.4**	**-1.7**
GYA				smax			
	comp=N,410nm,1.0s						
GYA				smax			
	comp=E,410nm,1.0s						
GYA				LR	LR		
	comp=N,4μm,3.8s						
GYA				LR	LR		
	comp=E,2μm,4.2s						
GYA				LR	LR		
	comp=Z,4μm,3.7s						
KMI	**Kunming**	**6.67**	**191**	Pn	**Pn**	**12 29 40.5**	**+2.7**
KMI				Sn	**Sn**	**12 30 50.4**	**-2.9**
KMI				Sg	**Sn**	**12 31 23.3**	**+30**
KMI				smax			
	comp=N,50nm,1.9s						
KMI				smax			
	comp=E,38nm,2.0s						
KMI				LR	LR		
	comp=N,390nm,5.7s						
KMI				LR	LR		
	comp=E,940nm,8.3s						
GTA	**Gaotai**	**8.49**	**336**	*e*P	**Pn**	**12 30 06.8**	**+4.1**
GTA				pP		12 30 11.5	
GTA				sP		12 30 14.8	
GTA				S	**Sn**

comp=Z,8.0nm,0.6s
LSA Lhasa 11.40 263 Pn **Pn 12 30 43.7 +1.0**
comp=Z,8.2nm,0.6s
BJI Beijing 12.79 46 P **Pn 12 31 00.9 -0.7**
BJI pmax pmax
comp=Z,9.0nm,0.5s
BJI LR LR
comp=N,390nm,7.4s
BJI LR LR
comp=E,280nm,6.2s
QIZ Qiongzhong 13.60 157 P **Pn 12 31 14.5 +1.7**
QIZ S **Sn 12 33 47.9 +4.5**
QIZ pmax pmax
comp=Z,29nm,1.6s
QIZ pmax pmax
comp=Z,110nm,3.7s
QIZ LR LR
comp=N,630nm,4.8s
QIZ LR LR
comp=E,160nm,5.8s
QIZ LR LR
comp=Z,650nm,11.5s
TAPN Taplejung 14.99 257 *e*P **Pn 12 31 30.7 -1.0**
comp=Z,18nm,0.8s
ODAN Odare 15.43 256 *e*P **Pn 12 31 36.3 -1.2**
comp=Z,30nm,0.8s
RAMN Ramite 16.05 257 *e*P **Pn 12 31 43.7 -1.9**
comp=Z,17nm,0.7s
JIRN Jiri 16.15 260 *e*P **Pn 12 31 45.8 -1.1**
comp=Z,44nm,1.0s
SONM Songino Array 16.21 5 Pn **Pn 12 31 46.6 -0.9**
comp=Z,0.1nm,0.3s,baz=186,slow=14,SNR=20
SONM LR LR 12 38 52.2
comp=Z,177nm,21.2s,baz=171,slow=40
ULN Ulaanbaatar 16.30 7 *e*P **Pn 12 31 48.2 -0.4**
ULN pmax pmax
comp=Z,11nm,0.9s
ULN Ulaanbaatar 16.30 7 *e*Pn **Pn 12 31 48.2 -0.4**
comp=Z,11nm,0.9s
GUN Gumba 16.34 261 *e*P **Pn 12 31 47.6 -1.6**
comp=Z,128nm,1.1s
PKI Pulchoki 16.84 261 *e*P **Pn 12 31 54.0 -1.6**
comp=Z,65nm,1.0s
PKIN Phulchoki 16.85 261 *e*P **Pn 12 31 53.9 -1.8**
comp=Z,66nm,0.7s
KKN Kakani 16.88 262 *e*P **Pn 12 31 54.3 -1.8**
comp=Z,41nm,0.8s
DMN Daman 17.08 261 *e*P **Pn 12 31 56.9 -1.7**
comp=Z,80nm,0.9s
WMQ Urumqi 17.76 318 *e*P **Pn 12 32 06.3 -0.6**
WMQ LR LR
comp=N,280nm,10.0s
WMQ LR LR
comp=E,380nm,7.0s
WMQ LR LR
comp=Z,150nm,14.5s
ZAK Zakamensk 18.69 358 *e*P **Pn 12 32 17.5 -0.7**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
TLY Talaya 19.98 359 *e*P **Pn 12 32 36.3 +2.6**
TLY pmax pmax
comp=Z,8.0nm,0.9s
TLY MLR MLR
comp=Z,179nm,13.0s
MOY Mondy 20.10 354 *e*P **P 12 32 34.9 +1.7**
KSRS Korea Array 20.34 67 P **P 12 32 36.0 0.0**
comp=Z,12nm,0.8s,baz=255,slow=10,SNR=18
KSRS Korea Array 20.34 67 P **P 12 32 36.0 0.0**
KSRS pmax pmax
comp=Z,13nm,0.8s
IRK Irkutsk 20.54 0 *e*P **P 12 32 39.2 +1.2**
IRK pmax pmax
comp=Z,71nm,0.8s
CN2 Changchun 20.64 48 *e*P **P 12 32 40.6 +1.5**
CN2 *es*P sP 12 32 47.0 +0.3
CN2 *e*S **S 12 36 26.5 -2.5**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,300nm,11.0s,MS4.1
CN2 LR LR
comp=E,300nm,11.0s,MS4.1
CN2 LR LR
comp=Z,400nm,12.0s,MS4.0
HIA Hailar 21.09 29 *e*P **P 12 32 44.9 +0.8**
HIA pmax pmax
comp=Z,8.0nm,0.5s
HIA Hailar 21.09 29 *e*P **P 12 32 44.9 +0.8**
comp=Z,7.7nm,0.5s,mb4.3
JOW Kunigami 21.54 97 LR LR 12 42 05.3
comp=Z,156nm,19.6s,MS3.4,baz=162,slow=39
MK31 Makanchi Array 22.59 318 *e*P **P 12 32 59.0 -1.1**
MKAR Makanchi Array 22.59 318 P **P 12 33 00.3 +0.2**
comp=Z,9.7nm,1.0s,mb4.2,baz=121,slow=12,SNR=36
MKAR LR LR 12 42 48.6
comp=Z,187nm,18.4s,MS3.5,baz=178,slow=40
MKAR Makanchi Array 22.59 318 P **P 12 33 00.3 +0.2**
MKAR LR LR 12 42 48.6
TGY Tagaytay City 23.27 135 P **P 12 33 12.8 +5.2**
comp=Z,48nm,0.3s,mb5.3,baz=114,slow=19,SNR=3.8
MDJ Mudanjiang 23.67 50 P **P 12 33 10.5 -0.7**
MDJ pmax pmax
comp=Z,9.0nm,1.1s,mb4.1
MDJ pmax pmax
comp=Z,130nm,4.8s
KSH Kashi 24.17 297 *e*P **P 12 33 19.1 +3.2**
KSH *ep*P 12 33 23.1
KSH *es*P sP 12 33 26.1 +2.4
KSH *e*PP 12 33 54.1
KSH *e*PcP PcP 12 36 59.0 +2.6
KSH *e*S **S 12 37 34.9 +1.8**
KSH *e*SS 12 38 29.3
KSH pmax pmax
comp=Z,15nm,0.8s,mb4.5
KSH LR LR
comp=N,200nm,5.9s
KSH LR LR
comp=E,170nm,7.7s
TKM2 Tokmak 2 25.24 304 P **P 12 33 27.2 +1.6**
SNR=5.6
KZA Kyzart 25.26 302 P **P 12 33 28.0 +2.3**
SNR=26
KBK Karagaybulak 25.62 304 P **P 12 33 31.0 +1.9**
SNR=8.5
UCH Uchtor 25.82 302 P **P 12 33 32.9 +1.9**
SNR=29
AAK Ala-Archa 25.94 303 P **P 12 33 33.1 +1.1**
comp=E,0.9nm,0.3s,mb3.8,baz=186,slow=12,SNR=5.8
AAK Ala-Archa 25.94 303 *e*P **P 12 33 31.1 -0.9**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
AAK Ala-Archa 25.94 303 *e*P **P 12 33 31.1 -0.9**
comp=Z,4.0nm,0.8s,mb4.0
USP Ospenovka 26.11 305 P **P 12 33 34.7 +1.2**
SNR=6.7
ZAA0 Zalesovo Array 26.23 334 *e*P **P 12 33 34.1 -0.3**
ZALV Zalesovo Beam 26.23 334 P **P 12 33 34.4 0.0**
comp=Z,16nm,0.8s,mb4.6,baz=132,slow=9.3,SNR=66
ZALV LR LR 12 44 29.0
comp=Z,60nm,20.2s,MS3.1,baz=127,slow=38
ZALV Zalesovo Beam 26.23 334 P **P 12 33 34.4 0.0**
ZALV LR LR 12 44 29.0
AML Almayashu 26.39 302 P **P 12 33 37.9 +1.9**
SNR=8.3
KURK Kurchatov 26.83 323 P **P 12 33 40.4 +0.5**
comp=Z,9.2nm,0.9s,mb4.3,baz=129,slow=10,SNR=28
KURK PcP PcP 12 37 03.9 +1.7
comp=Z,0.4nm,0.2s,baz=122,slow=2.4,SNR=1.9
KURK Kurchatov 26.83 323*c i*P **P 12 33 39.9 +0.1**
KURK pmax pmax
comp=Z,16nm,1.1s,mb4.5
KURK Kurchatov 26.83 323 *e*P **P 12 33 39.7 -0.2**
comp=Z,12nm,1.0s,mb4.4
BOD Bodaibo 26.98 12 *e*P **P 12 33 40.9 -0.2**
BOD pmax pmax
comp=Z,3.0nm,0.9s,mb3.8
KLR Kul'dur 27.10 42 *e*P **P 12 33 43.2 +0.9**
MJAR Matsushiro Arr 28.48 71 P **P 12 33 57.3 +2.5**
comp=Z,1.3nm,0.6s,mb3.7,baz=269,slow=11,SNR=5.7
KBL Kabul 29.49 285 *e*P **P 12 34 04.7 +0.9**
KBL pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
KBL Kabul 29.49 285 *e*P **P 12 34 04.7 +0.9**
comp=Z,2.1nm,0.4s,mb4.2
BVAR Borovoye Array 32.38 321 P **P 12 34 29.6 +0.5**
comp=Z,2.4nm,0.6s,mb4.2,baz=116,slow=10,SNR=13
BVAR LR LR 12 49 13.0
comp=Z,32nm,18.1s,MS3.1,baz=241,slow=39
BRVK Borovoye 32.45 321*c i*P **P 12 34 30.0 +0.3**
BRVK pmax pmax
comp=Z,11nm,1.5s,mb4.5
SVE Sverdlovsk 39.08 323⇑ *e*P **P 12 35 27.5 +1.1**
SVE pmax pmax
comp=Z,25nm,0.9s,mb4.9
ARU Arti 40.02 322*c i*P **P 12 35 34.3 0.0**
ARU S **S 12 41 38.6 -0.3**
ARU SS SS 12 44 30.3 -5.7
ARU pmax pmax
comp=Z,34nm,1.0s,mb5.0
ARU Arti 40.02 322 *e*P **P 12 35 34.4 +0.1**
comp=Z,24nm,0.7s,mb5.0
TIXI Tiksi 42.16 11 *e*P **P 12 35 49.3 -2.5**
TIXI pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
TIXI Tiksi 42.16 11 *e*P **P 12 35 50.1 -1.6**
comp=Z,1.4nm,0.6s,mb3.8
PETK Petropavlovsk- 43.72 45 P **P 12 36 04.2 -0.4**
comp=Z,1.5nm,0.8s,mb3.8,baz=276,slow=4.2,SNR=2.5
ZEI Tsey 48.34 301 *e*P **P 12 36 39.4 -1.8**
ZEI pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KIV Kislovodsk 49.06 303 *e*P **P 12 36 47.6 +0.9**
KIV pmax pmax
comp=Z,15nm,0.9s,mb5.0
KIV MLR MLR
comp=Z,38nm,16.0s,MS3.5
BILL Bilibino 50.61 25⇓ *e*P **P 12 36 56.7 -1.4**
BILL *e* 12 38 51.7
BILL *e*S **S 12 44 08.0 -3.6**
BILL pmax pmax
comp=Z,4.0nm,2.5s,mb3.9
BILL MLR MLR
comp=Z,100nm,13.0s,MS4.0
OBN Obninsk 52.10 318⇓ *e*P **P 12 37 09.3 -0.1**
OBN *e* 12 39 09.3
OBN *e*S **S 12 44 31.6 -0.8**
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.0
JOF Joensuu 54.58 328 *e*P **P 12 37 26.6 -0.9**
JOF pmax pmax
comp=Z,11nm,0.7s,mb5.0
JOF Joensuu 54.58 328 *ep* **P 12 37 26.6 -0.9**
comp=Z,11nm,0.7s,mb5.0
KEV Kevo 56.23 336 *e*P **P 12 37 36.8 -2.5**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KEV Kevo 56.23 336 *ep* **P 12 37 36.8 -2.5**
comp=Z,9.3nm,0.6s,mb5.0
BR131 Keskin Array S 56.52 299 *e*P **P 12 37 41.9 0.0**
BRTR Keskin Array B 56.52 299 P **P 12 37 41.8 -0.2**
comp=Z,4.3nm,0.8s,mb4.5,baz=93,slow=6.8,SNR=22
ARCES ARCESS Array B 56.76 336 P **P 12 37 42.6 -0.5**
comp=Z,5.7nm,0.7s,mb4.7,baz=80,slow=7.9,SNR=28
AKASG Malin Array Be 57.04 313 P **P 12 37 44.9 -0.5**
comp=Z,4.4nm,0.6s,mb4.7,baz=69,slow=6.6,SNR=12
FINES FINESS Array B 57.12 326 P **P 12 37 45.5 -0.3**
comp=Z,11nm,0.7s,mb5.0,baz=93,slow=7.6,SNR=23
WRAB Tennant Creek 58.91 147 *e*P **P 12 38 00.4 +1.6**
WRAB pmax pmax
comp=Z,26nm,1.5s,mb5.0
WRAB Tennant Creek 58.91 147 *e*P **P 12 38 00.3 +1.5**
comp=Z,26nm,1.5s,mb5.0
WRA Warramunga Arr 58.92 147 P **P 12 37 58.5 -0.3**
comp=Z,3.0nm,0.8s,mb4.4,baz=328,slow=8.9,SNR=27
KWP Kalwaria Pacla 61.37 313 *e*P **P 12 38 15.8 +0.5**
KWP Kalwaria Pacla 61.37 313 *e*P **P 12 38 15.8 +0.4**
KOLS Kolonicke sedl 61.84 312 *e*P **P 12 38 18.3 -0.3**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
KOLS Kolonicke sedl 61.84 312 *e*P **P 12 38 18.3 -0.3**
comp=Z,2.5nm,0.9s,mb4.3
KOLS *e* 13 10 47.7
KOLS Kolonicke sedl 61.84 312 *e*P **P 12 38 18.3 -0.3**
KOLS *e* 13 10 47.7
ASAR Alice Springs 61.95 149 P **P 12 38 20.4 +0.8**
comp=Z,1.3nm,0.8s,mb4.1,baz=336,slow=6.6,SNR=18
STHS Stebnicka Huta 62.34 313 *e*P **P 12 38 22.4 +0.5**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 62.34 313 *e*P **P 12 38 22.4 +0.5**
comp=Z,3.9nm,0.9s,mb4.5
STHS Stebnicka Huta 62.34 313 *e*P **P 12 38 22.4 +0.5**
NIE Niedzica 62.92 313 *e*P **P 12 38 26.8 +1.0**
OJC Ojcow 62.99 314 *e*P **P 12 38 26.1 -0.2**
KECS Kecovo 63.10 312 *e*P **P 12 38 27.4 +0.4**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.10 312 *e*P **P 12 38 27.4 +0.4**
comp=Z,1.6nm,0.7s,mb4.3
KECS Kecovo 63.10 312 *e*P **P 12 38 27.4 +0.4**
OKC Ostrava-Krasne 64.12 314 AMS AMS 13 07 00.0
VYHS Vyhne 64.14 313 *e*P **P 12 38 34.2 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
VYHS Vyhne 64.14 313 *e*P **P 12 38 34.2 +0.3**
comp=Z,5.3nm,1.3s,mb4.4
VYHS Vyhne 64.14 313 *e*P **P 12 38 34.2 +0.3**
NB2 NORSAR Subarra 64.21 327 P **P 12 38 32.7 -1.4**
comp=Z,9.0nm,0.9s,mb4.8,baz=73,slow=6.5
NOA NORSAR Array B 64.21 327 P **P 12 38 33.0 -1.0**
comp=Z,5.0nm,0.8s,mb4.6,baz=71,slow=6.5,SNR=12
NOA LR LR 13 08 04.3
comp=Z,36nm,18.4s,MS3.6,baz=220,slow=38
KOLL Kolacno 64.38 313 *e*P **P 12 38 36.2 +0.7**
KOLL Kolacno 64.38 313 *e*P **P 12 38 36.2 +0.7**
MORC Moravsky Berou 64.51 314 *e*P **P 12 38 36.6 +0.3**
MORC pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MORC Moravsky Berou 64.51 314 *e*P **P 12 38 36.6 +0.3**
comp=Z,6.4nm,0.8s,mb4.7
DPC Dobruska-Polom 65.06 315 *e*P **P 12 38 40.2 +0.4**
DPC MLR MLR
comp=Z,200nm,19.1s,MS4.3
DPC Dobruska-Polom 65.06 315 *e*P **P 12 38 40.2 +0.4**
DPC AMS AMS 13 08 00.0
comp=Z,200nm,19.1s
TREC Trest 65.94 314 AMS AMS 13 08 40.0
comp=Z,100nm,19.1s
PVCC Panska Ves 66.05 316 AMS AMS 13 09 10.0
comp=Z,100nm,7.0s
PRU Pruhonice 66.26 315 *e*P **P 12 38 48.2 +0.6**
PRU MLR MLR
comp=Z,200nm,16.8s,MS4.4
PRU Pruhonice 66.26 315 *e*P **P 12 38 48.2 +0.6**
PRU AMS AMS 13 09 00.0
comp=Z,200nm,16.8s
BRG Berggiesshubel 66.29 316 *e*P **P 12 38 47.7 -0.1**
comp=Z,6.8nm,0.8s,mb4.7
BRG Berggiesshubel 66.29 316 *e*P **P 12 38 47.7 -0.1**
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CLL Collm 66.68 317 *i*P **P 12 38 49.5 -0.8**
CLL *e* 12 39 18.0
CLL pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CLL Collm 66.68 317 *i*P **P 12 38 49.5 -0.8**
comp=Z,7.0nm,1.0s,mb4.7
CLL *e*PcP PcP 12 39 18.0 -1.3
CLL Collm 66.68 317 *i*P **P 12 38 49.5 -0.8**
comp=Z,7.0nm,1.0s,mb4.7
CLL *e*PcP PcP 12 39 18.0 -1.3
KHC Kasperske Hory 67.16 315 *e*P **P 12 38 53.6 +0.2**
KHC MLR MLR
comp=Z,200nm,23.5s,MS4.3
KHC Kasperske Hory 67.16 315 *e*P **P 12 38 53.6 +0.2**
KHC AMS AMS 13 09 20.0
comp=Z,200nm,23.5s
GEC2 GERESS Array S 67.19 314 *e*P **P 12 38 53.7 +0.1**
GEC2 pmax pmax
comp=Z,1μm,1.0s
GEC2 GERESS Array S 67.19 314 *e*P **P 12 38 53.7 +0.1**
comp=Z,1μm,1.0s
GERES GERESS Array B 67.19 314 P **P 12 38 53.2 -0.3**
comp=Z,2.6nm,0.7s,mb4.4,baz=73,slow=5.9,SNR=18
GERES LR LR 13 09 49.0
comp=Z,116nm,19.9s,MS4.1,baz=316,slow=37
KMBO Kilima Mbogo 71.12 256 P **P 12 39 18.8 +0.3**
comp=Z,2.5nm,0.8s,mb4.2,baz=43,slow=11,SNR=4.7
KMBO Kilima Mbogo 71.12 256 P **P 12 39 18.8 +0.3**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 71.12 256 *e*P **P 12 39 17.6 -0.9**
comp=Z,1.7nm,0.8s,mb4.0
CDF Champ du Feu 71.25 316 *e*P **P 12 39 18.1 -0.6**
comp=Z,14nm,1.0s,mb4.6
CDF Champ du Feu 71.25 316 *e*P **P 12 39 18.1 -0.6**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CDF Champ du Feu 71.25 316 *e*P **P 12 39 18.1 -0.6**
comp=Z,7.1nm,1.0s,mb4.5
STKA Stephens Creek 72.46 147 P **P 12 39 27.1 +1.0**
comp=Z,1.8nm,0.8s,mb4.1,baz=305,slow=12,SNR=2.8
LPG La Plagne 72.91 313⇑ *i*P **P 12 39 29.0 +0.3**
comp=Z,29nm,0.8s,mb5.0
LPG La Plagne 72.91 313⇑ *i*P **P 12 39 29.0 +0.3**
LPG pmax pmax
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 72.91 313⇑ *i*P **P 12 39 29.0 +0.3**
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 72.91 313⇑ *i*P **P 12 39 28.9 +0.2**
comp=Z,28nm,0.8s,mb5.0
LPL La Plagne 72.91 313⇑ *i*P **P 12 39 28.9 +0.2**
LPL pmax pmax
comp=Z,14nm,0.8s,mb4.9
LPL La Plagne 72.91 313⇑ *i*P **P 12 39 28.9 +0.2**
comp=Z,14nm,0.8s,mb4.9
SMF Signal de Mont 74.14 315⇑ *i*P **P 12 39 35.2 -0.7**
comp=Z,32nm,1.1s,mb4.8
SMF Signal de Mont 74.14 315⇑ *i*P **P 12 39 35.2 -0.7**
SMF pmax pmax
comp=Z,16nm,1.1s,mb4.9
SMF Signal de Mont 74.14 315⇑ *i*P **P 12 39 35.2 -0.7**
comp=Z,16nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.29 315 *e*P **P 12 39 42.1 -0.5**
comp=Z,18nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.29 315 *e*P **P 12 39 42.1 -0.5**
TCF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.29 315 *e*P **P 12 39 42.1 -0.5**
comp=Z,9.3nm,1.1s,mb4.6
KEST Kesra 75.80 303 P **P 12 39 45.8 0.0**
comp=Z,1.2nm,0.9s,mb3.8,baz=325,slow=10,SNR=3.5
CAF Calviac 76.07 314 *e*P **P 12 39 47.1 0.0**
comp=Z,12nm,1.0s,mb4.5
CAF Calviac 76.07 314 *e*P **P 12 39 47.1 0.0**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CAF Calviac 76.07 314 *e*P **P 12 39 47.1 0.0**
comp=Z,6.1nm,1.0s,mb4.5
YKA Yellowknife Ar 81.11 17 P **P 12 40 13.5 -1.0**
comp=Z,0.7nm,0.5s,mb3.9,baz=329,slow=5.3,SNR=22
YKA Yellowknife Ar 81.11 17 P **P 12 40 13.5 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.5s
TORD Torodi Ar. Bea 93.53 288 P **P 12 41 15.4 -0.6**
comp=Z,1.3nm,1.1s,mb4.3,baz=46,slow=4.2,SNR=3.2

*CSEM **14** 12:41:14.6±0.3, 36°.26N×22°.29E, h15km, MD3.5, Error ellipse: s-maj=8.5km s-min=4.0km az=45.0*
*THE **14** 12:41:15.1, 36°.32N×22°.39E, h0km±1km, ML3.2/1, Error ellipse: s-maj=3.3km s-min=1.0km az=235.0*
*ATH **14** 12:41:15.1, 36°.31N×22°.34E, h40km±2km, MD3.5/13*
*NEIC **14** 12:41:15.1, 36°.31N×22°.34E, h40km, MD3.5(ATH), After ATH.*

ISC 14 12:41:14.4±1.0, 36°.24N±0°.05×22°.28E±0°.06, h12km±5km, n51, o0°89/68, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.61**	**86**	*e*P	**Pg**	**12 41 27.9**	**+1.6**
KYTH	**Kithira**	**0.61**	**86**	*e*P	**Pg**	**12 41 27.9**	**+1.6**
VLI	**Veliai**	**0.71**	**48**	*e*P	**Pg**	**12 41 27.7**	**-0.5**
VLI				*e*S	**Sg**	**12 41 38.2**	**+0.7**
VLI	**Veliai**	**0.71**	**48**	*e*P	**Pg**	**12 41 27.7**	**-0.5**
VLI				*e*S	**Sg**	**12 41 38.2**	**+0.7**
PYL	**PYLOS**	**0.79**	**326**	*e*P	**Pg**	**12 41 29.8**	**+0.2**
PYL				*e*S	**Sg**	**12 41 41.9**	**+2.0**
PYL	**PYLOS**	**0.79**	**326**	P	**Pg**	**12 41 29.7**	**+0.1**
PYL				S	**Sg**	**12 41 41.6**	**+1.7**
PYL	**PYLOS**	**0.79**	**326**	*e*P	**Pg**	**12 41 29.8**	**+0.2**
PYL				S	**Sg**	**12 41 41.6**	**+1.7**
ITM	**Ithomi**	**0.98**	**343**	*e*P	**Pg**	**12 41 32.6**	**-0.7**
ITM				*e*S	**Sg**	**12 41 46.4**	**+0.3**
ITM	**Ithomi**	**0.98**	**343**	P	**Pg**	**12 41 32.5**	**-0.8**
ITM				S	**Sg**	**12 41 46.5**	**+0.4**
ITM	**Ithomi**	**0.98**	**343**	*e*P	**Pg**	**12 41 32.6**	**-0.7**
ITM				*e*S	**Sg**	**12 41 46.4**	**+0.3**
VLX	**Vlachokerasia**	**1.13**	**4**	*e*P	**Pg**	**12 41 34.4**	**-1.8**
VLX				*e*S	**Sg**	**12 41 49.3**	**-1.6**
VLX	**Vlachokerasia**	**1.13**	**4**	P	**Pg**	**12 41 34.5**	**-1.7**
VLX				S	**Sg**	**12 41 50.9**	**0.0**
VLX	**Vlachokerasia**	**1.13**	**4**	P	**Pg**	**12 41 34.5**	**-1.7**
VLX				*e*S	**Sg**	**12 41 49.3**	**-1.6**
KARN	**Karanos**	**1.57**	**122**	*e*P	**Pn**	**12 41 43.0**	**+1.0**
KARN	**Karanos**	**1.57**	**122**	P	**Pn**	**12 41 43.4**	**+1.4**
KARN				S	**Sg**	**12 42 05.2**	**+0.3**
KARN	**Karanos**	**1.57**	**122**	*e*P	**Pn**	**12 41 43.0**	**+1.0**
KARN				S	**Sg**	**12 42 05.2**	**+0.3**
GUR	**Goura**	**1.69**	**2**	*e*P	**Pn**	**12 41 43.2**	**-0.5**
GUR	**Goura**	**1.69**	**2**	P	**Pn**	**12 41 44.4**	**+0.7**
GUR				S	**Sn**	**12 42 07.0**	**+1.7**
GUR	**Goura**	**1.69**	**2**	*e*P	**Pn**	**12 41 43.2**	**-0.5**
GUR				S	**Sn**	**12 42 07.0**	**+1.7**
VAM	**Vamos**	**1.77**	**118**	*e*P	**Pn**	**12 41 44.3**	**-0.4**
VAM	**Vamos**	**1.77**	**118**	*e*P	**Pn**	**12 41 44.3**	**-0.4**
NAIG	**Nisos Aigina**	**1.79**	**32**	*e*P	**Pn**	**12 41 44.5**	**-0.6**
NAIG	**Nisos Aigina**	**1.79**	**32**	*e*P	**Pn**	**12 41 44.5**	**-0.6**
LTK	**Loutraki**	**1.86**	**17**	*e*P	**Pn**	**12 41 45.1**	**-0.9**
LTK	**Loutraki**	**1.86**	**17**	P	**Pn**	**12 41 45.5**	**-0.5**
LTK	**Loutraki**	**1.86**	**17**	P	**Pn**	**12 41 45.5**	**-0.5**
RLS	**Riolos of Patr**	**1.93**	**340**	*e*P	**Pn**	**12 41 47.3**	**+0.4**
RLS	**Riolos of Patr**	**1.93**	**340**	*e*P	**Pn**	**12 41 47.3**	**+0.4**
LAKA	**Lakka**	**2.01**	**353**	P	**Pn**	**12 41 48.2**	**+0.1**
LAKA				S	**Sn**	**12 42 14.0**	**+0.9**
LAKA	**Lakka**	**2.01**	**353**	P	**Pn**	**12 41 48.2**	**+0.1**
LAKA				S	**Sn**	**12 42 14.0**	**+0.9**
VLY	**Voula,Athens**	**2.01**	**36**	*e*P	**Pn**	**12 41 47.4**	**-0.7**
VLY	**Voula,Athens**	**2.01**	**36**	*e*P	**Pn**	**12 41 47.4**	**-0.7**
EFP	**Efpalio**	**2.20**	**352**	*e*P	**Pn**	**12 41 51.5**	**+0.8**
EFP	**Efpalio**	**2.20**	**352**	P	**Pn**	**12 41 52.2**	**+1.5**
EFP	**Efpalio**	**2.20**	**352**	*e*P	**Pn**	**12 41 51.5**	**+0.8**
VLS	**Valsamata**	**2.36**	**326**	*e*P	**Pn**	**12 41 51.8**	**-1.1**
VLS	**Valsamata**	**2.36**	**326**	P	**Pn**	**12 41 51.9**	**-1.0**
VLS	**Valsamata**	**2.36**	**326**	P	**Pn**	**12 41 51.9**	**-1.0**
LKR	**Lokris**	**2.47**	**13**	*e*P	**Pn**	**12 41 53.1**	**-1.3**
LKR	**Lokris**	**2.47**	**13**	*e*P	**Pn**	**12 41 53.1**	**-1.3**
EVR	**Evrytania**	**2.70**	**352**	*e*P	**Pn**	**12 41 57.6**	**+0.1**
EVR	**Evrytania**	**2.70**	**352**	*e*P	**Pn**	**12 41 57.6**	**+0.1**
AGG	**Agios Georgios**	**2.78**	**1**	*e*P	**Pn**	**12 41 58.5**	**-0.1**
AGG	**Agios Georgios**	**2.78**	**1**	P	**Pn**	**12 41 58.4**	**-0.2**
AGG	**Agios Georgios**	**2.78**	**1**	P	**Pn**	**12 41 58.4**	**-0.2**
LAST	**Lasithi**	**2.81**	**112**	*e*P	**Pn**	**12 41 58.8**	**-0.3**
LAST	**Lasithi**	**2.81**	**112**	*e*P	**Pn**	**12 41 58.8**	**-0.3**
XOR	**Xorichti**	**3.20**	**13**	P	**Pn**	**12 42 04.2**	**-0.3**
XOR	**Xorichti**	**3.20**	**13**	P	**Pn**	**12 42 04.2**	**-0.3**
THL	**Klokotos Trika**	**3.33**	**356**	*e*P	**Pn**	**12 42 06.0**	**-0.2**
THL	**Klokotos Trika**	**3.33**	**356**	*e*P	**Pn**	**12 42 06.0**	**-0.2**

*NEIC **14** 12:48:47.3, 16°.93N×94°.34W, h134km, MD3.9(MEX), After MEX.*

MEX 14 12:48:47.3±0.7, 16°.93N×94°.34W, h134km±7km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.54**	**287**	*i*P	Pn	12 49 05.9	-1.1
CMIG				*i*S	Sn	12 49 20.1	-1.9
CMIG	**Matias Romero**	**0.54**	**287**	*i*P	Pn	12 49 05.9	-1.1
CMIG				*i*S	Sn	12 49 20.1	-1.9
TUIG	**Tuzandepetl**	**1.10**	**356**	*i*P	Pn	12 49 09.9	-1.6
TUIG				*i*S	Sn	12 49 28.3	-1.6
TUIG	**Tuzandepetl**	**1.10**	**356**	*i*P	Pn	12 49 09.9	-1.6
TUIG				*i*S	Sn	12 49 28.3	-1.6
TGIG		**1.18**	**97**	*i*P	Pn	12 49 11.0	-1.2
TGIG				*i*S	Sn	12 49 28.8	-2.5
PCIG		**1.63**	**138**	*i*P	Pn	12 49 16.4	-0.7
PCIG				*i*S	Sn	12 49 38.5	-1.4
SCX	**San Cristobal**	**1.65**	**97**	*e*P	Pn	12 49 15.9	-1.4
SCX				*i*S	Sn	12 49 38.6	-1.7

SCX	**San Cristobal**	**1.65 97**	*e*P	Pn	12 49 15.9	-1.4
SCX			*i* S	Sn	12 49 38.6	-1.7
HUIG	**Huatulco**	**2.05 236**	*i* P	Pn	12 49 19.4	-2.7
HUIG			*i* S	Sn	12 49 46.8	-2.0
HUIG	**Huatulco**	**2.05 236**	*i* P	Pn	12 49 19.4	-2.7
HUIG			*i* S	Sn	12 49 46.8	-2.0
CCIG	**Comitan**	**2.21 107**	*i* P	Pn	12 49 23.3	-0.8
CCIG			*i* S	Sn	12 49 49.6	-2.7
CCIG	**Comitan**	**2.21 107**	*i* P	Pn	12 49 23.3	-0.8
CCIG			*i* S	Sn	12 49 49.6	-2.7
VHO	**Vista Hermosa**	**2.29 274**	*i* P	Pn	12 49 24.4	-0.6
VHO			*i* S	Sn	12 49 52.7	-1.3
VHO	**Vista Hermosa**	**2.29 274**	*i* P	Pn	12 49 24.4	-0.6
VHO			*i* S	Sn	12 49 52.7	-1.3
UTMO	**Huajuapan**	**3.42 286**	*i* P	Pn	12 49 39.3	-0.3
UTMO			*i* S	Sn	12 50 17.9	-2.1
PNIG	**Pinotepa**	**3.67 262**	*i* P	Pn	12 49 40.3	-2.4
PNIG			*i* S	Sn	12 50 23.4	-2.2
PNIG	**Pinotepa**	**3.67 262**	*i* P	Pn	12 49 40.3	-2.4
PNIG			*i* S	Sn	12 50 23.4	-2.2

*OMAN **14** 13:03:01.9±99.0, 33°86N×52°39E, h20km, Error ellipse: s-maj=6797.0km s-min=213.0km az=339.0*
*IDC **14** 13:04:14.2±0.6, 28°33N×54°01E, h0km, mb4.1/21, mb1 4.2/23, mb1mx4.1/31, mbtmp4.1/23, ML4.3/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/40, Error ellipse: s-maj=16.2km s-min=13.2km az=140.0*
*NEIC **14** 13:04:15.1±1.1, 28°20N×54°09E, h7km±7km, mb4.0/6, ML4.0(THR), Error ellipse: s-maj=8.2km s-min=6.4km az=197.0*
*ISCJB **14** 13:04:15.4±0.2, 28°37N±0°02×54°07E±0°03, h10km, mb4.1/30, MS3.7/3, Error ellipse: s-maj=3.5km s-min=3.1km az=144.8*
*THR **14** 13:04:16.6±0.4, 28°16N×54°11E, h16km±3km, ML4.0*
*MOS **14** 13:04:17.0±1.4, 28°25N×54°00E, h33km, mb4.6/5, Error ellipse: s-maj=12.5km s-min=8.1km az=103.0*
*TEH **14** 13:04:18.4, 28°27N×53°97E, h14km*
*CSEM **14** 13:04:18.3±0.2, 28°39N×54°04E, h20km, mb4.2/9, Error ellipse: s-maj=5.6km s-min=4.9km az=51.0*

ISC 14 13:04:17.2±0.2, 28°36N±0°02×54°06E±0°03, h10km, n160, σ1§28/172, mb4.1/30, MS3.7/3, 1C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.95**	**266**	*e*Pg	**Pg**	**13 04 35.0**	**-0.5**
GHIR				*e*Sg	**Sg**	**13 04 49.0**	**+1.1**
GHIR	**Ghir-Karzin**	**0.95**	**266**	*e*Pg	**Pg**	**13 04 35.4**	**-0.1**
GHIR	comp=E,4µm,0.4s			AML	AML	13 04 58.7	
GHIR	comp=N,5µm,0.5s			AML	AML	13 04 59.0	
GHIR	**Ghir-Karzin**	**0.95**	**266**	*e*Pg	**Pg**	**13 04 35.0**	**-0.5**
GHIR				*e*Sg	**Sg**	**13 04 49.8**	**+1.9**
ISRV	**Sarvestan**	**1.31**	**321**	Pg	**Pg**	**13 04 43.0**	**+0.6**
ISRV				Sg	**Sg**	**13 05 00.7**	**+1.2**
ISRV	**Sarvestan**	**1.31**	**321**	*e*Pg	**Pg**	**13 04 43.0**	**+0.6**
ISRV				*e*Sg	**Sg**	**13 05 00.8**	**+1.3**
ISRV	comp=Z,21µm,0.2s			*e*		13 05 16.3	
ISRV	**Sarvestan**	**1.31**	**321**	*e*Pg	**Pg**	**13 04 43.0**	**+0.6**
ISRV				*e*Sg	**Sg**	**13 05 00.8**	**+1.3**
IMOK	**Mouk**	**1.36**	**300**	Pg	**Pg**	**13 04 42.6**	**-0.8**
IMOK	**Mouk**	**1.36**	**300**	*e*Pg	**Pg**	**13 04 42.6**	**-0.8**
IMOK	comp=Z,60µm,0.4s			*e*		13 05 16.8	
IMOK	**Mouk**	**1.36**	**300**	*e*Pg	**Pg**	**13 04 42.6**	**-0.8**
IPAR	**Pars**	**1.72**	**329**	Pn	**Pn**	**13 04 48.6**	**+1.4**
IPAR				Sg	**Sg**	**13 05 12.7**	**+0.2**
IPAR	**Pars**	**1.72**	**329**	*e*Pn	**Pn**	**13 04 48.6**	**+1.4**
IPAR				*e*Sg	**Sg**	**13 05 12.7**	**+0.2**
IPAR	comp=Z,19µm,0.4s			*e*		13 05 24.0	
BNDS	**Bandar-Abbas**	**2.10**	**117**	*e*Pg	**Pn**	**13 04 52.0**	**-0.4**
BNDS	**Bandar-Abbas**	**2.10**	**117**	*e*Pg	**Pn**	**13 04 52.7**	**+0.2**
BNDS	comp=N,1µm,0.6s			AML	AML	13 05 40.5	
BNDS	**Bandar-Abbas**	**2.10**	**117**	*e*Pg	**Pn**	**13 04 52.7**	**+0.3**
IBND	**Bandar-abas**	**2.38**	**112**	*e*Pn	**Pn**	**13 04 57.3**	**+1.1**
IBND	comp=Z,31µm,0.3s			*e*		13 05 46.6	
IBND	**Bandar-abas**	**2.38**	**112**	*e*Pn	**Pn**	**13 04 57.3**	**+1.1**
KRBR	**Kerman**	**2.86**	**55**	*e*Pn	**Pn**	**13 05 05.0**	**+2.1**
KRBR				*e*Sg	**Sg**	**13 05 48.0**	**-1.1**
KRBR	**Kerman**	**2.86**	**55**	*e*Pn	**Pn**	**13 05 05.1**	**+2.2**
KRBR				*e*Sg	**Sg**	**13 05 48.9**	**-0.2**
KRBR	comp=N,399nm,0.8s			AML	AML	13 05 54.1	
KRBR	comp=E,507nm,0.6s			AML	AML	13 06 02.6	
KRBR	**Kerman**	**2.86**	**55**	*e*Pn	**Pn**	**13 05 05.1**	**+2.2**
KRBR				*e*Sg	**Sg**	**13 05 48.0**	**-1.1**
IMEH	**Mehriz**	**3.06**	**9**	Pn	**Pn**	**13 05 08.5**	**+2.9**
IMEH	**Mehriz**	**3.06**	**9**	*e*Pn	**Pn**	**13 05 08.5**	**+2.9**
IMEH	**Mehriz**	**3.06**	**9**	*e*	**Sg**	**13 05 59.5**	**+4.1**
IBAF	comp=Z,2µm,0.5s						
BANOM	**Banah**	**3.14**	**140**	P	**Pn**	**13 05 07.0**	**+0.2**
BANOM	SNR=17			S	**Sn**	**13 05 39.3**	**-5.1**
IBAF	**Bafgh**	**3.47**	**22**	Pn	**Pn**	**13 05 12.8**	**+1.5**
IBAF	**Bafgh**	**3.47**	**22**	*e*Pn	**Pn**	**13 05 12.9**	**+1.6**
IBAF	comp=Z,2µm,0.4s			*e*		13 06 23.8	
IBAF	**Bafgh**	**3.47**	**22**	Pn	**Pn**	**13 05 12.8**	**+1.5**
ISAD	**Sadrabad**	**3.55**	**355**	Pn	**Pn**	**13 05 14.7**	**+2.3**
ISAD	**Sadrabad**	**3.55**	**355**	*e*Pn	**Pn**	**13 05 14.7**	**+2.3**
ISAD	comp=Z,3µm,0.3s			*e*		13 06 33.3	
ISAD	**Sadrabad**	**3.55**	**355**	*e*Pn	**Pn**	**13 05 14.7**	**+2.3**
NAZ	**Nazwa, Dubai**	**3.65**	**157**	⇑P	**Pn**	**13 05 15.3**	**+1.5**
NAZ	SNR=14 **Nazwa, Dubai**	**3.65**	**157**	P	**Pn**	**13 05 15.3**	**+1.5**
FAQ	SNR=14 **Al Faqa, Dubai**	**3.85**	**159**	P	**Pn**	**13 05 17.8**	**+1.2**
FAQ	SNR=10.0 **Al Faqa, Dubai**	**3.85**	**159**	P	**Pn**	**13 05 17.8**	**+1.2**
ICHK	SNR=10.0 **Chekchek**	**3.88**	**4**	Pn	**Pn**	**13 05 18.8**	**+1.9**
ICHK				Sn	**Sn**	**13 06 03.6**	**+1.1**
ICHK	**Chekchek**	**3.88**	**4**	*e*Pn	**Pn**	**13 05 18.9**	**+2.0**
ICHK	comp=Z,2µm,0.3s			*e*		13 05 44.9	
ICHK				*e*Sn	**Sn**	**13 06 03.6**	**+1.1**
ICHK	**Chekchek**	**3.88**	**4**	Pn	**Pn**	**13 05 18.8**	**+1.9**
ICHK				*e*Sn	**Sn**	**13 06 03.6**	**+1.1**
ASUD	**Al Ashush, Dub**	**3.89**	**163**	P	**Pn**	**13 05 18.7**	**+1.6**
HATD	SNR=32 **Hatta, Dubai**	**3.98**	**152**	⇓P	**Pn**	**13 05 19.3**	**+0.9**
HATD	SNR=20 **Hatta, Dubai**	**3.98**	**152**	P	**Pn**	**13 05 19.3**	**+1.0**
ASHO	SNR=20 **Ashiyiah**	**4.08**	**154**	⇓P	**Pn**	**13 05 20.4**	**+0.8**
ASHO	SNR=23 **Ashiyiah**	**4.08**	**154**	P	**Pn**	**13 05 20.4**	**+0.8**
SLWS	SNR=23	**4.69**	**222**	P	**Pn**	**13 05 29.1**	**+1.0**
SLWS		**4.69**	**222**	P	**Pn**	**13 05 29.0**	**+1.0**
IZEF	**Zefreh**	**4.76**	**342**	Pn	**Pn**	**13 05 29.6**	**+0.6**
IZEF	**Zefreh**	**4.76**	**342**	*e*Pn	**Pn**	**13 05 29.7**	**+0.7**
IZEF	comp=Z,439nm,0.2s			*e*		13 05 57.2	
IZEF	**Zefreh**	**4.76**	**342**	Pn	**Pn**	**13 05 29.6**	**+0.6**
BOQSS		**4.86**	**240**	P	**Pn**	**13 05 31.4**	**+1.0**
BTHS		**5.18**	**215**	P	**Pn**	**13 05 35.0**	**+0.2**
BTHS		**5.18**	**215**	P	**Pn**	**13 05 35.0**	**+0.2**
KFJS		**5.40**	**270**	P	**Pn**	**13 05 38.6**	**+0.8**
KFJS		**5.40**	**270**	P	**Pn**	**13 05 38.6**	**+0.8**
QRN	**Al-Qurain**	**5.42**	**275**	*e*P	**Pn**	**13 05 37.4**	**-0.6**
KBD	**Kabd**	**5.65**	**280**	*e*P	**Pn**	**13 05 40.6**	**-0.6**
KBD	comp=Z,30nm,0.4s			AML	AML	13 06 47.0	
KBD	**Kabd**	**5.65**	**280**	*e*P	**Pn**	**13 05 40.6**	**-0.6**
UMR	**Umm Al-Rimmam**	**5.68**	**284**	*e*P	**Pn**	**13 05 41.9**	**+0.2**
UMR	**Umm Al-Rimmam**	**5.68**	**284**	*e*P	**Pn**	**13 05 41.9**	**+0.2**
RDF	**Al-Radifah**	**5.75**	**277**	*e*P	**Pn**	**13 05 42.7**	**+0.1**
RDF	comp=Z,60nm,0.6s			AML	AML	13 06 50.0	
RDF	**Al-Radifah**	**5.75**	**277**	*e*P	**Pn**	**13 05 42.7**	**+0.1**
ZHSF	**Zahedan**	**6.01**	**76**	*e*Pn	**Pn**	**13 05 47.0**	**+0.8**
ZHSF	**Zahedan**	**6.01**	**76**	*e*Pn	**Pn**	**13 05 47.6**	**+1.4**
ZHSF	**Zahedan**	**6.01**	**76**	*e*Pn	**Pn**	**13 05 47.6**	**+1.4**
MIB	**Mutribah**	**6.05**	**285**	*e*P	**Pn**	**13 05 47.0**	**+0.2**
MIB	comp=Z,56nm,0.6s			AML	AML	13 06 53.5	
MIB	**Mutribah**	**6.05**	**285**	*e*P	**Pn**	**13 05 47.0**	**+0.2**
ITEG	**Tejag**	**6.06**	**41**	*e*Pn	**Pn**	**13 05 48.4**	**+1.5**
ITEG	comp=N,625nm,0.4s			*e*		13 07 57.4	
ISFB	**Sefidab**	**6.17**	**346**	Pn	**Pn**	**13 05 49.0**	**+0.6**
ISFB	**Sefidab**	**6.17**	**346**	*e*Pn	**Pn**	**13 05 49.1**	**+0.7**
ISFB	comp=Z,286nm,0.5s			*e*		13 07 50.6	
ISFB	**Sefidab**	**6.17**	**346**	Pn	**Pn**	**13 05 49.0**	**+0.6**
BSY	**Bisya** SNR=12	**6.27**	**152**	P	**Pn**	**13 05 50.1**	**+0.3**
BSYO	**Bisya** SNR=12	**6.30**	**152**	P	**Pn**	**13 05 50.1**	**-0.1**
IVRN	**Varamin**	**6.90**	**344**	Pn	**Pn**	**13 05 58.8**	**+0.3**
IVRN	**Varamin**	**6.90**	**344**	*e*Pn	**Pn**	**13 05 58.9**	**+0.4**
IVRN	comp=Z,562nm,0.2s			*e*		13 06 00.4	
IVRN	**Varamin**	**6.90**	**344**	*e*Pn	**Pn**	**13 05 58.9**	**+0.4**
ISHM	**Shahmirzad**	**7.45**	**355**	Pn	**Pn**	**13 06 07.4**	**+1.5**
ISHM	**Shahmirzad**	**7.45**	**355**	*e*Pn	**Pn**	**13 06 07.4**	**+1.5**
ASF	**Jabal al Asfar**	**15.31**	**289**	Pn	**Pn**	**13 07 49.1**	**-4.2**
ASF	comp=Z,1.0nm,0.3s,baz=134,slow=2.5,SNR=5.8			Sn	**Sn**	**13 10 39.9**	**-3.1**
MALT	**Malatya**	**16.38**	**311**	*e*P	**Pn**	**13 08 05.6**	**-1.7**
MALT	comp=Z,2.0nm,0.3s,baz=342,slow=19,SNR=2.8			pmax	pmax		
MALT	**Malatya**	**16.38**	**311**	*e*P	**Pn**	**13 08 05.6**	**-1.7**
ZEI	**Tsey**	**16.56**	**333**	*e*P	**Pn**	**13 08 09.2**	**-0.3**
ZEI	comp=Z,37nm,0.6s			pmax	pmax		
MMAI	**Mount Meron Ar**	**16.70**	**291**	Pn	**Pn**	**13 08 07.8**	**-3.5**
MMAI	comp=Z,26nm,1.3s			LR	LR	13 15 04.1	
EIL	**Elat**	**16.77**	**279**	LR	LR	13 14 02.6	
BR131	comp=Z,1.3nm,0.3s,baz=97,slow=14,SNR=3.8 **Keskin Array S**	**20.32**	**309**	P	**P**	**13 08 54.8**	**+1.4**
BR131	comp=Z,53nm,18.1s,baz=86,slow=35 **Keskin Array S**	**20.32**	**309**	P	**P**	**13 08 54.8**	**+1.4**
BRTR	comp=Z,2.1nm,0.6s **Keskin Array B**	**20.32**	**309**	P	**P**	**13 08 51.8**	**-1.6**
BRTR	comp=Z,2.1nm,0.6s **Keskin Array B**	**20.32**	**309**	P	**P**	**13 08 51.8**	**-1.6**
AML	comp=Z,2.3nm,0.6s,baz=129,slow=12,SNR=16 **Almayashu**	**21.05**	**44**	*e*P	**P**	**13 09 00.5**	**-0.7**
AML	comp=Z,10nm,0.8s,mb4.2 **Almayashu**	**21.05**	**44**	*e*P	**P**	**13 09 00.5**	**-0.7**
ABKAR	comp=Z,10nm,0.8s,mb4.2 **Akbulak array**	**21.35**	**11**	*e*P	**P**	**13 09 02.8**	**-1.6**
ABKAR	comp=Z,4.1nm,0.7s,mb3.9 **Akbulak array**	**21.35**	**11**	*e*P	**P**	**13 09 02.8**	**-1.6**
UCH	comp=Z,4.1nm,0.7s,mb3.9 **Uchtor**	**21.61**	**45**	*e*P	**P**	**13 09 08.3**	**+1.0**
UCH	comp=Z,4.6nm,0.8s,mb4.0 **Uchtor**	**21.61**	**45**	*e*P	**P**	**13 09 08.3**	**+1.0**
AAK	comp=Z,4.6nm,0.8s,mb4.0 **Ala-Archa**	**21.82**	**44**	P	**P**	**13 09 09.0**	**-0.5**
AAK	comp=Z,0.7nm,0.3s,mb3.5,baz=207,slow=2.3,SNR=1.9			LR	LR	13 19 11.4	
AAK	comp=Z,18nm,18.5s,MS2.5,baz=33,slow=41 **Ala-Archa**	**21.82**	**44**	P	**P**	**13 09 09.0**	**-0.5**
AAK				LR	LR	13 19 11.4	
AAK	**Ala-Archa**	**21.82**	**44**	P	**P**	**13 09 09.0**	**-0.6**
AKTK	**Aktyubinsk**	**22.25**	**7**	P	**P**	**13 09 13.4**	**-0.6**
AKTK	**Aktyubinsk**	**22.25**	**7**	P	**P**	**13 09 13.5**	**-0.5**
AKTO	**Aktyubinsk**	**22.25**	**7**	P	**P**	**13 09 13.4**	**-0.6**
VRHR	comp=Z,3.3nm,0.8s,mb3.8,baz=176,slow=11,SNR=11 **Novokhopersk**	**24.57**	**341**	*e*P	**P**	**13 09 38.5**	**+1.4**
VRHR	comp=N,10.0nm,0.5s			pmax	pmax		
VRHR	comp=Z,30nm,0.5s,mb5.1			pmax	pmax		
VRHR	comp=E,10.0nm,1.1s			pmax	pmax		
VRHR	**Novokhopersk**	**24.57**	**341**	*e*P	**P**	**13 09 38.5**	**+1.4**
VORD	**Divnogorie**	**25.18**	**338**	*e*P	**P**	**13 09 43.4**	**+0.7**
VORD	comp=N,10.0nm,0.6s			pmax	pmax		
VORD	comp=Z,9.0nm,0.6s,mb4.5			pmax	pmax		
VORD	comp=E,7.0nm,0.4s			pmax	pmax		
VORD	**Divnogorie**	**25.18**	**338**	*e*P	**P**	**13 09 43.4**	**+0.7**
VSR	**Storozhevoye**	**25.44**	**338**	*e*P	**P**	**13 09 45.7**	**+0.7**
VSR	comp=Z,10.0nm,0.6s,mb4.5			pmax	pmax		
VSR	comp=N,30nm,1.1s			pmax	pmax		
VSR	comp=E,8.0nm,0.4s			pmax	pmax		
VSR	**Storozhevoye**	**25.44**	**338**	*e*P	**P**	**13 09 45.7**	**+0.7**
IDI	comp=E,30nm,1.1s,mb4.7 **Anoyia**	**25.67**	**293**	P	**P**	**13 09 45.2**	**-2.1**
IDI	comp=E,2.5nm,0.4s,mb4.1,baz=20,slow=15,SNR=3.2 **Anoyia**	**25.67**	**293**	P	**P**	**13 09 45.2**	**-2.1**
BRVK	**Borovoye**	**27.43**	**21**	*e*P	**P**	**13 10 01.6**	**-1.4**
BRVK	comp=Z,1.0nm,0.6s,mb3.5			pmax	pmax		
BRVK	**Borovoye**	**27.43**	**21**	*e*P	**P**	**13 10 01.6**	**-1.4**
BRVK	comp=Z,1.2nm,0.6s,mb3.6 **Borovoye**	**27.43**	**21**	*e*P	**P**	**13 10 01.6**	**-1.4**
BVAR	comp=Z,1.0nm,0.6s,mb3.5 **Borovoye Array**	**27.44**	**22**	P	**P**	**13 10 02.7**	**-0.3**
BVAR	comp=Z,1.3nm,0.6s,mb3.6,baz=201,slow=7.8,SNR=10 **Borovoye Array**	**27.44**	**22**	P	**P**	**13 10 02.7**	**-0.3**
MK31	**Makanchi Array**	**28.73**	**43**	*e*P	**P**	**13 10 12.7**	**-2.0**
MK31	**Makanchi Array**	**28.73**	**43**	*e*P	**P**	**13 10 12.7**	**-2.0**
MKAR	**Makanchi Array**	**28.73**	**43**	P	**P**	**13 10 14.2**	**-0.5**
MKAR	comp=Z,1.1nm,0.5s,mb3.9,baz=232,slow=9.2,SNR=13 **Makanchi Array**	**28.73**	**43**	P	**P**	**13 10 14.2**	**-0.5**
KURK	**Kurchatov**	**29.03**	**33**	P	**P**	**13 10 13.5**	**-3.8**
AKASG	comp=Z,0.6nm,0.5s,mb3.6,baz=233,slow=8.8,SNR=4.8 **Malin Array Be**	**29.15**	**327**	P	**P**	**13 10 16.1**	**-2.3**
AKASG	comp=Z,0.9nm,0.6s,mb3.7,baz=128,slow=8.0,SNR=6.6 **Malin Array Be**	**29.15**	**327**	P	**P**	**13 10 16.1**	**-2.3**
VYHS	**Vyhne**	**33.72**	**316**	*e*P	**P**	**13 11 00.2**	**+1.6**
VYHS	**Vyhne**	**33.72**	**316**	*e*P	**P**	**13 11 00.2**	**+1.6**
VYHS	**Vyhne**	**33.72**	**316**	*e*P	**P**	**13 11 00.2**	**+1.6**
ZAA0	**Zalesovo Array**	**34.02**	**33**	*e*P	**P**	**13 10 59.1**	**-2.0**
ZAA0	**Zalesovo Array**	**34.02**	**33**	*e*P	**P**	**13 10 59.1**	**-2.0**
ZALV	**Zalesovo Beam**	**34.02**	**33**	P	**P**	**13 10 59.9**	**-1.2**
GERES	comp=Z,3.0nm,0.5s,mb4.5,baz=245,slow=9.7,SNR=14 **GERESS Array B**	**37.02**	**315**	P	**P**	**13 11 27.7**	**+0.7**
GERES	comp=Z,0.4nm,0.5s,mb3.5,baz=91,slow=5.1,SNR=3.7 **GERESS Array B**	**37.02**	**315**	P	**P**	**13 11 27.7**	**+0.7**
JOF	**Joensuu**	**37.61**	**343**	*e*P	**P**	**13 11 29.3**	**-2.5**
JOF	comp=Z,5.0nm,0.6s,mb4.4			pmax	pmax		
JOF	**Joensuu**	**37.61**	**343**	*e*p	**P**	**13 11 29.3**	**-2.5**
JOF	comp=Z,4.5nm,0.6s,mb4.4 **Joensuu**	**37.61**	**343**	*e*P	**P**	**13 11 29.3**	**-2.5**
FINES	comp=Z,5.0nm,0.6s,mb4.4 **FINESS Array B**	**37.96**	**338**	P	**P**	**13 11 33.1**	**-1.7**
FINES	comp=Z,6.0nm,0.9s,mb4.3,baz=156,slow=19,SNR=11 **FINESS Array B**	**37.96**	**338**	P	**P**	**13 11 33.1**	**-1.7**
CLL	**Collm**	**38.28**	**318**	*e*P	**P**	**13 11 39.0**	**+1.4**
NB2	**NORSAR Subarra**	**43.34**	**331**	P	**P**	**13 12 17.7**	**-1.5**
NB2	comp=Z,2.0nm,0.7s,mb4.0,baz=123,slow=7.9 **NORSAR Subarra**	**43.34**	**331**	P	**P**	**13 12 17.7**	**-1.5**
NOA	comp=Z,2.0nm,0.7s,mb4.0,SNR=6.3 **NORSAR Array B**	**43.34**	**331**	P	**P**	**13 12 17.9**	**-1.3**
NOA	comp=Z,2.0nm,0.8s,mb3.9,baz=120,slow=8.0,SNR=6.5 **NORSAR Array B**	**43.34**	**331**	P	**P**	**13 12 17.9**	**-1.3**
ARCES	**ARCESS Array B**	**44.39**	**346**	P	**P**	**13 12 27.4**	**-0.1**
ARCES	comp=Z,0.6nm,0.4s,mb3.7,baz=165,slow=6.3,SNR=9.8 **ARCESS Array B**	**44.39**	**346**	P	**P**	**13 12 27.4**	**-0.1**
SONM	comp=Z,1.0nm,0.8s,mb3.7,baz=265,slow=8.8,SNR=5.9 **Songino Array**	**44.60**	**49**	P	**P**	**13 12 29.1**	**-0.4**
SONM	comp=Z,0.9nm,0.5s,mb4.0,baz=300,slow=4.6,SNR=4.8 **Songino Array**	**44.60**	**49**	P	**P**	**13 12 29.1**	**-0.4**
OPO	**Ambohidratompo**	**47.13**	**189**	P	**P**	**13 12 49.6**	**-0.1**
OPO	comp=Z,0.9nm,0.5s,mb4.0,baz=300,slow=4.6,SNR=4.8 **Ambohidratompo**	**47.13**	**189**	P	**P**	**13 12 49.6**	**-0.1**
BOD	**Bodaibo**	**50.55**	**37**	*e*P	**P**	**13 13 14.3**	**-1.3**
BOD	comp=Z,4.0nm,0.9s,mb4.3			pmax	pmax		
BOD	**Bodaibo**	**50.55**	**37**	*e*P	**P**	**13 13 14.3**	**-1.3**
TORD	comp=Z,4.0nm,0.9s,mb4.3 **Torodi Ar. Bea**	**50.88**	**264**	P	**P**	**13 13 16.9**	**-1.7**
DBIC	comp=Z,4.6nm,0.6s,mb4.6,baz=58,slow=7.4,SNR=39 **Dimbokro**	**59.57**	**261**	P	**P**	**13 14 18.9**	**-2.5**
DBIC	comp=Z,3.3nm,0.7s,mb4.5,baz=26,slow=8.1,SNR=5.9 **Dimbokro**	**59.57**	**261**	*e*P	**P**	**13 14 19.4**	**-2.1**
DBIC	**Dimbokro**	**59.57**	**261**	*e*P	**P**	**13 14 19.4**	**-2.0**
KSRS	comp=Z,1.3nm,0.6s,mb4.2,baz=280,slow=6.9,SNR=5.7 **Korea Array**	**61.24**	**61**	P	**P**	**13 14 30.7**	**-1.9**
KSRS	comp=Z,1.0nm,0.6s,mb4.1 **Korea Array**	**61.24**	**61**	P	**P**	**13 14 30.7**	**-1.9**
KSRS				pmax	pmax		
KSRS	comp=Z,1.0nm,0.6s,mb4.1 **Korea Array**	**61.24**	**61**	P	**P**	**13 14 30.7**	**-1.9**
BOSA	comp=Z,1.0nm,0.6s,mb4.1 **Boshof**	**63.01**	**208**	P	**P**	**13 14 43.2**	**-1.2**
BOSA	comp=Z,4.5nm,0.5s,mb4.9,baz=28,slow=6.2,SNR=16 **Boshof**	**63.01**	**208**	P	**P**	**13 14 43.2**	**-1.2**
MJAR	comp=Z,227nm,20.0s,MS4.4,baz=220,slow=40 **Matsushiro Arr**	**69.36**	**59**	LR	LR	13 50 31.0	
CBIJ	comp=Z,2.6nm,0.5s,mb4.2,baz=315,slow=4.1,SNR=15 **Chichi jima**	**76.12**	**67**	LR	LR	13 50 31.3	
YKA	comp=Z,90nm,18.3s,MS4.1,baz=7.4,slow=36 **Yellowknife Ar**	**89.01**	**355**	P	**P**	**13 17 11.2**	**-0.8**
YKA	comp=Z,1.0nm,0.7s,mb4.3,baz=6.2,slow=5.2,SNR=21 **Yellowknife Ar**	**89.01**	**355**	P	**P**	**13 17 11.2**	**-0.8**
YKA	**Yellowknife Ar**	**89.01**	**355**	P	**P**	**13 17 11.2**	**-0.8**
WRA	**Warramunga Arr**	**91.16**	**112**	P	**P**	**13 17 20.3**	**-2.4**
ASAR	comp=Z,0.6nm,0.5s,mb4.2,baz=315,slow=4.1,SNR=15 **Alice Springs**	**92.64**	**115**	P	**P**	**13 17 27.6**	**-2.0**
ASAR	comp=Z,1.0nm,0.6s,mb4.4,baz=305,slow=4.8,SNR=28 **Alice Springs**	**92.64**	**115**	P	**P**	**13 17 27.5**	**-2.0**

*IDC **14** 13:09:52.8±0.9, 32°47N×105°15E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, MS3.6/2, Ms1 3.6/2, ms1mx3.0/44, Error ellipse: s-maj=39.4km s-min=16.6km az=50.0*
*NEIC **14** 13:09:56.2±5.2, 32°46N×105°14E, h20km±38km, mb4.5/3, Error ellipse: s-maj=39.1km s-min=9.7km az=47.0*
*BJI **14** 13:09:56.5, 32°46N×105°29E, h14km, mB4.6/4, mb4.2/4, ML3.9/11, Ms3.7/4, Ms7 3.6/4*

ISC 14 13:09:54.3±0.9, 32°58N±0°04×105°27E±0°06, h5km±6km, n28, σ1§03/32, mb3.9/13, MS3.6/2, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.10**	**218**	Pg	**Pg**	**13 10 34.0**	**-0.6**
CD2				Sg	**Sg**	**13 11 02.4**	**+0.5**
CD2	comp=N,3µm,0.5s			smax			
XAN	**Xi'an**	**3.38**	**64**	Pn	**Pn**	**13 10 48.9**	**+1.2**
XAN				Pg	**Pg**	**13 10 58.3**	**-0.8**
XAN				Sn	**Sn**	**13 11 37.3**	**+9.1**
XAN	comp=N,200nm,0.5s			smax			
XAN	comp=E,130nm,0.8s			smax			
LZH	**Lanzhou**	**3.69**	**342**	Pg	**Pg**	**13 11 05.6**	**+0.6**
LZH				Sg	**Sg**	**13 11 52.3**	**-0.6**
LZH	comp=N,410nm,0.9s			smax			
LZH	comp=E,400nm,0.8s			smax			
LZH	comp=E,830nm,6.5s			LR	LR		
LZH	comp=Z,960nm,7.3s			LR	LR		
ENH	**Enshi**	**4.27**	**121**	*e*Pn	**Pn**	**13 11 01.0**	**+1.1**
GYA	**Guiyang**	**6.22**	**168**	Pn	**Pn**	**13 11 28.0**	**+1.4**
GYA				Sn	**Sn**	**13 12 34.8**	**-3.3**
GYA	comp=N,100nm,0.5s			smax			
GYA	comp=E,70nm,1.0s			smax			
GTA	**Gaotai**	**8.12**	**329**	*e*P	**Pn**	**13 11 45.4**	**-7.4**
GTA				pP		13 11 49.9	
GTA				sP		13 11 52.9	
GTA				S	**Sn**	**13 13 11.0**	**-14**
GTA				sS		13 13 20.0	
GTA	comp=Z,4.0nm,1.1s			pmax	pmax		
GTA	comp=Z,100nm,5.7s			pmax	pmax		
GTA	comp=N,190nm,10.5s			LR	LR		
GTA	comp=E,130nm,10.8s			LR	LR		
GTA	comp=Z,170nm,11.1s			LR	LR		
KSRS	**Korea Array**	**19.16**	**69**	P	**Pn**	**13 14 19.4**	**0.0**
MK31	comp=Z,0.1nm,0.3s,baz=252,slow=10,SNR=4.2 **Makanchi Array**	**22.57**	**316**	P	**P**	**13 14 54.7**	**-0.5**
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**13 14 53.5**	**-1.7**
MKAR	comp=Z,0.4nm,0.4s,mb3.2,baz=96,slow=13,SNR=3.4 **Makanchi Array**	**22.57**	**316**	P	**P**	**13 14 53.5**	**-1.7**
ZALV	**Zalesovo Beam**	**25.86**	**332**	P	**P**	**13 15 27.0**	**+0.4**
KURK	comp=Z,0.7nm,0.4s,mb3.5,baz=134,slow=10,SNR=4.0 **Kurchatov**	**26.70**	**321**	P	**P**	**13 15 35.1**	**+0.9**
ABKAR	comp=Z,1.1nm,0.7s,mb3.5,baz=135,slow=8.5,SNR=4.3 **Akbulak array**	**37.47**	**310**	*e*P	**P**	**13 17 08.8**	**+0.4**
AKTK	**Aktyubinsk**	**38.88**	**312**	P	**P**	**13 17 21.4**	**+1.0**
AKTO	**Aktyubinsk**	**38.88**	**312**	P	**P**	**13 17 21

comp=E,140nm,0.8s
KMI Kunming 6.31 183 Pn **Pn 13 17 55.9 -0.9**
KMI Sn **Sn 13 19 05.8 -3.6**
KMI LR LR
comp=N,260nm,9.3s
KMI LR LR
comp=E,540nm,8.8s
SONM Songino Array 16.56 8 Pn **Pn 13 20 15.5 -0.4**
baz=184,slow=12,SNR=8.0
KSRS Korea Array 21.34 67 P **P 13 21 09.3 -1.7**
comp=E,2.1nm,0.7s,mb3.6,baz=260,slow=10,SNR=9.9
MKAR Makanchi Array 22.12 320 P **P 13 21 21.2 +1.9**
comp=E,1.4nm,0.8s,mb3.4,baz=113,slow=12,SNR=6.4
ZAA0 Zalesovo Array 26.02 335 *e*P **P 13 21 56.8 0.0**
ZALV Zalesovo Beam 26.02 335 P **P 13 21 56.9 0.0**
comp=E,1.0nm,0.6s,mb3.5,baz=131,slow=9.2,SNR=5.4
KURK Kurchatov 26.43 324 P **P 13 22 01.3 +0.7**
comp=E,0.4nm,0.3s,mb3.4,baz=124,slow=8.7,SNR=3.7
ARCES ARCESS Array B 56.57 336 P **P 13 26 05.9 -0.3**
comp=E,1.1nm,0.9s,mb3.9,baz=92,slow=6.3,SNR=3.1
WRAB Tennant Creek 59.27 145 P **P 13 26 28.4 +2.7**
comp=E,2.0nm,0.6s,mb4.3
WRA Warramunga Arr 59.27 145 P **P 13 26 26.0 +0.2**
comp=E,1.9nm,0.9s,mb4.1,baz=338,slow=7.5,SNR=10
ASAR Alice Springs 62.27 148 P **P 13 26 46.8 +0.7**
comp=E,0.2nm,0.4s,mb3.6,baz=340,slow=6.4,SNR=3.7
YKA Yellowknife Ar 81.62 17 P **P 13 28 40.6 -1.2**
comp=E,0.1nm,0.4s,mb3.1,baz=331,slow=5.8,SNR=3.4

IDC 14 13:19:53.1±1.1, 33°.58N×104°.80E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/26, mbtmp3.4/5, Error ellipse: s-maj=73.1km s-min=20.5km az=61.0, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**24.79**	**331**	P	P	13 25 17.6	+1.1
	1.5nm,0.6s,baz=131,slow=10,SNR=5.4						
KURK	**Kurchatov**	**25.68**	**320**	P	P	13 25 23.9	-0.7
	0.3nm,0.5s,baz=124,slow=9.1,SNR=2.2						
WRA	**Warramunga Arr**	**60.23**	**148**	P	P	13 30 03.8	+0.7
	0.3nm,0.4s,baz=338,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**63.32**	**150**	P	P	13 30 23.5	-0.4
	0.3nm,0.8s,baz=330,slow=6.9,SNR=3.8						
YKA	**Yellowknife Ar**	**79.16**	**17**	P	P	13 31 59.1	-0.2
	0.1nm,0.5s,baz=328,slow=5.3,SNR=6.2						

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*ISCJB **14** 13:20:60.0±0.4, 32°.57N±0°.04×105°.49E±0°.06, h10^{km}, mb4.0/15, Error ellipse: s-maj=7.3km s-min=5.2km az=6.1*
*IDC **14** 13:21:00.1±0.8, 32°.56N×105°.44E, h0^{km}, mb4.0/10, mb1 4.0/12, mb1mx3.9/28, mbtmp3.9/12, ML3.6/2, Error ellipse: s-maj=37.6km s-min=15.6km az=54.0*
*BJI **14** 13:21:01.7, 32°.57N×105°.64E, h16^{km}, mB4.6/4, mb4.4/5, ML4.1/12, Ms4.1/4, Ms7 3.7/5*
*NEIC **14** 13:21:04.0±3.0, 32°.69N×105°.67E, h25^{km}±22^{km}, mb4.0/4, Error ellipse: s-maj=17.0km s-min=5.6km az=54.0*
ISC 14 13:21:01.8±0.4, 32°.60N±0°.04×105°.52E±0°.06, h10^{km}, n28, σ0^{s}85/34, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.26**	**222**	Pg	**Pg**	**13 21 43.8**	**-1.3**
CD2				Sg	**Sg**	**13 22 13.8**	**-0.6**
CD2				smax			
	comp=N,9μm,0.7s						
XAN	**Xi'an**	**3.19**	**62**	Pn	**Pn**	**13 21 52.8**	**+0.8**
XAN				Sg	**Sg**	**13 22 38.3**	**-5.9**
XAN				smax			
	comp=N,680nm,0.7s						
XAN				smax			
	comp=E,370nm,0.8s						
LZH	**Lanzhou**	**3.75**	**339**	Pn	**Pn**	**13 22 01.8**	**+2.1**
LZH				Pg	**Pg**	**13 22 11.8**	**-1.8**
LZH				Sg	**Sg**	**13 22 55.8**	**-6.3**
LZH				smax			
	comp=N,500nm,0.5s						
LZH				smax			
	comp=E,960nm,0.6s						
LZH				LR	LR		
	comp=N,2μm,5.6s						
LZH				LR	LR		
	comp=Z,2μm,7.0s						
ENH	**Enshi**	**4.11**	**123**	Pn	**Pn**	**13 22 04.8**	**+0.2**
GYA	**Guiyang**	**6.20**	**170**	Pn	**Pn**	**13 22 33.3**	**-0.1**
GYA				Sn	**Sn**	**13 23 45.8**	**+1.4**
GYA				smax			
	comp=N,200nm,1.0s						
GYA				smax			
	comp=E,130nm,0.7s						
GYA				LR	LR		
	comp=Z,2μm,3.7s						
WHN	**Wuhan**	**7.81**	**103**	Pn	**Pn**	**13 22 50.5**	**-5.0**
WHN				Sn	**Sn**	**13 24 19.3**	**-4.6**
WHN				LR	LR		
	comp=Z,1μm,5.8s						
SONM	**Songino Array**	**15.23**	**2**	Pn	**Pn**	**13 24 35.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=190,slow=16,SNR=3.0						
KSRS	**Korea Array**	**18.96**	**69**	P	**Pn**	**13 25 25.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=249,slow=9.9,SNR=4.8						
MK31	**Makanchi Array**	**22.70**	**315**	*e*P	**P**	**13 26 04.6**	**+1.1**
MKAR	**Makanchi Array**	**22.70**	**315**	P	**P**	**13 26 04.1**	**+0.6**
	comp=Z,1.7nm,0.6s,mb3.6,baz=112,slow=12,SNR=10						
ZAA0	**Zalesovo Array**	**25.94**	**331**	*e*P	**P**	**13 26 33.7**	**-0.5**
ZALV	**Zalesovo Beam**	**25.94**	**331**	P	**P**	**13 26 34.3**	**+0.2**
	comp=Z,1.2nm,0.4s,mb3.8,baz=130,slow=11,SNR=5.6						
KURK	**Kurchatov**	**26.82**	**320**	P	**P**	**13 26 42.5**	**+0.4**
	comp=Z,1.2nm,0.8s,mb3.5,baz=122,slow=11,SNR=6.1						
KURK	**Kurchatov**	**26.82**	**320**	*e*P	**P**	**13 26 42.5**	**+0.4**
	comp=Z,1.5nm,0.6s,mb3.7						
ABKAR	**Akbulak array**	**37.61**	**310**	*e*P	**P**	**13 28 17.0**	**+0.4**
	comp=Z,1.3nm,0.7s,mb3.8						
TIXI	**Tiksi**	**41.06**	**11**	P	**P**	**13 28 44.7**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.0						
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**	**13 30 42.6**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.2,baz=82,slow=8.7,SNR=6.4						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**13 30 47.1**	**-0.2**
	comp=Z,1.1nm,0.4s,mb4.2,baz=72,slow=6.2,SNR=5.7						
AKASG	**Malin Array Be**	**57.25**	**313**	P	**P**	**13 30 48.5**	**-0.7**
	comp=Z,0.8nm,0.4s,mb4.1,baz=66,slow=6.9,SNR=3.7						
WRAB	**Tennant Creek**	**59.07**	**148**	*e*P	**P**	**13 31 02.0**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**59.07**	**148**	P	**P**	**13 31 02.1**	**-0.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=341,slow=7.4,SNR=37						
WB2	**Warramunga Arr**	**59.08**	**148**	*e*P	**P**	**13 31 02.0**	**-0.3**
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**13 31 23.4**	**+0.1**
	comp=Z,1.8nm,0.4s,mb4.5,baz=332,slow=6.5,SNR=33						
NB2	**NORSAR Subarra**	**64.05**	**327**	P	**P**	**13 31 35.7**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**13 31 35.3**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=70,slow=6.7,SNR=4.3						
SMF	**Signal de Mont**	**74.28**	**316**	*e*P	**P**	**13 32 40.0**	**+0.8**
	comp=Z,7.5nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	**74.50**	**316**	*e*P	**P**	**13 32 41.4**	**+1.0**
	comp=Z,3.5nm,0.6s,mb4.2						
YKA	**Yellowknife Ar**	**79.91**	**18**	P	**P**	**13 33 10.0**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=326,slow=4.8,SNR=6.0						

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*IDC **14** 13:27:17.6±0.8, 32°.39N×105°.33E, h0^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.7/28, mbtmp3.7/10, ML3.4/2, MS3.8/2, Ms1 3.8/2, ms1mx3.0/39, Error ellipse: s-maj=37.5km s-min=16.4km az=55.0*
*NEIC **14** 13:27:18.7±0.7, 32°.43N×105°.54E, h10^{km}, mb4.1/3, Error ellipse: s-maj=28.4km s-min=11.2km az=53.0*
*BJI **14** 13:27:18.8, 32°.50N×105°.19E, h14^{km}, mB4.6/2, mb4.3/2, ML4.2/9, Ms3.9/2, Ms7 3.7/2*
ISC 14 13:27:20.1±1.2, 32°.36N±0°.04×105°.31E±0°.05, h16^{km}±9^{km}, n21, σ0^{s}84/25, mb3.8/11, MS3.7/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.96**	**223**	Pg	**Pg**	**13 27 56.6**	**-1.2**
CD2				Sg	**Sg**	**13 28 24.3**	**+1.0**
CD2				smax			
	comp=N,10μm,0.6s						
XAN	**Xi'an**	**3.46**	**60**	Pn	**Pn**	**13 28 13.4**	**+0.2**
XAN				Pg	**Pb**	**13 28 21.3**	**+0.4**
XAN				Sg	**Sb**	**13 29 02.9**	**+0.2**
XAN				smax			
	comp=N,680nm,0.7s						
XAN				smax			
	comp=E,370nm,0.8s						
LZH	**Lanzhou**	**3.91**	**342**	Pn	**Pn**	**13 28 19.8**	**+0.3**
LZH				Pg	**Pb**	**13 28 28.9**	**+0.2**
LZH				Sg	**Sb**	**13 29 16.8**	**+1.0**
LZH				smax			
	comp=N,690nm,0.6s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=E,2μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,8.3s						
ENH	**Enshi**	**4.13**	**119**	Pn	**Pn**	**13 28 16.9**	**-5.6**
SONM	**Songino Array**	**15.48**	**3**	Pn	**Pn**	**13 30 56.1**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=2.4						
KSRS	**Korea Array**	**19.21**	**68**	P	**Pn**	**13 31 43.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=250,slow=11,SNR=5.6						
MK31	**Makanchi Array**	**22.75**	**316**	*e*P	**P**	**13 32 19.3**	**-2.1**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 32 20.3**	**-1.1**
	comp=Z,0.9nm,0.5s,mb3.4,baz=114,slow=12,SNR=6.9						
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**13 32 53.2**	**+0.6**
	comp=Z,0.6nm,0.4s,mb3.5,baz=134,slow=8.3,SNR=3.3						
ZALV				LR	LR	13 43 01.0	
	comp=Z,102nm,20.4s,MS3.4,baz=263,slow=36						
KURK	**Kurchatov**	**26.89**	**321**	P	**P**	**13 32 59.3**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.2,baz=134,slow=8.7,SNR=5.3						
ABKAR	**Akbulak array**	**37.63**	**310**	*e*P	**P**	**13 34 35.1**	**+1.1**
	comp=Z,0.3nm,0.4s,mb3.4						
TIXI	**Tiksi**	**41.33**	**11**	*e*P	**P**	**13 35 05.1**	**+0.5**
	comp=Z,1.1nm,0.3s,mb4.0						
ARCES	**ARCESS Array B**	**56.54**	**335**	P	**P**	**13 37 01.9**	**+0.7**
	comp=Z,1.8nm,0.7s,mb4.2,baz=78,slow=7.6,SNR=5.7						
AKASG	**Malin Array Be**	**57.28**	**313**	P	**P**	**13 37 07.4**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=65,slow=7.5,SNR=3.3						
WRAB	**Tennant Creek**	**58.96**	**148**	*e*P	**P**	**13 37 19.4**	**+0.6**
	comp=Z,2.5nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.96**	**148**	P	**P**	**13 37 19.0**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.3,baz=340,slow=7.5,SNR=16						
WB2	**Warramunga Arr**	**58.97**	**148**	*e*P	**P**	**13 37 18.6**	**-0.2**
MLR	**Muntele Rosu**	**60.76**	**308**	LR	LR	14 08 18.6	
	comp=Z,141nm,20.3s,MS4.1,baz=59,slow=40						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**13 37 40.1**	**+0.3**
	comp=Z,0.8nm,0.7s,mb4.0,baz=331,slow=6.6,SNR=12						
YKA	**Yellowknife Ar**	**80.19**	**18**	P	**P**	**13 39 28.2**	**-1.1**
	comp=Z,0.1nm,0.3s,mb3.2,baz=327,slow=4.7,SNR=3.3						
YKA	**Yellowknife Ar**	**80.19**	**18**	P	**P**	**13 39 28.2**	**-1.1**

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*IDC **14** 13:29:41.4±0.6, 32°.37N×105°.21E, h0^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.2/33, mbtmp4.2/23, ML4.0/2, MS3.8/5, Ms1 3.8/5, ms1mx3.3/36, Error ellipse: s-maj=20.5km s-min=12.3km az=38.0*
*ISCJB **14** 13:29:42.5±0.9, 32°.22N±0°.02×105°.20E±0°.03, h15^{km}±6^{km}, mb4.3/38, MS3.7/9, Error ellipse: s-maj=4.4km s-min=3.8km az=174.7*
*BJI **14** 13:29:43.2, 32°.35N×105°.19E, h19^{km}, mB4.9/17, mb4.4/26, ML4.5/17, Ms4.3/31, Ms7 4.0/26*
*MOS **14** 13:29:44.2±0.8, 32°.31N×105°.20E, h33^{km}, mb4.6/11, Error ellipse: s-maj=12.1km s-min=7.3km az=108.2*
*NEIC **14** 13:29:45.6±1.8, 32°.38N×105°.23E, h27^{km}±13^{km}, mb4.2/11, Error ellipse: s-maj=6.4km s-min=4.3km az=222.0*
ISC 14 13:29:43.4±0.8, 32°.25N±0°.02×105°.18E±0°.03, h11^{km}±5^{km}, n103, σ1^{s}20/122, mb4.3/38, MS3.7/9, 5C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.81**	**223**	Pg	**Pg**	**13 30 17.3**	**-0.7**
CD2				Sg	**Sg**	**13 30 42.0**	**+0.5**
CD2				smax			
	comp=N,40μm,0.5s						
XAN	**Xi'an**	**3.61**	**59**	Pg	**Pb**	**13 30 47.9**	**+0.7**
XAN				Sg	**Sb**	**13 31 32.5**	**+1.5**
XAN				smax			
	comp=N,2μm,1.0s						
XAN				smax			
	comp=E,870nm,0.7s						
XAN				LR	LR		
	comp=N,770nm,4.8s						
XAN				LR	LR		
	comp=E,1μm,7.2s						
XAN				LR	LR		
	comp=Z,5μm,5.5s						
LZH	**Lanzhou**	**3.98**	**344**	Pn	**Pn**	**13 30 45.3**	**+0.9**
LZH				Pg	**Pb**	**13 30 54.4**	**+0.8**
LZH				Sn	**Sn**	**13 31 30.8**	**-0.2**
LZH				Sg	**Sb**	**13 31 43.1**	**+1.3**
LZH				smax			
	comp=N,2μm,0.6s						
LZH				smax			
	comp=E,3μm,0.6s						
LZH				LR	LR		
	comp=E,3μm,7.0s						
LZH				LR	LR		
	comp=Z,4μm,9.4s						
ENH	**Enshi**	**4.18**	**117**	*e*Pn	**Pn**	**13 30 48.2**	**+1.1**
ENH				*e*Pg	**Pg**	**13 31 01.1**	**-2.4**
ENH				*e*Sg	**Sg**	**13 31 54.9**	**-2.8**
GYA	**Guiyang**	**5.91**	**167**	Pn	**Pn**	**13 31 13.5**	**+2.6**
GYA				Sn	**Sn**	**13 32 18.8**	**+0.2**
GYA				smax			
	comp=N,610nm,0.7s						
GYA				smax			
	comp=E,610nm,0.8s						
GYA				LR	LR		
	comp=N,5μm,3.8s						
GYA				LR	LR		
	comp=E,3μm,4.2s						
GYA				LR	LR		
	comp=Z,4μm,3.7s						
KMI	**Kunming**	**7.42**	**197**	Pn	**Pn**	**13 31 30.8**	**-0.7**
KMI				Sn	**Sn**	**13 32 56.9**	**+1.2**
KMI				Sg	**Sg**	**13 33 37.6**	**-3.9**
KMI				smax			
	comp=N,96nm,2.0s						
KMI				smax			
	comp=E,79nm,1.6s						
KMI				LR	LR		
	comp=N,940nm,7.3s						
KMI				LR	LR		
	comp=E,2μm,7.0s						
WHN	**Wuhan**	**8.02**	**100**	P	**Pn**	**13 31 35.5**	**-4.3**
WHN				S	**Sn**	**13 33 06.8**	**-3.7**
WHN				LR	LR		
	comp=N,3μm,2.0s						
WHN				LR	LR		
	comp=E,2μm,2.0s						
WHN				LR	LR		
	comp=Z,2μm,15.6s						
GTA	**Gaotai**	**8.37**	**330**	*e*P	**Pn**	**13 31 35.3**	**-9.2**
GTA				pP		13 31 44.6	
GTA				sP		13 31 49.0	
GTA				S	**Sn**	**13 32 58.8**	**-20**
GTA				sS		13 33 09.9	
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,61nm,5.7s						
GTA				LR	LR		
	comp=N,950nm,10.5s						
GTA				LR	LR		
	comp=E,820nm,7.8s						
GTA				LR	LR		
	comp=Z,730nm,10.5s						
BTO	**Baotou**	**9.20**	**24**	*e*P	**Pn**	**13 31 52.8**	**-3.2**
HHC	**Hu-ho-hao-te**	**10.00**	**29**	*e*P	**Pn**	**13 32 09.5**	**+2.6**
HHC				pP		13 32 16.8	
HHC				sP		13 32 21.5	
HHC				S	**Sn**	**13 34 01.9**	**+2.9**
HHC				sS		13 34 12.6	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,4.7s						
HHC				LR	LR		
	comp=N,1μm,4.7s						
HHC				LR	LR		
	comp=E,920nm,4.1s						
HHC				LR	LR		
	comp=Z,650nm,4.9s						
TIA	**Tai'an**	**10.65**	**65**	*e*P	**Pn**	**13 32 16.5**	**+0.7**
NJ2	**Nanjing**	**11.59**	**87**	*e*P	**Pn**	**13 32 32.3**	**+3.5**
GZH	**Guangzhou**	**11.64**	**140**	P	**Pn**	**13 32 27.8**	**-1.7**
GZH				S	**Sn**	**13 34 39.3**	**-0.1**
GZH				LR	LR		
	comp=N,1μm,10.8s						
GZH				LR	LR		
	comp=E,710nm,6.7s						
BJI	**Beijing**	**11.80**	**46**	P	**Pn**	**13 32 31.6**	**+0.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,86nm,4.9s						
BJI				LR	LR		
	comp=N,1μm,9.9s						
BJI				LR	LR		
	comp=E,1μm,11.8s						
BJI				LR	LR		
	comp=Z,190nm,16.4s						
LSA	**Lhasa**	**12.31**	**262**	P	**Pn**	**13 32 41.8**	**+3.3**
LSA				S	**Sn**	**13 34 54.8**	**-0.9**
LSA				LR	LR		
	comp=E,250nm,9.5s						
LSA				LR	LR		
	comp=Z,440nm,9.0s						
LSA	**Lhasa**	**12.31**	**262**	P	**Pn**	**13 32 40.0**	**+1.5**
LSA				pmax	pmax		
	comp=Z,20nm,1.1s						
LSA	**Lhasa**	**12.31**	**262**	P	**Pn**	**13 32 40.0**	**+1.5**
	comp=Z,20nm,1.1s						
SHL	**Shillong**	**13.41**	**244**	*e*P	**Pn**	**13 32 54.5**	**+0.9**
QIZ	**Qiongzhong**	**13.82**	**161**	P	**Pn**	**13 33 01.6**	**+2.4**
QIZ				S	**Sn**	**13 35 36.5**	**+3.9**
QIZ				pmax	pmax		
	comp=Z,33nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,140nm,4.7s						
QIZ				LR	LR		
	comp=N,650nm,9.2s						
QIZ				LR	LR		
	comp=Z,900nm,11.4s						
QZH	**Quanzhou**	**13.84**	**118**	*e*P	**Pn**	**13 33 01.8**	**+2.3**
QZH				S	**Sn**	**13 35 32.3**	**-0.9**
QZH				LR	LR		
	comp=N,3μm,8.0s						
QZH				LR	LR		
	comp=E,2μm,11.2s						
QZH				LR	LR		
	comp=Z,3μm,10.7s						
SONM	**Songino Array**	**15.59**	**3**	Pn	**Pn**	**13 33 21.6**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=7.8						
ULN	**Ulaanbaatar**	**15.66**	**5**	*e*P	**Pn**	**13 33 21.6**	**-2.3**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**15.66**	**5**	*e*P	**Pn**	**13 33 21.6**	**-2.3**
	comp=Z,12nm,1.0s						
TAPN	**Taplejung**	**15.93**	**257**	*e*P	**Pn**	**13 33 29.4**	**+1.9**
	comp=Z,26nm,0.8s						
ODAN	**Odare**	**16.38**	**255**	*e*P	**Pn**	**13 33 34.0**	**+0.7**
	comp=Z,60nm,0.9s						
RAMN	**Ramite**	**17.00**	**257**	*e*P	**Pn**	**13 33 41.0**	**-0.1**
	comp=Z,53nm,1.0s						
JIRN	**Jiri**	**17.08**	**259**	*e*P	**Pn**	**13 33 42.6**	**+0.5**
	comp=Z,43nm,0.8s						
GUN	**Gumba**	**17.25**	**260**	*e*P	**Pn**	**13 33 44.3**	**0.0**
	comp=Z,42nm,0.8s						
SNY	**Shenyang**	**17.50**	**52**	⇑P	**Pn**	**13 33 48.5**	**+1.3**
SNY				S	**Sn**	**13 37 04.3**	**+2.4**
SNY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SNY				LR	LR		
	comp=N,440nm,17.5s						
SNY				LR	LR		
	comp=E,330nm,17.5s						
SNY				LR	LR		
	comp=Z,170nm,13.1s						
PKI	**Pulchoki**	**17.76**	**260**	*e*P	**Pn**	**13 33 50.0**	**-0.6**
	comp=Z,20nm,0.5s						
PKIN	**Phulchoki**	**17.77**	**260**	*e*P	**Pn**	**13 33 49.9**	**-0.8**
	comp=Z,36nm,0.9s						
KKN	**Kakani**	**17.79**	**261**	*e*P	**Pn**	**13 33 50.7**	**-0.3**
	comp=Z,42nm,0.9s						
WMQ	**Urumqi**	**17.94**	**315**	*e*P	**Pn**	**13 33 56.0**	**+3.4**
WMQ				LR	LR		
	comp=N,550nm,20.0s						
WMQ				LR	LR		
	comp=E,220nm,17.0s						
WMQ				LR	LR		
	comp=Z,190nm,16.0s						
DMN	**Daman**	**18.00**	**260**	*e*P	**Pn**	**13 33 53.4**	**-0.1**
	comp=Z,75nm,0.9s						
ZAK	**Zakamensk**	**18.17**	**356**	*e*P	**Pn**	**13 33 50.7**	**-4.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSRS	**Korea Array**	**19.36**	**68**	P	**Pn**	**13 34 09.0**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=257,slow=9.8,SNR=34						
KSRS	**Korea Array**	**19.36**	**68**	P	**Pn**	**13 34 09.0**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	**Talaya**	**19.45**	**357**	*e*P	**Pn**	**13 34 13.4**	**+2.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CN2	**Changchun**	**19.64**	**48**	*e*P	**Pn**	**13 34 22.4**	**+9.1**
CN2				*es*P	sP	13 34 29.0	+12
CN2				*e*S	**Sn**	**13 37 57.3**	**+3.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
MOY	**Mondy**	**19.64**	**352**	*e*P	**Pn**	**13 34 13.7**	**+0.4**
MOY				pmax	pmax		
	comp=Z,14nm,1.5s						
IRK	**Irkutsk**	**19.99**	**358**	*e*P	**Pn**	**13 34 17.1**	**-0.3**
IRK				pmax	pmax		
	comp=Z,31nm,2.2s						
HIA	**Hailar**	**20.20**	**28**	P	**P**	**13 34 18.7**	**+0.7**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**20.20**	**28**	P	**P**	**13 34 18.7**	**+0.7**
	comp=Z,8.2nm,0.6s						
MDJ	**Mudanjiang**	**22.67**	**50**	P	**P**	**13 34 44.8**	**+0.3**
MDJ				pP		13 34 47.6	
MDJ				PcP	PcP	13 38 37.8	+0.9
MDJ				S	**S**	**13 38 50.4**	**-2.5**
MDJ				ScP	ScP	13 42 14.8	+0.3
MDJ				PcS	PcS	13 42 16.1	+0.5
MDJ				ScS	ScS	13 46 00.8	+1.0
MDJ				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,39nm,3.3s						
MDJ				LR	LR		
	comp=N,110nm,19.5s,MS3.4						
MDJ				LR	LR		
	comp=E,47nm,18.4s,MS3.4						
MK31	**Makanchi Array**	**22.75**	**316**	*e*P	**P**	**13 34 44.5**	**-0.9**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 34 44.5**	**-0.9**
	comp=E,8.4nm,0.8s,mb4.2,baz=114,slow=12,SNR=23						
MKAR				LR	LR	13 44 05.5	
	comp=E,248nm,18.5s,MS3.7,baz=108,slow=38						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**13 34 44.5**	**-0.9**
MKAR				LR	LR	13 44 05.5	
KSH	**Kashi**	**24.68**	**295**	*e*P	**P**	**13 35 07.1**	**+2.9**
KSH				pP		13 35 11.3	
KSH				*es*P	sP	13 35 14.1	+5.0
KSH				*e*PP		13 35 40.1	
KSH				*e*S	**S**	**13 39 24.0**	**-1.7**
KSH				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.3						
KSH				LR	LR		
	comp=N,390nm,9.7s						
KSH				LR	LR		
	comp=E,120nm,5.3s						
ZAA0	**Zalesovo Array**	**26.12**	**332**	*e*P	**P**	**13 35 15.8**	**-1.2**
ZALV	**Zalesovo Beam**	**26.12**	**332**	P	**P**	**13

comp=Z,6.9nm,0.8s,mb4.2
EKS2 Erkin-Say 26.87 302 P **P** 13 35 24.1 +0.1
comp=Z,2.8nm,0.7s,mb3.9
KURK Kurchatov 26.91 321 P **P** 13 35 23.6 -0.6
comp=Z,5.7nm,0.7s,mb4.2,baz=124,slow=11,SNR=11
KURK LR LR 13 47 09.3
comp=Z,171nm,18.1s,MS3.6,baz=115,slow=39
KURK Kurchatov 26.91 321 *d* P **P** 13 35 22.8 -1.4
KURK pmax pmax
comp=Z,9.0nm,1.3s,mb4.1
KURK Kurchatov 26.91 321 *e* P **P** 13 35 23.5 -0.8
comp=Z,6.3nm,0.8s,mb4.2
NVS Novosibirsk 27.40 332 *e* P **P** 13 35 29.7 +1.1
MJAR Matsushiro Arr 27.51 72 P **P** 13 35 29.3 -0.5
comp=Z,1.5nm,0.5s,mb3.9,baz=269,slow=11,SNR=3.0
JHJ Hachijo jima 2 29.06 79 LR LR 13 46 28.4
comp=Z,214nm,19.7s,MS3.8,baz=111,slow=35
ASAJ Asahikawa 31.45 57 P **P** 13 36 04.1 -0.6
comp=Z,2.5nm,0.5s,mb4.3,baz=310,slow=28,SNR=5.3
ASAJ Asahikawa 31.45 57 P **P** 13 36 04.1 -0.6
ASAJ pmax pmax
comp=Z,3.0nm,0.5s
BVAR Borovoye Array 32.48 320 P **P** 13 36 13.1 -0.5
comp=Z,1.2nm,0.5s,mb4.0,baz=123,slow=11,SNR=7.5
BRVK Borovoye 32.55 320 *c* *e* P **P** 13 36 13.2 -1.1
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BRVK Borovoye 32.55 320 *e* P **P** 13 36 13.6 -0.7
comp=Z,1.5nm,0.5s,mb4.2
ABKAR Akbulak array 37.62 310 *e* P **P** 13 36 57.7 -0.2
comp=Z,1.1nm,0.4s,mb3.9
AKTK Aktyubinsk 39.04 312 P **P** 13 37 09.2 -0.7
AKTK LR LR 13 52 36.7
AKTO Aktyubinsk 39.04 312 P **P** 13 37 09.2 -0.7
comp=Z,2.1nm,0.6s,mb4.1,baz=116,slow=16,SNR=7.5
AKTO LR LR 13 52 36.7
comp=Z,94nm,18.3s,MS3.6,baz=279,slow=35
ARU Arti 40.10 321 *d* P **P** 13 37 18.1 -0.6
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.4
ARU Arti 40.10 321 *e* P **P** 13 37 18.0 -0.7
comp=Z,11nm,0.8s,mb4.6
TIXI Tiksi 41.45 11 P **P** 13 37 28.3 -1.4
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
TIXI Tiksi 41.45 11 P **P** 13 37 28.3 -1.3
comp=Z,2.4nm,0.6s,mb4.0
SEY Seymchan 42.64 30 *c* *e* Px 13 37 50.7
PETK Petropavlovsk- 42.73 45 P **P** 13 37 39.4 -0.9
comp=Z,4.5nm,0.8s,mb4.3,baz=302,slow=2.7,SNR=9.1
PETK Petropavlovsk- 42.73 45 P **P** 13 37 39.4 -0.9
ZEI Tsey 48.77 301 *e* P **P** 13 38 29.6 +1.4
ZEI pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KIV Kislovodsk 49.46 303 *e* P **P** 13 38 36.8 +3.3
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,88nm,17.0s,MS3.8
BILL Bilibino 49.75 26⇑ *e* P Px 13 38 46.1
BILL *e* 13 40 34.6
BILL *e* S **S** 13 45 38.2 -5.8
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.9
OBN Obninsk 52.25 317⇑ *e* P **P** 13 38 54.3 0.0
OBN *e* 13 40 50.6
OBN pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.9
FITZ Fitzroy Crossi 53.77 156 *e* P **P** 13 39 06.0 +0.2
ARCES ARCESS Array B 56.60 336 P **P** 13 39 24.9 -0.8
comp=Z,2.0nm,0.6s,mb4.3,baz=86,slow=7.7,SNR=7.2
BRTR Keskin Array B 56.98 299 P **P** 13 39 28.8 -0.1
comp=Z,2.9nm,0.8s,mb4.4,baz=98,slow=7.6,SNR=12
FINES FINESS Array B 57.13 326 P **P** 13 39 28.5 -1.1
comp=Z,1.6nm,0.5s,mb4.3,baz=67,slow=7.3,SNR=5.3
AKASG Malin Array Be 57.28 313 P **P** 13 39 29.6 -1.2
comp=Z,1.6nm,0.6s,mb4.3,baz=69,slow=6.6,SNR=4.6
SPITS Spitsbergen Ar 58.45 346 P **P** 13 39 37.7 -0.9
comp=Z,2.4nm,0.9s,mb4.2,baz=134,slow=8.4,SNR=3.4
WRAB Tennant Creek 58.93 148 *e* P **P** 13 39 42.8 +0.2
WRAB pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
WRAB Tennant Creek 58.93 148 *e* P **P** 13 39 42.8 +0.2
comp=Z,5.5nm,0.6s,mb4.8
WRA Warramunga Arr 58.93 148 P **P** 13 39 43.2 +0.5
comp=Z,3.7nm,0.6s,mb4.6,baz=340,slow=7.6,SNR=19
WB2 Warramunga Arr 58.94 148 *e* P **P** 13 39 42.8 +0.1
MLR Muntele Rosu 60.74 308 P **P** 13 39 55.1 +0.2
comp=Z,1.3nm,0.4s,mb4.4,baz=139,slow=11,SNR=3.4
ASAR Alice Springs 62.01 150 P **P** 13 40 04.3 +0.7
comp=Z,1.7nm,0.7s,mb4.3,baz=332,slow=6.3,SNR=12
NB2 NORSAR Subarra 64.19 327 P **P** 13 40 14.9 -2.8
comp=Z,1.1nm,0.6s,mb4.1,baz=71,slow=6.9
NOA NORSAR Array B 64.19 327 P **P** 13 40 15.9 -1.8
comp=Z,2.3nm,0.8s,mb4.3,baz=71,slow=6.6,SNR=5.4
INK Inuvik 70.77 20 *e* P **P** 13 40 58.0 -1.2
STKA Stephens Creek 72.48 148 P **P** 13 41 09.8 -0.1
comp=Z,1.6nm,0.6s,mb4.2,baz=319,slow=3.2,SNR=5.1
LPG La Plagne 73.14 313 *e* P **P** 13 41 14.0 +0.2
comp=Z,9.3nm,0.7s,mb4.5
LPL La Plagne 73.14 313 *e* P **P** 13 41 13.9 +0.1
comp=Z,4.9nm,0.4s,mb4.5
TCF Toulx Ste Croi 75.48 316 *e* P **P** 13 41 27.2 -0.3
YKA Yellowknife Ar 80.33 18 P **P** 13 41 52.3 -1.8
comp=Z,1.3nm,0.5s,mb4.1,baz=328,slow=5.1,SNR=18
YKA Yellowknife Ar 80.33 18 P **P** 13 41 52.3 -1.8
TORD Torodi Ar. Bea 94.16 288 P **P** 13 43 03.4 +0.8
comp=Z,0.5nm,1.0s,mb3.9,baz=43,slow=5.3,SNR=3.4

IDC 14 13:35:06.9±1.5, 31°.04N×103°.58E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=50.9km s-min=24.7km az=44.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.09**	**66**	P	P	13 39 52.1	-0.7
	1.2nm,0.6s,baz=260,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**22.73**	**320**	P	P	13 40 10.6	+0.2
	0.4nm,0.5s,baz=131,slow=12,SNR=3.4						
KURK	**Kurchatov**	**27.02**	**324**	P	P	13 40 50.3	-0.2
	0.9nm,0.7s,baz=129,slow=9.5,SNR=4.3						
WRA	**Warramunga Arr**	**58.68**	**146**	P	P	13 45 06.5	+0.2
	1.2nm,1.0s,baz=327,slow=9.0,SNR=5.6						

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*IDC **14** 13:39:07.3±1.1, 31°.88N×104°.75E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, Error ellipse: s-maj=71.1km s-min=20.6km az=57.0*
*NEIC **14** 13:39:08.7±0.9, 31°.98N×104°.96E, h10km, Error ellipse: s-maj=38.4km s-min=11.8km az=218.0*
ISC 14 13:39:09.5±1.9, 32°.32N±0°.08×105°.24E±0°.09, h11km±13km, n9, σ1°22/12, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.54**	**60**	Pg	**Pg**	13 40 18.1	+0.9
XAN				Sn	**Sn**	13 40 51.8	+5.7
XAN				Sg	**Sg**	13 41 02.3	-0.8
XAN				smax			
	comp=N,63nm,0.7s						
XAN				smax			
	comp=E,170nm,0.8s						
LZH	**Lanzhou**	**3.94**	**343**	Pg	**Pg**	13 40 26.1	+1.3
LZH				Sg	**Sg**	13 41 14.5	-1.3
LZH				smax			
	comp=N,170nm,0.9s						
LZH				smax			
	comp=E,200nm,0.6s						
LZH				LR	LR		
	comp=E,320nm,5.4s						
LZH				LR	LR		
	comp=Z,460nm,9.1s						
ENH	**Enshi**	**4.17**	**118**	*e*Pg	**Pg**	13 40 29.4	0.0
MKAR	**Makanchi Array**	**22.74**	**316**	P	**P**	13 44 10.8	-0.6
	comp=Z,0.4nm,0.7s,mb2.9,baz=142,slow=8.2,SNR=2.9						
MKAR	**Makanchi Array**	**22.74**	**316**	P	**P**	13 44 10.8	-0.6
KURK	**Kurchatov**	**26.89**	**321**	P	**P**	13 44 50.5	+0.3
	comp=Z,0.2nm,0.3s,mb3.1,baz=128,slow=8.4,SNR=2.4						
WRA	**Warramunga Arr**	**58.96**	**148**	P	**P**	13 49 06.5	-2.5
	comp=Z,0.2nm,0.4s,mb3.5,baz=339,slow=7.7,SNR=3.2						
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	13 49 29.6	-0.4
	comp=Z,0.4nm,1.0s,mb3.5,baz=340,slow=7.1,SNR=3.2						
YKA	**Yellowknife Ar**	**80.25**	**18**	P	**P**	13 51 22.5	+2.7
	comp=Z,0.5nm,0.6s,mb3.7,baz=329,slow=5.1,SNR=7.5						

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*NEIC **14** 13:39:36.7, 17°.10N×95°.09W, h134km, MD3.9(MEX), After MEX.*
MEX 14 13:39:36.7±1.0, 17°.10N×95°.09W, h134km±9km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.20**	**92**	*i* P	Pn	13 39 54.5	-0.5
CMIG				*i* S	Sn	13 40 06.7	-2.0
CMIG	**Matias Romero**	**0.20**	**92**	*i* P	Pn	13 39 54.5	-0.5
CMIG				*i* S	Sn	13 40 06.7	-2.0
TUIG	**Tuzandepetl**	**1.13**	**34**	*i* P	Pn	13 40 00.1	-1.0
TUIG				*i* S	Sn	13 40 16.9	-2.8
TUIG	**Tuzandepetl**	**1.13**	**34**	*i* P	Pn	13 40 00.1	-1.0
TUIG				*i* S	Sn	13 40 16.9	-2.8
OXX	**Oaxaca**	**1.56**	**270**	*i* P	Pn	13 40 03.9	-1.9
OXX				*i* S	Sn	13 40 25.0	-2.9
OXX	**Oaxaca**	**1.56**	**270**	*i* P	Pn	13 40 03.9	-1.9
OXX				*i* S	Sn	13 40 25.0	-2.9
VHO	**Vista Hermosa**	**1.57**	**269**	*i* P	Pn	13 40 04.8	-1.1
VHO				*i* S	Sn	13 40 26.5	-1.6
VHO	**Vista Hermosa**	**1.57**	**269**	*i* P	Pn	13 40 04.8	-1.1
VHO				*i* S	Sn	13 40 26.5	-1.6
HUIG	**Huatulco**	**1.65**	**217**	*i* P	Pn	13 40 05.1	-1.6
HUIG				*i* S	Sn	13 40 27.4	-2.2
HUIG	**Huatulco**	**1.65**	**217**	*i* P	Pn	13 40 05.1	-1.6
HUIG				*i* S	Sn	13 40 27.4	-2.2
TGIG		**1.91**	**99**	*i* P	Pn	13 40 09.5	-0.3
TGIG				*i* S	Sn	13 40 32.4	-2.6
PCIG		**2.27**	**127**	*i* P	Pn	13 40 12.9	-1.2
PCIG				*i* S	Sn	13 40 38.6	-4.2
TPIG	**Tehuac#an**	**2.53**	**302**	*i* P	Pn	13 40 16.7	-0.7
TPIG				*i* S	Sn	13 40 46.9	-1.9
UTMO	**Huajuapan**	**2.69**	**286**	*i* P	Pn	13 40 17.4	-2.0
UTMO				*i* S	Sn	13 40 49.4	-3.1
CCIG	**Comitan**	**2.94**	**106**	*i* P	Pn	13 40 22.5	-0.2
CCIG				*i* S	Sn	13 40 57.1	-1.0
CCIG	**Comitan**	**2.94**	**106**	*i* P	Pn	13 40 22.5	-0.2
CCIG				*i* S	Sn	13 40 57.1	-1.0
PNIG	**Pinotepa**	**3.00**	**257**	*i* P	Pn	13 40 22.1	-1.2
PNIG				*i* S	Sn	13 40 58.6	-0.8
PNIG	**Pinotepa**	**3.00**	**257**	*i* P	Pn	13 40 22.1	-1.2
PNIG				*i* S	Sn	13 40 58.6	-0.8
IIO	**Organos**	**4.25**	**306**	*e* P	Pn	13 40 34.9	-5.0
IIO				*i* S	Sn	13 41 34.9	+6.0
IIO	**Organos**	**4.25**	**306**	*e* P	Pn	13 40 34.9	-5.0
IIO				*i* S	Sn	13 41 34.9	+6.0
MZVM		**4.45**	**298**	*e* P	Pn	13 40 47.0	+4.4
MZVM				*i* S	Sn	13 41 29.7	-4.0

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*IDC **14** 13:43:46.6±0.8, 31°.44N×103°.95E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/27, mbtmp3.9/13, ML3.4/1, Error ellipse: s-maj=36.9km s-min=15.1km az=54.0*
*NEIC **14** 13:43:48.3±0.5, 31°.44N×103°.96E, h10km, mb4.4/3, Error ellipse: s-maj=16.6km s-min=7.6km az=49.0*
*BJI **14** 13:43:49.9, 31°.36N×104°.17E, h17km, mB4.6/3, mb4.2/3, ML3.8/12, Ms3.6/2, Ms7 3.5/2*
ISC 14 13:43:49.9±0.9, 31°.44N±0°.04×103°.93E±0°.08, h19km±6km, n25, σ0°.91/29, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**196**	Pg	**Pg**	13 44 00.6	-0.4
CD2				Sg	**Sg**	13 44 08.8	+0.3
CD2				smax			
	comp=N,10μm,0.7s						
LZH	**Lanzhou**	**4.63**	**359**	Pg	**Pg**	13 45 16.9	-1.7
LZH				Sg	**Sg**	13 46 20.6	+2.0
LZH				smax			
	comp=N,86nm,0.8s						
LZH				smax			
	comp=E,100nm,1.0s						
LZH				LR	LR		
	comp=E,460nm,5.4s						
LZH				LR	LR		
	comp=Z,510nm,7.5s						
ENH	**Enshi**	**4.92**	**102**	*e*Pn	**Pn**	13 45 03.0	+0.2
XAN	**Xi'an**	**4.94**	**57**	Pn	**Pn**	13 45 03.9	+0.9
XAN				Sn	**Sn**	13 46 02.5	+3.0
XAN				Sg	**Sg**	13 46 22.6	-5.8
XAN				smax			
	comp=N,140nm,0.6s						
XAN				smax			
	comp=E,71nm,0.7s						
GYA	**Guiyang**	**5.51**	**154**	Pn	**Pn**	13 45 11.9	+0.9
GYA				smax			
	comp=N,100nm,0.7s						
GYA				smax			
	comp=E,110nm,0.5s						
SONM	**Songino Array**	**16.48**	**6**	Pn	**Pn**	13 47 40.1	+0.2
	comp=E,0.1nm,0.3s,baz=187,slow=10,SNR=3.9						
TLY	**Talaya**	**20.22**	**359**	P	**P**	13 48 22.1	-1.4
	comp=E,71nm,1.3s						
KSRS	**Korea Array**	**20.65**	**67**	P	**P**	13 48 27.6	-0.8
	comp=E,1.5nm,0.7s,baz=263,slow=10.0,SNR=7.0						
MK31	**Makanchi Array**	**22.63**	**319**	*e*P	**P**	13 48 50.5	+1.0
MKAR	**Makanchi Array**	**22.63**	**319**	P	**P**	13 48 50.5	+1.1
	comp=E,1.2nm,0.5s,mb3.6,baz=116,slow=11,SNR=13						
ZAA0	**Zalesovo Array**	**26.35**	**334**	*e*P	**P**	13 49 24.7	+0.2
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	**P**	13 49 24.8	+0.3
	comp=E,3.3nm,0.7s,mb4.0,baz=137,slow=9.1,SNR=15						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	13 49 29.8	+0.4
	comp=E,2.7nm,0.8s,mb3.8,baz=128,slow=9.2,SNR=12						
KURK	**Kurchatov**	**26.89**	**323**	*e*P	**P**	13 49 30.0	+0.6
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	13 50 18.9	+0.4
	comp=E,0.4nm,0.3s,mb3.7,baz=119,slow=9.3,SNR=3.6						
ABKAR	**Akbulak array**	**37.34**	**311**	*e*P	**P**	13 51 01.1	+0.2
	comp=E,0.3nm,0.3s,mb3.6						
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	13 53 32.7	-0.3
	comp=E,1.3nm,0.8s,mb4.0,baz=93,slow=7.7,SNR=12						
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	13 53 32.7	-0.3
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	13 53 35.1	-0.3
	comp=E,1.1nm,0.6s,mb4.1,baz=92,slow=11,SNR=3.3						
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P	**P**	13 53 46.8	-0.5
	comp=E,3.5nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	13 53 47.1	-0.1
	comp=E,0.9nm,0.4s,mb4.2,baz=328,slow=9.0,SNR=33						
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	13 54 07.8	0.0
	comp=E,0.5nm,0.6s,mb3.9,baz=333,slow=6.8,SNR=15						
HFS	**Hagfors**	**63.41**	**326**	P	**P**	13 54 16.2	-1.6
	comp=E,0.8nm,0.4s,mb4.2,baz=92,slow=4.5,SNR=5.7						
NOA	**NORSAR Array B**	**64.29**	**327**	P	**P**	13 54 22.8	-0.8
	comp=E,0.7nm,0.5s,mb4.0,baz=74,slow=6.9,SNR=3.2						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	13 56 04.9	-0.2
	comp=E,0.5nm,0.6s,mb3.6,baz=330,slow=5.2,SNR=9.2						

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*IDC **14** 13:58:17.1±1.5, 8°.26S×108°.59E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, ML3.7/1, MS3.8/1, Ms1 3.8/1, ms1mx2.9/31, Error ellipse: s-maj=100.5km s-min=19.0km az=50.0*
*NEIC **14** 13:58:22.6±1.2, 8°.26S×108°.63E, h35km, Error ellipse: s-maj=66.3km s-min=9.8km az=51.0*
NEIC Felt [III] at Cilacap and Pangandaran.
*ISCJB **14** 13:58:28.0±0.9, 8°.03S±0°.08×109°.09E±0°.07, h97km±8km, mb3.6/5, Error ellipse: s-maj=13.2km s-min=11.0km az=179.1*
*DJA **14** 13:58:32, 8°.16S×109°.27E, h74km, MLv4.4/16*
ISC 14 13:58:29.4±0.9, 8°.06S±0°.08×109°.11E±0°.07, h90km±8km, n34, σ1°15/28, mb3.6/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.41**	**84**	P	**Pn**	13 58 54.2	+0.2
UGM				S	**Sn**	13 59 11.9	-0.7
SMRI	**Semarang**	**1.66**	**53**	P	**Pn**	13 58 59.9	+2.7
SMRI				S	**Sn**	13 59 17.8	-0.5
LEM	**Lembang**	**1.92**	**310**	P	x	13 59 05.5	
PCJI	**Pacitan**	**2.05**	**94**	P	**Pn**	13 59 02.6	+0.3
PCJI				S	**Sn**	13 59 26.5	-0.9
SJI	**Sawahan**	**2.65**	**83**	P	**Pn**	13 59 11.6	+1.3
PWJI	**Pagerwojo**	**2.67**	**89**	P	**Pn**	13 59 10.6	+0.1
DBJI	**Dramaga**	**2.78**	**302**	P	x	13 59 16.2	
GRJI	**Gresik**	**3.53**	**71**	P	**Pn**	13 59 23.5	+1.4
GRJI				S	**Sn**	14 00 03.1	+0.2
CGJI	**Cibinong**	**3.68**	**293**	P	x	13 59 29.2	
RBSI	**Rajabasa**	**4.00**	**303**	P	x	13 59 32.9	
XMIS	**Christmas Isla**	**4.17**	**235**	P	**Pn**	13 59 31.0	+0.2
KMMI	**Kalianget**	**4.92**	**79**	P	**Pn**	13 59 38.4	-2.6
ABJI	**Asem Bagus**	**5.08**	**87**	P	**Pn**	13 59 43.1	-0.1
KASI	**Kota Agung**	**5.23**	**299**	P	x	13 59 49.5	
	0.2nm49nm,0.9s						
NBBI	**Negara**	**5.46**	**94**	P	**Pn**	13 59 49.6	+1.2
	164nm,1.2s,0.7nm						
TPI	**Tanjungpandan**	**5.47**	**345**	P	x	13 59 52.1	
	0.2nm23nm,0.8s						
IGBI	**Denpasar**	**6.02**	**98**	P	**Pn**	13 59 53.1	-2.8
SRBI	**Singaraja**	**6.04**	**91**	P	**Pn**	13 59 56.0	-0.3
	34nm,0.4s,0.2nm						
MDSI	**Maura Dua**	**6.05**	**306**	P	x	14 00 02.9	
	23nm,1.1s						
DNP	**Denpasar**	**6.07**	**96**	P	**Pn**	13 59 57.0	+0.4
	245nm,0.5s,1.7nm						
KSI	**Kapahiang**	**7.82**	**304**	P	x	14 00 24.7	
	0.3nm54nm,0.6s						
JMBI	**JAMBI**	**8.39**	**319**	P	x	14 00 33.8	
MBWA	**Marble Bar**	**16.57**	**143**	*e*Pn	**Pn**	14 02 14.0	-2.4
MBWA				*e*Sn	Sx	14 05 02.4	
FITZ	**Fitzroy Crossi**	**18.92**	**123**	P	**Pn**	14 02 44.0	-0.9
	0.2nm,0.3s,baz=278,slow=6.0,SNR=7.7						
FITZ	**Fitzroy Crossi**	**18.92**	**123**	*e*P	**Pn**	14 02 44.0	-0.8
WRA	**Warramunga Arr**	**27.13**	**118**	P	**P**	14 04 05.0	+0.7
	0.4nm,0.4s,mb3.3,baz=290,slow=12,SNR=6.2						
WRA				PcP	PcP	14 07 22.5	-0.5
	0.2nm,0.5s,baz=306,slow=2.1,SNR=3.9						
WRAB	**Tennant Creek**	**27.14**	**118**	*e*P	**P**	14 04 06.4	+2.0
ASAR	**Alice Springs**	**28.37**	**126**	P	**P**	14 04 15.6	+0.2
	0.4nm,0.3s,mb3.4,baz=305,slow=8.4,SNR=17						
ASAR				PcP	PcP	14 07 26.4	+0.4
	0.4nm,0.4s,baz=301,slow=2.2,SNR=9.2						
STKA	**Stephens Creek**	**38.38**	**133**	P	**P**	14 05 43.2	+1.1
	3.3nm,0.7s,mb4.3,baz=322,slow=8.6,SNR=9.0						
STKA				PcP	PcP	14 07 54.7	+0.7
	1.1nm,0.7s,baz=22,slow=5.4,SNR=3.1						
STKA	**Stephens Creek**	**38.38**	**133**	P	**P**	14 05 43.2	+1.1
STKA				PcP	PcP	14 07 54.7	+0.7
MJAR	**Matsushiro Arr**	**52.10**	**30**	LR	LR	14 29 01.7	
	comp=Z,98nm,19.1s,baz=235,slow=35						
MK31	**Makanchi Array**	**59.60**	**339**	P	**P**	14 08 23.5	-0.3
MKAR	**Makanchi Array**	**59.60**	**339**	P	**P**	14 08 22.7	-1.1
	0.2nm,0.3s,mb3.6,baz=152,slow=7.7,SNR=6.1						
KURK	**Kurchatov**	**64.22**	**339**	P	**P**	14 08 53.8	-0.8
	0.2nm,0.4s,mb3.3,baz=159,slow=5.5,SNR=2.6						

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*ISK **14** 13:58:44.0, 40°.29N×32°.76E, h26km, MD2.9*
*DDA **14** 13:58:46.9, 40°.02N×33°.17E, h9km±6km, Md2.9*
*ISCJB **14** 13:58:47.7±0.5, 39°.98N±0°.03×33°.11E±0°.06, h22km±7km, Error ellipse: s-maj=7.5km s-min=5.1km az=27.8*
*CSEM **14** 13:58:47.2±0.2, 40°.02N×33°.10E, h15km, MD2.9, Error ellipse: s-maj=6.8km s-min=4.4km az=128.0*
ISC 14 13:58:47.7±0.5, 40°.00N±0°.03×33°.10E±0°.05, h17km±5km, n26, σ1°23/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.28**	**247**	*e*PG	**Pg**	13 58 53.3	-0.4
LOD				*e*SG	**Sg**	13 58 59.7	+1.8
LOD	**Lodumlu**	**0.28**	**247**	*e*Pg	**Pg**	13 58 53.3	-0.5
LOD				*e*Sg	**Sg**	13 58 59.7	+1.8
BBAL	**Bala**	**0.46**	**177**	*i* P	**Pg**	13 58 56.4	-0.6
BBAL				*i* S	**Sg**	13 59 03.7	+0.6
BBAL	**Bala**	**0.46**	**177**	*i* P	**Pg**	13 58 56.3	-0.6
BBAL				*i* S	**Sg**	13 59 03.7	+0.6
ELDT	**Eldivan**	**0.55**	**27**	*i* P	**Pg**	13 58 57.3	-1.4
ELDT				*i* S	**Sg**	13 59 06.5	+0.4
ELDT	**Eldivan**	**0.55**	**27**	*i* P	**Pg**	13 58 57.3	-1.4
ELDT				*i* S	**Sg**	13 59 06.6	+0.5
CANT	**Cankiri**	**0.73**	**33**	*e*PG	**Pg**	13 58 58.6	-3.3
CANT				*e*SG	**Sg**	13 59 10.7	-0.9
SGKT	**Sivrigoynuk**	**0.98**	**306**	*i* P	**Pg**	13 59 07.9	+1.2
SGKT				*i* S	**Sg**	13 59 19.7	+0.1
SGKT	**Sivrigoynuk**	**0.98**	**306**	*i* P	**Pg**	13 59 07.9	+1.2
SGKT				*i* S	**Sg**	13 59 19.7	+0.1
ILGA	**Ilgaz**	**1.15**	**24**	*i* P	**Pg**	13 59 08.1	-1.9
ILGA				*i* S	**Sg**	13 59 27.4	+2.3
ILGA	**Ilgaz**	**1.15**	**24**	*i* P	**Pg**	13 59 08.1	-1.9
ILGA				*i* S	**Sg**	13 59 27.4	+2.3
CORM	**Corum**	**1.19**	**81**	*e*PN	**Pn**	13 59 08.6	-1.0
CORM				*e*SN	**Sn**	13 59 27.4	+2.1
CORM	**Corum**	**1.19**	**81**	*e*Pn	**Pn**	13 59 08.6	-0.9
CORM				*e*Sn	**Sn**	13 59 27.4	+2.1
TOS	**Tosya**	**1.25**	**34**	*e*PN	**Pn**	13 59 05.9	-4.5
SAFT	**Safranbolu**	**1.28**	**346**	*e*PG	**Pn**	13 59 02.1	-8.6
SVRH	**Sivrihisar-ESK**	**1.33**	**246**	*e*PN	**Pn**	13 59 07.0	-4.5
CTKT	**Corum**	**1.44**	**64**	*i* P	**Pn**	13 59 12.7	-0.3
CTKT				*i* S	**Sn**	13 59 32.2	+0.8
CTKT	**Corum**	**1.44**	**64**	*i* P	**Pn**	13 59 12.7	-0.2
CTKT				*i* S	**Sn**	13 59 32.2	+0.8
KIZT	**Kizilcal**	**1.46**	**220**	*e*PN	**Pn**	13 59 11.2	-2.0
KIZT	**Kizilcal**	**1.46**	**220**	*e*Pn	**Pn**	13 59 11.3	-1.9
YOZ	**Yozgat**	**1.75**	**101**	*e*PN	**Pn**	13 59 18.2	+1.0
YOZ	**Yozgat**	**1.75**	**101**	*e*Pn	**Pn**	13 59 18.2	+1.0
KONT	**Konya--Tatoy**	**2.13**	**196**	*e*PN	**Pn**	13 59 22.1	-0.4
KONT	**Konya--Tatoy**	**2.13**	**196**	*e*Pn	**Pn**	13 59 22.1	-0.3
SVSK	**Karacayir**	**3.00**	**90**	*e*PN	**Pn**	13 59 34.4	0.0
SVSK	**Karacayir**	**3.00**	**90**	*e*Pn	**Pn**	13 59 34.4	0.0

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*ISCJB **14** 14:05:26.4±0.5, 31°.44N±0°.05×104°.22E±0°.08, h10km, mb3.9/10, Error ellipse: s-maj=10.0km s-min=6.1km az=16.3*
*IDC **14** 14:05:26.4±0.8, 31°.39N×103°.94E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, ML3.3/1, Error ellipse: s-maj=37.9km s-min=15.9km az=57.0*
*NEIC **14** 14:05:28.0±0.5, 31°.34N×103°.81E, h10km, mb4.5/1

WRAB	**Tennant Creek**	**58.78**	**146**	*e*P	**P**	**14 15 26.8**	**-0.2**
	comp=E,2.3nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**58.78**	**146**	P	**P**	**14 15 26.9**	**-0.1**
	comp=E,1.1nm,0.6s,mb4.1,baz=328,slow=9.1,SNR=36						
WB2	**Warramunga Arr**	**58.79**	**146**	*e*P	**P**	**14 15 26.5**	**-0.6**
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**14 15 47.0**	**-0.7**
	comp=E,0.6nm,0.7s,mb3.8,baz=342,slow=6.7,SNR=9.9						
HFS	**Hagfors**	**63.46**	**326**	P	**P**	**14 15 57.0**	**-1.4**
	comp=E,1.3nm,0.6s,mb4.2,baz=91,slow=8.9,SNR=4.1						
STKA	**Stephens Creek**	**72.32**	**147**	P	**P**	**14 16 53.8**	**-0.5**
	comp=E,1.9nm,0.8s,mb4.1,baz=0.0,slow=7.1,SNR=3.3						
STKA	**Stephens Creek**	**72.32**	**147**	*e*P	**P**	**14 16 53.6**	**-0.8**
YKA	**Yellowknife Ar**	**81.36**	**17**	P	**P**	**14 17 44.4**	**-0.6**
	comp=E,0.3nm,0.5s,mb3.5,baz=328,slow=5.1,SNR=5.7						
YKA	**Yellowknife Ar**	**81.36**	**17**	P	**P**	**14 17 44.4**	**-0.6**

*BJI **14** 14:18:54.4, 31°.60N×103°.65E, h17km, ML3.5/7, Ms3.2/1*
*ISCJB **14** 14:18:57.9±0.7, 31°.63N±0°.07×104°.08E±0°.09, h10km, mb3.6/6, Error ellipse: s-maj=10.5km s-min=10.0km az=21.7*
*IDC **14** 14:18:58.3±1.1, 31°.52N×103°.86E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=42.6km s-min=19.4km az=56.0*
*NEIC **14** 14:18:59.9±0.9, 31°.55N×104°.04E, h10km, mb3.9/1, Error ellipse: s-maj=28.8km s-min=13.1km az=52.0*
ISC 14 14:18:59.8±0.7, 31°.73N±0°.05×104°.03E±0°.08, h10km, n13, σ1§28/16, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.35**	**358**	Pg	**Pg**	**14 20 21.9**	**-1.3**
LZH				Sg	**Sg**	**14 21 18.5**	**-1.1**
LZH				smax			
	comp=N,63nm,0.5s						
LZH				smax			
	comp=E,60nm,0.9s						
LZH				LR	LR		
	comp=N,360nm,4.6s						
LZH				LR	LR		
	comp=Z,440nm,6.9s						
XAN	**Xi'an**	**4.71**	**59**	Pn	**Pn**	**14 20 12.0**	**+1.0**
XAN				Pg	**Pg**	**14 20 21.4**	**-8.7**
XAN				Sn	**Sn**	**14 21 06.3**	**+0.6**
XAN				smax			
	comp=N,72nm,0.6s						
XAN				smax			
	comp=E,33nm,0.6s						
ENH	**Enshi**	**4.90**	**106**	*e*Pn	**Pn**	**14 20 11.8**	**-1.8**
GYA	**Guiyang**	**5.73**	**156**	Pg	**Pb**	**14 20 36.1**	**-3.8**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,50nm,0.8s						
SONM	**Songino Array**	**16.19**	**6**	Pn	**Pn**	**14 22 51.4**	**+4.1**
	comp=E,0.1nm,0.3s,baz=195,slow=10,SNR=2.7						
SONM	**Songino Array**	**16.19**	**6**	Pn	**Pn**	**14 22 51.4**	**+4.1**
KSRS	**Korea Array**	**20.46**	**67**	P	**P**	**14 23 39.6**	**+2.1**
	comp=E,0.5nm,0.6s,baz=252,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**22.47**	**318**	P	**P**	**14 24 00.5**	**+1.5**
	comp=E,0.5nm,0.7s,mb3.1,baz=128,slow=11,SNR=3.6						
KURK	**Kurchatov**	**26.71**	**323**	P	**P**	**14 24 40.6**	**+1.5**
	comp=E,0.1nm,0.3s,mb2.8,baz=214,slow=21,SNR=3.7						
ARCES	**ARCESS Array B**	**56.67**	**336**	P	**P**	**14 28 42.0**	**-0.9**
	comp=E,1.7nm,0.8s,mb4.1,baz=76,slow=10,SNR=3.9						
WRAB	**Tennant Creek**	**59.02**	**146**	*e*P	**P**	**14 28 59.6**	**-0.3**
	comp=E,0.5nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**59.02**	**146**	P	**P**	**14 28 58.7**	**-1.3**
	comp=E,0.5nm,0.5s,mb3.8,baz=328,slow=9.0,SNR=9.4						
ASAR	**Alice Springs**	**62.05**	**149**	P	**P**	**14 29 21.1**	**+0.4**
	comp=E,0.3nm,0.5s,mb3.7,baz=337,slow=6.7,SNR=6.9						

*IDC **14** 14:25:21.4±0.7, 31°.37N×103°.83E, h0km, mb4.0/12, mb1 4.1/13, mb1mx3.9/26, mbtmp4.0/13, ML3.2/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/37, Error ellipse: s-maj=35.9km s-min=13.8km az=56.0*
*NEIC **14** 14:25:23.0±0.4, 31°.37N×103°.80E, h10km, mb4.3/2, Error ellipse: s-maj=16.0km s-min=7.3km az=50.0*
*ISCJB **14** 14:25:24.7±0.9, 31°.40N±0°.04×103°.96E±0°.07, h37km±10km, mb3.9/13, MS3.6/2, Error ellipse: s-maj=9.7km s-min=7.0km az=20.4*
*BJI **14** 14:25:24.2, 31°.36N×104°.11E, h17km, mB4.7/2, mb4.3/5, ML3.8/14, Ms3.5/3, Ms7 3.4/2*
ISC 14 14:25:24.7±0.8, 31°.42N±0°.03×104°.01E±0°.06, h20km±5km, n29, σ0§97/34, mb3.9/13, MS3.6/2, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**203**	Pg	**Pg**	**14 25 35.3**	**-0.5**
CD2				Sg	**Sg**	**14 25 43.4**	**+0.2**
CD2				smax			
	comp=N,11μm,0.7s						
LZH	**Lanzhou**	**4.66**	**358**	Pg	**Pg**	**14 26 54.5**	**+0.5**
LZH				Sg	**Sg**	**14 27 55.0**	**+0.7**
LZH				smax			
	comp=N,84nm,0.8s						
LZH				smax			
	comp=E,100nm,0.6s						
LZH				LR	LR		
	comp=E,560nm,5.3s						
LZH				LR	LR		
	comp=Z,690nm,7.3s						
ENH	**Enshi**	**4.84**	**102**	*e*Pn	**Pn**	**14 26 39.6**	**+3.1**
	comp=Z,64nm,0.6s						
XAN	**Xi'an**	**4.89**	**56**	Pn	**Pn**	**14 26 38.3**	**+1.1**
XAN				Pg	**Pg**	**14 26 55.1**	**-3.3**
XAN				Sn	**Sn**	**14 27 34.0**	**+0.8**
XAN				Sg	**Sg**	**14 27 56.9**	**-4.9**
XAN				smax			
	comp=N,160nm,0.5s						
XAN				smax			
	comp=E,69nm,0.7s						
GYA	**Guiyang**	**5.46**	**154**	Pg	**Pb**	**14 26 51.4**	**-8.0**
GYA				Sg	**Sn**	**14 27 47.1**	**-0.1**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,160nm,0.8s						
KMI	**Kunming**	**6.37**	**190**	Pn	**Pn**	**14 27 05.5**	**+8.0**
KMI				Sn	**Sn**	**14 28 10.5**	**+0.9**
KMI				smax			
	comp=N,22nm,1.2s						
KMI				smax			
	comp=E,23nm,1.3s						
KMI				LR	LR		
	comp=N,170nm,8.0s						
KMI				LR	LR		
	comp=E,420nm,7.0s						
GTA	**Gaotai**	**8.68**	**338**	*e*P	**Pn**	**14 27 38.6**	**+9.5**
GTA				pP		14 27 43.1	
GTA				sP		14 27 46.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WHN	**Wuhan**	**8.92**	**93**	S	**Sn**	**14 29 09.4**	**-2.9**
SONM	**Songino Array**	**16.50**	**6**	Pn	**Pn**	**14 29 15.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=184,slow=16,SNR=5.8						
KSRS	**Korea Array**	**20.59**	**66**	P	**P**	**14 30 04.0**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=257,slow=9.9,SNR=12						
CN2	**Changchun**	**20.93**	**48**	↑P	**P**	**14 30 07.9**	**+1.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**14 30 24.6**	**-0.3**
	comp=Z,1.1nm,0.5s,mb3.5,baz=116,slow=11,SNR=14						
AAK	**Ala-Archa**	**25.96**	**304**	LR	LR	14 42 56.0	
	comp=Z,56nm,19.1s,MS3.1,baz=208,slow=41						
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**14 30 59.5**	**-0.2**
	comp=Z,4.1nm,0.8s,mb4.0,baz=134,slow=9.5,SNR=17						
KURK	**Kurchatov**	**26.95**	**323**	P	**P**	**14 31 03.9**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.7,baz=128,slow=9.0,SNR=7.7						
BVAR	**Borovoye Array**	**32.50**	**321**	P	**P**	**14 31 53.8**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.7,baz=119,slow=9.2,SNR=5.1						
ABKAR	**Akbulak array**	**37.41**	**311**	*e*P	**P**	**14 32 35.4**	**-0.8**
TIXI	**Tiksi**	**42.46**	**11**	*e*P	**P**	**14 33 16.9**	**-1.0**
	comp=Z,0.9nm,0.2s,mb4.0						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**14 35 07.7**	**-0.4**
	comp=Z,1.5nm,0.8s,mb4.1,baz=91,slow=7.7,SNR=15						
ARCES				PcP	PcP	14 36 02.2	-1.1
	comp=Z,2.5nm,0.9s,baz=90,slow=4.5,SNR=4.7						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**14 35 10.2**	**-0.4**
	comp=Z,1.1nm,0.6s,mb4.1,baz=90,slow=9.5,SNR=4.5						
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**14 35 21.6**	**+0.1**
	comp=Z,1.7nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**14 35 21.9**	**+0.3**
	comp=Z,0.7nm,0.3s,mb4.2,baz=328,slow=9.0,SNR=32						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**14 35 42.5**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.9,baz=330,slow=6.6,SNR=14						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**14 35 57.5**	**-1.3**
	comp=Z,0.6nm,0.6s,mb3.8,baz=71,slow=6.8,SNR=2.9						
STKA	**Stephens Creek**	**72.31**	**147**	P	**P**	**14 36 49.2**	**+0.3**
	comp=Z,1.1nm,0.3s,mb4.3,baz=326,slow=23,SNR=8.0						
STKA	**Stephens Creek**	**72.31**	**147**	*e*P	**P**	**14 36 49.0**	**+0.2**
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**14 37 39.7**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=329,slow=5.2,SNR=9.4						
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**14 37 39.7**	**-0.2**
YBH	**Yreka Blue Hor**	**95.44**	**33**	LR	LR	15 24 50.1	
	comp=Z,51nm,19.0s,MS4.0,baz=187,slow=37						

*IDC **14** 14:33:13.5±1.5, 1°.60S×145°.90E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/16, mbtmp3.9/9, MS3.4/9, Ms1 3.4/9, ms1mx3.3/27, Error ellipse: s-maj=57.6km s-min=18.3km az=107.0*
*ISCJB **14** 14:33:17.0±1.1, 1°.6S±0°.1×145°.8E±0°.3, h33km, mb3.9/10, MS3.4/8, Error ellipse: s-maj=40.9km s-min=12.1km az=20.6*
*NEIC **14** 14:33:19.0±1.0, 1°.62S×145°.80E, h35km, mb4.4/1, Error ellipse: s-maj=39.5km s-min=11.5km az=111.0*
ISC 14 14:33:19.0±1.1, 1°.6S±0°.1×145°.8E±0°.3, h35km, n19, σ1§01/12, mb3.9/10, MS3.4/8, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**15.14**	**356**	LR	LR	14 41 05.7	
	comp=Z,194nm,19.9s,baz=98,slow=31						
KAKA	**Kakadu**	**17.23**	**230**	*e*Pn	**Pn**	**14 37 16.3**	**-0.8**
WRAB	**Tennant Creek**	**21.37**	**211**	*e*P	**P**	**14 38 03.7**	**+0.2**
	16nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**21.39**	**211**	P	**P**	**14 38 03.9**	**+0.2**
	2.6nm,0.4s,mb4.0,baz=33,slow=10,SNR=33						
ASAR	**Alice Springs**	**24.77**	**207**	P	**P**	**14 38 38.9**	**+1.3**
	2.9nm,0.7s,mb4.0,baz=30,slow=8.0,SNR=44						
FITZ	**Fitzroy Crossi**	**25.70**	**229**	P	**P**	**14 38 45.0**	**-1.1**
	2.7nm,0.6s,mb3.9,baz=43,slow=9.2,SNR=18						
FITZ				LR	LR	14 49 39.0	
	comp=Z,139nm,21.1s,MS3.5,baz=44,slow=38						
CBIJ	**Chichi jima**	**28.77**	**353**	LR	LR	14 49 30.9	
	comp=Z,81nm,21.3s,MS3.3,baz=106,slow=34						
STKA	**Stephens Creek**	**30.35**	**187**	LR	LR	14 53 26.6	
	comp=Z,129nm,18.4s,MS3.6,baz=19,slow=40						
AFI	**Afiamalu**	**43.66**	**108**	LR	LR	14 55 22.4	
	comp=Z,11nm,21.1s,MS2.7,baz=77,slow=30						
PETK	**Petropavlovsk-**	**55.44**	**9**	P	**P**	**14 42 49.0**	**-0.9**
	1.3nm,0.7s,mb4.1,baz=157,slow=6.8,SNR=8.5						
PETK				LR	LR	15 01 36.7	
	comp=Z,58nm,20.1s,MS3.7,baz=58,slow=31						
PETK	**Petropavlovsk-**	**55.44**	**9**	P	**P**	**14 42 49.0**	**-0.9**
PETK				LR	LR	15 01 36.7	
SONM	**Songino Array**	**60.03**	**330**	P	**P**	**14 43 23.9**	**+1.6**
	0.3nm,0.6s,mb3.5,baz=111,slow=8.0,SNR=2.6						
PPT	**Papeete**	**65.33**	**109**	LR	LR	15 06 18.0	
	comp=Z,4.6nm,21.5s,MS2.6,baz=355,slow=30						
MKAR	**Makanchi Array**	**73.40**	**320**	P	**P**	**14 44 49.1**	**+1.6**
	0.2nm,0.4s,mb3.4,baz=91,slow=7.2,SNR=3.1						
KURK	**Kurchatov**	**77.02**	**323**	P	**P**	**14 45 07.9**	**-0.4**
	0.5nm,0.4s,mb3.8,baz=100,slow=3.6,SNR=2.6						
BVAR	**Borovoye Array**	**82.56**	**324**	P	**P**	**14 45 37.0**	**-1.3**
	1.3nm,0.6s,mb4.1,baz=119,slow=6.7,SNR=8.2						
DLBC	**Dease Lake**	**88.30**	**32**	LR	LR	15 19 45.7	
	comp=Z,51nm,19.0s,MS4.0,baz=19,slow=32						
YKA	**Yellowknife Ar**	**95.86**	**27**	P	**P**	**14 46 41.3**	**-0.3**
	0.2nm,0.5s,mb3.8,baz=287,slow=4.7,SNR=3.7						
YKA				LR	LR	15 27 37.3	
	comp=Z,42nm,18.2s,MS4.0,baz=170,slow=34						
DBIC	**Dimbokro**	**150.33**	**281**	PKPbc	PKPbc	14 53 07.8	0.0
	1.8nm,0.7s,baz=6.9,slow=12,SNR=4.3						
DBIC				PKPab	PKPab	14 53 14.2	+0.1
	1.7nm,0.6s,baz=50,slow=10,SNR=3.7						

IDC 14 14:35:26.4±1.3, 32°.12N×105°.04E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/25, mbtmp3.3/4, Error ellipse: s-maj=187.1km s-min=22.4km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.76**	**317**	P	P	14 40 30.1	0.0
	0.3nm,0.7s,baz=128,slow=9.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.17**	**332**	P	P	14 41 02.5	+0.1
	1.0nm,0.5s,baz=131,slow=10.5,SNR=4.4						
WRA	**Warramunga Arr**	**58.89**	**147**	P	P	14 45 27.2	0.0
	0.2nm,0.5s,baz=339,slow=7.9,SNR=6.0						
ASAR	**Alice Springs**	**61.96**	**150**	P	P	14 45 48.3	+0.1
	0.3nm,0.9s,baz=331,slow=6.4,SNR=4.4						

CASC 14 14:41:47.4±1.9, 13°.51N×90°.75W, h14km±6km, MD3.7, ML3.2, 3C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.72**	**23**	↑*e*P	Pg	14 42 02.1	+0.6
PCG	**Pacaya**	**0.89**	**9**	↑*e*P	Pg	14 42 04.5	-0.2
FUG	**Fuego 3**	**0.94**	**355**	↑*e*P	Pb	14 42 04.6	-0.9
FG6		**1.05**	**353**	||*e*P	Pb	14 42 06.2	-1.2
RTR	**El Retiro**	**1.14**	**70**	*e*P	Pb	14 42 08.3	-0.7
RTR				*e*S	Sb	14 42 23.4	-0.3
NBG	**Las Nubes**	**1.14**	**20**	*e*S	Sb	14 42 25.7	+2.0
NBG				*e*P		14 42 09.2	
SBLS	**San Blas**	**1.14**	**73**	*e*P	Pb	14 42 08.1	-0.9
SBLS				*e*S	Sb	14 42 23.9	+0.1
SNJE	**San Jose**	**1.17**	**72**	*e*P	Pn	14 42 08.5	-0.9
SNJE				*e*S	Sb	14 42 24.2	-0.3
JAT	**Jato**	**1.18**	**313**	*e*P	Pn	14 42 07.3	-2.2
RBDL	**Robledal**	**1.20**	**60**	*e*P	Pn	14 42 09.3	-0.4
RBDL				*e*S	Sb	14 42 24.6	-0.6
TP2	**Tecpan 2**	**1.29**	**348**	||*e*P	Pn	14 42 10.2	-0.9
TP2				*e*S	Sb	14 42 27.1	-1.0
BOQS	**Boqueron**	**1.45**	**81**	*e*P	Pn	14 42 12.8	-0.4
BOQS				*e*S	Sn	14 42 32.8	+0.7
BOQS				AML	AML	14 42 42.6	
	comp=Z,378nm,0.5s						
LFU	**La Fuente**	**1.61**	**81**	*e*P	Pn	14 42 15.9	+0.4
LFU				*e*P		14 42 15.9	
MTO2	**Montecristo 2**	**1.61**	**56**	*e*P	Pn	14 42 15.3	-0.2
MTO2				*e*S	Sn	14 42 38.0	+1.9
LFRS	**El Faro**	**1.65**	**86**	*e*P	Pn	14 42 15.6	-0.4
LFRS				*e*S	Sn	14 42 37.5	+0.6
LBRS	**Las Brisas**	**1.68**	**82**	*e*P	Pn	14 42 16.8	+0.4
LBRS				*e*S	Sn	14 42 38.5	+0.8
MRL	**Marmol**	**1.86**	**33**	||*e*P	Pn	14 42 19.8	+1.0
SNVI	**San Vicente**	**1.86**	**87**	*e*P	Pn	14 42 18.8	-0.1
SNVI				*e*S	Sn	14 42 43.7	+1.4
VSM	**San Miguel**	**2.41**	**92**	*e*P	Pn	14 42 27.2	+0.8
BLLM	**Bellamira**	**2.44**	**91**	*e*P	Pn	14 42 27.1	+0.1
BLLM				*e*S	Sn	14 42 56.3	-0.3
CAHU	**Cacacuatique**	**2.48**	**84**	*e*P	Pn	14 42 27.4	0.0
CNCH	**Conchagua**	**2.85**	**94**	*e*P	Pn	14 42 32.3	-0.2
CNCH				*e*S	Sn	14 43 08.0	+1.4
COPN	**Copaltepe**	**4.26**	**108**	*e*P	Pn	14 42 51.7	-0.3
BOAB	**BOACO BROADBAN**	**5.07**	**101**	*e*P	Pn	14 43 01.8	-1.3

IDC 14 14:46:09.0±1.5, 32°.24N×105°.15E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/26, mbtmp3.4/4, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=95.0km s-min=26.6km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.61**	**3**	Pn	Pn	14 49 50.3	+0.1
	0.1nm,0.3s,baz=182,slow=12,SNR=7.3						
MKAR	**Makanchi Array**	**22.74**	**316**	P	P	14 51 12.7	+0.2
	0.5nm,0.7s,baz=130,slow=12,SNR=4.3						
AAK	**Ala-Archa**	**26.33**	**302**	LR	LR	15 03 53.6	
	comp=Z,26nm,19.6s,baz=90,slow=40						
WRA	**Warramunga Arr**	**58.93**	**148**	P	P	14 56 11.2	+1.1
	0.5nm,0.7s,baz=340,slow=7.5,SNR=5.0						
ASAR	**Alice Springs**	**62.01**	**150**	P	P	14 56 30.1	-0.9
	0.2nm,0.4s,baz=331,slow=6.5,SNR=5.5						

IDC 14 14:47:55.4±4.9, 22°.77N×143°.43E, h110km±76km, mb3.5/4, mb1 3.5/6, mb1mx3.2/25, mbtmp3.4/6, ML4.0/2, Error ellipse: s-maj=122.7km s-min=36.4km az=67.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.45**	**346**	P	Pn	14 49 01.1	+0.3
	19nm,0.3s,baz=120,slow=23,SNR=9.9						
CBIJ				S	Sn	14 49 46.8	-4.9
	42nm,0.3s,baz=126,slow=24,SNR=21						
KSRS	**Korea Array**	**19.81**	**321**	P	P	14 52 17.1	-0.1
	0.2nm,0.3s,baz=135,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**43.37**	**192**	P	P	14 55 46.9	-0.1
	1.1nm,0.4s,baz=17,slow=8.8,SNR=41						
FITZ	**Fitzroy Crossi**	**44.19**	**205**	P	P	14 55 53.0	-0.5
	1.4nm,0.7s,baz=40,slow=7.9,SNR=4.5						
ASAR	**Alice Springs**	**47.07**	**192**	P	P	14 56 15.7	-0.5
	0.2nm,0.3s,baz=9.5,slow=6.5,SNR=14						
STKA	**Stephens Creek**	**54.36**	**182**	P	P	14 57 11.7	+1.0
	0.8nm,0.3s,baz=27,slow=6.8,SNR=4.9						

MAN 14 14:49:03, 12°.66N×123°.73E, h26km, mb4.1, ML2.9, MS2.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.32**	**199**	*e*P	Pb	14 49 13.0	+2.6
MMPH				*i* S	Sb	14 49 19.9	+4.5
PVCP	**Virac**	**1.02**	**24**	*e*P	Pn	14 49 21.5	-0.1
PVCP				*e*S	Sb	14 49 36.8	+1.9
AUQP	**San Andres**	**1.22**	**303**	*e*P	Pn	14 49 24.3	-0.1
RCP	**Roxas**	**1.46**	**222**	||*e*P	Pn	14 49 29.0	+1.4
RCP				*e*S	Sn	14 49 47.5	+1.6
GQP	**Guinayangan**	**1.76**	**315**	↑*e*P	Sn	14 49 54.1	+0.7
BOAC	**Boac**	**2.00**	**294**	*e*P	Pn	14 49 37.0	+1.8
BOAC				*e*S	Sn	14 49 58.4	-1.0
POLP	**Polilio Island**	**2.69**	**320**	*e*P	Pn	14 49 46.5	+1.8

DJA 14 15:07:55, 0°.81S×120°.22E, h19km, MLv3.7/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.40**	**256**	P	Pg	15 08 03.5	+0.2
MPSI	**Mapaga**	**1.18**	**344**	P	Pn	15 08 17.4	+0.8
APSI	**Ampana**	**1.43**	**94**	P	Pn	15 08 21.1	+1.1
MRSI	**Marisa**	**2.14**	**53**	P	Pn	15 08 27.8	-2.0
TTSI	**Tana Toraja**	**2.26**	**190**	P	Pn	15 08 32.2	+0.9
TTSI				S	Sn	15 09 01.7	+3.1
LUWI	**Luwuk**	**2.56**	**95**	P	Pn	15 08 38.5	+3.0
KDI	**Kendari**	**3.94**	**143**	P	Pn	15 08 52.5	-2.0

*ISCJB **14** 15:12:34.9±1.9, 51°.3N±0°.3×179°.52E±0°.07, h93km±11km, mb3.9/6, Error ellipse: s-maj=43.5km s-min=7.2km az=2.1*
*NEIC **14** 15:12:36.2±1.7, 51°.21N×179°.49E, h91km±10km, MG3.7(AEIC), Error ellipse: s-maj=41.6km s-min=8.4km az=177.0*
*IDC **14** 15:12:39.2±7.8, 51°.56N×179°.43E, h98km±66km, mb3.6/6, mb1 3.6/7, mb1mx3.3/28, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=110.1km s-min=24.3km az=168.0*
ISC 14 15:12:36.2±1.8, 51°.21N±0°.3×179°.51E±0°.07, h89km±10km, n16, σ0§88/18, mb3.9/6, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.67**	**296**	P	**Pn**	**15 13 29.6**	**-1.1**
SMY				S	**Sn**	**15 14 12.8**	**0.0**
ATKA	**Atka Island**	**4.04**	**73**	P	**Pn**	**15 13 35.1**	**-0.5**
ATKA				S	**Sn**	**15 14 21.1**	**-0.7**
NIKO	**Nikolski**	**7.38**	**72**	P	**Pn**	**15 14 20.9**	**-0.2**
SPIA	**Saint Paul Isl**	**8.46**	**41**	P	**Pn**	**15 14 36.8**	**+1.0**
UNV	**Unalaska Valle**	**8.93**	**67**	P	**Pn**	**15 14 43.1**	**+1.0**
AKGG	**Akutan Green G**	**9.29**	**66**	P	**Pn**	**15 14 48.9**	**+1.7**
SDPT	**Sand Point**	**12.66**	**63**	*e*Pn	**Pn**	**15 15 30.9**	**-1.7**
PETK	**Petropavlovsk-**	**13.51**	**287**	P	**Pn**	**15 15 44.7**	**+0.7**
	0.1nm,0.3s,baz=92,slow=12,SNR=4.9						
YKA	**Yellowknife Ar**	**36.11**	**46**	P	**P**	**15 19 29.3**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=281,slow=8.3,SNR=3.4						
SONM	**Songino Array**	**45.76**	**296**	P	**P**	**15 20 49.6**	**+1.2**
	0.3nm,0.4s,mb3.3,baz=83,slow=8.0,SNR=3.3						
SPITS	**Spitsbergen Ar**	**50.45**	**356**	P	**P**	**15 21 23.4**	**-0.6**
	0.9nm,0.4s,mb4.1,baz=43,slow=6.2,SNR=25						
MK31	**Makanchi Array**	**59.29**	**308**	*e*P	**P**	**15 22 27.2**	**-1.0**
MKAR	**Makanchi Array**	**59.29**	**308**	P	**P**	**15 22 27.9**	**-0.3**
	0.8nm,0.3s,mb4.2,baz=51,slow=6.7,SNR=18						
BVAR	**Borovoye Array**	**60.32**	**319**	P	**P**	**15 22 35.6**	**+0.5**
	1.9nm,0.5s,mb4.4,baz=56,slow=7.4,SNR=18						
NB2	**NORSAR Subarra**	**67.70**	**354**	P	**P**	**15 23 23.1**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.0,baz=7.6,slow=6.5						
NOA	**NORSAR Array B**	**67.70**	**354**	P	**P**	**15 23 23.1**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=9.1,slow=6.1,SNR=4.3						

*NEIC **14** 15:19:38.4, 35°.36N×22°.56E, h26km, MD3.6(ATH), After ATH.*
*CSEM **14** 15:19:38.4, 35°.36N×22°.56E, h26km, MD3.6, After ATH*
ATH 14 15:19:38.4, 35°.36N×22°.56E, h26km±2km, MD3.6/18, Central Mediterranean Sea

| Code | Station Name | Δ° |

XAN	**Xi'an**	**4.32**	**58**	Pn	**Pn**	**15 25 09.6**	**+4.8**
XAN				Pg	**Pg**	**15 25 19.8**	**-1.5**
XAN				Sn	**Sn**	**15 25 56.5**	**+0.9**
XAN				Sg	**Sg**	**15 26 17.1**	**-0.1**
XAN				smax			
	comp=N,72nm,0.7s						
XAN				smax			
	comp=E,34nm,0.7s						
ENH	**Enshi**	**4.56**	**109**	*e*Pn	**Pn**	**15 25 08.2**	**+0.1**
GYA	**Guiyang**	**5.69**	**160**	Pg	**Pg**	**15 25 48.8**	**+1.3**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,40nm,0.8s						
SONM	**Songino Array**	**16.04**	**5**	Pn	**Pn**	**15 27 46.9**	**+2.1**
	comp=E,0.2nm,0.3s,baz=181,slow=14,SNR=3.4						
KSRS	**Korea Array**	**20.05**	**67**	P	**P**	**15 28 32.4**	**-0.1**
	comp=E,1.3nm,0.7s,baz=255,slow=9.9,SNR=5.6						
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**15 29 00.5**	**0.0**
	comp=E,0.3nm,0.6s,mb2.9,baz=124,slow=9.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**15 29 34.0**	**0.0**
	comp=E,0.4nm,0.4s,mb3.3,baz=134,slow=12,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**15 29 34.0**	**0.0**
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**15 29 39.6**	**-0.4**
	comp=E,0.7nm,0.6s,mb3.4,baz=130,slow=8.8,SNR=3.7						
BVAR	**Borovoye Array**	**32.43**	**321**	P	**P**	**15 30 29.2**	**-0.1**
	comp=E,0.3nm,0.6s,mb3.3,baz=126,slow=15,SNR=3.2						
EIL	**Elat**	**58.84**	**288**	LR	LR	16 00 28.4	
	comp=E,18nm,18.2s,slow=37						
WRAB	**Tennant Creek**	**58.90**	**147**	*e*P	**P**	**15 33 57.9**	**-0.7**
	comp=E,1.2nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**58.90**	**147**	P	**P**	**15 33 58.0**	**-0.7**
	comp=E,1.1nm,0.5s,mb4.1,baz=339,slow=7.8,SNR=23						
ASAR	**Alice Springs**	**61.95**	**149**	P	**P**	**15 34 19.1**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.9,baz=332,slow=6.8,SNR=8.0						
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	**15 36 13.0**	**-0.4**
	comp=E,0.2nm,0.4s,mb3.4,baz=329,slow=5.2,SNR=4.0						
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	**15 36 13.0**	**-0.4**

PRE 14 15:29:20.1±1.3, 21°.67S×33°.15E, h5km, ML3.6, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.45**	**221**	*e*P	Pn	15 30 02.1	+1.4
MOPA				*e*S	Sn	15 30 31.9	+0.9
MOPA				AML	AML	15 30 42.0	
	comp=Z,475nm,0.6s						
MSNA	**Messina**	**2.98**	**256**	*e*P	Pn	15 30 08.9	+0.8
MSNA				*e*S	Sn	15 30 45.0	+0.8
MSNA				AML	AML	15 31 02.4	
	comp=Z,100nm,0.2s						
POGA	**Pongola**	**5.84**	**194**	*e*P	Pn	15 30 48.0	+0.6
POGA				*e*S	Sn	15 31 51.3	-3.5
POGA				AML	AML	15 32 42.4	
	comp=Z,16nm,0.5s						
PRYS	**Parys**	**7.43**	**224**	*e*P	Pn	15 31 09.9	+0.7
PRYS				*e*S	Sn	15 32 31.0	-3.0
PRYS				AML	AML	15 33 26.0	
	comp=Z,10nm,0.7s						
LBTB	**Lobatse**	**7.70**	**243**	*e*P	Pn	15 31 13.8	+0.9
LBTB				*e*S	Sn	15 32 37.0	-3.5
LBTB				AML	AML	15 32 49.3	
	comp=Z,5.0nm,0.6s						
BOSA	**Boshof**	**9.94**	**224**	*e*P	Pn	15 31 44.2	+0.6
BOSA				*e*S	Sn	15 33 30.1	-5.6
BOSA				AML	AML	15 34 09.1	
	comp=Z,1.4nm,0.3s						

*NEIC **14** 15:31:09.5±4.2, 29°.44S×176°.48W, h60km±26km, mb3.7/1, Error ellipse: s-maj=48.5km s-min=36.3km az=109.0*
*ISCJB **14** 15:31:10.3±4.2, 29°.4S±0°.3×176°.7W±0°.4, h72km±25km, mb3.7/5, Error ellipse: s-maj=52.9km s-min=45.2km az=28.6*
*IDC **14** 15:31:10.8±3.8, 29°.39S×176°.69W, h63km±24km, mb3.7/5, mb1 3.8/5, mb1mx3.6/14, mbtmp3.7/5, Error ellipse: s-maj=39.3km s-min=37.5km az=47.0*

ISC 14 15:31:10.9±4.0, 29°.4S±0°.3×176°.7W±0°.3, h64km±26km, n8, σ0s88/10, mb3.8/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.09**	**278**	P	**Pn**	**15 31 31.2**	**+0.9**
	534nm,0.3s,baz=82,slow=8.6,SNR=64						
RAO				S	**Sn**	**15 31 44.2**	**-0.5**
	3μm,0.3s,baz=90,slow=21,SNR=54						
RAO	**Raoul Island**	**1.09**	**278**	*e*Pn	**Pn**	**15 31 31.1**	**+0.7**
RAO				*e*Sn	**Sn**	**15 31 43.7**	**-1.0**
STKA	**Stephens Creek**	**35.83**	**255**	P	**P**	**15 38 06.0**	**+1.7**
	0.9nm,0.6s,mb3.9,baz=97,slow=8.0,SNR=4.2						
ASAR	**Alice Springs**	**44.32**	**265**	P	**P**	**15 39 14.9**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=98,slow=7.1,SNR=9.2						
WRA	**Warramunga Arr**	**45.22**	**270**	P	**P**	**15 39 21.4**	**-0.6**
	1.0nm,0.7s,mb3.8,baz=109,slow=7.7,SNR=9.2						
MAW	**Mawson**	**73.64**	**200**	P	**P**	**15 42 36.2**	**-0.9**
	2.0nm,0.5s,mb4.3,baz=100,slow=11,SNR=11						
MAW	**Mawson**	**73.64**	**200**	*e*P	**P**	**15 42 36.0**	**-1.1**
	0.6nm,0.6s,mb3.7						
PETK	**Petropavlovsk-**	**85.14**	**345**	P	**P**	**15 43 39.3**	**-0.2**
	0.7nm,0.5s,mb4.0,baz=96,slow=7.8,SNR=5.4						

*IDC **14** 15:33:17.1±0.9, 31°.33N×103°.50E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.8/27, mbtmp3.9/13, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.2/39, Error ellipse: s-maj=33.9km s-min=16.1km az=49.0*
*ISCJB **14** 15:33:18.8±1.2, 31°.33N±0°.07×103°.55E±0°.10, h26km±10km, mb3.9/14, Error ellipse: s-maj=15.6km s-min=9.7km az=144.1*
*NEIC **14** 15:33:18.7±0.5, 31°.36N×103°.54E, h10km, mb4.1/3, Error ellipse: s-maj=14.8km s-min=7.4km az=223.0*
*BJI **14** 15:33:18.4, 31°.36N×103°.63E, h17km, mb3.8/1, ML3.7/14, Ms3.9/3, Ms7 3.5/3*

ISC 14 15:33:19.4±0.9, 31°.37N±0°.03×103°.67E±0°.05, h15km±6km, n28, σ0s97/32, mb3.9/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**171**	Pg	**Pg**	**15 33 27.4**	**-1.3**
CD2				Sg	**Sg**	**15 33 35.1**	**+0.2**
CD2				smax			
	comp=N,14μm,0.8s						
LZH	**Lanzhou**	**4.71**	**2**	Pg	**Pg**	**15 34 51.0**	**+1.4**
LZH				Sg	**Sg**	**15 35 55.3**	**+4.7**
LZH				smax			
	comp=N,98nm,1.0s						
LZH				smax			
	comp=E,100nm,0.8s						
LZH				LR	LR		
	comp=E,940nm,6.3s						
LZH				LR	LR		
	comp=Z,1μm,7.5s						
ENH	**Enshi**	**5.12**	**101**	*e*Pn	**Pn**	**15 34 37.4**	**+1.9**
	comp=Z,60nm,0.8s						
XAN	**Xi'an**	**5.16**	**58**	Pg	**Pg**	**15 34 53.8**	**-4.5**
XAN				Sg	**Sg**	**15 36 04.3**	**-0.9**
XAN				smax			
	comp=N,100nm,1.0s						
XAN				smax			
	comp=E,60nm,0.7s						
GYA	**Guiyang**	**5.55**	**151**	Pg	**Pg**	**15 34 59.8**	**-6.0**
GYA				Sg	**Sb**	**15 36 02.9**	**+0.5**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,100nm,0.7s						
KMI	**Kunming**	**6.28**	**188**	Pn	**Pn**	**15 34 51.3**	**-0.2**
KMI				Sn	**Sn**	**15 36 08.0**	**+5.1**
KMI				smax			
	comp=N,29nm,1.9s						
KMI				smax			
	comp=E,29nm,1.2s						
KMI				LR	LR		
	comp=N,290nm,6.0s						
KMI				LR	LR		
	comp=E,800nm,8.9s						
WHN	**Wuhan**	**9.21**	**92**	S	**Sn**	**15 37 13.3**	**-1.7**
WHN				LR	LR		
	comp=Z,610nm,6.5s						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**15 37 12.5**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=189,slow=13,SNR=8.3						
KSRS	**Korea Array**	**20.88**	**67**	P	**P**	**15 38 02.4**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=251,slow=11,SNR=9.1						
MK31	**Makanchi Array**	**22.54**	**319**	*e*P	**P**	**15 38 14.6**	**-4.0**
MKAR	**Makanchi Array**	**22.54**	**319**	P	**P**	**15 38 17.8**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.6,baz=130,slow=13,SNR=11						
UCH	**Uchtor**	**25.62**	**303**	*e*P	**P**	**15 38 49.0**	**+0.8**
	comp=Z,4.1nm,1.2s,mb3.8						
AAK	**Ala-Archa**	**25.75**	**304**	P	**P**	**15 38 50.4**	**+1.1**
	comp=Z,0.6nm,0.3s,mb3.6,baz=347,slow=24,SNR=4.0						
ZALV	**Zalesovo Beam**	**26.32**	**334**	P	**P**	**15 38 54.3**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.0,baz=133,slow=8.7,SNR=16						
KURK	**Kurchatov**	**26.81**	**323**	P	**P**	**15 38 58.2**	**-0.7**
	comp=Z,5.4nm,0.7s,mb4.2,baz=127,slow=9.7,SNR=38						
KURK	**Kurchatov**	**26.81**	**323**	P	**P**	**15 38 58.2**	**-0.7**
BVAR	**Borovoye Array**	**32.35**	**322**	P	**P**	**15 39 47.9**	**-0.1**
	comp=Z,1.1nm,0.6s,mb3.9,baz=113,slow=8.9,SNR=6.6						
BRVK	**Borovoye**	**32.43**	**322**	*e*P	**P**	**15 39 48.3**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.0						
CBIJ	**Chichi jima**	**33.76**	**87**	LR	LR	15 54 54.0	
	comp=Z,48nm,18.6s,baz=34,slow=38						
ABKAR	**Akbulak array**	**37.22**	**312**	*e*P	**P**	**15 40 29.5**	**-0.6**
TIXI	**Tiksi**	**42.57**	**11**	*e*P	**P**	**15 41 13.5**	**-0.6**
	comp=Z,1.6nm,0.4s,mb4.1						
ARCES	**ARCESS Array B**	**56.87**	**336**	P	**P**	**15 43 02.0**	**-1.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=67,slow=9.3,SNR=5.0						
AKASG	**Malin Array Be**	**56.93**	**313**	P	**P**	**15 43 02.3**	**-1.5**
	comp=Z,1.3nm,0.5s,mb4.2,baz=67,slow=7.2,SNR=3.7						
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**15 43 04.4**	**-0.7**
	comp=Z,2.1nm,0.7s,mb4.3,baz=162,slow=19,SNR=3.7						
WRAB	**Tennant Creek**	**58.90**	**146**	*e*P	**P**	**15 43 18.3**	**+0.4**
WRA	**Warramunga Arr**	**58.90**	**146**	P	**P**	**15 43 18.0**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=338,slow=7.6,SNR=5.3						
ASAR	**Alice Springs**	**61.91**	**148**	P	**P**	**15 43 39.3**	**+0.9**
	comp=Z,0.5nm,0.9s,mb3.6,baz=335,slow=6.1,SNR=4.0						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**15 45 36.9**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.3,baz=329,slow=6.0,SNR=4.4						

IDC 14 15:33:41.4±1.5, 31°.44N×103°.01E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/26, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=85.0km s-min=24.6km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.58**	**8**	Pn	Pn	15 37 37.2	+2.1
	0.1nm,0.3s,baz=178,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**22.11**	**320**	P	P	15 38 39.5	+1.2
	1.2nm,0.8s,baz=112,slow=10,SNR=3.5						
ZALV	**Zalesovo Beam**	**26.02**	**335**	P	P	15 39 14.8	-1.2
	2.1nm,0.8s,baz=134,slow=8.5,SNR=5.9						
KURK	**Kurchatov**	**26.42**	**324**	P	P	15 39 19.4	-0.2
	3.2nm,0.9s,baz=127,slow=9.8,SNR=7.2						
WRA	**Warramunga Arr**	**59.28**	**145**	P	P	15 43 45.1	+0.1
	0.5nm,0.5s,baz=338,slow=7.7,SNR=4.7						

*NEIC **14** 15:47:47.1, 16°.67N×100°.62W, h6km, MD3.8(MEX), After MEX.*

MEX 14 15:47:47.1±0.5, 16°.67N×100°.62W, h6km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.50**	**42**	*i* P	Pg	15 47 56.5	-0.3
CAIG				*i* S	Sg	15 48 03.8	+0.4
CAIG	**El Cayaco**	**0.50**	**42**	*i* P	Pg	15 47 56.5	-0.3
CAIG				*i* S	Sg	15 48 03.8	+0.4
ACX	**Acapulco**	**0.70**	**74**	*i* P	Pg	15 47 59.2	-1.4
ACX				*i* S	Sg	15 48 08.9	-0.8
ACX	**Acapulco**	**0.70**	**74**	*i* P	Pg	15 47 59.2	-1.4
ACX				*i* S	Sg	15 48 08.9	-0.8
ZIIG	**Zihuatanejo**	**1.23**	**319**	*e*P	Pg	15 48 07.0	-3.7
ZIIG				*i* S	Sg	15 48 22.4	-4.2
ZIIG	**Zihuatanejo**	**1.23**	**319**	*e*P	Pg	15 48 07.0	-3.7
ZIIG				*i* S	Sg	15 48 22.4	-4.2
PNIG	**Pinotepa**	**2.41**	**96**	*i* P	Pn	15 48 24.3	-2.7
PNIG				*i* S	Sn	15 48 53.1	-3.7
PNIG	**Pinotepa**	**2.41**	**96**	*i* P	Pn	15 48 24.3	-2.7
PNIG				*i* S	Sn	15 48 53.1	-3.7
MZVM		**2.83**	**28**	*i* P	Pn	15 48 29.9	-3.0
MZVM				*i* S	Sn	15 49 02.9	-4.3
UTMO	**Huajuapan**	**2.93**	**66**	*i* P	Pn	15 48 32.8	-1.3
UTMO				*i* S	Sn	15 49 06.9	-2.8
PPM	**Popocatepetl**	**3.04**	**38**	*i* P	Pn	15 48 33.9	-1.8
PPM				*i* S	Sn	15 49 10.3	-2.2
PPM	**Popocatepetl**	**3.04**	**38**	*i* P	Pn	15 48 33.9	-1.8
PPM				*i* S	Sn	15 49 10.3	-2.2
IIO	**Organos**	**3.42**	**32**	*e*P	Pn	15 48 39.2	-1.7
IIO				*i* S	Sn	15 49 18.9	-2.8
IIO	**Organos**	**3.42**	**32**	*e*P	Pn	15 48 39.2	-1.7
IIO				*i* S	Sn	15 49 18.9	-2.8

*IDC **14** 15:50:43.8±0.7, 4°.01N×126°.49E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.9/22, mbtmp3.9/11, Error ellipse: s-maj=35.8km s-min=13.7km az=78.0*
*NEIC **14** 15:50:44.9±0.5, 4°.10N×126°.89E, h10km, mb3.8/1, Error ellipse: s-maj=18.8km s-min=8.7km az=70.0*
*ISCJB **14** 15:50:51.1±0.6, 3°.97N±0°.03×126°.62E±0°.07, h76km±7km, mb3.9/11, Error ellipse: s-maj=12.8km s-min=4.8km az=165.8*
*MAN **14** 15:50:51, 4°.07N×126°.53E, h165km, mb5.2, ML4.2, MS4.4*
*DJA **14** 15:50:53, 3°.74N×126°.59E, h15km, MLv4.6/6*

ISC 14 15:50:52.6±0.6, 3°.96N±0°.03×126°.59E±0°.07, h71km±7km, n32, σ0s82/38, mb3.9/11, 3C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.09**	**256**	P	**Pn**	**15 51 11.4**	**-0.9**
SGSI				S	**Sn**	**15 51 26.1**	**-0.9**
GSPH	**General Santos**	**2.67**	**322⇑**	*e*P	**Pn**	**15 51 32.8**	**-0.6**
GSPH				*i* S	**Sn**	**15 52 05.3**	**+0.7**
MATI	**Mati**	**2.98**	**354**	*e*P	**Pn**	**15 51 38.4**	**+0.7**
TNTI	**Ternate**	**3.26**	**166**	P	**Pn**	**15 51 40.9**	**-0.6**
DMPH	**Davao City--Mi**	**3.28**	**341⇑**	*e*P	**Pn**	**15 51 41.3**	**-0.4**
DMPH				*e*S	**Sn**	**15 52 21.2**	**+1.5**
BUKP	**Musuan**	**4.18**	**339**	*e*P	**Pn**	**15 51 55.4**	**+1.5**
LBMI	**Labuha**	**4.66**	**169**	P	**Pn**	**15 52 00.9**	**+0.4**
LBMI				S	**Sn**	**15 52 53.6**	**+0.3**
CGP	**Cagayan de Oro**	**4.84**	**337⇓**	*e*P	**Pn**	**15 52 02.2**	**-0.8**
CGP				*e*S	**Sn**	**15 52 56.7**	**-1.2**
ZMPH	**Zamboanga City**	**5.39**	**304⇑**	*i*P	**Pn**	**15 52 09.6**	**-1.0**
ZMPH				*i* S	**Sn**	**15 53 06.6**	**-4.8**
MRSI	**Marisa**	**5.79**	**233**	P	**Pn**	**15 52 17.5**	**+1.5**
	305nm,0.5s,4μm						
LUWI	**Luwuk**	**6.26**	**218**	P	**Pn**	**15 52 27.9**	**+5.4**
APSI	**Ampana**	**6.91**	**226**	P	**Pn**	**15 52 35.9**	**+4.6**
	112nm,0.9s,912nm0.3nm						
NLAI	**Namlea**	**7.17**	**176**	P	**Pn**	**15 52 34.9**	**0.0**
	33nm,0.9s,1μm0.3nm						
AAI	**Ambon**	**7.76**	**168**	P	**Pn**	**15 52 42.8**	**-0.2**
KSM	**Kuching**	**16.44**	**262**	*e*P	**Pn**	**15 54 40.9**	**+1.8**
	6.6nm,0.8s						
KAKA	**Kakadu**	**17.55**	**161**	*e*Pn	**Pn**	**15 54 48.3**	**-4.4**
FITZ	**Fitzroy Crossi**	**21.94**	**182**	P	**P**	**15 55 40.4**	**-0.1**
	1.5nm,0.6s,mb3.5,baz=38,slow=4.6,SNR=7.1						
FITZ	**Fitzroy Crossi**	**21.94**	**182**	*e*P	**P**	**15 55 40.2**	**-0.3**
WRAB	**Tennant Creek**	**24.94**	**162**	*e*P	**P**	**15 56 09.1**	**-0.3**
WRA	**Warramunga Arr**	**24.95**	**162**	P	**P**	**15 56 09.3**	**-0.2**
	2.2nm,0.5s,mb3.8,baz=340,slow=10,SNR=24						
CBIJ	**Chichi jima**	**27.41**	**31**	P	**P**	**15 56 31.3**	**-0.4**
	64nm,0.8s,baz=286,slow=19,SNR=8.0						
ASAR	**Alice Springs**	**28.37**	**166**	P	**P**	**15 56 40.2**	**-0.1**
	0.5nm,0.5s,mb3.3,baz=348,slow=7.2,SNR=9.1						
KSRS	**Korea Array**	**33.36**	**2**	P	**P**	**15 57 24.9**	**+0.9**
	2.3nm,0.6s,mb4.2,baz=180,slow=9.9,SNR=15						
STKA	**Stephens Creek**	**38.39**	**159**	P	**P**	**15 58 08.1**	**+0.9**
	1.8nm,0.6s,mb4.1,baz=319,slow=7.9,SNR=4.7						
STKA	**Stephens Creek**	**38.39**	**159**	P	**P**	**15 58 08.1**	**+0.9**
SONM	**Songino Array**	**47.03**	**341**	P	**P**	**15 59 15.9**	**-1.0**
	1.1nm,0.5s,mb3.8,baz=160,slow=8.3,SNR=8.7						
PETK	**Petropavlovsk-**	**55.27**	**22**	P	**P**	**16 00 18.1**	**-0.4**
	1.5nm,0.7s,mb4.1,baz=210,slow=1.5,SNR=9.6						
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**16 00 32.9**	**-0.1**
	0.7nm,0.5s,mb3.9,baz=129,slow=7.0,SNR=5.9						
ZALV	**Zalesovo Beam**	**60.32**	**333**	P	**P**	**16 00 53.1**	**-0.8**
	0.6nm,0.4s,mb4.0,baz=124,slow=7.8,SNR=3.0						
KURK	**Kurchatov**	**61.47**	**327**	P	**P**	**16 01 01.1**	**-0.6**
	1.9nm,0.8s,mb4.2,baz=129,slow=6.5,SNR=9.8						
KURK	**Kurchatov**	**61.47**	**327**	*e*P	**P**	**16 01 01.5**	**-0.2**
BVAR	**Borovoye Array**	**67.05**	**327**	P	**P**	**16 01 38.8**	**+0.6**
	0.2nm,0.3s,mb3.5,baz=138,slow=9.1,SNR=4.0						

*ISCJB **14** 15:51:58.3±0.8, 83°.7N±0°.2×11°.3E±°, h10km, mb3.6/7, MS3.3/3, Error ellipse: s-maj=28.1km s-min=14.3km az=146.5*
*IDC **14** 15:51:58.8±1.2, 83°.77N×113°.49E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.6/27, mbtmp3.8/7, MS3.4/3, Ms1 3.4/3, ms1mx2.7/41, Error ellipse: s-maj=43.2km s-min=19.4km az=152.0*
*NEIC **14** 15:51:60.0±0.7, 83°.70N×113°.49E, h10km, Error ellipse: s-maj=24.3km s-min=12.8km az=147.0*

ISC 14 15:52:00.1±0.8, 83°.7N±0°.2×11°.4E±°, h10km, n11, σ0s73/9, mb3.6/7, MS3.3/3, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.29**	**285**	P	**P**	**15 56 45.2**	**-0.9**
	3.7nm,0.9s,mb3.7,baz=13,slow=11,SNR=5.0						
INK	**Inuvik**	**24.96**	**54**	P	**P**	**15 57 23.1**	**+0.2**
	2.8nm,0.9s,mb3.8,baz=2.1,slow=15,SNR=5.1						
FINES	**FINESS Array B**	**29.07**	**279**	P	**P**	**15 58 01.4**	**+1.5**
	4.1nm,1.0s,mb4.1,baz=166,slow=24,SNR=2.9						
YKA	**Yellowknife Ar**	**32.22**	**40**	P	**P**	**15 58 27.5**	**-0.2**
	0.1nm,0.4s,mb3.0,baz=206,slow=23,SNR=4.0						
YKA				LR	LR	16 12 38.4	
	comp=Z,42nm,19.6s,MS3.1,baz=285,slow=38						
BVAR	**Borovoye Array**	**32.78**	**230**	LR	LR	16 13 14.6	
	comp=Z,64nm,18.7s,MS3.4,baz=15,slow=39						
MK31	**Makanchi Array**	**38.09**	**215**	*e*P	**P**	**15 59 17.5**	**-0.8**
MKAR	**Makanchi Array**	**38.09**	**215**	P	**P**	**15 59 19.0**	**+0.6**
	0.9nm,0.8s,mb3.6,baz=10,slow=7.5,SNR=6.3						
MKAR	**Makanchi Array**	**38.09**	**215**	P	**P**	**15 59 19.0**	**+0.6**
ASAJ	**Asahikawa**	**40.63**	**147**	LR	LR	16 18 15.5	
	comp=Z,64nm,19.6s,MS3.5,baz=42,slow=39						
TXAR	**Lajitas Array**	**65.95**	**35**	P	**P**	**16 02 45.8**	**0.0**
	0.4nm,0.7s,mb3.6,baz=349,slow=5.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**79.36**	**293**	P	**P**	**16 04 05.4**	**-0.3**
	0.4nm,0.8s,mb3.4,baz=0.7,slow=6.4,SNR=2.8						

DJA 14 15:52:48, 1°.93N×95°.72E, h15km, MLv4.0/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.96**	**109**	P	Pn	15 53 20.9	+0.2
GSI				S	Sn	15 53 43.0	-2.0
TRSI	**Tarutung**	**3.24**	**88**	P	Pn	15 53 42.6	+4.3
TSI	**Tuntungan**	**3.24**	**61**	P	Pn	15 53 38.7	+0.3
TSI				S	Sn	15 54 19.8	+3.1
BSI	**Banda Aceh**	**3.57**	**353**	P	Pn	15 53 42.1	-0.8
MNSI	**Mandailing Nat**	**4.02**	**106**	P	Pn	15 53 48.7	-0.4
SISI	**Saibi**	**4.67**	**134**	P	Pn	15 53 58.1	+0.1
SISI				S	Sn	15 54 56.0	+4.0
IPM	**Ipoh**	**5.87**	**64**	P	Pn	15 54 07.8	-6.7

*ISCJB **14** 15:59:46.7±1.8, 18°.7S±0°.2×169°.0E±0°.2, h244km±16km, mb4.0/9, Error ellipse: s-maj=26.0km s-min=24.1km az=150.8*
*NEIC **14** 15:59:46.5±2.2, 18°.63S×169°.24E, h243km±21km, mb3.9/2, Error ellipse: s-maj=23.9km s-min=19.6km az=190.0*
*NOU **14** 15:59:47.7±0.5, 18°.26S×169°.02E, h30km, MD3.1*
*IDC **14** 15:59:55.4±13.0, 18°.75S×169°.07E, h326km±117km, mb3.6/8, mb1 3.7/8, mb1mx3.6/15, mbtmp3.6/8, Error ellipse: s-maj=77.9km s-min=28.8km az=114.0*

ISC 14 15:59:47.1±1.8, 18°.7S±0°.2×169°.0E±0°.2, h235km±17km, n21, σ0s99/17, mb4.0/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.15**	**215**	*e*Pn	**Pn**	**16 00 53.1**	**+1.1**
LASL	**Noumea**	**4.23**	**213**	*e*P	**Pn**	**16 00 54.0**	**+1.0**
NOUC	**Port Laguerre**	**4.25**	**216**	*e*P	**Pn**	**16 00 54.1**	**+0.8**
NOUC				*e*S	**S**	**16 01 43.8**	**-1.9**
NOUC				AMP		16 01 46.8	
	comp=Z,14nm,5.1s						
MVNO	**Noumea**	**4.31**	**214**	*e*S	**S**	**16 01 44.4**	**-2.7**
URZ	**Urewera**	**20.75**	**162**	*e*P	**P**	**16 04 09.6**	**-0.2**
CTA	**Charters Tower**	**21.52**	**263**	P	**P**	**16 04 21.5**	**+3.4**
	comp=Z,2.5nm,0.5s,mb4.0,baz=111,slow=12,SNR=5.7						
CTAO	**Charters Tower**	**21.52**	**263**	*e*P	**P**	**16 04 17.7**	**-0.4**
	comp=Z,1.7nm,0.5s,mb3.8						
STKA	**Stephens Creek**	**27.97**	**237**	P	**P**	**16 05 16.8**	**+0.7**
	comp=Z,1.3nm,0.5s,mb3.8,baz=87,slow=8.3,SNR=3.1						
WRAB	**Tennant Creek**	**32.71**	**262**	*e*P	**P**	**16 05 57.9**	**0.0**
WRA	**Warramunga Arr**	**32.72**	**262**	P	**P**	**16 05 57.7**	**-0.3**
	comp=Z,0.7nm,0.3s,mb3.7,baz=80,slow=6.4,SNR=31						
ASAR	**Alice Springs**	**33.07**	**255**	P	**P**	**16 06 01.4**	**+0.5**
	comp=Z,4.5nm,0.3s,mb4.5,baz=81,slow=8.5,SNR=212						
FITZ	**Fitzroy Crossi**	**41.10**	**264**	P	**P**	**16 07 09.1**	**+0.7**
	comp=Z,3.7nm,0.6s,mb

comp=N,480nm,6.4s
KMI LR LR
comp=E,930nm,6.6s
CMAR Chiang Mai Arr 14.08 202 LR LR 16 13 39.3
comp=E,9μm,18.5s,baz=316,slow=36
SONM Songino Array 16.20 5 Pn **Pn 16 09 01.1 +0.2**
comp=E,0.1nm,0.3s,baz=185,slow=13,SNR=10
KSRS Korea Array 20.13 67 P **P 16 09 48.0 +0.5**
comp=E,3.3nm,0.8s,baz=256,slow=10,SNR=11
KSRS LR LR 16 17 30.5
comp=E,24nm,18.6s,MS2.6,baz=160,slow=37
MKAR Makanchi Array 22.76 318 P **P 16 10 14.5 -1.2**
comp=E,1.1nm,0.6s,mb3.5,baz=110,slow=14,SNR=8.6
UCH Uchtor 26.03 302 *eP* **P 16 10 47.3 +0.6**
comp=E,4.0nm,1.1s,mb3.9
AAK Ala-Archa 26.14 303 LR LR 16 21 50.0
comp=E,52nm,21.2s,MS3.0,baz=231,slow=38
ZAA0 Zalesovo Array 26.34 333 *eP* **P 16 10 48.7 -0.7**
ZALV Zalesovo Beam 26.34 333 P **P 16 10 48.5 -1.0**
comp=E,2.3nm,0.8s,mb3.7,baz=133,slow=10,SNR=7.5
KURK Kurchatov 26.98 322 P **P 16 10 54.0 -1.2**
comp=E,1.6nm,0.8s,mb3.6,baz=132,slow=8.6,SNR=10.0
BVAR Borovoye Array 32.54 321 P **P 16 11 45.1 +0.7**
comp=E,0.4nm,0.5s,mb3.6,baz=104,slow=6.1,SNR=2.8
ABKAR Akbulak array 37.53 311 *eP* **P 16 12 28.9 +1.4**
comp=E,0.8nm,0.6s,mb3.6
TIXI Tiksi 42.13 11 P **P 16 13 05.6 +0.1**
FITZ Fitzroy Crossi 53.50 155 P **P 16 14 33.5 -0.7**
comp=E,1.8nm,0.9s,mb4.0,baz=345,slow=7.4,SNR=5.0
BRTR Keskin Array B 56.73 299 P **P 16 14 56.4 -1.1**
comp=E,0.9nm,0.7s,mb3.9,baz=98,slow=7.6,SNR=5.9
ARCES ARCESS Array B 56.87 336 P **P 16 14 57.9 0.0**
comp=E,1.3nm,0.8s,mb4.0,baz=72,slow=8.0,SNR=7.5
FINES FINESS Array B 57.27 326 P **P 16 15 00.0 -0.9**
comp=E,1.7nm,0.5s,mb4.3,baz=73,slow=6.4,SNR=7.1
WRAB Tennant Creek 58.77 147 *eP* **P 16 15 11.9 0.0**
comp=E,4.1nm,0.6s,mb4.6
WRA Warramunga Arr 58.78 147 P **P 16 15 11.9 0.0**
comp=E,2.8nm,0.6s,mb4.5,baz=340,slow=7.9,SNR=54
ASAR Alice Springs 61.82 149 P **P 16 15 32.8 0.0**
comp=E,1.3nm,0.5s,mb4.3,baz=333,slow=6.5,SNR=30
NOA NORSAR Array B 64.34 327 P **P 16 15 49.3 +0.2**
comp=E,1.7nm,0.8s,mb4.1,baz=72,slow=6.8,SNR=4.0
GERES GERESS Array B 67.37 314 P **P 16 16 10.3 +1.5**
comp=E,0.4nm,0.8s,mb3.5,baz=98,slow=5.5,SNR=4.2
INK Inuvik 71.51 19 P **P 16 16 35.2 +1.1**
comp=E,1.7nm,0.7s,mb4.1,baz=222,slow=2.3,SNR=3.2
STKA Stephens Creek 72.32 147 P **P 16 16 38.6 -0.8**
comp=E,1.4nm,0.5s,mb4.2,baz=330,slow=9.8,SNR=5.2
STKA Stephens Creek 72.32 147 *eP* **P 16 16 38.6 -0.8**
YKA Yellowknife Ar 81.05 17 P **P 16 17 27.2 -1.2**
comp=E,0.6nm,0.6s,mb3.7,baz=329,slow=5.2,SNR=7.9

BJI ***14*** *16:09:48.9, 30.°30N×114.°30W, h10km, mB4.8/2, mb4.7/3, Ms4.6/3, Ms7 4.3/3*
IDC ***14*** *16:09:50.6±1.5, 30.°07N×114.°05W, h0km, mb4.2/6, mb1 4.1/12, mb1mx4.0/28, mbtmp4.0/12, ML3.5/5, MS4.1/28, Ms1 4.1/28, ms1mx3.9/47, Error ellipse: s-maj=26.2km s-min=11.9km az=31.0*
ISCJB ***14*** *16:09:51.1±0.9, 30.°18N±0.°07×114.°03W±0.°05, h10km, mb4.2/9, MS4.2/26, Error ellipse: s-maj=10.2km s-min=4.9km az=17.8*
GCMT ***14*** *16:09:52.9±0.3, 30.°20N×114.°16W, h14km±1km, MW4.8/63, Moment Tensor Solution. s19,c22; s63,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.05±.17; Mθθ0.55±.11; Mφφ1.50±.11; Mrθ-0.72±.28; Mrφ1.15±.07; Mθφ-0.05±.23; Best double couple: M0=2.28400×10^16 NP1:φs=199.00000°, δ41.00000°, λ-114.00000°. NP2: φs=49.00000°, δ53.00000°, λ-71.00000°. Principal axes: T 2.3160, Plg6.0000°, Azm125.0000°; N -0.0600, Plg15.0000°, Azm217.0000°; P -2.2530, Plg73.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***14*** *16:09:52.9±1.6, 30.°25N×114.°30W, h10km, mb4.3/21 Error ellipse: s-maj=23.9km s-min=11.9km az=184.0*
ISC 14 16:09:52.4±0.9, 30.°09N±0.°07×114.°00W±0.°05, h10km, n157, σ1§55/141, mb4.2/9, MS4.2/26, 40C-25D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
214A	**Organ Pipe Nat**	**2.12**	**29**	⇓P	**Pn**	**16 10 25.2**	**-2.6**
	baz=2.3						
214A				⇑S	**Sn**	**16 11 05.5**	**+11**
	baz=2.3						
113A	**Mohawk Valley,**	**2.67**	**4**	⇑P	**Pn**	**16 10 30.9**	**-4.5**
	baz=2.8						
114A	**Black Gap (USA**	**2.82**	**20**	⇑P	**Pn**	**16 10 34.9**	**-2.5**
	baz=3.0						
216A	**Three Points,**	**2.90**	**48**	⇓P	**Pn**	**16 10 36.4**	**-2.2**
	baz=3.2						
216A				⇑S	**Sn**	**16 11 22.6**	**+9.1**
	baz=3.2						
115A	**Sonoran Desert**	**3.01**	**30**	⇓P	**Pn**	**16 10 38.0**	**-2.1**
	baz=3.2						
115A				⇑S	**Sn**	**16 11 27.8**	**+12**
	baz=3.2						
GLA	**Glamis**	**3.03**	**347**	⇓P	**Pn**	**16 10 35.7**	**-4.7**
	baz=3.0						
GLA	**Glamis**	**3.03**	**347**	*e*Pn	**Pn**	**16 10 36.0**	**-4.4**
Z13A	**Yuma Proving G**	**3.11**	**5**	⇑P	**Pn**	**16 10 38.2**	**-3.2**
	baz=3.2						
SWSC	**Sam W. Stewart**	**3.23**	**332**	⇓P	**Pn**	**16 10 37.0**	**-6.1**
	baz=3.1						
Z14A	**Wintersburg**	**3.38**	**15**	⇑P	**Pn**	**16 10 43.1**	**-2.1**
	baz=3.5						
BAR	**Barrett**	**3.44**	**319**	*e*Pn	**Pn**	**16 10 41.0**	**-5.1**
MONP	**Monument Peak**	**3.47**	**324**	⇓P	**Pn**	**16 10 41.1**	**-5.3**
	baz=3.3						
TUC	**Tucson**	**3.53**	**50**	*e*Pn	**Pn**	**16 10 44.5**	**-2.7**
Z15A	**Gila River Ind**	**3.55**	**26**	⇑P	**Pn**	**16 10 46.5**	**-1.1**
	baz=3.7						
Y12C	**Blythe**	**3.67**	**353**	⇓P	**Pn**	**16 10 46.4**	**-2.9**
	baz=3.7						
318A	**Bisbee**	**3.71**	**68**	⇑Sb	**Sb**	**16 11 54.4**	**+12**
	baz=4.0						
Y13A	**Salome**	**3.71**	**2**	⇓P	**Pn**	**16 10 47.5**	**-2.3**
	baz=3.8						
117A	**Oracle**	**3.73**	**48**	⇑P	**Pn**	**16 10 48.6**	**-1.3**
	baz=4.0						
BC3	**Big Chuckw Mtn**	**3.76**	**341**	⇑P	**Pn**	**16 10 46.2**	**-4.2**
	baz=3.7						
218A	**Dragoon**	**3.88**	**60**	⇑Sb	**Sb**	**16 12 02.5**	**+15**
	baz=4.2						
Z16A	**Peralta Trail,**	**3.91**	**33**	⇓P	**Pn**	**16 10 51.3**	**-1.2**
	baz=4.1						
Z16A				⇑S	**Sn**	**16 11 48.0**	**+10**
	baz=4.1						
Y14A	**Wickenburg**	**3.93**	**12**	⇓P	**Pn**	**16 10 51.1**	**-1.6**
	baz=4.1						
PFO	**Pinyon Flat Ob**	**4.08**	**330**	⇑S	**Sn**	**16 11 44.0**	**+1.4**
	baz=4.0						
PFO	**Pinyon Flat Ob**	**4.08**	**330**	*e*Pn	**Pn**	**16 10 49.2**	**-5.6**
Y15A	**Casa Rosa Ranc**	**4.10**	**20**	⇑P	**Pn**	**16 10 53.6**	**-1.5**
	baz=4.3						
IRM	**Iron Mountain**	**4.17**	**347**	⇑P	**Pn**	**16 10 52.6**	**-3.5**
	baz=4.2						
PDMCI	**Parker Dam,Lak**	**4.20**	**358**	⇑P	**Pn**	**16 10 53.5**	**-2.9**
	baz=4.3						
Y16A	**Circle Bar Ran**	**4.34**	**29**	⇑P	**Pn**	**16 10 57.7**	**-0.7**
	baz=4.5						
Y16A				⇑Sb	**Sb**	**16 12 18.6**	**+17**
	baz=4.5						
Z17A	**San Carlos Hig**	**4.39**	**42**	⇓P	**Pn**	**16 10 58.4**	**-0.6**
	baz=4.6						
Z17A				⇓Sb	**Sb**	**16 12 19.5**	**+17**
	baz=4.6						
MURC	**Murrieta**	**4.43**	**323**	⇓S	**Sn**	**16 11 47.0**	**-4.2**
	baz=4.3						
X14A	**Yava**	**4.46**	**12**	⇑P	**Pn**	**16 10 58.9**	**-1.2**
	baz=4.6						
Y17A	**Roosevelt**	**4.49**	**36**	⇓P	**Pn**	**16 10 59.2**	**-1.2**
	baz=4.7						
Y17A				⇑S	**Sn**	**16 12 02.7**	**+10**
	baz=4.7						
X13A	**Yucca**	**4.49**	**2**	⇓P	**Pn**	**16 10 57.8**	**-2.6**
	baz=4.6						
219A	**White Tail Can**	**4.49**	**64**	⇑Sb	**Sb**	**16 12 20.6**	**+15**
	baz=4.8						
X15A	**Humboldt**	**4.63**	**18**	⇓P	**Pn**	**16 11 01.0**	**-1.4**
	baz=4.8						
X15A				⇑S	**Sn**	**16 12 07.2**	**+11**
	baz=4.8						
119A	**Ashpeak Ranch,**	**4.82**	**55**	⇑P	**Pn**	**16 11 04.4**	**-0.6**
	baz=5.1						
X16A	**Lo Mia Camp, P**	**4.83**	**26**	⇓P	**Pn**	**16 11 04.4**	**-0.7**
	baz=5.0						
Y18A	**Canyon Day Jun**	**4.99**	**42**	⇑P	**Pn**	**16 11 07.3**	**0.0**
	baz=5.2						
W13A	**Hualapai Mount**	**4.99**	**1**	⇑P	**Pn**	**16 11 06.2**	**-1.1**
	baz=5.1						
Z19A	**T-Link Ranch,**	**5.14**	**50**	⇑P	**Pn**	**16 11 08.5**	**-0.9**
	baz=5.4						
W14A	**Seligman**	**5.16**	**8**	⇑P	**Pn**	**16 11 09.2**	**-0.5**
	baz=5.3						
W15A	**Williams**	**5.28**	**16**	⇑P	**Pn**	**16 11 10.8**	**-0.5**
	baz=5.4						
MWC	**Mount Wilson**	**5.37**	**321**	Pn	**Pn**	**16 11 10.0**	**-2.4**
	46nm,0.7s						
W16A	**Flagstaff**	**5.41**	**22**	⇑P	**Pn**	**16 11 12.9**	**-0.1**
	baz=5.6						
V14A	**Boquillas Ranc**	**5.58**	**8**	⇓P	**Pn**	**16 11 15.1**	**-0.3**
	baz=5.7						
Y19A	**Nutrioso**	**5.58**	**45**	⇓P	**Pn**	**16 11 14.8**	**-0.6**
	baz=5.8						
X18A	**Snowflake**	**5.60**	**37**	⇑P	**Pn**	**16 11 14.8**	**-0.9**
	baz=5.8						
W17A	**Winslow**	**5.69**	**28**	⇓P	**Pn**	**16 11 17.0**	**0.0**
	baz=5.9						
GSC	**Goldstone**	**5.71**	**336**	*e*Pn	**Pn**	**16 11 18.5**	**+1.4**
	102nm,1.2s						
V13A	**Grand Canyon W**	**5.74**	**0**	⇑P	**Pn**	**16 11 16.0**	**-1.6**
	baz=5.8						
WUAZ	**Wupatki**	**5.84**	**22**	⇑P	**Pn**	**16 11 19.1**	**0.0**
	baz=6.0						
WUAZ	**Wupatki**	**5.84**	**22**	*e*Pn	**Pn**	**16 11 19.3**	**+0.3**
X19A	**St. Johns**	**5.88**	**42**	⇑P	**Pn**	**16 11 20.1**	**+0.6**
	baz=6.1						
V15A	**Kaibab Nationa**	**5.91**	**15**	⇓P	**Pn**	**16 11 19.6**	**-0.3**
	baz=6.1						
OSI	**Osito Adit**	**6.02**	**320**	*e*P	**Pn**	**16 11 19.1**	**-2.4**
	50nm,0.8s						
V17A	**Tonalea, Kykot**	**6.14**	**25**	⇓P	**Pn**	**16 11 23.9**	**+0.8**
	baz=6.3						
W18A	**Petrified Fore**	**6.17**	**35**	⇑P	**Pn**	**16 11 24.7**	**+1.2**
	baz=6.4						
U13A	**Pakoon Wash**	**6.31**	**0**	⇑P	**Pn**	**16 11 24.1**	**-1.3**
	baz=6.4						
U12A	**Valley of Fire**	**6.34**	**356**	⇑P	**Pn**	**16 11 23.5**	**-2.3**
	baz=6.4						
W19A	**Sanders**	**6.34**	**37**	⇑P	**Pn**	**16 11 25.9**	**+0.1**
	baz=6.6						
U14A	**Mt Trumbull**	**6.35**	**6**	⇓P	**Pn**	**16 11 25.0**	**-0.9**
	baz=6.4						
U15A	**North Rim**	**6.48**	**12**	⇑P	**Pn**	**16 11 27.7**	**-0.1**
	baz=6.6						
V18A	**Ganado**	**6.56**	**30**	⇑P	**Pn**	**16 11 29.7**	**+0.8**
	baz=6.8						
ISA	**Isabella**	**6.71**	**327**	*e*P	**Pn**	**16 11 28.9**	**-1.9**
	35nm,1.1s						
T15A	**Red Dirt Ranch**	**7.04**	**11**	⇓P	**Pn**	**16 11 35.0**	**-0.5**
	baz=7.2						
T16A	**Glen Canyon Da**	**7.18**	**16**	⇓P	**Pn**	**16 11 37.4**	**0.0**
	baz=7.3						
LENM	**Lemitar**	**7.21**	**54**	*e*P	**Pn**	**16 11 37.8**	**0.0**
	6.7nm,0.5s						
BNM	**Barren Site**	**7.45**	**55**	*e*P	**Pn**	**16 11 41.2**	**+0.1**
	299nm,1.7s						
CCUT	**Cedar City**	**7.46**	**4**	*e*P	**Pn**	**16 11 41.1**	**-0.1**
	40nm,1.1s						
MNTX	**Cornudas Mount**	**7.58**	**76**	*e*Pn	**Pn**	**16 11 47.9**	**+5.0**
	13nm,1.0s						
ANMO	**Albuquerque**	**8.00**	**51**	Pn	**Pn**	**16 11 49.8**	**+1.1**
	0.6nm,0.3s,baz=242,slow=13,SNR=5.8						
ANMO				Lg		16 14 11.9	
	0.3nm,0.3s,baz=338,slow=19,SNR=4.1						
ANMO				LR	LR	16 15 35.6	
	comp=Z,236nm,19.5s,baz=97,slow=43						
ANMO	**Albuquerque**	**8.00**	**51**	*e*P	**Pn**	**16 11 49.8**	**+1.2**
	0.7nm,0.6s						
MSU	**Marysvale**	**8.53**	**10**	*e*P	**Pn**	**16 11 57.4**	**+1.5**
	588nm,2.3s						
TXAR	**Lajitas Array**	**9.02**	**92**	Pn	**Pn**	**16 12 04.5**	**+1.8**
	0.3nm,0.3s,baz=259,slow=14,SNR=16						
TXAR				Lg		16 14 32.3	
	0.1nm,0.3s,baz=267,slow=33,SNR=3.5						
NVAR	**Mina Array Bea**	**9.04**	**338**	Pn	**Pn**	**16 12 04.5**	**+1.6**
	0.1nm,0.3s,baz=160,slow=12,SNR=12						
NVAR				Lg		16 14 46.0	
	0.1nm,0.3s,baz=164,slow=25,SNR=2.7						
SRU	**San Rafael**	**9.44**	**17**	*e*P	**Pn**	**16 12 09.8**	**+1.4**
SDCO	**Great Sand Dun**	**10.39**	**41**	*e*P	**Pn**	**16 12 27.0**	**+5.6**
ELK	**Elko**	**10.68**	**355**	Pn	**Pn**	**16 12 27.9**	**+2.6**
	0.1nm,0.3s,baz=190,slow=18,SNR=6.6						
ELK				LR	LR	16 16 27.6	
	comp=Z,741nm,21.1s,baz=171,slow=37						
N13A	**Wendover, West**	**10.74**	**359**	*e*P	**Pn**	**16 12 28.4**	**+2.2**
	20nm,0.9s						
N12A	**Clover Valley,**	**10.77**	**356**	*e*P	**Pn**	**16 12 25.8**	**-0.8**
	14nm,1.0s						
MOD	**Modoc**	**12.84**	**338**	*e*P	**Pn**	**16 12 57.4**	**+2.6**
	30nm,1.3s						
WVOR	**Wild Horse Val**	**12.87**	**344**	*e*P	**Pn**	**16 12 57.3**	**+2.1**
	41nm,1.4s						
PDAR	**Pinedale Array**	**13.14**	**15**	Pn	**Pn**	**16 13 00.9**	**+1.9**
	baz=183,slow=10,SNR=6.7						
PDAR				Lg		16 16 48.2	
	0.0nm,0.3s,baz=197,slow=15,SNR=2.3						
PDAR	**Pinedale Array**	**13.14**	**15**	Pn	**Pn**	**16 13 00.9**	**+1.9**
PDAR				Lg		16 16 48.2	
RRI2	**Red Ridge**	**13.40**	**8**	*e*P	**Pn**	**16 13 05.1**	**+2.6**
	6.2nm,1.0s						
HLID	**Hailey**	**13.45**	**359**	*e*P	**Pn**	**16 13 06.2**	**+3.0**
	42nm,2.0s						
REDW	**Red Top Meadow**	**13.48**	**10**	*e*P	**Pn**	**16 13 07.8**	**+4.2**
	9.8nm,1.1s						
YBH	**Yreka Blue Hor**	**13.58**	**331**	Pn	**Pn**	**16 13 06.4**	**+1.4**
	0.1nm,0.3s,baz=174,slow=11,SNR=4.8						
YBH				LR	LR	16 17 58.6	
	comp=Z,829nm,21.4s,baz=152,slow=36						
TPAW	**Teton Pass**	**13.59**	**9**	*e*P	**Pn**	**16 13 08.3**	**+3.2**
	37nm,1.6s						
LOHW	**Long Hollow**	**13.76**	**10**	*e*P	**Pn**	**16 13 09.4**	**+1.9**
	15nm,1.3s						
IMW	**Indian Meadow**	**13.99**	**9**	*e*P	**Pn**	**16 13 13.6**	**+2.9**
	29nm,1.5s						
YFT	**Old Faithful**	**14.55**	**9**	*e*P	**Pn**	**16 13 22.4**	**+4.1**
	39nm,1.3s						
MCMT	**McKenzie Canyo**	**14.74**	**3**	*e*P	**Pn**	**16 13 24.2**	**+3.5**
	11nm,1.4s						
YNR	**Norris Junctio**	**14.83**	**9**	*e*P	**Pn**	**16 13 25.4**	**+3.3**
	46nm,1.6s						
QLMT	**Earthquake Lak**	**14.85**	**7**	*e*P	**Pn**	**16 13 25.4**	**+3.0**
	1.5nm,0.4s						
DLMT	**Dillon**	**15.28**	**4**	*e*P	**Pn**	**16 13 30.5**	**+2.4**
	34nm,1.4s						
VIPM	**Ingram Point**	**15.31**	**342**	P	**Pn**	**16 13 34.8**	**+6.3**
GMO	**Grizzlie Mount**	**15.34**	**341**	P	**Pn**	**16 13 34.9**	**+6.0**
RLMT	**Red Lodge**	**15.46**	**13**	*e*P	**Pn**	**16 13 32.1**	**+1.7**
	12nm,1.2s						
BOZ	**Bozeman (W)**	**15.64**	**6**	*e*P	**Pn**	**16 13 34.5**	**+1.7**
	14nm,1.4s						
LRM	**Limekiln Ridge**	**15.75**	**4**	*e*P	**Pn**	**16 13 36.7**	**+2.5**
	164nm,1.5s						
LCCM	**Lewis and Clar**	**15.81**	**5**	P	**Pn**	**16 13 38.2**	**+3.3**
RSSD	**Black Hills**	**16.08**	**27**	*e*P	**Pn**	**16 13 39.2**	**+0.7**
	14nm,1.1s						
LNOR	**Lincton Mounta**	**16.11**	**349**	*e*P	**Pn**	**16 13 41.1**	**+2.3**
	11nm,1.1s						
HOOD	**Mount Hood Mea**	**16.35**	**341**	*e*P	**Pn**	**16 13 43.3**	**+1.4**
	228nm,1.5s						
NATX	**Nacogdoches**	**16.68**	**79**	P	**Pn**	**16 13 47.9**	**+1.6**
MSO	**Missoula**	**16.71**	**0**	*e*P	**Pn**	**16 13 47.4**	**+0.9**
	29nm,1.5s						
RSW	**Rattlesnake Hi**	**16.85**	**347**	*e*P	**Pn**	**16 13 50.9**	**+2.7**
	3.8nm,0.7s						
KSU1	**Kansas State U**	**16.89**	**53**	P	**Pn**	**16 13 51.8**	**+3.1**
JTMT	**Jette**	**17.63**	**359**	*e*P	**Pn**	**16 13 59.5**	**+1.5**
	31nm,1.7s						
LAO	**LASA Array**	**17.64**	**18**	P	**Pn**	**16 13 58.6**	**+0.5**
	62nm,1.4s						
LON	**Longmire**	**17.70**	**342**	*e*P	**Pn**	**16 13 58.8**	**-0.1**
	64nm,1.7s						
MIAR	**Mount Ida**	**17.82**	**70**	*e*P	**Pn**	**16 14 06.6**	**+6.1**
	50nm,1.7s						
RPW	**Rockport**	**19.21**	**345**	*e*P	**Pn**	**16 14 15.7**	**-1.6**
	7.4nm,1.4s						
ECSD	**EROS Data Cent**	**19.41**	**41**	P	**Pn**	**16 14 18.1**	**-1.6**
	40nm,1.3s						
CCM	**Cathedral Cave**	**20.42**	**61**	P	**P**	**16 14 33.6**	**+3.9**
	5.0nm,1.3s						
HDIL	**Hopedale**	**22.63**	**56**	P	**P**	**16 14 56.3**	**+2.9**
WVT	**Waverly**	**22.70**	**68**	*e*P	**P**	**16 14 57.0**	**+2.9**
	14nm,1.2s,mb4.3						
AGMN	**Agassiz Refuge**	**22.88**	**32**	*e*P	**P**	**16 14 55.7**	**-0.2**
	16nm,1.1s,mb4.3						
EDM	**Edmonton**	**23.12**	**1**	*e*P	**P**	**16 14 57.2**	**-1.1**
ULM	**Lac du Bonnet**	**24.32**	**29**	P	**P**	**16 15 10.0**	**+0.1**
	8.9nm,1.0s,mb4.2,baz=226,slow=10.0,SNR=11						
ULM				LR	LR	16 25 05.3	
	comp=Z,156nm,18.4s,MS3.5,baz=207,slow=38						
ULM	**Lac du Bonnet**	**24.32**	**29**	*e*P	**P**	**16 15 09.6**	**-0.3**
	48nm,1.5s,mb4.7						
BBB	**Bella Bella**	**24.41**	**339**	LR	LR	16 24 14.1	
	comp=Z,953nm,21.7s,MS4.2,baz=24,slow=35						
TKL	**Tuckaleechee C**	**25.93**	**70**	LR	LR	16 26 15.1	
	comp=Z,716nm,18.1s,MS4.2,baz=267,slow=38						
FFC	**Flin Flon**	**26.09**	**16**	P	**P**	**16 15 24.8**	**-1.2**
	13nm,1.2s,mb4.3						
APG	**El Apazote**	**26.34**	**120**	LR	LR	16 26 26.6	
	comp=Z,665nm,19.2s,MS4.2,baz=129,slow=38						
YKA	**Yellowknife Ar**	**32.41**	**359**	P	**P**	**16 16 21.3**	**-0.7**
	0.3nm,0.8s,mb3.2,baz=177,slow=8.5,SNR=6.2						
YKA				PcP	PcP	16 19 07.8	-1.4
	0.5nm,0.8s,baz=165,slow=2.2,SNR=5.1						
YKA				LR	LR	16 30 04.6	
	comp=Z,398nm,19.3s,MS4.1,baz=280,slow=37						
YKA	**Yellowknife Ar**	**32.41**	**359**	P	**P**	**16 16 21.4**	**-0.7**
YKA				PcP	PcP	16 19 07.8	-1.4
YKA				LR	LR	16 30 04.6	
INK	**Inuvik**	**39.93**	**349**	LR	LR	16 35 25.4	
	comp=Z,663nm,18.4s,MS4.5,baz=154,slow=38						
KTH	**Kantishna Hill**	**40.86**	**336**	*e*P	**P**	**16 17 32.0**	**-2.0**
SCHQ	**Schefferville**	**41.60**	**40**	P	**P**	**16 17 40.6**	**+0.3**
	3.7nm,0.9s,mb4.0,baz=269,slow=8.8,SNR=4.8						
ROSC	**El Rosal**	**45.03**	**116**	LR	LR	16 37 23.8	
	comp=Z,147nm,21.8s,MS3.9,baz=10,slow=37						
TAOE	**Nuku Hiva Isla**	**46.17**	**217**	*e*LR	LR	16 31 09.8	
	146nm,24.3s						
ATAH	**Atahualpa**	**50.28**	**131**	LR	LR	16 37 36.6	
	comp=Z,192nm,21.3s,MS4.1,baz=320,slow=33						
SFJD	**Kangerlussuaq**	**52.31**	**26**	P	**P**	**16 19 04.2**	**+0.4**
	4.3nm,0.7s,mb4.5,baz=249,slow=5.3,SNR=5.9						
SFJD	**Kangerlussuaq**	**52.31**	**26**	*e*P	**P**	**16 19 04.2**	**+0.4**
	58nm,1.8s,mb5.2						
PPT	**Papeete**	**58.48**	**221**	*e*LR	LR	16 36 49.3	
	105nm,23.8s,baz=39						
LPAZ	**La Paz**	**63.87**	**130**	LR	LR	16 46 32.0	
	comp=Z,163nm,19.2s,MS4.2,baz=118,slow=34						
PETK	**Petropavlovsk-**	**65.57**	**319**	P	**P**	**16 20 35.5**	**-0.6**
	5.1nm,0.8s,mb4.6,baz=89,slow=10,SNR=9.5						
PETK				LR	LR	16 43 38.5	
	comp=Z,95nm,21.4s,MS4.0,baz=262,slow=31						
PETK	**Petropavlovsk-**	**65.57**	**319**	P	**P**	**16 20 35.5**	**-0.6**
PETK				LR	LR	16 43 38.5	
LVC	**Limon Verde**	**68.00**	**135**	LR	LR	16 45 19.4	
	comp=Z,159nm,21.1s,MS4.2,baz=138,slow=31						
AFI	**Afiamalu**	**70.75**	**240**	LR	LR	16 44 06.8	
	comp=Z,90nm,18.7s,MS4.1,baz=62,slow=29						
CFAA	**Coronel Fontan**	**75.18**	**141**	LR	LR	16 49 34.4	
	comp=Z,14nm,18.2s,MS3.3,baz=322,slow=32						
ARCES	**ARCESS Array B**	**76.40**	**14**	LR	LR	16 59 09.7	
	comp=Z,172nm,18.7s,MS4.4,baz=155,slow=39						
CPUP	**Villa Florida**	**78.04**	**130**	LR	LR	16 55 30.2	
	comp=Z,103nm,20.0s,MS4.2,baz=134,slow=35						
NOA	**NORSAR Array B**	**78.90**	**24**	LR	LR	17 00 26.9	
	comp=Z,77nm,18.4s,MS4.1,baz=330,slow=38						
HFS	**Hagfors**	**80.41**	**24**	LR	LR	17 00 32.9	
	comp=Z,178nm,19.6s,MS4.4,baz=322,slow=38						
PLCA	**Paso Flores**	**81.15**	**148**	LR	LR	16 50 50.6	
	comp=Z,222nm,19.4s,MS4.5,baz=289,slow=30						
ESDC	**Sonseca Array**	**84.95**	**47**	LR	LR	16 59 14.2	
	comp=Z,70nm,18.1s,MS4.1,baz=165,slow=35						
GUMO	**Guam**	**92.65**	**287**	LR	LR	16 54 44.5	
	comp=Z,233nm,20.9s,MS4.6,baz=68,slow=29						
AKASG	**Malin Array Be**	**93.24**	**22**	LR	LR	17 09 32.6	
	comp=Z,85nm,18.3s,MS4.2,baz=25,slow=38						
URZ	**Urewera**	**93.55**	**227**	LR	LR	16 53 14.8	
	comp=Z,58nm,21.6s,MS4.0,baz=120,slow=28						
SONM	**Songino Array**	**94.36**	**334**	P	**P**	**16 23 12.5**	**+0.3**
	1.1nm,1.0s,mb4.2,baz=47,slow=2.8,SNR=6.6						
KEST	**Kesra**	**95.60**	**43**	LR	LR	17 06 57.3	
	comp=Z,36nm,18.8s,MS3.9,baz=240,slow=36						
BVAR	**Borovoye Array**	**97.15**	**357**	LR	LR	17 11 02.4	
	comp=Z,148nm,20.1s,MS4.5,baz=24,slow=38						
HHC	**Hu-ho-hao-te**	**97.77**	**327**	*e*P	**P**	**16 23 24.3**	**-3.6**
HHC				pP	pP	16 23 29.1	-2.1
HHC				sP	sP	16 23 31.3	-1.1
HHC				PP	PP	16 27 24.0	-1.1
HHC				SKS		16 33 59.3	
HHC				S	S	16 34 45.3	-8.6
HHC				SS	SS	16 41 26.5	-6.3
HHC				LR	LR		

KURK	**Kurchatov**	**26.83 321**	P	**P**	**16 17 36.4**	**+1.2**
	comp=Z,0.5nm,0.7s,mb3.2,baz=123,slow=11,SNR=3.9					
KURK	**Kurchatov**	**26.83 321**	P	**P**	**16 17 36.4**	**+1.2**
AKTK	**Aktyubinsk**	**38.92 312**	P	**P**	**16 19 19.2**	**-1.4**
AKTO	**Aktyubinsk**	**38.92 312**	P	**P**	**16 19 19.2**	**-1.4**
	comp=Z,0.8nm,0.4s,mb3.8,baz=135,slow=4.3,SNR=2.1					
ARCES	**ARCESS Array B**	**56.60 336**	P	**P**	**16 21 38.0**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.2,baz=82,slow=6.5,SNR=3.5					
ARCES	**ARCESS Array B**	**56.60 336**	P	**P**	**16 21 38.0**	**+0.6**
WRAB	**Tennant Creek**	**58.97 147**	P	**P**	**16 21 55.8**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.9					
WRA	**Warramunga Arr**	**58.97 147**	P	**P**	**16 21 55.7**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=327,slow=9.1,SNR=5.5					
ASAR	**Alice Springs**	**62.04 150**	P	**P**	**16 22 17.4**	**+1.9**
	comp=Z,0.2nm,0.5s,mb3.5,baz=336,slow=6.8,SNR=3.8					
YKA	**Yellowknife Ar**	**80.53 17**	P	**P**	**16 24 08.2**	**+1.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=325,slow=5.2,SNR=3.1					

*NOU **14** 16:20:32.9±0.8, 20°.04S×168°.57E, h30km, MD2.5, ML2.9*
*IDC **14** 16:20:37.6±1.9, 20°.35S×168°.23E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.1/14, mbtmp4.1/6, MS3.4/5, Ms1 3.4/5, ms1mx3.1/18, Error ellipse: s-maj=77.4km s-min=24.4km az=146.0*
*ISCJB **14** 16:20:39.9±0.8, 20°.4S±0°.1×168°.3E±0°.1, h33km, mb4.1/7, MS3.3/4, Error ellipse: s-maj=23.6km s-min=6.4km az=41.4*
*NEIC **14** 16:20:41.8±0.9, 20°.64S×168°.28E, h35km, mb4.7/1, Error ellipse: s-maj=38.7km s-min=14.7km az=150.0*

ISC 14 16:20:42.2±0.8, 20°.5S±0°.1×168°.3E±0°.1, h35km, n17, σ1§30/16, mb4.1/7, MS3.3/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.13 217**		*e*S	**Sn**	**16 21 41.0**	**+0.6**
DZM	**Mont Dzumac**	**2.34 226**		*e*Pn	**Pn**	**16 21 14.4**	**-3.7**
NORM	**Noumea**	**2.42 223**		*e*P	**Pn**	**16 21 15.8**	**-3.5**
NORM				*e*S	**Sn**	**16 21 47.8**	**0.0**
NORM				AMP		16 21 49.7	
	comp=Z,327nm,1.4s						
NOUC	**Port Laguerre**	**2.46 228**		*e*P	**Pn**	**16 21 17.2**	**-2.5**
NOUC				*e*S	**Sn**	**16 21 50.1**	**+1.5**
NOUC				AMP		16 22 02.5	
	comp=Z,139nm,1.3s						
MVNO	**Noumea**	**2.48 223**		*e*P	**Pn**	**16 21 17.3**	**-2.8**
MVNO				*e*S	**Sn**	**16 21 50.0**	**+0.8**
MVNO				AMP		16 21 54.7	
	comp=Z,25nm,4.2s						
RAO	**Raoul Island**	**15.28 128**		LR	LR	16 28 48.0	
	comp=Z,123nm,21.3s,baz=56,slow=32						
AFI	**Afiamalu**	**20.14 74**		LR	LR	16 30 40.8	
	comp=Z,72nm,18.3s,MS3.1,baz=37,slow=30						
AFI	**Afiamalu**	**20.14 74**		P	**P**	**16 25 13.6**	**+0.2**
CTA	**Charters Tower**	**20.65 267**		LR	LR	16 32 42.9	
	comp=Z,72nm,18.3s,MS3.1,baz=40,slow=35						
STKA	**Stephens Creek**	**26.43 239**		P	**P**	**16 26 17.6**	**+1.8**
	comp=Z,2.2nm,0.6s,mb3.9,baz=51,slow=6.0,SNR=9.7						
STKA				LR	LR	16 36 01.4	
	comp=Z,120nm,19.8s,MS3.4,baz=24,slow=35						
WRA	**Warramunga Arr**	**31.82 265**		P	**P**	**16 27 02.4**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=91,slow=8.5,SNR=4.7						
ASAR	**Alice Springs**	**31.96 258**		P	**P**	**16 27 05.0**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.3,baz=87,slow=9.1,SNR=47						
FITZ	**Fitzroy Crossi**	**40.23 266**		P	**P**	**16 28 16.3**	**+0.5**
	comp=Z,3.2nm,0.8s,mb4.1,baz=74,slow=3.3,SNR=7.8						
FITZ				LR	LR	16 43 45.0	
	comp=Z,82nm,18.5s,MS3.6,baz=174,slow=34						
PETK	**Petropavlovsk-**	**73.82 353**		P	**P**	**16 32 14.2**	**+1.4**
	comp=Z,2.2nm,0.9s,mb4.1,baz=140,slow=6.4,SNR=4.1						
ULN	**Ulaanbaatar**	**87.29 324**		P	**P**	**16 33 24.6**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.7						
NVAR	**Mina Array Bea**	**90.28 49**		P	**P**	**16 33 39.8**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.4,baz=225,slow=7.4,SNR=6.8						
GERES	**GERESS Array B**	**145.11 330**		PKPbc	PKPbc	16 40 15.2	-0.1
	comp=Z,0.5nm,0.6s,baz=350,slow=2.3,SNR=4.0						

*ISCJB **14** 16:28:23.4±1.2, 32°.18N±0°.08×104°.7E±0°.2, h10km, mb3.6/5, Error ellipse: s-maj=25.6km s-min=8.3km az=20.2*
*IDC **14** 16:28:24.2±1.4, 32°.11N×104°.52E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, Error ellipse: s-maj=171.8km s-min=24.9km az=57.0*

ISC 14 16:28:25.7±1.2, 32°.19N±0°.08×104°.6E±0°.2, h10km, n6, σ0§68/7, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.48 211**		Pg	**Pg**	**16 28 52.8**	**-1.3**
CD2				Sg	**Sg**	**16 29 14.1**	**+0.8**
CD2				smax			
	comp=N,2μm,0.6s						
MKAR	**Makanchi Array**	**22.48 317**		P	**P**	**16 33 24.4**	**-0.7**
	comp=N,0.4nm,0.6s,mb3.0,baz=118,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	**25.96 333**		P	**P**	**16 33 58.6**	**+0.4**
	comp=N,1.7nm,0.5s,mb3.8,baz=136,slow=10,SNR=7.7						
ARCES	**ARCESS Array B**	**56.47 336**		P	**P**	**16 38 07.7**	**+0.4**
	comp=N,1.6nm,0.9s,mb4.1,baz=70,slow=7.9,SNR=4.2						
FINES	**FINESS Array B**	**56.93 326**		P	**P**	**16 38 11.0**	**+0.3**
	comp=N,0.6nm,0.5s,mb3.9,baz=93,slow=9.5,SNR=3.7						
WRA	**Warramunga Arr**	**59.12 147**		P	**P**	**16 38 26.6**	**0.0**
	comp=N,0.3nm,0.7s,mb3.4,baz=341,slow=7.5,SNR=5.2						

*ISCJB **14** 16:32:26.9±0.9, 16°.38S±0°.09×69°.6W±0°.1, h227km±9km, mb3.5/3, Error ellipse: s-maj=20.8km s-min=13.8km az=7.7*
*NEIC **14** 16:32:27.0±0.8, 16°.11S×69°.67W, h206km±10km, Error ellipse: s-maj=21.7km s-min=14.5km az=204.0*
*IDC **14** 16:32:28.0±1.1, 16°.14S×69°.54W, h211km±9km, mb3.4/3, mb1 3.4/6, mb1mx3.3/20, mbtmp3.3/6, Error ellipse: s-maj=28.0km s-min=20.9km az=19.0*

ISC 14 16:32:28.2±0.9, 16°.2S±0°.1×69°.5W±0°.1, h221km±9km, n11, σ0§72/15, mb3.5/3, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.35 93**		P	**Pn**	**16 33 03.0**	**+0.5**
	43nm,0.3s,baz=301,slow=7.0,SNR=800						
LPAZ				S	**S**	**16 33 28.9**	**-0.4**
	8.4nm,0.3s,baz=265,slow=13,SNR=12						
LPAZ	**La Paz**	**1.35 93**		*e*Pn	**Pn**	**16 33 03.1**	**+0.5**
LPAZ				S	**S**	**16 33 28.9**	**-0.4**
LPAZ				*e*S	**S**	**16 33 29.8**	**+0.4**
LVC	**Limon Verde**	**6.38 175**		P	**Pn**	**16 34 00.0**	**-0.6**
	1.3nm,0.3s,baz=329,slow=12,SNR=18						
LVC				S	**S**	**16 35 07.7**	**-6.6**
	8.3nm,0.3s,baz=116,slow=19,SNR=29						
LVC	**Limon Verde**	**6.38 175**		*e*Pn	**Pn**	**16 34 00.9**	**+0.3**
LVC				S	**S**	**16 35 07.7**	**-6.7**
SIV	**San Ignacio**	**8.14 90**		P	**Pn**	**16 34 22.7**	**-0.5**
	0.3nm,0.3s,baz=276,slow=13,SNR=6.8						
NNA	**Nana**	**8.24 300**		P	**Pn**	**16 34 25.4**	**+0.7**
	2.6nm,0.3s,baz=161,slow=11,SNR=4.0						
NNA	**Nana**	**8.24 300**		Pn	**Pn**	**16 34 20.8**	**-3.8**
ULM	**Lac du Bonnet**	**70.13 342**		P	**P**	**16 43 15.4**	**-1.1**
	1.6nm,0.3s,mb4.1,baz=168,slow=5.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**76.21 72**		P	**P**	**16 43 53.8**	**+1.0**
	0.2nm,0.4s,mb3.1,baz=247,slow=5.1,SNR=4.8						
YKA	**Yellowknife Ar**	**86.04 341**		P	**P**	**16 44 43.6**	**+0.2**
	0.4nm,0.6s,mb3.3,baz=135,slow=4.6,SNR=7.0						
SONM	**Songino Array**	**148.30 5**		PKPbc	PKPbc	16 51 50.3	+2.1
	1.4nm,0.6s,baz=321,slow=0.9,SNR=8.9						

IDC 14 16:35:25.5±3.5, 6°.42S×149°.22E, h0km, mb3.3/2, mb1 3.5/2, mb1mx3.2/14, mbtmp3.3/2, ML3.3/1, Error ellipse: s-maj=107.9km s-min=47.4km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.74 226**		P	Pn	16 39 57.1	-1.3
	0.1nm,0.3s,baz=52,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**22.60 219**		P	P	16 40 28.2	+0.3
	0.2nm,0.4s,baz=54,slow=8.9,SNR=5.2						
FITZ	**Fitzroy Crossi**	**25.76 241**		P	P	16 40 57.7	-0.4
	0.9nm,0.8s,baz=59,slow=13,SNR=5.8						
TORD	**Torodi Ar. Bea**	**147.33 284**		PKPbc	PKPbc	16 55 11.7	-0.5
	0.2nm,0.5s,baz=54,slow=5.3,SNR=3.6						

IDC 14 16:37:18.0±1.5, 31°.26N×103°.61E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.3/1, Error ellipse: s-maj=41.5km s-min=25.5km az=47.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.69 7**		Pn	Pn	16 41 13.2	+0.1
	0.1nm,0.3s,baz=186,slow=13,SNR=3.3						
KSRS	**Korea Array**	**20.97 66**		P	P	16 42 00.8	-1.8
	3.0nm,0.6s,baz=257,slow=10,SNR=15						
MKAR	**Makanchi Array**	**22.59 319**		P	P	16 42 19.7	-0.2
	0.2nm,0.4s,baz=125,slow=9.7,SNR=4.4						
KURK	**Kurchatov**	**26.87 324**		P	P	16 42 59.1	-1.1
	0.5nm,0.7s,baz=128,slow=8.9,SNR=4.9						
ASAR	**Alice Springs**	**61.84 148**		P	P	16 47 38.9	-0.1
	0.3nm,0.9s,baz=328,slow=7.1,SNR=4.2						
YKA	**Yellowknife Ar**	**81.66 17**		P	P	16 49 39.4	+1.7
	0.2nm,0.5s,baz=328,slow=5.4,SNR=3.1						

IDC 14 16:44:00.3±2.7, 18°.49S×170°.09E, h0km, mb4.3/4, mb1 4.5/4, mb1mx4.0/15, mbtmp4.3/4, Error ellipse: s-maj=109.4km s-min=42.8km az=150.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.93 237**		P	P	16 50 01.6	+0.3
	1.7nm,0.6s,baz=71,slow=11,SNR=8.4						
WRA	**Warramunga Arr**	**33.76 262**		P	P	16 50 43.5	-0.5
	0.5nm,0.3s,baz=97,slow=8.4,SNR=42						
ASAR	**Alice Springs**	**34.10 255**		P	P	16 50 46.8	-0.2
	6.8nm,0.4s,baz=81,slow=8.9,SNR=282						
FITZ	**Fitzroy Crossi**	**42.13 263**		P	P	16 51 55.0	+0.3
	2.5nm,0.6s,baz=83,slow=8.1,SNR=20						
ARCES	**ARCESS Array B**	**124.55 346**		PKP	PKPdf	17 03 00.8	-0.2
	2.5nm,1.0s,baz=92,slow=3.1,SNR=3.7						

IDC 14 16:48:40.9±1.4, 31°.15N×103°.51E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/26, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=44.4km s-min=24.9km az=64.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.81 7**		Pn	Pn	16 52 39.0	+1.5
	0.1nm,0.3s,baz=173,slow=10.0,SNR=3.8						
KSRS	**Korea Array**	**21.10 66**		P	P	16 53 26.3	-0.7
	1.2nm,0.8s,baz=262,slow=9.7,SNR=5.6						
KURK	**Kurchatov**	**26.90 324**		P	P	16 54 23.1	-0.3
	0.5nm,0.7s,baz=128,slow=9.3,SNR=6.3						
WRA	**Warramunga Arr**	**58.80 146**		P	P	16 58 40.8	-0.3
	0.4nm,0.7s,baz=338,slow=7.8,SNR=6.3						
ASAR	**Alice Springs**	**61.80 148**		P	P	16 59 02.1	+0.5
	0.1nm,0.5s,baz=332,slow=6.8,SNR=2.7						

*BJI **14** 16:48:41.4, 35°.12N×81°.82E, h16km, ML3.6/4*
*ISCJB **14** 16:48:42.8±1.3, 35°.4N±0°.1×81°.7E±0°.1, h10km, mb3.5/6, Error ellipse: s-maj=14.7km s-min=14.0km az=168.6*
*IDC **14** 16:48:43.0±2.2, 35°.26N×81°.08E, h0km, mb3.7/5, mb1 3.6/9, mb1mx3.5/27, mbtmp3.5/9, ML3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/40, Error ellipse: s-maj=45.1km s-min=28.7km az=142.0*
*NEIC **14** 16:48:44.9±1.9, 35°.27N×81°.24E, h10km, mb3.3/1, Error ellipse: s-maj=28.5km s-min=20.4km az=162.0*

ISC 14 16:48:43.5±1.3, 35°.28N±0°.10×81°.7E±0°.1, h10km, n20, σ1§20/23, mb3.5/6, 4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.23 315**		Pn	**Pn**	**16 50 18.4**	**+3.0**
KSH				Sn	**Sn**	**16 51 26.3**	**-0.3**
KSH				smax			
	comp=N,29nm,0.6s						
KSH				smax			
	comp=E,27nm,0.6s						
UCH	**Uchtor**	**8.93 323**		P	**Pn**	**16 50 51.1**	**-1.4**
TKM2	**Tokmak 2**	**8.99 330**		⇓Pn	**Pn**	**16 50 54.6**	**+1.4**
	comp=E,0.8nm,0.6s						
TKM2				⇓Pg	Pn	16 51 24.4	+31
	comp=E,2.5nm,0.8s						
TKM2				⇓Lg		16 53 09.7	
	comp=E,6.1nm,0.9s						
TKM2	**Tokmak 2**	**8.99 330**		*e*Pn	**Pn**	**16 50 55.8**	**+2.5**
AAK	**Ala-Archa**	**9.25 325**		Pn	**Pn**	**16 51 00.8**	**+4.0**
	comp=E,0.0nm,0.3s,baz=186,slow=10,SNR=4.8						
AAK				Pg	Pn	16 51 27.4	+31
	comp=E,0.0nm,0.3s,baz=142,slow=12,SNR=5.0						
AAK				Lg		16 53 32.2	
	comp=E,0.0nm,0.3s,baz=302,slow=20,SNR=6.4						
AAK				LR	LR	16 54 37.4	
	comp=E,47nm,19.3s,baz=126,slow=40						
AAK	**Ala-Archa**	**9.25 325**		Pn	**Pn**	**16 51 00.8**	**+4.0**
AAK				Pg	Pn	16 51 27.4	+31
AAK				Lg		16 53 32.2	
AAK				LR	LR	16 54 37.4	
AML	**Almayashu**	**9.28 320**		Pn	**Pn**	**16 50 57.2**	**0.0**
	comp=E,5.8nm,0.5s						
MK31	**Makanchi Array**	**11.52 2**		Pn	**Pn**	**16 51 29.7**	**+1.9**
	comp=E,1.1nm,0.8s,baz=190,slow=12,SNR=9.7						
MK31				⇓Sn	**Sn**	**16 53 34.8**	**-1.7**
	comp=E,2.6nm,0.8s,baz=193,slow=26						
MK31	**Makanchi Array**	**11.52 2**		*e*P	**Pn**	**16 51 29.0**	**+1.1**
MKAR	**Makanchi Array**	**11.52 2**		Pn	**Pn**	**16 51 28.1**	**+0.2**
	comp=E,0.2nm,0.3s,baz=191,slow=12,SNR=11						
MKAR				Sn	**Sn**	**16 53 29.1**	**-7.3**
	comp=E,0.1nm,0.3s,baz=188,slow=21,SNR=2.9						
KURK	**Kurchatov**	**15.59 353**		Pn	**Pn**	**16 52 18.9**	**-4.3**
	comp=E,0.0nm,0.3s,baz=176,slow=12,SNR=4.6						
KURK	**Kurchatov**	**15.59 353**		Pn	**Pn**	**16 52 18.9**	**-4.3**
ZALV	**Zalesovo Beam**	**18.80 6**		P	**Pn**	**16 53 03.9**	**+0.6**
	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=2.5						
BVAR	**Borovoye Array**	**19.47 339**		P	**Pn**	**16 53 11.3**	**-0.1**
	comp=E,0.1nm,0.3s,baz=140,slow=11,SNR=3.8						
ABKAR	**Akbulak array**	**21.22 318**		P	**P**	**16 53 30.0**	**+0.8**
	comp=E,0.8nm,0.6s,mb3.2						
SONM	**Songino Array**	**22.22 48**		P	**P**	**16 53 46.9**	**+6.9**
	comp=E,1.0nm,0.9s,mb3.2,baz=243,slow=13,SNR=6.2						
FINES	**FINESS Array B**	**43.44 325**		P	**P**	**16 56 45.6**	**-0.5**
	comp=E,3.0nm,0.9s,mb4.0,baz=100,slow=14,SNR=3.8						
NOA	**NORSAR Array B**	**50.57 324**		P	**P**	**16 57 40.7**	**-1.1**
	comp=E,0.6nm,0.6s,mb3.7,baz=103,slow=8.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**74.45 275**		P	**P**	**17 00 20.4**	**-1.9**
	comp=E,0.7nm,0.7s,mb3.7,baz=47,slow=4.6,SNR=6.5						
YKA	**Yellowknife Ar**	**81.69 8**		P	**P**	**17 01 01.9**	**+0.3**
	comp=E,0.1nm,0.3s,mb3.2,baz=353,slow=4.5,SNR=4.0						

*ISCJB **14** 16:53:08.3±0.7, 51°.42N±0°.04×16°.09E±0°.04, h0km, Error ellipse: s-maj=5.7km s-min=2.9km az=17.8*
*CSEM **14** 16:53:09.9±0.4, 51°.47N×16°.16E, h1km, ML2.6/4, Error ellipse: s-maj=6.8km s-min=5.3km az=156.0, Suspected Mining induced.*
*WAR **14** 16:53:10.2, 51°.50N×16°.09E, ML2.5, Mining Induced*
*PRU **14** 16:53:10.3, 51°.46N×16°.11E, h0km*
*VIE **14** 16:53:12.1±0.4, 51°.28N×16°.14E, h0km, mb1.9/4, ML2.6/4, Error ellipse: s-maj=3.2km s-min=2.7km az=72.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 14 16:53:09.2±0.8, 51°.49N±0°.04×16°.11E±0°.04, h0km, n23, σ0§72/45, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66 170**		*e*Pg	**Pg**	**16 53 22.7**	**+0.9**
KSP				*e*Sg	**Sg**	**16 53 31.6**	**+1.4**
KSP	**Ksiaz**	**0.66 170**		*e*Pg	**Pg**	**16 53 22.5**	**+0.7**
KSP				*e*Sg	**Sg**	**16 53 31.6**	**+1.4**
UPC	**Upice**	**0.98 184**		*e*PG	**Pg**	**16 53 28.6**	**+0.6**
DPC	**Dobruska-Polom**	**1.15 173**		*e*PG	**Pg**	**16 53 31.4**	**+0.2**
DPC				*e*SG	**Sg**	**16 53 46.5**	**+0.5**
	comp=Z,38nm,0.4s						
PVCC	**Panska Ves**	**1.37 226**		*e*PG	**Pg**	**16 53 35.8**	**+0.4**
BRG	**Berggiesshubel**	**1.50 247**		PG	**Pg**	**16 53 37.6**	**-0.3**
BRG				SG	**Sg**	**16 53 57.5**	**+0.2**
	comp=Z,9.7nm,0.4s						
PRU	**Pruhonice**	**1.80 214**		*e*PG	**Pg**	**16 53 43.2**	**-0.5**
PRU				*e*SG	**Sg**	**16 54 07.3**	**+0.2**
	comp=Z,23nm,0.3s						
MORC	**Moravsky Berou**	**1.94 151**		*e*Pn	**Pn**	**16 53 43.2**	**-0.2**
MORC				*e*Sg	**Sg**	**16 54 10.7**	**-0.8**
CLL	**Collm**	**1.96 266**		*e*Pn	**Pn**	**16 53 43.0**	**-0.6**
CLL				*i* Pg	**Pg**	**16 53 45.8**	**-0.9**
CLL				*i*		16 53 49.9	
CLL				*e*Sg	**Sg**	**16 54 12.0**	**0.0**
	comp=Z,10.0nm,0.6s						
OKC	**Ostrava-Krasne**	**2.10 141**		*e*PG	**Pg**	**16 53 49.0**	**-0.4**
OKC				*e*SG	**Sg**	**16 54 15.9**	**-0.7**
	comp=Z,20nm,0.5s						
VRAC	**Vranov**	**2.20 172**		*e*Pn	**Pn**	**16 53 47.5**	**+0.5**
VRAC				*e*Sg	**Sg**	**16 54 19.4**	**-0.6**
NKC	**Novy Kostel**	**2.64 243**		*e*PN	**Pn**	**16 53 54.5**	**+1.5**
NKC				*e*PG	**Pg**	**16 53 59.6**	**-0.2**
NKC				*e*SG	**Sg**	**16 54 34.9**	**+0.9**
	comp=Z,29nm,0.4s						
OJC	**Ojcow**	**2.66 117**		*e*Pg	**Pg**	**16 54 00.0**	**-0.1**
OJC				*e*Sg	**Sg**	**16 54 35.2**	**+0.6**
OJC	**Ojcow**	**2.66 117**		*e*Pg	**Pg**	**16 54 00.0**	**-0.1**
OJC				*e*Sg	**Sg**	**16 54 35.2**	**+0.6**
KHC	**Kasperske Hory**	**2.87 216**		*e*PN	**Pn**	**16 53 56.3**	**+0.2**
KHC				*e*PG	**Pg**	**16 54 02.0**	**-2.1**
KHC				*e*SN	**Sn**	**16 54 31.5**	**+0.3**
KHC				*e*SG	**Sg**	**16 54 40.1**	**-1.1**
	comp=Z,5.9nm,0.3s						
MOX	**Moxa**	**2.96 255**		*e*PG	**Pg**	**16 54 04.9**	**-1.0**
MOX				*e*SG	**Sg**	**16 54 44.9**	**+0.6**
VYHS	**Vyhne**	**3.47 149**		*e*	**Pg**	**16 54 15.9**	**+0.1**
VYHS	**Vyhne**	**3.47 149**		*e*SG	**Sg**	**16 55 00.3**	**-0.4**
VYHS	**Vyhne**	**3.47 149**		*e*Sg	**Sg**	**16 55 00.3**	**-0.4**
CONA	**Conrad Observa**	**3.57 183**		⇑*i*Pn	**Pn**	**16 54 06.4**	**+0.7**
CONA				⇑*i*Sg	**Sg**	**16 55 02.8**	**-0.9**
	comp=Z,8.4nm,0.4s						
CONA	**Conrad Observa**	**3.57 183**		Pn	**Pn**	**16 54 06.4**	**+0.7**
CONA				Sg	**Sg**	**16 55 02.8**	**-0.9**
	comp=Z,8.4nm,0.4s						
MOA	**Molln**	**3.83 199**		⇑*i*Pn	**Pn**	**16 54 10.0**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**16 55 12.8**	**+0.4**
	comp=Z,5.8nm,0.4s						
MOA	**Molln**	**3.83 199**		Pn	**Pn**	**16 54 10.0**	**+0.6**
MOA				Sg	**Sg**	**16 55 12.8**	**+0.5**
	comp=Z,5.8nm,0.4s						

IDC 14 16:56:08.5±1.5, 31°.64N×104°.28E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/26, mbtmp3.4/4, Error ellipse: s-maj=362.1km s-min=23.2km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.68 318**		P	P	17 01 11.8	+0.4
	0.1nm,0.4s,baz=123,slow=10,SNR=3.7						
FINES	**FINESS Array B**	**57.21 326**		P	P	17 05 56.8	-0.3
	0.6nm,0.7s,baz=74,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**58.84 147**		P	P	17 06 08.7	-0.3
	0.2nm,0.5s,baz=332,slow=7.5,SNR=8.7						
ASAR	**Alice Springs**	**61.87 149**		P	P	17 06 30.1	+0.4
	0.2nm,0.5s,baz=337,slow=6.9,SNR=3.5						

*IDC **14** 17:02:59.6±1.4, 30°.64N×103°.24E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=42.1km s-min=22.8km az=47.0*
*ISCJB **14** 17:03:00.2±0.6, 30°.73N±0°.04×103°.27E±0°.06, h10km, mb3.5/7, Error ellipse: s-maj=7.5km s-min=5.7km az=154.6*
*NEIC **14** 17:03:01.6±0.7, 30°.67N×103°.23E, h10km, mb4.2/1, Error ellipse: s-maj=21.1km s-min=10.3km az=224.0*
*BJI **14** 17:03:03.6, 30°.61N×103°.41E, h11km, mb4.3/1, ML3.7/7*

ISC 14 17:03:01.7±0.6, 30°.68N±0°.05×103°.27E±0°.06, h10km, n15, σ1§09/19, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48 62**		Pg	**Pg**	**17 03 09.8**	**-1.3**
CD2				Sg	**Sg**	**17 03 16.3**	**-1.1**
CD2				smax			
	comp=N,4μm,0.5s						
GYA	**Guiyang**	**5.16 144**		Pg	**Pb**	**17 04 30.3**	**-1.8**
GYA				Sg	**Sb**	**17 05 35.4**	**+1.2**
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,90nm,0.8s						
ENH	**Enshi**	**5.38 93**		*e*P	**Pn**	**17 04 22.6**	**+0.5**
	comp=E,62nm,0.8s						
LZH	**Lanzhou**	**5.41 5**		*e*Pg	**Pg**	**17 04 49.6**	**+4.3**
LZH				Sg	**Sb**	**17 05 36.9**	**-4.4**
LZH				smax			
	comp=N,45nm,0.7s						
LZH				smax			
	comp=E,38nm,0.5s						
XAN	**Xi'an**	**5.84 54**		Pg	**Pg**	**17 04 55.5**	**+2.0**
XAN				Sg	**Sb**	**17 05 57.3**	**+3.7**
XAN				smax			
	comp=N,84nm,0.7s						
XAN				smax			
	comp=E,32nm,0.9s						
SONM	**Songino Array**	**17.30 7**		P	**Pn**	**17 07 04.2**	**+1.0**
	comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=4.6						
KSRS	**Korea Array**	**21.48 65**		P	**P**	**17 07 50.4**	**0.0**
	comp=E,0.7nm,0.5s,mb3.2,baz=244,slow=9.3,SNR=5.4						
MK31	**Makanchi Array**	**22.84 321**		*e*P	**P**	**17 08 05.1**	**+0.3**
MKAR	**Makanchi Array**	**22.84 321**		P	**P**	**17 08 05.5**	**+0.7**
	comp=E,0.3

2.4nm,0.5s,mb4.5,baz=124,slow=7.9,SNR=35
KSH Kashi 58.16 315⇑ *i P* **P 17 13 06.9 +6.5**
UCH Uchtor 60.29 317 *eP* **P 17 13 16.6 +1.5**
2.0nm,0.8s,mb4.2
ZALV Zalesovo Beam 60.69 333 P **P 17 13 17.2 -0.4**
0.4nm,0.3s,mb4.0,baz=123,slow=11,SNR=3.7
KURK Kurchatov 61.84 327 P **P 17 13 25.4 0.0**
2.5nm,0.6s,mb4.5,baz=130,slow=6.5,SNR=16
KURK Kurchatov 61.84 327 *eP* **P 17 13 25.0 -0.5**
BVAR Borovoye Array 67.42 327 P **P 17 14 01.5 -0.3**
0.9nm,0.5s,mb4.0,baz=134,slow=8.5,SNR=4.8
AKTK Aktyubinsk 73.77 322 P **P 17 14 40.4 0.0**
AKTO Aktyubinsk 73.77 322 P **P 17 14 40.4 0.0**
1.4nm,0.7s,mb4.0,baz=100,slow=8.9,SNR=8.1
BRTR Keskin Array B 90.14 310 P **P 17 16 06.3 -0.2**
0.5nm,0.7s,mb3.9,baz=87,slow=7.4,SNR=3.5
ARCES ARCESS Array B 90.54 340 P **P 17 16 08.0 +0.3**
2.2nm,0.7s,mb4.6,baz=64,slow=5.5,SNR=8.6
ARCES ARCESS Array B 90.54 340 P **P 17 16 08.0 +0.3**
SPITS Spitsbergen Ar 90.56 349 P **P 17 16 08.2 +0.5**
1.1nm,0.7s,mb4.3,baz=29,slow=4.4,SNR=3.6
SPITS Spitsbergen Ar 90.56 349 P **P 17 16 08.2 +0.5**
TORD Torodi Ar. Bea 123.04 288 PKP PKPdf 17 22 03.0 -0.3
0.3nm,0.7s,baz=62,slow=1.9,SNR=2.7

IDC ***14*** *17:17:20.2±0.5,31°.34N×103°.86E,h0km,mb4.4/20, mb1 4.5/21,mb1mx4.3/29,mbtmp4.4/21,ML2.9/1,MS3.6/4, Ms1 3.6/4,ms1mx3.2/32,Error ellipse: s-maj=26.8km s-min=11.7km az=53.0*
NEIC ***14*** *17:17:22.3±0.2,31°.43N×103°.95E,h10km,mb4.6/25, MS4.0/1,Error ellipse: s-maj=6.7km s-min=5.1km az=48.0*
MOS ***14*** *17:17:22.3±0.9,31°.40N×103°.94E,h25km,mb4.8/30,Error ellipse: s-maj=11.3km s-min=5.6km az=112.9*
ISCJB ***14*** *17:17:23.6±0.7,31°.40N±0°.02×103°.89E±0°.03,h33km±5km, mb4.5/65,MS3.9/10,Error ellipse: s-maj=4.2km s-min=4.0km az=1.0*
BJI ***14*** *17:17:23.1,31°.43N×103°.98E,h16km,mB4.8/22,mb4.5/32, ML4.4/20,Ms4.3/36,Ms7 4.0/33*
SZGRF ***14*** *17:17:46.4,33°.15N×100°.75E,h33km,mb4.9,Qinghai, China*
ISC 14 17:17:24.1±0.8,31°.44N±0°.02×103°.86E±0°.03,h19km±5km, n178,σ1$09/197,mb4.5/65,MS3.9/10,21C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**189**		Pg	**Pg**	**17 17 34.8**	**0.0**
CD2					Sg	**Sg**	**17 17 41.9**	**-0.1**
CD2					smax			
	comp=N,90μm,0.9s							
LZH	**Lanzhou**	**4.64**	**360**	*e*Pn		**Pn**	**17 18 33.3**	**+0.2**
LZH					Pg	**Pb**	**17 18 44.5**	**-0.3**
LZH					Sn	**Sn**	**17 19 24.9**	**-1.5**
LZH					Sg	**Sg**	**17 19 44.3**	**-8.7**
LZH					smax			
	comp=N,230nm,0.7s							
LZH					smax			
	comp=E,240nm,0.6s							
LZH					LR	LR		
	comp=E,3μm,5.6s							
LZH					LR	LR		
	comp=Z,4μm,6.1s							
ENH	**Enshi**	**4.98**	**102**	*e*P		**Pn**	**17 18 37.5**	**-0.2**
XAN	**Xi'an**	**4.99**	**57**	Pn		**Pn**	**17 18 37.3**	**-0.6**
XAN				Pg		**Pg**	**17 18 53.8**	**-5.9**
XAN				Sn		**Sn**	**17 19 36.4**	**+1.3**
XAN				Sg		**Sg**	**17 19 56.6**	**-7.8**
XAN				smax				
	comp=N,350nm,1.2s							
XAN				smax				
	comp=E,260nm,1.0s							
GYA	**Guiyang**	**5.53**	**153**	Pn		**Pn**	**17 18 46.3**	**+0.9**
GYA				Sn		**Sn**	**17 19 48.3**	**-0.2**
GYA				smax				
	comp=N,810nm,0.9s							
GYA				smax				
	comp=E,760nm,0.9s							
GYA				LR	LR			
	comp=N,1μm,11.5s							
GYA				LR	LR			
	comp=E,1μm,9.6s							
GYA				LR	LR			
	comp=Z,620nm,8.7s							
KMI	**Kunming**	**6.37**	**189**	Pn		**Pn**	**17 18 57.8**	**+1.0**
KMI				Sn		**Sn**	**17 20 08.5**	**-0.5**
KMI				Sg		**Sn**	**17 20 41.3**	**+32**
KMI				LR	LR			
	comp=N,1μm,6.9s							
KMI				LR	LR			
	comp=E,2μm,7.5s							
GTA	**Gaotai**	**8.61**	**339**	*e*P		**Pn**	**17 19 26.1**	**-1.5**
GTA				pP			17 19 35.4	
GTA				sP			17 19 39.8	
GTA				S		**Sn**	**17 21 01.5**	**-2.7**
GTA				pmax	pmax			
	comp=Z,4.0nm,0.7s							
GTA				pmax	pmax			
	comp=Z,98nm,5.7s							
GTA				LR	LR			
	comp=N,1μm,12.6s							
GTA				LR	LR			
	comp=E,710nm,8.7s							
GTA				LR	LR			
	comp=Z,2μm,15.0s							
WHN	**Wuhan**	**9.05**	**93**	P		**Pn**	**17 19 36.4**	**+2.8**
WHN				S		**Sn**	**17 21 06.8**	**-8.2**
WHN				LR	LR			
	comp=N,3μm,7.4s							
WHN				LR	LR			
	comp=E,2μm,7.7s							
WHN				LR	LR			
	comp=Z,2μm,6.6s							
LSA	**Lhasa**	**11.09**	**264**	P		**Pn**	**17 20 04.3**	**+2.7**
LSA				LR	LR			
	comp=N,350nm,11.3s							
LSA				LR	LR			
	comp=E,540nm,14.3s							
LSA				LR	LR			
	comp=Z,710nm,11.7s							
LSA	**Lhasa**	**11.09**	**264**	*e*P		**Pn**	**17 20 04.2**	**+2.6**
LSA				pmax	pmax			
	comp=Z,7.0nm,0.6s							
LSA	**Lhasa**	**11.09**	**264**	*e*P		**Pn**	**17 20 04.2**	**+2.5**
	comp=Z,7.3nm,0.6s							
HHC	**Hu-ho-hao-te**	**11.27**	**31**	*e*P		**Pn**	**17 20 05.8**	**+1.9**
HHC				pP			17 20 09.1	
HHC				PP			17 20 14.8	
HHC				S		**Sn**	**17 22 13.0**	**+3.7**
HHC				sS			17 22 18.3	
HHC				SS			17 22 26.6	
HHC				pmax	pmax			
	comp=Z,15nm,1.0s							
HHC				pmax	pmax			
	comp=Z,110nm,4.5s							
HHC				LR	LR			
	comp=N,490nm,3.2s							
HHC				LR	LR			
	comp=E,460nm,3.3s							
HHC				LR	LR			
	comp=Z,610nm,5.3s							
SHL	**Shillong**	**12.04**	**244**	*e*P		**Pn**	**17 20 14.2**	**-0.5**
NJ2	**Nanjing**	**12.78**	**83**	*e*P		**Pn**	**17 20 25.5**	**+0.8**
NJ2				pP			17 20 28.8	
NJ2				sP			17 20 32.1	
NJ2				PP			17 20 35.8	
NJ2				S		**Sn**	**17 22 48.0**	**+1.6**
NJ2				sS			17 22 53.0	
NJ2				pmax	pmax			
	comp=Z,20nm,0.7s							
NJ2				pmax	pmax			
	comp=Z,270nm,3.5s							
NJ2				LR	LR			
	comp=N,310nm,7.8s							
NJ2				LR	LR			
	comp=E,1μm,13.8s							
NJ2				LR	LR			
	comp=Z,1μm,13.8s							
BJI	**Beijing**	**13.17**	**46**	P		**Pn**	**17 20 28.6**	**-1.4**
BJI				pmax	pmax			
	comp=Z,6.0nm,0.8s							
BJI				pmax	pmax			
	comp=Z,130nm,5.0s							
BJI				LR	LR			
	comp=N,560nm,5.6s							
BJI				LR	LR			
	comp=E,410nm,5.9s							
BJI				LR	LR			
	comp=Z,140nm,20.5s							
QIZ	**Qiongzhong**	**13.48**	**155**	P		**Pn**	**17 20 34.9**	**+0.5**
QIZ				S		**Sn**	**17 23 05.8**	**+2.1**
QIZ				pmax	pmax			
	comp=Z,20nm,1.8s							
QIZ				LR	LR			
	comp=N,810nm,11.6s							
QIZ				LR	LR			
	comp=E,860nm,11.1s							
CM31	**Chiang Mai Arr**	**13.67**	**200**	*e*P		**Pn**	**17 20 38.0**	**+1.2**
	comp=Z,13nm,0.7s							
CM31				*e*			17 20 46.7	
SSE	**Sheshan**	**14.83**	**87**	P		**Pn**	**17 20 50.3**	**-2.3**
SSE				S		**Sn**	**17 23 34.3**	**-2.1**
SSE				pmax	pmax			
	comp=Z,31nm,0.7s							
SSE				pmax	pmax			
	comp=Z,250nm,6.1s							
SSE				LR	LR			
	comp=N,900nm,13.1s							
SSE				LR	LR			
	comp=E,380nm,13.1s							
SSE				LR	LR			
	comp=Z,730nm,12.0s							
GUN	**Gumba**	**16.02**	**262**	*e*P		**Pn**	**17 21 07.0**	**-1.3**
	comp=Z,28nm,0.5s							
SONM	**Songino Array**	**16.49**	**6**	Pn		**Pn**	**17 21 14.6**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=188,slow=13,SNR=6.0							
SONM				LR	LR		17 28 16.6	
	comp=Z,365nm,18.5s,baz=184,slow=40							
PKI	**Pulchoki**	**16.52**	**261**	*e*P		**Pn**	**17 21 13.3**	**-1.4**
	comp=Z,45nm,0.6s							
PKIN	**Phulchoki**	**16.52**	**261**	*e*P		**Pn**	**17 21 13.4**	**-1.4**
	comp=Z,33nm,0.6s							
KKN	**Kakani**	**16.56**	**262**	*e*P		**Pn**	**17 21 13.6**	**-1.6**
	comp=Z,79nm,0.8s							
ULN	**Ulaanbaatar**	**16.59**	**8**	*e*P		**Pn**	**17 21 15.5**	**+0.1**
ULN				pmax	pmax			
	comp=Z,8.0nm,1.0s							
ULN	**Ulaanbaatar**	**16.59**	**8**	*e*P		**Pn**	**17 21 15.4**	**0.0**
	comp=Z,8.0nm,1.0s							
DMN	**Daman**	**16.76**	**262**	*e*P		**Pn**	**17 21 15.8**	**-2.0**
	comp=Z,26nm,0.7s							
WMQ	**Urumqi**	**17.76**	**319**	*e*P		**Pn**	**17 21 31.3**	**+1.2**
WMQ				pmax	pmax			
	comp=Z,10.0nm,1.0s							
WMQ				LR	LR			
	comp=N,910nm,13.0s							
WMQ				LR	LR			
	comp=E,500nm,13.0s							
WMQ				LR	LR			
	comp=Z,210nm,14.0s							
ZAK	**Zakamensk**	**18.93**	**359**	*e*P		**Pn**	**17 21 43.6**	**-0.8**
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.2s							
TLY	**Talaya**	**20.23**	**360**	*e*P		**P**	**17 22 00.7**	**+2.9**
TLY				*e*			17 22 09.3	
TLY				*e*S		**S**	**17 25 49.6**	**+5.8**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.8s							
TLY				MLR	MLR			
	comp=Z,288nm,17.0s,MS3.7							
MOY	**Mondy**	**20.32**	**355**	*e*P		**P**	**17 22 01.1**	**+2.3**
MOY				pmax	pmax			
	comp=Z,42nm,2.2s							
KSRS	**Korea Array**	**20.71**	**67**	P		**P**	**17 22 02.9**	**-0.3**
	comp=Z,7.4nm,0.8s,baz=259,slow=10,SNR=44							
KSRS	**Korea Array**	**20.71**	**67**	P		**P**	**17 22 02.9**	**-0.2**
KSRS				pmax	pmax			
	comp=Z,7.0nm,0.8s							
IRK	**Irkutsk**	**20.79**	**1**	*e*P		**P**	**17 22 05.2**	**+1.3**
IRK				pmax	pmax			
	comp=Z,65nm,0.9s							
JOSI	**Joshimath**	**20.84**	**274**	*e*P		**P**	**17 22 05.0**	**+0.3**
CN2	**Changchun**	**21.02**	**48**	⇑P		**P**	**17 22 07.1**	**+0.7**
CN2				*e*sP		sP	17 22 13.0	-1.5
CN2				*e*S		**S**	**17 25 54.8**	**-4.8**
CN2				pmax	pmax			
	comp=Z,80nm,0.9s,mb5.0							
CN2				pmax	pmax			
	comp=Z,600nm,4.0s							
CN2				LR	LR			
	comp=N,200nm,14.0s,MS3.9							
CN2				LR	LR			
	comp=E,300nm,14.0s,MS3.9							
CN2				LR	LR			
	comp=Z,600nm,15.0s,MS4.1							
KLP	**Kalpa**	**21.83**	**277**	*e*P		**P**	**17 22 15.4**	**+0.2**
KLP				AMb	AMB		17 22 20.9	
	comp=Z,41nm,1.3s,mb4.7							
DDI	**Dehra Dun**	**22.16**	**274**	*ex*		**P**	**17 22 22.5**	**+3.7**
MK31	**Makanchi Array**	**22.59**	**319**	*e*P		**P**	**17 22 23.8**	**+0.6**
MKAR	**Makanchi Array**	**22.59**	**319**	P		**P**	**17 22 24.1**	**+0.8**
	comp=Z,18nm,0.9s,mb4.5,baz=120,slow=11,SNR=78							
MKAR	**Makanchi Array**	**22.59**	**319**	*ce*P		**P**	**17 22 24.1**	**+0.9**
MKAR				pmax	pmax			
	comp=Z,18nm,0.9s							
SMLA	**Simla**	**22.80**	**276**	*ex*		**P**	**17 22 21.6**	**-4.0**
AGRA	**Agra**	**22.96**	**266**	*e*P		**P**	**17 22 26.2**	**-1.2**
KKR	**Kurukshetra**	**23.28**	**273**	*e*P		**P**	**17 22 31.5**	**+0.8**
AYAN	**Aya Nagar**	**23.33**	**270**	*e*P		**P**	**17 22 30.9**	**-0.3**
AYAN				AMb	AMB		17 22 32.2	
	comp=Z,16nm,0.5s,mb4.7							
SONA	**Sohna**	**23.42**	**269**	*e*P		**P**	**17 22 30.5**	**-1.6**
SONA				AMb	AMB		17 22 32.5	
	comp=Z,23nm,0.8s,mb4.6							
RTK	**Rohtak**	**23.81**	**271**	*ex*		x	17 22 26.2	
KSH	**Kashi**	**24.03**	**297**	*e*P		**P**	**17 22 41.5**	**+3.8**
KSH				*e*pP			17 22 45.6	
KSH				*e*sP		sP	17 22 48.6	+2.5
KSH				*e*PP			17 23 16.5	
KSH				*e*PcP		PcP	17 26 21.6	+2.4
KSH				*e*S		**S**	**17 26 57.0**	**+3.1**
KSH				*e*sS		sS	17 27 04.6	+1.0
KSH				*e*SS			17 27 51.5	
KSH				*e*ScS		ScS	17 33 41.5	-2.2
KSH				pmax	pmax			
	comp=Z,40nm,2.4s,mb4.4							
KSH				LR	LR			
	comp=N,110nm,4.2s							
KSH				LR	LR			
	comp=E,89nm,2.9s							
MDJ	**Mudanjiang**	**24.05**	**50**	P		**P**	**17 22 37.5**	**-0.3**
MDJ				pP			17 22 40.5	
MDJ				sP		sP	17 22 42.4	-3.8
MDJ				PcP		PcP	17 26 19.5	+0.4
MDJ				S		**S**	**17 26 53.4**	**-0.7**
MDJ				PcS		PcS	17 29 59.1	+0.5
MDJ				ScS		ScS	17 33 44.6	+1.1
MDJ				pmax	pmax			
	comp=Z,19nm,1.5s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,69nm,4.0s							
MDJ	**Mudanjiang**	**24.05**	**50**	*e*P		**P**	**17 22 38.3**	**+0.5**
	comp=Z,21nm,1.1s,mb4.5							
NGP	**Nagpur**	**24.44**	**251**	*ex*		**P**	**17 22 36.7**	**-4.9**
NGP				AMb	AMB		17 22 39.8	
	comp=Z,32nm,1.1s,mb4.7							
ULHL	**Ulahol**	**24.49**	**304**	P		**P**	**17 22 43.8**	**+1.9**
	SNR=11							
KHET	**Khetri**	**24.56**	**269**	*e*P		**P**	**17 22 42.1**	**-0.5**
KHET				AMb	AMB		17 22 53.4	
	comp=Z,5.9nm,0.4s,mb4.5							
TKM2	**Tokmak 2**	**25.15**	**305**	P		**P**	**17 22 49.7**	**+1.8**
	SNR=7.3							
TKM2	**Tokmak 2**	**25.15**	**305**	*e*P		**P**	**17 22 49.1**	**+1.2**
TKM2				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.2							
TKM2	**Tokmak 2**	**25.15**	**305**	*e*P		**P**	**17 22 49.1**	**+1.2**
	comp=Z,7.8nm,1.1s,mb4.2							
KZA	**Kyzart**	**25.16**	**303**	P		**P**	**17 22 50.3**	**+2.4**
	SNR=18							
KBK	**Karagaybulak**	**25.53**	**304**	P		**P**	**17 22 53.3**	**+2.0**
	SNR=8.9							
UCH	**Uchtor**	**25.72**	**303**	P		**P**	**17 22 55.8**	**+2.7**
	SNR=8.8							
UCH	**Uchtor**	**25.72**	**303**	*e*P		**P**	**17 22 54.7**	**+1.6**
	comp=Z,516nm,0.6s							
AAK	**Ala-Archa**	**25.84**	**304**	P		**P**	**17 22 55.2**	**+1.0**
	comp=Z,1.0nm,0.4s,mb3.7,baz=134,slow=6.0,SNR=6.0							
AAK	**Ala-Archa**	**25.84**	**304**	*e*P		**P**	**17 22 55.8**	**+1.6**
AAK				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.2							
AAK	**Ala-Archa**	**25.84**	**304**	*e*P		**P**	**17 22 55.8**	**+1.6**
	comp=Z,7.8nm,1.0s,mb4.2							
USP	**Ospenovka**	**26.02**	**305**	P		**P**	**17 22 57.2**	**+1.4**
	SNR=6.7							
AML	**Almayashu**	**26.29**	**302**	P		**P**	**17 23 00.6**	**+2.4**
	SNR=5.7							
AML	**Almayashu**	**26.29**	**302**	*e*P		**P**	**17 23 00.5**	**+2.3**
	comp=Z,11nm,1.1s,mb4.3							
AML				*e*		pP	17 23 07.6	+3.5
ZAA0	**Zalesovo Array**	**26.33**	**334**	*e*P		**P**	**17 22 58.6**	**+0.1**
ZALV	**Zalesovo Beam**	**26.33**	**334**	P		**P**	**17 22 58.8**	**+0.3**
	comp=Z,20nm,0.8s,mb4.7,baz=133,slow=9.0,SNR=78							
ZALV				LR	LR		17 34 19.3	
	comp=Z,144nm,21.2s,MS3.5,baz=159,slow=39							
EKS2	**Erkin-Say**	**26.36**	**304**	*e*P		**P**	**17 22 58.7**	**-0.2**
	comp=Z,5.2nm,1.1s,mb4.0							
HYB	**Hyderabad**	**26.85**	**245**	*i* P		**P**	**17 23 03.0**	**-0.5**
KURK	**Kurchatov**	**26.86**	**323**	P		**P**	**17 23 03.4**	**+0.1**
	comp=Z,13nm,0.8s,mb4.5,baz=130,slow=8.9,SNR=30							
KURK				PcP	PcP		17 26 24.3	-1.1
	comp=Z,1.2nm,0.7s,baz=120,slow=1.9,SNR=4.7							
KURK				LR	LR		17 33 27.2	
	comp=Z,38nm,18.1s,MS3.0,baz=140,slow=36							
KURK	**Kurchatov**	**26.86**	**323**	*c i* P		**P**	**17 23 03.6**	**+0.3**
KURK				pmax	pmax			
	comp=Z,23nm,1.2s,mb4.6							
KURK	**Kurchatov**	**26.86**	**323**	*e*P		**P**	**17 23 03.7**	**+0.4**
	comp=Z,21nm,1.1s,mb4.6							
BOD	**Bodaibo**	**27.29**	**12**	*e*P		**P**	**17 23 07.1**	**+0.1**
BOD				pmax	pmax			
	comp=Z,3.0nm,1.8s,mb3.5							
KLR	**Kul'dur**	**27.48**	**42**	*e*P		**P**	**17 23 04.2**	**-4.7**
NVS	**Novosibirsk**	**27.61**	**334**	*e*P		**P**	**17 23 09.5**	**-0.5**
NVS				pmax	pmax			
	comp=Z,19nm,2.2s,mb4.3							
NVS				pmax	pmax			
	comp=N,12nm,1.8s							
KBL	**Kabul**	**29.28**	**286**	*e*P		**P**	**17 23 25.3**	**+0.2**
KBL				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.3							
KBL	**Kabul**	**29.28**	**286**	*e*P		**P**	**17 23 25.3**	**+0.2**
	comp=Z,6.4nm,1.0s,mb4.3							
BVAR	**Borovoye Array**	**32.40**	**322**	P		**P**	**17 23 53.0**	**+0.6**
	comp=Z,3.2nm,0.7s,mb4.3,baz=113,slow=9.8,SNR=14							
BVAR				PcP	PcP		17 26 38.6	-0.9
	comp=Z,1.6nm,0.7s,baz=116,slow=3.4,SNR=7.1							
BVAR				LR	LR		17 38 03.3	
	comp=Z,235nm,19.3s,MS3.9,baz=70,slow=38							
BVAR	**Borovoye Array**	**32.40**	**322**	P		**P**	**17 23 53.0**	**+0.6**
BVAR							17 26 38.6	
BRVK	**Borovoye**	**32.47**	**322**	*c i* P		**P**	**17 23 52.9**	**-0.1**
BRVK				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
BRVK	**Borovoye**	**32.47**	**322**	*e*P		**P**	**17 23 52.6**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.3							
YAK	**Yakutsk**	**34.87**	**21**	*e*P		**P**	**17 24 11.8**	**-2.0**
YAK				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.6							
YAK				pmax	pmax			
	comp=N,3.0nm,1.5s							
YAK				pmax	pmax			
	comp=E,4.0nm,1.5s							
ABKAR	**Akbulak array**	**37.30**	**311**	*e*P		**P**	**17 24 35.0**	**+0.3**
	comp=E,4.1nm,0.8s,mb4.3							
AKTK	**Aktyubinsk**	**38.76**	**313**	P		**P**	**17 24 47.4**	**+0.4**
AKTO	**Aktyubinsk**	**38.76**	**313**	P		**P**	**17 24 47.4**	**+0.4**
	comp=E,1.8nm,0.6s,mb4.0,baz=87,slow=9.5,SNR=8.7							
SVE	**Sverdlovsk**	**39.11**	**323**	⇑*e*P		**P**	**17 24 51.1**	**+1.3**
SVE				pmax	pmax			
	comp=Z,21nm,1.1s,mb4.8							
ARU	**Arti**	**40.04**	**322**	*c i* P		**P**	**17 24 58.0**	**+0.4**
ARU				*e*			17 26 27.0	
ARU				S		**S**	**17 31 04.5**	**+2.2**
ARU				SS	SS		17 33 55.0	-4.5
ARU				pmax	pmax			
	comp=Z,21nm,1.0s,mb4.8							
ARU	**Arti**	**40.04**	**322**	*e*P		**P**	**17 24 57.8**	**+0.2**
	comp=Z,14nm,0.9s,mb4.7							
TIXI	**Tiksi**	**42.47**	**11**	*e*P		**P**	**17 25 15.0**	**-2.4**
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.8s,mb4.0							
TIXI	**Tiksi**	**42.47**	**11**	*e*P		**P**	**17 25 15.9**	**-1.5**
	comp=Z,1.5nm,0.6s,mb3.8							
KIV	**Kislovodsk**	**48.96**	**303**	*e*P		**P**	**17 26 08.5**	**-0.5**
KIV				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7							
KIV				MLR	MLR			
	comp=Z,77nm,17.0s,MS3.8							
KLMR	**Klimovskoe**	**50.67**	**325**	*e*P		**P**	**17 26 20.9**	**-0.9**
KLMR				pmax	pmax			
	comp=Z,29nm,1.2s,mb5.1							
BILL	**Bilibino**	**50.97**	**25**	⇑*e*P		**P**	**17 26 23.2**	**-0.7**
BILL				*e*			17 28 19.2	
BILL				*e*S		**S**	**17 33 34.6**	**-4.9**
BILL				pmax	pmax			
	comp=Z,18nm,2.5s,mb4.6							
BILL				MLR	MLR			
	comp=Z,100nm,18.0s,MS3.9							
OBN	**Obninsk**	**52.09**	**318**	⇓*e*P		**P**	**17 26 32.0**	**-0.5**
OBN				*e*			17 28 32.3	
OBN				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.8							
OBN				MLR	MLR			
	comp=Z,200nm,19.0s,MS4.2							
FITZ	**Fitzroy Crossi**	**53.51**	**154**	P		**P**	**17 26 41.7**	**-1.6**
	comp=Z,3.0nm,0.8s,mb4.2,baz=139,slow=1.1,SNR=5.4							
APA	**Apatity**	**53.91**	**333**	⇓*i* P		**P**	**17 26 47.0**	**+1.2**
APA				MLR	MLR			
	comp=Z,500nm,13.0s,MS4.8							
JOF	**Joensuu**	**54.64**	**328**	*e*P		**P**	**17 26 50.5**	**-0.6**
JOF				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.9							
JOF	**Joensuu**	**54.64**	**328**	*e*p		**P**	**17 26 50.5**	**-0.6**
	comp=Z,9.1nm,0.7s,mb4.9							
KEV	**Kevo**	**56.34**	**336**	*e*P		**P**	**17 27 01.4**	**-1.9**
KEV				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9							
KEV	**Kevo**	**56.34**	**336**	*e*p		**P**	**17 27 01.4**	**-1.9**
	comp=Z,11nm,0.8s,mb4.9							
BRTR	**Keskin Array B**	**56.40**	**299**	P		**P**	**17 27 04.0**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=101,slow=4.0,SNR=6.0							
BRTR	**Keskin Array B**	**56.40**	**299**	*ce*P		**P**	**17 27 04.0**	**-0.2**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ARCES	**ARCESS Array B**	**56.87**	**336**	P		**P**	**17 27 06.8**	**-0.3**
	comp=Z,6.0nm,0.8s,mb4.7,baz=88,slow=7.4,SNR=32							
ARCES				PcP	PcP		17 28 01.7	-0.7
	comp=Z,1.6nm,0.6s,baz=90,slow=4.9,SNR=7.2							
ARCES	**ARCESS Array B**	**56.87**	**336**	P		**P**	**17 27 06.8**	**-0.3**
ARCES				PcP	PcP		17 28 01.7	-0.7
KAF	**Kangasniemi**	**57.00**	**327**	*e*P		**P**	**17 27 07.0**	**-1.1**
KAF				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.7							
KAF	**Kangasniemi**	**57.00**	**327**	*e*p		**P**	**17 27 07.0**	**-1.1**
	comp=Z,6.1nm,0.7s,mb4.7							
AKASG	**Malin Array Be**	**57.01**	**313**	P		**P**	**17 27 06.9**	**-1.4**
	comp=Z,0.7nm,0.4s,mb4.0,baz=70,slow=7.3,SNR=7.3							
AKASG	**Malin Array Be**	**57.01**	**313**	*c i* P		**P**	**17 27 07.3**	**-1.0**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							

comp=Z,4.0nm,0.8s,mb4.5,baz=72,slow=6.5,SNR=10
BRG Berggiesshubel 66.28 316 *e*P **P 17 28 10.6 -0.2**
CLL Collm 66.67 317 *e*P **P 17 28 13.0 -0.4**
comp=Z,3.0nm,1.1s,mb4.2
CLL Collm 66.67 317 *i* P **P 17 28 12.3 -1.1**
CLL *e* pP 17 28 19.0 -0.7
CLL *i* 17 28 22.4
CLL pmax pmax
comp=Z,7.0nm,1.8s,mb4.4
CLL MLR MLR
comp=Z,100nm,19.0s,MS4.0
CLL Collm 66.67 317 *i* P **P 17 28 12.3 -1.1**
comp=Z,11nm,1.8s,mb4.6
CLL *e* pP 17 28 19.0 -0.7
CLL *i* 17 28 22.4
CLL LR LR
comp=Z,100nm,19.0s,MS4.0
CLL Collm 66.67 317 *i* P **P 17 28 12.3 -1.1**
comp=Z,11nm,1.8s,mb4.6
CLL *e*pP pP 17 28 19.0 -0.7
CLL *i* sP sP 17 28 22.4 +0.4
CLL Lm 17 58 00.0
comp=Z,100nm,19.0s
SOKA Soboth 67.14 312 ⇑*i*P **P 17 28 16.1 -0.3**
comp=Z,4.8nm,1.1s,mb4.5
GEC2 GERESS Array S 67.17 314 *e*P **P 17 28 16.7 +0.2**
GEC2 GERESS Array S 67.17 314 *e*P **P 17 28 16.7 +0.2**
GEC2 GERESS Array S 67.17 314 *e*P **P 17 28 16.7 +0.2**
GERES GERESS Array B 67.17 314 P **P 17 28 16.8 +0.2**
comp=Z,1.5nm,0.9s,mb4.0,baz=74,slow=5.7,SNR=8.7
BSEG Bad Segeberg 67.21 320 *e*P **P 17 28 17.1 +0.4**
comp=Z,10.0nm,1.0s,mb4.8
BSEG Bad Segeberg 67.21 320 *e*P **P 17 28 17.1 +0.4**
BSEG pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BSEG Bad Segeberg 67.21 320 *e*P **P 17 28 17.1 +0.4**
COLD Coldfoot 67.25 24 *e*P **P 17 28 16.5 -0.3**
comp=Z,9.7nm,0.9s,mb4.8
TANN Tannenbergstha 67.32 316 *e*P **P 17 28 17.7 +0.2**
comp=Z,4.0nm,1.2s,mb4.3
WET Wettzell 67.56 315 *e*P **P 17 28 19.0 0.0**
WET Wettzell 67.56 315 *e*P **P 17 28 19.0 0.0**
WET Wettzell 67.56 315 *e*P **P 17 28 19.0 0.0**
ROTZ Rotzenmuhle 67.72 316 *e*P **P 17 28 20.4 +0.4**
comp=Z,5.0nm,1.0s,mb4.5
NRDL Niedersach Rie 67.89 319 *e*P **P 17 28 21.7 +0.7**
comp=Z,24nm,1.7s,mb5.0
CHUM Lake Minchumin 67.98 28 *e*P **P 17 28 21.4 0.0**
comp=Z,4.6nm,0.7s,mb4.6
CLZ Clausthal 67.99 318 *e*P **P 17 28 22.1 +0.4**
comp=Z,6.0nm,0.8s,mb4.7
CLZ Clausthal 67.99 318 *e*P **P 17 28 22.1 +0.4**
CLZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
CLZ Clausthal 67.99 318 *e*P **P 17 28 22.1 +0.4**
comp=Z,6.0nm,0.8s,mb4.7
GRA1 Grafenberg Arr 68.34 316 *e*P **P 17 28 24.2 +0.3**
comp=Z,18nm,1.5s,mb4.9
GRF Grafenberg Arr 68.34 316 *e*P **P 17 28 24.2 +0.3**
comp=Z,18nm,1.5s,mb4.9
GRF Grafenberg Arr 68.34 316 *e*P **P 17 28 24.2 +0.3**
GRF pmax pmax
comp=Z,18nm,1.5s,mb4.9
GRF Grafenberg Arr 68.34 316 *e*P **P 17 28 24.2 +0.3**
GRF pmax pmax
comp=Z,18nm,1.5s,mb4.9
GRF Grafenberg Arr 68.34 316 *e*P **P 17 28 24.2 +0.3**
comp=Z,18nm,1.5s,mb4.9
FUR Furstenfeldbru 68.92 314 *e*P **P 17 28 28.3 +0.7**
FUR Furstenfeldbru 68.92 314 *e*P **P 17 28 28.3 +0.7**
FUR Furstenfeldbru 68.92 314 *e*P **P 17 28 28.3 +0.7**
COLA College 69.22 26 *e*P **P 17 28 28.4 -0.7**
COLA pmax pmax
comp=Z,12nm,0.8s,mb4.9
COLA College 69.22 26 *e*P **P 17 28 28.4 -0.8**
comp=Z,12nm,0.8s,mb4.9
FETA Feichten 69.72 313 ⇑*i*P **P 17 28 31.9 -0.6**
comp=Z,5.1nm,1.0s,mb4.4
KDAK Kodiak Island 70.68 33 *i* P **P 17 28 38.7 +0.5**
CDF Champ du Feu 71.23 316 *e*P **P 17 28 41.4 -0.4**
WLF Walferdange 71.34 317 *e*P **P 17 28 43.4 +1.0**
comp=Z,14nm,1.2s,mb4.8
STKA Stephens Creek 72.40 147 P **P 17 28 47.3 -1.5**
comp=Z,3.0nm,0.7s,mb4.3,baz=338,slow=8.0,SNR=8.0
STKA Stephens Creek 72.40 147 *e*P **P 17 28 47.9 -0.9**
LPG La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.4**
comp=Z,15nm,0.8s,mb4.7
LPG La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.4**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.4**
comp=Z,7.6nm,0.8s,mb4.7
LPL La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.3**
comp=Z,11nm,0.7s,mb4.6
LPL La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.3**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
LPL La Plagne 72.87 313 ⇑*i*P **P 17 28 52.0 +0.3**
comp=Z,5.5nm,0.7s,mb4.6
SMF Signal de Mont 74.11 315 ⇑*i*P **P 17 28 58.4 -0.5**
comp=Z,8.6nm,0.8s,mb4.4
SMF Signal de Mont 74.11 315 ⇑*i*P **P 17 28 58.4 -0.5**
SMF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SMF Signal de Mont 74.11 315 ⇑*i*P **P 17 28 58.4 -0.5**
comp=Z,4.3nm,0.8s,mb4.4
TCF Toulx Ste Croi 75.27 315 ⇑*i*P **P 17 29 05.5 -0.1**
YKA Yellowknife Ar 81.44 17 P **P 17 29 38.8 -0.6**
comp=Z,2.3nm,0.6s,mb4.3,baz=329,slow=5.2,SNR=32
FFC Flin Flon 91.35 15 *i* P **P 17 30 28.2 -0.1**
TORD Torodi Ar. Bea 93.33 287 P **P 17 30 37.1 -1.2**
comp=Z,2.2nm,1.1s,mb4.5,baz=66,slow=3.7,SNR=7.7
BOSA Boshof 95.67 240 P **P 17 30 47.2 -1.3**
comp=Z,1.6nm,0.8s,mb4.5,baz=63,slow=2.3,SNR=2.7
BOSA Boshof 95.67 240 P **P 17 30 47.2 -1.3**
SBA Scott Base 115.13 168 *e*PKIKP PKiKP 17 36 01.8 -1.0
OTAV Otavalo 148.42 4 *e*PKPbc PKPbc 17 37 10.5 +0.5

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*ISCJB **14** 17:28:36.3±0.4, 32.°04N±0.°04×104.°76E±0.°06, h10km, mb4.0/15, Error ellipse: s-maj=8.0km s-min=5.3km az=154.4*
*IDC **14** 17:28:36.4±0.8, 32.°06N×104.°68E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.8/28, mbtmp3.9/12, ML3.5/2, Error ellipse: s-maj=31.7km s-min=15.7km az=56.0*
*BJI **14** 17:28:36.4, 31.°96N×104.°83E, h16km, mB4.6/4, mb4.1/4, ML3.9/10, Ms3.7/5, Ms7 3.5/6*
*NEIC **14** 17:28:38.6±0.5, 32.°01N×104.°54E, h10km, mb4.1/2, Error ellipse: s-maj=16.8km s-min=9.7km az=62.0*
ISC 14 17:28:38.5±0.4, 32.°11N±0.°04×104.°82E±0.°05, h10km, n27, σ1§25/35, mb4.0/15, **2C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.94**	**60**	Pn	**Pn**	**17 29 41.3**	**+2.3**
XAN				Sn	**Sn**	**17 30 24.9**	**-0.5**
XAN				Sg	**Sg**	**17 30 43.0**	**-2.2**
XAN				smax			
	comp=N,310nm,1.0s						
XAN				smax			
	comp=E,190nm,0.6s						
LZH	**Lanzhou**	**4.04**	**349**	*e*Pn	**Pn**	**17 29 43.1**	**+2.7**
LZH				Pg	**Pg**	**17 29 54.6**	**-1.4**
LZH				Sn	**Sn**	**17 30 31.4**	**+3.6**
LZH				Sg	**Sg**	**17 30 46.8**	**-1.6**
LZH				smax			
	comp=N,220nm,0.6s						
LZH				smax			
	comp=E,390nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,6.4s						
LZH				LR	LR		
	comp=Z,2μm,7.6s						
ENH	**Enshi**	**4.40**	**113**	*e*Pn	**Pn**	**17 29 48.8**	**+3.5**
GYA	**Guiyang**	**5.86**	**164**	Pg	**Pn**	**17 30 08.9**	**+3.5**
GYA				Sg	**Sn**	**17 31 12.1**	**-0.6**
GYA				smax			
	comp=N,180nm,0.9s						
GYA				smax			
	comp=E,190nm,1.0s						
WHN	**Wuhan**	**8.30**	**98**	P	**Pn**	**17 30 41.4**	**+2.5**
WHN				S	**Sn**	**17 32 07.3**	**-5.5**
WHN				LR	LR		
	comp=Z,1μm,4.6s						
GTA	**Gaotai**	**8.34**	**332**	*e*P	**Pn**	**17 30 40.1**	**+0.7**
GTA				pP		17 30 44.6	
GTA				sP		17 30 47.6	
GTA				S	**Sn**	**17 32 16.6**	**+3.0**
GTA				sS		17 32 25.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,90nm,5.1s						
GTA				LR	LR		
	comp=N,200nm,9.6s						
GTA				LR	LR		
	comp=E,97nm,11.4s						
GTA				LR	LR		
	comp=Z,200nm,10.8s						
CMAR	**Chiang Mai Arr**	**14.59**	**203**	Pn	**Pn**	**17 32 04.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=9.8,slow=11,SNR=3.6						
SONM	**Songino Array**	**15.75**	**4**	Pn	**Pn**	**17 32 24.5**	**+4.3**
	comp=Z,0.1nm,0.3s,baz=181,slow=16,SNR=3.5						
KSRS	**Korea Array**	**19.69**	**68**	P	**Pn**	**17 33 09.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=248,slow=9.9,SNR=7.6						
MK31	**Makanchi Array**	**22.64**	**317**	*e*P	**P**	**17 33 39.5**	**0.0**
MKAR	**Makanchi Array**	**22.64**	**317**	P	**P**	**17 33 39.8**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.4,baz=117,slow=9.9,SNR=8.0						
ZAA0	**Zalesovo Array**	**26.09**	**333**	*e*P	**P**	**17 34 11.7**	**-0.5**
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**17 34 12.0**	**-0.2**
	comp=Z,3.1nm,0.6s,mb4.0,baz=131,slow=10,SNR=13						
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**17 34 18.4**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.2,baz=124,slow=8.7,SNR=4.7						
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**17 35 05.9**	**-2.2**
	comp=Z,0.2nm,0.2s,mb3.5,baz=133,slow=8.1,SNR=3.1						
TIXI	**Tiksi**	**41.65**	**11**	*e*P	**P**	**17 36 29.7**	**+3.2**
	comp=Z,0.8nm,0.4s,mb3.7						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**17 38 20.3**	**-0.7**
	comp=Z,1.3nm,0.4s,mb4.3,baz=89,slow=7.4,SNR=17						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**17 38 23.7**	**-0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=99,slow=9.0,SNR=4.2						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**17 38 23.7**	**-0.8**
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**17 38 38.6**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**58.98**	**147**	P	**P**	**17 38 37.9**	**-0.4**
	comp=Z,1.5nm,0.4s,mb4.4,baz=328,slow=9.0,SNR=37						
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	**17 38 58.7**	**-0.5**
	comp=Z,0.9nm,0.7s,mb4.0,baz=325,slow=5.6,SNR=8.7						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**17 39 32.8**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=69,slow=7.3,SNR=4.3						
INK	**Inuvik**	**71.00**	**20**	P	**P**	**17 39 56.0**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=91,slow=3.8,SNR=3.9						
LPG	**La Plagne**	**73.00**	**313**	⇑*i*P	**P**	**17 40 08.3**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.5						
LPL	**La Plagne**	**73.01**	**313**	⇑*i*P	**P**	**17 40 08.2**	**-0.2**
	comp=Z,7.1nm,0.5s,mb4.5						
YKA	**Yellowknife Ar**	**80.55**	**17**	P	**P**	**17 40 50.1**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=328,slow=5.0,SNR=7.2						

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*ISCJB **14** 17:33:22.3±0.2, 31.°23N±0.°02×103.°70E±0.°02, h10km, mb4.7/85, MS4.3/42, Error ellipse: s-maj=3.1km s-min=2.8km az=27.5*
*IDC **14** 17:33:22.4±0.6, 31.°23N×103.°60E, h0km, mb4.6/21, mb1 4.7/22, mb1mx4.6/30, mbtmp4.6/22, ML3.8/1, MS4.1/24, Ms1 4.1/24, ms1mx4.0/37, Error ellipse: s-maj=20.9km s-min=11.5km az=45.0*
*BJI **14** 17:33:23.6, 31.°32N×103.°66E, h15km, mB4.8/21, mb4.6/33, ML4.7/24, Ms4.7/53, Ms7 4.4/42*
*NEIC **14** 17:33:24.3±0.2, 31.°27N×103.°67E, h10km, mb4.7/47, Error ellipse: s-maj=5.2km s-min=4.0km az=214.0*
*MOS **14** 17:33:25.8±0.9, 31.°27N×103.°69E, h33km, mb4.9/45, MS4.5/16, Error ellipse: s-maj=8.7km s-min=4.7km az=117.5*
*DJA **14** 17:33:26, 31.°12N×103.°61E, h10km, mb4.8/8*
*SZGRF **14** 17:33:38.1, 31.°98N×102.°15E, h33km, mb4.8, MS4.8, Sichuan, China*
ISC 14 17:33:24.6±0.2, 31.°26N±0.°02×103.°68E±0.°02, h10km, n291, σ1§03/304, **mb4.7**/84, **MS4.3**/42, **31C-7D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**169**	Pg	**Pg**	**17 33 32.8**	**+1.1**
CD2				Sg	**Sg**	**17 33 40.5**	**+4.0**
CD2				smax			
	comp=N,111μm,0.7s						
LZH	**Lanzhou**	**4.81**	**2**	*e*Pn	**Pn**	**17 34 39.8**	**+2.7**
LZH				Sn	**Sn**	**17 35 35.1**	**+2.2**
LZH				Sg	**Sg**	**17 35 53.5**	**-5.7**
LZH				smax			
	comp=N,570nm,1.0s						
LZH				smax			
	comp=E,270nm,0.8s						
LZH				LR	LR		
	comp=E,22μm,6.0s						
LZH				LR	LR		
	comp=Z,26μm,7.4s						
ENH	**Enshi**	**5.10**	**100**	*e*Pn	**Pn**	**17 34 42.5**	**+1.5**
	comp=Z,0.5nm,0.5s						
XAN	**Xi'an**	**5.22**	**57**	Pn	**Pn**	**17 34 43.1**	**+0.4**
XAN				Pg	**Pg**	**17 35 00.3**	**-4.3**
XAN				Sn	**Sn**	**17 35 50.1**	**+7.2**
XAN				Sg	**Sg**	**17 36 05.8**	**-6.4**
XAN				smax			
	comp=N,950nm,0.8s						
XAN				smax			
	comp=E,380nm,1.0s						
GYA	**Guiyang**	**5.46**	**151**	Pn	**Pn**	**17 34 46.9**	**+0.9**
GYA				Sg	**Sg**	**17 36 19.4**	**-0.5**
GYA				smax			
	comp=N,850nm,0.9s						
GYA				smax			
	comp=E,640nm,0.8s						
GYA				LR	LR		
	comp=N,3μm,11.5s						
GYA				LR	LR		
	comp=E,2μm,11.6s						
GYA				LR	LR		
	comp=Z,6μm,12.7s						
KMI	**Kunming**	**6.17**	**188**	⇑Pn	**Pn**	**17 34 56.3**	**+0.4**
KMI				Sn	**Sn**	**17 36 08.6**	**+2.1**
KMI				Sg	**Sg**	**17 36 45.3**	**+2.5**
KMI				smax			
	comp=N,190nm,1.4s						
KMI				smax			
	comp=E,200nm,1.3s						
KMI				LR	LR		
	comp=N,5μm,7.0s						
KMI				LR	LR		
	comp=E,16μm,8.7s						
GTA	**Gaotai**	**8.72**	**340**	P	**Pn**	**17 35 33.1**	**+2.3**
GTA				pP		17 35 42.3	
GTA				S	**Sn**	**17 37 11.9**	**+2.8**
GTA				sS		17 37 20.3	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,57nm,4.8s						
GTA				LR	LR		
	comp=N,2μm,10.2s						
GTA				LR	LR		
	comp=E,2μm,9.9s						
GTA				LR	LR		
	comp=Z,1μm,11.1s						
WHN	**Wuhan**	**9.20**	**92**	P	**Pn**	**17 35 40.8**	**+3.4**
WHN				S	**Sn**	**17 37 19.9**	**-1.1**
WHN				LR	LR		
	comp=N,5μm,6.5s						
WHN				LR	LR		
	comp=E,7μm,8.9s						
WHN				LR	LR		
	comp=Z,8μm,7.0s						
BTO	**Baotou**	**10.64**	**27**	*e*P	**Pn**	**17 35 57.3**	**+0.2**
LSA	**Lhasa**	**10.92**	**265**	P	**Pn**	**17 36 01.3**	**+0.3**
LSA				LR	LR		
	comp=N,1μm,12.8s						
LSA				LR	LR		
	comp=E,1μm,13.4s						
LSA				LR	LR		
	comp=Z,2μm,12.4s						
LSA	**Lhasa**	**10.92**	**265**	*e*P	**Pn**	**17 36 01.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	**Lhasa**	**10.92**	**265**	*e*P	**Pn**	**17 36 01.9**	**+1.0**
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.49**	**31**	*e*P	**Pn**	**17 36 08.9**	**+0.1**
HHC				pP		17 36 16.0	
HHC				sP		17 36 21.0	
HHC				S	**Sn**	**17 38 17.8**	**+0.6**
HHC				sS		17 38 28.8	
HHC				SS		17 38 31.9	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
HHC				LR	LR		
	comp=N,1μm,6.0s						
HHC				LR	LR		
	comp=E,2μm,4.7s						
HHC				LR	LR		
	comp=Z,1μm,5.5s						
SHL	**Shillong**	**11.83**	**244**	*e*P	**Pn**	**17 36 13.2**	**-0.2**
SHL				*ex*	x	17 39 33.2	
GZH	**Guangzhou**	**11.84**	**131**	P	**Pn**	**17 36 08.3**	**-5.3**
GZH				S	**Sn**	**17 38 17.3**	**-8.6**
GZH				LR	LR		
	comp=N,5μm,10.9s						
GZH				LR	LR		
	comp=E,5μm,11.5s						
TIA	**Tai'an**	**12.23**	**63**	*e*P	**Pn**	**17 36 20.0**	**+1.1**
NJ2	**Nanjing**	**12.96**	**83**	*e*P	**Pn**	**17 36 29.6**	**+0.8**
NJ2				pP		17 36 32.9	
NJ2				sP		17 36 36.3	
NJ2				PP		17 36 39.8	
NJ2				S	**Sn**	**17 38 54.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,40nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,370nm,3.7s						
NJ2				LR	LR		
	comp=N,2μm,6.2s						
NJ2				LR	LR		
	comp=E,4μm,10.0s						
NJ2				LR	LR		
	comp=Z,4μm,10.8s						
QIZ	**Qiongzhong**	**13.39**	**154**	P	**Pn**	**17 36 34.1**	**-0.8**
QIZ				S	**Sn**	**17 39 04.6**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,20nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,190nm,5.0s						
QIZ				LR	LR		
	comp=N,2μm,9.8s						
QIZ				LR	LR		
	comp=Z,2μm,11.0s						
BJI	**Beijing**	**13.40**	**46**	P	**Pn**	**17 36 33.9**	**-1.0**
BJI				pmax	pmax		
	comp=Z,14nm,0.9s						
BJI				pmax	pmax		
	comp=Z,120nm,3.7s						
BJI				LR	LR		
	comp=N,2μm,10.1s						
BJI				LR	LR		
	comp=E,2μm,11.4s						
BJI				LR	LR		
	comp=Z,680nm,19.8s						
CM31	**Chiang Mai Arr**	**13.45**	**200**	*e*P	**Pn**	**17 36 36.4**	**+0.8**
	comp=Z,6.6nm,0.6s						
CM31				*e*		17 36 44.7	
QZH	**Quanzhou**	**14.59**	**112**	*e*P	**Pn**	**17 36 50.8**	**-0.3**
QZH				S	**Sn**	**17 39 31.8**	**-1.1**
QZH				LR	LR		
	comp=N,7μm,11.2s						
QZH				LR	LR		
	comp=E,4μm,11.9s						
QZH				LR	LR		
	comp=Z,2μm,10.4s						
SSE	**Sheshan**	**14.99**	**86**	P	**Pn**	**17 36 55.5**	**-1.1**
SSE				S	**Sn**	**17 39 41.4**	**-1.3**
SSE				pmax	pmax		
	comp=Z,44nm,0.8s						
SSE				pmax	pmax		
	comp=Z,110nm,4.3s						
SSE				LR	LR		
	comp=N,2μm,10.5s						
SSE				LR	LR		
	comp=E,240nm,10.5s						
SSE				LR	LR		
	comp=Z,2μm,13.8s						
GUN	**Gumba**	**15.84**	**262**	*e*P	**Pn**	**17 37 04.3**	**-3.4**
	comp=Z,252nm,1.0s						
PKI	**Pulchoki**	**16.34**	**262**	*e*P	**Pn**	**17 37 10.7**	**-3.4**
	comp=Z,76nm,0.6s						
PKIN	**Phulchoki**	**16.34**	**262**	*e*P	**Pn**	**17 37 10.6**	**-3.7**
	comp=Z,54nm,0.5s						
KKN	**Kakani**	**16.38**	**262**	*e*P	**Pn**	**17 37 11.1**	**-3.6**
	comp=Z,244nm,0.8s						
DL2	**Dalian**	**16.54**	**58**	P	**Pn**	**17 37 18.0**	**+1.4**
DL2				*e*S	**Sn**	**17 40 24.3**	**+4.1**
DL2				pmax	pmax		
	comp=Z,20nm,0.8s						
DL2				LR	LR		
	comp=N,460nm,14.0s						
DL2				LR	LR		
	comp=E,380nm,15.3s						
DL2				LR	LR		
	comp=Z,490nm,18.1s						
DMN	**Daman**	**16.58**	**262**	*e*P	**Pn**	**17 37 13.8**	**-3.5**
	comp=Z,263nm,0.9s						
SONM	**Songino Array**	**16.68**	**6**	Pn	**Pn**	**17 37 18.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=191,slow=11,SNR=21						
SONM				LR	LR	17 44 44.7	
	comp=Z,440nm,21.5s,baz=186,slow=41						
ULN	**Ulaanbaatar**	**16.78**	**8**	*e*P	**Pn**	**17 37 19.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,21nm,1.0s						
ULN	**Ulaanbaatar**	**16.78**	**8**	*e*P	**Pn**	**17 37 19.3**	**-0.3**
	comp=Z,21nm,1.0s						
ULN	**Ulaanbaatar**	**16.78**	**8**	Pn	**Pn**	**17 37 20.0**	**+0.4**
	SNR=11						
ULN				Pn	**Pn**	**17 37 20.0**	**+0.4**
	SNR=11						
SSLB	**Suanglung**	**17.03**	**112**	*e*P	**Pn**	**17 37 23.9**	**+1.0**
	comp=Z,67nm,1.0s						
WMQ	**Urumqi**	**17.79**	**319**	*e*P	**Pn**	**17 37 30.9**	**-1.3**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMQ				LR	LR		
	comp=N,1μm,12.0s						
WMQ				LR	LR		
	comp=E,1μm,11.0s						
WMQ				LR	LR		
	comp=Z,830nm,22.0s						
ZAK	**Zakamensk**	**19.10**	**359**	*e*P	**Pn**	**17 37 47.6**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
SNY	**Shenyang**	**19.11**	**51**	⇑P	**Pn**	**17 37 48.3**	**-0.1**
SNY				S	**Sn**	**17 41 26.3**	**+3.9**
SNY				pmax	pmax		
	comp=Z,14nm,1.2s						
SNY				LR	LR		
	comp=N,260nm,6.3s						
SNY				LR	LR		
	comp=E,900nm,14.3s						
SNY				LR	LR		
	comp=E,640nm,18.8s						
INCN	**Inchon**	**19.92**	**66**	*e*P	**Pn**	**17 37 55.7**	**-2.4**
	comp=Z,25nm,0.7s						
PTH	**Pithoragarh**	**20.30**	**271**	*e*P	**P**	**17 38 01.0**	**+0.3**
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**17 38 03.8**	**+2.2**
TLY				*e*		17 38 23.6	
TLY				pmax	pmax		
	comp=Z,14nm,1.4s						
TLY				MLR	MLR		
	comp=Z,626nm,10.0s,MS4.3						
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**17 38 03.4**	**+1.8**
	comp=Z,18nm,1.3s						
TLY	**Talaya**	**20.40**	**360**	P	**P**	**17 38 03.9**	**+2.3**
	SNR=6.7						
TLY				P		17 38 03.9	
	SNR=6.7						
MOY	**Mondy**	**20.48**	**355**	*e*P	**P**	**17 38 03.8**	**+1.4**
MOY				pmax	pmax		
	comp=Z,46nm,1.6s						
JOSI	**Joshimath**	**20.70**	**274**	*e*P	**P**	**17 38 04.9**	**-0.1**
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**17 38 08.1**	**+0.7**
	comp=Z,41nm,0.8s,baz=260,slow=11,SNR=136						
KSRS				LR	LR	17 46 41.6	
	comp=Z,435nm,19.8s,MS3.8,baz=76,slow=38						
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**17 38 08.1**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,41nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,435nm,19.8s,MS3.8						

IRK Irkutsk 20.97 1 *eP* **P 17 38 08.3 +0.6**
IRK pmax pmax
comp=Z,76nm,1.6s
CN2 Changchun 21.25 48 ⇑P **P 17 38 11.8 +1.0**
CN2 *es*P sP 17 38 18.0 +3.0
CN2 *eS* **S 17 42 02.1 -4.8**
CN2 pmax pmax
comp=Z,40nm,0.8s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,11.0s,MS4.4
CN2 LR LR
comp=E,700nm,11.0s,MS4.4
CN2 LR LR
comp=Z,700nm,12.0s,MS4.3
HIA Hailar 21.68 29 *eP* **P 17 38 16.2 +0.8**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA Hailar 21.68 29 *eP* **P 17 38 16.2 +0.8**
comp=Z,17nm,0.8s,mb4.5
KLP Kalpa 21.70 277 *eP* **P 17 38 15.9 +0.1**
KLP *ex* x 17 42 12.9
JOW Kunigami 21.94 95 LR LR 17 45 52.6
comp=Z,2µm,21.6s,MS4.5,baz=344,slow=34
DDI Dehra Dun 22.02 274 *ex* **P 17 38 17.0 -2.2**
MK31 Makanchi Array 22.62 319 *eP* **P 17 38 25.0 -0.5**
MKAR Makanchi Array 22.62 319 P **P 17 38 25.4 0.0**
comp=Z,43nm,0.9s,mb4.9,baz=122,slow=10,SNR=80
MKAR LR LR 17 48 31.2
comp=Z,175nm,20.6s,MS3.5,baz=1.9,slow=40
SMLA Simla 22.66 277 *ex* x 17 38 21.4
AGRA Agra 22.79 266 *eP* **P 17 38 26.7 -0.8**
KKR Kurukshetra 23.13 274 *eP* **P 17 38 32.5 +1.4**
AYAN Aya Nagar 23.17 270 *eP* **P 17 38 30.5 -1.0**
SONA Sohna 23.26 269 *eP* **P 17 38 30.2 -2.2**
SONA AMb AMB 17 38 32.9
comp=Z,17nm,0.7s,mb4.6
RTK Rohtak 23.66 272 *ex* x 17 38 27.5
KSH Kashi 23.97 298 *eP* **P 17 38 42.1 +2.9**
KSH *ep*P 17 38 46.0
KSH *es*P sP 17 38 49.1 +5.6
KSH *e*PP 17 39 16.1
KSH *e*PcP PcP 17 42 23.1 +1.9
KSH *eS* **S 17 42 57.6 +1.8**
KSH *es*S sS 17 43 03.0 +2.2
KSH *e*SS 17 43 49.0
KSH pmax pmax
comp=Z,74nm,1.5s,mb4.9
KSH LR LR
comp=N,430nm,8.9s
KSH LR LR
comp=E,690nm,9.7s
NGP Nagpur 24.23 251 *ex* x 17 38 35.9
MDJ Mudanjiang 24.28 49 P **P 17 38 41.8 -0.1**
MDJ pP 17 38 44.9
MDJ sP sP 17 38 46.1 -0.1
MDJ PcP PcP 17 42 20.8 -1.0
MDJ S **S 17 43 00.3 -0.4**
MDJ ScP ScP 17 45 59.3 -1.2
MDJ PcS PcS 17 46 00.9 -0.5
MDJ ScS ScS 17 49 47.6 -0.1
MDJ pmax pmax
comp=Z,15nm,1.3s,mb4.3
MDJ pmax pmax
comp=Z,120nm,4.9s
MDJ LR LR
comp=N,460nm,11.2s
MDJ LR LR
comp=E,260nm,16.9s
MDJ LR LR
comp=Z,540nm,13.1s,MS4.2
MDJ Mudanjiang 24.28 49 *eP* **P 17 38 40.0 -1.9**
comp=Z,24nm,1.2s,mb4.5
KHET Khetri 24.40 270 *eP* **P 17 38 43.3 +0.1**
ULHL Ulahol 24.46 304 P **P 17 38 44.6 +0.9**
SNR=23
BHPL Bhopal 24.63 258 *eP* **P 17 38 45.5 +0.1**
BHPL AMb AMB 17 38 52.0
comp=Z,39nm,1.4s,mb4.8
BHPL *ex* x 17 43 10.6
KZA Kyzart 25.12 303 P **P 17 38 51.2 +1.6**
SNR=92
TKM2 Tokmak 2 25.12 305 P **P 17 38 50.7 +1.0**
SNR=16
TKM2 Tokmak 2 25.12 305 *eP* **P 17 38 50.0 +0.4**
TKM2 pmax pmax
comp=Z,17nm,1.0s,mb4.5
TKM2 Tokmak 2 25.12 305 *eP* **P 17 38 50.0 +0.3**
comp=Z,17nm,1.0s,mb4.5
KBK Karagaybulak 25.50 305 P **P 17 38 54.1 +1.0**
SNR=43
UCH Uchtor 25.68 303 P **P 17 38 56.0 +1.2**
SNR=57
UCH Uchtor 25.68 303 *eP* **P 17 38 55.9 +1.2**
CHMS Chumysh 25.74 305 P **P 17 38 54.4 -0.9**
SNR=6.2
FRU Bishkek 25.78 305 *eP* **P 17 38 57.0 +1.4**
FRU pmax pmax
comp=Z,45nm,1.8s,mb4.7
AAK Ala-Archa 25.81 304 P **P 17 38 59.1 +3.2**
SNR=17
AAK Ala-Archa 25.81 304 P **P 17 38 56.3 +0.4**
comp=Z,17nm,0.8s,mb4.6,baz=104,slow=6.4,SNR=38
AAK LR LR 17 49 51.8
comp=Z,693nm,18.4s,MS4.2,baz=90,slow=38
AAK Ala-Archa 25.81 304 *eP* **P 17 38 56.5 +0.6**
AAK pmax pmax
comp=Z,31nm,0.9s,mb4.8
AAK Ala-Archa 25.81 304 *eP* **P 17 38 56.5 +0.6**
comp=Z,31nm,0.9s,mb4.8
AAK Ala-Archa 25.81 304 P **P 17 38 57.3 +1.4**
SNR=19
AAK P 17 38 57.3
SNR=19
USP Ospenovka 25.99 306 P **P 17 38 57.8 +0.3**
SNR=19
AML Almayashu 26.25 303 P **P 17 39 01.0 +1.2**
SNR=28
AML Almayashu 26.25 303 *eP* **P 17 39 00.9 +1.1**
comp=Z,35nm,1.1s,mb4.8
EKS2 Erkin-Say 26.33 304 P **P 17 39 01.5 +1.0**
SNR=16
EKS2 Erkin-Say 26.33 304 *eP* **P 17 39 01.1 +0.5**
comp=Z,15nm,1.0s,mb4.5
ZAA0 Zalesovo Array 26.42 335 *eP* **P 17 39 00.5 -0.8**
ZALV Zalesovo Beam 26.42 335 P **P 17 39 00.7 -0.6**
comp=Z,40nm,0.9s,mb5.0,baz=134,slow=8.5,SNR=106
ZALV LR LR 17 49 53.7
comp=Z,363nm,19.5s,MS3.9,baz=326,slow=38
HYB Hyderabad 26.64 245 *i* P **P 17 39 08.0 +4.4**
KURK Kurchatov 26.90 323 P **P 17 39 05.1 -0.5**
comp=Z,64nm,0.8s,mb5.2,baz=128,slow=9.5,SNR=208
KURK LR LR 17 50 53.1
comp=Z,545nm,19.7s,MS4.1,baz=130,slow=39
KURK Kurchatov 26.90 323*c i*P **P 17 39 05.3 -0.3**
KURK pmax pmax
comp=Z,79nm,1.2s,mb5.1
KURK Kurchatov 26.90 323 *eP* **P 17 39 04.9 -0.7**
comp=Z,54nm,0.9s,mb5.1
KURK Kurchatov 26.90 323 P **P 17 39 05.7 0.0**
SNR=28
KURK P 17 39 05.7
SNR=28
BOD Bodaibo 27.49 12 *eP* **P 17 39 11.4 +0.6**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
NVS Novosibirsk 27.70 334 *eP* **P 17 39 10.9 -1.9**
NVS *e* 17 44 00.1
NVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
NVS pmax pmax
comp=N,12nm,1.7s
NVS pmax pmax
comp=E,9.0nm,1.2s
KLR Kul'dur 27.71 42 *eP* **P 17 39 10.9 -2.0**
KLR MLR MLR
comp=Z,1µm,11.0s,MS4.7
MJAR Matsushiro Arr 29.04 70 P **P 17 39 25.3 +0.4**
comp=Z,1.7nm,0.7s,mb3.9,baz=278,slow=10.0,SNR=4.2
MJAR LR LR 17 50 21.3
comp=Z,180nm,21.7s,MS3.6,baz=120,slow=35
KBL Kabul 29.18 286 *eP* **P 17 39 26.3 +0.1**
KBL pmax pmax
comp=Z,12nm,1.1s,mb4.5
KBL Kabul 29.18 286 *eP* **P 17 39 26.3 +0.2**
comp=Z,12nm,1.1s,mb4.5
NRGR Nerungri 29.32 24 *eP* **P 17 39 33.4 +6.2**
NRGR S **S 17 44 22.9 +2.7**
NRGR smax
comp=E,12nm,0.4s
JHJ Hachijo jima 2 30.52 77 LR LR 17 53 13.7
comp=E,482nm,21.5s,MS4.1,baz=14,slow=39
DAV Davao City (W) 31.60 135 LR LR 17 53 16.5
comp=E,398nm,20.0s,MS4.1,baz=315,slow=38
BVAR Borovoye Array 32.44 322 P **P 17 39 54.4 -0.3**
comp=E,10nm,0.7s,mb4.8,baz=116,slow=9.4,SNR=59
BVAR PcP PcP 17 42 40.8 -1.0
comp=E,1.0nm,0.7s,baz=169,slow=3.0,SNR=3.6
BVAR LR LR 17 53 57.8
comp=E,678nm,21.0s,MS4.3,baz=115,slow=38
BVAR Borovoye Array 32.44 322 P **P 17 39 54.4 -0.3**
BVAR 17 42 40.8
BRVK Borovoye 32.51 322*c i*P **P 17 39 55.0 -0.4**
BRVK pmax pmax
comp=Z,24nm,1.0s,mb5.1
BRVK Borovoye 32.51 322 *eP* **P 17 39 55.2 -0.2**
comp=Z,16nm,0.8s,mb5.0
BRVK Borovoye 32.51 322 P **P 17 39 55.6 +0.2**
SNR=6.0
BRVK P 17 39 55.6
SNR=6.0
ASAJ Asahikawa 33.06 56 LR LR 17 53 20.0
comp=Z,162nm,19.3s,MS3.8,baz=244,slow=36
YSS Yuzh-Sakhalins 33.74 51 *eP* **P 17 40 06.1 0.0**
YAK Yakutsk 35.09 21 *eP* **P 17 40 15.9 -1.7**
YAK *e**PP pP 17 40 26.0 +5.3
YAK *e* 17 42 54.6
YAK *eS* **S 17 45 43.7 -6.2**
YAK *e* 17 50 34.3
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK smax
comp=N,77nm,4.7s
YAK smax
comp=E,42nm,5.7s
YAK MLR MLR
comp=Z,413nm,13.0s,MS4.4
YAK MLR MLR
comp=N,120nm,9.0s
YAK MLR MLR
comp=E,216nm,11.0s
YAK Yakutsk 35.09 21 *eP* **P 17 40 15.8 -1.8**
comp=E,12nm,0.8s,mb4.9
ABKAR Akbulak array 37.29 312 *eP* **P 17 40 36.3 -0.4**
comp=E,7.7nm,0.8s,mb4.6
AKTK Aktyubinsk 38.76 313 P **P 17 40 47.9 -1.1**
AKTO Aktyubinsk 38.76 313 P **P 17 40 47.9 -1.1**
comp=E,3.3nm,0.7s,mb4.2,baz=97,slow=8.0,SNR=17
SVE Sverdlovsk 39.15 324⇑*eP* **P 17 40 52.7 +0.5**
SVE pmax pmax
comp=Z,33nm,1.0s,mb5.0
SVE MLR MLR
comp=Z,176nm,12.0s,MS4.1
KAPI Kappang 39.20 154 P **P 17 40 51.6 -1.5**
comp=Z,7.8nm,0.9s,mb4.4,baz=293,slow=23,SNR=4.6
ARU Arti 40.08 322*c i*P **P 17 40 59.3 -0.7**
ARU *e* 17 42 29.9
ARU S **S 17 47 05.0 -0.9**
ARU SS SS 17 49 56.4 -6.6
ARU pmax pmax
comp=Z,42nm,1.0s,mb5.1
ARU Arti 40.08 322 *eP* **P 17 40 59.4 -0.6**
comp=Z,36nm,0.8s,mb5.2
GUMO Guam 41.66 106 LR LR 17 58 49.3
comp=Z,86nm,18.5s,MS3.7,baz=54,slow=37
TIXI Tiksi 42.67 11 *eP* **P 17 41 19.7 -1.3**
TIXI pmax pmax
comp=Z,12nm,1.2s,mb4.5
TIXI MLR MLR
comp=Z,302nm,14.0s,MS4.3
TIXI Tiksi 42.67 11 *eP* **P 17 41 19.7 -1.4**
comp=Z,9.9nm,1.0s,mb4.5
SEY Seymchan 44.13 30*c i*P **P 17 41 32.9 0.0**
PETK Petropavlovsk- 44.33 44 P **P 17 41 34.3 -0.4**
comp=Z,5.0nm,0.9s,mb4.2,baz=212,slow=1.4,SNR=6.5
PETK LR LR 18 02 28.8
comp=Z,163nm,18.3s,MS4.0,baz=241,slow=39
PETK Petropavlovsk- 44.33 44 P **P 17 41 34.3 -0.4**
PETK LR LR 18 02 28.8
ZEI Tsey 48.18 301 *eP* **P 17 42 04.5 -0.6**
ZEI pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KIV Kislovodsk 48.92 303 *eP* **P 17 42 11.3 +0.5**
KIV pmax pmax
comp=Z,18nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,164nm,17.0s,MS4.1
KIV Kislovodsk 48.92 303 *eP* **P 17 42 11.7 +0.9**
comp=Z,18nm,1.0s,mb5.0
KIV Kislovodsk 48.92 303 P **P 17 42 11.5 +0.7**
SNR=5.2
KIV P 17 42 11.5
SNR=5.2
VRHR Novokhopersk 49.17 313 *eP* **P 17 42 11.7 -0.9**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=E,20nm,0.7s
VSR Storozhevoye 50.71 313 *eP* **P 17 42 23.6 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
KLMR Klimovskoe 50.73 325 *eP* **P 17 42 22.6 -1.7**
KLMR pmax pmax
comp=Z,28nm,1.1s,mb5.1
SOC Sochi 51.10 303 *eP* **P 17 42 25.7 -1.7**
SOC *e* 17 44 19.7
SOC *eS* **S 17 49 48.8 +3.7**
SOC pmax pmax
comp=Z,25nm,0.9s,mb5.1
BILL Bilibino 51.19 25⇑*eP* **P 17 42 26.9 -0.8**
BILL *e* 17 44 20.0
BILL *eS* **S 17 49 44.2 -1.4**
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BILL MLR MLR
comp=Z,300nm,17.0s,MS4.4
BILL Bilibino 51.19 25 *eP* **P 17 42 27.0 -0.7**
comp=Z,5.4nm,0.8s,mb4.5
OBN Obninsk 52.12 318⇓*eP* **P 17 42 34.0 -0.8**
OBN *eS* **S 17 49 57.1 -1.6**
OBN pmax pmax
comp=Z,25nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.5
OBN Obninsk 52.12 318 *eP* **P 17 42 33.9 -0.9**
MALT Malatya 53.07 297⇑*iP* **P 17 42 43.4 +1.3**
FITZ Fitzroy Crossi 53.42 154 *eP* **P 17 42 44.1 -0.7**
comp=Z,6.9nm,0.8s,mb4.6
FITZ Fitzroy Crossi 53.42 154 *eP* **P 17 42 43.9 -0.9**
comp=Z,12nm,1.3s,mb4.7
APA Apatity 54.00 333⇓*eP* **P 17 42 49.5 +1.0**
APA MLR MLR
comp=Z,1µm,13.0s,MS5.1
MBWA Marble Bar 54.35 161 *eP* **P 17 42 50.6 -0.9**
JOF Joensuu 54.70 328 *eP* **P 17 42 52.4 -1.2**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
JOF Joensuu 54.70 328 *ep* **P 17 42 52.4 -1.2**
comp=Z,8.2nm,0.7s,mb4.9
BR131 Keskin Array S 56.34 299 *eP* **P 17 43 05.5 -0.3**
comp=Z,1.6nm,0.8s,mb4.1
BRTR Keskin Array B 56.34 299 P **P 17 43 05.0 -0.8**
comp=Z,1.7nm,0.8s,mb4.1,baz=107,slow=7.9,SNR=9.3
BRTR LR LR 18 12 01.7
comp=Z,44nm,18.8s,MS3.6,baz=160,slow=41
KEV Kevo 56.44 336 *eP* **P 17 43 03.2 -2.8**
KEV pmax pmax
comp=Z,17nm,1.1s,mb5.0
KEV Kevo 56.44 336 *ep* **P 17 43 03.2 -2.8**
comp=Z,17nm,1.1s,mb5.0
MMAI Mount Meron Ar 56.88 291 LR LR 18 13 51.7
comp=Z,103nm,18.3s,MS4.0,baz=135,slow=43
ARCES ARCESS Array B 56.96 336 P **P 17 43 08.8 -1.0**
comp=Z,6.3nm,0.9s,mb4.7,baz=78,slow=7.9,SNR=10
ARCES LR LR 18 09 28.4
comp=Z,265nm,19.0s,MS4.4,baz=68,slow=38
AKASG Malin Array Be 57.01 313 P **P 17 43 08.7 -1.7**
comp=Z,5.7nm,0.7s,mb4.7,baz=72,slow=6.1,SNR=13
AKASG PcP PcP 17 44 04.8 -0.6
comp=Z,1.3nm,0.5s,baz=75,slow=4.7,SNR=5.2
AKASG LR LR 18 08 51.1
comp=Z,292nm,18.2s,MS4.4,baz=95,slow=37
AKASG Malin Array Be 57.01 313 P **P 17 43 08.7 -1.7**
AKASG 17 44 04.8
KAF Kangasniemi 57.06 327 *eP* **P 17 43 09.0 -1.5**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KAF Kangasniemi 57.06 327 *ep* **P 17 43 09.0 -1.5**
comp=Z,5.3nm,0.7s,mb4.7
FINES FINESS Array B 57.23 326 P **P 17 43 10.7 -1.1**
comp=Z,6.5nm,0.7s,mb4.8,baz=90,slow=7.6,SNR=19
WRAB Tennant Creek 58.81 146 *eP* **P 17 43 23.9 +0.6**
WRAB pmax pmax
comp=Z,30nm,0.9s,mb5.3
WRAB Tennant Creek 58.81 146 *eP* **P 17 43 23.9 +0.7**
comp=Z,30nm,0.9s,mb5.3
WRA Warramunga Arr 58.81 146 P **P 17 43 23.1 -0.2**
comp=Z,20nm,0.9s,mb5.1,baz=338,slow=7.6,SNR=68
WRA Warramunga Arr 58.81 146 P **P 17 43 23.1 -0.2**
VRI Vrincioaia 59.70 308⇑P **P 17 43 29.7 +0.4**
VRI Vrincioaia 59.70 308⇑*iP* **P 17 43 29.7 +0.4**
PLOR Plostina 59.76 308⇑P **P 17 43 30.1 +0.4**
PLOR Plostina 59.76 308⇑*iP* **P 17 43 30.1 +0.4**
BURAR Bucovina Array 60.25 310⇑P **P 17 43 32.5 -0.5**
BURAR Bucovina Array 60.25 310⇑*iP* **P 17 43 32.5 -0.5**
BUR08 Bucovina Ar. S 60.26 310 *eP* **P 17 43 32.0 -1.0**
MLR Muntele Rosu 60.33 308⇑P **P 17 43 35.2 +1.6**
MLR Muntele Rosu 60.33 308⇑*iP* **P 17 43 35.2 +1.6**
VOIR 60.95 308⇑P **P 17 43 38.3 +0.5**
VOIR 60.95 308⇑*iP* **P 17 43 38.3 +0.5**
KWP Kalwaria Pacla 61.33 313 *eP* **P 17 43 40.1 -0.2**
KWP Kalwaria Pacla 61.33 313 *eP* **P 17 43 39.6 -0.8**
comp=Z,17nm,0.9s,mb5.2
KWP Kalwaria Pacla 61.33 313⇓*iP* **P 17 43 40.7 +0.4**
KOLS Kolonicke sedl 61.80 312 *eP* **P 17 43 43.4 -0.1**
KOLS pmax pmax
comp=Z,6.0nm,1.5s,mb4.5
KOLS Kolonicke sedl 61.80 312 *eP* **P 17 43 43.4 -0.1**
comp=Z,5.5nm,1.5s,mb4.5
KOLS Kolonicke sedl 61.80 312 *eP* **P 17 43 43.4 -0.1**
ASAR Alice Springs 61.82 148 P **P 17 43 43.7 -0.2**
comp=Z,5.8nm,0.9s,mb4.7,baz=333,slow=6.3,SNR=35
TRPA Tarpa 61.85 311⇓*iP* **P 17 43 44.1 +0.2**
STHS Stebnicka Huta 62.31 313 *eP* **P 17 43 47.4 +0.5**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 62.31 313 *eP* **P 17 43 47.4 +0.5**
comp=Z,3.6nm,0.9s,mb4.5
STHS Stebnicka Huta 62.31 313 *eP* **P 17 43 47.4 +0.5**
GZR Gura Zlata 62.49 308⇑P sP 17 43 59.4 +6.7
GZR Gura Zlata 62.49 308⇑*iP* sP 17 43 59.4 +6.7
NIE Niedzica 62.89 313 *eP* **P 17 43 51.8 +1.0**
OJC Ojcow 62.97 314 *eP* **P 17 43 51.2 -0.1**
KECS Kecovo 63.06 312 *eP* **P 17 43 52.2 +0.2**
KECS pmax pmax
comp=Z,2.0nm,1.2s,mb4.1
KECS Kecovo 63.06 312 *eP* **P 17 43 52.2 +0.2**
comp=Z,1.8nm,1.2s,mb4.1
KECS Kecovo 63.06 312 *eP* **P 17 43 52.2 +0.2**
PSZ Piszkesteto 63.61 312⇑P **P 17 43 50.8 -4.8**
PSZ Piszkesteto 63.61 312⇑*iP* **P 17 43 50.8 -4.8**
VYHS Vyhne 64.10 313 *eP* **P 17 43 59.2 +0.4**
VYHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
VYHS Vyhne 64.10 313 *eP* **P 17 43 59.2 +0.4**
comp=Z,3.1nm,1.1s,mb4.2
VYHS Vyhne 64.10 313 *eP* **P 17 43 59.2 +0.4**
OKC Ostrava-Krasne 64.10 314 *eP* **P 17 43 58.9 +0.1**
OKC MLR MLR
comp=Z,300nm,14.7s,MS4.6
OKC Ostrava-Krasne 64.10 314 *eP* **P 17 43 58.9 +0.1**
OKC AMS AMS 18 12 40.0
comp=Z,300nm,14.7s
NB2 NORSAR Subarra 64.33 327 P **P 17 43 58.9 -1.2**
comp=Z,3.1nm,0.7s,mb4.5,baz=72,slow=7.4
NOA NORSAR Array B 64.33 327 P **P 17 43 58.3 -1.8**
comp=Z,5.6nm,1.0s,mb4.5,baz=73,slow=6.8,SNR=6.4
NOA LR LR 18 14 18.7
comp=Z,119nm,18.4s,MS4.1,baz=40,slow=38
KOLL Kolacno 64.34 313 *eP* **P 17 44 01.4 +1.0**
KOLL Kolacno 64.34 313 *eP* **P 17 44 01.3 +0.9**
MORC Moravsky Berou 64.49 314 *eP* **P 17 44 01.1 -0.3**
comp=Z,5.2nm,0.9s,mb4.6
MORC Moravsky Berou 64.49 314⇓*iP* **P 17 44 01.5 +0.1**
PKSM Moragy 64.97 310⇓P **P 17 44 04.4 -0.2**
PKSM Moragy 64.97 310⇓*iP* **P 17 44 04.4 -0.2**
DPC Dobruska-Polom 65.05 315 *eP* **P 17 44 05.4 +0.4**
DPC MLR MLR
comp=Z,500nm,17.4s,MS4.8
DPC Dobruska-Polom 65.05 315 *eP* **P 17 44 05.4 +0.4**
DPC AMS AMS 18 13 10.0
comp=Z,500nm,17.4s
NWAO Narrogin (SRO) 65.12 167 *eP* **P 17 44 05.4 -0.1**
VRAC Vranov 65.23 314⇑P **P 17 44 06.4 +0.2**
VRAC Vranov 65.23 314⇑*iP* **P 17 44 06.4 +0.2**
CTA Charters Tower 65.39 136 *eP* **P 17 44 06.7 -0.9**
comp=Z,5.9nm,0.9s,mb4.6
CTAO Charters Tower 65.39 136 *eP* **P 17 44 06.2 -1.4**
TREC Trest 65.92 314 AMS AMS 18 13 50.0
comp=Z,400nm,17.3s
PVCC Panska Ves 66.04 316 AMS AMS 18 13 50.0
comp=Z,500nm,16.4s
CONA Conrad Observa 66.16 313⇑*iP* **P 17 44 12.8 +0.5**
comp=Z,7.5nm,1.3s,mb4.5
PRU Pruhonice 66.25 315 *eP* **P 17 44 13.5 +0.7**
PRU MLR MLR
comp=Z,500nm,17.7s,MS4.8
PRU Pruhonice 66.25 315 *eP* **P 17 44 13.5 +0.7**
PRU AMS AMS 18 14 00.0
comp=Z,500nm,17.7s
BRG Berggiesshubel 66.29 316 *eP* **P 17 44 12.9 -0.1**
comp=Z,5.0nm,0.9s,mb4.5
BRG Berggiesshubel 66.29 316 *eP* **P 17 44 13.2 +0.1**
comp=Z,4.7nm,0.8s,mb4.5
BRG
comp=N,232nm,18.3s
BRG
comp=E,240nm,15.5s
BRG
comp=Z,443nm,14.9s
BRG Berggiesshubel 66.29 316 *eP* **P 17 44 13.2 +0.2**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BRG MLR MLR
comp=N,139nm,18.3s,MS4.4
BRG MLR MLR
comp=E,144nm,15.5s,MS4.4
BRG MLR MLR
comp=Z,265nm,14.9s,MS4.6
CLL Collm 66.69 317 *eP* **P 17 44 15.0 -0.6**
CLL *i* 17 44 23.6
CLL pmax pmax
comp=Z,11nm,1.1s,mb4.8
CLL MLR MLR
comp=Z,300nm,20.6s,MS4.5
CLL Collm 66.69 317 *eP* **P 17 44 15.0 -0.6**
comp=Z,7.0nm,1.1s,mb4.6
CLL *i* 17 44 23.6
CLL LR LR
comp=Z,300nm,20.6s,MS4.5
CLL Collm 66.69 317 *eP* **P 17 44 15.0 -0.6**
comp=Z,7.0nm,1.1s,mb4.6
CLL Lm 17 14 00.0
comp=N,200nm,19.4s
CLL Lm 17 14 00.0
comp=E,200nm,21.1s
CLL Lm 17 14 00.0
comp=Z,300nm,20.6s
CLL *i* (sP) sP 17 44 23.6 +3.6
CLL *e*PP PP 17 46 41.0 -1.1
SOKA Soboth 67.14 312⇑*iP* **P 17 44 18.6 0.0**
comp=Z,6.3nm,1.0s,mb4.6
KHC Kasperske Hory 67.14 315 *eP* **P 17 44 18.5 0.0**
KHC MLR MLR
comp=Z,500nm,20.3s,MS4.7
KHC Kasperske Hory 67.14 315 *eP* **P 17 44 18.5 0.0**

KHC AMS AMS 18 14 30.0
comp=Z,500nm,20.3s
GEC2 GERESS Array S 67.17 314 *eP* **P 17 44 18.7 0.0**
comp=Z,7.0nm,1.1s,mb4.6
GEC2 GERESS Array S 67.17 314 *eP* **P 17 44 18.7 0.0**
GEC2 pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
GERES GERESS Array B 67.17 314 P **P 17 44 18.1 -0.5**
comp=Z,3.1nm,0.9s,mb4.3,baz=74,slow=5.7,SNR=18
GERES LR LR 18 15 07.0
comp=Z,359nm,19.4s,MS4.6,baz=58,slow=37
MOA Molln 67.19 313⇑ *iP* **P 17 44 19.2 +0.4**
comp=Z,4.9nm,1.1s,mb4.5
BSEG Bad Segeberg 67.25 320 *eP* **P 17 44 18.7 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
BSEG Bad Segeberg 67.25 320 *eP* **P 17 44 18.7 -0.3**
BSEG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TANN Tannenbergstha 67.34 316 *eP* **P 17 44 19.7 0.0**
NKC Novy Kostel 67.42 316 *eP* **P 17 44 22.4 +2.2**
NKC MLR MLR
comp=Z,300nm,15.7s,MS4.6
NKC Novy Kostel 67.42 316 *eP* **P 17 44 22.4 +2.2**
NKC AMS AMS 18 14 50.0
comp=Z,300nm,15.7s
COLD Coldfoot 67.47 24 *eP* **P 17 44 20.0 -0.3**
comp=Z,11nm,0.9s,mb4.9
WET Wettzell 67.57 315 *eP* **P 17 44 21.2 0.0**
comp=Z,3.0nm,0.9s,mb4.3
WET Wettzell 67.57 315 *eP* **P 17 44 21.2 0.0**
WET pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ROTZ Rotzenmuhle 67.73 316 *eP* **P 17 44 22.6 +0.4**
MOX Moxa 67.75 317 *eP* **P 17 44 23.9 +1.6**
MOX Moxa 67.75 317 *eP* **P 17 44 23.5 +1.2**
comp=Z,6.0nm,1.2s,mb4.5
NRDL Niedersach Rie 67.91 319 *eP* **P 17 44 23.8 +0.5**
CLZ Clausthal 68.01 318 *eP* **P 17 44 23.9 0.0**
comp=Z,8.0nm,1.0s,mb4.7
CLZ Clausthal 68.01 318 *eP* **P 17 44 23.9 0.0**
CLZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
GRA1 Grafenberg Arr 68.35 316 *eP* **P 17 44 26.4 +0.3**
comp=Z,14nm,1.1s,mb4.9
GRA1 LR LR
comp=Z,500nm,18.2s,MS4.8
GRF Grafenberg Arr 68.35 316 *eP* **P 17 44 26.4 +0.3**
comp=Z,14nm,1.1s,mb4.9
GRF *eL* 18 15 40.8
comp=Z,516nm,18.2s
GRF Grafenberg Arr 68.35 316 *eP* **P 17 44 26.4 +0.3**
GRF pmax pmax
comp=Z,14nm,1.1s,mb4.9
GRF MLR MLR
comp=Z,500nm,18.2s,MS4.8
GRF Grafenberg Arr 68.35 316 *eP* **P 17 44 26.4 +0.3**
GRF pmax pmax
comp=Z,14nm,1.1s,mb4.9
GRF MLR MLR
comp=Z,500nm,18.2s,MS4.8
PPLA Purkeypile 68.70 28 *eP* **P 17 44 28.1 +0.1**
comp=Z,45nm,1.4s,mb5.2
WTTA Wattenberg 69.06 313⇑ *iP* **P 17 44 30.6 0.0**
comp=Z,7.8nm,1.1s,mb4.5
TRF Thorofare Moun 69.20 28 *eP* **P 17 44 31.7 +0.5**
comp=Z,2.8nm,0.8s,mb4.2
COLA College 69.44 26 *eP* **P 17 44 33.0 +0.4**
COLA pmax pmax
comp=Z,15nm,0.9s,mb4.9
COLA College 69.44 26 *eP* **P 17 44 33.0 +0.3**
comp=Z,15nm,0.9s,mb4.9
FETA Feichten 69.73 313⇑ *iP* **P 17 44 34.8 +0.1**
comp=Z,13nm,1.1s,mb4.8
PMR Palmer 70.58 29 *eP* **P 17 44 39.3 -0.3**
BFO Black Forest 70.65 315 *eP* **P 17 44 40.2 -0.1**
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 70.65 315 *eP* **P 17 44 40.2 -0.1**
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KDAK Kodiak Island 70.91 33 *i* P **P 17 44 42.5 +0.8**
MEM Membach 71.02 318 P **P 17 44 43.3 +0.8**
CDF Champ du Feu 71.25 316 *eP* **P 17 44 43.0 -0.9**
comp=Z,14nm,1.1s,mb4.5
CDF Champ du Feu 71.25 316 *eP* **P 17 44 43.0 -0.9**
CDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CDF Champ du Feu 71.25 316 *eP* **P 17 44 43.0 -0.9**
comp=Z,6.9nm,1.1s,mb4.5
WLF Walferdange 71.36 317 P **P 17 44 45.5 +0.9**
comp=Z,13nm,1.3s,mb4.7
WLF Walferdange 71.36 317 *eP* **P 17 44 45.6 +1.0**
DOU Dourbes 72.06 318 P **P 17 44 50.2 +1.4**
INK Inuvik 72.13 19 P **P 17 44 48.4 -0.5**
comp=Z,8.5nm,1.0s,mb4.6,baz=312,slow=7.8,SNR=7.9
INK Inuvik 72.13 19 *eP* **P 17 44 48.5 -0.4**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 72.13 19 *eP* **P 17 44 48.5 -0.3**
comp=Z,9.4nm,1.0s,mb4.7
STKA Stephens Creek 72.34 147 *eP* **P 17 44 50.1 -0.5**
comp=Z,3.4nm,0.6s,mb4.5
STKA Stephens Creek 72.34 147 P **P 17 44 50.0 -0.6**
comp=Z,4.1nm,0.6s,mb4.5,baz=297,slow=4.9,SNR=11
STKA Stephens Creek 72.34 147 *eP* **P 17 44 49.4 -1.1**
LPG La Plagne 72.87 313 *eP* **P 17 44 53.6 -0.2**
comp=Z,19nm,0.8s,mb4.8
LPG La Plagne 72.87 313 *eP* **P 17 44 53.6 -0.2**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 72.87 313 *eP* **P 17 44 53.6 -0.2**
comp=Z,9.4nm,0.8s,mb4.8
LPL La Plagne 72.88 313 *eP* **P 17 44 53.5 -0.3**
comp=Z,26nm,1.0s,mb4.8
LPL La Plagne 72.88 313 *eP* **P 17 44 53.5 -0.3**
LPL pmax pmax
comp=Z,13nm,1.0s,mb4.8
LPL La Plagne 72.88 313 *eP* **P 17 44 53.5 -0.3**
comp=Z,13nm,1.0s,mb4.8
BNI Bardonecchia 73.12 313 *eP* **P 17 44 55.1 -0.1**
BNI pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BNI Bardonecchia 73.12 313 *eP* **P 17 44 55.1 -0.1**
comp=Z,3.6nm,0.8s,mb4.3
SMF Signal de Mont 74.13 315 *eP* **P 17 45 00.0 -1.1**
comp=Z,25nm,1.2s,mb4.7
SMF Signal de Mont 74.13 315 *eP* **P 17 45 00.0 -1.1**
SMF pmax pmax
comp=Z,13nm,1.2s,mb4.7
SMF Signal de Mont 74.13 315 *eP* **P 17 45 00.0 -1.1**
comp=Z,13nm,1.2s,mb4.7
TCF Toulx Ste Croi 75.28 315 *eP* **P 17 45 07.0 -0.8**
comp=Z,16nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.28 315 *eP* **P 17 45 07.0 -0.8**
TCF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.28 315 *eP* **P 17 45 07.0 -0.8**
comp=Z,8.1nm,1.1s,mb4.6
CAF Calviac 76.06 314 *eP* **P 17 45 11.9 -0.4**
comp=Z,17nm,1.2s,mb4.5
CAF Calviac 76.06 314 *eP* **P 17 45 11.9 -0.4**
CAF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
CAF Calviac 76.06 314 *eP* **P 17 45 11.9 -0.4**
comp=Z,8.4nm,1.2s,mb4.5
YKA Yellowknife Ar 81.65 17 P **P 17 45 42.3 -0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=327,slow=4.9,SNR=29
YKA LR LR 18 20 24.7
comp=Z,93nm,21.3s,MS4.1,baz=155,slow=34
YKA Yellowknife Ar 81.65 17 P **P 17 45 42.3 -0.3**
YKA LR LR 18 20 24.7
TOA0 Torodi Ar. Sit 93.24 287 *eP* **P 17 46 38.3 -1.6**
TORD Torodi Ar. Bea 93.24 287 LR LR 18 34 19.8
comp=Z,74nm,20.5s,MS4.1,baz=105,slow=39
BOSA Boshof 95.45 240 LR LR 18 28 01.1
comp=Z,194nm,18.4s,MS4.6,baz=144,slow=34
ULM Lac du Bonnet 97.02 13 LR LR 18 32 06.5
comp=Z,132nm,19.1s,MS4.4,baz=179,slow=36

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*ISCJB **14** 17:34:48.6±0.7,28°.23S±0°.05×67°.47W±0°.09, h128km±11km, mb4.0/5, Error ellipse: s-maj=13.3km s-min=8.2km az=171.6*
*NEIC **14** 17:34:50.1±0.7,28°.27S×67°.46W, h126km±7km, mb4.6/1, Error ellipse: s-maj=12.7km s-min=9.5km az=82.0*
*IDC **14** 17:34:50.3±0.6,28°.24S×67°.76W, h130km±5km, mb3.8/4, mb1 3.8/7, mb1mx3.6/17, mbtmp3.7/7, Error ellipse: s-maj=24.6km s-min=9.8km az=91.0*

ISC 14 17:34:49.8±0.7,28°.23S±0°.05×67°.45W±0°.09, h123km±10km, n27, σ1§06/21, mb4.0/5, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.96**	**254**	*eP*	**Pn**	**17 35 35.9**	**+0.3**
LCO				*eS*	**Sn**	**17 36 10.9**	**0.0**
CFAA	**Coronel Fontan**	**3.43**	**191**	P	**Pn**	**17 35 42.6**	**+0.8**
	4.7nm,0.3s,baz=0.7,slow=12,SNR=109						
CFAA				S	**Sn**	**17 36 21.4**	**-0.6**
	12nm,0.3s,baz=268,slow=18,SNR=34						
LVC	**Limon Verde**	**5.75**	**346**	P	**Pn**	**17 36 14.5**	**+1.7**
	4.1nm,0.3s,baz=186,slow=9.5,SNR=42						
LVC				S	**Sn**	**17 37 15.8**	**-1.8**
	4.2nm,0.3s,baz=188,slow=9.6,SNR=3.7						
LVC	**Limon Verde**	**5.75**	**346**	*eP*	**Pn**	**17 36 13.8**	**+1.0**
LVC				S	**Sn**	**17 37 15.8**	**-1.8**
CPUP	**Villa Florida**	**9.21**	**80**	P	**Pn**	**17 36 58.6**	**-1.0**
	1.5nm,0.3s,baz=240,slow=12,SNR=14						
CPUP	**Villa Florida**	**9.21**	**80**	*eP*	**Pn**	**17 36 59.1**	**-0.5**
	37nm,0.7s						
TRQA	**Tornquist**	**10.82**	**156**	*eP*	**Pn**	**17 37 20.4**	**-0.7**
	119nm,1.6s						
LPAZ	**La Paz**	**11.90**	**357**	P	**Pn**	**17 37 37.0**	**+1.4**
	0.2nm,0.3s,baz=242,slow=1.0,SNR=4.3						
LPAZ	**La Paz**	**11.90**	**357**	*eP*	**Pn**	**17 37 38.1**	**+2.5**
WVT	**Waverly**	**66.83**	**342**	*eP*	**P**	**17 45 28.1**	**-0.1**
	4.7nm,0.6s,mb4.5						
TXAR	**Lajitas Array**	**66.90**	**326**	P	**P**	**17 45 26.5**	**-2.3**
	0.2nm,0.5s,mb3.2,baz=140,slow=7.5,SNR=3.0						
DBIC	**Dimbokro**	**69.57**	**70**	P	**P**	**17 45 45.8**	**0.0**
	2.0nm,0.7s,mb4.1,baz=171,slow=5.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**78.49**	**68**	P	**P**	**17 46 38.6**	**+1.0**
	5.0nm,0.6s,mb4.4,baz=265,slow=5.3,SNR=37						
TORD	**Torodi Ar. Bea**	**78.49**	**68**	P	**P**	**17 46 38.6**	**+1.0**
BOSA	**Boshof**	**79.19**	**117**	P	**P**	**17 46 41.9**	**+0.4**
	1.4nm,0.4s,mb4.1,baz=52,slow=10,SNR=9.0						
BOSA	**Boshof**	**79.19**	**117**	P	**P**	**17 46 41.9**	**+0.5**
BOSA	**Boshof**	**79.19**	**117**	P	**P**	**17 46 41.9**	**+0.4**
ASAR	**Alice Springs**	**124.45**	**204**	PKP	PKPdf	17 53 34.5	-0.5
	0.9nm,0.6s,baz=144,slow=2.1,SNR=18						
ASAR				pPKP	pPKPdf	17 54 09.0	+1.0
	0.4nm,1.0s,baz=122,slow=1.7,SNR=1.3						
WRA	**Warramunga Arr**	**127.68**	**206**	PKP	PKPdf	17 53 41.0	-0.2
	1.1nm,0.7s,baz=166,slow=1.8,SNR=18						
KURK	**Kurchatov**	**145.96**	**39**	PKPbc	PKPbc	17 54 15.2	+0.6
	2.2nm,0.8s,baz=300,slow=3.3,SNR=12						
KURK				pPKPbc	pPKPbc	17 54 49.0	+1.7
	0.5nm,0.6s,baz=301,slow=3.6,SNR=3.2						
AAK	**Ala-Archa**	**146.13**	**55**	PKPbc	PKPbc	17 54 15.8	+0.4
	1.7nm,0.5s,baz=254,slow=2.0,SNR=6.7						
ZAA0	**Zalesovo Array**	**147.27**	**31**	*e*PKPbc	PKPbc	17 54 19.5	+1.2
ZAA0				*e*		17 54 53.1	
ZALV	**Zalesovo Beam**	**147.27**	**31**	PKPbc	PKPbc	17 54 19.3	+1.0
	3.3nm,0.3s,baz=267,slow=2.7,SNR=18						
ZALV				pPKPbc	pPKPbc	17 54 52.7	+1.6
	1.8nm,0.6s,baz=298,slow=3.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**147.27**	**31**	PKPbc	PKPbc	17 54 19.3	+1.0
ZALV				pPKPbc	pPKPbc	17 54 52.7	+1.6
MK31	**Makanchi Array**	**149.95**	**44**	*e*PKPbc	PKPbc	17 54 26.0	+0.6
MKAR	**Makanchi Array**	**149.95**	**44**	PKPbc	PKPbc	17 54 26.3	+0.9
	2.8nm,0.7s,baz=305,slow=2.6,SNR=29						
MKAR				pPKPbc	pPKPbc	17 54 59.5	+1.2
	0.7nm,0.6s,baz=317,slow=2.8,SNR=3.9						
MKAR	**Makanchi Array**	**149.95**	**44**	PKPbc	PKPbc	17 54 26.3	+0.9
MKAR				pPKPbc	pPKPbc	17 54 59.5	+1.2

FUNV 14 17:36:44.6,6°.78N×73°.15W,h170km, MW3.6,3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**37⇓**	*iP*	Pn	17 37 14.0	-0.5
CAPV				*eS*	Sn	17 37 35.6	-1.8
VIGV	**El Vigia**	**2.71**	**41**	*eP*	Pn	17 37 28.4	-0.8
VIGV				*eS*	Sn	17 38 00.6	-3.3
SOCV	**Socops**	**2.73**	**56**	*eP*	Pn	17 37 28.6	-0.8
SOCV				*eS*	Sn	17 38 00.6	-3.6
ELOV	**Elorza**	**3.65**	**86**	*eP*	Pn	17 37 39.9	-1.0
VIRV	**Villa del Rosa**	**3.78**	**11⇑**	*iP*	Pn	17 37 40.7	-1.9
VIRV				*eS*	Sn	17 38 23.1	-4.7
QARV	**Quebrada Arrib**	**4.29**	**37⇑**	*eP*	Pn	17 37 48.3	-0.8
SANV	**Sanarito**	**4.49**	**53**	*eP*	Pn	17 37 50.2	-1.5
CURV	**Curarigua**	**4.51**	**44**	*eP*	Pn	17 37 50.5	-1.5
DABV	**Dabajuro**	**4.81**	**31**	*eP*	Pn	17 37 54.0	-1.9
TEPV	**Terepaima**	**5.04**	**51**	*eP*	Pn	17 37 57.5	-1.4
SIQV	**Siquisique**	**5.07**	**40⇑**	*iP*	Pn	17 37 57.6	-1.7
BAUV	**El Baul**	**5.50**	**67**	*eP*	Pn	17 38 02.2	-2.8
IMOV	**Isla Los Monje**	**5.98**	**22**	*eP*	Pn	17 38 09.3	-1.9
MONV	**Montecano**	**6.03**	**31**	*eP*	Pn	17 38 10.1	-1.8
CAOV	**Caicara del Or**	**6.80**	**85**	*eP*	Pn	17 38 19.2	-2.9
BIRV	**Birongo**	**7.73**	**61**	*eP*	Pn	17 38 32.4	-2.0
CUPV	**Cepira**	**7.98**	**65**	*eP*	Pn	17 38 36.2	-1.5

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*HLW **14** 17:37:01.3,36°.21N×27°.12E, h33km±32km, Md3.7*
*ATH **14** 17:37:04.3,35°.78N×27°.06E, h32km±1km, MD3.5/14*
*ISCJB **14** 17:37:05.1±0.5,35°.78N±0°.02×27°.05E±0°.03, h26km±5km, Error ellipse: s-maj=4.8km s-min=3.4km az=42.8*
*CSEM **14** 17:37:05.8±0.2,35°.80N×27°.05E, h20km, MD3.5, Error ellipse: s-maj=4.8km s-min=4.2km az=142.0*
*NEIC **14** 17:37:05.0,35°.86N×27°.02E, h10km, ML3.2(ATH), After ATH.*
*ISK **14** 17:37:05.2,35°.93N×27°.04E, h8km, MD3.2*
*DDA **14** 17:37:10.7,36°.12N×27°.64E, h6km±7km, Md3.2*

ISC 14 17:37:04.8±0.5,35°.83N±0°.02×27°.02E±0°.03,h11km±4km, n75,σ1§14/103,2D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**157**	⇓*i*PB	**Pg**	**17 37 11.4**	**+0.5**
KARP				*e*SB	**Sg**	**17 37 16.7**	**+1.8**
KARP	**Karpathos**	**0.30**	**157**	⇓*i*Pb	**Pg**	**17 37 11.4**	**+0.5**
KARP				*e*Sb	**Sg**	**17 37 16.7**	**+1.8**
ZKR	**Zakros**	**0.97**	**223**	*e*PN	**Pg**	**17 37 22.8**	**-0.6**
ZKR	**Zakros**	**0.97**	**223**	*e*Pn	**Pg**	**17 37 22.8**	**-0.6**
ARG	**Arkhangelos**	**0.98**	**66**	*e*PN	**Pg**	**17 37 23.1**	**-0.5**
ARG				*e*SN	**Sg**	**17 37 36.4**	**0.0**
ARG	**Arkhangelos**	**0.98**	**66**	*e*Pn	**Pg**	**17 37 23.1**	**-0.5**
DAT	**Datca**	**1.01**	**26**	*e*PG	**Pg**	**17 37 23.1**	**-1.1**
DAT				*e*SG	**Sg**	**17 37 36.0**	**-1.3**
DAT	**Datca**	**1.01**	**26**	*e*Pg	**Pg**	**17 37 23.1**	**-1.1**
DAT				*e*Sg	**Sg**	**17 37 36.0**	**-1.3**
NPS	**Neapolis**	**1.28**	**244**	*e*PN	**Pn**	**17 37 27.9**	**-0.6**
NPS				*e*SN	**Sn**	**17 37 44.4**	**-1.2**
NPS	**Neapolis**	**1.28**	**244**	*e*Pn	**Pn**	**17 37 27.9**	**-0.6**
NPS				*e*Sn	**Sn**	**17 37 44.4**	**-1.2**
BDRM	**Kayabasi**	**1.28**	**15**	*e*P	**Pn**	**17 37 28.0**	**-0.6**
BDRM				*i* S	**Sb**	**17 37 43.6**	**-1.7**
BDRM	**Kayabasi**	**1.28**	**15**	*e*P	**Pn**	**17 37 28.0**	**-0.6**
BDRM				*i* S	**Sb**	**17 37 43.6**	**-1.8**
LAST	**Lasithi**	**1.42**	**243**	*e*PN	**Pn**	**17 37 29.8**	**-0.7**
LAST				*e*SN	**Sn**	**17 37 48.8**	**-0.3**
LAST	**Lasithi**	**1.42**	**243**	*e*Pn	**Pn**	**17 37 29.8**	**-0.7**
LAST				*e*Sn	**Sn**	**17 37 48.8**	**-0.3**
XRY	**Khrisi**	**1.44**	**229**	*e*PN	**Pn**	**17 37 31.4**	**+0.7**
XRY	**Khrisi**	**1.44**	**229**	*e*Pn	**Pn**	**17 37 31.4**	**+0.7**
MLSB	**Milas**	**1.59**	**22**	*e*PN	**Pn**	**17 37 32.8**	**+0.1**
MLSB	**Milas**	**1.59**	**22**	*e*Pn	**Pn**	**17 37 32.8**	**0.0**
TURN	**Turunc**	**1.65**	**50**	*i* P	**Pn**	**17 37 30.2**	**-3.5**
TURN				*i* S	**Sn**	**17 37 46.9**	**-8.0**
TURN	**Turunc**	**1.65**	**50**	*i* P	**Pn**	**17 37 30.2**	**-3.4**
YER	**Yerkesik**	**1.66**	**38**	*e*PN	**Pn**	**17 37 33.3**	**-0.4**
YER	**Yerkesik**	**1.66**	**38**	*e*Pn	**Pn**	**17 37 33.3**	**-0.4**
APE	**Apeiranthos**	**1.73**	**316**	*e*PN	**Pn**	**17 37 34.8**	**+0.1**
APE				*e*SN	**Sn**	**17 37 56.6**	**-0.1**
APE	**Apeiranthos**	**1.73**	**316**	*e*Pn	**Pn**	**17 37 34.8**	**+0.1**
APE				*e*Sn	**Sn**	**17 37 56.6**	**-0.1**
FETY	**Fethiye**	**1.85**	**64**	*e*PN	**Pn**	**17 37 37.5**	**+1.1**
FETY	**Fethiye**	**1.85**	**64**	*e*Pn	**Pn**	**17 37 37.5**	**+1.1**
SMG	**Samos**	**1.89**	**356**	*e*PB	**Pn**	**17 37 37.4**	**+0.6**
AYDN	**Tasoluk**	**1.96**	**20**	*i* P	**Pg**	**17 37 41.1**	**-1.2**
AYDN				*i* S	**Sn**	**17 38 01.1**	**-1.2**
AYDN	**Tasoluk**	**1.96**	**20**	*i* P	**Pg**	**17 37 41.1**	**-1.2**
AYDN				*i* S	**Sn**	**17 38 01.1**	**-1.3**
SIVA	**Sivas**	**1.98**	**247**	*e*PB	**Pb**	**17 37 39.0**	**-1.7**
SIVA				*e*SN	**Sn**	**17 38 01.7**	**-1.1**
AKAS	**Kas**	**2.13**	**78**	*i* P	**Pn**	**17 37 41.7**	**+1.4**
AKAS				*i* S	**Sn**	**17 38 09.4**	**+2.7**
AKAS	**Kas**	**2.13**	**78**	*i* P	**Pn**	**17 37 41.7**	**+1.4**
AKAS				*i* S	**Sn**	**17 38 09.4**	**+2.6**
VAM	**Vamos**	**2.33**	**260**	*e*PN	**Pn**	**17 37 43.0**	**0.0**
VAM				*e*SB	**Sn**	**17 38 10.5**	**-1.2**
VAM	**Vamos**	**2.33**	**260**	*e*Pn	**Pn**	**17 37 43.0**	**0.0**
VAM				*e*Sb	**Sn**	**17 38 10.5**	**-1.2**
GLHS	**Glhisar (BURDU**	**2.40**	**56**	*e*PN	**Pn**	**17 37 45.2**	**+1.3**
GLHS	**Glhisar (BURDU**	**2.40**	**56**	*e*Pn	**Pn**	**17 37 45.2**	**+1.3**
GOLH	**Golhisar**	**2.48**	**55**	*i* P	**Pn**	**17 37 47.2**	**+2.1**
GOLH				*i* S	**Sg**	**17 38 21.5**	**-3.1**
GOLH	**Golhisar**	**2.48**	**55**	*i* P	**Pn**	**17 37 47.2**	**+2.1**
ELL	**Elmali**	**2.51**	**68**	*e*PN	**Pn**	**17 37 46.5**	**+1.1**
ELL	**Elmali**	**2.51**	**68**	*e*Pn	**Pn**	**17 37 46.5**	**+1.1**
KARN	**Karanos**	**2.56**	**261**	*e*PB	**Pn**	**17 37 47.3**	**+1.1**
KULA	**Kula-Manisa**	**2.99**	**26**	*e*PN	**Pn**	**17 37 53.4**	**+1.4**
KULA	**Kula-Manisa**	**2.99**	**26**	*e*Pn	**Pn**	**17 37 53.4**	**+1.4**
KYTH	**Kithira**	**3.26**	**279**	*e*PN	**Pn**	**17 37 56.5**	**+0.8**
KYTH	**Kithira**	**3.26**	**279**	*e*Pn	**Pn**	**17 37 56.5**	**+0.8**
VLY	**Voula,Athens**	**3.28**	**309**	*e*PN	**Pn**	**17 37 56.7**	**+0.6**
VLY	**Voula,Athens**	**3.28**	**309**	*e*Pn	**Pn**	**17 37 56.7**	**+0.6**
VLI	**Veliai**	**3.42**	**286**	*e*PN	**Pn**	**17 37 58.1**	**+0.2**
VLI				*e*SN	**Sn**	**17 38 37.8**	**-0.6**
VLI	**Veliai**	**3.42**	**286**	*e*Pn	**Pn**	**17 37 58.1**	**+0.2**
VLI				*e*Sn	**Sn**	**17 38 37.8**	**-0.6**
LTK	**Loutraki**	**3.92**	**305**	*e*PN	**Pn**	**17 38 06.0**	**+1.2**
LTK	**Loutraki**	**3.92**	**305**	*e*Pn	**Pn**	**17 38 06.0**	**+1.2**
VLX	**Vlachokerasia**	**4.04**	**294**	*e*PN	**Pn**	**17 38 07.8**	**+1.3**
VLX	**Vlachokerasia**	**4.04**	**294**	*e*Pn	**Pn**	**17 38 07.8**	**+1.3**
GUR	**Goura**	**4.30**	**301**	*e*PN	**Pn**	**17 38 11.8**	**+1.8**
GUR	**Goura**	**4.30**	**301**	*e*Pn	**Pn**	**17 38 11.8**	**+1.8**
ITM	**Ithomi**	**4.32**	**290**	*e*PN	**Pn**	**17 38 10.6**	**+0.3**
ITM	**Ithomi**	**4.32**	**290**	*e*Pn	**Pn**	**17 38 10.6**	**+0.3**
PYL	**PYLOS**	**4.39**	**286**	*e*PN	**Pn**	**17 38 13.0**	**+1.7**
PYL	**PYLOS**	**4.39**	**286**	*e*Pn	**Pn**	**17 38 13.0**	**+1.7**
SLUM		**4.58**	**200**	P	**Pn**	**17 38 13.8**	**-0.1**
	baz=200						
SLUM		**4.58**	**200**	P	**Pn**	**17 38 13.8**	**-0.1**
HMAT	**Matruh**	**4.72**	**179**	P	**Pn**	**17 38 15.9**	**+0.1**
	baz=181						
HMAT				S	**Sn**	**17 39 08.9**	**-1.6**
	baz=181						
HMAT	**Matruh**	**4.72**	**179**	P	**Pn**	**17 38 15.9**	**+0.1**
HMAT				S	**Sn**	**17 39 08.9**	**-1.6**
AGG	**Agios Georgios**	**4.91**	**312**	*e*PN	**Pn**	**17 38 20.2**	**+1.8**
AGG	**Agios Georgios**	**4.91**	**312**	*e*Pn	**Pn**	**17 38 20.2**	**+1.8**
SWA2		**6.70**	**192**	P	**Pn**	**17 38 43.5**	**+0.5**
	baz=192						
SWA2		**6.70**	**192**	P	**Pn**	**17 38 43.4**	**+0.4**
AMAG	**Maghara**	**7.32**	**133**	P	**Pn**	**17 38 50.2**	**-1.4**
	baz=135						
AMAG	**Maghara**	**7.32**	**133**	P	**Pn**	**17 38 50.2**	**-1.4**
SUZ		**7.71**	**139**	P	**Pn**	**17 38 56.0**	**-1.0**
	baz=141						
SUZ		**7.71**	**139**	P	**Pn**	**17 38 56.0**	**-1.0**
HNKL	**Nakhl**	**8.30**	**133**	P	**Pn**	**17 39 03.1**	**-1.8**
	baz=135						
HNKL				S	**Sn**	**17 40 29.6**	**-9.0**
	baz=135						
HNKL	**Nakhl**	**8.30**	**133**	P	**Pn**	**17 39 03.1**	**-1.8**
HNKL				S	**Sn**	**17 40 29.6**	**-9.0**
HFRF	**Wahat Farafira**	**8.72**	**172**	P	**Pn**	**17 39 10.5**	**-0.3**
	baz=173						
HFRF	**Wahat Farafira**	**8.72**	**172**	P	**Pn**	**17 39 10.5**	**-0.3**

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*ISCJB **14** 17:39:06.8±1.3,36°.50N±0°.05×21°.34E±0°.07, h17km±8km, Error ellipse: s-maj=9.5km s-min=7.4km az=145.1*
*NEIC **14** 17:39:06.9,36°.56N×21°.36E, h28km, MD3.5(ATH), After ATH.*
*ATH **14** 17:39:06.9,36°.56N×21°.36E, h28km±2km, MD3.5/11*
*CSEM **14** 17:39:07.7±0.3,36°.52N×21°.41E, h15km, ML3.3/2, Error ellipse: s-maj=7.0km s-min=4.7km az=58.0*
*THE **14** 17:39:09.0,36°.52N×21°.58E, h14km±1km, ML3.3/2, Error ellipse: s-maj=3.0km s-min=1.4km az=91.0*

ISC 14 17:39:07.2±1.2,36°.51N±0°.05×21°.39E±0°.06,h12km±6km, n61,σ0§74/78,1D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**37**	⇓*i*PB	**Pg**	**17 39 17.4**	**+0.8**
PYL				*e*SB	**Sg**	**17 39 23.1**	**+0.1**
PYL	**PYLOS**	**0.48**	**37**	P	**Pg**	**17 39 17.3**	**+0.7**
PYL				S	**Sg**	**17 39 22.1**	**-0.9**
PYL	**PYLOS**	**0.48**	**37**	P	**Pg**	**17 39 17.3**	**+0.7**
PYL				S	**Sg**	**17 39 22.1**	**-0.9**
PYL				*e*Sb	**Sg**	**17 39 23.1**	**+0.1**
ITM	**Ithomi**	**0.80**	**33**	*e*PN	**Pg**	**17 39 22.5**	**-0.1**
ITM				*e*SN	**Sg**	**17 39 33.7**	**+0.7**
ITM	**Ithomi**	**0.80**	**33**	P	**Pg**	**17 39 22.4**	**-0.2**
ITM				S	**Sg**	**17 39 33.5**	**+0.5**
ITM	**Ithomi**	**0.80**	**33**	P	**Pg**	**17 39 22.4**	**-0.2**
ITM				S	**Sg**	**17 39 33.5**	**+0.5**
VLX	**Vlachokerasia**	**1.17**	**43**	*e*PN	**Pn**	**17 39 28.8**	**-0.6**
VLX				*e*SN	**Sn**	**17 39 45.0**	**-0.3**
VLX	**Vlachokerasia**	**1.17**	**43**	P	**Pb**	**17 39 28.7**	**-0.7**
VLX				S	**Sb**	**17 39 44.7**	**+0.2**
VLX	**Vlachokerasia**	**1.17**	**43**	*e*Pn	**Pn**	**17 39 28.8**	**-0.6**
VLX				S	**Sb**	**17 39 44.7**	**+0.2**
VLX				*e*Sn	**Sn**	**17 39 45.0**	**-0.3**
VLI	**Veliai**	**1.27**	**80**	*e*PN	**Pn**	**17 39 31.1**	**+0.4**
VLI				*e*SN	**Sn**	**17 39 48.7**	**+1.1**
VLI	**Veliai**	**1

CASC 14 17:40:05.6±2.3, 12°.94N×88°.91W, h32km±8km, MD3.9, ML3.3, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.67**	**6**	*eP*	Pn	17 40 18.8	-0.1
SNVI				*eS*	Sb	17 40 29.8	+1.9
LFRS	**El Faro**	**0.69**	**348**	⇓*iP*	Pn	17 40 19.2	+0.1
VSM	**San Miguel**	**0.78**	**52**	*eP*	Pn	17 40 20.2	-0.2
SNET	**Serv Nac Est T**	**0.80**	**337**	*eP*	Pn	17 40 20.5	-0.2
BLLM	**Bellamira**	**0.82**	**53**	*eP*	Pn	17 40 20.3	-0.6
BLLM				*eS*	Sn	17 40 33.8	+1.8
BOQS	**Boqueron**	**0.86**	**335**	*eP*	Pn	17 40 22.1	+0.5
BOQS				*eS*	Sn	17 40 34.8	+1.7
CAHU	**Cacacuatique**	**1.07**	**40**	*eP*	Pn	17 40 22.7	-1.6
CNCH	**Conchagua**	**1.10**	**72**	*eP*	Pn	17 40 24.1	-0.6
SBLS	**San Blas**	**1.13**	**322**	*eP*	Pn	17 40 25.7	+0.5
SNJE	**San Jose**	**1.14**	**324**	*eP*	Pn	17 40 25.1	-0.2
SNJE				*eS*	Sn	17 40 41.4	+1.5
RTR	**El Retiro**	**1.19**	**323**	*eP*	Pn	17 40 26.8	+0.8
RBDL	**Robledal**	**1.39**	**327**	*eP*	Pn	17 40 28.1	-0.6
MTO2	**Montecristo 2**	**1.51**	**343**	*eP*	Pn	17 40 28.8	-1.7
IXG	**Ixpaco**	**1.94**	**309**	⇑*eP*	Pn	17 40 36.4	+0.1
TGUH	**Tegucigalpa,Un**	**1.94**	**55**	*eP*	Pn	17 40 34.1	-2.2
TELN	**Telica**	**2.06**	**99**	*eP*	Pn	17 40 38.6	+0.6
NBG	**Las Nubes**	**2.15**	**320**	*eP*	Pn	17 40 40.0	+0.8
CNGN	**Cerro Negro**	**2.20**	**101**	*eP*	Pn	17 40 39.9	-0.1
CNGN				*eS*	Sn	17 41 06.0	-0.1
CNGN				AML	AML	17 41 15.2	
	comp=E,223nm,0.3s						
MIRN	**Miramar**	**2.20**	**103**	*eP*	Pn	17 40 40.2	+0.2
MRL	**Marmol**	**2.24**	**340**	*eP*	Pn	17 40 39.9	-0.6
MOMN	**Momotombo**	**2.37**	**103**	*eP*	Pn	17 40 42.9	+0.6
CSAN		**2.54**	**107**	*eP*	Pn	17 40 45.3	+0.7
TP2	**Tecpan 2**	**2.75**	**312**	*eP*	Pn	17 40 48.8	+1.3
TICN	**Ticuantepe**	**2.77**	**109**	*eP*	Pn	17 40 49.1	+1.4
JTS	**JuntasAbangare**	**4.69**	**124**	*eP*	Pn	17 41 15.6	+1.4

*IDC **14** 17:53:08.2±1.1, 37°.13N×142°.53E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/35, Error ellipse: s-maj=29.7km s-min=20.6km az=79.0*
*ISCJB **14** 17:53:12.0±0.7, 37°.26N±0°.04×142°.23E±0°.06, h33km, mb3.6/5, Error ellipse: s-maj=6.5km s-min=6.3km az=139.0*
*JMA **14** 17:53:12.3±0.2, 37°.30N×142°.14E, h33km, M3.7*
*NEIC **14** 17:53:13.6±0.8, 37°.08N×142°.39E, h35km, mb4.2/1, Error ellipse: s-maj=17.7km s-min=14.1km az=193.0*

ISC 14 17:53:12.5±1.6, 37°.28N±0°.04×142°.17E±0°.06, h25km±11km, n22, σ1§38/32, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.04**	**275**	P	**Pn**	**17 53 30.4**	**-1.1**
JFK				*eS*	**Sb**	**17 53 43.1**	**-1.9**
ONAJ	**Iwakimizuishiy**	**1.11**	**261**	P	**Pn**	**17 53 31.5**	**-1.0**
ONAJ				*eS*	**Sn**	**17 53 45.3**	**-1.7**
JMM	**Marumori**	**1.24**	**299**	P	**Pn**	**17 53 33.4**	**-0.9**
JMM				*eS*	**Sn**	**17 53 48.6**	**-1.7**
JIO	**Ouri**	**1.34**	**331**	P	**Pn**	**17 53 34.7**	**-1.0**
JIO				*eS*	**Sn**	**17 53 50.9**	**-1.8**
JFT	**Otama**	**1.48**	**280**	P	**Pn**	**17 53 37.8**	**+0.2**
JFT				S	**Sn**	**17 53 55.8**	**-0.3**
JOU	**Okura**	**1.61**	**313**	P	**Pn**	**17 53 39.4**	**0.0**
JOU				*eS*	**Sn**	**17 53 59.6**	**+0.2**
JMK	**Ichinoseki**	**1.83**	**336**	P	**Pn**	**17 53 42.4**	**0.0**
JYS	**Shiratake**	**1.92**	**300**	P	**Pn**	**17 53 44.7**	**+1.1**
JYS				*eS*	**Sn**	**17 54 08.8**	**+1.9**
JFY	**Yanaizu**	**1.97**	**275**	P	**Pn**	**17 53 45.2**	**+0.9**
JFY				S	**Sn**	**17 54 08.7**	**+0.5**
JYK	**Kaneyama**	**2.17**	**319**	P	**Pn**	**17 53 47.2**	**+0.1**
MJAR	**Matsushiro Arr**	**3.26**	**258**	Pn	**Pn**	**17 54 04.2**	**+2.2**
	3.6nm,0.3s,baz=90,slow=15,SNR=21						
MAJO	**Matsushiro**	**3.26**	**258**	*eP*	**Pn**	**17 54 03.8**	**+1.7**
MAT	**Matsushiro**	**3.26**	**258**	P	**Pn**	**17 54 04.2**	**+2.1**
MAT				S	**Sn**	**17 54 41.6**	**+1.5**
JHJ	**Hachijo jima 2**	**4.59**	**206**	Pn	**Pn**	**17 54 20.4**	**+0.2**
	13nm,0.3s,baz=233,slow=21,SNR=6.2						
JHJ				Sn	**Sn**	**17 55 10.1**	**-2.7**
	27nm,0.3s,baz=91,slow=24,SNR=3.4						
ASAJ	**Asahikawa**	**6.84**	**3**	Pn	**Pn**	**17 54 53.0**	**+1.9**
	0.4nm,0.3s,baz=307,slow=28,SNR=4.5						
ASAJ				Sn	**Sn**	**17 56 07.0**	**-1.2**
	0.3nm,0.3s,baz=94,slow=19,SNR=2.6						
KSRS	**Korea Array**	**11.34**	**275**	LR	LR	17 59 59.2	
	comp=Z,98nm,18.8s,baz=145,slow=35						
MKAR	**Makanchi Array**	**44.50**	**302**	P	**P**	**18 01 24.1**	**+2.4**
	0.6nm,0.9s,mb3.4,baz=84,slow=9.0,SNR=4.8						
MKAR				LR	LR	18 21 44.3	
	comp=Z,61nm,19.0s,baz=210,slow=38						
KURK	**Kurchatov**	**46.26**	**308**	P	**P**	**18 01 37.8**	**+2.2**
	0.7nm,0.6s,mb3.8,baz=81,slow=7.7,SNR=3.9						
KURK	**Kurchatov**	**46.26**	**308**	*eP*	**P**	**18 01 37.8**	**+2.2**
	2.8nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**57.39**	**189**	P	**P**	**18 02 58.0**	**-0.8**
	0.2nm,0.4s,mb3.5,baz=6.7,slow=22,SNR=10						
ASAR	**Alice Springs**	**61.11**	**189**	P	**P**	**18 03 22.6**	**-1.9**
	0.3nm,0.9s,mb3.4,baz=3.0,slow=5.3,SNR=5.6						
TXAR	**Lajitas Array**	**89.49**	**53**	P	**P**	**18 06 07.0**	**-0.8**
	0.3nm,0.8s,mb3.7,baz=329,slow=3.2,SNR=3.2						

*ISCJB **14** 17:58:54.2±1.2, 33°.4N±0°.1×98°.7E±0°.2, h10km, mb3.5/3, Error ellipse: s-maj=28.8km s-min=16.0km az=153.5*
*IDC **14** 17:58:54.9±1.7, 33°.50N×98°.78E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.2/26, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=48.1km s-min=33.9km az=60.0*

ISC 14 17:58:56.3±1.2, 33°.5N±0°.1×98°.7E±0°.2, h10km, n5, σ0§60/5, mb3.5/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**6.00**	**8**	*eP*	**Pn**	**18 00 25.4**	**+0.4**
GTA				pP		18 00 30.3	
GTA				sP		18 00 33.1	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**18.25**	**322**	P	**Pn**	**18 03 09.2**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=118,slow=12,SNR=3.7						
KSRS	**Korea Array**	**24.08**	**72**	P	**P**	**18 04 11.4**	**-0.4**
	comp=Z,1.3nm,0.7s,mb3.5,baz=263,slow=9.6,SNR=7.3						
WRA	**Warramunga Arr**	**63.06**	**142**	P	**P**	**18 09 23.5**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.8,baz=337,slow=7.7,SNR=8.3						
ASAR	**Alice Springs**	**65.97**	**145**	P	**P**	**18 09 43.5**	**+0.7**
	comp=Z,0.3nm,0.9s,mb3.3,baz=338,slow=6.6,SNR=2.6						

*IDC **14** 18:02:18.1±1.5, 39°.72N×20°.45E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.6/4, MS3.6/1, Ms1 3.6/1, ms1mx2.6/46, Error ellipse: s-maj=62.4km s-min=25.6km az=127.0*
*TIR **14** 18:02:19.1±2.6, 39°.90N×20°.55E, h6km±15km, ML3.2*
*NEIC **14** 18:02:20.7, 39°.60N×20°.35E, h18km, MD3.8(ATH), ML3.1(PDG), After ATH.*
*CSEM **14** 18:02:20.7±0.1, 39°.66N×20°.36E, h5km, ML3.9/8, Error ellipse: s-maj=3.6km s-min=2.5km az=38.0*
*ATH **14** 18:02:20.7, 39°.60N×20°.35E, h18km±1km, MD3.8/16*
*ISCJB **14** 18:02:21.0±0.4, 39°.67N±0°.02×20°.36E±0°.02, h10km±2km, mb3.6/4, Error ellipse: s-maj=3.4km s-min=2.4km az=135.3*
*PDG **14** 18:02:21.3±1.0, 39°.70N×20°.41E, h12km±2km, ML3.1/9, Error ellipse: s-maj=2.0km s-min=2.0km az=0.0*
*THE **14** 18:02:21.5, 39°.60N×20°.30E, h17km±2km, ML3.9/8, Error ellipse: s-maj=4.0km s-min=0.9km az=219.0*
*SKO **14** 18:02:22.1, 39°.63N×20°.37E, h10km, M2.9, ML3.2*

ISC 14 18:02:21.5±0.4, 39°.65N±0°.02×20°.36E±0°.02, h10km±2km, n143, σ1§03/213, mb3.6/4, 13C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.11**	**191**	P	**Pg**	**18 02 23.8**	**-0.5**
IGT				S	**Sg**	**18 02 28.2**	**+1.9**
IGT	**Igoumenitsa**	**0.11**	**191**	P	**Pg**	**18 02 23.8**	**-0.5**
IGT				S	**Sg**	**18 02 28.2**	**+1.9**
SRN	**Sarande**	**0.36**	**310**	*e*PG	**Pg**	**18 02 27.8**	**-0.9**
SRN				*i* SG	**Sg**	**18 02 34.5**	**+0.9**
SRN	**Sarande**	**0.36**	**310**	*e*Pg	**Pg**	**18 02 27.8**	**-0.9**
	SNR=90						
SRN				*i* Sg	**Sg**	**18 02 34.5**	**+0.9**
	SNR=90						
JAN	**Janina**	**0.38**	**88**	*e*PB	**Pg**	**18 02 28.0**	**-1.0**
JAN				*e*SB	**Sg**	**18 02 34.8**	**+0.8**
JAN	**Janina**	**0.38**	**88**	*e*Pb	**Pg**	**18 02 28.0**	**-1.0**
JAN				*e*Sb	**Sg**	**18 02 34.8**	**+0.8**
KEK	**Kerkira**	**0.44**	**279**	*e*PB	**Pg**	**18 02 29.5**	**-0.6**
KEK				*e*SB	**Sg**	**18 02 36.3**	**+0.3**
KEK	**Kerkira**	**0.44**	**279**	P	**Pg**	**18 02 29.4**	**-0.7**
KEK				S	**Sg**	**18 02 36.0**	**0.0**
KEK	**Kerkira**	**0.44**	**279**	*e*Pb	**Pg**	**18 02 29.5**	**-0.6**
KEK				S	**Sg**	**18 02 36.0**	**0.0**
KEK				*e*Sb	**Sg**	**18 02 36.3**	**+0.3**
MEV	**Metsovon**	**0.68**	**78**	P	**Pg**	**18 02 34.0**	**-0.7**
MEV	**Metsovon**	**0.68**	**78**	P	**Pg**	**18 02 34.0**	**-0.7**
KZN	**Kozani**	**1.27**	**58**	*e*PB	**Pn**	**18 02 43.9**	**-1.4**
KZN	**Kozani**	**1.27**	**58**	P	**Pn**	**18 02 44.0**	**-1.3**
KZN				S	**Sb**	**18 03 02.6**	**+0.7**
KZN	**Kozani**	**1.27**	**58**	P	**Pn**	**18 02 44.0**	**-1.3**
KZN				S	**Sb**	**18 03 02.6**	**+0.7**
THL	**Klokotos Trika**	**1.28**	**93**	*e*PN	**Pn**	**18 02 44.3**	**-1.1**
THL				*e*SN	**Sn**	**18 03 03.3**	**+0.7**
THL	**Klokotos Trika**	**1.28**	**93**	P	**Pn**	**18 02 43.6**	**-1.8**
THL				S	**Sb**	**18 03 01.4**	**-0.7**
THL	**Klokotos Trika**	**1.28**	**93**	P	**Pn**	**18 02 43.6**	**-1.8**
THL	**Klokotos Trika**	**1.28**	**93**	*e*Pn	**Pn**	**18 02 44.3**	**-1.1**
THL				S	**Sb**	**18 03 01.4**	**-0.7**
THL				*e*Sn	**Sn**	**18 03 03.3**	**+0.7**
EVR	**Evrytania**	**1.34**	**122**	*e*PN	**Pn**	**18 02 46.0**	**-0.2**
EVR				*e*SN	**Sn**	**18 03 03.4**	**-0.6**
EVR	**Evrytania**	**1.34**	**122**	*e*Pn	**Pn**	**18 02 46.0**	**-0.2**
EVR				*e*Sn	**Sn**	**18 03 03.4**	**-0.6**
FNA	**Florina**	**1.38**	**34**	P	**Pn**	**18 02 45.3**	**-1.5**
FNA				S	**Sb**	**18 03 06.3**	**+1.3**
FNA	**Florina**	**1.38**	**34**	P	**Pn**	**18 02 45.3**	**-1.5**
FNA				S	**Sb**	**18 03 06.3**	**+1.3**
VLS	**Valsamata**	**1.48**	**173**	*e*PN	**Pn**	**18 02 47.3**	**-0.8**
VLS				*e*SN	**Sn**	**18 03 08.7**	**+1.3**
VLS	**Valsamata**	**1.48**	**173**	P	**Pn**	**18 02 47.6**	**-0.5**
VLS				S	**Sn**	**18 03 09.3**	**+1.9**
VLS	**Valsamata**	**1.48**	**173**	P	**Pn**	**18 02 47.6**	**-0.5**
VLS				S	**Sn**	**18 03 09.3**	**+1.9**
VLS	**Valsamata**	**1.48**	**173**	*e*Pn	**Pn**	**18 02 47.3**	**-0.8**
VLS				*e*Sn	**Sn**	**18 03 08.7**	**+1.3**
OHR	**Ohrid**	**1.50**	**13**	*i* Pn	**Pn**	**18 02 48.2**	**-0.3**
OHR				*e*Sg	**Sg**	**18 03 12.2**	**+2.3**
OHR				*e*Lg		18 03 12.4	
	comp=N,221nm,0.8s						
OHR				*e*Lg		18 03 13.1	
	comp=E,356nm,0.5s						
OHR	**Ohrid**	**1.50**	**13**	P	**Pn**	**18 02 47.7**	**-0.8**
OHR	**Ohrid**	**1.50**	**13**	P	**Pn**	**18 02 47.7**	**-0.8**
OHR	**Ohrid**	**1.50**	**13**	*i* Pn	**Pn**	**18 02 48.1**	**-0.4**
OHR				*e*Sg	**Sg**	**18 03 12.1**	**+2.2**
OHR				*e*Lg		18 03 12.3	
	comp=E,221nm,0.8s						
SCTE	**Santa Cesarea**	**1.52**	**287**	*e*PB	**Pn**	**18 02 48.1**	**-0.6**
SCTE	**Santa Cesarea**	**1.52**	**287**	*e*Pb	**Pn**	**18 02 48.1**	**-0.6**
BIA	**Bitola**	**1.56**	**28**	*e*Pg	**Pn**	**18 02 49.2**	**0.0**
BIA				*e*Sg	**Sg**	**18 03 11.5**	**-0.1**
BIA	**Bitola**	**1.56**	**28**	P	**Pn**	**18 02 48.5**	**-0.8**
BIA	**Bitola**	**1.56**	**28**	P	**Pn**	**18 02 48.5**	**-0.8**
BIA	**Bitola**	**1.56**	**28**	*e*Pg	**Pn**	**18 02 49.2**	**-0.1**
BIA				*e*Sg	**Sg**	**18 03 11.5**	**-0.1**
AGG	**Agios Georgios**	**1.65**	**112**	*e*PN	**Pn**	**18 02 51.1**	**+0.6**
AGG	**Agios Georgios**	**1.65**	**112**	P	**Pn**	**18 02 50.7**	**+0.2**
AGG				S	**Sn**	**18 03 11.1**	**-0.6**
AGG	**Agios Georgios**	**1.65**	**112**	P	**Pn**	**18 02 50.7**	**+0.2**
AGG	**Agios Georgios**	**1.65**	**112**	*e*Pn	**Pn**	**18 02 51.1**	**+0.6**
AGG				S	**Sn**	**18 03 11.1**	**-0.6**
LIT	**Litokhoron**	**1.70**	**74**	*e*PB	**Pn**	**18 02 51.0**	**-0.2**
LIT	**Litokhoron**	**1.70**	**74**	P	**Pn**	**18 02 51.2**	**0.0**
LIT				S	**Sn**	**18 03 13.5**	**+0.5**
LIT	**Litokhoron**	**1.70**	**74**	P	**Pn**	**18 02 51.2**	**0.0**
LIT				S	**Sn**	**18 03 13.5**	**+0.5**
EFP	**Efpalio**	**1.71**	**135**	*e*PN	**Pn**	**18 02 53.0**	**+1.7**
EFP	**Efpalio**	**1.71**	**135**	*e*Pn	**Pn**	**18 02 53.0**	**+1.7**
TIR	**Tirane**	**1.74**	**348**	*e*PN	**Pn**	**18 02 53.3**	**+1.5**
TIR	**Tirane**	**1.74**	**348**	*e*Pn	**Pn**	**18 02 53.3**	**+1.5**
RLS	**Riolos of Patr**	**1.80**	**151**	*e*PN	**Pn**	**18 02 52.8**	**+0.2**
RLS	**Riolos of Patr**	**1.80**	**151**	*e*Pn	**Pn**	**18 02 52.8**	**+0.2**
KRUS	**Krusevo**	**1.85**	**21**	*i* Pn	**Pn**	**18 02 53.7**	**+0.4**
KRUS				*e*Sg	**Sg**	**18 03 19.4**	**-1.7**
KRUS	**Krusevo**	**1.85**	**21**	*i* Pn	**Pn**	**18 02 53.6**	**+0.3**
KRUS				*e*Sg	**Sg**	**18 03 19.3**	**-1.7**
XOR	**Xorichti**	**2.21**	**96**	P	**Pn**	**18 02 58.0**	**-0.2**
XOR				S	**Sn**	**18 03 25.4**	**-0.1**
XOR	**Xorichti**	**2.21**	**96**	P	**Pn**	**18 02 58.0**	**-0.2**
XOR				S	**Sn**	**18 03 25.4**	**-0.1**
NEO	**Neokhori**	**2.24**	**98**	*e*Pb	**Pn**	**18 02 58.3**	**-0.3**
NEO				P	**Pb**	**18 03 01.7**	**-0.4**
NEO	**Neokhori**	**2.24**	**98**	*e*Pb	**Pn**	**18 02 58.3**	**-0.3**
LKR	**Lokris**	**2.28**	**115**	*e*PB	**Pn**	**18 02 59.5**	**+0.3**
LKR	**Lokris**	**2.28**	**115**	*e*Pb	**Pn**	**18 02 59.5**	**+0.3**
GUR	**Goura**	**2.30**	**137**	*e*PN	**Pn**	**18 03 00.4**	**+0.9**
GUR	**Goura**	**2.30**	**137**	*e*Pn	**Pn**	**18 03 00.4**	**+0.9**
HORT	**Hortiatis**	**2.31**	**65**	P	**Pn**	**18 02 59.6**	**+0.1**
HORT	**Hortiatis**	**2.31**	**65**	P	**Pn**	**18 02 59.6**	**+0.1**
VAY	**Valandovo**	**2.38**	**44**	*i* Pn	**Pn**	**18 03 00.6**	**+0.1**
VAY	**Valandovo**	**2.38**	**44**	P	**Pn**	**18 03 00.2**	**-0.3**
VAY	**Valandovo**	**2.38**	**44**	P	**Pn**	**18 03 00.2**	**-0.3**
VAY	**Valandovo**	**2.38**	**44**	*i* Pn	**Pn**	**18 03 00.6**	**+0.1**
SKO	**Skopje**	**2.46**	**19**	*i* Pn	**Pn**	**18 03 03.9**	**+2.1**
SKO	**Skopje**	**2.46**	**19**	*i* Pn	**Pn**	**18 03 03.8**	**+2.1**
ULC	**Ulcinj**	**2.46**	**340**	*e*PN	**Pn**	**18 03 01.4**	**-0.3**
ULC	**Ulcinj**	**2.46**	**340**	⇓*i*Pn	**Pn**	**18 03 01.4**	**-0.3**
ULC				*e*Sn	**Sn**	**18 03 32.8**	**+0.9**
ULC	**Ulcinj**	**2.46**	**340**	⇓*i*Pn	**Pn**	**18 03 01.4**	**-0.3**
ULC				*e*Sn	**Sn**	**18 03 32.8**	**+0.9**
STIP	**Stip**	**2.47**	**34**	*i* Pn	**Pn**	**18 03 03.0**	**+1.2**
STIP	**Stip**	**2.47**	**34**	*i* Pn	**Pn**	**18 03 03.0**	**+1.2**
PLG	**Polygyros**	**2.48**	**72**	*e*PN	**Pn**	**18 03 01.8**	**-0.1**
PLG	**Polygyros**	**2.48**	**72**	P	**Pn**	**18 03 01.5**	**-0.4**
PLG	**Polygyros**	**2.48**	**72**	P	**Pn**	**18 03 01.5**	**-0.4**
PLG	**Polygyros**	**2.48**	**72**	*e*Pn	**Pn**	**18 03 01.8**	**-0.1**
PAIG	**Paliouri**	**2.57**	**83**	P	**Pn**	**18 03 02.2**	**-1.0**
PAIG	**Paliouri**	**2.57**	**83**	P	**Pn**	**18 03 02.2**	**-1.0**
SOH	**Sokhos**	**2.58**	**62**	*e*PN	**Pn**	**18 03 03.9**	**+0.7**
SOH	**Sokhos**	**2.58**	**62**	P	**Pn**	**18 03 02.2**	**-1.0**
SOH	**Sokhos**	**2.58**	**62**	P	**Pn**	**18 03 02.2**	**-1.0**
SOH	**Sokhos**	**2.58**	**62**	*e*Pn	**Pn**	**18 03 03.9**	**+0.7**
LTK	**Loutraki**	**2.60**	**128**	*e*PB	**Pn**	**18 03 04.5**	**+0.9**
LTK	**Loutraki**	**2.60**	**128**	*e*Pb	**Pn**	**18 03 04.5**	**+0.9**
BCI	**Bajram Curri**	**2.73**	**355**	*e*PG	**Pn**	**18 03 06.5**	**+1.2**
TIP	**Timpagrande**	**2.83**	**262**	P	**Pn**	**18 03 06.7**	**0.0**
TIP	**Timpagrande**	**2.83**	**262**	P	**Pn**	**18 03 06.7**	**0.0**
OUR	**Ouranopolis**	**2.87**	**75**	P	**Pn**	**18 03 06.9**	**-0.3**
OUR	**Ouranopolis**	**2.87**	**75**	P	**Pn**	**18 03 06.9**	**-0.3**
BUM	**Brajici-Budva**	**2.88**	**338**	*e*PN	**Pn**	**18 03 06.6**	**-0.8**
BUM				*i* SN	**Sn**	**18 03 42.9**	**+0.9**
BUM	**Brajici-Budva**	**2.88**	**338**	⇑*i*Pn	**Pn**	**18 03 06.6**	**-0.8**
BUM				*e*Sn	**Sn**	**18 03 42.9**	**+0.9**
BUM	**Brajici-Budva**	**2.88**	**338**	⇑*i*Pn	**Pn**	**18 03 06.6**	**-0.8**
BUM				*e*Sn	**Sn**	**18 03 42.9**	**+0.9**
PDG	**Podgorica**	**2.90**	**344**	*e*PN	**Pn**	**18 03 07.4**	**-0.4**
PDG				*i* SN	**Sn**	**18 03 43.4**	**+0.7**
PDG	**Podgorica**	**2.90**	**344**	⇓*i*Pn	**Pn**	**18 03 07.4**	**-0.4**
PDG				*e*Sn	**Sn**	**18 03 43.4**	**+0.7**
TTG	**Podgorica**	**2.90**	**344**	⇓*i*Pn	**Pn**	**18 03 07.4**	**-0.4**
TTG				*e*Sn	**Sn**	**18 03 43.4**	**+0.7**
TTG	**Podgorica**	**2.90**	**344**	⇓*i*Pn	**Pn**	**18 03 07.4**	**-0.4**
TTG				*e*Sn	**Sn**	**18 03 43.4**	**+0.7**
PVY	**Plav**	**2.96**	**354**	*e*PN	**Pn**	**18 03 09.1**	**+0.5**
PVY				*i* SN	**Sn**	**18 03 45.0**	**+0.9**
PVY	**Plav**	**2.96**	**354**	⇑*i*Pn	**Pn**	**18 03 09.1**	**+0.5**
PVY				*e*Sn	**Sn**	**18 03 45.0**	**+0.9**
PVY	**Plav**	**2.96**	**354**	⇑*i*Pn	**Pn**	**18 03 09.1**	**+0.5**
PVY				*e*Sn	**Sn**	**18 03 45.0**	**+0.9**
HCY	**Herceg Novi**	**3.13**	**334**	*e*PN	**Pn**	**18 03 10.8**	**-0.1**
HCY				*i* SN	**Sn**	**18 03 49.1**	**+0.7**
HCY	**Herceg Novi**	**3.13**	**334**	⇑*i*Pn	**Pn**	**18 03 10.8**	**-0.1**
HCY				*e*Sn	**Sn**	**18 03 49.1**	**+0.7**
HCY	**Herceg Novi**	**3.13**	**334**	⇑*i*Pn	**Pn**	**18 03 10.8**	**-0.1**
HCY				*e*Sn	**Sn**	**18 03 49.1**	**+0.7**
NVR	**Nevrokopi**	**3.17**	**56**	*e*PN	**Pn**	**18 03 10.8**	**-0.6**
NVR	**Nevrokopi**	**3.17**	**56**	*e*Pn	**Pn**	**18 03 10.8**	**-0.6**
VLY	**Voula,Athens**	**3.23**	**123**	P	**Pn**	**18 03 14.1**	**+1.9**
VLY	**Voula,Athens**	**3.23**	**123**	P	**Pn**	**18 03 14.1**	**+1.9**
BEY	**Berane**	**3.24**	**354**	*e*PN	**Pn**	**18 03 12.4**	**0.0**
BEY	**Berane**	**3.24**	**354**	⇑*i*Pn	**Pn**	**18 03 12.4**	**0.0**
BEY				*e*Sn	**Sn**	**18 03 51.8**	**+0.8**
IVA	**Berane**	**3.24**	**354**	⇑*i*Pn	**Pn**	**18 03 12.4**	**0.0**
IVA				*e*Sn	**Sn**	**18 03 51.8**	**+0.8**
IVA	**Berane**	**3.24**	**354**	⇑*i*Pn	**Pn**	**18 03 12.4**	**0.0**
IVA				*e*Sn	**Sn**	**18 03 51.8**	**+0.8**
NKY	**Niksic**	**3.33**	**342**	*e*PN	**Pn**	**18 03 13.3**	**-0.3**
NKY				*i* SN	**Sn**	**18 03 54.0**	**+0.9**
NKY	**Niksic**	**3.33**	**342**	⇓*i*Pn	**Pn**	**18 03 13.3**	**-0.3**
NKY				*e*Sn	**Sn**	**18 03 54.0**	**+0.9**
NKY	**Niksic**	**3.33**	**342**	⇓*i*Pn	**Pn**	**18 03 13.3**	**-0.3**
NKY				*e*Sn	**Sn**	**18 03 54.0**	**+0.9**
BARS	**Barje**	**3.35**	**19**	⇓*i*Pn	**Pn**	**18 03 14.1**	**+0.2**
BRY	**Bratogost**	**3.53**	**338**	*e*PN	**Pn**	**18 03 16.3**	**-0.1**
BRY				*i* SN	**Sn**	**18 03 59.0**	**+0.9**
BRY	**Bratogost**	**3.53**	**338**	⇑*i*Pn	**Pn**	**18 03 16.3**	**-0.1**
BRY				*e*Sn	**Sn**	**18 03 59.0**	**+0.9**
BRY	**Bratogost**	**3.53**	**338**	⇑*i*Pn	**Pn**	**18 03 16.3**	**-0.1**
BRY				*e*Sn	**Sn**	**18 03 59.0**	**+0.9**
UPM	**Unac-Piva**	**3.72**	**343**	⇓*i*Pn	**Pn**	**18 03 19.1**	**+0.1**
UPM				*e*Sn	**Sn**	**18 04 02.6**	**-0.2**
UPM	**Unac-Piva**	**3.72**	**343**	⇓*i*Pn	**Pn**	**18 03 19.1**	**+0.1**
UPM				*e*Sn	**Sn**	**18 04 02.6**	**-0.2**
LIA	**Limnos Island**	**3.72**	**85**	*e*PN	**Pn**	**18 03 19.2**	**+0.2**
LIA	**Limnos Island**	**3.72**	**85**	*e*Pn	**Pn**	**18 03 19.2**	**+0.2**
PLE	**Pljevlja**	**3.75**	**349**	⇓*i*Pn	**Pn**	**18 03 19.0**	**-0.4**
PLE				*e*Sn	**Sn**	**18 04 04.3**	**+0.7**
PLE	**Pljevlja**	**3.75**	**349**	⇓*i*Pn	**Pn**	**18 03 19.0**	**-0.4**
PLE				*e*Sn	**Sn**	**18 04 04.3**	**+0.7**
STON	**Ston**	**3.80**	**329**	*e*Pn	**Pn**	**18 03 18.1**	**-2.0**
STON				Sn	**Sn**	**18 04 01.4**	**-3.4**
STON	**Ston**	**3.80**	**329**	*e*Pn	**Pn**	**18 03 18.1**	**-1.9**
STON				Sn	**Sn**	**18 04 01.3**	**-3.4**
RDO	**Rodhopi**	**4.23**	**68**	*e*PN	**Pn**	**18 03 26.5**	**+0.6**
RDO	**Rodhopi**	**4.23**	**68**	*e*Pn	**Pn**	**18 03 26.5**	**+0.6**
BBLS	**Lazići**	**4.28**	**351**	*i* Pn	**Pn**	**18 03 29.4**	**+2.8**
DIVS	**Divibare**	**4.46**	**357**	*i* Pn	**Pn**	**18 03 28.5**	**-0.6**
DIVS				*i* Sn	**Sn**	**18 04 18.7**	**-2.3**
ALN	**Alexandroupoli**	**4.52**	**72**	*e*PN	**Pn**	**18 03 29.9**	**-0.1**
ALN	**Alexandroupoli**	**4.52**	**72**	*e*Pn	**Pn**	**18 03 29.9**	**-0.1**
KARN	**Karanos**	**5.09**	**145**	*e*

mb1 3.8/10, mb1mx3.6/28, mbtmp3.7/10, ML3.0/1, Error ellipse: s-maj=40.0km s-min=16.6km az=56.0
*NEIC **14** 18:35:30.2±0.7, 31°.46N×103°.89E, h10km, mb4.3/1, Error ellipse: s-maj=23.4km s-min=9.9km az=49.0*
*BJI **14** 18:35:31.2, 31°.37N×104°.03E, h13km, mb3.9/1, ML3.8/18, Ms3.4/3, Ms7 3.3/2*
ISC 14 18:35:29.5±0.4, 31°.49N±0°.04×104°.14E±0°.05, h10km, n20, σ1§07/27, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.66**	**210**	Pg	**Pg**	**18 35 41.6**	**-0.7**
CD2				Sg	**Sg**	**18 35 49.5**	**-1.4**
CD2				smax			
	comp=N,8μm,0.7s						
LZH	**Lanzhou**	**4.60**	**357**	*e*Pg	**Pg**	**18 36 53.9**	**-3.6**
LZH				Sg	**Sg**	**18 37 51.8**	**-5.3**
LZH				smax			
	comp=N,91nm,1.0s						
LZH				smax			
	comp=E,88nm,1.0s						
ENH	**Enshi**	**4.75**	**103**	*e*P	**Pn**	**18 36 46.3**	**+5.0**
XAN	**Xi'an**	**4.77**	**56**	Pn	**Pb**	**18 36 49.8**	**-3.3**
XAN				Pg	**Pg**	**18 36 59.0**	**-1.8**
XAN				Sn	**Sb**	**18 37 49.1**	**-1.5**
XAN				Sg	**Sg**	**18 38 04.0**	**+1.4**
XAN				smax			
	comp=N,210nm,0.8s						
XAN				smax			
	comp=E,81nm,0.7s						
GYA	**Guiyang**	**5.47**	**156**	Pn	**Pn**	**18 36 55.9**	**+4.8**
GYA				Sn	**Sn**	**18 37 54.9**	**+0.7**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,120nm,0.9s						
KMI	**Kunming**	**6.46**	**191**	Pn	**Pn**	**18 37 04.8**	**+0.2**
KMI				Sn	**Sn**	**18 38 13.8**	**-4.6**
KMI				smax			
	comp=N,34nm,1.7s						
KMI				smax			
	comp=E,26nm,1.9s						
KMI				LR	LR		
	comp=N,380nm,7.2s						
KMI				LR	LR		
	comp=E,550nm,8.4s						
SONM	**Songino Array**	**16.42**	**5**	Pn	**Pn**	**18 39 20.9**	**+1.0**
	comp=E,0.1nm,0.3s,baz=179,slow=13,SNR=3.6						
KSRS	**Korea Array**	**20.47**	**67**	P	**P**	**18 40 06.8**	**-0.5**
	comp=E,1.1nm,0.7s,baz=260,slow=11,SNR=5.0						
MK31	**Makanchi Array**	**22.71**	**319**	*e*P	**P**	**18 40 32.1**	**+0.8**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**18 40 31.8**	**+0.5**
	comp=E,1.1nm,0.8s,mb3.4,baz=116,slow=12,SNR=12						
ZAA0	**Zalesovo Array**	**26.39**	**334**	*e*P	**P**	**18 41 06.5**	**+0.6**
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**18 41 06.2**	**+0.3**
	comp=E,1.6nm,0.6s,mb3.7,baz=131,slow=8.1,SNR=9.4						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**18 41 11.4**	**+0.3**
	comp=E,1.4nm,0.8s,mb3.5,baz=128,slow=9.3,SNR=10						
KURK	**Kurchatov**	**26.96**	**323**	*e*P	**P**	**18 41 11.2**	**+0.1**
ARCES	**ARCESS Array B**	**56.92**	**336**	P	**P**	**18 45 13.1**	**-1.3**
	comp=E,1.6nm,0.8s,mb4.1,baz=74,slow=8.9,SNR=3.7						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**18 45 16.6**	**-0.3**
	comp=E,2.1nm,1.0s,mb4.1,baz=79,slow=8.6,SNR=1.8						
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**18 45 29.9**	**+2.1**
	comp=E,2.2nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**58.77**	**146**	P	**P**	**18 45 28.5**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.9,baz=338,slow=7.7,SNR=16						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**18 45 49.2**	**+0.6**
	comp=E,0.3nm,0.5s,mb3.7,baz=331,slow=6.7,SNR=9.1						
YKA	**Yellowknife Ar**	**81.32**	**17**	P	**P**	**18 47 45.3**	**-0.4**
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=5.1,SNR=3.7						

*BJI **14** 18:37:10.9, 31°.35N×104°.06E, h15km, mb4.0/2, ML4.1/7, Ms3.9/2, Ms7 3.5/2*
*ISCJB **14** 18:37:12.8±1.2, 31°.28N±0°.05×104°.0E±0°.1, h11km±8km, mb3.9/6, MS3.1/6, Error ellipse: s-maj=17.1km s-min=8.7km az=3.9*
*IDC **14** 18:37:12.3±1.1, 31°.13N×103°.65E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/26, mbtmp3.8/7, ML3.3/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/38, Error ellipse: s-maj=40.4km s-min=18.7km az=54.0*
*NEIC **14** 18:37:14.4±0.6, 31°.21N×103°.86E, h10km, mb4.2/2, Error ellipse: s-maj=27.8km s-min=10.5km az=59.0*
ISC 14 18:37:15.2±1.0, 31°.24N±0°.05×103°.8E±0°.1, h14km±7km, n19, σ0§83/17, mb3.9/6, MS3.1/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**190**	Pg	**Pg**	**18 37 21.0**	**-1.0**
CD2				Sg	**Sg**	**18 37 27.6**	**+1.0**
CD2				smax			
	comp=N,18μm,0.7s						
LZH	**Lanzhou**	**4.83**	**0**	*e*Pg	**Pg**	**18 38 47.5**	**-0.2**
LZH				Sg	**Sg**	**18 39 44.5**	**-5.8**
LZH				smax			
	comp=N,66nm,0.9s						
LZH				smax			
	comp=E,140nm,1.0s						
SONM	**Songino Array**	**16.69**	**6**	Pn	**Pn**	**18 41 08.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=9.2						
SONM				LR	LR	18 48 15.4	
	comp=E,89nm,19.7s,baz=284,slow=39						
KSRS	**Korea Array**	**20.81**	**66**	P	**P**	**18 41 57.0**	**+0.9**
	comp=E,3.5nm,0.7s,baz=261,slow=10.0,SNR=12						
KSRS				LR	LR	18 50 02.6	
	comp=E,26nm,21.2s,MS2.6,baz=140,slow=37						
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**18 42 15.8**	**-0.7**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**18 42 15.6**	**-0.9**
	comp=E,3.4nm,1.0s,mb3.7,baz=122,slow=12,SNR=11						
AAK	**Ala-Archa**	**25.93**	**304**	LR	LR	18 54 22.4	
	comp=E,55nm,18.1s,MS3.1,baz=315,slow=40						
AAK	**Ala-Archa**	**25.93**	**304**	P	**P**	**18 42 47.9**	**+1.0**
ZAA0	**Zalesovo Array**	**26.50**	**334**	*e*P	**P**	**18 42 53.5**	**+1.7**
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**18 42 51.9**	**0.0**
	comp=E,2.2nm,0.9s,mb3.7,baz=146,slow=11,SNR=5.9						
ZALV				LR	LR	18 53 54.3	
	comp=E,34nm,20.7s,MS2.9,baz=228,slow=38						
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**18 42 51.9**	**0.0**
ZALV				LR	LR	18 53 54.3	
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**18 42 55.3**	**-1.1**
	comp=E,1.6nm,0.8s,mb3.6,baz=128,slow=9.4,SNR=9.8						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**18 42 57.4**	**+1.0**
	comp=E,3.3nm,1.0s,mb3.8						
MJAR	**Matsushiro Arr**	**28.93**	**70**	LR	LR	18 54 15.1	
	comp=E,71nm,18.5s,MS3.3,baz=280,slow=35						
JHJ	**Hachijo jima 2**	**30.40**	**77**	LR	LR	18 57 20.3	
	comp=E,129nm,18.6s,MS3.6,baz=124,slow=40						
PETK	**Petropavlovsk-**	**44.26**	**44**	LR	LR	19 05 05.0	
	comp=E,25nm,18.6s,MS3.2,baz=42,slow=38						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**18 47 12.6**	**0.0**
	comp=E,3.5nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**18 47 11.9**	**-0.6**
	comp=E,0.8nm,0.7s,mb3.9,baz=338,slow=7.6,SNR=6.6						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**18 47 32.4**	**-0.7**
	comp=E,0.4nm,0.6s,mb3.7,baz=334,slow=6.1,SNR=5.2						

*ISCJB **14** 18:37:54.8±0.8, 31°.9N±0°.1×104°.06E±0°.08, h10km, mb3.6/9, Error ellipse: s-maj=14.6km s-min=10.2km az=176.0*
*IDC **14** 18:37:55.4±1.0, 31°.96N×103°.99E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.2/1, Error ellipse: s-maj=38.0km s-min=18.6km az=52.0*
*NEIC **14** 18:37:56.8±0.7, 31°.93N×103°.99E, h10km, mb3.7/1, Error ellipse: s-maj=24.2km s-min=12.8km az=63.0*
ISC 14 18:37:57.0±0.8, 32°.0N±0°.1×104°.03E±0°.08, h10km, n15, σ0§83/16, mb3.6/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.61**	**62**	Pg	**Pn**	**18 39 10.8**	**+4.2**
XAN				Sg	**Sn**	**18 39 59.8**	**-0.4**
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,55nm,0.8s						
SONM	**Songino Array**	**15.96**	**6**	Pn	**Pn**	**18 41 43.5**	**+2.1**
	comp=E,0.1nm,0.3s,baz=168,slow=7.6,SNR=5.1						
KSRS	**Korea Array**	**20.37**	**68**	P	**P**	**18 42 34.2**	**+0.5**
	comp=E,0.7nm,0.5s,baz=253,slow=9.9,SNR=1.2						
MKAR	**Makanchi Array**	**22.30**	**318**	P	**P**	**18 42 53.8**	**-0.6**
	comp=E,1.0nm,0.9s,mb3.3,baz=115,slow=9.7,SNR=2.4						
ZAA0	**Zalesovo Array**	**25.93**	**334**	*e*P	**P**	**18 43 29.1**	**0.0**
ZALV	**Zalesovo Beam**	**25.93**	**334**	P	**P**	**18 43 29.5**	**+0.4**
	comp=E,1.0nm,0.5s,mb3.6,baz=133,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**25.93**	**334**	P	**P**	**18 43 29.5**	**+0.4**
KURK	**Kurchatov**	**26.53**	**322**	P	**P**	**18 43 34.9**	**+0.2**
	comp=E,0.7nm,0.7s,mb3.3,baz=120,slow=11,SNR=2.4						
KURK	**Kurchatov**	**26.53**	**322**	P	**P**	**18 43 34.9**	**+0.2**
TIXI	**Tiksi**	**41.93**	**11**	*e*P	**P**	**18 45 46.1**	**-1.2**
	comp=E,0.7nm,0.5s,mb3.5						
BRTR	**Keskin Array B**	**56.27**	**299**	P	**P**	**18 47 37.9**	**+0.3**
	comp=E,0.5nm,0.8s,mb3.6,baz=113,slow=3.3,SNR=2.9						
FINES	**FINESS Array B**	**56.82**	**326**	P	**P**	**18 47 40.8**	**-0.5**
	comp=E,0.9nm,0.5s,mb4.1,baz=63,slow=5.1,SNR=5.6						
WRA	**Warramunga Arr**	**59.22**	**146**	P	**P**	**18 47 59.2**	**+0.7**
	comp=E,1.1nm,1.0s,mb3.9,baz=326,slow=9.1,SNR=5.2						
ASAR	**Alice Springs**	**62.26**	**149**	P	**P**	**18 48 19.0**	**-0.1**
	comp=E,0.4nm,0.6s,mb3.8,baz=337,slow=6.6,SNR=6.0						
YKA	**Yellowknife Ar**	**80.90**	**17**	P	**P**	**18 50 09.7**	**-1.2**
	comp=E,0.3nm,0.5s,mb3.5,baz=330,slow=5.3,SNR=4.8						

IDC 14 18:44:37.5±5.5, 16°.46S×173°.17W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/18, mbtmp3.8/4, ML1.6/1, Error ellipse: s-maj=224.4km s-min=28.8km az=134.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.87**	**28**	Pn	Pn	18 45 23.6	-0.9
	4.9nm,0.3s,baz=35,slow=21,SNR=6.2						
AFI				Sn	Sn	18 45 51.4	-8.3
	33nm,0.3s,baz=46,slow=21,SNR=13						
STKA	**Stephens Creek**	**43.71**	**241**	P	P	18 52 43.9	-0.6
	1.9nm,0.8s,baz=90,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**49.82**	**258**	P	P	18 53 32.3	-0.3
	0.5nm,0.7s,baz=96,slow=6.3,SNR=7.0						
ASAR	**Alice Springs**	**50.00**	**253**	P	P	18 53 33.9	0.0
	2.0nm,0.7s,baz=87,slow=8.5,SNR=30						
BRTR	**Keskin Array B**	**147.11**	**320**	PKPbc	PKPbc	19 04 23.2	+0.6
	0.7nm,0.8s,baz=110,slow=2.1,SNR=4.8						

*ISCJB **14** 18:47:25.7±0.7, 8°.5S±0°.1×108°.59E±0°.04, h89km±11km, mb3.5/3, Error ellipse: s-maj=17.1km s-min=5.5km az=13.4*
*DJA **14** 18:47:27, 8°.42S×108°.60E, h62km, MLv4.0/8*
*IDC **14** 18:47:35.7±2.3, 9°.64S×110°.40E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, Error ellipse: s-maj=132.1km s-min=20.7km az=50.0*
ISC 14 18:47:26.9±0.7, 8°.5S±0°.1×108°.59E±0°.04, h83km±12km, n14, σ0§84/19, mb3.5/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.69**	**348**	P	**Pn**	**18 47 43.2**	**+0.4**
CMJI				S	**Sn**	**18 47 54.1**	**-0.4**
LEM	**Lembang**	**1.90**	**329**	P	**Pn**	**18 47 59.2**	**+1.7**
LEM				S	**Sn**	**18 48 20.4**	**-0.4**
UGM	**Wanagama**	**1.99**	**74**	P	**Pn**	**18 47 59.1**	**+0.4**
UGM				S	**Sn**	**18 48 22.3**	**-0.7**
PCJI	**Pacitan**	**2.57**	**84**	P	**Pn**	**18 48 07.7**	**+1.2**
PCJI				S	**Sn**	**18 48 36.5**	**-0.5**
DBJI	**Dramaga**	**2.64**	**316**	P	**Pn**	**18 48 08.1**	**+0.7**
DBJI				S	**Sn**	**18 48 38.8**	**+0.2**
PWJI	**Pagerwojo**	**3.21**	**82**	P	**Pn**	**18 48 15.5**	**+0.4**
PWJI				S	**Sn**	**18 48 51.0**	**-1.4**
SJI	**Sawahan**	**3.23**	**77**	P	**Pn**	**18 48 16.7**	**+1.3**
CGJI	**Cibinong**	**3.42**	**302**	P	**Pn**	**18 48 18.1**	**+0.2**
CGJI				S	**Sn**	**18 48 55.5**	**-1.9**
XMIS	**Christmas Isla**	**3.52**	**235**	P	**Pn**	**18 48 18.9**	**-0.5**
WRA	**Warramunga Arr**	**27.39**	**117**	P	**P**	**18 53 04.3**	**-0.5**
	0.1nm,0.3s,mb2.8,baz=288,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**28.56**	**125**	P	**P**	**18 53 15.1**	**-0.1**
	0.4nm,0.7s,mb3.2,baz=309,slow=9.3,SNR=4.4						
STKA	**Stephens Creek**	**38.49**	**132**	P	**P**	**18 54 41.1**	**-0.1**
	2.7nm,0.4s,mb4.4,baz=315,slow=8.0,SNR=13						
MKAR	**Makanchi Array**	**59.80**	**339**	P	sP	18 57 55.2	+1.7
	0.4nm,0.5s,baz=114,slow=9.2,SNR=4.7						
KURK	**Kurchatov**	**64.41**	**339**	P	sP	18 58 23.9	-0.6
	0.7nm,0.6s,baz=125,slow=6.3,SNR=6.1						

MAN 14 18:48:52, 7°.45N×126°.41E, h30km, mb4.2, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.53**	**197**	*e*P	Pb	18 49 04.5	+1.6
MATI				*e*S	Sb	18 49 13.8	+3.5
DMPH	**Davao City--Mi**	**0.97**	**248**	||*P*	Pn	18 49 10.4	+0.8
DMPH				*|S*	Sn	18 49 31.5	+9.1
BUKP	**Musuan**	**1.40**	**288**	*e*P	Pn	18 49 16.4	+0.8
BUKP				*e*S	Sn	18 49 29.2	-3.9

*ISCJB **14** 18:49:59.4±0.4, 32°.25N±0°.05×104°.64E±0°.08, h10km, mb3.8/11, Error ellipse: s-maj=10.1km s-min=5.8km az=152.7*
*IDC **14** 18:49:59.2±1.1, 32°.08N×104°.50E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.0/2, Error ellipse: s-maj=40.9km s-min=20.6km az=48.0*
*NEIC **14** 18:50:00.2±0.5, 31°.95N×104°.45E, h10km, mb3.9/1, Error ellipse: s-maj=19.2km s-min=8.1km az=46.0*
*BJI **14** 18:50:00.2, 32°.00N×104°.65E, h12km, ML3.7/8, Ms3.7/2, Ms7 3.2/3*
ISC 14 18:50:01.4±0.5, 32°.27N±0°.04×104°.65E±0°.07, h10km, n24, σ0§99/29, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.86**	**350**	*e*Pn	**Pb**	**18 51 06.6**	**-3.0**
LZH				Pg	**Pg**	**18 51 14.1**	**-1.3**
LZH				Sn	**Sn**	**18 51 51.0**	**+4.8**
LZH				Sg	**Sg**	**18 52 06.0**	**+0.6**
LZH				smax			
	comp=N,420nm,0.7s						
LZH				smax			
	comp=E,330nm,0.9s						
LZH				LR	LR		
	comp=N,780nm,5.1s						
LZH				LR	LR		
	comp=Z,1μm,5.8s						
XAN	**Xi'an**	**3.99**	**63**	Pn	**Pn**	**18 51 01.9**	**-0.7**
XAN				Pg	**Pb**	**18 51 12.5**	**+0.7**
XAN				Sg	**Sb**	**18 52 03.6**	**+3.4**
XAN				smax			
	comp=N,190nm,0.8s						
XAN				smax			
	comp=E,75nm,0.8s						
ENH	**Enshi**	**4.60**	**114**	*e*Pn	**Pn**	**18 51 10.1**	**-0.9**
GYA	**Guiyang**	**6.06**	**163**	Pg	**Pb**	**18 51 41.8**	**-5.2**
GYA				Sn	**Sn**	**18 52 41.9**	**+1.5**
GYA				smax			
	comp=N,40nm,0.9s						
GYA				smax			
	comp=E,40nm,0.8s						
GTA	**Gaotai**	**8.13**	**332**	*e*P	Px	18 52 38.8	
GTA				pP		18 52 43.6	
GTA				sP		18 52 47.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**15.60**	**4**	Pn	**Pn**	**18 53 45.3**	**+4.1**
	comp=Z,0.0nm,0.3s,baz=189,slow=11,SNR=1.8						
KSRS	**Korea Array**	**19.77**	**68**	P	**Pn**	**18 54 32.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=258,slow=10,SNR=3.2						
MK31	**Makanchi Array**	**22.42**	**317**	*e*P	**P**	**18 54 59.9**	**-0.3**
MKAR	**Makanchi Array**	**22.42**	**317**	P	**P**	**18 55 00.9**	**+0.8**
	comp=Z,0.5nm,0.4s,mb3.3,baz=116,slow=12,SNR=14						
ZAA0	**Zalesovo Array**	**25.89**	**333**	*e*P	**P**	**18 55 33.9**	**+0.7**
ZALV	**Zalesovo Beam**	**25.89**	**333**	P	**P**	**18 55 33.8**	**+0.7**
	comp=Z,3.1nm,0.6s,mb4.0,baz=131,slow=11,SNR=13						
KURK	**Kurchatov**	**26.61**	**321**	P	**P**	**18 55 40.5**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.2,baz=122,slow=11,SNR=7.2						
ABKAR	**Akbulak array**	**37.26**	**310**	*e*P	**P**	**18 57 13.2**	**+0.1**
	comp=Z,1.2nm,0.4s,mb4.1						
ARCES	**ARCESS Array B**	**56.39**	**335**	P	**P**	**18 59 42.5**	**+0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=72,slow=7.9,SNR=9.6						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**18 59 45.4**	**-0.5**
	comp=Z,1.1nm,0.5s,mb4.1,baz=76,slow=8.0,SNR=7.7						
AKASG	**Malin Array Be**	**56.93**	**313**	P	**P**	**18 59 45.4**	**-1.2**
	comp=Z,0.6nm,0.4s,mb4.0,baz=66,slow=7.1,SNR=3.2						
WRAB	**Tennant Creek**	**59.19**	**147**	*e*P	**P**	**18 59 59.6**	**-3.1**
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**19 00 22.7**	**-0.8**
	comp=Z,0.3nm,0.7s,mb3.5,baz=334,slow=6.3,SNR=8.0						
CDF	**Champ du Feu**	**71.11**	**316**	*e*P	**P**	**19 01 19.9**	**+0.1**
LPG	**La Plagne**	**72.79**	**313**	*e*P	**P**	**19 01 30.6**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.3						
LPL	**La Plagne**	**72.79**	**313**	*e*P	**P**	**19 01 30.4**	**+0.4**
	comp=Z,3.0nm,0.5s,mb4.2						
SMF	**Signal de Mont**	**74.00**	**315**	*e*P	**P**	**19 01 36.5**	**-0.6**
TCF	**Toulx Ste Croi**	**75.15**	**316**	*e*P	**P**	**19 01 45.1**	**+1.3**
YKA	**Yellowknife Ar**	**80.44**	**17**	P	**P**	**19 02 13.2**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.1,SNR=5.6						

*CRAAG **14** 18:52:17.3, 34°.78N×3°.37E, Ml4.0*
*IDC **14** 18:52:17.9±1.0, 34°.88N×3°.43E, h0km, mb3.4/8, mb1 3.6/12, mb1mx3.5/32, mbtmp3.5/12, ML3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/33, Error ellipse: s-maj=24.0km s-min=16.3km az=165.0*
*NEIC **14** 18:52:19.1, 34°.83N×3°.42E, h0km, MG4.1(MDD), After MDD.*
*CSEM **14** 18:52:21.4±0.3, 35°.02N×3°.27E, h5km, ML4.0, Error ellipse: s-maj=8.3km s-min=4.6km az=171.0*
*MDD **14** 18:52:22.7±0.9, 35°.02N×3°.32E, h0km, mb4.1/5, Error ellipse: s-maj=11.1km s-min=6.1km az=172.0, PRIMO*
ISC 14 18:52:20.7±0.8, 35°.01N±0°.04×3°.38E±0°.03, h9km±4km, n144, σ1§25/171, mb3.6/8, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	**Djebel Ketaf**	**1.11**	**21**	P	**Pg**	**18 52 43.0**	**+0.8**
AKET	**Djebel Ketaf**	**1.11**	**21**	P	**Pg**	**18 52 43.0**	**+0.8**
AKET	**Djebel Ketaf**	**1.11**	**21**	P	**Pg**	**18 52 43.0**	**+0.8**
AKET	**Djebel Ketaf**	**1.11**	**21**	P	**Pg**	**18 52 43.0**	**+0.8**
ATAF	**Djebel Tarf**	**1.13**	**40**	P	**Pb**	**18 52 43.0**	**+0.6**
ATAF	**Djebel Tarf**	**1.13**	**40**	P	**Pb**	**18 52 43.0**	**+0.6**
ATAF	**Djebel Tarf**	**1.13**	**40**	P	**Pb**	**18 52 43.0**	**+0.6**
ATAF	**Djebel Tarf**	**1.13**	**40**	P	**Pb**	**18 52 43.0**	**+0.6**
ADJB	**Djebel Djouab**	**1.15**	**2**	P	**Pb**	**18 52 43.5**	**+0.8**
ADJB	**Djebel Djouab**	**1.15**	**2**	P	**Pb**	**18 52 43.5**	**+0.8**
ADJB	**Djebel Djouab**	**1.15**	**2**	P	**Pb**	**18 52 43.5**	**+0.8**
ADJB	**Djebel Djouab**	**1.15**	**2**	P	**Pb**	**18 52 43.5**	**+0.8**
EMHD	**Djebel Mahouad**	**1.24**	**344**	P	**Pn**	**18 52 44.8**	**+0.6**
EMHD	**Djebel Mahouad**	**1.24**	**344**	P	**Pn**	**18 52 44.8**	**+0.6**
EMHD	**Djebel Mahouad**	**1.24**	**344**	P	**Pn**	**18 52 44.8**	**+0.6**
EMHD	**Djebel Mahouad**	**1.24**	**344**	P	**Pn**	**18 52 44.8**	**+0.6**
ETRT	**Tiaret**	**1.75**	**283**	P	**Pn**	**18 52 51.2**	**0.0**
ETRT	**Tiaret**	**1.75**	**283**	P	**Pn**	**18 52 51.2**	**0.0**
ETRT	**Tiaret**	**1.75**	**283**	P	**Pn**	**18 52 51.2**	**0.0**
ETRT	**Tiaret**	**1.75**	**283**	P	**Pn**	**18 52 51.2**	**0.0**
ABA	**Alger-Bouzareа**	**1.81**	**351**	P	**Pn**	**18 52 53.3**	**+1.2**
ABA	**Alger-Bouzareа**	**1.81**	**351**	P	**Pn**	**18 52 53.3**	**+1.2**
ABA	**Alger-Bouzareа**	**1.81**	**351**	P	**Pn**	**18 52 53.3**	**+1.2**
ABA	**Alger-Bouzareа**	**1.81**	**351**	P	**Pn**	**18 52 53.3**	**+1.2**
AKF	**Akfadou**	**1.89**	**30**	P	**Pg**	**18 52 56.3**	**-0.6**
AKF	**Akfadou**	**1.89**	**30**	P	**Pg**	**18 52 56.3**	**-0.6**
AKF	**Akfadou**	**1.89**	**30**	P	**Pg**	**18 52 56.3**	**-0.6**
AKF	**Akfadou**	**1.89**	**30**	P	**Pg**	**18 52 56.3**	**-0.6**
EBNR	**Beni Rached**	**1.98**	**311**	P	**Pg**	**18 52 58.2**	**-0.5**
ECHA	**Ech Chlef**	**2.00**	**305**	P	**Pg**	**18 52 58.0**	**-1.1**
CKHR	**Kef el Ahmar**	**2.01**	**59**	P	**Pn**	**18 52 56.0**	**+1.3**
CKHR	**Kef el Ahmar**	**2.01**	**59**	P	**Pn**	**18 52 56.0**	**+1.3**
CKHR	**Kef el Ahmar**	**2.01**	**59**	P	**Pn**	**18 52 56.0**	**+1.3**
CKHR	**Kef el Ahmar**	**2.01**	**59**	P	**Pn**	**18 52 56.0**	**+1.3**
ECHF	**Ech Chlef**	**2.02**	**305**	P	**Pg**	**18 52 58.0**	**-1.5**
ECHF	**Ech Chlef**	**2.02**	**305**	P	**Pg**	**18 52 58.0**	**-1.5**
SET	**Setif**	**2.03**	**54**	P	**Pg**	**18 52 58.0**	**-1.6**
SET	**Setif**	**2.03**	**54**	P	**Pg**	**18 52 58.0**	**-1.6**
SET	**Setif**	**2.03**	**54**	P	**Pg**	**18 52 58.0**	**-1.6**
SET	**Setif**	**2.03**	**54**	P	**Pg**	**18 52 58.0**	**-1.6**
EANR	**'Ain N'Sour**	**2.09**	**297**	P	**Pn**	**18 52 57.7**	**+1.9**
EANR	**'Ain N'Sour**	**2.09**	**297**	P	**Pn**	**18 52 57.7**	**+1.9**
EANR	**'Ain N'Sour**	**2.09**	**297**	P	**Pn**	**18 52 57.7**	**+1.9**
EANR	**'Ain N'Sour**	**2.09**	**297**	P	**Pn**	**18 52 57.7**	**+1.9**
OJGS	**Djebel Guires**	**2.21**	**284**	P	**Pn**	**18 52 52.0**	**-5.5**
OJGS	**Djebel Guires**	**2.21**	**284**	P	**Pn**	**18 52 52.0**	**-5.5**
OJGS	**Djebel Guires**	**2.21**	**284**	P	**Pn**	**18 52 52.0**	**-5.5**
OKGL	**Djebel Kef Gue**	**2.46**	**295**	P	**Pn**	**18 52 56.0**	**-5.0**
OKGL	**Djebel Kef Gue**	**2.46**	**295**	P	**Pn**	**18 52 56.0**	**-5.0**
OKGL	**Djebel Kef Gue**	**2.46**	**295**	P	**Pn**	**18 52 56.0**	**-5.0**
DFRA	**Djebel Bou Aff**	**2.54**	**52**	P	**Pn**	**18 53 04.0**	**+1.9**
DFRA	**Djebel Bou Aff**	**2.54**	**52**	P	**Pn**	**18 53 04.0**	**+1.9**
DFRA	**Djebel Bou Aff**	**2.

ETOB S **Sn** **18 54 41.6 -1.2**
0.8nm,0.2s,SNR=7.9
EBER Berja 5.43 292 P **Pn** **18 53 40.1 -1.6**
EBER Berja 5.43 292 P **Pn** **18 53 40.1 -1.6**
1.3nm,0.2s,SNR=7.9
EBER Berja 5.43 292 P **Pn** **18 53 40.1 -1.6**
1.3nm,0.2s,SNR=7.9
EBER Berja 5.43 292 P **Pn** **18 53 40.1 -1.6**
1.3nm,0.2s,SNR=7.9
EHUE Huescar 5.57 302 P **Pn** **18 53 44.4 +0.7**
EHUE Huescar 5.57 302 P **Pn** **18 53 44.4 +0.7**
0.3nm,0.2s,SNR=7.9
EHUE Huescar 5.57 302 P **Pn** **18 53 44.4 +0.7**
0.3nm,0.2s,SNR=7.9
EHUE Huescar 5.57 302 P **Pn** **18 53 44.4 +0.6**
0.3nm,0.2s,SNR=7.9
ECHE Chera 5.74 324 P **Pn** **18 53 46.1 +0.1**
ECHE S **Sn** **18 54 50.9 -1.1**
ECHE Chera 5.74 324 P **Pn** **18 53 46.1 +0.1**
1.8nm,0.4s,SNR=4.0
ECHE S **Sn** **18 54 50.9 -1.1**
3.0nm,0.5s,SNR=7.9
ECHE Chera 5.74 324 P **Pn** **18 53 46.1 +0.1**
1.8nm,0.4s,SNR=4.0
ECHE S **Sn** **18 54 50.9 -1.1**
3.0nm,0.5s,SNR=7.9
ECHE Chera 5.74 324 P **Pn** **18 53 46.1 +0.1**
1.8nm,0.4s,SNR=4.0
ECHE S **Sn** **18 54 50.9 -1.1**
3.0nm,0.5s,SNR=7.9
EQES Quesada 5.91 300 P **Pn** **18 53 48.3 0.0**
EQES S **Sn** **18 54 54.3 -1.8**
EQES Quesada 5.91 300 P **Pn** **18 53 48.3 0.0**
0.6nm,0.1s,SNR=7.9
EQES S **Sn** **18 54 54.3 -1.8**
8.8nm,0.4s,SNR=4.0
EQES Quesada 5.91 300 P **Pn** **18 53 48.3 0.0**
0.6nm,0.1s,SNR=7.9
EQES S **Sn** **18 54 54.3 -1.8**
8.8nm,0.4s,SNR=4.0
EQES Quesada 5.91 300 P **Pn** **18 53 48.3 0.0**
0.6nm,0.1s,SNR=7.9
EQES S **Sn** **18 54 54.3 -1.7**
8.8nm,0.4s,SNR=4.0
EQUE Quentar 5.94 294 P **Pn** **18 53 50.2 +1.3**
11nm,0.5s,SNR=7.9
EQUE Quentar 5.94 294 P **Pn** **18 53 50.2 +1.3**
11nm,0.5s,SNR=7.9
EQUE Quentar 5.94 294 P **Pn** **18 53 50.2 +1.4**
11nm,0.5s,SNR=7.9
EVIA Vianos 5.95 309 P **Pn** **18 53 51.2 +2.3**
SNR=7.9
EVIA S **Sn** **18 54 56.0 -1.2**
6.4nm,0.4s,SNR=7.9
EVIA Vianos 5.95 309 P **Pn** **18 53 51.2 +2.3**
SNR=7.9
EVIA S **Sn** **18 54 56.0 -1.2**
6.4nm,0.4s,SNR=7.9
EVIA Vianos 5.95 309 S **Sn** **18 54 56.0 -1.2**
6.4nm,0.4s,SNR=7.9
EMOS Mosqueruela 6.16 331 P **Pn** **18 53 53.0 +1.3**
EMOS S **Sn** **18 55 01.2 -1.1**
EMOS Mosqueruela 6.16 331 P **Pn** **18 53 53.0 +1.3**
1.2nm,0.1s,SNR=7.9
EMOS S **Sn** **18 55 01.2 -1.1**
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 6.16 331 P **Pn** **18 53 53.0 +1.3**
1.2nm,0.1s,SNR=7.9
EMOS S **Sn** **18 55 01.2 -1.1**
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 6.16 331 P **Pn** **18 53 53.0 +1.2**
1.2nm,0.1s,SNR=7.9
EMOS S **Sn** **18 55 01.2 -1.1**
0.4nm,0.2s,SNR=7.9
ERTA Horta de San J 6.41 339 P **Pn** **18 53 57.0 +1.8**
SNR=7.9
ERTA S **Sn** **18 55 06.4 -2.1**
SNR=7.9
ERTA Horta de San J 6.41 339 P **Pn** **18 53 57.0 +1.8**
SNR=7.9
ERTA S **Sn** **18 55 06.4 -2.1**
SNR=7.9
MDT Midelt 7.00 254 Pn **Pn** **18 54 02.5 -0.8**
0.7nm,0.3s,baz=68,slow=14,SNR=21
MDT Lg 18 56 00.5
0.7nm,0.3s,baz=202,slow=19,SNR=4.0
MDT LR LR 18 56 42.4
comp=Z,60nm,21.1s,baz=207,slow=38
MDT Midelt 7.00 254 Pn **Pn** **18 54 02.5 -0.8**
ZFT Errachidia 7.11 248 P **Pn** **18 54 08.0 +3.2**
ZFT Errachidia 7.11 248 P **Pn** **18 54 08.0 +3.2**
ESDC Sonseca Array 7.48 311 Pn **Pn** **18 54 11.0 +1.1**
0.6nm,0.3s,baz=124,slow=13,SNR=3.9
ESDC Sn **Sn** **18 55 36.3 +1.6**
0.5nm,0.3s,baz=123,slow=24,SNR=1.9
ESDC Sonseca Array 7.48 311 Pn **Pn** **18 54 11.0 +1.1**
GERES GERESS Array B 15.79 26 Pn **Pn** **18 56 03.2 +0.1**
0.1nm,0.3s,baz=223,slow=16,SNR=7.1
GERES GERESS Array B 15.79 26 Pn **Pn** **18 56 03.2 +0.1**
MLR Muntele Rosu 20.09 52 P **P** **18 56 53.5 -0.9**
1.9nm,0.7s,baz=230,slow=7.9,SNR=3.1
MLR Muntele Rosu 20.09 52 P **P** **18 56 53.5 -0.9**
EKA Eskdalemuir Ar 20.82 349 P **P** **18 57 03.0 +0.7**
0.8nm,0.7s,baz=160,slow=11,SNR=3.6
EKA Eskdalemuir Ar 20.82 349 P **P** **18 57 03.0 +0.7**
TORD Torodi Ar. Bea 21.82 184 P **P** **18 57 10.3 -3.0**
0.7nm,0.7s,mb3.2,baz=4.1,slow=11,SNR=7.0
TORD Torodi Ar. Bea 21.82 184 P **P** **18 57 10.3 -3.0**
AKASG Malin Array Be 24.42 42 P **P** **18 57 35.5 -3.8**
2.9nm,0.7s,mb3.8,baz=241,slow=9.8,SNR=7.8
BRTR Keskin Array B 24.44 70 P **P** **18 57 39.6 0.0**
0.6nm,0.7s,mb3.1,baz=259,slow=12,SNR=2.9
BRTR Keskin Array B 24.44 70 P **P** **18 57 39.6 0.0**
UCH Uchtor 54.58 60 *eP* **P** **19 01 49.2 -0.1**
1.5nm,0.7s,mb4.1
KURK Kurchatov 54.98 49 P **P** **19 01 50.4 -1.6**
0.8nm,0.7s,mb3.8,baz=290,slow=7.8,SNR=9.5
MKAR Makanchi Array 58.44 52 P **P** **19 02 15.1 -1.5**
1.0nm,0.6s,mb4.0,baz=284,slow=6.1,SNR=15
YKA Yellowknife Ar 70.92 334 P **P** **19 03 36.9 -0.9**
0.1nm,0.5s,mb3.0,baz=64,slow=5.7,SNR=2.1
SONM Songino Array 72.69 43 P **P** **19 03 48.2 -0.6**
0.3nm,0.5s,mb3.5,baz=273,slow=6.8,SNR=3.7
ASAR Alice Springs 135.81 89 PKP PKPdf 19 11 40.3 -1.8
0.3nm,0.7s,baz=305,slow=3.3,SNR=2.0

IDC 14 18:54:42.9±1.2,31°.20N×103°.82E,h0km,mb3.5/7,
mb1 3.7/8,mb1mx3.5/26,mbtmp3.5/8,ML3.3/1,Error
ellipse: s-maj=40.9km s-min=20.3km az=55.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.73**	**6**	Pn	Pn	18 58 39.5	+1.0
0.1nm,0.3s,baz=191,slow=15,SNR=2.8							
KSRS	**Korea Array**	**20.84**	**66**	P		18 59 26.1	0.0
1.2nm,0.7s,baz=264,slow=11,SNR=6.2							
MKAR	**Makanchi Array**	**22.75**	**319**	P	P	18 59 48.3	+1.9
1.2nm,1.0s,baz=137,slow=11,SNR=7.1							
ZALV	**Zalesovo Beam**	**26.53**	**334**	P	P	19 00 21.7	-0.3
0.5nm,0.4s,baz=134,slow=10,SNR=1.6							
KURK	**Kurchatov**	**27.02**	**323**	P	P	19 00 25.1	-1.4
0.4nm,0.8s,baz=125,slow=9.3,SNR=3.7							
WRA	**Warramunga Arr**	**58.69**	**146**	P	P	19 04 42.1	-0.2
0.9nm,0.5s,baz=339,slow=7.8,SNR=5.7							
ASAR	**Alice Springs**	**61.70**	**149**	P	P	19 05 03.4	+0.5
0.4nm,0.8s,baz=334,slow=6.2,SNR=2.8							
YKA	**Yellowknife Ar**	**81.67**	**17**	P	P	19 07 02.3	-0.4
0.3nm,0.5s,baz=328,slow=5.0,SNR=4.1							

*ISCJB **14** 18:56:00.4±0.6, 17°.9S±0°.1×179°.5W±0°.1, h650km, mb3.5/12, Error ellipse: s-maj=21.0km s-min=14.3km az=146.8*
*IDC **14** 18:56:00.5±4.0, 17°.96S×179°.40W, h639km±45km, mb3.1/11, mb1 3.4/11, mb1mx3.3/16, mbtmp3.1/11, Error ellipse: s-maj=26.6km s-min=20.8km az=116.0*
*NEIC **14** 18:56:03.2±2.2, 17°.90S×179°.54W, h671km±26km, mb4.6/2, Error ellipse: s-maj=16.9km s-min=15.0km az=126.0*
ISC 14 18:56:01.9±0.6,17°.9S±0°.1×179°.5W±0°.1,h650km,n30,
σ0°53/13,mb3.5/12,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.73**	**241**	P	**P**	**19 02 25.5**	**+0.3**
1.7nm,0.4s,mb3.8,baz=63,slow=11,SNR=9.4							
WRAB	**Tennant Creek**	**43.62**	**260**	*eP*	**P**	**19 03 11.8**	**+0.1**
1.7nm,0.6s,mb3.5							
WRA	**Warramunga Arr**	**43.62**	**260**	P	**P**	**19 03 11.4**	**-0.4**
1.5nm,0.5s,mb3.6,baz=95,slow=7.1,SNR=7.1							
ASAR	**Alice Springs**	**43.80**	**254**	P	**P**	**19 03 12.8**	**-0.3**
15nm,0.5s,mb4.5,baz=89,slow=7.9,SNR=266							
ASAR				PcP	PcP	19 04 44.6	+0.1
0.8nm,0.4s,baz=105,slow=3.7,SNR=6.5							
MJAR	**Matsushiro Arr**	**67.31**	**324**	P	**P**	**19 05 54.2**	**-0.1**
1.5nm,0.4s,mb3.6,baz=162,slow=5.7,SNR=5.8							
QSPA	**South Pole Qui**	**72.14**	**180**	P	**P**	**19 06 21.7**	**-0.4**
1.6nm,1.1s,mb3.4,baz=108,slow=3.4,SNR=5.1							
PETK	**Petropavlovsk-**	**73.43**	**346**	P	**P**	**19 06 29.6**	**-0.2**
2.5nm,0.7s,mb3.7,baz=110,slow=8.5,SNR=5.7							
KSRS	**Korea Array**	**74.03**	**319**	P	**P**	**19 06 34.6**	**+1.1**
0.5nm,0.6s,mb3.2,baz=126,slow=5.8,SNR=2.5							
NVAR	**Mina Array Bea**	**80.14**	**44**	P	**P**	**19 07 06.3**	**-0.2**
0.7nm,0.5s,mb3.3,baz=238,slow=5.2,SNR=2.3							
PMSA	**Palmer Station**	**84.20**	**157**	*eP*	**P**	**19 07 26.9**	**+0.4**
81nm,0.5s							
TXAR	**Lajitas Array**	**86.86**	**58**	P	**P**	**19 07 40.6**	**+0.8**
0.6nm,0.8s,mb3.3,baz=212,slow=8.3,SNR=4.1							
PDAR	**Pinedale Array**	**88.06**	**44**	P	**P**	**19 07 45.0**	**-0.1**
0.4nm,0.7s,mb3.2,baz=268,slow=2.7,SNR=3.1							
YKA	**Yellowknife Ar**	**94.77**	**25**	P	**P**	**19 08 14.3**	**-1.1**
0.1nm,0.4s,mb3.3,baz=258,slow=5.0,SNR=2.3							
MKAR	**Makanchi Array**	**108.41**	**314**	PKiKP	PKiKP	19 13 16.9	-1.2
0.3nm,0.5s,baz=225,slow=2.1,SNR=7.5							
KURK	**Kurchatov**	**111.15**	**318**	PKiKP	PKiKP	19 13 22.1	-1.1
0.4nm,0.6s,baz=113,slow=1.7,SNR=3.5							
BVAR	**Borovoye Array**	**116.20**	**321**	PKP	PKPdf	19 13 31.7	-1.1
0.8nm,0.3s,baz=152,slow=1.9,SNR=5.8							
ARCES	**ARCESS Array B**	**126.14**	**349**	PKP	PKPdf	19 13 50.9	-0.5
0.4nm,0.4s,baz=21,slow=1.3,SNR=13							
FINES	**FINESS Array B**	**132.91**	**344**	PKhKP		19 14 00.8	
0.6nm,0.5s,baz=129,slow=2.7,SNR=4.3							
FINES				PKP	PKPdf	19 14 03.0	-1.5
0.6nm,0.5s,baz=132,slow=2.1,SNR=1.6							
FINES	**FINESS Array B**	**132.91**	**344**	PKP		19 14 00.8	
FINES				PKP	PKPdf	19 14 03.0	-1.5
EKA	**Eskdalemuir Ar**	**142.55**	**3**	PKhKP		19 14 18.4	
0.8nm,0.6s,baz=348,slow=3.1,SNR=4.4							
BR131	**Keskin Array S**	**144.06**	**314**	*e*PKPdf	PKPdf	19 14 25.1	-0.3
BRTR	**Keskin Array B**	**144.06**	**314**	PKP	PKPdf	19 14 25.2	-0.2
1.6nm,0.7s,baz=106,slow=2.6,SNR=9.5							
ASF	**Jabal al Asfar**	**144.30**	**300**	PKP	PKPdf	19 14 26.9	+0.8
1.4nm,0.4s,baz=18,slow=6.4,SNR=4.8							
UPC	**Upice**	**145.20**	**343**	*e*PKP	PKPdf	19 14 28.8	+1.8
CLL	**Collm**	**145.24**	**346**	||*i*PKPbc	PKPbc	19 14 28.5	+0.1
comp=Z,9.0nm,0.6s							
DPC	**Dobruska-Polom**	**145.25**	**342**	*e*PKP	PKPdf	19 14 29.0	+1.9
MMAI	**Mount Meron Ar**	**145.29**	**302**	PKPbc	PKPbc	19 14 29.7	+0.6
comp=Z,2.8nm,0.5s,baz=74,slow=6.2,SNR=8.4							
MLR	**Muntele Rosu**	**145.30**	**328**	PKPbc	PKPbc	19 14 27.4	-1.3
comp=Z,1.8nm,0.6s,baz=276,slow=3.5,SNR=3.1							
KHC	**Kasperske Hory**	**147.12**	**344**	*e*PKP	PKPbc	19 14 33.9	+0.3
GERES	**GERESS Array B**	**147.34**	**344**	PKPbc	PKPbc	19 14 34.0	-0.2
comp=Z,1.4nm,0.5s,baz=24,slow=3.2,SNR=17							

*ISCJB **14** 19:03:03.1±0.8, 1°.2S±0°.2×88°.0E±0°.1, h10km, mb3.8/9, Error ellipse: s-maj=26.1km s-min=14.2km az=41.6*
*IDC **14** 19:03:03.0±1.0, 1°.36S×87°.97E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/26, mbtmp3.8/9, ML4.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/30, Error ellipse: s-maj=33.9km s-min=18.1km az=46.0*
*NEIC **14** 19:03:04.3±0.8, 1°.46S×87°.86E, h10km, mb4.0/1, Error ellipse: s-maj=23.7km s-min=14.7km az=223.0*
ISC 14 19:03:04.8±0.8,1°.4S±0°.1×87°.9E±0°.1,h10km,n12,
σ19°12/12,mb3.8/9,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.20**	**320**	Pn	**Pn**	**19 05 44.3**	**-0.7**
2.2nm,0.3s,baz=131,slow=13,SNR=34							
PALK				Sn	**Sn**	**19 07 44.9**	**-5.5**
3.3nm,0.3s,baz=63,slow=13,SNR=3.5							
CM31	**Chiang Mai Arr**	**22.49**	**28**	*eP*	**P**	**19 08 07.5**	**+3.0**
5.3nm,0.9s,mb4.0							
FITZ	**Fitzroy Crossi**	**40.59**	**117**	P	**P**	**19 10 44.7**	**-0.3**
2.1nm,0.7s,mb3.9,baz=337,slow=4.4,SNR=7.1							
MKAR	**Makanchi Array**	**48.21**	**355**	P	**P**	**19 11 45.3**	**-0.2**
0.2nm,0.6s,mb3.4,baz=152,slow=6.5,SNR=3.3							
WRA	**Warramunga Arr**	**48.98**	**115**	P	**P**	**19 11 52.8**	**+0.9**
baz=287,slow=8.5							
ASAR	**Alice Springs**	**49.74**	**120**	P	**P**	**19 11 55.3**	**-2.4**
0.6nm,0.8s,mb3.6,baz=293,slow=7.8,SNR=7.8							
KMBO	**Kilima Mbogo**	**50.65**	**270**	P	**P**	**19 12 05.2**	**+0.4**
0.5nm,0.3s,mb3.9,baz=81,slow=13,SNR=3.4							
SONM	**Songino Array**	**51.59**	**16**	P	**P**	**19 12 11.7**	**+0.6**
1.0nm,0.7s,mb3.9,baz=196,slow=8.8,SNR=8.1							
KURK	**Kurchatov**	**52.49**	**353**	P	**P**	**19 12 17.0**	**-0.7**
1.1nm,0.9s,mb3.8,baz=176,slow=7.0,SNR=8.9							
KURK				LR	LR	19 34 19.2	
comp=Z,46nm,21.1s,baz=210,slow=36							
ZALV	**Zalesovo Beam**	**55.18**	**358**	P	**P**	**19 12 36.6**	**-0.8**
2.2nm,0.8s,mb4.2,baz=190,slow=7.5,SNR=7.4							
TORD	**Torodi Ar. Bea**	**86.62**	**283**	P	**P**	**19 15 50.5**	**+1.2**
0.3nm,0.7s,mb3.7,baz=104,slow=4.7,SNR=2.2							
TXAR	**Lajitas Array**	**150.08**	**21**	PKPbc	PKPbc	19 22 55.4	-1.1
0.3nm,0.7s,baz=288,slow=2.0,SNR=3.7							

*ATH **14** 19:17:55.3,41°.48N×20°.29E, h6km±4km, MD3.3/5*
*CSEM **14** 19:17:57.8±0.2,41°.20N×20°.32E, h2km, ML2.3, Error ellipse: s-maj=5.7km s-min=2.8km az=39.0*
*THE **14** 19:17:57.6,41°.34N×20°.37E, h5km±1km, ML3.4/2, Error ellipse: s-maj=2.9km s-min=0.9km az=198.0*
*ISCJB **14** 19:17:57.9±0.3,41°.25N±0°.02×20°.35E±0°.02, h0km±3km, Error ellipse: s-maj=3.3km s-min=2.1km az=135.7*
*SKO **14** 19:17:58.3,41°.19N×20°.30E, h4km, M2.3, ML2.7*
*NEIC **14** 19:17:59.0,41°.23N×20°.21E, h1km, MD3.3(ATH), ML3.0(PDG), After PDG.*
*PDG **14** 19:17:59.0±0.5,41°.23N×20°.21E, h1km±1km, ML3.0/10, Error ellipse: s-maj=1.5km s-min=1.7km az=0.0*
*TIR **14** 19:17:58.6±3.4,41°.27N×20°.31E, h5km±8km, ML3.5*
*BEO **14** 19:18:01.2±0.5,41°.37N×20°.21E, h4km±2km, ML2.3/7*
ISC 14 19:17:58.5±0.4,41°.24N±0°.02×20°.33E±0°.02,h4km±3km,
n100,σ19°36/172,24C-5D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**287**	||*i*Pg	**Pg**	**19 18 04.7**	**-0.8**
TIR				*i* Sg	**Sg**	**19 18 10.6**	**+0.3**
TIR	**Tirane**	**0.36**	**287**	P	**Pg**	**19 18 04.5**	**-1.0**
TIR				S	**Sg**	**19 18 10.7**	**+0.4**
TIR	**Tirane**	**0.36**	**287**	||*i*Pg	**Pg**	**19 18 04.7**	**-0.8**
TIR				*i* Sg	**Sg**	**19 18 10.6**	**+0.3**
OHR	**Ohrid**	**0.38**	**110**	||*i*Pg	**Pg**	**19 18 05.1**	**-0.6**
OHR				*i* Sg	**Sg**	**19 18 11.6**	**+0.9**
OHR				*e*Lg		19 18 11.8	
comp=N,1μm,0.5s							
OHR				*e*Lg		19 18 12.1	
comp=E,828nm,0.4s							
OHR	**Ohrid**	**0.38**	**110**	P	**Pg**	**19 18 05.0**	**-0.8**
OHR				S	**Sg**	**19 18 11.8**	**+1.1**
OHR	**Ohrid**	**0.38**	**110**	P	**Pg**	**19 18 05.0**	**-0.8**
OHR				*i* Sg	**Sg**	**19 18 11.6**	**+0.9**
OHR				*e*Lg		19 18 11.7	
comp=E,1μm,0.5s							
KRUS	**Krusevo**	**0.71**	**79**	||*i*Pg	**Pg**	**19 18 10.8**	**-1.2**
KRUS				*i* Sg	**Sg**	**19 18 21.4**	**+0.2**
KRUS				*e*Lg		19 18 21.7	
comp=N,109nm,0.2s							
KRUS				*e*Lg		19 18 21.9	
comp=E,144nm,0.2s							
KRUS	**Krusevo**	**0.71**	**79**	||*i*Pg	**Pg**	**19 18 10.8**	**-1.2**
KRUS				*i* Sg	**Sg**	**19 18 21.4**	**+0.2**
KRUS				*e*Lg		19 18 21.7	
comp=E,109nm,0.2s							
BIA	**Bitola**	**0.78**	**106**	*i* Pg	**Pg**	**19 18 12.1**	**-1.4**
BIA				*i* Sg	**Sg**	**19 18 24.3**	**+0.6**
BIA				*e*Lg		19 18 24.6	
comp=N,157nm,0.3s							
BIA				*e*Lg		19 18 25.3	
comp=E,400nm,0.8s							
BIA	**Bitola**	**0.78**	**106**	P	**Pg**	**19 18 11.8**	**-1.7**
BIA				S	**Sg**	**19 18 24.4**	**+0.7**
BIA	**Bitola**	**0.78**	**106**	P	**Pg**	**19 18 11.8**	**-1.7**
BIA	**Bitola**	**0.78**	**106**	*i* Pg	**Pg**	**19 18 12.1**	**-1.4**
BIA				*i* Sg	**Sg**	**19 18 24.3**	**+0.6**
BIA				*e*Lg		19 18 24.5	
comp=E,157nm,0.3s							
PUK	**Puka**	**0.87**	**338**	*e*PG	**Pg**	**19 18 14.3**	**-0.8**
PUK				*i* SG	**Sg**	**19 18 28.1**	**+1.8**
PUK	**Puka**	**0.87**	**338**	*e*Pg	**Pg**	**19 18 14.3**	**-0.8**
SNR=90							
PUK				*i* Sg	**Sg**	**19 18 28.1**	**+1.8**
SNR=90							
FNA	**Florina**	**0.92**	**119**	P	**Pg**	**19 18 14.9**	**-1.1**
FNA				S	**Sg**	**19 18 28.8**	**+0.9**
FNA	**Florina**	**0.92**	**119**	P	**Pg**	**19 18 14.9**	**-1.1**
FNA				S	**Sg**	**19 18 28.8**	**+0.9**
ULC	**Ulcinj**	**1.08**	**312**	*e*PN	**Pg**	**19 18 17.3**	**-2.0**
ULC				*i* SN	**Sg**	**19 18 33.9**	**+0.5**
ULC	**Ulcinj**	**1.08**	**312**	||*i*Pg	**Pg**	**19 18 17.3**	**-2.0**
ULC				*e*Sg	**Sg**	**19 18 33.9**	**+0.5**
ULC	**Ulcinj**	**1.08**	**312**	||*i*Pg	**Pg**	**19 18 17.3**	**-2.0**
ULC				*e*Sg	**Sg**	**19 18 33.9**	**+0.5**
SKO	**Skopje**	**1.11**	**48**	*i* Pg	**Pg**	**19 18 20.7**	**+0.9**
SKO				*i* Sg	**Sg**	**19 18 35.9**	**+1.7**
SKO	**Skopje**	**1.11**	**48**	*e*Pg	**Pg**	**19 18 20.1**	**+0.3**
SKO				*i* Sg	**Sg**	**19 18 35.7**	**+1.5**
SKO				*e*Lg		19 18 35.9	
comp=N,202nm,0.9s							
SKO				*e*Lg		19 18 37.3	
comp=E,150nm,0.5s							
SKO	**Skopje**	**1.11**	**48**	*e*Pg	**Pg**	**19 18 20.1**	**+0.3**
SKO				*i* Sg	**Sg**	**19 18 35.6**	**+1.4**
SKO				*e*Lg		19 18 35.9	
comp=E,202nm,0.9s							
BCI	**Bajram Curri**	**1.14**	**350**	*e*PG	**Pg**	**19 18 20.4**	**0.0**
BCI				*i* SG	**Sg**	**19 18 36.0**	**+0.8**
BCI	**Bajram Curri**	**1.14**	**350**	*e*Pg	**Pg**	**19 18 20.4**	**0.0**
SNR=90							
BCI				*i* Sg	**Sg**	**19 18 36.0**	**+0.8**
SNR=90							
PVY	**Plav**	**1.38**	**349**	*e*PN	**Pn**	**19 18 24.6**	**0.0**
PVY				*i* SN	**Sn**	**19 18 45.8**	**+2.5**
PVY	**Plav**	**1.38**	**349**	||*i*Pg	**Pn**	**19 18 24.6**	**0.0**
PVY				*i* Sg	**Sn**	**19 18 45.8**	**+2.5**
PVY	**Plav**	**1.38**	**349**	||*i*Pg	**Pn**	**19 18 24.6**	**0.0**
PVY				*i* Sg	**Sn**	**19 18 45.8**	**+2.5**
SRN	**Sarande**	**1.38**	**190**	*e*PG	**Pg**	**19 18 27.1**	**+2.2**
SRN				*i* SG	**Sg**	**19 18 47.1**	**+4.3**
PDG	**Podgorica**	**1.43**	**327**	*e*PN	**Pn**	**19 18 23.8**	**-1.5**
PDG				*i* SN	**Sg**	**19 18 46.4**	**+1.9**
PDG	**Podgorica**	**1.43**	**327**	||*i*Pg	**Pn**	**19 18 23.8**	**-1.5**
PDG				*e*Sg	**Sg**	**19 18 46.4**	**+1.9**
TTG	**Podgorica**	**1.43**	**327**	||*i*Pg	**Pn**	**19 18 23.8**	**-1.5**
TTG				*e*Sg	**Sg**	**19 18 46.4**	**+1.9**
TTG	**Podgorica**	**1.43**	**327**	||*i*Pg	**Pn**	**19 18 23.8**	**-1.5**
TTG				*e*Sg	**Sg**	**19 18 46.4**	**+1.9**
KZN	**Kozani**	**1.44**	**130**	*e*PB	**Pb**	**19 18 25.9**	**0.0**
KZN	**Kozani**	**1.44**	**130**	P	**Pn**	**19 18 23.2**	**-2.1**
KZN	**Kozani**	**1.44**	**130**	P	**Pn**	**19 18 23.2**	**-2.1**
KZN	**Kozani**	**1.44**	**130**	*e*Pb	**Pb**	**19 18 25.9**	**0.0**
STIP	**Stip**	**1.47**	**71**	*e*Pg	**Pn**	**19 18 24.9**	**-0.9**
STIP				*e*Sg	**Sg**	**19 18 45.5**	**-0.1**
STIP				*e*Lg		19 18 47.1	
comp=E,9.5nm,0.3s							
STIP	**Stip**	**1.47**	**71**	*e*Pg	**Pn**	**19 18 24.8**	**-1.0**
STIP				*e*Sg	**Sg**	**19 18 45.5**	**-0.2**
STIP				*e*Lg		19 18 47.1	
comp=E,9.5nm,0.3s							
BUM	**Brajici-Budva**	**1.50**	**315**	*e*PN	**Pn**	**19 18 25.3**	**-1.0**
BUM				*i* SN	**Sg**	**19 18 48.6**	**+1.7**
BUM	**Brajici-Budva**	**1.50**	**315**	||*i*Pg	**Pn**	**19 18 25.3**	**-1.0**
BUM				*e*Sg	**Sg**	**19 18 48.6**	**+1.7**
BUM	**Brajici-Budva**	**1.50**	**315**	||*i*Pg	**Pn**	**19 18 25.3**	**-1.0**
BUM				*e*Sg	**Sg**	**19 18 48.6**	**+1.7**
KEK	**Kerkira**	**1.58**	**195**	*e*PN	**Pg**	**19 18 28.9**	**+0.2**
KEK				*e*SB	**Sg**	**19 18 53.4**	**+4.3**
KEK	**Kerkira**	**1.58**	**195**	*e*Pn	**Pg**	**19 18 28.9**	**+0.2**
JAN	**Janina**	**1.63**	**166**	*e*PG	**Pg**	**19 18 30.5**	**+0.8**
JAN				*e*SN	**Sg**	**19 18 55.0**	**+4.1**
JAN	**Janina**	**1.63**	**166**	*e*Pg	**Pg**	**19 18 30.5**	**+0.8**
BEY	**Berane**	**1.66**	**349**	*e*PN	**Pn**	**19 18 30.2**	**+1.8**
BEY				*i* SN	**Sg**	**19 18 55.3**	**+3.4**
BEY	**Berane**	**1.66**	**349**	||*i*Pn	**Pn**	**19 18 30.2**	**+1.8**
BEY				*e*Sn	**Sg**	**19 18 55.3**	**+3.4**
IVA	**Berane**	**1.66**	**349**	||*i*Pn	**Pn**	**19 18 30.2**	**+1.8**
IVA				*e*Sn	**Sg**	**19 18 55.3**	**+3.4**
IVA	**Berane**	**1.66**	**349**	||*i*Pn	**Pn**	**19 18 30.2**	**+1.8**
IVA				*e*Sn	**Sg**	**19 18 55.3**	**+3.4**
VAY	**Valandovo**	**1.69**	**87**	*e*Pg	**Pg**	**19 18 29.6**	**-1.3**
VAY				*e*Sg	**Sg**	**19 18 52.3**	**-0.5**
VAY				*e*Lg		19 18 53.1	
comp=N,44nm,0.7s							
VAY				*e*Lg		19 18 53.5	
comp=E,30nm,0.4s							
VAY	**Valandovo**	**1.69**	**87**	*e*Pg	**Pg**	**19 18 29.6**	**-1.3**
VAY				*e*Sg	**Sg**	**19 18 52.3**	**-0.6**
VAY				*e*Lg		19 18 53.1	
comp=E,44nm,0.7s							
HCY	**Herceg Novi**	**1.82**	**312**	*e*PN	**Pn**	**19 18 30.9**	**+0.3**
HCY				*i* SN	**Sg**	**19 18 57.5**	**+0.4**
HCY	**Herceg Novi**	**1.82**	**312**	||*i*Pn	**Pn**	**19 18 30.9**	**+0.3**
HCY				*e*Sn	**Sg**	**19 18 57.5**	**+0.4**
HCY	**Herceg Novi**	**1.82**	**312**	||*i*Pn	**Pn**	**19 18 30.9**	**+0.3**
HCY				*e*Sn	**Sg**	**19 18 57.5**	**+0.4**
NKY	**Niksic**	**1.86**	**328**	*e*PN	**Pn**	**19 18 31.7**	**+

NEO	Neokhori	2.94	130	*e*Pn		Pn		19 18 47.2	+1.2
BZS	Buzias	4.47	12	*e*Pn		Pn		19 19 06.6	-0.5
BZS				*e*Sn		Sn		19 19 57.4	-2.2
BZS				*e*Sn		Sn		19 19 57.4	-2.2
BZS	Buzias	4.47	12	*e*Pn		Pn		19 19 06.6	-0.5
NVLJ	Novalja	5.21	311	⇑*i*Pn		Pn		19 19 15.9	-1.2
NVLJ				Sn		Sn		19 20 15.7	-1.9
NVLJ	Novalja	5.21	311	⇑*i*Pn		Pn		19 19 15.9	-1.2
NVLJ				Sn		Sn		19 20 15.7	-1.9

ISCJB ***14*** *19:19:23.3±0.3, 32°.15N±0°.03×105°.19E±0°.04, h10km, mb3.9/15, Error ellipse: s-maj=5.0km s-min=4.0km az=12.4*
IDC ***14*** *19:19:23.5±0.8, 32°.20N×105°.01E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/27, mbtmp3.9/15, ML3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.2/34, Error ellipse: s-maj=29.0km s-min=16.3km az=48.0*
NEIC ***14*** *19:19:25.1±0.5, 32°.21N×105°.15E, h10km, mb4.0/3, Error ellipse: s-maj=11.9km s-min=8.9km az=215.0*
BJI ***14*** *19:19:25.3, 32°.24N×105°.16E, h14km, mB4.5/2, mb4.0/5, ML3.8/15, Ms3.7/4, Ms7 3.6/5*
ISC 14 19:19:25.3±0.3, 32°.19N±0°.03×105°.18E±0°.04, h10km, n34, σ1§25/44, mb3.9/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.76**	**224**	Pg	**Pg**	**19 19 57.9**	**-1.2**
CD2				Sg	**Sg**	**19 20 20.8**	**-1.1**
CD2				smax			
	comp=N,8μm,0.8s						
XAN	**Xi'an**	**3.64**	**59**	Pn	**Pn**	**19 20 24.1**	**+2.4**
XAN				Pg	**Pg**	**19 20 33.0**	**-2.1**
XAN				Sn	**Sn**	**19 21 05.8**	**+1.1**
XAN				Sg	**Sg**	**19 21 19.0**	**-3.3**
XAN				smax			
	comp=N,340nm,0.9s						
XAN				smax			
	comp=E,180nm,0.9s						
XAN				LR	LR		
	comp=N,250nm,5.7s						
XAN				LR	LR		
	comp=E,190nm,8.3s						
XAN				LR	LR		
	comp=Z,200nm,8.1s						
LZH	**Lanzhou**	**4.04**	**344**	*e*Pn	**Pn**	**19 20 28.9**	**+1.7**
LZH				Pg	**Pg**	**19 20 39.3**	**-3.4**
LZH				Sn	**Sn**	**19 21 15.8**	**+1.2**
LZH				Sg	**Sg**	**19 21 28.6**	**-6.5**
LZH				smax			
	comp=N,560nm,0.6s						
LZH				smax			
	comp=E,510nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,5.8s						
LZH				LR	LR		
	comp=Z,2μm,7.2s						
ENH	**Enshi**	**4.16**	**116**	*e*Pn	**Pn**	**19 20 28.4**	**-0.3**
GYA	**Guiyang**	**5.86**	**167**	Pn	**Pn**	**19 20 56.3**	**+4.1**
GYA				Sn	**Sn**	**19 21 59.6**	**+0.2**
GYA				smax			
	comp=N,190nm,0.8s						
GYA				smax			
	comp=E,180nm,0.6s						
KMI	**Kunming**	**7.36**	**198**	Pn	**Pn**	**19 21 14.1**	**+1.3**
KMI				Sn	**Sn**	**19 22 38.0**	**+1.6**
KMI				smax			
	comp=N,25nm,1.3s						
KMI				smax			
	comp=E,28nm,1.7s						
WHN	**Wuhan**	**8.01**	**99**	P	**Pn**	**19 21 16.4**	**-5.4**
WHN				S	**Sn**	**19 22 51.8**	**-0.6**
WHN				LR	LR		
	comp=N,600nm,4.1s						
WHN				LR	LR		
	comp=E,1μm,5.2s						
WHN				LR	LR		
	comp=Z,670nm,8.0s						
GTA	**Gaotai**	**8.42**	**330**	*e*P	**Pn**	**19 21 30.0**	**+2.7**
GTA				pP		19 21 39.5	
GTA				S	**Sn**	**19 23 06.3**	**+3.9**
GTA				sS		19 23 16.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,68nm,4.5s						
GTA				LR	LR		
	comp=N,160nm,8.7s						
GTA				LR	LR		
	comp=E,130nm,8.7s						
GTA				LR	LR		
	comp=Z,280nm,8.4s						
LSA	**Lhasa**	**12.30**	**262**	*e*P	**Pn**	**19 22 22.1**	**+1.7**
SONM	**Songino Array**	**15.65**	**3**	Pn	**Pn**	**19 23 07.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=4.9						
ULN	**Ulaanbaatar**	**15.72**	**5**	*e*P	**Pn**	**19 23 07.9**	**+1.2**
	comp=Z,3.1nm,0.9s						
KSRS	**Korea Array**	**19.38**	**68**	P	**Pn**	**19 23 52.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=253,slow=9.4,SNR=5.1						
MK31	**Makanchi Array**	**22.79**	**316**	*e*P	**P**	**19 24 27.3**	**-0.6**
MKAR	**Makanchi Array**	**22.79**	**316**	P	**P**	**19 24 27.5**	**-0.5**
	comp=Z,6.4nm,1.1s,mb4.0,baz=117,slow=11,SNR=19						
TKM2	**Tokmak 2**	**25.66**	**303**	*e*P	**P**	**19 24 55.5**	**+0.3**
	comp=Z,2.4nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**26.17**	**332**	P	**P**	**19 24 58.9**	**-0.7**
	comp=Z,1.3nm,0.6s,mb3.7,baz=139,slow=10,SNR=6.5						
UCH	**Uchtor**	**26.27**	**301**	*e*P	**P**	**19 25 02.5**	**+1.8**
	comp=Z,7.8nm,1.2s,mb4.1						
KURK	**Kurchatov**	**26.95**	**321**	P	**P**	**19 25 06.0**	**-0.8**
	comp=Z,2.3nm,0.8s,mb3.7,baz=132,slow=8.2,SNR=17						
KURK	**Kurchatov**	**26.95**	**321**	*e*P	**P**	**19 25 04.9**	**-1.9**
ASAJ	**Asahikawa**	**31.48**	**57**	LR	LR	19 40 31.7	
	comp=Z,58nm,19.7s,baz=50,slow=40						
BVAR	**Borovoye Array**	**32.53**	**320**	P	**P**	**19 25 55.1**	**-1.0**
	comp=Z,0.8nm,0.5s,mb3.9,baz=115,slow=10.0,SNR=4.5						
ABKAR	**Akbulak array**	**37.65**	**310**	*e*P	**P**	**19 26 38.7**	**-1.7**
TIXI	**Tiksi**	**41.51**	**11**	*e*P	**P**	**19 27 11.9**	**-0.4**
PETK	**Petropavlovsk-**	**42.78**	**45**	P	**P**	**19 27 23.4**	**+0.6**
	comp=Z,1.5nm,0.7s,mb3.8,baz=270,slow=5.8,SNR=3.6						
ARCES	**ARCESS Array B**	**56.65**	**336**	P	**P**	**19 29 07.8**	**-0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=82,slow=11,SNR=6.7						
BRTR	**Keskin Array B**	**57.01**	**299**	P	**P**	**19 29 09.8**	**-1.4**
	comp=Z,0.5nm,0.7s,mb3.7,baz=94,slow=5.8,SNR=2.8						
FINES	**FINESS Array B**	**57.18**	**326**	P	**P**	**19 29 10.9**	**-1.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=79,slow=9.9,SNR=5.1						
ASAR	**Alice Springs**	**61.96**	**150**	P	**P**	**19 29 46.1**	**+0.7**
	comp=Z,0.8nm,0.6s,mb4.0,baz=330,slow=6.6,SNR=22						
NOA	**NORSAR Array B**	**64.24**	**327**	P	**P**	**19 29 58.5**	**-1.7**
	comp=Z,0.7nm,0.6s,mb3.9,baz=71,slow=6.9,SNR=3.5						
NOA	**NORSAR Array B**	**64.24**	**327**	P	**P**	**19 29 58.5**	**-1.7**
STKA	**Stephens Creek**	**72.43**	**148**	P	**P**	**19 30 52.2**	**+0.5**
	comp=Z,2.3nm,0.9s,mb4.1,baz=343,slow=11,SNR=4.0						
YKA	**Yellowknife Ar**	**80.39**	**18**	P	**P**	**19 31 36.2**	**-0.4**
	comp=Z,1.1nm,0.6s,mb4.0,baz=329,slow=5.2,SNR=16						
YKA	**Yellowknife Ar**	**80.39**	**18**	P	**P**	**19 31 36.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**94.17**	**288**	P	**P**	**19 32 44.4**	**-0.5**
	comp=Z,0.5nm,0.7s,mb4.0,baz=64,slow=3.4,SNR=3.7						

THE ***14*** *19:33:01.4, 37°.74N×19°.82E, h0km±3km, ML3.4/3, Error ellipse: s-maj=3.7km s-min=1.8km az=217.0*
CSEM ***14*** *19:33:03.9±0.6, 37°.69N×20°.07E, h5km, MD3.6, Error ellipse: s-maj=14.9km s-min=6.5km az=69.0*
NEIC ***14*** *19:33:05.3, 37°.71N×20°.08E, h30km, MD3.6(ATH), After ATH.*
ATH ***14*** *19:33:05.3, 37°.71N×20°.08E, h30km±4km, MD3.6/11*
ISC 14 19:33:01.9±1.0, 37°.72N±0°.05×19°.78E±0°.08, h10km, n50, σ1§08/60, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.78**	**54**	*e*PN	**Pg**	**19 33 17.9**	**+0.9**
VLS				*e*SN	**Sg**	**19 33 27.8**	**+0.5**
VLS	**Valsamata**	**0.78**	**54**	P	**Pg**	**19 33 15.4**	**-1.6**
VLS				S	**Sg**	**19 33 25.9**	**-1.4**
VLS	**Valsamata**	**0.78**	**54**	P	**Pg**	**19 33 15.4**	**-1.6**
VLS	**Valsamata**	**0.78**	**54**	*e*Pn	**Pg**	**19 33 17.9**	**+0.9**
VLS				S	**Sg**	**19 33 25.9**	**-1.4**
KFL	**Anninata**	**0.89**	**64**	P	**Pg**	**19 33 16.9**	**-2.1**
RLS	**Riolos of Patr**	**1.38**	**75**	*e*PN	**Pn**	**19 33 26.5**	**-0.6**
RLS	**Riolos of Patr**	**1.38**	**75**	*e*Pn	**Pn**	**19 33 26.5**	**-0.6**
PYL	**PYLOS**	**1.77**	**117**	P	**Pn**	**19 33 32.4**	**-0.1**
PYL	**PYLOS**	**1.77**	**117**	P	**Pn**	**19 33 32.4**	**-0.1**
ITM	**Ithomi**	**1.79**	**107**	*e*PN	**Pn**	**19 33 33.2**	**+0.3**
ITM	**Ithomi**	**1.79**	**107**	P	**Pn**	**19 33 32.6**	**-0.3**
ITM	**Ithomi**	**1.79**	**107**	P	**Pn**	**19 33 32.6**	**-0.3**
ITM	**Ithomi**	**1.79**	**107**	*e*Pn	**Pn**	**19 33 33.2**	**+0.3**
LAKA	**Lakka**	**1.81**	**73**	P	**Pn**	**19 33 33.2**	**+0.1**
LAKA				S	**Sn**	**19 33 57.5**	**+1.3**
LAKA	**Lakka**	**1.81**	**73**	P	**Pn**	**19 33 33.2**	**+0.1**
LAKA				S	**Sn**	**19 33 57.5**	**+1.3**
EFP	**Efpalio**	**1.82**	**67**	P	**Pn**	**19 33 33.0**	**-0.2**
EFP	**Efpalio**	**1.82**	**67**	P	**Pn**	**19 33 33.0**	**-0.2**
IGT	**Igoumenitsa**	**1.86**	**13**	P	**Pn**	**19 33 33.8**	**0.0**
IGT	**Igoumenitsa**	**1.86**	**13**	P	**Pn**	**19 33 33.8**	**0.0**
KEK	**Kerkira**	**1.99**	**0**	*e*PN	**Pg**	**19 33 39.5**	**-0.5**
KEK	**Kerkira**	**1.99**	**0**	P	**Pn**	**19 33 34.5**	**-1.1**
KEK				S	**Sn**	**19 34 01.6**	**+1.1**
KEK	**Kerkira**	**1.99**	**0**	P	**Pn**	**19 33 34.5**	**-1.1**
KEK	**Kerkira**	**1.99**	**0**	*e*Pn	**Pg**	**19 33 39.5**	**-0.5**
KEK				S	**Sn**	**19 34 01.6**	**+1.1**
EVR	**Evrytania**	**1.99**	**53**	*e*PN	**Pn**	**19 33 36.4**	**+0.8**
EVR	**Evrytania**	**1.99**	**53**	*e*Pn	**Pn**	**19 33 36.4**	**+0.8**
GUR	**Goura**	**2.04**	**83**	P	**Pn**	**19 33 35.8**	**-0.5**
GUR	**Goura**	**2.04**	**83**	P	**Pn**	**19 33 35.8**	**-0.5**
VLX	**Vlachokerasia**	**2.10**	**99**	P	**Pn**	**19 33 36.0**	**-1.0**
VLX	**Vlachokerasia**	**2.10**	**99**	P	**Pn**	**19 33 36.0**	**-1.0**
JAN	**Janina**	**2.10**	**23**	*e*PN	**Pb**	**19 33 39.5**	**-0.7**
JAN	**Janina**	**2.10**	**23**	*e*Pn	**Pb**	**19 33 39.5**	**-0.7**
AGG	**Agios Georgios**	**2.39**	**56**	P	**Pn**	**19 33 41.0**	**-0.1**
AGG				S	**Sn**	**19 34 11.7**	**+1.3**
AGG	**Agios Georgios**	**2.39**	**56**	P	**Pn**	**19 33 41.0**	**-0.1**
AGG				S	**Sn**	**19 34 11.7**	**+1.3**
THL	**Klokotos Trika**	**2.54**	**43**	*e*PN	**Pn**	**19 33 44.3**	**+1.2**
THL	**Klokotos Trika**	**2.54**	**43**	*e*Pn	**Pn**	**19 33 44.3**	**+1.2**
LTK	**Loutraki**	**2.54**	**82**	P	**Pn**	**19 33 42.0**	**-1.1**
LTK	**Loutraki**	**2.54**	**82**	P	**Pn**	**19 33 42.0**	**-1.1**
VLI	**Veliai**	**2.71**	**111**	*e*PB	**Pn**	**19 33 47.0**	**+1.5**
ATAL	**Atalanti**	**2.73**	**68**	P	**Pn**	**19 33 44.5**	**-1.3**
ATAL	**Atalanti**	**2.73**	**68**	P	**Pn**	**19 33 44.5**	**-1.3**
KYTH	**Kithira**	**2.98**	**118**	*e*PN	**Pn**	**19 33 48.8**	**-0.4**
KYTH	**Kithira**	**2.98**	**118**	*e*Pn	**Pn**	**19 33 48.8**	**-0.4**
KZN	**Kozani**	**3.01**	**30**	*e*PN	**Pn**	**19 33 51.8**	**+2.2**
KZN	**Kozani**	**3.01**	**30**	*e*Pn	**Pn**	**19 33 51.8**	**+2.2**
NEO	**Neokhori**	**3.13**	**59**	*e*PN	**Pn**	**19 33 53.1**	**+1.8**
NEO	**Neokhori**	**3.13**	**59**	*e*Pn	**Pn**	**19 33 53.1**	**+1.8**
LIT	**Litokhoron**	**3.18**	**41**	P	**Pn**	**19 33 52.9**	**+1.0**
LIT	**Litokhoron**	**3.18**	**41**	P	**Pn**	**19 33 52.9**	**+1.0**
KRUS	**Krusevo**	**3.81**	**17**	*e*Pn	**Pn**	**19 34 01.0**	**+0.4**
KRUS				*e*Sg	**Sn**	**19 34 43.7**	**-1.8**
KRUS	**Krusevo**	**3.81**	**17**	*e*Pn	**Pn**	**19 34 01.0**	**+0.3**

NIED ***14*** *19:39:00, 24°.20N×125°.20E, h35km, Mw4.1 Best double couple: Mo1.86000×10^15 NP1:φs=54.00000°, δ70.00000°, λ-48.00000°. NP2:φs=165.00000°, δ45.00000°, λ-152.00000°.*
IDC ***14*** *19:39:10.7±0.8, 24°.27N×125°.10E, h0km, mb3.9/13, mb1 3.9/15, mb1mx3.9/24, mbtmp3.8/15, ML3.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/32, Error ellipse: s-maj=27.5km s-min=18.0km az=67.0*
ISCJB ***14*** *19:39:14.3±0.7, 24°.23N±0°.06×125°.23E±0°.04, h40km±5km, mb3.9/17, Error ellipse: s-maj=10.9km s-min=4.6km az=151.6*
JMA ***14*** *19:39:14.4±0.2, 24°.20N×125°.19E, h19km, M4.2*
NEIC ***14*** *19:39:16.0±2.6, 24°.22N×125°.12E, h35km±20km, mb4.4/4, Error ellipse: s-maj=15.1km s-min=9.4km az=155.0*
ISC 14 19:39:14.4±1.1, 24°.21N±0°.07×125°.21E±0°.04, h26km±7km, n45, σ1§00/52, mb3.9/17, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.58**	**18**	P	**Pb**	**19 39 26.1**	**+0.1**
JOGS				S	**Sb**	**19 39 34.8**	**+0.9**
JMJ	**Miyako jima 2**	**0.61**	**7**	P	**Pb**	**19 39 26.4**	**-0.2**
JMJ				S	**Sb**	**19 39 35.0**	**+0.2**
JTJ	**Tarama**	**0.64**	**313**	P	**Pb**	**19 39 26.3**	**-0.7**
JTJ				S	**Sb**	**19 39 35.1**	**-0.4**
JIJ	**Ishigaki jima**	**0.99**	**279**	P	**Pn**	**19 39 32.0**	**-0.6**
JIJ				S	**Sb**	**19 39 46.3**	**+0.7**
JKRS	**Kuro-shima**	**1.10**	**272**	P	**Pn**	**19 39 34.9**	**+0.7**
JKRS				*e*S	**Sn**	**19 39 48.5**	**0.0**
HATJ	**Hateruma jima**	**1.30**	**264**	P	**Pn**	**19 39 36.7**	**-0.1**
HATJ				S	**Sn**	**19 39 53.9**	**+0.6**
IRIF	**Iriomote-Funau**	**1.36**	**276**	P	**Pn**	**19 39 38.1**	**+0.4**
YOJ	**Yonaguni jima**	**2.03**	**278**	P	**Pn**	**19 39 47.3**	**+0.4**
JKE	**Kume jima 2**	**2.55**	**34**	P	**Pn**	**19 39 54.3**	**+0.2**
JJT2	**Tamagusuku 2**	**3.00**	**54**	P	**Pn**	**19 40 01.2**	**+1.0**
JAGN	**Aguni-jima**	**3.00**	**37**	P	**Pn**	**19 40 01.8**	**+1.5**
NACB	**Ninganchiao**	**3.31**	**270**	*e*P	**Pn**	**19 40 04.0**	**-0.5**
YHNB	**Yeheng**	**3.53**	**278**	*e*P	**Pn**	**19 40 09.6**	**+2.0**
YULB	**Yu-li**	**3.68**	**258**	*e*P	**Pn**	**19 40 07.8**	**-1.8**
JIH	**Iheya**	**3.76**	**41**	P	**Pn**	**19 40 11.7**	**+1.0**
JOW	**Kunigami**	**3.81**	**46**	P	**Pn**	**19 40 11.3**	**-0.1**
JOW	**Kunigami**	**3.81**	**46**	Pn	**Pn**	**19 40 11.4**	**+0.1**
	3.0nm,0.3s,baz=158,slow=16,SNR=12						
JOW				Sn	**Sn**	**19 41 12.6**	**+17**
	3.1nm,0.3s,baz=320,slow=30,SNR=1.4						
SSLB	**Suanglung**	**3.92**	**265**	*e*P	**Pn**	**19 40 12.1**	**-0.8**
TWG	**Pinlang**	**4.04**	**251**	*e*P	**Pn**	**19 40 12.9**	**-1.8**
TPUB	**Ta-pu**	**4.30**	**259**	*e*P	**Pn**	**19 40 18.9**	**+0.7**
JTK	**Tokunoshima**	**4.90**	**43**	P	**Pn**	**19 40 24.6**	**-1.8**
JMZ	**Minamidaito 2**	**5.68**	**72**	P	**Pn**	**19 40 34.2**	**-3.0**
JAM	**Amami Oshima**	**5.75**	**42**	P	**Pn**	**19 40 36.4**	**-1.7**
KSRS	**Korea Array**	**13.41**	**9**	Pn	**Pn**	**19 42 22.6**	**-0.4**
	0.1nm,0.3s,baz=184,slow=14,SNR=3.5						
MJAR	**Matsushiro Arr**	**16.62**	**39**	Pn	**Pn**	**19 43 09.5**	**+3.9**
	0.1nm,0.3s,baz=270,slow=7.3,SNR=1.5						
SONM	**Songino Array**	**27.92**	**332**	P	**P**	**19 45 01.4**	**-0.9**
	0.2nm,0.6s,mb2.9,baz=169,slow=8.4,SNR=1.6						
SONM				LR	LR	19 56 07.4	
	comp=Z,115nm,18.0s,baz=134,slow=37						
PETK	**Petropavlovsk-**	**37.85**	**32**	P	**P**	**19 46 28.7**	**-0.1**
	1.1nm,0.7s,mb3.7,baz=213,slow=7.7,SNR=2.7						
MK31	**Makanchi Array**	**40.92**	**314**	*e*P	**P**	**19 46 53.8**	**-0.7**
MKAR	**Makanchi Array**	**40.92**	**314**	P	**P**	**19 46 54.0**	**-0.6**
	1.0nm,0.5s,mb3.7,baz=102,slow=9.4,SNR=18						
ZALV	**Zalesovo Beam**	**42.27**	**325**	P	**P**	**19 47 03.0**	**-2.5**
	0.4nm,0.2s,mb3.6,baz=108,slow=8.1,SNR=3.7						
KURK	**Kurchatov**	**44.47**	**319**	P	**P**	**19 47 22.8**	**-0.5**
	1.6nm,1.1s,mb3.7,baz=110,slow=8.9,SNR=11						
TKM2	**Tokmak 2**	**44.67**	**307**	*e*P	**P**	**19 47 26.9**	**+1.9**
UCH	**Uchtor**	**45.37**	**306**	*e*P	**P**	**19 47 32.8**	**+2.2**
4.9nm,1.0s,mb4.3							
ASAR	**Alice Springs**	**48.33**	**169**	P	**P**	**19 47 54.7**	**+0.9**
1.7nm,0.6s,mb4.3,baz=356,slow=12,SNR=35							
KBL	**Kabul**	**49.48**	**296**	*e*P	**P**	**19 48 03.5**	**+0.9**
4.2nm,0.9s,mb4.5							
BVAR	**Borovoye Array**	**50.01**	**320**	P	**P**	**19 48 06.0**	**-0.4**
0.3nm,0.3s,mb3.8,baz=106,slow=7.2,SNR=3.8							
ABKAR	**Akbulak array**	**56.06**	**314**	*e*P	**P**	**19 48 51.2**	**+0.1**
3.3nm,0.6s,mb4.5							
ARU	**Arti**	**57.31**	**323**	*e*P	**P**	**19 48 58.8**	**-1.0**
2.7nm,0.8s,mb4.3							
STKA	**Stephens Creek**	**57.92**	**164**	P	**P**	**19 49 05.1**	**+0.8**
2.0nm,0.6s,mb4.3,baz=302,slow=7.0,SNR=4.0							
FINES	**FINESS Array B**	**73.27**	**330**	P	**P**	**19 50 43.1**	**0.0**
1.9nm,0.6s,mb4.2,baz=76,slow=8.0,SNR=8.5							
AKASG	**Malin Array Be**	**75.28**	**319**	P	**P**	**19 50 54.9**	**-0.2**
0.5nm,0.5s,mb3.7,baz=65,slow=5.4,SNR=2.6							
BRTR	**Keskin Array B**	**76.10**	**307**	P	**P**	**19 51 00.6**	**+0.6**
0.5nm,0.8s,mb3.5,baz=117,slow=4.7,SNR=3.6							
NB2	**NORSAR Subarra**	**79.90**	**333**	P	**P**	**19 51 20.4**	**-0.2**
comp=Z,1.4nm,0.8s,mb3.9,baz=54,slow=5.6							
NOA	**NORSAR Array B**	**79.90**	**333**	P	**P**	**19 51 21.0**	**+0.4**
comp=Z,0.9nm,0.7s,mb3.8,baz=58,slow=5.2,SNR=3.6							
YKA	**Yellowknife Ar**	**81.49**	**24**	P	**P**	**19 51 29.5**	**+0.4**
comp=Z,0.8nm,0.8s,mb3.7,baz=302,slow=5.8,SNR=7.0							

IDC ***14*** *19:49:04.7±1.0, 16°.57N×122°.36E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/23, mbtmp4.0/13, ML4.2/1, Error ellipse: s-maj=31.4km s-min=16.4km az=95.0*
ISCJB ***14*** *19:49:07.8±1.1, 16°.59N±0°.03×122°.56E±0°.05, h31km±7km, mb3.9/13, Error ellipse: s-maj=8.3km s-min=5.3km az=2.5*
MAN ***14*** *19:49:07, 16°.52N×122°.42E, h11km, mb4.8, ML3.8, MS3.8*
NEIC ***14*** *19:49:10.2±2.4, 16°.49N×122°.30E, h41km±24km, mb4.2/2, Error ellipse: s-maj=24.1km s-min=13.3km az=61.0*
ISC 14 19:49:07.4±1.1, 16°.56N±0°.03×122°.49E±0°.05, h15km±6km, n32, σ1§07/43, mb3.9/13, 2C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.51**	**353**	*e*P	**Pg**	**19 49 18.4**	**+1.0**
PALP				*e*S	**Sg**	**19 49 33.6**	**+9.4**
CAUP	**Cauayan**	**0.74**	**301**	*e*P	**Pg**	**19 49 21.1**	**-0.7**
CAUP				*e*S	**Sg**	**19 49 30.6**	**-1.1**
BALP	**Baler**	**1.19**	**227**	*e*P	**Pn**	**19 49 28.1**	**-1.4**
BALP				*e*S	**Sb**	**19 49 41.4**	**-3.6**
CVP	**Callao Caves**	**1.30**	**331**	⇑*e*P	**Pn**	**19 49 30.0**	**-1.0**
CVP				*i* S	**Sb**	**19 49 48.9**	**+0.8**
PCPH	**Palayan**	**1.66**	**234**	⇑*e*P	**Pn**	**19 49 35.8**	**-0.2**
PCPH				*e*S	**Sn**	**19 49 57.0**	**0.0**
SGCP	**Mt. Cagua**	**1.73**	**346**	*e*P	**Pn**	**19 49 38.6**	**+1.8**
APYP	**Conner**	**1.76**	**318**	*e*P	**Pn**	**19 49 38.7**	**+1.4**
APYP				*e*S	**Sn**	**19 49 59.1**	**-0.3**
BCPH	**Baguio City Da**	**1.84**	**265**	⇓*e*P	**Pn**	**19 49 39.0**	**+0.7**
BCPH				*e*S	**Sn**	**19 50 02.2**	**+0.9**
POLP	**Polilio Island**	**1.89**	**196**	*e*P	**Pn**	**19 49 38.9**	**-0.2**
ABRA	**Dolores**	**2.01**	**303**	*e*P	**Pn**	**19 49 41.5**	**+0.7**
BOLP	**Bolinao**	**2.48**	**266**	*e*P	**Pn**	**19 49 50.0**	**+2.9**
PIP	**Pasuquin**	**2.50**	**315**	⇓*i*P	**Pn**	**19 49 48.4**	**+0.8**
PIP				*e*S	**Sn**	**19 50 22.6**	**+4.8**
SCZP	**Santa Cruz**	**2.59**	**253**	*e*P	**Pn**	**19 49 51.7**	**+2.9**
GQP	**Guinayangan**	**2.64**	**181**	⇓*e*P	**Pn**	**19 49 50.3**	**+0.9**
GQP				*e*S	**Sn**	**19 50 22.4**	**+1.3**
TGY	**Tagaytay City**	**2.86**	**212**	Pn	**Pn**	**19 49 51.3**	**-1.1**
	40nm,0.3s,baz=117,slow=9.0,SNR=2.4						
TGY				Pg	**Pg**	**19 49 57.0**	**-5.3**
	90nm,0.3s,baz=92,slow=3.8,SNR=10						
TGY				Sn	**Sn**	**19 50 30.4**	**+3.7**
	54nm,0.3s,baz=52,slow=12,SNR=4.3						
LUBP	**Lubang**	**3.54**	**218**	*e*P	**Pn**	**19 50 08.7**	**+6.9**
KSRS	**Korea Array**	**21.36**	**12**	P	**P**	**19 53 54.3**	**+0.2**
	1.4nm,0.6s,mb3.5,baz=198,slow=11,SNR=8.0						
SONM	**Songino Array**	**33.89**	**340**	P	**P**	**19 55 49.1**	**-0.3**
	0.9nm,0.8s,mb3.7,baz=159,slow=9.4,SNR=3.7						
ASAR	**Alice Springs**	**41.50**	**164**	P	**P**	**19 56 53.7**	**-0.3**
	0.3nm,0.6s,mb3.1,baz=14,slow=10,SNR=6.7						
MK31	**Makanchi Array**	**44.84**	**321**	*e*P	**P**	**19 57 20.4**	**-0.4**
MKAR	**Makanchi Array**	**44.84**	**321**	P	**P**	**19 57 20.2**	**-0.6**
	1.6nm,0.8s,mb3.9,baz=116,slow=8.7,SNR=13						
PETK	**Petropavlovsk-**	**45.70**	**29**	P	**P**	**19 57 28.6**	**+1.0**
	1.2nm,0.7s,mb4.0,baz=219,slow=11,SNR=2.0						
ZALV	**Zalesovo Beam**	**47.38**	**331**	P	**P**	**19 57 39.4**	**-1.3**
	2.0nm,0.8s,mb4.1,baz=120,slow=8.8,SNR=7.2						
UCH	**Uchtor**	**48.20**	**312**	*e*P	**P**	**19 57 47.8**	**+0.5**
	1.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**48.84**	**324**	P	**P**	**19 57 51.3**	**-0.8**
	4.0nm,0.8s,mb4.5,baz=122,slow=8.1,SNR=33						
KURK	**Kurchatov**	**48.84**	**324**	*e*P	**P**	**19 57 50.6**	**-1.4**
	6.3nm,1.0s,mb4.6						
BVAR	**Borovoye Array**	**54.44**	**324**	P	**P**	**19 58 33.3**	**-0.6**
	1.7nm,0.9s,mb4.0,baz=104,slow=11,SNR=7.8						
ARCES	**ARCESS Array B**	**77.05**	**339**	P	**P**	**20 00 59.2**	**-0.3**
	2.2nm,0.8s,mb4.1,baz=112,slow=8.8,SNR=3.1						
FINES	**FINESS Array B**	**78.64**	**331**	P	**P**	**20 01 07.1**	**-1.4**
	2.2nm,1.0s,mb4.1,baz=33,slow=3.8,SNR=2.2						
NB2	**NORSAR Subarra**	**85.52**	**333**	P	**P**	**20 01 42.6**	**-2.0**
	comp=Z,1.3nm,0.7s,mb4.3,baz=64,slow=5.1						
NOA	**NORSAR Array B**	**85.52**	**333**	P	**P**	**20 01 42.8**	**-1.7**
	comp=Z,1.3nm,

comp=E,140nm,2.0s
KMI LR LR
comp=N,1μm,7.7s
KMI LR LR
comp=E,4μm,9.3s
GTA Gaotai 8.84 340 *e*P **Pn 20 01 14.3 +3.7**
GTA pP 20 01 23.3
GTA sP 20 01 28.0
GTA S **Sn 20 02 51.6 +1.1**
GTA pmax pmax
comp=Z,2.0nm,1.3s
GTA pmax pmax
comp=Z,83nm,4.5s
GTA LR LR
comp=N,280nm,10.5s
GTA LR LR
comp=E,350nm,8.1s
GTA LR LR
comp=Z,400nm,8.1s
WHN Wuhan 9.25 91 ⇓P **Pn 20 01 17.8 +1.5**
WHN LR LR
comp=N,4μm,12.0s
WHN LR LR
comp=E,2μm,7.6s
WHN LR LR
comp=Z,1μm,7.5s
LSA Lhasa 10.86 266 *e*P **Pn 20 01 38.6 +0.3**
HHC Hu-ho-hao-te 11.65 31 *e*P **Pn 20 01 49.8 +0.7**
HHC pP 20 01 54.3
HHC PP 20 01 59.5
HHC S **Sn 20 04 01.1 +1.8**
HHC sS 20 04 08.8
HHC SS 20 04 15.3
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,380nm,5.2s
HHC LR LR
comp=E,630nm,5.0s
HHC LR LR
comp=Z,440nm,5.9s
CM31 Chiang Mai Arr 13.29 200 *e*P **Pn 20 02 15.7 +4.0**
comp=Z,3.9nm,0.7s
SONM Songino Array 16.83 6 Pn **Pn 20 02 59.8 +1.3**
comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=8.4
SONM LR LR 20 08 34.3
comp=Z,51nm,18.7s,baz=186,slow=34
ULN Ulaanbaatar 16.93 8 *e*P **Pn 20 03 00.7 +0.9**
comp=Z,3.0nm,0.8s
KSRS Korea Array 21.03 66 P **P 20 03 46.2 -0.6**
comp=Z,5.7nm,0.6s,mb4.1,baz=260,slow=10,SNR=16
KSRS LR LR 20 13 19.9
comp=Z,54nm,19.0s,MS3.0,baz=155,slow=41
CN2 Changchun 21.39 48 *e*P **P 20 03 51.4 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
MK31 Makanchi Array 22.70 320 *e*P **P 20 04 05.0 +0.4**
MKAR Makanchi Array 22.70 320 P **P 20 04 05.2 +0.6**
comp=Z,3.5nm,1.0s,mb3.8,baz=125,slow=10,SNR=16
MKAR LR LR 20 14 31.3
comp=Z,56nm,18.2s,MS3.0,baz=126,slow=41
MDJ Mudanjiang 24.41 49 *e*P **P 20 04 20.6 -0.9**
UCH Uchtor 25.72 304 *e*P **P 20 04 36.7 +3.3**
comp=Z,10nm,1.4s,mb4.2
AAK Ala-Archa 25.85 305 P **P 20 04 37.0 +2.4**
comp=Z,0.7nm,0.3s,mb3.6,baz=143,slow=5.1,SNR=1.6
AAK LR LR 20 15 26.0
comp=Z,178nm,20.0s,MS3.6,baz=256,slow=38
AAK Ala-Archa 25.85 305 *e*P **P 20 04 36.7 +2.1**
comp=Z,4.2nm,0.9s,mb4.0
AAK LR LR 20 15 26.0
EKS2 Erkin-Say 26.37 304 P **P 20 04 42.4 +3.2**
comp=Z,6.1nm,1.4s,mb3.9
ZAA0 Zalesovo Array 26.53 335 *e*P **P 20 04 38.0 -2.5**
ZALV Zalesovo Beam 26.53 335 P **P 20 04 40.0 -0.6**
comp=Z,1.5nm,0.7s,mb3.6,baz=134,slow=9.2,SNR=7.2
ZALV LR LR 20 16 05.6
comp=Z,51nm,21.2s,MS3.0,baz=151,slow=39
KURK Kurchatov 26.99 324 P **P 20 04 44.1 -0.7**
comp=Z,1.8nm,0.8s,mb3.6,baz=127,slow=10,SNR=11
KURK LR LR 20 16 29.5
comp=Z,116nm,21.3s,MS3.4,baz=160,slow=39
MJAR Matsushiro Arr 29.14 70 LR LR 20 18 10.3
comp=Z,51nm,19.4s,MS3.1,baz=260,slow=40
DAV Davao City (W) 31.54 135 LR LR 20 18 07.7
comp=Z,161nm,19.2s,MS3.7,baz=327,slow=36
BVAR Borovoye Array 32.52 322 P **P 20 05 33.4 -0.4**
comp=Z,0.5nm,0.5s,mb3.7,baz=120,slow=10,SNR=2.2
ARU Arti 40.17 322 *e*P **P 20 06 38.3 -0.7**
TIXI Tiksi 42.82 11 *e*P **P 20 06 59.0 -1.6**
PETK Petropavlovsk- 44.47 44 LR LR 20 27 24.1
comp=Z,38nm,18.4s,MS3.4,baz=70,slow=38
BRTR Keskin Array B 56.37 300 P **P 20 08 46.7 +2.3**
comp=Z,0.2nm,0.4s,mb3.5,baz=45,slow=11,SNR=1.9
FINES FINESS Array B 57.32 326 P **P 20 08 49.5 -1.2**
comp=Z,3.7nm,1.1s,mb4.3,baz=79,slow=10,SNR=4.3
WRAB Tennant Creek 58.71 146 *e*P **P 20 09 00.9 -0.1**
comp=Z,6.4nm,0.8s,mb4.7
ASAR Alice Springs 61.72 148 P **P 20 09 20.3 -1.2**
comp=Z,0.8nm,0.8s,mb3.9,baz=329,slow=6.7,SNR=9.2
GERES GERESS Array B 67.24 314 P **P 20 09 58.4 +1.0**
comp=Z,0.2nm,0.3s,mb3.6,baz=95,slow=11,SNR=2.4
GERES LR LR 20 41 15.4
comp=Z,59nm,19.4s,MS3.8,baz=276,slow=38
CDF Champ du Feu 71.31 316 *e*P **P 20 10 21.4 -1.3**
LPG La Plagne 72.94 313 *e*P **P 20 10 32.0 -0.5**
LPL La Plagne 72.94 313 *e*P **P 20 10 31.9 -0.6**
comp=Z,3.9nm,0.7s,mb4.2
SMF Signal de Mont 74.19 315 *e*P **P 20 10 38.4 -1.4**
TCF Toulx Ste Croi 75.35 315 *e*P **P 20 10 45.3 -1.3**
CAF Calviac 76.12 314 *e*P **P 20 10 50.3 -0.7**
YKA Yellowknife Ar 81.80 17 P **P 20 11 20.7 -1.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=326,slow=5.5,SNR=3.4
TORD Torodi Ar. Bea 93.23 287 P **P 20 12 20.6 +2.4**
comp=Z,0.4nm,0.8s,mb3.9,baz=78,slow=2.4,SNR=3.0
ULM Lac du Bonnet 97.17 12 LR LR 21 00 11.9
comp=Z,73nm,19.1s,MS4.2,baz=140,slow=38

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*IDC **14** 20:21:57.8±0.8, 31°.64N×104°.13E, h0km, mb3.7/12, mb1 3.8/13, mb1mx3.7/28, mbtmp3.7/13, ML2.8/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/38, Error ellipse: s-maj=35.5km s-min=16.1km az=51.0*
*NEIC **14** 20:21:59.1±0.7, 31°.48N×104°.01E, h10km, mb3.2/1, Error ellipse: s-maj=20.8km s-min=11.0km az=46.0*
*BJI **14** 20:21:59.3, 31°.65N×104°.32E, h12km, mb3.9/4, ML3.7/13, Ms3.7/5, Ms7 3.4/5*
ISC 14 20:21:58.7±0.8, 31°.62N±0°.03×104°.17E±0°.05, h4km±6km, n28, σ0°97/34, mb3.8/14, MS3.0/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.79**	**206**	Pg	**Pg**	**20 22 13.8**	**-0.1**
CD2				Sg	**Sg**	**20 22 24.6**	**+0.4**
CD2				smax			
comp=N,2μm,1.2s							
LZH	**Lanzhou**	**4.46**	**357**	*e*Pn	**Pn**	**20 23 09.3**	**+2.3**
LZH				Pg	**Pg**	**20 23 21.9**	**-2.3**
LZH				Sn	**Sn**	**20 24 01.3**	**+2.0**
LZH				Sg	**Sg**	**20 24 21.6**	**-0.4**
LZH				smax			
comp=N,250nm,1.0s							
LZH				smax			
comp=E,130nm,0.9s							
LZH				LR	LR		
comp=E,2μm,5.8s							
LZH				LR	LR		
comp=Z,2μm,7.0s							
XAN	**Xi'an**	**4.67**	**58**	Pn	**Pn**	**20 23 09.8**	**-0.1**
XAN				Pg	**Pg**	**20 23 21.5**	**-6.7**
XAN				Sn	**Sn**	**20 24 09.9**	**+5.4**
XAN				Sg	**Sg**	**20 24 28.8**	**+0.1**
XAN				smax			
comp=N,160nm,0.8s							
XAN				smax			
comp=E,72nm,0.9s							
XAN				LR	LR		
comp=N,210nm,7.3s							
XAN				LR	LR		
comp=E,120nm,10.0s							
XAN				LR	LR		
comp=Z,110nm,8.5s							
ENH	**Enshi**	**4.76**	**105**	*e*Pn	**Pn**	**20 23 11.5**	**+0.3**
GYA	**Guiyang**	**5.59**	**156**	Pg	**Pg**	**20 23 46.9**	**+1.1**
GYA				Sg	**Sb**	**20 24 43.8**	**-0.4**
GYA				smax			
comp=N,100nm,0.9s							
GYA				smax			
comp=E,100nm,0.8s							
GTA	**Gaotai**	**8.54**	**337**	*e*P	**Pn**	**20 24 08.8**	**+5.8**
GTA				pP		20 24 13.4	
GTA				sP		20 24 16.3	
GTA				pmax	pmax		
comp=Z,4.0nm,1.4s							
WHN	**Wuhan**	**8.80**	**94**	P	Px	20 24 22.8	
WHN				S	**Sn**	**20 25 42.6**	**-3.6**
WHN				LR	LR		
comp=N,2μm,5.4s							
WHN				LR	LR		
comp=E,540nm,5.1s							
WHN				LR	LR		
comp=Z,870nm,6.0s							
SONM	**Songino Array**	**16.28**	**5**	Pn	**Pn**	**20 25 49.2**	**+1.1**
comp=Z,0.0nm,0.3s,baz=182,slow=16,SNR=6.7							
ULN	**Ulaanbaatar**	**16.37**	**7**	*e*Pn	**Pn**	**20 25 53.9**	**+4.7**
comp=Z,1.7nm,0.8s							
KSRS	**Korea Array**	**20.39**	**67**	P	**P**	**20 26 36.5**	**+0.1**
comp=Z,2.0nm,0.7s,baz=253,slow=9.6,SNR=7.4							
KSRS				LR	LR	20 33 41.3	
comp=Z,20nm,20.8s,MS2.5,baz=155,slow=34							
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**20 27 00.7**	**+0.3**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**20 27 00.9**	**+0.5**
comp=Z,1.2nm,0.8s,mb3.4,baz=116,slow=11,SNR=11							
MKAR				LR	LR	20 36 44.2	
comp=Z,74nm,18.7s,MS3.1,baz=286,slow=39							
AAK	**Ala-Archa**	**25.96**	**303**	LR	LR	20 39 28.4	
comp=Z,73nm,18.3s,MS3.2,baz=26,slow=40							
ZAA0	**Zalesovo Array**	**26.28**	**334**	*e*P	**P**	**20 27 35.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**20 27 34.9**	**0.0**
comp=Z,1.7nm,0.8s,mb3.6,baz=132,slow=10.0,SNR=7.3							
KURK	**Kurchatov**	**26.87**	**323**	P	**P**	**20 27 40.7**	**+0.5**
comp=Z,1.3nm,0.8s,mb3.5,baz=129,slow=9.0,SNR=9.0							
JHJ	**Hachijo jima 2**	**30.03**	**78**	LR	LR	20 41 23.5	
comp=Z,46nm,20.0s,MS3.1,baz=230,slow=39							
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**20 28 30.0**	**+0.5**
comp=Z,0.4nm,0.6s,mb3.4,baz=123,slow=11,SNR=3.5							
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**20 31 42.1**	**-1.5**
comp=Z,2.2nm,0.9s,mb4.2,baz=76,slow=7.6,SNR=4.3							
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**20 31 44.2**	**-1.6**
comp=Z,0.6nm,0.4s,mb4.0,baz=70,slow=7.6,SNR=3.1							
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**20 31 45.0**	**-1.2**
comp=Z,2.9nm,1.1s,mb4.2,baz=86,slow=5.7,SNR=3.0							
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**20 31 59.6**	**+0.9**
comp=Z,0.5nm,0.4s,mb3.9,baz=338,slow=7.7,SNR=3.5							
ASAR	**Alice Springs**	**61.91**	**149**	P	**P**	**20 32 19.1**	**-0.3**
comp=Z,0.3nm,0.6s,mb3.6,baz=337,slow=7.0,SNR=5.9							
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**20 32 54.0**	**0.0**
comp=Z,0.4nm,0.6s,mb3.6,baz=56,slow=8.8,SNR=3.4							
LPG	**La Plagne**	**72.94**	**313**	*e*P	**P**	**20 33 29.4**	**+0.3**
comp=Z,6.7nm,0.7s,mb4.4							
LPL	**La Plagne**	**72.94**	**313**	*e*P	**P**	**20 33 29.3**	**+0.2**
comp=Z,3.0nm,0.6s,mb4.1							
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**20 33 35.0**	**-1.3**
comp=Z,6.0nm,0.8s,mb4.2							
YKA	**Yellowknife Ar**	**81.18**	**17**	P	**P**	**20 34 14.2**	**-0.9**
comp=Z,0.2nm,0.3s,mb3.5,baz=332,slow=5.5,SNR=3.1							

MAN 14 20:23:21, 16°.56N×122°.42E, h27km, mb4.5, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.50**	**1**	*e*P	Pb	20 23 32.0	+0.7
CAUP	**Cauayan**	**0.69**	**304**	*e*P	Pb	20 23 34.7	+0.3
CAUP				*e*S	Sb	20 23 42.9	-0.7
BALP	**Baler**	**1.15**	**225**	*e*P	Pn	20 23 41.8	+0.5
BALP				*e*S	Sn	20 23 56.3	+0.1
PCPH	**Palayan**	**1.62**	**232**⇑	*e*P	Pn	20 23 49.5	+1.7
APYP	**Conner**	**1.71**	**319**	*e*P	Pn	20 23 51.0	+2.0
APYP				*e*S	Sn	20 24 11.2	+1.1
POLP	**Polilio Island**	**1.88**	**194**	*e*P	Sb	20 24 17.6	-0.2

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*IDC **14** 20:35:50.9±1.1, 31°.26N×103°.91E, h0km, mb3.7/11, mb1 3.9/12, mb1mx3.7/25, mbtmp3.7/12, ML3.2/1, Error ellipse: s-maj=36.0km s-min=20.2km az=44.0*
*BJI **14** 20:35:52.8, 31°.20N×104°.16E, h13km, mB4.5/1, mb4.1/1, ML3.7/16, Ms3.7/3, Ms7 3.7/3*
*NEIC **14** 20:35:53.1±0.6, 31°.39N×103°.98E, h10km, mb4.1/1, Error ellipse: s-maj=14.5km s-min=9.5km az=198.0*
ISC 14 20:35:52.0±0.8, 31°.35N±0°.04×104°.09E±0°.05, h6km±5km, n28, σ1°16/38, mb3.8/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**213**	Pg	**Pg**	**20 36 02.8**	**+0.6**
CD2				Sg	**Sg**	**20 36 09.3**	**+0.3**
CD2				smax			
comp=N,4μm,1.0s							
LZH	**Lanzhou**	**4.73**	**358**	*e*Pn	**Pn**	**20 37 10.8**	**+6.9**
LZH				Pg	**Pg**	**20 37 22.4**	**-0.2**
LZH				Sn	**Sn**	**20 38 07.0**	**+8.0**
LZH				Sg	**Sg**	**20 38 24.3**	**+0.5**
LZH				smax			
comp=N,77nm,1.0s							
LZH				smax			
comp=E,87nm,1.2s							
LZH				LR	LR		
comp=E,500nm,5.6s							
LZH				LR	LR		
comp=Z,530nm,6.2s							
ENH	**Enshi**	**4.76**	**102**	*e*Pn	**Pn**	**20 37 07.4**	**+3.0**
XAN	**Xi'an**	**4.87**	**55**	Pn	**Pn**	**20 37 07.9**	**+2.0**
XAN				Pg	**Pg**	**20 37 24.3**	**-1.1**
XAN				Sn	**Sn**	**20 38 04.8**	**+2.1**
XAN				Sg	**Sg**	**20 38 26.5**	**-2.1**
XAN				smax			
comp=N,140nm,0.7s							
XAN				smax			
comp=E,87nm,0.9s							
GYA	**Guiyang**	**5.37**	**155**	Pg	**Pb**	**20 37 22.5**	**-3.9**
GYA				Sn	**Sn**	**20 38 20.4**	**+5.4**
GYA				smax			
comp=N,170nm,0.8s							
GYA				smax			
comp=E,150nm,1.0s							
KMI	**Kunming**	**6.32**	**191**	Pn	**Pn**	**20 37 22.4**	**-3.4**
KMI				Sn	**Sn**	**20 38 33.8**	**-4.6**
KMI				smax			
comp=N,20nm,1.3s							
KMI				smax			
comp=E,24nm,1.5s							
WHN	**Wuhan**	**8.85**	**93**	P	**Pn**	**20 38 05.3**	**+4.8**
WHN				S	**Sn**	**20 39 38.8**	**-1.8**
WHN				LR	LR		
comp=N,670nm,4.4s							
WHN				LR	LR		
comp=E,640nm,7.2s							
WHN				LR	LR		
comp=Z,1μm,5.0s							
LSA	**Lhasa**	**11.28**	**265**	*e*P	**Pn**	**20 38 35.2**	**+1.3**
SONM	**Songino Array**	**16.55**	**5**	Pn	**Pn**	**20 39 45.8**	**+1.0**
comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=4.9							
KSRS	**Korea Array**	**20.56**	**66**	P	**P**	**20 40 33.7**	**+2.2**
comp=Z,1.1nm,0.8s,baz=258,slow=10,SNR=5.6							
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**20 40 55.9**	**+0.6**
comp=Z,0.8nm,0.6s,mb3.4,baz=125,slow=10,SNR=13							
MDJ	**Mudanjiang**	**23.95**	**49**	P	**P**	**20 41 08.2**	**+1.1**
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**20 41 30.1**	**+0.1**
comp=Z,1.5nm,0.6s,mb3.7,baz=133,slow=9.7,SNR=9.2							
KURK	**Kurchatov**	**27.04**	**323**	P	**P**	**20 41 35.0**	**0.0**
comp=Z,1.2nm,0.6s,mb3.6,baz=127,slow=9.3,SNR=11							
KURK	**Kurchatov**	**27.04**	**323**	*e*P	**P**	**20 41 33.6**	**-1.3**
comp=Z,5.2nm,1.3s,mb3.9							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**20 42 23.8**	**-0.3**
comp=Z,0.4nm,0.5s,mb3.6,baz=117,slow=12,SNR=4.3							
ABKAR	**Akbulak array**	**37.50**	**311**	P	**P**	**20 43 05.7**	**-0.8**
BRTR	**Keskin Array B**	**56.61**	**299**	P	**P**	**20 45 35.2**	**-0.6**
comp=Z,0.5nm,0.8s,mb3.6,baz=46,slow=6.2,SNR=2.9							
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**20 45 38.0**	**-0.3**
comp=Z,1.3nm,0.6s,mb4.2,baz=81,slow=7.6,SNR=7.6							
ARCES				PcP	PcP	20 46 32.7	-0.6
comp=Z,2.9nm,1.0s,baz=64,slow=4.1,SNR=4.4							
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**20 45 38.0**	**-0.3**
ARCES				PcP	PcP	20 46 32.7	-0.6
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**20 45 39.9**	**-0.9**
comp=Z,1.7nm,0.8s,mb4.1,baz=108,slow=6.2,SNR=5.7							
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**20 46 11.2**	**0.0**
comp=Z,0.5nm,0.6s,mb3.8,baz=337,slow=6.7,SNR=7.3							
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**20 46 27.8**	**-1.2**
comp=Z,0.5nm,0.7s,mb3.6,baz=74,slow=6.6,SNR=3.4							
CDF	**Champ du Feu**	**71.43**	**316**	*e*P	**P**	**20 47 12.4**	**-0.8**
comp=Z,3.4nm,0.7s,mb4.1							
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**20 47 23.2**	**+0.1**
comp=Z,2.7nm,0.5s,mb4.1							
LPL	**La Plagne**	**73.08**	**313**	*e*P	**P**	**20 47 23.0**	**-0.1**
comp=Z,4.0nm,0.5s,mb4.3							
SMF	**Signal de Mont**	**74.31**	**315**	*e*P	**P**	**20 47 29.4**	**-0.9**
YKA	**Yellowknife Ar**	**81.46**	**17**	P	**P**	**20 48 09.5**	**-0.2**
comp=Z,0.4nm,0.6s,mb3.6,baz=330,slow=5.2,SNR=5.9							

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*ISCJB **14** 20:51:09.8±0.6, 31°.29N±0°.05×103°.8E±0°.1, h10km, mb3.5/8, Error ellipse: s-maj=12.6km s-min=7.6km az=167.9*
*IDC **14** 20:51:09.9±1.0, 31°.37N×103°.96E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, Error ellipse: s-maj=77.1km s-min=18.3km az=59.0*
*NEIC **14** 20:51:11.8±0.7, 31°.26N×103°.68E, h10km, mb3.9/1, Error ellipse: s-maj=23.0km s-min=10.6km az=52.0*
*BJI **14** 20:51:11.7, 31°.30N×104°.00E, h12km, mb3.5/1, ML3.5/8, Ms3.6/6, Ms7 3.4/4*
ISC 14 20:51:11.7±0.6, 31°.36N±0°.04×103°.87E±0°.09, h10km, n15, σ1°08/18, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**192**	Pg	**Pg**	**20 51 21.5**	**+0.9**
CD2				Sg	**Sg**	**20 51 28.6**	**+2.0**
CD2				smax			
comp=N,3μm,0.6s							
ENH	**Enshi**	**4.96**	**101**	*e*P	**Pn**	**20 52 28.0**	**+1.8**
comp=N,83nm,0.7s							
GYA	**Guiyang**	**5.46**	**153**	Pg	**Pb**	**20 52 45.9**	**-1.3**
GYA				smax			
comp=N,90nm,1.0s							
GYA				smax			
comp=E,130nm,0.9s							
KMI	**Kunming**	**6.29**	**189**	Pn	**Pn**	**20 52 43.8**	**-0.7**
KMI				Sn	**Sn**	**20 53 54.8**	**-1.6**
KMI				Sg	**Sg**	**20 54 27.8**	**-5.8**
KMI				smax			
comp=N,17nm,2.0s							
KMI				smax			
comp=E,20nm,1.7s							
KMI				LR	LR		
comp=N,340nm,7.3s							
KMI				LR	LR		
comp=E,470nm,15.8s							
GTA	**Gaotai**	**8.69**	**339**	*e*P	**Pn**	**20 53 25.6**	**+8.1**
GTA				S	**Sn**	**20 55 03.0**	**+7.5**
GTA				sS		20 55 09.6	
GTA				pmax	pmax		
comp=Z,2.0nm,1.1s							
GTA				LR	LR		
comp=N,210nm,10.8s							
GTA				LR	LR		
comp=E,160nm,8.7s							
GTA				LR	LR		
comp=Z,210nm,7.5s							
WHN	**Wuhan**	**9.04**	**92**	P	**Pn**	**20 53 21.5**	**-0.8**
WHN				LR	LR		
comp=N,1μm,4.3s							
WHN				LR	LR		
comp=E,300nm,3.2s							
WHN				LR	LR		
comp=Z,1μm,5.4s							
SONM	**Songino Array**	**16.57**	**6**	Lg		20 59 50.0	
comp=Z,0.1nm,0.3s,baz=203,slow=29,SNR=5.6							
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**20 56 13.4**	**+0.5**
comp=Z,0.8nm,1.0s,mb3.1,baz=199,slow=6.3,SNR=4.6							
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**20 56 48.3**	**+0.1**
comp=Z,0.4nm,0.4s,mb3.3,baz=130,slow=9.8,SNR=3.1							
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**20 56 52.6**	**-0.4**
comp=Z,0.3nm,0.3s,mb3.4,baz=132,slow=8.5,SNR=4.3							
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**21 00 56.5**	**-0.3**
comp=Z,3.2nm,1.0s,mb4.3,baz=89,slow=7.4,SNR=3.1							
WRAB	**Tennant Creek**	**58.79**	**146**	P	**P**	**21 01 12.4**	**+2.1**
comp=Z,0.9nm,0.8s,mb3.9							
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**21 01 09.8**	**-0.5**
comp=Z,0.5nm,0.8s,mb3.6,baz=338,slow=7.6,SNR=3.5							
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**21 01 30.6**	**-0.2**
comp=Z,0.2nm,0.7s,mb3.3,baz=338,slow=6.1,SNR=2.7							
YKA	**Yellowknife Ar**	**81.51**	**17**	P	**P**	**21 03 28.8**	**-0.3**
comp=Z,0.2nm,0.7s,mb3.2,baz=332,slow=5.3,SNR=3.2							

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*IDC **14** 20:51:24.6±0.8, 32°.33N×104°.53E, h0km, mb3.9/15, mb1 4.0/17, mb1mx3.9/30, mbtmp3.9/17, ML3.0/2, Error ellipse: s-maj=29.4km s-min=15.7km az=46.0*
*BJI **14** 20:51:25.8, 32°.41N×104°.59E, h9km, mb4.1/3, ML4.0/9, Ms3.9/3, Ms7 3.7/3*
*NEIC **14** 20:51:26.4±0.4, 32°.52N×104°.82E, h10km, mb4.0/5, Error ellipse: s-maj=14.9km s-min=7.5km az=218.0*
ISC 14 20:51:24.8±1.3, 32°.32N±0°.04×104°.68E±0°.05, h2km±8km, n40, σ1°10/46, mb4.0/23, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.61**	**209**	Pg	**Pn**	**20 51 52.8**	**-1.4**
CD2				Sg	**Sn**	**20 52 14.8**	**-0.7**
CD2				smax			
comp=N,4μm,0.6s							
LZH	**Lanzhou**	**3.82**	**350**	*e*Pg	**Pb**	**20 52 30.5**	**-2.4**
LZH				Sn	**Sn**	**20 53 14.9**	**+4.9**
LZH				Sg	**Sg**	**20 53 29.0**	**+1.5**
LZH				smax			
comp=N,880nm,0.7s							
LZH				smax			
comp=E,690nm,0.8s							
LZH				LR	LR		
comp=E,2μm,6.6s							
LZH				LR	LR		
comp=Z,2μm,7.0s							
XAN	**Xi'an**	**3.95**	**63**	Pn	**Pn**	**20 52 27.3**	**+0.9**
XAN				Pg	**Pg**	**20 52 38.3**	**-2.2**
XAN				Sn	**Sn**	**20 53 12.6**	**-0.6**
XAN				Sg	**Sg**	**20 53 28.3**	**-3.4**
XAN				smax			
comp=N,440nm,0.7s							
XAN				smax			
comp=E,150nm,0.8s							
ENH	**Enshi**	**4.59**	**115**	*e*Pg	**Pg**	**20 52 54.0**	**+1.2**
LSA	**Lhasa**	**11.90**	**261**	*e*P	**Pn**	**20 54 19.8**	**+4.4**
SONM	**Songino Array**	**15.55**	**4**	Pn	**Pn**	**20 55 06.9**	**+1.9**
comp=E,0.0nm,0.3s,baz=187,slow=12,SNR=2.9							
SONM	**Songino Array**	**15.55**	**4**	Pn	**Pn**	**20 55 06.9**	**+1.9**
KSRS	**Korea Array**	**19.73**	**69**	P	**Pn**	**20 55 56.5**	**-0.5**
comp=E,0.2nm,0.3s,baz=257,slow=11,SNR=8.6							
MKAR	**Makanchi Array**	**22.41**	**317**	P	**P**	**20 56 24.9**	**+0.4**
comp=E,1.4nm,0.8s,mb3.5,baz=121,slow=12,SNR=5.1							
UCH	**Uchtor**	**25.84**	**301**	*e*P	**P**	**20 56 59.5**	**+2.0**
comp=E,2.9nm,1.1s,mb3.7							
ZAA0	**Zalesovo Array**	**25.86**	**333**	*e*P	**P**	**20 56 57.2**	**-0.2**
ZALV	**Zalesovo Beam**	**25.86**	**333**	P	**P**	**20 56 57.7**	**+0.2**
comp=E,5.0nm,0.7s,mb4.2,baz=129,slow=10,SNR=21							
ZALV	**Zalesovo Beam**	**25.86**	**333**	P	**P**	**20 56 57.7**	**+0.2**
KURK	**Kurchatov**	**26.58**	**321**	P	**P**	**20 57 01.8**	**-2.4**
comp=E,0.8nm,0.6s,mb3.4,baz=129,slow=8.4,SNR=6.7							
KURK	**Kurchatov**	**26.58**	**321**	P	**P**	**20 57 01.8**	**-2.4**
ABKAR	**Akbulak array**	**37.24**	**310**	*e*P	**P**	**20 58 38.0**	**+0.4**
comp=E,1.4nm,0.6s,mb4.0							
AKTK	**Aktyubinsk**	**38.68**	**312**	P	**P**	**20 58 49.9**	**+0.2**
AKTO	**Aktyubinsk**	**38.68**	**312**	P	**P**	**20 58 49.9**	**+0.2**
comp=E,1.4nm,0.5s,mb3.9,baz=120,slow=14,SNR=8.9							
ARU	**Arti**	**39.78**	**321**	*e*P	**P**	**20 58 59.3**	**+0.5**
comp

WRAB	**Tennant Creek**	**59.22**	**147**	*eP*	**P**	**21 01 29.3 +1.8**
	comp=E,3.9nm,0.7s,mb4.5					
WRA	**Warramunga Arr**	**59.22**	**147**	P	**P**	**21 01 28.3 +0.8**
	comp=E,2.4nm,0.7s,mb4.3,baz=339,slow=7.4,SNR=13					
ASAR	**Alice Springs**	**62.28**	**150**	P	**P**	**21 01 49.4 +1.0**
	comp=E,0.9nm,0.7s,mb4.0,baz=334,slow=6.0,SNR=8.3					
NOA	**NORSAR Array B**	**63.90**	**327**	P	**P**	**21 01 57.5 -1.2**
	comp=E,1.0nm,0.7s,mb3.9,baz=74,slow=6.4,SNR=3.3					
NOA	**NORSAR Array B**	**63.90**	**327**	P	**P**	**21 01 57.5 -1.2**
GERES	**GERESS Array B**	**67.05**	**314**	P	**P**	**21 02 18.6 -0.7**
	comp=E,0.5nm,0.8s,mb3.6,baz=92,slow=3.2,SNR=4.4					
CDF	**Champ du Feu**	**71.09**	**316**	*eP*	**P**	**21 02 44.0 -0.4**
KMBO	**Kilima Mbogo**	**71.66**	**257**	P	**P**	**21 02 51.6 +3.3**
	comp=E,1.0nm,0.6s,mb3.9,baz=38,slow=16,SNR=4.3					
LPG	**La Plagne**	**72.78**	**313**	*eP*	**P**	**21 02 55.0 +0.4**
	comp=E,10nm,0.8s,mb4.5					
LPL	**La Plagne**	**72.78**	**313**	*eP*	**P**	**21 02 54.8 +0.2**
	comp=E,6.8nm,0.7s,mb4.4					
AVF	**Avril sur Loir**	**74.20**	**316**	*eP*	**P**	**21 03 02.4 -0.5**
YKA	**Yellowknife Ar**	**80.39**	**17**	P	**P**	**21 03 37.1 -0.2**
	comp=E,0.6nm,0.6s,mb3.7,baz=330,slow=5.2,SNR=7.7					
YKA	**Yellowknife Ar**	**80.39**	**17**	P	**P**	**21 03 37.1 -0.2**
URZ	**Urewera**	**97.29**	**131**	*eP*	**P**	**21 04 59.7 +0.5**

*DDA **14** 20:53:51.6, 39.°41N×33.°06E, h6km±1km, Md3.1*
*ISK **14** 20:53:51.1, 39.°43N×33.°08E, h5km, MD3.1*
*ISCJB **14** 20:53:52.8±0.4, 39.°43N±0.°03×33.°08E±0.°04, h10km, Error ellipse: s-maj=4.6km s-min=3.2km az=42.8*
*CSEM **14** 20:53:52.8±0.1, 39.°40N×33.°10E, h5km, MD3.1, Error ellipse: s-maj=2.4km s-min=1.9km az=117.0*
ISC 14 20:53:52.6±0.6, 39.°40N±0.°03×33.°09E±0.°04, h1km±5km, **n40, σ0**s**85/55, 1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.15**	**11**	⇓*i*Pg	**Pg**	**20 53 55.1**	**-0.3**
BBAL				*i* Sg	**Sg**	**20 53 57.5**	**+0.1**
LOD	**Lodumlu**	**0.55**	**333**	*e*PG	**Pg**	**20 54 02.2**	**-0.9**
LOD				*e*SG	**Sg**	**20 54 10.7**	**+0.4**
LOD	**Lodumlu**	**0.55**	**333**	*e*Pg	**Pg**	**20 54 02.2**	**-0.9**
LOD				*e*Sg	**Sg**	**20 54 10.7**	**+0.4**
CDAG	**Cicekdag**	**1.02**	**77**	⇑*i*P	**Pg**	**20 54 11.2**	**-0.9**
CDAG				*i* S	**Sg**	**20 54 26.7**	**+1.4**
CDAG	**Cicekdag**	**1.02**	**77**	*i* P	**Pg**	**20 54 11.2**	**-0.9**
CDAG				*i* S	**Sg**	**20 54 26.7**	**+1.4**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**20 54 12.7**	**-0.5**
KIZT				*e*SG	**Sg**	**20 54 28.5**	**+1.5**
KIZT	**Kizilcal**	**1.07**	**242**	*e*Pg	**Pg**	**20 54 12.7**	**-0.4**
KIZT				*e*Sg	**Sg**	**20 54 28.5**	**+1.5**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pg**	**20 54 13.2**	**-0.9**
ELDT				*e*S	**Sg**	**20 54 28.9**	**+0.2**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pg**	**20 54 13.2**	**-0.9**
ELDT				*e*S	**Sg**	**20 54 28.9**	**+0.3**
KDHN	**Kadinhani**	**1.16**	**221**	*e*P	**Pg**	**20 54 15.4**	**+0.6**
KDHN				*e*S	**Sg**	**20 54 30.1**	**+0.4**
KDHN	**Kadinhani**	**1.16**	**221**	*e*P	**Pg**	**20 54 15.4**	**+0.6**
KDHN				*e*S	**Sg**	**20 54 30.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.21**	**273**	*e*PN	**Pn**	**20 54 15.1**	**-1.6**
SVRH	**Sivrihisar-ESK**	**1.21**	**273**	*e*Pn	**Pn**	**20 54 15.1**	**-1.6**
SULT	**Sultanhani-AKS**	**1.24**	**164**	*e*PN	**Pn**	**20 54 16.6**	**-0.6**
SULT	**Sultanhani-AKS**	**1.24**	**164**	*e*Pn	**Pn**	**20 54 16.6**	**-0.5**
LADK	**Ladik-KONYA**	**1.32**	**205**	*e*PN	**Pn**	**20 54 18.0**	**-0.2**
LADK	**Ladik-KONYA**	**1.32**	**205**	*e*Pn	**Pn**	**20 54 18.0**	**-0.2**
CORM	**Corum**	**1.42**	**56**	*e*PN	**Pn**	**20 54 18.5**	**-1.1**
CORM	**Corum**	**1.42**	**56**	*e*Pn	**Pn**	**20 54 18.5**	**-1.1**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*PN	**Pn**	**20 54 21.4**	**-0.1**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*Pn	**Pn**	**20 54 21.4**	**0.0**
ESKT	**Eskisehir**	**1.74**	**275**	*e*PN	**Pn**	**20 54 23.9**	**+0.1**
ESKT	**Eskisehir**	**1.74**	**275**	*e*Pn	**Pn**	**20 54 24.0**	**+0.1**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**20 54 23.2**	**-0.8**
YOZ	**Yozgat**	**1.74**	**81**	*e*Pn	**Pn**	**20 54 23.3**	**-0.7**
TOS	**Tosya**	**1.79**	**23**	*e*PN	**Pn**	**20 54 23.8**	**-0.8**
TOS	**Tosya**	**1.79**	**23**	*e*Pn	**Pn**	**20 54 23.8**	**-0.8**
CTKT	**Corum**	**1.79**	**46**	*e*P	**Pn**	**20 54 24.9**	**+0.3**
CTKT				*e*S	**Sn**	**20 54 48.5**	**+0.5**
CTKT	**Corum**	**1.79**	**46**	*e*P	**Pn**	**20 54 24.9**	**+0.2**
CTKT				*e*S	**Sn**	**20 54 48.5**	**+0.4**
MDU	**Mudurnu**	**1.79**	**307**	*e*PN	**Pn**	**20 54 24.7**	**0.0**
MDU	**Mudurnu**	**1.79**	**307**	*e*Pn	**Pn**	**20 54 24.7**	**0.0**
SAFT	**Safranbolu**	**1.86**	**351**	*e*PN	**Pn**	**20 54 25.4**	**-0.3**
SAFT	**Safranbolu**	**1.86**	**351**	*e*Pn	**Pn**	**20 54 25.4**	**-0.3**
BALT	**Daday**	**2.15**	**6**	*e*P	**Pn**	**20 54 31.2**	**+1.7**
BALT				*e*S	**Sn**	**20 54 59.8**	**+3.0**
BALT	**Daday**	**2.15**	**6**	*e*P	**Pn**	**20 54 31.2**	**+1.7**
BALT				*e*S	**Sn**	**20 54 59.8**	**+3.0**
GULT	**Gulveren**	**2.23**	**298**	*e*PN	**Pn**	**20 54 30.3**	**-0.4**
GULT	**Gulveren**	**2.23**	**298**	*e*Pn	**Pn**	**20 54 30.3**	**-0.4**
KOZT	**Kozan**	**2.88**	**131**	*e*PN	**Pn**	**20 54 39.7**	**0.0**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**20 54 43.1**	**+0.9**
SVSK	**Karacayir**	**3.06**	**79**	*e*Pn	**Pn**	**20 54 43.1**	**+0.9**

GUC 14 20:55:55.1±0.6, 23.°32S×70.°64W, h24km±2km**, MD3.5, ML2.7, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.28**	**39**	*e*P	Pb	20 56 01.3	-0.4
MECH				*i* S	Sb	20 56 05.8	-0.3
ANCH	**Antofagasta**	**0.42**	**150**	⇓*i*P	Pb	20 56 02.8	-1.1
ANCH				*i* S	Sb	20 56 09.3	-0.6
PECH	**Pedro de Valdi**	**1.14**	**51**	⇑*i*P	Pn	20 56 15.1	-0.6
PECH				*i* S	Sn	20 56 30.3	-0.3
PECH				AML	AML	20 56 32.1	
	comp=N,728nm,0.4s						
PB04	**Plate Boundary**	**1.49**	**46**	⇓*i*P	Pn	20 56 13.6	-6.9
PB04				*i* S	Sn	20 56 28.4	-11
PB04				AML	AML	20 56 32.1	
	comp=N,263nm,1.0s						
LVC	**Limon Verde**	**1.74**	**67**	⇑*i*P	Pn	20 56 25.5	+1.7
LVC				*i* S	Sn	20 56 48.1	+2.8
LVC				AML	AML	20 56 50.3	
	comp=N,84nm,0.3s						
PB01	**Plate Boundary**	**2.50**	**25**	*e*P	Pn	20 56 36.6	+2.2
PB01				*i* S	Sn	20 57 07.8	+3.6
PB01				AML	AML	20 57 13.7	
	comp=E,56nm,0.4s						

*IDC **14** 21:01:05.1±0.4, 31.°63N×104.°23E, h0km, mb4.9/35, mb1 5.0/36, mb1mx4.9/40, mbtmp4.9/36, ML3.7/1, MS4.1/17, Ms1 4.1/17, ms1mx3.9/40, Error ellipse: s-maj=13.0km s-min=10.2km az=38.0*
*ISCJB **14** 21:01:05.3±0.1, 31.°62N±0.°02×104.°17E±0.°02, h10km, mb5.0/204, MS4.2/43, Error ellipse: s-maj=2.7km s-min=2.4km az=173.5*
*BJI **14** 21:01:06.3, 31.°64N×104.°34E, h10km, mB4.9/21, mb4.8/34, ML4.9/22, Ms4.8/59, Ms7 4.6/45*
*NEIC **14** 21:01:07.0±0.1, 31.°66N×104.°21E, h10km, mb5.1/121, MS4.4/7, Error ellipse: s-maj=3.8km s-min=2.8km az=212.0*
*TEH **14** 21:01:07.0, 31.°64N×104.°19E, h10km*
*MOS **14** 21:01:08.8±0.7, 31.°66N×104.°19E, h33km, mb5.2/96, MS4.3/22, Error ellipse: s-maj=7.1km s-min=3.6km az=123.3*
*SZGRF **14** 21:01:08.8, 30.°95N×104.°09E, h16km, mb5.4, MS4.6, Sichuan, China*
*DJA **14** 21:01:11, 31.°62N×104.°20E, h31km, mb5.4/32*
ISC 14 21:01:07.3±0.1, 31.°66N±0.°02×104.°17E±0.°02, h10km**, (h18**km±3.7km**: pP-P), n638, σ0**s**95/667, mb5.0/204, MS4.2/43, 127C-11D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.82**	**205**	Pg	**Pg**	**21 01 25.0**	**+1.8**
CD2				Sg	**Sg**	**21 01 36.6**	**+2.7**
CD2				smax			
	comp=N,62μm,0.7s						
LZH	**Lanzhou**	**4.42**	**357**	*e*Pn	**Pn**	**21 02 16.9**	**+2.4**
LZH				Pg	**Pg**	**21 02 29.0**	**-3.1**
LZH				Sn	**Sn**	**21 03 13.3**	**+7.2**
LZH				Sg	**Sg**	**21 03 28.9**	**-0.5**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=N,12μm,6.2s						
LZH				LR	LR		
	comp=Z,13μm,7.5s						
XAN	**Xi'an**	**4.65**	**58**	Pn	**Pn**	**21 02 16.4**	**-1.2**
XAN				Pg	**Pb**	**21 02 29.1**	**+0.1**
XAN				Sn	**Sn**	**21 03 10.8**	**-0.8**
XAN				Sg	**Sb**	**21 03 29.8**	**+4.8**
XAN				smax			
	comp=N,3μm,0.9s						
XAN				smax			
	comp=E,1μm,0.8s						
XAN				LR	LR		
	comp=N,7μm,8.3s						
XAN				LR	LR		
	comp=E,3μm,9.3s						
XAN				LR	LR		
	comp=Z,3μm,8.6s						
ENH	**Enshi**	**4.77**	**105**	*e*Pn	**Pn**	**21 02 19.9**	**+0.7**
ENH				*e*S	**Sb**	**21 03 32.4**	**+3.9**
GYA	**Guiyang**	**5.62**	**157**	Pn	**Pn**	**21 02 31.3**	**+0.3**
GYA				Sn	**Sn**	**21 03 34.5**	**-1.1**
GYA				smax			
	comp=N,4μm,0.9s						
GYA				smax			
	comp=E,3μm,0.9s						
GYA				LR	LR		
	comp=N,3μm,8.4s						
GYA				LR	LR		
	comp=E,6μm,8.4s						
GYA				LR	LR		
	comp=Z,4μm,11.8s						
KMI	**Kunming**	**6.63**	**191**	Pn	**Pn**	**21 02 46.4**	**+1.6**
KMI				Sn	**Sn**	**21 04 02.8**	**+2.3**
KMI				Sg	**Sg**	**21 04 42.4**	**+2.2**
KMI				smax			
	comp=N,400nm,2.0s						
KMI				smax			
	comp=E,460nm,2.9s						
KMI				LR	LR		
	comp=N,4μm,9.1s						
KMI				LR	LR		
	comp=E,4μm,9.1s						
GTA	**Gaotai**	**8.51**	**337**	*e*P	**Pn**	**21 03 12.6**	**+2.0**
GTA				pP		21 03 21.8	
GTA				sP		21 03 26.1	
GTA				S	**Sn**	**21 04 48.3**	**+1.7**
GTA				sS		21 04 58.5	
GTA				pmax	pmax		
	comp=Z,87nm,6.3s						
GTA				LR	LR		
	comp=N,4μm,14.7s						
GTA				LR	LR		
	comp=E,4μm,14.7s						
GTA				LR	LR		
	comp=Z,4μm,12.0s						
WHN	**Wuhan**	**8.80**	**95**	P	**Pn**	**21 03 13.9**	**-0.7**
WHN				S	**Sn**	**21 04 48.1**	**-5.7**
WHN				LR	LR		
	comp=N,8μm,8.5s						
WHN				LR	LR		
	comp=E,12μm,7.1s						
WHN				LR	LR		
	comp=Z,10μm,11.0s						
BTO	**Baotou**	**10.10**	**26**	*e*P	**Pn**	**21 03 34.3**	**+1.9**
BTO				LR	LR		
	comp=N,2μm,9.7s						
HHC	**Hu-ho-hao-te**	**10.94**	**31**	*e*P	**Pn**	**21 03 46.3**	**+2.5**
HHC				pP		21 03 53.3	
HHC				sP		21 03 58.1	
HHC				S	**Sn**	**21 05 49.1**	**+2.9**
HHC				sS		21 06 00.8	
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				LR	LR		
	comp=N,5μm,5.5s						
HHC				LR	LR		
	comp=E,2μm,5.1s						
HHC				LR	LR		
	comp=Z,2μm,5.9s						
IMP	**Imphal**	**11.32**	**235**	*e*P	**Pn**	**21 03 49.0**	**-0.2**
IMP				*ex*	x	21 06 08.0	
LSA	**Lhasa**	**11.38**	**263**	P	**Pn**	**21 03 51.8**	**+1.9**
LSA				S	**Sn**	**21 05 54.6**	**-2.5**
LSA				LR	LR		
	comp=N,960nm,14.8s						
LSA				LR	LR		
	comp=E,3μm,13.0s						
LSA				LR	LR		
	comp=Z,3μm,12.2s						
LSA	**Lhasa**	**11.38**	**263**	*e*P	**Pn**	**21 03 51.9**	**+2.0**
LSA				*e*		21 06 00.3	
LSA				pmax	pmax		
	comp=Z,36nm,0.6s						
LSA	**Lhasa**	**11.38**	**263**	*e*Pn	**Pn**	**21 03 51.9**	**+2.0**
	comp=Z,36nm,0.6s						
LSA				*e*Sn	**Sn**	**21 06 00.3**	**+3.2**
TIA	**Tai'an**	**11.68**	**64**	*e*P	**Pn**	**21 03 52.5**	**-1.5**
TIA				LR	LR		
	comp=N,1μm,8.0s						
TIA				LR	LR		
	comp=E,1μm,8.0s						
GZH	**Guangzhou**	**11.80**	**134**	P	**Pn**	**21 03 51.9**	**-3.8**
GZH				S	**Sn**	**21 06 01.8**	**-5.7**
GZH				LR	LR		
	comp=N,4μm,9.0s						
GZH				LR	LR		
	comp=E,4μm,10.5s						
SHL	**Shillong**	**12.38**	**244**	*e*P	**Pn**	**21 04 04.0**	**+0.4**
SHL				*ex*	x	21 07 53.0	
CHRT	**Chiangrai**	**12.38**	**200**	⇑P	**Pn**	**21 04 06.0**	**+2.3**
	comp=E,290nm,0.7s						
NJ2	**Nanjing**	**12.49**	**84**	*e*P	**Pn**	**21 04 08.3**	**+3.1**
NJ2				pP		21 04 11.3	
NJ2				sP		21 04 14.6	
NJ2				PP		21 04 18.3	
NJ2				S	**Sn**	**21 06 29.5**	**+5.1**
NJ2				sS		21 06 34.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,50nm,3.8s						
NJ2				LR	LR		
	comp=N,4μm,11.9s						
NJ2				LR	LR		
	comp=E,4μm,12.3s						
NJ2				LR	LR		
	comp=Z,4μm,12.9s						
BJT	**Baijiatuau**	**12.81**	**46**	*e*P	**Pn**	**21 04 12.0**	**+2.6**
BJT				*e*		21 06 32.8	
BJT				pmax	pmax		
	comp=Z,51nm,0.9s						
BJT	**Baijiatuau**	**12.81**	**46**	*e*Pn	**Pn**	**21 04 12.0**	**+2.6**
	comp=Z,51nm,0.9s						
BJT				*e*Sn	**Sn**	**21 06 32.8**	**+0.8**
BJI	**Beijing**	**12.83**	**46**	P	**Pn**	**21 04 10.8**	**+1.1**
BJI				pmax	pmax		
	comp=Z,18nm,0.5s						
BJI				LR	LR		
	comp=N,4μm,4.4s						
BJI				LR	LR		
	comp=E,3μm,5.7s						
BJI				LR	LR		
	comp=Z,690nm,20.1s						
QIZ	**Qiongzhong**	**13.58**	**157**	P	**Pn**	**21 04 20.1**	**+0.1**
QIZ				S	**Sn**	**21 06 53.6**	**+2.6**
QIZ				pmax	pmax		
	comp=Z,23nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,320nm,5.6s						
QIZ				LR	LR		
	comp=N,1μm,5.7s						
QIZ				LR	LR		
	comp=Z,2μm,6.4s						
QIZ	**Qiongzhong**	**13.58**	**157**	*e*Pn	**Pn**	**21 04 18.3**	**-1.7**
	comp=Z,112nm,1.7s						
QIZ				*e*Sn	**Sn**	**21 06 47.8**	**-3.2**
CHG	**Chiang Mai**	**13.63**	**201**	⇓P	**Pn**	**21 04 22.0**	**+1.2**
	comp=Z,71nm,1.0s						
QZH	**Quanzhou**	**14.35**	**114**	P	**Pn**	**21 04 30.4**	**-0.2**
QZH				S	**Sn**	**21 07 07.9**	**-2.0**
QZH				LR	LR		
	comp=N,3μm,8.1s						
QZH				LR	LR		
	comp=E,7μm,8.8s						
QZH				LR	LR		
	comp=Z,10μm,8.4s						
SSE	**Sheshan**	**14.55**	**88**	P	**Pn**	**21 04 32.6**	**-0.7**
SSE				S	**Sn**	**21 07 15.6**	**+0.9**
SSE				pmax	pmax		
	comp=Z,36nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,5.6s						
SSE				LR	LR		
	comp=N,3μm,12.6s						
SSE				LR	LR		
	comp=E,1μm,12.6s						
SSE				LR	LR		
	comp=Z,3μm,11.7s						
KKTK	**Khon Kaen**	**15.30**	**185**	P	**Pn**	**21 04 44.0**	**+0.6**
DL2	**Dalian**	**15.97**	**58**	P	**Pn**	**21 04 55.8**	**+3.7**
DL2				*e*S	**Sn**	**21 07 55.3**	**+6.1**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				pmax	pmax		
	comp=Z,170nm,4.1s						
DL2				LR	LR		
	comp=N,810nm,13.1s						
DL2				LR	LR		
	comp=E,480nm,11.4s						
DL2				LR	LR		
	comp=Z,780nm,13.2s						
SONM	**Songino Array**	**16.25**	**5**	Pn	**Pn**	**21 04 55.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=187,slow=12,SNR=34						
SONM				Lg		21 09 40.7	
	comp=Z,0.1nm,0.3s,baz=194,slow=28,SNR=3.0						
SONM				LR	LR	21 11 46.2	
	comp=Z,2μm,18.0s,baz=190,slow=39						
GUN	**Gumba**	**16.31**	**261**	*e*P	**Pn**	**21 04 55.3**	**-1.2**
	comp=Z,515nm,1.0s						
NST	**Nakhon Sawan**	**16.33**	**194**	P	**Pn**	**21 04 58.0**	**+1.2**
ULN	**Ulaanbaatar**	**16.34**	**7**	*e*P	**Pn**	**21 04 56.2**	**-0.5**
ULN				pmax	pmax		
	comp=Z,55nm,1.1s						
ULN	**Ulaanbaatar**	**16.34**	**7**	*e*Pn	**Pn**	**21 04 56.2**	**-0.5**
	comp=Z,55nm,1.1s						
ULN	**Ulaanbaatar**	**16.34**	**7**	Pn	**Pn**	**21 05 01.4**	**+4.7**
	SNR=26						
ULN				Pn	**Pn**	**21 05 01.4**	**+4.7**
	SNR=26						
YHNB	**Yeheng**	**16.68**	**110**	*e*Pn	**Pn**	**21 05 06.2**	**+5.0**
SSLB	**Suanglung**	**16.79**	**114**	*e*Pn	**Pn**	**21 05 06.5**	**+3.9**
	comp=Z,83nm,0.9s						
PKI	**Pulchoki**	**16.81**	**261**	*e*P	**Pn**	**21 05 01.7**	**-1.1**
	comp=Z,146nm,0.6s						
PKIN	**Phulchoki**	**16.82**	**261**	*e*P	**Pn**	**21 05 01.8**	**-1.2**
	comp=Z,219nm,0.9s						
KKN	**Kakani**	**16.85**	**262**	*e*P	**Pn**	**21 05 01.8**	**-1.6**
	comp=Z,246nm,0.8s						
DMN	**Daman**	**17.05**	**261**	*e*P	**Pn**	**21 05 04.5**	**-1.4**
	comp=Z,336nm,1.1s						
NACB	**Ninganchiao**	**17.10**	**112**	Pn	**Pn**	**21 05 06.4**	**-0.1**
	comp=Z,46nm,0.9s						
WMQ	**Urumqi**	**17.77**	**318**	P	**Pn**	**21 05 16.8**	**+2.1**
WMQ				sP	sP	21 05 23.1	+3.5
WMQ				S	**Sn**	**21 08 32.3**	**-0.4**
WMQ				sS	sS	21 08 37.4	-6.8
WMQ				SS		21 08 53.3	
WMQ				PcP	PcP	21 09 55.8	+3.8
WMQ				pmax	pmax		
	comp=Z,31nm,1.3s						
WMQ				LR	LR		
	comp=N,2μm,11.0s						
WMQ				LR	LR		
	comp=E,1μm,10.0s						
WMQ				LR	LR		
	comp=Z,500nm,16.0s						
SNY	**Shenyang**	**18.54**	**51**	⇓P	**Pn**	**21 05 26.1**	**+2.0**
SNY				S	**Sn**	**21 08 50.3**	**-0.9**
SNY				pmax	pmax		
	comp=Z,14nm,1.1s						
SNY				LR	LR		
	comp=N,630nm,10.1s						
SNY				LR	LR		
	comp=E,1μm,17.2s						
SNY				LR	LR		
	comp=Z,1μm,13.5s						
ZAK	**Zakamensk**	**18.72**	**358**	*e*P	**Pn**	**21 05 26.1**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INCN	**Inchon**	**19.37**	**66**	P	**Pn**	**21 05 33.0**	**-1.2**
TLY	**Talaya**	**20.01**	**359**	*e*P	**P**	**21 05 44.1**	**+4.1**
TLY				*e*		21 05 53.8	
TLY				pmax	pmax		
	comp=Z,29nm,1.8s						
TLY				MLR	MLR		
	comp=Z,1μm,11.0s,MS4.5						
TLY	**Talaya**	**20.01**	**359**	*e*P	**P**	**21 05 40.5**	**+0.5**
TLY				*e*S	**S**	**21 09 25.7**	**+0.9**
TLY	**Talaya**	**20.01**	**359**	P	**P**	**21 05 42.5**	**+2.5**
	SNR=5.5						
TLY				P		21 05 42.5	
	SNR=5.5						
MOY	**Mondy**	**20.13**	**354**	*e*P	**P**	**21 05 43.1**	**+1.8**
MOY				pmax	pmax		
	comp=Z,53nm,1.3s						
KSRS	**Korea Array**	**20.38**	**67**	P	**P**	**21 05 44.2**	**+0.1**
	comp=Z,96nm,1.0s,baz=256,slow=10,SNR=51						
KSRS				S	**S**	**21 09 33.2**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=243,slow=16,SNR=2.6						
KSRS				LR	LR	21 13 09.7	
	comp=Z,340nm,22.0s,MS3.7,baz=260,slow=36						
KSRS	**Korea Array**	**20.38**	**67**	P	**P**	**21 05 44.3**	**+0.2**
KSRS				S	**S**	**21 09 33.2**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,96nm,1.0s						
KSRS				smax			
	comp=N,2.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,340nm,22.0s,MS3.7						
IRK	**Irkutsk**	**20.57**	**0**	⇓*i*P	**P**	**21 05 47.1**	**+1.0**
IRK				pmax	pmax		
	comp=Z,169nm,1.1s						
CN2	**Changchun**	**20.67**	**48**	*e*P	**P**	**21 05 48.3**	**+1.0**
CN2				*es*P	sP	21 05 55.0	+3.6
CN2				*e*S	**S**	**21 09 34.3**	**-3.9**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,700nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,800nm,15.0s,MS4.2						
JOSI	**Joshimath**	**21.09**	**273**	*e*P	**P**	**21 05 52.1**	**+0.2**
HIA	**Hailar**	**21.14**	**29**	*e*P	**P**	**21 05 53.1**	**+0.9**
HIA				pmax	pmax		
	comp=Z,96nm,1.1s						
HIA	**Hailar**	**21.14**	**29**	*e*P	**P**	**21 05 53.1**	**+0.9**
	comp=Z,96nm,1.1s,mb5.0						
KLP	**Kalpa**	**22.07**	**277**	*e*P	**P**	**21 06 02.9**	**+0.5**
KLP				AMb	AMB	21 06 04.7	
	comp=Z,58nm,0.7s,mb5.1						
DDI	**Dehra Dun**	**22.41**	**273**	*e*P	**P**	**21 06 05.5**	**-0.6**
DDI				*ex*	x	21 07 40.0	
MK31	**Makanchi Array**	**22.60**	**318**	*e*P	**P**	**21 06 08.9**	**+1.0**
MKAR	**Makanchi Array**	**22.60**	**318**	P	**P**	**21 06 08.7**	**+0.7**
	comp=Z,29nm,1.0s,mb4.7,baz=118,slow=12,SNR=136						
MKAR				PcP	PcP	21 10 00.1	-0.8
	comp=Z,2.3nm,0.6s,baz=116,slow=3.4,SNR=7.0						
MKAR				ScP	ScP	21 13 36.8	-1.8
	comp=Z,1.6nm,1.0s,baz=128,slow=2.4,SNR=4.0						
MKAR				LR	LR	21 15 53.5	
	comp=Z,569nm,19.0s,MS4.0,baz=122,slow=39						
MKAR	**Makanchi Array**	**22.60**	**318**	P	**P**	**21 06 08.7**	**+0.8**
MKAR						21 10 00.1	
JBP	**Jabalpur**	**23.04**	**254**	⇑*e*P	**P**	**21 06 11.9**	**-0.9**
JBP				*ex*	x	21 06 14.8

MDJ pP 21 06 23.0
MDJ sP sP 21 06 24.8 +1.2
MDJ PcP PcP 21 10 02.5 -0.7
MDJ S **S** **21 10 34.1 0.0**
MDJ ScP ScP 21 13 41.1 -0.5
MDJ PcS PcS 21 13 42.8 +0.3
MDJ ScS ScS 21 17 28.9 +0.8
MDJ pmax pmax
comp=Z,44nm,1.5s,mb4.7
MDJ pmax pmax
comp=Z,110nm,4.1s
MDJ LR LR
comp=N,350nm,23.4s,MS3.8
MDJ LR LR
comp=E,150nm,22.2s,MS3.8
MDJ LR LR
comp=Z,280nm,17.9s,MS3.8
MDJ Mudanjiang 23.70 50 *e*P **P** **21 06 20.3 +1.0**
comp=Z,65nm,1.2s,mb4.9
RTK Rohtak 24.07 271 *e*P **P** **21 06 13.2 -10**
RTK AMb AMB 21 06 15.4
comp=Z,153nm,0.9s,mb5.4
THN Thein Dam 24.10 279 *e*P **P** **21 06 21.1 -2.0**
KSH Kashi 24.16 297 *e*P **P** **21 06 27.6 +4.0**
KSH *e*pP 21 06 31.5
KSH *e*sP sP 21 06 34.5 +6.6
KSH *e*PP 21 07 03.6
KSH *e*PcP PcP 21 10 05.6 +1.3
KSH *e*S **S** **21 10 44.8 +3.2**
KSH *e*sS sS 21 10 51.5 +4.9
KSH *e*SS 21 11 40.6
KSH pmax pmax
comp=Z,140nm,2.3s,mb5.0
KSH LR LR
comp=N,630nm,11.4s,MS4.5
KSH LR LR
comp=E,560nm,11.6s,MS4.5
ULHL Ulahol 24.59 303 P **P** **21 06 29.3 +1.8**
SNR=26
BHPL Bhopal 25.12 257 *e*P **P** **21 06 30.8 -1.7**
BHPL AMb AMB 21 06 34.4
comp=Z,48nm,0.8s,mb5.1
TKM2 Tokmak 2 25.24 305 P **P** **21 06 35.4 +2.0**
SNR=25
TKM2 Tokmak 2 25.24 305 *e*P **P** **21 06 35.0 +1.6**
TKM2 pmax pmax
comp=Z,18nm,0.9s,mb4.6
TKM2 Tokmak 2 25.24 305 *e*P **P** **21 06 35.0 +1.7**
comp=Z,18nm,0.9s,mb4.6
KZA Kyzart 25.26 302 P **P** **21 06 35.9 +2.4**
SNR=107
KBK Karagaybulak 25.62 304 P **P** **21 06 38.9 +2.0**
SNR=40
UCH Uchtor 25.82 302 P **P** **21 06 41.1 +2.4**
SNR=77
UCH Uchtor 25.82 302 *e*P **P** **21 06 39.7 +1.0**
comp=Z,60nm,1.0s,mb5.1
FRU Bishkek 25.91 304 *e*P **P** **21 06 40.0 +0.6**
FRU pmax pmax
comp=Z,50nm,1.8s,mb4.7
AAK Ala-Archa 25.94 303 P **P** **21 06 41.3 +1.6**
comp=Z,98nm,0.8s,mb5.4,SNR=8.0
AAK Ala-Archa 25.94 303 P **P** **21 06 41.4 +1.6**
SNR=11
AAK Ala-Archa 25.94 303 P **P** **21 06 41.2 +1.5**
comp=Z,7.4nm,0.8s,mb4.3,baz=92,slow=5.7,SNR=15
AAK LR LR 21 17 42.8
comp=Z,416nm,18.9s,MS4.0,baz=83,slow=38
AAK Ala-Archa 25.94 303 *e*P **P** **21 06 41.4 +1.7**
AAK pmax pmax
comp=Z,48nm,1.6s,mb4.8
AAK Ala-Archa 25.94 303 *e*P **P** **21 06 41.4 +1.6**
comp=Z,48nm,1.6s,mb4.8
AAK Ala-Archa 25.94 303 P **P** **21 06 42.0 +2.3**
SNR=14
AAK P 21 06 42.0
SNR=14
USP Ospenovka 26.11 305 P **P** **21 06 42.6 +1.3**
SNR=33
ZAA0 Zalesovo Array 26.25 334⇑ *e*P **P** **21 06 42.1 -0.2**
ZAA0 *e*PcP PcP 21 10 10.8 +2.1
ZALV Zalesovo Beam 26.25 334 P **P** **21 06 42.4 0.0**
comp=Z,42nm,0.8s,mb5.0,baz=131,slow=9.3,SNR=171
ZALV LR LR 21 16 40.0
comp=Z,310nm,18.1s,MS3.9,baz=138,slow=36
AJM Ajmer 26.27 266 *e*P **P** **21 06 42.0 -0.9**
AML Almayashu 26.39 302 P **P** **21 06 46.2 +2.4**
SNR=33
AML Almayashu 26.39 302 *e*P **P** **21 06 45.9 +2.1**
comp=Z,36nm,0.8s,mb5.0
AML *e*PcP PcP 21 10 09.7 +0.4
KULM Kulim 26.44 188 *e*P **P** **21 06 44.0 -0.5**
comp=Z,17nm,0.8s,mb4.6
KULM PcP PcP 21 10 09.6 -0.2
EKS2 Erkin-Say 26.46 303 P **P** **21 06 46.0 +1.5**
SNR=12
EKS2 Erkin-Say 26.46 303 *e*P **P** **21 06 45.6 +1.1**
comp=Z,9.4nm,0.8s,mb4.4
EKS2 *e*PcP PcP 21 10 09.5 +0.1
KURK Kurchatov 26.84 323 P **P** **21 06 47.9 +0.2**
comp=Z,19nm,0.8s,mb4.7,baz=130,slow=8.3,SNR=32
KURK PcP PcP 21 10 09.2 -0.9
comp=Z,6.9nm,0.5s,baz=116,slow=2.1,SNR=9.1
KURK LR LR 21 18 08.8
comp=Z,500nm,18.2s,MS4.1,baz=130,slow=38
KURK Kurchatov 26.84 323*c i*P **P** **21 06 48.4 +0.6**
KURK pmax pmax
comp=Z,34nm,1.0s,mb4.8
KURK Kurchatov 26.84 323 *e*P **P** **21 06 48.3 +0.5**
comp=Z,44nm,1.2s,mb4.9
KURK Kurchatov 26.84 323 P **P** **21 06 48.3 +0.6**
SNR=15
KURK P 21 06 48.3
SNR=15
BOD Bodaibo 27.02 12 *e*P **P** **21 06 49.4 +0.1**
BOD pmax pmax
comp=Z,13nm,1.2s,mb4.3
KLR Kul'dur 27.14 42 *e*P **P** **21 06 46.7 -3.8**
KLR pmax pmax
comp=E,60nm,1.0s
KLR pmax pmax
comp=Z,64nm,1.0s,mb5.1
HYB Hyderabad 27.19 245 *i*P **P** **21 06 50.5 -0.7**
NVS Novosibirsk 27.53 333 *e*P **P** **21 06 53.2 -0.7**
NVS pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=E,9.0nm,0.8s
MAJO Matsushiro 28.51 71 *e*P **P** **21 07 03.2 +0.3**
MAJO *e* 21 10 14.5
MAT Matsushiro 28.51 71 P **P** **21 07 04.5 +1.6**
MAT S **S** **21 11 51.2 +0.6**
MJAR Matsushiro Arr 28.51 71 P **P** **21 07 01.6 -1.3**
comp=E,9.1nm,1.0s,mb4.5,baz=277,slow=9.2,SNR=10
MJAR PcP PcP 21 10 13.8 -0.7
comp=E,2.2nm,0.8s,baz=267,slow=2.6,SNR=5.2
MJAR LR LR 21 17 28.2
comp=E,162nm,21.2s,MS3.6,baz=260,slow=34
MJAR Matsushiro Arr 28.51 71 P **P** **21 07 01.6 -1.3**
MJAR 21 10 13.8
HABR Khabarovsk 28.73 45 *e*P **P** **21 07 05.0 +0.3**
HABR *e**SP sP 21 07 17.4 +8.4
HABR *e*S **S** **21 11 53.2 -0.6**
HABR *e**SS sS 21 12 08.3 +9.4
HABR *e*SS SS 21 13 17.3 -38
HABR *e*SSS 21 13 31.2
HABR pmax pmax
comp=Z,85nm,2.4s,mb5.0
HABR pmax pmax
comp=E,45nm,2.2s
HABR pmax pmax
comp=N,24nm,2.0s
HABR MLR MLR
comp=Z,1μm,13.0s,MS4.6
KBL Kabul 29.48 285 *e*P **P** **21 07 12.7 +1.2**
KBL *e* 21 08 17.2
KBL *e* 21 10 17.2
KBL pmax pmax
comp=Z,29nm,1.1s,mb4.9
KBL Kabul 29.48 285 *e*P **P** **21 07 12.7 +1.2**
comp=Z,29nm,1.1s,mb4.9
KBL *e*PP PP 21 08 17.2 -0.7
KBL *e*PcP PcP 21 10 17.1 +0.2
JHJ Hachijo jima 2 30.02 78 LR LR 21 21 09.6
comp=Z,493nm,18.0s,MS4.2,baz=68,slow=40
KSM Kuching 30.58 168 *e*P **P** **21 07 21.5 +0.2**
comp=Z,13nm,0.7s,mb4.9
DAV Davao City (W) 31.59 136 LR LR 21 20 48.2
comp=Z,247nm,21.8s,MS3.8,baz=230,slow=38
BHJ Bhuj 31.65 263 AMb AMB 21 05 13.3
comp=Z,116nm,2.2s,mb5.3
BVAR Borovoye Array 32.39 321 P **P** **21 07 37.6 +0.6**
comp=Z,7.8nm,0.5s,mb4.8,baz=121,slow=9.5,SNR=41
BVAR PcP PcP 21 10 23.3 -1.0
comp=Z,5.7nm,0.6s,baz=142,slow=2.8,SNR=11
BVAR LR LR 21 21 34.0
comp=Z,229nm,21.8s,MS3.8,baz=110,slow=38
BVAR Borovoye Array 32.39 321 P **P** **21 07 37.6 +0.6**
BVAR 21 10 23.3
BRVK Borovoye 32.47 321 P **P** **21 07 38.9 +1.3**
comp=Z,117nm,0.6s,mb5.9,SNR=6.3
BRVK Borovoye 32.47 321*d i*P **P** **21 07 38.0 +0.4**
BRVK pmax pmax
comp=Z,25nm,1.7s,mb4.8
BRVK Borovoye 32.47 321 *e*P **P** **21 07 38.4 +0.8**
comp=Z,12nm,0.7s,mb4.8
BRVK Borovoye 32.47 321 P **P** **21 07 38.6 +1.0**
SNR=6.0
BRVK P 21 07 38.6
SNR=6.0
ASAJ Asahikawa 32.49 56 P **P** **21 07 38.9 +0.9**
comp=Z,12nm,0.7s,mb4.8,baz=265,slow=15,SNR=10
ASAJ Asahikawa 32.49 56 P **P** **21 07 38.9 +0.9**
ASAJ pmax pmax
comp=Z,12nm,0.7s
PALK Pallekele 32.68 227 P **P** **21 07 40.5 +0.6**
comp=Z,13nm,0.9s,mb4.8,baz=82,slow=7.1,SNR=2.6
PALK Pallekele 32.68 227 *e*P **P** **21 07 39.8 -0.1**
YSS Yuzh-Sakhalins 33.16 51 *e*P **P** **21 07 47.0 +3.2**
YSS MLR MLR
comp=Z,400nm,12.0s,MS4.3
YSS MLR MLR
comp=N,600nm,13.0s,MS4.6
YSS MLR MLR
comp=E,400nm,11.0s,MS4.6
YSS Yuzh-Sakhalins 33.16 51 *e*P **P** **21 07 47.4 +3.6**
comp=E,26nm,0.7s,mb5.3
YAK Yakutsk 34.57 21 *e*P **P** **21 07 54.2 -1.6**
YAK *e**PP pP 21 08 03.7 +4.8
YAK *e* 21 10 25.3
YAK *e*S **S** **21 13 26.1 +1.5**
YAK *e*SS SS 21 15 29.7 -25
YAK *e* 21 18 16.1
YAK pmax pmax
comp=Z,16nm,1.0s,mb4.9
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK smax
comp=N,42nm,2.2s
YAK smax
comp=E,23nm,2.1s
YAK MLR MLR
comp=Z,463nm,13.0s,MS4.4
YAK MLR MLR
comp=E,272nm,11.0s,MS4.3
YAK MLR MLR
comp=N,160nm,11.0s,MS4.3
YAK Yakutsk 34.57 21 *e*P **P** **21 07 55.1 -0.8**
comp=N,18nm,0.6s,mb5.2
IDAH Dahanechah 37.30 284 *e*P **P** **21 08 19.2 -0.4**
ABKAR Akbulak array 37.35 311 *e*P **P** **21 08 20.3 +0.5**
comp=N,19nm,0.8s,mb5.0
ABKAR *e*PP PP 21 09 47.8 +2.9
ABKAR *e*PcP PcP 21 10 38.1 -0.7
IAKL Akhelmad 37.65 290 *e*P **P** **21 08 24.5 +2.0**
ABKT Ailbek 38.03 292 P **P** **21 08 27.0 +1.3**
comp=N,302nm,0.6s,mb6.2,SNR=31
AKTK Aktyubinsk 38.80 313 P **P** **21 08 32.4 +0.3**
AKTK PcP PcP 21 10 42.3 -1.0
AKTO Aktyubinsk 38.80 313 P **P** **21 08 32.4 +0.3**
comp=N,7.2nm,0.5s,mb4.6,baz=95,slow=8.7,SNR=30
AKTO PcP PcP 21 10 42.3 -1.0
comp=N,2.8nm,0.6s,baz=166,slow=4.2,SNR=4.1
SVE Sverdlovsk 39.09 323⇓ *e*P **P** **21 08 35.5 +1.1**
SVE pmax pmax
comp=Z,59nm,0.9s,mb5.3
KAPI Kappang 39.38 155 P **P** **21 08 35.7 -1.5**
comp=Z,39nm,0.9s,mb5.1,baz=329,slow=8.3,SNR=12
ARU Arti 40.03 322 P **P** **21 08 42.1 -0.1**
comp=Z,562nm,0.7s,mb6.4,SNR=32
ARU Arti 40.03 322*c i*P **P** **21 08 42.6 +0.4**
ARU *e* 21 10 14.3
ARU *e* 21 10 45.3
ARU S **S** **21 14 49.2 +1.4**
ARU SS SS 21 17 39.6 -5.0
ARU pmax pmax
comp=Z,89nm,1.0s,mb5.5
ARU Arti 40.03 322 *e*P **P** **21 08 42.7 +0.5**
comp=Z,64nm,0.7s,mb5.5
IGLO Ghaloghah 41.59 291 *e*P **P** **21 08 54.0 -1.4**
SMDO Samad 41.60 270 P **P** **21 08 56.7 +1.2**
SNR=5.7
IMEH Mehriz 41.94 283 *e*P **P** **21 08 57.7 -0.6**
BSY Bisya 42.44 270 P **P** **21 09 03.4 +0.9**
SNR=9.1
IFIR Firoozkooh 42.59 290 *e*P **P** **21 09 05.1 +1.5**
IDMV Damavand 43.18 290 *e*P **P** **21 09 09.8 +1.4**
SEY Seymchan 43.58 30*c i*P **P** **21 09 13.0 +1.8**
PEA0B Petropavlovsk- 43.76 45 *e*P **P** **21 09 12.4 -0.4**
PEA0B *e*PcP PcP 21 11 00.4 +1.0
PETK Petropavlovsk- 43.76 45 P **P** **21 09 12.0 -0.8**
comp=Z,18nm,0.9s,mb4.8,baz=220,slow=8.8,SNR=7.4
PETK LR LR 21 29 20.8
comp=Z,202nm,18.1s,MS4.1,baz=259,slow=39
IKLH Kolahrood 44.00 287 *e*P **P** **21 09 15.8 +0.8**
ZEI Tsey 48.34 301 *e*P **P** **21 09 48.8 -0.2**
ZEI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIV Kislovodsk 49.06 303 P **P** **21 09 55.6 +1.1**
comp=Z,322nm,0.9s,mb6.3,SNR=8.8
KIV Kislovodsk 49.06 303 *e*P **P** **21 09 55.1 +0.6**
KIV *e*S **S** **21 16 58.7 -0.5**
KIV pmax pmax
comp=Z,59nm,1.1s,mb5.5
KIV pmax pmax
comp=Z,52nm,6.3s
KIV MLR MLR
comp=Z,136nm,16.0s,MS4.0
KIV Kislovodsk 49.06 303 *e*P **P** **21 09 55.5 +1.0**
comp=Z,46nm,0.9s,mb5.5
KIV Kislovodsk 49.06 303 P **P** **21 09 55.3 +0.8**
SNR=13
KIV P 21 09 55.3
SNR=13
VRHR Novokhopersk 49.21 312 *e*P **P** **21 09 55.1 -0.5**
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,40nm,0.8s
KLMR Klimovskoe 50.64 325⇑ *i*P **P** **21 10 06.2 -0.1**
KLMR pmax pmax
comp=Z,49nm,0.9s,mb5.4
BILL Bilibino 50.65 25⇑ *e*P **P** **21 10 08.6 +2.3**
BILL *e* 21 12 04.6
BILL *e*S **S** **21 17 24.5 +3.7**
BILL pmax pmax
comp=Z,33nm,1.7s,mb5.0
BILL MLR MLR
comp=Z,400nm,15.0s,MS4.6
BILL Bilibino 50.65 25 *e*P **P** **21 10 04.7 -1.5**
comp=Z,20nm,1.1s,mb5.0
VSR Storozhevoye 50.75 313 *e*P **P** **21 10 07.1 -0.2**
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,20nm,0.5s
SOC Sochi 51.24 303 *e*P **P** **21 10 10.4 -0.7**
SOC *e**SP sP 21 10 22.7 +7.2
SOC *e* 21 12 10.6
SOC *e*S **S** **21 17 26.7 -3.0**
SOC *e*SS SS 21 21 03.7 -1.1
SOC pmax pmax
comp=Z,16nm,0.6s,mb5.1
SOC MLR MLR
comp=Z,87nm,14.0s,MS3.9
MOS Moscow 51.49 318 *e*P **P** **21 10 11.3 -1.4**
MOS *e* 21 12 09.2
MOS *e*S **S** **21 17 29.9 -2.8**
MOS pmax pmax
comp=Z,102nm,1.0s,mb5.7
KAKA Kakadu 51.78 144 *e*P **P** **21 10 12.9 -2.4**
comp=Z,13nm,0.8s,mb4.9
KAKA Kakadu 51.78 144 *e*P **P** **21 10 13.2 -2.2**
comp=Z,28nm,0.6s,mb5.4
KAKA *e*PcP PcP 21 11 28.5 0.0
OBN Obninsk 52.11 318⇑ *e*P **P** **21 10 17.0 -0.4**
OBN *e*S **S** **21 17 35.0 -6.2**
OBN pmax pmax
comp=Z,76nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.0
OBN Obninsk 52.11 318 *e*P **P** **21 10 17.2 -0.1**
comp=Z,99nm,1.5s,mb5.5
ANN Anapa 52.66 305 *e*P **P** **21 10 20.4 -1.2**
ANN pmax pmax
comp=Z,73nm,0.9s,mb5.6
MALT Malatya 53.27 297 *e*P **P** **21 10 27.0 +0.8**
MALT *e* 21 11 31.4
MALT 21 12 27.0
MALT pmax pmax
comp=Z,17nm,1.0s,mb4.9
MALT Malatya 53.27 297 *e*P **P** **21 10 27.0 +0.8**
comp=Z,17nm,1.0s,mb4.9
MALT *e*PcP PcP 21 11 31.4 -2.5
MALT PP PP 21 12 27.0 +0.8
MALT Malatya 53.27 297⇓ *i*P **P** **21 10 26.9 +0.7**
FITZ Fitzroy Crossi 53.59 154 *e*P **P** **21 10 27.8 -0.9**
comp=Z,22nm,0.9s,mb5.1
FITZ Fitzroy Crossi 53.59 154 *e*P **P** **21 10 27.9 -0.8**
comp=Z,16nm,0.9s,mb4.9
APA Apatity 53.84 333⇑ *e*P **P** **21 10 30.4 +0.5**
APA MLR MLR
comp=Z,1μm,14.0s,MS5.1
JOF Joensuu 54.59 328 *e*P **P** **21 10 34.5 -1.0**
JOF pmax pmax
comp=Z,25nm,0.6s,mb5.4
JOF Joensuu 54.59 328 *e*p **P** **21 10 34.5 -1.0**
comp=Z,25nm,0.6s,mb5.4
MBWA Marble Bar 54.59 162 *e*P **P** **21 10 35.3 -0.6**
comp=Z,11nm,0.8s,mb4.9
SIM Simferopol' 54.95 305*ce*P **P** **21 10 39.0 +0.6**
SIM pmax pmax
comp=Z,48nm,0.7s,mb5.6
SIM MLR MLR
comp=Z,120nm,17.0s,MS4.0
ASF Jabal al Asfar 56.21 290 P **P** **21 10 48.3 +0.6**
comp=Z,19nm,0.9s,mb5.1,baz=312,slow=4.0,SNR=34
KEV Kevo 56.25 336 *e*P **P** **21 10 46.8 -0.6**
KEV *e* 21 11 44.2
KEV pmax pmax
comp=Z,23nm,0.8s,mb5.3
KEV Kevo 56.25 336 *e*P **P** **21 10 46.8 -0.6**
comp=Z,23nm,0.8s,mb5.3
KEV *e*PcP PcP 21 11 44.2 -0.6
KEV Kevo 56.25 336 *e*p **P** **21 10 45.9 -1.5**
comp=Z,26nm,0.7s,mb5.4
BRTR Keskin Array B 56.52 299 P **P** **21 10 49.9 +0.1**
comp=Z,12nm,0.8s,mb5.0,baz=94,slow=6.7,SNR=82
BRTR Keskin Array B 56.52 299 *i*P **P** **21 10 49.9 +0.1**
BRTR pmax pmax
comp=Z,12nm,0.8s
ARCES ARCESS Array B 56.78 336 P **P** **21 10 50.5 -0.6**
comp=Z,13nm,0.7s,mb5.1,baz=83,slow=7.4,SNR=57
ARCES PcP PcP 21 11 46.3 -0.6
comp=Z,3.0nm,0.7s,baz=92,slow=3.1,SNR=7.8
ARCES LR LR 21 36 15.1
comp=Z,98nm,21.0s,MS3.9,baz=357,slow=37
ARCES ARCESS Array B 56.78 336 P **P** **21 10 50.5 -0.6**
ARCES 21 11 46.3
ARCES ARCESS Array B 56.78 336 P **P** **21 10 50.5 -0.7**
ARCES PcP PcP 21 11 46.3 -0.6
ARCES LR LR 21 36 15.1
ARE0 ARCESS Array S 56.78 336 *e*P **P** **21 10 50.6 -0.5**
KAF Kangasniemi 56.96 327 *e*P **P** **21 10 51.3 -1.2**
KAF pmax pmax
comp=Z,17nm,0.6s,mb5.2
KAF Kangasniemi 56.96 327 *e*p **P** **21 10 51.3 -1.2**
comp=Z,17nm,0.6s,mb5.3
AKASG Malin Array Be 57.05 313 P **P** **21 10 52.2 -1.1**
comp=Z,14nm,0.6s,mb5.2,baz=70,slow=6.3,SNR=45
AKASG Malin Array Be 57.05 313*ce*P **P** **21 10 52.7 -0.6**
AKASG pmax pmax
comp=Z,14nm,0.6s
AKASG Malin Array Be 57.05 313 P **P** **21 10 52.2 -1.1**
AKBB Malin Array Si 57.05 313 *e*P **P** **21 10 52.7 -0.6**
AKBB *e* 21 11 51.5
KIEV Kiev 57.06 313 *e*P **P** **21 10 52.7 -0.7**
KIEV *e* 21 11 48.8
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KIEV Kiev 57.06 313 *e*P **P** **21 10 52.7 -0.7**
comp=Z,8.2nm,0.6s,mb4.9
KIEV *e*PcP PcP 21 11 48.8 +0.5
MMAI Mount Meron Ar 57.13 291 P **P** **21 10 54.8 +0.6**
comp=Z,13nm,1.1s,mb4.9,baz=85,slow=11,SNR=12
FINES FINESS Array B 57.14 326 P **P** **21 10 53.5 -0.3**
comp=Z,23nm,0.7s,mb5.3,baz=78,slow=7.5,SNR=69
CSS Prodhromos 58.14 294 *e*P **P** **21 11 00.4 -0.9**
comp=Z,13nm,0.8s,mb5.0
EIL Elat 58.63 288 P **P** **21 11 04.7 -0.1**
comp=Z,24nm,0.8s,mb5.3,baz=19,slow=3.1,SNR=32
COEN Coen 58.79 134 *e*P **P** **21 11 05.9 0.0**
comp=Z,266nm,0.9s,mb6.3
WRAB Tennant Creek 58.90 146 P **P** **21 11 06.0 -0.6**
comp=Z,386nm,0.6s,SNR=17
WRAB Tennant Creek 58.90 146 *e*P **P** **21 11 07.4 +0.8**
WRAB pmax pmax
comp=Z,41nm,0.8s,mb5.5
WRAB Tennant Creek 58.90 146 *e*P **P** **21 11 07.4 +0.8**
comp=Z,40nm,0.8s,mb5.5
WRA Warramunga Arr 58.90 146 P **P** **21 11 06.2 -0.4**
comp=Z,24nm,0.5s,mb5.5,baz=340,slow=7.7,SNR=278
WRA Warramunga Arr 58.90 146 P **P** **21 11 06.2 -0.4**
PSN Preselentsi 59.38 305 *i*P **P** **21 11 10.2 +0.4**
ISP Isparta 59.40 298 P **P** **21 11 09.0 -1.0**
ISP pmax pmax
comp=Z,44nm,1.0s,mb5.4
ISP Isparta 59.40 298 P **P** **21 11 09.0 -1.0**
comp=Z,44nm,1.0s,mb5.4
ISP Isparta 59.40 298 P **P** **21 11 09.1 -0.9**
ATD Arta Tunnel 59.68 265 P **P** **21 11 12.8 +0.6**
comp=Z,18nm,0.9s,mb5.1,baz=327,slow=4.5,SNR=7.5
VRI Vrincioaia 59.79 308 *i*P **P** **21 11 13.1 +0.6**
VRI Vrincioaia 59.79 308⇓ *i*P **P** **21 11 13.3 +0.8**
PLOR Plostina 59.84 308⇑ *i*P **P** **21 11 13.7 +0.8**
PLOR Plostina 59.84 308⇑ *i*P **P** **21 11 13.7 +0.8**
SUW Suwalki 59.97 318 *e*P **P** **21 11 12.9 -0.7**
SUW Suwalki 59.97 318 *e*P **P** **21 11 13.1 -0.5**
SUW pmax pmax
comp=Z,70nm,1.0s,mb5.7
SUW Suwalki 59.97 318 *e*P **P** **21 11 13.1 -0.6**
comp=Z,70nm,1.0s,mb5.7
PRD Provadia 60.07 305 *i*P **P** **21 11 14.7 +0.2**
BURAR Bucovina Array 60.32 310⇑ *i*P **P** **21 11 16.3 +0.1**
BURAR Bucovina Array 60.32 310⇑ *i*P **P** **21 11 16.3 +0.1**
MLR Muntele Rosu 60.42 308⇑ *i*P **P** **21 11 17.3 +0.4**
MLR Muntele Rosu 60.42 308⇑ *i*P **P** **21 11 17.3 +0.4**
LVV L'vov 60.49 313 *e*P **P** **21 11 17.1 -0.2**
JMB Yambol 60.86 304 P **P** **21 11 20.6 +0.7**
JMB Yambol 60.86 304 *i*P **P** **21 11 20.8 +0.9**
VOIR 61.04 308 P **P** **21 11 21.4 +0.3**
VOIR 61.04 308⇑ *i*P **P** **21 11 21.3 +0.2**
SZH Strazhica 61.07 305 *i*P **P** **21 11 24.1 +2.7**
KWP Kalwaria Pacla 61.37 313 *i*P **P** **21 11 23.7 +0.4**
KWP Kalwaria Pacla 61.37 313 *e*P **P** **21 11 23.6 +0.3**
KWP *e* 21 12 03.9
KWP *e* 21 13 40.2
KWP pmax pmax
comp=Z,71nm,0.8s,mb5.8
KWP Kalwaria Pacla 61.37 313 *e*P **P** **21 11 23.6 +0.3**
comp=Z,71nm,0.8s,mb5.8
KWP *e*PcP PcP 21 12 03.9 -1.6
KWP *e*PP PP 21 13 40.2 +2.1
KWP Kalwaria Pacla 61.37 313⇑ *i*P **P** **21 11 23.6 +0.3**
BMR Baia Mare 61.42 311 P **P** **21 11 24.8 +1.1**
ALN Alexandroupoli 61.73 303 P **P** **21 11 25.4 -0.4**
BLCB Balcova 61.82 300 P **P** **21 11 25.3 -1.2**
KOLS Kolonicke sedl 61.84 312 *e*P **P** **21 11 26.5 0.0**
KOLS *e* 21 11 43.4

KOLS pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
KOLS MLR MLR
comp=Z,100nm,19.8s,MS4.0
KOLS Kolonicke sedl 61.84 312 *eP* **P 21 11 26.5 0.0**
comp=Z,8.4nm,0.8s,mb4.9
KOLS *e* 21 11 43.4
KOLS LR LR
comp=Z,100nm,19.8s,MS4.0
KOLS Kolonicke sedl 61.84 312 *eP* **P 21 11 26.5 0.0**
KOLS *e* 21 11 43.4
TRPA Tarpa 61.91 311⇑*iP* **P 21 11 27.3 +0.4**
UZH Uzhgorod 61.92 312⇑*iP* **P 21 11 27.1 +0.1**
UZH *e* 21 12 07.6
ASAR Alice Springs 61.94 149 P **P 21 11 27.1 -0.2**
comp=Z,10nm,0.7s,mb5.1,baz=332,slow=6.3,SNR=54
ASAR PKP2bc 21 40 42.5
comp=Z,0.4nm,0.8s,baz=124,slow=2.9,SNR=4.2
ASAR Alice Springs 61.94 149 P **P 21 11 27.1 -0.2**
ASAR ⇑*e* 21 40 42.5
KDZ Kurdzhali 61.94 304 *iP* **P 21 11 27.6 +0.4**
RDO Rodhopi 62.01 303 P **P 21 11 27.1 -0.7**
DRGR 62.19 310 P **P 21 11 29.4 +0.5**
DRGR 62.19 310⇓*iP* **P 21 11 29.6 +0.7**
PLD Plovdiv 62.30 304 P **P 21 11 29.5 -0.1**
STHS Stebnicka Huta 62.35 313 *eP* **P 21 11 29.3 -0.6**
STHS pmax pmax
comp=Z,11nm,0.9s,mb5.0
STHS Stebnicka Huta 62.35 313 *eP* **P 21 11 29.3 -0.6**
comp=Z,11nm,0.9s,mb5.0
STHS Stebnicka Huta 62.35 313 *eP* **P 21 11 29.3 -0.6**
RZN Rozhen 62.42 304 *iP* **P 21 11 30.9 +0.4**
LIA Limnos Island 62.68 302 P **P 21 11 31.5 -0.7**
NIE Niedzica 62.93 313 *eP* **P 21 11 34.5 +0.8**
OJC Ojcow 63.00 314 *eP* **P 21 11 34.0 -0.2**
KECS Kecovo 63.11 312 *eP* **P 21 11 35.3 +0.4**
KECS pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KECS Kecovo 63.11 312 *eP* **P 21 11 35.3 +0.4**
comp=Z,6.2nm,0.7s,mb4.8
KECS Kecovo 63.11 312 *eP* **P 21 11 35.3 +0.4**
MMB Musomiste 63.15 304 *iP* **P 21 11 34.9 -0.5**
VTS Vitosha 63.19 305 P **P 21 11 35.5 -0.1**
VTS Vitosha 63.19 305 *iP* **P 21 11 35.9 +0.3**
BZS Buzias 63.28 309 P **P 21 11 36.0 -0.1**
BZS Buzias 63.28 309⇓*iP* **P 21 11 35.9 -0.2**
KKB Krupnik 63.51 304 *iP* **P 21 11 37.3 -0.5**
GKP Gorka Klasztor 63.58 318 *eP* **P 21 11 37.8 -0.2**
PSZ Piszkesteto 63.66 312 *eP* **P 21 11 39.0 +0.4**
PSZ *e* 21 12 18.2
PSZ pmax pmax
comp=Z,20nm,1.4s,mb5.0
PSZ Piszkesteto 63.66 312 *eP* **P 21 11 39.0 +0.4**
comp=Z,20nm,1.4s,mb5.0
PSZ *e*PcP PcP 21 12 18.2 +3.4
PSZ Piszkesteto 63.66 312⇑*eP* **P 21 11 38.8 +0.2**
PSZ Piszkesteto 63.66 312⇓*iP* **P 21 11 38.7 +0.1**
PLG Polygyros 63.77 303 P **P 21 11 38.4 -1.1**
LIKS Likavka 63.79 313 *eP* **P 21 11 37.7 -1.8**
LIKS pmax pmax
comp=Z,26nm,1.2s,mb5.1
LIKS Likavka 63.79 313 *eP* **P 21 11 37.7 -1.8**
comp=Z,26nm,1.2s,mb5.1
LIKS Likavka 63.79 313 *eP* **P 21 11 37.7 -1.8**
HORT Hortiatis 63.94 303 P **P 21 11 39.5 -1.1**
VAY Valandovo 64.06 304 *eP* **P 21 11 40.2 -1.2**
OKC Ostrava-Krasne 64.13 314 *eP* **P 21 11 42.1 +0.4**
OKC MLR MLR
comp=Z,300nm,11.8s,MS4.7
OKC Ostrava-Krasne 64.13 314 *eP* **P 21 11 42.1 +0.4**
OKC AMS AMS 21 40 50.0
comp=Z,300nm,11.8s
VYHS Vyhne 64.14 313 *eP* **P 21 11 42.3 +0.5**
VYHS pmax pmax
comp=Z,18nm,1.4s,mb4.9
VYHS Vyhne 64.14 313 *eP* **P 21 11 42.3 +0.5**
comp=Z,18nm,1.4s,mb4.9
VYHS *e*S **S 21 20 24.0 +5.3**
VYHS Vyhne 64.14 313 *eP* **P 21 11 42.3 +0.5**
VYHS *e*S **S 21 20 23.9 +5.2**
STIP Stip 64.20 305 *eP* **P 21 11 41.3 -1.0**
NB2 NORSAR Subarra 64.22 327 P **P 21 11 40.9 -1.2**
comp=Z,16nm,0.8s,mb5.1,baz=72,slow=6.9
NOA NORSAR Array B 64.22 327 P **P 21 11 40.9 -1.2**
comp=Z,13nm,0.8s,mb5.0,baz=71,slow=6.5,SNR=33
NOA PP PP 21 14 02.8 -0.2
comp=Z,1.6nm,0.8s,baz=69,slow=6.1,SNR=3.8
BSD Bornholm Skovb 64.29 320⇑*iP* **P 21 11 41.5 -1.1**
BSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
BSD Bornholm Skovb 64.29 320⇑*iP* **P 21 11 41.5 -1.1**
comp=Z,9.5nm,1.1s,mb4.7
KOLL Kolacno 64.39 313 *eP* **P 21 11 44.1 +0.7**
KOLL Kolacno 64.39 313 *eP* **P 21 11 44.0 +0.6**
NAO01 NORSAR Array S 64.44 327 *eP* **P 21 11 41.8 -1.7**
MORC Moravsky Berou 64.52 314 *eP* **P 21 11 44.5 +0.3**
comp=Z,21nm,0.8s,mb5.2
MORC Moravsky Berou 64.52 314⇑*iP* **P 21 11 44.3 +0.1**
IDI Anoyia 64.52 297 P **P 21 11 43.4 -1.1**
comp=Z,19nm,0.8s,mb5.2,baz=30,slow=8.5,SNR=9.9
LIT Litokhoron 64.55 303 P **P 21 11 42.8 -1.8**
SKO Skopje 64.63 305 *eP* **P 21 11 44.2 -0.9**
SIVA Sivas 64.69 297 P **P 21 11 42.2 -3.4**
LKR Lokris 64.70 301 P **P 21 11 44.0 -1.6**
KSP Ksiaz 64.92 316 *eP* **P 21 11 46.9 +0.1**
KSP Ksiaz 64.92 316⇑*eP* **P 21 11 46.4 -0.4**
KRUS Krusevo 64.98 304 *iP* **P 21 11 46.0 -1.4**
PKSM Moragy 65.04 310 ⇑P **P 21 11 47.4 -0.3**
PKSM Moragy 65.04 310⇑*iP* **P 21 11 47.4 -0.3**
AGG Agios Georgios 65.05 302 P **P 21 11 46.3 -1.6**
DPC Dobruska-Polom 65.07 315 *eP* **P 21 11 48.3 +0.5**
DPC MLR MLR
comp=Z,400nm,23.2s,MS4.5
DPC Dobruska-Polom 65.07 315 *eP* **P 21 11 48.3 +0.5**
DPC AMS AMS 21 41 10.0
comp=Z,400nm,23.2s
THL Klokotos Trika 65.08 302 P **P 21 11 45.9 -2.2**
VRAC Vranov 65.26 314 ⇑P **P 21 11 49.8 +0.7**
VRAC Vranov 65.26 314⇑*iP* **P 21 11 49.8 +0.7**
ZST Bratislava 65.33 313 *eP* **P 21 11 50.1 +0.6**
comp=Z,7.6nm,0.8s,mb4.8
ZST LR LR
comp=Z,300nm,16.9s,MS4.6
ZST Bratislava 65.33 313 *eP* **P 21 11 50.1 +0.6**
RGN Rugen 65.35 320 *eP* **P 21 11 50.0 +0.5**
CTA Charters Tower 65.39 136 *eP* **P 21 11 49.9 -0.2**
comp=Z,6.5nm,0.4s,mb5.0
CTAO Charters Tower 65.39 136 *eP* **P 21 11 50.2 +0.1**
OHR Ohrid 65.39 304 *eP* **P 21 11 48.8 -1.2**
NWAO Narrogin (SRO) 65.41 168 *eP* **P 21 11 50.5 +0.4**
COP Copenhagen 65.43 322 *iP* **P 21 11 49.9 -0.1**
COP pmax pmax
comp=Z,11nm,0.9s,mb4.9
COP Copenhagen 65.43 322 *iP* **P 21 11 49.9 -0.1**
comp=Z,11nm,0.9s,mb4.9
GUR Goura 65.44 301 P **P 21 11 41.8 -8.6**
LAKA Lakka 65.59 301 P **P 21 11 46.1 -5.3**
RUE Ruedersdorf 65.82 318 *eP* **P 21 11 52.7 +0.2**
ALE Alert 65.87 358 P **P 21 11 52.0 -0.5**
comp=Z,38nm,1.2s,mb5.3,SNR=5.4
TREC Trest 65.94 314 *eP* **P 21 11 54.1 +0.6**
TREC MLR MLR
comp=Z,300nm,23.3s,MS4.4
TREC Trest 65.94 314 *eP* **P 21 11 54.1 +0.6**
TREC AMS AMS 21 41 50.0
comp=Z,300nm,23.3s
PVCC Panska Ves 66.05 316 *eP* **P 21 11 54.6 +0.4**
PVCC MLR MLR
comp=Z,200nm,13.7s,MS4.5
PVCC Panska Ves 66.05 316 *eP* **P 21 11 54.6 +0.4**
PVCC AMS AMS 21 42 10.0
comp=Z,200nm,13.7s
CONA Conrad Observa 66.20 313 *iP* **P 21 11 55.6 +0.4**
comp=Z,19nm,0.9s,mb5.1,SNR=17
PRU Pruhonice 66.27 315 *eP* **P 21 11 56.2 +0.7**
PRU MLR MLR
comp=Z,300nm,16.0s,MS4.6
PRU Pruhonice 66.27 315 *eP* **P 21 11 56.2 +0.7**
PRU AMS AMS 21 42 00.0
comp=Z,300nm,16.0s
PYL PYLOS 66.28 300 P **P 21 11 53.3 -2.5**
BRG Berggiesshubel 66.30 316 *eP* **P 21 11 55.5 -0.2**
comp=Z,21nm,0.9s,mb5.2
BRG Berggiesshubel 66.30 316 *eP* **P 21 11 55.8 +0.1**
comp=Z,21nm,0.9s,mb5.2
BRG *e* 21 14 23.3
comp=Z,3.5nm,0.9s
BRG
comp=N,150nm,16.1s
BRG
comp=E,135nm,11.1s
BRG
comp=Z,202nm,16.3s
BRG Berggiesshubel 66.30 316 *eP* **P 21 11 55.8 +0.1**
BRG *e* 21 14 23.3
BRG pmax pmax
comp=Z,13nm,0.9s,mb5.0
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
BRG MLR MLR
comp=N,90nm,16.1s
BRG MLR MLR
comp=E,81nm,11.1s
BRG MLR MLR
comp=Z,121nm,16.3s,MS4.2
IGT Igoumenitsa 66.30 303 P **P 21 11 54.0 -2.0**
DAG Danmarks Havn 66.31 348 *eP* **P 21 11 54.0 -1.4**
DAG Danmarks Havn 66.31 348 *iP* **P 21 11 54.0 -1.4**
TTA Tatalina 66.55 29 *eP* **P 21 11 56.2 -0.9**
TTA pmax pmax
comp=Z,12nm,0.9s,mb4.9
TTA Tatalina 66.55 29 *eP* **P 21 11 56.2 -0.9**
comp=Z,12nm,0.9s,mb4.9
ARSA Arzberg 66.67 312⇑*iP* **P 21 11 58.0 -0.2**
comp=Z,13nm,0.9s,mb5.0,SNR=7.6
CLL Collm 66.69 317 *eP* **P 21 11 57.6 -0.6**
comp=Z,21nm,1.1s,mb5.1
CLL Collm 66.69 317⇑*iP* **P 21 11 57.7 -0.5**
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CLL Collm 66.69 317⇑*iP* **P 21 11 57.7 -0.5**
comp=Z,21nm,1.1s,mb5.1
CLL *i* pP 21 12 02.3 +0.8
CLL Collm 66.69 317⇑*iP* **P 21 11 57.7 -0.5**
comp=Z,21nm,1.1s,mb5.1
CLL *i* pP pP 21 12 02.3 +0.8
CLL *e* 21 12 12.0
CLL LmH 21 37 00.0
comp=N,200nm,22.0s
CLL LmH 21 37 00.0
comp=E,100nm,20.5s
MUD Monsted U'grnd 66.85 323⇑*iP* **P 21 11 59.0 -0.1**
MUD pmax pmax
comp=Z,15nm,1.0s,mb5.0
MUD Monsted U'grnd 66.85 323⇑*iP* **P 21 11 59.0 -0.1**
comp=Z,15nm,1.0s,mb5.0
COLD Coldfoot 66.94 24 *eP* **P 21 11 58.4 -1.2**
comp=Z,30nm,1.0s,mb5.3
PERS Pernice 67.16 312 *iP* **P 21 12 01.1 -0.2**
KHC Kasperske Hory 67.17 315 *eP* **P 21 12 01.3 0.0**
KHC *e* 21 12 29.2
KHC pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KHC Kasperske Hory 67.17 315 *eP* **P 21 12 01.3 0.0**
comp=Z,2.7nm,0.7s,mb4.4
KHC *e*PcP PcP 21 12 29.2 -0.1
KHC Kasperske Hory 67.17 315 *eP* **P 21 12 01.4 +0.1**
KHC AMS AMS 21 42 30.0
comp=Z,300nm,21.5s
SOKA Soboth 67.19 312⇑*iP* **P 21 12 01.4 -0.1**
comp=Z,25nm,1.0s,mb5.0
GEC2 GERESS Array S 67.20 314 *eP* **P 21 12 01.4 -0.1**
comp=Z,22nm,1.1s,mb5.1
GEC2 GERESS Array S 67.20 314 *eP* **P 21 12 01.4 -0.1**
GEC2 pmax pmax
comp=Z,22nm,1.1s,mb5.1
GERES GERESS Array B 67.20 314 P **P 21 12 01.6 +0.1**
comp=Z,9.7nm,0.8s,mb4.9,baz=75,slow=5.7,SNR=77
GERES LR LR 21 43 03.0
comp=Z,214nm,19.0s,MS4.4,baz=244,slow=37
BSEG Bad Segeberg 67.21 320 *eP* **P 21 12 01.8 +0.3**
comp=Z,33nm,0.9s,mb5.4
BSEG Bad Segeberg 67.21 320 *eP* **P 21 12 01.8 +0.3**
BSEG pmax pmax
comp=Z,33nm,0.9s,mb5.4
MOA Molln 67.23 313⇑*iP* **P 21 12 01.9 +0.2**
comp=Z,20nm,1.0s,mb5.1,SNR=14
TANN Tannenbergstha 67.35 316 *eP* **P 21 12 02.2 -0.2**
comp=Z,15nm,0.9s,mb5.0
NKC Novy Kostel 67.42 316 *eP* **P 21 12 03.3 +0.4**
NKC AMS AMS 21 42 00.0
BOJS Bojanci 67.50 310 *eP* **P 21 12 03.2 -0.3**
OBKA Obir 67.57 312⇑*iP* **P 21 12 03.7 -0.2**
comp=Z,18nm,1.4s,mb4.9
WET Wettzell 67.59 315 *eP* **P 21 12 04.0 0.0**
comp=Z,19nm,1.3s,mb5.0
WET Wettzell 67.59 315 *eP* **P 21 12 04.0 0.0**
WET pmax pmax
comp=Z,19nm,1.3s,mb5.0
CHUM Lake Minchumin 67.66 28 *eP* **P 21 12 03.9 -0.2**
comp=Z,13nm,0.8s,mb5.0
ROTZ Rotzenmuhle 67.75 316 *eP* **P 21 12 05.2 +0.2**
comp=Z,33nm,1.0s,mb5.3
MOX Moxa 67.75 317 *eP* **P 21 12 04.9 -0.1**
comp=Z,23nm,1.3s,mb5.0
MOX
comp=Z,100nm,17.0s
MOX Moxa 67.75 317 *eP* **P 21 12 04.7 -0.3**
comp=Z,21nm,1.3s,mb5.0
MOX Moxa 67.75 317 *eP* **P 21 12 04.9 -0.1**
MOX pmax pmax
comp=Z,23nm,1.3s,mb5.0
MOX MLR MLR
comp=Z,100nm,17.0s,MS4.1
NRDL Niedersach Rie 67.89 319 *eP* **P 21 12 06.0 +0.2**
comp=Z,28nm,1.2s,mb5.2
CLZ Clausthal 68.00 318 *eP* **P 21 12 06.6 +0.1**
comp=Z,35nm,1.0s,mb5.3
CLZ Clausthal 68.00 318 *eP* **P 21 12 06.6 +0.1**
CLZ pmax pmax
comp=Z,35nm,1.0s,mb5.3
BPAW Bear Paw Mtn. 68.08 27 *eP* **P 21 12 06.0 -0.9**
comp=Z,22nm,1.0s,mb5.1
MYKA Terra Mystica 68.10 312⇑*iP* **P 21 12 06.8 -0.4**
comp=Z,7.4nm,0.9s,mb4.7
KBA Koelnbreinsper 68.11 313 *iP* **P 21 12 07.2 0.0**
comp=Z,11nm,0.8s,mb5.0,SNR=9.6
JAVS Javornik 68.12 311 *eP* **P 21 12 06.4 -0.9**
PPLA Purkeypile 68.15 29 *eP* **P 21 12 06.7 -0.6**
comp=Z,27nm,0.8s,mb5.3
VOY Vojsko 68.17 311 *eP* **P 21 12 06.8 -0.9**
VOY *e* 21 12 14.8
KTH Kantishna Hill 68.36 28 *eP* **P 21 12 07.9 -0.6**
comp=Z,34nm,1.4s,mb5.2
GRA1 Grafenberg Arr 68.36 316 *eP* **P 21 12 09.0 +0.2**
comp=Z,43nm,0.9s,mb5.5
GRA1 *e*pP pP 21 12 13.5 +1.4
GRA1 LR LR
comp=Z,300nm,18.7s,MS4.5
GRF Grafenberg Arr 68.36 316 *eP* **P 21 12 09.0 +0.2**
comp=Z,43nm,0.9s,mb5.5
GRF *e*pP pP 21 12 13.5 +1.4
GRF *e*L 21 43 39.1
comp=Z,338nm,18.7s
GRF Grafenberg Arr 68.36 316 *eP* **P 21 12 09.0 +0.2**
GRF pmax pmax
comp=Z,43nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,300nm,18.7s,MS4.5
GRF Grafenberg Arr 68.36 316 *eP* **P 21 12 09.0 +0.2**
GRF pmax pmax
comp=Z,43nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,300nm,18.7s,MS4.5
PTCC Patocco-Chiusa 68.37 312 P **P 21 12 08.1 -0.8**
UBBA Unterbreizbach 68.63 317 *eP* **P 21 12 09.9 -0.6**
ABTA Abfaltersbach 68.76 312⇑*iP* **P 21 12 10.4 -1.0**
comp=Z,11nm,1.1s,mb4.7,SNR=8.5
COLA College 68.91 26 *eP* **P 21 12 11.1 -0.8**
COLA pmax pmax
comp=Z,38nm,1.0s,mb5.3
COLA College 68.91 26 *eP* **P 21 12 11.1 -0.9**
comp=Z,38nm,1.0s,mb5.3
FUR Furstenfeldbru 68.95 314 *eP* **P 21 12 12.8 +0.3**
comp=Z,85nm,1.0s,mb5.6
FUR Furstenfeldbru 68.95 314 *eP* **P 21 12 12.8 +0.3**
FUR pmax pmax
comp=Z,85nm,1.0s,mb5.6
TIP Timpagrande 68.99 304 *eP* **P 21 12 12.8 -0.1**
comp=Z,16nm,0.8s,mb5.0
RSO Redoubt South 69.02 31 *eP* **P 21 12 15.9 +3.2**
MCK McKinley 69.06 27 *eP* **P 21 12 12.5 -0.4**
WTTA Wattenberg 69.10 313⇑*iP* **P 21 12 12.0 -1.4**
comp=Z,31nm,1.1s,mb5.2
FG5 Orsara di Pugl 69.17 306 P **P 21 12 14.3 +0.3**
IBBN Ibbenburen 69.28 319 *eP* **P 21 12 14.4 -0.1**
comp=Z,33nm,1.5s,mb5.0
MOTA Moosalm 69.40 313 *iP* **P 21 12 14.9 -0.4**
comp=Z,31nm,1.1s,mb5.1,SNR=14
RETA Reutte 69.55 314⇓*iP* **P 21 12 15.9 -0.4**
comp=Z,9.5nm,0.9s,mb4.7
CING Cingoli 69.70 309 P **P 21 12 17.4 +0.1**
MIDA Miranda 69.72 307 P **P 21 12 17.5 +0.1**
TERO Teramo 69.75 308 P **P 21 12 17.5 -0.1**
RNI2 Rionero Sannit 69.76 307 P **P 21 12 18.1 +0.4**
FETA Feichten 69.76 313 *iP* **P 21 12 17.2 -0.4**
comp=Z,33nm,1.0s,mb5.2,SNR=28
TNS Taunus Mts 69.78 317 *eP* **P 21 12 17.4 -0.2**
comp=Z,20nm,1.0s,mb5.0
TNS Taunus Mts 69.78 317 *eP* **P 21 12 17.4 -0.2**
TNS pmax pmax
comp=Z,20nm,1.0s,mb5.0
TOD Tromm 69.83 316 *eP* **P 21 12 17.7 -0.2**
FSSB Fossombrone 69.85 309 P **P 21 12 18.4 +0.2**
BUG Bochum--Univer 69.93 319 *eP* **P 21 12 18.4 -0.1**
comp=Z,32nm,1.5s,mb5.0
STU Stuttgart 69.96 315 *eP* **P 21 12 18.4 -0.3**
comp=Z,32nm,1.0s,mb5.2
STU Stuttgart 69.96 315 *eP* **P 21 12 19.1 +0.4**
STU pmax pmax
comp=Z,23nm,0.7s,mb5.2
STU Stuttgart 69.96 315 *eP* **P 21 12 19.1 +0.4**
comp=Z,23nm,0.7s,mb5.2
NRCA Norcia 69.99 308 P **P 21 12 19.4 +0.4**
SDI San Donato 69.99 307 P **P 21 12 18.7 -0.4**
AQU L'Aquila 69.99 308 *eP* **P 21 12 19.7 +0.6**
AQU pmax pmax
comp=Z,35nm,0.9s,mb5.3
AQU L'Aquila 69.99 308 *eP* **P 21 12 19.7 +0.6**
comp=Z,35nm,0.9s,mb5.3
PMR Palmer 70.03 29 *eP* **P 21 12 22.1 +3.1**
PTQR Pietraquaria 70.14 308 P **P 21 12 20.3 +0.3**
DAVA Damuels 70.17 314⇑*iP* **P 21 12 19.7 -0.4**
comp=Z,9.7nm,1.0s,mb4.7
MURB Monte Urbino 70.20 309 P **P 21 12 21.1 +0.8**
BADI Badiali 70.28 309 P **P 21 12 21.9 +1.1**
KDAK Kodiak Island 70.35 34 P **P 21 12 19.9 -1.1**
comp=Z,29nm,0.8s,mb5.2
KDAK Kodiak Island 70.35 34 *iP* **P 21 12 20.0 -0.9**
SFI Santa Sofia 70.37 310 P **P 21 12 22.3 +0.9**
SPAK Spaichingen-Ko 70.49 315 *eP* **P 21 12 21.9 -0.1**
VMG Vicchio 70.54 310 P **P 21 12 24.0 +1.6**
MGAB Montegabbione 70.62 309 P **P 21 12 22.9 0.0**
BFO Black Forest 70.67 315 P **P 21 12 22.1 -1.0**
comp=Z,90nm,1.1s,mb5.6,SNR=6.7
BFO Black Forest 70.67 315 *eP* **P 21 12 22.5 -0.6**
comp=Z,20nm,1.0s,mb5.0
BFO Black Forest 70.67 315 *eP* **P 21 12 22.5 -0.6**
BFO pmax pmax
comp=Z,20nm,1.0s,mb5.0
RUP Ruppelstein 70.81 317 *eP* **P 21 12 23.8 -0.1**
GSCL Gusciola 71.00 311 P **P 21 12 26.6 +1.4**
MEM Membach 71.01 318 P **P 21 12 25.2 0.0**
comp=Z,10nm,1.6s,mb4.5
FELD Feldberg im Sc 71.06 315 *eP* **P 21 12 24.6 -0.9**
ERBM Eremo 71.08 311 P **P 21 12 27.3 +1.6**
KMBO Kilima Mbogo 71.09 256 P **P 21 12 26.6 +0.4**
comp=Z,12nm,0.9s,mb4.8,baz=45,slow=9.0,SNR=24
KMBO Kilima Mbogo 71.09 256 *eP* **P 21 12 26.7 +0.5**
KMBO pmax pmax
comp=Z,24nm,1.1s
KMBO Kilima Mbogo 71.09 256 *eP* **P 21 12 26.7 +0.5**
comp=Z,24nm,1.1s,mb5.0
KMBO Kilima Mbogo 71.09 256 P **P 21 12 27.1 +0.9**
SNR=7.9
KMBO P 21 12 27.1
SNR=7.9
BEBN Eben Emael 71.11 318 P **P 21 12 25.9 +0.2**
VLC Villacollemand 71.21 311 *eP* **P 21 12 27.1 +0.6**
comp=Z,22nm,1.0s,mb5.0
CDF Champ du Feu 71.26 316⇑*iP* **P 21 12 26.4 -0.3**
comp=Z,54nm,1.1s,mb5.1
CDF Champ du Feu 71.26 316⇑*iP* **P 21 12 26.4 -0.3**
CDF pmax pmax
comp=Z,27nm,1.1s,mb5.1
CDF Champ du Feu 71.26 316⇑*iP* **P 21 12 26.4 -0.3**
comp=Z,27nm,1.1s,mb5.1
PII Pisa 71.31 310 P **P 21 12 26.6 -0.5**
WLF Walferdange 71.35 317 P **P 21 12 27.9 +0.7**
comp=Z,38nm,1.3s,mb5.2
WLF Walferdange 71.35 317 *eP* **P 21 12 27.6 +0.4**
comp=Z,63nm,1.1s,mb5.5
WLF Walferdange 71.35 317 *eP* **P 21 12 27.9 +0.7**
EGAK Eagle 71.38 24 *eP* **P 21 12 23.4 -3.7**
comp=Z,5.3nm,0.8s,mb4.5
ECH Echery 71.42 316 *eP* **P 21 12 27.2 -0.4**
ECH pmax pmax
comp=Z,17nm,1.1s,mb4.9
ECH Echery 71.42 316 *eP* **P 21 12 27.2 -0.4**
comp=Z,17nm,1.1s,mb4.9
BCLA Clavier 71.50 318 P **P 21 12 27.8 -0.3**
BOB Bobbio (Coli) 71.55 312 P **P 21 12 28.9 +0.4**
MOF Molkenrain 71.60 315 *eP* **P 21 12 28.1 -0.6**
INK Inuvik 71.62 19 LR LR 21 48 15.2
comp=Z,165nm,19.7s,MS4.3,baz=301,slow=40
INK Inuvik 71.62 19 *eP* **P 21 12 27.7 -0.8**
INK pmax pmax
comp=Z,29nm,0.9s
INK Inuvik 71.62 19 *eP* **P 21 12 27.7 -0.8**
comp=Z,29nm,0.9s,mb5.2
DIV Divide 71.66 29 *eP* **P 21 12 29.3 +0.5**
HINF Hinteralfeld 71.78 315⇑*iP* **P 21 12 29.3 -0.5**
comp=Z,32nm,1.0s,mb4.9
HINF Hinteralfeld 71.78 315⇑*iP* **P 21 12 29.3 -0.5**
HINF pmax pmax
comp=Z,16nm,1.0s,mb4.9
HINF Hinteralfeld 71.78 315⇑*iP* **P 21 12 29.3 -0.5**
comp=Z,16nm,1.0s,mb4.9
UCC Uccle 71.85 319 P **P 21 12 30.2 0.0**
comp=Z,25nm,2.4s,mb4.7
GIVF Givet 71.92 318 *eP* **P 21 12 30.4 -0.2**
HAU Haudompre 72.00 316⇑*iP* **P 21 12 30.6 -0.5**
comp=Z,23nm,1.0s,mb4.8
HAU *e*MLR MLR
comp=Z,226nm,19.0s,MS4.2
HAU Haudompre 72.00 316⇑*iP* **P 21 12 30.6 -0.5**
HAU pmax pmax
comp=Z,12nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,230nm,19.0s,MS4.5
HAU Haudompre 72.00 316⇑*iP* **P 21 12 30.6 -0.5**
comp=Z,12nm,1.0s,mb4.8
HAU LR LR
comp=Z,230nm,19.0s,MS4.5
SNF Seneffe 72.03 319 P **P 21 12 31.2 -0.1**
comp=Z,8.6nm,1.3s,mb4.5
DOU Dourbes 72.05 318 P **P 21 12 30.9 -0.5**
THEF They Montfort 72.11 316 *eP* **P 21 12 31.3 -0.5**
BMRM Bremner River 72.22 29 *eP* **P 21 12 31.4 -0.8**
comp=Z,51nm,1.0s,mb5.4
EIDS Eidsvold 72.27 136 *eP* **P 21 12 33.0 0.0**
comp=Z,16nm,0.8s,mb5.0
BAIF Baives 72.29 318⇑*iP* **P 21 12 32.7 -0.1**
comp=Z,24nm,1.0s,mb4.8
BAIF Baives 72.29 318⇑*iP* **P 21 12 32.7 -0.1**
BAIF pmax pmax
comp=Z,12nm,1.0s,mb4.8
BAIF Baives 72.29 318⇑*iP* **P 21 12 32.7 -0.1**
comp=Z,12nm,1.0s,mb4.8
DAWY Dawson 72.42 24 *eP* **P 21 12 30.3 -3.0**
STKA Stephens Creek 72.44 147⇑*iP* **P 21 12 33.1 -0.7**
comp=Z,7.8nm,0.6s,mb4.8
STKA Stephens Creek 72.44 147 P **P 21 12 33.2 -0.6**
comp=Z,14nm,0.8s,mb5.0,baz=333,slow=5.5,SNR=29
STKA Stephens Creek 72.44 147 *eP* **P 21 12 32.9 -0.9**
comp=Z,2.7nm,0.9s,mb4.2
MEZF Maizieres J'vi 72.53 316⇑*iP* **P 21 12 34.1 -0.2**
comp=Z,19nm,0.9s,mb4.7
MEZF Maizieres J'vi 72.53 316⇑*iP* **P 21 12 34.1 -0.2**
comp=Z,19nm,0.9s,mb5.0
CABF La Chapelle 72.80 314⇑*iP* **P 21 12 35.5 -0.5**
comp=Z,28nm,1.1s,mb4.8
CABF La Chapelle 72.80 314⇑*iP* **P 21 12 35.5 -0.5**
CABF pmax pmax
comp=Z,14nm,1.1s,mb4.8
CABF La Chapelle 72.80 314⇑*iP* **P 21 12 35.5 -0.5**

comp=Z,14nm,1.1s,mb4.8
PGF Pioggiola 72.84 310⇑ iP P 21 12 36.4 +0.1
comp=Z,119nm,1.0s,mb5.5
PGF Pioggiola 72.84 310⇑ iP P 21 12 36.4 +0.1
PGF pmax pmax
comp=Z,59nm,1.0s,mb5.5
PGF Pioggiola 72.84 310⇑ iP P 21 12 36.4 +0.1
comp=Z,59nm,1.0s,mb5.5
SUMG Summit 72.91 349 eP P 21 12 35.6 -0.5
comp=Z,23nm,1.3s,mb5.0
LPG La Plagne 72.91 313⇑ iP P 21 12 37.1 +0.5
comp=Z,94nm,0.9s,mb5.4
LPG La Plagne 72.91 313⇑ iP P 21 12 37.1 +0.5
LPG pmax pmax
comp=Z,47nm,0.9s,mb5.4
LPG La Plagne 72.91 313⇑ iP P 21 12 37.1 +0.5
comp=Z,47nm,0.9s,mb5.4
LPL La Plagne 72.92 313⇑ iP P 21 12 37.1 +0.4
comp=Z,88nm,0.9s,mb5.4
LPL La Plagne 72.92 313⇑ iP P 21 12 37.1 +0.4
LPL pmax pmax
comp=Z,44nm,0.9s,mb5.4
LPL La Plagne 72.92 313⇑ iP P 21 12 37.1 +0.4
comp=Z,44nm,0.9s,mb5.4
IMI Imperia 72.93 311 P P 21 12 36.8 0.0
SAOF Saorge 73.11 311 eP P 21 12 37.5 -0.3
BNI Bardonecchia 73.17 313 eP P 21 12 37.9 -0.3
RES Resolute Bay 73.18 5 LR LR 21 47 51.2
comp=Z,89nm,18.7s,MS4.1,baz=316,slow=38
RES Resolute Bay 73.18 5 eP P 21 12 37.9 +0.1
RES pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
RES Resolute Bay 73.18 5 eP P 21 12 37.9 +0.2
comp=Z,8.0nm,1.2s,mb4.5
SBF Sospel 73.24 311⇑ iP P 21 12 38.3 -0.3
comp=Z,78nm,0.9s,mb5.3
SBF Sospel 73.24 311⇑ iP P 21 12 38.3 -0.3
SBF pmax pmax
comp=Z,39nm,0.9s,mb5.3
SBF Sospel 73.24 311⇑ iP P 21 12 38.3 -0.3
comp=Z,39nm,0.9s,mb5.3
MBDF Montbardon 73.26 312 eP P 21 12 39.1 +0.4
comp=Z,20nm,0.8s,mb4.8
MBDF Montbardon 73.26 312 eP P 21 12 39.1 +0.4
MBDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MBDF Montbardon 73.26 312 eP P 21 12 39.1 +0.4
comp=Z,9.9nm,0.8s,mb4.8
LUCF Luceram 73.29 311 eP P 21 12 38.4 -0.5
TOUF Mont Tournerai 73.29 312 eP P 21 12 38.6 -0.3
MVIF Mont Vial 73.41 312 eP P 21 12 39.0 -0.6
ESK Eskdalemuir 73.56 325 i P P 21 12 40.5 +0.2
ESK Eskdalemuir 73.56 325 eP P 21 12 39.7 -0.6
LOR Lormes 73.83 316⇑ iP P 21 12 41.1 -0.9
LOR comp=Z,12nm,0.9s,mb4.5 eMLR MLR
comp=Z,170nm,22.0s,MS4.0
LOR Lormes 73.83 316⇑ iP P 21 12 41.1 -0.9
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,170nm,22.0s,MS4.3
LOR Lormes 73.83 316⇑ iP P 21 12 41.1 -0.9
comp=Z,6.3nm,0.9s,mb4.5
LOR LR LR
comp=Z,170nm,22.0s,MS4.3
FRF La Foret Royal 73.89 311⇑ iP P 21 12 41.9 -0.5
comp=Z,40nm,1.3s,mb4.9
FRF La Foret Royal 73.89 311⇑ iP P 21 12 41.9 -0.5
FRF pmax pmax
comp=Z,20nm,1.3s,mb4.9
FRF La Foret Royal 73.89 311⇑ iP P 21 12 41.9 -0.5
comp=Z,20nm,1.3s,mb4.9
VSL Villasalto 73.99 307 eP P 21 12 43.5 +0.4
OPO Ambohidratompo 74.01 236 P P 21 12 42.6 -0.8
comp=Z,12nm,0.9s,mb4.8,baz=54,slow=5.1,SNR=7.0
LMR La Mourre 74.09 311⇑ iP P 21 12 43.2 -0.4
comp=Z,60nm,1.2s,mb5.1
LMR La Mourre 74.09 311⇑ iP P 21 12 43.2 -0.4
LMR pmax pmax
comp=Z,30nm,1.2s,mb5.1
LMR La Mourre 74.09 311⇑ iP P 21 12 43.2 -0.4
comp=Z,30nm,1.2s,mb5.1
SSF Saint Saulge 74.14 316⇑ iP P 21 12 43.1 -0.7
comp=Z,22nm,1.1s,mb4.7
SSF Saint Saulge 74.14 316⇑ iP P 21 12 43.1 -0.7
SSF pmax pmax
comp=Z,11nm,1.1s,mb4.7
SSF Saint Saulge 74.14 316⇑ iP P 21 12 43.1 -0.7
comp=Z,11nm,1.1s,mb4.7
SMF Signal de Mont 74.14 315⇑ iP P 21 12 43.4 -0.5
comp=Z,78nm,1.1s,mb5.3
SMF Signal de Mont 74.14 315⇑ iP P 21 12 43.4 -0.5
SMF pmax pmax
comp=Z,39nm,1.1s,mb5.2
SMF Signal de Mont 74.14 315⇑ iP P 21 12 43.4 -0.5
comp=Z,39nm,1.1s,mb5.2
AVF Avril sur Loir 74.36 316⇑ iP P 21 12 44.6 -0.6
comp=Z,59nm,1.1s,mb5.1
AVF Avril sur Loir 74.36 316⇑ iP P 21 12 44.6 -0.6
AVF pmax pmax
comp=Z,29nm,1.1s,mb5.1
AVF Avril sur Loir 74.36 316⇑ iP P 21 12 44.6 -0.6
comp=Z,29nm,1.1s,mb5.1
SMRF Simiane la Rot 74.37 312 eP P 21 12 45.3 0.0
comp=Z,33nm,1.3s,mb4.8
SMRF Simiane la Rot 74.37 312 eP P 21 12 45.3 0.0
comp=Z,33nm,1.3s,mb5.1
SSB Saint Sauveur 74.39 314 eP P 21 12 44.4 -0.9
SSB pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SSB Saint Sauveur 74.39 314 eP P 21 12 44.4 -1.0
comp=Z,6.1nm,1.0s,mb4.5
VIVF Saint-Julien-l 74.51 313⇑ iP P 21 12 45.6 -0.4
comp=Z,50nm,1.1s,mb5.0
VIVF Saint-Julien-l 74.51 313⇑ iP P 21 12 45.6 -0.4
VIVF pmax pmax
comp=Z,25nm,1.1s,mb5.1
VIVF Saint-Julien-l 74.51 313⇑ iP P 21 12 45.6 -0.4
comp=Z,25nm,1.1s,mb5.1
HYF Humbligny 74.55 316 eP P 21 12 46.2 0.0
PLDF La Plantade 74.61 315 eP P 21 12 47.3 +0.7
TREF Trevaresse 74.66 312 eP P 21 12 47.6 +0.6
BGF Bois d'Agland 74.78 315 eP P 21 12 47.1 -0.5
comp=Z,12nm,0.9s,mb4.5
BGF Bois d'Agland 74.78 315 eP P 21 12 47.1 -0.5
BGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BGF Bois d'Agland 74.78 315 eP P 21 12 47.1 -0.5
comp=Z,5.9nm,0.9s,mb4.5
AGO Saint Agoulin 74.86 315 eP P 21 12 49.1 +1.0
PYM Petit Puy Mans 75.09 315 eP P 21 12 50.0 +0.6
HYT Haines Junctio 75.11 27 eP P 21 12 50.0 +0.8
LBL Lubilhac 75.20 314 eP P 21 12 50.7 +0.7
TCF Toulx Ste Croi 75.30 315⇑ iP P 21 12 50.3 -0.3
comp=Z,37nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.30 315⇑ iP P 21 12 50.3 -0.3
TCF pmax pmax
comp=Z,18nm,1.0s,mb5.0
TCF Toulx Ste Croi 75.30 315⇑ iP P 21 12 50.3 -0.3
comp=Z,18nm,1.0s,mb5.0
LASF Ste Croix 75.40 313 eP P 21 12 51.2 0.0
comp=Z,66nm,1.2s,mb5.1
LDF La Druitiere 75.47 318⇑ iP P 21 12 50.9 -0.6
comp=Z,22nm,0.9s,mb4.8
LDF La Druitiere 75.47 318⇑ iP P 21 12 50.9 -0.6
LDF pmax pmax
comp=Z,11nm,0.9s,mb4.8
LDF La Druitiere 75.47 318⇑ iP P 21 12 50.9 -0.6
comp=Z,11nm,0.9s,mb4.8
FLN La Foliniere 75.59 319 eP P 21 12 51.7 -0.5
comp=Z,26nm,1.0s,mb4.8
FLN eMLR MLR
comp=Z,105nm,19.8s,MS3.8
FLN La Foliniere 75.59 319 eP P 21 12 51.7 -0.5
FLN pmax pmax
comp=Z,13nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,100nm,19.8s,MS4.1
FLN La Foliniere 75.59 319 eP P 21 12 51.7 -0.5
comp=Z,13nm,1.0s,mb4.8
FLN LR LR
comp=Z,100nm,19.8s,MS4.1
KEST Kesra 75.80 303 P P 21 12 53.8 +0.1
comp=Z,2.5nm,0.8s,mb4.2,baz=278,slow=2.6,SNR=11
GRR Gorron 76.00 318⇑ iP P 21 12 54.1 -0.4
comp=Z,36nm,0.8s,mb5.0
GRR Gorron 76.00 318⇑ iP P 21 12 54.1 -0.4
GRR pmax pmax
comp=Z,18nm,0.8s,mb5.0
GRR Gorron 76.00 318⇑ iP P 21 12 54.1 -0.4
comp=Z,18nm,0.8s,mb5.0
CAF Calviac 76.08 314⇑ iP P 21 12 55.3 +0.2
comp=Z,47nm,1.1s,mb5.0
CAF Calviac 76.08 314⇑ iP P 21 12 55.3 +0.2
CAF pmax pmax
comp=Z,24nm,1.1s,mb5.0
CAF Calviac 76.08 314⇑ iP P 21 12 55.3 +0.2
comp=Z,24nm,1.1s,mb5.0
RJF Les Rejaudoux 76.22 315⇑ iP P 21 12 56.0 +0.1
comp=Z,56nm,1.2s,mb5.1
RJF eMLR MLR
comp=Z,170nm,19.5s,MS4.1
RJF Les Rejaudoux 76.22 315⇑ iP P 21 12 56.0 +0.1
RJF pmax pmax
comp=Z,28nm,1.2s,mb5.1
RJF MLR MLR
comp=Z,170nm,19.5s,MS4.4
RJF Les Rejaudoux 76.22 315⇑ iP P 21 12 56.0 +0.1
comp=Z,28nm,1.2s,mb5.1
RJF LR LR
comp=Z,170nm,19.5s,MS4.4
ARMA Armidale 76.41 139 eP P 21 12 57.9 +0.9
ARMA Armidale 76.41 139 eP P 21 12 58.3 +1.3
comp=Z,13nm,1.3s,mb4.7
MFF Saint Martin d 76.53 317⇑ iP P 21 12 57.4 -0.2
comp=Z,54nm,1.2s,mb5.0
MFF Saint Martin d 76.53 317⇑ iP P 21 12 57.4 -0.2
MFF pmax pmax
comp=Z,27nm,1.2s,mb5.0
MFF Saint Martin d 76.53 317⇑ iP P 21 12 57.4 -0.2
comp=Z,27nm,1.2s,mb5.0
MTLF Montolieu 76.80 313 eP P 21 12 59.0 -0.2
comp=Z,19nm,1.1s,mb4.6
MTLF Montolieu 76.80 313 eP P 21 12 59.0 -0.2
MTLF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MTLF Montolieu 76.80 313 eP P 21 12 59.0 -0.2
comp=Z,9.4nm,1.1s,mb4.6
SKAG Skagway 76.82 27 eP P 21 12 59.2 +0.2
comp=Z,52nm,1.0s,mb5.4
LFF La Frestale 76.88 315⇑ iP P 21 12 59.8 +0.2
comp=Z,35nm,1.1s,mb4.9
LFF La Frestale 76.88 315⇑ iP P 21 12 59.8 +0.2
LFF pmax pmax
comp=Z,17nm,1.1s,mb4.9
LFF La Frestale 76.88 315⇑ iP P 21 12 59.8 +0.2
comp=Z,18nm,1.1s,mb4.9
SGMF Saint Gilles 77.03 319⇑ iP P 21 13 00.4 0.0
comp=Z,34nm,0.9s,mb5.0
SGMF Saint Gilles 77.03 319⇑ iP P 21 13 00.4 0.0
SGMF pmax pmax
comp=Z,17nm,0.9s,mb5.0
SGMF Saint Gilles 77.03 319⇑ iP P 21 13 00.4 0.0
comp=Z,17nm,0.9s,mb5.0
ROSF Rostrenen 77.38 319 eP P 21 13 02.3 -0.1
comp=Z,81nm,1.5s,mb5.1
ROSF Rostrenen 77.38 319 eP P 21 13 02.3 -0.1
ROSF pmax pmax
comp=Z,40nm,1.5s,mb5.1
ROSF Rostrenen 77.38 319 eP P 21 13 02.3 -0.1
comp=Z,40nm,1.5s,mb5.1
QUIF Quistinic 77.55 319 eP P 21 13 03.1 -0.2
comp=Z,64nm,1.3s,mb5.1
QUIF Quistinic 77.55 319 eP P 21 13 03.1 -0.2
QUIF pmax pmax
comp=Z,32nm,1.3s,mb5.1
QUIF Quistinic 77.55 319 eP P 21 13 03.1 -0.2
comp=Z,32nm,1.3s,mb5.1
EPF Esparros 78.13 313 eP P 21 13 06.1 -0.5
comp=Z,18nm,1.2s,mb4.6
EPF Esparros 78.13 313 eP P 21 13 06.1 -0.5
EPF pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
EPF Esparros 78.13 313 eP P 21 13 06.1 -0.5
comp=Z,8.9nm,1.2s,mb4.6
ETSF Etsaut 78.76 314⇑ iP P 21 13 10.4 +0.3
comp=Z,18nm,1.0s,mb4.7
ETSF Etsaut 78.76 314⇑ iP P 21 13 10.4 +0.3
ETSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ETSF Etsaut 78.76 314⇑ iP P 21 13 10.4 +0.3
comp=Z,9.1nm,1.0s,mb4.7
SJPF Ste Jean 79.05 314⇑ iP P 21 13 12.2 +0.5
comp=Z,22nm,1.2s,mb4.7
SJPF Ste Jean 79.05 314⇑ iP P 21 13 12.2 +0.5
SJPF pmax pmax
comp=Z,11nm,1.2s,mb4.7
SJPF Ste Jean 79.05 314⇑ iP P 21 13 12.2 +0.5
comp=Z,11nm,1.2s,mb4.7
SFJD Kangerlussuaq 79.80 350 eP P 21 13 14.4 -1.0
SFJD pmax pmax
comp=Z,16nm,0.8s,mb5.0
SFJD Kangerlussuaq 79.80 350 eP P 21 13 14.3 -1.0
comp=Z,16nm,0.8s,mb5.0
SFJD Kangerlussuaq 79.80 350⇑ iP P 21 13 14.4 -1.0
comp=Z,14nm,0.8s,mb5.0
YKA Yellowknife Ar 81.15 17 P P 21 13 21.9 -0.8
comp=Z,4.2nm,0.4s,mb4.7,baz=328,slow=5.2,SNR=100
YKA PKKPbc PKKPbc 21 31 55.7 -3.5
comp=Z,0.6nm,0.6s,baz=147,slow=2.2,SNR=9.1
YKA LR LR 21 53 54.9
comp=Z,212nm,18.6s,MS4.5,baz=280,slow=39
YKA Yellowknife Ar 81.15 17 P P 21 13 21.9 -0.8
YKA PKKPbc PKKPbc 21 31 55.7 -3.5
YKA LR LR 21 53 54.9
ESDC Sonseca Array 82.69 312 P P 21 13 31.1 -0.1
comp=Z,2.0nm,0.7s,mb4.2,baz=40,slow=5.6,SNR=7.8
PBRG Braganca 83.15 315 eP P 21 13 34.4 +0.8
comp=Z,26nm,1.5s,mb5.0
MVO Moncorvo 83.70 315 eP P 21 13 36.3 -0.1
comp=Z,22nm,1.9s,mb5.0
PMRV Marv??o 84.97 314 eP P 21 13 43.1 +0.2
TAM Tamanrasset 85.25 294 eP P 21 13 44.5 -0.1
TAM pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
TAM Tamanrasset 85.25 294 eP P 21 13 44.5 -0.1
comp=Z,4.0nm,1.1s,mb4.5
PBAR Barrancos 85.51 313 eP P 21 13 46.3 +0.7
comp=Z,15nm,1.2s,mb5.1
PBEJ Beja 86.12 313 eP P 21 13 49.1 +0.5
comp=Z,26nm,1.5s,mb5.2
LSZ Lusaka 86.41 250 P P 21 13 49.7 -0.6
comp=Z,7.8nm,0.9s,mb4.9,baz=45,slow=5.3,SNR=11
LSZ Lusaka 86.41 250 eP P 21 13 49.8 -0.5
LSZ pmax pmax
comp=Z,25nm,1.3s,mb5.3
LSZ Lusaka 86.41 250 eP P 21 13 49.8 -0.5
comp=Z,25nm,1.3s,mb5.3
FCC Fort Churchill 88.64 9 eP P 21 13 59.6 -0.8
EDM Edmonton 89.39 21 eP P 21 14 03.9 -0.1
RPW Rockport 90.40 28 eP P 21 14 08.8 -0.1
comp=Z,1.4nm,0.8s,mb4.3
FFC Flin Flon 91.07 15 i P P 21 14 11.3 -0.5
FFC Flin Flon 91.07 15 eP P 21 14 08.8 -3.0
comp=Z,19nm,1.3s,mb5.3
NEW Newport 92.27 26 eP P 21 14 16.6 -0.9
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 92.27 26 eP P 21 14 16.6 -0.9
comp=Z,5.3nm,0.9s,mb4.9
WALA Waterton Lakes 92.76 24 eP P 21 14 20.6 +0.9
BSMT Bassoo Peak 93.47 25 eP P 21 14 23.4 +0.4
comp=Z,4.3nm,0.8s,mb4.9
SCHQ Schefferville 93.52 355 P P 21 14 22.0 -1.1
comp=Z,6.9nm,0.9s,mb5.1,baz=13,slow=7.6,SNR=8.6
TORD Torodi Ar. Bea 93.52 288 P P 21 14 22.4 -1.5
comp=Z,2.2nm,1.0s,mb4.5,baz=66,slow=2.9,SNR=11
TORD PP PP 21 18 07.0 -1.1
comp=Z,0.7nm,0.7s,baz=57,slow=6.1,SNR=4.2
TORD Torodi Ar. Bea 93.52 288 P P 21 14 22.4 -1.5
TORD PP PP 21 18 07.0 -1.1
YBMT Yellow Bay 93.74 25 eP P 21 14 25.6 +1.3
comp=Z,5.9nm,1.1s,mb4.9
SWMT Swartz Lake 94.05 25 eP P 21 14 25.9 +0.2
comp=Z,3.5nm,0.9s,mb4.8
SLMT Seeley Lake 94.46 25 eP P 21 14 29.1 +1.5
comp=Z,14nm,1.1s,mb5.3
MSO Missoula 94.65 25 eP P 21 14 28.9 +0.4
CHMT Chamberlain Mo 94.82 25 P P 21 14 29.2 0.0
BOZ Bozeman (W) 96.49 24 eP P 21 14 36.8 -0.1
ULM Lac du Bonnet 96.54 13 LR LR 22 00 27.2
comp=Z,112nm,18.6s,MS4.4,baz=14,slow=37
HLID Hailey 97.23 27 eP P 21 14 40.3 -0.1
comp=Z,2.9nm,1.0s,mb4.7
RSSD Black Hills 100.31 20 eP PKIKP Pdif 21 14 54.5 +0.5
WMOK Wichita Mounta 110.52 20 eP PKIKP PKiKP 21 19 40.8 +0.6
WMOK e 21 20 15.2
TXAR Lajitas Array 113.82 26 PKKPbc PKKPbc 21 30 28.1 -0.5
comp=Z,0.8nm,0.7s,baz=158,slow=7.2,SNR=7.6
ROSC El Rosal 143.66 357 PKP PKPdf 21 20 44.3 +1.1
comp=Z,10nm,0.5s,baz=72,slow=20,SNR=4.3
OTAV Otavalo 148.18 5 eP PKPdf 21 20 52.3 +1.3
LPAZ La Paz 163.17 334 PKP PKPdf 21 21 10.9 +0.3
comp=Z,2.5nm,0.9s,baz=42,slow=5.5,SNR=8.6
PLCA Paso Flores 169.99 204 PKPab PKPab 21 22 28.2 -1.9
comp=Z,2.7nm,0.7s,baz=264,slow=8.5,SNR=6.0
PLCA Paso Flores 169.99 204 PKP2 PKPab 21 22 28.3 -1.8
PLCA pmax pmax
comp=Z,3.0nm,0.7s

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*ISCJB **14** 21:03:05.8±1.3, 19°.93S±0°.08×177°.8W±0°.1, h339km±15km, mb3.8/13, Error ellipse: s-maj=19.4km s-min=11.0km az=24.2*
*NEIC **14** 21:03:07.0±1.2, 19°.93S×177°.67W, h341km±14km, mb3.9/7, Error ellipse: s-maj=17.0km s-min=10.5km az=120.0*
*IDC **14** 21:03:07.3±2.4, 19°.99S×177°.63W, h343km±26km, mb3.3/6, mb1 3.6/8, mb1mx3.4/16, mbtmp3.4/8, Error ellipse: s-maj=30.9km s-min=14.9km az=141.0*
ISC 14 21:03:06.6±1.3, **19°.95S**±0°.09×**177°.7W**±0°.1, **h334**km±16km, **n33**, σ0°**85**/30, **mb3.8**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.27**	**44**	P	**Pn**	**21 05 04.2**	**+0.4**
	4.5nm,0.3s,baz=254,slow=15,SNR=2.7						
AFI				S	**S**	**21 06 32.4**	**-7.0**
	4.1nm,0.3s,baz=162,slow=20,SNR=4.1						
RAO	**Raoul Island**	**9.27**	**181**	S	**S**	**21 06 56.8**	**-4.4**
	32nm,0.3s,baz=343,slow=20,SNR=3.1						
RAO	**Raoul Island**	**9.27**	**181**	Pn	**Pn**	**21 05 15.5**	**-0.2**
RAO				Sn	**S**	**21 07 00.3**	**-0.9**
URZ	**Urewera**	**18.79**	**193**	P	**P**	**21 07 01.8**	**-1.0**
	1.9nm,0.3s,baz=27,slow=2.3,SNR=5.9						
URZ				S	**S**	**21 10 08.8**	**-10**
	0.4nm,0.3s,baz=285,slow=18,SNR=3.7						
CTAO	**Charters Tower**	**33.81**	**263**	eP	**P**	**21 09 21.0**	**+2.5**
	2.7nm,0.5s,mb3.7						
STKA	**Stephens Creek**	**38.27**	**244**	P	**P**	**21 09 57.2**	**+1.2**
	3.5nm,0.8s,mb3.6,baz=97,slow=11,SNR=8.4						
STKA	**Stephens Creek**	**38.27**	**244**	eP	**P**	**21 09 57.8**	**+1.9**
	1.2nm,1.0s,mb3.1						
ASAR	**Alice Springs**	**44.91**	**256**	P	**P**	**21 10 49.7**	**+0.3**
	3.4nm,0.6s,mb3.6,baz=98,slow=8.4,SNR=61						
WRAB	**Tennant Creek**	**44.93**	**261**	eP	**P**	**21 10 50.0**	**+0.3**
	7.4nm,1.3s,mb3.7						
WRA	**Warramunga Arr**	**44.94**	**261**	P	**P**	**21 10 49.8**	**+0.1**
	0.6nm,0.3s,mb3.2,baz=96,slow=6.9,SNR=43						
MBWA	**Marble Bar**	**58.23**	**257**	eP	**P**	**21 12 27.4**	**+0.1**
	5.7nm,0.6s,mb4.1						
SBA	**Scott Base**	**58.44**	**184**	eP	**P**	**21 12 29.8**	**+2.0**
	1.0nm,0.5s,mb3.4						
CASY	**Casey**	**64.57**	**205**	eP	**P**	**21 13 08.3**	**-0.3**
	1.4nm,0.4s,mb3.9						
MJAR	**Matsushiro Arr**	**69.92**	**323**	P	**P**	**21 13 42.4**	**+0.1**
	1.4nm,0.5s,mb3.9,baz=159,slow=5.8,SNR=8.3						
MAJO	**Matsushiro**	**69.92**	**323**	P	**P**	**21 13 42.0**	**-0.3**
TWG	**Pinlang**	**73.31**	**302**	P	**P**	**21 14 02.4**	**-0.3**
YULB	**Yu-li**	**73.42**	**303**	P	**P**	**21 14 02.2**	**-1.1**
NACB	**Ninganchiao**	**73.59**	**304**	P	**P**	**21 14 04.1**	**-0.2**
KSM	**Kuching**	**73.60**	**278**	P	**P**	**21 14 03.9**	**-0.7**
TATO	**Taipei**	**74.08**	**305**	eP	**P**	**21 14 06.5**	**-0.6**
MDJ	**Mudanjiang**	**80.22**	**325**	eP	**P**	**21 14 40.2**	**-0.3**
	44nm,1.6s,mb4.9						
NVAR	**Mina Array Bea**	**80.44**	**43**	P	**P**	**21 14 42.1**	**+0.3**
	0.3nm,0.4s,mb3.4,baz=240,slow=9.1,SNR=2.4						
NVAR	**Mina Array Bea**	**80.44**	**43**	P	**P**	**21 14 42.1**	**+0.3**
COR	**Corvallis**	**81.14**	**36**	P	**P**	**21 14 45.1**	**-0.3**
KULM	**Kulim**	**83.96**	**278**	eP	**P**	**21 14 59.2**	**-1.3**
	2.1nm,0.6s,mb4.1						
TXAR	**Lajitas Array**	**86.53**	**57**	P	**P**	**21 15 13.5**	**+0.7**
	0.8nm,0.8s,mb3.6,baz=193,slow=5.1,SNR=4.1						
TXAR	**Lajitas Array**	**86.53**	**57**	P	**P**	**21 15 13.5**	**+0.7**
AKASG	**Malin Array Be**	**142.66**	**332**	PKhKP		21 21 54.9	
	0.2nm,0.3s,baz=43,slow=4.0,SNR=4.2						
AKASG	**Malin Array Be**	**142.66**	**332**	PKP	PKPdf	21 21 54.9	-5.2
BRTR	**Keskin Array B**	**146.66**	**313**	PKPbc	PKPbc	21 22 08.5	-1.1
	0.9nm,0.9s,baz=108,slow=2.7,SNR=5.5						
CLL	**Collm**	**147.59**	**347**	ePKPbc	PKPbc	21 22 13.0	+1.3
MMAI	**Mount Meron Ar**	**147.77**	**301**	PKPbc	PKPbc	21 22 12.1	-0.7
	1.9nm,0.7s,baz=103,slow=2.7,SNR=4.6						
GERES	**GERESS Array B**	**149.74**	**345**	PKPbc	PKPbc	21 22 15.7	-1.5
	0.2nm,0.5s,baz=51,slow=3.9,SNR=3.4						

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*DDA **14** 21:04:04.8, 38°.21N×26°.65E, h7km±2km, Md2.7*
*ATH **14** 21:04:04.1, 38°.26N×27°.03E, h4km, MD2.7/3*
*ISCJB **14** 21:04:05.0±0.6, 38°.21N±0°.03×26°.65E±0°.06, h10km±5km, Error ellipse: s-maj=9.0km s-min=4.4km az=156.5*
*CSEM **14** 21:04:05.0±0.1, 38°.23N×26°.65E, h10km, ML2.9/2, Error ellipse: s-maj=4.7km s-min=2.4km az=66.0*
*THE **14** 21:04:06.1, 38°.28N×26°.66E, h8km±3km, ML2.9/2, Error ellipse: s-maj=3.8km s-min=0.6km az=64.0*
ISC 14 21:04:05.2±0.6, **38°.23N**±0°.03×**26°.65E**±0°.07, **h10**km±6km, **n19**, σ0°**60**/30, **1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**344**	⇑iPg	**Pg**	**21 04 08.4**	**0.0**
URLA				*i* Sg	**Sg**	**21 04 10.9**	**+0.3**
BLCB	**Balcova**	**0.35**	**63**	P	**Pg**	**21 04 12.3**	**+0.1**
BLCB				S	**Sg**	**21 04 17.5**	**+0.6**
BLCB	**Balcova**	**0.35**	**63**	P	**Pg**	**21 04 12.3**	**+0.1**
BLCB				S	**Sg**	**21 04 17.5**	**+0.6**
SMG	**Samos**	**0.54**	**164**	ePG	**Pg**	**21 04 15.0**	**-0.7**
SMG				eSG	**Sg**	**21 04 23.0**	**+0.2**
SMG	**Samos**	**0.54**	**164**	ePg	**Pg**	**21 04 15.0**	**-0.7**
SMG				eSg	**Sg**	**21 04 23.0**	**+0.2**
GCAM	**G?zelcaml?**	**0.70**	**138**	eP	**Pg**	**21 04 18.3**	**-0.5**
GCAM				eS	**Sg**	**21 04 27.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.70**	**138**	eP	**Pg**	**21 04 18.3**	**-0.5**
GCAM				eS	**Sg**	**21 04 27.7**	**-0.2**
PRK	**Paraskevi**	**1.06**	**344**	ePB	**Pb**	**21 04 25.8**	**+0.2**
PRK	**Paraskevi**	**1.06**	**344**	P	**Pg**	**21 04 24.9**	**-0.7**
PRK				S	**Sg**	**21 04 39.6**	**+0.2**
PRK	**Paraskevi**	**1.06**	**344**	P	**Pg**	**21 04 24.9**	**-0.7**
PRK	**Paraskevi**	**1.06**	**344**	ePb	**Pb**	**21 04 25.8**	**+0.2**
PRK				S	**Sg**	**21 04 39.6**	**+0.2**
SIGR	**SIGRI**	**1.16**	**328**	P	**Pb**	**21 04 27.0**	**-0.4**
SIGR				S	**Sb**	**21 04 42.5**	**0.0**
SIGR	**SIGRI**	**1.16**	**328**	P	**Pb**	**21 04 27.0**	**-0.4**
SIGR				S	**Sb**	**21 04 42.5**	**0.0**
APE	**Apeiranthos**	**1.46**	**218**	ePB	**Pb**	**21 04 35.7**	**+3.3**
APE	**Apeiranthos**	**1.46**	**218**	P	**Pn**	**21 04 32.2**	**+0.7**
APE	**Apeiranthos**	**1.46**	**218**	P	**Pn**	**21 04 32.2**	**+0.7**
APE	**Apeiranthos**	**1.46**	**218**	ePb	**Pb**	**21 04 35.7**	**+3.3**
LIA	**Limnos Island**	**2.02**	**326**	P	**Pn**	**21 04 38.7**	**-0.6**
LIA	**Limnos Island**	**2.02**	**326**	P	**Pn**	**21 04 38.7**	**-0.6**

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*SKHL **14** 21:30:58.2±1.9, 45°.78N×150°.37E, h94km±25km, mb5.6/1, msh5.7/2*
*NEIC **14** 21:30:58.5±0.6, 45°.67N×149°.98E, h104km±5km, mb4.3/20, Error ellipse: s-maj=6.8km s-min=4.1km az=141.0*
*MOS **14** 21:30:58.5±1.0, 45°.63N×150°.15E, h120km, mb4.0/20, Error ellipse: s-maj=9.9km s-min=6.5km az=94.3*
*ISCJB **14** 21:30:58.8±0.7, 45°.54N±0°.05×149°.99E±0°.08, h124km±5km, mb4.0/40, Error ellipse: s-maj=10.9km s-min=6.1km az=44.8*
*IDC **14** 21:31:00.7±2.6, 45°.73N×150°.03E, h123km±23km, mb3.7/19, mb1 3.8/21, mb1mx3.7/28, mbtmp3.6/21, Error ellipse: s-maj=17.2km s-min=13.5km az=142.0*
*JMA **14** 21:31:02.2±0.6, 44°.99N×150°.05E, h118km, M4.1*
ISC 14 21:30:59.5±0.6, **45°.60N**±0°.05×**150°.01E**±0°.07, **h115**km±4km, **n147**, σ1°**10**/164, **mb4.0**/40, **3C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.56**	**257**	*i* PN	**Pn**	**21 31 28.2**	**+1.0**
KUR				*e*S	**Sn**	**21 31 50.2**	**+1.9**
KUR				pmax	pmax		
	comp=N,240nm,0.4s						
KUR				pmax	pmax		
	comp=E,80nm,0.4s						

KUR pmax pmax
comp=Z,490nm,0.4s
KUR pmax pmax
comp=N,2μm,1.0s
KUR smax
comp=N,3μm,0.4s
KUR smax
comp=E,2μm,0.4s
KUR smax
comp=N,10μm,1.0s
KUR smax
comp=E,5μm,1.0s
KUR Kuril'sk 1.56 257 ||*i*P **Pn 21 31 28.2 +1.0**
KUR AMB AMB 21 31 29.0
comp=E,240nm,0.4s
KUR AMB AMB 21 31 29.0
comp=E,110nm,0.4s
KUR AMB AMB 21 31 29.0
comp=E,630nm,0.4s
KUR AMB AMB 21 31 29.0
comp=E,2μm,1.0s
KUR *i*S **Sn 21 31 50.2 +1.9**
KUR A 21 31 53.6
comp=E,3μm,0.7s
KUR A 21 31 53.6
comp=E,2μm,0.7s
KUR A 21 31 54.0
comp=E,10μm,1.0s
KUR A 21 31 54.0
comp=E,5μm,1.0s
YUK Yuzh-Kuril'sk 3.34 244 *e*PN **Pn 21 31 51.5 +1.4**
YUK *e*S **Sn 21 32 30.4 +1.2**
YUK pmax pmax
comp=N,110nm,0.4s
YUK pmax pmax
comp=Z,180nm,0.4s
YUK pmax pmax
comp=E,100nm,0.4s
YUK smax
comp=E,470nm,0.6s
YUK smax
comp=N,530nm,0.4s
YUK smax
comp=N,2μm,1.0s
YUK smax
comp=E,1μm,0.6s
YUK Yuzh-Kuril'sk 3.34 244 *e*P **Pn 21 31 51.5 +1.4**
YUK AMB AMB 21 31 52.0
comp=E,110nm,0.3s
YUK AMB AMB 21 31 52.0
comp=E,180nm,0.3s
YUK AMB AMB 21 31 52.0
comp=E,100nm,0.4s
YUK *e*S **Sn 21 32 30.4 +1.2**
YUK A 21 32 31.7
comp=E,530nm,0.5s
YUK A 21 32 31.7
comp=E,470nm,0.5s
YUK A 21 32 32.8
comp=E,1μm,0.6s
YUK A 21 32 32.8
comp=E,2μm,1.0s
NEM2 Nemuro 2 3.79 235 P **Pn 21 31 55.5 -0.5**
NEM2 *e*S **Sn 21 32 37.4 -2.4**
JRA Rausu 3.86 246 P **Pn 21 31 59.1 +2.1**
JNK Nakash 4.28 244 P **Pn 21 32 04.0 +1.3**
JAK Akkeshi 4.62 238 P **Pn 21 32 06.7 -0.5**
JAK *e*S **Sn 21 32 57.5 -2.3**
JTKR Abashiri--Toko 4.64 252 P **Pn 21 32 09.4 +1.9**
JMP Maruseppu 5.00 254 P **Pn 21 32 14.7 +2.5**
JAR Ashorobuto 5.03 245 P **Pn 21 32 14.4 +1.7**
JOB Onbets 5.19 241 P **Pn 21 32 15.7 +0.8**
JOB *e*S **Sn 21 33 12.4 -1.2**
YSS Yuzh-Sakhalins 5.21 288 *i*PN **Pn 21 32 18.3 +3.2**
YSS *e*S **Sn 21 33 20.0 +6.0**
YSS smax
comp=N,60nm,1.2s
YSS Yuzh-Sakhalins 5.21 288 *e*Pn **Pn 21 32 14.0 -1.1**
YSS Yuzh-Sakhalins 5.21 288 ||*i*P **Pn 21 32 18.3 +3.2**
YSS *e*S **Sn 21 33 20.0 +6.0**
YSS A 21 33 23.0
comp=N,60nm,1.2s
JSE Soyaes 5.28 266 P **Pn 21 32 19.4 +3.3**
JKK2 Kamakawa 2 5.46 254 P **Pn 21 32 20.9 +2.5**
ASAJ Asahikawa 5.48 257 P **Pn 21 32 21.7 +3.0**
comp=N,0.9nm,0.3s,baz=78,slow=15,SNR=10
ASAJ S **Sn 21 33 38.0 +18**
comp=N,0.9nm,0.3s,baz=51,slow=16,SNR=2.0
JCH Churui 5.64 240 P **Pn 21 32 21.0 0.0**
JCH *e*S **Sn 21 33 22.6 -1.9**
ERM Erimo 6.12 237 *e*PN **Pn 21 32 29.8 +2.4**
ERM Erimo 6.12 237 *e*P **Pn 21 32 29.8 +2.4**
JBT2 Biratori 2 6.18 246 *e*S **Sn 21 33 36.0 -1.5**
JNBK Urakawa-nobuka 6.20 240 P **Pn 21 32 28.0 -0.6**
JNBK *e*S **Sn 21 33 34.6 -3.5**
SKR Severo-Kuril's 6.52 37 *e*PN **Pn 21 32 25.5 -7.3**
SKR Severo-Kuril's 6.52 37 *e*P **Pn 21 32 25.5 -7.3**
JNB Noboribetsu 7.18 247 P **Pn 21 32 43.1 +1.3**
JNB *e*S **Sn 21 34 00.5 -1.3**
JKB Kayabe 7.49 243 P **Pn 21 32 45.5 -0.4**
JKB *e*S **Sn 21 34 04.8 -4.4**
JSR Shiriuchi 8.07 243 *e*S **Sn 21 34 17.7 -5.6**
JTM Tenmabayashi 8.11 237 *e*S **Sn 21 34 17.1 -7.3**
JANG Nango 8.13 233 P **Pn 21 32 52.1 -2.5**
JANG *e*S **Sn 21 34 16.2 -8.5**
JTH Tanohata 8.24 229 *e*S **Sn 21 34 18.8 -8.7**
OFUJ Ofunato 8.98 226 P **Pn 21 33 04.0 -2.1**
OFUJ *e*S **Sn 21 34 37.4 -7.9**
PEA0B Petropavlovsk- 9.03 31 *e*Pn **Pn 21 33 05.4 -1.3**
PETK Petropavlovsk- 9.03 31 P **Pn 21 33 05.2 -1.5**
comp=N,1.5nm,0.3s,baz=212,slow=11,SNR=72
JRG Rokugo 9.29 231 P **Pn 21 33 09.5 -0.9**
PET Petropavlovsk 9.32 34 PN **Pn 21 33 08.8 -1.9**
JIO Ouri 9.62 225 *e*S **Sn 21 34 51.5 -9.4**
JFK Kawauchi 10.70 223 *e*S **Sn 21 35 19.0 -8.2**
MAJO Matsushiro 12.69 229 PN **Pn 21 33 56.4 +0.7**
MDJ Mudanjiang 14.46 273 *e*Pn **Pn 21 34 17.8 -0.6**
SEY Seymchan 17.42 4 *c*e**P Pn 21 34 54.9 0.0**
INCN Inchon 19.24 253 Pn **Pn 21 35 15.0 -1.8**
BILL Bilibino 24.03 15 *e*P **P 21 36 02.0 -1.3**
BILL Bilibino 24.03 15 *e*P **P 21 36 02.0 -1.2**
comp=N,0.4nm,0.5s,mb3.0
ULN Ulaanbaatar 29.25 290 P **P 21 36 49.7 -0.7**
SONM Songino Array 29.70 290 P **P 21 36 55.0 +0.7**
comp=N,0.2nm,0.3s,mb3.2,baz=81,slow=9.1,SNR=3.8
TLY Talaya 30.81 298 *e*P **P 21 37 02.7 -1.3**
TATO Taipei 30.81 238 *e*P **P 21 37 04.4 +0.1**
ENH Enshi 35.03 258 P **P 21 37 40.6 -0.4**
ZALV Zalesovo Beam 41.54 306 P **P 21 38 34.3 -0.9**
comp=N,0.4nm,0.3s,mb3.6,baz=70,slow=8.5,SNR=2.6
INK Inuvik 43.77 32 P **P 21 38 53.5 +0.5**
comp=N,1.2nm,0.3s,mb4.1,baz=256,slow=4.6,SNR=3.1
MK31 Makanchi Array 45.55 297 *e*P **P 21 39 07.2 -0.2**
MKAR Makanchi Array 45.55 297 P **P 21 39 07.7 +0.3**
comp=N,1.2nm,0.7s,mb3.7,baz=72,slow=8.0,SNR=15
MKAR Makanchi Array 45.55 297 *e*P **P 21 39 07.8 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 46.20 303 *e*P **P 21 39 11.5 -1.0**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KURK Kurchatov 46.20 303 *e*P **P 21 39 11.5 -1.0**
comp=Z,1.6nm,0.6s,mb3.9
DLBC Dease Lake 47.93 44 *e*P **P 21 39 27.4 +1.6**
BVAR Borovoye Array 49.92 309 P **P 21 39 40.5 -0.5**
comp=Z,0.7nm,0.3s,mb4.0,baz=52,slow=8.0,SNR=8.5
BVAR Borovoye Array 49.92 309 *e*P **P 21 39 40.7 -0.3**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 49.96 309 *c i*P **P 21 39 40.4 -0.9**
BRVK pmax pmax
comp=Z,3.0nm,1.7s,mb4.0
BRVK Borovoye 49.96 309 *e*P **P 21 39 40.2 -1.1**
comp=Z,1.1nm,0.3s,mb4.3
CM31 Chiang Mai Arr 50.00 255 P **P 21 39 42.2 +0.2**
AAK Ala-Archa 52.40 296 P **P 21 39 59.8 +0.1**
RES Resolute Bay 52.60 18 P **P 21 40 00.4 -0.3**
comp=Z,4.5nm,0.6s,mb4.7,baz=325,slow=7.5,SNR=13
RES Resolute Bay 52.60 18 P **P 21 40 00.4 -0.3**
RES pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
YKA Yellowknife Ar 53.12 35 P **P 21 40 04.7 0.0**
comp=Z,0.7nm,0.5s,mb3.9,baz=299,slow=6.9,SNR=9.0
ARU Arti 54.39 317 *d i*P **P 21 40 13.8 -0.2**
ARU *e* 21 42 15.6
ARU S **S 21 47 44.4 +1.3**
ARU SS SS 21 51 23.9 -2.3
ARU pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
ARU Arti 54.39 317 *e*P **P 21 40 12.4 -1.6**
comp=Z,3.1nm,0.4s,mb4.7
ARCES ARCESS Array B 58.21 340 P **P 21 40 40.3 -0.7**
comp=Z,4.0nm,1.1s,mb4.3,baz=42,slow=6.7,SNR=3.5
KBL Kabul 60.47 290 *e*P **P 21 40 57.3 +0.3**
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KBL Kabul 60.47 290 *e*P **P 21 40 57.3 +0.3**
comp=Z,7.9nm,0.8s,mb4.8
SUMG Summit 61.98 3 *e*P **P 21 41 06.2 -0.3**
comp=Z,7.7nm,0.8s,mb4.8
FCC Fort Churchill 63.39 32 *e*P **P 21 41 15.6 -0.5**
FINES FINESS Array B 64.14 334 P **P 21 41 19.4 -1.6**
comp=Z,1.9nm,0.5s,mb4.2,baz=35,slow=8.3,SNR=16
CTAO Charters Tower 65.46 184 P **P 21 41 30.6 +0.6**
LOHW Long Hollow 66.03 52 P **P 21 41 32.2 -1.3**
comp=Z,6.6nm,0.6s,mb4.6
WRAB Tennant Creek 66.76 196 *e*P **P 21 41 37.8 -0.5**
WRAB pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
WRAB Tennant Creek 66.76 196 *e*P **P 21 41 37.8 -0.4**
comp=Z,1.9nm,0.7s,mb4.0
WRA Warramunga Arr 66.77 196 P **P 21 41 38.7 +0.4**
comp=Z,0.7nm,0.6s,mb3.7,baz=11,slow=6.6,SNR=7.9
FRB Frobisher Bay 66.82 18 P **P 21 41 37.1 -1.1**
comp=Z,1.4nm,0.3s,mb4.3,baz=358,slow=4.4,SNR=6.4
PDAR Pinedale Array 67.16 52 P **P 21 41 41.5 +0.8**
comp=Z,0.4nm,0.6s,mb3.4,baz=325,slow=1.8,SNR=3.7
PDAR pP pP 21 42 09.2 +0.2
comp=Z,0.6nm,0.8s,baz=328,slow=5.4,SNR=3.2
NB2 NORSAR Subarra 68.59 340 P **P 21 41 48.3 -1.1**
comp=Z,1.2nm,0.6s,mb3.9,baz=28,slow=6.5
NOA NORSAR Array B 68.59 340 P **P 21 41 48.5 -0.8**
comp=Z,1.8nm,0.7s,mb4.0,baz=29,slow=6.4,SNR=10
KIV Kislovodsk 70.03 313 *e*P **P 21 42 00.1 +1.6**
KIV pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
KIV Kislovodsk 70.03 313 *e*P **P 21 42 00.1 +1.6**
comp=Z,3.7nm,0.7s,mb4.3
ASAR Alice Springs 70.48 196 P **P 21 42 02.6 +1.3**
comp=Z,0.5nm,0.5s,mb3.6,baz=10,slow=5.9,SNR=7.3
ASAR Alice Springs 70.48 196 *e*P **P 21 42 02.9 +1.6**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.27 325 P **P 21 42 05.0 -0.9**
comp=Z,1.3nm,0.4s,mb4.1,baz=37,slow=6.2,SNR=4.7
AKASG Malin Array Be 71.27 325 *e*P **P 21 42 05.2 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
BUR08 Bucovina Ar. S 75.31 325 *e*P **P 21 42 30.2 +0.5**
STHS Stebnicka Huta 75.39 328 *e*P **P 21 42 31.5 +1.4**
STHS pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
STHS Stebnicka Huta 75.39 328 *e*P **P 21 42 31.5 +1.4**
comp=Z,2.4nm,0.6s,mb4.1
STHS Stebnicka Huta 75.39 328 *e*P **P 21 42 31.5 +1.4**
KOLS Kolonicke sedl 75.41 327 *e*P **P 21 42 31.0 +0.8**
KOLS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KOLS Kolonicke sedl 75.41 327 *e*P **P 21 42 31.0 +0.8**
comp=Z,2.3nm,0.9s,mb3.9
KOLS *e* 22 07 09.5
KOLS Kolonicke sedl 75.41 327 *e*P **P 21 42 31.0 +0.8**
KOLS *e* 22 07 09.5
MORC Moravsky Berou 76.41 331 *e*P **P 21 42 36.0 +0.1**
MORC pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
MORC Moravsky Berou 76.41 331 *e*P **P 21 42 36.0 0.0**
comp=Z,4.5nm,1.2s,mb4.1
KECS Kecovo 76.45 328 *e*P **P 21 42 35.9 -0.2**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KECS Kecovo 76.45 328 *e*P **P 21 42 35.9 -0.2**
comp=Z,1.6nm,0.8s,mb3.8
KECS Kecovo 76.45 328 *e*P **P 21 42 35.9 -0.2**
CLL Collm 76.58 334 *i*P **P 21 42 36.6 -0.3**
CLL pmax pmax
comp=Z,21nm,1.0s,mb4.8
CLL Collm 76.58 334 *i*P **P 21 42 36.6 -0.3**
comp=Z,6.0nm,1.0s,mb4.3
CLL Collm 76.58 334 *i*P **P 21 42 36.6 -0.3**
comp=Z,6.0nm,1.0s,mb4.3
VYHS Vyhne 77.04 329 *e*P **P 21 42 40.2 +0.7**
VYHS pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
VYHS Vyhne 77.04 329 *e*P **P 21 42 40.2 +0.7**
comp=Z,1.0nm,0.6s,mb3.7
VYHS Vyhne 77.04 329 *e*P **P 21 42 40.2 +0.7**
STKA Stephens Creek 77.49 187 P **P 21 42 42.2 +0.3**
BRTR Keskin Array B 77.71 315 P **P 21 42 44.4 +1.0**
comp=Z,1.1nm,0.9s,mb3.6,baz=46,slow=5.3,SNR=6.2
BRTR Keskin Array B 77.71 315 *e*P **P 21 42 44.4 +1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 78.51 332 P **P 21 42 47.7 +0.1**
comp=Z,0.7nm,0.5s,mb3.8,baz=35,slow=5.4,SNR=11
TXAR Lajitas Array 79.93 58 P **P 21 42 55.7 0.0**
comp=Z,0.3nm,0.6s,mb3.3,baz=266,slow=5.4,SNR=2.7
CDF Champ du Feu 80.86 336 *e*P **P 21 43 00.4 +0.1**
HAU Haudompre 81.50 336 *e*P **P 21 43 03.7 0.0**
MMAI Mount Meron Ar 81.92 310 P **P 21 43 08.2 +2.0**
comp=Z,2.2nm,0.5s,mb4.2,baz=45,slow=6.4,SNR=8.4
FLN La Foliniere 82.55 341 *e*P **P 21 43 08.8 -0.4**
LDF La Druitiere 82.62 341 *e*P **P 21 43 09.7 +0.1**
CABF La Chapelle 82.84 336 *e*P **P 21 43 11.1 +0.4**
LOR Lormes 82.86 338 *e*P **P 21 43 10.9 +0.1**
comp=Z,3.3nm,0.5s,mb4.2
LOR Lormes 82.86 338 *e*P **P 21 43 10.9 +0.1**
LOR pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
LOR Lormes 82.86 338 *e*P **P 21 43 10.9 +0.1**
comp=Z,1.6nm,0.4s,mb4.2
GRR Gorron 82.99 341 *e*P **P 21 43 11.0 -0.4**
SSF Saint Saulge 83.14 338 *e*P **P 21 43 12.3 0.0**
AVF Avril sur Loir 83.43 338 *e*P **P 21 43 13.0 -0.8**
SMF Signal de Mont 83.43 337 *e*P **P 21 43 14.3 +0.5**
comp=Z,10nm,0.9s,mb4.4
SMF Signal de Mont 83.43 337 *e*P **P 21 43 14.3 +0.5**
SMF pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
SMF Signal de Mont 83.43 337 *e*P **P 21 43 14.3 +0.5**
comp=Z,5.1nm,0.9s,mb4.3
SGMF Saint Gilles 83.50 342 *e*P **P 21 43 13.6 -0.5**
ROSF Rostrenen 83.57 342 *e*P **P 21 43 14.2 -0.2**
LPL La Plagne 83.64 335 *e*P **P 21 43 15.4 +0.5**
LPG La Plagne 83.65 335 *e*P **P 21 43 15.4 +0.5**
TCF Toulx Ste Croi 84.20 338 *e*P **P 21 43 18.1 +0.4**
MBDF Montbardon 84.35 335 *e*P **P 21 43 18.3 -0.1**
comp=Z,4.3nm,0.7s,mb4.1
MBDF Montbardon 84.35 335 *e*P **P 21 43 18.3 -0.1**
MBDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
MBDF Montbardon 84.35 335 *e*P **P 21 43 18.3 -0.1**
comp=Z,2.2nm,0.7s,mb4.1
ORIF Oris-en-Rattie 84.44 335 *e*P **P 21 43 19.6 +0.7**
comp=Z,2.6nm,0.5s,mb4.0
ORIF Oris-en-Rattie 84.44 335 *e*P **P 21 43 19.6 +0.7**
ORIF pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
ORIF Oris-en-Rattie 84.44 335 *e*P **P 21 43 19.6 +0.7**
comp=Z,1.3nm,0.5s,mb4.0
MFF Saint Martin d 84.50 340 *e*P **P 21 43 19.1 -0.1**
LMR La Mourre 85.69 334 *e*P **P 21 43 25.6 +0.4**
LFF La Frestale 85.83 339 *e*P **P 21 43 26.1 +0.3**
comp=Z,7.2nm,0.6s,mb4.5
LFF La Frestale 85.83 339 *e*P **P 21 43 26.1 +0.3**
LFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LFF La Frestale 85.83 339 *e*P **P 21 43 26.1 +0.3**
comp=Z,3.6nm,0.6s,mb4.5
MTLF Montolieu 86.93 337 *e*P **P 21 43 31.8 +0.6**
ETSF Etsaut 88.07 339 *e*P **P 21 43 37.6 +0.9**
comp=Z,3.9nm,0.6s,mb4.3
ETSF Etsaut 88.07 339 *e*P **P 21 43 37.6 +0.9**
ETSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
ETSF Etsaut 88.07 339 *e*P **P 21 43 37.6 +0.9**
comp=Z,2.0nm,0.6s,mb4.3

CASC 14 21:35:01.1±1.9, 13°.30N×90°.26W, h22^{km}±5^{km}, MD3.6, 3C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.82**	**49**	*e*P	Pb	21 35 16.5	-0.2
SBLS				*e*S	Sb	21 35 27.6	+0.3
IXG	**Ixpaco**	**0.89**	**348**	||*i*P	Pb	21 35 18.3	+0.4
BOQS	**Boqueron**	**1.05**	**66**	*e*P	Pn	21 35 19.9	-0.6
BOQS				*e*S	Sb	21 35 34.9	+1.0
SNET	**Serv Nac Est T**	**1.07**	**69**	*e*P	Pn	21 35 20.1	-0.8
SNET				*e*S	Sb	21 35 34.7	+0.1
PCG	**Pacaya**	**1.14**	**343**	*e*P	Pn	21 35 22.4	+0.6
PCG				*e*S	Sb	21 35 36.8	+0.4
LFRS	**El Faro**	**1.21**	**75**	*e*P	Pn	21 35 22.8	+0.1
LBRS	**Las Brisas**	**1.26**	**70**	*e*P	Pn	21 35 23.3	-0.2
FUG	**Fuego 3**	**1.27**	**334**	||*e*P	Pn	21 35 23.6	0.0
NBG	**Las Nubes**	**1.28**	**356**	||*e*P	Pn	21 35 25.0	+1.3
NBG				*e*S	Sn	21 35 42.7	+2.5
FG6		**1.39**	**334**	*e*P	Pn	21 35 25.2	0.0
FG6				*e*S	Sn	21 35 43.5	+0.6
SNVI	**San Vicente**	**1.42**	**77**	*e*P	Pn	21 35 25.5	-0.1
SNVI				*e*S	Sn	21 35 44.4	+0.8
TP2	**Tecpan 2**	**1.65**	**334**	||*e*P	Pn	21 35 30.1	+1.4
TP2				*e*S	Sn	21 35 51.5	+2.2
JAT	**Jato**	**1.68**	**307**	||*e*P	Pn	21 35 29.8	+0.7
MRL	**Marmol**	**1.84**	**17**	*e*P	Pn	21 35 32.3	+0.9
VSM	**San Miguel**	**1.94**	**86**	*e*P	Pn	21 35 32.2	-0.6
BLLM	**Bellamira**	**1.98**	**86**	*e*P	Pn	21 35 33.3	+0.1
BLLM				*e*S	Sn	21 35 58.6	+1.2
CNCH	**Conchagua**	**2.36**	**90**	*e*P	Pn	21 35 38.3	-0.3
CNCH				*e*S	Sn	21 36 09.2	+2.2
TELN	**Telica**	**3.42**	**101**	*e*P	Pn	21 35 52.8	-0.3
COPN	**Copaltepe**	**3.75**	**107**	*e*P	Pn	21 35 58.0	+0.3
CSAN		**3.91**	**106**	*e*P	Pn	21 36 00.9	+1.0
BOAB	**BOACO BROADBAN**	**4.56**	**100**	*e*P	Pn	21 36 07.6	-1.2

*ISCJB **14** 21:36:15.5±0.3, 36°.94N±0°.03×50°.05E±0°.03, h10^{km}, Error ellipse: s-maj=4.8km s-min=2.5km az=24.1*
*CSEM **14** 21:36:15.5±0.2, 36°.88N×49°.95E, h2^{km}, ML3.7, Error ellipse: s-maj=10.4km s-min=5.0km az=23.0*
*TEH **14** 21:36:17.3, 37°.05N×50°.06E, h2^{km}*
ISC 14 21:36:17.5±0.3, 36°.99N±0°.03×50°.08E±0°.03, h10^{km}, n45, σ1^{s}19/72, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**1.16**	**254**	*e*Pg	**Pn**	**21 36 33.8**	**-6.0**
ZNJK				*e*Sg	**Sn**	**21 36 47.4**	**-8.3**
THKV	**Tehran--Karaj**	**1.25**	**149**	*e*Pg	**Pn**	**21 36 35.0**	**-6.0**
CHTH	**Charan**	**1.37**	**142**	*e*Pg	**Pn**	**21 36 37.6**	**-5.1**
CHTH				*e*Sg	**Sn**	**21 36 54.4**	**-6.5**
IPRN	**Peran**	**1.96**	**112**	*e*Pn	**Pn**	**21 36 50.1**	**-0.7**
IPRN				*e*Sg	**Sn**	**21 37 17.4**	**+1.9**
IPRN				*e*	**Sg**	**21 37 21.1**	**+0.4**
	comp=Z,18μm,0.2s						
IPRN	**Peran**	**1.96**	**112**	*e*Pn	**Pn**	**21 36 50.1**	**-0.7**
IPRN				*e*Sg	**Sn**	**21 37 17.4**	**+1.9**
DAMV	**Damavand**	**2.04**	**131**	*e*Pg	**Pn**	**21 36 50.6**	**-1.3**
ISRB	**Sarab**	**2.09**	**294**	*e*Pn	**Pn**	**21 36 51.9**	**-0.7**
ISRB				*e*	**Pb**	**21 36 54.3**	**-1.3**
	comp=Z,10μm,0.1s						
ISRB				*e*Sg	**Sn**	**21 37 20.9**	**+2.2**
ISRB	**Sarab**	**2.09**	**294**	*e*Pn	**Pn**	**21 36 51.9**	**-0.7**
ISRB				*e*Sg	**Sn**	**21 37 20.9**	**+2.2**
ASAO	**Ashtian**	**2.44**	**181**	*e*Pg	**Pn**	**21 36 53.1**	**-4.2**
IFIR	**Firoozkooh**	**2.54**	**121**	*e*Pn	**Pn**	**21 37 00.2**	**+1.4**
IFIR				*e*Sn	**Sn**	**21 37 30.9**	**+1.1**
IFIR				*e*		21 37 46.1	
	comp=Z,3μm,0.1s						
IFIR	**Firoozkooh**	**2.54**	**121**	*e*Pn	**Pn**	**21 37 00.2**	**+1.4**
IFIR				*e*Sn	**Sn**	**21 37 30.9**	**+1.1**
GLBA	**Clilabad**	**2.61**	**330**	P	**Pn**	**21 36 58.7**	**-1.0**
	SNR=86						
GLBA				S	**Sn**	**21 37 31.3**	**-0.2**
ILAS	**Lasjerd**	**2.83**	**124**	*e*	**Pg**	**21 37 09.8**	**-1.9**
	comp=Z,2μm,0.1s						
ILAS				*e*Pn	**Pn**	**21 37 02.6**	**-0.1**
ISHM	**Shahmirzad**	**2.85**	**114**	*e*Pn	**Pn**	**21 37 04.1**	**+1.1**
ISHM				*e*	**Sg**	**21 37 48.2**	**-0.8**
	comp=Z,5μm,0.2s						
ISHM	**Shahmirzad**	**2.85**	**114**	*e*Pn	**Pn**	**21 37 04.1**	**+1.1**
SNGE	**Sanandaj**	**2.91**	**230**	*e*Pn	**Pn**	**21 36 58.9**	**-5.0**
SNGE				*e*Sg	**Sn**	**21 37 36.5**	**-2.5**
IGLO	**Ghaloghah**	**3.05**	**98**	*e*Pn	**Pn**	**21 37 06.6**	**+0.8**
IGLO				*e*	**Sg**	**21 38 01.9**	**+6.4**
	comp=Z,4μm,0.2s						
IGLO	**Ghaloghah**	**3.05**	**98**	*e*Pn	**Pn**	**21 37 06.6**	**+0.8**
ALIB	**Ii-Bayraml**	**3.08**	**344**	P	**Pn**	**21 37 06.4**	**+0.2**
	SNR=4.2						
ITBZ	**Tabriz**	**3.36**	**293**	*e*Pn	**Pn**	**21 37 10.2**	**+0.2**
ITBZ				*e*	**Sg**	**21 38 06.7**	**+1.3**
	comp=Z,659nm,0.2s						
IANJ	**Anjilo**	**3.45**	**115**	*e*Pn	**Pn**	**21 37 11.4**	**+0.1**
IANJ				*e*	**Pg**	**21 37 21.6**	**-2.0**
	comp=Z,724nm,0.1s						
IANJ	**Anjilo**	**3.45**	**115**	*e*Pn	**Pn**	**21 37 11.4**	**+0.1**
IKOM	**Komasi**	**3.50**	**217**	*e*Pn	**Pn**	**21 37 14.0**	**+2.0**
IKOM				*e*	**Sn**	**21 38 03.8**	**+10**
	comp=Z,947nm,0.3s						
IKOM	**Komasi**	**3.50**	**217**	*e*Pn	**Pn**	**21 37 14.0**	**+2.0**
ISHB	**Shabestar**	**3.77**	**291**	*e*Pn	**Pn**	**21 37 15.4**	**-0.3**
ISHB				*e*	**Sg**	**21 38 16.8**	**-1.7**
	comp=Z,1μm,0.2s						
IDHR	**Dehrash**	**3.77**	**234**	*e*Pn	**Pn**	**21 37 18.6**	**+2.9**
IDHR				*e*	**Pg**	**21 37 27.3**	**-2.5**
	comp=E,522nm,0.2s						
IDHR	**Dehrash**	**3.77**	**234**	*e*Pn	**Pn**	**21 37 18.6**	**+2.9**
IMRD	**Marand**	**3.87**	**298**	*e*Pn	**Pn**	**21 37 17.2**	**+0.2**
IMRD				*e*	**Sg**	**21 38 25.3**	**+3.6**
	comp=Z,2μm,0.3s						
IMRD	**Marand**	**3.87**	**298**	*e*Pn	**Pn**	**21 37 17.2**	**+0.2**
BRDA	**Brd**	**3.98**	**326**	P	**Pn**	**21 37 18.4**	**-0.1**
	SNR=3.6						
BRDA				S	**Sn**	**21 38 05.2**	**0.0**
IZEF	**Zefreh**	**4.48**	**155**	*e*Pn	**Pn**	**21 37 25.9**	**+0.4**
IZEF				*e*	**Sg**	**21 38 38.1**	**-3.3**
	comp=Z,360nm,0.3s						
IZEF	**Zefreh**	**4.48**	**155**	*e*Pn	**Pn**	**21 37 25.9**	**+0.4**
SEKA	**Sheki**	**4.77**	**333**	P	**Pn**	**21 37 28.4**	**-1.0**
	SNR=35						
SEKA				S	**Sn**	**21 38 23.8**	**-0.9**
MSL	**Mosul**	**5.63**	**266**	*e*P	**Pn**	**21 37 42.0**	**+0.8**
MSL				*e*S	**Sn**	**21 38 48.0**	**+2.0**
BHD	**Baghdad**	**5.96**	**233**	*e*P	**Pn**	**21 37 46.0**	**+0.2**
BHD				*e*S	**Sn**	**21 38 55.0**	**+0.8**
BHD	**Baghdad**	**5.96**	**233**	*e*P	**Pn**	**21 37 46.0**	**+0.2**
BHD				*e*S	**Sn**	**21 38 55.0**	**+0.8**
ISFR	**Sfrayin**	**6.34**	**87**	*e*Pn	**Pn**	**21 37 51.3**	**+0.4**
ISFR				*e*		21 39 12.3	
	comp=Z,359nm,0.4s						
ISFR	**Sfrayin**	**6.34**	**87**	*e*Pn	**Pn**	**21 37 51.3**	**+0.4**
IEMG	**Emamgholi**	**6.86**	**84**	*e*Pn	**Pn**	**21 37 57.7**	**-0.3**
IEMG				*e*		21 38 05.1	
	comp=Z,135nm,0.1s						
IEMG	**Emamgholi**	**6.86**	**84**	*e*Pn	**Pn**	**21 37 57.7**	**-0.3**
IAKL	**Akhelmad**	**6.97**	**91**	*e*Pn	**Pn**	**21 38 00.0**	**+0.3**
IAKL				*e*		21 38 08.7	
	comp=Z,124nm,0.1s						
IPAY	**Payeh**	**7.18**	**92**	*e*Pn	**Pn**	**21 38 03.1**	**+0.6**
IPAY	**Payeh**	**7.18**	**92**	*e*	**Pb**	**21 38 16.1**	**-6.2**
	comp=Z,71nm,0.1s						
IMYA	**Miami**	**8.08**	**92**	*e*Pn	**Pn**	**21 38 15.1**	**+0.2**
IMYA				*e*		21 38 19.0	
	comp=Z,49nm,0.1s						
IMYA	**Miami**	**8.08**	**92**	*e*Pn	**Pn**	**21 38 15.1**	**+0.2**

*IDC **14** 21:44:04.8±1.7, 2°.60S×99°.51E, h0^{km}, mb3.8/9, mb1 3.9/9, mb1mx3.7/23, mbtmp3.8/9, Error ellipse: s-maj=68.6km s-min=16.9km az=56.0*
*ISCJB **14** 21:44:09.3±0.9, 2°.51S±0°.05×99°.67E±0°.09, h47^{km}±6^{km}, mb3.9/9, Error ellipse: s-maj=15.6km s-min=7.1km az=164.9*
*DJA **14** 21:44:09, 2°.57S×99°.77E, h44^{km}, MLv4.0/11*
ISC 14 21:44:10.0±1.1, 2°.50S±0°.05×99°.64E±0°.08, h34^{km}±8^{km}, n24, σ0^{s}80/26, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.46**	**125**	P	**Pb**	**21 44 20.7**	**+0.7**

PPSI				S	Sb	21 44 26.6	-0.3
SISI	**Saibi**	**1.29**	**335**	P	Pn	21 44 31.7	+0.1
SISI				S	Sn	21 44 54.7	+7.0
PDSI	**Padang**	**1.78**	**28**	P	Pn	21 44 38.1	-0.3
PDSI				S	Sn	21 44 59.7	-0.2
PPI	**Padang Panjang**	**2.17**	**21**	P	Pn	21 44 44.1	+0.4
PPI				S	Sn	21 45 08.3	-1.1
SDSI	**Sungai Dareh**	**2.37**	**49**	P	Pn	21 44 47.4	+0.8
KSI	**Kapahiang**	**3.17**	**111**	P	Px	21 45 16.3	
MNSI	**Mandailing Nat**	**3.27**	**359**	P	Pn	21 44 59.5	+0.5
MNAI	**Manna**	**3.79**	**119**	P	Pn	21 45 02.0	-4.1
GSI	**Gunungsitoli**	**4.30**	**331**	P	Pn	21 45 11.0	-2.1
MDSI	**Maura Dua**	**4.94**	**114**	P	Pn	21 45 22.2	+0.3
LWLI	**Liwa**	**5.07**	**120**	P	Pn	21 45 23.2	-0.5
KASI	**Kota Agung**	**5.70**	**122**	P	Pn	21 45 31.0	-1.4
	31nm,1.9s,0.1nm						
MYKOM	**Kota Tinggi**	**5.99**	**45**	P	Pn	21 45 37.2	+0.8
	15nm,1.2s,0.1nm						
CGJI	**Cibinong**	**7.29**	**124**	P	Pn	21 45 47.3	-6.9
WRA	**Warramunga Arr**	**38.06**	**120**	P	P	21 51 25.5	-0.1
	1.2nm,0.4s,mb4.0,baz=302,slow=9.2,SNR=19						
ASAR	**Alice Springs**	**39.26**	**125**	P	P	21 51 35.2	-0.4
	0.9nm,0.7s,mb3.6,baz=297,slow=8.2,SNR=7.8						
KSRS	**Korea Array**	**47.63**	**31**	P	P	21 52 43.5	+0.5
	0.8nm,0.6s,mb3.9,baz=225,slow=7.2,SNR=4.0						
STKA	**Stephens Creek**	**49.09**	**131**	P	P	21 52 54.9	+0.5
	0.8nm,0.7s,mb3.9,baz=323,slow=5.1,SNR=3.2						
SONM	**Songino Array**	**50.47**	**6**	P	P	21 53 05.8	+1.3
	0.9nm,0.4s,mb4.2,baz=191,slow=9.6,SNR=8.6						
MKAR	**Makanchi Array**	**51.41**	**345**	P	P	21 53 12.8	+1.2
	1.0nm,0.7s,mb3.9,baz=149,slow=8.7,SNR=13						
KURK	**Kurchatov**	**55.98**	**344**	P	P	21 53 44.1	-0.9
	0.4nm,0.8s,mb3.5,baz=165,slow=6.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**57.59**	**350**	P	P	21 53 56.3	0.0
	1.4nm,0.7s,mb4.1,baz=176,slow=5.9,SNR=8.8						
BVAR	**Borovoye Array**	**60.53**	**340**	P	P	21 54 16.7	0.0
	0.3nm,0.5s,mb3.7,baz=155,slow=7.9,SNR=3.8						
TXAR	**Lajitas Array**	**145.32**	**37**	PKPbc	PKPbc	22 03 46.3	+1.5
	1.9nm,0.6s,baz=296,slow=1.5,SNR=12						

CASC 14 21:47:17.7±2.8, 12.61N×88.85W, h30km±97km, MD4.1, ML3.3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.98**	**35**	*e*P	Pn	21 47 34.2	-1.2
SNVI	**San Vicente**	**0.99**	**0**	*e*P	Pn	21 47 34.7	-0.8
SNVI				*e*S	Sn	21 47 50.1	+1.5
BLLM	**Bellamira**	**1.02**	**36**	*e*P	Pn	21 47 35.9	0.0
BLLM				*e*S	Sn	21 47 52.3	+3.2
LFRS	**El Faro**	**1.03**	**348**	*e*P	Pn	21 47 35.8	-0.2
LFRS				*e*S	Sn	21 47 49.3	-0.1
CNCH	**Conchagua**	**1.19**	**56**	*e*P	Pn	21 47 38.4	+0.1
BOQS	**Boqueron**	**1.19**	**339**	*e*P	Pn	21 47 39.1	+0.8
CAHU	**Cacacuatique**	**1.31**	**28**	*e*P	Pn	21 47 41.2	+1.3
CAHU				*e*P		21 47 42.4	
SBLS	**San Blas**	**1.43**	**328**	*e*P	Pn	21 47 42.5	+0.8
SBLS				*e*P		21 47 42.6	
RBDL	**Robledal**	**1.70**	**331**	*e*P	Pn	21 47 46.3	+1.0
TGUH	**Tegucigalpa,Un**	**2.10**	**47**	*e*S	Sn	21 48 15.1	-0.8
TGUH				AML	AML	21 48 21.5	
	comp=N,276nm,0.5s						

*IDC **14** 21:47:38.3±0.7, 56.70S×142.68W, h0km, mb4.3/6, mb1 4.3/6, mb1mx4.2/12, mbtmp4.3/6, MS5.1/14, Ms1 5.0/14, ms1mx4.9/20, Error ellipse: s-maj=32.4km s-min=22.1km az=7.0*

*ISCJB **14** 21:47:38.8±0.4, 56.91S±0.07×142.3W±0.1, h10km, mb4.6/13, MS5.2/197, Error ellipse: s-maj=11.6km s-min=9.3km az=40.6*

*GCMT **14** 21:47:40.3±0.1, 56.70S×142.29W, h19km, MW5.7/102, Moment Tensor Solution. s95,c182; s102,c286; Duration: 128 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.24±.04; $M_{\theta\theta}$=3.77±.05; $M_{\phi\phi}$=-3.53±.04; $M_{r\theta}$=0.27±.09; $M_{\theta\phi}$=2.97±.04; $M_{r\phi}$=-0.21±.08; Best double couple: M_0=4.71900×10^{17} NP1:ϕ_s=25.00000°, δ=86.00000°, λ=-179.00000°. NP2:ϕ_s=295.00000°, δ=89.00000°, λ=-4.00000°. Principal axes: T 4.8320, Plg2.0000°, Azm340.0000°; N -0.2240, Plg86.0000°, Azm98.0000°; P -4.6050, Plg4.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **14** 21:47:40.3±0.4, 56.77S×142.31W, h10km, mb4.8/10, MS5.2/183 Error ellipse: s-maj=18.2km s-min=13.8km az=182.0*

*BJI **14** 21:47:41.2, 56.80S×142.30W, h10km, mB6.0/7, Ms5.7/8, Ms7 5.2/7*

*MOS **14** 21:47:42.9±1.2, 56.87S×143.19W, h10km, mb5.1/6, MS5.0/19, Error ellipse: s-maj=27.5km s-min=19.1km az=88.8*

ISC 14 21:47:39.6±2.5, 56.87S±0.09×142.4W±0.1, h4km±14km, n267, σ1844/43, mb4.6/13, MS5.2/197, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**27.11**	**201**	*e*P	P	21 53 25.4	+2.5
SBA				pmax	pmax		
	comp=Z,31nm,1.6s,mb4.6						
SBA				MLR	MLR		
	comp=Z,6μm,21.0s,MS5.1						
SBA	**Scott Base**	**27.11**	**201**	*e*P	P	21 53 25.4	+2.5
	comp=Z,31nm,1.6s,mb4.6						
SBA				LR	LR		
	comp=Z,6μm,21.0s,MS5.1						
SNZO	**South Karori**	**31.51**	**281**	PFAKE		21 54 10.0	+7.7
SNZO				LR	LR		
	comp=Z,6μm,20.0s,MS5.3						
RPZ	**Rata Peaks**	**31.87**	**274**	LR	LR	22 03 37.7	
	comp=Z,7μm,19.5s,MS5.3,baz=127,slow=30						
URZ	**Urewera**	**32.44**	**288**	LR	LR	22 04 03.8	
	comp=Z,6μm,20.7s,MS5.2,baz=142,slow=31						
QSPA	**South Pole Qui**	**33.29**	**180**	P	P	21 54 19.1	+1.6
	comp=Z,7.7nm,0.9s,mb4.6,baz=67,slow=3.6,SNR=12						
QSPA				LR	LR	22 05 10.3	
	comp=Z,5μm,21.8s,MS5.2,baz=68,slow=31						
DRV	**Dumont d'Urvil**	**35.57**	**222**	S	S	22 00 28.0	+15
DRV				L		22 02 00.0	
DRV				R		22 04 00.0	
PMSA	**Palmer Station**	**36.61**	**135**	LR	LR	22 06 05.0	
	comp=Z,2μm,21.0s,MS4.9,baz=248,slow=30						
PMSA	**Palmer Station**	**36.61**	**135**	PFAKE		21 55 00.0	+14
PMSA				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
RAO	**Raoul Island**	**37.18**	**303**	LR	LR	22 05 57.1	
	comp=Z,2μm,19.3s,MS4.8,baz=158,slow=30						
RAO	**Raoul Island**	**37.18**	**303**	P	P	21 54 52.6	+1.1
RAO				pmax	pmax		
	comp=Z,105nm,0.4s						
RAO	**Raoul Island**	**37.18**	**303**	P	P	21 54 52.5	+1.1
	comp=Z,105nm,0.4s						
RPN	**Rapa Nui**	**37.88**	**52**	LR	LR	22 06 52.5	
	comp=Z,1μm,18.4s,MS4.8,baz=28,slow=30						
PPT	**Papeete**	**39.60**	**349**	*e*S	S	22 01 16.7	+1.4
	comp=Z,2μm,26.0s						
PPT				*e*LR	LR	22 05 35.8	
	comp=Z,14μm,27.8s,baz=180						
PPT	**Papeete**	**39.60**	**349**	LR	LR	22 07 21.0	
	comp=Z,3μm,18.6s,MS5.2,baz=161,slow=30						
TAU	**Tasmania Unive**	**45.34**	**257**	P	P	21 55 58.9	+0.5
TAU				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.2						
CASY	**Casey**	**45.66**	**213**	P	P	21 56 03.5	+2.9
	comp=Z,18nm,1.3s,mb4.8						
CASY				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
EFI	**East Falkland**	**46.54**	**121**	*e*P	P	21 56 13.2	+5.5
EFI				*e*S	S	22 02 57.7	+1.2
EFI				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.0						
PLCA	**Paso Flores**	**47.67**	**102**	PFAKE		21 56 30.0	+13
PLCA				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
TAOE	**Nuku Hiva Isla**	**47.92**	**3**	*e*S	S	22 03 17.4	+0.6
	comp=Z,3μm,27.2s						
TAOE				*e*LQ		22 07 21.4	
	comp=Z,6μm,28.3s						
TAOE				*e*LR	LR	22 09 36.1	
	comp=Z,8μm,27.8s,baz=198						
AFI	**Afiamalu**	**48.38**	**320**	*e*P	P	21 56 24.8	+2.4
AFI				*e*S	S	22 03 20.5	-2.8
AFI				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.1						
VNA2	**Neumayer--Watz**	**48.58**	**162**	*e*	P	21 56 21.4	-1.9
	baz=215,slow=6.2						
VNA1	**Neumayer--Stat**	**48.66**	**161**	*e*	P	21 56 22.9	-1.1
CAN	**Canberra**	**49.86**	**265**	*e*P	P	21 56 38.6	+5.0
CAN				*e*		21 57 53.5	
CAN				*e*S	S	22 03 42.5	-1.3
CAN				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.2						
MIR	**Mirnyy**	**50.13**	**205**	*e*P	P	21 56 42.0	+6.8
MIR				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
MIR				MLR	MLR		
	comp=N,2μm,14.0s,MS5.5						
MIR				MLR	MLR		
	comp=E,2μm,14.0s,MS5.5						
MIR				MLR	MLR		
	comp=Z,4μm,14.0s,MS5.6						
DZM	**Mont Dzumac**	**50.84**	**291**	*e*S	S	22 03 58.7	+1.1
	comp=Z,334nm,28.6s						
DZM				*e*LQ		22 09 13.0	
	comp=Z,9μm,27.6s						
DZM				*e*LR	LR	22 11 17.0	
	comp=Z,4μm,25.0s						
MAIT	**Maitri**	**51.33**	**169**	*e*P	P	21 56 39.2	-5.0
TRQA	**Tornquist**	**54.17**	**106**	*e*P	P	21 57 05.9	+0.2
	comp=Z,5.4nm,1.0s,mb4.4						
TRQA				LR	LR		
	comp=Z,924nm,20.0s,MS4.8						
MAW	**Mawson**	**54.44**	**192**	P	P	21 57 07.6	+0.4
	comp=Z,1.5nm,0.8s,mb4.0,baz=187,slow=16,SNR=2.3						
MAW				LR	LR	22 18 56.6	
	comp=Z,1μm,19.0s,MS5.0,baz=157,slow=34						
MAW	**Mawson**	**54.44**	**192**	*e*P	P	21 57 07.4	+0.2
MAW				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MAW				MLR	MLR		
	comp=Z,4μm,22.0s						
MAW	**Mawson**	**54.44**	**192**	*e*P	P	21 57 07.4	+0.2
	comp=Z,1.7nm,1.1s,mb3.9						
MAW				LR	LR		
	comp=Z,4μm,22.0s,MS5.4						
EIDS	**Eidsvold**	**56.37**	**275**	P	P	21 57 21.8	+0.2
STKA	**Stephens Creek**	**56.50**	**262**	P	P	21 57 21.9	-0.6
	comp=Z,3.1nm,0.8s,mb4.4,baz=166,slow=12,SNR=5.6						
STKA				LR	LR	22 16 47.5	
	comp=Z,3μm,21.7s,MS5.3,baz=131,slow=31						
STKA	**Stephens Creek**	**56.50**	**262**	*e*P	P	21 57 21.6	-0.9
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STKA	**Stephens Creek**	**56.50**	**262**	*e*P	P	21 57 21.6	-0.9
	comp=Z,1.5nm,1.0s,mb4.0						
FUNA	**Funafuti**	**56.73**	**313**	PFAKE		21 57 40.0	+16
FUNA				LR	LR		
	comp=Z,5μm,19.0s,MS5.6						
XMAS	**Kiritimati**	**59.98**	**343**	PFAKE		21 58 00.0	+13
XMAS				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
LVC	**Limon Verde**	**62.36**	**89**	*e*P	P	21 58 02.9	-0.2
	comp=Z,15nm,1.1s,mb5.0						
LVC				LR	LR		
	comp=Z,626nm,22.0s,MS4.7						
CTAO	**Charters Tower**	**63.24**	**274**	PFAKE		21 58 20.0	+11
CTAO				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
CPUP	**Villa Florida**	**65.72**	**101**	P	P	21 58 23.1	-2.0
	comp=Z,0.3nm,0.3s,mb3.8,baz=219,slow=6.3,SNR=4.5						
CPUP	**Villa Florida**	**65.72**	**101**	*e*P	P	21 58 22.9	-2.3
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CPUP	**Villa Florida**	**65.72**	**101**	*e*P	P	21 58 22.9	-2.3
	comp=Z,4.8nm,0.5s,mb4.8						
NNA	**Nana**	**66.73**	**76**	PFAKE		21 58 40.0	+8.2
NNA				LR	LR		
	comp=Z,965nm,19.0s,MS5.0						
ASAR	**Alice Springs**	**67.13**	**262**	P	P	21 58 31.5	-2.7
	comp=Z,4.0nm,0.8s,mb4.5,baz=140,slow=6.3,SNR=29						
LPAZ	**La Paz**	**67.90**	**86**	P	P	21 58 40.8	+1.6
	comp=Z,3.0nm,1.0s,mb4.3,baz=244,slow=5.9,SNR=6.4						
LPAZ	**La Paz**	**67.90**	**86**	*e*P	P	21 58 39.5	+0.3
LPAZ				pmax	pmax		
	comp=Z,20nm,1.4s						
LPAZ				MLR	MLR		
	comp=Z,458nm,21.0s						
LPAZ	**La Paz**	**67.90**	**86**	*e*P	P	21 58 39.5	+0.3
	comp=Z,20nm,1.4s,mb5.0						
LPAZ				LR	LR		
	comp=Z,458nm,21.0s,MS4.7						
TARA	**Tarawa**	**68.25**	**311**	PFAKE		21 58 50.0	+8.7
TARA				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**68.36**	**243**	PFAKE		21 58 50.0	+8.1
NWAO				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
PAYG	**Puerto Ayora**	**69.68**	**57**	PFAKE		21 59 00.0	+10
PAYG				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
WRA	**Warramunga Arr**	**69.90**	**264**	LR	LR	22 25 23.2	
	comp=Z,1μm,19.7s,MS5.2,baz=120,slow=32						
WRAB	**Tennant Creek**	**69.90**	**264**	*e*P	P	21 58 49.2	-2.4
WRAB				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
WRAB				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.2						
WRAB	**Tennant Creek**	**69.90**	**264**	*e*P	P	21 58 49.2	-2.4
	comp=Z,20nm,1.3s,mb4.9						
WRAB				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
SPB	**Sao Paulo**	**73.19**	**107**	PFAKE		21 59 20.0	+8.6
SPB				LR	LR		
	comp=Z,837nm,19.0s,MS5.0						
FITZ	**Fitzroy Crossi**	**76.12**	**258**	P	P	21 59 27.1	-1.4
	comp=Z,1.0nm,0.8s,mb3.8,baz=131,slow=9.3,SNR=2.6						
FITZ				LR	LR	22 28 46.8	
	comp=Z,2μm,21.5s,MS5.4,baz=147,slow=32						
FITZ	**Fitzroy Crossi**	**76.12**	**258**	*e*P	P	21 59 26.9	-1.6
	comp=Z,6.8nm,1.3s,mb4.4						
OTAV	**Otavalo**	**76.23**	**68**	PFAKE		21 59 40.0	+11
OTAV				LR	LR		
	comp=Z,258nm,20.0s,MS4.5						
MBWA	**Marble Bar**	**76.73**	**252**	P	P	21 59 31.9	0.0
MBWA				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
JOHN	**Johnston Islan**	**76.76**	**333**	PFAKE		21 59 40.0	+8.2
JOHN				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
POHA	**Pohakuloa**	**77.12**	**347**	PFAKE		21 59 50.0	+16
POHA				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
JTS	**JuntasAbangare**	**81.80**	**57**	PFAKE		22 00 10.0	+11
JTS				LR	LR		
	comp=Z,821nm,21.0s,MS5.1						
ROSC	**El Rosal**	**82.28**	**69**	LR	LR	22 31 17.2	
	comp=Z,316nm,19.1s,MS4.7,baz=198,slow=32						
BCIP	**Isla Barro Col**	**83.23**	**62**	PFAKE		22 00 20.0	+13
BCIP				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
TGUH	**Tegucigalpa,Un**	**84.07**	**53**	PFAKE		22 00 20.0	+8.7
TGUH				LR	LR		
	comp=Z,473nm,21.0s,MS4.8						
WAKE	**Wake Island**	**87.00**	**313**	PFAKE		22 00 40.0	+14
WAKE				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
SDV	**Santo Domingo**	**87.60**	**70**	PFAKE		22 00 40.0	+11
SDV				LR	LR		
	comp=Z,231nm,21.0s,MS4.6						
SUR	**Sutherland**	**89.97**	**166**	PFAKE		22 00 50.0	+10
SUR				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
TXAR	**Lajitas Array**	**91.90**	**33**	LR	LR	22 32 49.2	
	comp=Z,380nm,20.6s,MS4.8,baz=5.0,slow=30						
MTDJ	**Mount Denham**	**92.17**	**59**	PFAKE		22 01 00.0	+10
MTDJ				LR	LR		
	comp=Z,682nm,22.0s,MS5.0						
PFO	**Pinyon Flat Ob**	**92.76**	**21**	PFAKE		22 01 00.0	+7.6
PFO				LR	LR		
	comp=Z,483nm,19.0s,MS5.0						
TUC	**Tucson**	**92.77**	**26**	PFAKE		22 01 00.0	+7.5
TUC				LR	LR		
	comp=Z,764nm,20.0s,MS5.2						
MNTX	**Cornudas Mount**	**93.62**	**31**	PFAKE		22 01 10.0	+14
MNTX				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
RCBR	**Riachuelo**	**94.05**	**107**	PFAKE		22 01 10.0	+11
RCBR				LR	LR		
	comp=Z,758nm,19.0s,MS5.2						
JCT	**Junction City**	**94.16**	**36**	PFAKE		22 01 10.0	+11
JCT				LR	LR		
	comp=Z,495nm,22.0s,MS4.9						
BOSA	**Boshof**	**94.22**	**169**	LR	LR	22 38 16.0	
	comp=Z,1μm,21.2s,MS5.3,baz=186,slow=32						
BOSA	**Boshof**	**94.22**	**169**	PFAKE		22 01 10.0	+10
BOSA				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
GTBY	**Guantanamo Bay**	**94.78**	**61**	PFAKE		22 01 10.0	+7.9
GTBY				LR	LR		
	comp=Z,726nm,22.0s,MS5.1						
SAO	**San Andreas Ge**	**94.94**	**17**	PFAKE		22 01 10.0	+7.6
SAO				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
HKT	**Hockley**	**95.00**	**39**	PFAKE		22 01 10.0	+7.1
HKT				LR	LR		
	comp=Z,449nm,19.0s,MS5.0						
GRGR	**Grenville**	**95.04**	**76**	PFAKE		22 01 10.0	+6.6
GRGR				LR	LR		
	comp=Z,651nm,22.0s,MS5.0						
DAC	**Darwin (Calif)**	**95.13**	**20**	PFAKE		22 01 10.0	+6.7
DAC				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
WUAZ	**Wupatki**	**95.70**	**25**	PFAKE		22 01 20.0	+14
WUAZ				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
COCO	**West Island**	**95.71**	**238**	PFAKE		22 01 20.0	+13
COCO				LR	LR		
	comp=Z,955nm,19.0s,MS5.3						
SDDR	**Presa de Saban**	**95.84**	**64**	PFAKE		22 01 20.0	+13
SDDR				LR	LR		
	comp=Z,391nm,20.0s,MS4.9						
MCCM	**Marconi Confer**	**96.08**	**15**	PFAKE		22 01 20.0	+12
MCCM				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
CMB	**Columbia Colle**	**96.35**	**17**	PFAKE		22 01 20.0	+11
CMB				LR	LR		
	comp=Z,847nm,19.0s,MS5.2						
ANMO	**Albuquerque**	**96.38**	**29**	PFAKE		22 01 20.0	+11
ANMO				LR	LR		
	comp=Z,883nm,22.0s,MS5.2						
HOPS	**Hopland**	**96.88**	**15**	PFAKE		22 01 20.0	+8.8
HOPS				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
TPH	**Tonopah**	**96.94**	**20**	PFAKE		22 01 20.0	+8.5
TPH				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
DAV	**Davao City (W)**	**96.99**	**272**	PFAKE		22 01 20.0	+7.7
DAV				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
BBGH	**Gun Hill**	**97.00**	**77**	PFAKE		22 01 20.0	+7.7
BBGH				LR	LR		
	comp=Z,2μm,22.0s,MS5.5						
NATX	**Nacogdoches**	**97.06**	**39**	PFAKE		22 01 20.0	+7.8
NATX				LR	LR		
	comp=Z,404nm,19.0s,MS4.9						
FDF	**Fort de France**	**97.48**	**75**	PFAKE		22 01 30.0	+16
FDF				LR	LR		
	comp=Z,682nm,22.0s,MS5.1						
AMTX	**Amarillo**	**97.67**	**33**	PFAKE		22 01 30.0	+15
AMTX				LR	LR		
	comp=Z,914nm,22.0s,MS5.2						
SJG	**San Juan**	**97.69**	**69**	PFAKE		22 01 30.0	+15
SJG				LR	LR		
	comp=Z,803nm,20.0s,MS5.2						
LBTB	**Lobatse**	**97.81**	**169**	PFAKE		22 01 30.0	+14
LBTB				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
MVCO	**Mesa Verde**	**98.00**	**27**	PFAKE		22 01 30.0	+14
MVCO				LR	LR		
	comp=Z,701nm,22.0s,MS5.1						
GRTK	**Grand Turk**	**98.06**	**63**	PFAKE		22 01 30.0	+13
GRTK				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
MVU	**Marysvale**	**98.37**	**23**	PFAKE		22 01 30.0	+12
MVU				LR	LR		
	comp=Z,896nm,19.0s,MS5.3						
WMOK	**Wichita Mounta**	**98.42**	**35**	PFAKE		22 01 30.0	+12
WMOK				LR	LR		
	comp=Z,476nm,20.0s,MS5.0						
WDC	**Whiskeytown Da**	**98.51**	**15**	PFAKE		22 01 30.0	+12
WDC				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
VBMS	**Vicksburg**	**98.97**	**42**	PFAKE		22 01 30.0	+9.3
VBMS				LR	LR		
	comp=Z,168nm,21.0s,MS4.5						
BRAL	**Brewton**	**99.21**	**46**	PFAKE		22 01 30.0	+8.1
BRAL				LR	LR		
	comp=Z,314nm,20.0s,MS4.8						
BMN	**Battle Mountai**	**99.23**	**19**	PFAKE		22 01 30.0	+8.3
BMN				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
SDCO	**Great Sand Dun**	**99.27**	**29**	P	P	22 01 21.5	-0.4
SDCO				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
ANWB	**Willy Bob**	**99.58**	**73**	PFAKE		22 01 30.0	+6.2
ANWB				LR	LR		
	comp=Z,273nm,20.0s,MS4.8						
YBH	**Yreka Blue Hor**	**99.62**	**15**	PFAKE		22 01 30.0	+6.6
YBH				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
DUG	**Dugway**	**99.86**	**23**	PFAKE		22 01 40.0	+15
DUG				LR	LR		
	comp=Z,855nm,19.0s,MS5.3						
ELK	**Elko**	**99.90**	**21**	PFAKE		22 01 40.0	+14
ELK				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
MIAR	**Mount Ida**	**99.97**	**39**	PFAKE		22 01 40.0	+14
MIAR				LR	LR		
	comp=Z,409nm,19.0s,MS5.0						
MOD	**Modoc**	**100.14**	**17**	PFAKE		22 01 40.0	+13
MOD				LR	LR		
	comp=Z,763nm,19.0s,MS5.2						
HUMO	**Hull Mountain**	**100.44**	**14**	PFAKE		22 01 40.0	+12
HUMO				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
KSM	**Kuching**	**100.65**	**256**	PFAKE		22 01 40.0	+11
KSM				LR	LR		
	comp=Z,567nm,19.0s,MS5.1						
WVOR	**Wild Horse Val**	**100.93**	**18**	PFAKE		22 01 40.0	+10
WVOR				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
LRAL	**Lakeview Retre**	**101.03**	**45**	PFAKE		22 01 40.0	+9.5
LRAL				LR	LR		
	comp=Z,250nm,19.0s,MS4.8						
ISCO	**Idaho Springs**	**101.18**	**28**	PFAKE		22 01 40.0	+8.8
ISCO				LR	LR		
	comp=Z,932nm,19.0s,MS5.3						
KKM	**Kota Kinabalu**	**101.27**	**264**	PFAKE		22 01 40.0	+8.4
KKM		

KSU1 LR LR
comp=Z,438nm,20.0s,MS5.0
OGNE Ogallala 103.21 30 PFAKE 22 01 50.0 +10
OGNE LR LR
comp=Z,818nm,22.0s,MS5.2
WVT Waverly 103.45 43 PFAKE 22 01 50.0 +8.7
WVT LR LR
comp=Z,303nm,20.0s,MS4.8
NHSC New Hope 103.84 50 PFAKE 22 01 50.0 +7.0
NHSC LR LR
comp=Z,257nm,22.0s,MS4.7
CCM Cathedral Cave 103.94 39 PFAKE 22 01 50.0 +6.6
CCM LR LR
comp=Z,253nm,19.0s,MS4.8
ABPO Ambohimpanom 103.98 189 PFAKE 22 01 50.0 +6.4
ABPO LR LR
comp=Z,2μm,20.0s,MS5.7
LKWY Lake 104.56 23 PFAKE 22 02 00.0 +14
LKWY LR LR
comp=Z,957nm,19.0s,MS5.3
HAWA Hanford 104.65 16 PFAKE 22 02 00.0 +13
HAWA LR LR
comp=Z,1μm,21.0s,MS5.3
NLWA Neilton Lookou 105.03 13 PFAKE 22 02 00.0 +12
NLWA LR LR
comp=Z,1μm,20.0s,MS5.5
BOZ Bozeman (W) 105.34 22 PFAKE 22 06 10.0 +7.6
BOZ LR LR
comp=Z,484nm,19.0s,MS5.1
RLMT Red Lodge 105.34 24 PFAKE 22 06 10.0 +7.6
RLMT LR LR
comp=Z,484nm,20.0s,MS5.0
WCI Wyandotte Cave 105.88 43 PFAKE 22 06 10.0 +6.3
WCI LR LR
comp=Z,256nm,20.0s,MS4.8
MSO Missoula 106.02 20 PFAKE 22 06 10.0 +6.4
MSO LR LR
comp=Z,828nm,20.0s,MS5.3
CNNC Cliffs of the 106.64 50 PFAKE 22 06 20.0 +15
CNNC LR LR
comp=Z,466nm,19.0s,MS5.1
SCIA State Center 106.74 36 PFAKE 22 06 20.0 +15
SCIA LR LR
comp=Z,481nm,20.0s,MS5.0
NEW Newport 106.85 17 PFAKE 22 06 20.0 +15
NEW LR LR
comp=Z,708nm,20.0s,MS5.2
HDIL Hopedale 106.85 40 PFAKE 22 06 20.0 +15
HDIL LR LR
comp=Z,483nm,22.0s,MS5.0
BLA Blacksburg 107.28 48 PFAKE 22 06 20.0 +14
BLA LR LR
comp=Z,317nm,19.0s,MS4.9
ECSD EROS Data Cent 107.33 33 PFAKE 22 06 20.0 +14
ECSD LR LR
comp=Z,1μm,22.0s,MS5.5
LAO LASA Array 107.51 25 PFAKE 22 06 20.0 +14
LAO LR LR
comp=Z,948nm,20.0s,MS5.3
LSZ Lusaka 107.70 170 PFAKE 22 06 20.0 +12
LSZ LR LR
comp=Z,2μm,19.0s,MS5.7
EGMT Eagleton 107.99 22 PFAKE 22 06 20.0 +13
EGMT LR LR
comp=Z,435nm,20.0s,MS5.0
JFWS Jewell Farm 108.62 38 PFAKE 22 06 20.0 +11
JFWS LR LR
comp=Z,410nm,20.0s,MS5.0
ACSO Alum Creek Sta 108.88 44 PFAKE 22 06 20.0 +11
ACSO LR LR
comp=Z,374nm,20.0s,MS5.0
KULM Kulim 108.94 250 PFAKE 22 06 20.0 +10
KULM LR LR
comp=Z,510nm,19.0s,MS5.1
CBN Corbin 109.38 49 PFAKE 22 06 20.0 +10
CBN LR LR
comp=Z,533nm,19.0s,MS5.1
MCWV Mont Chateau 109.61 47 PFAKE 22 06 20.0 +9.4
MCWV LR LR
comp=Z,333nm,20.0s,MS4.9
DGMT Dagmar 109.66 26 PFAKE 22 06 20.0 +10
DGMT LR LR
comp=Z,836nm,19.0s,MS5.3
DGAR Diego Garcia 109.88 217 PFAKE 22 06 20.0 +8.0
DGAR LR LR
comp=Z,596nm,20.0s,MS5.2
AAM Ann Arbor 110.41 43 PFAKE 22 06 20.0 +8.0
AAM LR LR
comp=Z,379nm,20.0s,MS5.0
SSPA Standing Stone 111.23 47 PFAKE 22 06 20.0 +6.4
SSPA LR LR
comp=Z,329nm,20.0s,MS4.9
ERPA Erie 111.65 45 PFAKE 22 06 30.0 +16
ERPA LR LR
comp=Z,439nm,20.0s,MS5.0
AGMN Agassiz Refuge 111.70 31 PFAKE 22 06 30.0 +16
AGMN LR LR
comp=Z,721nm,19.0s,MS5.3
COWI Conover 111.81 37 PFAKE 22 06 30.0 +15
COWI LR LR
comp=Z,476nm,19.0s,MS5.1
GLMI Grayling 112.25 41 PFAKE 22 06 30.0 +15
GLMI LR LR
comp=Z,660nm,21.0s,MS5.2
EYMN Ely 112.69 34 PFAKE 22 06 30.0 +14
EYMN LR LR
comp=Z,870nm,19.0s,MS5.4
BINY Binghamton 113.32 48 PFAKE 22 06 30.0 +12
BINY LR LR
comp=Z,728nm,19.0s,MS5.3
ULM Lac du Bonnet 113.46 31 PFAKE 22 06 30.0 +12
ULM LR LR
comp=Z,1μm,22.0s,MS5.4
YHNB Yeheng 113.66 279 PFAKE 22 06 30.0 +11
YHNB LR LR
comp=Z,928nm,21.0s,MS5.4
TATO Taipei 113.84 279 PFAKE 22 06 30.0 +11
TATO LR LR
comp=Z,1μm,20.0s,MS5.5
MAJO Matsushiro 114.47 300 PFAKE 22 06 30.0 +10
MAJO LR LR
comp=Z,555nm,20.0s,MS5.2
QIZ Qiongzhong 115.44 266 PFAKE 22 06 30.0 +7.7
QIZ LR LR
comp=Z,286nm,19.0s,MS4.9
NCB Newcomb 115.51 48 PFAKE 22 06 30.0 +8.3
NCB LR LR
comp=Z,373nm,21.0s,MS5.0
LONY Lake Ozonia 115.89 47 PFAKE 22 06 30.0 +7.6
LONY LR LR
comp=Z,425nm,20.0s,MS5.0
FFC Flin Flon 115.98 25 PFAKE 22 06 30.0 +7.8
FFC LR LR
comp=Z,833nm,19.0s,MS5.4
ERM Erimo 116.60 307 PFAKE 22 06 40.0 +16
ERM LR LR
comp=Z,1μm,19.0s,MS5.5
LBNH Lisbon 116.67 49 PFAKE 22 06 40.0 +16
LBNH LR LR
comp=Z,450nm,19.0s,MS5.1
MSEY Mahe Island 116.96 200 PFAKE 22 06 40.0 +14
MSEY LR LR
comp=Z,753nm,19.0s,MS5.3
PET Petropavlovsk 119.67 323 PFAKE 22 06 40.0 +11
PET LR LR
comp=Z,1μm,20.0s,MS5.6
DBIC Dimbokro 119.92 129 PFAKE 22 06 40.0 +8.8
DBIC LR LR
comp=Z,375nm,19.0s,MS5.0
YSS Yuzh-Sakhalins 120.71 310 PKIKP PKPdf 22 06 30.6 -1.0
YSS MLR MLR
comp=Z,200nm,21.0s,MS4.7
NJ2 Nanjing 120.83 282 *e*PKP PKPdf 22 06 29.3 -3.0
INCN Inchon 120.93 292 PFAKE 22 06 40.0 +7.7
INCN LR LR
comp=Z,394nm,21.0s,MS5.0
EGAK Eagle 121.32 1 PFAKE 22 06 40.0 +7.8
EGAK LR LR
comp=Z,1μm,19.0s,MS5.5
COLA College 121.49 357 PFAKE 22 06 40.0 +7.5
COLA LR LR
comp=Z,1μm,20.0s,MS5.6
KMBO Kilima Mbogo 122.19 180 PFAKE 22 06 50.0 +14
KMBO LR LR
comp=Z,2μm,22.0s,MS5.6
GYA Guiyang 123.13 268 Pdif Pdif 22 03 08.9 +0.2
GYA PKP PKPdf 22 06 37.8 +0.9
GYA PP PP 22 08 23.3 +6.4
GYA SKKS SKKSac 22 15 13.6 -2.5
GYA SS SS 22 25 05.3 +3.0
GYA AMB AMB
comp=Z,330nm,7.8s
KMI Kunming 124.22 264 PKP PKPdf 22 06 39.0 -0.1
ENH Enshi 124.55 274 PFAKE 22 06 50.0 +10
ENH LR LR
comp=Z,331nm,21.0s,MS5.0
MDJ Mudanjiang 124.86 300 PKP PKPdf 22 06 40.3 +0.7
MDJ sPKP 22 06 45.8
MDJ PP PP 22 08 28.3 -0.2
MDJ SS SS 22 25 26.8 +2.8
MDJ AMB AMB
comp=Z,140nm,8.3s
MDJ LR LR
comp=N,33nm,20.1s,MS4.4
MDJ LR LR
comp=E,79nm,18.6s,MS4.4
MDJ LR LR
comp=Z,120nm,18.6s,MS4.6
MDJ Mudanjiang 124.86 300 PFAKE 22 06 50.0 +10
MDJ LR LR
comp=Z,516nm,22.0s,MS5.2
INK Inuvik 125.03 4 PKIKP PKPdf 22 06 38.8 -0.4
CD2 Chengdu 128.18 269 PKP PKPdf 22 06 48.8 +2.3
CD2 PP PP 22 08 57.1 +6.5
CD2 PKS 22 10 24.0
CD2 SKS SKSdf 22 13 59.1 +0.5
CD2 SKKS SKKSac 22 15 49.3 +1.2
CD2 SS SS 22 26 11.0 +5.3
CD2 AMB AMB
comp=Z,480nm,6.5s
CD2 LR LR
comp=N,530nm,6.5s
CD2 LR LR
comp=Z,290nm,8.9s
BJT Baijiatuau 128.25 287 PFAKE 22 07 00.0 +14
BJT LR LR
comp=Z,399nm,22.0s,MS5.1
TORD Torodi Ar. Bea 128.47 133 PKP PKPdf 22 06 46.5 -1.0
comp=Z,0.4nm,0.8s,baz=232,slow=1.3,SNR=3.1
TORD Torodi Ar. Bea 128.47 133 PKP PKPdf 22 06 46.5 -1.0
BILL Bilibino 130.19 337 PFAKE 22 07 00.0 +11
BILL LR LR
comp=Z,874nm,22.0s,MS5.4
HHC Hu-ho-hao-te 131.28 284 *e*PKP PKPdf 22 06 54.8 +2.8
HHC PP PP 22 09 17.4 +6.6
HHC PKS 22 10 29.4
HHC SKKS SKKSac 22 16 09.3 +2.4
HHC SS SS 22 26 49.8 +5.9
HHC AMB AMB
comp=Z,96nm,5.3s
HHC LR LR
comp=N,290nm,18.6s,MS5.2
HHC LR LR
comp=E,380nm,20.1s,MS5.2
HHC LR LR
comp=Z,560nm,20.0s,MS5.3
LZH Lanzhou 132.03 274 *e*PKP PKPdf 22 06 51.4 -2.2
HIA Hailar 132.91 298 PFAKE 22 07 10.0 +15
HIA LR LR
comp=Z,433nm,20.0s,MS5.2
LSA Lhasa 134.11 257 PFAKE 22 07 10.0 +12
LSA LR LR
comp=Z,301nm,21.0s,MS5.0
YAK Yakutsk 136.70 317 PFAKE 22 07 10.0 +8.5
YAK LR LR
comp=Z,421nm,20.0s,MS5.2
ULN Ulaanbaatar 138.40 288 PKIKP PKPdf 22 07 03.7 -1.4
ULN MLR MLR
comp=Z,277nm,20.0s,MS5.0
TAM Tamanrasset 138.69 132 PFAKE 22 07 20.0 +14
TAM LR LR
comp=Z,398nm,19.0s,MS5.2
SONM Songino Array 138.72 288 PKP PKPdf 22 07 06.0 +0.3
comp=Z,0.2nm,0.7s,baz=124,slow=2.1,SNR=2.5
SFJD Kangerlussuaq 140.81 38 PFAKE 22 07 20.0 +11
SFJD LR LR
comp=Z,516nm,20.0s,MS5.3
TIXI Tiksi 142.08 329 *e*PKHKP 22 07 05.9
TIXI pmax pmax
comp=Z,3.0nm,1.1s
TIXI Tiksi 142.08 329 PFAKE 22 07 20.0 +9.0
TIXI LR LR
comp=Z,538nm,22.0s,MS5.3
RTC Rabat Centre 142.24 108 PFAKE 22 07 20.0 +7.5
RTC LR LR
comp=Z,417nm,22.0s,MS5.2
TLY Talaya 142.46 291 PKIKP PKPdf 22 07 11.8 -0.5
TLY MLR MLR
comp=Z,276nm,20.0s,MS5.0
MOY Mondy 143.82 289 *e*PKIKP PKPdf 22 07 20.6 +5.9
SFS San Fernando 144.48 106 PFAKE 22 07 30.0 +14
SFS LR LR
comp=Z,801nm,20.0s,MS5.5
WMQ Urumqi 146.28 269 *e*PKPbc PKPbc 22 07 23.3 +2.9
WMQ LR LR
comp=N,150nm,22.0s,MS5.1
WMQ LR LR
comp=E,290nm,23.0s,MS5.1
WMQ LR LR
comp=Z,300nm,24.0s,MS5.0
NIL Nilore 146.44 242 PFAKE 22 07 30.0 +10
NIL LR LR
comp=Z,109nm,22.0s,MS4.6
MTE Manteigas 146.63 100 PFAKE 22 07 30.0 +10
MTE LR LR
comp=Z,373nm,20.0s,MS5.2
SUMG Summit 146.79 32 *e*PKHKP 22 07 19.4
PAB San Pablo 147.74 104 PFAKE 22 07 30.0 +8.2
PAB LR LR
comp=Z,324nm,20.0s,MS5.1
ESDC Sonseca Array 148.04 105 PKPbc PKPbc 22 07 23.6 -1.8
comp=Z,1.0nm,0.6s,baz=249,slow=2.5,SNR=7.7
ESLA Sonseca Array 148.04 105 *e*PKPdf PKPdf 22 07 23.9 +1.6
ESLA LR LR
comp=Z,2μm,21.0s,MS5.9
KBL Kabul 149.16 237 *e*PKP2 PKPab 22 07 29.9 -3.0
MK31 Makanchi Array 151.12 269 *e*PKIKP PKPbc 22 07 31.4 -1.4
MKAR Makanchi Array 151.12 269 PKPbc PKPbc 22 07 31.7 -1.1
comp=Z,4.0nm,0.7s,baz=110,slow=1.8,SNR=14
BORG Borgarnes 151.21 50 PFAKE 22 07 40.0 +13
BORG LR LR
comp=Z,657nm,20.0s,MS5.4
KEST Kesra 151.56 126 PKPbc PKPbc 22 07 34.8 +0.6
comp=Z,1.1nm,1.0s,baz=288,slow=3.2,SNR=3.2
TKM2 Tokmak 2 152.26 256 *e*PKIKP PKPbc 22 07 36.0 +0.4
TKM2 MLR MLR
comp=Z,270nm,20.0s,MS5.0
UCH Uchtor 152.35 254 *e*PKIKP PKPbc 22 07 36.6 +0.8
UCH MLR MLR
comp=Z,278nm,20.0s,MS5.1
AAK Ala-Archa 152.65 254 PKPbc PKPbc 22 07 37.3 +0.9
comp=Z,0.5nm,0.4s,baz=121,slow=18,SNR=2.5
AAK Ala-Archa 152.65 254 *e*PKPbc PKPbc 22 07 35.3 -1.1
AAK LR LR
comp=Z,396nm,21.0s,MS5.2
AML Almayashu 152.72 253 *e*PKIKP PKPdf 22 07 29.5 0.0
AML MLR MLR
comp=Z,296nm,21.0s,MS5.1
EIL Elat 152.75 175 PKPbc PKPbc 22 07 35.5 -1.6
comp=Z,0.7nm,0.4s,baz=141,slow=6.5,SNR=1.7
EKS2 Erkin-Say 153.05 254 *e*PKIKP PKPbc 22 07 37.5 +0.2
EKS2 MLR MLR
comp=Z,270nm,20.0s,MS5.1
ZAA0 Zalesovo Array 153.47 284 *e*PKPbc PKPbc 22 07 38.6 +0.7
ZALV Zalesovo Beam 153.47 284 PKPbc PKPbc 22 07 37.0 -0.9
comp=Z,0.9nm,0.7s,baz=126,slow=6.4,SNR=4.4
ZALV PKPab PKPab 22 07 48.2 -2.0
comp=Z,2.8nm,0.8s,baz=99,slow=3.3,SNR=7.5
ZALV Zalesovo Beam 153.47 284 PKPbc PKPbc 22 07 37.0 -0.9
ZALV PKPab PKPab 22 07 48.2 -2.0
WDD Wield Dalam 153.87 134 PFAKE 22 07 40.0 +8.6
WDD LR LR
comp=Z,773nm,19.0s,MS5.5
VSL Villasalto 154.65 121 PFAKE 22 07 40.0 +7.6
VSL LR LR
comp=Z,450nm,21.0s,MS5.3
KURK Kurchatov 155.31 273 PKPbc PKPdf 22 07 39.5 +6.7
comp=Z,0.3nm,0.5s,baz=137,slow=1.9,SNR=4.4
KURK PKPab PKPab 22 07 58.5 +0.3
comp=Z,2.2nm,1.1s,baz=122,slow=2.7,SNR=4.3
KURK Kurchatov 155.31 273 *e*PKPdf PKPdf 22 07 35.2 +2.4
KURK PKPbc PKPdf 22 07 39.5 +6.7
KURK PKPab PKPab 22 07 58.5 +0.3
KURK LR LR
comp=Z,333nm,21.0s,MS5.1
KBS Kingsbay 156.29 12 PFAKE 22 07 40.0 +6.6
KBS LR LR
comp=Z,602nm,20.0s,MS5.4
SSB Saint Sauveur 156.45 105 PFAKE 22 07 50.0 +15
SSB LR LR
comp=Z,280nm,20.0s,MS5.1
CEL Celeste 156.48 133 PFAKE 22 07 50.0 +15
CEL LR LR
comp=Z,538nm,21.0s,MS5.3
ESK Eskdalemuir 157.40 77 PFAKE 22 07 50.0 +15
ESK LR LR
comp=Z,423nm,20.0s,MS5.3
BNI Bardonecchia 157.42 108 PFAKE 22 07 50.0 +14
BNI LR LR
comp=Z,488nm,21.0s,MS5.3
TIP Timpagrande 157.62 133 PFAKE 22 07 50.0 +14
TIP LR LR
comp=Z,708nm,21.0s,MS5.5
CSS Prodhromos 157.90 171 *e*PKPdf PKPdf 22 07 36.3 -0.5
CSS LR LR
comp=Z,518nm,20.0s,MS5.4
VLC Villacollemand 158.69 115 PFAKE 22 07 50.0 +13
VLC LR LR
comp=Z,387nm,21.0s,MS5.2
AQU L'Aquila 158.78 123 PFAKE 22 07 50.0 +12
AQU LR LR
comp=Z,731nm,22.0s,MS5.5
ECH Echery 159.69 102 PFAKE 22 07 50.0 +12
ECH LR LR
comp=Z,585nm,21.0s,MS5.4
WLF Walferdange 159.98 98 PFAKE 22 07 50.0 +11
WLF LR LR
comp=Z,535nm,21.0s,MS5.4
ISP Isparta 160.39 163 PFAKE 22 07 50.0 +10
ISP LR LR
comp=Z,511nm,21.0s
BFO Black Forest 160.39 103 PFAKE 22 07 50.0 +11
BFO LR LR
comp=Z,478nm,22.0s
TIR Tirane 160.69 136 PFAKE 22 07 50.0 +10
TIR LR LR
comp=Z,599nm,20.0s
BVAR Borovoye Array 160.91 272 PKPab PKPab 22 08 20.5 -1.9
comp=Z,1.2nm,0.8s,baz=80,slow=3.4,SNR=4.0
BRVK Borovoye 160.98 272 PFAKE 22 07 50.0 +10
BRVK LR LR
comp=Z,591nm,19.0s
MALT Malatya 161.43 182 *e*PKIKP PKPdf 22 07 42.1 +1.4
MALT MLR MLR
comp=Z,979nm,20.0s
TRI Trieste 161.47 117 PFAKE 22 07 50.0 +10
TRI LR LR
comp=Z,443nm,21.0s
GNI Garni 162.64 199 PFAKE 22 07 50.0 +8.2
GNI LR LR
comp=Z,616nm,21.0s
BR131 Keskin Array S 162.65 170 PFAKE 22 07 50.0 +8.1
BR131 LR LR
comp=Z,420nm,21.0s
GERES GERESS Array B 163.54 109 PKP PKPdf 22 07 44.9 +2.5
comp=Z,0.1nm,0.3s,baz=186,slow=1.0,SNR=3.0
KONO Kongsberg 165.04 68 PFAKE 22 07 50.0 +6.6
KONO LR LR
comp=Z,494nm,22.0s
NAO01 NORSAR Array S 165.65 63 PFAKE 22 07 50.0 +6.1
NAO01 LR LR
comp=Z,674nm,19.0s
PSZ Piszkesteto 165.99 122 PFAKE 22 08 00.0 +15
PSZ LR LR
comp=Z,390nm,20.0s
KEV Kevo 166.25 16 PFAKE 22 07 50.0 +5.9
KEV LR LR
comp=Z,525nm,19.0s
AKTO Aktyubinsk 166.33 251 PKPab PKPab 22 08 44.0 -2.3
comp=Z,0.8nm,0.5s,baz=129,slow=1.9,SNR=2.5
KIV Kislovodsk 166.68 196 PFAKE 22 08 00.0 +15
KIV LR LR
comp=Z,573nm,22.0s
ARU Arti 168.47 277 PFAKE 22 08 00.0 +14
ARU LR LR
comp=Z,561nm,22.0s
KWP Kalwaria Pacla 168.51 123 PFAKE 22 08 00.0 +14
KWP LR LR
comp=Z,444nm,20.0s
LVZ Lovozero 168.84 6 PFAKE 22 08 00.0 +14
LVZ LR LR
comp=Z,826nm,22.0s
KIEV Kiev 172.06 138 PFAKE 22 08 00.0 +12
KIEV LR LR
comp=Z,602nm,22.0s
OBN Obninsk 178.15 161 PFAKE 22 08 00.0 +10
OBN LR LR
comp=Z,931nm,22.0s

*ATH **14** 21:51:05.5, 37.°86N×26.°79E, h100km*
*CSEM **14** 21:51:08.8±0.3, 38.°03N×26.°16E, h8km, MD3.3, Error ellipse: s-maj=7.0km s-min=5.3km az=90.0*
*ISCJB **14** 21:51:09.2±1.0, 38.°02N±0.°04×26.°17E±0.°07, h10km, Error ellipse: s-maj=8.2km s-min=6.1km az=167.0*
*DDA **14** 21:51:09.5, 38.°00N×26.°25E, h7km±3km, Md3.3*
ISC 14 21:51:09.1±1.1, 38.°01N±0.°04×26.°14E±0.°08, h9km±7km, n12, σ0°89/19, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.50**	**45**	⇑*i P*	**Pg**	**21 51 18.1**	**-0.7**
URLA				*i* S	**Sg**	**21 51 25.3**	**-0.1**
URLA	**Izmir**	**0.50**	**45**	*i P*	**Pg**	**21 51 18.1**	**-0.7**
URLA				*i* S	**Sg**	**21 51 25.3**	**-0.1**
SMG	**Samos**	**0.62**	**118**	*eP*	**Pg**	**21 51 20.0**	**-1.2**
SMG				*e*S	**Sg**	**21 51 30.5**	**+1.2**
SMG	**Samos**	**0.62**	**118**	*eP*	**Pg**	**21 51 20.0**	**-1.2**
SMG				*e*S	**Sg**	**21 51 30.5**	**+1.2**
APE	**Apeiranthos**	**1.06**	**208**	*eP*	**Pg**	**21 51 30.0**	**+0.6**
APE	**Apeiranthos**	**1.06**	**208**	*eP*	**Pg**	**21 51 30.0**	**+0.6**
PRK	**Paraskevi**	**1.24**	**5**	*eP*	**Pn**	**21 51 32.0**	**-0.6**
PRK	**Paraskevi**	**1.24**	**5**	*eP*	**Pn**	**21 51 32.0**	**-0.6**
AYVA	**Ayvalik**	**1.37**	**18**	*eP*	**Pn**	**21 51 33.6**	**-0.7**
AYVA				*e*S	**Sb**	**21 51 54.2**	**+1.8**
AYVA	**Ayvalik**	**1.37**	**18**	*eP*	**Pn**	**21 51 33.6**	**-0.7**
AYDN	**Tasoluk**	**1.42**	**104**	*eP*	**Pn**	**21 51 35.3**	**+0.3**
AYDN				*e*S	**Sn**	**21 51 53.3**	**-0.4**
AYDN	**Tasoluk**	**1.42**	**104**	*eP*	**Pn**	**21 51 35.3**	**+0.3**
AYDN				*e*S	**Sn**	**21 51 53.3**	**-0.5**

MAN 14 21:51:43, 16.°47N×122.°50E, h7km, mb4.4, ML3.2, MS3.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.59**	**353**	*eP*	Pg	21 51 55.6	+1.2
CAUP	**Cauayan**	**0.80**	**306**	*eP*	Pg	21 51 58.2	-0.2
CAUP				*e*S	Sg	21 52 08.3	-0.6
BALP	**Baler**	**1.15**	**231**	*eP*	Pg	21 52 05.3	+0.3
BALP				*e*S	Sg	21 52 18.8	-1.1
PCPH	**Palayan**	**1.62**	**236**	⇑*eP*	Pn	21 52 12.9	+0.9
PCPH				*i* S	Sn	21 52 34.7	+1.5
POLP	**Polilio Island**	**1.81**	**197**	*eP*	Pn	21 52 15.3	+0.7
APYP	**Conner**	**1.83**	**319**	*eP*	Pn	21 52 15.9	+1.0
ABRA	**Dolores**	**2.07**	**305**	*eP*	Pn	21 52 18.1	-0.1
BOLP	**Bolinao**	**2.48**	**268**	*eP*	Pn	21 52 27.0	+3.1
GQP	**Guinayangan**	**2.55**	**181**	⇓*eP*	Pn	21 52 26.7	+1.9
GQP				*e*S	Sn	21 52 57.4	+1.2
LUBP	**Lubang**	**3.48**	**219**	*eP*	Pn	21 52 45.9	+8.2

*ISCJB **14** 21:53:29.9±0.4, 31.°30N±0.°05×103.°83E±0.°06, h10km, mb3.6/11, Error ellipse: s-maj=7.8km s-min=5.8km az=142.9*
*IDC **14** 21:53:30.9±0.9, 31.°35N×103.°78E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.5/27, mbtmp3.6/10, Error ellipse: s-maj=38.3km s-min=17.6km az=53.0*
*NEIC **14** 21:53:32.2±0.4, 31.°36N×103.°75E, h10km, mb3.7/4, Error ellipse: s-maj=8.8km s-min=6.8km az=206.0*
*BJI **14** 21:53:35.5, 31.°56N×103.°72E, h11km, ML3.5/10, Ms3.3/2,*

Ms7 3.3/1
ISC 14 21:53:32.3±0.4, 31°38N±0°04×103°82E±0°05, h10km, n30, σ0°89/34, mb3.6/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**186**	Pg	**Pg**	**21 53 45.6**	**+4.1**
CD2				Sg	**Sg**	**21 53 54.5**	**+6.7**
CD2	comp=N,2μm,0.7s			smax			
LZH	**Lanzhou**	**4.69**	**0**	*e*Pg	**Pb**	**21 54 54.8**	**+0.2**
LZH				Sg	**Sb**	**21 55 51.3**	**+0.2**
LZH	comp=N,30nm,0.6s			smax			
LZH	comp=E,21nm,0.6s			smax			
LZH	comp=E,290nm,6.3s			LR	LR		
ENH	**Enshi**	**5.00**	**101**	*e*Pn	**Pn**	**21 54 48.5**	**+1.2**
ENH	comp=E,22nm,0.5s			*e*Sg	**Sg**	**21 56 12.0**	**-0.7**
XAN	**Xi'an**	**5.05**	**57**	Pg	**Pg**	**21 55 06.1**	**-2.9**
XAN				Sn	**Sn**	**21 55 42.4**	**-4.0**
XAN	comp=N,85nm,0.6s			smax			
XAN	comp=E,60nm,0.7s			smax			
GYA	**Guiyang**	**5.50**	**152**	Pg	**Pg**	**21 55 17.6**	**-0.1**
GYA	comp=N,80nm,0.6s			smax			
GYA	comp=E,60nm,0.8s			smax			
BJT	**Baijiatuan**	**13.21**	**46**	Pn	**Pn**	**21 56 41.9**	**+1.9**
SONM	**Songino Array**	**16.55**	**6**	Pn	**Pn**	**21 57 23.7**	**-0.6**
	baz=186,slow=13,SNR=2.8						
ULN	**Ulaanbaatar**	**16.65**	**8**	Pn	**Pn**	**21 57 25.4**	**-0.2**
TLY	**Talaya**	**20.28**	**360**	P	**P**	**21 58 07.6**	**-0.3**
	comp=E,6.9nm,0.7s						
KSRS	**Korea Array**	**20.76**	**66**	P	**P**	**21 58 15.1**	**+1.8**
	comp=E,0.9nm,0.7s,baz=261,slow=10,SNR=3.1						
MK31	**Makanchi Array**	**22.61**	**319**	*e*P	**P**	**21 58 33.5**	**+0.6**
MKAR	**Makanchi Array**	**22.61**	**319**	P	**P**	**21 58 35.0**	**+2.0**
	comp=E,0.3nm,0.6s,mb2.9,baz=119,slow=9.9,SNR=5.5						
TKM2	**Tokmak 2**	**25.15**	**305**	*e*P	**P**	**21 58 56.7**	**-0.8**
	comp=E,0.6nm,0.5s,mb3.4						
AAK	**Ala-Archa**	**25.84**	**304**	P	**P**	**21 59 03.9**	**+0.1**
	comp=E,0.7nm,0.7s,mb3.3						
EKS2	**Erkin-Say**	**26.36**	**304**	P	**P**	**21 59 08.5**	**0.0**
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**21 59 09.0**	**+0.6**
	comp=E,1.2nm,0.6s,mb3.6,baz=135,slow=10,SNR=7.2						
KURK	**Kurchatov**	**26.88**	**323**	P	**P**	**21 59 13.3**	**+0.2**
	comp=E,0.6nm,0.8s,mb3.2,baz=122,slow=9.1,SNR=5.8						
KURK	**Kurchatov**	**26.88**	**323**	*e*P	**P**	**21 59 12.9**	**-0.1**
KBL	**Kabul**	**29.26**	**286**	P	**P**	**21 59 34.5**	**0.0**
PALK	**Pallekele**	**32.27**	**227**	P	**P**	**22 00 00.4**	**-0.8**
BRVK	**Borovoye**	**32.49**	**322**	*e*P	**P**	**22 00 01.9**	**-0.9**
	comp=E,1.2nm,1.0s,mb3.7						
YSS	**Yuzh-Sakhalins**	**33.57**	**51**	P	**P**	**22 00 12.4**	**+0.1**
GUMO	**Guam**	**41.57**	**106**	P	**P**	**22 01 20.6**	**+0.2**
MALT	**Malatya**	**53.12**	**297**	P	**P**	**22 02 48.9**	**-1.3**
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**22 03 19.4**	**+0.2**
	comp=E,0.5nm,0.5s,mb3.8,baz=79,slow=9.9,SNR=5.0						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**22 03 31.3**	**+0.2**
	comp=E,1.3nm,0.6s,mb4.1,baz=338,slow=7.5,SNR=7.0						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**22 03 52.0**	**+0.3**
	comp=E,0.2nm,0.4s,mb3.6,baz=345,slow=7.2,SNR=5.5						
HFS	**Hagfors**	**63.41**	**326**	P	**P**	**22 04 01.4**	**-0.2**
	comp=E,1.2nm,0.7s,mb4.1,baz=85,slow=3.2,SNR=3.5						
AQU	**L'Aquila**	**69.93**	**308**	P	**P**	**22 04 43.2**	**-0.4**
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**22 05 48.6**	**-0.9**
	comp=E,0.4nm,0.5s,mb3.6,baz=328,slow=5.1,SNR=5.7						

NEIC 14 21:54:47.0, 36°96N×29°22E, h5km, MD3.1(ISK), After ISK.
ISK 14 21:54:47.9, 36°96N×29°22E, h5km, MD3.1
IDC 14 21:54:48.6±1.8, 36°83N×29°30E, h0km, mb3.5/1, mb1 3.5/5, mb1mx3.2/25, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=33.8km s-min=20.3km az=166.0
CSEM 14 21:54:49.1±0.1, 36°94N×29°22E, h2km, MD3.1, Error ellipse: s-maj=3.2km s-min=3.0km az=172.0
ISCJB 14 21:54:49.3±0.5, 36°96N±0°02×29°22E±0°03, h4km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=139.3
DDA 14 21:54:50.0, 37°00N×29°22E, h7km±6km, Md3.1
ISC 14 21:54:49.8±0.4, 36°96N±0°02×29°22E±0°03, h4km±4km, n73, σ0°96/101, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**49**	PG	**Pg**	**21 54 54.6**	**-1.0**
GLHS				*e*SG	**Sg**	**21 55 00.3**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.30**	**49**	*i* Pg	**Pg**	**21 54 54.7**	**-1.0**
GLHS				*e*Sg	**Sg**	**21 55 00.3**	**+0.7**
FETY	**Fethiye**	**0.34**	**198**	PG	**Pg**	**21 54 55.6**	**-0.8**
FETY				*e*SG	**Sg**	**21 55 01.6**	**+0.9**
FETY	**Fethiye**	**0.34**	**198**	*i* Pg	**Pg**	**21 54 55.6**	**-0.8**
FETY				*e*Sg	**Sg**	**21 55 01.6**	**+0.8**
GOLH	**Golhisar**	**0.39**	**45**	⇑*i*P	**Pg**	**21 54 56.7**	**-0.7**
GOLH				*i* S	**Sg**	**21 55 03.4**	**+0.9**
GOLH	**Golhisar**	**0.39**	**45**	*i* P	**Pg**	**21 54 56.7**	**-0.7**
GOLH				*i* S	**Sg**	**21 55 03.4**	**+0.9**
TURN	**Turunc**	**0.50**	**260**	*e*P	**Pg**	**21 55 04.3**	**+4.9**
TURN				*e*S	**Sg**	**21 55 14.8**	**+8.9**
ELL	**Elmali**	**0.59**	**110**	*e*PG	**Pg**	**21 55 00.8**	**-0.4**
ELL				*e*SG	**Sg**	**21 55 09.5**	**+0.6**
ELL	**Elmali**	**0.59**	**110**	*e*Pg	**Pg**	**21 55 00.8**	**-0.4**
ELL				*e*Sg	**Sg**	**21 55 09.5**	**+0.6**
DNZL	**Cakiroluk**	**0.74**	**350**	⇑*i*P	**Pg**	**21 55 02.7**	**-1.4**
DNZL				*i* S	**Sg**	**21 55 14.2**	**+0.4**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**21 55 02.7**	**-1.4**
DNZL				*i* S	**Sg**	**21 55 14.2**	**+0.4**
YER	**Yerkesik**	**0.77**	**284**	*e*PG	**Pg**	**21 55 03.5**	**-1.1**
YER	**Yerkesik**	**0.77**	**284**	*e*Pg	**Pg**	**21 55 03.5**	**-1.1**
AKAS	**Kas**	**0.79**	**156**	⇓*i*P	**Pg**	**21 55 04.7**	**-0.2**
AKAS				*i* S	**Sg**	**21 55 18.7**	**+3.5**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**21 55 04.7**	**-0.2**
AKAS				*i* S	**Sg**	**21 55 18.7**	**+3.6**
DENT	**Denizli**	**0.81**	**350**	*e*PG	**Pg**	**21 55 04.5**	**-0.9**
DENT	**Denizli**	**0.81**	**350**	*e*Pg	**Pg**	**21 55 04.5**	**-0.9**
KSL	**Kastellorizon**	**0.86**	**160**	*e*P	**Pg**	**21 55 06.5**	**+0.2**
KORT	**Korkueli**	**0.91**	**87**	*e*P	**Pg**	**21 55 06.6**	**-0.6**
KORT				*e*S	**Sg**	**21 55 22.1**	**+3.0**
KORT	**Korkueli**	**0.91**	**87**	*e*P	**Pg**	**21 55 06.6**	**-0.7**
KORT				*e*S	**Sg**	**21 55 22.0**	**+2.9**
ARG	**Arkhangelos**	**1.15**	**230**	*e*P	**Pg**	**21 55 11.0**	**-0.8**
ANTB	**Antalya**	**1.15**	**92**	*e*PN	**Pn**	**21 55 10.9**	**-1.8**
ANTB	**Antalya**	**1.15**	**92**	*e*Pn	**Pn**	**21 55 10.9**	**-1.8**
BCK	**Bucak**	**1.21**	**65**	*e*PN	**Pn**	**21 55 12.3**	**-1.2**
BCK	**Bucak**	**1.21**	**65**	*e*Pn	**Pn**	**21 55 12.3**	**-1.1**
AYDN	**Tasoluk**	**1.28**	**304**	*e*P	**Pg**	**21 55 13.7**	**-0.7**
AYDN				*e*S	**Sg**	**21 55 31.9**	**+1.0**
AYDN	**Tasoluk**	**1.28**	**304**	*e*P	**Pg**	**21 55 13.7**	**-0.6**
AYDN				*e*S	**Sg**	**21 55 31.9**	**+1.0**
DAT	**Datca**	**1.33**	**261**	*e*PN	**Pn**	**21 55 14.6**	**-0.6**
DAT	**Datca**	**1.33**	**261**	*e*Pn	**Pn**	**21 55 14.6**	**-0.6**
ISP	**Isparta**	**1.36**	**49**	*e*PN	**Pn**	**21 55 15.0**	**-0.6**
ISP	**Isparta**	**1.36**	**49**	*e*Pn	**Pn**	**21 55 14.9**	**-0.6**
ISP				*e*S	**Sg**	**21 55 35.4**	**+1.9**
ISP	**Isparta**	**1.36**	**49**	*e*Pn	**Pn**	**21 55 15.0**	**-0.5**
ISP				*e*S	**Sg**	**21 55 35.4**	**+1.9**
KHL	**Karahalli**	**1.39**	**10**	*e*PN	**Pn**	**21 55 15.5**	**-0.4**
KHL	**Karahalli**	**1.39**	**10**	*e*Pn	**Pn**	**21 55 15.5**	**-0.4**
KHAL	**Karahalli**	**1.43**	**9**	*e*P	**Pn**	**21 55 16.5**	**0.0**
KHAL				*e*S	**Sb**	**21 55 35.0**	**-0.5**
KHAL	**Karahalli**	**1.43**	**9**	*e*P	**Pn**	**21 55 16.5**	**0.0**
KHAL				*e*S	**Sb**	**21 55 35.0**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.52**	**69**	*e*PN	**Pn**	**21 55 17.8**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.52**	**69**	*e*Pn	**Pn**	**21 55 17.8**	**+0.1**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**21 55 18.8**	**-0.3**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn	**Pn**	**21 55 18.8**	**-0.3**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*PN	**Pn**	**21 55 23.2**	**0.0**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*Pn	**Pn**	**21 55 23.2**	**0.0**
SMG	**Samos**	**2.04**	**292**	*e*P	**Pn**	**21 55 25.0**	**+0.1**
IZM	**Izmir**	**2.11**	**313**	*e*PN	**Pn**	**21 55 26.6**	**+0.7**
IZM	**Izmir**	**2.11**	**313**	*e*Pn	**Pn**	**21 55 26.6**	**+0.7**
KARP	**Karpathos**	**2.18**	**230**	*e*P	**Pn**	**21 55 27.5**	**+0.7**
ALT	**Altintas**	**2.21**	**18**	*e*PN	**Pn**	**21 55 27.5**	**+0.2**
ALT	**Altintas**	**2.21**	**18**	*e*Pn	**Pn**	**21 55 27.5**	**+0.2**
BLCB	**Balcova**	**2.24**	**310**	*e*PN	**Pn**	**21 55 27.7**	**0.0**
BLCB	**Balcova**	**2.24**	**310**	*e*Pn	**Pn**	**21 55 27.7**	**+0.1**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**21 55 33.0**	**+0.1**
HDMB	**Hadim**	**2.62**	**89**	*e*Pn	**Pn**	**21 55 33.0**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**21 55 33.9**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**21 55 33.9**	**+0.1**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*PN	**Pn**	**21 55 36.2**	**+1.0**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*Pn	**Pn**	**21 55 36.3**	**+1.0**
KIZT	**Kizilcal**	**2.85**	**47**	*e*PN	**Pn**	**21 55 36.3**	**+0.3**
KIZT	**Kizilcal**	**2.85**	**47**	*e*Pn	**Pn**	**21 55 36.3**	**+0.3**
APE	**Apeiranthos**	**2.95**	**273**	*e*P	**Pn**	**21 55 38.5**	**+1.0**
ZKR	**Zakros**	**3.05**	**234**	*e*P	**Pn**	**21 55 40.5**	**+1.7**
NPS	**Neapolis**	**3.37**	**241**	*e*P	**Pn**	**21 55 44.5**	**+1.3**
IDI	**Anoyia**	**3.88**	**246**	Pn	**Pn**	**21 55 50.5**	**+0.3**
	2.0nm,0.3s,baz=59,slow=17,SNR=18						
IDI				Sn	**Sn**	**21 56 36.2**	**+0.1**
	5.1nm,0.3s,baz=4.8,slow=16,SNR=11						
IDI	**Anoyia**	**3.88**	**246**	Pn	**Pn**	**21 55 50.5**	**+0.3**
IDI				Sn	**Sn**	**21 56 36.2**	**0.0**
BR131	**Keskin Array S**	**4.44**	**50**	*e*Pn	**Pn**	**21 55 58.2**	**+0.3**
BR131				*e*Sn	**Sn**	**21 56 50.1**	**0.0**
BR131	**Keskin Array S**	**4.44**	**50**	*e*Pn	**Pn**	**21 55 58.2**	**+0.3**
BR131				*e*Sn	**Sn**	**21 56 50.1**	**+0.1**
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**21 55 57.9**	**0.0**
	0.4nm,0.3s,baz=227,slow=14,SNR=11						
BRTR				Sn	**Sn**	**21 56 50.8**	**+0.8**
	0.4nm,0.3s,baz=231,slow=24,SNR=6.8						
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**21 55 57.9**	**0.0**
BRTR				Sn	**Sn**	**21 56 50.8**	**+0.8**
KARN	**Karanos**	**4.56**	**252**	*e*P	**Pn**	**21 56 02.5**	**+3.0**
MMAI	**Mount Meron Ar**	**6.42**	**126**	Pn	**Pn**	**21 56 23.9**	**-1.2**
	1.9nm,0.3s,baz=307,slow=13,SNR=14						
MMAI				Sn	**Sn**	**21 57 34.6**	**-4.2**
	0.5nm,0.3s,baz=324,slow=23,SNR=3.3						
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**21 56 53.7**	**-2.8**
	0.8nm,0.3s,baz=350,slow=12,SNR=5.2						
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**21 56 53.7**	**-2.8**
EIL	**Elat**	**8.71**	**145**	Pn	**Pn**	**21 56 53.7**	**-2.8**
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**22 01 35.1**	**-1.2**
	0.4nm,0.5s,baz=39,slow=8.3,SNR=6.8						

ISCJB 14 22:05:01.6±0.2, 37°23N±0°01×115°79W±0°02, h10km, Error ellipse: s-maj=2.6km s-min=2.1km az=2.1
NEIC 14 22:05:01.5, 37°21N×115°79W, h9km, ML3.4(REN), After REN.
ISC 14 22:05:02.0±0.2, 37°21N±0°01×115°79W±0°02, h10km, n57, σ0°96/102, 18C-29D, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S11A	**Rachel**	**0.43**	**4**	⇓P	**Pg**	**22 05 10.5**	**0.0**
S11A	baz=0.4,SNR=57			⇓S	**Sg**	**22 05 17.0**	**+0.7**
T11A	**Corn Creek, Al**	**0.45**	**86**	P	**Pg**	**22 05 10.4**	**-0.4**
T11A	baz=0.5,SNR=502			⇓S	**Sg**	**22 05 16.5**	**-0.4**
S12A	**Delamar Landin**	**0.85**	**62**	⇑P	**Pg**	**22 05 18.0**	**-0.3**
S12A	baz=0.8,SNR=154			⇑S	**Sg**	**22 05 29.8**	**+0.4**
SHPR	**Sheep Range**	**0.86**	**144**	*e*Pg	**Pg**	**22 05 17.4**	**-1.3**
U10A	**Ash Meadows, A**	**0.90**	**209**	P	**Pg**	**22 05 18.9**	**-0.4**
	baz=0.9,SNR=168						
S10A	**Tonopah Range,**	**0.96**	**318**	⇓P	**Pg**	**22 05 20.2**	**-0.3**
S10A	baz=1.0,SNR=233			⇓S	**Sg**	**22 05 33.1**	**+0.1**
T12A	**Moapa**	**0.99**	**119**	⇑P	**Pg**	**22 05 20.4**	**-0.5**
	baz=1.0,SNR=8.1						
FURC	**Furace Creek,**	**1.13**	**230**	⇓P	**Pb**	**22 05 23.3**	**-0.4**
	baz=1.1,SNR=143						
R11A	**Troy Canyon, C**	**1.15**	**8**	⇓P	**Pb**	**22 05 23.4**	**-0.6**
	baz=1.1						
R10A	**Warm Springs**	**1.15**	**339**	P	**Pb**	**22 05 24.2**	**+0.2**
	baz=1.1,SNR=90						
R10A				⇓S	**Sb**	**22 05 40.2**	**+1.1**
	baz=1.1						
U12A	**Valley of Fire**	**1.27**	**127**	⇓P	**Pn**	**22 05 25.1**	**-0.7**
	baz=1.3,SNR=153						
U12A				⇑S	**Sb**	**22 05 42.4**	**0.0**
	baz=1.3						
GRAC	**Grapevine Rang**	**1.28**	**261**	⇓P	**Pn**	**22 05 26.0**	**0.0**
	baz=1.3,SNR=65						
GRAC				⇓S	**Sb**	**22 05 43.2**	**+0.4**
	baz=1.3						
SHOC	**Shoshone**	**1.37**	**197**	⇑P	**Pn**	**22 05 27.1**	**0.0**
	baz=1.4,SNR=26						
V11A	**Goodsprings**	**1.40**	**168**	⇓S	**Sn**	**22 05 45.9**	**-0.2**
	baz=1.4						
R12A	**Pony Springs,**	**1.46**	**40**	⇑P	**Pn**	**22 05 28.7**	**+0.3**
	baz=1.5,SNR=48						
R12A				⇓S	**Sn**	**22 05 48.9**	**+1.4**
	baz=1.5						
T13A	**Saint George**	**1.52**	**97**	P	**Pn**	**22 05 29.1**	**-0.1**
	baz=1.5,SNR=76						
S13A	**Holt Ranch, En**	**1.58**	**76**	⇓P	**Pn**	**22 05 30.2**	**+0.2**
	baz=1.6						
Q11A	**Duckwater**	**1.64**	**4**	⇑P	**Pn**	**22 05 31.4**	**+0.6**
	baz=1.6,SNR=7.0						
Q11A				⇓Sb	**Sb**	**22 05 55.0**	**+2.1**
	baz=1.6						
V12A	**Nelson**	**1.66**	**153**	⇑P	**Pn**	**22 05 31.0**	**-0.2**
	baz=1.7						
V12A				⇑Sb	**Sb**	**22 05 54.2**	**+0.6**
	baz=1.7						
U13A	**Pakoon Wash**	**1.66**	**118**	⇑P	**Pn**	**22 05 31.0**	**-0.2**
	baz=1.7,SNR=332						
U13A				⇓Sb	**Sb**	**22 05 54.7**	**+1.0**
	baz=1.7						
Q10A	**Clear Creek Ra**	**1.68**	**343**	⇓P	**Pn**	**22 05 31.9**	**0.4**
	baz=1.7,SNR=17						
Q10A				⇑Sb	**Sb**	**22 05 56.7**	**+2.4**
	baz=1.7						
TUQ	**Turquoise Moun**	**1.77**	**184**	⇓P	**Pn**	**22 05 32.6**	**-0.2**
	baz=1.8,SNR=59						
TUQ				⇑Sb	**Sb**	**22 05 57.5**	**+0.6**
	baz=1.8						
MPMC	**Manual Prospec**	**1.79**	**231**	⇓P	**Pn**	**22 05 33.1**	**+0.2**
	baz=1.8,SNR=338						
MPMC				⇓Sb	**Sb**	**22 05 57.9**	**+0.6**
	baz=1.8						
CCUT	**Cedar City**	**1.96**	**79**	*e*Pn	**Pn**	**22 05 35.8**	**+0.5**
CCUT				*e*S	**Sn**	**22 06 04.6**	**+4.7**
Q12A	**Willow Creek R**	**1.98**	**22**	⇓P	**Pn**	**22 05 36.1**	**+0.5**
	baz=2.0,SNR=34						
Q12A				⇓S	**Sn**	**22 06 00.6**	**+0.2**
	baz=2.0						
V13A	**Grand Canyon W**	**1.99**	**132**	P	**Pn**	**22 05 35.8**	**+0.1**
	baz=2.0,SNR=80						
W12A	**Cal Nev Ari**	**2.04**	**158**	⇑Sb	**Sb**	**22 06 06.0**	**+1.3**
	baz=2.1						
GSC	**Goldstone**	**2.08**	**204**	⇓P	**Pn**	**22 05 36.9**	**0.0**
	baz=2.1						
GSC	**Goldstone**	**2.08**	**204**	*e*Pn	**Pn**	**22 05 37.0**	**+0.2**
GSC				*e*Pg	**Pg**	**22 05 40.7**	**-1.1**
GSC				*e*S	**Sn**	**22 06 07.9**	**+5.2**
LDFC	**Landfair**	**2.20**	**165**	*e*Pn	**Pn**	**22 05 38.5**	**0.0**
LDFC				*e*S	**Sn**	**22 06 09.6**	**+3.8**
MTUM	**Tungsten Hills**	**2.22**	**275**	*e*Pn	**Pn**	**22 05 38.8**	**-0.1**
MTUM				*e*Sg	**Sg**	**22 06 13.1**	**-0.3**
P11A	**Circle Ranch,**	**2.34**	**1**	⇑Sb	**Sb**	**22 06 15.9**	**+2.7**
	baz=2.3						
P12A	**McGill**	**2.36**	**17**	⇓P	**Pn**	**22 05 41.6**	**+0.8**
	baz=2.4,SNR=17						
HEC	**Hector,Ludlow**	**2.42**	**191**	⇑Sb	**Sb**	**22 06 17.1**	**+1.7**
	baz=2.4						
GMRC	**Granite Mounta**	**2.43**	**178**	⇓P	**Pn**	**22 05 41.5**	**-0.2**
	baz=2.4,SNR=46						
Q14A	**Sevier Lake (B**	**2.66**	**47**	⇑P	**Pn**	**22 05 45.7**	**+0.8**
	baz=2.7						
ISA	**Isabella**	**2.66**	**235**	⇓P	**Pn**	**22 05 45.5**	**+0.6**
	baz=2.7,SNR=15						
ISA	**Isabella**	**2.66**	**235**	*e*Pn	**Pn**	**22 05 45.3**	**+0.4**
ISA				*e*Pg	**Pg**	**22 05 52.6**	**-0.4**
T15A	**Red Dirt Ranch**	**2.73**	**93**	⇓P	**Pn**	**22 05 46.4**	**+0.6**
	baz=2.7,SNR=8.8						
U15A	**North Rim**	**2.91**	**105**	⇑P	**Pn**	**22 05 49.2**	**+0.8**
	baz=2.9,SNR=11						
O11A	**Cowboy Ranch,**	**2.92**	**2**	⇓P	**Pn**	**22 05 49.3**	**+0.8**
	baz=2.9						
O10A	**Cortez Mining,**	**3.13**	**350**	⇓P	**Pn**	**22 05 52.3**	**+1.0**
	baz=3.1						
MSU	**Marysvale**	**3.14**	**64**	*e*Pn	**Pn**	**22 05 51.2**	**-0.3**
MSU				*e*Pg	**Pg**	**22 06 02.7**	**+0.5**
MSU				*e*S	**Sg**	**22 06 41.6**	**-1.3**
WAKR	**Walker**	**3.16**	**295**	*e*Pn	**Pn**	**22 05 55.0**	**+3.2**
BELC	**Belle Mtn.**	**3.21**	**183**	⇑P	**Pn**	**22 05 52.8**	**+0.3**
	baz=3.2,SNR=8.1						
BMN	**Battle Mountai**	**3.41**	**341**	*e*Pn	**Pn**	**22 05 55.6**	**+0.4**
BMN				*e*Pg	**Pg**	**22 06 06.4**	**-0.9**
BMN				*e*S	**Sg**	**22 06 50.3**	**-1.1**
ELK	**Elko**	**3.56**	**7**	*e*Pn	**Pn**	**22 05 57.0**	**-0.2**
ELK				*e*Pg	**Pg**	**22 06 06.5**	**-3.6**
ELK				*e*S	**Sg**	**22 06 56.1**	**-0.1**
PFO	**Pinyon Flat Ob**	**3.63**	**189**	*e*Pn	**Pn**	**22 05 58.2**	**-0.1**
PFO				*e*Pg	**Pg**	**22 06 16.2**	**+4.5**
N12A	**Clover Valley,**	**3.68**	**9**	*e*Pn	**Pn**	**22 05 59.8**	**+0.8**
N12A				*e*Pg	**Pg**	**22 06 07.4**	**-5.2**
N12A				*e*S	**Sg**	**22 07 00.8**	**+0.5**
CMB	**Columbia Colle**	**3.74**	**284**	*e*Pn	**Pn**	**22 05 59.2**	**-0.7**
CMB				*e*Pg	**Pg**	**22 06 10.3**	**-3.4**
CMB				*e*S	**Sg**	**22 06 59.4**	**-2.8**
PAHR	**Pah Rah Range**	**3.77**	**313**	*e*Pn	**Pn**	**22 05 57.9**	**-2.3**
PAHR				*e*Sb	**Sg**	**22 07 01.1**	**-1.9**
DUG	**Dugway**	**3.78**	**37**	*e*Pn	**Pn**	**22 06 00.1**	**-0.2**
DUG				*e*Pg	**Pg**	**22 06 13.4**	**-1.1**
DUG				*e*S	**Sg**	**22 07 00.6**	**-2.8**
WUAZ	**Wupatki**	**3.94**	**114**	*e*Pn	**Pn**	**22 06 03.3**	**+0.8**
WUAZ				*e*Pg	**Pg**	**22 06 14.6**	**-2.9**
WUAZ				*e*S	**Sg**	**22 07 02.0**	**-6.6**
GLA	**Glamis**	**4.22**	**169**	*e*Pn	**Pn**	**22 06 05.6**	**-0.8**
GLA				*e*Pg	**Pg**	**22 06 22.9**	**0.0**
GLA				*e*S	**Sg**	**22 07 08.8**	**-8.9**
BGU	**Big Grassy Mou**	**4.29**	**29**	*e*Pn	**Pn**	**22 06 07.9**	**+0.6**
BGU				*e*Pg	**Pg**	**22 06 22.7**	**-1.4**
BGU				*e*S	**Sg**	**22 07 16.6**	**-3.1**
M13A	**Montello**	**4.33**	**16**	*e*Pn	**Pn**	**22 06 07.7**	**-0.2**
M13A				*e*Pg	**Pg**	**22 06 20.4**	**-4.6**
M13A				*e*S	**Sg**	**22 07 12.0**	**-9.1**
MVCO	**Mesa Verde**	**5.82**	**88**	*e*Pn	**Pn**	**22 06 29.0**	**+0.6**
MVCO				*e*Pg	**Pg**	**22 06 51.6**	**-1.8**
MVCO				*e*S	**Sg**	**22 08 08.2**	**-0.6**

CSEM 14 22:06:24.3±0.2, 50°15N×19°06E, h2km, ML2.5/4, Error ellipse: s-maj=6.2km s-min=3.0km az=175.0
PRU 14 22:06:24.9, 50°17N×19°04E, h0km
IPEC 14 22:06:24.2±0.1, 50°21N×19°07E, h0km±1km, ML1.5/4, Error ellipse: s-maj=2.7km s-min=0.8km az=170.0
WAR 14 22:06:24.5, 50°08N×19°15E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	22 06 33.3	+0.4
OJC				*e*Sg	Sg	22 06 39.6	+1.0
OJC	**Ojcow**	**0.44**	**71**	*e*Pg	Pg	22 06 33.2	+0.3
	baz=269						
OJC				*e*Sg	Sg	22 06 38.9	+0.3
	baz=269						
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*PG	Pg	22 06 37.6	-0.2
OKC				*e*SG	Sg	22 06 47.6	+0.9
	comp=Z,8.4nm,0.3s						
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*Pg	Pg	22 06 37.6	-0.2
	baz=58						
NIE	**Niedzica**	**1.00**	**131**	*e*Pg	Pg	22 06 43.9	+0.3
NIE				*e*Sg	Sg	22 06 59.8	+3.2
MORC	**Moravsky Berou**	**1.08**	**255**	*e*Pg	Pg	22 06 44.7	-0.5
	baz=66						
MORC				*e*Sg	Sg	22 06 57.8	-1.5
	comp=Z,7.2nm,0.2s,baz=66						
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*PN	Pn	22 06 54.1	+1.4
STHS				*e*SN	Sn	22 07 15.4	+2.3
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*Pn	Pn	22 06 54.1	+1.4
STHS				*e*Sn	Sn	22 07 15.4	+2.3
JAVC	**Velka Javorina**	**1.56**	**219**	*e*Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEYT	**Eskypehyr**	1.71	274	*i* P	**Pn**	22 06 58.9	-0.2
SEYT				*i* S	**Sn**	22 07 22.0	+0.6
YOZ	**Yozgat**	1.76	82	*e*PN	**Pn**	22 06 59.9	+0.1
YOZ	**Yozgat**	1.76	82	*e*Pn	**Pn**	22 06 59.9	+0.2
CTKT	**Corum**	1.79	47	*i* P	**Pn**	22 07 00.8	+0.7
CTKT				*i* S	**Sn**	22 07 22.2	-1.0
CTKT	**Corum**	1.79	47	*i* P	**Pn**	22 07 00.8	+0.7
CTKT				*i* S	**Sn**	22 07 22.2	-1.0
SAFT	**Safranbolu**	1.83	351	*e*PN	**Pn**	22 06 59.4	-1.4
SAFT	**Safranbolu**	1.83	351	*e*Pn	**Pn**	22 06 59.4	-1.3
BALT	**Daday**	2.12	7	*i* P	**Pn**	22 07 07.0	+2.3
BALT				*i* S	**Sn**	22 07 36.2	+4.8
BALT	**Daday**	2.12	7	*i* P	**Pn**	22 07 06.9	+2.2
GULT	**Gulveren**	2.20	298	*e*PN	**Pn**	22 07 04.3	-1.5
GULT	**Gulveren**	2.20	298	*e*Pn	**Pn**	22 07 04.3	-1.5
ALT	**Altintas**	2.32	262	*e*PN	**Pn**	22 07 06.9	-0.6
ALT	**Altintas**	2.32	262	*e*Pn	**Pn**	22 07 06.9	-0.6
BYBT	**Boyabat**	2.42	32	*e*PN	**Pn**	22 07 08.7	-0.1
BYBT	**Boyabat**	2.42	32	*e*Pn	**Pn**	22 07 08.7	-0.1
KOZT	**Kozan**	2.92	131	*e*PN	**Pn**	22 07 16.5	+0.9
SVSK	**Karacayir**	3.08	80	*e*PN	**Pn**	22 07 19.0	+1.1
SVSK	**Karacayir**	3.08	80	*e*Pn	**Pn**	22 07 19.0	+1.1

IDC ***14*** *22:10:09.0±0.5, 31°.16N×103°.76E, h0km, mb4.4/28, mb1 4.5/29, mb1mx4.4/35, mbtmp4.4/29, ML3.5/1, MS4.4/11, Ms1 4.4/11, ms1mx4.0/44, Error ellipse: s-maj=16.3km s-min=10.0km az=45.0*

BJI ***14*** *22:10:09.8, 31°.21N×103°.85E, h10km, mB5.0/24, mb4.8/32, ML4.9/23, Ms5.1/53, Ms7 4.8/38*

ISCJB ***14*** *22:10:11.6±0.5, 31°.17N±0°.02×103°.80E±0°.03, h27km±4km, mb4.6/70, MS4.5/26, Error ellipse: s-maj=4.1km s-min=3.6km az=164.6*

NEIC ***14*** *22:10:11.3±0.3, 31°.18N×103°.72E, h10km, mb4.8/34, MS4.6/1, Error ellipse: s-maj=7.2km s-min=5.2km az=203.0*

NEIC Felt at Chengdu.

MOS ***14*** *22:10:12.1±1.2, 31°.16N×103°.82E, h33km, mb4.8/32, MS4.5/13, Error ellipse: s-maj=8.6km s-min=5.3km az=105.6*

DJA ***14*** *22:10:25, 31°.54N×104°.25E, h91km, mb4.9/11*

ISC 14 22:10:12.5±0.6, 31°.17N±0°.02×103°.75E±0°.02, h18km±3km, n228, σ1$20/244, mb4.6/70, MS4.5/26, 11C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	0.26	179	Pg	**Pg**	22 10 17.1	-1.2
CD2				Sg	**Sg**	22 10 22.8	+0.5
CD2				smax			
	comp=N,176μm,0.7s						
LZH	**Lanzhou**	4.91	1	*e*Pn	**Pn**	22 11 26.3	+1.0
LZH				Sg	**Sg**	22 12 49.8	-0.2
LZH				smax			
	comp=N,2μm,0.8s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=N,16μm,6.7s						
LZH				LR	LR		
	comp=Z,18μm,7.9s						
ENH	**Enshi**	5.02	99	*e*Pn	**Pn**	22 11 27.1	+0.3
	comp=Z,330nm,0.6s						
ENH				*e*S	**Sg**	22 12 55.8	+2.2
XAN	**Xi'an**	5.22	55	Pn	**Pn**	22 11 28.0	-1.6
XAN				Pg	**Pb**	22 11 43.8	+0.6
XAN				Sg	**Sb**	22 12 45.4	-0.1
XAN				smax			
	comp=N,2μm,1.0s						
XAN				smax			
	comp=E,1μm,1.0s						
XAN				LR	LR		
	comp=N,17μm,10.9s						
XAN				LR	LR		
	comp=E,3μm,10.5s						
XAN				LR	LR		
	comp=Z,1μm,9.2s						
GYA	**Guiyang**	5.34	151	Pn	**Pn**	22 11 33.0	+1.6
GYA				Sg	**Sb**	22 12 50.8	+1.7
GYA				smax			
	comp=N,2μm,1.2s						
GYA				smax			
	comp=E,2μm,1.3s						
GYA				LR	LR		
	comp=N,16μm,6.9s						
GYA				LR	LR		
	comp=E,16μm,8.7s						
GYA				LR	LR		
	comp=Z,5μm,5.6s						
KMI	**Kunming**	6.09	189	Pn	**Pn**	22 11 41.9	+0.3
KMI				Sn	**Sn**	22 12 52.1	+1.3
KMI				Sg		22 13 27.0	
KMI				smax			
	comp=N,400nm,1.7s						
KMI				smax			
	comp=E,400nm,2.9s						
KMI				LR	LR		
	comp=N,12μm,9.3s						
KMI				LR	LR		
	comp=E,16μm,8.8s						
GTA	**Gaotai**	8.83	340	P	**Pn**	22 12 20.4	+1.2
GTA				pP		22 12 29.6	
GTA				S	**Sn**	22 13 58.1	-0.1
GTA				sS		22 14 06.5	
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA				pmax	pmax		
	comp=Z,180nm,6.6s						
GTA				LR	LR		
	comp=N,5μm,13.5s						
GTA				LR	LR		
	comp=E,8μm,11.7s						
GTA				LR	LR		
	comp=Z,7μm,14.7s						
WHN	**Wuhan**	9.13	91	P	**Pn**	22 12 22.3	-1.1
WHN				S	**Sn**	22 14 02.8	-2.9
WHN				LR	LR		
	comp=N,14μm,4.1s						
WHN				LR	LR		
	comp=E,23μm,6.7s						
WHN				LR	LR		
	comp=Z,18μm,7.1s						
BTO	**Baotou**	10.70	27	*e*P	**Pn**	22 12 51.3	+6.5
BTO				S	**Sn**	22 14 57.6	+14
BTO				LR	LR		
	comp=N,1μm,8.6s						
BTO				LR	LR		
	comp=E,1μm,8.0s						
LSA	**Lhasa**	10.98	266	P	**Pn**	22 12 47.1	-1.6
LSA				S	**Sn**	22 14 49.6	-1.4
LSA				LR	LR		
	comp=N,1μm,16.3s						
LSA				LR	LR		
	comp=E,3μm,13.2s						
LSA				LR	LR		
	comp=Z,4μm,11.7s						
LSA	**Lhasa**	10.98	266	*e*P	**Pn**	22 12 48.4	-0.3
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	10.98	266	*e*Pn	**Pn**	22 12 48.4	-0.3
	comp=Z,13nm,0.8s						
HHC	**Hu-ho-hao-te**	11.54	31	*e*P	**Pn**	22 12 54.8	-1.5
HHC				pP		22 13 02.1	
HHC				sP		22 13 06.9	
HHC				S	**Sn**	22 15 05.3	+0.6
HHC				sS		22 15 16.0	
HHC				SS		22 15 19.4	
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
HHC				LR	LR		
	comp=N,2μm,5.7s						
HHC				LR	LR		
	comp=E,2μm,5.5s						
HHC				LR	LR		
	comp=Z,2μm,5.6s						
GZH	**Guangzhou**	11.73	131	P	**Pn**	22 12 57.3	-1.7
GZH				S	**Sn**	22 15 02.8	-6.7
GZH				LR	LR		
	comp=N,5μm,6.8s						
GZH				LR	LR		
	comp=E,5μm,7.0s						
SHL	**Shillong**	11.85	245	*e*P	**Pn**	22 12 59.5	-1.1
TIA	**Tai'an**	12.22	62	*e*P	**Pn**	22 13 04.6	-1.0
TIA				LR	LR		
	comp=N,2μm,8.0s						
TIA				LR	LR		
	comp=E,1μm,6.0s						
NJ2	**Nanjing**	12.90	82	*e*P	**Pn**	22 13 15.6	+0.6
NJ2				pP		22 13 18.9	
NJ2				sP		22 13 22.0	
NJ2				PP		22 13 25.8	
NJ2				S	**Sn**	22 15 34.0	-4.1
NJ2				pmax	pmax		
	comp=Z,50nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,350nm,4.6s						
NJ2				LR	LR		
	comp=N,6μm,10.1s						
NJ2				LR	LR		
	comp=E,3μm,10.9s						
NJ2				LR	LR		
	comp=Z,4μm,10.5s						
QIZ	**Qiongzhong**	13.28	154	P	**Pn**	22 13 22.8	+2.6
QIZ				S	**Sn**	22 15 54.4	+7.0
QIZ				pmax	pmax		
	comp=Z,25nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,150nm,4.1s						
QIZ				LR	LR		
	comp=N,6μm,7.6s						
QIZ				LR	LR		
	comp=E,1μm,9.1s						
QIZ				LR	LR		
	comp=Z,5μm,9.0s						
CM31	**Chiang Mai Arr**	13.38	200	*e*Pn	**Pn**	22 13 29.1	+7.5
	comp=Z,9.7nm,0.6s						
CMAR	**Chiang Mai Arr**	13.38	200	Pn	**Pn**	22 13 21.4	-0.2
	baz=12,slow=10						
BJT	**Baijiatuau**	13.41	45	*e*Pn	**Pn**	22 13 22.0	+0.2
BJT				*e*Sn	**Sn**	22 15 50.3	0.0
BJI	**Beijing**	13.42	45	P	**Pn**	22 13 22.0	-0.1
BJI				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BJI				LR	LR		
	comp=N,5μm,11.3s						
BJI				LR	LR		
	comp=E,4μm,13.9s						
QZH	**Quanzhou**	14.49	112	*e*P	**Pn**	22 13 33.9	-2.8
QZH				S	**Sn**	22 16 14.4	-2.5
QZH				LR	LR		
	comp=N,9μm,7.0s						
QZH				LR	LR		
	comp=E,7μm,6.4s						
QZH				LR	LR		
	comp=Z,13μm,9.1s						
KKTK	**Khon Kaen**	14.79	183	P	**Pn**	22 13 47.0	+6.2
SSE	**Sheshan**	14.94	86	P	**Pn**	22 13 42.1	-0.6
SSE				S	**Sn**	22 16 28.3	+0.6
SSE				pmax	pmax		
	comp=Z,28nm,1.0s						
SSE				pmax	pmax		
	comp=Z,250nm,6.7s						
SSE				LR	LR		
	comp=N,9μm,12.1s						
SSE				LR	LR		
	comp=E,2μm,12.1s						
SSE				LR	LR		
	comp=Z,4μm,8.1s						
DL2	**Dalian**	16.53	57	⇓P	**Pn**	22 14 06.5	+3.1
DL2				S	**Sn**	22 17 12.1	+5.6
DL2				pmax	pmax		
	comp=Z,40nm,1.4s						
DL2				pmax	pmax		
	comp=Z,140nm,5.6s						
DL2				LR	LR		
	comp=N,1μm,17.4s						
DL2				LR	LR		
	comp=E,990nm,17.9s						
DL2				LR	LR		
	comp=Z,1μm,12.8s						
SONM	**Songino Array**	16.77	6	Pn	**Pn**	22 14 05.6	-0.7
	comp=Z,0.2nm,0.3s,baz=188,slow=13,SNR=57						
SONM				LR	LR	22 21 10.6	
	comp=Z,3μm,19.5s,baz=186,slow=39						
YHNB	**Yeheng**	16.86	108	*e*Pn	**Pn**	22 14 08.7	+1.1
ULN	**Ulaanbaatar**	16.87	8	*e*P	**Pn**	22 14 06.8	-0.7
ULN				pmax	pmax		
	comp=Z,31nm,1.1s						
ULN	**Ulaanbaatar**	16.87	8	*e*Pn	**Pn**	22 14 06.8	-0.8
	comp=Z,31nm,1.1s						
SSLB	**Suanglung**	16.93	112	*e*Pn	**Pn**	22 14 11.2	+2.7
	comp=Z,245nm,1.3s						
WMQ	**Urumqi**	17.90	319	P	**Pn**	22 14 19.8	-0.6
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.0s						
WMQ				LR	LR		
	comp=N,3μm,22.0s						
WMQ				LR	LR		
	comp=E,1μm,21.0s						
WMQ				LR	LR		
	comp=Z,690nm,17.0s						
ZAK	**Zakamensk**	19.20	359	*e*P	**Pn**	22 14 35.4	-0.8
ZAK				pmax	pmax		
	comp=Z,22nm,1.6s						
INCN	**Inchon**	19.90	65	*e*P	**Pn**	22 14 44.4	-0.2
	comp=Z,37nm,0.9s						
TLY	**Talaya**	20.50	360	*c i*P	**P**	22 14 49.8	+0.5
TLY				*e*		22 15 07.4	
TLY				*e*		22 15 15.6	
TLY				*e*S	**S**	22 18 40.9	+3.0
TLY				*e*SS		22 19 13.5	
TLY				pmax	pmax		
	comp=Z,23nm,1.3s						
TLY				MLR	MLR		
	comp=Z,3μm,18.0s,MS4.7						
TLY	**Talaya**	20.50	360	*e*Pn	**P**	22 14 49.9	+0.6
	comp=Z,15nm,1.0s						
MOY	**Mondy**	20.58	355	*e*P	**P**	22 14 50.9	+0.6
MOY				pmax	pmax		
	comp=Z,77nm,2.5s						
JOSI	**Joshimath**	20.77	275	*e*P	**P**	22 14 52.7	+0.2
KSRS	**Korea Array**	20.90	66	P	**P**	22 14 54.0	+0.2
	comp=Z,41nm,0.7s,baz=261,slow=10,SNR=170						
KSRS				LR	LR	22 22 50.7	
	comp=Z,680nm,21.9s,MS4.0,baz=265,slow=36						
KSRS	**Korea Array**	20.90	66	P	**P**	22 14 54.1	+0.3
KSRS				pmax	pmax		
	comp=Z,41nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,680nm,21.9s,MS4.0						
IRK	**Irkutsk**	21.06	1	⇑*i*P	**P**	22 14 56.4	+1.0
IRK				pmax	pmax		
	comp=Z,176nm,1.2s,mb5.3						
CN2	**Changchun**	21.27	48	*e*P	**P**	22 14 58.5	+0.8
CN2				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.2						
HIA	**Hailar**	21.73	29	*e*P	**P**	22 15 02.5	-0.2
HIA				pmax	pmax		
	comp=Z,38nm,0.9s						
HIA	**Hailar**	21.73	29	*e*P	**P**	22 15 02.5	-0.2
	comp=Z,38nm,0.9s,mb4.8						
KLP	**Kalpa**	21.77	278	*e*P	**P**	22 15 02.7	-0.6
KLP				AMb	AMB	22 15 15.2	
	comp=Z,87nm,1.4s,mb5.0						
JOW	**Kunigami**	21.86	95	P	**P**	22 15 03.1	-1.2
	comp=Z,28nm,0.5s,mb5.0,baz=28,slow=4.6,SNR=6.8						
DDI	**Dehra Dun**	22.09	274	*e*P	**P**	22 15 08.0	+1.3
DDI				*ex*	x	22 17 18.5	
MK31	**Makanchi Array**	22.73	319	*e*P	**P**	22 15 13.5	+0.1
MKAR	**Makanchi Array**	22.73	319	P	**P**	22 15 13.3	-0.1
	comp=Z,24nm,1.0s,mb4.6,baz=125,slow=12,SNR=39						
MKAR				ScP	ScP	22 22 41.4	-0.5
	comp=Z,2.0nm,0.9s,baz=103,slow=5.2,SNR=7.2						
MKAR				LR	LR	22 25 25.4	
	comp=Z,350nm,19.9s,MS3.8,baz=124,slow=40						
MKAR	**Makanchi Array**	22.73	319	P	**P**	22 15 13.3	-0.1
MKAR				ScP	ScP	22 22 41.4	-0.5
MKAR				LR	LR	22 25 25.4	
SMLA	**Simla**	22.74	277	*i* x	**P**	22 15 10.3	-3.3
AGRA	**Agra**	22.85	267	*e*P	**P**	22 15 14.8	0.0
AGRA				AMb	AMB	22 15 19.3	
	comp=Z,55nm,0.5s,mb5.3						
NDI	**New Delhi**	23.11	271	*ex*	x	22 15 23.0	
KKR	**Kurukshetra**	23.20	274	*e*P	**P**	22 15 18.5	-0.1
AYAN	**Aya Nagar**	23.24	270	*e*P	**P**	22 15 17.8	-1.0
AYAN				AMb	AMB	22 15 28.9	
	comp=Z,18nm,1.3s,mb4.3						
RTK	**Rohtak**	23.73	272	*ex*	x	22 15 18.1	
THN	**Thein Dam**	23.84	280	*e*P	**P**	22 15 24.6	-0.1
KSH	**Kashi**	24.07	298	*e*P	**P**	22 15 31.6	+4.8
KSH				*e*pP		22 15 34.5	
KSH				*e*sP	sP	22 15 37.0	+2.5
KSH				*e*PP		22 16 05.1	
KSH				*e*PcP	PcP	22 19 10.3	+2.3
KSH				*e*S	**S**	22 19 47.8	+4.4
KSH				*e*sS	sS	22 19 53.1	+0.7
KSH				*e*SS		22 20 40.0	
KSH				pmax	pmax		
	comp=Z,230nm,4.3s						
KSH				LR	LR		
	comp=N,850nm,9.7s						
KSH				LR	LR		
	comp=E,980nm,11.0s						
MDJ	**Mudanjiang**	24.29	49	P	**P**	22 15 28.8	+0.1
MDJ				pP		22 15 32.0	
MDJ				sP	sP	22 15 33.1	-3.4
MDJ				PcP	PcP	22 19 08.8	+0.5
MDJ				S	**S**	22 19 48.0	+1.2
MDJ				ScP	ScP	22 22 47.0	+0.9
MDJ				PcS	PcS	22 22 48.9	+0.9
MDJ				ScS	ScS	22 26 33.4	+0.1
MDJ				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,140nm,3.7s						
MDJ				LR	LR		
	comp=N,680nm,22.6s,MS4.1						
MDJ				LR	LR		
	comp=E,270nm,24.8s,MS4.1						
MDJ	**Mudanjiang**	24.29	49	*e*P	**P**	22 15 29.9	+1.2
	comp=E,200nm,1.8s,mb5.2						
KHET	**Khetri**	24.46	270	*e*P	**P**	22 15 28.6	-1.8
KHET				AMb	AMB	22 15 44.6	
	comp=Z,21nm,1.8s,mb4.3						
ULHL	**Ulahol**	24.57	304	P	**P**	22 15 34.6	+3.3
	SNR=5.4						
KZA	**Kyzart**	25.22	304	P	**P**	22 15 38.6	+1.4
	SNR=16						
TKM2	**Tokmak 2**	25.23	306	*e*P	**P**	22 15 37.2	-0.1
TKM2				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
TKM2	**Tokmak 2**	25.23	306	*e*P	**P**	22 15 37.2	0.0
	comp=Z,10nm,0.9s,mb4.4						
KBK	**Karagaybulak**	25.61	305	P	**P**	22 15 42.0	+1.3
	SNR=14						
UCH	**Uchtor**	25.79	304	P	**P**	22 15 49.4	+7.0
	SNR=9.9						
UCH	**Uchtor**	25.79	304	*e*P	**P**	22 15 42.1	-0.3
	comp=Z,19nm,1.1s,mb4.5						
FRU	**Bishkek**	25.89	305	*e*P	**P**	22 15 47.0	+3.7
FRU				pmax	pmax		
	comp=Z,50nm,1.8s,mb4.7						
FRU				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.4						
AAK	**Ala-Archa**	25.92	304	P	**P**	22 15 44.6	+1.1
	comp=Z,2.3nm,0.6s,mb3.9,baz=95,slow=7.7,SNR=4.4						
AAK				LR	LR	22 26 41.7	
	comp=Z,1μm,18.4s,MS4.5,baz=86,slow=38						
AAK	**Ala-Archa**	25.92	304	*e*P	**P**	22 15 44.9	+1.4
AAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.5						
AAK	**Ala-Archa**	25.92	304	*e*P	**P**	22 15 44.9	+1.4
	comp=Z,16nm,1.1s,mb4.5						
USP	**Ospenovka**	26.10	306	P	**P**	22 15 49.6	+4.4
	SNR=11						
AML	**Almayashu**	26.35	303	P	**P**	22 15 49.1	+1.6
	SNR=10						
AML	**Almayashu**	26.35	303	*e*P	**P**	22 15 48.7	+1.2
	comp=Z,17nm,1.1s,mb4.5						
EKS2	**Erkin-Say**	26.43	304	P	**P**	22 15 56.2	+8.0
	SNR=6.0						
EKS2	**Erkin-Say**	26.43	304	*e*P	**P**	22 15 48.6	+0.4
	comp=Z,44nm,1.8s,mb4.7						
ZAA0	**Zalesovo Array**	26.53	335	*e*P	**P**	22 15 47.9	-1.1
ZALV	**Zalesovo Beam**	26.53	335	P	**P**	22 15 48.5	-0.5
	comp=Z,18nm,0.9s,mb4.6,baz=134,slow=8.5,SNR=41						
ZALV				LR	LR	22 26 44.7	
	comp=Z,561nm,21.4s,MS4.1,baz=324,slow=38						
ZALV	**Zalesovo Beam**	26.53	335	P	**P**	22 15 48.5	-0.5
ZALV				LR	LR	22 26 44.7	
HYB	**Hyderabad**	26.66	245	*i* P	**P**	22 15 50.0	-0.4
KURK	**Kurchatov**	27.02	324	P	**P**	22 15 53.0	-0.3
	comp=Z,11nm,0.7s,mb4.5,baz=127,slow=9.4,SNR=58						
KURK				LR	LR	22 27 25.5	
	comp=Z,677nm,18.4s,MS4.2,baz=125,slow=38						
KURK	**Kurchatov**	27.02	324	*ce*P	**P**	22 15 53.3	0.0
KURK				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.6						
KURK	**Kurchatov**	27.02	324	*e*P	**P**	22 15 53.1	-0.3
	comp=Z,24nm,1.0s,mb4.7						
BOD	**Bodaibo**	27.57	12	*e*P	**P**	22 15 58.7	+0.5
BOD				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2						
KLR	**Kul'dur**	27.74	41	*e*P	**P**	22 15 56.0	-3.8
KLR				MLR	MLR		
	comp=Z,2μm,13.0s,MS4.9						
NVS	**Novosibirsk**	27.81	334	*e*P	**P**	22 15 59.1	-1.3
NVS				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.5						
NVS				pmax	pmax		
	comp=N,21nm,1.8s						
NVS				pmax	pmax		
	comp=E,13nm,1.6s						
MJAR	**Matsushiro Arr**	29.01	70	P	**P**	22 16 10.2	-1.2
	comp=E,6.4nm,0.9s,mb4.3,baz=271,slow=9.8,SNR=8.0						
MJAR				LR	LR	22 26 46.0	
	comp=E,318nm,21.7s,MS3.9,baz=240,slow=34						
KBL	**Kabul**	29.27	286	*e*P	**P**	22 16 14.6	+1.0
KBL				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
KBL	**Kabul**	29.27	286	*e*P	**P**	22 16 14.6	+1.0
	comp=Z,14nm,1.2s,mb4.6						
NRGR	**Nerungri**	29.38	24	*e*P	**P**	22 16 09.4	-5.0
NRGR				S	**S**	22 21 07.1	+0.1
NRGR				smax			
	comp=E,22nm,0.6s						
JHJ	**Hachijo jima 2**	30.48	77	P	**P**	22 16 24.4	0.0
	comp=E,158nm,0.7s,baz=232,slow=14,SNR=4.5						
BVAR	**Borovoye Array**	32.55	322	P	**P**	22 16 42.2	-0.2
	comp=E,1.7nm,0.6s,mb4.1,baz=118,slow=9.2,SNR=13						
BVAR				PcP	PcP	22 19 28.2	-0.4
	comp=E,2.9nm,0.8s,baz=144,slow=3.5,SNR=10						
BVAR				ScP	ScP	22 23 10.4	-1.2
	comp=E,0.9nm,0.8s,baz=17,slow=1.5,SNR=4.4						
BVAR	**Borovoye Array**	32.55	322	P	**P**	22 16 42.2	-0.2
BVAR						22 19 28.2	
BRVK	**Borovoye**	32.63	322	*ce*P	**P**	22 16 42.7	-0.3
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
BRVK	**Borovoye**	32.63	322	*e*P	**P**	22 16 43.0	0.0
	comp=Z,30nm,1.7s,mb4.9						
ASAJ	**Asahikawa**	33.06	56	P	**P**	22 16 46.4	-0.5
	comp=Z,7.8nm,0.8s,mb4.7,baz=233,slow=14,SNR=4.5						
ASAJ	**Asahikawa**	33.06	56	P	**P**	22 16 46.4	-0.5
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	33.75	51	*e*P	**P**	22 16 51.0	-1.9
YSS				*e*		22 24 44.0	
YSS				MLR	MLR		
	comp=Z,500nm,13.0s,MS4.4						
YSS				MLR	MLR		
	comp=E,900nm,12.0s						
YAK	**Yakutsk**	35.15	21	*e*P	**P**	22 17 03.2	-1.6
YAK				*e**PP	pP	22 17 12.4	+2.0
YAK				*e*		22 19 34.1	
YAK				*e*S	**S**	22 22 34.0	-2.8
YAK				*e*		22 27 21.5	
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				smax			
	comp=N,28nm,2.3s						
YAK				smax			
	comp=E,21nm,1.9s						
YAK				MLR	MLR		
	comp=Z,512nm,12.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,356nm,11.0s						

ABKAR Akbulak array 37.41 312 *e*P **P 22 17 24.1 -0.2**
comp=E,4.3nm,1.0s,mb4.2
AKTK Aktyubinsk 38.87 313 P **P 22 17 36.7 +0.1**
AKTO Aktyubinsk 38.87 313 P **P 22 17 36.7 +0.1**
comp=E,1.2nm,0.5s,mb3.9,baz=114,slow=17,SNR=3.8
KAPI Kappang 39.09 154 P **P 22 17 37.6 -1.2**
comp=E,14nm,0.9s,mb4.7,baz=310,slow=8.5,SNR=5.2
SVE Sverdlovsk 39.27 324 *e*P **P 22 17 40.3 +0.5**
SVE pmax pmax
comp=Z,14nm,0.9s,mb4.7
SVE MLR MLR
comp=Z,468nm,15.0s,MS4.4
ARU Arti 40.20 322*c i*P **P 22 17 45.2 -2.4**
ARU S **S 22 23 50.9 -2.5**
ARU SS SS 22 26 47.0 -4.4
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.5
ARU Arti 40.20 322 *e*P **P 22 17 47.3 -0.3**
comp=Z,12nm,0.9s,mb4.6
TIXI Tiksi 42.75 11 *e*P **P 22 18 07.0 -1.3**
TIXI pmax pmax
comp=Z,22nm,1.8s,mb4.6
TIXI MLR MLR
comp=Z,1μm,17.0s,MS4.9
TIXI Tiksi 42.75 11 *e*P **P 22 18 07.1 -1.2**
comp=Z,37nm,1.7s,mb4.8
SEY Seymchan 44.18 30*c e*P **P 22 18 20.1 +0.1**
PETK Petropavlovsk- 44.35 44 P **P 22 18 20.0 -1.4**
comp=Z,5.1nm,0.7s,mb4.3,baz=187,slow=7.3,SNR=6.5
PETK Petropavlovsk- 44.35 44 P **P 22 18 20.0 -1.5**
ZEI Tsey 48.28 301 *e*P **P 22 18 54.6 +2.1**
ZEI pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KIV Kislovodsk 49.03 303 *e*P **P 22 18 58.3 +0.1**
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,171nm,17.0s,MS4.1
KIV Kislovodsk 49.03 303 *e*P **P 22 18 58.4 +0.2**
comp=Z,11nm,1.0s,mb4.8
KLMR Klimovskoe 50.84 325 *e*P **P 22 19 05.5 -6.2**
KLMR pmax pmax
comp=Z,20nm,1.3s,mb4.9
BILL Bilibino 51.25 25⇑ *e*P **P 22 19 13.7 -1.0**
BILL *e* 22 21 12.3
BILL *e*S **S 22 26 33.4 +1.2**
BILL pmax pmax
comp=Z,23nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,500nm,15.0s,MS4.7
BILL Bilibino 51.25 25 *e*P **P 22 19 13.3 -1.3**
comp=Z,12nm,0.9s,mb4.8
KAKA Kakadu 51.60 143 *e*P **P 22 19 16.3 -1.6**
comp=Z,9.5nm,0.6s,mb4.9
OBN Obninsk 52.23 318⇓ *e*P **P 22 19 23.7 +1.5**
OBN *e* 22 21 23.3
OBN *e*S **S 22 26 44.1 -1.9**
OBN pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.4
OBN Obninsk 52.23 318 P **P 22 19 23.1 +0.9**
MALT Malatya 53.17 297 P **P 22 19 31.2 +1.8**
FITZ Fitzroy Crossi 53.31 154 *e*P **P 22 19 29.7 -0.8**
comp=Z,6.3nm,0.8s,mb4.6
FITZ Fitzroy Crossi 53.31 154 P **P 22 19 29.8 -0.8**
comp=Z,2.6nm,0.6s,mb4.4,baz=322,slow=8.1,SNR=8.4
FITZ Fitzroy Crossi 53.31 154 *e*P **P 22 19 29.9 -0.6**
comp=Z,4.8nm,0.9s,mb4.4
APA Apatity 54.11 334⇓ *e*P **P 22 19 36.4 +0.5**
APA MLR MLR
comp=Z,2μm,16.0s,MS5.2
MBWA Marble Bar 54.24 162 *e*P **P 22 19 42.9 +5.6**
JOF Joensuu 54.81 328 *e*P **P 22 19 39.6 -1.4**
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
JOF Joensuu 54.81 328 *e p* **P 22 19 39.6 -1.4**
comp=Z,4.0nm,0.7s,mb4.6
ASF Jabal al Asfar 56.04 290 LR LR 22 47 50.5
comp=Z,240nm,18.2s,MS4.3,baz=341,slow=40
BR131 Keskin Array S 56.45 300 *e*P **P 22 19 53.7 +0.5**
comp=Z,2.5nm,0.9s,mb4.2
BRTR Keskin Array B 56.45 300 P **P 22 19 51.4 -1.8**
comp=Z,0.9nm,0.8s,mb3.9,baz=79,slow=6.4,SNR=6.8
BRTR PcP PcP 22 20 50.8 +0.8
comp=Z,1.1nm,0.9s,baz=97,slow=5.8,SNR=3.7
KEV Kevo 56.55 336 *e*P **P 22 19 52.0 -1.4**
KEV pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KEV Kevo 56.55 336 *e p* **P 22 19 52.0 -1.4**
comp=Z,9.5nm,0.9s,mb4.8
ARCES ARCESS Array B 57.08 336 P **P 22 19 56.4 -0.8**
comp=Z,2.3nm,0.7s,mb4.3,baz=87,slow=8.5,SNR=10
ARCES PcP PcP 22 20 49.7 -2.2
comp=Z,2.1nm,0.6s,baz=92,slow=3.6,SNR=4.3
ARCES LR LR 22 45 25.5
comp=Z,362nm,20.8s,MS4.5,baz=62,slow=37
ARCES ARCESS Array B 57.08 336 P **P 22 19 56.4 -0.8**
ARCES 22 20 49.7
ARCES ARCESS Array B 57.08 336 P **P 22 19 56.4 -0.8**
ARCES PcP PcP 22 20 49.7 -2.2
ARCES LR LR 22 45 25.5
ARE0 ARCESS Array S 57.08 336 *e*P **P 22 19 59.1 +2.0**
AKASG Malin Array Be 57.12 313 P **P 22 19 56.4 -1.4**
comp=Z,0.4nm,0.3s,mb3.9,baz=68,slow=7.6,SNR=4.3
AKASG LR LR 22 45 33.9
comp=Z,383nm,19.7s,MS4.5,baz=45,slow=37
KAF Kangasniemi 57.17 327 *e*P **P 22 19 55.8 -2.1**
KAF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KAF Kangasniemi 57.17 327 *e p* **P 22 19 55.8 -2.1**
comp=Z,3.6nm,0.9s,mb4.4
FINES FINESS Array B 57.35 326 P **P 22 19 58.2 -1.0**
comp=Z,2.1nm,0.5s,mb4.4,baz=82,slow=7.8,SNR=10
WRAB Tennant Creek 58.69 146 *e*P **P 22 20 08.6 -0.5**
WRAB pmax pmax
comp=Z,41nm,0.8s,mb5.5
WRAB Tennant Creek 58.69 146 *e*P **P 22 20 08.6 -0.4**
comp=Z,41nm,0.8s,mb5.5
WRA Warramunga Arr 58.69 146 P **P 22 20 08.6 -0.4**
comp=Z,21nm,0.8s,mb5.2,baz=328,slow=9.0,SNR=121
COEN Coen 58.70 134 *e*P **P 22 20 09.3 0.0**
COEN Coen 58.70 134 *e*P **P 22 20 09.7 +0.4**
ISP Isparta 59.31 298 *e*P **P 22 20 14.8 +1.5**
VRI Vrincioaia 59.81 308⇑ *i*P **P 22 20 18.3 +1.7**
PLOR Plostina 59.87 308⇑ *i*P **P 22 20 16.1 -0.9**
SUW Suwalki 60.09 318 *e*P Px 22 20 30.0
BURAR Bucovina Array 60.36 310⇓ *i*P **P 22 20 23.0 +2.6**
BUR08 Bucovina Ar. S 60.37 310 *e*P **P 22 20 21.2 +0.8**
MLR Muntele Rosu 60.44 308⇓ *i*P **P 22 20 21.5 +0.6**
KWP Kalwaria Pacla 61.44 313 *e*P **P 22 20 27.4 -0.2**
KWP Kalwaria Pacla 61.44 313 *e*P **P 22 20 27.1 -0.6**
comp=Z,29nm,1.3s,mb5.2
KWP Kalwaria Pacla 61.44 313⇓ *i*P **P 22 20 27.5 -0.2**
ASAR Alice Springs 61.70 148 P **P 22 20 29.6 0.0**
comp=Z,4.9nm,0.7s,mb4.8,baz=342,slow=6.6,SNR=42
DRGR 62.23 310⇑ *e*P **P 22 20 33.0 0.0**
OJC Ojcow 63.09 314 *e*P **P 22 20 38.0 -0.7**
HFS Hagfors 63.55 326 P **P 22 20 40.4 -1.1**
comp=Z,3.6nm,0.8s,mb4.5,baz=106,slow=4.8,SNR=7.0
OKC Ostrava-Krasne 64.22 314 AMS AMS 22 49 40.0
comp=Z,200nm,16.7s
NB2 NORSAR Subarra 64.44 327 P **P 22 20 45.8 -1.6**
comp=Z,1.4nm,0.6s,mb4.2,baz=73,slow=6.9
NOA NORSAR Array B 64.44 327 P **P 22 20 46.0 -1.4**
comp=Z,2.5nm,0.8s,mb4.3,baz=72,slow=6.6,SNR=9.0
MORC Moravsky Berou 64.61 314 *e*P **P 22 20 48.4 -0.3**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MORC Moravsky Berou 64.61 314 *e*P **P 22 20 48.4 -0.3**
comp=Z,2.2nm,0.7s,mb4.3
PKSM Moragy 65.08 310⇑ *i*P **P 22 20 50.3 -1.6**
DPC Dobruska-Polom 65.16 315 *e*P **P 22 20 54.4 +2.1**
DPC MLR MLR
comp=Z,500nm,17.5s,MS4.8
DPC MLR MLR
comp=Z,500nm,20.5s
TREC Trest 66.03 314 AMS AMS 22 50 00.0
comp=Z,300nm,15.6s
PVCC Panska Ves 66.16 316 *e*P **P 22 21 01.7 +3.0**
PVCC MLR MLR
comp=Z,400nm,13.8s,MS4.8
PVCC MLR MLR
comp=Z,400nm,14.3s
PRU Pruhonice 66.36 315 *e*P **P 22 21 07.7 +7.7**
PRU MLR MLR
comp=Z,500nm,14.6s,MS4.9
PRU MLR MLR
comp=Z,400nm,18.3s
BRG Berggiesshubel 66.41 316 *e*P **P 22 21 02.5 +2.2**
comp=Z,4.5nm,0.9s,mb4.5
BRG Berggiesshubel 66.41 316 *e*P **P 22 21 02.5 +2.2**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
CLL Collm 66.81 317 *e*P **P 22 21 05.0 +2.1**
CLL *e* pP 22 21 09.0 +0.3
CLL *e* 22 21 16.0
CLL LR LR
comp=Z,400nm,20.6s,MS4.6
CLL Collm 66.81 317 *e*P **P 22 21 05.0 +2.1**
CLL *e*pP pP 22 21 09.0 +0.3
CLL *e* 22 21 16.0
CLL *e*PP PP 22 23 30.0 +0.3
CLL LmV 22 51 00.0
comp=Z,400nm,20.6s
KHC Kasperske Hory 67.26 315 AMS AMS 22 51 30.0
comp=Z,300nm,11.1s
GERES GERESS Array B 67.29 314 P **P 22 21 06.9 +0.9**
comp=Z,0.7nm,0.5s,mb3.9,baz=76,slow=5.6,SNR=9.3
NKC Novy Kostel 67.53 316 AMS AMS 22 51 30.0
COLD Coldfoot 67.53 24 *e*P **P 22 21 07.0 -0.2**
comp=Z,13nm,1.0s,mb4.9
BPAW Bear Paw Mtn. 68.68 27 *e*P **P 22 21 14.5 +0.1**
comp=Z,17nm,1.0s,mb4.9
PPLA Purkeypile 68.75 28 *e*P **P 22 21 16.8 +1.8**
comp=Z,36nm,1.3s,mb5.2
KTH Kantishna Hill 68.96 28 *e*P **P 22 21 16.6 +0.4**
COLA College 69.50 26 *e*P **P 22 21 19.8 +0.3**
COLA pmax pmax
comp=Z,25nm,0.9s,mb5.1
COLA College 69.50 26 *e*P **P 22 21 19.8 +0.3**
comp=Z,25nm,0.9s,mb5.2
MCK McKinley 69.65 27 *e*P **P 22 21 17.5 -3.0**
CEL Celeste 69.95 303 P **P 22 21 23.5 +0.7**
comp=Z,19nm,1.2s,mb4.9
AQU L'Aquila 70.01 308 *e*P **P 22 21 24.6 +1.5**
AQU 22 21 48.0
AQU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
AQU L'Aquila 70.01 308 *e*P **P 22 21 24.6 +1.5**
comp=Z,6.6nm,0.9s,mb4.6
AQU PcP PcP 22 21 48.0 +2.7
KMBO Kilima Mbogo 70.63 256 LR LR 22 53 48.0
comp=Z,2μm,22.0s,MS5.2,baz=103,slow=37
KDAK Kodiak Island 70.95 33 *i* P **P 22 21 29.1 +0.6**
WLF Walferdange 71.47 317 P **P 22 21 31.8 0.0**
EGAK Eagle 71.97 24 *e*P **P 22 21 38.0 +3.4**
EIDS Eidsvold 72.17 136 *e*P **P 22 21 36.6 +0.3**
INK Inuvik 72.19 19 P **P 22 21 35.5 -0.4**
comp=Z,10nm,0.8s,mb4.8,baz=343,slow=5.4,SNR=14
INK Inuvik 72.19 19 *e*P **P 22 21 35.3 -0.6**
INK pmax pmax
comp=Z,14nm,0.9s
INK Inuvik 72.19 19 *e*P **P 22 21 35.3 -0.6**
comp=Z,14nm,0.9s,mb4.9
STKA Stephens Creek 72.23 147 *e*P **P 22 21 35.8 -0.6**
comp=Z,6.5nm,0.6s,mb4.7
STKA Stephens Creek 72.23 147 P **P 22 21 35.7 -0.7**
comp=Z,7.1nm,0.5s,mb4.8,baz=328,slow=6.2,SNR=15
STKA Stephens Creek 72.23 147 P **P 22 21 35.7 -0.7**
LPG La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
comp=Z,8.9nm,0.6s,mb4.6
LPG La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPG La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
comp=Z,4.4nm,0.6s,mb4.6
LPL La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
comp=Z,6.6nm,0.6s,mb4.5
LPL La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LPL La Plagne 72.99 313 *e*P **P 22 21 40.6 -0.4**
comp=Z,3.3nm,0.6s,mb4.4
BNI Bardonecchia 73.24 313 *e*P **P 22 21 42.0 -0.5**
SUMG Summit 73.32 349 *e*P **P 22 21 45.0 +2.5**
RES Resolute Bay 73.70 5 P **P 22 21 44.5 -0.2**
comp=Z,5.2nm,0.9s,mb4.5,baz=6.5,slow=5.8,SNR=9.9
RES Resolute Bay 73.70 5 P **P 22 21 44.5 -0.2**
RES pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
RES Resolute Bay 73.70 5 *e*P **P 22 21 45.4 +0.7**
comp=Z,6.8nm,1.0s,mb4.5
CMSA Cobar Meteorol 73.95 144 *e*P **P 22 21 46.8 +0.1**
SMF Signal de Mont 74.24 315 *e*P **P 22 21 46.9 -1.4**
TCF Toulx Ste Croi 75.40 315 *e*P **P 22 21 53.7 -1.3**
CAF Calviac 76.17 314 *e*P **P 22 21 59.0 -0.5**
SKAG Skagway 77.42 27 *e*P **P 22 22 08.1 +1.9**
YKA Yellowknife Ar 81.72 17 P **P 22 22 29.2 -0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=330,slow=5.2,SNR=27
ESDC Sonseca Array 82.75 312 P **P 22 22 36.2 +0.8**
comp=Z,0.1nm,0.3s,baz=34,slow=3.2,SNR=2.8
MDT Midelt 87.11 307 P **P 22 22 57.6 +0.1**
comp=Z,2.3nm,1.0s,mb4.4,baz=19,slow=3.2,SNR=5.1
FCC Fort Churchill 89.18 9 *e*P **P 22 23 09.6 +2.8**
EDM Edmonton 89.98 21 *e*P **P 22 23 15.8 +5.2**
ETW Entiat 92.15 28 *e*P **P 22 23 28.7 +7.9**
NEW Newport 92.86 26 *e*P **P 22 23 30.1 +6.0**
TORD Torodi Ar. Bea 93.33 287 P **P 22 23 24.9 -2.0**
comp=Z,0.7nm,1.1s,mb4.0,baz=123,slow=5.3,SNR=4.3
WALA Waterton Lakes 93.35 24 P **P 22 23 29.7 +3.3**
BOZ Bozeman (W) 97.08 24 *e*P **P 22 23 46.2 +2.8**
RLMT Red Lodge 98.35 23 *e*P **P 22 23 52.4 +3.3**
SDCO Great Sand Dun 106.20 24 PKiKP PKiKP 22 28 40.1 +4.2
LPAZ La Paz 163.44 332 PKP PKPdf 22 30 16.2 +1.5
comp=Z,1.0nm,0.9s,baz=68,slow=5.4,SNR=3.1

MAN 14 22:13:28,12°.73N×123°.81E,h29km,mb3.8,ML2.5,MS2.1,
2C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.41**	**206**	*e*P	Pb	22 13 38.8	+1.8
MMPH				*i* S	Sb	22 13 46.0	+2.9
PVCP	**Virac**	**0.93**	**21**	*e*P	Pn	22 13 47.4	+2.3
PVCP				*e*S	Sn	22 13 58.0	+0.5
AUQP	**San Andres**	**1.25**	**298**	*e*P	Pn	22 13 50.1	+0.5
RCP	**Roxas**	**1.56**	**222**⇑	*e*P	Pn	22 13 54.6	+0.8
RCP				*i* S	Sn	22 14 14.8	+1.8
GQP	**Guinayangan**	**1.77**	**312**⇓	*e*P	Pn	22 13 56.6	0.0
GQP				*e*S	Sn	22 14 19.2	+1.0
KALP	**Kalibo**	**1.78**	**234**⇑	*e*P	Sn	22 14 16.4	-2.0
OTRP	**Odiongan**	**1.78**	**258**	*e*P	Pn	22 13 58.5	+1.6
TBP	**Tagbilaran**	**3.02**	**179**	*e*P	Pn	22 14 16.6	+2.8

MAN 14 22:14:48,12°.73N×123°.63E,h20km,mb4.9,ML3.8,MS3.9,
2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.37**	**182**	*e*P	Pb	22 14 58.1	+2.2
MMPH				*i* S	Sb	22 15 04.2	+2.9
PVCP	**Virac**	**1.00**	**30**	*e*P	Pb	22 15 06.5	-0.1
PVCP				*e*S	Sb	22 15 15.9	-3.4
AUQP	**San Andres**	**1.10**	**302**	*e*P	Pn	22 15 08.0	-0.3
AUQP				*e*S	Sb	22 15 24.6	+2.2
RCP	**Roxas**	**1.45**	**217**⇓	*e*P	Pn	22 15 13.1	0.0
RCP				*i* S	Sn	22 15 33.0	+1.4
OTRP	**Odiongan**	**1.62**	**257**	*e*P	Pn	22 15 15.7	+0.3
GQP	**Guinayangan**	**1.64**	**315**⇓	*e*P	Pn	22 15 15.8	0.0
GQP				*e*S	Sn	22 15 39.1	+2.9
KALP	**Kalibo**	**1.64**	**231**	*e*P	Pn	22 15 24.3	+8.6
LLP	**Lapu-Lapu**	**2.42**	**172**	*e*P	Pn	22 15 27.8	+1.4
LLP				*e*S	Sn	22 16 00.3	+4.7

MOS ***14*** *22:16:27.1±2.0,47°.03N×152°.72E,h66km,mb4.0/2, Error ellipse: s-maj=15.2km s-min=11.7km az=84.4*
ISCJB ***14*** *22:16:30.0±2.0,47°.0N±0°.1×152°.5E±0°.2,h86km±15km, mb3.7/12, Error ellipse: s-maj=27.6km s-min=12.7km az=36.0*
NEIC ***14*** *22:16:33.3±1.5,47°.08N×152°.40E,h96km±11km,mb3.8/1, Error ellipse: s-maj=20.2km s-min=9.1km az=133.0*
IDC ***14*** *22:16:33.1±4.0,47°.03N×152°.54E,h98km±26km,mb3.4/11, mb1 3.5/13,mb1mx3.4/27,mbtmp3.4/13, Error ellipse: s-maj=77.6km s-min=23.6km az=152.0*
ISC 14 22:16:32.4±1.8,47°.1N±0°.1×152°.4E±0°.2,h87km±13km,n33,
σ1$06/33,mb3.7/12,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.35**	**33**	*e*PN	Pn	22 17 26.5	-9.5
SKR				pmax	pmax		
comp=Z,80nm,0.5s							
YSS	**Yuzh-Sakhalins**	**6.61**	**272**	PN	Pn	22 18 07.6	+0.9
PETK	**Petropavlovsk-**	**6.92**	**27**	P	Pn	22 18 12.4	+1.5
comp=Z,0.4nm,0.3s,baz=194,slow=12,SNR=5.0							
PETK	**Petropavlovsk-**	**6.92**	**27**	*e*PN	Pn	22 18 12.3	+1.4
PETK	**Petropavlovsk-**	**6.92**	**27**	P	Pn	22 18 12.4	+1.5
ASAJ	**Asahikawa**	**7.50**	**250**	P	Pn	22 18 20.3	+1.3
comp=Z,0.7nm,0.3s,baz=81,slow=12,SNR=5.7							
ASAJ	**Asahikawa**	**7.50**	**250**	PN	Pn	22 18 20.3	+1.4
ASAJ				pmax	pmax		
comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**8.33**	**236**	*i* PN	Pn	22 18 28.0	-2.3
YAK	**Yakutsk**	**19.78**	**327**	*e*P	Pn	22 20 55.6	-1.9
YAK				pmax	pmax		
comp=Z,13nm,0.4s							
YAK	**Yakutsk**	**19.78**	**327**	*e*P	Pn	22 20 55.6	-1.9
comp=Z,13nm,0.4s							
INCN	**Inchon**	**21.27**	**253**	P	P	22 21 12.6	+1.1
HIA	**Hailar**	**21.81**	**288**	P	P	22 21 15.5	-1.6
TATO	**Taipei**	**33.01**	**239**	*e*P	P	22 22 59.2	+0.1
YHNB	**Yeheng**	**33.31**	**239**	*e*P	P	22 23 01.1	-0.6
SSLB	**Suanglung**	**34.23**	**238**	*e*P	P	22 23 08.2	-1.5
comp=Z,4.2nm,0.6s,mb4.5							
YULB	**Yu-li**	**34.34**	**237**	*e*P	P	22 23 12.2	+1.5
ZALV	**Zalesovo Beam**	**42.03**	**305**	P	P	22 24 14.9	+0.1
comp=Z,0.4nm,0.4s,mb3.5,baz=139,slow=9.3,SNR=2.7							
MKAR	**Makanchi Array**	**46.36**	**297**	P	P	22 24 50.1	+0.6
comp=Z,0.4nm,0.8s,mb3.2,baz=68,slow=6.9,SNR=3.8							
KURK	**Kurchatov**	**46.78**	**303**	P	P	22 24 53.6	+0.8
comp=Z,0.4nm,0.6s,mb3.4,baz=72,slow=8.3,SNR=3.5							
KURK	**Kurchatov**	**46.78**	**303**	P	P	22 24 52.9	+0.2
KURK				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.9							
KURK	**Kurchatov**	**46.78**	**303**	P	P	22 24 52.9	+0.1
comp=Z,0.6nm,0.4s,mb3.7							
BVAR	**Borovoye Array**	**50.28**	**309**	P	P	22 25 19.6	+0.1
comp=Z,0.2nm,0.4s,mb3.4,baz=51,slow=7.8,SNR=3.4							
YKA	**Yellowknife Ar**	**50.94**	**37**	P	P	22 25 23.6	-0.8
comp=Z,0.5nm,0.8s,mb3.6,baz=297,slow=7.3,SNR=3.5							
ARCES	**ARCESS Array B**	**57.38**	**340**	P	P	22 26 11.6	+0.6
comp=Z,1.6nm,0.8s,mb4.1,baz=18,slow=6.9,SNR=2.6							
FINES	**FINESS Array B**	**63.53**	**334**	P	P	22 26 52.8	-0.1
comp=Z,1.2nm,0.4s,mb4.1,baz=35,slow=6.2,SNR=18							
NB2	**NORSAR Subarra**	**67.75**	**341**	P	P	22 27 19.8	-0.3
comp=Z,0.8nm,0.5s,mb3.8,baz=28,slow=6.2							
NOA	**NORSAR Array B**	**67.75**	**341**	P	P	22 27 20.2	0.0
comp=Z,1.0nm,0.6s,mb3.9,baz=27,slow=6.4,SNR=4.9							
NOA	**NORSAR Array B**	**67.75**	**341**	P	P	22 27 20.2	0.0
AKASG	**Malin Array Be**	**71.00**	**326**	P	P	22 27 40.2	-0.1
comp=Z,1.4nm,0.3s,mb4.2,baz=34,slow=6.8,SNR=3.9							
PALK	**Pallekele**	**72.27**	**261**	*i* P	P	22 27 48.6	+0.1
BRTR	**Keskin Array B**	**77.82**	**316**	P	P	22 28 21.9	+1.9
comp=Z,0.6nm,0.8s,mb3.4,baz=58,slow=5.1,SNR=3.9							
BRTR	**Keskin Array B**	**77.82**	**316**	*e*P	P	22 28 21.9	+1.9
BRTR				pmax	pmax		
comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**77.94**	**334**	P	P	22 28 20.0	-0.6
comp=Z,0.1nm,0.3s,mb3.0,baz=25,slow=12,SNR=2.8							

IDC 14 22:23:20.1±0.9,27°.50N×140°.86E,h0km,mb3.5/5,
mb1 3.7/5,mb1mx3.5/23,mbtmp3.5/5,Error ellipse:
s-maj=26.4km s-min=17.6km az=35.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.24**	**109**	Pn	Pn	22 23 44.4	-0.4
71nm,0.3s,baz=304,slow=6.5,SNR=35							
CBIJ				Sn	Sn	22 24 01.2	-1.1
452nm,0.3s,baz=286,slow=20,SNR=38							
WRA	**Warramunga Arr**	**47.58**	**188**	P	P	22 31 58.1	+0.4
3.2nm,0.7s,baz=8.3,slow=8.6,SNR=25							
MKAR	**Makanchi Array**	**49.31**	**309**	P	P	22 32 09.2	-1.6
0.1nm,0.6s,baz=104,slow=6.1,SNR=2.4							
ASAR	**Alice Springs**	**51.31**	**188**	P	P	22 32 26.3	+0.1
0.4nm,0.9s,baz=358,slow=6.6,SNR=4.4							
KURK	**Kurchatov**	**51.86**	**314**	P	P	22 32 30.8	+0.7
0.2nm,0.4s,baz=91,slow=6.7,SNR=2.2							
YKA	**Yellowknife Ar**	**72.34**	**28**	P	P	22 34 48.4	+1.0
0.3nm,0.8s,baz=296,slow=6.2,SNR=2.4							

ISCJB ***14*** *22:38:50.5±0.4,38°.59N±0°.02×23°.64E±0°.03,h7km±3km, Error ellipse: s-maj=4.0km s-min=2.9km az=3.6*
CSEM ***14*** *22:38:50.6±0.2,38°.58N×23°.64E,h10km,ML3.0, Error ellipse: s-maj=4.5km s-min=3.4km az=100.0*
ATH ***14*** *22:38:50.8,38°.58N×23°.57E,h20km±1km,MD3.1/18, ML3.0*
NEIC ***14*** *22:38:50.8,38°.58N×23°.57E,h20km,ML3.0(ATH), After ATH.*
THE ***14*** *22:38:51.2,38°.58N×23°.61E,h7km±1km,ML2.9/5, Error ellipse: s-maj=1.2km s-min=0.7km az=323.0*
ISC 14 22:38:51.1±0.4,38°.58N±0°.02×23°.62E±0°.03,h10km±3km,
n77,σ0$81/110,2D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.48**	**283**	P	Pg	22 38 59.8	-0.8
ATAL				S	Sg	22 39 07.4	+0.4
ATAL	**Atalanti**	**0.48**	**283**	P	Pg	22 38 59.8	-0.8
ATAL				S	Sg	22 39 07.4	+0.4
LKR	**Lokris**	**0.49**	**278**	*e*PB	Pg	22 38 59.6	-1.1
LKR	**Lokris**	**0.49**	**278**	P	Pg	22 38 59.6	-1.1
LKR				S	Sg	22 39 07.1	-0.1
LKR	**Lokris**	**0.49**	**278**	P	Pg	22 38 59.6	-1.1
LKR				S	Sg	22 39 07.1	-0.1
PTL	**Penteli**	**0.57**	**160**	*e*PN	Pg	22 39 02.0	-0.1
PTL	**Penteli**	**0.57**	**160**	*e*Pn	Pg	22 39 02.0	-0.1
ATH	**Athens Observa**	**0.61**	**173**	*e*PN	Pg	22 39 02.9	-0.1
ATH				*e*SN	Sg	22 39 11.3	+0.3
ATH	**Athens Observa**	**0.61**	**173**	*e*Pn	Pg	22 39 02.9	-0.1
AOS	**Alonnisos**	**0.62**	**19**	P	Pg	22 39 03.0	-0.2
AOS				S	Sg	22 39 13.0	+1.7
AOS	**Alonnisos**	**0.62**	**19**	P	Pg	22 39 03.0	-0.2
AOS				S	Sg	22 39 13.0	+1.7
ATHU	**Athens Univers**	**0.63**	**168**	P	Pg	22 39 03.1	-0.2
ATHU	**Athens Univers**	**0.63**	**168**	P	Pg	22 39 03.1	-0.2
VLY	**Voula,Athens**	**0.74**	**169**	*e*PN	Pg	22 39 05.1	-0.3
VLY	**Voula,Athens**	**0.74**	**169**	*e*Pn	Pg	22 39 05.1	-0.3
LTK	**Loutraki**	**0.76**	**223**	*e*PN	Pg	22 39 04.9	-0.9
LTK	**Loutraki**	**0.76**	**223**	P	Pg	22 39 04.9	-0.9
LTK				S	Sg	22 39 16.8	+1.1
LTK	**Loutraki**	**0.76**	**223**	P	Pg	22 39 04.9	-0.9
LTK				S	Sg	22 39 16.8	+1.1
NEO	**Neokhori**	**0.79**	**337**⇓	*i*PN	Pg	22 39 06.0	-0.3
NEO				*e*SN	Sg	22 39 17.1	+0.5
NEO	**Neokhori**	**0.79**	**337**⇓	*i*Pn	Pg	22 39 06.0	-0.3
NEO				*e*Sn	Sg	22 39 17.1	+0.5
NAIG	**Nisos Aigina**	**0.83**	**187**	*e*PN	Pg	22 39 06.7	-0.4
NAIG	**Nisos Aigina**	**0.83**	**187**	*e*Pn	Pg	22 39 06.7	-0.4
XOR	**Xorichti**	**0.85**	**337**	P	Pg	22 39 06.9	-0.7
XOR				S	Sg	22 39 20.4	+1.7
XOR	**Xorichti**	**0.85**	**337**	P	Pg	22 39 06.9	-0.7
XOR				S	Sg	22 39 20.4	+1.7
AGG	**Agios Georgios**	**1.10**	**294**	*e*PN	Pg	22 39 11.3	-1.0
AGG				*e*SN	Sg	22 39 26.1	-0.5
AGG	**Agios Georgios**	**1.10**	**294**	P	Pb	22 39 11.7	-0.6
AGG				S	Sg	22 39 27.7	+1.1
AGG	**Agios Georgios**	**1.10**	**294**	*e*Pn	Pg	22 39 11.3	-1.0
AGG	**Agios Georgios**	**1.10**	**294**	P	Pb	22 39 11.7	-0.6
AGG				*e*Sn	Sg	22 39 26.1	-0.5
AGG				S	Sg	22 39 27.7

EFP	**Efpalio**	**1.36**	**264**	*e*PN	**Pn**	**22 39 15.1**	**-1.0**
EFP				*e*SN	**Sn**	**22 39 34.1**	**-0.1**
EFP	**Efpalio**	**1.36**	**264**	P	**Pn**	**22 39 16.2**	**+0.1**
EFP				S	**Sb**	**22 39 34.9**	**+0.9**
EFP	**Efpalio**	**1.36**	**264**	*e*Pn	**Pn**	**22 39 15.1**	**-1.0**
EFP	**Efpalio**	**1.36**	**264**	P	**Pn**	**22 39 16.2**	**+0.1**
EFP				*e*Sn	**Sn**	**22 39 34.1**	**-0.1**
EFP				S	**Sb**	**22 39 34.9**	**+0.9**
EVR	**Evrytania**	**1.46**	**284**	*e*PN	**Pn**	**22 39 17.9**	**+0.4**
EVR	**Evrytania**	**1.46**	**284**	*e*Pn	**Pn**	**22 39 17.9**	**+0.4**
VLX	**Vlachokerasia**	**1.56**	**219**	*e*PN	**Pn**	**22 39 19.3**	**+0.4**
VLX	**Vlachokerasia**	**1.56**	**219**	P	**Pn**	**22 39 19.3**	**+0.4**
VLX				S	**Sn**	**22 39 39.6**	**+0.4**
VLX	**Vlachokerasia**	**1.56**	**219**	P	**Pn**	**22 39 19.3**	**+0.4**
VLX				S	**Sn**	**22 39 39.6**	**+0.4**
THL	**Klokotos Trika**	**1.59**	**309**	*e*PB	**Pn**	**22 39 18.5**	**-0.9**
THL	**Klokotos Trika**	**1.59**	**309**	P	**Pn**	**22 39 19.1**	**-0.3**
THL				S	**Sn**	**22 39 39.8**	**-0.2**
THL	**Klokotos Trika**	**1.59**	**309**	P	**Pn**	**22 39 19.1**	**-0.3**
THL				S	**Sn**	**22 39 39.8**	**-0.2**
LIT	**Litokhoron**	**1.75**	**330**	*e*PB	**Pn**	**22 39 21.2**	**-0.4**
LIT				*e*SN	**Sn**	**22 39 43.8**	**-0.2**
LIT	**Litokhoron**	**1.75**	**330**	P	**Pn**	**22 39 21.2**	**-0.4**
LIT	**Litokhoron**	**1.75**	**330**	P	**Pn**	**22 39 21.2**	**-0.4**
LIT				*e*Sn	**Sn**	**22 39 43.8**	**-0.2**
OUR	**Ouranopolis**	**1.77**	**9**	P	**Pn**	**22 39 21.0**	**-0.9**
OUR	**Ouranopolis**	**1.77**	**9**	P	**Pn**	**22 39 21.0**	**-0.9**
RLS	**Riolos of Patr**	**1.77**	**254**	*e*PN	**Pn**	**22 39 22.9**	**+1.0**
RLS	**Riolos of Patr**	**1.77**	**254**	*e*Pn	**Pn**	**22 39 22.9**	**+1.0**
LIA	**Limnos Island**	**1.79**	**42**	P	**Pn**	**22 39 21.3**	**-0.8**
LIA	**Limnos Island**	**1.79**	**42**	P	**Pn**	**22 39 21.3**	**-0.8**
PLG	**Polygyros**	**1.79**	**356**	*e*PB	**Pn**	**22 39 21.9**	**-0.3**
PLG	**Polygyros**	**1.79**	**356**	P	**Pn**	**22 39 21.9**	**-0.3**
PLG	**Polygyros**	**1.79**	**356**	P	**Pn**	**22 39 21.9**	**-0.3**
VLI	**Veliai**	**1.94**	**197**	*e*PB	**Pn**	**22 39 23.8**	**-0.4**
ITM	**Ithomi**	**1.94**	**224**	*e*PN	**Pn**	**22 39 25.2**	**+1.0**
ITM	**Ithomi**	**1.94**	**224**	*e*Pn	**Pn**	**22 39 25.2**	**+1.0**
SOH	**Sokhos**	**2.25**	**355**	*e*PB	**Pn**	**22 39 28.3**	**-0.1**
PYL	**PYLOS**	**2.25**	**222**	*e*PN	**Pn**	**22 39 29.7**	**+1.3**
PYL	**PYLOS**	**2.25**	**222**	*e*Pn	**Pn**	**22 39 29.7**	**+1.3**
KYTH	**Kithira**	**2.34**	**192**	*e*PN	**Pn**	**22 39 29.9**	**+0.2**
KYTH	**Kithira**	**2.34**	**192**	*e*Pn	**Pn**	**22 39 29.9**	**+0.2**
VLS	**Valsamata**	**2.42**	**261**	*e*PN	**Pn**	**22 39 31.8**	**+1.1**
VLS	**Valsamata**	**2.42**	**261**	*e*Pn	**Pn**	**22 39 31.8**	**+1.1**
SRS	**Serrai**	**2.53**	**359**	P	**Pn**	**22 39 32.4**	**+0.1**
SRS	**Serrai**	**2.53**	**359**	P	**Pn**	**22 39 32.4**	**+0.1**
NVR	**Nevrokopi**	**2.77**	**4**	*e*PN	**Pn**	**22 39 35.1**	**-0.5**
NVR	**Nevrokopi**	**2.77**	**4**	*e*Pn	**Pn**	**22 39 35.1**	**-0.5**
ALN	**Alexandroupoli**	**2.97**	**38**	*e*PN	**Pn**	**22 39 39.8**	**+1.4**
ALN	**Alexandroupoli**	**2.97**	**38**	*e*Pn	**Pn**	**22 39 39.8**	**+1.4**
KARN	**Karanos**	**3.18**	**176**	*e*PB	**Pn**	**22 39 44.2**	**+2.9**

*IDC **14** 22:39:48.0±4.0, 31°.04N×103°.80E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, Error ellipse: s-maj=92.0km s-min=29.5km az=11.0*
*ISCJB **14** 22:39:49.3±0.4, 31°.34N±0°.03×103°.92E±0°.06, h10km, mb3.8/11, Error ellipse: s-maj=7.0km s-min=3.9km az=171.6*
*NEIC **14** 22:39:50.0±0.9, 31°.15N×103°.79E, h10km, mb3.9/1, Error ellipse: s-maj=22.1km s-min=10.1km az=200.0*
*BJI **14** 22:39:49.1, 31°.31N×103°.93E, h8km, ML3.7/8, Ms3.4/2*
ISC 14 22:39:51.0±0.4, 31°.27N±0°.03×103°.88E±0°.06, h10km, n25, σ1§10/31, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**196**	Pg	**Pg**	**22 39 58.9**	**+0.7**
CD2				Sg	**Sg**	**22 40 06.1**	**+2.9**
CD2	comp=N,19μm,0.6s			smax			
LZH	**Lanzhou**	**4.81**	**360**	*e*Pg	**Pg**	**22 41 26.1**	**+3.0**
LZH				Sg	**Sg**	**22 42 27.0**	**+1.6**
LZH	comp=N,120nm,0.8s			smax			
LZH	comp=E,53nm,0.6s			smax			
ENH	**Enshi**	**4.93**	**100**	*e*Pn	**Pn**	**22 41 05.4**	**+0.3**
ENH				*e*Sn	**Sn**	**22 42 00.9**	**-1.2**
XAN	**Xi'an**	**5.07**	**56**	Pn	**Pn**	**22 40 59.8**	**-7.3**
XAN	comp=N,89nm,0.9s			smax			
XAN	comp=E,48nm,0.9s			smax			
GYA	**Guiyang**	**5.38**	**152**	Pg	**Pb**	**22 41 24.8**	**-0.2**
GYA				Sg	**Sb**	**22 42 29.9**	**+0.3**
GYA	comp=N,120nm,0.8s			smax			
GYA	comp=E,100nm,0.9s			smax			
KMI	**Kunming**	**6.20**	**190**	Pn	**Pn**	**22 41 24.5**	**+1.9**
KMI				Sn	**Sn**	**22 42 34.4**	**+0.9**
KMI				Sg	**Sg**	**22 43 07.4**	**-2.7**
KMI	comp=N,19nm,2.3s			smax			
KMI	comp=E,14nm,2.5s			smax			
KMI	comp=N,290nm,20.2s			LR	LR		
KMI	comp=E,250nm,24.0s			LR	LR		
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**22 43 44.5**	**+0.1**
	baz=180,slow=12,SNR=4.5						
KSRS	**Korea Array**	**20.76**	**66**	P	**P**	**22 44 33.0**	**+1.1**
	comp=E,1.3nm,0.6s,baz=257,slow=10,SNR=5.2						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**22 44 52.7**	**-0.2**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**22 44 53.4**	**+0.5**
	comp=E,2.7nm,0.8s,mb3.7,baz=120,slow=11,SNR=19						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**22 44 53.4**	**+0.5**
UCH	**Uchtor**	**25.83**	**303**	*e*P	**P**	**22 45 21.2**	**-1.2**
	comp=E,3.5nm,1.3s,mb3.7						
EKS2	**Erkin-Say**	**26.47**	**304**	P	**P**	**22 45 27.2**	**-1.0**
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**22 45 28.2**	**0.0**
	comp=E,2.6nm,0.8s,mb3.8,baz=134,slow=8.5,SNR=10.0						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**22 45 33.2**	**+0.3**
	comp=E,2.2nm,0.8s,mb3.8,baz=132,slow=9.1,SNR=8.9						
BVAR	**Borovoye Array**	**32.55**	**322**	P	**P**	**22 46 22.4**	**+0.4**
	comp=E,0.5nm,0.7s,mb3.5,baz=134,slow=6.2,SNR=2.6						
MALT	**Malatya**	**53.22**	**297**	P	**P**	**22 49 08.1**	**-1.5**
KEV	**Kevo**	**56.51**	**336**	P	**P**	**22 49 31.1**	**-1.7**
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**22 49 36.4**	**-0.2**
	comp=E,1.1nm,0.8s,mb3.9,baz=80,slow=8.0,SNR=4.3						
FINES	**FINESS Array B**	**57.33**	**326**	P	**P**	**22 49 37.9**	**-0.9**
	comp=E,0.6nm,0.6s,mb3.8,baz=54,slow=3.3,SNR=4.1						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**22 50 26.2**	**-0.9**
	comp=E,0.4nm,0.6s,mb3.7,baz=75,slow=5.5,SNR=3.6						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**22 51 21.1**	**+0.3**
	comp=E,4.3nm,0.7s,mb4.2						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**22 51 21.2**	**+0.4**
	comp=E,3.1nm,0.5s,mb4.2						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**22 52 08.0**	**-0.7**
	comp=E,0.3nm,0.4s,mb3.5,baz=330,slow=5.3,SNR=5.3						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**22 52 08.0**	**-0.7**

*ISCJB **14** 22:44:18.4±0.8, 39°.66N±0°.05×20°.40E±0°.05, h6km±8km, Error ellipse: s-maj=8.3km s-min=6.1km az=0.0*
*CSEM **14** 22:44:18.0±0.3, 39°.63N×20°.38E, h2km, MD3.2, Error ellipse: s-maj=6.9km s-min=6.3km az=48.0*
*NEIC **14** 22:44:18.0, 39°.61N×20°.38E, h20km, MD3.2(ATH), After ATH.*
*ATH **14** 22:44:18.0, 39°.61N×20°.38E, h20km±3km, MD3.2/8*
ISC 14 22:44:18.8±0.8, 39°.64N±0°.05×20°.39E±0°.05, h7km±7km, n22, σ0§84/29, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.35**	**87**	*e*PB	**Pg**	**22 44 24.9**	**-0.8**
JAN				*e*SB	**Sg**	**22 44 31.6**	**+1.2**
JAN	**Janina**	**0.35**	**87**	*e*Pb	**Pg**	**22 44 24.9**	**-0.8**
JAN				*e*Sb	**Sg**	**22 44 31.6**	**+1.2**
KEK	**Kerkira**	**0.46**	**279**	*e*PB	**Pg**	**22 44 26.5**	**-1.3**
KEK				*e*SB	**Sg**	**22 44 35.0**	**+1.1**
KEK	**Kerkira**	**0.46**	**279**	*e*Pb	**Pg**	**22 44 26.5**	**-1.3**
KZN	**Kozani**	**1.25**	**57**	*e*PN	**Pn**	**22 44 42.0**	**-0.6**
KZN	**Kozani**	**1.25**	**57**	*e*Pn	**Pn**	**22 44 42.0**	**-0.6**
THL	**Klokotos Trika**	**1.25**	**93**	*e*PN	**Pn**	**22 44 41.8**	**-0.9**
THL	**Klokotos Trika**	**1.25**	**93**	*e*Pn	**Pn**	**22 44 41.8**	**-0.9**
EVR	**Evrytania**	**1.32**	**123**	*e*PN	**Pn**	**22 44 43.3**	**-0.2**
EVR	**Evrytania**	**1.32**	**123**	*e*Pn	**Pn**	**22 44 43.3**	**-0.2**
VLS	**Valsamata**	**1.47**	**174**	*e*PN	**Pn**	**22 44 45.2**	**-0.4**
VLS	**Valsamata**	**1.47**	**174**	*e*Pn	**Pn**	**22 44 45.2**	**-0.4**
BIA	**Bitola**	**1.55**	**27**	*e*Pn	**Pn**	**22 44 48.5**	**+1.7**
BIA	**Bitola**	**1.55**	**27**	*e*Pn	**Pn**	**22 44 48.4**	**+1.6**
AGG	**Agios Georgios**	**1.62**	**112**	*e*PN	**Pn**	**22 44 48.2**	**+0.4**
AGG	**Agios Georgios**	**1.62**	**112**	*e*Pn	**Pn**	**22 44 48.2**	**+0.4**
LIT	**Litokhoron**	**1.68**	**73**	*e*PN	**Pn**	**22 44 48.9**	**+0.4**
LIT	**Litokhoron**	**1.68**	**73**	*e*Pn	**Pn**	**22 44 48.9**	**+0.4**
EFP	**Efpalio**	**1.69**	**135**	*e*PN	**Pn**	**22 44 49.2**	**+0.5**
EFP				*e*SN	**Sn**	**22 45 10.3**	**-0.2**
EFP	**Efpalio**	**1.69**	**135**	*e*Pn	**Pn**	**22 44 49.2**	**+0.5**
EFP				*e*Sn	**Sn**	**22 45 10.3**	**-0.2**
KRUS	**Krusevo**	**1.84**	**20**	*e*Pn	**Pn**	**22 44 51.0**	**+0.1**
KRUS				*e*Sg	**Sg**	**22 45 17.3**	**-0.8**
KRUS	**Krusevo**	**1.84**	**20**	*e*Pn	**Pn**	**22 44 50.9**	**+0.1**
KRUS				*e*Sg	**Sg**	**22 45 17.2**	**-0.9**

*IDC **14** 22:45:04.5±1.0, 7°.71S×125°.88E, h0km, mb3.9/8, mb1 4.0/11, mb1mx3.9/19, mbtmp3.9/11, ML3.8/3, Error ellipse: s-maj=45.2km s-min=19.8km az=66.0*
*ISCJB **14** 22:45:05.3±2.4, 7°.85S±0°.06×125°.83E±0°.07, h23km±18km, mb3.9/10, Error ellipse: s-maj=13.6km s-min=5.7km az=141.9*
*NEIC **14** 22:45:05.4±0.2, 7°.78S×125°.92E, h10km, mb4.0/3, Error ellipse: s-maj=8.8km s-min=4.7km az=68.0*
ISC 14 22:45:07.9±2.7, 7°.83S±0°.06×125°.81E±0°.06, h25km±20km, n33, σ0§97/40, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.63**	**295**	Pn	**Pn**	**22 46 44.5**	**+0.6**
	0.8nm,0.3s,baz=114,slow=13,SNR=5.1						
KAPI				Sn	**Sn**	**22 47 57.8**	**-1.0**
	0.7nm,0.3s,baz=9.5,slow=18,SNR=3.3						
KAKA	**Kakadu**	**8.13**	**127**	*e*P	**Pn**	**22 47 06.5**	**+2.0**
	9.6nm,0.6s						
KAKA				*e*S	**Sn**	**22 48 36.1**	**+0.4**
KNA	**Kununurra**	**8.39**	**160**	*e*P	**Pn**	**22 47 09.2**	**+1.2**
	30nm,0.9s						
KNA				*e*S	**Sn**	**22 48 39.9**	**-2.1**
FITZ	**Fitzroy Crossi**	**10.21**	**181**	*e*P	**Pn**	**22 47 32.7**	**-0.3**
	12nm,0.6s						
FITZ				*e*S	**Sn**	**22 49 18.8**	**-8.0**
FITZ	**Fitzroy Crossi**	**10.21**	**181**	Pn	**Pn**	**22 47 32.7**	**-0.3**
	0.6nm,0.3s,baz=13,slow=8.4,SNR=15						
FITZ				Sn	**Sn**	**22 49 15.7**	**-11**
	0.6nm,0.3s,baz=31,slow=8.0,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.21**	**181**	*e*Pn	**Pn**	**22 47 32.2**	**-0.8**
FITZ				*e*Sn	**Sn**	**22 49 23.3**	**-3.6**
MBWA	**Marble Bar**	**14.49**	**203**	*e*Pn	**Pn**	**22 48 32.0**	**+0.4**
WRAB	**Tennant Creek**	**14.61**	**146**	*e*Pn	**Pn**	**22 48 30.6**	**-2.5**
	6.5nm,0.8s						
WRAB				*e*Sn	**Sn**	**22 51 06.8**	**-7.5**
ASAR	**Alice Springs**	**17.56**	**155**	P	**Pn**	**22 49 10.2**	**-0.9**
	0.6nm,0.3s,baz=322,slow=9.9,SNR=18						
ASAR				S	**Sn**	**22 52 21.6**	**-4.5**
	0.3nm,0.3s,baz=322,slow=20,SNR=5.4						
KSM	**Kuching**	**18.01**	**300**	Pn	**Pn**	**22 49 16.5**	**-0.2**
STKA	**Stephens Creek**	**28.09**	**151**	P	**P**	**22 51 00.1**	**+2.4**
	1.6nm,0.7s,mb3.8,baz=302,slow=13,SNR=2.6						
STKA	**Stephens Creek**	**28.09**	**151**	*e*P	**P**	**22 50 56.8**	**-0.9**
	5.2nm,2.0s,mb3.8						
GUMO	**Guam**	**28.48**	**42**	P	**P**	**22 50 59.7**	**-1.6**
YHNB	**Yeheng**	**32.59**	**353**	P	**P**	**22 51 37.0**	**-0.4**
ENH	**Enshi**	**40.99**	**338**	*e*P	**P**	**22 52 48.2**	**-0.7**
LSA	**Lhasa**	**50.02**	**320**	P	**P**	**22 54 00.8**	**+0.2**
RAO	**Raoul Island**	**56.88**	**120**	*e*P	**P**	**22 54 51.6**	**+0.6**
	131nm,0.6s						
ULN	**Ulaanbaatar**	**57.88**	**345**	P	**P**	**22 54 57.3**	**-0.3**
SONM	**Songino Array**	**58.02**	**345**	P	**P**	**22 54 58.2**	**-0.4**
	0.2nm,0.4s,mb3.5,baz=176,slow=8.5,SNR=2.9						
PETK	**Petropavlovsk-**	**66.47**	**20**	P	**P**	**22 55 55.0**	**-0.1**
	3.2nm,1.0s,mb4.3,baz=189,slow=7.3,SNR=4.0						
MK31	**Makanchi Array**	**66.71**	**329**	*e*P	**P**	**22 55 55.6**	**-1.2**
MKAR	**Makanchi Array**	**66.71**	**329**	P	**P**	**22 55 56.6**	**-0.2**
	0.5nm,0.6s,mb3.7,baz=135,slow=6.5,SNR=7.9						
UCH	**Uchtor**	**68.31**	**321**	*e*P	**P**	**22 56 07.6**	**+0.6**
	0.7nm,0.7s,mb3.8						
AAK	**Ala-Archa**	**68.54**	**322**	P	**P**	**22 56 09.8**	**+1.4**
	0.9nm,0.3s,mb4.2,baz=127,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**70.55**	**336**	P	**P**	**22 56 20.5**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=149,slow=6.7,SNR=3.2						
KURK	**Kurchatov**	**71.11**	**330**	P	**P**	**22 56 24.0**	**-0.1**
	0.8nm,0.9s,mb3.6,baz=140,slow=5.5,SNR=3.9						
MAW	**Mawson**	**72.68**	**201**	*e*P	**P**	**22 56 34.2**	**+0.9**
SBA	**Scott Base**	**73.10**	**172**	*e*P	**P**	**22 56 36.4**	**+0.7**
BVAR	**Borovoye Array**	**76.59**	**329**	P	**P**	**22 56 56.5**	**+0.3**
	0.8nm,0.9s,mb3.7,baz=134,slow=4.3,SNR=5.1						
BRVK	**Borovoye**	**76.66**	**329**	*e*P	**P**	**22 56 57.0**	**+0.4**
	3.3nm,1.2s,mb4.1						
MALT	**Malatya**	**92.74**	**308**	P	**P**	**22 58 18.4**	**+0.1**
LBTB	**Lobatse**	**95.88**	**244**	P	**P**	**22 58 34.2**	**+1.1**
ESLA	**Sonseca Array**	**125.11**	**314**	PKPdf	PKPdf	23 04 06.8	+0.3

*SZGRF **14** 22:44:55.0, 21°.18S×177°.69W, h33km, Fiji Islands region*
*ISCJB **14** 22:45:59.1±0.8, 19°.80S±0°.05×178°.34W±0°.04, h574km±10km, mb4.8/71, Error ellipse: s-maj=8.4km s-min=4.6km az=161.1*
*IDC **14** 22:45:59.3±1.1, 19°.86S×178°.11W, h572km±12km, mb4.2/18, mb1 4.3/20, mb1mx4.2/22, mbtmp4.2/20, Error ellipse: s-maj=12.4km s-min=10.4km az=116.0*
*BJI **14** 22:46:00.2, 19°.80S×178°.30W, h604km, mB5.0/14, mb5.0/24*
*MOS **14** 22:46:00.0±1.1, 19°.66S×178°.22W, h584km, mb4.8/12, Error ellipse: s-maj=11.2km s-min=9.6km az=55.9*
*DJA **14** 22:46:00, 20°.12S×178°.14W, h582km, mb5.1/26*
*NEIC **14** 22:46:02.2±0.6, 19°.80S×178°.25W, h604km±7km, mb4.9/39, Error ellipse: s-maj=7.2km s-min=4.7km az=157.0*
*GCMT **14** 22:46:02.2±0.8, 20°.18S×178°.54W, h603km±6km, MW5.4/31, Moment Tensor Solution. s31,c37; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr-0.34±.10; Mθθ 1.08±.14; Mφφ-0.74±.16; Mrθ-0.38±.14; Mrφ 0.58±.17; Mθφ-1.24±.15; Best double couple: M0 1.70200×10^17 NP1:φs 292.00000°, δ41.00000°, λ-12.00000°. NP2: φs 31.00000°, δ82.00000°, λ-131.00000°. Principal axes: T 1.5910, Plg25.0000°, Azm152.0000°; N 0.2190, Plg40.0000°, Azm38.0000°; P -1.8120, Plg39.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s.*
*BGS **14** 22:46:02.2±6.0, 19°.80S×178°.25W, h604km, mb4.9(NEIC)*
ISC 14 22:45:59.4±0.8, 19°.80S±0°.05×178°.29W±0°.04, h564km±9km, h605km±2.8km: pP-P, n757, σ0§65/432, mb4.8/71, 169C-169D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.55**	**48**	P	**P**	**22 48 01.8**	**-1.2**
	6.0nm,0.3s,baz=59,slow=20,SNR=4.5						
AFI				S	**S**	**22 49 37.6**	**-6.7**
	29nm,0.3s,baz=36,slow=23,SNR=19						
RAO	**Raoul Island**	**9.42**	**178**	S	**S**	**22 49 58.0**	**-2.1**
	48nm,0.3s,baz=98,slow=21,SNR=5.8						
RAO	**Raoul Island**	**9.42**	**178**	*e*P	**P**	**22 48 17.1**	**+5.6**
FUNA	**Funafuti**	**11.46**	**347**	*e*P	**P**	**22 48 33.8**	**+1.2**
DZM	**Mont Dzumac**	**14.45**	**258**	*e*P	**P**	**22 49 07.1**	**+4.0**
	55nm,0.7s						
DZM	**Mont Dzumac**	**14.45**	**258**	*e*P	**P**	**22 49 06.4**	**+3.4**
DZM	**Mont Dzumac**	**14.45**	**258**	*e*P	**P**	**22 49 07.2**	**+4.2**
	38nm,0.6s						
OUZ	**Omahuta**	**16.96**	**203**	*e*P	**P**	**22 49 29.3**	**+2.4**
	120nm,1.0s						
RAR	**Rarotonga**	**17.40**	**98**	*e*P	**P**	**22 49 29.8**	**-1.4**
URZ	**Urewera**	**18.83**	**191**	P	**P**	**22 49 41.4**	**-2.5**
	17nm,0.3s,baz=6.7,slow=5.1,SNR=68						
URZ				S	**S**	**22 52 38.9**	**-7.5**
	0.5nm,0.3s,baz=175,slow=22,SNR=8.0						
URZ				ScP	ScP	22 56 21.4	-3.5
	0.9nm,0.3s,baz=236,slow=3.3,SNR=4.0						
URZ	**Urewera**	**18.83**	**191**	P	**P**	**22 49 41.5**	**-2.5**
	54nm,0.6s						
RPZ	**Rata Peaks**	**25.47**	**198**	P	**P**	**22 50 42.7**	**-0.6**
	9.0nm,0.6s,mb4.6,baz=268,slow=4.9,SNR=10.0						
PAE	**Paea**	**27.25**	**90**	*e*P	**P**	**22 50 58.1**	**-1.3**
	9.8nm,1.1s,mb4.3						
PAE	**Paea**	**27.25**	**90**	*e*P	**P**	**22 50 58.1**	**-1.3**
PAE				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
TIAR	**Tiarei**	**27.49**	**90**	*e*P	**P**	**22 51 00.3**	**-1.2**
	comp=Z,26nm,0.7s,mb5.0						
EIDS	**Eidsvold**	**28.79**	**253**	*e*P	**P**	**22 51 13.3**	**+0.7**
EIDS	**Eidsvold**	**28.79**	**253**	*e*P	**P**	**22 51 13.5**	**+0.8**
	comp=Z,50nm,1.4s,mb5.0						
ARMA	**Armidale**	**29.14**	**243**	*e*P	**P**	**22 51 17.3**	**+1.6**
ARMA				*e*		22 56 54.7	
ARMA	**Armidale**	**29.14**	**243**	*e*P	**P**	**22 51 17.7**	**+2.0**
	comp=Z,16nm,0.8s,mb4.7						
PMOR	**Pomariorio Ree**	**29.36**	**86**	*e*P	**P**	**22 51 16.1**	**-1.7**
	comp=Z,69nm,1.0s,mb5.2						
CNB	**Canberra Magne**	**32.41**	**235**	*e*P	**P**	**22 51 44.7**	**+1.2**
CTA	**Charters Tower**	**33.30**	**263**	⇓*i*P	**P**	**22 51 52.6**	**+1.3**
	comp=Z,78nm,0.4s,mb5.6						
CTA	**Charters Tower**	**33.30**	**263**	P	**P**	**22 51 52.6**	**+1.3**
	comp=Z,105nm,0.5s,mb5.7,baz=92,slow=10,SNR=181						
CTAO	**Charters Tower**	**33.30**	**263**	*e*P	**P**	**22 51 52.7**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,123nm,0.5s,mb5.7						
CTAO	**Charters Tower**	**33.30**	**263**	*e*P	**P**	**22 51 52.7**	**+1.4**
	comp=Z,123nm,0.5s,mb5.7						
CMSA	**Cobar Meteorol**	**34.36**	**243**	*e*P	**P**	**22 52 00.8**	**+0.8**
TOO	**Toolangi**	**36.10**	**233**	*e*P	**P**	**22 52 15.1**	**+0.7**
TAU	**Tasmania Unive**	**36.94**	**224**	P	**P**	**22 52 21.7**	**+0.5**
COEN	**Coen**	**37.28**	**273**	*e*P	**P**	**22 52 25.5**	**+1.2**
	comp=Z,551nm,0.8s						
STKA	**Stephens Creek**	**37.86**	**243**	P	**P**	**22 52 29.9**	**+1.1**
	comp=Z,22nm,0.9s,mb4.7,baz=88,slow=9.5,SNR=14						
STKA				PcP	PcP	22 54 29.9	-0.4
	comp=Z,2.7nm,0.7s,baz=346,slow=6.7,SNR=3.1						
STKA	**Stephens Creek**	**37.86**	**243**	*e*P	**P**	**22 52 29.8**	**+0.9**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**37.86**	**243**	*e*P	**P**	**22 52 29.8**	**+0.9**
	comp=Z,5.5nm,0.9s,mb4.1						
BBOO	**Buckleboo**	**42.62**	**243**	*e*P	**P**	**22 53 07.2**	**+0.3**
	comp=Z,41nm,0.6s,mb5.1						
ASAR	**Alice Springs**	**44.42**	**256**	P	**P**	**22 53 21.4**	**+0.5**
	comp=Z,76nm,0.8s,mb5.3,baz=86,slow=8.7,SNR=196						
ASAR				PcP	PcP	22 54 51.6	-0.6
	comp=Z,5.4nm,0.4s,baz=104,slow=3.4,SNR=9.1						
ASAR				ScP	ScP	22 57 51.0	-0.1
	comp=Z,2.1nm,0.7s,baz=106,slow=4.7,SNR=5.2						
ASAR				S	**S**	**22 59 12.8**	**-2.6**
	comp=Z,3.9nm,0.9s,baz=90,slow=16,SNR=15						
ASAR	**Alice Springs**	**44.42**	**256**	P	**P**	**22 53 21.5**	**+0.6**
ASAR						22 54 51.7	
ASAR				S	**S**	**22 59 12.8**	**-2.6**
WRAB	**Tennant Creek**	**44.43**	**261**	*e*P	**P**	**22 53 20.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,96nm,1.2s,mb5.2						
WRAB	**Tennant Creek**	**44.43**	**261**	*e*P	**P**	**22 53 20.9**	**-0.1**
	comp=Z,96nm,1.2s,mb5.2						
WRA	**Warramunga Arr**	**44.44**	**261**	S	**S**	**22 59 12.3**	**-3.3**
	comp=Z,1.5nm,0.9s,baz=98,slow=13,SNR=5.3						
KAKA	**Kakadu**	**47.70**	**271**	*e*P	**P**	**22 53 44.9**	**-0.9**
	comp=Z,44nm,0.7s,mb5.1						
KAKA	**Kakadu**	**47.70**	**271**	*e*P	**P**	**22 53 44.8**	**-1.0**
	comp=Z,68nm,0.6s,mb5.4						
GUMO	**Guam**	**49.15**	**310**	P	**P**	**22 53 57.4**	**+0.8**
	comp=Z,48nm,0.4s,mb5.4,baz=168,slow=16,SNR=3.4						
FORT	**Forrest**	**49.33**	**246**	*e*P	**P**	**22 53 57.3**	**-0.5**
	comp=Z,44nm,0.6s,mb5.2						
KNA	**Kununurra**	**50.42**	**266**	⇓*i*P	**P**	**22 54 06.2**	**+0.3**
	comp=Z,51nm,1.2s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.86**	**262**	*e*P	**P**	**22 54 23.6**	**+0.1**
	comp=Z,24nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**52.86**	**262**	P	**P**	**22 54 23.7**	**+0.3**
	comp=Z,12nm,0.5s,mb4.5,baz=110,slow=3.7,SNR=37						
FITZ	**Fitzroy Crossi**	**

baz=80
YBH Yreka Blue Hor 79.91 39 eP P 22 57 09.9 -0.2
YBH pmax pmax
comp=Z,13nm,1.2s
YBH Yreka Blue Hor 79.91 39 eP P 22 57 09.9 -0.2
comp=Z,12nm,1.2s,mb4.1
MPMC Manual Prospec 79.92 46 ⇓P P 22 57 10.5 +0.2
baz=80,SNR=5.7
WAKR Walker 80.01 43 eP P 22 57 11.4 +0.7
BC3 Big Chuckw Mtn 80.04 49 ⇓P P 22 57 11.3 +0.4
baz=80
HEC Hector,Ludlow 80.05 47 ⇑P P 22 57 10.9 -0.1
baz=80
GLA Glamis 80.17 50 ⇑P P 22 57 12.6 +0.9
baz=80
LBCM Butte Creek Ri 80.18 40 P P 22 57 11.8 +0.2
BEKR Beckwourth 80.22 41 ⇓P P 22 57 11.8 +0.1
baz=80
WCN Washoe City 80.27 42 ⇓P P 22 57 12.4 +0.4
baz=80
HUMO Hull Mountain 80.30 38 eP P 22 57 12.6 +0.5
GMRC Granite Mounta 80.49 48 ⇓P P 22 57 13.8 +0.5
baz=81
IRM Iron Mountain 80.52 49 ⇓P P 22 57 14.0 +0.6
baz=81
FURC Furnace Creek, 80.57 46 ⇑P P 22 57 13.9 +0.3
baz=81
TUQ Turquoise Moun 80.65 47 ⇑P P 22 57 14.4 +0.2
baz=81
SHOC Shoshone 80.66 47 ⇓P P 22 57 14.3 +0.2
baz=81
NVAR Mina Array Bea 80.70 44 P P 22 57 14.4 +0.2
comp=Z,6.3nm,0.9s,mb4.1,baz=224,slow=8.7,SNR=24
PAHR Pah Rah Range 80.73 42 eP P 22 57 15.0 +0.5
Y12C Blythe 80.75 49 ⇑P P 22 57 14.9 +0.2
baz=81
113A Mohawk Valley, 80.79 50 ⇓P P 22 57 15.4 +0.5
baz=81
U10A Ash Meadows, A 80.90 46 ⇓P P 22 57 15.6 +0.2
baz=81
214A Organ Pipe Nat 81.08 52 ⇑P P 22 57 16.7 +0.3
baz=81
Z13A Yuma Proving G 81.09 50 ⇓P P 22 57 16.7 +0.3
baz=81,SNR=6.6
MPOR Mary's Peak 81.15 36 P P 22 57 17.1 +0.7
V11A Goodsprings 81.21 47 ⇑P P 22 57 17.2 +0.2
baz=81
PDMCI Parker Dam,Lak 81.31 49 ⇑P P 22 57 17.9 +0.4
baz=81
114A Black Gap (USA 81.43 51 ⇑P P 22 57 18.8 +0.6
baz=82
MOD Modoc 81.45 40 eP P 22 57 18.2 +0.2
S10A Tonopah Range, 81.54 45 ⇓P P 22 57 18.6 0.0
baz=82,SNR=17
V12A Nelson 81.55 47 ⇑P P 22 57 19.3 +0.6
baz=82
IRO Indian Ridge 81.57 37 P P 22 57 18.8 +0.2
K05A Summer Lake 81.58 39 ⇓P P 22 57 19.2 +0.5
baz=82,SNR=11
X13A Yucca 81.68 49 ⇑P P 22 57 19.8 +0.4
baz=82
Z14A Wintersburg 81.69 50 ⇑P P 22 57 20.3 +0.8
baz=82
115A Sonoran Desert 81.88 51 ⇓P P 22 57 21.0 +0.5
baz=82
W13A Hualapai Mount 81.90 48 ⇓P P 22 57 20.6 +0.1
baz=82
R10A Warm Springs 81.93 45 ⇑P P 22 57 21.1 +0.5
baz=82
Y14A Wickenburg 81.94 50 ⇑P P 22 57 21.2 +0.4
baz=82
S11A Rachel 81.95 45 ⇑P P 22 57 20.9 +0.2
baz=82
H04A Detroit Lake 82.02 37 ⇓P P 22 57 20.5 -0.4
baz=82,SNR=7.0
F03A Seaside 82.04 35 ⇓P P 22 57 21.0 +0.1
baz=82
T11A Corn Creek, Al 82.09 46 ⇓P P 22 57 21.5 +0.1
baz=82,SNR=9.7
216A Three Points, 82.11 52 ⇑P P 22 57 22.6 +0.9
baz=82
U12A Valley of Fire 82.13 47 ⇑P P 22 57 22.3 +0.6
baz=82
MAW Mawson 82.13 200 P P 22 57 21.1 -0.1
Q10A Clear Creek Ra 82.16 44 ⇓P P 22 57 22.2 +0.4
baz=82
G04A Mulino 82.18 36 ⇑P P 22 57 22.5 +0.8
baz=82
116A Eloy 82.20 51 ⇑P P 22 57 22.8 +0.7
baz=82
V13A Grand Canyon W 82.22 48 ⇑P P 22 57 22.0 -0.1
baz=82,SNR=5.7
X14A Yava 82.28 49 ⇓P P 22 57 22.8 +0.4
baz=82,SNR=7.3
Y15A Casa Rosa Ranc 82.42 50 ⇑P P 22 57 23.4 +0.2
baz=83,SNR=7.6
E03A Lebam 82.43 35 ⇑P P 22 57 22.9 0.0
baz=83,SNR=5.0
217A Green Valley 82.48 53 ⇓P P 22 57 24.0 +0.5
baz=83,SNR=7.6
U13A Pakoon Wash 82.52 47 ⇑P P 22 57 24.0 +0.3
baz=83,SNR=14
W14A Seligman 82.52 49 ⇑P P 22 57 24.1 +0.5
baz=83,SNR=7.9
S12A Delamar Landin 82.54 46 ⇑P P 22 57 24.1 +0.4
baz=83,SNR=6.4
P10A Eureka 82.55 43 ⇓P P 22 57 23.9 +0.2
baz=83
Q11A Duckwater 82.66 44 ⇓P P 22 57 24.9 +0.6
baz=83
F04A Amboy 82.66 36 ⇓P P 22 57 23.6 -0.5
baz=83
V14A Boquillas Ranc 82.72 48 ⇑P P 22 57 25.1 +0.5
baz=83,SNR=10
LVP Lakeview Peak 82.75 36 P P 22 57 24.7 +0.2
TUC Tucson 82.76 52 eP P 22 57 25.0 +0.1
X15A Humboldt 82.76 50 ⇑P P 22 57 25.3 +0.4
baz=83,SNR=5.5
WVOR Wild Horse Val 82.76 40 eP P 22 57 23.6 -1.1
WVOR pmax pmax
comp=Z,14nm,1.1s,mb4.4
WVOR Wild Horse Val 82.76 40 eP P 22 57 23.6 -1.1
comp=Z,14nm,1.1s,mb4.4
NLWA Neilton Lookou 82.80 34 ⇑P P 22 57 25.1 +0.3
baz=83
VIPM Ingram Point 82.81 38 P P 22 57 24.9 0.0
OOW Octopus West 82.86 33 P P 22 57 25.9 +0.9
T13A Saint George 82.87 47 ⇑P P 22 57 25.6 +0.3
baz=83,SNR=5.8
O10A Cortez Mining, 82.89 43 ⇓P P 22 57 25.6 +0.2
baz=83
117A Oracle 82.92 52 ⇑P P 22 57 26.3 +0.6
baz=83,SNR=5.3
318A Bisbee 82.94 53 ⇓P P 22 57 26.4 +0.5
baz=83,SNR=8.6
Y16A Circle Bar Ran 83.01 50 ⇑P P 22 57 26.4 +0.3
baz=83,SNR=6.3
U14A Mt Trumbull 83.06 47 ⇑P P 22 57 26.8 +0.5
baz=83,SNR=9.7
R12A Pony Springs, 83.08 45 ⇑P P 22 57 26.7 +0.3
baz=83
218A Dragoon 83.15 53 ⇑P P 22 57 27.8 +0.9
baz=83
OSD Olympics--Snow 83.16 34 P P 22 57 27.2 +0.7
S13A Holt Ranch, En 83.19 46 ⇓P P 22 57 27.7 +0.7
baz=83
I07A Izee 83.20 38 ⇓P P 22 57 26.9 +0.1
baz=83,SNR=12
G06A Carlson Farm, 83.23 37 ⇑P P 22 57 26.7 -0.3
baz=83
X16A Lo Mia Camp, P 83.30 50 ⇑P P 22 57 28.2 +0.7
baz=83,SNR=7.6
Q12A Willow Creek R 83.31 45 ⇑P P 22 57 27.7 +0.2
baz=84
O11A Cowboy Ranch, 83.35 43 ⇓P P 22 57 27.6 -0.1
baz=84,SNR=5.0
Y17A Roosevelt 83.38 51 ⇓P P 22 57 28.5 +0.5
baz=84
J08A Circle Bar Ran 83.39 39 ⇓P P 22 57 27.8 0.0
baz=84
KULM Kulim 83.41 278 eP P 22 57 28.1 -0.5
319A Douglas 83.44 53 ⇓P P 22 57 29.1 +0.7
baz=84,SNR=6.7
GAMB Gambell 83.45 3 eP P 22 57 27.0 -0.6
comp=Z,90nm,1.4s,mb5.1
V15A Kaibab Nationa 83.47 48 ⇑P P 22 57 28.8 +0.4
baz=84,SNR=5.9
P12A McGill 83.48 44 ⇓P P 22 57 28.8 +0.5
baz=84
CCUT Cedar City 83.52 46 eP P 22 57 29.3 +0.7
118A Homack Ranch, 83.52 52 ⇓P P 22 57 29.4 +0.7
baz=84
M10A I.L. Ranch, Tu 83.55 42 ⇑P P 22 57 28.9 +0.3
baz=84,SNR=6.9
W16A Flagstaff 83.56 49 ⇓P P 22 57 29.3 +0.5
baz=84
D05A Emmclaw 83.67 35 ⇓P P 22 57 30.0 +0.9
baz=84
U15A North Rim 83.69 48 ⇑P P 22 57 30.0 +0.5
baz=84,SNR=15
219A White Tail Can 83.75 53 ⇓P P 22 57 30.6 +0.8
baz=84
Q13A Wheeler Ranch, 83.80 45 ⇑P P 22 57 30.3 +0.4
baz=84
J09A Fry Pan Ranch, 83.82 40 ⇓P P 22 57 29.9 0.0
baz=84,SNR=6.9
WUAZ Wupatki 83.88 49 ⇓P P 22 57 31.0 +0.6
baz=84
WUAZ Wupatki 83.88 49 eP P 22 57 31.1 +0.7
L10A Juniper Basin 83.89 41 ⇑P P 22 57 30.4 +0.1
baz=84
T15A Red Dirt Ranch 83.92 47 ⇓P P 22 57 30.8 +0.2
baz=84
H08A Prairie City 83.94 38 ⇓P P 22 57 30.5 0.0
baz=84
M11A Holland Ranch, 83.97 42 ⇓P P 22 57 31.0 +0.3
baz=84
320A Kipp Ranch, An 84.00 54 ⇓P P 22 57 31.8 +0.7
baz=84,SNR=5.7
Y18A Canyon Day Jun 84.01 51 ⇑P P 22 57 31.8 +0.7
baz=84
O12A Currie 84.01 44 ⇑P P 22 57 30.8 -0.2
baz=84
K10A MacKenzie Ranc 84.03 41 ⇓P P 22 57 30.8 -0.2
baz=84,SNR=5.2
P13A Bates Ranch, G 84.06 45 ⇓P P 22 57 31.3 +0.1
baz=84
119A Ashpeak Ranch, 84.08 52 ⇑P P 22 57 31.8 +0.3
baz=84
N12A Clover Valley, 84.13 43 ⇓P P 22 57 31.7 +0.1
baz=84
N12A Clover Valley, 84.13 43 eP P 22 57 30.8 -0.8
I09A Lost Marbles R 84.18 39 ⇑P P 22 57 31.5 -0.2
baz=84
G08A Pilot Rock 84.22 38 ⇑P P 22 57 31.8 0.0
baz=84,SNR=11
220A Playas Peak, P 84.26 53 ⇑P P 22 57 32.9 +0.5
baz=84,SNR=5.2
TTA Tatalina 84.30 10 eP P 22 57 31.5 -0.3
Q14A Sevier Lake (B 84.31 45 ⇑P P 22 57 32.3 -0.2
baz=84,SNR=7.1
V17A Tonalea, Kykot 84.35 49 ⇑P P 22 57 32.8 +0.1
baz=84,SNR=7.3
Z19A T-Link Ranch, 84.35 52 ⇑P P 22 57 33.3 +0.5
baz=84
U16A Tuba City 84.36 49 ⇓P P 22 57 33.0 +0.2
baz=84,SNR=7.8
L11A Cat Creek Ranc 84.39 42 ⇓P P 22 57 33.2 +0.4
baz=84
PMR Palmer 84.40 14 eP P 22 57 30.9 -1.4
120A U Bar Ranch, L 84.47 53 ⇓P P 22 57 34.4 +1.0
baz=85
T16A Glen Canyon Da 84.51 48 ⇓P P 22 57 33.9 +0.5
baz=85
M12A Wells 84.51 42 ⇓P P 22 57 33.3 0.0
baz=85
H09A Durkee 84.62 39 ⇓P P 22 57 33.7 -0.1
baz=85
F08A Pendleton 84.62 37 ⇓P P 22 57 34.1 +0.3
baz=85
Y19A Nutrioso 84.67 51 ⇓P P 22 57 34.9 +0.6
baz=85,SNR=6.3
N13A Wendover, West 84.67 43 ⇓P P 22 57 34.3 +0.1
baz=85
B06A Marblemount 84.76 34 ⇓P P 22 57 34.3 -0.1
baz=85
Z20A Nine Sixteen R 84.77 52 ⇑P P 22 57 35.7 +0.9
baz=85
DIV Divide 84.78 15 eP P 22 57 33.6 -0.6
G09A Cove 84.90 38 ⇑P P 22 57 34.7 -0.4
baz=85,SNR=5.6
BMRM Bremner River 84.93 16 eP P 22 57 34.1 -0.8
T17A Navajo Res., N 85.01 48 ⇓P P 22 57 36.5 +0.6
baz=85
C07A Waterville 85.02 35 ⇑P P 22 57 35.3 -0.4
baz=85
121A Cookes Peak, D 85.10 53 ⇑P P 22 57 37.0 +0.5
baz=85,SNR=6.0
H10A Noah's Angus R 85.12 39 ⇑P P 22 57 36.1 -0.1
baz=85
BJT Baijiatuau 85.20 315 P P 22 57 36.5 -0.2
BJT pmax pmax
comp=Z,28nm,0.6s
BJT Baijiatuau 85.20 315 P P 22 57 36.5 -0.2
comp=Z,28nm,0.6s,mb5.0
BJI Beijing 85.20 315 P P 22 57 37.3 +0.5
BJI pmax pmax
comp=Z,38nm,0.7s,mb5.0
D08A Wollman Farm, 85.27 36 ⇓P P 22 57 36.8 -0.1
baz=85
G10A Bishop Farm, J 85.29 38 ⇑P P 22 57 36.6 -0.5
baz=85,SNR=5.4
Y20A Horse Springs, 85.29 52 ⇑P P 22 57 37.9 +0.5
baz=85,SNR=5.6
S17A Black Ridge (B 85.32 47 ⇑P P 22 57 37.3 -0.1
baz=86
E09A Wood Farm, Sta 85.39 37 ⇑P P 22 57 37.5 0.0
baz=86
ENH Enshi 85.42 304 eP P 22 57 38.4 +0.3
comp=Z,81nm,1.2s,mb5.1
B07A Winthrop 85.45 35 ⇑P P 22 57 37.5 -0.2
baz=86
TNA Tin City 85.45 4 eP P 22 57 36.3 -1.1
comp=Z,16nm,1.1s,mb4.5
Z21A St. Cloud Mine 85.54 52 ⇑P P 22 57 39.4 +0.9
baz=86
OD2 Odessa Site #2 85.58 36 eP P 22 57 37.6 -0.8
F10A Beach Ranch, E 85.61 38 ⇓P P 22 57 38.0 -0.5
baz=86,SNR=19
D09A Jones Farm, Ri 85.62 36 ⇓P P 22 57 38.4 -0.1
baz=86
H11A Donnelly 85.62 39 ⇓P P 22 57 38.4 -0.2
baz=86,SNR=14
SEY Seymchan 85.63 347 dP P 22 57 37.5 -0.8
I12A Atlanta 85.65 40 ⇓P P 22 57 39.1 +0.3
baz=86
A07A Ashnola River, 85.66 34 ⇓P P 22 57 38.3 -0.4
baz=86
T18A Mexican Hat 85.73 48 ⇑P P 22 57 39.4 0.0
baz=86,SNR=15
W20A Rainah 85.76 50 ⇑P P 22 57 40.2 +0.6
baz=86
KTH Kantishna Hill 85.79 12 eP P 22 57 37.2 -1.8
comp=Z,14nm,0.9s,mb4.6
U19A Dine' College, 85.80 49 ⇓P P 22 57 39.9 +0.2
baz=86
B08A Colville Reser 85.81 35 ⇓P P 22 57 38.5 -0.9
baz=86,SNR=6.5
TRF Thorofare Moun 85.82 12 eP P 22 57 37.3 -1.9
comp=Z,42nm,0.9s,mb5.1
G11A Walters Elk Ra 85.85 39 ⇓P P 22 57 39.6 -0.2
baz=86,SNR=25
Y21A Point of Rocks 85.86 52 ⇑P P 22 57 40.6 +0.6
baz=86,SNR=8.5
HLID Hailey 85.97 41 ⇓P P 22 57 40.5 +0.2
baz=86,SNR=12
X21A Alamocita Cree 85.97 51 ⇑P P 22 57 41.0 +0.4
baz=86
J13A Cove Ranch, Pi 86.03 41 ⇑P P 22 57 40.8 +0.1
baz=86,SNR=8.8
Z22A Elephant Butte 86.05 53 ⇑P P 22 57 41.2 +0.3
baz=86,SNR=6.0
C09A Chrisman Ranch 86.06 36 ⇑P P 22 57 40.4 -0.3
baz=86
GYA Guiyang 86.07 300 P P 22 57 41.9 +0.7
GYA pP pP 22 59 52.8 +10
GYA sP sP 23 00 52.1 +12
GYA PP PP 23 01 15.4 +3.0
GYA SKS 23 07 09.4
GYA S S 23 07 25.0 -4.1
GYA sS sS 23 11 15.0 +8.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
GYA pmax pmax
comp=Z,110nm,6.5s
T19A Beclabito 86.18 49 ⇓P P 22 57 41.8 +0.3
baz=86
F11A Grangeville 86.18 38 ⇓P P 22 57 40.0 -1.3
baz=86,SNR=6.2
D10A Wagner Farm, O 86.19 37 ⇓P P 22 57 40.7 -0.6
baz=86
K14A Jones Ranch, D 86.21 42 ⇑P P 22 57 41.2 -0.3
baz=86
H12A Diamond D Ranc 86.23 40 ⇓P P 22 57 41.2 -0.3
baz=86,SNR=13
G12A Big Creek, Yel 86.26 39 ⇑P P 22 57 41.6 -0.1
baz=86
R18A Canyonlands Na 86.31 47 ⇑P P 22 57 41.7 -0.4
baz=86,SNR=6.5
I13A Wildhorse Cree 86.34 41 ⇓P P 22 57 42.2 +0.1
baz=86,SNR=6.0
MCK McKinley 86.34 13 eP P 22 57 40.4 -1.2
Y22A Socorro 86.35 52 ⇓P P 22 57 42.6 +0.2
baz=86
324A Moseley Ranch, 86.38 55 ⇓P P 22 57 43.1 +0.6
baz=86
E11A Bogner Ranch, 86.41 38 ⇑P P 22 57 40.9 -1.5
baz=87,SNR=6.3
L15A Malad City 86.44 43 ⇑P P 22 57 42.1 -0.5
baz=87
425A Indio Mountain 86.48 56 ⇑P P 22 57 43.5 +0.5
baz=87
B09A Rice 86.49 35 ⇑P P 22 57 42.1 -0.6
baz=87,SNR=6.3
Q18A Rafter H Ranch 86.49 46 ⇓P P 22 57 42.7 -0.2
baz=87
S19A Harvey Farm, M 86.53 48 ⇓P P 22 57 43.1 0.0
baz=87
MNTX Cornudas Mount 86.56 55 eP P 22 57 42.7 -0.7
comp=Z,2.8nm,1.0s,mb3.9
A09A Danville 86.57 35 ⇓P P 22 57 42.5 -0.5
baz=87,SNR=5.4
H13A Challis 86.60 40 ⇑P P 22 57 43.4 +0.1
baz=87,SNR=8.2
O17A Robinson Place 86.61 45 ⇓P P 22 57 43.8 +0.3
baz=87,SNR=5.4
224A Corundas Mount 86.62 54 ⇓P P 22 57 43.8 +0.1
baz=87
626A Big Bend Ranch 86.62 57 ⇑P P 22 57 43.9 +0.1
baz=87
F12A Elk City 86.64 39 ⇓P P 22 57 43.2 -0.3
baz=87
R19A Curley Farm, L 86.70 47 ⇑P P 22 57 43.4 -0.6
baz=87
D11A Klaveano Farm, 86.72 37 ⇓P P 22 57 43.0 -0.8
baz=87,SNR=7.3
325A Bean Ranch, Si 86.74 55 ⇑P P 22 57 44.3 0.0
baz=87
I14A Mackay 86.75 41 ⇓P P 22 57 44.2 +0.1
baz=87,SNR=6.4
E12A Beaver Dam Sad 86.81 38 ⇑P P 22 57 43.7 -0.5
baz=87
526A Mary Lane Ranc 86.87 57 ⇓P P 22 57 44.8 -0.1
baz=87
G13A Cobalt 86.89 40 ⇑P P 22 57 44.5 -0.2
baz=87,SNR=9.5
TXAR Lajitas Array 86.90 57 P P 22 57 45.3 +0.2
comp=Z,1.1nm,0.4s,mb3.9,baz=224,slow=3.5,SNR=11
TXAR Lajitas Array 86.90 57 P P 22 57 45.3 +0.2
124A Stringfield Ra 86.94 54 ⇑P P 22 57 45.6 +0.4
baz=87
NEW Newport 86.96 36 eP P 22 57 42.9 -2.0
Q19A Hogan Spring (87.02 47 ⇑P P 22 57 45.1 -0.3
baz=87
Y23A Lovelace Mesa, 87.03 52 ⇑P P 22 57 45.9 +0.3
baz=87
L16A Fish Haven 87.06 43 ⇑P P 22 57 45.4 -0.1
baz=87
426A McDonald Obser 87.17 56 ⇑P P 22 57 46.4 +0.1
baz=87
ANMO Albuquerque 87.17 51 eP P 22 57 43.3 -2.9
ANMO pmax pmax
comp=Z,5.0nm,1.4s
ANMO Albuquerque 87.17 51 eP P 22 57 43.3 -3.0
comp=Z,5.3nm,1.4s,mb4.0
F13A Darby 87.20 39 ⇑P P 22 57 45.5 -0.5
baz=87,SNR=15
527A Woodward Ranch 87.28 57 ⇓P P 22 57 47.0 +0.1
baz=87
D12A Red Ives Fores 87.29 38 ⇑P P 22 57 46.1 -0.4
baz=87
K16A Soda Springs 87.36 43 ⇓P P 22 57 47.2 +0.2
baz=88
G14A Jackson 87.44 40 ⇑P P 22 57 47.3 +0.1
baz=88
S21A Coal Bank Pass 87.44 48 ⇓P P 22 57 47.8 +0.4
baz=88
B11A Sandpoint 87.47 36 ⇓P P 22 57 46.9 -0.4
baz=88,SNR=6.6
Y24A Capitan 87.48 53 ⇑P P 22 57 47.7 -0.1
baz=88
P19A Cripple Cowboy 87.53 46 ⇑P P 22 57 47.9 +0.1
baz=88
J16A Bone 87.57 42 ⇓P P 22 57 48.2 +0.3
baz=88,SNR=11
C12B Naegeli Ranch, 87.57 37 ⇓P P 22 57 47.3 -0.5
baz=88,SNR=6.1
COLA College 87.58 13 eP P 22 57 45.5 -1.9
COLA pmax pmax
comp=Z,40nm,0.8s,mb5.2
COLA College 87.58 13 eP P 22 57 45.5 -1.9
comp=Z,40nm,0.8s,mb5.2
MCMT McKenzie Canyo 87.59 40 eP P 22 57 48.2 +0.3
comp=Z,9.6nm,1.1s,mb4.4
H15A Lima 87.61 41 ⇓P P 22 57 48.2 +0.2
baz=88,SNR=9.6
E13A Victor 87.63 39 ⇓P P 22 57 47.9 -0.2
baz=88
M18A Lyman 87.66 44 ⇑P P 22 57 48.4 +0.1
baz=88
Q20A Ridgley Place, 87.68 47 ⇑P P 22 57 48.4 -0.1
baz=88
N18A Larsen Ranch, 87.70 45 ⇓P P 22 57 49.0 +0.4
baz=88
226A Malaga, Loving 87.70 55 ⇓P P 22 57 48.8 0.0
baz=88
427A Hayter Ranch, 87.74 56 ⇓P P 22 57 49.2 +0.2
baz=88
Z25A Roswell 87.75 54 ⇑P P 22 57 49.7 +0.7
baz=88
A11A Hall Mountain, 87.77 36 ⇑P P 22 57 48.7 0.0
baz=88,SNR=5.4
RRI2 Red Ridge 87.79 42 eP P 22 57 49.2 +0.3
D13A Huson 87.82 38 ⇓P P 22 57 48.8 -0.1
baz=88
B12A Libby 87.92 36 ⇑P P 22 57 49.5 +0.1
baz=88
R21A Cimarron 87.93 48 ⇑P P 22 57 49.8 +0.1
baz=88
I16A Newdale 87.95 42 ⇑P P 22 57 50.3 +0.7
baz=88
G15A Dillon 87.98 40 ⇓P P 22 57 49.6 -0.1
baz=88,SNR=9.2
DLMT Dillon 88.02 40 eP P 22 57 50.1 +0.2
E14A Clinton 88.03 39 ⇑P P 22 57 49.9 -0.1
baz=88
BSMT Bassoo Peak 88.04 37 eP P 22 57 49.2 -0.8
W24A Lazy 6 Ranch, 88.06 52 ⇓P P 22 57 50.5 +0.1
baz=88
C13A Hot Springs 88.07 37 ⇓P P 22 57 49.5 -0.7
baz=88
REDW Red Top Meadow 88.09 42 eP P 22 57 50.7 +0.4
TPAW Teton Pass 88.09 42 eP P 22 57 50.2 -0.2
comp=Z,10nm,1.3s,mb4.4
J17A Brown Place, J 88.18 42 ⇑P P 22 57 51.0 +0.2
baz=88
K18A Toltan Ranch, 88.26 43 ⇓P P 22 57 51.5 +0.4
baz=88
M19A Rock Springs 88.30 45 ⇓P P 22 57 51.0 -0.3
baz=88
IMW Indian Meadow 88.30 42 eP P 22 57 51.6 +0.3
Z26A Caprock 88.30 54 ⇓P P 22 57 51.4 -0.2
baz=88
BILL Bilibino 88.31 354 ⇑eP P 22 57 50.1 -0.7
BILL e 23 01 27.6
BILL eS SKSac 23 07 21.7 -3.8
BILL pmax pmax
comp=Z,11nm,0.9s,mb4.6
BILL Bilibino 88.31 354 eP P 22 57 49.8 -1.0
comp=Z,8.9nm,0.8s,mb4.5
X25A Clemmons Ranch 88.32 52 ⇓P P 22 57 51.8 +0.2
baz=88
F15A Butte 88.33 40 ⇑P P 22 57 51.0 -0.3

baz=88,SNR=13
LRM Limekiln Ridge 88.34 40 *e*P **P 22 57 51.8 +0.3**
D14A Greenough 88.37 38 ⇓P **P 22 57 51.1 -0.4**
baz=88
R22A Saguache, Gunn 88.42 48 ⇓P **P 22 57 52.2 +0.2**
baz=89
CHMT Chamberlain Mo 88.43 38 *e*P **P 22 57 51.2 -0.6**
G16A Moss Hill, Enn 88.43 40 ⇓P **P 22 57 51.9 +0.1**
baz=89,SNR=7.9
L19A Farson 88.45 44 ⇓P **P 22 57 52.0 0.0**
baz=89
QLMT Earthquake Lak 88.46 41 *e*P **P 22 57 53.1 +1.1**
B13A Whitefish 88.50 37 ⇑P **P 22 57 51.9 -0.2**
baz=89
H16A Russell Place, 88.51 41 ⇑P **P 22 57 53.1 +0.8**
baz=89,SNR=16
E15A Deer Lodge 88.54 39 ⇑P **P 22 57 51.9 -0.5**
baz=89
I17A Pilgrim Ck. 88.54 42 ⇑P **P 22 57 52.8 +0.4**
baz=89
J18A Kendall Valley 88.55 43 ⇑P **P 22 57 52.4 -0.1**
baz=89,SNR=12
N20A Spence Gulch, 88.58 46 ⇑P **P 22 57 52.5 -0.1**
baz=89,SNR=6.1
C14A Swan Lake 88.59 38 ⇓P **P 22 57 52.0 -0.5**
baz=89
Q22A Crested Butte, 88.60 48 ⇑P **P 22 57 53.2 +0.4**
baz=89
BW06 Boulder Array 88.63 43 *e*P **P 22 57 52.7 -0.1**
PDAR Pinedale Array 88.63 43 P **P 22 57 52.5 -0.4**
comp=Z,4.6nm,0.8s,mb4.3,baz=212,slow=2.7,SNR=31
HHC Hu-ho-hao-te 88.67 314 ⇓P **P 22 57 53.6 +0.5**
HHC pP pP 23 00 04.8 +8.9
HHC sP sP 23 01 02.8 +10
HHC PP PP 23 01 36.6 +4.0
HHC SKS 23 07 25.4
HHC S S 23 07 49.4 -3.3
HHC sS sS 23 11 40.3 +8.5
HHC SS SS 23 14 04.4 +2.4
HHC pmax pmax
comp=Z,20nm,1.2s,mb4.8
HHC pmax pmax
comp=Z,170nm,5.5s
SMCO Snowmass 88.70 47 *e*P **P 22 57 53.3 +0.1**
BOZ Bozeman (W) 88.75 40 ⇑P **P 22 57 53.3 0.0**
baz=89,SNR=13
BOZ Bozeman (W) 88.75 40 *e*P **P 22 57 53.2 -0.1**
W25A X Bar L Ranch, 88.77 52 ⇓P **P 22 57 53.2 -0.4**
baz=89
H17A Grant Village 88.78 42 ⇓P **P 22 57 54.9 +1.4**
baz=89
KMI Kunming 88.79 297 P **P 22 57 54.6 +0.6**
KMI pmax pmax
comp=Z,28nm,1.3s,mb4.9
DAWY Dawson 88.86 16 *e*P **P 22 57 53.0 -0.4**
I18A Diamond G Ranc 88.92 42 ⇑P **P 22 57 54.2 +0.1**
baz=89
D15A Lincoln 88.92 39 ⇓P **P 22 57 53.6 -0.5**
baz=89,SNR=5.0
M20A Sweetwater, Wa 88.93 45 ⇓P **P 22 57 54.7 +0.4**
baz=89
X26A CR and CF Fran 88.97 53 ⇑P **P 22 57 54.7 +0.1**
baz=89
LKWY Lake 88.97 41 *e*P **P 22 57 55.2 +0.8**
LKWY pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
LKWY Lake 88.97 41 *e*P **P 22 57 55.2 +0.8**
comp=Z,5.5nm,1.0s,mb4.3
EGAK Eagle 89.00 15 *e*P **P 22 57 53.3 -0.7**
comp=Z,24nm,0.9s,mb5.0
N21A Black Mountain 89.04 46 ⇓P **P 22 57 54.7 -0.1**
baz=89,SNR=7.6
L20A Wamsutter 89.07 44 ⇓P **P 22 57 55.0 +0.1**
baz=89,SNR=7.7
K19A Absolon Red Bu 89.12 44 ⇑P **P 22 57 54.6 -0.5**
baz=89
HRY Holter Researc 89.16 39 *e*P **P 22 57 55.0 -0.2**
comp=Z,2.7nm,0.7s,mb4.2
E16A East Helena 89.17 39 ⇑P **P 22 57 55.3 0.0**
baz=89
Y27A Causey 89.18 54 ⇑P **P 22 57 55.2 -0.4**
baz=89
COLD Coldfoot 89.24 11 *e*P **P 22 57 54.2 -0.9**
comp=Z,21nm,1.1s,mb4.9
C15A Salmond Ranch, 89.25 38 ⇓P **P 22 57 54.8 -0.8**
baz=89
VNA2 Neumayer--Watz 89.30 177 *e*P **P 22 57 53.5 -2.0**
K20A Yellowstone Ra 89.37 44 ⇑P **P 22 57 55.8 -0.5**
baz=90
CHRT Chiangrai 89.39 291 ⇓P **P 22 57 58.0 +1.1**
comp=Z,168nm,0.9s,mb5.9
NVL N'lazarevskaya 89.40 183 *e*P **P 22 57 46.6 -9.4**
NVL pmax pmax
comp=Z,17nm,1.1s,mb4.8
A14A Double T Ranch 89.41 37 ⇓P **P 22 57 55.8 -0.5**
baz=90,SNR=7.7
F17A Fitzpatrick Pl 89.47 40 ⇑P **P 22 57 57.2 +0.6**
baz=90
MSTX Muleshoe 89.51 54 ⇓P **P 22 57 56.7 -0.4**
baz=90
VNA1 Neumayer--Stat 89.53 177 *e*P **P 22 57 54.9 -1.7**
M21A Separation Pea 89.53 45 ⇑P **P 22 57 56.5 -0.5**
baz=90,SNR=5.2
X27A F and S Farms, 89.54 53 ⇑P **P 22 57 57.2 -0.1**
baz=90
B15A Bradely Ranch, 89.55 37 ⇓P **P 22 57 55.9 -1.0**
baz=90
L21A Rawlins 89.69 45 ⇓P **P 22 57 57.3 -0.5**
baz=90
W27A Bowe Ranch, En 89.74 52 ⇓P **P 22 57 57.5 -0.7**
baz=90
CHG Chiang Mai 89.75 290 ⇓P **P 22 57 59.4 +0.8**
comp=Z,29nm,0.9s,mb5.1
C16A Fuhringer Ranc 89.76 38 ⇑P **P 22 57 57.6 -0.3**
baz=90,SNR=5.2
N22A Wattenberg Ran 89.78 46 ⇓P **P 22 57 58.3 +0.1**
baz=90,SNR=8.0
A15A Johnson Ranch, 89.80 37 ⇑P **P 22 57 57.5 -0.6**
baz=90
G18A Lazy EL Ranch, 89.85 41 ⇑P **P 22 57 58.4 0.0**
baz=90
RLMT Red Lodge 89.94 41 ⇓P **P 22 57 59.5 +0.6**
baz=90
PLCA Paso Flores 89.95 134 P **P 22 57 57.7 -1.5**
comp=Z,5.3nm,1.0s,mb4.3,baz=85,slow=1.0,SNR=3.5
M22A Cedar Creek Ra 89.96 46 ⇓P **P 22 57 59.5 +0.4**
baz=90
F18A Big Timber 90.04 41 ⇑P **P 22 57 59.3 0.0**
baz=90
D17A Six Diamond Ra 90.06 39 ⇓P **P 22 57 59.3 -0.1**
baz=90,SNR=12
B16A M & M Farms, S 90.09 38 ⇓P **P 22 57 58.8 -0.7**
baz=90
CD2 Chengdu 90.18 303 P **P 22 58 00.8 +0.5**
CD2 pP pP 23 00 11.3 +7.8
CD2 sP sP 23 01 10.1 +10
CD2 PP PP 23 01 48.5 +3.8
CD2 SKS 23 07 34.8
CD2 S S 23 08 02.3 -4.5
CD2 sS sS 23 11 54.4 +7.6
CD2 SS SS 23 14 27.0 +3.0
CD2 pmax pmax
comp=Z,70nm,0.6s,mb5.7
CD2 pmax pmax
comp=Z,300nm,9.8s
E18A Harlowton 90.24 40 ⇑P **P 22 58 00.4 +0.2**
baz=90
C17A Wharram Farm, 90.26 39 ⇓P **P 22 57 59.8 -0.4**
baz=90,SNR=14
A16A West Butte Ran 90.43 37 ⇑P **P 22 58 00.4 -0.6**
baz=91,SNR=8.8
B17A L&G Farms, Che 90.56 38 ⇓P **P 22 58 01.2 -0.4**
baz=91
D18A Linhart Farms, 90.61 39 ⇓P **P 22 58 01.8 -0.1**
baz=91
B18A Beardsley Farm 91.20 38 ⇓P **P 22 58 04.3 -0.3**
baz=91
YAK Yakutsk 91.36 338 *e*P **P 22 58 02.8 -2.2**
YAK pmax pmax
comp=Z,22nm,1.0s,mb5.0
A18A Metzger Ranch, 91.42 38 ⇓P **P 22 58 05.3 -0.3**
baz=92
LZH Lanzhou 92.13 308 *e*P **P 22 58 10.0 +0.8**
LZH pmax pmax
comp=Z,32nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,130nm,4.3s

INK Inuvik 93.67 15 *e*P **P 22 58 14.1 -1.3**
ULN Ulaanbaatar 94.66 319 *e*P **P 22 58 19.6 -0.8**
ULN pmax pmax
comp=Z,10.0nm,1.5s,mb4.7
ULN Ulaanbaatar 94.66 319 *e*P **P 22 58 19.6 -0.8**
comp=Z,9.6nm,1.5s,mb4.7
SONM Songino Array 95.05 319 P **P 22 58 21.2 -0.9**
comp=Z,0.8nm,0.5s,mb4.1,baz=133,slow=5.5,SNR=8.1
YKA Yellowknife Ar 95.99 25 P **P 22 58 24.9 -1.2**
comp=Z,1.1nm,0.6s,mb4.3,baz=243,slow=4.5,SNR=18
GTA Gaotai 96.32 309 *e*P **P 22 58 28.5 +0.3**
GTA pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
PALK Pallekele 102.76 273 *i* P Pdif 22 58 49.5 -7.2
ZALV Zalesovo Beam 109.78 321 PKiKP PKiKP 23 03 24.3 -2.1
comp=Z,2.1nm,0.6s,baz=180,slow=1.1,SNR=11
ZALV Zalesovo Beam 109.78 321 PKPdf PKiKP 23 03 24.3 -2.2
MK31 Makanchi Array 110.52 314 *e*PKIKP PKiKP 23 03 26.1 -2.0
MKAR Makanchi Array 110.52 314 Pdiff Pdif 22 59 32.1 +0.9
comp=Z,0.6nm,0.7s,baz=93,slow=6.4,SNR=6.2
MKAR PKiKP PKiKP 23 03 25.9 -2.1
comp=Z,2.2nm,0.6s,baz=88,slow=0.3,SNR=31
MKAR PKKPbc PKKPbc 23 14 27.7 -2.6
comp=Z,0.1nm,0.5s,baz=260,slow=3.2,SNR=3.6
MKAR PKKPab PKKPab 23 14 39.9 -1.3
comp=Z,0.3nm,0.8s,baz=270,slow=6.1,SNR=4.0
MKAR Makanchi Array 110.52 314 PKIKP PKiKP 23 03 26.0 -2.1
KURK Kurchatov 113.30 318 PKiKP PKiKP 23 03 31.1 -2.1
comp=Z,3.0nm,0.7s,baz=94,slow=1.9,SNR=21
KURK Kurchatov 113.30 318 *c i* PKIKP PKiKP 23 03 31.1 -2.1
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 113.30 318 *e*PKiKP PKiKP 23 03 30.9 -2.3
TKM2 Tokmak 2 114.86 309 *e*PKIKP PKPdf 23 03 34.5 -2.0
UCH Uchtor 115.61 308 *e*PKIKP PKPdf 23 03 36.7 -1.3
UCH *e* 23 04 51.1
AAK Ala-Archa 115.65 309 PKP PKPdf 23 03 36.5 -1.5
comp=Z,0.8nm,0.3s,baz=153,slow=4.5,SNR=4.4
AAK Ala-Archa 115.65 309 *e*PKPdf PKPdf 23 03 36.2 -1.8
EKS2 Erkin-Say 116.18 309 *e*PKIKP PKPdf 23 03 37.6 -1.4
AML Almayashu 116.21 308 *e*PKIKP PKPdf 23 03 38.0 -1.1
BVAR Borovoye Array 118.37 320 PKP PKPdf 23 03 41.2 -1.8
comp=Z,4.8nm,0.4s,baz=118,slow=1.0,SNR=49
BVAR SKP 23 06 23.6
comp=Z,1.4nm,0.8s,baz=96,slow=5.8,SNR=5.7
BVAR PKKPbc PKKPbc 23 14 04.8 +0.9
comp=Z,0.3nm,0.6s,baz=264,slow=3.0,SNR=4.2
BRVK Borovoye 118.43 320 *c i* PKIKP PKPdf 23 03 41.5 -1.5
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 118.43 320 *e*PKPdf PKPdf 23 03 41.0 -2.0
KBL Kabul 119.32 299 *e*PKIKP PKPdf 23 03 44.3 -1.0
ARU Arti 124.47 326 *i* PKIKP PKPdf 23 03 52.3 -2.2
ARU Arti 124.47 326 *e*PKPdf PKPdf 23 03 52.8 -1.8
ABKAR Akbulak array 125.39 317 *e*PKPdf PKPdf 23 03 54.9 -1.7
KEV Kevo 127.73 349 *e*PKIKP PKPdf 23 03 57.9 -2.5
KEV pmax pmax
comp=Z,2.0nm,0.4s
KEV Kevo 127.73 349 *ep* PKPdf 23 03 57.9 -2.5
comp=Z,2.3nm,0.4s
ARCES ARCESS Array B 128.18 350 PKP PKPdf 23 03 59.0 -2.3
comp=Z,3.7nm,0.4s,baz=75,slow=1.4,SNR=42
ARCES SKPbc 23 06 27.5
comp=Z,5.0nm,0.9s,baz=56,slow=3.1,SNR=8.8
ARCES ARCESS Array B 128.18 350 PKP PKPdf 23 03 59.0 -2.3
ARCES SKPbc 23 06 27.5
JOF Joensuu 132.38 342 *e*PKIKP PKPdf 23 04 07.3 -2.1
JOF pmax pmax
comp=Z,11nm,0.5s
JOF Joensuu 132.38 342 *ep* PKPdf 23 04 07.3 -2.1
comp=Z,11nm,0.5s
KAF Kangasniemi 134.40 344 *e*PKIKP PKPdf 23 04 08.1 -5.1
KAF pmax pmax
comp=Z,6.0nm,0.6s
KAF Kangasniemi 134.40 344 *ep* PKPdf 23 04 08.1 -5.1
comp=Z,5.9nm,0.6s
FINES FINESS Array B 135.03 344 PKhKP 23 03 59.9
comp=Z,0.6nm,0.3s,baz=58,slow=3.9,SNR=9.4
FINES PKP PKPdf 23 04 10.9 -3.5
comp=Z,3.2nm,0.5s,baz=50,slow=2.9,SNR=12
FINES SKPbc SKPbc 23 06 51.4 -1.1
comp=Z,4.5nm,0.9s,baz=80,slow=2.1,SNR=5.3
FINES FINESS Array B 135.03 344 PKHKP 23 03 59.9
FINES 23 04 10.9
FINES FINESS Array B 135.03 344 PKP 23 03 59.9
FINES PKP PKPdf 23 04 10.9 -3.5
FINES SKPbc SKPbc 23 06 51.4 -1.1
OBN Obninsk 136.01 332 ⇑ *i* PKIKP PKPdf 23 04 13.9 -2.5
OBN *e**PP 23 06 21.8
OBN pmax pmax
comp=Z,2.0nm,0.4s
ZEI Tsey 137.87 313 *i* PKIKP PKPdf 23 04 20.4 +0.2
ZEI pmax pmax
comp=Z,4.0nm,0.9s
NOA NORSAR Array B 138.25 353 PKhKP 23 04 09.7
comp=Z,3.3nm,0.8s,baz=22,slow=3.9,SNR=9.7
NOA PKP PKPdf 23 04 20.8 +0.4
comp=Z,2.0nm,0.6s,baz=14,slow=4.1,SNR=6.3
KMBO Kilima Mbogo 139.42 243 SKPbc SKPbc 23 07 05.3 -1.5
comp=Z,3.4nm,1.0s,baz=190,slow=24,SNR=4.8
BEST Besiri 141.29 306 *i* P PKPdf 23 04 21.9 -4.7
KAC Achnashellach 141.99 6 *e*P PKPdf 23 04 21.9 -5.3
MCD Coleburn Disti 142.09 4 *e*P PKPdf 23 04 21.7 -5.7
SUW Suwalki 142.09 339 *e*PKP PKPdf 23 04 23.1 -4.4
KPL Plockton 142.11 7 *e*P PKPdf 23 04 22.3 -5.1
MDO Dochfour 142.14 5 *e*P PKPdf 23 04 22.0 -5.5
AKASG Malin Array Be 142.27 331 PKhKP 23 04 22.0
comp=Z,10nm,0.3s,baz=44,slow=4.5,SNR=78
AKASG SKPbc SKPbc 23 07 11.2 -1.6
comp=Z,2.8nm,0.6s,baz=38,slow=2.8,SNR=10
AKASG Malin Array Be 142.27 331 *c i* PKIKP PKPdf 23 04 28.2 +0.3
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 142.27 331 *e*PKHKP 23 04 22.6
KIEV Kiev 142.28 331 *e*PKHKP 23 04 22.7
KAR1 Arisaig 142.51 7 *e*P PKPdf 23 04 23.6 -4.5
MUD Monsted U'grnd 142.97 353 *i* PKHKP 23 04 25.3
MUD pmax pmax
comp=Z,28nm,0.8s
MUD Monsted U'grnd 142.97 353 *i* P PKPdf 23 04 25.3 -3.7
comp=Z,28nm,0.8s
COP Copenhagen 143.27 350 ⇓ *i* PKIKP PKPdf 23 04 26.3 -3.2
COP pmax pmax
comp=Z,24nm,0.8s
COP Copenhagen 143.27 350 ⇓ *i* P PKPdf 23 04 26.3 -3.2
comp=Z,24nm,0.8s
SIM Simferopol' 143.28 320 *d i* PKIKP PKPdf 23 04 28.6 -1.3
SIM pmax pmax
comp=Z,72nm,0.7s
MALT Malatya 143.29 308 *e*PKPdf PKPdf 23 04 28.5 -1.6
MALT Malatya 143.29 308 ⇓ *i* P PKPdf 23 04 28.7 -1.4
BSD Bornholm Skovb 143.34 347 ⇓ *i* PKIKP PKPdf 23 04 26.4 -3.3
BSD pmax pmax
comp=Z,46nm,0.9s
BSD Bornholm Skovb 143.34 347 ⇓ *i* P PKPdf 23 04 26.4 -3.3
comp=Z,46nm,0.9s
EAB Aberfoyle 143.38 6 *e*P PKPdf 23 04 26.5 -3.2
EBH Black Hill 143.39 5 *e*P PKPdf 23 04 26.4 -3.3
ERBA Erbaa 143.60 313 *i* P PKPdf 23 04 29.4 -1.1
AKCD Akcadag 143.67 308 *i* P PKPdf 23 04 29.9 -0.9
PGBU Glenifferbraes 143.74 6 *e*P PKPdf 23 04 27.5 -2.8
EDI Edinburgh 143.74 5 *e*P PKPdf 23 04 27.3 -3.0
ESY Stoneypath 143.79 4 *e*P PKPdf 23 04 27.4 -2.9
EAU Auchinoon 143.80 5 *e*P PKPdf 23 04 28.2 -2.2
EBL Broad Law 143.90 5 *e*P PKPdf 23 04 28.5 -2.1
GZT Gaziantep 144.25 307 *i* P PKPdf 23 04 31.5 -0.3
WAR Warsaw 144.28 340 *e*PKP PKPdf 23 04 30.8 -0.5
ESK Eskdalemuir 144.34 5 *i* PKIKP PKPdf 23 04 31.2 -0.2
ECK Cauldkaine Hil 144.48 5 *e*P PKPdf 23 04 29.4 -2.2
GKP Gorka Klasztor 144.50 344 *i* PKPdf PKPdf 23 04 31.0 -0.7
GAL1 Galloway 144.65 6 *e*P PKPdf 23 04 30.3 -1.6
KUZU Kuzuini 144.81 306 *i* P PKPdf 23 04 33.1 +0.3
XAL Allendale 144.87 4 *e*P PKPdf 23 04 31.1 -1.2
CTKT Corum 144.98 314 *i* P PKPdf 23 04 33.8 +0.8
LVV L'vov 145.16 335 *e*PKIKP PKPdf 23 04 32.9 -0.1
GIM North Isle of 145.24 6 *e*P PKPdf 23 04 32.6 -0.4
BSEG Bad Segeberg 145.29 351 *e*PKPbc PKPbc 23 04 33.2 -1.0
BSEG Bad Segeberg 145.29 351 *e*PKP2 PKPbc 23 04 33.2 -1.0
BSEG Bad Segeberg 145.29 351 *e*PKPbc PKPbc 23 04 33.2 -1.0
DMUB Kingscourt 145.32 9 *e*P PKPdf 23 04 32.7 -0.4
BALT Daday 145.49 316 *i* P PKPdf 23 04 34.5 +0.7
ILGA Ilgaz 145.50 315 *i* P PKPbc 23 04 35.4 +0.1
LEOM Leova 145.65 327 ⇓PKP2 PKPbc 23 04 34.9 -0.6
LEOM Leova 145.65 327 ⇓ *i* P PKPbc 23 04 34.9 -0.6

CDAG Cicekdag 145.70 312 *i* P PKPdf 23 04 35.0 +0.7
YAYL Yayladag 145.79 305 *i* P PKPdf 23 04 35.2 +0.7
DCN Croghan 145.80 10 *e*P PKPdf 23 04 34.1 +0.2
KWP Kalwaria Pacla 145.83 335 *e*PKP PKPbc 23 04 35.1 -0.7
KWP Kalwaria Pacla 145.83 335 *e*PKP2 PKPbc 23 04 35.1 -0.8
KWP Kalwaria Pacla 145.83 335 *e*PKPbc PKPbc 23 04 34.9 -1.0
KWP Kalwaria Pacla 145.83 335 ⇓ *i* P PKPbc 23 04 35.0 -0.9
YURE YUREGIR 145.88 307 *i* P PKPbc 23 04 36.1 -0.4
RUE Ruedersdorf 146.05 347 *e*PKPdf PKPdf 23 04 34.0 -0.3
BR131 Keskin Array S 146.17 313 *e*PKPdf PKPdf 23 04 33.9 -1.1
BRTR Keskin Array B 146.17 313 PKP PKPdf 23 04 33.4 -1.6
comp=Z,13nm,0.6s,baz=91,slow=2.0,SNR=88
BRTR PKPbc PKPbc 23 04 36.1 -1.0
comp=Z,13nm,0.6s,baz=122,slow=2.0,SNR=85
TLCR 146.18 325 ⇑PKP2 PKPbc 23 04 36.0 -1.0
TLCR 146.18 325 ⇑ *i* P PKPbc 23 04 36.0 -1.0
LHO Holmfirth 146.20 4 *e*P PKPdf 23 04 35.4 +0.8
WLF1 Llynfaes 146.24 7 *e*P PKPdf 23 04 35.2 +0.5
BUR08 Bucovina Ar. S 146.31 331 *e*PKPdf PKPdf 23 04 35.5 +0.5
BUR01 Bucovina Ar. S 146.32 331 P PKPbc 23 04 36.2 -1.1
BURAR Bucovina Array 146.32 331 ⇓PKP2 PKPbc 23 04 36.8 -0.5
BURAR Bucovina Array 146.32 331 ⇓ *i* P PKPbc 23 04 36.8 -0.5
GULE Gulek 146.36 308 *i* P PKPbc 23 04 37.6 -0.2
OJC Ojcow 146.41 339 *e*PKP PKPbc 23 04 36.4 -1.1
KOLS Kolonicke sedl 146.56 335 *e*PKP PKPdf 23 04 34.5 -0.8
KOLS *e* 23 04 37.6
KOLS *e* 23 04 40.5
KOLS Kolonicke sedl 146.56 335 *e*PKP PKPdf 23 04 34.5 -0.8
KOLS *e* 23 04 37.6
KOLS *e* 23 04 40.5
STHS Stebnicka Huta 146.57 337 *e*PKP PKPbc 23 04 37.6 -0.3
STHS *e* 23 04 41.9
STHS Stebnicka Huta 146.57 337 *e*PKP PKPbc 23 04 37.6 -0.3
STHS *e* 23 04 41.9
BBAL Bala 146.61 313 *i* P PKPbc 23 04 37.6 -0.7
NRDL Niedersach Rie 146.72 351 *e*PKPbc PKPbc 23 04 37.1 -1.1
UZH Uzhgorod 146.80 335 ⇑PKP2 PKPbc 23 04 38.0 -0.6
WIT Witteveen 146.82 355 *e*PKP PKPbc 23 04 38.4 -0.1
comp=Z,220nm,0.9s
VRI Vrincioaia 146.83 327 P PKPbc 23 04 38.1 -0.6
VRI Vrincioaia 146.83 327 ⇑ *i* P PKPbc 23 04 38.0 -0.8
SGKT Sivrigoynuk 146.84 315 *i* P PKPbc 23 04 38.2 -0.7
TIRR Tirgusor 146.87 324 *e*PKPdf PKPdf 23 04 34.6 -1.4
TIRR *e*PKPbc PKPbc 23 04 37.8 -1.1
TIRR *e*PKPab PKPab 23 04 41.8 -0.3
PLOR Plostina 146.88 327 PKP2 PKPbc 23 04 38.1 -0.8
PLOR Plostina 146.88 327 ⇑ *i* P PKPbc 23 04 38.0 -0.9
NIE Niedzica 146.91 338 *e*PKP2 PKPbc 23 04 38.6 -0.2
KSP Ksiaz 146.94 343 *i* PKPdf PKPbc 23 04 38.4 -0.5
HARR Harsova 146.98 325 ⇑PKP2 PKPbc 23 04 38.8 -0.4
HARR Harsova 146.98 325 ⇑ *i* P PKPbc 23 04 38.8 -0.4
CWF Charnwood Fore 147.04 3 *e*P PKPdf 23 04 36.7 +0.7
BMR Baia Mare 147.04 333 PKP2 PKPbc 23 04 38.7 -0.6
TRPA Tarpa 147.09 334 ⇓ *i* P PKPbc 23 04 38.8 -0.6
HLM1 Long Mynd 147.15 5 *e*P PKPdf 23 04 37.7 +1.5
IBBN Ibbenburen 147.21 353 *e*PKPbc PKPbc 23 04 38.8 -0.7
IBBN *e*PKPab PKPab 23 04 42.1 -1.0
MMAI Mount Meron Ar 147.23 301 PKPbc PKPbc 23 04 40.2 0.0
comp=Z,27nm,0.6s,baz=66,slow=4.9,SNR=71
OKC Ostrava-Krasne 147.28 340 ⇑*e*PKP PKPbc 23 04 38.8 -1.0
OKC *e*PKPAB PKPab 23 04 43.6 +0.1
CLZ Clausthal 147.31 350 *e*PKPbc PKPbc 23 04 39.1 -0.7
CLZ *e*PKPab PKPab 23 04 42.5 -1.0
CLZ Clausthal 147.31 350 *e*PKP2 PKPbc 23 04 39.1 -0.7
CLZ Clausthal 147.31 350 *e*PKPbc PKPbc 23 04 39.1 -0.7
CLZ *e*PKPab PKPab 23 04 42.5 -1.0
CLL Collm 147.32 347 *e*PKPbc PKPbc 23 04 38.8 -1.1
CLL Collm 147.32 347 *e*PKIKP PKPdf 23 04 35.0 -1.5
CLL *i* 23 04 42.8
CLL Collm 147.32 347 *e*PKP PKPdf 23 04 35.0 -1.5
CLL ⇓ *i*PKP PKPbc 23 04 38.9 -1.0
CLL ⇑ *i*PKP PKPab 23 04 42.8 -0.8
CLL *ep*PKP pPKPbc 23 06 53.0 +3.5
CLL Collm 147.32 347 *e*PKPdf PKPdf 23 04 35.0 -1.5
comp=Z,8.0nm,1.3s
CLL ⇓ *i*PKPbc PKPbc 23 04 38.9 -1.0
comp=Z,70nm,1.0s
CLL ⇑ *i*PKPab PKPab 23 04 42.8 -0.8
comp=Z,28nm,0.9s
CLL *ep*PKPbc pPKPbc 23 06 53.0 +3.5
CLL *e*SKPdf SKPdf 23 07 11.0 -6.4
CLL *i* (SKPbc) 23 07 23.6
comp=Z,8.0nm,1.3s
CLL *e* 23 07 27.0
comp=Z,5.0nm,1.2s
UPC Upice 147.32 343 *e*PKPDF PKPdf 23 04 36.3 -0.3
UPC ⇑*e*PKP PKPbc 23 04 39.4 -0.5
UPC *e*PKPAB PKPab 23 04 43.6 0.0
DPC Dobruska-Polom 147.38 343 *e*PKPDF PKPdf 23 04 36.1 -0.6
DPC ⇑*e*PKP PKPbc 23 04 39.7 -0.3
DPC *e*PKPAB PKPab 23 04 44.3 +0.4
PSN Preselentsi 147.48 323 *i* P PKPbc 23 04 40.0 -0.5
MLR Muntele Rosu 147.49 328 P PKPbc 23 04 39.8 -0.7
MLR Muntele Rosu 147.49 328 ⇓ *i* P PKPbc 23 04 39.3 -1.2
BRG Berggiesshubel 147.51 346 *e*PKPbc PKPbc 23 04 39.5 -0.9
BRG *e*PKPab PKPab 23 04 43.4 -1.0
BRG Berggiesshubel 147.51 346 *e*PKP PKPdf 23 04 36.0 -0.8
comp=Z,5.8nm,1.1s
BRG *i* 23 04 39.7
comp=Z,30nm,0.8s
BRG *i* 23 04 43.9
comp=Z,22nm,0.9s
BRG Berggiesshubel 147.51 346 *e*PKIKP PKPdf 23 04 36.0 -0.9
BRG *i* 23 04 43.9
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG pmax pmax
comp=Z,18nm,0.8s
BRG pmax pmax
comp=Z,13nm,0.9s
BRG pmax pmax
comp=N,2.0nm,0.7s
MORC Moravsky Berou 147.53 341 *e*PKPdf PKPdf 23 04 36.0 -1.0
MORC *e*PKPbc PKPbc 23 04 39.4 -1.0
MORC P 23 04 40.0
MORC *e*PKPab PKPab 23 04 44.1 -0.4
MORC Moravsky Berou 147.53 341 ⇑ *i* P PKPbc 23 04 39.8 -0.6
HTR Trewern Hill 147.54 6 *e*P PKPdf 23 04 38.5 +1.6
KECS Kecovo 147.62 336 *e*PKP PKPbc 23 04 40.4 -0.3
KECS *e* 23 04 45.0
KECS Kecovo 147.62 336 *e*PKP PKPbc 23 04 40.4 -0.3
KECS *e* 23 04 45.0
WTSB Winterswijk 147.65 354 *e*PKP PKPbc 23 04 39.6 -1.1
comp=N,56nm,1.0s
PVCC Panska Ves 147.68 345 *e*PKPDF PKPdf 23 04 37.0 -0.1
PVCC ⇑*e*PKP PKPbc 23 04 40.4 -0.4
PVCC *e*PKPAB PKPab 23 04 45.0 -0.1
KDHN Kadinhani 147.76 312 *i* P PKPbc 23 04 40.0 -1.4
VOIR 147.97 328 P PKPbc 23 04 41.0 -0.7
VOIR 147.97 328 ⇑ *i* P PKPbc 23 04 41.3 -0.4
HGH Gray Hill 148.02 5 *e*P PKPbc 23 04 39.7 -2.0
DRGR 148.06 332 P PKPbc 23 04 41.1 -0.8
DRGR 148.06 332 ⇑ *i* P PKPbc 23 04 41.3 -0.6
BUG Bochum--Univer 148.12 353 *e*PKPbc PKPbc 23 04 40.7 -1.2
ESKT Eskisehir 148.16 314 *i* P PKPbc 23 04 40.9 -1.5
PRU Pruhonice 148.19 344 *e*PKPDF PKPdf 23 04 37.6 -0.4
PRU ⇑*e*PKP PKPbc 23 04 41.8 -0.3
PRU *e*PKPAB PKPab 23 04 47.3 +0.1
VYHS Vyhne 148.21 338 *e*PKP PKPbc 23 04 41.7 -0.5
VYHS *e* 23 04 47.5
VYHS Vyhne 148.21 338 *e*PKP PKPbc 23 04 41.7 -0.5
VYHS *e* 23 04 47.5
PRD Provadia 148.23 323 *i* P PKPbc 23 04 41.9 -0.5
VRAC Vranov 148.23 341 P PKPbc 23 04 41.7 -0.6
VRAC Vranov 148.23 341 ⇓ *i* P PKPbc 23 04 41.6 -0.6
MOX Moxa 148.23 348 *e*PKP PKPbc 23 04 41.2 -1.0
comp=N,44nm,1.3s
MOX Moxa 148.23 348 *e*PKPbc PKPbc 23 04 41.2 -1.0
BORA Eskisehir 148.25 315 *i* P PKPbc 23 04 41.6 -1.0
TANN Tannenbergstha 148.28 347 *e*PKPbc PKPbc 23 04 41.5 -0.8
CSS Prodhromos 148.28 305 *e*PKPbc PKPbc 23 04 41.0 -1.8
CSS *e*PKPab PKPab 23 04 47.6 -0.6
KOLL Kolacno 148.29 339 *e*PKP2 PKPbc 23 04 42.1 -0.3
KOLL Kolacno 148.29 339 *e*PKP PKPbc 23 04 42.1 -0.3
PSZ Piszkesteto 148.31 336 *e*PKHKP PKPbc 23 04 41.4 -1.1
PSZ *e* 23 04 47.4
PSZ Piszkesteto 148.31 336 ⇓*e*PKP PKPbc 23 04 41.6 -0.9
PSZ Piszkesteto 148.31 336 ⇓ *i* P PKPbc 23 04 41.4 -1.1
UBBA Unterbreizbach 148.35 350 *e*PKPbc PKPbc 23 04 41.5 -1.0
NKC Novy Kostel 148.45 347 ⇑*e*PKP PKPbc 23 04 42.2 -0.5
NKC *e*PKPAB PKPab 23 04 47.9 -0.4

WOL	Wolverton	148.46	4	eP		PKPbc	23 04 41.0	-1.7
TREC	Trest	148.56	343	ePKPDF		PKPdf	23 04 37.7	-0.9
TREC				⇑ePKP		PKPbc	23 04 42.3	-0.8
TREC				ePKPAB		PKPab	23 04 47.6	-1.2
GAZI	Gazipasa	148.58	308	i P		PKPdf	23 04 40.5	+1.4
BEBN	Eben Emael	148.91	355	PKPbc		PKPbc	23 04 42.7	-1.2
BEBN				PKPab		PKPab	23 04 48.9	-1.2
HGN	Heimansgroeve	148.92	355	ePKP		PKPbc	23 04 42.5	-1.4
	comp=N,3.7nm,1.3s							
ROTZ	Rotzenmuhle	148.94	347	ePKPbc		PKPbc	23 04 43.3	-0.7
UCC	Uccle	148.99	357	PKPbc		PKPbc	23 04 43.1	-1.0
UCC				PKPab		PKPab	23 04 49.3	-1.2
BUD	Budapest	149.00	337	⇓ePKP		PKPbc	23 04 43.0	-0.9
SZH	Strazhica	149.00	324	i P		PKPbc	23 04 43.3	-1.0
ZST	Bratislava	149.05	340	ePKP2		PKPbc	23 04 44.6	+0.3
ZST	Bratislava	149.05	340	ePKP		PKPbc	23 04 44.6	+0.3
GZR	Gura Zlata	149.10	330	⇑iP		PKPbc	23 04 43.5	-1.0
JMB	Yambol	149.16	323	P		PKPbc	23 04 44.1	-0.6
JMB	Yambol	149.16	323	i P		PKPbc	23 04 44.4	-0.3
TNS	Taunus Mts	149.17	352	ePKPbc		PKPbc	23 04 43.5	-1.0
TNS				ePKPab		PKPab	23 04 50.4	-0.8
TNS	Taunus Mts	149.17	352	ePKPbc		PKPbc	23 04 43.5	-1.0
TNS				ePKPab		PKPab	23 04 50.4	-0.8
GRA1	Grafenberg Arr	149.22	348	ePKPbc		PKPbc	23 04 43.8	-0.8
GRA1				ePKPab		PKPab	23 04 50.8	-0.7
GRF	Grafenberg Arr	149.22	348	ePKPbc		PKPbc	23 04 43.8	-0.8
GRF				ePKPab		PKPab	23 04 50.8	-0.7
GRF	Grafenberg Arr	149.22	348	ePKP		PKPbc	23 04 43.8	-0.8
GRF				ePKP		PKPab	23 04 50.8	-0.7
KHC	Kasperske Hory	149.22	345	ePKPdf		PKPdf	23 04 38.4	-1.2
KHC				ePKPbc		PKPbc	23 04 44.1	-0.5
KHC				ePKPab		PKPab	23 04 52.3	+0.8
SNF	Seneffe	149.29	357	PKPbc		PKPbc	23 04 44.0	-0.8
SNF				PKPab		PKPab	23 04 50.6	-1.1
GDZ	Gediz	149.30	315	i P		PKPbc	23 04 44.4	-0.8
MENF	Mencas	149.30	359	PKP		PKPbc	23 04 43.9	-0.9
BCLA	Clavier	149.31	356	PKPbc		PKPbc	23 04 43.7	-1.2
BCLA				PKPab		PKPab	23 04 50.7	-1.1
WET	Wettzell	149.38	346	ePKPbc		PKPbc	23 04 44.2	-0.8
WET				ePKPab		PKPab	23 04 51.5	-0.6
WET	Wettzell	149.38	346	ePKPbc		PKPbc	23 04 44.2	-0.8
WET				ePKPab		PKPab	23 04 51.5	-0.6
BZS	Buzias	149.45	332	P		PKPbc	23 04 44.3	-1.1
BZS	Buzias	149.45	332	⇑iP		PKPdf	23 04 38.8	-1.4
GEC2	GERESS Array S	149.45	344	ePKPbc		PKPbc	23 04 44.3	-0.9
GEC2	GERESS Array S	149.45	344	ePKPdf		PKPdf	23 04 39.4	-0.7
GEC2				ePKPbc		PKPbc	23 04 44.2	-1.0
GEC2				ePKPbc		PKPbc	23 04 44.3	-0.9
GEC2				ePKPab		PKPab	23 04 51.8	-0.7
GERES	GERESS Array B	149.45	344	PKP		PKPdf	23 04 39.4	-0.6
	comp=N,4.3nm,1.1s,baz=45,slow=0.8,SNR=12							
GERES				PKPbc		PKPbc	23 04 44.4	-0.8
	comp=N,18nm,0.8s,baz=40,slow=2.3,SNR=133							
GERES				PKPab		PKPab	23 04 52.0	-0.5
	comp=N,4.1nm,0.6s,baz=32,slow=5.3,SNR=10							
ABH	Alteburg	149.62	353	PKP		PKPbc	23 04 44.9	-0.7
KHAL	Karahalli	149.65	314	i P		PKPbc	23 04 44.9	-1.2
GIVF	Givet	149.66	356	ePKP1		PKPbc	23 04 44.7	-1.0
	comp=N,124nm,1.0s							
CONA	Conrad Observa	149.68	341	⇑iPKPdf		PKPdf	23 04 39.4	-1.1
	comp=N,2.7nm,1.2s,SNR=26							
CONA				⇓iPKiKP		PKiKP	23 04 45.4	-1.1
	comp=N,26nm,0.8s							
CONA				⇑iPKPab		PKPab	23 04 54.1	+0.6
	comp=N,22nm,1.2s							
DOU	Dourbes	149.68	356	PKPbc		PKPbc	23 04 44.9	-0.8
DURS	Dursunbey	149.69	316	i P		PKPbc	23 04 44.6	-1.5
KORT	Korkueli	149.70	311	i P		PKPbc	23 04 45.1	-1.1
TOD	Tromm	149.72	351	PKHKP		PKPbc	23 04 44.9	-0.9
BAIF	Baives	149.74	357	ePKP1		PKPbc	23 04 45.0	-0.9
	comp=N,84nm,1.0s							
DEMI	Demirci	149.83	315	i P		PKPbc	23 04 45.1	-1.3
RUP	Ruppelstein	149.86	353	PKHKP		PKPbc	23 04 45.6	-0.6
WLF	Walferdange	149.99	354	PKPbc		PKPbc	23 04 43.3	-3.2
WLF				PKPbc		PKPbc	23 04 46.1	-0.4
WLF				PKPab		PKPab	23 04 53.9	-0.8
WLF	Walferdange	149.99	354	ePKPbc		PKPbc	23 04 45.9	-0.6
WLF	Walferdange	149.99	354	ePKPdf		PKPdf	23 04 40.6	-0.2
WLF				ePKPbc		PKPbc	23 04 46.1	-0.3
WLF				ePKPab		PKPab	23 04 54.1	-0.5
GOLH	Golhisar	150.15	311	i P		PKPbc	23 04 46.4	-0.9
BALY	Balya	150.17	317	i P		PKPbc	23 04 46.0	-1.3
PKSM	Moragy	150.20	336	P		PKPbc	23 04 45.9	-1.2
PKSM	Moragy	150.20	336	⇑iP		PKPbc	23 04 45.6	-1.5
MOA	Molln	150.22	343	⇑iPKPdf		PKPdf	23 04 38.7	-2.6
	comp=N,1.3nm,0.9s,SNR=6.6							
MOA				⇓iPKPbc		PKPbc	23 04 45.8	-1.2
	comp=N,6.6nm,0.6s							
MOA				⇓iPKPab		PKPab	23 04 56.1	+0.4
	comp=N,18nm,1.4s							
MANT	Manisa	150.22	314	i P		PKPbc	23 04 46.6	-0.8
DNZL	Cakiroluk	150.29	313	i P		PKPbc	23 04 47.2	-0.4
KDZ	Kurdzhali	150.35	322	i P		PKPbc	23 04 46.5	-1.1
ALN	Alexandroupoli	150.46	321	P		PKPbc	23 04 46.0	-1.8
STU	Stuttgart	150.47	350	ePKPbc		PKPbc	23 04 46.6	-1.0
STU	Stuttgart	150.47	350	ePKIKP		PKPdf	23 04 40.7	-0.9
STU				e			23 04 56.6	
STU	Stuttgart	150.47	350	ePKPdf		PKPdf	23 04 40.7	-0.9
STU				ePKPbc		PKPbc	23 04 46.4	-1.3
STU				ePKPab		PKPab	23 04 56.6	-0.1
LANF	Langenberg	150.47	352	PKP		PKPbc	23 04 46.9	-0.7
JSA	Saint Aubin	150.51	5	eP		PKPbc	23 04 46.0	-1.7
AKHS	Akhisar	150.51	316	i P		PKPbc	23 04 46.8	-1.2
AKAS	Kas	150.57	310	i P		PKPbc	23 04 46.9	-1.4
RDO	Rodhopi	150.60	322	P		PKPbc	23 04 46.5	-1.7
FUR	Furstenfeldbru	150.66	347	ePKPbc		PKPbc	23 04 46.8	-1.3
FUR				ePKPab		PKPab	23 04 57.0	-0.5
FUR	Furstenfeldbru	150.66	347	ePKIKP		PKPbc	23 04 46.8	-1.3
FUR				e			23 04 57.0	
FUR	Furstenfeldbru	150.66	347	ePKPbc		PKPbc	23 04 46.8	-1.3
FUR				ePKPab		PKPab	23 04 57.0	-0.5
RZN	Rozhen	150.72	323	i P		PKPbc	23 04 47.2	-1.2
VTS	Vitosha	150.93	326	P		PKPbc	23 04 47.6	-1.3
VTS	Vitosha	150.93	326	i P		PKPbc	23 04 47.8	-1.1
BFO	Black Forest	151.04	351	ePKPbc		PKPbc	23 04 47.6	-1.3
BFO				ePKPab		PKPab	23 04 57.6	-1.5
BFO	Black Forest	151.04	351	ePKIKP		PKPbc	23 04 47.6	-1.3
BFO				e			23 04 57.6	
BFO	Black Forest	151.04	351	ePKPbc		PKPbc	23 04 47.6	-1.3
BFO				ePKPab		PKPab	23 04 57.6	-1.5
FLN	La Foliniere	151.05	3	ePKP1		PKPbc	23 04 47.4	-1.5
	comp=N,36nm,0.6s							
SOKA	Soboth	151.05	341	⇑iPKPdf		PKPdf	23 04 41.1	-1.5
	comp=N,4.6nm,1.4s							
SOKA				⇓iPKPbc		PKPbc	23 04 47.6	-1.4
	comp=N,18nm,1.3s							
SOKA				⇑iPKPab		PKPab	23 04 58.1	-1.1
	comp=N,17nm,1.2s							
PERS	Pernice	151.06	341	i PKPbc		PKPbc	23 04 47.4	-1.6
PERS				i PKPab		PKPab	23 04 58.4	-0.9
CDF	Champ du Feu	151.10	352	ePKP1		PKPbc	23 04 47.9	-1.2
	comp=N,36nm,0.9s							
AYDN	Tasoluk	151.11	314	i P		PKPbc	23 04 48.7	-0.7
KBA	Koelnbreinsper	151.18	343	⇑iPKPdf		PKPdf	23 04 41.0	-1.8
	comp=N,1.6nm,0.9s,SNR=11							
KBA				⇑iPKPbc		PKPbc	23 04 47.9	-1.4
	comp=N,9.3nm,0.6s							
KBA				⇓iPKPab		PKPab	23 05 00.5	+0.7
	comp=N,23nm,1.0s							
SPAK	Spaichingen-Ko	151.19	350	PKP		PKPbc	23 04 48.0	-1.3
LDF	La Druitiere	151.23	3	ePKP1		PKPbc	23 04 47.7	-1.7
	comp=N,24nm,0.5s							
MEZF	Maizieres J'vi	151.24	355	ePKP1		PKPbc	23 04 48.4	-1.0
	comp=N,100nm,1.2s							
ROSF	Rostrenen	151.24	7	ePKP1		PKPbc	23 04 47.6	-1.8
	comp=N,22nm,0.7s							
PRK	Paraskevi	151.30	318	P		PKPbc	23 04 48.5	-1.3
ECH	Echery	151.31	352	PKP		PKPbc	23 04 48.6	-0.9
ECH	Echery	151.31	352	ePKPdf		PKPdf	23 04 42.3	-0.6
ECH				ePKPbc		PKPbc	23 04 48.1	-1.4
ECH				PKP		PKPbc	23 04 48.6	-0.9
ECH				ePKPab		PKPab	23 04 58.9	-1.4
MMB	Musomiste	151.34	324	i P		PKPbc	23 04 48.4	-1.4
DIVS	Divibare	151.36	332	P		PKPbc	23 04 48.9	-0.9
GRR	Gorron	151.40	4	ePKP1		PKPbc	23 04 48.3	-1.4
	comp=N,30nm,0.5s							
SGMF	Saint Gilles	151.40	6	ePKP1		PKPbc	23 04 48.0	-1.7
	comp=N,57nm,0.9s							
THEF	They Montfort	151.43	354	PKP		PKPbc	23 04 49.3	-0.5
WTTA	Wattenberg	151.43	346	⇑iPKPdf		PKPdf	23 04 42.1	-1.0
	comp=N,5.5nm,0.8s							
WTTA				⇓iPKiKP		PKiKP	23 04 49.0	-1.1
	comp=N,12nm,0.4s							
WTTA				⇑iPKPab		PKPab	23 05 00.9	+0.1
	comp=N,9.8nm,0.5s							
MOTA	Moosalm	151.47	347	⇓iPKPdf		PKPdf	23 04 41.3	-1.9
	comp=N,2.9nm,0.9s							
MOTA				⇑iPKPbc		PKPbc	23 04 48.7	-1.3
	comp=N,16nm,0.9s							
MOTA				⇓iPKPab		PKPab	23 05 00.6	-0.4
	comp=N,6.9nm,0.6s							
KKB	Krupnik	151.50	325	i P		PKPbc	23 04 48.9	-1.3
FELD	Feldberg im Sc	151.53	351	PKP		PKPbc	23 04 49.0	-1.0
GCAM	G?zelcaml?	151.53	314	i P		PKPbc	23 04 49.4	-1.0
LIA	Limnos Island	151.59	320	P		PKPbc	23 04 48.7	-1.8
URLA	Izmir	151.60	316	i P		PKPbc	23 04 49.2	-1.3
HAU	Haudompre	151.61	353	ePKP1		PKPbc	23 04 48.9	-1.3
	comp=N,19nm,0.7s							
LOS	Limnos	151.63	320	P		PKPbc	23 04 48.9	-1.6
QUIF	Quistinic	151.67	7	ePKP1		PKPbc	23 04 48.5	-1.9
ABTA	Abfaltersbach	151.70	344	⇑iPKPdf		PKPdf	23 04 41.9	-1.7
	comp=N,8.8nm,1.3s							
ABTA				⇓iPKPbc		PKPbc	23 04 48.9	-1.6
	comp=N,16nm,0.5s							
ABTA				⇑iPKPab		PKPab	23 05 01.1	-0.9
	comp=N,10nm,0.6s							
HINF	Hinteralfeld	151.74	353	ePKP1		PKPbc	23 04 49.0	-1.5
	comp=N,11nm,0.6s							
FETA	Feichten	151.86	347	⇑iPKPdf		PKPdf	23 04 42.8	-1.0
	comp=N,8.0nm,1.1s							
FETA				⇓iPKiKP		PKiKP	23 04 50.1	-0.9
	comp=N,18nm,1.2s							
FETA				⇑iPKPab		PKPab	23 05 02.4	-0.3
	comp=N,13nm,1.1s							
VISS	Visnje	151.89	340	i PKPdf		PKPdf	23 04 41.8	-2.1
VISS				i PKPbc		PKPbc	23 04 49.6	-1.3
VISS				ePKPab		PKPab	23 05 01.2	-1.6
VOY	Vojsko	151.98	342	eP		PKPbc	23 04 49.4	-1.7
VOY				ePKPab		PKPab	23 05 01.7	-1.4
BOJS	Bojanci	152.02	339	i PKPdf		PKPdf	23 04 43.5	-0.6
BOJS				ePKPbc		PKPbc	23 04 50.3	-0.9
BOJS				i PKPab		PKPab	23 05 02.5	-0.8
JAVS	Javornik	152.05	341	i PKPbc		PKPbc	23 04 49.7	-1.5
JAVS				i PKPab		PKPab	23 05 01.8	-1.7
STIP	Stip	152.10	326	ePKP		PKPab	23 05 03.0	-0.8
VAY	Valandovo	152.16	325	ePKP		PKPab	23 05 03.3	-0.8
PLG	Polygyros	152.31	323	P		PKPab	23 05 04.3	-0.5
LOR	Lormes	152.54	357	ePKP1		PKPbc	23 04 51.1	-1.2
	comp=N,13nm,0.6s							
SSF	Saint Saulge	152.76	357	ePKP1		PKPbc	23 04 51.6	-1.2
	comp=N,21nm,0.9s							
KRUS	Krusevo	152.82	327	ePKP		PKPbc	23 04 51.2	-1.9
KRUS				ePKP		PKPab	23 05 06.1	-0.8
AOS	Alonnisos	152.83	320	P		PKPdf	23 04 40.1	-5.4
CABF	La Chapelle	153.01	353	ePKP1		PKPbc	23 04 52.6	-0.7
	comp=N,21nm,1.0s							
LIT	Litokhoron	153.04	323	P		PKPab	23 05 06.5	-1.4
AVF	Avril sur Loir	153.04	358	ePKP1		PKPbc	23 04 52.0	-1.4
FNA	Florina	153.18	326	P		PKPab	23 04 51.9	-2.0
MFF	Saint Martin d	153.22	3	ePKP1		PKPbc	23 04 52.3	-1.5
	comp=N,14nm,0.8s							
OHR	Ohrid	153.24	327	ePKP		PKPbc	23 04 52.5	-1.5
OHR				ePKP		PKPab	23 05 07.4	-1.3
BGF	Bois d'Agland	153.29	358	ePKP1		PKPbc	23 04 52.6	-1.3
	comp=N,8.7nm,0.6s							
KZN	Kozani	153.30	324	P		PKPab	23 05 08.0	-1.0
TCF	Toulx Ste Croi	153.57	359	ePKP1		PKPbc	23 04 53.1	-1.4
	comp=N,17nm,1.0s							
LPL	La Plagne	154.01	352	ePKP1		PKPbc	23 04 55.1	-0.4
LPG	La Plagne	154.03	352	ePKP1		PKPbc	23 04 55.1	-0.4
EFP	Efpalio	154.49	321	P		PKPbc	23 04 56.1	-0.6
ORIF	Oris-en-Rattie	154.71	353	ePKP1		PKPdf	23 04 56.0	+8.1
KEK	Kerkira	154.78	326	P		PKPdf	23 04 39.1	-9.1
MBDF	Montbardon	154.78	352	ePKP1		PKPdf	23 04 56.1	+8.1
	comp=N,9.5nm,0.8s							
VIVF	Saint-Julien-l	154.89	355	ePKP1		PKPdf	23 04 56.3	+8.2
KFL	Anninata	155.36	322	P		PKPab	23 05 17.4	-0.5
SBF	Sospel	155.53	350	ePKP1		PKPdf	23 04 58.1	+9.1
FRF	La Foret Royal	155.95	351	ePKP1		PKPdf	23 04 58.2	+8.6
LMR	La Mourre	156.19	351	ePKP1		PKPdf	23 04 59.8	+10
	comp=N,4.5nm,0.9s							
PBRG	Braganca	156.91	16	ePKPab		PKPab	23 05 23.6	-0.9
MVO	Moncorvo	157.43	17	ePKPab		PKPab	23 05 26.4	-0.3
PTOM	Tomar	158.41	22	ePKPab		PKPab	23 05 29.9	-1.1
PMRV	Marv??o	158.92	20	ePKPab		PKPab	23 05 32.5	-0.7
PESTR	Estremoz	159.36	21	ePKPab		PKPab	23 05 33.4	-1.8
EVO	Evora	159.51	22	ePKPab		PKPab	23 05 34.4	-1.5
ESDC	Sonseca Array	159.59	13	PKPab		PKPab	23 05 35.2	-0.9
	comp=N,4.8nm,1.0s,baz=345,slow=4.7,SNR=12							
ESLA	Sonseca Array	159.59	13	ePKPab		PKPab	23 05 35.7	-0.5
PVAQ	Vaqueiros	160.62	23	ePKPab		PKPab	23 05 40.1	-0.7
KEST	Kesra	162.76	339	PKPab		PKPab	23 05 49.9	-0.3
	comp=N,1.9nm,0.7s,baz=261,slow=2.4,SNR=7.6							
LIC	Lamto	165.00	153	eP		PKPab	23 05 58.8	-1.8
	comp=N,32nm,1.1s							
KIC	Kosan Boka	165.25	154	eP		PKPab	23 06 00.2	-1.4
	comp=N,22nm,0.9s							
TIC	Toumodi	165.38	153	eP		PKPab	23 06 00.6	-1.7
	comp=N,24nm,1.0s							
DBIC	Dimbokro	165.48	153	PKP		PKPdf	23 04 57.0	-3.6
	comp=N,3.6nm,1.0s,baz=42,slow=0.8,SNR=4.1							
DBIC				PKPab		PKPab	23 06 01.7	-0.9
	comp=N,5.5nm,0.8s,baz=169,slow=4.3,SNR=8.1							
TOA0	Torodi Ar. Sit	173.39	180	ePKPdf		PKPdf	23 05 02.5	-2.7
TOA0	Torodi Ar. Sit	173.39	180	ePKPdf		PKPdf	23 05 02.3	-2.9
TORD	Torodi Ar. Bea	173.39	180	PKP		PKPdf	23 05 01.9	-3.3
	comp=N,2.6nm,1.0s,baz=234,slow=0.7,SNR=12							
TORD				PKPab		PKPab	23 06 35.8	-1.7
	comp=N,1.5nm,0.9s,baz=193,slow=3.4,SNR=7.3							

ISCJB **14** *22:47:00.5±1.1, 6°.43S±0°.08×125°.9E±0°.1, h512km±14km, mb3.6/11, Error ellipse: s-maj=20.3km s-min=9.9km az=159.8*
NEIC **14** *22:47:01.1±0.6, 6°.47S×125°.86E, h508km±7km, mb3.7/7, Error ellipse: s-maj=11.2km s-min=5.6km az=71.0*
IDC **14** *22:47:01.2±4.0, 6°.49S×125°.82E, h504km±53km, mb3.2/6, mb1 3.3/8, mb1mx3.2/19, mbtmp3.3/8, Error ellipse: s-maj=112.0km s-min=15.6km az=58.0*

ISC 14 22:47:01.0±0.9, **6°.47S**±0°.07×**125°.9E**±0°.1, **h503**km±12km, **n29**, σ0°.43/28, **mb3.6**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.27	283	P		P	22 48 39.8	-0.2
	3.3nm,0.3s,baz=162,slow=5.7,SNR=12							
DAV	Davao City (W)	13.45	359	P		P	22 49 55.2	+0.2
WRAB	Tennant Creek	15.71	149	eP		P	22 50 18.7	+0.1
	3.8nm,0.3s							
KKM	Kota Kinabalu	15.73	322	P		P	22 50 18.6	-0.3
MBWA	Marble Bar	15.78	202	P		P	22 50 19.9	+0.6
ASAR	Alice Springs	18.76	157	P		P	22 50 48.1	-0.1
	2.6nm,0.3s,baz=337,slow=9.2,SNR=23							
COCO	West Island	29.20	257	P		P	22 52 20.9	-0.5
STKA	Stephens Creek	29.24	152	P		P	22 52 21.9	+0.4
	5.8nm,0.7s,mb4.1,baz=325,slow=9.2,SNR=6.0							
STKA	Stephens Creek	29.24	152	eP		P	22 52 21.8	+0.3
	1.2nm,0.8s,mb3.4							
TAU	Tasmania Unive	40.94	156	eP		P	22 53 58.4	-0.6
	2.0nm,0.6s,mb3.7							
LSA	Lhasa	49.05	319	eP		P	22 55 02.2	+0.5
	3.7nm,0.4s,mb4.1							
MDJ	Mudanjiang	50.95	3	P		P	22 55 14.9	-0.5
YSS	Yuzh-Sakhalins	55.25	14	P		P	22 55 45.9	-0.1
ULN	Ulaanbaatar	56.59	345	eP		P	22 55 55.4	+0.2
	1.0nm,0.5s,mb3.4							
SONM	Songino Array	56.73	344	P		P	22 55 56.6	+0.3
	0.6nm,0.7s,mb3.0,baz=161,slow=7.9,SNR=3.1							
TLY	Talaya	60.98	344	eP		P	22 56 24.8	+0.1
MK31	Makanchi Array	65.59	329	eP		P	22 56 54.4	-0.2
MKAR	Makanchi Array	65.59	329	P		P	22 56 54.8	+0.3
	0.8nm,0.6s,mb3.6,baz=132,slow=7.6,SNR=10							
ZALV	Zalesovo Beam	69.35	335	P		P	22 57 17.4	0.0
	1.4nm,0.4s,mb3.8,baz=126,slow=5.6,SNR=5.8							
KURK	Kurchatov	69.98	330	P		P	22 57 21.5	+0.3
	0.8nm,0.6s,mb3.4,baz=139,slow=5.0,SNR=4.5							
KURK	Kurchatov	69.98	330	P		P	22 57 21.5	+0.3
SBA	Scott Base	74.43	172	P		P	22 57 46.5	-0.2
BVAR	Borovoye Array	75.47	329	P		P	22 57 52.8	0.0
	0.6nm,0.5s,mb3.4,baz=134,slow=6.2,SNR=5.8							
BRVK	Borovoye	75.54	329	eP		P	22 57 53.0	-0.2
	1.5nm,0.8s,mb3.6							
ARU	Arti	83.11	329	eP		P	22 58 32.2	-1.1
	2.1nm,0.8s,mb3.7							
KIV	Kislovodsk	89.56	314	P		P	22 59 05.6	+1.2
MCK	McKinley	93.61	26	P		P	22 59 22.7	0.0
LBTB	Lobatse	96.54	244	eP		P	22 59 36.9	0.0
DBIC	Dimbokro	131.08	273	ePKPdf		PKPdf	23 05 15.2	-1.1

GUC 14 22:56:21.0±0.7, **22°.94S**×**70°.18W**, **h40**km±2km, **MD3.7, ML2.9, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.30	237	⇓iP		Pn	22 56 28.5	-0.8
MECH				i S		Sn	22 56 35.0	0.0
MECH				AML		AML	22 56 39.5	
	comp=E,1μm,0.7s							
PECH	Pedro de Valdi	0.58	54	⇑iP		Pn	22 56 33.1	+0.3
PECH				i S		Sn	22 56 42.0	+0.9
PECH				AML		AML	22 56 43.8	
	comp=N,1μm,0.6s							
ANCH	Antofagasta	0.77	196	⇓iP		Pn	22 56 34.0	-1.4
ANCH				i S		Sn	22 56 45.2	-0.6
ANCH				AML		AML	22 56 46.8	
	comp=N,1μm,0.3s							
PB04	Plate Boundary	0.93	43	eP		Pn	22 56 33.2	-4.3
PB04				i S		Sn	22 56 42.8	-6.8
PB04				AML		AML	22 56 47.5	
	comp=N,734nm,0.7s							
LVC	Limon Verde	1.21	75	⇑iP		Pn	22 56 42.9	+1.5
LVC				i S		Sn	22 56 59.2	+2.6
PB01	Plate Boundary	2.00	19	eP		Pn	22 56 53.8	+1.6
PB01				i S		Sn	22 57 18.6	+2.6
PB01				AML		AML	22 57 23.1	
	comp=E,142nm,0.3s							
HMBC	Humberston	2.66	6	eP		Pn	22 57 03.6	+2.1
HMBC				i S		Sn	22 57 35.7	+3.2
HMBC				AML		AML	22 57 50.7	
	comp=E,110nm,0.5s							

ISCJB **14** *23:00:48.4±0.4, 55°.10S±0°.07×129°.0W±0°.1, h10km, mb4.6/13, MS4.6/11, Error ellipse: s-maj=10.4km s-min=10.3km az=42.0*
IDC **14** *23:00:49.1±0.7, 55°.14S×129°.05W, h0km, mb4.4/6, mb1 4.6/6, mb1mx4.3/14, mbtmp4.4/6, MS4.6/11, Ms1 4.6/11, ms1mx4.5/13, Error ellipse: s-maj=32.3km s-min=20.5km az=169.0*
NEIC **14** *23:00:50.4±0.2, 55°.10S×129°.05W, h10km, mb4.8/8, Error ellipse: s-maj=12.0km s-min=8.6km az=165.0*
GCMT **14** *23:00:50.4±0.2, 55°.32S×128°.97W, h16km±1km, MW5.2/90, Moment Tensor Solution. s51,c76; s90,c140; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79±.22; $M_{\theta\theta}$5.33±.25; $M_{\phi\phi}$-4.55±.18; $M_{r\theta}$-0.27±.55; $M_{\theta\phi}$6.41±.17; $M_{\phi r}$0.13±.47; Best double couple: $M_0$8.09900×10^{16} NP1:ϕ_s199.00000°, δ88.00000°, λ-179.00000°. NP2: ϕ_s109.00000°, δ89.00000°, λ-2.00000°. Principal axes: T 8.4860, Plg1.0000°, Azm154.0000°; N -0.7810, Plg88.0000°, Azm274.0000°; P -7.7110, Plg2.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 23:00:50.3±0.4, **55°.07S**±0°.07×**129°.1W**±0°.1, **h10**km, **n86**, σ0°.81/28, **mb4.6**/13, **MS4.6**/11, **Pacific-Antarctic Ridge**

| Code | Station Name | Δ° | AZ° | Ph

	comp=Z,55nm,1.5s								
SONM	Songino Array	145.51	281	PKPbc	PKPbc	23 20 28.5	+0.8		
	comp=Z,3.9nm,0.7s,baz=137,slow=3.0,SNR=20								
KEST	Kesra	145.65	107	PKPbc	PKPbc	23 20 28.9	+0.5		
	comp=Z,4.5nm,1.1s,baz=203,slow=3.1,SNR=8.1								
MTLF	Montolieu	146.75	90	*e*PKP1	PKPab	23 20 33.6	+0.8		
	comp=Z,10nm,0.9s								
LFF	La Frestale	146.87	87	*e*PKP1	PKPbc	23 20 32.6	+0.8		
DAG	Danmarks Havn	147.38	24	*i* P	PKPab	23 20 35.0	+0.7		
CAF	Calviac	147.62	88	*e*PKP1	PKPbc	23 20 35.6	+1.7		
	comp=Z,30nm,1.4s								
GRR	Gorron	147.88	80	*e*PKP1	PKPbc	23 20 32.9	-1.6		
	comp=Z,49nm,1.4s								
FLN	La Foliniere	148.29	80	*e*PKP1	PKPbc	23 20 34.5	-1.0		
	comp=Z,57nm,1.3s								
TCF	Toulx Ste Croi	148.49	86	*e*PKP1	PKPbc	23 20 37.5	+1.4		
TLY	Talaya	148.99	286	PKPdf	PKPdf	23 20 33.2	+0.1		
LMR	La Mourre	149.22	94	*e*PKP1	PKPbc	23 20 39.5	+1.4		
	comp=Z,26nm,1.4s								
AVF	Avril sur Loir	149.42	86	*e*PKP1	PKPbc	23 20 39.6	+1.1		
	comp=Z,18nm,1.3s								
FRF	La Foret Royal	149.44	93	*e*PKP1	PKPbc	23 20 39.9	+1.3		
	comp=Z,52nm,1.7s								
SMF	Signal de Mont	149.62	86	*e*PKP1	PKPbc	23 20 40.2	+1.2		
	comp=Z,37nm,1.4s								
SSF	Saint Saulge	149.66	85	*e*PKP1	PKPbc	23 20 40.1	+1.1		
	comp=Z,28nm,1.6s								
LOR	Lormes	149.97	85	*e*PKP1	PKPbc	23 20 41.1	+1.3		
	comp=Z,42nm,1.5s								
SBF	Sospel	150.07	94	*e*PKP1	PKPbc	23 20 41.4	+1.3		
	comp=Z,27nm,1.1s								
PGF	Pioggiola	150.15	97	*e*PKP1	PKPbc	23 20 41.7	+1.3		
	comp=Z,30nm,1.2s								
LPG	La Plagne	150.65	90	*e*PKP1	PKPbc	23 20 43.8	+2.3		
	comp=Z,16nm,1.2s								
LPL	La Plagne	150.65	90	*e*PKP1	PKPbc	23 20 43.7	+2.2		
	comp=Z,37nm,1.5s								
CABF	La Chapelle	150.89	88	*e*PKP1	PKPbc	23 20 43.5	+1.5		
	comp=Z,30nm,1.4s								
BAIF	Baives	151.59	81	*e*PKP1	PKPbc	23 20 45.3	+1.8		
HINF	Hinteralfeld	151.98	86	*e*PKP1	PKPbc	23 20 45.8	+1.3		
TIP	Timpagrande	152.20	111	*e*PKPbc	PKPbc	23 20 45.9	+0.7		
GERES	GERESS Array B	156.44	90	PKPbc	PKPdf	23 20 53.7	+10		
	comp=Z,1.3nm,0.9s,baz=236,slow=0.5,SNR=9.5								
CSS	Prodhromos	156.48	142	PKPdf	PKPdf	23 20 45.2	+0.5		
MK31	Makanchi Array	158.72	260	*e*PKPdf	PKPdf	23 20 47.8	+0.7		
MKAR	Makanchi Array	158.72	260	PKPdf	PKPab	23 21 24.1	+1.2		
	comp=Z,0.7nm,0.7s,baz=118,slow=4.8,SNR=7.5								
BRTR	Keskin Array B	160.78	136	PKPab	PKPab	23 21 31.5	-0.4		
	comp=Z,0.6nm,0.8s,baz=222,slow=1.9,SNR=3.7								
MICGM	Minsk	166.70	83	*e*LR	LR	23 20 53.0			
KIV	Kislovodsk	167.66	151	PKPdf	PKPdf	23 20 54.8	-0.9		
BVAR	Borovoye Array	168.38	268	PKPab	PKPab	23 22 06.3	+1.2		
	comp=Z,0.5nm,0.5s,baz=120,slow=5.2,SNR=4.1								
BRVK	Borovoye	168.46	268	*e*PKPdf	PKPdf	23 20 55.5	-0.4		
ARU	Arti	175.48	291	PKPdf	PKPdf	23 20 59.5	+0.4		

CASC 14 23:17:26.6±2.2, 15°.92N×88°.35W, h0km±20km, MD4.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAHU	Cacacuatique	2.14	176	*e*P	Pn	23 18 02.9	-0.8
CAHU				*e*S	Sn	23 18 32.6	+1.7
RBDL	Robledal	2.22	216	*e*P	Pn	23 18 04.2	-0.4
LBRS	Las Brisas	2.27	197	*e*P	Pn	23 18 05.4	-0.1
LBRS				*e*S	Sn	23 18 36.0	+1.8
SNVI	San Vicente	2.34	192	*e*P	Pn	23 18 07.2	+0.8
BOQS	Boqueron	2.35	203	*e*P	Pn	23 18 07.7	+1.2
BOQS				*e*S	Sn	23 18 39.0	+2.8
RTR	El Retiro	2.37	212	*e*P	Pn	23 18 07.7	+0.9
SNJE	San Jose	2.38	211	*e*P	Pn	23 18 07.1	+0.2
SNJE				*e*S	Sn	23 18 40.2	+3.5
LFRS	El Faro	2.39	197	*e*P	Pn	23 18 06.9	-0.1
SBLS	San Blas	2.41	211	*e*P	Pn	23 18 06.9	-0.5
SBLS				*e*S	Sn	23 18 39.9	+2.3
BLLM	Bellamira	2.47	178	*e*P	Pn	23 18 07.3	-0.8
CNCH	Conchagua	2.68	169	*e*P	Pn	23 18 10.8	-0.2
BOAB	BOACO BROADBAN	3.32	143	*e*P	Pn	23 18 34.3	+0.7
BOAB				*e*S	Sn	23 19 26.7	+2.0

*IDC **14** 23:28:12.8±0.8, 32°.23N×104°.46E, h0km, mb4.0/15, mb1 4.1/17, mb1mx4.0/27, mbtmp3.9/17, ML3.9/1, Error ellipse: s-maj=22.1km s-min=17.8km az=42.0*
*BJI **14** 23:28:14.4, 32°.19N×104°.68E, h16km, mb4.3/3, ML3.8/16, Ms4.0/5, Ms7 3.5/5*
*NEIC **14** 23:28:15.4±2.7, 32°.21N×104°.44E, h19km±17km, mb4.3/9, Error ellipse: s-maj=7.5km s-min=6.4km az=89.0*
ISC 14 23:28:13.5±0.8, 32°.25N±0°.03×104°.44E±0°.04, h4km±5km, n79, σ1°.02/90, mb4.2/27, 6C-5D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.46	204	Pg	Pg	23 28 40.8	-0.6
CD2				Sg	Sg	23 29 00.5	+0.2
CD2				smax			
	comp=N,12μm,0.8s						
LZH	Lanzhou	3.86	353	*e*Pn	Pn	23 29 16.8	+3.1
LZH				Pg	Pg	23 29 27.8	+0.3
LZH				Sn	Sn	23 30 03.3	+3.9
LZH				Sg	Sg	23 30 17.4	-0.2
LZH				smax			
	comp=N,1μm,0.7s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=N,1μm,4.8s						
LZH				LR	LR		
	comp=Z,2μm,5.4s						
XAN	Xi'an	4.16	63	Pn	Pn	23 29 15.3	-2.4
XAN				Pg	Pg	23 29 29.0	-4.2
XAN				Sg	Sg	23 30 18.3	-8.8
XAN				smax			
	comp=N,310nm,0.9s						
XAN				smax			
	comp=E,110nm,0.9s						
XAN				LR	LR		
	comp=N,300nm,7.4s						
XAN				LR	LR		
	comp=E,250nm,9.0s						
XAN				LR	LR		
	comp=Z,280nm,7.5s						
ENH	Enshi	4.75	113	*e*Pn	Pn	23 29 27.0	+1.2
ENH				*e*Pg	Pg	23 29 44.5	+0.1
ENH				*e*S	Sb	23 30 36.6	+1.9
GYA	Guiyang	6.08	161	Pn	Pn	23 29 47.3	+3.1
GYA				Sn	Sn	23 30 54.3	0.0
GYA				smax			
	comp=N,100nm,0.7s						
GYA				smax			
	comp=E,140nm,0.9s						
KMI	Kunming	7.25	192	Pn	Pn	23 29 51.0	-9.3
KMI				Sn	Sn	23 31 17.8	-5.3
KMI				smax			
	comp=N,23nm,1.9s						
KMI				smax			
	comp=E,36nm,1.2s						
WHN	Wuhan	8.64	99	P	Pn	23 30 20.5	+1.2
WHN				LR	LR		
	comp=N,1μm,5.9s						
WHN				LR	LR		
	comp=E,770nm,7.2s						
WHN				LR	LR		
	comp=Z,1μm,5.8s						
LSA	Lhasa	11.69	261	Pn	Pn	23 31 00.1	-1.0
BJT	Baijiatuan	12.24	47	Pn	Pn	23 31 07.6	-1.0
CM31	Chiang Mai Arr	14.60	201	Pn	Pn	23 31 39.1	-1.8
CMAR	Chiang Mai Arr	14.60	201	Pn	Pn	23 31 42.2	+1.4
	baz=10,slow=10						
SONM	Songino Array	15.64	5	Pn	Pn	23 31 56.3	+1.7
	baz=182,slow=16,SNR=2.9						
ULN	Ulaanbaatar	15.72	6	*e*Pn	Pn	23 31 55.1	-0.6
KSRS	Korea Array	19.94	68	P	Pn	23 32 44.7	-3.3
	comp=Z,0.3nm,0.3s,baz=258,slow=10,SNR=9.7						
MK31	Makanchi Array	22.32	317	*e*P	P	23 33 12.2	+0.2
MK31				S	S	23 37 17.7	-0.3
MKAR	Makanchi Array	22.32	317	P	P	23 33 13.6	+1.6
	comp=Z,1.1nm,0.4s,mb3.7,baz=112,slow=11,SNR=24						
AAK	Ala-Archa	25.82	302	P	P	23 33 44.9	-0.8
ZAA0	Zalesovo Array	25.83	333	*e*P	P	23 33 45.1	-0.6
ZALV	Zalesovo Beam	25.83	333	P	P	23 33 46.3	+0.6
	comp=Z,7.2nm,0.6s,mb4.3,baz=130,slow=10,SNR=38						

KURK	Kurchatov	26.52	322	P	P	23 33 52.5	+0.5		
	comp=Z,1.3nm,0.7s,mb3.6,baz=121,slow=11,SNR=17								
KURK				PcP	PcP	23 37 15.3	-1.3		
	comp=Z,0.6nm,0.6s,baz=118,slow=1.5,SNR=5.7								
KURK	Kurchatov	26.52	322	*e*P	P	23 33 51.4	-0.5		
	comp=Z,1.5nm,0.7s,mb3.6								
KURK				PcP	PcP	23 37 15.3	-1.3		
BVAR	Borovoye Array	32.09	320	P	P	23 34 42.4	+1.0		
	comp=Z,0.7nm,0.7s,mb3.6,baz=115,slow=9.7,SNR=5.9								
BVAR				PcP	PcP	23 37 29.8	-0.8		
	comp=Z,0.5nm,0.7s,baz=108,slow=3.6,SNR=2.6								
BVAR	Borovoye Array	32.09	320	P	P	23 34 42.4	+1.0		
BVAR				PcP	PcP	23 37 29.8	-0.8		
BRVK	Borovoye	32.16	320	*e*P	P	23 34 42.3	+0.3		
	comp=Z,1.3nm,0.6s,mb3.9								
PALK	Pallekele	33.25	227	P	P	23 34 51.7	-0.3		
ARU	Arti	39.72	321	*e*P	P	23 35 47.4	+0.7		
	comp=Z,5.0nm,0.6s,mb4.4								
PETK	Petropavlovsk-	43.17	45	P	P	23 36 16.7	+1.6		
	comp=Z,1.9nm,0.8s,mb3.9,baz=282,slow=7.2,SNR=3.0								
KIV	Kislovodsk	48.94	302	*e*P	P	23 37 00.9	+0.2		
	comp=Z,4.2nm,0.6s,mb4.7								
OBN	Obninsk	51.83	317	P	P	23 37 21.4	-1.1		
MALT	Malatya	53.22	296	*e*P	P	23 37 32.6	-0.4		
	comp=Z,0.9nm,0.6s,mb3.9								
FITZ	Fitzroy Crossi	54.02	155	P	P	23 37 38.2	-0.8		
JOF	Joensuu	54.22	327	*e*p	P	23 37 39.3	-0.6		
	comp=Z,3.7nm,0.6s,mb4.5								
KEV	Kevo	55.81	336	*e*p	P	23 37 49.6	-1.7		
	comp=Z,4.0nm,0.7s,mb4.6								
ARCES	ARCESS Array B	56.34	335	P	P	23 37 55.1	-0.1		
	comp=Z,2.7nm,0.8s,mb4.3,baz=80,slow=8.2,SNR=15								
BR131	Keskin Array S	56.44	299	P	P	23 37 55.8	-0.5		
	comp=Z,0.9nm,0.6s,mb4.0								
BRTR	Keskin Array B	56.44	299	P	P	23 37 56.6	+0.3		
	comp=Z,1.3nm,0.8s,mb4.0,baz=99,slow=6.3,SNR=10								
KAF	Kangasniemi	56.60	327	*e*p	P	23 37 56.4	-0.7		
	comp=Z,3.6nm,0.8s,mb4.5								
FINES	FINESS Array B	56.78	326	P	P	23 37 58.4	0.0		
	comp=Z,2.7nm,0.5s,mb4.5,baz=77,slow=6.9,SNR=25								
FINES	FINESS Array B	56.78	326	P	P	23 37 58.4	0.0		
AKASG	Malin Array Be	56.82	313	P	P	23 37 58.5	-0.3		
	comp=Z,2.3nm,0.5s,mb4.4,baz=69,slow=6.6,SNR=6.8								
WRAB	Tennant Creek	59.26	147	*e*P	P	23 38 13.6	-2.7		
ISP	Isparta	59.33	298	P	P	23 38 14.7	-2.0		
VRI	Vrincioaia	59.61	308	⇑*i*P	P	23 38 19.3	+0.8		
PLOR	Plostina	59.67	308	⇓*i*P	P	23 38 20.7	+1.8		
BURAR	Bucovina Array	60.12	310	⇓*i*P	P	23 38 22.5	+0.6		
MLR	Muntele Rosu	60.25	307	⇑*i*P	P	23 38 23.7	+0.9		
VOIR		60.86	308	⇓*i*P	P	23 38 28.0	+0.9		
KWP	Kalwaria Pacla	61.14	313	*e*P	P	23 38 28.9	0.0		
	comp=Z,13nm,1.0s,mb5.0								
KWP	Kalwaria Pacla	61.14	313	⇑*i*P	P	23 38 29.8	+0.9		
KOLS	Kolonicke sedl	61.62	312	*e*P	P	23 38 33.0	+0.9		
KOLS	Kolonicke sedl	61.62	312	*e*P	P	23 38 33.0	+0.9		
DRGR		62.00	310	⇓*i*P	P	23 38 36.0	+1.3		
STHS	Stebnicka Huta	62.12	313	*e*P	P	23 38 28.9	-6.6		
STHS	Stebnicka Huta	62.12	313	*e*	P	23 38 28.9	-6.6		
ASAR	Alice Springs	62.32	149	P	P	23 38 37.7	+0.7		
	comp=Z,0.9nm,0.8s,mb4.0,baz=323,slow=6.4,SNR=7.8								
NB2	NORSAR Subarra	63.86	327	P	P	23 38 45.6	-1.2		
	comp=Z,1.4nm,0.6s,mb4.2,baz=74,slow=6.9								
NOA	NORSAR Array B	63.86	327	P	P	23 38 45.8	-1.0		
	comp=Z,1.4nm,0.6s,mb4.1,baz=71,slow=6.6,SNR=6.3								
OKC	Ostrava-Krasne	63.89	314	*e*P	P	23 38 47.3	+0.1		
VYHS	Vyhne	63.92	312	*e*P	P	23 38 48.2	+0.8		
VYHS	Vyhne	63.92	312	*e*P	P	23 38 48.2	+0.8		
NAO01	NORSAR Array S	64.07	327	P	P	23 38 48.3	+0.1		
MORC	Moravsky Berou	64.28	314	*e*P	P	23 38 49.7	-0.1		
DPC	Dobruska-Polom	64.82	315	*e*P	P	23 38 54.2	+0.9		
PKSM	Moragy	64.84	310	⇓*i*P	P	23 38 53.9	+0.4		
CLL	Collm	66.42	317	*e*P	P	23 39 03.0	-0.7		
GERES	GERESS Array B	66.96	314	P	P	23 39 07.3	+0.2		
	comp=Z,0.9nm,0.8s,mb3.9,baz=73,slow=5.9,SNR=7.3								
COLA	College	68.28	26	P	P	23 39 13.8	-1.3		
TIP	Timpagrande	68.86	304	*e*P	P	23 39 19.2	-0.1		
	comp=Z,1.5nm,0.5s,mb4.2								
INK	Inuvik	70.98	19	P	P	23 39 30.9	-0.9		
KMBO	Kilima Mbogo	71.45	256	P	P	23 39 36.0	+0.4		
	comp=Z,2.4nm,1.0s,mb4.1,baz=35,slow=8.1,SNR=5.9								
KMBO	Kilima Mbogo	71.45	256	*e*P	P	23 39 35.0	-0.6		
	comp=Z,4.8nm,1.2s,mb4.3								
LPG	La Plagne	72.68	313	⇑*i*P	P	23 39 43.1	+0.7		
	comp=Z,12nm,0.7s,mb4.6								
LPL	La Plagne	72.68	313	⇑*i*P	P	23 39 43.0	+0.6		
	comp=Z,9.5nm,0.6s,mb4.6								
SMF	Signal de Mont	73.89	315	⇑*i*P	P	23 39 49.8	+0.2		
	comp=Z,7.4nm,0.9s,mb4.3								
CAF	Calviac	75.84	314	*e*P	P	23 40 01.0	+0.1		
YKA	Yellowknife Ar	80.52	17	P	P	23 40 25.5	-1.0		
	comp=Z,0.7nm,0.7s,mb3.7,baz=330,slow=5.0,SNR=9.5								
FCC	Fort Churchill	88.03	10	P	P	23 41 03.2	-1.5		
TORD	Torodi Ar. Bea	93.56	288	P	P	23 41 30.4	-0.9		
	comp=Z,0.3nm,0.9s,mb3.7,baz=77,slow=3.1,SNR=3.9								
LBTB	Lobatse	94.28	243	P	P	23 41 34.2	-0.1		

*NEIC **14** 23:35:31.2, 22°.95S×70°.18W, h46km, mb3.2/1, After GUC.*
GUC 14 23:35:31.2±0.8, 22°.95S×70°.18W, h46km±2km, ML3.8, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.29	238	⇓*i*P	Pn	23 35 39.3	-0.5
MECH				*i* S	Sn	23 35 46.2	+0.2
PECH	Pedro de Valdi	0.59	53	⇑*i*P	Pn	23 35 43.9	+0.6
PECH				*i* S	Sn	23 35 53.4	+1.4
PECH				AML	AML	23 35 53.9	
	comp=E,11μm,0.2s						
ANCH	Antofagasta	0.76	196	⇓*i*P	Pn	23 35 44.5	-1.1
ANCH				*i* S	Sn	23 35 55.0	-1.0
ANCH	Antofagasta	0.76	196	⇓*i*P	Pn	23 35 44.5	-1.1
ANCH				*i* S	Sn	23 35 55.0	-1.0
ANCH				AML	AML	23 35 56.3	
	comp=E,3μm,0.3s						
MACH	Maria Elena	0.85	28	⇑*i*P	Pn	23 35 47.6	+0.8
MACH				*i* S	Sn	23 35 59.8	+1.7
LVC	Limon Verde	1.22	74	⇑*i*P	Pn	23 35 53.3	+1.5
LVC				*i* S	Sn	23 36 09.7	+2.5
PB01	Plate Boundary	2.00	19	⇓*e*P	Pn	23 36 03.9	+1.3
PB01				*i* S	Sn	23 36 28.2	+1.7
PB01				AML	AML	23 36 36.6	
	comp=E,855nm,0.3s						
HMBC	Humberston	2.67	6	*e*P	Pn	23 36 12.0	+0.2
LCO	Las Campanas	6.05	184	*e*Pn	Pn	23 36 57.1	-1.1
LCO				*e*Sn	Sn	23 38 06.1	0.0
LPAZ	La Paz	6.90	17	*e*Pn	Pn	23 37 13.0	+3.1
	comp=E,2.3nm,0.6s						
TRQA	Tornquist	16.62	157	*e*Pn	Pn	23 39 20.8	-0.1
	comp=E,1.5nm,0.6s						
PLCA	Paso Flores	17.73	181	P	Pn	23 39 36.7	+2.1
RPN	Rapa Nui	35.62	255	P	P	23 42 23.9	-0.8
JTS	JuntasAbangare	36.06	335	*e*P	P	23 42 27.3	-1.2
	comp=E,1.5nm,0.3s						

*IDC **14** 23:55:10.6±0.9, 31°.48N×103°.24E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/26, mbtmp3.7/11, ML3.4/1, Error ellipse: s-maj=36.8km s-min=16.7km az=53.0*
*NEIC **14** 23:55:12.2±0.4, 31°.50N×103°.21E, h10km, mb3.9/6, Error ellipse: s-maj=8.9km s-min=6.3km az=208.0*
*ISCJB **14** 23:55:13.6±1.3, 31°.52N±0°.05×103°.25E±0°.07, h33km±11km, mb3.8/14, Error ellipse: s-maj=10.6km s-min=7.7km az=168.4*
*BJI **14** 23:55:13.6, 31°.50N×103°.23E, h15km, mB4.5/1, mb4.4/3, ML3.4/10, Ms3.7/4, Ms7 3.6/2*
ISC 14 23:55:13.8±1.1, 31°.52N±0°.03×103°.21E±0°.07, h19km±7km, n37, σ0°.90/42, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.77	142	Pg	Pg	23 55 31.8	+2.9
CD2				Sg	Sg	23 55 38.4	-0.7
LZH	Lanzhou	4.59	6	*e*Pg	Pg	23 56 40.0	-1.6
LZH				Sn	Sn	23 57 21.9	+7.1
LZH				Sg	Sg	23 57 41.4	+0.3
LZH				smax			
	comp=N,76nm,0.9s						
LZH				smax			
	comp=E,210nm,1.0s						
LZH				LR	LR		
	comp=N,610nm,5.2s						
LZH				LR	LR		
	comp=Z,850nm,6.7s						

XAN	Xi'an	5.43	61	Pg		23 56 59.8			
XAN				Sg		23 57 59.6			
XAN				smax					
	comp=N,130nm,0.9s								
XAN				smax					
	comp=E,59nm,1.0s								
ENH	Enshi	5.54	101	*e*Pn	Pn	23 56 34.5	-0.7		
	comp=E,58nm,0.7s								
ENH				*e*S	Sn	23 57 45.6	+7.3		
GYA	Guiyang	5.88	148	Pg	Pb	23 56 53.8	-1.9		
GYA				Sn	Sn	23 57 52.1	+5.4		
GYA				smax					
	comp=N,120nm,1.0s								
GYA				smax					
	comp=E,120nm,1.0s								
KMI	Kunming	6.38	184	Pn	Pn	23 56 50.6	+3.8		
KMI				Sn	Sn	23 58 00.3	+1.1		
KMI				smax					
	comp=N,24nm,1.6s								
KMI				smax					
	comp=E,22nm,1.5s								
KMI				LR	LR				
	comp=N,190nm,8.6s								
KMI				LR	LR				
	comp=E,330nm,7.8s								
GTA	Gaotai	8.35	342	*e*P	Pn	23 57 22.0	+8.3		
GTA				pP		23 57 26.4			
GTA				sP		23 57 29.5			
GTA				pmax	pmax				
	comp=Z,3.0nm,0.7s								
SONM	Songino Array	16.48	8	Pn	Pn	23 59 04.4	+0.7		
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=9.9								
ULN	Ulaanbaatar	16.59	9	*e*Pn	Pn	23 59 04.9	-0.3		
	comp=Z,1.1nm,0.6s								
NACB	Ninganchiao	17.82	110	Pn	Pn	23 59 21.2	+0.5		
KSRS	Korea Array	21.19	67	P	P	23 59 58.7	+0.7		
	comp=Z,1.2nm,0.4s,mb3.6,baz=253,slow=10,SNR=7.1								
HIA	Hailar	21.66	30	*e*P	P	00 00 03.5	+0.4		
MK31	Makanchi Array	22.17	319	*e*P	P	00 00 07.7	-0.7		
MKAR	Makanchi Array	22.17	319	P	P	00 00 08.7	+0.3		
	comp=Z,1.2nm,0.7s,mb3.4,baz=127,slow=12,SNR=12								
UCH	Uchtor	25.21	303	*e*P	P	00 00 39.9	+1.7		
	comp=Z,3.5nm,0.9s,mb3.9								
AAK	Ala-Archa	25.34	304	P	P	00 00 39.6	+0.3		
	comp=Z,4.3nm,1.1s,mb3.9								
AML	Almayashu	25.77	303	P	P	00 00 43.6	+0.4		
	comp=Z,1.2nm,0.4s,mb3.8								
EKS2	Erkin-Say	25.85	304	P	P	00 00 43.6	-0.4		
ZALV	Zalesovo Beam	26.02	335	P	P	00 00 45.0	-0.3		
	comp=Z,2.3nm,0.7s,mb3.8,baz=138,slow=9.5,SNR=12								
KURK	Kurchatov	26.46	324	P	P	00 00 49.3	0.0		
	comp=Z,0.8nm,0.7s,mb3.4,baz=127,slow=8.7,SNR=6.1								
KURK	Kurchatov	26.46	324	*e*P	P	00 00 50.5	+1.2		
	comp=Z,1.6nm,0.8s,mb3.6								
KBL	Kabul	28.72	285	P	P	00 01 09.2	-0.7		
PALK	Pallekele	31.99	226	*e*P	P	00 01 38.7	-0.2		
YSS	Yuzh-Sakhalins	33.89	51	P	P	00 01 55.2	0.0		
YAK	Yakutsk	35.00	21	P	P	00 02 03.2	-1.3		
ARU	Arti	39.64	322	*e*P	P	00 02 43.4	-0.6		
AKASG	Malin Array Be	56.54	313	P	P	00 04 56.6	+1.9		
	comp=Z,0.5nm,0.4s,mb3.9,baz=78,slow=7.4,SNR=2.5								
ARCES	ARCESS Array B	56.57	336	P	P	00 04 54.4	-0.2		
	comp=Z,1.0nm,0.8s,mb3.9,baz=95,slow=7.3,SNR=3.7								
ARCES	ARCESS Array B	56.57	336	P	P	00 04 54.4	-0.2		
FINES	FINESS Array B	56.80	326	P	P	00 04 55.9	-0.5		
	comp=Z,2.4nm,0.9s,mb4.2,baz=72,slow=4.5,SNR=3.4								
WRA	Warramunga Arr	59.24	146	P	P	00 05 13.3	-0.7		
	comp=Z,0.7nm,0.6s,mb3.9,baz=339,slow=7.5,SNR=4.7								
KWP	Kalwaria Pacla	60.87	313	*e*P	P	00 05 24.4	-0.4		
ASAR	Alice Springs	62.24	148	P	P	00 05 34.0	-0.3		
	comp=Z,0.3nm,0.6s,mb3.6,baz=331,slow=7.4,SNR=3.0								
MORC	Moravsky Berou	64.03	314	*e*P	P	00 05 45.8	-0.2		
	comp=Z,0.8nm,0.5s,mb4.0								
YKA	Yellowknife Ar	81.52	17	P	P	00 07 28.3	-1.2		
	comp=Z,0.1nm,0.3s,mb3.3,baz=331,slow=5.4,SNR=4.4								
YKA	Yellowknife Ar	81.52	17	P	P	00 07 28.3	-1.2		
EGMT	Eagleton	95.48	22	P	P	00 08 38.0	+0.8		
	comp=Z,6.9nm,0.8s								

*ISCJB **15** 00:01:43.8±0.6, 5°.91N±0°.07×125°.6E±0°.1, h203km±5km, mb3.5/8, Error ellipse: s-maj=20.2km s-min=10.5km az=162.5*
*NEIC **15** 00:01:44.9±0.7, 5°.89N×125°.55E, h195km

KURK Kurchatov 26.96 321 P P 00 09 08.9 -0.4
0.4nm,0.7s,baz=126,slow=8.8,SNR=4.1
WRA Warramunga Arr 58.85 147 P P 00 13 26.9 +0.1
0.7nm,0.6s,baz=339,slow=7.9,SNR=5.3
ASAR Alice Springs 61.92 150 P P 00 13 47.8 +0.1
0.3nm,0.7s,baz=329,slow=6.7,SNR=3.1

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*ISCJB **15** 00:07:28.0±0.5, 32.°12N±0.°05×104.°86E±0.°06, h10km, mb3.7/12, Error ellipse: s-maj=7.7km s-min=6.2km az=40.6*
*IDC **15** 00:07:28.3±1.2, 32.°10N×104.°88E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/27, mbtmp3.7/7, Error ellipse: s-maj=73.3km s-min=22.2km az=53.0*
*NEIC **15** 00:07:29.2±0.6, 32.°09N×104.°89E, h10km, mb3.9/4, Error ellipse: s-maj=19.3km s-min=9.4km az=217.0*
*BJI **15** 00:07:31.2, 32.°25N×104.°58E, h13km, ML3.7/6, Ms3.6/1, Ms7 3.7/1*
ISC 15 00:07:29.9±0.4, 32.°13N±0.°05×104.°83E±0.°05, h10km, n25, σ1§00/31, mb3.7/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.52**	**217**	Pg	**Pg**	**Pg**	**00 07 58.8**	**-0.3**
CD2				Sg	**Sg**	**Sg**	**00 08 18.8**	**-0.1**
CD2				smax				
	comp=N,2μm,0.6s							
XAN	**Xi'an**	**3.93**	**60**	Pn	**Pn**	**Pn**	**00 08 34.1**	**+3.8**
XAN				Pg	**Pg**	**Pg**	**00 08 45.1**	**-0.1**
XAN				Sg	**Sg**	**Sg**	**00 09 32.3**	**-3.8**
XAN				smax				
	comp=N,64nm,0.5s							
XAN				smax				
	comp=E,32nm,0.8s							
LZH	**Lanzhou**	**4.03**	**349**	*e*Pg	**Pg**	**Pg**	**00 08 41.3**	**-5.9**
LZH				Sn	**Sn**	**Sn**	**00 09 26.3**	**+7.3**
LZH				Sg	**Sg**	**Sg**	**00 09 35.1**	**-4.4**
LZH				smax				
	comp=N,160nm,0.6s							
LZH				smax				
	comp=E,320nm,0.8s							
LZH				LR	LR			
	comp=E,470nm,5.1s							
LZH				LR	LR			
	comp=Z,580nm,6.4s							
ENH	**Enshi**	**4.40**	**114**	*e*Pn	**Pn**	**Pn**	**00 08 34.9**	**-1.9**
ENH				*e*Sn	**Sn**	**Sn**	**00 09 30.3**	**+2.3**
SONM	**Songino Array**	**15.73**	**4**	Pn	**Pn**	**Pn**	**00 11 16.6**	**+5.1**
	comp=Z,0.0nm,0.3s,baz=178,slow=10,SNR=5.5							
ULN	**Ulaanbaatar**	**15.81**	**5**	Pn	**Pn**	**Pn**	**00 11 11.5**	**-1.0**
MK31	**Makanchi Array**	**22.64**	**317**	*e*P	**P**	**P**	**00 12 31.1**	**+0.2**
MKAR	**Makanchi Array**	**22.64**	**317**	P	**P**	**P**	**00 12 32.1**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.3,baz=122,slow=12,SNR=6.2							
TKM2	**Tokmak 2**	**25.45**	**303**	*e*P	**P**	**P**	**00 12 58.1**	**+0.2**
	comp=Z,2.0nm,1.4s,mb3.5							
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**P**	**00 13 04.5**	**+1.0**
	comp=Z,1.2nm,0.6s,mb3.6,baz=134,slow=10,SNR=5.4							
AAK	**Ala-Archa**	**26.16**	**302**	P	**P**	**P**	**00 13 04.3**	**-0.1**
EKS2	**Erkin-Say**	**26.68**	**302**	P	**P**	**P**	**00 13 08.9**	**-0.2**
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**P**	**00 13 09.6**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.2,baz=117,slow=8.0,SNR=4.9							
KURK	**Kurchatov**	**26.82**	**322**	*e*P	**P**	**P**	**00 13 09.5**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.4							
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**P**	**00 13 59.8**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=79,slow=7.5,SNR=2.8							
BRVK	**Borovoye**	**32.46**	**320**	*e*P	**P**	**P**	**00 14 00.1**	**-0.1**
	comp=Z,4.3nm,1.4s,mb4.1							
MALT	**Malatya**	**53.56**	**296**	P	**P**	**P**	**00 16 49.5**	**-1.5**
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**P**	**00 16 59.2**	**+1.7**
	comp=Z,1.1nm,0.6s,mb4.0							
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**P**	**00 17 15.9**	**0.0**
	comp=Z,0.8nm,0.4s,mb4.1,baz=93,slow=6.9,SNR=12							
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**P**	**00 17 29.6**	**-0.2**
	comp=Z,0.8nm,0.9s,mb3.8,baz=327,slow=8.9,SNR=5.1							
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**P**	**00 19 00.7**	**+0.9**
	comp=Z,2.7nm,0.6s,mb4.0							
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**P**	**00 19 00.6**	**+0.8**
SMF	**Signal de Mont**	**74.21**	**315**	*e*P	**P**	**P**	**00 19 06.8**	**-0.1**
YKA	**Yellowknife Ar**	**80.53**	**17**	P	**P**	**P**	**00 19 42.1**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=327,slow=5.0,SNR=6.1							
ESLA	**Sonseca Array**	**82.79**	**313**	*e*P	**P**	**P**	**00 19 52.3**	**-2.1**
	comp=Z,1.8nm,1.2s,mb4.0							

IDC 15 00:08:56.4±2.8, 5.°78S×132.°31E, h0km, mb3.8/1, mb1 3.6/4, mb1mx3.4/15, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=120.1km s-min=29.3km az=80.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.87**	**207**	Pn		Pn	00 12 14.6	+0.1
	0.1nm,0.3s,baz=36,slow=10,SNR=6.2							
FITZ				Sn		Sn	00 14 39.6	-10
	0.3nm,0.3s,baz=252,slow=20,SNR=8.8							
WRA	**Warramunga Arr**	**14.21**	**172**	Pn		Pn	00 12 18.2	-0.9
	0.1nm,0.3s,baz=351,slow=13,SNR=8.0							
WRA				Sn		Sn	00 14 49.5	-8.2
	0.3nm,0.3s,baz=358,slow=22,SNR=7.3							
ASAR	**Alice Springs**	**17.85**	**175**	P		Pn	00 13 07.0	+0.7
	0.1nm,0.3s,baz=348,slow=8.7,SNR=3.3							
MKAR	**Makanchi Array**	**68.50**	**326**	P		P	00 20 00.7	+0.1
	0.4nm,0.4s,baz=106,slow=7.4,SNR=6.8							

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*ISCJB **15** 00:09:27.6±0.2, 31.°84N±0.°02×104.°46E±0.°03, h10km, mb4.4/46, MS4.1/3, Error ellipse: s-maj=3.8km s-min=3.3km az=28.4*
*IDC **15** 00:09:28.1±0.6, 31.°90N×104.°45E, h0km, mb4.3/19, mb1 4.4/21, mb1mx4.2/32, mbtmp4.3/21, ML3.3/1, Error ellipse: s-maj=23.2km s-min=12.0km az=51.0*
*BJI **15** 00:09:29.0, 31.°86N×104.°52E, h15km, mB4.7/11, mb4.4/22, ML4.2/20, Ms4.2/19, Ms7 4.0/17*
*NEIC **15** 00:09:29.5±0.2, 31.°89N×104.°51E, h10km, mb4.3/14, Error ellipse: s-maj=5.4km s-min=4.6km az=51.0*
*MOS **15** 00:09:30.7±0.9, 31.°88N×104.°49E, h33km, mb4.5/27, Error ellipse: s-maj=10.4km s-min=6.1km az=113.3*
ISC 15 00:09:29.5±0.2, 31.°86N±0.°02×104.°46E±0.°03, h10km, n139, σ1§16/154, mb4.4/46, MS4.1/3, 3C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**213**	Pg	**Pg**	**Pg**	**00 09 49.3**	**-1.7**
CD2				Sg	**Sg**	**Sg**	**00 10 04.6**	**-0.9**
CD2				smax				
	comp=N,33μm,0.7s							
XAN	**Xi'an**	**4.34**	**59**	Pn	**Pn**	**Pn**	**00 10 35.9**	**+0.4**
XAN				Pg	**Pg**	**Pg**	**00 10 50.1**	**-2.5**
XAN				Sg	**Sg**	**Sg**	**00 11 47.3**	**-1.5**
XAN				smax				
	comp=N,600nm,0.8s							
XAN				smax				
	comp=E,220nm,1.0s							
ENH	**Enshi**	**4.59**	**109**	*e*Pn	**Pn**	**Pn**	**00 10 40.2**	**+1.1**
ENH				*e*S	**Sg**	**Sg**	**00 11 55.0**	**-2.1**
GYA	**Guiyang**	**5.71**	**160**	Pn	**Pn**	**Pn**	**00 10 55.9**	**+1.5**
GYA				Sn	**Sn**	**Sn**	**00 12 04.3**	**+4.2**
GYA				smax				
	comp=N,40nm,0.8s							
GYA				smax				
	comp=E,50nm,0.9s							
KMI	**Kunming**	**6.88**	**193**	Pn	**Pn**	**Pn**	**00 11 10.5**	**+0.1**
KMI				Sn	**Sn**	**Sn**	**00 12 27.8**	**-0.9**
KMI				smax				
	comp=N,53nm,1.2s							
KMI				smax				
	comp=E,70nm,1.0s							
KMI				LR	LR			
	comp=N,640nm,6.3s							
KMI				LR	LR			
	comp=E,580nm,5.5s							
KMI				LR	LR			
	comp=Z,570nm,7.9s							
GTA	**Gaotai**	**8.43**	**335**	P	**Pn**	**Pn**	**00 11 36.1**	**+4.4**
GTA				pP			00 11 39.4	
GTA				sP			00 11 42.5	
GTA				S	**Sn**	**Sn**	**00 13 13.0**	**+6.1**
GTA				sS			00 13 18.3	
GTA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
GTA				LR	LR			
	comp=N,460nm,10.8s							
GTA				LR	LR			
	comp=E,270nm,10.8s							
GTA				LR	LR			
	comp=Z,9μm,10.2s							
HHC	**Hu-ho-hao-te**	**10.64**	**31**	*e*P	**Pn**		**00 12 03.9**	**+1.9**
HHC				pP			00 12 08.3	
HHC				PP			00 12 12.5	
HHC				S	**Sn**		**00 14 03.9**	**+2.7**
HHC				sS			00 14 13.1	
HHC				SS			00 14 18.9	
HHC				pmax	pmax			
	comp=Z,22nm,1.0s							
HHC				pmax	pmax			
	comp=Z,150nm,4.7s							
HHC				LR	LR			
	comp=N,600nm,6.0s							
HHC				LR	LR			
	comp=E,370nm,4.9s							
HHC				LR	LR			
	comp=Z,500nm,5.7s							
LSA	**Lhasa**	**11.65**	**263**	*e*P	**Pn**		**00 12 17.3**	**+1.5**
LSA				pmax	pmax			
	comp=Z,8.0nm,0.5s							
LSA	**Lhasa**	**11.65**	**263**	*e*P	**Pn**		**00 12 17.3**	**+1.5**
	comp=Z,7.6nm,0.5s							
NJ2	**Nanjing**	**12.23**	**85**	*e*P	**Pn**		**00 12 25.9**	**+2.1**
NJ2				pP			00 12 29.5	
NJ2				sP			00 12 34.3	
NJ2				PP			00 12 35.5	
NJ2				S	**Sn**		**00 14 42.3**	**+2.1**
NJ2				sS			00 14 48.8	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,80nm,3.6s							
NJ2				LR	LR			
	comp=N,280nm,11.3s							
NJ2				LR	LR			
	comp=E,950nm,14.0s							
BJT	**Baijiatuan**	**12.50**	**46**	P	**Pn**		**00 12 25.0**	**-2.4**
BJI	**Beijing**	**12.51**	**46**	P	**Pn**		**00 12 25.4**	**-2.2**
BJI				S	**Sn**		**00 14 47.4**	**+0.4**
BJI				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BJI				LR	LR			
	comp=N,340nm,9.3s							
BJI				LR	LR			
	comp=E,250nm,9.3s							
QIZ	**Qiongzhong**	**13.66**	**158**	P	**Pn**		**00 12 44.4**	**+1.0**
QIZ				S	**Sn**		**00 15 16.3**	**+1.0**
QIZ				pmax	pmax			
	comp=Z,5.0nm,1.3s							
QIZ				pmax	pmax			
	comp=Z,78nm,3.0s							
QIZ				LR	LR			
	comp=N,540nm,4.6s							
QIZ				LR	LR			
	comp=E,140nm,3.2s							
QIZ				LR	LR			
	comp=Z,410nm,4.3s							
CM31	**Chiang Mai Arr**	**14.24**	**202**	*e*Pn	**Pn**		**00 12 50.7**	**-0.6**
	comp=Z,14nm,0.6s							
CMAR	**Chiang Mai Arr**	**14.24**	**202**	Pn	**Pn**		**00 12 53.0**	**+1.7**
	baz=18,slow=12							
SONM	**Songino Array**	**16.03**	**5**	Pn	**Pn**		**00 13 16.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=183,slow=16,SNR=5.2							
ULN	**Ulaanbaatar**	**16.11**	**6**	*e*P	**Pn**		**00 13 17.4**	**+1.4**
ULN							00 16 07.9	
ULN				pmax	pmax			
	comp=Z,8.0nm,1.2s							
ULN	**Ulaanbaatar**	**16.11**	**6**	*e*Pn	**Pn**		**00 13 17.4**	**+1.4**
	comp=Z,8.1nm,1.2s							
ULN				Sn	**Sn**		**00 16 07.9**	**-6.7**
YHNB	**Yeheng**	**16.52**	**111**	P	**Pn**		**00 13 21.4**	**0.0**
GUN	**Gumba**	**16.59**	**261**	*e*P	**Pn**		**00 13 19.5**	**-2.7**
	comp=Z,83nm,0.6s							
PKI	**Pulchoki**	**17.09**	**260**	*e*P	**Pn**		**00 13 24.9**	**-3.6**
	comp=Z,24nm,0.5s							
KKN	**Kakani**	**17.13**	**261**	*e*P	**Pn**		**00 13 25.9**	**-3.1**
	comp=Z,42nm,0.8s							
DMN	**Daman**	**17.33**	**261**	*e*P	**Pn**		**00 13 29.5**	**-2.1**
	comp=Z,30nm,0.7s							
ZAK	**Zakamensk**	**18.53**	**358**	*e*P	**Pn**		**00 13 47.0**	**+0.8**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
TLY	**Talaya**	**19.82**	**359**	*e*P	**Pn**		**00 13 59.8**	**-1.9**
KSRS	**Korea Array**	**20.07**	**67**	P	**P**		**00 14 03.8**	**+0.8**
	comp=Z,16nm,0.7s,baz=256,slow=10,SNR=53							
KSRS	**Korea Array**	**20.07**	**67**	P	**P**		**00 14 03.8**	**+0.8**
KSRS				pmax	pmax			
	comp=Z,17nm,0.7s							
CN2	**Changchun**	**20.36**	**48**	⇑P	**P**		**00 14 07.5**	**+1.4**
CN2				*e*pP			00 14 16.4	
CN2				*e*S	**S**		**00 17 50.8**	**-3.3**
CN2				pmax	pmax			
	comp=Z,20nm,0.6s							
CN2				pmax	pmax			
	comp=Z,300nm,3.0s							
CN2				LR	LR			
	comp=N,400nm,17.0s,MS4.2							
CN2				LR	LR			
	comp=E,900nm,17.0s,MS4.2							
CN2				LR	LR			
	comp=Z,300nm,16.0s,MS3.8							
HIA	**Hailar**	**20.84**	**29**	P	**P**		**00 14 10.8**	**-0.5**
JOSI	**Joshimath**	**21.33**	**273**	*e*P	**P**		**00 14 16.7**	**0.0**
KLP	**Kalpa**	**22.29**	**276**	*e*P	**P**		**00 14 26.5**	**-0.5**
KLP				AMb	AMB		00 14 27.9	
	comp=Z,11nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**		**00 14 30.9**	**+0.6**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**		**00 14 30.9**	**+0.6**
	comp=Z,6.2nm,0.8s,mb4.1,baz=114,slow=11,SNR=30							
MKAR	**Makanchi Array**	**22.62**	**318**	*ce*P	**P**		**00 14 31.0**	**+0.7**
MKAR				pmax	pmax			
	comp=Z,6.0nm,0.9s							
SMLA	**Simla**	**23.27**	**275**	*e*P	**P**		**00 14 38.1**	**+0.8**
MDJ	**Mudanjiang**	**23.39**	**50**	*e*P	**P**		**00 14 37.4**	**-1.1**
AGRA	**Agra**	**23.50**	**266**	*e*P	**P**		**00 14 38.6**	**-1.2**
AYAN	**Aya Nagar**	**23.84**	**269**	*e*P	**P**		**00 14 42.1**	**-0.9**
KSH	**Kashi**	**24.30**	**296**	*e*P	**P**		**00 14 50.0**	**+3.0**
KSH				*ep*P			00 14 54.3	
KSH				*es*P	sP		00 14 57.1	+5.8
KSH				*e*PP			00 15 26.1	
KSH				*e*PcP	PcP		00 18 28.1	+1.3
KSH				*e*S	**S**		**00 19 06.5**	**+0.5**
KSH				*es*S	sS		00 19 14.3	+3.3
KSH				*e*SS			00 20 03.1	
KSH				pmax	pmax			
	comp=Z,7.0nm,1.6s,mb3.8							
ULHL	**Ulahol**	**24.69**	**303**	P	**P**		**00 14 52.0**	**+1.4**
	SNR=6.5							
NGP	**Nagpur**	**25.05**	**251**	*ex*	x		00 14 48.9	
KHET	**Khetri**	**25.07**	**269**	*e*P	**P**		**00 14 53.9**	**-0.4**
KHET				AMb	AMB		00 14 56.7	
	comp=Z,11nm,0.9s,mb4.4							
TKM2	**Tokmak 2**	**25.33**	**304**	P	**P**		**00 14 57.8**	**+1.4**
	SNR=7.1							
TKM2	**Tokmak 2**	**25.33**	**304**	*e*P	**P**		**00 14 57.4**	**+1.0**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.0							
TKM2	**Tokmak 2**	**25.33**	**304**	*e*P	**P**		**00 14 57.4**	**+1.0**
	comp=Z,3.9nm,0.8s,mb4.0							
KZA	**Kyzart**	**25.36**	**302**	P	**P**		**00 14 59.0**	**+2.3**
	SNR=18							
KBK	**Karagaybulak**	**25.72**	**303**	P	**P**		**00 15 01.3**	**+1.4**
	SNR=7.0							
UCH	**Uchtor**	**25.93**	**302**	P	**P**		**00 15 04.0**	**+2.2**
	SNR=8.5							
UCH	**Uchtor**	**25.93**	**302**	*e*P	**P**		**00 15 02.9**	**+1.1**
	comp=Z,9.2nm,1.2s,mb4.2							
AAK	**Ala-Archa**	**26.04**	**303**	P	**P**		**00 15 03.8**	**+1.0**
	comp=Z,1.7nm,0.5s,mb3.8,baz=108,slow=1.2,SNR=6.3							
AAK	**Ala-Archa**	**26.04**	**303**	P	**P**		**00 15 03.8**	**+0.9**
AAK				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.9							
AAK	**Ala-Archa**	**26.04**	**303**	*e*P	**P**		**00 15 03.8**	**+1.0**
	comp=Z,4.8nm,0.9s,mb4.0							
ZAA0	**Zalesovo Array**	**26.18**	**333**	*e*P	**P**		**00 15 03.8**	**-0.2**
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**		**00 15 03.9**	**-0.1**
	comp=Z,3.7nm,0.5s,mb4.2,baz=131,slow=9.6,SNR=23							
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**		**00 15 03.9**	**-0.1**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.2							
USP	**Ospenovka**	**26.20**	**304**	P	**P**		**00 15 05.3**	**+1.0**
	SNR=6.1							
AML	**Almayashu**	**26.50**	**301**	P	**P**		**00 15 08.8**	**+1.8**
	SNR=6.5							
AML	**Almayashu**	**26.50**	**301**	*e*P	**P**		**00 15 08.5**	**+1.5**
	comp=Z,5.9nm,0.7s,mb4.2							
EKS2	**Erkin-Say**	**26.56**	**303**	*e*P	**P**		**00 15 08.6**	**+1.0**
	comp=Z,6.7nm,1.3s,mb4.0							
KLR	**Kul'dur**	**26.83**	**42**	*e*P	**P**		**00 15 08.0**	**-1.9**
KURK	**Kurchatov**	**26.83**	**322**	P	**P**		**00 15 10.2**	**+0.3**
	comp=Z,5.7nm,0.7s,mb4.2,baz=127,slow=8.7,SNR=40							
KURK	**Kurchatov**	**26.83**	**322**	*de*P	**P**		**00 15 10.4**	**+0.5**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.0							
KURK	**Kurchatov**	**26.83**	**322**	*e*P	**P**		**00 15 10.3**	**+0.4**
	comp=Z,5.5nm,1.1s,mb4.0							
KBL	**Kabul**	**29.66**	**285**	*e*P	**P**		**00 15 35.9**	**+0.5**
KBL				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.5							
KBL	**Kabul**	**29.66**	**285**	*e*P	**P**		**00 15 35.9**	**+0.5**
	comp=Z,8.9nm,1.0s,mb4.5							
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**		**00 15 59.5**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=119,slow=9.2,SNR=14							
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**		**00 15 59.5**	**+0.3**
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
BRVK	**Borovoye**	**32.47**	**321**	*c iP*	**P**		**00 16 00.1**	**+0.2**
BRVK				pmax	pmax			
	comp=Z,7.0nm,2.5s,mb4.0							
BRVK	**Borovoye**	**32.47**	**321**	*e*P	**P**		**00 16 00.3**	**+0.5**
	comp=Z,3.6nm,0.8s,mb4.2							
ABKAR	**Akbulak array**	**37.41**	**311**	*e*P	**P**		**00 16 42.7**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.1							
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**		**00 16 54.9**	**+0.2**
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**		**00 16 54.9**	**+0.2**
	comp=Z,2.8nm,0.5s,mb4.3,baz=95,slow=13,SNR=5.7							
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**		**00 16 54.9**	**+0.2**
AKTO				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.3							
SVE	**Sverdlovsk**	**39.08**	**323**	⇓*e*P	**P**		**00 16 57.4**	**+0.9**
SVE				*e*S	**S**		**00 22 53.6**	**-2.1**
SVE				*e*SS	SS		00 25 43.2	-4.6
SVE				pmax	pmax			
	comp=Z,14nm,1.0s,mb4.7							
ARU	**Arti**	**40.03**	**322**	*d iP*	**P**		**00 17 04.7**	**+0.3**
ARU				*e*			00 18 37.6	
ARU				S	**S**		**00 23 10.4**	**+0.5**
ARU				pmax	pmax			
	comp=Z,24nm,1.0s,mb4.9							
ARU	**Arti**	**40.03**	**322**	*e*P	**P**		**00 17 04.8**	**+0.4**
	comp=Z,18nm,0.6s,mb5.0							
TIXI	**Tiksi**	**41.96**	**11**	*e*P	Px		00 17 31.3	
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.6							
PETK	**Petropavlovsk-**	**43.44**	**45**	P	**P**		**00 17 31.9**	**-0.6**
	comp=Z,3.3nm,0.7s,mb4.2,baz=219,slow=4.9,SNR=7.1							
PETK	**Petropavlovsk-**	**43.44**	**45**	P	**P**		**00 17 31.9**	**-0.5**
PETK				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.1							
MAK	**Makhachkala**	**45.79**	**301**	*e*P	**P**		**00 17 43.8**	**-7.5**
MAK				MLR	MLR			
	comp=Z,301nm,19.0s,MS4.3							
ZEI	**Tsey**	**48.44**	**301**	*e*P	**P**		**00 18 11.4**	**-0.6**
ZEI				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.4							
KIV	**Kislovodsk**	**49.16**	**303**	*e*P	**P**		**00 18 17.4**	**-0.1**
KIV				pmax	pmax			
	comp=Z,10.0nm,1.1s,mb4.8							
KIV				MLR	MLR			
	comp=Z,134nm,16.0s,MS4.0							
KIV	**Kislovodsk**	**49.16**	**303**	*e*P	**P**		**00 18 17.2**	**-0.3**
	comp=Z,6.9nm,0.8s,mb4.7							
VRHR	**Novokhopersk**	**49.26**	**312**	*e*P	**P**		**00 18 17.5**	**-0.7**
VRHR				pmax	pmax			
	comp=Z,7.0nm,0.5s,mb5.0							
VRHR				pmax	pmax			
	comp=N,7.0nm,0.7s							
VRHR				pmax	pmax			
	comp=E,5.0nm,0.8s							
DGAR	**Diego Garcia**	**49.58**	**224**	P	**P**		**00 18 21.1**	**+0.1**
BILL	**Bilibino**	**50.37**	**25**	⇓*e*P	**P**		**00 18 29.4**	**+3.0**
BILL				pmax	pmax			
	comp=Z,11nm,2.5s,mb4.4							
BILL	**Bilibino**	**50.37**	**25**	*e*P	**P**		**00 18 24.5**	**-1.8**
KLMR	**Klimovskoe**	**50.62**	**325**	*e*P	**P**		**00 18 27.4**	**-1.0**
KLMR				pmax	pmax			
	comp=Z,24nm,1.5s,mb4.9							
VSR	**Storozhevoye**	**50.80**	**312**	*e*P	**P**		**00 18 30.0**	**+0.2**
VSR				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.9							
VSR				pmax	pmax			
	comp=N,7.0nm,1.2s							
VSR				pmax	pmax			
	comp=E,10.0nm,1.0s							
SOC	**Sochi**	**51.34**	**303**	*e*P	**P**		**00 18 32.6**	**-1.5**
SOC				*e*S	**S**		**00 25 40.2**	**-13**
SOC				*e*			00 28 12.6	
MALT	**Malatya**	**53.40**	**296**	*e*P	**P**		**00 18 49.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**53.66**	**155**	P	**P**		**00 18 52.2**	**+0.8**
	comp=E,4.6nm,1.0s,mb4.3,baz=321,slow=11,SNR=4.9							
FITZ	**Fitzroy Crossi**	**53.66**	**155**	*e*P	**P**		**00 18 51.6**	**+0.2**
JOF	**Joensuu**	**54.56**	**327**	*e*P	**P**		**00 18 56.4**	**-1.1**
JOF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
JOF	**Joensuu**	**54.56**	**327**	*e*p	**P**		**00 18 56.4**	**-1.1**
	comp=Z,2.4nm,0.5s,mb4.5							
KEV	**Kevo**	**56.17**	**336**	*e*P	**P**		**00 19 08.1**	**-0.9**
KEV				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4							
KEV	**Kevo**	**56.17**	**336**	*e*p	**P**		**00 19 08.1**	**-0.9**
	comp=Z,2.7nm,0.7s,mb4.4							
BR131	**Keskin Array S**	**56.64**	**299**	*e*P	**P**		**00 19 12.7**	**-0.1**
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**		**00 19 12.6**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.2,baz=94,slow=6.6,SNR=13							
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**		**00 19 12.6**	**-0.2**
BRT

GERES pmax pmax
comp=Z,1.0nm,0.6s
KDAK Kodiak Island 70.05 34 *i* P **P 00 20 38.2 -3.1**
CDF Champ du Feu 71.29 316 *eP* **P 00 20 48.5 -0.6**
comp=Z,2.5nm,0.6s,mb4.0
INK Inuvik 71.35 19 P **P 00 20 48.7 -0.4**
WLF Walferdange 71.38 317 *eP* **P 00 20 49.6 0.0**
STKA Stephens Creek 72.47 147 P **P 00 20 57.6 +1.4**
comp=Z,3.4nm,0.8s,mb4.4,baz=326,slow=9.9,SNR=4.0
STKA Stephens Creek 72.47 147 *eP* **P 00 20 56.0 -0.2**
LPG La Plagne 72.96 313 *eP* **P 00 20 59.3 +0.2**
comp=Z,9.4nm,0.7s,mb4.5
LPL La Plagne 72.96 313 *eP* **P 00 20 59.3 +0.2**
comp=Z,11nm,0.8s,mb4.6
BNI Bardonecchia 73.21 313 *eP* **P 00 21 00.8 +0.2**
SMF Signal de Mont 74.18 315 *eP* **P 00 21 05.5 -0.8**
AVF Avril sur Loir 74.40 316 *eP* **P 00 21 06.7 -0.9**
comp=Z,19nm,1.3s,mb4.5
CAF Calviac 76.12 314 *eP* **P 00 21 17.4 -0.1**
YKA Yellowknife Ar 80.89 17 P **P 00 21 43.6 +0.2**
comp=Z,0.9nm,0.5s,mb4.0,baz=329,slow=5.3,SNR=13

*ISCJB **15** 00:37:19.5±0.3, 32°.49N±0°.03×105°.40E±0°.04, h10km, mb4.2/28, Error ellipse: s-maj=5.4km s-min=3.9km az=160.9*
*BJI **15** 00:37:20.8, 32°.48N×105°.36E, h10km, mB4.6/3, mb4.2/5, ML4.2/18, Ms4.1/9, Ms7 3.6/8*
*IDC **15** 00:37:20.3±0.7, 32°.44N×105°.27E, h0km, mb4.1/14, mb1 4.1/16, mb1mx4.0/28, mbtmp4.0/16, ML3.7/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/38, Error ellipse: s-maj=29.4km s-min=13.9km az=56.0*
*NEIC **15** 00:37:21.8±0.3, 32°.45N×105°.18E, h10km, mb4.2/10, Error ellipse: s-maj=8.9km s-min=5.2km az=59.0*
ISC 15 00:37:21.7±0.3, 32°.48N±0°.03×105°.35E±0°.04, h10km, n58, σ1°.97/70, mb4.2/28, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.07**	**221**	Pn	**Pn**	**00 37 57.0**	**+0.5**
CD2				Pg	**Pg**	**00 38 00.5**	**-0.9**
CD2				Sn	**Sn**	**00 38 25.3**	**+2.9**
CD2				Sg	**Sg**	**00 38 27.0**	**-1.3**
CD2				smax			
	comp=N,10μm,0.7s						
XAN	**Xi'an**	**3.37**	**62**	Pn	**Pn**	**00 38 16.8**	**+2.4**
XAN				Pg	**Pg**	**00 38 23.0**	**-3.3**
XAN				Sg	**Sg**	**00 39 03.6**	**-6.4**
XAN				smax			
	comp=N,1μm,0.8s						
XAN				smax			
	comp=E,650nm,0.8s						
LZH	**Lanzhou**	**3.81**	**341**	*e*Pn	**Pn**	**00 38 22.0**	**+1.6**
LZH				Pg	**Pg**	**00 38 32.9**	**-1.7**
LZH				Sn	**Sn**	**00 38 58.8**	**-6.4**
LZH				Sg	**Sg**	**00 39 19.8**	**-4.2**
LZH				smax			
	comp=N,860nm,0.7s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,2μm,6.1s						
LZH				LR	LR		
	comp=Z,3μm,7.7s						
ENH	**Enshi**	**4.17**	**121**	*e*Pn	**Pn**	**00 38 27.6**	**+2.3**
ENH				*e*Pg	**Pg**	**00 38 40.6**	**-0.9**
ENH				*e*S	**Sg**	**00 39 33.3**	**-2.2**
GYA	**Guiyang**	**6.11**	**169**	Pn	**Pn**	**00 38 53.0**	**+1.0**
GYA				Sn	**Sn**	**00 40 04.1**	**+2.1**
GYA				smax			
	comp=N,190nm,0.9s						
GYA				smax			
	comp=E,120nm,0.9s						
KMI	**Kunming**	**7.68**	**198**	Pn	**Pn**	**00 39 15.3**	**+1.7**
KMI				smax			
	comp=N,52nm,1.0s						
KMI				smax			
	comp=E,33nm,1.7s						
KMI				LR	LR		
	comp=N,280nm,4.7s						
KMI				LR	LR		
	comp=E,550nm,5.7s						
KMI				LR	LR		
	comp=Z,200nm,6.3s						
WHN	**Wuhan**	**7.92**	**102**	⇓P	**Pn**	**00 39 17.4**	**+0.5**
WHN				S	**Sn**	**00 40 45.4**	**-1.2**
WHN				LR	LR		
	comp=Z,1μm,5.8s						
GTA	**Gaotai**	**8.24**	**329**	*e*P	**Pn**	**00 39 21.9**	**+0.6**
GTA				pP		00 39 25.4	
GTA				sP		00 39 28.0	
GTA				S	**Sn**	**00 40 56.8**	**+2.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,4.5s						
GTA				LR	LR		
	comp=N,490nm,11.3s						
GTA				LR	LR		
	comp=E,580nm,10.1s						
GTA				LR	LR		
	comp=Z,530nm,11.6s						
TIA	**Tai'an**	**10.42**	**66**	*e*P	Px	00 40 17.8	
CMAR	**Chiang Mai Arr**	**15.11**	**204**	Pn	**Pn**	**00 40 54.8**	**-0.4**
	baz=15,slow=11						
SONM	**Songino Array**	**15.36**	**3**	Pn	**Pn**	**00 40 58.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=7.1						
ULN	**Ulaanbaatar**	**15.42**	**4**	*e*Pn	**Pn**	**00 40 59.3**	**+0.1**
	comp=Z,6.4nm,1.0s						
ULN				*e*Sn	**Sn**	**00 43 51.6**	**+1.6**
KSRS	**Korea Array**	**19.14**	**69**	P	**Pn**	**00 41 46.3**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=253,slow=11,SNR=14						
KSRS				LR	LR	00 49 28.6	
	comp=Z,65nm,19.7s,baz=185,slow=38						
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**00 42 22.7**	**-0.4**
MK31				*e*PcP	PcP	00 46 14.6	-0.8
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**00 42 23.7**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.0,baz=123,slow=12,SNR=33						
KSH	**Kashi**	**24.71**	**295**	P	**P**	**00 42 46.8**	**+3.8**
KSH				pmax	pmax		
	comp=Z,64nm,4.3s						
TKM2	**Tokmak 2**	**25.62**	**303**	*e*P	**P**	**00 42 49.7**	**-1.5**
	comp=Z,1.4nm,0.5s,mb3.8						
ZAA0	**Zalesovo Array**	**25.98**	**332**	*e*P	**P**	**00 42 53.9**	**-0.4**
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**00 42 54.5**	**+0.2**
	comp=Z,1.5nm,0.5s,mb3.8,baz=132,slow=10.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**00 42 54.5**	**+0.1**
UCH	**Uchtor**	**26.25**	**301**	*e*P	**P**	**00 42 57.2**	**+0.3**
	comp=Z,1.4nm,0.6s,mb3.7						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**00 43 02.0**	**+0.1**
	comp=Z,1.9nm,0.7s,mb3.7,baz=136,slow=8.3,SNR=11						
AML	**Almayashu**	**26.83**	**300**	*e*P	**P**	**00 43 02.3**	**+0.1**
	comp=Z,3.5nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**27.30**	**72**	LR	LR	00 54 24.6	
	comp=Z,50nm,19.2s,baz=355,slow=37						
KBL	**Kabul**	**30.24**	**284**	P	**P**	**00 43 29.7**	**-3.0**
	comp=Z,3.0nm,0.4s,mb4.4						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**00 43 51.8**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.0,baz=106,slow=8.1,SNR=4.5						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**00 44 36.2**	**+0.1**
	comp=Z,1.3nm,0.5s,mb3.9						
KAPI	**Kappang**	**39.72**	**157**	P	**P**	**00 44 54.1**	**-0.3**
	comp=Z,3.8nm,0.3s,mb4.5,baz=158,slow=5.4,SNR=4.7						
ARU	**Arti**	**40.02**	**321**	*e*P	**P**	**00 44 55.6**	**-0.8**
	comp=Z,3.7nm,0.9s,mb4.1						
KIV	**Kislovodsk**	**49.46**	**302**	P	**P**	**00 46 10.6**	**-1.4**
MALT	**Malatya**	**53.80**	**296**	P	**P**	**00 46 43.5**	**-1.0**
JOF	**Joensuu**	**54.44**	**327**	*e*p	**P**	**00 46 47.7**	**-1.1**
	comp=Z,2.5nm,0.7s,mb4.2						
KEV	**Kevo**	**55.91**	**336**	*e*P	**P**	**00 46 59.7**	**+0.4**
	comp=Z,5.9nm,0.7s,mb4.7						
KEV	**Kevo**	**55.91**	**336**	*e*p	**P**	**00 46 58.5**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**56.45**	**335**	P	**P**	**00 47 03.4**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.5,baz=81,slow=7.2,SNR=14						
KAF	**Kangasniemi**	**56.83**	**327**	*e*p	**P**	**00 47 04.7**	**-1.2**
	comp=Z,1.8nm,0.8s,mb4.2						
BR131	**Keskin Array S**	**56.99**	**299**	*e*P	**P**	**00 47 06.9**	**-0.6**
BRTR	**Keskin Array B**	**56.99**	**299**	P	**P**	**00 47 07.4**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=104,slow=7.9,SNR=5.6						
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**00 47 07.8**	**+0.5**
	comp=Z,1.1nm,0.4s,mb4.2,baz=81,slow=6.7,SNR=13						
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**00 47 08.2**	**-0.7**
	comp=Z,1.4nm,0.4s,mb4.4,baz=67,slow=7.5,SNR=7.1						
WRAB	**Tennant Creek**	**59.04**	**148**	*e*P	**P**	**00 47 22.1**	**+0.2**
	comp=Z,9.4nm,0.6s,mb5.0						
TIPR	**Tirgusor**	**59.35**	**306**	P	**P**	**00 47 23.1**	**-0.8**
KWP	**Kalwaria Pacla**	**61.55**	**313**	*e*P	**P**	**00 47 38.7**	**-0.2**
	comp=Z,7.8nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**00 47 43.2**	**+0.2**
	comp=Z,3.5nm,0.8s,mb4.6,baz=335,slow=6.0,SNR=28						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**00 47 55.9**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=70,slow=6.6,SNR=3.9						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**00 47 55.9**	**+0.5**
MORC	**Moravsky Berou**	**64.67**	**314**	*e*P	**P**	**00 47 58.3**	**-1.3**
GERES	**GERESS Array B**	**67.35**	**314**	P	**P**	**00 48 17.3**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=64,slow=6.1,SNR=5.2						
TIP	**Timpagrande**	**69.37**	**304**	P	**P**	**00 48 29.0**	**-0.6**
CDF	**Champ du Feu**	**71.37**	**316**	*e*P	**P**	**00 48 42.0**	**+0.3**
WLF	**Walferdange**	**71.43**	**317**	P	**P**	**00 48 41.2**	**-0.9**
STKA	**Stephens Creek**	**72.60**	**148**	P	**P**	**00 48 49.8**	**+0.6**
	comp=Z,1.4nm,0.6s,mb4.1,baz=22,slow=7.3,SNR=4.1						
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**00 48 52.5**	**+0.5**
	comp=Z,7.6nm,0.5s,mb4.6						
LPL	**La Plagne**	**73.08**	**313**	*e*P	**P**	**00 48 52.4**	**+0.4**
	comp=Z,6.1nm,0.5s,mb4.5						
SMF	**Signal de Mont**	**74.27**	**315**	*e*P	**P**	**00 48 59.2**	**+0.3**
TCF	**Toulx Ste Croi**	**75.42**	**316**	*e*P	**P**	**00 49 06.1**	**+0.5**
	comp=Z,6.0nm,1.1s,mb4.1						
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**00 49 31.3**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.7,baz=330,slow=5.2,SNR=11						
YKA	**Yellowknife Ar**	**80.06**	**18**	P	**P**	**00 49 31.3**	**+0.1**

*IDC **15** 00:39:42.9±1.9, 31°.23N×103°.69E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.8/8, ML4.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/36, Error ellipse: s-maj=37.1km s-min=30.0km az=9.0*
*ISCJB **15** 00:39:43.6±1.0, 31°.2N±0°.1×103°.7E±0°.1, h25km±12km, mb3.6/8, Error ellipse: s-maj=19.6km s-min=15.2km az=137.1*
*NEIC **15** 00:39:43.9±0.9, 31°.20N×103°.70E, h10km, mb3.8/2, Error ellipse: s-maj=17.6km s-min=12.8km az=115.0*
*BJI **15** 00:39:44.1, 31°.09N×103°.57E, h10km, mB4.2/1, ML3.9/6*
ISC 15 00:39:44.0±1.9, 31°.20N±0°.10×103°.7E±0°.1, h10km±16km, n17, σ0°.97/18, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**167**	Pg	**Pg**	**00 39 49.0**	**-0.9**
CD2				Sg	**Sg**	**00 39 54.3**	**+0.4**
CD2				smax			
	comp=N,53μm,0.7s						
CMAR	**Chiang Mai Arr**	**13.39**	**200**	Pn	**Pn**	**00 42 54.8**	**+0.6**
	comp=N,1.1nm,0.3s,baz=13,slow=12,SNR=2.9						
BJT	**Baijiatuan**	**13.43**	**46**	Pn	**Pn**	**00 42 54.0**	**-0.6**
SONM	**Songino Array**	**16.75**	**6**	Pn	**Pn**	**00 43 40.5**	**+2.0**
	comp=N,0.2nm,0.3s,baz=187,slow=9.8,SNR=4.2						
SONM				LR	LR	00 50 04.0	
	comp=N,68nm,18.4s,baz=102,slow=37						
KSRS	**Korea Array**	**20.94**	**66**	P	**P**	**00 44 27.4**	**+0.5**
	comp=N,1.3nm,0.5s,baz=257,slow=9.6,SNR=4.5						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**00 44 34.8**	**+4.2**
MK31	**Makanchi Array**	**22.67**	**319**	P	**P**	**00 44 46.0**	**+0.6**
MKAR	**Makanchi Array**	**22.67**	**319**	P	**P**	**00 44 45.5**	**+0.2**
	comp=N,1.4nm,0.8s,mb3.4,baz=115,slow=12,SNR=3.1						
UCH	**Uchtor**	**25.72**	**303**	*e*P	**P**	**00 45 14.6**	**+0.1**
	comp=N,0.8nm,0.7s,mb3.4						
AAK	**Ala-Archa**	**25.85**	**304**	P	**P**	**00 45 18.1**	**+2.5**
	comp=N,0.6nm,0.3s,mb3.6,baz=46,slow=7.2,SNR=1.5						
ZAA0	**Zalesovo Array**	**26.48**	**335**	*e*P	**P**	**00 45 20.1**	**-1.1**
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**00 45 21.1**	**0.0**
	comp=N,2.0nm,0.7s,mb3.7,baz=133,slow=10,SNR=5.3						
KURK	**Kurchatov**	**26.95**	**324**	P	**P**	**00 45 25.0**	**-0.4**
	comp=N,0.6nm,0.7s,mb3.3,baz=128,slow=9.2,SNR=3.7						
BRVK	**Borovoye**	**32.57**	**322**	*e*P	**P**	**00 46 14.2**	**-0.9**
	comp=N,1.1nm,0.6s,mb4.0						
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**00 49 31.1**	**-0.4**
	comp=N,1.2nm,0.7s,mb4.0,baz=73,slow=7.0,SNR=1.7						
KWP	**Kalwaria Pacla**	**61.38**	**313**	*e*P	**P**	**00 49 58.3**	**-1.7**
YKA	**Yellowknife Ar**	**81.71**	**17**	P	**P**	**00 52 02.0**	**-0.3**
	comp=N,0.3nm,0.5s,mb3.5,baz=332,slow=5.4,SNR=3.6						

*IDC **15** 00:49:13.7±0.5, 8°.13N×38°.59W, h0km, mb4.3/24, mb1 4.4/24, mb1mx4.3/29, mbtmp4.3/24, MS3.9/23, Ms1 3.9/23, ms1mx3.9/28, Error ellipse: s-maj=20.3km s-min=11.1km az=146.0*
*NEIC **15** 00:49:15.7±0.3, 7°.95N×38°.36W, h10km, mb4.7/55, Error ellipse: s-maj=7.5km s-min=4.6km az=164.0*
*SZGRF **15** 00:49:15.6, 7°.59N×38°.32W, h33km, mb4.9, MS4.1, Central Mid-Atlantic Ridge*
*GCMT **15** 00:49:15.7±0.3, 8°.20N×38°.66W, h17km±1km, MW4.8/59, Moment Tensor Solution. s17,c23; s59,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.64±.11; $M_{\theta\theta}$0.22±.10; $M_{\phi\phi}$0.42±.10; $M_{r\theta}$-0.73±.24; $M_{\theta\phi}$-2.07±.09; $M_{r\phi}$0.53±.25; Best double couple: $M_0$2.20700×10^{16} NP1:ϕ_s3.00000°, δ72.00000°, λ4.00000°. NP2: ϕ_s272.00000°, δ86.00000°, λ162.00000°. Principal axes: T 2.6340, Plg15.0000°, Azm226.0000°; N -0.8550, Plg72.0000°, Azm80.0000°; P -1.7790, Plg10.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **15** 00:49:15.7±3.0, 8°.05N±0°.07×38°.58W±0°.03, h33km±28km, mb4.6/91, MS3.9/26 Error ellipse: s-maj=12.0km s-min=4.7km az=163.1*
*CSEM **15** 00:49:19.6±1.4, 8°.59N×39°.06W, h33km, mb4.7/22, Ms3.9, Error ellipse: s-maj=55.0km s-min=51.4km az=80.0*
ISC 15 00:49:18.9±2.2, 8°.02N±0°.07×38°.58W±0°.03, h35km±21km, n325, σ1°.06/310, mb4.6/91, MS3.9/26, 54C-42D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**14.02**	**169**	*e*Pn	**Pn**	**00 52 33.5**	**-1.5**
RCBR				*e*Sn	**Sn**	**00 55 00.5**	**-8.9**
BBTS	**Babate**	**22.59**	**71**	P	**P**	**00 54 17.2**	**+0.8**
	27nm,0.8s,mb4.7,baz=353,slow=1.0,SNR=4.9						
BBTS				LR	LR	01 00 50.7	
	comp=Z,467nm,20.0s,MS3.9,baz=199,slow=31						
PCRV	**Puerto La Cruz**	**25.81**	**277**	LR	LR	01 06 07.1	
	comp=Z,148nm,18.0s,MS3.6,baz=255,slow=39						
MTP	**Monte Pirata**	**28.08**	**294**	*e*P	**P**	**00 55 09.2**	**+1.9**
	9.5nm,0.8s,mb4.5						
CBYP	**Canovanas**	**28.41**	**294**	P	**P**	**00 55 14.6**	**+4.3**
SJG	**San Juan**	**28.62**	**293**	P	**P**	**00 55 15.1**	**+2.9**
	19nm,0.2s,mb5.4,baz=48,slow=19,SNR=1.7						
CELP	**Cerrillos**	**29.00**	**293**	*e*P	**P**	**00 55 13.8**	**-1.8**
SDV	**Santo Domingo**	**31.71**	**274**	P	**P**	**00 55 41.3**	**+1.7**
	2.2nm,0.6s,mb4.2,baz=102,slow=7.6,SNR=4.4						
SDV	**Santo Domingo**	**31.71**	**274**	*e*P	**P**	**00 55 40.9**	**+1.3**
SIV	**San Ignacio**	**32.64**	**223**	P	**P**	**00 55 48.8**	**+1.2**
	7.7nm,0.9s,mb4.7,baz=64,slow=10,SNR=35						
TIC	**Toumodi**	**33.31**	**90**	*e*P	**P**	**00 55 53.1**	**-0.5**
	13nm,0.7s,mb5.0						
LIC	**Lamto**	**33.34**	**91**	*e*P	**P**	**00 55 53.0**	**-0.8**
	41nm,0.9s,mb5.4						
DBIC	**Dimbokro**	**33.47**	**90**	P	**P**	**00 55 54.1**	**-0.9**
	9.5nm,0.7s,mb4.8,baz=258,slow=9.2,SNR=30						
DBIC	**Dimbokro**	**33.47**	**90**	*e*P	**P**	**00 55 54.5**	**-0.6**
	9.5nm,0.6s,mb4.9						
SDDR	**Presa de Saban**	**33.55**	**292**	*e*P	**P**	**00 55 56.6**	**+1.0**
KIC	**Kosan Boka**	**33.61**	**91**	*e*P	**P**	**00 55 56.7**	**+0.5**
	32nm,1.4s,mb5.0						
BBSR	**BB Station**	**34.27**	**319**	P	**P**	**00 56 05.6**	**+3.9**
ROSC	**El Rosal**	**35.65**	**267**	P	**P**	**00 56 15.6**	**+1.7**
	7.3nm,0.7s,mb4.7,baz=262,slow=22,SNR=3.2						
ROSC				LR	LR	01 12 36.3	
	comp=Z,168nm,18.9s,MS3.8,baz=49,slow=39						
ROSC	**El Rosal**	**35.65**	**267**	*e*P	**P**	**00 56 15.8**	**+1.9**
OUK	**Oukaimeden**	**36.77**	**47**	*i* P	**P**	**00 56 24.0**	**+0.8**
LPAZ	**La Paz**	**37.93**	**230**	P	**P**	**00 56 34.5**	**+1.3**
	11nm,1.1s,mb4.5,baz=45,slow=6.2,SNR=22						
LPAZ				LR	LR	01 10 50.8	
	comp=Z,254nm,21.7s,MS4.0,baz=32,slow=34						
LPAZ	**La Paz**	**37.93**	**230**	*e*P	**P**	**00 56 34.6**	**+1.4**
	14nm,1.1s,mb4.6						
CPUP	**Villa Florida**	**38.70**	**207**	P	**P**	**00 56 43.7**	**+4.2**
	0.3nm,0.4s,baz=83,slow=3.2,SNR=2.8						
CPUP				LR	LR	01 12 44.3	
	comp=Z,309nm,19.0s,MS4.2,baz=8.9,slow=36						
CPUP	**Villa Florida**	**38.70**	**207**	P	**P**	**00 56 43.7**	**+4.2**
CPUP				LR	LR	01 12 44.3	
KIB	**El Ksiba**	**38.81**	**46**	*i* P	**P**	**00 56 41.5**	**+1.0**
PFVI	**Vila Bisbo**	**39.60**	**38**	*e*LR	LR	01 07 15.2	
	248nm,22.0s						
MORF	**Marmelete**	**39.82**	**38**	*e*LR	LR	01 08 12.8	
	342nm,20.0s						
TOA0	**Torodi Ar. Sit**	**39.88**	**79**	*e*P	**P**	**00 56 48.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**39.88**	**79**	P	**P**	**00 56 48.9**	**-0.7**
	13nm,0.8s,mb4.7,baz=273,slow=8.7,SNR=72						
TORD				LR	LR	01 10 45.2	
	comp=Z,187nm,19.5s,MS3.9,baz=110,slow=32						
TORD	**Torodi Ar. Bea**	**39.88**	**79**	P	**P**	**00 56 48.9**	**-0.7**
TORD				LR	LR	01 10 45.2	
MDT	**Midelt**	**39.97**	**47**	P	**P**	**00 56 50.6**	**+0.5**
	3.9nm,0.7s,mb4.2,baz=236,slow=7.1,SNR=12						
PBDV	**Barranco-do-Ve**	**40.23**	**39**	*e*P	**P**	**00 56 52.1**	**-0.1**
	19nm,1.1s,mb4.7						
PBDV				*e*LR	LR	01 07 50.1	
	271nm,22.0s						
PCVE	**Castro Verde**	**40.41**	**38**	*e*LR	LR	01 07 37.7	
	298nm,20.0s						
PVAQ	**Vaqueiros**	**40.46**	**39**	*e*LR	LR	01 07 53.7	
	321nm,22.0s						
OTAV	**Otavalo**	**40.48**	**261**	*e*P	**P**	**00 56 55.2**	**+0.6**
	2.1nm,0.6s,mb4.0						
PMAFR	**Mafra**	**40.52**	**36**	*e*LR	LR	01 07 42.6	
	174nm,22.0s						
EVO	**Evora**	**40.99**	**37**	*e*P	**P**	**00 56 58.7**	**+0.2**
	31nm,1.7s,mb4.7						
PBAR	**Barrancos**	**41.36**	**39**	*e*P	**P**	**00 57 01.4**	**-0.1**
	15nm,1.5s,mb4.4						
PBAR				*e*LR	LR	01 08 18.0	
	246nm,22.0s						
PESTR	**Estremoz**	**41.46**	**37**	*e*LR	LR	01 08 21.3	
	230nm,22.0s						
PTOM	**Tomar**	**41.46**	**36**	*e*P	**P**	**00 57 01.4**	**-0.9**
	55nm,1.5s,mb5.0						
PMRV	**Marv??o**	**41.94**	**37**	*e*LR	LR	01 08 37.4	
	171nm,20.0s						
MTE	**Manteigas**	**42.48**	**36**	*e*LR	LR	01 08 37.3	
	231nm,22.0s						
LVC	**Limon Verde**	**42.53**	**224**	P	**P**	**00 57 11.1**	**-0.2**
	3.2nm,0.7s,mb4.2,baz=72,slow=8.7,SNR=4.2						
LVC	**Limon Verde**	**42.53**	**224**	*e*P	**P**	**00 57 11.0**	**-0.3**
MVO	**Moncorvo**	**43.27**	**35**	*e*LR	LR	01 09 18.9	
	165nm,22.0s						
ESDC	**Sonseca Array**	**44.18**	**39**	LR	LR	01 13 22.0	
	comp=Z,196nm,18.6s,MS4.1,baz=270,slow=33						
TAM	**Tamanrasset**	**44.79**	**66**	*e*P	**P**	**00 57 29.4**	**-0.1**
	8.6nm,1.1s,mb4.5						
SJPF	**Ste Jean**	**47.87**	**37**	*e*P	**P**	**00 57 52.5**	**-0.8**
SJPF	**Ste Jean**	**47.87**	**37**	*e*P	**P**	**00 57 52.5**	**-0.8**
ETSF	**Etsaut**	**48.14**	**37**	*e*P	**P**	**00 57 55.9**	**+0.5**
	8.2nm,0.8s,mb4.5						
ETSF	**Etsaut**	**48.14**	**37**	*e*P	**P**	**00 57 55.9**	**+0.5**
	4.1nm,0.8s,mb4.5						
ETSF	**Etsaut**	**48.14**	**37**	*e*P	**P**	**00 57 55.9**	**+0.5**
	4.1nm,0.8s,mb4.5						
MCWV	**Mont Chateau**	**48.49**	**317**	*e*P	**P**	**00 57 59.9**	**+1.7**
	144nm,2.3s,mb5.6						
CFAA	**Coronel Fontan**	**48.55**	**214**	P	**P**	**00 57 59.3**	**+0.6**
	0.7nm,0.8s,mb3.7,baz=22,slow=8.4,SNR=9.1						
EPF	**Esparros**	**48.76**	**38**	*e*P	**P**	**00 58 00.9**	**+0.7**
	16nm,0.9s,mb4.8						
EPF	**Esparros**	**48.76**	**38**	*e*P	**P**	**00 58 00.9**	**+0.7**
	7.8nm,0.9s,mb4.7						
EPF	**Esparros**	**48.76**	**38**	*e*P	**P**	**00 58 00.9**	**+0.7**
	7.8nm,0.9s,mb4.7						
TZTN	**Tazewell**	**49.72**	**312**	*e*P	**P**	**00 58 11.0**	**+3.3**
ROSF	**Rostrenen**	**50.02**	**30**	*e*P	**P**	**00 58 09.4**	**-0.3**
	68nm,1.4s,mb5.2						
ROSF	**Rostrenen**	**50.02**	**30**	*e*P	**P**	**00 58 09.4**	**-0.3**
	34nm,1.4s,mb5.2						
ROSF	**Rostrenen**	**50.02**	**30**	*e*P	**P**	**00 58 09.4**	**-0.3**
	34nm,1.4s,mb5.2						
MTLF	**Montolieu**	**50.08**	**38**	*e*P	**P**	**00 58 09.8**	**-0.5**
	41nm,1.6s,mb4.9						
MTLF	**Montolieu**	**50.08**	**38**	*e*P	**P**	**00 58 09.8**	**-0.5**
	20nm,1.6s,mb4.9						
MTLF	**Montolieu**	**50.08**	**38**	*e*P	**P**	**00 58 09.8**	**-0.5**
	20nm,1.6s,mb4.9						
LFF	**La Frestale**	**50.08**	**36**	*e*P	**P**	**00 58 09.3**	**-1.0**
	30nm,1.1s,mb4.9						
LFF	**La Frestale**	**50.08**	**36**	*e*P	**P**	**00 58 09.3**	**-1.0**
	15nm,1.1s,mb4.9						
LFF	**La Frestale**	**50.08**	**36**	*e*P	**P**	**00 58 09.3**	**-1.0**
	15nm,1.1s,mb4.9						
SGMF	**Saint Gilles**	**50.33**	**31**	*e*P	**P**	**00 58 11.0**	**-1.1**
	32nm,1.0s,mb5.0						
SGMF	**Saint Gilles**	**50.33**	**31**	*e*P	**P**	**00 58 11.0**	**-1.1**
	16nm,1.

comp=Z,8.4nm,0.9s,mb4.7
SBF Sospel 53.62 40 *e*P **P 00 58 36.5 -0.2**
comp=Z,8.4nm,0.9s,mb4.7
BNI Bardonecchia 53.71 39 *e*P **P 00 58 38.1 +0.8**
comp=Z,6.7nm,0.9s,mb4.6
OLIL Olney 53.90 313 *e*P **P 00 58 42.0 +3.2**
comp=Z,22nm,0.9s,mb5.1
LPL La Plagne 53.97 38 *e*P **P 00 58 39.8 +0.6**
comp=Z,3.2nm,0.7s,mb4.1
LPL La Plagne 53.97 38 *e*P **P 00 58 39.8 +0.6**
comp=Z,1.6nm,0.7s,mb4.1
LPL La Plagne 53.97 38 *e*P **P 00 58 39.8 +0.6**
comp=Z,1.6nm,0.7s,mb4.1
LPG La Plagne 53.97 38 *e*P **P 00 58 40.0 +0.8**
comp=Z,5.5nm,0.9s,mb4.2
LPG La Plagne 53.97 38 *e*P **P 00 58 40.0 +0.8**
comp=Z,2.8nm,0.9s,mb4.2
LPG La Plagne 53.97 38 *e*P **P 00 58 40.0 +0.8**
comp=Z,2.8nm,0.9s,mb4.2
CABF La Chapelle 54.13 37 *e*P **P 00 58 40.4 0.0**
comp=Z,63nm,1.7s,mb5.0
CABF La Chapelle 54.13 37 *e*P **P 00 58 40.4 0.0**
comp=Z,32nm,1.7s,mb5.0
CABF La Chapelle 54.13 37 *e*P **P 00 58 40.4 0.0**
comp=Z,32nm,1.7s,mb5.0
MEZF Maizieres J'vi 54.53 34 *e*P **P 00 58 42.2 -1.1**
MEZF Maizieres J'vi 54.53 34 *e*P **P 00 58 42.2 -1.1**
ESK Eskdalemuir 54.88 24 *e*P **P 00 58 47.6 +2.0**
BAIF Baives 54.94 32 *e*P **P 00 58 46.3 +0.1**
comp=Z,17nm,1.0s,mb4.8
BAIF Baives 54.94 32 *e*P **P 00 58 46.3 +0.1**
comp=Z,8.5nm,1.0s,mb4.7
BAIF Baives 54.94 32 *e*P **P 00 58 46.3 +0.1**
comp=Z,8.5nm,1.0s,mb4.8
HAU Haudompre 55.00 35 *e*P **P 00 58 46.1 -0.6**
HAU *e*MLR MLR
comp=Z,121nm,19.5s,MS3.7
HAU Haudompre 55.00 35 *e*P **P 00 58 46.1 -0.6**
HAU LR LR
comp=Z,120nm,19.5s,MS4.0
HAU Haudompre 55.00 35 *e*P **P 00 58 46.1 -0.6**
DOU Dourbes 55.17 32 P **P 00 58 50.4 +2.5**
HINF Hinteralfeld 55.19 36 *e*P **P 00 58 46.8 -1.3**
GIVF Givet 55.29 33 *e*P **P 00 58 48.8 +0.1**
comp=Z,48nm,1.1s,mb5.1
GIVF Givet 55.29 33 *e*P **P 00 58 48.8 +0.1**
comp=Z,24nm,1.1s,mb5.1
GIVF Givet 55.29 33 *e*P **P 00 58 48.8 +0.1**
comp=Z,24nm,1.1s,mb5.1
ECH Echery 55.57 36 *e*P **P 00 58 50.0 -0.8**
comp=Z,7.8nm,1.0s,mb4.7
CDF Champ du Feu 55.74 35 *e*P **P 00 58 52.4 +0.4**
CDF Champ du Feu 55.74 35 *e*P **P 00 58 52.4 +0.4**
MEM Membach 56.20 33 P **P 00 58 58.0 +2.8**
comp=Z,7.3nm,1.2s,mb4.6
BFO Black Forest 56.31 36 *e*P **P 00 58 54.8 -1.2**
comp=Z,7.9nm,1.0s,mb4.7
DAVOX Davos/Dischmat 56.49 38 LR LR 01 19 35.3
comp=Z,232nm,20.7s,MS4.3,baz=250,slow=32
DAVA Damuels 56.73 38⇑*i*P **P 00 58 58.8 -0.2**
comp=Z,12nm,1.4s,mb4.7
PLCA Paso Flores 56.75 209 P **P 00 58 59.9 +0.6**
comp=Z,3.9nm,0.9s,mb4.4,baz=19,slow=12,SNR=3.6
PLCA LR LR 01 24 45.4
comp=Z,234nm,18.9s,MS4.3,baz=290,slow=38
MIAR Mount Ida 56.82 306 *e*P **P 00 59 04.2 +4.2**
JFWS Jewell Farm 56.95 317 *e*P **P 00 59 02.6 +1.9**
comp=Z,15nm,0.9s,mb5.0
AQU L'Aquila 56.96 44 *e*P **P 00 59 00.6 -0.3**
FETA Feichten 57.12 38⇑*i*P **P 00 59 00.8 -1.0**
comp=Z,4.7nm,1.0s,mb4.5
WTTA Wattenberg 57.78 38⇑*i*P **P 00 59 04.7 -1.9**
comp=Z,8.4nm,1.0s,mb4.7
GRA1 Grafenberg Arr 58.63 36 *e*P **P 00 59 11.6 -0.8**
comp=Z,8.0nm,1.0s,mb4.7
GRA1 LR LR
comp=Z,100nm,20.4s,MS3.9
GRF Grafenberg Arr 58.63 36 *e*P **P 00 59 11.6 -0.8**
comp=Z,8.0nm,1.0s,mb4.7
GRF *e*L 01 20 17.1
comp=Z,107nm,20.4s
OBKA Obir 59.29 40⇑*i*P **P 00 59 16.9 -0.1**
comp=Z,11nm,1.6s,mb4.7
MOX Moxa 59.30 35 *e*P **P 00 59 16.7 -0.3**
comp=Z,9.0nm,1.3s,mb4.6
NKC Novy Kostel 59.58 35 *ex* **P 00 59 19.0 0.0**
FRB Frobisher Bay 59.62 345 P **P 00 59 20.0 +1.1**
comp=Z,2.9nm,1.0s,mb4.3,baz=138,slow=9.5,SNR=2.4
FRB Frobisher Bay 59.62 345 P **P 00 59 20.0 +1.1**
GERES GERESS Array B 59.71 37 P **P 00 59 19.1 -0.8**
comp=Z,1.3nm,0.8s,mb4.0,baz=251,slow=4.1,SNR=9.0
GERES LR LR 01 20 50.4
comp=Z,111nm,21.7s,MS4.0,baz=257,slow=32
KHC Kasperske Hory 59.76 37 *e*P **P 00 59 18.8 -1.4**
comp=Z,2.4nm,0.8s,mb4.3
KHC Kasperske Hory 59.76 37 *e*P **P 00 59 19.2 -1.0**
KHC Kasperske Hory 59.76 37 P **P 00 59 19.2 -1.0**
CLL Collm 60.38 34 *e*P **P 00 59 25.0 +0.6**
CLL *i* 00 59 28.3
CLL *i* pP 00 59 33.1 -2.1
CLL Collm 60.38 34 *e*P **P 00 59 25.0 +0.6**
CLL LmV 00 23 00.0
comp=Z,100nm,19.7s
CLL LmH 00 24 00.0
comp=N,100nm,20.1s
CLL LmH 00 24 00.0
comp=E,100nm,18.9s
CLL *i* pP pP 00 59 28.3 -6.9
comp=Z,5.0nm,0.9s
CLL *i* pP 00 59 33.1 -2.1
CONA Conrad Observa 60.66 39⇑*i*P **P 00 59 25.7 -0.7**
comp=Z,5.5nm,1.2s,mb4.6
PRU Pruhonice 60.69 36 *e*P **P 00 59 26.6 0.0**
PRU *ex* x 00 59 34.9
PRU Pruhonice 60.69 36 P **P 00 59 26.6 0.0**
BRG Berggiesshubel 60.72 35 *e*(P) **P 00 59 29.8 +3.1**
comp=Z,4.3nm,1.1s,mb4.5
TREC Trest 60.97 37 *e*P **P 00 59 27.2 -1.3**
TREC Trest 60.97 37 P **P 00 59 27.2 -1.3**
WMOK Wichita Mounta 61.05 305 *e*P **P 00 59 35.6 +6.3**
comp=Z,3.8nm,0.8s,mb4.6
ZST Bratislava 61.54 39 *e*P **P 00 59 32.0 -0.3**
comp=Z,2.8nm,0.5s,mb4.7
ZST Bratislava 61.54 39 *e*P **P 00 59 32.0 -0.3**
ECSD EROS Data Cent 61.60 316 *e*P **P 00 59 34.7 +1.8**
comp=Z,5.9nm,1.0s,mb4.7
VRAC Vranov 61.64 38 LR LR 01 22 42.7
comp=Z,104nm,20.8s,MS4.0,baz=241,slow=33
UPC Upice 61.77 36 *e*P **P 00 59 35.3 +1.5**
UPC Upice 61.77 36 P **P 00 59 35.3 +1.5**
PKSM Moragy 61.83 41⇓*i*P **P 00 59 36.9 +2.5**
DPC Dobruska-Polom 61.88 36 *e*P **P 00 59 34.6 0.0**
DPC *ex* x 00 59 43.4
DPC Dobruska-Polom 61.88 36 P **P 00 59 34.6 0.0**
KOLL Kolacno 62.48 39 *e*P **P 00 59 41.3 +2.6**
KOLL Kolacno 62.48 39 *e*P **P 00 59 41.2 +2.5**
VYHS Vyhne 62.72 39 *e*P **P 00 59 41.0 +0.7**
comp=Z,3.3nm,1.7s,mb4.2
VYHS Vyhne 62.72 39 *e*P **P 00 59 41.0 +0.7**
VYHS Vyhne 62.72 39 *e*P **P 00 59 41.0 +0.7**
comp=Z,3.3nm,1.7s,mb4.2
ULM Lac du Bonnet 63.27 323 P **P 00 59 44.0 +0.1**
comp=Z,2.7nm,0.6s,mb4.5,baz=92,slow=5.4,SNR=6.0
ULM LR LR 01 20 39.9
comp=Z,82nm,20.3s,MS3.9,baz=57,slow=30
BZS Buzias 63.63 43⇑*i*P **P 00 59 46.5 +0.1**
BZS Buzias 63.63 43⇑*i*P **P 00 59 46.5 +0.1**
428A Kincaid Ranch, 63.71 300⇓P **P 00 59 46.9 -0.3**
baz=64,SNR=6.4
528A Cox Ranch, San 63.73 300⇓P **P 00 59 46.3 -1.1**
baz=64
628A Black Gap, Mar 63.75 299⇑P **P 00 59 46.7 -0.8**
baz=64,SNR=5.2
NAO01 NORSAR Array S 64.15 24 P **P 00 59 51.8 +2.3**
627A Terlingua Ranc 64.18 299⇓P **P 00 59 49.3 -1.1**
baz=64
427A Hayter Ranch, 64.33 300⇓P **P 00 59 49.7 -1.6**
baz=65,SNR=5.4
227A Bennet, Jal 64.37 302⇓P **P 00 59 50.3 -1.2**
baz=65
NB2 NORSAR Subarra 64.39 24 P **P 00 59 49.5 -1.5**
comp=Z,4.4nm,1.0s,mb4.4,baz=237,slow=6.5
NOA NORSAR Array B 64.39 24 P **P 00 59 50.4 -0.7**
comp=Z,2.5nm,0.9s,mb4.2,baz=235,slow=7.0,SNR=6.1
NOA LR LR 01 24 37.7
comp=Z,79nm,18.0s,MS3.9,baz=240,slow=33

TXAR Lajitas Array 64.41 299 P **P 00 59 50.5 -1.3**
comp=Z,0.6nm,0.5s,mb3.9,baz=102,slow=7.2,SNR=5.6
TXAR LR LR 01 25 56.1
comp=Z,46nm,20.3s,MS3.7,baz=180,slow=34
527A Woodward Ranch 64.44 299⇓P **P 00 59 50.3 -1.7**
baz=65
Z27A Tatum 64.47 303⇑P **P 00 59 50.4 -1.7**
baz=65
SUMG Summit 64.50 0 *e*P **P 00 59 53.6 +2.0**
Y27A Causey 64.50 304⇑P **P 00 59 52.0 -0.3**
baz=65
DRGR 64.69 42⇓*i*P **P 00 59 52.7 -0.6**
DRGR 64.69 42⇓*i*P **P 00 59 52.7 -0.6**
626A Big Bend Ranch 64.84 299⇑P **P 00 59 53.7 -0.9**
baz=65
426A McDonald Obser 64.85 300⇓P **P 00 59 54.0 -0.7**
baz=65
CPRX Cap Rock 64.97 303 *e*P **P 00 59 57.6 +2.2**
comp=Z,11nm,0.9s,mb4.9
KOLS Kolonicke sedl 65.02 39 *e*P **P 00 59 59.0 +3.6**
comp=Z,2.3nm,1.0s,mb4.2
KOLS Kolonicke sedl 65.02 39 *e*P **P 00 59 59.0 +3.6**
Z26A Caprock 65.09 303⇑P **P 00 59 55.4 -0.8**
baz=65
KWP Kalwaria Pacla 65.50 39 *e*P **P 00 59 58.6 +0.1**
comp=Z,8.2nm,0.9s,mb4.8
KWP Kalwaria Pacla 65.50 39⇑*i*P **P 00 59 59.1 +0.6**
KWP Kalwaria Pacla 65.50 39⇑*i*P **P 00 59 59.1 +0.6**
125A Gardner Draw, 65.59 302⇑P **P 00 59 59.5 0.0**
baz=66,SNR=5.1
JMIC Jan Mayen 65.68 10 LR LR 01 21 23.5
comp=Z,45nm,21.3s,MS3.6,baz=234,slow=29
425A Indio Mountain 65.68 300⇓P **P 00 59 59.7 -0.4**
baz=66
Z25A Roswell 65.71 303⇓P **P 00 59 59.8 -0.4**
baz=66
325A Bean Ranch, Si 65.73 301⇓P **P 00 59 59.9 -0.4**
baz=66,SNR=6.0
FCC Fort Churchill 65.75 332 *e*P **P 00 59 57.8 -2.2**
comp=Z,0.1nm,0.6s
Y25A Mesa, Roswell 65.76 304⇑P **P 01 00 00.6 +0.1**
baz=66
VOIR 65.91 44⇓*i*P **P 01 00 03.1 +1.9**
VOIR 65.91 44⇓*i*P **P 01 00 03.1 +1.9**
MNTX Cornudas Mount 66.11 301 *e*P **P 01 00 02.7 -0.1**
comp=Z,4.3nm,1.0s,mb4.4
324A Moseley Ranch, 66.17 301⇓P **P 01 00 01.8 -1.4**
baz=66,SNR=6.0
224A Corundas Mount 66.26 301⇓P **P 01 00 02.9 -0.9**
baz=66,SNR=5.2
124A Stringfield Ra 66.26 302⇑P **P 01 00 02.7 -1.1**
baz=66
Y24A Capitan 66.38 303⇑P **P 01 00 04.2 -0.3**
baz=67,SNR=7.1
W24A Lazy 6 Ranch, 66.50 305⇑P **P 01 00 04.8 -0.4**
baz=67,SNR=6.0
MLR Muntele Rosu 66.54 44⇓*i*P **P 01 00 05.7 +0.4**
MLR Muntele Rosu 66.54 44⇓*i*P **P 01 00 05.7 +0.4**
BUR08 Bucovina Ar. S 66.55 41 *e*P **P 01 00 05.3 +0.1**
BURAR Bucovina Array 66.55 41⇑*i*P **P 01 00 05.6 +0.3**
BURAR Bucovina Array 66.55 41⇑*i*P **P 01 00 05.6 +0.3**
Y23A Lovelace Mesa, 66.89 303⇓P **P 01 00 07.5 -0.3**
baz=67
SDCO Great Sand Dun 66.90 308 *e*P **P 01 00 10.3 +2.6**
comp=Z,4.0nm,0.8s,mb4.5
VRI Vrincioaia 67.15 44⇓*i*P **P 01 00 09.5 +0.3**
VRI Vrincioaia 67.15 44⇓*i*P **P 01 00 09.5 +0.3**
V23A Ortiz Mt. (NFS 67.19 305⇑P **P 01 00 08.4 -1.3**
baz=67
ISCO Idaho Springs 67.29 310 *e*P **P 01 00 13.5 +3.4**
comp=Z,5.3nm,1.0s,mb4.5
ANMO Albuquerque 67.33 304 P **P 01 00 14.2 +3.7**
Z22A Elephant Butte 67.58 303⇑P **P 01 00 10.4 -1.7**
baz=68
LAZ Ladron 67.83 304 *e*P **P 01 00 14.3 +0.6**
comp=Z,3.7nm,1.0s,mb4.4
T22A Edith 67.92 307⇓P **P 01 00 12.5 -1.7**
baz=68,SNR=6.2
M22A Cedar Creek Ra 68.27 311⇑P **P 01 00 15.3 -1.0**
baz=68
FFC Flin Flon 68.27 326 *e*P **P 01 00 14.5 -1.5**
X21A Alamocita Cree 68.37 304⇑P **P 01 00 16.7 -0.4**
baz=69,SNR=5.5
Y20A Horse Springs, 68.81 303⇑P **P 01 00 19.6 -0.3**
baz=69
L21A Rawlins 68.92 312⇓P **P 01 00 18.4 -2.0**
baz=69
219A White Tail Can 69.42 301⇓P **P 01 00 23.5 -0.1**
baz=70
Y19A Nucioso 69.54 303⇑P **P 01 00 24.0 -0.4**
baz=70
AKASG Malin Array Be 69.82 39 P **P 01 00 24.9 -0.8**
comp=Z,2.2nm,0.7s,mb4.2,baz=253,slow=6.9,SNR=8.4
AKASG LR LR 01 27 46.4
comp=Z,112nm,21.7s,MS4.1,baz=260,slow=33
O19A Miners Draw (B 70.02 310⇑P **P 01 00 26.0 -1.2**
baz=70
R18A Canyonlands Na 70.42 308⇓P **P 01 00 29.1 -0.5**
baz=71
TUC Tucson 70.73 301 P **P 01 00 34.5 +2.8**
RLMT Red Lodge 70.74 315⇑P **P 01 00 30.5 -1.0**
baz=71
P18A Preston Nutter 70.81 309⇑P **P 01 00 31.0 -1.0**
baz=71
V17A Tonalea, Kykot 70.92 305⇓P **P 01 00 33.3 +0.5**
baz=71,SNR=5.8
FINES FINESS Array B 71.02 27 P **P 01 00 32.3 -0.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=266,slow=3.1,SNR=6.6
FINES LR LR 01 27 07.2
comp=Z,102nm,20.0s,MS4.1,baz=313,slow=32
T17A Navajo Res., N 71.03 306⇓P **P 01 00 33.5 +0.1**
baz=71
O17A Robinson Place 71.24 310⇓P **P 01 00 34.4 -0.2**
baz=72
BRTR Keskin Array B 71.25 51 P **P 01 00 35.5 +0.9**
comp=Z,2.2nm,0.7s,mb4.2,baz=241,slow=5.6,SNR=10
BRTR LR LR 01 34 48.4
comp=Z,35nm,18.6s,MS3.6,baz=260,slow=38
BR131 Keskin Array S 71.25 51 *e*P **P 01 00 35.1 +0.5**
X16A Lo Mia Camp, P 71.38 304⇑P **P 01 00 35.4 -0.2**
baz=72
WUAZ Wupatki 71.39 305⇓P **P 01 00 35.7 +0.1**
baz=72
WUAZ Wupatki 71.39 305 *e*P **P 01 00 40.8 +5.2**
E18A Harlowton 71.39 316⇑P **P 01 00 35.0 -0.4**
baz=72
BOSA Boshof 71.47 124 P **P 01 00 40.6 +4.4**
comp=Z,6.3nm,1.1s,mb4.5,baz=286,slow=5.8,SNR=5.2
W16A Flagstaff 71.49 304⇓P **P 01 00 36.7 +0.4**
baz=72
TPAW Teton Pass 71.74 313 *e*P **P 01 00 42.3 +4.8**
YMR Madison River 71.88 314 *e*P **P 01 00 42.5 +4.1**
comp=Z,21nm,1.0s,mb5.0
RRI2 Red Ridge 71.99 313 *e*P **P 01 00 41.9 +2.8**
HWUT Hardware Ranch 72.00 311 *e*P **P 01 00 41.9 +2.7**
E17A Martinsdale 72.03 316⇑P **P 01 00 38.1 -1.1**
baz=72
J16A Bone 72.19 313⇓P **P 01 00 39.7 -0.6**
baz=72
MMAI Mount Meron Ar 72.26 58 P **P 01 00 42.3 +1.4**
comp=Z,2.6nm,0.9s,mb4.2,baz=349,slow=15,SNR=3.9
MMAI LR LR 01 36 42.7
comp=Z,58nm,18.5s,MS3.9,baz=80,slow=40
BOZ Bozeman (W) 72.46 315⇓P **P 01 00 41.5 -0.3**
baz=73,SNR=5.6
G16A Moss Hill, Enn 72.54 315⇑P **P 01 00 42.2 -0.1**
baz=73
D16A Dana Ranch, Ca 72.57 317⇑P **P 01 00 42.3 -0.1**
baz=73,SNR=5.6
X14A Yava 72.58 304⇓P **P 01 00 42.6 -0.1**
baz=73
SPUT South Promonto 72.63 311 P **P 01 00 45.9 +2.9**
L15A Malad City 72.64 311⇑P **P 01 00 42.6 -0.4**
baz=73,SNR=5.1
M15A Larsen Ranch, 72.64 311⇑P **P 01 00 42.6 -0.4**
baz=73,SNR=5.5
HRY Holter Researc 72.72 316 P **P 01 00 46.4 +3.0**
DUG Dugway 72.83 310⇑P **P 01 00 44.4 +0.2**
baz=73
P14A Drum Mountains 72.98 309⇓P **P 01 00 45.2 +0.1**
baz=73
G15A Dillon 73.01 315⇑P **P 01 00 44.9 -0.2**
baz=73,SNR=5.3
BGU Big Grassy Mou 73.04 310 *e*P **P 01 00 45.2 -0.2**
comp=Z,13nm,1.0s,mb4.8
F15A Butte 73.08 315⇓P **P 01 00 45.7 +0.2**
baz=73

DLMT Dillon 73.11 315 *e*P **P 01 00 52.2 +6.6**
Q14A Sevier Lake (B 73.11 308⇑P **P 01 00 46.1 +0.3**
baz=73
N14A Grayback Hills 73.16 310⇑P **P 01 00 46.6 +0.5**
baz=73,SNR=5.5
Z13A Yuma Proving G 73.18 302⇑P **P 01 00 46.7 +0.3**
baz=73
M14A Sheep Mountain 73.32 311⇑P **P 01 00 47.2 +0.1**
baz=74
W13A Hualapai Mount 73.42 304⇓P **P 01 00 47.9 +0.2**
baz=74
ARCES ARCESS Array B 73.62 19 P **P 01 00 47.8 -0.4**
comp=Z,2.3nm,0.9s,mb4.1,baz=294,slow=1.2,SNR=4.4
SLMT Seeley Lake 73.91 317 *e*P **P 01 00 56.6 +6.3**
I13A Wildhorse Cree 74.06 313⇑P **P 01 00 51.4 +0.1**
baz=74
R12A Pony Springs, 74.11 307⇑P **P 01 00 51.9 +0.1**
baz=74
C14A Swan Lake 74.13 317⇓P **P 01 00 50.9 -0.7**
baz=74
G13A Cobalt 74.23 315⇑P **P 01 00 52.4 +0.1**
baz=74
HLID Hailey 74.25 313⇑P **P 01 00 52.8 +0.4**
baz=74
HLID Hailey 74.25 313 *e*P **P 01 00 56.3 +3.8**
SWMT Swartz Lake 74.28 317 *e*P **P 01 00 54.8 +2.2**
IRM Iron Mountain 74.44 303⇑P **P 01 00 53.7 0.0**
baz=75
N12A Clover Valley, 74.56 310 *e*P **P 01 00 58.1 +3.8**
T11A Corn Creek, Al 74.56 306⇑P **P 01 00 54.4 0.0**
baz=75
B13A Whitefish 74.67 318⇑P **P 01 00 54.8 +0.1**
baz=75
A13A Flathead Natio 74.69 318⇓P **P 01 00 55.2 +0.3**
baz=75
MALT Malatya 74.89 53 *e*P **P 01 00 56.6 +0.3**
comp=Z,3.9nm,1.0s,mb4.3
MALT Malatya 74.89 53⇓*i*P **P 01 00 48.2 -8.0**
Q11A Duckwater 74.95 308⇑P **P 01 00 56.1 -0.5**
baz=75
F12A Elk City 75.00 315⇓P **P 01 00 56.1 -0.7**
baz=75
L11A Cat Creek Ranc 75.16 311⇑P **P 01 00 57.3 -0.4**
baz=75
D12A Red Ives Fores 75.16 316⇓P **P 01 00 57.4 -0.3**
baz=75
E12A Beaver Dam Sad 75.26 316⇑P **P 01 00 58.5 +0.2**
baz=76
D11A Klaveano Farm, 75.83 316⇑P **P 01 01 01.6 +0.1**
baz=76
YKA Yellowknife Ar 76.48 332 P **P 01 01 03.2 -1.6**
comp=Z,0.7nm,0.6s,mb3.8,baz=101,slow=6.1,SNR=12
YKA LR LR 01 30 22.8
comp=Z,59nm,21.4s,MS3.9,baz=355,slow=32
YKA Yellowknife Ar 76.48 332 P **P 01 01 03.2 -1.6**
YKA LR LR 01 30 22.8
MOD Modoc 78.54 311 *e*P **P 01 01 20.6 +3.8**
comp=Z,21nm,1.1s,mb5.0
ETW Entiat 78.56 317 *e*P **P 01 01 20.2 +3.4**
CMB Columbia Colle 78.67 307 P **P 01 01 21.9 +4.4**
INK Inuvik 84.43 338 *e*P **P 01 01 44.4 -3.0**
AKTK Aktyubinsk 88.06 39 P **P 01 02 06.4 +0.8**
AKTO Aktyubinsk 88.06 39 P **P 01 02 06.4 +0.8**
comp=Z,2.9nm,0.9s,mb4.5,baz=277,slow=6.3,SNR=5.0
ABKAR Akbulak array 89.51 40 *e*P **P 01 02 13.4 +0.9**
comp=Z,1.7nm,0.7s,mb4.5
BVAR Borovoye Array 94.82 35 LR LR 01 44 37.5
comp=Z,115nm,19.1s,MS4.4,baz=350,slow=35
GYA Guiyang 131.91 43 *e*Pdif Pdif 01 05 21.8 -0.3
GYA PKP PKPdf 01 08 28.9 -0.4
GYA PP PP 01 10 52.8 +3.3
GYA AMB AMB
comp=Z,110nm,7.8s

ISCJB ***15*** *00:50:18.4±0.9,31°.43N±0°.03×103°.62E±0°.04,h7km±6km, mb4.0/19,MS3.3/5,Error ellipse: s-maj=6.4km s-min=5.0km az=163.2*
IDC ***15*** *00:50:19.6±1.0,31°.49N×103°.59E,h0km,mb4.1/12, mb1 4.2/13,mb1mx3.9/27,mbtmp4.1/13,ML3.4/1,MS3.4/4, Ms1 3.4/4,ms1mx2.9/29,Error ellipse: s-maj=30.7km s-min=16.8km az=43.0*
BJI ***15*** *00:50:19.0,31°.35N×103°.68E,h10km,mB4.8/7,mb4.4/10, ML4.3/20,Ms4.2/12,Ms7 3.8/10*
NEIC ***15*** *00:50:20.7±0.5,31°.46N×103°.55E,h10km,mb4.1/10,Error ellipse: s-maj=12.0km s-min=8.1km az=210.0*
ISC 15 00:50:21.1±0.8,31°.36N±0°.03×103°.62E±0°.05,h15km±5km, n43,σ1°.24/53,mb4.0/19,MS3.3/5,2C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**165**	Pg	**Pg**	**00 50 29.3**	**-1.1**
CD2				Sg	**Sg**	**00 50 36.9**	**+0.2**
CD2				smax			
comp=N,16μm,1.0s							
LZH	**Lanzhou**	**4.72**	**2**	*e*Pg	**Pb**	**00 51 39.6**	**-3.9**
LZH				Sn	**Sn**	**00 52 31.1**	**+5.0**
LZH				Sg	**Sg**	**00 52 52.4**	**-0.1**
LZH				smax			
comp=N,290nm,0.7s							
LZH				smax			
comp=E,230nm,0.7s							
LZH				LR	LR		
comp=E,3μm,4.6s							
LZH				LR	LR		
comp=Z,4μm,5.0s							
ENH	**Enshi**	**5.17**	**101**	*e*Pn	**Pn**	**00 51 38.8**	**+0.9**
comp=Z,167nm,0.8s							
ENH				*e*Sn	**Sn**	**00 52 39.8**	**+2.5**
XAN	**Xi'an**	**5.21**	**58**	Pg	**Pg**	**00 51 56.9**	**-3.9**
XAN				Sg	**Sg**	**00 52 59.4**	**-8.9**
XAN				smax			
comp=N,330nm,0.6s							
XAN				smax			
comp=E,170nm,0.9s							
GYA	**Guiyang**	**5.57**	**151**	Pg	**Pb**	**00 51 54.3**	**-3.7**
GYA				Sn	**Sn**	**00 52 45.9**	**-1.2**
GYA				smax			
comp=N,300nm,0.8s							
GYA				smax			
comp=E,530nm,0.9s							
GYA				LR	LR		
comp=N,4μm,6.9s							
GYA				LR	LR		
comp=E,3μm,8.7s							
GYA				LR	LR		
comp=Z,5μm,5.6s							
KMI	**Kunming**	**6.26**	**187**	Pn	**Pn**	**00 51 54.1**	**+1.1**
KMI				Sn	**Sn**	**00 53 02.3**	**-2.0**
KMI				smax			
comp=N,56nm,1.1s							
KMI				smax			
comp=E,56nm,1.2s							
KMI				LR	LR		
comp=N,650nm,9.3s							
KMI				LR	LR		
comp=E,2μm,11.2s							
KMI				LR	LR		
comp=Z,430nm,9.8s							
GTA	**Gaotai**	**8.61**	**340**	*e*Pn	**Pn**	**00 52 28.4**	**+3.3**
GTA				pP		00 52 32.0	
GTA				sP		00 52 34.4	
GTA				pmax	pmax		
comp=Z,4.0nm,1.1s							
WHN	**Wuhan**	**9.25**	**92**	Pn	**Pn**	**00 52 33.8**	**-0.2**
WHN				S	**Sn**	**00 54 12.9**	**-4.9**
WHN				LR	LR		
comp=N,2μm,5.8s							
WHN				LR	LR		
comp=E,780nm,6.3s							
WHN				LR	LR		
comp=Z,770nm,8.9s							
HHC	**Hu-ho-hao-te**	**11.44**	**32**	*e*Pn	**Pn**	**00 53 05.8**	**+2.0**
HHC				pP		00 53 11.3	
HHC				PP		00 53 15.3	
HHC				S	**Sn**	**00 55 15.3**	**+4.0**
HHC				sS		00 55 25.5	
HHC				SS		00 55 31.6	
HHC				pmax	pmax		
comp=Z,21nm,1.1s							
HHC				pmax	pmax		
comp=Z,160nm,5.2s							
HHC				LR	LR		
comp=N,270nm,5.4s							

HHC LR LR
comp=E,360nm,5.2s
HHC LR LR
comp=Z,310nm,5.7s
GUN Gumba 15.80 262 eP Pn 00 54 06.5 +3.4
comp=Z,59nm,1.0s
PKI Pulchoki 16.30 261 eP Pn 00 54 10.1 +0.6
KKN Kakani 16.34 262 eP Pn 00 54 11.7 +1.6
comp=Z,49nm,0.9s
DMN Daman 16.55 262 eP Pn 00 54 13.8 +1.2
comp=Z,33nm,0.8s
SONM Songino Array 16.59 7 Pn Pn 00 54 14.3 +1.3
comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=6.4
ULN Ulaanbaatar 16.69 8 ePn Pn 00 54 12.6 -1.7
comp=Z,1.5nm,0.4s
TLY Talaya 20.30 0 P P 00 54 55.7 -0.5
KSRS Korea Array 20.93 67 P P 00 55 03.5 +0.4
comp=Z,9.9nm,0.6s,baz=262,slow=10,SNR=39
KSRS LR LR 01 04 14.7
comp=Z,40nm,18.6s,MS2.8,baz=270,slow=40
CN2 Changchun 21.22 48 ⇑P P 00 55 07.8 +1.5
CN2 esP sP 00 55 14.0 +1.5
CN2 eS S 00 58 58.3 -3.4
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.5
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,200nm,17.0s,MS3.7
CN2 LR LR
comp=E,200nm,17.0s,MS3.7
CN2 LR LR
comp=Z,200nm,19.0s,MS3.5
MK31 Makanchi Array 22.51 319 eP P 00 55 19.6 -0.4
MKAR Makanchi Array 22.51 319 P P 00 55 20.4 +0.4
comp=Z,6.4nm,0.8s,mb4.1,baz=125,slow=11,SNR=56
TKM2 Tokmak 2 25.02 305 eP P 00 55 43.6 -0.8
comp=Z,6.2nm,1.3s,mb4.0
UCH Uchtor 25.59 303 eP P 00 55 50.6 +1.0
comp=Z,5.8nm,1.1s,mb4.0
AAK Ala-Archa 25.71 304 P P 00 55 52.4 +1.7
comp=Z,1.6nm,0.6s,mb3.7,baz=114,slow=3.0,SNR=7.2
AAK LR LR 01 06 47.3
comp=Z,160nm,18.5s,MS3.6,baz=260,slow=38
AAK Ala-Archa 25.71 304 eP P 00 55 49.7 -1.1
comp=Z,2.0nm,0.4s,mb4.0
AAK LR LR 01 06 47.3
AML Almayashu 26.15 303 eP P 00 55 55.3 +0.6
comp=Z,3.0nm,0.9s,mb3.8
ZAA0 Zalesovo Array 26.31 335 eP P 00 55 54.3 -1.7
ZAA0 PcP PcP 00 59 19.8 -2.0
ZALV Zalesovo Beam 26.31 335 P P 00 55 56.0 +0.1
comp=Z,6.2nm,0.8s,mb4.2,baz=138,slow=9.8,SNR=24
KURK Kurchatov 26.79 323 P P 00 55 58.7 -1.7
comp=Z,11nm,0.8s,mb4.4,baz=127,slow=9.4,SNR=38
KURK LR LR 01 06 23.9
comp=Z,62nm,18.8s,MS3.2,baz=130,slow=36
KURK Kurchatov 26.79 323 eP P 00 55 59.8 -0.6
comp=Z,8.3nm,0.8s,mb4.3
KURK LR LR 01 06 23.9
KBL Kabul 29.10 286 P P 00 56 20.8 -0.4
BVAR Borovoye Array 32.33 322 P P 00 56 49.8 +0.3
comp=Z,1.7nm,0.6s,mb4.0,baz=118,slow=10,SNR=16
BVAR LR LR 01 10 07.6
comp=Z,77nm,18.5s,MS3.4,baz=138,slow=37
BRVK Borovoye 32.40 322 eP P 00 56 49.9 -0.2
comp=Z,1.8nm,0.6s,mb4.1
ABKAR Akbulak array 37.19 312 eP P 00 57 31.1 -0.4
comp=Z,1.0nm,0.8s,mb3.7
ARU Arti 39.97 322 eP P 00 57 53.8 -0.9
comp=Z,6.0nm,0.8s,mb4.4
TIXI Tiksi 42.58 12 eP P 00 58 14.7 -1.3
comp=Z,2.2nm,0.6s,mb4.1
PETK Petropavlovsk- 44.30 44 P P 00 58 30.9 +0.8
comp=Z,1.5nm,0.9s,mb3.7,baz=217,slow=8.7,SNR=3.6
ARCES ARCESS Array B 56.85 336 P P 01 00 04.3 -0.3
comp=Z,1.5nm,0.8s,mb4.1,baz=81,slow=8.3,SNR=8.1
FINES FINESS Array B 57.12 326 P P 01 00 05.9 -0.7
comp=Z,0.6nm,0.5s,mb3.9,baz=111,slow=7.5,SNR=6.1
TIRR Tirgusor 58.81 306 P P 01 00 16.5 -2.3
WRA Warramunga Arr 58.92 146 P P 01 00 21.1 +1.3
comp=Z,2.3nm,0.9s,mb4.2,baz=339,slow=7.6,SNR=5.7
STKA Stephens Creek 72.45 147 P P 01 01 49.4 +2.5
comp=Z,2.7nm,0.8s,mb4.2,baz=310,slow=20,SNR=3.9
YKA Yellowknife Ar 81.57 17 P P 01 02 37.3 -0.6
comp=Z,0.7nm,0.9s,mb3.6,baz=324,slow=5.5,SNR=5.1
YKA Yellowknife Ar 81.57 17 P P 01 02 37.3 -0.6

IDC 15 00:55:38.5±2.2, 4.87S×133.54E, h0km, mb3.8/2, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML3.7/3, Error ellipse: s-maj=89.3km s-min=26.8km az=82.0, Irian Jaya region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
WRA Warramunga Arr 15.00 177 Pn Pn 00 59 13.0 +1.0
0.2nm,0.3s,baz=357,slow=11,SNR=6.7
WRA Sn Sn 01 01 50.0 -9.1
0.2nm,0.3s,baz=360,slow=22,SNR=4.0
FITZ Fitzroy Crossi 15.25 210 Pn Pn 00 59 13.8 -1.5
0.6nm,0.3s,baz=43,slow=10,SNR=17
FITZ Sn Sn 01 01 54.4 -11
0.3nm,0.3s,baz=191,slow=12,SNR=6.0
ASAR Alice Springs 18.69 179 P Pn 00 59 58.6 -0.1
0.2nm,0.3s,baz=4.3,slow=9.7,SNR=11
MKAR Makanchi Array 68.45 325 P P 01 06 42.7 +0.3
0.8nm,0.6s,baz=119,slow=7.6,SNR=11
KURK Kurchatov 72.60 327 P P 01 07 07.5 -0.1
0.7nm,0.9s,baz=122,slow=5.6,SNR=3.6

ISCJB 15 01:05:34.1±0.6, 37.80N±0.03×21.29E±0.04, h10km, Error ellipse: s-maj=4.5km s-min=3.3km az=137.0
CSEM 15 01:05:34.2±0.2, 37.82N×21.28E, h10km, MD3.2, Error ellipse: s-maj=4.6km s-min=3.7km az=49.0
THE 15 01:05:34.2, 37.79N×21.29E, h0km±4km, ML2.8/1, Error ellipse: s-maj=4.1km s-min=0.9km az=208.0
NEIC 15 01:05:34.8, 37.84N×21.28E, h5km, MD3.2(ATH), After ATH.
ATH 15 01:05:34.8, 37.84N×21.28E, h5km±2km, MD3.2/11
ISC 15 01:05:34.9±0.5, 37.81N±0.03×21.28E±0.03, h8km±6km, n35, σ0.83/60, Southern Greece

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
RLS Riolos of Patr 0.28 31 ePG Pg 01 05 39.5 -1.0
RLS eSG Sg 01 05 44.0 -0.3
RLS Riolos of Patr 0.28 31 ePg Pg 01 05 39.5 -1.0
RLS eSg Sg 01 05 44.0 -0.3
KFL Anninata 0.49 307 P Pg 01 05 43.9 -0.5
KFL S Sg 01 05 52.5 +1.7
UPR University Cam 0.62 40 ePB Pg 01 05 46.6 -0.1
UPR eSB Sg 01 05 55.4 +0.6
UPR University Cam 0.62 40 P Pg 01 05 46.1 -0.6
UPR S Sg 01 05 56.0 +1.2
UPR University Cam 0.62 40 P Pg 01 05 46.1 -0.6
UPR University Cam 0.62 40 ePb Pg 01 05 46.6 -0.1
UPR eSb Sg 01 05 55.4 +0.6
UPR S Sg 01 05 56.0 +1.2
VLS Valsamata 0.66 304 ePG Pg 01 05 46.8 -0.7
VLS eSB Sb 01 05 57.4 -0.4
VLS Valsamata 0.66 304 P Pg 01 05 46.4 -1.1
VLS S Sg 01 05 57.0 +0.9
VLS Valsamata 0.66 304 P Pg 01 05 46.4 -1.1
VLS Valsamata 0.66 304 ePg Pg 01 05 46.8 -0.7
VLS S Sg 01 05 57.0 +0.9
VLS eSb Sb 01 05 57.4 -0.4
EFP Efpalio 0.79 39 ePG Pg 01 05 49.3 -0.7
EFP eSB Sg 01 06 00.6 +0.4
EFP Efpalio 0.79 39 P Pg 01 05 49.0 -1.0
EFP S Sg 01 06 01.9 +1.7
EFP Efpalio 0.79 39 P Pg 01 05 49.0 -1.0
EFP Efpalio 0.79 39 ePg Pg 01 05 49.3 -0.7
EFP eSb Sg 01 06 00.6 +0.4
EFP S Sg 01 06 01.9 +1.7
ITM Ithomi 0.81 141 ePG Pg 01 05 50.7 +0.2
ITM eSB Sb 01 06 03.4 +1.1
ITM Ithomi 0.81 141 P Pg 01 05 50.3 -0.2
ITM S Sg 01 06 00.8 -0.3
ITM Ithomi 0.81 141 P Pg 01 05 50.3 -0.2
ITM Ithomi 0.81 141 ePg Pg 01 05 50.7 +0.2
ITM S Sg 01 06 00.8 -0.3
ITM eSb Sb 01 06 03.4 +1.1
GUR Goura 0.85 81 ePB Pg 01 05 49.5 -1.6
GUR eSB Sb 01 06 03.5 +0.2
GUR Goura 0.85 81 P Pg 01 05 49.2 -1.9
GUR S Sg 01 06 02.4 +0.2
GUR Goura 0.85 81 P Pg 01 05 49.2 -1.9
GUR Goura 0.85 81 ePb Pg 01 05 49.5 -1.6
GUR S Sg 01 06 02.4 +0.2
GUR eSb Sb 01 06 03.5 +0.2
EVR Evrytania 1.18 20 ePB Pb 01 05 57.2 -0.2
EVR Evrytania 1.18 20 ePb Pb 01 05 57.2 -0.2
LTK Loutraki 1.35 81 ePB Pb 01 06 00.5 +0.2
LTK Loutraki 1.35 81 P Pn 01 05 59.0 -0.9
LTK Loutraki 1.35 81 P Pn 01 05 59.0 -0.9
LTK Loutraki 1.35 81 ePb Pb 01 06 00.5 +0.2
LKR Lokris 1.59 58 P Pn 01 06 03.4 +0.2
LKR Lokris 1.59 58 P Pn 01 06 03.4 +0.2
VLI Veliai 1.71 129 ePN Pg 01 06 08.1 +0.4
VLI eSN Sg 01 06 31.2 +1.3
THL Klokotos Trika 1.84 18 ePN Pg 01 06 09.6 -0.5
THL eSN Sg 01 06 34.9 +0.9
KYTH Kithira 2.08 137 ePG Pg 01 06 13.8 -0.8
KYTH Kithira 2.08 137 ePg Pg 01 06 13.8 -0.8

IDC 15 01:09:47.2±1.4, 32.13N×105.46E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, Error ellipse: s-maj=85.4km s-min=26.4km az=57.0, Sichuan

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SONM Songino Array 15.70 2 Pn Pn 01 13 33.1 +3.5
0.0nm,0.3s,baz=228,slow=30,SNR=2.4
MKAR Makanchi Array 23.00 316 P P 01 14 53.8 +0.3
0.6nm,0.8s,baz=115,slow=11,SNR=5.9
ZALV Zalesovo Beam 26.33 332 P P 01 15 24.3 -0.2
0.7nm,0.4s,baz=138,slow=9.7,SNR=5.4
ARCES ARCESS Array B 56.80 336 P P 01 19 32.6 -0.1
1.3nm,0.8s,baz=76,slow=7.7,SNR=3.9
ASAR Alice Springs 61.79 150 P P 01 20 07.9 +0.1
0.3nm,0.7s,baz=333,slow=6.1,SNR=4.2
YKA Yellowknife Ar 80.37 18 P P 01 22 00.3 +0.3
0.2nm,0.6s,baz=327,slow=4.8,SNR=2.1

NEIC 15 01:16:43.9, 37.61N×15.92W, h0km, MN3.1(MDD), After MDD.
MDD 15 01:16:45.0±2.2, 37.58N×15.81W, h0km, mb4.4/5, Error ellipse: s-maj=19.8km s-min=17.3km az=42.0, PRIMO
INMG 15 01:16:47.3±1.2, 37.46N×16.16W, h10km, ML2.6, Error ellipse: s-maj=6.7km s-min=5.9km az=77.0
CSEM 15 01:16:50.2±0.3, 37.76N×15.35W, h10km, ML3.4/16, Error ellipse: s-maj=6.5km s-min=5.7km az=49.0
ISC 15 01:16:50.3±0.9, 37.76N±0.05×15.35W±0.06, h10km, n118, σ0.75/209, Azores-Cape St. Vincent Ridge

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PMPS Porto Santo 4.76 190 eSn Sx 01 18 29.8
PMPS A 01 18 37.0
11nm,0.6s
PMPS Porto Santo 4.76 190 S Sx 01 18 29.8
5.7nm,0.6s
PMPS Porto Santo 4.76 190 S Sx 01 18 29.8
5.7nm,0.6s
PMAFR Mafra 4.91 74 ePn Pn 01 18 05.2 +1.0
PMAFR eSn Sn 01 19 03.3 +2.2
PMAFR A 01 19 08.7
18nm,0.5s
PMAFR Mafra 4.91 74 ePn Pn 01 18 05.2 +1.0
PMAFR eSn Sn 01 19 03.3 +2.2
18nm,0.5s
PMAR Madeira 5.19 195 eSn Sx 01 18 38.6
PMAR A 01 18 45.3
17nm,0.6s
PMAR Madeira 5.19 195 S Sx 01 18 38.6
8.7nm,0.6s
PMAR Madeira 5.19 195 S Sx 01 18 38.6
8.7nm,0.6s
PFVI Vila Bisbo 5.23 95 ePn Pn 01 18 07.6 -0.9
PFVI eSn Sn 01 19 08.1 -0.7
PFVI A 01 19 21.5
5.2nm,0.9s
PFVI Vila Bisbo 5.23 95 ePn Pn 01 18 07.6 -0.9
PFVI eSn Sn 01 19 08.1 -0.7
5.2nm,0.9s
PTEO Sao Teotonio 5.26 90 ePn Pn 01 18 08.3 -0.7
PTEO eSn Sn 01 19 08.9 -0.7
PTEO A 01 19 13.4
6.1nm,0.3s
PTEO Sao Teotonio 5.26 90 P Pn 01 18 08.3 -0.7
PTEO S Sn 01 19 08.9 -0.7
3.1nm,0.3s
PTEO Sao Teotonio 5.26 90 P Pn 01 18 08.3 -0.7
PTEO S Sn 01 19 08.9 -0.7
3.1nm,0.3s
PTEO Sao Teotonio 5.26 90 ePn Pn 01 18 08.3 -0.7
PTEO eSn Sn 01 19 08.9 -0.7
6.1nm,0.3s
FUL Funchal 5.27 194 eSn Sx 01 18 39.0
FUL Funchal 5.27 194 S Sx 01 18 39.0
FUL Funchal 5.27 194 S Sx 01 18 39.0
MORF Marmelete 5.34 93 ePn Pn 01 18 09.4 -0.7
MORF eSn Sn 01 19 11.9 +0.2
MORF A 01 19 18.8
5.1nm,0.1s
MORF Marmelete 5.34 93 P Pn 01 18 09.4 -0.7
MORF S Sn 01 19 11.9 +0.2
5.1nm,0.1s
MORF Marmelete 5.34 93 P Pn 01 18 09.4 -0.7
MORF S Sn 01 19 11.9 +0.2
5.1nm,0.1s
MORF Marmelete 5.34 93 ePn Pn 01 18 09.4 -0.7
MORF eSn Sn 01 19 11.9 +0.2
5.1nm,0.1s
MOE Montemor 5.57 80 ePn Pn 01 18 13.6 +0.4
MOE eSn Sn 01 19 18.2 +1.0
MOE Montemor 5.57 80 ePn Pn 01 18 13.6 +0.4
MOE eSn Sn 01 19 18.2 +1.0
PTOM Tomar 5.74 69 ePn Pn 01 18 16.6 +1.1
PTOM eSn Sn 01 19 23.1 +1.8
PTOM A 01 19 27.1
6.4nm,0.3s
PTOM Tomar 5.74 69 P Pn 01 18 16.6 +1.1
PTOM S Sn 01 19 23.1 +1.8
3.2nm,0.3s
PTOM Tomar 5.74 69 P Pn 01 18 16.6 +1.1
PTOM S Sn 01 19 23.1 +1.8
3.2nm,0.3s
PTOM Tomar 5.74 69 ePn Pn 01 18 16.6 +1.1
PTOM eSn Sn 01 19 23.1 +1.8
6.4nm,0.3s
EVO Evora 5.83 80 ePn Pn 01 18 17.8 +1.0
EVO eSn Sn 01 19 24.1 +0.4
EVO A 01 19 28.1
5.0nm,0.1s
EVO Evora 5.83 80 P Pn 01 18 17.8 +1.0
EVO S Sn 01 19 24.1 +0.4
5.0nm,0.1s
EVO Evora 5.83 80 P Pn 01 18 17.8 +1.0
EVO S Sn 01 19 24.1 +0.4
5.0nm,0.1s
EVO Evora 5.83 80 ePn Pn 01 18 17.8 +1.0
EVO eSn Sn 01 19 24.1 +0.4
5.0nm,0.1s
PBDV Barranco-do-Ve 5.92 93 ePn Pn 01 18 17.2 -0.8
PBDV eSn Sn 01 19 25.7 -0.2
PBDV A 01 19 32.8
2.2nm,0.5s
PBDV Barranco-do-Ve 5.92 93 P Pn 01 18 17.2 -0.8
PBDV S Sn 01 19 25.7 -0.2
2.2nm,0.5s
PBDV Barranco-do-Ve 5.92 93 P Pn 01 18 17.2 -0.8
PBDV S Sn 01 19 25.7 -0.2
2.2nm,0.5s
PBDV Barranco-do-Ve 5.92 93 ePn Pn 01 18 17.2 -0.8
PBDV eSn Sn 01 19 25.7 -0.2
2.2nm,0.5s
PBEJ Beja 5.92 85 ePn Pn 01 18 18.0 -0.1
PBEJ eSn Sn 01 19 25.6 -0.4
PBEJ A 01 19 31.9
2.3nm,0.2s
PBEJ Beja 5.92 85 P Pn 01 18 18.0 -0.1
PBEJ S Sn 01 19 25.6 -0.4
1.2nm,0.2s
PBEJ Beja 5.92 85 P Pn 01 18 18.0 -0.1
PBEJ S Sn 01 19 25.6 -0.4
1.2nm,0.2s
PBEJ Beja 5.92 85 ePn Pn 01 18 18.0 -0.1
PBEJ eSn Sn 01 19 25.6 -0.4
2.3nm,0.2s
PVAQ Vaqueiros 6.07 91 ePn Pn 01 18 19.5 -0.6
PVAQ eSn Sn 01 19 29.1 -0.5
PVAQ A 01 19 32.5
3.9nm,0.3s
PVAQ Vaqueiros 6.07 91 P Pn 01 18 19.5 -0.6
PVAQ S Sn 01 19 29.1 -0.5
3.9nm,0.3s
PVAQ Vaqueiros 6.07 91 P Pn 01 18 19.5 -0.6
PVAQ S Sn 01 19 29.1 -0.5
3.9nm,0.3s
PVAQ Vaqueiros 6.07 91 ePn Pn 01 18 19.5 -0.6
PVAQ eSn Sn 01 19 29.1 -0.5
3.9nm,0.3s
PESTR Estremoz 6.20 77 ePn Pn 01 18 22.5 +0.6
PESTR eSn Sn 01 19 33.3 +0.5
PESTR A 01 19 38.1
2.9nm,0.4s
PESTR Estremoz 6.20 77 P Pn 01 18 22.5 +0.6
PESTR S Sn 01 19 33.3 +0.5
2.9nm,0.4s
PESTR Estremoz 6.20 77 P Pn 01 18 22.5 +0.6
PESTR S Sn 01 19 33.3 +0.5
2.9nm,0.4s
PESTR Estremoz 6.20 77 ePn Pn 01 18 22.5 +0.6
PESTR eSn Sn 01 19 33.3 +0.5
2.9nm,0.4s
EGRO El Granado 6.25 90 P Pn 01 18 22.0 -0.5
EGRO S Sn 01 19 33.5 -0.4
EGRO El Granado 6.25 90 P Pn 01 18 22.0 -0.5
1.1nm,0.1s,SNR=7.9
EGRO S Sn 01 19 33.5 -0.4
1.9nm,0.1s,SNR=7.9
EGRO El Granado 6.25 90 P Pn 01 18 22.0 -0.5
1.1nm,0.1s,SNR=7.9
EGRO S Sn 01 19 33.5 -0.4
1.9nm,0.1s,SNR=7.9
EGRO El Granado 6.25 90 P Pn 01 18 22.0 -0.5
1.1nm,0.1s,SNR=7.9
EGRO S Sn 01 19 33.5 -0.4
1.9nm,0.1s,SNR=7.9
PMRV Marv??o 6.45 73 ePn Pn 01 18 25.4 +0.1
PMRV eSn Sn 01 19 38.8 -0.1
PMRV A 01 19 43.1
3.2nm,0.4s
PMRV Marv??o 6.45 73 P Pn 01 18 25.4 +0.1
PMRV S Sn 01 19 38.8 -0.1
3.2nm,0.4s
PMRV Marv??o 6.45 73 P Pn 01 18 25.4 +0.1
PMRV S Sn 01 19 38.8 -0.1
3.2nm,0.4s
PMRV Marv??o 6.45 73 ePn Pn 01 18 25.4 +0.1
PMRV eSn Sn 01 19 38.8 -0.1
3.2nm,0.4s
PCBR Castelo Branco 6.49 69 ePn Pn 01 18 25.9 +0.1
PCBR eSn Sn 01 19 39.9 0.0
PCBR A 01 19 44.5
1.6nm,0.3s
PCBR Castelo Branco 6.49 69 P Pn 01 18 25.9 +0.1
PCBR S Sn 01 19 39.9 0.0
0.8nm,0.3s
PCBR Castelo Branco 6.49 69 P Pn 01 18 25.9 +0.1
PCBR S Sn 01 19 39.9 0.0
0.8nm,0.3s
PCBR Castelo Branco 6.49 69 ePn Pn 01 18 25.9 +0.1
PCBR eSn Sn 01 19 39.9 0.0
1.6nm,0.3s
PVIS Viseu 6.49 61 ePn Pn 01 18 26.0 +0.1
PVIS eSn Sn 01 19 40.1 +0.1
PVIS A 01 19 44.8
3.3nm,0.6s
PVIS Viseu 6.49 61 P Pn 01 18 26.0 +0.1
PVIS S Sn 01 19 40.1 +0.1
1.7nm,0.6s
PVIS Viseu 6.49 61 P Pn 01 18 26.0 +0.1
PVIS S Sn 01 19 40.1 +0.1
1.7nm,0.6s
PVIS Viseu 6.49 61 ePn Pn 01 18 26.0 +0.1
PVIS eSn Sn 01 19 40.1 +0.1
3.3nm,0.6s
PBAR Barrancos 6.58 84 ePn Pn 01 18 27.8 +0.7
PBAR eSn Sn 01 19 41.7 -0.4
PBAR A 01 19 49.6
2.0nm,0.2s
PBAR Barrancos 6.58 84 P Pn 01 18 27.8 +0.7
PBAR S Sn 01 19 41.7 -0.4
2.0nm,0.2s
PBAR Barrancos 6.58 84 P Pn 01 18 27.8 +0.7
PBAR S Sn 01 19 41.7 -0.4
2.0nm,0.2s
PBAR Barrancos 6.58 84 ePn Pn 01 18 27.8 +0.7
PBAR eSn Sn 01 19 41.7 -0.4
2.0nm,0.2s
MTE Manteigas 6.62 64 eSn Sn 01 19 43.9 +0.9
MTE A 01 19 49.8
4.3nm,0.7s
MTE Manteigas 6.62 64 eSn Sn 01 19 43.9 +0.9
4.3nm,0.7s
EBAD Badajoz 6.63 79 P Pn 01 18 28.2 +0.4
EBAD S Sn 01 19 43.8 +0.3
EBAD Badajoz 6.63 79 P Pn 01 18 28.2 +0.4
0.7nm,0.1s,SNR=8.2
EBAD S Sn 01 19 43.8 +0.3
5.1nm,0.3s,SNR=7.9
EBAD Badajoz 6.63 79 P Pn 01 18 28.2 +0.4
0.7nm,0.1s,SNR=8.2
EBAD S Sn 01 19 43.8 +0.3
5.1nm,0.3s,SNR=7.9
EBAD Badajoz 6.63 79 P Pn 01 18 28.2 +0.4
0.7nm,0.1s,SNR=8.2
EBAD S Sn 01 19 43.8 +0.3
5.1nm,0.3s,SNR=7.9
PVRL Vila Real 6.86 57 ePn Pn 01 18 31.7 +0.7
PVRL eSn Sn 01 19 49.6 +0.5
PVRL Vila Real 6.86 57 P Pn 01 18 31.7 +0.7
PVRL S Sn 01 19 49.6 +0.5
PVRL Vila Real 6.86 57 P Pn 01 18 31.7 +0.7
PVRL S Sn 01 19 49.6 +0.5
PVRL Vila Real 6.86 57 ePn Pn 01 18 31.7 +0.7
PVRL eSn Sn 01 19 49.6 +0.5
EMIN Mina Concepcio 6.87 87 P Pn 01 18 31.1 0.0
EMIN S Sn 01 19 49.0 -0.4
EMIN Mina Concepcio 6.87 87 P Pn 01 18 31.1 0.0
0.4nm,0.1s,SNR=7.9
EMIN S Sn 01 19 49.0 -0.4
1.1nm,0.2s,SNR=7.9
EMIN Mina Concepcio 6.87 87 P Pn 01 18 31.1 0.0
0.4nm,0.1s,SNR=7.9
EMIN S Sn 01 19 49.0 -0.4
1.1nm,0.2s,SNR=7.9
EMIN Mina Concepcio 6.87 87 P Pn 01 18 31.1 0.0
0.4nm,0.1s,SNR=7.9
EMIN S Sn 01 19 49.0 -0.4
1.1nm,0.2s,SNR=7.9
PCAB Cabril 6.88 53 ePn Pn 01 18 31.9 +0.7
PCAB eSn Sn 01 19 50.2 +0.6
PCAB Cabril 6.88 53 P Pn 01 18 31.9 +0.7
PCAB S Sn 01 19 50.2 +0.6
PCAB Cabril 6.88 53 P Pn 01 18 31.9 +0.7
PCAB S Sn 01 19 50.2 +0.6
PCAB Cabril 6.88 53 ePn Pn 01 18 31.9 +0.7
PCAB eSn Sn 01 19 50.2 +0.6
ELOB Lobios 6.95 52 P Pn 01 18 31.7 -0.4
ELOB S Sn 01 19 50.7 -0.5
ELOB Lobios 6.95 52 P Pn 01 18 31.7 -0.4
1.4nm,0.1s,SNR=7.9
ELOB S Sn 01 19 50.7 -0.5
1.5nm,0.2s,SNR=7.9
ELOB Lobios 6.95 52 P Pn 01 18 31.7 -0.4
1.4nm,0.1s,SNR=7.9
ELOB S Sn 01 19 50.7 -0.5
1.5nm,0.2s,SNR=7.9
ELOB Lobios 6.95 52 P Pn 01 18 31.7 -0.4
1.4nm,0.1s,SNR=7.9
ELOB S Sn 01 19 50.7 -0.5
1.5nm,0.2s,SNR=7.9
EMAZ Mazaricos 7.11 41 P Pn 01 18 34.1 -0.2
EMAZ S Sn 01 19 53.3 -1.8
EMAZ Mazaricos 7.11 41 P Pn 01 18 34.1 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	01 19 53.3	-1.8
	1.8nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.11	41	P	Pn	01 18 34.1	-0.2
	1.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	01 19 53.3	-1.8
	1.8nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.11	41	P	Pn	01 18 34.1	-0.2
	1.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	01 19 53.3	-1.7
	1.8nm,0.2s,SNR=7.9						
MVO	Moncorvo	7.28	60	ePn	Pn	01 18 36.9	+0.3
MVO				eSn	Sn	01 19 57.9	-1.4
MVO				A		01 20 10.9	
	2.4nm,0.5s						
MVO	Moncorvo	7.28	60	ePn	Pn	01 18 36.9	+0.3
MVO				eSn	Sn	01 19 57.9	-1.4
	2.4nm,0.5s						
STS	Santiago	7.29	43	P	Pn	01 18 36.1	-0.7
STS				S	Sn	01 19 59.5	-0.1
STS	Santiago	7.29	43	P	Pn	01 18 36.1	-0.7
	3.4nm,0.1s,SNR=7.9						
STS				S	Sn	01 19 59.5	-0.1
	3.3nm,0.1s,SNR=7.9						
STS	Santiago	7.29	43	P	Pn	01 18 36.1	-0.7
	3.4nm,0.1s,SNR=7.9						
STS				S	Sn	01 19 59.5	-0.1
	3.3nm,0.1s,SNR=7.9						
STS	Santiago	7.29	43	P	Pn	01 18 36.1	-0.7
	3.4nm,0.1s,SNR=7.9						
STS				S	Sn	01 19 59.5	-0.1
	3.3nm,0.1s,SNR=7.9						
ESPR	Espera	7.62	94	S	Sn	01 20 07.6	-0.1
	1.6nm,0.3s,SNR=7.9						
ESPR	Espera	7.62	94	S	Sn	01 20 07.6	-0.1
	1.6nm,0.3s,SNR=7.9						
ESPR	Espera	7.62	94	S	Sn	01 20 07.6	-0.1
	1.6nm,0.3s,SNR=7.9						
PBRG	Braganca	7.76	56	ePn	Pn	01 18 44.2	+1.0
PBRG				A		01 20 14.5	
	1.6nm,0.4s						
PBRG	Braganca	7.76	56	P	Pn	01 18 44.2	+1.0
PBRG	Braganca	7.76	56	P	Pn	01 18 44.2	+1.0
PBRG	Braganca	7.76	56	ePn	Pn	01 18 44.2	+1.0
	1.6nm,0.4s						
ECAL	Calabor	7.83	55	P	Pn	01 18 44.1	-0.1
ECAL				S	Sn	01 20 13.2	+0.3
ECAL	Calabor	7.83	55	P	Pn	01 18 44.1	-0.1
	0.9nm,0.1s,SNR=7.9						
ECAL				S	Sn	01 20 13.2	+0.3
	1.1nm,0.2s,SNR=7.9						
ECAL	Calabor	7.83	55	P	Pn	01 18 44.1	-0.1
	0.9nm,0.1s,SNR=7.9						
ECAL				S	Sn	01 20 13.2	+0.3
	1.1nm,0.2s,SNR=7.9						
ECAL	Calabor	7.83	55	P	Pn	01 18 44.1	-0.1
	0.9nm,0.1s,SNR=7.9						
ECAL				S	Sn	01 20 13.1	+0.3
EPON	Pontenova	8.36	46	P	Pn	01 18 50.4	-1.0
EPON				S	Sn	01 20 24.0	-1.8
EPON	Pontenova	8.36	46	P	Pn	01 18 50.4	-1.0
	0.6nm,0.2s,SNR=7.9						
EPON				S	Sn	01 20 24.0	-1.8
	0.5nm,0.1s,SNR=7.9						
EPON	Pontenova	8.36	46	P	Pn	01 18 50.4	-1.0
	0.6nm,0.2s,SNR=7.9						
EPON				S	Sn	01 20 24.0	-1.8
	0.5nm,0.1s,SNR=7.9						
EPON	Pontenova	8.36	46	P	Pn	01 18 50.4	-1.0
	0.6nm,0.2s,SNR=7.9						
EPON				S	Sn	01 20 24.0	-1.8
	0.5nm,0.1s,SNR=7.9						
EADA	Adamuz	8.52	84	P	Pn	01 18 53.8	+0.1
EADA				S	Sn	01 20 28.9	-0.9
EADA	Adamuz	8.52	84	P	Pn	01 18 53.8	+0.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	01 20 28.9	-0.9
	1.7nm,0.1s,SNR=7.9						
EADA	Adamuz	8.52	84	P	Pn	01 18 53.8	+0.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	01 20 28.9	-0.9
	1.7nm,0.1s,SNR=7.9						
EADA	Adamuz	8.52	84	P	Pn	01 18 53.8	+0.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	01 20 28.9	-0.9
	1.7nm,0.1s,SNR=7.9						

MAN 15 01:27:11, 16°.56N×122°.53E, h18km, mb4.5, ML3.4, MS3.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.51	349	eP	Pg	01 27 21.7	+0.4
CAUP	Cauayan	0.78	300	eP	Pb	01 27 25.7	-0.3
CAUP				eS	Sb	01 27 34.1	-2.0
BALP	Baler	1.22	228	eP	Pn	01 27 33.0	-0.2
BALP				eS	Sb	01 27 46.8	-2.2
APYP	Conner	1.79	317	eP	Pn	01 27 41.6	+0.7
APYP				eS	Sn	01 28 04.5	+1.4
GQP	Guinayangan	2.64	182⇓	eP	Pn	01 27 54.9	+2.1
GQP				eS	Sn	01 28 25.5	+1.2

*ISCJB **15** 01:28:26.6±0.4, 32°.68N±0°.04×105°.30E±0°.04, h10km, mb3.9/17, Error ellipse: s-maj=5.3km s-min=5.0km az=33.4*
*BJI **15** 01:28:27.9, 32°.59N×105°.33E, h18km, mB4.5/3, mb4.2/4, ML3.9/18, Ms4.0/5, Ms7 3.7/6*
*IDC **15** 01:28:27.2±1.0, 32°.69N×105°.16E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.8/27, mbtmp3.8/14, ML3.6/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/40, Error ellipse: s-maj=35.9km s-min=19.5km az=43.0*
*NEIC **15** 01:28:28.6±0.5, 32°.75N×105°.32E, h10km, mb4.0/4, Error ellipse: s-maj=16.5km s-min=8.1km az=43.0*
ISC 15 01:28:28.5±0.4, **32°.63N**±0°.03×**105°.26E**±0°.04, **h10**km, **n37**, σ**1.14**/47, **mb3.9**/17, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.14	217	Pg	Pn	01 29 04.3	+0.1
CD2				Sg	Sn	01 29 28.3	-2.5
XAN	Xi'an	3.38	64	Pn	Pn	01 29 20.6	-0.7
XAN				Pg	Pg	01 29 31.5	-1.7
XAN				Sg	Sg	01 30 16.4	-0.5
XAN				smax			
	comp=N,440nm,0.6s						
XAN				smax			
	comp=E,330nm,0.8s						
LZH	Lanzhou	3.64	342	Pn	Pn	01 29 27.6	+2.6
LZH				Pg	Pg	01 29 37.5	-0.8
LZH				Sn	Sn	01 30 11.4	+3.4
LZH				Sg	Sg	01 30 25.3	-0.3
LZH				smax			
	comp=N,600nm,0.5s						
LZH				smax			
	comp=E,1µm,0.6s						
LZH				LR	LR		
	comp=E,1µm,5.5s						
LZH				LR	LR		
	comp=Z,2µm,6.5s						
ENH	Enshi	4.31	122	ePn	Pn	01 29 34.2	+0.1
ENH				eS	Sb	01 30 38.7	+2.2
GYA	Guiyang	6.27	168	Pn	Pn	01 30 02.8	+1.7
GYA				Sn	Sn	01 31 08.8	-4.0
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,120nm,0.7s						
KMI	Kunming	7.80	197	Pg	Sn	01 31 45.5	-4.9
KMI				Sg	Sx	01 32 31.5	
KMI				smax			
	comp=N,36nm,1.2s						
KMI				smax			
	comp=E,27nm,1.0s						
KMI				LR	LR		
	comp=N,200nm,3.8s						
KMI				LR	LR		
	comp=E,460nm,6.0s						
KMI				LR	LR		
	comp=Z,190nm,7.1s						
WHN	Wuhan	8.03	103	P	Pn	01 30 26.6	+1.3
WHN				S	Sn	01 31 52.0	-4.1
WHN				LR	LR		
	comp=Z,910nm,5.3s						
GTA	Gaotai	8.08	328	P	Pn	01 30 26.5	+0.7
GTA				pP		01 30 29.9	
GTA				sP		01 30 32.5	
GTA				S	Sn	01 32 00.4	+3.2
GTA				sS		01 32 06.0	
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,4.8s						
GTA				LR	LR		
	comp=N,330nm,10.7s						
GTA				LR	LR		
	comp=E,180nm,9.8s						
GTA				LR	LR		
	comp=Z,580nm,11.0s						
BTO	Baotou	8.83	24	eP	Pn	01 30 45.0	+8.8
BTO				S	Sn	01 32 28.5	+13
BTO				LR	LR		
	comp=N,120nm,4.9s						
BTO				LR	LR		
	comp=E,120nm,12.5s						
SONM	Songino Array	15.21	3	Pn	Pn	01 32 01.9	-1.5
	comp=E,0.1nm,0.3s,baz=178,slow=12,SNR=7.2						
KSRS	Korea Array	19.16	69	P	Pn	01 32 52.8	-0.2
	comp=E,0.4nm,0.3s,baz=253,slow=9.5,SNR=6.7						
KSRS				LR	LR	01 39 51.5	
	comp=E,62nm,19.8s,baz=347,slow=36						
MK31	Makanchi Array	22.53	316	eP	P	01 33 27.7	-0.7
MKAR	Makanchi Array	22.53	316	P	P	01 33 28.4	+0.1
	comp=E,3.6nm,0.8s,mb3.9,baz=116,slow=13,SNR=18						
KSH	Kashi	24.58	295	P	P	01 33 51.5	+2.9
KSH				pmax	pmax		
	comp=Z,70nm,4.7s						
TKM2	Tokmak 2	25.48	302	eP	P	01 33 56.8	0.0
	comp=Z,1.5nm,0.5s,mb3.8						
ZALV	Zalesovo Beam	25.81	332	P	P	01 33 59.1	-0.5
	comp=Z,0.9nm,0.4s,mb3.6,baz=129,slow=9.9,SNR=5.0						
UCH	Uchtor	26.11	300	eP	P	01 34 03.9	+1.4
	comp=Z,5.1nm,1.1s,mb4.0						
KURK	Kurchatov	26.66	321	P	P	01 34 07.5	+0.2
	comp=Z,1.2nm,0.6s,mb3.6,baz=128,slow=9.9,SNR=12						
KURK	Kurchatov	26.66	321	eP	P	01 34 07.5	+0.2
	comp=Z,2.0nm,0.8s,mb3.7						
AML	Almayashu	26.69	300	eP	P	01 34 08.7	+1.0
	comp=Z,2.1nm,0.5s,mb3.9						
BVAR	Borovoye Array	32.24	320	P	P	01 34 56.6	-0.2
	comp=Z,0.7nm,0.6s,mb3.6,baz=116,slow=8.7,SNR=5.1						
KAPI	Kappang	39.89	157	LR	LR	01 50 39.8	
	comp=Z,70nm,21.8s,baz=130,slow=33						
ARCES	ARCESS Array B	56.28	335	P	P	01 38 09.3	+0.5
	comp=Z,1.1nm,0.8s,mb4.0,baz=81,slow=7.5,SNR=4.9						
BRTR	Keskin Array B	56.85	299	P	P	01 38 12.3	-1.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=102,slow=6.3,SNR=6.5						
FINES	FINESS Array B	56.86	326	P	P	01 38 12.4	-0.6
	comp=Z,2.0nm,0.9s,mb4.2,baz=103,slow=8.4,SNR=5.7						
AKASG	Malin Array Be	57.07	313	P	P	01 38 13.3	-1.4
	comp=Z,1.0nm,0.4s,mb4.2,baz=68,slow=7.8,SNR=4.3						
AKASG	Malin Array Be	57.07	313	P	P	01 38 13.3	-1.4
ASAR	Alice Springs	62.30	150	P	P	01 38 52.3	+1.3
	comp=Z,1.2nm,0.7s,mb4.1,baz=328,slow=6.1,SNR=9.3						
NOA	NORSAR Array B	63.91	327	P	P	01 39 00.8	-0.4
	comp=Z,0.2nm,0.4s,mb3.5,baz=72,slow=5.0,SNR=3.4						
NOA	NORSAR Array B	63.91	327	P	P	01 39 00.8	-0.4
CLL	Collm	66.62	317	eP	P	01 39 19.0	0.0
CLL				LmV		01 08 00.0	
	comp=Z,100nm,20.2s						
GERES	GERESS Array B	67.19	314	P	P	01 39 22.3	-0.3
	comp=Z,0.4nm,0.6s,mb3.6,baz=56,slow=5.0,SNR=5.3						
LPG	La Plagne	72.92	313	eP	P	01 39 57.8	-0.1
	comp=Z,5.1nm,0.5s,mb4.4						
LPL	La Plagne	72.93	313	eP	P	01 39 57.7	-0.2
	comp=Z,5.0nm,0.5s,mb4.4						
SMF	Signal de Mont	74.11	315	eP	P	01 40 03.7	-1.2
YKA	Yellowknife Ar	79.95	18	P	P	01 40 36.9	-0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=5.5,SNR=4.5						
YKA	Yellowknife Ar	79.95	18	P	P	01 40 36.9	-0.5

*ISCJB **15** 01:33:35.6±0.5, 37°.82N±0°.02×29°.36E±0°.05, h9km±6km, Error ellipse: s-maj=6.2km s-min=4.1km az=2.3*
*CSEM **15** 01:33:35.6±0.2, 37°.81N×29°.33E, h15km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.1km az=79.0*
*ISK **15** 01:33:35.1, 37°.80N×29°.34E, h15km, MD2.8*
*DDA **15** 01:33:36.0, 37°.84N×29°.32E, h7km±2km, Md2.7*
ISC 15 01:33:36.1±0.5, **37°.81N**±0°.03×**29°.34E**±0°.05, **h15**km±5km, **n28**, σ**0.80**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.25	257	ePG	Pg	01 33 40.5	-0.9
DENT				eSG	Sg	01 33 45.3	+0.3
DENT	Denizli	0.25	257	ePg	Pg	01 33 40.5	-0.9
DENT				eSg	Sg	01 33 45.3	+0.2
DNZL	Cakiroluk	0.26	242	i P	Pg	01 33 41.3	-0.3
DNZL				i S	Sg	01 33 45.6	+0.2
DNZL	Cakiroluk	0.26	242	i P	Pg	01 33 41.3	-0.3
DNZL				i S	Sg	01 33 45.6	+0.2
KHL	Karahalli	0.53	16	ePG	Pg	01 33 45.7	-0.9
KHL				eSG	Sg	01 33 55.0	+1.3
KHL	Karahalli	0.53	16	ePg	Pg	01 33 45.7	-0.9
KHL				eSg	Sg	01 33 55.0	+1.3
KHAL	Karahalli	0.57	12	i P	Pg	01 33 46.5	-0.8
KHAL				i S	Sg	01 33 55.3	+0.4
KHAL	Karahalli	0.57	12	i P	Pg	01 33 46.5	-0.8
KHAL				i S	Sg	01 33 55.3	+0.3
GOLH	Golhisar	0.60	163	i P	Pg	01 33 47.8	0.0
GOLH				i S	Sg	01 33 58.2	+2.4
GOLH	Golhisar	0.60	163	i P	Pg	01 33 47.8	0.0
GOLH				i S	Sg	01 33 58.2	+2.4
GLHS	Glhisar (BURDU	0.67	169	ePG	Pg	01 33 49.0	-0.1
GLHS	Glhisar (BURDU	0.67	169	ePg	Pg	01 33 49.0	-0.1
KULA	Kula-Manisa	0.88	323	ePG	Pg	01 33 52.2	-0.9
KULA				eSG	Sg	01 34 05.9	+1.2
KULA	Kula-Manisa	0.88	323	ePg	Pg	01 33 52.2	-0.9
KULA				eSg	Sg	01 34 05.9	+1.2
MANT	Manisa	0.91	318	i P	Pg	01 33 53.2	-0.6
MANT				i S	Sg	01 34 05.6	-0.2
MANT	Manisa	0.91	318	i P	Pg	01 33 53.2	-0.6
MANT				i S	Sg	01 34 05.6	-0.2
ISP	Isparta	0.93	88	ePG	Pg	01 33 53.9	-0.2
ISP	Isparta	0.93	88	ePg	Pg	01 33 53.9	-0.2
ELL	Elmali	1.16	157	ePN	Pn	01 33 57.4	-0.2
ELL	Elmali	1.16	157	ePn	Pn	01 33 57.4	-0.3
SHUT	Suhut-Afyon	1.21	52	ePN	Pn	01 33 57.4	-1.0
SHUT	Suhut-Afyon	1.21	52	ePn	Pn	01 33 57.4	-1.0
GDZ	Gediz	1.28	5	i P	Pn	01 33 59.2	-0.2
GDZ				i S	Sb	01 34 21.1	+5.0
GDZ	Gediz	1.28	5	i P	Pn	01 33 59.2	-0.2
DEMI	Demirci	1.32	339	i P	Pn	01 34 00.4	+0.4
DEMI				i S	Sn	01 34 18.5	+1.2
DEMI	Demirci	1.32	339	i P	Pn	01 34 00.4	+0.4
DEMI				i S	Sn	01 34 18.5	+1.2
ALT	Altintas	1.38	26	ePN	Pn	01 34 00.7	-0.1
ALT	Altintas	1.38	26	ePn	Pn	01 34 00.7	-0.1

*IDC **15** 01:45:34.6±0.9, 31°.60N×104°.31E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/28, mbtmp3.8/14, ML3.2/1, Error ellipse: s-maj=34.6km s-min=17.0km az=48.0*
*NEIC **15** 01:45:36.3±0.6, 31°.60N×104°.15E, h10km, mb4.0/1, Error ellipse: s-maj=20.2km s-min=9.9km az=223.0*
*BJI **15** 01:45:36.9, 31°.74N×104°.45E, h14km, mB4.7/4, mb4.2/4, ML4.1/12, Ms3.9/4, Ms7 3.6/4*
ISC 15 01:45:35.0±0.8, **31°.73N**±0°.03×**104°.51E**±0°.04, **h0**km±5km, **n33**, σ**1.13**/42, **mb4.1**/17, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.04	218	Pg	Pg	01 45 55.1	+0.1
CD2				Sg	Sg	01 46 09.3	+0.8
CD2				smax			
	comp=N,4µm,0.7s						
XAN	Xi'an	4.37	57	Pg	Pg	01 46 57.9	-0.8
XAN				Sg	Sg	01 47 56.1	+0.9
XAN				smax			
	comp=N,380nm,0.7s						
XAN				smax			
	comp=E,130nm,0.8s						
LZH	Lanzhou	4.38	353	ePn	Pn	01 46 43.4	+0.7
LZH				Pg	Pg	01 46 57.5	-1.4
LZH				Sn	Sn	01 47 36.5	+2.1
LZH				Sg	Sg	01 47 55.6	-0.1
LZH				smax			
	comp=N,280nm,0.7s						
LZH				smax			
	comp=E,260nm,0.5s						
LZH				LR	LR		
	comp=N,940nm,6.6s						
LZH				LR	LR		
	comp=Z,2µm,7.0s						
ENH	Enshi	4.51	108	ePn	Pn	01 46 49.3	+4.7
ENH				eSg	Sg	01 48 05.0	+5.0
GYA	Guiyang	5.58	160	Pg	Pb	01 47 10.1	-3.2
GYA				Sg	Sb	01 48 21.8	+1.0
GYA				smax			
	comp=N,190nm,0.8s						
GYA				smax			
	comp=E,210nm,0.8s						
KMI	Kunming	6.77	194	Pn	Pb	01 47 27.5	-6.0
KMI				Sn	Sn	01 48 33.8	+0.5
KMI				smax			
	comp=N,31nm,1.0s						
KMI				smax			
	comp=E,31nm,1.5s						
KMI				LR	LR		
	comp=N,290nm,7.2s						
KMI				LR	LR		
	comp=E,230nm,7.2s						
KMI				LR	LR		
	comp=Z,240nm,7.2s						
WHN	Wuhan	8.52	95	P	Px	01 47 54.5	
WHN				S	Sn	01 49 15.3	-1.1
WHN				LR	LR		
	comp=N,1µm,5.2s						
WHN				LR	LR		
	comp=E,670nm,8.3s						
WHN				LR	LR		
	comp=Z,830nm,5.0s						
GTA	Gaotai	8.56	335	P	Pn	01 47 43.6	+3.4
GTA				pP		01 47 47.0	
GTA				sP		01 47 49.6	
GTA				S	Sn	01 49 20.3	+2.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,390nm,4.5s						
GTA				LR	LR		
	comp=N,260nm,13.2s						
GTA				LR	LR		
	comp=E,320nm,13.8s						
GTA				LR	LR		
	comp=Z,210nm,12.6s						
SONM	Songino Array	16.15	5	Pn	Pn	01 49 24.3	+1.1
	comp=Z,0.1nm,0.3s,baz=183,slow=13,SNR=2.5						
KSRS	Korea Array	20.08	67	P	P	01 50 12.7	+2.7
	comp=Z,2.5nm,0.6s,baz=254,slow=10.0,SNR=9.3						
MK31	Makanchi Array	22.74	318	eP	P	01 50 33.5	-5.1
MKAR	Makanchi Array	22.74	318	P	P	01 50 38.5	0.0
	comp=Z,2.7nm,0.8s,mb3.8,baz=118,slow=12,SNR=20						
KSH	Kashi	24.39	297	P	P	01 50 58.3	+3.4
KSH				pmax	pmax		
	comp=Z,140nm,5.1s						
UCH	Uchtor	26.03	302	eP	P	01 51 06.4	-3.3
	comp=Z,4.4nm,1.2s,mb4.0						
ZAA0	Zalesovo Array	26.31	333	eP	P	01 51 12.4	+0.2
ZALV	Zalesovo Beam	26.31	333	P	P	01 51 12.2	+0.1
	comp=Z,2.5nm,0.6s,mb4.1,baz=127,slow=10,SNR=12						
KURK	Kurchatov	26.96	322	P	P	01 51 17.8	-0.3
	comp=Z,1.6nm,0.5s,mb4.0,baz=130,slow=9.0,SNR=13						
BVAR	Borovoye Array	32.52	321	P	P	01 52 07.5	+0.2
	comp=Z,0.9nm,0.5s,mb4.0,baz=110,slow=13,SNR=4.2						
JOF	Joensuu	54.69	328	ep	P	01 55 03.7	-1.8
	comp=Z,1.7nm,0.6s,mb4.2						
BRTR	Keskin Array B	56.74	299	P	P	01 55 20.1	-0.4
	comp=Z,0.8nm,0.7s,mb3.8,baz=112,slow=6.7,SNR=4.6						
ARCES	ARCESS Array B	56.83	336	P	P	01 55 20.4	-0.3
	comp=Z,0.8nm,0.5s,mb4.0,baz=82,slow=8.8,SNR=12						
KAF	Kangasniemi	57.06	327	ep	P	01 55 20.7	-1.8
	comp=Z,1.8nm,0.5s,mb4.4						
AKASG	Malin Array Be	57.21	313	P	P	01 55 23.2	-0.6
	comp=Z,0.5nm,0.3s,mb4.0,baz=70,slow=8.0,SNR=2.3						
FINES	FINESS Array B	57.24	326	P	P	01 55 23.6	-0.2
	comp=Z,2.6nm,0.4s,mb4.6,baz=98,slow=6.9,SNR=23						
WRA	Warramunga Arr	58.80	147	P	P	01 55 34.9	-0.3
	comp=Z,0.8nm,0.5s,mb4.0,baz=340,slow=7.6,SNR=3.9						
ASAR	Alice Springs	61.85	149	P	P	01 55 55.3	-0.6
	comp=Z,0.6nm,0.6s,mb4.0,baz=336,slow=6.6,SNR=5.5						
NB2	NORSAR Subarra	64.32	327	P	P	01 56 11.0	-1.0
	comp=Z,0.6nm,0.5s,mb4.1,baz=74,slow=6.9						
NOA	NORSAR Array B	64.32	327	P	P	01 56 10.8	-1.2
	comp=Z,0.7nm,0.4s,mb4.2,baz=75,slow=6.7,SNR=4.0						
NOA	NORSAR Array B	64.32	327	P	P	01 56 10.8	-1.2
LPG	La Plagne	73.08	313	eP	P	01 57 07.4	+0.5
	comp=Z,3.1nm,0.6s,mb4.3						
LPL	La Plagne	73.08	313	eP	P	01 57 07.2	+0.3
	comp=Z,3.2nm,0.5s,mb4.4						
YKA	Yellowknife Ar	80.99	17	P	P	01 57 51.3	+0.2
	comp=Z,0.3nm,0.5s,mb3.6,baz=328,slow=5.4,SNR=6.8						
YKA	Yellowknife Ar	80.99	17	P	P	01 57 51.3	+0.1

*ISCJB **15** 01:46:33.2±0.7, 32°.1N±0°.1×105°.2E±0°.2, h10km, mb3.9/11, Error ellipse: s-maj=32.2km s-min=11.5km az=153.5*
*IDC **15** 01:46:33.9±0.9, 32°.30N×105°.31E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/27, mbtmp3.9/11, MS3.3/1, Ms1 3.3/1, ms1mx2.3/42, Error ellipse: s-maj=54.8km s-min=17.7km az=57.0*
*NEIC **15** 01:46:35.4±0.6, 32°.24N×105°.22E, h10km, mb4.4/1, Error ellipse: s-maj=29.9km s-min=11.1km az=61.0*
*BJI **15** 01:46:36.8, 32°.19N×105°.27E, h19km, mB4.7/1, ML4.1/2*
ISC 15 01:46:35.4±0.7, **32°.2N**±0°.1×**105°.2E**±0°.2, **h10**km, **n16**, σ**1.09**/18, **mb3.9**/11, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.05	345	ePn	Pb	01 47 48.8	+1.9
LZH				Pg	Pg	01 47 57.6	+4.5
LZH				Sg	Sg	01 48 37.4	-8.2
LZH				smax			
	comp=N,440nm,0.5s						
LZH				smax			
	comp=E,340nm,0.6s						
LZH				LR	LR		
	comp=E,1µm,6.3s						
LZH				LR	LR		
	comp=Z,1µm,7.9s						
SONM	Songino Array	15.68	3	Pn	Pn	01 50 15.5	-0.7
	baz=180,slow=12,SNR=2.5						
MKAR	Makanchi Array	22.79	316	P	P	01 51 37.1	-0.9
	comp=Z,3.1nm,1.0s,mb3.7,baz=128,slow=9.4,SNR=5.4						
MKAR				LR	LR	02 00 18.5	
	comp=Z,61nm,18.1s,baz=78,slow=36						
KSH	Kashi	24.69	295	P	P	01 52 04.4	+7.9
KSH				pmax	pmax		
	comp=Z,110nm,5.6s						
ZALV	Zalesovo Beam	26.17	332	P	P	01 52 08.9	-0.9
	comp=Z,1.1nm,0.5s,mb3.7,baz=134,slow=10.0,SNR=2.7						
KURK	Kurchatov	26.95	321	P	P	01 52 15.7	-1.2
	comp=Z,1.7nm,0.8s,mb3.6,baz=124,slow=10,SNR=5.4						
BVAR	Borovoye Array	32.53	320	P	P	01 53 05.8	-0.5
	comp=Z,1.0nm,0.9s,mb3.8,baz=128,slow=12,SNR=2.6						
ARCES	ARCESS Array B	56.66	336	P	P	01 56 18.6	+0.2
	comp=Z,1.9nm,0.8s,mb4.2,baz=83,slow=8.4,SNR=6.4						
FINES	FINESS Array B	57.19	326	P	P	01 56 23.9	+1.7
	comp=Z,2.5nm,0.8s,mb4.3,baz=55,slow=7.3,SNR=3.9						
WRAB	Tennant Creek	58.87	148	P	P	01 56 34.4	-0.1
	comp=Z,2.1nm,0.7s,mb4.3						
WRA	Warramunga Arr	58.88	148	P	P	01 56 34.9	+0.4
	comp=Z,0.9nm,0.4s,mb4.1,baz=340,slow=7.5,SNR=3.5						
WRA	Warramunga Arr	58.88	148	P	P	01 56 34.9	+0.4
ASAR	Alice Springs	61.95	150	P	P	01 56 55.8	+0.4
	comp=Z,0.4nm,0.5s,mb3.8,baz=327,slow=6.6,SNR=3.5						
NB2	NORSAR Subarra	64.24	327	P	P	01 57 13.2	+2.9
	comp=Z,0.1nm,0.6s,mb3.0,baz=74,slow=6.9						
NOA	NORSAR Array B	64.24	327	P	P	01 57 11.7	+1.4
	comp=Z,1.0nm,0.6s,mb4.0,baz=72,slow=6.6,SNR=4.2						
YKA	Yellowknife Ar	80.41	18	P	P	01 58 45.5	-1.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=328,slow=5.1,SNR=13						

*ISCJB **15** 01:48:09.5±1.1, 14°.3N±0°.1×145°.2E±0°.2, h115km±9km, mb3.9/16, Error ellipse: s-maj=31.6km s-min=18.3km az=0.8*
*NEIC **15** 01:48:09.9±1.3, 14°.29N×145°.42E, h108km±10km, mb3.7/1, Error ellipse: s-maj=27.7km s-min=13.4km az=90.0*
*IDC **15** 01:48:09.3±1.3, 14°.31N×145°.39E, h101km±8km, mb3.7/12, mb1 3.8/12, mb1mx3.7/23, mbtmp3.7/12, Error ellipse:*

s-maj=33.4km s-min=15.6km az=90.0

ISC 15 01:48:10.1±1.2, 14°.3N±0°.1×145°.3E±0°.2, h107km±10km, n22, σ1°.05/24, mb3.9/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.83**	**211**	P		**Pn**	**01 48 29.6**	**+0.2**
	450nm,0.3s,baz=58,slow=2.0,SNR=125							
GUMO				S		**Sn**	**01 48 43.6**	**-0.2**
	1μm,0.3s,baz=346,slow=23,SNR=53							
GUMO	**Guam**	**0.83**	**211**	*e*Pg		**Pn**	**01 48 29.6**	**+0.3**
GUMO				*e*Sg		**Sn**	**01 48 43.5**	**-0.4**
WRA	**Warramunga Arr**	**35.70**	**198**	P		**P**	**01 54 58.8**	**+0.4**
	3.2nm,0.8s,mb4.3,baz=22,slow=9.8,SNR=15							
FITZ	**Fitzroy Crossi**	**37.59**	**212**	P		**P**	**01 55 15.3**	**+0.8**
	3.1nm,0.8s,mb4.2,baz=48,slow=7.4,SNR=8.8							
ASAR	**Alice Springs**	**39.35**	**197**	P		**P**	**01 55 28.2**	**-0.9**
	0.7nm,0.7s,mb3.6,baz=20,slow=10,SNR=8.4							
SONM	**Songino Array**	**46.40**	**324**	P		**P**	**01 56 27.1**	**+1.3**
	1.1nm,0.6s,mb3.8,baz=138,slow=8.3,SNR=6.6							
MKAR	**Makanchi Array**	**61.28**	**316**	P		**P**	**01 58 15.1**	**+1.0**
	0.4nm,0.4s,mb3.8,baz=88,slow=8.0,SNR=4.0							
MKAR	**Makanchi Array**	**61.28**	**316**	P		**P**	**01 58 15.1**	**+1.0**
ZALV	**Zalesovo Beam**	**61.30**	**324**	P		**P**	**01 58 14.2**	**+0.1**
	0.4nm,0.3s,mb3.9,baz=116,slow=13,SNR=3.5							
KURK	**Kurchatov**	**64.32**	**320**	P		**P**	**01 58 34.6**	**+0.4**
	1.4nm,0.6s,mb3.9,baz=99,slow=6.8,SNR=9.2							
BVAR	**Borovoye Array**	**69.64**	**322**	P		**P**	**01 59 08.0**	**+0.2**
	1.4nm,0.6s,mb4.0,baz=94,slow=7.6,SNR=9.1							
ABKAR	**Akbulak array**	**76.30**	**318**	*e*P		**P**	**01 59 47.1**	**-0.1**
	0.6nm,0.5s,mb3.6							
YKA	**Yellowknife Ar**	**82.03**	**27**	P		**P**	**02 00 17.2**	**-0.9**
	0.3nm,0.6s,mb3.3,baz=287,slow=5.5,SNR=4.4							
YKA	**Yellowknife Ar**	**82.03**	**27**	P		**P**	**02 00 17.2**	**-1.0**
KEV	**Kevo**	**85.98**	**342**	*e*p		**P**	**02 00 34.8**	**-3.2**
	0.4nm,0.4s,mb3.7							
BSMT	**Bassoo Peak**	**86.04**	**42**	*e*P		**P**	**02 00 39.9**	**+1.1**
NVAR	**Mina Array Bea**	**86.14**	**51**	P		**P**	**02 00 40.8**	**+1.3**
	0.8nm,0.5s,mb3.9,baz=262,slow=5.7,SNR=4.8							
ARCES	**ARCESS Array B**	**86.54**	**342**	P		**P**	**02 00 40.2**	**-0.6**
	1.7nm,1.0s,mb3.9,baz=80,slow=8.9,SNR=5.6							
ARCES	**ARCESS Array B**	**86.54**	**342**	P		**P**	**02 00 40.2**	**-0.6**
JOF	**Joensuu**	**87.83**	**335**	*e*p		**P**	**02 00 42.2**	**-4.9**
	2.2nm,0.6s,mb4.4							
KAF	**Kangasniemi**	**90.25**	**336**	*e*p		**P**	**02 00 55.5**	**-3.0**
	0.6nm,0.4s,mb4.1							
FINES	**FINESS Array B**	**90.70**	**335**	P		**P**	**02 00 58.9**	**-1.7**
	2.8nm,0.6s,mb4.6,baz=58,slow=4.3,SNR=19							

IGQ ***15*** *01:54:41.6,2°.84S×78°.04W,h12km±2km,Mb4.9,Ms4.8, Error ellipse: s-maj=7.2km s-min=2.6km az=153.1*

IDC ***15*** *01:54:42.3±0.8,2°.55S×77°.67W,h0km,mb3.9/11, mb1 4.2/15,mb1mx4.1/24,mbtmp4.0/15,ML4.1/4,MS3.4/6, Ms1 3.4/6,ms1mx3.1/29,Error ellipse: s-maj=30.0km s-min=13.8km az=57.0*

NEIC ***15*** *01:54:47.9±0.9,2°.71S×77°.89W,h39km±9km,mb4.5/19, MD4.9(IGQ),Error ellipse: s-maj=13.9km s-min=5.7km az=66.0*

NEIC Felt at Banos and Macas, Ecuador.

ISC 15 01:54:44.2±1.1, 2°.80S±0°.03×78°.03W±0°.06, h8km±6km, n246, σ0°.83/242, mb4.2/29, MS3.7/5, 115C-72D, Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.56**	**342**	⇑P		**Pg**	**01 54 54.4**	**-0.8**
MACE	**Macas**	**0.56**	**342**	⇑S		**Sg**	**01 55 02.0**	**-0.5**
RIOE	**Riobamba**	**1.20**	**330**	⇑S		**Sb**	**01 55 21.1**	**-1.8**
RIOE	**Riobamba**	**1.20**	**330**	⇑P		**Pn**	**01 55 05.5**	**-1.8**
PATA	**Patacocha**	**1.35**	**342**	⇑P		**Pn**	**01 55 07.6**	**-1.7**
BPAT	**Tungurahua Vol**	**1.35**	**342**	⇑P		**Pn**	**01 55 07.6**	**-1.7**
ARRY	**Arrayan**	**1.35**	**341**	⇑P		**Pn**	**01 55 07.3**	**-2.1**
BMAS	**Trigal station**	**1.36**	**341**	⇑S		**Sb**	**01 55 25.8**	**-1.8**
BMAS	**Trigal station**	**1.36**	**341**	⇑P		**Pn**	**01 55 07.8**	**-1.7**
ULBA	**Ulba**	**1.39**	**344**	⇑P		**Pn**	**01 55 08.4**	**-1.5**
RETU	**Refugio**	**1.40**	**343**	⇑P		**Pn**	**01 55 08.6**	**-1.5**
BIL2	**Estacion Bilba**	**1.41**	**340**	⇑P		**Pn**	**01 55 09.0**	**-1.3**
BRUN	**Tungurahua Vol**	**1.42**	**344**	⇑S		**Sn**	**01 55 27.9**	**-1.2**
BRUN	**Tungurahua Vol**	**1.42**	**344**	⇑P		**Pn**	**01 55 08.8**	**-1.5**
RUN5	**Runtun**	**1.43**	**344**	⇑P		**Pn**	**01 55 08.8**	**-1.6**
JUI6	**Juive**	**1.43**	**342**	⇑P		**Pn**	**01 55 08.9**	**-1.6**
IGUA	**Igualata**	**1.43**	**335**	⇑P		**Pn**	**01 55 10.2**	**-0.4**
PISA	**Pisayambo**	**1.76**	**348**	⇑P		**Pn**	**01 55 14.8**	**-0.2**
BMOR	**Cotopaxi Volca**	**2.10**	**348**	⇑P		**Pn**	**01 55 20.7**	**+1.1**
BMOR	**Cotopaxi Volca**	**2.10**	**348**	⇑S		**Sn**	**01 55 47.5**	**+1.6**
MOV1	**Cotopaxi Vol s**	**2.11**	**349**	⇑P		**Pn**	**01 55 20.7**	**+0.9**
TAMB	**Tambo**	**2.12**	**351**	⇑P		**Pn**	**01 55 20.6**	**+0.7**
BTAM	**Cotopaxi Volca**	**2.14**	**350**	⇑S		**Sn**	**01 55 50.6**	**+3.7**
BTAM	**Cotopaxi Volca**	**2.14**	**350**	⇑P		**Pn**	**01 55 21.2**	**+0.9**
COV1	**Cotopaxi Volc**	**2.14**	**351**	⇑P		**Pn**	**01 55 21.8**	**+1.5**
BREF	**Cotopaxi Volca**	**2.15**	**349**	⇑S		**Sn**	**01 55 51.2**	**+3.9**
BREF	**Cotopaxi Volca**	**2.15**	**349**	⇑P		**Pn**	**01 55 21.8**	**+1.4**
BNAS	**Cotopaxi Volca**	**2.16**	**348**	⇑S		**Sn**	**01 55 51.0**	**+3.5**
BNAS	**Cotopaxi Volca**	**2.16**	**348**	⇑P		**Pn**	**01 55 21.9**	**+1.4**
BVC2	**Cotopaxi Volca**	**2.16**	**350**	⇑P		**Pn**	**01 55 21.6**	**+1.1**
BVC2	**Cotopaxi Volca**	**2.16**	**350**	⇑S		**Sn**	**01 55 51.7**	**+4.3**
CAMI	**Rancho Maria**	**2.16**	**347**	⇑P		**Pn**	**01 55 21.9**	**+1.5**
VC1	**Cotopaxi 1**	**2.17**	**350**	⇑P		**Pn**	**01 55 21.7**	**+1.0**
NAS2	**Nasa**	**2.18**	**348**	⇑P		**Pn**	**01 55 22.4**	**+1.6**
PITA	**Cotopaxi Volc**	**2.26**	**350**	⇑P		**Pn**	**01 55 23.3**	**+1.4**
ANTI	**Antisana**	**2.33**	**357**	⇑P		**Pn**	**01 55 23.1**	**+0.1**
JUA2	**San Juan 2**	**2.63**	**347**	⇑P		**Pn**	**01 55 28.7**	**+1.8**
GGP	**Refugio Guagua**	**2.67**	**348**	⇑P		**Pn**	**01 55 29.3**	**+1.8**
TERV	**Terraza Guagua**	**2.67**	**347**	P		**Pn**	**01 55 30.7**	**+3.2**
PINO	**Pino**	**2.68**	**347**	⇑P		**Pn**	**01 55 29.6**	**+1.8**
LAV3	**Lava3-Reventad**	**2.71**	**8**	P		**Pn**	**01 55 27.2**	**-0.8**
CHAR	**Charly**	**2.71**	**8**	⇓P		**Pn**	**01 55 27.9**	**-0.3**
YANA	**Yana**	**2.71**	**348**	⇑P		**Pn**	**01 55 30.1**	**+1.9**
CONE	**Cono NE Rev Vo**	**2.73**	**8**	P		**Pn**	**01 55 27.3**	**-1.1**
CAYR	**Refugio Cayamb**	**2.79**	**0**	⇑P		**Pn**	**01 55 30.4**	**+1.2**
CAYA	**Cayambe**	**2.85**	**1**	P		**Pn**	**01 55 30.9**	**+0.9**
OTAV	**Otavalo**	**3.04**	**352**	*e*Pn		**Pn**	**01 55 33.8**	**+1.1**
COTA	**Cotacachi**	**3.12**	**354**	⇓P		**Pn**	**01 55 35.7**	**+1.9**
CHIS	**Cerro-Chispas-**	**3.21**	**303**	P		**Pn**	**01 55 36.1**	**+1.2**
JAMA	**Jama**	**3.33**	**319**	P		**Pn**	**01 55 35.3**	**-1.3**
ATAH	**Atahualpa**	**4.19**	**185**	Pn		**Pn**	**01 55 53.8**	**+5.3**
	14nm,0.3s,baz=22,slow=10,SNR=65							
ATAH				Sn		**Sn**	**01 56 47.4**	**+10**
	24nm,0.3s,baz=25,slow=12,SNR=4.2							
ATAH				LR		LR	01 57 53.8	
	comp=Z,606nm,20.9s,baz=7.3,slow=42							
ROSC	**El Rosal**	**8.45**	**26**	Pn		**Pn**	**01 56 46.1**	**-0.9**
	1.3nm,0.3s,baz=107,slow=18,SNR=2.7							
ROSC				Lg			01 59 04.6	
	8.0nm,0.3s,baz=78,slow=21,SNR=5.0							
ROSC				LR		LR	02 00 02.8	
	comp=Z,181nm,20.1s,baz=17,slow=40							
ROSC	**El Rosal**	**8.45**	**26**	*e*Pn		**Pn**	**01 56 48.1**	**+1.0**
ROSC				Lg			01 59 04.6	
NNA	**Nana**	**9.21**	**173**	Pn		**Pn**	**01 56 58.2**	**+0.8**
	5.1nm,0.3s,baz=326,slow=8.5,SNR=9.1							
NNA				Sn		**Sn**	**01 58 39.0**	**-2.2**
	5.0nm,0.3s,baz=285,slow=20,SNR=3.6							
NNA	**Nana**	**9.21**	**173**	*e*Pn		**Pn**	**01 56 57.9**	**+0.4**
NNA				*e*Sn		**Sn**	**01 58 40.9**	**-0.4**
SDV	**Santo Domingo**	**13.75**	**32**	Pn		**Pn**	**01 57 56.7**	**-2.9**
	1.2nm,0.3s,baz=243,slow=16,SNR=7.2							
SDV				Lg			02 01 59.4	
	1.5nm,0.3s,baz=1.3,slow=9.5,SNR=4.4							
SDV	**Santo Domingo**	**13.75**	**32**	*e*Pn		**Pn**	**01 57 57.9**	**-1.7**
	7.7nm,0.5s							
SDV				Lg			02 01 59.4	
JTS	**JuntasAbangare**	**14.72**	**332**	Pn		**Pn**	**01 58 12.4**	**-0.4**
	0.2nm,0.3s,baz=138,slow=12,SNR=2.0							
JTS				LR		LR	02 03 16.1	
	comp=Z,152nm,18.1s,baz=350,slow=35							
LPAZ	**La Paz**	**16.57**	**145**	Pn		**Pn**	**01 58 37.7**	**+0.6**
	0.2nm,0.3s,baz=338,slow=14,SNR=4.2							
LPAZ	**La Paz**	**16.57**	**145**	*e*Pn		**Pn**	**01 58 38.0**	**+0.9**
	7.2nm,0.8s							
SIV	**San Ignacio**	**21.22**	**129**	P		**P**	**01 59 29.6**	**-1.1**
	11nm,0.6s,mb4.4,baz=314,slow=9.8,SNR=84							
APG	**El Apazote**	**21.55**	**325**	P		**P**	**01 59 33.9**	**-0.3**
	2.8nm,0.6s,mb3.8,baz=158,slow=8.8,SNR=7.2							
APG				LR		LR	02 06 43.5	
	comp=Z,68nm,20.1s,MS3.0,baz=232,slow=34							
LVC	**Limon Verde**	**21.59**	**157**	*e*P		**P**	**01 59 37.2**	**+2.6**
	14nm,0.8s,mb4.5							
CMIG	**Matias Romero**	**25.83**	**320**	P		**P**	**02 00 16.1**	**-0.2**
	5.6nm,0.8s,mb4.2,baz=112,slow=6.4,SNR=9.4							
CMIG				LR		LR	02 08 19.5	
	comp=Z,70nm,21.9s,MS3.1,baz=181,slow=32							
CPUP	**Villa Florida**	**30.69**	**142**	P		**P**	**02 00 59.5**	**-0.2**
	0.6nm,0.5s,mb3.7,baz=338,slow=5.2,SNR=3.2							
628A	**Black Gap, Mar**	**39.97**	**325**	⇑P		**P**	**02 02 20.2**	**+0.9**
	baz=40							
627A	**Terlingua Ranc**	**40.23**	**325**	⇑P		**P**	**02 02 21.9**	**+0.3**
	baz=40							
TXAR	**Lajitas Array**	**40.30**	**324**	P		**P**	**02 02 22.7**	**+0.5**
	0.3nm,0.5s,mb3.3,baz=32,slow=26,SNR=3.7							
528A	**Cox Ranch, San**	**40.42**	**326**	⇑P		**P**	**02 02 23.3**	**+0.2**
	baz=40							
626A	**Big Bend Ranch**	**40.74**	**324**	⇓P		**P**	**02 02 26.2**	**+0.4**
	baz=41,SNR=7.6							
428A	**Kincaid Ranch,**	**40.80**	**327**	⇑P		**P**	**02 02 26.6**	**+0.4**
	baz=41							
527A	**Woodward Ranch**	**40.87**	**325**	⇑P		**P**	**02 02 27.1**	**+0.2**
	baz=41,SNR=9.6							
526A	**Mary Lane Ranc**	**41.09**	**325**	⇑P		**P**	**02 02 28.8**	**+0.2**
	baz=41,SNR=5.7							
328A	**Wristen Ranch,**	**41.37**	**327**	⇓P		**P**	**02 02 30.8**	**-0.1**
	baz=41							
426A	**McDonald Obser**	**41.50**	**325**	⇑P		**P**	**02 02 32.2**	**+0.1**
	baz=42							
227A	**Bennet, Jal**	**42.11**	**327**	⇑P		**P**	**02 02 37.2**	**+0.2**
	baz=42							
WMOK	**Wichita Mounta**	**42.12**	**334**	*e*P		**P**	**02 02 35.4**	**-1.7**
	7.4nm,0.9s,mb4.3							
425A	**Indio Mountain**	**42.14**	**324**	⇓P		**P**	**02 02 37.1**	**-0.2**
	baz=42,SNR=6.1							
CCM	**Cathedral Cave**	**42.45**	**344**	*e*P		**P**	**02 02 36.7**	**-3.0**
	4.1nm,0.8s,mb4.1							
325A	**Bean Ranch, Si**	**42.56**	**325**	⇓P		**P**	**02 02 40.5**	**-0.3**
	baz=43							
226A	**Malaga, Loving**	**42.59**	**327**	⇑P		**P**	**02 02 41.2**	**+0.2**
	baz=43							
324A	**Moseley Ranch,**	**42.91**	**325**	⇑P		**P**	**02 02 43.2**	**-0.3**
	baz=43,SNR=6.3							
126A	**Clayton Basin,**	**42.99**	**327**	⇓P		**P**	**02 02 44.8**	**+0.7**
	baz=43							
MNTX	**Cornudas Mount**	**43.04**	**325**	*e*P		**P**	**02 02 44.1**	**-0.5**
	2.8nm,1.1s,mb3.9							
Z27A	**Tatum**	**43.08**	**329**	⇓P		**P**	**02 02 44.4**	**-0.5**
	baz=43,SNR=5.3							
CPRX	**Cap Rock**	**43.21**	**328**	*e*P		**P**	**02 02 46.9**	**+1.0**
125A	**Gardner Draw,**	**43.35**	**327**	⇑P		**P**	**02 02 47.1**	**0.0**
	baz=43							
MSTX	**Muleshoe**	**43.37**	**330**	⇑P		**P**	**02 02 47.2**	**0.0**
	baz=44							
Z26A	**Caprock**	**43.45**	**328**	⇓P		**P**	**02 02 48.3**	**+0.5**
	baz=44,SNR=12							
Y27A	**Causey**	**43.50**	**329**	⇓P		**P**	**02 02 48.2**	**-0.1**
	baz=44,SNR=5.4							
AMTX	**Amarillo**	**43.57**	**331**	*e*P		**P**	**02 02 48.3**	**-0.5**
	10.0nm,0.7s,mb4.7							
124A	**Stringfield Ra**	**43.83**	**326**	⇓P		**P**	**02 02 51.4**	**+0.6**
	baz=44							
Z25A	**Roswell**	**43.85**	**327**	⇓P		**P**	**02 02 50.9**	**-0.2**
	baz=44,SNR=6.9							
X27A	**F and S Farms,**	**44.07**	**330**	⇑P		**P**	**02 02 53.0**	**+0.1**
	baz=44							
Y25A	**Mesa, Roswell**	**44.33**	**328**	⇑P		**P**	**02 02 55.6**	**+0.7**
	baz=44							
X26A	**CR and CF Fran**	**44.36**	**329**	⇑P		**P**	**02 02 55.3**	**+0.2**
	baz=44							
122A	**Conniff Cattle**	**44.71**	**325**	⇑P		**P**	**02 02 58.5**	**+0.6**
	baz=45							
Y24A	**Capitan**	**44.73**	**327**	⇓P		**P**	**02 02 58.6**	**+0.4**
	baz=45,SNR=6.0							
121A	**Cookes Peak, D**	**45.05**	**324**	⇓P		**P**	**02 03 01.0**	**+0.4**
	baz=45							
220A	**Playas Peak, P**	**45.05**	**322**	⇑P		**P**	**02 03 01.0**	**+0.3**
	baz=45,SNR=5.4							
Y23A	**Lovelace Mesa,**	**45.08**	**327**	⇓P		**P**	**02 03 01.3**	**+0.4**
	baz=45							
W25A	**X Bar L Ranch,**	**45.21**	**329**	⇑P		**P**	**02 03 01.9**	**-0.1**
	baz=45,SNR=5.2							
Z21A	**St. Cloud Mine**	**45.53**	**325**	⇑P		**P**	**02 03 05.0**	**+0.4**
	baz=46							
120A	**U Bar Ranch, L**	**45.56**	**323**	⇑P		**P**	**02 03 05.2**	**+0.4**
	baz=46							
219A	**White Tail Can**	**45.56**	**322**	⇑P		**P**	**02 03 05.0**	**+0.2**
	baz=46,SNR=5.5							
318A	**Bisbee**	**45.64**	**321**	⇓P		**P**	**02 03 05.8**	**+0.4**
	baz=46							
W24A	**Lazy 6 Ranch,**	**45.70**	**328**	⇓P		**P**	**02 03 06.0**	**+0.2**
	baz=46							
Z20A	**Nine Sixteen R**	**45.94**	**324**	⇑P		**P**	**02 03 08.5**	**+0.7**
	baz=46							
Y21A	**Point of Rocks**	**46.04**	**325**	⇓P		**P**	**02 03 09.4**	**+0.9**
	baz=46							
W23A	**Werner Place,**	**46.05**	**328**	⇑P		**P**	**02 03 09.4**	**+0.8**
	baz=46							
ANMO	**Albuquerque**	**46.06**	**327**	*e*P		**P**	**02 03 09.1**	**+0.4**
	6.1nm,0.8s,mb4.6							
Y20A	**Horse Springs,**	**46.38**	**325**	⇑P		**P**	**02 03 11.8**	**+0.7**
	baz=46,SNR=5.6							
217A	**Green Valley**	**46.39**	**320**	⇑P		**P**	**02 03 11.8**	**+0.5**
	baz=46							
X21A	**Alamocita Cree**	**46.42**	**326**	⇑P		**P**	**02 03 12.7**	**+1.1**
	baz=46							
118A	**Homack Ranch,**	**46.44**	**322**	⇑P		**P**	**02 03 12.3**	**+0.6**
	baz=46							
TUC	**Tucson**	**46.72**	**321**	*e*P		**P**	**02 03 14.0**	**+0.1**
	2.6nm,1.0s,mb4.1							
117A	**Oracle**	**46.87**	**321**	⇓P		**P**	**02 03 15.1**	**+0.1**
	baz=47,SNR=5.8							
Y19A	**Nutrioso**	**46.92**	**324**	⇑P		**P**	**02 03 16.2**	**+0.8**
	baz=47							
Y18A	**Canyon Day Jun**	**47.26**	**323**	⇑P		**P**	**02 03 18.2**	**+0.1**
	baz=47							
V21A	**Milan**	**47.34**	**327**	⇓P		**P**	**02 03 19.3**	**+0.6**
	baz=47							
SDCO	**Great Sand Dun**	**47.70**	**330**	*e*P		**P**	**02 03 21.7**	**+0.3**
	8.6nm,1.1s,mb4.7							
214A	**Organ Pipe Nat**	**47.79**	**319**	⇓P		**P**	**02 03 22.3**	**0.0**
	baz=48							
115A	**Sonoran Desert**	**47.90**	**320**	⇑P		**P**	**02 03 23.2**	**+0.1**
	baz=48							
X17A	**Forest Lakes**	**48.11**	**323**	⇓P		**P**	**02 03 25.6**	**+0.9**
	baz=48							
Y16A	**Circle Bar Ran**	**48.21**	**322**	⇑P		**P**	**02 03 25.7**	**+0.2**
	baz=48							
X16A	**Lo Mia Camp, P**	**48.55**	**323**	⇓P		**P**	**02 03 28.5**	**+0.4**
	baz=49							
R22A	**Saguache, Gunn**	**48.70**	**330**	⇓P		**P**	**02 03 29.4**	**+0.2**
	baz=49							
Y15A	**Casa Rosa Ranc**	**48.78**	**321**	⇑P		**P**	**02 03 30.1**	**+0.2**
	baz=49							
V17A	**Tonalea, Kykot**	**48.99**	**324**	⇓P		**P**	**02 03 31.5**	**0.0**
	baz=49							
X15A	**Humboldt**	**49.08**	**322**	⇑P		**P**	**02 03 32.5**	**+0.4**
	baz=49							
WUAZ	**Wupatki**	**49.26**	**324**	⇓P		**P**	**02 03 34.1**	**+0.6**
	baz=49							
WUAZ	**Wupatki**	**49.26**	**324**	*e*P		**P**	**02 03 34.5**	**+1.0**
	7.2nm,1.1s,mb4.6							
Q22A	**Crested Butte,**	**49.27**	**330**	⇓P		**P**	**02 03 33.8**	**+0.3**
	baz=49,SNR=6.4							
ISCO	**Idaho Springs**	**49.37**	**332**	*e*P		**P**	**02 03 34.3**	**0.0**
	2.2nm,0.8s,mb4.2							
X14A	**Yaw**	**49.47**	**322**	⇑P		**P**	**02 03 35.6**	**+0.5**
	baz=50							
T18A	**Mexican Hat**	**49.54**	**326**	⇓P		**P**	**02 03 35.2**	**-0.4**
	baz=50							
S19A	**Harvey Farm, M**	**49.58**	**327**	⇑P		**P**	**02 03 35.9**	**-0.1**
	baz=50							
T17A	**Navajo Res., N**	**49.96**	**326**	⇑P		**P**	**02 03 39.2**	**+0.4**
	baz=50							
R19A	**Curley Farm, L**	**50.05**	**328**	⇓P		**P**	**02 03 39.3**	**-0.2**
	baz=50							
R18A	**Canyonlands Na**	**50.46**	**327**	⇓P		**P**	**02 03 42.1**	**-0.4**
	baz=50							
PHWY	**Pilot Hill**	**50.50**	**333**	*e*P		**P**	**02 03 42.8**	**0.0**
	6.0nm,0.6s,mb4.8							
W13A	**Hualapai Mount**	**50.50**	**322**	⇓P		**P**	**02 03 43.7**	**+0.7**
	baz=50							
Q19A	**Hogan Spring (**	**50.54**	**328**	⇓P		**P**	**02 03 43.1**	**-0.1**
	baz=51							
N22A	**Wattenberg Ran**	**50.56**	**332**	⇑P		**P**	**02 03 43.7**	**+0.4**
	baz=51							
N20A	**Spence Gulch,**	**51.45**	**331**	⇑P		**P**	**02 03 50.0**	**+0.1**
	baz=52							
V12A	**Nelson**	**51.51**	**321**	⇑P		**P**	**02 03 50.7**	**+0.2**
	baz=52							
M21A	**Separation Pea**	**51.62**	**332**	⇑P		**P**	**02 03 51.4**	**+0.1**
	baz=52							
M20A	**Sweetwater, Wa**	**51.91**	**331**	⇑P		**P**	**02 03 53.3**	**-0.2**
	baz=52							
N19A	**John Jarvie Ra**	**51.94**	**330**	⇑P		**P**	**02 03 53.6**	**-0.1**
	baz=52							
O17A	**Robinson Place**	**52.22**	**328**	⇓P		**P**	**02 03 56.4**	**+0.6**
	baz=52							
DAU	**Daniels Canyon**	**52.65**	**328**	*e*P		**P**	**02 03 59.6**	**+0.7**
M18A	**Lyman**	**52.79**	**330**	⇓P		**P**	**02 03 59.9**	**0.0**
	baz=53							
N17A	**Moffit Pass**	**52.82**	**329**	⇓P		**P**	**02 04 00.3**	**+0.2**
	baz=53							
L18A	**Fontenelle, Gr**	**53.14**	**330**	⇑P		**P**	**02 04 02.6**	**0.0**
	baz=53							
Q13A	**Wheeler Ranch,**	**53.15**	**325**	⇑P		**P**	**02 04 03.1**	**+0.5**
	baz=53							
DUG	**Dugway**	**53.33**	**327**	⇑P		**P**	**02 04 04.0**	**0.0**
	baz=53							
MPMC	**Manual Prospec**	**53.38**	**320**	⇓P		**P**	**02 04 03.8**	**-0.7**
	baz=53							
P13A	**Bates Ranch, G**	**53.48**	**326**	⇑P		**P**	**02 04 05.8**	**+0.6**
	baz=54							
PDAR	**Pinedale Array**	**53.55**	**331**	P		**P**	**02 04 04.8**	**-0.7**
	0.9nm,0.7s,mb3.8,baz=120,slow=8.8,SNR=6.1							
N15A	**Stansbury Isla**	**53.66**	**328**	⇑P		**P**	**02 04 05.9**	**-0.6**
	baz=54							
HWUT	**Hardware Ranch**	**53.68**	**329**	*e*P		**P**	**02 04 05.8**	**-0.7**
	7.5nm,0.9s,mb4.6							
K18A	**Toltan Ranch,**	**53.68**	**331**	⇓P		**P**	**02 04 06.5**	**-0.1**
	baz=54							
L16A	**Fish Haven**	**53.91**	**329**	⇓P		**P**	**02 04 07.8**	**-0.4**
	baz=54							
SPUT	**South Promonto**	**53.92**	**328**	*e*P		**P**	**02 04 08.0**	**-0.3**
	6.0nm,1.0s,mb4.5							
S10A	**Tonopah Range,**	**53.99**	**322**	⇓P		**P**	**02 04 09.2**	**+0.4**
	baz=54							
N14A	**Grayback Hills**	**53.99**	**327**	⇓P		**P**	**02 04 09.0**	**+0.1**
	baz=54							
P12A	**McGill**	**54.00**	**325**	⇓P		**P**	**02 04 09.0**	**+0.1**
	baz=54							
Q11A	**Duckwater**	**54.02**	**324**	⇓P		**P**	**02 04 09.3**	**+0.3**
	baz=54							
J18A	**Kendall Valley**	**54.10**	**331**	⇑P		**P**	**02 04 09.2**	**-0.4**
	baz=54							
K17A	**Gardner Place,**	**54.20**	**330**	⇓P		**P**	**02 04 09.7**	**-0.6**
	baz=54							
I18A	**Diamond G Ranc**	**54.38**	**332**	⇑P		**P**	**02 04 11.6**	**0.0**
	baz=54							
L15A	**Malad City**	**54.39**	**329**	⇑P		**P**	**02 04 11.5**	**-0.2**
	baz=54							
O12A	**Currie**	**54.45**	**326**	⇑P		**P**	**02 04 12.3**	**+0.1**
	baz=54							
M14A	**Sheep Mountain**	**54.54**	**328**	⇑P		**P**	**02 04 12.6**	**-0.2**
	baz=55							
K16A	**Soda Springs**	**54.59**	**330**	⇑P		**P**	**02 04 13.1**	**0.0**
	baz=55							
LOHW	**Long Hollow**	**54.69**	**331**	*e*P		**P**	**02 04 13.5**	**-0.3**
	35n

DBIC	Dimbokro	73.64	82	P		P	02 06 16.3	-2.7
	0.9nm,0.4s,mb4.1,baz=259,slow=5.8,SNR=4.6							
DBIC	Dimbokro	73.64	82	P		P	02 06 16.3	-2.7
TORD	Torodi Ar. Bea	80.64	76	P		P	02 06 55.0	-3.3
	0.3nm,0.4s,mb3.6,baz=282,slow=6.0,SNR=17							
VNA2	Neumayer--Watz	81.10	162	*e*P		P	02 07 05.6	+5.9
NOA	NORSAR Array B	92.06	29	LR		LR	02 43 37.5	
	comp=Z,17nm,18.8s,MS3.5,baz=245,slow=32							
MDJ	Mudanjiang	131.76	334	PKP		PKPdf	02 13 58.3	+0.1
MDJ				LR		LR		
	comp=Z,36nm,19.7s,MS4.1							
WMQ	Urumqi	137.23	15	*e*PKP		PKPdf	02 14 08.9	+0.4
HHC	Hu-ho-hao-te	141.14	348	*e*PKP		PKPdf	02 14 14.9	-0.8
HHC				sPKP			02 14 29.5	
HHC				PP		PP	02 17 20.3	+4.4
HHC				PKS			02 17 50.1	
HHC				SKS		SKSdf	02 21 19.3	-7.0
HHC				SKKS		SKKSac	02 24 06.5	-4.6
HHC				SS		SS	02 35 43.1	-0.6
HHC				AMB		AMB		
	comp=Z,110nm,6.1s							
HHC				LR		LR		
	comp=N,96nm,21.3s,MS4.6							
HHC				LR		LR		
	comp=E,72nm,23.0s,MS4.6							
HHC				LR		LR		
	comp=Z,120nm,20.5s,MS4.6							
NJ2	Nanjing	146.85	333	*e*PKPbc		PKPbc	02 14 26.8	-0.9
CD2	Chengdu	151.99	357	PKPbc		PKPdf	02 14 33.0	-1.2
GYA	Guiyang	156.04	350	*e*PKP		PKPdf	02 14 37.8	-2.2
GYA				sPKP			02 14 53.3	
GYA				PKPab		PKPab	02 15 07.6	+0.5
GYA				PKS			02 18 09.8	
GYA				PP		PP	02 18 45.6	+2.8
GYA				AMB		AMB		
	comp=Z,90nm,7.8s							

ISCJB ***15*** *02:00:22.2±0.5,31°.46N±0°.04×104°.26E±0°.07,h10km, mb3.8/9, Error ellipse: s-maj=9.6km s-min=5.5km az=21.1*
IDC ***15*** *02:00:22.7±0.9,31°.45N×104°.12E,h0km,mb3.8/10, mb1 3.9/11,mb1mx3.7/27,mbtmp3.8/11,ML3.5/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/44,Error ellipse: s-maj=39.4km s-min=16.9km az=54.0*
NEIC ***15*** *02:00:24.6±0.7,31°.40N×103°.92E,h10km,Error ellipse: s-maj=23.3km s-min=10.4km az=45.0*
BJI ***15*** *02:00:24.0,31°.35N×104°.49E,h10km,mB4.6/2,mb4.6/3, ML3.4/8,Ms3.7/2,Ms7 3.8/2*

ISC 15 02:00:24.0±0.5,31°.47N±0°.04×104°.21E±0°.08,h10km,n23, σ1§10/27,mb3.8/9,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.68	215	Pg	Pg	02 00 36.3	-0.8
CD2				Sg	Sg	02 00 45.9	0.0
CD2				smax			
	comp=N,5μm,0.7s						
LZH	Lanzhou	4.62	356	*e*Pg	Pg	02 01 51.9	-0.5
LZH				Sn	Sn	02 02 32.3	+4.8
LZH				Sg	Sg	02 02 49.8	-2.4
LZH				smax			
	comp=N,57nm,0.5s						
LZH				smax			
	comp=E,62nm,0.8s						
LZH				LR	LR		
	comp=N,640nm,5.2s						
LZH				LR	LR		
	comp=Z,890nm,6.6s						
ENH	Enshi	4.69	103	Pn	Pn	02 01 40.1	+5.3
XAN	Xi'an	4.73	56	Pn	Pn	02 01 33.6	-1.7
XAN				Sg	Sg	02 02 51.8	-4.0
XAN				smax			
	comp=N,47nm,0.6s						
XAN				smax			
	comp=E,22nm,0.9s						
GYA	Guiyang	5.44	156	Pg	Pb	02 01 56.3	-2.8
GYA				smax			
	comp=N,50nm,1.0s						
GYA				smax			
	comp=E,60nm,0.9s						
KMI	Kunming	6.45	192	Pn	Pn	02 01 59.1	0.0
KMI				Sn	Sn	02 03 08.1	-4.7
KMI				smax			
	comp=N,18nm,1.3s						
KMI				smax			
	comp=E,20nm,1.2s						
SONM	Songino Array	16.43	5	Pn	Pn	02 04 15.7	+1.2
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=4.0						
KSRS	Korea Array	20.42	67	P	P	02 05 02.5	+1.2
	comp=E,1.5nm,0.6s,baz=249,slow=10.0,SNR=5.6						
CN2	Changchun	20.78	48	⇑P	P	02 05 07.3	+2.2
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MK31	Makanchi Array	22.76	318	*e*P	P	02 05 26.7	+0.3
MKAR	Makanchi Array	22.76	318	P	P	02 05 27.3	+0.9
	comp=Z,0.8nm,0.5s,mb3.4,baz=124,slow=11,SNR=12						
MKAR	Makanchi Array	22.76	318	P	P	02 05 27.3	+0.9
ZALV	Zalesovo Beam	26.43	334	P	P	02 06 00.9	+0.2
	comp=Z,1.6nm,0.6s,mb3.7,baz=134,slow=8.5,SNR=5.1						
KURK	Kurchatov	27.01	323	P	P	02 06 06.7	+0.7
	comp=Z,1.4nm,0.8s,mb3.5,baz=127,slow=8.9,SNR=9.6						
AKTO	Aktyubinsk	38.95	313	LR	LR	02 23 36.9	
	comp=Z,30nm,18.3s,baz=230,slow=36						
ARCES	ARCESS Array B	56.96	336	P	P	02 10 08.7	-0.5
	comp=Z,2.9nm,1.0s,mb4.3,baz=67,slow=9.3,SNR=6.4						
FINES	FINESS Array B	57.31	326	P	P	02 10 11.8	0.0
	comp=Z,1.2nm,0.4s,mb4.2,baz=84,slow=7.9,SNR=10						
WRA	Warramunga Arr	58.73	146	P	P	02 10 22.7	+0.6
	comp=Z,1.8nm,0.7s,mb4.2,baz=339,slow=7.6,SNR=15						
ASAR	Alice Springs	61.76	149	P	P	02 10 43.5	+0.7
	comp=Z,0.5nm,0.7s,mb3.8,baz=330,slow=6.1,SNR=4.1						
NB2	NORSAR Subarra	64.40	327	P	P	02 10 58.9	-1.0
	comp=Z,0.4nm,0.5s,mb3.7,baz=75,slow=6.9						
NOA	NORSAR Array B	64.40	327	P	P	02 10 59.3	-0.7
	comp=Z,0.6nm,0.5s,mb3.9,baz=74,slow=6.5,SNR=3.9						
YKA	Yellowknife Ar	81.32	17	P	P	02 12 40.4	+0.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	81.32	17	P	P	02 12 40.4	+0.2

IDC 15 02:01:05.1±1.1,31°.50N×104°.18E,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.5/27,mbtmp3.7/5,MS2.8/1,Ms1 2.8/1, ms1mx2.4/42,Error ellipse: s-maj=182.8km s-min=19.6km az=56.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.72	318	P	P	02 06 08.0	-0.4
	1.1nm,1.0s,baz=129,slow=9.6,SNR=3.6						
ZALV	Zalesovo Beam	26.39	334	P	P	02 06 43.0	0.0
	0.6nm,0.3s,baz=141,slow=8.5,SNR=2.5						
KURK	Kurchatov	26.97	323	P	P	02 06 48.5	+0.3
	0.5nm,0.8s,baz=125,slow=9.6,SNR=2.6						
KURK				LR	LR	02 17 47.5	
	comp=Z,22nm,21.9s,baz=210,slow=37						
WRA	Warramunga Arr	58.77	146	P	P	02 11 04.3	-0.8
	2.2nm,0.6s,baz=338,slow=7.6,SNR=9.7						
ASAR	Alice Springs	61.80	149	P	P	02 11 26.9	+1.1
	0.3nm,0.5s,baz=318,slow=7.3,SNR=4.0						

IDC ***15*** *02:05:18.4±0.7,31°.19N×103°.80E,h0km,mb4.0/14, mb1 4.1/15,mb1mx3.9/27,mbtmp4.0/15,ML3.6/1,MS3.1/3, Ms1 3.1/3,ms1mx2.6/40,Error ellipse: s-maj=32.2km s-min=13.8km az=53.0*
ISCJB ***15*** *02:05:19.4±0.3,31°.40N±0°.03×103°.85E±0°.06,h10km, mb4.0/17,MS3.0/2,Error ellipse: s-maj=7.2km s-min=4.3km az=5.6*
NEIC ***15*** *02:05:20.0±0.6,31°.20N×103°.75E,h10km,mb4.1/1,Error ellipse: s-maj=20.9km s-min=9.7km az=46.0*
BJI ***15*** *02:05:22.8,31°.34N×104°.00E,h23km,mB4.3/4,mb4.3/6, ML4.1/15,Ms3.8/4,Ms7 3.4/4*

ISC 15 02:05:20.9±0.3,31°.33N±0°.03×103°.85E±0°.06,h10km,n35, σ1§07/43,mb4.0/17,MS3.0/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.42	191	Pg	Pg	02 05 30.3	+1.1
CD2				Sg	Sg	02 05 36.8	+2.0
CD2				smax			
	comp=N,10μm,0.7s						
LZH	Lanzhou	4.75	360	*e*Pg	Pg	02 06 52.8	+0.9
LZH				Sg	Sg	02 07 55.4	+2.0
LZH				smax			
	comp=N,120nm,0.9s						
LZH				smax			
	comp=E,150nm,0.8s						
LZH				LR	LR		
	comp=E,1μm,5.5s						
LZH				LR	LR		
	comp=Z,2μm,6.0s						
ENH	Enshi	4.96	101	*e*Pn	Pn	02 06 36.5	+1.1
	comp=Z,74nm,0.4s						
XAN	Xi'an	5.06	56	Pn	Pn	02 06 37.3	+0.5
XAN				Pg	Pg	02 06 55.4	-2.4
XAN				Sn	Sn	02 07 35.1	-0.2
XAN				Sg	Sg	02 07 57.9	-5.4
XAN				smax			
	comp=N,230nm,0.8s						
XAN				smax			
	comp=E,130nm,0.8s						
GYA	Guiyang	5.44	152	Pn	Pn	02 06 45.8	+3.8
GYA				Sn	Sn	02 07 51.0	+6.3
GYA				smax			
	comp=N,310nm,0.7s						
GYA				smax			
	comp=E,400nm,0.7s						
KMI	Kunming	6.26	189	Pn	Pn	02 06 54.8	+1.5
KMI				Sn	Sn	02 08 03.3	-1.5
KMI				smax			
	comp=N,45nm,1.5s						
KMI				smax			
	comp=E,40nm,1.3s						
KMI				LR	LR		
	comp=N,280nm,6.3s						
KMI				LR	LR		
	comp=E,500nm,7.9s						
KMI				LR	LR		
	comp=Z,270nm,10.7s						
GTA	Gaotai	8.71	339	*e*P	Pn	02 07 33.8	+6.8
GTA				pP		02 07 37.3	
GTA				sP		02 07 39.9	
GTA				S	Sn	02 09 11.9	+6.7
GTA				sS		02 09 17.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,86nm,6.2s						
GTA				LR	LR		
	comp=N,320nm,12.5s						
GTA				LR	LR		
	comp=E,310nm,12.8s						
GTA				LR	LR		
	comp=Z,340nm,13.1s						
WHN	Wuhan	9.05	92	P	Px	02 07 48.1	
WHN				S	Sn	02 09 08.4	-5.2
WHN				LR	LR		
	comp=N,740nm,5.0s						
WHN				LR	LR		
	comp=E,830nm,5.0s						
WHN				LR	LR		
	comp=Z,870nm,4.7s						
SONM	Songino Array	16.60	6	Pn	Pn	02 09 14.3	+0.7
	comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=9.5						
SONM				LR	LR	02 16 03.3	
	comp=Z,78nm,18.6s,baz=357,slow=38						
KSRS	Korea Array	20.76	66	P	P	02 10 02.1	+0.3
	comp=Z,5.1nm,0.7s,baz=262,slow=10.0,SNR=22						
CN2	Changchun	21.10	48	*e*P	P	02 10 06.8	+1.4
CN2				pmax	pmax		
	comp=Z,30nm,0.6s,mb4.8						
MK31	Makanchi Array	22.67	319	*e*P	P	02 10 23.1	+0.8
MKAR	Makanchi Array	22.67	319	P	P	02 10 23.1	+0.8
	comp=Z,1.1nm,0.5s,mb3.5,baz=120,slow=11,SNR=14						
ZAA0	Zalesovo Array	26.43	334	*e*P	P	02 10 55.3	-2.3
ZALV	Zalesovo Beam	26.43	334	P	P	02 10 57.5	-0.1
	comp=Z,1.0nm,0.3s,mb3.8,baz=133,slow=10.0,SNR=7.7						
ZALV				LR	LR	02 22 36.6	
	comp=Z,31nm,18.6s,MS2.9,baz=233,slow=39						
KURK	Kurchatov	26.94	323	P	P	02 11 02.5	+0.2
	comp=Z,1.8nm,0.7s,mb3.7,baz=126,slow=9.4,SNR=18						
KURK	Kurchatov	26.94	323	*e*P	P	02 11 02.4	+0.1
	comp=Z,5.1nm,1.3s,mb3.9						
BVAR	Borovoye Array	32.48	322	P	P	02 11 51.2	-0.2
	comp=Z,0.7nm,0.6s,mb3.7,baz=139,slow=13,SNR=3.2						
BVAR				LR	LR	02 25 33.2	
	comp=Z,38nm,18.2s,MS3.1,baz=279,slow=37						
AKTK	Aktyubinsk	38.83	313	P	P	02 12 45.8	-0.1
AKTO	Aktyubinsk	38.83	313	P	P	02 12 45.8	-0.1
	comp=Z,0.3nm,0.4s,mb3.4,baz=90,slow=1.0,SNR=3.0						
ARCES	ARCESS Array B	56.97	336	P	P	02 15 05.8	-0.3
	comp=Z,1.7nm,0.9s,mb4.1,baz=86,slow=7.6,SNR=9.3						
ARCES				PcP	PcP	02 16 00.6	-0.6
	comp=Z,0.7nm,0.5s,baz=85,slow=5.2,SNR=6.4						
FINES	FINESS Array B	57.26	326	P	P	02 15 07.8	-0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=106,slow=8.8,SNR=3.4						
WRA	Warramunga Arr	58.78	146	P	P	02 15 19.1	-0.3
	comp=Z,2.7nm,0.5s,mb4.5,baz=338,slow=7.5,SNR=36						
ASAR	Alice Springs	61.79	149	P	P	02 15 39.5	-0.4
	comp=Z,1.2nm,0.7s,mb4.1,baz=341,slow=6.6,SNR=11						
NB2	NORSAR Subarra	64.36	327	P	P	02 15 55.0	-1.6
	comp=Z,0.1nm,0.6s,mb3.0,baz=75,slow=7.4						
NOA	NORSAR Array B	64.36	327	P	P	02 15 55.1	-1.5
	comp=Z,1.0nm,0.8s,mb3.9,baz=72,slow=6.8,SNR=4.3						
CDF	Champ du Feu	71.31	316	*e*P	P	02 16 40.0	-0.6
STKA	Stephens Creek	72.31	147	P	P	02 16 43.3	-3.3
	comp=Z,1.9nm,0.7s,mb4.1,baz=288,slow=6.4,SNR=2.9						
LPG	La Plagne	72.94	313	*e*P	P	02 16 50.6	+0.2
	comp=Z,2.0nm,0.5s,mb4.0						
LPL	La Plagne	72.94	313	*e*P	P	02 16 50.5	+0.1
	comp=Z,4.3nm,0.5s,mb4.3						
SMF	Signal de Mont	74.19	315	*e*P	P	02 16 57.1	-0.6
	comp=Z,2.0nm,0.5s,mb4.0						
CAF	Calviac	76.12	314	*e*P	P	02 17 09.0	+0.1
YKA	Yellowknife Ar	81.54	17	P	P	02 17 37.7	-0.7
	comp=Z,1.0nm,0.6s,mb3.9,baz=330,slow=5.4,SNR=13						
YKA	Yellowknife Ar	81.54	17	P	P	02 17 37.7	-0.7
TORD	Torodi Ar. Bea	93.36	287	P	P	02 18 35.1	-1.6
	comp=Z,1.0nm,1.2s,mb4.1,baz=68,slow=3.6,SNR=3.1						

ISCJB ***15*** *02:09:20.4±0.4,31°.25N±0°.03×103°.81E±0°.06,h10km, mb3.8/11,Error ellipse: s-maj=7.8km s-min=4.2km az=173.9*
IDC ***15*** *02:09:20.2±0.8,31°.15N×103°.74E,h0km,mb3.7/10, mb1 3.8/11,mb1mx3.7/26,mbtmp3.7/11,ML4.0/1,Error ellipse: s-maj=31.3km s-min=17.3km az=52.0*
NEIC ***15*** *02:09:21.8±0.7,31°.16N×103°.67E,h10km,Error ellipse: s-maj=21.3km s-min=10.9km az=44.0*
BJI ***15*** *02:09:23.0,31°.13N×103°.51E,h13km,mb4.0/1,ML3.7/6, Ms3.6/1,Ms7 3.4/1*

ISC 15 02:09:22.2±0.4,31°.25N±0°.03×103°.78E±0°.06,h10km,n27, σ0§91/33,mb3.8/11,2C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.34	183	Pg	Pg	02 09 28.6	-0.3
CD2				Sg	Sg	02 09 33.9	+0.5
CD2				smax			
	comp=N,30μm,0.5s						
LZH	Lanzhou	4.83	1	*e*Pg	Pg	02 11 03.5	+8.9
LZH				Sg	Sg	02 12 04.0	+6.9
LZH				smax			
	comp=N,95nm,1.0s						
LZH				smax			
	comp=E,150nm,0.9s						
ENH	Enshi	5.01	100	*e*Pn	Pn	02 10 39.1	+1.7
XAN	Xi'an	5.15	56	Pg	Pg	02 11 07.4	+6.5
XAN				Sn	Sn	02 11 37.3	-1.6
XAN				Sg	Sg	02 12 02.6	-5.0
XAN				smax			
	comp=N,74nm,0.7s						
XAN				smax			
	comp=E,44nm,0.9s						
GYA	Guiyang	5.40	151	Pg	Pg	02 11 08.0	+2.3
GYA				Sg	Sb	02 12 00.9	-0.6
GYA				smax			
	comp=N,130nm,0.6s						
GYA				smax			
	comp=E,140nm,0.7s						
KMI	Kunming	6.17	189	Pn	Pn	02 10 53.3	-0.1
KMI				Sn	Sn	02 12 03.1	-0.9
KMI				smax			
	comp=N,33nm,1.0s						
KMI				smax			
	comp=E,24nm,0.9s						
KMI				LR	LR		
	comp=N,160nm,5.9s						
KMI				LR	LR		
	comp=E,290nm,4.6s						
KMI				LR	LR		
	comp=Z,160nm,5.2s						
SONM	Songino Array	16.68	6	Pn	Pn	02 13 17.2	+1.2
	comp=Z,0.6nm,0.3s,baz=186,slow=13,SNR=3.2						
KSRS	Korea Array	20.85	66	P	P	02 14 04.8	+0.7
	comp=Z,1.4nm,0.6s,baz=271,slow=11,SNR=5.1						
MK31	Makanchi Array	22.69	319	*e*P	P	02 14 24.7	+1.0
MKAR	Makanchi Array	22.69	319	P	P	02 14 24.4	+0.7
	comp=Z,1.6nm,0.9s,mb3.5,baz=123,slow=9.0,SNR=7.0						
ZAA0	Zalesovo Array	26.47	334	*e*P	P	02 14 56.4	-2.9
ZALV	Zalesovo Beam	26.47	334	P	P	02 14 59.4	+0.2
	comp=Z,0.7nm,0.3s,mb3.6,baz=131,slow=6.8,SNR=5.1						
KURK	Kurchatov	26.96	323	P	P	02 15 04.2	+0.4
	comp=Z,1.6nm,0.8s,mb3.6,baz=130,slow=9.5,SNR=5.9						
BRTR	Keskin Array B	56.43	299	P	P	02 19 04.0	+0.1
	comp=Z,0.5nm,0.8s,mb3.6,baz=79,slow=7.6,SNR=3.2						
ARCES	ARCESS Array B	57.01	336	P	P	02 19 07.6	-0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=83,slow=8.1,SNR=6.5						
ARCES	ARCESS Array B	57.01	336	P	P	02 19 07.6	-0.1
WRA	Warramunga Arr	58.75	146	P	P	02 19 19.9	-0.5
	comp=Z,1.1nm,0.6s,mb4.1,baz=337,slow=7.5,SNR=7.7						
ASAR	Alice Springs	61.76	149	P	P	02 19 40.1	-0.9
	comp=Z,0.7nm,0.9s,mb3.8,baz=334,slow=7.0,SNR=3.8						
CDF	Champ du Feu	71.32	316	*e*P	P	02 20 41.4	-0.5
LPG	La Plagne	72.95	313	⇑*i*P	P	02 20 52.1	+0.4
	comp=Z,2.9nm,0.6s,mb4.1						
LPL	La Plagne	72.95	313	⇑*i*P	P	02 20 52.0	+0.3
	comp=Z,4.0nm,0.6s,mb4.2						
SMF	Signal de Mont	74.20	315	*e*P	P	02 20 58.5	-0.5
AVF	Avril sur Loir	74.42	315	*e*P	P	02 20 59.5	-0.8
CAF	Calviac	76.13	314	*e*P	P	02 21 10.3	+0.1
YKA	Yellowknife Ar	81.64	17	P	P	02 21 39.5	-0.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.2,SNR=5.1						
YKA	Yellowknife Ar	81.64	17	P	P	02 21 39.5	-0.6
TORD	Torodi Ar. Bea	93.32	287	P	P	02 22 37.5	-0.3
	comp=Z,0.5nm,1.1s,mb3.9,baz=65,slow=2.6,SNR=3.1						

JSN 15 02:17:12.9±1.4,19°.34N×75°.49W,h0km±408km,MD4.1, 2C-4D,Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	Castle Mountai	1.46	215	⇑*e*P	Pn	02 17 39.6	-0.9
GWJ	Greenwich	1.72	223	⇓*i*P	Pn	02 17 42.4	-1.6
STH	Stony Hill	1.77	225	⇓*i*P	Pn	02 17 42.9	-1.8
STH				*i* S	Sn	02 18 04.8	-3.2
HOJ	Hope	1.78	222	⇓*i*P	Pn	02 17 43.0	-2.0
PCJ	Portland Cotta	2.24	225	⇑*e*P	Pn	02 17 50.3	-0.9
PCJ				*e*S	Sn	02 18 18.0	-1.6
MCJ	Malvern	2.51	236	⇓*e*P	Pn	02 17 53.1	-1.9
MCJ				*e*S	Sn	02 18 25.3	-1.0

IDC 15 02:19:56.5±1.1,30°.97N×103°.68E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.5/26,mbtmp3.6/7,ML3.4/1,Error ellipse: s-maj=39.0km s-min=20.5km az=59.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.97	6	Pn	Pn	02 23 54.0	-1.2
	0.1nm,0.3s,baz=177,slow=13,SNR=3.2						
KSRS	Korea Array	21.03	66	P	P	02 24 41.4	-0.5
	3.3nm,0.7s,baz=261,slow=11,SNR=11						
MKAR	Makanchi Array	22.84	320	P	P	02 25 02.5	+1.3
	0.3nm,0.4s,baz=132,slow=11,SNR=3.2						
KURK	Kurchatov	27.14	324	P	P	02 25 39.5	-1.7
	0.4nm,0.9s,baz=129,slow=9.5,SNR=3.7						
WRA	Warramunga Arr	58.57	146	P	P	02 29 55.1	-0.1
	2.1nm,0.7s,baz=337,slow=7.5,SNR=11						
ASAR	Alice Springs	61.57	148	P	P	02 30 15.6	-0.1
	0.3nm,0.5s,baz=336,slow=6.3,SNR=4.6						
YKA	Yellowknife Ar	81.92	17	P	P	02 32 18.5	+0.9
	0.2nm,0.6s,baz=329,slow=5.6,SNR=3.6						

ISCJB ***15*** *02:26:18.1±1.7,9°.46S±0°.05×107°.44E±0°.04,h30km±13km, mb4.2/14,Error ellipse: s-maj=9.8km s-min=6.0km az=33.0*
DJA ***15*** *02:26:19,9°.43S×107°.45E,h30km,MLv4.7/19*
NEIC ***15*** *02:26:20.9±0.4,9°.45S×107°.36E,h35km,mb4.4/3,Error ellipse: s-maj=12.0km s-min=8.8km az=49.0*
IDC ***15*** *02:26:20.6±0.9,9°.32S×107°.54E,h28km±4km,mb4.0/11, mb1 4.0/12,mb1mx3.9/21,mbtmp4.0/12,ML3.4/1,Error ellipse: s-maj=30.7km s-min=13.3km az=55.0*

ISC 15 02:26:18.2±2.4,9°.48S±0°.05×107°.41E±0°.05,h16km±16km, h28km±2.9km:pP-P,n43,σ0§93/44,mb4.2/14,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	2.00	240	*e*Pn	Pn	02 26 50.5	-0.8
XMIS	Christmas Isla	2.00	240	P	Pn	02 26 50.2	-1.2
CLJI	Cilicap	2.36	42	P	Pn	02 26 54.8	-1.6
LEM	Lembang	2.64	5	P	Pn	02 27 00.7	+0.5
DBJI	Dramaga	2.97	347	P	Pn	02 27 05.1	+0.3
DBJI				S	Sn	02 27 41.3	+1.1
CGJI	Cibinong	3.31	329	P	Pn	02 27 09.5	+0.1
CGJI				S	Sn	02 27 47.0	-1.5
UGM	Wanagama	3.45	63	P	Pn	02 27 09.6	-1.7
UGM				S	Sn	02 27 47.4	-4.5
SMRI	Semarang	3.85	51	P	Pn	02 27 17.0	+0.1
PCJI	Pacitan	3.94	71	S	Sn	02 27 58.8	-5.2
NGJI	Ngawi	4.52	63	P	Pn	02 27 27.4	+1.3
PWJI	Pagerwojo	4.58	72	P	Pn	02 27 25.8	-1.1
SJI	Sawahan	4.64	68	P	Pn	02 27 28.0	+0.2
KASI	Kota Agung	4.87	323	P	Pn	02 27 32.4	+1.5
KRKI	Karangkates	5.16	76	P	Pn	02 27 36.7	+1.9
GRJI	Gresik	5.63	64	P	Pn	02 27 41.0	-0.3
	163nm,0.5s,6μm0.6nm						
MDSI	Maura Dua	5.90	327	P	Pn	02 27 44.6	-0.5
	23nm,0.9s,0.1nm						
GMJI	Gumukmas	6.08	79	P	Pn	02 27 47.8	+0.2
	116nm,0.7s,0.4nm						
TPI	Tanjungpandan	6.68	2	P	Pn	02 27 57.1	+1.3
	20nm,1.2s,0.1nm						
MNAI	Manna	6.73	319	P	Pn	02 27 56.0	-0.5
	127nm,1.2s,0.7nm						
KMMI	Kalianget	6.92	70	P	Pn	02 28 02.9	+3.8
ABJI	Asem Bagus	6.95	77	P	Pn	02 28 00.2	+0.7
KHKI	Kahang-Kahang	8.18	83	P	Pn	02 28 14.8	-1.6
FITZ	Fitzroy Crossi	19.66	118	P	Pn	02 30 47.2	-0.8
	0.1nm,0.3s,baz=275,slow=3.5,SNR=5.0						
WRA	Warramunga Arr	28.01	115	P	P	02 32 08.3	-0.4
	1.9nm,0.9s,mb3.7,baz=286,slow=11,SNR=5.7						
WRA				pP	pP	02 32 17.0	+3.4
	2.2nm,0.7s,baz=289,slow=11,SNR=8.0						
ASAR	Alice Springs	28.98	122	P	P	02 32 17.6	+0.3
	0.4nm,0.5s,mb3.4,baz=298,slow=7.9,SN

comp=Z,1.8nm,0.5s,mb4.3,baz=142,slow=2.1,SNR=12
PETK pP pP 02 38 09.8 +2.7
comp=Z,2.6nm,0.6s,baz=166,slow=2.2,SNR=5.7
PETK Petropavlovsk- 75.55 29 P **P 02 38 01.2 -0.7**
PETK pP pP 02 38 09.8 +2.7
BRTR Keskin Array B 83.77 312 P **P 02 38 47.8 +0.9**
comp=Z,8.8nm,0.9s,mb3.9,baz=122,slow=8.1,SNR=4.4
TXAR Lajitas Array 144.84 51 PKP PKPdf 02 45 55.2 0.0
comp=Z,0.4nm,0.6s,baz=132,slow=1.9,SNR=1.7

*IDC **15** 02:42:18.4±1.2,56°.29N×164°.33E,h0km,mb3.6/7, mb1 3.9/9,mb1mx3.6/28,mbtmp3.7/9,ML4.1/2,MS3.2/1, Ms1 3.2/1,ms1mx2.5/37,Error ellipse: s-maj=41.3km s-min=17.7km az=145.0*
*ISCJB **15** 02:42:19.5±0.8,56°.05N±0°.04×164°.63E±0°.05,h21km±7km, mb3.6/7,Error ellipse: s-maj=7.7km s-min=4.8km az=12.8*
*KRSC **15** 02:42:19.6±0.5,55°.99N×164°.52E,h17km±16km,ML4.3*
*MOS **15** 02:42:20.0±0.7,56°.02N×164°.63E,h28km,mb4.0/4,Error ellipse: s-maj=24.2km s-min=12.0km az=51.2*
*NEIC **15** 02:42:23.2±0.7,56°.22N×164°.33E,h35km,Error ellipse: s-maj=23.2km s-min=9.0km az=139.0*

ISC 15 02:42:18.3±0.9,56°.10N±0°.05×164°.59E±0°.05,h1km±6km, n38,σ1°.03/58,mb3.7/7,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.99**	**277**	*e*P	**Pg**	**02 42 36.8**	**-0.6**
KBTR				*i* S	**Sg**	**02 42 49.1**	**-1.2**
BKI	**Bering**	**1.19**	**138**	*i* P	**Pg**	**02 42 41.1**	**0.0**
BKI				*i* S	**Sg**	**02 42 56.3**	**-0.2**
SMKR	**Semkarok**	**1.80**	**287**	*e*P	**Pn**	**02 42 49.8**	**-0.7**
SMKR				*i* S	**Sn**	**02 43 12.2**	**-1.8**
BDR	**Baidarnaya**	**1.94**	**286**	*e*P	**Pn**	**02 42 52.4**	**0.0**
BDR				*i* S	**Sn**	**02 43 16.9**	**-0.4**
SRKR	**Sorokina**	**1.98**	**288**	*e*P	**Pn**	**02 42 52.5**	**-0.4**
SRKR				*i* S	**Sn**	**02 43 17.2**	**-1.2**
ZLN	**Zelenaya**	**2.12**	**269**	*e*P	**Pn**	**02 42 55.7**	**+0.8**
ZLN				*i* S	**Sn**	**02 43 21.5**	**-0.3**
CIRR	**Tsirk**	**2.15**	**272**	*e*P	**Pn**	**02 42 56.0**	**+0.8**
CIRR				*i* S	**Sn**	**02 43 22.7**	**+0.2**
KLY	**Klyuchi**	**2.21**	**277**	*e*P	**Pn**	**02 42 54.7**	**-1.4**
KLY				*i* S	**Sn**	**02 43 20.4**	**-3.6**
MKZ	**Mys Kozlova**	**2.25**	**228**	*e*P	**Pn**	**02 42 55.7**	**-0.9**
MKZ				*i* S	**Sn**	**02 43 21.5**	**-3.4**
KRSR	**Krestovskiy**	**2.25**	**275**	P	**Pn**	**02 42 57.3**	**+0.6**
BZMR	**Bezymyannaya**	**2.31**	**268**	*e*P	**Pn**	**02 42 58.2**	**+0.8**
BZMR				*i* S	**Sn**	**02 43 26.4**	**+0.1**
KIRR	**Kirishev**	**2.39**	**268**	*e*P	**Pn**	**02 42 59.4**	**+0.9**
KIRR				*i* S	**Sn**	**02 43 28.2**	**-0.1**
KPT	**Kopyto**	**2.45**	**269**	*e*P	**Pn**	**02 43 00.3**	**+0.9**
KPT				*i* S	**Sn**	**02 43 29.9**	**-0.1**
KMNR	**Kamenistaya**	**2.47**	**264**	*e*P	**Pn**	**02 43 00.9**	**+1.2**
KMNR				*i* S	**Sn**	**02 43 30.8**	**+0.4**
KOZR	**Kozyr**	**2.63**	**271**	PN	**Pn**	**02 43 04.0**	**+2.2**
KOZR				S	**Sn**	**02 43 36.4**	**+2.1**
KOZ	**Kozyrevsk**	**2.64**	**271**	*e*P	**Pn**	**02 43 04.0**	**+2.0**
KOZ				*i* S	**Sn**	**02 43 36.4**	**+1.8**
SRDR	**Sredinnyy**	**2.73**	**277**	*e*P	**Pn**	**02 43 04.3**	**+1.1**
SRDR				*i* S	**Sn**	**02 43 36.9**	**+0.1**
SPN	**Mys Shipunski**	**4.01**	**223**	*e*P	**Pn**	**02 43 19.6**	**-1.2**
SPN				*i* S	**Sn**	**02 44 01.9**	**-6.4**
PET	**Petropavlovsk**	**4.62**	**231**	*e*P	**Pn**	**02 43 29.8**	**+0.6**
PET				*i* S	**Sn**	**02 44 21.5**	**-2.0**
PET	**Petropavlovsk**	**4.62**	**231**	*e*Pn	**Pn**	**02 43 29.8**	**+0.6**
PET				*e*S	**Sn**	**02 44 22.2**	**-1.3**
PETK	**Petropavlovsk-**	**5.00**	**236**	Pn	**Pn**	**02 43 34.7**	**+0.3**
	2.0nm,0.3s,baz=68,slow=17,SNR=31						
PETK				Sn	**Sn**	**02 44 33.6**	**+0.9**
	0.4nm,0.3s,baz=75,slow=17,SNR=2.0						
PETK	**Petropavlovsk-**	**5.00**	**236**	PN	**Pn**	**02 43 34.7**	**+0.3**
PETK						02 44 33.6	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
RUS	**Russkaya**	**5.11**	**227**	*e*P	**Pn**	**02 43 35.7**	**-0.2**
RUS				*i* S	**Sn**	**02 44 30.9**	**-4.6**
ASAJ	**Asahikawa**	**18.41**	**239**	P	**Pn**	**02 46 34.2**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=7.1,slow=8.1,SNR=8.1						
ASAJ	**Asahikawa**	**18.41**	**239**	P	**Pn**	**02 46 34.3**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**26.45**	**233**	P	**P**	**02 47 56.9**	**+0.4**
	comp=Z,0.8nm,0.4s,mb3.7,baz=34,slow=7.4,SNR=3.7						
MJAR	**Matsushiro Arr**	**26.45**	**233**	P	**P**	**02 47 56.9**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**29.89**	**41**	P	**P**	**02 48 27.1**	**+0.2**
	comp=Z,1.6nm,0.8s,mb3.9,baz=303,slow=12,SNR=3.8						
INK	**Inuvik**	**29.89**	**41**	P	**P**	**02 48 27.1**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**39.19**	**47**	P	**P**	**02 49 47.4**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=295,slow=9.0,SNR=3.7						
YKA	**Yellowknife Ar**	**39.19**	**47**	P	**P**	**02 49 47.4**	**+0.2**
ZALV	**Zalesovo Beam**	**43.37**	**302**	LR	LR	03 11 27.4	
	comp=Z,27nm,18.1s,baz=116,slow=40						
MKAR	**Makanchi Array**	**49.20**	**296**	P	**P**	**02 51 06.1**	**-1.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=62,slow=5.8,SNR=2.5						
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**02 51 17.2**	**-0.7**
	comp=Z,0.7nm,0.4s,mb3.9,baz=56,slow=8.3,SNR=4.9						
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**02 51 17.2**	**-0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**53.83**	**65**	P	**P**	**02 51 43.0**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.6,baz=350,slow=4.7,SNR=3.3						
NOA	**NORSAR Array B**	**61.34**	**346**	P	**P**	**02 52 32.5**	**-2.5**
	comp=Z,0.7nm,0.8s,mb3.9,baz=5.6,slow=5.0,SNR=2.3						
NOA	**NORSAR Array B**	**61.34**	**346**	P	**P**	**02 52 32.5**	**-2.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

IDC 15 02:47:23.9±6.9,19°.08S×175°.97W,h0km,mb3.8/2, mb1 4.0/2,mb1mx3.7/15,mbtmp3.8/2,Error ellipse: s-maj=305.3km s-min=109.5km az=153.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.70**	**260**	P	P	02 55 55.2	+0.3
	0.4nm,0.3s,baz=97,slow=7.4,SNR=20						
ASAR	**Alice Springs**	**46.72**	**255**	P	P	02 55 54.5	-0.4
	0.7nm,0.4s,baz=91,slow=7.7,SNR=10						
AKASG	**Malin Array Be**	**142.65**	**333**	PKP	PKPdf	03 06 58.2	-0.6
	0.8nm,0.4s,baz=41,slow=4.1,SNR=4.7						

DJA 15 02:47:34,0°.12N×122°.82E,h100km,MLv3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.95**	**292**	P	Pn	02 47 52.9	-1.0
LUWI	**Luwuk**	**1.16**	**182**	P	Pn	02 47 46.9	-9.3
LUWI				S	Sn	02 48 10.9	-2.0
APSI	**Ampana**	**1.56**	**229**	P	Pn	02 48 02.0	+1.0
APSI				S	Sn	02 48 37.6	+16
LBMI	**Labuha**	**4.74**	**99**	P	Pn	02 48 43.2	0.0
NLAI	**Namlea**	**5.42**	**128**	P	Pn	02 49 03.0	+10

DJA 15 02:56:23,1°.78N×121°.20E,h50km,MLv3.8/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.49**	**150**	P	Pn	02 56 47.7	+0.3
MRSI				S	Sn	02 57 07.0	+1.3
APSI	**Ampana**	**2.71**	**170**	P	Pn	02 57 02.4	-1.7
LUWI	**Luwuk**	**3.21**	**151**	P	Pn	02 57 11.1	+0.1
TTSI	**Tana Toraja**	**4.99**	**196**	P	Pn	02 57 36.6	+1.2

IDC 15 02:57:39.4±2.3,32°.78N×105°.65E,h0km,mb3.3/4, mb1 3.6/4,mb1mx3.3/26,mbtmp3.4/4,Error ellipse: s-maj=357.5km s-min=21.5km az=52.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.65**	**315**	P	P	03 02 41.7	-0.2
	0.4nm,0.5s,baz=123,slow=10,SNR=5.0						
KURK	**Kurchatov**	**26.75**	**320**	P	P	03 03 20.8	+0.3
	0.3nm,0.6s,baz=124,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**59.16**	**148**	P	P	03 07 42.2	+0.1
	0.4nm,0.5s,baz=339,slow=7.5,SNR=7.7						
ASAR	**Alice Springs**	**62.27**	**151**	P	P	03 08 03.1	0.0
	0.3nm,0.7s,baz=348,slow=7.1,SNR=3.5						

IDC 15 03:11:59.0±2.5,32°.57N×105°.10E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.4/26,mbtmp3.6/4,Error ellipse: s-maj=450.4km s-min=21.4km az=53.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.48**	**316**	P	P	03 16 59.7	0.0
	0.4nm,0.5s,baz=119,slow=12,SNR=5.6						
KURK	**Kurchatov**	**26.62**	**321**	P	P	03 17 39.2	+0.1
	0.4nm,0.9s,baz=130,slow=7.2,SNR=3.0						
WRA	**Warramunga Arr**	**59.23**	**148**	P	P	03 22 04.1	+1.9
	1.4nm,0.7s,baz=340,slow=7.3,SNR=4.5						
ASAR	**Alice Springs**	**62.31**	**150**	P	P	03 22 21.4	-1.7
	0.5nm,0.4s,baz=334,slow=6.7,SNR=3.0						

*IDC **15** 03:12:29.8±1.1,5°.75S×147°.52E,h0km,mb4.0/6, mb1 4.2/7,mb1mx4.0/14,mbtmp4.1/7,ML4.3/1,MS3.4/2, Ms1 3.4/2,ms1mx3.0/20,Error ellipse: s-maj=42.5km s-min=18.7km az=97.0*
*NEIC **15** 03:12:35.7±1.1,5°.69S×147°.29E,h35km,mb4.6/3,Error ellipse: s-maj=30.8km s-min=11.9km az=107.0*
*ISCJB **15** 03:12:37.5±3.3,5°.8S±0°.1×147°.1E±0°.1,h59km±32km, mb4.3/9,Error ellipse: s-maj=24.1km s-min=16.2km az=37.1*

ISC 15 03:12:39.0±3.4,5°.8S±0°.1×147°.1E±0°.3,h57km±28km,n26, σ0°.88/21,mb4.3/9,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.96**	**205**	*e*Pn	**Pn**	**03 14 47.1**	**+1.3**
	91nm,0.4s						
COEN				*e*S	**Sn**	**03 16 24.2**	**-1.1**
KAKA	**Kakadu**	**16.00**	**244**	*e*P	**Pn**	**03 16 20.5**	**-0.1**
	14nm,0.5s						
KAKA	**Kakadu**	**16.00**	**244**	*e*Pn	**Pn**	**03 16 20.6**	**0.0**
	40nm,0.6s						
KAKA				*e*S	**S**	**03 19 15.1**	**-13**
WRAB	**Tennant Creek**	**18.72**	**220**	*e*P	**Pn**	**03 16 53.2**	**-0.9**
	18nm,1.0s						
WB2	**Warramunga Arr**	**18.72**	**220**	*e*P	**Pn**	**03 16 54.0**	**-0.2**
WRA	**Warramunga Arr**	**18.73**	**220**	P	**Pn**	**03 16 53.6**	**-0.6**
	1.1nm,0.3s,baz=49,slow=10,SNR=58						
WRA				PcP	PcP	03 21 19.9	+0.5
	0.2nm,0.3s,baz=29,slow=1.8,SNR=10						
WRA				LR	LR	03 25 03.2	
	comp=Z,84nm,19.5s,baz=335,slow=40						
ASAR	**Alice Springs**	**21.82**	**214**	P	**P**	**03 17 27.4**	**+0.7**
	3.7nm,0.3s,mb4.3,baz=48,slow=8.7,SNR=41						
ASAR				PcP	PcP	03 21 25.1	+0.1
	0.6nm,0.5s,baz=22,slow=1.3,SNR=5.6						
FITZ	**Fitzroy Crossi**	**24.25**	**238**	*e*P	**P**	**03 17 51.7**	**+0.8**
	94nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**24.25**	**238**	P	**P**	**03 17 52.0**	**+1.1**
	52nm,0.7s,mb5.1,baz=63,slow=7.2,SNR=194						
STKA	**Stephens Creek**	**26.43**	**191**	*e*P	**P**	**03 18 10.5**	**0.0**
	1.4nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**26.43**	**191**	P	**P**	**03 18 10.3**	**-0.2**
	3.5nm,0.7s,mb4.0,baz=18,slow=6.8,SNR=7.6						
STKA	**Stephens Creek**	**26.43**	**191**	*e*P	**P**	**03 18 10.6**	**+0.1**
	1.3nm,1.1s,mb3.4						
MBWA	**Marble Bar**	**30.59**	**237**	*e*P	**P**	**03 18 49.0**	**+1.3**
	12nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**37.57**	**223**	*e*P	**P**	**03 19 48.0**	**-0.1**
	55nm,1.5s,mb5.1						
KSRS	**Korea Array**	**46.62**	**339**	P	**P**	**03 21 00.7**	**-1.0**
	1.5nm,0.7s,mb4.0,baz=149,slow=9.3,SNR=7.7						
KSRS				LR	LR	03 37 10.4	
	comp=Z,48nm,21.2s,baz=0.1,slow=32						
SONM	**Songino Array**	**64.30**	**331**	P	**P**	**03 23 09.8**	**+1.3**
	1.3nm,0.6s,mb4.1,baz=150,slow=6.3,SNR=7.8						
MKAR	**Makanchi Array**	**77.43**	**320**	P	**P**	**03 24 27.9**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=101,slow=7.5,SNR=2.7						
ZALV	**Zalesovo Beam**	**78.92**	**328**	P	**P**	**03 24 35.0**	**-1.3**
	0.6nm,0.4s,mb3.9,baz=110,slow=6.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**78.92**	**328**	P	**P**	**03 24 35.0**	**-1.3**
GERES	**GERESS Array B**	**121.82**	**326**	PKP	PKPdf	03 31 25.6	-1.2
	0.7nm,0.6s,baz=42,slow=2.2,SNR=7.7						
PLCA	**Paso Flores**	**122.21**	**147**	PKP	PKPdf	03 31 26.7	-1.2
	2.9nm,1.1s,baz=257,slow=2.5,SNR=3.3						
LPAZ	**La Paz**	**138.80**	**123**	PKP	PKPdf	03 31 56.5	-3.4
	1.0nm,0.8s,baz=262,slow=7.1,SNR=3.4						
CPUP	**Villa Florida**	**140.22**	**145**	PKP	PKPdf	03 32 01.3	-0.9
	0.2nm,0.3s,baz=104,slow=0.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**145.14**	**285**	PKPbc	PKPbc	03 32 10.0	-0.9
	2.2nm,0.7s,baz=85,slow=3.3,SNR=19						
DBIC	**Dimbokro**	**152.11**	**273**	PKPbc	PKPbc	03 32 27.5	-1.7
	2.0nm,0.8s,baz=110,slow=20,SNR=4.4						
DBIC				PKPab	PKPab	03 32 38.9	-0.1
	2.9nm,1.0s,baz=63,slow=4.5,SNR=3.0						
DBIC	**Dimbokro**	**152.11**	**273**	PKPbc	PKPbc	03 32 27.5	-1.7
DBIC				PKPab	PKPab	03 32 38.9	-0.1

*NEIC **15** 03:34:48.0,60°.70N×70°.59W,h18km,mb3.7/1, MN3.9(OTT),After OTT.*
*IDC **15** 03:34:52.6±0.8,60°.69N×71°.85W,h0km,mb3.6/5, mb1 4.0/9,mb1mx3.6/31,mbtmp3.8/9,ML3.1/4,Error ellipse: s-maj=12.7km s-min=9.7km az=54.0*

OTT 15 03:34:48.4±0.3,60°.70N×70°.59W,h18km,MN3.9/30, 67km southwest from Quaqtaq, Qc Boothia Ungava Seismic Zone.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUQ	**Kuujjuuaa**	**2.83**	**156**	Pn	Pn	03 35 32.5	-0.1
KUQ				Pg	Pg	03 35 36.0	-6.6
KUQ				Sn	Sn	03 36 10.1	+3.9
KUQ				Sg	Sg	03 36 15.8	-3.5
KUQ	**Kuujjuuaa**	**2.83**	**156**	PN	Pn	03 35 32.5	-0.1
KUQ				PG	Pg	03 35 36.0	-6.6
KUQ				SN	Sn	03 36 10.1	+3.9
KUQ				SG	Sg	03 36 15.8	-3.5
KUQ				Trac		03 36 16.1	
	comp=Z,371nm,0.3s						
FRB	**Frobisher Bay**	**3.20**	**17**	Pn	Pn	03 35 46.4	+8.7
	13nm,0.3s,baz=200,slow=16,SNR=69						
FRB	**Frobisher Bay**	**3.20**	**17**	Pn	Pn	03 35 38.9	+1.3
FRB				Pg	Pg	03 35 46.3	-3.3
FRB				Sn	Sn	03 36 14.3	-0.9
FRB				Lg		03 36 27.1	
FRB	**Frobisher Bay**	**3.20**	**17**	PN	Pn	03 35 38.9	+1.3
FRB				PG	Pg	03 35 46.3	-3.3
FRB				SN	Sn	03 36 14.3	-0.9
FRB				LG		03 36 27.1	
FRB				Trac		03 36 27.4	
	comp=Z,86nm,0.2s						
AKVQ	**Akulivik**	**3.73**	**275**	PN	Pn	03 35 46.1	+1.2
AKVQ				PG	Pg	03 35 54.7	-5.0
AKVQ				SN	Sn	03 36 27.5	-0.8
AKVQ				LG		03 36 44.2	
AKVQ				Trac		03 36 53.1	
	comp=Z,82nm,0.2s						
IVKQ	**Ivujivik**	**3.90**	**299**	PN	Pn	03 35 48.2	+1.0
IVKQ				SN	Sn	03 36 29.9	-2.6
IVKQ				SG	Sg	03 36 47.3	-6.2
IVKQ				Trac		03 36 51.1	
	comp=Z,229nm,0.3s						
INUQ	**Inukjuak**	**4.44**	**243**	PN	Pn	03 35 54.7	0.0
INUQ				SN	Sn	03 36 41.9	-4.0
INUQ				LG		03 37 06.8	
INUQ				Trac		03 37 09.2	
	comp=Z,114nm,0.2s						
SNQN	**Sanikiluaq**	**6.14**	**231**	PN	Pn	03 36 19.7	+1.6
SNQN				SN	Sn	03 37 21.3	-6.4
SNQN				LG		03 37 57.4	
SNQN				Trac		03 38 03.0	
	comp=Z,59nm,0.3s						
SCHQ	**Schefferville**	**6.22**	**160**	Pn	Pn	03 36 27.2	+8.1
	5.9nm,0.3s,baz=349,slow=12,SNR=41						
SCHQ				Pg	Pn	03 36 43.9	+25
	3.4nm,0.3s,baz=340,slow=11,SNR=4.9						
SCHQ				Sn	Sn	03 37 36.5	+6.8
	6.4nm,0.3s,baz=76,slow=16,SNR=3.9						
SCHQ	**Schefferville**	**6.22**	**160**	*e*Pn	Pn	03 36 18.4	-0.7
	15nm,0.4s						
SCHQ				Pg	Pn	03 36 43.9	+25
SCHQ				*e*S	Sn	03 37 25.1	-4.6
SCHQ	**Schefferville**	**6.22**	**160**	PN	Pn	03 36 18.3	-0.9
SCHQ				SN	Sn	03 37 25.4	-4.2
SCHQ				LG		03 37 56.9	
SCHQ				Trac		03 38 05.7	
	comp=Z,53nm,0.3s						
LG4Q	**La Grande 4**	**7.35**	**197**	Pn	Pn	03 36 33.2	-1.3
LG4Q				Sn	Sn	03 37 50.2	-7.1
LG4Q				Lg		03 38 34.6	
LG4Q	**La Grande 4**	**7.35**	**197**	PN	Pn	03 36 33.2	-1.3
LG4Q				SN	Sn	03 37 50.2	-7.1
LG4Q				LG		03 38 34.6	
LG4Q				Trac		03 38 43.2	
	comp=Z,64nm,0.4s						
QILN	**Qililugaq Expl**	**9.18**	**317**	Pn	Pn	03 36 58.5	-1.2
QILN				Sn	Sn	03 38 33.1	-9.3
QILN				Lg		03 39 27.4	
QILN	**Qililugaq Expl**	**9.18**	**317**	PN	Pn	03 36 58.5	-1.2
QILN				SN	Sn	03 38 33.1	-9.3
QILN				LG		03 39 27.4	
QILN				Trac		03 39 47.5	
	comp=Z,22nm,0.4s						
SRLN	**Sarcpa Lake, N**	**9.56**	**331**	Pn	Pn	03 37 02.4	-2.5
SRLN				Sn	Sn	03 38 43.2	-8.4
SRLN				Lg		03 39 39.6	
SRLN	**Sarcpa Lake, N**	**9.56**	**331**	PN	Pn	03 37 02.4	-2.5
SRLN				SN	Sn	03 38 43.2	-8.4
SRLN				LG		03 39 39.6	
SRLN				Trac		03 39 46.3	
	comp=Z,91nm,0.6s						
SILO	**Sutton Inlier**	**9.88**	**237**	Pn	Pn	03 37 06.9	-2.5
SILO				Sn	Sn	03 38 49.1	-11
SILO				Lg		03 39 49.0	
SILO	**Sutton Inlier**	**9.88**	**237**	PN	Pn	03 37 06.9	-2.5
SILO				SN	Sn	03 38 49.1	-11
SILO				LG		03 39 49.0	
SILO				Trac		03 40 03.6	
	comp=Z,21nm,0.4s						
ILON	**Igloolik, Nuna**	**9.89**	**336**	Pn	Pn	03 37 06.5	-2.9
ILON				Sn	Sn	03 38 51.6	-8.1
ILON				Lg		03 39 47.2	
ILON	**Igloolik, Nuna**	**9.89**	**336**	PN	Pn	03 37 06.5	-2.8
ILON				SN	Sn	03 38 51.6	-8.1
ILON				LG		03 39 47.2	
ILON				Trac		03 39 57.5	
	comp=Z,36nm,0.4s						
WAGN	**Wager Bay**	**9.92**	**310**	PN	Pn	03 37 08.4	-1.4
WAGN				SN	Sn	03 38 50.7	-10
WAGN				LG		03 39 55.5	
SEDN	**First Sedna Si**	**10.02**	**294**	PN	Pn	03 37 09.4	-1.7
SEDN				SN	Sn	03 38 53.0	-10
SEDN				LG		03 39 57.5	
SEDN				Trac		03 40 08.3	
	comp=Z,46nm,0.8s						
LAIN	**Lailor River,**	**10.04**	**333**	PN	Pn	03 37 10.1	-1.3
LAIN				SN	Sn	03 38 55.8	-7.6
LAIN				LG		03 39 51.8	
LAIN				Trac		03 39 59.3	
	comp=Z,81nm,0.8s						
JOSN	**Second Sedna S**	**10.16**	**293**	PN	Pn	03 37 11.5	-1.5
JOSN				SN	Sn	03 38 55.5	-11
JOSN				LG		03 40 01.3	
JOSN				Trac		03 40 10.8	
	comp=Z,46nm,0.7s						
MNQ	**Manicouagan**	**10.25**	**173**	Pn	Pn	03 37 13.0	-1.2
MNQ				Sn	Sn	03 38 58.4	-10
MNQ				Lg		03 40 02.1	
MNQ	**Manicouagan**	**10.25**	**173**	PN	Pn	03 37 13.0	-1.2
MNQ				SN	Sn	03 38 58.4	-10
MNQ				LG		03 40 02.1	
MNQ				Trac		03 40 13.9	
	comp=Z,32nm,0.4s						
NUNN	**Nunuq Camp, NU**	**10.34**	**305**	PN	Pn	03 37 13.0	-2.5
NUNN				SN	Sn	03 39 00.8	-10
NUNN				LG		03 40 04.3	
NUNN				Trac		03 40 11.3	
	comp=Z,38nm,0.5s						
GIFN	**Gifford Fjord,**	**10.38**	**339**	PN	Pn	03 37 13.7	-2.4
GIFN				SN	Sn	03 39 03.2	-8.5
GIFN				LG		03 40 04.1	
GIFN				Trac		03 40 10.7	
	comp=Z,39nm,0.6s						
AP3N	**Apex site 3 Nu**	**10.52**	**332**	PN	Pn	03 37 16.6	-1.4
AP3N				SN	Sn	03 39 05.4	-10
AP3N				LG		03 40 09.0	
AP3N				Trac		03 40 23.6	
	comp=Z,28nm,0.5s						
VIMO	**Victor Mine**	**10.69**	**228**	PN	Pn	03 37 19.4	-0.8
VIMO				SN	Sn	03 39 09.7	-10
VIMO				LG		03 40 13.1	
VIMO				Trac		03 40 25.1	
	comp=Z,18nm,0.4s						
SMQ	**Clarke City**	**10.73**	**166**	PN	Pn	03 37 19.1	-1.8
SMQ				SN	Sn	03 39 09.1	-11
SMQ				LG		03 40 13.8	
SMQ				Trac		03 40 25.9	
	comp=Z,40nm,0.5s						
SFJD	**Kangerlussuaq**	**10.80**	**46**	SN	Sn	03 39 17.4	-4.5
CHGQ	**Chibougamau**	**11.03**	**193**	PN	Pn	03 37 23.5	-1.5
CHGQ				SN	Sn	03 39 14.3	-13
CHGQ				LG		03 40 26.0	
CHGQ				Trac		03 40 33.4	
	comp=Z,27nm,0.4s						
ARVN	**Arviat, NU**	**11.42**	**282**	PN	Pn	03 37 26.6	-3.7
ARVN				SN	Sn	03 39 27.8	-9.4
ARVN				LG		03 40 40.5	
ARVN				Trac		03 40 47.1	
	comp=Z,67nm,1.0s						
BULN	**Bullion Camp,**	**11.51**	**309**	PN	Pn	03 37 30.2	-1.2
BULN				SN	Sn	03 39 32.0	-7.2
BULN				LG		03 40 36.6	
BULN				Trac		03 40 49.5	
	comp=Z,32nm,0.6s						
CNQ	**Baie Comeau**	**11.52**	**172**	PN	Pn	03 37 29.3	-2.4
CNQ				SN	Sn	03 39 24.5	-15
CNQ				L

RES SN Sn 03 41 27.1 -15
RES LG 03 43 15.3
RES Trac 03 43 26.2
comp=Z,50nm,1.1s
ULM Lac du Bonnet 17.62 245 Pn Pn 03 38 48.4 -4.2
0.2nm,0.3s,baz=42,slow=16,SNR=2.1
ULM Sn Sn 03 41 48.0 -20
0.5nm,0.3s,baz=104,slow=22,SNR=2.9
ULM Lg 03 43 44.6
0.7nm,0.3s,baz=342,slow=19,SNR=2.1
ULM Lac du Bonnet 17.62 245 Pn Pn 03 38 48.4 -4.2
ULM Sn Sn 03 41 48.0 -20
ULM Lac du Bonnet 17.62 245 PN Pn 03 38 53.7 +1.1
FFC Flin Flon 17.68 264 Pn Pn 03 38 49.1 -4.1
FFC Sn Sn 03 41 52.0 -18
FFC Lg 03 43 49.5
FFC Flin Flon 17.68 264 PN Pn 03 38 49.1 -4.1
FFC SN Sn 03 41 52.0 -18
FFC LG 03 43 49.5
FFC Trac 03 44 14.2
comp=Z,4.7nm,0.5s
AGMN Agassiz Refuge 19.07 241 *e*P Pn 03 39 10.1 -0.2
2.2nm,0.4s
AGMN *e*S Sn 03 42 25.6 -18
YKW3 Yellowknife Ar 20.70 294 Pn P 03 39 27.0 -0.1
YKW3 Yellowknife Ar 20.70 294 PN P 03 39 27.0 -0.1
YKA Yellowknife Ar 20.71 294 P P 03 39 26.5 -0.7
0.6nm,0.5s,baz=76,slow=10,SNR=12
YKA S S 03 43 15.5 -1.9
0.2nm,0.4s,baz=78,slow=24,SNR=4.3
YKA Lg 03 45 29.1
2.8nm,0.8s,baz=76,slow=28,SNR=11
YKA Yellowknife Ar 20.71 294 P P 03 39 26.6 -0.7
YKA S S 03 43 15.5 -1.9
INK Inuvik 26.94 313 P P 03 40 31.2 +3.1
0.7nm,0.8s,baz=13,slow=4.1,SNR=2.6
INK Inuvik 26.94 313 P P 03 40 31.2 +3.1
PDAR Pinedale Array 29.46 250 P P 03 40 51.8 +0.9
0.5nm,0.4s,baz=44,slow=6.6,SNR=5.5
NVAR Mina Array Bea 36.98 255 P P 03 41 58.9 +2.6
0.1nm,0.3s,baz=43,slow=6.3,SNR=3.8
ARCES ARCESS Array B 37.19 35 P P 03 42 08.4 +11
1.8nm,1.0s,baz=325,slow=8.8,SNR=3.2

*ISCJB **15** 04:06:29.2±1.0,31°.72N±0°.03×104°.40E±0°.05,h10km±7km, mb3.9/21,MS3.0/4,Error ellipse: s-maj=6.6km s-min=5.2km az=160.5*
*IDC **15** 04:06:29.1±0.7,31°.71N×104°.44E,h0km,mb3.9/17, mb1 4.0/18,mb1mx3.9/29,mbtmp3.9/18,ML3.4/1,MS3.1/4, Ms1 3.1/4,ms1mx2.7/28,Error ellipse: s-maj=30.7km s-min=14.8km az=49.0*
*BJI **15** 04:06:29.6,31°.75N×104°.42E,h10km,mB4.7/1,mb4.2/3, ML3.8/15,Ms3.8/7,Ms7 3.4/8*
*NEIC **15** 04:06:31.0±0.4,31°.76N×104°.43E,h10km,mb4.1/4,Error ellipse: s-maj=15.4km s-min=7.5km az=220.0*
ISC 15 04:06:31.4±1.0,31°.66N±0°.03×104°.33E±0°.05,h13km±6km, n41,σ1.9 07/51,mb3.9/21,MS3.0/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.89**	**213**	Pg	**Pg**	**04 06 48.4**	**-0.1**
CD2				Sg	**Sg**	**04 07 02.8**	**+2.7**
CD2				smax			
comp=N,6μm,0.6s							
LZH	**Lanzhou**	**4.44**	**355**	*e*Pn	**Pn**	**04 07 40.3**	**+1.9**
LZH				Sn	**Sn**	**04 08 31.8**	**+1.8**
LZH				Sg	**Sg**	**04 08 52.5**	**-1.4**
LZH				smax			
comp=N,320nm,1.0s							
LZH				smax			
comp=E,140nm,0.8s							
LZH				LR	LR		
comp=E,1μm,5.6s							
LZH				LR	LR		
comp=Z,2μm,7.0s							
XAN	**Xi'an**	**4.54**	**57**	Pn	**Pn**	**04 07 39.8**	**0.0**
XAN				Pg	**Pg**	**04 07 51.3**	**-7.0**
XAN				Sn	**Sn**	**04 08 36.8**	**+4.3**
XAN				Sg	**Sg**	**04 08 49.6**	**-7.6**
XAN				smax			
comp=N,220nm,1.1s							
XAN				smax			
comp=E,94nm,0.9s							
XAN				LR	LR		
comp=N,320nm,4.5s							
XAN				LR	LR		
comp=E,150nm,5.5s							
XAN				LR	LR		
comp=Z,130nm,6.8s							
ENH	**Enshi**	**4.64**	**106**	*e*Pn	**Pn**	**04 07 42.1**	**+0.8**
ENH				*e*Sg	**Sg**	**04 08 54.2**	**-6.3**
GYA	**Guiyang**	**5.57**	**158**	Pg	**Pb**	**04 08 05.9**	**-2.6**
GYA				Sn	**Sn**	**04 08 57.6**	**-0.2**
GYA				smax			
comp=N,200nm,0.9s							
GYA				smax			
comp=E,250nm,0.9s							
KMI	**Kunming**	**6.66**	**193**	Pn	**Pn**	**04 08 12.9**	**+4.0**
KMI				Sn	**Sn**	**04 09 21.5**	**-3.2**
KMI				smax			
comp=N,38nm,1.3s							
KMI				smax			
comp=E,21nm,1.1s							
KMI				LR	LR		
comp=N,490nm,7.1s							
KMI				LR	LR		
comp=E,180nm,7.4s							
KMI				LR	LR		
comp=Z,200nm,7.1s							
WHN	**Wuhan**	**8.67**	**95**	P	**Pn**	**04 08 41.5**	**+5.0**
WHN				S	**Sn**	**04 10 13.9**	**-0.2**
WHN				LR	LR		
comp=Z,940nm,7.7s							
NJ2	**Nanjing**	**12.36**	**84**	*e*P	**Pn**	**04 09 28.6**	**+1.5**
NJ2				pP		04 09 32.1	
NJ2				sP		04 09 35.6	
NJ2				PP		04 09 38.8	
NJ2				S	**Sn**	**04 11 47.3**	**+2.6**
NJ2				sS		04 11 53.3	
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
NJ2				pmax	pmax		
comp=Z,60nm,3.8s							
NJ2				LR	LR		
comp=N,250nm,15.0s							
NJ2				LR	LR		
comp=E,150nm,14.9s							
NJ2				LR	LR		
comp=Z,240nm,15.5s							
SONM	**Songino Array**	**16.24**	**5**	Pn	**Pn**	**04 10 17.7**	**-1.4**
comp=Z,0.1nm,0.3s,baz=181,slow=13,SNR=5.8							
KSRS	**Korea Array**	**20.25**	**67**	P	**P**	**04 11 06.1**	**-0.4**
comp=Z,2.4nm,0.8s,baz=256,slow=10,SNR=9.9							
KSRS				LR	LR	04 18 11.6	
comp=Z,23nm,20.1s,MS2.5,baz=145,slow=35							
MK31	**Makanchi Array**	**22.69**	**318**	*e*P	**P**	**04 11 32.7**	**+0.1**
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**04 11 32.5**	**-0.1**
comp=Z,3.1nm,0.9s,mb3.7,baz=115,slow=11,SNR=23							
MKAR				LR	LR	04 21 17.1	
comp=Z,93nm,19.2s,MS3.2,baz=182,slow=39							
MKAR	**Makanchi Array**	**22.69**	**318**	P	**P**	**04 11 32.5**	**-0.1**
MKAR				LR	LR	04 21 17.1	
TKM2	**Tokmak 2**	**25.35**	**304**	*e*P	**P**	**04 11 59.9**	**+1.9**
comp=Z,6.9nm,1.5s,mb4.0							
UCH	**Uchtor**	**25.94**	**302**	*e*P	**P**	**04 12 04.8**	**+1.4**
comp=Z,4.2nm,1.0s,mb3.9							
AAK	**Ala-Archa**	**26.05**	**303**	LR	LR	04 24 16.4	
comp=Z,77nm,20.3s,MS3.2,baz=176,slow=41							
ZALV	**Zalesovo Beam**	**26.31**	**334**	P	**P**	**04 12 06.1**	**-0.5**
comp=Z,2.0nm,0.7s,mb3.8,baz=135,slow=10,SNR=7.9							
ZALV				LR	LR	04 22 46.4	
comp=Z,28nm,19.4s,MS2.8,baz=68,slow=37							
KURK	**Kurchatov**	**26.92**	**322**	P	**P**	**04 12 11.6**	**-0.6**
comp=Z,1.6nm,0.8s,mb3.6,baz=127,slow=8.8,SNR=13							
KURK	**Kurchatov**	**26.92**	**322**	P	**P**	**04 12 11.6**	**-0.6**
BVAR	**Borovoye Array**	**32.48**	**321**	P	**P**	**04 13 01.5**	**+0.1**
comp=Z,0.7nm,0.6s,mb3.7,baz=132,slow=6.6,SNR=4.0							
ABKAR	**Akbulak array**	**37.45**	**311**	*e*P	**P**	**04 13 44.4**	**0.0**
comp=Z,0.9nm,0.6s,mb3.8							
AKTK	**Aktyubinsk**	**38.90**	**313**	P	**P**	**04 13 56.1**	**-0.4**
AKTO	**Aktyubinsk**	**38.90**	**313**	P	**P**	**04 13 56.1**	**-0.4**
comp=Z,0.8nm,0.7s,mb3.6,baz=112,slow=16,SNR=4.1							
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**04 16 14.7**	**+0.5**
comp=Z,0.8nm,0.9s,mb3.8,baz=106,slow=7.8,SNR=3.0							
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	**04 16 14.8**	**-0.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=76,slow=5.1,SNR=5.8							
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	**04 16 14.8**	**-0.4**
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**04 16 16.9**	**-0.7**
comp=Z,0.4nm,0.4s,mb3.8,baz=67,slow=7.2,SNR=3.4							
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**04 16 17.0**	**-1.0**
comp=Z,1.8nm,0.6s,mb4.3,baz=72,slow=8.2,SNR=6.1							
WRA	**Warramunga Arr**	**58.83**	**147**	P	**P**	**04 16 29.1**	**-0.6**
comp=Z,1.6nm,0.5s,mb4.3,baz=340,slow=7.9,SNR=34							
KWP	**Kalwaria Pacla**	**61.47**	**313**	*e*P	**P**	**04 16 47.1**	**-0.5**
comp=Z,8.1nm,1.0s,mb4.8							
ASAR	**Alice Springs**	**61.86**	**149**	P	**P**	**04 16 50.1**	**-0.3**
comp=Z,0.8nm,0.5s,mb4.1,baz=335,slow=6.5,SNR=12							
NOA	**NORSAR Array B**	**64.30**	**327**	P	**P**	**04 17 06.7**	**+0.4**
comp=Z,0.9nm,0.9s,mb3.8,baz=71,slow=6.7,SNR=3.0							
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**04 17 26.7**	**+1.0**
comp=Z,0.1nm,0.5s,mb3.1,baz=79,slow=6.9,SNR=4.5							
CDF	**Champ du Feu**	**71.36**	**316**	*e*P	**P**	**04 17 50.6**	**-0.3**
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**04 18 00.9**	**0.0**
comp=Z,5.4nm,0.8s,mb4.2							
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**04 18 00.8**	**-0.1**
TCF	**Toulx Ste Croi**	**75.40**	**316**	*e*P	**P**	**04 18 14.2**	**-0.6**
CAF	**Calviac**	**76.18**	**314**	*e*P	**P**	**04 18 19.0**	**-0.3**
YKA	**Yellowknife Ar**	**81.11**	**17**	P	**P**	**04 18 44.9**	**-1.2**
comp=Z,0.4nm,0.5s,mb3.6,baz=329,slow=5.4,SNR=11							
SCHQ	**Schefferville**	**93.53**	**355**	P	**P**	**04 19 45.6**	**-1.2**
comp=Z,3.2nm,1.0s,mb4.7,baz=265,slow=18,SNR=3.6							
TORD	**Torodi Ar. Bea**	**93.65**	**288**	P	**P**	**04 19 49.7**	**+1.6**
comp=Z,0.6nm,1.1s,mb4.0,baz=85,slow=2.7,SNR=2.7							

*IDC **15** 04:27:28.5±0.7,31°.22N×103°.76E,h0km,mb4.3/15, mb1 4.4/16,mb1mx4.2/26,mbtmp4.3/16,ML3.7/1,MS3.4/7, Ms1 3.4/7,ms1mx3.2/29,Error ellipse: s-maj=30.7km s-min=13.6km az=53.0*
*ISCJB **15** 04:27:30.4±0.8,31°.27N±0°.03×103°.89E±0°.04,h24km±6km, mb4.3/27,MS3.4/7,Error ellipse: s-maj=5.4km s-min=4.8km az=24.0*
*NEIC **15** 04:27:30.1±0.3,31°.28N×103°.96E,h14km,mB4.6/12,mb4.6/20, ML4.4/19,Ms4.3/23,Ms7 4.0/21*
*MOS **15** 04:27:31.7±0.6,31°.25N×103°.83E,h33km,mb4.6/22,Error ellipse: s-maj=15.7km s-min=7.1km az=103.5*
ISC 15 04:27:31.4±0.7,31°.27N±0°.02×103°.86E±0°.03,h15km±4km, n97,σ0.9 95/109,mb4.3/27,MS3.4/7,14C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**194**	Pg	**Pg**	**04 27 37.9**	**-1.0**
CD2				Sg	**Sg**	**04 27 43.8**	**-0.1**
CD2				smax			
comp=N,66μm,0.9s							
LZH	**Lanzhou**	**4.81**	**360**	*e*Pn	**Pn**	**04 28 47.0**	**+3.9**
LZH				Pg	**Pg**	**04 28 59.3**	**-4.1**
LZH				Sn	**Sn**	**04 29 45.4**	**+6.9**
LZH				Sg	**Sg**	**04 30 06.3**	**+0.6**
LZH				smax			
comp=N,470nm,0.8s							
LZH				smax			
comp=E,450nm,0.6s							
LZH				LR	LR		
comp=N,2μm,5.6s							
LZH				LR	LR		
comp=Z,2μm,6.5s							
ENH	**Enshi**	**4.94**	**100**	*e*Pn	**Pn**	**04 28 45.9**	**+0.9**
comp=Z,264nm,0.6s							
ENH				*e*S	**Sg**	**04 30 07.9**	**-2.1**
XAN	**Xi'an**	**5.08**	**56**	Pn	**Pn**	**04 28 46.8**	**-0.2**
XAN				Pg	**Pg**	**04 29 02.0**	**-6.7**
XAN				Sn	**Sn**	**04 29 43.8**	**-1.6**
XAN				Sg	**Sb**	**04 30 05.3**	**+4.4**
XAN				smax			
comp=N,890nm,0.7s							
XAN				smax			
comp=E,480nm,1.0s							
XAN				LR	LR		
comp=N,2μm,11.3s							
XAN				LR	LR		
comp=E,370nm,11.3s							
XAN				LR	LR		
comp=Z,310nm,10.8s							
GYA	**Guiyang**	**5.38**	**152**	Pn	**Pn**	**04 28 54.9**	**+3.8**
GYA				smax			
comp=N,470nm,0.8s							
GYA				smax			
comp=E,420nm,0.8s							
KMI	**Kunming**	**6.20**	**189**	Pn	**Pn**	**04 29 03.3**	**+1.0**
KMI				Sn	**Sn**	**04 30 14.9**	**+2.0**
KMI				smax			
comp=N,77nm,1.6s							
KMI				smax			
comp=E,92nm,1.1s							
KMI				LR	LR		
comp=N,1μm,8.0s							
KMI				LR	LR		
comp=E,2μm,7.6s							
KMI				LR	LR		
comp=Z,850nm,13.7s							
GTA	**Gaotai**	**8.77**	**339**	*e*P	**Pn**	**04 29 39.8**	**+2.2**
GTA				pP		04 29 43.5	
GTA				sP		04 29 45.8	
GTA				S	**Sn**	**04 31 15.4**	**-0.7**
GTA				pmax	pmax		
comp=Z,5.0nm,1.2s							
GTA				pmax	pmax		
comp=Z,78nm,4.2s							
GTA				LR	LR		
comp=N,650nm,14.3s							
GTA				LR	LR		
comp=E,740nm,14.3s							
GTA				LR	LR		
comp=Z,720nm,14.9s							
WHN	**Wuhan**	**9.04**	**92**	P	**Pn**	**04 29 42.3**	**+1.0**
WHN				S	**Sn**	**04 31 17.3**	**-5.5**
WHN				LR	LR		
comp=N,3μm,7.1s							
WHN				LR	LR		
comp=E,2μm,7.8s							
WHN				LR	LR		
comp=Z,2μm,7.7s							
BTO	**Baotou**	**10.57**	**26**	*e*P	Px	04 30 20.8	
BTO				S	Sx	04 32 15.8	
BTO				LR	LR		
comp=N,270nm,10.7s							
BTO				LR	LR		
comp=E,310nm,12.7s							
HHC	**Hu-ho-hao-te**	**11.41**	**31**	*e*P	**Pn**	**04 30 13.8**	**+0.1**
HHC				pP		04 30 18.1	
HHC				PP		04 30 23.1	
HHC				S	**Sn**	**04 32 22.3**	**+1.5**
HHC				sS		04 32 28.6	
HHC				SS		04 32 35.9	
HHC				pmax	pmax		
comp=Z,15nm,1.0s							
HHC				pmax	pmax		
comp=Z,250nm,6.6s							
HHC				LR	LR		
comp=N,470nm,4.8s							
HHC				LR	LR		
comp=E,350nm,5.5s							
HHC				LR	LR		
comp=Z,340nm,5.8s							
SHL	**Shillong**	**11.97**	**245**	*e*P	**Pn**	**04 30 24.0**	**+2.5**
TIA	**Tai'an**	**12.09**	**62**	*e*P	**Pn**	**04 30 24.6**	**+1.6**
NJ2	**Nanjing**	**12.80**	**83**	*e*P	**Pn**	**04 30 34.8**	**+2.1**
NJ2				pP		04 30 38.3	
NJ2				sP		04 30 40.9	
NJ2				PP		04 30 44.8	
NJ2				S	**Sn**	**04 33 01.0**	**+6.1**
NJ2				sS		04 33 07.0	
NJ2				pmax	pmax		
comp=Z,20nm,0.6s							
NJ2				pmax	pmax		
comp=Z,80nm,3.5s							
NJ2				LR	LR		
comp=N,250nm,10.2s							
NJ2				LR	LR		
comp=E,660nm,8.1s							
NJ2				LR	LR		
comp=Z,550nm,9.4s							
BJI	**Beijing**	**13.29**	**45**	P	**Pn**	**04 30 31.9**	**-7.5**
BJI				pmax	pmax		
comp=Z,15nm,0.5s							
BJI				LR	LR		
comp=N,800nm,11.7s							
BJI				LR	LR		
comp=E,550nm,15.4s							
QIZ	**Qiongzhong**	**13.33**	**155**	P	**Pn**	**04 30 38.6**	**-1.4**
QIZ				S	**Sn**	**04 33 08.0**	**0.0**
QIZ				LR	LR		
comp=N,430nm,6.3s							
QIZ				LR	LR		
comp=Z,760nm,8.0s							
GUN	**Gumba**	**16.00**	**262**	*e*P	**Pn**	**04 31 16.4**	**+0.6**
comp=Z,35nm,0.8s							
PKI	**Pulchoki**	**16.49**	**262**	*e*P	**Pn**	**04 31 21.5**	**-0.7**
comp=Z,27nm,0.6s							
PKIN	**Phulchoki**	**16.50**	**262**	*e*P	**Pn**	**04 31 22.6**	**+0.3**
comp=Z,48nm,0.7s							
KKN	**Kakani**	**16.54**	**263**	*e*P	**Pn**	**04 31 22.9**	**+0.1**
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**04 31 24.2**	**+0.1**
comp=Z,0.3nm,0.3s,baz=187,slow=13,SNR=51							
SONM				LR	LR	04 38 41.9	
comp=Z,130nm,21.1s,baz=11,slow=40							
DMN	**Daman**	**16.74**	**262**	*e*P	**Pn**	**04 31 25.6**	**+0.3**
comp=Z,42nm,0.8s							
ULN	**Ulaanbaatar**	**16.76**	**7**	*e*P	**Pn**	**04 31 24.9**	**-0.4**
ULN				pmax	pmax		
comp=Z,12nm,0.8s							
ULN	**Ulaanbaatar**	**16.76**	**7**	*e*Pn	**Pn**	**04 31 24.9**	**-0.5**
comp=Z,12nm,0.8s							
WMQ	**Urumqi**	**17.89**	**319**	*e*P	**Pn**	**04 31 39.3**	**-0.2**
WMQ				pmax	pmax		
comp=Z,23nm,1.0s							
WMQ				LR	LR		
comp=N,280nm,21.0s							
WMQ				LR	LR		
comp=E,180nm,20.0s							
WMQ				LR	LR		
comp=Z,120nm,13.0s							
ZAK	**Zakamensk**	**19.10**	**359**	*e*P	**Pn**	**04 31 52.9**	**-1.3**
ZAK				pmax	pmax		
comp=Z,8.0nm,0.9s							
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**04 32 09.2**	**+1.7**
TLY				*e*		04 32 23.9	
TLY				pmax	pmax		
comp=Z,10.0nm,0.9s							
TLY				MLR	MLR		
comp=Z,172nm,11.0s,MS3.7							
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**04 32 09.4**	**+1.9**
comp=Z,8.5nm,0.8s							
MOY	**Mondy**	**20.49**	**355**	*e*P	**P**	**04 32 10.2**	**+1.7**
MOY				pmax	pmax		
comp=Z,31nm,2.6s							
KS15	**Wonju Array Si**	**20.74**	**66**	*e*P	**P**	**04 32 12.3**	**+1.0**
KSRS	**Korea Array**	**20.77**	**66**	P	**P**	**04 32 12.4**	**+0.7**
comp=Z,4.9nm,0.6s,baz=257,slow=9.9,SNR=19							
KSRS				LR	LR	04 39 53.2	
comp=Z,111nm,20.5s,MS3.2,baz=5.7,slow=36							
KSRS	**Korea Array**	**20.77**	**66**	P	**P**	**04 32 12.4**	**+0.7**
KSRS				pmax	pmax		
comp=Z,5.0nm,0.6s							
KSRS				MLR	MLR		
comp=Z,111nm,20.5s,MS3.2							
IRK	**Irkutsk**	**20.96**	**1**	*e*P	**P**	**04 32 15.1**	**+1.5**
IRK				pmax	pmax		
comp=Z,163nm,0.8s							
HIA	**Hailar**	**21.60**	**29**	*e*P	**P**	**04 32 20.5**	**0.0**
HIA				pmax	pmax		
comp=Z,8.0nm,0.6s							
HIA	**Hailar**	**21.60**	**29**	*e*P	**P**	**04 32 20.5**	**0.0**
comp=Z,7.7nm,0.6s,mb4.3							
DDI	**Dehra Dun**	**22.18**	**274**	*ex*	x	04 32 26.0	
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**04 32 32.5**	**0.0**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**04 32 33.0**	**+0.5**
comp=Z,7.9nm,0.7s,mb4.2,baz=122,slow=12,SNR=50							
MKAR				LR	LR	04 42 21.1	
comp=Z,47nm,20.2s,MS2.9,baz=330,slow=39							
MKAR	**Makanchi Array**	**22.72**	**319**	*ce*P	**P**	**04 32 33.0**	**+0.5**
MKAR				pmax	pmax		
comp=Z,8.0nm,0.7s							
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**04 32 33.0**	**+0.5**
MKAR				LR	LR	04 42 21.1	
MDJ	**Mudanjiang**	**24.16**	**49**	P	**P**	**04 32 46.5**	**-0.2**
MDJ				pmax	pmax		
comp=Z,7.0nm,1.4s,mb3.9							
MDJ				pmax	pmax		
comp=Z,72nm,4.9s							
AAK	**Ala-Archa**	**25.94**	**304**	LR	LR	04 44 12.8	
comp=Z,122nm,18.3s,MS3.5,baz=91,slow=39							
ZAA0	**Zalesovo Array**	**26.48**	**334**	*e*P	**P**	**04 33 07.3**	**-0.5**
ZALV	**Zalesovo Beam**	**26.48**	**334**	P	**P**	**04 33 07.8**	**0.0**
comp=Z,9.8nm,0.7s,mb4.4,baz=134,slow=8.5,SNR=41							
ZALV				LR	LR	04 43 50.7	
comp=Z,101nm,18.2s,MS3.4,baz=228,slow=37							
ZALV	**Zalesovo Beam**	**26.48**	**334**	P	**P**	**04 33 07.8**	**0.0**
ZALV				pmax	pmax		
comp=Z,10.0nm,0.7s,mb4.5							
ZALV				MLR	MLR		
comp=Z,101nm,18.2s,MS3.4							
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**04 33 12.2**	**-0.2**
comp=Z,12nm,0.9s,mb4.4,baz=127,slow=9.6,SNR=44							
KURK	**Kurchatov**	**26.99**	**323**	*ce*P	**P**	**04 33 11.3**	**-1.1**
KURK				pmax	pmax		
comp=Z,16nm,1.2s,mb4.4							
KURK	**Kurchatov**	**26.99**	**323**	*e*P	**P**	**04 33 12.0**	**-0.4**
comp=Z,20nm,1.3s,mb4.5							
KLR	**Kul'dur**	**27.60**	**41**	*e*P	**P**	**04 33 14.8**	**-3.1**
NVS	**Novosibirsk**	**27.76**	**334**	*e*P	**P**	**04 33 19.2**	**-0.1**
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**04 34 01.4**	**0.0**
comp=Z,1.4nm,0.6s,mb4.1,baz=122,slow=11,SNR=8.3							
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**04 34 01.4**	**-0.1**
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BRVK	**Borovoye**	**32.61**	**322**	*d iP*	**P**	**04 34 02.6**	**+0.5**
BRVK				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.4							
BRVK	**Borovoye**	**32.61**	**322**	*e*P	**P**	**04 34 02.4**	**+0.3**
comp=Z,1.7nm,0.6s,mb4.2							
ABKAR	**Akbulak array**	**37.41**	**312**	*e*P	**P**	**04 34 42.8**	**-0.8**
comp=Z,0.5nm,0.4s,mb3.7							
ARU	**Arti**	**40.18**	**322**	*c iP*	**P**	**04 35 06.1**	**-0.6**
ARU						04 36 36.3	
ARU				S	**S**	**04 41 12.4**	**-0.2**
ARU				SS	SS	04 44 09.8	-0.6
ARU				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.5							
BILL	**Bilibino**	**51.12**	**25**	*e*P	**P**	**04 36 32.1**	**-0.9**
BILL				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
BRTR	**Keskin Array B**	**56.48**	**299**	P	**P**	**04 37 11.8**	**-0.9**
comp=Z,1.0nm,0.9s,mb3.9,baz=116,slow=5.6,SNR=4.5							
BRTR	**Keskin Array B**	**56.48**	**299**	*ce*P	**P**	**04 37 13.1**	**+0.4**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.9s							
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**04 37 15.4**	**-0.6**
comp=Z,2.3nm,0.5s,mb4.4,baz=92,slow=7.5,SNR=29							
ARCES				LR	LR	05 03 53.9	
comp=Z,47nm,19.4s,MS3.6,baz=277,slow=38							
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**04 37 15.5**	**-0.6**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.5s							
ARCES				MLR	MLR		
comp=Z,47nm,19.4s							
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**04 37 17.4**	**-0.8**
comp=Z,2.5nm,0.6s,mb4.4,baz=73,slow=6.4,SNR=6.3							
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**04 37 17.4**	**-0.8**
FINES				pmax	pmax		
comp=Z,3.0nm,0.6s							
FINES	**FINESS Array B**	**57.32**	**326**	P	**P**	**04 37 17.4**	**-0.8**
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**04 37 28.7**	**+0.1**
WRAB				pmax	pmax		
comp=Z,8.0nm,0.7s,mb4.9							
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**04 37 28.7**	**+0.1**
comp=Z,8.4nm,0.7s,mb4.9							
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**04 37 28.5**	**-0.1**
comp=Z,5.3nm,0.6s,mb4.8,baz=338,slow=7.3,SNR=54							
WRA	**Warramunga Arr**	**58.72**	**146**	P	**P**	**04 37 28.5**	**-0.1**
WRA				pmax	pmax		
comp=Z,5.0nm,0.6s							
KWP	**Kalwaria Pacla**	**61.45**	**313**	*e*P	**P**	**04

NOA	**NORSAR Array B**	**64.41**	**327**	P	**P**	**04 38 05.2**	**-1.3**
	comp=Z,2.4nm,0.7s,mb4.3,baz=74,slow=6.6,SNR=12						
NOA				LR	LR	05 05 45.2	
	comp=Z,18nm,18.7s,MS3.3,baz=45,slow=36						
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**04 38 24.7**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.7,baz=65,slow=6.3,SNR=6.7						
COLD	**Coldfoot**	**67.41**	**24**	*e*P	**P**	**04 38 25.7**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.6						
COLA	**College**	**69.37**	**26**	*e*P	**P**	**04 38 38.2**	**+0.2**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
COLA	**College**	**69.37**	**26**	*e*P	**P**	**04 38 38.1**	**+0.1**
	comp=Z,5.2nm,0.8s,mb4.5						
KDAK	**Kodiak Island**	**70.82**	**33**	*i* P	**P**	**04 38 46.7**	**-0.3**
CDF	**Champ du Feu**	**71.36**	**316**	⇑*i*P	**P**	**04 38 49.5**	**-0.9**
INK	**Inuvik**	**72.07**	**19**	*e*P	**P**	**04 38 53.8**	**-0.6**
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
INK	**Inuvik**	**72.07**	**19**	*e*P	**P**	**04 38 53.8**	**-0.6**
	comp=Z,5.3nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**72.26**	**147**	P	**P**	**04 38 55.4**	**-0.6**
	comp=Z,2.1nm,0.7s,mb4.2,baz=344,slow=7.4,SNR=2.9						
LPG	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.2**	**-0.1**
	comp=Z,11nm,0.7s,mb4.6						
LPG	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.2**	**-0.1**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LPG	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.2**	**-0.1**
	comp=Z,5.6nm,0.7s,mb4.6						
LPL	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.1**	**-0.2**
	comp=Z,8.9nm,0.6s,mb4.6						
LPL	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.1**	**-0.2**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.99**	**313**	⇑*i*P	**P**	**04 39 00.1**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.6						
SMF	**Signal de Mont**	**74.23**	**315**	⇑*i*P	**P**	**04 39 06.6**	**-1.0**
	comp=Z,5.4nm,0.7s,mb4.3						
SMF	**Signal de Mont**	**74.23**	**315**	⇑*i*P	**P**	**04 39 06.6**	**-1.0**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SMF	**Signal de Mont**	**74.23**	**315**	⇑*i*P	**P**	**04 39 06.6**	**-1.0**
	comp=Z,2.7nm,0.7s,mb4.3						
TCF	**Toulx Ste Croi**	**75.39**	**315**	*e*P	**P**	**04 39 13.6**	**-0.7**
CAF	**Calviac**	**76.17**	**314**	*e*P	**P**	**04 39 18.4**	**-0.3**
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**04 39 47.8**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.2,baz=330,slow=5.2,SNR=35						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**04 39 47.8**	**-0.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**04 39 47.8**	**-0.4**
FFC	**Flin Flon**	**91.51**	**15**	*i* P	**P**	**04 40 37.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**93.39**	**287**	P	**P**	**04 40 45.6**	**-0.8**
	comp=Z,0.6nm,0.8s,mb4.1,baz=62,slow=3.5,SNR=5.4						

KISR ***15*** *04:28:55.9±0.7, 32.°05N×49.°57E, h44km±607km, ML3.2*
ISCJB ***15*** *04:28:57.1±1.3, 32.°06N±0.°03×49.°40E±0.°04, h21km±13km, Error ellipse: s-maj=7.0km s-min=4.8km az=39.6*
CSEM ***15*** *04:28:57.2±0.1, 32.°11N×49.°38E, h15km, ML3.1, Error ellipse: s-maj=3.3km s-min=1.8km az=118.0*
TEH ***15*** *04:28:57.8, 32.°01N×49.°38E, h18km*
ISC 15 04:28:57.5±1.3, 32.°06N±0.°04×49.°42E±0.°04, h15km±9km, n23, σ0=74/30, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.53**	**275**	*e*Pg	**Pg**	**04 29 07.2**	**-0.8**
IPIR	**Pirpir**	**1.39**	**63**	*e*Pn	Px	04 29 31.8	
IPIR				*e*		04 29 56.8	
	comp=Z,4μm,0.2s						
IKLH	**Kolahrood**	**2.21**	**55**	*e*Pn	**Pn**	**04 29 34.3**	**+0.6**
IKLH				*e*		04 30 10.6	
	comp=Z,2μm,0.2s						
IGAR	**Gharneh**	**2.25**	**81**	*e*Pn	**Pn**	**04 29 35.2**	**+1.0**
IGAR				*e*Sn	**Sn**	**04 30 02.3**	**+0.7**
IGAR				*e*		04 30 08.2	
	comp=Z,2μm,0.2s						
ASAO	**Ashtian**	**2.53**	**11**	*e*Pn	**Pn**	**04 29 37.9**	**-0.2**
IZEF	**Zefreh**	**2.59**	**71**	*e*Pn	**Pn**	**04 29 39.7**	**+0.7**
IZEF				*e*		04 30 23.3	
	comp=Z,1μm,0.3s						
IKOM	**Komasi**	**2.65**	**323**	*e*Pn	**Pn**	**04 29 39.5**	**-0.2**
IKOM				*e*Sn	**Sn**	**04 30 11.4**	**-0.2**
IKOM				*e*		04 30 24.2	
	comp=Z,732nm,0.2s						
MIB	**Mutribah**	**2.88**	**219**	*e*P	**Pn**	**04 29 42.7**	**-0.1**
MIB				AML	AML	04 30 32.4	
	comp=Z,45nm,0.5s						
MIB	**Mutribah**	**2.88**	**219**	*e*P	**Pn**	**04 29 42.7**	**-0.1**
NASN	**Na'in**	**2.96**	**75**	*e*Pn	**Pn**	**04 29 44.4**	**+0.5**
KBD	**Kabd**	**3.24**	**208**	*e*P	**Pn**	**04 29 47.6**	**-0.2**
KBD				*e*S	**Sn**	**04 30 26.4**	**+0.2**
KBD				AML	AML	04 30 29.3	
	comp=Z,43nm,0.4s						
KBD	**Kabd**	**3.24**	**208**	*e*P	**Pn**	**04 29 47.6**	**-0.2**
KBD				*e*S	**Sn**	**04 30 26.4**	**+0.2**
IGHG	**Ghaleghazi**	**3.29**	**314**	*e*Pn	**Pn**	**04 29 48.6**	**0.0**
IGHG				*e*		04 30 55.7	
	comp=Z,853nm,0.3s						
IRAZ	**Razeghan**	**3.36**	**7**	*e*Pn	**Pn**	**04 29 49.6**	**+0.1**
IRAZ				*e*		04 30 43.7	
	comp=Z,680nm,0.3s						
SNGE	**Sanandaj**	**3.48**	**331**	*e*Pn	**Pn**	**04 29 50.2**	**-1.0**
IVRN	**Varamin**	**3.50**	**33**	*e*Pn	**Pn**	**04 29 52.3**	**+0.8**
IVRN				*e*		04 30 02.9	
	comp=Z,629nm,0.2s						
RDF	**Al-Radifah**	**3.52**	**208**	*e*P	**Pn**	**04 29 52.0**	**+0.4**
RDF				*e*S	**Sn**	**04 30 33.7**	**+0.6**
RDF				AML	AML	04 30 34.8	
	comp=Z,49nm,0.3s						
RDF	**Al-Radifah**	**3.52**	**208**	*e*P	**Pn**	**04 29 52.0**	**+0.3**
RDF				*e*S	**Sn**	**04 30 33.7**	**+0.7**
	comp=Z,49nm,0.3s						
QRN	**Al-Qurain**	**3.55**	**202**	*e*P	**Pn**	**04 29 51.8**	**-0.3**
QRN				*e*S	**Sn**	**04 30 33.9**	**0.0**
QRN				AML	AML	04 30 35.0	
	comp=Z,74nm,0.6s						
IDMV	**Damavand**	**4.12**	**31**	*e*Pn	**Pn**	**04 30 00.9**	**+0.9**
IDMV				*e*		04 30 18.4	
	comp=Z,319nm,0.3s						
DAMV	**Damavand**	**4.14**	**30**	*e*Pn	**Pn**	**04 30 00.0**	**-0.3**
ICHK	**Chekchek**	**4.23**	**86**	*e*Sn	**Sn**	**04 30 48.7**	**-1.9**
IMEH	**Mehriz**	**4.47**	**97**	*e*Pn	**Pn**	**04 30 04.9**	**+0.1**
IMEH				*e*Sn	**Sn**	**04 30 54.5**	**-2.1**
IMEH				*e*		04 31 34.9	
	comp=Z,124nm,0.5s						

SOF ***15*** *04:29:54.9, 45.°07N×25.°76E, h10km, MD2.6*
ISCJB ***15*** *04:29:56.9±0.6, 45.°14N±0.°04×25.°73E±0.°06, h53km±9km, Error ellipse: s-maj=6.9km s-min=6.1km az=137.1*
BUC ***15*** *04:29:56.5±0.4, 45.°10N×25.°77E, h39km±3km, MD3.1/2, Error ellipse: s-maj=5.7km s-min=2.6km az=356.0*
NEIC ***15*** *04:29:56.3, 45.°02N×25.°77E, h30km, ML3.1(BUC), After BUC.*
CSEM ***15*** *04:29:57.5±0.2, 45.°13N×25.°76E, h36km±4km, MD3.1/2, Error ellipse: s-maj=6.8km s-min=5.2km az=87.0*
ISC 15 04:29:57.8±0.6, 45.°13N±0.°04×25.°74E±0.°06, h45km±13km, n36, σ0=89/47, 3C-10D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.39**	**22**	P	**Pn**	**04 30 06.6**	**-0.7**
MLR	**Muntele Rosu**	**0.39**	**22**	⇓*i*P	**Pn**	**04 30 06.4**	**-0.9**
MLR				*i* S	**Sn**	**04 30 14.2**	**+0.1**
MLR	**Muntele Rosu**	**0.39**	**22**	⇓*i*P	**Pn**	**04 30 06.4**	**-0.9**
MLR	**Muntele Rosu**	**0.39**	**22**	P	**Pn**	**04 30 06.6**	**-0.7**
MLR				*i* S	**Sn**	**04 30 14.2**	**+0.1**
VOIR		**0.57**	**302**	P	**Pn**	**04 30 09.2**	**-0.4**
VOIR		**0.57**	**302**	⇑*i*P	**Pn**	**04 30 09.2**	**-0.4**
VOIR				*i* S	**Sn**	**04 30 18.5**	**+0.4**
VOIR		**0.57**	**302**	⇑*i*P	**Pn**	**04 30 09.2**	**-0.4**
VOIR		**0.57**	**302**	⇑*i*P	**Pn**	**04 30 09.2**	**-0.4**
VOIR				*i* S	**Sn**	**04 30 18.5**	**+0.4**
PLOR	**Plostina**	**0.96**	**41**	⇓*i*P	**Pn**	**04 30 14.3**	**-0.5**
PLOR				*i* S	**Sn**	**04 30 27.1**	**-0.3**
PLOR	**Plostina**	**0.96**	**41**	⇓*i*P	**Pn**	**04 30 14.3**	**-0.5**
PLOR	**Plostina**	**0.96**	**41**	⇓*i*P	**Pn**	**04 30 14.3**	**-0.5**
PLOR				*i* S	**Sn**	**04 30 27.1**	**-0.3**
VRI	**Vrincioaia**	**1.01**	**43**	P	**Pn**	**04 30 14.9**	**-0.6**
VRI				S	**Sn**	**04 30 30.2**	**+1.7**
VRI	**Vrincioaia**	**1.01**	**43**	⇓*i*P	**Pn**	**04 30 15.0**	**-0.5**
VRI	**Vrincioaia**	**1.01**	**43**	⇓*i*P	**Pn**	**04 30 15.0**	**-0.5**
VRI	**Vrincioaia**	**1.01**	**43**	P	**Pn**	**04 30 14.9**	**-0.6**
VRI				S	**Sn**	**04 30 30.2**	**+1.6**
CFR	**Carcaliu**	**1.70**	**88**	P	**Pn**	**04 30 24.0**	**-0.9**
CFR	**Carcaliu**	**1.70**	**88**	⇓*i*P	**Pn**	**04 30 24.0**	**-0.9**
CFR				*i* S	**Sn**	**04 30 45.1**	**-0.3**
CFR	**Carcaliu**	**1.70**	**88**	⇓*i*P	**Pn**	**04 30 24.0**	**-0.9**
CFR	**Carcaliu**	**1.70**	**88**	⇓*i*P	**Pn**	**04 30 24.0**	**-0.9**
SZH	**Strazhica**	**1.87**	**176**	*i* P	**Pn**	**04 30 27.3**	**0.0**
SZH	**Strazhica**	**1.87**	**176**	*i* P	**Pn**	**04 30 27.3**	**0.0**
PVL	**Pavlikeni**	**1.94**	**189**	*i* P	**Pn**	**04 30 31.0**	**+2.8**
PVL	**Pavlikeni**	**1.94**	**189**	*i* P	**Pn**	**04 30 31.0**	**+2.8**
PRD	**Provadia**	**2.27**	**148**	*i* P	**Pn**	**04 30 32.6**	**-0.2**
PRD	**Provadia**	**2.27**	**148**	*i* P	**Pn**	**04 30 32.6**	**-0.2**
PSN	**Preselentsi**	**2.28**	**129**	*i* P	**Pn**	**04 30 33.1**	**+0.3**
PSN	**Preselentsi**	**2.28**	**129**	*i* P	**Pn**	**04 30 33.1**	**+0.3**
MPEP	**Malo Peshtene**	**2.28**	**220**	*i* P	**Pn**	**04 30 32.7**	**-0.2**
BURAR	**Bucovina Array**	**2.51**	**352**	*i* S	**Sn**	**04 31 04.6**	**-0.7**
BURAR	**Bucovina Array**	**2.51**	**352**	S	**Sn**	**04 31 04.6**	**-0.7**
BURAR	**Bucovina Array**	**2.51**	**352**	*i* S	**Sn**	**04 31 04.6**	**-0.7**
BUR08	**Bucovina Ar. S**	**2.54**	**352**	*e*Pn	**Pn**	**04 30 36.5**	**+0.1**
BUR08				*e*S	**Sn**	**04 31 08.2**	**+2.1**
BUR08	**Bucovina Ar. S**	**2.54**	**352**	*e*Pn	**Pn**	**04 30 36.5**	**+0.1**
BUR08				*e*S	**Sn**	**04 31 08.2**	**+2.1**
DRGR		**2.68**	**309**	*i* S	**Sn**	**04 31 08.7**	**-0.9**
DRGR		**2.68**	**309**	S	**Sn**	**04 31 08.7**	**-0.9**
DRGR		**2.68**	**309**	*i* S	**Sn**	**04 31 08.7**	**-0.9**

ISCJB ***15*** *04:32:18.5±0.8, 32.°18N±0.°07×105.°14E±0.°06, h10km, mb3.7/10, Error ellipse: s-maj=10.5km s-min=7.7km az=166.3*
IDC ***15*** *04:32:19.0±1.2, 32.°27N×105.°06E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=57.0km s-min=22.2km az=51.0*
NEIC ***15*** *04:32:20.6±0.7, 32.°26N×105.°05E, h10km, mb4.3/3, Error ellipse: s-maj=41.1km s-min=12.2km az=52.0*
BJI ***15*** *04:32:21.1, 32.°09N×104.°88E, h15km, ML3.4/5, Ms3.4/2, Ms7 3.5/2*
ISC 15 04:32:20.7±0.8, 32.°24N±0.°08×105.°03E±0.°06, h10km, n17, σ0=95/20, mb3.7/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.72**	**60**	Pg	**Pg**	**04 33 32.0**	**-0.1**
XAN				Sg	**Sg**	**04 34 20.4**	**+0.1**
XAN				smax			
	comp=N,130nm,0.5s						
XAN				smax			
	comp=E,53nm,0.5s						
LZH	**Lanzhou**	**3.96**	**346**	*e*Pg	**Pg**	**04 33 34.5**	**-2.1**
LZH				Sn	**Sn**	**04 34 11.0**	**+3.1**
LZH				Sg	**Sg**	**04 34 22.4**	**-5.4**
LZH				smax			
	comp=N,140nm,0.8s						
LZH				smax			
	comp=E,320nm,0.7s						
LZH				LR	LR		
	comp=E,410nm,5.6s						
LZH				LR	LR		
	comp=Z,790nm,6.7s						
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**04 37 22.5**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.4,baz=119,slow=9.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**04 37 54.2**	**+0.1**
	comp=Z,0.5nm,0.3s,mb3.5,baz=129,slow=11,SNR=2.5						
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**04 38 01.7**	**+0.6**
	comp=Z,0.4nm,0.4s,mb3.4,baz=126,slow=9.8,SNR=4.5						
BVAR	**Borovoye Array**	**32.41**	**320**	P	**P**	**04 38 50.5**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.6,baz=108,slow=9.3,SNR=2.5						
BRTR	**Keskin Array B**	**56.87**	**299**	P	**P**	**04 42 04.8**	**-0.9**
	comp=Z,0.2nm,0.6s,mb3.4,baz=86,slow=9.1,SNR=2.2						
BRTR	**Keskin Array B**	**56.87**	**299**	P	**P**	**04 42 04.8**	**-0.9**
WRAB	**Tennant Creek**	**58.99**	**147**	*e*P	**P**	**04 42 20.7**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**04 42 21.0**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=340,slow=7.3,SNR=6.1						
CDF	**Champ du Feu**	**71.35**	**316**	*e*P	**P**	**04 43 44.8**	**+4.1**
CABF	**La Chapelle**	**72.92**	**315**	*e*P	**P**	**04 43 54.1**	**+4.0**
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**04 43 56.4**	**+5.5**
	comp=Z,4.5nm,0.7s,mb4.2						
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**04 43 56.4**	**+5.5**
	comp=Z,3.3nm,0.6s,mb4.3						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**04 43 56.3**	**+5.4**
	comp=Z,2.4nm,0.5s,mb4.1						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**04 43 56.3**	**+5.4**
	comp=Z,1.2nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**80.37**	**17**	P	**P**	**04 44 31.2**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=328,slow=5.1,SNR=6.8						

ISCJB ***15*** *04:52:12.8±0.9, 31.°7N±0.°2×105.°1E±0.°3, h10km, mb3.5/6, Error ellipse: s-maj=46.5km s-min=13.6km az=155.7*
IDC ***15*** *04:52:12.9±1.1, 31.°45N×104.°81E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/26, mbtmp3.5/6, Error ellipse: s-maj=75.3km s-min=20.2km az=58.0*
ISC 15 04:52:14.7±0.9, 31.°6N±0.°1×104.°9E±0.°3, h10km, n8, σ0=89/9, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.60**	**349**	*e*Pg	**Pg**	**04 53 42.5**	**-0.3**
LZH				Sg	**Sn**	**04 54 23.8**	**+6.1**
LZH				smax			
	comp=N,280nm,0.7s						
LZH				smax			
	comp=E,220nm,0.5s						
LZH				LR	LR		
	comp=E,480nm,5.6s						
LZH				LR	LR		
	comp=Z,630nm,6.6s						
GTA	**Gaotai**	**8.87**	**333**	*e*P	**Pn**	**04 54 16.9**	**-6.0**
GTA				pP		04 54 20.4	
GTA				sP		04 54 22.9	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MKAR	**Makanchi Array**	**23.11**	**318**	P	**P**	**04 57 20.6**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.0,baz=116,slow=11,SNR=4.1						
KURK	**Kurchatov**	**27.31**	**322**	P	**P**	**04 57 59.7**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.0,baz=121,slow=9.3,SNR=3.3						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**05 02 00.9**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=74,slow=6.7,SNR=4.3						
WRA	**Warramunga Arr**	**58.47**	**147**	P	**P**	**05 02 12.4**	**+1.4**
	comp=Z,0.9nm,1.0s,mb3.8,baz=328,slow=6.3,SNR=4.7						
ASAR	**Alice Springs**	**61.52**	**150**	P	**P**	**05 02 30.0**	**-1.9**
	comp=Z,0.2nm,0.4s,mb3.6,baz=325,slow=6.2,SNR=3.3						
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**05 04 29.9**	**+0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=329,slow=4.9,SNR=6.3						

BJI 15 04:55:44.4, 35.°05N×81.°78E, h15km, ML3.6/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.43**	**316**	Pg	Pg	04 57 37.4	-10
KSH				smax			
	comp=N,54nm,1.1s						
KSH				smax			
	comp=E,34nm,0.6s						
LZH	**Lanzhou**	**17.98**	**80**	*e*P	Pn	04 59 57.5	+3.7

DDA ***15*** *04:59:09.7, 39.°13N×28.°15E, h7km±5km, Md2.8*
ISCJB ***15*** *04:59:10.8±0.5, 39.°09N±0.°03×28.°09E±0.°04, h17km±17km, Error ellipse: s-maj=4.8km s-min=4.5km az=170.4*
CSEM ***15*** *04:59:10.5±0.1, 39.°10N×28.°11E, h12km, MD2.7, Error ellipse: s-maj=2.7km s-min=2.4km az=84.0*
ISK ***15*** *04:59:10.3, 39.°09N×28.°11E, h8km, MD2.7*
ISC 15 04:59:10.7±0.5, 39.°10N±0.°02×28.°11E±0.°04, h14km±7km, n22, σ0=56/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.32**	**227**	*i* P	**Pg**	**04 59 17.3**	**0.0**
AKHS				*i* S	**Sg**	**04 59 22.4**	**+0.7**
AKHS	**Akhisar**	**0.32**	**227**	*i* P	**Pg**	**04 59 17.3**	**+0.1**
AKHS				*i* S	**Sg**	**04 59 22.4**	**+0.8**
AKS	**Akhisar**	**0.32**	**227**	PG	**Pg**	**04 59 17.4**	**+0.2**
AKS				SG	**Sg**	**04 59 21.6**	**-0.1**
AKS	**Akhisar**	**0.32**	**227**	*i* Pg	**Pg**	**04 59 17.5**	**+0.3**
AKS				*i* Sg	**Sg**	**04 59 21.6**	**-0.1**
DEMI	**Demirci**	**0.48**	**96**	*i* P	**Pg**	**04 59 20.1**	**-0.1**
DEMI				*i* S	**Sg**	**04 59 25.7**	**-0.8**
DEMI	**Demirci**	**0.48**	**96**	*i* P	**Pg**	**04 59 20.0**	**-0.1**
DEMI				*i* S	**Sg**	**04 59 25.7**	**-0.8**
BALB	**Balikesir**	**0.57**	**342**	*e*PG	**Pg**	**04 59 22.0**	**+0.1**
BALB				*e*SG	**Sg**	**04 59 30.2**	**+0.7**
BALB	**Balikesir**	**0.57**	**342**	*e*Pg	**Pg**	**04 59 22.0**	**+0.1**
BALB				*e*Sg	**Sg**	**04 59 30.2**	**+0.7**
DURS	**Dursunbey**	**0.58**	**29**	*i* P	**Pg**	**04 59 21.1**	**-0.9**
DURS	**Dursunbey**	**0.58**	**29**	*i* P	**Pg**	**04 59 21.1**	**-0.9**
DST	**Dursunbey**	**0.65**	**38**	*e*PG	**Pg**	**04 59 23.5**	**+0.1**
DST				*e*SG	**Sg**	**04 59 33.1**	**+1.1**
DST	**Dursunbey**	**0.65**	**38**	*e*Pg	**Pg**	**04 59 23.5**	**+0.2**
DST				*e*Sg	**Sg**	**04 59 33.1**	**+1.2**
MANT	**Manisa**	**0.70**	**150**	*i* P	**Pg**	**04 59 24.2**	**-0.1**
MANT				*i* S	**Sg**	**04 59 33.2**	**-0.3**
MANT	**Manisa**	**0.70**	**150**	*i* P	**Pg**	**04 59 24.2**	**-0.1**
MANT				*i* S	**Sg**	**04 59 33.2**	**-0.4**
KULA	**Kula-Manisa**	**0.72**	**143**	*e*PG	**Pg**	**04 59 24.7**	**0.0**
KULA				*e*SG	**Sg**	**04 59 34.4**	**+0.1**
KULA	**Kula-Manisa**	**0.72**	**143**	*e*Pg	**Pg**	**04 59 24.7**	**-0.1**
KULA				*e*Sg	**Sg**	**04 59 34.4**	**+0.1**
BALY	**Balya**	**0.74**	**330**	*i* P	**Pg**	**04 59 24.7**	**-0.5**
BALY				*i* S	**Sg**	**04 59 34.0**	**-1.1**
BALY	**Balya**	**0.74**	**330**	*i* P	**Pg**	**04 59 24.7**	**-0.5**
BALY				*i* S	**Sg**	**04 59 34.0**	**-1.0**
GDZ	**Gediz**	**1.07**	**90**	*i* P	**Pb**	**04 59 31.7**	**+0.9**
GDZ				*i* S	**Sb**	**04 59 44.8**	**+0.1**
GDZ	**Gediz**	**1.07**	**90**	*i* P	**Pb**	**04 59 31.7**	**+0.8**
GDZ				*i* S	**Sb**	**04 59 44.8**	**+0.1**
BLCB	**Balcova**	**1.10**	**230**	*e*PN	**Pn**	**04 59 31.2**	**-0.3**
BLCB	**Balcova**	**1.10**	**230**	*e*Pn	**Pn**	**04 59 31.2**	**-0.3**

ISCJB ***15*** *05:17:21.2±1.0, 32.°22N±0.°04×105.°07E±0.°04, h8km±7km, mb4.2/23, Error ellipse: s-maj=5.9km s-min=5.5km az=162.3*
IDC ***15*** *05:17:21.8±0.7, 32.°22N×104.°92E, h0km, mb4.2/14, mb1 4.3/16, mb1mx4.1/29, mbtmp4.1/16, ML3.7/2, Error ellipse: s-maj=28.4km s-min=13.6km az=52.0*
BJI ***15*** *05:17:22.7, 32.°27N×105.°07E, h10km, mB4.5/1, mb4.3/5, ML4.1/15, Ms4.1/8, Ms7 3.7/9*
NEIC ***15*** *05:17:23.6±0.3, 32.°27N×105.°00E, h10km, mb4.2/7, Error ellipse: s-maj=10.9km s-min=6.1km az=225.0*
ISC 15 05:17:22.3±0.8, 32.°30N±0.°03×105.°03E±0.°03, h1km±5km, n44, σ1=11/56, mb4.3/23, 7C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.76**	**218**	Pn	**Pn**	**05 17 54.5**	**+0.5**
CD2				Pg	**Pg**	**05 17 58.3**	**+2.2**
CD2				Sg	**Sg**	**05 18 18.3**	**-0.6**
CD2				smax			
	comp=N,10μm,0.6s						
XAN	**Xi'an**	**3.69**	**61**	Pn	**Pn**	**05 18 22.5**	**+1.9**
XAN				Pg	**Pg**	**05 18 31.8**	**-1.4**
XAN				Sn	**Sn**	**05 19 05.8**	**+1.0**
XAN				Sg	**Sg**	**05 19 19.6**	**-1.5**
XAN				smax			
	comp=N,310nm,0.6s						
XAN				smax			
	comp=E,200nm,0.8s						
XAN				LR	LR		
	comp=N,230nm,6.4s						
XAN				LR	LR		
	comp=E,150nm,9.3s						
XAN				LR	LR		
	comp=Z,180nm,7.8s						
LZH	**Lanzhou**	**3.91**	**346**	*e*Pn	**Pn**	**05 18 26.4**	**+2.9**
LZH				Pg	**Pg**	**05 18 36.3**	**-0.9**
LZH				Sn	**Sn**	**05 19 14.1**	**+4.2**
LZH				Sg	**Sg**	**05 19 26.3**	**-1.5**
LZH				smax			
	comp=N,490nm,0.8s						
LZH				smax			
	comp=E,690nm,0.7s						
LZH				LR	LR		
	comp=E,2μm,5.8s						
LZH				LR	LR		
	comp=Z,1μm,6.9s						
ENH	**Enshi**	**4.32**	**117**	*e*Pn	**Pn**	**05 18 30.5**	**+1.4**
ENH				*e*Sg	**Sg**	**05 19 41.4**	**+0.4**
GYA	**Guiyang**	**5.99**	**166**	Pg	**Pn**	**05 18 58.0**	**+5.8**
GYA				Sg	**Sn**	**05 19 58.5**	**-2.9**
GYA				smax			
	comp=N,240nm,0.7s						
GYA				smax			
	comp=E,300nm,0.7s						
KMI	**Kunming**	**7.43**	**196**	Pn	**Pn**	**05 19 14.0**	**+2.1**
KMI				Sn	**Sn**	**05 20 34.0**	**-2.8**
KMI				smax			
	comp=N,29nm,1.0s						
KMI				smax			
	comp=E,36nm,0.7s						
KMI				LR	LR		
	comp=N,340nm,8.1s						
KMI				LR	LR		
	comp=E,350nm,6.6s			

comp=Z,3.7nm,0.7s,mb4.5,baz=90,slow=7.6,SNR=8.6
WRA Warramunga Arr 59.04 148 P **P 05 27 23.6 -0.4**
comp=Z,3.8nm,0.6s,mb4.6,baz=326,slow=9.3,SNR=63
ASAR Alice Springs 62.11 150 P **P 05 27 44.8 -0.2**
comp=Z,2.0nm,0.5s,mb4.6,baz=334,slow=6.8,SNR=31
HFS Hagfors 63.23 326 P **P 05 27 51.2 -0.9**
comp=Z,2.0nm,0.6s,mb4.4,baz=88,slow=8.2,SNR=10.0
NB2 NORSAR Subarra 64.08 327 P **P 05 27 56.3 -1.4**
comp=Z,2.6nm,0.8s,mb4.5,baz=73,slow=6.9
NOA NORSAR Array B 64.08 327 P **P 05 27 56.5 -1.1**
comp=Z,2.1nm,0.7s,mb4.5,baz=71,slow=6.7,SNR=7.0
CDF Champ du Feu 71.31 316⇑*iP* **P 05 28 43.5 0.0**
comp=Z,2.8nm,0.5s,mb4.3
CDF Champ du Feu 71.31 316⇑*iP* **P 05 28 43.5 0.0**
comp=Z,1.4nm,0.5s,mb4.3
STKA Stephens Creek 72.59 148 P **P 05 28 50.6 -0.6**
comp=Z,1.2nm,0.4s,mb4.4,baz=315,slow=8.6,SNR=4.0
LPG La Plagne 73.01 313⇑*iP* **P 05 28 53.9 +0.2**
comp=Z,7.1nm,0.6s,mb4.7
LPG La Plagne 73.01 313⇑*iP* **P 05 28 53.9 +0.2**
comp=Z,3.5nm,0.6s,mb4.7
LPL La Plagne 73.01 313⇑*iP* **P 05 28 53.8 0.0**
comp=Z,6.8nm,0.6s,mb4.7
LPL La Plagne 73.01 313⇑*iP* **P 05 28 53.8 0.0**
comp=Z,3.4nm,0.6s,mb4.7
SMF Signal de Mont 74.21 315⇑*iP* **P 05 28 59.8 -1.0**
YKA Yellowknife Ar 80.32 17 P **P 05 29 34.3 -0.4**
comp=Z,1.0nm,0.6s,mb4.0,baz=328,slow=5.1,SNR=23

*IDC **15** 05:22:06.9±1.3, 37°.14N×55°.08E, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML3.9/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/45, Error ellipse: s-maj=25.2km s-min=14.3km az=163.0*
*THR **15** 05:22:08.0±0.5, 36°.93N×55°.33E, h7km, ML4.1*
*CSEM **15** 05:22:08.6±0.1, 37°.26N×55°.06E, h10km, mb4.0/13, Error ellipse: s-maj=4.0km s-min=2.8km az=146.0*
*TEH **15** 05:22:09.0, 37°.24N×55°.01E, h11km*
*NEIC **15** 05:22:09.0, 37°.20N×55°.00E, h11km, mb3.9/3, ML4.1(THR), MN4.1(TEH), After TEH.*
*ISCJB **15** 05:22:09.2±0.9, 37°.28N±0°.03×55°.07E±0°.03, h28km±8km, mb3.9/18, Error ellipse: s-maj=5.8km s-min=3.4km az=148.7*
*MOS **15** 05:22:13.4±1.0, 37°.77N×55°.02E, h29km, mb4.1/14, Error ellipse: s-maj=11.8km s-min=8.2km az=101.7*
*NNC **15** 05:22:19.3±3.5, 38°.04N×55°.93E, h8km±41km, mb3.7, Error ellipse: s-maj=42.6km s-min=14.0km az=47.0*
ISC 15 05:22:09.7±0.8, 37°.27N±0°.03×55°.06E±0°.03, h18km±6km, n180, σ1§11/200, mb3.9/18, 8C-5D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.91**	**65**	*e*Pg	**Pg**		**05 22 26.3**	**-1.1**
MRVT				*e*Sg	**Sg**		**05 22 40.0**	**+0.6**
MRVT				AML	AML		05 22 45.2	
	comp=N,7μm,0.2s							
MRVT				AML	AML		05 22 45.7	
	comp=E,7μm,0.2s							
MRVT	**Maraveh tapeh**	**0.91**	**65**	*e*Pg	**Pg**		**05 22 26.3**	**-1.1**
MRVT				*e*Sg	**Sg**		**05 22 39.9**	**+0.5**
IGLO	**Ghaloghah**	**1.25**	**232**	Pg	**Pn**		**05 22 30.5**	**-1.7**
IGLO	**Ghaloghah**	**1.25**	**232**	*e*Pg	**Pn**		**05 22 30.5**	**-1.7**
IGLO				*e*			05 22 50.6	
	comp=Z,74μm,0.2s							
IGLO	**Ghaloghah**	**1.25**	**232**	*e*Pg	**Pn**		**05 22 30.5**	**-1.7**
IKIA	**Kiasar**	**1.53**	**226**	Pn	**Pn**		**05 22 35.6**	**-0.5**
IKIA	**Kiasar**	**1.53**	**226**	*e*Pn	**Pn**		**05 22 35.6**	**-0.5**
IKIA				*e*			05 23 02.1	
	comp=Z,23μm,0.3s							
IKIA	**Kiasar**	**1.53**	**226**	*e*Pn	**Pn**		**05 22 35.6**	**-0.5**
IANJ	**Anjilo**	**2.02**	**207**	Pn	**Pn**		**05 22 42.7**	**-0.2**
IANJ	**Anjilo**	**2.02**	**207**	*e*Pn	**Pn**		**05 22 42.8**	**-0.1**
IANJ				*e*			05 23 11.8	
	comp=Z,11μm,0.2s							
IANJ	**Anjilo**	**2.02**	**207**	*e*Pn	**Pn**		**05 22 42.8**	**-0.1**
ISHM	**Shahmirzad**	**2.04**	**225**	Pn	**Pn**		**05 22 44.1**	**+1.0**
ISHM				Sn	**Sn**		**05 23 07.3**	**-0.8**
ISHM	**Shahmirzad**	**2.04**	**225**	*e*Pn	**Pn**		**05 22 44.1**	**+1.0**
ISHM				*e*Sn	**Sn**		**05 23 07.3**	**-0.8**
ISHM				*e*			05 23 13.3	
	comp=Z,61μm,0.2s							
ISHM	**Shahmirzad**	**2.04**	**225**	*e*Pn	**Pn**		**05 22 44.1**	**+1.0**
ISHM				*e*Sn	**Sn**		**05 23 07.3**	**-0.8**
ISHV	**Shirvan**	**2.12**	**82**	Pn	**Pn**		**05 22 44.9**	**+0.6**
ISHV	**Shirvan**	**2.12**	**82**	*e*Pn	**Pn**		**05 22 44.9**	**+0.6**
ISHV				*e*			05 23 27.2	
	comp=Z,30μm,0.3s							
ISHV	**Shirvan**	**2.12**	**82**	*e*Pn	**Pn**		**05 22 44.9**	**+0.6**
IALA	**Alasht**	**2.16**	**237**	Pn	**Pn**		**05 22 44.3**	**-0.5**
IALA	**Alasht**	**2.16**	**237**	*e*Pn	**Pn**		**05 22 44.3**	**-0.5**
IALA				*e*			05 23 18.0	
	comp=Z,40μm,0.2s							
IALA	**Alasht**	**2.16**	**237**	*e*Pn	**Pn**		**05 22 44.3**	**-0.5**
ISFR	**Sfrayin**	**2.36**	**94**	Pn	**Pn**		**05 22 48.2**	**+0.6**
ISFR	**Sfrayin**	**2.36**	**94**	*e*Pn	**Pn**		**05 22 48.3**	**+0.7**
ISFR				*e*			05 23 30.2	
	comp=Z,15μm,0.3s							
ISFR	**Sfrayin**	**2.36**	**94**	*e*Pn	**Pn**		**05 22 48.3**	**+0.7**
IPRN	**Peran**	**2.41**	**246**	Pn	**Pn**		**05 22 48.6**	**+0.3**
IPRN				Sn	**Sn**		**05 23 18.2**	**+0.9**
IPRN	**Peran**	**2.41**	**246**	*e*Pn	**Pn**		**05 22 48.6**	**+0.3**
IPRN				*e*Sn	**Sn**		**05 23 18.3**	**+1.0**
IPRN				*e*			05 23 33.6	
	comp=Z,27μm,0.2s							
IPRN	**Peran**	**2.41**	**246**	*e*Pn	**Pn**		**05 22 48.6**	**+0.3**
IPRN				*e*Sn	**Sn**		**05 23 18.3**	**+1.0**
IFIR	**Firoozkooh**	**2.47**	**229**	Pn	**Pn**		**05 22 49.8**	**+0.8**
IFIR	**Firoozkooh**	**2.47**	**229**	*e*Pn	**Pn**		**05 22 49.9**	**+0.9**
IFIR				*e*			05 22 56.5	
	comp=Z,9μm,0.1s							
IFIR	**Firoozkooh**	**2.47**	**229**	*e*Pn	**Pn**		**05 22 49.9**	**+0.9**
ILAS	**Lasjerd**	**2.53**	**223**	Pn	**Pn**		**05 22 49.8**	**-0.1**
ILAS	**Lasjerd**	**2.53**	**223**	*e*Pn	**Pn**		**05 22 49.9**	**0.0**
ILAS				*e*			05 23 32.3	
	comp=Z,8μm,0.3s							
ILAS	**Lasjerd**	**2.53**	**223**	*e*Pn	**Pn**		**05 22 49.9**	**0.0**
IKRD	**Kardeh**	**2.81**	**99**	Pn	**Pg**		**05 23 05.2**	**+1.6**
IKRD	**Kardeh**	**2.81**	**99**	*e*Pn	**Pg**		**05 23 05.2**	**+1.6**
IKRD				*e*			05 24 19.9	
	comp=Z,2μm,0.3s							
IEMG	**Emamgholi**	**2.87**	**86**	Pn	**Pn**		**05 22 55.1**	**+0.6**
IEMG	**Emamgholi**	**2.87**	**86**	*e*Pn	**Pn**		**05 22 55.2**	**+0.7**
IEMG				*e*			05 23 50.4	
	comp=Z,6μm,0.2s							
IEMG	**Emamgholi**	**2.87**	**86**	*e*Pn	**Pn**		**05 22 55.2**	**+0.7**
IDMV	**Damavand**	**2.97**	**236**	Pn	**Pn**		**05 22 57.7**	**+1.8**
IDMV	**Damavand**	**2.97**	**236**	*e*Pn	**Pn**		**05 22 57.7**	**+1.8**
IDMV				*e*			05 23 41.6	
	comp=Z,5μm,0.2s							
IDMV	**Damavand**	**2.97**	**236**	*e*Pn	**Pn**		**05 22 57.7**	**+1.8**
DAMV	**Damavand**	**2.98**	**238**	*e*Pn	**Pn**		**05 22 57.0**	**+1.0**
DAMV	**Damavand**	**2.98**	**238**	*e*Pn	**Pn**		**05 22 58.2**	**+2.2**
DAMV				AML	AML		05 23 46.5	
	comp=E,497nm,0.6s							
DAMV				AML	AML		05 23 48.1	
	comp=N,553nm,0.5s							
DAMV	**Damavand**	**2.98**	**238**	*e*Pn	**Pn**		**05 22 57.0**	**+1.0**
IAKL	**Akhelmad**	**3.04**	**102**	Pn	**Pn**		**05 22 56.9**	**0.0**
IAKL	**Akhelmad**	**3.04**	**102**	*e*Pn	**Pn**		**05 22 56.9**	**0.0**
IAKL				*e*			05 23 52.0	
	comp=Z,3μm,0.1s							
IPAY	**Payeh**	**3.27**	**103**	Pn	**Pn**		**05 23 00.5**	**+0.5**
IPAY	**Payeh**	**3.27**	**103**	*e*Pn	**Pn**		**05 23 00.5**	**+0.5**
IPAY				*e*			05 24 02.5	
	comp=Z,3μm,0.3s							
IPAY	**Payeh**	**3.27**	**103**	*e*Pn	**Pn**		**05 23 00.5**	**+0.5**
CHTH	**Charan**	**3.44**	**248**	*e*Pn	**Pn**		**05 23 05.3**	**+2.9**
CHTH	**Charan**	**3.44**	**248**	*e*Pn	**Pn**		**05 23 05.3**	**+2.9**
IVRN	**Varamin**	**3.52**	**231**	Pn	**Pn**		**05 23 02.9**	**-0.6**
IVRN	**Varamin**	**3.52**	**231**	*e*Pn	**Pn**		**05 23 03.0**	**-0.5**
IVRN				*e*			05 23 60.0	
	comp=Z,3μm,0.3s							
IVRN	**Varamin**	**3.52**	**231**	*e*Pn	**Pn**		**05 23 03.0**	**-0.5**
THKV	**Tehran--Karaj**	**3.62**	**249**	*e*Pn	**Pn**		**05 23 08.2**	**+3.3**
THKV				AML	AML		05 24 09.5	
	comp=N,343nm,0.7s							
THKV				AML	AML		05 24 13.9	
	comp=E,392nm,0.7s							
THKV	**Tehran--Karaj**	**3.62**	**249**	*e*Pn	**Pn**		**05 23 07.9**	**+3.0**
IMOG	**Moghan**	**3.63**	**107**	Pn	**Pn**		**05 23 05.2**	**+0.2**
IMOG	**Moghan**	**3.63**	**107**	*e*	**Pg**		**05 23 20.1**	**+0.7**
	comp=Z,2μm,0.2s							
IMOG				*e*Pn	**Pn**		**05 23 05.2**	**+0.2**
ISFB	**Sefidab**	**3.70**	**219**	Pn	**Pn**		**05 23 05.6**	**-0.4**
ISFB	**Sefidab**	**3.70**	**219**	*e*Pn	**Pn**		**05 23 05.6**	**-0.4**
ISFB				*e*			05 24 10.5	
	comp=Z,2μm,0.2s							
ISFB	**Sefidab**	**3.70**	**219**	*e*Pn	**Pn**		**05 23 05.6**	**-0.4**
GHVR	**GHOM**	**4.13**	**229**	*e*Pn	**Pn**		**05 23 13.7**	**+1.8**
GHVR				AML	AML		05 24 25.7	
	comp=E,217nm,0.7s							
GHVR				AML	AML		05 24 36.0	
	comp=N,190nm,0.6s							
GHVR	**GHOM**	**4.13**	**229**	*e*Pn	**Pn**		**05 23 13.0**	**+1.1**
IMYA	**Miami**	**4.16**	**101**	Pn	**Pn**		**05 23 12.5**	**+0.3**
IMYA	**Miami**	**4.16**	**101**	*e*Pn	**Pn**		**05 23 12.5**	**+0.3**
IMYA				*e*			05 24 33.5	
	comp=Z,4μm,0.7s							
IMYA	**Miami**	**4.16**	**101**	*e*Pn	**Pn**		**05 23 12.5**	**+0.3**
IRAZ	**Razeghan**	**4.54**	**247**	Pn	**Pn**		**05 23 19.3**	**+1.8**
IRAZ	**Razeghan**	**4.54**	**247**	*e*Pn	**Pn**		**05 23 19.4**	**+1.9**
IRAZ				*e*			05 23 37.7	
	comp=Z,1μm,0.3s							
IRAZ	**Razeghan**	**4.54**	**247**	*e*Pn	**Pn**		**05 23 19.4**	**+1.9**
NASN	**Na'in**	**4.83**	**203**	*e*Pn	**Pn**		**05 23 20.4**	**-1.1**
NASN	**Na'in**	**4.83**	**203**	*e*Pn	**Pn**		**05 23 20.4**	**-1.1**
IKLH	**Kolahrood**	**4.86**	**217**	Pn	**Pn**		**05 23 21.6**	**-0.3**
IKLH	**Kolahrood**	**4.86**	**217**	*e*Pn	**Pn**		**05 23 21.6**	**-0.3**
IKLH				*e*			05 24 52.9	
	comp=Z,1μm,0.3s							
IKLH	**Kolahrood**	**4.86**	**217**	*e*Pn	**Pn**		**05 23 21.6**	**-0.3**
IZEF	**Zefreh**	**4.91**	**208**	Pn	**Pn**		**05 23 21.5**	**-1.0**
IZEF	**Zefreh**	**4.91**	**208**	*e*Pn	**Pn**		**05 23 21.5**	**-1.0**
IZEF				*e*			05 24 55.1	
	comp=Z,752nm,0.3s							
IZEF	**Zefreh**	**4.91**	**208**	*e*Pn	**Pn**		**05 23 21.5**	**-1.0**
ICHK	**Chekchek**	**5.04**	**186**	Pn	**Pn**		**05 23 23.8**	**-0.6**
ICHK	**Chekchek**	**5.04**	**186**	*e*Pn	**Pn**		**05 23 23.8**	**-0.6**
ICHK				*e*			05 23 28.0	
	comp=Z,2μm,0.3s							
ICHK	**Chekchek**	**5.04**	**186**	*e*Pn	**Pn**		**05 23 23.8**	**-0.6**
ITEG	**Tejag**	**5.31**	**144**	*e*Pn	**Pn**		**05 23 27.7**	**-0.4**
ITEG				*e*			05 23 28.2	
	comp=Z,3μm,0.1s							
ITEG	**Tejag**	**5.31**	**144**	*e*Pn	**Pn**		**05 23 27.7**	**-0.4**
IBAF	**Bafgh**	**5.68**	**176**	Pn	**Pn**		**05 23 32.1**	**-1.1**
IBAF	**Bafgh**	**5.68**	**176**	*e*Pn	**Pn**		**05 23 32.1**	**-1.1**
IBAF				*e*			05 25 25.0	
	comp=Z,885nm,0.5s							
IBAF	**Bafgh**	**5.68**	**176**	*e*Pn	**Pn**		**05 23 32.1**	**-1.1**
IPIR	**Pirpir**	**5.71**	**218**	Pn	**Pb**		**05 23 47.7**	**-1.1**
IPIR	**Pirpir**	**5.71**	**218**	*e*Pn	**Pb**		**05 23 47.7**	**-1.1**
IPIR				*e*			05 25 46.3	
	comp=Z,464nm,0.3s							
IPIR	**Pirpir**	**5.71**	**218**	*e*Pn	**Pb**		**05 23 47.7**	**-1.1**
IMEH	**Mehriz**	**5.88**	**184**	Pn	**Pn**		**05 23 35.1**	**-0.8**
IMEH	**Mehriz**	**5.88**	**184**	*e*Pn	**Pn**		**05 23 35.1**	**-0.8**
IMEH				*e*			05 25 25.3	
	comp=Z,934nm,0.5s							
IMEH	**Mehriz**	**5.88**	**184**	*e*Pn	**Pn**		**05 23 35.1**	**-0.8**
IDAH	**Dahanechah**	**6.00**	**137**	*e*Pn	**Pn**		**05 23 37.1**	**-0.5**
IDAH				*e*			05 24 06.8	
	comp=Z,310nm,0.3s							
IDAH	**Dahanechah**	**6.00**	**137**	*e*Pn	**Pn**		**05 23 37.1**	**-0.5**
BHD	**Baghdad**	**9.60**	**249**	*e*P	**Pn**		**05 24 26.0**	**-0.9**
BHD				*e*S	**Sn**		**05 26 12.0**	**-2.3**
BHD	**Baghdad**	**9.60**	**249**	*e*P	**Pn**		**05 24 26.0**	**-0.9**
BHD				*e*S	**Sn**		**05 26 12.0**	**-2.3**
MSL	**Mosul**	**9.62**	**268**	*e*P	**Pn**		**05 24 27.0**	**-0.2**
MSL				*e*S	**Sn**		**05 26 15.0**	**+0.2**
ZEI	**Tsey**	**10.16**	**306**	*e*P	**Pn**		**05 24 34.5**	**-0.1**
ZEI				*e*S	**Sn**		**05 26 26.4**	**-1.7**
ZEI				pmax	pmax			
	comp=Z,2.0nm,0.5s							
ZEI	**Tsey**	**10.16**	**306**	*e*P	**Pn**		**05 24 34.5**	**-0.1**
	comp=Z,2.0nm,0.5s							
KIV	**Kislovodsk**	**11.52**	**309**	*e*P	**Pn**		**05 24 57.8**	**+4.6**
KIV				*e*S	**Sn**		**05 27 04.6**	**+3.2**
KIV				pmax	pmax			
	comp=Z,8.0nm,0.8s							
KIV				MLR	MLR			
	comp=Z,12nm,11.0s							
AB31	**Akbulak array**	**12.49**	**15**	P	**Pn**		**05 25 04.8**	**-1.7**
	comp=Z,1.3nm,0.4s,baz=206,slow=13,SNR=26							
AB31				⇓S	**Sn**		**05 27 15.8**	**-9.2**
	comp=Z,3.6nm,0.4s,baz=195,slow=22,SNR=20							
AB31	**Akbulak array**	**12.49**	**15**	P	**Pn**		**05 25 04.8**	**-1.7**
	comp=Z,1.3nm,0.4s,SNR=26							
ABKAR	**Akbulak array**	**12.49**	**15**	*e*Pn	**Pn**		**05 25 04.7**	**-1.8**
	comp=Z,2.6nm,0.4s							
ABKAR				*e*Sn	**Sn**		**05 27 17.1**	**-8.0**
ABKAR	**Akbulak array**	**12.49**	**15**	*e*Pn	**Pn**		**05 25 04.7**	**-1.8**
	comp=Z,2.6nm,0.4s							
KK31	**Karatay Array**	**13.17**	**59**	P	**Pn**		**05 25 12.6**	**-3.1**
	comp=Z,1.2nm,0.5s,baz=241,slow=13,SNR=11							
KK31				⇓S	**Sn**		**05 27 30.6**	**-11**
	comp=Z,2.8nm,0.6s,baz=243,slow=24,SNR=4.2							
AKTK	**Aktyubinsk**	**13.33**	**8**	Pn	**Pn**		**05 25 17.2**	**-0.7**
AKTK				Sn	**Sn**		**05 27 39.0**	**-6.5**
AKTK				LR	LR		05 31 48.1	
AKTK	**Aktyubinsk**	**13.33**	**8**	P	**Pn**		**05 25 17.2**	**-0.7**
	comp=Z,1.0nm,0.3s							
AKTO	**Aktyubinsk**	**13.33**	**8**	⇑P	**Pn**		**05 25 16.9**	**-1.0**
	comp=Z,0.5nm,0.6s							
AKTO				⇓S	**Sn**		**05 27 36.9**	**-8.6**
	comp=Z,1.1nm,0.8s							
AKTO	**Aktyubinsk**	**13.33**	**8**	Pn	**Pn**		**05 25 17.2**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=174,slow=18,SNR=6.9							
AKTO				Sn	**Sn**		**05 27 39.0**	**-6.5**
	comp=Z,0.5nm,0.3s,baz=78,slow=19,SNR=6.7							
AKTO				LR	LR		05 31 48.1	
	comp=Z,110nm,19.0s,baz=182,slow=43							
AKTO	**Aktyubinsk**	**13.33**	**8**	P	**Pn**		**05 25 17.2**	**-0.7**
AKTO							05 27 39.0	
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKTO				smax				
	comp=N,1.0nm,0.3s							
AKTO				MLR	MLR			
	comp=Z,110nm,19.0s							
AKTO	**Aktyubinsk**	**13.33**	**8**	P	**Pn**		**05 25 16.9**	**-1.0**
	comp=Z,0.5nm,0.6s							
EKS2	**Erkin-Say**	**15.32**	**64**	*e*Pn	**Pn**		**05 25 42.9**	**-2.1**
	comp=Z,2.0nm,0.5s							
AAK	**Ala-Archa**	**15.83**	**64**	Pn	**Pn**		**05 25 48.6**	**-2.9**
	comp=Z,0.0nm,0.3s,baz=210,slow=10,SNR=6.3							
AAK				LR	LR		05 31 51.0	
	comp=Z,24nm,20.3s,baz=216,slow=37							
AAK	**Ala-Archa**	**15.83**	**64**	P	**Pn**		**05 25 48.6**	**-2.9**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AAK				MLR	MLR			
	comp=Z,24nm,20.3s							
BRTR	**Keskin Array B**	**16.94**	**285**	Pn	**Pn**		**05 26 09.7**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=83,slow=10,SNR=5.7							
BRTR	**Keskin Array B**	**16.94**	**285**	*e*P	**Pn**		**05 26 09.6**	**+3.9**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**16.94**	**285**	*e*P	**Pn**		**05 26 09.6**	**+3.9**
	comp=Z,1.0nm,0.9s							
VORD	**Divnogorie**	**17.71**	**326**	*e*P	**Pn**		**05 26 12.7**	**-2.5**
VORD				pmax	pmax			
	comp=Z,7.0nm,0.5s							
VORD				pmax	pmax			
	comp=N,30nm,0.8s							
VORD				pmax	pmax			
	comp=E,30nm,0.9s							
VSR	**Storozhevoye**	**17.94**	**326**	*e*P	**Pn**		**05 26 15.6**	**-2.5**
VSR				pmax	pmax			
	comp=Z,10.0nm,0.5s							
VSR				pmax	pmax			
	comp=N,10.0nm,0.6s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.8s							
EIL	**Elat**	**18.39**	**252**	LR	LR		05 34 50.8	
	comp=E,32nm,19.8s,baz=346,slow=42							
BRVK	**Borovoye**	**19.02**	**29**	*d iP*	**Pn**		**05 26 31.6**	**+0.4**
BRVK				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BRVK	**Borovoye**	**19.02**	**29**	*e*P	**Pn**		**05 26 31.7**	**+0.5**
	comp=Z,6.6nm,0.8s							
BRVK				*e*Sn	**Sn**		**05 29 55.7**	**-8.1**
BRVK	**Borovoye**	**19.02**	**29**	*i* P	**Pn**		**05 26 31.6**	**+0.4**
	comp=Z,10.0nm,1.2s							
BVA0	**Borovoye Array**	**19.04**	**29**	⇑P	**Pn**		**05 26 31.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=215,slow=12,SNR=57							
BVAR	**Borovoye Array**	**19.04**	**29**	P	**Pn**		**05 26 31.7**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=216,slow=9.1,SNR=33							
BVAR				LR	LR		05 34 39.4	
	comp=Z,38nm,19.7s,baz=129,slow=39							
BVAR	**Borovoye Array**	**19.04**	**29**	P	**Pn**		**05 26 31.7**	**+0.3**
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
BVAR				MLR	MLR			
	comp=Z,38nm,19.7s							
BVAR	**Borovoye Array**	**19.04**	**29**	P	**Pn**		**05 26 31.4**	**0.0**
	comp=Z,1.7nm,0.8s,SNR=57							
KURK	**Kurchatov**	**21.52**	**44**	P	**P**		**05 26 57.4**	**-0.1**
	comp=Z,1.5nm,0.6s,mb3.6,baz=246,slow=11,SNR=5.6							
KURK	**Kurchatov**	**21.52**	**44**	*ce*P	**P**		**05 26 58.7**	**+1.2**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.7s,mb3.7							
KURK	**Kurchatov**	**21.52**	**44**	P	**P**		**05 26 57.4**	**-0.1**
OBN	**Obninsk**	**21.84**	**331**	⇓*e*P	**P**		**05 27 01.6**	**+0.7**
OBN				*e*			05 27 23.6	
OBN				pmax	pmax			
	comp=Z,19nm,1.0s,mb4.5							
OBN	**Obninsk**	**21.84**	**331**	*e*P	**P**		**05 27 01.6**	**+0.7**
	comp=Z,19nm,1.0s,mb4.5							
MK31	**Makanchi Array**	**22.26**	**56**	P	**P**		**05 27 05.8**	**+0.3**
	comp=Z,1.4nm,0.5s,mb3.6,baz=245,slow=8.6,SNR=18							
MK31	**Makanchi Array**	**22.26**	**56**	*e*P	**P**		**05 27 06.0**	**+0.5**
MK31	**Makanchi Array**	**22.26**	**56**	P	**P**		**05 27 05.8**	**+0.3**
	comp=Z,1.4nm,0.5s,mb3.6,SNR=18							
MKAR	**Makanchi Array**	**22.26**	**56**	P	**P**		**05 27 06.0**	**+0.5**
	comp=Z,1.9nm,0.7s,mb3.6,baz=247,slow=11,SNR=14							
MKAR	**Makanchi Array**	**22.26**	**56**	*ce*P	**P**		**05 27 05.5**	**0.0**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**22.26**	**56**	*e*P	**P**		**05 27 05.5**	**0.0**
	comp=Z,2.0nm,0.7s,mb3.7							
AKASG	**Malin Array Be**	**22.78**	**314**	P	**P**		**05 27 10.9**	**-0.1**
	comp=Z,2.4nm,0.6s,mb3.8,baz=117,slow=9.0,SNR=12							
AKASG	**Malin Array Be**	**22.78**	**314**	*ce*P	**P**		**05 27 11.1**	**+0.1**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.6s							
AKASG	**Malin Array Be**	**22.78**	**314**	P	**P**		**05 27 10.9**	**-0.1**
AKBB	**Malin Array Si**	**22.78**	**314**	*e*P	**P**		**05 27 11.1**	**+0.1**
AKBB	**Malin Array Si**	**22.78**	**314**	*e*P	**P**		**05 27 11.1**	**+0.1**
KIEV	**Kiev**	**22.79**	**314**	*e*P	**P**		**05 27 10.7**	**-0.4**
KIEV				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.1							
KIEV	**Kiev**	**22.79**	**314**	*e*P	**P**		**05 27 10.7**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.1							
KIEV	**Kiev**	**22.79**	**314**	*e*P	**P**		**05 27 10.7**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.1							
MLR	**Muntele Rosu**	**23.24**	**300**	P	**P**		**05 27 18.2**	**+2.3**
	comp=Z,7.3nm,1.1s,mb4.0,baz=74,slow=2.0,SNR=5.2							
MLR	**Muntele Rosu**	**23.24**	**300**	P	**P**		**05 27 18.2**	**+2.3**
MLR				pmax	pmax			
	comp=Z,7.0nm,1.1s							
MLR	**Muntele Rosu**	**23.24**	**300**	P	**P**		**05 27 18.2**	**+2.3**
	comp=Z,7.0nm,1.1s,mb4.0							
BUR08	**Bucovina Ar. S**	**24.20**	**305**	*e*P	**P**		**05 27 25.8**	**+0.7**
BUR08	**Bucovina Ar. S**	**24.20**	**305**	*e*P	**P**		**05 27 25.8**	**+0.7**
ZALV	**Zalesovo Beam**	**26.40**	**41**	P	**P**		**05 27 45.5**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.7,baz=251,slow=9.2,SNR=5.9							
ZALV	**Zalesovo Beam**	**26.40**	**41**	P	**P**		**05 27 45.6**	**+0.7**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.6							
GERES	**GERESS Array B**	**31.98**	**304**	P	**P**		**05 28 36.0**	**+1.4**
	comp=Z,0.4nm,0.5s,mb3.5,baz=94,slow=8.6,SNR=4.3							
GERES	**GERESS Array B**	**31.98**	**304**	P	**P**		**05 28 36.0**	**+1.5**
**HF

IDC **15** *05:27:46.0±0.5, 31°.90N×104°.37E, h0km, mb4.7/34, mb1 4.8/35, mb1mx4.7/39, mbtmp4.7/35, ML3.8/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/37, Error ellipse: s-maj=16.0km s-min=10.4km az=38.0*

BJI **15** *05:27:46.8, 31°.94N×104°.46E, h10km, mB4.8/19, mb4.9/30, ML4.7/21, Ms4.4/45, Ms7 4.1/38*

ISCJB **15** *05:27:47.3±0.8, 31°.90N±0°.02×104°.38E±0°.03, h15km±5km, mb4.8/113, MS3.9/19, Error ellipse: s-maj=3.9km s-min=3.5km az=34.6*

NEIC **15** *05:27:47.8±0.2, 31°.93N×104°.42E, h10km, mb4.9/51, Error ellipse: s-maj=4.7km s-min=3.8km az=210.0*

MOS **15** *05:27:49.6±0.7, 31°.94N×104°.42E, h35km, mb5.1/63, MS4.0/13, Error ellipse: s-maj=8.7km s-min=4.5km az=117.8*

DJA **15** *05:27:49, 31°.72N×104°.33E, h10km, mb4.9/7*

SZGRF **15** *05:27:56.9, 32°.24N×103°.17E, h33km, mb5.1, Sichuan, China*

ISC 15 05:27:48.9±0.8, 31°.92N±0°.02×104°.38E±0°.03, h16km±5km, n309, σ0°90/325, mb4.8/113, MS3.9/19, 44C-11D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.14**	**208**	Pg	**Pg**	**05 28 10.3**	**-0.5**
CD2				Sg	**Sg**	**05 28 25.9**	**+0.2**
CD2				smax			
	comp=N,19μm,0.7s						
LZH	**Lanzhou**	**4.19**	**354**	*e*Pn	**Pn**	**05 28 54.3**	**+2.2**
LZH				Pg	**Pg**	**05 29 05.8**	**-3.3**
LZH				Sn	**Sn**	**05 29 41.5**	**+0.9**
LZH				Sg	**Sg**	**05 29 57.8**	**-5.5**
LZH				smax			
	comp=N,2μm,0.7s						
LZH				smax			
	comp=E,3μm,0.8s						
LZH				LR	LR		
	comp=N,7μm,6.1s						
LZH				LR	LR		
	comp=Z,8μm,6.3s						
XAN	**Xi'an**	**4.36**	**60**	Pn	**Pn**	**05 28 53.9**	**-0.6**
XAN				Pg	**Pg**	**05 29 06.0**	**-6.5**
XAN				Sn	**Sn**	**05 29 39.6**	**-5.4**
XAN				Sg	**Sg**	**05 30 02.4**	**-6.6**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,860nm,0.7s						
XAN				LR	LR		
	comp=N,2μm,6.9s						
XAN				LR	LR		
	comp=E,770nm,10.7s						
XAN				LR	LR		
	comp=Z,990nm,7.9s						
ENH	**Enshi**	**4.67**	**109**	*e*Pn	**Pn**	**05 28 58.9**	**+0.1**
ENH				*e*Sg	**Sg**	**05 30 18.8**	**-0.2**
GYA	**Guiyang**	**5.79**	**159**	Pn	**Pn**	**05 29 15.0**	**+0.9**
GYA				Sn	**Sn**	**05 30 18.9**	**-1.3**
GYA				smax			
	comp=N,770nm,0.8s						
GYA				smax			
	comp=E,750nm,0.9s						
GYA				LR	LR		
	comp=N,4μm,4.3s						
GYA				LR	LR		
	comp=E,3μm,4.0s						
GYA				LR	LR		
	comp=Z,3μm,5.2s						
KMI	**Kunming**	**6.92**	**192**	Pn	**Pn**	**05 29 27.9**	**-1.7**
KMI				Sn	**Sn**	**05 30 47.3**	**-0.7**
KMI				smax			
	comp=N,120nm,1.2s						
KMI				smax			
	comp=E,91nm,1.9s						
KMI				LR	LR		
	comp=N,2μm,7.5s						
KMI				LR	LR		
	comp=E,1μm,6.6s						
KMI				LR	LR		
	comp=Z,2μm,12.3s						
GTA	**Gaotai**	**8.35**	**335**	P	**Pn**	**05 29 50.1**	**+0.9**
GTA				pP		05 29 53.5	
GTA				sP		05 29 56.1	
GTA				S	**Sn**	**05 31 26.1**	**+2.9**
GTA				sS		05 31 31.5	
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,66nm,4.2s						
GTA				LR	LR		
	comp=N,2μm,11.4s						
GTA				LR	LR		
	comp=E,980nm,13.4s						
GTA				LR	LR		
	comp=Z,2μm,16.1s						
WHN	**Wuhan**	**8.64**	**96**	P	**Pn**	**05 29 55.9**	**+2.6**
WHN				S	**Sn**	**05 31 23.5**	**-7.0**
WHN				LR	LR		
	comp=N,6μm,11.6s						
WHN				LR	LR		
	comp=E,3μm,6.7s						
WHN				LR	LR		
	comp=Z,2μm,6.6s						
BTO	**Baotou**	**9.79**	**26**	*e*P	**Pn**	**05 30 07.0**	**-2.0**
BTO				LR	LR		
	comp=N,730nm,9.9s						
BTO				LR	LR		
	comp=E,320nm,10.8s						
HHC	**Hu-ho-hao-te**	**10.63**	**31**	*e*P	**Pn**	**05 30 23.9**	**+3.5**
HHC				S	**Sn**	**05 32 24.4**	**+5.4**
HHC				sS		05 32 29.3	
HHC				SS		05 32 38.1	
HHC				pmax	pmax		
	comp=Z,230nm,1.0s						
HHC				LR	LR		
	comp=N,2μm,4.5s						
HHC				LR	LR		
	comp=E,1μm,5.7s						
HHC				LR	LR		
	comp=Z,1μm,5.9s						
TIA	**Tai'an**	**11.40**	**64**	*e*P	**Pn**	**05 30 31.8**	**+0.7**
TIA				LR	LR		
	comp=N,430nm,6.0s						
TIA				LR	LR		
	comp=E,440nm,8.0s						
NJ2	**Nanjing**	**12.29**	**86**	*e*P	**Pn**	**05 30 46.3**	**+3.1**
NJ2				pP		05 30 51.1	
NJ2				sP		05 30 53.1	
NJ2				PP		05 30 56.3	
NJ2				S	**Sn**	**05 33 04.3**	**+4.4**
NJ2				sS		05 33 11.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.8s						
NJ2				LR	LR		
	comp=N,710nm,16.4s						
NJ2				LR	LR		
	comp=E,540nm,13.7s						
NJ2				LR	LR		
	comp=Z,780nm,16.1s						
BJI	**Beijing**	**12.52**	**46**	P	**Pn**	**05 30 45.8**	**-0.5**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,96nm,3.5s						
BJI				LR	LR		
	comp=N,2μm,4.9s						
BJI				LR	LR		
	comp=E,1μm,5.2s						
BJI				LR	LR		
	comp=Z,250nm,14.8s						
SHL	**Shillong**	**12.65**	**243**	*e*P	**Pn**	**05 30 49.0**	**+0.7**
QIZ	**Qiongzhong**	**13.74**	**158**	P	**Pn**	**05 31 04.3**	**+1.2**
QIZ				S	**Sn**	**05 33 38.3**	**+2.9**
QIZ				pmax	pmax		
	comp=Z,15nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,210nm,5.8s						
QIZ				LR	LR		
	comp=N,1μm,10.4s						
QIZ				LR	LR		
	comp=Z,1μm,11.6s						
CM31	**Chiang Mai Arr**	**14.27**	**201**	*e*Pn	**Pn**	**05 31 12.3**	**+1.9**
QZH	**Quanzhou**	**14.29**	**116**	*e*P	**Pn**	**05 31 12.8**	**+2.2**
QZH				S	**Sn**	**05 33 52.3**	**+3.4**
QZH				LR	LR		
	comp=N,3μm,6.9s						
QZH				LR	LR		
	comp=Z,2μm,10.2s						
SSE	**Sheshan**	**14.36**	**89**	P	**Pn**	**05 31 10.4**	**-1.1**
SSE				S	**Sn**	**05 33 49.8**	**-0.7**
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				pmax	pmax		
	comp=Z,87nm,8.0s						
SSE				LR	LR		
	comp=N,390nm,8.5s						
SSE				LR	LR		
	comp=E,590nm,8.5s						
SSE				LR	LR		
	comp=Z,750nm,10.3s						
SONM	**Songino Array**	**15.97**	**5**	Pn	**Pn**	**05 31 32.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=185,slow=13,SNR=40						
SONM				LR	LR	05 38 06.0	
	comp=Z,493nm,21.7s,baz=77,slow=39						
ULN	**Ulaanbaatar**	**16.06**	**7**	*e*P	**Pn**	**05 31 34.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,32nm,1.0s						
ULN	**Ulaanbaatar**	**16.06**	**7**	*e*Pn	**Pn**	**05 31 34.2**	**+0.3**
	comp=Z,32nm,1.0s						
GUN	**Gumba**	**16.53**	**261**	*e*P	**Pn**	**05 31 40.7**	**+0.6**
	comp=Z,36nm,0.6s						
PKI	**Pulchoki**	**17.03**	**260**	*e*P	**Pn**	**05 31 44.8**	**-1.6**
	comp=Z,19nm,0.5s						
PKIN	**Phulchoki**	**17.04**	**260**	*e*P	**Pn**	**05 31 45.8**	**-0.8**
	comp=Z,64nm,0.7s						
KKN	**Kakani**	**17.07**	**261**	*e*P	**Pn**	**05 31 45.8**	**-1.1**
DMN	**Daman**	**17.28**	**261**	*e*P	**Pn**	**05 31 48.3**	**-1.2**
	comp=Z,39nm,0.7s						
WMQ	**Urumqi**	**17.71**	**317**	*e*P	**Pn**	**05 31 54.8**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s						
WMQ				LR	LR		
	comp=N,640nm,13.0s						
WMQ				LR	LR		
	comp=E,460nm,9.0s						
WMQ				LR	LR		
	comp=Z,260nm,23.0s						
ZAK	**Zakamensk**	**18.47**	**358**	*e*P	**Pn**	**05 32 03.7**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
TLY	**Talaya**	**19.76**	**359**	*e*P	**Pn**	**05 32 20.4**	**+0.9**
TLY				pmax	pmax		
	comp=Z,12nm,0.9s						
TLY				MLR	MLR		
	comp=Z,497nm,11.0s						
TLY	**Talaya**	**19.76**	**359**	*e*Pn	**Pn**	**05 32 19.7**	**+0.2**
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**20.11**	**68**	P	**P**	**05 32 22.2**	**+0.3**
	comp=Z,5.2nm,0.7s,baz=256,slow=10,SNR=17						
KSRS				LR	LR	05 41 21.3	
	comp=Z,89nm,19.1s,MS3.1,baz=280,slow=41						
KSRS	**Korea Array**	**20.11**	**68**	P	**P**	**05 32 22.3**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,89nm,19.1s,MS3.1						
IRK	**Irkutsk**	**20.32**	**360**	*e*P	**P**	**05 32 25.2**	**+1.2**
IRK				pmax	pmax		
	comp=Z,141nm,0.7s						
CN2	**Changchun**	**20.37**	**48**	*e*P	**P**	**05 32 26.0**	**+1.3**
CN2				*e*pP		05 32 30.1	
CN2				*e*sP	sP	05 32 33.3	+1.9
CN2				*e*S	**S**	**05 36 08.3**	**-4.0**
CN2				pmax	pmax		
	comp=Z,50nm,0.6s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS3.9						
CN2				LR	LR		
	comp=Z,300nm,12.0s,MS3.9						
HIA	**Hailar**	**20.82**	**29**	*e*P	**P**	**05 32 30.1**	**+0.5**
HIA				pmax	pmax		
	comp=Z,42nm,0.7s						
HIA	**Hailar**	**20.82**	**29**	*e*P	**P**	**05 32 30.1**	**+0.6**
	comp=Z,42nm,0.7s						
MK31	**Makanchi Array**	**22.53**	**318**	*e*P	**P**	**05 32 48.1**	**+0.2**
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**05 32 48.5**	**+0.6**
	comp=Z,18nm,0.8s,mb4.6,baz=114,slow=12,SNR=102						
MKAR				LR	LR	05 42 25.2	
	comp=Z,397nm,19.6s,MS3.9,baz=289,slow=39						
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**05 32 48.5**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,18nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,397nm,19.7s						
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**05 32 48.5**	**+0.6**
MKAR				LR	LR	05 42 25.2	
DDI	**Dehra Dun**	**22.58**	**273**	*ex*	x	05 32 52.0	
MDJ	**Mudanjiang**	**23.40**	**50**	P	**P**	**05 32 57.8**	**+0.7**
MDJ				sP	sP	05 33 02.3	-1.5
MDJ				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,40nm,3.1s						
MDJ				LR	LR		
	comp=Z,74nm,19.2s,MS3.2						
MDJ	**Mudanjiang**	**23.40**	**50**	*e*P	**P**	**05 32 58.2**	**+1.1**
	comp=Z,66nm,1.2s,mb4.9						
KSH	**Kashi**	**24.21**	**296**	*e*P	**P**	**05 33 08.5**	**+3.8**
KSH				*e*pP		05 33 12.5	
KSH				*e*sP	sP	05 33 15.6	+3.9
KSH				*e*PP		05 33 44.6	
KSH				*e*PcP	PcP	05 36 46.5	+1.5
KSH				*e*S	**S**	**05 37 25.6**	**+3.1**
KSH				*e*sS	sS	05 37 32.6	+2.0
KSH				*e*SS		05 38 21.6	
KSH				pmax	pmax		
	comp=Z,120nm,2.4s,mb4.9						
KSH				LR	LR		
	comp=N,380nm,8.7s						
KSH				LR	LR		
	comp=E,270nm,8.8s						
ULHL	**Ulahol**	**24.61**	**303**	P	**P**	**05 33 10.0**	**+1.7**
	SNR=9.7						
TKM2	**Tokmak 2**	**25.25**	**304**	P	**P**	**05 33 15.6**	**+1.5**
	SNR=18						
TKM2	**Tokmak 2**	**25.25**	**304**	*e*P	**P**	**05 33 15.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**25.25**	**304**	*e*P	**P**	**05 33 15.1**	**+1.0**
	comp=Z,16nm,0.7s,mb4.7						
KZA	**Kyzart**	**25.27**	**302**	P	**P**	**05 33 16.2**	**+1.8**
	SNR=25						
KBK	**Karagaybulak**	**25.64**	**303**	P	**P**	**05 33 19.6**	**+1.9**
	SNR=10						
UCH	**Uchtor**	**25.84**	**302**	P	**P**	**05 33 21.7**	**+2.2**
	SNR=24						
UCH	**Uchtor**	**25.84**	**302**	*e*P	**P**	**05 33 21.4**	**+1.9**
	comp=Z,26nm,1.0s,mb4.7						
UCH				*e*PcP	PcP	05 36 49.4	+0.8
AAK	**Ala-Archa**	**25.95**	**303**	P	**P**	**05 33 23.6**	**+3.1**
	SNR=6.2						
AAK	**Ala-Archa**	**25.95**	**303**	P	**P**	**05 33 20.9**	**+0.3**
	comp=Z,4.2nm,0.6s,mb4.1,baz=116,slow=3.2,SNR=12						
AAK				LR	LR	05 45 35.1	
	comp=Z,156nm,21.1s,MS3.5,baz=306,slow=41						
AAK	**Ala-Archa**	**25.95**	**303**	*e*P	**P**	**05 33 21.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**25.95**	**303**	*e*P	**P**	**05 33 21.6**	**+1.0**
	comp=Z,7.4nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**26.10**	**333**	*e*P	**P**	**05 33 21.6**	**-0.1**
ZALV	**Zalesovo Beam**	**26.10**	**333**	P	**P**	**05 33 21.5**	**-0.2**
	comp=Z,22nm,0.7s,mb4.8,baz=130,slow=9.7,SNR=91						
ZALV				LR	LR	05 44 20.5	
	comp=Z,83nm,19.2s,MS3.3,baz=159,slow=38						
ZALV	**Zalesovo Beam**	**26.10**	**333**	P	**P**	**05 33 21.5**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.8						
ZALV				MLR	MLR		
	comp=Z,83nm,19.2s,MS3.3						
ZALV	**Zalesovo Beam**	**26.10**	**333**	P	**P**	**05 33 21.5**	**-0.2**
ZALV				LR	LR	05 44 20.5	
USP	**Ospenovka**	**26.11**	**304**	P	**P**	**05 33 25.8**	**+3.9**
	SNR=14						
AML	**Almayashu**	**26.41**	**301**	P	**P**	**05 33 26.6**	**+2.0**
	SNR=13						
AML	**Almayashu**	**26.41**	**301**	*e*P	**P**	**05 33 26.4**	**+1.8**
	comp=Z,14nm,0.9s,mb4.5						
BOD	**Bodaibo**	**26.73**	**11**	*e*P	**P**	**05 33 27.3**	**-0.1**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**05 33 27.6**	**0.0**
	comp=Z,21nm,0.8s,mb4.7,baz=129,slow=8.5,SNR=38						
KURK				PcP	PcP	05 36 49.8	-0.6
	comp=Z,1.0nm,0.4s,baz=126,slow=2.1,SNR=3.6						
KURK				LR	LR	05 44 39.9	
	comp=Z,193nm,20.4s,MS3.6,baz=125,slow=38						
KURK	**Kurchatov**	**26.75**	**322**	*c i*P	**P**	**05 33 27.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
KURK	**Kurchatov**	**26.75**	**322**	*e*P	**P**	**05 33 27.8**	**+0.2**
	comp=Z,18nm,0.8s,mb4.7						
KLR	**Kul'dur**	**26.83**	**42**	*e*P	**P**	**05 33 24.3**	**-4.0**
KLR				MLR	MLR		
	comp=Z,1μm,11.0s,MS4.6						
NVS	**Novosibirsk**	**27.39**	**333**	*e*P	**P**	**05 33 32.4**	**-0.9**
NVS				pmax	pmax		
	comp=Z,19nm,2.0s,mb4.3						
NVS				pmax	pmax		
	comp=N,12nm,1.7s						
MJAR	**Matsushiro Arr**	**28.26**	**71**	P	**P**	**05 33 41.5**	**+0.1**
	comp=N,0.9nm,0.3s,mb3.9,baz=271,slow=8.4,SNR=3.3						
MJAR	**Matsushiro Arr**	**28.26**	**71**	P	**P**	**05 33 41.5**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBL	**Kabul**	**29.59**	**285**	*e*P	**P**	**05 33 55.0**	**+1.9**
KBL				*e*		05 36 58.0	
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
KBL	**Kabul**	**29.59**	**285**	*e*P	**P**	**05 33 55.0**	**+1.8**
	comp=Z,6.7nm,0.8s,mb4.4						
KBL				*e*PcP	PcP	05 36 58.0	+0.2
ASAJ	**Asahikawa**	**32.20**	**57**	P	**P**	**05 34 16.6**	**+0.6**
	comp=Z,4.4nm,0.4s,mb4.6,baz=162,slow=25,SNR=3.8						
ASAJ	**Asahikawa**	**32.20**	**57**	P	**P**	**05 34 16.7**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**05 34 17.2**	**+0.3**
	comp=Z,5.2nm,0.6s,mb4.6,baz=114,slow=9.8,SNR=22						
BVAR				PcP	PcP	05 37 04.2	-0.4
	comp=Z,1.8nm,0.6s,baz=147,slow=3.5,SNR=5.7						
BVAR				LR	LR	05 47 55.9	
	comp=Z,131nm,18.4s,MS3.7,baz=230,slow=37						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**05 34 17.2**	**+0.3**
BVAR						05 37 04.2	
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,131nm,18.4s						
BRVK	**Borovoye**	**32.38**	**321**	*d i*P	**P**	**05 34 17.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
BRVK	**Borovoye**	**32.38**	**321**	*e*P	**P**	**05 34 17.7**	**+0.1**
	comp=Z,9.7nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**32.86**	**52**	*e*P	**P**	**05 34 22.0**	**+0.2**
YAK	**Yakutsk**	**34.27**	**21**	*e*P	**P**	**05 34 32.5**	**-1.4**
YAK				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
YAK				pmax	pmax		
	comp=N,10.0nm,1.3s						
ABKAR	**Akbulak array**	**37.32**	**311**	*e*P	**P**	**05 35 00.5**	**+0.3**
	comp=N,5.7nm,0.8s,mb4.5						
AKTK	**Aktyubinsk**	**38.76**	**312**	P	**P**	**05 35 12.7**	**+0.3**
AKTK				PcP	PcP	05 37 23.3	-0.4
AKTO	**Aktyubinsk**	**38.76**	**312**	P	**P**	**05 35 12.7**	**+0.3**
	comp=N,5.5nm,0.5s,mb4.5,baz=97,slow=8.9,SNR=28						
AKTO				PcP	PcP	05 37 23.3	-0.4
	comp=N,1.2nm,0.6s,baz=130,slow=8.6,SNR=3.3						
AKTO	**Aktyubinsk**	**38.76**	**312**	P	**P**	**05 35 12.7**	**+0.3**
AKTO						05 37 23.3	
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
SVE	**Sverdlovsk**	**38.99**	**323**	⇓*e*P	**P**	**05 35 14.9**	**+0.7**
SVE				*e*S	**S**	**05 41 10.8**	**-1.4**
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
KAPI	**Kappang**	**39.53**	**155**	P	**P**	**05 35 17.7**	**-1.5**
	comp=Z,26nm,1.1s,mb4.9,baz=286,slow=6.9,SNR=3.4						
ARU	**Arti**	**39.94**	**322**	*d i*P	**P**	**05 35 22.4**	**+0.3**
ARU				S	**S**	**05 41 27.1**	**+0.6**
ARU				SS	SS	05 44 18.9	-4.2
ARU				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.4						
ARU	**Arti**	**39.94**	**322**	*e*P	**P**	**05 35 22.2**	**+0.1**
	comp=Z,54nm,0.7s,mb5.4						
TIXI	**Tiksi**	**41.91**	**11**	*e*P	**P**	**05 35 36.9**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,419nm,18.0s,MS4.4						
TIXI	**Tiksi**	**41.91**	**11**	*e*P	**P**	**05 35 37.0**	**-1.2**
	comp=Z,11nm,0.5s,mb4.7						
SEY	**Seymchan**	**43.27**	**30**	*d i*P	**P**	**05 35 48.8**	**-0.5**
PETK	**Petropavlovsk-**	**43.45**	**45**	P	**P**	**05 35 50.6**	**-0.3**
	comp=Z,13nm,0.8s,mb4.7,baz=220,slow=3.9,SNR=17						
PETK	**Petropavlovsk-**	**43.45**	**45**	P	**P**	**05 35 50.6**	**-0.3**
PETK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
ZEI	**Tsey**	**48.36**	**301**	*e*P	**P**	**05 36 29.5**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
KIV	**Kislovodsk**	**49.07**	**303**	*e*P	**P**	**05 36 35.4**	**+0.1**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=Z,74nm,17.0s,MS3.8						
VRHR	**Novokhopersk**	**49.17**	**312**	*e*P	**P**	**05 36 35.1**	**-0.8**
VRHR				pmax	pmax		
	comp=N,20nm,0.8s						
VRHR				pmax	pmax		
	comp=E,20nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
BILL	**Bilibino**	**50.34**	**26**	⇑*i*P	**P**	**05 36 43.9**	**-0.7**
BILL				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.1						
BILL				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.3						
BILL	**Bilibino**	**50.34**	**26**	*e*P	**P**	**05 36 44.0**	**-0.6**
	comp=Z,6.9nm,0.6s,mb4.9						
VSR	**Storozhevoye**	**50.71**	**312**	*e*P	**P**	**05 36 47.1**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
VSR				pmax	pmax		
	comp=N,4.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.4s						
SOC	**Sochi**	**51.26**	**303**	*e*P	**P**	**05 36 49.6**	**-2.2**
SOC				*e**PP	pP	05 37 00.0	+3.1
SOC				*e*		05 38 12.0	
SOC				*e*PPP		05 39 54.8	
SOC				*e*S	**S**	**05 44 05.9**	**-4.0**
SOC				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
MOS	**Moscow**	**51.42**	**318**	*e*P	**P**	**05 36 50.1**	**-2.7**
MOS				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.6						
OBN	**Obninsk**	**52.04**	**318**	⇓*i*P	**P**	**05 36 57.6**	**+0.1**
OBN				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
ANN	**Anapa**	**52.66**	**305**	*e*P	**P**	**05 36 58.9**	**-3.4**
ANN				*e*		05 38 56.7	
ANN				*e*S	**S**	**05 44 23.3**	**-5.9**
ANN				*e*SS	SS	05 48 01.6	-5.7
ANN				*e*SSS		05 49 55.0	
ANN				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.3						
KNA	**Kununurra**	**52.85**	**150**	*e*P	**P**	**05 37 03.4**	**-0.5**
	comp=Z,38nm,0.7s,mb5.4						
MALT	**Malatya**	**53.32**	**296**	*e*P	**P**	**05 37 07.7**	**+0.5**
	comp=Z,1.8nm,0.5s,mb4.3						
MALT	**Malatya**	**53.32**	**296**	⇓*i*P	**P**	**05 37 08.5**	**+1.3**
APA	**Apatity**	**53.69**	**333**	⇑*e*P	**P**	**05 37 09.9**	**+0.4**
APA				MLR	MLR		

comp=Z,200nm,13.0s,MS4.4
FITZ Fitzroy Crossi 53.75 155 *e*P **P 05 37 09.7 -0.7**
comp=Z,16nm,0.9s,mb5.0
FITZ Fitzroy Crossi 53.75 155 *e*P **P 05 37 09.8 -0.6**
comp=Z,12nm,0.9s,mb4.8
JOF Joensuu 54.47 327 *e*P **P 05 37 13.4 -1.9**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
JOF Joensuu 54.47 327 *e*p **P 05 37 13.4 -1.9**
comp=Z,6.8nm,0.6s,mb4.8
KEV Kevo 56.09 336 *e*P **P 05 37 25.1 -1.7**
KEV pmax pmax
comp=Z,15nm,0.6s,mb5.2
KEV Kevo 56.09 336 *e*p **P 05 37 25.1 -1.7**
comp=Z,15nm,0.6s,mb5.2
ASF Jabal al Asfar 56.29 290 P **P 05 37 29.4 +0.5**
comp=Z,4.7nm,0.7s,mb4.6,baz=255,slow=2.6,SNR=10
ASF Jabal al Asfar 56.29 290 P **P 05 37 29.4 +0.5**
ASF pmax pmax
comp=Z,5.0nm,0.7s
BR131 Keskin Array S 56.55 299 *e*P **P 05 37 30.3 -0.3**
BRTR Keskin Array B 56.55 299 P **P 05 37 30.4 -0.2**
comp=Z,4.1nm,0.8s,mb4.5,baz=97,slow=7.3,SNR=21
BRTR Keskin Array B 56.55 299 *ce*P **P 05 37 30.3 -0.3**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 56.62 336 P **P 05 37 30.1 -0.5**
comp=Z,8.9nm,0.6s,mb5.0,baz=77,slow=8.2,SNR=98
ARCES PcP PcP 05 38 25.9 -0.9
comp=Z,1.8nm,0.5s,baz=77,slow=5.5,SNR=4.4
ARCES LR LR 06 02 05.8
comp=Z,34nm,20.7s,MS3.4,baz=272,slow=36
ARCES ARCESS Array B 56.62 336 P **P 05 37 30.1 -0.5**
ARCES 05 38 25.9
ARCES pmax pmax
comp=Z,9.0nm,0.6s
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES MLR MLR
comp=Z,34nm,20.7s
KAF Kangasniemi 56.84 327 *e*P **P 05 37 30.7 -1.6**
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KAF Kangasniemi 56.84 327 *e*p **P 05 37 30.7 -1.6**
comp=Z,7.7nm,0.6s,mb4.9
AKASG Malin Array Be 57.01 313 P **P 05 37 32.9 -0.8**
comp=Z,8.3nm,0.6s,mb5.0,baz=70,slow=6.3,SNR=22
AKASG Malin Array Be 57.01 313 P **P 05 37 32.9 -0.8**
AKASG pmax pmax
comp=Z,8.0nm,0.6s
KIEV Kiev 57.02 313 *e*P **P 05 37 32.9 -0.8**
KIEV pmax pmax
comp=Z,21nm,1.4s,mb5.0
KIEV Kiev 57.02 313 *e*P **P 05 37 32.9 -0.9**
comp=Z,21nm,1.4s,mb5.0
FINES FINESS Array B 57.03 326 P **P 05 37 33.2 -0.4**
comp=Z,13nm,0.5s,mb5.2,baz=82,slow=6.8,SNR=60
FINES FINESS Array B 57.03 326 P **P 05 37 33.2 -0.4**
FINES pmax pmax
comp=Z,13nm,0.5s
FINES FINESS Array B 57.03 326 P **P 05 37 33.2 -0.4**
EIL Elat 58.73 288 P **P 05 37 45.7 -0.4**
comp=Z,5.5nm,0.7s,mb4.7,baz=36,slow=5.3,SNR=6.4
EIL Elat 58.73 288 P **P 05 37 45.7 -0.4**
COEN Coen 58.84 135 P **P 05 37 47.1 +0.2**
comp=Z,101nm,1.2s,mb5.7
WRAB Tennant Creek 59.01 147 *e*P **P 05 37 48.0 0.0**
WRAB pmax pmax
comp=Z,41nm,0.6s,mb5.6
WRAB Tennant Creek 59.01 147 *e*P **P 05 37 48.0 0.0**
comp=Z,41nm,0.6s,mb5.6
WRA Warramunga Arr 59.02 147 P **P 05 37 47.9 -0.1**
comp=Z,28nm,0.6s,mb5.5,baz=341,slow=7.9,SNR=155
WRA Warramunga Arr 59.02 147 P **P 05 37 47.9 -0.1**
WRA pmax pmax
comp=Z,28nm,0.6s
HARR Harsova 59.28 306 ⇑P **P 05 37 50.2 +0.5**
HARR Harsova 59.28 306 ⇑*i*P **P 05 37 50.2 +0.5**
VRI Vrincioaia 59.77 308 ⇑P **P 05 37 53.3 +0.2**
VRI Vrincioaia 59.77 308 ⇑*i*P **P 05 37 53.3 +0.2**
ATD Arta Tunnel 59.89 265 P **P 05 37 55.0 +0.7**
comp=Z,2.0nm,0.3s,mb4.6,baz=268,slow=21,SNR=4.7
ATD Arta Tunnel 59.89 265 P **P 05 37 55.0 +0.7**
SUW Suwalki 59.90 318 *e*P **P 05 37 53.4 -0.4**
BURAR Bucovina Array 60.29 310 ⇑P **P 05 37 56.6 0.0**
BURAR Bucovina Array 60.29 310 ⇑*i*P **P 05 37 56.6 0.0**
BUR08 Bucovina Ar. S 60.30 310 *e*P **P 05 37 56.6 0.0**
MLR Muntele Rosu 60.41 308 P **P 05 37 56.9 -0.5**
comp=Z,2.5nm,0.6s,mb4.5,baz=319,slow=11,SNR=5.7
MLR Muntele Rosu 60.41 308 ⇓*i*P **P 05 37 57.8 +0.4**
VOIR 61.03 308 ⇑P **P 05 38 01.9 +0.3**
VOIR 61.03 308 ⇑*i*P **P 05 38 01.9 +0.3**
KWP Kalwaria Pacla 61.33 313 *e*P **P 05 38 03.9 +0.3**
KWP Kalwaria Pacla 61.33 313 *e*P **P 05 38 04.0 +0.4**
KWP pmax pmax
comp=Z,42nm,0.9s,mb5.6
KWP Kalwaria Pacla 61.33 313 *e*P **P 05 38 04.0 +0.3**
comp=Z,42nm,0.9s,mb5.6
KWP Kalwaria Pacla 61.33 313 ⇑*i*P **P 05 38 03.8 +0.2**
KOLS Kolonicke sedl 61.80 312 *e*P **P 05 38 06.9 +0.1**
KOLS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KOLS Kolonicke sedl 61.80 312 *e*P **P 05 38 06.9 +0.1**
comp=Z,3.3nm,0.8s,mb4.5
KOLS Kolonicke sedl 61.80 312 *e*P **P 05 38 06.9 +0.1**
TRPA Tarpa 61.87 311 ⇑*i*P **P 05 38 07.6 +0.3**
ASAR Alice Springs 62.06 149 P **P 05 38 08.8 0.0**
comp=Z,13nm,0.8s,mb5.1,baz=334,slow=6.6,SNR=39
ASAR Alice Springs 62.06 149 P **P 05 38 08.8 +0.1**
ASAR pmax pmax
comp=Z,13nm,0.8s
DRGR 62.17 310 ⇓P **P 05 38 10.2 +0.9**
DRGR 62.17 310 ⇓*i*P **P 05 38 10.1 +0.8**
STHS Stebnicka Huta 62.31 313 *e*P **P 05 38 10.1 -0.1**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
STHS Stebnicka Huta 62.31 313 *e*P **P 05 38 10.1 -0.1**
comp=Z,4.8nm,0.8s,mb4.7
STHS Stebnicka Huta 62.31 313 *e*P **P 05 38 10.1 -0.1**
GZR Gura Zlata 62.56 308 ⇑P **P 05 38 12.1 +0.1**
GZR Gura Zlata 62.56 308 ⇑*i*P **P 05 38 12.1 +0.1**
NIE Niedzica 62.88 313 *e*P **P 05 38 15.0 +1.0**
OJC Ojcow 62.95 314 *e*P **P 05 38 14.5 0.0**
KECS Kecovo 63.07 312 *e*P **P 05 38 15.6 +0.3**
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
KECS Kecovo 63.07 312 *e*P **P 05 38 15.6 +0.3**
comp=Z,2.6nm,0.7s,mb4.5
KECS Kecovo 63.07 312 *e*P **P 05 38 15.6 +0.3**
HFS Hagfors 63.23 326 P **P 05 38 15.5 -0.7**
comp=Z,8.1nm,0.5s,mb5.2,baz=103,slow=6.4,SNR=58
HFS Hagfors 63.23 326 P **P 05 38 15.5 -0.7**
HFS pmax pmax
comp=Z,8.0nm,0.5s
VYHS Vyhne 64.10 313 *e*P **P 05 38 22.6 +0.5**
VYHS pmax pmax
comp=Z,9.0nm,1.4s,mb4.6
VYHS Vyhne 64.10 313 *e*P **P 05 38 22.6 +0.5**
comp=Z,9.3nm,1.4s,mb4.6
VYHS Vyhne 64.10 313 *e*P **P 05 38 22.6 +0.5**
NB2 NORSAR Subarra 64.11 327 P **P 05 38 20.9 -1.0**
comp=Z,7.4nm,0.6s,mb4.9,baz=74,slow=6.9
NOA NORSAR Array B 64.11 327 P **P 05 38 20.8 -1.2**
comp=Z,7.2nm,0.6s,mb4.8,baz=74,slow=6.8,SNR=27
NOA LR LR 06 07 58.8
comp=Z,75nm,18.2s,MS3.9,baz=40,slow=38
NOA NORSAR Array B 64.11 327 P **P 05 38 20.8 -1.1**
NOA pmax pmax
comp=Z,7.0nm,0.6s
NOA MLR MLR
comp=Z,75nm,18.2s
BSD Bornholm Skovb 64.21 320 ⇑*i*P **P 05 38 21.6 -1.1**
BSD pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BSD Bornholm Skovb 64.21 320 ⇑*i*P **P 05 38 21.6 -1.1**
comp=Z,7.8nm,0.8s,mb4.8
NAO01 NORSAR Array S 64.32 327 *e*P **P 05 38 21.9 -1.4**
comp=Z,1.9nm,0.4s,mb4.5
KOLL Kolacno 64.35 313 *e*P **P 05 38 24.4 +0.7**
KOLL Kolacno 64.35 313 *e*P **P 05 38 24.4 +0.7**
MORC Moravsky Berou 64.47 314 *e*P **P 05 38 24.6 +0.1**
comp=Z,8.0nm,0.8s,mb4.8
MORC Moravsky Berou 64.47 314 ⇑*i*P **P 05 38 24.7 +0.2**
IDI Anoyia 64.57 297 P **P 05 38 24.2 -1.2**
comp=Z,6.5nm,0.7s,mb4.8,baz=28,slow=17,SNR=3.4

KSP Ksiaz 64.86 316 *e*P **P 05 38 27.2 +0.2**
PKSM Moragy 65.01 310 ⇑P **P 05 38 27.8 -0.3**
PKSM Moragy 65.01 310 ⇑*i*P **P 05 38 27.8 -0.3**
DPC Dobruska-Polom 65.02 315 *e*P **P 05 38 28.4 +0.4**
DPC *ep*P pP 05 38 39.3 +6.0
VRAC Vranov 65.22 314 P **P 05 38 29.7 +0.3**
comp=Z,6.6nm,0.4s,mb5.0,baz=188,slow=14,SNR=6.5
VRAC Vranov 65.22 314 P **P 05 38 29.7 +0.3**
VRAC pmax pmax
comp=Z,7.0nm,0.4s
COP Copenhagen 65.34 321 *e*P **P 05 38 31.2 +1.1**
COP pmax pmax
comp=Z,11nm,0.8s,mb4.9
COP Copenhagen 65.34 321 *i*P **P 05 38 31.2 +1.1**
comp=Z,11nm,0.8s,mb5.0
CTA Charters Tower 65.44 136 *e*P **P 05 38 34.6 +3.5**
comp=Z,6.0nm,0.8s,mb4.7
CSNA Conrad Observa 66.17 313 ⇑*i*P **P 05 38 35.8 +0.3**
comp=Z,9.7nm,1.1s,mb4.7
BRG Berggiesshubel 66.24 316 *e*P **P 05 38 35.8 -0.2**
comp=Z,9.0nm,0.8s,mb4.8
BRG Berggiesshubel 66.24 316 *i*P **P 05 38 35.9 -0.1**
comp=Z,9.0nm,0.8s,mb4.8
BRG
comp=N,87nm,16.1s
BRG
comp=E,102nm,28.5s
BRG
comp=Z,124nm,17.8s
BRG Berggiesshubel 66.24 316 *i*P **P 05 38 35.9 -0.1**
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BRG MLR MLR
comp=N,52nm,16.1s
BRG MLR MLR
comp=E,61nm,28.5s
BRG MLR MLR
comp=Z,74nm,17.8s,MS3.9
CLL Collm 66.63 317 *e*P **P 05 38 38.4 0.0**
comp=Z,11nm,0.9s,mb4.9
CLL Collm 66.63 317 *e*P **P 05 38 38.0 -0.4**
CLL pmax pmax
comp=Z,11nm,0.9s,mb4.9
CLL MLR MLR
comp=Z,100nm,16.4s,MS4.1
CLL Collm 66.63 317 *e*P **P 05 38 38.0 -0.4**
comp=Z,11nm,0.9s,mb4.9
CLL *e* pP 05 38 41.0 -2.7
CLL LR LR
comp=Z,100nm,16.4s,MS4.1
CLL Collm 66.63 317 *e*P **P 05 38 38.0 -0.4**
comp=Z,11nm,0.9s,mb4.9
CLL *ep*P pP 05 38 41.0 -2.7
CLL *e* 06 03 06.0
COLD Coldfoot 66.64 24 *e*P **P 05 38 37.8 -0.4**
comp=Z,12nm,0.9s,mb4.9
MUD Monsted U'grnd 66.75 323 *e*P **P 05 38 39.1 0.0**
MUD pmax pmax
comp=Z,15nm,0.7s,mb5.1
MUD Monsted U'grnd 66.75 323 *i*P **P 05 38 39.1 0.0**
comp=Z,15nm,0.7s,mb5.1
GROS Grobnik 66.94 311 *i*P **P 05 38 40.2 -0.4**
PERS Pernice 67.12 312 *i*P **P 05 38 41.5 -0.2**
BSEG Bad Segeberg 67.13 320 *e*P **P 05 38 42.1 +0.5**
comp=Z,18nm,0.8s,mb5.2
BSEG Bad Segeberg 67.13 320 *e*P **P 05 38 42.1 +0.5**
BSEG pmax pmax
comp=Z,18nm,0.8s,mb5.2
GEC2 GERESS Array S 67.15 314 *e*P **P 05 38 41.4 -0.4**
comp=Z,8.0nm,1.1s,mb4.7
GEC2 GERESS Array S 67.15 314 *e*P **P 05 38 41.4 -0.4**
GEC2 pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
GERES GERESS Array B 67.15 314 P **P 05 38 41.9 +0.1**
comp=Z,4.2nm,0.7s,mb4.6,baz=70,slow=5.8,SNR=30
GERES LR LR 06 09 43.3
comp=Z,164nm,19.6s,MS4.3,baz=61,slow=38
GERES GERESS Array B 67.15 314 P **P 05 38 41.9 +0.1**
GERES pmax pmax
comp=Z,4.0nm,0.7s
GERES MLR MLR
comp=Z,164nm,19.6s
SOKA Soboth 67.16 312 ⇑*i*P **P 05 38 41.7 -0.2**
comp=Z,12nm,1.0s,mb4.9
MOA Molln 67.19 313 ⇓*i*P **P 05 38 42.3 +0.2**
comp=Z,7.2nm,1.0s,mb4.7
TANN Tannenbergstha 67.29 316 *e*P **P 05 38 42.5 -0.1**
comp=Z,7.0nm,0.9s,mb4.7
CHUM Lake Minchumin 67.35 28 *e*P **P 05 38 42.1 -0.7**
comp=Z,9.3nm,0.7s,mb4.9
PDKS Podkum 67.42 311 *i*P **P 05 38 43.5 -0.1**
WET Wettzell 67.54 315 *e*P **P 05 38 44.3 +0.1**
comp=Z,6.0nm,0.9s,mb4.6
WET Wettzell 67.54 315 *e*P **P 05 38 44.3 +0.1**
WET pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ROTZ Rotzenmuhle 67.69 316 *e*P **P 05 38 45.6 +0.4**
comp=Z,12nm,0.8s,mb5.0
MOX Moxa 67.69 317 *e*P **P 05 38 45.1 -0.1**
comp=Z,5.0nm,0.8s,mb4.6
BPAW Bear Paw Mtn. 67.77 27 *e*P **P 05 38 44.3 -1.2**
comp=Z,9.4nm,0.7s,mb4.9
NRDL Niedersach Rie 67.82 319 *e*P **P 05 38 46.0 0.0**
comp=Z,13nm,0.9s,mb5.0
PPLA Purkeypile 67.84 29 *e*P **P 05 38 46.0 0.0**
comp=Z,15nm,0.6s,mb5.2
CLZ Clausthal 67.93 318 *e*P **P 05 38 47.0 +0.3**
comp=Z,19nm,0.8s,mb5.2
CLZ Clausthal 67.93 318 *e*P **P 05 38 47.0 +0.3**
CLZ pmax pmax
comp=Z,19nm,0.8s,mb5.2
KNDS Knezji Dol 68.03 311 *i*P **P 05 38 47.2 -0.2**
KBA Koelnbreinsper 68.07 313 ⇑*i*P **P 05 38 47.6 -0.1**
comp=Z,4.8nm,0.7s,mb4.6
SKDS Skadanscina 68.26 311 *i*P **P 05 38 48.2 -0.6**
GRA1 Grafenberg Arr 68.31 316 *e*P **P 05 38 49.3 +0.2**
comp=Z,18nm,0.8s,mb5.2
GRF Grafenberg Arr 68.31 316 *e*P **P 05 38 49.3 +0.2**
comp=Z,18nm,0.8s,mb5.2
GRF Grafenberg Arr 68.31 316 *e*P **P 05 38 49.3 +0.2**
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.2
GRF Grafenberg Arr 68.31 316 *e*P **P 05 38 49.3 +0.2**
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.2
COLA College 68.60 26 *e*P **P 05 38 50.1 -0.5**
COLA pmax pmax
comp=Z,31nm,1.2s,mb5.1
COLA College 68.60 26 *e*P **P 05 38 50.1 -0.5**
comp=Z,31nm,1.2s,mb5.1
FUR Furstenfeldbru 68.90 314 *e*P **P 05 38 53.5 +0.7**
comp=Z,23nm,0.6s,mb5.3
FUR Furstenfeldbru 68.90 314 *e*P **P 05 38 53.5 +0.7**
FUR pmax pmax
comp=Z,23nm,0.6s,mb5.3
WTTA Wattenberg 69.06 313 ⇑*i*P **P 05 38 53.6 -0.2**
comp=Z,8.3nm,0.6s,mb4.9
MOTA Moosalm 69.35 313 ⇓*i*P **P 05 38 55.6 -0.1**
comp=Z,6.5nm,0.8s,mb4.6
FETA Feichten 69.72 313 ⇑*i*P **P 05 38 57.5 -0.4**
comp=Z,11nm,0.9s,mb4.8
PMR Palmer 69.72 29 *e*P **P 05 38 56.9 -0.7**
KDAK Kodiak Island 70.03 34 *i*P **P 05 38 59.9 +0.3**
BFO Black Forest 70.61 315 *e*P **P 05 39 02.8 -0.6**
comp=Z,9.0nm,1.1s,mb4.6
BFO Black Forest 70.61 315 *e*P **P 05 39 02.8 -0.6**
BFO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CDF Champ du Feu 71.20 316 ⇑*i*P **P 05 39 06.6 -0.3**
comp=Z,13nm,0.6s,mb4.7
CDF Champ du Feu 71.20 316 ⇑*i*P **P 05 39 06.6 -0.3**
CDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CDF Champ du Feu 71.20 316 ⇑*i*P **P 05 39 06.6 -0.3**
comp=Z,6.7nm,0.6s,mb4.8
WLF Walferdange 71.29 317 P **P 05 39 08.1 +0.6**
comp=Z,15nm,1.1s,mb4.8
WLF Walferdange 71.29 317 *e*P **P 05 39 08.1 +0.7**
comp=Z,28nm,1.0s,mb5.2
WLF Walferdange 71.29 317 *e*P **P 05 39 07.7 +0.2**
INK Inuvik 71.31 19 *e*P **P 05 39 06.2 -1.1**
INK pmax pmax
comp=Z,17nm,0.7s
INK Inuvik 71.31 19 *e*P **P 05 39 06.2 -1.1**
comp=Z,17nm,0.7s,mb5.1
KMBO Kilima Mbogo 71.33 257 P **P 05 39 08.0 -0.2**
comp=Z,1.1nm,0.5s,mb4.1,baz=11,slow=23,SNR=3.8

KMBO Kilima Mbogo 71.33 257 P **P 05 39 08.0 -0.2**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
KMBO Kilima Mbogo 71.33 257 P **P 05 39 08.0 -0.2**
BCLA Clavier 71.43 318 P **P 05 39 08.4 +0.2**
BMRM Bremner River 71.91 29 *e*P **P 05 39 10.6 -0.4**
comp=Z,16nm,0.6s,mb5.1
DOU Dourbes 71.98 318 P **P 05 39 11.5 -0.1**
DAWY Dawson 72.11 24 *e*P **P 05 39 11.7 -0.4**
EIDS Eidsvold 72.33 136 *e*P **P 05 39 17.8 +3.9**
STKA Stephens Creek 72.56 147 *e*P **P 05 39 14.8 -0.3**
comp=Z,9.0nm,0.6s,mb4.9
STKA Stephens Creek 72.56 147 P **P 05 39 15.0 -0.1**
comp=Z,13nm,0.8s,mb4.9,baz=345,slow=5.9,SNR=14
SUMG Summit 72.69 349 *e*P **P 05 39 15.2 -0.2**
comp=Z,11nm,1.0s,mb4.7
LPG La Plagne 72.87 313 ⇑*i*P **P 05 39 17.5 +0.5**
comp=Z,53nm,0.7s,mb5.3
LPG La Plagne 72.87 313 ⇑*i*P **P 05 39 17.5 +0.5**
LPG pmax pmax
comp=Z,27nm,0.7s,mb5.3
LPG La Plagne 72.87 313 ⇑*i*P **P 05 39 17.5 +0.5**
comp=Z,27nm,0.7s,mb5.3
LPL La Plagne 72.87 313 ⇑*i*P **P 05 39 17.4 +0.4**
comp=Z,47nm,0.8s,mb5.2
LPL La Plagne 72.87 313 ⇑*i*P **P 05 39 17.4 +0.4**
LPL pmax pmax
comp=Z,24nm,0.8s,mb5.2
LPL La Plagne 72.87 313 ⇑*i*P **P 05 39 17.4 +0.4**
comp=Z,24nm,0.8s,mb5.2
BNI Bardonecchia 73.13 313 *e*P **P 05 39 18.4 -0.1**
SMF Signal de Mont 74.09 315 ⇑*i*P **P 05 39 23.6 -0.6**
comp=Z,26nm,0.9s,mb4.9
SMF Signal de Mont 74.09 315 ⇑*i*P **P 05 39 23.6 -0.6**
SMF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SMF Signal de Mont 74.09 315 ⇑*i*P **P 05 39 23.6 -0.6**
comp=Z,13nm,0.9s,mb4.9
TCF Toulx Ste Croi 75.25 315 ⇑*i*P **P 05 39 30.6 -0.3**
comp=Z,18nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.25 315 ⇑*i*P **P 05 39 30.6 -0.3**
TCF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TCF Toulx Ste Croi 75.25 315 ⇑*i*P **P 05 39 30.6 -0.3**
comp=Z,9.1nm,0.9s,mb4.7
KEST Kesra 75.81 303 P **P 05 39 34.1 -0.2**
comp=Z,1.0nm,0.6s,mb3.9,baz=196,slow=1.5,SNR=4.5
CAF Calviac 76.03 314 ⇑*i*P **P 05 39 35.6 +0.2**
comp=Z,14nm,0.8s,mb4.6
CAF Calviac 76.03 314 ⇑*i*P **P 05 39 35.6 +0.2**
CAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CAF Calviac 76.03 314 ⇑*i*P **P 05 39 35.6 +0.2**
comp=Z,6.9nm,0.8s,mb4.6
SFJD Kangerlussuaq 79.58 350 *i*P **P 05 39 54.4 -0.3**
SFJD pmax pmax
comp=Z,12nm,0.7s,mb4.9
SFJD Kangerlussuaq 79.58 350 *i*P **P 05 39 54.4 -0.3**
comp=Z,12nm,0.7s,mb4.9
YKA Yellowknife Ar 80.85 17 P **P 05 40 01.1 -0.6**
comp=Z,6.3nm,0.7s,mb4.7,baz=329,slow=5.2,SNR=77
YKA Yellowknife Ar 80.85 17 P **P 05 40 01.1 -0.5**
YKA pmax pmax
comp=Z,6.0nm,0.7s
ESDC Sonseca Array 82.65 312 P **P 05 40 11.5 -0.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=39,slow=5.4,SNR=4.4
ESDC Sonseca Array 82.65 312 P **P 05 40 11.5 -0.1**
FCC Fort Churchill 88.36 10 *e*P **P 05 40 38.6 -1.0**
EDM Edmonton 89.09 22 *e*P **P 05 40 42.8 -0.4**
FFC Flin Flon 90.77 15 *i*P **P 05 40 50.6 -0.4**
FFC Flin Flon 90.77 15 *e*P **P 05 40 50.4 -0.6**
comp=Z,7.5nm,1.0s,mb5.0
ETW Entiat 91.24 28 *e*P **P 05 40 53.9 +0.5**
NEW Newport 91.96 26 *e*P **P 05 40 57.3 +0.7**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW Newport 91.96 26 *e*P **P 05 40 57.3 +0.6**
comp=Z,3.6nm,0.9s,mb4.7
BSMT Bassoo Peak 93.17 25 *e*P **P 05 41 03.5 +1.3**
SCHQ Schefferville 93.28 355 P **P 05 41 01.9 -0.7**
comp=Z,6.3nm,0.6s,mb5.2,baz=20,slow=5.1,SNR=16
TORD Torodi Ar. Bea 93.61 288 P **P 05 41 04.0 -0.9**
comp=Z,0.6nm,0.8s,mb4.1,baz=58,slow=4.2,SNR=5.3
SLMT Seeley Lake 94.15 25 *e*P **P 05 41 07.1 +0.4**
PDAR Pinedale Array 99.42 25 P **P 05 41 31.0 +0.3**
comp=Z,0.2nm,0.6s,mb3.8,baz=15,slow=3.9,SNR=3.4
SDV Santo Domingo 139.15 352 PKhKP 05 47 06.3
comp=Z,0.8nm,0.4s,baz=257,slow=14,SNR=4.6
ROSC El Rosal 143.41 358 PKP PKPdf 05 47 21.0 -2.3
comp=Z,4.6nm,0.5s,baz=120,slow=22,SNR=6.2
ROSC El Rosal 143.41 358 *e*PKPdf PKPdf 05 47 21.0 -2.4
OTAV Otavalo 147.91 5 *e*PKPbc PKPbc 05 47 34.7 +0.7
LPAZ La Paz 163.02 335 PKPab PKPab 05 48 39.5 -1.0
comp=Z,0.7nm,0.7s,baz=310,slow=6.2,SNR=3.6
LPAZ La Paz 163.02 335 PKP2 PKPab 05 48 39.5 -1.0
LPAZ pmax pmax
comp=Z,1.0nm,0.7s

IDC 15 05:47:42.7±3.3, 5.74S×153.88E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/16, mbtmp3.6/5, Error ellipse: s-maj=107.8km s-min=28.7km az=116.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.66**	**232**	P	P	05 52 56.4	+0.1
	0.6nm,1.1s,baz=60,slow=9.1,SNR=3.1						
ASAR	**Alice Springs**	**26.21**	**225**	P	P	05 53 19.7	+0.2
	0.3nm,0.7s,baz=54,slow=9.5,SNR=3.7						
FITZ	**Fitzroy Crossi**	**30.18**	**244**	P	P	05 53 53.4	-1.5
	1.1nm,0.6s,baz=63,slow=6.8,SNR=3.8						
MKAR	**Makanchi Array**	**81.74**	**319**	P	P	06 00 02.4	-0.9
	0.8nm,0.8s,baz=90,slow=5.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**82.53**	**326**	P	P	06 00 08.1	+0.8
	0.7nm,0.4s,baz=104,slow=4.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**151.61**	**287**	PKPbc	PKPbc	06 07 41.8	+1.7
	0.8nm,1.0s,baz=60,slow=0.7,SNR=4.2						

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*MOS **15** 05:49:05.0±1.4, 52.72N×159.78E, h55km, mb4.2/21, Error ellipse: s-maj=12.7km s-min=6.1km az=84.2*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
*KRSC **15** 05:49:05.6±0.1, 52.70N×160.06E, h41km±31km, ML4.8*
*ISCJB **15** 05:49:06.8±0.5, 52.75N±0.04×159.82E±0.08, h72km±4km, mb4.0/29, Error ellipse: s-maj=9.6km s-min=4.0km az=40.4*
*NEIC **15** 05:49:09.2±0.8, 52.87N×159.59E, h76km±6km, mb4.1/5, Error ellipse: s-maj=10.3km s-min=7.3km az=148.0*
*IDC **15** 05:49:10.5±1.3, 52.90N×159.65E, h86km±10km, mb3.7/20, mb1 3.9/21, mb1mx3.8/29, mbtmp3.7/21, Error ellipse: s-maj=17.1km s-min=12.2km az=149.0*

ISC 15 05:49:08.2±0.6, 52.75N±0.04×159.77E±0.08, h68km±4km, n102, σ1§05/117, mb4.0/29, 6C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.38**	**24**	*i* P	**Pn**	**05 49 15.7**	**-4.0**
NLC	**Nalytchevo**	**0.49**	**329**	*i* P	**Pn**	**05 49 18.4**	**-2.3**
PET	**Petropavlovsk**	**0.73**	**293**	⇑*i*PN	**Pn**	**05 49 22.4**	**-0.8**
PET				*e*S	**Sn**	**05 49 33.8**	**-0.5**
PET				pmax	pmax		
	comp=Z,2μm,0.2s						
PET				pmax	pmax		
	comp=Z,2μm,0.3s						
PET				smax			
	comp=N,21μm,0.7s						
PET				smax			
	comp=E,17μm,0.6s						
PET	**Petropavlovsk**	**0.73**	**293**	*e*P	**Pn**	**05 49 22.3**	**-0.9**
PET				*i* S	**Sn**	**05 49 34.0**	**-0.3**
PET	**Petropavlovsk**	**0.73**	**293**	*e*Pn	**Pn**	**05 49 22.3**	**-0.9**
PET				*e*Sn	**Sn**	**05 49 33.9**	**-0.4**
SDLR	**Sedlovina**	**0.75**	**315**	*e*P	**Pn**	**05 49 22.5**	**-1.0**
INSR	**Institute**	**0.77**	**295**	*e*P	**Pn**	**05 49 22.2**	**-1.5**
INSR				*i* S	**Sn**	**05 49 34.1**	**-1.1**
RUS	**Russkaya**	**0.83**	**248**	*e*P	**Pn**	**05 49 23.0**	**-1.3**
RUS				*i* S	**Sn**	**05 49 35.7**	**-0.6**
GRL	**Gorelyy**	**1.05**	**260**	*e*P	**Pn**	**05 49 27.3**	**+0.2**
GRL				*i* S	**Sn**	**05 49 42.5**	**+1.3**
PETK	**Petropavlovsk-**	**1.30**	**287**	P	**Pn**	**05 49 30.8**	**+0.5**
	comp=E,198nm,0.3s,baz=87,slow=18,SNR=1014						
PETK				S	**Sn**	**05 49 48.9**	**+1.8**

comp=E,231nm,0.3s,baz=89,slow=19,SNR=7.9
PETK Petropavlovsk- 1.30 287 PN **Pn 05 49 30.8 +0.4**
PETK S **Sn 05 49 48.9 +1.9**
PETK pmax pmax
comp=Z,198nm,0.3s
PETK smax
comp=N,231nm,0.3s
KII Karymskiy 1.30 352 *e*P **Pn 05 49 29.3 -1.1**
GNL Ganaly 1.45 312 *e*P **Pn 05 49 33.0 +0.7**
GNL *i* S **Sn 05 49 53.7 +3.2**
MIPR Malaya Ipel'ka 1.90 257 *e*P **Pn 05 49 39.6 +1.3**
MKZ Mys Kozlova 2.16 32 *e*P **Pn 05 49 38.4 -3.4**
MKZ *i* S **Sn 05 50 02.3 -5.2**
KMNR Kamenistaya 3.03 5 *e*P **Pn 05 49 54.1 +0.5**
KMNR *i* S **Sn 05 50 29.1 +0.4**
SKR Severo-Kuril's 3.07 229 *e*PN **Pn 05 49 49.0 -5.2**
SKR *e*S **Sn 05 50 25.4 -4.3**
SKR pmax pmax
comp=Z,80nm,0.5s
SKR smax
comp=N,390nm,0.5s
SKR smax
comp=E,460nm,0.5s
ALID Alaid 3.22 236 *e*P **Pn 05 49 57.2 +0.9**
BZMR Bezymyannaya 3.22 7 *e*P **Pn 05 49 56.8 +0.5**
KIRR Kirishev 3.23 6 *e*P **Pn 05 49 56.9 +0.5**
KPT Kopyto 3.24 5 *e*P **Pn 05 49 56.8 +0.3**
KOZ Kozyrevsk 3.32 1 *e*P **Pn 05 49 57.8 +0.2**
KOZR Kozyr 3.33 1 PN **Pn 05 49 57.8 +0.1**
ZLN Zelenaya 3.33 10 *e*P **Pn 05 49 58.2 +0.4**
ZLN *i* S **Sn 05 50 35.9 -0.2**
CIRR Tsirk 3.42 9 *e*P **Pn 05 49 59.6 +0.6**
KRSR Krestovskiy 3.51 7 *e*P **Pn 05 50 00.3 +0.1**
SRDR Sredinnyy 3.58 360 *e*P **Pn 05 50 01.1 0.0**
KLY Klyuchi 3.61 8 *e*P **Pn 05 50 02.3 +0.8**
KLY *i* S **Sn 05 50 44.3 +1.4**
KBTR Krutoberegovo 3.90 26 *e*P **Pn 05 50 04.6 -0.9**
KBTR *i* S **Sn 05 50 48.8 -1.1**
BDR Baidarnaya 3.92 12 *e*P **Pn 05 50 06.6 +0.8**
SMKR Semkarok 3.97 14 *e*P **Pn 05 50 06.6 +0.2**
SMKR *i* S **Sn 05 50 52.5 +0.9**
BKI Bering 4.41 54 *e*P **Pn 05 50 09.1 -3.4**
BKI *i* S **Sn 05 50 53.6 -8.9**
SEY Seymchan 10.94 342 ⇓*i*PN **Pn 05 51 43.0 +1.5**
ASAJ Asahikawa 14.27 240 P **Pn 05 52 27.8 +1.2**
comp=E,0.9nm,0.3s,baz=82,slow=8.9,SNR=5.1
ASAJ Asahikawa 14.27 240 P **Pn 05 52 27.8 +1.2**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ERM Erimo 15.51 233 *e*P **Pn 05 52 39.3 -3.3**
BILL Bilibino 15.66 9⇑*e*P **Pn 05 52 44.2 -0.1**
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL Bilibino 15.66 9 P **Pn 05 52 45.6 +1.3**
comp=Z,4.0nm,0.4s
MJAR Matsushiro Arr 22.18 232 P **P 05 53 59.5 +1.1**
comp=Z,1.6nm,0.5s,mb3.6,baz=14,slow=12,SNR=4.2
MJAR Matsushiro Arr 22.18 232 P **P 05 53 59.5 +1.2**
MJAR pmax pmax
comp=Z,2.0nm,0.5s
TIXI Tiksi 23.31 336 *e*P **P 05 54 07.9 -1.8**
TIXI pmax pmax
comp=Z,2.0nm,0.8s,mb3.5
TIXI Tiksi 23.31 336 *e*P **P 05 54 06.2 -3.6**
comp=Z,3.9nm,0.8s,mb3.8
TTA Tatalina 25.13 49 *e*P **P 05 54 26.8 +0.5**
TTA pmax pmax
comp=Z,8.0nm,1.1s,mb4.1
TTA Tatalina 25.13 49 *e*P **P 05 54 26.8 +0.4**
comp=Z,8.3nm,1.1s,mb4.1
KSRS Korea Array 26.90 248 P **P 05 54 45.2 +2.7**
comp=Z,0.7nm,0.3s,mb3.6,baz=40,slow=11,SNR=5.0
KSRS Korea Array 26.90 248 P **P 05 54 45.3 +2.8**
KSRS pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
SONM Songino Array 33.79 284 P **P 05 55 42.9 -0.2**
comp=Z,0.3nm,0.3s,mb3.6,baz=75,slow=7.0,SNR=4.4
SONM PcP PcP 05 58 21.9 +1.1
comp=Z,1.1nm,0.7s,baz=100,slow=2.2,SNR=5.2
SONM Songino Array 33.79 284 P **P 05 55 42.9 -0.3**
SONM 05 58 21.9
SONM pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 34.27 37 P **P 05 55 46.9 -0.2**
comp=Z,1.5nm,0.5s,mb4.1,baz=290,slow=9.0,SNR=12
INK PcP PcP 05 58 21.9 +0.1
comp=Z,0.4nm,0.5s,baz=306,slow=4.4,SNR=6.9
INK Inuvik 34.27 37 P **P 05 55 46.9 -0.2**
INK 05 58 22.0
INK pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 43.55 42 P **P 05 57 04.4 -0.2**
comp=Z,0.8nm,0.7s,mb3.5,baz=301,slow=7.9,SNR=8.3
RES Resolute Bay 43.72 22 P **P 05 57 05.7 -0.1**
comp=Z,1.0nm,0.8s,mb3.6,baz=22,slow=4.6,SNR=9.2
RES Resolute Bay 43.72 22 P **P 05 57 05.7 -0.2**
RES pmax pmax
comp=Z,1.0nm,0.8s,mb3.6
RES Resolute Bay 43.72 22 P **P 05 57 05.7 -0.1**
KURK Kurchatov 47.75 302 *d*P **P 05 57 36.4 -1.5**
KURK pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
MK31 Makanchi Array 48.13 296 *e*P **P 05 57 39.2 -1.6**
MKAR Makanchi Array 48.13 296 P **P 05 57 39.3 -1.6**
comp=Z,1.1nm,0.4s,mb4.0,baz=57,slow=6.3,SNR=15
MKAR Makanchi Array 48.13 296 *ce*P **P 05 57 39.2 -1.6**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 50.45 308 P **P 05 57 58.6 +0.2**
comp=Z,0.9nm,0.5s,mb4.0,baz=49,slow=6.7,SNR=3.9
BVAR Borovoye Array 50.45 308 P **P 05 57 58.6 +0.2**
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BSMT Bassoo Peak 51.73 59 *e*P **P 05 58 08.7 +0.6**
comp=Z,1.7nm,0.7s,mb4.2
KEV Kevo 53.08 341 *e*P **P 05 58 13.4 -4.4**
KEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KEV Kevo 53.08 341 *ep* **P 05 58 13.4 -4.4**
comp=Z,1.9nm,0.6s,mb4.3
FFC Flin Flon 53.41 46 *ce*P **P 05 58 21.2 +0.8**
ARU Arti 53.52 317 P **P 05 58 20.6 -0.6**
ARCES ARCESS Array B 53.55 342 P **P 05 58 19.8 -1.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=40,slow=9.6,SNR=7.3
ARCES ARCESS Array B 53.55 342 P **P 05 58 19.8 -1.5**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 53.55 342 P **P 05 58 19.8 -1.5**
FCC Fort Churchill 53.88 38 *e*P **P 05 58 23.1 -0.7**
NVAR Mina Array Bea 56.05 70 P **P 05 58 41.0 +1.3**
comp=Z,0.6nm,0.5s,mb3.9,baz=306,slow=8.2,SNR=4.0
JOF Joensuu 57.80 335 *e*P **P 05 58 49.8 -1.9**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 57.80 335 *ep* **P 05 58 49.8 -1.9**
comp=Z,0.8nm,0.4s,mb4.1
PDAR Pinedale Array 57.87 60 P **P 05 58 53.5 +1.0**
comp=Z,2.0nm,0.8s,mb4.2,baz=326,slow=3.4,SNR=19
KAF Kangasniemi 59.73 337 *e*P **P 05 59 03.8 -1.3**
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KAF Kangasniemi 59.73 337 *ep* **P 05 59 03.8 -1.3**
comp=Z,1.2nm,0.5s,mb4.2
RSSD Black Hills 59.76 56 *e*P **P 05 59 06.2 +0.5**
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RSSD Black Hills 59.76 56 *e*P **P 05 59 06.2 +0.6**
comp=Z,6.2nm,0.8s,mb4.7
FINES FINESS Array B 60.36 336 P **P 05 59 08.8 -0.7**
comp=Z,0.6nm,0.3s,mb4.1,baz=61,slow=5.8,SNR=5.9
FINES FINESS Array B 60.36 336 P **P 05 59 08.8 -0.6**
FINES pmax pmax
comp=Z,1.0nm,0.3s
NB2 NORSAR Subarra 63.82 344 P **P 05 59 31.9 -0.7**
comp=Z,1.0nm,0.4s,mb4.0,baz=20,slow=6.9
NOA NORSAR Array B 63.82 344 P **P 05 59 31.4 -1.2**
comp=Z,1.4nm,0.5s,mb4.1,baz=22,slow=6.7,SNR=8.5
NOA NORSAR Array B 63.82 344 P **P 05 59 31.5 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
COEN Coen 67.95 197 *e*P **P 06 00 00.2 +0.6**
comp=Z,331nm,0.4s
AKASG Malin Array Be 68.81 329 P **P 06 00 03.5 -1.1**
comp=Z,0.8nm,0.3s,mb4.0,baz=29,slow=6.7,SNR=4.2
AKASG Malin Array Be 68.81 329 *ce*P **P 06 00 03.9 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
TXAR Lajitas Array 70.96 67 P **P 06 00 18.8 +0.6**
comp=Z,2.4nm,0.5s,mb4.2,baz=300,slow=4.5,SNR=28
TXAR Lajitas Array 70.96 67 P **P 06 00 18.8 +0.6**
TXAR pmax pmax
comp=Z,2.0nm,0.5s
CLL Collm 72.61 339 *e*P **P 06 00 28.0 +0.3**
CLL Collm 72.61 339 *e*P **P 06 00 28.0 +0.3**
BUR08 Bucovina Ar. S 72.75 330 *e*P **P 06 00 28.4 -0.3**
GERES GERESS Array B 74.76 338 P **P 06 00 40.4 +0.1**
comp=Z,0.7nm,0.4s,mb3.7,baz=53,slow=5.2,SNR=6.5
GERES GERESS Array B 74.76 338 P **P 06 00 40.4 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 75.68 205 P **P 06 00 45.8 0.0**
comp=Z,0.7nm,0.6s,mb3.6,baz=25,slow=6.3,SNR=6.9
WRA Warramunga Arr 75.68 205 P **P 06 00 45.8 0.0**
WRA pmax pmax
comp=Z,1.0nm,0.6s
KBA Koelnbreinsper 76.50 337⇓*i*P **P 06 00 52.0 +1.6**
comp=Z,9.8nm,0.8s,mb4.6
BRTR Keskin Array B 76.76 320 P **P 06 00 51.9 -0.1**
comp=Z,0.7nm,0.6s,mb3.6,baz=50,slow=6.7,SNR=4.7
BRTR Keskin Array B 76.76 320 *ce*P **P 06 00 51.5 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 79.36 204 P **P 06 01 07.5 +1.2**
comp=Z,0.8nm,0.6s,mb3.8,baz=15,slow=5.4,SNR=11
ASAR Alice Springs 79.36 204 P **P 06 01 07.5 +1.2**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
CMIG Matias Romero 85.53 68 P **P 06 01 38.5 -0.2**
comp=Z,2.5nm,0.9s,mb4.1,baz=280,slow=3.0,SNR=3.1
LPAZ La Paz 127.79 64 PKP PKPdf 06 08 06.7 +0.9
comp=Z,0.6nm,0.3s,baz=243,slow=2.3,SNR=13
LPAZ La Paz 127.79 64 PKIKP PKPdf 06 08 06.7 +1.0
LPAZ pmax pmax
comp=Z,1.0nm,0.3s

*ISCJB **15** 05:52:44.3±0.5, 6°.89N±0°.05×73°.04W±0°.07, h169km±5km, mb3.4/6, Error ellipse: s-maj=12.1km s-min=6.9km az=35.6*
*FUNV **15** 05:52:44.9, 6°.80N×73°.15W, h169km, MW3.5*
*IDC **15** 05:52:44.6±0.7, 6°.78N×72°.97W, h161km±8km, mb3.1/6, mb1 3.4/8, mb1mx3.3/22, mbtmp3.2/8, Error ellipse: s-maj=20.8km s-min=7.6km az=131.0*
*NEIC **15** 05:52:45.5±0.8, 6°.79N×72°.97W, h170km±9km, Error ellipse: s-maj=17.6km s-min=12.9km az=112.0*
ISC 15 05:52:45.3±0.5, 6°.88N±0°.06×73°.03W±0°.07, h163km±5km, n24, σ0°80/29, mb3.4/6, 4C, Northern Colombia
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CAPV Capacho 1.21 36⇑*i*P **Pn 05 53 14.2 +1.1**
CAPV *e*S **Sn 05 53 35.3 +0.8**
ROSC El Rosal 2.39 213 P **Pn 05 53 25.8 0.0**
25nm,0.3s,baz=90,slow=20,SNR=87
ROSC S **Sn 05 53 56.0 -1.1**
17nm,0.3s,baz=106,slow=16,SNR=10.0
VIGV El Vigia 2.55 40⇑*i*P **Pn 05 53 28.3 +0.6**
VIGV *e*S **Sn 05 54 00.6 +0.1**
SOCV Socops 2.56 57 *e*P **Pn 05 53 28.6 +0.8**
SOCV *e*S **Sn 05 54 00.6 -0.2**
SDV Santo Domingo 3.10 50 P **Pn 05 53 35.6 +1.2**
9.9nm,0.3s,baz=245,slow=3.1,SNR=127
SDV S **Sn 05 54 12.6 0.0**
19nm,0.3s,baz=49,slow=19,SNR=31
ELOV Elorza 3.52 88 *e*P **Pn 05 53 40.1 +0.4**
VIRV Villa del Rosa 3.66 10⇑*i*P **Pn 05 53 40.8 -0.7**
VIRV *e*S **Sn 05 54 23.0 -2.2**
QARV Quebrada Arrib 4.13 37⇑*i*P **Pn 05 53 48.4 +0.8**
SANV Sanarito 4.33 53 *e*P **Pn 05 53 49.8 -0.3**
CURV Curarigua 4.35 44 *e*P **Pn 05 53 50.5 +0.1**
TEPV Terepaima 4.88 51 *e*P **Pn 05 53 57.8 +0.5**
SIQV Siquisique 4.92 40 *e*P **Pn 05 53 57.6 -0.2**
BAUV El Baul 5.35 67 *e*P **Pn 05 54 02.7 -0.8**
IMOV Isla Los Monje 5.84 21 *e*P **Pn 05 54 09.1 -0.9**
MONV Montecano 5.88 31 *e*P **Pn 05 54 10.3 -0.2**
CAOV Caicara del Or 6.67 86 *e*P **Pn 05 54 20.2 -0.7**
BIRV Birongo 7.58 61 *e*P **Pn 05 54 32.5 -0.5**
LPAZ La Paz 23.52 168 P **P 05 57 41.4 +0.7**
0.5nm,0.6s,mb3.3,baz=55,slow=17,SNR=4.1
TXAR Lajitas Array 36.50 312 P **P 05 59 35.8 +0.9**
0.4nm,0.6s,mb3.3,baz=129,slow=8.1,SNR=4.8
ULM Lac du Bonnet 47.27 340 P **P 06 01 02.0 0.0**
0.7nm,0.5s,mb3.6,baz=167,slow=8.7,SNR=3.1
PDAR Pinedale Array 48.09 324 P **P 06 01 09.5 +1.1**
0.4nm,0.6s,mb3.2,baz=119,slow=11,SNR=3.6
YKA Yellowknife Ar 63.24 340 P **P 06 02 56.1 +0.1**
0.8nm,0.6s,mb3.8,baz=133,slow=6.6,SNR=27
YKA pP pP 06 03 35.1 +0.6
0.2nm,0.7s,baz=134,slow=6.9,SNR=2.5
TORD Torodi Ar. Bea 73.63 78 P **P 06 03 59.8 -1.7**
0.5nm,1.1s,mb3.1,baz=289,slow=5.7,SNR=4.1
ASAR Alice Springs 149.22 234 PKPbc PKPbc 06 12 14.3 -1.0
0.2nm,0.3s,baz=124,slow=2.7,SNR=4.5

CASC 15 06:30:51.9±2.2, 13°.49N×90°.39W, h28km±6km, MD3.6, 1C-2D, Near coast of Guatemala
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SBLS San Blas 0.83 65 *e*P Pb 06 31 07.5 -0.2
SBLS *e*S Sb 06 31 19.4 +0.9
RTR El Retiro 0.83 60 *e*P Pn 06 31 08.1 +0.3
RTR *e*S Sb 06 31 19.4 +0.7
SNJE San Jose 0.85 63 *e*P Pn 06 31 07.9 -0.2
SNJE *e*S Sb 06 31 19.2 0.0
RBDL Robledal 0.93 48 *e*P Pn 06 31 09.1 0.0
RBDL *e*S Sb 06 31 21.2 -0.1
FUG Fuego 3 1.05 336⇓*e*P Pn 06 31 10.6 -0.2
NBG Las Nubes 1.10 2 *e*P Pn 06 31 12.7 +1.2
NBG *e*S Sn 06 31 29.4 +3.7
BOQS Boqueron 1.11 77 *e*P Pn 06 31 11.4 -0.2
BOQS *e*S Sn 06 31 26.9 +1.0
SNET Serv Nac Est T 1.15 80 *e*P Pn 06 31 12.1 -0.1
SNET *e*S Sn 06 31 27.6 +0.7
FG6 1.17 336 *e*P Pn 06 31 12.6 +0.2
FG6 *e*S Sn 06 31 28.7 +1.2
LFRS El Faro 1.30 84 *e*P Pn 06 31 14.6 +0.3
LFRS *e*S Sn 06 31 31.2 +0.5
LBRS Las Brisas 1.34 79 *e*P Pn 06 31 14.9 +0.2
LBRS *e*S Sn 06 31 32.5 +0.9
TP2 Tecpan 2 1.43 335 *e*P Pn 06 31 17.0 +1.0
TP2 *e*S Sn 06 31 35.3 +1.5
JAT Jato 1.46 305⇓*e*P Pn 06 31 16.5 0.0
SNVI San Vicente 1.52 85 *e*P Pn 06 31 17.4 +0.2
MRL Marmol 1.71 23⇑*e*P Pn 06 31 20.8 +0.9
BLLM Bellamira 2.10 91 *e*P Pn 06 31 26.2 +1.0
CAHU Cacacuatique 2.14 82 *e*P Pn 06 31 25.5 -0.2
CNCH Conchagua 2.50 94 *e*P Pn 06 31 31.1 +0.4
CNCH *e*S Sn 06 32 02.5 +2.2

IDC 15 06:30:54.7±1.8, 31°.40N×104°.39E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/27, mbtmp3.3/4, Error ellipse: s-maj=375.8km s-min=21.6km az=54.0, Sichuan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 22.92 318 P P 06 35 59.3 -0.8
0.4nm,0.8s,baz=125,slow=10,SNR=3.9
KURK Kurchatov 27.16 323 P P 06 36 40.1 +0.5
0.1nm,0.3s,baz=139,slow=7.2,SNR=3.0
WRA Warramunga Arr 58.58 147 P P 06 40 53.0 -0.4
0.9nm,0.9s,baz=338,slow=7.9,SNR=7.7
ASAR Alice Springs 61.62 149 P P 06 41 14.6 +0.4
0.2nm,0.7s,baz=334,slow=6.2,SNR=2.7

IDC 15 06:40:08.7±3.6, 32°.62N×105°.84E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.3/3, Error ellipse: s-maj=451.9km s-min=28.6km az=51.0, Sichuan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MKAR Makanchi Array 22.88 315 P P 06 45 13.8 +0.1
0.5nm,0.8s,baz=124,slow=10,SNR=4.7
WRA Warramunga Arr 58.95 148 P P 06 50 10.0 +0.1
0.6nm,0.7s,baz=340,slow=7.3,SNR=7.0
ASAR Alice Springs 62.05 151 P P 06 50 31.1 0.0
0.2nm,0.4s,baz=335,slow=6.3,SNR=3.6

*NEIC **15** 07:14:27.4, 17°.63N×101°.59W, h16km, MD3.6(MEX), After MEX.*
MEX 15 07:14:27.4±0.8, 17°.63N×101°.59W, h16km±3km, MD3.6, Near coast of Guerrero
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZIIG Zihuatanejo 0.12 100 *i*P Pg 07 14 29.8 -1.1
ZIIG *i* S Sg 07 14 33.1 -0.2
ZIIG Zihuatanejo 0.12 100 *i*P Pg 07 14 29.8 -1.1
ZIIG *i* S Sg 07 14 33.1 -0.2
CAIG El Cayaco 1.39 114 *i*P Pn 07 14 49.2 -2.9
CAIG *i* S Sn 07 15 04.3 -5.9
CAIG El Cayaco 1.39 114 *i*P Pn 07 14 49.2 -2.9
CAIG *i* S Sn 07 15 04.3 -5.9
ACX Acapulco 1.77 115 *e*P Pn 07 14 54.4 -3.0
ACX *i* S Sn 07 15 14.9 -4.6
ACX Acapulco 1.77 115 *e*P Pn 07 14 54.4 -3.0
ACX *i* S Sn 07 15 14.9 -4.6
MMIG Aquila 1.80 292 *e*P Pn 07 14 54.3 -3.5
MMIG *i* S Sn 07 15 15.3 -5.1
MZVM 2.72 55 *e*P Pn 07 15 07.7 -2.8
MZVM *i* S Sn 07 15 39.1 -4.1
PPM Popocatepetl 3.15 63 *e*P Pn 07 15 14.4 -2.1
PPM *i* S Sn 07 15 51.2 -2.7
PPM Popocatepetl 3.15 63 *e*P Pn 07 15 14.4 -2.1
PPM *i* S Sn 07 15 51.2 -2.7
IIO Organos 3.35 54 *e*P Pn 07 15 17.3 -1.8
IIO *i* S Sn 07 15 53.4 -5.1
IIO Organos 3.35 54 *e*P Pn 07 15 17.3 -1.8
IIO *i* S Sn 07 15 53.4 -5.1
UTMO Huajuapan 3.61 86 *e*P Pn 07 15 21.2 -1.5
UTMO *i* S Sn 07 16 02.6 -2.5

*NEIC **15** 07:17:58.1, 16°.63N×100°.80W, h13km, MD3.9(MEX), After MEX.*
MEX 15 07:17:58.1±0.8, 16°.63N×100°.80W, h13km±24km, MD3.9, Near coast of Guerrero
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CAIG El Cayaco 0.66 50 *i*P Pg 07 18 09.6 -1.3
CAIG *i* S Sg 07 18 16.9 -2.7
CAIG El Cayaco 0.66 50 *i*P Pg 07 18 09.6 -1.3
CAIG *i* S Sg 07 18 16.9 -2.7
ACX Acapulco 0.88 74 *i*P Pg 07 18 12.2 -2.8
ACX *i* S Sg 07 18 23.4 -3.1
ACX Acapulco 0.88 74 *i*P Pg 07 18 12.2 -2.8
ACX *i* S Sg 07 18 23.4 -3.1
ZIIG Zihuatanejo 1.17 327 *e*P Pb 07 18 16.4 -3.8
ZIIG *i* S Sb 07 18 31.2 -4.0
ZIIG Zihuatanejo 1.17 327 *e*P Pb 07 18 16.4 -3.8
ZIIG *i* S Sb 07 18 31.2 -4.0
PNIG Pinotepa 2.57 95 *e*P Pn 07 18 35.2 -4.2
PNIG *i* S Sn 07 19 07.0 -3.7
PNIG Pinotepa 2.57 95 *e*P Pn 07 18 35.2 -4.2
PNIG *i* S Sn 07 19 07.0 -3.7
MZVM 2.95 30 *e*P Pn 07 18 42.1 -2.7
MZVM *i* S Sn 07 19 16.1 -4.0
UTMO Huajuapan 3.10 67 *e*P Pn 07 18 43.8 -2.9
UTMO *i* S Sn 07 19 21.4 -2.3
PPM Popocatepetl 3.19 40 *i*P Pn 07 18 45.3 -2.6
PPM *i* S Sn 07 19 23.0 -2.9
PPM Popocatepetl 3.19 40 *i*P Pn 07 18 45.3 -2.6
PPM *i* S Sn 07 19 23.0 -2.9
IIO Organos 3.55 33 *e*P Pn 07 18 50.2 -2.7
IIO *i* S Sn 07 19 31.8 -3.0
IIO Organos 3.55 33 *e*P Pn 07 18 50.2 -2.7
IIO *i* S Sn 07 19 31.8 -3.0
VHO Vista Hermosa 3.92 83 *e*P Pn 07 18 55.8 -2.2
VHO *i* S Sn 07 19 40.6 -3.2
VHO Vista Hermosa 3.92 83 *e*P Pn 07 18 55.8 -2.2
VHO *i* S Sn 07 19 40.6 -3.2

*ISCJB **15** 07:33:12.1±1.0, 30°.8N±0°.1×103°.28E±0°.08, h10km, mb3.4/4, Error ellipse: s-maj=19.3km s-min=9.3km az=165.9*
*IDC **15** 07:33:12.8±1.4, 30°.62N×102°.99E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=340.2km s-min=22.8km az=54.0*
ISC 15 07:33:14.2±1.0, 30°.8N±0°.1×103°.32E±0°.07, h10km, n6, σ1°16/6, mb3.4/4, Sichuan
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CD2 Chengdu 0.39 79 Pg **Pg 07 33 20.1 -1.6**
CD2 Sg **Sg 07 33 27.8 +0.9**
CD2 smax
comp=N,2μm,0.5s
KSRS Korea Array 21.37 65 LR LR 07 46 48.5
comp=N,40nm,19.8s,baz=155,slow=38
MKAR Makanchi Array 22.75 320 P **P 07 38 16.2 -0.1**
comp=N,0.8nm,1.0s,mb3.1,baz=126,slow=12,SNR=4.8
KURK Kurchatov 27.06 324 P **P 07 38 56.9 +0.3**
comp=N,0.2nm,0.3s,mb3.1,baz=128,slow=9.8,SNR=3.7
WRA Warramunga Arr 58.63 145 P **P 07 43 11.3 -0.3**
comp=N,0.5nm,0.6s,mb3.7,baz=337,slow=7.7,SNR=6.9
ASAR Alice Springs 61.62 148 P **P 07 43 32.7 +0.7**
comp=N,0.5nm,0.7s,mb3.7,baz=329,slow=6.7,SNR=4.1

*IDC **15** 07:44:02.3±6.9, 35°.58N×81°.96E, h0km, mb4.0/1, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, ML3.5/3, MS3.3/1, Ms1 3.4/1, ms1mx2.5/42, Error ellipse: s-maj=139.1km s-min=58.1km az=112.0*
*NEIC **15** 07:44:03.4±2.9, 35°.62N×82°.04E, h10km, mb3.6/1, Error ellipse: s-maj=38.0km s-min=15.8km az=142.0*
*BJI **15** 07:44:05.1, 35°.78N×81°.72E, h10km, ML4.1/4*
ISC 15 07:44:05.0±3.1, 35°.6N±0°.1×82°.0E±0°.1, h20km±32km, n15, σ0°74/20, mb3.7/2, 2C-2D, Xizang
Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 6.18 311 Pn **Pn 07 45 34.8 -0.2**
KSH Sn **Sn 07 46 45.4 +0.3**
KSH smax
comp=N,93nm,0.6s
KSH smax
comp=E,190nm,1.0s
UCH Uchtor 8.81 321 *e*Pn **Pn 07 46 11.1 0.0**
comp=E,8.6nm,0.6s
UCH *e*Sn **Sn 07 47 44.8 -5.0**
TKM2 Tokmak 2 8.82 328⇑Pn **Pn 07 46 10.6 -0.7**
comp=E,1.6nm,0.6s
TKM2 ⇓Pg Pn 07 46 38.9 +28
comp=E,4.6nm,0.8s
TKM2 ⇓Lg 07 48 26.6
comp=E,19nm,0.8s
AAK Ala-Archa 9.12 322 Pn **Pn 07 46 24.3 +8.9**
comp=E,0.0nm,0.3s,baz=254,slow=1.0,SNR=2.8
AAK Pg Pn 07 46 46.7 +31
comp=E,0.0nm,0.3s,baz=113,slow=8.4,SNR=6.2
AAK Sn **Sn 07 48 09.1 +12**
comp=E,0.0nm,0.3s,baz=136,slow=3.2,SNR=2.0
AAK Lg 07 48 44.1
comp=E,0.0nm,0.3s,baz=310,slow=22,SNR=6.4
AAK Ala-Archa 9.12 322 *e*Pn **Pn 07 46 15.8 +0.5**
comp=E,5.4nm,0.6s
AAK Pg Pn 07 46 46.7 +31
AAK Sn **Sn 07 48 09.1 +12**
AAK Lg 07 48 44.1
AML Almayashu 9.19 317 *e*Pn **Pn 07 46 16.9 +0.7**
comp=E,11nm,0.7s
KBL Kabul 10.70 268 Pn **Pn 07 46 36.9 -0.2**
MK31 Makanchi Array 11.15 1 Pn **Pn 07 46 44.0 +0.8**
comp=E,1.6nm,0.4s,baz=186,slow=12,SNR=18
MK31 ⇑Sn **Sn 07 48 46.6 -0.6**
comp=E,4.4nm,0.7s,baz=184,slow=24,SNR=2.9
MKAR Makanchi Array 11.15 1 Pn **Pn 07 46 44.3 +1.1**
comp=E,0.5nm,0.3s,baz=181,slow=12,SNR=17
MKAR Sn **Sn 07 48 47.5 +0.3**
comp=E,0.7nm,0.3s,baz=187,slow=24,SNR=4.7
KURK Kurchatov 15.28 352 Pn **Pn 07 47 37.0 -2.2**
comp=E,0.0nm,0.3s,baz=176,slow=12,SNR=3.0
ZALV Zalesovo Beam 18.42 5 P **Pn 07 48 18.5 -0.3**
comp=E,0.4nm,0.3s,baz=187,slow=10,SNR=4.5

BVAR	Borovoye Array	19.24	338	P	Pn	07 48 29.0 +0.2
	comp=E,0.2nm,0.3s,baz=153,slow=10.0,SNR=7.3					
ABKAR	Abkulak array	21.14	317	*e*P	P	07 48 48.0 -0.4
	comp=E,2.0nm,0.8s,mb3.5					
ARCES	ARCESS Array B	45.50	336	P	P	07 52 23.0 +0.6
	comp=E,1.9nm,0.8s,mb4.0,baz=113,slow=9.1,SNR=5.0					
NOA	NORSAR Array B	50.44	323	LR	LR	08 14 50.7
	comp=E,28nm,19.1s,baz=275,slow=37					

IDC 15 07:44:13.4±1.2, 31°.61N×104°.41E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/27, mbtmp3.8/5, Error ellipse: s-maj=84.4km s-min=21.5km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	26.39	334	P	P	07 49 51.2	-0.1
	1.3nm,0.6s,baz=140,slow=7.8,SNR=4.6						
KURK	Kurchatov	27.01	322	P	P	07 49 56.7	-0.2
	1.4nm,0.8s,baz=129,slow=11,SNR=7.9						
WRA	Warramunga Arr	58.74	147	P	P	07 54 13.2	0.0
	1.1nm,0.6s,baz=340,slow=7.7,SNR=4.6						
ASAR	Alice Springs	61.78	149	P	P	07 54 34.0	0.0
	0.5nm,0.6s,baz=342,slow=8.8,SNR=3.1						
YKA	Yellowknife Ar	81.14	17	P	P	07 56 30.6	+0.3
	0.3nm,0.5s,baz=329,slow=5.4,SNR=7.3						

IDC 15 07:47:37.8±0.9, 30°.85N×103°.43E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.7/25, mbtmp3.9/8, Error ellipse: s-maj=39.8km s-min=17.7km az=59.0
NEIC 15 07:47:39.4±0.8, 30°.74N×103°.23E, h10km, Error ellipse: s-maj=30.0km s-min=13.0km az=224.0
BJI 15 07:47:41.8, 30°.83N×103°.45E, h10km, mB4.3/1, mb3.9/1, ML3.6/9, Ms3.5/2, Ms7 3.3/2

ISC 15 07:47:39.7±1.1, 30°.91N±0°.04×103°.37E±0°.07, h11km±7km, n16, σ1°33/24, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.33	89	Pg	Pg	07 47 48.5	+2.1
CD2				Sg	Sg	07 47 55.5	+4.6
CD2				smax			
	comp=N,6μm,1.2s						
LZH	Lanzhou	5.18	4	*e*Pg	Pg	07 49 16.3	-2.6
LZH				Sg	Sg	07 50 24.4	-1.6
LZH				smax			
	comp=N,68nm,0.7s						
LZH				smax			
	comp=E,36nm,0.5s						
GYA	Guiyang	5.29	146	Pg	Pg	07 49 20.1	-1.0
GYA				Sg	Sb	07 50 13.9	-1.9
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,120nm,0.8s						
ENH	Enshi	5.31	95	*e*Pn	Pn	07 49 01.1	+2.1
ENH				*e*Sn	Sn	07 49 59.6	-0.5
XAN	Xi'an	5.64	55	Pn	Pn	07 49 04.3	+0.9
XAN				Pg	Pg	07 49 23.4	-4.2
XAN				Sn	Sn	07 50 08.5	+0.4
XAN				Sg	Sg	07 50 36.3	-4.3
XAN				smax			
	comp=N,130nm,0.9s						
XAN				smax			
	comp=E,71nm,0.9s						
KMI	Kunming	5.79	186	Pn	Pn	07 49 07.3	+1.8
KMI				Sn	Sb	07 50 21.4	-8.6
KMI				smax			
	comp=N,39nm,0.8s						
KMI				smax			
	comp=E,63nm,0.9s						
KMI				LR	LR		
	comp=N,250nm,9.2s						
KMI				LR	LR		
	comp=E,340nm,10.0s						
KMI				LR	LR		
	comp=Z,230nm,10.5s						
KSRS	Korea Array	21.30	66	P	P	07 52 26.2	-0.1
	comp=Z,4.7nm,0.7s,mb3.9,baz=250,slow=9.4,SNR=20						
MKAR	Makanchi Array	22.72	320	P	P	07 52 44.0	+2.5
	comp=Z,1.5nm,0.9s,mb3.4,baz=122,slow=13,SNR=3.8						
MKAR	Makanchi Array	22.72	320	P	P	07 52 44.0	+2.5
ZALV	Zalesovo Beam	26.63	335	P	P	07 53 18.4	+0.4
	comp=Z,0.8nm,0.6s,mb3.5,baz=123,slow=10,SNR=2.6						
KURK	Kurchatov	27.03	324	P	P	07 53 21.3	-0.4
	comp=Z,0.2nm,0.4s,mb3.0,baz=128,slow=10.0,SNR=3.6						
WRA	Warramunga Arr	58.66	145	P	P	07 57 36.4	-0.8
	comp=Z,1.9nm,0.5s,mb4.4,baz=337,slow=7.5,SNR=21						
ASAR	Alice Springs	61.65	148	P	P	07 57 57.4	-0.2
	comp=Z,0.6nm,0.5s,mb4.0,baz=337,slow=7.0,SNR=7.8						
STKA	Stephens Creek	72.19	146	P	P	07 59 03.9	-0.7
	comp=Z,0.6nm,0.2s,mb4.1,baz=300,slow=20,SNR=3.8						
YKA	Yellowknife Ar	82.06	17	P	P	07 59 59.2	-0.5
	comp=Z,0.7nm,0.6s,mb3.7,baz=331,slow=5.2,SNR=9.9						
YKA	Yellowknife Ar	82.06	17	P	P	07 59 59.2	-0.5

DJA 15 07:49:20, 2°.77S×128°.11E, h12km, MLv3.5/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.92	175	P	Pg	07 49 36.9	-0.8
NLAI	Namlea	1.11	245	P	Pb	07 49 39.8	-1.4
NLAI				S	Sb	07 49 55.8	+0.2
LBMI	Labuha	2.20	344	P	Pn	07 49 57.4	+1.0
SWI	Sorong	3.67	59	P	Pn	07 50 16.8	+0.1
APSI	Ampana	6.72	286	P	Pn	07 50 58.5	0.0

IDC 15 08:01:15.7±1.1, 30°.87N×103°.54E, h0km, mb3.4/7, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, MS2.5/2, Ms1 2.5/2, ms1mx2.4/32, Error ellipse: s-maj=43.1km s-min=19.0km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.19	65	P	P	08 06 02.8	0.0
	0.7nm,0.3s,baz=241,slow=11,SNR=4.8						
MKAR	Makanchi Array	22.84	320	P	P	08 06 22.3	+2.0
	0.6nm,0.8s,baz=129,slow=11,SNR=5.1						
TGY	Tagaytay City	23.12	132	LR	LR	08 14 02.6	
	comp=Z,8.1nm,18.6s,baz=277,slow=33						
ZALV	Zalesovo Beam	26.72	335	P	P	08 06 55.4	-1.2
	0.4nm,0.4s,baz=123,slow=8.8,SNR=2.4						
KURK	Kurchatov	27.14	324	P	P	08 06 59.8	-0.6
	0.5nm,0.7s,baz=133,slow=8.6,SNR=4.0						
WRA	Warramunga Arr	58.55	146	P	P	08 11 13.7	-0.6
	0.5nm,0.7s,baz=338,slow=7.5,SNR=7.0						
ASAR	Alice Springs	61.55	148	P	P	08 11 35.3	+0.6
	0.5nm,1.0s,baz=339,slow=6.5,SNR=2.7						
NWAO	Narrogin (SRO)	64.76	167	LR	LR	08 40 31.0	
	comp=Z,4.9nm,19.9s,baz=213,slow=36						
YKA	Yellowknife Ar	82.06	17	P	P	08 13 37.8	+0.2
	0.3nm,0.9s,baz=328,slow=5.2,SNR=3.8						

ISCJB 15 08:12:18.7±0.5, 38°.17N±0°.02×28°.70E±0°.04, h6km±5km, Error ellipse: s-maj=4.7km s-min=3.6km az=7.0
DDA 15 08:12:18.6, 38°.19N×28°.70E, h11km±3km, Md2.7
ISK 15 08:12:18.6, 38°.18N×28°.72E, h8km, MD2.9
CSEM 15 08:12:19.0±0.1, 38°.19N×28°.72E, h10km, MD2.7, Error ellipse: s-maj=1.8km s-min=1.6km az=45.0

ISC 15 08:12:19.1±0.4, 38°.18N±0°.02×28°.69E±0°.03, h7km±5km, n35, σ0°78/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	Manisa	0.33	341	*i* P	Pg	08 12 25.6	0.0
MANT				*i* S	Sg	08 12 30.5	+0.5
MANT	Manisa	0.33	341	*i* P	Pg	08 12 25.5	-0.1
MANT				*i* S	Sg	08 12 30.5	+0.5
KULA	Kula-Manisa	0.34	356	*e*PG	Pg	08 12 25.8	+0.1
KULA				*e*SG	Sg	08 12 30.9	+0.7
KULA	Kula-Manisa	0.34	356	*e*Pg	Pg	08 12 25.8	+0.1
KULA				*e*Sg	Sg	08 12 30.9	+0.7
DENT	Denizli	0.50	148	*e*PG	Pg	08 12 28.5	-0.3
DENT				*e*SG	Sg	08 12 36.5	+1.2
DENT	Denizli	0.50	148	*e*Pg	Pg	08 12 28.5	-0.3
DENT				*e*Sg	Sg	08 12 36.5	+1.2
DNZL	Cakiroluk	0.56	150	*i* P	Pg	08 12 30.4	+0.5
DNZL				*i* S	Sg	08 12 38.1	+0.9
DNZL	Cakiroluk	0.56	150	*i* P	Pg	08 12 30.4	+0.5
DNZL				*i* S	Sg	08 12 38.1	+0.9
KHAL	Karahalli	0.66	73	*i* P	Pg	08 12 31.4	-0.3
KHAL				*i* S	Sg	08 12 40.0	-0.3
KHAL	Karahalli	0.66	73	*i* P	Pg	08 12 31.4	-0.4
KHAL				*i* S	Sg	08 12 40.0	-0.3
KHL	Karahalli	0.67	77	*e*PG	Pg	08 12 31.4	-0.6
KHL				*e*SG	Sg	08 12 41.1	+0.4
KHL	Karahalli	0.67	77	*e*Pg	Pg	08 12 31.4	-0.6
KHL				*e*Sg	Sg	08 12 41.1	+0.4
AYDN	Tasoluk	0.82	232	*i* P	Pg	08 12 34.4	-0.6
AYDN				*i* S	Sg	08 12 46.8	+1.2
AYDN	Tasoluk	0.82	232	*i* P	Pg	08 12 34.4	-0.6
AYDN				*i* S	Sg	08 12 46.8	+1.1
DEMI	Demirci	0.86	1	*i* P	Pg	08 12 35.2	-0.5
DEMI				*i* S	Sg	08 12 46.3	-0.7
DEMI	Demirci	0.86	1	*i* P	Pg	08 12 35.2	-0.5
DEMI				*i* S	Sg	08 12 46.3	-0.7
AKHS	Akhisar	0.98	316	*i* P	Pg	08 12 37.5	-0.5
AKHS				*i* S	Sg	08 12 51.2	+0.4
AKHS	Akhisar	0.98	316	*i* P	Pg	08 12 37.5	-0.5
AKHS				*i* S	Sg	08 12 51.2	+0.4
YER	Yerkesik	1.09	198	*e*PN	Pg	08 12 39.5	-0.5
YER	Yerkesik	1.09	198	*e*Pn	Pg	08 12 39.5	-0.5
GDZ	Gediz	1.10	34	*i* P	Pg	08 12 39.5	-0.7
GDZ				*i* S	Sg	08 12 54.4	-0.1
GDZ	Gediz	1.10	34	*i* P	Pg	08 12 39.5	-0.7
GDZ				*i* S	Sg	08 12 54.4	-0.1
IZM	Izmir	1.15	282	*e*PN	Pn	08 12 41.6	0.0
GCAM	G?zelcaml?	1.25	248	*i* P	Pn	08 12 40.4	-2.6
GCAM				*i* S	Sb	08 12 58.6	-0.7
GCAM	G?zelcaml?	1.25	248	*i* P	Pn	08 12 40.4	-2.6
GCAM				*i* S	Sb	08 12 58.6	-0.7
BLCB	Balcova	1.32	280	*e*PN	Pn	08 12 44.0	0.0
BLCB	Balcova	1.32	280	*e*Pn	Pn	08 12 44.0	+0.1
ALT	Altintas	1.41	51	*e*PN	Pn	08 12 44.5	-0.7
ALT	Altintas	1.41	51	*e*Pn	Pn	08 12 44.5	-0.8
DST	Dursunbey	1.43	358	*e*PN	Pn	08 12 45.7	+0.3
DST	Dursunbey	1.43	358	*e*Pn	Pn	08 12 45.7	+0.2
DURS	Dursunbey	1.43	353	*i* P	Pn	08 12 45.1	-0.5
DURS				*i* S	Sn	08 13 06.5	+1.9
DURS	Dursunbey	1.43	353	*i* P	Pn	08 12 45.1	-0.4
BALY	Balya	1.77	332	*i* P	Pn	08 12 49.9	-0.3
BALY				*i* S	Sn	08 13 14.4	+1.5
BALY	Balya	1.77	332	*i* P	Pn	08 12 49.9	-0.3
BALY				*i* S	Sn	08 13 14.4	+1.4

IDC 15 08:13:14.5±1.1, 31°.02N×103°.73E, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.4/25, mbtmp3.5/7, MS3.6/1, Ms1 3.6/1, ms1mx2.4/41, Error ellipse: s-maj=45.9km s-min=20.5km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.97	66	P	P	08 17 59.1	-0.1
	0.8nm,0.5s,baz=257,slow=9.2,SNR=2.6						
MKAR	Makanchi Array	22.84	320	P	P	08 18 20.3	+1.3
	0.2nm,0.5s,baz=124,slow=11,SNR=4.5						
ZALV	Zalesovo Beam	26.66	335	P	P	08 18 54.1	-0.7
	0.6nm,0.3s,baz=132,slow=10,SNR=3.6						
KURK	Kurchatov	27.12	324	P	P	08 18 58.6	-0.4
	0.3nm,0.4s,baz=122,slow=9.1,SNR=4.5						
CBIJ	Chichi jima	33.73	87	LR	LR	08 32 38.3	
	comp=Z,98nm,21.8s,baz=122,slow=34						
WRA	Warramunga Arr	58.58	146	P	P	08 23 13.5	+0.3
	0.3nm,0.6s,baz=337,slow=7.6,SNR=6.9						
ASAR	Alice Springs	61.59	148	P	P	08 23 33.3	-0.4
	0.3nm,0.8s,baz=340,slow=6.5,SNR=2.7						
YKA	Yellowknife Ar	81.86	17	P	P	08 25 35.3	+0.1
	0.2nm,0.6s,baz=329,slow=5.2,SNR=4.4						

IDC 15 08:15:07.9±1.1, 31°.22N×103°.62E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, MS3.0/1, Ms1 3.0/1, ms1mx2.0/39, Error ellipse: s-maj=44.6km s-min=19.9km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.98	66	P	P	08 19 52.1	-0.6
	0.5nm,0.3s,baz=250,slow=10,SNR=3.7						
MKAR	Makanchi Array	22.62	319	P	P	08 20 09.8	-0.4
	0.3nm,0.5s,baz=130,slow=10,SNR=3.7						
KURK	Kurchatov	26.91	324	P	P	08 20 50.3	-0.2
	0.5nm,0.4s,baz=124,slow=9.3,SNR=7.2						
ASF	Jabal al Asfar	55.91	290	LR	LR	08 53 16.3	
	comp=Z,12nm,18.9s,baz=115,slow=41						
ARCES	ARCESS Array B	56.99	336	P	P	08 24 55.2	+0.4
	2.0nm,1.0s,baz=84,slow=8.3,SNR=5.1						
WRA	Warramunga Arr	58.80	146	P	P	08 25 08.1	0.0
	0.8nm,0.5s,baz=340,slow=7.7,SNR=13						
ASAR	Alice Springs	61.80	148	P	P	08 25 28.7	0.0
	0.1nm,0.4s,baz=345,slow=6.9,SNR=3.7						
YKA	Yellowknife Ar	81.70	17	P	P	08 27 28.0	+0.2
	0.3nm,0.7s,baz=332,slow=5.4,SNR=4.5						

IDC 15 08:28:06.5±0.9, 32°.07N×104°.65E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.6/2, Error ellipse: s-maj=40.0km s-min=17.2km az=55.0
NEIC 15 08:28:08.3±0.6, 32°.04N×104°.56E, h10km, mb3.8/2, Error ellipse: s-maj=16.2km s-min=8.6km az=48.0
BJI 15 08:28:10.4, 32°.09N×104°.62E, h9km, ML3.5/12, Ms3.2/2, Ms7 3.3/1

ISC 15 08:28:07.6±0.8, 32°.16N±0°.03×104°.69E±0°.05, h2km±6km, n20, σ1°08/28, mb3.6/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.47	213	Pg	Pg	08 28 35.1	-0.7
CD2				Sg	Sg	08 28 55.8	+0.9
CD2				smax			
	comp=N,5μm,0.8s						
LZH	Lanzhou	3.98	350	*e*Pn	Pb	08 29 18.4	0.0
LZH				Pg	Pg	08 29 25.3	+1.4
LZH				Sn	Sn	08 30 01.4	+4.5
LZH				Sg	Sg	08 30 14.5	-1.0
LZH				smax			
	comp=N,230nm,0.8s						
LZH				smax			
	comp=E,320nm,0.5s						
LZH				LR	LR		
	comp=E,490nm,4.6s						
LZH				LR	LR		
	comp=Z,470nm,6.0s						
XAN	Xi'an	4.02	61	Pn	Pn	08 29 16.0	+5.9
XAN				Pg	Pg	08 29 22.5	-2.1
XAN				Sn	Sn	08 29 58.5	+0.7
XAN				Sg	Sg	08 30 12.8	-3.9
XAN				smax			
	comp=N,210nm,0.7s						
XAN				smax			
	comp=E,74nm,0.6s						
ENH	Enshi	4.52	113	Pn	Pn	08 29 18.0	+1.0
ENH				*e*Sg	Sg	08 30 33.6	+0.8
GYA	Guiyang	5.93	163	Pn	Pn	08 29 41.3	+4.8
GYA				Sn	Sn	08 30 41.8	-3.2
GYA				smax			
	comp=N,100nm,0.7s						
GYA				smax			
	comp=E,120nm,0.9s						
SONM	Songino Array	15.71	4	Pn	Pn	08 31 51.4	+1.5
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=2.3						
KSRS	Korea Array	19.78	68	P	Pn	08 32 39.4	-1.0
	comp=E,0.5nm,0.3s,baz=245,slow=10,SNR=4.5						
HIA	Hailar	20.49	29	P	P	08 32 48.5	+1.9
	comp=E,4.5nm,0.5s						
PALP	Palanan	21.99	129	*e*P	Px	08 33 28.3	
MKAR	Makanchi Array	22.53	317	P	P	08 33 08.0	-0.5
	comp=E,0.4nm,0.6s,mb3.0,baz=120,slow=10,SNR=5.4						
PVCP	Virac	25.67	132	*e*P	P	08 33 40.0	+1.1
ZALV	Zalesovo Beam	26.00	333	P	P	08 33 41.3	-0.3
	comp=E,1.4nm,0.5s,mb3.7,baz=131,slow=10,SNR=2.4						
KURK	Kurchatov	26.72	322	P	P	08 33 48.5	+0.4
	comp=E,0.1nm,0.3s,mb2.8,baz=130,slow=8.7,SNR=2.8						
ABKAR	Abkulak array	37.36	311	*e*P	P	08 35 22.0	+0.6
	comp=E,0.2nm,0.3s,mb3.4						
ARCES	ARCESS Array B	56.51	336	P	P	08 37 50.4	-0.4
	comp=E,0.6nm,0.6s,mb3.8,baz=76,slow=10,SNR=3.8						
FINES	FINESS Array B	56.98	326	P	P	08 37 54.0	-0.1
	comp=E,0.6nm,0.6s,mb3.8,baz=96,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	59.08	147	P	P	08 38 08.1	-1.2
	comp=E,1.1nm,0.4s,mb4.2,baz=326,slow=9.1,SNR=25						
ASAR	Alice Springs	62.14	150	P	P	08 38 29.4	-0.7
	comp=E,0.5nm,0.5s,mb3.9,baz=334,slow=6.7,SNR=7.7						
YKA	Yellowknife Ar	80.54	17	P	P	08 40 19.9	-1.0
	comp=E,0.4nm,0.6s,mb3.5,baz=329,slow=5.4,SNR=7.1						
YKA	Yellowknife Ar	80.54	17	P	P	08 40 19.9	-1.0

ISCJB 15 08:31:25.8±0.9, 31°.25N±0°.04×103°.80E±0°.05, h11km±6km, mb3.7/9, Error ellipse: s-maj=7.3km s-min=5.9km az=7.1
IDC 15 08:31:25.3±1.0, 31°.13N×103°.64E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/27, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=36.2km s-min=17.9km az=58.0
BJI 15 08:31:27.7, 31°.16N×103°.82E, h9km, mb4.3/1, ML4.0/12, Ms3.6/1, Ms7 3.5/2
NEIC 15 08:31:27.6±0.7, 31°.23N×103°.71E, h10km, mb3.8/1, Error ellipse: s-maj=19.1km s-min=10.3km az=211.0

ISC 15 08:31:27.7±0.8, 31°.25N±0°.03×103°.74E±0°.05, h10km±5km, n21, σ0°90/27, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.34	177	Pg	Pg	08 31 34.1	-0.3
CD2				Sg	Sg	08 31 39.5	+0.6
CD2				smax			
	comp=N,27μm,0.6s						
LZH	Lanzhou	4.83	1	*e*Pg	Pg	08 33 00.8	+0.6
LZH				Sg	Sg	08 34 01.8	-1.0
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,110nm,0.9s						
ENH	Enshi	5.04	100	*e*Pn	Pn	08 32 44.6	+1.2
	comp=E,48nm,0.5s						
ENH				*e*Sn	Sn	08 33 41.8	+0.1
XAN	Xi'an	5.18	56	Pg	Pg	08 33 06.3	-0.8
XAN				Sn	Sn	08 33 46.6	+1.4
XAN				Sg	Sg	08 34 07.5	-6.7
XAN				smax			
	comp=E,160nm,0.7s						
XAN				smax			
	comp=E,130nm,0.9s						
GYA	Guiyang	5.42	151	Pg	Pb	08 32 58.4	-4.0
GYA				smax			
	comp=N,200nm,1.0s						
GYA				smax			
	comp=E,190nm,0.8s						
KMI	Kunming	6.16	188	Pn	Pn	08 32 58.8	0.0
KMI				Sn	Sn	08 34 09.4	+0.1
KMI				smax			
	comp=N,27nm,1.9s						
KMI				smax			
	comp=E,22nm,1.5s						
KMI				LR	LR		
	comp=N,400nm,9.2s						
KMI				LR	LR		
	comp=E,310nm,8.3s						
KMI				LR	LR		
	comp=Z,330nm,9.4s						
WHN	Wuhan	9.15	92	P	Px	08 33 50.1	
WHN				S	Sn	08 35 21.1	-1.7
WHN				LR	LR		
	comp=N,720nm,8.5s						
WHN				LR	LR		
	comp=E,430nm,7.0s						
WHN				LR	LR		
	comp=Z,730nm,6.6s						
SONM	Songino Array	16.69	6	Pn	Pn	08 35 21.7	+0.1
	comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=5.9						
KSRS	Korea Array	20.88	66	P	P	08 36 11.0	+1.0
	comp=Z,5.9nm,0.7s,baz=262,slow=10,SNR=28						
CN2	Changchun	21.22	48	*e*P	P	08 36 15.1	+1.5
MK31	Makanchi Array	22.67	319	*e*P	P	08 36 28.9	-0.1
MKAR	Makanchi Array	22.67	319	P	P	08 36 29.5	+0.5
	comp=Z,2.1nm,0.9s,mb3.6,baz=129,slow=9.7,SNR=12						
MKAR	Makanchi Array	22.67	319	P	P	08 36 29.5	+0.5
AAK	Ala-Archa	25.86	304	P	P	08 37 01.2	+1.7
	comp=Z,0.7nm,0.3s,mb3.7,baz=127,slow=5.1,SNR=1.9						
ZALV	Zalesovo Beam	26.46	335	P	P	08 37 03.9	-0.8
	comp=Z,0.4nm,0.3s,mb3.4,baz=134,slow=10,SNR=3.4						
KURK	Kurchatov	26.95	323	P	P	08 37 08.8	-0.4
	comp=Z,1.0nm,0.8s,mb3.4,baz=129,slow=9.9,SNR=5.9						
KBL	Kabul	29.23	286	*e*P	P	08 37 29.3	-0.4
	comp=Z,1.6nm,1.0s,mb3.7						
WRA	Warramunga Arr	58.77	146	P	P	08 41 25.1	-1.0
	comp=Z,2.7nm,0.8s,mb4.3,baz=338,slow=7.5,SNR=14						
ASAR	Alice Springs	61.77	148	P	P	08 41 45.2	-1.4
	comp=Z,0.5nm,0.5s,mb3.9,baz=348,slow=6.5,SNR=6.1						
INK	Inuvik	72.13	19	P	P	08 42 51.5	-0.5
	comp=Z,2.5nm,0.9s,mb4.1,baz=327,slow=4.9,SNR=5.6						
YKA	Yellowknife Ar	81.65	17	P	P	08 43 45.4	-0.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.0,SNR=6.4						

IDC 15 08:32:13.9±1.3, 9°.32N×127°.06E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, Error ellipse: s-maj=159.1km s-min=18.1km az=68.0
NEIC 15 08:32:19.7±6.3, 9°.23N×127°.00E, h42km±54km, mb4.6/1, Error ellipse: s-maj=80.8km s-min=10.8km az=63.0
ISCJB 15 08:32:22.8±0.8, 8°.94N±0°.04×126°.37E±0°.07, h80km±7km, mb4.0/8, Error ellipse: s-maj=12.1km s-min=6.1km az=156.3
MAN 15 08:32:23, 8°.97N×126°.29E, h33km, mb4.7, ML3.6, MS3.6

ISC 15 08:32:23.7±0.7, 8°.92N±0°.05×126°.38E±0°.07, h71km±7km, n23, σ1°07/32, mb4.0/8, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.74	181	‖*i* P	Pn	08 32 39.3	+0.1
BIPH				*i* S	Sn	08 32 48.3	-2.2
BUTP	Butuan	0.75	273	*e*P	Pn	08 32 38.0	-1.3
BUTP				*e*S	Sn	08 32 45.7	-5.1
BUKP	Musuan	1.67	232	*e*P	Pn	08 32 51.3	+0.4
BUKP				*e*S	Sn	08 33 04.5	-7.1
CGP	Cagayan de Oro	1.73	254	‖*i* P	Pn	08 32 50.6	-1.2
CGP				*i* S	Sn	08 33 10.5	-2.5
DAV	Davao City (W)	2.01	203	*e*Pn	Pn	08 32 58.9	+3.4
DAV				*e*Sn	Sn	08 33 30.7	+11
DMPH	Davao City--Mi	2.02	205	‖*i* P	Pn	08 32 56.7	+1.0
DMPH				*i* S	Sn	08 33 21.6	+1.4
TBP	Tagbilaran	2.60	287	*e*P	Pn	08 33 03.9	+0.4
TBP				*e*S	Sn	08 33 32.8	-1.3
PLP	Palo	2.62	328	‖*e*P	Pn	08 33 04.8	+0.9
PLP				*e*S	Sn	08 33 34.4	-0.2
LLP	Lapu-Lapu	2.75	300	‖*e*P	Pn	08 33 06.7	+1.0
LLP				*e*S	Sn	08 33 38.3	+0.5
SNPH	Sibulan	3.13	278	‖*e*P	Pn	08 33 10.8	0.0
SNPH				*i* S	Sn	08 33 47.6	+0.5
PAGZ	Pagadian	3.15	250	*e*P	Pn	08 33 12.1	+1.0
CNP	Cataman	3.94	335

WRA Warramunga Arr 58.92 147 P P 08 56 07.3 +0.7
0.3nm,0.4s,baz=340,slow=7.1,SNR=7.8
ASAR Alice Springs 61.99 150 P P 08 56 26.8 -0.7
0.3nm,0.8s,baz=335,slow=7.0,SNR=2.6
YKA Yellowknife Ar 80.47 17 P P 08 58 19.1 +0.2
0.2nm,0.5s,baz=328,slow=5.3,SNR=4.8

*IDC **15** 08:53:48.1±4.7, 31°.98N×67°.44E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.5/30, mbtmp3.7/7, ML3.4/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/36, Error ellipse: s-maj=82.4km s-min=56.4km az=153.0*
*NEIC **15** 08:54:15.5±2.4, 33°.75N×67°.69E, h99km±14km, mb3.2/1, Error ellipse: s-maj=29.8km s-min=16.2km az=218.0*
ISC 15 08:53:44.2±1.5, 31°.4N±0°.1×67°.5E±0°.1, h10km, n18, σ1§20/19, mb3.5/3, MS3.5/2, 1D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.34**	**22**	*e*Pn	**Pn**	**08 54 39.2**	**+2.7**
KBL				*e*Sn	**Sn**	**08 55 17.4**	**+1.1**
NIL	**Nilore**	**5.30**	**64**	*e*Pn	**Pg**	**08 55 24.1**	**-1.7**
KSH	**Kashi**	**10.59**	**38**	Pn	**Pn**	**08 56 14.3**	**-1.7**
KSH				Sn	**Sn**	**08 58 05.5**	**-9.1**
KSH				smax			
	comp=N,10.0nm,0.8s						
KSH				smax			
	comp=E,17nm,0.9s						
AML	**Almayashu**	**11.75**	**23**	*e*Pn	**Pn**	**08 56 31.4**	**-0.5**
	comp=E,6.9nm,0.8s						
AML				*e*Sn	**Sn**	**08 58 42.9**	**-0.2**
UCH	**Uchtor**	**12.12**	**25**	*e*Pn	**Pn**	**08 56 37.2**	**+0.3**
	comp=E,5.1nm,0.9s						
AAK	**Ala-Archa**	**12.47**	**24**	Pn	**Pn**	**08 56 41.6**	**-0.1**
	comp=E,0.0nm,0.3s,baz=208,slow=14,SNR=5.4						
AAK				LR	LR	09 01 41.6	
	comp=E,31nm,19.9s,baz=35,slow=39						
TKM2	**Tokmak 2**	**13.13**	**27**	*e*Pn	**Pn**	**08 56 51.1**	**+0.4**
	comp=E,3.2nm,0.7s						
ABKAR	**Akbulak array**	**18.70**	**344**	Pn	**Pn**	**08 58 01.3**	**-1.6**
	comp=E,0.9nm,0.6s						
MKAR	**Makanchi Array**	**19.08**	**32**	P	**Pn**	**08 58 07.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=212,slow=11,SNR=7.5						
MKAR				LR	LR	09 05 52.3	
	comp=E,26nm,19.0s,baz=210,slow=39						
MKAR	**Makanchi Array**	**19.08**	**32**	P	**Pn**	**08 58 07.7**	**+0.1**
MKAR				LR	LR	09 05 52.3	
AKTK	**Aktyubinsk**	**20.26**	**342**	P	**P**	**08 58 19.3**	**-0.4**
AKTO	**Aktyubinsk**	**20.26**	**342**	⇓Lg		09 11 00.7	
	comp=E,0.6nm,0.9s						
AKTO	**Aktyubinsk**	**20.26**	**342**	P	**P**	**08 58 19.3**	**-0.4**
	comp=E,0.1nm,0.3s,baz=169,slow=10,SNR=3.8						
KURK	**Kurchatov**	**20.95**	**20**	P	**P**	**08 58 26.0**	**-1.1**
	comp=E,2.4nm,0.7s,baz=211,slow=11,SNR=15						
BVAR	**Borovoye Array**	**21.67**	**5**	P	**P**	**08 58 34.4**	**-0.5**
	comp=E,1.0nm,0.5s,mb3.5,baz=184,slow=9.7,SNR=7.7						
BVAR				LR	LR	09 07 51.5	
	comp=E,128nm,18.0s,MS3.4,baz=58,slow=40						
ZALV	**Zalesovo Beam**	**25.70**	**24**	P	**P**	**08 59 16.1**	**+1.7**
	comp=E,1.6nm,0.6s,mb3.8,baz=216,slow=9.4,SNR=7.3						
DBIC	**Dimbokro**	**71.54**	**267**	LR	LR	09 36 46.3	
	comp=E,37nm,19.3s,MS3.7,baz=212,slow=36						
YKA	**Yellowknife Ar**	**86.38**	**1**	P	**P**	**09 06 29.0**	**+2.6**
	comp=E,0.2nm,0.8s,mb3.4,baz=354,slow=5.2,SNR=3.7						

CASC 15 08:56:31.0±1.4, 12°.81N×88°.59W, h54km±20km, MD3.6, ML3.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.69**	**26**	*e*P	Pn	08 56 45.2	+0.5
BLLM	**Bellamira**	**0.72**	**28**	*e*P	Pn	08 56 45.4	+0.2
BLLM				*e*S	Sn	08 56 56.4	+0.9
SNVI	**San Vicente**	**0.84**	**343**	*e*P	Pn	08 56 47.2	+0.5
SNVI				*e*S	Sn	08 56 59.5	+1.3
CNCH	**Conchagua**	**0.87**	**57**	*e*P	Pn	08 56 46.8	-0.3
CNCH				*e*S	Sn	08 57 00.3	+1.4
LFRS	**El Faro**	**0.94**	**330**	*e*P	Pn	08 56 48.0	+0.1
LFRS				*e*S	Sn	08 57 00.4	0.0
CAHU	**Cacacuatique**	**1.03**	**21**	*e*P	Pn	08 56 49.6	+0.5
CAHU				*e*S	Sn	08 57 04.7	+2.1
LBRS	**Las Brisas**	**1.03**	**334**	*e*P	Pn	08 56 49.8	+0.6
LBRS				*e*S	Sn	08 57 02.7	0.0
SNET	**Serv Nac Est T**	**1.08**	**324**	*e*P	Pn	08 56 50.0	+0.1
SNET				*e*S	Sn	08 57 04.9	+1.1
SBLS	**San Blas**	**1.44**	**316**	*e*P	Pn	08 56 56.5	+1.8
CRIN	**San Cristobal**	**1.50**	**94**	*e*P	Pn	08 56 55.5	-0.1
CRIN				*e*S	Sn	08 57 15.0	+0.9
CRIN				AML	AML	08 57 17.5	
	comp=E,204nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.78**	**46**	*e*P	Pn	08 56 59.1	-0.4
TGUH				*e*S	Sn	08 57 21.4	+0.4
MIRN	**Miramar**	**1.86**	**101**	*e*P	Pn	08 57 00.1	-0.4

*ISCJB **15** 09:17:54.2±0.4, 31°.74N±0°.04×104°.72E±0°.05, h10km, mb4.0/14, Error ellipse: s-maj=6.3km s-min=5.7km az=155.1*
*IDC **15** 09:17:55.4±0.8, 31°.63N×104°.37E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.8/27, mbtmp3.8/11, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=38.6km s-min=15.0km az=55.0*
*NEIC **15** 09:17:57.7±0.5, 31°.96N×104°.88E, h10km, mb4.7/4, Error ellipse: s-maj=14.2km s-min=8.0km az=46.0*
*BJI **15** 09:17:57.6, 31°.63N×104°.59E, h10km, ML3.6/8, Ms3.6/1, Ms7 3.7/1*
ISC 15 09:17:56.6±0.5, 31°.76N±0°.04×104°.63E±0°.05, h10km, n26, σ1§11/35, mb4.0/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.13**	**222**	Pg	**Pg**	**09 18 14.6**	**-3.8**
CD2				Sg	**Sg**	**09 18 29.3**	**-3.8**
CD2				smax			
	comp=N,2μm,0.9s						
XAN	**Xi'an**	**4.26**	**57**	Pn	**Pn**	**09 18 58.4**	**-3.1**
XAN				Pg	**Pg**	**09 19 17.8**	**-0.4**
XAN				Sn	**Sn**	**09 19 54.9**	**+3.6**
XAN				Sg	**Sg**	**09 20 13.6**	**+0.2**
XAN				smax			
	comp=N,150nm,0.8s						
XAN				smax			
	comp=E,69nm,0.8s						
LZH	**Lanzhou**	**4.36**	**352**	*e*Pn	**Pn**	**09 19 07.1**	**+4.2**
LZH				Pg	**Pg**	**09 19 19.6**	**-0.5**
LZH				Sn	**Sn**	**09 19 59.1**	**+5.3**
LZH				Sg	**Sg**	**09 20 15.8**	**-0.9**
LZH				smax			
	comp=N,81nm,0.5s						
LZH				smax			
	comp=E,110nm,0.6s						
LZH				LR	LR		
	comp=E,380nm,4.9s						
LZH				LR	LR		
	comp=Z,470nm,5.5s						
ENH	**Enshi**	**4.42**	**108**	Pn	**Pn**	**09 19 02.9**	**-0.9**
ENH				Sn	**Sn**	**09 19 51.6**	**-3.7**
GYA	**Guiyang**	**5.58**	**161**	Pg	**Pg**	**09 19 45.9**	**+2.5**
GYA				Sg	**Sg**	**09 20 39.8**	**-16**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,40nm,0.6s						
LSA	**Lhasa**	**11.78**	**263**	*e*Pn	**Pn**	**09 20 50.8**	**+6.1**
ULN	**Ulaanbaatar**	**16.19**	**6**	*e*Pn	**Pn**	**09 21 44.0**	**-0.1**
SSLB	**Suanglung**	**16.47**	**115**	*e*Pn	**Pn**	**09 21 47.6**	**-0.2**
KSRS	**Korea Array**	**19.97**	**67**	P	**Pn**	**09 22 32.5**	**+1.8**
	comp=E,2.6nm,0.8s,baz=257,slow=9.5,SNR=10						
KSRS				LR	LR	09 30 39.2	
	comp=E,30nm,18.2s,baz=145,slow=38						
MKAR	**Makanchi Array**	**22.79**	**318**	P	**P**	**09 22 59.6**	**+0.4**
	comp=E,0.4nm,0.5s,mb3.1,baz=113,slow=11,SNR=5.5						
ZALV	**Zalesovo Beam**	**26.33**	**333**	P	**P**	**09 23 33.4**	**+1.0**
	comp=E,0.7nm,0.5s,mb3.5,baz=143,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**26.33**	**333**	P	**P**	**09 23 33.4**	**+1.0**
KURK	**Kurchatov**	**27.00**	**322**	P	**P**	**09 23 38.2**	**-0.3**
	comp=E,0.4nm,0.6s,mb3.1,baz=129,slow=8.5,SNR=3.1						
KKM	**Kota Kinabalu**	**27.79**	**155**	P	**P**	**09 23 50.2**	**+4.4**
	comp=E,62nm,1.2s,mb5.1						
BVAR	**Borovoye Array**	**32.56**	**321**	P	**P**	**09 24 28.4**	**+0.7**
	comp=E,0.5nm,0.5s,mb3.7,baz=77,slow=6.2,SNR=2.3						
ARU	**Arti**	**40.19**	**322**	*e*P	**P**	**09 25 33.1**	**+0.3**
	comp=E,6.2nm,0.4s,mb4.7						
TIXI	**Tiksi**	**42.02**	**11**	*e*P	**P**	**09 25 47.4**	**-0.2**
	comp=E,1.7nm,0.5s,mb3.9						
ARCES	**ARCESS Array B**	**56.85**	**336**	P	**P**	**09 27 41.0**	**+0.1**
	comp=E,1.7nm,0.9s,mb4.1,baz=82,slow=8.3,SNR=4.6						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**09 27 44.2**	**+0.1**
	comp=E,0.9nm,0.5s,mb4.0,baz=81,slow=8.9,SNR=3.4						
WRAB	**Tennant Creek**	**58.77**	**147**	*e*P	**P**	**09 27 52.2**	**-2.8**
	comp=E,11nm,1.5s,mb4.7						
WRA	**Warramunga Arr**	**58.77**	**147**	P	**P**	**09 27 55.0**	**+0.1**
	comp=E,1.2nm,0.5s,mb4.2,baz=339,slow=7.6,SNR=23						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**09 28 16.9**	**+1.2**
	comp=E,0.5nm,0.4s,mb4.0,baz=334,slow=6.7,SNR=13						
RSO	**Redoubt South**	**68.72**	**31**	*e*P	**P**	**09 28 59.6**	**-0.5**
STKA	**Stephens Creek**	**72.32**	**148**	P	**P**	**09 29 22.9**	**+0.6**
	comp=E,3.7nm,1.1s,mb4.2,baz=329,slow=19,SNR=3.0						
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**09 30 11.9**	**+1.2**
	comp=E,0.5nm,0.4s,mb3.8,baz=329,slow=5.3,SNR=16						
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**09 30 11.9**	**+1.2**

*ISCJB **15** 09:42:50.3±0.5, 51°.53N±0°.07×75°.71E±0°.06, h10km, Error ellipse: s-maj=10.4km s-min=3.4km az=27.2*
*IDC **15** 09:42:50.1±1.1, 51°.45N×75°.43E, h0km, mb1 2.8/3, mb1mx2.7/28, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=22.2km s-min=9.3km az=30.0*
*NNC **15** 09:42:52.1±1.1, 51°.35N×75°.36E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=55.3km s-min=6.0km az=23.0*
ISC 15 09:42:52.5±0.5, 51°.55N±0°.07×75°.68E±0°.06, h10km, n9, σ1§23/18, 6C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.02**	**116**	⇓Pn	**Pg**	**09 43 29.8**	**-1.5**
	0.7nm,0.4s						
KURBB				⇑Sn	**Sg**	**09 43 57.9**	**+0.5**
	7.5nm,0.6s						
KURK	**Kurchatov**	**2.03**	**113**	⇑Pn	**Pg**	**09 43 30.2**	**-1.2**
	6.8nm,0.7s						
KURK				⇓Sn	**Sg**	**09 43 56.5**	**-1.2**
	38nm,1.2s						
KURK	**Kurchatov**	**2.03**	**113**	Pg	**Pn**	**09 43 28.6**	**+1.8**
	0.6nm,0.3s,baz=292,slow=18,SNR=30						
KURK				Lg		09 43 57.5	
	0.8nm,0.3s,baz=290,slow=21,SNR=26						
VOSK	**Vostochnaya**	**3.13**	**294**	⇓Pn	**Pn**	**09 43 42.3**	**+0.5**
	2.4nm,0.5s						
VOSK				⇓Sn	**Sn**	**09 44 18.4**	**-0.7**
	23nm,0.7s						
BVA0	**Borovoye Array**	**3.57**	**297**	⇑Pn	**Pn**	**09 43 47.2**	**-0.7**
	0.3nm,0.5s,baz=94,slow=22,SNR=6.8						
BVA0				⇑Sn	**Sn**	**09 44 31.0**	**+0.9**
	1.5nm,0.7s,baz=98,slow=24,SNR=8.1						
BVAR	**Borovoye Array**	**3.57**	**297**	Pn	**Pn**	**09 43 45.5**	**-2.4**
	0.3nm,0.3s,baz=119,slow=15,SNR=3.6						
BVAR				Sn	**Sn**	**09 44 31.2**	**+1.1**
	1.8nm,0.3s,baz=112,slow=26,SNR=9.4						
ZALV	**Zalesovo Beam**	**6.05**	**63**	Pn	**Pn**	**09 44 23.3**	**+1.4**
	0.4nm,0.3s,baz=254,slow=13,SNR=4.3						
ZALV				Sn	**Sn**	**09 45 31.2**	**0.0**
	0.3nm,0.3s,baz=247,slow=26,SNR=4.6						
ZALV				Lg		09 46 05.8	
	0.2nm,0.3s,baz=257,slow=32,SNR=2.8						
MK31	**Makanchi Array**	**6.43**	**135**	⇑Pn	**Pn**	**09 44 27.5**	**+0.3**
	0.4nm,0.6s,baz=0.0,slow=0.1,SNR=3.8						
MK31				⇓Sn	**Sn**	**09 45 42.0**	**+1.4**
	0.6nm,0.5s,baz=315,slow=18,SNR=4.1						
MK31				⇑Lg		09 46 14.9	
	2.2nm,0.5s,baz=324,slow=27,SNR=5.5						
MKAR	**Makanchi Array**	**6.43**	**135**	Pn	**Pn**	**09 44 25.3**	**-1.9**
	0.1nm,0.3s,baz=318,slow=14,SNR=4.9						
MKAR				Pg	**Pb**	**09 44 40.2**	**-4.3**
	0.1nm,0.3s,baz=320,slow=13,SNR=6.4						
MKAR				Sn	**Sn**	**09 45 41.9**	**+1.2**
	0.2nm,0.3s,baz=317,slow=23,SNR=6.4						
MKAR				Lg		09 46 15.5	
	0.7nm,0.3s,baz=315,slow=30,SNR=9.1						

IDC 15 09:45:07.6±53.0, 18°.15S×179°.23E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.9/3, Error ellipse: s-maj=952.7km s-min=141.7km az=78.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.55**	**241**	P	P	09 52 15.9	+0.8
	3.0nm,1.0s,baz=96,slow=9.2,SNR=3.3						
WRA	**Warramunga Arr**	**42.38**	**260**	P	P	09 53 03.4	-0.5
	0.2nm,0.3s,baz=96,slow=8.5,SNR=15						
ASAR	**Alice Springs**	**42.56**	**255**	P	P	09 53 05.2	-0.3
	1.3nm,0.4s,baz=90,slow=8.6,SNR=49						

*BJI **15** 09:46:38.8, 36°.60N×70°.51E, h198km, mB4.8/18, mb4.7/31*
*ISCJB **15** 09:46:39.8±0.1, 36°.46N±0°.02×70°.63E±0°.02, h208km, mb4.5/150, Error ellipse: s-maj=2.6km s-min=2.1km az=39.2*
*NEIC **15** 09:46:40.0±0.5, 36°.44N×70°.61E, h196km±4km, mb4.6/81, Error ellipse: s-maj=5.1km s-min=3.6km az=171.0*
*MOS **15** 09:46:39.2±0.9, 36°.47N×70°.62E, h202km, mb4.4/72, Error ellipse: s-maj=6.0km s-min=3.9km az=123.1*
*TEH **15** 09:46:40.0, 36°.52N×70°.57E, h194km*
*SZGRF **15** 09:46:42.1, 35°.45N×69°.91E, h205km, mb4.8, Hindu Kush, Afghanistan, region*
*IDC **15** 09:46:42.0±0.7, 36°.52N×70°.64E, h217km±6km, mb4.2/23, mb1 4.3/28, mb1mx4.3/29, mbtmp4.2/28, Error ellipse: s-maj=9.8km s-min=7.6km az=154.0*
*NNC **15** 09:46:45.7±3.2, 36°.99N×70°.60E, h213km±23km, mb4.1, mpv5.6, Error ellipse: s-maj=34.5km s-min=19.3km az=46.0*
ISC 15 09:46:41.4±0.1, 36°.45N±0°.02×70°.65E±0°.02, h209km, h209km±1.5km; pP-P, n453, σ1§04/501, mb4.5/150, 47C-13D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.32**	**215**	*e*Pn	**Pn**	**09 47 22.7**	**-1.1**
KBL				*e*Sn	**Sn**	**09 47 54.2**	**-2.8**
CEP	**Cherat**	**2.82**	**158**	⇑P	**Pn**	**09 47 29.6**	**+0.2**
CEP				S	**Sn**	**09 47 59.0**	**-8.1**
CHCP	**Chirah Chowk**	**3.52**	**142**	⇑P	**Pn**	**09 47 38.3**	**+0.7**
SARP	**Sargodha**	**4.82**	**159**	P	**Pn**	**09 47 53.1**	**-0.7**
JMU	**Jammu**	**5.12**	**136**	*e*x	x	09 48 12.5	
JMU				*e*S	**Sn**	**09 48 53.0**	**-4.6**
KSH	**Kashi**	**5.20**	**52**	⇓*i*P	**Pn**	**09 47 53.0**	**-5.4**
KSH				sP		09 48 32.0	
KSH				S	**Sn**	**09 48 45.8**	**-14**
KSH				smax			
	comp=N,840nm,0.4s						
KSH				smax			
	comp=E,670nm,0.6s						
THN	**Thein Dam**	**5.80**	**132**	*e*P	**Pn**	**09 48 04.9**	**-1.3**
THN				*e*x	**Sn**	**09 49 11.4**	**-1.9**
DLH	**Dalhousie**	**5.87**	**130**	*e*P	**Pn**	**09 48 06.0**	**-1.1**
DLH				*e*x	**Sn**	**09 49 10.0**	**-5.1**
AML	**Almayashu**	**6.14**	**22**	P	**Pn**	**09 48 09.2**	**-1.2**
	SNR=1015						
AML	**Almayashu**	**6.14**	**22**	*e*Pn	**Pn**	**09 48 09.2**	**-1.2**
	comp=E,1μm,0.6s						
AML				*e*Sn	**Sn**	**09 49 17.1**	**-4.0**
UCH	**Uchtor**	**6.50**	**26**	P	**Pn**	**09 48 14.0**	**-1.0**
	SNR=837						
KK31	**Karatay Array**	**6.64**	**359**	⇓P	**Pn**	**09 48 14.8**	**-2.0**
	comp=E,77nm,0.2s,baz=189,slow=16,SNR=1719						
KK31				S	**Sn**	**09 49 25.8**	**-7.1**
	comp=E,440nm,0.7s,baz=184,slow=18,SNR=7.9						
EKS2	**Erkin-Say**	**6.65**	**20**	P	**Pn**	**09 48 15.8**	**-1.2**
	SNR=168						
EKS2	**Erkin-Say**	**6.65**	**20**	*e*Pn	**Pn**	**09 48 15.7**	**-1.3**
	comp=E,469nm,0.9s						
EKS2				*e*Sn	**Sn**	**09 49 28.9**	**-4.3**
KZA	**Kyzart**	**6.65**	**31**	P	**Pn**	**09 48 15.4**	**-1.6**
	SNR=166						
AAK	**Ala-Archa**	**6.85**	**25**	P	**Pn**	**09 48 18.4**	**-1.2**
	comp=E,1.2nm,0.3s,baz=186,slow=3.6,SNR=201						
AAK				S	**Sn**	**09 49 32.8**	**-4.9**
	comp=E,0.3nm,0.3s,baz=137,slow=23,SNR=7.2						
AAK	**Ala-Archa**	**6.85**	**25**	*e*Pn	**Pn**	**09 48 18.3**	**-1.2**
AAK				*e*Sn	**Sn**	**09 49 37.5**	**-0.2**
AAK	**Ala-Archa**	**6.85**	**25**	Pn	**Pn**	**09 48 18.7**	**-0.8**
	SNR=88						
AAK				Pn	**Pn**	**09 48 18.7**	**-0.8**
	SNR=88						
BHK	**Bhakra**	**6.94**	**135**	*e*P	**Pn**	**09 48 15.4**	**-5.5**
BHK				*e*S	**Sn**	**09 49 27.0**	**-13**
KBK	**Karagaybulak**	**7.03**	**27**	P	**Pn**	**09 48 21.1**	**-0.8**
	SNR=182						
SDNR	**Sundarnagar**	**7.21**	**131**	*e*P	**Pn**	**09 48 23.1**	**-1.2**
SDNR				*e*S	**Sn**	**09 49 40.1**	**-6.2**
ULHL	**Ulahol**	**7.22**	**35**	P	**Pn**	**09 48 22.9**	**-1.5**
	SNR=61						
CHMS	**Chumysh**	**7.26**	**25**	P	**Pn**	**09 48 23.2**	**-1.6**
	SNR=218						
USP	**Ospenovka**	**7.42**	**22**	P	**Pn**	**09 48 24.7**	**-2.2**
	SNR=111						
TKM2	**Tokmak 2**	**7.50**	**29**	⇑P	**Pn**	**09 48 26.7**	**-1.2**
	comp=E,395nm,0.6s						
TKM2	**Tokmak 2**	**7.50**	**29**	P	**Pn**	**09 48 26.9**	**-1.1**
	SNR=103						
TKM2	**Tokmak 2**	**7.50**	**29**	*e*PN	**Pn**	**09 48 26.8**	**-1.2**
TKM2				pmax	pmax		
	comp=Z,560nm,0.6s						
TKM2	**Tokmak 2**	**7.50**	**29**	*e*Pn	**Pn**	**09 48 26.8**	**-1.2**
	comp=Z,560nm,0.6s						
SMLA	**Simla**	**7.59**	**133**	*i* x	**Pn**	**09 48 25.1**	**-4.2**
SMLA				*i* S	**Sn**	**09 49 47.6**	**-7.8**
SMLA				*e*x	x	09 49 50.8	
	comp=N,3μm,0.3s						
SMLA				*e*x	x	09 49 53.4	
	comp=E,2μm,0.4s						
KLP	**Kalpa**	**7.99**	**126**	*e*P	**Pn**	**09 48 33.9**	**-0.6**
KLP				*e*S	**Sn**	**09 49 56.7**	**-8.2**
KLP				AML	AML	09 50 15.4	
	comp=E,739nm,0.3s						
KLP				AML	AML	09 50 17.0	
	comp=N,780nm,0.6s						
IMYA	**Miami**	**8.51**	**272**	*e*P	**Pn**	**09 48 39.0**	**-2.1**
DDI	**Dehra Dun**	**8.70**	**133**	*e*P	**Pn**	**09 48 41.0**	**-2.7**
DDI				*e*x	x	09 50 19.0	
IMOG	**Moghan**	**9.14**	**271**	*e*P	**Pn**	**09 48 47.3**	**-2.0**
IPAY	**Payeh**	**9.39**	**273**	*e*P	**Pn**	**09 48 50.3**	**-2.2**
KHET	**Khetri**	**9.43**	**151**	*e*P	**Pn**	**09 48 50.6**	**-2.5**
KHET				*e*S	**Sn**	**09 50 29.7**	**-9.2**
KHET				AML	AML	09 50 50.3	
	comp=E,81nm,0.6s						
KHET				AML	AML	09 50 52.3	
	comp=N,117nm,0.2s						
JOSI	**Joshimath**	**9.48**	**126**	*e*P	**Pn**	**09 48 53.7**	**0.0**
JOSI				*e*S	**Sn**	**09 50 30.3**	**-10**
JASL	**Jaisalmer**	**9.50**	**179**	*e*P	**Pn**	**09 48 51.6**	**-2.5**
NDI	**New Delhi**	**9.52**	**143**	*e*P	**Pn**	**09 48 50.0**	**-4.3**
NDI				*e*S	**Sn**	**09 50 26.0**	**-15**
SONA	**Sohna**	**9.82**	**145**	*e*P	**Pn**	**09 48 57.1**	**-1.1**
SONA				*e*S	**Sn**	**09 50 38.0**	**-10**
SONA				AML	AML	09 50 47.3	
	comp=E,115nm,0.5s						
VAN	**Vannovskaya**	**10.12**	**282**	*e*P	**Pn**	**09 48 58.8**	**-3.1**
AJM	**Ajmer**	**10.51**	**160**	*e*P	**Pn**	**09 49 05.5**	**-1.6**
AJM				*e*S	**S**	**09 50 55.1**	**-10**
AJM				AML	AML	09 51 16.2	
	comp=N,103nm,0.4s						
AJM				AML	AML	09 51 17.9	
	comp=E,111nm,0.2s						
PTH	**Pithoragarh**	**10.57**	**128**	*e*P	**Pn**	**09 49 07.0**	**-0.8**
PTH				*e*x	x	09 53 34.0	
AGRA	**Agra**	**11.09**	**144**	*e*P	**Pn**	**09 49 12.9**	**-1.5**
AGRA				*e*S	**S**	**09 51 09.0**	**-9.4**
BHJ	**Bhuj**	**13.18**	**184**	*e*P	**Pn**	**09 49 41.2**	**+0.3**
BHJ				*e*x	x	09 51 58.4	
MK31	**Makanchi Array**	**13.49**	**36**	⇑P	**Pn**	**09 49 42.7**	**-1.8**
	comp=E,18nm,0.7s,baz=233,slow=5.7,SNR=95						
MK31	**Makanchi Array**	**13.49**	**36**	*e*Pn	**Pn**	**09 49 42.6**	**-1.8**
MK31				*e*Sn	**S**	**09 52 20.5**	**+6.0**
MKAR	**Makanchi Array**	**13.49**	**36**	P	**Pn**	**09 49 42.4**	**-2.1**
	comp=E,2.6nm,0.3s,baz=231,slow=7.7,SNR=72						
MKAR				S	**S**	**09 52 11.8**	**-2.8**
	baz=216,slow=25,SNR=1.8						
MKAR	**Makanchi Array**	**13.49**	**36**	P	**Pn**	**09 49 42.4**	**-2.1**
MKAR				S	**S**	**09 52 11.8**	**-2.8**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
IGLO	**Ghaloghah**	**13.54**	**275**	*e*P	**Pn**	**09 49 45.9**	**+0.7**
IKIA	**Kiasar**	**13.69**	**274**	*e*P	**Pn**	**09 49 48.0**	**+1.0**
BHPL	**Bhopal**	**14.41**	**154**	*e*P	**Pn**	**09 49 56.0**	**0.0**
WMQ	**Urumqi**	**14.96**	**55**	P	**Pn**	**09 50 02.4**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,34nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.0s						
AB31	**Akbulak array**	**14.99**	**332**	⇑P	**Pn**	**09 50 00.2**	**-2.6**
	comp=Z,41nm,0.6s,baz=142,slow=12,SNR=469						
AB31				⇓S	**S**	**09 52 38.4**	**-11**
	comp=Z,25nm,0.7s,baz=151,slow=24,SNR=4.3						
ABKAR	**Akbulak array**	**14.99**	**332**	*e*Pn	**Pn**	**09 50 00.4**	**-2.4**
	comp=Z,50nm,0.5s						
ABKAR				*e*S	**S**	**09 52 42.5**	**-6.4**
DMN	**Daman**	**15.09**	**122**	*e*P	**Pn**	**09 50 04.2**	**0.0**
	comp=Z,72nm,0.4s						
KKN	**Kakani**	**15.10**	**121**	*e*P	**Pn**	**09 50 04.2**	**-0.1**
	comp=Z,51nm,0.3s						
PKIN	**Phulchoki**	**15.31**	**121**	*e*P	**Pn**	**09 50 07.2**	**+0.3**
	comp=Z,79nm,0.4s						
PKI	**Pulchoki**	**15.32**	**121**	*e*P	**Pn**	**09 50 06.8**	**-0.3**
	comp=Z,88nm,0.4s						
KURK	**Kurchatov**	**15.37**	**19**	P	**Pn**	**09 50 03.5**	**-3.8**
	comp=Z,0.5nm,0.3s,

HATD Hatta, Dubai 17.02 231 P **P 09 50 26.5 +0.7**
SNR=6.3
TAPN Taplejung 17.07 117 *eP* **P 09 50 29.2 +2.7**
comp=N,60nm,0.4s
WBK Wadi Bani Khal 17.11 219 P **P 09 50 30.0 +3.1**
SNR=7.9
ODAN Odare 17.14 119 *eP* **P 09 50 29.8 +2.6**
comp=N,151nm,0.8s
ASHO Ashiyiah 17.17 231 P **P 09 50 28.2 +0.7**
SNR=21
NAZ Nazwa, Dubai 17.20 233 P **P 09 50 30.7 +2.8**
SNR=10.0
SMDO Samad 17.24 223 P **P 09 50 30.8 +2.6**
SNR=6.9
ARQ Araqi 17.89 227 P **P 09 50 36.8 +1.5**
SNR=7.6
POO Poona 18.08 170 *ex* **P 09 50 42.3 +4.9**
LSA Lhasa 18.44 106 *eP* **P 09 50 45.3 +4.0**
LSA pmax pmax
comp=Z,33nm,0.9s
LSA Lhasa 18.44 106 *eP* **P 09 50 45.2 +4.0**
comp=Z,33nm,0.9s
LATR Latur 18.71 162 *ex* **P 09 50 45.8 +1.5**
LATR *ex* x 09 54 27.8
IHRS Heris 18.84 283 *eP* **P 09 50 46.8 +1.2**
KAD Karad 19.33 170 *eP* **P 09 50 50.3 -0.6**
ZAA0 Zalesovo Array 20.07 25 *eP* **P 09 50 58.5 -0.1**
ZAA0 *eS* **S 09 54 38.3 +6.1**
ZALV Zalesovo Beam 20.07 25 P **P 09 50 58.5 0.0**
comp=Z,11nm,0.3s,baz=222,slow=10,SNR=57
ZALV S **S 09 54 29.8 -2.4**
comp=Z,7.9nm,0.8s,baz=213,slow=18,SNR=5.6
ZALV Zalesovo Beam 20.07 25 P **P 09 50 58.5 -0.1**
ZALV S **S 09 54 29.8 -2.4**
ZALV pmax pmax
comp=Z,11nm,0.3s
ZALV smax
comp=N,8.0nm,0.8s
ZALV Zalesovo Beam 20.07 25 P **P 09 50 58.5 0.0**
ZALV S **S 09 54 29.8 -2.4**
HYB Hyderabad 20.21 158 *i* P **P 09 50 58.5 -1.9**
HYB *eS* **S 09 54 37.0 +1.5**
NVS Novosibirsk 20.33 21 *eP* **P 09 51 01.5 +0.3**
NVS *e* 09 52 00.4
NVS *i* S **S 09 54 36.1 -0.9**
NVS pmax pmax
comp=Z,37nm,1.0s
NVS pmax pmax
comp=N,40nm,1.3s
NVS smax
comp=E,131nm,1.4s
NVS smax
comp=N,117nm,1.7s
UMR Umm Al-Rimmam 20.40 257 *eP* **P 09 51 01.9 -0.4**
UMR AMb AMB 09 51 09.2
comp=Z,125nm,0.6s
KBD Kabd 20.59 256 *eP* **P 09 51 03.5 -0.7**
KBD AMb AMB 09 51 06.9
comp=Z,56nm,0.7s
MIB Mutribah 20.59 258 *eP* **P 09 51 03.8 -0.5**
MIB AMb AMB 09 51 07.5
comp=Z,73nm,0.6s
QRN Al-Qurain 20.61 255 *eP* **P 09 51 03.8 -0.7**
QRN AMb AMB 09 51 10.1
comp=Z,89nm,0.6s
MTA Mtatsminda 20.71 293 P **P 09 51 07.1 +1.6**
TBLG Delisi 20.75 293 P **P 09 51 07.3 +1.4**
RDF Al-Radifah 20.81 255 *eP* **P 09 51 06.1 -0.5**
RDF AMb AMB 09 51 13.0
comp=Z,114nm,0.6s
SVE Sverdlovsk 21.46 345⇓ *eP* **P 09 51 13.6 +0.4**
SVE *eS* **S 09 55 02.5 +5.7**
SVE pmax pmax
comp=Z,39nm,1.0s,mb4.9
ZEI Tsey 21.50 295 *eP* **P 09 51 14.1 +0.3**
ZEI pmax pmax
comp=Z,13nm,0.8s,mb4.5
ARU Arti 21.59 342 *d iP* **P 09 51 15.8 +1.3**
ARU *e* 09 51 44.8
ARU S **S 09 55 03.8 +4.9**
ARU pmax pmax
comp=Z,61nm,1.7s,mb4.8
ONI Oni 21.80 295 P **P 09 51 18.1 +1.3**
GOF Gofitskoye 22.53 301 *eP* **P 09 51 17.9 -5.5**
GOF *eS* **S 09 55 12.9 -1.6**
GOF pmax pmax
comp=Z,70nm,1.0s,mb5.2
KIV Kislovodsk 22.56 298 *eP* **P 09 51 23.0 -0.7**
KIV *eS* **S 09 55 15.0 0.0**
KIV pmax pmax
comp=Z,12nm,0.7s,mb4.5
KIV MLR MLR
comp=Z,21nm,14.0s
KIV Kislovodsk 22.56 298 *eP* **P 09 51 22.9 -0.8**
comp=Z,35nm,0.8s,mb4.9
GTA Gaotai 23.15 74 ⇑P **P 09 51 31.0 +1.9**
GTA pP 09 52 07.4
GTA sP sP 09 52 30.5 -2.7
GTA PcP PcP 09 55 10.4 -0.5
GTA S **S 09 55 29.6 +5.0**
GTA SS 09 56 39.4
GTA pmax pmax
comp=Z,20nm,1.1s,mb4.6
GTA pmax pmax
comp=Z,140nm,4.5s
GTA LR LR
comp=N,120nm,15.5s
GTA LR LR
comp=E,120nm,14.0s
GTA LR LR
comp=Z,96nm,14.6s
ABTO Aybut 24.45 223 P **P 09 51 44.0 +2.9**
SNR=5.9
SOC Sochi 24.64 296 *eP* **P 09 51 44.0 +1.4**
SOC *e**PP 09 52 21.0
SOC *eS* **S 09 55 47.2 -1.0**
SOC *e**SS sS 09 56 58.8 -3.6
SOC pmax pmax
comp=Z,19nm,1.0s,mb4.7
VRHR Novokhopersk 25.35 314 *eP* **P 09 51 48.9 0.0**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.1
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,60nm,1.4s
MOY Mondy 26.34 45 *eP* **P 09 52 00.2 +2.5**
MOY *e* pP 09 52 43.6 +4.0
MOY pmax pmax
comp=Z,25nm,1.9s,mb4.5
VORD Divnogorie 26.66 313 *eP* **P 09 52 00.2 -0.5**
VORD pmax pmax
comp=Z,20nm,1.1s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,1.1s
LZH Lanzhou 26.70 81 *eP* **P 09 52 03.1 +2.0**
LZH pP pP 09 52 43.8 +0.8
LZH sP sP 09 53 03.9 -3.5
LZH pmax pmax
comp=Z,26nm,1.0s,mb4.8
VSR Storozhevoye 26.83 313 *eP* **P 09 52 02.0 -0.1**
VSR pmax pmax
comp=Z,30nm,1.2s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.7s
ZAK Zakamensk 27.23 49 *eP* **P 09 52 04.7 -1.0**
ZAK *e* pP 09 52 48.4 +0.7
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
TLY Talaya 27.88 46 *eP* **P 09 52 13.4 +2.0**
TLY *eS* **S 09 56 40.2 +1.2**
TLY *e* 09 58 17.6
TLY pmax pmax
comp=Z,11nm,1.3s,mb4.3
CD2 Chengdu 28.01 92 P **P 09 52 19.6 +6.7**
CD2 pP pP 09 52 58.3 +3.3
CD2 sP sP 09 53 20.5 +1.2
CD2 S **S 09 56 51.8 +10**
CD2 sS sS 09 58 00.4 +3.3
CD2 pmax pmax
comp=Z,70nm,0.9s,mb5.3

CD2 pmax pmax
comp=Z,170nm,5.8s
SONM Songino Array 28.59 55 P **P 09 52 18.9 +1.1**
comp=Z,6.4nm,0.9s,mb4.2,baz=259,slow=9.3,SNR=26
SONM pP pP 09 53 04.4 +4.4
comp=Z,4.4nm,0.9s,baz=262,slow=9.3,SNR=3.1
SONM PcP PcP 09 55 23.6 +0.3
comp=Z,3.0nm,0.9s,baz=251,slow=2.3,SNR=4.8
SONM Songino Array 28.59 55 P **P 09 52 18.9 +1.1**
SONM *PP pP 09 53 04.4 +4.3
SONM 09 55 23.6
SONM pmax pmax
comp=Z,6.0nm,0.9s
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM pmax pmax
comp=Z,3.0nm,0.9s
ULN Ulaanbaatar 29.04 55 *eP* **P 09 52 23.4 +1.7**
ULN pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
ULN Ulaanbaatar 29.04 55 *eP* **P 09 52 23.4 +1.7**
comp=Z,9.4nm,1.1s,mb4.3
BR131 Keskin Array S 29.18 288 *eP* **P 09 52 24.0 +0.8**
BRTR Keskin Array B 29.18 288 P **P 09 52 23.3 +0.1**
comp=Z,2.7nm,0.7s,mb4.0,baz=104,slow=9.0,SNR=16
BRTR PcP PcP 09 55 23.7 -1.3
comp=Z,1.8nm,0.8s,baz=103,slow=4.1,SNR=3.8
BRTR Keskin Array B 29.18 288 P **P 09 52 23.3 +0.2**
BRTR 09 55 23.7
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR pmax pmax
comp=Z,2.0nm,0.8s
MOS Moscow 29.52 321 *eP* **P 09 52 25.1 -0.8**
MOS pmax pmax
comp=Z,133nm,0.8s,mb5.6
KMI Kunming 29.66 103 P **P 09 52 27.5 0.0**
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
OBN Obninsk 29.79 320 ⇑*iP* **P 09 52 28.5 +0.2**
OBN *e**PP pP 09 53 10.6 -0.1
OBN *e* 09 53 33.1
OBN pmax pmax
comp=Z,101nm,1.2s,mb5.3
OBN Obninsk 29.79 320 *eP* **P 09 52 28.5 +0.2**
comp=Z,46nm,0.6s,mb5.3
HHC Hu-ho-hao-te 32.04 69 *eP* **P 09 52 50.4 +2.2**
HHC pP pP 09 53 29.8 -1.1
HHC sP sP 09 53 51.9 -3.1
HHC PP PP 09 54 05.1 +0.1
HHC PcP PcP 09 55 35.5 +3.0
HHC S **S 09 57 47.0 +2.7**
HHC sS sS 09 58 57.0 -3.3
HHC pmax pmax
comp=Z,11nm,1.1s,mb4.3
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,200nm,12.4s
HHC LR LR
comp=E,510nm,14.5s
HHC LR LR
comp=Z,110nm,14.8s
GYA Guiyang 32.14 98 P **P 09 52 51.0 +1.8**
GYA pP pP 09 53 31.8 -0.1
GYA sP sP 09 53 55.3 -0.7
GYA PP PP 09 54 05.4 -0.9
GYA PcP PcP 09 55 34.9 +1.9
GYA S **S 09 57 48.0 +1.9**
GYA ScP ScP 09 58 59.3 +2.7
GYA sS sS 09 59 00.3 -1.8
GYA PcS PcS 09 59 18.9 +0.7
GYA ScS ScS 10 02 56.8 +0.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,5.3s
AKASG Malin Array Be 32.76 309 P **P 09 52 54.0 -0.3**
comp=Z,10.0nm,0.7s,mb4.5,baz=80,slow=7.4,SNR=30
AKASG pP pP 09 53 36.9 -0.2
comp=Z,8.1nm,0.8s,baz=82,slow=7.5,SNR=4.3
AKASG ScP ScP 09 58 58.5 +0.3
comp=Z,0.4nm,0.3s,baz=90,slow=2.8,SNR=5.9
AKASG Malin Array Be 32.76 309 P **P 09 52 54.0 -0.3**
AKASG *PP pP 09 53 36.9 -0.1
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 32.76 309 *eP* **P 09 52 53.9 -0.4**
KIEV Kiev 32.76 309 *eP* **P 09 52 53.9 -0.5**
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.5
KIEV Kiev 32.76 309 *eP* **P 09 52 53.9 -0.5**
comp=Z,12nm,0.8s,mb4.5
BUR08 Bucovina Ar. S 35.09 303 *eP* **P 09 53 15.3 +1.0**
IDID Didziasalis 35.17 317 *eP* **P 09 53 15.9 +0.9**
IZAR Zarasai 35.55 317 *eP* **P 09 53 18.5 +0.3**
BOD Bodaibo 35.56 39 *eP* **P 09 53 18.4 +0.1**
BOD pmax pmax
comp=Z,18nm,1.1s,mb4.5
ISAL Salakas 35.57 317 *eP* **P 09 53 19.3 +0.9**
BJI Beijing 35.64 70 P **P 09 53 19.1 -0.1**
BJI pP pP 09 53 58.1 -4.3
BJI S **S 09 58 40.0 +0.4**
BJI pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
BJI pmax pmax
comp=Z,82nm,5.4s
JOF Joensuu 35.77 330 *eP* **P 09 53 19.2 -0.8**
JOF pmax pmax
comp=Z,33nm,0.6s,mb5.0
JOF Joensuu 35.77 330 *ep* **P 09 53 19.2 -0.8**
comp=Z,33nm,0.6s,mb5.0
LVV L'vov 35.96 307 *eP* **P 09 53 21.9 +0.1**
LVV *e* pP 09 54 04.5 -0.6
KOLS Kolonicke sedl 37.07 305 *eP* **P 09 53 31.7 +0.5**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
KOLS Kolonicke sedl 37.07 305 *eP* **P 09 53 31.7 +0.5**
comp=Z,5.8nm,1.0s,mb4.1
KOLS *e*PP pP 09 54 14.5 -0.2
KOLS Kolonicke sedl 37.07 305 *eP* **P 09 53 31.7 +0.5**
KOLS *ep*P pP 09 54 14.5 -0.2
FINES FINESS Array B 37.36 326 P **P 09 53 33.8 +0.3**
comp=Z,34nm,0.7s,mb5.0,baz=108,slow=10,SNR=85
FINES FINESS Array B 37.36 326 P **P 09 53 33.8 +0.3**
FINES pmax pmax
comp=Z,34nm,0.7s
KAF Kangasniemi 37.51 327 *eP* **P 09 53 33.1 -1.6**
KAF pmax pmax
comp=Z,16nm,0.7s,mb4.7
KAF Kangasniemi 37.51 327 *ep* **P 09 53 33.1 -1.6**
comp=Z,16nm,0.7s,mb4.7
STHS Stebnicka Huta 37.76 306 *eP* **P 09 53 37.1 +0.2**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
STHS Stebnicka Huta 37.76 306 *eP* **P 09 53 37.1 +0.2**
comp=Z,3.1nm,0.8s,mb3.9
STHS *e*PP pP 09 54 25.5 +5.0
STHS Stebnicka Huta 37.76 306 *eP* **P 09 53 37.1 +0.2**
STHS *ep*P pP 09 54 25.5 +5.0
KECS Kecovo 38.25 304 *eP* **P 09 53 42.0 +0.9**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KECS Kecovo 38.25 304 *eP* **P 09 53 42.0 +0.9**
comp=Z,2.4nm,0.7s,mb3.8
KECS *e*PP pP 09 54 25.0 +0.2
KECS Kecovo 38.25 304 *eP* **P 09 53 42.0 +0.9**
KECS *ep*P pP 09 54 25.0 +0.2
NIE Niedzica 38.36 306 *eP* **P 09 53 43.5 +1.5**
NIE *e**PP pP 09 54 27.0 +1.3
OJC Ojcow 38.71 307 *eP* **P 09 53 45.0 +0.2**
OJC *ep*P pP 09 54 28.3 -0.3
VYHS Vyhne 39.35 304 *eP* **P 09 53 51.0 +0.8**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb3.8
VYHS Vyhne 39.35 304 *eP* **P 09 53 51.0 +0.8**
comp=Z,3.9nm,1.3s,mb3.8
VYHS *e*PP pP 09 54 34.9 +0.8
VYHS Vyhne 39.35 304 *eP* **P 09 53 51.0 +0.8**
VYHS *ep*P pP 09 54 34.9 +0.8
KOLL Kolacno 39.64 305 *eP* **P 09 53 53.7 +1.2**
KOLL Kolacno 39.64 305 *eP* **P 09 53 53.7 +1.2**

NJ2 Nanjing 39.76 82 *eP* **P 09 53 54.6 +0.8**
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb4.8
ZST Bratislava 40.52 304 *eP* **P 09 53 59.8 0.0**
ZST pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
ZST Bratislava 40.52 304 *eP* **P 09 53 59.8 0.0**
comp=Z,6.1nm,0.6s,mb4.2
ZST Bratislava 40.52 304 *eP* **P 09 53 59.8 0.0**
KEV Kevo 40.74 338 *eP* **P 09 53 59.8 -1.5**
KEV pmax pmax
comp=Z,16nm,0.7s,mb4.6
KEV Kevo 40.74 338 *ep* **P 09 53 59.8 -1.5**
comp=Z,16nm,0.7s,mb4.5
ARCES ARCESS Array B 41.08 338 P **P 09 54 04.7 +0.6**
comp=Z,29nm,0.7s,mb4.8,baz=116,slow=8.2,SNR=92
ARCES ARCESS Array B 41.08 338 P **P 09 54 04.7 +0.6**
ARCES pmax pmax
comp=Z,29nm,0.7s
ARE0 ARCESS Array S 41.08 338 *eP* **P 09 54 04.6 +0.5**
CLNS Chul'man 41.13 43 *eP* **P 09 54 06.4 +1.7**
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.3
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS pmax pmax
comp=N,4.0nm,1.0s
CSNA Conrad Observa 41.37 304 ⇑*iP* **P 09 54 07.4 +0.7**
comp=N,14nm,0.9s,mb4.4
GROS Grobnik 41.76 302 *i* P **P 09 54 10.1 +0.2**
DOBS Dobrina 41.82 301 *i* P **P 09 54 10.6 +0.3**
BSD Bornholm Skovb 41.84 315 *i* P **P 09 54 09.4 -1.0**
BSD pmax pmax
comp=Z,18nm,0.9s,mb4.5
BSD Bornholm Skovb 41.84 315 *i* P **P 09 54 09.4 -1.0**
comp=Z,18nm,0.9s,mb4.5
CN2 Changchun 41.88 62 *eP* **P 09 54 12.8 +1.9**
CN2 *ep*P pP 09 54 54.0 -1.3
CN2 *eS* **S 10 00 15.5 +2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
SOKA Soboth 42.05 302 ⇑*iP* **P 09 54 12.8 +0.5**
comp=Z,12nm,0.9s,mb4.3
PDKS Podkum 42.15 301 *i* P **P 09 54 13.6 +0.5**
BRG Berggiesshubel 42.43 308 *eP* **P 09 54 15.6 +0.4**
comp=Z,16nm,1.0s,mb4.4
BRG *ep*P pP 09 54 59.6 -0.1
BRG Berggiesshubel 42.43 308 *i* P **P 09 54 15.8 +0.6**
comp=Z,16nm,1.0s,mb4.4
BRG *e* pP 09 55 01.7 +2.0
comp=Z,6.3nm,1.0s
BRG Berggiesshubel 42.43 308 *i* P **P 09 54 15.8 +0.6**
BRG *e* pP 09 55 01.7 +2.0
BRG pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb3.8
MOA Molln 42.45 304 ⇑*iP* **P 09 54 15.5 +0.1**
comp=Z,12nm,0.9s,mb4.3
GEC2 GERESS Array S 42.73 305 *eP* **P 09 54 17.8 +0.1**
comp=Z,5.0nm,1.2s,mb3.8
GEC2 GERESS Array S 42.73 305 *eP* **P 09 54 17.8 +0.1**
GEC2 pmax pmax
comp=Z,5.0nm,1.2s,mb3.8
GERES GERESS Array B 42.73 305 P **P 09 54 17.8 +0.1**
comp=Z,1.9nm,0.8s,mb3.6,baz=93,slow=8.0,SNR=11
GERES pP pP 09 55 03.2 +1.0
comp=Z,0.9nm,0.6s,baz=92,slow=7.1,SNR=2.9
GERES GERESS Array B 42.73 305 P **P 09 54 17.8 +0.1**
GERES *PP pP 09 55 03.2 +1.0
GERES pmax pmax
comp=Z,2.0nm,0.8s
GERES pmax pmax
comp=Z,1.0nm,0.6s
KHC Kasperske Hory 42.78 306 *eP* **P 09 54 18.5 +0.4**
KHC pmax pmax
comp=Z,2.0nm,0.8s,mb3.6
KHC Kasperske Hory 42.78 306 *eP* **P 09 54 18.5 +0.4**
comp=Z,1.9nm,0.8s,mb3.6
VOJS Vojsko 42.93 301 *eP* **P 09 54 19.1 -0.2**
CLL Collm 43.00 309 *eP* **P 09 54 19.9 +0.1**
comp=Z,8.0nm,0.8s,mb4.2
CLL Collm 43.00 309 *i* P **P 09 54 20.2 +0.4**
CLL pmax pmax
comp=Z,11nm,1.1s,mb4.2
CLL Collm 43.00 309 *i* P **P 09 54 20.2 +0.4**
comp=Z,11nm,1.1s,mb4.2
CLL Collm 43.00 309 *i* P **P 09 54 20.2 +0.4**
comp=Z,11nm,1.1s,mb4.2
ROBS Robic 43.15 302 *eP* **P 09 54 20.9 -0.2**
COP Copenhagen 43.28 315 *eP* **P 09 54 22.1 +0.2**
COP pmax pmax
comp=Z,17nm,0.8s,mb4.5
COP Copenhagen 43.28 315 *i* P **P 09 54 22.1 +0.2**
comp=Z,17nm,0.8s,mb4.5
TANN Tannenbergstha 43.40 308 *eP* **P 09 54 23.0 0.0**
comp=Z,6.0nm,1.0s,mb4.0
RJOB Jochberg 43.44 304 *eP* **P 09 54 23.2 -0.2**
comp=Z,9.0nm,0.9s,mb4.2
ROTZ Rotzenmuhle 43.62 307 *eP* **P 09 54 26.0 +1.2**
comp=Z,13nm,1.1s,mb4.2
ROTZ *ep*P pP 09 55 10.5 +1.0
MOX Moxa 43.92 308 *eP* **P 09 54 27.8 +0.6**
MOX Moxa 43.92 308 *eP* **P 09 54 27.6 +0.4**
comp=Z,9.0nm,1.0s,mb4.0
MOX *ep*P pP 09 55 13.8 +1.9
YAK Yakutsk 44.17 35 *ceP* **P 09 54 29.0 +0.1**
YAK *e**PP pP 09 55 13.6 -0.2
YAK *e* 09 56 08.2
YAK *e* 09 56 16.5
YAK *eS* **S 10 00 45.7 +0.1**
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=Z,56nm,1.0s,mb4.8
YAK pmax pmax
comp=Z,39nm,2.3s,mb4.3
YAK smax
comp=E,125nm,3.0s
YAK smax
comp=N,45nm,1.7s
YAK Yakutsk 44.17 35 *eP* **P 09 54 29.3 +0.4**
comp=N,67nm,0.8s,mb5.0
NB2 NORSAR Subarra 44.25 323 P **P 09 54 29.2 -0.4**
comp=Z,41nm,0.7s,mb4.9,baz=96,slow=7.9
NOA NORSAR Array B 44.25 323 P **P 09 54 29.2 -0.4**
comp=Z,38nm,0.8s,mb4.8,baz=97,slow=7.8,SNR=144
NOA pP pP 09 55 15.1 +0.6
comp=Z,5.2nm,0.8s,baz=98,slow=8.0,SNR=2.5
NOA NORSAR Array B 44.25 323 P **P 09 54 29.2 -0.4**
NOA *PP pP 09 55 15.1 +0.7
NOA pmax pmax
comp=Z,38nm,0.8s
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA NORSAR Array B 44.25 323 P **P 09 54 29.2 -0.4**
NOA pP pP 09 55 15.1 +0.6
GRA1 Grafenberg Arr 44.26 307 *eP* **P 09 54 31.2 +1.3**
comp=Z,11nm,1.1s,mb4.1
GRF Grafenberg Arr 44.26 307 *eP* **P 09 54 31.2 +1.3**
comp=Z,11nm,1.1s,mb4.1
GRF Grafenberg Arr 44.26 307 *eP* **P 09 54 31.2 +1.3**
GRF pmax pmax
comp=Z,11nm,1.1s,mb4.1
GRF Grafenberg Arr 44.26 307 *eP* **P 09 54 31.2 +1.3**
GRF pmax pmax
comp=Z,11nm,1.1s,mb4.1
NAO01 NORSAR Array S 44.39 323 *eP* **P 09 54 30.1 -0.6**
comp=Z,8.2nm,0.6s,mb4.2
BSEG Bad Segeberg 44.52 313 *eP* **P 09 54 32.5 +0.7**
comp=Z,23nm,1.1s,mb4.4
BSEG Bad Segeberg 44.52 313 *eP* **P 09 54 32.5 +0.7**
BSEG pmax pmax
comp=Z,23nm,1.1s,mb4.4
CLZ Clausthal 44.60 310 *eP* **P 09 54 32.9 +0.3**
comp=Z,29nm,1.4s,mb4.4
CLZ Clausthal 44.60 310 *eP* **P 09 54 32.9 +0.3**
CLZ pmax pmax
comp=Z,29nm,1.4s,mb4.4
MOTA Moosalm 44.63 303 ⇓*iP* **P 09 54 32.4 -0.4**
comp=Z,7.9nm,0.7s,mb4.1
MDJ Mudanjiang 44.67 60 P **P 09 54 34.0 +0.8**
MDJ pP pP 09 55 15.8 -2.3
MDJ sP sP 09 55 37.1 -4.6

MDJ PcP PcP 09 56 12.8 +0.9
MDJ S **S** **10 00 54.6 +1.2**
MDJ sS sS 10 02 09.8 -2.6
MDJ pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
MDJ pmax pmax
comp=Z,74nm,6.4s
MDJ LR LR
comp=E,48nm,25.1s
MDJ LR LR
comp=Z,34nm,23.5s
NRDL Niedersach Rie 44.72 311 *eP* **P** **09 54 34.0 +0.5**
comp=Z,15nm,1.1s,mb4.2
UBBA Unterbreizbach 44.93 308 *eP* **P** **09 54 35.4 +0.3**
comp=Z,5.0nm,0.6s,mb4.0
FETA Feichten 44.93 303⇑ *iP* **P** **09 54 34.6 -0.6**
comp=Z,7.2nm,0.9s,mb4.0
MUD Monsted U'grnd 45.11 316 *eP* **P** **09 54 37.3 +0.9**
MUD pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
MUD Monsted U'grnd 45.11 316 *i P* **P** **09 54 37.3 +0.9**
comp=Z,9.6nm,1.0s,mb4.1
KSRS Korea Array 45.16 71 P **P** **09 54 37.5 +0.3**
comp=Z,1.8nm,0.6s,mb3.6,baz=278,slow=6.3,SNR=8.4
KSRS pP pP 09 55 24.4 +2.2
comp=Z,2.4nm,1.1s,baz=278,slow=7.1,SNR=2.0
KSRS PcP PcP 09 56 12.9 -0.8
comp=Z,2.8nm,0.9s,baz=274,slow=4.1,SNR=5.8
KSRS Korea Array 45.16 71 P **P** **09 54 37.5 +0.3**
KSRS *PP pP 09 55 24.4 +2.2
KSRS 09 56 13.0
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb3.6
KSRS pmax pmax
comp=Z,2.0nm,1.1s,mb3.4
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.6
KLR Kul'dur 45.40 54 *eP* **P** **09 54 35.2 -3.6**
DAVA Damuels 45.46 304⇑ *iP* **P** **09 54 39.1 -0.3**
comp=Z,32nm,1.0s,mb4.6
STU Stuttgart 45.69 306 *eP* **P** **09 54 41.8 +0.6**
comp=Z,12nm,1.1s,mb4.1
TIXI Tiksi 45.92 22 *i P* **P** **09 54 43.0 +0.4**
TIXI pmax pmax
comp=Z,33nm,0.9s,mb4.7
TIXI Tiksi 45.92 22 *eP* **P** **09 54 42.8 +0.1**
comp=Z,35nm,1.0s,mb4.6
TNS Taunus Mts 45.98 308 *eP* **P** **09 54 43.8 +0.4**
comp=Z,14nm,0.8s,mb4.3
TNS Taunus Mts 45.98 308 *eP* **P** **09 54 43.8 +0.4**
TNS pmax pmax
comp=Z,14nm,0.8s,mb4.3
IBBN Ibbenburen 46.17 311 *eP* **P** **09 54 45.4 +0.6**
comp=Z,24nm,0.7s,mb4.6
BFO Black Forest 46.33 305 *eP* **P** **09 54 45.7 -0.4**
comp=Z,6.0nm,0.8s,mb4.0
BFO Black Forest 46.33 305 *eP* **P** **09 54 45.7 -0.4**
BFO pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
LANF Langenberg 46.57 306 *eP* **P** **09 54 47.7 -0.3**
VLA Vladivostok 46.61 62 *i P* **P** **09 54 48.8 +0.4**
VLA pmax pmax
comp=Z,20nm,0.7s,mb4.6
FELD Feldberg im Sc 46.62 305 *eP* **P** **09 54 47.5 -0.9**
CDF Champ du Feu 47.01 305 *eP* **P** **09 54 50.9 -0.5**
comp=Z,8.2nm,0.7s,mb3.9
CDF Champ du Feu 47.01 305 *eP* **P** **09 54 50.9 -0.5**
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
CDF Champ du Feu 47.01 305 *eP* **P** **09 54 50.9 -0.5**
comp=Z,4.1nm,0.7s,mb3.9
PGF Pioggiola 47.04 297⇑ *iP* **P** **09 54 51.2 -0.5**
comp=Z,17nm,0.8s,mb4.1
PGF *epP* pP 09 55 35.3 -1.8
PGF Pioggiola 47.04 297⇑ *iP* **P** **09 54 51.2 -0.5**
PGF *e*PP pP 09 55 35.3 -1.8
PGF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
PGF Pioggiola 47.04 297⇑ *iP* **P** **09 54 51.2 -0.5**
comp=Z,8.7nm,0.8s,mb4.1
PGF *epP* pP 09 55 35.3 -1.8
HINF Hinteralfeld 47.39 305 *eP* **P** **09 54 54.0 -0.4**
comp=Z,14nm,0.8s,mb4.0
HINF Hinteralfeld 47.39 305 *eP* **P** **09 54 54.0 -0.4**
HINF pmax pmax
comp=Z,7.0nm,0.8s,mb4.0
HINF Hinteralfeld 47.39 305 *eP* **P** **09 54 54.0 -0.4**
comp=Z,7.2nm,0.8s,mb4.0
SPB4 Spitsbergen Ar 47.48 347 *eP* **P** **09 54 55.7 +1.1**
HABR Khabarovsk 47.67 54 *eP* **P** **09 54 56.3 -0.2**
HABR *e*SP sP 09 56 02.3 -3.1
HABR *e* 09 56 22.0
HABR *e*S **S** **10 01 57.5 +1.6**
HABR *e*SS sS 10 02 54.0 -1.8
HABR *e* 10 04 28.0
HABR *e*SS SS 10 05 10.7 +4.1
HABR pmax pmax
comp=E,14nm,0.9s
HABR pmax pmax
comp=Z,19nm,1.2s,mb4.3
HABR pmax pmax
comp=N,9.0nm,0.8s
HABR MLR MLR
comp=Z,54nm,15.0s
HAU Haudompre 47.69 305 *eP* **P** **09 54 56.5 -0.1**
comp=Z,9.6nm,0.6s,mb4.0
HAU Haudompre 47.69 305 *eP* **P** **09 54 56.5 -0.1**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
HAU Haudompre 47.69 305 *eP* **P** **09 54 56.5 -0.1**
comp=Z,4.8nm,0.6s,mb4.0
SAOF Saorge 47.72 300 *eP* **P** **09 54 57.2 +0.3**
AUTN L'Aution 47.81 300 *eP* **P** **09 54 56.9 -0.7**
SBF Sospel 47.83 299 *eP* **P** **09 54 55.9 -1.9**
comp=Z,25nm,0.8s,mb4.3
SBF Sospel 47.83 299 *eP* **P** **09 54 55.9 -1.9**
SBF pmax pmax
comp=Z,13nm,0.8s,mb4.3
SBF Sospel 47.83 299 *eP* **P** **09 54 55.9 -1.9**
comp=Z,13nm,0.8s,mb4.3
LUCF Luceram 47.89 299 *eP* **P** **09 54 58.4 +0.2**
TOUF Mont Tournerai 47.93 300 *eP* **P** **09 54 59.2 +0.7**
LPG La Plagne 47.93 302⇑ *iP* **P** **09 54 59.0 +0.5**
comp=Z,17nm,0.8s,mb4.2
LPG La Plagne 47.93 302⇑ *iP* **P** **09 54 59.0 +0.5**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
LPG La Plagne 47.93 302⇑ *iP* **P** **09 54 59.0 +0.5**
comp=Z,8.7nm,0.8s,mb4.1
LPL La Plagne 47.94 302⇑ *iP* **P** **09 54 59.0 +0.4**
comp=Z,20nm,0.8s,mb4.2
LPL La Plagne 47.94 302⇑ *iP* **P** **09 54 59.0 +0.4**
LPL pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
LPL La Plagne 47.94 302⇑ *iP* **P** **09 54 59.0 +0.4**
comp=Z,10nm,0.8s,mb4.2
MVIF Mont Vial 48.02 300 *eP* **P** **09 54 58.4 -0.9**
MBDF Montbardon 48.09 301⇑ *iP* **P** **09 54 59.4 -0.4**
comp=Z,13nm,0.6s,mb4.1
MBDF *epP* pP 09 55 46.2 +0.9
MBDF Montbardon 48.09 301⇑ *iP* **P** **09 54 59.4 -0.4**
MBDF *e*PP pP 09 55 46.2 +0.9
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
MBDF Montbardon 48.09 301⇑ *iP* **P** **09 54 59.4 -0.4**
comp=Z,6.7nm,0.6s,mb4.2
MBDF *epP* pP 09 55 46.2 +0.9
CABF La Chapelle 48.14 303 *eP* **P** **09 55 00.5 +0.4**
comp=Z,50nm,1.1s,mb4.4
CABF *epP* pP 09 55 47.2 +1.5
CABF La Chapelle 48.14 303 *eP* **P** **09 55 00.5 +0.4**
CABF *e*PP pP 09 55 47.2 +1.5
CABF pmax pmax
comp=Z,25nm,1.1s,mb4.5
CABF La Chapelle 48.14 303 *eP* **P** **09 55 00.5 +0.4**
comp=Z,25nm,1.1s,mb4.5
CABF *epP* pP 09 55 47.2 +1.5
MEZF Maizieres J'vi 48.45 306 *eP* **P** **09 55 02.8 +0.4**
comp=Z,17nm,0.6s,mb4.3
MEZF Maizieres J'vi 48.45 306 *eP* **P** **09 55 02.8 +0.4**
comp=Z,17nm,0.6s,mb4.5
FRF La Foret Royal 48.46 299 *eP* **P** **09 55 02.2 -0.4**
KMBO Kilima Mbogo 48.59 227 P **P** **09 55 05.6 +1.6**
comp=Z,7.6nm,0.6s,mb4.2,baz=40,slow=12,SNR=23
KMBO Kilima Mbogo 48.59 227 *i P* **P** **09 55 05.5 +1.6**
KMBO pmax pmax
comp=Z,8.0nm,0.6s
KMBO Kilima Mbogo 48.59 227 *eP* **P** **09 55 05.5 +1.6**
comp=Z,7.7nm,0.7s,mb4.1
KBS Kingsbay 48.59 347 *ceP* **P** **09 55 04.2 +1.1**
KBS *i* *PP pP 09 55 49.2 +0.4
KBS pmax pmax
comp=Z,47nm,1.1s,mb4.7
KBS Kingsbay 48.59 347 *eP* **P** **09 55 04.3 +1.1**
comp=Z,28nm,0.8s,mb4.7
LMR La Mourre 48.62 299 *eP* **P** **09 55 03.8 0.0**
ORIF Oris-en-Rattie 48.66 301 *eP* **P** **09 55 03.9 -0.2**
BAIF Baives 48.70 308 *eP* **P** **09 55 05.0 +0.7**
comp=Z,29nm,1.0s,mb4.3
BAIF Baives 48.70 308 *eP* **P** **09 55 05.0 +0.7**
BAIF pmax pmax
comp=Z,14nm,1.0s,mb4.2
BAIF Baives 48.70 308 *eP* **P** **09 55 05.0 +0.7**
comp=Z,14nm,1.0s,mb4.3
KEST Kesra 48.78 288 P **P** **09 55 05.2 0.0**
comp=Z,2.5nm,0.6s,mb3.7,baz=23,slow=1.8,SNR=11
SMRF Simiane la Rot 49.11 300 *eP* **P** **09 55 07.8 +0.3**
LOR Lormes 49.49 305 *eP* **P** **09 55 09.7 -0.6**
VIVF Saint-Julien-l 49.51 301⇑ *iP* **P** **09 55 10.6 +0.1**
comp=Z,12nm,0.7s,mb4.0
VIVF *epP* pP 09 55 56.5 +0.1
VIVF Saint-Julien-l 49.51 301⇑ *iP* **P** **09 55 10.6 +0.1**
VIVF *e*PP pP 09 55 56.5 +0.1
VIVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.0
VIVF Saint-Julien-l 49.51 301⇑ *iP* **P** **09 55 10.6 +0.1**
comp=Z,5.9nm,0.7s,mb4.0
VIVF *epP* pP 09 55 56.5 +0.1
SMF Signal de Mont 49.64 304 *eP* **P** **09 55 11.3 -0.2**
comp=Z,27nm,0.7s,mb4.4
SMF *epP* pP 09 55 57.2 -0.2
SMF Signal de Mont 49.64 304 *eP* **P** **09 55 11.3 -0.2**
SMF *e*PP pP 09 55 57.2 -0.2
SMF pmax pmax
comp=Z,14nm,0.7s,mb4.4
SMF Signal de Mont 49.64 304 *eP* **P** **09 55 11.3 -0.2**
comp=Z,14nm,0.7s,mb4.4
SMF *epP* pP 09 55 57.2 -0.2
SSF Saint Saulge 49.77 304 *eP* **P** **09 55 12.0 -0.5**
comp=Z,8.6nm,0.8s,mb3.8
SSF *epP* pP 09 55 58.0 -0.4
SSF Saint Saulge 49.77 304 *eP* **P** **09 55 12.0 -0.5**
SSF *e*PP pP 09 55 58.0 -0.4
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
SSF Saint Saulge 49.77 304 *eP* **P** **09 55 12.0 -0.5**
comp=Z,4.3nm,0.8s,mb3.8
SSF *epP* pP 09 55 58.0 -0.4
AVF Avril sur Loir 49.94 304⇑ *iP* **P** **09 55 13.4 -0.3**
comp=Z,31nm,0.8s,mb4.4
AVF *epP* pP 09 55 59.3 -0.3
AVF Avril sur Loir 49.94 304⇑ *iP* **P** **09 55 13.4 -0.3**
AVF *e*PP pP 09 55 59.3 -0.3
AVF pmax pmax
comp=Z,15nm,0.8s,mb4.4
AVF Avril sur Loir 49.94 304⇑ *iP* **P** **09 55 13.4 -0.3**
comp=Z,15nm,0.8s,mb4.4
AVF *epP* pP 09 55 59.3 -0.3
AGO Saint Agoulin 50.26 303 *eP* **P** **09 55 15.9 -0.3**
LASF Ste Croix 50.28 301 *eP* **P** **09 55 16.6 +0.3**
comp=Z,34nm,1.0s,mb4.3
LASF *epP* pP 09 56 02.6 +0.3
HYF Humbligny 50.30 305 *eP* **P** **09 55 16.6 +0.2**
BGF Bois d'Agland 50.33 304 *eP* **P** **09 55 16.3 -0.4**
LBL Lubilhac 50.39 302 *eP* **P** **09 55 17.3 +0.1**
TCF Toulx Ste Croi 50.83 304⇑ *iP* **P** **09 55 20.5 +0.1**
comp=Z,26nm,0.9s,mb4.4
TCF *epP* pP 09 56 06.6 +0.2
TCF Toulx Ste Croi 50.83 304⇑ *iP* **P** **09 55 20.5 +0.1**
TCF *e*PP pP 09 56 06.6 +0.2
TCF pmax pmax
comp=Z,13nm,0.9s,mb4.4
TCF Toulx Ste Croi 50.83 304⇑ *iP* **P** **09 55 20.5 +0.1**
comp=Z,13nm,0.9s,mb4.4
TCF *epP* pP 09 56 06.6 +0.2
CAF Calviac 51.28 302⇑ *iP* **P** **09 55 24.1 +0.3**
comp=Z,15nm,0.8s,mb4.2
CAF *epP* pP 09 56 10.1 +0.2
CAF Calviac 51.28 302⇑ *iP* **P** **09 55 24.1 +0.3**
CAF *e*PP pP 09 56 10.1 +0.2
CAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
CAF Calviac 51.28 302⇑ *iP* **P** **09 55 24.1 +0.3**
comp=Z,7.3nm,0.8s,mb4.2
CAF *epP* pP 09 56 10.1 +0.2
RJF Les Rejaudoux 51.55 303 *eP* **P** **09 55 26.1 +0.3**
MTLF Montolieu 51.62 300 *eP* **P** **09 55 26.4 0.0**
comp=Z,13nm,0.8s,mb4.1
MTLF Montolieu 51.62 300 *eP* **P** **09 55 26.4 0.0**
MTLF pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
MTLF Montolieu 51.62 300 *eP* **P** **09 55 26.4 0.0**
comp=Z,6.3nm,0.8s,mb4.1
LDF La Druitiere 51.78 307 *eP* **P** **09 55 26.1 -1.3**
FLN La Foliniere 51.97 307 *eP* **P** **09 55 28.2 -0.6**
comp=Z,22nm,0.8s,mb4.3
FLN La Foliniere 51.97 307 *eP* **P** **09 55 28.2 -0.6**
FLN pmax pmax
comp=Z,11nm,0.8s,mb4.3
FLN La Foliniere 51.97 307 *eP* **P** **09 55 28.2 -0.6**
comp=Z,11nm,0.8s,mb4.3
LFF La Frestale 52.18 302 *eP* **P** **09 55 30.6 +0.2**
comp=Z,26nm,0.7s,mb4.5
LFF La Frestale 52.18 302 *eP* **P** **09 55 30.6 +0.2**
LFF pmax pmax
comp=Z,13nm,0.7s,mb4.5
LFF La Frestale 52.18 302 *eP* **P** **09 55 30.6 +0.2**
comp=Z,13nm,0.7s,mb4.5
GRR Gorron 52.31 307⇑ *iP* **P** **09 55 30.7 -0.6**
comp=Z,19nm,0.8s,mb4.2
GRR Gorron 52.31 307⇑ *iP* **P** **09 55 30.7 -0.6**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
GRR Gorron 52.31 307⇑ *iP* **P** **09 55 30.7 -0.6**
comp=Z,9.3nm,0.8s,mb4.3
MFF Saint Martin d 52.31 305 *eP* **P** **09 55 30.7 -0.7**
EPF Esparros 53.03 300 *eP* **P** **09 55 36.3 -0.4**
comp=Z,8.1nm,0.7s,mb4.0
EPF Esparros 53.03 300 *eP* **P** **09 55 36.3 -0.4**
EPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
EPF Esparros 53.03 300 *eP* **P** **09 55 36.3 -0.4**
comp=Z,4.1nm,0.7s,mb4.0
YSS Yuzh-Sakhalins 53.08 55 *eP* **P** **09 55 37.0 0.0**
YSS pmax pmax
comp=Z,40nm,1.1s,mb4.8
YSS Yuzh-Sakhalins 53.08 55 *eP* **P** **09 55 38.2 +1.2**
comp=Z,19nm,0.9s,mb4.5
MAT Matsushiro 53.23 68 P **P** **09 55 38.1 -0.2**
MAT *e*S S 10 02 29.8 -23
MJAR Matsushiro Arr 53.23 68 P **P** **09 55 38.4 +0.2**
comp=Z,7.4nm,1.0s,mb4.1,baz=289,slow=9.3,SNR=16
MJAR Matsushiro Arr 53.23 68 P **P** **09 55 38.4 +0.1**
MJAR pmax pmax
comp=Z,7.0nm,1.0s
SGMF Saint Gilles 53.43 307 *eP* **P** **09 55 39.2 -0.3**
ETSF Etsaut 53.70 300⇑ *iP* **P** **09 55 41.7 +0.2**
comp=Z,17nm,0.6s,mb4.4
ETSF Etsaut 53.70 300⇑ *iP* **P** **09 55 41.7 +0.2**
ETSF pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
ETSF Etsaut 53.70 300⇑ *iP* **P** **09 55 41.7 +0.2**
comp=Z,8.6nm,0.6s,mb4.5
ROSF Rostrenen 53.87 307 *eP* **P** **09 55 42.2 -0.5**
comp=Z,14nm,0.7s,mb4.3
ROSF Rostrenen 53.87 307 *eP* **P** **09 55 42.2 -0.5**
ROSF pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
ROSF Rostrenen 53.87 307 *eP* **P** **09 55 42.2 -0.5**
comp=Z,6.8nm,0.7s,mb4.3
QUIF Quistinic 53.92 307 *eP* **P** **09 55 42.3 -0.8**
SJPF Ste Jean 54.09 301 *eP* **P** **09 55 44.3 -0.1**
comp=Z,12nm,1.0s,mb4.1
SJPF Ste Jean 54.09 301 *eP* **P** **09 55 44.3 -0.1**
SJPF pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
SJPF Ste Jean 54.09 301 *eP* **P** **09 55 44.3 -0.1**
comp=Z,5.9nm,1.0s,mb4.1
SEY Seymchan 54.61 34 *ceP* **P** **09 55 48.9 +1.1**
DAG Danmarks Havn 54.69 344⇓ *eP* **P** **09 55 48.8 +0.6**
DAG *i* pP 09 56 36.4 +1.4
DAG pmax pmax
comp=Z,17nm,0.7s,mb4.7
DAG Danmarks Havn 54.69 344⇓ *iP* **P** **09 55 48.8 +0.6**
comp=Z,17nm,0.7s,mb4.7
DAG *i* pP 09 56 36.4 +1.4
SCO Scoresbysund 56.98 336 *eP* **P** **09 56 08.3 +3.8**
SCO pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
SCO Scoresbysund 56.98 336 *i P* **P** **09 56 08.3 +3.8**
comp=Z,4.0nm,1.1s,mb4.0
ESDC Sonseca Array 57.23 298 P **P** **09 56 06.4 -0.3**
comp=Z,1.3nm,0.5s,mb3.9,baz=57,slow=7.2,SNR=4.8
TAM Tamanrasset 57.26 276 *eP* **P** **09 56 07.2 0.0**
TAM pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
TAM Tamanrasset 57.26 276 *eP* **P** **09 56 07.2 0.0**
comp=Z,2.3nm,0.3s,mb4.3
BILL Bilibino 58.77 26⇑ *iP* **P** **09 56 18.1 +1.1**
BILL *e*PP pP 09 57 04.7 +0.3
BILL *e* 09 58 30.0
BILL pmax pmax
comp=Z,26nm,1.0s,mb4.8
BILL Bilibino 58.77 26 *eP* **P** **09 56 17.7 +0.7**
comp=Z,27nm,1.0s,mb4.8
PETK Petropavlovsk- 60.20 44 P **P** **09 56 26.5 -0.4**
comp=Z,1.7nm,0.6s,mb3.8,baz=337,slow=6.6,SNR=4.9
PETK Petropavlovsk- 60.20 44 P **P** **09 56 26.5 -0.4**
PETK pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
EVO Evora 60.57 298 *eP* **P** **09 56 30.1 +0.4**
comp=Z,40nm,1.3s,mb4.6
SUMG Summit 61.01 341 *eP* **P** **09 56 33.6 +1.4**
comp=Z,30nm,1.1s,mb4.8
LSZ Lusaka 65.22 226 *eP* **P** **09 57 01.4 +0.9**
LSZ pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
LSZ Lusaka 65.22 226 *eP* **P** **09 57 01.4 +0.9**
comp=Z,9.7nm,0.8s,mb4.5
TOA0 Torodi Ar. Sit 65.43 268 *eP* **P** **09 56 59.7 -2.4**
TORD Torodi Ar. Bea 65.43 268 P **P** **09 57 00.1 -1.9**
comp=Z,20nm,0.5s,mb5.0,baz=48,slow=5.6,SNR=231
SFJD Kangerlussuaq 67.70 339 *eP* **P** **09 57 15.6 +0.1**
SFJD pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
SFJD Kangerlussuaq 67.70 339 *i P* **P** **09 57 15.6 +0.1**
comp=Z,10nm,0.8s,mb4.5
COLD Coldfoot 72.09 16 *eP* **P** **09 57 42.8 +0.6**
comp=Z,35nm,1.3s,mb4.8
INK Inuvik 74.00 9 *eP* **P** **09 57 54.6 +1.2**
INK pmax pmax
comp=Z,64nm,1.4s
INK Inuvik 74.00 9 *eP* **P** **09 57 54.6 +1.3**
comp=Z,64nm,1.4s,mb5.1
TTA Tatalina 74.16 20 *eP* **P** **09 57 55.5 +1.1**
CHUM Lake Minchumin 74.37 18 *eP* **P** **09 57 56.7 +1.1**
comp=Z,60nm,1.3s,mb5.1
DBIC Dimbokro 74.41 267 P **P** **09 57 55.5 -1.2**
comp=Z,11nm,0.6s,mb4.7,baz=30,slow=6.7,SNR=17
DBIC Dimbokro 74.41 267 *eP* **P** **09 57 55.6 -1.1**
DBIC pmax pmax
comp=Z,12nm,0.8s
DBIC Dimbokro 74.41 267 *eP* **P** **09 57 55.6 -1.1**
comp=Z,12nm,0.8s,mb4.6
LBTB Lobatse 74.45 222 *eP* **P** **09 57 57.5 +0.9**
LBTB pmax pmax
comp=Z,35nm,1.0s,mb4.9
LBTB Lobatse 74.45 222 *eP* **P** **09 57 57.5 +0.9**
comp=Z,35nm,1.0s,mb4.9
KIC Kosan Boka 74.50 266 *eP* **P** **09 57 55.8 -1.4**
comp=Z,40nm,0.8s,mb5.1
BPAW Bear Paw Mtn. 74.52 18 *eP* **P** **09 57 56.9 +0.4**
comp=Z,19nm,1.0s,mb4.7
TIC Toumodi 74.56 267 *eP* **P** **09 57 56.0 -1.5**
comp=Z,11nm,0.2s,mb5.1
TIC Toumodi 74.56 267 *eP* **P** **09 57 56.0 -1.5**
TIC pmax pmax
comp=Z,11nm,0.2s,mb5.1
COLA College 74.60 16 *eP* **P** **09 57 57.2 +0.3**
COLA pmax pmax
comp=Z,34nm,0.8s,mb5.0
COLA College 74.60 16 *eP* **P** **09 57 57.2 +0.3**
comp=Z,34nm,0.8s,mb5.0
TSUM Tsumeb 74.67 232 *eP* **P** **09 57 58.4 +0.5**
comp=Z,16nm,1.0s,mb4.6
LIC Lamto 74.81 267 *eP* **P** **09 57 57.4 -1.6**
comp=Z,39nm,0.7s,mb5.1
KTH Kantishna Hill 75.00 18 *eP* **P** **09 57 59.8 +0.6**
comp=Z,41nm,1.1s,mb5.0
FITZ Fitzroy Crossi 75.09 126 *eP* **P** **09 58 00.6 +0.2**
comp=Z,21nm,0.9s,mb4.8
FITZ Fitzroy Crossi 75.09 126 *eP* **P** **09 58 00.7 +0.3**
comp=Z,16nm,1.0s,mb4.6
PPLA Purkeypile 75.22 19 *eP* **P** **09 58 01.3 +0.8**
comp=Z,78nm,2.0s,mb5.0
MCK McKinley 75.33 17 *eP* **P** **09 58 01.6 +0.5**
MCK pmax pmax
comp=Z,41nm,1.4s,mb4.9
MCK McKinley 75.33 17 *eP* **P** **09 58 01.6 +0.5**
comp=Z,41nm,1.4s,mb4.9
KNA Kununurra 75.49 122 *eP* **P** **09 58 02.7 0.0**
comp=Z,40nm,0.7s,mb5.2
KAKA Kakadu 75.96 118 *eP* **P** **09 58 03.9 -1.5**
comp=Z,17nm,0.6s,mb4.8
EGAK Eagle 76.06 13 *eP* **P** **09 58 05.4 +0.2**
comp=Z,16nm,1.0s,mb4.6
DAWY Dawson 77.03 13 *eP* **P** **09 58 11.4 +0.7**
RSO Redoubt South 77.08 20 *eP* **P** **09 58 11.6 +0.6**
PMR Palmer 77.10 18 *eP* **P** **09 58 12.1 +1.0**
BOSA Boshof 77.53 220 P **P** **09 58 14.3 +0.5**
comp=Z,26nm,0.8s,mb4.9,baz=35,slow=5.7,SNR=30
BOSA Boshof 77.53 220 *eP* **P** **09 58 14.5 +0.6**
BOSA pmax pmax
comp=Z,27nm,0.9s,mb4.9
BOSA Boshof 77.53 220 *eP* **P** **09 58 14.4 +0.6**
comp=Z,27nm,0.9s,mb4.9
DIV Divide 78.32 17 *eP* **P** **09 58 18.8 +1.0**
comp=Z,22nm,0.7s,mb4.9
KDAK Kodiak Island 79.35 22 *i P* **P** **09 58 24.2 +0.7**
HYT Haines Junctio 80.36 14 *eP* **P** **09 58 31.2 +2.4**
YKA Yellowknife Ar 81.31 2 P **P** **09 58 33.9 +0.1**
comp=Z,15nm,0.8s,mb4.6,baz=349,slow=5.3,SNR=147
YKA pP pP 09 59 25.5 +1.2
comp=Z,2.9nm,0.7s,baz=349,slow=5.4,SNR=5.4
YKA PKKPbc PKKPbc 10 17 03.4 -3.8
comp=Z,0.4nm,0.6s,baz=168,slow=2.0,SNR=8.3
YKA Yellowknife Ar 81.31 2 P **P** **09 58 33.9 +0.1**
YKA *PP pP 09 59 25.5 +1.2
YKA pmax pmax
comp=Z,15nm,0.8s
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 81.31 2 P **P** **09 58 33.9 +0.1**
YKA pP pP 09 59 25.5 +1.2
YKA PKKPbc PKKPbc 10 17 03.4 -3.8
SCHQ Schefferville 82.03 337 P **P** **09 58 36.9 -0.8**
comp=Z,4.6nm,0.7s,mb4.2,baz=52,slow=5.7,SNR=11
SCHQ Schefferville 82.03 337 P **P** **09 58 36.9 -0.8**
WRA Warramunga Arr 82.21 122 P **P** **09 58 38.3 -0.9**
comp=Z,20nm,0.8s,mb4.8,baz=322,slow=4.8,SNR=129
WRA Warramunga Arr 82.21 122 P **P** **09 58 38.3 -0.8**
WRA pmax pmax
comp=Z,20nm,0.8s
WRAB Tennant Creek 82.21 122 *eP* **P** **09 58 38.0 -1.1**
WRAB pmax pmax
comp=Z,32nm,0.9s,mb5.0
WRAB Tennant Creek 82.21 122 *eP* **P** **09 58 38.0 -1.1**
comp=Z,32nm,0.9s,mb5.0
DLBC Dease Lake 83.89 11 *eP* **P** **09 58 48.6 +1.4**
FCC Fort Churchill 84.29 352 *eP* **P** **09 58 49.9 +0.7**
comp=Z,0.4nm,0.9s
FCC *epP* pP 09 59 40.9 +0.8
ASAR Alice Springs 84.46 125 P **P** **09 58 49.7 -0.8**
comp=Z,15nm,0.8s,mb4.8,baz=310,slow=4.9,SNR=143
ASAR Alice Springs 84.46 125 P **P** **09 58 49.7 -0.8**
ASAR pmax pmax
comp=Z,15nm,0.8s
COEN Coen 84.65 112 *eP* **P** **09 58 51.0 -0.7**
MTSU Mount Surprise 88.13 114 *eP* **P** **09 59 08.3 -0.2**
comp=Z,27nm,1.2s,mb5.0
FFC Flin Flon 88.97 356 *eP* **P** **09 59 12.5 +0.6**
FFC *e*PP pP 10 00 04.1 +0.8
FFC pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
FFC Flin Flon 88.97 356 *eP* **P** **09 59 12.5 +0.6**
comp=Z,9.3nm,1.0s,mb4.6
FFC *epP* pP 10 00 04.0 +0.8

EDM	**Edmonton**	**90.63**	**2**	*e*P	**P**	**09 59 20.7**	**+1.0**
EDM				*e**PP	pP	10 00 12.2	+1.1
CTA	**Charters Tower**	**90.78**	**114**	*e*P	**P**	**09 59 20.2**	**-0.6**
	comp=Z,6.8nm,0.7s,mb4.7						
CTAO	**Charters Tower**	**90.78**	**114**	*e*P	**P**	**09 59 20.1**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CTAO	**Charters Tower**	**90.78**	**114**	*e*P	**P**	**09 59 20.1**	**-0.7**
	comp=Z,10nm,0.8s,mb4.8						
ULM	**Lac du Bonnet**	**92.85**	**351**	P	**P**	**09 59 29.6**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.5,baz=9.5,slow=6.9,SNR=8.1						
EYMN	**Ely**	**94.47**	**348**	*e*P	**P**	**09 59 36.9**	**-0.6**
	comp=Z,42nm,2.0s,mb5.1						
EYMN				*e*pP	pP	10 00 29.5	+0.5
AGMN	**Agassiz Refuge**	**94.77**	**351**	*e*P	**P**	**09 59 38.9**	**0.0**
	comp=Z,7.3nm,1.3s,mb4.7						
JCW	**Jim Creek**	**94.98**	**8**	*e*P	**P**	**09 59 40.7**	**+0.9**
STKA	**Stephens Creek**	**94.99**	**126**	P	**P**	**09 59 39.8**	**-0.2**
	comp=Z,3.3nm,0.9s,mb4.5,baz=342,slow=3.2,SNR=4.1						
NEW	**Newport**	**95.37**	**5**	*e*P	**P**	**09 59 42.3**	**+0.7**
NEW				pmax	pmax		
	comp=Z,56nm,2.8s						
NEW	**Newport**	**95.37**	**5**	*e*P	**P**	**09 59 42.3**	**+0.7**
	comp=Z,56nm,2.8s,mb5.2						
BSMT	**Bassoo Peak**	**95.93**	**4**	*e*P	**P**	**09 59 45.4**	**+1.2**
SLMT	**Seeley Lake**	**96.60**	**3**	*e*P	**P**	**09 59 47.8**	**+0.6**
HRY	**Holter Researc**	**97.18**	**2**	*e*P	**P**	**09 59 50.8**	**+1.0**
DLMT	**Dillon**	**98.51**	**2**	*e*P	**P**	**09 59 56.8**	**+1.0**
	comp=Z,6.0nm,1.4s,mb4.7						
PDAR	**Pinedale Array**	**101.16**	**0**	PKiKP	PKiKP	10 04 30.7	-0.6
	comp=Z,0.2nm,0.6s,baz=311,slow=1.9,SNR=2.7						
NVAR	**Mina Array Bea**	**105.03**	**7**	PKiKP	PKiKP	10 04 37.3	-1.2
	comp=Z,0.3nm,0.6s,baz=299,slow=1.9,SNR=3.1						
RPZ	**Rata Peaks**	**120.86**	**124**	PKP	PKPdf	10 05 08.3	+0.1
	comp=Z,7.1nm,0.9s,baz=326,slow=3.6,SNR=3.4						
QSPA	**South Pole Qui**	**126.25**	**180**	PKP	PKPdf	10 05 17.3	-0.1
	comp=Z,9.6nm,0.8s,baz=256,slow=1.2,SNR=46						
QSPA	**South Pole Qui**	**126.25**	**180**	PKP	PKPdf	10 05 17.3	-0.1
CPUP	**Villa Florida**	**134.93**	**268**	PKP	PKPdf	10 05 34.6	-0.9
	comp=Z,2.5nm,0.6s,baz=40,slow=1.8,SNR=14						
CPUP	**Villa Florida**	**134.93**	**268**	PKIKP	PKPdf	10 05 34.6	-0.9
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LPAZ	**La Paz**	**138.36**	**288**	PKP	PKPdf	10 05 42.3	+0.2
	comp=Z,1.1nm,0.7s,baz=1.3,slow=9.4,SNR=5.1						
LPAZ	**La Paz**	**138.36**	**288**	PKIKP	PKPdf	10 05 42.3	+0.2
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**149.54**	**250**	PKPbc	PKPbc	10 06 05.3	-0.2
	comp=Z,9.9nm,0.9s,baz=71,slow=2.9,SNR=11						
PLCA				PKPab	PKPab	10 06 12.4	+1.1
	comp=Z,3.3nm,0.9s,baz=78,slow=2.4,SNR=4.4						
PLCA	**Paso Flores**	**149.54**	**250**	PKPbc	PKPbc	10 06 05.3	-0.3
PLCA				PKPab	PKPab	10 06 12.4	+1.1

*ISCJB **15** 09:55:29.8±0.6, 32°.40N±0°.04×104°.92E±0°.08, h10km, mb3.7/7, Error ellipse: s-maj=9.4km s-min=5.3km az=15.5*
*IDC **15** 09:55:29.2±1.2, 32°.26N×104°.79E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.5/5, Error ellipse: s-maj=76.5km s-min=21.9km az=60.0*
*BJI **15** 09:55:30.9, 32°.35N×105°.01E, h10km, ML3.5/6, Ms3.4/2, Ms7 3.3/2*
*NEIC **15** 09:55:31.2±0.9, 32°.18N×104°.70E, h10km, mb4.3/2, Error ellipse: s-maj=28.5km s-min=10.5km az=40.0*

ISC 15 09:55:31.5±0.5, 32°.44N±0°.03×104°.82E±0°.07, h10km, n11, σ1§31/17, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.78**	**211**	Pn	**Pn**	**09 56 02.1**	**-0.2**
CD2				Pg	**Pg**	**09 56 03.4**	**-2.2**
CD2				Sn	**Sn**	**09 56 26.3**	**+1.4**
CD2				Sg	**Sg**	**09 56 28.8**	**+0.2**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**3.73**	**348**	*e*Pn	**Pn**	**09 56 29.9**	**+0.8**
LZH				Pg	**Pg**	**09 56 41.5**	**-1.4**
LZH				Sn	**Sn**	**09 57 13.8**	**+0.8**
LZH				Sg	**Sg**	**09 57 29.3**	**-1.9**
LZH				smax			
	comp=N,240nm,0.5s						
LZH				smax			
	comp=E,230nm,0.6s						
LZH				LR	LR		
	comp=E,350nm,6.8s						
LZH				LR	LR		
	comp=Z,470nm,7.5s						
ENH	**Enshi**	**4.54**	**117**	*e*Pg	**Pg**	**09 56 58.3**	**-0.1**
MKAR	**Makanchi Array**	**22.41**	**316**	P	**P**	**10 00 31.9**	**+1.8**
	comp=Z,0.6nm,0.5s,mb3.3,baz=124,slow=12,SNR=4.2						
ZAA0	**Zalesovo Array**	**25.81**	**332**	*e*P	**P**	**10 01 02.8**	**+0.2**
ZALV	**Zalesovo Beam**	**25.81**	**332**	P	**P**	**10 01 02.0**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.4,baz=129,slow=8.2,SNR=2.6						
MAJO	**Matsushiro**	**27.74**	**72**	*e*P	**P**	**10 01 21.4**	**+1.2**
	comp=Z,2.2nm,0.5s,mb4.0						
TIXI	**Tiksi**	**41.33**	**11**	P	**P**	**10 03 19.5**	**+2.5**
	comp=Z,1.2nm,0.1s,mb4.5						
WRA	**Warramunga Arr**	**59.25**	**147**	P	**P**	**10 05 31.3**	**-1.9**
	comp=Z,1.0nm,0.8s,mb3.9,baz=340,slow=7.7,SNR=5.6						
ASAR	**Alice Springs**	**62.32**	**150**	P	**P**	**10 05 52.7**	**-1.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=326,slow=6.2,SNR=4.1						
YKA	**Yellowknife Ar**	**80.24**	**17**	P	**P**	**10 07 42.8**	**+0.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=330,slow=5.5,SNR=2.7						

BJI 15 09:58:22.1, 32°.70N×105°.73E, h12km, ML4.0/9, Ms3.8/1, Ms7 3.9/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.45**	**224**	Pg	Pg	09 59 07.5	-1.6
CD2				Sg	Sg	09 59 39.8	-1.0
CD2				smax			
	comp=N,790nm,0.7s						
XAN	**Xi'an**	**2.99**	**63**	Pn	Pn	09 59 11.9	+2.6
XAN				Pg	Pg	09 59 17.6	-1.7
XAN				Sn	Sn	09 59 48.3	+3.3
XAN				Sg	Sg	09 59 55.5	-2.5
XAN				smax			
	comp=N,240nm,0.4s						
XAN				smax			
	comp=E,140nm,0.6s						
LZH	**Lanzhou**	**3.72**	**336**	*e*Pn	Pn	09 59 22.0	+2.6
LZH				Sn	Sn	10 00 07.8	+4.7
LZH				Sg	Sg	10 00 18.3	-3.3
LZH				smax			
	comp=N,440nm,0.5s						
LZH				smax			
	comp=E,510nm,0.7s						
LZH				LR	LR		
	comp=E,810nm,5.4s						
LZH				LR	LR		
	comp=Z,1μm,6.6s						
GYA	**Guiyang**	**6.27**	**172**	Pg	Pb	10 00 08.4	-2.9
GYA				smax			
	comp=N,70nm,0.7s						
GYA				smax			
	comp=E,70nm,0.7s						

NNC 15 10:00:34.0±2.9, 51°.10N×75°.15E, h0km, mb2.8, mpv2.4, 6C-4D, Error ellipse: s-maj=90.2km s-min=11.5km az=23.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.19**	**101**	⇑Pn	Pn	10 01 12.8	+1.2
	0.9nm,0.6s						
KURBB				⇓Sn	Sn	10 01 41.0	+1.5
	3.5nm,0.6s						
KURK	**Kurchatov**	**2.23**	**99**	⇑Pn	Pn	10 01 12.8	+0.7
	2.9nm,0.5s						
KURK				⇓Sn	Sn	10 01 39.4	-0.9
	13nm,0.7s						
KURK	**Kurchatov**	**2.23**	**99**	*e*P	Pn	10 01 12.6	+0.5
VOSK	**Vostochnaya**	**3.05**	**304**	⇑Pn	Pn	10 01 23.1	-0.3
	1.8nm,0.7s						
VOSK				⇑Sn	Sn	10 02 01.1	+0.5
	13nm,0.6s						
BVA0	**Borovoye Array**	**3.51**	**305**	⇓Pn	Pn	10 01 31.8	+2.1
	0.3nm,0.6s,baz=116,slow=16,SNR=4.3						
BVA0				⇓Sn	Sn	10 02 12.1	+0.1
	0.8nm,0.7s,baz=117,slow=25,SNR=5.5						
MK31	**Makanchi Array**	**6.38**	**130**	⇑Sn	Sn	10 03 20.2	-2.4
	4.8nm,1.4s,baz=118,slow=13,SNR=6.3						
MK31				⇑Lg		10 03 58.2	
	3.1nm,0.8s,baz=327,slow=26,SNR=5.0						

MAN 15 10:29:16, 11°.46N×125°.07E, h26km, mb4.6, ML3.4, MS3.3, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.31**	**198**	⇓*e*P	Pb	10 29 24.0	+0.8
PLP				*e*S	Sb	10 29 32.9	+4.7
OCLP	**Ormoc**	**0.61**	**228**	*e*P	Pb	10 29 29.4	+1.3
CNP	**Catarman**	**1.12**	**339**	*e*P	Pn	10 29 36.2	+0.2
CNP				*e*S	Sn	10 29 50.3	-0.2
PVCP	**Virac**	**2.31**	**337**	*e*P	Pn	10 29 54.3	+1.9
PVCP				*e*S	Sn	10 30 16.2	-3.7

*NEIC **15** 10:32:28.9±0.7, 31°.28N×103°.58E, h10km, mb4.4/3, Error ellipse: s-maj=24.1km s-min=10.7km az=50.0*
*IDC **15** 10:32:28.2±1.0, 31°.33N×103°.93E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=38.8km s-min=18.1km az=57.0*
*BJI **15** 10:32:32.9, 31°.30N×104°.01E, h21km, ML3.7/12*

ISC 15 10:32:30.1±1.8, 31°.40N±0°.07×103°.93E±0°.09, h13km±14km, n18, σ0§98/21, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**197**	Pg	**Pg**	**10 32 39.3**	**-0.7**
CD2				Sg	**Sg**	**10 32 46.9**	**+0.1**
CD2				smax			
	comp=N,5μm,0.6s						
LZH	**Lanzhou**	**4.68**	**359**	*e*Pg	**Pb**	**10 33 56.8**	**+4.9**
LZH				Sg	**Sb**	**10 34 57.5**	**+9.3**
LZH				smax			
	comp=N,58nm,1.0s						
LZH				smax			
	comp=E,88nm,1.2s						
ENH	**Enshi**	**4.91**	**102**	Pn	**Pn**	**10 33 46.5**	**+2.9**
	comp=E,30nm,0.5s						
XAN	**Xi'an**	**4.96**	**57**	Pg	**Sn**	**10 34 40.4**	**-1.2**
XAN				Sg	**Sg**	**10 35 02.8**	**-6.7**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,53nm,0.6s						
GYA	**Guiyang**	**5.47**	**153**	Pg	**Pb**	**10 34 05.9**	**+0.3**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,100nm,0.8s						
SONM	**Songino Array**	**16.52**	**6**	Pn	**Pn**	**10 36 22.4**	**+1.0**
	comp=E,0.2nm,0.3s,baz=191,slow=15,SNR=2.9						
KSRS	**Korea Array**	**20.67**	**66**	P	**P**	**10 37 09.8**	**+0.1**
	comp=E,1.8nm,0.8s,baz=261,slow=11,SNR=8.4						
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**10 37 28.6**	**-2.3**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**10 37 32.0**	**+1.1**
	comp=E,0.7nm,0.5s,mb3.3,baz=121,slow=11,SNR=8.6						
ZAA0	**Zalesovo Array**	**26.39**	**334**	*e*P	**P**	**10 38 05.4**	**-0.7**
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**10 38 06.4**	**+0.4**
	comp=E,1.9nm,0.7s,mb3.8,baz=136,slow=9.4,SNR=7.8						
KURK	**Kurchatov**	**26.92**	**323**	P	**P**	**10 38 11.3**	**+0.5**
	comp=E,1.5nm,0.8s,mb3.5,baz=129,slow=8.9,SNR=6.9						
KBL	**Kabul**	**29.35**	**286**	*e*P	**P**	**10 38 23.4**	**-9.3**
	comp=E,3.2nm,0.4s,mb4.4						
BRVK	**Borovoye**	**32.54**	**322**	*e*P	**P**	**10 38 56.8**	**-3.9**
	comp=E,0.9nm,0.3s,mb4.2						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**10 42 28.0**	**-0.2**
	comp=E,1.9nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**10 42 28.2**	**-0.1**
	comp=E,1.0nm,0.5s,mb4.1,baz=339,slow=7.6,SNR=30						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**10 42 48.6**	**-0.2**
	comp=E,0.3nm,0.5s,mb3.7,baz=331,slow=6.8,SNR=9.4						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**10 44 47.0**	**+0.4**
	comp=E,0.1nm,0.4s,mb3.1,baz=328,slow=4.8,SNR=3.3						

*ISCJB **15** 10:34:52.6±0.5, 31°.00N±0°.05×104°.08E±0°.05, h10km, mb3.6/8, Error ellipse: s-maj=7.0km s-min=6.1km az=177.0*
*IDC **15** 10:34:52.9±1.1, 31°.03N×103°.98E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/28, Error ellipse: s-maj=41.5km s-min=20.9km az=55.0*
*NEIC **15** 10:34:54.8±0.7, 31°.22N×104°.23E, h10km, mb4.4/5, Error ellipse: s-maj=21.9km s-min=12.7km az=45.0*
*BJI **15** 10:34:54.6, 31°.07N×103°.80E, h10km, ML3.5/7, Ms3.5/1, Ms7 3.3/1*

ISC 15 10:34:54.6±0.5, 31°.05N±0°.05×103°.97E±0°.06, h10km, n18, σ1§11/21, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**231**	Pg	**Pg**	**10 34 58.6**	**-0.7**
CD2				Sg	**Sg**	**10 35 03.0**	**+0.6**
CD2				smax			
	comp=N,33μm,0.6s						
LZH	**Lanzhou**	**5.02**	**359**	*e*Pg	**Pg**	**10 36 23.8**	**-6.9**
LZH				smax			
	comp=N,61nm,1.0s						
LZH				smax			
	comp=E,55nm,0.8s						
XAN	**Xi'an**	**5.13**	**53**	Pg	**Pg**	**10 36 33.6**	**+0.7**
XAN				Sg	**Sg**	**10 37 33.3**	**-6.2**
XAN				smax			
	comp=N,64μm,0.7s						
XAN				smax			
	comp=E,36nm,1.0s						
GYA	**Guiyang**	**5.16**	**152**	Pg	**Pg**	**10 36 38.4**	**+5.1**
GYA				Sg	**Sg**	**10 37 41.1**	**+1.0**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,90nm,0.8s						
KMI	**Kunming**	**6.01**	**191**	Pn	**Pn**	**10 36 21.8**	**-1.7**
KMI				Sn	**Sn**	**10 37 41.0**	**+8.7**
KMI				smax			
	comp=N,17nm,0.8s						
KMI				smax			
	comp=E,18nm,1.0s						
KMI				LR	LR		
	comp=N,340nm,8.9s						
KMI				LR	LR		
	comp=E,310nm,9.3s						
KMI				LR	LR		
	comp=Z,150nm,5.6s						
TATO	**Taipei**	**16.61**	**107**	*e*P	**Pn**	**10 38 48.1**	**+0.6**
	comp=Z,9.6nm,0.3s						
TPUB	**Ta-pu**	**16.71**	**113**	*e*P	**Pn**	**10 38 46.8**	**-2.0**
	comp=Z,57nm,1.3s						
KSRS	**Korea Array**	**20.78**	**66**	P	**P**	**10 39 36.6**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=260,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	**22.94**	**319**	P	**P**	**10 40 00.4**	**+1.6**
	comp=Z,0.4nm,0.7s,mb2.9,baz=139,slow=12,SNR=4.0						
KULM	**Kulim**	**25.82**	**188**	P	**P**	**10 40 28.4**	**+2.3**
	comp=Z,11nm,1.2s,mb4.2						
KURK	**Kurchatov**	**27.21**	**323**	P	**P**	**10 40 38.3**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.1,baz=128,slow=10,SNR=2.6						
MAJO	**Matsushiro**	**28.88**	**70**	P	**P**	**10 40 49.5**	**-3.9**
	comp=Z,3.3nm,0.8s,mb4.1						
JHJ	**Hachijo jima 2**	**30.33**	**77**	LR	LR	10 52 39.6	
	comp=Z,96nm,19.4s,baz=246,slow=35						
WRAB	**Tennant Creek**	**58.49**	**146**	P	**P**	**10 44 50.5**	**-0.6**
WRA	**Warramunga Arr**	**58.50**	**146**	P	**P**	**10 44 50.9**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=338,slow=7.7,SNR=16						
ASAR	**Alice Springs**	**61.51**	**149**	P	**P**	**10 45 11.5**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.4,baz=331,slow=7.1,SNR=3.0						
INK	**Inuvik**	**72.24**	**19**	*e*P	**P**	**10 46 19.0**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**10 47 12.0**	**-1.3**
	comp=Z,0.2nm,0.7s,mb3.2,baz=324,slow=5.0,SNR=3.3						

*ISK **15** 10:35:29.9, 38°.83N×27°.50E, h20km, MD3.0*
*DDA **15** 10:35:30.0, 38°.81N×27°.46E, h13km±1km, Md3.3*
*ATH **15** 10:35:29.9, 38°.37N×25°.51E, h15km±3km, MD3.4/3*
*ISCJB **15** 10:35:30.0±0.5, 38°.86N±0°.02×27°.45E±0°.03, h7km±4km, Error ellipse: s-maj=3.8km s-min=3.4km az=172.4*
*CSEM **15** 10:35:30.3±0.1, 38°.83N×27°.51E, h15km, MD3.0, Error ellipse: s-maj=2.3km s-min=2.2km az=91.0*

ISC 15 10:35:30.7±0.4, 38°.85N±0°.02×27°.47E±0°.03, h14km±3km, n61, σ0§91/86, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.27**	**83**	PG	**Pg**	**10 35 36.1**	**-0.4**
AKS				*e*SG	**Sg**	**10 35 40.9**	**+0.5**
AKS	**Akhisar**	**0.27**	**83**	*i* Pg	**Pg**	**10 35 36.1**	**-0.4**
AKS				*e*Sg	**Sg**	**10 35 40.9**	**+0.5**
AKHS	**Akhisar**	**0.27**	**83**	*i* P	**Pg**	**10 35 36.1**	**-0.4**
AKHS				*i* S	**Sg**	**10 35 41.0**	**+0.6**
AKHS	**Akhisar**	**0.27**	**83**	*i* P	**Pg**	**10 35 36.1**	**-0.4**
AKHS				*i* S	**Sg**	**10 35 41.0**	**+0.6**
IZM	**Izmir**	**0.48**	**200**	PG	**Pg**	**10 35 40.7**	**+0.5**
IZM				*e*SG	**Sg**	**10 35 47.1**	**+0.6**
IZM	**Izmir**	**0.48**	**200**	*i* Pg	**Pg**	**10 35 40.7**	**+0.5**
IZM				*e*Sg	**Sg**	**10 35 47.1**	**+0.6**
BLCB	**Balcova**	**0.57**	**216**	*e*PG	**Pg**	**10 35 41.1**	**-0.8**
BLCB	**Balcova**	**0.57**	**216**	*e*Pg	**Pg**	**10 35 41.1**	**-0.8**
AYVA	**Ayvalik**	**0.76**	**308**	*i* P	**Pg**	**10 35 45.8**	**+0.3**
AYVA				*i* S	**Sg**	**10 35 56.2**	**+0.6**
AYVA	**Ayvalik**	**0.76**	**308**	*i* P	**Pg**	**10 35 45.8**	**+0.3**
AYVA				*i* S	**Sg**	**10 35 56.2**	**+0.6**
BALB	**Balikesir**	**0.85**	**22**	*e*PG	**Pg**	**10 35 47.0**	**-0.3**
BALB	**Balikesir**	**0.85**	**22**	*e*Pg	**Pg**	**10 35 47.0**	**-0.3**
BALY	**Balya**	**0.90**	**7**	*i* P	**Pb**	**10 35 47.9**	**-0.2**
BALY				*i* S	**Sb**	**10 36 01.8**	**+1.8**
BALY	**Balya**	**0.90**	**7**	*i* P	**Pb**	**10 35 47.9**	**-0.2**
BALY				*i* S	**Sb**	**10 36 01.8**	**+1.8**
KULA	**Kula-Manisa**	**0.99**	**109**	*e*PG	**Pg**	**10 35 48.9**	**-1.0**
KULA				*e*SG	**Sg**	**10 36 02.1**	**-0.8**
KULA	**Kula-Manisa**	**0.99**	**109**	*e*Pg	**Pg**	**10 35 48.9**	**-1.0**
KULA				*e*Sg	**Sg**	**10 36 02.1**	**-0.7**
DEMI	**Demirci**	**0.99**	**78**	*i* P	**Pb**	**10 35 48.9**	**-0.8**
DEMI				*i* S	**Sb**	**10 36 04.1**	**+1.5**
DEMI	**Demirci**	**0.99**	**78**	*i* P	**Pb**	**10 35 48.9**	**-0.8**
DEMI				*i* S	**Sb**	**10 36 04.1**	**+1.5**
PRK	**Paraskevi**	**1.01**	**294**	*e*PN	**Pn**	**10 35 50.3**	**-0.2**
PRK				*e*SN	**Sn**	**10 36 04.5**	**0.0**
PRK	**Paraskevi**	**1.01**	**294**	*e*Pn	**Pn**	**10 35 50.3**	**-0.2**
PRK				*e*Sn	**Sn**	**10 36 04.5**	**0.0**
DURS	**Dursunbey**	**1.09**	**46**	*i* P	**Pb**	**10 35 51.3**	**0.0**
DURS				*i* S	**Sb**	**10 36 06.8**	**+1.5**
DURS	**Dursunbey**	**1.09**	**46**	*i* P	**Pb**	**10 35 51.3**	**0.0**
DST	**Dursunbey**	**1.17**	**49**	*e*PN	**Pn**	**10 35 51.6**	**-1.0**
DST	**Dursunbey**	**1.17**	**49**	*e*Pn	**Pn**	**10 35 51.6**	**-1.1**
AYDN	**Tasoluk**	**1.23**	**165**	*i* P	**Pn**	**10 35 52.4**	**-1.0**
AYDN				*i* S	**Sb**	**10 36 09.3**	**-0.1**
AYDN	**Tasoluk**	**1.23**	**165**	*i* P	**Pn**	**10 35 52.4**	**-1.0**
SMG	**Samos**	**1.24**	**204**	*e*PN	**Pn**	**10 35 53.0**	**-0.6**
SMG				*e*SN	**Sn**	**10 36 10.4**	**+0.3**
SMG	**Samos**	**1.24**	**204**	*e*Pn	**Pn**	**10 35 53.0**	**-0.6**
SMG				*e*Sn	**Sn**	**10 36 10.4**	**+0.3**
EZN	**Ezine**	**1.32**	**318**	*e*PN	**Pn**	**10 35 54.4**	**-0.3**
EZN	**Ezine**	**1.32**	**318**	*e*Pn	**Pn**	**10 35 54.4**	**-0.3**
BOZC	**Bozcaada**	**1.48**	**313**	*i* P	**Pn**	**10 35 58.1**	**+1.2**
BOZC				*i* S	**Sn**	**10 36 14.8**	**-1.2**
EDC	**Edincik**	**1.53**	**11**	*e*PN	**Pn**	**10 35 57.0**	**-0.6**
EDC	**Edincik**	**1.53**	**11**	*e*Pn	**Pn**	**10 35 57.0**	**-0.6**
BNT	**Bandirma**	**1.55**	**13**	*e*PN	**Pn**	**10 35 56.8**	**-1.0**
BNT	**Bandirma**	**1.55**	**13**	*e*Pn	**Pn**	**10 35 56.8**	**-1.0**
KCT	**Karacabey**	**1.57**	**26**	*e*PN	**Pn**	**10 35 57.3**	**-0.9**
KCT	**Karacabey**	**1.57**	**26**	*e*Pn	**Pn**	**10 35 57.3**	**-0.9**
LPK	**Lapseki**	**1.62**	**340**	*e*PN	**Pn**	**10 35 58.4**	**-0.4**
LPK	**Lapseki**	**1.62**	**340**	*e*Pn	**Pn**	**10 35 58.4**	**-0.4**
DNZL	**Cakiroluk**	**1.70**	**132**	*i* P	**Pn**	**10 36 01.9**	**+2.0**
DNZL				*i* S	**Sn**	**10 36 24.9**	**+3.5**
DNZL	**Cakiroluk**	**1.70**	**132**	*i* P	**Pn**	**10 36 01.9**	**+2.0**
BDRM	**Kayabasi**	**1.78**	**181**	*i* P	**Pn**	**10 36 02.9**	**+1.9**
BDRM				*i* S	**Sn**	**10 36 26.7**	**+3.4**
BDRM	**Kayabasi**	**1.78**	**181**	*i* P	**Pn**	**10 36 02.9**	**+1.9**
BDRM				*i* S	**Sn**	**10 36 26.7**	**+3.3**
GADA	**Gvkgeada**	**1.81**	**318**	*e*PN	**Pn**	**10 36 01.5**	**+0.1**
GADA	**Gvkgeada**	**1.81**	**318**	*e*Pn	**Pn**	**10 36 01.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.85**	**353**	*e*PN	**Pn**	**10 36 01.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.85**	**353**	*e*Pn	**Pn**	**10 36 01.5**	**-0.5**
ALT	**Altintas**	**2.07**	**83**	*e*PN	**Pn**	**10 36 04.0**	**-1.0**
ALT	**Altintas**	**2.07**	**83**	*e*Pn	**Pn**	**10 36 04.0**	**-1.0**
DAT	**Datca**	**2.12**	**178**	*e*PN	**Pn**	**10 36 04.5**	**-1.1**
DAT	**Datca**	**2.12**	**178**	*e*Pn	**Pn**	**10 36 04.5**	**-1.1**
ENEZ	**Enez**	**2.14**	**332**	*e*PN	**Pn**	**10 36 06.2**	**+0.2**
ENEZ	**Enez**	**2.14**	**332**	*e*Pn	**Pn**	**10 36 06.2**	**+0.2**
YLV	**Yalova**	**2.26**	**40**	*e*PN	**Pn**	**10 36 07.2**	**-0.4**
YLV	**Yalova**	**2.26**	**40**	*e*Pn	**Pn**	**10 36 07.2**	**-0.4**
ALN	**Alexandroupoli**	**2.32**	**332**	*e*PB	**Pb**	**10 36 13.5**	**+1.1**
ALN				*e*SN	**Sn**	**10 36 44.5**	**+7.7**
ALN	**Alexandroupoli**	**2.32**	**332**	*e*Pb	**Pb**	**10 36 13.5**	**+1.1**
GULT	**Gulveren**	**2.84**	**55**	*e*PN	**Pn**	**10 36 15.0**	**-0.5**
GULT	**Gulveren**	**2.84**	**55**	*e*Pn	**Pn**	**10 36 15.0**	**-0.5**
EDRB	**Edirne**	**3.05**	**350**	*e*PN	**Pn**	**10 36 18.9**	**+0.4**
EDRB

comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,91nm,4.8s
GTA LR LR
comp=N,250nm,10.4s
GTA LR LR
comp=E,290nm,10.7s
GTA LR LR
comp=Z,190nm,10.4s
SONM Songino Array 15.41 3 Pn **Pn 10 48 22.0 -2.2**
comp=Z,0.2nm,0.3s,baz=185,slow=15,SNR=4.4
KSRS Korea Array 19.19 69 P **Pn 10 49 12.5 +0.9**
comp=Z,0.2nm,0.3s,baz=255,slow=12,SNR=11
MK31 Makanchi Array 22.70 316 *eP* **P 10 49 48.9 +0.4**
MKAR Makanchi Array 22.70 316 P **P 10 49 47.9 -0.6**
comp=Z,2.0nm,0.8s,mb3.6,baz=118,slow=13,SNR=12
MKAR LR LR 10 58 57.7
comp=Z,41nm,21.3s,MS2.8,baz=244,slow=38
MKAR Makanchi Array 22.70 316 P **P 10 49 47.9 -0.6**
MKAR LR LR 10 58 57.7
ZALV Zalesovo Beam 26.01 332 P **P 10 50 18.6 -1.2**
comp=Z,0.8nm,0.4s,mb3.6,baz=128,slow=9.6,SNR=4.4
ZALV LR LR 11 00 16.4
comp=Z,18nm,19.4s,MS2.6,baz=161,slow=36
ZALV Zalesovo Beam 26.01 332 P **P 10 50 18.6 -1.2**
ZALV LR LR 11 00 16.4
KURK Kurchatov 26.84 321 P **P 10 50 26.6 -0.7**
comp=Z,1.5nm,0.8s,mb3.6,baz=125,slow=10.0,SNR=5.8
ASAJ Asahikawa 31.26 57 LR LR 11 03 44.2
comp=Z,27nm,20.0s,MS2.9,baz=360,slow=36
BVAR Borovoye Array 32.42 320 LR LR 11 04 21.5
comp=Z,59nm,19.0s,MS3.3,baz=192,slow=36
ABKAR Akbulak array 37.59 310 *eP* **P 10 52 01.7 +0.3**
comp=Z,0.4nm,0.4s,mb3.5
ARCES ARCESS Array B 56.48 335 P **P 10 54 27.9 -0.7**
comp=Z,0.9nm,0.5s,mb4.0,baz=79,slow=7.5,SNR=11
BRTR Keskin Array B 56.99 299 P **P 10 54 32.3 -0.4**
comp=Z,0.5nm,0.6s,mb3.7,baz=73,slow=6.8,SNR=3.0
WRA Warramunga Arr 59.02 148 P **P 10 54 48.3 +1.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=343,slow=7.6,SNR=16
ASAR Alice Springs 62.10 150 P **P 10 55 09.5 +1.5**
comp=Z,0.7nm,0.7s,mb3.9,baz=331,slow=6.5,SNR=10
EGAK Eagle 70.28 25 P **P 10 56 02.4 +2.5**
CDF Champ du Feu 71.39 316 *eP* **P 10 56 06.7 -0.3**
LPG La Plagne 73.09 313 *eP* **P 10 56 17.1 -0.2**
comp=Z,3.7nm,0.5s,mb4.3
LPG La Plagne 73.09 313 *eP* **P 10 56 17.1 -0.2**
comp=Z,1.9nm,0.5s,mb4.3
LPL La Plagne 73.10 313 *eP* **P 10 56 17.0 -0.3**
comp=Z,2.2nm,0.4s,mb4.1
LPL La Plagne 73.10 313 *eP* **P 10 56 17.0 -0.3**
comp=Z,1.1nm,0.4s,mb4.1
TCF Toulx Ste Croi 75.43 316 *eP* **P 10 56 31.0 +0.1**
CAF Calviac 76.24 315 *eP* **P 10 56 35.5 0.0**
YKA Yellowknife Ar 80.13 18 P **P 10 56 56.4 -0.4**
comp=Z,0.1nm,0.5s,mb3.0,baz=331,slow=5.5,SNR=3.8
SCHQ Schefferville 92.83 355 LR LR 11 42 46.0
comp=Z,59nm,18.1s,MS4.1,baz=44,slow=38

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*IDC **15** 11:03:58.1±1.5, 13°.10N×120°.27E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=36.3km s-min=12.7km az=110.0*
*MAN **15** 11:04:02, 13°.21N×120°.46E, h29km, mb4.6, ML3.5, MS3.4*
ISC 15 11:04:01.8±1.1, 13°.16N±0°.04×120°.41E±0°.05, h20km±6km, n19, σ1°11/23, mb3.4/3, MS3.1/2, 3C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.59**	**344**	*eP*	**Pg**	**11 04 15.0**	**+1.3**
PGP	**Puerto Galera**	**0.63**	**58**	⇓*iP*	**Pg**	**11 04 13.9**	**-0.4**
PGP				*i* S	**Sg**	**11 04 21.8**	**-1.0**
SJMP	**San Jose**	**0.98**	**135**	*eP*	**Pb**	**11 04 20.6**	**+0.4**
SJMP				*eS*	**Sb**	**11 04 32.7**	**0.0**
TGY	**Tagaytay City**	**1.06**	**29**	Pg	**Pg**	**11 04 21.6**	**-0.9**
	566nm,0.3s,baz=202,slow=3.4,SNR=62						
TGY				Lg		11 04 36.2	
	794nm,0.3s,baz=135,slow=23,SNR=20						
TGY	**Tagaytay City**	**1.06**	**29**	⇑*eP*	**Pb**	**11 04 21.5**	**-0.1**
BUSP	**Coron**	**1.17**	**190**	*eP*	**Pn**	**11 04 23.7**	**+0.6**
BUSP				*eS*	**Sb**	**11 04 33.0**	**-5.2**
BOAC	**Boac**	**1.43**	**78**	*eP*	**Pn**	**11 04 27.0**	**+0.4**
BOAC				*eS*	**Sn**	**11 04 43.4**	**-1.5**
OTRP	**Odiongan**	**1.76**	**117**	*eP*	**Pn**	**11 04 31.8**	**+0.5**
OTRP				*eS*	**Sn**	**11 04 50.5**	**-2.6**
GQP	**Guinayangan**	**2.12**	**69**	⇑*eP*	**Pn**	**11 04 38.0**	**+1.9**
GQP				*eS*	**Sn**	**11 05 05.2**	**+3.4**
POLP	**Polillo Island**	**2.15**	**44**	*eP*	**Pn**	**11 04 37.5**	**+0.9**
AUQP	**San Andres**	**2.21**	**86**	*eP*	**Pn**	**11 04 42.7**	**+5.3**
PCPH	**Palayan**	**2.48**	**16**	⇑*eP*	**Pn**	**11 04 40.1**	**-1.0**
PCPH				*eS*	**Sn**	**11 05 09.1**	**-1.6**
BALP	**Baler**	**2.80**	**24**	*eP*	**Pn**	**11 04 46.6**	**+1.0**
DAV	**Davao City (W)**	**7.91**	**139**	LR	LR	11 10 08.7	
	comp=Z,142nm,20.8s,baz=190,slow=47						
GUMO	**Guam**	**23.80**	**86**	LR	LR	11 18 37.7	
	comp=Z,42nm,18.7s,MS2.9,baz=114,slow=37						
JHJ	**Hachijo jima 2**	**26.59**	**38**	LR	LR	11 18 09.0	
	comp=Z,73nm,19.5s,MS3.2,baz=88,slow=32						
WRA	**Warramunga Arr**	**35.64**	**157**	P	**P**	**11 10 58.0**	**-0.6**
	0.3nm,0.5s,mb3.4,baz=331,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**38.91**	**160**	P	**P**	**11 11 25.4**	**-0.9**
	0.5nm,0.5s,mb3.5,baz=335,slow=6.6,SNR=16						
MKAR	**Makanchi Array**	**46.30**	**324**	P	**P**	**11 12 25.4**	**-0.7**
	0.2nm,0.6s,mb3.2,baz=133,slow=6.1,SNR=2.6						

IDC 15 11:12:00.6±23.0, 30°.27N×107°.10E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/26, mbtmp3.5/3, Error ellipse: s-maj=567.3km s-min=46.6km az=120.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.70**	**62**	P	Pn	**11 16 19.4**	**-1.4**
	0.1nm,0.3s,baz=258,slow=9.5,SNR=4.6						
WRA	**Warramunga Arr**	**56.39**	**149**	P	P	11 21 44.4	+0.6
	0.4nm,0.6s,baz=328,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**59.48**	**151**	P	P	11 22 05.0	-0.4
	0.2nm,0.6s,baz=332,slow=6.4,SNR=4.5						

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*NEIC **15** 11:12:23.0, 33°.50S×70°.22W, h110km, MD3.3(GUC), After GUC.*
GUC 15 11:12:23.0±0.9, 33°.50S×70°.22W, h110km±4km, MD3.3, ML3.5, 6C-7D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.18**	**341**	⇓*iP*	Pn	11 12 38.9	+0.5
FCH				AML	AML	11 12 53.5	
	comp=N,2μm,0.3s						
FSR	**Penalolen**	**0.26**	**274**	⇑*iP*	Pn	11 12 39.2	+0.6
FSR				*i* S	Sn	11 12 51.1	+0.9
FSR	**Penalolen**	**0.26**	**274**	⇑*iP*	Pn	11 12 39.2	+0.6
FSR				*i* S	Sn	11 12 51.1	+0.9
FSR				AML	AML	11 12 52.1	
	comp=N,536nm,0.2s						
PCH	**Pirque**	**0.28**	**243**	⇑*iP*	Pn	11 12 39.0	+0.4
PCH				*i* S	Sn	11 12 50.9	+0.6
CLCH	**Cerro Calan**	**0.28**	**290**	AML	AML	11 12 53.1	
	comp=E,2μm,0.4s						
ANTU	**Antumapu**	**0.35**	**258**	⇑*iP*	Pn	11 12 39.4	+0.4
ANTU				*eS*	Sn	11 12 51.6	+0.6
ANTU				AML	AML	11 12 51.9	
	comp=E,5μm,0.3s						
LMEL	**Las Melosas**	**0.35**	**178**	⇓*iP*	Pn	11 12 39.4	+0.4
LMEL				*i* S	Sn	11 12 51.7	+0.7
LMEL	**Las Melosas**	**0.35**	**178**	⇓*iP*	Pn	11 12 39.4	+0.4
LMEL				*i* S	Sn	11 12 51.7	+0.7
LMEL				AML	AML	11 12 56.3	
	comp=N,1μm,0.1s						
SAN	**Santiago**	**0.37**	**276**	*i* S	Sn	11 12 51.4	+0.3
SAN				AML	AML	11 12 52.2	
	comp=E,6μm,0.2s						
PEL	**Peldehue**	**0.52**	**312**	⇓*iP*	Pn	11 12 40.4	+0.4
PEL				*i* S	Sn	11 12 53.5	+0.8
PEL				AML	AML	11 12 54.4	
	comp=N,15μm,0.2s						
TACH	**Talagante**	**0.62**	**255**	⇓*iP*	Pn	11 12 40.9	+0.2
TACH				*i* S	Sn	11 12 54.4	+0.4
CACH	**El Canelo**	**0.70**	**207**	⇓*iP*	Pn	11 12 42.3	+1.0
CACH				*i* S	Sn	11 12 57.3	+2.2
JACH	**Jahuel**	**0.87**	**339**	⇑*iP*	Pn	11 12 43.1	+0.2
JACH				*i* S	Sn	11 12 59.3	+1.4
LNV	**Longovilo**	**1.09**	**245**	⇑*iP*	Pn	11 12 45.0	-0.1
LNV				*i* S	Sn	11 13 01.7	-0.2
IHA	**Instituto Hidr**	**1.28**	**291**	*eP*	Pn	11 12 47.7	+0.5
IHA				*i* S	Sn	11 13 06.2	+0.7
CHNG	**Los Chungos**	**1.94**	**326**	⇓*iP*	Pn	11 12 55.8	+0.6
CHNG				*i* S	Sn	11 13 19.4	-0.3
CHNG				AML	AML	11 13 20.1	
	comp=E,124nm,0.3s						

IDC 15 11:13:58.8±4.2, 34°.43N×108°.12E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.7/4, Error ellipse: s-maj=437.0km s-min=21.4km az=50.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.05**	**310**	P	P	11 19 05.6	0.0
	0.5nm,0.8s,baz=113,slow=11,SNR=3.6						
AKASG	**Malin Array Be**	**57.61**	**312**	P	P	11 23 50.4	0.0
	0.9nm,0.5s,baz=69,slow=6.6,SNR=2.5						
WRA	**Warramunga Arr**	**59.55**	**151**	P	P	11 24 04.3	+0.1
	0.7nm,0.5s,baz=341,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**62.76**	**153**	P	P	11 24 25.9	+0.1
	0.6nm,0.7s,baz=333,slow=6.9,SNR=11						

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*IDC **15** 11:19:04.0±2.5, 54°.46N×86°.94E, h0km, mb1 3.4/3, mb1mx3.1/28, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=23.4km s-min=21.4km az=30.0*
*NNC **15** 11:19:11.0±3.5, 54°.11N×86°.37E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=24.6km s-min=23.8km az=114.0*
ISC 15 11:19:09.6±2.6, 54°.3N±0°.1×86°.4E±0°.2, h10km, n7, σ1°18/11, 5C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.01**	**250**	Pg	**Pg**	**11 19 27.5**	**-1.5**
	3.0nm,0.3s,baz=66,slow=17,SNR=47						
ZALV				Lg		11 19 46.3	
	2.6nm,0.3s,baz=56,slow=22,SNR=6.2						
KURK	**Kurchatov**	**5.97**	**236**	⇑Pn	**Pn**	**11 20 38.6**	**+0.7**
	4.0nm,0.7s						
KURK				⇑Sn	**Sn**	**11 21 47.5**	**+1.3**
	2.8nm,1.0s						
KURK				⇓Lg		11 22 16.9	
	4.2nm,0.9s						
KURK	**Kurchatov**	**5.97**	**236**	Pn	**Pn**	**11 20 40.3**	**+2.4**
	0.3nm,0.3s,baz=53,slow=14,SNR=39						
KURK				Sn	**Sn**	**11 21 53.1**	**+6.8**
	0.1nm,0.3s,baz=56,slow=21,SNR=3.4						
KURK				Lg		11 22 27.7	
	0.0nm,0.3s,baz=44,slow=30,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.07**	**236**	⇑Pn	**Pn**	**11 20 40.1**	**+0.8**
	1.2nm,0.7s,baz=55,slow=14						
KURBB				⇓Sn	**Sn**	**11 21 49.1**	**+0.3**
	0.8nm,0.8s						
KURBB				⇑Lg		11 22 21.1	
	1.2nm,0.9s						
MK31	**Makanchi Array**	**7.97**	**201**	⇑Sn	**Sn**	**11 22 35.9**	**+0.5**
	0.5nm,0.5s,baz=26,slow=27						
MK31				Lg		11 23 18.9	
MKAR	**Makanchi Array**	**7.97**	**201**	Pn	**Pn**	**11 21 05.2**	**-0.1**
	0.1nm,0.3s,baz=24,slow=12,SNR=3.6						
MKAR				Sn	**Sn**	**11 22 32.6**	**-2.8**
	0.1nm,0.3s,baz=22,slow=27,SNR=2.2						
MKAR				Lg		11 23 28.7	
	0.1nm,0.3s,baz=31,slow=29,SNR=4.3						
BVAR	**Borovoye Array**	**9.61**	**269**	Pn	**Pn**	**11 21 27.2**	**-0.6**
	0.3nm,0.3s,baz=72,slow=14,SNR=6.8						

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*IDC **15** 11:26:58.5±1.2, 2°.48S×99°.89E, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.2/24, mbtmp4.3/14, MS3.8/2, Ms1 3.8/2, ms1mx2.9/42, Error ellipse: s-maj=44.3km s-min=14.2km az=55.0*
*BJI **15** 11:27:00.0, 3°.08S×99°.71E, h65km, mB5.2/5, mb4.7/9*
*ISCJB **15** 11:27:02.3±1.2, 2°.60S±0°.06×99°.83E±0°.09, h47km±9km, mb4.3/21, MS3.9/2, Error ellipse: s-maj=17.1km s-min=6.4km az=147.4*
*DJA **15** 11:27:03, 2°.58S×99°.87E, h30km, MLv4.4/7*
*NEIC **15** 11:27:03.8±0.5, 2°.46S×100°.00E, h35km, mb4.5/5, Error ellipse: s-maj=18.5km s-min=6.7km az=52.0*
ISC 15 11:27:03.1±2.4, 2°.59S±0°.06×99°.79E±0°.07, h35km±17km, n41, σ0°91/39, mb4.3/21, MS3.9/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.43**	**331**	P	**Pn**	**11 27 25.8**	**-0.9**
PDSI	**Padang**	**1.79**	**22**	P	**Pn**	**11 27 30.8**	**-0.8**
PDSI				S	**Sn**	**11 27 53.7**	**+0.6**
PPI	**Padang Panjang**	**2.20**	**16**	P	**Pn**	**11 27 37.0**	**-0.2**
SDSI	**Sungai Dareh**	**2.32**	**45**	P	**Pn**	**11 27 39.4**	**+0.6**
BKNI	**Bangkinang**	**3.15**	**23**	P	**Pn**	**11 27 53.1**	**+2.8**
MNAI	**Manna**	**3.62**	**119**	P	**Pn**	**11 27 57.9**	**+1.2**
MDSI	**Maura Dua**	**4.77**	**113**	P	**Pn**	**11 28 13.6**	**+1.1**
MDSI				S	**Sn**	**11 29 05.9**	**-0.7**
LWLI	**Liwa**	**4.89**	**120**	P	**Pn**	**11 28 15.0**	**+0.7**
KASI	**Kota Agung**	**5.53**	**122**	P	**Pn**	**11 28 23.1**	**+0.1**
CGJI	**Cibinong**	**7.11**	**124**	P	**Pn**	**11 28 42.5**	**-2.3**
KULM	**Kulim**	**7.87**	**6**	*e*Pn	**Pn**	**11 28 53.5**	**-1.6**
KAPI	**Kappang**	**20.06**	**98**	*e*Pn	**P**	**11 31 33.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**29.66**	**123**	P	**P**	**11 33 06.7**	**+0.9**
	1.4nm,0.8s,mb3.8,baz=305,slow=12,SNR=5.3						
XAN	**Xi'an**	**37.43**	**13**	P	**P**	**11 34 11.9**	**-1.2**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**37.88**	**120**	P	**P**	**11 34 16.7**	**-0.5**
	comp=Z,5.7nm,0.5s,mb4.6,baz=304,slow=9.0,SNR=94						
WRAB	**Tennant Creek**	**37.89**	**120**	*e*P	**P**	**11 34 16.9**	**-0.3**
ASAR	**Alice Springs**	**39.08**	**125**	P	**P**	**11 34 27.1**	**-0.1**
	comp=Z,5.0nm,0.6s,mb4.4,baz=300,slow=7.7,SNR=47						
GTA	**Gaotai**	**41.79**	**0**	P	**P**	**11 34 50.1**	**+0.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
KSRS	**Korea Array**	**47.62**	**31**	P	**P**	**11 35 35.8**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.5,baz=224,slow=8.7,SNR=22						
STKA	**Stephens Creek**	**48.92**	**131**	P	**P**	**11 35 47.0**	**+1.0**
	comp=Z,3.1nm,0.4s,mb4.7,baz=308,slow=15,SNR=16						
STKA	**Stephens Creek**	**48.92**	**131**	*e*P	**P**	**11 35 44.4**	**-1.6**
TKM2	**Tokmak 2**	**50.28**	**337**	*e*P	**P**	**11 35 57.0**	**+0.9**
	comp=Z,5.5nm,0.9s,mb4.6						
AML	**Almayashu**	**50.40**	**335**	*e*P	**P**	**11 35 58.3**	**+1.3**
	comp=Z,2.3nm,0.6s,mb4.4						
SONM	**Songino Array**	**50.54**	**6**	P	**P**	**11 35 58.8**	**+0.8**
	comp=Z,4.8nm,0.7s,mb4.5,baz=188,slow=8.4,SNR=21						
ULN	**Ulaanbaatar**	**50.64**	**6**	*e*P	**P**	**11 35 59.1**	**+0.4**
	comp=Z,2.9nm,0.7s,mb4.3						
MK31	**Makanchi Array**	**51.53**	**345**	*e*P	**P**	**11 36 05.6**	**+0.1**
MKAR	**Makanchi Array**	**51.53**	**345**	P	**P**	**11 36 06.3**	**+0.8**
	comp=Z,5.4nm,0.6s,mb4.6,baz=149,slow=8.1,SNR=53						
MJAR	**Matsushiro Arr**	**52.86**	**39**	P	**P**	**11 36 14.2**	**-1.3**
	comp=Z,1.9nm,0.8s,mb4.1,baz=216,slow=7.6,SNR=5.7						
KURK	**Kurchatov**	**56.11**	**344**	P	**P**	**11 36 38.4**	**-0.5**
	comp=Z,2.8nm,0.9s,mb4.3,baz=164,slow=6.8,SNR=12						
KURK				LR	LR	12 04 38.2	
	comp=Z,44nm,19.0s,MS3.6,baz=120,slow=40						
ZALV	**Zalesovo Beam**	**57.70**	**350**	P	**P**	**11 36 49.4**	**-0.7**
	comp=Z,5.2nm,0.7s,mb4.7,baz=160,slow=4.7,SNR=18						
ZALV	**Zalesovo Beam**	**57.70**	**350**	P	**P**	**11 36 49.4**	**-0.7**
BVAR	**Borovoye Array**	**60.66**	**340**	P	**P**	**11 37 10.1**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.3,baz=147,slow=8.3,SNR=8.8						
ABKAR	**Akbulak array**	**62.05**	**332**	*e*P	**P**	**11 37 19.8**	**-0.2**
	comp=Z,3.9nm,0.7s,mb4.7						
PETK	**Petropavlovsk-**	**73.48**	**32**	P	**P**	**11 38 31.6**	**-0.5**
	comp=Z,1.6nm,0.8s,mb4.0,baz=255,slow=2.7,SNR=4.5						
RPZ	**Rata Peaks**	**74.72**	**135**	LR	LR	12 10 11.5	
	comp=Z,115nm,20.1s,MS4.2,baz=95,slow=35						
TIXI	**Tiksi**	**76.46**	**9**	*e*P	**P**	**11 38 47.8**	**-1.1**
	comp=Z,2.8nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**84.53**	**332**	P	**P**	**11 39 33.0**	**+0.6**
	comp=Z,0.8nm,0.5s,mb4.1,baz=127,slow=5.9,SNR=2.9						
ARCES	**ARCESS Array B**	**86.95**	**340**	P	**P**	**11 39 45.0**	**+0.8**
	comp=Z,0.6nm,0.6s,mb4.0,baz=84,slow=3.8,SNR=3.7						
TXAR	**Lajitas Array**	**145.29**	**38**	PKPbc	PKPbc	11 46 38.8	+1.1
	comp=Z,5.9nm,0.7s,baz=277,slow=0.9,SNR=48						
MIAR	**Mount Ida**	**145.85**	**20**	*e*PKPdf	PKPdf	11 46 39.9	+1.2
JCT	**Junction City**	**146.63**	**32**	*e*PKPbc	PKPbc	11 46 42.5	+0.8

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*IDC **15** 11:37:50.5±0.9, 2°.58S×99°.75E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.2/26, mbtmp4.4/16, MS3.8/2, Ms1 3.7/2, ms1mx2.8/40, Error ellipse: s-maj=35.9km s-min=13.2km az=49.0*
*ISCJB **15** 11:37:53.9±0.8, 2°.66S±0°.05×99°.79E±0°.07, h42km±6km, mb4.4/21, MS3.7/2, Error ellipse: s-maj=13.9km s-min=5.6km az=146.4*
*NEIC **15** 11:37:55.8±0.5, 2°.53S×99°.86E, h35km, mb4.6/5, Error ellipse: s-maj=18.0km s-min=6.8km az=51.0*
*DJA **15** 11:37:55, 2°.65S×99°.91E, h32km, MLv4.5/10*
ISC 15 11:37:54.9±0.8, 2°.64S±0°.05×99°.77E±0°.06, h32km±5km, n41, σ0°89/45, mb4.4/21, MS3.7/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.27**	**117**	P	**Pb**	**11 38 02.0**	**-0.2**
PPSI				S	**Sb**	**11 38 07.5**	**+0.3**
SISI	**Saibi**	**1.47**	**332**	P	**Pn**	**11 38 18.5**	**-0.7**
PDSI	**Padang**	**1.85**	**22**	P	**Pn**	**11 38 23.4**	**-1.1**
PDSI				S	**Sn**	**11 38 48.5**	**+1.7**
PPI	**Padang Panjang**	**2.25**	**16**	P	**Pn**	**11 38 29.7**	**-0.4**
SDSI	**Sungai Dareh**	**2.37**	**44**	P	**Pn**	**11 38 32.1**	**+0.5**
KSI	**Kapahiang**	**3.00**	**110**	P	**Pn**	**11 38 43.7**	**+3.5**
BKNI	**Bangkinang**	**3.21**	**23**	P	**Pn**	**11 38 44.4**	**+1.2**
MNSI	**Mandailing Nat**	**3.42**	**357**	P	**Pn**	**11 38 46.5**	**+0.5**
RGRI	**Rengat**	**3.43**	**48**	P	**Pn**	**11 38 44.0**	**-2.2**
MNAI	**Manna**	**3.61**	**118**	P	**Pn**	**11 38 49.1**	**+0.4**
MNAI				S	**Sn**	**11 39 28.9**	**-1.4**
MDSI	**Maura Dua**	**4.77**	**113**	P	**Pn**	**11 39 05.9**	**+1.2**
MDSI				S	**Sn**	**11 39 58.9**	**0.0**
LWLI	**Liwa**	**4.89**	**119**	P	**Pn**	**11 39 07.4**	**+1.1**
KASI	**Kota Agung**	**5.52**	**121**	P	**Pn**	**11 39 14.7**	**-0.3**
	78nm,0.8s,0.6nm						
KASI				S	**Sn**	**11 40 12.5**	**-4.9**
	78nm,0.8s,0.6nm						
CGJI	**Cibinong**	**7.10**	**124**	P	**Pn**	**11 39 35.4**	**-1.3**
KULM	**Kulim**	**7.92**	**6**	*e*Pn	**Pn**	**11 39 47.0**	**-1.1**
KAPI	**Kappang**	**20.08**	**97**	P	**P**	**11 42 24.2**	**-1.7**
	8.6nm,0.6s,baz=252,slow=8.1,SNR=3.9						
FITZ	**Fitzroy Crossi**	**29.66**	**123**	P	**P**	**11 43 58.4**	**+0.5**
	2.0nm,0.7s,mb3.9,baz=306,slow=8.1,SNR=6.6						
FITZ				LR	LR	11 57 12.9	
	comp=Z,160nm,18.5s,MS3.7,baz=359,slow=39						
WRA	**Warramunga Arr**	**37.88**	**120**	P	**P**	**11 45 10.0**	**+0.7**
	7.3nm,0.5s,mb4.7,baz=304,slow=9.0,SNR=120						
WRAB	**Tennant Creek**	**37.88**	**120**	*e*P	**P**	**11 45 09.5**	**+0.2**
	9.2nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**39.07**	**125**	P	**P**	**11 45 19.9**	**+0.5**
	6.5nm,0.6s,mb4.5,baz=301,slow=7.9,SNR=54						
GTA	**Gaotai**	**41.84**	**0**	*e*P	**P**	**11 45 42.6**	**+0.7**
GTA				pP	pP	11 45 48.3	-3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
KSRS	**Korea Array**	**47.68**	**31**	P	**P**	**11 46 28.1**	**-0.5**
	comp=Z,5.4nm,0.9s,mb4.6,baz=225,slow=8.6,SNR=22						
STKA	**Stephens Creek**	**48.90**	**131**	P	**P**	**11 46 39.5**	**+1.3**
	comp=Z,5.0nm,0.4s,mb4.9,baz=313,slow=7.5,SNR=22						
STKA				LR	LR	12 08 56.6	
	comp=Z,105nm,21.7s,MS3.8,baz=357,slow=38						
TKM2	**Tokmak 2**	**50.32**	**337**	*e*P	**P**	**11 46 49.2**	**+0.5**
	comp=Z,5.3nm,0.8s,mb4.6						
SONM	**Songino Array**	**50.60**	**6**	P	**P**	**11 46 51.5**	**+0.9**
	comp=Z,6.6nm,0.7s,mb4.7,baz=189,slow=9.2,SNR=21						
ULN	**Ulaanbaatar**	**50.70**	**6**	*e*P	**P**	**11 46 51.8**	**+0.4**
	comp=Z,4.1nm,0.7s,mb4.5						
MK31	**Makanchi Array**	**51.58**	**345**	*e*P	**P**	**11 46 58.0**	**0.0**
MKAR	**Makanchi Array**	**51.58**	**345**	P	**P**	**11 46 58.8**	**+0.7**
	comp=Z,5.5nm,0.7s,mb4.6,baz=148,slow=8.2,SNR=43						
MJAR	**Matsushiro Arr**	**52.91**	**39**	P	**P**	**11 47 06.9**	**-1.3**
	comp=Z,2.9nm,0.9s,mb4.2,baz=215,slow=7.7,SNR=7.0						
KURK	**Kurchatov**	**56.15**	**344**	P	**P**	**11 47 31.4**	**0.0**
	comp=Z,3.3nm,0.9s,mb4.4,baz=164,slow=6.8,SNR=14						
KURK	**Kurchatov**	**56.15**	**344**	P	**P**	**11 47 31.4**	**0.0**
ZALV	**Zalesovo Beam**	**57.75**	**350**	P	**P**	**11 47 42.8**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.7,baz=163,slow=5.7,SNR=26						
BVAR	**Borovoye Array**	**60.70**	**340**	P	**P**	**11 48 03.0**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.2,baz=147,slow=8.9,SNR=7.4						
ABKAR	**Akbulak array**	**62.09**	**332**	*e*P	**P**	**11 48 12.2**	**-0.4**
	comp=Z,4.2nm,0.7s,mb4.7						
AKTK	**Aktyubinsk**	**63.80**	**332**	P	**P**	**11 48 23.9**	**-0.1**
AKTO	**Aktyubinsk**	**63.80**	**332**	P	**P**	**11 48 23.9**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=132,slow=5.0,SNR=4.8						
BRTR	**Keskin Array B**	**73.58**	**313**	P	**P**	**11 49 24.2**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=144,slow=5.4,SNR=2.8						
TIXI	**Tiksi**	**76.52**	**9**	*e*P	**P**	**11 49 40.2**	**-1.3**
	comp=Z,2.8nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**84.56**	**332**	P	**P**	**11 50 24.7**	**-0.1**
	comp=Z,0.7

GYA			Sg	Sg	11 52 24.5	-4.5
GYA	comp=N,130nm,0.8s		smax			
GYA	comp=E,130nm,0.8s		smax			
KMI	**Kunming**	**6.38 192**	Pn	**Pn**	**11 51 10.3**	**-0.4**
KMI			Sn	**Sn**	**11 52 22.8**	**-1.1**
KMI	comp=N,16nm,1.0s		smax			
KMI	comp=E,22nm,1.0s		smax			
KMI	comp=N,250nm,6.8s		LR	LR		
KMI	comp=E,240nm,5.5s		LR	LR		
KMI	comp=Z,160nm,8.7s		LR	LR		
KSRS	**Korea Array**	**20.49 66**	P	**P**	**11 54 17.1**	**+2.3**
	comp=Z,1.5nm,0.7s,baz=258,slow=9.9,SNR=9.1					
MK31	**Makanchi Array**	**22.79 319**	*eP*	**P**	**11 54 40.0**	**+0.6**
MKAR	**Makanchi Array**	**22.79 319**	P	**P**	**11 54 40.0**	**+0.5**
	comp=Z,3.8nm,1.2s,mb3.7,baz=103,slow=8.1,SNR=6.4					
ZALV	**Zalesovo Beam**	**26.48 334**	P	**P**	**11 55 13.6**	**-0.5**
	comp=Z,1.5nm,0.8s,mb3.5,baz=135,slow=9.0,SNR=5.1					
KURK	**Kurchatov**	**27.04 323**	P	**P**	**11 55 19.1**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.3,baz=129,slow=8.5,SNR=3.4					
PETK	**Petropavlovsk-**	**43.95 44**	LR	LR	12 17 55.9	
	comp=Z,25nm,18.4s,baz=38,slow=39					
WRAB	**Tennant Creek**	**58.69 146**	*eP*	**P**	**11 59 33.9**	**-0.8**
WRA	**Warramunga Arr**	**58.69 146**	P	**P**	**11 59 34.8**	**0.0**
	comp=Z,0.9nm,0.3s,mb4.2,baz=338,slow=7.7,SNR=16					
ASAR	**Alice Springs**	**61.72 149**	P	**P**	**11 59 55.7**	**+0.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=331,slow=6.5,SNR=7.0					
YKA	**Yellowknife Ar**	**81.40 17**	P	**P**	**12 01 53.6**	**0.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=328,slow=5.1,SNR=4.9					

*ISCJB **15** 11:55:02.5±1.2, 19°.12N±0°.07×64°.80W±0°.05, h27km±9km, Error ellipse: s-maj=12.0km s-min=7.6km az=177.1*
*TRN **15** 11:55:02.0, 18°.99N×64°.82W, h24km*
*NEIC **15** 11:55:04.3, 19°.10N×64°.75W, h18km, MD3.7(RSPR), After RSPR.*
ISC 15 11:55:03.6±1.2, 19°.04N±0°.08×64°.75W±0°.05, h29km±10km, n40, σ0°61/50, 22C-15D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.50**	**127**	*eP*	**Pb**	**11 55 13.8**	**-0.3**
TBVI	**Tortola**	**0.63**	**168**	*eP*	**Pb**	**11 55 15.9**	**-0.3**
TBVI	**Tortola**	**0.63**	**168**	*eP*	**Pb**	**11 55 15.9**	**-0.3**
STVI	**Saint Thomas**	**0.71**	**196**	*eP*	**Pb**	**11 55 17.3**	**-0.2**
STVI				*eS*	**Sb**	**11 55 27.6**	**+0.7**
STVI	**Saint Thomas**	**0.71**	**196**	*eP*	**Pb**	**11 55 17.3**	**-0.2**
STVI				*eS*	**Sb**	**11 55 27.6**	**+0.7**
MTP	**Monte Pirata**	**1.20**	**219**	*eP*	**Pn**	**11 55 24.5**	**0.0**
MTP				*eSn*	**Sn**	**11 55 36.0**	**-3.8**
MTP	**Monte Pirata**	**1.20**	**219**	*eP*	**Pn**	**11 55 24.5**	**0.0**
MTP				*eS*	**Sn**	**11 55 39.9**	**+0.1**
CDVI	**St. Croix**	**1.28**	**181**	*eP*	**Pn**	**11 55 26.9**	**+1.4**
CDVI	**St. Croix**	**1.28**	**181**	*eP*	**Pn**	**11 55 26.9**	**+1.4**
CBYP	**Canovanas**	**1.29**	**234**	*eP*	**Pn**	**11 55 25.0**	**-0.7**
CBYP	**Canovanas**	**1.29**	**234**	*eP*	**Pn**	**11 55 25.3**	**-0.4**
HUMP	**Col San Antoni**	**1.37**	**230**	*eP*	**Pn**	**11 55 26.5**	**-0.3**
HUMP				*eS*	**Sn**	**11 55 43.5**	**-0.4**
HUMP	**Col San Antoni**	**1.37**	**230**	*eP*	**Pn**	**11 55 26.5**	**-0.3**
HUMP				*eS*	**Sn**	**11 55 43.5**	**-0.4**
CPD	**Cerro la Pandu**	**1.48**	**228**	*eP*	**Pn**	**11 55 28.5**	**+0.1**
CPD	**Cerro la Pandu**	**1.48**	**228**	*eP*	**Pn**	**11 55 28.5**	**+0.1**
SJG	**San Juan**	**1.61**	**235**	*eP*	**Pn**	**11 55 30.1**	**0.0**
SJG	**San Juan**	**1.61**	**235**	*eP*	**Pn**	**11 55 29.5**	**-0.6**
SJG	**San Juan**	**1.61**	**235**	*eP*	**Pn**	**11 55 30.8**	**+0.7**
SJG				*eS*	**Sn**	**11 55 49.8**	**-0.2**
SMRT	**St. Maarten**	**1.87**	**121**	*eP*	**Pn**	**11 55 33.5**	**-0.1**
CELP	**Cerrillos**	**1.98**	**241**	*eP*	**Pn**	**11 55 35.0**	**-0.1**
CELP	**Cerrillos**	**1.98**	**241**	*eP*	**Pn**	**11 55 35.3**	**+0.2**
SABA	**Saba**	**2.01**	**134**	*eP*	**Pn**	**11 55 35.3**	**-0.3**
AOPR	**Arecibo Observ**	**2.02**	**250**	*eP*	**Pn**	**11 55 35.1**	**-0.5**
AOPR	**Arecibo Observ**	**2.02**	**250**	*eP*	**Pn**	**11 55 35.1**	**-0.5**
OBIP	**Obispado Ponce**	**2.02**	**241**	*eP*	**Pn**	**11 55 35.6**	**-0.1**
OBIP				*eS*	**Sn**	**11 55 59.7**	**-0.2**
OBIP	**Obispado Ponce**	**2.02**	**241**	*eP*	**Pn**	**11 55 35.6**	**-0.1**
OBIP				*eS*	**Sn**	**11 55 59.7**	**-0.2**
ICM	**Isla Caja Muer**	**2.03**	**236**	*eP*	**Pn**	**11 55 35.4**	**-0.4**
ICM	**Isla Caja Muer**	**2.03**	**236**	*eP*	**Pn**	**11 55 35.4**	**-0.4**
LRS	**Lares**	**2.12**	**250**	*eP*	**Pn**	**11 55 36.5**	**-0.5**
LRS	**Lares**	**2.12**	**250**	*eP*	**Pn**	**11 55 36.5**	**-0.5**
GBPR	**Guanica, Bosqu**	**2.28**	**243**	*eP*	**Pn**	**11 55 39.5**	**+0.2**
AGPR	**Aguadilla, PR**	**2.30**	**256**	*eP*	**Pn**	**11 55 39.0**	**-0.7**
AGPR	**Aguadilla, PR**	**2.30**	**256**	*eP*	**Pn**	**11 55 39.0**	**-0.7**
LSP	**Las Mesas**	**2.37**	**249**	*eP*	**Pn**	**11 55 40.5**	**-0.1**
LSP	**Las Mesas**	**2.37**	**249**	*eP*	**Pn**	**11 55 40.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.46**	**246**	*eP*	**Pn**	**11 55 41.9**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.46**	**246**	*eP*	**Pn**	**11 55 41.9**	**+0.2**
LZG	**Guadaloupe-1**	**4.04**	**135**	*eP*	**Pn**	**11 56 07.3**	**+3.8**
SDDR	**Presa de Saban**	**6.18**	**271**	*ePn*	**Pn**	**11 56 34.5**	**+1.5**
	33nm,0.5s						
SDDR				*eSn*	**Sn**	**11 57 43.4**	**+0.7**
SDV	**Santo Domingo**	**11.59**	**210**	*ePn*	**Pn**	**11 57 51.3**	**+4.1**
	10nm,0.8s						

IDC 15 11:59:27.4±24.0, 21°.86S×172°.42W, h0km, mb4.5/4, mb1 4.6/4, mb1mx4.1/17, mbtmp4.5/4, Error ellipse: s-maj=457.5km s-min=138.8km az=77.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.55**	**265**	P	P	12 06 52.8	+0.7
	12nm,0.4s,baz=94,slow=10,SNR=50						
STKA	**Stephens Creek**	**41.95**	**246**	P	P	12 07 18.7	-1.5
	1.7nm,0.5s,baz=103,slow=11,SNR=11						
ASAR	**Alice Springs**	**49.28**	**257**	P	P	12 08 18.4	0.0
	1.0nm,0.4s,baz=94,slow=6.7,SNR=66						
WRA	**Warramunga Arr**	**49.57**	**262**	P	P	12 08 21.1	+0.5
	4.2nm,0.4s,baz=98,slow=8.3,SNR=154						
KAKA	**Kakadu**	**53.20**	**270**	*eP*	P	12 08 50.7	+2.8
	2.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**58.00**	**262**	*eP*	P	12 09 25.2	+2.8
	5.2nm,0.6s						

*ISCJB **15** 12:00:49.0±2.8, 17°.9S±0°.2×175°.0W±0°.3, h197km±45km, mb4.2/9, Error ellipse: s-maj=41.0km s-min=27.8km az=158.2*
*IDC **15** 12:00:49.0±3.2, 18°.12S×175°.12W, h165km±47km, mb4.1/7, mb1 4.1/8, mb1mx3.7/20, mbtmp4.0/8, Error ellipse: s-maj=38.8km s-min=25.2km az=60.0*
ISC 15 12:00:49.3±2.6, 18°.1S±0°.2×175°.2W±0°.3, h168km±42km, n11, σ0°62/12, mb4.3/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.25**	**39**	P	**Pn**	**12 02 06.4**	**0.0**
	6.3nm,0.3s,baz=302,slow=18,SNR=16						
AFI				S	**Sn**	**12 03 00.5**	**-6.2**
	8.2nm,0.3s,baz=55,slow=19,SNR=3.7						
URZ	**Urewera**	**21.23**	**197**	P	**P**	**12 05 21.8**	**-0.1**
	4.6nm,0.4s,mb4.2,baz=337,slow=2.4,SNR=9.8						
RPZ	**Rata Peaks**	**28.10**	**202**	P	**P**	**12 06 24.5**	**-0.8**
	4.3nm,0.7s,mb4.3,baz=281,slow=5.2,SNR=3.9						
ARMA	**Armidale**	**32.56**	**242**	*eP*	**P**	**12 07 05.6**	**+0.9**
CTA	**Charters Tower**	**36.47**	**260**	P	**P**	**12 07 39.2**	**+0.9**
	3.7nm,1.0s,mb4.0,baz=91,slow=13,SNR=6.5						
STKA	**Stephens Creek**	**41.28**	**242**	P	**P**	**12 08 18.2**	**0.0**
	3.2nm,0.8s,mb4.0,baz=72,slow=10,SNR=7.1						
WRA	**Warramunga Arr**	**47.64**	**259**	P	**P**	**12 09 08.8**	**-0.1**
	6.2nm,0.3s,mb4.7,baz=98,slow=6.2,SNR=62						
ASAR	**Alice Springs**	**47.72**	**254**	P	**P**	**12 09 09.4**	**0.0**
	22nm,0.6s,mb5.0,baz=91,slow=7.7,SNR=162						
KAKA	**Kakadu**	**50.67**	**268**	*eP*	**P**	**12 09 30.6**	**-1.3**
	2.6nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**56.05**	**260**	*eP*	**P**	**12 10 10.9**	**-0.2**
	4.4nm,0.4s,mb4.6						
QSPA	**South Pole Qui**	**72.00**	**180**	P	**P**	**12 11 54.7**	**+0.6**
	2.1nm,1.0s,mb3.8,baz=60,slow=6.4,SNR=4.3						

*ISCJB **15** 12:01:01.5±3.5, 14°.44S±0°.08×76°.0W±0°.1, h1km±23km, mb4.1/13, MS3.7/6, Error ellipse: s-maj=24.2km s-min=8.5km az=151.1*
*IDC **15** 12:01:02.9±0.8, 14°.47S×76°.05W, h0km, mb4.0/10, mb1 4.2/14, mb1mx4.1/21, mbtmp4.0/14, ML3.7/4, MS3.5/9, Ms1 3.5/9, ms1mx3.4/24, Error ellipse: s-maj=30.8km s-min=14.9km az=61.0*
*NEIC **15** 12:01:04.8±0.5, 14°.38S×75°.92W, h10km, mb4.5/3, Error ellipse: s-maj=17.8km s-min=7.4km az=53.0*
ISC 15 12:01:04.2±3.7, 14°.40S±0°.08×75°.9W±0°.1, h6km±23km, n31, σ1°00/27, mb4.1/13, MS3.7/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.56**	**339**	Pn	**Pn**	**12 01 45.2**	**-1.0**
	38nm,0.3s,baz=155,slow=16,SNR=31						
NNA				Sn	**Sn**	**12 02 17.5**	**-0.2**
	107nm,0.3s,baz=184,slow=16,SNR=10						
NNA				LR	LR	12 02 54.4	
	comp=Z,642nm,18.8s,baz=157,slow=43						
ATAH	**Atahualpa**	**7.74**	**341**	Pn	**Pn**	**12 02 56.8**	**-0.7**
	0.8nm,0.3s,baz=23,slow=7.7,SNR=4.5						
ATAH				Sn	**Sn**	**12 04 30.3**	**+4.7**
	2.5nm,0.3s,baz=137,slow=19,SNR=2.2						
LPAZ	**La Paz**	**7.75**	**105**	Pn	**Pn**	**12 03 04.3**	**+6.8**
	10nm,0.3s,baz=279,slow=7.2,SNR=234						
LPAZ				LR	LR	12 05 55.3	
	comp=Z,85nm,18.7s,baz=286,slow=37						
LVC	**Limon Verde**	**10.53**	**142**	*ePn*	**Pn**	**12 03 36.5**	**+0.8**
	24nm,0.7s						
LVC				*e*Sn	**Sn**	**12 05 31.1**	**-2.9**
SIV	**San Ignacio**	**14.42**	**98**	Pn	**Pn**	**12 04 28.0**	**-0.9**
	0.4nm,0.3s,baz=276,slow=16,SNR=13						
CFAA	**Coronel Fontan**	**18.52**	**159**	P	**Pn**	**12 05 21.6**	**+0.3**
	0.1nm,0.3s,baz=322,slow=11,SNR=7.9						
CFAA				LR	LR	12 10 57.1	
	comp=Z,16nm,19.0s,baz=325,slow=32						
CPUP	**Villa Florida**	**21.06**	**127**	P	**P**	**12 05 50.2**	**+1.2**
	2.5nm,0.6s,mb3.8,baz=286,slow=8.9,SNR=11						
CPUP				LR	LR	12 15 39.6	
	comp=Z,153nm,18.5s,MS3.4,baz=82,slow=42						
CPUP	**Villa Florida**	**21.06**	**127**	P	**P**	**12 05 50.2**	**+1.2**
CPUP				LR	LR	12 15 39.6	
SDV	**Santo Domingo**	**23.72**	**13**	P	**P**	**12 06 18.6**	**+1.4**
	8.5nm,0.6s,mb4.4,baz=200,slow=9.5,SNR=16						
SDV	**Santo Domingo**	**23.72**	**13**	*eP*	**P**	**12 06 18.1**	**+0.8**
JTS	**JuntasAbangare**	**26.11**	**339**	LR	LR	12 16 40.9	
	comp=Z,128nm,19.4s,MS3.5,baz=235,slow=36						
PCRV	**Puerto La Cruz**	**26.86**	**25**	LR	LR	12 18 17.9	
	comp=Z,188nm,18.0s,MS3.7,baz=202,slow=38						
TXAR	**Lajitas Array**	**51.07**	**328**	P	**P**	**12 10 06.5**	**-1.0**
	0.6nm,0.7s,mb3.7,baz=150,slow=9.1,SNR=5.4						
SDCO	**Great Sand Dun**	**58.84**	**333**	*eP*	**P**	**12 11 03.1**	**-0.5**
	2.2nm,0.9s,mb4.2						
DUG	**Dugway**	**64.23**	**329**	*eP*	**P**	**12 11 39.1**	**-0.9**
	3.9nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**64.73**	**333**	P	**P**	**12 11 44.6**	**+1.5**
	0.3nm,0.3s,mb3.8,baz=128,slow=7.1,SNR=5.0						
NVAR	**Mina Array Bea**	**65.84**	**325**	P	**P**	**12 11 51.0**	**+0.5**
	0.2nm,0.4s,mb3.5,baz=134,slow=6.4,SNR=4.0						
RRI2	**Red Ridge**	**65.97**	**332**	*eP*	**P**	**12 11 54.0**	**+2.7**
	2.1nm,0.7s,mb4.3						
ULM	**Lac du Bonnet**	**66.72**	**346**	P	**P**	**12 11 56.5**	**+0.7**
	1.2nm,0.4s,mb4.2,baz=111,slow=6.7,SNR=2.7						
ULM				LR	LR	12 40 32.6	
	comp=Z,57nm,18.4s,MS3.8,baz=84,slow=36						
DBIC	**Dimbokro**	**73.51**	**78**	P	**P**	**12 12 38.6**	**+0.2**
	3.1nm,0.7s,mb4.3,baz=258,slow=7.7,SNR=5.0						
DBIC				LR	LR	12 43 36.4	
	comp=Z,97nm,19.1s,MS4.1,baz=204,slow=35						
EDM	**Edmonton**	**74.62**	**338**	*eP*	**P**	**12 12 44.0**	**0.0**
QSPA	**South Pole Qui**	**75.75**	**180**	P	**P**	**12 12 49.7**	**-0.5**
	1.4nm,0.7s,mb4.0,baz=88,slow=1.9,SNR=6.4						
TOA0	**Torodi Ar. Sit**	**81.57**	**74**	*eP*	**P**	**12 13 23.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**81.57**	**74**	P	**P**	**12 13 23.9**	**+0.5**
	9.6nm,0.7s,mb4.8,baz=268,slow=5.2,SNR=34						
TORD	**Torodi Ar. Bea**	**81.57**	**74**	P	**P**	**12 13 23.9**	**+0.5**
YKA	**Yellowknife Ar**	**82.39**	**343**	P	**P**	**12 13 25.4**	**-1.3**
	0.5nm,0.6s,mb3.6,baz=145,slow=6.0,SNR=14						
ESDC	**Sonseca Array**	**85.73**	**47**	LR	LR	12 51 44.7	
	comp=Z,45nm,18.1s,MS3.9,baz=270,slow=35						
ASAR	**Alice Springs**	**132.23**	**218**	PKP	PKPdf	12 20 18.4	-1.6
	0.2nm,0.5s,baz=109,slow=1.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**137.74**	**17**	PKP	PKPdf	12 20 28.8	-0.4
	0.7nm,0.3s,baz=351,slow=4.5,SNR=2.8						
KURK	**Kurchatov**	**138.33**	**24**	PKP	PKPdf	12 20 30.9	+0.5
	0.3nm,0.3s,baz=302,slow=2.1,SNR=3.0						
SONM	**Songino Array**	**146.61**	**357**	PKPbc	PKPbc	12 20 46.4	-0.2
	1.7nm,0.6s,baz=323,slow=2.8,SNR=5.9						

IDC 15 12:06:56.7±1.4, 31°.61N×104°.30E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=45.4km s-min=26.8km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.29**	**67**	P	P	12 11 33.9	-0.2
	1.9nm,0.7s,baz=254,slow=10,SNR=10						
MKAR	**Makanchi Array**	**22.71**	**318**	P	P	12 12 00.0	0.0
	0.4nm,0.7s,baz=132,slow=9.9,SNR=5.8						
WRA	**Warramunga Arr**	**58.80**	**147**	P	P	12 16 57.1	+0.2
	1.9nm,0.5s,baz=340,slow=7.9,SNR=18						
ASAR	**Alice Springs**	**61.83**	**149**	P	P	12 17 17.5	-0.1
	0.7nm,0.5s,baz=339,slow=6.7,SNR=17						

*ISCJB **15** 12:10:21.9±0.3, 31°.34N±0°.03×103°.78E±0°.03, h10km, mb4.2/31, MS3.4/4, Error ellipse: s-maj=4.5km s-min=4.0km az=149.8*
*IDC **15** 12:10:21.7±0.7, 31°.26N×103°.76E, h0km, mb4.2/20, mb1 4.2/21, mb1mx4.1/32, mbtmp4.2/21, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=26.5km s-min=14.5km az=48.0*
*NEIC **15** 12:10:23.4±0.3, 31°.25N×103°.77E, h10km, mb4.4/8, Error ellipse: s-maj=8.2km s-min=6.5km az=47.0*
*BJI **15** 12:10:23.9, 31°.33N×103°.87E, h10km, mB4.7/11, mb4.4/17, ML4.3/18, Ms4.2/16, Ms7 3.7/14*
ISC 15 12:10:24.4±0.2, 31°.36N±0°.02×103°.69E±0°.03, h10km, n71, σ1°02/83, mb4.2/31, MS3.4/4, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**172**	Pg	**Pg**	**12 10 34.3**	**+1.0**
CD2				Sg	**Sg**	**12 10 41.3**	**+2.0**
CD2	comp=N,20μm,0.8s			smax			
LZH	**Lanzhou**	**4.71**	**2**	*ePn*	**Pb**	**12 11 42.8**	**-4.3**
LZH				Pg	**Pg**	**12 11 57.3**	**+2.6**
LZH				Sn	**Sn**	**12 12 36.3**	**+6.1**
LZH				Sg	**Sg**	**12 12 55.3**	**-0.4**
LZH	comp=N,160nm,0.6s			smax			
LZH	comp=E,270nm,0.7s			smax			
LZH	comp=N,910nm,5.6s			LR	LR		
LZH	comp=Z,990nm,8.0s			LR	LR		
ENH	**Enshi**	**5.11**	**101**	*ePn*	**Pn**	**12 11 38.6**	**-2.4**
ENH				*e*Sg	**Sg**	**12 13 01.6**	**-6.8**
XAN	**Xi'an**	**5.16**	**57**	Pn	**Pn**	**12 11 44.5**	**+2.9**
XAN				Pg	**Pb**	**12 11 55.8**	**+1.1**
XAN				Sn	**Sn**	**12 12 37.3**	**-3.9**
XAN				Sg	**Sb**	**12 12 58.0**	**+1.3**
XAN	comp=N,1μm,0.6s			smax			
XAN	comp=E,430nm,0.8s			smax			
XAN	comp=N,280nm,9.7s			LR	LR		
XAN	comp=E,250nm,5.9s			LR	LR		
XAN	comp=Z,290nm,10.2s			LR	LR		
GYA	**Guiyang**	**5.54**	**151**	Pn	**Pn**	**12 11 47.4**	**+0.5**
GYA				Sn	**Sn**	**12 12 48.8**	**-1.9**
GYA	comp=N,330nm,0.7s			smax			
GYA	comp=E,410nm,1.0s			smax			
KMI	**Kunming**	**6.27**	**188**	Pn	**Pn**	**12 11 58.4**	**+1.4**
KMI				Sn	**Sn**	**12 13 07.4**	**-1.3**
KMI	comp=N,97nm,1.0s			smax			
KMI	comp=E,140nm,0.6s			smax			
KMI	comp=N,570nm,6.7s			LR	LR		
KMI	comp=E,1μm,6.9s			LR	LR		
KMI	comp=Z,560nm,12.4s			LR	LR		
GTA	**Gaotai**	**8.63**	**340**	*eP*	**Pn**	**12 12 26.9**	**-2.3**
GTA				pP		12 12 30.9	
GTA				sP		12 12 33.6	
GTA				S	**Sn**	**12 14 04.5**	**-2.1**
GTA				sS		12 14 08.9	
GTA	comp=Z,3.0nm,1.0s			pmax	pmax		
GTA	comp=Z,71nm,4.2s			pmax	pmax		
GTA	comp=N,580nm,11.6s			LR	LR		
GTA	comp=E,500nm,15.8s			LR	LR		
GTA	comp=Z,620nm,13.7s			LR	LR		
WHN	**Wuhan**	**9.20**	**92**	P	**Pn**	**12 12 37.3**	**+0.2**
WHN				S	**Sn**	**12 14 12.1**	**-8.5**
WHN	comp=N,3μm,5.8s			LR	LR		
WHN	comp=E,870nm,4.1s			LR	LR		
WHN	comp=Z,1μm,8.1s			LR	LR		
LSA	**Lhasa**	**10.94**	**264**	P	**Pn**	**12 13 04.8**	**+3.9**
LSA	comp=E,480nm,12.1s			LR	LR		
LSA	comp=Z,520nm,12.6s			LR	LR		
LSA	**Lhasa**	**10.94**	**264**	*ePn*	**Pn**	**12 13 02.3**	**+1.4**
HHC	**Hu-ho-hao-te**	**11.40**	**32**	*eP*	**Pn**	**12 13 07.8**	**+0.5**
HHC				pP		12 13 12.1	
HHC				PP		12 13 17.1	
HHC				S	**Sn**	**12 15 14.8**	**+0.1**
HHC				sS		12 15 21.3	
HHC				SS		12 15 29.1	
HHC	comp=Z,23nm,1.1s			pmax	pmax		
HHC	comp=Z,130nm,5.2s			pmax	pmax		
HHC	comp=N,260nm,4.6s			LR	LR		
HHC	comp=E,280nm,4.0s			LR	LR		
HHC	comp=Z,320nm,5.7s			LR	LR		
SHL	**Shillong**	**11.88**	**244**	*eP*	**Pn**	**12 13 15.0**	**+1.2**
NJ2	**Nanjing**	**12.94**	**83**	*eP*	**Pn**	**12 13 28.3**	**0.0**
NJ2				pP		12 13 31.4	
NJ2				sP		12 13 34.5	
NJ2				PP		12 13 39.0	
NJ2				S	**Sn**	**12 15 52.3**	**0.0**
NJ2				sS		12 15 58.4	
NJ2	comp=Z,20nm,0.6s			pmax	pmax		
NJ2	comp=Z,70nm,3.8s			pmax	pmax		
NJ2	comp=N,400nm,10.3s			LR	LR		
NJ2	comp=E,760nm,9.3s			LR	LR		
NJ2	comp=Z,170nm,8.2s			LR	LR		
CM31	**Chiang Mai Arr**	**13.55**	**200**	*ePn*	**Pn**	**12 13 33.0**	**-3.7**
	comp=Z,5.4nm,0.4s						
TAPN	**Taplejung**	**14.49**	**258**	*eP*	**Pn**	**12 13 50.1**	**+0.6**
ODAN	**Odare**	**14.93**	**257**	*eP*	**Pn**	**12 13 55.5**	**0.0**
	comp=Z,34nm,0.8s						
RAMN	**Ramite**	**15.56**	**258**	*eP*	**Pn**	**12 14 03.6**	**-0.2**
JIRN	**Jiri**	**15.67**	**261**	*eP*	**Pn**	**12 14 05.6**	**+0.3**
	comp=Z,40nm,0.8s						
GUN	**Gumba**	**15.86**	**262**	*eP*	**Pn**	**12 14 08.0**	**+0.3**
	comp=Z,43nm,0.4s						
PKI	**Pulchoki**	**16.36**	**261**	*eP*	**Pn**	**12 14 13.7**	**-0.4**
	comp=Z,40nm,0.6s						
PKIN	**Phulchoki**	**16.37**	**261**	*eP*	**Pn**	**12 14 13.6**	**-0.7**
	comp=Z,29nm,0.6s						
KKN	**Kakani**	**16.40**	**262**	*eP*	**Pn**	**12 14 14.4**	**-0.3**
	comp=Z,41nm,0.5s						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**12 14 17.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=5.9						
SONM				LR	LR	12 21 25.3	
	comp=Z,196nm,19.2s,baz=270,slow=40						
DMN	**Daman**	**16.60**	**262**	*eP*	**Pn**	**12 14 17.1**	**-0.2**
	comp=Z,50nm,0.8s						
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**12 15 05.3**	**-1.2**
	comp=Z,6.4nm,0.7s,baz=260,slow=10,SNR=18						
KSRS				LR	LR	12 22 24.6	
	comp=Z,72nm,20.1s,MS3.0,baz=321,slow=35						
CN2	**Changchun**	**21.18**	**48**	*eP*	**P**	**12 15 13.5**	**+3.7**
CN2				*es*P	sP	12 15 20.0	+6.1
CN2				*e*S	**S**	**12 19 00.8**	**-4.4**
CN2	comp=Z,30nm,0.5s,mb4.9			pmax	pmax		
CN2	comp=Z,200nm,3.0s			pmax	pmax		
CN2	comp=N,200nm,14.0s,MS3.8			LR	LR		
CN2	comp=E,200nm,14.0s,MS3.8			LR	LR		
CN2	comp=Z,200nm,16.0s,MS3.6			LR	LR		
HIA	**Hailar**	**21.59**	**29**	P	**P**	**12 15 14.0**	**-0.2**
DDI	**Dehra Dun**	**22.02**	**274**	*ex*	x	12 15 24.0	
MK31	**Makanchi Array**	**22.55**	**319**	*eP*	**P**	**12 15 25.2**	**+0.8**
MKAR	**Makanchi Array**	**22.55**	**319**	P	**P**	**12 15 25.4**	**+0.9**
	comp=Z,5.7nm,0.7s,mb4.1,baz=116,slow=11,SNR=22						
MDJ	**Mudanjiang**	**24.21**	**50**	P	**P**	**12 15 44.6**	**+3.6**
MDJ	comp=Z,14nm,1.4s,mb4.2			pmax	pmax		
MDJ	comp=Z,67nm,4.4s			pmax	pmax		
TKM2	**Tokmak 2**	**25.07**	**305**	*eP*	**P**	**12 15 50.4**	**+1.5**
	comp=Z,2.9nm,0.8s,mb3.9						
UCH	**Uchtor**	**25.64**	**303**	*eP*	**P**	**12 15 54.4**	**+0.4**
	comp=Z,5.7nm,1.0s,mb4.1						
AAK	**Ala-Archa**	**25.76**	**304**	LR	LR	12 27 48.6	
	comp=Z,124nm,19.7s,MS3.4,baz=274,slow=40						
ZALV	**Zalesovo Beam**	**26.33**	**334**	P	**P**	**12 16 00.9**	**+0.7**
	comp=Z,6.0nm,0.7s,mb4.2,baz=132,slow=8.8,SNR=14						
KURK	**Kurchatov**	**26.82**	**323**	P	**P**	**12 16 05.5**	**+0.8**
	comp=Z,2.2nm,0.4s,mb4.0,baz=129,slow=8.8,SNR=13						
JHJ	**Hachijo jima 2**	**30.49**	**

comp=Z,2.1nm,0.7s,mb4.3,baz=74,slow=6.6,SNR=8.8
IDI Anoyia 64.29 297 P **P** **12 20 58.5 -1.5**
comp=Z,2.2nm,0.4s,mb4.6,baz=48,slow=18,SNR=2.9
GERES GERESS Array B 67.11 314 P **P** **12 21 18.3 +0.3**
comp=Z,0.3nm,0.4s,mb3.7,baz=63,slow=9.3,SNR=4.2
COLA College 69.35 26 *e*P **P** **12 21 31.2 -0.6**
comp=Z,5.2nm,1.1s,mb4.4
DAVOX Davos/Dischmat 70.29 313 P **P** **12 21 37.5 -0.4**
comp=Z,1.4nm,0.4s,mb4.3,baz=144,slow=19,SNR=3.2
CDF Champ du Feu 71.18 316 *e*P **P** **12 21 43.0 -0.3**
LPG La Plagne 72.81 313⇑*i*P **P** **12 21 53.6 +0.5**
comp=Z,6.7nm,0.6s,mb4.4
LPG La Plagne 72.81 313 *i*P **P** **12 21 53.6 +0.5**
comp=Z,3.3nm,0.6s,mb4.4
LPL La Plagne 72.81 313 *e*P **P** **12 21 53.6 +0.5**
comp=Z,5.6nm,0.4s,mb4.5
LPL La Plagne 72.81 313 *e*P **P** **12 21 53.6 +0.5**
comp=Z,2.8nm,0.4s,mb4.5
SMF Signal de Mont 74.06 315 *e*P **P** **12 21 59.9 -0.6**
comp=Z,3.1nm,0.5s,mb4.2
SMF Signal de Mont 74.06 315 *e*P **P** **12 21 59.9 -0.6**
comp=Z,1.5nm,0.4s,mb4.3
TCF Toulx Ste Croi 75.22 315 *e*P **P** **12 22 07.0 -0.2**
CAF Calviac 75.99 314 *e*P **P** **12 22 11.9 +0.3**
YKA Yellowknife Ar 81.55 17 P **P** **12 22 40.8 -1.0**
comp=Z,0.6nm,0.6s,mb3.7,baz=329,slow=5.3,SNR=15
TORD Torodi Ar. Bea 93.21 287 P **P** **12 23 38.7 -0.8**
comp=Z,0.8nm,0.7s,mb4.3,baz=66,slow=4.4,SNR=5.1
TORD Torodi Ar. Bea 93.21 287 P **P** **12 23 38.7 -0.8**

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*NEIC **15** 12:35:32.5, 17°.34N×99°.73W, h48km, MD3.6(MEX), After MEX.*
MEX 15 12:35:32.5±0.9, 17°.34N×99°.73W, h48km±16km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.50**	**200**	*i* P	Pn	12 35 41.8	-1.9
ACX				*i* S	Sn	12 35 50.1	-1.5
ACX	**Acapulco**	**0.50**	**200**	*i* P	Pn	12 35 41.8	-1.9
ACX				*i* S	Sn	12 35 50.1	-1.5
CAIG	**El Cayaco**	**0.59**	**240**	*e*P	Pn	12 35 42.6	-2.1
CAIG				*i* S	Sn	12 35 51.7	-1.8
CAIG	**El Cayaco**	**0.59**	**240**	*e*P	Pn	12 35 42.6	-2.1
CAIG				*i* S	Sn	12 35 51.7	-1.8
PLIG	**Platanillo**	**1.07**	**12**	*e*P	Pn	12 35 49.9	-1.2
PLIG				*i* S	Sn	12 36 03.0	-1.9
PLIG	**Platanillo**	**1.07**	**12**	*e*P	Pn	12 35 49.9	-1.2
PLIG				*i* S	Sn	12 36 03.0	-1.9
ZIIG	**Zihuatanejo**	**1.67**	**279**	*i* P	Pn	12 35 58.3	-1.0
ZIIG				*i* S	Sn	12 36 17.8	-1.9
ZIIG	**Zihuatanejo**	**1.67**	**279**	*i* P	Pn	12 35 58.3	-1.0
ZIIG				*i* S	Sn	12 36 17.8	-1.9
PNIG	**Pinotepa**	**1.81**	**121**	*e*P	Pn	12 36 00.5	-0.7
PNIG				*i* S	Sn	12 36 20.1	-2.7
PNIG	**Pinotepa**	**1.81**	**121**	*e*P	Pn	12 36 00.5	-0.7
PNIG				*i* S	Sn	12 36 20.1	-2.7
MZVM		**1.90**	**15**	*e*P	Pn	12 36 00.8	-1.7
MZVM				*i* S	Sn	12 36 21.0	-4.2
UTMO	**Huajuapan**	**1.90**	**75**	*i* P	Pn	12 36 02.0	-0.5
UTMO				*i* S	Sn	12 36 22.8	-2.6
PPM	**Popocatepetl**	**2.01**	**31**	*i* P	Pn	12 36 01.8	-2.3
PPM				*i* S	Sn	12 36 26.7	-1.3
PPM	**Popocatepetl**	**2.01**	**31**	*i* P	Pn	12 36 01.8	-2.3
PPM				*i* S	Sn	12 36 26.7	-1.3
IIO	**Organos**	**2.44**	**23**	*i* P	Pn	12 36 11.5	+1.7
IIO				*i* S	Sn	12 36 39.9	+1.5
IIO	**Organos**	**2.44**	**23**	*i* P	Pn	12 36 11.5	+1.7
IIO				*i* S	Sn	12 36 39.9	+1.5

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*ISCJB **15** 12:35:40.9±0.8, 38°.88N±0°.05×37°.07E±0°.05, h10km, Error ellipse: s-maj=7.5km s-min=5.4km az=172.5*
*CSEM **15** 12:35:40.7±0.4, 38°.89N×37°.08E, h2km, MD2.8, Error ellipse: s-maj=10.7km s-min=7.0km az=165.0*
*ISK **15** 12:35:41.6, 38°.81N×37°.00E, h5km, MD2.8*
*DDA **15** 12:35:42.5, 38°.75N×36°.97E, h7km±3km, Md2.9*
ISC 15 12:35:42.8±0.7, 38°.79N±0°.05×36°.97E±0°.04, h2km±16km, n16, σ0°.77/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	**SarD1z-Kayseri**	**0.24**	**243**	*e*PG	**Pg**	**12 35 54.0**	**+6.6**
SARI				*e*SG	**Sg**	**12 36 02.7**	**+12**
SARI	**SarD1z-Kayseri**	**0.24**	**243**	*e*Pg	**Pg**	**12 35 54.0**	**+6.6**
SARI				*e*Sg	**Sg**	**12 36 02.7**	**+12**
PINB	**Pinarbasi**	**0.46**	**256**	*e*P	**Pg**	**12 35 52.1**	**+0.5**
PINB				*e*S	**Sg**	**12 35 57.7**	**+0.1**
PINB	**Pinarbasi**	**0.46**	**256**	*e*P	**Pg**	**12 35 52.1**	**+0.5**
PINB				*e*S	**Sg**	**12 35 57.7**	**+0.2**
DARE	**Darende-Malaty**	**0.67**	**76**	*e*PG	**Pg**	**12 35 50.7**	**-5.0**
DARE				*e*SG	**Sg**	**12 35 57.5**	**-6.9**
DARE	**Darende-Malaty**	**0.67**	**76**	*e*Pg	**Pg**	**12 35 50.7**	**-4.9**
DARE				*e*Sg	**Sg**	**12 35 57.5**	**-6.8**
AKCD	**Akcadag**	**0.89**	**123**	*i* P	**Pg**	**12 35 58.9**	**-1.1**
AKCD				*i* S	**Sg**	**12 36 11.0**	**-0.4**
AKCD	**Akcadag**	**0.89**	**123**	*i* P	**Pg**	**12 35 58.8**	**-1.1**
AKCD				*i* S	**Sg**	**12 36 11.0**	**-0.5**
SVSK	**Karacayir**	**1.13**	**1**	*e*PN	**Pg**	**12 36 03.0**	**-1.4**
SVSK	**Karacayir**	**1.13**	**1**	*e*Pn	**Pg**	**12 36 03.0**	**-1.4**
KEMA	**Kemaliye**	**1.28**	**67**	*i* P	**Pg**	**12 36 07.7**	**+0.4**
KEMA				*i* S	**Sg**	**12 36 25.3**	**+1.5**
KEMA	**Kemaliye**	**1.28**	**67**	*i* P	**Pg**	**12 36 07.7**	**+0.4**
KEMA				*i* S	**Sg**	**12 36 25.3**	**+1.4**
ANDN	**Andirin**	**1.30**	**202**	*i* P	**Pg**	**12 36 08.1**	**+0.3**
ANDN				*i* S	**Sg**	**12 36 24.8**	**+0.2**
ANDN	**Andirin**	**1.30**	**202**	*i* P	**Pg**	**12 36 08.1**	**+0.3**
ANDN				*i* S	**Sg**	**12 36 24.8**	**+0.1**
GZT	**Gaziantep**	**1.50**	**162**	*e*P	Px	12 36 33.0	
GZT				*i* S	Sx	12 36 45.7	
KOZT	**Kozan**	**1.59**	**215**	*e*PN	**Pn**	**12 36 11.9**	**0.0**

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*ISCJB **15** 12:54:11.5±0.5, 32°.48N±0°.04×105°.15E±0°.05, h10km, mb3.6/7, Error ellipse: s-maj=6.6km s-min=5.2km az=22.4*
*IDC **15** 12:54:12.0±1.0, 32°.39N×105°.05E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/28, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=39.7km s-min=17.8km az=56.0*
*BJI **15** 12:54:13.9, 32°.35N×105°.07E, h19km, ML3.7/11, Ms3.7/3, Ms7 3.6/4*
ISC 15 12:54:13.6±0.5, 32°.45N±0°.04×105°.08E±0°.05, h10km, n14, σ1.9±10/23, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.90**	**217**	Pg	**Pn**	**12 54 45.5**	**-0.6**
CD2				Sg	**Sn**	**12 55 08.5**	**-1.7**
CD2				smax			
	comp=N,5μm,0.7s						
XAN	**Xi'an**	**3.59**	**63**	Pn	**Pn**	**12 55 13.8**	**+4.5**
XAN				Pg	**Pg**	**12 55 20.9**	**-1.5**
XAN				Sn	**Sn**	**12 55 54.8**	**+3.1**
XAN				Sg	**Sg**	**12 56 08.0**	**-0.9**
XAN				smax			
	comp=N,290nm,0.7s						
XAN				smax			
	comp=E,140nm,0.5s						
LZH	**Lanzhou**	**3.77**	**345**	*e*Pn	**Pn**	**12 55 15.3**	**+3.5**
LZH				Pg	**Pg**	**12 55 25.3**	**-0.6**
LZH				Sn	**Sn**	**12 56 02.4**	**+6.2**
LZH				Sg	**Sg**	**12 56 14.5**	**-0.3**
LZH				smax			
	comp=N,440nm,0.8s						
LZH				smax			
	comp=E,560nm,0.6s						
LZH				LR	LR		
	comp=E,630nm,4.6s						
LZH				LR	LR		
	comp=Z,720nm,6.0s						
GYA	**Guiyang**	**6.13**	**167**	Pg	**Pn**	**12 55 48.6**	**+4.4**
GYA				Sg	**Sn**	**12 56 56.3**	**+1.9**
GYA				smax			
	comp=N,130nm,0.6s						
GYA				smax			
	comp=E,100nm,0.7s						
WHN	**Wuhan**	**8.14**	**101**	P	**Pn**	**12 56 11.3**	**-0.5**
WHN				S	**Sn**	**12 57 38.3**	**-5.6**
WHN				LR	LR		
	comp=N,720nm,5.3s						
WHN				LR	LR		
	comp=E,420nm,3.9s						
WHN				LR	LR		
	comp=Z,930nm,5.4s						
SONM	**Songino Array**	**15.40**	**3**	Pn	**Pn**	**12 57 52.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=4.9						
KSRS	**Korea Array**	**19.36**	**69**	P	**Pn**	**12 58 40.8**	**+0.3**
	baz=260,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**22.55**	**316**	P	**P**	**12 59 13.9**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.2,baz=114,slow=12,SNR=7.7						
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**12 59 46.0**	**+0.5**
	comp=Z,1.0nm,0.4s,mb3.7,baz=138,slow=12,SNR=4.4						
KURK	**Kurchatov**	**26.70**	**321**	P	**P**	**12 59 53.1**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.2,baz=124,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**13 03 55.6**	**+1.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=96,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	**59.14**	**148**	P	**P**	**13 04 14.3**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=338,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**13 04 35.6**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.7,baz=331,slow=6.6,SNR=6.2						
YKA	**Yellowknife Ar**	**80.17**	**18**	P	**P**	**13 06 22.5**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=326,slow=5.2,SNR=7.3						

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*ISCJB **15** 13:04:03.3±0.8, 32°.80N±0°.02×105°.52E±0°.03, h3km±5km, mb4.5/41, MS3.7/10, Error ellipse: s-maj=4.3km s-min=3.9km az=150.2*
*IDC **15** 13:04:04.2±0.7, 32°.68N×105°.52E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.2/28, mbtmp4.1/17, ML3.9/2, MS3.5/9, Ms1 3.5/9, ms1mx3.1/50, Error ellipse: s-maj=27.1km s-min=14.4km az=43.0*
*BJI **15** 13:04:04.8, 32°.74N×105°.62E, h10km, mB4.6/13, mb4.5/22, ML4.7/21, Ms4.3/29, Ms7 4.1/24*
*NEIC **15** 13:04:06.3±0.3, 32°.84N×105°.59E, h10km, mb4.8/20, Error ellipse: s-maj=7.6km s-min=6.1km az=222.0*
*MOS **15** 13:04:07.5±1.0, 32°.78N×105°.61E, h34km, mb4.7/29, Error ellipse: s-maj=11.3km s-min=6.7km az=111.5*
ISC 15 13:04:06.2±0.8, 32°.76N±0°.02×105°.48E±0°.03, h9km±5km, n135, σ1.9±12/149, mb4.5/41, MS3.7/10, 15C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.35**	**219**	Pn	**Pn**	**13 04 46.4**	**+1.4**
CD2				Pg	**Pg**	**13 04 50.8**	**-0.5**
CD2				Sg	**Sg**	**13 05 21.9**	**+0.1**
CD2				smax			
	comp=N,20μm,0.6s						
XAN	**Xi'an**	**3.15**	**65**	Pn	**Pn**	**13 04 55.4**	**-0.6**
XAN				Sn	**Sn**	**13 05 29.9**	**-3.8**
XAN				Sg	**Sg**	**13 05 40.0**	**-7.3**
XAN				smax			
	comp=N,3μm,0.6s						
XAN				smax			
	comp=E,1μm,1.0s						
XAN				LR	LR		
	comp=N,5μm,9.2s						
XAN				LR	LR		
	comp=E,1μm,8.2s						
XAN				LR	LR		
	comp=Z,1μm,8.5s						
LZH	**Lanzhou**	**3.59**	**338**	Pn	**Pn**	**13 05 04.8**	**+2.8**
LZH				Pg	**Pg**	**13 05 14.3**	**-0.6**
LZH				Sg	**Sg**	**13 06 00.4**	**-1.0**
LZH				smax			
	comp=N,3μm,1.0s						
LZH				smax			
	comp=E,5μm,1.0s						
LZH				LR	LR		
	comp=E,8μm,5.2s						
LZH				LR	LR		
	comp=Z,10μm,7.0s						
ENH	**Enshi**	**4.22**	**125**	*e*Pn	**Pn**	**13 05 11.1**	**+0.4**
ENH				*e*S	**Sb**	**13 06 14.0**	**+2.3**
GYA	**Guiyang**	**6.36**	**170**	Pn	**Pn**	**13 05 39.9**	**-0.2**
GYA				Sn	**Sn**	**13 06 50.8**	**-2.1**
GYA				smax			
	comp=N,490nm,1.0s						
GYA				smax			
	comp=E,550nm,1.0s						
GYA				LR	LR		
	comp=N,2μm,4.3s						
GYA				LR	LR		
	comp=E,2μm,4.0s						
GYA				LR	LR		
	comp=Z,2μm,5.2s						
WHN	**Wuhan**	**7.88**	**104**	Pn	**Pn**	**13 06 02.8**	**+1.9**
WHN				Sn	**Sn**	**13 07 24.3**	**-5.9**
WHN				LR	LR		
	comp=N,5μm,5.6s						
WHN				LR	LR		
	comp=E,4μm,4.8s						
WHN				LR	LR		
	comp=Z,4μm,3.0s						
KMI	**Kunming**	**7.98**	**198**	P	**Pn**	**13 06 02.3**	**0.0**
KMI				S	**Sn**	**13 07 30.9**	**-1.8**
KMI				smax			
	comp=N,63nm,1.5s						
KMI				smax			
	comp=E,72nm,1.3s						
KMI				LR	LR		
	comp=N,680nm,7.3s						
KMI				LR	LR		
	comp=E,1μm,7.6s						
KMI				LR	LR		
	comp=Z,670nm,10.1s						
GTA	**Gaotai**	**8.07**	**327**	⇑P	**Pn**	**13 06 04.8**	**+1.3**
GTA				pP		13 06 08.6	
GTA				sP		13 06 10.8	
GTA				S	**Sn**	**13 07 36.0**	**+1.1**
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
GTA				pmax	pmax		
	comp=Z,89nm,3.6s						
GTA				LR	LR		
	comp=N,2μm,11.9s						
GTA				LR	LR		
	comp=E,2μm,10.4s						
GTA				LR	LR		
	comp=Z,1μm,12.2s						
BTO	**Baotou**	**8.64**	**24**	*e*P	**Pn**	**13 06 10.4**	**-0.9**
BTO				S	**Sn**	**13 07 47.6**	**-1.3**
BTO				LR	LR		
	comp=N,320nm,8.0s						
BTO				LR	LR		
	comp=E,170nm,2.8s						
HHC	**Hu-ho-hao-te**	**9.43**	**29**	*e*P	**Pn**	**13 06 24.4**	**+2.2**
HHC				pP		13 06 31.5	
HHC				sP		13 06 36.4	
HHC				S	**Sn**	**13 08 10.9**	**+2.5**
HHC				sS		13 08 21.5	
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,5.1s						
HHC				LR	LR		
	comp=E,900nm,4.5s						
HHC				LR	LR		
	comp=Z,990nm,5.9s						
TIA	**Tai'an**	**10.21**	**67**	*e*P	**Pn**	**13 06 32.3**	**-0.6**
TIA				LR	LR		
	comp=N,420nm,8.0s						
NJ2	**Nanjing**	**11.33**	**90**	*e*P	**Pn**	**13 06 50.5**	**+2.3**
NJ2				pP		13 06 54.4	
NJ2				sP		13 06 57.1	
NJ2				S	**Sn**	**13 08 56.3**	**+1.4**
NJ2				sS		13 09 02.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.6s						
NJ2				LR	LR		
	comp=N,640nm,13.6s						
NJ2				LR	LR		
	comp=E,830nm,17.9s						
NJ2				LR	LR		
	comp=Z,4μm,15.2s						
LSA	**Lhasa**	**12.64**	**260**	P	**Pn**	**13 07 09.6**	**+3.4**
LSA				LR	LR		
	comp=N,540nm,20.9s						
LSA				LR	LR		
	comp=E,470nm,11.9s						
LSA				LR	LR		
	comp=Z,560nm,12.7s						
LSA	**Lhasa**	**12.64**	**260**	*e*P	**Pn**	**13 07 09.3**	**+3.1**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**12.64**	**260**	*e*Pn	**Pn**	**13 07 09.3**	**+3.1**
	comp=Z,12nm,0.8s						
SHL	**Shillong**	**13.87**	**242**	*e*P	**Pn**	**13 07 22.0**	**-1.0**
SHL				*e*S	Sx	13 11 35.0	
QZH	**Quanzhou**	**13.87**	**121**	*e*P	**Pn**	**13 07 22.1**	**-0.9**
QZH				S	**Sn**	**13 09 59.5**	**+2.3**
QZH				LR	LR		
	comp=N,2μm,11.1s						
QZH				LR	LR		
	comp=E,3μm,17.4s						
QZH				LR	LR		
	comp=Z,2μm,9.4s						
QIZ	**Qiongzhong**	**14.22**	**163**	P	**Pn**	**13 07 24.4**	**-3.4**
QIZ				S	**Sn**	**13 09 59.6**	**-6.2**
QIZ				pmax	pmax		
	comp=Z,16nm,1.7s						
QIZ				LR	LR		
	comp=E,840nm,12.0s						
QIZ				LR	LR		
	comp=Z,610nm,10.9s						
DL2	**Dalian**	**14.46**	**60**	*e*P	**Pn**	**13 07 37.0**	**+6.1**
DL2				S	**Sn**	**13 10 24.0**	**+13**
DL2				pmax	pmax		
	comp=Z,20nm,1.5s						
DL2				LR	LR		
	comp=N,350nm,18.0s						
DL2				LR	LR		
	comp=E,290nm,15.8s						
DL2				LR	LR		
	comp=Z,400nm,14.5s						
CHG	**Chiang Mai**	**15.07**	**204**	⇓P	Px	13 07 51.3	
	comp=Z,24nm,0.8s						
SONM	**Songino Array**	**15.08**	**2**	Pn	**Pn**	**13 07 38.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=183,slow=12,SNR=8.3						
SONM				LR	LR	13 13 00.8	
	comp=Z,35nm,18.8s,baz=214,slow=35						
ULN	**Ulaanbaatar**	**15.14**	**4**	*e*P	**Pn**	**13 07 38.8**	**-1.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.14**	**4**	*e*Pn	**Pn**	**13 07 38.8**	**-1.3**
	comp=Z,9.4nm,0.9s						
CM31	**Chiang Mai Arr**	**15.40**	**204**	*e*Pn	**Pn**	**13 07 44.4**	**+0.6**
	comp=Z,27nm,1.0s						
YHNB	**Yeheng**	**16.09**	**116**	*e*Pn	**Pn**	**13 07 54.4**	**+1.7**
	comp=Z,91nm,1.1s						
SSLB	**Suanglung**	**16.28**	**119**	*e*Pn	**Pn**	**13 07 58.5**	**+3.4**
	comp=Z,53nm,1.0s						
TAPN	**Taplejung**	**16.30**	**255**	*e*P	**Pn**	**13 07 56.0**	**+0.7**
	comp=Z,129nm,1.1s						
BDT	**Bhumibol Dam**	**16.52**	**202**	P	**Pn**	**13 08 02.0**	**+3.8**
	comp=Z,20nm,1.0s						
ODAN	**Odare**	**16.76**	**254**	*e*P	**Pn**	**13 08 01.1**	**-0.1**
	comp=Z,78nm,1.0s						
SNY	**Shenyang**	**16.98**	**53**	⇑P	**Pn**	**13 08 04.8**	**+0.9**
SNY				S	**Sn**	**13 11 09.5**	**-3.3**
SNY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SNY				pmax	pmax		
	comp=Z,91nm,4.3s						
SNY				LR	LR		
	comp=N,360nm,15.2s						
SNY				LR	LR		
	comp=E,410nm,14.7s						
SNY				LR	LR		
	comp=Z,390nm,17.4s						
RAMN	**Ramite**	**17.36**	**255**	*e*P	**Pn**	**13 08 08.1**	**-0.7**
	comp=Z,140nm,1.1s						
JIRN	**Jiri**	**17.43**	**258**	*e*P	**Pn**	**13 08 09.9**	**+0.3**
GUN	**Gumba**	**17.59**	**259**	*e*P	**Pn**	**13 08 12.0**	**+0.4**
	comp=Z,164nm,1.0s						
ZAK	**Zakamensk**	**17.69**	**355**	*e*P	**Pn**	**13 08 13.0**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WMQ	**Urumqi**	**17.77**	**314**	*e*P	**Pn**	**13 08 17.0**	**+3.3**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
WMQ				LR	LR		
	comp=N,690nm,17.0s						
WMQ				LR	LR		
	comp=E,330nm,17.0s						
WMQ				LR	LR		
	comp=Z,240nm,16.0s						
PKI	**Pulchoki**	**18.10**	**259**	*e*P	**Pn**	**13 08 17.8**	**-0.2**
	comp=Z,74nm,0.9s						
PKIN	**Phulchoki**	**18.11**	**259**	*e*P	**Pn**	**13 08 18.2**	**+0.1**
	comp=Z,50nm,0.7s						
KKN	**Kakani**	**18.13**	**259**	*e*P	**Pn**	**13 08 18.0**	**-0.3**
	comp=Z,94nm,1.0s						
DMN	**Daman**	**18.34**	**259**	*e*P	**Pn**	**13 08 20.5**	**-0.4**
	comp=Z,86nm,1.0s						
KSRS	**Korea Array**	**18.94**	**69**	P	**Pn**	**13 08 27.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=257,slow=10.0,SNR=23						
KSRS				LR	LR	13 15 15.1	
	comp=Z,75nm,19.3s,baz=108,slow=36						
KSRS	**Korea Array**	**18.94**	**69**	P	**Pn**	**13 08 27.1**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,75nm,19.3s						
CN2	**Changchun**	**19.11**	**49**	⇓P	**Pn**	**13 08 30.3**	**+0.2**
CN2				*e*pP	pP	13 08 38.3	+6.5
CN2				*e*S	**Sn**	**13 11 58.3**	**-6.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,12.0s						
CN2				LR	LR		
	comp=E,300nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
MK31	**Makanchi Array**	**22.57**	**315**	*e*P	**P**	**13 09 06.6**	**0.0**
MKAR	**Makanchi Array**	**22.57**	**315**	P	**P**	**13 09 07.5**	**+0.9**
	comp=Z,6.8nm,0.8s,mb4.1,baz=118,slow=12,SNR=28						
MKAR	**Makanchi Array**	**22.57**	**315**	P	**P**	**13 09 07.5**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**22.57**	**315**	P	**P**	**13 09 07.5**	**+0.9**
DDI	**Dehra Dun**	**23.48**	**271**	*ex*	**P**	**13 09 15.5**	**-0.9**
KLR	**Kul'dur**	**25.58**	**42**	*e*P	**P**	**13 09 31.2**	**-4.2**
KLR				MLR	MLR		
	comp=E,500nm,11.0s						
KLR				MLR	MLR		
	comp=Z,1μm,11.0s,MS4.6						
BOD	**Bodaibo**	**25.73**	**11**	*e*P	**P**	**13 09 37.3**	**+0.6**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb3.8						
ZAA0	**Zalesovo Array**	**25.79**	**331**	*e*P	**P**	**13 09 36.5**	**-0.8**
ZALV	**Zalesovo Beam**	**25.79**	**331**	P	**P**	**13 09 37.0**	**-0.3**
	comp=Z,0.9nm,0.3s,mb3.7,baz=133,slow=12,SNR=6.4						
ZALV	**Zalesovo Beam**	**25.79**	**331**	P	**P**	**13 09 37.0**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
FRU	**Bishkek**	**26.25**	**301**	P	**P**	**13 09 42.0**	**+0.4**
FRU				*e*		13 10 21.0	
AAK	**Ala-Archa**	**26.30**	**301**	LR	LR	13 22 07.1	
	comp=Z,169nm,18.7s,MS3.6,baz=315,slow=41						
AAK	**Ala-Archa**	**26.30**	**301**	*e*P	**P**	**13 09 46.4**	**+4.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.5						
AAK	**Ala-Archa**	**26.30**	**301**	*e*P	**P**	**13 09 46.4**	**+4.4**
	comp=Z,6.5nm,0.4s,mb4.5						
KURK	**Kurchatov**	**26.68**	**320**	P	**P**	**13 09 45.5**	**+0.2**
	comp=Z,3.1nm,0.8s,mb3.9,baz=274,slow=27,SNR=16						
KURK	**Kurchatov**	**26.68**	**320**	*ce*P	**P**	**13 09 45.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
KURK	**Kurchatov**	**26.68**	**320**	*e*P	**P**	**13 09 45.0**	**-0.4**
	comp=Z,16nm,1.0s,mb4.5						
MJAR	**Matsushiro Arr**	**27.11**	**73**	P	**P**	**13 09 50.0**	**+0.5**
	comp=Z,1.8nm,0.8s,mb3.7,baz=278,slow=10,SNR=5.7						
MJAR				LR	LR	13 21 31.0	
	comp=Z,63nm,18.2s,MS3.2,baz=315,slow=39						
MJAR	**Matsushiro Arr**	**27.11**	**73**	P	**P**	**13 09 50.0**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR				MLR	MLR		

KBL Kabul 30.29 284 *eP* **P 13 10 19.2 +1.5**
KBL pmax pmax
comp=Z,13nm,0.9s,mb4.7
KBL Kabul 30.29 284 *eP* **P 13 10 19.2 +1.5**
comp=Z,13nm,0.9s,mb4.7
ASAJ Asahikawa 30.96 58 LR LR 13 22 23.9
comp=Z,139nm,20.4s,MS3.6,baz=209,slow=36
BVAR Borovoye Array 32.26 319 P **P 13 10 35.8 +0.9**
comp=Z,0.7nm,0.6s,mb3.7,baz=123,slow=11,SNR=5.0
BVAR LR LR 13 24 24.4
comp=Z,73nm,18.9s,MS3.4,baz=105,slow=38
BVAR Borovoye Array 32.26 319 P **P 13 10 35.8 +0.9**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,73nm,18.9s
BRVK Borovoye 32.33 319 *ceP* **P 13 10 36.5 +1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.8s,mb4.3
BRVK Borovoye 32.33 319 *eP* **P 13 10 35.4 -0.1**
comp=Z,2.9nm,0.6s,mb4.3
YAK Yakutsk 33.15 21 *eP* **P 13 10 41.3 -1.2**
YAK pmax pmax
comp=Z,16nm,1.0s,mb4.9
YAK Yakutsk 33.15 21 *eP* **P 13 10 42.0 -0.6**
comp=Z,14nm,0.8s,mb4.9
ABKAR Akbulak array 37.48 310 *eP* **P 13 11 20.8 +0.8**
comp=Z,2.5nm,0.6s,mb4.2
SVE Sverdlovsk 38.90 322⇑ *eP* **P 13 11 33.0 +1.2**
SVE pmax pmax
comp=Z,16nm,1.1s,mb4.7
ARU Arti 39.87 321 *c iP* **P 13 11 41.0 +1.0**
ARU *e* 13 13 11.6
ARU S **S 13 17 47.9 +3.4**
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.7
TIXI Tiksi 40.91 11 *eP* **P 13 11 47.5 -0.9**
TIXI pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
TIXI MLR MLR
comp=Z,122nm,11.0s,MS4.0
TIXI Tiksi 40.91 11 *eP* **P 13 11 47.4 -0.9**
comp=Z,7.4nm,0.7s,mb4.4
SEY Seymchan 42.08 30 *ceP* **P 13 11 57.8 -0.3**
PETK Petropavlovsk- 42.20 45 LR LR 13 31 26.2
comp=Z,113nm,20.5s,MS3.7,baz=42,slow=39
GOF Gofitskoye 48.99 304 *eP* **P 13 12 47.4 -5.7**
BILL Bilibino 49.18 26⇑ *eP* **P 13 12 53.6 -0.6**
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BILL Bilibino 49.18 26 *eP* **P 13 12 53.3 -0.9**
comp=Z,7.6nm,0.6s,mb4.9
MIB Mutribah 49.24 283 *eP* **P 13 12 55.3 +0.1**
MIB AMb AMB 13 13 02.2
comp=Z,46nm,1.0s,mb5.4
RDF Al-Radifah 49.36 282 *eP* **P 13 12 56.1 -0.1**
RDF AMb AMB 13 13 03.4
comp=Z,63nm,1.1s,mb5.6
KIV Kislovodsk 49.41 302 *eP* **P 13 12 57.4 +1.1**
KIV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIV MLR MLR
comp=Z,77nm,16.0s,MS3.8
VSR Storozhevoye 50.84 312 *eP* **P 13 13 06.7 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.0s
OBN Obninsk 52.05 317 *eP* **P 13 13 16.2 +0.2**
OBN pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
JOF Joensuu 54.27 327 *eP* **P 13 13 31.6 -0.6**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JOF Joensuu 54.27 327 *ep* **P 13 13 31.6 -0.6**
comp=Z,5.4nm,0.7s,mb4.6
KEV Kevo 55.71 336 *eP* **P 13 13 40.9 -1.6**
KEV pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KEV Kevo 55.71 336 *ep* **P 13 13 40.9 -1.6**
comp=Z,2.3nm,0.7s,mb4.3
ARCES ARCESS Array B 56.24 335 P **P 13 13 46.2 -0.1**
comp=Z,1.7nm,0.8s,mb4.2,baz=77,slow=7.8,SNR=7.5
ARCES ARCESS Array B 56.24 335 P **P 13 13 46.3 -0.1**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
KAF Kangasniemi 56.66 326 *eP* **P 13 13 48.8 -0.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KAF Kangasniemi 56.66 326 *ep* **P 13 13 48.8 -0.6**
comp=Z,2.7nm,0.5s,mb4.5
FINES FINESS Array B 56.86 326 P **P 13 13 51.3 +0.5**
comp=Z,3.5nm,0.4s,mb4.7,baz=90,slow=7.3,SNR=23
FINES FINESS Array B 56.86 326 P **P 13 13 51.3 +0.4**
FINES pmax pmax
comp=Z,4.0nm,0.4s
BRTR Keskin Array B 56.95 299 P **P 13 13 52.0 0.0**
comp=Z,2.0nm,0.9s,mb4.2,baz=107,slow=6.6,SNR=9.0
BRTR Keskin Array B 56.95 299 *i P* **P 13 13 52.5 +0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 57.12 313 P **P 13 13 53.0 +0.1**
comp=Z,3.7nm,0.6s,mb4.6,baz=68,slow=6.3,SNR=12
AKASG Malin Array Be 57.12 313 *i P* **P 13 13 53.0 +0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 57.12 313 P **P 13 13 53.0 +0.1**
WRA Warramunga Arr 59.22 148 P **P 13 14 06.8 -1.1**
comp=Z,6.4nm,0.7s,mb4.8,baz=341,slow=7.3,SNR=22
WRA Warramunga Arr 59.22 148 P **P 13 14 06.8 -1.1**
WRA pmax pmax
comp=Z,6.0nm,0.7s
KWP Kalwaria Pacla 61.44 313 *eP* **P 13 14 21.0 -1.8**
KWP pmax pmax
comp=Z,29nm,1.1s,mb5.3
KWP Kalwaria Pacla 61.44 313 *eP* **P 13 14 21.0 -1.8**
comp=Z,29nm,1.1s,mb5.3
ASAR Alice Springs 62.32 150 P **P 13 14 27.8 -1.1**
comp=Z,4.0nm,0.7s,mb4.7,baz=338,slow=7.1,SNR=35
ASAR Alice Springs 62.32 150 P **P 13 14 27.8 -1.1**
ASAR pmax pmax
comp=Z,4.0nm,0.7s
NOA NORSAR Array B 63.90 327 P **P 13 14 38.4 -0.7**
comp=Z,3.3nm,0.9s,mb4.4,baz=70,slow=6.5,SNR=8.8
NOA NORSAR Array B 63.90 327 P **P 13 14 38.4 -0.6**
NOA pmax pmax
comp=Z,3.0nm,0.9s
VYHS Vyhne 64.22 312 *eP* **P 13 14 42.4 +1.0**
VYHS Vyhne 64.22 312 *eP* **P 13 14 42.4 +1.0**
VRAC Vranov 65.30 314 LR LR 13 48 05.6
comp=Z,42nm,18.1s,MS3.7,baz=236,slow=40
RUE Ruedersdorf 65.75 318 *eP* **P 13 14 50.4 -0.9**
comp=Z,24nm,0.4s,mb5.6
BPAW Bear Paw Mtn. 66.60 28 *eP* **P 13 14 55.4 -1.1**
comp=Z,17nm,1.2s,mb5.0
PPLA Purkeypile 66.66 29 *eP* **P 13 14 55.9 -0.9**
comp=Z,10nm,0.7s,mb5.0
GERES GERESS Array B 67.23 314 P **P 13 15 01.4 +0.6**
comp=Z,0.6nm,0.6s,mb3.8,baz=54,slow=6.8,SNR=5.2
GERES GERESS Array B 67.23 314 P **P 13 15 01.4 +0.6**
GERES pmax pmax
comp=Z,1.0nm,0.6s
COLA College 67.43 26 *eP* **P 13 15 00.1 -1.7**
COLA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
COLA College 67.43 26 *eP* **P 13 15 00.1 -1.7**
comp=Z,9.6nm,1.0s,mb4.8
PMR Palmer 68.53 30 *eP* **P 13 15 06.7 -2.0**
PMR pmax pmax
comp=Z,14nm,1.0s,mb4.8
PMR Palmer 68.53 30 *eP* **P 13 15 06.7 -2.1**
comp=Z,14nm,1.0s,mb4.8
KMBO Kilima Mbogo 72.42 257 *i P* **P 13 15 40.4 +7.1**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
LPG La Plagne 72.97 313⇑ *iP* **P 13 15 37.3 +1.2**
comp=Z,10nm,0.6s,mb4.6
LPG La Plagne 72.97 313⇑ *iP* **P 13 15 37.3 +1.2**
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LPG La Plagne 72.97 313⇑ *iP* **P 13 15 37.3 +1.2**
comp=Z,5.2nm,0.6s,mb4.6
LPL La Plagne 72.97 313⇑ *iP* **P 13 15 37.2 +1.1**
comp=Z,10nm,0.6s,mb4.6
LPL La Plagne 72.97 313⇑ *iP* **P 13 15 37.2 +1.1**
LPL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LPL La Plagne 72.97 313⇑ *iP* **P 13 15 37.2 +1.1**
comp=Z,5.2nm,0.6s,mb4.6
ORIF Oris-en-Rattie 73.80 313⇑ *iP* **P 13 15 41.5 +0.6**
YKA Yellowknife Ar 79.77 18 P **P 13 16 13.3 -1.0**
comp=Z,1.3nm,0.7s,mb4.0,baz=329,slow=5.2,SNR=10
YKA Yellowknife Ar 79.77 18 P **P 13 16 13.3 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
FFC Flin Flon 89.72 16 *i P* **P 13 17 10.3 +5.7**
TORD Torodi Ar. Bea 94.24 288 P **P 13 17 25.7 -0.6**
comp=Z,0.5nm,1.0s,mb3.9,baz=44,slow=4.1,SNR=3.1

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*PRU **15** 13:13:55.8, 50.°04N×18.°36E, h0km*
CSEM 15 13:13:44.6±0.1, 50.°24N×19.°24E, h1km, Error ellipse: s-maj=6.8km s-min=2.1km az=177.0, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.81**	**241**	*e*PG	Pg	13 14 00.0	-0.1
OKC				*e*SG	Sg	13 14 04.3	-6.3
comp=Z,19nm,0.6s							
OKC	**Ostrava-Krasne**	**0.81**	**241**	Pg	Pg	13 14 00.0	-0.1
MORC	**Moravsky Berou**	**1.19**	**248**	*e*Pg	Pg	13 14 07.5	+0.1
DPC	**Dobruska-Polom**	**1.88**	**274**	*e*PG	Pg	13 14 20.5	0.0
DPC				*e*SG	Sg	13 14 38.8	-6.0
comp=Z,7.2nm,0.4s							
DPC	**Dobruska-Polom**	**1.88**	**274**	Pg	Pg	13 14 20.5	0.0
VRAC	**Vranov**	**1.95**	**242**	*e*Sg	Sg	13 14 38.7	-8.6
KWP	**Kalwaria Pacla**	**2.32**	**104**	*e*P	Pn	13 14 23.9	0.0
KWP	**Kalwaria Pacla**	**2.32**	**104**	*e*P	Pn	13 14 23.9	0.0

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*NEIC **15** 13:20:21.6±2.0, 31.°08N×103.°79E, h10km, Error ellipse: s-maj=36.3km s-min=21.1km az=181.0*
*IDC **15** 13:20:21.1±0.9, 31.°18N×103.°71E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.7/27, mbtmp3.7/10, ML3.6/1, Error ellipse: s-maj=34.9km s-min=16.6km az=56.0*
*ISCJB **15** 13:20:23.6±0.9, 31.°24N±0.°05×103.°76E±0.°09, h27km±7km, mb3.7/8, Error ellipse: s-maj=12.7km s-min=8.5km az=13.3*
*BJI **15** 13:20:25.9, 31.°16N×103.°56E, h10km, ML3.5/10, Ms3.3/1, Ms7 3.1/1*
ISC 15 13:20:23.3±1.1, 31.°29N±0.°04×103.°73E±0.°08, h9km±7km, n16, σ0.°77/20, mb3.7/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**176**	Pg	**Pg**	**13 20 30.9**	**+0.1**
CD2				Sg	**Sg**	**13 20 36.5**	**+0.6**
CD2				smax			
comp=N,8μm,0.6s							
XAN	**Xi'an**	**5.16**	**57**	Pg	**Pg**	**13 22 01.4**	**-0.9**
XAN				Sn	**Sn**	**13 22 41.8**	**+1.3**
XAN				smax			
comp=N,130nm,0.7s							
XAN				smax			
comp=E,60nm,0.7s							
GYA	**Guiyang**	**5.46**	**151**	Pg	**Pn**	**13 21 50.3**	**+5.4**
GYA				Sg	**Sb**	**13 22 58.1**	**-6.4**
GYA				smax			
comp=N,90nm,0.8s							
GYA				smax			
comp=E,100nm,0.8s							
KMI	**Kunming**	**6.21**	**188**	Pn	**Pn**	**13 21 54.9**	**-0.3**
KMI				Sn	**Sn**	**13 23 07.1**	**+0.8**
KMI				smax			
comp=N,16nm,1.1s							
KMI				smax			
comp=E,23nm,1.0s							
KMI				LR	LR		
comp=N,160nm,9.4s							
KMI				LR	LR		
comp=E,160nm,7.8s							
KMI				LR	LR		
comp=Z,220nm,12.5s							
SONM	**Songino Array**	**16.64**	**6**	Pn	**Pn**	**13 24 17.7**	**+1.0**
comp=Z,0.2nm,0.3s,baz=178,slow=10,SNR=3.2							
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**13 25 06.0**	**+0.5**
comp=Z,2.7nm,0.7s,baz=261,slow=10,SNR=16							
MK31	**Makanchi Array**	**22.62**	**319**	*e*P	**P**	**13 25 24.4**	**+0.1**
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**13 25 25.4**	**+1.0**
comp=Z,0.9nm,0.8s,mb3.3,baz=123,slow=12,SNR=7.4							
ZALV	**Zalesovo Beam**	**26.41**	**334**	P	**P**	**13 26 00.1**	**+0.1**
comp=Z,0.9nm,0.6s,mb3.5,baz=116,slow=3.4,SNR=4.7							
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**13 26 04.0**	**-0.5**
comp=Z,1.7nm,0.8s,mb3.6,baz=128,slow=9.5,SNR=5.9							
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**13 26 53.7**	**+0.1**
comp=Z,0.2nm,0.3s,mb3.4,baz=60,slow=8.5,SNR=2.2							
WRA	**Warramunga Arr**	**58.81**	**146**	P	**P**	**13 30 20.8**	**-1.3**
comp=Z,1.1nm,0.4s,mb4.2,baz=338,slow=7.8,SNR=37							
ASAR	**Alice Springs**	**61.82**	**148**	P	**P**	**13 30 41.5**	**-1.1**
comp=Z,0.6nm,0.7s,mb3.8,baz=334,slow=7.1,SNR=14							
INK	**Inuvik**	**72.08**	**19**	P	**P**	**13 31 46.5**	**-1.0**
comp=Z,2.4nm,1.0s,mb4.1,baz=18,slow=5.0,SNR=4.6							
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**13 32 40.8**	**-0.5**
comp=Z,0.4nm,0.7s,mb3.5,baz=330,slow=5.1,SNR=5.4							
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**13 32 40.8**	**-0.5**

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*ISCJB **15** 13:25:19.9±0.8, 49.°90N±0.°05×129.°99W±0.°08, h10km, mb3.1/2, Error ellipse: s-maj=8.0km s-min=6.9km az=145.3*
*PGC **15** 13:25:19.9±2.8, 49.°70N×130.°15W, h10km, ML3.3/8, Mw3.9, 224km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*NEIC **15** 13:25:19.9, 49.°70N×130.°15W, h10km, MW3.9(PGC), After PGC.*
*IDC **15** 13:25:21.6±2.3, 49.°79N×129.°49W, h0km, mb3.3/2, mb1 3.8/7, mb1mx3.5/28, mbtmp3.5/7, ML3.7/5, MS3.6/4, Ms1 3.6/4, ms1mx3.2/15, Error ellipse: s-maj=39.2km s-min=12.3km az=75.0*
ISC 15 13:25:21.2±0.9, 49.°95N±0.°05×129.°97W±0.°09, h10km, n20, σ0.°93/24, mb3.1/2, 7D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.36**	**59**	⇑Pn	**Pn**	**13 25 46.1**	**-0.2**
HOLB				⇓Sn	**Sn**	**13 26 04.9**	**+0.5**
BPBC	**Brooks Peninsu**	**1.43**	**81**	⇓Pn	**Pn**	**13 25 46.2**	**-1.0**
BPBC				⇓Sn	**Sn**	**13 26 05.6**	**-0.3**
PHC	**Port Hardy**	**1.79**	**64**	⇓Pn	**Pn**	**13 25 52.2**	**0.0**
PHC				⇓Sn	**Sn**	**13 26 15.2**	**+0.3**
MAYB	**Maynard**	**1.85**	**75**	⇑Pn	**Pn**	**13 25 52.6**	**-0.4**
MAYB				⇑Sn	**Sn**	**13 26 16.1**	**-0.3**
WOSB	**Woss**	**2.20**	**83**	⇓Pn	**Pn**	**13 25 57.7**	**0.0**
BBB	**Bella Bella**	**2.52**	**27**	Pn	**Pn**	**13 26 03.3**	**+1.1**
68nm,0.3s,baz=224,slow=11,SNR=1062							
BBB				Sn	**Sn**	**13 26 32.9**	**-0.1**
25nm,0.3s,baz=301,slow=22,SNR=8.8							
BBB	**Bella Bella**	**2.52**	**27**	Pn	**Pn**	**13 26 03.4**	**+1.2**
BBB				⇑Sn	**Sn**	**13 26 33.8**	**+0.8**
BNB	**Barry Inlet**	**2.86**	**338**	⇓Pn	**Pn**	**13 26 06.8**	**0.0**
MOBC	**Moresby Island**	**3.44**	**339**	⇑Pn	**Pn**	**13 26 14.6**	**-0.1**
OD2	**Odessa Site #2**	**7.88**	**105**	*e*P	**Pn**	**13 27 16.3**	**+0.6**
4.4nm,0.7s							
DLBC	**Dease Lake**	**8.51**	**360**	Pn	**Pn**	**13 27 28.6**	**+4.3**
0.2nm,0.3s,baz=143,slow=20,SNR=3.2							
DLBC				LR	LR	13 30 45.2	
comp=Z,388nm,20.9s,baz=191,slow=37							
LNOR	**Lincton Mounta**	**8.84**	**113**	*e*P	**Pn**	**13 27 28.9**	**0.0**
3.5nm,1.0s							
YBH	**Yreka Blue Hor**	**9.65**	**146**	Pn	**Pn**	**13 27 43.4**	**+3.4**
0.1nm,0.3s,baz=22,slow=5.4,SNR=2.9							
NVAR	**Mina Array Bea**	**14.21**	**140**	Pn	**Pn**	**13 28 43.0**	**+0.6**
0.1nm,0.3s,baz=332,slow=12,SNR=6.6							
YKA	**Yellowknife Ar**	**15.14**	**28**	Pn	**Pn**	**13 28 54.5**	**-0.3**
0.1nm,0.3s,baz=215,slow=12,SNR=8.1							
YKA				LR	LR	13 35 07.1	
comp=Z,177nm,18.8s,baz=265,slow=39							
PDAR	**Pinedale Array**	**15.79**	**109**	Pn	**Pn**	**13 29 04.8**	**+1.4**
0.1nm,0.3s,baz=310,slow=8.5,SNR=15							
INK	**Inuvik**	**18.50**	**356**	LR	LR	13 37 21.4	
comp=Z,236nm,19.8s,baz=187,slow=38							
ULM	**Lac du Bonnet**	**21.76**	**76**	P	**P**	**13 30 10.5**	**-2.2**
0.7nm,0.4s,mb3.4,baz=0.0,slow=13,SNR=1.7							
TXAR	**Lajitas Array**	**28.63**	**126**	P	**P**	**13 31 15.0**	**-2.7**
0.1nm,0.5s,mb2.8,baz=150,slow=23,SNR=3.1							
SCHQ	**Schefferville**	**37.67**	**58**	LR	LR	13 47 59.3	
comp=Z,101nm,21.7s,baz=307,slow=36							

IDC 15 13:32:08.1±2.0, 21.°52N×143.°09E, h286km±19km, mb3.1/8, mb1 3.2/9, mb1mx3.0/25, mbtmp3.1/9, Error ellipse: s-maj=36.1km s-min=14.7km az=89.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.61**	**352**	P	Pn	13 33 33.8	+1.5
5.6nm,0.3s,baz=90,slow=20,SNR=3.7							
CBIJ				S	S	13 34 39.3	-0.7
7.8nm,0.3s,baz=246,slow=20,SNR=4.1							
WRA	**Warramunga Arr**	**42.09**	**192**	P	P	13 39 31.6	-1.0
0.5nm,0.4s,baz=15,slow=9.2,SNR=13							
ASAR	**Alice Springs**	**45.80**	**192**	P	P	13 40 03.2	+1.3
0.2nm,0.5s,baz=11,slow=14.5,SNR=4.5							
KURK	**Kurchatov**	**57.55**	**317**	P	P	13 41 28.7	+0.6
0.7nm,0.5s,baz=95,slow=7.1,SNR=5.4							
BVAR	**Borovoye Array**	**62.75**	**320**	P	P	13 42 03.4	+0.3
0.7nm,0.3s,baz=100,slow=7.8,SNR=7.0							
YKA	**Yellowknife Ar**	**76.65**	**28**	P	P	13 43 27.3	0.0
0.4nm,0.6s,baz=291,slow=5.9,SNR=3.9							
ARCES	**ARCESS Array B**	**79.06**	**341**	P	P	13 43 40.5	+0.1
1.4nm,0.8s,baz=73,slow=8.6,SNR=6.1							
FINES	**FINESS Array B**	**83.30**	**334**	P	P	13 44 01.8	-1.0
0.6nm,0.4s,baz=72,slow=6.2,SNR=3.6							
NVAR	**Mina Array Bea**	**83.32**	**51**	P	P	13 44 04.0	+0.7
0.3nm,0.6s,baz=261,slow=5.4,SNR=3.1							

DJA 15 13:36:01, 9.°66S×113.°22E, h20km, MLv3.7/10, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.40**	**9**	P	Pn	13 36 23.7	-1.7
KRKI	**Karangkates**	**1.67**	**333**	P	Pn	13 36 29.3	+0.1
KRKI				S	Sn	13 36 51.6	+1.5
NBBI	**Negara**	**1.89**	**47**	P	Pn	13 36 33.1	+1.0
ABJI	**Asem Bagus**	**2.11**	**29**	P	Pn	13 36 37.2	+2.1
PWJI	**Pagerwojo**	**2.15**	**319**	P	Pn	13 36 35.4	-0.3
SJI	**Sawahan**	**2.39**	**323**	P	Pn	13 36 39.5	+0.4
PCJI	**Pacitan**	**2.49**	**306**	P	Pn	13 36 41.5	+1.1
SRBI	**Singaraja**	**2.52**	**52**	P	Pn	13 36 41.5	+0.7
KHKI	**Kahang-Kahang**	**2.69**	**62**	P	Pn	13 36 44.1	+1.0
KMMI	**Kalianget**	**2.70**	**16**	P	Pn	13 36 44.5	+1.2
NGJI	**Ngawi**	**2.87**	**322**	P	Pn	13 36 48.6	+3.0
UGM	**Wanagama**	**3.18**	**303**	P	Pn	13 36 50.3	+0.4

DJA 15 13:41:02, 1.°39S×123.°76E, h17km, MLv3.9/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.05**	**289**	P	Pb	13 41 21.4	-0.3
APSI	**Ampana**	**2.16**	**283**	P	Pn	13 41 38.0	+0.7
MRSI	**Marisa**	**2.60**	**316**	P	Pn	13 41 44.1	+0.8
KDI	**Kendari**	**2.79**	**204**	P	Pn	13 41 46.4	+0.4
NLAI	**Namlea**	**3.81**	**119**	P	Pn	13 42 00.8	+0.9
LBMI	**Labuha**	**3.81**	**79**	P	Pn	13 42 00.5	+0.5
TTSI	**Tana Toraja**	**4.27**	**247**	P	Pn	13 42 07.1	+0.9

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*ISCJB **15** 13:48:07.8±0.9, 23.°77S±0.°07×67.°6W±0.°2, h235km±10km, mb4.4/4, Error ellipse: s-maj=22.3km s-min=11.8km az=179.7*
*GUC **15** 13:48:08.1±0.4, 23.°73S×67.°49W, h208km±7km, ML4.2*
*NEIC **15** 13:48:08.1, 23.°73S×67.°49W, h208km, mb4.5/6, After GUC.*
*IDC **15** 13:48:12.2±10.0, 23.°34S×66.°23W, h200km±78km, mb3.4/1, mb1 3.4/2, mb1mx3.1/15, mbtmp3.3/2, Error ellipse: s-maj=123.5km s-min=75.4km az=45.0*
ISC 15 13:48:08.7±1.0, 23.°73S±0.°07×67.°6W±0.°1, h228km±10km, n14, σ0.°64/20, mb4.4/4, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.66**	**312⇑**	*iP*	**Pn**	**13 48 46.1**	**-0.2**
LVC				*i* S	**S**	**13 49 14.8**	**-0.9**
PECH	**Pedro de Valdi**	**2.24**	**300**	*i P*	**Pn**	**13 48 52.2**	**+0.5**
PECH				*i* S	**S**	**13 49 25.5**	**0.0**
PECH				AML	AML	13 49 27.2	
comp=N,555nm,0.2s							
PB04	**Plate Boundary**	**2.29**	**309**	*e*P	**Pn**	**13 48 58.2**	**+5.9**
PB04				*i* S	**S**	**13 49 36.4**	**+10**
ANCH	**Antofagasta**	**2.61**	**270⇑**	*iP*	**Pn**	**13 48 55.7**	**+0.1**
ANCH				*i* S	**S**	**13 49 32.2**	**-0.1**
ANCH	**Antofagasta**	**2.61**	**270⇑**	*iP*	**Pn**	**13 48 55.7**	**+0.1**
ANCH				*i* S	**S**	**13 49 32.2**	**-0.1**
ANCH				AML	AML	13 49 33.9	
comp=E,551nm,0.6s							
LCO	**Las Campanas**	**5.96**	**207**	*e*Pn	**Pn**	**13 49 29.5**	**-6.4**
comp=E,6.3nm,0.3s							
LCO				*e*Sn	**S**	**13 50 36.8**	**-8.6**
LPAZ	**La Paz**	**7.42**	**356**	P	**Pn**	**13 49 56.3**	**+1.6**
comp=E,1.0nm,0.3s,baz=171,slow=6.5,SNR=20							
LPAZ				S	**S**	**13 51 19.4**	**-0.1**
comp=E,0.1nm,0.3s,baz=229,slow=11,SNR=2.0							
NNA	**Nana**	**14.63**	**321**	Pn	**Pn**	**13 51 26.1**	**+0.7**
comp=E,4.8nm,0.5s							
TRQA	**Tornquist**	**15.06**	**163**	*e*Pn	**Pn**	**13 51 30.8**	**+0.4**
comp=E,30nm,1.6s							
RCBR	**Riachuelo**	**35.27**	**65**	*e*P	**P**	**13 54 37.4**	**-4.8**
comp=E,51nm,1.4s,mb4.9							
JTS	**JuntasAbangare**	**37.84**	**331**	P	**P**	**13 55 03.6**	**-0.3**
comp=E,14nm,1.2s,mb4.3							
SJG	**San Juan**	**41.61**	**2**	P	**P**	**13 55 33.9**	**-0.8**
comp=E,21nm,0.3s,mb5.0							
TORD	**Torodi Ar. Bea**	**76.96**	**69**	P	**P**	**13 59 36.0**	**-0.7**
comp=E,0.6nm,0.5s,mb3.5,baz=252,slow=6.0,SNR=11							
MKAR	**Makanchi Array**	**146.65**	**39**	PKPbc	PKPbc	14 07 26.2	+2.8
comp=E,0.3nm,0.7s,baz=324,slow=3.3,SNR=4.0							

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*NEIC **15** 13:50:57.3±0.9, 17.°17S×172.°28W, h35km, mb4.4/3, Error ellipse: s-maj=31.4km s-min=13.7km az=123.0*
*IDC **15** 13:50:58.0±0.9, 17.°18S×172.°29W, h37km±6km, mb3.9/5, mb1 4.1/6, mb1mx3.8/18, mbtmp3.9/6, ML2.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/30, Error ellipse: s-maj=27.4km s-min=15.2km az=126.0*
ISC 15 13:50:58.1±1.0, 17.°1S±0.°1×172.°4W±0.°2, h35km, (h35km±9km:pP-P), n17, σ0.91/14, mb4.2/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.21**	**11**	Pn	**Pn**	**13 51 45.2**	**-0.8**
18nm,0.3s,baz=14,slow=6.8,SNR=48							
AFI				Sn	**Sn**	**13 52 17.2**	**-5.8**
47nm,0.3s,baz=28,slow=22,SNR=7.2							
AFI				LR	LR	13 52 45.9	
comp=Z,172nm,20.6s,baz=5.4,slow=33							
URZ	**Urewera**	**23.03**	**202**	P	**P**	**13 56 00.2**	**+0.1**
6.2nm,0.8s,mb4.1,baz=104,slow=8.3,SNR=3.4							
URZ				S	**S**	**14 00 07.2**	**-1.1**
2.7nm,0.4s,baz=119,slow=19,SNR=5.2							
URZ	**Urewera**	**23.03**	**202**	*e*P	**P**	**13 55 57.2**	**-2.9**
8.9nm,0.6s,mb4.4							
URZ				*e*S	**S**	**14 00 08.2**	**-0.2**
RPZ	**Rata Peaks**	**30.03**	**204**	pP	pP	13 57 12.9	-0.9
8.0nm,0.6s,baz=352,slow=2.0,SNR=3.4							
STKA	**Stephens Creek**	**44.07**	**242**	P	**P**	**13 59 02.1**	**-0.8**
4.0nm,0.9s,mb4.1,baz=119,slow=13,SNR=3.3							
STKA	**Stephens Creek**	**44.07**	**242**	*e*P	**P**	**13 59 02.4**	**-0.5**
2.8nm,1.3s,mb3.8							
WB2	**Warramunga Arr**	**50.42**	**258**	*e*P	**P**	**13 59 52.9**	**+0.4**
WRAB	**Tennant Creek**	**50.42**	**258**	*e*P	**P**	**13 59 51.7**	**-0.8**
11nm,1.3s,mb4.7							
WRA	**Warramunga Arr**	**50.43**	**258**	P	**P**	**13 59 53.3**	**+0.7**
3.5nm,0.9s,mb4.4,baz=92,slow=7.0,SNR=22	

TXAR pP pP 14 03 19.9 +0.7
BVAR Borovoye Array 119.80 322 PKP PKPdf 14 09 44.4 0.0
0.4nm,0.6s,baz=128,slow=2.4,SNR=3.8
GERES GERESS Array B 147.93 352 PKPbc PKPbc 14 10 39.1 -0.5
0.9nm,0.7s,baz=7.8,slow=3.0,SNR=4.2
BRTR Keskin Array B 148.06 320 PKPbc PKPbc 14 10 38.8 -1.4
0.5nm,0.5s,baz=64,slow=3.4,SNR=3.4
TORD Torodi Ar. Bea 173.08 124 PKPab PKPab 14 12 29.8 -2.0
0.5nm,0.9s,baz=228,slow=4.9,SNR=2.1

IDC 15 13:52:36.9±1.5, 31°.39N×104°.01E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/24, mbtmp3.4/3, Error ellipse: s-maj=199.9km s-min=25.2km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.72**	**319**	P	P	13 57 39.9	-0.3
	0.3nm,0.5s,baz=108,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	P	13 58 15.5	+0.3
	0.5nm,0.6s,baz=144,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**58.75**	**146**	P	P	14 02 36.8	0.0
	0.6nm,0.5s,baz=338,slow=7.7,SNR=3.4						

*IDC **15** 13:54:42.8±0.8, 32°.23N×104°.88E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.7/28, mbtmp3.7/13, ML3.2/1, Error ellipse: s-maj=35.2km s-min=15.6km az=52.0*
*ISCJB **15** 13:54:43.3±1.6, 32°.36N±0°.05×104°.84E±0°.06, h7km±9km, mb3.8/12, Error ellipse: s-maj=10.1km s-min=6.6km az=136.5*
*BJI **15** 13:54:46.2, 32°.29N×104°.86E, h8km, mb4.2/2, ML3.9/10, Ms3.7/3, Ms7 3.4/4*
*NEIC **15** 13:54:47.7±0.8, 32°.45N×104°.66E, h10km, mb3.7/1, Error ellipse: s-maj=24.5km s-min=10.1km az=217.0*
ISC 15 13:54:44.0±1.7, 32°.25N±0°.07×104°.85E±0°.06, h4km±10km, n23, σ1°.08/30, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.85**	**61**	Pg	**Pg**	**13 55 56.0**	**-1.8**
XAN				Sn	**Sn**	**13 56 30.5**	**+0.8**
XAN				Sg	**Sg**	**13 56 42.9**	**-4.8**
XAN				smax			
	comp=N,240nm,0.7s						
XAN				smax			
	comp=E,140nm,0.8s						
LZH	**Lanzhou**	**3.92**	**348**	Pn	**Pn**	**13 55 47.4**	**+2.5**
LZH				Pg	**Pg**	**13 55 59.9**	**+0.9**
LZH				Sg	**Sg**	**13 56 50.3**	**+0.5**
LZH				smax			
	comp=N,280nm,0.8s						
LZH				smax			
	comp=E,520nm,0.9s						
LZH				LR	LR		
	comp=E,690nm,5.7s						
LZH				LR	LR		
	comp=Z,930nm,8.6s						
ENH	**Enshi**	**4.43**	**115**	*e*Pn	**Pn**	**13 55 58.3**	**+6.3**
ENH				*e*Sn	**Sb**	**13 56 57.3**	**+1.1**
GYA	**Guiyang**	**5.99**	**164**	Pn	**Pn**	**13 56 17.8**	**+4.4**
GYA				Sn	**Sn**	**13 57 27.8**	**+5.4**
GYA				smax			
	comp=N,130nm,0.7s						
GYA				smax			
	comp=E,140nm,0.9s						
GTA	**Gaotai**	**8.23**	**332**	P	**Pb**	**13 57 04.4**	**-2.7**
GTA				pP		13 57 07.9	
GTA				sP		13 57 10.4	
GTA				S	**Sb**	**13 58 38.3**	**-7.1**
GTA				sS		13 58 42.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,83nm,4.4s						
GTA				LR	LR		
	comp=N,240nm,9.1s						
GTA				LR	LR		
	comp=E,150nm,7.1s						
GTA				LR	LR		
	comp=Z,220nm,10.1s						
SONM	**Songino Array**	**15.61**	**4**	Pn	**Pn**	**13 58 25.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=2.7						
KSRS	**Korea Array**	**19.62**	**68**	P	**Pn**	**13 59 13.6**	**-1.1**
	baz=255,slow=10,SNR=4.5						
MK31	**Makanchi Array**	**22.56**	**317**	*e*P	**P**	**13 59 44.8**	**-0.2**
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**13 59 45.8**	**+0.8**
	comp=Z,1.8nm,0.7s,mb3.6,baz=116,slow=11,SNR=13						
ZALV	**Zalesovo Beam**	**25.98**	**332**	P	**P**	**14 00 17.8**	**+0.1**
	comp=Z,1.1nm,0.5s,mb3.6,baz=142,slow=10,SNR=4.7						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**14 00 25.0**	**+0.6**
	comp=Z,0.8nm,0.5s,mb3.5,baz=133,slow=9.4,SNR=8.7						
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**14 00 25.0**	**+0.6**
BVAR	**Borovoye Array**	**32.30**	**320**	P	**P**	**14 01 14.6**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.6,baz=116,slow=10,SNR=4.5						
ABKAR	**Akbulak array**	**37.40**	**310**	*e*P	**P**	**14 01 58.5**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.7						
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**14 04 26.4**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=75,slow=7.6,SNR=10						
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**14 04 26.4**	**-0.2**
BRTR	**Keskin Array B**	**56.73**	**299**	P	**P**	**14 04 28.0**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.8,baz=66,slow=4.2,SNR=2.4						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**14 04 29.9**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.3,baz=103,slow=8.6,SNR=5.0						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**14 04 29.9**	**-0.4**
WRA	**Warramunga Arr**	**59.08**	**147**	P	**P**	**14 04 45.0**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=341,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**62.15**	**150**	P	**P**	**14 05 05.9**	**-0.5**
	comp=Z,0.5nm,0.4s,mb4.0,baz=332,slow=6.4,SNR=9.4						
NOA	**NORSAR Array B**	**64.04**	**327**	P	**P**	**14 05 17.3**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=70,slow=6.6,SNR=2.9						
YKA	**Yellowknife Ar**	**80.41**	**17**	P	**P**	**14 06 54.6**	**-1.8**
	comp=Z,0.1nm,0.4s,mb3.1,baz=330,slow=4.6,SNR=3.4						

*NEIC **15** 13:57:20.0±2.1, 30°.87N×103°.66E, h10km, Error ellipse: s-maj=35.9km s-min=15.2km az=146.0*
*ISCJB **15** 13:57:20.3±0.6, 31°.16N±0°.06×103°.78E±0°.09, h10km, mb3.8/8, Error ellipse: s-maj=11.1km s-min=7.6km az=17.5*
*IDC **15** 13:57:20.1±1.0, 31°.08N×103°.61E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/26, mbtmp3.7/9, ML3.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/48, Error ellipse: s-maj=39.5km s-min=17.9km az=57.0*
*BJI **15** 13:57:24.2, 31°.04N×103°.66E, h17km, ML3.8/7, Ms3.5/1, Ms7 3.3/1*
ISC 15 13:57:21.7±0.6, 31°.13N±0°.07×103°.71E±0°.08, h10km, n18, σ0°.94/20, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.27**	**55**	Pg	**Pg**	**13 58 59.3**	**-3.4**
XAN				Sn	**Sn**	**13 59 41.0**	**-0.4**
XAN				smax			
	comp=N,71nm,0.5s						
XAN				smax			
	comp=E,26nm,0.8s						
KMI	**Kunming**	**6.04**	**188**	Pn	**Pn**	**13 58 51.5**	**+0.4**
KMI				Sn	**Sn**	**14 00 05.3**	**+4.9**
KMI				smax			
	comp=N,23nm,1.1s						
KMI				smax			
	comp=E,20nm,0.9s						
KMI				LR	LR		
	comp=N,310nm,8.2s						
KMI				LR	LR		
	comp=E,180nm,5.6s						
KMI				LR	LR		
	comp=Z,170nm,7.1s						
LSA	**Lhasa**	**10.94**	**266**	*e*Pn	**Pn**	**13 59 56.0**	**-2.3**
	comp=Z,4.5nm,0.4s						
SONM	**Songino Array**	**16.81**	**6**	Pn	**Pn**	**14 01 18.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=4.7						
SONM				LR	LR	14 07 49.8	
	comp=Z,72nm,21.7s,baz=76,slow=37						
KSRS	**Korea Array**	**20.95**	**66**	P	**P**	**14 02 05.6**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=261,slow=10.0,SNR=8.0						
CN2	**Changchun**	**21.32**	**48**	*e*P	**P**	**14 02 03.1**	**-5.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**22.74**	**320**	*e*P	**P**	**14 02 24.4**	**+0.5**
MKAR	**Makanchi Array**	**22.74**	**320**	P	**P**	**14 02 24.8**	**+0.9**
	comp=Z,0.7nm,0.8s,mb3.2,baz=118,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.56**	**335**	P	**P**	**14 02 58.9**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.3,baz=137,slow=11,SNR=3.9						
KURK	**Kurchatov**	**27.03**	**324**	P	**P**	**14 03 03.7**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.5,baz=128,slow=9.7,SNR=5.2						
KURK	**Kurchatov**	**27.03**	**324**	P	**P**	**14 03 03.7**	**-0.2**
ARCES	**ARCESS Array B**	**57.10**	**336**	P	**P**	**14 07 07.5**	**-0.3**
	comp=Z,2.7nm,0.9s,mb4.2,baz=84,slow=8.3,SNR=4.3						
ARCES	**ARCESS Array B**	**57.10**	**336**	P	**P**	**14 07 07.5**	**-0.3**
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**14 07 19.6**	**+0.1**
	comp=Z,3.2nm,0.8s,mb4.4,baz=336,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**58.68**	**146**	P	**P**	**14 07 19.6**	**+0.1**
ASAR	**Alice Springs**	**61.69**	**148**	P	**P**	**14 07 40.1**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=330,slow=6.1,SNR=5.5						
YKA	**Yellowknife Ar**	**81.77**	**17**	P	**P**	**14 09 40.4**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=331,slow=4.9,SNR=4.5						
YKA	**Yellowknife Ar**	**81.77**	**17**	P	**P**	**14 09 40.4**	**+0.1**

DJA 15 14:02:12.2±1.8, 1N×125°.38E, h12km, MLv4.4/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.88**	**10**	P	Pg	14 02 27.4	-1.7
SGSI				S	Sg	14 02 41.5	+0.9
TNTI	**Ternate**	**2.84**	**136**	P	Pn	14 02 57.3	+0.2
TNTI				S	Sn	14 03 33.6	+2.3
LBMI	**Labuha**	**4.03**	**148**	P	Pn	14 03 13.5	0.0
LBMI				S	Sn	14 04 03.0	+2.3
MRSI	**Marisa**	**4.15**	**236**	P	Pn	14 03 14.1	-1.1
LUWI	**Luwuk**	**4.63**	**214**	P	Pn	14 03 21.6	-0.2
LUWI				S	Sn	14 04 16.3	+0.7
APSI	**Ampana**	**5.25**	**225**	P	Pn	14 03 31.4	+1.0
	104nm,0.9s,2μm0.7nm						
APSI				S	Sn	14 04 33.1	+2.2
	104nm,0.9s,2μm0.7nm						
TTSI	**Tana Toraja**	**8.04**	**224**	P	Pn	14 04 09.2	+0.4

*ISCJB **15** 14:06:08.9±3.8, 20°.84S±0°.06×174°.02W±0°.05, h4km±24km, mb4.9/54, MS5.0/14, Error ellipse: s-maj=11.7km s-min=5.8km az=149.6*
*IDC **15** 14:06:09.8±0.4, 20°.77S×174°.03W, h0km, mb4.6/18, mb1 4.8/20, mb1mx4.7/23, mbtmp4.7/20, ML5.0/2, MS4.2/3, Ms1 4.2/3, ms1mx3.8/30, Error ellipse: s-maj=19.8km s-min=13.2km az=130.0*
*SZGRF **15** 14:06:13.3, 21°.97S×173°.45W, h36km, Tonga Islands*
*MOS **15** 14:06:14.4±1.2, 20°.63S×174°.19W, h33km, mb5.1/28, Error ellipse: s-maj=14.1km s-min=9.5km az=53.0*
*NEIC **15** 14:06:15.3±0.2, 20°.84S×174°.06W, h35km, mb5.1/30, Error ellipse: s-maj=9.1km s-min=4.3km az=136.0*
*DJA **15** 14:06:17, 20°.62S×174°.56W, h10km, mb5.4/19*
*BJI **15** 14:06:19.6, 19°.96S×174°.78W, h35km, mB5.3/18, mb5.1/23, Ms5.2/16, Ms7 4.9/16*
ISC 15 14:06:11.4±4.6, 20°.84S±0°.07×174°.01W±0°.05, h9km±28km, h36km±.8km: pP-P, n522, σ0°.63/382, mb4.9/54, MS5.0/14, 132C-123D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.21**	**17**	Pn	**Pn**	**14 07 51.0**	**-6.0**
	6.6nm,0.3s,baz=260,slow=9.0,SNR=13						
AFI				Sn	**Sn**	**14 09 05.8**	**-13**
	11nm,0.3s,baz=356,slow=19,SNR=2.6						
AFI	**Afiamalu**	**7.21**	**17**	*e*P	**Pn**	**14 07 50.9**	**-6.2**
AFI				pmax	pmax		
	comp=Z,96nm,0.7s						
AFI	**Afiamalu**	**7.21**	**17**	*e*Pn	**Pn**	**14 07 50.9**	**-6.2**
	comp=Z,96nm,0.7s						
AFI				*e*Sn	**Sn**	**14 09 05.7**	**-13**
RAO	**Raoul Island**	**9.09**	**202**	Pn	**Pn**	**14 08 21.2**	**-1.7**
	comp=Z,40nm,0.3s,baz=84,slow=21,SNR=4.5						
RAO				Sn	**Sn**	**14 09 57.4**	**-7.9**
	comp=Z,14nm,0.3s,baz=90,slow=20,SNR=4.5						
RAR	**Rarotonga**	**13.30**	**94**	*e*P	**Pn**	**14 09 08.2**	**-12**
OUZ	**Omahuta**	**18.00**	**215**	*e*Pn	**Pn**	**14 10 22.8**	**+0.9**
	comp=Z,60nm,1.5s						
DZM	**Mont Dzumac**	**18.24**	**263**	*e*P	**Pn**	**14 10 28.8**	**+3.9**
	comp=Z,98nm,1.5s						
DZM				*e*LQ		14 14 33.7	
	comp=Z,1μm,24.6s						
DZM				*e*LR	LR	14 14 49.1	
	comp=Z,1μm,23.1s						
DZM	**Mont Dzumac**	**18.24**	**263**	*e*P	**Pn**	**14 10 27.0**	**+2.0**
	comp=Z,37nm,1.1s						
URZ	**Urewera**	**18.98**	**202**	P	**Pn**	**14 10 34.8**	**+1.0**
	comp=Z,2.2nm,0.3s,baz=13,slow=5.3,SNR=29						
URZ				S	**Sn**	**14 13 52.0**	**-14**
	comp=Z,0.4nm,0.3s,baz=338,slow=19,SNR=3.6						
URZ	**Urewera**	**18.98**	**202**	*e*P	**Pn**	**14 10 34.1**	**+0.3**
	comp=Z,64nm,0.8s						
PPT	**Papeete**	**23.29**	**86**	*e*P	**P**	**14 11 15.6**	**-4.2**
	comp=Z,52nm,1.5s,mb4.8						
PPT				*e*LR	LR	14 16 35.0	
	comp=Z,1μm,26.8s,baz=256						
PPT	**Papeete**	**23.29**	**86**	P	**P**	**14 11 16.8**	**-3.0**
	comp=Z,15nm,0.8s,mb4.5,baz=47,slow=2.9,SNR=4.7						
PPT				LR	LR	14 18 39.0	
	comp=Z,597nm,18.6s,MS4.1,baz=253,slow=32						
PPT	**Papeete**	**23.29**	**86**	P	**P**	**14 11 16.8**	**-3.0**
PPT				pmax	pmax		
	comp=Z,15nm,0.8s						
PPT				MLR	MLR		
	comp=Z,597nm,18.6s						
TIAR	**Tiarei**	**23.51**	**86**	*e*P	**P**	**14 11 17.5**	**-4.5**
	comp=Z,41nm,1.0s,mb4.8						
KHZ	**Kahutara**	**23.93**	**203**	*e*P	**P**	**14 11 24.1**	**-1.6**
	comp=Z,24nm,0.8s,mb4.7						
RPZ	**Rata Peaks**	**25.99**	**205**	P	**P**	**14 11 44.8**	**+0.4**
	comp=Z,18nm,0.7s,mb4.7,baz=285,slow=3.3,SNR=15						
ARMA	**Armidale**	**32.31**	**246**	*e*P	**P**	**14 12 38.6**	**-2.3**
ARMA	**Armidale**	**32.31**	**246**	*e*P	**P**	**14 12 41.9**	**+1.0**
	comp=Z,25nm,1.4s,mb4.8						
TAOE	**Nuku Hiva Isla**	**34.74**	**75**	*e*LR	LR	14 21 49.5	
	comp=Z,709nm,26.8s,baz=253						
CNB	**Canberra Magne**	**35.17**	**238**	*e*P	**P**	**14 13 06.1**	**+0.4**
CTA	**Charters Tower**	**37.18**	**264**	P	**P**	**14 13 22.4**	**-0.6**
	comp=Z,5.0nm,0.6s,mb4.5,baz=101,slow=11,SNR=8.6						
CTA				LR	LR	14 26 56.8	
	comp=Z,276nm,18.1s,MS4.1,baz=80,slow=34						
CTA	**Charters Tower**	**37.18**	**264**	P	**P**	**14 13 22.4**	**-0.6**
CTA				LR	LR	14 26 56.8	
CTAO	**Charters Tower**	**37.18**	**264**	*e*P	**P**	**14 13 22.3**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,57nm,1.8s,mb5.1						
CTAO	**Charters Tower**	**37.18**	**264**	*e*P	**P**	**14 13 22.3**	**-0.7**
	comp=Z,57nm,1.8s,mb5.1						
TAU	**Tasmania Unive**	**39.06**	**227**	*e*P	**P**	**14 13 40.0**	**+1.3**
TAU				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0						
TAU	**Tasmania Unive**	**39.06**	**227**	*e*P	**P**	**14 13 40.0**	**+1.4**
	comp=Z,40nm,1.2s,mb5.0						
STKA	**Stephens Creek**	**41.02**	**245**	*e*P	**P**	**14 13 54.9**	**-0.2**
	comp=Z,8.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**41.02**	**245**	P	**P**	**14 13 54.7**	**-0.4**
	comp=Z,7.9nm,0.9s,mb4.4,baz=74,slow=8.9,SNR=10						
STKA				LR	LR	14 29 35.7	
	comp=Z,419nm,18.8s,MS4.3,baz=28,slow=34						
COEN	**Coen**	**41.34**	**272**	*e*P	**P**	**14 13 57.6**	**-0.3**
	comp=Z,160nm,1.3s,mb5.5						
KIP	**Kipapa**	**44.82**	**21**	*e*P	**P**	**14 14 24.5**	**-1.3**
KIP	**Kipapa**	**44.82**	**21**	*e*P	**P**	**14 14 25.8**	**-0.1**
	comp=Z,2μm,2.9s						
ASAR	**Alice Springs**	**48.08**	**256**	P	**P**	**14 14 50.1**	**-1.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=313,slow=9.1,SNR=5.6						
ASAR				PcP	PcP	14 16 20.2	+0.8
	comp=Z,3.5nm,0.8s,baz=100,slow=5.0,SNR=4.8						
ASAR				S	**S**	**14 21 46.5**	**-3.9**
	comp=Z,1.5nm,0.9s,baz=99,slow=15,SNR=7.3						
ASAR	**Alice Springs**	**48.08**	**256**	P	**P**	**14 14 50.2**	**-1.4**
ASAR						14 16 20.3	
ASAR				S	**S**	**14 21 46.5**	**-3.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAR				smax			
	comp=N,2.0nm,0.9s						
WRAB	**Tennant Creek**	**48.25**	**261**	P	**P**	**14 14 51.6**	**-1.3**
	comp=N,98nm,1.5s,mb5.6,SNR=5.4						
WRAB	**Tennant Creek**	**48.25**	**261**	*e*P	**P**	**14 14 51.2**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.3						
WRAB	**Tennant Creek**	**48.25**	**261**	*e*P	**P**	**14 14 51.2**	**-1.7**
	comp=Z,57nm,1.6s,mb5.3						
WRA	**Warramunga Arr**	**48.26**	**261**	P	**P**	**14 14 51.3**	**-1.7**
	comp=Z,6.3nm,0.9s,mb4.6,baz=96,slow=7.8,SNR=40						
WRA				PcP	PcP	14 16 21.4	+1.3
	comp=Z,3.6nm,0.8s,baz=96,slow=3.4,SNR=5.1						
WRA	**Warramunga Arr**	**48.26**	**261**	P	**P**	**14 14 51.3**	**-1.7**
WRA						14 16 21.4	
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KAKA	**Kakadu**	**51.72**	**270**	*e*P	**P**	**14 15 16.8**	**-2.6**
	comp=Z,66nm,1.5s,mb5.3						
KAKA	**Kakadu**	**51.72**	**270**	*e*P	**P**	**14 15 16.1**	**-3.3**
	comp=Z,187nm,1.4s,mb5.8						
FORT	**Forrest**	**52.59**	**247**	*e*P	**P**	**14 15 24.9**	**-0.8**
	comp=Z,20nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**56.69**	**262**	*e*P	**P**	**14 15 54.0**	**-1.6**
	comp=Z,21nm,1.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**56.69**	**262**	P	**P**	**14 15 54.8**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.4,baz=92,slow=3.5,SNR=18						
FITZ	**Fitzroy Crossi**	**56.69**	**262**	*e*P	**P**	**14 15 54.0**	**-1.5**
	comp=Z,43nm,1.6s,mb5.2						
SBA	**Scott Base**	**57.81**	**185**	*e*P	**P**	**14 16 05.2**	**+2.6**
SBA				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
SBA	**Scott Base**	**57.81**	**185**	*e*P	**P**	**14 16 05.2**	**+2.6**
	comp=Z,24nm,1.0s,mb5.2						
KLBR	**Kellerberrin**	**61.30**	**245**	*e*P	**P**	**14 16 27.2**	**-0.2**
	comp=Z,86nm,1.4s,mb5.7						
MBWA	**Marble Bar**	**61.42**	**257**	*e*P	**P**	**14 16 24.4**	**-4.0**
	comp=Z,10nm,0.6s,mb5.1						
NWAO	**Narrogin (SRO)**	**61.56**	**243**	*e*P	**P**	**14 16 27.9**	**-1.3**
NWAO				pmax	pmax		
	comp=Z,21nm,1.1s						
NWAO	**Narrogin (SRO)**	**61.56**	**243**	*e*P	**P**	**14 16 27.9**	**-1.3**
	comp=Z,21nm,1.1s,mb5.2						
CASY	**Casey**	**65.26**	**206**	*e*P	**P**	**14 16 54.5**	**+1.4**
CASY	**Casey**	**65.26**	**206**	*e*P	**P**	**14 16 54.0**	**+0.9**
	comp=Z,27nm,0.9s,mb5.3						
QSPA	**South Pole Qui**	**69.23**	**180**	P	**P**	**14 17 19.6**	**+1.5**
	comp=Z,18nm,1.0s,mb5.0,baz=45,slow=2.8,SNR=29						
QSPA	**South Pole Qui**	**69.23**	**180**	P	**P**	**14 17 19.6**	**+1.5**
MJAR	**Matsushiro Arr**	**72.75**	**321**	P	**P**	**14 17 39.8**	**-0.3**
	comp=Z,3.0nm,0.7s,mb4.3,baz=165,slow=6.2,SNR=9.3						
MJAR	**Matsushiro Arr**	**72.75**	**321**	P	**P**	**14 17 39.8**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAJO	**Matsushiro**	**72.76**	**321**	*e*P	**P**	**14 17 41.4**	**+1.3**
MAT	**Matsushiro**	**72.76**	**321**	P	**P**	**14 17 39.7**	**-0.4**
MAT				*e*S	S	14 27 11.6	+5.7
BSC	**Santa Cruz Isl**	**75.17**	**44**	⇑P	**P**	**14 17 54.4**	**+0.2**
	baz=75						
SCI	**San Clemente I**	**75.28**	**46**	P	**P**	**14 17 55.1**	**+0.2**
	baz=76						
PKM	**Peak Mountain**	**75.61**	**43**	⇑P	**P**	**14 17 57.7**	**+0.9**
	baz=76						
CIS	**Catalina Islan**	**75.63**	**45**	⇓P	**P**	**14 17 57.1**	**+0.2**
	baz=76						
SAO	**San Andreas Ge**	**75.77**	**41**	*e*P	**P**	**14 17 57.9**	**+0.3**
SAO				*e**PP	pP	14 18 09.1	+8.4
MWC	**Mount Wilson**	**76.35**	**45**	*e*P	**P**	**14 18 00.8**	**-0.2**
MONP	**Monument Peak**	**76.66**	**47**	⇓P	**P**	**14 18 02.8**	**+0.1**
	baz=77,SNR=7.0						
VES	**Vestal, Richgr**	**76.67**	**43**	⇓P	**P**	**14 18 02.9**	**+0.1**
	baz=77						
EDW2	**Edwards Air Fo**	**76.79**	**44**	⇓P	**P**	**14 18 03.3**	**-0.2**
	baz=77,SNR=16						
ISA	**Isabella**	**76.95**	**44**	⇑P	**P**	**14 18 04.4**	**+0.1**
	baz=77,SNR=22						
ISA	**Isabella**	**76.95**	**44**	*e*P	**P**	**14 18 03.5**	**-0.9**
ISA				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
ISA	**Isabella**	**76.95**	**44**	*e*P	**P**	**14 18 03.5**	**-0.9**
	comp=Z,37nm,1.3s,mb5.2						
PFO	**Pinyon Flat Ob**	**77.06**	**46**	⇑P	**P**	**14 18 04.8**	**-0.2**
	baz=77,SNR=7.1						
PFO	**Pinyon Flat Ob**	**77.06**	**46**	*e*P	**P**	**14 18 05.2**	**+0.1**
BBRC	**Big Bear Sol-O**	**77.13**	**45**	⇓P	**P**	**14 18 05.5**	**+0.1**
	baz=77						
KSM	**Kuching**	**77.17**	**277**	*e*P	**P**	**14 18 06.5**	**+0.4**
CMB	**Columbia Colle**	**77.22**	**41**	*e*P	**P**	**14 18 05.7**	**-0.1**
LRMC	**Laurel Mountai**	**77.34**	**44**	⇓P	**P**	**14 18 06.8**	**+0.2**
	baz=78						
BELC	**Belle Mtn.**	**77.59**	**46**	⇓P	**P**	**14 18 07.8**	**-0.2**
	baz=78,SNR=10						
WDC	**Whiskeytown Da**	**77.60**	**38**	*e*P	**P**	**14 18 08.1**	**+0.2**
PETK	**Petropavlovsk-**	**77.62**	**343**	P	**P**	**14 18 07.3**	**-0.4**
	comp=Z,11nm,0.8s,mb4.8,baz=124,slow=8.8,SNR=12						
PETK	**Petropavlovsk-**	**77.62**	**343**	P	**P**	**14 18 07.3**	**-0.4**
PETK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
BC3	**Big Chuckw Mtn**	**77.76**	**47**	⇓P	**P**	**14 18 08.9**	**-0.1**
	baz=78,SNR=11						
GSC	**Goldstone**	**77.82**	**45**	⇓P	**P**	**14 18 09.0**	**-0.2**
	baz=78						
GSC	**Goldstone**	**77.82**	**45**	*e*P	**P**	**14 18 09.3**	**+0.1**
GSC				*e*		14 18 19.7	
GSC				pmax	pmax		
	comp=Z,5.0nm,0.2s,mb5.1						
GSC	**Goldstone**	**77.82**	**45**	*e*P	**P**	**14 18 09.3**	**+0.1**
	comp=Z,4.7nm,0.2s,mb5.1						
GSC				*e*PcP	PcP	14 18 19.7	+0.5
MPMC	**Manual Prospec**	**77.83**	**44**	⇓P	**P**	**14 18 09.

216A	Three Points,	79.64	50	⇓P	P	14 18 19.2	-0.2
	baz=80						
W13A	Hualapai Mount	79.65	46	⇑P	P	14 18 19.3	0.0
	baz=80,SNR=6.0						
KSRS	Korea Array	79.66	317	P	P	14 18 20.9	+1.6
	comp=Z,1.3nm,0.8s,mb3.9,baz=129,slow=5.5,SNR=7.8						
KSRS	Korea Array	79.66	317	P	P	14 18 20.9	+1.6
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
MOD	Modoc	79.74	38	eP	P	14 18 20.0	+0.3
MOD				epP	pP	14 18 31.2	+8.4
Z15A	Gila River Ind	79.84	49	⇓P	P	14 18 20.4	0.0
	baz=80						
S11A	Rachel	79.89	43	⇓P	P	14 18 20.4	-0.2
	baz=80						
K05A	Summer Lake	79.94	37	⇑P	P	14 18 21.2	+0.4
	baz=80,SNR=5.9						
U12A	Valley of Fire	79.97	45	⇑P	P	14 18 21.2	+0.2
	baz=80						
X14A	Yava	79.97	47	⇓P	P	14 18 21.2	+0.1
	baz=80,SNR=6.6						
217A	Green Valley	79.98	51	⇑P	P	14 18 21.1	-0.1
	baz=80,SNR=9.2						
T11A	Corn Creek, Al	79.99	44	⇑P	P	14 18 21.4	+0.3
	baz=80,SNR=22						
V13A	Grand Canyon W	80.01	46	⇓P	P	14 18 21.3	0.0
	baz=80,SNR=7.0						
T12A	Moapa	80.03	45	⇑P	P	14 18 21.6	+0.3
	baz=80						
Y15A	Casa Rosa Ranc	80.08	48	⇑P	P	14 18 21.8	+0.1
	baz=80,SNR=10						
Q10A	Clear Creek Ra	80.18	42	⇓P	P	14 18 22.2	+0.1
	baz=80,SNR=7.9						
W14A	Seligman	80.26	47	⇓P	P	14 18 23.0	+0.4
	baz=80,SNR=13						
TUC	Tucson	80.28	50	eP	P	14 18 22.8	0.0
U13A	Pakoon Wash	80.34	45	⇓P	P	14 18 23.4	+0.3
	baz=81,SNR=16						
Z16A	Peralta Trail,	80.38	49	⇓P	P	14 18 23.5	+0.2
	baz=81						
318A	Bisbee	80.40	51	⇓P	P	14 18 23.4	-0.1
	baz=81,SNR=6.6						
R11A	Troy Canyon, C	80.41	43	⇑P	P	14 18 23.3	-0.1
	baz=81,SNR=9.9						
X15A	Humboldt	80.44	48	⇓P	P	14 18 23.7	+0.1
	baz=81						
S12A	Delamar Landin	80.45	44	⇑P	P	14 18 24.0	+0.4
	baz=81,SNR=8.7						
117A	Oracle	80.46	50	⇑P	P	14 18 23.7	-0.1
	baz=81,SNR=7.1						
V14A	Boquillas Ranc	80.48	46	⇓P	P	14 18 24.1	+0.4
	baz=81,SNR=9.5						
P10A	Eureka	80.61	41	⇓P	P	14 18 24.6	+0.2
	baz=81						
Y16A	Circle Bar Ran	80.63	48	⇓P	P	14 18 24.7	0.0
	baz=81,SNR=9.5						
BMN	Battle Mountai	80.64	40	eP	P	14 18 23.2	-1.3
BMN				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
BMN	Battle Mountai	80.64	40	eP	P	14 18 23.2	-1.3
	comp=Z,36nm,1.6s,mb5.0						
218A	Dragoon	80.64	51	⇑P	P	14 18 24.8	0.0
	baz=81,SNR=7.4						
Q11A	Duckwater	80.66	42	⇑P	P	14 18 24.8	+0.1
	baz=81,SNR=8.0						
T13A	Saint George	80.72	45	⇓P	P	14 18 25.5	+0.4
	baz=81,SNR=5.7						
U14A	Mt Trumbull	80.86	46	⇓P	P	14 18 26.4	+0.5
	baz=81,SNR=22						
319A	Douglas	80.89	52	⇓P	P	14 18 26.2	+0.1
	baz=81						
X16A	Lo Mia Camp, P	80.95	48	⇑P	P	14 18 26.7	+0.4
	baz=81						
Y17A	Roosevelt	80.98	49	⇑P	P	14 18 26.7	+0.1
	baz=81						
O10A	Cortez Mining,	80.99	41	⇑P	P	14 18 26.7	+0.3
	baz=81,SNR=5.2						
P11A	Circle Ranch,	81.01	42	⇓P	P	14 18 27.0	+0.5
	baz=81						
R12A	Pony Springs,	81.02	43	⇓P	P	14 18 27.1	+0.4
	baz=81,SNR=6.7						
WVOR	Wild Horse Val	81.04	38	eP	P	14 18 26.5	-0.1
WVOR				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
WVOR	Wild Horse Val	81.04	38	eP	P	14 18 26.5	-0.1
	comp=Z,11nm,1.2s,mb4.7						
118A	Homack Ranch,	81.04	50	⇑P	P	14 18 27.0	+0.1
	baz=81,SNR=6.9						
S13A	Holt Ranch, En	81.07	44	⇓P	P	14 18 27.3	+0.4
	baz=81						
V15A	Kaibab Nationa	81.21	46	⇑P	P	14 18 28.2	+0.4
	baz=81,SNR=9.9						
219A	White Tail Can	81.22	51	⇑P	P	14 18 27.9	+0.1
	baz=81,SNR=5.8						
T14A	Hurricane	81.29	45	⇓P	P	14 18 28.4	+0.3
	baz=82						
Q12A	Willow Creek R	81.29	43	⇑P	P	14 18 28.4	+0.3
	baz=82						
O11A	Cowboy Ranch,	81.42	41	⇓P	P	14 18 28.8	+0.1
	baz=82,SNR=12						
U15A	North Rim	81.47	46	⇓P	P	14 18 29.7	+0.6
	baz=82,SNR=15						
119A	Ashpeak Ranch,	81.59	50	⇑P	P	14 18 29.9	+0.1
	baz=82,SNR=5.1						
I07A	Izee	81.59	36	⇓P	P	14 18 29.7	+0.2
	baz=82,SNR=5.1						
WUAZ	Wupatki	81.59	47	⇑P	P	14 18 29.8	+0.1
	baz=82						
WUAZ	Wupatki	81.59	47	eP	P	14 18 30.5	+0.8
Y18A	Canyon Day Jun	81.59	49	⇑P	P	14 18 30.1	+0.3
	baz=82,SNR=5.3						
220A	Playas Peak, P	81.71	51	⇑P	P	14 18 30.5	+0.1
	baz=82,SNR=6.1						
J08A	Circle Bar Ran	81.71	37	⇑P	P	14 18 30.5	+0.3
	baz=82						
M10A	I.L. Ranch, Tu	81.71	40	⇑P	P	14 18 30.4	+0.2
	baz=82						
T15A	Red Dirt Ranch	81.73	45	⇓P	P	14 18 30.7	+0.2
	baz=82,SNR=11						
Q13A	Wheeler Ranch,	81.76	43	⇓P	P	14 18 30.7	+0.1
	baz=82						
Z19A	T-Link Ranch,	81.89	50	⇑P	P	14 18 31.4	0.0
	baz=82,SNR=5.7						
120A	U Bar Ranch, L	81.96	51	⇓P	P	14 18 31.8	0.0
	baz=82,SNR=5.6						
V17A	Tonalea, Kykot	82.04	47	⇑P	P	14 18 32.1	0.0
	baz=82,SNR=13						
P13A	Bates Ranch, G	82.05	43	⇑P	P	14 18 32.3	+0.3
	baz=82,SNR=9.0						
O12A	Currie	82.06	42	⇓P	P	14 18 32.4	+0.3
	baz=82						
L10A	Juniper Basin	82.09	39	⇓P	P	14 18 32.0	-0.2
	baz=82,SNR=9.9						
U16A	Tuba City	82.09	47	⇑P	P	14 18 32.6	+0.2
	baz=82						
J09A	Fry Pan Ranch,	82.11	38	⇓P	P	14 18 31.9	-0.3
	baz=82,SNR=9.2						
N12A	Clover Valley,	82.22	41	⇓P	P	14 18 32.9	0.0
	baz=82,SNR=6.4						
N12A	Clover Valley,	82.22	41	eP	P	14 18 33.2	+0.3
Y19A	Nutrioso	82.24	49	⇓P	P	14 18 33.8	+0.6
	baz=82,SNR=6.7						
Q14A	Sevier Lake (B	82.25	43	⇓P	P	14 18 33.4	+0.3
	baz=82,SNR=25						
K10A	MacKenzie Ranc	82.28	39	⇑P	P	14 18 33.1	-0.1
	baz=82,SNR=8.9						
Z20A	Nine Sixteen R	82.28	50	⇑P	P	14 18 33.7	+0.3
	baz=82,SNR=7.5						
T16A	Glen Canyon Da	82.30	46	⇑P	P	14 18 33.6	+0.2
	baz=82,SNR=5.2						
H08A	Prairie City	82.33	36	⇓P	P	14 18 33.5	+0.1
	baz=83						
X19A	St. Johns	82.46	49	⇑P	P	14 18 34.5	+0.2
	baz=83						
R15A	Junction	82.46	44	⇑P	P	14 18 34.6	+0.4
	baz=83						
MAW	Mawson	82.48	199	eP	P	14 18 35.8	+1.8
	comp=Z,10nm,0.9s,mb4.8						
MAW	Mawson	82.48	199	P	P	14 18 35.3	+1.4
	comp=Z,11nm,0.9s,mb4.8,baz=107,slow=6.9,SNR=13						
MAW	Mawson	82.48	199	eP	P	14 18 35.1	+1.2
L11A	Cat Creek Ranc	82.57	40	⇓P	P	14 18 34.6	-0.1
	baz=83,SNR=8.6						
121A	Cookes Peak, D	82.57	51	⇓P	P	14 18 34.9	0.0
	baz=83						
M12A	Wells	82.63	41	⇑P	P	14 18 34.8	-0.2
	baz=83,SNR=11						
HABR	Khabarovsk	82.63	329	eP	P	14 18 32.6	-2.3
HABR				e*SP	sP	14 18 47.4	+8.3
HABR				ePPP		14 23 33.1	
HABR				eS	S	14 28 47.5	-4.7
HABR				eSSS		14 37 38.2	
HABR				pmax	pmax		
	comp=Z,65nm,1.9s,mb5.3						
HABR				pmax	pmax		
	comp=E,13nm,1.3s						
HABR				pmax	pmax		
	comp=N,19nm,1.9s						
HABR				MLR	MLR		
	comp=Z,55nm,19.0s,MS3.9						
G08A	Pilot Rock	82.66	36	⇓P	P	14 18 35.0	-0.1
	baz=83,SNR=10						
U17A	Shonto	82.66	46	⇓P	P	14 18 35.8	+0.5
	baz=83,SNR=6.1						
V18A	Ganado	82.69	48	⇓P	P	14 18 36.0	+0.5
	baz=83						
MSU	Marysvale	82.70	44	eP	P	14 18 36.7	+1.2
P14A	Drum Mountains	82.72	43	⇑P	P	14 18 35.6	+0.1
	baz=83						
N13A	Wendover, West	82.74	41	⇑P	P	14 18 35.5	-0.1
	baz=83,SNR=5.4						
W19A	Sanders	82.75	48	⇓P	P	14 18 35.7	-0.1
	baz=83						
K11A	Parker Ranch,	82.76	39	⇓P	P	14 18 35.6	-0.1
	baz=83,SNR=6.7						
T17A	Navajo Res., N	82.78	46	⇑P	P	14 18 36.3	+0.4
	baz=83,SNR=6.8						
Y20A	Horse Springs,	82.84	50	⇑P	P	14 18 36.8	+0.5
	baz=83,SNR=13						
H09A	Durkee	82.98	37	⇓P	P	14 18 36.9	+0.1
	baz=83						
MDJ	Mudanjiang	82.99	323	P	P	14 18 38.1	+1.3
MDJ				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,82nm,4.9s						
MDJ	Mudanjiang	82.99	323	eP	P	14 18 38.0	+1.2
	comp=Z,8.6nm,0.8s,mb4.8						
L12A	House Creek Ra	83.00	40	⇓P	P	14 18 36.9	0.0
	baz=83,SNR=6.5						
NJ2	Nanjing	83.01	308	eP	P	14 18 38.8	+1.6
NJ2				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.5						
RSW	Rattlesnake Hi	83.02	35	eP	P	14 18 37.6	+0.7
R16A	Teasdale	83.03	45	⇓P	P	14 18 37.5	+0.3
	baz=83						
M13A	Montello	83.05	41	⇓P	P	14 18 37.2	0.0
	baz=83,SNR=9.7						
M13A	Montello	83.05	41	eP	P	14 18 37.2	0.0
	comp=Z,32nm,1.4s,mb5.2						
HAWA	Hanford	83.05	35	eP	P	14 18 37.4	+0.3
X20A	Quemado	83.08	49	⇓P	P	14 18 37.6	0.0
	baz=83,SNR=9.4						
U18A	Rough Rock, Ch	83.10	47	⇑P	P	14 18 37.9	+0.3
	baz=83,SNR=6.9						
S17A	Black Ridge (B	83.12	46	⇑P	P	14 18 37.6	-0.1
	baz=83						
DUG	Dugway	83.23	43	⇑P	P	14 18 37.9	-0.3
	baz=84						
MFID	Camas Ranch	83.27	39	⇑P	P	14 18 38.2	-0.1
	baz=84,SNR=9.4						
G09A	Cove	83.30	36	⇑P	P	14 18 38.2	-0.2
	baz=84,SNR=12						
W20A	Ramah	83.38	49	⇓P	P	14 18 39.4	+0.3
	baz=84,SNR=8.4						
ETW	Entiat	83.42	33	eP	P	14 18 39.2	+0.2
H10A	Noah's Angus R	83.45	37	⇓P	P	14 18 38.4	-0.8
	baz=84,SNR=13						
T18A	Mexican Hat	83.48	46	⇑P	P	14 18 39.8	+0.3
	baz=84,SNR=28						
U19A	Dine' College,	83.49	47	⇑P	P	14 18 39.5	-0.1
	baz=84,SNR=7.0						
I11A	Placerville	83.49	38	⇓P	P	14 18 39.0	-0.4
	baz=84,SNR=7.9						
Z22A	Elephant Butte	83.53	51	⇑P	P	14 18 40.1	+0.2
	baz=84,SNR=9.5						
X21A	Alamocita Cree	83.53	50	⇑P	P	14 18 40.2	+0.3
	baz=84,SNR=6.0						
Q16A	Castle Valley	83.58	44	⇑P	P	14 18 40.3	+0.3
	baz=84						
J12A	Stokes Ranch,	83.60	39	⇑P	P	14 18 39.9	-0.1
	baz=84,SNR=13						
R17A	Hanksville Air	83.61	45	⇑P	P	14 18 40.0	-0.1
	baz=84,SNR=17						
L13A	Double Diamond	83.61	40	⇑P	P	14 18 40.1	+0.1
	baz=84						
C07A	Waterville	83.61	33	⇓P	P	14 18 40.1	+0.1
	baz=84						
M14A	Sheep Mountain	83.64	41	⇑P	P	14 18 40.0	-0.3
	baz=84,SNR=6.2						
G10A	Bishop Farm, J	83.67	37	⇑P	P	14 18 39.9	-0.4
	baz=84,SNR=11						
324A	Moseley Ranch,	83.73	53	⇑P	P	14 18 40.2	-0.8
	baz=84,SNR=5.6						
TMUT	Trail Mountain	83.76	44	eP	P	14 18 42.3	+1.4
425A	Indio Mountain	83.79	54	⇑P	P	14 18 40.6	-0.8
	baz=84						
D08A	Wollman Farm,	83.80	34	⇑P	P	14 18 40.7	-0.2
	baz=84,SNR=5.9						
K13A	Stover Farm, H	83.85	40	⇑P	P	14 18 41.5	+0.2
	baz=84						
626A	Big Bend Ranch	83.86	55	⇓P	P	14 18 41.2	-0.5
	baz=84,SNR=5.7						
Y22A	Socorro	83.87	50	⇓P	P	14 18 41.5	-0.1
	baz=84,SNR=6.2						
T19A	Beclabito	83.90	47	⇓P	P	14 18 42.0	+0.3
	baz=84						
I12A	Atlanta	83.90	39	⇑P	P	14 18 41.6	0.0
	baz=84,SNR=12						
H11A	Donnelly	83.94	37	⇑P	P	14 18 41.3	-0.4
	baz=84,SNR=14						
L14A	Malta	84.01	41	⇓P	P	14 18 42.0	-0.1
	baz=84						
224A	Corundas Mount	84.01	53	⇓P	P	14 18 42.3	-0.1
	baz=84,SNR=8.2						
F10A	Beach Ranch, E	84.03	36	⇓P	P	14 18 41.3	-0.9
	baz=84,SNR=7.3						
325A	Bean Ranch, Si	84.08	53	⇓P	P	14 18 41.9	-0.9
	baz=84,SNR=5.0						
B07A	Winthrop	84.09	33	⇑P	P	14 18 42.2	-0.2
	baz=84						
SRU	San Rafael	84.10	44	⇑P	P	14 18 42.7	0.0
	baz=84,SNR=11						
SRU	San Rafael	84.10	44	eP	P	14 18 43.2	+0.6
D09A	Jones Farm, Ri	84.13	35	⇓P	P	14 18 42.9	+0.3
	baz=84						
R18A	Canyonlands Na	84.13	45	⇓P	P	14 18 42.9	+0.1
	baz=84,SNR=9.6						
HLID	Hailey	84.19	39	⇑P	P	14 18 43.0	0.0
	baz=84,SNR=16						
HLID	Hailey	84.19	39	eP	P	14 18 43.6	+0.6
G11A	Walters Elk Ra	84.21	37	⇓P	P	14 18 42.5	-0.6
	baz=84,SNR=13						
J13A	Cove Ranch, Pi	84.23	39	⇓P	P	14 18 43.5	+0.3
	baz=84,SNR=14						
LPM	Los Pinos Moun	84.29	50	eP	P	14 18 44.4	+0.7
A07A	Ashnola River,	84.34	32	⇓P	P	14 18 43.7	+0.1
	baz=85						
K14A	Jones Ranch, D	84.34	40	⇑P	P	14 18 44.0	+0.2
	baz=85						
DAU	Daniels Canyon	84.34	43	eP	P	14 18 45.3	+1.4
GAMB	Gambell	84.35	1	eP	P	14 18 44.2	+0.8
	comp=Z,7.1nm,0.8s,mb4.8						
Q18A	Rafter H Ranch	84.36	45	⇓P	P	14 18 43.9	-0.1
	baz=85,SNR=10						
124A	Stringfield Ra	84.36	52	⇓P	P	14 18 44.1	-0.1
	baz=85,SNR=6.7						
627A	Terlingua Ranc	84.39	56	⇑P	P	14 18 43.7	-0.7
	baz=85,SNR=8.6						
B08A	Colville Reser	84.42	33	⇑P	P	14 18 43.5	-0.5
	baz=85						
426A	McDonald Obser	84.46	54	⇑P	P	14 18 44.1	-0.6
	baz=85,SNR=5.2						
H12A	Diamond D Ranc	84.51	38	⇓P	P	14 18 44.1	-0.5
	baz=85,SNR=12						
L15A	Malad City	84.51	41	⇑P	P	14 18 44.2	-0.5
	baz=85						
Y23A	Lovelace Mesa,	84.52	51	⇑P	P	14 18 44.9	-0.1
	baz=85						
527A	Woodward Ranch	84.54	55	⇓P	P	14 18 44.4	-0.8
	baz=85						
O17A	Robinson Place	84.55	43	⇓P	P	14 18 45.0	+0.1
	baz=85,SNR=8.4						
I13A	Wildhorse Cree	84.57	39	⇓P	P	14 18 44.8	-0.1
	baz=85,SNR=5.7						
F11A	Grangeville	84.57	36	⇑P	P	14 18 44.0	-0.9
	baz=85						
D10A	Wagner Farm, O	84.68	35	⇓P	P	14 18 44.7	-0.7
	baz=85						
TTA	Tatalina	84.69	8	eP	P	14 18 45.7	+0.6
ANMO	Albuquerque	84.73	50	P	P	14 18 46.2	+0.3
	comp=Z,9.5nm,1.2s,mb4.8,baz=204,slow=5.6,SNR=17						
ANMO	Albuquerque	84.73	50	eP	P	14 18 46.4	+0.4
E11A	Bogner Ranch,	84.83	36	⇑P	P	14 18 45.2	-1.0
	baz=85						
Q19A	Hogan Spring (	84.85	45	⇑P	P	14 18 46.1	-0.4
	baz=85,SNR=7.2						
H13A	Challis	84.86	38	⇑P	P	14 18 46.4	0.0
	baz=85,SNR=6.5						
CN2	Changchun	84.89	321	eP	P	14 18 47.1	+0.6
CN2				epP	pP	14 18 57.6	+7.9
CN2				eS	S	14 29 12.3	-2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,13.0s,MS4.8						
CN2				LR	LR		
	comp=Z,200nm,17.0s,MS4.6						
V22A	San Miguel Ran	84.89	49	⇓P	P	14 18 46.7	-0.1
	baz=85						
N17A	Moffit Pass	84.90	43	⇑P	P	14 18 46.9	+0.2
	baz=85						
125A	Gardner Draw,	84.93	52	⇑P	P	14 18 46.8	-0.3
	baz=85,SNR=6.4						
GDL2	Guadalupe Moun	84.93	53	eP	P	14 18 47.5	+0.5
I14A	Mackay	84.97	39	⇓P	P	14 18 46.9	-0.1
	baz=85,SNR=5.9						
Y24A	Capitan	84.97	51	⇓P	P	14 18 47.1	-0.1
	baz=85,SNR=13						
F12A	Elk City	85.00	37	⇓P	P	14 18 46.5	-0.6
	baz=85,SNR=20						
427A	Hayter Ranch,	85.03	55	⇓P	P	14 18 46.9	-0.6
	baz=85,SNR=6.6						
226A	Malaga, Loving	85.06	53	⇑P	P	14 18 47.0	-0.8
	baz=85						
B09A	Rice	85.07	34	⇓P	P	14 18 47.0	-0.4
	baz=85						
L16A	Fish Haven	85.11	42	⇑P	P	14 18 47.3	-0.4
	baz=85						
S21A	Coal Bank Pass	85.17	47	⇑P	P	14 18 47.7	-0.4
	baz=85						
528A	Cox Ranch, San	85.18	55	⇑P	P	14 18 47.6	-0.7
	baz=85,SNR=6.5						
G13A	Cobalt	85.19	38	⇑P	P	14 18 47.9	-0.2
	baz=85						
A09A	Danville	85.19	33	⇓P	P	14 18 47.8	-0.1
	baz=85						
E12A	Beaver Dam Sad	85.22	36	⇓P	P	14 18 47.6	-0.5
	baz=86						
J15A	Blackfoot	85.27	40	⇑P	P	14 18 48.6	+0.1
	baz=86						
M17A	Scullys Gap (B	85.29	42	⇑P	P	14 18 48.5	-0.2
	baz=86						
H14A	Leadore	85.41	39	⇑P	P	14 18 49.0	-0.2
	baz=86,SNR=7.6						
T22A	Edith	85.45	48	⇑P	P	14 18 49.2	-0.3
	baz=86						
K16A	Soda Springs	85.47	41	⇓P	P	14 18 49.6	+0.1
	baz=86						
Y25A	Mesa, Roswell	85.51	51	⇑P	P	14 18 49.3	-0.6
	baz=86,SNR=9.9						
428A	Kincaid Ranch,	85.52	55	⇓P	P	14 18 49.5	-0.5
	baz=86						
F13A	Darby	85.54	37	⇑P	P	14 18 49.9	+0.2
	baz=86,SNR=6.1						
W24A	Lazy 6 Ranch,	85.61	50	⇑P	P	14 18 49.8	-0.6
	baz=86						
M18A	Lyman	85.65	43	⇓P	P	14 18 50.3	-0.1
	baz=86						
O19A	Miners Draw (B	85.65	44	⇑P	P	14 18 50.3	-0.1
	baz=86						
Z26A	Caprock	85.72	52	⇑P	P	14 18 50.3	-0.7
	baz=86,SNR=8.0						
X25A	Clemmons Ranch	85.82	51	⇑P	P	14 18 50.8	-0.6
	baz=86,SNR=6.4						
H15A	Lima	85.83	39	⇑P	P	14 18 51.4	+0.1
	baz=86						
MCMT	McKenzie Canyo	85.83	39	eP	P	14 18 51.1	-0.1
	comp=Z,1.1nm,0.8s,mb4.1						
RRI2	Red Ridge	85.92	41	eP	P	14 18 52.0	+0.3
TRF	Thorofare Moun	86.05	10	eP	P	14 18 50.9	-1.0
	comp=Z,25nm,1.2s,mb5.3						
SKAG	Skagway	86.05	19	eP	P	14 18 50.6	-1.3
D13A	Huson	86.23	36	⇑P	P	14 18 53.1	0.0
	baz=86						
CMIG	Matias Romero	86.24	70	P	P	14 18 52.5	-1.3
	comp=Z,2.3nm,0.9s,mb4.4,baz=261,slow=4.4,SNR=3.9						
DLMT	Dillon	86.29	38	eP	P	14 18 53.7	+0.2
	comp=Z,1.1nm,0.4s,mb4.4						
W25A	X Bar L Ranch,	86.30	50	⇑P	P	14 18 52.7	-1.0
	baz=86,SNR=8.4						
A11A	Hall Mountain,	86.33	34	⇑P	P	14 18 53.5	-0.1
	baz=87						
E14A	Clinton	86.38	37	⇓P	P	14 18 53.7	-0.2
	baz=87						
IMW	Indian Meadow	86.45	40	eP	P	14 18 54.6	+0.3
X26A	CR and CF Fran	86.45	51	⇑P	P	14 18 54.1	-0.5
	baz=87						
L19A	Farson	86.45	42	⇓P	P	14 18 53.8	-0.6
	baz=87						
N20A	Spence Gulch,	86.49	44	⇓P	P	14 18 54.6	0.0
	baz=87						
MCK	McKinley	86.54	11	eP	P	14 18 52.6	-1.7
MCK				e*PP	pP	14 19 05.0	+7.6
MCK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
MCK	McKinley	86.54	11	eP	P	14 18 52.6	-1.7
	comp=Z,16nm,0.9s,mb5.3						
MCK				epP	pP	14 19 05.0	+7.5
J18A	Kendall Valley	86.64	41	⇑P	P	14 18 55.1	-0.1
	baz=87						
G16A	Moss Hill, Enn	86.67	39	⇑P	P	14 18 55.1	-0.2
	baz=87						
BW06	Boulder Array	86.68	42	⇑P	P	14 18 55.0	-0.5
	baz=87						
PDAR	Pinedale Array	86.68	42	P	P	14 18 54.8	-0.7
	comp=Z,2.0nm,1.0s,mb4.3,baz=204,slow=3.3,SNR=11						
H16A	Russell Place,	86.71	39	⇑P	P	14 18 56.1	+0.6
	baz=87						
D14A	Greenough	86.75	37	⇑P	P	14 18 55.9	+0.2
	baz=87						
MSTX	Muleshoe	86.94	52	⇓P	P	14 18 56.5	-0.4
	baz=87						
B13A	Whitefish	86.98	35	⇓P	P	14

DAWY	Dawson	88.80	14	*e*P	P	14 19 05.9	+0.8
A16A	West Butte Ran	88.87	36	⇑P	P	14 19 05.1	-0.7
	baz=89						
BILL	Bilibino	89.80	353	⇑*e*P	P	14 19 09.1	-0.6
BILL				pmax	pmax		
	comp=Z,12nm,2.7s,mb4.8						
BILL	Bilibino	89.80	353	*e*P	P	14 19 09.3	-0.4
	comp=Z,4.3nm,1.0s,mb4.7						
A18A	Metzger Ranch,	89.82	36	⇓P	P	14 19 10.0	-0.3
	baz=90						
GYA	Guiyang	90.09	298	P	P	14 19 13.3	+1.2
GYA				pP	pP	14 19 24.8	+10
GYA				sP	sP	14 19 29.3	+13
GYA				SKS		14 29 38.9	
GYA				S	S	14 30 01.8	-4.0
GYA				sS	sS	14 30 20.0	+8.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=N,480nm,21.9s,MS5.1						
GYA				LR	LR		
	comp=E,530nm,22.1s,MS5.1						
GYA				LR	LR		
	comp=Z,540nm,20.8s,MS5.0						
EDM	Edmonton	90.40	32	*e*P	P	14 19 13.4	+0.6
HHC	Hu-ho-hao-te	92.29	313	*e*P	P	14 19 23.5	+1.5
HHC				pP	pP	14 19 34.1	+9.0
HHC				sP	sP	14 19 38.0	+12
HHC				SKS		14 29 53.1	
HHC				S	S	14 30 22.3	-3.0
HHC				sS	sS	14 30 40.1	+10
HHC				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.5						
HHC				pmax	pmax		
	comp=Z,98nm,5.1s						
HHC				LR	LR		
	comp=N,300nm,18.0s,MS5.0						
HHC				LR	LR		
	comp=E,340nm,18.8s,MS5.0						
HHC				LR	LR		
	comp=Z,370nm,16.8s,MS4.9						
KMI	Kunming	92.85	296	P	P	14 19 28.3	+3.4
KMI				pP	pP	14 19 38.8	+11
KMI				sP	sP	14 19 43.5	+14
KMI				PP	PP	14 23 11.4	+3.8
KMI				S	S	14 30 26.6	-4.4
KMI				sS	sS	14 30 44.6	+8.4
KMI				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.8						
KMI				pmax	pmax		
	comp=Z,73nm,4.5s						
KMI				LR	LR		
	comp=N,210nm,18.9s,MS4.8						
KMI				LR	LR		
	comp=E,220nm,17.9s,MS4.8						
KMI				LR	LR		
	comp=Z,250nm,19.9s,MS4.7						
CD2	Chengdu	94.14	301	P	P	14 19 31.8	+1.1
CD2				pP	pP	14 19 42.3	+8.4
CD2				sP	sP	14 19 46.3	+11
CD2				PP	PP	14 23 21.4	+3.8
CD2				SKS		14 30 02.6	
CD2				S	S	14 30 37.5	-4.6
CD2				sS	sS	14 30 55.3	+8.0
CD2				LR	LR		
	comp=N,340nm,5.9s						
CD2				LR	LR		
	comp=Z,280nm,5.4s						
YKA	Yellowknife Ar	95.29	24	P	P	14 19 34.3	-0.9
	comp=Z,1.4nm,0.8s,mb4.4,baz=234,slow=4.4,SNR=15						
ECSD	EROS Data Cent	95.49	45	*e*P	P	14 19 36.3	-0.3
LZH	Lanzhou	95.97	306	*e*P	P	14 19 41.4	+2.4
LZH				pP	pP	14 19 52.1	+10
LZH				sP	sP	14 19 56.0	+13
LZH				SKS		14 30 13.0	
LZH				*e*S	S	14 30 53.5	-4.2
LZH				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.3						
LZH				pmax	pmax		
	comp=Z,93nm,8.0s						
LZH				LR	LR		
	comp=E,170nm,17.2s						
LZH				LR	LR		
	comp=Z,290nm,19.4s,MS4.8						
LPAZ	La Paz	98.46	111	LR	LR	14 57 16.8	
	comp=Z,2μm,19.3s,MS5.7,baz=142,slow=31						
SONM	Songino Array	98.49	318	P	P	14 19 50.5	+0.5
	comp=Z,0.3nm,0.4s,mb4.2,baz=132,slow=2.1,SNR=4.6						
ZALV	Zalesovo Beam	113.11	321	PKiKP	PKiKP	14 24 48.3	-0.6
	comp=Z,0.4nm,0.4s,baz=180,slow=0.7,SNR=4.0						
ZALV	Zalesovo Beam	113.11	321	*i* PKIKP	PKiKP	14 24 48.3	-0.5
MK31	Makanchi Array	114.16	313	*e*PKIKP	PKiKP	14 24 49.6	-1.5
MKAR	Makanchi Array	114.16	313	PKP	PKiKP	14 24 50.0	-1.1
	comp=Z,1.9nm,0.8s,baz=85,slow=0.8,SNR=14						
MKAR	Makanchi Array	114.16	313	PKIKP	PKiKP	14 24 50.0	-1.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	116.78	317	PKP	PKPdf	14 24 55.3	-0.7
	comp=Z,2.6nm,0.8s,baz=85,slow=1.9,SNR=14						
KURK	Kurchatov	116.78	317	PKIKP	PKPdf	14 24 55.3	-0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TKM2	Tokmak 2	118.65	308	*e*PKIKP	PKPdf	14 25 00.2	+0.3
UCH	Uchtor	119.42	307	*e*PKPdf	PKPdf	14 25 02.3	+0.9
UCH				*ep*PKPdf	pPKPdf	14 25 12.8	+8.2
AAK	Ala-Archa	119.45	308	PKP	PKPdf	14 25 02.1	+0.7
	comp=Z,0.8nm,0.3s,baz=225,slow=5.7,SNR=4.5						
AAK	Ala-Archa	119.45	308	PKIKP	PKPdf	14 25 02.1	+0.7
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AML	Almayashu	120.03	307	*e*PKPdf	PKPdf	14 25 03.7	+1.1
AML				*ep*PKPdf	pPKPdf	14 25 13.4	+7.6
BVAR	Borovoye Array	121.74	320	PKP	PKPdf	14 25 04.7	-0.8
	comp=Z,3.6nm,0.8s,baz=107,slow=1.5,SNR=25						
BVAR	Borovoye Array	121.74	320	PKIKP	PKPdf	14 25 04.7	-0.8
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SPITS	Spitsbergen Ar	122.40	357	PKP	PKPdf	14 25 05.3	-0.9
	comp=Z,4.4nm,0.8s,baz=174,slow=7.8,SNR=3.7						
SPITS	Spitsbergen Ar	122.40	357	PKIKP	PKPdf	14 25 05.3	-0.8
SPITS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	128.89	317	*e*PKPdf	PKPdf	14 25 19.3	0.0
ABKAR				*ep*PKPdf	pPKPdf	14 25 31.1	+8.6
AKTK	Aktyubinsk	129.79	319	PKP	PKPdf	14 25 21.2	+0.3
AKTO	Aktyubinsk	129.79	319	PKP	PKPdf	14 25 21.2	+0.3
	comp=Z,1.1nm,0.7s,baz=42,slow=5.5,SNR=4.6						
AKTO	Aktyubinsk	129.79	319	PKIKP	PKPdf	14 25 21.3	+0.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	129.88	351	PKP	PKPdf	14 25 19.6	-1.0
	comp=Z,3.4nm,0.9s,baz=346,slow=0.5,SNR=6.3						
ARCES	ARCESS Array B	129.88	351	PKIKP	PKPdf	14 25 19.6	-1.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	137.08	346	PKhKP		14 25 29.1	
	comp=Z,1.4nm,0.9s,baz=270,slow=1.1,SNR=2.9						
NOA	NORSAR Array B	139.67	356	PKP	PKPdf	14 25 39.8	+0.7
	comp=Z,1.4nm,1.0s,baz=13,slow=4.1,SNR=2.7						
NOA	NORSAR Array B	139.67	356	PKIKP	PKPdf	14 25 39.8	+0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZEI	Tsey	141.51	313	*i* PKIKP	PKPdf	14 25 43.1	+0.1
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KIV	Kislovodsk	141.84	316	*e*PKIKP	PKPdf	14 25 43.4	-0.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SUW	Suwalki	144.38	343	*e*PKP	PKPdf	14 25 46.0	-1.7
SUW	Suwalki	144.38	343	*e*PKPdf	PKPdf	14 25 46.8	-1.0
AKASG	Malin Array Be	145.04	334	PKP	PKPdf	14 25 47.5	-1.5
	comp=Z,14nm,0.8s,baz=36,slow=3.4,SNR=45						
AKASG	Malin Array Be	145.04	334	PKIKP	PKPdf	14 25 47.5	-1.5
AKASG				pmax	pmax		
	comp=Z,14nm,0.8s						
AKBB	Malin Array Si	145.04	334	*e*PKIKP	PKPdf	14 25 47.2	-1.8
KIEV	Kiev	145.05	334	*e*PKIKP	PKPdf	14 25 47.2	-1.8
KIEV				*e*		14 25 58.8	
BEST	Besiri	145.13	307	*i* P	PKPbc	14 25 50.2	+1.1
KELT	Kelkit	145.76	312	*i* P	PKPdf	14 25 51.3	+0.8
SIM	Simferopol'	146.60	323	*de*PKP2	PKPab	14 25 56.6	+2.2
SIM				pmax	pmax		
	comp=Z,19nm,0.8s						
KEMA	Kemaliye	146.65	311	*i* P	PKPbc	14 25 54.8	+1.1
BSEG	Bad Segeberg	146.80	355	*e*PKPbc	PKPbc	14 25 54.4	+0.8
MALT	Malatya	147.08	309	*e*PKPbc	PKPbc	14 25 55.8	+0.9
MALT	Malatya	147.08	309	⇑*i*P	PKPab	14 25 58.0	+1.5
LVV	L'vov	147.73	338	*i* PKP2	PKPbc	14 25 55.7	-0.6
KIS	Kishinev	147.99	330	*e*P	PKPdf	14 25 55.0	+0.9
GZT	Gaziantep	148.07	308	*i* P	PKPab	14 25 59.6	-0.8
NRDL	Niedersach Rie	148.24	355	*e*PKPbc	PKPbc	14 25 58.2	+0.6
KWP	Kalwaria Pacla	148.34	339	*e*PKP	PKPbc	14 25 58.3	+0.3
IBBN	Ibbenburen	148.56	358	*e*PKPbc	PKPbc	14 25 59.2	+0.7
OJC	Ojcow	148.71	343	*e*PKP	PKPbc	14 25 58.8	-0.1
CLZ	Clausthal	148.87	355	*e*PKPbc	PKPbc	14 26 00.2	+0.9
KSP	Ksiaz	148.98	347	*e*PKP	PKPbc	14 26 00.0	+0.4
KSP	Ksiaz	148.98	347	*e*PKP2	PKPbc	14 26 00.3	+0.7
STHS	Stebnicka Huta	149.00	341	*e*PKP	PKPbc	14 26 00.9	+1.2
STHS	Stebnicka Huta	149.00	341	*e*PKP	PKPbc	14 26 00.9	+1.2
BUR08	Bucovina Ar. S	149.08	334	*e*PKPbc	PKPbc	14 26 01.2	+1.3
KOLS	Kolonicke sedl	149.09	339	*e*PKP	PKPbc	14 26 01.3	+1.4
KOLS	Kolonicke sedl	149.09	339	*e*PKP	PKPbc	14 26 01.3	+1.4
BURAR	Bucovina Array	149.09	334	⇑PKIKP	PKPdf	14 25 56.2	+0.4
BURAR	Bucovina Array	149.09	334	⇑*i*P	PKPdf	14 25 56.2	+0.4
CLL	Collm	149.10	351	*e*PKPbc	PKPbc	14 26 00.6	+0.7
CLL				*ep*PKPbc	pPKPbc	14 26 11.7	+8.6
CLL	Collm	149.10	351	⇓*i*PKIKP	PKPdf	14 25 56.7	+1.0
CLL				pmax	pmax		
	comp=Z,34nm,1.2s						
CLL	Collm	149.10	351	*i* PKP	PKPdf	14 25 56.7	+1.0
CLL				⇑*i*PKP	PKPab	14 26 03.8	-0.3
CLL				*i* pPKP	pPKPdf	14 26 11.2	+12
CLL	Collm	149.10	351	*i* PKPdf	PKPdf	14 25 56.7	+1.0
CLL				⇓*i*PKPbc	PKPbc	14 25 59.8	-0.1
	comp=Z,34nm,1.2s						
CLL				⇑*i*PKPab	PKPab	14 26 03.8	-0.3
	comp=Z,11nm,0.9s						
CLL				*i* pPKPbc	pPKPbc	14 26 11.2	+8.1
	comp=Z,19nm,1.0s						
CLL				*i*		14 26 36.7	
CLL				*e*		14 26 53.0	
NIE	Niedzica	149.28	342	*e*PKP2	PKPab	14 26 02.0	-2.9
UZH	Uzhgorod	149.34	339	⇑*i*PKP2	PKPbc	14 26 00.8	+0.2
UPC	Upice	149.35	347	*e*PKP	PKPdf	14 25 59.8	+3.6
UPC				*ep*PKP	pPKPdf	14 26 12.3	+13
BRG	Berggiesshubel	149.38	350	*e*PKPbc	PKPbc	14 26 01.5	+0.9
BRG				*ep*PKPbc	pPKPbc	14 26 12.5	+8.7
BRG	Berggiesshubel	149.38	350	*e*PKP	PKPdf	14 25 57.0	+0.8
	comp=Z,8.7nm,1.2s						
BRG				*i*		14 26 01.6	
	comp=Z,30nm,1.3s						
BRG				*e*		14 42 18.3	
	comp=Z,2.7nm,0.7s						
BRG				*i*		14 42 44.0	
BRG				SS	SS	14 48 46.0	+1.3
BRG							
	comp=N,2μm,24.6s						
BRG							
	comp=E,2μm,29.2s						
BRG							
	comp=Z,3μm,25.8s						
BRG	Berggiesshubel	149.38	350	*e*PKIKP	PKPdf	14 25 57.0	+0.8
BRG				*i*		14 26 01.6	
BRG				*e*		14 42 18.3	
BRG				SS	SS	14 48 46.0	+1.3
BRG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,18nm,1.3s						
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRG				MLR	MLR		
	comp=N,1μm,24.6s,MS5.7						
BRG				MLR	MLR		
	comp=E,1μm,29.2s,MS5.7						
BRG				MLR	MLR		
	comp=Z,2μm,25.8s,MS5.8						
DPC	Dobruska-Polom	149.44	347	*e*PKHKP	PKPdf	14 25 56.6	+0.3
DPC				MLR	MLR		
	comp=Z,4μm,21.4s,MS6.1						
BUG	Bochum--Univer	149.44	358	*e*PKPbc	PKPbc	14 26 01.1	+0.4
OKC	Ostrava-Krasne	149.50	344	*e*PKP2	PKPbc	14 26 01.7	+0.8
OKC				MLR	MLR		
	comp=Z,1μm,24.1s,MS5.6						
PVCC	Panska Ves	149.61	349	*e*PKP2	PKPbc	14 26 01.8	+0.6
PVCC				MLR	MLR		
	comp=Z,3μm,27.4s,MS6.0						
TRPA	Tarpa	149.69	338	⇓*i*P	PKPbc	14 26 01.9	+0.5
MORC	Moravsky Berou	149.70	345	*e*PKP2	PKPbc	14 26 01.0	-0.4
MORC	Moravsky Berou	149.70	345	⇓*i*P	PKPbc	14 26 01.9	+0.5
BR131	Keskin Array S	149.79	315	*e*PKPbc	PKPbc	14 26 02.2	+0.2
BRTR	Keskin Array B	149.79	315	PKP	PKPdf	14 25 58.0	+0.8
	comp=Z,1.1nm,0.7s,baz=178,slow=5.9,SNR=5.2						
BRTR				PKPbc	PKPbc	14 26 02.0	0.0
	comp=Z,8.7nm,0.9s,baz=124,slow=2.6,SNR=32						
BRTR	Keskin Array B	149.79	315	PKHKP	PKPdf	14 25 58.0	+0.8
BRTR						14 26 02.0	
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
UBBA	Unterbreizbach	149.92	355	*e*PKPbc	PKPbc	14 26 02.2	+0.3
MOX	Moxa	149.93	353	*e*PKP	PKPbc	14 26 02.3	+0.4
	comp=Z,36nm,1.6s						
MOX	Moxa	149.93	353	*e*PKPbc	PKPbc	14 26 02.5	+0.6
MOX				*ep*PKPbc	pPKPbc	14 26 13.7	+8.5
TANN	Tannenbergstha	150.05	352	*e*PKPbc	PKPbc	14 26 03.2	+1.0
TANN				*ep*PKPbc	pPKPbc	14 26 14.0	+8.5
KECS	Kecovo	150.06	341	*e*PKP	PKPbc	14 26 03.6	+1.3
KECS				*e*	pPKPab	14 26 14.3	+3.0
KECS	Kecovo	150.06	341	*e*PKP	PKPbc	14 26 03.6	+1.3
KECS				*e*		14 26 14.3	
PRA	Prague	150.07	349	PKP	PKPbc	14 26 03.0	+0.7
PRA				pPKP	pPKPab	14 26 14.0	+2.7
UCC	Uccle	150.07	2	PKPbc	PKPbc	14 26 01.3	-1.0
HARR	Harsova	150.09	328	⇓*i*P	PKPbc	14 26 04.1	+1.6
PRU	Pruhonice	150.13	349	*e*PKP	PKPbc	14 26 03.1	+0.7
PRU				*ep*PKP	pPKPab	14 26 12.2	+0.7
HGN	Heimansgroeve	150.14	0	*e*PKP	PKPbc	14 26 02.0	-0.5
	comp=Z,25nm,2.0s						
NKC	Novy Kostel	150.23	352	*e*PKP	PKPbc	14 26 02.4	-0.3
NKC				*ep*PKP	pPKPdf	14 26 14.0	+13
SNF	Seneffe	150.36	2	PKPbc	PKPbc	14 26 03.5	+0.6
MLR	Muntele Rosu	150.44	331	⇓*i*P	PKPbc	14 26 02.8	-0.5
VYHS	Vyhne	150.54	343	*e*PKIKP	PKPdf	14 25 59.0	+0.9
VYHS				*e*		14 26 04.6	
VYHS				*e*		14 26 15.7	
VYHS	Vyhne	150.54	343	*e*PKP	PKPdf	14 25 59.0	+0.9
VYHS				*e*		14 26 04.6	
VYHS				*e*		14 26 15.7	
VYHS				*e*		14 42 44.0	
VYHS				*e*		14 52 18.2	
VYHS				*e*		14 58 55.2	
VYHS	Vyhne	150.54	343	*e*PKP	PKPdf	14 25 59.0	+0.9
VYHS				*e*		14 26 04.6	
VYHS				*e*		14 26 15.7	
KOLL	Kolacno	150.59	343	*e*PKP	PKPbc	14 26 05.1	+1.5
KOLL				*e*	pPKPab	14 26 15.8	+2.4
KOLL	Kolacno	150.59	343	*e*PKP	PKPbc	14 26 05.1	+1.5
KOLL				*e*		14 26 15.8	
TREC	Trest	150.61	347	*e*PKP	PKPbc	14 26 03.5	-0.1
TREC				*ep*PKP	PKPab	14 26 12.6	+2.3
TNS	Taunus Mts	150.62	357	*e*PKPbc	PKPbc	14 26 04.3	+0.7
ROTZ	Rotzenmuhle	150.72	352	*e*PKPbc	PKPbc	14 26 04.8	+1.0
PSZ	Piszkesteto	150.75	341	*e*PKPbc	PKPbc	14 26 04.2	+0.2
PSZ	Piszkesteto	150.75	341	⇓*e*PKP	PKPbc	14 26 04.5	+0.5
PSZ	Piszkesteto	150.75	341	⇓*i*P	PKPbc	14 26 05.1	+1.1
DRGR		150.75	336	⇓*i*P	PKPbc	14 26 05.0	+1.0
DOU	Dourbes	150.78	2	PKPbc	PKPbc	14 26 04.6	+0.6
DOU				APKPbc		14 26 15.7	
GIVF	Givet	150.78	2	*e*PKIKP	PKPbc	14 26 04.2	+0.2
	comp=Z,58nm,1.1s						
BAIF	Baives	150.81	2	*e*PKIKP	PKPbc	14 26 04.4	+0.3
	comp=Z,59nm,1.2s						
GRA1	Grafenberg Arr	150.91	353	*e*PKPbc	PKPbc	14 26 05.2	+0.9
GRF	Grafenberg Arr	150.91	353	*e*PKPbc	PKPbc	14 26 05.2	+0.9
HENT	Hendek	150.95	319	*i* P	PKPbc	14 26 05.6	+0.9
KHC	Kasperske Hory	151.13	350	*e*PKPbc	PKPbc	14 26 04.8	0.0
KHC	Kasperske Hory	151.13	350	*e*PKP	PKPbc	14 26 04.9	+0.1
KHC				*ep*PKP	pPKPab	14 26 16.1	+0.5
MMAI	Mount Meron Ar	151.21	301	PKPbc	PKPbc	14 26 07.0	+1.4
	comp=Z,15nm,0.9s,baz=52,slow=9.6,SNR=6.9						
WET	Wettzell	151.23	351	*e*PKPbc	PKPbc	14 26 05.9	+0.8
WLF	Walferdange	151.24	360	PKPbc	PKPbc	14 26 06.8	+1.8
WLF				APKPbc		14 26 16.8	
WLF	Walferdange	151.24	360	*e*PKPbc	PKPbc	14 26 06.2	+1.1
WLF				*ep*PKPbc	pPKPab	14 26 17.2	+1.1
GEC2	GERESS Array S	151.38	349	*e*PKPbc	PKPbc	14 26 06.1	+0.7
GEC2				*ep*PKPbc	pPKPab	14 26 17.4	+0.7
GERES	GERESS Array B	151.38	349	PKP	PKPdf	14 25 59.9	+0.5
	comp=Z,0.6nm,0.7s,baz=207,slow=1.5,SNR=4.9						
GERES				PKPbc	PKPbc	14 26 05.3	-0.1
	comp=Z,5.3nm,0.9s,baz=48,slow=2.0,SNR=30						
GERES	GERESS Array B	151.38	349	PKIKP	PKPdf	14 25 59.9	+0.5
GERES						14 26 05.3	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KDHN	Kadinhani	151.42	314	*i* P	PKPbc	14 26 05.6	-0.3
ROSF	Rostrenen	151.57	13	*e*PKIKP	PKPbc	14 26 05.1	-0.8
FLN	La Foliniere	151.66	9	*e*PKIKP	PKPbc	14 26 05.7	-0.4
	comp=Z,56nm,1.1s						
SGMF	Saint Gilles	151.79	12	*e*PKIKP	PKPbc	14 26 05.6	-0.8
CSNA	Conrad Observa	151.83	346	⇑*i*PKIKP	PKPbc	14 26 07.7	+1.2
	comp=Z,18nm,1.1s						
LDF	La Drutiiere	151.88	9	*e*PKIKP	PKPbc	14 26 06.1	-0.5
	comp=Z,92nm,1.5s						
GRR	Gorron	151.97	10	*e*PKIKP	PKPbc	14 26 06.5	-0.3
	comp=Z,40nm,1.1s						
QUIF	Quistinic	151.99	13	*e*PKIKP	PKPbc	14 26 06.1	-0.8
BZS	Buzias	152.15	336	⇓*i*P	PKPbc	14 26 08.0	+0.7
CDF	Champ du Feu	152.47	358	*e*PKIKP	PKPbc	14 26 08.0	+0.1
	comp=Z,26nm,1.1s						
BFO	Black Forest	152.51	357	*e*PKPbc	PKPbc	14 26 08.1	+0.1
BFO	Black Forest	152.51	357	*e*PKIKP	PKPdf	14 26 01.4	+0.3
BFO				*e*		14 26 08.2	
BFO	Black Forest	152.51	357	*e*PKPdf	PKPdf	14 26 01.4	+0.3
BFO				*e*PKPbc	PKPbc	14 26 08.1	+0.1
BFO				*e*PKPbc	PKPbc	14 26 08.2	+0.2
RJOB	Jochberg	152.61	350	*e*PKPbc	PKPbc	14 26 08.8	+0.5
RJOB				*ep*PKPbc	pPKPbc	14 26 19.5	+8.0
SOKA	Soboth	153.19	346	⇑*i*PKiKP	PKiKP	14 26 09.8	0.0
	comp=Z,9.0nm,1.0s						
WTTA	Wattenberg	153.25	351	⇑*i*PKiKP	PKiKP	14 26 10.4	+0.6
	comp=Z,12nm,1.0s						
FETA	Feichten	153.60	353	⇑*i*PKiKP	PKiKP	14 26 11.1	+0.5
	comp=Z,11nm,1.2s						
MFF	Saint Martin d	153.82	10	*e*PKIKP	PKPbc	14 26 10.5	-0.4
LJU	Ljubljana	153.91	346	*i* PKP	PKPdf	14 26 03.6	+0.4
VISS	Visnje	154.06	346	*i* PKP	PKPdf	14 26 03.7	+0.3
BOJS	Bojanci	154.25	345	*i* PKP	PKPdf	14 26 03.8	+0.1
DBIC	Dimbokro	162.42	142	PKP	PKPdf	14 26 13.3	-1.2
	comp=Z,5.5nm,1.1s,baz=160,slow=7.7,SNR=3.8						
DBIC	Dimbokro	162.42	142	PKIKP	PKPdf	14 26 13.3	-1.2
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DBIC	Dimbokro	162.42	142	PKP	PKPdf	14 26 13.3	-1.2
TORD	Torodi Ar. Bea	171.32	151	PKP	PKPdf	14 26 20.0	-1.1
	comp=Z,1.0nm,0.9s,baz=53,slow=0.7,SNR=5.6						
TORD				PKPab	PKPab	14 27 40.1	-0.9
	comp=Z,2.4nm,1.2s,baz=218,slow=3.8,SNR=4.9						
TORD	Torodi Ar. Bea	171.32	151	PKP	PKPdf	14 26 20.0	-1.1
TORD				PKPab	PKPab	14 27 40.1	-0.9

MAN 15 14:08:38, 13°.84N×120°.62E, h176km, mb4.3, ML3.1, MS2.9, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.38	254	*e*P	Pn	14 09 03.8	+2.0
LUBP				*e*S	Sn	14 09 15.3	-4.8
BOAC	Boac	1.25	108	*e*P	Pn	14 09 08.8	+1.5
BOAC				*e*S	Sn	14 09 26.8	-3.0
SJMP	San Jose	1.45	160	*e*P	Pn	14 09 10.3	+1.1
BUSP	Coron	1.87	193	*e*P	Pn	14 09 14.8	+1.4
SCZP	Santa Cruz	2.04	340	*e*P	Pn	14 09 16.3	+1.0

ISCJB ***15*** *14:18:09.3±5.0, 30°.64N±0°.07×103°.3E±0°.3, h8km±23km, mb3.4/4, Error ellipse: s-maj=45.1km s-min=9.7km az=8.2*
IDC ***15*** *14:18:12.7±1.5, 30°.49N×103°.72E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=45.4km s-min=28.8km az=57.0*
ISC 15 14:18:10.3±6.0, 30°.8N±0°.1×103°.3E±0°.3, h4km±29km, n6, σ0°.43/8, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.45	73	Pg	Pg	14 18 09.9	-9.1
CD2				Sg	Sg	14 18 24.8	-0.1
CD2				smax			
	comp=N,2μm,1.0s						
GYA	Guiyang	5.24	144	Pg	Pg	14 19 50.8	0.0
GYA				Sg	Sg	14 20 58.8	+0.1
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,90nm,0.7s						
KSRS	Korea Array	21.45	65	P	P	14 22 59.8	+0.2
	comp=E,1.3nm,0.9s,m

MS5.7/122, MW5.8, MW5.9, Error ellipse: s-maj=6.7km s-min=5.9km az=199.0, Moment Tensor Solution. s45 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.81; $M_{\theta\theta}$4.63; $M_{\phi\phi}$-1.82; $M_{r\theta}$-3.27; $M_{\theta\phi}$3.00; $M_{r\phi}$2.88; Best double couple: $M_0$6.70000×10^{17} NP1:ϕ_s214.00000°, δ47.00000°, λ-154.00000°. NP2:ϕ_s105.00000°, δ71.00000°, λ-46.00000°. Principal axes: T 6.3300, Plg14.0000°, Azm164.0000°; N 0.6000, Plg41.0000°, Azm268.0000°; P -6.9400, Plg45.0000°, Azm59.0000°;

*GCMT **15** 14:23:28.8±0.1, 58°.14S×25°.19W, h37km, MW5.9/101, Moment Tensor Solution. s98,c216; s101,c323; Duration: 2s3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.21±.01; $M_{\theta\theta}$0.60±.01; $M_{\phi\phi}$-0.39±.01; $M_{r\theta}$-0.62±.01; $M_{\theta\phi}$0.39±.01; $M_{\phi r}$0.41±.01; Best double couple: $M_0$0.99300×10^{18} NP1:ϕ_s212.00000°, δ41.00000°, λ-167.00000°. NP2:ϕ_s112.00000°, δ82.00000°, λ-50.00000°. Principal axes: T 0.9570, Plg25.0000°, Azm172.0000°; N 0.0720, Plg40.0000°, Azm285.0000°; P -1.0290, Plg40.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*SZGRF **15** 14:23:32.5, 56°.97S×24°.59W, h33km, mb5.8, South Sandwich Islands region*

*IDC **15** 14:23:32.1±0.6, 57°.86S×25°.56W, h60km±4km, mb5.3/15, mb1 5.3/16, mb1mx5.2/18, mbtmp5.3/16, MS5.6/23, Ms1 5.5/23, ms1mx5.5/25, Error ellipse: s-maj=12.9km s-min=11.4km az=42.0*

ISC 15 14:23:29.7±1.4, 58°.02S±0°.04×25°.54W±0°.07, h37km±12km, h52km±6.2km: pP-P, n626, σ1§03/163, mb5.7/61, MS5.7/186, 10C-33D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.63**	**157**	*e*PKPdf		**Pn**	**14 26 52.8**	**-0.9**
VNA1				*e*S		**Sn**	**14 29 28.1**	**-6.1**
VNA1				*e*			14 35 32.6	
VNA2	**Neumayer--Watz**	**15.03**	**157**	*e*PKPdf		**Pn**	**14 26 57.4**	**-1.5**
VNA2				*e*S		**Sn**	**14 29 32.2**	**-12**
VNA2				*e*			14 35 32.5	
PMSA	**Palmer Station**	**19.37**	**234**	P		**Pn**	**14 27 54.4**	**+1.4**
	7.7nm,0.3s,baz=69,slow=10,SNR=26							
PMSA				PcP		PcP	14 32 13.0	+1.0
	2.1nm,0.3s,baz=88,slow=3.8,SNR=6.0							
PMSA				LR		LR	14 34 07.8	
	comp=Z,33μm,21.9s,baz=84,slow=33							
PMSA				ScP		ScP	14 35 42.4	-2.3
	2.2nm,0.3s,baz=59,slow=2.7,SNR=11							
PMSA	**Palmer Station**	**19.37**	**234**	*e*P		**Pn**	**14 27 54.1**	**+1.0**
	810nm,1.4s							
EFI	**East Falkland**	**19.63**	**275**	*e*Pn		**Pn**	**14 27 57.2**	**+0.9**
	2μm,1.7s							
MAIT	**Maitri**	**20.10**	**144**	*e*P		**P**	**14 28 00.4**	**+0.7**
MAIT				*e*S		**S**	**14 31 40.8**	**-2.3**
NVL	**N'lazarevskaya**	**20.13**	**144**	⇓*i*P		**P**	**14 27 50.6**	**-9.4**
USHA	**Ushuaia**	**23.64**	**259**	P		**P**	**14 28 39.0**	**+1.9**
	57nm,0.6s,mb5.2,baz=108,slow=9.0,SNR=22							
USHA				PcP		PcP	14 32 21.7	+1.1
	5.6nm,0.5s,baz=324,slow=4.6,SNR=5.0							
USHA				ScP		ScP	14 35 53.5	-1.9
	21nm,0.7s,baz=4.4,slow=3.9,SNR=8.2							
SYO	**Syowa Base**	**29.50**	**138**	⇑*e*P		**P**	**14 29 27.0**	**-2.7**
SYO	**Syowa Base**	**29.50**	**138**	⇓*i*P		**P**	**14 29 32.0**	**+2.3**
SYO	**Syowa Base**	**29.50**	**138**	⇓*i*P		**P**	**14 29 35.0**	**+5.3**
COYC	**Coyhaique**	**30.71**	**273**	*e*P		**P**	**14 29 39.5**	**-1.1**
TRQA	**Tornquist**	**30.94**	**294**	*e*P		**P**	**14 29 42.6**	**-0.2**
	54nm,1.0s,mb5.3							
QSPA	**South Pole Qui**	**32.23**	**180**	P		**P**	**14 29 55.2**	**+1.5**
	72nm,0.5s,mb5.7,baz=202,slow=3.7,SNR=289							
QSPA				ScP		ScP	14 36 19.8	-1.7
	21nm,0.9s,baz=134,slow=5.7,SNR=4.3							
PLCA	**Paso Flores**	**33.25**	**281**	P		**P**	**14 30 03.0**	**0.0**
	29nm,0.8s,mb5.2,baz=137,slow=7.4,SNR=48							
PLCA				PcP		PcP	14 32 44.9	+0.3
	5.6nm,0.6s,baz=98,slow=3.7,SNR=4.5							
PLCA				ScP		ScP	14 36 22.4	-3.2
	14nm,0.7s,baz=143,slow=4.1,SNR=13							
PLCA				LR		LR	14 43 21.7	
	comp=Z,7μm,18.8s,MS5.4,baz=128,slow=36							
PLCA	**Paso Flores**	**33.25**	**281**	P		**P**	**14 30 03.1**	**+0.1**
PLCA							14 32 44.9	
PLCA				pmax		pmax		
	comp=Z,29nm,0.8s							
PLCA				pmax		pmax		
	comp=Z,6.0nm,0.6s							
PLCA				pmax		pmax		
	comp=N,14nm,0.7s							
PLCA				MLR		MLR		
	comp=Z,7μm,18.8s							
PLCA	**Paso Flores**	**33.25**	**281**	*e*P		**P**	**14 30 02.9**	**-0.1**
	comp=Z,520nm,1.3s,mb6.3							
CCHI	**Chillan**	**37.13**	**285**	*e*P		pP	14 30 46.3	-0.7
CAM4	**Nova Friburgo**	**37.69**	**334**	⇓*i*P		**P**	**14 30 42.7**	**+1.4**
CAM4				*i*			14 30 44.1	
CAM4				*i*			14 30 47.2	
CAM4				*i*		pP	14 30 52.1	+0.2
CAM4				*i*		pP	14 30 54.5	+2.6
CAM4				*i*			14 30 57.0	
CAM4				*i*			14 31 01.1	
CAM4				*i*			14 31 06.6	
CAM4				*i*			14 31 08.3	
CAM4				*i*			14 31 13.6	
CAM4				*i*			14 31 23.9	
SPB	**Sao Paulo**	**37.82**	**326**	*e*P		**P**	**14 30 43.2**	**+0.9**
	comp=Z,98nm,0.9s,mb5.5							
MAW	**Mawson**	**38.04**	**142**	⇑*i*P		**P**	**14 30 44.2**	**+0.5**
	comp=Z,81nm,0.7s,mb5.6							
MAW	**Mawson**	**38.04**	**142**	P		**P**	**14 30 44.3**	**+0.5**
	comp=Z,86nm,0.6s,mb5.6,baz=231,slow=8.5,SNR=103							
MAW				PcP		PcP	14 32 59.4	+1.2
	comp=Z,38nm,1.0s,baz=248,slow=5.6,SNR=3.8							
MAW				ScP		ScP	14 36 39.3	-3.4
	comp=Z,7.2nm,0.7s,baz=250,slow=2.0,SNR=4.9							
MAW				LR		LR	14 43 58.7	
	comp=Z,9μm,20.4s,MS5.6,baz=252,slow=32							
MAW	**Mawson**	**38.04**	**142**	P		**P**	**14 30 44.3**	**+0.6**
MAW							14 32 59.4	
MAW							14 36 39.3	
MAW				pmax		pmax		
	comp=Z,86nm,0.6s							
MAW				pmax		pmax		
	comp=Z,38nm,1.0s							
MAW				pmax		pmax		
	comp=N,7.0nm,0.7s							
MAW	**Mawson**	**38.04**	**142**	*e*P		**P**	**14 30 44.2**	**+0.5**
	comp=N,123nm,1.6s,mb5.4							
MAW				LR		LR		
	comp=Z,15μm,20.0s,MS5.8							
ELIM	**Elim**	**38.06**	**72**	⇓*i*P		**P**	**14 30 44.6**	**+0.4**
LMEL	**Las Melosas**	**38.33**	**289**	*e*P		**P**	**14 30 47.3**	**+0.7**
CPUP	**Villa Florida**	**38.79**	**311**	P		**P**	**14 30 48.6**	**-1.8**
	comp=Z,10nm,0.5s,mb4.8,baz=142,slow=7.7,SNR=26							
CPUP				ScP		ScP	14 36 41.7	-4.4
	comp=Z,9.6nm,0.8s,baz=152,slow=2.4,SNR=5.2							
CPUP				LR		LR	14 45 39.1	
	comp=Z,6μm,20.8s,MS5.4,baz=140,slow=34							
CPUP	**Villa Florida**	**38.79**	**311**	P		**P**	**14 30 48.6**	**-1.9**
CPUP							14 36 41.7	
CPUP				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CPUP				pmax		pmax		
	comp=N,10.0nm,0.8s							
CPUP				MLR		MLR		
	comp=Z,6μm,20.8s							
FCH	**Farellones**	**38.79**	**290**	*e*P		**P**	**14 30 50.7**	**+0.3**
CER	**Ceres**	**38.81**	**70**	*e*P		**P**	**14 30 50.0**	**-0.6**
CER				AMS		AMS	14 42 59.3	
	comp=Z,3μm,19.8s,MS5.2							
PEL	**Peldehue**	**39.14**	**290**	*e*P		**P**	**14 30 53.2**	**-0.1**
CFAA	**Coronel Fontan**	**39.17**	**294**	P		**P**	**14 30 51.7**	**-1.9**
	comp=Z,2.4nm,0.7s,baz=153,slow=9.3,SNR=11							
CFAA				LR		LR	14 46 30.2	
	comp=Z,963nm,20.2s,MS4.6,baz=146,slow=35							
CFAA	**Coronel Fontan**	**39.17**	**294**	P		**P**	**14 30 51.7**	**-1.9**
CFAA				LR		LR	14 46 30.2	
SUR	**Sutherland**	**40.36**	**71**	LR		LR	14 43 43.8	
	comp=Z,16μm,20.9s,MS5.8,baz=234,slow=30							
SUR	**Sutherland**	**40.36**	**71**	*e*P		**P**	**14 31 04.8**	**+1.3**
	comp=Z,437nm,1.4s,mb6.0							
SUR	**Sutherland**	**40.36**	**71**	⇓*i*P		**P**	**14 31 04.7**	**+1.2**
SUR				AMS		AMS	14 43 52.6	
	comp=Z,12μm,21.4s,MS5.7							
CVNA	**Calvinia**	**40.55**	**69**	⇓*i*P		**P**	**14 31 05.3**	**+0.2**
CVNA				AMS		AMS	14 44 07.4	
	comp=Z,19μm,20.5s,MS5.9							
KOMG	**Komaggas**	**40.82**	**65**	⇓*i*P		**P**	**14 31 07.8**	**+0.5**
KOMG				AMS		AMS	14 44 00.5	
	comp=Z,15μm,21.2s,MS5.8							
TLL	**Tololo Astrono**	**41.61**	**292**	*e*P		**P**	**14 31 15.3**	**+1.5**
LCO	**Las Campanas**	**42.51**	**293**	*e*P		**P**	**14 31 21.1**	**-0.1**
	comp=Z,180nm,1.1s,mb5.7							
LCO				LR		LR		
	comp=Z,8μm,22.0s,MS5.5							
LCO	**Las Campanas**	**42.51**	**293**	*e*P		**P**	**14 31 20.1**	**-1.0**
SOE	**Somerset East**	**42.52**	**76**	⇑*i*P		**P**	**14 31 20.9**	**-0.3**
SOE				AMS		AMS	14 45 23.0	
	comp=Z,9μm,20.7s,MS5.7							
GRM	**Grahamstown**	**42.54**	**78**	*e*P		**P**	**14 31 21.2**	**-0.1**
GRM				AMS		AMS	14 45 08.6	
	comp=Z,12μm,19.9s,MS5.8							
PKA	**Prieska**	**43.52**	**71**	⇓*i*P		**P**	**14 31 29.5**	**+0.2**
PKA				AMS		AMS	14 45 50.4	
	comp=Z,5μm,20.8s,MS5.4							
UPI	**Upington**	**43.85**	**68**	⇓*i*P		**P**	**14 31 32.2**	**+0.2**
UPI				AMS		AMS	14 45 55.1	
	comp=Z,11μm,20.4s,MS5.8							
HVD	**Gariep Dam**	**44.16**	**74**	⇓*i*P		**P**	**14 31 34.9**	**+0.4**
HVD				AMS		AMS	14 46 10.9	
	comp=Z,6μm,20.9s,MS5.5							
SBA	**Scott Base**	**44.17**	**184**	*e*P		**P**	**14 31 35.9**	**+1.9**
SBA				pmax		pmax		
	comp=Z,158nm,1.1s,mb5.7							
SBA	**Scott Base**	**44.17**	**184**	*e*P		**P**	**14 31 35.9**	**+1.8**
	comp=Z,158nm,1.1s,mb5.7							
SHEL	**Horse Pasture**	**44.52**	**28**	*e*P		**P**	**14 31 35.0**	**-2.4**
SHEL				pmax		pmax		
	comp=Z,558nm,1.5s,mb6.2							
SHEL	**Horse Pasture**	**44.52**	**28**	*e*P		**P**	**14 31 35.0**	**-2.4**
	comp=Z,558nm,1.5s,mb6.2							
BOSA	**Boshof**	**45.65**	**72**	P		**P**	**14 31 45.9**	**-0.5**
	comp=Z,188nm,1.0s,mb6.0,baz=213,slow=8.2,SNR=138							
BOSA				LR		LR	14 46 46.6	
	comp=Z,13μm,21.8s,MS5.8,baz=209,slow=31							
BOSA	**Boshof**	**45.65**	**72**	*e*P		**P**	**14 31 46.2**	**-0.1**
BOSA				pmax		pmax		
	comp=Z,356nm,1.1s,mb6.2							
BOSA				MLR		MLR		
	comp=Z,13μm,21.0s,MS5.8							
BOSA	**Boshof**	**45.65**	**72**	*e*P		**P**	**14 31 46.2**	**-0.1**
	comp=Z,356nm,1.1s,mb6.2							
BOSA				LR		LR		
	comp=Z,13μm,21.0s,MS5.8							
BOSA	**Boshof**	**45.65**	**72**	⇓*i*P		**P**	**14 31 46.2**	**-0.1**
BOSA				AMS		AMS	14 47 08.7	
	comp=Z,11μm,21.4s,MS5.8							
KSD	**Kokstad**	**46.23**	**78**	*e*P		**P**	**14 31 51.7**	**+0.7**
KSD				AMS		AMS	14 46 57.7	
	comp=Z,25μm,20.4s,MS6.2							
SWZ	**Schweizer**	**46.85**	**71**	⇓*i*P		**P**	**14 31 55.6**	**-0.2**
SWZ				AMS		AMS	14 48 03.8	
	comp=Z,13μm,20.3s,MS5.9							
SEK	**Senekal**	**47.09**	**74**	⇓*i*P		**P**	**14 31 57.8**	**+0.1**
SEK				AMS		AMS	14 48 19.9	
	comp=Z,7μm,19.8s,MS5.6							
MIR	**Mirnyy**	**47.62**	**152**	⇓*i*P		**P**	**14 32 01.8**	**+0.5**
MIR				*e*S		**S**	**14 38 49.0**	**-4.7**
MIR				pmax		pmax		
	comp=Z,450nm,1.6s,mb6.2							
MIR				pmax		pmax		
	comp=Z,1μm,6.0s							
MIR				pmax		pmax		
	comp=N,1μm,5.0s							
MIR				pmax		pmax		
	comp=E,510nm,3.0s							
MIR				smax				
	comp=N,4μm,14.0s							
PRYS	**Parys**	**48.09**	**73**	⇓*i*P		**P**	**14 32 04.9**	**-0.6**
PRYS				AMS		AMS	14 48 43.8	
	comp=Z,10μm,21.3s,MS5.8							
KSR	**Koster**	**48.74**	**72**	⇓*i*P		**P**	**14 32 10.2**	**-0.3**
KSR				AMS		AMS	14 49 04.7	
	comp=Z,8μm,20.7s,MS5.7							
LBTB	**Lobatse**	**48.78**	**70**	LR		LR	14 48 46.0	
	comp=Z,13μm,20.1s,MS5.9,baz=222,slow=31							
LBTB	**Lobatse**	**48.78**	**70**	*e*P		**P**	**14 32 10.5**	**-0.2**
LBTB				MLR		MLR		
	comp=Z,12μm,20.0s,MS5.9							
LBTB	**Lobatse**	**48.78**	**70**	*e*P		**P**	**14 32 10.5**	**-0.3**
LBTB				LR		LR		
	comp=Z,12μm,20.0s,MS5.9							
LBTB	**Lobatse**	**48.78**	**70**	⇓*i*P		**P**	**14 32 10.5**	**-0.3**
LBTB				AMS		AMS	14 48 57.4	
	comp=Z,12μm,20.5s,MS5.9							
ERPM	**east rand prop**	**49.02**	**74**	⇓*i*P		**P**	**14 32 13.2**	**+0.6**
ERPM				AMS		AMS	14 49 23.7	
	comp=Z,10μm,21.0s,MS5.8							
SLR	**Silverton**	**49.54**	**73**	*e*P		**P**	**14 32 15.8**	**-0.7**
SLR				AMS		AMS	14 49 37.7	
	comp=Z,15μm,21.1s,MS6.0							
TSUM	**Tsumeb**	**49.92**	**58**	LR		LR	14 48 36.4	
	comp=Z,8μm,21.8s,MS5.7,baz=210,slow=30							
TSUM	**Tsumeb**	**49.92**	**58**	*e*P		**P**	**14 32 19.8**	**+0.3**
	comp=Z,237nm,1.3s,mb6.1							
TSUM	**Tsumeb**	**49.92**	**58**	⇓*i*P		**P**	**14 32 19.8**	**+0.3**
TSUM				AMS		AMS	14 48 45.0	
	comp=Z,58μm,21.8s,MS6.5							
POGA	**Pongola**	**49.92**	**78**	⇓*i*P		**P**	**14 32 19.2**	**-0.2**
POGA				AMS		AMS	14 48 35.0	
	comp=Z,3μm,23.9s,MS5.2							
CASY	**Casey**	**51.75**	**159**	*e*P		**P**	**14 32 31.9**	**-0.8**
CASY	**Casey**	**51.75**	**159**	*e*P		**P**	**14 32 32.9**	**+0.2**
	comp=Z,266nm,1.4s,mb6.0							
CASY				LR		LR		
	comp=Z,16μm,21.0s,MS6.0							
LPAZ	**La Paz**	**52.24**	**305**	P		**P**	**14 32 36.4**	**-0.5**
	comp=Z,40nm,0.6s,mb5.5,baz=132,slow=5.1,SNR=62							
LPAZ				S		**S**	**14 39 55.4**	**-3.8**
	comp=Z,1.4nm,0.8s,baz=60,slow=20,SNR=3.8							
LPAZ	**La Paz**	**52.24**	**305**	P		**P**	**14 32 36.4**	**-0.5**
LPAZ				S		**S**	**14 39 55.4**	**-3.8**
LPAZ				pmax		pmax		
	comp=Z,40nm,0.6s							
LPAZ				smax				
	comp=N,1.0nm,0.9s							
LPAZ	**La Paz**	**52.24**	**305**	*e*P		**P**	**14 32 36.5**	**-0.5**
	comp=N,82nm,0.8s,mb5.7							
LPAZ				LR		LR		
	comp=Z,3μm,20.0s,MS5.3							
PAF	**Port-aux-Franc**	**52.73**	**125**	PFAKE			14 32 50.0	+10
PAF				LR		LR		
	comp=Z,7μm,21.0s,MS5.7							
MOPA	**Mopani**	**52.96**	**75**	⇓*i*P		**P**	**14 32 41.2**	**-0.9**
MOPA				AMS		AMS	14 51 06.6	
	comp=Z,8μm,20.6s,MS5.7							
MSNA	**Messina**	**53.23**	**72**	⇓*i*P		**P**	**14 32 43.7**	**-0.5**
MSNA				AMS		AMS	14 51 48.8	
	comp=Z,14μm,20.6s,MS6.0							
DRV	**Dumont d'Urvil**	**55.17**	**173**	P		**P**	**14 33 03.0**	**+5.3**
DRV				S		**S**	**14 40 31.0**	**-6.6**
DRV				SS		SS	14 44 16.0	-5.0
DRV				R			14 49 00.0	
LSZ	**Lusaka**	**58.30**	**66**	LR		LR	14 54 16.7	
	comp=Z,10μm,21.3s,MS5.9,baz=207,slow=32							
LSZ	**Lusaka**	**58.30**	**66**	*e*P		**P**	**14 33 19.7**	**-0.8**
LSZ				MLR		MLR		
	comp=Z,10μm,21.0s,MS5.9							
LSZ	**Lusaka**	**58.30**	**66**	*e*P		**P**	**14 33 19.7**	**-0.8**
LSZ				LR		LR		
	comp=Z,10μm,21.0s,MS5.9							
LSZ	**Lusaka**	**58.30**	**66**	⇓*i*P		**P**	**14 33 20.4**	**-0.1**
NNA	**Nana**	**59.98**	**298**	*e*P		**P**	**14 33 38.4**	**+6.2**
	comp=Z,80nm,1.3s,mb5.6							
NNA				LR		LR		
	comp=Z,3μm,22.0s,MS5.4							
RPN	**Rapa Nui**	**64.20**	**260**	LR		LR	14 57 29.4	
	comp=Z,2μm,18.5s,MS5.3,baz=143,slow=32							
ABPO	**Ambohimpanom**	**64.95**	**86**	*e*P		**P**	**14 34 06.4**	**+1.0**
ABPO				pmax		pmax		
	comp=Z,86nm,1.1s,mb5.7							
ABPO				MLR		MLR		
	comp=Z,3μm,21.0s,MS5.4							
ABPO	**Ambohimpanom**	**64.95**	**86**	*e*P		**P**	**14 34 06.4**	**+1.0**
	comp=Z,86nm,1.1s,mb5.7							
ABPO				LR		LR		
	comp=Z,3μm,21.0s,MS5.4							
LIC	**Lamto**	**66.15**	**22**	*e*P		**P**	**14 34 12.5**	**-0.6**
	comp=Z,691nm,1.3s,mb6.5							
KIC	**Kosan Boka**	**66.34**	**23**	*e*P		**P**	**14 34 13.5**	**-0.8**
	comp=Z,679nm,1.3s,mb6.5							
TIC	**Toumodi**	**66.56**	**22**	*e*P		**P**	**14 34 15.0**	**-0.7**
	comp=Z,118nm,0.3s,mb6.5							
TIC	**Toumodi**	**66.56**	**22**	*e*P		**P**	**14 34 15.0**	**-0.7**
TIC				pmax		pmax		
	comp=Z,118nm,0.3s,mb6.4							
DBIC	**Dimbokro**	**66.61**	**22**	P		**P**	**14 34 15.9**	**-0.1**
	comp=Z,74nm,0.6s,mb5.9,baz=171,slow=7.6,SNR=102							
DBIC				pP		pP	14 34 32.0	+4.7
	comp=Z,57nm,0.8s,baz=163,slow=7.4,SNR=6.2							
DBIC				LR		LR	14 56 23.3	
	comp=Z,4μm,20.9s,MS5.6,baz=174,slow=30							
DBIC	**Dimbokro**	**66.61**	**22**	P		**P**	**14 34 15.9**	**-0.1**
DBIC				*PP		pP	14 34 32.0	+4.7
DBIC				pmax		pmax		
	comp=Z,74nm,0.6s							
DBIC				pmax		pmax		
	comp=Z,57nm,0.8s							
DBIC	**Dimbokro**	**66.61**	**22**	*e*P		**P**	**14 34 15.9**	**-0.1**
DBIC				LR		LR		
	comp=Z,315nm,20.0s,MS4.5							
DBIC	**Dimbokro**	**66.61**	**22**	⇓*i*P		**P**	**14 34 16.0**	**-0.1**
RER	**Riviere de l'E**	**67.73**	**94**	*e*P		**P**	**14 34 21.3**	**-1.9**
	comp=Z,211nm,1.0s,mb6.1							
OTAV	**Otavalo**	**71.49**	**303**	*e*P		**P**	**14 34 46.7**	**+0.3**
BBTS	**Babate**	**72.79**	**9**	LR		LR	15 00 17.0	
	comp=Z,3μm,21.9s,MS5.5,baz=26,slow=30							
ROSC	**El Rosal**	**73.84**	**309**	P		**P**	**14 35 00.3**	**-0.1**
	comp=Z,19nm,0.7s,mb5.1,baz=97,slow=17,SNR=8.7							
ROSC				pP		pP	14 35 16.6	+4.9
	comp=Z,24nm,0.8s,baz=113,slow=13,SNR=3.3							
ROSC				LR		LR	15 09 27.8	
	comp=Z,2μm,19.6s,MS5.5,baz=185,slow=37							
ROSC	**El Rosal**	**73.84**	**309**	*e*P		**P**	**14 35 02.1**	**+1.8**
TOA0	**Torodi Ar. Sit**	**74.36**	**28**	⇓*i*P		**P**	**14 35 03.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**74.36**	**28**	P		**P**	**14 35 03.3**	**+0.1**
	comp=Z,121nm,0.9s,mb5.8,baz=199,slow=6.3,SNR=427							
TORD				pP		pP	14 35 18.9	+4.3
	comp=Z,146nm,0.7s,baz=196,slow=6.4,SNR=15							
TORD				S		S	14 44 33.0	-1.7
	comp=Z,2.7nm,1.1s,baz=202,slow=9.2,SNR=7.0							
TORD				LR		LR	15 00 58.1	
	comp=Z,6μm,21.6s,MS5.8,baz=180,slow=30							
TORD				PKPPKP			15 02 33.9	
	comp=Z,0.8nm,1.0s,baz=299,slow=1.5,SNR=4.3							
KMBO	**Kilima Mbogo**	**74.94**	**67**	P		**P**	**14 35 10.0**	**+3.2**
	comp=Z,26nm,1.0s,mb5.1,baz=205,slow=5.4,SNR=44							
KMBO				LR		LR	15 05 56.2	
	comp=Z,5μm,18.2s,MS5.9,baz=208,slow=34							
KMBO	**Kilima Mbogo**	**74.94**	**67**	*e*P		**P**	**14 35 10.0**	**+3.3**
KMBO				LR		LR		
	comp=Z,6μm,22.0s,MS5.8							
KMBO	**Kilima Mbogo**	**74.94**	**67**	P		**P**	**14 35 10.9**	**+4.2**
	SNR=31							
KMBO				P			14 35 10.9	
	SNR=31							
PCRV	**Puerto La Cruz**	**75.04**	**320**	LR		LR	15 07 07.2	
	comp=Z,2μm,19.2s,MS5.4,baz=330,slow=35							
GRGR	**Grenville**	**75.89**	**324**	*e*P		**P**	**14 35 11.9**	**-0.2**
	comp=Z,203nm,0.7s,mb6.2							
GRGR				LR		LR		
	comp=Z,3μm,20.0s,MS5.6							
SDV	**Santo Domingo**	**76.03**	**314**	*e*P		**P**	**14 35 11.9**	**-1.1**
	comp=Z,46nm,0.8s,mb5.5							
BBGH	**Gun Hill**	**76.20**	**326**	PFAKE			14 35 20.0	+6.2
BBGH				LR		LR		
	comp=Z,5μm,20.0s,MS5.8							
ODZ	**Otahua Downs**	**76.42**	**192**	*e*P		**P**	**14 35 15.5**	**+0.6**
	comp=Z,142nm,1.6s,mb5.7							
RPZ	**Rata Peaks**	**77.69**	**192**	P		**P**	**14 35 23.0**	**+1.0**
	comp=Z,41nm,0.8s,mb5.4,baz=164,slow=5.6,SNR=12							
RPZ				LR		LR	15 06 56.4	
	comp=Z,3μm,20.1s,MS5.6,baz=174,slow=34							
RPZ	**Rata Peaks**	**77.69**	**192**	*e*P		**P**	**14 35 21.9**	**-0.1**
	comp=Z,249nm,1.6s,mb5.9							
FDF	**Fort de France**	**78.19**	**325**	*e*P		**P**	**14 35 24.6**	**-0.3**
FDF				pmax		pmax		
	comp=Z,229nm,0.9s,mb6.1							
FDF				MLR		MLR		
	comp=Z,2μm,20.0s,MS5.4							
FDF	**Fort de France**	**78.19**	**325**	*e*P		**P**	**14 35 24.6**	**-0.3**
	comp=Z,229nm,0.9s,mb6.1							
FDF				LR		LR		
	comp=Z,2μm,20.0s,MS5.4							
KHZ	**Kahutara**	**78.67**	**194**	*e*P		**P**	**14 35 27.2**	**-0.2**
	comp=Z,106nm,1.3s,mb5.6							
TAU	**Tasmania Unive**	**79.26**	**175**	*e*P		**P**	**14 35 29.6**	**-1.1**
TAU				pmax		pmax		
	comp=Z,172nm,1.0s,mb5.9							
TAU	**Tasmania Unive**	**79.26**	**175**	*e*P		**P**	**14 35 29.6**	**-1.1**
	comp=Z,172nm,1.0s,mb5.9							
MGG	**Marie-Galante**	**79.36**	**325**	*e*P		**P**	**14 35 31.8**	**+0.5**
TBG	**Guadaloupe-3**	**79.39**	**325**	*e*P		**P**	**14 35 31.5**	**-0.1**
PHG	**Guadaloupe-2**	**79.55**

MTDJ Mount Denham 87.23 311 PFAKE 14 36 20.0 +8.1
MTDJ LR LR
comp=Z,4μm,22.0s,MS5.8
GRTK Grand Turk 87.81 318 PFAKE 14 36 20.0 +5.4
GRTK LR LR
comp=Z,3μm,20.0s,MS5.7
GTBY Guantanamo Bay 87.83 314 PFAKE 14 36 30.0 +15
GTBY LR LR
comp=Z,5μm,20.0s,MS5.9
DGAR Diego Garcia 87.99 101 PFAKE 14 36 30.0 +14
DGAR LR LR
comp=Z,2μm,20.0s,MS5.6
RIV Riverview 88.46 177 *e*P **P** **14 36 17.9 +0.1**
FORT Forrest 88.81 157 *e*P **P** **14 36 20.0 +0.6**
comp=Z,132nm,0.7s,mb6.4
FORT Forrest 88.81 157 *e*P **P** **14 36 19.4 -0.1**
comp=Z,143nm,0.7s,mb6.4
STKA Stephens Creek 89.80 169 ⇓ *i*P **P** **14 36 24.4 +0.3**
comp=Z,32nm,1.0s,mb5.6
STKA *e* 14 39 55.9
STKA *e*S SKSac 14 46 45.1 -6.5
STKA Stephens Creek 89.80 169 P **P** **14 36 24.4 +0.3**
comp=Z,43nm,1.0s,mb5.8,baz=158,slow=4.6,SNR=32
STKA PP PP 14 39 57.9 +2.1
comp=Z,14nm,1.0s,baz=180,slow=6.4,SNR=4.8
STKA LR LR 15 14 52.8
comp=Z,6μm,19.8s,MS6.0,baz=185,slow=34
PPT Papeete 91.73 232 *e*PP PP 14 40 09.2 -2.4
comp=Z,264nm,27.0s
PPT *e*SKSac SKSac 14 47 05.8 +2.8
comp=Z,1μm,26.8s
PPT Papeete 91.73 232 *e*PS PS 14 48 49.7 +5.3
comp=Z,2μm,31.2s
PPT *e*LQ 15 02 08.6
comp=Z,932nm,24.8s
PPT *e*LR LR 15 05 57.6
comp=Z,16μm,27.0s,baz=158
PPT Papeete 91.73 232 LR LR 15 09 37.8
comp=Z,5μm,19.8s,MS5.9,baz=134,slow=30
ARMA Armidale 91.88 178 *e*P **P** **14 36 31.5 -2.2**
ARMA *e* 14 40 11.5
ARMA *e*S SKSac 14 46 56.4 -7.2
ARMA Armidale 91.88 178 *e*P **P** **14 36 31.5 -2.2**
comp=Z,28nm,1.1s,mb5.5
CMIG Matias Romero 93.88 296 P **P** **14 36 41.5 -1.5**
comp=Z,4.9nm,0.7s,mb5.0,baz=116,slow=3.9,SNR=6.3
CMIG Matias Romero 93.88 296 P **P** **14 36 41.5 -1.5**
TAOE Nuku Hiva Isla 95.14 244 *e*PP PP 14 40 38.4 -0.1
comp=Z,223nm,27.3s
TAOE *e*SKSac SKSac 14 47 23.6 +1.8
comp=Z,875nm,28.5s
TAOE *e*SP SP 14 49 18.7 +0.8
comp=Z,850nm,28.0s
TAOE *e*SS SS 14 54 32.7 +5.8
comp=Z,360nm,25.4s
TAOE *e*LQ 15 03 31.8
comp=Z,1μm,30.2s
TAOE *e*LR LR 15 07 37.4
comp=Z,5μm,32.8s
CMLA Cha da Macela 95.42 0 PFAKE 14 37 00.0 +11
CMLA LR LR
comp=Z,2μm,19.0s,MS5.6
COCO West Island 95.80 124 PFAKE 14 37 00.0 +8.0
COCO LR LR
comp=Z,2μm,22.0s,MS5.6
PFVI Vila Bisbo 95.82 13 *e*P **P** **14 36 58.5 +7.1**
comp=Z,90nm,1.6s,mb6.0
PFVI *e*SKS 14 47 24.4
PFVI *e*LQ 15 04 06.2
PFVI *e*LR LR 15 07 41.4
comp=Z,3μm,22.0s
BBSR BB Station 95.84 328 PFAKE 14 37 00.0 +8.4
BBSR LR LR
comp=Z,2μm,22.0s,MS5.6
MBWA Marble Bar 96.00 148 PFAKE 14 37 00.0 +7.2
MBWA LR LR
comp=Z,3μm,21.0s,MS5.8
MORF Marmelete 96.02 13 *e*P **P** **14 36 54.4 +2.2**
comp=Z,62nm,2.8s,mb5.5
MORF *e*SKS 14 47 23.8
MORF *e*LQ 15 03 56.7
MORF *e*LR LR 15 07 55.7
comp=Z,4μm,22.0s
PBDV Barranco-do-Ve 96.05 14 *e*P **P** **14 36 53.9 +1.5**
comp=Z,52nm,2.2s,mb5.6
PBDV Barranco-do-Ve 96.05 14 *e*PP PP 14 40 51.8 +5.9
PBDV *e*SKS 14 47 32.7
PBDV *e*LQ 15 03 42.0
PBDV *e*LR LR 15 08 48.4
comp=Z,3μm,22.0s
PVAQ Vaqueiros 96.23 14 *e*P **P** **14 36 56.3 +3.1**
comp=Z,40nm,2.0s,mb5.5
PVAQ Vaqueiros 96.23 14 *e*PP PP 14 40 52.9 +5.6
PVAQ *e*SKS 14 47 29.6
PVAQ *e*LQ 15 03 44.1
PVAQ *e*LR LR 15 08 36.8
comp=Z,2μm,26.0s
PCVE Castro Verde 96.42 14 *e*P **P** **14 36 57.8 +3.8**
PCVE Castro Verde 96.42 14 *e*PP PP 14 40 56.5 +7.7
PCVE *e*SKS 14 47 23.6
PCVE *e*LQ 15 03 54.9
PCVE *e*LR LR 15 09 02.5
comp=Z,4μm,22.0s
PBEJ Beja 96.83 14 *e*P **P** **14 36 57.0 +1.1**
comp=Z,28nm,2.1s,mb5.3
PBEJ Beja 96.83 14 *e*PP PP 14 41 04.2 +12
ASAR Alice Springs 96.84 161 P **P** **14 36 56.1 -0.4**
comp=Z,21nm,0.8s,mb5.6,baz=187,slow=3.8,SNR=156
ASAR PP PP 14 40 52.1 +1.2
comp=Z,5.5nm,0.9s,baz=186,slow=7.1,SNR=6.0
ASAR S SKSac 14 47 26.4 -4.2
comp=Z,1.1nm,0.9s,baz=185,slow=6.7,SNR=5.3
ASAR PKKP PKKPbc 14 53 36.0 +0.7
comp=Z,1.3nm,0.6s,baz=8.1,slow=2.0,SNR=8.0
ASAR PKPPKP 15 01 50.0
comp=Z,0.6nm,0.9s,baz=17,slow=2.6,SNR=4.4
ASAR Alice Springs 96.84 161 P **P** **14 36 56.2 -0.4**
ASAR 14 40 52.2
ASAR S SKSac 14 47 26.4 -4.1
ASAR pmax pmax
comp=Z,21nm,0.8s
ASAR pmax pmax
comp=Z,6.0nm,0.9s
ASAR smax
comp=N,1.0nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.6s
PBAR Barrancos 97.08 15 *e*P **P** **14 36 59.6 +2.6**
comp=Z,32nm,1.3s,mb5.6
PBAR Barrancos 97.08 15 *e*PP PP 14 40 56.5 +2.6
PBAR *e*SKS 14 47 31.6
PBAR *e*LQ 15 00 47.6
PBAR *e*LR LR 15 09 27.2
comp=Z,3μm,22.0s
PMAFR Mafra 97.57 13 *e*P **P** **14 37 05.8 +6.6**
comp=Z,200nm,1.8s,mb6.3
PMAFR Mafra 97.57 13 *e*PP PP 14 41 11.1 +13
PMAFR *e*SKS 14 47 34.0
PMAFR *e*LQ 15 04 46.5
PMAFR *e*LR LR 15 09 04.7
comp=Z,3μm,20.0s
DWPF Disney 97.65 312 PFAKE 14 37 10.0 +10
DWPF LR LR
comp=Z,3μm,20.0s,MS5.7
PESTR Estremoz 97.69 14 *e*SKS SKSac 14 47 32.6 -1.0
PESTR *e*LQ 15 04 01.6
PESTR *e*LR LR 15 09 19.9
comp=Z,3μm,22.0s
KEST Kesra 97.87 28 P **P** **14 37 03.0 +2.3**
comp=Z,4.4nm,1.0s,mb4.9,baz=232,slow=4.5,SNR=9.1
KEST PP PP 14 40 58.0 -2.0
comp=Z,2.6nm,1.1s,baz=149,slow=5.9,SNR=4.3
KEST LR LR 15 15 32.5
comp=Z,1μm,21.4s,MS5.4,baz=335,slow=32
PMRV Marv??o 98.27 14 *e*SKS 14 47 38.7
PMRV *e*LQ 15 04 04.7
PMRV *e*LR LR 15 09 14.2
comp=Z,3μm,22.0s
ESDC Sonseca Array 98.99 17 LR LR 15 17 31.5
comp=Z,1μm,21.0s,MS5.3,baz=185,slow=33
ESLA Sonseca Array 98.99 17 PFAKE 14 37 20.0 +14
ESLA LR LR
comp=Z,10μm,22.0s,MS6.3
MTE Manteigas 99.20 14 *e*SKS SKSac 14 47 43.0 +1.8
MTE *e*LQ 15 04 46.2
MTE *e*LR LR 15 10 00.6
comp=Z,4μm,22.0s
MTE Manteigas 99.20 14 PFAKE 14 37 20.0 +13
MTE LR LR
comp=Z,4μm,22.0s,MS5.9
DZM Mont Dzumac 99.59 191 *e*PP PP 14 41 08.1 -3.9
comp=Z,212nm,27.9s
DZM *e*SKSac SKSac 14 47 46.5 +2.0
comp=Z,1μm,30.1s
DZM Mont Dzumac 99.59 191 *e*PS PS 14 50 12.2 +2.3
comp=Z,977nm,25.1s
DZM *e*SS SS 14 55 34.1 +5.6
comp=Z,638nm,24.4s
DZM *e*LQ 15 05 28.6
comp=Z,3μm,35.4s
DZM *e*LR LR 15 09 40.7
comp=Z,4μm,23.6s
MVO Moncorvo 100.02 14 *e*SKS SKSac 14 47 48.1 +2.9
MVO *e*LQ 15 05 10.8
MVO *e*LR LR 15 10 28.2
comp=Z,3μm,22.0s
FITZ Fitzroy Crossi 100.49 152 *e*P Pdif 14 37 13.6 +0.5
comp=Z,6.7nm,1.0s
FITZ Fitzroy Crossi 100.49 152 PKKP PKKPbc 14 53 39.6 +14
comp=Z,1.4nm,0.6s,baz=2.5,slow=0.9,SNR=6.7
WRA Warramunga Arr 100.55 161 P Pdif 14 37 12.4 -0.9
comp=Z,5.3nm,0.8s,baz=196,slow=4.7,SNR=35
WRA PP PP 14 41 19.8 +0.4
comp=Z,4.9nm,0.9s,baz=191,slow=7.1,SNR=6.0
WRA PKKP PKKPbc 14 53 26.8 +1.7
comp=Z,2.4nm,0.9s,baz=358,slow=3.1,SNR=12
WRA PKPPKP 15 01 40.0
comp=Z,0.6nm,0.8s,baz=17,slow=1.8,SNR=4.9
WRA Warramunga Arr 100.55 161 P Pdif 14 37 12.4 -0.9
WRA 14 41 19.8
WRA pmax pmax
comp=Z,5.0nm,0.8s
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA pmax pmax
comp=Z,2.0nm,0.9s
WB2 Warramunga Arr 100.55 161 *e*Pdif Pdif 14 37 12.6 -0.8
WRAB Tennant Creek 100.56 161 *e*P Pdif 14 37 12.2 -1.2
WRAB *e* 14 41 19.4
WRAB pmax pmax
comp=Z,58nm,1.8s
WRAB Tennant Creek 100.56 161 *e*P Pdif 14 37 12.2 -1.2
comp=Z,58nm,1.8s
WRAB *e*PP PP 14 41 19.4 0.0
EIL Elat 100.88 50 P Pdif 14 37 11.8 -3.0
comp=Z,1.6nm,0.6s,baz=225,slow=4.3,SNR=2.2
NHSC New Hope 101.63 316 PFAKE 14 37 30.0 +12
NHSC LR LR
comp=Z,1μm,20.0s,MS5.4
CTA Charters Tower 101.89 172 PP PP 14 41 27.8 -1.7
comp=Z,4.3nm,0.9s,baz=146,slow=4.0,SNR=3.3
CTAO Charters Tower 101.89 172 PFAKE 14 37 30.0 +11
CTAO LR LR
comp=Z,9μm,20.0s,MS6.3
CEL Celeste 102.00 32 PFAKE 14 37 30.0 +10
CEL LR LR
comp=Z,2μm,21.0s,MS5.5
MSVF Nonsavu 102.04 203 PFAKE 14 37 30.0 +10
MSVF LR LR
comp=Z,709nm,22.0s,MS5.1
BRAL Brewton 102.48 309 PFAKE 14 37 30.0 +8.1
BRAL LR LR
comp=Z,2μm,19.0s,MS5.7
AFI Afiamalu 103.15 214 PFAKE 14 37 40.0 +15
AFI LR LR
comp=Z,2μm,20.0s,MS5.6
GOGA Godfrey 103.15 313 PFAKE 14 37 30.0 +5.1
GOGA LR LR
comp=Z,2μm,22.0s,MS5.7
ASF Jabal al Asfar 103.87 51 PP PP 14 41 42.6 -2.8
comp=Z,2.7nm,0.8s,baz=110,slow=5.3,SNR=3.7
LRAL Lakeview Retre 104.22 310 PFAKE 14 37 40.0 +10
LRAL LR LR
comp=Z,3μm,21.0s,MS5.8
KVTX Kingsville 104.25 299 PFAKE 14 37 40.0 +10
KVTX LR LR
comp=Z,2μm,22.0s,MS5.6
AQU L'Aquila 105.15 29 PFAKE 14 42 00.0 +13
AQU LR LR
comp=Z,3μm,22.0s,MS5.9
CBN Corbin 105.20 320 PFAKE 14 42 00.0 +13
CBN LR LR
comp=Z,1μm,20.0s,MS5.5
HKT Hockley 105.35 302 PFAKE 14 42 00.0 +12
HKT LR LR
comp=Z,953nm,20.0s,MS5.3
BLA Blacksburg 105.39 317 PFAKE 14 42 00.0 +12
BLA LR LR
comp=Z,1μm,19.0s,MS5.4
BNI Bardonecchia 106.14 23 PFAKE 14 42 00.0 +11
BNI LR LR
comp=Z,4μm,21.0s,MS6.0
AKHS Akhisar 106.34 41 *i*P PP 14 41 59.5 -4.1
NATX Nacogdoches 106.37 304 PFAKE 14 42 00.0 +10
NATX LR LR
comp=Z,616nm,20.0s,MS5.2
OXF Oxford 106.49 309 PFAKE 14 42 00.0 +10
OXF LR LR
comp=Z,3μm,22.0s,MS5.8
DURS Dursunbey 107.21 41 *i*P PP 14 42 06.1 -3.9
MCWV Mont Chateau 107.36 319 PFAKE 14 42 00.0 +8.8
MCWV LR LR
comp=Z,2μm,22.0s,MS5.7
BINY Binghamton 108.34 323 PFAKE 14 42 00.0 +7.1
BINY LR LR
comp=Z,2μm,20.0s,MS5.7
ANDN Andirin 108.35 48 *i*P PP 14 42 16.1 -2.3
DAVOX Davos/Dischmat 108.48 25 PP PP 14 42 19.3 +0.2
comp=Z,1.3nm,0.4s,baz=232,slow=6.5,SNR=4.3
BOJS Bojanci 108.57 29 *e*PP PP 14 42 17.0 -2.9
BOJS *e* 14 51 41.0
CEY Cerknica 108.58 28 *e*PP PP 14 42 17.0 -2.9
LJU Ljubljana 108.89 28 *e*PP PP 14 42 19.5 -2.7
LJU *e* 14 51 54.0
FETA Feichten 108.89 25 ⇑ *i*PP PP 14 42 19.9 -2.3
comp=Z,12nm,1.8s
LBNH Lisbon 108.95 327 PFAKE 14 42 10.0 +16
LBNH LR LR
comp=Z,2μm,20.0s,MS5.7
ACSO Alum Creek Sta 108.99 317 PFAKE 14 42 10.0 +16
ACSO LR LR
comp=Z,1μm,20.0s,MS5.4
GORS Gorjuse 109.01 28 *e*PP PP 14 42 20.9 -2.2
BR131 Keskin Array S 109.18 45 PFAKE 14 42 10.0 +15
BR131 LR LR
comp=Z,2μm,22.0s,MS5.6
BRTR Keskin Array B 109.18 45 Pdiff Pdif 14 37 54.2 +2.5
comp=Z,0.3nm,0.3s,baz=216,slow=7.1,SNR=3.0
BRTR PP PP 14 42 19.3 -5.1
comp=Z,4.8nm,0.9s,baz=187,slow=8.7,SNR=10
BRTR PKKPbc PKKPbc 14 52 58.9 -1.0
comp=Z,0.6nm,0.4s,baz=74,slow=2.3,SNR=3.8
BRTR Keskin Array B 109.18 45 P Pdif 14 37 54.2 +2.5
BRTR 14 52 58.9
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.4s
ECH Echery 109.26 23 PFAKE 14 42 10.0 +16
ECH LR LR
comp=Z,2μm,22.0s,MS5.7
WTTA Wattenberg 109.33 26 ⇑ *i*PP PP 14 42 23.7 -1.7
comp=Z,33nm,1.7s
NCB Newcomb 109.39 325 PFAKE 14 42 10.0 +15
NCB LR LR
comp=Z,2μm,20.0s,MS5.7
ERPA Erie 109.60 320 PFAKE 14 42 10.0 +15
ERPA LR LR
comp=Z,1μm,20.0s,MS5.5
BFO Black Forest 109.61 23 *e*Pdiff Pdif 14 37 54.6 +1.0
BFO *e*PP PP 14 42 24.8 -2.6
BFO *e*SP SP 14 51 45.0 -5.1
BFO Black Forest 109.61 23 *e*Pdif Pdif 14 37 54.6 +1.0
BFO *e*PP PP 14 42 24.8 -2.6
BFO *e*SP SP 14 51 45.0 -5.1
BFO LR LR
comp=Z,3μm,22.0s,MS5.9
ELDT Eldivan 109.77 44 *i*P PP 14 42 22.8 -5.9
MALT Malatya 109.81 49 PFAKE 14 42 10.0 +14
MALT LR LR
comp=Z,3μm,20.0s,MS5.9
RJOB Jochberg 110.05 26 *e*Pdiff Pdif 14 37 55.9 +0.3
RJOB *e*PP PP 14 42 26.5 -4.1
RJOB *e*SP SP 14 51 49.5 -5.1
FUR Furstenfeldbru 110.10 25 *e*Pdiff Pdif 14 37 56.6 +0.8
FUR *e*PP PP 14 42 26.0 -4.9
FUR *e*SP SP 14 51 49.0 -6.0
STU Stuttgart 110.21 24 *e*Pdiff Pdif 14 37 59.1 +2.8
STU *e*PP PP 14 42 27.4 -4.3
STU *e*SP SP 14 51 50.6 -5.4
CCM Cathedral Cave 110.29 310 PFAKE 14 42 10.0 +13
CCM LR LR
comp=Z,3μm,22.0s,MS5.9
WLF Walferdange 110.44 21 *e*Pdiff Pdif 14 37 59.0 +1.7
WLF *e*PP PP 14 42 28.6 -4.8
WLF *e*SP SP 14 51 56.7 -1.4
FUNA Funafuti 110.70 206 PFAKE 14 42 10.0 +12
FUNA LR LR
comp=Z,6μm,22.0s,MS6.1
AAM Ann Arbor 111.05 318 PFAKE 14 42 10.0 +12
AAM LR LR
comp=Z,2μm,20.0s,MS5.7
MNTX Cornudas Mount 111.26 296 *e*PKPdf PKiKP 14 41 57.2 -1.6
MNTX LR LR
comp=Z,1μm,20.0s,MS5.4
GEC2 GERESS Array S 111.30 27 *e*Pdiff Pdif 14 38 01.9 +0.8
GEC2 *e*PP PP 14 42 35.6 -4.0
GERES GERESS Array B 111.30 27 PKiKP PKiKP 14 41 57.1 -1.1
comp=Z,0.8nm,0.7s,baz=188,slow=0.9,SNR=3.6
GERES PP PP 14 42 40.9 +1.3
comp=Z,2.4nm,0.9s,baz=198,slow=7.0,SNR=4.8
GERES PKKPbc PKKPbc 14 52 54.6 +1.3
comp=Z,0.7nm,0.7s,baz=350,slow=3.0,SNR=4.9
GERES GERESS Array B 111.30 27 *i* PKIKP PKiKP 14 41 57.1 -1.2
GERES 14 42 40.9
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,2.0nm,0.9s
GERES pmax pmax
comp=Z,1.0nm,0.7s
WET Wettzell 111.39 26 *e*Pdiff Pdif 14 38 03.1 +1.6
WET *e*PP PP 14 42 36.2 -4.0
WET *e*SP SP 14 52 04.6 -2.2
TNS Taunus Mts 111.43 23 *e*Pdiff Pdif 14 38 03.3 +1.6
TNS *e*PP PP 14 42 35.9 -4.6
TNS *e*SP SP 14 52 06.5 -0.7
GRA1 Grafenberg Arr 111.52 25 *e*Pdif Pdif 14 38 04.4 +2.3
GRA1 *e*PP PP 14 42 36.9 -4.2
GRA1 *e*SP SP 14 52 05.3 -2.8
GRA1 LR LR
comp=Z,3μm,21.4s,MS5.8
GRF Grafenberg Arr 111.52 25 *e*Pdiff Pdif 14 38 04.4 +2.3
GRF *e*PP PP 14 42 36.9 -4.2
GRF *e*SP SP 14 52 05.3 -2.8
GRF *e*L 15 23 44.3
comp=Z,3μm,21.4s
GRF Grafenberg Arr 111.52 25 *e*P Pdif 14 38 04.4 +2.3
GRF *e* 14 42 36.9
GRF *e*SP SP 14 52 05.3 -2.8
KHC Kasperske Hory 111.54 26 *e*P Pdif 14 38 01.1 -1.1
KHC *e* 14 42 37.5
KHC *e*PS PS 14 52 11.0 -1.5
KHC *e*SS SS 14 58 30.1 +17
KHC MLR MLR
comp=Z,4μm,24.4s,MS5.9
KHC Kasperske Hory 111.54 26 *e*PDIF Pdif 14 38 01.1 -1.1
KHC *e*x x 14 42 37.5
KHC *e*SP SP 14 52 11.0 +2.8
KHC *e*SS SS 14 58 30.1 +17
KHC AMS AMS 15 21 00.0
comp=Z,4μm,24.4s
ZST Bratislava 111.55 29 *e*PP PP 14 42 40.2 -1.1
ZST *e*PS PS 14 52 18.3 +5.7
MLR Muntele Rosu 111.63 36 PP PP 14 42 44.8 +2.9
comp=Z,1.6nm,0.3s,baz=209,slow=5.9,SNR=7.3
HDIL Hopedale 111.65 313 PFAKE 14 42 10.0 +11
HDIL LR LR
comp=Z,1μm,22.0s,MS5.5
ROTZ Rotzenmuhle 111.81 25 *e*Pdiff Pdif 14 38 06.1 +2.7
ROTZ *e*PP PP 14 42 39.0 -4.2
ROTZ *e*SP SP 14 52 09.8 -0.9
HYB Hyderabad 112.06 92 *i* PKP PKiKP 14 42 00.0 -0.7
TREC Trest 112.15 28 *e*P Pdif 14 37 58.8 -6.1
TREC *e* 14 42 42.4
TREC *e*PS PS 14 52 20.5 +2.3
TREC MLR MLR
comp=Z,5μm,22.4s,MS6.0
TREC Trest 112.15 28 *e*PDIF Pdif 14 37 58.8 -6.1
TREC *e*x x 14 42 42.4
TREC *e*SP SP 14 52 20.5 +6.6
TREC AMS AMS 15 23 50.0
comp=Z,5μm,22.4s
AMTX Amarillo 112.16 300 *e*PKPdf PKiKP 14 41 59.0 -1.3
AMTX LR LR
comp=Z,917nm,20.0s,MS5.4
NKC Novy Kostel 112.31 25 *e*PP PP 14 42 41.8 -4.9
NKC *e*SP SP 14 52 28.0 +13
NKC *e*SS SS 14 58 48.7 +25
NKC AMS AMS 15 22 10.0
comp=Z,3μm,24.1s
UBBA Unterbreizbach 112.32 23 *e*Pdiff Pdif 14 38 07.0 +1.4
UBBA *e*PP PP 14 42 42.6 -4.2
UBBA *e*SP SP 14 52 15.3 0.0
BUG Bochum--Univer 112.35 22 *e*Pdiff Pdif 14 38 08.0 +2.2
BUG *e*PP PP 14 42 42.4 -4.6
BUG *e*SP SP 14 52 18.1 +2.5
TANN Tannenbergstha 112.48 25 *e*Pdiff Pdif 14 38 08.9 +2.5
TANN *e*PP PP 14 42 43.9 -4.1
TANN *e*SP SP 14 52 17.3 +0.5
MOX Moxa 112.50 25 *e*(P) PP 14 42 42.6 -5.6
MOX *e*SP PS 14 52 38.0 +17
MOX
comp=Z,1μm,23.0s
MOX Moxa 112.50 25 *e*Pdiff Pdif 14 38 07.1 +0.6
MOX *e*PP PP 14 42 44.6 -3.6
MOX *e*SP SP 14 52 17.6 +0.6
PRU Pruhonice 112.57 27 *e*P Pdif 14 38 02.9 -3.9
PRU *e* 14 42 43.8
PRU *e*PS PS 14 52 26.7 +4.7
PRU MLR MLR
comp=Z,3μm,30.1s,MS5.8
PRU Pruhonice 112.57 27 *e*PDIF Pdif 14 38 02.9 -3.9
PRU *e*PP PP 14 42 43.8 -4.8
PRU *e*SP SP 14 52 26.7 +9.1
PRU *e*SS SS 14 58 53.5 +27
PRU AMS AMS 15 20 00.0
comp=Z,3μm,30.1s
PRA Prague 112.62 27 PP PP 14 42 47.0 -2.0
KECS Kecovo 112.72 31 *e* PP 14 42 48.5 -1.2
KECS Kecovo 112.72 31 *e*PP PP 14 42 48.5 -1.2
KULM Kulim 112.99 119 PFAKE 14 42 10.0 +7.3
KULM LR LR
comp=Z,2μm,20.0s,MS5.7
PVCC Panska Ves 113.08 27 *e*PP PP 14 43 01.5 +9.3
PVCC AMS AMS 15 20 30.0
comp=Z,3μm,27.4s
BRG Berggiesshubel 113.25 26 *e*Pdiff Pdif 14 38 11.4 +1.6
BRG *e*PP PP 14 42 48.9 -4.5
BRG *e*SP SP 14 52 25.6 +1.7
BRG Berggiesshubel 113.25 26 *i* PKP PKiKP 14 42 06.9 +5.0
comp=Z,3.8nm,0.9s
BRG Berggiesshubel 113.25 26 *i* PKIKP PKiKP 14 42 06.9 +5.0
BRG pmax pmax
comp=Z,2.0nm,0.9s
IBBN Ibbenburen 113.27 22 *e*Pdiff Pdif 14 38 11.6 +1.7
IBBN *e*PP PP 14 42 49.7 -3.9
IBBN *e*SP SP 14 52 27.4 +3.4
BUR08 Bucovina Ar. S 113.33 35 *e*PKPdf PKiKP 14 42 01.4 -0.8
OKC Ostrava-Krasne 113.33 29 *e*PP PP 14 42 51.2 -2.8
OKC *e*SP SP 14 52 33.5 +8.9
OKC *e*SS SS 14 59 19.5 +43
OKC AMS AMS 15 21 10.0
comp=Z,1μm,24.1s
DPC Dobruska-Polom 113.34 28 *e*PP PP 14 42 52.7 -1.4
DPC *e*PS PS 14 52 34.7 +5.7
DPC *e*SS SS 14 59 03.1 +26
DPC AMS AMS 15 24 40.0
comp=Z,4μm,21.4s
CLZ Clausthal 113.36 23 *e*Pdiff Pdif 14 38 12.9 +2.6
CLZ *e*PP PP 14 42 50.6 -3.6
CLZ *e*SP SP 14 52 27.4 +2.6
KSU1 Kansas State U 113.42 307 PFAKE 14 42 10.0 +7.4

KSU1 LR LR
comp=Z,3µm,22.0s,MS5.8
CLL Collm 113.44 25 *e*Pdiff Pdif 14 38 11.9 +1.3
CLL *e*PP PP 14 42 50.6 -4.2
CLL *e*SP SP 14 52 27.4 +1.8
CLL Collm 113.44 25 *e*P Pdif 14 38 09.0 -1.6
CLL *e* 14 42 02.0
CLL *e* 14 42 18.0
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL pmax pmax
comp=Z,13nm,1.5s
CLL MLR MLR
comp=Z,2µm,21.8s,MS5.7
CLL Collm 113.44 25 *e*Pdif Pdif 14 38 09.0 -1.6
CLL *e*PKP PKiKP 14 42 02.0 -0.2
CLL *e* 14 42 18.0
CLL *i* PKKP PKKPbc 14 52 47.5 +1.4
CLL *e* 14 53 02.0
CLL LR LR
comp=Z,2µm,21.8s,MS5.7
CLL Collm 113.44 25 *e*Pdif Pdif 14 38 09.0 -1.6
CLL *e*PKiKP PKiKP 14 42 02.0 -0.2
comp=Z,4.0nm,0.8s
CLL *es*PKiKP 14 42 18.0
CLL *e*PP PP 14 42 50.0 -4.8
CLL *e* 14 43 17.0
CLL *e*PS PS 14 52 34.0 +4.1
CLL *i* PKKPbc PKKPbc 14 52 47.5 +1.4
comp=Z,13nm,1.5s
CLL *es*PKKPbc 14 53 02.0
CLL *e*PPS 14 53 42.0
CLL *e*SS SS 14 58 42.0 +3.6
CLL *e*SKKSacre 15 00 12.0
CLL *e*SSS 15 02 54.0
CLL LV 15 25 00.0
comp=Z,2µm,21.8s
GLMI Grayling 113.58 318 PFAKE 14 42 10.0 +7.3
GLMI LR LR
comp=Z,2µm,21.0s,MS5.7
KOLS Kolonicke sedl 113.62 32 *e* PP 14 43 05.2 +9.1
KOLS *e* PKKPbc 14 52 48.6 +3.2
KOLS Kolonicke sedl 113.62 32 *e*PP PP 14 43 05.2 +9.1
KOLS *e* 14 52 48.6
ARTV Artvin 113.67 50 *i* P PP 14 42 42.8 -14
STHS Stebnicka Huta 113.77 31 *e* PP 14 42 56.0 -1.2
STHS Stebnicka Huta 113.77 31 *e*PP PP 14 42 56.0 -1.2
KSM Kuching 113.79 130 PFAKE 14 42 20.0 +16
KSM LR LR
comp=Z,1µm,20.0s,MS5.5
KIS Kishinev 113.89 37 *e*PKIKP PKiKP 14 42 12.0 +8.8
KIS *e* 14 42 55.0
NRDL Niedersach Rie 113.92 23 *e*Pdiff Pdif 14 38 13.8 +1.0
NRDL *e*PP PP 14 42 54.6 -3.6
NRDL *e*SP SP 14 52 32.8 +2.9
JFWS Jewell Farm 114.03 313 PFAKE 14 42 10.0 +6.3
JFWS LR LR
comp=Z,2µm,22.0s,MS5.6
OJC Ojcow 114.11 30 *e*PKiKP PKiKP 14 42 03.7 +0.1
OJC *e* 14 42 56.5
OJC *e*PP PP 14 43 13.6 +14
OJC *e*SP SP 14 52 51.6 +20
OJC L 15 27 20.5
comp=Z,1.3nm,21.2s
OJC Ojcow 114.11 30 *i* PKIKP PKiKP 14 42 03.7 +0.1
OJC *e* 14 42 56.5
LAZ Ladron 114.32 296 *e*PKPdf PKiKP 14 42 04.4 -0.1
KWP Kalwaria Pacla 114.38 32 PFAKE 14 42 20.0 +16
KWP LR LR
comp=Z,2µm,20.0s,MS5.7
TUC Tucson 114.39 292 *e*PKIKP PKiKP 14 42 04.2 -0.5
ESK Eskdalemuir 114.41 14 PFAKE 14 42 20.0 +16
ESK LR LR
comp=Z,1µm,21.0s,MS5.5
ANMO Albuquerque 114.44 297 PFAKE 14 42 20.0 +15
ANMO LR LR
comp=Z,1µm,20.0s,MS5.4
CBKS Cedar Bluff 114.53 304 PFAKE 14 42 20.0 +15
CBKS LR LR
comp=Z,1µm,21.0s,MS5.5
SOC Sochi 114.82 47 *i* PKIKP PKiKP 14 42 06.3 +1.1
SOC *e*PPP 14 45 26.1
SOC *e*PS PS 14 52 45.2 +2.5
SOC *e* 14 53 47.6
SOC *e*SS SS 14 59 04.0 +7.2
SOC MLR MLR
comp=Z,973nm,20.0s,MS5.4
ANN Anapa 114.98 44 *i* PKIKP PKiKP 14 42 04.0 -1.4
ANN *e* 14 43 01.4
ANN *e* 14 48 47.1
ANN pmax pmax
comp=Z,42nm,1.6s
ANN MLR MLR
comp=N,777nm,25.0s
ANN MLR MLR
comp=Z,1µm,25.0s,MS5.4
BSEG Bad Segeberg 115.32 23 *e*Pdiff Pdif 14 38 21.1 +2.1
BSEG *e*SP SP 14 52 45.3 +2.6
ZEI Tsey 115.80 50 *i* PKIKP PKPdf 14 42 06.4 -0.7
ZEI *e* 14 43 09.5
ZEI pmax pmax
comp=Z,11nm,1.7s
SDCO Great Sand Dun 116.26 299 *e*PKPdf PKPdf 14 42 07.6 -0.6
KIV Kislovodsk 116.30 48 *e*P Pdif 14 38 21.5 -1.8
KIV *i* 14 42 07.1
KIV *e* 14 48 54.7
KIV *e*PS PS 14 52 56.3 +0.1
KIV *e*SS SS 14 59 16.5 +0.3
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV Kislovodsk 116.30 48 PFAKE 14 42 20.0 +12
KIV LR LR
comp=Z,2µm,22.0s,MS5.7
COWI Conover 116.32 316 *e*PKPdf PKPdf 14 42 06.5 -1.4
COWI LR LR
comp=Z,2µm,22.0s,MS5.7
MVCO Mesa Verde 117.24 297 *e*PKPdf PKPdf 14 42 09.9 -0.1
KIEV Kiev 117.25 36 *e*PKIKP PKPdf 14 42 07.7 -1.9
KIEV MLR MLR
comp=Z,723nm,20.0s,MS5.3
ECSD EROS Data Cent 117.26 310 *e*PKPdf PKPdf 14 42 08.0 -1.9
ECSD LR LR
comp=Z,3µm,21.0s,MS5.9
WUAZ Wupatki 117.26 294 *e*PKPdf PKPdf 14 42 10.3 +0.1
AKASG Malin Array Be 117.27 36 PKP PKPdf 14 42 08.0 -1.7
comp=Z,3.1nm,0.7s,baz=239,slow=2.1,SNR=14
AKASG PP PP 14 43 22.2 +0.5
comp=Z,3.8nm,0.8s,baz=206,slow=7.6,SNR=4.1
AKASG Malin Array Be 117.27 36 PKIKP PKPdf 14 42 08.0 -1.6
AKASG 14 43 22.2
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 117.27 36 *e*PKIKP PKPdf 14 42 07.8 -1.8
SCHQ Schefferville 117.33 335 PKP PKPdf 14 42 08.2 -1.4
comp=Z,7.2nm,0.6s,baz=181,slow=1.4,SNR=13
COP Copenhagen 117.40 23 *e*PKIKP PKPdf 14 42 13.3 +3.6
COP Copenhagen 117.40 23 *i* P PKPdf 14 42 13.3 +3.6
BSD Bornholm Skovb 117.40 25 *e*PKIKP PKPdf 14 42 06.8 -2.9
BSD Bornholm Skovb 117.40 25 *i* P PKPdf 14 42 06.8 -2.9
MAK Makhachkala 117.45 52 *i* PKIKP PKPdf 14 42 13.2 +3.0
MAK *i* 14 43 24.6
MAK *e* 14 48 56.5
MAK *e* 14 49 20.2
MAK *i* PS PS 14 53 09.8 +3.1
MAK MLR MLR
comp=Z,2µm,17.0s,MS5.8
BAR Barrett 117.63 288 *e*PKPdf PKPdf 14 42 11.0 0.0
ISCO Idaho Springs 117.97 301 *e*PKIKP PKPdf 14 42 11.1 -0.3
PFO Pinyon Flat Ob 118.26 289 PFAKE 14 42 20.0 +7.9
PFO LR LR
comp=Z,330nm,20.0s,MS5.0
EYMN Ely 118.74 316 *e*PKPdf PKPdf 14 42 10.6 -2.0
EYMN LR LR
comp=Z,2µm,21.0s,MS5.7
PHWY Pilot Hill 119.11 302 *e*PKPdf PKPdf 14 42 12.3 -1.1
SRU San Rafael 119.71 297 *e*PKIKP PKPdf 14 42 13.9 -0.8
GSC Goldstone 119.78 290 *e*PKIKP PKPdf 14 42 14.9 -0.1
CCUT Cedar City 119.85 294 *e*P PKPdf 14 42 09.2 -5.8
CCUT *e*PKPdf PKPdf 14 42 15.4 +0.3
MSU Marysvale 120.03 295 *e*PKIKP PKPdf 14 42 15.4 0.0
MVU Marysvale 120.04 295 PFAKE 14 42 30.0 +15
MVU LR LR
comp=Z,1µm,20.0s,MS5.6
MNK Minsk 120.16 33 *e*PKIKP PKPdf 14 42 12.0 -3.1
MICGM Minsk 120.18 33 *e*P PKPdf 14 42 12.0 -3.1
TMUT Trail Mountain 120.19 296 *e*PKPdf PKPdf 14 42 15.1 -0.5
RWWY Rawlins 120.21 301 *e*PKPdf PKPdf 14 42 14.9 -0.7
KKM Kota Kinabalu 120.28 135 PFAKE 14 42 30.0 +13
KKM LR LR
comp=Z,2µm,21.0s,MS5.7
NDI New Delhi 120.50 84 *ex* x 14 42 13.5
BER Bergen 120.52 17 *e*PP PP 14 43 40.2 -3.9
BER *e*SS SS 15 00 07.2 -3.2
BER AMS AMS 15 26 54.1
comp=Z,2µm,27.4s,MS5.7
KONO Kongsberg 120.55 20 *e*PP PP 14 43 42.8 -1.5
KONO *e*SKS SKSdf 14 49 10.0 -14
KONO *e*SS SS 15 00 10.1 -0.7
KONO AMS AMS 15 27 59.5
comp=Z,2µm,26.8s,MS5.7
KONO Kongsberg 120.55 20 PFAKE 14 42 30.0 +14
KONO LR LR
comp=Z,3µm,22.0s,MS5.9
AGMN Agassiz Refuge 120.70 313 *e*PKPdf PKPdf 14 42 14.8 -1.5
RSSD Black Hills 120.72 305 *e*PKIKP PKPdf 14 42 14.9 -1.6
KBL Kabul 120.86 73 *e*PKIKP PKPdf 14 42 15.8 -1.3
ISA Isabella 120.90 289 *e*PKIKP PKPdf 14 42 16.8 -0.3
DAC Darwin (Calif) 120.94 290 PFAKE 14 42 30.0 +13
DAC LR LR
comp=Z,845nm,19.0s,MS5.4
MPU Maple Canyon 120.95 297 *e*PKPdf PKPdf 14 42 17.5 +0.4
MPU *e*SKPdf SKPdf 14 45 47.0 -2.2
VSR Storozhevoye 121.01 42 *e*PKIKP PKPdf 14 42 16.2 -0.6
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,30nm,1.3s
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,30nm,1.2s
VSR MLR MLR
comp=Z,810nm,20.0s,MS5.4
VSR MLR MLR
comp=N,750nm,21.0s,MS5.4
VSR MLR MLR
comp=E,350nm,18.0s,MS5.4
DAU Daniels Canyon 121.08 297 *e*PKPdf PKPdf 14 42 17.6 +0.3
DAU *e*SKPdf SKPdf 14 45 46.7 -2.8
NLU North Lily Min 121.11 296 *e*PKPdf PKPdf 14 42 15.5 -1.9
JLU Jordanelle 121.33 297 *e*PKPdf PKPdf 14 42 17.4 -0.3
JLU *ep*PKPdf pPKPdf 14 42 28.7 -1.1
JLU *es*PKPdf 14 42 34.6
FOO Floro 121.63 17 *e*PP PP 14 43 47.6 -4.0
FOO AMS AMS 15 27 00.4
comp=Z,3µm,23.1s,MS5.9
DUG Dugway 121.66 296 *e*PKIKP PKPdf 14 42 18.3 -0.1
HFS Hagfors 121.78 22 PKP PKPdf 14 42 15.7 -2.3
comp=Z,4.8nm,0.8s,baz=191,slow=4.4,SNR=6.3
HFS PKKPbc PKKPbc 14 52 15.9 -0.4
comp=Z,3.1nm,0.5s,baz=69,slow=4.9,SNR=11
HFS Hagfors 121.78 22 PKIKP PKPdf 14 42 15.7 -2.3
HFS pmax pmax
comp=Z,5.0nm,0.8s
HFS pmax pmax
comp=Z,3.0nm,0.5s
NAO01 NORSAR Array S 121.90 20 *e*PKPdf PKPdf 14 42 16.7 -1.5
BW06 Boulder Array 122.13 300 PFAKE 14 42 30.0 +11
BW06 LR LR
comp=Z,2µm,21.0s,MS5.7
PDAR Pinedale Array 122.13 300 PKP PKPdf 14 42 17.9 -1.3
comp=Z,8.4nm,0.5s,baz=136,slow=5.4,SNR=58
PDAR SKP 14 45 48.1
comp=Z,2.3nm,0.8s,baz=147,slow=2.2,SNR=4.3
PDAR PKKPab PKKPab 14 52 15.7 +1.2
comp=Z,1.3nm,0.8s,baz=336,slow=0.5,SNR=8.7
NOA NORSAR Array B 122.14 20 PKP PKPdf 14 42 17.8 -0.9
comp=Z,11nm,1.0s,baz=199,slow=1.7,SNR=18
NOA pPKP pPKPdf 14 42 34.5 +3.9
comp=Z,4.1nm,0.6s,baz=201,slow=1.9,SNR=5.6
NOA PKKPbc PKKPbc 14 52 15.1 +0.2
comp=Z,2.3nm,0.7s,baz=23,slow=4.2,SNR=12
NOA NORSAR Array B 122.14 20 PKIKP PKPdf 14 42 17.8 -0.9
NOA 14 42 34.5
NOA pmax pmax
comp=Z,11nm,1.0s
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 122.14 20 PKP PKPdf 14 42 17.8 -0.9
NOA pPKP pPKPdf 14 42 34.5 +3.9
NOA PKKPbc PKKPbc 14 52 15.1 +0.2
HWUT Hardware Ranch 122.16 298 *e*PKPdf PKPdf 14 42 18.7 -0.7
HWUT LR LR
comp=Z,1µm,20.0s,MS5.6
DDI Dehra Dun 122.24 84 *ex* x 14 42 19.0
ULM Lac du Bonnet 122.28 314 PKP PKPdf 14 42 17.6 -1.7
comp=Z,21nm,0.7s,baz=159,slow=0.8,SNR=31
ULM SKP 14 45 48.4
comp=Z,6.7nm,0.6s,baz=135,slow=1.6,SNR=4.8
ULM PKKPbc PKKPbc 14 52 14.2 0.0
comp=Z,4.3nm,0.8s,baz=302,slow=5.9,SNR=5.9
BGU Big Grassy Mou 122.33 296 *e*PKPdf PKPdf 14 42 19.1 -0.6
NIL Nilore 122.33 77 PFAKE 14 42 30.0 +10
NIL LR LR
comp=Z,108nm,21.0s,MS4.5
BORG Borgarnes 122.48 2 PFAKE 14 42 30.0 +11
BORG LR LR
comp=Z,2µm,20.0s,MS5.8
BDT Bhumibol Dam 122.54 111 P PKPdf 14 42 20.0 -0.8
comp=Z,16nm,1.0s
N13A Wendover, West 122.84 296 *e*PKPdf PKPdf 14 42 21.0 +0.3
AHID Auburn Hatcher 122.85 299 *e*PKPdf PKPdf 14 42 19.6 -1.1
AHID LR LR
comp=Z,2µm,21.0s,MS5.7
HVU Hansel Valley 122.87 297 *e*PKIKP PKPdf 14 42 20.5 -0.2
NVAR Mina Array Bea 122.97 291 PKP PKPdf 14 42 21.5 +0.5
comp=Z,9.5nm,0.6s,baz=141,slow=2.9,SNR=50
NVAR PKKPab PKKPab 14 52 13.2 +1.9
comp=Z,0.5nm,0.5s,baz=286,slow=2.2,SNR=5.3
REDW Red Top Meadow 123.19 300 *e*PKPdf PKPdf 14 42 20.7 -0.6
M13A Montello 123.21 296 *e*PKPdf PKPdf 14 42 21.0 -0.4
SNOW Snow King Moun 123.22 300 *e*PKPdf PKPdf 14 42 20.4 -0.9
N12A Clover Valley, 123.23 295 *e*PKPdf PKPdf 14 42 21.6 +0.1
ELK Elko 123.25 295 *e*PKIKP PKPdf 14 42 21.8 +0.3
LOHW Long Hollow 123.27 300 *e*PKPdf PKPdf 14 42 21.0 -0.4
TPAW Teton Pass 123.34 300 *e*PKPdf PKPdf 14 42 21.5 -0.1
OBN Obninsk 123.36 37 ⇑*i*PKIKP PKPdf 14 42 19.7 -1.5
OBN *i* 14 42 36.1
OBN *i* 14 43 59.9
OBN *i* PS PS 14 53 57.1 -2.2
OBN *e*PPS 14 55 32.2
OBN *e*SS SS 15 00 46.4 -0.3
OBN pmax pmax
comp=Z,47nm,1.5s
OBN Obninsk 123.36 37 PFAKE 14 42 30.0 +8.8
OBN LR LR
comp=Z,1µm,22.0s,MS5.5
RRI2 Red Ridge 123.40 299 *e*PKPdf PKPdf 14 42 20.9 -0.8
CM31 Chiang Mai Arr 123.54 110 *e*PKPdf PKPdf 14 42 21.8 -0.9
CM31 LR LR
comp=Z,1µm,20.0s,MS5.6
IMW Indian Meadow 123.65 300 *e*PKPdf PKPdf 14 42 21.9 -0.2
LAO LASA Array 123.69 305 *e*PKPdf PKPdf 14 42 21.2 -0.9
LAO LR LR
comp=Z,2µm,20.0s,MS5.8
CMB Columbia Colle 123.70 289 *e*PKIKP PKPdf 14 42 22.5 +0.1
CMB MLR MLR
comp=Z,1µm,22.0s,MS5.5
RLMT Red Lodge 123.83 302 *e*PKPdf PKPdf 14 42 21.7 -0.8
DMN Daman 123.84 91 *e*P PKPdf 14 42 22.2 -0.8
comp=Z,101nm,1.1s
CHG Chiang Mai 123.84 110 ⇓P PKPdf 14 42 23.0 -0.3
comp=Z,28nm,1.0s
LKWY Lake 123.91 301 *e*PKIKP PKPdf 14 42 23.7 +1.1
LKWY MLR MLR
comp=Z,3µm,20.0s,MS5.9
PKIN Phulchoki 123.97 92 *e*P PKPdf 14 42 22.5 -0.8
PKI Pulchoki 123.97 92 *e*P PKPdf 14 42 22.2 -1.1
comp=Z,135nm,1.1s
BMN Battle Mountai 123.97 293 *e*PKIKP PKPdf 14 42 22.7 -0.2
BMN MLR MLR
comp=Z,948nm,20.0s,MS5.5
KKN Kakani 124.07 91 *e*P PKPdf 14 42 22.5 -1.0
comp=Z,74nm,1.1s
RAMN Ramite 124.11 93 *e*P PKPdf 14 42 23.2 -0.4
comp=Z,222nm,1.1s
YNR Norris Junctio 124.16 301 *e*PKPdf PKPdf 14 42 22.6 -0.5
DGMT Dagmar 124.21 308 *e*PKPdf PKPdf 14 42 22.6 -0.4
DGMT LR LR
comp=Z,3µm,20.0s,MS5.9
MOS Moscow 124.22 38 *e*PKIKP PKPdf 14 42 21.1 -1.7
MOS *e* 14 49 35.2
MOS MLR MLR
comp=Z,2µm,22.0s,MS5.8
YMR Madison River 124.25 301 *e*PKPdf PKPdf 14 42 23.9 +0.7
ODAN Odare 124.45 94 *e*P PKPdf 14 42 23.7 -0.5
JIRN Jiri 124.45 92 *e*P PKPdf 14 42 23.8 -0.4
comp=Z,156nm,1.0s
DAV Davao City (W) 124.48 144 PFAKE 14 42 40.0 +15
DAV LR LR
comp=Z,2µm,19.0s,MS5.7
GUN Gumba 124.49 92 *e*P PKPdf 14 42 23.8 -0.5
comp=Z,154nm,1.1s
GCMT Greycliff 124.52 302 *e*PKPdf PKPdf 14 42 20.1 -3.7
QLMT Earthquake Lak 124.59 300 *e*PKPdf PKPdf 14 42 24.9 +1.0
HLID Hailey 125.01 297 *e*PKPdf PKPdf 14 42 24.9 +0.1
TAPN Taplejung 125.01 94 *e*P PKPdf 14 42 24.8 -0.5
comp=Z,63nm,1.0s
MCCM Marconi Confer 125.05 287 PFAKE 14 42 40.0 +15
MCCM LR LR
comp=Z,890nm,21.0s,MS5.4
CHRT Chiangrai 125.15 110 P PKPdf 14 42 24.5 -1.3
comp=Z,224nm,0.7s
MCMT McKenzie Canyo 125.24 300 *e*PKPdf PKPdf 14 42 25.6 +0.5
BOZ Bozeman (W) 125.30 301 *e*PKIKP PKPdf 14 42 24.9 -0.3
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.7
NSS Namsos 125.51 19 AMS AMS 15 27 26.1
comp=Z,2µm,25.4s,MS5.8
DLMT Dillon 125.53 300 *e*PKPdf PKPdf 14 42 26.1 +0.5
LCCM Lewis and Clar 125.56 301 P PKPdf 14 42 26.5 +0.8
FINES FINESS Array B 125.71 28 PKP PKPdf 14 42 24.3 -1.2
comp=Z,16nm,0.6s,baz=119,slow=2.4,SNR=44
FINES FINESS Array B 125.71 28 PKIKP PKPdf 14 42 24.3 -1.2
FINES pmax pmax
comp=Z,16nm,0.6s
SHL Shillong 125.79 99 *e*P PKPdf 14 42 26.0 -0.8
SHL *ex* x 14 54 20.0
HOPS Hopland 125.80 288 PFAKE 14 42 40.0 +14
HOPS LR LR
comp=Z,1µm,20.0s,MS5.5
LRM Limekiln Ridge 125.81 301 *e*PKPdf PKPdf 14 42 26.1 -0.1
SFJD Kangerlussuaq 126.09 348 *e*PKIKP PKPdf 14 42 25.0 -1.1
SFJD MLR MLR
comp=Z,3µm,18.0s,MS6.0
SFJD Kangerlussuaq 126.09 348 *e*PKPdf PKPdf 14 42 20.6 -5.4
SFJD Kangerlussuaq 126.09 348 *i* P PKPdf 14 42 25.0 -1.1
SFJD
comp=Z,3µm,18.0s
WVOR Wild Horse Val 126.19 294 *e*PKIKP PKPdf 14 42 27.4 +0.4
HRY Holter Researc 126.20 302 *e*PKPdf PKPdf 14 42 27.1 +0.2
EGMT Eagleton 126.26 304 *e*PKPdf PKPdf 14 42 25.8 -1.2
EGMT LR LR
comp=Z,3µm,21.0s,MS5.9
KAF Kangasniemi 126.34 27 *e*pkp PKPdf 14 42 24.5 -2.2
MOD Modoc 126.60 292 *e*PKPdf PKPdf 14 42 27.9 0.0
MOD LR LR
comp=Z,1µm,22.0s,MS5.5
WDC Whiskeytown Da 126.72 289 *e*PKPdf PKPdf 14 42 27.0 -1.1
CHMT Chamberlain Mo 127.00 301 *e*PKPdf PKPdf 14 42 28.3 -0.1
MSO Missoula 127.25 300 *e*PKPdf PKPdf 14 42 28.5 -0.4
MSO LR LR
comp=Z,2µm,19.0s,MS5.7
SLMT Seeley Lake 127.35 301 *e*PKPdf PKPdf 14 42 28.5 -0.6
ABKAR Akbulak array 127.74 56 *e*PKPdf PKPdf 14 42 28.6 -1.2
ABKAR *e*PP PP 14 44 30.8 -1.9
ABKAR *e*SKPdf SKPdf 14 45 43.5 -18
SWMT Swartz Lake 127.78 301 *e*PKPdf PKPdf 14 42 29.4 -0.5
AKTK Aktyubinsk 127.78 54 PKP PKPdf 14 42 28.8 -1.0
AKTO Aktyubinsk 127.78 54 PKP PKPdf 14 42 28.8 -1.0
comp=Z,30nm,1.0s,baz=173,slow=2.7,SNR=63
AKTO Aktyubinsk 127.78 54 PKIKP PKPdf 14 42 28.8 -1.0
AKTO pmax pmax
comp=Z,30nm,1.0s
YBMT Yellow Bay 128.05 301 *e*PKPdf PKPdf 14 42 29.8 -0.6
JTMT Jette 128.08 301 *e*PKPdf PKPdf 14 42 30.0 -0.5
FFC Flin Flon 128.11 314 *i* PKIKP PKPdf 14 42 30.1 -0.2
FFC Flin Flon 128.11 314 *e*PKPdf PKPdf 14 42 29.4 -0.9
FFC LR LR
comp=Z,2µm,20.0s,MS5.8
KSH Kashi 128.22 75 *i* PKP PKPdf 14 42 30.1 -0.9
KSH *es*PKP 14 42 44.8
KSH *e*PKS 14 46 05.9
KSH *e*SKS SKSdf 14 49 36.8 -2.5
KSH AMB AMB
comp=Z,72nm,5.4s
KSH LR LR
comp=N,240nm,8.2s
KSH LR LR
comp=E,200nm,7.9s
SCO Scoresbysund 128.23 2 *i* P PKPdf 14 42 29.2 -0.9
SCO Scoresbysund 128.23 2 *i* P PP 14 44 32.3 -3.2
SCO
comp=Z,1µm,20.0s
JOF Joensuu 128.28 29 *e*pkp PKPdf 14 42 28.2 -2.2
BSMT Bassoo Peak 128.39 301 *e*PKPdf PKPdf 14 42 30.2 -0.8
BSMT *e*SKPdf SKPdf 14 45 45.7 -17
FCC Fort Churchill 128.39 322 *e*PKIKP PKPdf 14 42 29.0 -1.7
HUMO Hull Mountain 128.44 291 *e*PKPdf PKPdf 14 42 31.5 +0.2
HUMO LR LR
comp=Z,970nm,20.0s,MS5.5
BBOR Butler Butte 128.51 291 P PKPdf 14 42 32.0 +0.5
LNOR Lincton Mounta 128.57 297 *e*PKIKP PKPdf 14 42 31.4 -0.1
VIPM Ingram Point 128.69 294 PKIKP PKPdf 14 42 33.2 +1.4
LSA Lhasa 128.71 95 PKP PKPdf 14 42 31.9 -0.4
LSA Lhasa 128.71 95 *e*PKPdf PKPdf 14 42 32.5 +0.3
WALA Waterton Lakes 128.88 302 *e*PKPdf PKPdf 14 42 31.2 -0.7
AML Almayashu 129.00 71 P PKPdf 14 42 32.6 +0.2
SNR=26
AML Almayashu 129.00 71 *e*PKPdf PKPdf 14 42 31.5 -0.9
AML LR LR
comp=Z,3µm,21.0s,MS6.0
IRO Indian Ridge 129.12 293 P PKPdf 14 42 33.5 +0.9
QIZ Qiongzhong 129.26 121 PKPbc PKPdf 14 42 40.3 +6.7
QIZ PP PP 14 44 48.4 +5.9
QIZ SS SS 15 02 15.0 +15
QIZ AMB AMB
comp=Z,160nm,4.7s
QIZ LR LR
comp=N,870nm,19.0s
QIZ LR LR
comp=Z,1µm,20.2s,MS5.6
JMIC Jan Mayen 129.28 7 *e*PP PP 14 44 40.0 -2.4
JMIC AMS AMS 15 27 09.9
comp=Z,2µm,29.2s,MS5.5
EKS2 Erkin-Say 129.43 70 P PKPdf 14 42 33.1 -0.1
SNR=22
EKS2 Erkin-Say 129.43 70 *e*PKPdf PKPdf 14 42 32.3 -0.9
EKS2 LR LR
comp=Z,3µm,21.0s,MS5.9
UCH Uchtor 129.49 71 P PKPdf 14 42 33.7 +0.3
SNR=21
UCH Uchtor 129.49 71 *e*PKPdf PKPdf 14 42 33.3 -0.1
HAWA Hanford 129.54 296 *e*PKPdf PKPdf 14 42 33.9 +0.6
HAWA LR LR
comp=Z,1µm,19.0s,MS5.7
RSW Rattlesnake Hi 129.57 296 *e*PKPdf PKPdf 14 42 34.3 +0.9
KZA Kyzart 129.75 72 P PKPdf 14 42 34.2 +0.3
SNR=27
NEW Newport 129.77 300 *e*PKIKP PKPdf 14 42 32.7 -1.0
NEW *e* 14 42 44.4
AAK Ala-Archa 129.77 71 P PKPdf 14 42 33.8 0.0
SNR=17
AAK Ala-Archa 129.77 71 PKP PKPdf 14 42 33.5 -0.4
comp=Z,12nm,0.6s,baz=165,slow=3.0,SNR=26
AAK SKPbc 14 45 51.0
comp=Z,3.6nm,0.7s,baz=224,slow=5.8,SNR=4.6
AAK Ala-Archa 129.77 71 PKIKP PKPdf 14 42 33.5 -0.4
AAK pmax pmax
comp=Z,12nm,0.6s
AAK pmax pmax
comp=N,4.0nm,0.7s
AAK Ala-Archa 129.77 71 PKP PKPdf 14 42 33.5 -0.4
AAK SKPbc 14 45 51.0

AAK					LR	LR		
	comp=Z,3μm,22.0s,MS6.0							
AAK	**Ala-Archa**	**129.77**	**71**		PKPdf	PKPdf	14 42 34.1	+0.2
	SNR=18							
AAK					PKPdf	PKPdf	14 42 34.1	+0.2
	SNR=18							
OD2	**Odessa Site #2**	**129.88**	**298**		*e*PKPdf	PKPdf	14 42 33.7	-0.2
FRU	**Bishkek**	**129.98**	**71**		*e*PKIKP	PKPdf	14 42 32.0	-2.3
FRU					pmax	pmax		
	comp=Z,120nm,2.0s							
KBK	**Karagaybulak**	**130.02**	**71**		P	PKPdf	14 42 34.9	+0.6
	SNR=12							
MXC	**Moxie City**	**130.04**	**296**		P	PKPdf	14 42 36.0	+1.7
COR	**Corvallis**	**130.06**	**292**		PFAKE		14 42 50.0	+16
COR					LR	LR		
	comp=Z,2μm,22.0s,MS5.7							
CHMS	**Chumysh**	**130.17**	**71**		P	PKPdf	14 42 34.7	+0.1
	SNR=7.6							
USP	**Ospenovka**	**130.24**	**70**		P	PKPdf	14 42 33.6	-1.2
	SNR=16							
ULHL	**Ulahol**	**130.38**	**73**		P	PKPdf	14 42 35.6	+0.5
	SNR=8.1							
NAC	**Naches**	**130.41**	**296**		P	PKPdf	14 42 36.3	+1.3
TKM2	**Tokmak 2**	**130.54**	**72**		P	PKPdf	14 42 34.5	-0.8
	SNR=10							
TKM2	**Tokmak 2**	**130.54**	**72**		*e*PKPdf	PKPdf	14 42 34.3	-1.0
SUMG	**Summit**	**130.61**	**355**		*e*PKPdf	PKPdf	14 42 32.7	-1.8
WPW	**White Pass**	**130.73**	**295**		P	PKPdf	14 42 36.6	+1.1
ETW	**Entiat**	**130.79**	**297**		*e*PKPdf	PKPdf	14 42 34.6	-1.1
LON	**Longmire**	**130.89**	**295**		*e*PKIKP	PKPdf	14 42 35.3	-0.6
JOHN	**Johnston Islan**	**130.90**	**228**		*e*PKPdf	PKPdf	14 42 36.9	0.0
JOHN					LR	LR		
	comp=Z,2μm,19.0s,MS5.9							
RVW	**Rose Valley**	**130.91**	**294**		P	PKPdf	14 42 37.6	+1.7
KMI	**Kunming**	**131.02**	**109**		PKP	PKPdf	14 42 37.0	+0.2
TRO	**Tromso**	**131.30**	**19**		*e*P	PKPdf	14 42 36.4	+0.4
TRO					*e*PP	PP	14 44 56.4	+0.9
TRO					AMS	AMS	15 33 01.6	
	comp=Z,3μm,27.1s,MS5.8							
EDM	**Edmonton**	**131.62**	**307**		*e*PKIKP	PKPdf	14 42 35.8	-1.2
HTW	**Haystack Looko**	**131.62**	**296**		P	PKPdf	14 42 37.2	0.0
RPW	**Rockport**	**131.95**	**297**		*e*PKPdf	PKPdf	14 42 37.4	-0.4
GNW	**Green Mountain**	**131.96**	**295**		*e*PKPdf	PKPdf	14 42 38.1	+0.2
JCW	**Jim Creek**	**131.97**	**297**		*e*PKPdf	PKPdf	14 42 37.2	-0.6
NLWA	**Neilton Lookou**	**132.34**	**295**		*e*PKPdf	PKPdf	14 42 38.8	+0.2
ARU	**Arti**	**132.34**	**48**		*i* PKIKP	PKPdf	14 42 37.5	-0.8
ARU							14 44 59.5	
ARU					MLR	MLR		
	comp=Z,2μm,23.0s,MS5.8							
ARU	**Arti**	**132.34**	**48**		PFAKE		14 42 50.0	+12
ARU					LR	LR		
	comp=Z,1μm,20.0s,MS5.7							
MBW	**Mount Baker**	**132.37**	**297**		P	PKPdf	14 42 39.0	+0.5
APA	**Apatity**	**132.56**	**27**	⇑	*i* PKIKP	PKPdf	14 42 36.0	-2.4
APA					*e*		14 55 06.0	
KEV	**Kevo**	**132.92**	**22**		PFAKE		14 42 50.0	+11
KEV					LR	LR		
	comp=Z,1μm,21.0s,MS5.7							
KEV	**Kevo**	**132.92**	**22**		*e*pkp	PKPdf	14 42 22.0	-17
PGC	**Sidney**	**133.02**	**296**		*e*PKPdf	PKPdf	14 42 39.6	-0.2
LVZ	**Lovozero**	**133.12**	**27**		PFAKE		14 42 50.0	+11
LVZ					LR	LR		
	comp=Z,2μm,21.0s,MS5.8							
SVE	**Sverdlovsk**	**133.45**	**49**	⇓	*i* PKIKP	PKPdf	14 42 40.8	+0.5
SVE					*e*		14 45 08.4	
SVE					*e*SP	SP	14 55 21.1	-1.7
SVE					pmax	pmax		
	comp=Z,51nm,1.5s							
SVE					MLR	MLR		
	comp=Z,3μm,24.0s,MS5.9							
SOKR	**Solikamsk**	**133.83**	**44**	*c*	*i* PKIKP	PKPdf	14 42 41.3	+0.3
SOKR							14 45 10.1	
SOKR					SS	SS	15 02 58.1	+1.9
SOKR					SSS		15 07 56.7	
SOKR					pmax	pmax		
	comp=Z,60nm,2.8s							
GYA	**Guiyang**	**134.08**	**112**		Pdif	Pdif	14 39 43.0	+0.6
GYA					PKP	PKPdf	14 42 43.3	+0.7
GYA					sPKP		14 42 58.9	
GYA					PP	PP	14 45 19.0	+5.3
GYA					PKS		14 46 19.3	
GYA					SKKS	SKKSac	14 52 05.4	-0.5
GYA					SS	SS	15 03 02.1	+2.7
GYA					AMB	AMB		
	comp=Z,4μm,7.8s							
GYA					LR	LR		
	comp=N,5μm,23.5s,MS6.3							
GYA					LR	LR		
	comp=E,3μm,22.1s,MS6.3							
GYA					LR	LR		
	comp=Z,6μm,20.8s,MS6.3							
DAG	**Danmarks Havn**	**134.60**	**2**		*e*PKIKP	PKPdf	14 42 39.0	-3.0
DAG	**Danmarks Havn**	**134.60**	**2**		*i* P	PKPdf	14 42 39.0	-3.0
DAG					*i*		14 46 05.1	
BRVK	**Borovoye**	**135.04**	**58**		*i* PKIKP	PKPdf	14 42 41.9	-1.5
BRVK	**Borovoye**	**135.04**	**58**		*e*PKPdf		14 42 38.0	
BRVK					LR	LR		
	comp=Z,3μm,21.0s,MS6.0							
BRVK	**Borovoye**	**135.04**	**58**		PKPdf	PKPdf	14 42 43.3	-0.2
	SNR=8.0							
BRVK					PKPdf	PKPdf	14 42 43.3	-0.2
	SNR=8.0							
BVAR	**Borovoye Array**	**135.06**	**58**		PKhKP		14 42 30.1	
	comp=Z,5.0nm,1.0s,baz=238,slow=2.8,SNR=16							
BVAR					PKP	PKPdf	14 42 42.8	-0.7
	comp=Z,8.6nm,0.8s,baz=234,slow=2.0,SNR=18							
BVAR					pPKP	pPKPdf	14 43 00.8	+5.3
	comp=Z,15nm,0.7s,baz=188,slow=2.4,SNR=8.6							
BVAR					PP	PP	14 45 18.3	-1.6
	comp=Z,5.9nm,0.9s,baz=202,slow=6.2,SNR=3.8							
BVAR					SKPbc	SKPbc	14 46 06.9	-3.9
	comp=Z,9.7nm,0.9s,baz=238,slow=2.8,SNR=3.8							
BVAR					PKKP		14 52 25.6	
	comp=Z,1.0nm,0.6s,baz=139,slow=3.1,SNR=3.9							
BVAR	**Borovoye Array**	**135.06**	**58**		PKIKP	PKPdf	14 42 42.8	-0.7
BVAR							14 45 18.3	
BVAR	**Borovoye Array**	**135.06**	**58**		PKP	PKPdf	14 42 42.8	-0.7
BVAR					pPKP	pPKPdf	14 43 00.8	+5.3
BVAR					PP	PP	14 45 18.3	-1.6
BVAR					SKPbc	SKPbc	14 46 06.9	-3.9
BVAR					PKKP		14 52 25.6	
GUMO	**Guam**	**135.07**	**167**		PFAKE		14 43 00.0	+15
GUMO					LR	LR		
	comp=Z,2μm,20.0s,MS5.7							
CD2	**Chengdu**	**136.26**	**106**		PKP	PKPdf	14 42 47.6	+1.1
CD2					sPKP		14 43 02.0	
CD2					PP	PP	14 45 32.4	+4.9
CD2					PKS		14 46 22.4	
CD2					SKS	SKSdf	14 49 53.0	-1.2
CD2					SKKS	SKKSac	14 52 19.3	+0.5
CD2					SS	SS	15 03 29.3	+3.7
CD2					AMB	AMB		
	comp=Z,270nm,5.4s							
CD2					LR	LR		
	comp=N,420nm,6.1s							
CD2					LR	LR		
	comp=Z,300nm,6.0s							
MKAR	**Makanchi Array**	**136.65**	**72**		PKhKP		14 42 33.3	
	comp=Z,4.5nm,0.9s,baz=254,slow=4.1,SNR=17							
MKAR					PKP	PKPdf	14 42 46.7	+0.1
	comp=Z,15nm,1.0s,baz=246,slow=1.6,SNR=16							
MKAR					PP	PP	14 45 35.0	+5.0
	comp=Z,4.6nm,0.9s,baz=204,slow=3.2,SNR=3.7							
MKAR					SKPbc	SKPbc	14 46 12.3	-3.6
	comp=Z,2.1nm,0.7s,baz=256,slow=4.5,SNR=4.0							
MKAR					PKKP		14 52 22.5	
	comp=Z,0.7nm,0.6s,baz=53,slow=0.4,SNR=7.5							
MKAR	**Makanchi Array**	**136.65**	**72**		*i* PKHKP		14 42 33.3	
MKAR							14 42 46.7	
MKAR							14 45 35.0	
MKAR					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MKAR					pmax	pmax		
	comp=Z,15nm,1.0s							
MKAR					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MKAR					pmax	pmax		
	comp=N,2.0nm,0.7s							
MKAR	**Makanchi Array**	**136.65**	**72**		PKP	PKPdf	14 42 46.7	+0.1
MKAR					PP	PP	14 45 35.0	+5.0
MKAR					SKPbc	SKPbc	14 46 12.3	-3.6
MKAR					PKKP		14 52 22.5	
WMQ	**Urumqi**	**137.40**	**79**		*e*PKP	PKPdf	14 42 47.9	-0.3
WMQ					PP	PP	14 45 37.8	+3.1
WMQ					PKS		14 46 22.6	
WMQ					SKS	SKSdf	14 49 53.3	-2.2
WMQ					SKKS	SKKSac	14 52 23.9	-1.2
WMQ					LR	LR		
	comp=N,1μm,29.0s,MS5.6							
WMQ					LR	LR		
	comp=E,1μm,27.0s,MS5.6							
WMQ					LR	LR		
	comp=Z,1μm,29.0s,MS5.5							
WMQ	**Urumqi**	**137.40**	**79**		PKPbc	PKPdf	14 42 48.3	+0.1
WMQ					PP	PP	14 45 37.8	+3.1
WMQ					PKS		14 46 22.9	
WMQ					SKS	SKSdf	14 49 53.4	-2.1
WMQ					PcP		14 51 02.3	
WMQ					SKKS	SKKSac	14 52 24.4	-0.7
WMQ					SS	SS	15 03 38.3	-1.1
WMQ					AMB	AMB		
	comp=Z,340nm,5.0s							
WMQ					AMB	AMB		
	comp=Z,220nm,23.0s							
WMQ					LR	LR		
	comp=N,1μm,27.0s,MS5.7							
WMQ					LR	LR		
	comp=E,1μm,28.0s,MS5.7							
WMQ					LR	LR		
	comp=Z,1μm,27.0s,MS5.6							
KURK	**Kurchatov**	**137.42**	**66**		PKhKP		14 42 35.8	
	comp=Z,3.2nm,0.8s,baz=233,slow=3.7,SNR=16							
KURK					PKP	PKPdf	14 42 47.4	-0.6
	comp=Z,11nm,0.8s,baz=237,slow=2.3,SNR=17							
KURK					SKPbc	SKPbc	14 46 14.2	-3.9
	comp=Z,3.7nm,0.7s,baz=238,slow=3.2,SNR=5.3							
KURK	**Kurchatov**	**137.42**	**66**	*i*	PKHKP		14 42 35.8	
KURK							14 42 47.4	
KURK					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KURK					pmax	pmax		
	comp=Z,11nm,0.8s							
KURK					pmax	pmax		
	comp=N,4.0nm,0.7s							
KURK	**Kurchatov**	**137.42**	**66**		PKP	PKPdf	14 42 47.4	-0.6
KURK					SKPbc	SKPbc	14 46 14.2	-3.9
KURK					LR	LR		
	comp=Z,1μm,21.0s,MS5.6							
KURK	**Kurchatov**	**137.42**	**66**		PKPdf	PKPdf	14 42 47.2	-0.7
	SNR=8.8							
KURK					PKPdf	PKPdf	14 42 47.2	-0.7
	SNR=8.8							
YKA	**Yellowknife Ar**	**138.22**	**316**		PKhKP		14 42 37.0	
	comp=Z,0.8nm,0.4s,baz=120,slow=4.1,SNR=18							
YKA					PKP	PKPdf	14 42 48.3	-0.7
	comp=Z,38nm,0.6s,baz=128,slow=2.3,SNR=109							
YKA					SKPbc	SKPbc	14 46 16.1	-4.0
	comp=Z,22nm,0.7s,baz=127,slow=2.4,SNR=12							
YKA					SKKPbc		14 54 52.3	
	comp=Z,1.0nm,0.9s,baz=314,slow=5.2,SNR=4.2							
YKA	**Yellowknife Ar**	**138.22**	**316**		PKP	PKPdf	14 42 48.4	-0.7
YKA					SKPbc	SKPbc	14 46 16.1	-4.0
YKA					SKKPbc		14 54 52.3	
SPB4	**Spitsbergen Ar**	**138.31**	**12**		*e*PKPdf	PKPdf	14 42 42.5	-6.4
SPITS	**Spitsbergen Ar**	**138.31**	**12**		SKP	SKPbc	14 46 16.8	-3.1
	comp=Z,10nm,0.9s,baz=148,slow=9.7,SNR=3.6							
KBS	**Kingsbay**	**138.50**	**10**		*e*		14 42 41.0	
KBS					*e*PP	PP	14 45 42.8	+1.9
KBS					*e*SS	SS	15 03 51.0	-0.3
KBS					AMS	AMS	15 39 07.7	
	comp=Z,1μm,25.2s,MS5.6							
KBS	**Kingsbay**	**138.50**	**10**	*i*	PKIKP	PKPdf	14 42 51.8	+2.6
KBS	**Kingsbay**	**138.50**	**10**		PFAKE		14 43 00.0	+11
KBS					LR	LR		
	comp=Z,2μm,21.0s,MS5.8							
RES	**Resolute Bay**	**140.02**	**337**		*e*PKHKP		14 42 44.2	
LZH	**Lanzhou**	**140.36**	**101**		*e*PKP	PKPdf	14 42 50.3	-3.5
LZH					sPKP		14 43 04.5	
LZH					PP	PP	14 45 52.5	-0.4
LZH					SKS	SKSdf	14 49 55.0	-5.8
LZH					SKKS	SKKSac	14 52 38.8	-4.1
LZH					SS	SS	15 04 11.6	-2.5
LZH					AMB	AMB		
	comp=Z,900nm,10.0s							
LZH					LR	LR		
	comp=E,870nm,18.3s							
LZH					LR	LR		
	comp=Z,1μm,20.0s,MS5.7							
GTA	**Gaotai**	**140.71**	**94**		PKP	PKPdf	14 42 52.5	-1.9
GTA					LR	LR		
	comp=N,770nm,11.0s,MS5.7							
GTA					LR	LR		
	comp=E,460nm,15.8s,MS5.7							
GTA					LR	LR		
	comp=Z,1μm,14.6s,MS5.7							
GTA	**Gaotai**	**140.71**	**94**	⇓	PKP	PKPdf	14 42 48.0	-6.4
GTA					sPKP		14 43 02.4	
GTA					PP	PP	14 45 50.0	-5.1
GTA					PKS		14 46 22.3	
GTA					SKS	SKSdf	14 49 52.5	-8.7
GTA					SKKS	SKKSac	14 52 36.3	-8.5
GTA					SS	SS	15 04 09.5	-8.8
GTA					AMB	AMB		
	comp=Z,380nm,9.5s							
GTA					LR	LR		
	comp=N,620nm,20.8s,MS5.5							
GTA					LR	LR		
	comp=E,540nm,19.6s,MS5.5							
GTA					LR	LR		
	comp=Z,860nm,22.0s,MS5.5							
WHN	**Wuhan**	**141.19**	**118**		PKPbc	PKPdf	14 42 49.4	-6.1
WHN					PP	PP	14 46 02.3	+4.4
WHN					SS	SS	15 04 31.9	+8.3
WHN					LR	LR		
	comp=Z,3μm,18.7s,MS6.1							
DLBC	**Dease Lake**	**142.19**	**304**		*e*PKPdf		14 42 50.9	
ZAA0	**Zalesovo Array**	**142.40**	**65**		*e*PKPdf		14 42 50.6	
ZALV	**Zalesovo Beam**	**142.40**	**65**		PKhKP		14 42 50.8	
	comp=Z,5.4nm,0.3s,baz=241,slow=3.7,SNR=24							
ZALV					PP	PP	14 46 08.3	+3.0
	comp=Z,5.5nm,0.8s,baz=282,slow=7.1,SNR=3.5							
ZALV					SKP		14 46 25.9	
	comp=Z,6.8nm,0.8s,baz=241,slow=1.5,SNR=3.6							
ZALV	**Zalesovo Beam**	**142.40**	**65**	*i*	PKHKP		14 42 50.8	
ZALV							14 46 08.3	
ZALV					pmax	pmax		
	comp=Z,5.0nm,0.4s							
ZALV					pmax	pmax		
	comp=Z,6.0nm,0.8s							
ZALV					pmax	pmax		
	comp=N,7.0nm,0.8s							
ZALV	**Zalesovo Beam**	**142.40**	**65**		PKP		14 42 50.8	
ZALV					PP	PP	14 46 08.3	+3.0
ZALV					SKP		14 46 25.9	
JOW	**Kunigami**	**143.79**	**138**		PKP	PKPdf	14 42 57.8	-2.5
	comp=N,110nm,1.1s,baz=200,slow=4.0,SNR=6.8							
MIDW	**Midway**	**144.31**	**226**		PFAKE		14 43 10.0	+8.9
MIDW					LR	LR		
	comp=Z,1μm,19.0s,MS5.8							
NJ2	**Nanjing**	**144.55**	**122**		*e*PKPbc	PKPdf	14 42 59.8	-1.6
NJ2					pPKP	pPKPdf	14 43 10.8	-2.6
NJ2					sPKP		14 43 15.3	
NJ2					PP	PP	14 46 18.0	-0.1
NJ2					SKKS	SKKSac	14 53 05.0	-2.2
NJ2					AMB	AMB		
	comp=Z,1μm,8.4s							
NJ2					LR	LR		
	comp=N,9μm,24.7s,MS6.7							
NJ2					LR	LR		
	comp=E,11μm,23.4s,MS6.7							
SSE	**Sheshan**	**144.77**	**125**		PKPbc	PKPdf	14 43 00.0	-1.8
SSE					AMB	AMB		
	comp=Z,270nm,4.3s							
SSE					LR	LR		
	comp=N,530nm,22.5s,MS5.3							
SSE					LR	LR		
	comp=E,400nm,22.9s,MS5.3							
SSE					LR	LR		
	comp=Z,760nm,21.6s,MS5.4							
SKAG	**Skagway**	**145.07**	**303**		*e*PKPdf	PKPdf	14 43 00.1	-1.3
BTO	**Baotou**	**146.95**	**102**		*e*PKPbc	PKPbc	14 43 06.5	-0.8
PNL	**Peninsula**	**147.00**	**302**		*e*PKPdf	PKPdf	14 43 05.2	+0.5
INK	**Inuvik**	**147.88**	**318**		*e*PKHKP		14 43 03.7	
INK					*e*		14 43 08.2	
CBIJ	**Chichi jima**	**147.91**	**159**		PKPbc	PKPbc	14 43 08.7	-1.6
	comp=Z,180nm,0.6s,baz=293,slow=7.7,SNR=5.1							
HHC	**Hu-ho-hao-te**	**147.93**	**103**		*e*PKPbc	PKPbc	14 43 07.8	-2.1
HHC					pPKP	pPKPdf	14 43 18.4	-0.4
HHC					sPKP		14 43 22.3	
HHC					PKS		14 46 40.8	
HHC					PP	PP	14 46 42.9	+4.6
HHC					SKS	SKSdf	14 50 10.8	-1.2
HHC					SKKS	SKKSac	14 53 27.1	+1.2
HHC					SS	SS	15 05 45.6	+4.6
HHC					AMB	AMB		
	comp=Z,380nm,8.2s							
HHC					LR	LR		
	comp=N,820nm,20.3s,MS5.7							
HHC					LR	LR		
	comp=E,850nm,21.8s,MS5.7							
HHC					LR	LR		
	comp=Z,1μm,20.6s,MS5.6							
DAWY	**Dawson**	**148.76**	**309**		*e*PKPdf	PKPdf	14 43 05.4	-2.0
DAWY					*e*PKPbc	PKPbc	14 43 10.5	-0.8
MOY	**Mondy**	**149.28**	**78**		*e*PKIKP	PKPdf	14 43 06.9	-1.8
MOY					pmax	pmax		
	comp=Z,465nm,2.7s							
BJT	**Baijiatuau**	**149.66**	**110**		*e*PKP2	PKPbc	14 43 14.0	-0.4
BJI	**Beijing**	**149.68**	**110**		PKPbc	PKPbc	14 43 13.0	-1.4
BJI					PP	PP	14 46 50.1	+1.7
BJI					SS	SS	15 06 01.6	+1.1
BJI					LR	LR		
	comp=N,560nm,23.2s,MS5.4							
BJI					LR	LR		
	comp=E,430nm,21.6s,MS5.4							
BJI					LR	LR		
	comp=Z,800nm,22.1s,MS5.5							
EGAK	**Eagle**	**149.72**	**310**		*e*PKPdf	PKPdf	14 43 06.2	-2.8
EGAK					*e*PKPbc	PKPbc	14 43 12.9	-0.8
EGAK					LR	LR		
	comp=Z,2μm,19.0s,MS5.9							
ZAK	**Zakamensk**	**149.77**	**82**		*e*PKIKP	PKPdf	14 43 08.3	-1.2
ZAK					pmax	pmax		
	comp=Z,188nm,1.3s							
BMRM	**Bremner River**	**149.90**	**302**		*e*PKPdf	PKPdf	14 43 07.9	-1.4
BMRM					*e*PKPbc	PKPbc	14 43 14.4	+0.2
SONM	**Songino Array**	**149.91**	**89**		PKP	PKPdf	14 43 09.0	-0.8
	comp=Z,7.3nm,1.0s,baz=218,slow=1.7,SNR=29							
SONM					PKPbc	PKPbc	14 43 14.2	-0.5
	comp=Z,124nm,1.0s,baz=219,slow=2.4,SNR=105							
SONM	**Songino Array**	**149.91**	**89**		PKHKP	PKPdf	14 43 09.0	-0.8
SONM					pmax	pmax		
	comp=Z,7.0nm,1.0s							
SONM					pmax	pmax		
	comp=Z,124nm,1.0s							
ULN	**Ulaanbaatar**	**150.28**	**89**		*e*PKIKP	PKPdf	14 43 10.0	-0.4
ULN					*e*		14 43 14.7	
ULN	**Ulaanbaatar**	**150.28**	**89**		PKPdf	PKPdf	14 43 09.9	-0.4
	SNR=59							
ULN					PKPdf	PKPdf	14 43 09.9	-0.4
	SNR=59							
DIV	**Divide**	**150.49**	**302**		*e*PKPdf	PKPdf	14 43 08.1	-2.2
DIV					*e*PKPbc	PKPbc	14 43 15.7	0.0
TLY	**Talaya**	**150.68**	**80**	*i*	PKIKP	PKPdf	14 43 10.7	-0.2
TLY					*e*		14 43 16.5	
TLY					*e*		14 46 54.7	
TLY					pmax	pmax		
	comp=Z,28nm,0.8s							
TLY	**Talaya**	**150.68**	**80**		*e*PKPdf	PKPdf	14 43 10.4	-0.5
TLY	**Talaya**	**150.68**	**80**		PKPdf	PKPdf	14 43 11.2	+0.3
	SNR=64							
TLY					PKPdf	PKPdf	14 43 11.2	+0.3
	SNR=64							
IRK	**Irkutsk**	**151.31**	**80**		*e*PKIKP	PKPbc	14 43 16.7	-1.2
IRK					*e*		14 43 26.5	
IRK					pmax	pmax		
	comp=Z,278nm,1.8s							
DL2	**Dalian**	**151.46**	**118**		PKPbc	PKPbc	14 43 18.0	-0.7
DL2					PP	PP	14 46 56.0	-2.5
DL2					AMB	AMB		
	comp=Z,300nm,3.3s							
DL2					LR	LR		
	comp=N,400nm,19.5s							
DL2					LR	LR		
	comp=Z,400nm,22.9s,MS5.2							
SEW	**Seward**	**151.82**	**298**		*e*PKPbc	PKPbc	14 43 18.4	-0.3
KDAK	**Kodiak Island**	**152.45**	**292**	*i*	PKIKP	PKPbc	14 43 19.7	-0.6
COLA	**College**	**152.50**	**309**		PFAKE		14 43 20.0	+6.8
COLA					LR	LR		
	comp=Z,2μm,20.0s,MS5.8							
INCN	**Inchon**	**152.55**	**126**		*e*PKPdf	PKPdf	14 43 13.8	-0.4
INCN					*e*PKPbc	PKPbc	14 43 20.6	-0.6
INCN					LR	LR		
	comp=Z,1μm,20.0s,MS5.7							
INCN	**Inchon**	**152.55**	**126**		PKPdf	PKPbc	14 43 21.1	-0.1
	SNR=5.7							
OHAK	**Old Harbor**	**152.57**	**291**		*e*PKPbc	PKPbc	14 43 20.6	0.0
MCK	**McKinley**	**152.69**	**306**		*e*PKIKP	PKPdf	14 43 10.6	-2.9
MCK					*e*		14 43 20.6	
KSRS	**Korea Array**	**153.07**	**128**		PKP	PKPdf	14 43 14.6	-0.4
	comp=Z,4.4nm,1.0s,baz=206,slow=1.7,SNR=21							
KSRS					PKPbc	PKPbc	14 43 21.6	-0.7
	comp=Z,26nm,1.0s,baz=206,slow=2.0,SNR=36							
KSRS					PKPab	PKPab	14 43 33.3	-0.7
	comp=Z,18nm,0.9s,baz=219,slow=4.7,SNR=15							
KSRS	**Korea Array**	**153.07**	**128**		PKIKP	PKPdf	14 43 14.6	-0.4
KSRS							14 43 21.6	
KSRS							14 43 33.3	
KSRS					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KSRS					pmax	pmax		
	comp=Z,27nm,1.0s							
KSRS					pmax	pmax		
	comp=Z,19nm,0.9s							
JHJ	**Hachijo jima 2**	**153.19**	**152**		PKPbc	PKPbc	14 43 22.8	0.0
	comp=Z,81nm,0.7s,baz=204,slow=10.0,SNR=4.0							
JHJ					PKPab	PKPab	14 43 36.6	+2.0
	comp=Z,83nm,0.6s,baz=301,slow=18,SNR=4.9							
TRF	**Thorofare Moun**	**153.20**	**305**		*e*PKPdf	PKPdf	14 43 11.6	-2.7
TRF					*e*PKPbc	PKPbc	14 43 21.6	-0.1
RSO	**Redoubt South**	**153.49**	**298**		*e*PKPbc	PKPbc	14 43 21.1	-1.4
KTH	**Kantishna Hill**	**153.50**	**305**		*e*PKPbc	PKPbc	14 43 21.6	-0.8
COLD	**Coldfoot**	**153.85**	**313**		*e*PKPdf	PKPdf	14 43 11.5	-3.6
COLD					*e*PKPbc	PKPbc	14 43 23.0	0.0
SNY	**Shenyang**	**154.67**	**116**	⇓	PKP	PKPdf	14 43 14.0	-3.1
S

MDJ	**Mudanjiang**	**159.63**	**120**	PKP	PKPdf	14 43 22.3	-1.0
MDJ				pPKP	pPKPdf	14 43 35.9	+0.6
MDJ				PP	PP	14 47 42.0	-2.0
MDJ				SS	SS	15 07 48.5	+0.3
MDJ				LR	LR		
	comp=Z,930nm,27.4s,MS5.5						
MDJ	**Mudanjiang**	**159.63**	**120**	*e*PKPdf	PKPdf	14 43 22.2	-1.0
ERM	**Erimo**	**162.45**	**151**	PFAKE		14 43 40.0	+14
ERM				LR	LR		
	comp=Z,2μm,21.0s						
TIXI	**Tiksi**	**162.76**	**27**	*i* PKIKP	PKPdf	14 43 20.0	-5.7
TIXI				*e*		14 47 58.4	
TIXI				pmax	pmax		
	comp=Z,12nm,1.5s						
TIXI	**Tiksi**	**162.76**	**27**	*e*PKPdf	PKPdf	14 43 21.5	-4.3
KLR	**Kul'dur**	**163.98**	**114**	*e*PKIKP	PKPdf	14 43 21.3	-6.3
KLR				*e*		14 44 16.9	
KLR				pmax	pmax		
	comp=E,57nm,1.6s						
KLR				pmax	pmax		
	comp=Z,140nm,1.6s						
CLNS	**Chul'man**	**164.09**	**82**	*e*PKIKP	PKPdf	14 43 25.5	-1.9
CLNS				pmax	pmax		
	comp=Z,29nm,1.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
ASAJ	**Asahikawa**	**164.25**	**147**	PKP	PKPdf	14 43 27.4	-0.6
	comp=N,3.5nm,0.8s,baz=264,slow=9.5,SNR=4.8						
ASAJ				PKPab	PKPab	14 44 22.1	-0.1
	comp=N,18nm,1.1s,baz=238,slow=9.2,SNR=5.8						
ASAJ	**Asahikawa**	**164.25**	**147**	PKIKP	PKPdf	14 43 27.4	-0.6
ASAJ				*e*		14 44 22.1	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAJ				pmax	pmax		
	comp=Z,18nm,1.1s						
HABR	**Khabarovsk**	**165.01**	**121**	*e*PKP2	PKPab	14 44 25.7	+0.2
HABR				*e*		14 48 12.5	
HABR				*e*		14 50 30.2	
HABR				*e*SS	SS	15 08 46.7	+2.5
HABR				*e*SSS		15 15 12.6	
HABR				pmax	pmax		
	comp=Z,76nm,1.1s						
HABR				pmax	pmax		
	comp=E,28nm,1.5s						
HABR				pmax	pmax		
	comp=N,20nm,1.3s						
YSS	**Yuzh-Sakhalins**	**166.85**	**142**	*i* PKIKP	PKPdf	14 43 30.0	0.0
YSS				*e*		14 43 40.5	
YSS				*e*		14 48 28.0	
YSS				*e*SS	SS	15 08 58.0	-4.3
YSS				pmax	pmax		
	comp=Z,140nm,1.8s						
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YAK	**Yakutsk**	**167.02**	**62**	*e*PKIKP	PKPdf	14 43 26.5	-3.2
YAK				*e*		14 48 21.2	
YAK				*e*		14 50 25.7	
YAK				pmax	pmax		
	comp=Z,16nm,1.1s						
YAK				pmax	pmax		
	comp=Z,272nm,3.9s						
YAK				pmax	pmax		
	comp=N,156nm,6.8s						
YAK				pmax	pmax		
	comp=E,94nm,2.6s						
BILL	**Bilibino**	**168.63**	**337**	*i* PKIKP	PKPdf	14 43 26.2	-4.4
BILL				*i*		14 43 41.9	
BILL				*e*		14 48 34.6	
BILL				*i* PPP		14 52 31.8	
BILL				*i* SS	SS	15 09 20.9	+1.0
BILL				pmax	pmax		
	comp=Z,11nm,1.4s						
BILL	**Bilibino**	**168.63**	**337**	*e*PKPdf	PKPdf	14 43 25.9	-4.7
BILL				LR	LR		
	comp=Z,2μm,22.0s						
PET	**Petropavlovsk**	**174.46**	**207**	*i* PKIKP	PKPdf	14 43 32.0	-1.9
PET				*e*		14 49 04.8	
PET				*e*SS	SS	15 10 18.7	+1.5
PET				pmax	pmax		
	comp=Z,20nm,1.2s						
PET				pmax	pmax		
	comp=Z,27nm,1.3s						
PET				pmax	pmax		
	comp=Z,500nm,14.4s						
PETK	**Petropavlovsk-**	**174.75**	**202**	PKP	PKPdf	14 43 32.8	-1.2
	comp=Z,8.5nm,0.9s,baz=101,slow=4.7,SNR=11						
PETK				PKPab	PKPab	14 45 08.2	-0.2
	comp=Z,26nm,1.0s,baz=123,slow=5.5,SNR=12						
PETK				PP	PP	14 49 04.2	+3.2
	comp=Z,8.7nm,1.2s,baz=90,slow=0.1,SNR=4.5						
PETK	**Petropavlovsk-**	**174.75**	**202**	PKIKP	PKPdf	14 43 32.8	-1.2
PETK						14 45 08.2	
PETK						14 49 04.3	
PETK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PETK				pmax	pmax		
	comp=Z,26nm,1.0s						
PETK				pmax	pmax		
	comp=Z,9.0nm,1.2s						

IDC 15 14:25:49.8±21.0, 4°.35S×70°.78E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, Error ellipse: s-maj=711.2km s-min=41.9km az=64.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**51.94**	**10**	P	P	14 35 00.4	0.0
	0.2nm,0.6s,baz=184,slow=5.8,SNR=2.8						
ASAR	**Alice Springs**	**63.68**	**114**	P	P	14 36 22.9	-0.6
	0.4nm,0.8s,baz=277,slow=6.0,SNR=4.2						
WRA	**Warramunga Arr**	**63.69**	**110**	P	P	14 36 24.3	+0.6
	0.8nm,0.9s,baz=285,slow=6.0,SNR=5.3						

*ISCJB **15** 14:33:06.4±0.5, 31°.80N±0°.04×104°.38E±0°.06, h10km, mb3.6/6, Error ellipse: s-maj=7.2km s-min=6.0km az=176.4*
*BJI **15** 14:33:06.8, 31°.85N×104°.19E, h8km, ML3.7/10, Ms3.5/2, Ms7 3.5/3*
*IDC **15** 14:33:06.3±1.0, 31°.69N×104°.40E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/27, mbtmp3.7/7, Error ellipse: s-maj=45.5km s-min=18.1km az=50.0*
*NEIC **15** 14:33:07.7±1.6, 31°.47N×104°.10E, h10km, Error ellipse: s-maj=39.9km s-min=15.7km az=209.0*
ISC 15 14:33:08.3±0.5, 31°.81N±0°.04×104°.32E±0°.06, h10km, n15, σ1§13/20, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.02**	**208**	Pg	**Pg**	**14 33 27.4**	**-0.5**
CD2				Sg	**Sg**	**14 33 40.9**	**-0.2**
CD2				smax			
	comp=N,4μm,0.5s						
LZH	**Lanzhou**	**4.29**	**355**	Pg	**Pb**	**14 34 19.3**	**-4.5**
LZH				Sg	**Sg**	**14 35 23.9**	**-2.1**
LZH				smax			
	comp=N,140nm,1.0s						
LZH				smax			
	comp=E,420nm,1.1s						
LZH				LR	LR		
	comp=E,400nm,5.6s						
LZH				LR	LR		
	comp=Z,470nm,7.7s						
XAN	**Xi'an**	**4.46**	**59**	Pn	**Pn**	**14 34 19.3**	**+3.3**
XAN				Sg	**Sg**	**14 35 26.5**	**-5.1**
XAN				smax			
	comp=N,65nm,0.6s						
XAN				smax			
	comp=E,23nm,0.5s						
ENH	**Enshi**	**4.69**	**108**	*e*Pn	**Pn**	**14 34 19.8**	**+0.7**
ENH				*e*Sn	**Sn**	**14 35 14.2**	**+0.6**
GYA	**Guiyang**	**5.71**	**158**	Pg	**Pn**	**14 34 32.8**	**-0.4**
GYA				Sg	**Sn**	**14 35 38.6**	**-0.2**
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
SONM	**Songino Array**	**16.09**	**5**	Pn	**Pn**	**14 36 59.3**	**+4.8**
	comp=E,0.3nm,0.3s,baz=186,slow=12,SNR=2.9						
KSRS	**Korea Array**	**20.20**	**67**	P	**P**	**14 37 42.8**	**-0.4**
	comp=E,1.0nm,0.6s,baz=257,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**22.58**	**318**	P	**P**	**14 38 09.7**	**+1.0**
	comp=E,0.7nm,0.6s,mb3.3,baz=115,slow=12,SNR=10						
ZALV	**Zalesovo Beam**	**26.17**	**333**	P	**P**	**14 38 42.4**	**-0.3**
	comp=E,1.0nm,0.6s,mb3.5,baz=131,slow=8.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**26.17**	**333**	P	**P**	**14 38 42.4**	**-0.3**
KURK	**Kurchatov**	**26.80**	**322**	P	**P**	**14 38 48.5**	**+0.1**
	comp=E,0.7nm,0.6s,mb3.4,baz=128,slow=8.8,SNR=6.4						
AKTK	**Aktyubinsk**	**38.80**	**312**	P	**P**	**14 40 34.9**	**+1.8**
AKTO	**Aktyubinsk**	**38.80**	**312**	P	**P**	**14 40 34.9**	**+1.8**
	comp=E,0.3nm,0.3s,mb3.5,baz=105,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**58.95**	**147**	P	**P**	**14 43 06.6**	**-1.4**
	comp=E,1.3nm,0.6s,mb4.2,baz=338,slow=7.7,SNR=6.3						
ASAR	**Alice Springs**	**61.99**	**149**	P	**P**	**14 43 27.3**	**-1.4**
	comp=E,0.5nm,0.5s,mb3.9,baz=331,slow=6.5,SNR=8.7						

*ISK **15** 14:38:59.1, 38°.33N×38°.09E, h2km, MD2.8*
*CSEM **15** 14:38:59.1, 38°.33N×38°.09E, h2km, MD2.8, After ISK*
*ISCJB **15** 14:39:00.3±0.5, 38°.43N±0°.03×38°.10E±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=4.3km az=166.6*
*DDA **15** 14:39:00.2, 38°.27N×38°.13E, h6km±3km, Md2.8*
ISC 15 14:39:00.6±0.5, 38°.42N±0°.03×38°.08E±0°.04, h5km±10km, n23, σ1§13/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.18**	**225**	*i* P	**Pg**	**14 39 03.7**	**-0.4**
AKCD				*i* S	**Sg**	**14 39 06.9**	**+0.4**
AKCD	**Akcadag**	**0.18**	**225**	*i* P	**Pg**	**14 39 03.7**	**-0.4**
AKCD				*i* S	**Sg**	**14 39 06.9**	**+0.4**
MYA	**Malataya**	**0.29**	**110**	PG	**Pg**	**14 39 05.9**	**-0.3**
MYA	**Malataya**	**0.29**	**110**	*i* Pg	**Pg**	**14 39 05.9**	**-0.2**
MALT	**Malatya**	**0.29**	**112**	PG	**Pg**	**14 39 04.9**	**-1.3**
MALT				*e*SG	**Sg**	**14 39 10.1**	**0.0**
MALT	**Malatya**	**0.29**	**112**	*i* Pg	**Pg**	**14 39 04.9**	**-1.3**
MALT				*e*Sg	**Sg**	**14 39 10.1**	**0.0**
DARE	**Darende-Malaty**	**0.57**	**338**	*e*PG	**Pg**	**14 39 10.5**	**-1.1**
DARE				*e*SG	**Sg**	**14 39 18.3**	**-0.7**
DARE	**Darende-Malaty**	**0.57**	**338**	*e*Pg	**Pg**	**14 39 10.5**	**-1.1**
DARE				*e*Sg	**Sg**	**14 39 18.3**	**-0.7**
ELZG	**Elazig**	**0.71**	**84**	*i* P	**Pg**	**14 39 14.0**	**-0.3**
ELZG				*i* S	**Sg**	**14 39 25.4**	**+1.9**
ELZG	**Elazig**	**0.71**	**84**	*i* P	**Pg**	**14 39 14.0**	**-0.2**
ELZG				*i* S	**Sg**	**14 39 25.4**	**+1.9**
KEMA	**Kemaliye**	**0.90**	**21**	*i* P	**Pg**	**14 39 19.6**	**+1.7**
KEMA				*i* S	**Sg**	**14 39 36.1**	**+6.5**
KEMA	**Kemaliye**	**0.90**	**21**	*i* P	**Pg**	**14 39 19.6**	**+1.7**
KEMA				*i* S	**Sg**	**14 39 36.1**	**+6.5**
SVRC	**Sivrice-ELAZID**	**0.96**	**92**	*e*PG	**Pg**	**14 39 17.9**	**-1.2**
SVRC	**Sivrice-ELAZID**	**0.96**	**92**	*e*Pg	**Pg**	**14 39 17.9**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.12**	**284**	*e*PN	**Pg**	**14 39 25.7**	**+3.7**
SARI	**SarD1z-Kayseri**	**1.12**	**284**	*e*Pn	**Pg**	**14 39 25.7**	**+3.7**
PTK	**Pertek**	**1.13**	**65**	*e*PN	**Pg**	**14 39 21.9**	**-0.2**
PTK	**Pertek**	**1.13**	**65**	*e*Pn	**Pg**	**14 39 21.9**	**-0.3**
GZT	**Gaziantep**	**1.14**	**201**	*i* P	**Pg**	**14 39 22.4**	**-0.1**
GZT				*i* S	**Sg**	**14 39 38.7**	**+1.4**
KMRS	**Kahramanmaras**	**1.31**	**226**	*e*PN	**Pn**	**14 39 23.5**	**-1.9**
KMRS	**Kahramanmaras**	**1.31**	**226**	*e*Pn	**Pn**	**14 39 23.5**	**-2.0**
SVSK	**Karacayir**	**1.71**	**331**	*e*PN	**Pn**	**14 39 32.7**	**+1.6**
SVSK	**Karacayir**	**1.71**	**331**	*e*Pn	**Pn**	**14 39 32.7**	**+1.7**

*NEIC **15** 14:39:33.5±0.5, 57°.88S×25°.39W, h35km, mb4.6/6, Error ellipse: s-maj=18.0km s-min=13.3km az=181.0*
*IDC **15** 14:39:36.7±0.8, 57°.99S×25°.67W, h62km±6km, mb4.0/8, mb1 4.0/9, mb1mx3.9/18, mbtmp4.0/9, Error ellipse: s-maj=21.0km s-min=19.4km az=174.0*
ISC 15 14:39:39.0±5.2, 58°.0S±0°.1×25°.8W±0°.2, h85km±51km, h61km±1.0km: pP-P, n25, σ0§58/17, mb4.3/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.27**	**234**	P	**Pn**	**14 43 57.4**	**-0.8**
	0.2nm,0.3s,baz=90,slow=10,SNR=2.0						
PMSA	**Palmer Station**	**19.27**	**234**	*e*P	**Pn**	**14 43 57.8**	**-0.4**
	10nm,0.7s						
EFI	**East Falkland**	**19.51**	**275**	*e*P	**Pn**	**14 44 01.9**	**+0.7**
	260nm,1.7s						
MAW	**Mawson**	**38.11**	**142**	P	**P**	**14 46 49.4**	**+0.4**
	2.5nm,0.5s,mb4.3,baz=237,slow=8.8,SNR=4.8						
SUR	**Sutherland**	**40.47**	**71**	P	**P**	**14 47 04.5**	**-4.5**
	147nm,2.0s,mb5.5						
LBTB	**Lobatse**	**48.89**	**70**	P	**P**	**14 48 15.3**	**-0.7**
	2.0nm,0.5s,mb4.3,baz=240,slow=2.8,SNR=3.0						
LBTB	**Lobatse**	**48.89**	**70**	P	**P**	**14 48 15.3**	**-0.7**
SIV	**San Ignacio**	**49.50**	**313**	P	**P**	**14 48 19.9**	**-0.7**
	0.7nm,0.5s,mb3.9,baz=173,slow=8.8,SNR=5.3						
CASY	**Casey**	**51.78**	**159**	*e*P	**P**	**14 48 37.3**	**0.0**
	1.3nm,0.8s,mb4.0						
LPAZ	**La Paz**	**52.15**	**305**	P	**P**	**14 48 41.4**	**+0.8**
	1.3nm,0.5s,mb4.2,baz=167,slow=4.9,SNR=4.8						
LPAZ	**La Paz**	**52.15**	**305**	*e*P	**P**	**14 48 41.1**	**+0.6**
	1.2nm,0.6s,mb4.1						
LSZ	**Lusaka**	**58.41**	**66**	P	**P**	**14 49 25.3**	**-0.2**
	2.2nm,0.7s,mb4.3,baz=234,slow=8.7,SNR=3.5						
NNA	**Nana**	**59.88**	**298**	*e*P	**P**	**14 49 34.9**	**-0.8**
	4.5nm,0.4s,mb4.8						
DBIC	**Dimbokro**	**66.67**	**23**	P	**P**	**14 50 20.7**	**+0.3**
	1.8nm,0.4s,mb4.3,baz=172,slow=7.3,SNR=3.7						
DBIC				pP	pP	14 50 37.3	-4.8
	2.1nm,0.5s,baz=179,slow=9.7,SNR=1.8						
TORD	**Torodi Ar. Bea**	**74.42**	**28**	P	**P**	**14 51 08.1**	**+0.6**
	1.7nm,0.5s,mb4.0,baz=199,slow=6.4,SNR=18						
TORD				pP	pP	14 51 24.9	-4.6
	4.2nm,0.6s,baz=199,slow=6.6,SNR=10.0						
TORD	**Torodi Ar. Bea**	**74.42**	**28**	P	**P**	**14 51 08.1**	**+0.6**
TORD				pP	pP	14 51 24.9	-4.6
ASAR	**Alice Springs**	**96.87**	**161**	P	**P**	**14 53 00.6**	**+0.2**
	0.9nm,0.8s,mb4.3,baz=180,slow=3.5,SNR=8.9						
ASAR				pP	pP	14 53 17.3	-5.9
	0.7nm,0.9s,baz=186,slow=5.0,SNR=2.1						
PDAR	**Pinedale Array**	**122.03**	**300**	PKP	PKPdf	14 58 22.6	+0.2
	0.4nm,0.4s,baz=126,slow=5.4,SNR=7.3						
FINES	**FINESS Array B**	**125.77**	**28**	PKP	PKPdf	14 58 29.3	+0.3
	0.8nm,0.5s,baz=156,slow=3.8,SNR=5.3						
FINES				pPKP	pPKPdf	14 58 46.4	-6.4
	1.7nm,0.5s,baz=152,slow=1.7,SNR=5.7						
FINES	**FINESS Array B**	**125.77**	**28**	PKP	PKPdf	14 58 29.3	+0.2
FINES				pPKP	pPKPdf	14 58 46.4	-6.4
AAK	**Ala-Archa**	**129.89**	**71**	PKP	PKPdf	14 58 36.7	-0.8
	0.5nm,0.3s,baz=135,slow=1.4,SNR=3.1						
YKA	**Yellowknife Ar**	**138.15**	**316**	PKP	PKPdf	14 58 53.1	+0.8
	1.0nm,0.6s,baz=133,slow=2.0,SNR=11						
INK	**Inuvik**	**147.81**	**318**	PKPbc	PKPbc	14 59 12.6	+0.4
	5.3nm,0.7s,baz=72,slow=3.8,SNR=16						
SONM	**Songino Array**	**150.03**	**89**	PKPbc	PKPbc	14 59 18.7	+0.3
	1.8nm,0.5s,baz=219,slow=2.1,SNR=7.3						
KDAK	**Kodiak Island**	**152.34**	**292**	PKPbc	PKPbc	14 59 24.5	+1.0

IDC 15 14:45:21.9±0.9, 31°.65N×104°.27E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/27, mbtmp3.7/8, Error ellipse: s-maj=40.8km s-min=17.5km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.30**	**67**	P	P	14 49 59.8	+0.4
	2.2nm,0.7s,baz=257,slow=10,SNR=9.1						
MKAR	**Makanchi Array**	**22.66**	**318**	P	P	14 50 25.4	+0.8
	0.9nm,0.7s,baz=113,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.29**	**334**	P	P	14 50 59.1	+0.2
	1.0nm,0.6s,baz=137,slow=11,SNR=3.6						
KURK	**Kurchatov**	**26.90**	**323**	P	P	14 51 04.5	+0.1
	0.5nm,0.6s,baz=125,slow=8.0,SNR=3.3						
FINES	**FINESS Array B**	**57.19**	**326**	P	P	14 55 10.1	-0.3
	0.8nm,0.7s,baz=46,slow=8.1,SNR=2.8						
FINES	**FINESS Array B**	**57.19**	**326**	P	P	14 55 10.2	-0.2
WRA	**Warramunga Arr**	**58.85**	**147**	P	P	14 55 22.3	-0.2
	1.4nm,0.5s,baz=340,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**61.88**	**149**	P	P	14 55 43.5	+0.4
	0.4nm,0.5s,baz=338,slow=6.9,SNR=8.9						
YKA	**Yellowknife Ar**	**81.13**	**17**	P	P	14 57 38.2	-0.6
	0.5nm,0.7s,baz=326,slow=4.8,SNR=4.4						

*NEIC **15** 14:54:19.8, 17°.41N×100°.36W, h24km, MD3.7(MEX), After MEX.*
MEX 15 14:54:19.8±0.8, 17°.41N×100°.36W, h24km±6km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.37**	**167**	*i* P	Pb	14 54 26.4	-1.4
CAIG				*i* S	Sb	14 54 30.9	-2.4
CAIG	**El Cayaco**	**0.37**	**167**	*i* P	Pb	14 54 26.4	-1.4
CAIG				*i* S	Sb	14 54 30.9	-2.4
ACX	**Acapulco**	**0.68**	**142**	*i* P	Pb	14 54 31.5	-1.6
ACX				*i* S	Sb	14 54 39.5	-2.7
ACX	**Acapulco**	**0.68**	**142**	*i* P	Pb	14 54 31.5	-1.6
ACX				*i* S	Sb	14 54 39.5	-2.7
ZIIG	**Zihuatanejo**	**1.08**	**281**	*i* P	Pn	14 54 37.3	-2.1
ZIIG				*i* S	Sb	14 54 49.3	-4.1
ZIIG	**Zihuatanejo**	**1.08**	**281**	*i* P	Pn	14 54 37.3	-2.1
ZIIG				*i* S	Sb	14 54 49.3	-4.1
PLIG	**Platanillo**	**1.27**	**40**	*e*P	Pn	14 54 39.3	-2.8
PLIG				*i* S	Sn	14 54 55.0	-3.5
PLIG	**Platanillo**	**1.27**	**40**	*e*P	Pn	14 54 39.3	-2.8
PLIG				*i* S	Sn	14 54 55.0	-3.5
MZVM		**2.07**	**31**	*i* P	Pn	14 54 51.6	-1.4
MZVM				*i* S	Sn	14 55 15.2	-3.0
PPM	**Popocatepetl**	**2.33**	**45**	*e*P	Pn	14 54 54.4	-2.3
PPM				*i* S	Sn	14 55 21.9	-2.6
PPM	**Popocatepetl**	**2.33**	**45**	*e*P	Pn	14 54 54.4	-2.3
PPM				*i* S	Sn	14 55 21.9	-2.6
PNIG	**Pinotepa**	**2.36**	**115**	*e*P	Pn	14 54 55.2	-1.9
PNIG				*i* S	Sn	14 55 22.4	-3.0
PNIG	**Pinotepa**	**2.36**	**115**	*e*P	Pn	14 54 55.2	-1.9
PNIG				*i* S	Sn	14 55 22.4	-3.0
UTMO	**Huajuapan**	**2.47**	**80**	*i* P	Pn	14 54 56.4	-2.2
UTMO				*i* S	Sn	14 55 25.3	-2.7
IIO	**Organos**	**2.67**	**35**	*e*P	Pn	14 54 57.1	-4.2
IIO				*i* S	Sn	14 55 28.8	-4.1
IIO	**Organos**	**2.67**	**35**	*e*P	Pn	14 54 57.1	-4.2
IIO				*i* S	Sn	14 55 28.8	-4.1

*ISCJB **15** 14:57:32.5±0.5, 31°.25N±0°.05×103°.47E±0°.09, h10km, mb3.5/8, Error ellipse: s-maj=11.4km s-min=6.9km az=168.6*
*IDC **15** 14:57:32.8±1.0, 31°.21N×103°.48E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/26, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=39.9km s-min=17.2km az=54.0*
*BJI **15** 14:57:33.7, 31°.32N×103°.43E, h9km, ML3.6/12, Ms3.8/3, Ms7 3.4/2*
*NEIC **15** 14:57:34.1±0.6, 31°.27N×103°.53E, h10km, mb4.3/1, Error ellipse: s-maj=20.5km s-min=8.9km az=48.0*
ISC 15 14:57:34.5±0.5, 31°.30N±0°.04×103°.47E±0°.08, h10km, n14, σ0§91/17, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**148**	Pg	**Pg**	**14 57 43.3**	**-0.2**
CD2				Sg	**Sg**	**14 57 51.8**	**+2.2**
CD2				smax			
	comp=N,14μm,0.7s						
ENH	**Enshi**	**5.28**	**100**	*e*Pn	**Pn**	**14 58 52.6**	**-0.8**
	comp=N,36nm,0.8s						
ENH				*e*Sn	**Sn**	**14 59 50.0**	**-4.3**
XAN	**Xi'an**	**5.35**	**58**	Pg	**Pb**	**14 59 09.0**	**+1.0**
XAN				smax			
	comp=N,64nm,0.7s						
XAN				smax			
	comp=E,34nm,0.9s						
KMI	**Kunming**	**6.19**	**186**	Pn	**Pn**	**14 59 06.5**	**+0.6**
KMI				Sn	**Sn**	**15 00 16.3**	**-0.4**
KMI				smax			
	comp=N,29nm,1.8s						
KMI				smax			
	comp=E,22nm,1.2s						
KMI				LR	LR		
	comp=N,260nm,9.5s						
KMI				LR	LR		
	comp=E,1μm,10.5s						
KMI				LR	LR		
	comp=Z,220nm,9.2s						
SONM	**Songino Array**	**16.66**	**7**	Pn	**Pn**	**15 01 27.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=3.0						
KSRS	**Korea Array**	**21.07**	**66**	P	**P**	**15 02 19.1**	**+0.3**
	comp=Z,2.0nm,0.8s,mb3.5,baz=262,slow=10,SNR=9.9						
MK31	**Makanchi Array**	**22.48**	**320**	*e*Pn	**P**	**15 02 33.4**	**-0.4**
MKAR	**Makanchi Array**	**22.48**	**320**	P	**P**	**15 02 34.1**	**+0.3**
	comp=Z,0.3nm,0.7s,mb2.8,baz=122,slow=12,SNR=4.7						
ZALV	**Zalesovo Beam**	**26.31**	**335**	P	**P**	**15 03 09.8**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.5,baz=152,slow=9.8,SNR=4.5						
KURK	**Kurchatov**	**26.77**	**324**	P	**P**	**15 03 14.2**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.4,baz=130,slow=9.3,SNR=6.9						
BVAR	**Borovoye Array**	**32.30**	**322**	P	**P**	**15 04 05.5**	**+2.1**
	comp=Z,0.2nm,0.4s,mb3.3,baz=134,slow=8.3,SNR=2.1						
WRAB	**Tennant Creek**	**58.94**	**146**	P	**P**	**15 07 32.8**	**-1.2**
	comp=Z,2.4nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**58.94**	**146**	P	**P**	**15 07 33.1**	**-1.0**
	comp=Z,1.0nm,0.8s,mb3.9,baz=337,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**61.94**	**148**	P	**P**	**15 07 54.2**	**-0.3**
	comp=Z,0.3nm,0.8s,mb3.5,baz=334,slow=7.2,SNR=7.9						

*ISCJB **15** 15:02:44.9±0.4, 32°.26N±0°.04×105°.31E±0°.05, h10km, mb3.8/12, Error ellipse: s-maj=6.6km s-min=5.1km az=170.3*
*IDC **15** 15:02:45.8±0.8, 32°.13N×104°.88E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/27, mbtmp3.7/11, ML3.4/1, Error ellipse: s-maj=41.3km s-min=15.9km az=53.0*
*BJI **15** 15:02:49.3, 32°.28N×105°.06E, h20km, mB4.5/2, mb3.5/3, ML3.7/14, Ms3.5/4, Ms7 3.5/5*
*NEIC **15** 15:02:50.3±4.7, 32°.10N×104°.95E, h31km±35km, mb3.9/3, Error ellipse: s-maj=27.5km s-min=8.3km az=50.0*
ISC 15 15:02:47.2±0.4, 32°.29N±0°.03×105°.24E±0°.05, h10km, n23, σ1§10/30, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.55**	**59**	Pg	**Pg**	**15 03 54.4**	**-0.8**
XAN				Sg	**Sg**	**15 04 40.9**	**-0.3**
XAN				smax			
	comp=N,200nm,0.8s						
XAN				smax			
	comp=E,150nm,0.8s						
LZH	**Lanzhou**	**3.96**	**343**	Pn

comp=Z,1.2nm,0.6s,mb3.5,baz=113,slow=11,SNR=12
ZALV Zalesovo Beam 26.11 332 P **P** **15 08 21.2 +0.2**
comp=Z,0.6nm,0.4s,mb3.5,baz=128,slow=9.3,SNR=3.3
KURK Kurchatov 26.91 321 P **P** **15 08 28.2 -0.1**
comp=Z,1.3nm,0.8s,mb3.5,baz=123,slow=9.9,SNR=7.4
KURK Kurchatov 26.91 321 *eP* **P** **15 08 28.0 -0.3**
comp=Z,3.0nm,0.9s,mb3.8
BVAR Borovoye Array 32.49 320 P **P** **15 09 17.8 +0.1**
comp=Z,0.6nm,0.5s,mb3.7,baz=106,slow=11,SNR=4.0
ABKAR Akbulak array 37.63 310 P **P** **15 10 02.0 -0.1**
comp=Z,0.3nm,0.3s,mb3.5
ARCES ARCESS Array B 56.59 336 P **P** **15 12 30.0 +0.3**
comp=Z,1.7nm,0.9s,mb4.1,baz=88,slow=9.8,SNR=4.6
FINES FINESS Array B 57.13 326 P **P** **15 12 33.2 -0.5**
comp=Z,0.8nm,0.4s,mb4.1,baz=81,slow=6.4,SNR=4.0
WRAB Tennant Creek 58.93 148 *eP* **P** **15 12 47.4 +0.6**
comp=Z,2.5nm,0.8s,mb4.3
WRA Warramunga Arr 58.93 148 P **P** **15 12 47.1 +0.4**
comp=Z,1.5nm,0.6s,mb4.2,baz=340,slow=7.8,SNR=13
ASAR Alice Springs 62.01 150 P **P** **15 13 08.2 +0.5**
comp=Z,0.3nm,0.5s,mb3.7,baz=327,slow=6.3,SNR=11
NOA NORSAR Array B 64.19 327 P **P** **15 13 20.9 -0.9**
comp=Z,0.5nm,0.5s,mb3.8,baz=71,slow=6.8,SNR=3.0
YKA Yellowknife Ar 80.28 18 P **P** **15 14 58.2 +0.3**
comp=Z,0.6nm,0.5s,mb3.8,baz=327,slow=5.1,SNR=9.8
YKA Yellowknife Ar 80.28 18 P **P** **15 14 58.2 +0.3**

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*IDC **15** 15:06:41.2±1.0, 31°.21N×103°.52E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.7/8, ML3.4/1, MS4.0/1, Ms1 4.0/1, ms1mx3.1/49, Error ellipse: s-maj=38.3km s-min=18.2km az=59.0*
*NEIC **15** 15:06:42.8±0.6, 31°.21N×103°.55E, h10km, mb4.4/1, Error ellipse: s-maj=20.2km s-min=9.4km az=54.0*
*ISCJB **15** 15:06:43.2±1.1, 31°.20N±0°.09×103°.6E±0°.1, h26km±9km, mb3.7/7, Error ellipse: s-maj=20.2km s-min=12.7km az=151.7*
*BJI **15** 15:06:48.1, 31°.20N×103°.57E, h9km, ML3.7/6*
ISC 15 15:06:43.1±1.5, 31°.25N±0°.06×103°.6E±0°.1, h10km±9km, n17, σ0°63/17, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**157**	Pg		**Pg**	**15 06 50.3**	**-0.1**
CD2				Sg		**Sg**	**15 06 55.8**	**+0.4**
CD2				smax				
	comp=N,9μm,0.5s							
ENH	**Enshi**	**5.17**	**99**	*e*Pn		**Pn**	**15 08 00.5**	**0.0**
XAN	**Xi'an**	**5.29**	**57**	Pg		**Pg**	**15 08 23.8**	**-0.6**
XAN				smax				
	comp=N,47nm,0.7s							
XAN				smax				
	comp=E,22nm,0.8s							
SONM	**Songino Array**	**16.70**	**7**	Pn		**Pn**	**15 10 37.9**	**+0.9**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=2.2							
KSRS	**Korea Array**	**20.99**	**66**	P		**P**	**15 11 26.6**	**+0.1**
	comp=E,2.3nm,0.7s,baz=262,slow=10,SNR=16							
CN2	**Changchun**	**21.31**	**48**	*e*P		**P**	**15 11 30.3**	**+0.4**
MKAR	**Makanchi Array**	**22.58**	**319**	P		**P**	**15 11 43.2**	**-0.2**
	comp=E,0.5nm,0.7s,mb3.0,baz=121,slow=12,SNR=5.1							
MKAR	**Makanchi Array**	**22.58**	**319**	P		**P**	**15 11 43.2**	**-0.2**
ZALV	**Zalesovo Beam**	**26.40**	**335**	P		**P**	**15 12 17.7**	**-1.7**
	comp=E,1.2nm,0.9s,mb3.4,baz=149,slow=12,SNR=3.9							
KURK	**Kurchatov**	**26.86**	**324**	P		**P**	**15 12 24.8**	**+1.1**
	comp=E,0.3nm,0.2s,mb3.4,baz=125,slow=9.9,SNR=3.5							
KURK	**Kurchatov**	**26.86**	**324**	P		**P**	**15 12 24.8**	**+1.1**
DAV	**Davao City (W)**	**31.65**	**135**	LR		LR	15 25 01.3	
	comp=E,287nm,21.9s,baz=202,slow=35							
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P		**P**	**15 16 41.9**	**0.0**
	comp=E,3.2nm,0.9s,mb4.3							
WRA	**Warramunga Arr**	**58.84**	**146**	P		**P**	**15 16 41.5**	**-0.5**
	comp=E,2.0nm,0.8s,mb4.2,baz=337,slow=7.6,SNR=15							
WB2	**Warramunga Arr**	**58.85**	**146**	*e*P		**P**	**15 16 41.6**	**-0.4**
ASAR	**Alice Springs**	**61.85**	**148**	P		**P**	**15 17 02.5**	**0.0**
	comp=E,0.3nm,0.5s,mb3.7,baz=340,slow=6.8,SNR=13							
YKA	**Yellowknife Ar**	**81.68**	**17**	P		**P**	**15 19 01.6**	**+0.4**
	comp=E,0.4nm,0.7s,mb3.5,baz=330,slow=5.3,SNR=3.7							

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*IDC **15** 15:25:34.5±1.1, 31°.07N×103°.87E, h0km, mb3.4/6, mb1 3.5/7, mb1mx3.4/26, mbtmp3.4/7, ML3.6/1, Error ellipse: s-maj=41.5km s-min=19.4km az=55.0*
*NEIC **15** 15:25:36.0±0.8, 31°.02N×103°.66E, h10km, Error ellipse: s-maj=25.8km s-min=12.3km az=51.0*
*BJI **15** 15:25:37.0, 31°.21N×103°.86E, h15km, ML3.5/12*
ISC 15 15:25:36.4±0.8, 31°.19N±0°.04×104°.02E±0°.06, h11km±6km, n13, σ0°92/18, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**219**	Pg		**Pg**	**15 25 43.1**	**-0.4**
CD2				Sg		**Sg**	**15 25 49.3**	**+0.9**
CD2				smax				
	comp=N,5μm,0.8s							
ENH	**Enshi**	**4.79**	**100**	*e*P		**Pn**	**15 26 53.7**	**+5.2**
	comp=N,27nm,0.3s							
XAN	**Xi'an**	**5.02**	**54**	Pn		**Pn**	**15 26 54.5**	**+2.9**
XAN				Pg		**Pg**	**15 27 11.8**	**-0.7**
XAN				Sg		**Sg**	**15 28 16.8**	**-0.7**
XAN				smax				
	comp=N,67nm,0.5s							
XAN				smax				
	comp=E,37nm,0.8s							
GYA	**Guiyang**	**5.25**	**153**	Pg		**Pb**	**15 27 03.8**	**-4.5**
GYA				Sg		**Sb**	**15 28 12.5**	**+1.2**
GYA				smax				
	comp=N,70nm,0.7s							
GYA				smax				
	comp=E,50nm,0.9s							
KMI	**Kunming**	**6.15**	**191**	Pn		**Pn**	**15 27 06.1**	**-1.1**
KMI				Sn		**Sn**	**15 28 16.9**	**-0.6**
KMI				smax				
	comp=N,14nm,0.9s							
KMI				smax				
	comp=E,15nm,1.3s							
SONM	**Songino Array**	**16.72**	**6**	Pn		**Pn**	**15 29 31.1**	**+0.5**
	comp=E,0.2nm,0.3s,baz=202,slow=7.2,SNR=2.5							
KSRS	**Korea Array**	**20.68**	**66**	P		**P**	**15 30 17.7**	**+1.3**
	comp=E,1.5nm,0.7s,baz=256,slow=10,SNR=8.2							
MKAR	**Makanchi Array**	**22.87**	**319**	P		**P**	**15 30 39.8**	**0.0**
	comp=E,0.4nm,0.8s,mb2.9,baz=129,slow=8.2,SNR=4.1							
ZALV	**Zalesovo Beam**	**26.61**	**334**	P		**P**	**15 31 15.4**	**+0.7**
	comp=E,0.3nm,0.4s,mb3.2,baz=156,slow=7.6,SNR=3.8							
KURK	**Kurchatov**	**27.14**	**323**	P		**P**	**15 31 18.9**	**-0.6**
	comp=E,0.7nm,0.8s,mb3.3,baz=129,slow=9.1,SNR=4.2							
WRAB	**Tennant Creek**	**58.58**	**146**	*e*P		**P**	**15 35 32.5**	**-0.9**
WRA	**Warramunga Arr**	**58.58**	**146**	P		**P**	**15 35 32.8**	**-0.6**
	comp=E,1.0nm,0.9s,mb3.9,baz=339,slow=7.5,SNR=6.8							
ASAR	**Alice Springs**	**61.60**	**149**	P		**P**	**15 35 53.8**	**-0.3**
	comp=E,0.2nm,0.8s,mb3.3,baz=341,slow=6.6,SNR=4.9							

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*IDC **15** 15:29:04.7±1.1, 74°.89N×134°.05E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/27, mbtmp3.8/9, Error ellipse: s-maj=33.1km s-min=21.7km az=176.0*
*ISCJB **15** 15:29:05.9±5.6, 74°.82N±0°.09×133°.9E±0°.4, h16km±41km, mb3.7/13, Error ellipse: s-maj=18.2km s-min=12.0km az=40.5*
*NEIC **15** 15:29:06.5±0.7, 74°.85N×133°.99E, h10km, mb3.5/2, Error ellipse: s-maj=20.3km s-min=12.8km az=142.0*
*MOS **15** 15:29:07.9±1.6, 74°.80N×133°.95E, h33km, mb4.1/5, Error ellipse: s-maj=64.8km s-min=15.1km az=81.0*
ISC 15 15:29:06.0±5.8, 74°.80N±0°.08×134°.1E±0°.4, h6km±37km, n24, σ1°22/25, mb3.7/13, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**3.50**	**208**	*e*P		**Pn**	**15 30 01.6**	**+0.8**
TIXI				*e*S		**Sn**	**15 30 42.6**	**+0.1**
TIXI				pmax		pmax		
	comp=Z,5.0nm,0.8s							
TIXI				smax				
	comp=E,7.0nm,0.6s							
TIXI				smax				
	comp=N,8.0nm,0.4s							
TIXI	**Tiksi**	**3.50**	**208**	*e*Pn		**Pn**	**15 30 01.1**	**+0.2**
BOD	**Bodaibo**	**18.66**	**215**	*e*P		**Pn**	**15 33 21.9**	**-2.4**
BOD				pmax		pmax		
	comp=Z,4.0nm,1.9s							
PETK	**Petropavlovsk-**	**23.75**	**143**	P		**P**	**15 34 18.0**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.2,baz=20,slow=11,SNR=2.8							
PETK	**Petropavlovsk-**	**23.75**	**143**	P		**P**	**15 34 18.0**	**-0.6**
PETK				pmax		pmax		
	comp=Z,1.0nm,0.8s,mb3.3							
RES	**Resolute Bay**	**27.89**	**25**	*e*P		**P**	**15 34 53.4**	**-2.5**
RES				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.7							
RES	**Resolute Bay**	**27.89**	**25**	*e*P		**P**	**15 34 53.4**	**-2.5**
	comp=Z,0.5nm,0.5s,mb3.4							
ZALV	**Zalesovo Beam**	**28.38**	**250**	P		**P**	**15 35 00.5**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.6,baz=9.2,slow=11,SNR=4.7							
ZALV	**Zalesovo Beam**	**28.38**	**250**	P		**P**	**15 35 00.5**	**+0.1**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.7							
ZALV	**Zalesovo Beam**	**28.38**	**250**	P		**P**	**15 35 00.5**	**+0.1**
SONM	**Songino Array**	**29.52**	**219**	P		**P**	**15 35 12.4**	**+1.9**
	comp=Z,2.7nm,0.8s,mb4.1,baz=17,slow=10,SNR=7.0							
SONM	**Songino Array**	**29.52**	**219**	P		**P**	**15 35 12.4**	**+1.9**
SONM				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SONM	**Songino Array**	**29.52**	**219**	P		**P**	**15 35 12.4**	**+1.9**
KURK	**Kurchatov**	**32.89**	**255**	P		**P**	**15 35 40.4**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=26,slow=8.3,SNR=3.4							
BVAR	**Borovoye Array**	**32.92**	**265**	P		**P**	**15 35 41.0**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.4,baz=35,slow=18,SNR=3.4							
MK31	**Makanchi Array**	**35.61**	**248**	*e*P		**P**	**15 36 04.0**	**+0.2**
MKAR	**Makanchi Array**	**35.61**	**248**	P		**P**	**15 36 03.6**	**-0.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=39,slow=6.6,SNR=10							
MKAR	**Makanchi Array**	**35.61**	**248**	P		**P**	**15 36 03.7**	**-0.1**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**35.93**	**47**	P		**P**	**15 36 08.9**	**+2.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=336,slow=8.6,SNR=3.4							
ABKAR	**Akbulak array**	**39.11**	**272**	*e*P		**P**	**15 36 33.3**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.6							
ZEI	**Tsey**	**49.30**	**284**	*e*P		**P**	**15 37 55.9**	**+0.8**
ZEI				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
NVAR	**Mina Array Bea**	**57.71**	**62**	P		**P**	**15 38 58.1**	**+1.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=354,slow=5.4,SNR=3.6							
TORD	**Torodi Ar. Bea**	**87.43**	**314**	P		**P**	**15 41 51.8**	**-2.1**
	comp=Z,0.9nm,0.8s,mb4.0,baz=360,slow=5.3,SNR=6.5							
WRA	**Warramunga Arr**	**94.52**	**180**	P		**P**	**15 42 25.7**	**-0.9**
	comp=Z,0.2nm,0.7s,mb3.6,baz=0.8,slow=5.8,SNR=4.8							

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*IDC **15** 15:42:37.4±1.2, 24°.39N×127°.37E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.5/5, ML3.4/1, MS4.2/1, Ms1 4.2/1, ms1mx3.6/19, Error ellipse: s-maj=50.0km s-min=20.7km az=74.0*
*ISCJB **15** 15:42:40.2±0.7, 24°.42N±0°.05×127°.38E±0°.05, h33km, mb3.4/4, Error ellipse: s-maj=7.5km s-min=4.9km az=139.2*
*JMA **15** 15:42:41.2±0.3, 24°.45N×127°.31E, h66km, M3.3*
ISC 15 15:42:41.7±2.3, 24°.44N±0°.05×127°.32E±0°.05, h34km±20km, n20, σ0°90/26, mb3.4/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.73**	**13**	P		**Pn**	**15 43 09.6**	**+0.1**
JJT2				*e*S		**Sn**	**15 43 30.5**	**+0.1**
JOGS	**Gusukube**	**1.77**	**281**	P		**Pn**	**15 43 10.2**	**+0.2**
JOGS				*e*S		**Sn**	**15 43 31.2**	**-0.1**
NAH1	**Naha**	**1.78**	**11**	*e*S		**Sn**	**15 43 31.5**	**-0.2**
JMJ	**Miyako jima 2**	**1.88**	**282**	*e*S		**Sn**	**15 43 34.8**	**+0.7**
JKE	**Kume jima 2**	**1.94**	**346**	P		**Pn**	**15 43 12.5**	**+0.2**
JKE				*e*S		**Sn**	**15 43 36.1**	**+0.7**
JAGN	**Aguni-jima**	**2.14**	**358**	P		**Pn**	**15 43 15.4**	**+0.4**
JTJ	**Tarama**	**2.39**	**275**	P		**Pn**	**15 43 18.1**	**-0.4**
JTJ				*e*S		**Sn**	**15 43 44.2**	**-2.5**
JOW	**Kunigami**	**2.53**	**20**	P		**Pn**	**15 43 20.4**	**0.0**
JOW				*e*S		**Sn**	**15 43 48.2**	**-1.9**
JOW	**Kunigami**	**2.53**	**20**	Pn		**Pn**	**15 43 20.4**	**0.0**
	11nm,0.3s,baz=126,slow=22,SNR=40							
JOW				Sn		**Sn**	**15 43 48.6**	**-1.5**
	14nm,0.3s,baz=120,slow=25,SNR=6.2							
JIH	**Iheya**	**2.65**	**13**	P		**Pn**	**15 43 22.4**	**+0.4**
JIH				*e*S		**Sn**	**15 43 52.6**	**-0.3**
JIJ	**Ishigaki jima**	**2.90**	**269**	*e*S		**Sn**	**15 43 55.6**	**-3.6**
JTK	**Tokunoshima**	**3.64**	**23**	P		**Pn**	**15 43 35.8**	**+0.1**
JTK				*e*S		Sx	15 44 15.6	
JMZ	**Minamidaito 2**	**3.79**	**68**	P		**Pn**	**15 43 35.7**	**-2.1**
JMZ				*e*S		Sx	15 44 15.6	
JAM	**Amami Oshima**	**4.45**	**27**	P		**Pn**	**15 43 47.0**	**+0.1**
JAM				*e*S		Sx	15 44 34.6	
JZK	**Kikaishima**	**4.53**	**31**	P		**Pn**	**15 43 48.7**	**+0.8**
KSRS	**Korea Array**	**12.98**	**2**	LR		LR	15 51 17.0	
	comp=Z,1μm,21.6s,baz=175,slow=40							
MKAR	**Makanchi Array**	**42.14**	**314**	P		**P**	**15 50 31.8**	**+1.1**
	0.2nm,0.5s,mb3.0,baz=99,slow=8.9,SNR=3.8							
WRA	**Warramunga Arr**	**44.65**	**171**	P		**P**	**15 50 51.0**	**-0.2**
	0.8nm,0.6s,mb3.7,baz=352,slow=8.5,SNR=6.4							
KURK	**Kurchatov**	**45.57**	**318**	P		**P**	**15 50 59.7**	**+1.4**
	0.2nm,0.6s,mb3.2,baz=106,slow=8.2,SNR=2.6							
ASAR	**Alice Springs**	**48.25**	**172**	P		**P**	**15 51 20.0**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=6.7,slow=11,SNR=3.6							

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*NOU **15** 15:45:34.3±0.8, 18°.73S×167°.71E, h30km, MD2.7, ML2.4*
*IDC **15** 15:45:36.2±2.1, 19°.16S×168°.03E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.1/13, mbtmp4.0/6, MS4.8/1, Ms1 4.8/1, ms1mx3.4/24, Error ellipse: s-maj=68.7km s-min=25.4km az=146.0*
*ISCJB **15** 15:45:38.8±1.1, 19°.35S±0°.07×168°.1E±0°.2, h33km, mb4.0/6, Error ellipse: s-maj=24.7km s-min=7.3km az=17.9*
*NEIC **15** 15:45:41.5±3.7, 19°.72S×168°.35E, h54km±41km, mb4.3/1, Error ellipse: s-maj=50.1km s-min=21.9km az=164.0*
ISC 15 15:45:40.4±1.1, 19°.44S±0°.08×168°.3E±0°.2, h35km, n16, σ1°10/16, mb4.0/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.99**	**205**	*e*S		**Sn**	**15 47 03.6**	**+3.8**
DZM	**Mont Dzumac**	**3.12**	**213**	*e*Pn		**Pn**	**15 46 25.5**	**-1.5**
LASL	**Noumea**	**3.21**	**210**	*e*P		**Pn**	**15 46 27.4**	**-0.9**
NOUC	**Port Laguerre**	**3.21**	**214**	*e*P		**Pn**	**15 46 27.4**	**-1.0**
NOUC				*e*S		**Sn**	**15 47 06.4**	**+0.9**
NOUC				AMP			15 47 23.5	
	comp=Z,23nm,1.9s							
MVNO	**Noumea**	**3.29**	**211**	*e*S		**Sn**	**15 47 08.1**	**+0.9**
CTA	**Charters Tower**	**20.71**	**264**	P		**P**	**15 50 19.7**	**+1.9**
	comp=Z,5.9nm,0.9s,baz=108,slow=12,SNR=5.1							
CTAO	**Charters Tower**	**20.71**	**264**	*e*P		**P**	**15 50 19.0**	**+1.2**
	comp=Z,26nm,1.5s							
WRAB	**Tennant Creek**	**31.89**	**263**	*e*P		**P**	**15 52 01.8**	**-0.9**
WRA	**Warramunga Arr**	**31.90**	**263**	P		**P**	**15 52 01.2**	**-1.5**
	comp=Z,1.0nm,0.9s,mb3.7,baz=88,slow=8.3,SNR=5.7							
ASAR	**Alice Springs**	**32.17**	**256**	P		**P**	**15 52 04.6**	**-0.5**
	comp=Z,3.5nm,0.8s,mb4.3,baz=84,slow=9.1,SNR=27							
FITZ	**Fitzroy Crossi**	**40.29**	**265**	P		**P**	**15 53 14.3**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.0,baz=100,slow=9.3,SNR=6.3							
JOW	**Kunigami**	**60.15**	**319**	LR		LR	16 19 30.3	
	comp=Z,659nm,18.6s,baz=345,slow=34							
MJAR	**Matsushiro Arr**	**62.50**	**333**	P		**P**	**15 56 00.3**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.9,baz=161,slow=7.1,SNR=4.6							
TPUB	**Ta-pu**	**62.95**	**310**	*e*P		**P**	**15 56 05.7**	**+2.0**
PETK	**Petropavlovsk-**	**72.82**	**353**	P		**P**	**15 57 04.9**	**-0.2**
	comp=Z,2.1nm,0.8s,mb4.1,baz=195,slow=10,SNR=4.7							
NVAR	**Mina Array Bea**	**89.63**	**49**	P		**P**	**15 58 35.6**	**+1.0**
	comp=Z,0.2nm,0.3s,mb3.9,baz=238,slow=5.2,SNR=3.3							

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*IDC **15** 16:06:06.8±1.0, 32°.21N×104°.84E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, Error ellipse: s-maj=79.7km s-min=18.5km az=59.0*
*ISCJB **15** 16:06:07.2±0.6, 32°.21N±0°.06×104°.56E±0°.08, h10km, mb3.7/8, Error ellipse: s-maj=11.4km s-min=5.8km az=38.2*
*NEIC **15** 16:06:08.0±0.8, 31°.95N×104°.40E, h10km, mb4.0/1, Error ellipse: s-maj=40.2km s-min=13.0km az=47.0*
*BJI **15** 16:06:09.6, 32°.04N×104°.58E, h13km, ML3.4/4, Ms3.5/1, Ms7 3.3/1*
ISC 15 16:06:08.9±0.6, 32°.18N±0°.06×104°.58E±0°.08, h10km, n11, σ1°23/15, mb3.7/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.45**	**209**	Pn		**Pn**	**16 06 33.1**	**-2.0**
CD2				Pg		**Pg**	**16 06 37.3**	**+0.6**
CD2				Sg		**Sg**	**16 06 56.9**	**+1.4**
XAN	**Xi'an**	**4.09**	**62**	Pn		**Pn**	**16 07 12.8**	**+1.3**
XAN				Pg		**Pg**	**16 07 23.3**	**-3.9**
XAN				Sn		**Sn**	**16 07 59.8**	**+0.4**
XAN				smax				
	comp=N,910nm,0.5s							
XAN				smax				
	comp=E,410nm,0.7s							
XAN				LR		LR		
	comp=N,830nm,14.7s							
XAN				LR		LR		
	comp=E,380nm,9.7s							
XAN				LR		LR		
	comp=Z,400nm,10.5s							
ENH	**Enshi**	**4.61**	**113**	Pn		**Pn**	**16 07 19.7**	**+1.0**
MKAR	**Makanchi Array**	**22.45**	**317**	P		**P**	**16 11 10.2**	**+2.2**
	comp=Z,0.1nm,0.3s,mb2.7,baz=111,slow=11,SNR=3.4							
ZALV	**Zalesovo Beam**	**25.94**	**333**	P		**P**	**16 11 41.3**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.4,baz=132,slow=12,SNR=3.8							
ARCES	**ARCESS Array B**	**56.45**	**336**	P		**P**	**16 15 49.8**	**-0.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=64,slow=11,SNR=3.1							
FINES	**FINESS Array B**	**56.91**	**326**	P		**P**	**16 15 53.0**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=71,slow=6.0,SNR=3.4							
WRAB	**Tennant Creek**	**59.14**	**147**	*e*P		**P**	**16 16 06.5**	**-3.3**
	comp=Z,0.8nm,0.6s,mb3.9							
WRA	**Warramunga Arr**	**59.14**	**147**	P		**P**	**16 16 09.1**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.2,baz=340,slow=7.8,SNR=30							
ASAR	**Alice Springs**	**62.20**	**149**	P		**P**	**16 16 29.5**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.7,baz=335,slow=6.6,SNR=5.7							
YKA	**Yellowknife Ar**	**80.55**	**17**	P		**P**	**16 18 20.7**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=330,slow=5.1,SNR=4.1							

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*ISCJB **15** 16:06:53.8±0.2, 32°.43N±0°.03×105°.24E±0°.04, h10km, mb4.5/64, Error ellipse: s-maj=5.2km s-min=4.3km az=177.7*
*IDC **15** 16:06:53.9±0.7, 32°.49N×105°.32E, h0km, mb4.4/18, mb1 4.5/19, mb1mx4.3/29, mbtmp4.3/19, ML4.3/1, Error ellipse: s-maj=29.5km s-min=13.4km az=47.0*
*MOS **15** 16:06:54.8±0.8, 32°.35N×105°.25E, h21km, mb4.7/47, Error ellipse: s-maj=13.2km s-min=5.6km az=118.3*
*NEIC **15** 16:06:55.4±0.2, 32°.34N×105°.15E, h10km, mb4.6/34, Error ellipse: s-maj=9.1km s-min=4.9km az=47.0*
*BJI **15** 16:06:55.5, 32°.43N×105°.14E, h12km, mB4.6/7, mb4.4/14, ML4.3/7, Ms4.2/14, Ms7 4.0/10*
*SZGRF **15** 16:07:07.6, 33°.13N×104°.10E, h33km, mb4.8, Gansu, China*
ISC 15 16:06:55.7±0.2, 32°.47N±0°.03×105°.28E±0°.04, h10km, n187, σ0°92/197, mb4.5/64, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.03**	**220**	Pg		**Pg**	**16 07 39.0**	**+4.5**
CD2				Sg		**Sg**	**16 08 01.5**	**+0.7**
CD2				smax				
	comp=N,12μm,0.7s							
LZH	**Lanzhou**	**3.79**	**342**	Pn		**Pn**	**16 07 57.0**	**+2.8**
LZH				Pg		**Pg**	**16 08 06.4**	**-2.0**
LZH				Sn		**Sn**	**16 08 39.9**	**+1.0**
LZH				Sg		**Sg**	**16 08 54.0**	**-3.5**
LZH				smax				
	comp=N,2μm,0.7s							
LZH				smax				
	comp=E,3μm,0.6s							
LZH				LR		LR		
	comp=N,5μm,4.4s							
LZH				LR		LR		
	comp=E,5μm,7.9s							
ENH	**Enshi**	**4.22**	**120**	Pn		**Pn**	**16 08 00.3**	**+0.3**
GYA	**Guiyang**	**6.12**	**168**	Pg		**Pn**	**16 08 27.5**	**+1.4**
GYA				Sg		**Sn**	**16 09 35.6**	**-0.5**
GYA				smax				
	comp=N,250nm,0.8s							
GYA				smax				
	comp=E,240nm,0.7s							
KMI	**Kunming**	**7.65**	**198**	Pn		**Pn**	**16 08 49.0**	**+1.8**
KMI				Sn		**Sn**	**16 10 06.6**	**-7.4**
KMI				smax				
	comp=N,34nm,1.4s							
KMI				smax				
	comp=E,47nm,1.6s							
KMI				LR		LR		
	comp=N,350nm,9.0s							
KMI				LR		LR		
	comp=E,700nm,8.7s							
KMI				LR		LR		
	comp=Z,520nm,14.6s							
WHN	**Wuhan**	**7.98**	**102**	P		**Pn**	**16 08 53.3**	**+1.6**
WHN				S		**Sn**	**16 10 18.6**	**-3.5**
WHN				LR		LR		
	comp=N,2μm,5.3s							
WHN				LR		LR		
	comp=E,1μm,5.7s							
GTA	**Gaotai**	**8.22**	**329**	⇓P		**Pn**	**16 08 55.3**	**+0.4**
GTA				pP			16 08 58.5	
GTA				sP			16 09 01.3	
GTA				S		**Sn**	**16 10 35.8**	**+8.0**
GTA				sS			16 10 41.8	
GTA				pmax		pmax		
	comp=Z,8.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,380nm,5.6s							
GTA				LR		LR		
	comp=N,710nm,9.8s							
GTA				LR		LR		
	comp=E,680nm,12.8s							
GTA				LR		LR		
	comp=Z,840nm,11.9s							
NJ2	**Nanjing**	**11.50**	**88**	*e*P		**Pn**	**16 09 48.6**	**+8.6**
NJ2	

MKAR Makanchi Array 22.65 316 *ceP* **P 16 11 56.9 +0.1**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
ULHL Ulahol 24.95 301 P **P 16 12 19.4 +0.3**
SNR=8.2
TKM2 Tokmak 2 25.58 303 P **P 16 12 26.2 +1.4**
SNR=8.5
TKM2 Tokmak 2 25.58 303 *eP* **P 16 12 25.6 +0.8**
TKM2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
TKM2 Tokmak 2 25.58 303 *eP* **P 16 12 25.6 +0.8**
comp=Z,9.3nm,0.7s,mb4.4
KZA Kyzart 25.64 301 P **P 16 12 27.5 +2.2**
SNR=17
KLR Kul'dur 25.90 42 *eP* **P 16 12 26.1 -1.6**
ZAA0 Zalesovo Array 25.96 332 *eP* **P 16 12 27.8 -0.3**
ZALV Zalesovo Beam 25.96 332 P **P 16 12 28.3 +0.2**
comp=Z,3.7nm,0.5s,mb4.2,baz=133,slow=9.5,SNR=19
ZALV Zalesovo Beam 25.96 332 P **P 16 12 28.3 +0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
ZALV Zalesovo Beam 25.96 332 P **P 16 12 28.3 +0.2**
KBK Karagaybulak 25.98 302 P **P 16 12 29.8 +1.3**
SNR=12
BOD Bodaibo 26.04 11 *eP* **P 16 12 29.9 +1.1**
BOD pmax pmax
comp=Z,5.0nm,1.4s,mb3.9
UCH Uchtor 26.20 301 P **P 16 12 32.7 +2.3**
SNR=13
UCH Uchtor 26.20 301 *eP* **P 16 12 31.5 +1.1**
comp=Z,15nm,1.2s,mb4.4
AAK Ala-Archa 26.30 302 P **P 16 12 31.9 +0.5**
comp=Z,1.1nm,0.4s,mb3.8,baz=138,slow=6.1,SNR=6.3
AAK Ala-Archa 26.30 302 *eP* **P 16 12 32.2 +0.9**
AAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
AAK Ala-Archa 26.30 302 *eP* **P 16 12 32.2 +0.8**
comp=Z,3.9nm,0.9s,mb3.9
USP Ospenovka 26.44 303 P **P 16 12 33.6 +1.0**
SNR=12
AML Almayashu 26.78 300 P **P 16 12 37.7 +2.0**
SNR=16
AML Almayashu 26.78 300 *eP* **P 16 12 37.0 +1.3**
comp=Z,12nm,0.8s,mb4.5
KURK Kurchatov 26.79 321 P **P 16 12 36.1 +0.5**
comp=Z,4.6nm,0.6s,mb4.2,baz=135,slow=8.7,SNR=41
KURK PcP PcP 16 15 57.1 -1.3
comp=Z,0.7nm,0.8s,baz=114,slow=2.0,SNR=4.2
KURK Kurchatov 26.79 321 P **P 16 12 36.2 +0.6**
KURK 16 15 57.1
KURK pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
KURK pmax pmax
comp=Z,1.0nm,0.9s,mb3.4
KURK Kurchatov 26.79 321 *eP* **P 16 12 35.4 -0.2**
KURK PcP PcP 16 15 57.1 -1.3
EKS2 Erkin-Say 26.82 301 P **P 16 12 37.5 +1.4**
SNR=7.0
EKS2 Erkin-Say 26.82 301 *eP* **P 16 12 35.1 -0.9**
comp=Z,3.2nm,0.6s,mb4.0
NRGR Nerungri 27.67 23 *eP* **P 16 12 36.3 -7.2**
BVAR Borovoye Array 32.37 320 P **P 16 13 25.4 +0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=116,slow=10,SNR=9.9
BVAR Borovoye Array 32.37 320 P **P 16 13 25.4 +0.3**
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 32.44 320 *ceP* **P 16 13 26.8 +1.1**
BRVK pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
BRVK Borovoye 32.44 320 *eP* **P 16 13 26.3 +0.6**
comp=Z,4.1nm,0.6s,mb4.4
YAK Yakutsk 33.47 21 *eP* **P 16 13 41.1 +6.4**
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.8
ABKAR Akbulak array 37.53 310 *eP* **P 16 14 09.8 0.0**
comp=Z,5.9nm,0.8s,mb4.4
AKTK Aktyubinsk 38.95 312 P **P 16 14 21.9 +0.3**
AKTO Aktyubinsk 38.95 312 P **P 16 14 21.9 +0.3**
comp=Z,2.9nm,0.6s,mb4.2,baz=111,slow=13,SNR=11
AKTO Aktyubinsk 38.95 312 P **P 16 14 22.0 +0.3**
AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
TIXI Tiksi 41.22 11 *eP* **P 16 14 38.6 -1.6**
TIXI pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
TIXI Tiksi 41.22 11 *eP* **P 16 14 39.8 -0.4**
comp=Z,2.7nm,0.6s,mb4.0
SEY Seymchan 42.41 30 *ceP* **P 16 14 50.2 +0.2**
MIB Mutribah 49.14 283 *eP* **P 16 15 42.8 -0.9**
MIB AMb AMB 16 15 44.2
comp=Z,17nm,0.9s,mb5.1
RDF Al-Radifah 49.25 282 *eP* **P 16 15 44.6 +0.1**
RDF AMb AMB 16 15 46.1
comp=Z,27nm,1.7s,mb5.0
KIV Kislovodsk 49.41 302 *eP* **P 16 15 45.0 -0.6**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BILL Biiibino 49.51 26 *eP* **P 16 15 49.4 +3.4**
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
VSR Storozhevoye 50.90 312 *eP* **P 16 15 56.5 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,9.0nm,0.7s
OBN Obninsk 52.14 317 *eP* **P 16 16 05.5 -0.5**
OBN pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
JOF Joensuu 54.41 327 *eP* **P 16 16 17.3 -5.3**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
JOF Joensuu 54.41 327 *ep* **P 16 16 17.3 -5.3**
comp=Z,1.4nm,0.5s,mb4.2
KEV Kevo 55.89 336 *eP* **P 16 16 31.6 -1.6**
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KEV Kevo 55.89 336 *ep* **P 16 16 31.6 -1.6**
comp=Z,8.2nm,0.6s,mb4.9
ARCES ARCESS Array B 56.43 335 P **P 16 16 36.7 -0.3**
comp=Z,7.5nm,0.8s,mb4.8,baz=82,slow=7.7,SNR=17
ARCES ARCESS Array B 56.43 335 P **P 16 16 36.7 -0.3**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
ARCES ARCESS Array B 56.43 335 P **P 16 16 36.7 -0.3**
KAF Kangasniemi 56.80 327 *eP* **P 16 16 38.5 -1.2**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KAF Kangasniemi 56.80 327 *ep* **P 16 16 38.5 -1.2**
comp=Z,1.7nm,0.5s,mb4.3
BR131 Keskin Array S 56.94 299 *eP* **P 16 16 40.4 -0.7**
comp=Z,2.2nm,0.7s,mb4.3
BRTR Keskin Array B 56.94 299 P **P 16 16 41.1 0.0**
comp=Z,2.2nm,0.8s,mb4.2,baz=102,slow=7.1,SNR=12
BRTR Keskin Array B 56.94 299 P **P 16 16 41.1 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 56.99 326 P **P 16 16 40.8 -0.3**
comp=Z,2.2nm,0.5s,mb4.4,baz=84,slow=7.5,SNR=16
FINES FINESS Array B 56.99 326 P **P 16 16 40.8 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 57.19 313 P **P 16 16 42.0 -0.6**
comp=Z,5.1nm,0.6s,mb4.8,baz=70,slow=6.1,SNR=16
AKASG Malin Array Be 57.19 313 *ceP* **P 16 16 42.0 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 57.20 313 *eP* **P 16 16 41.9 -0.8**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KIEV Kiev 57.20 313 *eP* **P 16 16 41.9 -0.9**
comp=Z,3.3nm,0.6s,mb4.5
MMAI Mount Meron Ar 57.72 291 P **P 16 16 48.1 +1.4**
comp=Z,1.2nm,0.3s,mb4.4,baz=73,slow=11,SNR=5.9
WRAB Tennant Creek 59.07 148 *eP* **P 16 16 55.7 -0.4**
WRAB pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
WRAB Tennant Creek 59.07 148 *eP* **P 16 16 55.7 -0.4**
comp=Z,9.5nm,0.8s,mb4.9
WRA Warramunga Arr 59.08 148 P **P 16 16 55.9 -0.2**
comp=Z,7.3nm,0.8s,mb4.8,baz=342,slow=7.2,SNR=16
WRA Warramunga Arr 59.08 148 P **P 16 16 55.9 -0.3**
WRA pmax pmax
comp=Z,7.0nm,0.8s
KOLS Kolonicke sedl 61.99 312 *eP* **P 16 17 15.7 -0.1**
KOLS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KOLS Kolonicke sedl 61.99 312 *eP* **P 16 17 15.7 -0.1**
comp=Z,2.1nm,0.6s,mb4.4
KOLS Kolonicke sedl 61.99 312 *eP* **P 16 17 15.7 -0.1**
ASAR Alice Springs 62.16 150 P **P 16 17 17.4 +0.3**
comp=Z,2.7nm,0.9s,mb4.4,baz=332,slow=6.7,SNR=8.4
ASAR Alice Springs 62.16 150 P **P 16 17 17.4 +0.3**
ASAR pmax pmax
comp=Z,3.0nm,0.9s
STHS Stebnicka Huta 62.48 313 *eP* **P 16 17 19.1 0.0**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
STHS Stebnicka Huta 62.48 313 *eP* **P 16 17 19.1 0.0**
comp=Z,2.6nm,0.7s,mb4.5
STHS Stebnicka Huta 62.48 313 *eP* **P 16 17 19.1 0.0**
KECS Kecovo 63.26 312 *eP* **P 16 17 24.4 +0.1**
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KECS Kecovo 63.26 312 *eP* **P 16 17 24.4 +0.1**
comp=Z,1.2nm,0.7s,mb4.1
KECS Kecovo 63.26 312 *eP* **P 16 17 24.4 +0.1**
NB2 NORSAR Subarra 64.05 327 P **P 16 17 28.0 -1.3**
comp=Z,2.2nm,0.6s,mb4.4,baz=71,slow=6.9
NOA NORSAR Array B 64.05 327 P **P 16 17 28.1 -1.2**
comp=Z,1.8nm,0.6s,mb4.3,baz=71,slow=6.7,SNR=14
NOA NORSAR Array B 64.05 327 P **P 16 17 28.1 -1.2**
NOA pmax pmax
comp=Z,2.0nm,0.6s
BRG Berggiesshubel 66.36 316 *eP* **P 16 17 44.3 -0.2**
comp=Z,4.0nm,0.9s,mb4.5
BRG Berggiesshubel 66.36 316 *eP* **P 16 17 44.4 -0.1**
comp=Z,3.3nm,0.7s,mb4.5
BRG Berggiesshubel 66.36 316 *eP* **P 16 17 44.4 -0.1**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
CLL Collm 66.74 317 *eP* **P 16 17 46.5 -0.4**
comp=Z,5.0nm,1.3s,mb4.4
CLL Collm 66.74 317 *eP* **P 16 17 46.0 -0.9**
CLL *e* 16 17 51.0
CLL pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
CLL Collm 66.74 317 *eP* **P 16 17 46.0 -0.9**
comp=Z,4.0nm,1.2s,mb4.3
CLL *e* 16 17 51.0
CLL Collm 66.74 317 *eP* **P 16 17 46.0 -0.9**
comp=Z,4.0nm,1.2s,mb4.3
CLL *ep*P pP 16 17 51.0 +0.9
CLL LmV 16 44 00.0
comp=Z,500nm,20.6s
BSEG Bad Segeberg 67.19 320 *eP* **P 16 17 50.3 +0.6**
comp=Z,10.0nm,0.9s,mb4.8
BSEG Bad Segeberg 67.19 320 *eP* **P 16 17 50.4 +0.7**
BSEG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 67.31 314 *eP* **P 16 17 50.5 0.0**
comp=Z,3.0nm,0.7s,mb4.4
GEC2 GERESS Array S 67.31 314 *eP* **P 16 17 50.5 0.0**
GEC2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
GERES GERESS Array B 67.31 314 P **P 16 17 50.8 +0.2**
comp=Z,1.4nm,0.6s,mb4.2,baz=64,slow=6.1,SNR=19
GERES GERESS Array B 67.31 314 P **P 16 17 50.8 +0.3**
GERES pmax pmax
comp=Z,1.0nm,0.6s
TANN Tannenbergstha 67.41 316 *eP* **P 16 17 51.3 +0.1**
comp=Z,6.0nm,1.1s,mb4.5
WERD Werda 67.49 316 *eP* **P 16 17 51.4 -0.3**
NKC Novy Kostel 67.49 316 *eP* **P 16 17 52.2 +0.5**
GUNZ Gunzen 67.51 316 *eP* **P 16 17 51.6 -0.2**
WERN Wernitzgruen 67.51 316 *eP* **P 16 17 51.8 0.0**
PLN Plauen 67.56 316 *eP* **P 16 17 52.0 -0.1**
WET Wettzell 67.68 315 *eP* **P 16 17 53.0 +0.1**
comp=Z,4.0nm,1.1s,mb4.4
WET Wettzell 67.68 315 *eP* **P 16 17 53.0 +0.1**
WET pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
ROTZ Rotzenmuhle 67.83 316 *eP* **P 16 17 54.0 +0.2**
comp=Z,5.0nm,0.9s,mb4.5
NRDL Niedersach Rie 67.90 319 *eP* **P 16 17 54.3 +0.1**
comp=Z,7.0nm,0.9s,mb4.7
CLZ Clausthal 68.02 318 *eP* **P 16 17 55.2 +0.2**
comp=Z,7.0nm,0.8s,mb4.7
CLZ Clausthal 68.02 318 *eP* **P 16 17 55.2 +0.2**
CLZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
GRA1 Grafenberg Arr 68.44 316 *eP* **P 16 17 58.0 +0.3**
comp=Z,11nm,0.9s,mb4.9
GRF Grafenberg Arr 68.44 316 *eP* **P 16 17 58.0 +0.3**
comp=Z,11nm,0.9s,mb4.9
GRF Grafenberg Arr 68.44 316 *eP* **P 16 17 58.0 +0.3**
GRF pmax pmax
comp=Z,11nm,0.9s,mb4.9
GRF Grafenberg Arr 68.44 316 *eP* **P 16 17 58.0 +0.3**
GRF pmax pmax
comp=Z,11nm,0.9s,mb4.9
TNS Taunus Mts 69.82 317 *eP* **P 16 18 05.7 -0.5**
comp=Z,12nm,1.3s,mb4.7
TNS Taunus Mts 69.82 317 *eP* **P 16 18 05.7 -0.5**
TNS pmax pmax
comp=Z,12nm,1.3s,mb4.7
BFO Black Forest 70.75 315 *eP* **P 16 18 12.2 +0.3**
comp=Z,8.0nm,1.6s,mb4.4
BFO Black Forest 70.75 315 *eP* **P 16 18 12.2 +0.3**
BFO pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
CDF Champ du Feu 71.33 316 *eP* **P 16 18 15.0 -0.5**
comp=Z,7.3nm,0.7s,mb4.4
CDF Champ du Feu 71.33 316 *eP* **P 16 18 15.0 -0.5**
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CDF Champ du Feu 71.33 316 *eP* **P 16 18 15.0 -0.5**
comp=Z,3.7nm,0.7s,mb4.4
WLF Walferdange 71.39 317 *eP* **P 16 18 16.3 +0.5**
comp=Z,10.0nm,0.8s,mb4.8
HINF Hinteralfeld 71.86 315 *eP* **P 16 18 17.9 -0.8**
BAIF Baives 72.31 318 *eP* **P 16 18 21.0 -0.3**
STKA Stephens Creek 72.62 148 P **P 16 18 22.8 -0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=323,slow=15,SNR=2.4
CABF La Chapelle 72.90 315 *eP* **P 16 18 24.2 -0.7**
LPG La Plagne 73.04 313 *eP* **P 16 18 26.1 +0.3**
comp=Z,29nm,0.7s,mb5.0
LPG La Plagne 73.04 313 *eP* **P 16 18 26.1 +0.3**
LPG pmax pmax
comp=Z,14nm,0.7s,mb5.0
LPG La Plagne 73.04 313 *eP* **P 16 18 26.1 +0.3**
comp=Z,14nm,0.7s,mb5.0
PGF Pioggiola 73.04 310 *eP* **P 16 18 25.7 -0.1**
comp=Z,11nm,0.6s,mb4.7
PGF Pioggiola 73.04 310 *eP* **P 16 18 25.7 -0.1**
PGF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
PGF Pioggiola 73.04 310 *eP* **P 16 18 25.7 -0.1**
comp=Z,5.6nm,0.6s,mb4.7
LPL La Plagne 73.04 313 *eP* **P 16 18 26.0 +0.2**
comp=Z,22nm,0.6s,mb5.0
LPL La Plagne 73.04 313 *eP* **P 16 18 26.0 +0.2**
LPL pmax pmax
comp=Z,11nm,0.6s,mb5.0
LPL La Plagne 73.04 313 *eP* **P 16 18 26.0 +0.2**
comp=Z,11nm,0.6s,mb5.0
MBDF Montbardon 73.40 313 *eP* **P 16 18 27.9 0.0**
comp=Z,5.9nm,0.8s,mb4.3
MBDF Montbardon 73.40 313 *eP* **P 16 18 27.9 0.0**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MBDF Montbardon 73.40 313 *eP* **P 16 18 27.9 0.0**
comp=Z,3.0nm,0.8s,mb4.3
SBF Sospel 73.41 312 *eP* **P 16 18 27.4 -0.6**
comp=Z,17nm,0.8s,mb4.7
SBF Sospel 73.41 312 *eP* **P 16 18 27.4 -0.6**
SBF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SBF Sospel 73.41 312 *eP* **P 16 18 27.4 -0.6**
comp=Z,8.4nm,0.8s,mb4.7
ORIF Oris-en-Rattie 73.86 313 *eP* **P 16 18 30.3 -0.3**
comp=Z,9.8nm,0.7s,mb4.6
ORIF Oris-en-Rattie 73.86 313 *eP* **P 16 18 30.3 -0.3**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 73.86 313 *eP* **P 16 18 30.3 -0.3**
comp=Z,4.9nm,0.7s,mb4.5
SSF Saint Saulge 74.21 316 *eP* **P 16 18 31.6 -1.0**
SMF Signal de Mont 74.23 315 *eP* **P 16 18 32.0 -0.7**
comp=Z,11nm,0.8s,mb4.5
SMF Signal de Mont 74.23 315 *eP* **P 16 18 32.0 -0.7**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SMF Signal de Mont 74.23 315 *eP* **P 16 18 32.0 -0.7**
comp=Z,5.5nm,0.8s,mb4.5
AVF Avril sur Loir 74.44 316 *eP* **P 16 18 33.2 -0.8**
comp=Z,7.0nm,0.8s,mb4.4
AVF Avril sur Loir 74.44 316 *eP* **P 16 18 33.2 -0.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AVF Avril sur Loir 74.44 316 *eP* **P 16 18 33.2 -0.8**
comp=Z,3.5nm,0.8s,mb4.3
LASF Ste Croix 75.54 313 *eP* **P 16 18 39.9 -0.4**
RJF Les Rejaudoux 76.31 315 *eP* **P 16 18 44.7 0.0**
MFF Saint Martin d 76.58 317 *eP* **P 16 18 46.1 -0.2**
LFF La Frestale 76.97 315 *eP* **P 16 18 48.5 0.0**
ETSF Etsaut 78.88 314 *eP* **P 16 18 59.4 +0.3**
comp=Z,4.4nm,0.6s,mb4.3
ETSF Etsaut 78.88 314 *eP* **P 16 18 59.4 +0.3**
ETSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ETSF Etsaut 78.88 314 *eP* **P 16 18 59.4 +0.3**
comp=Z,2.2nm,0.6s,mb4.3
SJPF Ste Jean 79.16 314 *eP* **P 16 19 01.2 +0.5**
comp=Z,7.6nm,0.7s,mb4.4
SJPF Ste Jean 79.16 314 *eP* **P 16 19 01.2 +0.5**
SJPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SJPF Ste Jean 79.16 314 *eP* **P 16 19 01.2 +0.5**
comp=Z,3.8nm,0.7s,mb4.4
YKA Yellowknife Ar 80.09 18 P **P 16 19 04.9 -0.4**
comp=Z,0.6nm,0.5s,mb3.8,baz=329,slow=5.1,SNR=8.2
YKA Yellowknife Ar 80.09 18 P **P 16 19 04.9 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 80.09 18 P **P 16 19 04.9 -0.4**
ULM Lac du Bonnet 95.53 13 P **P 16 20 20.1 -0.7**
comp=Z,3.0nm,0.4s,mb5.1,baz=7.7,slow=5.6,SNR=7.2
ULM Lac du Bonnet 95.53 13 P **P 16 20 20.1 -0.7**

HLW ***15*** *16:08:01.0, 34.°91N×26.°34E, h33km±35km, Ml3.0*
IDC ***15*** *16:08:01.6±1.4, 34.°79N×26.°10E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.5/21, mbtmp3.9/4, Error ellipse: s-maj=65.4km s-min=24.5km az=137.0*
CSEM ***15*** *16:08:03.3±0.2, 34.°54N×26.°26E, h8km, MD3.6, Error ellipse: s-maj=6.0km s-min=3.4km az=59.0*
ISCJB ***15*** *16:08:03.4±0.8, 34.°57N±0.°05×26.°33E±0.°08, h28km±9km, mb3.9/4, Error ellipse: s-maj=10.7km s-min=7.7km az=164.7*
NEIC ***15*** *16:08:05.1, 34.°64N×26.°24E, h5km, MD3.6(ATH), After ATH.*
ATH ***15*** *16:08:05.1, 34.°64N×26.°24E, h5km, MD3.6/5*
ISC 15 16:08:03.9±0.9, 34.°58N±0.°05×26.°26E±0.°06, h17km±8km, n33, σ0.9 65/40, mb3.9/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.54**	**356**	*e*PG	**Pg**	**16 08 14.3**	**-0.3**
ZKR				*e*SB	**Sg**	**16 08 21.6**	**-0.2**
ZKR	**Zakros**	**0.54**	**356**	*e*Pg	**Pg**	**16 08 14.3**	**-0.3**
ZKR				*e*Sb	**Sg**	**16 08 21.6**	**-0.2**
XRY	**Khrisi**	**0.55**	**303**	*e*PG	**Pg**	**16 08 14.6**	**-0.3**
XRY	**Khrisi**	**0.55**	**303**	*e*Pg	**Pg**	**16 08 14.6**	**-0.3**
NPS	**Neapolis**	**0.86**	**322**	*e*PB	**Pg**	**16 08 21.2**	**+0.4**
NPS	**Neapolis**	**0.86**	**322**	*e*Pb	**Pg**	**16 08 21.2**	**+0.4**
LAST	**Lasithi**	**0.87**	**312**	*e*PG	**Pg**	**16 08 20.2**	**-0.6**
LAST				*e*SB	**Sg**	**16 08 32.9**	**+0.7**
LAST	**Lasithi**	**0.87**	**312**	*e*Pg	**Pg**	**16 08 20.2**	**-0.6**
LAST				*e*Sb	**Sg**	**16 08 32.9**	**+0.7**
KARP	**Karpathos**	**1.22**	**37**	*e*PB	**Pb**	**16 08 28.0**	**+1.6**
KARP	**Karpathos**	**1.22**	**37**	*e*Pb	**Pb**	**16 08 28.0**	**+1.6**
SIVA	**Sivas**	**1.27**	**291**	*e*PG	**Pg**	**16 08 28.3**	**-0.1**
SIVA	**Sivas**	**1.27**	**291**	*e*Pg	**Pg**	**16 08 28.3**	**-0.1**
GVD	**Gavdhos**	**1.81**	**279**	*e*PN	**Pg**	**16 08 39.2**	**+0.5**
GVD	**Gavdhos**	**1.81**	**279**	*e*P	**Pn**	**16 08 34.1**	**-0.2**
GVD				*e*Pn	**Pg**	**16 08 39.2**	**+0.5**
GVD	**Gavdhos**	**1.81**	**279**	*e*Pn	**Pg**	**16 08 39.2**	**+0.5**
KARN	**Karanos**	**2.09**	**294**	*e*PG	**Pg**	**16 08 43.3**	**-0.8**
KARN	**Karanos**	**2.09**	**294**	*e*Pg	**Pg**	**16 08 43.3**	**-0.8**
SLUM		**3.20**	**196**	P	**Pn**	**16 08 54.0**	**+0.6**
	baz=196						
SLUM				AMP		16 09 00.0	
	comp=N,30μm,1.0s,logA/T=4.5,baz=196						
SLUM		**3.20**	**196**	P	**Pn**	**16 08 54.0**	**+0.6**
HMAT	**Matruh**	**3.55**	**168**	P	**Pn**	**16 08 58.2**	**0.0**
	baz=170						
HMAT				AMP		16 09 00.0	
	comp=E,20μm,1.4s,logA/T=4.2,baz=170						
HMAT				S	**Sn**	**16 09 38.9**	**-0.7**
	baz=170						
HMAT	**Matruh**	**3.55**	**168**	P	**Pn**	**16 08 58.2**	**+0.1**
HMAT				S	**Sn**	**16 09 38.9**	**-0.7**
SWA2		**5.36**	**188**	P	**Pn**	**16 09 24.0**	**+0.8**
	baz=188						
SWA2		**5.36**	**188**	P	**Pn**	**16 09 24.0**	**+0.9**
GLL	**Jalalah**	**6.80**	**136**	P	**Pn**	**16 09 42.2**	**-0.7**
	baz=138						
GLL	**Jalalah**	**6.80**	**136**	P	**Pn**	**16 09 42.2**	**-0.7**
HFRF	**Wahat Farafira**	**7.61**	**166**	P	**Pn**	**16 09 53.7**	**-0.4**
	baz=167						
HFRF	**Wahat Farafira**	**7.61**	**166**	P	**Pn**	**16 09 53.7**	**-0.3**
TIP	**Timpagrande**	**8.89**	**304**	P	**Pn**	**16 10 11.0**	**-0.4**
TOA0	**Torodi Ar. Sit**	**30.83**	**232**	*e*P	**P**	**16 14 19.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**30.83**	**232**	P	**P**	**16 14 19.6**	**+0.6**
	comp=E,1.2nm,0.5s,mb4.0,baz=32,slow=8.9,SNR=17						
ARCES	**ARCESS Array B**	**35.01**	**360**	P	**P**	**16 14 53.7**	**-1.4**
	comp=E,1.4nm,0.9s,mb3.9,baz=165,slow=10.0,SNR=4.1						
MKAR	**Makanchi Array**	**43.34**	**56**	P	**P**	**16 16 05.5**	**+0.6**
	comp=E,0.8nm,0.7s,mb3.5,baz=287,slow=6.1,SNR=5.0						
ZALV	**Zalesovo Beam**	**44.76**	**46**	P	**P**	**16 16 15.8**	**-0.4**
	comp=E,1.4nm,0.4s,mb4.1,baz=279,slow=9.4,SNR=5.8						

CSEM ***15*** *16:17:02.2±0.3, 50.°02N×18.°30E, h1km, ML2.0/4, Error ellipse: s-maj=7.3km s-min=4.6km az=21.0*
PRU ***15*** *16:17:02.9, 50.°02N×18.°30E, h0km*
WAR 15 16:17:00.5, 50.°05N×18.°43E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.16**	**282**	*e*Pg	Pg	16 17 04.5	+1.0
OKC	**Ostrava-Krasne**	**0.28**	**221**	*e*PG	Pg	16 17 06.4	+0.5
OKC				*e*SG	Sg	16 17 10.9	+1.4
	comp=Z,31nm,0.6s						
OKC	**Ostrava-Krasne**	**0.28**	**221**	Pg	Pg	16 17 06.4	+0.5
OKC				Sg	Sg	16 17 10.9	+1.4
	comp=Z,31nm,0.6s						
MORC	**Moravsky Berou**	**0.64**	**245**	*e*Pg	Pg	16 17 12.7	0.0
MORC				*e*Sg	Sg	16 17 21.0	0.0
OJC	**Ojcow**	**0.89**	**79**	*e*Pg	Pg	16 17 17.5	-0.1
OJC				*e*Sg	Sg	16 17 29.9	+0.7
NIE	**Niedzica**	**1.37**	**117**	*e*Pg	Pg	16 17 27.1	+0.3
NIE				*e*Sg	Sg	16 17 47.3	+2.7
DPC	**Dobruska-Polom**	**1.39**	**283**	*e*P	Pn	16 17 26.6	-0.5
DPC	**Dobruska-Polom**	**1.39**	**283**	*e*PG	Pg	16 17 26.6	-0.5
DPC				*e*SG	Sg	16 17 45.1	0.0
	comp=Z,14nm,0.8s						
DPC	**Dobruska-Polom**	**1.39**	**283**	Pg	Pg	16 17 26.6	-0.5
DPC				Sg	Sg	16 17 45.1	0.0
	comp=Z,14nm,0.8s						
VYHS	**Vyhne**	**1.58**	**170**	*e*P	Pn	16 17 30.0	+0.3
VYHS				pmax	pmax		
	comp=N,2.0nm,0.7s						
VYHS	**Vyhne**	**1.58**	**170**	*e*P	Pn	16 17 31.4	+1.7
VYHS	**Vyhne**	**1.58**	**170**	*e*PN	Pn	16 17 30.0	+0.3
VYHS				*e*SN	Sn	16 17 50.9	+0.1
VYHS	**Vyhne**	**1.58**	**170**	*e*Pn	Pn	16 17 30.0	+0.3
VYHS	**Vyhne**	**1.58**	**170**	*e*P	Pn	16 17 31.4	+1.7
	comp=N,1.9nm,0.9s						
VYHS				*e*Sn	Sn	16 17 50.9	+0.1
STHS	**Stebnicka Huta**	**1.93**	**108**	*e*PN	Pn	16 17 38.0	+3.5
STHS				*e*SG	Sg	16 18 06.9	+4.4
STHS	**Stebnicka Huta**	**1.93**	**108**	*e*Pn	Pn	16 17 38.0	+3.5
STHS				*e*Sg	Sg	16 18 06.9	+4.4
PRU	**Pruhonice**	**2.51**	**270**	*e*SG	Sg	16 18 19.9	-1.2
	comp=Z,2.6nm,0.6s						
PRU	**Pruhonice**	**2.51**	**270**	Sg	Sg	16 18 19.9	-1.2
	comp=Z,2.6nm,0.6s						
BRG	**Berggiesshubel**	**2.99**	**288**	SG	Sg	16 18 35.1	-1.3
	comp=Z,2.8nm,0.6s						
KHC	**Kasperske Hory**	**3.29**	**256**	*e*SG	Sg	16 18 45.5	-0.7
	comp=Z,1.8nm,0.6s						
KHC	**Kasperske Hory**	**3.29**	**256**	Sg	Sg	16 18 45.5	-0.7

comp=Z,1.8nm,0.6s

*NEIC **15** 16:31:23.6±2.8, 39°.58N×144°.95E, h53km±16km, mb4.2/1, Error ellipse: s-maj=37.8km s-min=12.6km az=96.0*
*JMA **15** 16:31:28.3±0.2, 40°.20N×143°.35E, h6km±3km, M3.7*
*ISCJB **15** 16:31:29.6±0.8, 40°.12N±0°.04×143°.52E±0°.07, h33km, mb3.6/4, Error ellipse: s-maj=8.5km s-min=4.7km az=27.7*
*IDC **15** 16:31:32.2±7.7, 40°.48N×142°.67E, h0km, mb3.7/4, mb1 3.5/6, mb1mx3.4/24, mbtmp3.6/6, ML3.0/2, Error ellipse: s-maj=149.7km s-min=29.3km az=109.0*

ISC 15 16:31:30.2±1.9, 40°.15N±0°.05×143°.44E±0°.09, h23km±20km, n22, σ0s85/32, mb3.6/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.23**	**261**	P	**Pn**	**16 31 50.6**	**-1.4**
JTH				eS	**Sn**	**16 32 06.2**	**-1.7**
MIYJ	**Miyakonagasawa**	**1.37**	**246**	P	**Pn**	**16 31 53.0**	**-0.9**
MIYJ				eS	**Sn**	**16 32 10.3**	**-1.1**
JANG	**Nango**	**1.49**	**279**	P	**Pn**	**16 31 54.4**	**-1.2**
JOM	**Ohasama**	**1.79**	**249**	P	**Pn**	**16 31 59.6**	**-0.1**
JOM				eS	**Sn**	**16 32 21.4**	**-0.2**
ERM	**Erimo**	**1.88**	**353**	eP	**Pn**	**16 32 05.7**	**+4.8**
JEM	**Erimo**	**1.88**	**353**	P	**Pn**	**16 32 00.9**	**0.0**
JTM	**Tenmabayashi**	**1.92**	**290**	P	**Pn**	**16 32 01.1**	**-0.4**
JTM				eS	**Sn**	**16 32 25.8**	**+0.9**
JMK	**Ichinoseki**	**2.09**	**236**	P	**Pn**	**16 32 03.8**	**0.0**
JAH	**Hinai**	**2.15**	**272**	P	**Pn**	**16 32 04.8**	**+0.2**
JAH				eS	**Sn**	**16 32 31.6**	**+1.0**
JNBK	**Urakawa-nobuka**	**2.19**	**346**	P	**Pn**	**16 32 05.7**	**+0.5**
JNBK				eS	**Sn**	**16 32 32.4**	**+0.8**
JOT	**Ohata**	**2.20**	**305**	P	**Pn**	**16 32 04.8**	**-0.5**
JOT				eS	**Sn**	**16 32 32.4**	**+0.7**
JCH	**Churui**	**2.46**	**359**	P	**Pn**	**16 32 08.3**	**-0.6**
JCH				eS	**Sn**	**16 32 36.8**	**-1.5**
JKB	**Kayabe**	**2.52**	**314**	P	**Pn**	**16 32 10.3**	**+0.6**
JKB				eS	**Sn**	**16 32 40.2**	**+0.5**
ASAJ	**Asahikawa**	**4.01**	**351**	Pn	**Pn**	**16 32 30.1**	**-0.1**
	0.8nm,0.3s,baz=214,slow=9.6,SNR=8.9						
ASAJ				Sn	**Sn**	**16 33 12.4**	**-4.1**
	1.1nm,0.3s,baz=214,slow=19,SNR=4.4						
MJAR	**Matsushiro Arr**	**5.47**	**230**	Pn	**Pn**	**16 32 51.7**	**+1.5**
	0.5nm,0.3s,baz=40,slow=11,SNR=13						
MAJO	**Matsushiro**	**5.47**	**230**	eP	**Pn**	**16 32 51.4**	**+1.1**
	7.2nm,0.6s						
MAT	**Matsushiro**	**5.47**	**230**	P	**Pn**	**16 32 51.6**	**+1.4**
ZALV	**Zalesovo Beam**	**41.07**	**310**	P	**P**	**16 39 12.0**	**+0.3**
	0.4nm,0.5s,mb3.3,baz=84,slow=7.4,SNR=2.5						
MKAR	**Makanchi Array**	**43.89**	**300**	P	**P**	**16 39 34.9**	**+0.2**
	0.4nm,0.8s,mb3.2,baz=72,slow=6.5,SNR=3.2						
KURK	**Kurchatov**	**45.33**	**306**	P	**P**	**16 39 46.6**	**+0.5**
	3.0nm,0.7s,mb4.2,baz=79,slow=8.6,SNR=16						
KURK	**Kurchatov**	**45.33**	**306**	eP	**P**	**16 39 45.3**	**-0.8**
	2.0nm,0.7s,mb4.1						
BVAR	**Borovoye Array**	**49.70**	**311**	P	**P**	**16 40 20.3**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=60,slow=7.0,SNR=4.1						

*NEIC **15** 16:31:48.9±3.9, 26°.67N×102°.99E, h35km, mb3.7/3, Error ellipse: s-maj=70.9km s-min=25.1km az=154.0*
*IDC **15** 16:31:49.0±1.0, 27°.23N×102°.68E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, Error ellipse: s-maj=40.6km s-min=17.9km az=57.0*
*BJI **15** 16:31:50.4, 27°.29N×102°.83E, h15km, mb4.3/1, ML3.3/8*

ISC 15 16:31:50.9±2.4, 27°.24N±0°.09×102°.52E±0°.09, h11km±18km, n18, σ1s13/20, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.12**	**175**	Pg	**Pg**	**16 32 30.4**	**-1.1**
KMI				Sg	**Sg**	**16 32 59.8**	**+0.9**
KMI				smax			
	comp=N,170nm,0.8s						
KMI				smax			
	comp=E,190nm,0.8s						
KMI				LR	LR		
	comp=N,1μm,5.6s						
KMI				LR	LR		
	comp=E,2μm,6.4s						
KMI				LR	LR		
	comp=Z,750nm,7.4s						
GYA	**Guiyang**	**3.78**	**101**	Pg	**Pn**	**16 32 49.6**	**+0.5**
GYA				Sg	**Sn**	**16 33 34.8**	**+1.1**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,110nm,0.7s						
SONM	**Songino Array**	**20.78**	**7**	P	**P**	**16 36 33.5**	**+1.6**
	comp=E,0.6nm,0.3s,baz=186,slow=39,SNR=2.8						
ULN	**Ulaanbaatar**	**20.89**	**9**	P	**P**	**16 36 32.7**	**-0.4**
	comp=E,0.9nm,0.4s						
KSRS	**Korea Array**	**23.69**	**58**	P	**P**	**16 37 00.4**	**-2.4**
	comp=E,0.8nm,0.5s,mb3.4,baz=246,slow=9.7,SNR=5.2						
MK31	**Makanchi Array**	**25.20**	**326**	eP	**P**	**16 37 17.1**	**+0.7**
MKAR	**Makanchi Array**	**25.20**	**326**	P	**P**	**16 37 18.7**	**+2.2**
	comp=E,0.9nm,0.5s,mb3.6,baz=126,slow=11,SNR=10						
KURK	**Kurchatov**	**29.67**	**329**	P	**P**	**16 37 57.0**	**+0.5**
	comp=E,1.6nm,0.6s,mb3.9,baz=134,slow=10,SNR=10						
KURK	**Kurchatov**	**29.67**	**329**	P	**P**	**16 37 56.4**	**0.0**
	comp=E,2.0nm,0.5s,mb4.1						
ZALV	**Zalesovo Beam**	**29.70**	**339**	P	**P**	**16 37 57.1**	**+0.4**
	comp=E,0.4nm,0.5s,mb3.5,baz=133,slow=11,SNR=3.6						
ABKAR	**Akbulak array**	**39.33**	**316**	eP	**P**	**16 39 20.9**	**+0.9**
	comp=E,0.3nm,0.4s,mb3.4						
TIXI	**Tiksi**	**46.80**	**11**	eP	**P**	**16 40 18.5**	**-1.6**
WRA	**Warramunga Arr**	**56.12**	**143**	P	**P**	**16 41 30.2**	**-0.3**
	comp=E,0.6nm,0.6s,mb3.8,baz=333,slow=8.2,SNR=9.6						
WRA	**Warramunga Arr**	**56.12**	**143**	P	**P**	**16 41 30.2**	**-0.3**
ASAR	**Alice Springs**	**58.99**	**146**	P	**P**	**16 41 49.9**	**-0.8**
	comp=E,0.5nm,0.5s,mb3.8,baz=325,slow=6.2,SNR=5.2						
ASAR	**Alice Springs**	**58.99**	**146**	P	**P**	**16 41 49.9**	**-0.8**
FINES	**FINESS Array B**	**60.03**	**327**	P	**P**	**16 41 56.7**	**-0.7**
	comp=E,1.2nm,0.7s,mb4.1,baz=87,slow=12,SNR=4.6						
ARCES	**ARCESS Array B**	**60.23**	**337**	P	**P**	**16 41 57.3**	**-1.3**
	comp=E,0.9nm,0.8s,mb3.9,baz=89,slow=7.7,SNR=5.7						

*ISCJB **15** 16:40:42.0±0.4, 32°.46N±0°.04×105°.55E±0°.04, h10km, mb3.9/13, Error ellipse: s-maj=5.3km s-min=4.7km az=7.8*
*IDC **15** 16:40:42.9±0.9, 32°.43N×105°.37E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/27, mbtmp3.7/10, ML3.6/1, Error ellipse: s-maj=47.1km s-min=17.1km az=52.0*
*NEIC **15** 16:40:44.6±0.6, 32°.21N×104°.98E, h10km, mb4.2/2, Error ellipse: s-maj=29.7km s-min=9.1km az=47.0*
*BJI **15** 16:40:45.7, 32°.53N×105°.45E, h25km, mB4.7/4, mb4.3/4, ML3.7/10, Ms3.7/1, Ms7 3.6/2*

ISC 15 16:40:44.2±0.4, 32°.51N±0°.03×105°.49E±0°.04, h10km, n24, σ1s32/34, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.17**	**223**	Pg	**Pg**	**16 41 24.0**	**-1.8**
CD2				Sg	**Sg**	**16 41 52.9**	**-1.1**
CD2				smax			
	comp=N,2μm,0.9s						
XAN	**Xi'an**	**3.25**	**61**	Pn	**Pn**	**16 41 37.6**	**+2.3**
XAN				Pg	**Pg**	**16 41 44.9**	**-1.7**
XAN				Sg	**Sg**	**16 42 27.1**	**-1.7**
XAN				smax			
	comp=N,490nm,0.7s						
XAN				smax			
	comp=E,170nm,0.6s						
LZH	**Lanzhou**	**3.82**	**340**	Pn	**Pn**	**16 41 43.9**	**+0.8**
LZH				Pg	**Pg**	**16 41 54.4**	**-3.1**
LZH				Sg	**Sg**	**16 42 40.1**	**-6.9**
LZH				smax			
	comp=N,580nm,0.9s						
LZH				smax			
	comp=E,850nm,1.0s						
LZH				LR	LR		
	comp=E,790nm,6.7s						
LZH				LR	LR		
	comp=Z,970nm,8.6s						
ENH	**Enshi**	**4.08**	**122**	ePg	**Pn**	**16 41 50.2**	**+3.6**
ENH				ePg	**Pg**	**16 42 02.4**	**0.0**
ENH				eSg	**Sg**	**16 42 53.9**	**-1.3**
GYA	**Guiyang**	**6.11**	**170**	Pn	**Pn**	**16 42 16.5**	**+1.9**
GYA				Sn	**Sn**	**16 43 24.9**	**+0.3**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,50nm,0.6s						
WHN	**Wuhan**	**7.81**	**102**	P	**Pn**	**16 42 39.3**	**+1.4**
WHN				S	**Sn**	**16 44 06.4**	**0.0**
GTA	**Gaotai**	**8.28**	**328**	eP	**Pn**	**16 42 53.3**	**+8.9**
GTA				pP		16 42 56.6	
GTA				sP		16 42 59.4	
GTA				S	**Sn**	**16 44 25.3**	**+7.3**
GTA				sS		16 44 31.5	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA				pmax	pmax		
	comp=Z,160nm,5.0s						
GTA				LR	LR		
	comp=N,240nm,14.9s						
GTA				LR	LR		
	comp=E,130nm,12.8s						
GTA				LR	LR		
	comp=Z,230nm,14.3s						
KSRS	**Korea Array**	**19.02**	**69**	P	**Pn**	**16 45 06.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=249,slow=11,SNR=4.8						
MK31	**Makanchi Array**	**22.75**	**316**	eP	**P**	**16 45 47.1**	**+0.7**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**16 45 44.9**	**-1.5**
	comp=Z,0.7nm,0.7s,mb3.2,baz=117,slow=9.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**16 46 16.3**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.4,baz=134,slow=8.3,SNR=2.8						
KURK	**Kurchatov**	**26.88**	**321**	P	**P**	**16 46 23.9**	**-1.1**
	comp=Z,1.0nm,0.9s,mb3.4,baz=128,slow=9.4,SNR=3.5						
ABKAR	**Akbulak array**	**37.65**	**310**	eP	**P**	**16 47 58.3**	**-1.0**
TIXI	**Tiksi**	**41.15**	**11**	eP	**P**	**16 48 31.8**	**+3.6**
	comp=Z,2.2nm,0.8s,mb3.8						
ARCES	**ARCESS Array B**	**56.47**	**335**	P	**P**	**16 50 27.0**	**+1.1**
	comp=Z,2.5nm,0.8s,mb4.3,baz=70,slow=7.9,SNR=4.4						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 50 32.2**	**+2.0**
	comp=Z,1.0nm,0.7s,mb4.0,baz=58,slow=4.7,SNR=4.7						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**16 50 32.2**	**+2.0**
WRAB	**Tennant Creek**	**59.00**	**148**	eP	**P**	**16 50 44.4**	**+0.2**
	comp=Z,2.4nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**16 50 44.3**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.2,baz=340,slow=7.5,SNR=5.4						
ASAR	**Alice Springs**	**62.10**	**150**	P	**P**	**16 51 05.3**	**0.0**
	comp=Z,0.9nm,0.8s,mb4.0,baz=338,slow=6.5,SNR=7.9						
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**16 51 20.2**	**+2.0**
	comp=Z,0.9nm,0.8s,mb3.9,baz=70,slow=6.6,SNR=3.4						
GERES	**GERESS Array B**	**67.42**	**314**	P	**P**	**16 51 40.2**	**+0.4**
	comp=Z,0.3nm,0.3s,mb3.7,baz=104,slow=2.8,SNR=3.6						
LPG	**La Plagne**	**73.15**	**313**	eP	**P**	**16 52 11.0**	**-3.9**
	comp=Z,9.8nm,0.9s,mb4.5						
LPL	**La Plagne**	**73.15**	**313**	eP	**P**	**16 52 10.9**	**-4.1**
	comp=Z,5.4nm,0.7s,mb4.3						

*IDC **15** 17:03:11.8±0.8, 32°.42N×105°.16E, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.8/27, mbtmp3.8/14, ML3.7/1, Error ellipse: s-maj=36.3km s-min=15.3km az=50.0*
*NEIC **15** 17:03:13.5±0.4, 32°.42N×105°.13E, h10km, mb3.7/3, Error ellipse: s-maj=11.2km s-min=7.2km az=222.0*
*BJI **15** 17:03:14.2, 32°.47N×105°.36E, h20km, mB4.5/3, mb3.9/3, ML3.7/12, Ms3.7/4, Ms7 3.7/4*

ISC 15 17:03:11.7±0.9, 32°.46N±0°.03×105°.43E±0°.04, h3km±5km, n34, σ1s17/44, mb3.9/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.10**	**223**	Pg	**Pg**	**17 03 52.3**	**+0.3**
CD2				Sg	**Sg**	**17 04 19.8**	**+0.6**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**3.32**	**61**	Pn	**Pn**	**17 04 08.8**	**+4.2**
XAN				Pg	**Pg**	**17 04 14.5**	**-0.9**
XAN				Sn	**Sn**	**17 04 42.4**	**-2.2**
XAN				Sg	**Sg**	**17 04 58.0**	**-0.5**
XAN				smax			
	comp=N,230nm,0.8s						
XAN				smax			
	comp=E,110nm,0.6s						
LZH	**Lanzhou**	**3.85**	**341**	Pn	**Pn**	**17 04 14.4**	**+2.5**
LZH				Pg	**Pg**	**17 04 24.4**	**-1.2**
LZH				Sg	**Sg**	**17 05 11.3**	**-4.2**
LZH				smax			
	comp=N,760nm,0.6s						
LZH				smax			
	comp=E,1μm,0.6s						
LZH				LR	LR		
	comp=E,1μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,8.4s						
ENH	**Enshi**	**4.10**	**121**	ePn	**Pn**	**17 04 20.0**	**+4.7**
GYA	**Guiyang**	**6.07**	**169**	Pn	**Pn**	**17 04 48.4**	**+6.0**
GYA				Sn	**Sn**	**17 05 52.6**	**+0.1**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,80nm,0.7s						
KMI	**Kunming**	**7.68**	**199**	Pn	**Pn**	**17 05 00.3**	**-4.2**
KMI				Sn	**Sn**	**17 06 30.3**	**-1.7**
KMI				smax			
	comp=N,10.0nm,1.5s						
KMI				smax			
	comp=E,13nm,1.0s						
WHN	**Wuhan**	**7.85**	**102**	P	**Pn**	**17 05 08.8**	**+2.0**
WHN				S	**Sn**	**17 06 34.5**	**-1.7**
WHN				LR	LR		
	comp=N,1μm,3.9s						
WHN				LR	LR		
	comp=E,640nm,6.0s						
WHN				LR	LR		
	comp=Z,800nm,5.6s						
GTA	**Gaotai**	**8.30**	**328**	eP	**Pn**	**17 05 16.4**	**+3.5**
GTA				pP		17 05 19.6	
GTA				sP		17 05 22.4	
GTA				S	**Sn**	**17 06 55.4**	**+8.2**
GTA				sS		17 07 01.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,88nm,4.5s						
GTA				LR	LR		
	comp=N,200nm,11.9s						
GTA				LR	LR		
	comp=E,150nm,10.7s						
GTA				LR	LR		
	comp=Z,240nm,11.9s						
LSA	**Lhasa**	**12.55**	**261**	eP	**Pn**	**17 06 09.2**	**-2.0**
ULN	**Ulaanbaatar**	**15.44**	**4**	P	**Pn**	**17 06 52.5**	**+2.1**
	comp=Z,1.4nm,0.6s						
KSRS	**Korea Array**	**19.09**	**69**	P	**Pn**	**17 07 39.8**	**+3.6**
	comp=Z,0.2nm,0.3s,baz=254,slow=11,SNR=7.5						
MK31	**Makanchi Array**	**22.75**	**316**	eP	**P**	**17 08 15.4**	**+0.4**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**17 08 15.0**	**+0.1**
	comp=Z,1.5nm,0.6s,mb3.6,baz=114,slow=12,SNR=23						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**17 08 15.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**17 08 45.9**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.6,baz=137,slow=9.2,SNR=5.7						
ZALV	**Zalesovo Beam**	**26.03**	**332**	P	**P**	**17 08 45.9**	**0.0**
KURK	**Kurchatov**	**26.88**	**321**	P	**P**	**17 08 54.0**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.5,baz=135,slow=8.7,SNR=14						
KURK	**Kurchatov**	**26.88**	**321**	eP	**P**	**17 08 53.2**	**-0.4**
	comp=Z,1.7nm,0.7s,mb3.7						
BVAR	**Borovoye Array**	**32.46**	**320**	P	**P**	**17 09 42.6**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=119,slow=12,SNR=3.9						
ABKAR	**Akbulak array**	**37.64**	**310**	eP	**P**	**17 10 27.5**	**-0.3**
TIXI	**Tiksi**	**41.21**	**11**	eP	**P**	**17 10 59.0**	**+1.7**
	comp=Z,0.7nm,0.5s,mb3.5						
ARCES	**ARCESS Array B**	**56.50**	**335**	P	**P**	**17 12 54.9**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=78,slow=7.6,SNR=7.5						
BRTR	**Keskin Array B**	**57.06**	**299**	P	**P**	**17 12 58.4**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=98,slow=6.0,SNR=4.0						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**17 12 58.2**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.9,baz=72,slow=6.2,SNR=6.1						
AKASG	**Malin Array Be**	**57.29**	**313**	P	**P**	**17 12 59.6**	**-1.0**
	comp=Z,1.4nm,0.5s,mb4.3,baz=66,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**58.99**	**148**	P	**P**	**17 13 13.8**	**+1.1**
	comp=Z,1.6nm,0.7s,mb4.1,baz=340,slow=7.4,SNR=14						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**17 13 35.1**	**+1.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=334,slow=6.6,SNR=11						
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**17 13 45.6**	**-1.4**
	comp=Z,0.1nm,0.6s,mb3.0,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**17 13 46.0**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=71,slow=6.6,SNR=4.3						
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**17 14 08.8**	**+0.4**
	comp=Z,0.5nm,0.4s,mb3.9,baz=46,slow=7.6,SNR=4.8						
LPG	**La Plagne**	**73.15**	**313**	eP	**P**	**17 14 44.0**	**+0.4**
	comp=Z,5.8nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.15**	**313**	eP	**P**	**17 14 43.9**	**+0.3**
	comp=Z,6.6nm,0.6s,mb4.5						
SMF	**Signal de Mont**	**74.33**	**315**	eP	**P**	**17 14 49.8**	**-0.7**
	comp=Z,3.3nm,0.5s,mb4.2						
YKA	**Yellowknife Ar**	**80.07**	**18**	P	**P**	**17 15 22.4**	**-0.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=330,slow=5.6,SNR=3.6						

*ISCJB **15** 17:10:20.4±2.7, 48°.9N±0°.1×155°.3E±0°.3, h33km±24km, mb3.7/11, Error ellipse: s-maj=29.8km s-min=19.9km az=8.1*
*MOS **15** 17:10:21.5±1.7, 48°.93N×155°.17E, h35km, mb4.1/5, Error ellipse: s-maj=32.3km s-min=12.1km az=83.6*
*NEIC **15** 17:10:25.6±2.2, 48°.90N×155°.30E, h59km±19km, mb3.8/1, Error ellipse: s-maj=21.2km s-min=18.7km az=74.0*
*IDC **15** 17:10:25.9±4.3, 48°.90N×155°.27E, h62km±39km, mb3.3/10, mb1 3.5/11, mb1mx3.3/25, mbtmp3.3/11, ML2.9/1, Error ellipse: s-maj=31.1km s-min=20.6km az=84.0*

ISC 15 17:10:25.2±2.6, 49°.0N±0°.1×155°.4E±0°.3, h56km±24km, n24, σ1s04/23, mb3.7/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.80**	**15**	ePN	**Pn**	**17 10 49.0**	**-4.9**
SKR				eS	**Sn**	**17 11 12.0**	**-3.6**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,510nm,0.3s						
SKR				smax			
	comp=E,390nm,0.3s						
PETK	**Petropavlovsk-**	**4.42**	**18**	P	**Pn**	**17 11 31.7**	**+2.1**
	comp=E,0.6nm,0.3s,baz=178,slow=11,SNR=12						
PETK	**Petropavlovsk-**	**4.42**	**18**	ePN	**Pn**	**17 11 31.7**	**+2.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PET	**Petropavlovsk**	**4.58**	**26**	ePN	**Pn**	**17 11 30.4**	**-1.4**
PET				pmax	pmax		
	comp=Z,13nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	**Petropavlovsk**	**4.58**	**26**	eP	**Pn**	**17 11 32.1**	**+0.4**
MKAR	**Makanchi Array**	**47.31**	**297**	P	**P**	**17 18 53.3**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.4,baz=68,slow=6.0,SNR=4.4						
MKAR	**Makanchi Array**	**47.31**	**297**	eP	**P**	**17 18 53.3**	**+0.4**
KURK	**Kurchatov**	**47.44**	**303**	P	**P**	**17 18 54.5**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.6,baz=66,slow=8.4,SNR=6.9						
KURK	**Kurchatov**	**47.44**	**303**	P	**P**	**17 18 54.6**	**+0.7**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**48.25**	**38**	P	**P**	**17 19 01.0**	**+1.0**
	comp=Z,0.4nm,0.7s,mb3.6,baz=296,slow=7.2,SNR=3.7						
BVAR	**Borovoye Array**	**50.66**	**309**	P	**P**	**17 19 18.1**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=64,slow=13,SNR=2.5						
ARCES	**ARCESS Array B**	**56.28**	**341**	P	**P**	**17 19 58.0**	**-1.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=37,slow=6.8,SNR=2.7						
ARCES	**ARCESS Array B**	**56.28**	**341**	P	**P**	**17 19 58.0**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ABKAR	**Akbulak array**	**58.19**	**310**	eP	**P**	**17 20 13.3**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.6						
FINES	**FINESS Array B**	**62.70**	**335**	P	**P**	**17 20 42.9**	**-0.7**
	comp=Z,0.6nm,0.5s,mb4.0,baz=182,slow=25,SNR=2.5						
FINES	**FINESS Array B**	**62.70**	**335**	P	**P**	**17 20 42.9**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**71.10**	**201**	P	**P**	**17 21 36.0**	**-1.5**
	comp=Z,1.5nm,1.1s,mb3.8,baz=18,slow=6.5,SNR=9.7						
WRA	**Warramunga Arr**	**71.10**	**201**	P	**P**	**17 21 36.0**	**-1.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ASAR	**Alice Springs**	**74.79**	**200**	P	**P**	**17 21 59.4**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=11,slow=5.7,SNR=8.9						
GERES	**GERESS Array B**	**77.13**	**335**	P	**P**	**17 22 12.3**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=70,slow=4.4,SNR=3.5						
BRTR	**Keskin Array B**	**77.81**	**318**	P	**P**	**17 22 17.5**	**+1.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=32,slow=3.3,SNR=3.4						
BRTR	**Keskin Array B**	**77.81**	**318**	P	**P**	**17 22 17.5**	**+1.2**
LPAZ	**La Paz**	**131.97**	**63**	PKP	PKPdf	17 29 34.2	+1.9
	comp=Z,0.7nm,0.6s,baz=300,slow=16,SNR=4.4						
LPAZ	**La Paz**	**131.97**	**63**	PKIKP	PKPdf	17 29 34.3	+1.9
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **15** 17:17:13.5±0.7, 10°.82N±0°.04×62°.10W±0°.04, h95km±7km, Error ellipse: s-maj=7.8km s-min=4.2km az=142.1*
*FUNV **15** 17:17:14.8, 10°.94N×62°.05W, h88km, MW3.1*
*TRN **15** 17:17:14.5, 10°.79N×62°.04W, h90km, MD2.8*
*NEIC **15** 17:17:14.9, 10°.81N×62°.03W, h89km, MD2.8(TRN), After TRN.*

ISC 15 17:17:14.4±0.8, 10°.82N±0°.04×62°.09W±0°.04, h91km±8km, n25, σ0s82/50, 2C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.22**	**218**	↓iP	**Pn**	**17 17 28.1**	**+0.6**
GUIV				eS	**Sn**	**17 17 37.5**	**+0.3**
TRN	**Trinidad (W)**	**0.69**	**104**	eP	**Pn**	**17 17 31.4**	**+0.5**
TRN				eS	**Sn**	**17 17 42.2**	**-0.9**
TRN	**Trinidad (W)**	**0.69**	**104**	eP	**Pn**	**17 17 31.4**	**+0.5**
TRN				eS	**Sn**	**17 17 42.2**	**-0.9**
GUNV	**Guanoco**	**1.07**	**232**	eP	**Pn**	**17 17 36.4**	**+1.5**
GUNV				eS	**Sn**

0.4nm,0.4s,baz=149,slow=7.4,SNR=4.5
MKAR Makanchi Array 85.08 318 P P 17 34 38.0 +0.5
2.1nm,0.6s,baz=101,slow=6.1,SNR=33
ZALV Zalesovo Beam 85.73 326 P P 17 34 40.5 -0.1
1.0nm,0.4s,baz=106,slow=4.6,SNR=7.4
BVAR Borovoye Array 93.90 323 P P 17 35 18.8 -0.3
0.3nm,0.5s,baz=104,slow=6.1,SNR=3.6

IGQ 15 17:23:48.6, 1°.89S×80°.25W, h10km±3km, Mb4.2, Ms4.0, 16C-11D, Error ellipse: s-maj=6.0km s-min=1.5km az=127.4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.96**	**330**	S	Sg	17 24 21.4	+1.8
CHIS	**Cerro-Chispas-**	**0.96**	**330**	P	Pg	17 24 05.3	-1.8
JAMA	**Jama**	**1.61**	**2**	⇓S	Sn	17 24 40.5	+2.4
JAMA	**Jama**	**1.61**	**2**	⇓P	Pn	17 24 18.0	+0.8
RIOE	**Riobamba**	**1.62**	**85**	S	Sn	17 24 40.8	+2.5
RIOE	**Riobamba**	**1.62**	**85**	P	Pn	17 24 18.8	+1.5
IGUA	**Igualata**	**1.66**	**76**	⇓P	Pn	17 24 20.1	+2.3
BIL2	**Estacion Bilba**	**1.80**	**76**	P	Pn	17 24 22.4	+2.6
BIL2	**Estacion Bilba**	**1.80**	**76**	S	Sn	17 24 46.1	+3.4
ARRY	**Arrayan**	**1.83**	**78**	⇓P	Pn	17 24 22.3	+2.1
JUI6	**Juive**	**1.84**	**76**	⇓P	Pn	17 24 27.3	+7.0
PATA	**Patacocha**	**1.85**	**78**	⇓P	Pn	17 24 23.0	+2.5
RETU	**Refugio**	**1.85**	**77**	⇓S	Sn	17 24 48.3	+4.3
RETU	**Refugio**	**1.85**	**77**	⇓P	Pn	17 24 23.5	+3.0
RUN5	**Runtun**	**1.88**	**76**	⇑P	Pn	17 24 23.8	+2.9
RUN5	**Runtun**	**1.88**	**76**	⇑S	Sn	17 24 48.3	+3.5
ULBA	**Ulba**	**1.89**	**77**	⇑S	Sn	17 24 48.2	+3.2
ULBA	**Ulba**	**1.89**	**77**	⇑P	Pn	17 24 24.0	+3.0
PISA	**Pisayambo**	**2.04**	**66**	S	Sn	17 24 53.8	+5.2
PISA	**Pisayambo**	**2.04**	**66**	P	Pn	17 24 26.2	+3.2
MACE	**Macas**	**2.08**	**100**	⇓S	Sn	17 24 52.1	+2.5
MACE	**Macas**	**2.08**	**100**	⇓P	Pn	17 24 25.9	+2.3
MOV1	**Cotopaxi Vol s**	**2.15**	**57**	⇓P	Pn	17 24 27.7	+3.1
NAS2	**Nasa**	**2.16**	**55**	⇑P	Pn	17 24 28.5	+3.7
VC1	**Cotopaxi 1**	**2.22**	**56**	⇑S	Sn	17 24 59.7	+6.6
VC1	**Cotopaxi 1**	**2.22**	**56**	⇑P	Pn	17 24 29.3	+3.7
TAMB	**Tambo**	**2.22**	**58**	⇑P	Pn	17 24 29.1	+3.5
PITA	**Cotopaxi Volc**	**2.24**	**54**	⇑P	Pn	17 24 29.1	+3.2
COV1	**Cotopaxi Volc**	**2.26**	**57**	⇑P	Pn	17 24 28.7	+2.6
JUA2	**San Juan 2**	**2.34**	**45**	P	Pn	17 24 29.1	+1.9
TERV	**Terraza Guagua**	**2.36**	**44**	P	Pn	17 24 29.1	+1.6
GGP	**Refugio Guagua**	**2.37**	**44**	⇑P	Pn	17 24 29.3	+1.7
PINO	**Pino**	**2.37**	**44**	⇑P	Pn	17 24 29.3	+1.6
YANA	**Yana**	**2.43**	**44**	P	Pn	17 24 29.8	+1.4
ANTI	**Antisana**	**2.53**	**56**	⇑S	Sn	17 25 07.5	+6.8
ANTI	**Antisana**	**2.53**	**56**	⇑P	Pn	17 24 33.5	+3.7
OTAV	**Otavalo**	**2.77**	**40**	P	Pn	17 24 34.4	+1.3
COTA	**Cotacachi**	**2.92**	**41**	P	Pn	17 24 37.8	+2.7
COTA	**Cotacachi**	**2.92**	**41**	S	Sn	17 25 15.6	+5.3
CAYR	**Refugio Cayamb**	**2.93**	**50**	S	Sn	17 25 18.3	+7.6
CAYR	**Refugio Cayamb**	**2.93**	**50**	P	Pn	17 24 39.4	+4.0
CAYA	**Cayambe**	**2.98**	**49**	⇑S	Sn	17 25 18.5	+6.6
CAYA	**Cayambe**	**2.98**	**49**	⇑P	Pn	17 24 39.6	+3.6
CHAR	**Charly**	**3.14**	**55**	P	Pn	17 24 44.8	+6.6
CONE	**Cono NE Rev Vo**	**3.17**	**55**	P	Pn	17 24 44.9	+6.2

*ISCJB **15** 17:38:03.8±1.1, 31°.28N±0°.06×103°.56E±0°.09, h25km±9km, mb3.5/7, Error ellipse: s-maj=13.3km s-min=9.1km az=160.1*
*IDC **15** 17:38:03.3±1.4, 31°.43N×103°.62E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/25, mbtmp3.6/6, MS3.2/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=47.4km s-min=21.7km az=45.0*
*NEIC **15** 17:38:04.3±0.7, 31°.40N×103°.65E, h10km, mb3.9/2, Error ellipse: s-maj=33.5km s-min=10.2km az=221.0*
*BJI **15** 17:38:04.6, 31°.17N×103°.44E, h17km, mb3.9/1, ML3.6/12, Ms3.5/2, Ms7 3.4/2*
ISC 15 17:38:04.1±1.3, 31°.30N±0°.05×103°.60E±0°.09, h11km±9km, n16, σ0§81/18, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**161**	Pg	**Pg**	**17 38 11.3**	**-0.9**
CD2				Sg	**Sg**	**17 38 19.0**	**+1.3**
CD2				smax			
	comp=N,7μm,0.8s						
ENH	**Enshi**	**5.17**	**100**	*e*Pn	**Pn**	**17 39 21.5**	**+0.2**
	comp=N,7.6nm,0.2s						
GYA	**Guiyang**	**5.52**	**150**	Pg	**Pb**	**17 39 39.3**	**-1.2**
GYA				Sg	**Sb**	**17 40 46.8**	**+0.1**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,70nm,1.0s						
KMI	**Kunming**	**6.20**	**187**	Pn	**Pn**	**17 39 34.3**	**-1.2**
KMI				Sn	**Sn**	**17 40 46.3**	**-0.1**
KMI				smax			
	comp=N,21nm,1.4s						
KMI				smax			
	comp=E,19nm,1.3s						
KMI				LR	LR		
	comp=N,280nm,10.0s						
KMI				LR	LR		
	comp=E,430nm,11.1s						
KMI				LR	LR		
	comp=Z,270nm,10.0s						
LSA	**Lhasa**	**10.86**	**265**	Pn	**Pn**	**17 40 40.0**	**+0.6**
KSRS	**Korea Array**	**20.96**	**66**	P	**P**	**17 42 47.0**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=246,slow=10,SNR=10						
MK31	**Makanchi Array**	**22.55**	**319**	*e*P	**P**	**17 43 04.0**	**+0.1**
MKAR	**Makanchi Array**	**22.55**	**319**	P	**P**	**17 43 04.4**	**+0.4**
	comp=Z,1.9nm,0.9s,mb3.5,baz=133,slow=12,SNR=6.6						
ZALV	**Zalesovo Beam**	**26.36**	**335**	P	**P**	**17 43 39.9**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.4,baz=126,slow=7.5,SNR=5.2						
KURK	**Kurchatov**	**26.83**	**324**	P	**P**	**17 43 43.6**	**-0.7**
	comp=Z,1.6nm,0.8s,mb3.6,baz=128,slow=9.3,SNR=20						
KURK	**Kurchatov**	**26.83**	**324**	*e*P	**P**	**17 43 42.9**	**-1.4**
	comp=Z,1.9nm,0.9s,mb3.6						
JHJ	**Hachijo jima 2**	**30.58**	**77**	LR	LR	17 56 14.1	
	comp=Z,43nm,21.9s,baz=243,slow=36						
BVAR	**Borovoye Array**	**32.37**	**322**	P	**P**	**17 44 33.9**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.4,baz=101,slow=6.2,SNR=3.1						
WRAB	**Tennant Creek**	**58.87**	**146**	*e*P	**P**	**17 48 02.9**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.9						
ASAR	**Alice Springs**	**61.88**	**148**	P	**P**	**17 48 25.3**	**+1.8**
	comp=Z,0.2nm,0.7s,mb3.4,baz=338,slow=6.4,SNR=5.6						
ASAR	**Alice Springs**	**61.88**	**148**	P	**P**	**17 48 25.3**	**+1.8**

IDC 15 17:50:33.2±1.3, 34°.94N×104°.86E, h0km, mb3.3/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.4/7, ML3.4/1, Error ellipse: s-maj=46.6km s-min=22.3km az=46.0, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.78**	**76**	P	Pn	17 54 54.8	+0.5
	0.1nm,0.3s,baz=262,slow=9.8,SNR=6.2						
MKAR	**Makanchi Array**	**20.69**	**312**	P	P	17 55 16.6	+1.8
	0.3nm,0.8s,baz=122,slow=10,SNR=4.0						
ZALV	**Zalesovo Beam**	**23.64**	**330**	P	P	17 55 46.1	+0.1
	0.2nm,0.3s,baz=198,slow=18,SNR=2.4						
KURK	**Kurchatov**	**24.69**	**318**	P	P	17 55 55.0	-0.7
	0.5nm,0.6s,baz=127,slow=9.9,SNR=4.5						
ARCES	**ARCESS Array B**	**54.05**	**335**	P	P	17 59 59.0	+0.1
	1.3nm,1.0s,baz=86,slow=7.1,SNR=7.9						
ASAR	**Alice Springs**	**64.47**	**150**	P	P	18 01 11.7	+0.1
	0.4nm,0.6s,baz=342,slow=9.3,SNR=5.9						
YKA	**Yellowknife Ar**	**77.85**	**18**	P	P	18 02 31.3	-0.9
	0.3nm,0.6s,baz=332,slow=5.6,SNR=3.8						

*ISCJB **15** 17:54:09.1±3.0, 32°.4N±0°.1×104°.85E±0°.09, h2km±17km, mb3.6/10, Error ellipse: s-maj=22.0km s-min=8.2km az=27.8*
*IDC **15** 17:54:09.5±1.1, 32°.02N×104°.55E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/26, mbtmp3.6/10, ML3.4/1, Error ellipse: s-maj=43.6km s-min=20.2km az=45.0*
*BJI **15** 17:54:10.6, 32°.09N×104°.80E, h20km, mB4.7/1, mb3.8/1, ML3.8/6, Ms3.9/1, Ms7 3.8/1*
*NEIC **15** 17:54:11.1±0.8, 32°.00N×104°.52E, h10km, mb3.6/2, Error ellipse: s-maj=36.4km s-min=9.9km az=219.0*
ISC 15 17:54:11.3±3.2, 32°.3N±0°.1×104°.81E±0°.09, h6km±18km, n19, σ0§97/23, mb3.6/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.87**	**62**	Pn	**Pn**	**17 55 12.5**	**+1.2**
XAN				Pg	**Pg**	**17 55 21.8**	**-3.6**
XAN				Sg	**Sg**	**17 56 14.9**	**-0.6**
XAN				smax			
	comp=N,100nm,1.1s						
XAN				smax			
	comp=E,43nm,0.8s						
LZH	**Lanzhou**	**3.88**	**348**	*e*Pn	**Pn**	**17 55 16.1**	**+4.6**
LZH				Pg	**Pg**	**17 55 26.8**	**+1.1**
LZH				Sg	**Sg**	**17 56 15.5**	**-0.5**
LZH				smax			
	comp=N,530nm,0.5s						
LZH				smax			
	comp=E,840nm,0.6s						
LZH				LR	LR		
	comp=E,880nm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,8.5s						
ENH	**Enshi**	**4.47**	**115**	*e*Pn	**Pn**	**17 55 20.7**	**+1.0**
KSRS	**Korea Array**	**19.64**	**68**	P	**Pn**	**17 58 41.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=254,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**22.52**	**317**	P	**P**	**17 59 12.0**	**+0.4**
	comp=Z,0.6nm,0.6s,mb3.2,baz=116,slow=11,SNR=7.4						
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**17 59 44.7**	**+0.5**
	comp=Z,1.8nm,0.6s,mb3.8,baz=138,slow=10,SNR=8.7						
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**17 59 44.7**	**+0.5**
KURK	**Kurchatov**	**26.69**	**321**	P	**P**	**17 59 51.0**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.4,baz=128,slow=8.0,SNR=8.6						
KURK	**Kurchatov**	**26.69**	**321**	*e*P	**P**	**17 59 50.9**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.5						
BVAR	**Borovoye Array**	**32.26**	**320**	P	**P**	**18 00 39.7**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.4,baz=107,slow=9.9,SNR=4.0						
ABKAR	**Akbulak array**	**37.36**	**310**	*e*P	**P**	**18 01 24.6**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.6						
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**18 03 53.0**	**-0.4**
	comp=Z,1.0nm,0.6s,mb4.1,baz=72,slow=7.9,SNR=9.8						
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**18 03 53.0**	**-0.4**
FINES	**FINESS Array B**	**56.93**	**326**	P	**P**	**18 03 56.5**	**-0.4**
	comp=Z,0.9nm,0.4s,mb4.2,baz=92,slow=7.0,SNR=9.6						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**18 04 32.2**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.7,baz=331,slow=6.5,SNR=8.2						
NB2	**NORSAR Subarra**	**64.00**	**327**	P	**P**	**18 04 43.8**	**-1.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.00**	**327**	P	**P**	**18 04 44.0**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.9,baz=73,slow=6.7,SNR=4.4						
YKA	**Yellowknife Ar**	**80.39**	**17**	P	**P**	**18 06 25.4**	**+2.1**
	comp=Z,0.2nm,0.6s,mb3.3,baz=327,slow=4.8,SNR=4.1						
YKA	**Yellowknife Ar**	**80.39**	**17**	P	**P**	**18 06 25.4**	**+2.1**

IDC 15 18:04:52.5±1.6, 33°.70N×107°.09E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/24, mbtmp3.3/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/14, Error ellipse: s-maj=71.2km s-min=25.3km az=59.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.84**	**208**	Pn	Pn	18 08 50.3	+0.7
	baz=9.0,slow=9.3						
MKAR	**Makanchi Array**	**22.90**	**312**	P	P	18 09 57.2	-0.4
	0.2nm,0.5s,baz=118,slow=11,SNR=3.5						
BVAR	**Borovoye Array**	**32.45**	**318**	LR	LR	18 25 42.8	
	comp=Z,96nm,19.8s,baz=117,slow=38						
FINES	**FINESS Array B**	**56.85**	**325**	P	P	18 14 38.9	+0.4
	0.3nm,0.4s,baz=76,slow=8.0,SNR=5.0						
ASAR	**Alice Springs**	**62.50**	**152**	P	P	18 15 17.7	-0.1
	0.1nm,0.3s,baz=332,slow=6.5,SNR=8.1						

*IDC **15** 18:05:19.6±0.7, 31°.81N×104°.20E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.3/28, mbtmp4.3/19, ML3.8/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/26, Error ellipse: s-maj=23.0km s-min=14.9km az=43.0*
*NEIC **15** 18:05:21.7±0.3, 31°.90N×104°.31E, h10km, mb4.3/21, Error ellipse: s-maj=6.8km s-min=6.1km az=200.0*
*BJI **15** 18:05:21.5, 31°.85N×104°.35E, h18km, mB4.6/21, mb4.5/26, ML4.4/13, Ms4.2/27, Ms7 4.0/25*
*ISCJB **15** 18:05:22.6±1.3, 31°.83N±0°.03×104°.26E±0°.03, h31km±10km, mb4.4/46, MS3.6/7, Error ellipse: s-maj=4.9km s-min=4.2km az=7.4*
*MOS **15** 18:05:22.6±1.0, 31°.81N×104°.28E, h33km, mb4.5/32, Error ellipse: s-maj=10.9km s-min=6.0km az=106.4*
ISC 15 18:05:22.2±0.9, 31°.86N±0°.02×104°.24E±0°.03, h12km±5km, n139, σ1§11/151, mb4.4/46, MS3.6/7, 10C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.03**	**203**	Pg	**Pg**	**18 05 41.3**	**-0.8**
CD2				Sg	**Sg**	**18 05 56.3**	**+0.7**
CD2				smax			
	comp=N,8μm,0.5s						
LZH	**Lanzhou**	**4.23**	**356**	*e*Pn	**Pn**	**18 06 29.4**	**+3.1**
LZH				Sn	**Sn**	**18 07 21.6**	**+6.1**
LZH				Sg	**Sg**	**18 07 34.6**	**-3.3**
LZH				smax			
	comp=N,550nm,0.6s						
LZH				smax			
	comp=E,2μm,1.4s						
LZH				LR	LR		
	comp=N,4μm,4.9s						
LZH				LR	LR		
	comp=Z,3μm,9.5s						
ENH	**Enshi**	**4.78**	**108**	*e*Pn	**Pn**	**18 06 33.8**	**-0.2**
ENH				*e*Sg	**Sg**	**18 07 54.7**	**-0.9**
GYA	**Guiyang**	**5.79**	**158**	Pn	**Pn**	**18 06 48.1**	**+0.3**
GYA				Sn	**Sn**	**18 07 52.9**	**-1.2**
GYA				smax			
	comp=N,620nm,0.9s						
GYA				smax			
	comp=E,560nm,0.9s						
GYA				LR	LR		
	comp=N,3μm,3.8s						
GYA				LR	LR		
	comp=E,2μm,3.3s						
GYA				LR	LR		
	comp=Z,3μm,3.8s						
KMI	**Kunming**	**6.84**	**191**	Pn	**Pn**	**18 07 02.8**	**+0.5**
KMI				Sn	**Sn**	**18 08 20.3**	**+0.2**
KMI				smax			
	comp=N,80nm,0.9s						
KMI				smax			
	comp=E,65nm,0.9s						
KMI				LR	LR		
	comp=N,980nm,10.5s						
KMI				LR	LR		
	comp=E,610nm,9.1s						
KMI				LR	LR		
	comp=Z,1μm,12.1s						
GTA	**Gaotai**	**8.35**	**336**	*e*P	**Pn**	**18 07 24.8**	**+1.9**
GTA				pP		18 07 28.1	
GTA				sP		18 07 30.8	
GTA				S	**Sn**	**18 09 01.6**	**+4.6**
GTA				sS		18 09 07.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,83nm,4.8s						
GTA				LR	LR		
	comp=N,1μm,11.0s						
GTA				LR	LR		
	comp=E,780nm,12.5s						
GTA				LR	LR		
	comp=Z,1μm,11.9s						
WHN	**Wuhan**	**8.76**	**96**	P	**Pn**	**18 07 38.3**	**+10**
WHN				S	**Sn**	**18 09 01.3**	**-6.0**
WHN				LR	LR		
	comp=N,3μm,3.0s						
WHN				LR	LR		
	comp=E,1μm,3.9s						
WHN				LR	LR		
	comp=Z,950nm,8.4s						
BTO	**Baotou**	**9.89**	**27**	*e*P	**Pn**	**18 07 41.6**	**-2.5**
BTO				S	**Sn**	**18 09 33.8**	**-1.2**
HHC	**Hu-ho-hao-te**	**10.73**	**31**	*e*P	**Pn**	**18 07 57.4**	**+1.8**
HHC				pP		18 08 00.5	
HHC				PP		18 08 05.8	
HHC				S	**Sn**	**18 09 57.0**	**+1.3**
HHC				sS		18 10 04.8	
HHC				SS		18 10 11.4	
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,4.7s						
HHC				LR	LR		
	comp=N,300nm,4.0s						
HHC				LR	LR		
	comp=E,370nm,4.2s						
HHC				LR	LR		
	comp=Z,310nm,4.4s						
LSA	**Lhasa**	**11.46**	**263**	*e*P	**Pn**	**18 08 08.2**	**+2.6**
NJ2	**Nanjing**	**12.42**	**85**	*e*P	**Pn**	**18 08 19.9**	**+1.2**
NJ2				pP		18 08 23.1	
NJ2				S	**Sn**	**18 10 39.0**	**+2.0**
NJ2				sS		18 10 46.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,60nm,4.2s						
NJ2				LR	LR		
	comp=N,400nm,16.2s						
NJ2				LR	LR		
	comp=E,490nm,14.0s						
NJ2				LR	LR		
	comp=Z,4μm,14.2s						
SHL	**Shillong**	**12.52**	**243**	*e*P	**Pn**	**18 08 20.0**	**-0.1**
BJI	**Beijing**	**12.65**	**47**	P	**Pn**	**18 08 19.5**	**-2.3**
BJI				pmax	pmax		
	comp=Z,11nm,0.5s						
BJI				LR	LR		
	comp=Z,120nm,17.0s						
QIZ	**Qiongzhong**	**13.74**	**157**	P	**Pn**	**18 08 38.1**	**+1.3**
QIZ				S	**Sn**	**18 11 12.4**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,230nm,4.5s						
QIZ				LR	LR		
	comp=N,600nm,6.5s						
QIZ				LR	LR		
	comp=Z,600nm,11.7s						
CM31	**Chiang Mai Arr**	**14.18**	**201**	*e*Pn	**Pn**	**18 08 44.6**	**+1.9**
	comp=Z,23nm,0.6s						
CM31				*e*		18 08 50.9	
SONM	**Songino Array**	**16.04**	**5**	Pn	**Pn**	**18 09 08.5**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=171,slow=14,SNR=4.7						
SONM				LR	LR	18 15 53.5	
	comp=Z,327nm,18.6s,baz=74,slow=39						
ULN	**Ulaanbaatar**	**16.13**	**7**	*e*P	**Pn**	**18 09 07.5**	**-1.0**
ULN				pmax	pmax		
	comp=Z,19nm,1.1s						
ULN	**Ulaanbaatar**	**16.13**	**7**	*e*Pn	**Pn**	**18 09 07.5**	**-1.0**
	comp=Z,19nm,1.1s						
GUN	**Gumba**	**16.40**	**261**	*e*P	**Pn**	**18 09 11.4**	**-0.7**
	comp=Z,41nm,0.8s						
PKI	**Pulchoki**	**16.90**	**260**	*e*P	**Pn**	**18 09 17.1**	**-1.4**
	comp=Z,17nm,0.5s						
PKIN	**Phulchoki**	**16.91**	**260**	*e*P	**Pn**	**18 09 16.8**	**-1.8**
	comp=Z,48nm,0.7s						
KKN	**Kakani**	**16.94**	**261**	*e*P	**Pn**	**18 09 17.7**	**-1.3**
	comp=Z,24nm,0.7s						
DMN	**Daman**	**17.14**	**261**	*e*P	**Pn**	**18 09 20.2**	**-1.4**
	comp=Z,33nm,0.9s						
WMQ	**Urumqi**	**17.66**	**317**	*e*P	**Pn**	**18 09 28.9**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.0s						
WMQ				LR	LR		
	comp=N,320nm,10.0s						
WMQ				LR	LR		
	comp=E,320nm,10.0s						
WMQ				LR	LR		
	comp=Z,180nm,18.0s						
ZAK	**Zakamensk**	**18.52**	**358**	*e*P	**Pn**	**18 09 38.9**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY	**Talaya**	**19.81**	**359**	*e*P	**Pn**	**18 09 55.1**	**+1.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,277nm,11.0s						
MOY	**Mondy**	**19.93**	**354**	*e*P	**Pn**	**18 09 56.0**	**+0.7**
MOY				pmax	pmax		
	comp=Z,31nm,2.1s						
KSRS	**Korea Array**	**20.25**	**68**	P	**P**	**18 09 57.5**	**+0.3**
	comp=Z,6.2nm,0.7s,baz=254,slow=11,SNR=20						
KSRS				LR	LR	18 18 57.9	
	comp=Z,58nm,18.8s,MS3.0,baz=145,slow=40						
KSRS	**Korea Array**	**20.25**	**68**	P	**P**	**18 09 57.5**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,58nm,18.8s,MS3.0						
IRK	**Irkutsk**	**20.37**	**0**	*e*P	**P**	**18 10 00.3**	**+1.9**
IRK				pmax	pmax		
	comp=Z,42nm,1.6s						
CN2	**Changchun**	**20.50**	**48**	*e*P	**P**	**18 10 00.1**	**+0.2**
CN2				*e*pP		18 10 04.3	
CN2				*e*sP	sP	18 10 07.3	+2.2
CN2				*e*S	**S**	**18 13 42.3**	**-6.7**
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS3.7						
CN2				LR	LR		
	comp=E,200nm,17.0s,MS3.7						
CN2				LR	LR		
	comp=Z,200nm,14.0s,MS3.6						
HIA	**Hailar**	**20.93**	**29**	*e*P	**P**	**18 10 04.9**	**+0.4**
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	**Hailar**	**20.93**	**29**	*e*P	**P**	**18 10 04.9**	**+0.4**
	comp=Z,18nm,0.9s						
MK31	**Makanchi Array**	**22.49**	**318**	*e*P	**P**	**18 10 21.8**	**+0.6**
MKAR	**Makanchi Array**	**22.49**	**318**	P	**P**	**18 10 21.9**	**+0.7**
	comp=Z,7.4nm,0.7s,mb4.2,baz=116,slow=12,SNR=66						
MKAR				PcP	PcP	18 14 14.6	-0.5
	comp=Z,0.6nm,0.6s,baz=165,slow=1.5,SNR=4.3						
MKAR	**Makanchi Array**	**22.49**	**318**	P	**P**	**18 10 21.9**	**+0.7**
MKAR						18 14 14.6	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MDJ	**Mudanjiang**	**23.53**	**50**	P	**P**	**18 10 32.3**	**0.0**
MDJ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,91nm,5.1s						
MDJ	**Mudanjiang**	**23.53**	**50**	*e*P	**P**	**18 10 32.7**	**+0.5**
	comp=Z,9.2nm,0.9s,mb4.2						
KSH	**Kashi**	**24.12**	**296**	*e*P	**P**	**18 10 41.8**	**+4.1**
KSH				*e*pP		18 10 45.8	
KSH				*e*sP	sP	18 10 48.8	+5.7
KSH				*e*PP		18 11 16.8	
KSH				*e*PcP	PcP	18 14 21.8	+3.1
KSH				*e*S	**S**	**18 14 58.0**	**+2.8**
KSH				*e*sS	sS	18 15 04.8	+3.3
KSH				*e*SS		18 15 51.8	
KSH				pmax	pmax		
	comp=Z,73nm,3.4s						
KSH				LR	LR		
	comp=N,110nm,5.6s						
KSH				LR	LR		
	comp=E,180nm,8.0s						
TKM2	**Tokmak 2**	**25.17**	**304**	*e*P	**P**	**18 10 48.

KURK PcP PcP 18 14 23.0 -1.3
comp=Z,1.2nm,0.7s,baz=116,slow=2.4,SNR=5.3
KURK Kurchatov 26.71 322 *c*e*P* **P 18 11 01.9 +0.8**
KURK pmax pmax
comp=Z,13nm,1.2s,mb4.3
KURK Kurchatov 26.71 322 *e*P **P 18 11 01.4 +0.3**
comp=Z,15nm,1.2s,mb4.4
BOD Bodaibo 26.81 12 *e*P **P 18 11 02.0 +0.1**
KLR Kul'dur 26.95 42 *e*P **P 18 11 00.0 -3.3**
NRGR Nerungri 28.58 24 *e*P sP 18 11 30.3 +7.1
JHJ Hachijo jima 2 29.93 78 LR LR 18 24 56.4
comp=Z,77nm,20.8s,MS3.3,baz=58,slow=39
BVAR Borovoye Array 32.27 321 P **P 18 11 50.4 0.0**
comp=Z,1.4nm,0.6s,mb4.0,baz=116,slow=9.8,SNR=14
BVAR PcP PcP 18 14 37.8 -0.6
comp=Z,1.5nm,0.9s,baz=145,slow=5.4,SNR=4.6
BVAR Borovoye Array 32.27 321 P **P 18 11 50.4 0.0**
BVAR 18 14 37.8
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 32.34 321 *c*e*P* **P 18 11 50.7 -0.3**
BRVK pmax pmax
comp=Z,10.0nm,2.5s,mb4.2
BRVK Borovoye 32.34 321 *e*P **P 18 11 49.1 -1.9**
comp=Z,2.5nm,0.8s,mb4.1
YAK Yakutsk 34.36 21 *e*P **P 18 12 07.3 -1.2**
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ABKAR Akbulak array 37.26 311 *e*P **P 18 12 33.9 +0.4**
comp=Z,4.3nm,0.7s,mb4.4
ARU Arti 39.91 322 *c i*P **P 18 12 56.2 +0.5**
ARU S **S 18 18 59.0 -1.1**
ARU SS SS 18 21 46.5 -10
ARU pmax pmax
comp=Z,36nm,1.2s,mb5.0
ARU Arti 39.91 322 *e*P **P 18 12 56.2 +0.5**
comp=Z,22nm,0.8s,mb4.9
TIXI Tiksi 41.99 11 *e*P **P 18 13 10.4 -2.2**
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
TIXI Tiksi 41.99 11 *e*P **P 18 13 11.4 -1.2**
comp=Z,2.0nm,0.6s,mb3.9
SEY Seymchan 43.38 30 *e*P **P 18 13 25.1 +1.1**
PETK Petropavlovsk- 43.57 45 P **P 18 13 25.7 0.0**
comp=Z,4.1nm,0.7s,mb4.3,baz=216,slow=4.6,SNR=9.0
PETK Petropavlovsk- 43.57 45 P **P 18 13 25.7 0.0**
PETK pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KIV Kislovodsk 48.99 303 *e*P **P 18 14 09.2 +0.7**
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,36nm,18.0s,MS3.4
KIV Kislovodsk 48.99 303 P **P 18 14 10.2 +1.7**
BILL Bilibino 50.45 26⇑*e*P **P 18 14 18.8 -0.4**
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BILL Bilibino 50.45 26 *e*P **P 18 14 18.1 -1.0**
comp=Z,2.0nm,0.6s,mb4.3
MOS Moscow 51.37 318 *e*P **P 18 14 24.0 -2.3**
MOS pmax pmax
comp=Z,51nm,0.9s,mb5.5
OBN Obninsk 51.99 318 *e*P **P 18 14 31.4 +0.4**
OBN pmax pmax
comp=Z,15nm,0.5s,mb5.2
JOF Joensuu 54.45 327 *e*P **P 18 14 47.1 -1.8**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
JOF Joensuu 54.45 327 *e*p **P 18 14 47.1 -1.8**
comp=Z,5.3nm,0.6s,mb4.7
KEV Kevo 56.09 336 *e*P **P 18 14 58.8 -1.9**
KEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KEV Kevo 56.09 336 *e*p **P 18 14 58.8 -1.9**
comp=Z,4.9nm,0.7s,mb4.7
BR131 Keskin Array S 56.47 299 *e*P **P 18 15 03.5 -0.4**
comp=Z,1.1nm,0.6s,mb4.1
BRTR Keskin Array B 56.47 299 P **P 18 15 03.2 -0.7**
comp=Z,1.3nm,0.6s,mb4.1,baz=111,slow=7.1,SNR=9.4
BRTR Keskin Array B 56.47 299 *c*e*P* **P 18 15 04.0 +0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 56.62 336 P **P 18 15 04.3 -0.1**
comp=Z,3.1nm,0.6s,mb4.5,baz=78,slow=7.8,SNR=28
ARCES LR LR 18 41 21.7
comp=Z,68nm,19.2s,MS3.8,baz=184,slow=38
ARCES ARCESS Array B 56.62 336 P **P 18 15 04.3 -0.1**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES MLR MLR
comp=Z,68nm,19.2s
KAF Kangasniemi 56.82 327 *e*P **P 18 15 05.1 -0.9**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KAF Kangasniemi 56.82 327 *e*p **P 18 15 05.1 -0.9**
comp=Z,5.5nm,0.6s,mb4.8
AKASG Malin Array Be 56.95 313 P **P 18 15 06.5 -0.7**
comp=Z,2.3nm,0.4s,mb4.6,baz=67,slow=7.8,SNR=8.3
AKASG Malin Array Be 56.95 313 *c*e*P* **P 18 15 06.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 57.00 326 P **P 18 15 06.7 -0.6**
comp=Z,7.2nm,0.5s,mb5.0,baz=84,slow=7.2,SNR=46
FINES FINESS Array B 57.00 326 P **P 18 15 06.7 -0.6**
FINES pmax pmax
comp=Z,7.0nm,0.5s
WRAB Tennant Creek 59.04 147 *e*P **P 18 15 21.2 -0.8**
WRAB pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
WRAB Tennant Creek 59.04 147 *e*P **P 18 15 21.2 -0.8**
comp=Z,10.0nm,1.0s,mb4.8
KWP Kalwaria Pacla 61.27 313 *e*P **P 18 15 37.6 +0.5**
KWP Kalwaria Pacla 61.27 313 *e*P **P 18 15 37.4 +0.3**
comp=Z,21nm,1.0s,mb5.2
KOLS Kolonicke sedl 61.75 312 *e*P **P 18 15 40.3 0.0**
KOLS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KOLS Kolonicke sedl 61.75 312 *e*P **P 18 15 40.3 0.0**
comp=Z,1.1nm,0.7s,mb4.1
KOLS Kolonicke sedl 61.75 312 *e*P **P 18 15 40.3 0.0**
ASAR Alice Springs 62.08 149 P **P 18 15 42.4 -0.3**
comp=Z,1.0nm,0.5s,mb4.2,baz=335,slow=6.7,SNR=40
ASAR Alice Springs 62.08 149 P **P 18 15 42.4 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
STHS Stebnicka Huta 62.25 313 *e*P **P 18 15 44.4 +0.7**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
STHS Stebnicka Huta 62.25 313 *e*P **P 18 15 44.4 +0.7**
comp=Z,1.5nm,0.8s,mb4.2
STHS Stebnicka Huta 62.25 313 *e*P **P 18 15 44.4 +0.7**
OJC Ojcow 62.90 314 *e*P sP 18 15 58.9 +5.4
OJC Ojcow 62.90 314 *e*P **P 18 15 48.9 +0.9**
KECS Kecovo 63.01 312 *e*P **P 18 15 48.8 0.0**
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KECS Kecovo 63.01 312 *e*P **P 18 15 48.8 0.0**
comp=Z,1.4nm,0.7s,mb4.2
KECS Kecovo 63.01 312 *e*P **P 18 15 48.8 0.0**
VYHS Vyhne 64.05 312 *e*P **P 18 15 56.1 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
VYHS Vyhne 64.05 312 *e*P **P 18 15 56.1 +0.5**
comp=Z,3.7nm,1.4s,mb4.2
VYHS Vyhne 64.05 312 *e*P **P 18 15 56.1 +0.5**
NB2 NORSAR Subarra 64.08 327 P **P 18 15 54.4 -1.2**
comp=Z,3.7nm,0.5s,mb4.7,baz=73,slow=6.9
NOA NORSAR Array B 64.08 327 P **P 18 15 54.8 -0.8**
comp=Z,4.0nm,0.7s,mb4.6,baz=74,slow=6.8,SNR=24
NOA NORSAR Array B 64.08 327 P **P 18 15 54.8 -0.8**
NOA pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 66.19 316 *e*P **P 18 16 09.5 0.0**
comp=Z,4.5nm,1.0s,mb4.5
BRG Berggiesshubel 66.19 316 *e*P **P 18 16 09.5 0.0**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
CLL Collm 66.58 317 *e*P **P 18 16 11.0 -1.0**
CLL MLR MLR
comp=Z,100nm,19.3s,MS4.0
CLL Collm 66.58 317 *e*(P) **P 18 16 11.0 -1.0**
CLL Lm 18 46 00.0
comp=Z,100nm,19.3s
GERES GERESS Array B 67.10 314 P **P 18 16 15.0 -0.4**
comp=Z,1.1nm,0.6s,mb4.1,baz=64,slow=6.1,SNR=8.2
GERES LR LR 18 47 08.8
comp=Z,119nm,20.4s,MS4.1,baz=268,slow=37
GERES GERESS Array B 67.10 314 P **P 18 16 15.0 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,119nm,20.4s
PPLA Purkeypile 67.95 29 *e*P **P 18 16 20.5 0.0**
COLA College 68.70 26 P **P 18 16 25.6 +0.5**
COLA pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
COLA College 68.70 26 P **P 18 16 25.6 +0.4**
comp=Z,9.3nm,1.0s,mb4.7
CDF Champ du Feu 71.15 316 *e*P **P 18 16 40.3 -0.2**
comp=Z,2.8nm,0.5s,mb4.2
KMBO Kilima Mbogo 71.19 256 P **P 18 16 41.0 -0.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=30,slow=23,SNR=4.3
KMBO Kilima Mbogo 71.19 256 P **P 18 16 41.0 -0.3**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
KMBO Kilima Mbogo 71.19 256 P **P 18 16 41.0 -0.3**
INK Inuvik 71.41 19 *e*P **P 18 16 40.1 -1.6**
STKA Stephens Creek 72.58 147 P **P 18 16 48.8 -0.4**
comp=Z,2.6nm,0.7s,mb4.2,baz=314,slow=9.5,SNR=4.8
STKA Stephens Creek 72.58 147 *e*P **P 18 16 48.9 -0.2**
LPG La Plagne 72.81 313⇑*i*P **P 18 16 51.2 +0.7**
comp=Z,16nm,0.6s,mb4.8
LPL La Plagne 72.82 313⇑*i*P **P 18 16 51.0 +0.5**
comp=Z,13nm,0.5s,mb4.8
SMF Signal de Mont 74.04 315⇑*i*P **P 18 16 57.2 -0.5**
comp=Z,6.4nm,0.7s,mb4.4
TCF Toulx Ste Croi 75.19 315 *e*P **P 18 17 03.7 -0.7**
comp=Z,3.1nm,0.6s,mb4.1
CAF Calviac 75.98 314⇑*i*P **P 18 17 09.2 +0.2**
YKA Yellowknife Ar 80.94 17 P **P 18 17 35.2 -0.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=331,slow=5.2,SNR=26
YKA Yellowknife Ar 80.94 17 P **P 18 17 35.2 -0.8**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 80.94 17 P **P 18 17 35.2 -0.8**
SCHQ Schefferville 93.32 355 P **P 18 18 34.9 -1.8**
comp=Z,3.8nm,0.7s,mb4.9,baz=198,slow=12,SNR=4.4

MAN 15 18:22:24,9.41N×121.69E,h29km,mb4.5,ML3.4,MS3.3, 2C,Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.50**	**36**	*e*P	Pn	18 22 48.9	-0.1
SNPH	**Sibulan**	**1.53**	**92**	*e*P	Pn	18 22 49.7	+0.3
SNPH				*i* S	Sn	18 23 08.7	+0.4
CUYO	**Cuyo Island**	**1.57**	**335**	*e*P	Pn	18 22 50.6	+0.6
IPIL	**Ipil**	**1.83**	**151**	*e*P	Pn	18 22 53.7	+0.1
IPIL				*e*S	Sn	18 23 05.9	-10
PAGZ	**Pagadian**	**2.28**	**133**	*e*P	Pn	18 23 01.3	+1.5
RCP	**Roxas**	**2.38**	**26**⇑	*e*P	Pn	18 23 02.8	+1.7
RCP				*e*S	Sn	18 23 30.6	+1.4
LLP	**Lapu-Lapu**	**2.42**	**68**⇑	*e*P	Pn	18 23 02.5	+0.9
LLP				*e*S	Sn	18 23 31.2	+0.9
ENPP	**El Nido**	**2.85**	**309**	*e*P	Pn	18 23 08.5	+0.9
BUSP	**Coron**	**2.96**	**331**	*e*P	Pn	18 23 09.7	+0.5

BJI 15 18:28:22.3,35.75N×82.38E,h15km,ML3.5/6,Ms3.7/1, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.32**	**308**	Pg	Pg	18 30 13.8	-10
KSH				Sn	Sn	18 31 08.1	+1.2
KSH				smax			
	comp=N,20nm,0.6s						
KSH				smax			
	comp=E,17nm,0.6s						

NNC ***15*** *18:35:12.7±2.8,40.33N×76.49E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=24.8km s-min=20.6km az=18.0*
ISC 15 18:35:13.2±1.9,40.35N±0.09×76.6E±0.2,h2km±15km,n16, σ0.67/15,7C-2D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.97**	**211**	⇑*i*Pg	**Pg**	**18 35 32.0**	**+0.2**
KSH				Sg	**Sg**	**18 35 50.3**	**+6.0**
KSH				smax			
	comp=N,290nm,0.6s						
KSH				smax			
	comp=E,260nm,0.4s						
ULHL	**Ulahol**	**1.92**	**351**	P	**Pn**	**18 35 48.2**	**+1.3**
	SNR=31						
KZA	**Kyzart**	**2.02**	**329**	P	**Pn**	**18 35 47.7**	**-0.5**
	SNR=128						
UCH	**Uchtor**	**2.46**	**320**	P	**Pn**	**18 35 53.7**	**-0.6**
	SNR=19						
KBK	**Karagaybulak**	**2.63**	**332**	P	**Pn**	**18 35 57.4**	**+0.8**
	SNR=16						
TKM2	**Tokmak 2**	**2.68**	**344**	⇑Pn	**Pn**	**18 35 58.0**	**+0.6**
	comp=E,24nm,0.5s						
TKM2				⇑Lg		18 36 37.6	
	comp=E,25nm,0.5s						
TKM2	**Tokmak 2**	**2.68**	**344**	P	**Pn**	**18 35 58.2**	**+0.8**
	SNR=38						
AAK	**Ala-Archa**	**2.79**	**326**	P	**Pn**	**18 35 58.7**	**-0.1**
	SNR=19						
AML	**Almayashu**	**2.84**	**310**	P	**Pn**	**18 35 58.6**	**-0.9**
	SNR=43						
CHMS	**Chumysh**	**3.00**	**333**	P	**Pn**	**18 36 02.2**	**+0.5**
	SNR=14						
EKS2	**Erkin-Say**	**3.15**	**318**	P	**Pn**	**18 36 03.8**	**0.0**
	SNR=25						
USP	**Ospenovka**	**3.32**	**332**	P	**Pg**	**18 36 16.7**	**-0.2**
	SNR=6.3						
KK31	**Karatay Array**	**5.34**	**303**	⇓Pg	**Pb**	**18 36 47.0**	**-0.2**
	comp=E,1.4nm,0.6s,baz=116,slow=15,SNR=4.2						
KK31				⇓Lg		18 37 57.2	
	comp=E,1.8nm,0.5s,baz=122,slow=25,SNR=4.3						
MK31	**Makanchi Array**	**7.64**	**31**	⇑Pn	**Pn**	**18 37 04.4**	**-1.1**
	comp=E,0.6nm,0.7s,baz=206,slow=14,SNR=5.7						
MK31				⇑Lg		18 39 17.0	
	comp=E,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**10.36**	**7**	⇑Lg		18 40 43.1	
	comp=E,1.0nm,0.8s						
KURK	**Kurchatov**	**10.46**	**7**	⇑Lg		18 40 45.9	
	comp=E,10nm,1.1s						

IDC ***15*** *18:42:35.8±0.9,31.64N×104.14E,h0km,mb3.8/10, mb1 3.9/10,mb1mx3.7/27,mbtmp3.8/10,MS3.1/1, Ms1 3.1/1,ms1mx2.4/29,Error ellipse: s-maj=37.0km s-min=17.5km az=49.0*
NEIC ***15*** *18:42:37.9±0.5,31.85N×104.33E,h10km,mb3.7/2,Error ellipse: s-maj=12.9km s-min=8.7km az=47.0*
BJI ***15*** *18:42:38.9,31.62N×104.34E,h19km,mB4.5/7,mb4.3/9, ML4.0/17,Ms3.9/7,Ms7 3.6/7*
ISC 15 18:42:37.3±0.8,31.71N±0.03×104.15E±0.05,h11km±6km, n31,σ1.910/41,mb3.7/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.87**	**203**	Pg	**Pg**	**18 42 54.0**	**-0.1**
CD2				Sg	**Sg**	**18 43 07.1**	**+1.7**
CD2				smax			
	comp=N,14μm,0.5s						
LZH	**Lanzhou**	**4.37**	**357**	*e*Pn	**Pn**	**18 43 48.9**	**+5.3**
LZH				Pg	**Pg**	**18 44 01.1**	**+0.1**
LZH				Sn	**Sn**	**18 44 41.3**	**+6.8**
LZH				Sg	**Sg**	**18 44 57.1**	**-0.5**
LZH				smax			
	comp=N,260nm,0.8s						
LZH				smax			
	comp=E,230nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,6.4s						
LZH				LR	LR		
	comp=Z,1μm,7.6s						
XAN	**Xi'an**	**4.63**	**59**	Pn	**Pn**	**18 43 46.9**	**-0.4**
XAN				Pg	**Pg**	**18 44 02.8**	**-3.3**
XAN				Sg	**Sg**	**18 45 02.3**	**-3.8**
XAN				smax			
	comp=N,320nm,0.5s						
XAN				smax			
	comp=E,160nm,0.6s						

ENH Enshi 4.80 106 *e*P **Pn 18 43 50.3 +0.8**
GYA Guiyang 5.68 157 Pn **Pn 18 44 02.1 +0.4**
GYA Sn **Sn 18 45 04.9 -2.0**
GYA smax
comp=N,92nm,0.9s
GYA smax
comp=E,270nm,0.8s
KMI Kunming 6.68 191 Pn **Pn 18 44 16.1 +0.6**
KMI Sn **Sn 18 45 31.3 -0.3**
KMI smax
comp=N,39nm,1.1s
KMI smax
comp=E,32nm,1.2s
KMI LR LR
comp=N,400nm,7.0s
KMI LR LR
comp=E,390nm,5.4s
KMI LR LR
comp=Z,300nm,6.6s
WHN Wuhan 8.82 95 P **Pn 18 44 53.8 +9.0**
WHN S **Sn 18 46 17.8 -6.4**
WHN LR LR
comp=N,2μm,13.6s
WHN LR LR
comp=E,2μm,10.0s
WHN LR LR
comp=Z,930nm,6.9s
LSA Lhasa 11.37 263 *e*P **Pn 18 45 23.9 +4.2**
comp=Z,3.5nm,0.6s
NJ2 Nanjing 12.50 85 *e*P **Pn 18 45 38.3 +3.1**
NJ2 pP 18 45 41.1
NJ2 sP 18 45 45.1
NJ2 PP 18 45 49.0
NJ2 S **Sn 18 47 59.4 +4.9**
NJ2 sS 18 48 03.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,40nm,3.8s
NJ2 LR LR
comp=N,250nm,13.8s
NJ2 LR LR
comp=E,370nm,15.3s
NJ2 LR LR
comp=Z,3μm,12.0s
CM31 Chiang Mai Arr 14.01 201 *e*P **Pn 18 45 59.8 +3.9**
comp=Z,7.2nm,0.6s
SONM Songino Array 16.19 5 Pn **Pn 18 46 30.7 +6.0**
comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=4.1
ULN Ulaanbaatar 16.28 7 P **Pn 18 46 31.8 +6.0**
comp=Z,7.3nm,1.4s
GUN Gumba 16.31 261 *e*P **Pn 18 46 25.5 -0.8**
comp=Z,30nm,0.8s
PKI Pulchoki 16.81 261 *e*P **Pn 18 46 30.9 -1.8**
comp=Z,16nm,0.8s
PKIN Phulchoki 16.82 261 *e*P **Pn 18 46 31.0 -1.8**
comp=Z,33nm,0.7s
KKN Kakani 16.85 261 *e*P **Pn 18 46 32.2 -1.0**
comp=Z,22nm,0.8s
DMN Daman 17.05 261 *e*P **Pn 18 46 34.4 -1.4**
comp=Z,15nm,0.8s
KSRS Korea Array 20.37 67 P **P 18 47 14.9 +1.0**
comp=Z,6.6nm,0.8s,baz=254,slow=10.0,SNR=29
KSRS LR LR 18 54 40.0
comp=Z,46nm,18.4s,baz=170,slow=36
CN2 Changchun 20.65 48 *e*P **P 18 47 21.6 +4.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MK31 Makanchi Array 22.55 318 *e*P **P 18 47 38.7 +1.4**
MKAR Makanchi Array 22.55 318 P **P 18 47 39.1 +1.8**
comp=Z,1.2nm,0.7s,mb3.5,baz=119,slow=12,SNR=16
ZALV Zalesovo Beam 26.19 334 P **P 18 48 12.1 +0.3**
comp=Z,1.2nm,0.5s,mb3.6,baz=136,slow=11,SNR=5.6
KURK Kurchatov 26.79 323 P **P 18 48 17.6 +0.5**
comp=Z,0.5nm,0.6s,mb3.2,baz=126,slow=8.6,SNR=7.1
ABKAR Akbulak array 37.30 311 *e*P **P 18 49 49.5 +0.2**
comp=Z,1.5nm,0.9s,mb3.8
BRTR Keskin Array B 56.48 299 P **P 18 52 19.6 +0.2**
comp=Z,0.8nm,0.9s,mb3.8,baz=104,slow=5.2,SNR=4.2
ARCES ARCESS Array B 56.72 336 P **P 18 52 21.1 +0.5**
comp=Z,1.0nm,0.9s,mb3.9,baz=96,slow=9.2,SNR=2.7
FINES FINESS Array B 57.09 326 P **P 18 52 24.1 +0.8**
comp=Z,1.2nm,0.7s,mb4.0,baz=100,slow=9.9,SNR=6.9
WRA Warramunga Arr 58.96 146 P **P 18 52 36.8 0.0**
comp=Z,1.3nm,0.5s,mb4.2,baz=323,slow=9.8,SNR=7.2
ASAR Alice Springs 61.99 149 P **P 18 52 57.4 -0.2**
comp=Z,0.4nm,0.6s,mb3.7,baz=337,slow=9.5,SNR=4.8
YKA Yellowknife Ar 81.10 17 P **P 18 54 52.0 -0.2**
comp=Z,0.1nm,0.2s,mb3.3,baz=116,slow=41,SNR=3.3
YKA Yellowknife Ar 81.10 17 P **P 18 54 52.0 -0.2**

IDC ***15*** *18:46:43.7±3.9,5.26N×124.70E,h150km±47km,mb3.6/5, mb1 3.8/5,mb1mx3.3/22,mbtmp3.6/5,Error ellipse: s-maj=81.4km s-min=19.5km az=70.0*
ISCJB ***15*** *18:46:45.1±0.5,5.55N±0.08×125.4E±0.1,h189km±7km, mb4.0/8,Error ellipse: s-maj=24.6km s-min=12.3km az=164.7*
NEIC ***15*** *18:46:45.5±1.4,5.54N×125.37E,h179km±22km,mb4.0/1, Error ellipse: s-maj=84.1km s-min=15.1km az=68.0*
MAN ***15*** *18:46:46,5.61N×125.42E,h176km,mb4.9,ML3.9,MS3.9*
ISC 15 18:46:46.2±0.5,5.55N±0.08×125.4E±0.1,h183km±7km, n21,σ0.53/29,mb4.1/8,4C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.71**	**319**⇓	*e*P	**Pn**	**18 47 12.2**	**-0.2**
GSPH				*i* S	**Sn**	**18 47 32.8**	**+0.2**
KCP	**Kidapawan**	**1.48**	**347**⇓	*e*P	**Pn**	**18 47 18.4**	**+0.1**
KCP				*i* S	**Sn**	**18 47 42.2**	**-1.0**
DAV	**Davao City (W)**	**1.52**	**6**	P	**Pn**	**18 47 18.4**	**-0.2**
	56nm,0.3s,baz=260,slow=11,SNR=5.4						
DAV				S	**Sn**	**18 47 46.4**	**+2.6**
	65nm,0.3s,baz=285,slow=24,SNR=6.9						
DAV	**Davao City (W)**	**1.52**	**6**	*e*P	**Pn**	**18 47 17.8**	**-0.8**
DAV				*e*S	**Sn**	**18 47 43.8**	**0.0**
DMPH	**Davao City--Mi**	**1.52**	**3**⇑	*i*P	**Pn**	**18 47 19.5**	**+0.8**
DMPH				*i* S	**Sn**	**18 47 43.6**	**-0.3**
MATI	**Mati**	**1.62**	**31**	*e*P	**Pn**	**18 47 19.3**	**-0.3**
MATI				*e*S	**Sn**	**18 47 30.1**	**-15**
BUKP	**Musuan**	**2.34**	**351**	*e*P	**Pn**	**18 47 27.7**	**+0.4**
BUKP				*e*S	**Sn**	**18 47 43.5**	**-16**
CGP	**Cagayan de Oro**	**2.97**	**346**⇑	*e*P	**Pn**	**18 47 35.0**	**+0.3**
CGP				*e*S	**Sn**	**18 48 12.4**	**-0.1**
PAGZ	**Pagadian**	**3.05**	**319**	*e*P	**Pn**	**18 47 35.7**	**+0.1**
KAKA	**Kakadu**	**19.44**	**159**	*e*P	**P**	**18 50 58.3**	**-0.5**
	14nm,0.5s						
KNA	**Kununurra**	**21.42**	**171**	*e*P	**P**	**18 51 20.1**	**+0.1**
	11nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**23.50**	**179**⇑	*i*P	**P**	**18 51 40.0**	**+0.3**
	5.6nm,0.3s,mb4.6						
FITZ	**Fitzroy Crossi**	**23.50**	**179**	P	**P**	**18 51 39.3**	**-0.4**
	3.5nm,0.4s,mb4.2,baz=359,slow=7.2,SNR=48						
WRAB	**Tennant Creek**	**26.80**	**161**	*e*P	**P**	**18 52 09.0**	**-0.5**
	2.1nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**26.81**	**161**	P	**P**	**18 52 09.3**	**-0.2**
	1.3nm,0.4s,mb3.9,baz=329,slow=11,SNR=39						
ASAR	**Alice Springs**	**30.20**	**164**	P	**P**	**18 52 39.6**	**+0.1**
	1.1nm,0.3s,mb4.0,baz=343,slow=7.0,SNR=77						
BBOO	**Buckleboo**	**39.47**	**166**⇑	*i*P	**P**	**18 53 59.5**	**+0.8**
	10nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**40.29**	**158**	*e*P	**P**	**18 54 06.2**	**+0.7**
	7.7nm,1.6s,mb4.1						
STKA	**Stephens Creek**	**40.29**	**158**	P	**P**	**18 54 05.5**	**0.0**
	1.6nm,0.4s,mb4.0,baz=340,slow=8.9,SNR=8.4						
STKA	**Stephens Creek**	**40.29**	**158**	P	**P**	**18 54 05.5**	**0.0**
MKAR	**Makanchi Array**	**55.33**	**325**	P	**P**	**18 56 00.6**	**-0.2**
	0.2nm,0.4s,mb3.2,baz=114,slow=8.4,SNR=4.2						

JMA 15 18:57:11.3±0.6,38.26N×149.27E,h43km,M3.7,North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.76**	**333**	P	Pn	18 58 35.6	+1.5
NEM2				*e*S	Sn	18 59 42.2	+3.3
JAK	**Akkeshi**	**5.87**	**325**	P	Pn	18 58 38.5	+2.8
JAK				*e*S	Sn	18 59 46.0	+4.3
MIYJ	**Miyakonagasawa**	**5.96**	**285**	P	Pn	18 58 39.5	+2.6
MIYJ				*e*S	Sn	18 59 45.0	+1.2
JTH	**Tanohata**	**6.00**	**289**	P	Pn	18 58 40.2	+2.7
JIO	**Ouri**	**6.23**	**274**	*e*S	Sn	18 59 49.3	-1.2
JCH	**Churui**	**6.26**	**316**	P	Pn	18 58 44.8	+3.7
JCH				*e*S	Sn	18 59 57.0	+5.7

JNK	**Nakash**	**6.34 329**	*e*S	Sn	18 59 55.2	+2.1
JANG	**Nango**	**6.37 292**	P	Pn	18 58 44.9	+2.3
JNBK	**Urakawa-nobuka**	**6.40 311**	P	Pn	18 58 47.6	+4.7
JNBK			*e*S	Sn	19 00 00.5	+5.8
JKZ	**Kuzumaki**	**6.41 288**	P	Pn	18 58 46.2	+3.1
JKZ			*e*S	Sn	18 59 57.6	+2.7
JAR	**Ashorobuto**	**6.54 322**	P	Pn	18 58 48.0	+3.2
JAR			*e*S	Sn	19 00 01.7	+3.7
ONAJ	**Iwakimizuishiy**	**6.82 263**	*e*S	Sn	19 00 02.2	-2.8
JRG	**Rokugo**	**6.84 282**	P	Pn	18 58 52.0	+3.0
JOT	**Ohata**	**7.05 299**	P	Pn	18 58 55.9	+4.0

GUC 15 19:04:52.0±0.3, 21°.19S×69°.13W, h117km±3km, MD3.4, ML3.5, 6C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.36 293**		⇑*i*P	Pn	19 05 09.1	+0.3
PB01				*i* S	Sn	19 05 21.9	+0.5
PB01				AML	AML	19 05 23.1	
	comp=N,3μm,0.4s						
PB04	**Plate Boundary**	**1.12 197**		⇓*i*P	Pn	19 05 20.0	+4.9
PB04				*i* S	Sn	19 05 40.6	+8.1
PB04				AML	AML	19 05 47.6	
	comp=N,560nm,0.4s						
HMBC	**Humberston**	**1.15 322**		⇑*i*P	Pn	19 05 15.7	+0.4
HMBC				*i* S	Sn	19 05 34.1	+1.2
HMBC				AML	AML	19 05 36.9	
	comp=E,667nm,0.2s						
MACH	**Maria Elena**	**1.16 210**		⇑*i*P	Pn	19 05 16.4	+1.0
MACH				*i* S	Sn	19 05 34.8	+1.6
PECH	**Pedro de Valdi**	**1.49 200**		⇑*i*P	Pn	19 05 20.0	+0.9
PECH				*i* S	Sn	19 05 41.3	+1.5
PECH				AML	AML	19 05 42.6	
	comp=E,1μm,0.3s						
PSGC	**Pisagua**	**1.84 329**		⇑*i*P	Pn	19 05 23.1	-0.1
PSGC				*i* S	Sn	19 05 47.4	+0.2
MNMC	**Miæe Miæ**	**2.09 348**		⇑*i*P	Pn	19 05 26.9	+0.5
MNMC				*i* S	Sn	19 05 54.0	+1.2
MNMC				AML	AML	19 05 59.3	
	comp=N,250nm,0.3s						

*NEIC **15** 19:28:18.0, 15°.06N×93°.02W, h62km, MD3.6(MEX), After MEX.*

MEX 15 19:28:18.0±0.8, 15°.06N×93°.02W, h62km±11km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.67 344**		*i* P	Pn	19 28 30.5	-1.6
PCIG				*i* S	Sn	19 28 40.8	-1.6
THIG		**0.74 101**		*i* P	Pn	19 28 31.2	-1.8
THIG				*i* S	Sn	19 28 42.6	-1.3
CCIG	**Comitan**	**1.49 35**		*i* P	Pn	19 28 42.3	-0.2
CCIG				*i* S	Sn	19 28 58.4	-2.6
CCIG	**Comitan**	**1.49 35**		*i* P	Pn	19 28 42.3	-0.2
CCIG				*i* S	Sn	19 28 58.4	-2.6
SCX	**San Cristobal**	**1.71 13**		*i* P	Pn	19 28 45.1	-0.5
SCX				*i* S	Sn	19 29 04.7	-1.8
SCX	**San Cristobal**	**1.71 13**		*i* P	Pn	19 28 45.1	-0.5
SCX				*i* S	Sn	19 29 04.7	-1.8
TGIG		**1.71 357**		*i* P	Pn	19 28 43.7	-2.0
TGIG				*i* S	Sn	19 29 04.6	-2.0
CMIG	**Matias Romero**	**2.70 319**		*i* P	Pn	19 28 57.8	-1.2
CMIG				*i* S	Sn	19 29 29.9	-0.7
CMIG	**Matias Romero**	**2.70 319**		*i* P	Pn	19 28 57.8	-1.2
CMIG				*i* S	Sn	19 29 29.9	-0.7
VHO	**Vista Hermosa**	**4.09 300**		*e*P	Pn	19 29 18.5	+0.4
VHO				*i* S	Sn	19 30 04.3	-0.5
VHO	**Vista Hermosa**	**4.09 300**		*e*P	Pn	19 29 18.5	+0.4
VHO				*i* S	Sn	19 30 04.3	-0.5
UTMO	**Huajuapan**	**5.35 302**		*e*P	Pn	19 29 35.5	+0.2
UTMO				*i* S	Sn	19 30 34.9	-0.8

*ISCJB **15** 19:34:39.9±0.6, 32°.26N±0°.05×105°.27E±0°.09, h10km, mb3.5/8, Error ellipse: s-maj=11.6km s-min=6.9km az=161.4*
*BJI **15** 19:34:40.1, 32°.40N×105°.53E, h9km, ML3.7/8, Ms3.9/2, Ms7 3.7/3*
*IDC **15** 19:34:41.0±1.1, 32°.41N×105°.28E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.5/27, mbtmp3.6/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/28, Error ellipse: s-maj=46.5km s-min=19.8km az=46.0*
*NEIC **15** 19:34:42.1±0.7, 32°.68N×105°.70E, h10km, mb3.4/1, Error ellipse: s-maj=60.5km s-min=10.4km az=224.0*

ISC 15 19:34:41.6±0.6, 32°.28N±0°.05×105°.29E±0°.09, h10km, n17, σ1§17/20, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.89 224**		Pg	**Pg**	**19 35 16.3**	**-1.5**
CD2				smax			
	comp=N,2μm,0.5s						
LZH	**Lanzhou**	**3.99 343**		*e*Pn	**Pn**	**19 35 44.6**	**+1.9**
LZH				Pg	**Pg**	**19 35 52.1**	**-5.9**
LZH				Sn	**Sn**	**19 36 28.8**	**-0.7**
LZH				Sg	**Sb**	**19 36 39.3**	**-0.9**
LZH				smax			
	comp=N,320nm,0.8s						
LZH				smax			
	comp=E,260nm,0.7s						
LZH				LR	LR		
	comp=E,510nm,5.2s						
LZH				LR	LR		
	comp=Z,620nm,6.8s						
ENH	**Enshi**	**4.11 118**		*e*Pn	**Pn**	**19 35 44.1**	**-0.4**
GYA	**Guiyang**	**5.92 168**		Pg	**Pb**	**19 36 17.1**	**-7.8**
GYA				Sg	**Sn**	**19 37 22.8**	**+5.6**
GYA				smax			
	comp=N,100nm,0.6s						
GYA				smax			
	comp=E,50nm,0.8s						
WHN	**Wuhan**	**7.93 100**		Pn	**Pn**	**19 36 33.6**	**-3.4**
WHN				LR	LR		
	comp=N,760nm,4.6s						
WHN				LR	LR		
	comp=E,200nm,4.5s						
WHN				LR	LR		
	comp=Z,560nm,5.5s						
KSRS	**Korea Array**	**19.26 68**		P	**Pn**	**19 39 07.0**	**-0.2**
	baz=251,slow=10,SNR=4.0						
MKAR	**Makanchi Array**	**22.80 316**		P	**P**	**19 39 45.3**	**+1.0**
	comp=Z,0.6nm,0.7s,mb3.2,baz=115,slow=11,SNR=7.4						
ZALV	**Zalesovo Beam**	**26.14 332**		P	**P**	**19 40 13.7**	**-2.0**
	comp=Z,0.5nm,0.5s,mb3.3,baz=134,slow=12,SNR=3.6						
KURK	**Kurchatov**	**26.95 321**		P	**P**	**19 40 23.5**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.1,baz=132,slow=9.8,SNR=4.1						
BVAR	**Borovoye Array**	**32.52 320**		LR	LR	19 53 37.3	
	comp=Z,37nm,21.4s,baz=299,slow=35						
ABKAR	**Akbulak array**	**37.67 310**		P	**P**	**19 41 56.4**	**-0.5**
	comp=Z,0.3nm,0.5s,mb3.3						
AKTK	**Aktyubinsk**	**39.09 312**		P	**P**	**19 42 10.1**	**+1.3**
AKTO	**Aktyubinsk**	**39.09 312**		P	**P**	**19 42 10.1**	**+1.3**
	comp=Z,0.7nm,0.6s,mb3.6,baz=114,slow=4.0,SNR=3.5						
FINES	**FINESS Array B**	**57.16 326**		P	**P**	**19 44 28.1**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=102,slow=8.8,SNR=4.9						
AKASG	**Malin Array Be**	**57.33 313**		P	**P**	**19 44 29.2**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.7,baz=68,slow=7.0,SNR=4.1						
AKASG	**Malin Array Be**	**57.33 313**		P	**P**	**19 44 29.2**	**-0.4**
ASAR	**Alice Springs**	**61.98 150**		P	**P**	**19 45 03.7**	**+1.8**
	comp=Z,1.5nm,0.7s,mb4.2,baz=332,slow=6.7,SNR=20						

*ISCJB **15** 19:42:40.8±1.0, 51°.47N±0°.05×16°.04E±0°.05, h0km, Error ellipse: s-maj=7.6km s-min=3.6km az=24.5*
*PRU **15** 19:42:40.9, 51°.55N×16°.21E, h0km*
*CSEM **15** 19:42:41.6±0.5, 51°.51N×16°.08E, h2km, ML2.7/5, Error ellipse: s-maj=9.3km s-min=4.7km az=14.0*
*WAR **15** 19:42:42.6, 51°.54N×16°.09E, ML2.2, Mining Induced*

ISC 15 19:42:41.3±1.1, 51°.53N±0°.05×16°.11E±0°.05, h0km, n23, σ0§73/42, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPC	**Upice**	**1.02 183**		*e*PG	**Pg**	**19 43 01.5**	**+0.6**
UPC	**Upice**	**1.02 183**		Pg	**Pg**	**19 43 01.5**	**+0.6**
DPC	**Dobruska-Polom**	**1.19 173**		*e*PG	**Pg**	**19 43 04.3**	**+0.3**
DPC				*e*SG	**Sg**	**19 43 19.7**	**+0.3**
	comp=Z,11nm,0.7s						
DPC	**Dobruska-Polom**	**1.19 173**		Pg	**Pg**	**19 43 04.3**	**+0.3**
DPC				Sg	**Sg**	**19 43 19.7**	**+0.3**
	comp=Z,11nm,0.7s						
PVCC	**Panska Ves**	**1.40 225**		*e*PG	**Pg**	**19 43 08.6**	**+0.6**
PVCC	**Panska Ves**	**1.40 225**		Pg	**Pg**	**19 43 08.6**	**+0.6**
PRU	**Pruhonice**	**1.83 213**		*e*PG	**Pg**	**19 43 16.9**	**+0.5**
PRU				*e*SG	**Sg**	**19 43 40.3**	**+0.1**
	comp=Z,6.8nm,0.3s						
PRU	**Pruhonice**	**1.83 213**		Pg	**Pg**	**19 43 16.9**	**+0.5**
PRU				Sg	**Sg**	**19 43 40.3**	**+0.1**
	comp=Z,6.8nm,0.3s						
CLL	**Collm**	**1.96 265**		*e*Pn	**Pn**	**19 43 15.0**	**-0.7**
CLL				*i* Pg	**Pg**	**19 43 17.8**	**-0.9**
CLL				*i*		19 43 21.7	
CLL				*i* Sg	**Sg**	**19 43 44.1**	**0.0**
	comp=Z,5.0nm,0.5s						
MORC	**Moravsky Berou**	**1.98 152**		*e*Pn	**Pn**	**19 43 15.9**	**-0.1**
MORC				*e*Sg	**Sg**	**19 43 44.4**	**-0.4**
OKC	**Ostrava-Krasne**	**2.13 142**		*e*PG	**Pg**	**19 43 22.1**	**0.0**
OKC				*e*SG	**Sg**	**19 43 50.9**	**+1.1**
	comp=Z,7.1nm,0.5s						
OKC	**Ostrava-Krasne**	**2.13 142**		Pg	**Pg**	**19 43 22.1**	**0.0**
OKC				Sg	**Sg**	**19 43 50.9**	**+1.1**
	comp=Z,7.1nm,0.5s						
VRAC	**Vranov**	**2.25 172**		*e*Pn	**Pn**	**19 43 20.5**	**+0.9**
VRAC				*e*Sg	**Sg**	**19 43 52.0**	**-1.3**
NKC	**Novy Kostel**	**2.66 242**		*e*PN	**Pn**	**19 43 25.5**	**+0.2**
NKC				*e*PG	**Pg**	**19 43 30.8**	**-1.3**
NKC				*e*SG	**Sg**	**19 44 07.5**	**+1.0**
	comp=Z,13nm,0.3s						
NKC	**Novy Kostel**	**2.66 242**		Pn	**Pn**	**19 43 25.5**	**+0.2**
NKC	**Novy Kostel**	**2.66 242**		Pg	**Pg**	**19 43 30.8**	**-1.3**
NKC				Sg	**Sg**	**19 44 07.5**	**+1.0**
	comp=Z,13nm,0.3s						
KHC	**Kasperske Hory**	**2.90 215**		*e*PN	**Pn**	**19 43 28.7**	**+0.1**
KHC				*e*PG	**Pg**	**19 43 35.8**	**-0.9**
KHC				*e*SN	**Sn**	**19 44 04.0**	**-0.1**
KHC				*e*SG	**Sg**	**19 44 13.5**	**-0.7**
	comp=Z,3.6nm,0.7s						
KHC	**Kasperske Hory**	**2.90 215**		Pn	**Pn**	**19 43 28.7**	**+0.1**
KHC	**Kasperske Hory**	**2.90 215**		Pg	**Pg**	**19 43 35.8**	**-0.9**
KHC				Sn	**Sn**	**19 44 04.0**	**-0.1**
KHC				Sg	**Sg**	**19 44 13.5**	**-0.7**
	comp=Z,3.6nm,0.7s						
MOX	**Moxa**	**2.97 254**		*e*PG	**Pg**	**19 43 38.0**	**-0.1**
MOX				*i* SG	**Sg**	**19 44 17.6**	**+1.1**
VYHS	**Vyhne**	**3.51 149**		*e*SG	**Sg**	**19 44 30.2**	**-3.8**
VYHS	**Vyhne**	**3.51 149**		*e*Sg	**Sg**	**19 44 30.2**	**-3.8**
STHS	**Stebnicka Huta**	**3.90 121**		*e*SG	**Sg**	**19 44 37.8**	**-8.8**

IDC 15 19:44:24.2±16.0, 31°.50N×105°.38E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/24, mbtmp3.6/3, Error ellipse: s-maj=362.0km s-min=137.2km az=14.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**23.41 317**		P	P	19 49 34.9	0.0
	0.2nm,0.5s,baz=130,slow=8.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.86 333**		P	P	19 50 06.2	-0.1
	1.2nm,0.7s,baz=134,slow=9.2,SNR=6.1						
ARCES	**ARCESS Array B**	**57.35 336**		P	P	19 54 13.8	+0.1
	1.4nm,0.8s,baz=92,slow=8.7,SNR=4.2						

*ISCJB **15** 19:47:46.1±0.6, 32°.45N±0°.03×104°.91E±0°.06, h10km, mb3.4/5, Error ellipse: s-maj=7.1km s-min=4.4km az=17.9*
*IDC **15** 19:47:48.6±1.5, 31°.84N×104°.54E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/25, mbtmp3.5/4, Error ellipse: s-maj=210.9km s-min=23.9km az=56.0*
*NEIC **15** 19:47:50.1±0.7, 31°.87N×104°.57E, h10km, mb3.8/1, Error ellipse: s-maj=36.3km s-min=10.2km az=223.0*
*BJI **15** 19:47:51.5, 32°.15N×104°.90E, h10km, ML3.4/8, Ms7 3.2/1*

ISC 15 19:47:49.1±0.5, 32°.40N±0°.03×104°.88E±0°.05, h10km, n11, σ1§32/18, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.76 213**		Pn	**Pn**	**19 48 20.1**	**+0.4**
CD2				Pg	**Pg**	**19 48 21.3**	**-1.6**
CD2				Sn	**Sn**	**19 48 42.5**	**+0.3**
CD2				Sg	**Sg**	**19 48 44.8**	**-1.0**
CD2				smax			
	comp=N,2μm,0.6s						
XAN	**Xi'an**	**3.76 63**		Pg	**Pg**	**19 49 01.1**	**-0.1**
XAN				Sg	**Sg**	**19 49 47.9**	**-2.0**
XAN				smax			
	comp=N,130nm,0.9s						
XAN				smax			
	comp=E,35nm,0.9s						
LZH	**Lanzhou**	**3.78 347**		*e*Pg	**Pg**	**19 49 01.9**	**+0.4**
LZH				Sg	**Sg**	**19 49 49.5**	**-1.0**
LZH				smax			
	comp=N,250nm,0.8s						
LZH				smax			
	comp=E,240nm,0.5s						
ENH	**Enshi**	**4.47 117**		*e*Pn	**Pn**	**19 48 58.3**	**+1.4**
ENH				*e*S	**Sb**	**19 50 04.6**	**+2.8**
GYA	**Guiyang**	**6.12 165**		Pg	**Pg**	**19 49 47.3**	**+1.0**
GYA				Sg	**Sb**	**19 50 48.5**	**-0.6**
GYA				smax			
	comp=N,60nm,0.6s						
GYA				smax			
	comp=E,60nm,0.8s						
MKAR	**Makanchi Array**	**22.47 316**		P	**P**	**19 52 51.4**	**+3.1**
	comp=E,0.4nm,0.7s,mb2.9,baz=114,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**25.87 332**		P	**P**	**19 53 25.3**	**+4.6**
	comp=E,0.5nm,0.5s,mb3.3,baz=116,slow=9.8,SNR=3.7						
KURK	**Kurchatov**	**26.63 321**		P	**P**	**19 53 30.9**	**+3.3**
	comp=E,0.4nm,0.3s,mb3.4,baz=131,slow=7.7,SNR=4.2						
KURK	**Kurchatov**	**26.63 321**		P	**P**	**19 53 30.9**	**+3.3**
WRAB	**Tennant Creek**	**59.19 147**		*e*P	**P**	**19 57 49.4**	**-0.9**
	comp=E,0.3nm,0.4s,mb3.7						
ASAR	**Alice Springs**	**62.26 150**		P	**P**	**19 58 10.2**	**-1.0**
	comp=E,0.3nm,0.4s,mb3.8,baz=335,slow=6.8,SNR=7.0						

*CSEM **15** 20:06:15.7±0.1, 39°.64N×38°.59E, h12km, MD2.8, Error ellipse: s-maj=2.3km s-min=1.9km az=114.0*
*ISK **15** 20:06:15.2, 39°.62N×38°.61E, h16km, MD2.8*
*ISCJB **15** 20:06:16.1±1.1, 39°.62N±0°.03×38°.64E±0°.07, h15km±9km, Error ellipse: s-maj=9.2km s-min=4.6km az=16.1*
*DDA **15** 20:06:16.1, 39°.54N×38°.83E, h7km±6km, Md2.8*

ISC 15 20:06:16.2±0.7, 39°.64N±0°.03×38°.62E±0°.06, h14km±6km, n21, σ0§94/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.38 195**		*i* P	**Pg**	**20 06 23.5**	**-0.4**
KEMA				*i* S	**Sg**	**20 06 29.4**	**+0.3**
KEMA	**Kemaliye**	**0.38 195**		*i* P	**Pg**	**20 06 23.5**	**-0.4**
KEMA				*i* S	**Sg**	**20 06 29.4**	**+0.4**
EZC	**Erzincan**	**0.57 78**		*e*PG	**Pg**	**20 06 27.6**	**+0.1**
EZC				*e*SG	**Sg**	**20 06 36.1**	**+1.1**
KELT	**Kelkit**	**0.70 43**		*i* P	**Pg**	**20 06 29.1**	**-0.8**
KELT				*i* S	**Sg**	**20 06 39.6**	**+0.5**
KELT	**Kelkit**	**0.70 43**		*i* P	**Pg**	**20 06 29.1**	**-0.8**
KELT				*i* S	**Sg**	**20 06 39.6**	**+0.4**
PTK	**Pertek**	**0.95 141**		*e*PG	**Pg**	**20 06 33.5**	**-1.1**
PTK				*e*SG	**Sg**	**20 06 47.7**	**+0.7**
PTK	**Pertek**	**0.95 141**		*e*Pg	**Pg**	**20 06 33.5**	**-1.1**
PTK				*e*Sg	**Sg**	**20 06 47.7**	**+0.6**
ELZG	**Elazig**	**1.17 166**		*i* P	**Pn**	**20 06 37.9**	**-0.3**
ELZG				*i* S	**Sb**	**20 06 50.0**	**-3.3**
ELZG	**Elazig**	**1.17 166**		*i* P	**Pn**	**20 06 37.8**	**-0.4**
ESPY	**Espiye-Giresun**	**1.28 4**		*e*PN	**Pn**	**20 06 39.4**	**-0.3**
ESPY				*e*SN	**Sn**	**20 06 56.8**	**+0.2**
ESPY	**Espiye-Giresun**	**1.28 4**		*e*Pn	**Pn**	**20 06 39.4**	**-0.2**
ESPY				*e*Sn	**Sn**	**20 06 56.8**	**+0.2**
SVSK	**Karacayir**	**1.28 283**		*e*PN	**Pn**	**20 06 39.1**	**-0.6**
SVSK				*e*SN	**Sn**	**20 06 56.8**	**+0.1**
SVSK	**Karacayir**	**1.28 283**		*e*Pn	**Pn**	**20 06 39.1**	**-0.6**
SVSK				*e*Sn	**Sn**	**20 06 56.8**	**+0.1**
MALT	**Malatya**	**1.33 187**		*e*PN	**Pn**	**20 06 40.1**	**-0.2**
MALT	**Malatya**	**1.33 187**		*e*Pn	**Pn**	**20 06 40.1**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.37 157**		*e*PN	**Pn**	**20 06 39.5**	**-1.3**
SVRC	**Sivrice-ELAZID**	**1.37 157**		*e*Pn	**Pn**	**20 06 39.5**	**-1.3**
AKCD	**Akcadag**	**1.45 202**		*i* P	**Pn**	**20 06 42.9**	**+1.0**
AKCD				*i* S	**Sn**	**20 07 03.2**	**+2.5**
AKCD	**Akcadag**	**1.45 202**		*i* P	**Pn**	**20 06 42.9**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.78 238**		*e*PN	**Pn**	**20 06 50.3**	**+3.8**
SARI	**SarD1z-Kayseri**	**1.78 238**		*e*Pn	**Pn**	**20 06 50.3**	**+3.8**

MAN 15 20:28:46, 18°.44N×120°.62E, h46km, mb4.8, ML3.7, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.11 182**		⇓*i*P	Pn	20 28 54.8	+1.4
PIP				*e*S	Sn	20 29 01.1	+2.5
ABRA	**Dolores**	**0.79 174**		*e*P	Pn	20 29 03.9	+3.0
ABRA				*e*S	Sn	20 29 11.1	-0.5
APYP	**Conner**	**0.82 134**		*e*P	Pn	20 29 04.0	+2.7
APYP				*e*S	Sn	20 29 10.9	-1.4
SGCP	**Mt. Cagua**	**1.37 98**		*e*P	Pn	20 29 10.1	+1.5
CAUP	**Cauayan**	**1.88 142**		*e*P	Pn	20 29 21.6	+6.0

*IDC **15** 20:29:13.8±1.2, 22°.81N×120°.71E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.5/24, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=38.9km s-min=25.1km az=65.0*
*NEIC **15** 20:29:14.9±0.6, 22°.75N×120°.69E, h10km, mb4.1/1, Error ellipse: s-maj=15.6km s-min=10.8km az=77.0*
*TAP **15** 20:29:14.6, 22°.98N×121°.01E, h7km, ML4.1, C*
*ISCJB **15** 20:29:15.1±0.3, 22°.96N±0°.01×121°.06E±0°.02, h2km±3km, mb3.7/5, Error ellipse: s-maj=3.0km s-min=2.2km az=174.2*

ISC 15 20:29:15.5±0.3, 22°.96N±0°.01×121°.06E±0°.02, h8km±2km, n69, σ1§21/110, mb3.7/5, 19D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.14 173**		⇓*i*P	**Pg**	**20 29 19.1**	**+0.6**
	baz=152						
TWG				*i* S	**Sg**	**20 29 21.6**	**+1.1**
	baz=152						
TTN	**Taitung**	**0.22 157**		P	**Pg**	**20 29 21.3**	**+1.3**
	baz=149						
TTN				*e*S	**Sg**	**20 29 26.4**	**+3.5**
	baz=149						
ELDTW	**Lidau**	**0.23 351**		⇓*i*P	**Pg**	**20 29 19.1**	**-1.1**
	baz=10.0						
ELDTW				S	**Sg**	**20 29 21.9**	**-1.5**
	baz=10.0						
CHKT	**Chengkung**	**0.32 64**		⇓*i*P	**Pg**	**20 29 23.1**	**+1.3**
	baz=71						
CHKT				S	**Sg**	**20 29 29.3**	**+3.3**
	baz=71						
STYT	**Tauyuan**	**0.34 307**		*i* P	**Pg**	**20 29 20.9**	**-1.4**
	baz=308						
STYT				S	**Sg**	**20 29 25.1**	**-1.7**
	baz=308						
ECL	**Taimali**	**0.37 195**		⇓*i*P	**Pg**	**20 29 22.5**	**-0.3**
	baz=186						
ECL				S	**Sg**	**20 29 27.4**	**-0.3**
	baz=186						
SSD	**Sandimen**	**0.44 242**		⇓*i*P	**Pg**	**20 29 22.8**	**-1.3**
	baz=228						
SSD				S	**Sg**	**20 29 28.0**	**-1.9**
	baz=228						
SGST	**Jiashian**	**0.45 286**		⇓*i*P	**Pg**	**20 29 23.7**	**-0.7**
	baz=288						
SGST				*i* S	**Sg**	**20 29 30.5**	**+0.2**
	baz=288						
TWF1	**Yuli**	**0.45 29**		⇓*i*P	**Pg**	**20 29 23.7**	**-0.6**
	baz=37						
TWF1				S	**Sg**	**20 29 29.4**	**-0.9**
	baz=37						
WTP	**Ta-pu**	**0.50 305**		⇓*i*P	**Pg**	**20 29 24.6**	**-0.6**
	baz=306						
WTP				S	**Sg**	**20 29 31.0**	**-0.7**
	baz=306						
CHN1	**Nanshi**	**0.54 295**		⇓*i*P	**Pg**	**20 29 25.7**	**-0.2**
	baz=301						
CHN1				*e*S	**Sg**	**20 29 33.9**	**+1.0**
	baz=301						
YUS	**Yu-Shan**	**0.54 350**		*i* P	**Pg**	**20 29 24.9**	**-1.0**
	baz=4.0						
YUS				S	**Sg**	**20 29 31.7**	**-1.3**
	baz=4.0						
SGLT	**Jiouru**	**0.57 246**		P	**Pg**	**20 29 25.9**	**-0.7**
	baz=236						
SGLT				*e*S	**Sg**	**20 29 36.7**	**+2.7**
	baz=236						
CHN4	**Tsaushan**	**0.58 313**		⇓*i*P	**Pg**	**20 29 26.3**	**-0.5**
	baz=314						
CHN4				*i* S	**Sg**	**20 29 34.3**	**+0.1**
	baz=314						
ALS	**Alishan**	**0.60 337**		⇓*i*P	**Pg**	**20 29 26.2**	**-0.9**
	baz=342						
ALS				S	**Sg**	**20 29 34.2**	**-0.6**
	baz=342						
TWM1	**Shoushan**	**0.60 257**		⇓*i*P	**Pg**	**20 29 27.3**	**+0.2**
	baz=247						
EHY	**Hungye**	**0.60 24**		⇓*i*P	**Pg**	**20 29 26.1**	**-1.1**
	baz=30						
EHY				S	**Sg**	**20 29 33.9**	**-1.0**
	baz=30						
EAST	**Anshuo**	**0.60 199**		⇓*i*P	**Pg**	**20 29 26.9**	**-0.3**
	baz=193						
EAST				*e*S	**Sg**	**20 29 36.7**	**+1.7**
	baz=193						
TWK	**Hsinying**	**0.61 301**		⇓*i*P	**Pg**	**20 29 27.0**	**-0.3**
	baz=307						
TWK				*e*S	**Sg**	**20 29 36.3**	**+1.1**
	baz=307						
TAW	**Tawu**	**0.61 194**		P	**Pg**	**20 29 27.8**	**+0.4**
	baz=189						
TAW				*e*S	**Sg**	**20 29 35.2**	**-0.2**
	baz=189						
CHN3	**Shinhua**	**0.65 281**		⇓P	**Pg**	**20 29 29.3**	**+1.3**
	baz=279						
CHN3				*e*S	**Sg**	**20 29 40.1**	**+3.6**
	baz=279						
SCZT	**Fangliau**	**0.71 215**		⇓*i*P	**Pg**	**20 29 28.4**	**-0.8**
	baz=210						
SCZT				*e*S	**Sg**	**20 29 38.1**	**-0.3**
	baz=210						
CHN5	**Tsauling**	**0.72 332**		⇓*i*P	**Pg**	**20 29 28.8**	**-0.7**
	baz=334						
CHN5				S	**Sg**	**20 29 39.2**	**+0.2**
	baz=334						
TAI1	**Yung-k'ang**	**0.77 276**		*e*P	**Pg**	**20 29 31.4**	**+1.1**
	baz=274						
TAI1				*e*S	**Sg**	**20 29 44.1**	**+3.8**
	baz=274						
CHN2	**Minshiung**	**0.78 317**		*e*P	**Pg**	**20 29 30.5**	**-0.1**
	baz=319						
CHN2				*e*S	**Sg**	**20 29 42.0**	**+1.2**

	baz=178								
HWA	Hwalien	1.13	26	eP		Pg	20 29 38.5	+1.1	
	baz=26								
WTCT	Ta-ch'eng	1.15	322	eP		Pg	20 29 36.5	-1.1	
	baz=324								
WTCT				eS		Sg	20 29 52.6	+0.1	
	baz=324								
WHF	Hehuan Shan	1.20	9	eP		Pg	20 29 36.7	-1.9	
	baz=20								
TWD	Chiawan	1.22	24	eP		Pb	20 29 37.6	-1.3	
	baz=32								
TCU	Taichung	1.23	344	eP		Pb	20 29 38.8	-0.4	
	baz=347								
TCU				eS		Sg	20 29 56.9	+1.5	
	baz=347								
TWT	Tachien	1.29	5	eP		Pn	20 29 39.1	-0.9	
	baz=15								
TWQ1	Liyutan	1.41	349	eP		Pn	20 29 42.1	+0.5	
	baz=352								
TWQ1				eS		Sb	20 30 01.8	+1.6	
	baz=352								
NSY	Sanyi	1.48	350	eP		Pn	20 29 42.7	+0.2	
	baz=352								
NSY				eS		Sn	20 30 04.0	+2.0	
	baz=352								
NNS	Nan Shan	1.50	11	eP		Pn	20 29 42.1	-0.8	
	baz=23								
NNS				eS		Sn	20 30 04.8	+2.1	
	baz=23								
PNG	Penghu	1.51	294	P		Pn	20 29 41.2	-1.7	
	baz=293								
PNG				eS		Sn	20 30 00.6	-2.1	
	baz=293								
ENA	Nanau	1.59	23	eP		Pn	20 29 43.9	-0.2	
	baz=22								
NSTT	Nanjuang	1.67	358	eP		Pn	20 29 45.3	+0.2	
	baz=338								
NSTT				S		Sn	20 30 09.2	+2.5	
	baz=338								
NSK	Sanguang	1.73	9	eP		Pn	20 29 45.8	-0.2	
	baz=23								
NSK				eS		Sn	20 30 11.1	+2.7	
	baz=23								
TWC	Suao	1.80	24	eP		Pn	20 29 48.0	+1.1	
	baz=22								
TWE	Neicheng	1.84	18	eP		Pn	20 29 48.6	+1.1	
	baz=30								
ILA	Ilan	1.91	19	eP		Pn	20 29 48.9	+0.5	
	baz=30								
TATO	Taipei	2.05	11	eP		Pn	20 29 52.8	+2.5	
TAP1	Taipei	2.12	12	eP		Pn	20 29 53.5	+2.3	
	baz=352								
TWS1	Kuangyinshan	2.16	9	eP		Pn	20 29 54.5	+2.6	
	baz=26								
TWS1				eS		Sn	20 30 26.1	+7.3	
	baz=26								
NWF	Wu-fen Shan	2.21	17	eP		Pn	20 29 53.5	+1.0	
	baz=28								
KNM	Kinmen	2.81	302	eP		Pn	20 29 59.6	-1.2	
	baz=303								
QZH	Quanzhou	3.00	312	Pn		Pn	20 30 03.6	+0.2	
QZH				Sn		Sn	20 30 37.3	-2.2	
QZH				smax					
	comp=N,410nm,1.1s								
QZH				smax					
	comp=E,300nm,0.6s								
KSRS	Korea Array	15.61	21	Pn		Pn	20 32 56.1	+0.2	
	comp=E,0.2nm,0.3s,baz=298,slow=10,SNR=3.0								
MJAR	Matsushiro Arr	20.08	44	P		P	20 33 53.4	+3.9	
	comp=E,1.4nm,0.7s,baz=223,slow=8.5,SNR=5.2								
MK31	Makanchi Array	39.14	317	eP		P	20 36 42.1	-1.5	
MKAR	Makanchi Array	39.14	317	P		P	20 36 42.5	-1.1	
	comp=E,0.5nm,0.7s,mb3.4,baz=128,slow=7.8,SNR=8.4								
MKAR				PcP		PcP	20 38 53.2	+0.1	
	comp=E,0.4nm,0.7s,baz=97,slow=7.3,SNR=4.3								
ZAA0	Zalesovo Array	41.21	328	eP		P	20 37 00.2	-0.4	
ZALV	Zalesovo Beam	41.21	328	P		P	20 36 59.0	-1.7	
	comp=E,2.5nm,0.8s,mb3.9,baz=101,slow=7.7,SNR=8.6								
WRAB	Tennant Creek	44.56	162	P		P	20 37 26.1	-2.1	
	comp=E,2.5nm,0.9s,mb4.0								
ASAR	Alice Springs	48.00	164	P		P	20 37 53.7	-1.4	
	comp=E,0.3nm,0.5s,mb3.5,baz=333,slow=6.6,SNR=6.7								
BVAR	Borovoye Array	48.55	321	P		P	20 37 57.8	-1.4	
	comp=E,0.5nm,0.7s,mb3.7,baz=60,slow=6.8,SNR=4.0								

*IDC **15** 20:38:22.9±1.3, 37.°60N×44.°67E, h0km, mb3.5/9, mb1 3.7/13, mb1mx3.6/27, mbtmp3.6/13, ML3.6/4, MS3.0/4, Ms1 3.0/4, ms1mx2.6/35, Error ellipse: s-maj=33.7km s-min=15.5km az=161.0*

*CSEM **15** 20:38:23.3±0.2, 37.°51N×44.°61E, h2km, ML3.8, Error ellipse: s-maj=5.3km s-min=4.0km az=23.0*

*ISCJB **15** 20:38:23.2±0.2, 37.°53N±0.°02×44.°56E±0.°02, h10km, mb3.4/10, MS3.2/2, Error ellipse: s-maj=2.9km s-min=2.4km az=12.3*

*THR **15** 20:38:23.8±0.4, 37.°53N×44.°46E, h14km±4km, ML3.5*

*DDA **15** 20:38:24.1, 37.°50N×44.°49E, h5km±1km, Md3.8*

*NEIC **15** 20:38:24.2, 37.°53N×44.°50E, h15km, mb3.9/2, ML3.7(THR), After THR.*

*ISK **15** 20:38:24.8, 37.°52N×44.°40E, h6km, ML3.8*

*TEH **15** 20:38:24.3, 37.°67N×44.°68E, h2km*

ISC 15 20:38:24.6±0.2, 37.°55N±0.°02×44.°56E±0.°02, h10km, n147, σ1°52/169, mb3.4/10, MS3.2/2, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	Hakkari	0.65	273	PG	Pg	20 38 34.7	-2.5
HKR	Hakkari	0.65	273	i Pg	Pg	20 38 34.7	-2.5
HAKT	HAKKARI	0.68	271	i P	Pg	20 38 34.8	-2.9
HAKT				i S	Sg	20 38 45.7	-0.9
HAKT	HAKKARI	0.68	271	i P	Pg	20 38 34.8	-2.9
HAKT				i S	Sg	20 38 45.7	-0.9
CUKT	Cukurca	0.82	249	ePG	Pg	20 38 38.0	-2.3
CUKT				eSG	Sg	20 38 49.2	-1.7
CUKT	Cukurca	0.82	249	ePg	Pg	20 38 38.0	-2.3
CUKT				eSg	Sg	20 38 49.2	-1.8
ISHB	Shabestar	1.11	48	ePg	Pg	20 38 41.6	-4.4
ISHB				e	Sg	20 38 49.6	-11
	comp=Z,28μm,0.2s						
IAZR	Azarshahr	1.13	83	ePg	Pg	20 38 42.5	-3.9
IAZR				e	Sg	20 39 03.5	+2.4
	comp=Z,67μm,0.3s						
IAZR	Azarshahr	1.13	83	ePg	Pg	20 38 42.5	-3.9
TVAN	Van	1.34	317	i P	Pn	20 38 47.7	-1.6
TVAN	Van	1.34	317	i P	Pn	20 38 47.7	-1.7
VANT	Van	1.35	311	ePN	Pn	20 38 50.0	+0.5
VANB	Van	1.40	319	ePN	Pn	20 38 47.9	-2.2
VANB				eSN	Sn	20 39 09.3	+0.7
VANB	Van	1.40	319	ePn	Pn	20 38 47.9	-2.2
VANB				eSn	Sn	20 39 09.3	+0.7
ITBZ	Tabriz	1.43	61	ePg	Pn	20 38 47.5	-3.1
ITBZ				e		20 38 52.8	
	comp=Z,12μm,0.3s						
ITBZ	Tabriz	1.43	61	ePg	Pn	20 38 47.5	-3.1
IMRD	Marand	1.47	37	ePg	Pn	20 38 47.9	-3.3
IMRD				e		20 39 23.0	
	comp=Z,25μm,0.3s						
IMRD	Marand	1.47	37	ePg	Pn	20 38 47.9	-3.3
MSL	Mosul	1.63	226	ePn	Pn	20 38 53.0	-0.3
MSL				i Sn	Sg	20 39 17.0	0.0
CLDR	Caldiran	1.67	343	ePN	Pn	20 38 55.0	+1.0
CLDR				eSN	Sg	20 39 17.4	-1.1
CLDR	Caldiran	1.67	343	ePn	Pn	20 38 55.0	+1.1
CLDR				eSn	Sg	20 39 17.4	-1.0
MAKU	Maku	1.81	3	ePn	Pn	20 38 57.0	+1.2
MAKU				eSg	Sg	20 39 22.0	-0.8
MAKU	Maku	1.81	3	ePg	Pn	20 38 57.3	+1.5
MAKU				eSg	Sg	20 39 22.0	-0.7
MAKU	Maku	1.81	3	ePn	Pn	20 38 57.0	+1.2
MAKU				eSg	Sg	20 39 22.0	-0.8
IBST	Bostanabad	1.86	85	ePn	Pn	20 38 54.8	-1.6
IBST				e		20 38 58.6	
	comp=Z,8μm,0.3s						
IBST				eSn	Sn	20 39 19.4	-0.6
TATV	Tatvan	2.05	299	i P	Pn	20 39 00.6	+1.5
TATV	Tatvan	2.05	299	i S	Sg	20 39 28.5	-2.0
TATV	Tatvan	2.05	299	i P	Pn	20 39 00.6	+1.5
TATV				i S	Sg	20 39 28.5	-2.0
IHRS	Heris	2.11	68	ePn	Pn	20 38 59.3	-0.6
IHRS				eSn	Sn	20 39 24.2	-1.9
IHRS				e		20 39 43.2	
	comp=Z,16μm,0.5s						
DYDN	Diyadin	2.11	341	i P	Pn	20 39 02.6	+2.7
DYDN	Diyadin	2.11	341	i P	Pn	20 39 02.7	+2.8
AGRB	Hanur-Agry	2.37	329	ePN	Pn	20 39 05.5	+1.9
AGRB	Hanur-Agry	2.37	329	ePn	Pn	20 39 05.5	+2.0
ISRB	Sarab	2.48	83	e	Pg	20 39 15.9	+3.8
	comp=Z,5μm,0.3s						
ISRB				ePn	Pn	20 39 04.6	-0.4
GNI	Garni	2.60	3	ePN	Pn	20 39 09.7	+3.0
GNI	Garni	2.60	3	ePn	Pn	20 39 09.1	+2.4
GNI	Garni	2.60	3	ePn	Pn	20 39 09.1	+2.4
BEST	Besiri	2.63	279	i P	Pn	20 39 06.5	-0.6
DIGO	Kars	3.01	342	i P	Pg	20 39 20.0	-2.3
IDHR	Dehrash	3.20	152	eSn	Sn	20 39 54.7	+1.6
IDHR				e		20 40 15.7	
	comp=N,6μm,0.2s						
IDHR	Dehrash	3.20	152	eSn	Sn	20 39 54.7	+1.6
ILIN	Lien	3.26	143	ePn	Pn	20 39 16.8	+1.0
ILIN				e		20 40 21.7	
	comp=Z,2μm,0.4s						
ILIN	Lien	3.26	143	ePn	Pn	20 39 16.8	+1.0
KARS	Kars	3.29	340	ePN	Pn	20 39 18.2	+2.1
SNGE	Sanandaj	3.32	137	ePn	Pn	20 39 18.0	+1.4
SNGE				eSg	Sb	20 40 08.0	+3.9
SNGE	Sanandaj	3.32	137	ePn	Pn	20 39 18.3	+1.7
SNGE				eSg	Sb	20 40 08.6	+4.5
SNGE				AML	AML	20 40 20.0	
	comp=N,165nm,0.7s						
SNGE				AML	AML	20 40 25.6	
	comp=E,142nm,0.6s						
SNGE	Sanandaj	3.32	137	ePn	Pn	20 39 18.0	+1.4
SNGE				eSg	Sb	20 40 08.0	+3.9
ZNJK	Zanjan	3.41	104	ePn	Pn	20 39 19.8	+2.0
ZNJK				AML	AML	20 40 22.0	
	comp=N,35nm,1.1s						
ZNJK	Zanjan	3.41	104	ePn	Pn	20 39 19.8	+2.0
ERZM	Erzurum	3.44	314	i P	Pb	20 39 24.1	-1.4
EZM	Erzurum	3.44	314	ePN	Pn	20 39 19.3	+1.1
DIYA	Diyarbakir	3.54	277	i P	Pn	20 39 20.3	+0.7
DIYA	Diyarbakir	3.54	277	i P	Pn	20 39 20.3	+0.7
IGHG	Ghaleghazi	3.60	153	ePn	Pn	20 39 21.6	+1.2
IGHG				e		20 40 35.6	
	comp=Z,6μm,0.5s						
IGHG	Ghaleghazi	3.60	153	ePn	Pn	20 39 21.6	+1.2
DAGI	Agillar	4.08	331	i P	Pn	20 39 30.7	+3.7
IKOM	Komasi	4.13	144	ePn	Pn	20 39 29.0	+1.3
IKOM				e		20 40 58.6	
	comp=Z,3μm,0.4s						
IKOM	Komasi	4.13	144	ePn	Pn	20 39 29.0	+1.3
MTA	Mtatsminda	4.15	2	P	Sg	20 40 37.0	-0.7
ARTV	Artvin	4.17	332	i P	Pg	20 39 42.2	-2.3
SVRC	Sivrice-ELAZID	4.24	283	ePN	Pn	20 39 29.8	+0.6
SVRC	Sivrice-ELAZID	4.24	283	ePn	Pn	20 39 29.8	+0.6
BHD	Baghdad	4.27	182	ePn	Pn	20 39 27.0	-2.6
BHD				ePg	Pg	20 39 44.0	-2.4
BHD				eSn	Sn	20 40 19.0	-0.5
BHD				eSg	Sg	20 40 45.0	+3.3
BHD	Baghdad	4.27	182	ePn	Pn	20 39 27.0	-2.6
PTK	Pertek	4.29	290	ePN	Pn	20 39 30.3	+0.5
PTK	Pertek	4.29	290	ePn	Pn	20 39 30.3	+0.4
ELZG	Elazig	4.51	284	i P	Pn	20 39 33.2	+0.4
ELZG	Elazig	4.51	284	i P	Pn	20 39 33.2	+0.3
BCA	Borcka	4.51	331	ePN	Pn	20 39 35.9	+2.9
BCA	Borcka	4.51	331	ePn	Pn	20 39 35.9	+3.0
EZC	Erzincan	4.63	300	ePN	Pn	20 39 35.9	+1.2
IRAZ	Razeghan	4.82	115	ePn	Pn	20 39 39.4	+2.1
IRAZ				e		20 40 06.9	
	comp=Z,564nm,0.3s						
IRAZ	Razeghan	4.82	115	ePn	Pn	20 39 39.4	+2.1
KELT	Kelkit	4.89	304	i P	Pg	20 39 54.6	-3.7
MALT	Malatya	4.91	281	ePN	Pn	20 39 40.0	+1.6
MALT	Malatya	4.91	281	ePn	Pn	20 39 37.4	-1.0
MALT	Malatya	4.91	281	ePn	Pn	20 39 37.4	-1.0
GUMT	Gumushane	4.91	308	ePN	Pn	20 39 40.8	+2.4
GUMT	Gumushane	4.91	308	ePn	Pn	20 39 40.8	+2.3
MYA	Malataya	4.91	281	ePN	Pn	20 39 40.6	+2.2
MYA	Malataya	4.91	281	ePn	Pn	20 39 40.7	+2.2
KEMA	Kemaliye	5.07	292	i P	Pn	20 39 41.8	+1.2
KEMA	Kemaliye	5.07	292	i P	Pn	20 39 41.8	+1.2
ONI	Oni	5.11	351	P	Sg	20 41 09.0	+0.4
AKCD	Akcadag	5.30	280	i P	Pn	20 39 44.1	+0.3
AKCD	Akcadag	5.30	280	i P	Pn	20 39 44.1	+0.3
ASAO	Ashtian	5.34	122	ePn	Pn	20 39 46.0	+1.6
ASAO	Ashtian	5.34	122	ePn	Pn	20 39 46.3	+1.9
ASAO	Ashtian	5.34	122	ePn	Pn	20 39 46.0	+1.6
DARE	Darende-Malaty	5.50	287	ePN	Pn	20 39 51.6	+5.1
GZT	Gaziantep	5.57	270	i P	Pn	20 39 50.9	+3.4
GAZ	Gaziantep	5.87	269	ePN	Pn	20 39 53.5	+1.9
GAZ	Gaziantep	5.87	269	ePn	Pn	20 39 53.5	+1.9
KUZU	Kuzuiri	6.03	265	i P	Pn	20 40 01.4	+7.6
KMRS	Kahramanmaras	6.09	272	ePN	Pn	20 39 57.2	+2.6
IDMV	Damavand	6.33	106	ePn	Pn	20 39 56.8	-1.1
IDMV				e		20 40 29.5	
	comp=Z,225nm,0.4s						
IDMV	Damavand	6.33	106	ePn	Pn	20 39 56.8	-1.1
ANDN	Andirin	6.53	273	i P	Pb	20 40 13.2	-5.0
IPIR	Pirpir	7.10	131	ePn	Pb	20 40 23.4	-4.6
IPIR				e		20 40 40.0	
	comp=Z,223nm,0.2s						
IPIR	Pirpir	7.10	131	ePn	Pb	20 40 23.4	-4.6
IKLH	Kolahrood	7.11	124	ePn	Pn	20 40 13.2	+4.5
IKLH				e		20 40 54.3	
	comp=Z,145nm,0.4s						
IKLH	Kolahrood	7.11	124	ePn	Pn	20 40 13.2	+4.5
ISHM	Shahmirzad	7.23	101	ePn	Pn	20 40 09.6	-0.7
ISHM				e		20 41 01.8	
	comp=Z,133nm,0.3s						
ISHM	Shahmirzad	7.23	101	ePn	Pn	20 40 09.6	-0.7
IZEF	Zefreh	7.87	124	ePn	Pn	20 40 18.7	-0.4
IZEF				e		20 41 07.8	
	comp=Z,48nm,0.3s						
IZEF	Zefreh	7.87	124	ePn	Pn	20 40 18.7	-0.4
MIB	Mutribah	8.06	163	eP	Pn	20 40 19.6	-2.1
MIB				AML	AML	20 41 49.1	
	comp=Z,12nm,0.6s						
MIB	Mutribah	8.06	163	eP	Pn	20 40 19.6	-2.1
ASF	Jabal al Asfar	8.27	232	Pn	Pn	20 40 24.0	-0.5
	comp=Z,0.8nm,0.3s,baz=270,slow=12,SNR=7.2						
ASF				Lg		20 42 41.4	
	comp=Z,0.4nm,0.3s,baz=107,slow=19,SNR=4.0						
UMR	Umm Al-Rimmam	8.39	161	eP	Pn	20 40 23.6	-2.7
UMR	Umm Al-Rimmam	8.39	161	eP	Pn	20 40 23.6	-2.7
MMAI	Mount Meron Ar	8.74	242	Pn	Pn	20 40 31.5	+0.4
	comp=Z,1.4nm,0.3s,baz=65,slow=16,SNR=7.8						
MMAI				LR	LR	20 44 31.7	
	comp=Z,73nm,18.6s,baz=95,slow=42						
BR131	Keskin Array S	8.82	288	ePn	Pn	20 40 34.4	+2.3
	comp=Z,2.0nm,0.8s						
BR131	Keskin Array S	8.82	288	ePn	Pn	20 40 34.4	+2.3
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	8.82	288	Pn	Pn	20 40 33.8	+1.7
	comp=Z,0.1nm,0.3s,baz=111,slow=14,SNR=16						
BRTR	Keskin Array B	8.82	288	Pn	Pn	20 40 33.8	+1.7
RDF	Al-Radifah	8.95	163	eP	Pn	20 40 31.9	-2.1
RDF				AML	AML	20 42 04.5	
	comp=Z,9.3nm,0.6s						
RDF	Al-Radifah	8.95	163	eP	Pn	20 40 31.9	-2.1
QRN	Al-Qurain	9.22	161	eP	Pn	20 40 35.8	-1.8
IPAR	Pars	10.44	135	ePn	Pn	20 40 53.4	-0.9
IPAR				e		20 40 56.0	
	comp=Z,73nm,0.3s						
IPAR	Pars	10.44	135	ePn	Pn	20 40 53.4	-0.9
EIL	Elat	11.21	228	LR	LR	20 45 37.1	
	comp=Z,43nm,19.5s,baz=125,slow=38						
IDI	Anoyia	16.00	268	Pn	Pn	20 42 12.6	+2.9
	comp=Z,0.3nm,0.3s,baz=112,slow=11,SNR=5.7						
AKTK	Aktyubinsk	16.08	32	Pn	Pn	20 42 10.8	+0.2
AKTK	Aktyubinsk	16.08	32	Pn	Pn	20 42 10.8	+0.2
AKTO	Aktyubinsk	16.08	32	Pn	Pn	20 42 10.8	+0.2
	comp=Z,0.1nm,0.3s,baz=243,slow=12,SNR=3.2						
AKASG	Malin Array Be	17.11	325	P	Pn	20 42 19.4	-4.2
	baz=137,slow=12,SNR=2.8						
TIP	Timpagrande	21.83	283	eP	P	20 43 16.2	-0.9
	comp=Z,8.1nm,0.7s,mb4.3						
TIP	Timpagrande	21.83	283	eP	P	20 43 16.2	-0.9
	comp=Z,8.1nm,0.7s,mb4.3						
AAK	Ala-Archa	23.39	68	P	P	20 43 34.0	+0.4
	comp=Z,0.5nm,0.3s,mb3.5,baz=286,slow=6.9,SNR=4.7						
AAK				LR	LR	20 54 30.8	
	comp=Z,36nm,20.7s,MS2.8,baz=23,slow=42						
AAK	Ala-Archa	23.39	68	P	P	20 43 34.0	+0.5
BVAR	Borovoye Array	23.68	41	P	P	20 43 35.2	-1.2
	comp=Z,0.7nm,0.9s,mb3.1,baz=219,slow=12,SNR=5.4						
BVAR	Borovoye Array	23.68	41	P	P	20 43 35.2	-1.1
GERES	GERESS Array B	25.00	307	P	P	20 43 48.6	+0.2
	comp=Z,7.0nm,0.6s,mb3.4,baz=99,slow=8.2,SNR=7.9						
GERES	GERESS Array B	25.00	307	P	P	20 43 48.6	+0.2
FINES	FINESS Array B	26.57	340	P	P	20 44 01.2	-1.2
	comp=Z,0.4nm,0.5s,mb3.2,baz=150,slow=12,SNR=3.6						
FINES	FINESS Array B	26.57	340	P	P	20 44 01.2	-1.2
KURK	Kurchatov	27.50	50	P	P	20 44 07.2	-3.7
	comp=Z,0.3nm,0.3s,mb3.3,baz=258,slow=8.3,SNR=4.3						
KURK	Kurchatov	27.50	50	eP	P	20 44 09.8	-1.1
	comp=Z,0.5nm,0.5s,mb3.3						
KURK	Kurchatov	27.50	50	eP	P	20 44 09.8	-1.1
	comp=Z,0.5nm,0.5s,mb3.3						
MKAR	Makanchi Array	29.21	59	P	P	20 44 26.0	-0.2
	comp=Z,0.6nm,0.9s,mb3.3,baz=250,slow=4.2,SNR=4.3						
MKAR	Makanchi Array	29.21	59	P	P	20 44 26.0	-0.2
NOA	NORSAR Array B	31.43	329	P	P	20 44 46.3	+0.6
	comp=Z,0.3nm,0.6s,mb3.3,baz=133,slow=7.3,SNR=3.4						
NOA	NORSAR Array B	31.43	329	P	P	20 44 46.3	+0.6
ZALV	Zalesovo Beam	32.00	46	P	P	20 44 49.9	-0.9
	comp=Z,0.4nm,0.4s,mb3.6,baz=296,slow=7.5,SNR=2.6						
TORD	Torodi Ar. Bea	45.20	249	P	P	20 46 42.7	+0.8
	comp=Z,0.4nm,0.8s,mb3.3,baz=53,slow=7.7,SNR=2.7						
SONM	Songino Array	45.48	56	LR	LR	21 09 55.8	
	comp=Z,60nm,20.6s,MS3.5,baz=263,slow=42						

*IDC **15** 21:05:03.4±1.1, 31.°46N×103.°97E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/26, mbtmp3.6/10, ML3.4/1, Error ellipse: s-maj=41.4km s-min=20.5km az=49.0*

*ISCJB **15** 21:05:05.0±0.9, 31.°52N±0.°04×104.°03E±0.°06, h25km±7km, mb3.8/10, Error ellipse: s-maj=8.6km s-min=6.2km az=5.1*

*NEIC **15** 21:05:04.8±0.5, 31.°49N×103.°94E, h10km, mb4.4/2, Error ellipse: s-maj=9.6km s-min=8.5km az=64.0*

*BJI **15** 21:05:05.3, 31.°55N×104.°16E, h17km, mb4.4/1, ML3.7/13, Ms3.4/1*

ISC 15 21:05:06.0±0.9, 31.°50N±0.°03×103.°98E±0.°06, h18km±6km, n26, σ1°02/33, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.61	198	Pg	Pg	21 05 17.3	-0.9
CD2				Sg	Sg	21 05 26.3	-0.1
CD2				smax			
	comp=N,2μm,0.8s						
LZH	Lanzhou	4.58	359	ePg	Pb	21 06 23.8	-2.0
LZH				Sg	Sg	21 07 34.1	+1.0
LZH				smax			
	comp=N,41nm,0.8s						
LZH				smax			
	comp=E,73nm,1.0s						
LZH				LR	LR		
	comp=N,260nm,4.8s						
XAN	Xi'an	4.88	57	Pn	Pn	21 06 18.3	-0.1
XAN				Sn	Sn	21 07 12.0	-2.4
XAN				Sg	Sg	21 07 37.0	-5.5
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,86nm,0.9s						
ENH	Enshi	4.89	103	ePn	Pn	21 06 20.0	+1.4
ENH				eS	Sg	21 07 37.4	-5.7
GYA	Guiyang	5.54	154	Pn	Pn	21 06 30.6	+3.0
GYA				Sn	Sn	21 07 31.8	+0.9
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,80nm,0.9s						
KMI	Kunming	6.44	190	Pn	Pn	21 06 41.0	+1.0
KMI				Sn	Sn	21 07 51.1	-2.0
KMI				smax			
	comp=N,11nm,1.6s						
KMI				smax			
	comp=E,13nm,1.0s						
BJT	Baijiatuau	13.04	46	Pn	Pn	21 08 09.8	-0.5
CM31	Chiang Mai Arr	13.76	201	ePn	Pn	21 08 19.2	-1.0
SONM	Songino Array	16.42	6	Pn	Pn	21 08 54.7	-0.7
	comp=E,0.1nm,0.3s,baz=150,slow=3.2,SNR=3.3						
ULN	Ulaanbaatar	16.52	7	Pn	Pn	21 08 56.6	-0.1
KSRS	Korea Array	20.59	67	P	P	21 09 44.5	+0.5
	comp=E,0.7nm,0.4s,baz=248,slow=9.1,SNR=3.3						
CN2	Changchun	20.90	48	eP	P	21 09 48.3	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	Makanchi Array	22.61	319	eP	P	21 10 05.8	+0.2
MKAR	Makanchi Array	22.61	319	P	P	21 10 07.4	+1.8
	comp=Z,2.0nm,1.2s,mb3.4,baz=116,slow=11,SNR=6.7						
AAK	Ala-Archa	25.89	304	eP	P	21 10 36.9	0.0
ZALV	Zalesovo Beam	26.32	334	P	P	21 10 41.9	+1.4
	comp=Z,1.3nm,0.6s,mb3.6,baz=128,slow=9.6,SNR=5.4						
KURK	Kurchatov	26.87	323	P	P	21 10 46.0	+0.5
	comp=Z,1.0nm,0.9s,mb3.3,baz=128,slow=9.3,SNR=4.4						
KURK	Kurchatov	26.87	323	P	P	21 10 45.1	-0.4
BVAR	Borovoye Array	32.42	321	P	P	21 11 34.4	-0.3
	comp=Z,0.1nm,0.3s,mb3.1,baz=57,slow=5.3,SNR=2.5						
TIXI	Tiksi	42.39	11	eP	P	21 12 59.0	+0.1
	comp=Z,2.0nm,0.3s,mb4.2						
FINES	FINESS Array B	57.18	326	P	P	21 14 51.8	+0.3
	comp=Z,1.3nm,0.8s,mb4.0,baz=79,slow=9.9,SNR=7.0						
ASAR	Alice Springs	61.88	149	P	P	21 15 24.6	+0.3
	comp=Z,1.0nm,0.

comp=Z,0.6nm,0.5s,mb3.4,baz=134,slow=8.3,SNR=3.6
AML Almayashu 27.07 300 P **P** **21 22 57.5 -0.5**
KURK Kurchatov 27.08 321 P **P** **21 22 58.8 +0.8**
comp=Z,0.5nm,0.6s,mb3.2,baz=135,slow=8.9,SNR=4.9
KURK Kurchatov 27.08 321 *e*P **P** **21 22 57.5 -0.5**
comp=Z,1.2nm,0.6s,mb3.6
MJAR Matsushiro Arr 27.23 72 P **P** **21 22 57.8 -1.7**
comp=Z,1.2nm,0.4s,mb3.8,baz=287,slow=10,SNR=5.3
BVAR Borovoye Array 32.66 320 P **P** **21 23 46.4 -1.1**
comp=Z,0.3nm,0.6s,mb3.4,baz=105,slow=9.1,SNR=3.6
BRVK Borovoye 32.74 320 *e*P **P** **21 23 47.5 -0.6**
comp=Z,0.6nm,0.3s,mb4.0
KIV Kislovodsk 49.71 303 P **P** **21 26 08.7 +1.1**
MALT Malatya 54.03 296 P **P** **21 26 40.9 +1.0**
ARCES ARCESS Array B 56.71 336 P **P** **21 26 58.2 -0.5**
comp=Z,1.4nm,0.8s,mb4.1,baz=65,slow=9.5,SNR=3.6
AKASG Malin Array Be 57.48 313 P **P** **21 27 05.1 +0.7**
comp=Z,0.5nm,0.4s,mb3.9,baz=67,slow=6.7,SNR=2.8
CSS Prodhromos 58.95 294 *e*P **P** **21 27 15.8 +0.8**
comp=Z,7.7nm,0.8s,mb4.8
MORC Moravsky Berou 64.93 314 P **P** **21 27 55.0 0.0**
comp=Z,0.8nm,0.4s,mb4.1
VSL Villasalto 74.56 307 *e*P **P** **21 28 53.7 -0.8**
ESLA Sonseca Array 83.13 313 *e*P **P** **21 29 41.5 0.0**
comp=Z,0.1nm,0.3s,mb3.3

ISCJB ***15*** *21:29:00.7±0.9, 31°.27N±0°.04×103°.76E±0°.06, h14km±6km, mb3.5/6, Error ellipse: s-maj=8.4km s-min=6.7km az=1.0*
IDC ***15*** *21:29:00.5±1.2, 31°.26N×103°.76E, h0km, mb3.7/7, mb1 3.8/7, ms1mx3.6/24, mbtmp3.8/7, MS2.8/1, Ms1 2.8/1, ms1mx2.3/42, Error ellipse: s-maj=39.6km s-min=23.2km az=42.0*
NEIC ***15*** *21:29:01.9±0.7, 31°.30N×103°.77E, h10km, mb3.5/1, Error ellipse: s-maj=22.6km s-min=10.8km az=216.0*
BJI ***15*** *21:29:05.3, 31°.22N×103°.60E, h15km, ML3.5/13*
ISC 15 21:29:02.1±0.8, 31°.28N±0°.03×103°.77E±0°.05, h9km±5km, n18, σ1§06/26, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**182**	Pg	**Pg**	**21 29 09.3**	**+0.1**
CD2				Sg	**Sg**	**21 29 15.6**	**+1.5**
CD2				smax			
	comp=N,4μm,0.7s						
LZH	**Lanzhou**	**4.80**	**1**	*e*Pg	**Pg**	**21 30 35.8**	**+1.8**
LZH				Sg	**Sg**	**21 31 30.6**	**-5.5**
LZH				smax			
	comp=N,43nm,0.6s						
LZH				smax			
	comp=E,40nm,0.5s						
ENH	**Enshi**	**5.02**	**100**	*e*Pn	**Pn**	**21 30 18.0**	**+0.5**
	comp=E,41nm,0.8s						
ENH				*e*Sn	**Sn**	**21 31 17.2**	**+1.6**
XAN	**Xi'an**	**5.14**	**56**	Pn	**Pn**	**21 30 20.3**	**+1.1**
XAN				Pg	**Pg**	**21 30 38.1**	**-2.4**
XAN				Sn	**Sn**	**21 31 19.1**	**+0.4**
XAN				Sg	**Sg**	**21 31 46.1**	**-1.0**
XAN				smax			
	comp=N,54nm,0.8s						
XAN				smax			
	comp=E,26nm,0.9s						
GYA	**Guiyang**	**5.43**	**151**	Pg	**Pg**	**21 30 46.3**	**+0.2**
GYA				Sg	**Sg**	**21 31 54.8**	**-1.6**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,50nm,0.9s						
KMI	**Kunming**	**6.20**	**189**	Pn	**Pn**	**21 30 33.9**	**+0.1**
KMI				Sn	**Sn**	**21 31 43.8**	**-1.0**
KMI				smax			
	comp=N,12nm,1.6s						
KMI				smax			
	comp=E,11nm,0.9s						
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**21 33 01.5**	**+5.9**
	comp=E,0.2nm,0.3s,baz=201,slow=11,SNR=3.3						
TLY	**Talaya**	**20.39**	**360**	P	**P**	**21 33 38.2**	**-0.8**
KSRS	**Korea Array**	**20.84**	**66**	P	**P**	**21 33 45.1**	**+1.1**
	comp=E,1.5nm,0.6s,baz=262,slow=10,SNR=12						
KSRS				LR	LR	21 41 14.4	
	comp=E,23nm,19.0s,baz=170,slow=35						
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**21 34 03.7**	**+0.2**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**21 34 04.4**	**+0.9**
	comp=E,1.9nm,1.0s,mb3.5,baz=127,slow=11,SNR=9.2						
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**21 34 38.2**	**-0.9**
	comp=E,0.6nm,0.6s,mb3.3,baz=134,slow=12,SNR=4.3						
KURK	**Kurchatov**	**26.94**	**323**	P	**P**	**21 34 43.4**	**-0.2**
	comp=E,0.9nm,0.7s,mb3.4,baz=125,slow=10,SNR=8.0						
KURK	**Kurchatov**	**26.94**	**323**	*e*P	**P**	**21 34 43.2**	**-0.4**
	comp=E,0.7nm,0.7s,mb3.3						
MALT	**Malatya**	**53.14**	**297**	P	**P**	**21 38 18.8**	**-1.4**
ASAR	**Alice Springs**	**61.78**	**149**	P	**P**	**21 39 20.8**	**-0.5**
	comp=E,0.2nm,0.4s,mb3.6,baz=352,slow=7.1,SNR=4.8						
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**21 41 19.1**	**-1.0**
	comp=E,0.4nm,0.7s,mb3.5,baz=335,slow=5.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**93.31**	**287**	P	**P**	**21 42 18.7**	**+0.9**
	comp=E,0.4nm,0.5s,mb4.1,baz=49,slow=5.3,SNR=5.5						

IDC ***15*** *21:31:39.8±3.5, 37°.64N×69°.14E, h0km, mb3.6/3, mb1 3.7/9, mb1mx3.5/29, mbtmp3.6/9, ML3.3/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/45, Error ellipse: s-maj=53.1km s-min=19.0km az=166.0*
ISCJB ***15*** *21:31:41.6±0.5, 38°.07N±0°.04×68°.94E±0°.06, h10km, mb3.5/3, Error ellipse: s-maj=7.6km s-min=5.5km az=30.2*
NNC ***15*** *21:31:44.3±4.3, 38°.15N×68°.79E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=39.0km s-min=27.4km az=13.0*
NEIC ***15*** *21:31:46.0±0.7, 37°.97N×69°.04E, h35km, mb3.7/2, Error ellipse: s-maj=10.8km s-min=9.4km az=131.0*
ISC 15 21:31:43.6±0.5, 38°.05N±0°.04×68°.91E±0°.06, h10km, n33, σ1§43/43, mb3.5/3, 1C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.51**	**178**	*e*Pn	**Pn**	**21 32 37.1**	**-1.1**
KBL				Sn	**Sn**	**21 33 19.6**	**-0.1**
KK31	**Karatay Array**	**5.19**	**13**	⇑Pn	**Pn**	**21 33 03.3**	**+2.0**
	2.5nm,0.6s,baz=190,slow=12,SNR=26						
KK31				⇓Pg	**Pg**	**21 33 19.2**	**-3.8**
	12nm,0.6s,baz=206,slow=14,SNR=19						
KK31				Lg		21 34 26.8	
	29nm,0.6s,baz=193,slow=29,SNR=10						
AML	**Almayashu**	**5.48**	**41**	*e*Pn	**Pn**	**21 33 06.1**	**+0.8**
	17nm,0.6s						
AML				*e*Sn	**Sn**	**21 34 08.1**	**-0.2**
KSH	**Kashi**	**5.71**	**73**	Pn	**Pn**	**21 33 04.1**	**-4.3**
KSH				Sn	**Sn**	**21 34 03.0**	**-11**
KSH				smax			
	comp=N,33nm,0.9s						
KSH				smax			
	comp=E,45nm,1.1s						
EKS2	**Erkin-Say**	**5.92**	**37**	*e*Pn	**Pn**	**21 33 12.1**	**+0.8**
EKS2				Sn	**Sn**	**21 34 13.4**	**-5.7**
UCH	**Uchtor**	**5.98**	**44**	P	**Pn**	**21 33 14.6**	**+2.4**
	SNR=12						
UCH	**Uchtor**	**5.98**	**44**	*e*Pn	**Pn**	**21 33 13.6**	**+1.4**
	comp=E,12nm,0.6s						
UCH				*e*Sn	**Sn**	**21 34 20.7**	**0.0**
AAK	**Ala-Archa**	**6.25**	**41**	P	**Pn**	**21 33 19.0**	**+3.1**
	SNR=6.6						
AAK	**Ala-Archa**	**6.25**	**41**	Pn	**Pn**	**21 33 17.3**	**+1.4**
	comp=E,0.0nm,0.3s,baz=209,slow=4.6,SNR=20						
AAK				Lg		21 34 56.9	
	comp=E,0.0nm,0.3s,baz=162,slow=20,SNR=2.5						
AAK	**Ala-Archa**	**6.25**	**41**	*e*Pn	**Pn**	**21 33 16.2**	**+0.4**
AAK				Sn	**Sn**	**21 34 23.1**	**-4.3**
AAK				Lg		21 34 56.9	
KZA	**Kyzart**	**6.31**	**48**	P	**Pn**	**21 33 18.2**	**+1.6**
	SNR=19						
KBK	**Karagaybulak**	**6.51**	**43**	P	**Pn**	**21 33 22.3**	**+2.9**
	SNR=20						
ULHL	**Ulahol**	**7.00**	**51**	P	**Pn**	**21 33 27.7**	**+1.6**
	SNR=6.6						
TKM2	**Tokmak 2**	**7.04**	**44**	⇓Pn	**Pn**	**21 33 27.6**	**+0.9**
	comp=E,5.5nm,0.5s						
TKM2				⇓Lg		21 35 25.2	
	comp=E,11nm,0.9s						
TKM2	**Tokmak 2**	**7.04**	**44**	P	**Pn**	**21 33 27.8**	**+1.1**
	SNR=14						
TKM2	**Tokmak 2**	**7.04**	**44**	*e*Pn	**Pn**	**21 33 27.0**	**+0.3**
	comp=E,8.6nm,0.6s						
TKM2				*e*Sn	**Sn**	**21 34 44.8**	**-1.9**
AB31	**Akbulak array**	**12.93**	**333**	P	**Pn**	**21 34 47.0**	**-0.3**
	comp=E,0.9nm,0.4s,baz=148,slow=13,SNR=60						
AB31				⇓S	**Sn**	**21 37 09.2**	**-1.9**
	comp=E,1.2nm,0.5s,baz=164,slow=22,SNR=5.0						
ABKAR	**Akbulak array**	**12.93**	**333**	*e*Pn	**Pn**	**21 34 46.8**	**-0.5**
	comp=E,1.8nm,0.4s						
ABKAR				*e*Sn	**Sn**	**21 37 04.9**	**-6.2**
MK31	**Makanchi Array**	**13.18**	**44**	*e*Pn	**Pn**	**21 34 49.4**	**-1.3**
MKAR	**Makanchi Array**	**13.18**	**44**	Pn	**Pn**	**21 34 49.6**	**-1.1**
	comp=E,0.1nm,0.3s,baz=224,slow=14,SNR=19						
KURK	**Kurchatov**	**14.42**	**26**	Pn	**Pn**	**21 35 04.6**	**-3.0**
	comp=E,0.0nm,0.3s,baz=218,slow=12,SNR=4.1						
KURK				Lg		21 39 20.1	
	comp=E,0.0nm,0.3s,baz=197,slow=28,SNR=4.2						
KURK				LR	LR	21 42 02.4	
	comp=E,36nm,19.3s,baz=30,slow=43						
KURK	**Kurchatov**	**14.42**	**26**	*e*Pn	**Pn**	**21 35 07.9**	**+0.3**
	comp=E,3.3nm,1.1s						
KURK				Lg		21 39 20.1	
KURK				LR	LR	21 42 02.4	
AKTK	**Aktyubinsk**	**14.61**	**331**	Pn	**Pn**	**21 35 09.4**	**-0.8**
AKTO	**Aktyubinsk**	**14.61**	**331**	Pn	**Pn**	**21 35 09.4**	**-0.8**
	comp=E,0.2nm,0.3s,baz=144,slow=15,SNR=10						
BVAR	**Borovoye Array**	**15.01**	**3**	Pn	**Pn**	**21 35 14.9**	**-0.7**
	comp=E,0.1nm,0.3s,baz=146,slow=9.0,SNR=3.6						
BRVK	**Borovoye**	**15.04**	**3**	*e*Pn	**Pn**	**21 35 18.2**	**+2.2**
	comp=E,4.3nm,0.8s						
ZAA0	**Zalesovo Array**	**19.29**	**29**	*e*P	**Pn**	**21 36 07.4**	**-1.9**
ZALV	**Zalesovo Beam**	**19.29**	**29**	P	**Pn**	**21 36 08.2**	**-1.2**
	comp=E,0.4nm,0.3s,baz=220,slow=11,SNR=8.4						
LSA	**Lhasa**	**20.23**	**108**	*e*P	**P**	**21 36 16.2**	**-2.6**
	comp=Z,2.5nm,0.7s						
KIV	**Kislovodsk**	**20.60**	**295**	*e*P	**P**	**21 36 23.8**	**+1.0**
FINES	**FINESS Array B**	**35.26**	**326**	P	**P**	**21 38 40.3**	**+2.2**
	comp=E,0.4nm,0.4s,mb3.7,baz=116,slow=13,SNR=5.3						
ARCES	**ARCESS Array B**	**39.07**	**337**	P	**P**	**21 39 13.2**	**+2.8**
	comp=E,1.5nm,0.8s,mb3.8,baz=104,slow=7.5,SNR=3.4						
NOA	**NORSAR Array B**	**42.13**	**322**	P	**P**	**21 39 35.5**	**-0.2**
	comp=E,0.2nm,0.3s,mb3.2,baz=163,slow=18,SNR=2.5						

ISCJB ***15*** *21:32:48.6±0.6, 50°.08N±0°.05×19°.09E±0°.03, h0km, Error ellipse: s-maj=6.6km s-min=3.0km az=178.2*
IPEC ***15*** *21:32:48.7±0.1, 50°.19N×19°.09E, h0km±1km, ML1.6/3, Error ellipse: s-maj=2.9km s-min=0.8km az=168.0*
CSEM ***15*** *21:32:48.5±0.3, 50°.18N×19°.05E, h2km, ML2.5/6, Error ellipse: s-maj=8.8km s-min=3.4km az=179.0*
PRU ***15*** *21:32:49.3, 50°.18N×19°.05E, h0km*
WAR ***15*** *21:32:49.0, 50°.08N×19°.16E*
ISC 15 21:32:49.0±0.6, 50°.10N±0°.05×19°.09E±0°.03, h0km, n24, σ0§90/40, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**74**	*e*Pg	**Pg**	**21 32 57.8**	**-0.2**
OJC				*e*Sg	**Sg**	**21 33 04.1**	**0.0**
OJC	**Ojcow**	**0.47**	**74**	*e*Pg	**Pg**	**21 32 57.3**	**-0.7**
OJC				*e*Sg	**Sg**	**21 33 03.1**	**-1.0**
OKC	**Ostrava-Krasne**	**0.66**	**247**	*e*PG	**Pg**	**21 33 01.9**	**+0.2**
OKC				*e*SG	**Sg**	**21 33 12.7**	**+2.4**
	comp=Z,9.6nm,0.3s						
OKC	**Ostrava-Krasne**	**0.66**	**247**	Pg	**Pg**	**21 33 01.9**	**+0.2**
OKC				*e*Sg	**Sg**	**21 33 10.4**	**+0.1**
NIE	**Niedzica**	**1.04**	**130**	*e*Pg	**Pg**	**21 33 08.4**	**-0.6**
NIE				*e*Sg	**Sn**	**21 33 24.4**	**-1.7**
MORC	**Moravsky Berou**	**1.05**	**253**	*e*Pg	**Pg**	**21 33 09.3**	**+0.1**
MORC				*e*Sg	**Sg**	**21 33 22.5**	**-0.3**
	comp=Z,9.2nm,0.3s						
JAVC	**Velka Javorina**	**1.55**	**217**	*e*Pn	**Pn**	**21 33 18.1**	**+0.3**
STHS	**Stebnicka Huta**	**1.55**	**115**	*e*PN	**Pn**	**21 33 18.6**	**+0.7**
STHS				*e*SN	**Sn**	**21 33 39.1**	**+0.4**
STHS	**Stebnicka Huta**	**1.55**	**115**	*e*Pn	**Pn**	**21 33 18.6**	**+0.7**
STHS				*e*Sn	**Sn**	**21 33 39.1**	**+0.4**
KOLL	**Kolacno**	**1.58**	**197**	*e*SN	**Sn**	**21 33 39.8**	**+0.3**
KOLL	**Kolacno**	**1.58**	**197**	*e*Sn	**Sn**	**21 33 39.8**	**+0.3**
VYHS	**Vyhne**	**1.61**	**186**	*e*PN	**Pn**	**21 33 17.4**	**-1.3**
VYHS				*e*SN	**Sn**	**21 33 39.1**	**-1.0**
VYHS	**Vyhne**	**1.61**	**186**	*e*Pn	**Pn**	**21 33 17.4**	**-1.3**
VYHS				*e*Sn	**Sn**	**21 33 39.1**	**-1.0**
DPC	**Dobruska-Polom**	**1.80**	**279**	*e*PG	**Pn**	**21 33 21.2**	**-0.1**
DPC				*e*SG	**Sn**	**21 33 45.1**	**+0.4**
	comp=Z,6.2nm,0.3s						
DPC	**Dobruska-Polom**	**1.80**	**279**	Pg	**Pn**	**21 33 21.2**	**-0.1**
DPC				Sg	**Sn**	**21 33 45.1**	**+0.4**
	comp=Z,6.2nm,0.3s						
VRAC	**Vranov**	**1.80**	**245**	*e*Pn	**Pn**	**21 33 21.6**	**+0.3**
VRAC				*e*Sg	**Sg**	**21 33 46.3**	**-0.7**
	comp=Z,5.1nm,0.4s						
KECS	**Kecovo**	**1.85**	**150**	*e*PN	**Pn**	**21 33 22.7**	**+0.7**
KECS				*e*SN	**Sn**	**21 33 45.8**	**-0.3**
KRUC	**Moravsky**	**2.04**	**241**	*e*Pn	**Pn**	**21 33 24.8**	**+0.2**
KRUC				*e*Sn	**Sn**	**21 33 52.4**	**+1.7**
	comp=Z,2.6nm,0.3s						
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*	**Pg**	**21 33 36.3**	**+1.7**
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*Pg	**Pg**	**21 33 36.3**	**+1.7**
KOLS				*e*Sn	**Sn**	**21 33 59.7**	**+0.7**
PRU	**Pruhonice**	**2.94**	**270**	*e*SG	**Sg**	**21 34 21.2**	**-2.1**
	comp=Z,9.4nm,2.1s						
PRU	**Pruhonice**	**2.94**	**270**	Sg	**Sg**	**21 34 21.2**	**-2.1**
	comp=Z,9.4nm,2.1s						
KHC	**Kasperske Hory**	**3.71**	**257**	*e*SG	**Sg**	**21 34 48.3**	**0.0**
	comp=Z,2.7nm,0.6s						
KHC	**Kasperske Hory**	**3.71**	**257**	Sg	**Sg**	**21 34 48.3**	**0.0**
	comp=Z,2.7nm,0.6s						

ISCJB ***15*** *21:36:19.4±0.9, 51°.45N±0°.04×16°.07E±0°.05, h0km, Error ellipse: s-maj=6.8km s-min=3.0km az=26.4*
IPEC ***15*** *21:36:19.2±0.3, 51°.57N×16°.11E, h0km, ML1.7/4, Error ellipse: s-maj=3.4km s-min=1.7km az=65.0*
CSEM ***15*** *21:36:20.0±0.3, 51°.51N×16°.10E, h2km, ML2.7/9, Error ellipse: s-maj=4.7km s-min=2.3km az=17.0*
PRU ***15*** *21:36:20.8, 51°.51N×16°.12E, h0km*
WAR ***15*** *21:36:21.1, 51°.53N×16°.09E, ML2.2, Mining Induced*
ISC 15 21:36:19.6±0.9, 51°.53N±0°.04×16°.12E±0°.04, h0km, n29, σ0§57/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**21 36 33.5**	**+0.6**
	baz=351						
UPC	**Upice**	**1.03**	**184**	*e*PG	**Pg**	**21 36 39.7**	**+0.4**
UPC	**Upice**	**1.03**	**184**	Pg	**Pg**	**21 36 39.7**	**+0.4**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*PG	**Pg**	**21 36 42.6**	**+0.2**
DPC				*e*SG	**Sg**	**21 36 57.6**	**-0.2**
	comp=Z,12nm,0.6s						
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*Pg	**Pg**	**21 36 42.5**	**+0.1**
	baz=354						
DPC				Sg	**Sg**	**21 36 57.6**	**-0.2**
	comp=Z,12nm,0.6s						
PVCC	**Panska Ves**	**1.40**	**225**	*e*PG	**Pg**	**21 36 46.7**	**+0.2**
PVCC	**Panska Ves**	**1.40**	**225**	*e*Pn	**Pn**	**21 36 46.3**	**-0.1**
	baz=42						
PVCC	**Panska Ves**	**1.40**	**225**	Pg	**Pg**	**21 36 46.7**	**+0.2**
BRG	**Berggiesshubel**	**1.52**	**245**	PG	**Pg**	**21 36 48.6**	**-0.1**
BRG				SG	**Sg**	**21 37 09.0**	**+0.6**
	comp=Z,18nm,0.3s						
PRU	**Pruhonice**	**1.84**	**214**	*e*PG	**Pg**	**21 36 54.3**	**-0.6**
PRU				*e*x	x	21 37 11.5	
PRU				*e*SG	**Sg**	**21 37 18.9**	**+0.2**
	comp=Z,4.9nm,0.3s						
PRU	**Pruhonice**	**1.84**	**214**	Pg	**Pg**	**21 36 54.3**	**-0.6**
PRU				Sg	**Sg**	**21 37 18.9**	**+0.2**
	comp=Z,4.9nm,0.3s						
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**21 36 54.0**	**-0.1**
CLL				*e*Pg	**Pg**	**21 36 57.0**	**-0.2**
CLL				*e*		21 37 00.0	
CLL				*e*Sg	**Sg**	**21 37 22.0**	**-0.7**
	comp=Z,9.0nm,0.8s						
CLL				*e*		21 37 37.0	
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**21 36 54.4**	**+0.1**
	baz=334						
MORC				*e*Sg	**Sg**	**21 37 22.3**	**-0.7**
	comp=Z,3.9nm,0.2s,baz=334						
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PG	**Pg**	**21 37 00.3**	**-0.1**
OKC				*e*SG	**Sg**	**21 37 27.7**	**-0.3**
	comp=Z,9.0nm,0.6s						
OKC	**Ostrava-Krasne**	**2.13**	**142**	Pg	**Pg**	**21 37 00.3**	**-0.1**
OKC				Sg	**Sg**	**21 37 27.7**	**-0.3**
	comp=Z,9.0nm,0.6s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**21 36 58.3**	**+0.3**
	baz=352						
VRAC				*e*Sg	**Sg**	**21 37 30.7**	**-1.0**
	comp=Z,3.6nm,0.3s,baz=352						
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn	**Pn**	**21 37 01.4**	**+0.2**
	baz=356						
KRUC				*e*Sg	**Sg**	**21 37 38.1**	**-1.1**
	comp=Z,1.8nm,0.3s,baz=356						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**21 37 04.1**	**+0.4**
NKC				*e*PG	**Pg**	**21 37 10.6**	**0.0**
NKC				*e*SG	**Sg**	**21 37 45.5**	**+0.3**
	comp=Z,9.5nm,0.4s						
NKC	**Novy Kostel**	**2.66**	**242**	Pn	**Pn**	**21 37 04.1**	**+0.4**
NKC	**Novy Kostel**	**2.66**	**242**	Pg	**Pg**	**21 37 10.6**	**0.0**
NKC				Sg	**Sg**	**21 37 45.5**	**+0.3**
	comp=Z,9.5nm,0.4s						
JAVC	**Velka Javorina**	**2.85**	**159**	*e*Sg	**Sg**	**21 37 53.2**	**+2.0**
	comp=Z,5.8nm,0.8s						
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**21 37 06.9**	**-0.1**
KHC				*e*PG	**Pg**	**21 37 14.2**	**-1.0**
KHC				*e*SN	**Sn**	**21 37 42.6**	**0.0**
KHC				*e*SG	**Sg**	**21 37 52.8**	**0.0**
	comp=Z,2.5nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**215**	Pn	**Pn**	**21 37 06.9**	**-0.1**
KHC	**Kasperske Hory**	**2.90**	**215**	Pg	**Pg**	**21 37 14.2**	**-1.0**
KHC				Sn	**Sn**	**21 37 42.6**	**0.0**
KHC				Sg	**Sg**	**21 37 52.8**	**0.0**
	comp=Z,2.5nm,0.3s						
MOX	**Moxa**	**2.98**	**254**	*e*PG	**Pg**	**21 37 16.2**	**-0.4**
MOX				*i* SG	**Sg**	**21 37 55.9**	**+0.7**
VYHS	**Vyhne**	**3.51**	**149**	*e*SG	**Sg**	**21 38 13.0**	**+0.8**
VYHS	**Vyhne**	**3.51**	**149**	*e*Sg	**Sg**	**21 38 13.0**	**+0.8**
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*SG	**Sg**	**21 38 24.5**	**-0.2**
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*Sg	**Sg**	**21 38 24.5**	**-0.2**

IDC ***15*** *21:40:21.4±2.1, 37°.88N×69°.17E, h0km, mb3.4/1, mb1 3.6/7, mb1mx3.4/29, mbtmp3.6/7, ML3.0/5, MS3.1/3, Ms1 3.1/3, ms1mx2.6/37, Error ellipse: s-maj=37.0km s-min=15.6km az=149.0*
ISCJB ***15*** *21:40:22.5±0.7, 38°.22N±0°.04×68°.61E±0°.07, h33km, mb3.7/2, MS3.3/2, Error ellipse: s-maj=8.2km s-min=6.2km az=178.9*
NEIC ***15*** *21:40:23.8±1.1, 38°.34N×68°.25E, h46km±16km, mb3.9/2, Error ellipse: s-maj=14.3km s-min=9.1km az=111.0*
NNC ***15*** *21:40:25.5±9.9, 38°.22N×68°.85E, h14km±53km, mb3.5, mpv3.3, Error ellipse: s-maj=51.7km s-min=24.7km az=22.0*
ISC 15 21:40:26.4±0.6, 38°.16N±0°.04×68°.79E±0°.06, h35km, n41, σ1§33/49, mb3.7/2, MS3.3/2, 2C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.62**	**177**	*e*Pn	**Pn**	**21 41 21.5**	**+1.6**
KBL				*e*Sn	**Sn**	**21 42 06.5**	**+5.1**
KK31	**Karatay Array**	**5.11**	**14**	Pn	**Pn**	**21 41 42.4**	**+2.0**
	0.4nm,0.2s,baz=202,slow=14,SNR=50						
KK31				Lg		21 43 06.1	
	46nm,0.6s,baz=197,slow=28,SNR=12						
AML	**Almayashu**	**5.46**	**42**	*e*Pn	**Pn**	**21 41 45.8**	**+0.6**
	20nm,0.7s						
AML				*e*Sn	**Sn**	**21 42 47.4**	**+0.7**
KSH	**Kashi**	**5.76**	**74**	Pn	**Pn**	**21 41 43.3**	**-6.1**
KSH				Sn	**Sn**	**21 42 38.6**	**-16**
KSH				smax			
	comp=N,60nm,1.2s						
KSH				smax			
	comp=E,62nm,1.2s						
EKS2	**Erkin-Say**	**5.89**	**39**	*e*Pn	**Pn**	**21 41 50.7**	**-0.4**
	comp=E,7.1nm,0.6s						
EKS2				*e*Sn	**Sn**	**21 42 57.6**	**+0.4**
UCH	**Uchtor**	**5.97**	**45**	P	**Pn**	**21 41 53.5**	**+1.3**
	SNR=8.2						
UCH	**Uchtor**	**5.97**	**45**	*e*Pn	**Pn**	**21 41 52.2**	**0.0**
	comp=E,24nm,1.0s						
UCH				*e*Sn	**Sn**	**21 43 00.6**	**+1.2**
AAK	**Ala-Archa**	**6.23**	**42**	P	**Pn**	**21 41 58.5**	**+2.7**
	SNR=5.5						
AAK	**Ala-Archa**	**6.23**	**42**	Pn	**Pn**	**21 41 56.7**	**+0.9**
	comp=E,0.0nm,0.3s,baz=219,slow=5.7,SNR=12						
AAK				Sn	**Sn**	**21 43 07.8**	**+2.0**
	comp=E,0.0nm,0.3s,baz=270,slow=17,SNR=3.1						
AAK				Lg		21 43 36.9	
	comp=E,0.0nm,0.3s,baz=41,slow=20,SNR=3.1						
AAK				LR	LR	21 44 40.6	
	comp=E,74nm,21.0s,baz=78,slow=41						
AAK	**Ala-Archa**	**6.23**	**42**	*e*Pn	**Pn**	**21 41 56.4**	**+0.5**
AAK				*e*Sn	**Sn**	**21 43 06.7**	**+0.9**
KZA	**Kyzart**	**6.30**	**50**	P	**Pn**	**21 41 57.4**	**+0.6**
	SNR=13						
KBK	**Karagaybulak**	**6.50**	**44**	P	**Pn**	**21 42 00.5**	**+1.0**
	SNR=15						
TKM2	**Tokmak 2**	**7.03**	**45**	⇓Pn	**Pn**	**21 42 06.8**	**+0.1**
	comp=E,3.7nm,0.5s						
TKM2				⇑Lg		21 44 04.3	
	comp=E,19nm,1.3s						
TKM2	**Tokmak 2**	**7.03**	**45**	P	**Pn**	**21 42 06.9**	**+0.1**
	SNR

comp=N,14μm,0.6s
LZH Lanzhou 4.66 359 *e*Pg **Pg** **21 44 54.3 -1.0**
LZH Sg **Sg** **21 45 55.9 +0.3**
LZH smax
comp=N,30nm,0.5s
LZH smax
comp=E,37nm,0.5s
ENH Enshi 4.90 102 *e*Pn **Pn** **21 44 40.2 +0.1**
ENH *e*Sn **Sn** **21 45 36.0 -1.0**
XAN Xi'an 4.94 57 Pg Px 21 45 12.3
XAN Sg **Sg** **21 46 05.3 +0.5**
XAN smax
comp=N,51nm,0.8s
XAN smax
comp=E,20nm,1.0s
GYA Guiyang 5.49 154 Pn **Pn** **21 44 52.8 +4.7**
GYA Sn **Sn** **21 45 53.8 +2.4**
GYA smax
comp=N,70nm,0.8s
GYA smax
comp=E,100nm,0.7s
KMI Kunming 6.36 190 Pn **Pn** **21 44 59.8 -0.3**
KMI Sn **Sn** **21 46 11.5 -1.5**
KMI smax
comp=N,12nm,1.1s
KMI smax
comp=E,17nm,1.1s
GTA Gaotai 8.65 338 *e*P Px 21 46 11.1
GTA pP 21 46 17.8
GTA sP 21 46 20.4
GTA pmax pmax
comp=Z,4.0nm,1.0s
LSA Lhasa 11.16 264 *e*Pn **Pn** **21 46 05.6 -0.4**
GUN Gumba 16.09 262 *e*P **Pn** **21 47 12.8 +0.2**
comp=Z,23nm,0.8s
SONM Songino Array 16.50 6 Pn **Pn** **21 47 15.0 -2.7**
comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=2.4
PKI Pulchoki 16.59 261 *e*P **Pn** **21 47 17.6 -1.4**
comp=Z,22nm,0.5s
PKIN Phulchoki 16.59 261 *e*P **Pn** **21 47 17.6 -1.5**
comp=Z,48nm,0.6s
KKN Kakani 16.63 262 *e*P **Pn** **21 47 18.3 -1.3**
comp=Z,37nm,0.7s
DMN Daman 16.83 262 *e*P **Pn** **21 47 20.3 -1.8**
comp=Z,33nm,0.8s
KSRS Korea Array 20.65 67 P **P** **21 48 04.9 -1.2**
comp=Z,0.3nm,0.3s,baz=260,slow=10,SNR=3.5
MK31 Makanchi Array 22.65 319 *e*P **P** **21 48 28.6 +1.1**
MKAR Makanchi Array 22.65 319 P **P** **21 48 28.5 +1.0**
comp=Z,1.2nm,0.9s,mb3.3,baz=124,slow=10,SNR=5.8
MKAR Makanchi Array 22.65 319 P **P** **21 48 28.5 +1.0**
AAK Ala-Archa 25.91 304 P **P** **21 49 01.3 +2.7**
comp=Z,0.8nm,0.3s,mb3.7,baz=127,slow=4.1,SNR=3.7
AAK Ala-Archa 25.91 304 *e*P **P** **21 48 59.5 +0.9**
comp=Z,2.4nm,0.8s,mb3.8
ZALV Zalesovo Beam 26.38 334 P **P** **21 49 04.6 +1.9**
comp=Z,1.9nm,0.8s,mb3.7,baz=130,slow=6.0,SNR=7.2
ZALV Zalesovo Beam 26.38 334 P **P** **21 49 04.6 +1.9**
KURK Kurchatov 26.91 323 P **P** **21 49 08.6 +1.1**
comp=Z,1.7nm,0.8s,mb3.7,baz=130,slow=9.3,SNR=6.3
MAJO Matsushiro 28.77 70 P **P** **21 49 22.9 -1.4**
KBL Kabul 29.36 286 P **P** **21 49 29.2 -0.3**
KIV Kislovodsk 49.03 303 *e*P **P** **21 52 15.3 +2.0**
comp=Z,1.5nm,0.6s,mb4.2
BR131 Keskin Array S 56.47 299 *e*P **P** **21 53 10.6 +2.1**
comp=Z,0.2nm,0.3s,mb3.6
FINES FINESS Array B 57.23 326 P **P** **21 53 14.4 +0.9**
comp=Z,1.8nm,0.9s,mb4.1,baz=60,slow=7.0,SNR=2.9
ASAR Alice Springs 61.83 149 P **P** **21 53 47.2 +1.5**
comp=Z,0.5nm,0.5s,mb3.9,baz=340,slow=6.7,SNR=7.6
COLA College 69.20 26 P **P** **21 54 30.6 -2.3**

ISCJB ***15*** *21:44:01.9±2.6, 56°.02S±0°.07×27°.4W±0°.1, h96km±25km, mb4.8/26, Error ellipse: s-maj=13.0km s-min=9.6km az=35.5*
NEIC ***15*** *21:44:02.7±0.2, 56°.05S×27°.48W, mb5.0/17, Error ellipse: s-maj=9.0km s-min=7.3km az=198.0*
GCMT ***15*** *21:44:02.7±0.3, 56°.19S×27°.21W, h97km±3km, MW5.0/59, Moment Tensor Solution. s29,c34; s59,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.41±.18; $M_{\theta\theta}$-2.51±.25; $M_{\phi\phi}$0.10±.25; $M_{r\theta}$-2.65±.12; $M_{\theta\phi}$0.33±.17; $M_{\phi r}$-1.88±.11; Best double couple: $M_0$4.05100×10^{16} NP1:ϕ_s116.00000°, δ26.00000°, λ136.00000°. NP2: ϕ_s247.00000°, δ73.00000°, λ71.00000°. Principal axes: T 4.3760, Plg58.0000°, Azm131.0000°; N -0.6510, Plg18.0000°, Azm253.0000°; P -3.7250, Plg25.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***15*** *21:44:03.0±1.0, 56°.01S×27°.47W, h101km, mb5.1/11 Error ellipse: s-maj=25.6km s-min=17.5km az=99.7*
IDC ***15*** *21:44:03.1±0.6, 56°.03S×27°.60W, h94km±4km, mb4.5/10, mb1 4.5/10, mb1mx4.4/14, mbtmp4.5/10, MS3.9/10, Ms1 3.8/10, ms1mx3.8/18, Error ellipse: s-maj=16.7km s-min=11.9km az=31.0*
ISC 15 21:44:03.9±2.7, 56°.07S±0°.07×27°.5W±0°.1, h99km±26km, h94km±1.8km:pP-P,n89,σ0s94/56, mb4.8/26, 1C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.83**	**158**	*e*	**Pn**	**21 47 53.5**	**+0.5**
VNA1				*e*		21 55 58.8	
VNA2	**Neumayer--Watz**	**17.23**	**158**	*e*	**Pn**	**21 47 56.8**	**-1.0**
VNA2				*e*		21 55 59.1	
EFI	**East Falkland**	**18.49**	**271**	P	**P**	**21 48 13.1**	**+1.3**
PMSA	**Palmer Station**	**19.77**	**229**	P	**P**	**21 48 29.0**	**+3.3**
1.3nm,0.3s,baz=40,slow=5.2,SNR=4.0							
MAIT	**Maitri**	**22.30**	**147**	*e*P	**P**	**21 48 51.1**	**-1.5**
MAIT				*e*S	**S**	**21 52 40.9**	**-10**
NVL	**N'lazarevskaya**	**22.33**	**146**	*e*P	**P**	**21 48 45.6**	**-7.3**
NVL				*e*S	**S**	**21 52 39.5**	**-12**
NVL				pmax	pmax		
comp=Z,25nm,1.1s,mb4.5							
TRQA	**Tornquist**	**29.20**	**293**	*e*P	**P**	**21 49 55.2**	**-0.5**
comp=Z,72nm,1.8s,mb5.0							
SYO	**Syowa Base**	**31.66**	**141**⇑	*e*P	**P**	**21 50 16.0**	**-1.1**
SYO	**Syowa Base**	**31.66**	**141**	||/P	**P**	**21 50 19.0**	**+1.9**
PLCA	**Paso Flores**	**31.86**	**280**	PcP	PcP	21 53 05.1	-2.3
comp=Z,2.1nm,0.9s,baz=286,slow=3.7,SNR=2.9							
PLCA				LR	LR	22 01 49.1	
comp=Z,140nm,18.8s,baz=272,slow=34							
QSPA	**South Pole Qui**	**34.18**	**180**	P	**P**	**21 50 39.8**	**+0.8**
comp=Z,24nm,0.9s,mb5.0,baz=200,slow=4.4,SNR=100							
QSPA				PcP	PcP	21 53 13.7	+0.4
comp=Z,9.8nm,0.8s,baz=130,slow=2.6,SNR=3.9							
CPUP	**Villa Florida**	**36.72**	**312**	P	**P**	**21 50 59.9**	**-1.3**
comp=Z,4.4nm,0.6s,mb4.6,baz=137,slow=7.2,SNR=18							
CPUP				pP	pP	21 51 20.6	-3.2
comp=Z,4.0nm,0.6s,baz=142,slow=8.9,SNR=5.5							
CPUP				PcP	PcP	21 53 21.7	+0.1
comp=Z,1.9nm,0.5s,baz=103,slow=2.7,SNR=4.4							
CPUP				ScP	ScP	21 56 55.8	-3.2
comp=Z,0.4nm,0.4s,baz=137,slow=3.3,SNR=3.8							
CPUP				LR	LR	22 05 52.3	
comp=Z,130nm,18.4s,baz=139,slow=36							
CPUP	**Villa Florida**	**36.72**	**312**	*e*P	**P**	**21 50 59.8**	**-1.4**
CPUP				*e*PP	pP	21 51 20.3	-3.5
CPUP				*e*		21 53 21.8	
CPUP				pmax	pmax		
comp=Z,20nm,0.5s							
CPUP	**Villa Florida**	**36.72**	**312**	*e*P	**P**	**21 50 59.8**	**-1.4**
comp=Z,20nm,0.5s,mb5.3							
CPUP				*e*pP	pP	21 51 20.3	-3.6
CPUP				*e*PcP	PcP	21 53 21.8	+0.1
CPUP				ScP	ScP	21 56 55.8	-3.2
CPUP				LR	LR	22 05 52.3	
CFAA	**Coronel Fontan**	**37.43**	**294**	P	**P**	**21 51 07.0**	**-0.3**
comp=Z,0.3nm,0.4s,baz=146,slow=6.1,SNR=4.4							
CFAA				pP	pP	21 51 26.9	-3.1
comp=Z,1.1nm,0.8s,baz=145,slow=9.5,SNR=6.0							
CFAA				PcP	PcP	21 53 21.9	-1.9
comp=Z,0.8nm,0.9s,baz=109,slow=3.0,SNR=4.3							
MAW	**Mawson**	**40.22**	**144**	P	**P**	**21 51 30.1**	**+0.1**
comp=Z,26nm,0.7s,mb5.2,baz=236,slow=8.0,SNR=48							
MAW				ScP	ScP	21 57 11.8	+0.1
comp=Z,5.6nm,0.9s,baz=262,slow=6.7,SNR=5.9							
MAW				LR	LR	22 05 33.6	
comp=Z,158nm,21.8s,baz=258,slow=32							
MAW	**Mawson**	**40.22**	**144**	*e*P	**P**	**21 51 30.0**	**-0.1**
MAW				*e*PP	pP	21 51 51.7	-1.3
MAW				*e*		21 53 32.8	
MAW				pmax	pmax		
comp=Z,6.0nm,0.7s							
MAW	**Mawson**	**40.22**	**144**	*e*P	**P**	**21 51 29.9**	**-0.1**
comp=Z,6.2nm,0.7s,mb4.5							
MAW				*e*pP	pP	21 51 51.7	-1.3
MAW				*e*PcP	PcP	21 53 32.8	+0.9
MAW				ScP	ScP	21 57 11.8	+0.1
MAW				LR	LR	22 05 33.6	
SUR	**Sutherland**	**40.79**	**75**	P	**P**	**21 51 36.0**	**+0.9**
comp=Z,7.2nm,1.0s,mb4.5,baz=215,slow=15,SNR=3.7							
SUR				pP	pP	21 51 57.4	-0.7
comp=Z,8.8nm,0.8s,baz=228,slow=3.7,SNR=3.5							
SBA	**Scott Base**	**46.05**	**184**	*e*P	**P**	**21 52 16.7**	**-0.2**
SBA				*e*		21 53 52.6	
SBA				pmax	pmax		
comp=Z,74nm,1.5s,mb5.2							
SBA	**Scott Base**	**46.05**	**184**	*e*P	**P**	**21 52 16.7**	**-0.2**
comp=Z,74nm,1.5s,mb5.2							
SBA				*e*PcP	PcP	21 53 52.6	+1.2
BOSA	**Boshof**	**46.12**	**76**	P	**P**	**21 52 17.8**	**-0.2**
comp=Z,6.3nm,0.9s,mb4.3,baz=212,slow=6.9,SNR=6.5							
BOSA				pP	pP	21 52 41.4	0.0
comp=Z,7.8nm,1.0s,baz=226,slow=11,SNR=4.0							
BOSA				PcP	PcP	21 53 52.4	0.0
comp=Z,4.9nm,0.9s,baz=228,slow=8.7,SNR=3.6							
BOSA				LR	LR	22 08 20.9	
comp=Z,130nm,18.9s,baz=57,slow=32							
BOSA	**Boshof**	**46.12**	**76**	*e*P	**P**	**21 52 18.2**	**+0.2**
BOSA				*PP	pP	21 52 41.4	0.0
BOSA				*e*		21 53 52.4	
BOSA				pmax	pmax		
comp=Z,13nm,1.0s,mb4.6							
BOSA	**Boshof**	**46.12**	**76**	*e*P	**P**	**21 52 18.2**	**+0.2**
comp=Z,13nm,1.0s,mb4.6							
BOSA				pP	pP	21 52 41.4	0.0
BOSA				PcP	PcP	21 53 52.4	0.0
BOSA				LR	LR	22 08 20.9	
LBTB	**Lobatse**	**49.16**	**73**	*e*P	**P**	**21 52 41.3**	**-0.2**
LBTB				*e*PP	pP	21 53 04.2	-0.9
LBTB				pmax	pmax		
comp=Z,18nm,1.1s,mb4.9							
LBTB	**Lobatse**	**49.16**	**73**	*e*P	**P**	**21 52 41.3**	**-0.2**
comp=Z,18nm,1.1s,mb4.9							
LBTB				*e*pP	pP	21 53 04.2	-1.0
TSUM	**Tsumeb**	**49.82**	**61**	*e*P	**P**	**21 52 46.9**	**+0.3**
comp=Z,4.8nm,0.8s,mb4.5							
TSUM				*e*pP	pP	21 53 11.3	+1.0
MIR	**Mirnyy**	**49.83**	**153**	*e*P	**P**	**21 52 41.0**	**-5.1**
MIR				pmax	pmax		
comp=Z,67nm,1.4s,mb5.4							
LPAZ	**La Paz**	**50.27**	**306**	P	**P**	**21 52 51.1**	**+1.1**
comp=Z,9.8nm,0.6s,mb4.9,baz=150,slow=6.0,SNR=40							
LPAZ				pP	pP	21 53 12.2	-1.5
comp=Z,5.9nm,0.5s,baz=138,slow=9.9,SNR=5.4							
LPAZ				ScP	ScP	21 57 52.2	-1.7
comp=Z,1.9nm,1.0s,baz=131,slow=1.8,SNR=5.8							
LPAZ				LR	LR	22 11 55.3	
comp=Z,113nm,21.4s,baz=50,slow=33							
LPAZ	**La Paz**	**50.27**	**306**	*e*P	**P**	**21 52 50.8**	**+0.8**
LPAZ				*e*PP	pP	21 53 12.6	-1.1
LPAZ				*e*		21 54 06.8	
LPAZ				pmax	pmax		
comp=Z,8.0nm,0.4s							
LPAZ	**La Paz**	**50.27**	**306**	*e*P	**P**	**21 52 50.8**	**+0.8**
comp=Z,8.2nm,0.4s,mb5.0							
LPAZ				*e*pP	pP	21 53 12.6	-1.1
LPAZ				*e*PcP	PcP	21 54 06.8	-0.7
LPAZ				ScP	ScP	21 57 52.2	-1.7
LPAZ				LR	LR	22 11 55.3	
RCBR	**Riachuelo**	**50.55**	**349**	*e*P	**P**	**21 52 50.4**	**-1.7**
CASY	**Casey**	**53.94**	**160**	*e*P	**P**	**21 53 16.9**	**+0.3**
comp=Z,64nm,1.3s,mb5.5							
LSZ	**Lusaka**	**58.52**	**69**	*e*P	**P**	**21 53 50.3**	**+0.6**
LSZ				*e*PP	pP	21 54 13.1	-1.0
LSZ				pmax	pmax		
comp=Z,30nm,1.3s,mb5.2							
LSZ	**Lusaka**	**58.52**	**69**	*e*P	**P**	**21 53 50.3**	**+0.6**
comp=Z,30nm,1.3s,mb5.2							
LSZ				*e*pP	pP	21 54 13.1	-1.0
RPN	**Rapa Nui**	**63.51**	**260**	LR	LR	22 16 14.9	
comp=Z,86nm,20.7s,baz=184,slow=30							
LIC	**Lamto**	**64.78**	**25**	*e*P	**P**	**21 54 32.5**	**+0.8**
comp=Z,52nm,1.2s,mb5.2							
KIC	**Kosan Boka**	**64.98**	**25**	*e*P	**P**	**21 54 33.1**	**+0.1**
comp=Z,52nm,1.5s,mb5.1							
TIC	**Toumodi**	**65.18**	**25**	*e*P	**P**	**21 54 35.0**	**+0.7**
comp=Z,21nm,0.4s,mb5.3							
TIC	**Toumodi**	**65.18**	**25**	*e*P	**P**	**21 54 35.0**	**+0.7**
TIC				pmax	pmax		
comp=Z,21nm,0.4s,mb5.3							
DBIC	**Dimbokro**	**65.25**	**25**	P	**P**	**21 54 34.3**	**-0.4**
comp=Z,2.8nm,0.6s,mb4.3,baz=160,slow=11,SNR=7.3							
DBIC				LR	LR	22 17 13.5	
comp=Z,101nm,19.4s,baz=214,slow=30							
DBIC	**Dimbokro**	**65.25**	**25**	*e*P	**P**	**21 54 34.7**	**-0.1**
DBIC				LR	LR	22 17 13.5	
OTAV	**Otavalo**	**69.54**	**304**	*e*P	**P**	**21 55 02.5**	**+0.6**
comp=Z,3.1nm,0.8s,mb4.2							
OTAV				PcP	PcP	21 55 24.4	0.0
ROSC	**El Rosal**	**71.80**	**310**	LR	LR	22 25 04.2	
comp=Z,72nm,20.5s,baz=51,slow=34							
TOA0	**Torodi Ar. Sit**	**73.15**	**30**	*e*P	**P**	**21 55 23.2**	**-0.2**
TOA0				*e*pP	pP	21 55 47.5	-1.2
TORD	**Torodi Ar. Bea**	**73.15**	**30**	P	**P**	**21 55 23.9**	**+0.5**
comp=Z,8.5nm,0.7s,mb4.7,baz=200,slow=6.5,SNR=135							
TORD				pP	pP	21 55 47.6	-1.1
comp=Z,3.2nm,0.5s,baz=200,slow=6.1,SNR=6.3							
TORD				LR	LR	22 21 24.3	
comp=Z,60nm,19.9s,baz=200,slow=31							
SDV	**Santo Domingo**	**73.92**	**315**	*e*P	**P**	**21 55 28.0**	**-0.1**
comp=Z,3.9nm,0.8s,mb4.2							
SDV				*e*pP	pP	21 55 52.0	-1.3
KMBO	**Kilima Mbogo**	**75.18**	**69**	P	**P**	**21 55 32.6**	**-2.8**
comp=Z,0.7nm,0.3s,mb3.8,baz=18,slow=21,SNR=3.6							
SJG	**San Juan**	**80.77**	**323**	P	**P**	**21 56 04.9**	**-1.2**
JTS	**JuntasAbangare**	**81.40**	**303**	*e*P	**P**	**21 56 08.6**	**-1.0**
JTS				pmax	pmax		
comp=Z,12nm,1.0s							
JTS	**JuntasAbangare**	**81.40**	**303**	*e*P	**P**	**21 56 08.6**	**-1.0**
comp=Z,12nm,1.0s,mb4.7							
MSEY	**Mahe Island**	**82.20**	**87**	*e*P	**P**	**21 56 14.4**	**+0.5**
MDT	**Midelt**	**90.66**	**19**	P	**P**	**21 56 56.8**	**+2.1**
comp=Z,6.3nm,1.0s,mb4.7,baz=242,slow=3.6,SNR=11							
STKA	**Stephens Creek**	**91.91**	**171**	P	**P**	**21 57 00.4**	**-0.4**
comp=Z,7.2nm,0.9s,mb4.9,baz=193,slow=3.2,SNR=7.6							
STKA	**Stephens Creek**	**91.91**	**171**	*e*P	**P**	**21 57 00.6**	**-0.2**
comp=Z,1.0nm,0.7s,mb4.2							
CMIG	**Matias Romero**	**92.06**	**298**	LR	LR	22 31 53.0	
comp=Z,70nm,19.6s,baz=204,slow=31							
COCO	**West Island**	**97.77**	**125**	P	**P**	**21 57 28.0**	**+0.1**
ASAR	**Alice Springs**	**99.01**	**163**	P	**P**	**21 57 32.9**	**-0.5**
comp=Z,7.7nm,1.0s,mb5.2,baz=189,slow=4.4,SNR=32							
PDAR	**Pinedale Array**	**120.23**	**302**	PKP	PKPdf	22 02 40.8	-1.5
comp=Z,0.6nm,0.6s,baz=130,slow=3.7,SNR=4.5							
NOA	**NORSAR Array B**	**120.68**	**21**	PKP	PKPdf	22 02 42.5	-0.1
comp=Z,1.1nm,0.9s,baz=162,slow=1.4,SNR=3.3							
ELK	**Elko**	**121.46**	**297**	PKP	PKPdf	22 02 45.2	+0.5
comp=Z,1.6nm,0.7s,baz=273,slow=1.8,SNR=6.6							
ELK	**Elko**	**121.46**	**297**	PKP	PKPdf	22 02 45.2	+0.5
SFJD	**Kangerlussuaq**	**123.97**	**349**	PKIKP	PKPdf	22 02 47.7	-1.0
WVOR	**Wild Horse Val**	**124.42**	**296**	*e*PKIKP	PKPdf	22 02 50.7	+0.4
FINES	**FINESS Array B**	**124.47**	**28**	PKP	PKPdf	22 02 49.7	-0.1
comp=Z,3.3nm,0.6s,baz=236,slow=1.0,SNR=17							
FINES				pPKP	pPKPdf	22 03 14.2	-2.8
comp=Z,1.4nm,0.8s,baz=122,slow=2.5,SNR=2.2							
JOF	**Joensuu**	**127.09**	**29**	*e*PKIKP	PKPdf	22 02 53.7	-1.1
JOF				pmax	pmax		
comp=Z,2.0nm,0.5s							
JOF	**Joensuu**	**127.09**	**29**	*e*p	PKPdf	22 02 53.7	-1.1
comp=Z,1.7nm,0.5s							
EKS2	**Erkin-Say**	**129.76**	**70**	*e*PKPdf	PKPdf	22 03 00.9	+0.4
UCH	**Uchtor**	**129.85**	**71**	*e*PKPdf	PKPdf	22 03 00.9	+0.2
AAK	**Ala-Archa**	**130.12**	**71**	PKP	PKPdf	22 03 01.7	+0.5
comp=Z,2.2nm,0.5s,baz=169,slow=5.2,SNR=2.9							
AAK				SKPbc	SKPbc	22 06 14.0	-0.7
comp=Z,0.9nm,0.4s,baz=277,slow=2.7,SNR=4.3							
ARCES	**ARCESS Array B**	**131.02**	**22**	PKP	PKPdf	22 03 01.9	-0.1
comp=Z,7.4nm,1.1s,baz=208,slow=2.3,SNR=6.5							
ARCES				pPKP	pPKPdf	22 03 26.5	-2.8
comp=Z,0.9nm,0.5s,baz=190,slow=2.2,SNR=1.3							
BRVK	**Borovoye**	**134.89**	**58**	PKIKP	PKPdf	22 03 09.0	-0.8
BVAR	**Borovoye Array**	**134.92**	**58**	PKP	PKPdf	22 03 10.9	+1.1
comp=Z,2.8nm,0.6s,baz=192,slow=2.7,SNR=6.5							
BVAR				SKPbc	SKPbc	22 06 28.3	-2.7
comp=Z,1.1nm,0.8s,baz=100,slow=6.0,SNR=3.2							
YKA	**Yellowknife Ar**	**136.09**	**318**	PKP	PKPdf	22 03 11.5	-0.3
comp=Z,3.0nm,0.7s,baz=127,slow=2.6,SNR=17							
YKA				pPKP	pPKPdf	22 03 36.7	-2.3
comp=Z,1.7nm,0.7s,baz=129,slow=2.4,SNR=4.6							
YKA				SKPbc	SKPbc	22 06 31.8	-2.5
comp=Z,1.5nm,0.9s,baz=130,slow=1.7,SNR=7.3							
YKA	**Yellowknife Ar**	**136.09**	**318**	PKIKP	PKPdf	22 03 11.5	-0.3
YKA						22 03 36.7	
YKA	**Yellowknife Ar**	**136.09**	**318**	PKP	PKPdf	22 03 11.5	-0.3
YKA				pPKP	pPKPdf	22 03 36.7	-2.3
YKA				SKPbc	SKPbc	22 06 31.8	-2.5
MKAR	**Makanchi Array**	**137.03**	**72**	PKP	PKPdf	22 03 13.8	-0.3
comp=Z,1.1nm,0.7s,baz=176,slow=3.0,SNR=2.4							
INK	**Inuvik**	**145.72**	**321**	*e*PKP2	PKPab	22 03 29.0	-1.1
DAWY	**Dawson**	**146.69**	**312**	*e*PKPdf	PKPdf	22 03 31.9	+1.2
COLA	**College**	**150.44**	**312**	*e*PKIKP	PKPbc	22 03 41.2	-1.0
KDAK	**Kodiak Island**	**150.69**	**296**	PKPbc	PKPbc	22 03 43.2	+0.3
SONM	**Songino Array**	**150.88**	**87**	PKPbc	PKPbc	22 03 43.0	-0.7
comp=Z,27nm,0.7s,baz=221,slow=3.3,SNR=22							
TRF	**Thorofare Moun**	**151.20**	**308**	*e*PKPbc	PKPbc	22 03 43.9	0.0
TLY	**Talaya**	**151.33**	**78**	*e*PKIKP	PKPbc	22 03 45.2	+0.6
RSO	**Redoubt South**	**151.61**	**302**	*e*PKPbc	PKPbc	22 03 44.7	-0.3
COLD	**Coldfoot**	**151.73**	**316**	*e*PKPdf	PKPdf	22 03 36.5	-2.2
COLD				*e*PKPbc	PKPbc	22 03 45.3	+0.2
PPLA	**Purkeypile**	**151.93**	**307**	*e*PKPbc	PKPbc	22 03 45.5	-0.2
KSRS	**Korea Array**	**155.10**	**128**	PKPab	PKPab	22 04 09.9	+0.3
comp=Z,2.7nm,0.9s,baz=206,slow=3.3,SNR=5.1							
MJAR	**Matsushiro Arr**	**158.18**	**148**	PKPab	PKPab	22 04 22.9	+0.1
comp=Z,3.1nm,1.0s,baz=196,slow=5.1,SNR=6.1							

ISCJB ***15*** *21:55:45.5±0.8, 32°.29N±0°.02×104°.74E±0°.02, h5km±4km, mb4.9/152, MS4.0/19, Error ellipse: s-maj=3.8km s-min=3.4km az=178.2*
IDC ***15*** *21:55:46.0±0.5, 32°.24N×104°.79E, h0km, mb4.8/31, mb1 4.8/33, mb1mx4.8/35, mbtmp4.7/33, ML3.8/2, MS3.9/7, Ms1 3.9/7, ms1mx3.3/44, Error ellipse: s-maj=14.8km s-min=10.9km az=34.0*
BJI ***15*** *21:55:47.4, 32°.26N×104°.75E, h14km, mB4.7/19, mb4.6/31, ML4.7/19, Ms4.5/34, Ms7 4.3/30*
NEIC ***15*** *21:55:48.0±0.1, 32°.30N×104°.77E, h10km, mb4.9/84, MS4.1/1, Error ellipse: s-maj=3.8km s-min=2.9km az=198.0*
MOS ***15*** *21:55:49.5±0.8, 32°.26N×104°.78E, h33km, mb5.1/71, MS4.1/13, Error ellipse: s-maj=7.4km s-min=3.9km az=120.9*
SZGRF ***15*** *21:55:50.4, 32°.43N×104°.65E, h19km, mb5.1, Sichuan, China*
DJA ***15*** *21:56:07, 32°.77N×105°.07E, h195km, mb4.5/7*
ISC 15 21:55:47.6±0.7, 32°.29N±0°.02×104°.74E±0°.02, h6km±4km, h7km±5.0km:pP-P,n473,σ0s87/480, mb4.9/152, MS4.0/19, 56C-9D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.61**	**211**	Pg	**Pg**	**21 56 17.3**	**-1.2**
CD2				Sg	**Sg**	**21 56 40.5**	**+1.1**
CD2				smax			
comp=N,44μm,1.0s							
LZH	**Lanzhou**	**3.86**	**349**	*e*Pn	**Pn**	**21 56 50.3**	**+2.9**
LZH				Pg	**Pg**	**21 57 00.8**	**-0.7**
LZH				Sn	**Sn**	**21 57 36.5**	**+3.5**
LZH				Sg	**Sg**	**21 57 50.1**	**-1.4**
LZH				smax			
comp=N,8μm,0.7s							
LZH				smax			
comp=E,12μm,0.6s							
LZH				LR	LR		
comp=N,14μm,7.0s							
LZH				LR	LR		
comp=Z,14μm,8.2s							
XAN	**Xi'an**	**3.92**	**62**	Pn	**Pn**	**21 56 49.1**	**+0.8**
XAN				Sn	**Sn**	**21 57 32.8**	**-1.8**
XAN				Sg	**Sg**	**21 57 52.9**	**-0.6**
XAN				smax			
comp=N,2μm,0.8s							
XAN				smax			
comp=E,1μm,0.7s							
ENH	**Enshi**	**4.54**	**115**	*e*Pn	**Pn**	**21 56 59.0**	**+2.2**
ENH				*e*S	**Sg**	**21 58 12.2**	**-1.1**
GYA	**Guiyang**	**6.05**	**163**	Pn	**Pn**	**21 57 19.8**	**+2.2**
GYA				smax			
comp=N,970nm,0.8s							
GYA				smax			
comp=E,850nm,0.9s							
GYA				LR	LR		
comp=N,4μm,4.3s							
GYA				LR	LR		
comp=E,3μm,4.0s							
GYA				LR	LR		
comp=Z,3μm,5.2s							
KMI	**Kunming**	**7.35**	**194**	Pn	**Pn**	**21 57 35.8**	**+0.3**
KMI				Sn	**Sn**	**21 58 50.8**	**-8.5**
KMI				smax			
comp=N,190nm,1.3s							
KMI				smax			
comp=E,230nm,1.2s							
KMI				LR	LR		
comp=N,1μm,6.4s							
KMI				LR	LR		
comp=E,3μm,7.5s							
KMI				LR	LR		
comp=Z,2μm,9.3s							
GTA	**Gaotai**	**8.15**	**332**	⇑P	**Pn**	**21 57 46.9**	**+0.5**
GTA				pP		21 57 50.4	
GTA				sP		21 57 52.8	
GTA				S	**Sn**	**21 59 22.3**	**+3.5**
GTA				sS		21 59 27.5	
GTA				pmax	pmax		
comp=Z,10.0nm,0.8s							
GTA				pmax	pmax		
comp=Z,72nm,4.2s							
GTA				LR	LR		
comp=N,2μm,11.0s							
GTA				LR	LR		
comp=E,1μm,12.2s			

comp=Z,35nm,0.9s
BJT *e*Sn **Sn** **22 00 53.5 -0.4**
BJI Beijing 12.04 47 P **Pn** **21 58 41.1 +1.4**
BJI pmax pmax
comp=Z,12nm,0.7s
BJI pmax pmax
comp=Z,84nm,5.8s
BJI LR LR
comp=N,3μm,4.9s
BJI LR LR
comp=E,3μm,5.2s
QIZ Qiongzhong 13.98 160 P **Pn** **21 59 07.0 +0.7**
QIZ pP 21 59 11.4
QIZ sP 21 59 15.9
QIZ S **Sn** **22 01 44.6 +2.7**
QIZ pmax pmax
comp=Z,10.0nm,0.9s
QIZ pmax pmax
comp=Z,230nm,5.5s
QIZ LR LR
comp=N,2μm,10.5s
QIZ LR LR
comp=E,330nm,9.1s
QIZ LR LR
comp=Z,2μm,11.0s
QZH Quanzhou 14.19 118 *e*P **Pn** **21 59 01.0 -8.2**
QZH S **Sn** **22 01 49.0 +2.0**
QZH LR LR
comp=N,3μm,9.4s
QZH LR LR
comp=E,4μm,7.9s
QZH LR LR
comp=Z,5μm,11.3s
CHG Chiang Mai 14.40 203 ⇑P Px 21 59 22.8
comp=Z,21nm,0.8s
CM31 Chiang Mai Arr 14.73 202 *e*Pn **Pn** **21 59 18.8 +2.3**
CMAR Chiang Mai Arr 14.73 202 LR LR 22 05 39.7
comp=Z,11μm,20.5s,baz=136,slow=40
SONM Songino Array 15.58 4 Pn **Pn** **21 59 27.4 -0.2**
comp=Z,0.3nm,0.3s,baz=180,slow=13,SNR=8.8
SONM Lg 22 04 03.1
comp=Z,0.5nm,0.3s,baz=192,slow=27,SNR=4.1
ULN Ulaanbaatar 15.65 6 *e*P **Pn** **21 59 28.7 +0.1**
ULN pmax pmax
comp=Z,25nm,1.0s
ULN Ulaanbaatar 15.65 6 *e*Pn **Pn** **21 59 28.7 +0.1**
comp=Z,25nm,1.0s
ULN Ulaanbaatar 15.65 6 Pn **Pn** **21 59 30.2 +1.5**
SNR=21
ULN Pn **Pn** **21 59 30.2 +1.5**
SNR=21
BDT Bhumibol Dam 15.86 200 P **Pn** **21 59 32.0 +0.6**
comp=Z,22nm,0.9s
KKTK Khon Kaen 15.98 187 P **Pn** **21 59 40.0 +7.0**
comp=Z,494nm,0.8s
YHNB Yeheng 16.47 113 Pn **Pn** **21 59 39.6 +0.3**
GUN Gumba 16.89 260 *e*P **Pn** **21 59 42.1 -2.5**
comp=Z,202nm,0.9s
NST Nakhon Sawan 17.07 195 P **Pn** **21 59 48.0 +1.1**
PKI Pulchoki 17.40 259 *e*P **Pn** **21 59 49.5 -1.5**
comp=Z,70nm,0.6s
PKIN Phulchoki 17.41 259 *e*P **Pn** **21 59 49.4 -1.7**
comp=Z,121nm,0.7s
KKN Kakani 17.43 260 *e*P **Pn** **21 59 49.7 -1.7**
comp=Z,56nm,0.6s
DMN Daman 17.64 260 *e*P **Pn** **21 59 52.3 -1.7**
comp=Z,58nm,0.6s
WMQ Urumqi 17.64 316 *e*P **Pn** **21 59 54.0 +0.1**
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,100nm,3.5s
WMQ LR LR
comp=N,1μm,11.0s
WMQ LR LR
comp=E,980nm,13.0s
WMQ LR LR
comp=Z,280nm,13.0s
ZAK Zakamensk 18.11 357 *e*P **Pn** **22 00 00.3 +0.7**
ZAK pmax pmax
comp=Z,20nm,1.3s
TLY Talaya 19.39 358 *e*P **Pn** **22 00 17.1 +1.9**
TLY pmax pmax
comp=Z,19nm,1.3s
TLY MLR MLR
comp=Z,373nm,11.0s
TLY Talaya 19.39 358 *e*Pn **Pn** **22 00 21.3 +6.1**
comp=Z,16nm,1.2s
TLY Talaya 19.39 358 P **Pn** **22 00 17.6 +2.4**
SNR=7.1
TLY P 22 00 17.6
SNR=7.1
MOY Mondy 19.55 353 *e*P **Pn** **22 00 18.5 +1.4**
MOY pmax pmax
comp=Z,56nm,1.4s
KSRS Korea Array 19.69 68 P **Pn** **22 00 17.6 -1.3**
comp=Z,0.4nm,0.3s,baz=257,slow=9.8,SNR=32
CN2 Changchun 19.89 49 *e*P **Pn** **22 00 22.8 +1.6**
CN2 *ep*P pP 22 00 26.5 +5.1
CN2 *es*P sP 22 00 29.8 +7.6
CN2 *e*S **Sn** **22 04 04.8 -0.2**
CN2 pmax pmax
comp=Z,80nm,1.2s
CN2 pmax pmax
comp=Z,400nm,10.0s
CN2 LR LR
comp=N,300nm,10.0s
CN2 LR LR
comp=E,400nm,10.0s
CN2 LR LR
comp=Z,400nm,8.0s
IRK Irkutsk 19.94 359⇑*i*P **Pn** **22 00 22.1 +0.4**
IRK pmax pmax
comp=Z,251nm,0.8s
HIA Hailar 20.35 29 *e*P **P** **22 00 25.6 +1.1**
HIA pmax pmax
comp=Z,31nm,1.1s
HIA Hailar 20.35 29 *e*P **P** **22 00 25.6 +1.1**
comp=Z,31nm,1.1s
JOW Kunigami 21.17 99 P **P** **22 00 33.3 -0.3**
comp=Z,15nm,0.6s,mb4.5,baz=315,slow=1.4,SNR=3.3
MK31 Makanchi Array 22.46 317 *e*P **P** **22 00 48.0 +0.7**
MKAR Makanchi Array 22.46 317 P **P** **22 00 48.0 +0.7**
comp=Z,6.6nm,0.6s,mb4.3,baz=112,slow=12,SNR=118
MKAR PcP PcP 22 04 41.1 -0.4
comp=Z,3.7nm,0.9s,baz=222,slow=1.6,SNR=4.6
MKAR LR LR 22 10 20.8
comp=Z,547nm,18.3s,MS4.0,baz=112,slow=39
MKAR Makanchi Array 22.46 317 *i*P **P** **22 00 48.0 +0.7**
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MDJ Mudanjiang 22.93 50 P **P** **22 00 52.5 +0.2**
MDJ pP 22 00 54.8
MDJ S **S** **22 05 03.3 +0.6**
MDJ pmax pmax
comp=Z,25nm,1.4s,mb4.5
MDJ pmax pmax
comp=Z,98nm,5.5s
MDJ Mudanjiang 22.93 50 *e*P **P** **22 00 52.6 +0.4**
comp=Z,51nm,1.4s,mb4.8
KSH Kashi 24.32 295 *e*P **P** **22 01 09.8 +3.9**
KSH *ep*P 22 01 13.8
KSH *es*P sP 22 01 16.8 +8.2
KSH *e*PP 22 01 45.8
KSH *e*PcP PcP 22 04 47.8 +2.2
KSH *e*S **S** **22 05 27.9 +2.5**
KSH *es*S sS 22 05 33.8 +5.3
KSH *e*SS 22 06 22.8
KSH pmax pmax
comp=Z,50nm,0.9s,mb4.9
KSH LR LR
comp=N,280nm,6.4s
KSH LR LR
comp=E,290nm,7.5s
ULHL Ulahol 24.66 302 P **P** **22 01 10.4 +1.5**
SNR=8.9
TKM2 Tokmak 2 25.29 303 P **P** **22 01 16.2 +1.5**
SNR=28
TKM2 Tokmak 2 25.29 303 *e*P **P** **22 01 15.0 +0.3**
TKM2 *e* 22 04 47.4
TKM2 pmax pmax
comp=Z,17nm,0.7s,mb4.7
TKM2 Tokmak 2 25.29 303 *e*P **P** **22 01 15.0 +0.3**
comp=Z,17nm,0.7s,mb4.7
TKM2 *e*PcP PcP 22 04 47.4 -0.3
KZA Kyzart 25.33 301 P **P** **22 01 17.4 +2.3**
SNR=38
KBK Karagaybulak 25.69 302 P **P** **22 01 20.1 +1.7**
SNR=48
UCH Uchtor 25.90 301 P **P** **22 01 22.6 +2.3**
SNR=47
ZAA0 Zalesovo Array 25.90 333 *e*P **P** **22 01 19.9 -0.3**
ZALV Zalesovo Beam 25.90 333 P **P** **22 01 20.6 +0.5**
comp=Z,29nm,0.6s,mb5.0,baz=130,slow=9.7,SNR=144
ZALV PcP PcP 22 04 46.8 -2.0
comp=Z,2.3nm,0.6s,baz=157,slow=4.1,SNR=3.4
ZALV Zalesovo Beam 25.90 333 P **P** **22 01 20.6 +0.5**
ZALV 22 04 46.8
ZALV pmax pmax
comp=Z,29nm,0.6s,mb5.0
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
FRU Bishkek 25.97 303 *e*P **P** **22 01 22.5 +1.7**
FRU *e* 22 01 56.0
AAK Ala-Archa 26.01 302 P **P** **22 01 22.7 +1.4**
SNR=6.2
AAK Ala-Archa 26.01 302 P **P** **22 01 22.5 +1.2**
comp=Z,5.1nm,0.8s,mb4.1,baz=120,slow=4.8,SNR=15
AAK PcP PcP 22 04 49.1 -0.2
comp=Z,2.4nm,0.6s,baz=180,slow=2.5,SNR=4.5
AAK LR LR 22 12 30.2
comp=Z,386nm,18.2s,MS4.0,baz=24,slow=38
AAK Ala-Archa 26.01 302 P **P** **22 01 22.5 +1.3**
AAK 22 04 49.1
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
AAK MLR MLR
comp=Z,386nm,18.2s,MS4.0
AAK Ala-Archa 26.01 302 *e*P **P** **22 01 22.6 +1.4**
comp=Z,10nm,1.0s,mb4.3
AAK Ala-Archa 26.01 302 P **P** **22 01 23.0 +1.8**
SNR=6.4
AAK P pP 22 01 23.0 -0.1
SNR=6.4
USP Ospenovka 26.16 303 P **P** **22 01 23.6 +1.0**
SNR=22
BOD Bodaibo 26.30 11 *e*P **P** **22 01 24.6 +0.9**
BOD pmax pmax
comp=Z,8.0nm,1.1s,mb4.2
KLR Kul'dur 26.35 42 *e*P **P** **22 01 20.0 -4.2**
AML Almayashu 26.48 301 P **P** **22 01 27.5 +2.1**
SNR=18
AML Almayashu 26.48 301 *e*P **P** **22 01 27.2 +1.7**
comp=Z,19nm,0.8s,mb4.7
AML *e*PcP PcP 22 04 51.2 +0.8
EKS2 Erkin-Say 26.53 302 P **P** **22 01 27.2 +1.3**
SNR=8.6
EKS2 Erkin-Say 26.53 302 *e*P **P** **22 01 26.5 +0.6**
comp=Z,4.7nm,0.7s,mb4.1
KURK Kurchatov 26.64 321 P **P** **22 01 26.4 -0.4**
comp=Z,18nm,0.8s,mb4.6,baz=130,slow=8.6,SNR=26
KURK PcP PcP 22 04 49.9 -0.8
comp=Z,6.4nm,0.6s,baz=115,slow=2.0,SNR=11
KURK LR LR 22 12 58.2
comp=Z,148nm,20.5s,MS3.5,baz=100,slow=39
KURK Kurchatov 26.64 321 *ce*P **P** **22 01 27.6 +0.8**
KURK pmax pmax
comp=Z,32nm,1.0s,mb4.8
KURK Kurchatov 26.64 321 *e*P **P** **22 01 26.8 -0.1**
comp=Z,32nm,1.1s,mb4.8
KURK Kurchatov 26.64 321 P **P** **22 01 27.4 +0.5**
SNR=11
KURK P pP 22 01 27.4 -1.3
SNR=11
MAJO Matsushiro 27.85 72 P **P** **22 01 38.1 +0.2**
MJAR Matsushiro Arr 27.85 72 P **P** **22 01 37.4 -0.5**
comp=Z,1.8nm,0.6s,mb3.9,baz=275,slow=11,SNR=8.0
MJAR Matsushiro Arr 27.85 72 P **P** **22 01 37.4 -0.5**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
KBL Kabul 29.79 284 *e*P **P** **22 01 56.1 +1.0**
KBL pmax pmax
comp=Z,27nm,1.3s,mb4.8
KBL Kabul 29.79 284 *e*P **P** **22 01 56.1 +1.0**
comp=Z,27nm,1.3s,mb4.8
DAV Davao City (W) 31.72 138 LR LR 22 16 36.7
comp=Z,183nm,19.3s,MS3.8,baz=210,slow=40
ASAJ Asahikawa 31.74 57 P **P** **22 02 10.4 -1.8**
comp=Z,1.7nm,0.4s,mb4.2,baz=263,slow=17,SNR=2.5
ASAJ Asahikawa 31.74 57 P **P** **22 02 10.5 -1.8**
ASAJ pmax pmax
comp=Z,2.0nm,0.4s
BVAR Borovoye Array 32.21 320 P **P** **22 02 17.0 +0.7**
comp=Z,7.9nm,0.7s,mb4.7,baz=115,slow=10.0,SNR=36
BVAR PcP PcP 22 05 04.0 -0.8
comp=Z,4.0nm,0.6s,baz=154,slow=3.2,SNR=8.8
BVAR Borovoye Array 32.21 320 P **P** **22 02 17.0 +0.7**
BVAR 22 05 04.0
BVAR pmax pmax
comp=Z,8.0nm,0.7s
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 32.28 320 *ce*P **P** **22 02 18.0 +1.1**
BRVK pmax pmax
comp=Z,12nm,0.7s,mb4.8
BRVK Borovoye 32.28 320 *e*P **P** **22 02 17.7 +0.8**
comp=Z,13nm,0.7s,mb4.9
BRVK Borovoye 32.28 320 P **P** **22 02 18.2 +1.3**
SNR=5.4
BRVK P pP 22 02 18.2 -0.6
SNR=5.4
YSS Yuzh-Sakhalins 32.39 52 *e*P **P** **22 02 18.0 +0.1**
PALK Pallekele 33.46 227 LR LR 22 17 53.5
comp=Z,77nm,19.4s,MS3.4,baz=349,slow=40
YAK Yakutsk 33.81 21 *e*P **P** **22 02 29.6 -0.5**
YAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
YAK Yakutsk 33.81 21 P **P** **22 02 28.9 -1.2**
ABKAR Akbulak array 37.30 310 *e*P **P** **22 03 01.2 +0.9**
comp=Z,16nm,0.5s,mb5.1
SVE Sverdlovsk 38.88 322⇓*e*P **P** **22 03 14.7 +1.2**
SVE pmax pmax
comp=Z,62nm,0.9s,mb5.3
KAPI Kappang 39.75 156 P **P** **22 03 19.6 -1.6**
comp=Z,30nm,0.8s,mb5.1,baz=326,slow=6.9,SNR=15
KAPI Kappang 39.75 156 *e*P **P** **22 03 19.9 -1.3**
comp=Z,43nm,0.9s,mb5.2
ARU Arti 39.84 321 P **P** **22 03 22.9 +1.4**
comp=Z,668nm,0.8s,SNR=16
ARU Arti 39.84 321 *c i*P **P** **22 03 22.1 +0.6**
ARU *e* 22 04 51.1
ARU S **S** **22 09 26.6 +0.5**
ARU SS SS 22 12 20.3 -1.6
ARU pmax pmax
comp=Z,112nm,1.0s,mb5.5
ARU Arti 39.84 321 *e*P **P** **22 03 21.8 +0.3**
comp=Z,83nm,0.8s,mb5.5
TIXI Tiksi 41.49 11 *c i*P **P** **22 03 34.5 -0.4**
TIXI pmax pmax
comp=Z,21nm,1.0s,mb4.7
TIXI MLR MLR
comp=Z,222nm,14.0s,MS4.2
TIXI Tiksi 41.49 11 *e*P **P** **22 03 34.6 -0.3**
comp=Z,17nm,0.8s,mb4.7
SOKR Solikamsk 41.72 325 *c i*P **P** **22 03 37.9 +0.9**
SOKR pmax pmax
comp=Z,120nm,1.1s,mb5.4
SEY Seymchan 42.79 30 *ce*P **P** **22 03 46.8 +1.1**
PEA0B Petropavlovsk- 42.97 45 *e*P **P** **22 03 47.6 +0.4**
PETK Petropavlovsk- 42.97 45 P **P** **22 03 47.0 -0.3**
comp=Z,7.2nm,0.6s,mb4.6,baz=234,slow=3.1,SNR=13
PETK Petropavlovsk- 42.97 45 P **P** **22 03 47.0 -0.3**
PETK pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
PETK Petropavlovsk- 42.97 45 P **P** **22 03 47.0 -0.3**
MAK Makhachkala 45.77 301 *e*P **P** **22 04 07.4 -2.4**
MAK MLR MLR
comp=Z,213nm,15.0s,MS4.2
GNI Garni 48.23 297 *ce*P **P** **22 04 30.0 +0.9**
GNI pmax pmax
comp=Z,18nm,1.2s
GNI Garni 48.23 297 *e*P **P** **22 04 29.0 -0.1**
comp=Z,15nm,1.0s,mb5.0
ZEI Tsey 48.42 301 *e*P **P** **22 04 30.4 -0.2**
ZEI pmax pmax
comp=Z,14nm,0.7s,mb5.1
UMR Umm Al-Rimmam 48.50 283 *e*P **P** **22 04 30.9 -0.5**
UMR AMb AMB 22 04 31.6
comp=Z,20nm,0.7s,mb5.3
KBD Kabd 48.64 282 *e*P **P** **22 04 32.2 -0.3**
KBD AMb AMB 22 04 32.6
comp=Z,11nm,0.9s,mb4.9
MIB Mutribah 48.73 283 *e*P **P** **22 04 33.0 -0.2**
MIB AMb AMB 22 04 34.8
comp=Z,42nm,0.9s,mb5.5
ONI Oni 48.78 301 P **P** **22 04 35.0 +1.7**
RDF Al-Radifah 48.84 282 *e*P **P** **22 04 34.2 +0.2**
RDF AMb AMB 22 04 35.7
comp=Z,36nm,1.0s,mb5.4
KIV Kislovodsk 49.12 302 *e*P **P** **22 04 37.1 +1.2**
KIV pmax pmax
comp=Z,35nm,0.9s,mb5.4
KIV MLR MLR
comp=Z,116nm,17.0s,MS3.9
KIV Kislovodsk 49.12 302 *e*P **P** **22 04 36.8 +0.8**
KIV Kislovodsk 49.12 302 P **P** **22 04 36.8 +0.9**
SNR=12
KIV P pP 22 04 36.8 -1.1
SNR=12
VRHR Novokhopersk 49.14 312 *e*P **P** **22 04 36.0 0.0**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.5
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.5s
BILL Bilibino 49.88 26⇑*e*P **P** **22 04 41.4 +0.1**
BILL pmax pmax
comp=Z,13nm,1.0s,mb4.9
BILL Bilibino 49.88 26 *e*P **P** **22 04 40.8 -0.5**
comp=Z,7.1nm,0.8s,mb4.8
KLMR Klimovskoe 50.40 325 *c i*P **P** **22 04 45.6 +0.2**
KLMR pmax pmax
comp=Z,77nm,0.5s,mb6.0
VORD Divnogorie 50.62 312 *e*P **P** **22 04 46.8 -0.4**
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VORD pmax pmax
comp=N,5.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,1.1s
VSR Storozhevoye 50.68 312 *e*P **P** **22 04 47.0 -0.6**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.8s
MOS Moscow 51.34 318 *e*P **P** **22 04 51.4 -1.1**
MOS *e* 22 06 57.1
MOS pmax pmax
comp=Z,83nm,0.8s,mb5.7
MOS pmax pmax
comp=Z,100nm,1.0s,mb5.7
OBN Obninsk 51.97 317 *c i*P **P** **22 04 55.2 -2.0**
OBN *e* 22 06 55.0
OBN pmax pmax
comp=Z,60nm,1.6s,mb5.3
OBN MLR MLR
comp=Z,100nm,19.0s,MS3.9
OBN Obninsk 51.97 317 *e*P **P** **22 04 55.1 -2.2**
KAKA Kakadu 52.01 145 *e*P **P** **22 04 58.4 +0.4**
comp=Z,6.2nm,0.6s,mb4.7
ANN Anapa 52.70 304 *e*P **P** **22 05 01.5 -1.3**
ANN *e* 22 06 06.7
ANN *e* 22 06 59.4
ANN *e*PPP 22 08 03.7
ANN *e*S **S** **22 12 27.7 -3.2**
ANN pmax pmax
comp=Z,64nm,1.0s,mb5.5
MALT Malatya 53.42 296 *e*P **P** **22 05 08.1 -0.2**
comp=Z,8.8nm,0.7s,mb4.8
MALT Malatya 53.42 296⇓*i*P **P** **22 05 09.2 +0.9**
APA Apatity 53.49 333⇑*i*P **P** **22 05 09.8 +1.5**
APA MLR MLR
comp=Z,200nm,13.0s,MS4.4
FITZ Fitzroy Crossi 53.96 155 *e*P **P** **22 05 11.2 -1.1**
comp=Z,20nm,0.9s,mb5.0
FITZ Fitzroy Crossi 53.96 155 *e*P **P** **22 05 11.8 -0.5**
comp=Z,18nm,1.0s,mb5.0
JOF Joensuu 54.32 327 *e*P **P** **22 05 13.4 -1.0**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
JOF Joensuu 54.32 327 *ep* **P** **22 05 13.4 -1.0**
comp=Z,5.8nm,0.4s,mb4.9
SIM Simferopol' 54.98 305 *c i*P **P** **22 05 20.3 +0.8**
SIM pmax pmax
comp=Z,39nm,0.8s,mb5.5
PUL Pulkovo 54.99 323 *ce*P **P** **22 05 20.6 +1.2**
PUL pmax pmax
comp=Z,56nm,0.6s,mb5.8
MBWA Marble Bar 55.05 163 *e*P **P** **22 05 19.5 -0.7**
MBWA Marble Bar 55.05 163 P **P** **22 05 19.6 -0.5**
KEV Kevo 55.87 336 *e*P **P** **22 05 24.2 -1.3**
KEV pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
KEV Kevo 55.87 336 *ep* **P** **22 05 24.2 -1.3**
comp=Z,8.1nm,0.4s,mb5.1
ARCES ARCESS Array B 56.40 335 P **P** **22 05 29.3 0.0**
comp=Z,21nm,0.7s,mb5.3,baz=81,slow=8.0,SNR=145
ARCES ARCESS Array B 56.40 335 P **P** **22 05 29.3 -0.1**
ARCES pmax pmax
comp=Z,21nm,0.7s
ARE0 ARCESS Array S 56.40 335 *e*P **P** **22 05 29.4 +0.1**
ASF Jabal al Asfar 56.45 290 P **P** **22 05 30.8 +0.5**
comp=Z,11nm,0.8s,mb5.0,baz=324,slow=7.1,SNR=17
ASF Jabal al Asfar 56.45 290 P **P** **22 05 30.8 +0.5**
ASF pmax pmax
comp=Z,11nm,0.8s
BR131 Keskin Array S 56.63 299 *e*P **P** **22 05 30.7 -0.7**
BRTR Keskin Array B 56.63 299 P **P** **22 05 31.3 -0.2**
comp=Z,8.5nm,0.8s,mb4.8,baz=98,slow=6.5,SNR=54
BRTR Keskin Array B 56.63 299 P **P** **22 05 31.3 -0.2**
BRTR pmax pmax
comp=Z,9.0nm,0.8s
KAF Kangasniemi 56.70 327 *e*P **P** **22 05 29.9 -1.6**
KAF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KAF Kangasniemi 56.70 327 *ep* **P** **22 05 29.9 -1.6**
comp=Z,7.1nm,0.4s,mb5.0
FINES FINESS Array B 56.89 326 P **P** **22 05 32.8 -0.1**
comp=Z,35nm,0.5s,mb5.7,baz=83,slow=7.1,SNR=315
FINES FINESS Array B 56.89 326 P **P** **22 05 32.8 -0.1**
FINES pmax pmax
comp=Z,35nm,0.5s
AKASG Malin Array Be 56.97 313 P **P** **22 05 32.5 -1.2**
comp=Z,11nm,0.6s,mb5.1,baz=70,slow=6.2,SNR=38
AKASG Malin Array Be 56.97 313 P **P** **22 05 32.5 -1.2**
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG Malin Array Be 56.97 313 P **P** **22 05 32.5 -1.2**
AKBB Malin Array Si 56.97 313 *e*P **P** **22 05 33.3 -0.4**
KIEV Kiev 56.98 313 *e*P **P** **22 05 33.1 -0.7**
KIEV pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KIEV Kiev 56.98 313 *e*P **P** **22 05 33.1 -0.7**
comp=Z,5.9nm,0.4s,mb5.0
MMAI Mount Meron Ar 57.35 291 P **P** **22 05 36.4 -0.3**
comp=Z,5.0nm,0.8s,mb4.6,baz=70,slow=17,SNR=3.6
IDID Didziasalis 57.53 318 *e*P **P** **22 05 38.0 +0.5**
IZAR Zarasai 57.72 319 *e*P **P** **22 05 39.1 +0.2**
ISAL Salakas 57.82 319 *e*P **P** **22 05 40.0 +0.4**
SPITS Spitsbergen Ar 58.32 346 LR LR 22 34 16.0
comp=Z,86nm,19.0s,MS3.9,baz=5.0,slow=40
TLCR 58.56 306⇑*i*P **P** **22 05 44.8 -0.2**
TLCR 58.56 306⇑*i*P **P** **22 05 44.8 -0.2**
EIL Elat 58.90 287 P **P** **22 05 47.4 -0.2**
comp=Z,14nm,0.8s,mb5.1,baz=27,slow=4.3,SNR=12
WRAB Tennant Creek 59.16 147 *e*P **P** **22 05 48.5 -0.8**
ISP Isparta 59.53 298 *e*P **P** **22 05 51.5 -0.3**
VRI Vrincioaia 59.78 308 P **P** **22 05 54.0 +0.6**
VRI Vrincioaia 59.78 308⇓*i*P **P** **22 05 54.0 +0.6**
SUW Suwalki 59.83 318 *e*P **P** **22 05 53.0 -0.6**
SUW Suwalki 59.83 318 *e*P **P** **22 05 51.8 -1.8**
SUW pmax pmax
comp=Z,41nm,0.8s,mb5.5
SUW Suwalki 59.83 318 *e*P **P** **22 05 51.8 -1.8**
comp=Z,41nm,0.8s,mb5.5
PLOR Plostina 59.84 308⇑P **P** **22 05 54.7 +0.9**
PLOR Plostina 59.84 308⇑*i*P **P** **22 05 54.7 +0.9**
MEEK Meekatharra 60.07 166 *e*P **P** **22 05 53.8 -1.7**
BURAR Bucovina Array 60.28 310 P **P** **22 05 57.3 +0.5**
BUR08 Bucovina Ar. S 60.28 310 *e*P **P** **22 05 56.7 -0.1**
MLR Muntele Rosu 60.42 307⇑P **P** **22 05 58.1 +0.3**
MLR Muntele Rosu 60.42 307⇑*i*P **P** **22 05 58.1 +0.3**

LVV L'vov 60.42 313 eP P 22 05 57.4 -0.3
JMB Yambol 60.90 304 P P 22 06 02.0 +0.9
VOIR 61.03 308 P P 22 06 02.5 +0.5
VOIR 61.03 308⇑ iP P 22 06 02.3 +0.3
KWP Kalwaria Pacla 61.30 313 eP P 22 06 04.2 +0.6
KWP Kalwaria Pacla 61.30 313 eP P 22 06 03.5 -0.1
comp=Z,66nm,1.0s,mb5.7
KWP Kalwaria Pacla 61.30 313⇑ iP P 22 06 04.2 +0.5
KOLS Kolonicke sedl 61.78 312 eP P 22 06 07.0 +0.1
KOLS pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.78 312 eP P 22 06 07.0 +0.1
comp=Z,5.1nm,0.8s,mb4.7
KOLS Kolonicke sedl 61.78 312 eP P 22 06 07.0 +0.1
ALN Alexandroupoli 61.79 302 P P 22 06 07.0 -0.2
TRPA Tarpa 61.85 311⇓ iP P 22 06 06.8 -0.7
UZH Uzhgorod 61.85 312⇓ iP P 22 06 06.8 -0.7
UZH i 22 06 14.6
UZH i 22 06 49.0
RDO Rodhopi 62.07 303 P P 22 06 09.0 -0.1
DRGR 62.16 310 P P 22 06 10.5 +0.9
ASAR Alice Springs 62.23 150 P P 22 06 09.7 -0.5
comp=Z,9.6nm,0.8s,mb5.0,baz=340,slow=6.7,SNR=30
ASAR Alice Springs 62.23 150 P P 22 06 09.7 -0.5
ASAR pmax pmax
comp=Z,10.0nm,0.8s
STHS Stebnicka Huta 62.27 313 eP P 22 06 10.5 +0.3
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.27 313 eP P 22 06 10.5 +0.3
comp=Z,5.9nm,0.9s,mb4.7
STHS Stebnicka Huta 62.27 313 eP P 22 06 10.5 +0.3
PLD Plovdiv 62.34 304 P P 22 06 10.9 +0.1
NIE Niedzica 62.85 313⇑ eP P 22 06 15.0 +0.9
OJC Ojcow 62.91 314 eP P 22 06 14.5 0.0
KECS Kecovo 63.04 312 eP P 22 06 15.9 +0.5
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
KECS Kecovo 63.04 312 eP P 22 06 15.9 +0.5
comp=Z,3.2nm,0.7s,mb4.6
KECS Kecovo 63.04 312 eP P 22 06 15.9 +0.5
VTS Vitosha 63.22 305 P P 22 06 17.4 +0.7
PSZ Piszkesteto 63.60 312 eP P 22 06 19.0 -0.1
PSZ pmax pmax
comp=Z,15nm,1.4s,mb4.8
PSZ Piszkesteto 63.60 312 eP P 22 06 19.0 -0.1
comp=Z,15nm,1.4s,mb4.8
PSZ Piszkesteto 63.60 312⇑ eP P 22 06 19.6 +0.5
SOH Sokhos 63.74 303 P P 22 06 19.2 -0.9
PAIG Paliouri 63.83 302 P P 22 06 20.1 -0.7
PLG Polygyros 63.83 303 P P 22 06 20.2 -0.6
NB2 NORSAR Subarra 63.95 327 P P 22 06 20.1 -1.1
comp=Z,35nm,1.1s,mb5.3,baz=72,slow=6.9
NOA NORSAR Array B 63.95 327 P P 22 06 20.4 -0.8
comp=Z,16nm,0.7s,mb5.2,baz=71,slow=6.7,SNR=65
NOA PP PP 22 08 43.5 +2.1
comp=Z,1.6nm,0.8s,baz=71,slow=8.0,SNR=4.1
NOA NORSAR Array B 63.95 327 P P 22 06 20.4 -0.8
NOA 22 08 43.5
NOA pmax pmax
comp=Z,16nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.8s
AOS Alonnisos 63.96 301 P P 22 06 20.4 -1.2
OKC Ostrava-Krasne 64.04 314 eP P 22 06 22.3 +0.3
OKC MLR MLR
comp=Z,100nm,13.6s,MS4.2
OKC Ostrava-Krasne 64.04 314 eP P 22 06 22.3 +0.3
OKC AMS AMS 22 35 20.0
comp=Z,100nm,13.6s
VYHS Vyhne 64.07 312 i P P 22 06 22.8 +0.6
VYHS pmax pmax
comp=Z,11nm,1.3s,mb4.7
VYHS Vyhne 64.07 312 i P P 22 06 22.8 +0.6
comp=Z,11nm,1.3s,mb4.7
VYHS Vyhne 64.07 312 i P P 22 06 22.8 +0.6
BSD Bornholm Skovb 64.11 320⇑ iP P 22 06 21.4 -0.9
BSD pmax pmax
comp=Z,12nm,0.8s,mb5.0
BSD Bornholm Skovb 64.11 320⇑ iP P 22 06 21.4 -0.9
comp=Z,12nm,0.8s,mb5.0
VAY Valandovo 64.11 304 i P P 22 06 21.1 -1.5
NAO01 NORSAR Array S 64.17 327 eP P 22 06 21.7 -1.0
comp=Z,4.1nm,0.4s,mb4.8
STIP Stip 64.24 304 i P P 22 06 22.5 -1.0
BUD Budapest 64.30 311⇑ ePeP P 22 06 24.7 +0.9
KOLL Kolacno 64.31 313 eP P 22 06 24.5 +0.7
KOLL Kolacno 64.31 313 eP P 22 06 24.5 +0.7
XOR Xorichti 64.38 302 P P 22 06 22.8 -1.6
MORC Moravsky Berou 64.43 314 eP P 22 06 24.6 +0.1
comp=Z,14nm,1.0s,mb4.9
MORC Moravsky Berou 64.43 314⇓ iP P 22 06 24.6 +0.1
SKO Skopje 64.66 305 eP P 22 06 25.9 -0.3
ATAL Atalanti 64.75 301 P P 22 06 26.0 -0.9
KSP Ksiaz 64.80 316 eP P 22 06 27.1 +0.1
DIVS Divibare 64.88 308 P P 22 06 27.3 -0.3
DPC Dobruska-Polom 64.96 315 eP P 22 06 28.5 +0.5
DPC MLR MLR
comp=Z,200nm,15.8s,MS4.4
DPC Dobruska-Polom 64.96 315 eP P 22 06 28.5 +0.5
DPC AMS AMS 22 35 50.0
comp=Z,200nm,15.8s
PKSM Moragy 65.00 310⇓ iP P 22 06 28.1 -0.2
KRUS Krusevo 65.02 304 eP P 22 06 26.4 -2.1
AGG Agios Georgios 65.13 302 P P 22 06 28.1 -1.2
FNA Florina 65.15 304 P P 22 06 27.5 -1.9
THL Klokotos Trika 65.15 302 P P 22 06 27.6 -1.8
KONO Kongsberg 65.20 326 eP P 22 06 28.8 -0.6
COP Copenhagen 65.23 321 i P P 22 06 29.8 +0.1
COP pmax pmax
comp=Z,15nm,0.7s,mb5.1
COP Copenhagen 65.23 321 i P P 22 06 29.8 +0.1
comp=Z,15nm,0.7s,mb5.1
ZST Bratislava 65.26 313 eP P 22 06 30.8 +0.8
ZST pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ZST Bratislava 65.26 313 eP P 22 06 30.8 +0.8
comp=Z,3.4nm,0.8s,mb4.4
ZST Bratislava 65.26 313 eP P 22 06 30.8 +0.8
OHR Ohrid 65.43 304 eP P 22 06 30.2 -1.0
CTAO Charters Tower 65.51 137 eP P 22 06 31.0 -0.9
GUR Goura 65.54 301 P P 22 06 29.1 -2.9
EFP Efpalio 65.66 301 P P 22 06 32.7 -0.1
TTA Tatalina 65.77 30 eP P 22 06 33.0 0.0
TTA pmax pmax
comp=Z,14nm,1.0s,mb5.0
TTA Tatalina 65.77 30 eP P 22 06 33.0 0.0
comp=Z,14nm,1.0s,mb5.0
TREC Trest 65.85 314 eP P 22 06 34.5 +0.7
TREC MLR MLR
comp=Z,200nm,18.8s,MS4.3
TREC Trest 65.85 314 eP P 22 06 34.5 +0.7
TREC AMS AMS 22 36 20.0
comp=Z,200nm,18.8s
NWAO Narrogin (SRO) 65.93 169 eP P 22 06 34.6 +0.3
PVCC Panska Ves 65.94 316 eP P 22 06 35.1 +0.8
PVCC MLR MLR
comp=Z,100nm,14.0s,MS4.2
PVCC Panska Ves 65.94 316 eP P 22 06 35.1 +0.8
PVCC AMS AMS 22 36 30.0
comp=Z,100nm,14.0s
TIR Tirane 65.99 305 P P 22 06 34.3 -0.5
CONA Conrad Observa 66.13 313⇑ iP P 22 06 36.1 +0.5
comp=Z,11nm,1.1s,mb4.8
PRU Pruhonice 66.16 315 eP P 22 06 36.7 +0.9
PRU MLR MLR
comp=Z,200nm,20.3s,MS4.3
PRU Pruhonice 66.16 315 eP P 22 06 36.7 +0.9
PRU AMS AMS 22 36 30.0
comp=Z,200nm,20.3s
COLD Coldfoot 66.17 24 eP P 22 06 35.5 -0.1
comp=Z,15nm,1.0s,mb5.0
BRG Berggiesshubel 66.18 316 eP P 22 06 36.0 +0.1
comp=Z,10.0nm,0.8s,mb4.9
BRG Berggiesshubel 66.18 316 i P P 22 06 36.0 +0.1
comp=Z,10nm,0.8s,mb4.9
BRG e 22 06 42.2
comp=Z,6.7nm,1.1s
BRG Berggiesshubel 66.18 316 i P P 22 06 36.0 +0.1
BRG e 22 06 42.2
BRG pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.4

IGT Igoumenitsa 66.36 303 P P 22 06 35.5 -1.8
CLL Collm 66.56 317 eP P 22 06 37.8 -0.5
comp=Z,12nm,1.2s,mb4.8
CLL Collm 66.56 317⇑ iP P 22 06 37.9 -0.4
CLL i 22 06 44.9
CLL pmax pmax
comp=Z,12nm,1.2s,mb4.8
CLL MLR MLR
comp=Z,100nm,18.1s,MS4.1
CLL Collm 66.56 317⇑ iP P 22 06 37.9 -0.4
comp=Z,12nm,1.2s,mb4.8
CLL i 22 06 44.9
CLL LR LR
comp=Z,100nm,18.1s,MS4.1
CLL Collm 66.56 317⇑ iP P 22 06 37.9 -0.4
comp=Z,12nm,1.2s,mb4.8
CLL i pP pP 22 06 44.9 +4.6
CLL LmH 22 32 00.0
comp=N,100nm,21.6s
CLL LmH 22 32 00.0
comp=E,100nm,20.4s
CLL Lm 22 36 00.0
comp=Z,100nm,18.1s
MUD Monsted U'grnd 66.63 323 i P P 22 06 38.3 -0.4
MUD pmax pmax
comp=Z,14nm,0.8s,mb5.0
MUD Monsted U'grnd 66.63 323 i P P 22 06 38.3 -0.4
comp=Z,14nm,0.8s,mb5.0
JMIC Jan Mayen 66.88 341 LR LR 22 38 08.4
comp=Z,64nm,18.3s,MS3.9,baz=35,slow=38
BSEG Bad Segeberg 67.03 320 eP P 22 06 41.8 +0.5
comp=Z,22nm,0.9s,mb5.2
BSEG Bad Segeberg 67.03 320 eP P 22 06 41.8 +0.5
BSEG pmax pmax
comp=Z,22nm,0.9s,mb5.2
KHC Kasperske Hory 67.07 315 eP P 22 06 41.2 -0.4
KHC pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KHC Kasperske Hory 67.07 315 eP P 22 06 41.1 -0.4
comp=Z,1.8nm,0.8s,mb4.2
KHC Kasperske Hory 67.07 315 eP P 22 06 41.9 +0.3
KHC AMS AMS 22 37 10.0
comp=Z,200nm,21.9s
PERS Pernice 67.10 312 i P P 22 06 41.8 0.0
GEC2 GERESS Array S 67.11 314 eP P 22 06 42.0 +0.2
comp=Z,14nm,1.2s,mb4.9
GEC2 GERESS Array S 67.11 314 eP P 22 06 42.0 +0.2
GEC2 pmax pmax
comp=Z,14nm,1.2s,mb4.9
GERES GERESS Array B 67.11 314 P P 22 06 42.0 +0.2
comp=Z,5.7nm,0.8s,mb4.6,baz=74,slow=5.7,SNR=44
GERES GERESS Array B 67.11 314 P P 22 06 42.0 +0.2
GERES pmax pmax
comp=Z,6.0nm,0.9s
SOKA Soboth 67.14 312⇑ iP P 22 06 42.1 0.0
comp=Z,19nm,1.4s,mb4.9
MOA Molln 67.15 313⇑ iP P 22 06 42.4 +0.3
comp=Z,9.4nm,1.0s,mb4.8,SNR=5.2
TANN Tannenbergstha 67.23 316 eP P 22 06 42.6 0.0
comp=Z,9.0nm,1.0s,mb4.8
ZAVS Zavodnje 67.24 311 i P P 22 06 42.4 -0.3
NKC Novy Kostel 67.31 316 eP P 22 06 43.6 +0.5
NKC MLR MLR
comp=Z,100nm,14.1s,MS4.2
NKC Novy Kostel 67.31 316 eP P 22 06 43.6 +0.5
NKC AMS AMS 22 37 20.0
comp=Z,100nm,14.1s
PPLA Purkeypile 67.37 29 eP P 22 06 43.1 -0.1
comp=Z,218nm,1.5s,mb6.0
BOJS Bojanci 67.46 310 i P P 22 06 44.5 +0.3
WET Wettzell 67.48 315 eP P 22 06 44.4 +0.2
comp=Z,7.0nm,1.0s,mb4.7
WET Wettzell 67.48 315 eP P 22 06 44.4 +0.2
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
MOX Moxa 67.63 317 eP P 22 06 45.0 -0.1
comp=Z,14nm,1.5s,mb4.8
MOX Moxa 67.63 317 eP P 22 06 44.8 -0.3
comp=Z,8.0nm,1.1s,mb4.7
MOX Moxa 67.63 317 eP P 22 06 45.0 -0.1
MOX pmax pmax
comp=Z,14nm,1.5s,mb4.8
ROTZ Rotzenmuhle 67.64 316 eP P 22 06 45.7 +0.5
comp=Z,19nm,1.1s,mb5.0
LJU Ljubljana 67.71 311 i P P 22 06 45.6 -0.1
NRDL Niedersach Rie 67.73 319 eP P 22 06 46.1 +0.4
comp=Z,16nm,0.9s,mb5.0
CLZ Clausthal 67.85 318 eP P 22 06 46.9 +0.4
comp=Z,19nm,0.8s,mb5.2
CLZ Clausthal 67.85 318 eP P 22 06 46.9 +0.4
CLZ pmax pmax
comp=Z,19nm,0.8s,mb5.2
KBA Koelnbreinsper 68.03 313⇑ iP P 22 06 47.8 +0.1
comp=Z,7.1nm,0.7s,mb4.8
COLA College 68.13 26 eP P 22 06 47.6 -0.4
COLA pmax pmax
comp=Z,19nm,1.0s,mb5.1
COLA College 68.13 26 eP P 22 06 47.6 -0.4
comp=Z,19nm,1.0s,mb5.1
RSO Redoubt South 68.23 31 P P 22 06 48.1 -0.6
GRA1 Grafenberg Arr 68.25 316 eP P 22 06 49.5 +0.5
comp=Z,28nm,1.1s,mb5.2
GRA1 epP pP 22 06 55.0 +4.0
GRF Grafenberg Arr 68.25 316 eP P 22 06 49.5 +0.5
comp=Z,28nm,1.1s,mb5.2
GRF epP pP 22 06 55.0 +4.0
GRF Grafenberg Arr 68.25 316 eP P 22 06 49.5 +0.5
GRF e*PP pP 22 06 55.0 +4.0
GRF pmax pmax
comp=Z,28nm,1.1s,mb5.2
GRF Grafenberg Arr 68.25 316 eP P 22 06 49.5 +0.5
GRF e*PP pP 22 06 55.0 +4.0
GRF pmax pmax
comp=Z,28nm,1.1s,mb5.2
ROBS Robic 68.27 312 eP P 22 06 48.3 -1.0
MCK McKinley 68.27 27 eP P 22 06 47.1 -1.8
UBBA Unterbreizbach 68.49 317 eP P 22 06 50.6 +0.1
comp=Z,10.0nm,1.4s,mb4.7
ABTA Abfaltersbach 68.69 312⇑ iP P 22 06 51.0 -0.8
comp=Z,5.3nm,0.7s,mb4.6
FUR Furstenfeldbru 68.86 314 eP P 22 06 53.6 +0.8
comp=Z,44nm,0.9s,mb5.4
FUR Furstenfeldbru 68.86 314 eP P 22 06 53.6 +0.8
FUR pmax pmax
comp=Z,44nm,0.9s,mb5.4
WTTA Wattenberg 69.02 313⇑ iP P 22 06 53.8 -0.1
comp=Z,19nm,1.0s,mb5.0
TIP Timpagrande 69.04 304 eP P 22 06 53.7 -0.4
comp=Z,9.5nm,0.6s,mb4.9
FG5 Orsara di Pugl 69.19 306 P P 22 06 55.6 +0.6
PMR Palmer 69.25 29 eP P 22 06 54.6 -0.4
PMR pmax pmax
comp=Z,13nm,0.6s,mb5.0
PMR Palmer 69.25 29 eP P 22 06 54.6 -0.4
comp=Z,13nm,0.6s,mb5.0
MOTA Moosalm 69.31 313⇑ iP P 22 06 55.5 -0.2
comp=Z,26nm,1.4s,mb5.0,SNR=8.9
RETA Reutte 69.46 314⇓ iP P 22 06 56.3 -0.3
comp=Z,5.6nm,1.0s,mb4.5
KDAK Kodiak Island 69.55 34 i P P 22 06 56.7 -0.3
TNS Taunus Mts 69.64 317 eP P 22 06 57.7 0.0
TNS pmax pmax
comp=Z,16nm,1.1s,mb4.9
TNS Taunus Mts 69.64 317 eP P 22 06 57.7 0.0
comp=Z,16nm,1.1s,mb4.9
FETA Feichten 69.68 313⇑ iP P 22 06 57.7 -0.3
comp=Z,17nm,1.0s,mb4.9,SNR=10.0
BUG Bochum--Univer 69.77 319 eP P 22 06 58.6 +0.1
comp=Z,12nm,1.1s,mb4.7
STU Stuttgart 69.84 315 eP P 22 06 59.1 +0.1
comp=Z,16nm,0.9s,mb5.0
SNTG Esanatoglia 69.90 309 P P 22 06 59.8 +0.4
NRCA Norcia 69.97 308 P P 22 07 00.4 +0.6
AQU L'Aquila 69.99 308 eP P 22 07 00.1 +0.1
AQU pmax pmax
comp=Z,23nm,1.0s,mb5.1
AQU L'Aquila 69.99 308 eP P 22 07 00.1 +0.2
comp=Z,23nm,1.0s,mb5.0
SDI San Donato 69.99 307 P P 22 06 59.8 -0.2
SOI Samo 70.01 303 P P 22 06 59.9 -0.3
CEL Celeste 70.04 303 eP P 22 07 00.2 -0.2
comp=Z,27nm,0.8s,mb5.2
PIEI Pieia 70.05 309 P P 22 07 00.5 +0.2
DAVA Damuels 70.09 314⇑ iP P 22 07 00.1 -0.4
comp=Z,7.8nm,1.0s,mb4.6
PTQR Pietraquaria 70.13 308 P P 22 07 01.3 +0.4

MTTG Motta San Giov 70.30 303 P P 22 07 01.9 0.0
BFO Black Forest 70.56 315 eP P 22 07 03.0 -0.3
comp=Z,8.0nm,1.0s,mb4.6
BFO Black Forest 70.56 315 eP P 22 07 03.0 -0.3
BFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
INK Inuvik 70.86 20 P P 22 07 04.8 0.0
comp=Z,16nm,0.9s,mb5.0,baz=326,slow=7.3,SNR=17
INK Inuvik 70.86 20 P P 22 07 04.8 0.0
INK pmax pmax
comp=Z,16nm,0.9s
INK Inuvik 70.86 20 eP P 22 07 04.3 -0.5
comp=Z,15nm,0.8s,mb5.0
MEM Membach 70.86 318 P P 22 07 05.4 +0.3
FELD Feldberg im Sc 70.96 315 eP P 22 07 05.3 -0.5
CDF Champ du Feu 71.14 316⇑ iP P 22 07 06.7 -0.2
comp=Z,22nm,0.9s,mb4.8
CDF Champ du Feu 71.14 316⇑ iP P 22 07 06.7 -0.2
CDF pmax pmax
comp=Z,11nm,0.9s,mb4.8
CDF Champ du Feu 71.14 316⇑ iP P 22 07 06.7 -0.2
comp=Z,11nm,0.9s,mb4.8
VLC Villacollemand 71.16 311 P P 22 07 06.4 -0.7
WLF Walferdange 71.22 317 P P 22 07 08.0 +0.7
WLF Walferdange 71.22 317 eP P 22 07 07.6 +0.3
comp=Z,33nm,1.0s,mb5.2
WLF Walferdange 71.22 317 eP P 22 07 07.0 -0.3
WLF pmax pmax
comp=Z,32nm,1.0s,mb5.2
WLF Walferdange 71.22 317 eP P 22 07 07.0 -0.3
comp=Z,32nm,1.0s,mb5.2
ECH Echery 71.31 316 eP P 22 07 07.2 -0.7
ECH Echery 71.31 316 eP P 22 07 08.1 +0.2
ECH pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
ECH Echery 71.31 316 eP P 22 07 08.1 +0.2
comp=Z,7.3nm,1.0s,mb4.6
BCLA Clavier 71.35 318 P P 22 07 08.3 +0.2
comp=Z,9.4nm,1.4s,mb4.5
BMRM Bremner River 71.44 29 eP P 22 07 08.4 0.0
comp=Z,24nm,0.9s,mb5.1
MOF Molkenrain 71.49 315 eP P 22 07 08.5 -0.5
KMBO Kilima Mbogo 71.71 257 P P 22 07 11.8 +1.0
comp=Z,4.2nm,0.9s,mb4.4,baz=55,slow=10,SNR=8.0
KMBO Kilima Mbogo 71.71 257 P P 22 07 11.8 +1.0
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 71.71 257 eP P 22 07 11.8 +1.0
comp=Z,9.1nm,0.9s,mb4.7
SNF Seneffe 71.88 319 P P 22 07 11.6 +0.3
DOU Dourbes 71.90 318 P P 22 07 11.7 +0.2
THEF They Montfort 71.99 316 eP P 22 07 11.5 -0.5
SUMG Summit 72.38 349 eP P 22 07 14.0 0.0
comp=Z,11nm,0.9s,mb4.8
RES Resolute Bay 72.51 5 eP P 22 07 14.7 0.0
RES pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
RES Resolute Bay 72.51 5 eP P 22 07 14.7 0.0
comp=Z,4.6nm,0.8s,mb4.5
STKA Stephens Creek 72.71 148 eP P 22 07 15.4 -1.0
comp=Z,7.8nm,0.8s,mb4.7
STKA Stephens Creek 72.71 148 P P 22 07 15.3 -1.0
comp=Z,8.7nm,0.7s,mb4.8,baz=319,slow=6.1,SNR=12
LPG La Plagne 72.83 313⇑ iP P 22 07 17.8 +0.7
comp=Z,56nm,0.7s,mb5.3
LPG La Plagne 72.83 313⇑ iP P 22 07 17.8 +0.7
LPG pmax pmax
comp=Z,28nm,0.7s,mb5.3
LPG La Plagne 72.83 313⇑ iP P 22 07 17.8 +0.7
comp=Z,28nm,0.7s,mb5.3
IMI Imperia 72.87 311 P P 22 07 17.2 -0.2
SAOF Saorge 73.05 312 eP P 22 07 18.3 -0.1
BNI Bardonecchia 73.09 313 eP P 22 07 18.8 +0.2
BNI pmax pmax
comp=Z,17nm,1.0s,mb4.9
BNI Bardonecchia 73.09 313 eP P 22 07 18.8 +0.2
comp=Z,17nm,1.0s,mb4.9
LUCF Luceram 73.23 312 eP P 22 07 19.5 0.0
TOUF Mont Tournerai 73.23 312 eP P 22 07 19.6 +0.1
ESK Eskdalemuir 73.32 325 eP P 22 07 19.4 -0.4
MVIF Mont Vial 73.35 312 eP P 22 07 20.1 -0.1
SMF Signal de Mont 74.03 315⇑ iP P 22 07 23.8 -0.4
comp=Z,45nm,1.0s,mb5.0
SMF Signal de Mont 74.03 315⇑ iP P 22 07 23.8 -0.4
SMF pmax pmax
comp=Z,23nm,1.0s,mb5.1
SMF Signal de Mont 74.03 315⇑ iP P 22 07 23.8 -0.4
comp=Z,23nm,1.0s,mb5.1
PLDF La Plantade 74.51 315 eP P 22 07 26.7 -0.2
AGO Saint Agoulin 74.76 315 eP P 22 07 28.5 +0.1
PYM Petit Puy Mans 74.99 315 eP P 22 07 29.5 -0.2
LBL Lubilhac 75.11 314 eP P 22 07 30.4 0.0
TCF Toulx Ste Croi 75.19 316⇑ iP P 22 07 30.8 0.0
comp=Z,39nm,1.2s,mb4.9
TCF Toulx Ste Croi 75.19 316⇑ iP P 22 07 30.8 0.0
TCF pmax pmax
comp=Z,19nm,1.2s,mb4.9
TCF Toulx Ste Croi 75.19 316⇑ iP P 22 07 30.8 0.0
comp=Z,19nm,1.2s,mb4.9
KEST Kesra 75.86 303 P P 22 07 34.9 0.0
comp=Z,2.6nm,0.9s,mb4.1,baz=353,slow=6.1,SNR=8.2
CAF Calviac 75.98 314⇑ iP P 22 07 35.8 +0.4
comp=Z,16nm,0.8s,mb4.7
CAF Calviac 75.98 314⇑ iP P 22 07 35.8 +0.4
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CAF Calviac 75.98 314⇑ iP P 22 07 35.8 +0.4
comp=Z,8.1nm,0.8s,mb4.7
VALF Valcebollere 77.35 312 eP P 22 07 43.7 +0.5
RESF Ens 78.17 313 eP P 22 07 48.4 +0.6
EBIE Bielsa 78.36 313 P P 22 07 49.0 +0.2
comp=Z,3.0nm,0.6s,mb4.4
EPOB Poblet 78.50 312 P P 22 07 49.8 +0.1
comp=Z,6.2nm,0.8s,mb4.6
DLBC Dease Lake 78.75 26 P P 22 07 50.1 -0.5
comp=Z,4.0nm,0.7s,mb4.4,baz=320,slow=11,SNR=3.4
ERTA Horta de San J 79.19 312 P P 22 07 53.5 0.0
comp=Z,7.7nm,0.7s,mb4.7
SFJD Kangerlussuaq 79.26 350 eP P 22 07 52.3 -1.0
SFJD pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SFJD Kangerlussuaq 79.26 350 i P P 22 07 52.3 -1.0
comp=Z,7.3nm,0.9s,mb4.6
EMOS Mosqueruela 80.03 312 P P 22 07 57.9 -0.1
ELAN Lanestosa 80.22 315 P P 22 07 59.9 +0.9
comp=Z,16nm,0.9s,mb4.9
YKA Yellowknife Ar 80.40 17 P P 22 07 59.5 -0.1
comp=Z,7.3nm,0.7s,mb4.7,baz=329,slow=5.1,SNR=63
YKA Yellowknife Ar 80.40 17 P P 22 07 59.5 -0.1
YKA pmax pmax
comp=Z,7.0nm,0.7s
YKA Yellowknife Ar 80.40 17 P P 22 07 59.5 -0.1
ETOR Torete 80.77 313 P P 22 08 02.1 +0.1
ETOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ETOR Torete 80.77 313 P P 22 08 02.1 +0.2
comp=Z,4.3nm,0.6s,mb4.6
ECHE Chera 80.78 311 P P 22 08 01.5 -0.5
EBEN Beniarda 80.79 310 P P 22 08 01.9 -0.3
ETOB Tobarra 81.68 311 P P 22 08 07.4 +0.5
comp=Z,6.3nm,0.6s,mb4.7
GUD Guadarrama 82.17 313 P P 22 08 09.9 +0.5
EVIA Vianos 82.30 311 P P 22 08 10.4 +0.3
ESDC Sonseca Array 82.62 313 P P 22 08 11.5 -0.3
comp=Z,2.2nm,0.6s,mb4.3,baz=41,slow=5.4,SNR=14
ESDC Sonseca Array 82.62 313 P P 22 08 12.1 +0.4
comp=Z,2.9nm,0.8s,mb4.4
ESLA Sonseca Array 82.62 313 eP P 22 08 11.8 0.0
EHUE Huescar 82.83 310 P P 22 08 13.4 +0.5
EQES Quesada 83.15 311 P P 22 08 14.5 0.0
comp=Z,4.5nm,0.9s,mb4.5
ELUQ Luque 84.06 311 P P 22 08 18.9 -0.3
ERON Agron 84.08 310 P P 22 08 18.0 -1.4
FRB Frobisher Bay 84.14 357 P P 22 08 17.6 -1.5
comp=Z,2.7nm,0.7s,mb4.5,baz=8.8,slow=10,SNR=4.3
FRB Frobisher Bay 84.14 357 P P 22 08 17.7 -1.4
FRB pmax pmax
comp=Z,3.0nm,0.7s
EBAD Badajoz 85.06 313 P P 22 08 24.6 +0.3
comp=Z,3.7nm,0.7s,mb4.6
EMIN Mina Concepcio 85.45 312 P P 22 08 26.3 0.0
comp=Z,5.1nm,0.8s,mb4.7
LSZ Lusaka 87.08 250 eP P 22 08 34.6 +0.1
LSZ pmax pmax
comp=Z,14nm,1.1s,mb5.1
LSZ Lusaka 87.08 250 eP P 22 08 34.6 +0.1

comp=Z,14nm,1.1s,mb5.1
FCC Fort Churchill 87.94 10 *e*P **P 22 08 37.2 -0.8**
FCC pmax pmax
comp=Z,1.0nm,1.2s,mb3.9
FCC Fort Churchill 87.94 10 *e*P **P 22 08 37.2 -0.8**
comp=Z,0.9nm,1.2s,mb3.9
FFC Flin Flon 90.33 15 *i*P **P 22 08 49.3 0.0**
FFC Flin Flon 90.33 15 *e*P **P 22 08 49.0 -0.3**
comp=Z,14nm,0.9s,mb5.3
ETW Entiat 90.77 29 *e*P **P 22 08 51.9 +0.4**
comp=Z,4.9nm,0.7s,mb5.0
NEW Newport 91.49 26 *e*P **P 22 08 55.0 +0.2**
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW Newport 91.49 26 *e*P **P 22 08 55.0 +0.1**
comp=Z,8.3nm,1.0s,mb5.0
BSMT Bassoo Peak 92.70 25 *e*P **P 22 09 01.1 +0.6**
comp=Z,6.2nm,0.9s,mb5.0
SCHQ Schefferville 92.93 355 P **P 22 09 00.7 -0.6**
comp=Z,2.2nm,0.6s,mb4.8,baz=59,slow=6.1,SNR=5.0
SCHQ Schefferville 92.93 355 *e*P **P 22 09 00.8 -0.6**
SLMT Seeley Lake 93.68 25 *e*P **P 22 09 04.5 -0.4**
comp=Z,7.5nm,0.9s,mb5.1
TOA0 Torodi Ar. Sit 93.79 288 *e*P **P 22 09 04.4 -1.6**
TORD Torodi Ar. Bea 93.79 288 P **P 22 09 05.4 -0.6**
comp=Z,1.7nm,0.9s,mb4.5,baz=41,slow=3.8,SNR=12
LBTB Lobatse 94.52 243 *e*P **P 22 09 07.9 -1.2**
LBTB pmax pmax
comp=Z,3.0nm,0.5s,mb5.0
LBTB Lobatse 94.52 243 *e*P **P 22 09 07.9 -1.2**
comp=Z,3.4nm,0.5s,mb5.0
HRY Holter Researc 94.72 24 *e*P **P 22 09 09.6 -0.2**
comp=Z,4.2nm,0.8s,mb4.9
BOZ Bozeman (W) 95.71 25 *e*P **P 22 09 14.7 +0.4**
BOZ pmax pmax
comp=Z,1.0nm,0.8s,mb4.3
BOZ Bozeman (W) 95.71 25 *e*P **P 22 09 14.7 +0.4**
comp=Z,1.2nm,0.8s,mb4.4
MCMT McKenzie Canyo 95.97 26 *e*P **P 22 09 15.9 +0.4**
comp=Z,0.6nm,0.6s,mb4.2
HLID Hailey 96.45 28 *e*P **P 22 09 17.7 0.0**
comp=Z,2.6nm,1.0s,mb4.6
BOSA Boshof 96.74 241 P **P 22 09 17.4 -1.8**
comp=Z,3.4nm,0.7s,mb4.9,baz=23,slow=5.1,SNR=6.0
BOSA Boshof 96.74 241 P **P 22 09 17.4 -1.7**
BOSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
RSSD Black Hills 99.55 21 *e*P **P 22 09 32.9 +1.3**
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
RSSD Black Hills 99.55 21 *e*P **P 22 09 32.9 +1.3**
comp=Z,2.0nm,0.6s,mb4.7
SSPA Standing Stone 107.40 2 *e*PKiKP PKiKP 22 14 15.4 +0.3
QSPA South Pole Qui 122.06 180 PKP PKPdf 22 14 41.0 -0.8
comp=Z,4.5nm,0.8s,baz=304,slow=1.4,SNR=10
QSPA PP PP 22 16 14.4 -2.5
comp=Z,0.3nm,0.3s,baz=269,slow=4.3,SNR=3.2
SDV Santo Domingo 138.82 353 *e*PKPdf PKPdf 22 15 14.6 -0.9
OTAV Otavalo 147.51 6 *e*PKPdf PKPdf 22 15 32.1 +1.3
LPAZ La Paz 162.80 336 PKP PKPdf 22 15 51.5 +0.3
comp=Z,4.3nm,0.9s,baz=6.5,slow=2.8,SNR=16
LPAZ La Paz 162.80 336 PKIKP PKPdf 22 15 51.5 +0.3
LPAZ pmax pmax
comp=Z,4.0nm,0.9s
LPAZ La Paz 162.80 336 *e*PKPdf PKPdf 22 15 51.6 +0.4

ISCJB ***15*** *22:02:31.8±0.3, 32°.25N±0°.04×105°.06E±0°.04, h10km, mb4.2/39, Error ellipse: s-maj=5.6km s-min=4.3km az=33.8*
IDC ***15*** *22:02:32.1±0.6, 32°.22N×105°.05E, h0km, mb4.2/20, mb1 4.3/21, mb1mx4.2/27, mbtmp4.2/21, ML3.9/1, Error ellipse: s-maj=20.0km s-min=13.0km az=44.0*
NEIC ***15*** *22:02:33.8±0.3, 32°.27N×105°.03E, h10km, mb4.3/10, Error ellipse: s-maj=9.3km s-min=5.6km az=212.0*
BJI ***15*** *22:02:33.0, 32°.18N×105°.10E, h10km, mB4.7/4, mb4.4/6, ML4.1/15, Ms4.2/7, Ms7 3.8/8*
MOS ***15*** *22:02:35.0±0.9, 32°.19N×105°.04E, h33km, mb4.5/26, Error ellipse: s-maj=13.2km s-min=8.0km az=119.9*
ISC 15 22:02:33.8±0.2, 32°.29N±0°.03×105°.08E±0°.04, h10km, n91, σ1§10/102, mb4.2/39, 7C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.66**	**60**	Pg	**Pg**	**22 03 42.1**	**-1.9**
XAN				Sg	**Sg**	**22 04 31.0**	**-0.5**
XAN				smax			
	comp=N,580nm,0.8s						
XAN				smax			
	comp=E,170nm,0.8s						
LZH	**Lanzhou**	**3.93**	**345**	*e*Pn	**Pn**	**22 03 40.0**	**+5.9**
LZH				Pg	**Pg**	**22 03 48.0**	**-1.0**
LZH				Sn	**Sn**	**22 04 27.3**	**+7.0**
LZH				Sg	**Sg**	**22 04 38.5**	**-1.4**
LZH				smax			
	comp=N,640nm,0.5s						
LZH				smax			
	comp=E,750nm,0.5s						
LZH				LR	LR		
	comp=N,2μm,6.1s						
LZH				LR	LR		
	comp=Z,2μm,6.8s						
ENH	**Enshi**	**4.27**	**117**	*e*Pn	**Pn**	**22 03 42.3**	**+3.4**
ENH				*e*Pg	**Pg**	**22 03 53.3**	**-2.4**
ENH				*e*Sn	**Sn**	**22 04 30.9**	**+2.2**
GYA	**Guiyang**	**5.97**	**166**	Pn	**Pn**	**22 04 05.0**	**+2.8**
GYA				Sn	**Sn**	**22 05 10.8**	**+0.1**
GYA				smax			
	comp=N,410nm,0.9s						
GYA				smax			
	comp=E,400nm,0.6s						
GYA				LR	LR		
	comp=N,990nm,4.3s						
GYA				LR	LR		
	comp=E,740nm,4.0s						
GYA				LR	LR		
	comp=Z,490nm,5.0s						
KMI	**Kunming**	**7.43**	**197**	Pn	**Pn**	**22 04 21.3**	**-1.0**
KMI				Sn	**Sn**	**22 05 44.5**	**-2.1**
KMI				smax			
	comp=N,46nm,0.8s						
KMI				smax			
	comp=E,52nm,0.8s						
KMI				LR	LR		
	comp=N,490nm,8.1s						
KMI				LR	LR		
	comp=E,390nm,8.9s						
KMI				LR	LR		
	comp=Z,300nm,7.0s						
WHN	**Wuhan**	**8.11**	**100**	P	**Pn**	**22 04 34.0**	**+2.4**
WHN				S	**Sn**	**22 06 00.1**	**-3.2**
WHN				LR	LR		
	comp=N,2μm,6.5s						
WHN				LR	LR		
	comp=E,460nm,7.1s						
WHN				LR	LR		
	comp=Z,1μm,6.1s						
NJ2	**Nanjing**	**11.67**	**87**	*e*P	**Pn**	**22 05 22.8**	**+2.4**
NJ2				pP		22 05 26.0	
NJ2				sP		22 05 29.1	
NJ2				PP		22 05 31.3	
NJ2				S	**Sn**	**22 07 35.0**	**+4.2**
NJ2				sS		22 07 43.0	
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,80nm,3.5s						
NJ2				LR	LR		
	comp=N,180nm,12.5s						
NJ2				LR	LR		
	comp=E,500nm,16.1s						
NJ2				LR	LR		
	comp=Z,420nm,15.3s						
BJT	**Baijiatuau**	**11.82**	**46**	P	**Pn**	**22 05 22.0**	**-0.3**
CM31	**Chiang Mai Arr**	**14.84**	**203**	*e*Pn	**Pn**	**22 06 08.8**	**+5.0**
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**15.56**	**3**	Pn	**Pn**	**22 06 16.2**	**+3.1**
	comp=Z,0.2nm,0.3s,baz=131,slow=17,SNR=2.0						
KSRS	**Korea Array**	**19.42**	**68**	P	**Pn**	**22 07 01.9**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=254,slow=10,SNR=15						
MK31	**Makanchi Array**	**22.67**	**316**	*e*P	**P**	**22 07 34.7**	**-0.4**
MK31				*e*		22 11 27.2	
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**22 07 35.9**	**+0.8**
	comp=Z,4.2nm,0.8s,mb3.9,baz=118,slow=12,SNR=14						
MKAR	**Makanchi Array**	**22.67**	**316**	*c*e*P	**P**	**22 07 35.9**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**22 07 35.9**	**+0.8**
KSH	**Kashi**	**24.59**	**295**	P	**P**	**22 07 57.8**	**+3.8**
KSH				pmax	pmax		
	comp=Z,160nm,4.8s						
TKM2	**Tokmak 2**	**25.54**	**303**	*e*P	**P**	**22 08 03.1**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**25.54**	**303**	*e*P	**P**	**22 08 03.1**	**+0.5**
	comp=Z,4.6nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**22 08 07.5**	**+0.5**
	comp=Z,1.8nm,0.5s,mb3.9,baz=133,slow=8.9,SNR=7.6						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**22 08 07.6**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
KLR	**Kul'dur**	**26.15**	**42**	*e*P	**P**	**22 08 05.2**	**-2.9**
UCH	**Uchtor**	**26.16**	**301**	*e*P	**P**	**22 08 10.0**	**+1.8**
	comp=Z,8.7nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**26.26**	**302**	P	**P**	**22 08 08.6**	**-0.5**
AML	**Almayashu**	**26.73**	**301**	*e*P	**P**	**22 08 13.6**	**+0.2**
	comp=Z,1.8nm,0.4s,mb4.0						
EKS2	**Erkin-Say**	**26.78**	**302**	*e*P	**P**	**22 08 13.6**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.5						
KURK	**Kurchatov**	**26.82**	**321**	P	**P**	**22 08 14.4**	**+0.2**
	comp=Z,3.8nm,0.8s,mb4.0,baz=130,slow=8.3,SNR=11						
KURK				PcP	PcP	22 11 36.5	-0.1
	comp=Z,1.5nm,0.5s,baz=118,slow=2.2,SNR=6.3						
KURK	**Kurchatov**	**26.82**	**321**	*c*e*P	**P**	**22 08 15.8**	**+1.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
KURK	**Kurchatov**	**26.82**	**321**	*e*P	**P**	**22 08 13.2**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.2						
KURK				PcP	PcP	22 11 36.5	-0.1
MAT	**Matsushiro**	**27.57**	**72**	P	**P**	**22 08 19.9**	**-1.1**
MJAR	**Matsushiro Arr**	**27.58**	**72**	P	**P**	**22 08 21.1**	**0.0**
	comp=Z,1.5nm,0.5s,mb3.9,baz=275,slow=10,SNR=7.7						
MJAR	**Matsushiro Arr**	**27.58**	**72**	P	**P**	**22 08 21.1**	**0.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBL	**Kabul**	**30.07**	**284**	*e*P	**P**	**22 08 44.1**	**+0.8**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KBL	**Kabul**	**30.07**	**284**	*e*P	**P**	**22 08 44.1**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**22 09 04.1**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.0,baz=112,slow=8.1,SNR=7.3						
BVAR				PcP	PcP	22 11 50.4	-0.4
	comp=Z,1.3nm,0.5s,baz=180,slow=1.5,SNR=7.5						
BVAR	**Borovoye Array**	**32.40**	**320**	P	**P**	**22 09 04.1**	**+0.5**
BVAR						22 11 50.4	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**32.47**	**320**	*c*e*P	**P**	**22 09 05.4**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
BRVK	**Borovoye**	**32.47**	**320**	*e*P	**P**	**22 09 04.3**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.3						
ABKAR	**Akbulak array**	**37.53**	**310**	*e*P	**P**	**22 09 47.7**	**-0.2**
SVE	**Sverdlovsk**	**39.06**	**322**	*e*P	**P**	**22 10 01.9**	**+1.3**
SVE				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
KAPI	**Kappang**	**39.63**	**157**	P	**P**	**22 10 04.6**	**-1.3**
	comp=Z,3.5nm,0.3s,mb4.5,baz=169,slow=15,SNR=3.0						
ARU	**Arti**	**40.02**	**321**	*d*i*P	**P**	**22 10 10.2**	**+1.5**
ARU				S	**S**	**22 16 15.7**	**+1.6**
ARU				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
TIXI	**Tiksi**	**41.43**	**11**	*e*P	**P**	**22 10 19.3**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
SEY	**Seymchan**	**42.65**	**30**	*e*P	**P**	**22 10 30.6**	**+0.4**
PETK	**Petropavlovsk-**	**42.76**	**45**	P	**P**	**22 10 31.9**	**+0.7**
	comp=Z,4.3nm,0.7s,mb4.3,baz=304,slow=3.1,SNR=11						
PETK	**Petropavlovsk-**	**42.76**	**45**	P	**P**	**22 10 32.0**	**+0.8**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
GNI	**Garni**	**48.50**	**297**	P	**P**	**22 11 16.4**	**-0.4**
ZEI	**Tsey**	**48.68**	**301**	*e*P	**P**	**22 11 17.2**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
KIV	**Kislovodsk**	**49.37**	**303**	*e*P	**P**	**22 11 24.3**	**+0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
KIV	**Kislovodsk**	**49.37**	**303**	*e*P	**P**	**22 11 23.1**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.7						
BILL	**Bilibino**	**49.75**	**26**↑	*e*P	**P**	**22 11 26.9**	**+0.9**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.3						
MALT	**Malatya**	**53.69**	**296**	*e*P	**P**	**22 11 55.2**	**-0.6**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MALT	**Malatya**	**53.69**	**296**	*e*P	**P**	**22 11 55.2**	**-0.6**
	comp=Z,2.5nm,0.9s,mb4.1						
FITZ	**Fitzroy Crossi**	**53.83**	**156**	*e*P	**P**	**22 11 56.1**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.2						
JOF	**Joensuu**	**54.48**	**327**	*e*P	**P**	**22 11 59.7**	**-1.5**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
JOF	**Joensuu**	**54.48**	**327**	*e*p	**P**	**22 11 59.7**	**-1.5**
	comp=Z,2.6nm,0.7s,mb4.3						
KEV	**Kevo**	**56.00**	**336**	*e*P	**P**	**22 12 11.3**	**-0.7**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KEV	**Kevo**	**56.00**	**336**	*e*p	**P**	**22 12 11.3**	**-0.7**
	comp=Z,3.4nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**56.53**	**336**	P	**P**	**22 12 16.0**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.3,baz=81,slow=7.5,SNR=5.1						
ARCES	**ARCESS Array B**	**56.53**	**336**	P	**P**	**22 12 16.0**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAF	**Kangasniemi**	**56.86**	**327**	*e*P	**P**	**22 12 14.0**	**-4.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KAF	**Kangasniemi**	**56.86**	**327**	*e*p	**P**	**22 12 14.0**	**-4.3**
	comp=Z,2.2nm,0.7s,mb4.3						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**22 12 18.6**	**-0.3**
	comp=Z,1.1nm,0.8s,mb4.0,baz=88,slow=7.0,SNR=8.2						
BRTR	**Keskin Array B**	**56.89**	**299**	*c*e*P	**P**	**22 12 18.6**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**22 12 19.6**	**-0.1**
	comp=Z,3.3nm,0.7s,mb4.5,baz=87,slow=8.2,SNR=12						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**22 12 19.6**	**-0.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**57.19**	**313**	P	**P**	**22 12 19.9**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=6.1,SNR=4.2						
AKASG	**Malin Array Be**	**57.19**	**313**	*c*e*P	**P**	**22 12 21.0**	**+0.2**
CSS	**Prodhromos**	**58.60**	**294**	*e*P	**P**	**22 12 30.0**	**-1.0**
WRAB	**Tennant Creek**	**59.00**	**148**	*e*P	**P**	**22 12 33.3**	**-0.5**
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**22 12 54.8**	**0.0**
	comp=Z,2.6nm,0.6s,mb4.6,baz=333,slow=6.7,SNR=27						
ASAR	**Alice Springs**	**62.08**	**150**	P	**P**	**22 12 54.8**	**0.0**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.11**	**327**	P	**P**	**22 13 06.8**	**-1.1**
	comp=Z,2.9nm,0.8s,mb4.4,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**22 13 07.1**	**-0.8**
	comp=Z,1.6nm,0.8s,mb4.1,baz=71,slow=6.7,SNR=6.7						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**22 13 07.1**	**-0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**22 13 07.1**	**-0.8**
PPLA	**Purkeypile**	**67.23**	**29**	*e*P	**P**	**22 13 28.5**	**+0.6**
GERES	**GERESS Array B**	**67.32**	**314**	P	**P**	**22 13 29.4**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=27,slow=6.6,SNR=3.4						
KDAK	**Kodiak Island**	**69.39**	**34**	*c*e*P	**P**	**22 13 42.0**	**+0.4**
INK	**Inuvik**	**70.77**	**20**	P	**P**	**22 13 49.6**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.5,baz=310,slow=5.4,SNR=8.3						
INK	**Inuvik**	**70.77**	**20**	P	**P**	**22 13 49.6**	**-0.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CDF	**Champ du Feu**	**71.35**	**316**	*e*P	**P**	**22 13 53.1**	**-0.6**
KMBO	**Kilima Mbogo**	**71.99**	**257**	P	**P**	**22 13 59.0**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.0,baz=32,slow=19,SNR=3.6						
KMBO	**Kilima Mbogo**	**71.99**	**257**	P	**P**	**22 13 59.0**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**72.55**	**148**	P	**P**	**22 14 00.6**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.3,baz=335,slow=8.1,SNR=8.3						
LPG	**La Plagne**	**73.05**	**313**	*e*P	**P**	**22 14 04.2**	**+0.3**
	comp=Z,7.7nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.05**	**313**	*e*P	**P**	**22 14 04.2**	**+0.2**
	comp=Z,4.8nm,0.6s,mb4.3						
YKA	**Yellowknife Ar**	**80.32**	**18**	P	**P**	**22 14 44.8**	**+0.1**
	comp=Z,2.1nm,0.5s,mb4.3,baz=328,slow=5.2,SNR=20						
YKA	**Yellowknife Ar**	**80.32**	**18**	P	**P**	**22 14 44.8**	**+0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**80.32**	**18**	P	**P**	**22 14 44.8**	**+0.1**
ESDC	**Sonseca Array**	**82.84**	**313**	P	**P**	**22 14 59.5**	**+1.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=21,slow=7.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	**94.07**	**288**	P	**P**	**22 15 52.3**	**-0.6**
	comp=Z,0.5nm,0.9s,mb3.9,baz=41,slow=4.8,SNR=3.4						

BJI ***15*** *22:07:20.3, 31°.94N×104°.75E, h8km, ML3.7/7, Ms7 3.4/1*
IDC ***15*** *22:07:22.8±3.5, 32°.16N×104°.69E, h0km, mb3.6/10, mb1 3.7/11, mb1mx3.6/26, mbtmp3.6/11, ML3.6/1, MS4.6/1, Ms1 4.6/1, ms1mx2.9/35, Error ellipse: s-maj=87.9km s-min=28.2km az=7.0*
NEIC ***15*** *22:07:24.1±0.6, 32°.16N×104°.71E, h10km, mb3.7/2, Error ellipse: s-maj=16.2km s-min=9.4km az=212.0*
ISC 15 22:07:23.9±0.6, 32°.12N±0°.07×104°.70E±0°.05, h10km, n24, σ0§95/26, mb3.7/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.45**	**214**	Pg	**Pn**	**22 07 42.0**	**-8.2**
CD2				smax			
	comp=N,2μm,0.5s						
LZH	**Lanzhou**	**4.02**	**350**	*e*Pg	**Pb**	**22 08 37.5**	**+2.7**
LZH				Sg	**Sb**	**22 09 28.1**	**+4.6**
LZH				smax			
	comp=N,390nm,1.3s						
LZH				smax			
	comp=E,440nm,1.2s						
XAN	**Xi'an**	**4.03**	**60**	Pg	**Pb**	**22 08 34.1**	**-0.8**
XAN				Sg	**Sb**	**22 09 23.5**	**-0.2**
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,43nm,0.6s						
ENH	**Enshi**	**4.50**	**113**	*e*Pn	**Pn**	**22 08 32.9**	**+0.8**
ENH				*e*S	**Sg**	**22 09 49.0**	**+0.7**
ULN	**Ulaanbaatar**	**15.83**	**6**	*e*Pn	**Pn**	**22 11 06.1**	**-0.6**
	comp=E,5.0nm,0.9s						
KSRS	**Korea Array**	**19.78**	**68**	P	**Pn**	**22 11 55.3**	**-0.5**
	comp=E,0.2nm,0.3s,baz=264,slow=11,SNR=2.6						
MK31	**Makanchi Array**	**22.57**	**317**	*e*P	**P**	**22 12 24.3**	**+0.1**
MKAR	**Makanchi Array**	**22.57**	**317**	P	**P**	**22 12 24.4**	**+0.2**
	comp=E,1.1nm,0.7s,mb3.4,baz=118,slow=10,SNR=6.3						
UCH	**Uchtor**	**25.96**	**301**	P	**P**	**22 12 57.0**	**+0.4**
ZALV	**Zalesovo Beam**	**26.04**	**333**	P	**P**	**22 12 57.3**	**+0.2**
	comp=E,0.6nm,0.4s,mb3.4,baz=116,slow=6.8,SNR=3.9						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**22 13 04.0**	**+0.5**
	comp=E,0.8nm,0.7s,mb3.4,baz=120,slow=9.1,SNR=4.1						
BVAR	**Borovoye Array**	**32.32**	**320**	P	**P**	**22 13 52.7**	**-0.3**
	comp=E,0.4nm,0.5s,mb3.5,baz=116,slow=10,SNR=3.1						
ABKAR	**Akbulak array**	**37.39**	**311**	*e*P	**P**	**22 14 36.7**	**-0.1**
	comp=E,0.9nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**38.83**	**312**	P	**P**	**22 14 49.4**	**+0.5**
AKTO	**Aktyubinsk**	**38.83**	**312**	P	**P**	**22 14 49.4**	**+0.5**
	comp=E,0.3nm,0.3s,mb3.5,baz=145,slow=12						
FITZ	**Fitzroy Crossi**	**53.82**	**155**	LR	LR	22 45 06.8	
	comp=E,520nm,18.2s,baz=3.5,slow=42						
ARCES	**ARCESS Array B**	**56.55**	**336**	P	**P**	**22 17 06.7**	**+0.6**
	comp=E,1.2nm,0.8s,mb4.0,baz=90,slow=14,SNR=2.8						
BRTR	**Keskin Array B**	**56.69**	**299**	P	**P**	**22 17 08.0**	**+0.4**
	comp=E,0.4nm,0.7s,mb3.5,baz=90,slow=8.6,SNR=3.0						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**22 17 08.4**	**-1.0**
	comp=E,0.7nm,0.4s,mb4.0,baz=97,slow=7.3,SNR=7.8						
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**22 17 59.2**	**+1.5**
	comp=E,0.4nm,0.5s,mb3.7,baz=75,slow=6.8,SNR=2.5						
KMBO	**Kilima Mbogo**	**71.64**	**257**	P	**P**	**22 18 45.9**	**-0.2**
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**22 18 51.0**	**-2.3**
	comp=E,4.1nm,0.6s,mb4.2						
LPL	**La Plagne**	**72.93**	**313**	*e*P	**P**	**22 18 51.0**	**-2.4**
YKA	**Yellowknife Ar**	**80.57**	**17**	P	**P**	**22 19 35.2**	**-1.0**
	comp=E,0.2nm,0.3s,mb3.5,baz=327,slow=4.7,SNR=3.8						

SZGRF ***15*** *22:07:03.0, 20°.53S×176°.78W, h33km, Fiji Islands region*
DJA ***15*** *22:07:39, 20°.18S×176°.94W, h343km, mb5.2/20*
ISCJB ***15*** *22:07:42.1±0.9, 19°.80S±0°.04×177°.55W±0°.04, h344km±9km, mb4.8/89, Error ellipse: s-maj=7.4km s-min=5.5km az=151.2*
MOS ***15*** *22:07:42.7±0.9, 19°.76S×177°.49W, h351km, mb5.0/23, MS4.7/6, Error ellipse: s-maj=11.1km s-min=7.0km az=52.5*
BJI ***15*** *22:07:43.1, 19°.87S×177°.53W, h364km, mB5.2/8, mb5.1/8*
GCMT ***15*** *22:07:44.7±0.6, 19°.87S×177°.37W, h398km±2km, MW5.3/56, Moment Tensor Solution. s56,c75; Duration: 1§1 Moment tensor: Scale 10^17Nm; Mrr-0.41±.04; Mθθ-0.37±.07; Mφφ0.78±.07; Mrθ-0.68±.05; Mrφ-0.09±.06; Mθφ-0.64±.05; Best double couple: M0 1.5300×10^17 NP1:φs143.00000°, δ33.00000°, λ-158.00000°. NP2: φs34.00000°, δ78.00000°, λ-59.00000°. Principal axes: T 1.0930, Plg26.0000°, Azm100.0000°; N 0.1200, Plg31.0000°, Azm207.0000°; P -1.2130, Plg47.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s.*
NEIC ***15*** *22:07:44.7±0.9, 19°.815×177°.50W, h363km±9km, mb4.9/65 Error ellipse: s-maj=9.0km s-min=5.1km az=155.0*
IDC ***15*** *22:07:45.8±1.1, 19°.90S×177°.39W, h374km±10km, mb4.4/24, mb1 4.4/26, mb1mx4.4/28, mbtmp4.4/26, Error ellipse: s-maj=10.8km s-min=10.0km az=119.0*
ISC 15 22:07:45.3±1.2, 19°.83S±0°.05×177°.54W±0°.04, h364km±12km, n807, σ0§64/573, mb4.8/89, 200C-229D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.07**	**44**	P	**Pn**	**22 09 35.7**

comp=Z,182nm,0.6s,mb5.5
CTA Charters Tower 33.99 263 P P 22 13 57.8 +1.4
comp=Z,171nm,0.6s,mb5.4,baz=93,slow=10,SNR=254
CTAO Charters Tower 33.99 263 eP P 22 13 57.7 +1.3
CTAO pmax pmax
comp=Z,164nm,0.6s,mb5.4
CTAO Charters Tower 33.99 263 eP P 22 13 57.7 +1.3
comp=Z,164nm,0.6s,mb5.4
COEN Coen 37.98 273 eP P 22 14 30.9 +1.0
COEN Coen 37.98 273 eP P 22 14 30.9 +1.0
comp=Z,243nm,0.9s,mb5.4
STKA Stephens Creek 38.47 243 eP P 22 14 34.6 +0.8
comp=Z,16nm,0.5s,mb4.5
STKA Stephens Creek 38.47 243 P P 22 14 34.7 +0.9
comp=Z,20nm,0.5s,mb4.6,baz=91,slow=9.5,SNR=56
ASAR Alice Springs 45.10 256 P P 22 15 27.4 +0.4
comp=Z,124nm,0.6s,mb5.2,baz=93,slow=8.3,SNR=982
ASAR PcP PcP 22 17 00.1 -0.6
comp=Z,10nm,0.5s,baz=100,slow=3.7,SNR=8.8
ASAR ScP ScP 22 20 17.9 0.0
comp=Z,3.2nm,0.8s,baz=109,slow=4.4,SNR=6.9
ASAR Alice Springs 45.10 256 P P 22 15 27.4 +0.4
ASAR 22 17 00.1
WRAB Tennant Creek 45.12 261 eP P 22 15 26.7 -0.5
KAKA Kakadu 48.40 270 ⇓iP P 22 15 51.5 -0.9
comp=Z,97nm,0.4s,mb5.4
KAKA Kakadu 48.40 270 eP P 22 15 51.5 -0.8
comp=Z,269nm,0.5s,mb5.7
KAKA ePcP PcP 22 17 10.1 -2.4
GUMO Guam 49.71 309 P P 22 16 03.3 +1.2
comp=Z,128nm,0.5s,mb5.4,baz=157,slow=9.8,SNR=12
GUMO Guam 49.71 309 eP P 22 16 02.8 +0.6
GUMO pmax pmax
comp=Z,113nm,0.6s,mb5.3
GUMO Guam 49.71 309 eP P 22 16 02.8 +0.6
comp=Z,113nm,0.6s,mb5.3
FORT Forrest 49.96 246 eP P 22 16 02.3 -1.6
comp=Z,26nm,0.5s,mb4.7
MBWA Marble Bar 58.42 257 eP P 22 17 03.9 -0.6
MBWA Marble Bar 58.42 257 eP P 22 17 03.7 -0.8
comp=Z,15nm,0.8s,mb4.4
MBWA ePcP PcP 22 17 49.6 -1.1
SBA Scott Base 58.57 184 eP P 22 17 06.5 +2.0
SBA pmax pmax
comp=Z,57nm,1.9s,mb4.7
SBA Scott Base 58.57 184 eP P 22 17 06.5 +2.0
comp=Z,58nm,1.9s,mb4.7
CBIJ Chichi jima 60.82 319 P P 22 17 20.0 -0.4
comp=Z,84nm,0.9s,mb5.2,baz=275,slow=17,SNR=3.1
DAV Davao City (W) 62.01 290 P P 22 17 29.9 +1.3
comp=Z,128nm,0.5s,mb5.8,baz=351,slow=7.0,SNR=5.5
KAPI Kappang 62.66 275 P P 22 17 32.5 -0.4
comp=Z,15nm,0.5s,mb4.8,baz=174,slow=2.6,SNR=13
KAPI Kappang 62.66 275 eP P 22 17 31.8 -1.1
comp=Z,19nm,0.6s,mb4.8
CASY Casey 64.75 205 eP P 22 17 44.8 -0.7
comp=Z,5.1nm,0.5s,mb4.4
JHJ Hachijo jima 2 66.58 322 P P 22 17 57.6 0.0
comp=Z,123nm,0.3s,baz=184,slow=5.3,SNR=16
TGY Tagaytay City 69.28 294 P P 22 18 14.0 -0.6
comp=Z,186nm,0.4s,baz=126,slow=4.3,SNR=3.5
MJAR Matsushiro Arr 69.93 323 P P 22 18 17.9 -0.2
comp=Z,18nm,0.7s,mb5.0,baz=159,slow=6.1,SNR=44
MAJO Matsushiro 69.93 323 eP P 22 18 17.5 -0.6
MAJO pmax pmax
comp=Z,27nm,0.7s,mb5.1
MAJO Matsushiro 69.93 323 eP P 22 18 17.5 -0.6
comp=Z,27nm,0.7s,mb5.1
MAT Matsushiro 69.93 323 P P 22 18 17.9 -0.2
MAT S S 22 26 49.0 -9.0
KKM Kota Kinabalu 70.01 284 eP P 22 18 18.8 -0.3
JOW Kunigami 70.07 310 P P 22 18 20.0 +0.9
comp=Z,12nm,0.5s,mb4.9,baz=106,slow=5.0,SNR=3.8
QSPA South Pole Qui 70.24 180 P P 22 18 19.6 +0.3
comp=Z,13nm,0.8s,mb4.7,baz=355,slow=0.9,SNR=27
QSPA South Pole Qui 70.24 180 P P 22 18 19.6 +0.3
ASAJ Asahikawa 73.35 331 P P 22 18 39.2 +1.2
comp=Z,8.9nm,0.6s,mb4.7,baz=184,slow=9.5,SNR=5.6
KSM Kuching 73.75 278 eP P 22 18 42.0 +0.8
comp=Z,7nm,1.3s,mb5.2
PEA0B Petropavlovsk- 75.74 345 eP P 22 18 50.2 -1.3
PETK Petropavlovsk- 75.74 345 P P 22 18 50.5 -0.9
comp=Z,13nm,0.7s,mb4.8,baz=126,slow=6.7,SNR=27
KSRS Korea Array 76.67 318 P P 22 18 58.0 +1.0
comp=Z,3.0nm,0.8s,mb4.1,baz=135,slow=5.2,SNR=11
BSC Santa Cruz Isl 76.83 46 ⇓P P 22 18 58.1 +0.1
baz=77
PKM Peak Mountain 77.22 45 ⇓P P 22 19 00.6 +0.5
baz=77
SAO San Andreas Ge 77.24 43 eP P 22 19 00.8 +0.6
SAO pmax pmax
comp=Z,17nm,1.0s,mb4.7
SAO San Andreas Ge 77.24 43 eP P 22 19 00.8 +0.5
comp=Z,18nm,1.0s,mb4.7
CIS Catalina Islan 77.34 47 ⇑P P 22 19 00.7 -0.2
baz=78
DECC Green Verdugo 77.86 47 ⇑P P 22 19 03.5 -0.2
baz=78
ARVC Arvin 78.02 46 ⇓P P 22 19 04.4 -0.1
baz=78
MWC Mount Wilson 78.03 47 eP P 22 19 04.8 +0.2
MWC pmax pmax
comp=Z,18nm,0.7s,mb4.9
MWC Mount Wilson 78.03 47 eP P 22 19 04.8 +0.2
comp=Z,18nm,0.7s,mb4.9
VES Vestal, Richgr 78.25 45 ⇑P P 22 19 05.5 -0.3
baz=78
MURC Murrieta 78.28 48 ⇓P P 22 19 05.6 -0.4
baz=78
BFSC Mount Baldy St 78.31 47 ⇓P P 22 19 05.9 -0.3
baz=78
MONP Monument Peak 78.44 49 ⇑P P 22 19 07.3 +0.4
baz=79
EDW2 Edwards Air Fo 78.44 46 ⇑P P 22 19 06.9 +0.1
baz=79
DVTC Desert V Tower 78.55 49 ⇑P P 22 19 07.2 -0.3
baz=79
ISA Isabella 78.56 45 ⇓P P 22 19 07.7 +0.2
baz=79
ISA Isabella 78.56 45 eP P 22 19 07.7 +0.3
ISA pmax pmax
comp=Z,15nm,0.8s,mb4.8
ISA Isabella 78.56 45 eP P 22 19 07.7 +0.3
comp=Z,15nm,0.8s,mb4.8
CMB Columbia Colle 78.68 43 eP P 22 19 07.7 -0.3
CMB pmax pmax
comp=Z,12nm,0.8s,mb4.7
CMB Columbia Colle 78.68 43 eP P 22 19 07.7 -0.3
comp=Z,12nm,0.8s,mb4.7
PFO Pinyon Flat Ob 78.81 48 ⇓P P 22 19 08.8 0.0
baz=79
PFO Pinyon Flat Ob 78.81 48 eP P 22 19 08.9 +0.1
PFO pmax pmax
comp=Z,88nm,2.0s,mb5.1
PFO Pinyon Flat Ob 78.81 48 eP P 22 19 08.9 +0.1
comp=Z,88nm,2.0s,mb5.2
WDC Whiskeytown Da 78.88 39 eP P 22 19 09.5 +0.4
WDC pmax pmax
comp=Z,64nm,1.8s,mb5.0
WDC Whiskeytown Da 78.88 39 eP P 22 19 09.5 +0.4
comp=Z,64nm,1.8s,mb5.0
SWSC Sam W. Stewart 78.91 49 ⇑P P 22 19 09.4 0.0
baz=79
LRMC Laurel Mountai 78.98 46 ⇓P P 22 19 10.0 +0.3
baz=79
CWC Cottonwood Cre 79.26 45 ⇓P P 22 19 11.3 +0.1
baz=79
BELC Belle Mtn. 79.34 48 ⇓P P 22 19 11.9 +0.2
baz=80
MLAC Mammoth Lakes 79.44 44 ⇓P P 22 19 12.6 +0.5
baz=80
MPMC Manual Prospec 79.44 46 ⇓P P 22 19 12.3 +0.1
baz=80
MTUM Tungsten Hills 79.46 44 eP P 22 19 12.7 +0.5
GSC Goldstone 79.49 47 ⇓P P 22 19 12.6 +0.1
baz=80
GSC Goldstone 79.49 47 eP P 22 19 12.1 -0.3
GSC pmax pmax
comp=Z,13nm,1.0s,mb4.6
GSC Goldstone 79.49 47 eP P 22 19 12.1 -0.3
comp=Z,13nm,1.0s,mb4.6
YBH Yreka Blue Hor 79.50 38 P P 22 19 12.9 +0.5
comp=Z,7.7nm,0.6s,mb4.7,baz=171,slow=2.0,SNR=21
YBH Yreka Blue Hor 79.50 38 eP P 22 19 12.7 +0.4
YBH pmax pmax
comp=Z,39nm,1.5s
YBH Yreka Blue Hor 79.50 38 eP P 22 19 12.7 +0.3
comp=Z,39nm,1.5s,mb4.9
TIN Tinemaha 79.51 44 ⇓P P 22 19 12.7 +0.2
baz=80
BC3 Big Chuckw Mtn 79.54 49 ⇓P P 22 19 13.2 +0.5
baz=80
HEC Hector,Ludlow 79.56 47 ⇓P P 22 19 12.8 0.0
baz=80
WAKR Walker 79.56 43 eP P 22 19 13.3 +0.5
112A Yuma 79.57 50 ⇓P P 22 19 13.6 +0.6
baz=80
GLA Glamis 79.66 49 ⇓P P 22 19 14.0 +0.6
baz=80
BEKR Beckwourth 79.78 41 ⇓P P 22 19 14.0 +0.1
baz=80
WCN Washoe City 79.82 42 ⇓P P 22 19 14.3 +0.2
baz=80
HUMO Hull Mountain 79.90 38 eP P 22 19 15.0 +0.5
comp=Z,115nm,2.4s,mb5.2
GMRC Granite Mounta 79.99 47 ⇓P P 22 19 15.3 +0.1
baz=80
IRM Iron Mountain 80.02 48 ⇓P P 22 19 15.7 +0.4
baz=80
GRAC Grapevine Rang 80.05 45 ⇓P P 22 19 15.6 +0.2
baz=80
KDAK Kodiak Island 80.06 13 P P 22 19 14.0 -1.0
comp=Z,21nm,1.0s,mb4.8
HABR Khabarovsk 80.08 330 eP P 22 19 14.2 -1.1
HABR e 22 22 20.9
HABR ePPP 22 24 12.0
HABR eS S 22 28 49.6 +1.1
HABR e 22 30 33.8
HABR pmax pmax
comp=Z,129nm,2.4s,mb5.2
HABR pmax pmax
comp=E,52nm,2.2s
HABR pmax pmax
comp=N,32nm,2.3s
HABR MLR MLR
comp=Z,137nm,16.0s
FURC Furnace Creek, 80.09 46 ⇑P P 22 19 15.7 +0.1
baz=80
TUQ Turquoise Moun 80.16 47 ⇓P P 22 19 16.1 +0.1
baz=80
SHOC Shoshone 80.17 46 ⇑P P 22 19 16.0 0.0
baz=80
MDJ Mudanjiang 80.22 325 eP P 22 19 15.8 -0.3
comp=Z,102nm,1.7s,mb5.3
Y12C Blythe 80.24 49 ⇑P P 22 19 16.8 +0.2
baz=80
113A Mohawk Valley, 80.28 50 ⇑P P 22 19 17.0 +0.3
baz=80
PAHR Pah Rah Range 80.29 42 eP P 22 19 17.0 +0.4
comp=Z,16nm,0.9s,mb4.8
U10A Ash Meadows, A 80.42 46 ⇓P P 22 19 17.6 +0.2
baz=81
214A Organ Pipe Nat 80.56 51 ⇑P P 22 19 18.4 +0.2
baz=81
Z13A Yuma Proving G 80.58 50 ⇓P P 22 19 18.7 +0.4
baz=81
NEE2 Needles Airpor 80.71 48 ⇑P P 22 19 19.2 +0.2
baz=81
V11A Goodsprings 80.72 47 ⇑P P 22 19 19.2 +0.2
baz=81
Y13A Salome 80.77 49 ⇓P P 22 19 19.6 +0.3
baz=81
PDMCI Parker Dam,Lak 80.80 49 ⇓P P 22 19 19.9 +0.5
baz=81
W12A Cal Nev Ari 80.82 47 ⇑P P 22 19 19.7 +0.3
baz=81
114A Black Gap (USA 80.91 50 ⇑P P 22 19 20.3 +0.3
baz=81
MOD Modoc 81.03 39 eP P 22 19 20.5 +0.1
V12A Nelson 81.06 47 ⇑P P 22 19 21.0 +0.2
baz=81
U11A Corn Creek 81.06 46 ⇑P P 22 19 21.1 +0.3
baz=81
S10A Tonopah Range, 81.07 44 ⇓P P 22 19 20.9 +0.2
baz=81
K05A Summer Lake 81.17 39 ⇑P P 22 19 21.7 +0.5
baz=81
Z14A Wintersburg 81.17 50 ⇑P P 22 19 21.8 +0.4
baz=81
X13A Yucca 81.17 48 ⇓P P 22 19 21.6 +0.2
baz=81
SHPR Sheep Range 81.26 46 eP P 22 19 22.5 +0.7
115A Sonoran Desert 81.36 51 ⇓P P 22 19 22.8 +0.4
baz=82
W13A Hualapai Mount 81.40 48 ⇑P P 22 19 23.1 +0.6
baz=82
Y14A Wickenburg 81.42 49 ⇓P P 22 19 23.0 +0.3
baz=82
R10A Warm Springs 81.47 44 ⇓P P 22 19 23.2 +0.4
baz=82
S11A Rachel 81.48 45 ⇑P P 22 19 23.4 +0.5
baz=82
216A Three Points, 81.58 52 ⇓P P 22 19 24.5 +1.0
baz=82
T11A Corn Creek, Al 81.61 46 ⇑P P 22 19 23.8 +0.2
baz=82
H04A Detroit Lake 81.63 36 ⇓P P 22 19 23.1 -0.4
baz=82
U12A Valley of Fire 81.64 47 ⇓P P 22 19 24.1 +0.3
baz=82
F03A Seaside 81.67 35 ⇑P P 22 19 23.4 -0.2
baz=82
116A Eloy 81.67 51 ⇑P P 22 19 24.7 +0.7
baz=82
T12A Moapa 81.68 46 ⇓P P 22 19 24.1 +0.2
baz=82
Q10A Clear Creek Ra 81.70 44 ⇓P P 22 19 24.3 +0.3
baz=82
Z15A Gila River Ind 81.70 50 ⇓P P 22 19 24.5 +0.3
baz=82
V13A Grand Canyon W 81.72 47 ⇑P P 22 19 24.3 +0.1
baz=82
X14A Yava 81.77 49 ⇓P P 22 19 24.2 -0.3
baz=82
Y15A Casa Rosa Ranc 81.91 50 ⇓P P 22 19 25.9 +0.7
baz=82
217A Green Valley 81.94 52 ⇓P P 22 19 26.4 +1.0
baz=82
W14A Seligman 82.02 48 ⇓P P 22 19 26.2 +0.5
baz=82,SNR=5.7
U13A Pakoon Wash 82.03 47 ⇓P P 22 19 26.4 +0.6
baz=82
E03A Lebam 82.06 34 ⇓P P 22 19 25.7 0.0
baz=82
S12A Delamar Landin 82.06 45 ⇓P P 22 19 26.8 +0.9
baz=82
BMN Battle Mountai 82.07 42 eP P 22 19 25.7 -0.1
BMN pmax pmax
comp=Z,2μm,1.0s
BMN Battle Mountai 82.07 42 eP P 22 19 25.7 -0.1
comp=Z,2μm,1.0s
P10A Eureka 82.09 43 ⇓P P 22 19 26.1 +0.1
baz=82
Q11A Duckwater 82.19 44 ⇑P P 22 19 26.7 +0.2
baz=82
V14A Boquillas Ranc 82.22 48 ⇑P P 22 19 27.1 +0.4
baz=82,SNR=12
TUC Tucson 82.23 52 eP P 22 19 27.3 +0.4
X15A Humboldt 82.25 49 ⇓P P 22 19 27.4 +0.5
baz=82
Z16A Peralta Trail, 82.26 51 ⇑P P 22 19 27.7 +0.6
baz=82
F04A Amboy 82.28 35 ⇓P P 22 19 26.5 -0.3
baz=82
MAW Mawson 82.34 200 P P 22 19 26.1 -0.7
comp=Z,3.3nm,0.6s,mb4.3,baz=11,slow=15,SNR=6.7
WVOR Wild Horse Val 82.34 40 eP P 22 19 26.9 -0.3
WVOR pmax pmax
comp=Z,32nm,1.1s,mb5.1
WVOR Wild Horse Val 82.34 40 eP P 22 19 26.9 -0.3
comp=Z,32nm,1.1s,mb5.1
T13A Saint George 82.39 46 ⇑P P 22 19 28.1 +0.5
baz=82
117A Oracle 82.39 52 ⇓P P 22 19 28.7 +1.0
baz=82
318A Bisbee 82.40 53 ⇑P P 22 19 28.8 +1.1
baz=82
VIPM Ingram Point 82.41 37 P P 22 19 27.7 +0.2
NLWA Neilton Lookou 82.44 34 ⇓P P 22 19 27.7 +0.2
baz=83
O10A Cortez Mining, 82.44 42 ⇓P P 22 19 27.9 +0.1
baz=83
Y16A Circle Bar Ran 82.49 50 ⇓P P 22 19 29.1 +0.9
baz=83
RSO Redoubt South 82.49 12 eP P 22 19 26.1 -1.4
OOW Octopus West 82.50 33 P P 22 19 28.7 +0.8
P11A Circle Ranch, 82.52 43 ⇑P P 22 19 28.1 0.0
baz=83
SHW Mount Saint He 82.55 35 P P 22 19 28.9 +0.7
U14A Mt Trumbull 82.57 47 ⇓P P 22 19 29.3 +0.8
baz=83
W15A Williams 82.58 49 ⇑P P 22 19 29.4 +0.8
baz=83
R12A Pony Springs, 82.61 45 ⇓P P 22 19 29.1 +0.5
baz=83
218A Dragoon 82.61 52 ⇓P P 22 19 29.8 +1.0
baz=83
N10A Dunphy 82.68 42 ⇓P P 22 19 29.2 +0.3
baz=83
S13A Holt Ranch, En 82.71 46 ⇑P P 22 19 29.7 +0.5
baz=83
X16A Lo Mia Camp, P 82.78 50 ⇓P P 22 19 30.5 +0.9
baz=83
I07A Izee 82.80 38 ⇓P P 22 19 29.9 +0.4
baz=83
OSD Olympics--Snow 82.80 33 P P 22 19 30.1 +0.6
Q12A Willow Creek R 82.84 44 ⇓P P 22 19 30.0 +0.2
baz=83
G06A Carlson Farm, 82.84 37 ⇓P P 22 19 29.6 0.0
baz=83
Y17A Roosevelt 82.86 51 ⇓P P 22 19 30.8 +0.8
baz=83
O11A Cowboy Ranch, 82.89 43 ⇑P P 22 19 30.5 +0.4
baz=83
319A Douglas 82.90 53 ⇓P P 22 19 31.4 +1.0
baz=83
Z17A San Carlos Hig 82.94 51 ⇑P P 22 19 31.2 +0.8
baz=83
R13A O'Grain Ranch, 82.95 45 ⇓P P 22 19 31.0 +0.6
baz=83
V15A Kaibab Nationa 82.97 48 ⇓P P 22 19 31.1 +0.5
baz=83
T14A Hurricane 82.97 47 ⇓P P 22 19 31.1 +0.5
baz=83
J08A Circle Bar Ran 82.97 39 ⇑P P 22 19 30.4 0.0
baz=83
118A Homack Ranch, 82.99 52 ⇑P P 22 19 31.9 +1.1
baz=83
P12A McGill 83.02 44 ⇓P P 22 19 31.1 +0.4
baz=83
CCUT Cedar City 83.03 46 eP P 22 19 31.9 +1.1
comp=Z,11nm,0.7s,mb4.8
W16A Flagstaff 83.06 49 ⇓P P 22 19 31.1 +0.1
baz=83
M10A I.L. Ranch, Tu 83.11 41 ⇓P P 22 19 31.6 +0.4
baz=83
LON Longmire 83.12 35 eP P 22 19 30.9 -0.2
LON pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
LON Longmire 83.12 35 eP P 22 19 30.9 -0.2
comp=Z,9.9nm,0.8s,mb4.7
Z18A Geronimo 83.15 51 ⇓P P 22 19 32.4 +0.9
baz=83
U15A North Rim 83.19 48 ⇓P P 22 19 32.5 +0.9
baz=83
X17A Forest Lakes 83.20 50 ⇑P P 22 19 32.6 +0.8
baz=83
219A White Tail Can 83.21 53 ⇓P P 22 19 32.8 +0.9
baz=83
N11A Elko Archery C 83.22 42 ⇓P P 22 19 31.8 +0.1
baz=83
WPW White Pass 83.23 35 P P 22 19 31.8 +0.1
S14A Cedar City 83.27 46 ⇑P P 22 19 32.8 +0.7
baz=83
D05A Enumclaw 83.30 34 ⇓P P 22 19 32.2 +0.2
baz=84
Q13A Wheeler Ranch, 83.33 45 ⇑P P 22 19 32.1 -0.2
baz=84
J09A Fry Pan Ranch, 83.40 39 ⇑P P 22 19 32.9 +0.3
baz=84
T15A Red Dirt Ranch 83.43 47 ⇓P P 22 19 33.2 +0.3
baz=84
320A Kipp Ranch, An 83.45 54 ⇓P P 22 19 34.5 +1.4
baz=84
GAMB Gambell 83.45 3 eP P 22 19 31.7 -0.6
comp=Z,14nm,1.2s,mb4.7
L10A Juniper Basin 83.46 41 ⇑P P 22 19 33.2 +0.3
baz=84
PGC Sidney 83.47 33 eP P 22 19 32.9 +0.2
comp=Z,10nm,1.9s,mb4.3
Y18A Canyon Day Jun 83.49 51 ⇓P P 22 19 34.4 +1.2
baz=84
ELK Elko 83.50 43 eP P 22 19 32.7 -0.4
ELK pmax pmax
comp=Z,17nm,1.2s
ELK Elko 83.50 43 eP P 22 19 32.7 -0.4
comp=Z,17nm,1.2s,mb4.8
M11A Holland Ranch, 83.52 42 ⇓P P 22 19 33.7 +0.4
baz=84
H08A Prairie City 83.54 38 ⇑P P 22 19 33.3 +0.1
baz=84
119A Ashpeak Ranch, 83.54 52 ⇑P P 22 19 34.7 +1.1
baz=84
O12A Currie 83.56 43 ⇓P P 22 19 33.7 +0.3
baz=84
P13A Bates Ranch, G 83.60 44 ⇑P P 22 19 33.7 0.0
baz=84
K10A MacKenzie Ranc 83.61 40 ⇑P P 22 19 34.0 +0.3
baz=84
BBB Bella Bella 83.61 28 P P 22 19 33.0 -0.4
comp=Z,13nm,0.7s,mb4.9,baz=221,slow=4.6,SNR=4.4
W17A Winslow 83.63 49 ⇑P P 22 19 34.8 +0.9
baz=84
R14A James Farms, M 83.65 46 ⇓P P 22 19 33.7 -0.3
baz=84
N12A Clover Valley, 83.68 43 ⇓P P 22 19 34.4 +0.4
baz=84
N12A Clover Valley, 83.68 43 eP P 22 19 34.0 0.0
comp=Z,85nm,0.6s,mb5.8
220A Playas Peak, P 83.72 53 ⇑P P 22 19 35.6 +1.2
baz=84
I09A Lost Marbles R 83.76 39 ⇓P P 22 19 34.2 -0.2
baz=84
S15A Panguitch 83.78 46 ⇑P P 22 19 35.8 +1.2
baz=84
Z19A T-Link Ranch, 83.82 52 ⇑P P 22 19 35.5 +0.6
baz=84
G08A Pilot Rock 83.82 37 ⇓P P 22 19 34.8 +0.1
baz=84
Q14A Sevier Lake (B 83.84 45 ⇓P P 22 19 35.4 +0.6
baz=84
U16A Tuba City 83.86 48 ⇓P P 22 19 35.5 +0.5
baz=84
X18A Snowflake 83.91 50 ⇑P P 22 19 35.7 +0.4
baz=84
120A U Bar Ranch, L 83.94 52 ⇓P P 22 19 36.5 +1.0
baz=84
L11A Cat Creek Ranc 83.95 41 ⇓P P 22 19 35.8 +0.4
baz=84
O13A Hicks Ranch, I 83.98 44 ⇑P P 22 19 35.4 -0.1
baz=84
T16A Glen Canyon Da 84.02 47 ⇑P P 22 19 36.4 +0.5
baz=84
J10A Berg Farm, Mel 84.03 40 ⇑P P 22 19 35.5 -0.2
baz=84
M12A Wells 84.07 42 ⇓P P 22 19 36.2 +0.3
baz=84
E07A Sunnyside 84.07 36 ⇓P P 22 19 36.0 +0.2
baz=84
R15A Junction 84.11 46 ⇑P P 22 19 37.0 +0.8
baz=84
K11A Parker Ranch, 84.11 41 ⇑P P 22 19 36.6 +0.5
baz=84
RSW Rattlesnake Hi 84.12 36 eP P 22 19 36.2 +0.1
Y19A Nutrioso 84.14 51 ⇓P P 22 19 37.7 +1.1
baz=84
HAWA Hanford 84.15 36 eP P 22 19 36.0 -0.2
comp=Z,17nm,0.6s,mb5.0
H09A Durkee 84.21 38 ⇓P P 22 19 36.6 +0.1
baz=84
TTA Tatalina 84.21 10 eP P 22 19 35.3 -0.9
N13A Wendover, West 84.22 43 ⇓P P 22 19 36.6 -0.2
baz=84
F08A Pendleton 84.22 37 ⇑P P 22 19 36.2 -0.4
baz=84
Z20A Nine Sixteen R 84.23 52 ⇓P P 22 19 38.1 +1.1
baz=84
P14A Drum Mountains 84.29 44 ⇑P P 22 19 37.3 +0.1
baz=84
WRW Wenatchee Ridg 84.31 34 P P 22 19 36.7 -0.3
221A Mesquite Ranch 84.33 53 ⇓P P 22 19 38.5 +1.0
baz=84
MSU Marysvale 84.33 46 eP P 22 19 38.5 +1.2

RPW	Rockport	84.34	34	eP	P	22 19 36.7	-0.4
C06A	Tall Timber Ra	84.34	34	⇓P	P	22 19 36.9	-0.3
	baz=84						
X19A	St. Johns	84.34	50	⇑P	P	22 19 38.4	+0.9
	baz=84						
W18A	Petrified Fore	84.35	50	⇓P	P	22 19 37.7	+0.1
	baz=84						
I10A	Payette	84.38	39	⇑P	P	22 19 37.7	+0.2
	baz=84						
L12A	House Creek Ra	84.40	42	⇑P	P	22 19 37.6	0.0
	baz=84						
U17A	Shonto	84.41	48	⇑P	P	22 19 38.1	+0.3
	baz=84						
Q15A	Fillmore	84.44	45	⇓P	P	22 19 38.2	+0.3
	baz=85						
ETW	Entiat	84.45	35	eP	P	22 19 37.5	-0.2
E08A	Dider Farm, El	84.47	36	⇑P	P	22 19 37.6	-0.3
	baz=85						
G09A	Cove	84.49	38	⇑P	P	22 19 38.0	0.0
	baz=85						
V18A	Ganado	84.50	49	⇓P	P	22 19 38.4	+0.2
	baz=85,SNR=9.8						
T17A	Navajo Res., N	84.51	48	⇓P	P	22 19 39.1	+0.8
	baz=85						
M13A	Montello	84.51	43	⇓P	P	22 19 38.6	+0.4
	baz=85						
M13A	Montello	84.51	43	eP	P	22 19 38.1	-0.1
LNOR	Lincton Mounta	84.55	37	eP	P	22 19 38.1	-0.1
121A	Cookes Peak, D	84.56	53	⇑P	P	22 19 39.6	+0.9
	baz=85						
MFID	Camas Ranch	84.59	40	⇓P	P	22 19 38.6	+0.1
	baz=85						
W19A	Sanders	84.60	50	⇑P	P	22 19 38.8	+0.1
	baz=85						
C07A	Waterville	84.64	35	⇑P	P	22 19 38.4	-0.3
	baz=85						
F09A	S2 Ranch, Elgi	84.67	37	⇑P	P	22 19 38.5	-0.4
	baz=85						
R16A	Teasdale	84.69	46	⇑P	P	22 19 40.0	+0.9
	baz=85						
H10A	Noah's Angus R	84.70	39	⇓P	P	22 19 38.7	-0.3
	baz=85						
WTV	Waterville	84.71	35	P	P	22 19 38.5	-0.5
NLW	Nelson Butte	84.73	34	P	P	22 19 38.8	-0.3
K12A	Draper Farm, C	84.73	41	⇑P	P	22 19 39.2	0.0
	baz=85						
A06A	Chilliwack	84.76	33	⇑P	P	22 19 38.9	-0.2
	baz=85						
Y20A	Horse Springs,	84.76	51	⇓P	P	22 19 40.7	+1.1
	baz=85						
DUG	Dugway	84.77	44	⇓P	P	22 19 39.2	-0.3
	baz=85						
BMRM	Bremner River	84.78	15	eP	P	22 19 37.7	-1.2
	comp=Z,14nm,0.6s,mb5.0						
I11A	Placerville	84.79	40	⇑P	P	22 19 39.4	-0.1
	baz=85						
S17A	Black Ridge (B	84.83	47	⇑P	P	22 19 39.7	-0.2
	baz=85						
N14A	Grayback Hills	84.87	43	⇓P	P	22 19 39.6	-0.4
	baz=85						
G10A	Bishop Farm, J	84.88	38	⇑P	P	22 19 39.6	-0.3
	baz=85						
U18A	Rough Rock, Ch	84.88	49	⇓P	P	22 19 40.4	+0.2
	baz=85						
222A	Williams Famil	84.88	53	⇑P	P	22 19 40.8	+0.6
	baz=85						
D08A	Wollman Farm,	84.89	36	⇓P	P	22 19 39.6	-0.3
	baz=85						
J12A	Stokes Ranch,	84.95	41	⇑P	P	22 19 40.5	+0.2
	baz=85						
X20A	Quemado	84.97	51	⇑P	P	22 19 41.6	+1.0
	baz=85						
E09A	Wood Farm, Sta	85.00	37	⇓P	P	22 19 39.8	-0.6
	baz=85						
Z21A	St. Cloud Mine	85.01	52	⇓P	P	22 19 42.0	+1.2
	baz=85						
L13A	Double Diamond	85.04	42	⇓P	P	22 19 40.9	+0.1
	baz=85						
O15A	The Old Anders	85.04	44	⇓P	P	22 19 40.6	-0.2
	baz=85						
M14A	Sheep Mountain	85.11	43	⇓P	P	22 19 41.0	-0.1
	baz=85						
V19A	Window Rock	85.13	49	⇑P	P	22 19 42.0	+0.6
	baz=85						
H11A	Donnelly	85.20	39	⇑P	P	22 19 41.5	0.0
	baz=85						
OD2	Odessa Site #2	85.20	36	eP	P	22 19 41.1	-0.3
F10A	Beach Ranch, E	85.21	37	⇑P	P	22 19 41.1	-0.4
	baz=85						
Q16A	Castle Valley	85.21	46	⇓P	P	22 19 42.1	+0.4
	baz=85						
I12A	Atlanta	85.22	40	⇓P	P	22 19 41.6	0.0
	baz=85						
T18A	Mexican Hat	85.23	48	⇑P	P	22 19 42.1	+0.3
	baz=85						
D09A	Jones Farm, Ri	85.23	36	⇓P	P	22 19 41.5	-0.1
	baz=85						
122A	Conniff Cattle	85.23	53	⇓P	P	22 19 42.5	+0.6
	baz=85						
W20A	Ramah	85.24	50	⇓P	P	22 19 42.5	+0.6
	baz=85						
K13A	Stover Farm, H	85.25	41	⇑P	P	22 19 42.0	+0.2
	baz=85						
R17A	Hanksville Air	85.28	46	⇑P	P	22 19 42.0	-0.1
	baz=85						
U19A	Dine' College,	85.29	49	⇑P	P	22 19 42.3	+0.1
	baz=85						
A07A	Ashnola River,	85.30	34	⇑P	P	22 19 41.6	-0.2
	baz=85						
Y21A	Point of Rocks	85.33	51	⇓P	P	22 19 43.3	+0.9
	baz=85						
TMUT	Trail Mountain	85.38	45	eP	P	22 19 43.5	+1.0
	comp=Z,15nm,0.6s,mb5.0						
B08A	Colville Reser	85.44	35	⇑P	P	22 19 41.8	-0.8
	baz=86						
G11A	Walters Elk Ra	85.44	38	⇓P	P	22 19 42.3	-0.4
	baz=86						
X21A	Alamocita Cree	85.45	51	⇑P	P	22 19 43.6	+0.6
	baz=86						
Z22A	Elephant Butte	85.51	52	⇓P	P	22 19 43.8	+0.5
	baz=86						
HLID	Hailey	85.54	41	⇑P	P	22 19 43.5	+0.3
	baz=86						
HLID	Hailey	85.54	41	eP	P	22 19 43.5	+0.3
	comp=Z,51nm,2.1s,mb5.0						
E10A	Myers Farm, Un	85.57	37	⇑P	P	22 19 43.4	+0.1
	baz=86						
V20A	Brimhall	85.58	50	⇑P	P	22 19 43.0	-0.6
	baz=86						
J13A	Cove Ranch, Pi	85.60	41	⇑P	P	22 19 43.4	0.0
	baz=86						
HVU	Hansel Valley	85.62	43	eP	P	22 19 43.7	+0.1
HVU				pmax	pmax		
	comp=Z,53nm,1.9s,mb5.0						
HVU	Hansel Valley	85.62	43	eP	P	22 19 43.7	+0.1
	comp=Z,53nm,1.9s,mb5.0						
M15A	Larsen Ranch,	85.67	43	⇓P	P	22 19 43.4	-0.4
	baz=86						
T19A	Beclabito	85.67	48	⇑P	P	22 19 44.1	+0.1
	baz=86						
KTH	Kantishna Hill	85.68	12	eP	P	22 19 41.0	-2.3
	comp=Z,8.5nm,0.8s,mb4.6						
C09A	Chrisman Ranch	85.68	36	⇑P	P	22 19 43.2	-0.5
	baz=86						
TRF	Thorofare Moun	85.71	12	eP	P	22 19 41.5	-2.0
	comp=Z,26nm,0.7s,mb5.2						
SRU	San Rafael	85.75	46	⇑P	P	22 19 44.3	0.0
	baz=86						
SRU	San Rafael	85.75	46	eP	P	22 19 44.6	+0.3
SRU				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.1						
SRU	San Rafael	85.75	46	eP	P	22 19 44.6	+0.3
	comp=Z,18nm,0.6s,mb5.1						
K14A	Jones Ranch, D	85.77	42	⇑P	P	22 19 44.2	-0.1
	baz=86						
F11A	Grangeville	85.78	38	⇑P	P	22 19 42.8	-1.5
	baz=86						
P17A	Butcher Ranch,	85.78	46	⇑P	P	22 19 44.3	-0.2
	baz=86						
D10A	Wagner Farm, O	85.80	37	⇓P	P	22 19 43.6	-0.8
	baz=86						
H12A	Diamond D Ranc	85.80	40	⇓P	P	22 19 44.2	-0.2
	baz=86						
U20A	Newcomb	85.82	49	⇓P	P	22 19 44.6	-0.1
	baz=86						
Y22A	Socorro	85.82	52	⇑P	P	22 19 45.1	+0.4
	baz=86						
324A	Moseley Ranch,	85.82	55	⇓P	P	22 19 45.0	+0.1
	baz=86						
R18A	Canyonlands Na	85.82	47	⇓P	P	22 19 44.6	0.0
	baz=86						
SEY	Seymchan	85.82	347	⇓P	P	22 19 42.0	-2.1
G12A	Big Creek, Yel	85.84	39	⇓P	P	22 19 44.4	-0.2
	baz=86						
W21A	San Fidel	85.86	51	⇓P	P	22 19 45.2	+0.2
	baz=86						
LAZ	Ladron	85.90	51	eP	P	22 19 45.7	+0.5
	comp=Z,2.5nm,0.7s,mb4.2						
I13A	Wildhorse Cree	85.91	40	⇑P	P	22 19 45.0	0.0
	baz=86						
425A	Indio Mountain	85.92	55	⇓P	P	22 19 46.0	+0.6
	baz=86						
Q18A	Rafter H Ranch	86.01	46	⇑P	P	22 19 45.2	-0.4
	baz=86						
E11A	Bogner Ranch,	86.01	38	⇑P	P	22 19 44.0	-1.4
	baz=86						
MNTX	Cornudas Mount	86.01	54	eP	P	22 19 45.4	-0.4
	comp=Z,6.4nm,0.7s,mb4.6						
S19A	Harvey Farm, M	86.03	48	⇓P	P	22 19 45.6	-0.1
	baz=86						
X22A	Bernardo	86.04	51	⇓P	P	22 19 46.4	+0.5
	baz=86						
626A	Big Bend Ranch	86.06	57	⇓P	P	22 19 46.5	+0.5
	baz=86						
Z23A	Rita Site, Whi	86.06	53	⇓P	P	22 19 46.6	+0.6
	baz=86						
224A	Corundas Mount	86.07	54	⇑P	P	22 19 46.5	+0.4
	baz=86						
B09A	Rice	86.11	35	⇓P	P	22 19 45.0	-0.8
	baz=86						
M16A	Huntsville	86.12	44	⇓P	P	22 19 45.4	-0.6
	baz=86						
O17A	Robinson Place	86.14	45	⇑P	P	22 19 46.4	+0.2
	baz=86						
H13A	Challis	86.17	40	⇑P	P	22 19 46.0	-0.3
	baz=86						
325A	Bean Ranch, Si	86.18	55	⇓P	P	22 19 46.8	+0.2
	baz=86						
P18A	Preston Nutter	86.19	46	⇑P	P	22 19 46.2	-0.3
	baz=86						
A09A	Danville	86.20	34	⇑P	P	22 19 45.9	-0.4
	baz=86						
R19A	Curley Farm, L	86.21	47	⇑P	P	22 19 46.3	-0.2
	baz=86						
MCK	McKinley	86.23	12	eP	P	22 19 44.7	-1.3
MCK				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
MCK	McKinley	86.23	12	eP	P	22 19 44.7	-1.4
	comp=Z,18nm,0.8s,mb4.9						
F12A	Elk City	86.23	38	⇓P	P	22 19 45.9	-0.5
	baz=86						
LPM	Los Pinos Moun	86.23	52	eP	P	22 19 47.0	+0.2
K15A	Arbon	86.24	42	⇑P	P	22 19 46.2	-0.4
	baz=86						
526A	Mary Lane Ranc	86.31	56	⇓P	P	22 19 47.6	+0.3
	baz=86						
HWUT	Hardware Ranch	86.31	43	eP	P	22 19 46.6	-0.3
I14A	Mackay	86.32	41	⇑P	P	22 19 47.2	+0.3
	baz=86,SNR=6.7						
D11A	Klaveano Farm,	86.33	37	⇑P	P	22 19 45.8	-1.1
	baz=86,SNR=5.1						
TXAR	Lajitas Array	86.33	57	P	P	22 19 47.7	+0.4
	comp=Z,4.4nm,0.7s,mb4.4,baz=221,slow=6.4,SNR=66						
124A	Stringfield Ra	86.39	54	⇑P	P	22 19 48.0	+0.4
	baz=86						
W22A	Albuquerque	86.41	51	⇑P	P	22 19 47.7	+0.1
	baz=86						
E12A	Beaver Dam Sad	86.41	38	⇑P	P	22 19 47.1	-0.2
	baz=86						
N17A	Moffit Pass	86.45	44	⇑P	P	22 19 47.2	-0.4
	baz=87						
G13A	Cobalt	86.47	39	⇑P	P	22 19 47.3	-0.4
	baz=87,SNR=12						
Y23A	Lovelace Mesa,	86.49	52	⇑P	P	22 19 48.0	0.0
	baz=87						
Q19A	Hogan Spring (	86.53	47	⇑P	P	22 19 47.7	-0.4
	baz=87,SNR=6.5						
NEW	Newport	86.58	36	eP	P	22 19 47.5	-0.6
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NEW	Newport	86.58	36	eP	P	22 19 47.5	-0.5
	comp=Z,5.5nm,0.8s,mb4.4						
L16A	Fish Haven	86.60	43	⇓P	P	22 19 47.9	-0.4
	baz=87						
627A	Terlingua Ranc	86.60	57	⇓P	P	22 19 49.2	+0.6
	baz=87						
426A	McDonald Obser	86.61	56	⇑P	P	22 19 49.2	+0.5
	baz=87						
ANMO	Albuquerque	86.65	51	eP	P	22 19 48.7	-0.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ANMO	Albuquerque	86.65	51	eP	P	22 19 48.7	0.0
	comp=Z,6.3nm,0.7s,mb4.5						
O18A	Roosevelt	86.66	45	⇓P	P	22 19 48.3	-0.3
	baz=87						
J15A	Blackfoot	86.67	41	⇑P	P	22 19 48.9	+0.2
	baz=87,SNR=18						
527A	Woodward Ranch	86.72	56	⇓P	P	22 19 49.3	+0.1
	baz=87						
H14A	Leadore	86.74	40	⇑P	P	22 19 48.9	0.0
	baz=87,SNR=7.5						
Z24A	Sheeppen Canyo	86.74	53	⇓P	P	22 19 49.3	+0.1
	baz=87						
A10A	Northport	86.75	35	⇓P	P	22 19 48.3	-0.6
	baz=87						
V22A	San Miguel Ran	86.76	50	⇓P	P	22 19 48.7	-0.6
	baz=87						
R20A	Redvale	86.77	48	⇑P	P	22 19 48.8	-0.5
	baz=87						
F13A	Darby	86.79	39	⇑P	P	22 19 48.5	-0.7
	baz=87,SNR=26						
M17A	Scullys Gap (B	86.82	44	⇑P	P	22 19 48.7	-0.8
	baz=87,SNR=6.0						
D12A	Red Ives Fores	86.89	37	⇓P	P	22 19 49.1	-0.5
	baz=87						
K16A	Soda Springs	86.92	42	⇓P	P	22 19 49.8	0.0
	baz=87						
326A	Caldwell Ranch	86.93	55	⇑P	P	22 19 50.0	-0.2
	baz=87						
S21A	Coal Bank Pass	86.94	48	⇑P	P	22 19 50.0	0.0
	baz=87,SNR=6.6						
Y24A	Capitan	86.95	52	⇓P	P	22 19 50.3	+0.1
	baz=87						
I15A	Monteview	86.95	41	⇑P	P	22 19 50.0	+0.1
	baz=87						
W23A	Werner Place,	86.97	51	⇓P	P	22 19 50.1	-0.2
	baz=87						
125A	Gardner Draw,	86.98	54	⇓P	P	22 19 50.6	+0.2
	baz=87						
GDL2	Guadalupe Moun	87.01	54	eP	P	22 19 51.3	+0.8
628A	Black Gap, Mar	87.01	57	⇑P	P	22 19 50.4	-0.2
	baz=87						
G14A	Jackson	87.01	40	⇓P	P	22 19 50.2	-0.1
	baz=87,SNR=6.3						
P19A	Cripple Cowboy	87.05	46	⇓P	P	22 19 50.2	-0.3
	baz=87,SNR=6.5						
B11A	Sandpoint	87.09	36	⇑P	P	22 19 50.0	-0.5
	baz=87,SNR=5.0						
J16A	Bone	87.12	42	⇑P	P	22 19 50.7	-0.1
	baz=87						
226A	Malaga, Loving	87.15	55	⇓P	P	22 19 51.3	+0.1
	baz=87						
MCMT	McKenzie Canyo	87.16	40	eP	P	22 19 50.8	-0.1
	comp=Z,4.2nm,0.6s,mb4.5						
427A	Hayter Ranch,	87.18	56	⇓P	P	22 19 51.9	+0.5
	baz=87						
H15A	Lima	87.18	40	⇓P	P	22 19 51.2	+0.1
	baz=87,SNR=12						
C12B	Naegeli Ranch,	87.18	37	⇑P	P	22 19 50.5	-0.5
	baz=87						
Q20A	Ridgley Place,	87.19	47	⇓P	P	22 19 50.9	-0.3
	baz=87						
M18A	Lyman	87.19	44	⇑P	P	22 19 50.9	-0.3
	baz=87,SNR=7.7						
Z25A	Roswell	87.20	53	⇓P	P	22 19 51.6	+0.2
	baz=87						
V23A	Ortiz Mt. (NFS	87.21	51	⇑P	P	22 19 51.8	+0.4
	baz=87						
E13A	Victor	87.22	38	⇓P	P	22 19 50.3	-0.9
	baz=87						
N18A	Larsen Ranch,	87.23	45	⇓P	P	22 19 50.6	-0.7
	baz=87						
DLBC	Dease Lake	87.27	23	P	P	22 19 50.9	-0.2
	comp=Z,4.2nm,0.7s,mb4.3,baz=142,slow=24,SNR=4.4						
O19A	Miners Draw (B	87.27	45	⇓P	P	22 19 51.7	+0.2
	baz=87						
F14A	Wisdom	87.37	39	⇓P	P	22 19 51.3	-0.6
	baz=88						
528A	Cox Ranch, San	87.37	57	⇑P	P	22 19 52.8	+0.5
	baz=88						
P20A	De Beque	87.38	46	⇑P	P	22 19 51.9	-0.2
	baz=88						
A11A	Hall Mountain,	87.39	35	⇓P	P	22 19 51.8	-0.1
	baz=88,SNR=7.8						
D13A	Huson	87.42	38	⇓P	P	22 19 51.1	-1.0
	baz=88,SNR=10						
R21A	Cimarron	87.43	48	⇓P	P	22 19 52.5	+0.1
	baz=88						
126A	Clayton Basin,	87.46	54	⇑P	P	22 19 52.5	-0.1
	baz=88						
COLA	College	87.46	12	eP	P	22 19 49.4	-2.5
COLA				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
COLA	College	87.46	12	eP	P	22 19 49.4	-2.5
	comp=Z,14nm,0.6s,mb5.0						
Y25A	Mesa, Roswell	87.50	53	⇓P	P	22 19 52.6	-0.2
	baz=88						
I16A	Newdale	87.51	41	⇑P	P	22 19 53.1	+0.5
	baz=88						
N19A	John Jarvie Ra	87.52	45	⇓P	P	22 19 52.0	-0.8
	baz=88						
W24A	Lazy 6 Ranch,	87.54	51	⇑P	P	22 19 52.4	-0.6
	baz=88						
B12A	Libby	87.54	36	⇓P	P	22 19 52.3	-0.3
	baz=88						
G15A	Dillon	87.56	40	⇓P	P	22 19 52.8	0.0
	baz=88,SNR=18						
MSO	Missoula	87.58	38	eP	P	22 19 52.2	-0.7
	comp=Z,20nm,1.7s,mb4.7						
DLMT	Dillon	87.59	40	eP	P	22 19 53.2	+0.3
	comp=Z,15nm,0.8s,mb4.9						
E14A	Clinton	87.62	39	⇓P	P	22 19 52.5	-0.5
	baz=88,SNR=17						
BSMT	Bassoo Peak	87.65	37	eP	P	22 19 52.2	-0.9
REDW	Red Top Meadow	87.65	42	eP	P	22 19 53.3	0.0
	comp=Z,39nm,1.7s,mb5.0						
TPAW	Teton Pass	87.65	42	eP	P	22 19 53.5	+0.2
	comp=Z,57nm,2.0s,mb5.1						
C13A	Hot Springs	87.67	37	⇑P	P	22 19 52.4	-0.9
	baz=88						
428A	Kincaid Ranch,	87.69	56	⇑P	P	22 19 54.3	+0.5
	baz=88						
J17A	Brown Place, J	87.74	42	⇑P	P	22 19 53.6	-0.1
	baz=88						
CPRX	Cap Rock	87.74	54	P	P	22 19 53.3	-0.7
	comp=Z,3.3nm,0.7s,mb4.3						
Z26A	Caprock	87.76	54	⇑P	P	22 19 53.8	-0.2
	baz=88						
A12A	Yaak River Ran	87.76	36	⇑P	P	22 19 53.3	-0.3
	baz=88						
O20A	White River Ci	87.78	46	⇑P	P	22 19 53.6	-0.4
	baz=88						
X25A	Clemmons Ranch	87.79	52	⇓P	P	22 19 53.6	-0.6
	baz=88						
K18A	Toltan Ranch,	87.80	43	⇑P	P	22 19 54.0	0.0
	baz=88						
M19A	Rock Springs	87.83	44	⇑P	P	22 19 53.7	-0.5
	baz=88						
328A	Wristen Ranch,	87.86	56	⇑P	P	22 19 54.5	-0.1
	baz=88						
IMW	Indian Meadow	87.86	42	eP	P	22 19 54.6	+0.4
	comp=Z,62nm,1.9s,mb5.1						
JTMT	Jette	87.87	37	eP	P	22 19 53.3	-0.9
F15A	Butte	87.91	39	⇓P	P	22 19 54.0	-0.4
	baz=88,SNR=12						
LRM	Limekiln Ridge	87.92	39	eP	P	22 19 54.3	-0.2
R22A	Saguache, Gunn	87.92	48	⇑P	P	22 19 55.0	+0.3
	baz=88,SNR=6.5						
D14A	Greenough	87.96	38	⇓P	P	22 19 53.7	-0.9
	baz=88						
127A	Arkansas Junct	87.98	54	⇓P	P	22 19 54.8	-0.3
	baz=88						
L19A	Farson	87.98	44	⇑P	P	22 19 54.5	-0.3
	baz=88,SNR=8.1						
G16A	Moss Hill, Enn	88.00	40	⇑P	P	22 19 54.9	0.0
	baz=88,SNR=8.7						
CHMT	Chamberlain Mo	88.02	38	eP	P	22 19 54.3	-0.6
QLMT	Earthquake Lak	88.03	41	eP	P	22 19 55.8	+0.8
SLMT	Seeley Lake	88.06	38	eP	P	22 19 54.3	-0.8
H16A	Russell Place,	88.08	41	⇓P	P	22 19 55.9	+0.7
	baz=88,SNR=29						
YBMT	Yellow Bay	88.09	37	eP	P	22 19 54.3	-0.9
I17A	Pilgrim Ck.	88.10	42	⇑P	P	22 19 56.0	+0.6
	baz=88						
J18A	Kendall Valley	88.10	43	⇑P	P	22 19 55.3	-0.1
	baz=88,SNR=33						
N20A	Spence Gulch,	88.10	45	⇑P	P	22 19 54.9	-0.6
	baz=88,SNR=6.0						
Q22A	Crested Butte,	88.11	47	⇑P	P	22 19 55.4	-0.1
	baz=88,SNR=9.3						
B13A	Whitefish	88.11	36	⇓P	P	22 19 54.2	-1.1
	baz=88						
E15A	Deer Lodge	88.12	39	⇑P	P	22 19 54.8	-0.6
	baz=88,SNR=6.5						
Y26A	Elida	88.15	53	⇑P	P	22 19 54.9	-0.9
	baz=88						
BW06	Boulder Array	88.18	43	⇑P	P	22 19 55.4	-0.4
	baz=88,SNR=9.4						
BW06	Boulder Array	88.18	43	eP	P	22 19 55.2	-0.6
	comp=Z,5.1nm,0.8s,mb4.4						
PDAR	Pinedale Array	88.18	43	P	P	22 19 55.5	-0.3
	comp=Z,3.7nm,0.6s,mb4.4,baz=220,slow=2.5,SNR=22						
C14A	Swan Lake	88.19	37	⇓P	P	22 19 55.1	-0.6
	baz=88						
SMCO	Snowmass	88.20	47	eP	P	22 19 56.4	+0.4
	comp=Z,12nm,0.3s,mb5.2						
W25A	X Bar L Ranch,	88.24	52	⇓P	P	22 19 55.7	-0.6
	baz=88						
BOZ	Bozeman (W)	88.32	40	⇓P	P	22 19 56.3	-0.1
	baz=88,SNR=28						
BOZ	Bozeman (W)	88.32	40	eP	P	22 19 56.0	-0.4
BOZ				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
BOZ	Bozeman (W)	88.32	40	eP	P	22 19 56.0	-0.3
	comp=Z,12nm,0.8s,mb4.8						
H17A	Grant Village	88.34	41	⇓P	P	22 19 57.7	+1.2
	baz=88,SNR=8.9						
Z27A	Tatum	88.36	54	⇑P	P	22 19 56.1	-0.7
	baz=88						
F16A	Kennard Place,	88.40	40	⇓P	P	22 19 56.9	+0.2
	baz=88,SNR=10						
BILL	Bilibino	88.42	354	eP	P	22 19 57.2	+0.9
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
X26A	CR and CF Fran	88.43	52	⇓P	P	22 19 56.4	-0.7
	baz=88						
YNR	Norris Junctio	88.43	41	eP	P	22 19 57.8	+0.8
	comp=Z,28nm,1.5s,mb4.9						
A13A	Flathead Natio	88.44	36	⇓P	P	22 19 56.8	-0.1
	baz=89						
M20A	Sweetwater, Wa	88.46	45	⇑P	P	22 19 56.9	-0.3
	baz=89						
I18A	Diamond G Ranc	88.47	42	⇑P	P	22 19 57.1	0.0
	baz=89,SNR=5.8						
D15A	Lincoln	88.52	38	⇑P	P	22 19 56.9	-0.4
	baz=89,SNR=12						
LKWY	Lake	88.53	41	eP	P	22 19 58.0	+0.6
N21A	Black Mountain	88

	baz=89								
V26A	Tequesquite Ra	88.98	51	⇓P		P	22 19 59.5	-0.2	
	baz=89								
X27A	F and S Farms,	89.01	53	⇓P		P	22 19 59.2	-0.6	
	baz=89								
A14A	Double T Ranch	89.02	36	⇑P		P	22 19 58.7	-0.8	
	baz=89,SNR=6.9								
F17A	Fitzpatrick Pl	89.04	40	⇓P		P	22 19 60.0	+0.3	
	baz=89,SNR=8.6								
CMIG	Matias Romero	89.05	72	P		P	22 19 59.2	-1.2	
	comp=Z,1.1nm,0.6s,mb3.8,baz=219,slow=7.7,SNR=3.4								
M21A	Separation Pea	89.06	45	⇓P		P	22 19 59.3	-0.6	
	baz=89,SNR=5.6								
D16A	Dana Ranch, Ca	89.08	39	⇓P		P	22 19 59.6	-0.2	
	baz=89,SNR=8.9								
COLD	Coldfoot	89.14	10	eP		P	22 19 58.9	-0.8	
	comp=Z,5.5nm,0.6s,mb4.6								
B15A	Bradely Ranch,	89.15	37	⇓P		P	22 19 58.8	-1.4	
	baz=89,SNR=8.2								
E17A	Martinsdale	89.20	39	⇓P		P	22 19 59.8	-0.6	
	baz=89								
W27A	Bowe Ranch, En	89.21	52	⇑P		P	22 20 00.1	-0.7	
	baz=89								
L21A	Rawlins	89.22	45	⇑P		P	22 20 00.0	-0.6	
	baz=89,SNR=5.4								
VNA2	Neumayer--Watz	89.23	177	ePdiff		P	22 19 58.3	-2.0	
U26A	Atchley Ranch,	89.27	51	⇑P		P	22 20 00.3	-0.7	
	baz=89								
N22A	Wattenberg Ran	89.30	46	⇑P		P	22 20 01.2	+0.1	
	baz=89								
C16A	Fuhringer Ranc	89.36	38	⇑P		P	22 20 00.2	-0.9	
	baz=90,SNR=7.0								
A15A	Johnson Ranch,	89.41	37	⇑P		P	22 20 00.2	-1.1	
	baz=90,SNR=8.8								
G18A	Lazy EL Ranch,	89.42	41	⇓P		P	22 20 01.5	0.0	
	baz=90,SNR=11								
VNA1	Neumayer--Stat	89.45	176	ePdiff		P	22 19 59.5	-1.8	
M22A	Cedar Creek Ra	89.48	45	⇓P		P	22 20 02.3	+0.4	
	baz=90								
RLMT	Red Lodge	89.51	41	⇑P		P	22 20 02.1	+0.2	
	baz=90,SNR=6.8								
F18A	Big Timber	89.61	40	⇓P		P	22 20 02.7	+0.3	
	baz=90,SNR=7.3								
D17A	Six Diamond Ra	89.65	39	⇓P		P	22 20 02.6	+0.1	
	baz=90,SNR=17								
B16A	M & M Farms, S	89.69	37	⇑P		P	22 20 01.6	-1.1	
	baz=90,SNR=9.0								
E18A	Harlowton	89.82	40	⇓P		P	22 20 03.5	+0.1	
	baz=90,SNR=8.8								
C17A	Wharram Farm,	89.84	38	⇓P		P	22 20 02.9	-0.5	
	baz=90,SNR=7.5								
JCT	Junction City	89.86	58	eP		P	22 20 04.0	+0.1	
L22A	Ellis Ranch, M	89.87	45	⇓P		P	22 20 04.0	+0.3	
	baz=90								
A16A	West Butte Ran	90.03	37	⇑P		P	22 20 04.0	-0.2	
	baz=90,SNR=33								
B17A	L&G Farms, Che	90.16	38	⇑P		P	22 20 03.8	-1.1	
	baz=90								
AMTX	Amarillo	90.17	53	eP		P	22 20 05.0	-0.3	
D18A	Linhart Farms,	90.19	39	⇑P		P	22 20 05.1	0.0	
	baz=90								
B18A	Beardsley Farm	90.80	38	⇓P		P	22 20 07.2	-0.7	
	baz=91,SNR=5.0								
A18A	Metzger Ranch,	91.02	38	⇓P		P	22 20 08.1	-0.7	
	baz=91								
RSSD	Black Hills	92.37	44	eP		P	22 20 14.7	-0.5	
LZH	Lanzhou	92.71	307	eP		P	22 20 18.5	+1.6	
LZH				pP		pP	22 21 40.8	-1.2	
LZH				sP		sP	22 22 19.5	-0.2	
LZH				pmax		pmax			
	comp=Z,31nm,1.1s,mb5.2								
LZH				pmax		pmax			
	comp=Z,130nm,4.5s								
CBKS	Cedar Bluff	93.16	50	eP		P	22 20 18.3	-0.7	
INK	Inuvik	93.52	15	P		P	22 20 18.4	-1.5	
	comp=Z,4.1nm,0.6s,mb4.6,baz=186,slow=3.8,SNR=8.5								
DGMT	Dagmar	94.13	40	⇓P		P	22 20 23.0	-0.1	
	baz=94								
SONM	Songino Array	95.53	319	P		P	22 20 30.1	+0.6	
	comp=Z,1.9nm,0.6s,mb4.4,baz=127,slow=4.6,SNR=3.4								
YKA	Yellowknife Ar	95.72	25	P		P	22 20 28.7	-1.3	
	comp=Z,1.5nm,0.8s,mb4.2,baz=240,slow=4.5,SNR=13								
ECSD	EROS Data Cent	97.16	46	eP		P	22 20 35.9	-1.1	
ZALV	Zalesovo Beam	110.24	321	PKiKP	PKiKP		22 25 32.0	-2.0	
	comp=Z,2.1nm,0.6s,baz=9.8,slow=0.2,SNR=10								
MK31	Makanchi Array	111.05	314	ePKIKP	PKiKP		22 25 33.6	-2.2	
MKAR	Makanchi Array	111.05	314	PKiKP	PKiKP		22 25 34.0	-1.8	
	comp=Z,1.7nm,0.6s,baz=219,slow=0.6,SNR=23								
MKAR				SKP			22 28 33.8		
	comp=Z,0.4nm,0.6s,baz=218,slow=1.1,SNR=3.8								
KURK	Kurchatov	113.79	318	PKiKP	PKiKP		22 25 38.8	-2.2	
	comp=Z,2.6nm,0.6s,baz=92,slow=1.9,SNR=17								
KURK				SKP			22 28 39.0		
	comp=Z,0.9nm,0.6s,baz=87,slow=1.9,SNR=4.0								
KURK	Kurchatov	113.79	318	ePKiKP	PKiKP		22 25 38.9	-2.1	
TKM2	Tokmak 2	115.43	309	ePKIKP	PKPdf		22 25 42.3	-2.0	
AAK	Ala-Archa	116.22	309	PKIKP	PKPdf		22 25 44.4	-1.5	
AML	Almayashu	116.78	308	ePKIKP	PKPdf		22 25 45.6	-1.4	
BVAR	Borovoye Array	118.84	320	PKP	PKPdf		22 25 48.7	-1.9	
	comp=Z,3.1nm,0.4s,baz=114,slow=2.6,SNR=29								
BVAR				SKP			22 28 49.0		
	comp=Z,0.6nm,0.5s,baz=125,slow=1.7,SNR=4.4								
BRVK	Borovoye	118.90	320	ePKIKP	PKPdf		22 25 48.3	-2.4	
KBL	Kabul	119.94	299	ePKIKP	PKPdf		22 25 52.7	-0.6	
SPITS	Spitsbergen Ar	121.22	357	PKP	PKPdf		22 25 52.6	-1.9	
	comp=Z,3.3nm,0.6s,baz=92,slow=5.1,SNR=8.1								
AKTK	Aktyubinsk	126.85	319	PKP	PKPdf		22 26 04.8	-1.2	
AKTO	Aktyubinsk	126.85	319	PKP	PKPdf		22 26 04.8	-1.2	
	comp=Z,1.5nm,0.5s,baz=83,slow=1.8,SNR=8.3								
BOSA	Boshof	127.05	205	PKP	PKPdf		22 26 05.4	-1.8	
	comp=Z,1.3nm,0.5s,baz=175,slow=3.1,SNR=4.6								
KEV	Kevo	127.89	349	epkp	PKPdf		22 26 05.2	-2.3	
ARCES	ARCESS Array B	128.34	350	PKP	PKPdf		22 26 07.1	-1.3	
	comp=Z,3.6nm,0.6s,baz=32,slow=1.2,SNR=25								
ARCES	ARCESS Array B	128.34	350	PKP	PKPdf		22 26 07.1	-1.3	
JOF	Joensuu	132.62	343	ePKIKP	PKPdf		22 26 13.8	-2.8	
JOF				pmax	pmax				
	comp=Z,6.0nm,0.5s								
JOF	Joensuu	132.62	343	epkp	PKPdf		22 26 13.8	-2.8	
	comp=Z,6.2nm,0.5s								
KAF	Kangasniemi	134.62	345	epkp	PKPdf		22 26 17.2	-3.2	
FINES	FINESS Array B	135.25	344	PKhKP			22 26 13.3		
	comp=Z,1.0nm,0.6s,baz=72,slow=4.5,SNR=5.9								
FINES				PKP	PKPdf		22 26 21.2	-0.3	
	comp=Z,2.0nm,0.5s,baz=180,slow=0.2,SNR=5.5								
OBN	Obninsk	136.37	332	ePKPdf	PKPdf		22 26 22.1	-1.7	
NOA	NORSAR Array B	138.37	354	PKhKP			22 26 18.6		
	comp=Z,0.8nm,0.6s,baz=22,slow=3.9,SNR=7.3								
NOA				PKP	PKPdf		22 26 27.8	+0.4	
	comp=Z,1.6nm,0.6s,baz=14,slow=4.0,SNR=9.3								
SUW	Suwalki	142.36	340	ePKP	PKPdf		22 26 31.0	-3.7	
AKASG	Malin Array Be	142.63	332	PKhKP			22 26 29.9		
	comp=Z,4.8nm,0.6s,baz=44,slow=4.4,SNR=19								
AKASG				PKP	PKPdf		22 26 36.4	+1.1	
	comp=Z,1.1nm,0.5s,baz=35,slow=2.9,SNR=5.1								
AKBB	Malin Array Si	142.63	332	ePKHKP			22 26 29.4		
KIEV	Kiev	142.65	332	ePKHKP			22 26 29.7		
MUD	Monsted U'grnd	143.09	354	ePKHKP			22 26 31.0		
MUD	Monsted U'grnd	143.09	354	i P			22 26 31.0		
BSD	Bornholm Skovb	143.53	348	ePKHKP			22 26 32.7		
BSD				pmax	pmax				
	comp=Z,5.0nm,0.7s								
BSD	Bornholm Skovb	143.53	348	i P			22 26 32.7		
	comp=Z,4.7nm,0.7s								
SIM	Simferopol'	143.75	321	d iPKIKP	PKPdf		22 26 36.4	-1.1	
SIM				pmax	pmax				
	comp=Z,60nm,0.7s								
MALT	Malatya	143.86	308	ePKPdf	PKPdf		22 26 35.9	-2.0	
MALT	Malatya	143.86	308	⇓i P	PKPdf		22 26 36.5	-1.4	
GKP	Gorka Klasztor	144.72	345	ePKP	PKPdf		22 26 37.7	-1.2	
KIS	Kishinev	145.41	328	eP	PKPdf		22 26 36.0	-4.3	
BSEG	Bad Segeberg	145.42	352	ePKPbc	PKPbc		22 26 39.5	-1.4	
BSEG	Bad Segeberg	145.42	352	ePKPbc	PKPbc		22 26 39.5	-1.4	
LVV	L'vov	145.49	335	ePKIKP	PKPdf		22 26 39.4	-0.9	
IAS	Iasi	145.90	329	PKP2	PKPdf		22 26 41.7	+0.6	
LEOM	Leova	146.05	327	⇓PKP2	PKPdf		22 26 42.3	+0.9	
LEOM	Leova	146.05	327	⇓i P	PKPdf		22 26 42.3	+0.9	
KWP	Kalwaria Pacla	146.15	336	ePKP	PKPdf		22 26 42.0	+0.6	
KWP	Kalwaria Pacla	146.15	336	ePKPdf	PKPdf		22 26 39.7	-1.7	
KWP	Kalwaria Pacla	146.15	336	⇓i P	PKPdf		22 26 42.4	+0.9	
TLCR		146.61	325	⇑PKP2	PKPdf		22 26 43.8	+1.4	
TLCR		146.61	325	⇑i P	PKPdf		22 26 43.8	+1.4	
BUR08	Bucovina Ar. S	146.67	332	ePKPbc	PKPbc		22 26 43.6	-1.1	
BURAR	Bucovina Array	146.69	332	⇓PKP2	PKPbc		22 26 44.2	-0.5	
BURAR	Bucovina Array	146.69	332	⇓i P	PKPdf		22 26 44.2	+1.8	
OJC	Ojcow	146.69	340	ePKP	PKPdf		22 26 42.8	+0.4	
BR131	Keskin Array S	146.70	313	ePKPab	PKPbc		22 26 43.8	-1.3	
BRTR	Keskin Array B	146.70	313	PKP	PKPdf		22 26 41.9	-0.8	
	comp=Z,7.8nm,0.6s,baz=110,slow=3.3,SNR=46								
BRTR				PKPbc	PKPbc		22 26 44.1	-1.0	
	comp=Z,7.6nm,0.6s,baz=137,slow=4.7,SNR=47								
NRDL	Niedersach Rie	146.86	351	ePKPbc	PKPbc		22 26 43.7	-1.3	
STHS	Stebnicka Huta	146.87	337	ePKP2	PKPbc		22 26 44.9	-0.3	
STHS	Stebnicka Huta	146.87	337	ePKP	PKPbc		22 26 44.9	-0.3	
KOLS	Kolonicke sedl	146.88	336	ePKIKP	PKPdf		22 26 42.1	-0.6	
KOLS				e			22 26 44.4		
KOLS	Kolonicke sedl	146.88	336	ePKP	PKPdf		22 26 42.0	-0.7	
KOLS				e			22 26 44.4		
UZH	Uzhgorod	147.12	336	⇑iPKP2	PKPbc		22 26 45.0	-0.9	
KSP	Ksiaz	147.17	344	ePKP	PKPbc		22 26 45.3	-0.6	
KSP	Ksiaz	147.17	344	ePKP2	PKPbc		22 26 45.2	-0.7	
NIE	Niedzica	147.20	338	ePKP2	PKPbc		22 26 45.6	-0.5	
VRI	Vrincioaia	147.24	328	⇑PKP2	PKPbc		22 26 45.5	-0.8	
VRI	Vrincioaia	147.24	328	⇑i P	PKPbc		22 26 45.5	-0.8	
PLOR	Plostina	147.29	328	⇓PKP2	PKPab		22 26 49.4	+0.1	
PLOR	Plostina	147.29	328	⇓i P	PKPab		22 26 49.4	+0.1	
IBBN	Ibbenburen	147.32	354	ePKPbc	PKPbc		22 26 45.2	-1.1	
IBBN				ePKPab	PKPab		22 26 47.9	-1.3	
HARR	Harsova	147.41	325	⇓PKP2	PKPbc		22 26 46.2	-0.6	
HARR	Harsova	147.41	325	⇓i P	PKPbc		22 26 46.2	-0.6	
TRPA	Tarpa	147.43	335	⇓i P	PKPbc		22 26 45.8	-0.9	
CLZ	Clausthal	147.46	351	ePKPbc	PKPbc		22 26 45.7	-0.9	
CLZ				ePKPab	PKPab		22 26 48.8	-0.9	
CLZ	Clausthal	147.46	351	ePKP2	PKPab		22 26 48.8	-0.9	
CLZ	Clausthal	147.46	351	ePKPbc	PKPbc		22 26 45.7	-0.9	
CLZ				ePKPab	PKPab		22 26 48.8	-0.9	
CLL	Collm	147.51	348	ePKPbc	PKPbc		22 26 45.5	-1.3	
CLL				ePKPab	PKPab		22 26 48.7	-1.2	
CLL	Collm	147.51	348	⇓i PKP	PKPbc		22 26 45.8	-1.0	
CLL				i PKP	PKPab		22 26 48.6	-1.3	
CLL				epPKP	pPKPdf		22 28 22.0	+8.4	
CLL	Collm	147.51	348	⇓i PKPbc	PKPbc		22 26 45.8	-1.0	
	comp=Z,20nm,0.7s								
CLL				i PKiKP	PKiKP		22 26 48.3	-0.3	
	comp=Z,15nm,0.8s								
CLL				epPKiKP			22 28 22.0		
CLL				⇑i SKPbc	SKPbc		22 29 48.2	-1.2	
	comp=Z,9.0nm,1.4s								
OKC	Ostrava-Krasne	147.55	341	⇑ePKP	PKPbc		22 26 46.1	-0.9	
OKC				ePKPAB	PKPab		22 26 50.0	-0.2	
UPC	Upice	147.55	344	⇑ePKP	PKPbc		22 26 46.2	-0.8	
UPC				ePKPAB	PKPab		22 26 50.0	-0.2	
DPC	Dobruska-Polom	147.61	343	⇑ePKP	PKPbc		22 26 46.7	-0.4	
DPC				ePKPAB	PKPab		22 26 50.5	+0.1	
BRG	Berggiesshubel	147.72	346	ePKPbc	PKPbc		22 26 46.2	-1.2	
BRG				ePKPab	PKPab		22 26 49.8	-1.0	
BRG	Berggiesshubel	147.72	346	ePKP	PKPdf		22 26 42.5	-1.5	
	comp=Z,5.2nm,1.3s								
BRG	Berggiesshubel	147.72	346	i PKP	PKPbc		22 26 46.3	-1.1	
	comp=Z,11nm,0.7s								
BRG				i			22 26 49.5		
	comp=Z,8.7nm,0.7s								
BRG				pPKP	pPKPdf		22 27 51.0	-23	
BRG				esPKP			22 28 24.8		
	comp=Z,2.7nm,1.1s								
BRG				eSPK	SKPbc		22 29 48.8	-1.1	
	comp=Z,3.5nm,1.0s								
BRG				i			22 36 33.0		
BRG				e			22 38 18.8		
	comp=Z,3.7nm,1.0s								
BRG									
	comp=N,220nm,29.0s								
BRG									
	comp=E,112nm,27.4s								
BRG									
	comp=Z,202nm,19.6s								
BRG	Berggiesshubel	147.72	346	i P	SKPbc		22 29 49.0	-0.9	
	comp=Z,3.5nm,1.0s								
BRG	Berggiesshubel	147.72	346	ePKIKP	PKPdf		22 26 42.5	-1.5	
BRG				pmax	pmax				
	comp=Z,3.0nm,1.3s								
BRG	Berggiesshubel	147.72	346	i PKP2	PKPbc		22 26 46.3	-1.1	
BRG				i			22 26 49.5		
BRG				pmax	pmax				
	comp=Z,7.0nm,0.7s								
BRG				pmax	pmax				
	comp=Z,5.0nm,0.7s								
BRG				pmax	pmax				
	comp=N,2.0nm,1.1s								
BRG				pmax	pmax				
	comp=N,2.0nm,1.0s								
BRG				pmax	pmax				
	comp=Z,2.0nm,1.0s								
BRG				MLR	MLR				
	comp=N,132nm,29.0s								
BRG				MLR	MLR				
	comp=E,67nm,27.4s								
BRG				MLR	MLR				
	comp=Z,121nm,19.6s								
MORC	Moravsky Berou	147.78	342	P	PKPbc		22 26 47.2	-0.4	
MORC	Moravsky Berou	147.78	342	⇓i P	PKPbc		22 26 46.5	-1.1	
MMAI	Mount Meron Ar	147.85	301	PKPbc	PKPbc		22 26 48.3	0.0	
	comp=Z,12nm,0.6s,baz=66,slow=6.5,SNR=29								
MLR	Muntele Rosu	147.89	328	⇓PKP2	PKPbc		22 26 47.0	-1.0	
MLR	Muntele Rosu	147.89	328	⇓i P	PKPbc		22 26 47.0	-1.0	
PVCC	Panska Ves	147.90	345	⇑ePKP	PKPbc		22 26 47.1	-0.7	
PVCC				ePKPAB	PKPab		22 26 51.2	-0.3	
KECS	Kecovo	147.93	337	ePKP2	PKPbc		22 26 47.4	-0.6	
KECS	Kecovo	147.93	337	ePKP	PKPbc		22 26 47.4	-0.6	
VOIR		148.37	329	⇑PKP2	PKPbc		22 26 49.1	-0.1	
VOIR		148.37	329	P	PKPbc		22 26 48.5	-0.7	
VOIR		148.37	329	⇑i P	PKPbc		22 26 49.0	-0.2	
PRU	Pruhonice	148.40	345	⇑ePKP	PKPbc		22 26 48.6	-0.6	
PRU				ePKPAB	PKPab		22 26 53.4	-0.2	
MOX	Moxa	148.41	349	ePKP	PKPbc		22 26 48.0	-1.1	
MOX									
	comp=Z,100nm,22.0s								
MOX	Moxa	148.41	349	ePKPbc	PKPbc		22 26 47.8	-1.3	
MOX				ePKPab	PKPab		22 26 52.4	-1.2	
DRGR		148.41	333	PKP2	PKPbc		22 26 48.6	-0.7	
TANN	Tannenbergstha	148.46	348	ePKPbc	PKPbc		22 26 48.4	-0.9	
TANN				ePKPab	PKPab		22 26 52.9	-0.9	
VRAC	Vranov	148.48	342	P	PKPbc		22 26 48.5	-0.9	
VRAC	Vranov	148.48	342	⇑i P	PKPbc		22 26 48.7	-0.7	
VYHS	Vyhne	148.50	339	ePKP2	PKPbc		22 26 48.6	-0.8	
VYHS	Vyhne	148.50	339	ePKP	PKPbc		22 26 48.6	-0.8	
UBBA	Unterbreizbach	148.50	351	ePKPbc	PKPbc		22 26 47.5	-1.9	
KOLL	Kolacno	148.57	340	ePKP	PKPbc		22 26 49.1	-0.5	
KOLL				e			22 26 55.6		
KOLL	Kolacno	148.57	340	ePKP	PKPbc		22 26 49.1	-0.5	
KOLL				e			22 26 55.6		
PSZ	Piszkesteto	148.62	337	⇑PKHKP	PKPbc		22 26 48.5	-1.3	
PSZ	Piszkesteto	148.62	337	ePKPdf	PKPdf		22 26 43.0	-2.6	
PSZ				ePKPbc	PKPbc		22 26 48.9	-0.8	
PSZ	Piszkesteto	148.62	337	⇑i P	PKPbc		22 26 48.5	-1.3	
NKC	Novy Kostel	148.64	348	⇑ePKP	PKPbc		22 26 49.0	-0.7	
NKC				ePKPAB	PKPab		22 26 53.7	-0.9	
TREC	Trest	148.80	343	⇑ePKP	PKPbc		22 26 49.3	-0.9	
TREC				ePKPAB	PKPab		22 26 54.8	-0.5	
EIL	Elat	149.00	295	PKPbc	PKPbc		22 26 50.6	-0.7	
	comp=Z,12nm,0.9s,baz=348,slow=4.2,SNR=8.1								
EIL				PKPab	PKPab		22 26 56.1	-0.7	
	comp=Z,4.7nm,0.7s,baz=21,slow=8.1,SNR=4.7								
UCC	Uccle	149.06	358	PKPbc	PKPbc		22 26 49.5	-1.3	
ROTZ	Rotzenmuhle	149.13	348	ePKPbc	PKPbc		22 26 50.2	-0.8	
ROTZ				ePKPab	PKPab		22 26 55.8	-0.8	
MEM	Membach	149.16	356	PKPbc	PKPbc		22 26 49.8	-1.2	
MEM				PKPab	PKPab		22 26 55.4	-1.2	
TNS	Taunus Mts	149.30	352	ePKPbc	PKPbc		22 26 50.4	-1.0	
TNS				ePKPab	PKPab		22 26 56.1	-1.2	
TNS	Taunus Mts	149.30	352	ePKP2	PKPab		22 26 56.1	-1.2	
TNS	Taunus Mts	149.30	352	ePKPbc	PKPbc		22 26 50.4	-1.0	
TNS				ePKPab	PKPab		22 26 56.1	-1.2	
ZST	Bratislava	149.32	341	ePKP	PKPbc		22 26 51.3	-0.2	
ZST				e			22 26 58.0		
ZST	Bratislava	149.32	341	ePKP	PKPbc		22 26 51.2	-0.3	
ZST				e			22 26 58.0		
SNF	Seneffe	149.35	358	PKPbc	PKPbc		22 26 50.4	-1.0	
BCLA	Clavier	149.39	356	PKPbc	PKPbc		22 26 54.9	+3.3	
BCLA				PKPab	PKPab		22 26 57.5	-0.1	
GRA1	Grafenberg Arr	149.39	349	ePKPbc	PKPbc		22 26 50.8	-0.8	
GRA1				ePKPab	PKPab		22 26 56.7	-1.0	
GRF	Grafenberg Arr	149.39	349	ePKPbc	PKPbc		22 26 50.8	-0.8	
GRF				ePKPab	PKPab		22 26 56.7	-1.0	
GRF	Grafenberg Arr	149.39	349	ePKP2	PKPab		22 26 56.7	-1.0	
GRF	Grafenberg Arr	149.39	349	ePKHKP	PKPbc		22 26 50.8	-0.8	
GRF				e			22 26 56.7		
KHC	Kasperske Hory	149.43	346	ePKPdf	PKPdf		22 26 45.0	-1.9	
KHC				ePKPbc	PKPbc		22 26 50.9	-0.9	
KHC				ePKPab	PKPab		22 26 56.5	-1.3	
WET	Wettzell	149.58	346	ePKPbc	PKPbc		22 26 50.9	-1.2	
WET				ePKPab	PKPab		22 26 57.8	-0.7	
WET	Wettzell	149.58	346	ePKP2	PKPab		22 26 57.8	-0.7	
WET	Wettzell	149.58	346	ePKPbc	PKPbc		22 26 50.9	-1.2	
WET				ePKPab	PKPab		22 26 57.8	-0.7	
GEC2	GERESS Array S	149.67	345	ePKPbc	PKPbc		22 26 51.2	-1.1	
GEC2				ePKPab	PKPab		22 26 58.0	-0.8	
GEC2	GERESS Array S	149.67	345	ePKPbc	PKPbc		22 26 51.1	-1.2	
GEC2				ePKPab	PKPab		22 26 57.8	-1.1	
GEC2	GERESS Array S	149.67	345	ePKPbc	PKPbc		22 26 51.2	-1.1	
GEC2				ePKPab	PKPab		22 26 58.0	-0.8	
GERES	GERESS Array B	149.67	345	PKPbc	PKPbc		22 26 51.1	-1.2	
	comp=Z,7.3nm,0.6s,baz=90,slow=1.3,SNR=66								
GERES				PKPab	PKPab		22 26 58.6	-0.2	
	comp=Z,2.1nm,0.6s,baz=24,slow=3.6,SNR=7.8								
GIVF	Givet	149.74	357	ePKP1	PKPbc		22 26 51.2	-1.2	
	comp=Z,28nm,0.7s								
DOU	Dourbes	149.75	357	PKPbc	PKPbc		22 26 51.4	-1.1	
DOU				PKPab	PKPab		22 26 57.5	-1.6	
BAIF	Baives	149.80	358	ePKP1	PKPbc		22 26 51.5	-1.1	
	comp=Z,37nm,0.9s								
BZS	Buzias	149.81	333	P	PKPbc		22 26 51.5	-1.2	
BZS	Buzias	149.81	333	⇓i P	PKPbc		22 26 51.5	-1.3	
CONA	Conrad Observa	149.94	342	i PKPdf	PKPbc		22 26 52.2	-0.7	
	comp=Z,18nm,0.6s,SNR=23								
WLF	Walferdange	150.09	355	PKPbc	PKPbc		22 26 52.5	-0.8	
WLF	Walferdange	150.09	355	ePKPbc	PKPbc		22 26 52.4	-0.9	
WLF				ePKPab	PKPab		22 26 59.5	-1.0	
WLF	Walferdange	150.09	355	ePKPbc	PKPbc		22 26 52.3	-1.0	
MOA	Molln	150.45	344	⇑iPKPdf	PKPbc		22 26 52.7	-1.5	
	comp=Z,6.4nm,0.6s								
PKSM	Moragy	150.51	337	P	PKPbc		22 26 53.0	-1.4	
PKSM	Moragy	150.51	337	⇑i P	PKPbc		22 26 52.6	-1.8	
STU	Stuttgart	150.62	351	ePKPbc	PKPbc		22 26 53.6	-1.0	
STU				ePKPab	PKPab		22 27 01.5	-1.3	
STU	Stuttgart	150.62	351	ePKPbc	PKPbc		22 26 53.5	-1.1	
STU				ePKPab	PKPab		22 27 00.8	-2.0	
KDZ	Kurdzhali	150.80	323	i P	PKPbc		22 26 54.2	-1.0	
FUR	Furstenfeldbru	150.84	348	ePKPbc	PKPbc		22 26 53.8	-1.3	
FUR				ePKPab	PKPab		22 27 02.7	-1.0	
FUR	Furstenfeldbru	150.84	348	ePKPbc	PKPbc		22 26 53.8	-1.3	
FUR			

ITM	**Ithomi**	**155.76**	**320**	P	PKPab	22 27 24.7	-0.4
SMRF	**Simiane la Rot**	**155.78**	**355**	*e*PKP1	PKPdf	22 27 03.0	+6.7
comp=Z,5.5nm,0.7s							
PBRG	**Braganca**	**156.74**	**18**	*e*PKPab	PKPab	22 27 28.0	-1.0
MVO	**Moncorvo**	**157.25**	**19**	*e*PKPdf	PKPdf	22 26 57.4	-0.9
PTOM	**Tomar**	**158.17**	**23**	*e*PKPab	PKPab	22 27 34.1	-1.2
PCBR	**Castelo Branco**	**158.30**	**21**	*e*PKPab	PKPab	22 27 34.4	-1.5
PMRV	**Marv??o**	**158.70**	**21**	*e*PKPab	PKPab	22 27 34.4	-3.2
PESTR	**Estremoz**	**159.13**	**22**	*e*PKPab	PKPab	22 27 38.2	-1.3
EVO	**Evora**	**159.27**	**24**	*e*PKPdf	PKPdf	22 27 01.1	+0.3
EVO	**Evora**	**159.27**	**24**	*e*PKPab	PKPab	22 27 38.8	-1.3
ESDC	**Sonseca Array**	**159.46**	**14**	PKPab	PKPab	22 27 40.4	-0.5
comp=Z,0.5nm,0.5s,baz=358,slow=4.9,SNR=4.1							
PBAR	**Barrancos**	**159.94**	**22**	*e*PKPab	PKPab	22 27 41.6	-1.5
DBIC	**Dimbokro**	**165.12**	**150**	PKP	PKPdf	22 27 04.6	-2.7
comp=Z,1.7nm,0.6s,baz=286,slow=7.2,SNR=4.0							
TOA0	**Torodi Ar. Sit**	**173.32**	**174**	*e*PKPdf	PKPdf	22 27 09.9	-2.4
TORD	**Torodi Ar. Bea**	**173.32**	**174**	PKP	PKPdf	22 27 10.0	-2.3
comp=Z,2.3nm,0.9s,baz=352,slow=0.5,SNR=11							
TORD				PKPab	PKPab	22 28 42.0	-0.5
comp=Z,1.0nm,0.6s,baz=176,slow=4.7,SNR=9.5							

IDC ***15*** *22:10:33.5±0.5, 31°.30N×104°.00E, h0km, mb4.5/31, mb1 4.6/32, mb1mx4.6/34, mbtmp4.5/32, ML4.0/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/39, Error ellipse: s-maj=15.4km s-min=11.1km az=39.0*

ISCJB ***15*** *22:10:33.6±1.1, 31°.29N±0°.02×103°.99E±0°.02, h12km±6km, mb4.7/110, MS3.7/10, Error ellipse: s-maj=4.1km s-min=3.4km az=17.3*

BJI ***15*** *22:10:34.2, 31°.32N×104°.03E, h10km, mB4.8/22, mb4.7/27, ML4.5/17, Ms4.5/43, Ms7 4.3/37*

NEIC ***15*** *22:10:35.1±0.1, 31°.31N×104°.02E, h10km, mb4.9/57, Error ellipse: s-maj=4.1km s-min=3.0km az=204.0*

MOS ***15*** *22:10:36.6±0.7, 31°.30N×104°.03E, h33km, mb5.0/63, Error ellipse: s-maj=7.5km s-min=4.4km az=117.1*

SZGRF ***15*** *22:10:48.0, 31°.90N×102°.22E, h33km, mb5.0, Sichuan, China*

ISC 15 22:10:34.3±0.9, 31°.32N±0°.02×103°.98E±0°.02, h3km±5km, n326, d0°91/337, mb4.7/110, MS3.7/10, 37C-13D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.75**	**359**	*e*Pn	**Pn**	**22 11 49.8**	**+3.0**
LZH				Sn	**Sn**	**22 12 48.0**	**+5.6**
LZH				Sg	**Sg**	**22 13 05.8**	**-1.2**
LZH				smax			
comp=N,550nm,0.8s							
LZH				smax			
comp=E,830nm,1.0s							
LZH				LR	LR		
comp=N,5μm,6.8s							
LZH				LR	LR		
comp=Z,5μm,7.6s							
ENH	**Enshi**	**4.85**	**101**	*e*Pn	**Pn**	**22 11 48.6**	**+0.4**
ENH				*e*Pg	**Pg**	**22 12 07.8**	**+0.5**
ENH				*e*Sg	**Sg**	**22 13 08.8**	**-1.3**
XAN	**Xi'an**	**4.97**	**56**	Pn	**Pn**	**22 11 50.1**	**+0.3**
XAN				Pg	**Pg**	**22 12 06.4**	**-3.1**
XAN				Sn	**Sn**	**22 12 45.8**	**-1.9**
XAN				Sg	**Sg**	**22 13 07.4**	**-6.4**
XAN				smax			
comp=N,380nm,0.8s							
XAN				smax			
comp=E,520nm,0.8s							
GYA	**Guiyang**	**5.39**	**153**	Pn	**Pn**	**22 11 55.9**	**+0.4**
GYA				smax			
comp=N,780nm,1.0s							
GYA				smax			
comp=E,580nm,0.9s							
GYA				LR	LR		
comp=N,2μm,4.3s							
GYA				LR	LR		
comp=E,2μm,4.0s							
GYA				LR	LR		
comp=Z,2μm,5.2s							
KMI	**Kunming**	**6.27**	**190**	Pn	**Pn**	**22 12 08.8**	**+1.1**
KMI				Sn	**Sn**	**22 13 19.5**	**-0.4**
KMI				smax			
comp=N,190nm,1.6s							
KMI				smax			
comp=E,160nm,1.0s							
KMI				LR	LR		
comp=N,3μm,6.2s							
KMI				LR	LR		
comp=E,940nm,5.2s							
KMI				LR	LR		
comp=Z,2μm,6.6s							
GTA	**Gaotai**	**8.76**	**338**	*e*P	**Pn**	**22 12 45.8**	**+4.0**
GTA				pP		22 12 48.9	
GTA				sP		22 12 51.8	
GTA				S	**Sn**	**22 14 24.6**	**+3.6**
GTA				sS		22 14 29.0	
GTA				pmax	pmax		
comp=Z,6.0nm,1.6s							
GTA				pmax	pmax		
comp=Z,77nm,4.5s							
GTA				LR	LR		
comp=N,2μm,11.3s							
GTA				LR	LR		
comp=E,2μm,12.2s							
GTA				LR	LR		
comp=Z,2μm,10.4s							
WHN	**Wuhan**	**8.94**	**92**	P	**Pn**	**22 12 47.1**	**+2.8**
WHN				S	**Sn**	**22 14 20.6**	**-4.9**
WHN				LR	LR		
comp=N,2μm,5.5s							
WHN				LR	LR		
comp=E,6μm,8.2s							
WHN				LR	LR		
comp=Z,6μm,7.3s							
BTO	**Baotou**	**10.47**	**26**	*e*P	Px	22 13 15.3	
BTO				S	Sx	22 15 13.4	
BTO				LR	LR		
comp=N,390nm,10.2s							
BTO				LR	LR		
comp=E,230nm,9.7s							
LSA	**Lhasa**	**11.19**	**265**	P	**Pn**	**22 13 13.9**	**-1.2**
LSA				S	**Sn**	**22 15 21.3**	**+0.6**
LSA				LR	LR		
comp=N,460nm,12.4s							
LSA				LR	LR		
comp=E,930nm,10.2s							
LSA				LR	LR		
comp=Z,1μm,10.2s							
LSA	**Lhasa**	**11.19**	**265**	*e*P	**Pn**	**22 13 17.1**	**+2.0**
LSA				pmax	pmax		
comp=Z,13nm,0.7s							
LSA	**Lhasa**	**11.19**	**265**	*e*Pn	**Pn**	**22 13 17.1**	**+2.0**
comp=Z,13nm,0.7s							
HHC	**Hu-ho-hao-te**	**11.31**	**31**	*e*P	**Pn**	**22 13 16.4**	**-0.3**
HHC				pP		22 13 23.4	
HHC				sP		22 13 28.3	
HHC				S	**Sn**	**22 15 23.3**	**-0.3**
HHC				sS		22 15 34.5	
HHC				SS		22 15 37.5	
HHC				pmax	pmax		
comp=Z,10.0nm,1.0s							
HHC				pmax	pmax		
comp=Z,350nm,5.5s							
HHC				LR	LR		
comp=N,910nm,4.8s							
HHC				LR	LR		
comp=E,670nm,4.2s							
HHC				LR	LR		
comp=Z,630nm,4.9s							
TIA	**Tai'an**	**11.97**	**62**	*e*P	**Pn**	**22 13 27.3**	**+1.5**
TIA				LR	LR		
comp=N,340nm,7.0s							
SHL	**Shillong**	**12.09**	**245**	*e*P	**Pn**	**22 13 23.0**	**-4.5**
SHL				*e*S	Sx	22 16 32.0	
NJ2	**Nanjing**	**12.69**	**83**	*e*P	**Pn**	**22 13 36.8**	**+1.1**
NJ2				pP		22 13 43.6	
NJ2				PP		22 13 46.9	
NJ2				sP		22 13 49.3	
NJ2				S	**Sn**	**22 15 59.3**	**+1.8**
NJ2				sS		22 16 10.8	
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
NJ2				pmax	pmax		
comp=Z,60nm,3.6s							
NJ2				LR	LR		
comp=N,1μm,11.9s							
NJ2				LR	LR		
comp=E,1μm,12.2s							
NJ2				LR	LR		
comp=Z,4μm,11.9s							
BJI	**Beijing**	**13.18**	**45**	P	**Pn**	**22 13 42.0**	**-0.3**
BJI				pmax	pmax		
comp=Z,6.0nm,0.9s							
BJI				pmax	pmax		
comp=Z,96nm,5.1s							
BJI				LR	LR		
comp=N,790nm,4.8s							
BJI				LR	LR		
comp=E,570nm,4.1s							
QIZ	**Qiongzhong**	**13.34**	**155**	P	**Pn**	**22 13 44.5**	**0.0**
QIZ				pP		22 13 47.3	
QIZ				S	**Sn**	**22 16 14.0**	**+0.6**
QIZ				pmax	pmax		
comp=Z,170nm,4.8s							
QIZ				LR	LR		
comp=N,780nm,7.2s							
QIZ				LR	LR		
comp=Z,800nm,6.7s							
QZH	**Quanzhou**	**14.37**	**113**	*e*P	**Pn**	**22 13 59.6**	**+1.0**
QZH				S	**Sn**	**22 16 39.1**	**+0.6**
QZH				LR	LR		
comp=N,3μm,4.6s							
QZH				LR	LR		
comp=E,2μm,5.8s							
QZH				LR	LR		
comp=Z,4μm,7.6s							
BDT	**Bhumibol Dam**	**14.73**	**199**	P	**Pn**	**22 14 11.0**	**+7.4**
comp=Z,16nm,0.9s							
NST	**Nakhon Sawan**	**15.97**	**194**	P	**Pn**	**22 14 20.0**	**0.0**
GUN	**Gumba**	**16.11**	**262**	*e*P	**Pn**	**22 14 20.1**	**-1.6**
comp=Z,127nm,0.8s							
DL2	**Dalian**	**16.29**	**58**	*e*P	**Pn**	**22 14 27.3**	**+3.3**
DL2				LR	LR		
comp=N,260nm,21.6s							
DL2				LR	LR		
comp=Z,280nm,14.6s							
SONM	**Songino Array**	**16.59**	**6**	Pn	**Pn**	**22 14 28.1**	**+0.2**
comp=Z,0.5nm,0.3s,baz=184,slow=14,SNR=33							
SONM	**Songino Array**	**16.59**	**6**	P	**Pn**	**22 14 28.1**	**+0.3**
SONM				pmax	pmax		
comp=Z,1.0nm,0.3s							
PKI	**Pulchoki**	**16.60**	**262**	*e*P	**Pn**	**22 14 26.5**	**-1.6**
comp=Z,41nm,0.5s							
PKIN	**Phulchoki**	**16.61**	**262**	*e*P	**Pn**	**22 14 26.6**	**-1.6**
comp=Z,72nm,0.6s							
KKN	**Kakani**	**16.65**	**263**	*e*P	**Pn**	**22 14 26.5**	**-2.2**
comp=Z,93nm,0.9s							
ULN	**Ulaanbaatar**	**16.69**	**7**	*e*P	**Pn**	**22 14 29.4**	**+0.4**
ULN				pmax	pmax		
comp=Z,17nm,0.9s							
ULN	**Ulaanbaatar**	**16.69**	**7**	*e*Pn	**Pn**	**22 14 29.4**	**+0.4**
comp=Z,17nm,0.9s							
YHNB	**Yeheng**	**16.72**	**109**	*e*Pn	**Pn**	**22 14 28.6**	**-1.0**
SSLB	**Suanglung**	**16.81**	**112**	*e*Pn	**Pn**	**22 14 32.5**	**+1.8**
comp=Z,36nm,0.8s							
DMN	**Daman**	**16.85**	**262**	*e*P	**Pn**	**22 14 29.0**	**-2.2**
comp=Z,86nm,0.9s							
WMQ	**Urumqi**	**17.91**	**319**	*e*P	**Pn**	**22 14 43.8**	**-0.6**
WMQ				pmax	pmax		
comp=Z,16nm,1.0s							
WMQ				LR	LR		
comp=N,700nm,10.0s							
WMQ				LR	LR		
comp=E,860nm,9.0s							
WMQ				LR	LR		
comp=Z,180nm,14.0s							
SNY	**Shenyang**	**18.87**	**51**	⇓P	**Pn**	**22 14 58.8**	**+2.7**
SNY				S	**Sn**	**22 18 27.0**	**-0.6**
SNY				pmax	pmax		
comp=Z,9.0nm,0.9s							
SNY				pmax	pmax		
comp=Z,350nm,4.9s							
SNY				LR	LR		
comp=E,430nm,14.6s							
SNY				LR	LR		
comp=Z,290nm,14.7s							
ZAK	**Zakamensk**	**19.05**	**359**	*e*P	**Pn**	**22 14 59.0**	**+0.9**
ZAK				pmax	pmax		
comp=Z,12nm,1.1s							
TLY	**Talaya**	**20.34**	**359**	*e*P	**P**	**22 15 12.1**	**+0.5**
MOY	**Mondy**	**20.45**	**355**	*e*P	**P**	**22 15 15.0**	**+2.3**
MOY				pmax	pmax		
comp=Z,58nm,1.5s							
KSRS	**Korea Array**	**20.66**	**66**	P	**P**	**22 15 15.4**	**+0.3**
comp=Z,16nm,0.9s,baz=262,slow=11,SNR=45							
KSRS				LR	LR	22 23 08.6	
comp=Z,139nm,21.4s,MS3.3,baz=155,slow=37							
KSRS	**Korea Array**	**20.66**	**66**	P	**P**	**22 15 15.4**	**+0.3**
KSRS				pmax	pmax		
comp=Z,16nm,0.9s							
KSRS				MLR	MLR		
comp=Z,139nm,21.5s,MS3.3							
IRK	**Irkutsk**	**20.91**	**0**	⇑*i*P	**P**	**22 15 18.5**	**+0.8**
IRK				pmax	pmax		
comp=Z,117nm,1.2s							
CN2	**Changchun**	**21.02**	**48**	⇑P	**P**	**22 15 20.0**	**+1.0**
CN2				sP	sP	22 15 27.3	+7.2
CN2				*e*S	**S**	**22 19 02.1**	**-11**
CN2				pmax	pmax		
comp=Z,100nm,0.7s,mb5.2							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,400nm,14.0s,MS4.0							
CN2				LR	LR		
comp=E,300nm,14.0s,MS4.0							
CN2				LR	LR		
comp=Z,200nm,15.0s,MS3.6							
HIA	**Hailar**	**21.50**	**29**	*e*P	**P**	**22 15 24.0**	**-0.2**
HIA				pmax	pmax		
comp=Z,35nm,0.7s							
HIA	**Hailar**	**21.50**	**29**	*e*P	**P**	**22 15 24.0**	**-0.2**
comp=Z,35nm,0.7s,mb4.9							
DDI	**Dehra Dun**	**22.28**	**274**	*ex*	x	22 15 34.0	
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**22 15 38.2**	**+0.8**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**22 15 38.2**	**+0.7**
comp=Z,6.5nm,0.5s,mb4.3,baz=124,slow=10,SNR=73							
MKAR				LR	LR	22 25 01.2	
comp=Z,159nm,18.6s,MS3.5,baz=120,slow=38							
MKAR	**Makanchi Array**	**22.75**	**319**	*i* P	**P**	**22 15 38.2**	**+0.8**
MKAR				pmax	pmax		
comp=Z,7.0nm,0.5s							
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**22 15 38.2**	**+0.7**
MKAR				LR	LR	22 25 01.2	
MDJ	**Mudanjiang**	**24.04**	**49**	P	**P**	**22 15 51.4**	**+0.9**
MDJ				pP		22 15 54.3	
MDJ				S	**S**	**22 20 12.8**	**+4.5**
MDJ				pmax	pmax		
comp=Z,44nm,1.1s,mb4.8							
MDJ				pmax	pmax		
comp=Z,86nm,6.3s							
MDJ				LR	LR		
comp=Z,110nm,23.6s,MS3.3							
MDJ	**Mudanjiang**	**24.04**	**49**	*e*P	**P**	**22 15 50.8**	**+0.3**
comp=Z,43nm,0.9s,mb4.9							
KSH	**Kashi**	**24.18**	**297**	*e*P	**P**	**22 15 55.4**	**+3.6**
KSH				*e*pP		22 15 59.3	
KSH				*e*sP	sP	22 16 02.4	+9.4
KSH				*e*PP		22 16 31.0	
KSH				*e*PcP	PcP	22 19 33.1	+0.6
KSH				*e*S	**S**	**22 20 12.1**	**+1.5**
KSH				*e*sS	sS	22 20 19.3	+7.3
KSH				*e*SS		22 21 08.3	
KSH				pmax	pmax		
comp=Z,28nm,1.3s,mb4.5							
KSH				LR	LR		
comp=N,310nm,7.4s							
KSH				LR	LR		
comp=E,190nm,7.6s							
ULHL	**Ulahol**	**24.64**	**304**	P	**P**	**22 15 57.7**	**+1.7**
SNR=7.5							
VLA	**Vladivostok**	**25.03**	**54**	*e*P	**P**	**22 15 59.2**	**-0.3**
VLA				pmax	pmax		
comp=Z,42nm,1.1s,mb4.9							
TKM2	**Tokmak 2**	**25.30**	**305**	P	**P**	**22 16 03.7**	**+1.8**
SNR=7.0							
TKM2	**Tokmak 2**	**25.30**	**305**	*e*P	**P**	**22 16 03.2**	**+1.2**
TKM2				*e*		22 19 34.5	
TKM2				pmax	pmax		
comp=Z,11nm,1.1s,mb4.3							
TKM2	**Tokmak 2**	**25.30**	**305**	*e*P	**P**	**22 16 03.2**	**+1.2**
comp=Z,11nm,1.1s,mb4.3							
TKM2				*e*PcP	PcP	22 19 34.5	-0.4
KZA	**Kyzart**	**25.30**	**303**	P	**P**	**22 16 04.4**	**+2.4**
SNR=27							
KBK	**Karagaybulak**	**25.68**	**304**	P	**P**	**22 16 07.3**	**+1.9**
SNR=14							
UCH	**Uchtor**	**25.87**	**303**	P	**P**	**22 16 09.4**	**+2.2**
SNR=16							
UCH	**Uchtor**	**25.87**	**303**	*e*P	**P**	**22 16 08.2**	**+1.0**
comp=Z,516nm,0.6s							
UCH				*e*PcP	PcP	22 19 36.9	+0.7
AAK	**Ala-Archa**	**26.00**	**304**	P	**P**	**22 16 10.1**	**+1.8**
comp=Z,1.4nm,0.5s,mb3.8,baz=134,slow=6.4,SNR=7.1							
AAK				LR	LR	22 27 20.6	
comp=Z,221nm,18.5s,MS3.7,baz=297,slow=39							
AAK	**Ala-Archa**	**26.00**	**304**	*e*P	**P**	**22 16 10.0**	**+1.7**
AAK				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.1							
AAK	**Ala-Archa**	**26.00**	**304**	*e*P	**P**	**22 16 10.0**	**+1.7**
comp=Z,6.4nm,0.9s,mb4.2							
AML	**Almayashu**	**26.44**	**303**	P	**P**	**22 16 14.7**	**+2.4**
SNR=8.0							
AML	**Almayashu**	**26.44**	**303**	*e*P	**P**	**22 16 13.8**	**+1.5**
comp=Z,7.9nm,0.8s,mb4.3							
AML				*e*PcP	PcP	22 19 38.2	+0.6
ZAA0	**Zalesovo Array**	**26.48**	**334**	*e*P	**P**	**22 16 12.6**	**+0.1**
ZALV	**Zalesovo Beam**	**26.48**	**334**	P	**P**	**22 16 12.7**	**+0.2**
comp=Z,44nm,1.0s,mb4.9,baz=133,slow=9.1,SNR=73							
ZALV	**Zalesovo Beam**	**26.48**	**334**	P	**P**	**22 16 12.7**	**+0.2**
ZALV				pmax	pmax		
comp=Z,44nm,1.0s,mb4.9							
EKS2	**Erkin-Say**	**26.51**	**304**	P	**P**	**22 16 14.1**	**+1.2**
SNR=6.3							
EKS2	**Erkin-Say**	**26.51**	**304**	*e*P	**P**	**22 16 13.1**	**+0.1**
comp=Z,18nm,1.4s,mb4.4							
HYB	**Hyderabad**	**26.90**	**245**	*i* P	**P**	**22 16 19.0**	**+2.3**
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**22 16 15.6**	**-1.8**
comp=Z,16nm,0.8s,mb4.6,baz=131,slow=9.0,SNR=41							
KURK				PcP	PcP	22 19 38.0	-0.8
comp=Z,2.7nm,0.7s,baz=118,slow=2.2,SNR=7.1							
KURK				LR	LR	22 28 22.4	
comp=Z,76nm,18.8s,MS3.3,baz=95,slow=40							
KURK	**Kurchatov**	**27.01**	**323**	*ce*P	**P**	**22 16 18.0**	**+0.7**
KURK				pmax	pmax		
comp=Z,22nm,1.0s,mb4.6							
KURK	**Kurchatov**	**27.01**	**323**	*e*P	**P**	**22 16 17.8**	**+0.5**
comp=Z,27nm,1.2s,mb4.7							
BOD	**Bodaibo**	**27.38**	**12**	*e*P	**P**	**22 16 21.1**	**+0.5**
KLR	**Kul'dur**	**27.49**	**41**	*e*P	**P**	**22 16 14.0**	**-7.7**
MAJO	**Matsushiro**	**28.77**	**70**	*e*P	**P**	**22 16 32.6**	**-0.7**
MAT	**Matsushiro**	**28.77**	**70**	P	**P**	**22 16 31.8**	**-1.5**
MAT				*e*S	**S**	**22 21 30.0**	**+6.5**
MJAR	**Matsushiro Arr**	**28.77**	**70**	P	**P**	**22 16 32.8**	**-0.5**
comp=Z,1.5nm,0.5s,mb4.0,baz=270,slow=10,SNR=6.8							
MJAR	**Matsushiro Arr**	**28.77**	**70**	P	**P**	**22 16 32.8**	**-0.5**
MJAR				pmax	pmax		
comp=Z,2.0nm,0.5s							
NRGR	**Nerungri**	**29.16**	**24**	*e*P	**P**	**22 16 45.8**	**+9.3**
KBL	**Kabul**	**29.41**	**286**	*e*P	**P**	**22 16 40.2**	**+1.2**
KBL				pmax	pmax		
comp=Z,15nm,1.0s,mb4.7							
KBL	**Kabul**	**29.41**	**286**	*e*P	**P**	**22 16 40.2**	**+1.2**
comp=Z,15nm,1.0s,mb4.7							
PALK	**Pallekele**	**32.33**	**227**	P	**P**	**22 17 04.7**	**-0.2**
BVAR	**Borovoye Array**	**32.56**	**322**	P	**P**	**22 17 07.0**	**+0.6**
comp=Z,3.8nm,0.7s,mb4.5,baz=115,slow=8.4,SNR=18							
BVAR				PcP	PcP	22 19 52.1	-0.8
comp=Z,2.9nm,0.5s,baz=139,slow=3.2,SNR=10							
BVAR				LR	LR	22 30 51.9	
comp=Z,148nm,21.0s,MS3.7,baz=108,slow=37							
BVAR	**Borovoye Array**	**32.56**	**322**	P	**P**	**22 17 07.0**	**+0.5**
BVAR						22 19 52.1	
BVAR				pmax	pmax		
comp=Z,4.0nm,0.7s							
BVAR				pmax	pmax		
comp=Z,3.0nm,0.5s							
BVAR				MLR	MLR		
comp=Z,148nm,21.0s							
BRVK	**Borovoye**	**32.63**	**322**	*ce*P	**P**	**22 17 08.0**	**+0.9**
BRVK				pmax	pmax		
comp=Z,18nm,1.7s,mb4.7							
BRVK	**Borovoye**	**32.63**	**322**	*e*P	**P**	**22 17 07.2**	**+0.1**
comp=Z,8.6nm,0.8s,mb4.7							
ASAJ	**Asahikawa**	**32.81**	**56**	P	**P**	**22 17 08.9**	**+0.1**
comp=Z,4.9nm,0.6s,mb4.6,baz=238,slow=12,SNR=3.7							
ASAJ	**Asahikawa**	**32.81**	**56**	P	**P**	**22 17 08.9**	**+0.1**
ASAJ				pmax	pmax		
comp=Z,5.0nm,0.6s							
YSS	**Yuzh-Sakhalins**	**33.50**	**51**	*e*P	**P**	**22 17 14.0**	**-0.8**
YSS				pmax	pmax		
comp=Z,40nm,1.1s,mb5.3							
YSS	**Yuzh-Sakhalins**	**33.50**	**51**	*e*P	**P**	**22 17 14.3**	**-0.4**
YAK	**Yakutsk**	**34.94**	**21**	*e*P	**P**	**22 17 25.8**	**-1.3**
YAK				pmax	pmax		
comp=Z,22nm,0.9s,mb5.1							
YAK				pmax	pmax		
comp=E,8.0nm,1.1s							
YAK				pmax	pmax		
comp=N,14nm,1.2s							
YAK	**Yakutsk**	**34.94**	**21**	*e*P	**P**	**22 17 25.6**	**-1.4**
ABKAR	**Akbulak array**	**37.45**	**311**	*e*P	**P**	**22 17 49.1**	**+0.4**
comp=N,6.6nm,0.7s,mb4.6							
AKTK	**Aktyubinsk**	**38.91**	**313**	P	**P**	**22 18 01.1**	**+0.1**
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**22 18 01.1**	**+0.1**
comp=N,3.1nm,0.5s,mb4.3,baz=90,slow=9.6,SNR=15							
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**22 18 01.1**	**0.0**
AKTO				pmax	pmax		
comp=Z,3.0nm,0.5s,mb4.3							
SVE	**Sverdlovsk**	**39.26**	**323**	⇓*e*P	**P**	**22 18 04.8**	**+0.9**
SVE				pmax	pmax		
comp=Z,27nm,1.0s,mb4.9							
ARU	**Arti**	**40.20**	**322**	*c i*P	**P**	**22 18 13.0**	**+1.3**
ARU				S	**S**	**22 24 17.1**	**-1.9**
ARU				SS	SS	22 27 07.1	-9.4
ARU				pmax	pmax		
comp=Z,28nm,0.8s,mb5.0							
SOKR	**Solikamsk**	**42.16**	**326**	*c i*P	**P**	**22 18 28.5**	**+0.7**
SOKR				pmax	pmax		
comp=Z,40nm,1.1s,mb5.0							
TIXI	**Tiksi**	**42.56**	**11**	*e*P	**P**	**22 18 28.7**	**-2.2**
TIXI				pmax	pmax		
comp=Z,7.0nm,0.8s,mb4.4							
TIXI				MLR	MLR		
comp=Z,205nm,17.0s,MS4.1							
TIXI	**Tiksi**	**42.56**	**11**	*e*P	**P**	**22 18 29.8**	**-1.1**
comp=Z,5.9nm,0.7s,mb4.4							
SEY	**Seymchan**	**43.95**	**30**	*ce*P	**P**	**22 18 42.3**	**+0.1**
PETK	**Petropavlovsk-**	**44.11**	**44**	P	**P**	**22 18 43.2**	**-0.4**
comp=Z,5.7nm,0.7s,mb4.4,baz=261,slow=5.7,SNR=11							
PETK	**Petropavlovsk-**	**44.11**	**44**	P	**P**	**22 18 43.2**	**-0.4**
PETK				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.4							
PETK	**Petropavlovsk-**	**44.11**	**44**	P	**P**	**22 18 43.2**	**-0.4**
GNI	**Garni**	**48.11**	**298**	*e*P	**P**	**22 19 16.7**	**+1.3**
ZEI	**Tsey**	**48.37**	**301**	*e*P	**P**	**22 19 17.1**	**-0.3**
ZEI				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.5							
KIV	**Kislovodsk**	**49.11**	**303**	*e*P	**P**	**22 19 23.8**	**+0.8**
KIV				pmax	pmax		
comp=Z,17nm,1.1s,mb5.0							
KIV				MLR	MLR		
comp=Z,57nm,17.0s,MS3.6							
KIV	**Kislovodsk**	**49.11**	**303**	*e*P	**P**	**22 19 24.0**	**+1.0**
comp=Z,17nm,1.1s,mb5.0							
VORD	**Divnogorie**	**50.80**	**312**	*e*P	**P**	**22 19 35.1**	**-0.6**
VORD				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.5							
VORD				pmax	pmax		
comp=N,5.0nm,0.6s							
VORD				pmax	pmax		
comp=E,3.0nm,0.6s							
KLMR	**Klimovskoe**	**

OBN Obninsk 52.25 318⇓ eP P 22 19 46.3 -0.2
OBN pmax pmax
comp=Z,13nm,1.0s,mb4.8
OBN Obninsk 52.25 318 eP P 22 19 46.3 -0.2
KNA Kununurra 52.51 149 eP P 22 19 48.3 -0.5
comp=Z,23nm,0.6s,mb5.3
MALT Malatya 53.28 297 eP P 22 19 55.0 +0.6
MALT pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
MALT Malatya 53.28 297 eP P 22 19 55.0 +0.6
comp=Z,6.2nm,1.3s,mb4.4
FITZ Fitzroy Crossi 53.36 154 eP P 22 19 54.5 -0.6
comp=Z,14nm,1.1s,mb4.8
FITZ Fitzroy Crossi 53.36 154 P P 22 19 54.5 -0.6
comp=Z,9.5nm,1.0s,mb4.7,baz=344,slow=2.9,SNR=4.6
FITZ Fitzroy Crossi 53.36 154 eP P 22 19 54.1 -1.0
comp=Z,7.4nm,0.9s,mb4.6
APA Apatity 54.06 333⇑ iP P 22 20 00.9 +1.2
APA MLR MLR
comp=Z,600nm,12.0s,MS4.9
MBWA Marble Bar 54.33 162 eP P 22 20 01.7 -0.4
JOF Joensuu 54.79 328 eP P 22 20 03.6 -1.4
JOF pmax pmax
comp=Z,12nm,0.6s,mb5.1
JOF Joensuu 54.79 328 ep P 22 20 03.6 -1.4
comp=Z,12nm,0.6s,mb5.1
KEV Kevo 56.49 336 eP P 22 20 17.2 0.0
KEV pmax pmax
comp=Z,23nm,0.8s,mb5.3
KEV Kevo 56.49 336 eP P 22 20 17.1 0.0
comp=Z,23nm,0.8s,mb5.3
KEV Kevo 56.49 336 ep P 22 20 15.9 -1.3
comp=Z,16nm,0.6s,mb5.2
BR131 Keskin Array S 56.54 299 eP P 22 20 17.6 -0.4
comp=Z,1.4nm,0.6s,mb4.2
BRTR Keskin Array B 56.54 299 P P 22 20 17.8 -0.2
comp=Z,2.4nm,0.8s,mb4.3,baz=100,slow=6.7,SNR=18
BRTR Keskin Array B 56.54 299 P P 22 20 17.8 -0.2
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 57.02 336 P P 22 20 20.6 -0.3
comp=Z,7.9nm,0.6s,mb4.9,baz=79,slow=7.9,SNR=41
ARCES PcP PcP 22 21 15.4 -0.5
comp=Z,3.1nm,0.5s,baz=80,slow=3.6,SNR=12
ARCES ARCESS Array B 57.02 336 P P 22 20 20.7 -0.2
ARCES 22 21 15.4
ARCES pmax pmax
comp=Z,8.0nm,0.6s
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARE0 ARCESS Array S 57.02 336 eP P 22 20 20.8 -0.1
MMAI Mount Meron Ar 57.10 291 P P 22 20 23.5 +1.4
comp=Z,1.8nm,0.4s,mb4.5,baz=45,slow=7.2,SNR=8.2
MMAI PcP PcP 22 21 17.0 +0.1
comp=Z,4.8nm,0.9s,baz=69,slow=4.6,SNR=3.0
KAF Kangasniemi 57.15 327 eP P 22 20 20.4 -1.6
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF Kangasniemi 57.15 327 ep P 22 20 20.4 -1.6
comp=Z,6.8nm,0.6s,mb4.8
AKASG Malin Array Be 57.16 313 P P 22 20 21.3 -0.9
comp=Z,2.6nm,0.4s,mb4.6,baz=69,slow=6.7,SNR=8.3
AKASG Malin Array Be 57.16 313 i P P 22 20 21.2 -1.0
AKASG pmax pmax
comp=Z,3.0nm,0.4s
FINES FINESS Array B 57.33 326 P P 22 20 22.9 -0.4
comp=Z,5.9nm,0.4s,mb5.0,baz=101,slow=7.7,SNR=56
FINES FINESS Array B 57.33 326 P P 22 20 22.9 -0.3
FINES pmax pmax
comp=Z,6.0nm,0.4s
IDID Didziasalis 57.83 319 eP P 22 20 27.0 +0.1
IZAR Zarasai 58.03 319 eP P 22 20 28.8 +0.5
ISAL Salakas 58.13 319 eP P 22 20 29.1 +0.1
COEN Coen 58.67 134 eP P 22 20 33.2 0.0
COEN Coen 58.67 134 eP P 22 20 33.1 -0.1
comp=Z,172nm,1.1s
WRAB Tennant Creek 58.71 146 eP P 22 20 33.3 -0.1
WRAB pmax pmax
comp=Z,34nm,0.8s,mb5.4
WRAB Tennant Creek 58.71 146 eP P 22 20 33.3 -0.1
comp=Z,34nm,0.8s,mb5.4
SPITS Spitsbergen Ar 59.10 346 P P 22 20 35.9 +0.4
comp=Z,1.6nm,0.4s,mb4.4,baz=115,slow=9.6,SNR=26
SPITS Spitsbergen Ar 59.10 346 P P 22 20 35.9 +0.5
SPITS pmax pmax
comp=Z,2.0nm,0.4s
HARR Harsova 59.36 306 ⇑P P 22 20 37.7 0.0
HARR Harsova 59.36 306⇑ iP P 22 20 37.7 0.0
ISP Isparta 59.42 298 eP P 22 20 38.5 +0.2
ISP Isparta 59.42 298⇓ iP P 22 20 39.1 +0.8
VRI Vrincioaia 59.87 308 ⇓P P 22 20 41.4 +0.2
VRI Vrincioaia 59.87 308⇓ iP P 22 20 41.4 +0.2
PLOR Plostina 59.92 308 ⇑P P 22 20 42.1 +0.5
PLOR Plostina 59.92 308⇑ iP P 22 20 42.1 +0.5
GAMB Gambell 59.93 31 eP P 22 20 40.8 -0.5
comp=Z,9.8nm,1.1s,mb4.8
SUW Suwalki 60.11 318 eP P 22 20 41.8 -1.0
SUW Suwalki 60.11 318 eP P 22 20 41.7 -1.0
BURAR Bucovina Array 60.41 310 ⇑P P 22 20 44.6 -0.3
BURAR Bucovina Array 60.41 310⇑ iP P 22 20 44.6 -0.3
BUR08 Bucovina Ar. S 60.42 310 eP P 22 20 44.4 -0.5
MLR Muntele Rosu 60.50 308 ⇓P P 22 20 46.7 +1.2
MLR Muntele Rosu 60.50 308⇓ iP P 22 20 46.7 +1.2
VOIR 61.12 308 ⇑P P 22 20 49.5 -0.3
VOIR 61.12 308⇑ iP P 22 20 49.5 -0.3
KWP Kalwaria Pacla 61.48 313 eP P 22 20 52.6 +0.5
KWP Kalwaria Pacla 61.48 313 eP P 22 20 52.2 +0.1
comp=Z,20nm,1.0s,mb5.2
KWP Kalwaria Pacla 61.48 313⇑ iP P 22 20 52.6 +0.4
ASAR Alice Springs 61.73 149 P P 22 20 54.0 0.0
comp=Z,4.6nm,0.6s,mb4.8,baz=338,slow=6.6,SNR=19
ASAR Alice Springs 61.73 149 P P 22 20 54.1 +0.1
ASAR pmax pmax
comp=Z,5.0nm,0.6s
KOLS Kolonicke sedl 61.95 312 eP P 22 20 55.1 -0.2
KOLS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
KOLS Kolonicke sedl 61.95 312 eP P 22 20 55.1 -0.2
comp=Z,1.5nm,1.0s,mb4.1
KOLS Kolonicke sedl 61.95 312 eP P 22 20 55.1 -0.2
STHS Stebnicka Huta 62.46 313 eP P 22 20 58.5 -0.2
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
STHS Stebnicka Huta 62.46 313 eP P 22 20 58.5 -0.2
comp=Z,2.6nm,1.1s,mb4.3
STHS Stebnicka Huta 62.46 313 eP P 22 20 58.5 -0.2
NIE Niedzica 63.04 313 eP P 22 21 03.2 +0.6
OJC Ojcow 63.12 314 eP P 22 21 02.9 -0.2
KECS Kecovo 63.21 312 eP P 22 21 03.7 -0.1
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KECS Kecovo 63.21 312 eP P 22 21 03.7 -0.1
comp=Z,1.5nm,0.8s,mb4.2
KECS Kecovo 63.21 312 eP P 22 21 03.7 -0.1
VYHS Vyhne 64.25 313 i P P 22 21 10.9 +0.3
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
VYHS Vyhne 64.25 313 i P P 22 21 10.9 +0.3
comp=Z,2.3nm,0.9s,mb4.2
VYHS Vyhne 64.25 313 i P P 22 21 10.9 +0.3
NB2 NORSAR Subarra 64.42 327 P P 22 21 10.1 -1.4
comp=Z,4.9nm,0.5s,mb4.8,baz=73,slow=6.9
NOA NORSAR Array B 64.42 327 P P 22 21 10.4 -1.1
comp=Z,4.6nm,0.6s,mb4.7,baz=74,slow=6.7,SNR=21
NOA NORSAR Array B 64.42 327 P P 22 21 10.4 -1.1
NOA pmax pmax
comp=Z,5.0nm,0.6s
KOLL Kolacno 64.50 313 eP P 22 21 12.8 +0.6
KOLL Kolacno 64.50 313 eP P 22 21 12.8 +0.6
NAO01 NORSAR Array S 64.63 327 eP P 22 21 11.7 -1.2
MORC Moravsky Berou 64.64 314 eP P 22 21 12.8 -0.3
comp=Z,5.6nm,0.8s,mb4.7
MORC Moravsky Berou 64.64 314⇑ iP P 22 21 13.4 +0.3
PKSM Moragy 65.13 310 ⇓P P 22 21 16.1 -0.3
PKSM Moragy 65.13 310⇓ iP P 22 21 16.1 -0.3
CTA Charters Tower 65.25 136 eP P 22 21 16.5 -0.9
comp=Z,2.3nm,0.4s,mb4.6
CTA Charters Tower 65.25 136 P P 22 21 17.1 -0.3
comp=Z,4.5nm,0.9s,mb4.5,baz=313,slow=8.8,SNR=4.1
CTA Charters Tower 65.25 136 P P 22 21 17.1 -0.3
CTA pmax pmax
comp=Z,5.0nm,0.9s
CTAO Charters Tower 65.25 136 eP P 22 21 16.5 -0.9
CTAO pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
CTAO Charters Tower 65.25 136 eP P 22 21 16.5 -0.9
comp=Z,2.6nm,0.3s,mb4.7
VRAC Vranov 65.38 314 ⇑P P 22 21 18.3 +0.4
VRAC Vranov 65.38 314⇑ iP P 22 21 18.3 +0.4
ZST Bratislava 65.44 313 eP P 22 21 18.8 +0.4
ZST pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ZST Bratislava 65.44 313 eP P 22 21 18.8 +0.4
comp=Z,2.6nm,0.6s,mb4.4
ZST Bratislava 65.44 313 eP P 22 21 18.8 +0.4
CONA Conrad Observa 66.31 313⇑ iP P 22 21 24.1 +0.1
comp=Z,5.7nm,1.1s,mb4.5
BRG Berggiesshubel 66.43 316 eP P 22 21 24.2 -0.5
comp=Z,6.0nm,0.7s,mb4.7
BRG Berggiesshubel 66.43 316 i P P 22 21 24.4 -0.3
comp=Z,6.0nm,0.7s,mb4.8
BRG Berggiesshubel 66.43 316 i P P 22 21 24.5 -0.2
BRG pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
CLL Collm 66.83 317 eP P 22 21 26.7 -0.5
comp=Z,5.0nm,0.9s,mb4.5
CLL Collm 66.83 317 i P P 22 21 26.4 -0.8
CLL pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
CLL Collm 66.83 317 i P P 22 21 26.4 -0.8
comp=Z,8.0nm,1.3s,mb4.6
CLL Collm 66.83 317 i P P 22 21 26.4 -0.8
comp=Z,8.0nm,1.3s,mb4.6
TTA Tatalina 66.92 29 eP P 22 21 28.0 +0.4
TTA pmax pmax
comp=Z,13nm,1.0s,mb4.9
TTA Tatalina 66.92 29 eP P 22 21 28.0 +0.3
comp=Z,13nm,1.0s,mb4.9
SOKA Soboth 67.30 312⇓ iP P 22 21 30.0 -0.3
comp=Z,7.2nm,0.9s,mb4.7
COLD Coldfoot 67.31 24 eP P 22 21 29.8 -0.3
comp=Z,21nm,1.0s,mb5.1
GEC2 GERESS Array S 67.32 314 eP P 22 21 29.7 -0.7
GEC2 pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
GEC2 GERESS Array S 67.32 314 eP P 22 21 29.7 -0.7
comp=Z,10.0nm,1.4s,mb4.7
GERES GERESS Array B 67.32 314 P P 22 21 30.5 +0.1
comp=Z,2.2nm,0.7s,mb4.3,baz=72,slow=5.7,SNR=22
GERES GERESS Array B 67.32 314 P P 22 21 30.5 +0.1
GERES pmax pmax
comp=Z,2.0nm,0.7s
BSEG Bad Segeberg 67.37 320 eP P 22 21 30.9 +0.3
comp=Z,12nm,0.9s,mb4.9
BSEG Bad Segeberg 67.37 320 eP P 22 21 30.8 +0.2
BSEG pmax pmax
comp=Z,12nm,0.9s,mb4.9
BSEG Bad Segeberg 67.37 320 eP P 22 21 30.8 +0.2
TANN Tannenbergstha 67.48 316 eP P 22 21 30.8 -0.6
comp=Z,4.0nm,1.1s,mb4.4
NKC Novy Kostel 67.56 316 eP P 22 21 29.8 -2.1
comp=Z,6.0nm,0.9s,mb4.6
NKC Novy Kostel 67.56 316 eP P 22 21 32.1 +0.2
WERD Werda 67.56 316 eP P 22 21 31.4 -0.5
comp=Z,4.0nm,0.7s,mb4.6
GUNZ Gunzen 67.57 316 eP P 22 21 31.6 -0.4
comp=Z,8.0nm,0.7s,mb4.9
WERN Wernitzgruen 67.58 316 eP P 22 21 31.8 -0.2
comp=Z,6.0nm,0.7s,mb4.7
NEUB Neuenburg 67.58 316 eP P 22 21 30.9 -1.1
comp=Z,12nm,0.8s,mb5.0
PLN Plauen 67.63 316 eP P 22 21 32.0 -0.3
comp=Z,17nm,1.1s,mb5.0
WET Wettzell 67.71 315 eP P 22 21 32.6 -0.3
WET pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
WET Wettzell 67.71 315 eP P 22 21 32.6 -0.3
comp=Z,7.0nm,1.4s,mb4.5
ROTZ Rotzenmuhle 67.88 316 eP P 22 21 33.9 0.0
comp=Z,7.0nm,0.7s,mb4.8
NRDL Niedersach Rie 68.04 319 eP P 22 21 34.8 -0.1
comp=Z,13nm,1.2s,mb4.8
CLZ Clausthal 68.14 318 eP P 22 21 35.7 +0.2
CLZ pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
CLZ Clausthal 68.14 318 eP P 22 21 35.7 +0.2
comp=Z,9.0nm,0.7s,mb4.9
RJOB Jochberg 68.30 313 eP P 22 21 36.3 -0.3
comp=Z,10.0nm,1.3s,mb4.7
BPAW Bear Paw Mtn. 68.45 27 eP P 22 21 37.1 -0.2
comp=Z,18nm,0.9s,mb5.1
GRA1 Grafenberg Arr 68.49 316 eP P 22 21 36.4 -1.4
comp=Z,10.0nm,0.7s,mb5.0
GRF Grafenberg Arr 68.49 316 eP P 22 21 36.4 -1.4
comp=Z,10.0nm,0.7s,mb5.0
GRF Grafenberg Arr 68.49 316 eP P 22 21 36.4 -1.4
GRF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
GRF Grafenberg Arr 68.49 316 eP P 22 21 36.4 -1.4
GRF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
PPLA Purkeypile 68.52 29 eP P 22 21 37.9 +0.2
comp=Z,28nm,0.9s,mb5.2
TIP Timpagrande 69.04 304 eP P 22 21 41.1 -0.3
comp=Z,16nm,1.4s,mb4.8
FUR Furstenfeldbru 69.07 314 eP P 22 21 41.8 +0.4
FUR pmax pmax
comp=Z,26nm,1.0s,mb5.1
FUR Furstenfeldbru 69.07 314 eP P 22 21 41.8 +0.4
comp=Z,26nm,1.0s,mb5.1
WTTA Wattenberg 69.21 313⇑ iP P 22 21 41.9 -0.4
comp=Z,4.9nm,0.5s,mb4.7
COLA College 69.28 26 eP P 22 21 42.0 -0.4
RSO Redoubt South 69.39 31 eP P 22 21 43.2 +0.1
MCK McKinley 69.43 27 eP P 22 21 43.6 +0.3
MCK pmax pmax
comp=Z,53nm,1.8s,mb5.2
MCK McKinley 69.43 27 eP P 22 21 43.6 +0.3
comp=Z,53nm,1.8s,mb5.2
FETA Feichten 69.88 313⇓ iP P 22 21 45.9 -0.5
comp=Z,7.0nm,0.9s,mb4.6
CEL Celeste 70.03 303 eP P 22 21 47.1 -0.5
comp=Z,14nm,1.0s,mb4.8
AQU L'Aquila 70.08 308 eP P 22 21 48.1 +0.4
PMR Palmer 70.40 29 eP P 22 21 48.6 -0.8
PMR pmax pmax
comp=Z,45nm,1.2s,mb5.3
PMR Palmer 70.40 29 eP P 22 21 48.6 -0.8
comp=Z,45nm,1.2s,mb5.3
KDAK Kodiak Island 70.71 34 P P 22 21 50.9 -0.5
comp=Z,30nm,0.9s,mb5.2
KDAK Kodiak Island 70.71 34 P P 22 21 50.9 -0.4
KDAK pmax pmax
comp=Z,31nm,0.9s,mb5.2
BFO Black Forest 70.79 315 eP P 22 21 51.2 -0.8
BFO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BFO Black Forest 70.79 315 eP P 22 21 51.2 -0.8
comp=Z,8.0nm,1.1s,mb4.6
KMBO Kilima Mbogo 70.86 256 P P 22 21 52.6 -0.3
comp=Z,1.5nm,0.7s,mb4.0,baz=33,slow=22,SNR=3.9
KMBO Kilima Mbogo 70.86 256 P P 22 21 52.7 -0.2
KMBO pmax pmax
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 70.86 256 eP P 22 21 52.6 -0.3
CDF Champ du Feu 71.39 316⇑ iP P 22 21 55.2 -0.4
comp=Z,12nm,0.8s,mb4.6
CDF Champ du Feu 71.39 316⇑ iP P 22 21 55.2 -0.4
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CDF Champ du Feu 71.39 316⇑ iP P 22 21 55.2 -0.4
comp=Z,6.1nm,0.8s,mb4.6
WLF Walferdange 71.49 317 eP P 22 21 56.3 +0.1
comp=Z,18nm,1.1s,mb4.9
WLF Walferdange 71.49 317 eP P 22 21 56.9 +0.7
WLF pmax pmax
comp=Z,14nm,0.9s,mb4.9
WLF Walferdange 71.49 317 eP P 22 21 56.9 +0.7
comp=Z,14nm,0.9s,mb4.9
EGAK Eagle 71.75 24 eP P 22 22 00.9 +3.4
comp=Z,161nm,2.8s,mb5.5
INK Inuvik 71.98 19 P P 22 21 58.5 -0.4
comp=Z,16nm,0.9s,mb4.9,baz=321,slow=7.4,SNR=16
INK Inuvik 71.98 19 eP P 22 21 58.8 0.0
INK pmax pmax
comp=Z,22nm,1.1s
INK Inuvik 71.98 19 eP P 22 21 58.8 0.0
comp=Z,22nm,1.1s,mb5.0
STKA Stephens Creek 72.25 147 eP P 22 22 00.3 -0.5
comp=Z,2.3nm,0.5s,mb4.4
STKA Stephens Creek 72.25 147 P P 22 22 00.5 -0.3
comp=Z,3.9nm,0.8s,mb4.4,baz=221,slow=10,SNR=9.0
DAWY Dawson 72.79 24 eP P 22 22 03.6 -0.1
LPG La Plagne 73.03 313⇑ iP P 22 22 05.9 +0.5
comp=Z,34nm,0.7s,mb5.1
LPG La Plagne 73.03 313⇑ iP P 22 22 05.9 +0.5
LPG pmax pmax
comp=Z,17nm,0.7s,mb5.1
LPG La Plagne 73.03 313⇑ iP P 22 22 05.9 +0.5
comp=Z,17nm,0.7s,mb5.1
SUMG Summit 73.21 349 eP P 22 22 06.1 0.0
comp=Z,19nm,1.3s,mb4.9
BNI Bardonecchia 73.28 313 eP P 22 22 06.7 -0.2
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BNI Bardonecchia 73.28 313 eP P 22 22 06.7 -0.2
comp=Z,4.7nm,0.8s,mb4.5
RES Resolute Bay 73.53 5 P P 22 22 08.2 +0.3
comp=Z,7.3nm,1.0s,mb4.6,baz=347,slow=5.2,SNR=12
RES Resolute Bay 73.53 5 P P 22 22 08.2 +0.3
RES pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CMSA Cobar Meteorol 73.96 144 eP P 22 22 11.3 +0.3
SMF Signal de Mont 74.27 315⇑ iP P 22 22 12.1 -0.6
comp=Z,16nm,0.8s,mb4.7
SMF Signal de Mont 74.27 315⇑ iP P 22 22 12.1 -0.6
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SMF Signal de Mont 74.27 315⇑ iP P 22 22 12.1 -0.6
comp=Z,8.3nm,0.8s,mb4.7
TCF Toulx Ste Croi 75.43 315⇑ iP P 22 22 19.1 -0.3
comp=Z,20nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.43 315⇑ iP P 22 22 19.1 -0.3
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.43 315⇑ iP P 22 22 19.1 -0.3
comp=Z,10nm,1.1s,mb4.7
KEST Kesra 75.85 303 P P 22 22 22.2 +0.1
comp=Z,0.9nm,0.6s,mb3.9,baz=333,slow=8.3,SNR=5.6
CAF Calviac 76.20 314⇑ iP P 22 22 24.0 +0.1
comp=Z,8.4nm,0.7s,mb4.5
CAF Calviac 76.20 314⇑ iP P 22 22 24.0 +0.1
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CAF Calviac 76.20 314⇑ iP P 22 22 24.0 +0.1
comp=Z,4.2nm,0.7s,mb4.5
DLBC Dease Lake 79.90 26 eP P 22 22 43.2 -1.0
SFJD Kangerlussuaq 80.11 350 eP P 22 22 44.7 -0.5
comp=Z,19nm,0.9s,mb5.0
YKA Yellowknife Ar 81.51 17 P P 22 22 52.3 -0.4
comp=Z,4.9nm,0.7s,mb4.6,baz=330,slow=5.2,SNR=36
ESDC Sonseca Array 82.80 312 P P 22 23 00.8 +0.9
comp=Z,0.5nm,0.5s,mb3.8,baz=44,slow=6.3,SNR=5.0
LSZ Lusaka 86.14 250 eP P 22 23 16.4 -0.8
LSZ pmax pmax
comp=Z,13nm,1.2s,mb5.0
LSZ Lusaka 86.14 250 eP P 22 23 16.4 -0.8
comp=Z,13nm,1.2s,mb5.0
FCC Fort Churchill 89.00 9 eP P 22 23 29.9 -0.3
comp=Z,0.2nm,0.9s,mb3.5
FFC Flin Flon 91.43 15 eP P 22 23 40.9 -0.8
WALA Waterton Lakes 93.13 24 eP P 22 23 49.8 +0.1
TOA0 Torodi Ar. Sit 93.47 288 eP P 22 23 51.4 -0.4
TORD Torodi Ar. Bea 93.47 288 P P 22 23 51.3 -0.5
comp=Z,2.1nm,0.8s,mb4.6,baz=56,slow=3.7,SNR=11
SCHQ Schefferville 93.83 355 eP P 22 23 52.7 -0.1
BOSA Boshof 95.70 240 P P 22 23 60.0 -1.7
comp=Z,8.3nm,1.3s,mb5.0,baz=318,slow=2.3,SNR=5.5
BOSA Boshof 95.70 240 P P 22 24 00.0 -1.7
BOSA pmax pmax
comp=Z,8.0nm,1.3s,mb5.0
CASY Casey 97.42 177 P P 22 24 08.4 -0.1
QSPA South Pole Qui 121.10 180 PKP PKPdf 22 29 26.4 -0.8
comp=Z,6.3nm,0.7s,baz=278,slow=1.2,SNR=24
VNA2 Neumayer--Watz 126.23 202 ePKPdf PKPdf 22 29 36.1 -1.2
baz=63,slow=2.0
SDV Santo Domingo 139.69 352 ePKPdf PKPdf 22 30 03.4 -0.9
ROSC El Rosal 143.99 357 PKP PKPdf 22 30 10.9 -1.1
comp=Z,12nm,0.6s,baz=288,slow=20,SNR=6.0
OTAV Otavalo 148.53 5 ePKPdf PKPdf 22 30 20.8 +1.1
OTAV ePKPbc PKPbc 22 30 23.6 +0.3
CPUP Villa Florida 162.89 282 PKP PKPdf 22 30 36.9 -1.5
comp=Z,0.3nm,0.4s,baz=195,slow=8.9,SNR=4.0
LPAZ La Paz 163.40 333 PKP PKPdf 22 30 39.2 +0.1
comp=Z,0.8nm,0.7s,baz=34,slow=5.5,SNR=4.4
LPAZ PKPab PKPab 22 31 28.5 -1.2
comp=Z,0.5nm,0.6s,baz=198,slow=12,SNR=3.6
PLCA Paso Flores 169.62 204 PKP PKPdf 22 30 43.2 +0.1
comp=Z,4.5nm,1.1s,baz=188,slow=8.0,SNR=2.9

IDC ***15*** *22:16:48.2s±4.6, 20.°94N×141.°45E, h0km, mb3.9/9, mb1 3.9/9, mb1mx3.8/21, mbtmp3.9/9, Error ellipse: s-maj=106.7km s-min=50.7km az=158.0*
ISCJB ***15*** *22:16:52.0s±1.0, 21.°0N±0.°1×141.°3E±0.°2, h33km, mb4.2/14, Error ellipse: s-maj=21.9km s-min=19.1km az=9.4*
NEIC ***15*** *22:16:53.8s±0.8, 20.°99N×141.°35E, h35km, mb4.5/6, Error ellipse: s-maj=19.1km s-min=16.5km az=100.0*
ISC 15 22:16:54.0±1.0, 21.°0N±0.°1×141.°3E±0.°2, h35km, n21, σ0.99/21, mb4.2/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**19.04**	**282**	*eP*	**Pn**	**22 21 13.0**	**-1.1**
MDJ	**Mudanjiang**	**25.49**	**340**	*eP*	**P**	**22 22 18.4**	**-0.5**
BJT	**Baijiatuan**	**28.64**	**317**	**P**	**P**	**22 22 46.5**	**-0.8**
PETK	**Petropavlovsk-** 0.6nm,0.4s,mb3.9,baz=178,slow=3.8,SNR=5.5	**34.46**	**17**	P	**P**	**22 23 37.6**	**-0.6**
SONM	**Songino Array** 1.1nm,0.7s,mb3.7,baz=97,slow=12,SNR=2.9	**38.80**	**322**	P	**P**	**22 24 14.1**	**-1.2**
SONM	**Songino Array**	**38.80**	**322**	P	**P**	**22 24 14.1**	**-1.2**
WRAB	**Tennant Creek** 3.4nm,0.9s,mb4.0	**41.23**	**190**	*eP*	**P**	**22 24 35.1**	**-0.6**
ZAA0	**Zalesovo Array**	**53.70**	**322**	*eP*	**P**	**22 26 12.3**	**0.0**
ZALV	**Zalesovo Beam** 0.7nm,0.7s,mb3.7,baz=102,slow=4.7,SNR=2.6	**53.70**	**322**	P	**P**	**22 26 11.1**	**-1.1**
MKAR	**Makanchi Array** 0.4nm,0.8s,mb3.4,baz=101,slow=7.1,SNR=3.2	**53.91**	**313**	P	**P**	**22 26 15.4**	**+1.4**
KURK	**Kurchatov** 0.9nm,0.7s,mb3.9,baz=94,slow=6.4,SNR=4.8	**56.82**	**318**	P	**P**	**22 26 37.1**	**+2.3**
KURK	**Kurchatov** 1.1nm,0.3s,mb4.4	**56.82**	**318**	*eP*	**P**	**22 26 34.6**	**-0.2**
UCH	**Uchtor** 71nm,2.4s,mb5.3	**59.22**	**307**	*eP*	**P**	**22 26 53.8**	**+2.0**
EKS2	**Erkin-Say**	**59.76**	**308**	P	**P**	**22 26 55.5**	**0.0**
BVAR	**Borovoye Array** 0.7nm,0.7s,mb3.9,baz=46,slow=6.2,SNR=3.3	**62.09**	**320**	P	**P**	**22 27 11.8**	**+0.6**
BRVK	**Borovoye** 3.9nm,0.9s,mb4.5	**62.15**	**320**	*eP*	**P**	**22 27 11.9**	**+0.3**
EGAK	**Eagle** 5.7nm,0.6s,mb4.8	**65.92**	**27**	P	**P**	**22 27 35.9**	**-0.2**
FINES	**FINESS Array B** 1.6nm,0.8s,mb4.1,baz=35,slow=5.1,SNR=4.7	**83.07**	**334**	P	**P**	**22 29 16.1**	**+0.4**
MALT	**Malatya** 1.3nm,0.7s,mb4.3	**86.80**	**310**	*eP*	**P**	**22 29 36.5**	**+1.5**
AKASG	**Malin Array Be** 1.1nm,0.5s,mb4.4,baz=35,slow=3.2,SNR=8.4	**87.07**	**324**	P	**P**	**22 29 36.9**	**+0.9**
BRTR	**Keskin Array B** 1.0nm,0.6s,mb4.3,baz=128,slow=4.3,SNR=3.7	**89.56**	**313**	P	**P**	**22 29 46.8**	**-1.3**

MOS ***15*** *22:19:05.8s±1.0, 10.°48S×164.°78E, h33km, mb5.4/21, MS4.4/4, Error ellipse: s-maj=11.7km s-min=9.1km az=97.5*
BJI ***15*** *22:19:05.7, 10.°47S×165.°34E, h51km, mB5.4/23, mb5.0/34, Ms5.2/30, MS7 4.9/26*
ISCJB ***15*** *22:19:06.3s±1.2, 10.°53S±0.°04×164.°90E±0.°05, h42km±10km, mb5.1/69, MS4.5/24, Error ellipse: s-maj=8.2km s-min=6.0km az=14.3*
NOU ***15*** *22:19:07.3s±1.2, 10.°31S×164.°35E, h30km, MD4.8, ML4.1*
NEIC ***15*** *22:19:08.8s±1.0, 10.°55S×164.°91E, h52km±8km, mb5.2/33, Error ellipse: s-maj=6.4km s-min=5.2km az=119.0*
GCMT ***15*** *22:19:08.8±0.1, 10.°53S×164.°81E, h58km±1km, MW5.4/90, Moment Tensor Solution. s79,c148; s90,c170; Duration: 1s2 Moment tensor: Scale 1017Nm; Mrr0.65±.03; Mθθ1.00±.02; Mφφ-1.65±.02; Mrθ-0.37±.02; Mrφ0.53±.02; Mθφ0.76±.02; Best double couple: M01.62000×1017 NP1φ1=214.00000°, δ55.00000°, λ169.00000°. NP2:φ2=311.00000°, δ81.00000°, λ35.00000°. Principal axes: T 1.2370, Plg31.0000°, Azm179.0000°; N 0.7670, Plg54.0000°, Azm323.0000°; P -2.0040, Plg17.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***15*** *22:19:09.6±0.4, 10.°54S×164.°92E, h56km±3km, mb4.5/22,*

mb1 4.5/22,mb1mx4.5/23,mbtmp4.5/22,MS4.5/13,
Ms1 4.5/13,ms1mx4.4/24 Error ellipse: s-maj=14.9km
s-min=10.7km az=96.0
DJA 15 22:19:13,10.63S×164.83E,h76km,mb5.5/26
ISC 15 22:19:09.5±0.8,10.54S±0.03×164.95E±0.05,h56km±8km,
h52km±1.7km:pP-P,n220,σ0.98/164,mb5.1/69,MS4.5/24,
10C,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.56**	**173**	*e*Pn		**Pn**	**Pn**	**22 21 52.9**	**+1.1**
	90nm,0.2s								
DZM				*e*Sn			**Sn**	**22 23 54.1**	**-5.3**
	35nm,0.3s								
DZM				*e*LR		LR	LR	22 24 34.0	
	4μm,25.7s								
DZM	**Mont Dzumac**	**11.56**	**173**	*e*Pn			**Pn**	**22 21 53.2**	**+1.4**
DZM				*e*Sn			**Sn**	**22 23 58.4**	**-0.9**
NOUC	**Port Laguerre**	**11.57**	**174**	*e*P			**Pn**	**22 21 53.4**	**+1.4**
NOUC				*e*S			**Sn**	**22 23 54.8**	**-4.9**
NOUC				AMP				22 24 02.2	
	comp=Z,68nm,2.9s								
BAYA	**Yate Dam**	**11.70**	**171**	*e*P			**Pn**	**22 21 54.8**	**+1.0**
BAYA				*e*S			**Sn**	**22 24 00.6**	**-2.2**
NORM	**Noumea**	**11.72**	**173**	*e*P			**Pn**	**22 21 56.4**	**+2.4**
ONTRN	**Noumea**	**11.79**	**173**	*e*P			**Pn**	**22 21 56.0**	**+1.1**
FUNA	**Funafuti**	**14.19**	**83**	*e*Pn			**Pn**	**22 22 25.7**	**-2.0**
TARA	**Tarawa**	**14.23**	**34**	*e*Pn			**Pn**	**22 22 27.8**	**-0.4**
	comp=Z,197nm,0.4s								
KWAJ	**Kwajalein Atol**	**19.39**	**8**	*e*P			**Pn**	**22 23 32.6**	**-0.1**
KWAJ					pmax		pmax		
	comp=Z,260nm,0.5s								
KWAJ	**Kwajalein Atol**	**19.39**	**8**	*e*P			**Pn**	**22 23 32.6**	**-0.1**
	comp=Z,260nm,0.5s								
EIDS	**Eidsvold**	**19.76**	**220**	*e*P			**Pn**	**22 23 36.7**	**-0.2**
EIDS				*e*S			**S**	**22 27 16.9**	**+2.1**
EIDS	**Eidsvold**	**19.76**	**220**	*e*Pn			**Pn**	**22 23 36.9**	**-0.1**
	comp=Z,148nm,0.9s								
CTA	**Charters Tower**	**20.36**	**240**	*e*P			**P**	**22 23 41.8**	**+0.2**
	comp=Z,43nm,0.9s								
CTA				*e*S			**S**	**22 27 24.4**	**-2.4**
CTA	**Charters Tower**	**20.36**	**240**	P			**P**	**22 23 42.2**	**+0.7**
	comp=Z,31nm,0.8s,baz=69,slow=13,SNR=16								
CTA				LR			LR	22 30 21.6	
	comp=Z,1μm,20.4s,MS4.3,baz=57,slow=33								
CTA	**Charters Tower**	**20.36**	**240**	P			**P**	**22 23 42.2**	**+0.7**
CTA				LR			LR	22 30 21.6	
CTAO	**Charters Tower**	**20.36**	**240**	*e*P			**P**	**22 23 40.9**	**-0.7**
CTAO					pmax		pmax		
	comp=Z,142nm,1.3s								
CTAO	**Charters Tower**	**20.36**	**240**	*e*Pn			**P**	**22 23 40.9**	**-0.7**
	comp=Z,142nm,1.3s								
COEN	**Coen**	**21.55**	**259**	*e*P			**P**	**22 23 54.2**	**-0.1**
	comp=Z,336nm,0.8s,mb5.8								
AFI	**Afiamalu**	**22.99**	**101**	LR		LR	LR	22 31 21.7	
	comp=Z,3μm,19.2s,MS4.8,baz=267,slow=32								
AFI	**Afiamalu**	**22.99**	**101**	P			**P**	**22 24 09.3**	**-0.4**
ARMA	**Armidale**	**23.34**	**210**	*e*P			**P**	**22 24 14.0**	**+0.9**
ARMA				*e*S			**S**	**22 28 22.9**	**+1.3**
ARMA	**Armidale**	**23.34**	**210**	*e*P			**P**	**22 24 13.9**	**+0.8**
	comp=Z,232nm,1.4s,mb5.4								
OUZ	**Omahuta**	**25.80**	**164**	*e*P			**P**	**22 24 36.0**	**+0.6**
	comp=Z,26nm,0.9s,mb4.8								
CNB	**Canberra Magne**	**28.45**	**207**	*e*P			**P**	**22 24 59.0**	**-0.2**
CAN	**Canberra**	**28.62**	**208**	*e*P			**P**	**22 25 00.4**	**-0.3**
CAN					pmax		pmax		
	comp=Z,11nm,0.6s,mb4.8								
CAN	**Canberra**	**28.62**	**208**	*e*P			**P**	**22 25 00.3**	**-0.4**
	comp=Z,11nm,0.6s,mb4.8								
URZ	**Urewera**	**29.68**	**160**	P			**P**	**22 25 10.7**	**+0.6**
	comp=Z,24nm,0.7s,mb5.0,baz=324,slow=3.8,SNR=10								
URZ				LR			LR	22 35 53.2	
	comp=Z,824nm,19.2s,MS4.4,baz=353,slow=34								
URZ	**Urewera**	**29.68**	**160**	*e*P			**P**	**22 25 09.2**	**-0.9**
	comp=Z,24nm,0.7s,mb5.0								
STKA	**Stephens Creek**	**30.28**	**222**	*e*P			**P**	**22 25 15.5**	**0.0**
	comp=Z,7.5nm,0.7s,mb4.5								
STKA	**Stephens Creek**	**30.28**	**222**	P			**P**	**22 25 16.1**	**+0.7**
	comp=Z,11nm,0.8s,mb4.6,baz=60,slow=11,SNR=14								
WRAB	**Tennant Creek**	**30.92**	**249**	P			**P**	**22 25 19.1**	**-2.1**
	comp=Z,67nm,0.6s,mb5.7,SNR=6.7								
WRAB	**Tennant Creek**	**30.92**	**249**	*e*P			**P**	**22 25 19.0**	**-2.2**
WRAB					pmax		pmax		
	comp=Z,22nm,1.2s,mb4.9								
WRAB	**Tennant Creek**	**30.92**	**249**	*e*P			**P**	**22 25 19.0**	**-2.3**
	comp=Z,22nm,1.2s,mb4.9								
SNZO	**South Karori**	**31.83**	**166**	*e*P			**P**	**22 25 28.6**	**-0.4**
KAKA	**Kakadu**	**31.90**	**263**	*e*P			**P**	**22 25 26.6**	**-3.4**
	comp=Z,36nm,0.6s,mb5.4								
KAKA	**Kakadu**	**31.90**	**263**	*e*P			**P**	**22 25 26.8**	**-3.2**
TOO	**Toolangi**	**32.11**	**210**	*e*P			**P**	**22 25 32.2**	**+0.7**
ASAR	**Alice Springs**	**32.33**	**242**	P			**P**	**22 25 31.7**	**-1.9**
	comp=Z,10nm,0.7s,mb4.8,baz=67,slow=9.9,SNR=57								
ASAR					pP		pP	22 25 48.7	+1.1
	comp=Z,5.2nm,0.7s,baz=69,slow=9.9,SNR=6.1								
ASAR					sP		sP	22 25 56.4	+2.2
	comp=Z,3.3nm,0.6s,baz=67,slow=11,SNR=3.1								
ASAR					PcP		PcP	22 28 20.0	-0.6
	comp=Z,2.7nm,0.7s,baz=62,slow=2.9,SNR=7.5								
ASAR	**Alice Springs**	**32.33**	**242**	P			**P**	**22 25 31.7**	**-1.9**
ASAR				*PP			pP	22 25 48.7	+1.1
ASAR								22 28 20.0	
KHZ	**Kahutara**	**32.63**	**168**	*e*P			**P**	**22 25 35.5**	**-0.5**
	comp=Z,16nm,0.7s,mb5.0								
RPZ	**Rata Peaks**	**33.48**	**172**	P			**P**	**22 25 43.1**	**-0.2**
	comp=Z,30nm,0.7s,mb5.4,baz=283,slow=3.1,SNR=32								
RPZ				LR			LR	22 36 41.9	
	comp=Z,774nm,20.8s,MS4.4,baz=7.2,slow=31								
RPZ	**Rata Peaks**	**33.48**	**172**	*e*P			**P**	**22 25 41.5**	**-1.9**
	comp=Z,29nm,0.7s,mb5.3								
BBOO	**Buckleboo**	**34.61**	**226**	*e*P			**P**	**22 25 52.8**	**-0.6**
	comp=Z,27nm,0.7s,mb5.3								
FITZ	**Fitzroy Crossi**	**38.76**	**254**	*e*P			**P**	**22 26 26.8**	**-2.1**
	comp=Z,17nm,0.6s,mb5.0								
FITZ	**Fitzroy Crossi**	**38.76**	**254**	P			**P**	**22 26 27.5**	**-1.4**
	comp=Z,11nm,0.7s,mb4.7,baz=95,slow=5.1,SNR=16								
FORT	**Forrest**	**39.70**	**234**	*e*P			**P**	**22 26 36.1**	**-0.4**
	comp=Z,34nm,0.8s,mb5.1								
FORT	**Forrest**	**39.70**	**234**	*e*P			**P**	**22 26 36.2**	**-0.3**
	comp=Z,53nm,0.9s,mb5.3								
DAV	**Davao City (W)**	**42.92**	**292**	LR			LR	22 43 08.0	
	comp=Z,554nm,21.6s,MS4.4,baz=102,slow=34								
PPT	**Papeete**	**44.58**	**104**	*e*S			**S**	**22 33 53.2**	**+4.6**
	comp=Z,448nm,25.2s								
PPT				*e*LR			LR	22 39 48.7	
	comp=Z,2μm,22.5s,baz=276								
PPT	**Papeete**	**44.58**	**104**	LR			LR	22 42 00.8	
	comp=Z,1μm,18.3s,MS4.9,baz=256,slow=31								
KAPI	**Kappang**	**45.08**	**273**	P			**P**	**22 27 19.9**	**-0.6**
	comp=Z,226nm,1.2s,mb5.9,SNR=5.7								
KAPI	**Kappang**	**45.08**	**273**	P			**P**	**22 27 19.3**	**-1.2**
	comp=Z,25nm,0.8s,mb5.1,baz=127,slow=4.2,SNR=15								
KAPI	**Kappang**	**45.08**	**273**	*e*P			**P**	**22 27 18.9**	**-1.7**
	comp=Z,44nm,1.0s,mb5.2								
KLBR	**Kellerberrin**	**48.32**	**237**	*e*P			**P**	**22 27 43.8**	**-1.8**
	comp=Z,88nm,1.8s,mb5.5								
NWAO	**Narrogin (SRO)**	**49.10**	**235**	LR			LR	22 46 18.2	
	comp=Z,11nm,20.2s,baz=79,slow=33								
NWAO	**Narrogin (SRO)**	**49.10**	**235**	*e*P			**P**	**22 27 50.5**	**-1.1**
JHJ	**Hachijo jima 2**	**49.60**	**332**	LR			LR	22 46 43.3	
	comp=Z,262nm,19.4s,MS4.2,baz=166,slow=33								
KKM	**Kota Kinabalu**	**51.24**	**287**	P			**P**	**22 28 07.7**	**-0.4**
JOW	**Kunigami**	**51.45**	**317**	P			**P**	**22 28 10.8**	**+1.4**
	comp=Z,20nm,0.7s,mb5.2,baz=209,slow=4.2,SNR=3.4								
JOW				LR			LR	22 45 27.9	
	comp=Z,901nm,20.8s,MS4.8,baz=100,slow=31								
MJAR	**Matsushiro Arr**	**53.16**	**333**	P			**P**	**22 28 21.6**	**-0.3**
	comp=Z,4.2nm,0.8s,mb4.4,baz=161,slow=6.8,SNR=17								
MJAR					pP		pP	22 28 36.7	0.0
	comp=Z,2.7nm,0.8s,baz=151,slow=6.6,SNR=3.3								
MJAR	**Matsushiro Arr**	**53.16**	**333**	P			**P**	**22 28 21.6**	**-0.3**
MJAR					pP		pP	22 28 36.7	0.0
MAJO	**Matsushiro**	**53.17**	**333**	*e*P			**P**	**22 28 21.8**	**-0.1**
MAJO					pmax		pmax		
	comp=Z,61nm,1.5s,mb5.3								
MAJO	**Matsushiro**	**53.17**	**333**	*e*P			**P**	**22 28 21.8**	**-0.1**
	comp=Z,61nm,1.5s,mb5.3								
MAT	**Matsushiro**	**53.17**	**333**	P			**P**	**22 28 21.3**	**-0.6**
MAT				S			**S**	**22 35 44.0**	**-4.7**
TAOE	**Nuku Hiva Isla**	**54.09**	**93**	*e*LR			LR	22 44 13.7	
	comp=Z,2μm,27.7s								
TPUB	**Ta-pu**	**54.87**	**308**	*e*P			**P**	**22 28 33.7**	**-1.0**
	comp=Z,28nm,0.6s,mb5.5								
SSLB	**Suanglung**	**54.89**	**309**	*e*P			**P**	**22 28 34.0**	**-0.7**
	comp=Z,17nm,0.6s,mb5.2								
TATO	**Taipei**	**55.15**	**310**	*e*P			**P**	**22 28 35.3**	**-1.2**
KSM	**Kuching**	**55.65**	**279**	*e*P			**P**	**22 28 39.7**	**-0.7**
	comp=Z,38nm,1.0s,mb5.4								
QZH	**Quanzhou**	**57.32**	**309**	⇑*i*P			**P**	**22 28 53.0**	**+0.9**
ASAJ	**Asahikawa**	**58.06**	**341**	P			**P**	**22 28 57.9**	**+1.0**
	comp=Z,16nm,0.6s,mb5.2,baz=218,slow=9.2,SNR=18								
KSRS	**Korea Array**	**59.02**	**326**	P			**P**	**22 29 04.2**	**+0.5**
	comp=Z,3.8nm,0.6s,mb4.6,baz=139,slow=7.3,SNR=24								
KSRS					pP		pP	22 29 18.3	-0.5
	comp=Z,1.4nm,0.5s,baz=140,slow=8.2,SNR=3.0								
YSS	**Yuzh-Sakhalins**	**60.57**	**343**	⇑*e*P			**P**	**22 29 14.6**	**+0.4**
YSS				*e*S			**S**	**22 37 30.0**	**+4.1**
YSS					pmax		pmax		
	comp=Z,30nm,1.0s,mb5.4								
YSS					MLR		MLR		
	comp=N,200nm,16.0s								
YSS					MLR		MLR		
	comp=Z,300nm,16.0s,MS4.5								
YSS	**Yuzh-Sakhalins**	**60.57**	**343**	*e*P			**P**	**22 29 14.8**	**+0.7**
	comp=Z,11nm,0.6s,mb5.2								
NJ2	**Nanjing**	**61.11**	**316**	*e*P			**P**	**22 29 20.5**	**+2.3**
NJ2					pmax		pmax		
	comp=Z,40nm,0.8s,mb5.6								
QIZ	**Qiongzhong**	**61.75**	**298**	P			**P**	**22 29 22.4**	**-0.3**
QIZ				pP			pP	22 29 33.9	-4.0
QIZ				sP			sP	22 29 38.6	-5.6
QIZ				PP			PP	22 31 38.8	-0.5
QIZ				S			**S**	**22 37 43.8**	**+1.8**
QIZ				sS			sS	22 38 03.3	-4.2
QIZ				SS			SS	22 41 47.1	+2.3
QIZ					pmax		pmax		
	comp=Z,140nm,5.5s								
QIZ					LR		LR		
	comp=E,310nm,22.6s								
QIZ					LR		LR		
	comp=Z,860nm,11.1s								
PET	**Petropavlovsk**	**63.54**	**356**	*e*P			**P**	**22 29 37.9**	**+4.0**
PET				*e*S			**S**	**22 38 07.9**	**+4.8**
PET					pmax		pmax		
	comp=Z,100nm,16.4s								
PET					MLR		MLR		
	comp=Z,300nm,18.0s,MS4.5								
MDJ	**Mudanjiang**	**63.54**	**333**	P			**P**	**22 29 34.5**	**+0.4**
MDJ				pP			pP	22 29 48.3	-1.0
MDJ				S			**S**	**22 38 06.8**	**+3.3**
MDJ					pmax		pmax		
	comp=Z,17nm,1.7s,mb4.8								
MDJ					pmax		pmax		
	comp=Z,220nm,13.6s								
MDJ					LR		LR		
	comp=Z,190nm,23.9s,MS4.2								
MDJ	**Mudanjiang**	**63.54**	**333**	*e*P			**P**	**22 29 34.2**	**+0.1**
	comp=Z,9.7nm,0.8s,mb4.9								
PETK	**Petropavlovsk-**	**63.70**	**355**	P			**P**	**22 29 35.7**	**+0.7**
	comp=Z,4.8nm,0.7s,mb4.7,baz=184,slow=5.2,SNR=16								
PETK					pP		pP	22 29 48.9	-1.3
	comp=Z,4.4nm,0.9s,baz=178,slow=7.4,SNR=3.8								
PETK					LR		LR	22 52 23.5	
	comp=Z,155nm,20.5s,MS4.2,baz=181,slow=31								
PETK	**Petropavlovsk-**	**63.70**	**355**	P			**P**	**22 29 35.7**	**+0.7**
PETK				*PP			pP	22 29 48.9	-1.3
HABR	**Khabarovsk**	**64.43**	**338**	*e*P			**P**	**22 29 37.9**	**-2.0**
HABR				*e*PP			pP	22 29 47.8	-7.3
HABR				S			**S**	**22 38 13.3**	**-1.0**
HABR				*e*SS			sS	22 38 30.0	-10
HABR					pmax		pmax		
	comp=E,50nm,2.0s								
HABR					pmax		pmax		
	comp=Z,79nm,1.7s,mb5.5								
HABR					pmax		pmax		
	comp=N,27nm,1.8s								
HABR					MLR		MLR		
	comp=Z,165nm,19.0s,MS4.2								
CN2	**Changchun**	**64.91**	**329**	*e*P			**P**	**22 29 43.6**	**+0.5**
CN2				*e*pP			pP	22 29 56.6	-1.8
CN2				*e*S			**S**	**22 38 20.4**	**-0.1**
CN2					pmax		pmax		
	comp=Z,20nm,1.2s,mb5.0								
CN2					pmax		pmax		
	comp=Z,200nm,6.0s								
CN2					LR		LR		
	comp=N,300nm,17.0s,MS4.7								
CN2					LR		LR		
	comp=E,300nm,17.0s,MS4.7								
CN2					LR		LR		
	comp=Z,300nm,17.0s,MS4.6								
KLR	**Kul'dur**	**66.28**	**337**	*e*P			**P**	**22 29 48.1**	**-3.8**
KLR					pmax		pmax		
	comp=E,35nm,1.8s								
KLR					pmax		pmax		
	comp=Z,64nm,1.8s,mb5.3								
CASY	**Casey**	**66.57**	**201**	*e*P			**P**	**22 29 52.8**	**-0.7**
CASY	**Casey**	**66.57**	**201**	*e*P			**P**	**22 29 53.0**	**-0.5**
	comp=Z,16nm,1.0s,mb5.0								
SBA	**Scott Base**	**67.31**	**180**	*e*P			**P**	**22 29 59.7**	**+1.7**
SBA					pmax		pmax		
	comp=Z,48nm,1.0s,mb5.5								
SBA	**Scott Base**	**67.31**	**180**	*e*P			**P**	**22 29 59.7**	**+1.6**
	comp=Z,48nm,1.0s,mb5.5								
GYA	**Guiyang**	**67.49**	**304**	P			**P**	**22 30 01.3**	**+1.3**
GYA				pP			pP	22 30 13.8	-1.6
GYA				sP			sP	22 30 18.0	-3.6
GYA				PcP			PcP	22 30 28.5	+1.4
GYA				PP			PP	22 32 31.3	+1.8
GYA				ScP				22 34 26.8	
GYA				PcS				22 34 34.5	
GYA				S			S	22 38 52.8	+0.3
GYA				sS			sS	22 39 12.5	-5.8
GYA				SKS				22 39 50.8	
GYA				SS			SS	22 43 15.3	+1.3
GYA					pmax		pmax		
	comp=Z,40nm,1.0s,mb5.4								
GYA					pmax		pmax		
	comp=Z,140nm,5.9s								
GYA					LR		LR		
	comp=N,690nm,18.3s,MS5.0								
GYA					LR		LR		
	comp=E,540nm,19.0s,MS5.0								
GYA					LR		LR		
	comp=Z,690nm,18.2s,MS4.9								
BJI	**Beijing**	**67.60**	**321**	P			**P**	**22 30 00.8**	**+0.4**
BJI				SS			SS	22 43 13.9	-1.3
BJI					pmax		pmax		
	comp=Z,22nm,1.5s,mb5.0								
BJI					pmax		pmax		
	comp=Z,210nm,3.7s								
BJI					LR		LR		
	comp=N,330nm,23.1s								
BJI					LR		LR		
	comp=E,300nm,17.8s								
KMI	**Kunming**	**70.19**	**302**	P			**P**	**22 30 18.3**	**+1.4**
KMI				pP			pP	22 30 31.1	-1.2
KMI				sP			sP	22 30 37.0	-1.5
KMI				PP			PP	22 32 55.3	+2.3
KMI				S			S	22 39 25.3	+0.8
KMI				sS			sS	22 39 45.6	-4.9
KMI				SS			SS	22 43 57.5	+1.7
KMI					pmax		pmax		
	comp=Z,33nm,1.5s,mb5.0								
KMI					pmax		pmax		
	comp=Z,160nm,3.1s								
KMI					LR		LR		
	comp=N,250nm,21.9s,MS4.6								
KMI					LR		LR		
	comp=E,240nm,21.9s,MS4.6								
KMI					LR		LR		
	comp=Z,290nm,21.9s,MS4.5								
HHC	**Hu-ho-hao-te**	**70.94**	**320**	⇑P			**P**	**22 30 22.6**	**+1.5**
HHC				pP			pP	22 30 35.8	-0.7
HHC				sP			sP	22 30 41.0	-1.8
HHC				PP			PP	22 33 03.8	+4.7
HHC				S			S	22 39 36.1	+3.4
HHC				sS			sS	22 39 57.4	-1.3
HHC				ScS			ScS	22 40 20.1	-0.4
HHC				SS			SS	22 44 10.9	+4.1
HHC					pmax		pmax		
	comp=Z,25nm,1.1s,mb5.1								
HHC					pmax		pmax		
	comp=Z,250nm,5.5s								
HHC					LR		LR		
	comp=N,290nm,18.6s,MS4.8								
HHC					LR		LR		
	comp=E,430nm,18.1s,MS4.8								
HHC					LR		LR		
	comp=Z,230nm,21.6s,MS4.4								
CM31	**Chiang Mai Arr**	**71.19**	**294**	*e*P			**P**	**22 30 24.1**	**+1.0**
	comp=Z,15nm,0.7s,mb5.0								
HIA	**Hailar**	**71.55**	**331**	*e*P			**P**	**22 30 24.0**	**-0.5**
HIA					pmax		pmax		
	comp=Z,21nm,1.1s								
HIA	**Hailar**	**71.55**	**331**	*e*P			**P**	**22 30 24.0**	**-0.5**
	comp=Z,21nm,1.1s,mb5.0								
CD2	**Chengdu**	**71.67**	**308**	P			**P**	**22 30 26.1**	**+0.4**
CD2				pP			pP	22 30 39.3	-1.9
CD2				sP			sP	22 30 44.5	-2.9
CD2				PP			PP	22 33 07.5	+1.9
CD2				S			S	22 39 41.3	-0.3
CD2				sS			sS	22 40 03.3	-4.3
CD2				SS			SS	22 44 19.4	+1.0
CD2				LR			LR		
	comp=N,530nm,5.9s								
CD2				LR			LR		
	comp=Z,500nm,8.3s								
LZH	**Lanzhou**	**73.84**	**312**	*e*P			**P**	**22 30 40.3**	**+1.8**
LZH				pP			pP	22 30 54.5	+0.5
LZH				sP			sP	22 31 00.5	+0.3
LZH					pmax		pmax		
	comp=Z,23nm,1.0s,mb5.1								
LZH					pmax		pmax		
	comp=Z,110nm,5.0s								
SEY	**Seymchan**	**73.89**	**354**	*c*eP			**P**	**22 30 38.2**	**0.0**
CLNS	**Chul'man**	**74.82**	**339**	*e*P			**P**	**22 30 44.3**	**+0.6**
CLNS					pmax		pmax		
	comp=Z,20nm,1.3s,mb4.9								
CLNS					pmax		pmax		
	comp=E,4.0nm,1.1s								
CLNS					pmax		pmax		
	comp=N,15nm,1.4s								
GAMB	**Gambell**	**76.21**	**10**	*e*P			**P**	**22 30 51.7**	**+0.2**
	comp=N,69nm,1.3s,mb5.4								
GAMB				*e*			pP	22 31 06.7	-0.5
YAK	**Yakutsk**	**77.39**	**344**	*e*P			**P**	**22 30 57.8**	**-0.4**
YAK					pmax		pmax		
	comp=Z,37nm,1.2s,mb5.2								
YAK	**Yakutsk**	**77.39**	**344**	*e*P			**P**	**22 30 58.0**	**-0.2**
ULN	**Ulaanbaatar**	**77.43**	**324**	*e*P			**P**	**22 30 59.1**	**+0.3**
ULN					pmax		pmax		
	comp=Z,104nm,1.8s,mb5.5								
ULN	**Ulaanbaatar**	**77.43**	**324**	*e*P			**P**	**22 30 59.1**	**+0.3**
	comp=Z,104nm,1.8s,mb5.5								
SONM	**Songino Array**	**77.80**	**324**	P			**P**	**22 31 01.9**	**+1.2**
	comp=Z,5.7nm,0.9s,mb4.5,baz=146,slow=5.3,SNR=19								
SONM					pP		pP	22 31 16.9	+0.4
	comp=Z,6.7nm,1.1s,baz=128,slow=6.4,SNR=4.6								
SONM					LR		LR	23 04 09.1	
	comp=Z,332nm,19.6s,MS4.7,baz=279,slow=35								
SONM	**Songino Array**	**77.80**	**324**	P			**P**	**22 31 01.9**	**+1.1**
SONM				*PP			pP	22 31 16.9	+0.5
SVW2	**Sparrevohn**	**77.88**	**18**	*e*P			**P**	**22 31 00.9**	**-0.1**
GTA	**Gaotai**	**78.14**	**314**	⇑P			**P**	**22 31 04.0**	**+1.1**
GTA				pP			pP	22 31 17.5	-1.1
GTA				sP			sP	22 31 22.5	-2.2
GTA				S			S	22 40 55.9	+2.7
GTA				SKS				22 41 09.5	
GTA				sS			sS	22 41 17.3	-2.3
GTA				SS			SS	22 46 01.3	+4.9
GTA					pmax		pmax		
	comp=Z,28nm,1.8s,mb4.9								
GTA					pmax		pmax		
	comp=Z,310nm,5.4s								
GTA					LR		LR		
	comp=N,220nm,19.6s,MS4.6								
GTA					LR		LR		
	comp=E,180nm,19.0s,MS4.6								
GTA					LR		LR		
	comp=Z,300nm,20.2s,MS4.6								
BILL	**Bilibino**	**78.38**	**1**	⇑*i*P			**P**	**22 31 03.7**	**+0.1**
BILL				*i*			pP	22 31 19.2	0.0
BILL					pmax		pmax		
	comp=Z,67nm,1.6s,mb5.3								
BILL	**Bilibino**	**78.38**	**1**	*e*P			**P**	**22 31 03.3**	**-0.3**
	comp=Z,61nm,1.3s,mb5.4								
BILL				*e*			pP	22 31 18.4	-0.8
QSPA	**South Pole Qui**	**79.46**	**180**	P			**P**	**22 31 10.5**	**+1.0**
	comp=Z,17nm,0.7s,mb5.1,baz=354,slow=1.2,SNR=41								
QSPA					pP		pP	22 31 26.5	+1.3
	comp=Z,15nm,1.0s,baz=308,slow=3.5,SNR=5.0								
BOD	**Bodaibo**	**79.74**	**335**	*e*P			**P**	**22 31 10.6**	**-0.6**
BOD					pmax		pmax		
	comp=Z,13nm,1.9s,mb4.5								
ZAK	**Zakamensk**	**80.84**	**325**	*e*P			**P**	**22 31 17.4**	**+0.1**
ZAK					pmax		pmax		
	comp=Z,8.0nm,1.4s,mb4.5								
KTH	**Kantishna Hill**	**81.17**	**18**	*e*P			**P**	**22 31 18.3**	**-0.4**
	comp=Z,37nm,1.7s,mb5.0								
TLY	**Talaya**	**81.27**	**326**	P			**P**	**22 31 19.7**	**+0.1**
	comp=Z,70nm,0.8s,mb5.7,SNR=5.2								
TLY	**Talaya**	**81.27**	**326**	*e*P			**P**	**22 31 19.5**	**-0.1**
TLY				*e*				22 46 43.3	
TLY					pmax		pmax	

PDAR pP pP 22 32 36.3 -0.3
comp=Z,0.9nm,0.9s,baz=262,slow=3.0,SNR=2.6
PDAR LR LR 23 08 56.9
comp=Z,211nm,19.5s,MS4.6,baz=262,slow=32
YKA Yellowknife Ar 94.89 27 P P 22 32 24.2 -1.0
comp=Z,0.1nm,0.3s,baz=298,slow=3.2,SNR=2.2
YKA LR LR 23 07 39.1
comp=Z,308nm,20.2s,MS4.8,baz=325,slow=31
KURK Kurchatov 95.75 320 P P 22 32 28.3 -1.1
comp=Z,1.6nm,0.7s,mb4.5,baz=92,slow=4.1,SNR=12
KURK PP PP 22 36 28.3 +6.5
comp=Z,0.7nm,0.8s,baz=98,slow=7.2,SNR=3.0
KURK Kurchatov 95.75 320 *ce*P **P 22 32 28.5 -1.0**
KURK pmax pmax
comp=Z,21nm,1.7s,mb5.3
KURK Kurchatov 95.75 320 *e*P **P 22 32 27.8 -1.7**
comp=Z,30nm,1.6s,mb5.5
TKM2 Tokmak 2 96.61 312 *e*P **P 22 32 33.1 -0.5**
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
TKM2 Tokmak 2 96.61 312 *e*P **P 22 32 33.1 -0.5**
comp=Z,1.9nm,0.6s,mb4.7
AAK Ala-Archa 97.38 312 *e*P **P 22 32 36.5 -0.5**
AML Almayashu 97.90 311 *e*P **P 22 32 39.8 +0.4**
comp=Z,2.3nm,0.8s,mb4.8
EKS2 Erkin-Say 97.90 312 *e*P **P 22 32 38.8 -0.6**
VNA2 Neumayer--Watz 98.56 183 *e*P **P 22 32 40.8 -1.0**
BVAR Borovoye Array 101.07 322 P Pdif 22 32 52.6 -0.7
comp=Z,1.3nm,0.6s,baz=103,slow=6.4,SNR=9.4
BVAR pP 22 33 07.3
comp=Z,0.9nm,0.7s,baz=107,slow=5.0,SNR=3.5
BRVK Borovoye 101.14 322 *e*P Pdif 22 32 52.7 -0.9
ARCES ARCESS Array B 115.65 345 PKP PKPdf 22 37 43.3 -1.6
comp=Z,1.6nm,0.6s,baz=64,slow=2.8,SNR=8.1
ARCES pPKP pPKPdf 22 38 01.5 0.0
comp=Z,1.3nm,0.8s,baz=72,slow=2.1,SNR=1.5
FINES FINESS Array B 121.02 338 PKP PKPdf 22 37 54.5 -0.9
comp=Z,1.8nm,0.8s,baz=79,slow=4.1,SNR=9.8
LPAZ La Paz 121.11 116 PKP PKPdf 22 37 57.2 +0.3
comp=Z,1.1nm,0.3s,baz=257,slow=7.6,SNR=5.2
MALT Malatya 124.93 310 *e*PKIKP PKPdf 22 38 03.9 +0.2
BOSA Boshof 124.94 224 PKP PKPdf 22 38 04.3 +0.3
comp=Z,3.6nm,0.6s,baz=186,slow=1.4,SNR=9.9
CPUP Villa Florida 124.94 133 PKP PKPdf 22 38 03.1 -1.0
comp=Z,1.0nm,0.6s,baz=334,slow=7.6,SNR=5.2
SDV Santo Domingo 125.25 87 *e*PKPdf PKPdf 22 38 03.8 -1.2
NOA NORSAR Array B 126.01 345 PKP PKPdf 22 38 04.8 -0.3
comp=Z,0.9nm,0.8s,baz=34,slow=2.1,SNR=3.7
NOA pPKP pPKPdf 22 38 21.5 -0.1
comp=Z,0.6nm,0.9s,baz=28,slow=1.9,SNR=1.9
NOA sPKP 22 38 30.5
NOA NORSAR Array B 126.01 345 PKIKP PKPdf 22 38 04.8 -0.3
NOA 22 38 21.5
AKASG Malin Array Be 126.01 327 PKP PKPdf 22 38 05.4 0.0
comp=Z,0.6nm,0.5s,baz=90,slow=0.7,SNR=5.4
AKASG pPKP pPKPdf 22 38 20.9 -1.0
comp=Z,0.2nm,0.3s,baz=73,slow=0.7,SNR=1.6
AKASG Malin Array Be 126.01 327 *c i*PKIKP PKPdf 22 38 05.4 0.0
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 128.05 313 PKP PKPdf 22 38 10.1 +0.5
comp=Z,0.8nm,0.8s,baz=103,slow=2.7,SNR=6.0
BRTR pPKP pPKPdf 22 38 26.4 +0.2
comp=Z,0.6nm,0.8s,baz=156,slow=6.2,SNR=2.8
BRTR Keskin Array B 128.05 313 *c i*PKIKP PKPdf 22 38 10.1 +0.5
BRTR pmax pmax
comp=Z,1.0nm,0.8s
UZH Uzhgorod 130.89 328 *e*PKIKP PKPdf 22 38 14.4 -0.3
MOX Moxa 134.40 336 *e*(PKP) 22 38 21.8
GERES GERESS Array B 134.91 333 PKP PKPdf 22 38 22.5 +0.2
comp=Z,0.8nm,0.7s,baz=48,slow=2.0,SNR=8.1
GERES pPKP pPKPdf 22 38 37.7 -1.1
comp=Z,0.2nm,0.6s,baz=120,slow=37,SNR=3.1
HINF Hinteralfeld 138.52 338 *e*PKP1 PKPdf 22 38 29.9 +0.9
CABF La Chapelle 139.81 337 *e*PKP1 PKPdf 22 38 31.6 +0.2
FRF La Foret Royal 142.09 334 *e*PKP1 PKPdf 22 38 37.1 +1.5
comp=Z,70nm,1.6s
MTLF Montolieu 144.03 338 *e*PKP1 PKPdf 22 38 37.4 -1.7
comp=Z,276nm,1.6s
FILF Fillols 144.58 337 *e*P PKPdf 22 38 39.2 -0.9
MLS Moulis 144.77 339 *e*P PKPdf 22 38 38.1 -2.3
VALF Valcebollere 144.92 338 *e*P PKPdf 22 38 40.5 -0.2
EPF Esparros 144.96 340 *e*PKP1 PKPdf 22 38 40.2 -0.5
comp=Z,159nm,1.9s
RESF Ens 145.16 340 *e*P PKPbc 22 38 41.9 +1.2
REYF Montagne du Re 145.16 341 *e*P PKPbc 22 38 40.8 +0.1
VIEF Viey 145.20 340 *e*P PKPbc 22 38 41.7 +0.9
ORDF Ordiarp 145.21 342 *e*P PKPbc 22 38 40.4 -0.4
ETSF Etsaut 145.37 341 *e*PKP1 PKPbc 22 38 42.3 +0.9
comp=Z,42nm,1.1s
SJPF Ste Jean 145.38 342 *e*PKP1 PKPbc 22 38 41.7 +0.3
comp=Z,87nm,1.6s
KEST Kesra 146.54 322 PKPbc PKPbc 22 38 45.4 +0.2
comp=Z,5.7nm,0.9s,baz=262,slow=1.7,SNR=24
KEST pPKPbc pPKPbc 22 39 02.6 +1.1
comp=Z,3.4nm,0.7s,baz=265,slow=5.9,SNR=4.8
CMAH Djebel Manchou 147.03 326 P PKPbc 22 38 46.0 -0.5
CKFL Kef-Lekhel 147.58 326 P PKPbc 22 38 48.0 0.0
CASM Ain Smara 147.81 326 P PKPbc 22 38 49.2 +0.5
DFRA Djebel Bou Aff 147.93 327 P PKPbc 22 38 49.4 +0.4
CTEI Djebel Teioual 148.00 326 P PKPbc 22 38 49.9 +0.7
PBRG Braganca 148.01 348 *e*PKPdf PKPab 22 38 52.6 +0.9
PCAB Cabril 148.34 350 *e*PKPdf PKPab 22 38 54.1 +1.0
SET Setif 148.44 327 P PKPbc 22 38 51.0 +0.7
MVO Moncorvo 148.69 348 *e*PKPab PKPab 22 38 55.6 +1.1
PVRL Vila Real 148.71 349 *e*PKPdf PKPbc 22 38 51.4 +0.5
PVRL Vila Real 148.71 349 *e*PKPab PKPab 22 38 55.9 +1.3
ABA Alger-Bouzarea 149.17 331 P PKPab 22 39 00.1 +3.5
ESDC Sonseca Array 149.35 343 PKPbc PKPbc 22 38 52.5 0.0
comp=Z,4.0nm,0.6s,baz=15,slow=3.7,SNR=13
ESDC PKPab PKPab 22 38 58.5 +1.3
comp=Z,4.1nm,0.6s,baz=13,slow=4.3,SNR=25
ESDC pPKPab pPKPab 22 39 13.6 +0.2
comp=Z,2.8nm,0.8s,baz=11,slow=4.1,SNR=4.3
ESLA Sonseca Array 149.35 343 *e*PKPdf PKPdf 22 38 49.5 +1.3
ADJB Djebel Djouab 149.48 330 P PKPbc 22 38 55.0 +2.0
MTE Manteigas 149.53 349 *e*PKPdf PKPbc 22 38 52.8 -0.1
MTE Manteigas 149.53 349 *e*PKPab PKPab 22 38 59.3 +1.4
PAB San Pablo 149.58 344 *e*PKPdf PKPdf 22 38 49.5 +0.9
PAB *e*PKPbc PKPbc 22 38 52.9 -0.3
PCBR Castelo Branco 150.05 348 *e*PKPdf PKPbc 22 38 54.8 +0.6
PCBR Castelo Branco 150.05 348 *e*PKPab PKPab 22 39 01.0 +0.9
PMRV Marv??o 150.43 348 *e*PKPdf PKPbc 22 38 56.0 +0.8
PESTR Estremoz 151.01 348 *e*PKPab PKPab 22 39 06.7 +2.6
EVO Evora 151.42 348 *e*PKP2 PKPab 22 39 06.1 +0.3
comp=Z,27nm,1.0s
EVO Evora 151.42 348 *e*PKPdf PKPbc 22 38 58.0 +0.5
EVO Evora 151.42 348 *e*PKPab PKPab 22 39 06.9 +1.1
PBAR Barrancos 151.56 347 *e*PKPab PKPab 22 39 07.2 +0.9
PBEJ Beja 151.88 348 *e*PKPab PKPab 22 39 09.4 +1.7
MORF Marmelete 152.73 349 *e*PKPab PKPab 22 39 11.7 +0.4
TOA0 Torodi Ar. Sit 163.41 281 *e*PKPdf PKPdf 22 39 07.2 +0.2
TORD Torodi Ar. Bea 163.41 281 PKP PKPdf 22 39 06.2 -0.8
comp=Z,1.6nm,1.0s,baz=85,slow=0.9,SNR=6.5
TORD pPKP pPKPdf 22 39 23.1 -0.5
comp=Z,1.2nm,1.0s,baz=146,slow=2.7,SNR=3.2
TORD sPKP 22 39 31.4
comp=Z,1.1nm,1.0s,baz=331,slow=1.6,SNR=3.1
TORD PKPab PKPab 22 39 57.7 -0.5
comp=Z,3.8nm,1.1s,baz=83,slow=4.2,SNR=13
TORD pPKPab pPKPab 22 40 14.0 -0.3
comp=Z,0.7nm,0.7s,baz=83,slow=1.6,SNR=1.6
TORD PP PP 22 43 47.3 +3.4
comp=Z,0.7nm,1.0s,baz=112,slow=6.6,SNR=4.6

MAN 15 22:21:03, 12°.38N×123°.78E, h17km, mb3.9, ML2.7, MS2.3, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MMPH	**Masbate**	**0.15**	**264⇑**	*i*P		Pg	22 21 09.2	+2.0
MMPH				*i*S		Sg	22 21 12.0	+2.1
PVCP	**Virac**	**1.27**	**17**	*e*P		Pn	22 21 25.8	-0.2
PVCP				*e*S		Sb	22 21 33.3	-9.2
RCP	**Roxas**	**1.29**	**231⇑**	*e*P		Pn	22 21 26.6	+0.3
RCP				*e*S		Sn	22 21 44.5	+1.2
AUQP	**San Andres**	**1.43**	**311**	*e*P		Pn	22 21 28.0	-0.2
AUQP				*e*S		Sn	22 21 48.3	+1.7
OTRP	**Odiongan**	**1.71**	**270**	*e*P		Pn	22 21 33.4	+1.3

ISCJB ***15*** *22:34:30.1±0.2, 31°.77N±0°.03×104°.47E±0°.03, h10km, mb4.2/35, Error ellipse: s-maj=4.2km s-min=3.8km az=165.5*
IDC ***15*** *22:34:30.6±0.5, 31°.81N×104°.48E, h0km, mb4.3/23, mb1 4.3/24, mb1mx4.2/33, mbtmp4.3/24, ML4.1/1, Error ellipse: s-maj=19.5km s-min=11.6km az=48.0*
NEIC ***15*** *22:34:32.4±0.3, 31°.87N×104°.48E, h10km, mb4.1/6, Error ellipse: s-maj=7.0km s-min=5.5km az=50.0*
BJI ***15*** *22:34:32.9, 31°.88N×104°.62E, h19km, mB4.6/9, mb4.4/17, ML4.3/17, Ms4.2/15, Ms7 3.9/12*
MOS ***15*** *22:34:33.8±0.9, 31°.85N×104°.48E, h33km, mb4.4/23, Error ellipse: s-maj=10.9km s-min=6.7km az=102.7*
ISC 15 22:34:32.2±0.2, 31°.77N±0°.03×104°.42E±0°.03, h10km, n108, σ1§**10**/123, **mb4.2**/35, **6C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
LZH	**Lanzhou**	**4.33**	**354**	*e*Pn		**Pn**	**22 35 40.3**	**+2.2**
LZH					Pg	**Pg**	**22 35 51.8**	**-3.4**
LZH					Sn	**Sn**	**22 36 29.8**	**+1.2**
LZH					Sg	**Sg**	**22 36 43.8**	**-7.5**
LZH				smax				
comp=N,560nm,0.6s								
LZH				smax				
comp=E,610nm,0.7s								
LZH					LR	LR		
comp=E,980nm,5.8s								
LZH					LR	LR		
comp=Z,1μm,5.9s								
XAN	**Xi'an**	**4.41**	**58**	Pn		**Pn**	**22 35 38.5**	**-0.7**
XAN					Pg	**Pg**	**22 35 52.3**	**-4.4**
XAN					Sn	**Sn**	**22 36 23.9**	**-6.7**
XAN					Sg	**Sg**	**22 36 45.1**	**-8.8**
XAN				smax				
comp=N,1μm,0.6s								
XAN				smax				
comp=E,400nm,1.0s								
ENH	**Enshi**	**4.60**	**108**	*e*Pn		**Pn**	**22 35 42.5**	**+0.7**
ENH				*e*Pg		**Pg**	**22 36 00.2**	**-0.1**
ENH				*e*S		**Sg**	**22 36 58.1**	**-1.8**
GYA	**Guiyang**	**5.64**	**159**	Pn		**Pn**	**22 35 58.3**	**+2.2**
GYA				Sn		**Sn**	**22 36 59.8**	**-1.2**
GYA				smax				
comp=N,600nm,0.6s								
GYA				smax				
comp=E,250nm,0.6s								
KMI	**Kunming**	**6.79**	**193**	Pn		**Pn**	**22 36 15.9**	**+4.1**
KMI				Sn		**Sn**	**22 37 31.3**	**+2.2**
KMI				smax				
comp=N,54nm,1.4s								
KMI				smax				
comp=E,52nm,1.5s								
KMI					LR	LR		
comp=N,1μm,6.6s								
KMI					LR	LR		
comp=E,680nm,5.9s								
KMI					LR	LR		
comp=Z,860nm,7.1s								
GTA	**Gaotai**	**8.49**	**335**	*e*P		**Pn**	**22 36 41.3**	**+6.1**
GTA					pP		22 36 44.6	
GTA					sP		22 36 47.3	
GTA					S	**Sn**	**22 38 15.8**	**+4.7**
GTA					sS		22 38 20.4	
GTA					pmax	pmax		
comp=Z,4.0nm,0.6s								
GTA					pmax	pmax		
comp=Z,140nm,4.2s								
GTA					LR	LR		
comp=N,370nm,10.7s								
GTA					LR	LR		
comp=E,570nm,12.2s								
GTA					LR	LR		
comp=Z,310nm,12.5s								
WHN	**Wuhan**	**8.60**	**96**	P		**Pn**	**22 36 36.3**	**-0.4**
WHN					S	**Sn**	**22 38 07.0**	**-6.8**
WHN					LR	LR		
comp=N,3μm,7.7s								
WHN					LR	LR		
comp=E,2μm,6.2s								
WHN					LR	LR		
comp=Z,2μm,6.4s								
BTO	**Baotou**	**9.91**	**26**	*e*P		**Pn**	**22 36 54.9**	**+0.3**
BTO					S	**Sn**	**22 38 45.3**	**-0.5**
BTO					LR	LR		
comp=N,240nm,8.9s								
BTO					LR	LR		
comp=E,120nm,8.4s								
HHC	**Hu-ho-hao-te**	**10.73**	**30**	*e*P		**Pn**	**22 37 06.4**	**+0.5**
HHC					pP		22 37 09.8	
HHC					sP		22 37 14.8	
HHC					S	**Sn**	**22 39 06.0**	**-0.1**
HHC					sS		22 39 10.8	
HHC					SS		22 39 20.1	
HHC					pmax	pmax		
comp=Z,14nm,1.1s								
HHC					pmax	pmax		
comp=Z,110nm,6.1s								
HHC					LR	LR		
comp=N,590nm,6.1s								
HHC					LR	LR		
comp=E,370nm,5.9s								
HHC					LR	LR		
comp=Z,400nm,5.7s								
LSA	**Lhasa**	**11.60**	**263**	*e*P		**Pn**	**22 37 19.7**	**+1.9**
LSA					pmax	pmax		
comp=Z,9.0nm,0.6s								
LSA	**Lhasa**	**11.60**	**263**	*e*Pn		**Pn**	**22 37 19.6**	**+1.8**
comp=Z,8.8nm,0.6s								
NJ2	**Nanjing**	**12.27**	**85**	*e*P		**Pn**	**22 37 29.8**	**+2.8**
NJ2					pP		22 37 32.9	
NJ2					sP		22 37 36.3	
NJ2					PP		22 37 40.3	
NJ2					S	**Sn**	**22 39 47.5**	**+3.7**
NJ2					sS		22 39 53.0	
NJ2					pmax	pmax		
comp=Z,10.0nm,0.6s								
NJ2					pmax	pmax		
comp=Z,60nm,4.2s								
NJ2					LR	LR		
comp=N,370nm,12.1s								
NJ2					LR	LR		
comp=E,750nm,10.2s								
CMAR	**Chiang Mai Arr**	**14.15**	**202**	Pn		**Pn**	**22 37 56.7**	**+4.1**
baz=12,slow=11								
SONM	**Songino Array**	**16.12**	**5**	Pn		**Pn**	**22 38 18.0**	**-0.7**
comp=E,0.8nm,0.3s,baz=183,slow=13,SNR=10								
SONM	**Songino Array**	**16.12**	**5**	P		**Pn**	**22 38 18.0**	**-0.7**
SONM				pmax		pmax		
comp=Z,1.0nm,0.3s								
ULN	**Ulaanbaatar**	**16.20**	**6**	*e*P		**Pn**	**22 38 18.8**	**-1.0**
GUN	**Gumba**	**16.54**	**261**	*e*P		**Pn**	**22 38 22.9**	**-1.3**
comp=Z,52nm,0.8s								
PKI	**Pulchoki**	**17.04**	**261**	*e*P		**Pn**	**22 38 29.3**	**-1.3**
comp=Z,30nm,0.6s								
PKIN	**Phulchoki**	**17.05**	**261**	*e*P		**Pn**	**22 38 29.4**	**-1.3**
comp=Z,54nm,0.7s								
KKN	**Kakani**	**17.08**	**261**	*e*P		**Pn**	**22 38 29.2**	**-1.9**
comp=Z,26nm,0.7s								
DMN	**Daman**	**17.28**	**261**	*e*P		**Pn**	**22 38 32.2**	**-1.4**
comp=Z,46nm,0.9s								
ZAK	**Zakamensk**	**18.61**	**358**	*e*P		**Pn**	**22 38 49.3**	**-0.5**
ZAK				pmax		pmax		
comp=Z,6.0nm,1.1s								
TLY	**Talaya**	**19.90**	**359**	*e*P		**Pn**	**22 39 07.4**	**+2.1**
TLY				pmax		pmax		
comp=Z,9.0nm,1.7s								
TLY	**Talaya**	**19.90**	**359**	*e*P		**Pn**	**22 39 02.5**	**-2.8**
comp=Z,2.3nm,0.6s								
MOY	**Mondy**	**20.04**	**354**	*e*P		**P**	**22 39 07.5**	**+2.3**
KSRS	**Korea Array**	**20.14**	**67**	P		**P**	**22 39 06.8**	**+0.4**
comp=Z,19nm,0.7s,baz=256,slow=10,SNR=80								
KSRS	**Korea Array**	**20.14**	**67**	P		**P**	**22 39 06.8**	**+0.4**
KSRS				pmax		pmax		
comp=Z,19nm,0.7s								
CN2	**Changchun**	**20.44**	**48**	⇑P		**P**	**22 39 10.4**	**+0.8**
CN2				*es*P		sP	22 39 17.0	+3.2
CN2				*es*S		**S**	**22 43 00.3**	**+1.9**
CN2				pmax		pmax		
comp=Z,40nm,0.6s								
CN2				pmax		pmax		
comp=Z,500nm,3.0s								
CN2				LR		LR		
comp=N,600nm,19.0s								
CN2				LR		LR		
comp=E,900nm,19.0s								
CN2				LR		LR		
comp=Z,400nm,18.0s								
HIA	**Hailar**	**20.93**	**29**	*e*P		**P**	**22 39 15.7**	**+0.8**
MK31	**Makanchi Array**	**22.66**	**318**	*e*P		**P**	**22 39 33.6**	**+0.2**
MKAR	**Makanchi Array**	**22.66**	**318**	P		**P**	**22 39 34.1**	**+0.7**
comp=Z,2.1nm,0.6s,mb3.8,baz=116,slow=13,SNR=22								
MKAR	**Makanchi Array**	**22.66**	**318**	P		**P**	**22 39 34.1**	**+0.7**
MKAR				pmax		pmax		
comp=Z,2.0nm,0.6s								
TKM2	**Tokmak 2**	**25.35**	**304**	*e*P		**P**	**22 39 59.3**	**0.0**
TKM2				pmax		pmax		
comp=Z,1.0nm,0.6s,mb3.5								
TKM2	**Tokmak 2**	**25.35**	**304**	*e*P		**P**	**22 39 59.3**	**0.0**
comp=Z,1.3nm,0.6s,mb3.6								
UCH	**Uchtor**	**25.94**	**302**	*e*P		**P**	**22 40 06.1**	**+1.4**
ZAA0	**Zalesovo Array**	**26.24**	**333**	*e*P		**P**	**22 40 07.0**	**-0.2**
ZALV	**Zalesovo Beam**	**26.24**	**333**	P		**P**	**22 40 07.3**	**+0.1**
comp=Z,4.9nm,0.5s,mb4.3,baz=134,slow=9.7,SNR=23								
ZALV	**Zalesovo Beam**	**26.24**	**333**	P		**P**	**22 40 07.4**	**+0.2**
ZALV				pmax		pmax		
comp=Z,5.0nm,0.5s,mb4.3								
AML	**Almayashu**	**26.51**	**302**	*e*P		**P**	**22 40 09.5**	**-0.3**
BOD	**Bodaibo**	**26.87**	**11**	*e*P		**P**	**22 40 12.7**	**-0.1**
KURK	**Kurchatov**	**26.88**	**322**	P		**P**	**22 40 13.6**	**+0.6**
comp=Z,1.4nm,0.5s,mb3.8,baz=127,slow=8.3,SNR=18								
KURK				PcP		PcP	22 43 34.4	-0.7
comp=Z,0.3nm,0.5s,baz=121,slow=2.3,SNR=2.4								
KURK	**Kurchatov**	**26.88**	**322**	*ce*P		**P**	**22 40 14.6**	**+1.6**
KURK				pmax		pmax		
comp=Z,4.0nm,1.2s,mb3.8								
KURK	**Kurchatov**	**26.88**	**322**	*e*P		**P**	**22 40 13.0**	**0.0**
comp=Z,2.9nm,0.7s,mb3.9								
KURK				PcP		PcP	22 43 34.4	-0.7
KLR	**Kul'dur**	**26.91**	**42**	*e*P		**P**	**22 40 07.8**	**-5.5**
MJAR	**Matsushiro Arr**	**28.28**	**71**	P		**P**	**22 40 24.8**	**-0.9**
comp=Z,0.6nm,0.4s,mb3.5,baz=271,slow=9.8,SNR=4.9								
MJAR	**Matsushiro Arr**	**28.28**	**71**	P		**P**	**22 40 24.8**	**-0.9**
MJAR				pmax		pmax		
comp=Z,1.0nm,0.4s								
KBL	**Kabul**	**29.65**	**285**	*e*P		**P**	**22 40 38.2**	**+0.3**
KBL				pmax		pmax		
comp=Z,3.0nm,0.8s,mb4.1								
KBL	**Kabul**	**29.65**	**285**	*e*P		**P**	**22 40 38.2**	**+0.3**
comp=Z,3.3nm,0.8s,mb4.1								
BVAR	**Borovoye Array**	**32.44**	**321**	P		**P**	**22 41 02.5**	**+0.3**
comp=Z,0.6nm,0.5s,mb3.7,baz=120,slow=9.5,SNR=5.5								
BVAR	**Borovoye Array**	**32.44**	**321**	P		**P**	**22 41 02.5**	**+0.2**
BVAR				pmax		pmax		
comp=Z,1.0nm,0.5s								
BRVK	**Borovoye**	**32.51**	**321**	*ce*P		**P**	**22 41 04.3**	**+1.4**
BRVK				pmax		pmax		
comp=Z,1.0nm,0.6s,mb3.9								
BRVK	**Borovoye**	**32.51**	**321**	*e*P		**P**	**22 41 02.1**	**-0.8**
AKTK	**Aktyubinsk**	**38.88**	**312**	P		**P**	**22 41 58.3**	**+0.7**
AKTO	**Aktyubinsk**	**38.88**	**312**	P		**P**	**22 41 58.3**	**+0.7**
comp=Z,0.8nm,0.4s,mb3.8,baz=88,slow=15,SNR=6.7								
AKTO	**Aktyubinsk**	**38.88**	**312**	P		**P**	**22 41 58.3**	**+0.7**
AKTO				pmax		pmax		
comp=Z,1.0nm,0.4s,mb3.9								
SVE	**Sverdlovsk**	**39.13**	**323**	*e*P		**P**	**22 42 00.9**	**+1.3**
KAPI	**Kappang**	**39.39**	**155**	P		**P**	**22 42 02.0**	**-0.1**
comp=Z,3.9nm,0.3s,mb4.5,baz=343,slow=6.3,SNR=3.8								
TIXI	**Tiksi**	**42.05**	**11**	*e*P		**P**	**22 42 21.4**	**-2.1**
TIXI				pmax		pmax		
comp=Z,2.0nm,0.5s,mb4.0								
SEY	**Seymchan**	**43.38**	**30**	*ce*P		**P**	**22 42 34.9**	**+0.5**
PETK	**Petropavlovsk-**	**43.53**	**45**	P		**P**	**22 42 35.5**	**-0.3**
comp=Z,7.0nm,0.7s,mb4.5,baz=227,slow=4.7,SNR=14								
PETK	**Petropavlovsk-**	**43.53**	**45**	P		**P**	**22 42 35.5**	**-0.2**
PETK				pmax		pmax		
comp=Z,7.0nm,0.7s,mb4.5								
PETK	**Petropavlovsk-**	**43.53**	**45**	P		**P**	**22 42 35.5**	**-0.3**
KIV	**Kislovodsk**	**49.18**	**303**	*e*P		**P**	**22 43 25.8**	**+5.5**
KIV				pmax		pmax		
comp=Z,4.0nm,0.9s,mb4.5								
BILL	**Bilibino**	**50.46**	**25⇑**	*e*P		**P**	**22 43 29.5**	**-0.2**
BILL				pmax		pmax		
comp=Z,3.0nm,0.7s,mb4.4								
MALT	**Malatya**	**53.41**	**296**	P		**P**	**22 43 52.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**53.60**	**155**	P		**P**	**22 43 53.4**	**-0.3**
comp=Z,2.7nm,0.8s,mb4.2,baz=304,slow=7.3								
FITZ	**Fitzroy Crossi**	**53.60**	**155**	P		**P**	**22 43 53.4**	**-0.3**
JOF	**Joensuu**	**54.61**	**328**	*e*P		**P**	**22 43 58.8**	**-1.7**
JOF				pmax		pmax		
comp=Z,2.0nm,0.6s,mb4.3								
JOF	**Joensuu**	**54.61**	**328**	*e*p		**P**	**22 43 58.8**	**-1.7**
comp=Z,1.9nm,0.6s,mb4.3								
KEV	**Kevo**	**56.23**	**336**	*e*P		**P**	**22 44 11.1**	**-1.0**
KEV				pmax		pmax		
comp=Z,5.0nm,0.7s,mb4.7								
KEV	**Kevo**	**56.23**	**336**	*e*p		**P**	**22 44 11.1**	**-1.0**
comp=Z,5.0nm,0.7s,mb4.7								
ASF	**Jabal al Asfar**	**56.37**	**290**	P		**P**	**22 44 17.8**	**+4.1**
comp=Z,2.0nm,0.8s,mb4.2,baz=336,slow=10,SNR=3.6								
ASF	**Jabal al Asfar**	**56.37**	**290**	P		**P**	**22 44 17.8**	**+4.1**
ASF				pmax		pmax		
comp=Z,2.0nm,0.8s								
BR131	**Keskin Array S**	**56.65**	**299**	*e*P		**P**	**22 44 15.5**	**0.0**
comp=Z,1.7nm,0.8s,mb4.1								
BRTR	**Keskin Array B**	**56.65**	**299**	P		**P**	**22 44 16.9**	**+1.3**
comp=Z,1.3nm,0.8s,mb4.0,baz=104,slow=5.2,SNR=8.5								
BRTR	**Keskin Array B**	**56.65**	**299**	*ce*P		**P**	**22 44 16.8**	**+1.3**
BRTR				pmax		pmax		
comp=Z,1.0nm,0.8s								
ARCES	**ARCESS Array B**	**56.77**	**336**	P		**P**	**22 44 15.6**	**-0.3**
comp=Z,2.7nm,0.7s,mb4.4,baz=81,slow=8.0,SNR=8.5								
ARCES	**ARCESS Array B**	**56.77**	**336**	P		**P**	**22 44 15.6**	**-0.3**
ARCES				pmax		pmax		
comp=Z,3.0nm,0.7s								
KAF	**Kangasniemi**	**56.98**	**327**	*e*P		**P**	**22 44 15.3**	**-2.2**
KAF				pmax		pmax		
comp=Z,2.0nm,0.6s,mb4.3								
KAF	**Kangasniemi**	**56.98**	**327**	*e*p		**P**	**22 44 15.3**	**-2.2**
comp=Z,2.1nm,0.6s,mb4.3								
AKASG	**Malin Array Be**	**57.13**	**313**	P		**P**	**22 44 20.6**	**+1.9**
comp=Z,0.7nm,0.4s,mb4.1,baz=68,slow=7.4,SNR=3.8								
AKASG	**Malin Array Be**	**57.13**	**313**	P		**P**	**22 44 20.6**	**+1.9**
AKASG				pmax		pmax		
comp=Z,1.0nm,0.4s								
FINES	**FINESS Array B**	**57.17**	**326**	P		**P**	**22 44 18.6**	**-0.3**
comp=Z,2.2nm,0.4s,mb4.5,baz=89,slow=7.7,SNR=28								
FINES	**FINESS Array B**	**57.17**	**326**	P		**P**	**22 44 18.6**	**-0.2**
FINES				pmax		pmax		
comp=Z,2.0nm,0.4s								
WRAB	**Tennant Creek**	**58.88**	**147**	*e*P		**P**	**22 44 31.4**	**+0.1**
WRAB				pmax		pmax		
comp=Z,7.0nm,0.6s,mb4.9								
WRAB	**Tennant

SMF	Signal de Mont	74.21	315	eP	P	22 46 08.5	-0.6
TCF	Toulx Ste Croi	75.37	316	eP	P	22 46 15.6	-0.2
CAF	Calviac	76.16	314	eP	P	22 46 21.1	+0.7
YKA	Yellowknife Ar	80.98	17	P	P	22 46 46.1	-0.5
	comp=Z,1.4nm,0.6s,mb4.0,baz=331,slow=5.5,SNR=9.8						
SCHQ	Schefferville	93.42	355	P	P	22 47 45.9	-1.7
	comp=Z,2.0nm,0.8s,mb4.6,baz=14,slow=4.2,SNR=3.2						

*IDC **15** 22:40:27.4±4.7, 36.°18N×71.°19E, h75km±40km, mb3.6/10, mb1 3.8/14, mb1mx3.6/27, mbtmp3.7/14, ML3.8/4, Error ellipse: s-maj=30.5km s-min=17.7km az=20.0*
*ISCJB **15** 22:40:31.3±0.4, 36.°50N±0.°03×71.°46E±0.°05, h122km±5km, mb3.9/13, Error ellipse: s-maj=6.6km s-min=4.1km az=170.8*
*BJI **15** 22:40:31.5, 36.°63N×71.°25E, h140km, mB4.5/2, mb4.5/3*
*NEIC **15** 22:40:33.2±0.7, 36.°55N×71.°36E, h120km±7km, mb4.3/10, Error ellipse: s-maj=10.2km s-min=7.9km az=135.0*
*NNC **15** 22:40:37.7±3.0, 36.°92N×71.°19E, h106km±37km, mb3.4, mpv4.3, Error ellipse: s-maj=23.7km s-min=19.8km az=2.0*

ISC 15 22:40:32.5±0.4, 36.°48N±0.°02×71.°46E±0.°05, h120km±5km, n76, σ1°29/92, mb3.9/13, 6C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.76	226	ePn	Pn	22 41 16.0	+0.3
KBL				eSn	Sn	22 41 48.9	0.0
CHCP	Chirah Chowk	3.18	152	P	Pn	22 41 24.0	+2.8
KSH	Kashi	4.68	48	P	Pn	22 41 39.3	-1.8
KSH				S	Sn	22 42 24.8	-10
KSH				smax			
	comp=N,540nm,0.3s						
KSH				smax			
	comp=E,740nm,0.6s						
JMU	Jammu	4.70	142	eS	Sn	22 42 34.0	-1.1
THN	Thein Dam	5.35	138	eP	Pn	22 41 51.1	+0.9
THN				ex	x	22 42 53.7	
AML	Almayashu	5.91	16	P	Pn	22 41 58.5	+0.9
	SNR=80						
AML	Almayashu	5.91	16	ePn	Pn	22 41 58.6	+1.0
	comp=E,123nm,0.6s						
AML				eSn	Sn	22 43 03.1	-0.8
UCH	Uchtor	6.21	21	P	Pn	22 42 03.0	+1.3
	SNR=44						
UCH	Uchtor	6.21	21	ePn	Pn	22 42 02.4	+0.7
UCH				eSn	Sn	22 43 09.7	-1.6
KZA	Kyzart	6.32	27	P	Pn	22 42 04.2	+1.1
	SNR=15						
EKS2	Erkin-Say	6.43	15	P	Pn	22 42 05.5	+0.8
	SNR=34						
EKS2	Erkin-Say	6.43	15	ePn	Pn	22 42 05.5	+0.8
	comp=E,17nm,0.5s						
EKS2				eSn	Sn	22 43 14.2	-2.4
BHK	Bhakra	6.51	139	ex	x	22 43 13.8	
AAK	Ala-Archa	6.58	20	P	Pn	22 42 07.9	+1.3
	SNR=80						
AAK	Ala-Archa	6.58	20	P	Pn	22 42 08.1	+1.4
	comp=E,0.3nm,0.3s,baz=182,slow=4.7,SNR=138						
AAK				S	Sn	22 43 19.0	-1.2
	comp=E,0.1nm,0.3s,baz=348,slow=19,SNR=16						
AAK	Ala-Archa	6.58	20	ePn	Pn	22 42 07.7	+1.1
	comp=E,51nm,0.4s						
AAK				eSn	Sn	22 43 12.1	-8.1
KK31	Karatay Array	6.66	354	⇑P	Pn	22 42 07.3	-0.5
	comp=E,9.3nm,0.3s,baz=181,slow=13,SNR=345						
KK31				⇑S	Sn	22 43 16.7	-5.4
	comp=E,24nm,0.5s,baz=341,slow=58,SNR=2.9						
KBK	Karagaybulak	6.73	23	P	Pn	22 42 10.9	+2.2
	SNR=12						
SDNR	Sundarnagar	6.75	136	eP	Pn	22 42 11.6	+2.5
SDNR				ex	x	22 43 24.1	
ULHL	Ulahol	6.85	31	P	Pn	22 42 11.8	+1.5
	SNR=8.2						
CHMS	Chumysh	6.99	20	P	Pn	22 42 13.1	+0.9
	SNR=7.3						
SMLA	Simla	7.14	137	i P	Pn	22 42 12.5	-2.0
SMLA				i S	Sn	22 43 27.7	-6.4
SMLA				ex	x	22 43 35.5	
	comp=E,984nm,0.3s						
SMLA				ex	x	22 43 37.3	
	comp=N,1μm,0.4s						
USP	Ospenovka	7.17	18	P	Pn	22 42 15.4	+0.7
	SNR=15						
TKM2	Tokmak 2	7.18	25	⇑P	Pn	22 42 15.6	+0.8
	comp=N,10nm,0.5s						
TKM2				⇑S	Sn	22 43 33.3	-1.5
	comp=N,21nm,0.9s						
TKM2	Tokmak 2	7.18	25	P	Pn	22 42 16.0	+1.2
	SNR=26						
TKM2	Tokmak 2	7.18	25	ePn	Pn	22 42 15.8	+1.0
	comp=N,15nm,0.5s						
TKM2				eSn	Sn	22 43 34.1	-0.6
KLP	Kalpa	7.49	129	eP	Pn	22 42 20.9	+1.8
KLP				eS	Sn	22 43 40.2	-2.2
KLP				AML	AML	22 43 45.6	
	comp=E,336nm,0.4s						
KLP				AML	AML	22 43 46.0	
	comp=N,311nm,0.8s						
DDI	Dehra Dun	8.25	136	ex	x	22 44 05.4	
KHET	Khetri	9.15	155	eS	Sn	22 44 15.5	-7.2
KHET				AML	AML	22 44 18.1	
	comp=E,68nm,0.3s						
KHET				AML	AML	22 44 19.9	
	comp=N,52nm,0.4s						
NDI	New Delhi	9.16	146	eP	Pn	22 42 42.0	+0.2
NDI				eS	Sn	22 44 17.0	-6.0
SONA	Sohna	9.48	148	eS	Sn	22 44 23.2	-7.5
SONA				AML	AML	22 44 29.8	
	comp=N,26nm,0.3s						
SONA				AML	AML	22 44 30.2	
	comp=E,60nm,0.5s						
MK31	Makanchi Array	13.09	35	ePn	Pn	22 43 34.5	+0.7
MKAR	Makanchi Array	13.09	35	P	Pn	22 43 34.0	+0.2
	comp=E,0.2nm,0.3s,baz=229,slow=17,SNR=8.3						
DMN	Daman	14.55	124	eP	Pn	22 43 51.7	-0.9
	comp=E,22nm,0.6s						
DMN	Daman	14.55	124	eP	Sn	22 46 24.9	-8.5
	comp=E,36nm,0.5s						
KKN	Kakani	14.55	123	eP	Pn	22 43 51.2	-1.4
KKN	Kakani	14.55	123	eP	Sn	22 46 25.9	-7.5
	comp=E,49nm,0.8s						
PKIN	Phulchoki	14.77	123	eP	Pn	22 43 54.7	-0.7
	comp=E,34nm,0.5s						
PKIN	Phulchoki	14.77	123	eP	Sn	22 46 29.1	-10
	comp=E,41nm,0.5s						
PKI	Pulchoki	14.78	123	eP	Pn	22 43 55.2	-0.3
	comp=E,18nm,0.4s						
PKI	Pulchoki	14.78	123	eP	Sn	22 46 29.8	-9.1
	comp=E,49nm,0.7s						
GUN	Gumba	14.89	121	eP	Pn	22 43 55.7	-1.2
	comp=E,25nm,0.5s						
GUN	Gumba	14.89	121	eP	Sn	22 46 33.0	-8.5
	comp=E,33nm,0.6s						
KURBB	Kurchatov Arra	15.03	18	⇓P	Pn	22 44 00.7	+2.3
	comp=E,0.7nm,0.7s						
KURK	Kurchatov	15.13	18	⇓P	Pn	22 44 02.0	+2.2
	comp=E,3.3nm,0.8s						
KURK	Kurchatov	15.13	18	P	Pn	22 43 56.3	-3.4
	comp=E,0.0nm,0.3s,baz=209,slow=10,SNR=5.5						
KURK	Kurchatov	15.13	18	Pn	Pn	22 43 55.3	-4.5
	comp=E,3.2nm,0.8s						
AB31	Akbulak array	15.28	330	⇑P	Pn	22 43 59.4	-2.2
	comp=E,1.1nm,0.4s,baz=142,slow=7.0,SNR=40						
ABKAR	Akbulak array	15.28	330	ePn	Pn	22 43 58.7	-2.9
	comp=E,2.1nm,0.4s						
ABKAR				eSn	Sn	22 46 35.0	-16
VOSK	Vostochnaya	16.25	359	⇑P	Pn	22 44 14.0	+0.5
	comp=E,1.7nm,0.6s						
BVA0	Borovoye Array	16.56	358	⇓P	Pn	22 44 18.1	+0.8
	comp=E,0.7nm,1.1s,baz=169,slow=12,SNR=12						
BVAR	Borovoye Array	16.56	358	P	Pn	22 44 16.9	-0.5
	comp=E,0.6nm,0.3s,baz=163,slow=12,SNR=15						
BVAR				S	S	22 47 11.4	-11
	comp=E,0.2nm,0.3s,baz=166,slow=24,SNR=6.6						
BRVK	Borovoye	16.60	358	ePn	Pn	22 44 16.1	-1.7
	comp=E,4.4nm,0.8s						
AKTK	Aktyubinsk	16.98	329	P	Pn	22 44 20.9	-1.6
AKTK				S	S	22 47 18.4	-13
AKTO	Aktyubinsk	16.98	329	P	Pn	22 44 20.9	-1.6
	comp=E,0.3nm,0.3s,baz=134,slow=12,SNR=9.4						
AKTO				S	S	22 47 18.4	-13
	comp=E,0.2nm,0.3s,baz=330,slow=20,SNR=5.7						
LSA	Lhasa	17.82	107	eP	Pn	22 44 34.8	+2.0
	comp=E,3.6nm,0.6s						
ZAA0	Zalesovo Array	19.78	24	eP	P	22 44 52.9	-0.1
ZALV	Zalesovo Beam	19.78	24	P	P	22 44 53.6	+0.6
	comp=E,7.6nm,0.6s,baz=218,slow=10,SNR=40						
ZALV				S	S	22 48 28.7	-0.5
	comp=E,0.9nm,0.6s,baz=209,slow=20,SNR=3.8						
LZH	Lanzhou	26.05	81	eP	P	22 45 55.8	+1.3
LZH				pP	pP	22 46 29.4	+9.0
LZH				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
SONM	Songino Array	28.04	55	P	P	22 46 15.7	+3.5
	comp=Z,0.5nm,0.4s,mb3.4,baz=276,slow=8.7,SNR=2.3						
ULN	Ulaanbaatar	28.48	55	P	P	22 46 16.9	+0.7
	comp=Z,4.6nm,0.9s,mb4.0						
BRTR	Keskin Array B	29.79	288	pP	pP	22 46 39.8	-14
	comp=Z,0.3nm,0.6s,baz=98,slow=8.6,SNR=2.9						
HHC	Hu-ho-hao-te	31.42	70	eP	P	22 46 42.8	+0.6
HHC				PP	PP	22 47 55.6	+0.3
HHC				S	S	22 51 40.4	-0.5
HHC				ScP	ScP	22 52 55.3	-9.3
HHC				SS	SS	22 53 44.1	-16
HHC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=N,250nm,14.7s						
HHC				LR	LR		
	comp=E,200nm,11.6s						
HHC				LR	LR		
	comp=Z,280nm,10.6s						
AKASG	Malin Array Be	33.25	309	P	P	22 46 58.6	+0.6
	comp=Z,1.3nm,0.5s,mb4.0,baz=82,slow=7.4,SNR=4.9						
HIA	Hailar	37.00	54	P	P	22 47 30.3	+0.1
FINES	FINESS Array B	37.71	326	P	P	22 47 35.9	0.0
	comp=Z,1.4nm,0.6s,mb4.0,baz=126,slow=9.8,SNR=6.1						
FINES	FINESS Array B	37.71	326	P	P	22 47 35.9	0.0
ARCES	ARCESS Array B	41.31	337	P	P	22 48 07.2	+1.5
	comp=Z,1.9nm,0.6s,mb4.1,baz=110,slow=7.8,SNR=12						
NB2	NORSAR Subarra	44.62	323	P	P	22 48 32.7	+0.2
	comp=Z,2.2nm,0.5s,mb4.1,baz=97,slow=7.9						
NOA	NORSAR Array B	44.62	323	P	P	22 48 33.0	+0.5
	comp=Z,1.8nm,0.5s,mb4.1,baz=97,slow=7.7,SNR=14						
NOA	NORSAR Array B	44.62	323	P	P	22 48 33.0	+0.5
MAJO	Matsushiro	52.62	69	P	P	22 49 32.2	-1.8
	comp=Z,2.4nm,0.3s,mb4.7						
TORD	Torodi Ar. Bea	66.09	269	P	P	22 51 04.8	-2.1
	comp=Z,0.5nm,0.5s,mb3.6,baz=48,slow=5.7,SNR=16						
YKA	Yellowknife Ar	81.25	3	P	P	22 52 35.9	+1.2
	comp=Z,0.9nm,0.5s,mb3.9,baz=350,slow=5.4,SNR=15						
WRA	Warramunga Arr	81.67	122	P	P	22 52 37.3	-0.1
	comp=Z,0.7nm,0.8s,mb3.5,baz=327,slow=4.9,SNR=5.6						
ASAR	Alice Springs	83.94	125	P	P	22 52 49.9	+0.8
	comp=Z,0.2nm,0.6s,mb3.1,baz=334,slow=8.2,SNR=3.3						

BJI 15 22:41:07.6, 38.°53N×112.°71E, h19km, ML3.1/7, Ms3.6/1, Ms7 3.6/1, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HHC	Hu-ho-hao-te	2.48	339	ePg	Pg	22 41 50.3	-4.9
HHC				Sg	Sg	22 42 19.1	-8.2
HHC				smax			
	comp=N,270nm,0.5s						
HHC				smax			
	comp=E,160nm,0.5s						
BTO	Baotou	2.94	316	ePg	Pg	22 41 57.4	-6.5
BTO				Sg	Sg	22 42 33.3	-8.6
BTO				smax			
	comp=N,25nm,0.4s						
BTO				smax			
	comp=E,15nm,0.5s						
LZH	Lanzhou	7.47	254	ePn	Pn	22 42 58.9	+3.3
LZH				Pg	Pn	22 43 24.3	+29
LZH				Sn	Sn	22 44 20.8	+1.0
LZH				Sg	Sn	22 45 00.6	+41
LZH				smax			
	comp=N,35nm,0.6s						
LZH				smax			
	comp=E,38nm,0.9s						
LZH				LR	LR		
	comp=E,230nm,5.8s						
LZH				LR	LR		
	comp=Z,260nm,6.3s						

*ISCJB **15** 22:41:57.3±0.4, 24.°31N±0.°04×122.°98E±0.°02, h43km±10km, Error ellipse: s-maj=6.5km s-min=3.2km az=177.3*
*JMA **15** 22:41:57.5±0.1, 24.°39N×123.°01E, h48km±1km, M2.8*
*TAP **15** 22:41:58.3, 24.°32N×122.°84E, h33km±2km, ML3.5, D*

ISC 15 22:41:57.8±0.4, 24.°35N±0.°04×122.°99E±0.°02, h43km±9km, n40, σ1°10/73, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.12	11	P	Pn	22 42 05.0	+0.1
YOJ				S	Sn	22 42 10.3	+0.5
IRIF	Iriomote-Funau	0.68	91	P	Pn	22 42 10.5	-0.5
IRIF				S	Sn	22 42 20.4	-0.1
HATJ	Hateruma jima	0.80	111	P	Pn	22 42 12.5	-0.2
JKRS	Kuro-shima	0.94	96	P	Pn	22 42 14.5	-0.1
JKRS				S	Sn	22 42 27.5	+0.7
JIJ	Ishigaki jima	1.05	89	P	Pn	22 42 15.5	-0.6
JIJ				S	Sn	22 42 29.0	-0.7
TWC	Suao	1.07	284	i P	Pn	22 42 15.3	-1.0
	baz=300						
TWC				S	Sn	22 42 27.9	-2.1
	baz=300						
TWB1	Santiao Chiao	1.12	306	eP	Pn	22 42 15.9	-1.1
	baz=323						
TWB1				eS	Sn	22 42 30.0	-1.3
	baz=323						
TWE	Neicheng	1.26	287	P	Pn	22 42 18.5	-0.4
	baz=301						
TWE				eS	Sn	22 42 33.7	-1.0
	baz=301						
TWD	Chiawan	1.30	258	eP	Pn	22 42 19.0	-0.5
	baz=245						
TWD				eS	Sn	22 42 34.5	-1.1
	baz=245						
NWF	Wu-fen Shan	1.31	304	eP	Pn	22 42 19.6	0.0
	baz=308						
NWF				eS	Sn	22 42 35.4	-0.6
	baz=308						
NNS	Nan Shan	1.47	274	eP	Pn	22 42 22.4	+0.5
	baz=261						
ESL	Shilin	1.52	250	eP	Pn	22 42 21.2	-1.2
	baz=238						
ESL				eS	Sn	22 42 38.3	-2.7
	baz=238						
NSK	Sanguang	1.52	283	P	Pn	22 42 23.7	+1.2
	baz=296						
NSK				eS	Sn	22 42 41.7	+0.6
	baz=296						
WHF	Hehuan Shan	1.58	263	P	Pn	22 42 23.4	0.0
	baz=265						
WHF				eS	Sn	22 42 42.6	0.0
	baz=265						
JTJ	Tarama	1.59	79	P	Pn	22 42 23.7	+0.2
JTJ				S	Sn	22 42 43.0	+0.2
TWT	Tachien	1.65	267	eP	Pn	22 42 25.3	+0.9
	baz=269						
TWT				eS	Sn	22 42 46.5	+2.1
	baz=269						
EHY	Hungye	1.74	242	P	Pn	22 42 24.2	-1.3
	baz=241						
EHY				eS	Sn	22 42 43.9	-2.6
	baz=241						
NSTT	Nanjuang	1.83	279	eP	Pn	22 42 28.0	+1.2
	baz=296						
NSTT				eS	Sn	22 42 50.5	+1.7
	baz=296						
TWF1	Yuli	1.84	238	P	Pn	22 42 25.7	-1.2
	baz=237						
TWF1				eS	Sn	22 42 47.2	-1.7
	baz=237						
CHKT	Chengkung	1.94	230	eS	Sn	22 42 47.6	-3.8
	baz=219						
SMLT	Sun Moon Lake	1.96	257	i P	Pn	22 42 28.9	+0.3
	baz=258						
SMLT				eS	Sn	22 42 51.5	-0.5
	baz=258						
TYC	Yuchr	2.00	258	i P	Pn	22 42 29.4	+0.3
	baz=259						
TYC				eS	Sn	22 42 52.9	+0.1
	baz=259						
TWQ1	Liyutan	2.02	270	eP	Pn	22 42 32.1	+2.7
	baz=271						
YUS	Yu-Shan	2.05	246	P	Pn	22 42 30.0	+0.2
	baz=246						
YUS				eS	Sn	22 42 53.0	-1.1
	baz=246						
ELDTW	Lidau	2.14	238	P	Pn	22 42 29.7	-1.3
	baz=238						
ELDTW				eS	Sn	22 42 53.6	-2.7
	baz=238						
WNT	Mingjian	2.15	258	eP	Pn	22 42 32.6	+1.4
	baz=258						
ALS	Alishan	2.16	248	i P	Pn	22 42 32.0	+0.6
	baz=249						
ALS				eS	Sn	22 42 55.9	-1.1
	baz=249						
CHN5	Tsauling	2.24	251	P	Pn	22 42 33.2	+0.8
	baz=252						
CHN5				S	Sn	22 42 59.4	+0.6
	baz=252						
TWG	Pinlang	2.32	230	eP	Pn	22 42 32.3	-1.2
	baz=241						
TWG				eS	Sn	22 42 56.6	-4.3
	baz=241						
STYT	Tauyuan	2.36	240	eP	Pn	22 42 33.9	-0.2
	baz=232						
STYT				eS	Sn	22 43 01.4	-0.4
	baz=232						
CHN4	Tsaushan	2.41	246	eP	Pn	22 42 35.9	+1.2
	baz=247						
CHN4				eS	Sn	22 43 04.6	+1.7
	baz=247						
WTP	Ta-pu	2.43	244	P	Pn	22 42 36.0	+1.0
	baz=244						
WTP				S	Sn	22 43 04.6	+1.0
	baz=244						
TWK	Hsinying	2.53	245	eP	Pn	22 42 36.8	+0.4
	baz=246						
TWK				eS	Sn	22 43 06.9	+1.0
	baz=246						
CHN1	Nanshi	2.53	243	P	Pn	22 42 37.4	+1.0
	baz=244						
CHN1				eS	Sn	22 43 07.3	+1.3
	baz=244						
SGST	Jiashian	2.54	241	P	Pn	22 42 37.5	+1.0
	baz=230						
SGST				S	Sn	22 43 07.2	+1.0
	baz=230						
ECL	Taimali	2.55	227	eP	Pn	22 42 35.2	-1.5
	baz=238						
ECL				eS	Sn	22 43 02.3	-4.2
	baz=238						
SSD	Sandimen	2.69	234	eP	Pn	22 42 39.6	+1.1
	baz=225						
SSD				eS	Sn	22 43 11.8	+2.0
	baz=225						
EAST	Anshuo	2.77	226	eP	Pn	22 42 39.3	-0.4
	baz=224						
SCZT	Fangliau	2.93	228	eP	Pn	22 42 43.7	+1.8
	baz=221						
SCZT				eS	Sn	22 43 16.0	+0.1
	baz=221						
HEN	Hengchun	3.12	222	eS	Sn	22 43 19.7	-0.8
	baz=221						

*ISCJB **15** 22:46:10.6±0.9, 31.°33N±0.°03×103.°69E±0.°04, h4km±6km, mb3.9/13, Error ellipse: s-maj=6.3km s-min=5.0km az=174.3*
*IDC **15** 22:46:10.9±1.2, 31.°12N×103.°65E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/25, mbtmp3.9/9, ML3.3/1, Error ellipse: s-maj=36.8km s-min=20.1km az=42.0*
*BJI **15** 22:46:11.6, 31.°33N×103.°67E, h12km, mB4.8/1, mb4.4/4, ML3.7/12, Ms3.9/4, Ms7 3.5/4*
*NEIC **15** 22:46:12.2±0.5, 31.°15N×103.°65E, h10km, mb4.2/8, Error ellipse: s-maj=10.7km s-min=6.9km az=194.0*

ISC 15 22:46:12.4±0.9, 31.°29N±0.°03×103.°66E±0.°04, h5km±6km, n31, σ1°06/38, mb3.9/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.39	167	Pg	Pg	22 46 20.3	+0.4
CD2				Sg	Sg	22 46 25.0	+0.1
CD2				smax			
	comp=N,2μm,0.4s						
LZH	Lanzhou	4.79	2	ePg	Pb	22 47 34.3	-2.5
LZH				Sg	Sg	22 48 47.6	+1.4
LZH				smax			
	comp=N,72nm,1.0s						
LZH				smax			
	comp=E,83nm,0.8s						
LZH				LR	LR		
	comp=N,650nm,4.3s						
LZH				LR	LR		
	comp=Z,580nm,6.3s						
ENH	Enshi	5.12	100	ePn	Pn	22 47 28.4	-1.3
	comp=Z,61nm,0.5s						
ENH				eSn	Sn	22 48 30.7	+1.5
XAN	Xi'an	5.22	57	Pn	Pn	22 47 30.9	-0.2
XAN				Sn	Sn	22 48 31.1	-0.5
XAN				Sg	Sg	22 48 59.4	-0.6
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,46nm,0.8s						
GYA	Guiyang	5.49	151	Pg	Pg	22 47 52.1	-5.4
GYA				smax			
	comp=N,150nm,0.8s						
GYA				smax			
	comp=E,150nm,0.8s						
KMI	Kunming	6.20	188	Pn	Pn	22 47 42.5	-2.1
KMI				Sn	Sn	22 48 57.4	+1.6
KMI				smax			
	comp=N,39nm,0.9s						
KMI				smax			
	comp=E,30nm,0.9s						
KMI				LR	LR		
	comp=N,460nm,8.2s						
KMI				LR	LR		
	comp=E,1μm,10.4s						
KMI				LR	LR		
	comp=Z,260nm,10.1s						
NJ2	Nanjing	12.97	83	eP	Pn	22 49 18.5	+1.1
NJ2				pP		22 49 22.4	
NJ2				sP		22 49 24.6	
NJ2				PP		22 49 29.4	
NJ2				S	Sn	22 51 46.8	+4.7
NJ2				sS		22 51 51.8	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,70nm,3.6s						
NJ2				LR	LR		
	comp=N,440nm,9.5s						
NJ2				LR	LR		
	comp=E,360nm,8.6s						
NJ2				LR	LR		
	comp=Z,2μm,10.2s						
BJT	Baijiatuau	13.38	46	Pn	Pn	22 49 23.8	+0.8
SONM	Songino Array	16.66	6	Pn	Pn	22 50 07.6	+1.1
	comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=3.8						
ULN	Ulaanbaatar	16.76	8	ePn	Pn	22 50 08.2	+0.4
	comp=Z,4.8nm,1.2s						
KSRS	Korea Array	20.92	66	P	P	22 50 56.2	+0.3
	comp=Z,3.4nm,0.7s,baz=258,slow=10,SNR=13						
CN2	Changchun	21.25	48	eP	P	22 50 56.5	-2.8
MK31	Makanchi Array	22.59	319	eP	P	22 51 13.9	+0.2
MKAR	Makanchi Array	22.59	319	P	P	22 51 13.9	+0.3
	comp=Z,12nm,1.1s,mb4.2,baz=119,slow=9.8,SNR=15						
TKM2	Tokmak 2	25.10	305	eP	P	22 51 37.0	-1.0
	comp=Z,5.9nm,1.3s,mb4.0						
UCH	Uchtor	25.66	303	eP	P	22 51 43.1	+0.1
	comp=Z,11nm,1.2s,mb4.2						
AAK	Ala-Archa	25.78	304	P	P	22 51 46.0	+1.8
	comp=Z,1.2nm,0.3s,mb3.9,baz=87,slow=8.9,SNR=7.4						
AAK	Ala-Archa	25.78	304	eP	P	22 51 44.4	+0.2
	comp=Z,3.8nm,0.8s,mb4.0						
AML	Almayashu	26.22	303	eP	P	22 51 48.9	+0.7
	comp=Z,4.2nm,1.0s,mb3.9						
EKS2	Erkin-Say	26.30	304	eP	P	22 51 49.8	+0.9
	comp=Z,3.4nm,0.9s,mb3.9						
ZAA0	Zalesovo Array	26.39	335	eP	P	22 51 49.3	-0.3
ZALV	Zalesovo Beam	26.39	335	P	P	22 51 49.1	-0.4
	comp=Z,1.9nm,0.7s,mb3.7,baz=137,slow=9.8,SNR=9.3						
KURK	Kurchatov	26.87	323	P	P	22 51 53.9	-0.1

comp=Z,3.4nm,0.9s,mb3.9,baz=127,slow=9.6,SNR=14
KURK Kurchatov 26.87 323 *e*P **P 22 51 54.0 +0.1**
comp=Z,8.4nm,1.2s,mb4.2
BVAR Borovoye Array 32.41 322 P **P 22 52 43.5 +0.5**
comp=Z,0.4nm,0.6s,mb3.4,baz=123,slow=11,SNR=3.9
ABKAR Abkulak array 37.27 312 P **P 22 53 23.8 -1.2**
MALT Malatya 53.04 297 *e*P **P 22 55 29.8 -0.7**
BRTR Keskin Array B 56.32 299 P **P 22 55 58.4 +4.2**
comp=Z,0.2nm,0.5s,mb3.4,baz=95,slow=8.7,SNR=2.3
ASAR Alice Springs 61.85 148 P **P 22 56 30.7 -1.9**
comp=Z,1.0nm,0.7s,mb4.0,baz=335,slow=4.9,SNR=7.0
PSZ Piszkesteto 63.58 312 *e*P **P 22 56 43.6 -0.4**
comp=Z,2.1nm,0.7s,mb4.3
YKA Yellowknife Ar 81.63 17 P **P 22 58 32.0 +0.9**
comp=Z,0.3nm,0.6s,mb3.4,baz=332,slow=6.5,SNR=3.9

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*ISCJB **15** 22:47:39.5±0.4, 31°.05N±0°.06×103°.45E±0°.05, h10km, mb4.2/32, Error ellipse: s-maj=8.2km s-min=6.4km az=175.7*
*IDC **15** 22:47:40.6±1.0, 31°.10N×103°.43E, h0km, mb4.0/13, mb1 4.2/14, mb1mx4.0/25, mbtmp4.1/14, Error ellipse: s-maj=33.9km s-min=18.9km az=44.0*
*NEIC **15** 22:47:41.6±0.4, 31°.05N×103°.38E, h10km, mb4.4/15, Error ellipse: s-maj=10.0km s-min=6.6km az=206.0*
*BJI **15** 22:47:41.7, 31°.37N×103°.55E, h17km, mB4.4/5, mb4.3/8, ML3.9/9, Ms4.0/7, Ms7 3.9/7*
*MOS **15** 22:47:43.0±1.0, 31°.09N×103°.52E, h33km, mb4.4/18, Error ellipse: s-maj=14.9km s-min=7.5km az=117.3*
ISC 15 22:47:41.8±0.4, 31°.10N±0°.06×103°.42E±0°.05, h10km, n83, σ0§95/86, mb4.2/32, 6C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.99**	**4**	*e*Pn	**Pn**	**22 48 54.8**	**-1.9**
LZH				Sg	**Sg**	**22 50 16.1**	**-5.9**
LZH				smax			
	comp=N,170nm,1.0s						
LZH				smax			
	comp=E,160nm,0.8s						
LZH				LR	LR		
	comp=N,3μm,5.6s						
LZH				LR	LR		
	comp=Z,2μm,5.7s						
ENH	**Enshi**	**5.29**	**97**	Pn	**Pn**	**22 49 00.7**	**-0.2**
KMI	**Kunming**	**5.98**	**186**	Pn	**Pn**	**22 49 12.8**	**+2.5**
KMI				Sn	**Sb**	**22 50 31.3**	**-6.5**
KMI				smax			
	comp=N,62nm,1.7s						
KMI				smax			
	comp=E,37nm,1.3s						
KMI				LR	LR		
	comp=N,550nm,10.0s						
KMI				LR	LR		
	comp=E,2μm,11.0s						
KMI				LR	LR		
	comp=Z,650nm,11.0s						
WHN	**Wuhan**	**9.42**	**91**	P	**Pn**	**22 49 57.0**	**-0.5**
WHN				LR	LR		
	comp=N,2μm,7.6s						
WHN				LR	LR		
	comp=E,1μm,7.0s						
WHN				LR	LR		
	comp=Z,1μm,6.4s						
GUN	**Gumba**	**15.60**	**263**	*e*P	**Pn**	**22 51 20.9**	**-0.8**
	comp=Z,38nm,0.8s						
PKI	**Pulchoki**	**16.09**	**262**	*e*P	**Pn**	**22 51 27.2**	**-0.9**
	comp=Z,29nm,0.9s						
PKIN	**Phulchoki**	**16.10**	**262**	*e*P	**Pn**	**22 51 27.3**	**-0.9**
	comp=Z,53nm,0.7s						
KKN	**Kakani**	**16.14**	**263**	*e*P	**Pn**	**22 51 27.6**	**-1.1**
	comp=Z,62nm,0.8s						
DMN	**Daman**	**16.34**	**262**	*e*P	**Pn**	**22 51 30.1**	**-1.2**
	comp=Z,59nm,0.9s						
SONM	**Songino Array**	**16.87**	**7**	Pn	**Pn**	**22 51 37.4**	**-0.5**
	baz=186,slow=13,SNR=4.9						
ULN	**Ulaanbaatar**	**16.98**	**8**	*e*P	**Pn**	**22 51 40.3**	**+1.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**16.98**	**8**	*e*Pn	**Pn**	**22 51 40.3**	**+1.0**
	comp=Z,7.3nm,1.0s						
KSRS	**Korea Array**	**21.19**	**66**	P	**P**	**22 52 25.9**	**-1.5**
	comp=Z,7.2nm,0.7s,mb4.1,baz=264,slow=11,SNR=20						
KSRS	**Korea Array**	**21.19**	**66**	P	**P**	**22 52 25.9**	**-1.5**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
MK31	**Makanchi Array**	**22.60**	**320**	*e*P	**P**	**22 52 42.2**	**-0.2**
MKAR	**Makanchi Array**	**22.60**	**320**	P	**P**	**22 52 42.2**	**-0.1**
	comp=Z,7.7nm,0.8s,mb4.2,baz=119,slow=9.9,SNR=13						
MKAR	**Makanchi Array**	**22.60**	**320**	P	**P**	**22 52 42.3**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH	**Kashi**	**23.85**	**298**	P	**P**	**22 52 59.0**	**+3.8**
KSH				pmax	pmax		
	comp=Z,49nm,2.4s,mb4.5						
TKM2	**Tokmak 2**	**25.04**	**306**	*e*P	**P**	**22 53 07.0**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
TKM2	**Tokmak 2**	**25.04**	**306**	*e*P	**P**	**22 53 07.0**	**+1.0**
	comp=Z,6.4nm,1.1s,mb4.1						
UCH	**Uchtor**	**25.59**	**304**	*e*P	**P**	**22 53 11.9**	**+0.9**
	comp=Z,8.6nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**25.72**	**305**	P	**P**	**22 53 16.1**	**+3.9**
	comp=Z,4.7nm,0.6s,mb4.2,baz=124,slow=5.0,SNR=13						
AAK	**Ala-Archa**	**25.72**	**305**	*e*P	**P**	**22 53 11.2**	**-1.0**
AML	**Almayashu**	**26.15**	**303**	*e*P	**P**	**22 53 16.2**	**+0.1**
	comp=Z,8.0nm,1.1s,mb4.2						
EKS2	**Erkin-Say**	**26.23**	**304**	*e*P	**P**	**22 53 17.3**	**+0.4**
	comp=Z,2.7nm,0.9s,mb3.8						
ZAA0	**Zalesovo Array**	**26.48**	**335**	*e*P	**P**	**22 53 18.6**	**-0.3**
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**22 53 19.6**	**+0.7**
	comp=Z,8.4nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=18						
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**22 53 19.6**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**26.90**	**324**	P	**P**	**22 53 21.9**	**-0.8**
	comp=Z,15nm,0.9s,mb4.5,baz=127,slow=9.7,SNR=43						
KURK	**Kurchatov**	**26.90**	**324**	*ce*P	**P**	**22 53 23.6**	**+0.8**
KURK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.6						
KURK	**Kurchatov**	**26.90**	**324**	*e*P	**P**	**22 53 22.4**	**-0.4**
	comp=Z,18nm,1.0s,mb4.6						
BOD	**Bodaibo**	**27.70**	**12**	*e*P	**P**	**22 53 28.1**	**-1.7**
KBL	**Kabul**	**29.01**	**286**	*e*P	**P**	**22 53 42.3**	**+0.5**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KBL	**Kabul**	**29.01**	**286**	*e*P	**P**	**22 53 42.3**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**22 54 11.6**	**-0.2**
	comp=Z,1.8nm,0.8s,mb3.9,baz=113,slow=11,SNR=8.9						
BVAR				PcP	PcP	22 57 01.5	+2.6
	comp=Z,0.7nm,0.8s,baz=90,slow=4.4,SNR=4.3						
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**22 54 11.6**	**-0.2**
BVAR						22 57 01.5	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**32.43**	**322**	P	**P**	**22 54 11.6**	**-0.2**
BVAR				PcP	PcP	22 57 01.5	+2.6
BRVK	**Borovoye**	**32.50**	**322**	*ce*P	**P**	**22 54 14.3**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BRVK	**Borovoye**	**32.50**	**322**	*e*P	**P**	**22 54 12.2**	**-0.2**
	comp=Z,3.6nm,0.9s,mb4.3						
YSS	**Yuzh-Sakhalins**	**34.02**	**51**	P	**P**	**22 54 25.6**	**-0.1**
SVE	**Sverdlovsk**	**39.15**	**324**	*e*P	**P**	**22 55 09.1**	**-0.3**
SVE				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
ARU	**Arti**	**40.08**	**323**	*d*P	**P**	**22 55 18.3**	**+1.2**
ARU				*e*		22 56 49.7	
ARU				S	**S**	**23 01 22.6**	**-0.3**
ARU				SS	SS	23 04 15.0	-5.0
ARU				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.6						
ARU	**Arti**	**40.08**	**323**	*e*P	**P**	**22 55 17.3**	**+0.3**
	comp=Z,6.9nm,0.8s,mb4.4						
TIXI	**Tiksi**	**42.88**	**12**	*e*P	**P**	**22 55 41.2**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.0						
COCO	**West Island**	**43.50**	**189**	*i*P	**P**	**22 55 50.0**	**+4.6**
KIV	**Kislovodsk**	**48.82**	**303**	*e*P	**P**	**22 56 28.6**	**+1.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**48.82**	**303**	*e*P	**P**	**22 56 27.4**	**+0.2**
	comp=Z,7.7nm,1.1s,mb4.7						
KLMR	**Klimovskoe**	**50.73**	**325**	*e*P	**P**	**22 56 32.9**	**-8.6**
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
BILL	**Bilibino**	**51.44**	**25**	⇑*e*P	**P**	**22 56 45.9**	**-0.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
OBN	**Obninsk**	**52.09**	**318**	⇑*e*P	**P**	**22 56 52.9**	**+1.2**
OBN				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
OBN	**Obninsk**	**52.09**	**318**	*e*P	**P**	**22 56 51.9**	**+0.2**
	comp=Z,15nm,1.0s,mb4.9						
MALT	**Malatya**	**52.94**	**297**	*e*P	**P**	**22 56 58.1**	**-0.2**
BRTR	**Keskin Array B**	**56.23**	**299**	P	**P**	**22 57 21.5**	**-0.6**
	comp=Z,0.6nm,0.9s,mb3.6,baz=126,slow=7.8,SNR=3.7						
BRTR	**Keskin Array B**	**56.23**	**299**	*ce*P	**P**	**22 57 23.8**	**+1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**56.23**	**299**	P	**P**	**22 57 21.5**	**-0.6**
AKASG	**Malin Array Be**	**56.96**	**313**	P	**P**	**22 57 28.2**	**+1.1**
	comp=Z,0.4nm,0.2s,mb4.0,baz=67,slow=7.0,SNR=4.2						
AKASG	**Malin Array Be**	**56.96**	**313**	*ce*P	**P**	**22 57 28.2**	**+1.0**
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**22 57 29.2**	**+1.9**
	comp=Z,2.8nm,0.8s,mb4.3,baz=77,slow=9.4,SNR=4.3						
ARCES	**ARCESS Array B**	**57.02**	**336**	P	**P**	**22 57 29.2**	**+1.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**22 57 30.2**	**+1.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=91,slow=8.3,SNR=4.3						
FINES	**FINESS Array B**	**57.24**	**326**	P	**P**	**22 57 30.2**	**+1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CSS	**Prodhromos**	**57.78**	**294**	P	**P**	**22 57 32.1**	**-1.1**
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**22 57 40.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**22 57 40.2**	**-0.1**
	comp=Z,9.8nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**22 58 00.8**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.3,baz=335,slow=6.8,SNR=10						
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**22 58 00.9**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**22 58 17.2**	**-0.2**
	comp=Z,1.8nm,1.1s,mb4.0,baz=74,slow=6.6,SNR=2.6						
NOA	**NORSAR Array B**	**64.35**	**327**	P	**P**	**22 58 17.2**	**-0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CLL	**Collm**	**66.66**	**317**	*e*P	**P**	**22 58 33.0**	**+0.5**
CLL				*e*		22 59 03.0	
CLL				MLR	MLR		
	comp=Z,200nm,23.0s						
CLL	**Collm**	**66.66**	**317**	*e*P	**P**	**22 58 33.0**	**+0.5**
CLL				*e*PcP	PcP	22 59 03.0	+1.4
GERES	**GERESS Array B**	**67.13**	**314**	P	**P**	**22 58 36.3**	**+0.8**
	comp=Z,0.5nm,0.7s,mb3.7,baz=33,slow=3.2,SNR=6.7						
GERES	**GERESS Array B**	**67.13**	**314**	P	**P**	**22 58 36.3**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CEL	**Celeste**	**69.75**	**303**	P	**P**	**22 58 51.2**	**-0.9**
	comp=Z,4.4nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.21**	**316**	*e*P	**P**	**22 59 00.2**	**-0.6**
LPG	**La Plagne**	**72.82**	**313**	*e*P	**P**	**22 59 10.7**	**+0.1**
	comp=Z,7.3nm,0.9s,mb4.3						
LPG	**La Plagne**	**72.82**	**313**	*e*P	**P**	**22 59 10.7**	**+0.1**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
LPG	**La Plagne**	**72.82**	**313**	*e*P	**P**	**22 59 10.7**	**+0.1**
	comp=Z,3.7nm,0.9s,mb4.3						
LPL	**La Plagne**	**72.83**	**313**	*e*P	**P**	**22 59 10.6**	**0.0**
	comp=Z,9.5nm,1.0s,mb4.4						
LPL	**La Plagne**	**72.83**	**313**	*e*P	**P**	**22 59 10.6**	**0.0**
LPL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
LPL	**La Plagne**	**72.83**	**313**	*e*P	**P**	**22 59 10.6**	**0.0**
	comp=Z,4.8nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**74.08**	**315**	*e*P	**P**	**22 59 17.0**	**-1.0**
TCF	**Toulx Ste Croi**	**75.25**	**315**	*e*P	**P**	**22 59 24.1**	**-0.6**
YKA	**Yellowknife Ar**	**81.87**	**17**	P	**P**	**23 00 02.7**	**+1.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=322,slow=4.6,SNR=3.8						

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*ISCJB **15** 23:24:28.5±0.5, 48°.04N±0°.08×146°.6E±0°.1, h478km±8km, mb3.4/12, Error ellipse: s-maj=15.4km s-min=9.5km az=136.5*
*MOS **15** 23:24:29.4±0.6, 48°.14N×146°.48E, h487km, mb3.6/8, Error ellipse: s-maj=23.1km s-min=12.8km az=69.8*
*NEIC **15** 23:24:30.5±0.5, 48°.13N×146°.39E, h483km±7km, mb4.0/6, Error ellipse: s-maj=11.6km s-min=6.2km az=148.0*
*IDC **15** 23:24:30.6±1.6, 48°.16N×146°.39E, h478km±27km, mb2.9/7, mb1 3.0/11, mb1mx2.9/25, mbtmp2.8/11, Error ellipse: s-maj=32.3km s-min=14.5km az=171.0*
ISC 15 23:24:29.8±0.5, 48°.04N±0°.09×146°.5E±0°.1, h476km±9km, n50, σ1§03/53, mb3.4/12, 1C, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**2.77**	**248**	⇑*i*PN	**P**	**23 25 38.6**	**+1.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**2.77**	**248**	*e*P	**P**	**23 25 38.6**	**+1.4**
JWK2	**Keihoku**	**4.19**	**231**	P	**P**	**23 25 49.5**	**+1.3**
JTKR	**Abashiri--Toko**	**4.46**	**205**	P	**P**	**23 25 50.6**	**0.0**
JMP	**Maruseppu**	**4.60**	**210**	P	**P**	**23 25 52.3**	**+0.5**
NEM2	**Nemuro 2**	**4.71**	**187**	P	**P**	**23 25 50.2**	**-2.7**
NEM2				*e*S	**S**	**23 26 54.9**	**-5.6**
ASAJ	**Asahikawa**	**4.78**	**216**	P	**P**	**23 25 54.5**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=21,slow=2.9,SNR=9.3						
ASAJ	**Asahikawa**	**4.78**	**216**	PN	**P**	**23 25 54.6**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JAR	**Ashorobuto**	**5.12**	**203**	P	**P**	**23 25 56.0**	**-0.6**
JAK	**Akkeshi**	**5.21**	**195**	P	**P**	**23 25 55.0**	**-2.4**
JAK				*e*S	**S**	**23 27 03.4**	**-5.5**
JFR	**Furan**	**5.60**	**211**	P	**P**	**23 26 01.2**	**0.0**
JCH	**Churui**	**5.87**	**203**	P	**P**	**23 26 01.6**	**-2.2**
JCH				*e*S	**S**	**23 27 13.2**	**-7.4**
JNBK	**Urakawa-nobuka**	**6.35**	**206**	P	**P**	**23 26 06.2**	**-2.4**
JANG	**Nango**	**8.46**	**207**	P	**P**	**23 26 30.3**	**-0.3**
PETK	**Petropavlovsk-**	**8.74**	**50**	P	**P**	**23 26 34.5**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=190,slow=4.7,SNR=5.1						
JOM	**Ohasama**	**9.36**	**206**	P	**P**	**23 26 40.7**	**+0.6**
JMK	**Ichinoseki**	**9.87**	**205**	P	**P**	**23 26 46.5**	**+1.0**
MDJ	**Mudanjiang**	**12.19**	**260**	*e*P	**P**	**23 27 09.9**	**-0.4**
	comp=Z,5.1nm,0.4s						
MAJO	**Matsushiro**	**13.02**	**211**	*e*PN	**P**	**23 27 19.8**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MAJO	**Matsushiro**	**13.02**	**211**	*e*P	**P**	**23 27 19.8**	**+0.4**
	comp=Z,4.2nm,0.4s						
MAT	**Matsushiro**	**13.02**	**211**	P	**P**	**23 27 20.0**	**+0.6**
MJAR	**Matsushiro Arr**	**13.02**	**211**	P	**P**	**23 27 20.4**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=21,slow=12,SNR=11						
MJAR	**Matsushiro Arr**	**13.02**	**211**	PN	**P**	**23 27 20.4**	**+1.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**17.23**	**239**	P	**P**	**23 28 04.7**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=45,slow=10,SNR=3.8						
BILL	**Bilibino**	**22.40**	**19**	P	**P**	**23 28 50.5**	**-0.4**
BILL	**Bilibino**	**22.40**	**19**	P	**P**	**23 28 50.5**	**-0.4**
ULN	**Ulaanbaatar**	**26.23**	**284**	*e*P	**P**	**23 29 25.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
ULN	**Ulaanbaatar**	**26.23**	**284**	*e*P	**P**	**23 29 25.0**	**-0.3**
	comp=Z,1.1nm,0.6s,mb3.5						
SONM	**Songino Array**	**26.67**	**285**	P	**P**	**23 29 32.4**	**+3.3**
	comp=Z,0.6nm,0.4s,mb3.4,baz=124,slow=12,SNR=2.9						
SONM	**Songino Array**	**26.67**	**285**	P	**P**	**23 29 32.4**	**+3.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NACB	**Ninganchiao**	**30.93**	**228**	P	**P**	**23 30 07.3**	**+0.7**
ZALV	**Zalesovo Beam**	**38.18**	**303**	P	**P**	**23 31 07.2**	**+0.2**
	comp=Z,0.3nm,0.3s,mb3.1,baz=72,slow=9.3,SNR=1.8						
MK31	**Makanchi Array**	**42.34**	**293**	*e*P	**P**	**23 31 40.2**	**-0.3**
MKAR	**Makanchi Array**	**42.34**	**293**	P	**P**	**23 31 40.1**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.4,baz=70,slow=7.5,SNR=15						
KURK	**Kurchatov**	**42.87**	**300**	*e*P	**P**	**23 31 43.8**	**-0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
KURK	**Kurchatov**	**42.87**	**300**	*e*P	**P**	**23 31 43.8**	**-0.9**
	comp=Z,1.6nm,0.4s,mb3.8						
INK	**Inuvik**	**42.97**	**32**	*e*P	**P**	**23 31 44.6**	**-0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	**Inuvik**	**42.97**	**32**	*e*P	**P**	**23 31 44.6**	**-0.6**
	comp=Z,1.6nm,0.4s,mb3.8						
BVAR	**Borovoye Array**	**46.52**	**306**	P	**P**	**23 32 12.5**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.2,baz=70,slow=9.7,SNR=5.0						
TKM2	**Tokmak 2**	**48.38**	**292**	P	**P**	**23 32 26.7**	**-0.3**
RES	**Resolute Bay**	**50.99**	**17**	*e*P	**P**	**23 32 45.5**	**-0.4**
RES				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
RES	**Resolute Bay**	**50.99**	**17**	*e*P	**P**	**23 32 45.5**	**-0.4**
	comp=Z,2.8nm,0.4s,mb4.0						
YKA	**Yellowknife Ar**	**52.52**	**35**	P	**P**	**23 32 57.0**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.1,baz=304,slow=7.2,SNR=6.8						
YKA	**Yellowknife Ar**	**52.52**	**35**	P	**P**	**23 32 57.0**	**0.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**52.52**	**35**	P	**P**	**23 32 57.0**	**-0.1**
FINES	**FINESS Array B**	**60.87**	**332**	P	**P**	**23 33 53.7**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.4,baz=35,slow=7.0,SNR=4.2						
FINES	**FINESS Array B**	**60.87**	**332**	P	**P**	**23 33 53.7**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FCC	**Fort Churchill**	**62.54**	**31**	*e*P	**P**	**23 34 05.3**	**-0.3**
NVAR	**Mina Array Bea**	**65.71**	**59**	P	**P**	**23 34 28.1**	**+1.9**
	comp=Z,0.4nm,0.6s,mb3.2,baz=304,slow=6.4,SNR=3.0						
PDAR	**Pinedale Array**	**67.50**	**51**	P	**P**	**23 34 37.6**	**+0.3**
	comp=Z,0.5nm,0.6s,mb3.4,baz=325,slow=1.8,SNR=5.2						

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*IDC **15** 23:26:44.8±1.4, 31°.11N×103°.40E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/23, mbtmp3.7/5, Error ellipse: s-maj=47.1km s-min=23.4km az=45.0*
*NEIC **15** 23:26:46.6±0.7, 31°.15N×103°.36E, h10km, mb3.8/3, Error ellipse: s-maj=14.1km s-min=10.9km az=196.0*
*BJI **15** 23:26:46.3, 31°.26N×103°.36E, h8km, ML3.4/11*
*ISCJB **15** 23:26:47.6±0.8, 31°.18N±0°.04×103°.44E±0°.07, h32km±6km, mb3.6/8, Error ellipse: s-maj=10.7km s-min=6.0km az=149.9*
ISC 15 23:26:47.5±1.1, 31°.20N±0°.04×103°.40E±0°.07, h14km±7km, n22, σ1§12/26, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**133**	Pg	**Pg**	**23 26 54.8**	**-1.2**
CD2				Sg	**Sg**	**23 27 02.5**	**+0.7**
CD2				smax			
	comp=N,8μm,0.6s						
LZH	**Lanzhou**	**4.89**	**4**	*e*Pg	**Pb**	**23 28 12.0**	**-0.9**
LZH				Sg	**Sb**	**23 29 13.1**	**+1.6**
LZH				smax			
	comp=N,35nm,0.5s						
LZH				smax			
	comp=E,38nm,0.6s						
ENH	**Enshi**	**5.33**	**98**	*e*Pn	**Pn**	**23 28 07.4**	**+0.8**
	comp=E,20nm,0.6s						
ENH				*e*Sn	**Sn**	**23 29 05.6**	**-2.1**
GYA	**Guiyang**	**5.53**	**148**	Pn	**Pn**	**23 28 12.3**	**+2.9**
GYA				Sn	**Sn**	**23 29 14.1**	**+1.4**
GYA				smax			
	comp=N,50nm,0.9s						
GYA				smax			
	comp=E,80nm,0.7s						
BJT	**Baijiatuau**	**13.60**	**46**	Pn	**Pn**	**23 30 00.1**	**+0.2**
SONM	**Songino Array**	**16.77**	**7**	Pn	**Pn**	**23 30 46.3**	**+4.5**
	comp=E,0.1nm,0.3s,baz=191,slow=13,SNR=2.6						
ULN	**Ulaanbaatar**	**16.88**	**9**	Pn	**Pn**	**23 30 43.1**	**0.0**
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**23 31 31.8**	**-0.5**
	comp=E,2.0nm,0.7s,mb3.5,baz=264,slow=9.9,SNR=9.0						
MKAR	**Makanchi Array**	**22.51**	**320**	P	**P**	**23 31 47.4**	**+0.8**
	comp=E,1.6nm,0.9s,mb3.4,baz=119,slow=11,SNR=9.9						
MKAR	**Makanchi Array**	**22.51**	**320**	P	**P**	**23 31 47.4**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**22.51**	**320**	P	**P**	**23 31 47.4**	**+0.8**
UCH	**Uchtor**	**25.52**	**304**	*e*P	**P**	**23 32 15.0**	**-0.5**
	comp=Z,2.1nm,0.9s,mb3.7						
AAK	**Ala-Archa**	**25.65**	**305**	P	**P**	**23 32 19.3**	**+2.7**
AAK	**Ala-Archa**	**25.65**	**305**	P	**P**	**23 32 19.3**	**+2.7**
ZALV	**Zalesovo Beam**	**26.37**	**335**	P	**P**	**23 32 23.0**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.5,baz=134,slow=11,SNR=5.0						
KURK	**Kurchatov**	**26.81**	**324**	*e*P	**P**	**23 32 26.4**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.6						
PALK	**Pallekele**	**31.89**	**226**	P	**P**	**23 33 11.7**	**-0.8**
BVAR	**Borovoye Array**	**32.34**	**322**	P	**P**	**23 33 16.0**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.5,baz=113,slow=11,SNR=5.0						
BRVK	**Borovoye**	**32.41**	**322**	*e*P	**P**	**23 33 16.9**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.8						
BR131	**Keskin Array S**	**56.16**	**299**	*e*P	**P**	**23 36 24.9**	**-1.9**
CSS	**Prodhromos**

comp=E,0.9nm,0.3s,baz=189,slow=24,SNR=5.5
EKS2 Erkin-Say 6.69 23 *e*Pn **Pn 23 33 02.3 +0.6**
EKS2 *e*S **Sn 23 34 15.7 -2.1**
AAK Ala-Archa 6.91 27 Pn **Pn 23 33 06.8 +2.3**
TKM2 Tokmak 2 7.58 31 *e*P **Pn 23 33 14.1 +0.8**
MK31 Makanchi Array 13.61 37 *e*Pn **Pn 23 34 31.7 +1.0**
MKAR Makanchi Array 13.61 37 P **Pn 23 34 32.8 +2.1**
comp=E,0.1nm,0.3s,baz=218,slow=12,SNR=3.1
ABKAR Akbulak array 14.79 333 *e*P **Pn 23 34 47.4 +2.1**
comp=E,1.4nm,0.3s
AKTK Aktyubinsk 16.48 331 P **Pn 23 35 06.9 +1.2**
AKTO Aktyubinsk 16.48 331 P **Pn 23 35 06.9 +1.2**
comp=E,0.1nm,0.3s,baz=127,slow=15,SNR=2.5
BVAR Borovoye Array 16.50 0 P **Pn 23 35 07.2 +1.3**
comp=E,0.1nm,0.3s,baz=167,slow=10,SNR=2.8
BRVK Borovoye 16.53 360 *e*P **Pn 23 35 05.8 -0.5**
comp=E,0.7nm,0.4s
ZALV Zalesovo Beam 20.13 26 P **P 23 35 44.2 -0.2**
comp=E,1.2nm,0.4s,baz=236,slow=12,SNR=5.9
MALT Malatya 25.31 284 P **P 23 36 31.8 -2.4**
AKASG Malin Array Be 32.48 309 P **P 23 37 35.7 -1.8**
comp=E,0.7nm,0.5s,mb3.4,baz=90,slow=15,SNR=3.7
FINES FINESS Array B 37.14 326 P **P 23 38 18.3 +1.1**
comp=E,0.4nm,0.5s,mb3.2,baz=104,slow=5.9,SNR=3.5
ARCES ARCESS Array B 40.90 338 P **P 23 38 49.2 +0.9**
comp=E,1.9nm,0.9s,mb3.5,baz=112,slow=9.8,SNR=4.4
NOA NORSAR Array B 44.01 323 P **P 23 39 11.1 -2.3**
comp=E,0.4nm,0.6s,mb2.9,baz=98,slow=7.7,SNR=3.0
YAK Yakutsk 44.28 36 P **P 23 39 15.9 +0.4**
YSS Yuzh-Sakhalins 53.28 55 P **P 23 40 22.5 -1.6**
TORD Torodi Ar. Bea 65.15 268 P **P 23 41 44.5 -1.4**
comp=E,0.2nm,0.6s,mb3.0,baz=55,slow=6.0,SNR=5.7
TORD Torodi Ar. Bea 65.15 268 P **P 23 41 44.5 -1.4**

*DJA **15** 23:37:49, 11.°02N×92.°79E, h64km, mb4.6/7*
*IDC **15** 23:38:06.8±0.7, 10.°06N×93.°48E, h0km, mb4.0/18, mb1 4.1/18, mb1mx4.0/26, mbtmp4.0/18, MS3.8/15, Ms1 3.8/15, ms1mx3.6/37, Error ellipse: s-maj=25.9km s-min=16.3km az=66.0*
*NEIC **15** 23:38:17.1±1.7, 10.°08N×92.°83E, h63km±16km, mb4.4/19, Error ellipse: s-maj=10.6km s-min=8.2km az=58.0*
*ISCJB **15** 23:38:18.0±2.2, 9.°88N±0.°08×92.°98E±0.°06, h101km±19km, mb4.2/34, Error ellipse: s-maj=12.5km s-min=9.5km az=6.4*
*BJI **15** 23:38:21.4, 10.°75N×92.°58E, h63km, mB5.0/2, mb4.4/5, Ms4.5/1, Ms7 4.1/1*
ISC 15 23:38:20.5±1.6, 9.°98N±0.°06×92.°91E±0.°06, h100km±14km, n82, σ1°16/77, mb4.2/34, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**12.07**	**311**	*i* P	**Pn**	**23 41 10.1**	**+1.0**
VIS				*i* S	**Sn**	**23 43 25.1**	**+3.2**
VIS				*ex*	x	23 43 31.5	
	comp=E,30nm,0.6s						
VIS				*ex*	x	23 43 37.8	
	comp=N,31nm,1.6s						
PALK	**Pallekele**	**12.37**	**258**	Pn	**Pn**	**23 41 16.4**	**+3.2**
	comp=N,0.8nm,0.3s,baz=72,slow=16,SNR=3.4						
PALK				Sn	**Sn**	**23 43 27.7**	**-1.6**
	comp=N,1.5nm,0.3s,baz=163,slow=19,SNR=7.1						
PALK				LR	LR	23 45 43.2	
	comp=N,262nm,20.5s,baz=68,slow=35						
PALK	**Pallekele**	**12.37**	**258**	*e*Pn	**Pn**	**23 41 08.4**	**-4.7**
PALK				*e*Sn	**Sn**	**23 43 27.1**	**-2.1**
KMI	**Kunming**	**17.72**	**31**	P	**Pn**	**23 42 17.0**	**-3.9**
KMI				pmax	pmax		
	comp=Z,11nm,1.4s						
PKI	**Pulchoki**	**18.87**	**339**	*e*P	**Pn**	**23 42 34.2**	**-0.4**
	comp=Z,12nm,0.5s						
DMN	**Daman**	**19.01**	**338**	*e*P	**Pn**	**23 42 35.9**	**-0.4**
	comp=Z,25nm,0.9s						
GUN	**Gumba**	**19.02**	**341**	*e*P	**Pn**	**23 42 36.1**	**-0.3**
	comp=Z,68nm,1.0s						
KKN	**Kakani**	**19.11**	**339**	*e*P	**Pn**	**23 42 37.3**	**-0.2**
	comp=Z,19nm,0.8s						
LSA	**Lhasa**	**19.69**	**355**	*e*P	**Pn**	**23 42 40.2**	**-4.0**
	comp=Z,20nm,0.8s						
COCO	**West Island**	**22.37**	**170**	P	**P**	**23 43 12.6**	**+2.0**
ENH	**Enshi**	**25.42**	**35**	P	**P**	**23 43 32.1**	**-6.8**
	comp=Z,17nm,0.8s,mb4.5						
LZH	**Lanzhou**	**27.82**	**19**	*e*P	**P**	**23 44 04.8**	**+4.4**
LZH				pP	pP	23 44 15.3	-7.4
LZH				sP	sP	23 44 20.8	-14
LZH				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.8						
KAPI	**Kappang**	**30.61**	**118**	LR	LR	23 55 52.4	
	comp=Z,164nm,21.4s,baz=103,slow=35						
KAPI	**Kappang**	**30.61**	**118**	*e*P	**P**	**23 44 25.4**	**0.0**
	comp=Z,25nm,0.9s,mb5.0						
NACB	**Ninganchiao**	**30.75**	**59**	P	**P**	**23 44 26.2**	**-0.3**
YHNB	**Yeheng**	**30.76**	**58**	P	**P**	**23 44 26.7**	**+0.2**
KBL	**Kabul**	**32.77**	**322**	*e*P	**P**	**23 44 44.0**	**-0.1**
	comp=Z,4.4nm,0.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**34.89**	**25**	*e*P	**P**	**23 45 04.8**	**+2.4**
HHC				pP	pP	23 45 16.8	-8.3
HHC				sP	sP	23 45 22.3	-14
HHC				PP	PP	23 46 24.4	+1.0
HHC				S	**S**	**23 50 32.8**	**+6.5**
HHC				sS	sS	23 50 53.4	-12
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=N,210nm,11.4s						
HHC				LR	LR		
	comp=E,290nm,10.2s						
HHC				LR	LR		
	comp=Z,210nm,12.1s						
UCH	**Uchtor**	**35.95**	**336**	P	**P**	**23 45 12.9**	**+1.5**
	SNR=5.7						
UCH	**Uchtor**	**35.95**	**336**	*e*P	**P**	**23 45 12.4**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**36.13**	**338**	P	**P**	**23 45 13.8**	**+0.9**
	SNR=6.3						
TKM2	**Tokmak 2**	**36.13**	**338**	*e*P	**P**	**23 45 13.3**	**+0.4**
	comp=Z,3.2nm,0.7s,mb4.4						
KBK	**Karagaybulak**	**36.14**	**337**	P	**P**	**23 45 14.6**	**+1.6**
	SNR=14						
AML	**Almayashu**	**36.19**	**336**	P	**P**	**23 45 15.2**	**+1.7**
	SNR=17						
AML	**Almayashu**	**36.19**	**336**	*e*P	**P**	**23 45 15.0**	**+1.6**
	comp=Z,13nm,0.7s,mb5.0						
AAK	**Ala-Archa**	**36.30**	**337**	P	**P**	**23 45 15.6**	**+1.2**
	comp=Z,4.5nm,0.7s,mb4.5,baz=159,slow=5.0,SNR=12						
AAK				LR	LR	00 02 11.2	
	comp=Z,199nm,20.8s,baz=144,slow=40						
AAK	**Ala-Archa**	**36.30**	**337**	*e*P	**P**	**23 45 15.9**	**+1.5**
	comp=Z,5.4nm,0.8s,mb4.5						
CHMS	**Chumysh**	**36.51**	**337**	P	**P**	**23 45 17.2**	**+1.0**
	SNR=5.1						
EKS2	**Erkin-Say**	**36.60**	**336**	P	**P**	**23 45 18.7**	**+1.7**
	SNR=11						
EKS2	**Erkin-Say**	**36.60**	**336**	*e*P	**P**	**23 45 18.2**	**+1.3**
	comp=Z,8.5nm,0.7s,mb4.8						
USP	**Ospenovka**	**36.84**	**337**	P	**P**	**23 45 19.8**	**+0.9**
	SNR=11						
JOW	**Kunigami**	**37.33**	**59**	LR	LR	00 00 37.4	
	comp=Z,247nm,18.6s,baz=44,slow=37						
MK31	**Makanchi Array**	**37.78**	**348**	*e*P	**P**	**23 45 25.8**	**-1.0**
MKAR	**Makanchi Array**	**37.78**	**348**	P	**P**	**23 45 25.8**	**-1.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=160,slow=7.8,SNR=33						
MKAR				LR	LR	00 03 06.8	
	comp=Z,60nm,21.4s,baz=74,slow=40						
MKAR	**Makanchi Array**	**37.78**	**348**	P	**P**	**23 45 25.8**	**-1.1**
MKAR				LR	LR	00 03 06.8	
SONM	**Songino Array**	**39.41**	**14**	P	**P**	**23 45 36.8**	**-3.6**
	comp=Z,1.7nm,0.8s,mb3.9,baz=190,slow=7.3,SNR=3.3						
KSRS	**Korea Array**	**41.73**	**43**	P	**P**	**23 45 53.1**	**-6.6**
	comp=Z,1.0nm,0.6s,mb3.8,baz=254,slow=9.0,SNR=6.6						
KURK	**Kurchatov**	**42.29**	**347**	P	**P**	**23 46 02.5**	**-1.5**
	comp=Z,2.1nm,0.8s,mb3.9,baz=164,slow=7.2,SNR=16						
KURK				LR	LR	00 06 20.8	
	comp=Z,142nm,21.9s,baz=155,slow=40						
KURK	**Kurchatov**	**42.29**	**347**	*e*P	**P**	**23 46 02.7**	**-1.3**
FITZ	**Fitzroy Crossi**	**42.69**	**131**	LR	LR	00 05 11.7	
	comp=Z,99nm,19.1s,baz=334,slow=38						
ZAA0	**Zalesovo Array**	**44.32**	**353**	*e*P	**P**	**23 46 18.7**	**-1.6**
ZALV	**Zalesovo Beam**	**44.32**	**353**	P	**P**	**23 46 19.2**	**-1.2**
	comp=Z,1.6nm,0.5s,mb4.0,baz=168,slow=7.6,SNR=15						
ZALV				LR	LR	00 07 54.0	
	comp=Z,54nm,19.9s,baz=50,slow=40						
ZALV	**Zalesovo Beam**	**44.32**	**353**	P	**P**	**23 46 19.2**	**-1.2**
ZALV				LR	LR	00 07 54.0	
BVAR	**Borovoye Array**	**46.62**	**341**	P	**P**	**23 46 37.7**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.7,baz=134,slow=11,SNR=10						
BVAR				PcP	PcP	23 48 09.9	-0.9
	comp=Z,0.8nm,0.7s,baz=174,slow=1.5,SNR=4.0						
BRVK	**Borovoye**	**46.68**	**341**	P	**P**	**23 46 38.2**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.0						
MDJ	**Mudanjiang**	**46.78**	**36**	P	**P**	**23 46 40.2**	**+0.3**
ABKAR	**Akbulak array**	**47.81**	**331**	*e*P	**P**	**23 46 48.5**	**+0.7**
	comp=Z,2.0nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**48.69**	**50**	LR	LR	00 08 12.5	
	comp=Z,105nm,18.6s,baz=250,slow=37						
AKTK	**Aktyubinsk**	**49.53**	**331**	P	**P**	**23 47 01.5**	**+0.6**
AKTO	**Aktyubinsk**	**49.53**	**331**	P	**P**	**23 47 01.5**	**+0.6**
	comp=Z,0.6nm,0.3s,mb4.0,baz=138,slow=9.1,SNR=4.8						
GNI	**Garni**	**52.11**	**314**	P	**P**	**23 47 19.8**	**-0.7**
ASAR	**Alice Springs**	**52.20**	**130**	P	**P**	**23 47 16.9**	**-4.5**
	comp=Z,3.0nm,0.8s,mb4.4,baz=315,slow=7.1,SNR=16						
KIV	**Kislovodsk**	**54.95**	**317**	*e*P	**P**	**23 47 42.2**	**+1.0**
	comp=Z,5.5nm,0.7s,mb4.7						
MALT	**Malatya**	**56.19**	**310**	P	**P**	**23 47 50.7**	**+0.5**
MMAI	**Mount Meron Ar**	**57.45**	**303**	LR	LR	00 17 17.1	
	comp=Z,109nm,18.8s,baz=120,slow=41						
YAK	**Yakutsk**	**58.41**	**19**	P	**P**	**23 48 05.7**	**+0.4**
BR131	**Keskin Array S**	**60.14**	**310**	*e*P	**P**	**23 48 17.1**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**60.14**	**310**	P	**P**	**23 48 18.1**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=129,slow=7.2,SNR=8.4						
BRTR				LR	LR	00 18 41.4	
	comp=Z,42nm,20.6s,baz=177,slow=40						
STKA	**Stephens Creek**	**62.43**	**134**	P	**P**	**23 48 30.2**	**-3.1**
	comp=Z,1.4nm,0.7s,mb4.1,baz=311,slow=11,SNR=3.0						
STKA				LR	LR	00 15 56.3	
	comp=Z,103nm,21.3s,baz=326,slow=37						
STKA	**Stephens Creek**	**62.43**	**134**	*e*P	**P**	**23 48 34.8**	**+1.6**
	comp=Z,0.9nm,0.7s,mb3.9						
STKA				LR	LR	00 15 56.3	
RMQ	**Roma**	**65.21**	**125**	*e*P	**P**	**23 48 49.7**	**-1.9**
	comp=Z,13nm,0.8s,mb4.8						
FINES	**FINESS Array B**	**70.29**	**332**	P	**P**	**23 49 22.4**	**-0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=84,slow=5.9,SNR=7.1						
ARCES	**ARCESS Array B**	**72.88**	**340**	P	**P**	**23 49 37.9**	**-0.4**
	comp=Z,1.6nm,0.7s,mb4.0,baz=90,slow=6.1,SNR=8.2						
ARCES				LR	LR	00 24 49.3	
	comp=Z,155nm,19.5s,baz=151,slow=38						
GERES	**GERESS Array B**	**75.46**	**318**	P	**P**	**23 49 52.9**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=119,slow=12,SNR=3.2						
BOSA	**Boshof**	**75.69**	**237**	P	**P**	**23 49 58.7**	**+3.4**
	comp=Z,3.1nm,1.0s,mb4.0,baz=65,slow=5.3,SNR=3.8						
BOSA	**Boshof**	**75.69**	**237**	*e*P	**P**	**23 49 56.7**	**+1.4**
	comp=Z,2.8nm,0.8s,mb4.0						
NOA	**NORSAR Array B**	**77.31**	**330**	P	**P**	**23 50 03.0**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.4,baz=92,slow=5.7,SNR=3.2						
NOA				LR	LR	00 26 47.0	
	comp=Z,47nm,20.6s,baz=100,slow=38						
LPG	**La Plagne**	**80.28**	**315**	*e*P	**P**	**23 50 19.0**	**-1.4**
	comp=Z,8.0nm,1.0s,mb4.2						
LPG	**La Plagne**	**80.28**	**315**	*e*P	**P**	**23 50 19.0**	**-1.4**
	comp=Z,4.0nm,1.0s,mb4.2						
LPL	**La Plagne**	**80.29**	**315**	*e*P	**P**	**23 50 19.1**	**-1.4**
	comp=Z,8.7nm,0.9s,mb4.3						
LPL	**La Plagne**	**80.29**	**315**	*e*P	**P**	**23 50 19.1**	**-1.4**
	comp=Z,4.3nm,0.9s,mb4.3						
MBDF	**Montbardon**	**80.33**	**314**	*e*P	**P**	**23 50 19.5**	**-1.2**
	comp=Z,4.2nm,0.7s,mb4.1						
MBDF	**Montbardon**	**80.33**	**314**	*e*P	**P**	**23 50 19.5**	**-1.2**
	comp=Z,2.1nm,0.7s,mb4.1						
BNI	**Bardonecchia**	**80.36**	**314**	P	**P**	**23 50 22.2**	**+1.3**
WLF	**Walferdange**	**80.38**	**319**	P	**P**	**23 50 21.4**	**+0.5**
ORIF	**Oris-en-Rattie**	**80.94**	**314**	*e*P	**P**	**23 50 22.3**	**-1.7**
TORD	**Torodi Ar. Bea**	**88.94**	**283**	P	**P**	**23 51 05.5**	**+1.0**
	comp=Z,0.3nm,0.8s,mb3.4,baz=93,slow=4.9,SNR=2.9						
TORD				LR	LR	00 28 56.7	
	comp=Z,50nm,18.2s,baz=245,slow=34						
ESDC	**Sonseca Array**	**88.94**	**310**	P	**P**	**23 51 05.0**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.5,baz=54,slow=3.7,SNR=2.5						
PDAR	**Pinedale Array**	**123.63**	**20**	PKP	PKPdf	23 57 04.0	-2.7
	comp=Z,0.2nm,0.4s,baz=11,slow=0.9,SNR=3.0						
PLCA	**Paso Flores**	**146.05**	**203**	PKPbc	PKPab	23 57 51.2	+1.4
	comp=Z,3.3nm,1.0s,baz=208,slow=5.1,SNR=3.7						
CPUP	**Villa Florida**	**147.50**	**236**	PKPbc	PKPbc	23 57 55.2	+1.5
	comp=Z,0.2nm,0.4s,baz=67,slow=11,SNR=3.1						
CPUP	**Villa Florida**	**147.50**	**236**	PKPbc	PKPbc	23 57 55.2	+1.5

*BJI **15** 23:41:39.5, 4.°17N×125.°02E, h306km, mB4.2/3, mb4.1/7*
*ISCJB **15** 23:41:40.4±0.4, 4.°01N±0.°04×124.°94E±0.°06, h329km±4km, mb4.0/36, Error ellipse: s-maj=9.1km s-min=5.5km az=6.6*
*NEIC **15** 23:41:40.2±0.7, 3.°97N×124.°69E, h311km±8km, mb4.2/17, Error ellipse: s-maj=10.5km s-min=6.3km az=83.0*
*IDC **15** 23:41:40.7±0.9, 3.°97N×124.°68E, h312km±8km, mb3.8/21, mb1 3.8/23, mb1mx3.8/27, mbtmp3.8/23, Error ellipse: s-maj=14.9km s-min=8.1km az=87.0*
*DJA **15** 23:41:41, 3.°91N×125.°04E, h317km, mb4.7/15*
ISC 15 23:41:41.2±0.4, 4.°02N±0.°03×124.°93E±0.°05, h319km±4km, n101, σ1°10/103, mb4.0/36, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.69**	**119**	P	**Pn**	**23 42 23.5**	**+0.9**
DAV	**Davao City (W)**	**3.10**	**12**	P	**Pn**	**23 42 39.2**	**-0.2**
	49nm,0.3s,baz=213,slow=1.4,SNR=18						
DAV				S	**S**	**23 43 26.7**	**+0.8**
	50nm,0.3s,baz=174,slow=19,SNR=3.1						
DAV	**Davao City (W)**	**3.10**	**12**	*e*Pn	**Pn**	**23 42 39.1**	**-0.3**
DAV				*e*S	**S**	**23 43 25.1**	**-0.8**
DAV	**Davao City (W)**	**3.10**	**12**	P	**Pn**	**23 42 39.6**	**+0.3**
TNTI	**Ternate**	**4.04**	**143**	P	**Pn**	**23 42 48.0**	**-1.0**
TNTI	**Ternate**	**4.04**	**143**	P	**Pn**	**23 42 48.5**	**-0.5**
MRSI	**Marisa**	**4.61**	**220**	P	**Pn**	**23 42 53.7**	**-1.6**
MRSI	**Marisa**	**4.61**	**220**	P	**Pn**	**23 42 54.4**	**-0.9**
LBMI	**Labuha**	**5.29**	**151**	P	**Pn**	**23 43 01.2**	**-1.8**
	173nm,0.5s,4.0nm						
LBMI	**Labuha**	**5.29**	**151**	P	**Pn**	**23 43 02.6**	**-0.4**
	205nm,0.5s,4.0nm						
LUWI	**Luwuk**	**5.47**	**203**	P	**Pn**	**23 43 05.2**	**+0.2**
	177nm,0.8s,3μm0.9nm						
LUWI	**Luwuk**	**5.47**	**203**	P	**Pn**	**23 43 04.5**	**-0.5**
	212nm,0.9s,3μm0.9nm						
APSI	**Ampana**	**5.89**	**214**	P	**Pn**	**23 43 09.4**	**-0.5**
	167nm,1.2s,2μm0.5nm						
APSI	**Ampana**	**5.89**	**214**	P	**Pn**	**23 43 10.1**	**+0.2**
	196nm,1.2s,2μm0.6nm						
NLAI	**Namlea**	**7.53**	**163**	P	**Pn**	**23 43 27.9**	**-1.5**
	58nm,0.5s,7μm1.9nm						
NLAI	**Namlea**	**7.53**	**163**	P	**Pn**	**23 43 31.0**	**+1.6**
	66nm,0.6s,7μm2.0nm						
KDI	**Kendari**	**8.25**	**196**	P	**Pn**	**23 43 35.3**	**-2.8**
	14nm,0.8s						
KDI	**Kendari**	**8.25**	**196**	P	**Pn**	**23 43 39.0**	**+0.9**
	18nm,0.9s,0.1nm						
TTSI	**Tana Toraja**	**8.68**	**216**	P	**Pn**	**23 43 43.9**	**+0.6**
	147nm,1.0s,1μm						
TTSI	**Tana Toraja**	**8.68**	**216**	P	**Pn**	**23 43 43.2**	**-0.1**
	177nm,0.9s,1μm0.5nm						
KAPI	**Kappang**	**10.36**	**210**	P	**Pn**	**23 44 01.1**	**-2.6**
	1.9nm,0.3s,baz=51,slow=6.6,SNR=11						
KBKI	**Kotabaru**	**11.38**	**230**	P	**Pn**	**23 44 17.2**	**+1.1**
	142nm,0.9s,1μm						
KBKI	**Kotabaru**	**11.38**	**230**	P	**Pn**	**23 44 18.9**	**+2.8**
	170nm,1.0s,1μm						
BBKI	**Banjar Baru**	**12.52**	**234**	P	**Pn**	**23 44 29.6**	**-0.2**
	168nm,0.9s						
BBKI	**Banjar Baru**	**12.52**	**234**	P	**Pn**	**23 44 29.6**	**-0.2**
	168nm,0.9s						
SBUM	**Sibu**	**12.78**	**263**	P	**Pn**	**23 44 34.0**	**+1.0**
	71nm,0.9s						
SBUM	**Sibu**	**12.78**	**263**	P	**Pn**	**23 44 35.1**	**+2.1**
	84nm,1.0s						
STKI	**Sintang**	**14.00**	**254**	P	**Pn**	**23 44 49.9**	**+2.5**
	75nm,0.2s						
KSM	**Kuching**	**14.82**	**261**	P	**P**	**23 44 50.0**	**-5.5**
	57nm,1.4s						
KSM	**Kuching**	**14.82**	**261**	P	**P**	**23 44 56.9**	**+1.4**
	33nm,1.3s						
KSM	**Kuching**	**14.82**	**261**	P	**P**	**23 44 58.8**	**+3.3**
	28nm,1.5s						
SJI	**Sawahan**	**17.57**	**228**	P	**P**	**23 45 26.9**	**+1.5**
	51nm,1.1s						
SJI	**Sawahan**	**17.57**	**228**	P	**P**	**23 45 27.2**	**+1.8**
	61nm,0.9s						
KAKA	**Kakadu**	**18.22**	**156**	*e*P	**P**	**23 45 32.2**	**0.0**
	48nm,0.6s						
KAKA				*e*S	**S**	**23 48 45.4**	**+1.4**
KAKA	**Kakadu**	**18.22**	**156**	P	**P**	**23 45 31.6**	**-0.7**
	50nm,1.0s,467nm						
KAKA	**Kakadu**	**18.22**	**156**	P	**P**	**23 45 32.5**	**+0.2**
	60nm,1.0s,466nm						
YULB	**Yu-li**	**19.58**	**350**	*e*P	**P**	**23 45 45.0**	**-1.6**
	8.8nm,0.6s						
TPUB	**Ta-pu**	**19.61**	**348**	*e*P	**P**	**23 45 47.3**	**+0.3**
	41nm,0.9s						
KNA	**Kununurra**	**20.01**	**169**	*e*P	**P**	**23 45 50.8**	**-0.4**
	29nm,0.7s						
SSLB	**Suanglung**	**20.02**	**349**	*e*P	**P**	**23 45 50.2**	**-1.0**
	12nm,0.6s						
GUMO	**Guam**	**21.86**	**63**	P	**P**	**23 46 10.1**	**+1.5**
	72nm,0.9s,mb4.9,baz=202,slow=10,SNR=2.3						
FITZ	**Fitzroy Crossi**	**21.99**	**178**	*e*P	**P**	**23 46 09.9**	**+0.1**
	42nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**21.99**	**178**	P	**P**	**23 46 10.0**	**+0.3**
	18nm,0.6s,mb4.5,baz=11,slow=7.2,SNR=52						
FITZ	**Fitzroy Crossi**	**21.99**	**178**	*e*P	**P**	**23 46 09.7**	**0.0**
	23nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**21.99**	**178**	P	**P**	**23 46 10.2**	**+0.4**
	72nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**21.99**	**178**	P	**P**	**23 46 10.2**	**+0.4**
	83nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**25.54**	**191**	*e*P	**P**	**23 46 41.5**	**-0.2**
	4.6nm,0.6s,mb3.9						
WRAB	**Tennant Creek**	**25.54**	**159**	*e*P	**P**	**23 46 41.8**	**-0.1**
WRAB	**Tennant Creek**	**25.54**	**159**	P	**P**	**23 46 41.6**	**-0.2**
	21nm,0.7s,mb4.5						
CBIJ	**Chichi jima**	**28.26**	**34**	P	**P**	**23 47 06.3**	**+0.5**
	65nm,0.7s,mb5.0,baz=264,slow=9.9,SNR=6.1						
ASAR	**Alice Springs**	**28.88**	**163**	P	**P**	**23 47 10.6**	**-0.8**
	1.9nm,0.6s,mb3.5,baz=326,slow=7.0,SNR=18						
ASAR				ScP	ScP	23 53 23.3	+0.7
	1.2nm,1.1s,baz=357,slow=5.0,SNR=4.5						
ASAR	**Alice Springs**	**28.88**	**163**	P	**P**	**23 47 10.6**	**-0.8**
ASAR				ScP	ScP	23 53 23.3	+0.7
ENH	**Enshi**	**29.91**	**332**	*e*P	**P**	**23 47 20.2**	**-0.2**
	13nm,0.9s,mb4.2						
XAN	**Xi'an**	**33.38**	**335**	P	**P**	**23 47 50.1**	**-0.3**
KSRS	**Korea Array**	**33.39**	**4**	P	**P**	**23 47 52.0**	**+1.5**
	0.8nm,0.5s,mb3.2,baz=183,slow=9.5,SNR=6.0						
KSRS				PcP	PcP	23 50 25.4	+1.6
	1.1nm,0.5s,baz=169,slow=1.5,SNR=6.2						
KSRS				ScP	ScP	23 53 38.3	+0.8
	0.4nm,0.4s,baz=170,slow=3.1,SNR=4.9						
MAJO	**Matsushiro**	**34.60**	**19**	*e*P	**P**	**23 48 00.9**	**+0.1**
	3.8nm,0.4s,mb4.0						
MAT	**Matsushiro Art**	**34.60**	**19**	P	**P**	**23 47 59.7**	**-1.1**
MJAR	**Matsushiro Arr**	**34.60**	**19**	P	**P**	**23 48 01.1**	**+0.3**
	5.5nm,0.8s,mb3.9,baz=192,slow=9.0,SNR=12						
BJT	**Baijiatuau**	**36.70**	**349**	*e*P	**P**	**23 48 18.6**	**+0.1**
	10nm,0.6s,mb4.2						
NWAO	**Narrogin (SRO)**	**37.46**	**191**	P	**P**	**23 48 24.3**	**-0.7**
	7.4nm,0.4s,mb4.3,baz=326,slow=3.8,SNR=4.4						
STKA	**Stephens Creek**	**39.06**	**157**	*e*P	**P**	**23 48 39.8**	**+1.6**
	3.6nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**39.06**	**157**	P	**P**	**23 48 39.8**	**+1.5**
	2.6nm,0.4s,mb3.8,baz=330,slow=8.2,SNR=7.5						
STKA	**Stephens Creek**	**39.06**	**157**	*e*P	**P**	**23 48 39.2**	**+0.9**
	1.1nm,0.8s,mb3.1						
CMSA	**Cobar Meteorol**	**40.52**	**152**	*e*P	**P**	**23 48 41.7**	**-8.4**
LSA	**Lhasa**	**40.91**	**312**	*e*P	**P**	**23 48 53.4**	**0.0**
	9.7nm,0.7s,mb4.1						
GTA	**Gaotai**	**41.94**	**331**	*e*P	**P**	**23 49 02.4**	**+0.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb3.9						
ASAJ	**Asahikawa**	**42.87**	**19**	P	**P**	**23 49 10.9**	**+2.1**
	comp=Z,1.6nm,0.7s,mb4.3,baz=230,slow=12,SNR=13						
ULN	**Ulaanbaatar**	**46.31**	**343**	*e*P	**P**	**23 49 35.2**	**-0.6**
	comp=Z,3.8nm,0.9s,mb3.5						
ULN	**Ulaanbaatar**	**46.31**	**343**	P	**P**	**23 49 36.9**	**+1.1**
ULN	**Ulaanbaatar**	**46.31**	**343**	P	**P**

*PDG **15** 23:52:23.6±0.4, 41.°61N×19.°75E, h7km±1km, ML2.2/9, Error ellipse: s-maj=1.7km s-min=2.0km az=0.0*

ISC 15 23:52:18.0±0.7, 41.°36N±0.°03×19.°83E±0.°04, h3km±4km, n50, σ0.°91/93, 11C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.69**	**4**	*e*PG	**Pg**	**23 52 31.6**	**+0.5**
PUK				*i* SG	**Sg**	**23 52 41.3**	**+1.3**
PUK	**Puka**	**0.69**	**4**	*e*Pg	**Pg**	**23 52 31.6**	**+0.5**
	SNR=92						
PUK				*i* Sg	**Sg**	**23 52 41.3**	**+1.3**
	SNR=92						
ULC	**Ulcinj**	**0.74**	**324**	*e*PN	**Pg**	**23 52 33.3**	**+1.0**
ULC				*i* SN	**Sg**	**23 52 42.2**	**+0.3**
ULC	**Ulcinj**	**0.74**	**324**	⇑*i*Pg	**Pg**	**23 52 33.3**	**+1.0**
ULC				*e*Sg	**Sg**	**23 52 42.2**	**+0.3**
ULC	**Ulcinj**	**0.74**	**324**	⇑*i*Pg	**Pg**	**23 52 33.3**	**+1.0**
ULC				*e*Sg	**Sg**	**23 52 42.2**	**+0.3**
OHR	**Ohrid**	**0.77**	**108**	*i* Pg	**Pg**	**23 52 32.5**	**-0.3**
OHR				*i* Sg	**Sg**	**23 52 43.2**	**+0.4**
OHR				*e*Lg		23 52 44.4	
	comp=E,50nm,0.7s						
OHR				*e*Lg		23 52 44.4	
	comp=N,59nm,0.6s						
OHR	**Ohrid**	**0.77**	**108**	*i* Pg	**Pg**	**23 52 32.4**	**-0.3**
OHR				*i* Sg	**Sg**	**23 52 43.1**	**+0.4**
OHR				*e*Lg		23 52 44.3	
	comp=N,50nm,0.7s						
BCI	**Bajram Curri**	**1.02**	**10**	*e*PG	**Pg**	**23 52 37.1**	**-0.5**
BCI				*i* SG	**Sg**	**23 52 52.7**	**+1.8**
BCI	**Bajram Curri**	**1.02**	**10**	*e*Pg	**Pg**	**23 52 37.1**	**-0.5**
	SNR=91						
BCI				*i* Sg	**Sg**	**23 52 52.7**	**+1.8**
	SNR=91						
KBN	**Korca**	**1.03**	**135**	*e*PG	**Pg**	**23 52 39.6**	**+1.9**
KBN				*i* SG	**Sg**	**23 52 57.1**	**+6.0**
KBN	**Korca**	**1.03**	**135**	*e*Pg	**Pg**	**23 52 39.6**	**+1.9**
	SNR=91						
KRUS	**Krusevo**	**1.07**	**89**	*i* Pg	**Pg**	**23 52 36.6**	**-1.8**
KRUS				*i* Sg	**Sg**	**23 52 51.7**	**-0.6**
KRUS				*e*Lg		23 52 53.4	
	comp=N,11nm,0.2s						
KRUS				*e*Lg		23 52 53.7	
	comp=E,19nm,0.4s						
KRUS	**Krusevo**	**1.07**	**89**	*i* Pg	**Pg**	**23 52 36.6**	**-1.8**
KRUS				*i* Sg	**Sg**	**23 52 51.6**	**-0.7**
KRUS				*e*Lg		23 52 53.3	
	comp=E,11nm,0.2s						
PDG	**Podgorica**	**1.15**	**339**	*e*PN	**Pg**	**23 52 40.1**	**0.0**
PDG				*i* SN	**Sg**	**23 52 54.9**	**-0.1**
PDG	**Podgorica**	**1.15**	**339**	⇑*i*Pg	**Pg**	**23 52 40.1**	**0.0**
PDG				*e*Sg	**Sg**	**23 52 54.9**	**-0.1**
TTG	**Podgorica**	**1.15**	**339**	⇑*i*Pg	**Pg**	**23 52 40.1**	**0.0**
TTG				*e*Sg	**Sg**	**23 52 54.9**	**-0.1**
BUM	**Brajici-Budva**	**1.17**	**324**	*e*PN	**Pn**	**23 52 41.4**	**+0.2**
BUM				*i* SN	**Sn**	**23 52 56.6**	**-1.0**
BUM	**Brajici-Budva**	**1.17**	**324**	⇑*i*Pg	**Pn**	**23 52 41.4**	**+0.2**
BUM				*e*Sg	**Sn**	**23 52 56.6**	**-1.0**
BUM	**Brajici-Budva**	**1.17**	**324**	⇑*i*Pg	**Pn**	**23 52 41.4**	**+0.2**
BUM				*e*Sg	**Sn**	**23 52 56.6**	**-1.0**
BIA	**Bitola**	**1.18**	**106**	*i* Pg	**Pg**	**23 52 40.3**	**-0.2**
BIA				*i* Sg	**Sg**	**23 52 55.8**	**0.0**
BIA				*e*Lg		23 52 57.2	
	comp=E,18nm,0.4s						
BIA				*e*Lg		23 52 57.4	
	comp=N,12nm,0.2s						
BIA	**Bitola**	**1.18**	**106**	*i* Pg	**Pg**	**23 52 40.3**	**-0.2**
BIA				*i* Sg	**Sg**	**23 52 55.8**	**0.0**
BIA				*e*Lg		23 52 57.1	
	comp=N,18nm,0.4s						
PVY	**Plav**	**1.24**	**5**	*e*PN	**Pg**	**23 52 41.7**	**0.0**
PVY				*i* SN	**Sg**	**23 52 58.2**	**+0.4**
PVY	**Plav**	**1.24**	**5**	⇑*i*Pg	**Pg**	**23 52 41.7**	**0.0**
PVY				*e*Sg	**Sg**	**23 52 58.2**	**+0.4**
PVY	**Plav**	**1.24**	**5**	⇑*i*Pg	**Pg**	**23 52 41.7**	**0.0**
PVY				*e*Sg	**Sg**	**23 52 58.2**	**+0.4**
SKO	**Skopje**	**1.35**	**63**	*e*Pg	**Pg**	**23 52 43.2**	**-0.7**
SKO				*e*Sg	**Sg**	**23 53 00.4**	**-1.0**
SKO				*e*Lg		23 53 00.8	
	comp=E,24nm,0.7s						
SKO				*e*Lg		23 53 01.3	
	comp=N,39nm,0.5s						
SKO	**Skopje**	**1.35**	**63**	*e*Pg	**Pg**	**23 52 43.2**	**-0.7**
SKO				*e*Sg	**Sg**	**23 53 00.4**	**-1.0**
SKO				*e*Lg		23 53 00.7	
	comp=N,24nm,0.7s						
HCY	**Herceg Novi**	**1.47**	**318**	*e*PN	**Pg**	**23 52 46.2**	**0.0**
HCY				*i* SN	**Sg**	**23 53 06.3**	**+1.0**
HCY	**Herceg Novi**	**1.47**	**318**	⇓*i*Pg	**Pg**	**23 52 46.2**	**0.0**
HCY				*e*Sg	**Sg**	**23 53 06.3**	**+1.0**
HCY	**Herceg Novi**	**1.47**	**318**	⇓*i*Pg	**Pg**	**23 52 46.2**	**0.0**
HCY				*e*Sg	**Sg**	**23 53 06.3**	**+1.0**
BEY	**Berane**	**1.51**	**2**	*e*PN	**Pn**	**23 52 46.3**	**+0.4**
BEY				*i* SN	**Sg**	**23 53 07.5**	**+0.9**
BEY	**Berane**	**1.51**	**2**	⇑*i*Pg	**Pn**	**23 52 46.3**	**+0.4**
BEY				*e*Sg	**Sg**	**23 53 07.5**	**+0.9**
IVA	**Berane**	**1.51**	**2**	⇑*i*Pg	**Pn**	**23 52 46.3**	**+0.4**
IVA				*e*Sg	**Sg**	**23 53 07.5**	**+0.9**
NKY	**Niksic**	**1.58**	**337**	*e*PN	**Pn**	**23 52 47.2**	**+0.4**
NKY				*i* SN	**Sg**	**23 53 09.0**	**+0.3**
NKY	**Niksic**	**1.58**	**337**	*e*Pg	**Pn**	**23 52 47.2**	**+0.4**
NKY				*e*Sg	**Sg**	**23 53 09.0**	**+0.3**
NKY	**Niksic**	**1.58**	**337**	*e*Pg	**Pn**	**23 52 47.2**	**+0.4**
NKY				*e*Sg	**Sg**	**23 53 09.0**	**+0.3**
STIP	**Stip**	**1.80**	**78**	*e*Pn	**Pn**	**23 52 50.0**	**+0.1**
STIP	**Stip**	**1.80**	**78**	*e*Pn	**Pn**	**23 52 49.9**	**+0.1**
BRY	**Bratogost**	**1.81**	**329**	*e*PN	**Pg**	**23 52 52.7**	**0.0**
BRY				*i* SN	**Sg**	**23 53 16.6**	**+0.4**
BRY	**Bratogost**	**1.81**	**329**	⇓*i*Pg	**Pg**	**23 52 52.7**	**0.0**
BRY				*e*Sg	**Sg**	**23 53 16.6**	**+0.4**
BRY	**Bratogost**	**1.81**	**329**	⇓*i*Pg	**Pg**	**23 52 52.7**	**0.0**
BRY				*e*Sg	**Sg**	**23 53 16.6**	**+0.4**
SJES	**Sjenica**	**1.91**	**3**	*i* Pg	**Pg**	**23 52 54.0**	**-0.5**
SJES				*i* Sg	**Sg**	**23 53 19.3**	**+0.1**
UPM	**Unac-Piva**	**1.97**	**340**	⇓*i*Pn	**Pg**	**23 52 55.3**	**-0.3**
UPM				*e*Sn	**Sg**	**23 53 19.4**	**-1.7**
PLE	**Pljevlja**	**2.00**	**351**	⇑*i*Pn	**Pg**	**23 52 56.0**	**-0.2**
PLE				*e*Sn	**Sg**	**23 53 19.5**	**-2.6**
BARS	**Barje**	**2.08**	**45**	*e*Pn	**Pn**	**23 52 54.1**	**+0.5**
BARS				*i* Sg	**Sn**	**23 53 20.5**	**+0.6**
STON	**Ston**	**2.19**	**314**	*e*Pn	**Pn**	**23 52 54.8**	**-0.4**
STON				Sn	**Sn**	**23 53 21.8**	**-1.0**
STON	**Ston**	**2.19**	**314**	*e*Pn	**Pn**	**23 52 54.8**	**-0.4**
STON				Sn	**Sn**	**23 53 21.8**	**-1.0**
BBLS	**Lazići**	**2.53**	**353**	*i* Pn	**Pg**	**23 53 04.8**	**-1.6**
GRUS	**Gruza**	**2.61**	**14**	*e*Pn	**Pn**	**23 52 59.8**	**-1.2**
ZAPS	**Zavoj**	**2.83**	**46**	*e*Pn	**Pn**	**23 53 06.3**	**+2.4**
BOLS	**Boljevac**	**2.92**	**32**	*i* Pn	**Pn**	**23 53 06.0**	**+0.7**

*SKO **15** 23:55:02.9, 41.°51N×19.°94E, h8km*

CSEM 15 23:55:00.0±0.8, 41.°26N×19.°84E, h10km, Error ellipse: s-maj=15.8km s-min=4.8km az=46.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.78**	**3**	*e*PG	Pg	23 55 15.6	+0.6
PUK				*i* SG	Sg	23 55 25.6	+0.4
PUK	**Puka**	**0.78**	**3**	*e*Pg	Pg	23 55 15.6	+0.6
PUK				*i* Sg	Sg	23 55 25.6	+0.4
KRUS	**Krusevo**	**1.06**	**84**	*i* Pg	Pg	23 55 20.7	+0.3
KRUS				*e*Sg	Sg	23 55 34.6	+0.3
KRUS	**Krusevo**	**1.06**	**84**	*i* Pg	Pg	23 55 20.7	+0.2
KRUS				*e*Sg	Sg	23 55 34.6	+0.3
BCI	**Bajram Curri**	**1.11**	**9**	*e*PG	Pg	23 55 21.1	-0.3
BCI				*i* SG	Sg	23 55 36.0	+0.1
BCI	**Bajram Curri**	**1.11**	**9**	*e*Pg	Pg	23 55 21.1	-0.3
BCI				*i* Sg	Sg	23 55 36.0	+0.1

*ISCJB **16** 00:06:06.9±0.8, 41.°38N±0.°04×19.°86E±0.°06, h10km, Error ellipse: s-maj=7.7km s-min=3.7km az=140.3*
*TIR **16** 00:06:06.9±0.5, 41.°36N×19.°74E, h12km±646km, ML3.0*
*CSEM **16** 00:06:07.9±0.3, 41.°45N×19.°94E, h15km, ML3.0, Error ellipse: s-maj=6.8km s-min=3.3km az=55.0*
*SKO **16** 00:06:09.2, 41.°38N×19.°92E, h17km, M1.5, ML2.0*

ISC 16 00:06:07.4±0.8, 41.°38N±0.°04×19.°85E±0.°06, h10km, n16, σ1.°26/31, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.66**	**3**	*e*PG	**Pg**	**00 06 20.4**	**+0.2**
PUK				*i* SG	**Sg**	**00 06 30.8**	**+1.9**
PUK	**Puka**	**0.66**	**3**	*e*Pg	**Pg**	**00 06 20.4**	**+0.2**
	SNR=90						
PUK				*i* Sg	**Sg**	**00 06 30.8**	**+1.9**
	SNR=90						
OHR	**Ohrid**	**0.77**	**110**	*i* Pg	**Pg**	**00 06 21.9**	**-0.3**
OHR				*i* Sg	**Sg**	**00 06 33.5**	**+1.3**
OHR				*e*Lg		00 06 33.6	
	comp=N,34nm,0.5s						
OHR				*e*Lg		00 06 34.2	
	comp=E,54nm,0.8s						
OHR	**Ohrid**	**0.77**	**110**	*i* Pg	**Pg**	**00 06 21.9**	**-0.3**
OHR				*i* Sg	**Sg**	**00 06 33.4**	**+1.2**
OHR				*e*Lg		00 06 33.6	
	comp=E,34nm,0.5s						
BCI	**Bajram Curri**	**1.00**	**9**	*e*PG	**Pg**	**00 06 26.9**	**+0.3**
BCI				*i* SG	**Sg**	**00 06 41.7**	**+2.1**
BCI	**Bajram Curri**	**1.00**	**9**	*e*Pg	**Pg**	**00 06 26.9**	**+0.3**
	SNR=90						
BCI				*i* Sg	**Sg**	**00 06 41.7**	**+2.1**
	SNR=90						
KBN	**Korca**	**1.04**	**136**	*e*PG	**Pg**	**00 06 28.3**	**+0.9**
KBN				*i* SG	**Sg**	**00 06 43.3**	**+2.4**
KBN	**Korca**	**1.04**	**136**	*e*Pg	**Pg**	**00 06 28.3**	**+0.9**
	SNR=90						
KBN				*i* Sg	**Sg**	**00 06 43.3**	**+2.4**
	SNR=90						
KRUS	**Krusevo**	**1.06**	**90**	*i* Pg	**Pg**	**00 06 26.8**	**-0.9**
KRUS				*i* Sg	**Sg**	**00 06 41.3**	**-0.1**
KRUS				*e*Lg		00 06 42.2	
	comp=N,6.4nm,0.2s						
KRUS				*e*Lg		00 06 43.3	
	comp=E,10nm,0.4s						
KRUS	**Krusevo**	**1.06**	**90**	*i* Pg	**Pg**	**00 06 26.8**	**-0.9**
KRUS				*i* Sg	**Sg**	**00 06 41.3**	**-0.1**
KRUS				*e*Lg		00 06 42.2	
	comp=E,6.4nm,0.2s						
BIA	**Bitola**	**1.17**	**107**	*i* Pg	**Pn**	**00 06 29.4**	**-0.4**
BIA				*e*Sg	**Sn**	**00 06 44.0**	**-1.8**
BIA				*e*Lg		00 06 45.7	
	comp=N,9.5nm,0.3s						
BIA				*e*Lg		00 06 46.4	
	comp=E,6.0nm,0.2s						
BIA	**Bitola**	**1.17**	**107**	*i* Pg	**Pn**	**00 06 29.3**	**-0.5**
BIA				*e*Sg	**Sn**	**00 06 44.0**	**-1.8**
BIA				*e*Lg		00 06 45.7	
	comp=E,9.5nm,0.3s						
SKO	**Skopje**	**1.33**	**63**	*e*Pg	**Pn**	**00 06 31.5**	**-0.5**
SKO				*e*Sg	**Sn**	**00 06 47.6**	**-2.2**
SKO				*e*Lg		00 06 48.5	
	comp=N,24nm,0.3s						
SKO				*e*Lg		00 06 49.7	
	comp=E,30nm,0.8s						
SKO	**Skopje**	**1.33**	**63**	*e*Pg	**Pn**	**00 06 31.5**	**-0.5**
SKO				*e*Sg	**Sn**	**00 06 47.5**	**-2.3**
SKO				*e*Lg		00 06 48.5	
	comp=E,24nm,0.3s						
STON	**Ston**	**2.18**	**314**	*e*Pn	**Pn**	**00 06 44.1**	**+0.4**
STON				Sn	**Sn**	**00 07 10.0**	**-0.9**
BBLS	**Lazići**	**2.51**	**353**	*e*Pg	**Pg**	**00 06 53.7**	**-1.7**

GUC 16 00:08:25.1±0.3, 22.°00S×70.°03W, h69km±2km, MD3.6, ML3.8, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.32**	**127**	⇓*i*P	Pn	00 08 37.0	+0.7
MACH				*i* S	Sn	00 08 45.9	+1.5
PECH	**Pedro de Valdi**	**0.68**	**151**	*i* P	Pn	00 08 40.2	+0.6
PECH				*i* S	Sn	00 08 51.6	+1.2
PECH				AML	AML	00 08 52.5	
	comp=N,8μm,0.2s						
MECH	**Mejillones**	**1.16**	**199**	*e*P	Pn	00 08 45.8	+0.2
MECH				*i* S	Sn	00 09 01.8	+0.9
MECH				AML	AML	00 09 03.2	
	comp=N,3μm,0.3s						
ANCH	**Antofagasta**	**1.71**	**192**	⇑*i*P	Pn	00 08 52.3	-0.5
ANCH				*i* S	Sn	00 09 13.7	-0.1

*DDA **16** 00:28:40.6, 37.°10N×27.°57E, h7km±2km, Md2.6*
*ISK **16** 00:28:40.8, 37.°10N×27.°55E, h8km, MD2.9*
*ISCJB **16** 00:28:41.1±0.6, 37.°11N±0.°04×27.°54E±0.°05, h7km±6km, Error ellipse: s-maj=7.9km s-min=5.7km az=136.5*
*CSEM **16** 00:28:41.0±0.1, 37.°10N×27.°53E, h6km, MD2.6, Error ellipse: s-maj=2.1km s-min=1.7km az=82.0*

ISC 16 00:28:41.3±0.6, 37.°11N±0.°04×27.°53E±0.°05, h8km±5km, n23, σ0.°27/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.08**	**236**	*i* P	**Pg**	**00 28 43.4**	**+0.1**
BDRM				*i* S	**Sg**	**00 28 45.0**	**+0.2**
BDRM	**Kayabasi**	**0.08**	**236**	*i* P	**Pg**	**00 28 43.4**	**0.0**
BDRM				*i* S	**Sg**	**00 28 45.0**	**+0.2**
MLSB	**Milas**	**0.27**	**47**	*e*PG	**Pg**	**00 28 46.4**	**-0.3**
MLSB				*e*SG	**Sg**	**00 28 50.9**	**+0.5**
MLSB	**Milas**	**0.27**	**47**	*e*Pg	**Pg**	**00 28 46.4**	**-0.3**
MLSB				*e*Sg	**Sg**	**00 28 50.9**	**+0.6**
DAT	**Datca**	**0.38**	**174**	*e*PG	**Pg**	**00 28 48.5**	**-0.3**
DAT	**Datca**	**0.38**	**174**	*e*Pg	**Pg**	**00 28 48.5**	**-0.3**
YER	**Yerkesik**	**0.60**	**88**	*e*PG	**Pg**	**00 28 52.9**	**-0.1**
YER				*e*SG	**Sg**	**00 29 01.0**	**+0.2**
YER	**Yerkesik**	**0.60**	**88**	*e*Pg	**Pg**	**00 28 52.9**	**-0.1**
YER				*e*Sg	**Sg**	**00 29 01.0**	**+0.1**
AYDN	**Tasoluk**	**0.62**	**27**	*i* P	**Pg**	**00 28 52.9**	**-0.4**
AYDN				*i* S	**Sg**	**00 29 00.9**	**-0.3**
AYDN	**Tasoluk**	**0.62**	**27**	*i* P	**Pg**	**00 28 52.9**	**-0.3**
AYDN				*i* S	**Sg**	**00 29 00.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.63**	**338**	*i* P	**Pg**	**00 28 53.5**	**0.0**
GCAM	**G?zelcaml?**	**0.63**	**338**	*i* P	**Pg**	**00 28 53.5**	**0.0**
TURN	**Turunc**	**0.89**	**105**	*i* P	**Pg**	**00 28 52.1**	**-6.3**
TURN				*i* S	**Sg**	**00 29 02.8**	**-7.3**
BLCB	**Balcova**	**1.33**	**343**	*e*PN	**Pn**	**00 29 06.2**	**+0.1**
BLCB	**Balcova**	**1.33**	**343**	*e*Pn	**Pn**	**00 29 06.3**	**+0.1**
FETY	**Fethiye**	**1.33**	**110**	*e*PN	**Pn**	**00 29 05.9**	**-0.3**
FETY	**Fethiye**	**1.33**	**110**	*e*Pn	**Pn**	**00 29 05.9**	**-0.4**
MANT	**Manisa**	**1.60**	**30**	*i* P	**Pn**	**00 29 10.0**	**+0.1**
MANT	**Manisa**	**1.60**	**30**	*i* P	**Pn**	**00 29 10.0**	**+0.1**
KULA	**Kula-Manisa**	**1.66**	**32**	*e*PN	**Pn**	**00 29 11.1**	**+0.3**
KULA	**Kula-Manisa**	**1.66**	**32**	*e*Pn	**Pn**	**00 29 11.1**	**+0.3**
ELL	**Elmali**	**1.94**	**100**	*e*PN	**Pn**	**00 29 14.9**	**+0.3**
ELL	**Elmali**	**1.94**	**100**	*e*Pn	**Pn**	**00 29 14.9**	**+0.3**

*ISCJB **16** 00:30:06.8±0.4, 37.°56N±0.°02×21.°60E±0.°03, h29km±3km, mb3.6/8, Error ellipse: s-maj=3.7km s-min=2.9km az=160.7*
*CSEM **16** 00:30:07.8±0.2, 37.°53N×21.°63E, h31km, ML4.0/8, Error ellipse: s-maj=5.0km s-min=3.9km az=50.0*
*NEIC **16** 00:30:07.1, 37.°59N×21.°70E, h31km, mb3.4/2, ML3.0(ATH), After ATH.*
*ATH **16** 00:30:07.1, 37.°59N×21.°70E, h31km±1km, MD3.7/14, ML3.0*
*THE **16** 00:30:07.9, 37.°59N×21.°75E, h12km±1km, ML4.0/8, Error ellipse: s-maj=1.1km s-min=0.6km az=198.0*
*IDC **16** 00:30:08.6±2.2, 37.°54N×21.°75E, h47km±27km, mb3.5/9, mb1 3.5/11, mb1mx3.4/28, mbtmp3.5/11, ML3.3/2, MS2.8/1, Ms1 2.9/1, ms1mx2.1/31, Error ellipse: s-maj=17.2km s-min=16.1km az=98.0*

ISC 16 00:30:07.5±0.4, 37.°56N±0.°02×21.°64E±0.°03, h23km±3km, n157, σ1.°29/212, mb3.6/8, 3C-2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.44**	**149**	*e*PB	**Pb**	**00 30 16.9**	**+0.3**
ITM				*e*SB	**Sb**	**00 30 24.7**	**+1.9**
ITM	**Ithomi**	**0.44**	**149**	P	**Pb**	**00 30 16.9**	**+0.3**
ITM				S	**Sb**	**00 30 23.4**	**+0.6**
ITM	**Ithomi**	**0.44**	**149**	P	**Pb**	**00 30 16.9**	**+0.3**
ITM				S	**Sb**	**00 30 23.4**	**+0.6**
ITM				*e*Sb	**Sb**	**00 30 24.7**	**+1.9**
RLS	**Riolos of Patr**	**0.52**	**345**	*e*PN	**Pn**	**00 30 18.0**	**-1.5**
RLS				*e*SN	**Sb**	**00 30 26.3**	**+1.1**
RLS	**Riolos of Patr**	**0.52**	**345**	*e*Pn	**Pn**	**00 30 18.0**	**-1.5**
RLS				*e*Sn	**Sb**	**00 30 26.3**	**+1.1**
VLX	**Vlachokerasia**	**0.61**	**107**	*e*PN	**Pn**	**00 30 19.0**	**-1.8**
VLX				*e*SN	**Sb**	**00 30 28.2**	**+0.4**
VLX	**Vlachokerasia**	**0.61**	**107**	P	**Pb**	**00 30 18.5**	**-1.1**
VLX				S	**Sb**	**00 30 26.4**	**-1.4**
VLX	**Vlachokerasia**	**0.61**	**107**	*e*Pn	**Pn**	**00 30 19.0**	**-1.8**
VLX				S	**Sb**	**00 30 26.4**	**-1.4**
VLX				*e*Sn	**Sb**	**00 30 28.2**	**+0.4**
PYL	**PYLOS**	**0.66**	**173**	*e*PN	**Pn**	**00 30 20.4**	**-1.1**
PYL				*e*SN	**Sn**	**00 30 31.5**	**+0.3**
PYL	**PYLOS**	**0.66**	**173**	P	**Pb**	**00 30 20.5**	**+0.1**
PYL				S	**Sb**	**00 30 31.2**	**+2.0**
PYL	**PYLOS**	**0.66**	**173**	*e*Pn	**Pn**	**00 30 20.4**	**-1.1**
PYL				*e*Sn	**Sn**	**00 30 31.5**	**+0.3**
GUR	**Goura**	**0.67**	**55**	*e*PB	**Pb**	**00 30 19.0**	**-1.6**
GUR				*e*SN	**Sn**	**00 30 29.6**	**-1.8**
GUR	**Goura**	**0.67**	**55**	P	**Pb**	**00 30 19.1**	**-1.5**
GUR				S	**Sb**	**00 30 28.1**	**-1.4**
GUR	**Goura**	**0.67**	**55**	*e*Pb	**Pb**	**00 30 19.0**	**-1.6**
GUR				*e*Sn	**Sn**	**00 30 29.6**	**-1.8**
LAKA	**Lakka**	**0.73**	**21**	P	**Pb**	**00 30 20.7**	**-0.9**
LAKA				S	**Sb**	**00 30 30.0**	**-1.3**
LAKA	**Lakka**	**0.73**	**21**	P	**Pb**	**00 30 20.7**	**-0.9**
UPR	**University Cam**	**0.74**	**9**	*e*PN	**Pn**	**00 30 21.4**	**-1.1**
UPR				*e*SN	**Sn**	**00 30 32.1**	**-0.9**
UPR	**University Cam**	**0.74**	**9**	P	**Pb**	**00 30 21.5**	**-0.2**
UPR				S	**Sb**	**00 30 31.2**	**-0.1**
UPR	**University Cam**	**0.74**	**9**	P	**Pb**	**00 30 21.5**	**-0.2**
UPR				S	**Sb**	**00 30 31.2**	**-0.1**
UPR				*e*Sn	**Sn**	**00 30 32.1**	**-0.9**
KFL	**Anninata**	**0.87**	**310**	P	**Pb**	**00 30 25.2**	**+1.2**
EFP	**Efpalio**	**0.90**	**13**	*e*PN	**Pn**	**00 30 23.5**	**-1.2**
EFP				*e*SN	**Sn**	**00 30 35.7**	**-1.2**
EFP	**Efpalio**	**0.90**	**13**	P	**Pb**	**00 30 23.6**	**-0.8**
EFP	**Efpalio**	**0.90**	**13**	P	**Pb**	**00 30 23.6**	**-0.8**
EFP				*e*Sn	**Sn**	**00 30 35.7**	**-1.2**
VLS	**Valsamata**	**1.04**	**307**	*e*PN	**Pn**	**00 30 27.5**	**+0.8**
VLS	**Valsamata**	**1.04**	**307**	P	**Pn**	**00 30 27.3**	**+0.6**
VLS				S	**Sb**	**00 30 44.1**	**+4.1**
VLS	**Valsamata**	**1.04**	**307**	P	**Pn**	**00 30 27.3**	**+0.6**
LTK	**Loutraki**	**1.15**	**66**	*e*PN	**Pn**	**00 30 27.7**	**-0.5**
LTK	**Loutraki**	**1.15**	**66**	P	**Pn**	**00 30 27.6**	**-0.6**
LTK				S	**Sn**	**00 30 43.2**	**0.0**
LTK	**Loutraki**	**1.15**	**66**	*e*Pn	**Pn**	**00 30 27.7**	**-0.5**
LTK				S	**Sn**	**00 30 43.2**	**0.0**
VLI	**Veliai**	**1.33**	**129**	*e*PN	**Pn**	**00 30 32.2**	**+1.5**
VLI	**Veliai**	**1.33**	**129**	*e*Pn	**Pn**	**00 30 32.2**	**+1.5**
EVR	**Evrytania**	**1.36**	**5**	*e*PN	**Pn**	**00 30 32.5**	**+1.3**
EVR	**Evrytania**	**1.36**	**5**	*e*Pn	**Pn**	**00 30 32.5**	**+1.3**
LKR	**Lokris**	**1.53**	**44**	P	**Pn**	**00 30 33.6**	**+0.2**
LKR	**Lokris**	**1.53**	**44**	P	**Pn**	**00 30 33.2**	**-0.2**
LKR				S	**Sn**	**00 30 53.3**	**+0.7**
LKR	**Lokris**	**1.53**	**44**	P	**Pn**	**00 30 33.6**	**+0.2**
LKR				S	**Sn**	**00 30 53.3**	**+0.7**
AGG	**Agios Georgios**	**1.56**	**20**	P	**Pn**	**00 30 34.5**	**+0.7**
AGG				S	**Sn**	**00 30 54.7**	**+1.4**
AGG	**Agios Georgios**	**1.56**	**20**	P	**Pn**	**00 30 34.5**	**+0.7**
AGG				S	**Sn**	**00 30 54.7**	**+1.4**
AGG	**Agios Georgios**	**1.56**	**20**	P	**Pn**	**00 30 34.5**	**+0.7**
AGG				S	**Sn**	**00 30 54.7**	**+1.4**
ATAL	**Atalanti**	**1.57**	**43**	P	**Pn**	**00 30 33.7**	**-0.3**
ATAL				S	**Sn**	**00 30 53.8**	**+0.2**
ATAL	**Atalanti**	**1.57**	**43**	P	**Pn**	**00 30 33.7**	**-0.3**
ATAL				S	**Sn**	**00 30 53.8**	**+0.2**
ATH	**Athens Observa**	**1.70**	**75**	*e*PB	**Pb**	**00 30 35.5**	**-2.5**
ATH	**Athens Observa**	**1.70**	**75**	*e*Pb	**Pb**	**00 30 35.5**	**-2.5**
VLY	**Voula,Athens**	**1.73**	**79**	P	**Pn**	**00 30 37.6**	**+1.4**
VLY	**Voula,Athens**	**1.73**	**79**	P	**Pn**	**00 30 37.6**	**+1.4**
ATHU	**Athens Univers**	**1.75**	**76**	P	**Pn**	**00 30 36.7**	**+0.3**
ATHU				S	**Sn**	**00 30 57.4**	**-0.5**
ATHU	**Athens Univers**	**1.75**	**76**	P	**Pn**	**00 30 36.7**	**+0.3**
ATHU				S	**Sn**	**00 30 57.4**	**-0.5**
PTL	**Penteli**	**1.83**	**74**	*e*PN	**Pn**	**00 30 37.3**	**-0.2**
PTL	**Penteli**	**1.83**	**74**	*e*Pn	**Pn**	**00 30 37.3**	**-0.2**
THL	**Klokotos Trika**	**2.03**	**8**	P	**Pn**	**00 30 41.4**	**+1.1**
THL				S	**Sn**	**00 31 05.2**	**+0.4**
THL	**Klokotos Trika**	**2.03**	**8**	P	**Pn**	**00 30 41.4**	**+1.1**
THL				S	**Sn**	**00 31 05.2**	**+0.4**
NEO	**Neokhori**	**2.15**	**35**

VOIR 8.28 17 ⇑ *i*P Pn 00 32 08.3 +2.2
MLR **Muntele Rosu** 8.56 21 P Pn 00 32 10.7 +0.8
0.2nm,0.3s,baz=154,slow=8.6,SNR=5.1
MLR **Muntele Rosu** 8.56 21 ⇑ *i*P Pn 00 32 11.7 +1.8
MLR **Muntele Rosu** 8.56 21 P Pn 00 32 10.7 +0.8
NVLJ **Novalja** 8.67 326 Sn Sn 00 33 41.9 -6.5
PLOR **Plostina** 9.09 23 ⇓ *i*P Pn 00 32 20.5 +3.3
VRI **Vrincioaia** 9.13 23 ⇓ *i*P Pn 00 32 21.6 +3.8
BRTR **Keskin Array B** 9.63 73 P Pn 00 32 27.9 +3.2
0.1nm,0.3s,baz=258,slow=13,SNR=3.3
VYHS **Vyhne** 11.12 350 *e*PN Pn 00 32 46.3 +1.3
VYHS *e*SN Sn 00 34 43.1 -5.5
VYHS **Vyhne** 11.12 350 *e*Pn Pn 00 32 46.3 +1.3
KOLL **Kolacno** 11.27 349 *e*SN Sn 00 34 49.4 -2.7
KOLS **Kolonicke sedl** 11.38 2 *e*PN Pn 00 32 51.4 +2.8
KOLS **Kolonicke sedl** 11.38 2 *e*SN Sn 00 34 57.1 +2.2
KOLS **Kolonicke sedl** 11.38 2 *e*Sn Sn 00 34 57.1 +2.2
MORC **Moravsky Berou** 12.57 348 Pn Pn 00 33 04.5 -0.3
MORC **Moravsky Berou** 12.57 348 Pn Pn 00 33 04.5 -0.3
MALT **Malatya** 13.28 82 Pn Pn 00 33 12.8 -1.7
MALT **Malatya** 13.28 82 Pn Pn 00 33 12.8 -1.7
CLL **Collm** 15.05 339 *e*PP 00 33 44.0
SUW **Suwalki** 16.49 3 *e*Pn Pn 00 33 56.5 -0.7
14nm,0.8s
SUW **Suwalki** 16.49 3 *e*Pn Pn 00 33 56.5 -0.7
14nm,0.8s
ESDC **Sonseca Array** 20.10 284 P P 00 34 38.6 -0.9
1.1nm,0.7s,baz=74,slow=11,SNR=5.1
ESDC **Sonseca Array** 20.10 284 P P 00 34 38.6 -0.9
ESLA **Sonseca Array** 20.10 284 *e*P P 00 34 38.6 -0.9
0.2nm,0.6s
ESLA **Sonseca Array** 20.10 284 *e*P P 00 34 38.6 -0.9
0.2nm,0.6s
HFS **Hagfors** 23.16 350 P P 00 35 10.3 -1.8
2.4nm,0.9s,mb3.6,baz=162,slow=19,SNR=4.6
HFS **Hagfors** 23.16 350 P P 00 35 10.3 -1.8
FINES **FINESS Array B** 24.07 5 P P 00 35 18.5 -2.3
0.3nm,0.4s,mb3.1,baz=165,slow=7.9,SNR=4.0
FINES **FINESS Array B** 24.07 5 P P 00 35 18.5 -2.3
NOA **NORSAR Array B** 24.41 348 LR LR 00 45 43.1
comp=Z,20nm,19.0s,baz=60,slow=38
EKA **Eskdalemuir Ar** 24.45 325 P P 00 35 23.4 -0.9
1.1nm,0.6s,mb3.4,baz=127,slow=9.8,SNR=8.9
EKA **Eskdalemuir Ar** 24.45 325 P P 00 35 23.4 -0.9
TORD **Torodi Ar. Bea** 30.13 221 P P 00 36 14.2 -1.3
0.8nm,0.7s,mb3.6,baz=34,slow=9.0,SNR=8.9
BRVK **Borovoye** 36.78 49 P P 00 37 10.2 -2.9
BVAR **Borovoye Array** 36.85 49 P P 00 37 12.4 -1.3
0.7nm,0.7s,mb3.6,baz=251,slow=4.4,SNR=5.7
BVAR **Borovoye Array** 36.85 49 P P 00 37 12.4 -1.3
DBIC **Dimbokro** 39.06 225 P P 00 37 31.9 -0.8
2.1nm,0.9s,mb3.9,baz=4.4,slow=13,SNR=2.6
DBIC **Dimbokro** 39.06 225 P P 00 37 31.9 -0.8
DBIC **Dimbokro** 39.06 225 P P 00 37 31.9 -0.8
KURK **Kurchatov** 41.94 53 P P 00 37 53.1 -3.1
1.5nm,0.7s,mb3.8,baz=281,slow=8.6,SNR=12
KURK pP pP 00 38 03.7 +0.4
1.3nm,0.7s,baz=282,slow=8.5,SNR=8.5
KURK **Kurchatov** 41.94 53 pP pP 00 38 03.7 +0.4
ZALV **Zalesovo Beam** 45.45 48 P P 00 38 21.9 -2.5
1.1nm,0.6s,mb3.9,baz=280,slow=8.4,SNR=5.3
ZALV pP pP 00 38 31.4 -0.1
0.7nm,0.5s,baz=297,slow=13,SNR=2.6
ZALV **Zalesovo Beam** 45.45 48 P P 00 38 21.9 -2.5
ZALV pP pP 00 38 31.4 -0.1

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*IDC **16** 00:33:26.5±0.8, 4°.43N×96°.54E, h0km, mb4.1/14, mb1 4.1/14, mb1mx4.0/24, mbtmp4.0/14, MS3.6/12, Ms1 3.6/12, ms1mx3.3/31, Error ellipse: s-maj=35.9km s-min=14.9km az=55.0*
*ISCJB **16** 00:33:32.0±0.6, 4°.40N±0°.04×96°.71E±0°.05, h55km±6km, mb4.1/22, MS3.6/11, Error ellipse: s-maj=10.4km s-min=5.0km az=145.6*
*NEIC **16** 00:33:31.3±0.6, 4°.50N×96°.70E, h35km, mb4.1/3, Error ellipse: s-maj=25.3km s-min=8.2km az=47.0*
*DJA **16** 00:33:32, 4°.42N×96°.68E, h30km, MLv4.8/10*
ISC 16 00:33:33.4±0.5, **4°.42N**±0°.04×**96°.69E**±0°.05, **h50**km±5km, **n62**, σ**1**°**30**/59, **mb4.1**/22, **MS3.6**/11, **1C**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**0.84**	**18**	P	**Pn**	**00 33 47.1**	**-1.9**
LHMI				S	**Sn**	**00 34 00.6**	**+0.2**
BSI	**Banda Aceh**	**1.75**	**308**	P	**Pn**	**00 34 00.1**	**-1.2**
BSI				S	**Sn**	**00 34 23.8**	**+1.3**
GSI	**Gunungsitoli**	**3.22**	**164**	P	**Pn**	**00 34 20.5**	**-1.0**
GSI				S	Px	00 34 34.6	
TRSI	**Tarutung**	**3.29**	**136**	P	**Pn**	**00 34 30.2**	**+7.8**
TRSI				S	Px	00 34 33.4	
IPM	**Ipoh**	**4.33**	**89**	P	**Pn**	**00 34 36.7**	**+0.1**
IPM	**Ipoh**	**4.33**	**89**	P	**Pn**	**00 34 36.3**	**-0.3**
MNSI	**Mandailing Nat**	**4.62**	**141**	P	**Pn**	**00 34 41.2**	**+0.5**
FRIM	**Kepong**	**5.06**	**103**	P	**Pn**	**00 34 46.6**	**-0.2**
BKNI	**Bangkinang**	**5.95**	**133**	P	**Pn**	**00 34 59.7**	**+0.7**
218nm,0.8s,2μm1.7nm							
PPI	**Padang Panjang**	**6.10**	**143**	P	**Pn**	**00 35 01.7**	**+0.7**
61nm,0.9s,1μm0.4nm							
SISI	**Saibi**	**6.19**	**157**	P	**Pn**	**00 35 02.8**	**+0.5**
55nm,0.8s,0.3nm							
KTGM	**Kuala Trenggan**	**6.49**	**82**	P	**Pn**	**00 35 06.0**	**-0.3**
PDSI	**Padang**	**6.50**	**144**	P	**Pn**	**00 35 07.1**	**+0.6**
115nm,0.7s,0.6nm							
KGM	**Kluang**	**7.04**	**110**	P	**Pn**	**00 35 16.6**	**+2.7**
SDSI	**Sungai Dareh**	**7.12**	**138**	P	**Pn**	**00 35 15.3**	**+0.3**
MYKOM	**Kota Tinggi**	**7.61**	**110**	P	**Pn**	**00 35 23.0**	**+1.2**
MYKOM	**Kota Tinggi**	**7.61**	**110**	P	**Pn**	**00 35 22.5**	**+0.7**
26nm,1.4s,0.5nm							
MNAI	**Manna**	**10.74**	**144**	P	**Pn**	**00 36 04.0**	**-0.6**
222nm,1.3s							
MDSI	**Maura Dua**	**11.59**	**140**	P	**Pn**	**00 36 14.1**	**-2.1**
KASI	**Kota Agung**	**12.59**	**142**	P	**Pn**	**00 36 25.4**	**-4.4**
KSM	**Kuching**	**13.91**	**102**	*e*P	**Pn**	**00 36 46.5**	**-1.4**
CHG	**Chiang Mai**	**14.47**	**9**	⇑ P	Px	00 37 06.0	
11nm,1.0s							
SBUM	**Sibu**	**15.63**	**97**	P	**Pn**	**00 37 12.7**	**+2.2**
PALK	**Pallekele**	**16.15**	**281**	LR	LR	00 42 30.5	
comp=Z,163nm,21.8s,baz=99,slow=34							
KMI	**Kunming**	**21.39**	**15**	P	**P**	**00 38 22.0**	**+5.1**
KMI				pmax	pmax		
comp=Z,13nm,1.0s,mb4.2							
SHL	**Shillong**	**21.52**	**348**	*e*P	**P**	**00 38 20.0**	**+1.6**
KAPI	**Kappang**	**24.87**	**112**	P	**P**	**00 38 52.1**	**+0.5**
comp=Z,10nm,0.7s,mb4.4,baz=308,slow=8.9,SNR=6.9							
KAPI				LR	LR	00 49 52.2	
comp=Z,117nm,19.5s,MS3.4,baz=120,slow=39							
LSA	**Lhasa**	**25.68**	**349**	P	**P**	**00 39 00.8**	**+2.0**
FITZ	**Fitzroy Crossi**	**36.28**	**129**	*e*P	**P**	**00 40 31.5**	**-0.7**
comp=Z,7.8nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**36.28**	**129**	*e*P	**P**	**00 40 31.3**	**-1.0**
comp=Z,4.3nm,0.6s,mb4.6							
KAKA	**Kakadu**	**39.39**	**116**	*e*P	**P**	**00 40 56.4**	**-2.2**
comp=Z,6.4nm,0.6s,mb4.5							
KAKA	**Kakadu**	**39.39**	**116**	*e*P	**P**	**00 40 56.2**	**-2.4**
NWAO	**Narrogin (SRO)**	**41.94**	**154**	P	**P**	**00 41 20.3**	**+0.9**
comp=Z,8.2nm,0.7s,mb4.4,baz=161,slow=22,SNR=1.6							
NWAO	**Narrogin (SRO)**	**41.94**	**154**	P	**P**	**00 41 19.4**	**0.0**
UCH	**Uchtor**	**42.52**	**335**	P	**P**	**00 41 22.8**	**-1.1**
AAK	**Ala-Archa**	**42.86**	**336**	LR	LR	01 00 31.7	
comp=Z,128nm,21.8s,MS3.8,baz=21,slow=38							
AAK	**Ala-Archa**	**42.86**	**336**	P	**P**	**00 41 25.7**	**-1.1**
KSRS	**Korea Array**	**43.55**	**37**	P	**P**	**00 41 32.1**	**-0.2**
comp=Z,0.8nm,0.5s,mb3.7,baz=130,slow=40,SNR=3.1							
KSRS				LR	LR	01 00 25.4	
comp=Z,58nm,19.6s,MS3.5,baz=223,slow=37							
MK31	**Makanchi Array**	**44.01**	**346**	*e*P	**P**	**00 41 34.5**	**-1.5**
MKAR	**Makanchi Array**	**44.01**	**346**	P	**P**	**00 41 34.5**	**-1.4**
comp=Z,0.5nm,0.4s,mb3.6,baz=153,slow=8.2,SNR=7.3							
MKAR				LR	LR	01 05 27.0	
comp=Z,36nm,18.5s,MS3.3,baz=157,slow=44							
SONM	**Songino Array**	**44.05**	**9**	P	**P**	**00 41 37.9**	**+1.7**
comp=Z,0.5nm,0.4s,mb3.6,baz=212,slow=5.1,SNR=2.5							
SONM				LR	LR	00 59 55.8	
comp=Z,80nm,21.5s,MS3.6,baz=240,slow=36							
WRAB	**Tennant Creek**	**44.22**	**124**	*e*P	**P**	**00 41 38.0**	**0.0**
comp=Z,45nm,0.5s							
ASAR	**Alice Springs**	**45.78**	**129**	P	**P**	**00 41 50.4**	**0.0**
comp=Z,6.7nm,0.9s,mb4.6,baz=307,slow=7.9,SNR=39							
ASAR				PcP	PcP	00 43 29.3	+1.9
comp=Z,0.9nm,0.8s,baz=302,slow=4.2,SNR=4.1							
FORT	**Forrest**	**46.08**	**142**	*e*P	**P**	**00 41 51.4**	**-1.2**
comp=Z,22nm,0.5s,mb5.3							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**48.57**	**345**	P	**P**	**00 42 10.1**	**-1.6**
comp=Z,0.4nm,0.5s,mb3.7,baz=164,slow=7.0,SNR=4.0							
KURK	**Kurchatov**	**48.57**	**345**	P	**P**	**00 42 09.7**	**-1.9**
comp=Z,0.9nm,0.6s,mb4.0							
MJAR	**Matsushiro Arr**	**49.72**	**44**	LR	LR	01 06 07.4	
comp=Z,89nm,18.4s,MS3.8,baz=240,slow=39							
ZALV	**Zalesovo Beam**	**50.32**	**351**	P	**P**	**00 42 26.0**	**+1.1**
comp=Z,0.6nm,0.4s,mb4.0,baz=156,slow=10.0,SNR=3.0							
ZALV				LR	LR	01 08 47.3	
comp=Z,28nm,18.3s,MS3.3,baz=70,slow=42							
ZALV	**Zalesovo Beam**	**50.32**	**351**	P	**P**	**00 42 26.0**	**+1.1**
ZALV				LR	LR	01 08 47.3	
BVAR	**Borovoye Array**	**53.06**	**340**	P	**P**	**00 42 43.5**	**-1.9**
comp=Z,0.5nm,0.6s,mb3.6,baz=145,slow=5.4,SNR=3.0							
BVAR				LR	LR	01 08 35.0	
comp=Z,47nm,18.7s,MS3.6,baz=258,slow=40							
ABKAR	**Akbulak array**	**54.46**	**331**	*e*P	**P**	**00 42 52.9**	**-2.7**
comp=Z,0.9nm,0.8s,mb3.8							
STKA	**Stephens Creek**	**55.91**	**134**	*e*P	**P**	**00 43 07.0**	**+0.6**
comp=Z,7.6nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**55.91**	**134**	P	**P**	**00 43 06.9**	**+0.5**
comp=Z,8.3nm,0.7s,mb4.9,baz=317,slow=8.0,SNR=16							
AKTK	**Aktyubinsk**	**56.17**	**331**	P	**P**	**00 43 09.8**	**+1.9**
AKTO	**Aktyubinsk**	**56.17**	**331**	P	**P**	**00 43 09.8**	**+1.9**
comp=Z,0.5nm,0.4s,mb3.9,baz=127,slow=12,SNR=3.7							
BRTR	**Keskin Array B**	**66.59**	**311**	P	**P**	**00 44 17.1**	**-1.6**
comp=Z,0.7nm,0.8s,mb3.7,baz=143,slow=10,SNR=5.6							
BOSA	**Boshof**	**75.96**	**239**	P	**P**	**00 45 19.0**	**+3.6**
comp=Z,1.9nm,0.7s,mb4.1,baz=86,slow=13,SNR=5.0							
BOSA				LR	LR	01 13 36.3	
comp=Z,62nm,19.3s,MS3.9,baz=333,slow=32							
ARCES	**ARCESS Array B**	**79.35**	**340**	P	**P**	**00 45 33.6**	**+0.1**
comp=Z,1.3nm,0.8s,mb3.9,baz=97,slow=7.4,SNR=1.6							
ARCES				LR	LR	01 23 56.5	
comp=Z,78nm,18.3s,MS4.1,baz=49,slow=38							
GERES	**GERESS Array B**	**82.07**	**319**	P	**P**	**00 45 50.2**	**+1.7**
comp=Z,0.4nm,0.6s,mb3.6,baz=49,slow=4.1,SNR=3.5							
HFS	**Hagfors**	**82.69**	**330**	P	**P**	**00 45 54.8**	**+3.3**
comp=Z,0.8nm,0.5s,mb4.0,baz=108,slow=4.8,SNR=5.4							
NOA	**NORSAR Array B**	**83.96**	**331**	LR	LR	01 28 07.7	
comp=Z,38nm,18.4s,MS3.8,baz=90,slow=39							
TORD	**Torodi Ar. Bea**	**93.86**	**283**	P	**P**	**00 46 46.4**	**+0.2**
comp=Z,0.5nm,0.9s,mb3.9,baz=93,slow=6.7,SNR=4.2							

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*ISCJB **16** 00:33:46.9±1.3, 76°.93N±0°.06×18°.9E±0°.3, h5km±20km, Error ellipse: s-maj=14.3km s-min=7.7km az=151.6*
*NAO **16** 00:33:47.5±1.0, 76°.97N×19°.36E, ML2.7*
*CSEM **16** 00:33:47.8±0.1, 76°.98N×18°.77E, h10km, ML3.0, Error ellipse: s-maj=2.5km s-min=1.4km az=73.0*
*BER **16** 00:33:51.4±1.6, 77°.06N×19°.08E, h16km±12km, MD2.2, ML3.0, ML2.7(NAO)*
ISC 16 00:33:47.9±1.4, **76°.99N**±0°.06×**19°.0E**±0°.4, **h7**km±17km, **n9**, σ**0**°**30**/15, **Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.78**	**273**	*e*P	**Pg**	**00 34 03.3**	**+0.5**
HSP				*e*S	**Sg**	**00 34 12.6**	**-0.2**
SPA0	**Spitsbergen Ar**	**1.32**	**336**	Pg	**Pg**	**00 34 13.0**	**-0.2**
baz=151,slow=22							
SPA0				Lg		00 34 31.0	
baz=152,slow=28							
SPA0	**Spitsbergen Ar**	**1.32**	**336**	Pg	**Pg**	**00 34 13.0**	**-0.2**
baz=151,slow=21,SNR=92							
SPA0				Lg		00 34 31.0	
baz=152,slow=25,SNR=6.9							
HOPEN	**Hopen**	**1.47**	**106**	*e*P	**Pn**	**00 34 15.2**	**+0.4**
HOPEN				*e*S	**Sn**	**00 34 34.0**	**-0.2**
HOPEN				AML	AML	00 34 40.2	
comp=Z,614nm,0.3s							
HOPEN	**Hopen**	**1.47**	**106**	*e*P	**Pn**	**00 34 15.2**	**+0.5**
SNR=55							
HOPEN				*e*S	**Sn**	**00 34 34.0**	**-0.2**
comp=Z,614nm,0.3s,SNR=55							
BJO	**Bjornoya**	**2.50**	**179**	*e*Pg	**Pg**	**00 34 35.4**	**-0.3**
BJO				*e*Sg	**Sg**	**00 35 08.1**	**+0.1**
BJO				AML	AML	00 35 14.4	
comp=Z,92nm,0.4s							
BJO	**Bjornoya**	**2.50**	**179**	*e*Pg	**Pg**	**00 34 35.4**	**-0.3**
SNR=91							
BJO				*e*Sg	**Sg**	**00 35 08.1**	**+0.1**
comp=Z,92nm,0.4s,SNR=91							
ARA0	**ARCESS Array S**	**7.72**	**163**	Pn	**Pn**	**00 35 40.3**	**-0.2**
baz=351,slow=12							
ARA0				Sn	**Sn**	**00 37 01.2**	**-6.7**
baz=357,slow=22							
ARA0	**ARCESS Array S**	**7.72**	**163**	P	**Pn**	**00 35 40.3**	**-0.1**
baz=351,slow=12,SNR=51							

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*IDC **16** 00:46:39.6±3.9, 3°.13S×100°.03E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=175.2km s-min=27.0km az=56.0*
*DJA **16** 00:46:40, 2°.99S×99°.24E, h10km, MLv3.8/5*
*ISCJB **16** 00:46:42.7±1.2, 3°.04S±0°.07×99°.32E±0°.08, h33km, mb3.7/4, Error ellipse: s-maj=12.5km s-min=8.7km az=137.4*
ISC 16 00:46:46.5±1.3, **2°.89S**±0°.10×**99°.47E**±0°.09, **h35**km, **n11**, σ**0**°**98**/14, **mb3.7**/4, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.56**	**77**	P	**Pn**	**00 46 53.8**	**-4.2**
PPSI				S	**Sn**	**00 47 06.7**	**+0.7**
SISI	**Saibi**	**1.60**	**346**	P	**Pn**	**00 47 08.1**	**-4.2**
SISI				S	**Sn**	**00 47 31.1**	**-0.7**
PDSI	**Padang**	**2.20**	**27**	P	**Pn**	**00 47 19.6**	**-1.0**
PDSI				S	**Sn**	**00 47 51.3**	**+4.6**
PPI	**Padang Panjang**	**2.59**	**21**	P	**Pn**	**00 47 26.8**	**+0.8**
SDSI	**Sungai Dareh**	**2.76**	**45**	P	**Pn**	**00 47 24.7**	**-3.6**
KSI	**Kapahiang**	**3.21**	**104**	P	**Pn**	**00 47 34.8**	**+0.3**
KASI	**Kota Agung**	**5.66**	**118**	P	**Pn**	**00 48 06.9**	**-1.2**
ASAR	**Alice Springs**	**39.17**	**125**	P	**P**	**00 54 04.5**	**-6.8**
0.6nm,0.5s,mb3.6,baz=300,slow=8.4,SNR=9.8							
SONM	**Songino Array**	**50.88**	**6**	P	**P**	**00 55 44.2**	**+0.3**
0.6nm,0.4s,mb3.9,baz=185,slow=8.7,SNR=3.2							
MKAR	**Makanchi Array**	**51.74**	**345**	P	**P**	**00 55 51.8**	**+1.3**
0.6nm,0.6s,mb3.7,baz=134,slow=8.7,SNR=5.8							
KURK	**Kurchatov**	**56.31**	**344**	P	**P**	**00 56 23.8**	**+0.1**
0.4nm,0.8s,mb3.5,baz=167,slow=6.9,SNR=2.3							
KURK				pP	pP	00 56 34.8	+0.6
0.4nm,0.8s,baz=165,slow=6.6,SNR=3.5							

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*NEIC **16** 00:59:18.8, 36°.06N×21°.78E, h5km, MD3.8(ATH), After ATH.*
*ATH **16** 00:59:18.8, 36°.06N×21°.78E, h5km±2km, MD3.8/12*
*ISCJB **16** 00:59:22.2±0.8, 36°.25N±0°.04×21°.88E±0°.06, h10km, Error ellipse: s-maj=7.7km s-min=4.3km az=144.2*
*CSEM **16** 00:59:23.1±0.6, 36°.27N×21°.89E, h2km, ML3.6/6, Error ellipse: s-maj=13.4km s-min=8.3km az=50.0*
*THE **16** 00:59:26.7, 36°.48N×21°.84E, h0km±2km, ML3.6/6, Error ellipse: s-maj=3.6km s-min=1.6km az=235.0*
ISC 16 00:59:22.9±0.9, **36°.23N**±0°.04×**21°.96E**±0°.06, **h10**km, **n62**, σ1°**28**/92, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.69**	**345**	*e*PB	**Pg**	**00 59 34.7**	**-1.5**
PYL	**PYLOS**	**0.69**	**345**	P	**Pg**	**00 59 34.5**	**-1.7**
PYL				S	**Sg**	**00 59 42.1**	**-3.1**
PYL	**PYLOS**	**0.69**	**345**	*e*Pb	**Pg**	**00 59 34.7**	**-1.5**
PYL				S	**Sg**	**00 59 42.1**	**-3.1**
KYTH	**Kithira**	**0.87**	**86**	*e*PB	**Pg**	**00 59 38.4**	**-1.2**
KYTH	**Kithira**	**0.87**	**86**	*e*Pb	**Pg**	**00 59 38.4**	**-1.2**
VLI	**Veliai**	**0.92**	**58**	*e*PB	**Pg**	**00 59 40.4**	**-0.3**
VLI				*e*SB	**Sg**	**00 59 56.3**	**+3.6**
VLI	**Veliai**	**0.92**	**58**	*e*Pb	**Pg**	**00 59 40.4**	**-0.3**
VLI				*e*Sb	**Sg**	**00 59 56.3**	**+3.6**
ITM	**Ithomi**	**0.95**	**358**	*e*PN	**Pg**	**00 59 40.0**	**-1.1**
ITM				*e*SB	**Sb**	**00 59 55.1**	**+1.1**
ITM	**Ithomi**	**0.95**	**358**	P	**Pg**	**00 59 39.9**	**-1.2**
ITM				S	**Sg**	**00 59 51.0**	**-2.5**
ITM	**Ithomi**	**0.95**	**358**	P	**Pg**	**00 59 39.9**	**-1.2**
ITM				S	**Sg**	**00 59 51.0**	**-2.5**
ITM				*e*Sb	**Sb**	**00 59 55.1**	**+1.1**
VLX	**Vlachokerasia**	**1.19**	**16**	P	**Pn**	**00 59 44.3**	**-1.2**
VLX				S	**Sn**	**01 00 00.3**	**-1.4**
VLX	**Vlachokerasia**	**1.19**	**16**	P	**Pn**	**00 59 44.3**	**-1.2**
VLX				S	**Sn**	**01 00 00.3**	**-1.4**
GUR	**Goura**	**1.73**	**10**	P	**Pb**	**00 59 54.1**	**-0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUR				S	**Sn**	**01 00 14.4**	**-0.7**
GUR	**Goura**	**1.73**	**10**	P	**Pb**	**00 59 54.1**	**-0.6**
GUR				S	**Sn**	**01 00 14.4**	**-0.7**
KARN	**Karanos**	**1.79**	**117**	P	**Pn**	**00 59 53.0**	**-0.8**
KARN	**Karanos**	**1.79**	**117**	P	**Pn**	**00 59 53.0**	**-0.8**
RLS	**Riolos of Patr**	**1.87**	**348**	*e*PG	**Pb**	**00 59 56.3**	**-0.8**
RLS	**Riolos of Patr**	**1.87**	**348**	*e*Pg	**Pb**	**00 59 56.3**	**-0.8**
NAIG	**Nisos Aigina**	**1.95**	**38**	*e*PN	**Pb**	**00 59 58.1**	**-0.4**
NAIG	**Nisos Aigina**	**1.95**	**38**	*e*Pn	**Pb**	**00 59 58.1**	**-0.4**
LTK	**Loutraki**	**1.96**	**24**	P	**Pn**	**00 59 57.4**	**+1.2**
LTK				S	**Sn**	**01 00 22.3**	**+1.5**
LTK	**Loutraki**	**1.96**	**24**	P	**Pn**	**00 59 57.4**	**+1.2**
LTK				S	**Sn**	**01 00 22.3**	**+1.5**
VAM	**Vamos**	**2.00**	**114**	*e*PN	**Pn**	**00 59 56.5**	**-0.1**
VAM	**Vamos**	**2.00**	**114**	*e*Pn	**Pn**	**00 59 56.5**	**-0.1**
LAKA	**Lakka**	**2.00**	**0**	P	**Pb**	**00 59 58.5**	**-0.9**
LAKA				S	**Sn**	**01 00 23.5**	**+1.6**
LAKA	**Lakka**	**2.00**	**0**	P	**Pb**	**00 59 58.5**	**-0.9**
LAKA				S	**Sn**	**01 00 23.5**	**+1.6**
EFP	**Efpalio**	**2.19**	**359**	*e*PN	**Pb**	**01 00 01.2**	**-1.4**
EFP	**Efpalio**	**2.19**	**359**	*e*Pn	**Pb**	**01 00 01.2**	**-1.4**
VLS	**Valsamata**	**2.23**	**331**	P	**Pn**	**00 59 59.2**	**-0.7**
VLS				S	**Sn**	**01 00 27.4**	**-0.1**
VLS	**Valsamata**	**2.23**	**331**	P	**Pn**	**00 59 59.2**	**-0.7**
VLS				S	**Sn**	**01 00 27.4**	**-0.1**
PTL	**Penteli**	**2.37**	**39**	*e*PN	**Pn**	**01 00 03.1**	**+1.3**
PTL	**Penteli**	**2.37**	**39**	*e*Pn	**Pn**	**01 00 03.1**	**+1.3**
LKR	**Lokris**	**2.55**	**19**	*e*PB	**Pn**	**01 00 05.5**	**+1.2**
LKR	**Lokris**	**2.55**	**19**	P	**Pb**	**01 00 06.6**	**-2.2**
LKR	**Lokris**	**2.55**	**19**	*e*Pb	**Pn**	**01 00 05.5**	**+1.2**
LKR	**Lokris**	**2.55**	**19**	P	**Pb**	**01 00 06.6**	**-2.2**
ATAL	**Atalanti**	**2.60**	**19**	P	**Pb**	**01 00 07.5**	**-2.0**
ATAL	**Atalanti**	**2.60**	**19**	P	**Pb**	**01 00 07.5**	**-2.0**
EVR	**Evrytania**	**2.68**	**357**	*e*PB	**Pn**	**01 00 06.7**	**+0.6**
EVR	**Evrytania**	**2.68**	**357**	*e*Pb	**Pn**	**01 00 06.7**	**+0.6**
AGG	**Agios Georgios**	**2.80**	**6**	P	**Pn**	**01 00 09.8**	**+2.1**
AGG				S	**Sn**	**01 00 41.3**	**-0.3**
AGG	**Agios Georgios**	**2.80**	**6**	P	**Pn**	**01 00 09.8**	**+2.1**
AGG				S	**Sn**	**01 00 41.3**	**-0.3**
LAST	**Lasithi**	**3.05**	**109**	P	**Pb**	**01 00 17.6**	**+0.3**
LAST				S	**Sg**	**01 00 59.9**	**-1.1**
LAST	**Lasithi**	**3.05**	**109**	P	**Pb**	**01 00 17.6**	**+0.3**
LAST				S	**Sg**	**01 00 59.9**	**-1.1**
XOR	**Xorichti**	**3.28**	**17**	P	**Pn**	**01 00 16.6**	**+2.3**
XOR				S	**Sn**	**01 00 53.7**	**+0.4**
XOR	**Xorichti**	**3.28**	**17**	P	**Pn**	**01 00 16.6**	**+2.3**
XOR				S	**Sn**	**01 00 53.7**	**+0.4**
AOS	**Alonnisos**	**3.31**	**27**	P	**Pn**	**01 00 17.3**	**+2.7**
AOS	**Alonnisos**	**3.31**	**27**	P	**Pn**	**01 00 17.3**	**+2.7**
THL	**Klokotos Trika**	**3.33**	**1**	*e*PN	**Pn**	**01 00 16.3**	**+1.3**
THL	**Klokotos Trika**	**3.33**	**1**	P	**Pn**	**01 00 16.6**	**+1.6**
THL				S	**Sn**	**01 00 53.6**	**-1.0**
THL	**Klokotos Trika**	**3.33**	**1**	*e*Pn	**Pn**	**01 00 16.3**	**+1.3**
THL	**Klokotos Trika**	**3.33**	**1**	P	**Pn**	**01 00 16.6**	**+1.6**
THL				S	**Sn**	**01 00 53.6**	**-1.0**
PAIG	**Paliouri**	**3.93**	**20**	P	**Pn**	**01 00 25.4**	**+2.1**
PAIG	**Paliouri**	**3.93**	**20**	P	**Pn**	**01 00 25.4**	**+2.1**
FNA	**Florina**	**4.57**	**354**	P	**Pn**	**01 00 32.9**	**+0.9**
FNA				S	**Sn**	**01 01 26.0**	**+0.9**
FNA	**Florina**	**4.57**	**354**	P	**Pn**	**01 00 32.9**	**+0.9**
FNA				S	**Sn**	**01 01 26.0**	**+0.9**
SOH	**Sokhos**	**4.71**	**13**	P	**Pn**	**01 00 35.6**	**+1.6**
SOH	**Sokhos**	**4.71**	**13**	P	**Pn**	**01 00 35.6**	**+1.6**
BIA	**Bitola**	**4.81**	**354**	*e*Pn	**Pn**	**01 00 40.7**	**+5.4**
BIA				*e*Sg	**Sn**	**01 01 31.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.11	66	P	P	01 19 21.9	+1.6
	comp=E,1.7nm,0.6s,mb3.6,baz=244,slow=8.9,SNR=7.1						
MK31	Makanchi Array	22.68	320	P	P	01 19 38.0	+1.0
MKAR	Makanchi Array	22.68	320	P	P	01 19 38.6	+1.6
	comp=E,0.9nm,0.7s,mb3.3,baz=121,slow=12,SNR=11						
AAK	Ala-Archa	25.81	305	eP	P	01 20 06.2	-0.6
	comp=E,2.1nm,0.6s,mb3.8						
ZAA0	Zalesovo Array	26.53	335	eP	P	01 20 13.3	+0.1
ZALV	Zalesovo Beam	26.53	335	P	P	01 20 14.0	+0.8
	comp=E,1.4nm,0.5s,mb3.7,baz=138,slow=9.0,SNR=6.5						
ZALV	Zalesovo Beam	26.53	335	P	P	01 20 14.0	+0.8
KURK	Kurchatov	26.97	324	P	P	01 20 17.6	+0.4
	comp=E,0.6nm,0.4s,mb3.4,baz=126,slow=9.5,SNR=7.0						
AKASG	Malin Array Be	57.04	313	P	P	01 24 20.6	-0.9
	comp=E,0.1nm,0.3s,mb3.3,baz=80,slow=4.6,SNR=4.1						
AKBB	Malin Array Si	57.04	313	eP	P	01 24 20.8	-0.7
FINES	FINESS Array B	57.31	326	P	P	01 24 23.2	-0.1
	comp=E,1.6nm,0.9s,mb4.1,baz=72,slow=15,SNR=3.2						
ASAR	Alice Springs	61.73	148	P	P	01 24 53.3	-0.8
	comp=E,0.3nm,0.5s,mb3.7,baz=338,slow=7.8,SNR=4.8						
NOA	NORSAR Array B	64.42	327	P	P	01 25 10.2	-1.3
	comp=E,0.4nm,0.6s,mb3.6,baz=74,slow=7.0,SNR=3.4						
CLL	Collm	66.74	317	eP	P	01 25 26.0	-0.8
STKA	Stephens Creek	72.26	147	P	P	01 26 00.3	-0.7
	comp=E,1.7nm,0.8s,mb4.0,baz=268,slow=5.7,SNR=2.8						
INK	Inuvik	72.34	19	P	P	01 26 01.5	+0.4
	comp=E,0.9nm,0.7s,mb3.8,baz=304,slow=3.6,SNR=2.5						
INK	Inuvik	72.34	19	eP	P	01 26 00.7	-0.4
	comp=E,1.5nm,0.9s,mb3.9						
YKA	Yellowknife Ar	81.86	17	P	P	01 26 54.9	+0.2
	comp=E,0.3nm,0.6s,mb3.4,baz=330,slow=4.9,SNR=3.9						

ISCJB 16 01:15:31.7±0.6, 31°.75N±0°.06×104°.30E±0°.10, h10^{km}, mb3.9/13, MS3.0/4, Error ellipse: s-maj=12.2km s-min=8.1km az=165.8
IDC 16 01:15:31.1±1.2, 31°.61N×104°.26E, h0^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.8/27, mbtmp3.8/12, ML3.6/1, MS3.1/4, Ms1 3.2/4, ms1mx2.8/32, Error ellipse: s-maj=32.5km s-min=21.4km az=34.0
NEIC 16 01:15:33.1±0.6, 31°.64N×104°.17E, h10^{km}, mb4.1/3, Error ellipse: s-maj=17.1km s-min=9.3km az=210.0
BJI 16 01:15:33.9, 31°.59N×104°.25E, h17^{km}, mB4.4/1, mb4.3/2, ML4.0/4, Ms3.8/2, Ms7 3.6/2
ISC 16 01:15:33.3±0.6, 31°.66N±0°.06×104°.24E±0°.09, h10^{km}, n30, σ0°.85/29, mb3.9/13, MS3.0/4, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.42	356	Pg	Pg	01 16 57.1	-1.0
LZH				Sn	Sn	01 17 39.8	+7.8
LZH				Sg	Sg	01 17 55.8	+0.4
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,280nm,0.8s						
LZH				LR	LR		
	comp=E,610nm,5.5s						
LZH				LR	LR		
	comp=Z,750nm,5.8s						
ENH	Enshi	4.71	106	ePn	Pn	01 16 46.9	+2.4
SONM	Songino Array	16.23	5	Pn	Pn	01 19 22.3	+0.9
	comp=Z,0.2nm,0.3s,baz=168,slow=7.4,SNR=2.5						
KSRS	Korea Array	20.32	67	P	P	01 20 09.7	+0.2
	comp=Z,2.0nm,0.6s,baz=254,slow=11,SNR=5.2						
MK31	Makanchi Array	22.64	318	eP	P	01 20 34.8	+0.5
MKAR	Makanchi Array	22.64	318	P	P	01 20 35.1	+0.8
	comp=Z,0.8nm,0.6s,mb3.4,baz=122,slow=12,SNR=5.1						
MKAR				LR	LR	01 30 58.1	
	comp=Z,44nm,18.2s,MS2.9,baz=125,slow=41						
AAK	Ala-Archa	25.99	303	LR	LR	01 33 52.1	
	comp=Z,48nm,19.8s,MS3.0,baz=188,slow=42						
ZALV	Zalesovo Beam	26.27	334	P	P	01 21 08.8	+0.2
	comp=Z,1.2nm,0.5s,mb3.7,baz=133,slow=13,SNR=4.2						
AML	Almayashu	26.44	302	eP	P	01 21 11.2	+0.9
	comp=Z,1.7nm,0.7s,mb3.7						
KURK	Kurchatov	26.87	323	P	P	01 21 14.2	+0.1
	comp=Z,0.3nm,0.3s,mb3.3,baz=129,slow=9.3,SNR=3.9						
KURK	Kurchatov	26.87	323	eP	P	01 21 14.0	-0.1
	comp=Z,7.1nm,1.5s,mb4.0						
BVAR	Borovoye Array	32.43	321	LR	LR	01 35 19.2	
	comp=Z,39nm,20.1s,MS3.1,baz=194,slow=37						
PETK	Petropavlovsk-	43.71	45	P	P	01 23 37.8	-0.6
	comp=Z,0.8nm,0.4s,mb3.8,baz=348,slow=14,SNR=4.4						
ONI	Oni	48.73	301	P	P	01 24 19.9	+1.8
ONI				S	pP	01 24 21.2	0.0
BRTR	Keskin Array B	56.57	299	P	P	01 25 15.8	-0.3
	comp=Z,0.5nm,0.8s,mb3.6,baz=78,slow=9.2,SNR=3.8						
ARCES	ARCESS Array B	56.80	336	P	P	01 25 16.5	-0.7
	comp=Z,3.0nm,1.0s,mb4.3,baz=92,slow=6.6,SNR=3.5						
ARCES	ARCESS Array B	56.80	336	P	P	01 25 16.5	-0.8
FINES	FINESS Array B	57.17	326	P	P	01 25 19.4	-0.6
	comp=Z,1.1nm,0.7s,mb4.0,baz=69,slow=10,SNR=6.1						
FINES	FINESS Array B	57.17	326	P	P	01 25 19.4	-0.6
ASAR	Alice Springs	61.91	149	P	P	01 25 52.5	-0.7
	comp=Z,0.4nm,0.5s,mb3.9,baz=344,slow=6.4,SNR=5.0						
NOA	NORSAR Array B	64.25	327	LR	LR	01 56 36.4	
	comp=Z,12nm,18.3s,MS3.1,baz=80,slow=38						
CDF	Champ du Feu	71.30	316	eP	P	01 26 52.4	-0.5
INK	Inuvik	71.59	19	P	P	01 26 53.3	-1.0
	comp=Z,1.5nm,0.8s,mb4.0,baz=348,slow=11,SNR=3.2						
LPG	La Plagne	72.95	313	eP	P	01 27 03.0	+0.1
	comp=Z,3.1nm,0.5s,mb4.2						
LPG	La Plagne	72.95	313	eP	P	01 27 03.0	+0.1
	comp=Z,1.5nm,0.4s,mb4.3						
LPL	La Plagne	72.96	313	eP	P	01 27 02.8	-0.1
	comp=Z,3.7nm,0.6s,mb4.2						
LPL	La Plagne	72.96	313	eP	P	01 27 02.8	-0.1
	comp=Z,1.9nm,0.6s,mb4.2						
SMF	Signal de Mont	74.18	315	eP	P	01 27 09.0	-1.1
YKA	Yellowknife Ar	81.12	17	P	P	01 27 47.8	-0.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=326,slow=5.1,SNR=6.5						
YKA	Yellowknife Ar	81.12	17	P	P	01 27 47.8	-0.7

IDC 16 01:16:20.1±0.9, 31°.10N×103°.73E, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx3.9/26, mbtmp4.0/10, ML3.4/1, Error ellipse: s-maj=32.9km s-min=17.8km az=55.0
NEIC 16 01:16:21.9±0.5, 31°.12N×103°.64E, h10^{km}, mb4.0/7, Error ellipse: s-maj=15.0km s-min=8.9km az=222.0
ISCJB 16 01:16:22.3±0.7, 31°.13N±0°.05×103°.75E±0°.09, h27^{km}±6^{km}, mb4.0/14, Error ellipse: s-maj=12.6km s-min=8.0km az=174.1
BJI 16 01:16:22.5, 31°.22N×103°.87E, h7^{km}, mB4.6/5, mb4.3/8, ML3.8/11, Ms4.1/4, Ms7 3.8/3
ISC 16 01:16:21.6±0.9, 31°.20N±0°.04×103°.90E±0°.07, h9^{km}±6^{km}, n30, σ0°.97/34, mb4.0/14, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.31	203	Pg	Pg	01 16 27.5	-0.2
CD2				Sg	Sg	01 16 32.8	+0.9
CD2				smax			
	comp=N,63μm,0.6s						
CD2	Chengdu	0.31	203	Pg	Pg	01 16 27.6	-0.1
CD2				Sg	Sg	01 16 32.9	+1.0
CD2				smax			
	comp=N,66μm,0.8s						
ENH	Enshi	4.90	99	ePn	Pn	01 17 40.8	+5.4
XAN	Xi'an	5.10	55	Pg	Pg	01 17 55.8	-3.4
XAN				Sg	Sg	01 19 03.8	-1.5
XAN				smax			
	comp=N,220nm,0.9s						
XAN				smax			
	comp=E,130nm,0.9s						
KMI	Kunming	6.14	190	Pn	Pn	01 17 51.5	-1.0
KMI				Sn	Sn	01 19 02.3	-0.5
KMI				smax			
	comp=N,56nm,1.4s						
KMI				smax			
	comp=E,65nm,1.4s						
KMI				LR	LR		
	comp=N,530nm,8.0s						
KMI				LR	LR		
	comp=E,1μm,7.6s						
KMI				LR	LR		
	comp=Z,410nm,12.1s						
SONM	Songino Array	16.73	6	Pn	Pn	01 20 17.1	+1.1
	comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=6.7						
ULN	Ulaanbaatar	16.82	7	eP	Pn	01 20 18.1	+0.8
	comp=Z,2.8nm,0.6s						
KSRS	Korea Array	20.77	66	P	P	01 21 04.8	+2.0
	comp=Z,5.8nm,0.6s,baz=267,slow=11,SNR=13						
CN2	Changchun	21.15	47	eP	P	01 21 08.8	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.5						
MK31	Makanchi Array	22.79	319	eP	P	01 21 24.9	+0.5
MKAR	Makanchi Array	22.79	319	P	P	01 21 24.9	+0.5
	comp=Z,2.7nm,0.7s,mb3.8,baz=124,slow=11,SNR=8.3						
UCH	Uchtor	25.88	303	eP	P	01 21 55.0	+1.4
	comp=Z,4.5nm,1.2s,mb3.9						
AAK	Ala-Archa	26.00	304	eP	P	01 21 53.8	-1.0
	comp=Z,2.6nm,0.9s,mb3.8						
AML	Almayashu	26.44	303	eP	P	01 21 58.0	-0.8
	comp=Z,1.8nm,0.8s,mb3.6						
ZAA0	Zalesovo Array	26.56	334	eP	P	01 21 59.4	-0.3
ZALV	Zalesovo Beam	26.56	334	P	P	01 21 60.0	+0.3
	comp=Z,1.3nm,0.7s,mb3.6,baz=131,slow=8.1,SNR=5.5						
ZALV	Zalesovo Beam	26.56	334	P	P	01 21 60.0	+0.3
KURK	Kurchatov	27.07	323	P	P	01 22 04.2	-0.1
	comp=Z,1.7nm,0.7s,mb3.7,baz=130,slow=9.2,SNR=8.7						
KURK	Kurchatov	27.07	323	eP	P	01 22 04.3	0.0
	comp=Z,7.2nm,1.4s,mb4.0						
ARU	Arti	40.25	322	eP	P	01 23 58.0	-0.5
	comp=Z,2.3nm,0.6s,mb4.1						
BRTR	Keskin Array B	56.54	300	P	P	01 26 03.3	-1.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=108,slow=4.7,SNR=2.6						
WRAB	Tennant Creek	58.65	146	eP	P	01 26 19.5	+0.2
	comp=Z,20nm,0.9s						
ASAR	Alice Springs	61.66	149	P	P	01 26 40.1	+0.2
	comp=Z,2.1nm,0.8s,mb4.3,baz=333,slow=5.9,SNR=11						
INK	Inuvik	72.13	19	P	P	01 27 46.5	+0.4
	comp=Z,2.2nm,0.8s,mb4.1,baz=17,slow=5.6,SNR=3.6						
STKA	Stephens Creek	72.18	147	P	P	01 27 46.8	0.0
	comp=Z,2.9nm,0.5s,mb4.5,baz=331,slow=16,SNR=7.6						
LPG	La Plagne	73.06	313	eP	P	01 27 50.4	-1.6
	comp=Z,9.2nm,1.0s,mb4.5						
LPG	La Plagne	73.06	313	eP	P	01 27 50.4	-1.6
	comp=Z,4.6nm,1.0s,mb4.4						
LPL	La Plagne	73.06	313	eP	P	01 27 51.0	-1.0
YKA	Yellowknife Ar	81.66	17	P	P	01 28 39.8	0.0
	comp=Z,0.6nm,0.7s,mb3.7,baz=331,slow=5.4,SNR=5.1						
YKA	Yellowknife Ar	81.66	17	P	P	01 28 39.8	0.0

NEIC 16 01:17:36.9, 67°.63N×166°.81W, h0^{km}, ML3.5(AEIC), After AEIC.
ISCJB 16 01:17:37.5±0.4, 67°.66N±0°.04×166°.6W±0°.1, h10^{km}, mb3.7/14, Error ellipse: s-maj=6.5km s-min=5.8km az=37.5
IDC 16 01:17:39.1±1.0, 67°.86N×166°.63W, h0^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.6/29, mbtmp3.6/13, ML3.5/1, Error ellipse: s-maj=29.6km s-min=15.6km az=15.0
ISC 16 01:17:39.6±0.4, 67°.66N±0°.04×166°.7W±0°.1, h10^{km}, n25, σ1°.12/30, mb3.7/14, Bering Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNA	Tin City	2.17	194	P	Pn	01 18 13.4	-2.2
TNA				S	Sn	01 18 42.6	+0.1
GAMB	Gambell	4.42	210	P	Pn	01 18 44.6	-1.9
GAMB				S	Sn	01 19 38.3	+0.4
GCSA	Galena City Sc	4.92	122	P	Pn	01 18 53.5	0.0
GCSA				S	Sn	01 19 52.6	+2.2
IM3	Indian Mountai	5.37	102	P	Pn	01 18 58.7	-0.9
COLD	Coldfoot	6.35	86	P	Pn	01 19 12.8	-0.2
TT01	Tatalina	6.53	132	P	Pn	01 19 15.1	-0.4
PPLA	Purkeypile	7.71	121	P	Pn	01 19 31.3	-0.5
SVW2	Sparrevohn	8.14	139	P	Pn	01 19 37.0	-0.5
BM3	Burnt Mountain	8.44	81	P	Pn	01 19 40.8	-0.8
INK	Inuvik	12.36	72	Pn	Pn	01 20 33.7	-1.6
	0.2nm,0.3s,baz=296,slow=2.8,SNR=5.6						
INK				Sn	Sn	01 22 44.6	-8.3
	0.1nm,0.3s,baz=107,slow=17,SNR=2.5						
INK	Inuvik	12.36	72	Pn	Pn	01 20 33.7	-1.6
INK				Sn	Sn	01 22 44.6	-8.3
YKA	Yellowknife Ar	21.95	78	P	P	01 22 32.4	-0.4
	0.5nm,0.7s,mb3.0,baz=303,slow=10.0,SNR=7.0						
PETK	Petropavlovsk-	22.40	247	P	P	01 22 38.9	+1.2
	1.3nm,0.7s,mb3.5,baz=70,slow=17,SNR=2.8						
RES	Resolute Bay	22.69	41	P	P	01 22 38.7	-2.0
	0.5nm,0.8s,mb3.0,baz=276,slow=5.2,SNR=1.0						
ULM	Lac du Bonnet	37.89	81	P	P	01 24 57.6	+1.4
	0.8nm,0.4s,mb3.8,baz=0.0,slow=4.0,SNR=2.0						
PDAR	Pinedale Array	38.92	100	P	P	01 25 07.0	+2.1
	0.4nm,0.6s,mb3.3,baz=323,slow=10,SNR=4.8						
NVAR	Mina Array Bea	39.52	113	P	P	01 25 12.2	+2.1
	0.5nm,0.5s,mb3.5,baz=321,slow=8.0,SNR=4.6						
JOF	Joensuu	49.07	349	eP	P	01 26 26.4	+0.3
	1.7nm,0.6s,mb4.2						
KAF	Kangasniemi	50.18	352	ep	P	01 26 34.2	-0.4
	0.9nm,0.4s,mb4.2						
FINES	FINESS Array B	50.86	352	P	P	01 26 39.8	+0.1
	1.1nm,0.5s,mb4.0,baz=19,slow=8.1,SNR=5.7						
KURK	Kurchatov	52.29	313	P	P	01 26 51.4	+0.8
	1.3nm,0.7s,mb4.0,baz=30,slow=7.2,SNR=5.7						
BVAR	Borovoye Array	52.35	320	P	P	01 26 51.2	+0.2
	0.5nm,0.4s,mb3.8,baz=22,slow=8.0,SNR=3.4						
TXAR	Lajitas Array	52.99	103	P	P	01 26 57.2	+1.1
	0.6nm,0.8s,mb3.6,baz=333,slow=7.1,SNR=4.6						
MKAR	Makanchi Array	54.76	308	P	P	01 27 08.5	-0.2
	0.3nm,0.6s,mb3.5,baz=47,slow=9.2,SNR=3.6						
AKASG	Malin Array Be	61.36	349	P	P	01 27 55.5	+0.6
	0.3nm,0.4s,mb3.8,baz=8.0,slow=6.3,SNR=4.3						

CSEM 16 01:23:09.1, 32°.52N×16°.67W, h0^{km}, mb4.0/3, After MDD
MDD 16 01:23:09.2±0.6, 32°.54N×16°.47W, h0^{km}, mb4.0/3, 4C, Error ellipse: s-maj=5.9km s-min=5.0km az=108.0, PRIMO, Madeira Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUL	Funchal	0.37	284	iP	Pg	01 23 16.6	+0.3
FUL				eS	Sg	01 23 20.1	-1.0
FUL	Funchal	0.37	284	A		01 23 21.2	
	938nm,0.3s						
FUL	Funchal	0.37	284	⇑P	Pg	01 23 16.6	+0.3
FUL				S	Sg	01 23 20.1	-1.0
FUL	Funchal	0.37	284	⇑P	Pg	01 23 16.6	+0.3
FUL				S	Sg	01 23 20.1	-1.0
PMPS	Porto Santo	0.53	13	iP	Pg	01 23 19.4	+0.1
PMPS				eS	Sg	01 23 24.9	-1.2
PMPS	Porto Santo	0.53	13	A		01 23 29.8	
	158nm,0.2s						
PMPS	Porto Santo	0.53	13	⇑P	Pg	01 23 19.4	+0.1
PMPS				S	Sg	01 23 24.9	-1.2
	469nm,0.3s						
PMPS	Porto Santo	0.53	13	⇑P	Pg	01 23 19.4	+0.1
PMPS				S	Sg	01 23 24.9	-1.2
	469nm,0.3s						
EBAJ	Bajamar	3.99	178	P	Pn	01 24 10.3	-1.3
	0.5nm,0.1s,SNR=7.9						
EBAJ	Bajamar	3.99	178	P	Pn	01 24 10.3	-1.3
	0.5nm,0.1s,SNR=7.9						
EBAJ	Bajamar	3.99	178	P	Pn	01 24 10.3	-1.3
	0.5nm,0.1s,SNR=7.9						
EHIG	Higuera	4.14	196	P	Pn	01 24 11.3	-2.3
	3.2nm,0.2s,SNR=7.9						
EHIG				S	Sn	01 24 57.3	-5.3
	23nm,0.5s,SNR=7.9						
EHIG	Higuera	4.14	196	P	Pn	01 24 11.3	-2.3
	3.2nm,0.2s,SNR=7.9						
EHIG				S	Sn	01 24 57.3	-5.3
	23nm,0.5s,SNR=7.9						
EHIG	Higuera	4.14	196	P	Pn	01 24 11.3	-2.3
	3.2nm,0.2s,SNR=7.9						
EHIG				S	Sn	01 24 57.3	-5.3
	23nm,0.5s,SNR=7.9						
CCAN	Las Canadas	4.31	182	P	Pn	01 24 14.6	-1.3
	0.5nm,0.1s,SNR=7.9						
CCAN				S	Sn	01 25 03.4	-3.5
	2.8nm,0.6s,SNR=7.9						
CCAN	Las Canadas	4.31	182	P	Pn	01 24 14.6	-1.3
	0.5nm,0.1s,SNR=7.9						
CCAN				S	Sn	01 25 03.4	-3.5
	2.8nm,0.6s,SNR=7.9						
CCAN	Las Canadas	4.31	182	P	Pn	01 24 14.6	-1.3
	0.5nm,0.1s,SNR=7.9						
CCAN				S	Sn	01 25 03.4	-3.5
	2.8nm,0.6s,SNR=7.9						
EOSO	Osorio	4.53	170	P	Pn	01 24 19.1	+0.1
	1.6nm,0.1s,SNR=7.9						
EOSO	Osorio	4.53	170	P	Pn	01 24 19.1	+0.1
	1.6nm,0.1s,SNR=7.9						
EOSO	Osorio	4.53	170	P	Pn	01 24 19.1	+0.2
	1.6nm,0.1s,SNR=7.9						
CFTV	Fuerteventura	4.60	153	P	Pn	01 24 19.3	-0.7
	0.7nm,0.2s,SNR=7.9						
CFTV				S	Sn	01 25 10.5	-3.7
	0.4nm,0.4s,SNR=7.9						
CFTV	Fuerteventura	4.60	153	P	Pn	01 24 19.3	-0.7
	0.7nm,0.2s,SNR=7.9						
CFTV				S	Sn	01 25 10.5	-3.7
	0.4nm,0.4s,SNR=7.9						
CFTV	Fuerteventura	4.60	153	P	Pn	01 24 19.3	-0.7
	0.7nm,0.2s,SNR=7.9						
CFTV				S	Sn	01 25 10.5	-3.7
	0.4nm,0.4s,SNR=7.9						
CHIE	El Hierro	4.97	195	P	Pn	01 24 22.4	-2.6
	1.1nm,0.2s,SNR=7.9						
CHIE				S	Sn	01 25 17.5	-5.7
	1.0nm,0.3s,SNR=7.9						
CHIE	El Hierro	4.97	195	P	Pn	01 24 22.4	-2.6
	1.1nm,0.2s,SNR=7.9						
CHIE				S	Sn	01 25 17.5	-5.7
	1.0nm,0.3s,SNR=7.9						
CHIE	El Hierro	4.97	195	P	Pn	01 24 22.4	-2.6
	1.1nm,0.2s,SNR=7.9						
CHIE				S	Sn	01 25 17.5	-5.7
	1.0nm,0.3s,SNR=7.9						

NEIC 16 01:31:42.8, 38°.08N×22°.17E, h58^{km}, MD3.3(ATH), After ATH.
ATH 16 01:31:42.8, 38°.08N×22°.17E, h58^{km}±2^{km}, MD3.3/9
ISCJB 16 01:31:43.4±0.5, 38°.10N±0°.03×22°.17E±0°.04, h57^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=4.5km az=21.5
THE 16 01:31:43.9, 38°.13N×22°.13E, h52^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.1km s-min=0.6km az=194.0
CSEM 16 01:31:44.0±0.1, 38°.08N×22°.16E, h47^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.9km s-min=2.6km az=84.0
ISC 16 01:31:43.9±0.5, 38°.10N±0°.03×22°.16E±0°.04, h55^{km}±6^{km}, n56, σ0°.64/84, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.20	314	P	Pn	01 31 52.1	-0.7
LAKA				S	Sn	01 31 58.2	-1.0
LAKA	Lakka	0.20	314	P	Pn	01 31 52.1	-0.7
LAKA				S	Sn	01 31 58.2	-1.0
GUR	Goura	0.21	139	eP	Pn	01 31 52.3	-0.6
GUR				eS	Sn	01 31 59.4	+0.1
GUR	Goura	0.21	139	P	Pn	01 31 52.2	-0.7
GUR	Goura	0.21	139	eP	Pn	01 31 52.3	-0.6
GUR				eS	Sn	01 31 59.4	+0.1
UPR	University Cam	0.35	302	eP	Pn	01 31 53.4	-0.5
UPR				eS	Sn	01 32 02.3	+1.1
UPR	University Cam	0.35	302	eP	Pn	01 31 53.4	-0.5
UPR				eS	Sn	01 32 02.3	+1.1
EFP	Efpalio	0.39	328	eP	Pn	01 31 54.0	-0.3
EFP				eS	Sn	01 32 02.4	+0.6
EFP	Efpalio	0.39	328	eP	Pn	01 31 54.0	-0.3
EFP				eS	Sn	01 32 02.4	+0.6
RLS	Riolos of Patr	0.55	266	eP	Pn	01 31 55.2	-0.8
RLS				eS	Sn	01 32 05.1	+0.2
RLS	Riolos of Patr	0.55	266	eP	Pn	01 31 55.2	-0.8
RLS				eS	Sn	01 32 05.1	+0.2
LTK	Loutraki	0.64	97	eP	Pn	01 31 57.0	-0.1
LTK				eS	Sn	01 32 06.1	-0.6
LTK	Loutraki	0.64	97	P	Pn	01 31 56.9	-0.2
LTK	Loutraki	0.64	97	eP	Pn	01 31 57.0	-0.1
LTK				eS	Sn	01 32 06.1	-0.6
VLX	Vlachokerasia	0.75	167	eP	Pn	01 31 58.2	-0.2
VLX	Vlachokerasia	0.75	167	P	Pn	01 31 58.4	0.0
VLX	Vlachokerasia	0.75	167	P	Pn	01 31 58.4	0.0
LKR	Lokris	0.86	50	eP	Pn	01 31 59.9	0.0
LKR	Lokris	0.86	50	P	Pn	01 31 59.8	-0.1
LKR				S	Sn	01 32 12.0	+0.4
LKR	Lokris	0.86	50	eP	Pn	01 31 59.9	0.0
LKR				S	Sn	01 32 12.0	+0.4
EVR	Evrytania	0.86	341	eP	Pn	01 32 01.1	+1.2
EVR	Evrytania	0.86	341	eP	Pn	01 32 01.1	+1.2
ATAL	Atalanti	0.90	48	P	Pn	01 32 00.5	+0.1
ATAL				S	Sn	01 32 12.8	+0.3
ATAL	Atalanti	0.90	48	P	Pn	01 32 00.5	+0.1
ATAL				S	Sn	01 32 12.8	+0.3
AGG	Agios Georgios	0.93	8	P	Pn	01 32 00.9	+0.1
AGG				S	Sn	01 32 13.1	-0.2
AGG	Agios Georgios	0.93	8	P	Pn	01 32 00.9	+0.1
AGG				S	Sn	01 32 13.1	-0.2
ITM	Ithomi	0.94	192	eP	Pn	01 32 01.3	+0.4
ITM	Ithomi	0.94	192	P	Pn	01 32 01.1	+0.2
ITM				S	Sn	01 32 14.4	+1.0
ITM	Ithomi	0.94	192	P	Pn	01 32 01.1	+0.2
ITM				S	Sn	01 32 14.4	+1.0
NAIG	Nisos Aigina	1.10	108	eP	Pn	01 32 03.3	+0.2
NAIG	Nisos Aigina	1.10	108	eP	Pn	01 32 03.3	+0.2
ATH	Athens Observa	1.23	95	eP	Pn	01 32 04.8	0.0
ATH	Athens Observa	1.23	95	eP	Pn	01 32 04.8	0.0
VLS	Valsamata	1.24	274	eP	Pn	01 32 04.6	-0.4
VLS	Valsamata	1.24	274	P	Pn	01 32 04.2	-0.8
VLS				S	Sn	01 32 21.3	+0.6
VLS	Valsamata	1.24	274	eP	Pn	01 32 04.6	-0.4
VLS				S	Sn	01 32 21.3	+0.6
PYL	PYLOS	1.25	196	eP	Pn	01 32 04.9	-0.1
PYL	PYLOS	1.25	196	P	Pn	01 32 04.8	-0.2
PYL				S	Sn	01 32 21.2	+0.4
PYL	PYLOS	1.25	196	eP	Pn	01 32 04.9	-0.1
PYL				S	Sn	01 32 21.2	+0.4
VLY	Voula,Athens	1.31	100	eP	Pn	01 32 05.7	-0.2
VLY	Voula,Athens	1.31	100	eP	Pn	01 32 05.7	-0.2
NEO	Neokhori	1.46	34	eP	Pn	01 32 08.1	+0.2
NEO	Neokhori	1.46	34	eP	Pn	01 32 08.1	+0.2
THL	Klokotos Trika	1.47	355	eP	Pn	01 32 08.3	+0.3
THL	Klokotos Trika	1.47	355	P	Pn	01 32 08.2	+0.2
THL				S	Sn	01 32 26.2	0.0
THL	Klokotos Trika	1.47	355	P	Pn	01 32 08.2	+0.2
THL				S	Sn	01 32 26.2	0.0
VLI	Veliai	1.51	156	eP	Pn	01 32 07.5	-1.1
VLI	Veliai	1.51	156	eP	Pn	01 32 07.5	-1.1
KYTH	Kithira	1.94	159	eP	Pn	01 32 14.9	+0.4
KYTH	Kithira	1.94	159	eP	Pn	01 32 14.9	+0.4
KEK	Kerkira	2.45	312	P	Pn	01 32 21.2	-0.2
KEK	Kerkira	2.45	312	P	Pn	01 32 21.2	-0.2
LIA	Limnos Island	2.96	52	P	Pn	01 32 29.4	+1.0
LIA	Limnos Island	2.96	52	P	Pn	01 32 29.4	+1.0
STON	Ston	5.86	326	ePn	Pn	01 33 05.2	-2.9
STON				Sn	Sn	01 34 06.7	-7.1
STON	Ston	5.86	326	ePn	Pn	01 33 05.2	-2.9
STON				Sn	Sn	01 34 06.7	-7.1

IDC 16 01:45:42.6±1.1, 16°.22S×172°.68W, h0^{km}, mb4.1/6, mb1 4.4/6, mb1mx4.1/16, mbtmp4.2/6, Error ellipse: s-maj=62.0km s-min=22.8km az=135.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.46	21	Pn	Pn	01 46 19.0	-5.0
	23nm,0.3s,baz=54,slow=5.4,SNR=17						
AFI				Sn	Sn	01 46 45.8	-8.9
	148nm,0.3s,baz=160,slow=21,SNR=12						
AFI				T		01 48 59.5	
	10.0nm,0.3s,baz=302,slow=21,SNR=4.5						
URZ	Urewera	23.72	200	P	P	01 50 56.6	+0.1
	9.5nm,0.8s,baz=31,slow=12,SNR=5.5						
STKA	Stephens Creek	44.24	241	P	P	01 53 54.0	+0.2
	4.8nm,0.9s,baz=58,slow=9.1,SNR=3.6						
ASAR	Alice Springs	50.52	253	P	P	01 54 42.0	-0.9
	13nm,0.7s,baz=86,slow=8.4,SNR=94						
NVAR	Mina Array Bea	74.47	41	P	P	01 57 23.1	+0.2
	0.7nm,0.7s,baz=232,slow=10,SNR=3.8						
PDAR	Pinedale Array	82.41	42	P	P	01 58 06.5	-0.2
	0.4nm,0.7s,baz=267,slow=3.5,SNR=4.2						
YKA	Yellowknife Ar	90.57	23	P	P	01 58 46.1	-0.2
	0.2nm,0.8s,baz=238,slow=3.5,SNR=3.8						
BRTR	Keskin Array B	147.23	321	PKPbc	PKPab	02 05 30.0	+0.1
	0.6nm,0.7s,baz=22,slow=5.4,SNR=3.2						

BJI 16 01:48:26.3, 31°.01N×103°.36E, h14^{km}, ML3.6/10, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.36	106	Pg	Pg	01 48 31.3	-2.2
CD2				Sg	Sg	01 48 38.4	0.0
CD2				smax			
	comp=N,12μm,0.7s						
LZH	Lanzhou	5.08	4	Pg	Pg	01 50 10.4	+6.8

LZH				Sg	Sg	01 51 05.8	-3.6
LZH				smax			
	comp=N,30nm,0.7s						
LZH				smax			
	comp=E,42nm,0.8s						
GYA	**Guiyang**	**5.38**	**147**	Pg	Pg	01 50 02.6	-6.8
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,60nm,0.9s						
XAN	**Xi'an**	**5.58**	**56**	Pg	Pg	01 50 08.0	-5.2
XAN				Sn	Sn	01 50 49.3	-3.6
XAN				smax			
	comp=N,89nm,0.7s						
XAN				smax			
	comp=E,48nm,0.8s						

*NEIC **16** 01:49:46.6, 60°.25N×139°.02W, h25km, ML2.6(AEIC), ML2.6(PGC), After PGC.*

PGC 16 01:49:46.6±4.8**, 60°.25N×139°.02W, h25km, ML2.6**/4**, 3D, 98km Wsw of Haines Jct., Yt Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNL	**Peninsula**	**0.62**	**198**	P	Pb	01 49 50.6	-8.1
HYT	**Haines Junctio**	**0.94**	**52**	P	Pn	01 50 03.8	-0.4
HYT				S	Sb	01 50 20.0	+3.7
HYT	**Haines Junctio**	**0.94**	**52**	⇑P	Pn	01 50 03.8	-0.4
HYT				⇑S	Sb	01 50 20.0	+3.7
PLBC	**Pleasant Camp**	**1.56**	**120**	Pn	Pn	01 50 12.9	+0.2
PLBC				Sg	Sn	01 50 36.0	+4.0
PLBC	**Pleasant Camp**	**1.56**	**120**	⇓Pn	Pn	01 50 12.9	+0.2
PLBC				⇑Sg	Sn	01 50 36.0	+4.0
WHY	**Whitehorse**	**2.09**	**77**	P	Pn	01 50 20.5	+0.5
WHY				S	Sn	01 50 51.2	+6.1
WHY	**Whitehorse**	**2.09**	**77**	⇑Pn	Pn	01 50 20.6	+0.6
WHY				⇓Sg	Sn	01 50 50.9	+5.7
BMRM	**Bremner River**	**2.84**	**287**	P	Pn	01 50 22.4	-8.0
BCA3	**Beaver Creek A**	**3.12**	**336**	P	Pn	01 50 28.7	-5.3
DAWY	**Dawson**	**3.83**	**358**	Pn	Pn	01 50 41.1	-2.8
DAWY				Sn	Sn	01 51 26.3	-1.7
DAWY	**Dawson**	**3.83**	**358**	⇑Pn	Pn	01 50 41.1	-2.8
DAWY				⇑Sn	Sn	01 51 26.3	-1.7
DAWY				⇓Sg	Sn	01 51 40.1	+12

*IDC **16** 01:59:59.6±1.9, 5°.44S×103°.44E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, Error ellipse: s-maj=77.7km s-min=21.1km az=57.0*
*DJA **16** 02:00:04, 6°.00S×104°.07E, h47km, MLv3.7/9*
*NEIC **16** 02:00:04.5±1.5, 5°.53S×103°.35E, h35km, mb4.0/2, Error ellipse: s-maj=85.9km s-min=14.7km az=53.0*
*ISCJB **16** 02:00:05.9±3.0, 5°.6S±0°.2×103°.4E±0°.3, h73km±20km, mb3.9/9, Error ellipse: s-maj=55.0km s-min=20.7km az=145.6*

ISC 16 02:00:07.9±3.5**, 5°.5S**±0°.2×**103°.5E**±0°.3**, h67**km±24km**, n23,** σ**0.88**/17**, mb3.9**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.76**	**51**	P	**Pn**	**02 00 22.5**	**-0.8**
LWLI				S	Sx	02 00 41.9	
KASI	**Kota Agung**	**1.03**	**91**	P	**Pn**	**02 00 18.2**	**-8.4**
KASI				S	Sx	02 00 29.0	
MDSI	**Maura Dua**	**1.24**	**35**	P	**Pn**	**02 00 30.3**	**+1.0**
MNAI	**Manna**	**1.24**	**336**	P	x	02 00 34.8	
KLI	**Kotabumi**	**1.53**	**65**	P	**Pn**	**02 00 28.5**	**-4.6**
BLSI	**Bandar Lampung**	**1.78**	**86**	S	**Pn**	**02 00 43.1**	**+6.6**
KSI	**Kapahiang**	**2.04**	**335**	P	x	02 00 44.9	
RBSI	**Rajabasa**	**2.29**	**99**	P	x	02 00 30.9	
CGJI	**Cibinong**	**2.48**	**117**	S	x	02 00 54.4	
DBJI	**Dramaga**	**3.43**	**108**	P	x	02 00 46.4	
CBJI	**Citeko**	**3.49**	**105**	P	x	02 00 47.8	
ASAR	**Alice Springs**	**34.42**	**125**	P	**P**	**02 06 48.0**	**-1.2**
	0.3nm,0.3s,mb3.5,baz=302,slow=7.9,SNR=6.3						
STKA	**Stephens Creek**	**44.25**	**131**	P	**P**	**02 08 13.1**	**+2.1**
	4.6nm,0.8s,mb4.3,baz=300,slow=8.1,SNR=5.1						
STKA	**Stephens Creek**	**44.25**	**131**	P	**P**	**02 08 13.1**	**+2.1**
KSRS	**Korea Array**	**48.44**	**26**	P	**P**	**02 08 42.9**	**-0.7**
	1.0nm,0.6s,mb3.8,baz=221,slow=7.0,SNR=5.1						
SONM	**Songino Array**	**53.17**	**2**	P	**P**	**02 09 19.7**	**+0.8**
	1.8nm,0.7s,mb4.2,baz=181,slow=8.9,SNR=8.5						
TKM2	**Tokmak 2**	**54.42**	**335**	*e*P	**P**	**02 09 28.7**	**+0.5**
	1.7nm,0.6s,mb4.2						
MK31	**Makanchi Array**	**55.35**	**342**	*e*P	**P**	**02 09 35.0**	**+0.2**
MKAR	**Makanchi Array**	**55.35**	**342**	P	**P**	**02 09 35.0**	**+0.1**
	0.8nm,0.7s,mb3.9,baz=140,slow=7.9,SNR=9.1						
MKAR	**Makanchi Array**	**55.35**	**342**	P	**P**	**02 09 35.0**	**+0.1**
ZALV	**Zalesovo Beam**	**61.27**	**348**	P	**P**	**02 10 15.9**	**-0.1**
	0.8nm,0.4s,mb4.1,baz=180,slow=2.5,SNR=4.2						
BVAR	**Borovoye Array**	**64.66**	**339**	P	**P**	**02 10 37.9**	**-0.6**
	0.7nm,0.6s,mb3.7,baz=140,slow=12,SNR=5.9						
ABKAR	**Akbulak array**	**66.36**	**330**	*e*P	**P**	**02 10 48.9**	**-0.7**
	0.5nm,0.5s,mb3.6						

*BJI **16** 02:02:19.4, 31°.00S×70°.37W, h98km, mB4.8/3*
*ISCJB **16** 02:02:20.5±0.3, 31°.07S±0°.03×70°.34W±0°.07, h98km±3km, mb4.6/30, Error ellipse: s-maj=9.4km s-min=4.2km az=172.0*
*NEIC **16** 02:02:21.5±0.4, 31°.08S×70°.53W, h101km±3km, mb4.7/23, Error ellipse: s-maj=7.9km s-min=4.5km az=85.0*
NEIC Felt [IV] at Canela; [III] at Illapel, La Serena, Los Vilos and Ovalle; [II] at La Calera, La Ligua and Salamanca. Also felt at Vicuna and Vina del Mar.
*GUC **16** 02:02:21.9±0.4, 31°.14S×71°.13W, h82km±5km, ML5.0*
*IDC **16** 02:02:22.1±0.7, 31°.01S×70°.61W, h105km±4km, mb4.7/10, mb1 4.6/13, mb1mx4.4/17, mbtmp4.6/13, MS3.3/2, Ms1 3.2/2, ms1mx3.0/18, Error ellipse: s-maj=17.2km s-min=9.0km az=34.0*

ISC 16 02:02:21.4±0.4**, 31°.08S**±0°.03×**70°.30W**±0°.06**, h90**km±3km**, h102**km±2.8km**:pP-P, n178,** σ**1.05**/158**, mb4.6**/30**, 35C-33D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.00**	**334**	⇑*i*P	**Pn**	**02 02 42.0**	**+0.9**
TLL				*i*S	**Sn**	**02 02 57.1**	**+1.1**
TLL	**Tololo Astrono**	**1.00**	**334**	⇑*i*P	**Pn**	**02 02 42.0**	**+0.9**
TLL				*i*S	**Sn**	**02 02 57.1**	**+1.1**
TLL				AML	AML	02 03 00.2	
	comp=E,36µm,0.6s						
CFAA	**Coronel Fontan**	**1.84**	**107**	P	**Pn**	**02 02 57.3**	**+5.8**
	comp=E,53nm,0.3s,baz=281,slow=12,SNR=971						
CFAA				S	**Sn**	**02 03 22.7**	**+8.2**
	comp=E,256nm,0.3s,baz=68,slow=16,SNR=68						
LCO	**Las Campanas**	**2.09**	**350**	*e*Pn	**Pn**	**02 02 55.2**	**+0.4**
PEL	**Peldehue**	**2.09**	**189**	⇑*i*P	**Pn**	**02 02 55.1**	**+0.3**
PEL				*e*S	**Sn**	**02 03 19.9**	**-0.3**
PEL				AML	AML	02 03 22.2	
	comp=E,16µm,0.2s						
FCH	**Farellones**	**2.25**	**180**	⇓*i*P	**Pn**	**02 02 58.9**	**+2.1**
FCH				*i*S	**Sn**	**02 03 27.1**	**+3.2**
FCH	**Farellones**	**2.25**	**180**	⇓*i*P	**Pn**	**02 02 58.9**	**+2.1**
FCH				*i*S	**Sn**	**02 03 27.1**	**+3.2**
FCH				AML	AML	02 03 29.6	
	comp=N,9µm,0.6s						
CLCH	**Cerro Calan**	**2.32**	**185**	AML	AML	02 03 31.1	
	comp=E,12µm,1.0s						
SAN	**Santiago**	**2.39**	**187**	*i*P	**Pn**	**02 02 59.0**	**+0.2**
SAN				*i*S	**Sn**	**02 03 27.0**	**-0.4**
SAN	**Santiago**	**2.39**	**187**	*i*P	**Pn**	**02 02 59.0**	**+0.2**
SAN				*i*S	**Sn**	**02 03 27.0**	**-0.4**
SAN				AML	AML	02 03 32.7	
	comp=E,5µm,0.4s						
FSR	**Penalolen**	**2.40**	**185**	*e*P	**Pn**	**02 02 59.7**	**+0.7**
FSR				*i*S	**Sn**	**02 03 28.2**	**+0.5**
RCDM	**Rinconada Maip**	**2.44**	**190**	*e*P	**Pn**	**02 02 58.3**	**-1.2**
RCDM				*e*S	**Sn**	**02 03 26.7**	**-1.9**
RCDM	**Rinconada Maip**	**2.44**	**190**	*e*P	**Pn**	**02 02 58.3**	**-1.2**
RCDM				*e*S	**Sn**	**02 03 26.7**	**-1.9**
RCDM				AML	AML	02 03 31.6	
	comp=N,11µm,0.1s						
ANTU	**Antumapu**	**2.50**	**186**	*i*P	**Pn**	**02 03 00.6**	**+0.3**
ANTU				*i*S	**Sn**	**02 03 29.9**	**-0.1**
ANTU	**Antumapu**	**2.50**	**186**	*i*P	**Pn**	**02 03 00.6**	**+0.3**
ANTU				*i*P		02 03 00.6	
ANTU				*i*S	**Sn**	**02 03 29.9**	**-0.1**
ANTU				*i*S	**Sn**	**02 03 29.9**	**-0.1**
ANTU				AML	AML	02 03 32.9	
	comp=E,8µm,0.8s						
PCH	**Pirque**	**2.54**	**184**	⇓*i*P	**Pn**	**02 03 01.5**	**+0.7**
PCH				*i*S	**Sn**	**02 03 32.0**	**+0.9**
TACH	**Talagante**	**2.63**	**192**	⇑*i*P	**Pn**	**02 03 01.2**	**-0.7**
TACH				*i*S	**Sn**	**02 03 31.2**	**-1.8**
LMEL	**Las Melosas**	**2.77**	**178**	⇓*i*P	**Pn**	**02 03 05.2**	**+1.5**
LMEL				*i*S	**Sn**	**02 03 38.6**	**+2.2**
LMEL	**Las Melosas**	**2.77**	**178**	⇓*i*P	**Pn**	**02 03 05.2**	**+1.5**
LMEL				*i*S	**Sn**	**02 03 38.6**	**+2.2**
LMEL				AML	AML	02 03 42.4	
	comp=N,7µm,0.1s						
LNV	**Longovilo**	**3.02**	**198**	⇓*i*P	**Pn**	**02 03 05.1**	**-2.1**
LNV				*i*S	**Sn**	**02 03 38.3**	**-4.2**
NICH	**Los Niches**	**3.99**	**191**	⇓*i*P	**Pn**	**02 03 19.0**	**-1.4**
NICH				*i*S	**Sn**	**02 04 02.6**	**-3.4**
PLCA	**Paso Flores**	**9.64**	**181**	P	**Pn**	**02 04 35.3**	**-1.9**
	comp=N,0.7nm,0.3s,baz=348,slow=15,SNR=12						
PLCA	**Paso Flores**	**9.64**	**181**	*e*Pn	**Pn**	**02 04 36.1**	**-1.0**
TRQA	**Tornquist**	**9.77**	**138**	*e*Pn	**Pn**	**02 04 39.9**	**+0.9**
CPUP	**Villa Florida**	**12.33**	**71**	P	**Pn**	**02 05 11.9**	**-1.8**
	comp=N,2.8nm,0.3s,baz=226,slow=12,SNR=36						
CPUP				S	**Sn**	**02 07 25.2**	**-3.9**
	comp=N,3.9nm,0.3s,baz=107,slow=17,SNR=2.4						
CPUP				LR	LR	02 10 42.5	
	comp=N,76nm,21.1s,baz=231,slow=40						
CPUP	**Villa Florida**	**12.33**	**71**	*e*Pn	**Pn**	**02 05 13.3**	**-0.4**
CPUP				*e*Sn	**Sn**	**02 07 26.7**	**-2.5**
LPAZ	**La Paz**	**14.85**	**8**	P	**Pn**	**02 05 44.2**	**-2.6**
	comp=N,3.8nm,0.3s,baz=178,slow=8.6,SNR=356						
LPAZ	**La Paz**	**14.85**	**8**	*e*Pn	**Pn**	**02 05 47.7**	**+0.9**
SIV	**San Ignacio**	**17.22**	**31**	P	**Pn**	**02 06 15.0**	**-1.2**
	comp=N,11nm,0.3s,baz=224,slow=12,SNR=297						
NNA	**Nana**	**19.93**	**341**	P	**Pn**	**02 06 43.3**	**-5.4**
	comp=N,2.1nm,0.3s,baz=190,slow=12,SNR=3.4						
NNA	**Nana**	**19.93**	**341**	*e*P	**Pn**	**02 06 45.5**	**-3.1**
	comp=N,34nm,1.1s						
SPB	**Sao Paulo**	**21.61**	**75**	*e*P	**P**	**02 07 05.8**	**+1.6**
	comp=N,16nm,0.6s,mb4.5						
USHA	**Ushuaia**	**23.78**	**177**	P	**P**	**02 07 24.7**	**-0.8**
	comp=N,16nm,1.0s,mb4.3,baz=273,slow=7.3,SNR=3.8						
OTAV	**Otavalo**	**32.09**	**345**	*e*P	**P**	**02 08 40.6**	**+0.6**
	comp=N,2.2nm,0.9s,mb3.9						
OTAV				*e*pP	pP	02 09 05.3	+4.7
ROSC	**El Rosal**	**35.94**	**353**	P	**P**	**02 09 14.5**	**+1.2**
	comp=N,5.3nm,0.4s,mb4.8,baz=98,slow=20,SNR=5.6						
ROSC				LR	LR	02 22 34.5	
	comp=N,77nm,21.0s,baz=21,slow=34						
ROSC	**El Rosal**	**35.94**	**353**	*e*P	**P**	**02 09 14.6**	**+1.3**
SDV	**Santo Domingo**	**39.73**	**359**	P	**P**	**02 09 43.9**	**-1.3**
	comp=N,20nm,0.8s,mb5.0,baz=213,slow=5.7,SNR=28						
SDV	**Santo Domingo**	**39.73**	**359**	*e*P	**P**	**02 09 43.5**	**-1.7**
	comp=N,21nm,0.9s,mb5.0						
PCRV	**Puerto La Cruz**	**41.37**	**8**	P	**P**	**02 09 56.0**	**-2.7**
	comp=N,13nm,1.0s,mb4.7,baz=209,slow=3.8,SNR=1.8						
FDF	**Fort de France**	**46.38**	**12**	*e*P	**P**	**02 10 36.6**	**-2.2**
	comp=N,37nm,0.5s,mb5.4						
ICM	**Isla Caja Muer**	**48.82**	**5**	*e*P	**P**	**02 10 56.0**	**-1.7**
CRPR	**Cabo Rojo, PR**	**48.89**	**4**	*e*P	**P**	**02 10 57.7**	**-0.5**
OBIP	**Obispado Ponce**	**48.96**	**5**	*e*P	**P**	**02 10 57.5**	**-1.2**
	comp=N,51nm,0.9s,mb5.5						
CELP	**Cerrillos**	**49.00**	**5**	*e*P	**P**	**02 10 57.8**	**-1.2**
SJG	**San Juan**	**49.06**	**5**	P	**P**	**02 10 57.4**	**-2.2**
	comp=N,18nm,0.4s,mb5.4,baz=172,slow=6.8,SNR=6.6						
APG	**El Apazote**	**49.74**	**334**	pP	pP	02 11 28.1	+1.5
	comp=N,4.9nm,0.9s,baz=95,slow=5.3,SNR=4.4						
APG				sP	sP	02 11 41.3	+4.6
	comp=N,3.5nm,0.8s,baz=193,slow=11,SNR=3.2						
VNA1	**Neumayer--Stat**	**51.80**	**158**	*e*P	**P**	**02 11 19.7**	**+0.1**
VNA2	**Neumayer--Watz**	**52.16**	**158**	*e*P	**P**	**02 11 21.7**	**-0.5**
QSPA	**South Pole Qui**	**59.16**	**180**	*e*P	**P**	**02 12 12.0**	**-0.2**
	comp=N,24nm,1.1s,mb5.1						
QSPA				*e*pP	pP	02 12 34.1	-0.5
JCT	**Junction City**	**67.33**	**333**	*e*P	**P**	**02 13 04.5**	**-2.2**
JCT				*e*pP	pP	02 13 31.1	+1.5
SWET	**Sewanee**	**67.56**	**346**	*e*P	**P**	**02 13 06.5**	**-1.5**
SWET				*e*pP	pP	02 13 30.6	-0.4
628A	**Black Gap, Mar**	**67.74**	**330**	⇑P	**P**	**02 13 09.1**	**-0.2**
	baz=68						
627A	**Terlingua Ranc**	**67.93**	**329**	⇓P	**P**	**02 13 09.1**	**-1.4**
	baz=68						
528A	**Cox Ranch, San**	**68.28**	**330**	⇓P	**P**	**02 13 12.1**	**-0.6**
	baz=68						
626A	**Big Bend Ranch**	**68.35**	**329**	⇑P	**P**	**02 13 12.9**	**-0.2**
	baz=69						
527A	**Woodward Ranch**	**68.62**	**329**	⇑P	**P**	**02 13 14.2**	**-0.6**
	baz=69						
428A	**Kincaid Ranch,**	**68.72**	**330**	⇑P	**P**	**02 13 15.4**	**-0.1**
	baz=69						
526A	**Mary Lane Ranc**	**68.76**	**329**	⇓P	**P**	**02 13 15.5**	**-0.1**
	baz=69						
WVT	**Waverly**	**68.85**	**345**	*e*P	**P**	**02 13 13.7**	**-2.4**
	comp=N,9.3nm,0.8s,mb4.7						
427A	**Hayter Ranch,**	**69.14**	**330**	⇓P	**P**	**02 13 18.5**	**+0.5**
	baz=69						
426A	**McDonald Obser**	**69.26**	**329**	⇓P	**P**	**02 13 18.2**	**-0.5**
	baz=70						
328A	**Wristen Ranch,**	**69.35**	**331**	⇑P	**P**	**02 13 19.2**	**0.0**
	baz=70						
425A	**Indio Mountain**	**69.78**	**329**	⇑P	**P**	**02 13 22.6**	**+0.6**
	baz=70						
326A	**Caldwell Ranch**	**69.79**	**330**	⇑P	**P**	**02 13 22.5**	**+0.5**
	baz=70						
226A	**Malaga, Loving**	**70.48**	**330**	⇓P	**P**	**02 13 26.0**	**-0.2**
	baz=71						
MNTX	**Cornudas Mount**	**70.73**	**329**	*e*P	**P**	**02 13 25.3**	**-2.5**
	comp=N,1.3nm,0.8s,mb3.8						
MNTX				*e*pP	pP	02 13 50.5	-0.4
Z27A	**Tatum**	**71.19**	**331**	⇑P	**P**	**02 13 30.4**	**-0.1**
	baz=71						
Z26A	**Caprock**	**71.47**	**331**	⇓P	**P**	**02 13 31.5**	**-0.6**
	baz=72						
CCM	**Cathedral Cave**	**71.50**	**343**	*e*P	**P**	**02 13 31.0**	**-1.2**
	comp=N,5.8nm,0.9s,mb4.4						
MSTX	**Muleshoe**	**71.58**	**332**	⇓P	**P**	**02 13 32.4**	**-0.4**
	baz=72						
124A	**Stringfield Ra**	**71.62**	**329**	⇓P	**P**	**02 13 32.5**	**-0.6**
	baz=72						
AMTX	**Amarillo**	**71.95**	**333**	*e*P	**P**	**02 13 33.7**	**-1.3**
Y25A	**Mesa, Roswell**	**72.33**	**330**	⇓P	**P**	**02 13 38.3**	**+1.0**
	baz=73						
220A	**Playas Peak, P**	**72.35**	**326**	⇑P	**P**	**02 13 37.5**	**0.0**
	baz=73						
LIC	**Lamto**	**72.45**	**71**	*e*P	**P**	**02 13 38.7**	**+0.2**
	comp=N,44nm,1.3s,mb5.1						
X26A	**CR and CF Fran**	**72.51**	**331**	⇓P	**P**	**02 13 38.9**	**+0.5**
	baz=73						
121A	**Cookes Peak, D**	**72.53**	**327**	⇑P	**P**	**02 13 38.8**	**+0.3**
	baz=73						
318A	**Bisbee**	**72.68**	**325**	⇑P	**P**	**02 13 39.5**	**+0.1**
	baz=73						
TIC	**Toumodi**	**72.70**	**71**	*e*P	**P**	**02 13 40.2**	**+0.2**
	comp=N,19nm,0.9s,mb4.9						
KIC	**Kosan Boka**	**72.76**	**71**	*e*P	**P**	**02 13 40.7**	**+0.3**
	comp=N,26nm,0.8s,mb5.1						
219A	**White Tail Can**	**72.78**	**326**	⇓P	**P**	**02 13 40.0**	**0.0**
	baz=73						
DBIC	**Dimbokro**	**72.85**	**71**	P	**P**	**02 13 41.2**	**+0.4**
	comp=N,10nm,0.7s,mb4.8,baz=213,slow=6.0,SNR=20						
DBIC				pP	pP	02 14 12.4	+8.3
	comp=N,6.7nm,0.8s,baz=239,slow=5.0,SNR=3.7						
DBIC	**Dimbokro**	**72.85**	**71**	*e*P	**P**	**02 13 41.0**	**+0.2**
	comp=N,10nm,0.7s,mb4.8						
120A	**U Bar Ranch, L**	**72.93**	**327**	⇑P	**P**	**02 13 41.5**	**+0.6**
	baz=73						
W26A	**Owens Ranch, T**	**72.96**	**332**	⇑P	**P**	**02 13 41.5**	**+0.6**
	baz=73						
217A	**Green Valley**	**73.36**	**325**	⇑P	**P**	**02 13 43.5**	**+0.1**
	baz=74						
Z20A	**Nine Sixteen R**	**73.39**	**327**	⇓P	**P**	**02 13 43.6**	**+0.1**
	baz=74						
V26A	**Tequesquite Ra**	**73.58**	**332**	⇓P	**P**	**02 13 45.9**	**+1.3**
	baz=74						
W24A	**Lazy 6 Ranch,**	**73.74**	**331**	⇑P	**P**	**02 13 47.2**	**+1.6**
	baz=74						
Y20A	**Horse Springs,**	**73.95**	**328**	⇑P	**P**	**02 13 47.4**	**+0.6**
	baz=74						
X21A	**Alamocita Cree**	**74.13**	**328**	⇑P	**P**	**02 13 48.3**	**+0.4**
	baz=74						
Y19A	**Nutrioso**	**74.39**	**327**	⇓P	**P**	**02 13 50.2**	**+0.8**
	baz=75						
Y17A	**Roosevelt**	**74.93**	**326**	⇓P	**P**	**02 13 52.6**	**0.0**
	baz=75						
SUR	**Sutherland**	**74.95**	**119**	P	**P**	**02 13 54.2**	**+1.3**
	comp=N,22nm,0.7s,mb5.0,baz=229,slow=5.6,SNR=21						
SUR	**Sutherland**	**74.95**	**119**	*e*P	**P**	**02 13 54.5**	**+1.6**
	comp=N,26nm,0.8s,mb5.0						
V22A	**San Miguel Ran**	**74.98**	**330**	⇓P	**P**	**02 13 53.3**	**+0.6**
	baz=75						
MAW	**Mawson**	**75.56**	**163**	P	**P**	**02 13 54.9**	**-0.9**
	comp=N,12nm,0.8s,mb4.7,baz=217,slow=6.3,SNR=15						
MAW	**Mawson**	**75.56**	**163**	*e*P	**P**	**02 13 54.7**	**-1.0**
	comp=N,3.3nm,0.9s,mb4.1						
X16A	**Lo Mia Camp, P**	**75.81**	**326**	⇑P	**P**	**02 13 58.9**	**+1.4**
	baz=76						
T22A	**Edith**	**75.91**	**331**	⇑P	**P**	**02 13 59.3**	**+1.3**
	baz=76						
Z13A	**Yuma Proving G**	**75.93**	**324**	⇑P	**P**	**02 13 58.8**	**+0.5**
	baz=76						
SDCO	**Great Sand Dun**	**75.95**	**332**	*e*P	**P**	**02 13 57.8**	**-0.4**
	comp=N,2.0nm,0.8s,mb3.9						
X15A	**Humboldt**	**76.25**	**325**	⇓P	**P**	**02 14 00.3**	**+0.3**
	baz=76,SNR=5.8						
T19A	**Beclabito**	**76.67**	**329**	⇓P	**P**	**02 14 03.3**	**+0.9**
	baz=77						
MVCO	**Mesa Verde**	**76.76**	**330**	⇑P	**P**	**02 14 03.9**	**+1.1**
	baz=77						
R22A	**Saguache, Gunn**	**76.88**	**331**	⇓P	**P**	**02 14 04.5**	**+1.0**
	baz=77						
X13A	**Yucca**	**77.12**	**324**	⇓P	**P**	**02 14 05.1**	**+0.2**
	baz=77,SNR=6.7						
Q22A	**Crested Butte,**	**77.48**	**332**	⇑P	**P**	**02 14 08.0**	**+1.2**
	baz=78						
ISCO	**Idaho Springs**	**77.76**	**333**	*e*P	**P**	**02 14 08.1**	**-0.3**
	comp=N,4.1nm,0.9s,mb4.2						
ISCO				*e*pP	pP	02 14 33.7	+1.8
SMCO	**Snowmass**	**77.77**	**332**	*e*P	**P**	**02 14 06.5**	**-2.0**
S18A	**Hurst Farm, Bl**	**77.81**	**329**	⇑P	**P**	**02 14 09.0**	**+0.3**
	baz=78						
V13A	**Grand Canyon W**	**78.19**	**325**	⇑P	**P**	**02 14 11.8**	**+0.9**
	baz=78						
ECSD	**EROS Data Cent**	**78.25**	**341**	*e*P	**P**	**02 14 09.8**	**-1.2**
	comp=N,2.5nm,0.4s,mb4.3						
ECSD				*e*pP	pP	02 14 33.2	-1.3
T15A	**Red Dirt Ranch**	**78.36**	**327**	⇓P	**P**	**02 14 13.3**	**+1.6**
	baz=79						
TSUM	**Tsumeb**	**78.59**	**106**	P	**P**	**02 14 14.6**	**+1.1**
	comp=N,14nm,1.0s,mb4.8,baz=218,slow=5.8,SNR=12						
R17A	**Hanksville Air**	**78.73**	**329**	⇓P	**P**	**02 14 14.7**	**+0.9**
	baz=79						
O20A	**White River Ci**	**79.10**	**331**	⇑P	**P**	**02 14 17.1**	**+1.3**
	baz=79						
P18A	**Preston Nutter**	**79.53**	**330**	⇑P	**P**	**02 14 18.8**	**+0.7**
	baz=80						
T11A	**Corn Creek, Al**	**79.90**	**325**	⇑P	**P**	**02 14 20.8**	**+0.6**
	baz=80						
BOSA	**Boshof**	**80.12**	**117**	P	**P**	**02 14 22.1**	**+0.3**
	comp=N,14nm,0.9s,mb4.8,baz=233,slow=4.7,SNR=12						
BOSA	**Boshof**	**80.12**	**117**	*e*P	**P**	**02 14 21.8**	**+0.1**
	comp=N,23nm,1.1s,mb4.9						
ISA	**Isabella**	**80.34**	**322**	⇑P	**P**	**02 14 22.7**	**+0.1**
	baz=80,SNR=7.1						
ISA	**Isabella**	**80.34**	**322**	*e*P	**P**	**02 14 21.3**	**-1.3**
ISA				*e*pP	pP	02 14 48.4	+2.2
RSSD	**Black Hills**	**80.93**	**336**	*e*P	**P**	**02 14 25.3**	**-0.2**
	comp=N,1.4nm,0.6s,mb4.0						
DUG	**Dugway**	**81.12**	**328**	*e*P	**P**	**02 14 26.2**	**-0.4**
	comp=N,3.5nm,1.3s,mb4.0						
TOA0	**Torodi Ar. Sit**	**81.82**	**69**	*e*P	**P**	**02 14 31.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**81.82**	**69**	P	**P**	**02 14 31.1**	**+0.2**
	comp=N,7.0nm,0.6s,mb4.6,baz=284,slow=6.1,SNR=125						
TORD				pP	pP	02 14 58.4	+3.8
	comp=N,3.9nm,0.8s,baz=257,slow=5.0,SNR=4.1						
LBTB	**Lobatse**	**82.18**	**114**	*e*P	**P**	**02 14 33.0**	**+0.3**
NVAR	**Mina Array Bea**	**82.36**	**324**	pP	pP	02 14 58.6	+1.7
	comp=N,1.5nm,0.8s,baz=158,slow=6.3,SNR=4.6						
M14A	**Sheep Mountain**	**82.42**	**329**	⇓P	**P**	**02 14 34.1**	**+0.7**
	baz=83						
ULM	**Lac du Bonnet**	**84.08**	**344**	pP	pP	02 15 06.1	+0.6
	comp=N,5.5nm,1.0s,baz=170,slow=3.9,SNR=4.5						
ULM	**Lac du Bonnet**	**84.08**	**344**	*e*P	**P**	**02 14 41.9**	**+0.2**
	comp=N,2.2nm,1.0s,mb3.9						
F18A	**Big Timber**	**84.54**	**334**	⇑P	**P**	**02 14 44.5**	**+0.3**
	baz=85						
HLID	**Hailey**	**84.54**	**329**	*e*P	**P**	**02 14 43.7**	**-0.5**
	comp=N,1.0nm,0.8s,mb3.8						
I13A	**Wildhorse Cree**	**84.69**	**330**	⇓P	**P**	**02 14 46.2**	**+1.2**
	baz=85						
D17A	**Six Diamond Ra**	**85.95**	**334**	⇑P	**P**	**02 14 52.7**	**+1.6**
	baz=86						
B15A	**Bradely Ranch,**	**87.62**	**333**	⇓P	**P**	**02 14 60.0**	**+0.7**
	baz=88						
A16A	**West Butte Ran**	**87.78**	**334**	⇑P	**P**	**02 14 59.5**	**-0.5**
	baz=88						
BSMT	**Bassoo Peak**	**88.13**	**332**	*e*P	**P**	**02 15 00.2**	**-1.5**
LSZ	**Lusaka**	**89.30**	**107**	*e*P	**P**	**02 15 09.3**	**+1.3**
	comp=N,32nm,1.4s,mb5.2						
YKA	**Yellowknife Ar**	**99.78**	**341**	pP	pP	02 16 19.6	+0.8
	comp=N,0.4nm,0.9s,baz=144,slow=4.3,SNR=3.6						
YKA				sP	sP	02 16 34.2	+5.7
	comp=N,0.3nm,0.6s,baz=134,slow=4.4,SNR=4.5						
BR131	**Keskin Array S**	**119.10**	**59**	*e*PKPdf	PKPdf	02 20 58.6	-1.0
BRTR	**Keskin Array B**	**119.10**	**59**	PKP	PKPdf	02 20 59.0	-0.7
	comp=N,0.7nm,0.8s,baz=143,slow=3.1,SNR=4.8						
KIEV	**Kiev**	**119.11**	**46**	*e*PKPdf	PKPdf	02 20 57.5	-1.8
AKASG	**Malin Array Be**	**119.12**	**46**	PKP	PKPdf	02 20 56.6	-2.7
	comp=N,0.9nm,0.6s,baz=256,slow=3.6,SNR=6.0						
AKBB	**Malin Array Si**	**119.12**	**46**	*e*PKPdf	PKPdf	02 20 57.6	-1.7
ASAR	**Alice Springs**	**120.83**	**206**	PKP	PKPdf	02 21 00.5	-3.2
	comp=N,0.8nm,0.8s,baz=163,slow=4.7,SNR=6.0						
MALT	**Malatya**	**122.26**	**62**	*e*PKPdf	PKPdf	02 21 05.2	-0.6
WRAB	**Tennant Creek**	**124.03**	**208**	*e*PKPdf	PKPdf	02 21 07.4	-2.4
GNI	**Garni**	**127.46**	**61**	*e*PKPdf	PKPdf	02 21 15.4	-0.3
FITZ	**Fitzroy Crossi**	**128.76**	**200**	PKP	PKPdf	02 21 17.3	-1.7
	comp=N,2.8nm,0.8s,baz=197,slow=5.0,SNR=5.0						
PETK	**Petropavlovsk-**	**139.10**	**317**	PKP	PKPdf	02 21 36.3	-0.8
	comp=N,0.7nm,0.2s,baz=125,slow=2.3,SNR=8.0						
BRVK	**Borovoye**	**144.06**	**41**	*e*PKPdf	PKPdf	02 21 44.4	-1.6
BVAR	**Borovoye Array**	**144.13**	**41**	PKP	PKPdf	02 21 44.7	-1.4
	comp=N,5.4nm,0.6s,baz=288,slow=3.0,SNR=34						
BVAR				pPKP	pPKPdf	02 22 13.0	+1.8
	comp=N,1.5nm,0.7s,baz=230,slow=3.7,SNR=3.3						
KBL	**Kabul**	**145.81**	**73**	*e*PKPbc	PKPbc	02 21 50.1	-0.2
HYB	**Hyderabad**	**148.64**	**108**	*i* PKP	PKPdf	02 21 58.0	+3.2
EKS2	**Erkin-Say**	**149.24**	**58**	P	PKPbc	02 21 60.0	+0.6
	SNR=12						
AML	**Almayashu**	**149.27**	**59**	P	PKPbc	02 22 00.2	+0.7
	SNR=5.8						
USP	**Ospenovka**	**149.65**	**56**	P	PKPbc	02 22 00.7	+0.3
	SNR=11						
KURK	**Kurchatov**	**149.73**	**41**	PKPbc	PKPbc	02 21 59.9	-0.4
	comp=N,3.9nm,0.7s,baz=304,slow=3.1,SNR=12						
KURK				pPKPbc	pPKPbc	02 22 27.8	+2.6
	comp=N,2.3nm,0.7s,baz=305,slow=3.4,SNR=4.2						
KURK	**Kurchatov**	**149.73**	**41**	*e*PKPbc	PKPbc	02 21 59.9	-0.4
AAK	**Ala-Archa**	**149.77**	**58**	P	PKPdf	02 22 01.6	+5.7
	SNR=12						
AAK	**Ala-Archa**	**149.77**	**58**	PKPbc	PKPbc	02 22 01.7	+1.0
	comp=N,8.9nm,0.7s,baz=205,slow=3.5,SNR=34						
AAK				pPKPbc	pPKPbc	02 22 29.8	+4.2
	comp=N,1.2nm,0.3s,baz=66,slow=1.5,SNR=1.8						
AAK	**Ala-Archa**	**149.77**	**58**	*e*PKPbc	PKPbc	02 22 01.1	+0.4
AAK				*e*PKPab	PKPab	02 22 06.5	+0.1
UCH	**Uchtor**	**149.85**	**58**	P	PKPbc	02 22 02.1	+1.2
	SNR=16						
KZA	**Kyzart**	**150.42**	**59**	P	PKPbc	02 22 03.7	+1.4
	SNR=8.0						
TKM2	**Tokmak 2**	**150.50**	**57**	P	PKPbc	02 22 02.7	+0.3
	SNR=7.9						
ZAA0	**Zalesovo Array**	**150.97**	**31**	*e*PKPbc	PKPbc	02 22 02.2	-1.0
ZALV	**Zalesovo Beam**	**150.97**	**31**	PKPbc	PKPbc	02 22 02.6	-0.6
	comp=N,20nm,0.7s,baz=304,slow=3.4,SNR=33						
ZALV				pPKPbc	pPKPbc	02 22 30.0	+1.9
	comp=N,14nm,0.8s,baz=302,slow=3.3,SNR=5.9						
ZALV				sPKPbc		02 22 38.7	
	comp=N,8.5nm,0.7s,baz=298,slow=3.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**150.97**	**31**	PKPbc	PKPbc	02 22 02.6	-0.6
ZALV				pPKPbc	pPKPbc	02 22 30.0	+1.9
ZALV				sPKPbc		02 22 38.7	
ULHL	**Ulahol**	**151.11**	**58**	P	PKPbc	02 22 04.6	+0.7
	SNR=8.6						
MK31	**Makanchi Array**	**153.71**	**46**	*e*PKPbc	PKPbc	02 22 08.4	-1.1
MK31				*e*PKPab	PKPab	02 22 23.0	+0.3
MKAR	**Makanchi Array**	**153.71**	**46**	PKP	PKPdf	02 22 00.8	-0.9
	comp=N,0.6nm,1.1s,baz=173,slow=1.0,SNR=4.0						
MKAR				PKPbc	PKPbc	02 22 08.8	-0.7
	comp=N,2.2nm,0.7s,baz=314,slow=1.9,SNR=22						
MKAR				PKPab	PKPab	02 22 23.1	+0.4
	comp=N,2.3nm,0.6s,baz=288,slow=4.6,SNR=12						
MKAR				pPKPab	pPKPab	02 22 50.2	+3.3
	comp=N,3.1nm,0.8s,baz=294,slow=3.9,SNR=4.9						
WMQ	**Urumqi**	**158.47**	**48**	*e*PKP	PKPdf	02 22 05.9	-2.1
CN2	**Changchun**	**162.21**	**320**	*e*PKP	PKPdf	02 22 10.3	-1.9

HHC	Hu-ho-hao-te	170.13	352	*e*PKP	PKPdf	02 22 15.8	-2.7
HHC				pPKP	pPKPdf	02 22 42.8	-0.9
HHC				sPKP		02 22 53.1	
HHC				PKS		02 25 47.0	
HHC				SKS	SKSdf	02 29 08.3	-5.5
HHC				SKKS	SKKSac	02 34 04.1	+1.1
HHC				AMB	AMB		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,150nm,22.2s						
HHC				LR	LR		
	comp=E,120nm,22.2s						
HHC				LR	LR		
	comp=Z,120nm,21.6s						
GYA	**Guiyang**	**174.69**	**149**	PKP	PKPdf	02 22 18.8	-2.1
GYA				pPKP	pPKPdf	02 22 46.5	+0.3
GYA				PKPab	PKPab	02 23 55.0	0.0
GYA				PKS		02 25 50.8	
GYA				PP	PP	02 27 48.4	+1.7
GYA				AMB	AMB		
	comp=Z,70nm,8.0s						
CD2	**Chengdu**	**174.90**	**90**	PKP	PKPdf	02 22 18.0	-2.9

*ISCJB **16** 02:11:32.7±0.5, 32°.30N±0°.04×105°.31E±0°.05, h10^{km}, mb3.8/14, Error ellipse: s-maj=6.4km s-min=5.8km az=32.0*
*IDC **16** 02:11:33.6±0.9, 32°.35N×105°.19E, h0^{km}, mb3.8/10, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, ML2.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.3/40, Error ellipse: s-maj=57.4km s-min=17.7km az=57.0*
*BJI **16** 02:11:34.8, 32°.28N×104°.92E, h10^{km}, ML3.8/9, Ms3.5/2, Ms7 3.5/3*
*NEIC **16** 02:11:35.3±0.5, 32°.34N×105°.11E, h10^{km}, mb3.9/5, Error ellipse: s-maj=17.6km s-min=7.7km az=225.0*
ISC 16 02:11:35.1±0.4,**32°.38N**±0°.04×**105°.23E**±0°.05,**h10**^{km},**n27,** σ1§**11**/32,**mb3.7**/14,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.51**	**61**	Pg	**Pn**	**02 12 21.9**	**-7.8**
XAN				Sn	**Sn**	**02 13 10.6**	**-0.6**
XAN				Sg	**Sg**	**02 13 28.3**	**+0.5**
XAN				smax			
	comp=N,190nm,0.6s						
XAN				smax			
	comp=E,66nm,0.6s						
LZH	**Lanzhou**	**3.88**	**343**	Pn	**Pn**	**02 12 39.0**	**+4.3**
LZH				Pg	**Pg**	**02 12 48.1**	**-1.3**
LZH				Sn	**Sn**	**02 13 23.6**	**+3.3**
LZH				Sg	**Sg**	**02 13 37.3**	**-2.3**
LZH				smax			
	comp=N,200nm,0.5s						
LZH				smax			
	comp=E,400nm,0.6s						
LZH				LR	LR		
	comp=E,520nm,3.4s						
LZH				LR	LR		
	comp=Z,780nm,4.0s						
ENH	**Enshi**	**4.20**	**119**	*e*Pn	**Pn**	**02 12 41.1**	**+1.9**
ENH				*e*Pg	**Pg**	**02 12 54.0**	**-1.6**
GYA	**Guiyang**	**6.03**	**168**	Pn	**Pn**	**02 13 07.4**	**+3.1**
GYA				Sn	**Sn**	**02 14 11.6**	**-1.8**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,80nm,0.9s						
SONM	**Songino Array**	**15.46**	**3**	Pn	**Pn**	**02 15 14.2**	**+1.1**
	comp=E,0.0nm,0.3s,baz=218,slow=6.8,SNR=2.9						
KSRS	**Korea Array**	**19.27**	**68**	LR	LR	02 22 58.5	
	comp=E,10nm,18.7s,baz=220,slow=36						
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**02 16 37.2**	**+0.6**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**02 16 37.2**	**+0.5**
	comp=E,0.8nm,0.3s,mb3.6,baz=115,slow=11,SNR=16						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**02 16 37.2**	**+0.5**
TKM2	**Tokmak 2**	**25.60**	**303**	*e*P	**P**	**02 17 05.8**	**+1.4**
	comp=E,1.4nm,0.6s,mb3.7						
ZAA0	**Zalesovo Array**	**26.02**	**332**	*e*P	**P**	**02 17 07.5**	**-0.6**
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**02 17 08.8**	**+0.6**
	comp=E,1.0nm,0.6s,mb3.5,baz=130,slow=8.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.02**	**332**	P	**P**	**02 17 08.8**	**+0.6**
UCH	**Uchtor**	**26.22**	**301**	*e*P	**P**	**02 17 10.2**	**+0.1**
	comp=E,2.9nm,1.1s,mb3.7						
AML	**Almayashu**	**26.80**	**300**	*e*P	**P**	**02 17 14.2**	**-1.1**
	comp=E,1.3nm,0.6s,mb3.6						
KURK	**Kurchatov**	**26.84**	**321**	P	**P**	**02 17 16.1**	**+0.5**
	comp=E,0.6nm,0.5s,mb3.4,baz=129,slow=9.8,SNR=5.1						
KURK	**Kurchatov**	**26.84**	**321**	*e*P	**P**	**02 17 15.9**	**+0.4**
	comp=E,1.4nm,0.5s,mb3.8						
JHJ	**Hachijo jima 2**	**28.99**	**79**	LR	LR	02 30 28.6	
	comp=E,46nm,18.7s,baz=201,slow=39						
BVAR	**Borovoye Array**	**32.41**	**320**	P	**P**	**02 18 05.4**	**+0.4**
	comp=E,0.3nm,0.4s,mb3.5,baz=131,slow=12,SNR=3.2						
BRVK	**Borovoye**	**32.49**	**320**	*e*P	**P**	**02 18 05.0**	**-0.6**
	comp=E,1.0nm,0.6s,mb3.8						
ARCES	**ARCESS Array B**	**56.50**	**335**	P	**P**	**02 21 16.8**	**-0.2**
	comp=E,1.4nm,0.7s,mb4.1,baz=76,slow=8.4,SNR=4.7						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**02 21 20.9**	**-0.1**
	comp=E,0.8nm,0.5s,mb4.0,baz=90,slow=8.0,SNR=5.3						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**02 21 20.9**	**-0.1**
WRA	**Warramunga Arr**	**59.01**	**148**	P	**P**	**02 21 35.5**	**+0.4**
	comp=E,2.5nm,1.1s,mb4.1,baz=340,slow=7.3						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**02 21 56.4**	**+0.2**
	comp=E,0.3nm,0.5s,mb3.7,baz=332,slow=6.8,SNR=4.0						
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	**02 22 07.8**	**-1.4**
	comp=E,0.6nm,0.5s,mb3.9,baz=79,slow=5.8,SNR=3.4						
YKA	**Yellowknife Ar**	**80.19**	**18**	P	**P**	**02 23 45.9**	**+0.6**
	comp=E,0.3nm,0.4s,mb3.6,baz=327,slow=5.1,SNR=7.5						

IDC 16 02:25:14.5±1.5,**31°.20N**×**103°.87E**, **h0**^{km}, **mb3.4**/4, **mb1 3.7**/4, **mb1mx3.4**/24, **mbtmp3.4**/4, **Error ellipse: s-maj=93.1km s-min=26.2km az=58.0**, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.78**	**319**	P	P	02 30 19.1	+0.7
	0.4nm,0.8s,baz=113,slow=9.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	P	02 30 53.7	-0.1
	0.5nm,0.4s,baz=132,slow=2.1,SNR=3.0						
WRA	**Warramunga Arr**	**58.66**	**146**	P	P	02 35 14.0	+0.3
	0.4nm,0.7s,baz=326,slow=9.1,SNR=7.6						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	P	02 37 33.8	-0.4
	0.4nm,0.7s,baz=331,slow=5.2,SNR=4.4						

*IDC **16** 02:28:59.4±5.6, 35°.91N×71°.13E, h76^{km}±43^{km}, mb3.5/8, mb1 3.6/13, mb1mx3.4/28, mbtmp3.5/13, ML3.4/5, Error ellipse: s-maj=50.5km s-min=27.5km az=147.0*
*ISCJB **16** 02:29:02.2±0.7, 36°.10N±0°.04×71°.19E±0°.07, h110^{km}±9^{km}, mb3.7/10, Error ellipse: s-maj=9.2km s-min=5.4km az=160.0*
*NEIC **16** 02:29:03.4±1.0, 36°.08N×71°.10E, h107^{km}±10^{km}, mb3.9/2, Error ellipse: s-maj=19.2km s-min=8.5km az=138.0*
*NNC **16** 02:29:06.9±5.7, 36°.88N×70°.36E, h0^{km}, mb3.9, mpv3.8, Error ellipse: s-maj=46.0km s-min=31.8km az=179.0*
ISC 16 02:29:03.4±0.6,**36°.07N**±0°.03×**71°.19E**±0°.07,**h108**^{km}±8^{km}, **n44,** σ1§**21**/53,**mb3.7**/10,**4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.33**	**230**	*e*Pn	**Pn**	**02 29 40.4**	**0.0**
KBL				*e*Sn	**Sn**	**02 30 17.0**	**+8.2**
CHCP	**Chirah Chowk**	**2.95**	**144**	⇑P	**Pn**	**02 29 52.8**	**+4.2**
JMU	**Jammu**	**4.54**	**136**	*e*S	**Sn**	**02 31 02.5**	**+0.9**
THN	**Thein Dam**	**5.21**	**133**	*e*P	**Pn**	**02 30 20.8**	**+1.7**
THN				*ex*	x	02 31 20.2	
AML	**Almayashu**	**6.36**	**17**	P	**Pn**	**02 30 35.1**	**+0.6**
	SNR=38						
SDNR	**Sundarnagar**	**6.63**	**132**	*e*P	**Pn**	**02 30 40.1**	**+1.9**
SDNR				*ex*	x	02 31 53.1	
UCH	**Uchtor**	**6.67**	**22**	P	**Pn**	**02 30 39.4**	**+0.7**
	SNR=18						
KZA	**Kyzart**	**6.78**	**27**	P	**Pn**	**02 30 40.7**	**+0.5**
	SNR=12						
EKS2	**Erkin-Say**	**6.88**	**16**	P	**Pn**	**02 30 43.6**	**+2.0**
	SNR=6.5						
SMLA	**Simla**	**7.01**	**133**	*i* x	**Pn**	**02 30 42.0**	**-1.4**
SMLA				*i* S	**Sn**	**02 31 59.0**	**-2.6**
AAK	**Ala-Archa**	**7.04**	**20**	P	**Pn**	**02 30 44.4**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**7.04**	**20**	P	**Pn**	**02 30 44.1**	**+0.4**
	0.1nm,0.3s,baz=159,slow=6.5,SNR=21						
AAK				S	**Sn**	**02 31 59.8**	**-2.3**
	0.0nm,0.3s,baz=305,slow=23,SNR=8.7						
KK31	**Karatay Array**	**7.04**	**356**	⇓P	**Pn**	**02 30 41.8**	**-1.9**
	2.3nm,0.3s,baz=187,slow=15,SNR=100						
KK31				⇑S	**Sn**	**02 31 54.3**	**-8.0**
	6.2nm,0.4s,baz=189,slow=27,SNR=8.8						
KLP	**Kalpa**	**7.41**	**126**	*e*P	**Pn**	**02 30 52.6**	**+3.8**
KLP				*e*S	**Sn**	**02 32 10.5**	**-0.9**
KLP				AML	AML	02 32 29.1	
	comp=N,93nm,0.6s						
KLP				AML	AML	02 32 30.6	
	comp=E,115nm,0.6s						
TKM2	**Tokmak 2**	**7.64**	**25**	⇑P	**Pn**	**02 30 52.6**	**+0.7**
	comp=E,4.7nm,0.7s						
TKM2				⇓S	**Sn**	**02 32 16.2**	**-0.6**
	comp=E,5.5nm,0.6s						
TKM2	**Tokmak 2**	**7.64**	**25**	P	**Pn**	**02 30 52.7**	**+0.8**
	SNR=5.8						
KHET	**Khetri**	**8.88**	**153**	*e*S	**Sn**	**02 32 43.8**	**-3.2**
KHET				AML	AML	02 32 45.5	
	comp=E,38nm,0.4s						
KHET				AML	AML	02 32 45.8	
	comp=N,46nm,0.3s						
SONA	**Sohna**	**9.26**	**146**	*e*S	**Sn**	**02 32 50.8**	**-5.4**
SONA				AML	AML	02 32 55.0	
	comp=E,41nm,0.2s						
SONA				AML	AML	02 32 56.0	
	comp=N,19nm,0.3s						
MK31	**Makanchi Array**	**13.55**	**34**	P	**Pn**	**02 32 16.9**	**+5.8**
	comp=N,0.4nm,0.5s,baz=213,slow=11,SNR=9.1						
MK31				S	**Sn**	**02 34 49.1**	**+8.9**
	comp=N,0.8nm,0.6s,baz=110,slow=12,SNR=14						
MK31	**Makanchi Array**	**13.55**	**34**	*e*Pn	**Pn**	**02 32 12.3**	**+1.2**
MKAR	**Makanchi Array**	**13.55**	**34**	P	**Pn**	**02 32 11.7**	**+0.7**
	comp=N,0.1nm,0.3s,baz=225,slow=16,SNR=3.2						
DMN	**Daman**	**14.52**	**122**	*e*P	**Pn**	**02 32 23.8**	**+0.2**
	comp=N,12nm,0.4s						
KKN	**Kakani**	**14.52**	**121**	*e*P	**Pn**	**02 32 23.6**	**-0.1**
	comp=N,17nm,0.5s						
PEI	**Pulchoki**	**14.75**	**121**	*e*P	**Pn**	**02 32 26.6**	**+0.1**
	comp=N,11nm,0.3s						
GUN	**Gumba**	**14.87**	**119**	*e*P	**Pn**	**02 32 26.6**	**-1.5**
	comp=N,11nm,0.3s						
AB31	**Akbulak array**	**15.54**	**332**	P	**Pn**	**02 32 32.8**	**-3.5**
	comp=N,1.4nm,0.3s,baz=159,slow=12,SNR=120						
AB31				S	**Sn**	**02 35 10.4**	**-17**
	comp=N,3.4nm,0.6s,baz=152,slow=22,SNR=9.8						
KURK	**Kurchatov**	**15.59**	**18**	P	**Pn**	**02 32 36.0**	**-0.9**
	comp=N,0.0nm,0.3s,baz=207,slow=10,SNR=2.8						
BVAR	**Borovoye Array**	**16.96**	**358**	P	**Pn**	**02 32 52.7**	**-1.2**
	comp=N,0.1nm,0.3s,baz=166,slow=13,SNR=2.8						
AKTK	**Aktyubinsk**	**17.23**	**331**	P	**Pn**	**02 32 56.4**	**-0.7**
AKTO	**Aktyubinsk**	**17.23**	**331**	⇑P	**Pn**	**02 32 56.5**	**-0.6**
	comp=N,0.9nm,0.8s						
AKTO				⇓S	**S**	**02 35 57.7**	**-11**
	comp=N,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**17.23**	**331**	P	**Pn**	**02 32 56.4**	**-0.7**
	comp=N,0.7nm,0.3s,baz=144,slow=15,SNR=18						
ZALV	**Zalesovo Beam**	**20.25**	**24**	P	**P**	**02 33 30.6**	**+0.8**
	comp=N,1.5nm,0.4s,baz=211,slow=10,SNR=6.4						
ARU	**Arti**	**22.09**	**341**	*e*P	**P**	**02 33 49.1**	**-0.3**
	comp=N,3.8nm,0.4s,mb4.1						
ULN	**Ulaanbaatar**	**28.90**	**55**	*e*P	**P**	**02 34 52.2**	**+0.4**
	comp=N,1.1nm,0.6s,mb3.7						
BRTR	**Keskin Array B**	**29.71**	**289**	P	**P**	**02 34 59.6**	**+0.4**
	comp=N,0.3nm,0.7s,mb3.0,baz=91,slow=7.4,SNR=3.2						
AKASG	**Malin Array Be**	**33.34**	**309**	P	**P**	**02 35 30.7**	**-0.1**
	comp=N,0.9nm,0.5s,mb3.8,baz=82,slow=7.7,SNR=4.7						
FINES	**FINESS Array B**	**37.93**	**326**	P	**P**	**02 36 10.2**	**+0.3**
	comp=N,1.5nm,0.7s,mb3.9,baz=120,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**41.60**	**338**	P	**P**	**02 36 41.7**	**+1.5**
	comp=N,3.7nm,1.0s,mb4.1,baz=105,slow=8.9,SNR=4.7						
ARCES	**ARCESS Array B**	**41.60**	**338**	P	**P**	**02 36 41.7**	**+1.5**
BRG	**Berggiesshubel**	**43.01**	**309**	*e*(P)	**P**	**02 36 54.4**	**+2.6**
	comp=N,2.5nm,0.7s,mb4.1						
NB2	**NORSAR Subarra**	**44.82**	**323**	P	**P**	**02 37 05.7**	**-0.4**
	comp=Z,0.9nm,0.4s,mb3.9,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.82**	**323**	P	**P**	**02 37 05.5**	**-0.6**
	comp=Z,1.0nm,0.4s,mb3.9,baz=97,slow=7.8,SNR=7.1						
TORD	**Torodi Ar. Bea**	**65.86**	**269**	P	**P**	**02 39 35.8**	**-2.0**
	comp=Z,0.9nm,0.9s,mb3.6,baz=50,slow=6.1,SNR=10						
YKA	**Yellowknife Ar**	**81.67**	**3**	P	**P**	**02 41 09.9**	**+0.7**
	comp=Z,0.2nm,0.4s,mb3.3,baz=350,slow=5.4,SNR=6.2						

*ISCJB **16** 02:29:12.8±0.4, 39°.88N±0°.02×17°.01E±0°.04, h10^{km}, Error ellipse: s-maj=4.5km s-min=3.1km az=3.8*
*CSEM **16** 02:29:12.2±0.2, 39°.84N×16°.99E, h20^{km}, ML3.5/6, Error ellipse: s-maj=3.7km s-min=2.3km az=98.0*
*ROM **16** 02:29:13.4±0.2, 39°.86N×17°.00E, h12^{km}, Md2.8/8, Ml2.4/23, Error ellipse: s-maj=3.1km s-min=1.9km az=78.0*
ISC 16 02:29:12.9±0.6,**39°.87N**±0°.02×**17°.05E**±0°.05,**h6**^{km}±5^{km}, **n53,** σ1§**11**/72,**Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORI	**Oriolo Calabro**	**0.50**	**293**	Pg	**Pg**	**02 29 22.8**	**+0.4**
ORI				Sg	**Sg**	**02 29 29.7**	**+0.8**
	878nm,0.5s						
ORI	**Oriolo Calabro**	**0.50**	**293**	Pg	**Pg**	**02 29 22.8**	**+0.4**
ORI				Sg	**Sg**	**02 29 29.7**	**+0.8**
	878nm,0.5s						
TAR1	**Taranto**	**0.68**	**16**	*e*Pg	**Pg**	**02 29 26.0**	**+0.1**
TAR1				*e*Sg	**Sg**	**02 29 38.6**	**+3.9**
CRAC	**Craco**	**0.68**	**317**	Pg	**Pg**	**02 29 26.4**	**+0.5**
CRAC				Sg	**Sg**	**02 29 36.6**	**+1.8**
	299nm,0.8s						
CRAC	**Craco**	**0.68**	**317**	Pg	**Pg**	**02 29 26.4**	**+0.5**
CRAC				Sg	**Sg**	**02 29 36.6**	**+1.8**
	299nm,0.8s						
TIP	**Timpagrande**	**0.73**	**198**	Pg	**Pg**	**02 29 26.6**	**-0.2**
	83nm,0.9s						
TIP	**Timpagrande**	**0.73**	**198**	Pg	**Pg**	**02 29 26.6**	**-0.2**
	83nm,0.9s						
LTRZ	**Laterza**	**0.75**	**347**	Pg	**Pg**	**02 29 27.1**	**-0.2**
LTRZ				Sg	**Sg**	**02 29 38.2**	**+1.2**
	262nm,0.3s						
LTRZ	**Laterza**	**0.75**	**347**	Pg	**Pg**	**02 29 27.1**	**-0.2**
LTRZ				Sg	**Sg**	**02 29 38.2**	**+1.2**
	262nm,0.3s						
SCHR	**S. Chirico Rap**	**0.81**	**294**	Pg	**Pg**	**02 29 28.3**	**-0.2**
	73nm,0.7s						
SCHR	**S. Chirico Rap**	**0.81**	**294**	Pg	**Pg**	**02 29 28.3**	**-0.2**
	73nm,0.7s						
MATE	**Matera**	**0.82**	**342**	Pg	**Pg**	**02 29 28.0**	**-0.6**
	159nm,0.6s						
MATE	**Matera**	**0.82**	**342**	Pg	**Pg**	**02 29 28.0**	**-0.6**
	159nm,0.6s						
MIGL	**Miglionico**	**0.86**	**328**	Pg	**Pg**	**02 29 28.9**	**-0.6**
MIGL				Sg	**Sg**	**02 29 42.0**	**+1.3**
	392nm,0.7s						
MIGL	**Miglionico**	**0.86**	**328**	Pg	**Pg**	**02 29 28.9**	**-0.6**
MIGL				Sg	**Sg**	**02 29 42.0**	**+1.3**
	392nm,0.7s						
SERS	**Sersale**	**0.88**	**198**	Pg	**Pg**	**02 29 29.1**	**-0.6**
	40nm,0.4s						
SERS	**Sersale**	**0.88**	**198**	Pg	**Pg**	**02 29 29.1**	**-0.6**
	40nm,0.4s						
CARO	**Carolei**	**0.89**	**226**	Pg	**Pg**	**02 29 29.0**	**-0.9**
	257nm,0.8s						
CARO	**Carolei**	**0.89**	**226**	Pg	**Pg**	**02 29 29.0**	**-0.9**
	257nm,0.8s						
NOCI	**Noci**	**0.92**	**1**	Pg	**Pg**	**02 29 30.1**	**-0.3**
NOCI				Sg	**Sg**	**02 29 44.4**	**+2.1**
	272nm,0.4s						
NOCI	**Noci**	**0.92**	**1**	Pg	**Pg**	**02 29 30.1**	**-0.3**
NOCI				Sg	**Sg**	**02 29 44.4**	**+2.1**
	272nm,0.4s						
SIRI	**Monte Sirino -**	**0.96**	**289**	Pg	**Pg**	**02 29 30.0**	**-1.2**
	120nm,0.5s						
SIRI	**Monte Sirino -**	**0.96**	**289**	Pg	**Pg**	**02 29 30.0**	**-1.2**
	120nm,0.5s						
SG1	**Sgolgore (BA)**	**1.01**	**344**	*e*Pg	**Pg**	**02 29 31.6**	**-0.6**
SG1				*e*Sg	**Sg**	**02 29 49.6**	**+4.4**
MCEL	**Monticello**	**1.06**	**296**	Pg	**Pg**	**02 29 31.6**	**-1.5**
	135nm,0.6s						
MCEL	**Monticello**	**1.06**	**296**	Pg	**Pg**	**02 29 31.6**	**-1.5**
	135nm,0.6s						
MTSN	**Montesano sull**	**1.07**	**292**	Pg	**Pg**	**02 29 31.4**	**-1.9**
	138nm,0.6s						
MTSN	**Montesano sull**	**1.07**	**292**	Pg	**Pg**	**02 29 31.4**	**-1.9**
	138nm,0.6s						
AMUR	**Altamura**	**1.09**	**342**	Pg	**Pg**	**02 29 33.2**	**-0.5**
	64nm,0.3s						
AMUR	**Altamura**	**1.09**	**342**	Pg	**Pg**	**02 29 33.2**	**-0.5**
	64nm,0.3s						
SCTE	**Santa Cesarea**	**1.11**	**79**	Pg	**Pn**	**02 29 34.6**	**-0.3**
SCTE				Sg	**Sn**	**02 29 50.8**	**+0.3**
	133nm,0.5s						
SCTE	**Santa Cesarea**	**1.11**	**79**	Pg	**Pn**	**02 29 34.6**	**-0.3**
SCTE				Sg	**Sn**	**02 29 50.8**	**+0.3**
	133nm,0.5s						
MGR	**Morigerati**	**1.18**	**283**	Pg	**Pn**	**02 29 33.7**	**-2.1**
	74nm,0.6s						
MGR	**Morigerati**	**1.18**	**283**	Pg	**Pn**	**02 29 33.7**	**-2.1**
	74nm,0.6s						
BAI	**Bari**	**1.24**	**354**	*e*Pg	**Pn**	**02 29 36.6**	**-0.1**
BAI				*e*Sg	**Sn**	**02 29 55.0**	**+1.3**
BULG	**Bulgheria - Ca**	**1.30**	**280**	Pg	**Pn**	**02 29 37.2**	**-0.3**
	61nm,0.5s						
BULG	**Bulgheria - Ca**	**1.30**	**280**	Pg	**Pn**	**02 29 37.2**	**-0.3**
	61nm,0.5s						
MRVN	**Minervino Murg**	**1.35**	**332**	Pg	**Pn**	**02 29 38.6**	**+0.4**
MRVN	**Minervino Murg**	**1.35**	**332**	Pg	**Pn**	**02 29 38.6**	**+0.4**
PLAC	**Placanica**	**1.50**	**199**	Pg	**Pn**	**02 29 41.1**	**+0.9**
	10.0nm,0.5s						
PLAC	**Placanica**	**1.50**	**199**	Pg	**Pn**	**02 29 41.1**	**+0.9**
	10.0nm,0.5s						
JOPP	**Joppolo**	**1.55**	**216**	Pg	**Pn**	**02 29 41.7**	**+0.8**
	20nm,0.5s						
JOPP	**Joppolo**	**1.55**	**216**	Pg	**Pn**	**02 29 41.7**	**+0.8**
	20nm,0.5s						
MSCL	**Scilla**	**1.91**	**211**	Pg	**Pn**	**02 29 47.8**	**+2.0**
	31nm,0.8s						
MSCL	**Scilla**	**1.91**	**211**	Pg	**Pn**	**02 29 47.8**	**+2.0**
	31nm,0.8s						
SOI	**Samo**	**1.96**	**204**	Pg	**Pn**	**02 29 47.9**	**+1.4**
	28nm,1.5s						
SOI	**Samo**	**1.96**	**204**	Pg	**Pn**	**02 29 47.9**	**+1.4**
	28nm,1.5s						
MPAZ	**Palizzi**	**2.08**	**203**	Pg	**Pn**	**02 29 49.4**	**+1.2**
	38nm,1.2s						
VPL	**Vulcano Piano**	**2.19**	**228**	Pg	**Pn**	**02 29 50.3**	**+0.6**
	38nm,0.7s						
STON	**Ston**	**3.04**	**9**	*e*Pn	**Pn**	**02 30 00.4**	**-1.0**
STON				Sn	**Sn**	**02 30 36.1**	**-1.9**
STON	**Ston**	**3.04**	**9**	*e*Pn	**Pn**	**02 30 00.3**	**-1.1**
STON				Sn	**Sn**	**02 30 36.1**	**-1.9**
NVLJ	**Novalja**	**4.96**	**342**	*e*Pn	**Pn**	**02 30 26.4**	**-1.4**
NVLJ				Sn	**Sn**	**02 31 22.3**	**-3.1**
NVLJ	**Novalja**	**4.96**	**342**	*e*Pn	**Pn**	**02 30 26.3**	**-1.5**
NVLJ				Sn	**Sn**	**02 31 22.2**	**-3.2**

IDC 16 02:29:46.1±1.5,**32°.39N**×**105°.23E**, **h0**^{km}, **mb3.7**/3, **mb1 3.7**/5, **mb1mx3.4**/26, **mbtmp3.6**/5, **ML3.4**/1, **Error ellipse: s-maj=45.8km s-min=25.2km az=50.0**, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.45**	**3**	Pn	Pn	02 33 25.2	-0.1
	baz=182,slow=14,SNR=3.7						
KSRS	**Korea Array**	**19.27**	**68**	P	Pn	02 34 12.2	-0.9
	0.1nm,0.3s,baz=252,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**22.68**	**316**	P	P	02 34 49.2	+0.2
	1.3nm,0.7s,baz=110,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**26.01**	**332**	P	P	02 35 20.5	-0.1
	0.6nm,0.4s,baz=126,slow=7.3,SNR=2.4						
ASAR	**Alice Springs**	**62.10**	**150**	P	P	02 40 08.9	0.0
	0.9nm,0.8s,baz=341,slow=7.2,SNR=5.0						

*ISCJB **16** 02:34:30.9±1.0, 31°.69N±0°.05×104°.38E±0°.07, h4^{km}±7^{km}, mb3.4/5, Error ellipse: s-maj=11.3km s-min=6.2km az=37.3*
*IDC **16** 02:34:31.8±1.5, 31°.60N×104°.13E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/25, mbtmp3.5/6, Error ellipse: s-maj=46.1km s-min=26.3km az=41.0*
ISC 16 02:34:33.0±1.1,**31°.68N**±0°.05×**104°.24E**±0°.07,**h4**^{km}±7^{km}, **n10,** σ0§**91**/15,**mb3.4**/5,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.87**	**208**	Pg	**Pg**	**02 34 50.3**	**+0.6**
CD2				Sg	**Sg**	**02 35 01.4**	**+0.4**
CD2				smax			
	comp=N,1μm,0.7s						
XAN	**Xi'an**	**4.59**	**58**	Pn	**Pn**	**02 35 49.1**	**+6.0**
XAN				Pg	**Pg**	**02 36 00.5**	**-0.4**
XAN				Sn	**Sn**	**02 36 39.6**	**+2.7**
XAN				Sg	**Sg**	**02 36 59.4**	**-1.0**
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,59nm,0.7s						
GYA	**Guiyang**	**5.62**	**157**	Pg	**Pn**	**02 35 58.3**	**+0.9**
GYA				Sg	**Sn**	**02 37 01.1**	**-1.3**
GYA				smax			
	comp=N,110nm,0.9s						
GYA				smax			
	comp=E,130nm,1.0s						
SONM	**Songino Array**	**16.22**	**5**	Pn	**Pn**	**02 38 26.3**

RUS	**Russkaya**	**0.71**	**264**	P	**Pb**	**02 38 47.6**	**-0.5**
RUS				S	**Sb**	**02 38 57.9**	**+0.5**
RUS	**Russkaya**	**0.71**	**264**	*e*P	**Pb**	**02 38 47.6**	**-0.5**
RUS				*i* S	**Sb**	**02 38 57.9**	**+0.5**
PET	**Petropavlovsk**	**0.81**	**310**	P	**Pb**	**02 38 48.7**	**-0.9**
PET				S	**Sb**	**02 38 59.3**	**-0.8**
PET	**Petropavlovsk**	**0.81**	**310**	⇓*i*PN	**Pb**	**02 38 48.7**	**-0.9**
PET				*i* S	**Sb**	**02 38 59.7**	**-0.4**
PET				pmax	pmax		
	comp=Z,1μm,0.4s						
PET				smax			
	comp=N,3μm,0.4s						
PET				smax			
	comp=N,3μm,0.4s						
PET	**Petropavlovsk**	**0.81**	**310**	*e*P	**Pb**	**02 38 48.7**	**-0.9**
PET				*i* S	**Sb**	**02 38 59.3**	**-0.8**
AVH	**Avacha**	**0.95**	**324**	*e*P	**Pb**	**02 38 51.2**	**-0.8**
AVH				*i* S	**Sb**	**02 39 04.3**	**+0.2**
GRL	**Gorelyy**	**0.98**	**273**	*e*P	**Pb**	**02 38 52.3**	**-0.3**
GRL				*i* S	**Sb**	**02 39 06.8**	**+1.8**
KII	**Karymskiy**	**1.54**	**355**	P	**Pn**	**02 38 59.4**	**-1.1**
KII				S	**Sn**	**02 39 17.7**	**-2.1**
KII	**Karymskiy**	**1.54**	**355**	*e*P	**Pn**	**02 38 59.4**	**-1.1**
KII				*i* S	**Sn**	**02 39 17.7**	**-2.1**
GNL	**Ganaly**	**1.58**	**319**	*e*P	**Pn**	**02 39 00.6**	**-0.5**
GNL				*i* S	**Sn**	**02 39 21.0**	**+0.1**
MIPR	**Malaya Ipel'ka**	**1.80**	**264**	*e*P	**Pn**	**02 39 04.3**	**+0.2**
MKZ	**Mys Kozlova**	**2.39**	**30**	P	**Pn**	**02 39 10.4**	**-1.8**
MKZ				S	**Sn**	**02 39 37.0**	**-3.8**
MKZ	**Mys Kozlova**	**2.39**	**30**	*e*P	**Pn**	**02 39 10.4**	**-1.8**
MKZ				*i* S	**Sn**	**02 39 37.0**	**-3.8**
SKR	**Severo-Kuril's**	**2.88**	**232**	*e*PN	**Pn**	**02 39 17.5**	**-1.4**
SKR				*e*S	**Sn**	**02 39 50.0**	**-2.8**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,250nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
ALID	**Alaid**	**3.05**	**239**	*e*P	**Pn**	**02 39 21.5**	**+0.3**
KMNR	**Kamenistaya**	**3.27**	**6**	*e*P	**Pn**	**02 39 25.0**	**+0.7**
BZMR	**Bezymyannaya**	**3.47**	**8**	*e*P	**Pn**	**02 39 28.3**	**+1.3**
KIRR	**Kirishev**	**3.47**	**6**	*e*P	**Pn**	**02 39 28.5**	**+1.4**
KPT	**Kopyto**	**3.48**	**5**	*e*P	**Pn**	**02 39 28.8**	**+1.7**
KOZ	**Kozyrevsk**	**3.56**	**2**	P	**Pn**	**02 39 30.0**	**+1.8**
KOZ	**Kozyrevsk**	**3.56**	**2**	P	**Pn**	**02 39 30.0**	**+1.8**
KOZR	**Kozyr**	**3.57**	**2**	PN	**Pn**	**02 39 30.0**	**+1.6**
ZLN	**Zelenaya**	**3.58**	**10**	*e*P	**Pn**	**02 39 29.6**	**+1.1**
CIRR	**Tsirk**	**3.67**	**9**	*e*P	**Pn**	**02 39 30.8**	**+1.1**
SRDR	**Sredinnyy**	**3.82**	**0**	*e*P	**Pn**	**02 39 31.9**	**+0.1**
KLY	**Klyuchi**	**3.85**	**8**	P	**Pn**	**02 39 33.2**	**+0.9**
KLY	**Klyuchi**	**3.85**	**8**	PN	**Pn**	**02 39 33.2**	**+0.9**
KLY	**Klyuchi**	**3.85**	**8**	P	**Pn**	**02 39 33.2**	**+0.9**
KBTR	**Krutoberegovo**	**4.14**	**25**	P	**Pn**	**02 39 36.2**	**0.0**
KBTR				S	**Sn**	**02 40 22.2**	**-1.7**
KBTR	**Krutoberegovo**	**4.14**	**25**	*e*P	**Pn**	**02 39 36.2**	**0.0**
KBTR				*i* S	**Sn**	**02 40 22.2**	**-1.7**
BDR	**Baidarnaya**	**4.17**	**12**	*e*P	**Pn**	**02 39 38.5**	**+1.9**
SMKR	**Semkarok**	**4.21**	**14**	*e*P	**Pn**	**02 39 38.6**	**+1.4**
SRKR	**Sorokina**	**4.24**	**11**	*e*P	**Pn**	**02 39 38.5**	**+0.9**
SRKR				*i* S	**Sn**	**02 40 25.1**	**-1.4**
BKI	**Bering**	**4.60**	**52**	*e*P	**Pn**	**02 39 40.7**	**-1.9**
BKI				*i* S	**Sn**	**02 40 28.1**	**-7.2**

JMA 16 02:51:24.6±0.1, 26°.82N×130°.28E, h58km, M3.6, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMZ	**Minamidaito 2**	**1.31**	**140**	P	Pn	02 51 47.1	+0.5
JMZ				*e*S	Sn	02 52 03.2	+0.1
JZK	**Kikaishima**	**1.51**	**350**	P	Pn	02 51 50.3	+0.9
JZK				*e*S	Sn	02 52 09.4	+1.3
JTK	**Tokunoshima**	**1.52**	**309**	P	Pn	02 51 49.9	+0.3
JTK				*e*S	Sn	02 52 09.0	+0.6
JAM	**Amami Oshima**	**1.69**	**339**	P	Pn	02 51 51.9	0.0
JAM				*e*S	Sn	02 52 11.4	-1.1
JOW	**Kunigami**	**1.79**	**271**	P	Pn	02 51 54.1	+0.9
JOW				*e*S	Sn	02 52 15.5	+0.6
JIH	**Iheya**	**2.08**	**276**	P	Pn	02 51 57.9	+0.8
JIH				*e*S	Sn	02 52 23.5	+1.7
JAGN	**Aguni-jima**	**2.73**	**266**	P	Pn	02 52 06.8	+0.9
JAGN				*e*S	Sn	02 52 37.7	0.0
JKE	**Kume jima 2**	**3.17**	**262**	P	Pn	02 52 12.5	+0.5
JKE				*e*S	Sn	02 52 49.5	+1.0

IDC ***16*** *03:10:01.6±0.8, 32°.65N×104°.91E, h0km, mb3.9/12, mb1 4.0/14, mb1mx3.8/28, mbtmp3.8/14, ML3.5/1, Error ellipse: s-maj=35.6km s-min=16.5km az=50.0*
BJI ***16*** *03:10:02.6, 32°.70N×105°.16E, h9km, mB4.5/9, mb4.2/6, ML4.1/14, Ms4.0/10, Ms7 3.5/11*
NEIC ***16*** *03:10:03.4±0.5, 32°.69N×105°.03E, h10km, mb4.1/8, Error ellipse: s-maj=18.7km s-min=8.6km az=223.0*
ISC 16 03:10:02.0±1.1, 32°.62N±0°.03×105°.07E±0°.04, h1km±7km, n36, σ1§27/45, mb4.0/19, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**214**	Pg	**Pg**	**03 10 40.0**	**-1.0**
CD2				Sg	**Sg**	**03 11 08.0**	**+0.6**
CD2				smax			
	comp=N,2μm,0.7s						
XAN	**Xi'an**	**3.52**	**65**	Pn	**Pn**	**03 10 55.3**	**-2.5**
XAN				Pg	**Pb**	**03 11 01.3**	**-3.8**
XAN				Sg	**Sb**	**03 11 46.5**	**-1.8**
XAN				smax			
	comp=N,420nm,0.8s						
XAN				smax			
	comp=E,250nm,1.1s						
XAN				LR	LR		
	comp=N,610nm,9.9s						
XAN				LR	LR		
	comp=E,140nm,10.4s						
XAN				LR	LR		
	comp=Z,150nm,9.9s						
LZH	**Lanzhou**	**3.61**	**344**	Pn	**Pn**	**03 11 01.6**	**+2.6**
LZH				Sn	**Sn**	**03 11 44.0**	**+1.8**
LZH				Sg	**Sg**	**03 11 58.6**	**+0.7**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,3μm,0.6s						
LZH				LR	LR		
	comp=N,2μm,4.5s						
LZH				LR	LR		
	comp=Z,2μm,6.5s						
ENH	**Enshi**	**4.44**	**121**	*e*Pn	**Pn**	**03 11 12.5**	**+2.1**
ENH				*e*Sn	**Sn**	**03 12 06.9**	**+4.2**
GYA	**Guiyang**	**6.29**	**167**	Pn	**Pn**	**03 11 36.8**	**+0.9**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,160nm,0.8s						
GTA	**Gaotai**	**8.01**	**329**	*e*P	**Pn**	**03 12 00.3**	**+0.9**
GTA				pP		03 12 03.6	
GTA				sP		03 12 06.3	
GTA				S	**Sn**	**03 13 33.9**	**+3.4**
GTA				sS		03 13 38.4	
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,58nm,4.2s						
GTA				LR	LR		
	comp=N,280nm,12.8s						
GTA				LR	LR		
	comp=E,250nm,11.6s						
GTA				LR	LR		
	comp=Z,260nm,11.6s						
HHC	**Hu-ho-hao-te**	**9.73**	**31**	*e*P	**Pn**	**03 12 22.3**	**-0.7**
HHC				pP		03 12 29.3	
HHC				sP		03 12 34.3	
HHC				S	**Sn**	**03 14 13.3**	**+0.5**
HHC				sS		03 14 23.3	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC				LR	LR		
	comp=N,240nm,4.5s						
HHC				LR	LR		
	comp=E,400nm,5.4s						
HHC				LR	LR		
	comp=Z,140nm,4.2s						
NJ2	**Nanjing**	**11.67**	**89**	*e*P	**Pn**	**03 12 50.6**	**+0.9**
NJ2				pP		03 12 53.3	
NJ2				sP		03 12 55.8	
NJ2				PP		03 12 58.6	
NJ2				S	**Sn**	**03 15 03.0**	**+2.4**
NJ2				sS		03 15 12.5	
NJ2				pmax	pmax		
	comp=Z,160nm,3.8s						
NJ2				LR	LR		
	comp=N,300nm,10.0s						
NJ2				LR	LR		
	comp=E,240nm,14.4s						
NJ2				LR	LR		
	comp=Z,190nm,12.1s						
SONM	**Songino Array**	**15.23**	**3**	Pn	**Pn**	**03 13 38.0**	**-0.1**
	baz=181,slow=13,SNR=3.4						
KSRS	**Korea Array**	**19.31**	**69**	P	**Pn**	**03 14 28.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=257,slow=10,SNR=4.9						
MK31	**Makanchi Array**	**22.43**	**316**	*e*P	**P**	**03 15 02.4**	**+0.4**
MKAR	**Makanchi Array**	**22.43**	**316**	P	**P**	**03 15 02.3**	**+0.4**
	comp=Z,2.8nm,0.7s,mb3.8,baz=117,slow=12,SNR=29						
KSH	**Kashi**	**24.44**	**295**	P	**P**	**03 15 26.1**	**+4.0**
KSH				pmax	pmax		
	comp=Z,45nm,4.2s						
TKM2	**Tokmak 2**	**25.35**	**302**	*e*P	**P**	**03 15 31.4**	**+1.0**
	comp=Z,2.4nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**25.75**	**332**	P	**P**	**03 15 32.5**	**-1.3**
	comp=Z,1.4nm,0.5s,mb3.8,baz=121,slow=9.4,SNR=5.0						
UCH	**Uchtor**	**25.98**	**300**	*e*P	**P**	**03 15 37.4**	**+1.3**
	comp=Z,5.2nm,1.1s,mb4.1						
AML	**Almayashu**	**26.56**	**300**	*e*P	**P**	**03 15 42.1**	**+0.8**
	comp=Z,2.5nm,0.5s,mb4.2						
KURK	**Kurchatov**	**26.57**	**321**	P	**P**	**03 15 40.2**	**-1.1**
	comp=Z,1.8nm,0.6s,mb4.0,baz=132,slow=8.8,SNR=4.3						
KURK	**Kurchatov**	**26.57**	**321**	*e*P	**P**	**03 15 41.6**	**+0.3**
	comp=Z,2.3nm,0.7s,mb4.0						
EKS2	**Erkin-Say**	**26.60**	**301**	*e*P	**P**	**03 15 41.9**	**+0.2**
	comp=Z,1.7nm,0.7s,mb3.9						
ABKAR	**Abkulak array**	**37.31**	**310**	*e*P	**P**	**03 17 15.2**	**-0.3**
	comp=Z,1.3nm,0.8s,mb3.7						
ARCES	**ARCESS Array B**	**56.23**	**335**	P	**P**	**03 19 42.0**	**-1.2**
	comp=Z,2.7nm,0.8s,mb4.3,baz=74,slow=8.9,SNR=5.4						
BRTR	**Keskin Array B**	**56.72**	**299**	P	**P**	**03 19 46.4**	**-0.9**
	comp=Z,0.4nm,0.7s,mb3.6,baz=87,slow=6.3,SNR=3.8						
FINES	**FINESS Array B**	**56.78**	**326**	P	**P**	**03 19 45.7**	**-1.6**
	comp=Z,0.6nm,0.4s,mb4.0,baz=73,slow=6.6,SNR=5.3						
AKASG	**Malin Array Be**	**56.96**	**313**	P	**P**	**03 19 47.1**	**-1.6**
	comp=Z,0.8nm,0.5s,mb4.0,baz=81,slow=4.4,SNR=4.6						
WRA	**Warramunga Arr**	**59.29**	**148**	P	**P**	**03 20 06.2**	**+0.8**
	comp=Z,0.9nm,0.3s,mb4.3,baz=341,slow=7.4,SNR=2.9						
WRA	**Warramunga Arr**	**59.29**	**148**	P	**P**	**03 20 06.2**	**+0.8**
ASAR	**Alice Springs**	**62.37**	**150**	P	**P**	**03 20 26.6**	**+0.3**
	comp=Z,0.5nm,0.4s,mb4.1,baz=332,slow=6.8,SNR=7.4						
NOA	**NORSAR Array B**	**63.83**	**327**	P	**P**	**03 20 33.5**	**-2.1**
	comp=Z,0.2nm,0.4s,mb3.7,baz=78,slow=8.6,SNR=2.7						
GERES	**GERESS Array B**	**67.08**	**314**	P	**P**	**03 20 56.0**	**-0.9**
	comp=Z,0.3nm,0.5s,mb3.8,baz=72,slow=6.4,SNR=3.5						
LPG	**La Plagne**	**72.82**	**313**	*e*P	**P**	**03 21 31.5**	**-0.7**
	comp=Z,4.8nm,0.5s,mb4.6						
LPG	**La Plagne**	**72.82**	**313**	*e*P	**P**	**03 21 31.5**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.6						
LPL	**La Plagne**	**72.82**	**313**	*e*P	**P**	**03 21 31.3**	**-0.9**
	comp=Z,4.6nm,0.5s,mb4.5						
LPL	**La Plagne**	**72.82**	**313**	*e*P	**P**	**03 21 31.3**	**-0.9**
	comp=Z,2.3nm,0.5s,mb4.6						
AVF	**Avril sur Loir**	**74.22**	**316**	*e*P	**P**	**03 21 39.3**	**-1.1**
YKA	**Yellowknife Ar**	**80.01**	**18**	P	**P**	**03 22 14.0**	**+1.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.1,SNR=5.6						

GUC 16 03:25:30.8±0.6, 23°.19S×70°.74W, h34km±5km, MD3.5, ML2.8, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.29**	**72**	⇓*i*P	Pb	03 25 37.7	-0.8
MECH				*i* S	Sb	03 25 43.4	-0.4
MECH				AML	AML	03 25 49.9	
	comp=N,1μm,0.3s						
ANCH	**Antofagasta**	**0.57**	**148**	⇓*i*P	Pn	03 25 42.1	-0.5
ANCH				*i* S	Sn	03 25 50.2	-0.6
ANCH				AML	AML	03 25 52.0	
	comp=E,956nm,0.2s						
PECH	**Pedro de Valdi**	**1.15**	**59**	*i* P	Pn	03 25 51.0	+0.6
PECH				*i* S	Sn	03 26 06.9	+1.9
PECH				AML	AML	03 26 07.5	
	comp=N,584nm,0.3s						
PB04	**Plate Boundary**	**1.48**	**52**	⇑*i*P	Pn	03 25 48.8	-6.2
PB04				*i* S	Sn	03 26 02.9	-10
PB04				AML	AML	03 26 05.6	
	comp=N,386nm,0.3s						
PB01	**Plate Boundary**	**2.44**	**29**	AML	AML	03 26 49.2	
	comp=E,80nm,0.4s						
HMBC	**Humberston**	**3.01**	**16**	AML	AML	03 27 09.9	
	comp=N,51nm,0.1s						

IDC 16 03:31:58.6±1.5, 31°.43N×104°.15E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.3/3, Error ellipse: s-maj=83.2km s-min=28.6km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.76**	**319**	P	P	03 37 02.5	+0.2
	0.6nm,0.9s,baz=119,slow=9.9,SNR=4.8						
WRA	**Warramunga Arr**	**58.73**	**146**	P	P	03 41 58.3	0.0
	0.5nm,0.4s,baz=338,slow=7.8,SNR=10.0						
YKA	**Yellowknife Ar**	**81.37**	**17**	P	P	03 44 16.8	0.0
	0.1nm,0.6s,baz=331,slow=5.6,SNR=2.7						

ISCJB ***16*** *03:34:24.8±0.9, 31°.37N±0°.02×103°.97E±0°.02, h4km±5km, mb5.0/155, MS4.3/46, Error ellipse: s-maj=3.6km s-min=2.9km az=18.5*
IDC ***16*** *03:34:25.6±0.5, 31°.39N×103°.98E, h0km, mb4.8/27, mb1 4.8/29, mb1mx4.8/30, mbtmp4.8/29, ML3.6/1, MS4.0/22, Ms1 4.0/22, ms1mx3.9/31, Error ellipse: s-maj=14.2km s-min=10.3km az=17.0*
BJI ***16*** *03:34:26.4, 31°.39N×104°.16E, h11km, mB4.9/19, mb4.8/34, ML5.0/21, Ms4.9/53, Ms7 4.6/44*
GCMT ***16*** *03:34:27.3±0.3, 31°.37N×104°.33E, h20km±1km, MW4.8/57, Moment Tensor Solution. s24,c28; s57,c81; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}1.56±.13; $M_{\theta\theta}$-0.62±.08; $M_{\phi\phi}$-0.94±.08; $M_{r\theta}$0.59±.14; $M_{\theta\phi}$-0.71±.04; $M_{\phi r}$1.09±.16; Best double couple: $M_0$1.97300×10^16 NP1:φs225.00000°, δ26.00000°, λ101.00000°. NP2: φs32.00000°, δ64.00000°, λ85.00000°. Principal axes: T 2.0060, Plg70.0000°, Azm291.0000°; N -0.0710, Plg5.0000°, Azm35.0000°; P -1.9390, Plg19.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *03:34:27.3±0.1, 31°.38N×104°.01E, h10km, mb5.1/84 Error ellipse: s-maj=4.0km s-min=2.7km az=212.0*
MOS ***16*** *03:34:29.0±0.8, 31°.45N×104°.06E, h33km, mb5.2/71, MS4.4/24, Error ellipse: s-maj=7.3km s-min=4.0km az=117.4*
SZGRF ***16*** *03:34:31.6, 31°.45N×103°.23E, h17km, mb5.3, MS4.8, Sichuan, China*
DJA ***16*** *03:34:37, 31°.60N×104°.04E, h79km, mb5.1/19*
ISC 16 03:34:26.0±0.7, 31°.41N±0°.02×104°.00E±0°.02, h0km±4km, n525, σ0§86/530, mb5.1/155, MS4.3/46, 85C-52D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**203**	Pg	**Pg**	**03 34 38.6**	**+2.3**
CD2				Sg	**Sg**	**03 34 47.3**	**+4.0**
CD2				smax			
	comp=N,75μm,0.7s						
LZH	**Lanzhou**	**4.67**	**358**	Pn	**Pn**	**03 35 40.0**	**+2.3**
LZH				Pg	**Pg**	**03 35 54.8**	**-0.7**
LZH				Sn	**Sn**	**03 36 36.1**	**+3.5**
LZH				Sg	**Sg**	**03 36 55.0**	**-1.1**
LZH				smax			
	comp=N,2μm,1.2s						
LZH				smax			
	comp=E,2μm,1.2s						
LZH				LR	LR		
	comp=N,12μm,8.0s						
LZH				LR	LR		
	comp=Z,13μm,10.0s						
ENH	**Enshi**	**4.85**	**102**	*e*Pn	**Pn**	**03 35 41.0**	**+0.8**
ENH				*e*Pg	**Pg**	**03 35 58.8**	**-0.3**
ENH				*e*Sg	**Sg**	**03 36 59.5**	**-2.5**
XAN	**Xi'an**	**4.91**	**56**	Pn	**Pn**	**03 35 40.8**	**-0.2**
XAN				Pg	**Pb**	**03 35 51.9**	**-0.9**
XAN				Sn	**Sn**	**03 36 36.1**	**-2.4**
XAN				Sg	**Sg**	**03 36 58.8**	**-5.0**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,1μm,0.8s						
XAN				LR	LR		
	comp=N,5μm,8.9s						
XAN				LR	LR		
	comp=E,2μm,8.9s						
XAN				LR	LR		
	comp=Z,2μm,8.8s						
GYA	**Guiyang**	**5.46**	**154**	Pn	**Pn**	**03 35 48.4**	**-0.1**
GYA				Sn	**Sn**	**03 36 52.3**	**+0.3**
GYA				Sg	**Sg**	**03 37 21.6**	**+0.3**
GYA				smax			
	comp=N,2μm,1.2s						
GYA				smax			
	comp=E,2μm,1.1s						
GYA				LR	LR		
	comp=N,9μm,5.4s						
GYA				LR	LR		
	comp=E,6μm,5.6s						
GYA				LR	LR		
	comp=Z,11μm,5.7s						
KMI	**Kunming**	**6.36**	**190**	Pn	**Pn**	**03 36 02.3**	**+1.4**
KMI				Sn	**Sn**	**03 37 15.8**	**+1.6**
KMI				smax			
	comp=N,290nm,1.4s						
KMI				smax			
	comp=E,220nm,1.6s						
KMI				LR	LR		
	comp=N,6μm,7.1s						
KMI				LR	LR		
	comp=E,5μm,6.9s						
KMI				LR	LR		
	comp=Z,5μm,7.8s						
GTA	**Gaotai**	**8.68**	**338**	⇑P	**Pn**	**03 36 34.3**	**+1.5**
GTA				pP		03 36 37.6	
GTA				sP		03 36 40.3	
GTA				S	**Sn**	**03 38 13.9**	**+2.5**
GTA				sS		03 38 20.0	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,6.5s						
GTA				LR	LR		
	comp=N,8μm,11.6s						
GTA				LR	LR		
	comp=E,5μm,9.5s						
GTA				LR	LR		
	comp=Z,8μm,11.0s						
BTO	**Baotou**	**10.39**	**26**	*e*P	Px	03 37 24.8	
BTO				S	Sx	03 39 12.0	
BTO				LR	LR		
	comp=N,1μm,8.8s						
BTO				LR	LR		
	comp=E,610nm,9.3s						
LSA	**Lhasa**	**11.21**	**265**	P	**Pn**	**03 37 09.9**	**+2.5**
LSA				S	**Sn**	**03 39 11.5**	**-1.9**
LSA				LR	LR		
	comp=N,2μm,11.3s						
LSA				LR	LR		
	comp=E,2μm,10.5s						
LSA				LR	LR		
	comp=Z,2μm,10.2s						
LSA	**Lhasa**	**11.21**	**265**	*e*P	**Pn**	**03 37 09.8**	**+2.4**
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
LSA	**Lhasa**	**11.21**	**265**	*e*Pn	**Pn**	**03 37 09.8**	**+2.3**
	comp=Z,14nm,0.7s						
HHC	**Hu-ho-hao-te**	**11.23**	**31**	*e*P	**Pn**	**03 37 09.4**	**+1.7**
HHC				pP		03 37 16.4	
HHC				sP		03 37 21.3	
HHC				S	**Sn**	**03 39 14.9**	**+1.1**
HHC				sS		03 39 25.6	
HHC				SS		03 39 29.5	
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
HHC				LR	LR		
	comp=N,2μm,4.2s						
HHC				LR	LR		
	comp=E,3μm,5.7s						
HHC				LR	LR		
	comp=Z,1μm,5.3s						
TIA	**Tai'an**	**11.92**	**63**	*e*P	**Pn**	**03 37 17.0**	**-0.1**
TIA				LR	LR		
	comp=N,710nm,8.0s						
TIA				LR	LR		
	comp=E,420nm,8.0s						
SHL	**Shillong**	**12.14**	**244**	*e*P	**Pn**	**03 37 20.0**	**-0.2**
SHL				*ex*	x	03 41 04.0	
NJ2	**Nanjing**	**12.66**	**83**	*e*P	**Pn**	**03 37 28.8**	**+1.4**
NJ2				pP		03 37 31.8	
NJ2				sP		03 37 34.8	
NJ2				PP		03 37 38.0	
NJ2				S	**Sn**	**03 39 40.5**	**-8.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,240nm,4.4s						
NJ2				LR	LR		
	comp=N,2μm,15.2s						
NJ2				LR	LR		
	comp=E,3μm,11.5s						
NJ2				LR	LR		
	comp=Z,4μm,12.4s						
BJI	**Beijing**	**13.11**	**46**	P	**Pn**	**03 37 33.0**	**-0.4**
BJI				pmax	pmax		
	comp=Z,18nm,0.6s						
BJI				pmax	pmax		
	comp=Z,91nm,5.3s						
BJI				LR	LR		
	comp=N,2μm,8.7s						
BJI				LR	LR		
	comp=E,1μm,9.8s						
QIZ	**Qiongzhong**	**13.41**	**155**	P	**Pn**	**03 37 37.8**	**+0.3**
QIZ				S	**Sn**	**03 40 08.3**	**+1.0**
QIZ				pmax	pmax		
	comp=Z,15nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,180nm,4.0s						
QIZ				LR	LR		
	comp=N,2μm,12.4s						
QIZ				LR	LR		
	comp=E,1μm,8.0s						
QIZ				LR	LR		
	comp=Z,4μm,12.6s						
QIZ	**Qiongzhong**	**13.41**	**155**	*e*Pn	**Pn**	**03 37 36.5**	**-1.0**
	comp=Z,26nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.68**	**201**	Pn	**Pn**	**03 37 39.6**	**-1.7**
	baz=19,slow=11						
QZH	**Quanzhou**	**14.38**	**113**	*e*P	**Pn**	**03 37 49.8**	**-1.1**
QZH				S	**Sn**	**03 40 31.1**	**-0.1**
QZH				LR	LR		
	comp=N,6μm,7.5s						
QZH				LR	LR		
	comp=E,8μm,9.5s						
QZH				LR	LR		
	comp=Z,13μm,10.2s						
SSE	**Sheshan**	**14.71**	**87**	P	**Pn**	**03 37 59.8**	**+4.5**
SSE				S	**Sn**	**03 40 39.0**	**0.0**
SSE				pmax	pmax		
	comp=Z,53nm,1.0s						
SSE				pmax	pmax		
	comp=Z,91nm,4.7s						
SSE				LR	LR		
	comp=N,480nm,8.6s						
SSE				LR	LR		
	comp=E,1μm,8.6s						
SSE				LR	LR		
	comp=Z,2μm,9.2s						
BDT	**Bhumibol Dam**	**14.81**	**199**	P	**Pn**	**03 38 02.0**	**+5.3**
	comp=Z,27nm,0.8s						
NST	**Nakhon Sawan**	**16.05**	**194**	P	**Pn**	**03 38 13.0**	**-0.2**
GUN	**Gumba**	**16.13**	**262**	*e*P	**Pn**	**03 38 13.5**	**-0.6**
	comp=Z,158nm,0.9s						
SONM	**Songino Array**	**16.51**	**6**	Pn	**Pn**	**03 38 18.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=70						

SONM Lg 03 43 20.8
comp=Z,0.2nm,0.3s,baz=195,slow=23,SNR=5.1
SONM LR LR 03 45 29.2
comp=Z,605nm,18.3s,baz=88,slow=40
ULN Ulaanbaatar 16.60 7 *e*P **Pn 03 38 20.4 +0.4**
ULN pmax pmax
comp=Z,32nm,1.2s
ULN Ulaanbaatar 16.60 7 *e*Pn **Pn 03 38 20.4 +0.4**
comp=Z,32nm,1.2s
ULN Ulaanbaatar 16.60 7 Pn **Pn 03 38 20.7 +0.7**
SNR=16
ULN Pn **Pn 03 38 20.7 +0.7**
SNR=16
PKI Pulchoki 16.63 261 *e*P **Pn 03 38 19.6 -0.9**
comp=Z,94nm,0.7s
PKIN Phulchoki 16.64 261 *e*P **Pn 03 38 20.3 -0.3**
comp=Z,122nm,0.8s
KKN Kakani 16.68 262 *e*P **Pn 03 38 20.0 -1.1**
comp=Z,76nm,0.5s
YHNB Yeheng 16.73 109 *e*P **Pn 03 38 22.4 +0.5**
comp=Z,68nm,0.9s
TPUB Ta-pu 16.82 115 *e*P **Pn 03 38 23.9 +0.9**
comp=Z,38nm,0.8s
SSLB Suanglung 16.82 113 *e*P **Pn 03 38 22.9 0.0**
comp=Z,80nm,0.8s
DMN Daman 16.88 262 *e*P **Pn 03 38 22.4 -1.2**
comp=Z,150nm,1.0s
YULB Yu-li 17.30 113 *e*P **Pn 03 38 30.6 +1.7**
comp=Z,59nm,1.1s
TWG Pinlang 17.42 115 *e*P **Pn 03 38 30.6 +0.1**
comp=Z,55nm,0.8s
WMQ Urumqi 17.86 319 *e*P **Pn 03 38 36.8 +1.0**
WMQ sP sP 03 38 43.3 +6.6
WMQ PP 03 38 50.3
WMQ S **Sn 03 41 53.9 -1.5**
WMQ sS sS 03 41 58.9 -3.8
WMQ SS 03 42 15.0
WMQ PcP PcP 03 43 14.1 +1.5
WMQ pmax pmax
comp=Z,36nm,1.2s
WMQ pmax pmax
comp=Z,570nm,3.5s
WMQ LR LR
comp=N,3μm,8.0s
WMQ LR LR
comp=E,2μm,9.0s
WMQ LR LR
comp=Z,870nm,13.0s
SNY Shenyang 18.80 51 ⇓P **Pn 03 38 51.5 +4.1**
SNY S **Sn 03 42 15.5 -2.8**
SNY pmax pmax
comp=Z,18nm,0.7s
SNY pmax pmax
comp=Z,170nm,5.6s
SNY LR LR
comp=N,510nm,8.5s
SNY LR LR
comp=E,570nm,9.6s
SNY LR LR
comp=Z,530nm,14.4s
ZAK Zakamensk 18.96 359⇑ *i*P **Pn 03 38 49.1 -0.1**
ZAK pmax pmax
comp=Z,26nm,1.3s
TLY Talaya 20.26 359 Pn **P 03 39 05.2 +2.4**
comp=Z,100nm,0.8s,SNR=6.5
TLY Talaya 20.26 359 *e*P **P 03 39 04.2 +1.4**
TLY *e* 03 39 38.4
TLY *e*S **S 03 42 49.8 -0.9**
TLY pmax pmax
comp=Z,40nm,1.8s
TLY MLR MLR
comp=Z,955nm,11.0s,MS4.4
TLY Talaya 20.26 359 *e*P **P 03 39 04.7 +1.9**
comp=Z,16nm,0.9s
TLY Talaya 20.26 359 P **P 03 39 04.9 +2.1**
SNR=16
TLY P 03 39 04.9
SNR=16
MOY Mondy 20.36 355 *e*P **P 03 39 05.6 +1.7**
MOY pmax pmax
comp=Z,119nm,1.8s
KSRS Korea Array 20.61 66 P **P 03 39 07.0 +0.3**
comp=Z,28nm,0.8s,baz=256,slow=9.9,SNR=101
KSRS S **S 03 42 59.5 +1.6**
comp=Z,0.6nm,0.3s,baz=254,slow=13,SNR=4.1
KSRS LR LR 03 47 59.6
comp=Z,173nm,18.1s,MS3.5,baz=104,slow=40
KSRS Korea Array 20.61 66 P **P 03 39 07.0 +0.3**
KSRS S **S 03 42 59.5 +1.6**
KSRS pmax pmax
comp=Z,28nm,0.9s
KSRS smax
comp=N,1.0nm,0.3s
KSRS MLR MLR
comp=Z,173nm,18.1s,MS3.5
IRK Irkutsk 20.82 0 *e*P **P 03 39 10.2 +1.3**
IRK pmax pmax
comp=Z,196nm,1.2s
CN2 Changchun 20.95 48 ⇑P **P 03 39 10.8 +0.5**
CN2 *es*P sP 03 39 17.8 +7.3
CN2 *e*S **S 03 42 52.6 -12**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,13.0s,MS4.3
CN2 LR LR
comp=E,600nm,13.0s,MS4.3
CN2 LR LR
comp=Z,500nm,14.0s,MS4.0
HIA Hailar 21.42 29 *e*P **P 03 39 15.6 +0.2**
HIA pmax pmax
comp=Z,40nm,0.8s
HIA Hailar 21.42 29 *e*P **P 03 39 15.6 +0.2**
comp=Z,40nm,0.8s,mb4.8
JOW Kunigami 21.68 96 P **P 03 39 19.2 +0.9**
comp=Z,11nm,0.3s,mb4.8,baz=91,slow=6.0,SNR=7.5
CIT Chita 21.76 16 *e*P **P 03 39 18.1 -0.9**
CIT *e* 03 50 37.1
CIT pmax pmax
comp=Z,164nm,1.8s,mb5.2
KLP Kalpa 21.95 277 *e*P **P 03 39 21.2 -0.1**
KLP AMb AMB 03 39 29.9
comp=Z,106nm,0.7s,mb5.4
DDI Dehra Dun 22.28 274 *ex* **P 03 39 23.0 -1.8**
MK31 Makanchi Array 22.69 319 *e*P **P 03 39 29.6 +0.6**
MKAR Makanchi Array 22.69 319 P **P 03 39 29.9 +0.9**
comp=Z,156nm,1.1s,mb5.4,baz=116,slow=11,SNR=310
MKAR ScP ScP 03 46 58.2 -2.1
comp=Z,2.1nm,0.8s,baz=95,slow=5.2,SNR=8.1
MKAR Makanchi Array 22.69 319 *ce*P **P 03 39 29.8 +0.8**
MKAR pmax pmax
comp=Z,156nm,1.1s
AGRA Agra 23.08 266 *e*P **P 03 39 32.2 -1.0**
BISR Bishrakh 23.16 270 *e*P **P 03 39 34.4 +0.3**
NDI New Delhi 23.32 270 *e*P **P 03 39 34.0 -1.8**
AYAN Aya Nagar 23.45 270 *e*P **P 03 39 35.4 -1.7**
AYAN AMb AMB 03 39 38.4
comp=Z,50nm,1.0s,mb5.0
SONA Sohna 23.54 269 *e*P **P 03 39 36.5 -1.7**
SONA AMb AMB 03 39 38.8
comp=Z,55nm,1.1s,mb5.0
MDJ Mudanjiang 23.98 49 P **P 03 39 41.5 -0.5**
MDJ pP 03 39 43.8
MDJ sP sP 03 39 45.8 +3.6
MDJ S **S 03 43 59.3 -0.3**
MDJ sS sS 03 44 04.6 +4.8
MDJ ScP ScP 03 47 01.3 -2.5
MDJ PcS PcS 03 47 02.8 -0.8
MDJ pmax pmax
comp=Z,15nm,1.2s,mb4.4
MDJ pmax pmax
comp=Z,160nm,4.5s
MDJ LR LR
comp=N,310nm,13.7s,MS4.1
MDJ LR LR
comp=E,200nm,10.9s,MS4.1
MDJ LR LR
comp=Z,350nm,12.5s,MS4.0
MDJ Mudanjiang 23.98 49 *e*P **P 03 39 41.6 -0.4**
comp=Z,72nm,1.0s,mb5.2
KSH Kashi 24.15 297 P **P 03 39 47.5 +3.8**
KSH *ep*P 03 39 51.6
KSH *es*P sP 03 39 54.6 +11
KSH *e*PP 03 40 23.6
KSH *e*PcP PcP 03 43 25.6 +1.0
KSH *e*S **S 03 44 04.8 +2.3**
KSH *es*S sS 03 44 11.5 +8.8
KSH *e*SS 03 45 00.0
KSH pmax pmax
comp=Z,200nm,2.9s,mb5.1
KSH LR LR
comp=N,840nm,10.5s,MS4.7
KSH LR LR
comp=E,940nm,11.0s,MS4.7
KSH LR LR
comp=Z,560nm,12.0s,MS4.3
ULHL Ulahol 24.61 304 P **P 03 39 49.7 +1.9**
SNR=40
KHET Khetri 24.68 270 *e*P **P 03 39 46.9 -1.7**
BHPL Bhopal 24.93 258 *e*P **P 03 39 49.4 -1.5**
VLA Vladivostok 24.97 54 *e*P **P 03 39 50.0 -1.1**
VLA pmax pmax
comp=Z,45nm,0.7s,mb5.3
VLA MLR MLR
comp=Z,400nm,16.4s,MS4.0
TKM2 Tokmak 2 25.27 305 P **P 03 39 55.2 +1.4**
SNR=28
KZA Kyzart 25.27 303 P **P 03 39 56.2 +2.4**
SNR=60
KBK Karagaybulak 25.64 304 P **P 03 39 59.2 +2.0**
SNR=18
UCH Uchtor 25.84 303 P **P 03 40 01.4 +2.4**
SNR=46
FRU Bishkek 25.93 304 *i*P **P 03 40 00.0 +0.2**
FRU *i* 03 40 08.0
FRU *i* 03 40 43.0
FRU pmax pmax
comp=Z,60nm,2.0s,mb4.9
AAK Ala-Archa 25.96 304 P **P 03 40 01.1 +1.0**
comp=Z,99nm,1.0s,mb5.4,SNR=5.7
AAK Ala-Archa 25.96 304 P **P 03 40 01.0 +0.9**
comp=Z,7.6nm,0.8s,mb4.4,baz=120,slow=5.5,SNR=14
AAK LR LR 03 51 57.0
comp=Z,961nm,19.4s,MS4.3,baz=93,slow=40
AAK Ala-Archa 25.96 304 *e*P **P 03 40 01.2 +1.1**
AAK pmax pmax
comp=Z,18nm,1.0s,mb4.7
AAK Ala-Archa 25.96 304 *e*P **P 03 40 01.2 +1.2**
comp=Z,18nm,1.0s,mb4.7
AAK Ala-Archa 25.96 304 P **P 03 40 02.2 +2.1**
SNR=11
AAK P 03 40 02.2
SNR=11
AJM Ajmer 26.11 267 *e*P **P 03 39 59.4 -2.3**
USP Ospenovka 26.14 305 P **P 03 40 02.8 +1.1**
SNR=30
AML Almayashu 26.40 302 P **P 03 40 06.4 +2.3**
SNR=24
ZAA0 Zalesovo Array 26.41 334 *e*P **P 03 40 04.3 +0.2**
ZALV Zalesovo Beam 26.41 334 P **P 03 40 04.4 +0.4**
comp=Z,109nm,0.7s,mb5.6,baz=133,slow=9.3,SNR=337
ZALV LR LR 03 51 17.8
comp=Z,333nm,21.9s,MS3.8,baz=338,slow=38
ZALV Zalesovo Beam 26.41 334 P **P 03 40 04.4 +0.4**
ZALV pmax pmax
comp=Z,109nm,0.7s,mb5.6
ZALV MLR MLR
comp=Z,333nm,21.9s,MS3.8
EKS2 Erkin-Say 26.48 304 P **P 03 40 06.5 +1.8**
SNR=8.6
HYB Hyderabad 26.95 245 *i*P **P 03 40 08.0 -1.2**
KURK Kurchatov 26.95 323 P **P 03 40 09.3 +0.4**
comp=Z,454nm,1.1s,mb6.1,SNR=71
KURK Kurchatov 26.95 323 P **P 03 40 08.3 -0.6**
comp=Z,68nm,0.9s,mb5.4,baz=126,slow=8.9,SNR=200
KURK LR LR 03 51 33.1
comp=Z,663nm,19.9s,MS4.2,baz=140,slow=38
KURK Kurchatov 26.95 323 *ce*P **P 03 40 09.5 +0.6**
KURK pmax pmax
comp=Z,123nm,1.2s,mb5.5
KURK Kurchatov 26.95 323 *e*P **P 03 40 09.6 +0.6**
comp=Z,100nm,1.1s,mb5.5
KURK Kurchatov 26.95 323 P **P 03 40 09.9 +1.0**
SNR=47
KURK P 03 40 09.9
SNR=47
BOD Bodaibo 27.29 12 *e*P **P 03 40 07.4 -4.5**
BOD pmax pmax
comp=Z,8.0nm,1.4s,mb4.3
KLR Kul'dur 27.42 42 *e*P **P 03 40 09.1 -4.1**
KLR MLR MLR
comp=Z,1μm,12.0s,MS4.7
NVS Novosibirsk 27.69 334⇑ *i*P **P 03 40 15.0 -0.5**
NVS pmax pmax
comp=N,20nm,1.4s
NVS pmax pmax
comp=E,26nm,1.4s
NVS pmax pmax
comp=Z,28nm,1.4s,mb4.9
MAT Matsushiro 28.73 70 P **P 03 40 23.2 -1.8**
MAT *e*S **S 03 45 12.0 -3.2**
MJAR Matsushiro Arr 28.73 70 P **P 03 40 24.0 -1.1**
comp=Z,3.7nm,0.9s,mb4.2,baz=274,slow=8.9,SNR=8.8
MJAR PcP PcP 03 43 35.5 +0.1
comp=Z,1.0nm,0.6s,baz=269,slow=3.0,SNR=4.6
MJAR LR LR 03 51 16.3
comp=Z,100nm,19.1s,MS3.4,baz=230,slow=35
MJAR Matsushiro Arr 28.73 70 P **P 03 40 24.0 -1.1**
MJAR 03 43 35.5
MJAR pmax pmax
comp=Z,4.0nm,0.9s
MJAR pmax pmax
comp=Z,1.0nm,0.6s
MJAR MLR MLR
comp=Z,100nm,19.1s
NRGR Nerungri 29.08 24 *e*P Px 03 40 40.9
JASL Jaisalmer 29.18 270 *e*P **P 03 40 27.2 -1.9**
CLNS Chul'man 29.28 24 *e*P **P 03 40 27.9 -1.7**
CLNS *e**PP 03 40 33.3
CLNS *e* 03 41 28.0
CLNS *e*S **S 03 45 11.9 -11**
CLNS pmax pmax
comp=Z,18nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,12nm,0.8s
CLNS pmax pmax
comp=E,9.0nm,0.7s
CLNS pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
CLNS smax
comp=N,43nm,13.0s
CLNS smax
comp=E,64nm,12.1s
CLNS MLR MLR
comp=Z,656nm,12.0s,MS4.5
CLNS MLR MLR
comp=N,310nm,12.0s,MS4.4
CLNS MLR MLR
comp=E,511nm,12.0s,MS4.4
KBL Kabul 29.41 286 *e*P **P 03 40 32.9 +1.9**
KBL pmax pmax
comp=Z,58nm,1.4s,mb5.2
KBL Kabul 29.41 286 *e*P **P 03 40 32.9 +1.9**
comp=Z,58nm,1.4s,mb5.2
JHJ Hachijo jima 2 30.22 77 LR LR 03 54 26.8
comp=Z,507nm,18.1s,MS4.2,baz=175,slow=40
BVAR Borovoye Array 32.50 322 P **P 03 40 58.8 +0.7**
comp=Z,12nm,0.7s,mb5.0,baz=117,slow=9.4,SNR=67
BVAR PcP PcP 03 43 43.9 -1.1
comp=Z,3.9nm,0.6s,baz=142,slow=2.5,SNR=7.0
BVAR LR LR 03 55 12.3
comp=Z,466nm,19.2s,MS4.2,baz=114,slow=38
BVAR Borovoye Array 32.50 322 P **P 03 40 58.8 +0.7**
BVAR 03 43 43.9
BVAR pmax pmax
comp=Z,12nm,0.7s
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR MLR MLR
comp=Z,466nm,19.2s
BRVK Borovoye 32.57 322 P **P 03 40 59.9 +1.2**
comp=Z,205nm,0.8s,mb6.1,SNR=13
BRVK Borovoye 32.57 322 *ce*P **P 03 40 59.5 +0.8**
BRVK pmax pmax
comp=Z,61nm,1.7s,mb5.2
BRVK Borovoye 32.57 322 *e*P **P 03 40 58.8 +0.1**
comp=Z,26nm,0.8s,mb5.2
BRVK Borovoye 32.57 322 P **P 03 40 59.9 +1.2**
SNR=15
BRVK P 03 40 59.9
SNR=15
ASAJ Asahikawa 32.75 56 P **P 03 40 59.9 -0.5**
comp=Z,6.5nm,0.7s,mb4.7,baz=281,slow=13,SNR=6.3
ASAJ Asahikawa 32.75 56 P **P 03 40 59.9 -0.5**
ASAJ pmax pmax
comp=Z,7.0nm,0.7s
YSS Yuzh-Sakhalins 33.43 51⇓ *i*P **P 03 41 06.0 -0.3**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,400nm,15.0s,MS4.3
YSS MLR MLR
comp=E,200nm,12.0s
YSS Yuzh-Sakhalins 33.43 51 *e*P **P 03 41 06.1 -0.2**
CBIJ Chichi jima 33.48 88 LR LR 03 54 58.5
comp=E,224nm,18.9s,MS3.9,baz=144,slow=37
YAK Yakutsk 34.85 21 *e*P **P 03 41 16.7 -1.8**
YAK *e**PP 03 41 25.3
YAK *e*PPP 03 42 41.2
YAK *e*S **S 03 46 41.1 -9.1**
YAK pmax pmax
comp=Z,37nm,0.9s,mb5.3
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
YAK smax
comp=N,41nm,9.6s
YAK smax
comp=E,35nm,10.4s
YAK MLR MLR
comp=N,197nm,10.0s
YAK MLR MLR
comp=E,107nm,8.0s
YAK MLR MLR
comp=Z,283nm,10.0s,MS4.3
YAK Yakutsk 34.85 21 *e*P **P 03 41 17.2 -1.3**
comp=Z,47nm,0.9s,mb5.4
ABKT Ailbek 37.99 293 P **P 03 41 47.3 +1.7**
comp=Z,156nm,1.6s,mb5.5,SNR=7.4
ITEG Tejag 38.12 285 *e*P **P 03 41 47.3 +0.6**
SVE Sverdlovsk 39.20 323⇓ *e*P **P 03 41 56.7 +1.2**
SVE pmax pmax
comp=Z,111nm,1.1s,mb5.4
KAPI Kappang 39.21 155 *e*P **P 03 41 54.5 -1.5**
comp=Z,42nm,1.3s,mb4.9
ARU Arti 40.14 322 *c i*P **P 03 42 04.0 +0.7**
ARU *e* 03 43 34.8
ARU S **S 03 48 09.8 -0.7**
ARU SS SS 03 51 03.6 -4.1
ARU pmax pmax
comp=Z,179nm,1.7s,mb5.4
ARU Arti 40.14 322 *e*P **P 03 42 03.8 +0.5**
comp=Z,117nm,1.1s,mb5.4
SOKR Solikamsk 42.10 326 *c i*P **P 03 42 20.2 +0.8**
SOKR pmax pmax
comp=Z,130nm,0.9s,mb5.7
SOKR MLR MLR
comp=Z,490nm,15.0s,MS4.5
TIXI Tiksi 42.48 11 *e*P **P 03 42 21.0 -1.3**
TIXI pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
TIXI MLR MLR
comp=Z,560nm,14.0s,MS4.6
TIXI Tiksi 42.48 11 *e*P **P 03 42 21.1 -1.2**
comp=Z,11nm,0.6s,mb4.8
TIXI *e*PcP PcP 03 44 14.2 -0.8
SEY Seymchan 43.87 30 *ce*P **P 03 42 33.5 -0.2**
PETK Petropavlovsk- 44.04 44 P **P 03 42 34.7 -0.5**
comp=Z,13nm,0.9s,mb4.7,baz=209,slow=4.6,SNR=14
PETK LR LR 04 02 59.7
comp=Z,98nm,19.2s,MS3.7,baz=60,slow=39
PETK Petropavlovsk- 44.04 44 P **P 03 42 34.7 -0.5**
PETK pmax pmax
comp=Z,13nm,0.9s,mb4.7
PETK MLR MLR
comp=Z,98nm,19.2s,MS3.7
PET Petropavlovsk 44.60 45 *e*P **P 03 42 39.0 -0.7**
PET pmax pmax
comp=Z,19nm,0.5s,mb5.3
PET Petropavlovsk 44.60 45 *e*P **P 03 42 39.0 -0.7**
comp=Z,19nm,0.5s,mb5.3
GNI Garni 48.08 298 *e*P **P 03 43 07.4 +0.1**
GNI Garni 48.08 298 *e*P **P 03 43 08.8 +1.5**
comp=Z,7.2nm,0.7s,mb4.9
UMR Umm Al-Rimmam 48.09 283 *e*P **P 03 43 07.2 -0.3**
UMR AMb AMB 03 43 12.1
comp=Z,30nm,0.6s,mb5.6
MIB Mutribah 48.33 284 *e*P **P 03 43 09.2 -0.1**
MIB AMb AMB 03 43 10.3
comp=Z,72nm,0.8s,mb5.9
ZEI Tsey 48.34 301 *e*P **P 03 43 08.9 -0.4**
ZEI pmax pmax
comp=Z,11nm,1.4s,mb4.8
RDF Al-Radifah 48.41 282 *e*P **P 03 43 09.9 -0.1**
RDF AMb AMB 03 43 10.9
comp=Z,53nm,0.7s,mb5.8
KIV Kislovodsk 49.07 303 *e*P **P 03 43 16.5 +1.6**
KIV *i* 03 43 26.9
KIV pmax pmax
comp=Z,47nm,1.6s,mb5.3
KIV MLR MLR
comp=Z,200nm,16.0s,MS4.2
KIV Kislovodsk 49.07 303 *e*P **P 03 43 15.9 +1.0**
comp=Z,25nm,1.1s,mb5.2
KIV Kislovodsk 49.07 303 P **P 03 43 16.4 +1.5**
SNR=8.0
KIV P 03 43 16.4
SNR=8.0
VRHR Novokhopersk 49.27 313 *e*P **P 03 43 15.9 -0.4**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.5
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,60nm,0.9s
KLMR Klimovskoe 50.77 325 *c i*P **P 03 43 27.4 -0.1**
KLMR pmax pmax
comp=Z,160nm,1.4s,mb5.8
VSR Storozhevoye 50.81 313 *e*P **P 03 43 27.4 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.5s
BILL Bilibino 50.94 25 *e*P **P 03 43 27.8 -0.9**
BILL *i* 03 44 41.7
BILL pmax pmax
comp=Z,44nm,1.6s,mb5.1
BILL MLR MLR
comp=Z,300nm,17.0s,MS4.4
BILL Bilibino 50.94 25 *e*P **P 03 43 27.5 -1.2**
comp=Z,41nm,1.3s,mb5.2
MOS Moscow 51.58 319 *e*P **P 03 43 31.1 -2.5**
MOS *e* 03 45 28.8
MOS pmax pmax
comp=Z,145nm,1.1s,mb5.8
KAKA Kakadu 51.66 144 *e*P **P 03 43 32.7 -2.0**
comp=Z,17nm,1.0s,mb4.9
OBN Obninsk 52.20 318 *e*P **P 03 43 37.9 -0.4**
OBN *i* 03 43 49.1
OBN pmax pmax
comp=Z,81nm,1.6s,mb5.4
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.4
OBN Obninsk 52.20 318 *e*P **P 03 43 37.8 -0.5**
comp=Z,12nm,0.6s,mb5.0
ANN Anapa 52.68 305 *e*P **P 03 43 42.7 +0.6**
ANN *e**PP 03 43 51.1
ANN *e*S **S 03 51 07.1 -3.5**
ANN pmax pmax
comp=Z,15nm,0.6s,mb5.1
ANN MLR MLR
comp=Z,79nm,14.0s,MS3.9
MALT Malatya 53.25 297 *e*P **P 03 43 47.0 +0.6**
MALT pmax pmax
comp=Z,28nm,1.8s,mb4.9
MALT Malatya 53.25 297 *e*P **P 03 43 47.0 +0.6**
comp=Z,28nm,1.8s,mb4.9
FITZ Fitzroy Crossi 53.43 154 *e*P **P 03 43 47.4 -0.3**
comp=Z,16nm,0.9s,mb5.0
APA Apatity 53.99 333⇑ *i*P **P 03 43 50.7 -0.6**
APA *i* 03 44 06.7
APA pmax pmax

comp=Z,39nm,1.0s,mb5.4
APA MLR MLR
JOF Joensuu 54.73 328 *e*P **P 03 43 55.3 -1.4**
JOF pmax pmax
comp=Z,42nm,0.6s,mb5.7
JOF Joensuu 54.73 328 *e*p **P 03 43 55.3 -1.4**
comp=Z,42nm,0.6s,mb5.6
KEV Kevo 56.42 336 *e*P **P 03 44 07.1 -1.7**
KEV pmax pmax
comp=Z,41nm,0.6s,mb5.6
KEV Kevo 56.42 336 *e*P **P 03 44 08.7 -0.1**
comp=Z,46nm,0.7s,mb5.6
KEV Kevo 56.42 336 *e*p **P 03 44 07.1 -1.7**
comp=Z,41nm,0.6s,mb5.6
BR131 Keskin Array S 56.52 299 *e*P **P 03 44 10.1 +0.1**
comp=Z,2.2nm,0.7s,mb4.3
BRTR Keskin Array B 56.52 299 P **P 03 44 09.8 -0.2**
comp=Z,3.0nm,0.8s,mb4.4,baz=100,slow=7.1,SNR=18
BRTR PcP PcP 03 45 06.0 -0.8
comp=Z,1.3nm,0.8s,baz=104,slow=5.2,SNR=3.8
BRTR LR LR 04 14 43.8
comp=Z,50nm,19.1s,MS3.6,baz=228,slow=43
BRTR Keskin Array B 56.52 299 *ce*P **P 03 44 09.8 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 56.95 336 P **P 03 44 12.5 -0.1**
comp=Z,24nm,0.7s,mb5.4,baz=80,slow=7.6,SNR=76
ARCES PcP PcP 03 45 07.4 -0.5
comp=Z,3.5nm,0.5s,baz=76,slow=5.1,SNR=6.9
ARCES LR LR 04 08 57.6
comp=Z,85nm,21.9s,MS3.8,baz=200,slow=36
ARCES ARCESS Array B 56.95 336 P **P 03 44 12.5 -0.1**
ARCES 03 45 07.4
ARCES pmax pmax
comp=Z,24nm,0.7s
ARCES pmax pmax
comp=Z,4.0nm,0.5s
ARCES MLR MLR
comp=Z,85nm,21.9s
ARE0 ARCESS Array S 56.95 336 *e*P **P 03 44 12.0 -0.6**
MMAI Mount Meron Ar 57.09 291 LR LR 04 13 48.7
comp=Z,76nm,19.4s,MS3.8,baz=45,slow=41
KAF Kangasniemi 57.09 327 *e*P **P 03 44 11.9 -1.8**
KAF pmax pmax
comp=Z,27nm,0.6s,mb5.5
KAF Kangasniemi 57.09 327 *e*p **P 03 44 11.9 -1.8**
comp=Z,27nm,0.6s,mb5.5,baz=84,slow=6.9
AKASG Malin Array Be 57.11 313 P **P 03 44 13.3 -0.7**
comp=Z,4.9nm,0.5s,mb4.8,baz=70,slow=6.4,SNR=25
AKASG LR LR 04 09 58.3
comp=Z,271nm,19.1s,MS4.4,baz=60,slow=37
AKASG Malin Array Be 57.11 313 P **P 03 44 13.4 -0.6**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG MLR MLR
comp=Z,271nm,19.1s
AKBB Malin Array Si 57.11 313 *e*P **P 03 44 13.5 -0.5**
KIEV Kiev 57.12 313 *e*P **P 03 44 13.2 -0.9**
KIEV pmax pmax
comp=Z,28nm,1.3s,mb5.1
KIEV Kiev 57.12 313 *e*P **P 03 44 13.2 -0.9**
comp=Z,28nm,1.3s,mb5.1
FINES FINESS Array B 57.27 326 P **P 03 44 14.8 -0.2**
comp=Z,45nm,0.8s,mb5.6,baz=90,slow=7.8,SNR=122
FINES FINESS Array B 57.27 326 P **P 03 44 14.8 -0.1**
FINES pmax pmax
comp=Z,45nm,0.8s
IDID Didziasalis 57.77 319 *e*P **P 03 44 18.9 +0.3**
KTK1 Kautokeino 57.78 335 *e*P **P 03 44 18.5 +0.1**
NACGM Naroch 57.82 318 *e* **P 03 44 16.0 -3.0**
ISAL Salakas 58.08 319 *e*P **P 03 44 20.9 +0.2**
KIS Kishinev 58.15 309 *e*P **P 03 44 19.0 -2.4**
KIS LRM 04 10 30.0
comp=Z,200nm,14.0s
COEN Coen 58.72 134 *e*P **P 03 44 25.8 +0.1**
comp=Z,137nm,0.8s,mb6.0
WRAB Tennant Creek 58.77 146 P **P 03 44 26.2 +0.2**
comp=Z,339nm,0.7s,SNR=13
WRAB Tennant Creek 58.77 146 *e*P **P 03 44 25.6 -0.4**
WRAB pmax pmax
comp=Z,36nm,0.7s,mb5.5
WRAB Tennant Creek 58.77 146 *e*P **P 03 44 25.6 -0.4**
comp=Z,36nm,0.7s,mb5.5
WRA Warramunga Arr 58.77 146 P **P 03 44 26.2 +0.3**
comp=Z,25nm,0.9s,mb5.2,baz=339,slow=7.7
WRA Warramunga Arr 58.77 146 P **P 03 44 26.2 +0.2**
WRA pmax pmax
comp=Z,25nm,0.9s
TRO Tromso 59.24 336 *e*P **P 03 44 28.1 -0.5**
HARR Harsova 59.32 306 ⇑P **P 03 44 29.5 -0.1**
HARR Harsova 59.32 306 ⇑*i*P **P 03 44 29.5 -0.1**
VRI Vrincioaia 59.83 308 ⇓P **P 03 44 33.4 +0.3**
VRI Vrincioaia 59.83 308 ⇓*i*P **P 03 44 33.4 +0.3**
PLOR Plostina 59.88 308 ⇓P **P 03 44 33.4 -0.1**
PLOR Plostina 59.88 308 ⇓*i*P **P 03 44 33.4 -0.1**
SUW Suwalki 60.06 318 *e*P **P 03 44 34.3 -0.2**
BURAR Bucovina Array 60.37 310 ⇓P **P 03 44 37.1 +0.3**
BURAR Bucovina Array 60.37 310 ⇓*i*P **P 03 44 37.1 +0.3**
BUR08 Bucovina Ar. S 60.37 310 *e*P **P 03 44 36.5 -0.3**
MLR Muntele Rosu 60.46 308 ⇓P **P 03 44 37.4 0.0**
MLR Muntele Rosu 60.46 308 ⇓*i*P **P 03 44 37.4 0.0**
LVV L'vov 60.56 313 *e*P **P 03 44 37.5 -0.5**
VOIR 61.08 308 ⇓P **P 03 44 42.9 +1.3**
VOIR 61.08 308 ⇓*i*P **P 03 44 42.9 +1.3**
KWP Kalwaria Pacla 61.44 313 *e*P **P 03 44 44.4 +0.4**
KWP Kalwaria Pacla 61.44 313 *e*P **P 03 44 44.2 +0.2**
comp=Z,61nm,1.1s,mb5.7
KWP Kalwaria Pacla 61.44 313 ⇑*i*P **P 03 44 44.2 +0.2**
MOR8 Moi Rana 61.54 332 *e*P **P 03 44 42.6 -1.8**
MOR8 AMB AMB 03 44 43.5
comp=Z,38nm,0.7s,mb5.8
ASAR Alice Springs 61.80 149 P **P 03 44 46.8 +0.1**
comp=Z,7.5nm,0.9s,mb4.9,baz=330,slow=6.1,SNR=46
ASAR Alice Springs 61.80 149 P **P 03 44 46.8 +0.2**
ASAR pmax pmax
comp=Z,8.0nm,0.9s
KOLS Kolonicke sedl 61.90 312 *e*P **P 03 44 47.2 +0.1**
KOLS pmax pmax
comp=Z,14nm,1.7s,mb4.9
KOLS Kolonicke sedl 61.90 312 *e*P **P 03 44 47.2 +0.1**
comp=Z,14nm,1.7s,mb4.9
KOLS Kolonicke sedl 61.90 312 *e*P **P 03 44 47.2 +0.1**
TRPA Tarpa 61.96 311 ⇓*i*P **P 03 44 47.5 -0.1**
UZH Uzhgorod 61.98 312 ⇑*i*P **P 03 44 47.6 0.0**
UZH *e* 03 44 55.6
STHS Stebnicka Huta 62.41 313 *e*P **P 03 44 50.3 -0.3**
STHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.7
STHS Stebnicka Huta 62.41 313 *e*P **P 03 44 50.3 -0.3**
comp=Z,5.5nm,1.3s,mb4.6
STHS Stebnicka Huta 62.41 313 *e*P **P 03 44 50.3 -0.3**
NIE Niedzica 62.99 313 *e*P **P 03 44 55.5 +1.1**
OJC Ojcow 63.07 314 *i* P **P 03 44 54.8 -0.1**
KECS Kecovo 63.17 312 *e*P **P 03 44 55.9 +0.3**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 63.17 312 *e*P **P 03 44 55.9 +0.3**
comp=Z,2.6nm,0.8s,mb4.4
KECS Kecovo 63.17 312 *e*P **P 03 44 55.9 +0.3**
PSZ Piszkesteto 63.72 312 *e*P **P 03 44 59.8 +0.5**
PSZ pmax pmax
comp=Z,41nm,1.8s,mb5.4
PSZ Piszkesteto 63.72 312 *e*P **P 03 44 59.8 +0.5**
comp=Z,41nm,1.8s,mb5.4
OKC Ostrava-Krasne 64.20 314 *e*P **P 03 45 02.0 -0.4**
OKC MLR MLR
comp=Z,400nm,14.4s,MS4.7
OKC Ostrava-Krasne 64.20 314 *e*P **P 03 45 02.0 -0.4**
OKC AMS AMS 04 14 00.0
comp=Z,400nm,14.4s
VYHS Vyhne 64.21 313 *e*P **P 03 45 02.8 +0.3**
VYHS pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
VYHS Vyhne 64.21 313 *e*P **P 03 45 02.8 +0.3**
comp=Z,8.1nm,1.2s,mb4.8
VYHS Vyhne 64.21 313 *e*P **P 03 45 02.8 +0.3**
NB2 NORSAR Subarra 64.36 327 P **P 03 45 02.1 -1.1**
comp=Z,18nm,0.6s,mb5.5,baz=74,slow=6.9
NOA NORSAR Array B 64.36 327 P **P 03 45 02.2 -1.0**
comp=Z,14nm,0.6s,mb5.4,baz=73,slow=6.4,SNR=79
NOA PP PP 03 47 25.2 +0.9
comp=Z,4.8nm,0.9s,baz=68,slow=8.3,SNR=5.5
NOA LR LR 04 14 38.0
comp=Z,167nm,18.3s,MS4.3,baz=130,slow=38

NOA NORSAR Array B 64.36 327 P **P 03 45 02.2 -1.0**
NOA 03 47 25.2
NOA pmax pmax
comp=Z,15nm,0.6s
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA MLR MLR
comp=Z,167nm,18.3s
NOA NORSAR Array B 64.36 327 P **P 03 45 02.2 -1.1**
NOA PP PP 03 47 25.2 +0.9
NOA LR LR 04 14 38.0
BSD Bornholm Skovb 64.39 320 ⇑*i*P **P 03 45 02.5 -1.0**
BSD pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
BSD Bornholm Skovb 64.39 320 ⇑*i*P **P 03 45 02.5 -1.0**
comp=Z,8.1nm,0.8s,mb5.0
KOLL Kolacno 64.45 313 *e*P **P 03 45 04.6 +0.5**
KOLL Kolacno 64.45 313 *e*P **P 03 45 04.6 +0.5**
NAO01 NORSAR Array S 64.57 327 *e*P **P 03 45 03.2 -1.4**
comp=Z,5.6nm,0.6s,mb5.0
MORC Moravsky Berou 64.59 314 ⇑P **P 03 45 05.0 0.0**
MORC Moravsky Berou 64.59 314 *e*P **P 03 45 04.9 -0.1**
comp=Z,5.5nm,0.6s,mb5.0
MORC Moravsky Berou 64.59 314 ⇑*i*P **P 03 45 04.9 -0.1**
OSL Oslo 64.95 326 *e*P **P 03 45 06.5 -0.7**
KSP Ksiaz 65.00 316 *e*P **P 03 45 07.9 +0.3**
KSP Ksiaz 65.00 316 *e*P **P 03 45 07.8 +0.2**
PKSM Moragy 65.09 310 ⇑P **P 03 45 08.0 -0.3**
PKSM Moragy 65.09 310 ⇑*i*P **P 03 45 08.0 -0.3**
DPC Dobruska-Polom 65.14 315 *e*P **P 03 45 09.0 +0.5**
DPC *ep*P 03 45 13.9
DPC AMS AMS 04 14 40.0
comp=Z,500nm,15.9s
UPC Upice 65.28 315 *e*P **P 03 45 09.0 -0.4**
UPC *ep*P 03 45 14.4
CTA Charters Tower 65.30 136 *e*P **P 03 45 09.5 -0.4**
comp=Z,6.5nm,1.1s,mb4.8
CTAO Charters Tower 65.30 136 *e*P **P 03 45 09.6 -0.3**
CTAO pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CTAO Charters Tower 65.30 136 *e*P **P 03 45 09.6 -0.3**
comp=Z,7.9nm,0.9s,mb4.9
VRAC Vranov 65.33 314 ⇓P **P 03 45 10.4 +0.6**
VRAC Vranov 65.33 314 ⇓*i*P **P 03 45 10.4 +0.6**
COP Copenhagen 65.53 322 *i* P **P 03 45 10.1 -0.9**
COP pmax pmax
comp=Z,19nm,0.8s,mb5.4
COP Copenhagen 65.53 322 *i* P **P 03 45 10.1 -0.9**
comp=Z,19nm,0.8s,mb5.4
TREC Trest 66.02 314 *e*P **P 03 45 14.3 +0.1**
TREC MLR MLR
comp=Z,400nm,20.7s,MS4.6
TREC Trest 66.02 314 *e*P **P 03 45 14.3 +0.1**
TREC AMS AMS 04 14 50.0
comp=Z,400nm,20.7s
ALE Alert 66.11 358 P **P 03 45 14.0 -0.4**
comp=Z,118nm,0.8s,mb6.2,SNR=10
PVCC Panska Ves 66.13 316 *e*P **P 03 45 15.2 +0.3**
PVCC MLR MLR
comp=Z,400nm,14.6s,MS4.8
PVCC Panska Ves 66.13 316 *e*P **P 03 45 15.2 +0.3**
PVCC AMS AMS 04 15 00.0
comp=Z,400nm,14.6s
CSNA Conrad Observa 66.27 313 ⇑*i*P **P 03 45 16.2 +0.3**
comp=Z,13nm,1.3s,mb5.0
PRU Pruhonice 66.34 315 *e*P **P 03 45 16.6 +0.3**
PRU *e* 03 45 26.1
PRU MLR MLR
comp=Z,500nm,18.8s,MS4.8
PRU Pruhonice 66.34 315 *e*P **P 03 45 16.6 +0.3**
PRU *ex* x 03 45 26.1
PRU AMS AMS 04 15 10.0
comp=Z,500nm,18.8s
BRG Berggiesshubel 66.38 316 *e*P **P 03 45 16.6 +0.1**
comp=Z,29nm,1.5s,mb5.3
BRG Berggiesshubel 66.38 316 *e*P **P 03 45 16.4 -0.1**
comp=Z,12nm,0.8s,mb5.2
BRG *i* 03 45 20.9
comp=Z,14nm,1.2s
BRG
comp=N,157nm,15.3s
BRG
comp=E,284nm,15.0s
BRG
comp=Z,424nm,18.5s
BRG Berggiesshubel 66.38 316 *e*P **P 03 45 16.4 -0.1**
BRG pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
BRG pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
BRG MLR MLR
comp=N,94nm,15.3s,MS4.4
BRG MLR MLR
comp=E,170nm,15.0s,MS4.4
BRG MLR MLR
comp=Z,254nm,18.5s,MS4.5
DAG Danmarks Havn 66.53 348 *e*P **P 03 45 15.0 -2.0**
DAG Danmarks Havn 66.53 348 *i* P **P 03 45 15.0 -2.0**
CLL Collm 66.78 317 *e*P **P 03 45 18.6 -0.4**
comp=Z,21nm,1.3s,mb5.2
CLL Collm 66.78 317 ⇑*i*P **P 03 45 18.5 -0.5**
CLL *e* 03 45 29.0
CLL pmax pmax
comp=Z,21nm,1.3s,mb5.2
CLL MLR MLR
comp=Z,300nm,17.4s,MS4.6
CLL Collm 66.78 317 ⇑*i*P **P 03 45 18.5 -0.5**
comp=Z,21nm,1.3s,mb5.2
CLL *i* 03 45 23.0
CLL *e* 03 45 29.0
CLL LR LR
comp=Z,300nm,17.4s,MS4.6
CLL Collm 66.78 317 ⇑*i*P **P 03 45 18.5 -0.5**
comp=Z,21nm,1.3s,mb5.2
CLL *e*SSS 03 01 42.0
CLL *i* pP 03 45 23.0
CLL *e* 03 45 29.0
CLL *e* 03 45 57.0
CLL *e*PP PP 03 47 45.0 -0.6
CLL *e*(SS) 03 58 54.0
TTA Tatalina 66.84 29 *e*P **P 03 45 19.3 0.0**
MUD Monsted U'grnd 66.96 323 ⇑*i*P **P 03 45 20.1 0.0**
MUD pmax pmax
comp=Z,18nm,1.1s,mb5.2
MUD Monsted U'grnd 66.96 323 ⇑*i*P **P 03 45 20.1 0.0**
comp=Z,18nm,1.1s,mb5.2
PERS Pernice 67.22 312 *i* P **P 03 45 21.6 -0.3**
KHC Kasperske Hory 67.24 315 *e*P **P 03 45 21.9 -0.2**
comp=Z,16nm,1.5s,mb5.0
KHC Kasperske Hory 67.24 315 *e*P **P 03 45 21.9 -0.1**
KHC *ep*P 03 45 27.0
KHC AMS AMS 04 16 00.0
comp=Z,500nm,15.4s
SOKA Soboth 67.25 312 ⇑*i*P **P 03 45 22.0 -0.2**
comp=Z,12nm,1.2s,mb5.0
GEC2 GERESS Array S 67.27 314 *e*P **P 03 45 22.4 +0.2**
comp=Z,16nm,1.4s,mb5.1
GEC2 GERESS Array S 67.27 314 *e*P **P 03 45 22.4 +0.2**
GEC2 pmax pmax
comp=Z,16nm,1.4s,mb5.1
GERES GERESS Array B 67.27 314 P **P 03 45 22.2 0.0**
comp=Z,2.9nm,0.6s,mb4.7,baz=64,slow=6.1,SNR=27
GERES LR LR 04 16 23.5
comp=Z,354nm,20.2s,MS4.6,baz=216,slow=37
GERES GERESS Array B 67.27 314 P **P 03 45 22.2 0.0**
GERES pmax pmax
comp=Z,3.0nm,0.6s
GERES MLR MLR
comp=Z,354nm,20.2s
MOA Molln 67.30 313 ⇑*i*P **P 03 45 22.6 +0.2**
comp=Z,11nm,1.5s,mb4.9
BSEG Bad Segeberg 67.31 320 *e*P **P 03 45 23.1 +0.7**
comp=Z,37nm,0.9s,mb5.6
TANN Tannenbergstha 67.43 316 *e*P **P 03 45 23.3 +0.1**
comp=Z,19nm,1.5s,mb5.1
NKC Novy Kostel 67.50 316 *e*P **P 03 45 23.6 -0.1**
NKC MLR MLR
comp=Z,400nm,12.5s,MS4.8
NKC Novy Kostel 67.50 316 *e*P **P 03 45 23.6 -0.1**
NKC AMS AMS 04 16 00.0
comp=Z,400nm,12.5s
JMIC Jan Mayen 67.50 341 LR LR 04 17 38.0
comp=Z,94nm,19.1s,MS4.0,baz=52,slow=38
BOJS Bojanci 67.56 310 *i* P **P 03 45 24.6 +0.5**
WET Wettzell 67.66 315 *e*P **P 03 45 25.0 +0.3**

comp=Z,14nm,1.2s,mb5.1
WET Wettzell 67.66 315 *e*P **P 03 45 25.0 +0.3**
WET pmax pmax
comp=Z,14nm,1.2s,mb5.1
VISS Visnje 67.71 311 *i* P **P 03 45 25.4 +0.3**
SVW2 Sparrevohn 67.78 31 *e*P **P 03 45 26.2 +0.9**
ROTZ Rotzenmuhle 67.83 316 *e*P **P 03 45 26.3 +0.6**
comp=Z,30nm,1.4s,mb5.3
MOX Moxa 67.84 317 *e*P **P 03 45 25.6 -0.2**
comp=Z,25nm,1.7s,mb5.2
MOX
comp=Z,200nm,17.0s
MOX Moxa 67.84 317 *e*P **P 03 45 25.8 0.0**
comp=Z,17nm,1.3s,mb5.1
MOX Moxa 67.84 317 *e*P **P 03 45 25.6 -0.2**
MOX pmax pmax
comp=Z,25nm,1.7s,mb5.2
MOX MLR MLR
comp=Z,200nm,17.0s,MS4.4
NRDL Niedersach Rie 67.98 319 *e*P **P 03 45 27.2 +0.5**
comp=Z,39nm,1.4s,mb5.4
CLZ Clausthal 68.09 318 *e*P **P 03 45 27.7 +0.3**
comp=Z,32nm,1.2s,mb5.4
CLZ Clausthal 68.09 318 *e*P **P 03 45 27.7 +0.3**
CLZ pmax pmax
comp=Z,32nm,1.2s,mb5.4
KBA Koelnbreinsper 68.17 313 ⇑*i*P **P 03 45 27.8 -0.1**
comp=Z,8.3nm,1.2s,mb4.8
JAVS Javornik 68.17 311 *i* P **P 03 45 26.5 -1.5**
GRA1 Grafenberg Arr 68.44 316 *e*P **P 03 45 30.0 +0.4**
comp=Z,53nm,1.5s,mb5.5
GRA1 *ep*P 03 45 34.8
GRA1 LR LR
comp=Z,500nm,18.1s,MS4.8
GRF Grafenberg Arr 68.44 316 *e*P **P 03 45 30.0 +0.4**
comp=Z,53nm,1.5s,mb5.5
GRF *ep*P 03 45 34.8
GRF *e*L 04 16 57.2
comp=Z,494nm,18.1s
GRF Grafenberg Arr 68.44 316 *e*P **P 03 45 30.0 +0.4**
GRF pmax pmax
comp=Z,53nm,1.5s,mb5.5
GRF MLR MLR
comp=Z,500nm,18.1s,MS4.8
GRF Grafenberg Arr 68.44 316 *e*P **P 03 45 30.0 +0.4**
GRF pmax pmax
comp=Z,53nm,1.5s,mb5.5
GRF MLR MLR
comp=Z,500nm,18.1s,MS4.8
TIP Timpagrande 69.01 304 *e*P **P 03 45 32.7 -0.6**
comp=Z,8.5nm,1.0s,mb4.9
FUR Furstenfeldbru 69.02 314 *e*P **P 03 45 33.9 +0.7**
comp=Z,36nm,0.8s,mb5.7
FUR Furstenfeldbru 69.02 314 *e*P **P 03 45 33.9 +0.7**
FUR pmax pmax
comp=Z,36nm,0.8s,mb5.7
WTTA Wattenberg 69.17 313 ⇓*i*P **P 03 45 33.8 -0.4**
comp=Z,15nm,1.2s,mb5.1
COLA College 69.19 26 *e*P **P 03 45 33.3 -0.7**
COLA pmax pmax
comp=Z,71nm,0.9s,mb5.9
COLA College 69.19 26 *e*P **P 03 45 33.3 -0.7**
comp=Z,71nm,0.9s,mb5.9
RSO Redoubt South 69.31 31 *e*P **P 03 45 35.2 +0.4**
MOTA Moosalm 69.46 314 ⇑*i*P **P 03 45 35.4 -0.6**
comp=Z,18nm,1.4s,mb5.1
FETA Feichten 69.83 313 ⇑*i*P **P 03 45 37.9 -0.4**
comp=Z,11nm,1.0s,mb5.0,SNR=5.5
TNS Taunus Mts 69.86 317 *e*P **P 03 45 38.6 +0.2**
comp=Z,17nm,1.1s,mb5.1
TNS Taunus Mts 69.86 317 *e*P **P 03 45 38.6 +0.2**
TNS pmax pmax
comp=Z,17nm,1.1s,mb5.1
TOD Tromm 69.91 316 *e*P **P 03 45 38.4 -0.3**
CEL Celeste 70.00 303 *e*P **P 03 45 38.7 -0.8**
comp=Z,38nm,1.4s,mb5.3
AQU L'Aquila 70.03 308 *e*P **P 03 45 39.8 +0.2**
PMR Palmer 70.32 29 *e*P **P 03 45 40.6 -0.4**
PMR pmax pmax
comp=Z,58nm,0.9s,mb5.7
PMR Palmer 70.32 29 *e*P **P 03 45 40.6 -0.4**
comp=Z,58nm,0.9s,mb5.7
OHAK Old Harbor 70.56 34 *e*P **P 03 45 42.1 -0.5**
comp=Z,134nm,1.9s,mb5.8
SPAK Spaichingen-Ko 70.56 315 *e*P **P 03 45 42.5 -0.3**
KDAK Kodiak Island 70.64 34 P **P 03 45 42.9 -0.1**
comp=Z,416nm,0.7s,SNR=11
KDAK Kodiak Island 70.64 34 *ce*P **P 03 45 42.3 -0.7**
BFO Black Forest 70.74 315 *e*P **P 03 45 43.5 -0.3**
comp=Z,19nm,1.4s,mb5.0
BFO Black Forest 70.74 315 *e*P **P 03 45 43.5 -0.3**
BFO pmax pmax
comp=Z,19nm,1.4s,mb5.0
KMBO Kilima Mbogo 70.89 256 P **P 03 45 45.5 +0.2**
comp=Z,6.0nm,0.9s,mb4.7,baz=33,slow=12,SNR=11
KMBO Kilima Mbogo 70.89 256 *ce*P **P 03 45 46.2 +0.9**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 70.89 256 *e*P **P 03 45 45.4 +0.1**
comp=Z,16nm,1.3s,mb5.0
RUP Ruppelstein 70.90 317 *e*P **P 03 45 44.9 +0.2**
MEM Membach 71.10 318 P **P 03 45 46.7 +0.7**
comp=Z,5.8nm,1.3s,mb4.5
FELD Feldberg im Sc 71.14 315 *e*P **P 03 45 45.8 -0.4**
BEBN Eben Emael 71.20 318 P **P 03 45 46.4 -0.2**
CDF Champ du Feu 71.34 316 ⇑*i*P **P 03 45 47.1 -0.3**
comp=Z,19nm,0.8s,mb5.0
CDF Champ du Feu 71.34 316 ⇑*i*P **P 03 45 47.1 -0.3**
CDF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
CDF Champ du Feu 71.34 316 ⇑*i*P **P 03 45 47.1 -0.3**
comp=Z,9.4nm,0.8s,mb5.0
SCO Scoresbysund 71.36 343 *i* P **P 03 45 47.1 -0.1**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SCO Scoresbysund 71.36 343 *i* P **P 03 45 47.1 -0.1**
comp=Z,8.3nm,0.9s,mb4.9
WLF Walferdange 71.44 317 P **P 03 45 48.5 +0.5**
comp=Z,29nm,1.4s,mb5.2
WLF Walferdange 71.44 317 *e*P **P 03 45 48.8 +0.8**
comp=Z,57nm,1.3s,mb5.5
WLF Walferdange 71.44 317 *e*P **P 03 45 48.5 +0.5**
WLF pmax pmax
comp=Z,54nm,1.3s,mb5.5
WLF Walferdange 71.44 317 *e*P **P 03 45 48.5 +0.4**
comp=Z,54nm,1.3s,mb5.5
ECH Echery 71.50 316 *e*P **P 03 45 47.7 -0.7**
BCLA Clavier 71.59 318 P **P 03 45 49.1 +0.2**
comp=Z,8.5nm,1.8s,mb4.6
EGAK Eagle 71.66 24 *e*P **P 03 45 48.1 -1.0**
comp=Z,25nm,1.1s,mb5.3
MOF Molkenrain 71.67 315 *e*P **P 03 45 49.0 -0.5**
MENT Mentasta 71.77 26 *e*P **P 03 45 50.1 +0.3**
INK Inuvik 71.90 19 *e*P **P 03 45 49.6 -0.9**
INK pmax pmax
comp=Z,44nm,0.8s
INK Inuvik 71.90 19 *e*P **P 03 45 49.6 -0.9**
comp=Z,44nm,0.8s,mb5.6
UCC Uccle 71.95 319 P **P 03 45 51.9 +0.8**
SNF Seneffe 72.12 319 P **P 03 45 52.2 +0.1**
comp=Z,12nm,2.0s,mb4.7
DOU Dourbes 72.14 318 P **P 03 45 52.1 -0.2**
comp=Z,5.5nm,1.5s,mb4.5
THEF They Montfort 72.19 316 *e*P **P 03 45 51.9 -0.7**
EIDS Eidsvold 72.19 136 *e*P **P 03 45 53.2 +0.4**
comp=Z,33nm,1.5s,mb5.2
STKA Stephens Creek 72.31 147 *e*P **P 03 45 53.3 0.0**
comp=Z,5.2nm,0.7s,mb4.8
STKA Stephens Creek 72.31 147 P **P 03 45 52.9 -0.5**
comp=Z,5.9nm,0.8s,mb4.8,baz=329,slow=6.3,SNR=11
STKA Stephens Creek 72.31 147 *e*P **P 03 45 52.6 -0.7**
DAWY Dawson 72.70 24 *e*P **P 03 45 54.6 -0.7**
LPG La Plagne 72.98 313 ⇑*i*P **P 03 45 57.8 +0.5**
comp=Z,45nm,0.7s,mb5.4
LPG La Plagne 72.98 313 ⇑*i*P **P 03 45 57.8 +0.5**
LPG pmax pmax
comp=Z,22nm,0.7s,mb5.4
LPG La Plagne 72.98 313 ⇑*i*P **P 03 45 57.8 +0.5**
comp=Z,22nm,0.7s,mb5.4
SUMG Summit 73.13 349 *e*P **P 03 45 57.4 -0.4**
comp=Z,38nm,1.1s,mb5.4
SAOF Saorge 73.17 311 *e*P **P 03 45 58.1 -0.4**
BNI Bardonecchia 73.23 313 *e*P **P 03 45 58.5 -0.3**
BNI pmax pmax
comp=Z,23nm,1.3s,mb5.2
BNI Bardonecchia 73.23 313 *e*P **P 03 45 58.5 -0.4**

comp=Z,23nm,1.3s,mb5.1
AUTN L'Aution 73.24 312 *e*P **P 03 45 59.0 +0.1**
LUCF Luceram 73.34 311 *e*P **P 03 45 59.0 -0.5**
TOUF Mont Tournerai 73.35 312 *e*P **P 03 45 59.4 -0.2**
RES Resolute Bay 73.45 5 *e*P **P 03 45 59.3 -0.3**
RES pmax pmax
comp=Z,23nm,1.0s,mb5.3
RES Resolute Bay 73.45 5 *e*P **P 03 45 59.3 -0.3**
comp=Z,23nm,1.0s,mb5.3
SMF Signal de Mont 74.22 315⇑*i*P **P 03 46 04.0 -0.6**
comp=Z,35nm,1.0s,mb5.1
SMF Signal de Mont 74.22 315⇑*i*P **P 03 46 04.0 -0.6**
SMF pmax pmax
comp=Z,18nm,1.0s,mb5.1
SMF Signal de Mont 74.22 315⇑*i*P **P 03 46 04.0 -0.6**
comp=Z,18nm,1.0s,mb5.0
AGO Saint Agoulin 74.94 315 *e*P **P 03 46 09.8 +1.0**
BORG Borgarnes 75.15 339 LR LR 04 22 27.6
comp=Z,81nm,19.8s,MS4.0,baz=43,slow=38
BORG Borgarnes 75.15 339 *e*P **P 03 46 10.9 +1.3**
BORG pmax pmax
comp=Z,36nm,0.9s
BORG Borgarnes 75.15 339 *e*P **P 03 46 10.9 +1.2**
comp=Z,36nm,0.9s,mb5.4
PYM Petit Puy Mans 75.16 315 *e*P **P 03 46 11.0 +0.9**
LBL Lubilhac 75.27 314 *e*P **P 03 46 11.7 +1.0**
TCF Toulx Ste Croi 75.38 315⇑*i*P **P 03 46 10.9 -0.4**
comp=Z,23nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.38 315⇑*i*P **P 03 46 10.9 -0.4**
TCF pmax pmax
comp=Z,12nm,1.0s,mb4.9
TCF Toulx Ste Croi 75.38 315⇑*i*P **P 03 46 10.9 -0.4**
comp=Z,12nm,1.0s,mb4.9
KEST Kesra 75.82 303 P **P 03 46 13.9 -0.1**
comp=Z,1.4nm,0.9s,mb4.1,baz=348,slow=3.8,SNR=4.5
CAF Calviac 76.15 314⇑*i*P **P 03 46 15.9 +0.1**
comp=Z,12nm,0.8s,mb4.8
CAF Calviac 76.15 314⇑*i*P **P 03 46 15.9 +0.1**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
CAF Calviac 76.15 314⇑*i*P **P 03 46 15.9 +0.1**
comp=Z,6.3nm,0.8s,mb4.8
ARMA Armidale 76.32 139 *e*P **P 03 46 17.9 +1.2**
SKAG Skagway 77.11 27 *e*P **P 03 46 21.8 +0.9**
comp=Z,57nm,0.8s,mb5.8
SFJD Kangerlussuaq 80.03 350 *e*P **P 03 46 36.1 -0.8**
SFJD pmax pmax
comp=Z,38nm,0.6s,mb5.5
SFJD Kangerlussuaq 80.03 350 *e*P **P 03 46 36.1 -0.8**
comp=Z,38nm,0.6s,mb5.5
SFJD Kangerlussuaq 80.03 350⇑*i*P **P 03 46 36.1 -0.8**
comp=Z,44nm,0.7s,mb5.5
YKA Yellowknife Ar 81.43 17 P **P 03 46 44.0 -0.5**
comp=Z,12nm,0.7s,mb5.1,baz=329,slow=5.3,SNR=163
YKA PKKPbc PKKPbc 04 05 14.9 -4.0
comp=Z,0.5nm,0.7s,baz=152,slow=2.2,SNR=8.5
YKA LR LR 04 24 52.4
comp=Z,99nm,19.9s,MS4.2,baz=80,slow=37
YKA Yellowknife Ar 81.43 17 P **P 03 46 44.0 -0.5**
YKA pmax pmax
comp=Z,12nm,0.7s
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA MLR MLR
comp=Z,99nm,19.9s
YKA Yellowknife Ar 81.43 17 P **P 03 46 44.0 -0.5**
YKA PKKPbc PKKPbc 04 05 14.9 -4.0
YKA LR LR 04 24 52.4
ESDC Sonseca Array 82.75 312 P **P 03 46 51.5 -0.3**
comp=Z,1.3nm,0.6s,mb4.3,baz=40,slow=5.5,SNR=5.8
MVO Moncorvo 83.78 315 *e*P **P 03 46 57.3 +0.2**
comp=Z,15nm,1.7s,mb5.0
PCAB Cabril 84.05 316 *e*P **P 03 46 57.6 -0.9**
comp=Z,23nm,1.5s,mb5.2
MTE Manteigas 84.55 314 *e*LQ 04 17 08.2
MTE *e*LR LR 04 23 37.1
comp=Z,98nm,20.0s
PCBR Castelo Branco 84.84 314 *e*P **P 03 47 03.1 +0.5**
comp=Z,18nm,1.6s,mb5.1
PMRV Marv??o 85.04 314 *e*P **P 03 47 03.9 +0.3**
comp=Z,14nm,1.7s,mb4.9
PMRV *e*LR LR 04 23 14.0
comp=Z,88nm,20.0s
PESTR Estremoz 85.50 313 *e*LR LR 04 25 24.1
comp=Z,115nm,18.0s
PBAR Barrancos 85.57 312 *e*P **P 03 47 06.3 +0.1**
comp=Z,11nm,2.1s,mb4.6
PBAR *e*LR LR 04 25 36.2
comp=Z,120nm,20.0s
EVO Evora 85.97 313 *e*P **P 03 47 08.0 -0.2**
comp=Z,20nm,1.8s,mb4.9
PBEJ Beja 86.18 313 *e*P **P 03 47 09.6 +0.3**
comp=Z,11nm,1.4s,mb4.8
LSZ Lusaka 86.19 250 *e*P **P 03 47 09.4 -0.1**
LSZ pmax pmax
comp=Z,28nm,1.3s,mb5.2
LSZ Lusaka 86.19 250 *e*P **P 03 47 09.4 -0.1**
comp=Z,28nm,1.3s,mb5.2
PVAQ Vaqueiros 86.46 312 *e*P **P 03 47 10.4 -0.3**
comp=Z,21nm,1.6s,mb5.0
PVAQ *e*LR LR 04 26 50.8
comp=Z,107nm,22.0s
PMAFR Mafra 86.49 314 *e*LR LR 04 27 56.9
comp=Z,101nm,18.0s
PCVE Castro Verde 86.53 312 *e*P **P 03 47 12.0 +1.0**
comp=Z,32nm,1.6s,mb5.3
PCVE *e*LR LR 04 26 02.6
comp=Z,126nm,20.0s
PBDV Barranco-do-Ve 86.70 312 *e*LR LR 04 27 02.5
comp=Z,125nm,18.0s
PFVI Vila Bisbo 87.33 312 *e*LR LR 04 27 19.9
comp=Z,134nm,20.0s
FCC Fort Churchill 88.91 9 *e*P **P 03 47 20.9 -1.1**
FCC pmax pmax
comp=Z,1.0nm,1.2s,mb3.9
FCC Fort Churchill 88.91 9 *e*P **P 03 47 20.9 -1.1**
comp=Z,1.0nm,1.2s,mb3.9
EDM Edmonton 89.68 21 *e*P **P 03 47 26.0 +0.3**
B06A Marblemount 90.64 28⇑P **P 03 47 29.9 -0.4**
baz=90
A07A Ashnola River, 90.66 27⇑P **P 03 47 30.3 -0.1**
baz=90
FFC Flin Flon 91.35 15 P **P 03 47 33.3 -0.1**
comp=Z,102nm,0.8s,mb6.2,SNR=10
FFC Flin Flon 91.35 15 *i*P **P 03 47 33.1 -0.3**
FFC Flin Flon 91.35 15 *e*P **P 03 47 32.7 -0.7**
comp=Z,17nm,1.0s,mb5.3
A09A Danville 91.42 26⇑P **P 03 47 34.2 +0.4**
baz=91,SNR=5.6
D05A Enumclaw 91.49 29⇓P **P 03 47 34.4 +0.2**
baz=91
B08A Colville Reser 91.63 27⇑P **P 03 47 35.2 +0.3**
baz=91,SNR=7.4
ETW Entiat 91.84 28 *e*P **P 03 47 36.4 +0.6**
comp=Z,3.1nm,0.7s,mb4.8
C07A Waterville 91.88 28⇓P **P 03 47 35.8 -0.2**
baz=92
B09A Rice 92.04 27⇑P **P 03 47 37.4 +0.6**
baz=92,SNR=7.2
A11A Hall Mountain, 92.26 25⇓P **P 03 47 38.6 +0.8**
baz=92
F04A Amboy 92.29 30⇓P **P 03 47 38.5 +0.5**
baz=92
C09A Chrisman Ranch 92.50 27⇑P **P 03 47 39.7 +0.8**
baz=92
NEW Newport 92.56 26 *e*P **P 03 47 39.8 +0.6**
NEW pmax pmax
comp=Z,3.0nm,0.7s
NEW Newport 92.56 26 *e*P **P 03 47 39.8 +0.6**
comp=Z,3.0nm,0.7s,mb4.8
G04A Mulino 92.84 31⇑P **P 03 47 41.5 +1.0**
baz=92
A13A Flathead Natio 92.98 24⇑P **P 03 47 41.5 +0.4**
baz=93
H04A Detroit Lake 93.38 31⇓P **P 03 47 43.6 +0.6**
baz=93
F07A Phinny Hill Vi 93.38 29⇑P **P 03 47 43.5 +0.5**
baz=93
B13A Whitefish 93.44 25⇓P **P 03 47 43.9 +0.7**
baz=93,SNR=6.1
TOA0 Torodi Ar. Sit 93.46 288 *e*P **P 03 47 43.4 -0.6**
TORD Torodi Ar. Bea 93.46 288 P **P 03 47 43.4 -0.5**
comp=Z,2.4nm,0.8s,mb4.7,baz=55,slow=3.6,SNR=15
TORD LR LR 04 32 59.4
comp=Z,43nm,19.3s,MS3.9,baz=65,slow=38
D10A Wagner Farm, O 93.50 27⇑P **P 03 47 43.6 +0.1**
baz=93
A15A Johnson Ranch, 93.52 23⇑P **P 03 47 44.2 +0.6**
baz=93
LBTB Lobatse 93.56 243 *e*P **P 03 47 42.9 -1.2**
LBTB pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
LBTB Lobatse 93.56 243 *e*P **P 03 47 42.9 -1.2**
comp=Z,2.5nm,0.4s,mb4.9
G06A Carlson Farm, 93.61 30⇑P **P 03 47 44.9 +0.8**
baz=93
SCHQ Schefferville 93.75 355 P **P 03 47 44.0 -0.5**
comp=Z,5.9nm,0.8s,mb5.0,baz=26,slow=2.6,SNR=8.0
SCHQ LR LR 04 35 24.9
comp=Z,100nm,18.9s,MS4.3,baz=33,slow=39
BSMT Bassoo Peak 93.76 25 *e*P **P 03 47 45.4 +0.7**
comp=Z,6.6nm,1.0s,mb4.9
D11A Klaveano Farm, 93.86 26⇑P **P 03 47 45.4 +0.2**
baz=94,SNR=8.3
A16A West Butte Ran 93.93 23⇑P **P 03 47 45.0 -0.5**
baz=94,SNR=8.1
F08A Pendleton 93.93 28⇓P **P 03 47 45.8 +0.2**
baz=94
C13A Hot Springs 93.98 25⇓P **P 03 47 46.4 +0.7**
baz=94,SNR=7.0
YBMT Yellow Bay 94.03 25 *e*P **P 03 47 46.8 +0.8**
comp=Z,9.5nm,1.3s,mb5.0
E10A Myers Farm, Un 94.03 27⇑P **P 03 47 46.5 +0.5**
baz=94
JTMT Jette 94.03 25 *e*P **P 03 47 46.7 +0.7**
comp=Z,3.0nm,0.9s,mb4.6
B15A Bradely Ranch, 94.15 23⇓P **P 03 47 46.0 -0.5**
baz=94,SNR=6.2
C14A Swan Lake 94.20 24⇓P **P 03 47 47.6 +0.8**
baz=94,SNR=8.5
D12A Red Ives Fores 94.23 26⇓P **P 03 47 46.7 -0.2**
baz=94
SWMT Swartz Lake 94.34 25 *e*P **P 03 47 48.0 +0.6**
comp=Z,3.9nm,1.0s,mb4.7
F10A Beach Ranch, E 94.41 27⇑P **P 03 47 48.4 +0.7**
baz=94
E11A Bogner Ranch, 94.49 27⇓P **P 03 47 48.5 +0.4**
baz=94
A18A Metzger Ranch, 94.51 22⇓P **P 03 47 48.4 +0.2**
baz=94
D13A Huson 94.52 25⇓P **P 03 47 48.8 +0.6**
baz=94
C15A Salmond Ranch, 94.60 24⇑P **P 03 47 49.0 +0.4**
baz=94
E12A Beaver Dam Sad 94.68 26⇓P **P 03 47 49.4 +0.4**
baz=94
SLMT Seeley Lake 94.74 25 *e*P **P 03 47 49.0 -0.2**
comp=Z,12nm,1.1s,mb5.2
B17A L&G Farms, Che 94.76 22⇓P **P 03 47 49.3 0.0**
baz=94,SNR=8.5
G09A Cove 94.76 28⇓P **P 03 47 50.0 +0.7**
baz=94
C16A Fuhringer Ranc 94.87 23⇑P **P 03 47 49.5 -0.3**
baz=94,SNR=6.2
D14A Greenough 94.88 25⇓P **P 03 47 49.6 -0.3**
baz=95,SNR=5.6
F11A Grangeville 94.90 27⇓P **P 03 47 50.3 +0.3**
baz=95
B18A Beardsley Farm 95.00 22⇑P **P 03 47 50.7 +0.3**
baz=95
G10A Bishop Farm, J 95.01 28⇑P **P 03 47 50.9 +0.4**
baz=95
I07A Izee 95.02 30⇓P **P 03 47 51.0 +0.4**
baz=95
E13A Victor 95.17 25⇓P **P 03 47 51.0 -0.2**
baz=95,SNR=5.0
EGMT Eagleton 95.33 22⇑P **P 03 47 52.0 0.0**
baz=95
C17A Wharram Farm, 95.34 23⇓P **P 03 47 51.1 -0.9**
baz=95,SNR=6.2
E14A Clinton 95.45 25⇑P **P 03 47 52.6 +0.2**
baz=95
D16A Dana Ranch, Ca 95.60 24⇑P **P 03 47 53.2 +0.1**
baz=95,SNR=6.7
F13A Darby 95.67 26⇓P **P 03 47 53.7 +0.1**
baz=95
E15A Deer Lodge 95.75 25⇓P **P 03 47 54.1 +0.3**
baz=95
BOSA Boshof 95.76 240 P **P 03 47 52.6 -1.4**
comp=Z,1.2nm,0.5s,mb4.7,baz=20,slow=19,SNR=5.9
BOSA Boshof 95.76 240 P **P 03 47 52.7 -1.4**
BOSA pmax pmax
comp=Z,1.0nm,0.5s,mb4.6
HRY Holter Researc 95.78 24 *e*P **P 03 47 54.3 +0.3**
comp=Z,4.1nm,1.0s,mb4.9
D17A Six Diamond Ra 95.79 23⇑P **P 03 47 54.3 +0.3**
baz=96
E16A East Helena 95.99 24⇓P **P 03 47 55.3 +0.4**
baz=96
J08A Circle Bar Ran 96.04 30⇓P **P 03 47 55.5 +0.3**
baz=96
D18A Linhart Farms, 96.04 22⇑P **P 03 47 55.3 +0.1**
baz=96
G13A Cobalt 96.30 26⇓P **P 03 47 56.3 -0.1**
baz=96
E17A Martinsdale 96.33 23⇑P **P 03 47 56.5 0.0**
baz=96
J09A Fry Pan Ranch, 96.35 29⇓P **P 03 47 56.9 +0.2**
baz=96
E18A Harlowton 96.56 23⇑P **P 03 47 57.5 0.0**
baz=96
DGMT Dagmar 96.57 18⇑P **P 03 47 57.4 -0.1**
baz=96
BOZ Bozeman (W) 96.78 24⇓P **P 03 47 58.8 +0.2**
baz=96
BOZ Bozeman (W) 96.78 24 *e*P **P 03 47 58.5 0.0**
ULM Lac du Bonnet 96.81 13 P **P 03 47 56.9 -1.7**
comp=Z,1.7nm,0.7s,mb4.8,baz=353,slow=5.1,SNR=4.0
ULM LR LR 04 35 53.0
comp=Z,99nm,19.8s,MS4.3,baz=162,slow=38
ULM Lac du Bonnet 96.81 13 *e*P **P 03 47 57.2 -1.4**
comp=Z,2.7nm,0.9s,mb4.9
G15A Dillon 96.88 25⇑P **P 03 47 59.2 +0.2**
baz=97
F17A Fitzpatrick Pl 96.89 24⇑P **P 03 47 59.3 +0.3**
baz=97,SNR=6.9
MCMT McKenzie Canyo 97.04 25 *e*P **P 03 48 00.1 +0.4**
comp=Z,2.0nm,1.1s,mb4.7
I12A Atlanta 97.05 27⇓P **P 03 48 00.5 +0.7**
baz=97
G16A Moss Hill, Enn 97.07 25⇓P **P 03 47 59.7 -0.2**
baz=97
F18A Big Timber 97.21 23⇑P **P 03 48 00.7 +0.2**
baz=97,SNR=5.2
I13A Wildhorse Cree 97.34 27⇓P **P 03 48 01.3 +0.2**
baz=97
G17A Pierce Place, 97.37 24⇓P **P 03 48 01.8 +0.6**
baz=97
J12A Stokes Ranch, 97.52 28⇓P **P 03 48 02.2 +0.3**
baz=97
HLID Hailey 97.52 27⇑P **P 03 48 02.1 +0.2**
baz=97
HLID Hailey 97.52 27 *e*P **P 03 48 02.8 +0.8**
comp=Z,2.1nm,1.0s,mb4.8
RLMT Red Lodge 98.05 23⇓P **P 03 48 04.3 0.0**
baz=98
L11A Cat Creek Ranc 98.16 29⇑P **P 03 48 05.1 +0.3**
baz=98
HWUT Hardware Ranch 100.29 26 *e*Pdif Pdif 03 48 14.4 +0.2
RSSD Black Hills 100.59 20 *e*P Pdif 03 48 16.0 +0.4
RSSD pmax pmax
comp=Z,3.0nm,0.8s
RSSD Black Hills 100.59 20 *e*Pdif Pdif 03 48 16.0 +0.4
comp=Z,3.0nm,0.8s
TUC Tucson 108.59 31 *e*PKP PKiKP 03 52 57.3 +0.2
WVT Waverly 111.91 10 *e*PKIKP PKiKP 03 53 02.8 -0.4
JCT Junction City 114.44 22 *e*PKIKP PKiKP 03 53 07.3 -0.9
QSPA South Pole Qui 121.18 180 *e*PKPdif PKPdf 03 53 18.7 -0.8
VNA2 Neumayer--Watz 126.32 202 *e*PKPdif PKPdf 03 53 28.4 -1.2
baz=66,slow=2.1
VNA1 Neumayer--Stat 126.65 203 *e*PKPdf PKPdf 03 53 29.3 -0.9
SDV Santo Domingo 139.61 352 *e*PKPpre 03 53 47.1
SDV *e*PKPdf PKPdf 03 53 55.9 -0.5
ROSC El Rosal 143.91 357 PKP PKPdf 03 54 02.5 -1.6
comp=Z,13nm,0.8s,baz=100,slow=4.7,SNR=10
ROSC El Rosal 143.91 357 *e*PKPdf PKPdf 03 54 02.2 -1.8
OTAV Otavalo 148.44 5 *e*PKPdf PKPdf 03 54 12.4 +0.7
OTAV *e*PKPbc PKPbc 03 54 16.0 +0.8
LPAZ La Paz 163.33 333 PKP PKPdf 03 54 31.8 +0.6
comp=Z,3.7nm,1.2s,baz=352,slow=5.4,SNR=7.0
LPAZ PKPab PKPab 03 55 19.9 -1.7
comp=Z,1.2nm,0.8s,baz=37,slow=5.3,SNR=4.0
LPAZ La Paz 163.33 333 PKIKP PKPdf 03 54 31.8 +0.7
LPAZ 03 55 19.9
LPAZ pmax pmax
comp=Z,4.0nm,1.2s
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 163.33 333 *e*PKPdf PKPdf 03 54 31.3 +0.2

DDA ***16*** *03:34:45.4,39.˚40N×40.˚03E,h7km±1km,Md2.8*
CSEM ***16*** *03:34:46.7±0.3,39.˚42N×39.˚95E,h20km,MD2.8,Error ellipse: s-maj=6.7km s-min=6.2km az=146.0*
ISK ***16*** *03:34:46.5,39.˚39N×39.˚88E,h26km,MD2.8*
ISC 16 03:34:46.6±0.8,39.˚42N±0.˚04×40.˚00E±0.˚04,h15km±6km, n19,σ1°07/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.60**	**304**	*e*PG	**Pg**	**03 34 57.5**	**-0.8**
EZC				*e*SG	**Sg**	**03 35 07.4**	**+1.0**
BINT	**Bingol**	**0.67**	**145**	*e*PG	**Pg**	**03 35 01.7**	**+2.0**
BINT	**Bingol**	**0.67**	**145**	*e*Pg	**Pg**	**03 35 01.7**	**+2.0**
PTK	**Pertek**	**0.71**	**222**	*e*PG	**Pg**	**03 34 59.3**	**-1.1**
PTK				*e*SG	**Sg**	**03 35 09.2**	**-0.6**
PTK	**Pertek**	**0.71**	**222**	*e*Pg	**Pg**	**03 34 59.3**	**-1.1**
PTK				*e*Sg	**Sg**	**03 35 09.2**	**-0.6**
KELT	**Kelkit**	**0.92**	**322**	*i* P	**Pb**	**03 35 04.2**	**-0.2**
KELT				*i* S	**Sb**	**03 35 17.3**	**+0.9**
KELT	**Kelkit**	**0.92**	**322**	*i* P	**Pb**	**03 35 04.2**	**-0.1**
KELT				*i* S	**Sb**	**03 35 17.3**	**+0.9**
GUMT	**Gumushane**	**1.11**	**339**	*e*PN	**Pn**	**03 35 06.7**	**-0.9**
EZM	**Erzurum**	**1.16**	**65**	*e*PN	**Pn**	**03 35 08.2**	**-0.1**
ERZM	**Erzurum**	**1.16**	**65**	*i* P	**Pn**	**03 35 07.5**	**-0.8**
ERZM				*i* S	**Sb**	**03 35 23.6**	**+0.4**
ERZM	**Erzurum**	**1.16**	**65**	*i* P	**Pn**	**03 35 07.5**	**-0.8**
ERZM				*i* S	**Sb**	**03 35 23.6**	**+0.4**
KEMA	**Kemaliye**	**1.18**	**263**	*i* P	**Pn**	**03 35 08.1**	**-0.4**
KEMA				*i* S	**Sb**	**03 35 23.7**	**+0.1**
KEMA	**Kemaliye**	**1.18**	**263**	*i* P	**Pn**	**03 35 08.1**	**-0.4**
KEMA				*i* S	**Sb**	**03 35 23.7**	**+0.1**
ELZG	**Elazig**	**1.21**	**221**	*e*P	**Pn**	**03 35 08.6**	**-0.4**
ELZG				*i* S	**Sb**	**03 35 25.8**	**+1.1**
ELZG	**Elazig**	**1.21**	**221**	*e*P	**Pn**	**03 35 08.6**	**-0.4**
ELZG				*i* S	**Sb**	**03 35 25.8**	**+1.1**
MALT	**Malatya**	**1.65**	**228**	*e*PN	**Pn**	**03 35 13.2**	**-1.8**
MALT	**Malatya**	**1.65**	**228**	*e*Pn	**Pn**	**03 35 13.2**	**-1.8**
AKCD	**Akcadag**	**1.97**	**236**	*e*P	**Pn**	**03 35 22.3**	**+2.9**
AKCD				*e*S	**Sn**	**03 35 47.7**	**+3.9**
AKCD	**Akcadag**	**1.97**	**236**	*e*P	**Pn**	**03 35 22.3**	**+2.9**

ISCJB ***16*** *03:42:11.6±0.4,39.˚82N±0.˚02×25.˚58E±0.˚02,h6km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=17.5*
DDA ***16*** *03:42:11.7,39.˚82N×25.˚61E,h27km±1km,Md3.1*
NEIC ***16*** *03:42:11.3,39.˚78N×25.˚55E,h28km,MD3.3(ATH),After ATH.*
ATH ***16*** *03:42:11.3,39.˚78N×25.˚55E,h28km±1km,MD3.3/8*
ISK ***16*** *03:42:12.9,39.˚83N×25.˚70E,h11km,MD3.3*
CSEM ***16*** *03:42:12.3±0.1,39.˚83N×25.˚57E,h10km,MD3.3,Error ellipse: s-maj=2.4km s-min=1.8km az=19.0*
THE ***16*** *03:42:12.4,39.˚82N×25.˚61E,h11km±1km,ML3.1/7,Error ellipse: s-maj=1.1km s-min=0.5km az=179.0*
SOF ***16*** *03:42:14.0,40.˚05N×25.˚60E,h13km,MD2.8*
ISC 16 03:42:12.3±0.4,39.˚83N±0.˚02×25.˚57E±0.˚02,h9km±3km, n111,σ0°74/153,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.31**	**284**	*e*PB	**Pg**	**03 42 18.8**	**+0.4**
LIA				*e*SB	**Sg**	**03 42 24.5**	**+2.0**
LIA	**Limnos Island**	**0.31**	**284**	P	**Pg**	**03 42 19.0**	**+0.6**
LIA				S	**Sg**	**03 42 23.9**	**+1.4**
LIA	**Limnos Island**	**0.31**	**284**	P	**Pg**	**03 42 19.0**	**+0.6**
LIA				S	**Sg**	**03 42 23.9**	**+1.4**
LIA				*e*Sb	**Sg**	**03 42 24.5**	**+2.0**
BOZC	**Bozcaada**	**0.37**	**87**	*i* P	**Pg**	**03 42 19.1**	**-0.5**
LOS	**Limnos**	**0.39**	**286**	P	**Pg**	**03 42 21.0**	**+1.0**
LOS	**Limnos**	**0.39**	**286**	P	**Pg**	**03 42 21.0**	**+1.0**
GADA	**Gvkgeada**	**0.44**	**35**	PG	**Pg**	**03 42 21.0**	**0.0**
GADA				SG	**Sg**	**03 42 27.3**	**+0.4**
GADA	**Gvkgeada**	**0.44**	**35**	*i* Pg	**Pg**	**03 42 21.0**	**0.0**
GADA				*i* Sg	**Sg**	**03 42 27.3**	**+0.4**
EZN	**Ezine**	**0.58**	**90**	*e*PG	**Pg**	**03 42 22.5**	**-1.1**
EZN	**Ezine**	**0.58**	**90**	*e*Pg	**Pg**	**03 42 22.5**	**-1.1**
SIGR	**SIGRI**	**0.65**	**160**	P	**Pg**	**03 42 24.2**	**-0.7**
SIGR				S	**Sg**	**03 42 34.0**	**+0.6**
SIGR	**SIGRI**	**0.65**	**160**	P	**Pg**	**03 42 24.2**	**-0.7**
SIGR				S	**Sg**	**03 42 34.0**	**+0.6**
PRK	**Paraskevi**	**0.79**	**137**	*e*PN	**Pg**	**03 42 27.0**	**-0.6**
PRK				*e*SN	**Sg**	**03 42 37.3**	**-0.6**
PRK	**Paraskevi**	**0.79**	**137**	P	**Pg**	**03 42 27.0**	**-0.6**
PRK				S	**Sg**	**03 42 38.0**	**+0.1**
PRK	**Paraskevi**	**0.79**	**137**	P	**Pg**	**03 42 27.0**	**-0.6**
PRK				*e*Sn	**Sg**	**03 42 37.3**	**-0.6**
PRK				S	**Sg**	**03 42 38.0**	**+0.1**
AYVA	**Ayvalik**	**1.01**	**120**	*i* P	**Pg**	**03 42 31.8**	**+0.1**
AYVA				*i* S	**Sg**	**03 42 46.1**	**+1.3**
AYVA	**Ayvalik**	**1.01**	**120**	*i* P	**Pg**	**03 42 31.8**	**+0.1**
AYVA				*i* S	**Sg**	**03 42 46.1**	**+1.3**
ENEZ	**Enez**	**1.01**	**26**	*e*PG	**Pg**	**03 42 31.5**	**-0.3**
ENEZ				*e*SG	**Sg**	**03 42 46.0**	**+1.0**
ENEZ	**Enez**	**1.01**	**26**	*e*Pg	**Pg**	**03 42 31.5**	**-0.3**
ENEZ				*e*Sg	**Sg**	**03 42 46.0**	**+1.0**
LPK	**Lapseki**	**1.06**	**59**	*e*PG	**Pg**	**03 42 31.9**	**-0.9**
LPK				*e*SG	**Sg**	**03 42 46.4**	**-0.2**
LPK	**Lapseki**	**1.06**	**59**	*e*Pg	**Pg**	**03 42 31.9**	**-0.9**
LPK				*e*Sg	**Sg**	**03 42 46.4**	**-0.2**
ALN	**Alexandroupoli**	**1.13**	**19**	*e*PN	**Pg**	**03 42 33.4**	**-0.7**
ALN	**Alexandroupoli**	**1.13**	**19**	P	**Pb**	**03 42 33.3**	**-0.7**
ALN				S	**Sg**	**03 42 48.7**	**0.0**
ALN	**Alexandroupoli**	**1.13**	**19**	P	**Pb**	**03 42 33.3**	**-0.7**
ALN				S	**Sg**	**03 42 48.7**	**0.0**
RDO	**Rodhopi**	**1.32**	**359**	*e*PN	**Pn**	**03 42 36.4**	**-0.5**
RDO	**Rodhopi**	**1.32**	**359**	P	**Pn**	**03 42 36.4**	**-0.5**
RDO				S	**Sb**	**03 42 53.9**	**-0.3**
RDO	**Rodhopi**	**1.32**	**359**	P	**Pn**	**03 42 36.4**	**-0.5**
RDO				S	**Sb**	**03 42 53.9**	**-0.3**
OUR	**Ouranopolis**	**1.32**	**293**	P	**Pn**	**03 42 36.1**	**-0.8**
OUR				S	**Sb**	**03 42 55.2**	**+0.9**
OUR	**Ouranopolis**	**1.32**	**293**	P	**Pn**	**03 42 36.1**	**-0.8**
OUR				S	**Sb**	**03 42 55.2**	**+0.9**
PAIG	**Paliouri**	**1.46**	**275**	P	**Pn**	**03 42 38.1**	**-0.7**
PAIG				S	**Sn**	**03 42 58.1**	**+0.1**
PAIG	**Paliouri**	**1.46**	**275**	P	**Pn**	**03 42 38.1**	**-0.7**
PAIG				S	**Sn**	**03 42 58.1**	**+0.1**
AOS	**Alonnisos**	**1.46**	**244**	P	**Pn**	**03 42 38.6**	**-0.3**
AOS				S	**Sn**	**03 42 58.2**	**+0.1**
AOS	**Alonnisos**	**1.46**	**244**	P	**Pn**	**03 42 38.6**	**-0.3**
AOS				S	**Sn**	**03 42 58.2**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**55**	*e*PN	**Pn**	**03 42 38.6**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.50**	**55**	*e*Pn	**Pn**	**03 42 38.6**	**-0.8**
SART	**Tekirdag**	**1.50**	**54**	*i* P	**Pn**	**03 42 39.1**	**-0.3**
SART				*i* S	**Sn**	**03 43 00.5**	**+1.4**
SART	**Tekirdag**	**1.50**	**54**	*i* P	**Pn**	**03 42 39.1**	**-0.3**
SART				*i* S	**Sn**	**03 43 00.5**	**+1.4**
BALY	**Balya**	**1.58**	**92**	*i* P	**Pn**	**03 42 40.2**	**-0.2**
BALY				*i* S	**Sn**	**03 43 00.5**	**-0.6**
BALY	**Balya**	**1.58**	**92**	*i* P	**Pn**	**03 42 40.2**	**-0.3**
BALY				*i* S	**Sn**	**03 43 00.5**	**-0.5**
MFT	**Murefte**	**1.62**	**53**	*e*PN	**Pn**	**03 42 41.7**	**+0.6**
MFT	**Murefte**	**1.62**	**53**	*e*Pn	**Pn**	**03 42 41.7**	**+0.6**
URLA	**Izmir**	**1.67**	**151**	*i* P	**Pn**	**03 42 40.9**	**-0.8**
URLA				*i* S	**Sn**	**03 43 02.4**	**-0.7**
URLA	**Izmir**	**1.67**	**151**	*i* P	**Pn**	**03 42 40.9**	**-0.8**
URLA				*i* S	**Sn**	**03 43 02.4**	**-0.7**
PLG	**Polygyros**	**1.72**	**289**	*e*PB	**Pn**	**03 42 41.8**	**-0.6**
PLG	**Polygyros**	**1.72**	**289**	P	**Pn**	**03 42 42.4**	**0.0**
PLG				S	**Sn**	**03 43 04.1**	**-0.3**
PLG	**Polygyros**	**1.72**	**289**	P	**Pn**	**03 42 42.4**	**0.0**
PLG				S	**Sn**	**03 43 04.1**	**-0.3**
BALB	**Balikesir**	**1.79**	**95**	*e*PN	**Pn**	**03 42 43.2**	**-0.2**
BALB	**Balikesir**	**1.79**	**95**	*e*Pn	**Pn**	**03 42 43.2**	**-0.2**
KDZ	**Kurdzhali**	**1.83**	**356**	P	**Pn**	**03 42 43.4**	**-0.5**
KDZ	**Kurdzhali**	**1.83**	**356**	P	**Pn**	**03 42 43.4**	**-0.5**
EDC	**Edincik**	**1.83**	**73**	*e*PN	**Pn**	**03 42 43.2**	**-0.8**
EDC	**Edincik**	**1.83**	**73**	*e*Pn	**Pn**	**03 42 43.2**	**-0.8**
BLCB	**Balcova**	**1.84**	**141**	*e*PN	**Pn**	**03 42 44.9**	**+0.9**
BLCB	**Balcova**	**1.84**	**141**	*e*Pn	**Pn**	**03 42 44.9**	**+0.9**
BNT	**Bandirma**	**1.88**	**73**	*e*PN	**Pn**	**03 42 43.7**	**-0.9**
NEO	**Neokhori**	**1.89**	**255**	*e*PB	**Pn**	**03 42 43.3**	**-1.4**
XOR	**Xorichti**	**1.89**	**257**	P	**Pn**	**03 42 44.1**	**-0.7**

XOR	**Xorichti**	**1.89**	**257**	P	**Pn**	**03 42 44.1**	**-0.7**
TKR	**Tekirdag**	**1.90**	**52**	*e*PN	**Pn**	**03 42 44.6**	**-0.3**
TKR	**Tekirdag**	**1.90**	**52**	*e*Pn	**Pn**	**03 42 44.6**	**-0.3**
IZM	**Izmir**	**1.94**	**137**	*e*PN	**Pn**	**03 42 46.5**	**+1.0**
IZM	**Izmir**	**1.94**	**137**	*e*Pn	**Pn**	**03 42 46.5**	**+1.1**
SOH	**Sokhos**	**1.96**	**301**	*e*PB	**Pn**	**03 42 45.4**	**-0.4**
SOH	**Sokhos**	**1.96**	**301**	P	**Pn**	**03 42 45.7**	**-0.1**
SOH	**Sokhos**	**1.96**	**301**	P	**Pn**	**03 42 45.7**	**-0.1**
RZN	**Rozhen**	**1.97**	**341**	P	**Pn**	**03 42 46.2**	**+0.4**
RZN	**Rozhen**	**1.97**	**341**	P	**Pn**	**03 42 46.2**	**+0.4**
AKS	**Akhisar**	**1.98**	**118**	*e*PN	**Pn**	**03 42 45.4**	**-0.6**
AKS	**Akhisar**	**1.98**	**118**	*e*Pn	**Pn**	**03 42 45.4**	**-0.6**
AKHS	**Akhisar**	**1.98**	**118**	*e*P	**Pn**	**03 42 45.4**	**-0.6**
AKHS				*i* S	**Sn**	**03 43 13.8**	**+2.9**
AKHS	**Akhisar**	**1.98**	**118**	*e*P	**Pn**	**03 42 45.4**	**-0.6**
AKHS				*i* S	**Sn**	**03 43 13.8**	**+2.9**
SRS	**Serrai**	**1.98**	**311**	P	**Pn**	**03 42 45.5**	**-0.5**
SRS	**Serrai**	**1.98**	**311**	P	**Pn**	**03 42 45.5**	**-0.5**
NVR	**Nevrokopi**	**2.00**	**320**	*e*PN	**Pn**	**03 42 46.0**	**-0.3**
NVR	**Nevrokopi**	**2.00**	**320**	*e*Pn	**Pn**	**03 42 46.0**	**-0.3**
CRLT	**Corlu**	**2.10**	**51**	*e*PN	**Pn**	**03 42 47.4**	**-0.3**
CRLT	**Corlu**	**2.10**	**51**	*e*Pn	**Pn**	**03 42 47.4**	**-0.3**
KCT	**Karacabey**	**2.18**	**78**	*e*PN	**Pn**	**03 42 48.7**	**-0.1**
KCT	**Karacabey**	**2.18**	**78**	*e*Pn	**Pn**	**03 42 48.7**	**-0.1**
EDRB	**Edirne**	**2.21**	**23**	*e*PN	**Pn**	**03 42 50.3**	**+1.2**
EDRB	**Edirne**	**2.21**	**23**	*e*Pn	**Pn**	**03 42 50.3**	**+1.2**
DURS	**Dursunbey**	**2.25**	**95**	*i* P	**Pn**	**03 42 49.6**	**-0.1**
DURS				*i* S	**Sn**	**03 43 17.1**	**-0.5**
DURS	**Dursunbey**	**2.25**	**95**	*i* P	**Pn**	**03 42 49.6**	**-0.1**
DURS				*i* S	**Sn**	**03 43 17.1**	**-0.5**
MMB	**Musomiste**	**2.25**	**322**	P	**Pn**	**03 42 49.8**	**+0.1**
MMB	**Musomiste**	**2.25**	**322**	P	**Pn**	**03 42 49.8**	**+0.1**
DST	**Dursunbey**	**2.37**	**94**	*e*PN	**Pn**	**03 42 51.0**	**-0.3**
PLD	**Plovdiv**	**2.37**	**344**	P	**Pg**	**03 42 57.5**	**-0.3**
SLVT	**Silivri**	**2.45**	**54**	*e*PN	**Pn**	**03 42 52.4**	**-0.1**
SLVT	**Silivri**	**2.45**	**54**	*e*Pn	**Pn**	**03 42 52.4**	**-0.1**
DEMI	**Demirci**	**2.56**	**107**	*e*P	**Pg**	**03 43 00.1**	**-1.3**
CTKS	**Kestanelik-??a**	**2.64**	**57**	*e*PN	**Pn**	**03 42 55.6**	**+0.5**
CTKS	**Kestanelik-??a**	**2.64**	**57**	*e*Pn	**Pn**	**03 42 55.6**	**+0.5**
MANT	**Manisa**	**2.68**	**119**	*i* P	**Pn**	**03 42 57.4**	**+1.8**
MANT				*i* S	**Sn**	**03 43 29.4**	**+1.3**
MANT	**Manisa**	**2.68**	**119**	*i* P	**Pn**	**03 42 57.4**	**+1.8**
MANT				*i* S	**Sn**	**03 43 29.4**	**+1.3**
KULA	**Kula-Manisa**	**2.74**	**118**	*e*PN	**Pn**	**03 42 57.5**	**+1.1**
KULA	**Kula-Manisa**	**2.74**	**118**	*e*Pn	**Pn**	**03 42 57.5**	**+1.1**
KKB	**Krupnik**	**2.78**	**318**	P	**Pg**	**03 43 06.2**	**+0.6**
BGKT	**Bogazkoy**	**2.79**	**60**	*e*PN	**Pn**	**03 42 57.2**	**+0.1**
BGKT	**Bogazkoy**	**2.79**	**60**	*e*Pn	**Pn**	**03 42 57.2**	**+0.1**
GEMT	**Gemlik**	**2.84**	**76**	*e*PN	**Pn**	**03 42 57.9**	**+0.1**
GEMT	**Gemlik**	**2.84**	**76**	*e*Pn	**Pn**	**03 42 57.9**	**+0.1**
ISK	**Istanbul-Kandi**	**2.94**	**64**	*e*PN	**Pn**	**03 42 59.8**	**+0.6**
ISK	**Istanbul-Kandi**	**2.94**	**64**	*e*Pn	**Pn**	**03 42 59.8**	**+0.7**
KLYT	**Kilyos**	**3.00**	**61**	*e*PN	**Pn**	**03 43 00.7**	**+0.6**
KLYT	**Kilyos**	**3.00**	**61**	*e*Pn	**Pn**	**03 43 00.7**	**+0.6**
YLV	**Yalova**	**3.00**	**75**	*e*PN	**Pn**	**03 43 00.6**	**+0.6**
YLV	**Yalova**	**3.00**	**75**	*e*Pn	**Pn**	**03 43 00.6**	**+0.5**
ALT	**Altintas**	**3.60**	**101**	*e*PN	**Pn**	**03 43 08.5**	**+0.3**
ALT	**Altintas**	**3.60**	**101**	*e*Pn	**Pn**	**03 43 08.5**	**+0.3**
GULT	**Gulveren**	**3.84**	**79**	*e*PN	**Pn**	**03 43 11.7**	**+0.2**
GULT	**Gulveren**	**3.84**	**79**	*e*Pn	**Pn**	**03 43 11.7**	**+0.2**

MEX 16 03:56:27.3±0.7, 18°.00N×98°.16W, h90km±10km, MD3.6, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UTMO	**Huajuapan**	**0.38**	**117**	*i* P	Pn	03 56 40.5	-0.6
UTMO				*i* S	Sn	03 56 49.8	-1.5
TPIG	**Tehuac#an**	**0.86**	**61**	*e*P	Pn	03 56 44.3	-1.1
TPIG				*i* S	Sn	03 56 57.5	-1.5
PPM	**Popocatepetl**	**1.15**	**337**	*i* P	Pn	03 56 47.4	-1.3
PPM				*i* S	Sn	03 57 04.1	-0.8
MZVM		**1.56**	**319**	*i* P	Pn	03 56 53.0	-0.8
MZVM				*i* S	Sn	03 57 13.5	-0.4
PNIG	**Pinotepa**	**1.60**	**179**	*i* P	Pn	03 56 52.6	-1.7
PNIG				*i* S	Sn	03 57 13.2	-1.6
IIO	**Organos**	**1.67**	**341**	*e*P	Pn	03 56 54.1	-1.1

IDC 16 04:13:51.5±1.1, 31°.18N×103°.96E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.7/8, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/33, Error ellipse: s-maj=40.5km s-min=19.4km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.74**	**6**	Pn	Pn	04 17 46.9	-0.4
	0.1nm,0.3s,baz=195,slow=11,SNR=4.0						
SONM				LR	LR	04 24 48.5	
	comp=Z,48nm,20.8s,baz=141,slow=39						
KSRS	**Korea Array**	**20.73**	**66**	P	P	04 18 34.9	+1.3
	0.8nm,0.4s,baz=268,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**22.84**	**319**	P	P	04 18 57.5	+1.4
	0.2nm,0.4s,baz=140,slow=10,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.60**	**334**	P	P	04 19 31.4	+0.1
	1.8nm,0.9s,baz=123,slow=10,SNR=4.8						
KURK	**Kurchatov**	**27.11**	**323**	P	P	04 19 36.0	+0.1
	0.3nm,0.3s,baz=129,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**58.60**	**146**	P	P	04 23 51.1	+0.7
	3.0nm,0.6s,baz=338,slow=7.8						
ASAR	**Alice Springs**	**61.62**	**149**	P	P	04 24 10.3	-0.6
	2.0nm,1.1s,baz=342,slow=8.9,SNR=4.8						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	P	04 26 09.9	-1.3
	0.1nm,0.6s,baz=330,slow=5.0,SNR=2.7						

*MAN **16** 04:14:48, 10°.96N×124°.78E, h4km, mb5.0, ML3.9, MS4.0*
*IDC **16** 04:14:48.7±1.4, 10°.87N×124°.67E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.9/7, Error ellipse: s-maj=74.2km s-min=25.2km az=72.0*
*ISCJB **16** 04:14:49.3±0.9, 10°.98N±0°.03×124°.80E±0°.05, h12km±5km, mb3.9/10, Error ellipse: s-maj=8.1km s-min=5.1km az=8.7*
*NEIC **16** 04:14:54.2±1.0, 10°.74N×124°.48E, h35km, mb4.2/4, Error ellipse: s-maj=33.6km s-min=16.3km az=75.0*
ISC 16 04:14:49.7±0.8, 10°.96N±0°.03×124°.78E±0°.04, h5km±5km, n21, σ1§07/27, mb3.9/10, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.19**	**298**	*e*P	**Pg**	**04 14 53.5**	**0.0**
OCLP	**Ormoc**	**0.19**	**298**	*e*S	**Sg**	**04 14 57.0**	**+1.0**
MSLP	**Maasin**	**0.82**	**175**	*e*P	**Pg**	**04 15 05.8**	**+0.2**
MSLP				*e*S	**Sg**	**04 15 17.9**	**+1.6**
BESP	**Borongan**	**0.91**	**45**	*e*P	**Pg**	**04 15 05.7**	**-1.5**
LLP	**Lapu-Lapu**	**1.02**	**231⇑**	*e*P	**Pg**	**04 15 07.7**	**-1.7**
LLP				*e*S	**Sg**	**04 15 22.2**	**-0.5**
CNP	**Catarman**	**1.54**	**356**	*e*P	**Pn**	**04 15 17.0**	**-0.9**
CNP				*e*S	**Sn**	**04 15 35.5**	**-2.8**
TBP	**Tagbilaran**	**1.55**	**216**	*e*P	**Pn**	**04 15 17.0**	**-1.0**
TBP				*e*S	**Sn**	**04 15 37.4**	**-1.1**
RCP	**Roxas**	**2.08**	**287⇓**	*e*P	**Pn**	**04 15 25.1**	**-0.2**
RCP				*e*S	**Sn**	**04 15 52.1**	**+0.5**
PVCP	**Virac**	**2.69**	**347**	*e*P	**Pn**	**04 15 35.5**	**+1.9**
BUKP	**Musuan**	**3.07**	**175**	*e*P	**Pn**	**04 15 39.9**	**+1.0**
KULM	**Kulim**	**24.53**	**259**	*e*P	**P**	**04 20 07.1**	**-3.4**
	4.1nm,0.6s,mb4.1						
KSRS	**Korea Array**	**26.53**	**6**	P	**P**	**04 20 29.0**	**+0.7**
	0.5nm,0.3s,mb3.5,baz=184,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**35.55**	**166**	P	**P**	**04 21 47.2**	**-0.7**
	0.5nm,0.8s,mb3.5,baz=345,slow=7.4,SNR=4.6						
SONM	**Songino Array**	**39.88**	**341**	P	**P**	**04 22 24.0**	**-0.3**
	1.2nm,0.9s,mb3.6,baz=185,slow=11,SNR=4.6						
MK31	**Makanchi Array**	**50.60**	**323**	*e*P	**P**	**04 23 50.9**	**+1.4**
MKAR	**Makanchi Array**	**50.60**	**323**	P	**P**	**04 23 50.0**	**+0.6**
	1.0nm,0.7s,mb3.9,baz=124,slow=8.1,SNR=4.3						
ZALV	**Zalesovo Beam**	**53.33**	**332**	P	**P**	**04 24 10.2**	**+0.5**
	0.4nm,0.3s,mb3.8,baz=138,slow=6.7,SNR=2.6						
UCH	**Uchtor**	**53.65**	**315**	*e*P	**P**	**04 24 13.5**	**+1.2**
	4.2nm,1.0s,mb4.3						
KURK	**Kurchatov**	**54.67**	**326**	P	**P**	**04 24 19.1**	**-0.5**
	5.1nm,1.1s,mb4.5,baz=123,slow=7.2,SNR=14						
KURK	**Kurchatov**	**54.67**	**326**	*e*P	**P**	**04 24 20.2**	**+0.6**
	1.4nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**60.27**	**326**	P	**P**	**04 24 58.6**	**-0.5**
	1.9nm,0.9s,mb4.1,baz=115,slow=7.0,SNR=7.0						
BRVK	**Borovoye**	**60.34**	**326**	*e*P	**P**	**04 24 59.7**	**+0.2**
	1.0nm,0.5s,mb4.1						

*ISCJB **16** 04:23:40.4±1.9, 18°.0N±0°.1×145°.8E±0°.2, h164km±20km, mb3.7/16, Error ellipse: s-maj=28.1km s-min=17.5km az=16.8*
*NEIC **16** 04:23:41.0±0.4, 18°.04N×145°.95E, mb3.8/5, Error ellipse: s-maj=18.5km s-min=8.9km az=103.0*
*IDC **16** 04:23:41.1±0.7, 17°.98N×146°.03E, h156km±6km, mb3.5/10, mb1 3.7/11, mb1mx3.6/20, mbtmp3.5/11, Error ellipse: s-maj=24.3km s-min=10.6km az=106.0*
ISC 16 04:23:41.4±1.8, 18°.0N±0°.1×145°.9E±0°.2, h160km±18km, h158km±1.9km; pP-P, n23, σ0§72/22, mb3.7/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.51**	**193**	P	**Pn**	**04 24 48.7**	**+0.1**
	28nm,0.3s,baz=160,slow=7.0,SNR=5.4						
GUMO				S	**Sn**	**04 25 40.8**	**-0.3**
	44nm,0.3s,baz=53,slow=18,SNR=5.1						
GUMO	**Guam**	**4.51**	**193**	P	**Pn**	**04 24 48.7**	**+0.1**
GUMO				S	**Sn**	**04 25 40.8**	**-0.3**
KSRS	**Korea Array**	**25.01**	**324**	pP	pP	04 29 21.4	-2.1
	0.6nm,0.4s,baz=145,slow=9.1,SNR=2.4						
PETK	**Petropavlovsk-**	**36.21**	**12**	P	**P**	**04 30 29.1**	**+0.5**
	0.8nm,0.6s,mb3.5,baz=188,slow=8.7,SNR=4.8						
PETK				pP	pP	04 31 02.8	-0.1
	1.0nm,0.6s,baz=268,slow=34,SNR=2.2						
WRAB	**Tennant Creek**	**39.38**	**197**	*e*P	**P**	**04 30 56.6**	**+1.1**
	1.3nm,0.7s,mb3.7						
FITZ	**Fitzroy Crossi**	**41.06**	**210**	P	**P**	**04 31 09.5**	**+0.1**
	1.4nm,0.3s,mb4.1,baz=49,slow=9.0,SNR=27						
ASAR	**Alice Springs**	**43.05**	**196**	P	**P**	**04 31 25.0**	**-0.4**
	0.2nm,0.3s,mb3.2,baz=18,slow=5.7,SNR=5.3						
ASAR	**Alice Springs**	**43.05**	**196**	P	**P**	**04 31 25.0**	**-0.4**
ZALV	**Zalesovo Beam**	**58.70**	**323**	P	**P**	**04 33 22.6**	**+0.6**
	0.6nm,0.4s,mb3.7,baz=101,slow=7.5,SNR=2.8						
MKAR	**Makanchi Array**	**59.11**	**314**	P	**P**	**04 33 26.5**	**+1.5**
	0.2nm,0.4s,mb3.3,baz=87,slow=6.9,SNR=3.2						
BVAR	**Borovoye Array**	**67.15**	**321**	P	**P**	**04 34 17.6**	**-0.2**
	1.0nm,0.6s,mb3.8,baz=78,slow=6.8,SNR=4.2						
INK	**Inuvik**	**69.92**	**23**	*e*P	**P**	**04 34 34.8**	**+0.1**
	1.3nm,0.6s,mb3.8						
ABKAR	**Akbulak array**	**74.00**	**317**	*e*P	**P**	**04 34 58.6**	**-0.8**
	0.5nm,0.5s,mb3.5						
YKA	**Yellowknife Ar**	**78.49**	**28**	P	**P**	**04 35 24.0**	**-0.4**
	0.9nm,0.5s,mb3.6,baz=287,slow=5.5,SNR=13						
YKA				pP	pP	04 36 02.8	-1.0
	0.7nm,0.7s,baz=289,slow=5.5,SNR=6.5						
RES	**Resolute Bay**	**80.04**	**14**	*e*P	**P**	**04 35 32.7**	**0.0**
	0.6nm,0.5s,mb3.5						
ARCES	**ARCESS Array B**	**83.22**	**342**	P	**P**	**04 35 48.9**	**-0.5**
	4.2nm,1.1s,mb4.1,baz=61,slow=7.5,SNR=6.6						
ARCES				pP	pP	04 36 29.1	-0.2
	2.3nm,0.9s,baz=66,slow=15,SNR=1.5						
ARCES	**ARCESS Array B**	**83.22**	**342**	P	**P**	**04 35 48.9**	**-0.5**
ARCES				pP	pP	04 36 29.1	-0.2
NVAR	**Mina Array Bea**	**83.38**	**52**	P	**P**	**04 35 51.2**	**+0.3**
	1.0nm,0.4s,mb3.9,baz=269,slow=5.8,SNR=12						
NVAR				pP	pP	04 36 29.6	-1.1
	1.0nm,0.7s,baz=266,slow=5.8,SNR=4.5						
HRY	**Holter Researc**	**85.17**	**42**	*e*P	**P**	**04 36 00.1**	**+0.4**
	1.4nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**87.61**	**335**	P	**P**	**04 36 09.1**	**-2.1**
	0.8nm,0.4s,mb3.9,baz=59,slow=4.9,SNR=5.7						
PDAR	**Pinedale Array**	**88.14**	**46**	P	**P**	**04 36 14.0**	**-0.2**
	0.2nm,0.6s,mb3.1,baz=243,slow=4.0,SNR=3.0						
LPAZ	**La Paz**	**147.42**	**92**	PKPbc	PKPbc	04 43 08.8	+1.5
	0.9nm,0.6s,baz=0.4,slow=0.4,SNR=5.8						
LPAZ	**La Paz**	**147.42**	**92**	PKPbc	PKPbc	04 43 08.8	+1.5

*IDC **16** 04:44:02.5±1.0, 24°.31N×95°.96E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.1/27, mbtmp4.2/14, MS3.4/6, Ms1 3.5/6, ms1mx3.1/34, Error ellipse: s-maj=31.9km s-min=18.3km az=40.0*
*ISCJB **16** 04:44:07.9±0.7, 24°.18N±0°.06×95°.90E±0°.05, h59km±8km, mb4.3/28, MS3.4/6, Error ellipse: s-maj=11.7km s-min=4.8km az=28.2*
*BJI **16** 04:44:07.0, 24°.48N×95°.94E, h35km, mB5.0/4, mb4.7/15, ML4.0/6, Ms4.2/5, Ms7 3.8/5*
*NEIC **16** 04:44:11.1±1.1, 24°.31N×96°.03E, h68km±12km, mb4.4/13, Error ellipse: s-maj=14.5km s-min=7.6km az=55.0*
ISC 16 04:44:09.6±0.6, 24°.24N±0°.06×95°.97E±0°.05, h53km±7km, n66, σ1§03/70, mb4.3/28, MS3.4/6, 1C, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.93**	**287**	*e*P	**Pn**	**04 44 40.0**	**0.0**
IMP				*e*S	**Sn**	**04 45 04.0**	**+0.9**
SHL	**Shillong**	**3.94**	**290**	*e*P	**Pn**	**04 45 06.5**	**-1.0**
SHL				*e*S	**Sn**	**04 45 54.0**	**+1.6**
CHRT	**Chiangrai**	**5.61**	**140**	P	**Pn**	**04 45 29.5**	**-1.0**
	487nm,0.6s						
CHG	**Chiang Mai**	**6.07**	**152**	⇑P	**Pn**	**04 45 36.9**	**+0.1**
	52nm,0.7s						
KMI	**Kunming**	**6.22**	**81**	P	**Pn**	**04 45 40.0**	**+1.1**
KMI				smax			
	comp=N,110nm,1.0s						
KMI				smax			
	comp=E,68nm,1.3s						
KMI				LR	LR		
	comp=N,4μm,9.0s						
KMI				LR	LR		
	comp=E,880nm,7.3s						
KMI				LR	LR		
	comp=Z,590nm,8.4s						
CM31	**Chiang Mai Arr**	**6.39**	**154**	*e*Pn	**Pn**	**04 45 41.4**	**+0.2**
	comp=Z,22nm,0.5s						
LSA	**Lhasa**	**6.93**	**323**	P	**Pn**	**04 45 45.9**	**-2.6**
LSA				LR	LR		
	comp=Z,990nm,15.8s						
LSA	**Lhasa**	**6.93**	**323**	*e*Pn	**Pn**	**04 45 50.0**	**+1.5**
	comp=Z,22nm,0.8s						
BDT	**Bhumibol Dam**	**7.52**	**157**	P	**Pn**	**04 45 56.5**	**-0.2**
	comp=Z,78nm,1.0s						
TAPN	**Taplejung**	**8.06**	**294**	*e*Pn	**Pn**	**04 46 03.7**	**-0.3**
RAMN	**Ramite**	**8.87**	**290**	*e*Pn	**Pn**	**04 46 15.5**	**+0.3**
RAMN				*e*Sn	**Sn**	**04 47 54.9**	**+1.1**
	comp=Z,283nm,1.0s						
GUN	**Gumba**	**9.78**	**294**	*e*Pn	**Pn**	**04 46 26.2**	**-1.3**
GUN				*e*Sn	**Sn**	**04 48 15.7**	**-0.1**
	comp=Z,145nm,0.6s						
PKI	**Pulchoki**	**10.06**	**291**	*e*Pn	**Pn**	**04 46 29.5**	**-2.0**
PKI				*e*Sn	**Sn**	**04 48 23.5**	**+0.6**
	comp=Z,49nm,0.6s						
PKIN	**Phulchoki**	**10.08**	**291**	*e*Pn	**Pn**	**04 46 29.6**	**-2.1**
KKN	**Kakani**	**10.24**	**292**	*e*Pn	**Pn**	**04 46 33.1**	**-0.8**
KKN				*e*Sn	**Sn**	**04 48 26.0**	**-1.2**
	comp=Z,70nm,0.7s						
DMN	**Daman**	**10.33**	**291**	*e*Pn	**Pn**	**04 46 34.9**	**-0.3**
DMN				*e*Sn	**Sn**	**04 48 30.0**	**+0.5**
	comp=Z,85nm,0.7s						
GTA	**Gaotai**	**15.47**	**11**	*e*P	**Pn**	**04 47 45.9**	**+1.6**
GTA				pP	pP	04 47 52.3	-7.3
GTA				sP	sP	04 47 55.3	-11
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KULM	**Kulim**	**19.38**	**166**	*e*P	**Pn**	**04 48 34.1**	**+1.5**
	comp=Z,13nm,1.0s						
WMQ	**Urumqi**	**20.68**	**343**	*e*P	**P**	**04 48 44.6**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,20nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.0s						
PALK	**Pallekele**	**22.33**	**223**	LR	LR	04 59 19.5	
	comp=Z,100nm,18.8s,MS3.3,baz=260,slow=41						
KSH	**Kashi**	**22.73**	**317**	P	**P**	**04 49 07.1**	**+0.1**
KSH				pmax	pmax		
	comp=Z,130nm,2.6s,mb4.9						
ULHL	**Ulahol**	**24.28**	**322**	P	**P**	**04 49 23.5**	**+1.7**
	SNR=8.4						
SONM	**Songino Array**	**24.96**	**17**	P	**P**	**04 49 27.6**	**-0.3**
	comp=Z,1.3nm,0.9s,mb3.5,baz=196,slow=9.1,SNR=4.6						
MK31	**Makanchi Array**	**25.03**	**337**	*e*P	**P**	**04 49 28.7**	**+0.2**
MKAR	**Makanchi Array**	**25.03**	**337**	P	**P**	**04 49 28.8**	**+0.2**
	comp=Z,19nm,0.7s,mb4.7,baz=147,slow=10,SNR=129						
TKM2	**Tokmak 2**	**25.09**	**323**	P	**P**	**04 49 30.2**	**+1.1**
	SNR=17						
TKM2	**Tokmak 2**	**25.09**	**323**	*e*P	**P**	**04 49 29.9**	**+0.8**
	comp=Z,19nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**25.17**	**18**	*e*P	**P**	**04 49 30.9**	**+1.1**
	comp=Z,3.9nm,0.9s,mb3.9						
UCH	**Uchtor**	**25.25**	**320**	P	**P**	**04 49 32.4**	**+1.7**
	SNR=12						
UCH	**Uchtor**	**25.25**	**320**	*e*P	**P**	**04 49 32.1**	**+1.5**
	comp=Z,6.8nm,0.7s,mb4.3						

KBK	**Karagaybulak**	**25.28**	**322**	P	**P**	**04 49 32.7**	**+1.8**
	SNR=5.4						
AAK	**Ala-Archa**	**25.52**	**321**	P	**P**	**04 49 34.7**	**+1.6**
	SNR=9.3						
AAK	**Ala-Archa**	**25.52**	**321**	P	**P**	**04 49 34.3**	**+1.3**
	comp=Z,4.6nm,0.5s,mb4.2,baz=133,slow=6.5,SNR=21						
AAK	**Ala-Archa**	**25.52**	**321**	*e*P	**P**	**04 49 34.2**	**+1.1**
	comp=Z,10nm,0.8s,mb4.4						
KBL	**Kabul**	**25.53**	**300**	*e*P	**P**	**04 49 34.8**	**+1.5**
	comp=Z,12nm,0.8s,mb4.5						
AML	**Almayashu**	**25.68**	**319**	P	**P**	**04 49 36.1**	**+1.7**
	SNR=17						
AML	**Almayashu**	**25.68**	**319**	*e*P	**P**	**04 49 35.7**	**+1.2**
	comp=Z,14nm,0.8s,mb4.6						
USP	**Ospenovka**	**25.92**	**322**	P	**P**	**04 49 36.9**	**+0.2**
	SNR=13						
EKS2	**Erkin-Say**	**25.95**	**320**	P	**P**	**04 49 38.4**	**+1.4**
	SNR=19						
EKS2	**Erkin-Say**	**25.95**	**320**	*e*P	**P**	**04 49 38.3**	**+1.3**
	comp=Z,13nm,0.8s,mb4.5						
KURK	**Kurchatov**	**29.64**	**337**	P	**P**	**04 50 08.8**	**-1.0**
	comp=Z,3.5nm,0.7s,mb4.2,baz=148,slow=8.9,SNR=22						
KURK	**Kurchatov**	**29.64**	**337**	*e*P	**P**	**04 50 09.2**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**30.82**	**347**	*e*P	**P**	**04 50 19.5**	**-0.7**
ZALV	**Zalesovo Beam**	**30.82**	**347**	P	**P**	**04 50 19.6**	**-0.6**
	comp=Z,4.5nm,0.7s,mb4.4,baz=165,slow=8.5,SNR=20						
ZALV				LR	LR	05 04 15.4	
	comp=Z,29nm,18.1s,MS3.0,baz=72,slow=39						
BVAR	**Borovoye Array**	**34.64**	**333**	P	**P**	**04 50 53.2**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.5,baz=134,slow=10,SNR=15						
BVAR				LR	LR	05 07 06.0	
	comp=Z,118nm,18.6s,MS3.7,baz=329,slow=40						
BRVK	**Borovoye**	**34.70**	**333**	*e*P	**P**	**04 50 53.8**	**-0.4**
	comp=Z,3.6nm,0.6s,mb4.5						
ABKAR	**Akbulak array**	**37.61**	**321**	*e*P	**P**	**04 51 19.3**	**+0.3**
	comp=Z,6.5nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**38.16**	**61**	P	**P**	**04 51 23.5**	**-0.4**
	comp=Z,3.7nm,0.9s,mb4.1,baz=268,slow=9.2,SNR=14						
BRTR	**Keskin Array B**	**54.06**	**302**	P	**P**	**04 53 28.6**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=99,slow=7.6,SNR=3.9						
AKASG	**Malin Array Be**	**57.02**	**316**	P	**P**	**04 53 48.6**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=79,slow=6.7,SNR=10						
AKBB	**Malin Array Si**	**57.02**	**316**	*e*P	**P**	**04 53 48.5**	**-1.3**
KIEV	**Kiev**	**57.03**	**316**	*e*P	**P**	**04 53 48.6**	**-1.3**
	comp=Z,2.6nm,0.8s,mb4.3						
JOF	**Joensuu**	**57.19**	**331**	*e*p	**P**	**04 53 49.5**	**-1.3**
	comp=Z,5.1nm,0.7s,mb4.7						
KAF	**Kangasniemi**	**59.37**	**329**	*e*p	**P**	**04 54 04.9**	**-1.1**
	comp=Z,2.3nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**59.41**	**328**	P	**P**	**04 54 06.1**	**-0.3**
	comp=Z,4.9nm,0.7s,mb4.6,baz=104,slow=8.0,SNR=15						
FINES	**FINESS Array B**	**59.41**	**328**	P	**P**	**04 54 06.1**	**-0.3**
ASAR	**Alice Springs**	**60.19**	**139**	P	**P**	**04 54 13.6**	**+1.4**
	comp=Z,1.0nm,0.6s,mb4.0,baz=322,slow=7.1,SNR=13						
KEV	**Kevo**	**60.21**	**338**	*e*p	**P**	**04 54 04.7**	**-7.0**
	comp=Z,4.6nm,0.7s,mb4.6						
BILL	**Bilibino**	**60.39**	**24**	*e*P	**P**	**04 54 11.8**	**-1.2**
	comp=Z,2.

STKA Stephens Creek 38.59 161 *eP* **P 04 57 02.7 +3.9**
15nm,0.6s,mb5.0
STKA Stephens Creek 38.59 161 P **P 04 56 58.2 -0.6**
16nm,0.6s,mb5.0,baz=316,slow=12,SNR=7.0
STKA Stephens Creek 38.59 161 P **P 04 56 58.2 -0.6**
SHL Shillong 40.31 305 *eP* **P 04 57 12.5 -0.8**
ASAJ Asahikawa 41.37 16 P **P 04 57 21.0 -0.7**
6.9nm,0.6s,mb4.6,baz=11,slow=33,SNR=6.1
ARMA Armidale 41.60 148 *eP* **P 04 57 25.2 +1.4**
ARMA Armidale 41.60 148 *eP* **P 04 57 25.1 +1.3**
13nm,0.8s,mb4.7
GTA Gaotai 42.94 328 *eP* **P 04 57 34.8 +0.3**
GTA pmax pmax
comp=Z,12nm,0.8s,mb4.7
ULN Ulaanbaatar 46.63 341 *eP* **P 04 58 03.8 +0.1**
comp=Z,4.2nm,0.6s,mb4.3
SONM Songino Array 46.82 340 P **P 04 58 04.8 -0.5**
comp=Z,1.7nm,0.6s,mb4.0,baz=159,slow=8.7,SNR=7.5
PETK Petropavlovsk- 54.13 22 P **P 04 59 01.1 +0.8**
comp=Z,4.7nm,0.8s,mb4.6,baz=191,slow=4.4,SNR=8.1
MK31 Makanchi Array 57.49 324 *eP* **P 04 59 24.4 -0.1**
MKAR Makanchi Array 57.49 324 P **P 04 59 24.4 0.0**
comp=Z,11nm,0.6s,mb5.1,baz=122,slow=8.3,SNR=55
KSH Kashi 58.24 314 P **P 04 59 29.8 0.0**
KSH pmax pmax
comp=Z,86nm,3.7s
KZA Kyzart 59.75 317 P **P 04 59 41.6 +1.4**
SNR=7.1
TKM2 Tokmak 2 59.85 318 P **P 04 59 41.5 +0.6**
SNR=7.5
TKM2 Tokmak 2 59.85 318 *eP* **P 04 59 41.1 +0.2**
comp=Z,3.4nm,0.5s,mb4.6
UCH Uchtor 60.31 317 P **P 04 59 45.5 +1.5**
SNR=11
UCH Uchtor 60.31 317 *eP* **P 04 59 45.2 +1.2**
comp=Z,10nm,1.1s,mb4.8
ZAA0 Zalesovo Array 60.31 332 *eP* **P 04 59 43.0 -0.9**
ZALV Zalesovo Beam 60.31 332 P **P 04 59 42.9 -0.9**
comp=Z,3.9nm,0.6s,mb4.6,baz=112,slow=6.5,SNR=17
ZALV Zalesovo Beam 60.31 332 P **P 04 59 42.9 -0.9**
AAK Ala-Archa 60.48 317 P **P 04 59 45.7 +0.5**
comp=Z,2.2nm,0.5s,mb4.5,baz=176,slow=3.4,SNR=6.3
AAK Ala-Archa 60.48 317 *eP* **P 04 59 45.6 +0.4**
USP Ospenovka 60.73 318 P **P 04 59 47.1 +0.2**
SNR=10
AML Almayashu 60.84 316 P **P 04 59 49.2 +1.5**
SNR=7.5
AML Almayashu 60.84 316 *eP* **P 04 59 48.5 +0.8**
comp=Z,4.8nm,0.6s,mb4.7
EKS2 Erkin-Say 60.98 317 P **P 04 59 49.8 +1.2**
SNR=8.7
EKS2 Erkin-Say 60.98 317 *eP* **P 04 59 49.2 +0.6**
comp=Z,5.9nm,0.6s,mb4.8
KURK Kurchatov 61.61 327 P **P 04 59 51.8 -0.9**
comp=Z,17nm,0.6s,mb5.2,baz=125,slow=6.2,SNR=69
KURK Kurchatov 61.61 327 *eP* **P 04 59 52.4 -0.3**
comp=Z,61nm,0.6s,mb5.8
KBL Kabul 61.91 307 *eP* **P 04 59 55.0 -0.1**
comp=Z,6.4nm,0.7s,mb4.8
TIXI Tiksi 66.91 0 *eP* **P 05 00 26.2 -0.8**
comp=Z,4.3nm,0.8s,mb4.3
BVAR Borovoye Array 67.20 326 P **P 05 00 29.1 -0.1**
comp=Z,7.2nm,0.7s,mb4.6,baz=118,slow=8.6,SNR=28
BRVK Borovoye 67.27 326 *eP* **P 05 00 29.1 -0.5**
comp=Z,19nm,0.7s,mb5.0
ABKAR Akbulak array 72.19 320 *eP* **P 05 00 59.5 -0.5**
comp=Z,7.7nm,0.6s,mb4.7
COLD Coldfoot 82.58 23 *eP* **P 05 01 58.7 +1.1**
comp=Z,2.4nm,0.6s,mb4.2
MCK McKinley 82.81 26 *eP* **P 05 01 58.9 +0.1**
comp=Z,7.7nm,1.0s,mb4.5
ATD Arta Tunnel 84.27 281 P **P 05 02 08.1 +0.8**
comp=Z,2.4nm,0.5s,mb4.3,baz=2.1,slow=23,SNR=4.0
MALT Malatya 86.75 308 *eP* **P 05 02 20.2 +1.0**
comp=Z,1.6nm,0.6s,mb4.1
ARCES ARCESS Array B 89.99 340 P **P 05 02 32.7 -1.2**
comp=Z,2.8nm,0.6s,mb4.6,baz=72,slow=7.8,SNR=12
ARCES ARCESS Array B 89.99 340 P **P 05 02 32.7 -1.2**
BRTR Keskin Array B 90.35 310 P **P 05 02 35.2 -1.0**
comp=Z,0.3nm,0.5s,mb3.6,baz=324,slow=42,SNR=2.9
FINES FINESS Array B 91.58 332 P **P 05 02 39.9 -1.6**
comp=Z,0.3nm,0.3s,mb4.0,baz=189,slow=37,SNR=3.2
AKASG Malin Array Be 91.93 321 P **P 05 02 41.7 -1.6**
comp=Z,0.8nm,0.5s,mb4.2,baz=68,slow=4.7,SNR=5.5
SCHQ Schefferville 119.47 10 PKP PKPdf 05 08 24.2 +0.2
comp=Z,1.7nm,0.6s,baz=216,slow=8.4,SNR=4.8
TOA0 Torodi Ar. Sit 123.75 289 *e*PKPdf PKPdf 05 08 32.9 -0.4
TORD Torodi Ar. Bea 123.75 289 PKP PKPdf 05 08 33.2 -0.1
comp=Z,0.9nm,0.7s,baz=33,slow=2.0,SNR=7.2
TRQA Tornquist 145.55 166 *e*PKPbc PKPbc 05 09 13.5 +0.2
CFAA Coronel Fontan 149.20 152 PKPbc PKPbc 05 09 24.0 +0.3
comp=Z,0.7nm,0.6s,baz=228,slow=3.5,SNR=14
LCO Las Campanas 150.03 146 *e*PKPbc PKPbc 05 09 26.4 +0.6
LPAZ La Paz 160.46 127 PKPab PKPab 05 10 21.5 +5.0
comp=Z,1.2nm,0.8s,baz=216,slow=1.9,SNR=4.8
SIV San Ignacio 165.69 143 PKP PKPdf 05 09 41.2 +1.0
comp=Z,0.6nm,0.4s,baz=220,slow=11,SNR=3.9

ISCJB ***16*** *04:51:52.5±0.4, 6°.78N±0°.05×72°.89W±0°.04, h168km±4km, mb4.0/36, Error ellipse: s-maj=7.8km s-min=5.7km az=151.7*
IDC ***16*** *04:51:52.5±0.6, 6°.75N×72°.92W, h157km±6km, mb3.6/8, mb1 3.8/12, mb1mx3.6/24, mbtmp3.7/12, Error ellipse: s-maj=14.2km s-min=6.8km az=130.0*
BJI ***16*** *04:51:52.5, 6°.70N×72°.90W, h163km, mB5.0/2*
NEIC ***16*** *04:51:53.0±0.5, 6°.68N×72°.92W, h164km±5km, mb4.1/30, Error ellipse: s-maj=6.6km s-min=5.9km az=81.0*
FUNV ***16*** *04:51:53.1, 6°.81N×73°.11W, h165km, MW4.2*
ISC 16 04:51:53.2±0.4, 6°.76N±0°.04×72°.91W±0°.04, h156km±4km, n278, σ0°55/277, mb4.0/36, 108C-92D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.25**	**28**	⇑*i*P	**Pn**	**04 52 21.6**	**+0.9**
ROSC	**El Rosal**	**2.36**	**217**	P	**Pn**	**04 52 33.4**	**+0.5**
	94nm,0.3s,baz=86,slow=20,SNR=164						
ROSC				S	**Sn**	**04 53 03.6**	**-0.1**
	165nm,0.3s,baz=89,slow=22,SNR=16						
ROSC	**El Rosal**	**2.36**	**217**	*e*Pn	**Pn**	**04 52 33.0**	**0.0**
ROSC				*e*Sn	**Sn**	**04 53 01.4**	**-2.2**
SOCV	**Socops**	**2.54**	**53**	*eP*	**Pn**	**04 52 36.5**	**+1.3**
VIGV	**El Vigia**	**2.57**	**36**	⇑*i*P	**Pn**	**04 52 36.2**	**+0.7**
VIGV				*e*S	**Sn**	**04 53 07.3**	**-1.0**
SDV	**Santo Domingo**	**3.09**	**47**	P	**Pn**	**04 52 43.1**	**+1.2**
	75nm,0.3s,baz=227,slow=5.2,SNR=509						
SDV				S	**Sn**	**04 53 19.6**	**-0.2**
	151nm,0.3s,baz=77,slow=23,SNR=34						
SDV	**Santo Domingo**	**3.09**	**47**	*e*Pn	**Pn**	**04 52 42.7**	**+0.7**
SDV				*e*Sn	**Sn**	**04 53 21.8**	**+2.0**
ELOV	**Elorza**	**3.41**	**86**	*eP*	**Pn**	**04 52 48.0**	**+2.0**
VIRV	**Villa del Rosa**	**3.75**	**8**	*eP*	**Pn**	**04 52 48.7**	**-1.7**
VIRV				*e*S	**Sn**	**04 53 29.6**	**-5.4**
QARV	**Quebrada Arrib**	**4.16**	**34**	⇑*i*P	**Pn**	**04 52 56.2**	**+0.5**
SANV	**Sanarito**	**4.31**	**51**	*eP*	**Pn**	**04 52 58.1**	**+0.5**
CURV	**Curarigua**	**4.36**	**42**	*eP*	**Pn**	**04 52 58.3**	**+0.1**
DABV	**Dabajuro**	**4.71**	**28**	*eP*	**Pn**	**04 53 03.0**	**+0.1**
DABV				*e*S	**Sn**	**04 53 53.0**	**-4.3**
TEPV	**Terepaima**	**4.87**	**49**	*eP*	**Pn**	**04 53 05.5**	**+0.5**
TEPV				*e*S	**Sn**	**04 53 58.9**	**-2.2**
SIQV	**Siquisique**	**4.94**	**38**	⇑*i*P	**Pn**	**04 53 05.7**	**-0.2**
BAUV	**El Baul**	**5.29**	**65**	*eP*	**Pn**	**04 53 10.0**	**-0.6**
PAYV	**Puerto Ayacuch**	**5.39**	**104**	*eP*	**Pn**	**04 53 12.6**	**+0.7**
MONV	**Montecano**	**5.92**	**29**	*eP*	**Pn**	**04 53 17.8**	**-1.1**
CAOV	**Caicara del Or**	**6.56**	**85**	*eP*	**Pn**	**04 53 27.0**	**-0.5**
MERV	**Las Mercedes**	**7.00**	**69**	*eP*	**Pn**	**04 53 32.9**	**-0.4**
FUNV	**FUNVISIS**	**7.07**	**58**	*eP*	**Pn**	**04 53 33.9**	**-0.3**
BCIP	**Isla Barro Col**	**7.27**	**290**	*e*Pn	**Pn**	**04 53 31.5**	**-5.3**
BIRV	**Birongo**	**7.53**	**60**	*eP*	**Pn**	**04 53 39.5**	**-0.8**
CUPV	**Cepira**	**7.77**	**65**	*eP*	**Pn**	**04 53 43.1**	**-0.5**
OTAV	**Otavalo**	**8.52**	**221**	*e*Pn	**Pn**	**04 53 51.3**	**-2.2**
OTAV				*e*Sn	**Sn**	**04 53 24.4**	**-4.0**
PCRV	**Puerto La Cruz**	**8.86**	**67**	P	**Pn**	**04 53 58.7**	**+0.7**
	3.2nm,0.3s,baz=259,slow=5.7,SNR=11						
PCRV				S	**Sn**	**04 55 37.1**	**+0.5**
	2.3nm,0.3s,baz=159,slow=20,SNR=3.7						
STH	**Stony Hill**	**11.88**	**342**	⇑*e*P	**Pn**	**04 54 38.2**	**+0.5**
JTS	**JuntasAbangare**	**12.42**	**287**	P	**Pn**	**04 54 45.8**	**+1.0**
	0.3nm,0.3s,baz=109,slow=18,SNR=2.9						
JTS	**JuntasAbangare**	**12.42**	**287**	*e*Pn	**Pn**	**04 54 45.7**	**+0.9**
ATAH	**Atahualpa**	**14.72**	**202**	P	**Pn**	**04 55 21.9**	**+8.0**
	0.2nm,0.3s,baz=102,slow=12,SNR=3.7						
LPAZ	**La Paz**	**23.38**	**168**	P	**P**	**04 56 48.6**	**+0.6**
	1.4nm,0.7s,mb3.5,baz=354,slow=7.1,SNR=5.9						
LPAZ				pP		04 57 19.8	
	1.1nm,0.8s,baz=305,slow=12,SNR=2.9						
LPAZ	**La Paz**	**23.38**	**168**	*eP*	**P**	**04 56 47.8**	**-0.2**
	2.0nm,0.8s,mb3.6						
SIV	**San Ignacio**	**25.46**	**153**	P	**P**	**04 57 07.0**	**+0.1**
	1.0nm,0.8s,mb3.4,baz=16,slow=23,SNR=5.5						
SIV				pP	pP	04 57 38.9	-0.4
	1.8nm,0.8s,baz=356,slow=9.9,SNR=4.1						
WVT	**Waverly**	**32.27**	**337**	*eP*	**P**	**04 58 06.5**	**-0.6**
	4.0nm,0.4s,mb4.5						
WCI	**Wyandotte Cave**	**33.60**	**341**	*eP*	**P**	**04 58 18.6**	**0.0**
	4.4nm,0.7s,mb4.3						
CCM	**Cathedral Cave**	**35.32**	**335**	*eP*	**P**	**04 58 33.1**	**-0.2**
	9.2nm,0.7s,mb4.5						
628A	**Black Gap, Mar**	**36.17**	**312**	⇑P	**P**	**04 58 40.1**	**-0.7**
	baz=36						
528A	**Cox Ranch, San**	**36.46**	**313**	⇑P	**P**	**04 58 42.4**	**-0.8**
	baz=37						
627A	**Terlingua Ranc**	**36.52**	**312**	⇓P	**P**	**04 58 43.3**	**-0.4**
	baz=37						
WMOK	**Wichita Mounta**	**36.66**	**323**	*eP*	**P**	**04 58 43.2**	**-1.6**
	1.6nm,0.6s,mb3.8						
428A	**Kincaid Ranch,**	**36.70**	**314**	⇓P	**P**	**04 58 45.3**	**0.0**
	baz=37						
527A	**Woodward Ranch**	**37.05**	**313**	⇓P	**P**	**04 58 48.2**	**0.0**
	baz=37,SNR=5.5						
328A	**Wristen Ranch,**	**37.16**	**315**	⇑P	**P**	**04 58 48.2**	**-1.0**
	baz=37						
427A	**Hayter Ranch,**	**37.28**	**314**	⇑P	**P**	**04 58 48.9**	**-1.2**
	baz=37						
526A	**Mary Lane Ranc**	**37.36**	**312**	⇓P	**P**	**04 58 50.2**	**-0.5**
	baz=38						
426A	**McDonald Obser**	**37.64**	**313**	⇑P	**P**	**04 58 52.4**	**-0.7**
	baz=38,SNR=5.5						
425A	**Indio Mountain**	**38.40**	**313**	⇓P	**P**	**04 58 58.8**	**-0.6**
	baz=38						
AMTX	**Amarillo**	**38.53**	**321**	*eP*	**P**	**04 58 59.9**	**-0.7**
	2.5nm,0.6s,mb4.0						
Z27A	**Tatum**	**38.57**	**317**	⇑P	**P**	**04 58 60.0**	**-0.9**
	baz=39,SNR=11						
Y27A	**Causey**	**38.87**	**318**	⇑P	**P**	**04 59 02.5**	**-1.0**
	baz=39						
Z26A	**Caprock**	**39.06**	**317**	⇓P	**P**	**04 59 04.3**	**-0.7**
	baz=39						
324A	**Moseley Ranch,**	**39.10**	**313**	⇑P	**P**	**04 59 04.8**	**-0.5**
	baz=39						
MNTX	**Cornudas Mount**	**39.17**	**314**	*eP*	**P**	**04 59 05.0**	**-0.8**
	2.8nm,0.6s,mb4.1						
125A	**Gardner Draw,**	**39.18**	**315**	⇑P	**P**	**04 59 05.7**	**-0.3**
	baz=39						
224A	**Corundas Mount**	**39.47**	**314**	⇑P	**P**	**04 59 08.3**	**-0.1**
	baz=40,SNR=12						
W27A	**Bowe Ranch, En**	**39.53**	**320**	⇓P	**P**	**04 59 08.3**	**-0.5**
	baz=40						
Y25A	**Mesa, Roswell**	**39.92**	**317**	⇑P	**P**	**04 59 12.4**	**+0.3**
	baz=40						
Y24A	**Capitan**	**40.43**	**316**	⇑P	**P**	**04 59 16.3**	**0.0**
	baz=41						
V26A	**Tequesquite Ra**	**40.45**	**320**	⇓P	**P**	**04 59 16.1**	**-0.3**
	baz=41						
W25A	**X Bar L Ranch,**	**40.53**	**319**	⇓P	**P**	**04 59 16.9**	**-0.2**
	baz=41,SNR=6.6						
222A	**Williams Famil**	**40.62**	**313**	⇓P	**P**	**04 59 17.8**	**-0.1**
	baz=41						
U26A	**Atchley Ranch,**	**40.79**	**321**	⇓P	**P**	**04 59 19.4**	**+0.2**
	baz=41						
Y23A	**Lovelace Mesa,**	**40.86**	**316**	⇑P	**P**	**04 59 20.2**	**+0.4**
	baz=41						
320A	**Kipp Ranch, An**	**41.30**	**311**	⇓P	**P**	**04 59 23.6**	**+0.2**
	baz=41						
220A	**Playas Peak, P**	**41.57**	**312**	⇓P	**P**	**04 59 26.1**	**+0.4**
	baz=42,SNR=5.1						
ANMO	**Albuquerque**	**41.71**	**317**	*eP*	**P**	**04 59 27.0**	**+0.3**
LAZ	**Ladron**	**41.87**	**316**	*eP*	**P**	**04 59 27.8**	**-0.2**
319A	**Douglas**	**41.88**	**311**	⇑P	**P**	**04 59 28.3**	**+0.1**
	baz=42						
120A	**U Bar Ranch, L**	**41.97**	**312**	⇓P	**P**	**04 59 29.3**	**+0.4**
	baz=42						
V23A	**Ortiz Mt. (NFS**	**41.98**	**318**	⇓P	**P**	**04 59 29.3**	**+0.4**
	baz=42						
219A	**White Tail Can**	**42.16**	**311**	⇓P	**P**	**04 59 30.6**	**+0.2**
	baz=42						
Z20A	**Nine Sixteen R**	**42.22**	**313**	⇓P	**P**	**04 59 31.8**	**+0.9**
	baz=42						
ECSD	**EROS Data Cent**	**42.30**	**334**	*eP*	**P**	**04 59 30.5**	**-0.8**
	13nm,1.8s,mb4.3						
X21A	**Alamocita Cree**	**42.34**	**315**	⇓P	**P**	**04 59 32.2**	**+0.4**
	baz=42						
318A	**Bisbee**	**42.45**	**310**	⇑P	**P**	**04 59 33.0**	**+0.2**
	baz=43						
Y20A	**Horse Springs,**	**42.47**	**314**	⇓P	**P**	**04 59 33.5**	**+0.6**
	baz=43						
SDCO	**Great Sand Dun**	**42.73**	**321**	*eP*	**P**	**04 59 35.8**	**+0.9**
	4.9nm,1.0s,mb4.1						
X20A	**Quemado**	**42.89**	**315**	⇑P	**P**	**04 59 37.2**	**+0.9**
	baz=43						
118A	**Homack Ranch,**	**42.99**	**312**	⇑P	**P**	**04 59 37.5**	**+0.3**
	baz=43,SNR=6.0						
Y19A	**Nutrioso**	**43.12**	**314**	⇓P	**P**	**04 59 38.9**	**+0.7**
	baz=43						
T22A	**Edith**	**43.18**	**319**	⇓P	**P**	**04 59 39.5**	**+0.9**
	baz=43						
X19A	**St. Johns**	**43.39**	**314**	⇑P	**P**	**04 59 40.8**	**+0.5**
	baz=44						
TUC	**Tucson**	**43.45**	**311**	*eP*	**P**	**04 59 40.2**	**-0.6**
	2.0nm,0.8s,mb3.8						
117A	**Oracle**	**43.53**	**311**	⇓P	**P**	**04 59 41.7**	**+0.2**
	baz=44						
Z17A	**San Carlos Hig**	**43.68**	**312**	⇓P	**P**	**04 59 42.8**	**+0.2**
	baz=44						
R22A	**Saguache, Gunn**	**43.81**	**321**	⇑P	**P**	**04 59 44.0**	**+0.4**
	baz=44						
W19A	**Sanders**	**43.81**	**315**	⇑P	**P**	**04 59 43.9**	**+0.3**
	baz=44						
X18A	**Snowflake**	**43.91**	**314**	⇑P	**P**	**04 59 44.8**	**+0.3**
	baz=44						
EYMN	**Ely**	**43.99**	**342**	*eP*	**P**	**04 59 43.9**	**-1.0**
	6.6nm,0.6s,mb4.4						
S21A	**Coal Bank Pass**	**44.14**	**319**	⇓P	**P**	**04 59 46.5**	**+0.3**
	baz=44						
116A	**Eloy**	**44.25**	**311**	⇑P	**P**	**04 59 46.7**	**-0.5**
	baz=44						
Q22A	**Crested Butte,**	**44.29**	**321**	⇑P	**P**	**04 59 47.9**	**+0.5**
	baz=44						
U19A	**Dine' College,**	**44.31**	**317**	⇓P	**P**	**04 59 47.6**	**0.0**
	baz=44						
MVCO	**Mesa Verde**	**44.34**	**318**	⇑P	**P**	**04 59 48.1**	**+0.2**
	baz=44						
Y16A	**Circle Bar Ran**	**44.70**	**312**	⇓P	**P**	**04 59 50.9**	**+0.2**
	baz=45						
115A	**Sonoran Desert**	**44.71**	**311**	⇑P	**P**	**04 59 51.2**	**+0.3**
	baz=45						
R20A	**Redvale**	**44.82**	**320**	⇑P	**P**	**04 59 52.4**	**+0.7**
	baz=45						
214A	**Organ Pipe Nat**	**44.83**	**309**	⇓P	**P**	**04 59 51.6**	**-0.2**
	baz=45						
U18A	**Rough Rock, Ch**	**44.83**	**317**	⇑P	**P**	**04 59 51.9**	**+0.2**
	baz=45						
X16A	**Lo Mia Camp, P**	**44.92**	**313**	⇓P	**P**	**04 59 53.1**	**+0.6**
	baz=45						
P21A	**Newcastle**	**45.02**	**322**	⇓P	**P**	**04 59 53.9**	**+0.7**
	baz=45						
V17A	**Tonalea, Kykot**	**45.06**	**315**	⇓P	**P**	**04 59 53.9**	**+0.3**
	baz=45						
Q20A	**Ridgley Place,**	**45.21**	**320**	⇓P	**P**	**04 59 55.5**	**+0.8**
	baz=45,SNR=5.1						
T18A	**Mexican Hat**	**45.22**	**317**	⇑P	**P**	**04 59 54.6**	**-0.2**
	baz=45						
114A	**Black Gap (USA**	**45.23**	**310**	⇑P	**P**	**04 59 55.2**	**+0.2**
	baz=45,SNR=5.9						
Y15A	**Casa Rosa Ranc**	**45.36**	**312**	⇓P	**P**	**04 59 56.1**	**+0.1**
	baz=46						
WUAZ	**Wupatki**	**45.41**	**315**	⇓P	**P**	**04 59 56.8**	**+0.5**
	baz=46						
WUAZ	**Wupatki**	**45.41**	**315**	*eP*	**P**	**04 59 57.5**	**+1.1**
	6.3nm,0.9s,mb4.2						
U17A	**Shonto**	**45.47**	**316**	⇓P	**P**	**04 59 57.1**	**+0.3**
	baz=46						
X15A	**Humboldt**	**45.53**	**313**	⇑P	**P**	**04 59 57.4**	**+0.1**
	baz=46						
Z14A	**Wintersburg**	**45.55**	**311**	⇓P	**P**	**04 59 57.5**	**+0.1**
	baz=46						
U16A	**Tuba City**	**45.56**	**315**	⇓P	**P**	**04 59 57.7**	**+0.3**
	baz=46						
AGMN	**Agassiz Refuge**	**45.76**	**339**	*eP*	**P**	**04 59 58.2**	**-0.6**
	3.6nm,0.6s,mb4.2						
T17A	**Navajo Res., N**	**45.77**	**317**	⇑P	**P**	**04 59 59.4**	**+0.2**
	baz=46						
N21A	**Black Mountain**	**45.82**	**323**	⇓P	**P**	**05 00 00.1**	**+0.7**
	baz=46						
Q19A	**Hogan Spring (**	**45.83**	**320**	⇓P	**P**	**04 59 59.6**	**0.0**
	baz=46						
Y14A	**Wickenburg**	**45.85**	**312**	⇓P	**P**	**04 59 59.9**	**+0.1**
	baz=46						
Z13A	**Yuma Proving G**	**46.01**	**310**	⇑P	**P**	**05 00 01.0**	**0.0**
	baz=46						
S17A	**Black Ridge (B**	**46.11**	**317**	⇑P	**P**	**05 00 02.2**	**+0.4**
	baz=46						
V15A	**Kaibab Nationa**	**46.13**	**314**	⇓P	**P**	**05 00 02.9**	**+1.0**
	baz=46,SNR=8.8						
M21A	**Separation Pea**	**46.25**	**324**	⇑P	**P**	**05 00 03.7**	**+0.9**
	baz=46						
N20A	**Spence Gulch,**	**46.31**	**323**	⇑P	**P**	**05 00 04.3**	**+1.1**
	baz=46						
Q18A	**Rafter H Ranch**	**46.47**	**320**	⇓P	**P**	**05 00 04.6**	**0.0**
	baz=47						
W14A	**Seligman**	**46.49**	**313**	⇑P	**P**	**05 00 05.0**	**+0.2**
	baz=47						
U15A	**North Rim**	**46.51**	**315**	⇑P	**P**	**05 00 05.4**	**+0.5**
	baz=47						
O19A	**Miners Draw (B**	**46.52**	**321**	⇑P	**P**	**05 00 04.8**	**-0.1**
	baz=47						
V14A	**Boquillas Ranc**	**46.70**	**314**	⇑P	**P**	**05 00 06.9**	**+0.5**
	baz=47						
R16A	**Teasdale**	**46.91**	**318**	⇑P	**P**	**05 00 08.5**	**+0.5**
	baz=47						
O18A	**Roosevelt**	**47.05**	**321**	⇑P	**P**	**05 00 09.4**	**+0.4**
	baz=47						
P17A	**Butcher Ranch,**	**47.07**	**320**	⇓P	**P**	**05 00 09.6**	**+0.4**
	baz=47						
U14A	**Mt Trumbull**	**47.13**	**315**	⇓P	**P**	**05 00 10.0**	**+0.3**
	baz=47						
T14A	**Hurricane**	**47.38**	**315**	⇑P	**P**	**05 00 12.1**	**+0.5**
	baz=48						
ULM	**Lac du Bonnet**	**47.42**	**340**	P	**P**	**05 00 10.6**	**-1.1**
	4.7nm,0.5s,mb4.4,baz=145,slow=7.4,SNR=12						
ULM	**Lac du Bonnet**	**47.42**	**340**	*eP*	**P**	**05 00 10.4**	**-1.2**
	9.4nm,1.2s,mb4.3						
V13A	**Grand Canyon W**	**47.44**	**314**	⇓P	**P**	**05 00 12.1**	**-0.1**
	baz=48						
O17A	**Robinson Place**	**47.47**	**320**	⇑P	**P**	**05 00 12.8**	**+0.5**
	baz=48,SNR=5.4						
U13A	**Pakoon Wash**	**47.69**	**314**	⇑P	**P**	**05 00 14.1**	**0.0**
	baz=48						
K19A	**Absolon Red Bu**	**47.87**	**324**	⇓P	**P**	**05 00 15.5**	**+0.2**
	baz=48						
T13A	**Saint George**	**47.93**	**315**	⇑P	**P**	**05 00 16.4**	**+0.5**
	baz=48						
N17A	**Moffit Pass**	**47.95**	**321**	⇓P	**P**	**05 00 16.4**	**+0.4**
	baz=48						
O16A	**Springville**	**47.96**	**320**	⇓P	**P**	**05 00 16.3**	**+0.2**
	baz=48						
V12A	**Nelson**	**48.01**	**313**	⇓P	**P**	**05 00 16.5**	**0.0**
	baz=48						
L18A	**Fontenelle, Gr**	**48.03**	**323**	⇓P	**P**	**05 00 16.8**	**+0.2**
	baz=48						
S13A	**Holt Ranch, En**	**48.17**	**316**	⇑P	**P**	**05 00 18.2**	**+0.4**
	baz=48						
SCHQ	**Schefferville**	**48.19**	**5**	P	**P**	**05 00 17.3**	**-0.2**
	2.1nm,0.5s,mb4.0,baz=186,slow=8.4,SNR=8.9						
BW06	**Boulder Array**	**48.25**	**324**	⇓P	**P**	**05 00 18.7**	**+0.5**
	baz=48						
BW06	**Boulder Array**	**48.25**	**324**	*eP*	**P**	**05 00 18.1**	**-0.2**
	35nm,2.9s,mb4.5						
PDAR	**Pinedale Array**	**48.25**	**324**	P	**P**	**05 00 17.9**	**-0.4**
	1.2nm,0.7s,mb3.7,baz=122,slow=8.2,SNR=12						
N16A	**Rees Ranch, Co**	**48.30**	**321**	⇑P	**P**	**05 00 19.3**	**+0.6**
	baz=48						
PFO	**Pinyon Flat Ob**	**48.31**	**310**	⇑P	**P**	**05 00 18.9**	**+0.1**
	baz=48						
Q14A	**Sevier Lake (B**	**48.47**	**318**	⇑P	**P**	**05 00 20.3**	**+0.3**
	baz=49						
V11A	**Goodsprings**	**48.48**	**313**	⇑P	**P**	**05 00 20.2**	**0.0**
	baz=49						
R13A	**O'Grain Ranch,**	**48.54**	**316**	⇓P	**P**	**05 00 20.9**	**+0.4**
	baz=49						
M16A	**Huntsville**	**48.66**	**321**	⇑P	**P**	**05 00 21.4**	**0.0**
	baz=49						
HWUT	**Hardware Ranch**	**48.78**	**321**	*eP*	**P**	**05 00 22.5**	**+0.1**
	2.3nm,0.6s,mb4.0						
J18A	**Kendall Valley**	**48.79**	**324**	⇓P	**P**	**05 00 22.0**	**-0.4**
	baz=49,SNR=6.5						
DUG	**Dugway**	**48.80**	**319**	⇓P	**P**	**05 00 22.5**	**0.0**
	baz=49						
DUG	**Dugway**	**48.80**	**319**	*eP*	**P**	**05 00 22.6**	**+0.1**
	1.0nm,0.6s,mb3.6						
L16A	**Fish Haven**	**48.93**	**322**	⇑P	**P**	**05 00 23.0**	**-0.5**
	baz=49,SNR=5.2						
Q13A	**Wheeler Ranch,**	**48.96**	**317**	⇓P	**P**	**05 00 24.0**	**+0.3**
	baz=49,SNR=6.2						
R12A	**Pony Springs,**	**49.05**	**316**	⇑P	**P**	**05 00 24.7**	**+0.2**
	baz=49						
P13A	**Bates Ranch, G**	**49.20**	**318**	⇓P	**P**	**05 00 26.5**	**+0.9**
	baz=49						
M15A	**Larsen Ranch,**	**49.25**	**321**	⇑P	**P**	**05 00 25.8**	**-0.1**
	baz

BOZ	Bozeman (W)	51.18	326	eP	P	05 00 39.8 -0.6
	1.3nm,0.6s,mb3.7					
I14A	Mackay	51.24	323	⇑P	P	05 00 41.2 +0.4
	baz=51					
L12A	House Creek Ra	51.24	320	⇓P	P	05 00 40.8 0.0
	baz=51					
E17A	Martinsdale	51.26	327	⇑P	P	05 00 40.7 -0.2
	baz=51,SNR=5.3					
J13A	Cove Ranch, Pi	51.38	322	⇑P	P	05 00 41.7 -0.2
	baz=52					
G15A	Dillon	51.38	325	⇑P	P	05 00 42.1 +0.3
	baz=52					
MCMT	McKenzie Canyo	51.39	324	eP	P	05 00 42.3 +0.3
	1.2nm,0.6s,mb3.7					
H14A	Leadore	51.57	324	⇓P	P	05 00 43.7 +0.4
	baz=52					
D17A	Six Diamond Ra	51.60	328	⇓P	P	05 00 43.5 +0.1
	baz=52					
HLID	Hailey	51.62	322	⇑P	P	05 00 43.7 +0.1
	baz=52					
HLID	Hailey	51.62	322	eP	P	05 00 43.5 -0.2
	1.2nm,0.6s,mb3.7					
I13A	Wildhorse Cree	51.63	323	⇓P	P	05 00 44.0 +0.3
	baz=52					
EGMT	Eagleton	51.67	329	⇑P	P	05 00 44.3 +0.3
	baz=52					
NVAR	Mina Array Bea	51.68	315	P	P	05 00 44.0 -0.1
	1.0nm,0.5s,mb3.7,baz=132,slow=6.3,SNR=6.2					
L11A	Cat Creek Ranc	51.72	320	⇑P	P	05 00 44.4 0.0
	baz=52					
E16A	East Helena	51.75	327	⇑P	P	05 00 44.6 0.0
	baz=52					
F15A	Butte	51.78	325	⇑P	P	05 00 45.0 +0.2
	baz=52					
J12A	Stokes Ranch,	51.87	321	⇑P	P	05 00 45.3 -0.2
	baz=52					
B18A	Beardsley Farm	51.92	329	⇓P	P	05 00 46.1 +0.3
	baz=52,SNR=7.7					
C17A	Wharram Farm,	51.94	328	⇑P	P	05 00 45.9 -0.1
	baz=52					
D16A	Dana Ranch, Ca	51.98	327	⇓P	P	05 00 46.3 0.0
	baz=52					
H13A	Challis	52.07	323	⇑P	P	05 00 46.8 -0.2
	baz=52					
L10A	Juniper Basin	52.13	319	⇑P	P	05 00 47.6 +0.1
	baz=52,SNR=5.8					
I12A	Atlanta	52.18	322	⇑P	P	05 00 47.6 -0.1
	baz=52,SNR=5.1					
K11A	Parker Ranch,	52.20	320	⇑P	P	05 00 47.9 -0.1
	baz=52					
E15A	Deer Lodge	52.21	326	⇑P	P	05 00 48.1 +0.1
	baz=52					
A18A	Metzger Ranch,	52.30	330	⇑P	P	05 00 48.8 +0.2
	baz=52					
G13A	Cobalt	52.35	324	⇓P	P	05 00 49.0 0.0
	baz=52					
B17A	L&G Farms, Che	52.38	329	⇑P	P	05 00 49.5 +0.3
	baz=53					
MFID	Camas Ranch	52.41	321	⇑P	P	05 00 49.5 0.0
	baz=53					
H12A	Diamond D Ranc	52.42	323	⇑P	P	05 00 49.5 0.0
	baz=53					
D15A	Lincoln	52.52	327	⇑P	P	05 00 50.4 +0.2
	baz=53					
C16A	Fuhringer Ranc	52.56	328	⇓P	P	05 00 50.6 +0.1
	baz=53					
E14A	Clinton	52.68	326	⇑P	P	05 00 51.4 0.0
	baz=53					
K10A	MacKenzie Ranc	52.74	320	⇓P	P	05 00 51.9 -0.1
	baz=53					
I11A	Placerville	52.75	322	⇓P	P	05 00 51.9 -0.1
	baz=53					
F13A	Darby	52.80	324	⇑P	P	05 00 52.0 -0.3
	baz=53					
C15A	Salmond Ranch,	53.01	327	⇑P	P	05 00 54.1 +0.3
	baz=53					
H11A	Donnelly	53.20	323	⇓P	P	05 00 54.5 -0.8
	baz=53					
A16A	West Butte Ran	53.20	329	⇓P	P	05 00 55.2 -0.1
	baz=53					
FFC	Flin Flon	53.22	339	eP	P	05 00 53.9 -1.3
	1.5nm,0.5s,mb4.0					
B15A	Bradely Ranch,	53.31	328	⇑P	P	05 00 56.2 +0.2
	baz=54					
J09A	Fry Pan Ranch,	53.58	320	⇑P	P	05 00 57.8 -0.3
	baz=54,SNR=6.3					
H10A	Noah's Angus R	53.59	322	⇓P	P	05 00 58.0 -0.1
	baz=54					
D13A	Huson	53.62	326	⇓P	P	05 00 58.1 -0.2
	baz=54					
C14A	Swan Lake	53.62	327	⇑P	P	05 00 58.3 +0.1
	baz=54					
WVOR	Wild Horse Val	53.71	319	eP	P	05 00 58.5 -0.5
	4.2nm,1.1s,mb4.1					
A15A	Johnson Ranch,	53.81	328	⇓P	P	05 00 59.1 -0.5
	baz=54					
E12A	Beaver Dam Sad	53.87	325	⇑P	P	05 00 59.7 -0.4
	baz=54					
C13A	Hot Springs	54.02	326	⇓P	P	05 01 01.0 -0.2
	baz=54					
D12A	Red Ives Fores	54.10	325	⇑P	P	05 01 01.6 -0.1
	baz=54					
A14A	Double T Ranch	54.16	328	⇓P	P	05 01 01.8 -0.4
	baz=54					
G10A	Bishop Farm, J	54.18	323	⇓P	P	05 01 01.7 -0.7
	baz=54,SNR=5.5					
E11A	Bogner Ranch,	54.20	324	⇓P	P	05 01 02.0 -0.6
	baz=54					
FCC	Fort Churchill	54.38	347	eP	P	05 01 02.4 -1.2
C12B	Naegeli Ranch,	54.53	326	⇑P	P	05 01 05.0 +0.1
	baz=55					
F10A	Beach Ranch, E	54.60	323	⇓P	P	05 01 04.8 -0.6
	baz=55					
D11A	Klaveano Farm,	54.65	325	⇑P	P	05 01 05.3 -0.5
	baz=55,SNR=5.3					
E10A	Myers Farm, Un	54.80	324	⇓P	P	05 01 06.6 -0.2
	baz=55					
I07A	Izee	55.05	320	⇓P	P	05 01 08.5 -0.2
	baz=55					
D10A	Wagner Farm, O	55.20	324	⇑P	P	05 01 08.9 -0.7
	baz=55					
G08A	Pilot Rock	55.30	322	⇓P	P	05 01 10.2 -0.2
	baz=56					
C09A	Chrisman Ranch	56.17	325	⇑P	P	05 01 16.5 -0.1
	baz=56					
F07A	Phinny Hill Vi	56.18	322	⇑P	P	05 01 16.7 -0.1
	baz=56					
B09A	Rice	56.43	325	⇓P	P	05 01 18.1 -0.3
	baz=57					
YKA	Yellowknife Ar	63.40	340	P	P	05 02 04.8 -0.9
	3.6nm,0.6s,mb4.4,baz=133,slow=6.6,SNR=122					
SUMG	Summit	69.01	11	eP	P	05 02 42.1 +0.8
INK	Inuvik	73.16	340	eP	P	05 03 06.0 -0.3
	1.8nm,0.6s,mb4.0					
TORD	Torodi Ar. Bea	73.55	78	P	P	05 03 08.4 -1.2
	0.2nm,0.5s,mb3.1,baz=281,slow=6.2,SNR=6.0					
KURK	Kurchatov	117.70	20	PKP	PKPdf	05 10 20.4 -0.4
	0.3nm,0.7s,baz=319,slow=2.3,SNR=2.9					
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	05 10 29.1 -0.7
	0.2nm,0.4s,baz=321,slow=2.3,SNR=4.8					
WMQ	Urumqi	126.69	17	ePKP	PKPdf	05 10 37.1 -1.2
HHC	Hu-ho-hao-te	132.45	355	ePKP	PKPdf	05 10 47.4 -1.9
HHC				sPKP		05 11 46.5
HHC				PP	PP	05 13 16.5 +3.6
HHC				PKS		05 14 21.8
HHC				SKS	SKSdf	05 17 40.5 -5.7
HHC				SKKS	SKKSac	05 19 49.0 -5.9
HHC				SS	SS	05 30 39.3 +0.6
HHC				AMB	AMB	
	comp=Z,110nm,6.4s					
HHC				LR	LR	
	comp=N,260nm,20.5s					
HHC				LR	LR	
	comp=E,250nm,22.6s					
HHC				LR	LR	
	comp=Z,170nm,21.5s					
STKA	Stephens Creek	139.26	228	PKP	PKPdf	05 11 02.7 +0.4
	comp=Z,1.0nm,0.6s,baz=52,slow=2.4,SNR=2.9					
STKA	Stephens Creek	139.26	228	PKP	PKPdf	05 11 02.7 +0.4
CD2	Chengdu	142.41	5	PKP	PKPdf	05 11 05.3 -2.7
ASAR	Alice Springs	149.24	234	PKPbc	PKPbc	05 11 22.9 -1.2
	comp=Z,3.3nm,0.6s,baz=118,slow=3.4,SNR=27					
WB2	Warramunga Arr	150.48	241	ePKPbc	PKPbc	05 11 25.9 -1.3
WRAB	Tennant Creek	150.48	241	ePKPbc	PKPbc	05 11 24.5 -2.7
WRA	Warramunga Arr	150.49	241	PKPbc	PKPbc	05 11 24.6 -2.7
	comp=Z,3.3nm,0.5s,baz=108,slow=2.6,SNR=32					

*IDC **16** 05:01:21.8±1.2,31°.61N×104°.04E,h0km,mb3.7/9, mb1 3.9/10,mb1mx3.7/28,mbtmp3.8/10,ML3.4/1,Error ellipse: s-maj=39.1km s-min=21.4km az=42.0*

*NEIC **16** 05:01:23.7±0.8,31°.69N×104°.03E,h10km,mb3.8/2,Error ellipse: s-maj=23.6km s-min=10.8km az=221.0*

*BJI **16** 05:01:24.6,31°.83N×104°.42E,h16km,mB4.3/1,mb3.7/3, ML4.0/13,Ms4.0/5,Ms7 3.8/5*

ISC 16 05:01:24.3±1.0,31°.85N±0°.03×104°.11E±0°.07,h3km±7km, n25,σ1°.25/34,mb3.8/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.98	198	Pg	Pg	05 01 42.6	-0.5
CD2				Sg	Sg	05 01 56.4	+0.5
CD2				smax			
	comp=N,5μm,0.6s						
LZH	Lanzhou	4.23	357	Pn	Pn	05 02 32.1	+2.5
LZH				Pg	Pg	05 02 43.0	-2.4
LZH				Sn	Sn	05 03 24.1	+4.6
LZH				Sg	Sg	05 03 41.8	+1.6
LZH				smax			
	comp=N,150nm,0.7s						
LZH				smax			
	comp=E,210nm,0.9s						
LZH				LR	LR		
	comp=N,2μm,6.6s						
LZH				LR	LR		
	comp=Z,2μm,9.0s						
XAN	Xi'an	4.60	60	Pg	Pn	05 02 39.3	+4.6
XAN				Sn	Sn	05 03 29.3	+0.7
XAN				Sg	Sg	05 03 45.6	-6.4
XAN				smax			
	comp=N,130nm,0.9s						
XAN				smax			
	comp=E,100nm,1.0s						
ENH	Enshi	4.88	107	ePn	Pn	05 02 38.2	-0.3
GYA	Guiyang	5.82	157	Pn	Pn	05 02 50.6	-0.9
GYA				Sn	Sn	05 03 59.6	+0.9
GYA				smax			
	comp=N,150nm,0.9s						
GYA				smax			
	comp=E,190nm,1.0s						
KMI	Kunming	6.81	190	Pn	Pn	05 03 05.8	+0.7
KMI				Sn	Sn	05 04 26.3	+3.2
KMI				smax			
	comp=N,25nm,1.5s						
KMI				smax			
	comp=E,18nm,1.1s						
GTA	Gaotai	8.31	336	eP	Pn	05 03 30.8	+5.2
GTA				pP		05 03 33.9	
GTA				sP		05 03 36.6	
GTA				S	Sn	05 05 05.6	+5.6
GTA				sS		05 05 11.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,72nm,5.4s						
GTA				LR	LR		
	comp=N,660nm,9.8s						
GTA				LR	LR		
	comp=E,290nm,10.7s						
GTA				LR	LR		
	comp=Z,570nm,11.0s						
SONM	Songino Array	16.06	6	Pn	Pn	05 05 11.2	+0.2
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=4.0						
KSRS	Korea Array	20.35	68	P	P	05 06 02.0	+0.2
	comp=Z,2.3nm,0.7s,baz=255,slow=10,SNR=8.2						
MKAR	Makanchi Array	22.42	318	P	P	05 06 25.0	+1.0
	comp=Z,2.4nm,0.9s,mb3.6,baz=114,slow=12,SNR=15						
MKAR	Makanchi Array	22.42	318	P	P	05 06 25.0	+1.0
UCH	Uchtor	25.68	302	eP	P	05 06 58.6	+3.3
	comp=Z,1.5nm,0.7s,mb3.6						
ZAA0	Zalesovo Array	26.05	334	eP	P	05 06 58.6	-0.1
ZALV	Zalesovo Beam	26.05	334	P	P	05 06 58.8	+0.2
	comp=Z,1.4nm,0.7s,mb3.6,baz=128,slow=9.7,SNR=5.9						
KURK	Kurchatov	26.65	322	P	P	05 07 04.6	+0.5
	comp=Z,1.8nm,1.0s,mb3.6,baz=129,slow=9.2,SNR=8.3						
KURK	Kurchatov	26.65	322	eP	P	05 07 03.3	-0.8
	comp=Z,3.0nm,1.3s,mb3.7						
AKASG	Malin Array Be	56.88	313	P	P	05 11 08.5	-1.7
	comp=Z,0.3nm,0.3s,mb3.8,baz=70,slow=6.8,SNR=3.6						
FINES	FINESS Array B	56.95	326	P	P	05 11 08.9	-1.6
	comp=Z,1.9nm,0.8s,mb4.2,baz=114,slow=13,SNR=4.1						
ASAR	Alice Springs	62.13	149	P	P	05 11 43.9	-2.8
	comp=Z,0.6nm,0.5s,mb4.0,baz=332,slow=6.6,SNR=5.3						
NOA	NORSAR Array B	64.03	327	P	P	05 11 57.1	-1.8
	comp=Z,1.0nm,0.9s,mb3.9,baz=69,slow=6.2,SNR=2.5						
LPG	La Plagne	72.74	313	eP	P	05 12 54.2	+0.5
	comp=Z,5.1nm,0.7s,mb4.2						
LPL	La Plagne	72.75	313	eP	P	05 12 54.1	+0.3
SMF	Signal de Mont	73.97	315	eP	P	05 13 00.7	-0.3
YKA	Yellowknife Ar	80.98	17	P	P	05 13 38.5	-1.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=331,slow=5.5,SNR=5.6						
YKA	Yellowknife Ar	80.98	17	P	P	05 13 38.5	-1.3

*NIED **16** 05:07:00,34°.00N×137°.00E,h360km,Mw5.0 Best double couple: M0 3.45000×10^16 NP1:φs 173.00000°, δ 76.00000°, λ 89.00000°. NP2:φs 356.00000°, δ 14.00000°, λ 93.00000°.*

*BJI **16** 05:07:31.7,34°.00N×136°.88E,h348km,mB4.7/24, mb5.0/51*

*JMA **16** 05:07:32.8±0.2,33°.97N×136°.98E,h356km±2km,M5.0*

JMA Felt I J1.

*MOS **16** 05:07:32.4±0.8,34°.04N×136°.88E,h344km,mb4.9/103, Error ellipse: s-maj=7.5km s-min=4.4km az=103.7*

*IDC **16** 05:07:33.2±0.6,33°.92N×136°.90E,h349km±5km,mb4.4/25, mb1 4.5/29,mb1mx4.4/33,mbtmp4.4/29,Error ellipse: s-maj=8.9km s-min=6.5km az=62.0*

*ISCJB **16** 05:07:33.1±0.1,34°.02N±0°.02×136°.89E±0°.02,h347km, mb4.8/252,Error ellipse: s-maj=2.7km s-min=1.6km az=164.2*

*NEIC **16** 05:07:33.1±0.4,33°.90N×136°.84E,h344km±3km, mb4.9/172,MW5.0(NIED),Error ellipse: s-maj=3.7km s-min=2.8km az=159.0*

NEIC Recorded [1 JMA] in Chiba, Fukushima and Tochigi.

*BGS **16** 05:07:34.6±1.7,33°.89N×135°.30E,h340km,mb4.4*

*SZGRF **16** 05:07:34.0,34°.21N×137°.39E,h352km,mb5.2,Near south coast of eastern Honshu, Japan*

*DJA **16** 05:07:36,33°.83N×136°.76E,h377km,mb5.1/18*

ISC 16 05:07:34.2±0.1,34°.03N±0°.02×136°.86E±0°.02,h349km, h349km±1.0km;pP-P,n1110,σ0°.74/1184,mb4.8/252, 268C-248D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	0.38	340	⇑P	Pn	05 08 18.0	0.0
JIE				S	S	05 08 52.3	-0.8
JKN2	Miekihoku	0.53	293	⇑P	Pn	05 08 18.1	-0.2
JKN2				S	S	05 08 52.5	-1.1
JAA	Atsumi	0.64	21	⇑P	Pn	05 08 18.6	+0.1
JAA				S	S	05 08 53.8	-0.3
TK02	Tokai 2	0.75	96	⇓P	Pn	05 08 18.6	-0.3
TK02				S	S	05 08 55.4	+0.7
TSUJ	Tsu 2	0.77	332	⇑P	Pn	05 08 19.1	+0.2
TSUJ				S	S	05 08 53.4	-1.4
TK04	Tokai 4	0.91	67	⇓P	Pn	05 08 19.3	-0.1
TK04				S	S	05 08 57.1	+1.5
TK03	Tokai 3	0.92	81	⇓P	Pn	05 08 19.5	0.0
TK03				S	S	05 08 57.1	+1.4
JWY	Kouya	1.07	280	⇑P	Pn	05 08 20.3	+0.3
JWY				S	S	05 08 56.2	-0.6
JWZ	Kozaga	1.08	243	⇑P	Pn	05 08 19.5	-0.6
JWZ				S	S	05 08 55.4	-1.5
HMMJ	Hamamatsu 2	1.09	40	S	S	05 08 56.6	-0.3
JHE	Heguri	1.16	303	⇑P	Pn	05 08 20.6	+0.2
JEG	Eigenji	1.17	341	⇑P	Pn	05 08 20.9	+0.5
JYZW	Yoshizawa	1.20	36	P	Pn	05 08 20.2	-0.4
JYZW				S	S	05 08 56.7	-1.1
JWM	Minabe	1.27	262	⇑P	Pn	05 08 20.6	-0.4
JSG	Sagara	1.27	59	⇓P	Pn	05 08 20.5	-0.4
JSG				S	S	05 08 58.5	+0.1
JAO	Obara	1.28	15	P	Pn	05 08 21.2	+0.3
JAO				S	S	05 08 58.8	+0.4
SHZ3	Shizuoka 3	1.52	47	⇓P	Pn	05 08 21.9	-0.3
SHZ3				S	S	05 09 00.6	-0.2
JNY	Yasuok	1.56	32	⇓P	Pn	05 08 22.3	-0.1
JNY				S	S	05 08 59.7	-1.5
JGF	Kuroka	1.62	14	⇓P	Pn	05 08 22.6	-0.2
JGF				S	S	05 09 00.8	-1.0
JFM	Mihama	1.66	334	⇑P	Pn	05 08 23.5	+0.5
JFM				S	S	05 09 02.1	-0.2
JGM	Miyama	1.67	356	⇑P	Pn	05 08 23.4	+0.3
JGM				eS	S	05 09 02.4	0.0
JAJ2	Tsuna	1.69	284	⇑P	Pn	05 08 23.1	-0.1
JMIK	Miki	1.69	298	⇑P	Pn	05 08 23.3	+0.1
JWT	Wachi	1.74	316	⇑P	Pn	05 08 23.9	+0.4
JWT				eS	S	05 09 01.5	-1.6
JIZS	Izushimoda	1.80	67	⇓P	Pn	05 08 23.1	-0.9
JIZS				S	S	05 09 03.4	-0.5
JKO	Kozu shima	1.89	85	⇓P	Pn	05 08 23.7	-0.9
JKS	Kasai	1.92	300	⇑P	Pn	05 08 24.9	+0.2
JYN	Shimob	2.02	43	⇓P	Pn	05 08 24.6	-0.8
JAI	Aioi	2.02	264	⇑P	Pn	05 08 25.5	0.0
JAI				eS	S	05 09 06.7	+0.1
AJI	Ajiro2	2.10	61	⇓P	Pn	05 08 24.9	-1.1
JNT	Takato	2.12	29	⇓P	Pn	05 08 25.8	-0.3
JNT				S	S	05 09 07.5	-0.3
JKY	Yasaka	2.15	318	⇑P	Pn	05 08 26.7	+0.3
JOD2	Odawara 2	2.21	56	⇓P	Pn	05 08 25.8	-1.0
JOD2				eS	S	05 09 08.6	-0.5
JGN	Niukaw	2.22	9	P	Pn	05 08 26.9	+0.1
JGN				S	S	05 09 08.1	-1.1
JIM2	Oshima 3	2.23	71	⇓P	Pn	05 08 25.7	-1.3
JKG	Kaga	2.28	349	⇑P	Pn	05 08 27.5	+0.2
JKG				eS	S	05 09 09.6	-0.5
MRT2	Murotomisaki 2	2.36	255	⇑P	Pn	05 08 27.9	-0.1
JKSM	Kasumi	2.39	311	⇑P	Pn	05 08 28.6	+0.5
JAD	Aida	2.41	293	⇑P	Pn	05 08 28.6	+0.3
JJS	Sakaide	2.46	279	⇑P	Pn	05 08 28.9	+0.2
JMN	Monobe	2.50	264	⇑P	Pn	05 08 29.5	+0.4
JMN				eS	S	05 09 14.1	+0.8
JNG	Nsakai	2.58	23	⇓P	Pn	05 08 29.3	-0.4
JNG				S	S	05 09 13.5	-0.8
JRY	Ryogami san	2.59	40	⇓P	Pn	05 08 29.2	-0.6
JRY				eS	S	05 09 13.8	-0.8
JHJ	Hachijo jima 2	2.60	110	P	Pn	05 08 28.7	-1.3
	348nm,0.3s,baz=199,slow=2.6,SNR=146						
JHJ				S	S	05 09 13.9	-0.9
	132nm,0.3s,baz=72,slow=20,SNR=2.7						
JHJ2	Mitsune	2.63	110	P	Pn	05 08 28.2	-2.0
MAJO	Matsushiro	2.74	23	ePn	Pn	05 08 30.4	-0.7
MAJO				eSn	S	05 09 19.1	+2.3
MAT	Matsushiro	2.74	23	P	Pn	05 08 30.4	-0.6
MAT				S	S	05 09 15.3	-1.5
MAT	Matsushiro	2.74	23	P	Pn	05 08 30.5	-0.5
MAT				eS	S	05 09 15.4	-1.4
MJAR	Matsushiro Arr	2.74	23	P	Pn	05 08 30.3	-0.7
	54nm,0.3s,baz=197,slow=9.6,SNR=574						
MJAR				S	S	05 09 15.4	-1.4
	14nm,0.3s,baz=196,slow=16,SNR=5.6						
MJAR	Matsushiro Arr	2.74	23	P	Pn	05 08 30.3	-0.7
MJAR				S	S	05 09 15.4	-1.4
MJAR				pmax	pmax		
	comp=Z,54nm,0.3s						
MJAR				smax			
	comp=N,14nm,0.3s						
JJH	Hakui	2.89	359	S	S	05 09 19.3	+0.1
TOK	Tokyo	2.90	54	P	Pn	05 08 31.9	-0.5
TOK				S	S	05 09 15.6	-3.7
JGK	Kuni	2.92	29	P	Pn	05 08 31.8	-0.8
JGK				eS	S	05 09 18.2	-1.4
BSO4	Boso 4	3.02	71	P	Pn	05 08 31.3	-2.3
BSO4				S	S	05 09 16.7	-4.7
BSO3	Boso 3	3.11	75	P	Pn	05 08 31.2	-3.2
BSO3				S	S	05 09 18.0	-4.8
JJG	Jouge	3.13	282	⇑P	Pn	05 08 35.2	+0.6
JET	Tanbara	3.18	267	⇑P	Pn	05 08 35.5	+0.4
JAG	Ashikaga	3.19	41	⇓P	Pn	05 08 33.0	-2.1
JAG				eS	S	05 09 19.2	-5.0
JHS	Saijyo	3.24	288	⇑P	Pn	05 08 36.4	+0.8
JHS				eS	S	05 09 25.6	+0.6
JJN	Nakama	3.25	19	⇓P	Pn	05 08 35.7	+0.1
JJN				S	S	05 09 24.6	-0.4
JKU	Kubokawa	3.25	258	⇑P	Pn	05 08 36.0	+0.3
BSO2	Boso 2	3.30	76	P	Pn	05 08 34.6	-1.5
JKT	Katashina	3.35	35	P	Pn	05 08 35.0	-1.6
JKT				S	S	05 09 22.4	-4.5
JSZ	Suzu	3.44	7	P	Pn	05 08 37.6	+0.2
JSZ				S	S	05 09 27.1	-1.2
BSO1	Boso 1	3.46	78	P	Pn	05 08 33.8	-3.9
BSO1				eS	S	05 09 22.6	-6.2
JNM	Ikuma	3.48	296	⇑P	Pn	05 08 38.6	+0.8
JTO	Tosashimizu	3.59	252	⇑P	Pn	05 08 38.3	-0.7
JTO				eS	S	05 09 29.7	-1.5
JHM	Kurahashi	3.60	273	⇑P	Pn	05 08 39.6	+0.6
SAI	Saigo	3.61	308	P	Pn	05 08 40.1	+1.0
SAI				eS	S	05 09 32.8	+1.3
UWA2	Uwa jima 2	3.63	258	⇑P	Pn	05 08 39.7	+0.3
JHK	Hiroka	3.66	28	P	Pn	05 08 38.2	-1.4
JHK				S	S	05 09 28.8	-3.5
JNA	Nagahama	3.68	264	⇑P	Pn	05 08 40.5	+0.6
JHT	Toyohira	3.73	281	⇑P	Pn	05 08 40.7	+0.4
JSB	Shiboa	3.85	40	P	Pn	05 08 40.5	-1.0
JSB				S	S	05 09 31.5	-4.2
JGT	Gotsu	3.87	286	⇑P	Pn	05 08 42.0	+0.3
JHO	Hitachi	3.98	49	⇓P	Pn	05 08 40.0	-2.8
JHO				S	S	05 09 32.4	-5.7
JFY	Yanaizu	4.09	34	P	Pn	05 08 42.3	-1.6
JFY				S	S	05 09 35.5	-4.6
JHIK	Hikimi	4.12	278	⇑P	Pn	05 08 44.9	+0.6
JKD	Kudamatsu	4.14	272	⇑P	Pn	05 08 45.3	+0.8
JSD	Sado	4.16	15	P	Pn	05 08 43.8	-0.8
JSD				S	S	05 09 37.7	-3.7
JNS	Sasagawa	4.27	27	P	Pn	05 08 44.4	-1.4
JNS				S	S	05 09 39.3	-4.3
JKI	Kunimi	4.42	266	⇑P	Pn	05 08 48.3	+0.8
ONAJ	Iwakimizuishiy	4.44	45	⇓P	Pn	05 08 45.1	-2.4
JFT	Otama	4.48	38	⇓P	Pn	05 08 46.3	-1.7
JKIT	Kitakata	4.74	254	⇑P	Pn	05 08 51.9	+1.0
JAW	Awa shima	4.82	23	P	Pn	05 08 50.5	-1.1
JAW				S	S	05 09 49.4	-4.9
JTSN	Tsuno	4.83	250	P	Pn	05 08 52.5	+0.6
JYS	Shirataka	4.92	31	⇓P	Pn	05 08 51.5	-1.2
JMM	Marumori	4.98	39	⇓P	Pn	05 08 51.2	-2.2
JFA	Akaike	5.06	268	⇑P	Pn	05 08 54.9	+0.5
JYA	Atsumi	5.10	26	P	Pn	05 08 53.8	-0.9
JTZ	Takazaki	5.30	248	⇑P	Pn	05 08 57.6	+0.5
JOU	Okura	5.31	34	⇓P	Pn	05 08 55.4	-1.6
JFI	Itaya	5.43	265	⇑P	Pn	05 08 59.3	+0.8
JZO	Okuchi	5.59	252	⇑P	Pn	05 09 00.8	+0.5
JYK	Kaneyama	5.63	29	P	Pn	05 08 59.1	-1.5
JIO	Ouri	5.71	38

JIH	**Iheya**	**10.36 230**	P	**Pn**	**05 09 56.0**	**-0.5**
ASAJ	**Asahikawa**	**11.01 22**	P	**Pn**	**05 10 01.4**	**-2.6**
	comp=Z,7.6nm,0.3s,baz=229,slow=14,SNR=26					
ASAJ			S	**S**	**05 12 01.6**	**-5.6**
	comp=Z,4.3nm,0.3s,baz=124,slow=26,SNR=5.8					
ASAJ	**Asahikawa**	**11.01 22**	P	**Pn**	**05 10 01.4**	**-2.6**
ASAJ			S	**S**	**05 12 01.6**	**-5.6**
ASAJ			pmax	pmax		
	comp=Z,8.0nm,0.3s					
ASAJ			smax			
	comp=N,4.0nm,0.3s					
MDJ	**Mudanjiang**	**11.97 334**	P	**Pn**	**05 10 15.6**	**+0.2**
MDJ			sP		05 11 31.8	
MDJ			S	**S**	**05 12 27.5**	**-0.9**
MDJ			ScP	ScP	05 18 30.8	+2.5
MDJ			PcS	PcS	05 19 04.1	+0.9
MDJ			ScS	ScS	05 22 06.9	+2.8
MDJ			pmax	pmax		
	comp=Z,78nm,1.3s					
MDJ			pmax	pmax		
	comp=Z,100nm,3.4s					
MDJ	**Mudanjiang**	**11.97 334**	*e*Pn	**Pn**	**05 10 15.6**	**+0.2**
	comp=Z,58nm,0.8s					
YUK	**Yuzh-Kuril'sk**	**12.19 32**	*e*P	**Pn**	**05 10 17.6**	**-0.4**
YUK			*i* S	**S**	**05 12 26.0**	**-7.1**
YUK			pmax	pmax		
	comp=Z,350nm,0.4s					
YUK			pmax	pmax		
	comp=E,150nm,0.5s					
YUK			pmax	pmax		
	comp=N,2μm,2.0s					
YUK			pmax	pmax		
	comp=Z,2μm,2.0s					
YUK			smax			
	comp=E,820nm,0.6s					
YUK			smax			
	comp=N,570nm,0.5s					
YUK			smax			
	comp=N,3μm,2.0s					
YUK			smax			
	comp=E,2μm,1.0s					
SNY	**Shenyang**	**13.05 310**	⇓P	**Pn**	**05 10 28.1**	**-0.1**
SNY			sP		05 11 46.3	
SNY			S	**S**	**05 12 50.0**	**-0.7**
SNY			PcP	PcP	05 15 32.0	+1.5
SNY			ScS	ScS	05 22 06.3	-0.3
SNY			pmax	pmax		
	comp=Z,190nm,1.0s					
CN2	**Changchun**	**13.19 321**	⇑P	**Pn**	**05 10 29.5**	**-0.3**
CN2			*es*P		05 11 48.6	
CN2			*e*S	**S**	**05 12 50.3**	**-3.1**
CN2			pmax	pmax		
	comp=Z,40nm,0.7s					
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=N,300nm,16.0s					
CN2			LR	LR		
	comp=E,400nm,16.0s					
CN2			LR	LR		
	comp=Z,300nm,17.0s					
CN2	**Changchun**	**13.19 321**	*e*PKP	**Pn**	**05 10 28.8**	**-1.0**
CN2			PP		05 12 32.8	
CN2			SKKS		05 19 07.3	
CN2			AMB	AMB		
	comp=Z,200nm,4.0s					
DL2	**Dalian**	**13.19 296**	P	**Pn**	**05 10 28.8**	**-1.1**
DL2			sP		05 11 42.9	
DL2			S	**S**	**05 12 52.3**	**-1.3**
DL2			pmax	pmax		
	comp=Z,70nm,0.9s					
DL2			pmax	pmax		
	comp=Z,210nm,5.8s					
YSS	**Yuzh-Sakhalins**	**13.66 17**	⇓*e*P	**Pn**	**05 10 34.1**	**-1.2**
YSS			*e*S	**S**	**05 12 57.2**	**-5.7**
YSS			pmax	pmax		
	comp=Z,500nm,3.0s					
YSS			pmax	pmax		
	comp=N,160nm,0.7s					
YSS			pmax	pmax		
	comp=E,90nm,0.7s					
YSS			pmax	pmax		
	comp=Z,230nm,0.7s					
YSS			smax			
	comp=E,180nm,1.1s					
YSS			smax			
	comp=Z,500nm,3.0s					
YSS	**Yuzh-Sakhalins**	**13.66 17**	*e*P	**Pn**	**05 10 34.9**	**-0.4**
	comp=Z,259nm,0.7s					
KUR	**Kuril'sk**	**14.02 34**	*e*P	**P**	**05 10 38.6**	**+0.6**
KUR			*e*S	**S**	**05 13 11.0**	**+0.7**
KUR			pmax	pmax		
	comp=Z,30nm,0.6s					
KUR			smax			
	comp=E,2μm,4.0s					
KUR			smax			
	comp=N,100nm,0.5s					
KUR			smax			
	comp=E,150nm,0.5s					
JTJ	**Tarama**	**14.13 232**	P	**P**	**05 10 39.4**	**0.0**
JIJ	**Ishigaki jima**	**14.69 232**	P	**P**	**05 10 43.5**	**-2.0**
NJ2	**Nanjing**	**15.23 268**	*e*P	**P**	**05 10 52.3**	**+0.9**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
KLR	**Kul'dur**	**15.65 347**	*e*P	**P**	**05 10 50.6**	**-5.1**
YULB	**Yu-li**	**17.26 236**	*e*P	**P**	**05 11 11.1**	**-2.3**
	comp=Z,63nm,0.7s					
BJI	**Beijing**	**17.56 296**	P	**P**	**05 11 15.3**	**-1.1**
BJI			sP	sP	05 12 49.1	-2.2
BJI			S	**S**	**05 14 18.0**	**-2.6**
BJI			pmax	pmax		
	comp=Z,120nm,1.0s					
BJI			pmax	pmax		
	comp=Z,250nm,3.6s					
BJT	**Baijiatuau**	**17.56 296**	*e*P	**P**	**05 11 15.4**	**-1.0**
BJT			pmax	pmax		
	comp=Z,143nm,0.8s					
BJT	**Baijiatuau**	**17.56 296**	*e*P	**P**	**05 11 15.4**	**-1.0**
	comp=Z,143nm,0.8s					
QZH	**Quanzhou**	**18.28 245**	⇑*i*P	**P**	**05 11 22.9**	**-1.4**
QZH			pmax	pmax		
	comp=Z,210nm,0.9s					
HIA	**Hailar**	**19.82 325**	*e*P	**P**	**05 11 38.4**	**-1.7**
HIA			pmax	pmax		
	comp=Z,103nm,1.0s					
HIA	**Hailar**	**19.82 325**	*e*P	**P**	**05 11 38.4**	**-1.7**
	comp=Z,103nm,1.0s					
HHC	**Hu-ho-hao-te**	**21.17 296**	*e*P	**P**	**05 11 51.5**	**-1.3**
HHC			sP	sP	05 13 31.6	+0.5
HHC			S	**S**	**05 15 21.1**	**-3.0**
HHC			PcP	PcP	05 15 44.8	+1.2
HHC			pmax	pmax		
	comp=Z,36nm,1.0s,mb4.6					
HHC			pmax	pmax		
	comp=Z,160nm,4.8s					
HHC			LR	LR		
	comp=N,200nm,6.1s					
HHC			LR	LR		
	comp=E,500nm,6.5s					
HHC			LR	LR		
	comp=Z,330nm,9.6s					
GUMO	**Guam**	**21.61 158**	P	**P**	**05 11 54.6**	**-2.4**
	comp=Z,204nm,0.8s,mb5.4,baz=162,slow=5.7,SNR=8.6					
GUMO	**Guam**	**21.61 158**	*e*P	**P**	**05 11 55.6**	**-1.5**
GUMO			pmax	pmax		
	comp=Z,515nm,1.3s,mb5.6					
GUMO	**Guam**	**21.61 158**	*e*P	**P**	**05 11 55.6**	**-1.5**
	comp=Z,515nm,1.3s,mb5.6					
BTO	**Baotou**	**22.29 295**	*e*P	**P**	**05 12 02.0**	**-1.0**
XAN	**Xi'an**	**23.13 278**	P	**P**	**05 12 10.0**	**-0.7**
XAN			pmax	pmax		
	comp=Z,27nm,0.8s,mb4.5					
XAN			pmax	pmax		
	comp=Z,53nm,6.9s					
ENH	**Enshi**	**23.45 268**	*e*P	**P**	**05 12 12.7**	**-0.9**
	comp=Z,155nm,0.8s,mb5.3					
NRGR	**Nerungri**	**24.11 343**	*e*P	**P**	**05 12 21.2**	**+2.0**
PEA0B	**Petropavlovsk-**	**24.17 32**	*e*P	**P**	**05 12 19.3**	**-0.5**
PETK	**Petropavlovsk-**	**24.17 32**	P	**P**	**05 12 19.4**	**-0.4**
	comp=Z,25nm,0.8s,mb4.5,baz=218,slow=7.0,SNR=34					
PETK			ScP	ScP	05 18 50.9	-3.5
	comp=Z,2.2nm,0.7s,baz=198,slow=4.2,SNR=4.9					
PETK	**Petropavlovsk-**	**24.17 32**	P	**P**	**05 12 19.4**	**-0.4**
PETK			pmax	pmax		
	comp=Z,25nm,0.8s,mb4.5					
PETK			pmax	pmax		
	comp=N,2.0nm,0.7s					
PETK	**Petropavlovsk-**	**24.17 32**	P	**P**	**05 12 19.4**	**-0.4**
PETK			ScP	ScP	05 18 50.9	-3.5
CLNS	**Chul'man**	**24.23 344**	*e*P	**P**	**05 12 21.3**	**+0.9**
CLNS			*e*S	**S**	**05 16 05.4**	**-7.1**
CLNS			pmax	pmax		
	comp=N,11nm,0.9s					
CLNS			pmax	pmax		
	comp=E,10.0nm,0.9s					
CLNS			pmax	pmax		
	comp=Z,26nm,0.6s,mb4.6					
CLNS			smax			
	comp=N,20nm,11.5s					
CLNS			smax			
	comp=E,94nm,13.9s					
ULN	**Ulaanbaatar**	**26.23 311**	*e*P	**P**	**05 12 39.5**	**+1.2**
ULN			pmax	pmax		
	comp=Z,86nm,0.8s,mb5.0					
ULN	**Ulaanbaatar**	**26.23 311**	*e*P	**P**	**05 12 39.5**	**+1.2**
	comp=Z,86nm,0.8s,mb5.0					
SONM	**Songino Array**	**26.63 310**	P	**P**	**05 12 43.0**	**+1.1**
	comp=Z,63nm,0.8s,mb4.9,baz=116,slow=7.4,SNR=87					
SONM			ScP	ScP	05 19 00.5	-1.1
	comp=Z,1.2nm,0.8s,baz=160,slow=4.7,SNR=3.9					
SONM	**Songino Array**	**26.63 310**	P	**P**	**05 12 43.0**	**+1.1**
SONM			pmax	pmax		
	comp=Z,63nm,0.9s					
SONM			pmax	pmax		
	comp=N,1.0nm,0.8s					
LZH	**Lanzhou**	**27.04 284**	⇑P	**P**	**05 12 45.3**	**-0.3**
LZH			pP		05 13 46.0	
LZH			sP	sP	05 14 31.3	+0.4
LZH			*e*S	**S**	**05 16 58.3**	**+1.1**
LZH			sS	sS	05 18 51.0	-4.8
LZH			pmax	pmax		
	comp=Z,70nm,1.2s,mb4.8					
LZH			pmax	pmax		
	comp=Z,200nm,4.0s					
GYA	**Guiyang**	**27.09 262**	P	**P**	**05 12 47.0**	**+0.8**
GYA			pP		05 13 49.4	
GYA			sP	sP	05 14 29.0	-2.4
GYA			PcP	PcP	05 15 58.6	+1.7
GYA			S	**S**	**05 16 59.8**	**+1.6**
GYA			sS	sS	05 18 50.3	-6.6
GYA			ScP	ScP	05 19 04.3	+0.9
GYA			PcS	PcS	05 19 39.0	0.0
GYA			ScS	ScS	05 22 55.3	-0.1
GYA			pmax	pmax		
	comp=Z,20nm,1.0s,mb4.3					
GYA			pmax	pmax		
	comp=Z,120nm,4.8s					
CD2	**Chengdu**	**28.04 273**	⇓*i*P	**P**	**05 12 53.8**	**-0.7**
CD2			pP		05 13 58.3	
CD2			sP	sP	05 14 39.0	-1.0
CD2			PcP	PcP	05 15 58.8	-0.4
CD2			S	**S**	**05 17 11.5**	**-1.5**
CD2			sS	sS	05 19 07.3	-4.7
CD2			pmax	pmax		
	comp=Z,280nm,0.7s,mb5.6					
CD2			pmax	pmax		
	comp=Z,240nm,6.3s					
QIZ	**Qiongzhong**	**28.30 245**	*e*P	**P**	**05 12 56.8**	**-0.2**
	comp=Z,35nm,1.0s,mb4.5					
BOD	**Bodaibo**	**28.35 334**	⇑*i*P	**P**	**05 12 56.3**	**-0.6**
BOD			*e*		05 15 58.4	
BOD			pmax	pmax		
	comp=Z,12nm,1.1s,mb4.0					
YAK	**Yakutsk**	**28.39 353**	*e*P	**P**	**05 12 56.6**	**-0.6**
YAK			*e**PP		05 14 00.0	
YAK			*e*S	**S**	**05 17 13.6**	**-4.2**
YAK			*e**SS	sS	05 19 07.9	-8.9
YAK			*e*		05 22 54.8	
YAK			pmax	pmax		
	comp=Z,12nm,0.8s,mb4.2					
YAK			pmax	pmax		
	comp=N,7.0nm,0.9s					
YAK			pmax	pmax		
	comp=E,4.0nm,0.9s					
YAK			pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.0					
YAK			smax			
	comp=E,109nm,2.3s					
ZAK	**Zakamensk**	**29.44 314**	⇑*i*P	**P**	**05 13 07.0**	**+0.4**
ZAK			pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.4					
TLY	**Talaya**	**29.72 317**	*e*P	**P**	**05 13 10.6**	**+1.6**
TLY			*e*S	**S**	**05 17 38.0**	**-0.7**
TLY			pmax	pmax		
	comp=Z,49nm,1.1s,mb4.7					
TLY			MLR	MLR		
	comp=Z,98nm,16.0s					
TLY	**Talaya**	**29.72 317**	*e*P	**P**	**05 13 10.6**	**+1.6**
	comp=Z,40nm,1.0s,mb4.6					
GTA	**Gaotai**	**30.04 291**	⇓P	**P**	**05 13 11.9**	**-0.1**
GTA			pP	pP	05 14 17.9	+0.7
GTA			sP	sP	05 14 58.3	+0.5
GTA			PcP	PcP	05 16 05.0	+0.9
GTA			S	**S**	**05 17 44.4**	**+0.4**
GTA			sS	sS	05 19 42.5	-0.9
GTA			SS	SS	05 20 01.3	-8.3
GTA			ScS	ScS	05 23 06.8	-1.9
GTA			pmax	pmax		
	comp=Z,68nm,0.9s,mb4.9					
GTA			pmax	pmax		
	comp=Z,100nm,4.5s					
GTA			LR	LR		
	comp=N,180nm,17.2s					
GTA			LR	LR		
	comp=E,160nm,17.5s					
GTA			LR	LR		
	comp=Z,230nm,18.1s					
SEY	**Seymchan**	**30.53 14**	*ce*P	**P**	**05 13 16.1**	**+0.2**
KMI	**Kunming**	**30.86 262**	P	**P**	**05 13 18.9**	**-0.5**
KMI			pP	pP	05 14 25.1	+0.3
KMI			PP	PP	05 14 39.1	+1.5
KMI			sP	sP	05 15 03.5	-1.8
KMI			S	**S**	**05 17 58.0**	**+0.8**
KMI			sS	sS	05 19 53.6	-3.2
KMI			SS	SS	05 20 15.8	-11
KMI			pmax	pmax		
	comp=Z,39nm,0.9s,mb4.6					
KMI			pmax	pmax		
	comp=Z,170nm,4.5s					
MOY	**Mondy**	**31.25 315**	*e*P	**P**	**05 13 23.8**	**+1.4**
MOY			pmax	pmax		
	comp=Z,32nm,1.6s,mb4.3					
SDKM	**Sandakan**	**33.62 217**	P	**P**	**05 13 42.6**	**-0.6**
KKM	**Kota Kinabalu**	**33.78 219**	P	**P**	**05 13 52.4**	**+7.8**
CHG	**Chiang Mai**	**36.95 256**	⇓P	**P**	**05 14 10.8**	**-0.6**
	comp=Z,44nm,0.7s,mb4.8					
NST	**Nakhon Sawan**	**37.75 250**	P	**P**	**05 14 17.0**	**-1.0**
BTM	**Bintulu**	**37.84 221**	P	**P**	**05 14 18.0**	**-0.8**
TIXI	**Tiksi**	**37.92 356**	*e*P	**P**	**05 14 18.3**	**-0.4**
TIXI			pmax	pmax		
	comp=Z,14nm,0.7s,mb4.3					
TIXI	**Tiksi**	**37.92 356**	*e*P	**P**	**05 14 18.0**	**-0.7**
	comp=Z,15nm,0.8s,mb4.3					
BILL	**Bilibino**	**37.98 17**	*e*P	**P**	**05 14 19.4**	**+0.2**
BILL			*e**PP	pP	05 15 28.2	+1.4
BILL			*e*		05 15 54.7	
BILL			*i*		05 16 26.8	
BILL			pmax	pmax		
	comp=Z,100nm,1.0s,mb5.0					
BILL	**Biiibino**	**37.98 17**	*e*P	**P**	**05 14 19.5**	**+0.2**
	comp=Z,81nm,0.9s,mb5.0					
BILL			*e*PcP	PcP	05 16 26.7	+0.1
LSA	**Lhasa**	**38.82 277**	P	**P**	**05 14 27.4**	**+0.7**
LSA	**Lhasa**	**38.82 277**	*e*P	**P**	**05 14 27.4**	**+0.7**
LSA			*e*		05 16 05.8	
LSA			*e*		05 16 28.5	
LSA			pmax	pmax		
	comp=Z,21nm,0.9s,mb4.4					
LSA	**Lhasa**	**38.82 277**	*e*P	**P**	**05 14 27.4**	**+0.7**
	comp=Z,21nm,0.9s,mb4.4					
LSA			*e*		05 16 05.8	
LSA			*e*PcP	PcP	05 16 28.5	-1.4
SBUM	**Sibu**	**38.94 222**	P	**P**	**05 14 27.4**	**-0.4**
WMQ	**Urumqi**	**38.98 299**	P	**P**	**05 14 28.4**	**+0.6**
WMQ			pP	pP	05 15 35.8	+0.1
WMQ			pmax	pmax		
	comp=Z,60nm,1.0s,mb4.8					
WMQ			pmax	pmax		
	comp=Z,140nm,4.4s					
KSM	**Kuching**	**40.81 223**	P	**P**	**05 14 43.2**	**+0.1**
KSM	**Kuching**	**40.81 223**	*e*P	**P**	**05 14 42.6**	**-0.5**
	comp=Z,76nm,0.8s,mb5.0					
ZAA0	**Zalesovo Array**	**41.30 315**	*e*P	**P**	**05 14 46.4**	**-0.2**
ZAA0			*e*PcP	PcP	05 16 36.7	-0.8
ZAA0			*e*ScP	ScP	05 19 48.7	-4.8
ZALV	**Zalesovo Beam**	**41.30 315**	P	**P**	**05 14 46.1**	**-0.5**
	comp=Z,14nm,0.7s,mb4.3,baz=97,slow=7.5,SNR=62					
ZALV			PcP	PcP	05 16 36.8	-0.7
	comp=Z,10nm,0.6s,baz=93,slow=2.6,SNR=14					
ZALV			ScP	ScP	05 19 52.0	-1.6
	comp=Z,0.8nm,0.3s,baz=109,slow=3.5,SNR=9.3					
ZALV	**Zalesovo Beam**	**41.30 315**	P	**P**	**05 14 46.1**	**-0.5**
ZALV					05 16 36.8	
ZALV			pmax	pmax		
	comp=Z,14nm,0.7s,mb4.3					
ZALV			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.2					
ZALV			pmax	pmax		
	comp=N,1.0nm,0.3s					
KAPI	**Kappang**	**42.07 206**	*e*P	**P**	**05 14 50.4**	**-2.8**
	comp=N,109nm,1.0s,mb4.9					
NVS	**Novosibirsk**	**42.33 316**	*i* P	**P**	**05 14 54.6**	**-0.2**
NVS			*i* *PP	pP	05 16 04.1	+0.2
NVS			*i* S	**S**	**05 20 49.4**	**+0.6**
NVS			*i* SS	SS	05 24 12.9	+1.4
NVS			pmax	pmax		
	comp=N,12nm,0.9s					
NVS			pmax	pmax		
	comp=Z,46nm,0.9s,mb4.6					
NVS			pmax	pmax		
	comp=E,52nm,1.5s					
NVS			smax			
	comp=N,21nm,1.4s					
NVS			smax			
	comp=E,34nm,1.6s					
KTGM	**Kuala Trenggan**	**42.34 235**	P	**P**	**05 14 55.6**	**+0.2**
TAPN	**Taplejung**	**42.47 275**	*e*P	**P**	**05 14 56.0**	**-0.3**
	comp=E,50nm,0.7s,mb4.7					
MK31	**Makanchi Array**	**42.65 304**	*e*P	**P**	**05 14 57.8**	**+0.3**
MK31			*e**PP	pP	05 16 04.9	-1.8
MKAR	**Makanchi Array**	**42.65 304**	P	**P**	**05 14 57.9**	**+0.4**
	comp=E,71nm,0.7s,mb4.9,baz=90,slow=10,SNR=641					
MKAR			ScP	ScP	05 19 57.7	-1.4
	comp=E,2.6nm,0.7s,baz=80,slow=5.3,SNR=7.5					
MKAR			S	**S**	**05 20 55.4**	**+1.7**
	comp=E,0.2nm,0.5s,baz=100,slow=16,SNR=2.8					
MKAR	**Makanchi Array**	**42.65 304**	P	**P**	**05 14 57.9**	**+0.4**
MKAR			S	**S**	**05 20 55.4**	**+1.7**
MKAR			pmax	pmax		
	comp=Z,71nm,0.7s					
MKAR			pmax	pmax		
	comp=N,3.0nm,0.7s					
MKAR	**Makanchi Array**	**42.65 304**	P	**P**	**05 14 57.9**	**+0.4**
MKAR			ScP	ScP	05 19 57.7	-1.4
MKAR			S	**S**	**05 20 55.4**	**+1.7**
GAMB	**Gambell**	**43.19 30**	*e*P	**P**	**05 15 01.7**	**+0.2**
	comp=N,26nm,1.1s,mb4.3					
GAMB			*e*PcP	PcP	05 16 43.8	+0.2
RAMN	**Ramite**	**43.53 275**	*e*P	**P**	**05 15 04.4**	**-0.3**
	comp=N,239nm,0.9s,mb5.3					
GUN	**Gumba**	**43.77 276**	*e*P	**P**	**05 15 06.7**	**0.0**
	comp=N,129nm,0.8s,mb5.1					
KULM	**Kulim**	**44.09 238**	P	**P**	**05 15 09.5**	**+0.2**
PKI	**Pulchoki**	**44.29 276**	*e*P	**P**	**05 15 10.2**	**-0.5**
	comp=N,92nm,1.0s,mb4.9					
PKIN	**Phulchoki**	**44.30 276**	*e*P	**P**	**05 15 10.1**	**-0.6**
KKN	**Kakani**	**44.31 276**	*e*P	**P**	**05 15 10.5**	**-0.4**
	comp=N,129nm,0.9s,mb5.1					
IPM	**Ipoh**	**44.40 237**	P	**P**	**05 15 11.1**	**-0.7**
MYKOM	**Kota Tinggi**	**44.49 231**	P	**P**	**05 15 12.5**	**+0.1**
DMN	**Daman**	**44.52 276**	*e*P	**P**	**05 15 12.2**	**-0.3**
	comp=N,97nm,1.1s,mb4.9					
KGM	**Kluang**	**44.67 232**	P	**P**	**05 15 13.8**	**0.0**
FRIM	**Kepong**	**44.89 235**	P	**P**	**05 15 15.6**	**0.0**
KURK	**Kurchatov**	**44.94 310**	P	**P**	**05 15 15.7**	**+0.2**
	comp=N,74nm,0.8s,mb4.9,baz=91,slow=6.7,SNR=279					
KURK			S	**S**	**05 21 26.3**	**-0.2**
	comp=N,0.3nm,0.7s,baz=59,slow=14,SNR=3.6					
KURK	**Kurchatov**	**44.94 310**	*ce*P	**P**	**05 15 15.1**	**-0.3**
KURK			pmax	pmax		
	comp=Z,200nm,1.1s,mb5.2					
KURK	**Kurchatov**	**44.94 310**	*e*P	**P**	**05 15 15.1**	**-0.3**
	comp=Z,137nm,0.9s,mb5.1					
TNA	**Tin City**	**45.28 29**	*e*P	**P**	**05 15 18.6**	**+0.8**
	comp=Z,47nm,1.1s,mb4.5					
KAKA	**Kakadu**	**46.67 186**	*e*P	**P**	**05 15 26.3**	**-2.9**
	comp=Z,20nm,0.8s,mb4.4					
KAKA	**Kakadu**	**46.67 186**	*e*P	**P**	**05 15 25.8**	**-3.3**
	comp=Z,70nm,0.8s,mb4.9					
ULHL	**Ulahol**	**47.50 299**	P	**P**	**05 15 35.7**	**+0.4**
	SNR=6.1					
SDPT	**Sand Point**	**47.54 43**	*e*P	**P**	**05 15 33.5**	**-1.9**
	comp=Z,62nm,0.6s,mb5.0					
SDPT			LR	LR		
	comp=Z,200nm,18.0s					
TKM2	**Tokmak 2**	**47.84 300**	P	**P**	**05 15 38.1**	**+0.2**
	SNR=31					
TKM2	**Tokmak 2**	**47.84 300**	*e*P	**P**	**05 15 38.0**	**+0.1**
TKM2			*e**PP	pP	05 16 51.5	+2.7
TKM2			pmax	pmax		
	comp=Z,14nm,0.8s,mb4.2					
TKM2	**Tokmak 2**	**47.84 300**	*e*P	**P**	**05 15 38.0**	**+0.1**
	comp=Z,14nm,0.8s,mb4.2					
TKM2			*e*pP	pP	05 16 51.5	+2.6
COEN	**Coen**	**48.09 172**	*e*P	**P**	**05 15 38.9**	**-1.1**
COEN	**Coen**	**48.09 172**	*e*P	**P**	**05 15 38.4**	**-1.6**
	comp=Z,186nm,1.1s,mb5.2					
KZA	**Kyzart**	**48.25 299**	P	**P**	**05 15 42.5**	**+1.5**
	SNR=15					
KSH	**Kashi**	**48.28 295**	*e*P	**P**	**05 15 44.9**	**+3.7**
KSH			*e*pP	pP	05 16 50.8	-1.6
KSH			*e*PcP	PcP	05 17 06.8	+4.7
KSH			*e*PP	PP	05 17 40.8	+3.5
KSH			*e*PcS	PcS	05 21 01.8	+3.3
KSH			*e*S	**S**	**05 22 17.8**	**+4.0**
KSH			*e*ScS	ScS	05 25 00.0	+4.0
KSH			*e*SS	SS	05 25 49.8	+1.8
KSH			pmax	pmax		
	comp=Z,20nm,0.9s,mb4.3					
KSH			pmax	pmax		
	comp=Z,48nm,3.1s					
KSH			LR	LR		
	comp=N,190nm,5.9s					
KSH			LR	LR		
	comp=E,220nm,8.8s					
KSH			LR	LR		
	comp=Z,120nm,4.0s					
KBK	**Karagaybulak**	**48.36 299**	P	**P**	**05 15 42.5**	**+0.7**
	SNR=13					
CHMS	**Chumysh**	**48.43 300**	P	**P**	**05 15 42.5**	**+0.2**
	SNR=5.2					
FRU	**Bishkek**	**48.56 300**	*i* P	**P**	**05 15 43.0**	**-0.3**
FRU			*i*		05 17 44.0	
FRU			pmax	pmax		
	comp=Z,60nm,2.0s,mb4.5					
USP	**Ospenovka**	**48.56 300**	P	**P**	**05 15 43.4**	**+0.1**
	SNR=7.0					
AAK	**Ala-Archa**	**48.69 299**	P	**P**	**05 15 44.6**	**+0.3**
	SNR=9.4					
AAK	**Ala-Archa**	**48.69 299**	P	**P**	**05 15 44.1**	**-0.2**
	comp=Z,4.4nm,0.5s,mb3.9,baz=105,slow=7.9,SNR=19					
AAK			ScP	ScP	05 20 22.4	-1.9
	comp=Z,2.3nm,0.7s,baz=192,slow=11,SNR=4.5					
AAK	**Ala-Archa**	**48.69 299**	*e*P	**P**	**05 15 44.5**	**+0.2**
AAK			*e**PP	pP	05 16 51.9	-3.7
AAK			pmax	pmax		
	comp=Z,47nm,1.6s,mb4.5					
AAK	**Ala-Archa**	**48.69 299**	*e*P	**P**	**05 15 44.5**	**+0.2**
	comp=Z,47nm,1.6s,mb4.5					
AAK			*e*pP	pP	05 16 51.9	-3.7
UCH	**Uchtor**	**48.76 299**	P	**P**	**05 15 46.0**	**+1.2**
	SNR=19					
UCH	**Uchtor**	**48.76 299**	*e*P	**P**	**05 15 45.8**	**+0.9**
	comp=Z,15nm,1.0s,mb4.2					
UCH			*e*PcP	PcP	05 17 04.2	+0.5
UCH			*e*ScP	ScP	05 20 23.7	-0.9
EKS2	**Erkin-Say**	**49.20 300**	P	**P**	**05 15 47.9**	**-0.2**
	SNR=5.3					
AML	**Almayashu**	**49.37 299**	P	**P**	**05 15 50.6**	**+1.2**
	SNR=51					
AML	**Almayashu**	**49.37 299**	*e*P	**P**	**05 15 50.3**	**+0.9**
	comp=Z,35nm,0.8s,mb4.6					
AML			*e*PcP	PcP	05 17 03.8	-2.2
AML			*e*ScP	ScP	05 20 26.5	-0.8
BVAR	**Borovoye Array**	**49.90 314**	P	**P**	**05 15 53.1**	**0.0**
	comp=Z,25nm,0.7s,mb4.5,baz=98,slow=9.1,SNR=88					

BVAR PcP PcP 05 17 07.0 -0.7
comp=Z,7.1nm,0.7s,baz=104,slow=5.0,SNR=6.0
BVAR ScP ScP 05 20 27.9 -1.4
comp=Z,5.0nm,0.7s,baz=100,slow=4.5,SNR=10
BVAR S **S** **05 22 34.8 -1.0**
comp=Z,0.4nm,0.4s,baz=87,slow=11,SNR=4.3
BVAR Borovoye Array 49.90 314 P **P** **05 15 53.1 -0.1**
BVAR pP 05 17 07.0 +2.2
BVAR S **S** **05 22 34.8 -0.9**
BVAR pmax pmax
comp=Z,25nm,0.7s
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BVAR pmax pmax
comp=N,5.0nm,0.7s
BRVK Borovoye 49.96 314 *ceP* **P** **05 15 53.6 0.0**
BRVK pmax pmax
comp=Z,43nm,1.0s,mb4.6
BRVK Borovoye 49.96 314 *eP* **P** **05 15 53.8 +0.2**
BRVK *e*ScP ScP 05 20 28.1 -1.5
TTA Tatalina 49.98 33 *eP* **P** **05 15 53.9 +0.3**
KNA Kununurra 50.10 190 *eP* **P** **05 15 53.8 -1.2**
comp=Z,28nm,0.9s,mb4.5
SVW2 Sparrevohn 50.14 36 *eP* **P** **05 15 55.8 +1.0**
RSO Redoubt South 51.54 37 *eP* **P** **05 16 05.7 +0.5**
CHUM Lake Minchumin 51.67 32 *eP* **P** **05 16 07.1 +1.1**
comp=Z,59nm,1.1s,mb4.8
PPLA Purkeypile 51.73 33 *eP* **P** **05 16 07.6 +1.0**
comp=Z,41nm,0.8s,mb4.8
KDAK Kodiak Island 51.80 40 P **P** **05 16 06.7 -0.4**
comp=Z,40nm,0.4s,mb5.1
KDAK Kodiak Island 51.80 40 *i* P **P** **05 16 06.4 -0.7**
KDAK Kodiak Island 51.80 40 P **P** **05 16 06.7 -0.4**
KTH Kantishna Hill 52.29 33 *eP* **P** **05 16 10.9 +0.3**
comp=Z,61nm,1.3s,mb4.8
COLD Coldfoot 52.56 28 *eP* **P** **05 16 12.8 +0.3**
comp=Z,14nm,1.0s,mb4.2
TRF Thorofare Moun 52.58 33 *eP* **P** **05 16 13.1 +0.3**
comp=Z,10nm,0.8s,mb4.2
FITZ Fitzroy Crossi 52.93 193 *eP* **P** **05 16 15.0 -0.8**
comp=Z,41nm,0.7s,mb4.9
FITZ Fitzroy Crossi 52.93 193 *eP* **P** **05 16 14.7 -1.1**
comp=Z,26nm,0.8s,mb4.6
MCK McKinley 53.17 32 *eP* **P** **05 16 16.6 -0.4**
MCK pmax pmax
comp=Z,10μm,1.2s
MCK McKinley 53.17 32 *eP* **P** **05 16 16.6 -0.4**
comp=Z,18μm,1.2s
SEW Seward 53.20 37 *eP* **P** **05 16 16.6 -0.7**
comp=Z,98nm,1.0s,mb5.1
PMR Palmer 53.23 35 *eP* **P** **05 16 17.4 0.0**
PMR pmax pmax
comp=Z,74nm,1.0s,mb5.0
PMR MLR MLR
comp=Z,300nm,20.0s
PMR Palmer 53.23 35 *eP* **P** **05 16 17.4 0.0**
comp=Z,74nm,1.0s,mb5.0
PMR LR LR
comp=Z,300nm,20.0s
COLA College 53.58 31 *eP* **P** **05 16 20.4 +0.5**
COLA pmax pmax
comp=Z,28nm,0.9s,mb4.6
COLA College 53.58 31 *eP* **P** **05 16 20.4 +0.5**
comp=Z,28nm,0.9s,mb4.6
WRAB Tennant Creek 53.71 183 *eP* **P** **05 16 18.2 -3.2**
WRAB pmax pmax
comp=Z,15nm,0.9s,mb4.3
WRAB Tennant Creek 53.71 183 *eP* **P** **05 16 18.2 -3.2**
comp=Z,15nm,0.9s,mb4.3
WRA Warramunga Arr 53.72 183 P **P** **05 16 19.6 -1.9**
comp=Z,9.9nm,0.3s,mb4.6,baz=0.1,slow=7.6,SNR=410
WRA ScP ScP 05 20 45.6 -0.6
comp=Z,2.2nm,0.7s,baz=358,slow=4.6,SNR=6.8
WRA S **S** **05 23 25.1 -3.0**
comp=Z,3.1nm,0.8s,baz=360,slow=13,SNR=3.8
WRA Warramunga Arr 53.72 183 P **P** **05 16 19.6 -1.9**
WRA S **S** **05 23 25.1 -3.0**
WRA pmax pmax
comp=Z,10.0nm,0.3s
WRA pmax pmax
comp=N,2.0nm,0.7s
WRA smax
comp=N,3.0nm,0.8s
HYB Hyderabad 54.39 268 *i* P **P** **05 16 25.0 -1.5**
CTA Charters Tower 54.55 169 *eP* **P** **05 16 26.1 -1.3**
comp=N,7.6nm,0.9s,mb4.0
CTAO Charters Tower 54.55 169 *eP* **P** **05 16 25.9 -1.5**
CTAO pmax pmax
comp=Z,12nm,0.9s,mb4.2
CTAO Charters Tower 54.55 169 *eP* **P** **05 16 25.9 -1.5**
comp=Z,12nm,0.9s,mb4.2
DIV Divide 54.89 35 *eP* **P** **05 16 29.6 +0.2**
comp=Z,30μm,1.1s
SVE Sverdlovsk 54.97 319 *eP* **P** **05 16 30.7 +0.7**
SVE pmax pmax
comp=Z,64nm,1.0s,mb4.9
KBL Kabul 55.03 291 *eP* **P** **05 16 30.6 -0.2**
KBL pmax pmax
comp=Z,29nm,0.9s,mb4.6
KBL Kabul 55.03 291 *eP* **P** **05 16 30.6 -0.2**
comp=Z,29nm,0.9s,mb4.6
BMRM Bremner River 55.47 35 *eP* **P** **05 16 33.9 +0.5**
comp=Z,84nm,0.8s,mb5.1
MENT Mentasta 55.59 33 *eP* **P** **05 16 35.6 +1.4**
ARU Arti 56.17 319 *d* *i*P **P** **05 16 38.2 -0.2**
ARU *e**PP pP 05 17 51.8 -0.3
ARU S **S** **05 24 01.8 +2.1**
ARU SS SS 05 27 48.7 -3.0
ARU pmax pmax
comp=Z,75nm,1.0s,mb5.0
EGAK Eagle 56.43 31 *eP* **P** **05 16 39.5 -0.6**
comp=Z,8.7nm,0.7s,mb4.2
ABKAR Akbulak array 57.05 310 *eP* **P** **05 16 44.1 -0.6**
comp=Z,28nm,0.6s,mb4.8
MBWA Marble Bar 57.26 199 *eP* **P** **05 16 44.9 -1.5**
MBWA Marble Bar 57.26 199 *eP* **P** **05 16 44.6 -1.8**
comp=Z,26nm,0.7s,mb4.7
DAWY Dawson 57.31 31 *eP* **P** **05 16 46.3 0.0**
DAWY *e*PcP PcP 05 17 35.8 -0.1
ASAR Alice Springs 57.44 183 P **P** **05 16 46.1 -1.5**
comp=Z,5.3nm,0.4s,mb4.2,baz=8.7,slow=6.8,SNR=62
ASAR S **S** **05 24 12.7 -4.2**
comp=Z,3.4nm,0.8s,baz=20,slow=20,SNR=12
ASAR Alice Springs 57.44 183 P **P** **05 16 46.1 -1.5**
ASAR S **S** **05 24 12.7 -4.2**
ASAR pmax pmax
comp=Z,5.0nm,0.4s
ASAR smax
comp=N,3.0nm,0.9s
PALK Pallekele 58.07 256 *i* P **P** **05 16 56.7 +4.4**
INK Inuvik 58.72 26 P **P** **05 16 56.0 +0.1**
comp=N,8.7nm,0.5s,mb4.5,baz=287,slow=6.3,SNR=55
INK ScP ScP 05 21 06.2 -1.5
comp=N,2.4nm,1.0s,baz=225,slow=1.4,SNR=3.2
INK Inuvik 58.72 26 P **P** **05 16 56.0 +0.1**
INK pmax pmax
comp=Z,9.0nm,0.5s
INK pmax pmax
comp=N,2.0nm,1.0s
INK Inuvik 58.72 26 *eP* **P** **05 16 56.1 +0.2**
comp=N,20nm,0.9s,mb4.6
HYT Haines Junctio 58.90 35 *eP* **P** **05 16 59.2 +2.0**
SKAG Skagway 60.32 36 *eP* **P** **05 17 07.8 +1.0**
comp=N,45nm,1.1s,mb4.8
SKAG LR LR
comp=Z,500nm,22.0s
EIDS Eidsvold 60.59 165 *eP* **P** **05 17 07.4 -1.6**
comp=Z,4.9nm,0.7s,mb4.0
POHA Pohakuloa 60.97 85 *eP* **P** **05 17 12.3 +0.5**
comp=Z,113nm,0.8s,mb5.3
DZM Mont Dzumac 62.49 149 *eP* **P** **05 17 20.1 -1.6**
MEEK Meekatharra 62.77 198 *eP* **P** **05 17 21.5 -1.9**
DLBC Dease Lake 63.25 36 *eP* **P** **05 17 26.8 +0.6**
APA Apatity 63.88 335 ⇓ *i*P **P** **05 17 23.0 -7.1**
APA MLR MLR
comp=Z,500nm,17.0s
KEV Kevo 64.91 339 *eP* **P** **05 17 35.7 -1.0**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
KEV Kevo 64.91 339 *ep* **P** **05 17 35.7 -1.0**
comp=Z,7.6nm,0.8s,mb4.4
FORT Forrest 64.99 188 *eP* **P** **05 17 36.4 -1.3**
comp=Z,20nm,0.6s,mb4.9
ARCES ARCESS Array B 65.48 339 P **P** **05 17 40.4 +0.1**
comp=Z,3.9nm,0.5s,mb4.3,baz=62,slow=8.5,SNR=25
ARCES ARCESS Array B 65.48 339 P **P** **05 17 40.4 +0.1**
ARCES pmax pmax
comp=Z,4.0nm,0.5s
ARE0 ARCESS Array S 65.48 339 *eP* **P** **05 17 40.4 +0.1**
ARMA Armidale 65.60 166 *eP* **P** **05 17 40.1 -1.5**
ARMA Armidale 65.60 166 *eP* **P** **05 17 40.0 -1.5**
comp=Z,8.8nm,0.8s,mb4.5
STKA Stephens Creek 65.71 176 *eP* **P** **05 17 41.0 -1.2**
comp=Z,7.2nm,0.9s,mb4.4
STKA Stephens Creek 65.71 176 P **P** **05 17 41.0 -1.1**
comp=Z,8.4nm,0.7s,mb4.6,baz=341,slow=9.2,SNR=8.8
STKA Stephens Creek 65.71 176 *eP* **P** **05 17 40.8 -1.3**
comp=Z,2.4nm,1.0s,mb3.9
RES Resolute Bay 66.40 13 *eP* **P** **05 17 45.7 -0.4**
RES pmax pmax
comp=Z,22nm,0.9s,mb4.9
RES Resolute Bay 66.40 13 *eP* **P** **05 17 45.7 -0.3**
comp=Z,22nm,0.9s,mb4.9
JOF Joensuu 66.84 331 *eP* **P** **05 17 47.0 -2.0**
JOF pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
JOF Joensuu 66.84 331 *ep* **P** **05 17 47.0 -2.0**
comp=Z,9.8nm,0.6s,mb4.7
VRHR Novokhopersk 67.39 317 *eP* **P** **05 17 52.2 -0.4**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.4s
YKA Yellowknife Ar 68.24 28 P **P** **05 17 57.3 -0.4**
comp=E,13nm,0.9s,mb4.6,baz=296,slow=6.0,SNR=77
YKA PcP PcP 05 18 20.5 -0.1
comp=E,1.5nm,0.8s,baz=299,slow=4.5,SNR=4.2
YKA Yellowknife Ar 68.24 28 P **P** **05 17 57.3 -0.4**
YKA 05 18 20.5
YKA pmax pmax
comp=Z,13nm,0.9s
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 68.24 28 P **P** **05 17 57.3 -0.4**
YKA PcP PcP 05 18 20.6 -0.1
OBN Obninsk 68.25 323 *eP* **P** **05 17 56.6 -1.2**
OBN *e**PP pP 05 19 14.6 -0.2
OBN *e* 05 20 32.5
OBN pmax pmax
comp=Z,20nm,0.9s,mb4.8
DAG Danmarks Havn 68.41 354 ⇑ *i*P **P** **05 17 59.1 +0.6**
DAG pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
DAG Danmarks Havn 68.41 354 ⇑ *i*P **P** **05 17 59.1 +0.6**
comp=Z,6.2nm,0.7s,mb4.5
IZEF Zefreh 68.43 296 *eP* **P** **05 17 59.2 -0.2**
VSR Storozhevoye 68.71 318 *eP* **P** **05 18 00.2 -0.6**
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.2
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VORD Divnogorie 68.76 318 *eP* **P** **05 18 00.4 -0.7**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VORD pmax pmax
comp=E,10.0nm,0.7s
YNG Young 68.82 170 *eP* **P** **05 18 00.7 -0.8**
comp=E,11nm,0.8s,mb4.6
KAF Kangasniemi 69.24 332 *eP* **P** **05 18 02.3 -1.5**
KAF pmax pmax
comp=Z,13nm,0.5s,mb4.9
KAF Kangasniemi 69.24 332 *ep* **P** **05 18 02.3 -1.5**
comp=Z,13nm,0.5s,mb4.9
FINES FINESS Array B 69.70 331 P **P** **05 18 06.2 -0.4**
comp=Z,16nm,0.5s,mb5.0,baz=62,slow=5.1,SNR=60
FINES FINESS Array B 69.70 331 P **P** **05 18 06.2 -0.4**
FINES pmax pmax
comp=Z,16nm,0.5s
ZEI Tsey 69.80 308 *eP* **P** **05 18 06.2 -1.4**
ZEI pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
KIV Kislovodsk 70.03 310 *eP* **P** **05 18 09.2 +0.3**
KIV *i* 05 18 27.3
KIV *i* *PP pP 05 19 27.3 +1.0
KIV *e* 05 20 51.2
KIV pmax pmax
comp=Z,84nm,1.0s,mb5.4
KIV Kislovodsk 70.03 310 *eP* **P** **05 18 09.8 +0.8**
comp=Z,105nm,1.1s,mb5.5
GNI Garni 70.48 306 *ceP* **P** **05 18 12.7 +1.0**
GNI pmax pmax
comp=Z,47nm,1.8s
GNI Garni 70.48 306 *eP* **P** **05 18 13.0 +1.3**
comp=Z,28nm,0.9s,mb5.0
PGC Sidney 71.08 44 *eP* **P** **05 18 15.6 +0.4**
comp=Z,1.9nm,1.0s,mb3.8
OSD Olympics--Snow 71.35 45 P **P** **05 18 17.8 +1.0**
NLWA Neilton Lookou 71.47 45 P **P** **05 18 18.4 +1.0**
baz=71
NLWA Neilton Lookou 71.47 45 *eP* **P** **05 18 18.6 +1.1**
comp=Z,26nm,0.9s,mb5.0
A05A Maple Falls 71.68 43 ⇑ P **P** **05 18 18.5 -0.1**
baz=72
MBW Mount Baker 71.90 43 P **P** **05 18 20.4 +0.5**
A06A Chilliwack 71.97 43 ⇑ P **P** **05 18 20.1 -0.3**
baz=72
DBAD Bademkaya 72.09 308 *i* P **P** **05 18 21.0 -0.2**
JCW Jim Creek 72.18 44 P **P** **05 18 22.2 +0.6**
B06A Marblemount 72.27 43 ⇓ P **P** **05 18 22.0 -0.1**
baz=72,SNR=6.1
RPW Rockport 72.29 43 P **P** **05 18 22.4 +0.2**
F03A Seaside 72.39 46 ⇑ P **P** **05 18 23.1 +0.2**
baz=72
HAKT HAKKARI 72.44 304 *i* P **P** **05 18 23.5 +0.2**
A07A Ashnola River, 72.61 42 ⇓ P **P** **05 18 23.9 -0.3**
baz=72,SNR=12
D05A Enumclaw 72.67 45 ⇑ P **P** **05 18 25.1 +0.6**
baz=72
ANN Anapa 72.89 313 *eP* **P** **05 18 23.5 -2.3**
ANN *e**PP pP 05 19 43.5 -0.4
ANN pmax pmax
comp=Z,48nm,1.2s,mb5.1
C06A Tall Timber Ra 72.92 43 ⇑ P **P** **05 18 26.0 +0.1**
baz=73
IDID Didziasalis 72.92 326 *eP* **P** **05 18 26.1 +0.3**
TDL Tradedollar La 72.98 45 P **P** **05 18 27.4 +1.1**
LON Longmire 73.01 45 *eP* **P** **05 18 26.5 0.0**
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
LON Longmire 73.01 45 *eP* **P** **05 18 26.5 0.0**
comp=Z,5.4nm,0.8s,mb4.3
ISAL Salakas 73.06 326 *eP* **P** **05 18 26.9 +0.3**
F04A Amboy 73.07 46 ⇑ P **P** **05 18 27.1 +0.2**
baz=73,SNR=5.2
NLW Nelson Butte 73.15 43 P **P** **05 18 27.7 +0.4**
COR Corvallis 73.24 47 *eP* **P** **05 18 28.9 +1.0**
COR pmax pmax
comp=Z,76nm,1.0s,mb5.4
COR Corvallis 73.24 47 *eP* **P** **05 18 28.9 +1.0**
comp=Z,76nm,1.0s,mb5.4
RNO Roman Nose 73.32 48 P **P** **05 18 29.6 +1.3**
ETW Entiat 73.41 44 *eP* **P** **05 18 29.1 +0.3**
comp=Z,12nm,0.7s,mb4.7
G04A Mulino 73.42 46 ⇓ P **P** **05 18 29.3 +0.4**
baz=73
UMR Umm Al-Rimmam 73.50 295 *eP* **P** **05 18 28.6 -1.1**
UMR AMb AMB 05 18 30.9
comp=Z,54nm,0.7s,mb5.4
C07A Waterville 73.52 43 ⇓ P **P** **05 18 29.1 -0.3**
baz=73
B08A Colville Reser 73.57 42 ⇓ P **P** **05 18 29.7 0.0**
baz=73,SNR=19
WTV Waterville 73.57 43 P **P** **05 18 30.0 +0.2**
SUMG Summit 73.63 359 *eP* **P** **05 18 31.1 +1.4**
comp=Z,17nm,0.8s,mb4.8
A09A Danville 73.65 42 ⇓ P **P** **05 18 29.9 -0.3**
baz=74,SNR=16
MIB Mutribah 73.65 295 *eP* **P** **05 18 29.7 -0.9**
MIB AMb AMB 05 18 30.7
comp=Z,87nm,0.7s,mb5.6
KBD Kabd 73.70 294 *eP* **P** **05 18 30.1 -0.8**
KBD AMb AMB 05 18 30.8
comp=Z,60nm,0.8s,mb5.4
HOOD Mount Hood Mea 73.85 46 *eP* **P** **05 18 31.2 -0.2**
comp=Z,90nm,0.8s,mb5.5
H04A Detroit Lake 73.87 47 ⇑ P **P** **05 18 31.4 -0.1**
baz=74,SNR=10
RDF Al-Radifah 73.93 294 *eP* **P** **05 18 31.7 -0.5**
RDF AMb AMB 05 18 32.5
comp=Z,148nm,0.7s,mb5.8
BEST Besiri 73.94 305 *i* P **P** **05 18 32.9 +0.8**
EDM Edmonton 73.98 36 *eP* **P** **05 18 32.1 +0.1**
B09A Rice 74.19 42 ⇑ P **P** **05 18 33.4 +0.1**
baz=74,SNR=19
A10A Northport 74.21 41 ⇓ P **P** **05 18 33.5 +0.1**
baz=74
AKASG Malin Array Be 74.34 321 P **P** **05 18 32.9 -1.2**
comp=Z,14nm,0.6s,mb4.9,baz=50,slow=5.8,SNR=55
AKASG Malin Array Be 74.34 321 P **P** **05 18 32.9 -1.2**
AKASG pmax pmax
comp=Z,14nm,0.6s
AKBB Malin Array Si 74.34 321 *eP* **P** **05 18 33.3 -0.8**
OD2 Odessa Site #2 74.45 43 *eP* **P** **05 18 35.0 +0.2**
C09A Chrisman Ranch 74.47 43 ⇓ P **P** **05 18 34.5 -0.4**
baz=74,SNR=10.0
RSW Rattlesnake Hi 74.49 44 *eP* **P** **05 18 35.4 +0.4**
HUMO Hull Mountain 74.49 49 *eP* **P** **05 18 35.5 +0.4**
comp=Z,8.8nm,0.8s,mb4.5
G06A Carlson Farm, 74.51 46 ⇑ P **P** **05 18 35.3 +0.2**
baz=74,SNR=8.2
D08A Wollman Farm, 74.51 43 ⇑ P **P** **05 18 35.0 -0.2**
baz=74,SNR=8.1
WRD Warden 74.52 44 P **P** **05 18 35.0 -0.2**
F07A Phinny Hill Vi 74.56 45 ⇑ P **P** **05 18 35.9 +0.4**
baz=74
SCO Scoresbysund 74.67 353 *i* P **P** **05 18 36.0 +0.4**
SCO pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
SCO Scoresbysund 74.67 353 *i* P **P** **05 18 36.0 +0.4**
comp=Z,8.8nm,1.0s,mb4.4
E08A Dider Farm, El 74.74 44 ⇓ P **P** **05 18 36.5 +0.1**
baz=75
B10A Chitwood Farm, 74.77 42 ⇑ P **P** **05 18 36.6 0.0**
baz=75
NEW Newport 74.85 42 *eP* **P** **05 18 37.0 -0.1**
NEW pmax pmax
comp=Z,29nm,1.0s
NEW Newport 74.85 42 *eP* **P** **05 18 37.0 -0.1**
comp=Z,29nm,1.0s,mb5.0
D09A Jones Farm, Ri 74.86 43 ⇓ P **P** **05 18 36.8 -0.3**
baz=75,SNR=6.2
A11A Hall Mountain, 74.88 41 ⇑ P **P** **05 18 37.9 +0.7**
baz=75,SNR=18
VIPM Ingram Point 74.91 46 P **P** **05 18 38.0 +0.5**
KHMM Horse Mountain 74.92 51 *eP* **P** **05 18 39.0 +1.4**
comp=Z,21nm,0.8s,mb4.9
C10A Spilker Farm, 75.00 42 ⇓ P **P** **05 18 38.0 +0.1**
baz=75
KEMA Kemaliye 75.09 307 *i* P **P** **05 18 39.2 +0.6**
YBH Yreka Blue Hor 75.11 50 *eP* **P** **05 18 39.5 +0.8**
YBH pmax pmax
comp=Z,15nm,0.8s
YBH Yreka Blue Hor 75.11 50 *eP* **P** **05 18 39.5 +0.8**
comp=Z,15nm,0.8s,mb4.8
B11A Sandpoint 75.17 41 ⇑ P **P** **05 18 39.2 +0.3**
baz=75,SNR=15
E09A Wood Farm, Sta 75.26 44 ⇑ P **P** **05 18 39.2 -0.2**
baz=75,SNR=9.1
A12A Yaak River Ran 75.27 41 ⇓ P **P** **05 18 40.1 +0.7**
baz=75
F08A Pendleton 75.29 44 ⇓ P **P** **05 18 40.3 +0.7**
baz=75,SNR=8.5
SUW Suwalki 75.36 326 *eP* **P** **05 18 39.7 -0.1**
SUW *e* pP 05 19 59.1 +0.7
D10A Wagner Farm, O 75.45 43 ⇓ P **P** **05 18 40.0 -0.4**
baz=75,SNR=7.8
NB2 NORSAR Subarra 75.46 336 P **P** **05 18 39.8 -0.5**
comp=Z,13nm,0.7s,mb4.8,baz=44,slow=5.9
NOA NORSAR Array B 75.46 336 P **P** **05 18 39.9 -0.3**
comp=Z,12nm,0.8s,mb4.7,baz=44,slow=5.6,SNR=41
NOA PP PP 05 21 31.7 -2.4
comp=Z,1.4nm,0.9s,baz=46,slow=8.7,SNR=3.5
NOA NORSAR Array B 75.46 336 P **P** **05 18 39.9 -0.4**
NOA pmax pmax
comp=Z,13nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 75.46 336 P **P** **05 18 39.9 -0.3**
NOA PP PP 05 21 31.7 -2.4
G08A Pilot Rock 75.47 45 ⇑ P **P** **05 18 40.9 +0.3**
baz=75,SNR=9.2
LNOR Lincton Mounta 75.53 44 *eP* **P** **05 18 41.4 +0.4**
LNOR pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
LNOR Lincton Mounta 75.53 44 *eP* **P** **05 18 41.4 +0.4**
comp=Z,1.4nm,0.6s,mb3.9
B12A Libby 75.58 41 ⇑ P **P** **05 18 41.4 +0.2**
baz=75
MALT Malatya 75.64 307 *eP* **P** **05 18 42.5 +0.8**
comp=Z,25nm,0.8s,mb5.0
MALT Malatya 75.64 307 ⇑ *i*P **P** **05 18 43.0 +1.3**
K05A Summer Lake 75.71 48 ⇓ P **P** **05 18 42.8 +0.8**
baz=76,SNR=20
I07A Izee 75.81 46 ⇑ P **P** **05 18 43.0 +0.4**
baz=76,SNR=12
WDC Whiskeytown Da 75.84 51 *eP* **P** **05 18 42.9 +0.1**
WDC pmax pmax
comp=Z,24nm,1.1s,mb4.8
WDC Whiskeytown Da 75.84 51 *eP* **P** **05 18 42.9 +0.1**
comp=Z,24nm,1.1s,mb4.8
F09A S2 Ranch, Elgi 75.84 44 ⇓ P **P** **05 18 43.0 +0.3**
baz=76
E10A Myers Farm, Un 75.86 43 ⇓ P **P** **05 18 42.7 -0.1**
baz=76,SNR=16
A13A Flathead Natio 75.94 40 ⇑ P **P** **05 18 43.4 +0.2**
baz=76
D11A Klaveano Farm, 75.98 42 ⇓ P **P** **05 18 43.3 -0.2**
baz=76,SNR=23
AKCD Akcadag 75.98 307 *i* P **P** **05 18 44.9 +1.2**
H08A Prairie City 76.07 46 ⇓ P **P** **05 18 44.4 +0.4**
baz=76,SNR=16
C12B Naegeli Ranch, 76.08 42 ⇑ P **P** **05 18 44.3 +0.3**
baz=76,SNR=7.2
F10A Beach Ranch, E 76.09 44 ⇑ P **P** **05 18 44.4 +0.3**
baz=76,SNR=8.7
WALA Waterton Lakes 76.13 40 *eP* **P** **05 18 44.8 +0.5**
comp=Z,1.1nm,0.8s,mb3.6
G09A Cove 76.16 45 ⇑ P **P** **05 18 44.7 +0.2**
baz=76,SNR=20
B13A Whitefish 76.24 41 ⇓ P **P** **05 18 45.6 +0.7**
baz=76,SNR=56
BSMT Bassoo Peak 76.37 41 *eP* **P** **05 18 46.3 +0.7**
A14A Double T Ranch 76.44 40 ⇓ P **P** **05 18 46.3 +0.3**
baz=76,SNR=47
E11A Bogner Ranch, 76.45 43 ⇓ P **P** **05 18 46.0 -0.1**
baz=76,SNR=13
D12A Red Ives Fores 76.53 42 ⇑ P **P** **05 18 46.6 +0.1**
baz=76
MOD Modoc 76.53 48 *eP* **P** **05 18 46.8 +0.2**
comp=Z,20nm,0.8s,mb4.9
G10A Bishop Farm, J 76.54 44 ⇓ P **P** **05 18 46.8 +0.2**
baz=76,SNR=43
H09A Durkee 76.58 45 ⇓ P **P** **05 18 47.4 +0.5**
baz=76,SNR=5.7
C13A Hot Springs 76.59 41 ⇑ P **P** **05 18 47.3 +0.4**
baz=76,SNR=60
JTMT Jette 76.71 41 *eP* **P** **05 18 48.1 +0.6**
GZT Gaziantep 76.73 306 *i* P **P** **05 18 48.9 +1.1**
F11A Grangeville 76.75 43 ⇓ P **P** **05 18 47.6 -0.2**
baz=77,SNR=22
E12A Beaver Dam Sad 76.78 43 ⇑ P **P** **05 18 48.1 +0.2**
baz=77
YBMT Yellow Bay 76.79 41 *eP* **P** **05 18 48.5 +0.5**
A15A Johnson Ranch, 76.81 39 ⇓ P **P** **05 18 47.8 -0.2**
baz=77,SNR=66
J08A Circle Bar Ran 76.84 46 ⇑ P **P** **05 18 48.7 +0.4**
baz=77,SNR=36
I09A Lost Marbles R 76.93 46 ⇑ P **P** **05 18 49.2 +0.4**
baz=77,SNR=20
G11A Walters Elk Ra 76.97 44 ⇓ P **P** **05 18 48.5 -0.5**
baz=77,SNR=32
C14A Swan Lake 76.99 41 ⇓ P **P** **05 18 49.5 +0.4**
baz=77
D13A Huson 77.00 42 ⇓ P **P** **05 18 48.8 -0.3**
baz=77,SNR=16
SWMT Swartz Lake 77.00 41 *eP* **P** **05 18 49.5 +0.3**
BALT Daday 77.14 312 *i* P **P** **05 18 50.9 +0.9**
H10A Noah's Angus R 77.16 45 ⇑ P **P** **05 18 49.6 -0.5**
baz=77,SNR=31
OHCM Honcut 77.20 51 *eP* **P** **05 18 50.1 -0.3**
WVOR Wild Horse Val 77.26 47 *eP* **P** **05 18 50.8 +0.2**
WVOR pmax pmax

comp=Z,48nm,1.6s,mb5.0
WVOR Wild Horse Val 77.26 47 *e*P **P 05 18 50.8 +0.1**
comp=Z,48nm,1.6s,mb5.0
J09A Fry Pan Ranch, 77.28 46 ⇑P **P 05 18 51.1 +0.4**
baz=77,SNR=38
B15A Bradely Ranch, 77.30 40 ⇑P **P 05 18 50.8 +0.1**
baz=77,SNR=71
F12A Elk City 77.34 43 ⇑P **P 05 18 51.2 +0.2**
baz=77,SNR=75
I10A Payette 77.42 45 ⇑P **P 05 18 51.9 +0.4**
baz=77,SNR=9.6
A16A West Butte Ran 77.42 39 ⇑P **P 05 18 51.1 -0.3**
baz=77,SNR=36
MSO Missoula 77.44 42 *e*P **P 05 18 50.8 -0.8**
comp=Z,14nm,1.2s,mb4.5
SLMT Seeley Lake 77.44 41 *e*P **P 05 18 51.7 +0.1**
H11A Donnelly 77.52 44 ⇑P **P 05 18 51.6 -0.5**
baz=77,SNR=24
D14A Greenough 77.53 41 ⇓P **P 05 18 51.7 -0.3**
baz=77,SNR=37
E13A Victor 77.53 42 ⇑P **P 05 18 51.6 -0.4**
baz=77,SNR=6.6
CDAG Cicekdag 77.58 309 *i* P **P 05 18 52.8 +0.4**
C15A Salmond Ranch, 77.60 40 ⇑P **P 05 18 52.8 +0.4**
baz=77,SNR=60
BEKR Beckwourth 77.63 50 ⇑P **P 05 18 52.8 +0.1**
baz=78,SNR=32
B16A M & M Farms, S 77.69 39 ⇑P **P 05 18 52.9 +0.1**
baz=78,SNR=18
CHMT Chamberlain Mo 77.77 41 *e*P **P 05 18 53.1 -0.2**
J10A Berg Farm, Mel 77.82 46 ⇓P **P 05 18 53.7 0.0**
baz=78,SNR=6.9
F13A Darby 77.84 43 ⇑P **P 05 18 53.7 -0.1**
baz=78,SNR=8.9
E14A Clinton 77.93 42 ⇑P **P 05 18 53.9 -0.3**
baz=78,SNR=11
BR131 Keskin Array S 77.99 310 *e*P **P 05 18 54.8 +0.1**
comp=Z,4.5nm,0.6s,mb4.4
BRTR Keskin Array B 77.99 310 P **P 05 18 54.6 -0.1**
comp=Z,8.3nm,0.8s,mb4.5,baz=107,slow=4.1,SNR=39
BRTR PP PP 05 21 53.2 -2.6
comp=Z,2.5nm,1.0s,baz=86,slow=6.3,SNR=3.9
BRTR Keskin Array B 77.99 310 P **P 05 18 54.7 0.0**
BRTR 05 21 53.2
BRTR pmax pmax
comp=Z,8.0nm,0.8s
BRTR pmax pmax
comp=Z,3.0nm,1.0s
I11A Placerville 78.01 45 ⇓P **P 05 18 54.9 +0.1**
baz=78,SNR=7.8
C16A Fuhringer Ranc 78.04 40 ⇑P **P 05 18 55.0 +0.2**
baz=78,SNR=69
D15A Lincoln 78.09 41 ⇑P **P 05 18 54.9 -0.2**
baz=78,SNR=12
K10A MacKenzie Ranc 78.13 46 ⇓P **P 05 18 55.5 +0.1**
baz=78,SNR=25
CFR Carcaliu 78.16 317 ⇑P **P 05 18 55.0 -0.5**
CFR Carcaliu 78.16 317 ⇑*i*P **P 05 18 55.0 -0.5**
FFC Flin Flon 78.20 30 *e*P **P 05 18 55.0 -0.5**
FFC *e**PP pP 05 20 15.1 +0.3
FFC pmax pmax
comp=Z,16nm,0.9s,mb4.8
FFC Flin Flon 78.20 30 *e*P **P 05 18 55.0 -0.6**
comp=Z,16nm,0.9s,mb4.8
FFC *ep*P pP 05 20 15.1 +0.3
B17A L&G Farms, Che 78.24 39 ⇑P **P 05 18 56.1 +0.2**
baz=78,SNR=68
BSD Bornholm Skovb 78.26 330 ⇓*i*P **P 05 18 55.1 -0.8**
BSD pmax pmax
comp=Z,23nm,0.7s,mb5.0
BSD Bornholm Skovb 78.26 330 ⇓*i*P **P 05 18 55.1 -0.8**
comp=Z,23nm,0.7s,mb5.0
H12A Diamond D Ranc 78.28 44 ⇑P **P 05 18 56.2 0.0**
baz=78,SNR=23
BUR08 Bucovina Ar. S 78.28 320 *e*P **P 05 18 56.2 +0.1**
BURAR Bucovina Array 78.29 320 ⇓P **P 05 18 56.6 +0.4**
BURAR Bucovina Array 78.29 320 ⇓*i*P **P 05 18 56.6 +0.4**
FCC Fort Churchill 78.30 24 *e*P **P 05 18 55.6 -0.4**
comp=Z,0.2nm,0.4s
G13A Cobalt 78.31 43 ⇓P **P 05 18 55.7 -0.6**
baz=78,SNR=14
WCN Washoe City 78.33 50 ⇑P **P 05 18 56.9 +0.3**
baz=78,SNR=12
KWP Kalwaria Pacla 78.33 323 *e*P **P 05 18 56.9 +0.5**
KWP *e* pP 05 20 16.1 +0.4
KWP Kalwaria Pacla 78.33 323 *e*P **P 05 18 56.8 +0.4**
KWP *e**PP pP 05 20 16.3 +0.6
KWP pmax pmax
comp=Z,40nm,0.9s,mb5.2
KWP Kalwaria Pacla 78.33 323 *e*P **P 05 18 56.8 +0.4**
comp=Z,40nm,0.9s,mb5.2
KWP *ep*P pP 05 20 16.3 +0.6
KWP Kalwaria Pacla 78.33 323 ⇑*i*P **P 05 18 57.1 +0.7**
PAHR Pah Rah Range 78.34 50 *e*P **P 05 18 57.0 +0.4**
A18A Metzger Ranch, 78.34 38 ⇓P **P 05 18 56.0 -0.4**
baz=78,SNR=38
F14A Wisdom 78.37 42 ⇓P **P 05 18 56.7 0.0**
baz=78,SNR=8.5
MFID Camas Ranch 78.38 45 ⇓P **P 05 18 57.1 +0.4**
baz=78,SNR=26
E15A Deer Lodge 78.40 41 ⇓P **P 05 18 56.8 0.0**
baz=78,SNR=34
VRI Vrincioaia 78.54 318 ⇑P **P 05 18 58.8 +1.2**
VRI Vrincioaia 78.54 318 ⇑*i*P **P 05 18 58.8 +1.2**
I12A Atlanta 78.56 45 ⇑P **P 05 18 58.0 +0.3**
baz=78,SNR=23
H13A Challis 78.61 44 ⇓P **P 05 18 58.0 0.0**
baz=78,SNR=44
D16A Dana Ranch, Ca 78.62 40 ⇓P **P 05 18 58.3 +0.3**
baz=78,SNR=44
CMB Columbia Colle 78.64 52 *e*P **P 05 18 58.3 +0.1**
CMB pmax pmax
comp=Z,28nm,0.9s,mb5.0
CMB Columbia Colle 78.64 52 *e*P **P 05 18 58.3 0.0**
comp=Z,28nm,0.9s,mb5.0
K11A Parker Ranch, 78.64 46 ⇓P **P 05 18 58.4 +0.2**
baz=78,SNR=17
SAO San Andreas Ge 78.65 53 *e*P **P 05 18 57.7 -0.6**
SAO pmax pmax
comp=Z,20nm,1.2s,mb4.7
SAO San Andreas Ge 78.65 53 *e*P **P 05 18 57.7 -0.6**
comp=Z,20nm,1.2s,mb4.7
G14A Jackson 78.66 43 ⇑P **P 05 18 57.6 -0.6**
baz=78
HRY Holter Researc 78.67 41 *e*P **P 05 18 58.7 +0.5**
C17A Wharram Farm, 78.67 40 ⇑P **P 05 18 57.8 -0.4**
baz=78,SNR=35
B18A Beardsley Farm 78.71 39 ⇑P **P 05 18 58.5 +0.1**
baz=78,SNR=40
L10A Juniper Basin 78.78 47 ⇓P **P 05 18 59.5 +0.6**
baz=79,SNR=24
F15A Butte 78.84 42 ⇑P **P 05 18 59.6 +0.4**
baz=79,SNR=38
E16A East Helena 78.86 41 ⇑P **P 05 18 59.4 +0.2**
baz=79,SNR=28
LRM Limekiln Ridge 78.87 42 *e*P **P 05 18 59.9 +0.5**
LRM *ep*P pP 05 20 19.0 +0.2
J12A Stokes Ranch, 78.91 45 ⇑P **P 05 18 60.0 +0.4**
baz=79,SNR=12
EGMT Eagleton 78.95 39 ⇑P **P 05 18 59.7 -0.1**
baz=79
EGMT Eagleton 78.95 39 *e*P **P 05 18 59.8 +0.1**
comp=Z,66nm,1.0s,mb5.3
WAKR Walker 78.99 51 *e*P **P 05 19 00.7 +0.6**
KOLS Kolonicke sedl 79.00 322 *e*P **P 05 19 00.3 +0.3**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
KOLS Kolonicke sedl 79.00 322 *e*P **P 05 19 00.3 +0.3**
comp=Z,6.2nm,1.0s,mb4.3
KOLS *ep*P pP 05 20 20.1 +0.7
KOLS Kolonicke sedl 79.00 322 *e*P **P 05 19 00.3 +0.3**
KOLS *ep*P pP 05 20 20.1 +0.7
D17A Six Diamond Ra 79.01 40 ⇓P **P 05 18 60.0 -0.1**
baz=79,SNR=52
M10A I.L. Ranch, Tu 79.06 47 ⇓P **P 05 19 01.2 +0.7**
baz=79,SNR=28
DLMT Dillon 79.07 42 *e*P **P 05 19 00.2 -0.2**
comp=Z,42nm,0.9s,mb5.2
DLMT *ep*P pP 05 20 20.1 +0.3
I13A Wildhorse Cree 79.08 44 ⇓P **P 05 19 01.3 +0.7**
baz=79,SNR=45
H14A Leadore 79.09 43 ⇑P **P 05 19 00.3 -0.2**
baz=79,SNR=8.4
HLID Hailey 79.12 45 P **P 05 19 01.6 +0.9**
baz=79
HLID Hailey 79.12 45 *e*P **P 05 19 01.5 +0.8**
comp=Z,16nm,0.9s,mb4.7

L11A Cat Creek Ranc 79.16 46 ⇓P **P 05 19 01.7 +0.7**
baz=79,SNR=29
MLR Muntele Rosu 79.20 318 ⇑P **P 05 19 02.6 +1.5**
MLR Muntele Rosu 79.20 318 ⇑*i*P **P 05 19 02.6 +1.5**
STHS Stebnicka Huta 79.20 323 *e*P **P 05 19 01.8 +0.7**
STHS pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
STHS Stebnicka Huta 79.20 323 *e*P **P 05 19 01.8 +0.7**
comp=Z,8.5nm,0.8s,mb4.5
STHS *ep*P pP 05 20 21.7 +1.1
STHS Stebnicka Huta 79.20 323 *e*P **P 05 19 01.8 +0.7**
STHS *ep*P pP 05 20 21.7 +1.1
G15A Dillon 79.25 42 ⇑P **P 05 19 01.5 +0.1**
baz=79,SNR=39
MCMT McKenzie Canyo 79.25 43 *e*P **P 05 19 00.8 -0.7**
comp=Z,4.3nm,1.1s,mb4.1
BMN Battle Mountai 79.28 48 *e*P **P 05 19 02.5 +0.8**
BMN pmax pmax
comp=Z,19nm,0.9s,mb4.8
BMN Battle Mountai 79.28 48 *e*P **P 05 19 02.5 +0.8**
comp=Z,19nm,0.9s,mb4.8
E17A Martinsdale 79.35 41 ⇑P **P 05 19 02.7 +0.8**
baz=79,SNR=72
F16A Kennard Place, 79.35 41 ⇓P **P 05 19 02.2 +0.3**
baz=79,SNR=26
J13A Cove Ranch, Pi 79.36 45 ⇓P **P 05 19 02.8 +0.7**
baz=79,SNR=38
TRPA Tarpa 79.38 322 ⇑*i*P **P 05 19 02.7 +0.7**
K12A Draper Farm, C 79.39 45 ⇑P **P 05 19 02.4 +0.2**
baz=79,SNR=12
OJC Ojcow 79.39 324 *i* P **P 05 19 02.0 0.0**
OJC *e*PcP PcP 05 19 07.1 -1.8
OJC *i* pP pP 05 20 22.3 +0.7
OJC Ojcow 79.39 324 ⇓*i*P **P 05 19 02.0 0.0**
OJC *e* 05 19 07.1
OJC *e**PP pP 05 20 22.3 +0.7
BOZ Bozeman (W) 79.43 42 ⇑P **P 05 19 02.9 +0.5**
baz=79
BOZ Bozeman (W) 79.43 42 *e*P **P 05 19 02.9 +0.5**
BOZ *e**PP pP 05 20 22.4 +0.5
BOZ pmax pmax
comp=Z,13nm,0.8s,mb4.7
BOZ Bozeman (W) 79.43 42 *e*P **P 05 19 02.9 +0.6**
comp=Z,13nm,0.8s,mb4.7
BOZ *ep*P pP 05 20 22.4 +0.5
D18A Linhart Farms, 79.45 40 ⇑P **P 05 19 02.7 +0.3**
baz=79,SNR=16
I14A Mackay 79.46 44 ⇓P **P 05 19 03.3 +0.7**
baz=79,SNR=85
H15A Lima 79.50 43 ⇑P **P 05 19 02.6 -0.1**
baz=79,SNR=16
MUD Monsted U'grnd 79.55 333 *e*P **P 05 19 02.4 -0.4**
MUD pmax pmax
comp=Z,11nm,0.9s,mb4.6
MUD Monsted U'grnd 79.55 333 *i* P **P 05 19 02.4 -0.4**
comp=Z,11nm,0.9s,mb4.6
N10A Dunphy 79.55 48 ⇑P **P 05 19 04.1 +1.0**
baz=79
M11A Holland Ranch, 79.57 47 ⇑P **P 05 19 04.2 +1.0**
baz=79,SNR=14
G16A Moss Hill, Enn 79.59 42 ⇑P **P 05 19 03.4 +0.1**
baz=79,SNR=19
L12A House Creek Ra 79.61 46 ⇓P **P 05 19 04.4 +1.0**
baz=80,SNR=28
NIE Niedzica 79.66 324 *e*P **P 05 19 04.6 +1.1**
VOIR 79.73 318 ⇑P **P 05 19 04.6 +0.6**
VOIR 79.73 318 ⇑*i*P **P 05 19 04.6 +0.6**
NVAR Mina Array Bea 79.76 50 P **P 05 19 04.6 +0.4**
comp=Z,17nm,0.8s,mb4.8,baz=284,slow=5.1,SNR=116
E18A Harlowton 79.79 40 ⇓P **P 05 19 04.8 +0.5**
baz=80,SNR=47
F17A Fitzpatrick Pl 79.80 41 ⇑P **P 05 19 04.7 +0.4**
baz=80,SNR=26
O10A Cortez Mining, 79.81 48 ⇑P **P 05 19 05.4 +1.0**
baz=80,SNR=11
K13A Stover Farm, H 79.86 45 ⇓P **P 05 19 05.5 +0.7**
baz=80,SNR=17
MLAC Mammoth Lakes 79.88 51 ⇓P **P 05 19 05.3 +0.4**
baz=80,SNR=5.6
I15A Monteview 79.97 43 ⇑P **P 05 19 05.9 +0.6**
baz=80,SNR=8.6
N11A Elko Archery C 79.97 47 ⇓P **P 05 19 06.3 +1.0**
baz=80,SNR=5.9
QLMT Earthquake Lak 80.05 42 *e*P **P 05 19 06.5 +0.8**
M12A Wells 80.11 46 ⇓P **P 05 19 07.0 +1.0**
baz=80,SNR=31
G17A Pierce Place, 80.12 41 ⇓P **P 05 19 06.4 +0.4**
baz=80,SNR=22
KECS Kecovo 80.19 323 *i* P **P 05 19 06.8 +0.5**
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KECS Kecovo 80.19 323 *i* P **P 05 19 06.8 +0.5**
comp=Z,4.0nm,0.8s,mb4.2
KECS *ep*P pP 05 20 26.6 +0.6
KECS Kecovo 80.19 323 *i* P **P 05 19 06.8 +0.5**
KECS *ep*P pP 05 20 26.6 +0.6
MTUM Tungsten Hills 80.21 52 *e*P **P 05 19 07.3 +0.6**
P10A Eureka 80.23 49 ⇓P **P 05 19 07.3 +0.6**
baz=80,SNR=6.4
H16A Russell Place, 80.23 42 ⇓P **P 05 19 07.2 +0.6**
baz=80,SNR=25
L13A Double Diamond 80.28 45 ⇓P **P 05 19 08.1 +1.1**
baz=80,SNR=19
ELK Elko 80.31 47 *e*P **P 05 19 07.7 +0.5**
ELK pmax pmax
comp=Z,11nm,0.9s
ELK Elko 80.31 47 *e*P **P 05 19 07.7 +0.5**
comp=Z,11nm,0.9s,mb4.6
F18A Big Timber 80.31 41 ⇓P **P 05 19 07.4 +0.4**
baz=80,SNR=28
J15A Blackfoot 80.37 44 ⇑P **P 05 19 08.4 +1.0**
baz=80,SNR=22
RCTC Rector, Farmer 80.37 53 ⇑P **P 05 19 07.2 -0.3**
baz=80
N12A Clover Valley, 80.37 47 ⇓P **P 05 19 08.3 +0.8**
baz=80,SNR=24
YMR Madison River 80.41 42 *e*P **P 05 19 08.3 +0.7**
comp=Z,61nm,1.5s,mb5.1
O11A Cowboy Ranch, 80.42 48 ⇑P **P 05 19 08.2 +0.5**
baz=80,SNR=12
SMMC Simmler 80.44 54 ⇓P **P 05 19 07.8 -0.1**
baz=80
K14A Jones Ranch, D 80.46 45 ⇑P **P 05 19 08.7 +0.8**
baz=80,SNR=24
YNR Norris Junctio 80.54 42 *e*P **P 05 19 10.2 +2.0**
comp=Z,28nm,1.2s,mb4.9
M13A Montello 80.59 46 ⇑P **P 05 19 09.2 +0.6**
baz=80,SNR=21
MMAI Mount Meron Ar 80.59 303 P **P 05 19 08.4 -0.4**
comp=Z,12nm,0.8s,mb4.7,baz=38,slow=9.7,SNR=6.3
TIN Tinemaha 80.60 52 ⇓P **P 05 19 09.2 +0.4**
baz=80,SNR=5.3
I16A Newdale 80.61 43 ⇓P **P 05 19 09.8 +1.1**
baz=80,SNR=26
YFT Old Faithful 80.62 42 *e*P **P 05 19 11.5 +2.8**
comp=Z,20nm,0.8s,mb4.9
KSP Ksiaz 80.62 326 *e*P **P 05 19 08.9 +0.4**
KSP *e* pP 05 20 29.9 +1.6
KSP Ksiaz 80.62 326 ⇓*e*P **P 05 19 08.9 +0.3**
KSP *e**PP pP 05 20 29.4 +1.1
P11A Circle Ranch, 80.71 48 ⇑P **P 05 19 09.8 +0.6**
baz=81
L14A Malta 80.73 45 ⇑P **P 05 19 09.9 +0.6**
baz=81,SNR=33
Q10A Clear Creek Ra 80.74 49 ⇑P **P 05 19 09.6 +0.2**
baz=81,SNR=13
VES Vestal, Richgr 80.74 53 ⇑P **P 05 19 08.4 -1.1**
baz=81,SNR=14
K15A Arbon 80.75 44 ⇓P **P 05 19 10.4 +1.0**
baz=81,SNR=8.5
MORC Moravsky Berou 80.77 325 *e*P **P 05 19 09.4 0.0**
comp=Z,16nm,1.0s,mb4.7
MORC Moravsky Berou 80.77 325 ⇑*i*P **P 05 19 09.8 +0.5**
LKWY Lake 80.79 42 *e*P **P 05 19 11.9 +2.3**
LKWY pmax pmax
comp=Z,38nm,1.0s,mb5.1
LKWY Lake 80.79 42 *e*P **P 05 19 11.9 +2.3**
comp=Z,38nm,1.0s,mb5.1
PKM Peak Mountain 80.80 54 ⇓P **P 05 19 10.0 +0.2**
baz=81,SNR=8.1
H17A Grant Village 80.80 42 ⇓P **P 05 19 11.8 +2.2**
baz=81
PSZ Piszkesteto 80.86 323 *e*P **P 05 19 10.5 +0.6**
PSZ *e**PP pP 05 20 29.3 -0.4
PSZ pmax pmax
comp=Z,11nm,0.7s,mb4.7

PSZ Piszkesteto 80.86 323 *e*P **P 05 19 10.5 +0.6**
comp=Z,11nm,0.7s,mb4.7
PSZ *ep*P pP 05 20 29.3 -0.4
PSZ Piszkesteto 80.86 323 ⇑*e*P **P 05 19 10.7 +0.8**
PSZ Piszkesteto 80.86 323 ⇓*i*P **P 05 19 10.3 +0.4**
N13A Wendover, West 80.88 47 ⇓P **P 05 19 10.7 +0.6**
baz=81,SNR=7.4
O12A Currie 80.90 47 ⇑P **P 05 19 11.0 +0.7**
baz=81,SNR=54
IMW Indian Meadow 80.91 43 *e*P **P 05 19 11.5 +1.3**
comp=Z,27nm,0.8s,mb5.0
J16A Bone 80.91 43 ⇑P **P 05 19 11.2 +1.0**
baz=81,SNR=27
DPC Dobruska-Polom 80.95 326 *e*P **P 05 19 10.8 +0.5**
DPC *ep*P pP 05 20 30.9 +0.8
DCID1 Drake Creek 80.96 43 *e*P **P 05 19 12.0 +1.6**
comp=Z,36nm,1.0s,mb5.1
BSEG Bad Segeberg 80.98 331 *e*P **P 05 19 10.2 -0.2**
comp=Z,16nm,1.0s,mb4.7
M14A Sheep Mountain 81.00 46 ⇓P **P 05 19 11.6 +0.8**
baz=81,SNR=34
VYHS Vyhne 81.01 324 *i* P **P 05 19 11.4 +0.8**
VYHS *e* pP 05 20 31.4 +0.9
VYHS Vyhne 81.01 324 *i* P **P 05 19 11.4 +0.8**
VYHS *ep*P pP 05 20 31.4 +0.9
RRI2 Red Ridge 81.03 43 *e*P **P 05 19 11.7 +0.8**
comp=Z,26nm,1.0s,mb4.9
RRI2 *ep*P pP 05 20 31.8 +1.0
RLMT Red Lodge 81.06 41 ⇓P **P 05 19 11.7 +0.7**
baz=81
RLMT Red Lodge 81.06 41 *e*P **P 05 19 11.6 +0.6**
comp=Z,28nm,1.1s,mb4.9
CWC Cottonwood Cre 81.06 52 ⇓P **P 05 19 10.9 -0.2**
baz=81
I17A Pilgrim Ck. 81.10 42 ⇑P **P 05 19 12.9 +1.7**
baz=81,SNR=27
R10A Warm Springs 81.12 50 ⇓P **P 05 19 11.8 +0.4**
baz=81,SNR=9.3
S10A Tonopah Range, 81.15 50 ⇑P **P 05 19 12.0 +0.4**
baz=81,SNR=50
TPAW Teton Pass 81.16 43 *e*P **P 05 19 12.7 +1.2**
comp=Z,24nm,0.8s,mb5.0
KOLL Kolacno 81.16 324 *e*P **P 05 19 12.2 +0.8**
KOLL Kolacno 81.16 324 *e*P **P 05 19 12.2 +0.8**
HVU Hansel Valley 81.16 45 *e*P **P 05 19 12.5 +0.9**
HVU pmax pmax
comp=Z,24nm,0.8s,mb5.0
HVU Hansel Valley 81.16 45 *e*P **P 05 19 12.5 +0.9**
comp=Z,24nm,0.8s,mb5.0
GRAC Grapevine Rang 81.19 51 ⇓P **P 05 19 11.9 +0.1**
baz=81,SNR=14
Q11A Duckwater 81.19 49 ⇓P **P 05 19 12.0 +0.2**
baz=81,SNR=13
K16A Soda Springs 81.20 44 ⇓P **P 05 19 13.0 +1.2**
baz=81,SNR=21
ISA Isabella 81.25 53 ⇓P **P 05 19 11.0 -1.2**
baz=81,SNR=12
ISA Isabella 81.25 53 *e*P **P 05 19 11.3 -0.9**
ISA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ISA Isabella 81.25 53 *e*P **P 05 19 11.3 -0.9**
comp=Z,9.5nm,0.9s,mb4.5
L15A Malad City 81.25 45 ⇓P **P 05 19 12.5 +0.5**
baz=81,SNR=20
LOHW Long Hollow 81.27 43 *e*P **P 05 19 13.0 +0.9**
comp=Z,17nm,1.0s,mb4.7
P12A McGill 81.28 48 ⇑P **P 05 19 12.7 +0.4**
baz=81,SNR=28
SNOW Snow King Moun 81.28 43 *e*P **P 05 19 13.1 +0.9**
comp=Z,32nm,1.1s,mb5.0
REDW Red Top Meadow 81.29 43 *e*P **P 05 19 12.8 +0.6**
comp=Z,33nm,1.2s,mb4.9
ARVC Arvin 81.33 53 ⇓P **P 05 19 12.1 -0.5**
baz=81
J17A Brown Place, J 81.37 43 ⇑P **P 05 19 13.5 +0.8**
baz=81,SNR=15
O13A Hicks Ranch, I 81.45 47 ⇑P **P 05 19 13.9 +0.8**
baz=81,SNR=8.5
DGMT Dagmar 81.47 36 ⇑P **P 05 19 12.7 -0.3**
baz=81
N14A Grayback Hills 81.49 46 ⇓P **P 05 19 13.6 +0.3**
baz=81,SNR=18
R11A Troy Canyon, C 81.53 49 ⇓P **P 05 19 13.6 +0.1**
baz=81,SNR=35
BGU Big Grassy Mou 81.54 46 *e*P **P 05 19 14.0 +0.4**
comp=Z,38nm,1.5s,mb5.0
VRAC Vranov 81.54 325 ⇓P **P 05 19 13.8 +0.4**
VRAC Vranov 81.54 325 ⇓*i*P **P 05 19 13.8 +0.4**
M15A Larsen Ranch, 81.55 45 ⇓P **P 05 19 13.7 +0.1**
baz=81,SNR=33
Q12A Willow Creek R 81.59 48 ⇑P **P 05 19 14.3 +0.4**
baz=81,SNR=12
K17A Gardner Place, 81.64 44 ⇑P **P 05 19 14.0 0.0**
baz=82,SNR=5.1
SPUT South Promonto 81.65 45 *e*P **P 05 19 14.4 +0.3**
comp=Z,13nm,1.1s,mb4.7
LAO LASA Array 81.65 38 *e*P **P 05 19 13.9 -0.1**
comp=Z,26nm,1.1s,mb5.0
I18A Diamond G Ranc 81.66 42 ⇑P **P 05 19 14.7 +0.6**
baz=82,SNR=12
BRG Berggiesshubel 81.66 327 *e*P **P 05 19 12.6 -1.4**
comp=Z,10.0nm,0.8s,mb4.7
BRG *ep*P pP 05 20 34.2 +0.2
BRG Berggiesshubel 81.66 327 *i* P **P 05 19 14.2 +0.1**
comp=Z,10nm,0.8s,mb4.7
BRG *i* 05 19 29.3
comp=Z,4.7nm,0.7s
BRG S S 05 28 53.0 -3.4
BRG Berggiesshubel 81.66 327 *i* P **P 05 19 14.1 +0.1**
BRG S S 05 28 53.0 -3.4
BRG pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
MPMC Manual Prospec 81.67 52 ⇑P **P 05 19 14.1 -0.2**
baz=82,SNR=29
OSI Osito Adit 81.69 54 ⇓P **P 05 19 14.5 0.0**
baz=82
BLG Laguna Peak 81.76 54 ⇑P **P 05 19 14.2 -0.6**
baz=82
CLL Collm 81.77 328 *e*P **P 05 19 14.0 -0.5**
comp=Z,24nm,0.9s,mb5.0
CLL Collm 81.77 328 ⇓*i*P **P 05 19 14.3 -0.2**
CLL *e**PP pP 05 20 35.0 +0.4
CLL pmax pmax
comp=Z,24nm,0.9s,mb5.0
CLL Collm 81.77 328 ⇓*i*P **P 05 19 14.3 -0.2**
comp=Z,24nm,0.9s,mb5.0
CLL *ep*P pP 05 20 35.0 +0.4
CLL Collm 81.77 328 ⇓*i*P **P 05 19 14.3 -0.2**
comp=Z,24nm,0.9s,mb5.0
CLL *i* PcP PcP 05 19 18.3 -1.0
CLL *e* 05 19 45.0
CLL *ep*P pP 05 20 35.0 +0.4
CLL *e*PP PP 05 22 29.0 +2.6
L16A Fish Haven 81.80 44 ⇓P **P 05 19 15.5 +0.6**
baz=82,SNR=17
FURC Furnace Creek, 81.83 51 ⇑P **P 05 19 15.2 0.0**
baz=82,SNR=41
P13A Bates Ranch, G 81.84 48 ⇑P **P 05 19 15.6 +0.4**
baz=82,SNR=16
S11A Rachel 81.85 50 ⇓P **P 05 19 15.5 +0.3**
baz=82,SNR=14
J18A Kendall Valley 81.86 43 ⇓P **P 05 19 15.8 +0.6**
baz=82,SNR=68
N15A Stansbury Isla 81.86 46 ⇓P **P 05 19 15.7 +0.4**
baz=82,SNR=20
LRMC Laurel Mountai 81.88 53 ⇓P **P 05 19 15.5 +0.1**
baz=82
SNCC San Nicolas Is 81.94 55 ⇓P **P 05 19 15.7 -0.1**
baz=82
HWUT Hardware Ranch 81.98 45 *e*P **P 05 19 16.3 +0.5**
comp=Z,42nm,1.0s,mb5.2
HWUT *ep*P pP 05 20 36.8 +0.9
PRA Prague 82.01 327 P **P 05 19 16.0 +0.2**
PRU Pruhonice 82.02 327 *e*P **P 05 19 16.1 +0.2**
PRU *ep*P pP 05 20 35.9 -0.1
EDW2 Edwards Air Fo 82.03 53 ⇑P **P 05 19 16.1 -0.1**
baz=82,SNR=21
L17A Cokeville 82.08 44 ⇑P **P 05 19 16.6 +0.3**
baz=82
DUG Dugway 82.12 46 P **P 05 19 17.4 +0.8**
baz=82,SNR=39
DUG Dugway 82.12 46 *e*P **P 05 19 17.0 +0.4**
DUG *e**PP pP 05 20 37.0 +0.3
DUG pmax pmax
comp=Z,35nm,1.1s,mb5.1

DUG Dugway 82.12 46 *eP* **P 05 19 17.0 +0.5**
comp=Z,36nm,1.1s,mb5.1
DUG *epP* pP 05 20 37.0 +0.3
M16A Huntsville 82.13 45 ⇓P **P 05 19 16.7 +0.1**
baz=82,SNR=12
NRDL Niedersach Rie 82.13 330 *eP* **P 05 19 15.9 -0.5**
comp=Z,12nm,1.2s,mb4.6
Q13A Wheeler Ranch, 82.14 48 ⇓P **P 05 19 17.0 +0.3**
baz=82,SNR=26
R12A Pony Springs, 82.16 49 ⇑P **P 05 19 17.0 +0.2**
baz=82,SNR=30
DECC Green Verdugo 82.17 54 ⇑P **P 05 19 16.5 -0.5**
baz=82
U10A Ash Meadows, A 82.21 51 ⇓P **P 05 19 17.4 +0.3**
baz=82,SNR=22
K18A Toltan Ranch, 82.21 43 ⇑P **P 05 19 17.5 +0.5**
baz=82,SNR=18
NOQ North Oquirrh 82.25 46 *eP* **P 05 19 17.8 +0.5**
comp=Z,41nm,0.8s,mb5.3
O15A The Old Anders 82.27 46 ⇓P **P 05 19 18.2 +0.8**
baz=82,SNR=7.9
P14A Drum Mountains 82.34 47 ⇓P **P 05 19 18.4 +0.7**
baz=82,SNR=18
MWC Mount Wilson 82.37 54 *eP* **P**
MWC *pmax* pmax **05 19 17.7 -0.3**
comp=Z,26nm,1.0s,mb5.0
MWC Mount Wilson 82.37 54 *eP* **P 05 19 17.7 -0.2**
comp=Z,26nm,1.0s,mb5.0
BW06 Boulder Array 82.40 43 *eP* **P 05 19 17.4 -0.5**
comp=Z,25nm,0.9s,mb5.0
PDAR Pinedale Array 82.40 43 P **P 05 19 17.9 0.0**
comp=Z,19nm,0.8s,mb5.0,baz=298,slow=2.0,SNR=145
PDAR PP PP 05 22 33.8 +1.9
comp=Z,1.6nm,1.1s,baz=308,slow=5.1,SNR=4.2
T11A Corn Creek, Al 82.43 50 ⇓P **P 05 19 18.5 +0.3**
baz=82,SNR=38
S12A Delamar Landin 82.44 50 ⇓P **P 05 19 18.8 +0.5**
baz=82,SNR=8.5
CLZ Clausthal 82.50 330 *eP* **P 05 19 18.2 -0.1**
comp=Z,32nm,0.9s,mb5.2
CLZ Clausthal 82.50 330 *eP* **P 05 19 18.2 -0.1**
CLZ *pmax* pmax
comp=Z,32nm,0.9s,mb5.2
N16A Rees Ranch, Co 82.51 45 ⇓P **P 05 19 18.6 +0.1**
baz=82
SHOC Shoshone 82.55 52 ⇓P **P 05 19 18.4 -0.5**
baz=82
GSC Goldstone 82.56 52 ⇑P **P 05 19 18.9 -0.1**
baz=82,SNR=28
GSC Goldstone 82.56 52 *eP* **P 05 19 18.9 -0.1**
GSC *pmax* pmax
comp=Z,33nm,0.9s,mb5.2
GSC Goldstone 82.56 52 *eP* **P 05 19 18.9 -0.1**
comp=Z,33nm,0.9s,mb5.2
Q14A Sevier Lake (B 82.58 48 ⇓P **P 05 19 19.5 +0.5**
baz=82,SNR=70
M17A Scullys Gap (B 82.59 44 ⇓P **P 05 19 19.2 +0.2**
baz=82,SNR=16
CIS Catalina Islan 82.61 55 ⇑P **P 05 19 18.6 -0.6**
baz=82,SNR=5.1
BFSC Mount Baldy St 82.63 54 ⇓P **P 05 19 18.9 -0.4**
baz=82,SNR=19
R13A O'Grain Ranch, 82.65 49 ⇑P **P 05 19 19.6 +0.3**
baz=82,SNR=14
TANN Tannenbergstha 82.65 328 *eP* **P 05 19 18.8 -0.3**
comp=Z,8.0nm,0.9s,mb4.5
L18A Fontenelle, Gr 82.67 44 ⇑P **P 05 19 19.6 +0.2**
baz=82,SNR=19
JLU Jordanelle 82.68 46 *eP* **P 05 19 20.1 +0.6**
comp=Z,20nm,1.1s,mb4.8
NLU North Lily Min 82.71 46 *eP* **P 05 19 20.3 +0.7**
comp=Z,26nm,1.0s,mb5.0
MVH1 Achvaich 82.73 340 *eP* **P 05 19 18.5 -0.9**
SCI San Clemente I 82.77 55 ⇓P **P 05 19 19.7 -0.4**
baz=83
K19A Absolon Red Bu 82.77 43 ⇓P **P 05 19 19.0 -0.8**
baz=83,SNR=16
U11A Corn Creek 82.82 51 ⇓P **P 05 19 20.3 0.0**
baz=83
P15A Leamington 82.83 47 ⇓P **P 05 19 20.9 +0.7**
baz=83,SNR=15
N17A Moffit Pass 82.83 45 ⇑P **P 05 19 20.6 +0.4**
baz=83,SNR=14
CONA Conrad Observa 82.85 324 ⇓*iP* **P 05 19 20.9 +0.7**
comp=Z,16nm,1.1s,mb4.8
MOX Moxa 82.86 328 *eP* **P 05 19 19.3 -0.8**
MOX Moxa 82.86 328 *eP* **P 05 19 19.8 -0.3**
comp=Z,13nm,0.8s,mb4.8
O16A Springville 82.90 46 ⇓P **P 05 19 21.1 +0.6**
baz=83
SHPR Sheep Range 82.91 51 *eP* **P 05 19 21.1 +0.4**
DAU Daniels Canyon 82.91 46 *eP* **P 05 19 21.5 +0.9**
DAU *e*PP* pP 05 20 39.1 -1.8
MPU Maple Canyon 82.94 46 *eP* **P 05 19 21.3 +0.5**
comp=Z,36nm,0.9s,mb5.2
MPU *epP* pP 05 20 41.5 +0.5
L19A Farson 82.94 43 ⇑P **P 05 19 20.8 +0.1**
baz=83,SNR=52
M18A Lyman 82.97 44 ⇓P **P 05 19 21.1 +0.2**
baz=83,SNR=8.2
TUQ Turquoise Moun 83.06 52 ⇑P **P 05 19 21.6 +0.1**
baz=83
KHC Kasperske Hory 83.07 326 *eP* **P 05 19 21.2 -0.1**
KHC *epP* pP 05 20 41.0 -0.6
S13A Holt Ranch, En 83.08 49 ⇓P **P 05 19 22.0 +0.4**
baz=83,SNR=41
BBRC Big Bear Sol-O 83.10 53 ⇑P **P 05 19 21.5 -0.2**
baz=83,SNR=7.4
Q15A Fillmore 83.12 47 ⇑P **P 05 19 22.1 +0.4**
baz=83,SNR=34
V11A Goodsprings 83.14 51 ⇓P **P 05 19 22.0 +0.1**
baz=83,SNR=16
HEC Hector,Ludlow 83.16 52 ⇑P **P 05 19 21.9 -0.1**
baz=83,SNR=21
K20A Yellowstone Ra 83.16 42 ⇓P **P 05 19 21.7 -0.2**
baz=83,SNR=14
R14A James Farms, M 83.16 48 ⇓P **P 05 19 22.2 +0.3**
baz=83
P16A Fountain Green 83.18 46 ⇓P **P 05 19 22.8 +0.8**
baz=83,SNR=12
MDO Dochfour 83.20 340 *eP* **P 05 19 20.9 -0.8**
GEC2 GERESS Array S 83.22 326 *eP* **P 05 19 21.5 -0.5**
comp=Z,12nm,0.9s,mb4.7
GEC2 *epP* pP 05 20 42.4 0.0
GEC2 GERESS Array S 83.22 326 *eP* **P 05 19 21.5 -0.5**
GEC2 *e*PP* pP 05 20 42.4 0.0
GEC2 *pmax* pmax
comp=Z,12nm,0.9s,mb4.7
GERES GERESS Array B 83.22 326 P **P 05 19 21.5 -0.5**
comp=Z,7.2nm,0.7s,mb4.6,baz=39,slow=5.1,SNR=42
GERES GERESS Array B 83.22 326 P **P 05 19 21.5 -0.5**
GERES *pmax* pmax
comp=Z,7.0nm,0.7s
IBBN Ibbenburen 83.22 331 *eP* **P 05 19 21.4 -0.6**
comp=Z,41nm,0.7s,mb5.4
ROTZ Rotzenmuhle 83.23 328 *eP* **P 05 19 22.2 +0.1**
comp=Z,27nm,1.3s,mb4.9
ROTZ *epP* pP 05 20 43.1 +0.7
WIT Witteveen 83.26 332 *eP* **P 05 19 22.2 0.0**
comp=Z,451nm,0.2s
MURC Murrieta 83.31 54 ⇑P **P 05 19 22.2 -0.6**
baz=83,SNR=9.9
U12A Valley of Fire 83.35 50 ⇑P **P 05 19 23.2 +0.3**
baz=83,SNR=5.2
O17A Robinson Place 83.36 45 ⇑P **P 05 19 23.4 +0.5**
baz=83,SNR=42
WET Wettzell 83.38 327 *eP* **P 05 19 22.7 -0.1**
comp=Z,8.0nm,1.0s,mb4.5
WET *epP* pP 05 20 44.1 +0.9
WET Wettzell 83.38 327 *eP* **P 05 19 22.7 -0.1**
WET *e*PP* pP 05 20 44.1 +0.9
WET *pmax* pmax
comp=Z,8.0nm,1.0s,mb4.5
T13A Saint George 83.39 50 ⇓P **P 05 19 23.7 +0.5**
baz=83,SNR=37
S14A Cedar City 83.40 49 ⇑P **P 05 19 23.5 +0.3**
baz=83,SNR=10.0
KAC Achnashellach 83.41 341 ⇑*eP* **P 05 19 22.6 -0.1**
CCUT Cedar City 83.41 49 *eP* **P 05 19 23.8 +0.6**
comp=Z,19nm,1.1s,mb4.8
M19A Rock Springs 83.44 44 ⇑P **P 05 19 23.4 +0.1**
baz=83,SNR=6.7
N18A Larsen Ranch, 83.48 44 ⇑P **P 05 19 23.4 -0.1**
baz=83,SNR=32
MSU Marysvale 83.55 48 *eP* **P 05 19 24.9 +1.0**
MSU *e*PP* pP 05 20 45.4 +1.1
L20A Wamsutter 83.58 43 ⇑P **P 05 19 24.3 +0.3**
baz=83,SNR=13
V12A Nelson 83.58 51 ⇑P **P 05 19 24.1 0.0**
baz=83,SNR=19
GMRC Granite Mounta 83.63 52 ⇓P **P 05 19 24.4 0.0**
baz=84,SNR=27
TMUT Trail Mountain 83.64 46 *eP* **P 05 19 24.6 +0.3**
comp=Z,26nm,1.3s,mb4.9
KPL Plockton 83.65 341 *eP* **P 05 19 23.9 -0.1**
KPL AMb AMB 05 19 24.1
comp=Z,15nm,1.3s,mb4.7
R15A Junction 83.68 48 ⇓P **P 05 19 25.3 +0.8**
baz=84,SNR=29
GRA1 Grafenberg Arr 83.73 328 *eP* **P 05 19 24.6 +0.1**
comp=Z,32nm,0.8s,mb5.2
GRA1 *epP* pP 05 20 45.5 +0.5
GRF Grafenberg Arr 83.73 328 *eP* **P 05 19 24.6 +0.1**
comp=Z,32nm,0.8s,mb5.2
GRF *epP* pP 05 20 45.5 +0.5
GRF Grafenberg Arr 83.73 328 *eP* **P 05 19 24.6 +0.1**
GRF *e*PP* pP 05 20 45.5 +0.5
GRF *pmax* pmax
comp=Z,32nm,0.8s,mb5.2
GRF Grafenberg Arr 83.73 328 *eP* **P 05 19 24.6 +0.1**
GRF *e*PP* pP 05 20 45.5 +0.5
GRF *pmax* pmax
comp=Z,32nm,0.8s,mb5.2
U13A Pakoon Wash 83.73 50 ⇑P **P 05 19 25.1 +0.3**
baz=84,SNR=28
O18A Roosevelt 83.74 45 ⇓P **P 05 19 25.8 +0.9**
baz=84,SNR=17
109C Camp Elliot, M 83.80 54 ⇓P **P 05 19 24.8 -0.5**
baz=84
PFO Pinyon Flat Ob 83.80 54 ⇑P **P 05 19 24.8 -0.5**
baz=84,SNR=43
PFO Pinyon Flat Ob 83.80 54 *eP* **P 05 19 24.9 -0.4**
PFO *pmax* pmax
comp=Z,87nm,1.0s,mb5.5
PFO Pinyon Flat Ob 83.80 54 *eP* **P 05 19 24.9 -0.4**
comp=Z,87nm,1.0s,mb5.5
LDFC Landfair 83.81 52 *eP* **P 05 19 25.2 0.0**
comp=Z,46nm,1.0s,mb5.3
P17A Butcher Ranch, 83.81 46 ⇑P **P 05 19 25.7 +0.5**
baz=84,SNR=23
N19A John Jarvie Ra 83.82 44 ⇑P **P 05 19 25.3 +0.1**
baz=84,SNR=23
W12A Cal Nev Ari 83.83 51 ⇑P **P 05 19 25.1 -0.2**
baz=84,SNR=5.2
WTSB Winterswijk 83.86 332 *eP* **P 05 19 24.8 -0.4**
comp=Z,14nm,0.9s,mb4.8
BELC Belle Mtn. 83.87 53 ⇑P **P 05 19 25.1 -0.5**
baz=84,SNR=18
T14A Hurricane 83.89 49 ⇓P **P 05 19 26.0 +0.4**
baz=84,SNR=19
Q16A Castle Valley 83.91 47 ⇑P **P 05 19 26.2 +0.5**
baz=84,SNR=26
S15A Panguitch 83.96 48 ⇓P **P 05 19 27.0 +1.0**
baz=84,SNR=12
EBH Black Hill 83.97 339 *eP* **P 05 19 25.1 -0.5**
ESY Stoneypath 83.97 338 *eP* **P 05 19 24.9 -0.8**
M20A Sweetwater, Wa 84.00 43 ⇑P **P 05 19 26.5 +0.4**
baz=84,SNR=19
P18A Preston Nutter 84.01 46 ⇓P **P 05 19 26.7 +0.5**
baz=84,SNR=21
ULM Lac du Bonnet 84.02 31 P **P 05 19 24.6 -1.4**
comp=Z,12nm,0.9s,mb4.7,baz=313,slow=5.7,SNR=17
V13A Grand Canyon W 84.06 50 ⇑P **P 05 19 26.5 0.0**
baz=84,SNR=18
BUG Bochum-Univer 84.08 331 *eP* **P 05 19 25.4 -0.9**
comp=Z,23nm,1.0s,mb5.0
R16A Teasdale 84.12 47 ⇑P **P 05 19 27.8 +1.0**
baz=84,SNR=51
L21A Rawlins 84.16 42 ⇓P **P 05 19 27.0 +0.2**
baz=84,SNR=19
SRU San Rafael 84.17 46 ⇓P **P 05 19 27.2 +0.2**
baz=84,SNR=52
SRU San Rafael 84.17 46 *eP* **P 05 19 27.5 +0.5**
SRU *pmax* pmax
comp=Z,50nm,0.9s,mb5.3
SRU San Rafael 84.17 46 *eP* **P 05 19 27.5 +0.5**
comp=Z,50nm,0.9s,mb5.3
BAR Barrett 84.21 54 *eP* **P 05 19 26.4 -0.9**
comp=Z,25nm,0.9s,mb5.0
U14A Mt Trumbull 84.22 50 ⇓P **P 05 19 27.7 +0.4**
baz=84,SNR=16
O19A Miners Draw (B 84.24 45 ⇑P **P 05 19 27.1 -0.2**
baz=84,SNR=20
MONP Monument Peak 84.26 54 ⇑P **P 05 19 27.2 -0.4**
baz=84,SNR=27
EAB Aberfoyle 84.26 339 *eP* **P 05 19 26.9 -0.2**
EAU Auchinoon 84.29 339 *eP* **P 05 19 27.2 0.0**
IRM Iron Mountain 84.34 52 ⇓P **P 05 19 27.7 -0.2**
baz=84,SNR=17
T15A Red Dirt Ranch 84.35 49 ⇑P **P 05 19 28.3 +0.4**
baz=84,SNR=33
N20A Spence Gulch, 84.39 44 ⇓P **P 05 19 28.7 +0.7**
baz=84,SNR=50
M21A Separation Pea 84.39 43 ⇓P **P 05 19 28.1 +0.1**
baz=84,SNR=19
Q18A Rafter H Ranch 84.41 46 ⇑P **P 05 19 27.9 -0.3**
baz=84,SNR=13
RWWY Rawlins 84.43 43 *eP* **P 05 19 28.4 +0.2**
comp=Z,60nm,1.1s,mb5.3
RJOB Jochberg 84.44 326 *eP* **P 05 19 28.2 +0.1**
comp=Z,9.0nm,1.2s,mb4.5
RJOB *epP* pP 05 20 49.4 +0.7
BC3 Big Chuckw Mtn 84.44 53 ⇑P **P 05 19 28.1 -0.4**
baz=84,SNR=12
R17A Hanksville Air 84.50 47 ⇓P **P 05 19 28.7 0.0**
baz=84,SNR=37
RSSD Black Hills 84.52 39 *eP* **P 05 19 28.4 -0.2**
RSSD *pmax* pmax
comp=Z,31nm,1.6s,mb4.9
RSSD Black Hills 84.52 39 *eP* **P 05 19 28.4 -0.2**
comp=Z,31nm,1.6s,mb4.9
TNS Taunus Mts 84.52 330 *eP* **P 05 19 27.9 -0.6**
comp=Z,20nm,1.3s,mb4.8
TNS Taunus Mts 84.52 330 *eP* **P 05 19 27.9 -0.6**
TNS *pmax* pmax
comp=Z,20nm,1.3s,mb4.8
W13A Hualapai Mount 84.59 51 ⇓P **P 05 19 29.0 -0.1**
baz=84,SNR=27
DVTC Desert V Tower 84.61 54 ⇑P **P 05 19 29.1 -0.3**
baz=84,SNR=14
PGBU Glenifferbraes 84.63 339 *eP* **P 05 19 28.4 -0.6**
PGBU AMb AMB 05 19 29.6
comp=Z,25nm,0.9s,mb5.0
SWSC Sam W. Stewart 84.65 54 ⇓P **P 05 19 29.0 -0.5**
baz=84,SNR=6.1
ESK Eskdalemuir 84.66 338 *eP* **P 05 19 28.6 -0.5**
XAL Allendale 84.74 338 *eP* **P 05 19 28.6 -0.9**
P19A Cripple Cowboy 84.75 45 ⇓P **P 05 19 30.2 +0.3**
baz=85,SNR=56
ECK Cauldkaine Hil 84.75 338 ⇑*eP* **P 05 19 29.4 -0.2**
V14A Boquillas Ranc 84.76 50 ⇓P **P 05 19 30.2 +0.3**
baz=85,SNR=32
U15A North Rim 84.78 49 ⇑P **P 05 19 30.6 +0.5**
baz=85,SNR=23
FUR Furstenfeldbru 84.82 327 *eP* **P 05 19 29.9 -0.1**
comp=Z,27nm,0.5s,mb5.3
FUR Furstenfeldbru 84.82 327 *eP* **P 05 19 29.9 -0.1**
FUR *pmax* pmax
comp=Z,27nm,0.5s,mb5.3
O20A White River Ci 84.86 44 ⇓P **P 05 19 30.4 0.0**
baz=85,SNR=18
N21A Black Mountain 84.86 43 ⇓P **P 05 19 30.7 +0.3**
baz=85,SNR=15
PDMCI Parker Dam,Lak 84.91 52 ⇓P **P 05 19 30.0 -0.8**
baz=85,SNR=5.3
T16A Glen Canyon Da 84.92 48 ⇓P **P 05 19 30.3 -0.5**
baz=85
X13A Yucca 84.94 51 ⇓P **P 05 19 30.5 -0.4**
baz=85,SNR=27
S17A Black Ridge (B 84.94 47 ⇑P **P 05 19 30.6 -0.2**
baz=85,SNR=14
M22A Cedar Creek Ra 84.96 43 ⇓P **P 05 19 31.2 +0.3**
baz=85,SNR=19
Y12C Blythe 85.00 52 ⇑P **P 05 19 31.0 -0.2**
baz=85,SNR=11
R18A Canyonlands Na 85.02 46 ⇓P **P 05 19 30.8 -0.3**
baz=85,SNR=26
Q19A Hogan Spring (85.03 46 ⇑P **P 05 19 31.0 -0.2**
baz=85
W14A Seligman 85.03 51 ⇓P **P 05 19 31.7 +0.4**
baz=85,SNR=24
HGN Heimansgroeve 85.14 331 *eP* **P 05 19 31.0 -0.5**
comp=Z,18nm,0.9s,mb4.9
P20A De Beque 85.19 45 ⇑P **P 05 19 32.2 +0.2**
baz=85,SNR=12
GLA Glamis 85.22 53 ⇓P **P 05 19 32.0 -0.4**
baz=85,SNR=19
GLA Glamis 85.22 53 *eP* **P 05 19 32.8 +0.5**
GLA *pmax* pmax
comp=Z,28nm,0.7s,mb5.2
GLA Glamis 85.22 53 *eP* **P 05 19 32.8 +0.4**
comp=Z,28nm,0.7s,mb5.2
MEM Membach 85.23 331 P **P 05 19 31.9 -0.1**
comp=Z,7.4nm,1.1s,mb4.4
V15A Kaibab Nationa 85.24 50 ⇑P **P 05 19 32.8 +0.5**
baz=85,SNR=25
O21A Pagoda 85.25 44 ⇓P **P 05 19 32.2 -0.1**
baz=85
T17A Navajo Res., N 85.35 48 ⇓P **P 05 19 32.6 -0.2**
baz=85,SNR=7.7
S18A Hurst Farm, Bl 85.40 47 ⇓P **P 05 19 32.9 -0.2**
baz=85,SNR=19
Y13A Salome 85.42 52 ⇓P **P 05 19 33.0 -0.3**
baz=85,SNR=9.0
N22A Wattenberg Ran 85.44 43 ⇑P **P 05 19 33.9 +0.7**
baz=85,SNR=20
R19A Curley Farm, L 85.46 46 ⇑P **P 05 19 33.8 +0.4**
baz=85,SNR=27
AGMN Agassiz Refuge 85.48 32 *eP* **P 05 19 31.9 -1.4**
comp=Z,1.8nm,0.6s,mb4.1
GAL1 Galloway 85.50 339 *eP* **P 05 19 33.0 -0.3**
GAL1 AMb AMB 05 19 33.9
comp=Z,18nm,0.9s,mb4.9
W15A Williams 85.58 50 ⇑P **P 05 19 34.5 +0.5**
baz=85,SNR=6.2
Q20A Ridgley Place, 85.60 45 ⇓P **P 05 19 34.3 +0.3**
baz=85,SNR=26
X14A Yava 85.62 51 ⇑P **P 05 19 34.5 +0.2**
baz=86,SNR=14
BCLA Clavier 85.66 331 P **P 05 19 33.8 -0.3**
comp=Z,5.9nm,1.1s,mb4.3
PHWY Pilot Hill 85.67 42 *eP* **P 05 19 34.8 +0.5**
comp=Z,19nm,0.9s,mb4.9
U16A Tuba City 85.69 49 ⇑P **P 05 19 34.8 +0.3**
baz=86,SNR=22
U17A Shonto 85.69 48 ⇑P **P 05 19 35.2 +0.6**
baz=86,SNR=20
112A Yuma 85.70 53 ⇓P **P 05 19 34.4 -0.3**
baz=86
P21A Newcastle 85.72 44 ⇓P **P 05 19 35.0 +0.4**
baz=86
LHO Holmfirth 85.73 337 ⇑*eP* **P 05 19 34.0 -0.3**
T18A Mexican Hat 85.83 47 ⇑P **P 05 19 34.9 -0.4**
baz=86,SNR=19
Y14A Wickenburg 85.88 52 ⇓P **P 05 19 35.1 -0.4**
baz=86,SNR=16
S19A Harvey Farm, M 85.88 47 ⇑P **P 05 19 35.1 -0.4**
baz=86,SNR=14
WLF Walferdange 85.91 330 *eP* **P 05 19 35.4 +0.1**
comp=Z,8.0nm,0.8s,mb4.6
Z13A Yuma Proving G 85.91 52 ⇑P **P 05 19 35.4 -0.3**
baz=86,SNR=21
WUAZ Wupatki 85.93 49 ⇓P **P 05 19 35.7 0.0**
baz=86,SNR=12
WUAZ Wupatki 85.93 49 *eP* **P 05 19 36.3 +0.5**
comp=Z,27nm,1.2s,mb5.0
SNF Seneffe 85.99 332 P **P 05 19 35.8 +0.1**
comp=Z,9.0nm,1.3s,mb4.4
BFO Black Forest 86.01 328 *eP* **P 05 19 34.8 -1.1**
comp=Z,6.0nm,0.7s,mb4.5
BFO Black Forest 86.01 328 *eP* **P 05 19 34.8 -1.1**
BFO *pmax* pmax
comp=Z,6.0nm,0.7s,mb4.5
X15A Humboldt 86.03 51 ⇑P **P 05 19 36.6 +0.4**
baz=86,SNR=27
R20A Redvale 86.05 46 ⇓P **P 05 19 36.6 +0.4**
baz=86,SNR=38
W16A Flagstaff 86.10 50 ⇑P **P 05 19 36.9 +0.4**
baz=86
113A Mohawk Valley, 86.10 53 ⇑P **P 05 19 36.0 -0.6**
baz=86,SNR=11
Q21A Lamborn Mesa, 86.10 45 ⇑P **P 05 19 37.0 +0.5**
baz=86,SNR=18
CWF Charnwood Fore 86.22 336 *eP* **P 05 19 36.1 -0.7**
CWF AMb AMB 05 19 36.3
comp=Z,18nm,1.3s,mb4.7
SMCO Snowmass 86.22 44 *eP* **P 05 19 37.9 +0.8**
comp=Z,59nm,1.2s,mb5.3
SMCO *epP* pP 05 20 59.4 +1.4
V17A Tonalea, Kykot 86.23 49 ⇓P **P 05 19 37.6 +0.4**
baz=86,SNR=29
Z14A Wintersburg 86.27 52 ⇑P **P 05 19 37.4 0.0**
baz=86
U18A Rough Rock, Ch 86.29 48 ⇓P **P 05 19 38.0 +0.5**
baz=86,SNR=26
Y15A Casa Rosa Ranc 86.30 51 ⇓P **P 05 19 37.8 +0.2**
baz=86,SNR=15
CDF Champ du Feu 86.40 329 *eP* **P 05 19 37.2 -0.5**
R21A Cimarron 86.42 45 ⇑P **P 05 19 38.7 +0.6**
baz=86,SNR=19
Q22A Crested Butte, 86.47 45 ⇓P **P 05 19 38.9 +0.6**
baz=86,SNR=63
T19A Beclabito 86.55 47 ⇑P **P 05 19 38.6 -0.1**
baz=86,SNR=22
X16A Lo Mia Camp, P 86.58 50 ⇓P **P 05 19 39.1 +0.2**
baz=86,SNR=17
ISCO Idaho Springs 86.59 43 *eP* **P 05 19 39.6 +0.8**
ISCO *pmax* pmax
comp=Z,12nm,0.8s,mb4.8
ISCO Idaho Springs 86.59 43 *eP* **P 05 19 39.6 +0.7**
comp=Z,12nm,0.8s,mb4.8
MVCO Mesa Verde 86.62 47 P **P 05 19 39.4 +0.4**
baz=86
MVCO Mesa Verde 86.62 47 *eP* **P 05 19 39.7 +0.7**
comp=Z,22nm,1.3s,mb4.8
W17A Winslow 86.63 49 ⇓P **P 05 19 39.3 +0.2**
baz=86
114A Black Gap (USA 86.69 52 ⇓P **P 05 19 39.3 -0.1**
baz=87,SNR=7.9
V18A Ganado 86.71 49 ⇓P **P 05 19 40.0 +0.5**
baz=87,SNR=7.4
S21A Coal Bank Pass 86.75 46 ⇓P **P 05 19 40.6 +1.0**
baz=87,SNR=13
U19A Dine' College, 86.78 48 ⇓P **P 05 19 40.2 +0.4**
baz=87,SNR=14
Y16A Circle Bar Ran 86.90 51 ⇑P **P 05 19 40.5 +0.1**
baz=87,SNR=7.2
R22A Saguache, Gunn 86.98 45 ⇑P **P 05 19 41.8 +1.1**
baz=87,SNR=33
HINF Hinteralfeld 87.04 329 *eP* **P 05 19 39.9 -0.9**
comp=Z,4.6nm,0.6s,mb4.2
HINF Hinteralfeld 87.04 329 *eP* **P 05 19 39.9 -0.9**
HINF *pmax* pmax
comp=Z,2.0nm,0.6s,mb4.1
HINF Hinteralfeld 87.04 329 *eP* **P 05 19 39.9 -0.9**
comp=Z,2.3nm,0.6s,mb4.2
HAU Haudompre 87.11 329 *eP* **P 05 19 40.3 -0.8**
U20A Newcomb 87.15 47 ⇓P **P 05 19 41.5 0.0**
baz=87,SNR=20
115A Sonoran Desert 87.16 52 ⇑P **P 05 19 41.6 0.0**
baz=87
W18A Petrified Fore 87.22 49 ⇓P **P 05 19 42.0 +0.1**
baz=87
214A Organ Pipe Nat 87.24 53 ⇓P **P 05 19 42.2 +0.1**
baz=87
V19A Window Rock 87.26 48 ⇓P **P 05 19 42.7 +0.6**
baz=87
Z16A Peralta Trail, 87.27 51 ⇑P **P 05 19 42.3 +0.1**
baz=87
Y17A Roosevelt 87.42 51 ⇑P **P 05 19 42.9 0.0**
baz=87,SNR=10
HTR Trewern Hill 87.43 337 *eP* **P 05 19 41.4 -1.2**
W19A Sanders 87.44 49 ⇓P **P 05 19 43.3 +0.4**
baz=87,SNR=7.2
X18A Snowflake 87.46 49 ⇑P **P 05 19 43.3 +0.2**
baz=87
V20A Brimhall 87.56 48 ⇑P **P 05 19 43.7 +0.2**
baz=87
116A Eloy 87.59 52 ⇓P **P 05 19 43.9 +0.2**
baz=87
EYMN Ely 87.63 30 *eP* **P 05 19 42.8 -0.8**
comp=Z,19nm,1.2s,mb4.8
T22A Edith 87.70 46 ⇑P **P 05 19 45.0 +0.9**
baz=88,SNR=25
OGNE Ogallala 87.79 40 *eP* **P 05 19 44.1 -0.3**
comp=Z,33nm,0.9s,mb5.2
Y18A Canyon Day Jun 87.89 50 ⇑P **P 05 19 45.2 +0.1**
baz=88,SNR=8.4
Z17A San Carlos Hig 87.92 51 ⇑P **P 05 19 45.6 +0.3**
baz=88
X19A St. Johns 87.94 49 ⇑P **P 05 19 45.9 +0.6**
baz=88

W20A	Ramah	87.98	48	⇑P		P	05 19 45.5	0.0
	baz=88,SNR=6.7							
SDCO	Great Sand Dun	88.04	45	eP		P	05 19 46.4	+0.7
	comp=Z,15nm,1.1s,mb4.7							
V21A	Milan	88.06	47	⇓P		P	05 19 46.2	+0.3
	baz=88							
216A	Three Points,	88.10	52	⇑P		P	05 19 46.3	+0.2
	baz=88							
Y19A	Nutrioso	88.27	49	⇓P		P	05 19 47.7	+0.8
	baz=88							
CABF	La Chapelle	88.31	329	eP		P	05 19 46.1	-0.7
	comp=Z,8.3nm,0.7s,mb4.4							
CABF	La Chapelle	88.31	329	eP		P	05 19 46.1	-0.7
CABF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4							
CABF	La Chapelle	88.31	329	eP		P	05 19 46.1	-0.7
	comp=Z,4.2nm,0.7s,mb4.4							
Z18A	Geronimo	88.33	51	⇓P		P	05 19 47.8	+0.6
	baz=88							
TUC	Tucson	88.35	52	eP		P	05 19 46.9	-0.4
TUC				pmax	pmax			
	comp=Z,7.0nm,1.3s,mb4.3							
TUC	Tucson	88.35	52	eP		P	05 19 46.9	-0.3
	comp=Z,7.4nm,1.3s,mb4.4							
X20A	Quemado	88.36	49	⇑P		P	05 19 48.0	+0.7
	baz=88,SNR=8.1							
V22A	San Miguel Ran	88.43	47	⇓P		P	05 19 48.1	+0.5
	baz=88,SNR=7.2							
W21A	San Fidel	88.51	48	⇓P		P	05 19 48.4	+0.5
	baz=88							
ECSD	EROS Data Cent	88.54	36	eP		P	05 19 47.2	-0.7
	comp=Z,14nm,0.9s,mb4.8							
118A	Homack Ranch,	88.66	51	⇑P		P	05 19 48.7	0.0
	baz=88,SNR=6.6							
LOR	Lormes	88.73	330	eP		P	05 19 48.1	-0.7
	comp=Z,9.9nm,0.9s,mb4.3							
LOR	Lormes	88.73	330	eP		P	05 19 48.1	-0.7
LOR				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.3							
LOR	Lormes	88.73	330	eP		P	05 19 48.1	-0.7
	comp=Z,4.9nm,0.9s,mb4.3							
Y20A	Horse Springs,	88.85	49	⇓P		P	05 19 50.1	+0.5
	baz=89,SNR=9.1							
X21A	Alamocita Cree	88.87	48	⇓P		P	05 19 50.2	+0.6
	baz=89,SNR=12							
LPL	La Plagne	88.87	327	eP		P	05 19 49.1	-0.3
	comp=Z,12nm,0.6s,mb4.6							
LPL	La Plagne	88.87	327	eP		P	05 19 49.1	-0.3
LPL				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.6							
LPL	La Plagne	88.87	327	eP		P	05 19 49.1	-0.3
	comp=Z,6.0nm,0.6s,mb4.6							
LPG	La Plagne	88.88	327	eP		P	05 19 49.3	-0.2
	comp=Z,16nm,0.7s,mb4.7							
LPG	La Plagne	88.88	327	eP		P	05 19 49.3	-0.2
LPG				pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.7							
LPG	La Plagne	88.88	327	eP		P	05 19 49.3	-0.2
	comp=Z,8.3nm,0.7s,mb4.7							
V23A	Ortiz Mt. (NFS	88.98	46	⇓P		P	05 19 51.4	+1.2
	baz=89,SNR=5.8							
119A	Ashpeak Ranch,	89.01	50	⇓P		P	05 19 50.4	+0.1
	baz=89							
W22A	Albuquerque	89.02	47	⇓P		P	05 19 51.1	+0.7
	baz=89							
218A	Dragoon	89.04	51	⇑P		P	05 19 51.0	+0.4
	baz=89							
SSF	Saint Saulge	89.04	330	eP		P	05 19 49.7	-0.5
	comp=Z,12nm,1.1s,mb4.3							
SSF	Saint Saulge	89.04	330	eP		P	05 19 49.7	-0.5
SSF				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.3							
SSF	Saint Saulge	89.04	330	eP		P	05 19 49.7	-0.5
	comp=Z,6.2nm,1.1s,mb4.3							
DYA	Yadsworthy	89.04	336	eP		P	05 19 49.5	-0.7
DYA				AMb	AMB		05 19 54.5	
	comp=Z,19nm,2.1s,mb4.6							
SCHQ	Schefferville	89.18	13	P		P	05 19 50.3	-0.4
	comp=Z,3.8nm,1.0s,mb4.2,baz=296,slow=8.2,SNR=6.3							
SCHQ	Schefferville	89.18	13	eP		P	05 19 50.7	0.0
	comp=Z,5.3nm,1.1s,mb4.3							
Y21A	Point of Rocks	89.23	49	⇑P		P	05 19 52.0	+0.7
	baz=89,SNR=7.0							
FLN	La Foliniere	89.23	333	eP		P	05 19 50.4	-0.6
	comp=Z,5.1nm,0.6s,mb4.3							
FLN	La Foliniere	89.23	333	eP		P	05 19 50.4	-0.6
FLN				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.3							
FLN	La Foliniere	89.23	333	eP		P	05 19 50.4	-0.6
	comp=Z,2.5nm,0.6s,mb4.2							
LDF	La Druitiere	89.23	333	eP		P	05 19 50.4	-0.7
SMF	Signal de Mont	89.23	330	eP		P	05 19 50.4	-0.7
	comp=Z,11nm,0.9s,mb4.4							
SMF	Signal de Mont	89.23	330	eP		P	05 19 50.4	-0.7
SMF				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.4							
SMF	Signal de Mont	89.23	330	eP		P	05 19 50.4	-0.7
	comp=Z,5.7nm,0.9s,mb4.4							
Z20A	Nine Sixteen R	89.24	50	⇑P		P	05 19 52.1	+0.7
	baz=89,SNR=15							
BNI	Bardonecchia	89.25	327	eP		P	05 19 50.1	-1.1
BNI				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
BNI	Bardonecchia	89.25	327	eP		P	05 19 50.1	-1.1
	comp=Z,7.2nm,1.0s,mb4.5							
X22A	Bernardo	89.31	48	⇑P		P	05 19 52.5	+0.8
	baz=89							
AVF	Avril sur Loir	89.32	330	eP		P	05 19 50.9	-0.6
	comp=Z,15nm,0.9s,mb4.5							
AVF	Avril sur Loir	89.32	330	eP		P	05 19 50.9	-0.6
AVF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.5							
AVF	Avril sur Loir	89.32	330	eP		P	05 19 50.9	-0.6
	comp=Z,7.4nm,0.9s,mb4.5							
ANMO	Albuquerque	89.35	47	eP		P	05 19 52.5	+0.6
ANMO				pmax	pmax			
	comp=Z,17nm,1.2s							
ANMO	Albuquerque	89.35	47	eP		P	05 19 52.5	+0.6
	comp=Z,17nm,1.2s,mb4.7							
W23A	Werner Place,	89.40	47	⇑P		P	05 19 52.7	+0.6
	baz=89,SNR=7.0							
318A	Bisbee	89.42	52	⇓P		P	05 19 52.5	+0.2
	baz=89,SNR=9.5							
MBDF	Montbardon	89.46	327	eP		P	05 19 51.0	-1.2
	comp=Z,7.1nm,0.7s,mb4.3							
MBDF	Montbardon	89.46	327	eP		P	05 19 51.0	-1.2
MBDF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4							
MBDF	Montbardon	89.46	327	eP		P	05 19 51.0	-1.2
	comp=Z,3.5nm,0.7s,mb4.3							
219A	White Tail Can	89.53	51	⇑P		P	05 19 52.9	+0.1
	baz=89,SNR=8.2							
120A	U Bar Ranch, L	89.58	50	⇓P		P	05 19 53.2	+0.2
	baz=89							
GRR	Gorron	89.68	333	eP		P	05 19 52.7	-0.4
	comp=Z,22nm,1.0s,mb4.8							
GRR	Gorron	89.68	333	eP		P	05 19 52.7	-0.4
GRR				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
GRR	Gorron	89.68	333	eP		P	05 19 52.7	-0.4
	comp=Z,11nm,1.0s,mb4.8							
Z21A	St. Cloud Mine	89.69	49	⇑P		P	05 19 54.0	+0.4
	baz=90,SNR=9.5							
Y22A	Socorro	89.71	48	⇑P		P	05 19 53.9	+0.3
	baz=90,SNR=6.6							
W24A	Lazy 6 Ranch,	89.81	46	⇑P		P	05 19 54.6	+0.6
	baz=90,SNR=23							
SBF	Sospel	89.82	326	eP		P	05 19 53.4	-0.5
319A	Douglas	89.92	51	⇑P		P	05 19 54.8	+0.2
	baz=90							
U26A	Atchley Ranch,	89.99	45	⇑P		P	05 19 54.9	+0.1
	baz=90							
220A	Playas Peak, P	90.07	51	⇓P		P	05 19 55.5	+0.2
	baz=90,SNR=8.4							
COWI	Conover	90.08	30	eP		P	05 19 54.6	-0.4
	comp=Z,29nm,1.4s,mb5.0							
121A	Cookes Peak, D	90.13	50	⇑P		P	05 19 55.8	+0.2
	baz=90,SNR=5.9							
Z22A	Elephant Butte	90.17	49	⇑P		P	05 19 56.2	+0.4
	baz=90,SNR=5.3							
TCF	Toulx Ste Croi	90.20	330	eP		P	05 19 55.3	-0.3
	comp=Z,12nm,0.9s,mb4.5							
TCF	Toulx Ste Croi	90.20	330	eP		P	05 19 55.3	-0.3
TCF				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5							
TCF	Toulx Ste Croi	90.20	330	eP		P	05 19 55.3	-0.3
	comp=Z,5.8nm,0.9s,mb4.5							
X24A	Lazy VL Ranch,	90.23	47	⇑P		P	05 19 56.4	+0.4
	baz=90							
Y23A	Lovelace Mesa,	90.28	48	⇓P		P	05 19 56.5	+0.3
	baz=90,SNR=15							
VIVF	Saint-Julien-l	90.30	328	eP		P	05 19 55.4	-0.7
	comp=Z,11nm,0.7s,mb4.6							
VIVF	Saint-Julien-l	90.30	328	eP		P	05 19 55.4	-0.7
VIVF				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
VIVF	Saint-Julien-l	90.30	328	eP		P	05 19 55.4	-0.7
	comp=Z,5.4nm,0.7s,mb4.6							
W25A	X Bar L Ranch,	90.37	46	⇓P		P	05 19 57.1	+0.4
	baz=90,SNR=35							
V26A	Tequesquite Ra	90.38	45	⇓P		P	05 19 56.7	+0.1
	baz=90							
SGMF	Saint Gilles	90.41	334	eP		P	05 19 56.3	-0.2
	comp=Z,28nm,1.0s,mb4.8							
SGMF	Saint Gilles	90.41	334	eP		P	05 19 56.3	-0.2
SGMF				pmax	pmax			
	comp=Z,14nm,1.0s,mb4.8							
SGMF	Saint Gilles	90.41	334	eP		P	05 19 56.3	-0.2
	comp=Z,14nm,1.0s,mb4.9							
320A	Kipp Ranch, An	90.44	51	⇑P		P	05 19 57.1	0.0
	baz=90							
221A	Mesquite Ranch	90.48	50	⇓P		P	05 19 57.4	+0.2
	baz=90							
122A	Conniff Cattle	90.51	49	⇓P		P	05 19 57.9	+0.5
	baz=90,SNR=5.8							
CBKS	Cedar Bluff	90.54	41	eP		P	05 19 55.9	-1.5
CBKS				pmax	pmax			
	comp=Z,25nm,1.3s,mb5.0							
CBKS	Cedar Bluff	90.54	41	eP		P	05 19 55.9	-1.4
	comp=Z,25nm,1.3s,mb5.0							
SMRF	Simiane la Rot	90.59	327	eP		P	05 19 57.9	+0.5
	comp=Z,35nm,1.3s,mb4.8							
SMRF	Simiane la Rot	90.59	327	eP		P	05 19 57.9	+0.5
	comp=Z,35nm,1.3s,mb5.1							
ROSF	Rostrenen	90.60	335	eP		P	05 19 57.3	-0.1
	comp=Z,37nm,1.0s,mb5.0							
ROSF	Rostrenen	90.60	335	eP		P	05 19 57.3	-0.1
ROSF				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
ROSF	Rostrenen	90.60	335	eP		P	05 19 57.3	-0.1
	comp=Z,19nm,1.0s,mb5.0							
Y24A	Capitan	90.66	47	⇑P		P	05 19 57.8	-0.2
	baz=90,SNR=5.4							
X25A	Clemmons Ranch	90.72	47	⇓P		P	05 19 58.6	+0.3
	baz=91							
222A	Williams Famil	90.85	50	⇓P		P	05 19 58.8	-0.1
	baz=91							
W26A	Owens Ranch, T	90.88	46	⇑P		P	05 19 59.6	+0.7
	baz=91							
MFF	Saint Martin d	90.88	332	eP		P	05 19 58.6	-0.2
	comp=Z,32nm,1.0s,mb4.9							
MFF	Saint Martin d	90.88	332	eP		P	05 19 58.6	-0.2
MFF				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9							
MFF	Saint Martin d	90.88	332	eP		P	05 19 58.6	-0.2
	comp=Z,16nm,1.0s,mb4.9							
Y25A	Mesa, Roswell	91.12	47	⇑P		P	05 19 59.7	-0.5
	baz=91,SNR=12							
X26A	CR and CF Fran	91.22	46	⇑P		P	05 20 00.6	0.0
	baz=91,SNR=25							
LASF	Ste Croix	91.27	328	eP		P	05 20 00.0	-0.6
	comp=Z,18nm,0.9s,mb4.7							
RJF	Les Rejaudoux	91.28	330	eP		P	05 20 00.5	-0.1
	comp=Z,15nm,0.9s,mb4.7							
RJF	Les Rejaudoux	91.28	330	eP		P	05 20 00.5	-0.1
RJF				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
RJF	Les Rejaudoux	91.28	330	eP		P	05 20 00.5	-0.1
	comp=Z,7.7nm,0.9s,mb4.6							
W27A	Bowe Ranch, En	91.31	45	⇓P		P	05 20 01.5	+0.5
	baz=91							
223A	Chaparral, Ant	91.34	49	⇑P		P	05 20 01.1	-0.1
	baz=91							
CAF	Calviac	91.36	330	eP		P	05 20 01.0	0.0
	comp=Z,24nm,1.1s,mb4.7							
CAF	Calviac	91.36	330	eP		P	05 20 01.0	0.0
CAF				pmax	pmax			
	comp=Z,12nm,1.1s,mb4.7							
CAF	Calviac	91.36	330	eP		P	05 20 01.0	0.0
	comp=Z,12nm,1.1s,mb4.7							
124A	Stringfield Ra	91.48	48	⇓P		P	05 20 02.1	+0.3
	baz=91,SNR=21							
Z25A	Roswell	91.54	47	⇓P		P	05 20 02.4	+0.3
	baz=91,SNR=25							
X27A	F and S Farms,	91.58	46	⇓P		P	05 20 02.6	+0.4
	baz=91							
224A	Corundas Mount	91.86	49	⇓P		P	05 20 03.6	0.0
	baz=92,SNR=21							
LFF	La Frestale	91.89	330	eP		P	05 20 03.5	0.0
	comp=Z,24nm,0.7s,mb4.9							
LFF	La Frestale	91.89	330	eP		P	05 20 03.5	0.0
LFF				pmax	pmax			
	comp=Z,12nm,0.7s,mb4.9							
LFF	La Frestale	91.89	330	eP		P	05 20 03.5	0.0
	comp=Z,12nm,0.7s,mb4.9							
KSU1	Kansas State U	91.99	39	eP		P	05 20 03.9	-0.1
	comp=Z,9.6nm,0.5s,mb5.0							
Z26A	Caprock	92.00	47	⇑P		P	05 20 04.2	0.0
	baz=92							
125A	Gardner Draw,	92.00	48	⇓P		P	05 20 04.1	-0.1
	baz=92,SNR=22							
Y27A	Causey	92.07	46	⇓P		P	05 20 04.4	-0.1
	baz=92							
MNTX	Cornudas Mount	92.20	49	eP		P	05 20 04.9	-0.3
	comp=Z,17nm,1.5s,mb4.8							
CPRX	Cap Rock	92.23	47	eP		P	05 20 05.1	-0.1
	comp=Z,7.1nm,0.9s,mb4.6							
MSTX	Muleshoe	92.24	46	⇑P		P	05 20 04.7	-0.6
	baz=92							
AMTX	Amarillo	92.25	45	eP		P	05 20 05.7	+0.4
	comp=Z,46nm,1.0s,mb5.4							
324A	Moseley Ranch,	92.31	49	⇑P		P	05 20 05.3	-0.4
	baz=92,SNR=8.0							
126A	Clayton Basin,	92.40	48	⇓P		P	05 20 05.6	-0.5
	baz=92							
Z27A	Tatum	92.43	47	⇑P		P	05 20 05.8	-0.4
	baz=92							
GDL2	Guadalupe Moun	92.49	48	eP		P	05 20 06.8	+0.3
MTLF	Montolieu	92.57	329	eP		P	05 20 06.0	-0.6
325A	Bean Ranch, Si	92.68	49	⇓P		P	05 20 07.5	+0.1
	baz=92							
CLNB	Carlsbad	92.75	48	eP		P	05 20 07.5	-0.2
	comp=Z,3.7nm,0.9s,mb4.4							
226A	Malaga, Loving	92.75	48	⇑P		P	05 20 07.6	-0.1
	baz=93							
127A	Arkansas Junct	92.78	47	⇓P		P	05 20 07.5	-0.4
	baz=93							
425A	Indio Mountain	93.07	49	⇓P		P	05 20 09.0	-0.1
	baz=93,SNR=16							
326A	Caldwell Ranch	93.34	48	⇓P		P	05 20 10.0	-0.4
	baz=93							
327A	Balmorhea Ranc	93.60	48	⇑P		P	05 20 11.7	+0.1
	baz=93							
426A	McDonald Obser	93.75	49	⇑P		P	05 20 12.0	-0.3
	baz=94							
328A	Wristen Ranch,	94.02	48	⇑P		P	05 20 13.2	-0.3
	baz=94							
WMOK	Wichita Mounta	94.02	43	eP		P	05 20 12.7	-0.7
WMOK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.8							
WMOK	Wichita Mounta	94.02	43	eP		P	05 20 12.7	-0.7
	comp=Z,10nm,1.0s,mb4.8							
427A	Hayter Ranch,	94.02	48	⇓P		P	05 20 13.3	-0.2
	baz=94							
526A	Mary Lane Ranc	94.13	49	⇑P		P	05 20 14.1	+0.1
	baz=94							
527A	Woodward Ranch	94.37	49	⇓P		P	05 20 15.0	-0.2
	baz=94							
626A	Big Bend Ranch	94.44	50	⇑P		P	05 20 15.1	-0.4
	baz=94							
428A	Kincaid Ranch,	94.55	48	⇑P		P	05 20 16.1	+0.2
	baz=94							
528A	Cox Ranch, San	94.87	49	⇑P		P	05 20 17.2	-0.2
	baz=95							
627A	Terlingua Ranc	94.99	49	⇓P		P	05 20 17.9	-0.1
	baz=95							
628A	Black Gap, Mar	95.28	49	⇓P		P	05 20 19.0	-0.3
	baz=95							
CCM	Cathedral Cave	95.50	36	eP		P	05 20 19.1	-1.0
CCM				pmax	pmax			
	comp=Z,13nm,1.2s,mb4.8							
CCM	Cathedral Cave	95.50	36	eP		P	05 20 19.1	-1.1
	comp=Z,13nm,1.2s,mb4.8							
JCT	Junction City	96.48	47	eP		P	05 20 23.3	-1.4
JCT				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7							
JCT	Junction City	96.48	47	eP		P	05 20 23.2	-1.4
	comp=Z,3.6nm,0.7s,mb4.6							
EVO	Evora	100.79	333	eP		Pdif	05 20 44.2	+0.5
	comp=Z,4.0nm,0.7s							
TORD	Torodi Ar. Bea	116.61	310	PKP		PKPdf	05 25 36.1	-1.6
	comp=Z,0.9nm,0.6s,baz=28,slow=1.5,SNR=13							
TORD				PP	PP		05 26 44.2	-5.8
	comp=Z,0.8nm,0.8s,baz=30,slow=6.8,SNR=3.5							
TORD				PKKPbc	PKKPbc		05 36 04.8	-0.2
	comp=Z,0.8nm,0.8s,baz=219,slow=2.7,SNR=5.2							
TORD	Torodi Ar. Bea	116.61	310	PKP		PKPdf	05 25 36.1	-1.6
TORD				PP	PP		05 26 44.2	-5.8
TORD				PKKPbc	PKKPbc		05 36 04.8	-0.2
BOSA	Boshof	122.29	255	PKP		PKPdf	05 25 47.5	-0.7
	comp=Z,1.2nm,0.6s,baz=84,slow=17,SNR=3.6							
BOSA	Boshof	122.29	255	PKIKP		PKPdf	05 25 47.5	-0.7
BOSA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
QSPA	South Pole Qui	123.78	180	ePKPdf		PKPdf	05 25 48.4	-1.2
DBIC	Dimbokro	125.68	311	PKP		PKPdf	05 25 54.3	-0.9
	comp=Z,2.9nm,0.7s,baz=310,slow=3.6,SNR=4.3							
DBIC	Dimbokro	125.68	311	PKIKP		PKPdf	05 25 54.3	-0.9
DBIC				pmax	pmax			
	comp=Z,3.0nm,0.7s							
SDV	Santo Domingo	129.98	37	ePKPdf		PKPdf	05 26 02.6	-0.8
SDV				eSKPbc	SKPbc		05 28 50.9	-1.8
LPAZ	La Paz	151.42	58	PKP		PKPdf	05 26 41.6	+0.4
	comp=Z,2.1nm,0.9s,baz=25,slow=2.5,SNR=6.7							
LPAZ				PKPbc	PKPbc		05 26 47.5	0.0
	comp=Z,11nm,0.8s,baz=345,slow=3.1,SNR=34							
LPAZ	La Paz	151.42	58	ePKPdf		PKPdf	05 26 41.4	+0.3
LPAZ				ePKPbc	PKPbc		05 26 47.4	-0.2
LPAZ				ePKPab	PKPab		05 26 56.7	-0.6
PLCA	Paso Flores	157.27	115	PKPab	PKPab		05 27 20.7	-1.0
	comp=Z,8.1nm,1.1s,baz=230,slow=6.8,SNR=6.1							
PLCA	Paso Flores	157.27	115	PKP2		PKPab	05 27 20.7	-1.1
PLCA				pmax	pmax			
	comp=Z,8.0nm,1.1s							
CPUP	Villa Florida	165.53	62	PKPab		PKPab	05 27 56.8	-1.5
	comp=Z,1.6nm,0.8s,baz=306,slow=7.1,SNR=4.8							
CPUP	Villa Florida	165.53	62	PKP2		PKPab	05 27 56.8	-1.5
CPUP				pmax	pmax			
	comp=Z,2.0nm,0.8s							

SZGRF ***16*** *05:25:42.8, 31°.27N×105°.23E, h33km, mb5.6, MS5.8, Sichuan, China*

IDC ***16*** *05:25:46.3±0.4, 31°.36N×103°.38E, h0km, mb4.9/29, mb1 4.9/30, mb1mx4.9/31, mbtmp4.9/30, ML4.1/1, MS5.1/26, Ms1 5.1/26, ms1mx5.1/32, Error ellipse: s-maj=11.6km s-min=8.8km az=44.0*

BJI ***16*** *05:25:47.0, 31°.31N×103°.45E, h14km, mB5.7/28, mb5.3/34, ML5.7/19, Ms5.9/66, Ms7 5.6/49*

GCMT ***16*** *05:25:47.3±0.1, 31°.25N×103°.33E, h24km, MW5.6/109, Moment Tensor Solution. s84, c125; s109, c265; Duration: 1s6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.61±.04; $M_{\theta\theta}$3.34±.04; $M_{\phi\phi}$-2.73±.04; $M_{r\theta}$-0.34±.06; $M_{\theta\phi}$-0.94±.03; $M_{\phi r}$1.00±.07; Best double couple: $M_0$3.37700×10^{17} NP1:ϕ_s235.00000°, δ71.00000°, λ-170.00000°. NP2:ϕ_s142.00000°, δ81.00000°, λ-19.00000°. Principal axes: T 3.5390, Plg7.0000°, Azm190.0000°; N -0.3250, Plg69.0000°, Azm297.0000°; P -3.2140, Plg20.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***16*** *05:25:47.3±0.1, 31°.36N×103°.35E, h3km, mb5.5/202, MS5.4/162, MW5.5, MW5.6 Error ellipse: s-maj=4.8km s-min=3.5km az=208.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36; $M_{\theta\theta}$1.45; $M_{\phi\phi}$-1.08; $M_{r\theta}$0.16; $M_{\theta\phi}$-0.47; $M_{\phi r}$1.55; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s243.00000°, δ59.00000°, λ-156.00000°. NP2:ϕ_s140.00000°, δ69.00000°, λ-33.00000°. Principal axes: T 1.5500, Plg6.0000°, Azm193.0000°; N 0.8300, Plg51.0000°, Azm291.0000°; P -2.3700, Plg37.0000°, Azm98.0000°;*

NEIC Felt at Chengdu.

ISCJB ***16*** *05:25:48.3±0.1, 31°.31N±0°.02×103°.35E±0°.02, h19km, mb5.4/307, MS5.4/222 Error ellipse: s-maj=2.5km s-min=2.0km az=5.3*

MOS ***16*** *05:25:49.3±1.1, 31°.35N×103°.36E, h29km, mb5.6/128, MS5.4/75, Error ellipse: s-maj=6.1km s-min=3.4km az=120.7*

DJA ***16*** *05:25:56, 31°.38N×103°.24E, h70km, Mw5.8/27*

ISC 16 05:25:48.5±0.6, 31°.32N±0°.02×103°.37E±0°.02, h9km±3km, h19km±2.2km:pP-P, n1183, σ1s19/1093, mb5.4/307, MS5.4/222, 94C-84D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.53	141	Pg	Pg	05 26 00.1	+1.4
CD2				Sg	Sg	05 26 10.0	+4.3
CD2				smax			
	comp=N,477μm,0.7s						
LZH	Lanzhou	4.77	5	Pn	Pn	05 27 02.1	+1.6
LZH				Sn	Sn	05 28 01.3	+5.4
LZH				Sg	Sg	05 28 22.6	+1.0
LZH				smax			
	comp=N,6μm,1.2s						
LZH				LR	LR		
	comp=N,111μm,6.2s						
LZH				LR	LR		
	comp=Z,179μm,9.2s						
ENH	Enshi	5.37	100	ePn	Pn	05 27 09.3	+0.5
	comp=Z,23nm,0.8s						
ENH				eS	Sg	05 28 34.6	-6.2
XAN	Xi'an	5.41	58	Pn	Pn	05 27 09.8	+0.5
XAN				Sn	Sn

TIY				LR	LR	
	comp=E,9μm,7.7s					
TIY				LR	LR	
	comp=Z,4μm,2.7s					
IMP	**Imphal**	**10.57**	**234**	*e*P	**Pn**	**05 28 18.0 -2.3**
IMP				*ex*	x	05 31 25.0
LSA	**Lhasa**	**10.66**	**264**	P	**Pn**	**05 28 21.8 +0.3**
LSA				S	**Sn**	**05 30 16.4 -4.6**
LSA				LR	LR	
	comp=N,34μm,14.0s					
LSA				LR	LR	
	comp=E,27μm,12.3s					
LSA				LR	LR	
	comp=Z,34μm,13.2s					
LSA	**Lhasa**	**10.66**	**264**	*e*P	**Pn**	**05 28 21.7 +0.2**
LSA				pmax	pmax	
	comp=Z,223nm,0.8s					
LSA	**Lhasa**	**10.66**	**264**	*e*Pn	**Pn**	**05 28 21.6 +0.2**
	comp=Z,223nm,0.8s					
BTO	**Baotou**	**10.71**	**28**	*e*P	**Pn**	**05 28 21.8 -0.3**
BTO				LR	LR	
	comp=N,26μm,11.3s					
BTO				LR	LR	
	comp=E,16μm,8.4s					
HHC	**Hu-ho-hao-te**	**11.58**	**33**	⇑P	**Pn**	**05 28 34.3 +0.3**
HHC				pP		05 28 41.4
HHC				sP		05 28 46.3
HHC				S	**Sn**	**05 30 43.8 +0.4**
HHC				sS		05 30 55.3
HHC				SS		05 30 58.6
HHC				pmax	pmax	
	comp=Z,68nm,1.0s					
HHC				pmax	pmax	
	comp=Z,880nm,4.9s					
HHC				LR	LR	
	comp=N,13μm,5.8s					
HHC				LR	LR	
	comp=E,23μm,5.8s					
HHC				LR	LR	
	comp=Z,23μm,6.1s					
SHL	**Shillong**	**11.62**	**243**	*i* P	**Pn**	**05 28 33.0 -1.6**
SHL				*ex*	x	05 30 54.0
GZH	**Guangzhou**	**12.08**	**130**	P	**Pn**	**05 28 36.0 -4.9**
GZH				LR	LR	
	comp=N,80μm,9.2s					
GZH				LR	LR	
	comp=E,71μm,11.0s					
TIA	**Tai'an**	**12.44**	**63**	P	**Pn**	**05 28 45.4 -0.3**
TIA				LR	LR	
	comp=N,14μm,9.0s					
TIA				LR	LR	
	comp=E,13μm,10.0s					
NJ2	**Nanjing**	**13.21**	**83**	*e*P	**Pn**	**05 28 56.6 +0.3**
NJ2				pP		05 28 59.9
NJ2				sP		05 29 02.6
NJ2				PP		05 29 06.0
NJ2				S	**Sn**	**05 31 23.5 +0.2**
NJ2				sS		05 31 32.5
NJ2				pmax	pmax	
	comp=Z,100nm,1.0s					
NJ2				pmax	pmax	
	comp=Z,620nm,7.9s					
NJ2				LR	LR	
	comp=N,75μm,15.4s					
NJ2				LR	LR	
	comp=E,45μm,11.6s					
NJ2				LR	LR	
	comp=Z,45μm,11.4s					
CMAR	**Chiang Mai Arr**	**13.42**	**198**	Pn	**Pn**	**05 28 59.3 +0.1**
	baz=8.8,slow=8.2					
BJT	**Baijiatuau**	**13.54**	**47**	*e*P	**Pn**	**05 29 00.3 -0.4**
BJT				pmax	pmax	
	comp=Z,148nm,1.0s					
BJT	**Baijiatuau**	**13.54**	**47**	*e*Pn	**Pn**	**05 29 00.3 -0.4**
	comp=Z,148nm,1.0s					
BJI	**Beijing**	**13.55**	**47**	P	**Pn**	**05 29 00.3 -0.6**
BJI				S	**Sn**	**05 31 31.0 -0.6**
BJI				pmax	pmax	
	comp=Z,60nm,0.9s					
BJI				pmax	pmax	
	comp=Z,790nm,5.6s					
BJI				LR	LR	
	comp=N,50μm,13.1s					
BJI				LR	LR	
	comp=E,41μm,13.4s					
BJI				LR	LR	
	comp=Z,8μm,16.0s					
QIZ	**Qiongzhong**	**13.56**	**153**	P	**Pn**	**05 29 03.1 +1.9**
QIZ				S	**Sn**	**05 31 33.1 +1.0**
QIZ				pmax	pmax	
	comp=Z,65nm,1.6s					
QIZ				pmax	pmax	
	comp=Z,510nm,7.8s					
QIZ				LR	LR	
	comp=N,44μm,7.2s					
QIZ				LR	LR	
	comp=E,12μm,8.4s					
QIZ				LR	LR	
	comp=Z,18μm,7.2s					
QIZ	**Qiongzhong**	**13.56**	**153**	*e*Pn	**Pn**	**05 29 01.9 +0.7**
	comp=Z,91nm,0.8s					
TAPN	**Taplejung**	**14.22**	**258**	*e*P	**Pn**	**05 29 07.7 -2.4**
	comp=Z,872nm,1.0s					
BDT	**Bhumibol Dam**	**14.57**	**197**	P	**Pn**	**05 29 14.0 -0.9**
	comp=Z,118nm,1.0s					
QZH	**Quanzhou**	**14.85**	**112**	⇓*i*P	**Pn**	**05 29 16.9 -1.8**
QZH				pmax	pmax	
	comp=Z,220nm,0.6s					
QZH				pmax	pmax	
	comp=Z,1μm,4.7s					
QZH				LR	LR	
	comp=N,25μm,9.3s					
QZH				LR	LR	
	comp=E,57μm,10.2s					
QZH				LR	LR	
	comp=Z,65μm,9.3s					
KKTK	**Khon Kaen**	**14.93**	**182**	P	**Pn**	**05 29 22.0 +2.2**
SSE	**Sheshan**	**15.25**	**86**	P	**Pn**	**05 29 21.3 -2.7**
SSE				S	**Sn**	**05 32 12.9 -0.2**
SSE				pmax	pmax	
	comp=Z,56nm,0.8s					
SSE				pmax	pmax	
	comp=Z,690nm,6.6s					
SSE				LR	LR	
	comp=N,59μm,12.8s					
SSE				LR	LR	
	comp=E,16μm,12.8s					
SSE				LR	LR	
	comp=Z,33μm,12.6s					
RAMN	**Ramite**	**15.29**	**258**	*e*P	**Pn**	**05 29 20.9 -3.6**
	comp=Z,844nm,1.0s					
GUN	**Gumba**	**15.59**	**262**	*e*P	**Pn**	**05 29 24.7 -3.8**
	comp=Z,2μm,1.2s					
NST	**Nakhon Sawan**	**15.86**	**191**	P	**Pn**	**05 29 29.0 -3.0**
	comp=Z,375nm,0.8s					
CAL	**Calcutta**	**16.00**	**241**	*e*P	**Pn**	**05 29 32.7 -1.1**
CAL				*ex*	x	05 32 44.6
UBT	**Ubonrachathani**	**16.07**	**174**	P	**Pn**	**05 29 39.0 +4.2**
	comp=Z,556nm,0.5s					
PKI	**Pulchoki**	**16.09**	**261**	*e*P	**Pn**	**05 29 30.8 -4.1**
	comp=Z,2μm,1.3s					
PKIN	**Phulchoki**	**16.09**	**261**	*e*P	**Pn**	**05 29 30.9 -4.2**
	comp=Z,984nm,0.7s					
KKN	**Kakani**	**16.13**	**262**	*e*P	**Pn**	**05 29 31.2 -4.3**
	comp=Z,3μm,1.0s					
DMN	**Daman**	**16.33**	**262**	*e*P	**Pn**	**05 29 33.9 -4.2**
	comp=Z,3μm,1.0s					
SONM	**Songino Array**	**16.65**	**7**	Pn	**Pn**	**05 29 41.6 -0.4**
	comp=Z,0.7nm,0.3s,baz=184,slow=11,SNR=78					
SONM				Lg		05 34 34.0
	comp=Z,0.1nm,0.3s,baz=192,slow=26,SNR=2.5					
SONM				LR	LR	05 36 57.4
	comp=Z,13μm,19.8s,baz=190,slow=40					
DL2	**Dalian**	**16.73**	**58**	P	**Pn**	**05 29 43.8 +0.7**
DL2				S	**Sn**	**05 32 49.6 +0.6**
DL2				pmax	pmax	
	comp=Z,120nm,1.4s					
DL2				pmax	pmax	
	comp=Z,510nm,3.7s					
DL2				LR	LR	
	comp=N,14μm,18.3s					
DL2				LR	LR	
	comp=E,11μm,18.3s					
DL2				LR	LR	
	comp=Z,12μm,12.2s					
ULN	**Ulaanbaatar**	**16.76**	**9**	*e*P	**Pn**	**05 29 42.8 -0.6**
ULN				pmax	pmax	
	comp=Z,260nm,1.2s					
ULN	**Ulaanbaatar**	**16.76**	**9**	*e*P	**Pn**	**05 29 42.8 -0.6**
	comp=Z,260nm,1.2s					
ULN	**Ulaanbaatar**	**16.76**	**9**	Pn	**Pn**	**05 29 43.1 -0.3**
	SNR=145					
ULN				Pn	**Pn**	**05 29 43.1 -0.3**
	SNR=145					
TATO	**Taipei**	**17.18**	**107**	*e*P	**Pn**	**05 29 49.0 +0.2**
	comp=Z,295nm,1.1s					
WMQ	**Urumqi**	**17.57**	**320**	P	**Pn**	**05 29 53.1 -0.5**
WMQ				sP	sP	05 29 59.1 +0.9
WMQ				PP		05 30 08.0
WMQ				S	**Sn**	**05 33 07.0 -2.3**
WMQ				sS	sS	05 33 12.3 -8.8
WMQ				SS		05 33 30.3
WMQ				PcP	PcP	05 34 33.6 +0.5
WMQ				pmax	pmax	
	comp=Z,130nm,1.4s					
WMQ				pmax	pmax	
	comp=Z,620nm,3.5s					
WMQ				LR	LR	
	comp=N,29μm,22.0s					
WMQ				LR	LR	
	comp=E,17μm,20.0s					
WMQ				LR	LR	
	comp=Z,7μm,16.0s					
YULB	**Yu-li**	**17.76**	**112**	*e*P	**Pn**	**05 29 58.1 +2.0**
	comp=Z,146nm,1.0s					
ZAK	**Zakamensk**	**19.04**	**360**	⇑*i*P	**Pn**	**05 30 10.6 -0.9**
ZAK				pmax	pmax	
	comp=Z,83nm,1.4s					
BWNR	**Bhubaneshwar**	**19.22**	**239**	*ex*	x	05 30 02.0
SNY	**Shenyang**	**19.28**	**51**	⇓P	**Pn**	**05 30 14.1 -0.3**
SNY				S	**Sn**	**05 33 50.4 -0.2**
SNY				pmax	pmax	
	comp=Z,86nm,2.3s					
SNY				pmax	pmax	
	comp=Z,2μm,7.3s					
SNY				LR	LR	
	comp=N,18μm,19.8s					
SNY				LR	LR	
	comp=E,9μm,19.8s					
SNY				LR	LR	
	comp=Z,11μm,14.4s					
PTH	**Pithoragarh**	**20.04**	**271**	*e*P	**P**	**05 30 19.8 -2.1**
PTH				*ex*	x	05 33 45.0
INCN	**Inchon**	**20.13**	**66**	*e*P	**P**	**05 30 23.8 +1.0**
	comp=Z,264nm,0.8s					
INCN				LR	LR	
	comp=Z,11μm,19.0s,MS5.2					
INCN	**Inchon**	**20.13**	**66**	P	**P**	**05 30 23.7 +0.9**
	SNR=40					
INCN				P		05 30 23.7
	SNR=40					
TLY	**Talaya**	**20.34**	**0**	Pn	**P**	**05 30 26.4 +1.4**
	comp=Z,608nm,1.2s,SNR=20					
TLY	**Talaya**	**20.34**	**0**	*c i*P	**P**	**05 30 26.0 +1.0**
TLY				*e*SS		05 34 50.1
TLY				pmax	pmax	
	comp=Z,222nm,1.4s					
TLY				MLR	MLR	
	comp=Z,14μm,20.0s,MS5.3					
TLY	**Talaya**	**20.34**	**0**	*e*P	**P**	**05 30 25.8 +0.8**
	comp=Z,318nm,1.5s					
TLY				LR	LR	
	comp=Z,963nm,19.0s,MS4.2					
TLY	**Talaya**	**20.34**	**0**	P	**P**	**05 30 26.1 +1.2**
	SNR=95					
TLY				P		05 30 26.1
	SNR=95					
MOY	**Mondy**	**20.40**	**356**	*e*P	**P**	**05 30 26.5 +0.9**
MOY				pmax	pmax	
	comp=Z,598nm,2.2s					
IRK	**Irkutsk**	**20.91**	**2**	⇑*i*P	**P**	**05 30 32.1 +0.9**
IRK				pmax	pmax	
	comp=Z,821nm,1.5s					
KSRS	**Korea Array**	**21.14**	**67**	P	**P**	**05 30 33.8 +0.1**
	comp=Z,88nm,0.7s,mb5.2,baz=257,slow=10,SNR=213					
KSRS				S	**S**	**05 34 27.6 -1.3**
	comp=Z,0.4nm,0.3s,baz=281,slow=20,SNR=2.8					
KSRS				LR	LR	05 38 38.4
	comp=Z,7μm,20.9s,MS5.0,baz=262,slow=37					
KSRS	**Korea Array**	**21.14**	**67**	P	**P**	**05 30 33.8 +0.1**
KSRS				S	**S**	**05 34 27.6 -1.3**
KSRS				pmax	pmax	
	comp=Z,88nm,0.7s,mb5.2					
KSRS				MLR	MLR	
	comp=Z,7μm,20.9s,MS5.0					
CN2	**Changchun**	**21.41**	**48**	⇓P	**P**	**05 30 37.8 +1.3**
CN2				*es*P	sP	05 30 44.8 +4.7
CN2				*e*S	**S**	**05 34 30.0 -4.1**
CN2				pmax	pmax	
	comp=Z,30nm,0.9s,mb4.6					
CN2				pmax	pmax	
	comp=Z,200nm,5.0s					
CN2				LR	LR	
	comp=N,11μm,16.0s,MS5.5					
CN2				LR	LR	
	comp=E,12μm,16.0s,MS5.5					
CN2				LR	LR	
	comp=Z,9μm,14.0s,MS5.3					
HIA	**Hailar**	**21.76**	**30**	*e*P	**P**	**05 30 40.8 +0.5**
HIA				pmax	pmax	
	comp=Z,125nm,0.8s					
HIA				MLR	MLR	
	comp=Z,3μm,21.0s					
HIA	**Hailar**	**21.76**	**30**	*e*P	**P**	**05 30 40.8 +0.5**
	comp=Z,125nm,0.8s,mb5.4					
HIA				LR	LR	
	comp=Z,3μm,21.0s,MS4.7					
CIT	**Chita**	**21.99**	**17**	*e*P	**P**	**05 30 43.7 +0.9**
CIT				*e*		05 31 10.9
CIT				*e*		05 34 47.8
CIT				pmax	pmax	
	comp=Z,1μm,1.8s,mb6.0					
JOW	**Kunigami**	**22.20**	**95**	P	**P**	**05 30 45.4 +0.1**
	comp=Z,34nm,0.5s,mb5.1,baz=260,slow=3.5,SNR=14					
JOW				LR	LR	05 40 42.4
	comp=Z,7μm,18.5s,MS5.1,baz=298,slow=40					
JBP	**Jabalpur**	**22.29**	**254**	*e*P	**P**	**05 30 44.3 -1.9**
JBP				*i x*	x	05 34 46.6
SMLA	**Simla**	**22.40**	**276**	*i* P	**P**	**05 30 41.5 -5.7**
SMLA				*i* S	**S**	**05 34 45.7 -8.0**
MK31	**Makanchi Array**	**22.40**	**320**	*e*P	**P**	**05 30 46.5 -0.7**
MKAR	**Makanchi Array**	**22.40**	**320**	P	**P**	**05 30 46.5 -0.7**
	comp=Z,86nm,1.0s,mb5.1,baz=126,slow=12,SNR=90					
MKAR				S	**S**	**05 34 56.1 +2.5**
	comp=Z,5.0nm,0.9s,baz=106,slow=17,SNR=2.2					
MKAR				LR	LR	05 39 20.2
	comp=Z,3μm,19.8s,MS4.7,baz=123,slow=36					
MKAR				P3KPbc		06 04 31.7
	comp=Z,1.9nm,0.9s,baz=336,slow=2.7,SNR=7.7					
MKAR	**Makanchi Array**	**22.40**	**320**	P	**P**	**05 30 46.6 -0.6**
MKAR				S	**S**	**05 34 56.1 +2.6**
MKAR				pmax	pmax	
	comp=Z,86nm,1.0s					
MKAR				smax		
	comp=N,5.0nm,0.9s					
MKAR				MLR	MLR	
	comp=Z,3μm,19.8s					
MKAR	**Makanchi Array**	**22.40**	**320**	P	**P**	**05 30 46.5 -0.7**
MKAR				S	**S**	**05 34 56.1 +2.5**
MKAR				LR	LR	05 39 20.2
SDNR	**Sundarnagar**	**22.52**	**277**	*e*P	**P**	**05 30 46.1 -2.5**
SDNR				*e*S	**S**	**05 34 56.5 +0.5**
AGRA	**Agra**	**22.53**	**266**	*e*P	**P**	**05 30 47.1 -1.7**
NDI	**New Delhi**	**22.79**	**270**	*ex*	x	05 30 46.0
BHK	**Bhakra**	**23.00**	**277**	*e*P	**P**	**05 30 50.2 -3.5**
BHK				*ex*	x	05 31 23.0
SONA	**Sohna**	**23.00**	**269**	*e*P	**P**	**05 30 51.5 -2.3**
SONA				AMb	AMB	05 31 01.8
	comp=Z,289nm,1.3s,mb5.5					
DLH	**Dalhousie**	**23.27**	**280**	*e*P	**P**	**05 30 56.0 -0.5**
DLH				*e*S	**S**	**05 35 08.0 -0.8**
TGY	**Tagaytay City**	**23.53**	**133**	P	**P**	**05 31 01.4 +2.1**
	comp=Z,110nm,0.3s,mb5.8,baz=310,slow=18,SNR=2.4					
TGY				LR	LR	05 39 47.4
	comp=Z,18nm,20.7s,baz=339,slow=36					
KSH	**Kashi**	**23.71**	**298**	⇑*i*P	**P**	**05 31 03.1 +2.2**
KSH				*e*pP		05 31 07.0
KSH				*es*P	sP	05 31 10.1 +5.5
KSH				*e*PP		05 31 37.1
KSH				*e*PcP	PcP	05 34 44.1 -0.7
KSH				*e*S	**S**	**05 35 16.8 +1.0**
KSH				*es*S	sS	05 35 24.1 +4.0
KSH				*e*SS		05 36 10.1
KSH				pmax	pmax	
	comp=Z,30nm,1.0s,mb4.7					
KSH				pmax	pmax	
	comp=Z,1μm,2.8s,mb5.9					
KSH				LR	LR	
	comp=N,12μm,10.6s,MS5.8					
KSH				LR	LR	
	comp=E,12μm,11.2s,MS5.8					
KSH				LR	LR	
	comp=Z,12μm,11.3s,MS5.6					
NGP	**Nagpur**	**24.00**	**251**	⇑*i*P	**P**	**05 30 57.5 -6.1**
NGP				*e*S	**S**	**05 35 15.1 -5.8**
AAA	**Alma-Ata**	**24.06**	**307**	*e*P	**P**	**05 31 04.8 +0.8**
AAA				*i* S	**S**	**05 35 15.2 -6.2**
AAA				pmax	pmax	
	comp=Z,4μm,3.5s					
AAA				smax		
	comp=N,5μm,8.0s					
AAA				MLR	MLR	
	comp=Z,15μm,16.0s,MS5.6					
KHET	**Khetri**	**24.14**	**269**	*e*P	**P**	**05 31 02.9 -1.9**
BHPL	**Bhopal**	**24.38**	**257**	*e*P	**P**	**05 31 05.3 -1.9**
MDJ	**Mudanjiang**	**24.44**	**50**	P	**P**	**05 31 07.3 -0.2**
MDJ				S	**S**	**05 35 29.4 +1.9**
MDJ				ScP	ScP	05 38 25.8 +0.6
MDJ				ScS	ScS	05 42 13.9 +1.3
MDJ				pmax	pmax	
	comp=Z,170nm,1.5s,mb5.2					
MDJ				pmax	pmax	
	comp=Z,2μm,5.9s					
MDJ				LR	LR	
	comp=N,8μm,20.6s					
MDJ				LR	LR	
	comp=E,8μm,15.1s					
MDJ				LR	LR	
	comp=Z,7μm,16.5s,MS5.2					
MDJ	**Mudanjiang**	**24.44**	**50**	*e*P	**P**	**05 31 07.5 +0.1**
	comp=Z,451nm,1.4s,mb5.7					
MDJ				LR	LR	
	comp=Z,4μm,19.0s,MS4.9					
KZA	**Kyzart**	**24.87**	**303**	P	**P**	**05 31 12.2 +0.8**
	SNR=74					
TKM2	**Tokmak 2**	**24.87**	**306**	P	**P**	**05 31 11.8 +0.4**
	SNR=17					
TKM2	**Tokmak 2**	**24.87**	**306**	*e*P	**P**	**05 31 11.5 +0.1**
TKM2				pmax	pmax	
	comp=Z,129nm,1.1s,mb5.4					
TKM2				MLR	MLR	
	comp=Z,14μm,19.0s,MS5.5					
TKM2	**Tokmak 2**	**24.87**	**306**	*e*P	**P**	**05 31 11.4 0.0**
	comp=Z,129nm,1.1s,mb5.4					
TKM2				LR	LR	
	comp=Z,14μm,19.0s,MS5.5					
KBK	**Karagaybulak**	**25.25**	**305**	P	**P**	**05 31 15.3 +0.5**
	SNR=40					
UCH	**Uchtor**	**25.43**	**303**	P	**P**	**05 31 17.7 +1.1**
	SNR=70					
UCH	**Uchtor**	**25.43**	**303**	*e*P	**P**	**05 31 17.5 +1.0**
	comp=Z,293nm,1.1s,mb5.7					
UCH				LR	LR	
	comp=Z,13μm,19.0s,MS5.5					
VLA	**Vladivostok**	**25.46**	**54**	*e*P	**P**	**05 31 16.2 -0.6**
VLA				*e*S	**S**	**05 35 41.3 -2.6**
VLA				pmax	pmax	
	comp=Z,149nm,1.3s,mb5.4					
VLA				MLR	MLR	
	comp=Z,6μm,14.0s,MS5.3					
CHMS	**Chumysh**	**25.49**	**305**	P	**P**	**05 31 18.8 +1.8**
	SNR=10					
FRU	**Bishkek**	**25.53**	**305**	⇑*i*P	**P**	**05 31 18.0 +0.6**
FRU				*i*		05 31 28.0
FRU				pmax	pmax	
	comp=Z,230nm,2.0s,mb5.4					
AAK	**Ala-Archa**	**25.56**	**304**	P	**P**	**05 31 18.2 +0.5**
	comp=Z,1μm,1.0s,mb6.4,SNR=24					
AAK	**Ala-Archa**	**25.56**	**304**	P	**P**	**05 31 20.3 +2.6**
	SNR=32					
AAK	**Ala-Archa**	**25.56**	**304**	P	**P**	**05 31 17.5 -0.2**
	comp=Z,17nm,0.8s,mb4.6,baz=125,slow=6.0,SNR=58					
AAK				LR	LR	05 42 09.2
	comp=Z,16μm,18.1s,MS5.6,baz=87,slow=38					
AAK	**Ala-Archa**	**25.56**	**304**	*e*P	**P**	**05 31 18.1 +0.4**
AAK				pmax	pmax	
	comp=Z,233nm,1.0s,mb5.7					
AAK				MLR	MLR	
	comp=Z,15μm,19.0s,MS5.5					
AAK	**Ala-Archa**	**25.56**	**304**	*e*P	**P**	**05 31 18.1 +0.4**
	comp=Z,233nm,1.0s,mb5.7					
AAK				LR	LR	
	comp=Z,15μm,19.0s,MS5.5					
AAK	**Ala-Archa**	**25.56**	**304**	P	**P**	**05 31 18.5 +0.9**
	SNR=126					
AAK				P		05 31 18.5
	SNR=126					
AJM	**Ajmer**	**25.57**	**266**	*e*P	**P**	**05 31 16.3 -1.6**
USP	**Ospenovka**	**25.75**	**306**	P	**P**	**05 31 19.8 +0.4**
	SNR=45					
KTGM	**Kuala Trenggan**	**25.86**	**181**	P	**P**	**05 31 23.4 +2.8**
AML	**Almayashu**	**26.00**	**303**	P	**P**	**05 31 22.6 +1.0**
	SNR=45					
AML	**Almayashu**	**26.00**	**303**	*e*P	**P**	**05 31 22.4 +0.8**
	comp=Z,127nm,1.1s,mb5.4					
AML				LR	LR	
	comp=Z,13μm,19.0s,MS5.5					
KULM	**Kulim**	**26.02**	**186**	P	**P**	**05 31 22.4 +0.3**
KULM	**Kulim**	**26.02**	**186**	*e*P	**P**	**05 31 20.4 -1.7**
	comp=Z,65nm,0.8s,mb5.2					
KULM				LR	LR	
	comp=Z,4μm,19.0s,MS5.0					
EKS2	**Erkin-Say**	**26.08**	**304**	P	**P**	**05 31 22.6 +0.2**
	SNR=31					
EKS2	**Erkin-Say**	**26.08**	**304**	*e*P	**P**	**05 31 22.4 0.0**
	comp=Z,81nm,0.8s,mb5.3					
EKS2				LR	LR	
	comp=Z,14μm,19.0s,MS5.5					
ZAA0	**Zalesovo Array**	**26.25**	**335**	*e*P	**P**	**05 31 22.4 -1.4**
ZALV	**Zalesovo Beam**	**26.25**	**335**	P	**P**	**05 31 22.6 -1.2**
	comp=Z,23nm,0.8s,mb4.7,baz=134,slow=8.5,SNR=42					
ZALV				LR	LR	05 41 51.7
	comp=Z,2μm,19.4s,MS4.8,baz=142,slow=37					
ZALV				P3KPbc		06 04 17.7
	comp=Z,0.7nm,0.5s,baz=343,slow=4.6,SNR=3.7					
ZALV	**Zalesovo Beam**	**26.25**	**335**	P	**P**	**05 31 22.6 -1.2**
ZALV				LR	LR	05 41 51.7
ZALV				*e*		06 04 17.7
HYB	**Hyderabad**	**26.43**	**244**	*i* P	**P**	**05 31 23.0 -2.7**
	comp=Z,335nm,1.0s,mb5.8					
HYB				*e*S	**S**	**05 36 00.0 +0.4**
HYB				LR	LR	05 42 12.0
	comp=Z,9.8nm,12.0s					
KURK	**Kurchatov**	**26.70**	**324**	P	**P**	**05 31 27.2 -0.7**
	comp=Z,825nm,1.2s,mb6.1,SNR=28					
KURK	**Kurchatov**	**26.70**	**324**	P	**P**	**05 31 26.5 -1.4**
	comp=Z,34nm,0.9s,mb4.9,baz=129,slow=9.4,SNR=81					
KURK				PcP	PcP	05 34 52.2 +1.0
	comp=Z,15nm,0.8s,baz=111,slow=2.5,SNR=4.4					
KURK				LR	LR	05 41 54.6
	comp=Z,5μm,19.7s,MS5.1,baz=120,slow=36					
KURK	**Kurchatov**	**26.70**	**324**	*c e*P	**P**	**05 31 27.2 -0.7**
KURK				pmax	pmax	
	comp=Z,79nm,1.7s,mb5.0					
KURK	**Kurchatov**	**26.70**	**324**	*e*P	**P**	**05 31 26.4 -1.4**
	comp=Z,61nm,1.1s,mb5.0					
KURK				LR	LR	
	comp=Z,5μm,21.0s,MS5.1					
KURK	**Kurchatov**	**26.70**	**324**	P	**P**	**05 31 27.1 -0.8**
	SNR=80					
KURK				P		05 31 27.1
	SNR=80					
IPM	**Ipoh**	**26.79**	**185**	P	**P**	**05 31 29.7 +0.7**
LATR	**Latur**	**27.43**	**248**	*ex*	x	05 31 30.0
BOD	**Bodaibo**	**27.49**	**12**	*e*P	**P**	**05 31 33.6 -1.3**
BOD				pmax	pmax	
	comp=Z,76nm,1.2s,mb5.1					
NVS	**Novosibirsk**	**27.53**	**334**	*e*P	**P**	**05 31 33.7 -1.6**
NVS				pmax	pmax	
	comp=Z,209nm,2.5s,mb5.3					
NVS				pmax	pmax	
	comp=N,137nm,1.7s					
NVS				pmax	pmax	
	comp=E,99nm,1.7s					
KLR	**Kul'dur**	**27.84**	**42**	*e*P	**P**	**05 31 34.3 -3.9**
KLR				pmax	pmax	
	comp=E,200nm,1.8s					
KLR				pmax	pmax	

comp=Z,190nm,1.8s,mb5.4
KLR MLR MLR
comp=E,14μm,12.0s
KLR MLR MLR
comp=Z,36μm,12.0s,MS6.2
KKM Kota Kinabalu 27.88 152 P **P 05 31 44.9 +6.1**
KKM Kota Kinabalu 27.88 152 *e*P **P 05 31 42.1 +3.3**
comp=Z,188nm,1.0s,mb5.7
KKM LR LR
comp=Z,4μm,19.0s,MS5.0
FRIM Kepong 27.98 184 P **P 05 31 39.9 +0.2**
JASL Jaisalmer 28.64 269 *e*P **P 05 31 44.3 -1.3**
SDKM Sandakan 28.65 150 P **P 05 31 47.2 +1.5**
KBL Kabul 28.91 286 *e*P **P 05 31 47.9 0.0**
KBL pmax pmax
comp=Z,145nm,1.0s,mb5.7
KBL Kabul 28.91 286 *e*P **P 05 31 47.9 0.0**
comp=Z,145nm,1.0s,mb5.7
KGM Kluang 29.15 180 P **P 05 31 55.8 +5.7**
MAJO Matsushiro 29.27 70 *e*P **P 05 31 50.0 -1.0**
MAJO pmax pmax
comp=Z,40nm,1.1s,mb5.1
MAJO MLR MLR
comp=Z,3μm,22.0s,MS4.9
MAJO Matsushiro 29.27 70 *e*P **P 05 31 50.0 -1.0**
comp=Z,40nm,1.1s,mb5.1
MAJO LR LR
comp=Z,3μm,22.0s,MS4.9
MAT Matsushiro 29.27 70 P **P 05 31 48.8 -2.2**
MAT S **S 05 36 40.0 -4.0**
MJAR Matsushiro Arr 29.27 70 P **P 05 31 50.2 -0.8**
comp=Z,5.8nm,1.1s,mb4.2,baz=270,slow=9.5,SNR=16
MJAR LR LR 05 42 57.4
comp=Z,3μm,21.5s,MS4.8,baz=265,slow=35
MJAR Matsushiro Arr 29.27 70 P **P 05 31 50.3 -0.7**
MJAR pmax pmax
comp=Z,6.0nm,1.1s
MJAR MLR MLR
comp=Z,3μm,21.5s
NRGR Nerungri 29.37 24 *e*P **P 05 31 53.6 +1.9**
NRGR S **S 05 36 49.0 +3.7**
NRGR smax
comp=E,50nm,0.5s
MYKOM Kota Tinggi 29.38 179 P **P 05 31 52.0 -0.1**
BTM Bintulu 29.43 160 P **P 05 31 53.6 +0.9**
POO Poona 29.55 251 *e*P **P 05 31 51.5 -2.1**
CLNS Chul'man 29.57 24 *e*P **P 05 31 53.2 -0.3**
CLNS *e**PP pP 05 31 56.9 +0.8
CLNS *e*PPP 05 32 57.5
CLNS *e* 05 34 59.0
CLNS *e*S **S 05 36 43.0 -5.4**
CLNS *e*SS SS 05 38 18.7 -35
CLNS *e*SSS 05 38 46.4
CLNS pmax pmax
comp=Z,14nm,0.7s,mb4.8
CLNS pmax pmax
comp=N,12nm,1.1s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS smax
comp=E,503nm,14.2s
CLNS smax
comp=N,397nm,12.6s
CLNS MLR MLR
comp=E,4μm,11.0s
CLNS MLR MLR
comp=N,3μm,17.0s
CLNS MLR MLR
comp=Z,6μm,11.0s,MS5.5
SBUM Sibu 29.91 162 P **P 05 31 58.4 +1.6**
KAD Karad 29.92 249 *e*P **P 05 31 54.3 -2.7**
KAD AMb AMB 05 32 01.4
comp=Z,82nm,1.1s,mb5.4
KSM Kuching 30.41 166 P **P 05 32 02.5 +1.3**
KSM Kuching 30.41 166 *e*P **P 05 32 01.5 +0.3**
comp=Z,39nm,0.8s,mb5.2
KSM LR LR
comp=Z,3μm,20.0s,MS5.0
BHJ Bhuj 30.93 263 *e*P **P 05 32 04.6 -1.2**
DAV Davao City (W) 31.83 135 PFAKE 05 32 30.0 +16
DAV LR LR
comp=Z,6μm,21.0s,MS5.2
PALK Pallekele 31.95 226 P **P 05 32 14.0 -0.9**
comp=Z,23nm,1.1s,mb4.9,baz=14,slow=4.2,SNR=3.3
PALK Pallekele 31.95 226 P **P 05 32 14.0 -0.9**
PALK pmax pmax
comp=Z,23nm,1.1s,mb4.9
BVAR Borovoye Array 32.23 322 P **P 05 32 16.1 -0.8**
comp=Z,12nm,0.6s,mb4.9,baz=116,slow=10,SNR=17
BVAR PcP PcP 05 35 03.0 -2.3
comp=Z,9.4nm,0.9s,baz=113,slow=2.6,SNR=3.6
BVAR LR LR 05 45 06.8
comp=Z,7μm,20.6s,MS5.3,baz=115,slow=36
BVAR Borovoye Array 32.23 322 P **P 05 32 16.1 -0.9**
BVAR 05 35 03.0
BVAR pmax pmax
comp=Z,12nm,0.6s
BVAR MLR MLR
comp=Z,7μm,20.6s
BRVK Borovoye 32.30 322 P **P 05 32 17.9 +0.3**
comp=Z,196nm,0.8s,mb6.0,SNR=7.1
BRVK Borovoye 32.30 322 *ce*P **P 05 32 17.2 -0.4**
BRVK pmax pmax
comp=Z,29nm,1.7s,mb4.8
BRVK Borovoye 32.30 322 *e*P **P 05 32 17.3 -0.3**
comp=Z,29nm,0.8s,mb5.2
BRVK LR LR
comp=Z,8μm,20.0s,MS5.4
BRVK Borovoye 32.30 322 P **P 05 32 17.7 +0.1**
SNR=22
BRVK P 05 32 17.7
SNR=22
ERM Erimo 33.38 60 *e*P **P 05 32 26.2 -1.0**
ERM pmax pmax
comp=Z,39nm,0.9s,mb5.3
ERM MLR MLR
comp=Z,2μm,19.0s,MS4.8
ERM Erimo 33.38 60 *e*P **P 05 32 26.1 -1.0**
comp=Z,39nm,0.9s,mb5.3
ERM LR LR
comp=Z,2μm,19.0s,MS4.8
YSS Yuzh-Sakhalins 33.90 51κ *i*P **P 05 32 31.4 -0.3**
YSS *e**SP sP 05 32 35.8 +0.4
YSS *e* 05 33 46.0
YSS *e*S **S 05 37 54.0 -2.2**
YSS pmax pmax
comp=Z,270nm,1.5s,mb6.0
YSS MLR MLR
comp=Z,7μm,15.0s,MS5.5
YSS MLR MLR
comp=N,6μm,13.0s,MS5.6
YSS MLR MLR
comp=E,6μm,13.0s,MS5.6
YSS Yuzh-Sakhalins 33.90 51 *e*P **P 05 32 31.8 +0.1**
comp=E,253nm,1.3s,mb6.0
CBIJ Chichi jima 34.02 87 LR LR 05 45 10.0
comp=E,3μm,21.9s,MS5.0,baz=280,slow=34
YAK Yakutsk 35.13 21 *e*P **P 05 32 40.4 -1.6**
YAK *e**PP pP 05 32 48.8 +4.1
YAK *e*PPP 05 34 03.4
YAK *e* 05 35 14.5
YAK *e*S **S 05 38 06.4 -8.3**
YAK *e*SS SS 05 40 21.6 -25
YAK *e*SSS 05 40 49.7
YAK pmax pmax
comp=Z,51nm,1.0s,mb5.4
YAK pmax pmax
comp=N,23nm,1.3s
YAK pmax pmax
comp=E,31nm,1.2s
YAK smax
comp=E,100nm,9.3s
YAK smax
comp=N,324nm,10.8s
YAK MLR MLR
comp=N,4μm,11.0s,MS5.7
YAK MLR MLR
comp=E,6μm,12.0s,MS5.7
YAK MLR MLR
comp=Z,6μm,12.0s,MS5.6
YAK Yakutsk 35.13 21 *e*P **P 05 32 41.1 -1.0**
comp=Z,72nm,0.9s,mb5.6
ABKAR Akbulak array 37.06 312 *e*P **P 05 32 58.0 -0.8**
comp=Z,0.5nm,0.4s
IAKL Akhelmad 37.12 291 *e*P **P 05 32 59.2 -0.3**
ABKT Ailbek 37.53 293 P **P 05 33 03.4 +0.5**
comp=Z,1μm,0.9s,mb6.6,SNR=24
VAN Vannovskaya 37.53 293 *e*P **P 05 33 01.2 -1.7**
SVE Sverdlovsk 38.95 324‖ *e*P **P 05 33 14.9 +0.3**
SVE *e*S **S 05 39 18.5 +5.4**
SVE pmax pmax
comp=Z,145nm,1.0s,mb5.7
SVE MLR MLR
comp=Z,4μm,13.0s,MS5.4
KAPI Kappang 39.37 154 P **P 05 33 23.5 +4.9**
comp=Z,330nm,1.0s,mb6.5,SNR=8.6
KAPI Kappang 39.37 154 P **P 05 33 17.7 -0.9**
comp=Z,40nm,0.9s,mb5.1,baz=181,slow=5.3,SNR=12
ARU Arti 39.88 322 P **P 05 33 26.5 +4.2**
comp=Z,873nm,0.9s,mb6.5,SNR=5.7
ARU Arti 39.88 322 *d i*P **P 05 33 27.5 +5.2**
ARU *e* 05 35 02.3
ARU S **S 05 39 33.5 +6.5**
ARU pmax pmax
comp=Z,5μm,16.0s
ARU Arti 39.88 322 *e*P **P 05 33 21.7 -0.7**
comp=Z,150nm,1.0s,mb5.7
ARU LR LR
comp=Z,4μm,22.0s,MS5.2
WBK Wadi Bani Khal 40.29 269 P **P 05 33 29.5 +3.2**
SNR=9.1
BIDO Bidbid 40.68 270 P **P 05 33 29.0 -0.5**
SNR=11
SMDO Samad 40.91 270 P **P 05 33 31.3 -0.1**
SNR=27
JMDO Jabal Madar 41.12 269 P **P 05 33 35.9 +2.8**
SNR=7.3
HOQ Hoqain 41.35 271 P **P 05 33 34.2 -0.7**
SNR=22
BANOM Banah 41.42 275 P **P 05 33 39.7 +4.1**
SNR=5.7
XMIS Christmas Isla 41.62 177 *e*P **P 05 33 39.4 +2.3**
BSY Bisya 41.76 270 P **P 05 33 38.2 -0.1**
SNR=48
SOKR Solikamsk 41.87 326 *c i*P **P 05 33 38.1 -0.6**
SOKR S **S 05 40 01.5 +5.0**
SOKR pmax pmax
comp=Z,200nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,3μm,18.0s,MS5.2
GUMO Guam 41.92 105 LR LR 05 51 27.6
comp=Z,1μm,20.1s,MS4.8,baz=144,slow=37
GUMO Guam 41.92 105 PFAKE 05 33 50.0 +10
GUMO LR LR
comp=Z,1μm,19.0s,MS4.9
HATD Hatta, Dubai 41.93 273 P **P 05 33 40.9 +1.2**
SNR=11
ASHO Ashiyiah 42.04 273 P **P 05 33 41.2 +0.6**
SNR=26
ARQ Araqi 42.12 271 P **P 05 33 41.3 +0.1**
SNR=14
NAZ Nazwa, Dubai 42.28 274 P **P 05 33 46.3 +3.8**
SNR=12
FAQ Al Faqa, Dubai 42.42 273 P **P 05 33 48.1 +4.4**
SNR=12
TIXI Tiksi 42.66 12 *c i*P **P 05 33 43.4 -1.7**
TIXI *e* 05 35 22.9
TIXI *e*S **S 05 40 02.3 -5.7**
TIXI *e*SS SS 05 43 10.8 -7.1
TIXI pmax pmax
comp=Z,127nm,1.1s,mb5.6
TIXI MLR MLR
comp=Z,5μm,13.0s,MS5.6
TIXI Tiksi 42.66 12 *e*P **P 05 33 43.2 -1.8**
comp=Z,78nm,0.8s,mb5.5
ASUD Al Ashush, Dub 42.68 273 P **P 05 33 46.5 +0.7**
SNR=12
COCO West Island 43.72 189 *e*P **P 05 33 54.1 0.0**
COCO pmax pmax
comp=Z,308nm,1.0s,mb6.0
COCO MLR MLR
comp=Z,2μm,22.0s,MS4.9
COCO West Island 43.72 189 *e*P **P 05 33 54.1 0.0**
comp=Z,308nm,1.0s,mb6.0
COCO LR LR
comp=Z,2μm,22.0s,MS4.9
SEY Seymchan 44.21 30 *ce*P **P 05 33 57.3 -0.3**
PETK Petropavlovsk- 44.47 44 P **P 05 33 59.2 -0.6**
comp=Z,19nm,0.7s,mb4.9,baz=221,slow=3.4,SNR=25
PETK LR LR 05 54 39.2
comp=Z,3μm,18.5s,MS5.3,baz=75,slow=39
PETK Petropavlovsk- 44.47 44 P **P 05 33 59.2 -0.7**
PETK pmax pmax
comp=Z,19nm,0.7s,mb4.9
PETK MLR MLR
comp=Z,3μm,18.5s,MS5.3
PET Petropavlovsk 45.03 45 *e*P **P 05 34 05.9 +1.5**
PET *e* 05 35 49.0
PET *e*S **S 05 40 38.2 -4.9**
PET *e*SS SS 05 43 54.0 -11
PET pmax pmax
comp=Z,700nm,6.1s
PET pmax pmax
comp=Z,200nm,16.9s
PET pmax pmax
comp=Z,91nm,1.4s,mb5.4
PET pmax pmax
comp=Z,900nm,9.0s
PET pmax pmax
comp=Z,500nm,5.9s
PET MLR MLR
comp=Z,5μm,15.0s,MS5.6
PET MLR MLR
comp=Z,5μm,16.0s
PET Petropavlovsk 45.03 45 *e*P **P 05 34 00.8 -3.5**
comp=Z,136nm,1.3s,mb5.6
PET LR LR
comp=Z,5μm,19.0s,MS5.4
MAK Makhachkala 45.27 301 *e*P **P 05 34 04.5 -1.9**
MAK *e* 05 35 55.6
MAK *e*S **S 05 40 45.2 -1.5**
MAK *e* 05 43 55.8
MAK pmax pmax
comp=Z,270nm,1.3s,mb5.9
MAK MLR MLR
comp=Z,5μm,18.0s,MS5.5
WHFO Wadi Hawf 46.66 265 P **P 05 34 15.2 -2.5**
SNR=15
ABTO Aybut 47.32 265 P **P 05 34 24.4 +1.6**
SNR=5.8
MTA Mtatsminda 47.40 300 P **P 05 34 27.8 +4.7**
TBLG Delisi 47.43 300 P **P 05 34 26.7 +3.3**
TBLG Delisi 47.43 300 P **P 05 34 26.7 +3.4**
UMR Umm Al-Rimmam 47.58 283 *e*P **P 05 34 22.9 -1.8**
UMR AMb AMB 05 34 37.7
comp=Z,221nm,1.1s,mb6.1
GNI Garni 47.65 298 *ce*P **P 05 34 26.5 +1.4**
GNI pmax pmax
comp=Z,157nm,2.5s
GNI Garni 47.65 298 *e*P **P 05 34 25.9 +0.8**
comp=Z,99nm,1.0s,mb5.8
GNI LR LR
comp=Z,1μm,21.0s,MS4.9
GNI Garni 47.65 298 P **P 05 34 26.5 +1.5**
SNR=21
GNI P 05 34 26.5
SNR=21
QRN Al-Qurain 47.65 282 *e*P **P 05 34 22.9 -2.4**
QRN AMb AMB 05 34 33.4
comp=Z,244nm,1.2s,mb6.1
KBD Kabd 47.71 282 *e*P **P 05 34 23.8 -1.9**
KBD AMb AMB 05 34 35.3
comp=Z,139nm,1.3s,mb5.8
MIB Mutribah 47.82 283 *e*P **P 05 34 24.9 -1.7**
MIB AMb AMB 05 34 33.6
comp=Z,436nm,0.8s,mb6.5
RDF Al-Radifah 47.90 282 *e*P **P 05 34 25.4 -1.9**
RDF AMb AMB 05 34 34.0
comp=Z,448nm,1.0s,mb6.4
ZEI Tsey 47.92 301 *e*P **P 05 34 30.0 +2.8**
ZEI *e*S **S 05 41 31.5 +6.7**
ZEI pmax pmax
comp=Z,91nm,1.0s,mb5.8
DYDN Diyadin 48.54 297 *i*P **P 05 34 36.1 +4.1**
DGAR Diego Garcia 48.56 223 PFAKE 05 34 40.0 +7.6
DGAR LR LR
comp=Z,2μm,22.0s,MS4.9
DIGO Kars 48.64 298 *i*P **P 05 34 36.4 +3.6**
KIV Kislovodsk 48.67 303 P **P 05 34 33.1 +0.2**
comp=Z,2μm,0.9s,SNR=15
KIV Kislovodsk 48.67 303 *e*P **P 05 34 33.1 +0.2**
KIV *e* 05 34 44.9
KIV *i* 05 35 55.2
KIV *e* 05 36 26.1
KIV *i*S **S 05 41 40.3 +5.0**
KIV pmax pmax
comp=Z,100nm,1.6s,mb5.6
KIV MLR MLR
comp=Z,2μm,16.0s,MS5.3
KIV Kislovodsk 48.67 303 *e*P **P 05 34 33.4 +0.4**
comp=Z,298nm,1.0s,mb6.3
KIV LR LR
comp=Z,2μm,20.0s,MS5.2
KIV Kislovodsk 48.67 303 P **P 05 34 32.5 -0.4**
SNR=54
KIV P 05 34 32.5
SNR=54
KARS Kars 48.83 299 *e*P **P 05 34 38.4 +4.2**
HAKT HAKKARI 48.89 294 *i*P **P 05 34 34.7 0.0**
VRHR Novokhopersk 48.93 313 *e*P **P 05 34 33.9 -0.9**
VRHR *i* *PP pP 05 34 40.8 +3.2
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VANB Van 48.94 296 *e*P **P 05 34 42.5 +7.4**
CUKT Cukurca 49.03 294 *e*P **P 05 34 39.0 +3.1**
AGRB Hanur-Agry 49.07 297 *e*P **P 05 34 39.5 +3.5**
ARTV Artvin 49.60 299 *i*P **P 05 34 40.3 +0.2**
DAGI Agillar 49.63 299 *i*P **P 05 34 40.4 +0.1**
DBOC Borcka 49.77 300 *i*P **P 05 34 44.6 +3.2**
DDEM Demirkent 49.78 299 *i*P **P 05 34 41.5 0.0**
BCA Borcka 49.78 300 *e*P **P 05 34 44.2 +2.7**
DBAD Bademkaya 49.80 299 *i*P **P 05 34 40.1 -1.6**
HOMI Horasan 49.81 298 *i*P **P 05 34 42.2 +0.5**
ERZM Erzurum 50.24 298 *i*P **P 05 34 46.8 +1.8**
EZM Erzurum 50.24 298 *e*P **P 05 34 46.5 +1.5**
VORD Divnogorie 50.41 312 *e*P **P 05 34 45.0 -1.1**
VORD *e**PP pP 05 34 51.5 +2.7
VORD pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
VORD pmax pmax
comp=N,4.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,1.0s
VOR Voronezh 50.43 313 P **P 05 34 46.0 -0.3**
VOR pmax pmax
comp=Z,180nm,2.0s,mb5.8
VSR Storozhevoye 50.48 313 *e*P **P 05 34 45.2 -1.4**
VSR *e**PP pP 05 34 52.1 +2.8
VSR *e**SP sP 05 34 56.8 +6.4
VSR *e*S **S 05 42 00.3 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,6.0nm,0.4s
VSR pmax pmax
comp=E,20nm,1.3s
VSR smax
comp=N,350nm,4.9s
VSR smax
comp=Z,100nm,2.9s
VSR smax
comp=E,280nm,5.9s
VSR MLR MLR
comp=E,980nm,12.0s,MS5.3
VSR MLR MLR
comp=Z,2μm,12.0s,MS5.4
VSR MLR MLR
comp=N,1μm,10.0s,MS5.3
KLMR Klimovskoe 50.53 325 *i*P **P 05 34 45.9 -0.9**
KLMR *e* 05 36 42.0
KLMR pmax pmax
comp=Z,327nm,1.4s,mb6.1
KLMR pmax pmax
comp=Z,87nm,5.2s
KLMR MLR MLR
comp=Z,5μm,13.0s,MS5.7
BEST Besiri 50.71 295 *i*P **P 05 34 49.2 +0.6**
SOC Sochi 50.85 303 *ce*P **P 05 34 51.3 +1.8**
SOC *e**PP pP 05 34 58.6 +6.3
SOC *e*S **S 05 42 03.3 -2.5**
SOC *e**SS sS 05 42 14.8 +4.5
SOC *e* 05 44 36.4
SOC *e*SSS 05 47 04.1
SOC pmax pmax
comp=Z,150nm,3.6s
SOC pmax pmax
comp=Z,66nm,0.9s,mb5.6
SOC MLR MLR
comp=Z,2μm,14.0s,MS5.3
KTUT Trabzon 51.24 300 *e*P **P 05 34 55.3 +2.7**
BILL Bilibino 51.25 25 *e*P **P 05 34 51.2 -1.0**
BILL *i* 05 35 00.7
BILL *i* 05 36 04.6
BILL *i*S **S 05 42 04.4 -6.2**
BILL pmax pmax
comp=Z,92nm,1.6s,mb5.5
BILL MLR MLR
comp=Z,5μm,14.0s,MS5.7
BILL Bilibino 51.25 25 *e*P **P 05 34 51.2 -1.0**
comp=Z,134nm,1.1s,mb5.8
BILL LR LR
comp=Z,3μm,19.0s,MS5.3
MACK Trabzon 51.25 300 *i*P **P 05 34 55.5 +3.0**
MOS Moscow 51.28 319 *e*P **P 05 34 51.0 -1.6**
MOS *e* 05 36 45.4
MOS *e*S **S 05 42 12.9 +1.5**
MOS *e* 05 44 37.8
MOS pmax pmax
comp=Z,300nm,0.9s,mb6.2
MOS pmax pmax
comp=Z,287nm,0.9s,mb6.2
GUMT Gumushane 51.56 299 *e*P **P 05 34 53.5 -1.4**
DIYA Diyarbakir 51.59 296 *i*P **P 05 34 58.4 +3.1**
KELT Kelkit 51.78 299 *i*P **P 05 34 59.5 +2.9**
EZC Erzincan 51.79 298 *e*P **P 05 35 00.5 +3.8**
OBN Obninsk 51.90 318 *e*P **P 05 34 56.3 -0.9**
OBN *i* 05 35 01.8
OBN *i* 05 35 10.7
OBN *i* 05 36 03.3
OBN *i* 05 36 55.8
OBN *i*S **S 05 42 19.9 0.0**
OBN pmax pmax
comp=Z,60nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,4μm,16.0s,MS5.6
OBN Obninsk 51.90 318 *e*P **P 05 34 56.1 -1.1**
comp=Z,79nm,0.9s,mb5.6
OBN LR LR
comp=Z,3μm,19.0s,MS5.3
KAKA Kakadu 51.92 143 *e*P **P 05 34 55.4 -2.4**
comp=Z,40nm,0.7s,mb5.5
KAKA Kakadu 51.92 143 *e*P **P 05 34 55.3 -2.5**
comp=Z,173nm,0.9s,mb6.0
PTK Pertek 51.94 297 *e*P **P 05 34 56.4 -1.4**
ESPY Espiye-Giresun 52.03 300 *e*P **P 05 34 53.5 -4.9**
SVRC Sivrice-ELAZID 52.12 296 *e*P **P 05 35 00.5 +1.4**
ANN Anapa 52.29 305 *e*P **P 05 34 59.3 -1.0**
ANN *e**PP pP 05 35 10.7 +7.7
ANN *e* 05 36 55.4
ANN *e*S **S 05 42 23.7 -1.9**
ANN *e*SS SS 05 46 04.5 +1.6
ANN pmax pmax
comp=Z,92nm,0.8s,mb5.8
ANN MLR MLR
comp=Z,3μm,16.0s,MS5.4
ELZG Elazig 52.34 297 *i*P **P 05 35 00.7 -0.1**
KEMA Kemaliye 52.54 298 *i*P **P 05 35 02.5 +0.2**
MALT Malatya 52.81 297 *e*P **P 05 35 07.5 +3.3**
MALT Malatya 52.81 297 *e*P **P 05 35 04.2 0.0**
MALT pmax pmax
comp=Z,32nm,1.0s,mb5.2
MALT MLR MLR
comp=Z,3μm,19.0s,MS5.3
MALT Malatya 52.81 297 *e*P **P 05 35 04.2 0.0**
comp=Z,32nm,1.0s,mb5.2
MALT LR LR
comp=Z,3μm,19.0s,MS5.3
MALT Malatya 52.81 297‖ *i*P **P 05 35 04.4 +0.2**
AKCD Akcadag 53.20 297 *i*P **P 05 35 07.8 +0.7**
LVZ Lovozero 53.39 334 PFAKE 05 35 20.0 +12
LVZ LR LR
comp=Z,4μm,21.0s,MS5.4

SVSK Karacayir 53.53 299 *eP* **P 05 35 14.4 +4.9**
ERBA Erbaa 53.54 300 *i* P **P 05 35 12.0 +2.4**
FITZ Fitzroy Crossi 53.59 153 *eP* **P 05 35 07.6 -2.5**
comp=Z,53nm,0.9s,mb5.5
FITZ *eS* **S 05 42 40.1 -3.6**
FITZ Fitzroy Crossi 53.59 153 P **P 05 35 09.3 -0.8**
comp=Z,9.8nm,0.8s,mb4.8,baz=344,slow=6.9,SNR=20
FITZ Fitzroy Crossi 53.59 153 *eP* **P 05 35 07.8 -2.3**
comp=Z,33nm,0.9s,mb5.3
APA Apatity 53.83 333 ⇓*iP* **P 05 35 15.0 +3.7**
APA *i* 05 35 26.5
APA *i* S **S 05 42 49.0 +3.1**
APA *e* 05 44 56.0
APA *e*SS SS 05 46 26.0 -0.3
APA pmax pmax
comp=Z,81nm,1.4s,mb5.5
APA MLR MLR
comp=Z,5µm,15.0s,MS5.7
KVT Kavak 53.98 300 *eP* **P 05 35 13.9 +1.1**
PINB Pinarbasi 54.27 297 *i* P **P 05 35 18.2 +3.3**
SMY Shemya 54.38 45 *eP* **P 05 35 16.0 +0.5**
SMY pmax pmax
comp=Z,465nm,1.8s,mb6.1
SMY MLR MLR
comp=Z,2µm,18.0s,MS5.3
SMY Shemya 54.38 45 *eP* **P 05 35 16.0 +0.5**
comp=Z,465nm,1.8s,mb6.1
SMY LR LR
comp=Z,2µm,18.0s,MS5.3
DIKM Dikmen 54.44 301 *eP* **P 05 35 16.8 +0.7**
MBWA Marble Bar 54.49 161 *eP* **P 05 35 17.6 +1.0**
MBWA Marble Bar 54.49 161 *eP* **P 05 35 16.8 +0.2**
comp=Z,105nm,0.9s,mb5.8
MBWA LR LR
comp=Z,1µm,20.0s,MS4.9
JOF Joensuu 54.51 328 *eP* **P 05 35 15.0 -1.3**
JOF pmax pmax
comp=Z,44nm,0.8s,mb5.5
JOF Joensuu 54.51 328 *ep* **P 05 35 15.0 -1.3**
comp=Z,44nm,0.8s,mb5.5
SIM Simferopol' 54.59 305 *eP* **P 05 35 25.7 +8.5**
SIM *eS* **S 05 43 04.0 +7.2**
SIM pmax pmax
comp=Z,65nm,0.8s,mb5.7
SIM MLR MLR
comp=Z,3µm,20.0s,MS5.3
CTKT Corum 55.01 300 *i* P **P 05 35 19.9 -0.4**
YURE YUREGIR 55.33 295 *i* P **P 05 35 27.7 +5.0**
CDAG Cicekdag 55.56 299 *i* P **P 05 35 26.0 +1.7**
ILGA Ilgaz 55.70 301 *i* P **P 05 35 25.7 +0.3**
BALT Daday 55.83 302 *i* P **P 05 35 25.6 -0.6**
GULE Gulek 55.86 296 *i* P **P 05 35 31.2 +4.7**
CANT Cankiri 55.88 300 *eP* **P 05 35 29.0 +2.4**
ELDT Eldivan 56.05 300 *i* P **P 05 35 30.4 +2.6**
BR131 Keskin Array S 56.09 299 *eP* **P 05 35 27.2 -0.9**
comp=Z,27nm,0.8s,mb5.3
BR131 LR LR
comp=Z,817nm,20.0s,MS4.8
BRTR Keskin Array B 56.09 299 P **P 05 35 27.1 -1.0**
comp=Z,17nm,1.0s,mb5.0,baz=109,slow=6.8,SNR=21
BRTR LR LR 06 03 26.4
comp=Z,900nm,18.4s,MS4.9,baz=254,slow=40
MERS Mersin 56.17 296 *eP* **P 05 35 30.8 +2.0**
KEV Kevo 56.28 336 *eP* **P 05 35 26.6 -2.4**
KEV pmax pmax
comp=Z,23nm,0.8s,mb5.3
KEV Kevo 56.28 336 *eP* **P 05 35 27.5 -1.5**
comp=Z,48nm,0.9s,mb5.5
KEV LR LR
comp=Z,2µm,19.0s,MS5.3
KEV Kevo 56.28 336 *ep* **P 05 35 26.6 -2.4**
comp=Z,23nm,0.8s,mb5.3
SAFT Safranbolu 56.41 301 *eP* **P 05 35 36.6 +6.2**
BBAL Bala 56.52 299 *i* P **P 05 35 33.3 +2.1**
SULT Sultanhani-AKS 56.58 298 *eP* **P 05 35 31.4 -0.3**
MMAI Mount Meron Ar 56.62 291 P **P 05 35 31.4 -0.6**
comp=Z,6.9nm,0.8s,mb4.8,baz=68,slow=8.5,SNR=3.4
MMAI LR LR 06 05 52.5
comp=Z,2µm,19.1s,MS5.2,baz=70,slow=42
AKASG Malin Array Be 56.78 313 P **P 05 35 31.0 -1.8**
comp=Z,6.7nm,0.6s,mb4.9,baz=72,slow=6.1,SNR=19
AKASG LR LR 06 03 16.1
comp=Z,2µm,20.0s,MS5.3,baz=60,slow=40
AKBB Malin Array Si 56.78 313 *eP* **P 05 35 30.8 -2.0**
KIEV Kiev 56.79 313 *eP* **P 05 35 30.4 -2.5**
KIEV pmax pmax
comp=Z,40nm,0.9s,mb5.5
KIEV MLR MLR
comp=Z,3µm,20.0s,MS5.3
KIEV Kiev 56.79 313 *eP* **P 05 35 30.4 -2.5**
comp=Z,40nm,0.9s,mb5.5
KIEV LR LR
comp=Z,3µm,20.0s,MS5.3
ARCES ARCESS Array B 56.80 336 P **P 05 35 31.0 -1.7**
comp=Z,11nm,0.7s,mb5.0,baz=84,slow=7.7,SNR=14
ARCES LR LR 06 00 56.7
comp=Z,2µm,18.1s,MS5.3,baz=96,slow=37
ARE0 ARCESS Array S 56.80 336 *eP* **P 05 35 31.4 -1.3**
KAF Kangasniemi 56.86 327 *eP* **P 05 35 30.8 -2.4**
KAF pmax pmax
comp=Z,28nm,0.8s,mb5.3
KAF Kangasniemi 56.86 327 *ep* **P 05 35 30.8 -2.4**
comp=Z,28nm,0.8s,mb5.3
MICGM Minsk 56.96 318⇓*eP* **P 05 35 35.0 +1.0**
MNK Minsk 56.98 318⇓*eP* **P 05 35 35.0 +0.8**
MNK *eS* **S 05 43 28.0 -0.5**
MNK pmax pmax
comp=Z,80nm,1.0s,mb5.7
MNK MLR MLR
comp=Z,12µm,14.0s,MS6.2
MNK MLR MLR
comp=N,5µm,12.0s,MS6.2
MNK MLR MLR
comp=E,10µm,14.0s,MS6.2
FINES FINESS Array B 57.04 326 P **P 05 35 33.0 -1.5**
comp=E,13nm,0.6s,mb5.1,baz=87,slow=6.7,SNR=20
FINES LR LR 06 01 07.2
comp=E,2µm,19.2s,MS5.3,baz=86,slow=37
SGKT Sivrigoynuk 57.04 301 *i* P **P 05 35 34.4 -0.4**
LADK Ladik-KONYA 57.45 298 *eP* **P 05 35 38.9 +1.1**
NACGM Naroch 57.53 318 *eP* **P 05 35 34.0 -4.0**
KDHN Kadinhani 57.55 298 *i* P **P 05 35 36.9 -1.5**
KIZT Kizilcal 57.63 299 *eP* **P 05 35 38.6 -0.4**
CSS Prodhromos 57.65 294 *eP* **P 05 35 41.2 +1.9**
comp=E,64nm,0.8s,mb5.7
CSS Prodhromos 57.65 294 P **P 05 35 40.8 +1.5**
MDU Mudurnu 57.69 301 *eP* **P 05 35 40.7 +1.2**
HDMB Hadim 57.71 296 *eP* **P 05 35 39.5 -0.1**
SVRH Sivrihisar-ESK 57.74 300 *eP* **P 05 35 37.8 -2.0**
KIS Kishinev 57.78 309 *eP* **P 05 35 39.0 -1.0**
comp=E,100nm,2.0s,mb5.5
KIS Kishinev 57.78 309 *e*PP PP 05 37 54.0 +6.2
KIS *e*LQ 05 54 16.0
KIS LRM 06 02 28.0
comp=E,2µm,14.0s
KIS Kishinev 57.78 309 *eP* **P 05 35 39.0 -1.0**
KIS *i* 05 35 45.0
KIS *e* 05 37 54.0
KIS pmax pmax
comp=Z,130nm,2.0s,mb5.6
KIS MLR MLR
comp=Z,2µm,14.0s,MS5.3
KIS MLR MLR
comp=N,2µm,15.0s,MS5.4
KIS MLR MLR
comp=E,1µm,15.0s,MS5.4
KIS MLR MLR
comp=Z,2µm,14.0s
HENT Hendek 57.83 301 *i* P **P 05 35 41.6 +1.2**
LEF Lefka 57.95 294 *eP* **P 05 35 42.4 +1.1**
MSEY Mahe Island 57.99 241 PFAKE 05 35 50.0 +8.2
MSEY LR LR
comp=Z,1µm,19.0s,MS5.1
GULT Gulveren 58.21 301 *eP* **P 05 35 43.6 +0.5**
BOLV Bolvadin 58.37 299 *i* P **P 05 35 43.1 -1.1**
BORA Eskisehir 58.41 300 *i* P **P 05 35 45.3 +0.8**
BJO Bjornoya 58.56 342 AMS AMS 06 05 42.0
comp=Z,4µm,13.8s,MS5.7
TIRR Tirgusor 58.66 306 *eP* **P 05 35 47.9 +1.7**
TIRR pmax pmax
comp=Z,30nm,1.0s,mb5.3
TIRR Tirgusor 58.66 306 *eP* **P 05 35 47.9 +1.8**
comp=Z,30nm,1.0s,mb5.3
CFR Carcaliu 58.67 307 ⇑*iP* **P 05 35 47.3 +1.1**
CFR Carcaliu 58.67 307 ⇑*iP* **P 05 35 47.3 +1.1**

SUTC Sutluce-Ispart 58.69 297 *eP* **P 05 35 48.2 +1.7**
SHUT Suhut-Afyon 58.72 299 *eP* **P 05 35 47.1 +0.4**
CAVI Cavuskoy 58.77 301 *eP* **P 05 35 45.9 -1.1**
ALT Altintas 58.90 299 *eP* **P 05 35 48.8 +0.9**
ISP Isparta 58.95 298 *eP* **P 05 35 49.4 +1.0**
ISP Isparta 58.95 298 *eP* **P 05 35 47.4 -0.9**
comp=Z,94nm,0.8s,mb5.9
ISP LR LR
comp=Z,2µm,20.0s,MS5.2
ISP Isparta 58.95 298 ⇑*iP* **P 05 35 49.9 +1.6**
ISP Isparta 58.95 298 P **P 05 35 49.6 +1.3**
SPB4 Spitsbergen Ar 58.98 346 *eP* **P 05 35 47.0 -0.9**
WRAB Tennant Creek 59.00 146 P **P 05 35 48.0 -0.7**
comp=Z,2µm,1.1s,mb6.9,SNR=34
WRAB Tennant Creek 59.00 146 *eP* **P 05 35 47.8 -0.9**
WRAB pmax pmax
comp=Z,295nm,1.0s,mb6.3
WRAB MLR MLR
comp=Z,1µm,20.0s,MS5.0
WRAB Tennant Creek 59.00 146 *eP* **P 05 35 47.8 -1.0**
comp=Z,295nm,1.0s,mb6.3
WRAB LR LR
comp=Z,1µm,20.0s,MS5.0
WRA Warramunga Arr 59.01 146 PKP2bc 06 05 36.9
comp=Z,7.2nm,1.1s,baz=143,slow=2.2,SNR=5.2
PSN Preselentsi 59.02 305 P **P 05 35 49.0 +0.3**
COEN Coen 59.05 134 *eP* **P 05 35 48.4 -0.8**
comp=Z,708nm,0.8s,mb6.8
TRO Tromso 59.10 336 *eP* **P 05 35 48.5 -0.3**
TRO *eS* **S 05 43 56.9 +1.2**
TRO AMS AMS 05 59 10.4
comp=Z,2µm,19.0s,MS5.3
GDZ Gediz 59.36 300 *i* P **P 05 35 52.7 +1.6**
VRI Vrincioaia 59.45 308 ⇑P **P 05 35 52.1 +0.4**
VRI Vrincioaia 59.45 308⇑*iP* **P 05 35 52.1 +0.4**
PLOR Plostina 59.51 308 ⇑P **P 05 35 52.6 +0.6**
PLOR Plostina 59.51 308⇑*iP* **P 05 35 52.5 +0.5**
CTYL Yal??k??y-??at 59.54 303 *eP* **P 05 35 54.6 +2.3**
KHAL Karahalli 59.56 299 *i* P **P 05 35 50.2 -2.3**
PRD Provadia 59.70 305 P **P 05 35 55.3 +1.9**
ELL Elmali 59.75 297 *eP* **P 05 35 54.6 +0.8**
SUW Suwalki 59.76 318 *eP* **P 05 35 52.7 -0.9**
SUW *ep*P pP 05 35 57.4 +1.0
SUW LMZ 06 02 18.9
comp=Z,5µm,18.0s
SUW Suwalki 59.76 318 *eP* **P 05 35 52.7 -0.9**
comp=Z,392nm,1.1s,mb6.3
DURS Dursunbey 59.95 300 *i* P **P 05 35 56.7 +1.5**
BURAR Bucovina Array 60.01 310 ⇑P **P 05 35 55.3 -0.2**
BURAR Bucovina Array 60.01 310⇑*iP* **P 05 35 55.3 -0.2**
BUR08 Bucovina Ar. S 60.02 310 *eP* **P 05 35 55.0 -0.4**
MLR Muntele Rosu 60.08 308 ⇑P **P 05 35 56.2 +0.2**
MLR Muntele Rosu 60.08 308⇑*iP* **P 05 35 56.2 +0.2**
ADK Adak 60.10 45 PFAKE 05 36 10.0 +14
ADK LR LR
comp=Z,2µm,21.0s,MS5.2
DNZL Cakiroluk 60.11 298 *i* P **P 05 35 54.2 -2.0**
GAMB Gambell 60.20 31 *eP* **P 05 35 55.3 -1.1**
comp=Z,76nm,1.1s,mb5.6
LVV L'vov 60.22 313 *eP* **P 05 35 58.0 +1.1**
LVV *eS* **S 05 44 10.1 -0.6**
LVV MLR MLR
comp=N,500nm,17.0s,MS5.2
LVV MLR MLR
comp=E,1µm,17.0s,MS5.2
LVV MLR MLR
comp=Z,2µm,17.0s,MS5.2
BALB Balikesir 60.38 301 *eP* **P 05 35 59.9 +1.8**
JMB Yambol 60.48 304 P **P 05 36 00.7 +1.9**
JMB Yambol 60.48 304 P **P 05 35 58.5 -0.3**
BALY Balya 60.54 301 *i* P **P 05 36 01.1 +1.9**
EDRB Edirne 60.55 303 *eP* **P 05 35 59.9 +0.7**
RKY Sarkoy-Tekirda 60.58 302 *eP* **P 05 35 58.7 -0.7**
VOIR 60.70 308 ⇑P **P 05 36 01.8 +1.6**
VOIR 60.70 308⇑*iP* **P 05 36 01.8 +1.6**
SZH Strazhica 60.71 305 P **P 05 36 01.0 +0.7**
LPK Lapseki 60.98 302 *eP* **P 05 36 00.5 -1.7**
KWP Kalwaria Pacla 61.10 313 *eP* **P 05 36 02.6 -0.2**
KWP *ep*P pP 05 36 07.4 +1.8
KWP LMZ 06 01 58.0
comp=Z,3µm,21.7s
KWP Kalwaria Pacla 61.10 313 *eP* **P 05 36 02.2 -0.7**
comp=Z,173nm,0.9s,mb6.2
KWP LR LR
comp=Z,3µm,21.0s,MS5.4
KWP Kalwaria Pacla 61.10 313⇓*iP* **P 05 36 02.7 -0.1**
PVL Pavlikeni 61.14 305 P **P 05 36 05.6 +2.3**
MLSB Milas 61.19 298 *eP* **P 05 36 04.5 +0.9**
IZM Izmir 61.22 300 *eP* **P 05 36 08.0 +4.2**
MORW Morawa 61.26 167 *eP* **P 05 36 05.4 +1.4**
ARG Arkhangelos 61.28 297 *eP* **P 05 36 05.8 +1.5**
ENEZ Enez 61.30 302 *eP* **P 05 36 04.0 -0.4**
ALN Alexandroupoli 61.33 303 P **P 05 36 05.8 +1.2**
MOR8 Moi Rana 61.37 332 *eP* **P 05 36 06.1 +1.7**
MOR8 AMB AMB 05 36 19.1
comp=Z,42nm,1.9s,mb5.2
TNA Tin City 61.42 28 *eP* **P 05 36 03.6 -1.1**
comp=Z,67nm,1.3s,mb5.6
GCAM G?zelcaml? 61.47 299 *i* P **P 05 36 07.5 +1.9**
KDZ Kurdzhali 61.55 304 P **P 05 36 06.8 +0.7**
KOLS Kolonicke sedl 61.56 312 *eP* **P 05 36 05.7 -0.3**
KOLS *e* 05 36 11.5
KOLS *eS* **S 05 44 30.7 +2.8**
KOLS pmax pmax
comp=Z,15nm,1.1s,mb5.0
KOLS Kolonicke sedl 61.56 312 *eP* **P 05 36 05.7 -0.3**
KOLS *e* 05 36 11.5
KOLS *eS* **S 05 44 30.7 +2.8**
KOLS *e*SCS ScS 05 46 01.1 +3.4
TRPA Tarpa 61.61 311⇓*iP* **P 05 36 06.2 -0.2**
RDO Rodhopi 61.62 303 P **P 05 36 05.8 -0.7**
UZH Uzhgorod 61.63 312 *eP* **P 05 36 07.0 +0.5**
UZH *e* 05 36 52.2
UZH *eS* **S 05 44 27.0 -1.8**
UZH *e* 05 45 58.0
UZH MLR MLR
comp=N,1µm,15.0s,MS5.5
UZH MLR MLR
comp=E,2µm,15.0s,MS5.5
UZH MLR MLR
comp=Z,1µm,15.0s,MS5.1
BOZC Bozcaada 61.66 301 *i* P **P 05 36 08.6 +1.9**
GADA Gvkgeada 61.66 302 *eP* **P 05 36 05.1 -1.7**
PRK Paraskevi 61.69 301 *eP* **P 05 36 09.3 +2.3**
PRK Paraskevi 61.69 301 P **P 05 36 08.0 +1.0**
SMG Samos 61.76 299 *eP* **P 05 36 09.8 +2.3**
DRGR 61.88 310 ⇓P **P 05 36 09.7 +1.5**
DRGR 61.88 310⇓*iP* **P 05 36 09.7 +1.5**
STOK Stokkvaagen 61.89 333 *eP* **P 05 36 09.9 +2.0**
PLD Plovdiv 61.92 304 P **P 05 36 10.9 +2.4**
PLD Plovdiv 61.92 304 P **P 05 36 09.2 +0.7**
ASAR Alice Springs 62.01 148 P **P 05 36 08.0 -1.2**
comp=Z,9.1nm,0.7s,mb5.0,baz=330,slow=6.4,SNR=53
ASAR PKPPKP 06 05 15.9
comp=Z,1.4nm,1.0s,baz=164,slow=3.0,SNR=4.6
STHS Stebnicka Huta 62.08 313 *eP* **P 05 36 08.9 -0.5**
STHS *e* 05 36 15.5
STHS pmax pmax
comp=Z,24nm,0.9s,mb5.3
STHS Stebnicka Huta 62.08 313 *eP* **P 05 36 08.9 -0.5**
STHS *e* 05 36 15.5
PGB Panagyurishte 62.16 305 P **P 05 36 12.2 +2.1**
KARP Karpathos 62.24 296 *eP* **P 05 36 12.5 +1.7**
LIA Limnos Island 62.27 302 P **P 05 36 12.4 +1.5**
NIE Niedzica 62.66 313 *eP* **P 05 36 13.3 0.0**
OJC Ojcow 62.74 314 *eP* **P 05 36 13.2 -0.7**
OJC *ep*P pP 05 36 16.2 -0.5
OJC *eS* **S 05 44 44.0 +1.3**
OJC L 06 03 16.7
comp=Z,3.0nm,18.9s
MMB Musomiste 62.77 304 P **P 05 36 15.1 +0.8**
NSS Namsos 62.78 331 *eP* **P 05 36 15.1 +1.2**
NSS AMB AMB 05 36 19.7
comp=Z,36nm,1.1s,mb5.4
NSS AMS AMS 06 04 07.7
comp=Z,3µm,10.8s,MS5.7
VTS Vitosha 62.82 305 P **P 05 36 13.2 -1.3**
VTS Vitosha 62.82 305 P **P 05 36 12.5 -2.0**
KECS Kecovo 62.83 312 *eP* **P 05 36 14.0 -0.5**
KECS *e* 05 36 20.4
KECS pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
KECS Kecovo 62.83 312 *eP* **P 05 36 14.0 -0.5**

KECS *e* 05 36 20.4
APE Apeiranthos 62.96 299 *eP* **P 05 36 16.6 +1.0**
APE Apeiranthos 62.96 299⇑*iP* **P 05 36 19.1 +3.5**
BZS Buzias 62.96 309 P **P 05 36 14.9 -0.5**
OUR Ouranopolis 63.00 303 P **P 05 36 16.6 +0.8**
SRS Serrai 63.02 303 P **P 05 36 17.6 +1.7**
KKB Krupnik 63.14 304 P **P 05 36 17.5 +0.8**
PAIG Paliouri 63.35 302 P **P 05 36 18.2 +0.1**
PSZ Piszkesteto 63.37 312 *eP* **P 05 36 19.7 +1.6**
PSZ pmax pmax
comp=Z,36nm,1.1s,mb5.4
PSZ MLR MLR
comp=Z,2µm,19.0s,MS5.2
PSZ Piszkesteto 63.37 312 *eP* **P 05 36 19.7 +1.6**
comp=Z,36nm,1.1s,mb5.4
PSZ LR LR
comp=Z,2µm,19.0s,MS5.2
PSZ Piszkesteto 63.37 312⇑*ep*P pP 05 36 20.7 -0.2
PSZ Piszkesteto 63.37 312⇓*iP* **P 05 36 19.5 +1.4**
PLG Polygyros 63.37 303 P **P 05 36 19.0 +0.7**
AOS Alonnisos 63.46 301 P **P 05 36 20.2 +1.3**
NPS Neapolis 63.52 297 *eP* **P 05 36 25.5 +6.1**
XRY Khrisi 63.60 296 *eP* **P 05 36 22.3 +2.4**
LAST Lasithi 63.66 297 P **P 05 36 16.8 -3.5**
VAY Valandovo 63.68 304 *eP* **P 05 36 20.3 0.0**
VAY Valandovo 63.68 304 P **P 05 36 21.2 +0.9**
PTL Penteli 63.86 300 *eP* **P 05 36 22.9 +1.4**
VYHS Vyhne 63.87 312 *eP* **P 05 36 20.8 -0.6**
VYHS *e* 05 36 26.8
VYHS *eS* **S 05 45 00.5 +3.7**
VYHS pmax pmax
comp=Z,17nm,1.0s,mb5.0
VYHS Vyhne 63.87 312 *eP* **P 05 36 20.8 -0.6**
VYHS *e* 05 36 26.8
VYHS *eS* **S 05 45 00.5 +3.7**
VYHS *e*SCS ScS 05 46 20.0 +4.8
OKC Ostrava-Krasne 63.87 314 *eP* **P 05 36 21.0 -0.4**
OKC *eS* **S 05 44 58.4 +1.5**
OKC MLR MLR
comp=Z,2µm,17.3s,MS5.4
OKC Ostrava-Krasne 63.87 314 *eP* **P 05 36 21.0 -0.4**
OKC *eS* **S 05 44 58.4 +1.5**
OKC AMS AMS 06 03 40.0
comp=Z,2µm,17.3s
XOR Xorichti 63.90 302 P **P 05 36 22.0 +0.2**
VLY Voula,Athens 63.98 300 *eP* **P 05 36 20.3 -2.0**
ATH Athens Observa 64.00 300 *eP* **P 05 36 27.5 +5.1**
KLBR Kellerberrin 64.04 166 *eP* **P 05 36 22.1 -0.4**
comp=Z,74nm,0.8s,mb5.8
BUD Budapest 64.07 311⇑*eP* **P 05 36 22.9 +0.2**
BSD Bornholm Skovb 64.11 320 *i* P **P 05 36 24.3 +1.5**
BSD pmax pmax
comp=Z,22nm,1.0s,mb5.1
BSD Bornholm Skovb 64.11 320 *i* P **P 05 36 24.3 +1.5**
comp=Z,22nm,1.0s,mb5.2
KOLL Kolacno 64.11 313 *eP* **P 05 36 23.2 +0.2**
KOLL *e* 05 36 29.2
KOLL Kolacno 64.11 313 *eP* **P 05 36 23.2 +0.2**
KOLL *e* 05 36 29.2
NB2 NORSAR Subarra 64.14 327 P **P 05 36 20.7 -2.2**
comp=Z,47nm,0.9s,mb5.5,baz=73,slow=6.5
NOA NORSAR Array B 64.14 327 P **P 05 36 21.3 -1.6**
comp=Z,5.0nm,0.9s,mb4.5,baz=69,slow=6.7,SNR=14
LIT Litokhoron 64.16 303 P **P 05 36 23.4 0.0**
SIVA Sivas 64.23 297 P **P 05 36 25.6 +1.6**
NAIG Nisos Aigina 64.24 300 *eP* **P 05 36 25.0 +1.0**
MORC Moravsky Berou 64.26 314 *eP* **P 05 36 23.0 -1.0**
comp=Z,38nm,0.9s,mb5.4
MORC Moravsky Berou 64.26 314⇑*iP* **P 05 36 25.4 +1.4**
LTK Loutraki 64.53 300 *eP* **P 05 36 28.8 +2.9**
DIVS Divibare 64.54 308 P **P 05 36 28.6 +2.7**
VAM Vamos 64.55 297 *eP* **P 05 36 30.0 +3.9**
KZN Kozani 64.60 303 P **P 05 36 24.9 -1.4**
KRUS Krusevo 64.60 304 *eP* **P 05 36 24.6 -1.8**
AGG Agios Georgios 64.65 302 P **P 05 36 25.5 -1.2**
KSP Ksiaz 64.68 316 *eP* **P 05 36 26.8 +0.1**
KSP *ep*P pP 05 36 29.8 +0.4
KSP *e*PP PP 05 38 45.0 -3.5
KSP LMZ 06 05 48.8
comp=Z,7µm,18.2s
KSP Ksiaz 64.68 316 *eP* **P 05 36 26.4 -0.2**
KSP *eS* **S 05 45 06.5 -0.3**
KSP *e* 05 46 18.0
KSP *e*SS SS 05 49 22.5 +5.5
KSP *e*SSS 05 52 10.0
KSP MLR MLR
comp=Z,8µm,18.2s,MS6.0
THL Klokotos Trika 64.69 302 P **P 05 36 25.6 -1.3**
FNA Florina 64.72 304 P **P 05 36 27.9 +0.8**
OSL Oslo 64.72 326 *e* **P 05 36 30.7 +3.9**
PKSM Moragy 64.73 310 ⇑P **P 05 36 27.6 +0.5**
PKSM Moragy 64.73 310⇑*iP* **P 05 36 27.6 +0.5**
DPC Dobruska-Polom 64.82 315 *eP* **P 05 36 27.5 -0.1**
DPC *eS* **S 05 45 09.6 +1.0**
DPC MLR MLR
comp=Z,4µm,17.3s,MS5.7
DPC Dobruska-Polom 64.82 315 *eP* **P 05 36 27.5 -0.1**
DPC *eS* **S 05 45 09.6 +1.0**
DPC AMS AMS 06 05 30.0
comp=Z,4µm,17.3s
GVD Gavdhos 64.84 297 *eP* **P 05 36 29.1 +1.1**
comp=Z,129nm,0.6s,mb6.1
VRAC Vranov 65.00 314 ⇓P **P 05 36 30.5 +1.7**
VRAC Vranov 65.00 314⇓*iP* **P 05 36 30.5 +1.7**
VLI Veliai 65.03 299 *eP* **P 05 36 26.1 -3.1**
IVA Berane 65.03 306⇓*iP* **P 05 36 28.9 -0.2**
IVA Berane 65.03 306⇓*iP* **P 05 36 29.0 -0.1**
ZST Bratislava 65.06 313 *eP* **P 05 36 30.0 +0.8**
ZST *e* 05 36 35.4
ZST pmax pmax
comp=Z,12nm,0.6s,mb5.1
ZST MLR MLR
comp=Z,3µm,18.1s,MS5.5
ZST Bratislava 65.06 313 *eP* **P 05 36 29.9 +0.7**
ZST *e* 05 36 35.4
PVY Plav 65.07 306⇓*iP* **P 05 36 28.7 -0.7**
KYTH Kithira 65.11 299 *eP* **P 05 36 27.7 -2.0**
RGN Rugen 65.17 320 *eP* **P 05 36 30.6 +0.9**
comp=Z,34nm,0.6s,mb5.5
LAKA Lakka 65.18 301 P **P 05 36 30.1 -0.1**
PLE Pljevlja 65.21 307⇓*iP* **P 05 36 31.3 +1.0**
PLE Pljevlja 65.21 307⇓*iP* **P 05 36 31.4 +1.1**
NWAO Narrogin (SRO) 65.23 167 *eP* **P 05 36 30.7 +0.4**
comp=Z,494nm,0.9s,mb6.5
NWAO Narrogin (SRO) 65.23 167 P **P 05 36 30.6 +0.4**
comp=Z,50nm,1.0s,mb5.5,baz=347,slow=5.2,SNR=12
NWAO Narrogin (SRO) 65.23 167 *eP* **P 05 36 30.7 +0.4**
NWAO pmax pmax
comp=Z,71nm,0.9s
NWAO MLR MLR
comp=Z,2µm,20.0s
NWAO Narrogin (SRO) 65.23 167 *eP* **P 05 36 30.6 +0.4**
comp=Z,70nm,0.9s,mb5.7
NWAO LR LR
comp=Z,2µm,20.0s,MS5.2
COP Copenhagen 65.27 321 *eP* **P 05 36 32.9 +2.5**
COP pmax pmax
comp=Z,24nm,0.8s,mb5.3
COP Copenhagen 65.27 321 *i* P **P 05 36 32.9 +2.5**
comp=Z,24nm,0.8s,mb5.3
MOL Molde 65.27 330 *eP* **P 05 36 32.3 +1.9**
MOL AMB AMB 05 36 46.2
comp=Z,92nm,1.3s,mb5.6
MOL AMS AMS 06 05 48.3
comp=Z,3µm,16.8s,MS5.5
KONO Kongsberg 65.35 326 *eP* **P 05 36 33.9 +3.0**
KONO AMB AMB 05 36 46.1
comp=Z,40nm,2.0s,mb5.1
KONO *eS* S 05 45 16.0 +1.2
KONO AMS AMS 06 06 02.6
comp=Z,2µm,18.2s,MS5.3
KONO Kongsberg 65.35 326 *eP* **P 05 36 29.9 -1.0**
KONO pmax pmax
comp=Z,71nm,1.3s,mb5.5
KONO MLR MLR
comp=Z,2µm,19.0s,MS5.4
KONO Kongsberg 65.35 326 *eP* **P 05 36 29.9 -0.9**
comp=Z,71nm,1.3s,mb5.5
KONO LR LR
comp=Z,2µm,19.0s,MS5.4
UNV Unalaska Valle 65.44 41 *eP* **P 05 36 33.2 +1.7**
comp=Z,63nm,1.0s,mb5.6
TIR Tirane 65.59 305 *eP* **P 05 36 32.9 +0.2**

TIR pmax pmax
comp=Z,60nm,0.8s,mb5.7
TIR MLR MLR
comp=Z,1µm,20.0s,MS5.1
TIR Tirane 65.59 305 *eP* **P 05 36 32.9 +0.2**
comp=Z,60nm,0.8s,mb5.7
TIR LR LR
comp=Z,1µm,20.0s,MS5.1
UPM Unac-Piva 65.59 307 ||*iP* **P 05 36 32.5 -0.2**
UPM Unac-Piva 65.59 307 ||*iP* **P 05 36 32.6 -0.1**
RUE Ruedersdorf 65.61 318 *eP* **P 05 36 31.3 -1.4**
comp=Z,84nm,1.5s,mb5.5
ITM Ithomi 65.61 300 *eP* **P 05 36 32.9 0.0**
ITM Ithomi 65.61 300 P **P 05 36 33.0 +0.1**
CTA Charters Tower 65.62 135 *eP* **P 05 36 32.7 -0.4**
comp=Z,56nm,0.8s,mb5.6
CTA *eS* S 05 45 16.9 -2.1
CTAO Charters Tower 65.62 135 *eP* **P 05 36 32.2 -0.9**
CTAO pmax pmax
comp=Z,80nm,0.8s,mb5.8
CTAO MLR MLR
comp=Z,779nm,20.0s,MS4.9
CTAO Charters Tower 65.62 135 *eP* **P 05 36 32.2 -0.9**
comp=Z,80nm,0.8s,mb5.8
CTAO LR LR
comp=Z,779nm,20.0s,MS4.9
TTG Podgorica 65.62 306 ||*iP* **P 05 36 32.4 -0.5**
TTG Podgorica 65.62 306 ||*iP* **P 05 36 32.4 -0.5**
NKY Niksic 65.67 307 ||*iP* **P 05 36 32.4 -0.8**
NKY Niksic 65.67 307 ||*iP* **P 05 36 32.5 -0.7**
TREC Trest 65.69 314 *eP* **P 05 36 35.2 +2.0**
TREC MLR MLR
comp=Z,3µm,19.0s,MS5.5
TREC Trest 65.69 314 *eP* **P 05 36 35.2 +2.0**
TREC AMS AMS 06 04 40.0
comp=Z,3µm,19.0s
ULC Ulcinj 65.80 306 ||*iP* **P 05 36 33.7 -0.4**
ULC Ulcinj 65.80 306 ||*iP* **P 05 36 33.8 -0.3**
PVCC Panska Ves 65.82 316 *eP* **P 05 36 33.9 -0.1**
PVCC *eS* S 05 45 22.5 +1.7
PVCC MLR MLR
comp=Z,4µm,14.4s,MS5.8
PVCC Panska Ves 65.82 316 *eP* **P 05 36 33.9 -0.1**
PVCC *eS* S 05 45 22.5 +1.7
PVCC AMS AMS 06 06 00.0
comp=Z,4µm,14.4s
PYL PYLOS 65.85 300 *eP* **P 05 36 34.4 -0.1**
PYL PYLOS 65.85 300 P **P 05 36 39.7 +5.2**
BUM Brajici-Budva 65.92 306 ||*iP* **P 05 36 33.8 -1.1**
BUM Brajici-Budva 65.92 306 ||*iP* **P 05 36 33.8 -1.0**
CONA Conrad Observa 65.93 313 *i P* **P 05 36 34.5 -0.3**
comp=Z,67nm,1.2s,mb5.5,SNR=13
BRY Bratogost 65.95 307 *eP* **P 05 36 34.3 -0.7**
BRY Bratogost 65.95 307 *eP* **P 05 36 34.3 -0.7**
PRU Pruhonice 66.02 315 *eP* **P 05 36 35.2 -0.2**
PRU *eS* S 05 45 24.0 +0.7
PRU MLR MLR
comp=Z,5µm,16.8s,MS5.8
PRU Pruhonice 66.02 315 *eP* **P 05 36 35.2 -0.2**
PRU *eS* S 05 45 24.0 +0.7
PRU AMS AMS 06 06 10.0
comp=Z,5µm,16.8s
FORT Forrest 66.06 157 *eP* **P 05 36 37.2 +1.5**
comp=Z,95nm,0.7s,mb5.9
FORT Forrest 66.06 157 *eP* **P 05 36 36.4 +0.7**
comp=Z,180nm,0.9s,mb6.1
PRA Prague 66.06 315 P **P 05 36 37.0 +1.4**
PRA AMS AMS 06 06 40.0
BRG Berggiesshubel 66.07 316 *eP* **P 05 36 33.8 -1.9**
comp=Z,29nm,1.0s,mb5.3
BRG Berggiesshubel 66.07 316 *i P* **P 05 36 34.7 -1.0**
comp=Z,7.5nm,1.0s,mb4.7
BRG *i* 05 36 39.7
comp=Z,37nm,1.3s
BRG *i* 05 36 46.6
comp=Z,29nm,1.0s
BRG S S 05 45 27.0 +3.2
BRG SS SS 05 49 42.0 +3.3
BRG *e*PKPPKP 06 05 12.7
comp=Z,2.3nm,0.6s
BRG
comp=N,7µm,22.7s
BRG
comp=E,3µm,24.6s
BRG
comp=Z,3µm,18.1s
BRG Berggiesshubel 66.07 316 *i P* **P 05 36 34.7 -1.0**
BRG *i* 05 36 39.7
BRG *i* 05 36 46.7
BRG S S 05 45 27.0 +3.2
BRG SS SS 05 49 42.0 +3.3
HCY Herceg Novi 66.14 306 *eP* **P 05 36 35.7 -0.6**
HCY Herceg Novi 66.14 306 *eP* **P 05 36 35.7 -0.5**
ALE Alert 66.18 358 P **P 05 36 35.0 -0.9**
comp=Z,172nm,1.0s,mb6.0,SNR=10
ARSA Arzberg 66.39 312 ||*iP* **P 05 36 36.7 -1.0**
comp=Z,32nm,1.2s,mb5.2
CLL Collm 66.47 317 *eP* **P 05 36 36.5 -1.7**
comp=Z,33nm,1.0s,mb5.3
CLL Collm 66.47 317 *eP* **P 05 36 37.0 -1.2**
CLL *e* 05 36 43.0
CLL *i* 05 36 50.0
CLL *i* 05 37 05.9
CLL *eS* S 05 45 34.0 +5.3
CLL *e* 05 46 36.0
CLL pmax pmax
comp=Z,29nm,1.4s,mb5.1
CLL MLR MLR
comp=Z,5µm,18.9s,MS5.8
CLL Collm 66.47 317 *eP* **P 05 36 37.0 -1.2**
comp=Z,29nm,1.4s,mb5.1
CLL *e* 05 36 43.0
CLL *i* 05 36 50.0
CLL *i* PcP PcP 05 37 05.9 -1.9
CLL *eS* S 05 45 34.0 +5.3
CLL *e*ScS ScS 05 46 36.0 +0.8
CLL LR LR
comp=Z,5µm,18.9s,MS5.8
CLL Collm 66.47 317 *eP* **P 05 36 37.0 -1.2**
comp=Z,29nm,1.4s,mb5.1
CLL LmV 05 06 00.0
comp=N,3µm,19.8s
CLL LmV 05 06 00.0
comp=E,3µm,19.5s
CLL LmV 05 06 00.0
comp=Z,5µm,18.9s
CLL *e* 05 36 43.0
CLL *i* 05 36 50.0
comp=Z,107nm,1.7s
CLL *i* PcP PcP 05 37 05.9 -1.9
comp=Z,22nm,1.1s
CLL *e* 05 37 28.0
CLL *e*PP PP 05 39 06.0 +1.8
CLL *e* 05 39 11.0
CLL *eS* S 05 45 34.0 +5.3
comp=N,300nm,24.9s
CLL *eS* S 05 45 34.0 +5.3
comp=E,200nm,22.1s
CLL *e*ScS ScS 05 46 36.0 +0.8
CLL *e*SS SS 05 49 49.0 +4.2
CLL *e* 05 50 38.0
CLL *e*SSS 05 52 42.0
CLL *e*SSSS 05 53 48.0
DAG Danmarks Havn 66.49 348 *eP* **P 05 36 36.0 -2.0**
DAG Danmarks Havn 66.49 348 *i P* **P 05 36 36.0 -2.0**
MUD Monsted U'grnd 66.70 323 *i P* **P 05 36 45.7 +6.1**
MUD pmax pmax
comp=Z,54nm,1.1s,mb5.5
MUD Monsted U'grnd 66.70 323 *i P* **P 05 36 45.7 +6.1**
comp=Z,54nm,1.1s,mb5.5
FOO Floro 66.73 329 *eS* S 05 45 31.6 +0.1
FOO AMS AMS 06 06 50.0
comp=Z,4µm,15.4s,MS5.8
PERS Pernice 66.87 311 *eP* **P 05 36 42.8 +1.9**
PERS *eS* S 05 45 31.5 -2.1
PERS *e* 05 46 33.4
KHC Kasperske Hory 66.92 314 *eP* **P 05 36 40.5 -0.6**
KHC *e* 05 36 46.0
KHC *eS* S 05 45 34.7 +0.5
KHC MLR MLR
comp=Z,3µm,17.1s,MS5.6
KHC Kasperske Hory 66.92 314 *eP* **P 05 36 40.4 -0.7**
comp=Z,27nm,1.3s,mb5.1
KHC Kasperske Hory 66.92 314 *eP* **P 05 36 40.5 -0.6**
KHC *ex* x 05 36 46.0
KHC *eS* S 05 45 34.7 +0.5
KHC AMS AMS 06 05 20.0
comp=Z,3µm,17.1s
GEC2 GERESS Array S 66.94 314 *eP* **P 05 36 40.6 -0.7**
comp=Z,8µm,1.1s
GERES GERESS Array B 66.94 314 P **P 05 36 40.5 -0.8**
comp=Z,7.7nm,1.0s,mb4.7,baz=59,slow=6.4,SNR=18
GERES LR LR 06 06 05.4
comp=Z,3µm,18.4s,MS5.5,baz=61,slow=36
MOA Molln 66.96 313 ⇑*iP* **P 05 36 40.1 -1.4**
comp=Z,38nm,1.1s,mb5.3
BER Bergen 67.07 328 *eP* **P 05 36 43.9 +2.0**
BER *eS* S 05 45 34.7 -1.0
BER AMS AMS 06 06 28.5
comp=Z,4µm,13.3s,MS5.8
TANN Tannenbergstha 67.11 316 *eP* **P 05 36 40.6 -1.7**
comp=Z,40nm,1.2s,mb5.3
TTA Tatalina 67.18 29 *eP* **P 05 36 42.6 +0.1**
NKC Novy Kostel 67.19 316 *eP* **P 05 36 42.2 -0.6**
NKC *eS* S 05 45 39.3 +1.9
NKC MLR MLR
comp=Z,4µm,15.2s,MS5.7
NKC Novy Kostel 67.19 316 *eP* **P 05 36 42.2 -0.6**
NKC *eS* S 05 45 39.3 +1.9
NKC AMS AMS 06 06 40.0
comp=Z,4µm,15.2s
BOJS Bojanci 67.20 310 *i* P **P 05 36 45.5 +2.5**
BOJS *eS* S 05 45 43.8 +6.1
BOJS *e* 05 46 41.5
WET Wettzell 67.34 315 *eP* **P 05 36 42.3 -1.5**
comp=Z,24nm,1.1s,mb5.1
WET Wettzell 67.34 315 *eP* **P 05 36 42.3 -1.5**
WET pmax pmax
comp=Z,24nm,1.1s,mb5.1
JMIC Jan Mayen 67.41 341 *eS* S 05 45 41.5 +2.1
JMIC AMS AMS 06 03 54.5
comp=Z,1µm,27.1s,MS5.0
MIDW Midway 67.42 70 PFAKE 05 37 00.0 +15
MIDW LR LR
comp=Z,2µm,19.0s,MS5.3
LJU Ljubljana 67.47 311 *i* P **P 05 36 45.9 +1.2**
ROTZ Rotzenmuhle 67.51 315 *eP* **P 05 36 43.7 -1.2**
comp=Z,46nm,1.1s,mb5.4
COLD Coldfoot 67.53 24 *eP* **P 05 36 43.7 -0.9**
comp=Z,114nm,1.1s,mb5.8
MOX Moxa 67.53 316 *eP* **P 05 36 47.1 +2.1**
comp=Z,64nm,1.9s,mb5.3
MOX *e* 05 36 56.3
MOX *eS* S 05 45 49.0 +7.5
MOX
comp=Z,4µm,19.0s
MOX Moxa 67.53 316 *eP* **P 05 36 43.2 -1.8**
comp=Z,79nm,1.6s,mb5.5
MOX Moxa 67.53 316 *eP* **P 05 36 47.1 +2.1**
MOX *e* 05 36 56.3
MOX pmax pmax
comp=Z,64nm,1.9s,mb5.3
MOX MLR MLR
comp=Z,4µm,19.0s,MS5.6
CLZ Clausthal 67.79 318 *eP* **P 05 36 45.1 -1.5**
comp=Z,77nm,1.0s,mb5.7
CLZ Clausthal 67.79 318 *eP* **P 05 36 45.1 -1.5**
CLZ pmax pmax
comp=Z,77nm,1.0s,mb5.7
JAVS Javornik 67.82 311 *i* P **P 05 36 48.5 +1.5**
JAVS *eS* S 05 45 47.9 +2.7
JAVS *e* 05 46 47.2
KBA Koelnbreinsper 67.83 312 ⇑*iP* **P 05 36 47.0 0.0**
comp=Z,23nm,0.8s,mb5.3,SNR=8.9
VOY Vojsko 67.88 311 *eP* **P 05 36 44.8 -2.5**
VOY *e* pP 05 36 47.9 -2.2
VOY *e* 05 36 51.8
VOY *e* 05 37 05.6
VOY *e* 05 37 14.6
VOY *e* 05 37 24.3
RJOB Jochberg 67.92 313 *eP* **P 05 36 46.2 -1.3**
comp=Z,27nm,1.1s,mb5.2
TRI Trieste 68.09 311 *eP* **P 05 36 48.5 -0.1**
TRI pmax pmax
comp=Z,100nm,1.1s,mb5.8
TRI MLR MLR
comp=Z,1µm,22.0s,MS5.1
TRI Trieste 68.09 311 *eP* **P 05 36 48.5 -0.1**
comp=Z,100nm,1.1s,mb5.8
TRI LR LR
comp=Z,1µm,22.0s,MS5.1
GRA1 Grafenberg Arr 68.13 316 *eP* **P 05 36 47.4 -1.4**
comp=Z,184nm,1.6s,mb5.9
GRA1 *eS* S 05 45 51.5 +2.8
GRA1 LR LR
comp=Z,5µm,21.1s,MS5.7
GRF Grafenberg Arr 68.13 316 *eP* **P 05 36 47.4 -1.4**
comp=Z,184nm,1.6s,mb5.9
GRF *eS* S 05 45 51.5 +2.8
GRF *eL* 06 03 43.9
comp=Z,5µm,21.1s
GRF Grafenberg Arr 68.13 316 *eP* **P 05 36 47.4 -1.4**
GRF *eS* S 05 45 51.5 +2.8
GRF pmax pmax
comp=Z,184nm,1.6s,mb5.9
GRF MLR MLR
comp=Z,5µm,21.1s,MS5.7
GRF Grafenberg Arr 68.13 316 *eP* **P 05 36 47.4 -1.4**
GRF *eS* S 05 45 51.5 +2.8
GRF pmax pmax
comp=Z,184nm,1.6s,mb5.9
GRF MLR MLR
comp=Z,5µm,21.1s,MS5.7
SVW2 Sparrevohn 68.13 31 *eP* **P 05 36 49.1 +0.5**
CHUM Lake Minchumin 68.27 27 *eP* **P 05 36 49.6 +0.2**
comp=Z,68nm,1.0s,mb5.6
UBBA Unterbreizbach 68.41 317 *eP* **P 05 36 48.4 -2.1**
comp=Z,28nm,1.5s,mb5.1
TIP Timpagrande 68.61 304 *eP* **P 05 36 50.3 -1.7**
comp=Z,48nm,1.0s,mb5.4
TIP LR LR
comp=Z,768nm,20.0s,MS4.9
PPLA Purkeypile 68.77 28 *eP* **P 05 36 52.5 -0.1**
comp=Z,83nm,0.8s,mb5.7
CHGN Chignik 68.82 36 *eP* **P 05 36 51.4 -1.6**
WTTA Wattenberg 68.83 313 ||*iP* **P 05 36 52.6 -0.6**
comp=Z,35nm,0.7s,mb5.4,SNR=9.5
KTH Kantishna Hill 68.97 28 *eP* **P 05 36 53.3 -0.5**
comp=Z,158nm,1.6s,mb5.7
MGR Morigerati 69.08 305 P **P 05 36 55.9 +1.0**
MOTA Moosalm 69.13 313 ⇑*iP* **P 05 36 54.2 -0.8**
comp=Z,36nm,0.8s,mb5.4
TRF Thorofare Moun 69.27 27 *eP* **P 05 36 54.9 -0.7**
comp=Z,3µm,0.8s
RETA Reutte 69.28 314 ⇑*iP* **P 05 36 55.8 -0.2**
comp=Z,26nm,1.0s,mb5.1,SNR=8.2
WIT Witteveen 69.48 320 *eP* **P 05 37 00.6 +3.5**
FETA Feichten 69.50 313 ⇑*iP* **P 05 36 56.7 -0.6**
comp=Z,85nm,0.9s,mb5.7,SNR=18
COLA College 69.50 26 *eP* **P 05 36 56.1 -1.0**
COLA pmax pmax
comp=Z,153nm,1.2s,mb5.8
COLA MLR MLR
comp=Z,3µm,19.0s,MS5.6
COLA College 69.50 26 *eP* **P 05 36 56.1 -0.9**
comp=Z,153nm,1.2s,mb5.8
COLA LR LR
comp=Z,3µm,19.0s,MS5.6
CEL Celeste 69.59 303 *eP* **P 05 36 56.7 -1.4**
comp=Z,154nm,0.9s,mb5.9
CEL LR LR
comp=Z,862nm,21.0s,MS5.0
TOD Tromm 69.60 316 *eP* **P 05 36 58.6 +0.7**
RSO Redoubt South 69.66 31 *eP* **P 05 36 58.1 0.0**
AQU L'Aquila 69.66 308 *eP* **P 05 37 00.1 +1.6**
comp=Z,114nm,1.0s,mb5.8
AQU LR LR
comp=Z,2µm,19.0s,MS5.3
AQU L'Aquila 69.66 308 ||*iP* **P 05 37 01.5 +3.1**
MCK McKinley 69.66 27 *eP* **P 05 36 56.9 -1.2**
MCK pmax pmax
comp=Z,25nm,0.7s,mb5.2
MCK McKinley 69.66 27 *eP* **P 05 36 56.9 -1.2**
comp=Z,26nm,0.7s,mb5.3
STU Stuttgart 69.72 315 *eP* **P 05 36 58.2 -0.5**
STU pmax pmax
comp=Z,84nm,1.1s,mb5.6
STU Stuttgart 69.72 315 *eP* **P 05 36 58.2 -0.5**
comp=Z,84nm,1.1s,mb5.6
WTSB Winterswijk 69.77 319 *eP* **P 05 37 01.3 +2.4**
comp=Z,40nm,1.4s,mb5.2
MTTG Motta San Giov 69.84 303 P **P 05 37 00.5 +0.8**
MURB Monte Urbino 69.88 309 P **P 05 37 03.2 +3.4**
DAVA Damuels 69.91 314 ⇑*iP* **P 05 36 58.4 -1.5**
comp=Z,34nm,1.1s,mb5.2
BADI Badiali 69.96 309 P **P 05 37 04.2 +3.9**
SFI Santa Sofia 70.06 310 P **P 05 36 58.4 -2.5**
ABH Alteburg 70.23 317 *eP* **P 05 37 03.3 +1.5**
SPAK Spaichingen-Ko 70.24 315 *eP* **P 05 37 01.6 -0.3**
KMBO Kilima Mbogo 70.35 256 P **P 05 37 02.7 -0.4**
comp=Z,16nm,0.9s,mb5.0,baz=32,slow=13,SNR=18
KMBO LR LR 06 10 20.0
comp=Z,751nm,18.3s,MS5.0,baz=251,slow=38
KMBO Kilima Mbogo 70.35 256 *eP* **P 05 37 03.5 +0.4**
KMBO pmax pmax
comp=Z,68nm,1.4s
KMBO MLR MLR
comp=Z,750nm,19.0s
KMBO Kilima Mbogo 70.35 256 *eP* **P 05 37 03.5 +0.5**
comp=Z,68nm,1.4s,mb5.4
KMBO LR LR
comp=Z,750nm,19.0s,MS5.0
KMBO Kilima Mbogo 70.35 256 P **P 05 37 05.9 +2.8**
SNR=6.5
KMBO P 05 37 05.9
SNR=6.5
BFO Black Forest 70.42 315 P **P 05 37 02.2 -0.8**
comp=Z,174nm,1.0s,mb5.9,SNR=5.7
BFO Black Forest 70.42 315 *eP* **P 05 37 00.9 -2.1**
comp=Z,32nm,1.0s,mb5.2
BFO Black Forest 70.42 315 *eP* **P 05 37 00.9 -2.1**
BFO pmax pmax
comp=Z,32nm,1.0s,mb5.2
FNVD Fontana Vidola 70.43 310 P **P 05 37 05.4 +2.3**
RUP Ruppelstein 70.59 317 *eP* **P 05 37 03.5 -0.5**
CSNT Castellina Chi 70.61 310 P **P 05 37 05.8 +1.6**
PMR Palmer 70.66 29 *eP* **P 05 37 03.6 -0.6**
PMR pmax pmax
comp=Z,108nm,1.4s,mb5.6
PMR Palmer 70.66 29 *eP* **P 05 37 03.6 -0.6**
comp=Z,108nm,1.4s,mb5.6
HGN Heimansgroeve 70.78 318 *eP* **P 05 37 07.2 +2.0**
comp=Z,22nm,2.0s,mb4.7
HGN Heimansgroeve 70.78 318 *eS* S 05 46 20.6 +0.7
MEM Membach 70.80 318 P **P 05 37 07.3 +2.0**
comp=Z,15nm,1.2s,mb4.8
FELD Feldberg im Sc 70.81 315 *eP* **P 05 37 04.4 -1.0**
BEBN Eben Emael 70.91 318 P **P 05 37 06.7 +0.7**
comp=Z,6.7nm,1.1s,mb4.5
VLC Villacollemand 70.91 310 *eP* **P 05 37 07.1 +1.0**
comp=Z,23nm,0.9s,mb5.1
VLC LR LR
comp=Z,1µm,20.0s,MS5.2
OHAK Old Harbor 70.94 34 *eP* **P 05 37 06.1 +0.1**
comp=Z,99nm,0.9s,mb5.7
OHAK LR LR
comp=Z,2µm,17.0s,MS5.5
KDAK Kodiak Island 71.00 33 P **P 05 37 06.0 -0.4**
comp=Z,626nm,0.8s,mb6.6,SNR=9.0
KDAK Kodiak Island 71.00 33 *i P* **P 05 37 05.6 -0.8**
CDF Champ du Feu 71.02 316 *eP* **P 05 37 05.1 -1.5**
comp=Z,96nm,1.1s,mb5.4
CDF Champ du Feu 71.02 316 *eP* **P 05 37 05.1 -1.5**
CDF pmax pmax
comp=Z,48nm,1.0s,mb5.4
CDF Champ du Feu 71.02 316 *eP* **P 05 37 05.1 -1.5**
comp=Z,48nm,1.0s,mb5.4
WLF Walferdange 71.14 317 P **P 05 37 07.1 -0.2**
comp=Z,85nm,1.2s,mb5.5
WLF Walferdange 71.14 317 *eP* **P 05 37 07.6 +0.3**
WLF pmax pmax
comp=Z,132nm,1.0s,mb5.8
WLF MLR MLR
comp=Z,3µm,20.0s,MS5.5
WLF Walferdange 71.14 317 *eP* **P 05 37 07.5 +0.2**
comp=Z,132nm,1.0s,mb5.8
WLF LR LR
comp=Z,3µm,20.0s,MS5.5
ECH Echery 71.18 315 *eP* **P 05 37 06.8 -0.8**
ECH Echery 71.18 315 *eP* **P 05 37 06.2 -1.4**
ECH pmax pmax
comp=Z,35nm,1.1s,mb5.2
ECH MLR MLR
comp=Z,2µm,22.0s,MS5.4
ECH Echery 71.18 315 *eP* **P 05 37 06.2 -1.4**
comp=Z,35nm,1.1s,mb5.2
ECH LR LR
comp=Z,2µm,22.0s,MS5.4
BOB Bobbio (Coli) 71.25 311 P **P 05 37 08.3 +0.2**
SCO Scoresbysund 71.28 343 *i P* **P 05 37 13.4 +5.6**
SCO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SCO Scoresbysund 71.28 343 *i P* **P 05 37 13.4 +5.6**
comp=Z,9.7nm,0.8s,mb4.8
BCLA Clavier 71.29 318 P **P 05 37 07.8 -0.5**
comp=Z,27nm,1.2s,mb5.0
MOF Molkenrain 71.35 315 *eP* **P 05 37 09.6 +0.9**
HINF Hinteralfeld 71.54 315 *eP* **P 05 37 08.0 -1.8**
comp=Z,75nm,1.0s,mb5.3
HINF Hinteralfeld 71.54 315 *eP* **P 05 37 08.0 -1.8**
HINF pmax pmax
comp=Z,38nm,1.0s,mb5.3
HINF Hinteralfeld 71.54 315 *eP* **P 05 37 08.0 -1.8**
comp=Z,38nm,1.0s,mb5.3
WDD Wield Dalam 71.59 301 *eP* **P 05 37 12.5 +2.1**
comp=Z,125nm,0.8s,mb5.9
WDD LR LR
comp=Z,478nm,20.0s,MS4.8
UCC Uccle 71.66 319 P **P 05 37 13.4 +2.9**
GIVF Givet 71.71 318 *eP* **P 05 37 09.5 -1.3**
comp=Z,93nm,1.1s,mb5.3
GIVF Givet 71.71 318 *eP* **P 05 37 09.5 -1.3**
GIVF pmax pmax
comp=Z,46nm,1.1s,mb5.3
GIVF Givet 71.71 318 *eP* **P 05 37 09.5 -1.3**
comp=Z,46nm,1.1s,mb5.3
HAU Haudompre 71.76 315 *eP* **P 05 37 09.4 -1.7**
comp=Z,47nm,1.0s,mb5.1
HAU *e*MLR MLR
comp=Z,4µm,18.2s,MS5.4
HAU Haudompre 71.76 315 *eP* **P 05 37 09.4 -1.7**
HAU pmax pmax
comp=Z,24nm,1.0s,mb5.1
HAU MLR MLR
comp=Z,4µm,18.3s,MS5.7
HAU Haudompre 71.76 315 *eP* **P 05 37 09.4 -1.7**
comp=Z,24nm,1.0s,mb5.1
HAU LR LR
comp=Z,4µm,18.3s,MS5.7
LOMF Lomont 71.76 315 *eP* **P 05 37 10.2 -0.9**
SNF Seneffe 71.83 318 P **P 05 37 12.9 +1.4**
comp=Z,29nm,1.6s,mb5.0
DOU Dourbes 71.84 318 P **P 05 37 11.2 -0.4**
comp=Z,13nm,1.1s,mb4.8
EGAK Eagle 71.96 24 *eP* **P 05 37 10.9 -1.1**
comp=Z,16nm,0.9s,mb4.9
EGAK LR LR
comp=Z,4µm,19.0s,MS5.7
BAIF Baives 72.08 318 *eP* **P 05 37 11.8 -1.2**
comp=Z,70nm,1.1s,mb5.2
BAIF Baives 72.08 318 *eP* **P 05 37 11.8 -1.2**
BAIF pmax pmax
comp=Z,35nm,1.1s,mb5.2
BAIF Baives 72.08 318 *eP* **P 05 37 11.8 -1.2**
comp=Z,35nm,1.1s,mb5.2
INK Inuvik 72.16 19 *eP* **P 05 37 12.0 -1.1**
INK pmax pmax
comp=Z,56nm,0.8s
INK Inuvik 72.16 19 *eP* **P 05 37 12.0 -1.2**
comp=Z,56nm,0.8s,mb5.5
DIV Divide 72.28 28 *eP* **P 05 37 13.9 -0.1**
comp=Z,13µm,0.6s
MEZF Maizieres J'vi 72.31 316 *eP* **P 05 37 13.2 -1.2**
EIDS Eidsvold 72.51 135 *eP* **P 05 37 15.2 -0.6**
comp=Z,75nm,0.8s,mb5.7
PGF Pioggiola 72.52 309 *eP* **P 05 37 14.7 -1.1**
comp=Z,184nm,0.9s,mb5.7
PGF Pioggiola 72.52 309 *eP* **P 05 37 14.7 -1.1**
PGF pmax pmax
comp=Z,92nm,0.9s,mb5.7
PGF Pioggiola 72.52 309 *eP* **P 05 37 14.7 -1.1**
comp=Z,92nm,0.9s,mb5.7
STKA Stephens Creek 72.53 147 *eP* **P 05 37 15.7 -0.1**
comp=Z,30nm,0.6s,mb5.4
STKA Stephens Creek 72.53 147 P **P 05 37 15.4 -0.4**
comp=Z,37nm,0.7s,mb5.4,baz=330,slow=7.2,SNR=24
STKA Stephens Creek 72.53 147 *eP* **P 05 37 15.8 -0.1**

comp=Z,13nm,0.9s,mb4.8
CABF La Chapelle 72.55 314 *e*P **P 05 37 14.2 -1.7**
comp=Z,174nm,1.6s,mb5.4
CABF La Chapelle 72.55 314 *e*P **P 05 37 14.2 -1.7**
CABF pmax pmax
comp=Z,87nm,1.6s,mb5.4
CABF La Chapelle 72.55 314 *e*P **P 05 37 14.2 -1.7**
comp=Z,87nm,1.6s,mb5.4
LPG La Plagne 72.64 313 *e*P **P 05 37 15.8 -0.7**
comp=Z,143nm,0.8s,mb5.7
LPG La Plagne 72.64 313 *e*P **P 05 37 15.8 -0.7**
LPG pmax pmax
comp=Z,71nm,0.8s,mb5.7
LPG La Plagne 72.64 313 *e*P **P 05 37 15.8 -0.7**
comp=Z,71nm,0.8s,mb5.7
LPL La Plagne 72.64 313 *e*P **P 05 37 15.7 -0.8**
comp=Z,199nm,1.0s,mb5.7
LPL La Plagne 72.64 313 *e*P **P 05 37 15.7 -0.8**
LPL pmax pmax
comp=Z,100nm,1.0s,mb5.7
LPL La Plagne 72.64 313 *e*P **P 05 37 15.7 -0.8**
comp=Z,100nm,1.0s,mb5.7
OSPF L'Ospedale 72.79 309 *e*P **P 05 37 18.6 +1.2**
SAOF Saorge 72.82 311 *e*P **P 05 37 17.3 -0.2**
BMRM Bremner River 72.84 28 *e*P **P 05 37 17.2 -0.2**
comp=Z,464nm,0.6s,mb6.6
BNI Bardonecchia 72.89 313 *e*P **P 05 37 16.4 -1.5**
BNI pmax pmax
comp=Z,94nm,1.3s,mb5.6
BNI MLR MLR
comp=Z,3µm,20.0s,MS5.5
BNI Bardonecchia 72.89 313 *e*P **P 05 37 16.4 -1.5**
comp=Z,94nm,1.3s,mb5.6
BNI LR LR
comp=Z,3µm,20.0s,MS5.5
AUTN L'Aution 72.90 311 *e*P **P 05 37 19.8 +1.8**
SBF Sospel 72.95 311 *e*P **P 05 37 16.7 -1.6**
comp=Z,167nm,0.9s,mb5.7
SBF Sospel 72.95 311 *e*P **P 05 37 16.7 -1.6**
SBF pmax pmax
comp=Z,84nm,0.9s,mb5.7
SBF Sospel 72.95 311 *e*P **P 05 37 16.7 -1.6**
comp=Z,84nm,0.9s,mb5.7
MBDF Montbardon 72.98 312 *e*P **P 05 37 18.1 -0.4**
comp=Z,66nm,0.7s,mb5.3
MBDF Montbardon 72.98 312 *e*P **P 05 37 18.1 -0.4**
MBDF pmax pmax
comp=Z,33nm,0.7s,mb5.4
MBDF Montbardon 72.98 312 *e*P **P 05 37 18.1 -0.4**
comp=Z,33nm,0.7s,mb5.4
LUCF Luceram 73.00 311 *e*P **P 05 37 18.0 -0.6**
DAWY Dawson 73.00 24 *e*P **P 05 37 17.0 -1.2**
TOUF Mont Tournerai 73.00 311 *e*P **P 05 37 19.3 +0.7**
SURF Saint Ours 73.07 312 *e*P **P 05 37 21.2 +2.2**
SUMG Summit 73.11 349 *e*P **P 05 37 17.6 -1.2**
comp=Z,48nm,2.2s,mb5.0
GDM Grand'Maison 73.17 313 *e*P **P 05 37 19.4 -0.2**
OPO Ambohidratompo 73.26 235 P **P 05 37 19.3 -1.1**
comp=Z,8.0nm,0.8s,mb4.7,baz=18,slow=7.6,SNR=7.6
CALN Calern 73.35 311 *e*P **P 05 37 20.3 -0.4**
GRN Grenoble 73.39 313 *e*P **P 05 37 22.2 +1.3**
ESK Eskdalemuir 73.45 325 *e*P **P 05 37 21.3 +0.3**
ESK pmax pmax
comp=Z,68nm,1.4s,mb5.4
ESK MLR MLR
comp=Z,3µm,20.0s,MS5.5
ESK Eskdalemuir 73.45 325 *e*P **P 05 37 21.3 +0.3**
comp=Z,68nm,1.4s,mb5.4
ESK LR LR
comp=Z,3µm,20.0s,MS5.5
ORIF Oris-en-Rattie 73.45 313 *e*P **P 05 37 20.0 -1.3**
comp=Z,131nm,1.0s,mb5.5
ORIF *e*MLR MLR
comp=Z,3µm,19.5s,MS5.3
ORIF Oris-en-Rattie 73.45 313 *e*P **P 05 37 20.0 -1.3**
ORIF pmax pmax
comp=Z,65nm,1.0s,mb5.5
ORIF Oris-en-Rattie 73.45 313 *e*P **P 05 37 20.0 -1.3**
comp=Z,65nm,1.0s,mb5.5
ABPO Ambohimpanom 73.53 235 PFAKE 05 37 30.0 +8.0
ABPO LR LR
comp=Z,2µm,22.0s,MS5.2
RES Resolute Bay 73.58 5 *e*P **P 05 37 20.8 -0.7**
RES pmax pmax
comp=Z,50nm,0.9s,mb5.4
RES Resolute Bay 73.58 5 *e*P **P 05 37 20.8 -0.7**
comp=Z,50nm,0.9s,mb5.4
LOR Lormes 73.59 316 *e*P **P 05 37 20.0 -2.0**
comp=Z,74nm,1.1s,mb5.2
LOR *e*MLR MLR
comp=Z,3µm,17.5s,MS5.4
LOR Lormes 73.59 316 *e*P **P 05 37 20.0 -2.0**
LOR pmax pmax
comp=Z,37nm,1.1s,mb5.2
LOR MLR MLR
comp=Z,3µm,17.5s,MS5.7
LOR Lormes 73.59 316 *e*P **P 05 37 20.0 -2.0**
comp=Z,37nm,1.1s,mb5.2
LOR LR LR
comp=Z,3µm,17.5s,MS5.7
FRF La Foret Royal 73.60 311 *e*P **P 05 37 20.6 -1.5**
comp=Z,111nm,1.2s,mb5.4
FRF La Foret Royal 73.60 311 *e*P **P 05 37 20.6 -1.5**
FRF pmax pmax
comp=Z,55nm,1.2s,mb5.4
FRF La Foret Royal 73.60 311 *e*P **P 05 37 20.6 -1.5**
comp=Z,55nm,1.2s,mb5.4
VSL Villasalto 73.64 306 *e*P **P 05 37 23.4 +0.8**
comp=Z,43nm,1.1s,mb5.3
VSL LR LR
comp=Z,593nm,20.0s,MS4.9
LMR La Mourre 73.79 311 *e*P **P 05 37 21.6 -1.7**
comp=Z,182nm,1.2s,mb5.6
LMR La Mourre 73.79 311 *e*P **P 05 37 21.6 -1.7**
LMR pmax pmax
comp=Z,91nm,1.2s,mb5.6
LMR La Mourre 73.79 311 *e*P **P 05 37 21.6 -1.7**
comp=Z,91nm,1.2s,mb5.6
SMF Signal de Mont 73.90 315 *e*P **P 05 37 22.2 -1.7**
comp=Z,195nm,1.0s,mb5.7
SMF Signal de Mont 73.90 315 *e*P **P 05 37 22.2 -1.7**
SMF pmax pmax
comp=Z,98nm,1.0s,mb5.7
SMF Signal de Mont 73.90 315 *e*P **P 05 37 22.2 -1.7**
comp=Z,98nm,1.0s,mb5.7
SSF Saint Saulge 73.90 315 *e*P **P 05 37 22.0 -1.9**
comp=Z,94nm,1.1s,mb5.3
SSF Saint Saulge 73.90 315 *e*P **P 05 37 22.0 -1.9**
SSF pmax pmax
comp=Z,47nm,1.1s,mb5.3
SSF Saint Saulge 73.90 315 *e*P **P 05 37 22.0 -1.9**
comp=Z,47nm,1.1s,mb5.3
SMRF Simiane la Rot 74.09 312 *e*P **P 05 37 23.9 -1.1**
comp=Z,223nm,1.8s,mb5.5
SMRF Simiane la Rot 74.09 312 *e*P **P 05 37 23.9 -1.1**
comp=Z,223nm,1.8s,mb5.8
SSB Saint Sauveur 74.12 314 *e*P **P 05 37 26.0 +0.8**
SSB Saint Sauveur 74.12 314 *e*P **P 05 37 25.8 +0.6**
SSB pmax pmax
comp=Z,28nm,1.1s,mb5.1
SSB MLR MLR
comp=Z,1µm,22.0s,MS5.2
SSB Saint Sauveur 74.12 314 *e*P **P 05 37 25.8 +0.6**
comp=Z,28nm,1.1s,mb5.1
SSB LR LR
comp=Z,1µm,22.0s,MS5.2
AVF Avril sur Loir 74.12 315 *e*P **P 05 37 23.5 -1.7**
comp=Z,180nm,1.1s,mb5.6
AVF Avril sur Loir 74.12 315 *e*P **P 05 37 23.5 -1.7**
AVF pmax pmax
comp=Z,90nm,1.1s,mb5.6
AVF Avril sur Loir 74.12 315 *e*P **P 05 37 23.5 -1.7**
comp=Z,90nm,1.1s,mb5.6
VIVF Saint-Julien-l 74.24 313 *e*P **P 05 37 24.3 -1.6**
comp=Z,104nm,1.1s,mb5.4
VIVF Saint-Julien-l 74.24 313 *e*P **P 05 37 24.3 -1.6**
VIVF pmax pmax
comp=Z,52nm,1.1s,mb5.4
VIVF Saint-Julien-l 74.24 313 *e*P **P 05 37 24.3 -1.6**
comp=Z,52nm,1.1s,mb5.4
HYF Humbligny 74.32 316 *e*P **P 05 37 25.1 -1.2**
PLDF La Plantade 74.36 314 *e*P **P 05 37 26.9 +0.4**
COLF Collangettes 74.53 314 *e*P **P 05 37 29.2 +1.6**
BGF Bois d'Agland 74.54 315 *e*P **P 05 37 26.0 -1.6**
comp=Z,61nm,1.0s,mb5.2
BGF Bois d'Agland 74.54 315 *e*P **P 05 37 26.0 -1.6**
BGF pmax pmax
comp=Z,31nm,1.0s,mb5.2
BGF Bois d'Agland 74.54 315 *e*P **P 05 37 26.0 -1.6**
comp=Z,31nm,1.0s,mb5.2
AGO Saint Agoulin 74.62 315 *e*P **P 05 37 28.8 +0.8**
PYM Petit Puy Mans 74.84 314 *e*P **P 05 37 29.9 +0.6**
LBL Lubilhac 74.94 314 *e*P **P 05 37 30.6 +0.6**
BORG Borgarnes 75.03 339 PFAKE 05 37 40.0 +10
BORG LR LR
comp=Z,1µm,19.0s,MS5.3
TCF Toulx Ste Croi 75.06 315 *e*P **P 05 37 29.2 -1.4**
comp=Z,133nm,1.1s,mb5.5
TCF Toulx Ste Croi 75.06 315 *e*P **P 05 37 29.2 -1.4**
TCF pmax pmax
comp=Z,67nm,1.1s,mb5.5
TCF Toulx Ste Croi 75.06 315 *e*P **P 05 37 29.2 -1.4**
comp=Z,67nm,1.1s,mb5.5
LASF Ste Croix 75.13 313 *e*P **P 05 37 29.8 -1.3**
comp=Z,116nm,1.0s,mb5.5
VERF Verneugheol 75.16 315 *e*P **P 05 37 29.5 -1.7**
LDF La Druitiere 75.27 318 *e*P **P 05 37 30.1 -1.7**
comp=Z,49nm,1.0s,mb5.1
LDF La Druitiere 75.27 318 *e*P **P 05 37 30.1 -1.7**
LDF pmax pmax
comp=Z,25nm,1.0s,mb5.1
LDF La Druitiere 75.27 318 *e*P **P 05 37 30.1 -1.7**
comp=Z,24nm,1.0s,mb5.1
FRNF Fournols 75.29 314 *e*P **P 05 37 29.4 -2.5**
FLN La Foliniere 75.39 318 *e*P **P 05 37 30.7 -1.7**
comp=Z,78nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,4µm,20.2s,MS5.4
FLN La Foliniere 75.39 318 *e*P **P 05 37 30.7 -1.7**
FLN pmax pmax
comp=Z,39nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,4µm,20.3s,MS5.7
FLN La Foliniere 75.39 318 *e*P **P 05 37 30.7 -1.7**
comp=Z,39nm,1.1s,mb5.2
FLN LR LR
comp=Z,4µm,20.3s,MS5.7
KEST Kesra 75.41 303 P **P 05 37 32.0 -0.9**
comp=Z,1.8nm,0.6s,mb4.2,baz=321,slow=2.4,SNR=7.1
KEST LR LR 06 15 25.7
comp=Z,328nm,19.7s,MS4.6,baz=309,slow=40
GRR Gorron 75.80 318 *e*P **P 05 37 33.2 -1.6**
comp=Z,88nm,0.9s,mb5.4
GRR Gorron 75.80 318 *e*P **P 05 37 33.2 -1.6**
GRR pmax pmax
comp=Z,44nm,0.9s,mb5.4
GRR Gorron 75.80 318 *e*P **P 05 37 33.2 -1.6**
comp=Z,44nm,0.9s,mb5.4
CAF Calviac 75.83 314 *e*P **P 05 37 34.0 -1.0**
comp=Z,122nm,1.1s,mb5.5
CAF Calviac 75.83 314 *e*P **P 05 37 34.0 -1.0**
CAF pmax pmax
comp=Z,61nm,1.1s,mb5.4
CAF Calviac 75.83 314 *e*P **P 05 37 34.0 -1.0**
comp=Z,61nm,1.1s,mb5.4
RJF Les Rejaudoux 75.97 315 *e*P **P 05 37 34.8 -1.1**
comp=Z,120nm,1.1s,mb5.5
RJF *e*MLR MLR
comp=Z,3µm,21.0s,MS5.2
RJF Les Rejaudoux 75.97 315 *e*P **P 05 37 34.8 -1.1**
RJF pmax pmax
comp=Z,60nm,1.1s,mb5.4
RJF MLR MLR
comp=Z,3µm,21.0s,MS5.5
RJF Les Rejaudoux 75.97 315 *e*P **P 05 37 34.8 -1.1**
comp=Z,60nm,1.1s,mb5.4
RJF LR LR
comp=Z,3µm,21.0s,MS5.5
DMUB Kingscourt 76.03 325 *e*P **P 05 37 39.7 +3.7**
MFF Saint Martin d 76.31 316 *e*P **P 05 37 36.4 -1.3**
comp=Z,107nm,1.0s,mb5.4
MFF Saint Martin d 76.31 316 *e*P **P 05 37 36.4 -1.3**
MFF pmax pmax
comp=Z,54nm,1.0s,mb5.4
MFF Saint Martin d 76.31 316 *e*P **P 05 37 36.4 -1.3**
comp=Z,54nm,1.0s,mb5.4
MTLF Montolieu 76.53 313 *e*P **P 05 37 37.7 -1.4**
comp=Z,60nm,1.1s,mb5.1
MTLF Montolieu 76.53 313 *e*P **P 05 37 37.7 -1.4**
MTLF pmax pmax
comp=Z,30nm,1.1s,mb5.1
MTLF Montolieu 76.53 313 *e*P **P 05 37 37.7 -1.4**
comp=Z,30nm,1.1s,mb5.1
EJON La Jonquera 76.55 312 P **P 05 37 41.0 +1.8**
comp=Z,24nm,0.9s,mb5.1
ARMA Armidale 76.61 139 *e*P **P 05 37 40.3 +0.8**
ARMA Armidale 76.61 139 *e*P **P 05 37 40.4 +0.9**
comp=Z,37nm,1.0s,mb5.3
LFF La Frestale 76.63 315 *e*P **P 05 37 38.7 -0.9**
comp=Z,118nm,1.1s,mb5.5
LFF La Frestale 76.63 315 *e*P **P 05 37 38.7 -0.9**
LFF pmax pmax
comp=Z,59nm,1.1s,mb5.4
LFF La Frestale 76.63 315 *e*P **P 05 37 38.7 -0.9**
comp=Z,59nm,1.1s,mb5.4
FILF Filole 76.70 312 *e*P **P 05 37 40.5 +0.4**
SGMF Saint Gilles 76.83 319 *e*P **P 05 37 39.5 -1.2**
comp=Z,113nm,1.0s,mb5.5
SGMF Saint Gilles 76.83 319 *e*P **P 05 37 39.5 -1.2**
SGMF pmax pmax
comp=Z,56nm,1.0s,mb5.5
SGMF Saint Gilles 76.83 319 *e*P **P 05 37 39.5 -1.2**
comp=Z,56nm,1.0s,mb5.5
VALF Valcebollere 77.13 312 *e*P **P 05 37 42.0 -0.5**
ROSF Rostrenen 77.19 319 *e*P **P 05 37 41.5 -1.2**
comp=Z,117nm,1.1s,mb5.4
ROSF Rostrenen 77.19 319 *e*P **P 05 37 41.5 -1.2**
ROSF pmax pmax
comp=Z,59nm,1.1s,mb5.4
ROSF Rostrenen 77.19 319 *e*P **P 05 37 41.5 -1.2**
comp=Z,58nm,1.1s,mb5.4
QUIF Quistinic 77.36 319 *e*P **P 05 37 42.2 -1.4**
comp=Z,68nm,1.0s,mb5.2
QUIF Quistinic 77.36 319 *e*P **P 05 37 42.2 -1.4**
QUIF pmax pmax
comp=Z,34nm,1.0s,mb5.2
QUIF Quistinic 77.36 319 *e*P **P 05 37 42.2 -1.4**
comp=Z,34nm,1.0s,mb5.2
SKAG Skagway 77.43 27 *e*P **P 05 37 44.9 +1.1**
comp=Z,47nm,0.8s,mb5.5
MLS Moulis 77.43 313 *e*P **P 05 37 41.1 -3.0**
EMIR Miracle 77.69 312 P **P 05 37 49.0 +3.4**
YNG Young 77.84 143 *e*P **P 05 37 47.0 +0.7**
comp=Z,22nm,1.0s,mb5.0
EPF Esparros 77.86 313 *e*P **P 05 37 45.2 -1.4**
comp=Z,69nm,1.2s,mb5.2
EPF Esparros 77.86 313 *e*P **P 05 37 45.2 -1.4**
EPF pmax pmax
comp=Z,35nm,1.2s,mb5.2
EPF Esparros 77.86 313 *e*P **P 05 37 45.2 -1.4**
comp=Z,35nm,1.2s,mb5.2
ETOS Mallorca 77.95 309 P **P 05 37 48.4 +1.3**
comp=Z,44nm,1.1s,mb5.3
RESF Ens 77.98 313 *e*P **P 05 37 47.1 -0.1**
SET Setif 77.98 305 P **P 05 37 50.0 +2.6**
VIEF Viey 78.14 313 *e*P **P 05 37 47.6 -0.5**
EBIE Bielsa 78.17 313 P **P 05 37 49.5 +1.2**
comp=Z,33nm,0.9s,mb5.3
EPOB Poblet 78.27 311 P **P 05 37 51.0 +2.1**
comp=Z,37nm,0.9s,mb5.3
ETSF Etsaut 78.49 313 *e*P **P 05 37 49.2 -0.9**
comp=Z,36nm,0.8s,mb5.1
ETSF Etsaut 78.49 313 *e*P **P 05 37 49.2 -0.9**
ETSF pmax pmax
comp=Z,18nm,0.8s,mb5.0
ETSF Etsaut 78.49 313 *e*P **P 05 37 49.2 -0.9**
comp=Z,18nm,0.8s,mb5.1
SJPF Ste Jean 78.79 314 *e*P **P 05 37 51.1 -0.6**
comp=Z,68nm,1.1s,mb5.2
SJPF Ste Jean 78.79 314 *e*P **P 05 37 51.1 -0.6**
SJPF pmax pmax
comp=Z,34nm,1.1s,mb5.2
SJPF Ste Jean 78.79 314 *e*P **P 05 37 51.1 -0.6**
comp=Z,34nm,1.1s,mb5.2
EALK Alkurruntz 78.91 314 P **P 05 37 53.3 +1.0**
comp=Z,48nm,1.5s,mb5.2
CAN Canberra 78.95 143 *e*P **P 05 37 52.8 +0.3**
CAN pmax pmax
comp=Z,55nm,1.2s,mb5.4
CAN MLR MLR
comp=Z,794nm,20.0s,MS5.0
CAN Canberra 78.95 143 *e*P **P 05 37 52.8 +0.3**
comp=Z,55nm,1.2s,mb5.4
CAN LR LR
comp=Z,794nm,20.0s,MS5.0
ELIZ Elizondo 78.95 314 P **P 05 37 54.0 +1.4**
ELIZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ELIZ Elizondo 78.95 314 P **P 05 37 54.0 +1.4**
comp=Z,6.2nm,0.8s,mb4.6
ERTA Horta de San J 78.96 311 P **P 05 37 54.2 +1.6**
comp=Z,60nm,1.3s,mb5.4
ESAC San Caprasio 79.06 312 P **P 05 37 54.1 +0.9**
comp=Z,29nm,0.8s,mb5.2
CNB Canberra Magne 79.13 143 *e*P **P 05 37 55.0 +1.6**
EIBI Ibiza 79.31 309 P **P 05 38 00.1 +5.5**
comp=Z,45nm,1.1s,mb5.3
ABA Alger-Bouzarea 79.32 307 P **P 05 38 02.1 +7.4**
ADJB Djebel Djouab 79.37 306 P **P 05 38 02.6 +7.6**
EMHD Djebel Mahouad 79.69 306 P **P 05 38 05.0 +8.3**
EMOS Mosqueruela 79.79 311 P **P 05 37 58.4 +1.2**
comp=Z,98nm,1.4s,mb5.5
ECRI Cripan 79.86 314 P **P 05 37 59.8 +2.2**
ECRI pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ECRI Cripan 79.86 314 P **P 05 37 59.8 +2.3**
comp=Z,4.3nm,0.5s,mb4.6
SFJD Kangerlussuaq 80.02 350 *e*P **P 05 37 56.1 -1.8**
SFJD pmax pmax
comp=Z,50nm,0.8s,mb5.5
SFJD MLR MLR
comp=Z,2µm,21.0s,MS5.5
SFJD Kangerlussuaq 80.02 350 *e*P **P 05 37 56.1 -1.8**
comp=Z,50nm,0.8s,mb5.5
SFJD LR LR
comp=Z,2µm,21.0s,MS5.5
ELAN Lanestosa 80.08 315 P **P 05 37 58.7 0.0**
comp=Z,49nm,1.2s,mb5.3
DLBC Dease Lake 80.12 25 *e*P **P 05 37 59.5 +0.8**
DZM Mont Dzumac 80.43 123 *e*P **P 05 38 01.3 +0.5**
comp=Z,87nm,1.4s,mb5.5
DZM *e*SS SS 05 53 18.7 -1.1
comp=Z,589nm,30.2s
DZM *e*LR LR 06 03 07.6
comp=Z,820nm,22.9s
DZM Mont Dzumac 80.43 123 *i* Pg **P 05 38 05.9 +5.1**
DZM Mont Dzumac 80.43 123 *e*P **P 05 38 01.9 +1.1**
comp=Z,49nm,1.0s,mb5.4
EBEN Beniarda 80.52 310 P **P 05 38 04.2 +3.0**
comp=Z,29nm,1.1s,mb5.1
ECHE Chera 80.53 311 P **P 05 38 04.5 +3.3**
ECHE pmax pmax
comp=Z,14nm,1.0s,mb4.8
ECHE Chera 80.53 311 P **P 05 38 04.5 +3.3**
comp=Z,14nm,1.0s,mb4.8
ETOR Torete 80.56 312 P **P 05 38 01.5 +0.2**
ETOR pmax pmax
comp=Z,14nm,0.8s,mb4.9
ETOR Torete 80.56 312 P **P 05 38 01.5 +0.2**
comp=Z,14nm,0.8s,mb4.9
EBNR Beni Rached 80.62 307 P **P 05 38 07.6 +5.8**
ECHA Ech Chlef 80.81 307 P **P 05 38 09.0 +6.2**
EANR 'Ain N'Sour 81.10 307 P **P 05 38 11.1 +6.8**
EARI Arriondas 81.12 316 P **P 05 38 05.0 +0.7**
comp=Z,37nm,1.4s,mb5.1
ETRT Tiaret 81.26 306 P **P 05 38 13.5 +8.3**
ETOB Tobarra 81.42 310 P **P 05 38 06.4 +0.4**
comp=Z,92nm,1.7s,mb5.4
YKA Yellowknife Ar 81.67 17 P **P 05 38 05.7 -1.1**
comp=Z,6.8nm,0.8s,mb4.6,baz=331,slow=5.3,SNR=45
YKA PKKPbc PKKPbc 05 56 40.6 +1.2
comp=Z,0.7nm,0.7s,baz=147,slow=2.3,SNR=8.5
YKA PKPPKP 06 04 42.6
comp=Z,0.2nm,0.7s,baz=158,slow=1.9,SNR=3.9
YKA LR LR 06 15 36.8
comp=Z,848nm,20.7s,MS5.1,baz=25,slow=37
YKA Yellowknife Ar 81.67 17 P **P 05 38 05.7 -1.1**
YKA PKKPbc PKKPbc 05 56 40.6 +1.2
YKA P'P' 06 04 42.6
YKA LR LR 06 15 36.8
GUD Guadarrama 81.98 313 P **P 05 38 08.8 -0.1**
GUD pmax pmax
comp=Z,20nm,0.9s,mb5.0
GUD Guadarrama 81.98 313 P **P 05 38 08.8 -0.1**
comp=Z,20nm,0.9s,mb5.0
EVIA Vianos 82.05 310 P **P 05 38 11.1 +1.8**
EVIA pmax pmax
comp=Z,32nm,1.0s,mb5.2
EVIA Vianos 82.05 310 P **P 05 38 11.1 +1.8**
comp=Z,32nm,1.0s,mb5.2
EPON Pontenova 82.25 316 P **P 05 38 10.7 +0.4**
comp=Z,57nm,1.4s,mb5.3
ESDC Sonseca Array 82.41 312 P **P 05 38 10.6 -0.6**
comp=Z,3.9nm,0.7s,mb4.4,baz=49,slow=4.5,SNR=8.6
ESDC LR LR 06 17 49.4
comp=Z,798nm,19.0s,MS5.1,baz=45,slow=38
ESDC Sonseca Array 82.41 312 P **P 05 38 11.9 +0.7**
comp=Z,9.3nm,1.3s,mb4.5
ESLA Sonseca Array 82.41 312 *e*P **P 05 38 11.9 +0.8**
comp=Z,4.9nm,1.1s,mb4.3
ESLA LR LR
comp=Z,5µm,19.0s,MS5.9
FUNA Funafuti 82.47 105 PFAKE 05 38 20.0 +8.2
FUNA LR LR
comp=Z,4µm,21.0s,MS5.8
EHUE Huescar 82.56 310 P **P 05 38 13.8 +1.8**
EHUE pmax pmax
comp=Z,15nm,1.0s,mb5.0
EHUE Huescar 82.56 310 P **P 05 38 13.8 +1.8**
comp=Z,15nm,1.0s,mb5.0
PAB San Pablo 82.72 312 *e*P **P 05 38 13.3 +0.5**
PAB pmax pmax
comp=Z,14nm,1.0s,mb5.0
PAB MLR MLR
comp=Z,982nm,20.0s,MS5.2
PAB San Pablo 82.72 312 *e*P **P 05 38 13.2 +0.4**
comp=Z,14nm,1.0s,mb4.9
PAB LR LR
comp=Z,982nm,20.0s,MS5.2
ECAL Calabor 82.82 315 P **P 05 38 13.7 +0.5**
comp=Z,37nm,1.2s,mb5.3
EQES Quesada 82.88 310 P **P 05 38 14.0 +0.3**
comp=Z,61nm,1.0s,mb5.6
PBRG Braganca 82.90 315 *e*P **P 05 38 16.3 +2.6**
comp=Z,29nm,2.1s,mb4.9
PBRG Braganca 82.90 315 *e*PcP PcP 05 38 21.3 +2.8
EBAN Banos Encina 83.15 311 P **P 05 38 15.2 +0.2**
EBAN pmax pmax
comp=Z,31nm,1.1s,mb5.2
EBAN Banos Encina 83.15 311 P **P 05 38 15.2 +0.2**
comp=Z,31nm,1.1s,mb5.3
EBER Berja 83.27 309 P **P 05 38 19.6 +3.8**
comp=Z,101nm,1.7s,mb5.6
MVO Moncorvo 83.46 315 *e*P **P 05 38 17.2 +0.6**
comp=Z,42nm,1.1s,mb5.4
MVO Moncorvo 83.46 315 *e*PcP PcP 05 38 21.3 +0.4
MVO *e*S S 05 48 38.5 +0.2
MVO *e*LQ 06 04 33.8
MVO *e*LR LR 06 08 42.7
comp=Z,1µm,18.0s
ECOG Cogollos-Vega 83.51 310 P **P 05 38 19.9 +3.0**
ECOG pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ECOG Cogollos-Vega 83.51 310 P **P 05 38 19.9 +3.0**
comp=Z,10nm,0.9s,mb5.0
EMAZ Mazaricos 83.55 317 P **P 05 38 22.2 +5.1**
comp=Z,47nm,1.3s,mb5.5
EADA Adamuz 83.66 311 P **P 05 38 18.5 +0.8**
comp=Z,31nm,0.9s,mb5.4
ELOB Lobios 83.66 316 P **P 05 38 17.3 -0.3**
comp=Z,70nm,1.5s,mb5.6
MOO Moorlands 83.73 149 *e*P **P 05 38 22.2 +4.6**
PCAB Cabril 83.73 315 *e*P **P 05 38 20.4 +2.4**
comp=Z,75nm,1.6s,mb5.6
PCAB Cabril 83.73 315 *e*PcP PcP 05 38 26.5 +4.4
EGUA Guajares 83.76 309 P **P 05 38 20.9 +2.7**
EGUA pmax pmax
comp=Z,191nm,1.0s,mb6.2
EGUA Guajares 83.76 309 P **P 05 38 20.9 +2.7**
comp=Z,191nm,1.0s,mb6.2
PVRL Vila Real 83.81 315 *e*P **P 05 38 20.0 +1.6**
comp=Z,33nm,1.6s,mb5.2
PVRL *i* P 05 38 29.9
ERON Agron 83.81 310 P **P 05 38 21.9 +3.4**
TAU Tasmania Unive 84.16 149 *e*P **P 05 38 21.3 +1.5**
TAU pmax pmax
comp=Z,55nm,1.0s,mb5.6
TAU MLR MLR
comp=Z,824nm,21.0s,MS5.1
TAU Tasmania Unive 84.16 149 *e*P **P 05 38 21.3 +1.5**

comp=Z,55nm,1.0s,mb5.6
TAU LR LR
comp=Z,824nm,21.0s,MS5.1
MTE Manteigas 84.22 314 *e*P **P 05 38 21.3 +0.8**
comp=Z,62nm,1.1s,mb5.7
MTE Manteigas 84.22 314 *e*PcP PcP 05 38 25.7 +1.4
MTE *e*S S 05 48 38.7 -7.3
MTE *e*LQ 06 00 36.8
MTE *e*LR LR 06 08 15.1
comp=Z,976nm,22.0s
MTE Manteigas 84.22 314 *e*P **P 05 38 21.1 +0.6**
comp=Z,44nm,1.0s,mb5.5
MTE LR LR
comp=Z,1µm,20.0s,MS5.3
PCBR Castelo Branco 84.52 314 *e*P **P 05 38 21.5 -0.5**
comp=Z,36nm,1.1s,mb5.4
PCBR Castelo Branco 84.52 314 *e*PcP PcP 05 38 29.4 +3.8
PMRV Marv??o 84.71 313 *e*P **P 05 38 24.2 +1.2**
comp=Z,46nm,1.3s,mb5.5
PMRV Marv??o 84.71 313 *e*PcP PcP 05 38 27.9 +1.4
PMRV *e*S S 05 48 34.4 -16
PMRV *e*LQ 06 03 28.6
PMRV *e*LR LR 06 11 53.7
comp=Z,2µm,18.0s
EBAD Badajoz 84.87 313 P **P 05 38 23.3 -0.5**
comp=Z,28nm,1.1s,mb5.3
PESTR Estremoz 85.17 313 *e*P **P 05 38 26.4 +1.1**
comp=Z,32nm,1.3s,mb5.3
PESTR Estremoz 85.17 313 *e*PcP PcP 05 38 30.4 +1.9
PESTR *e*S S 05 48 50.2 -5.2
PESTR *e*LQ 06 04 21.7
PESTR *e*LR LR 06 13 19.4
comp=Z,1µm,18.0s
PTOM Tomar 85.22 314 *e*P **P 05 38 26.2 +0.6**
comp=Z,54nm,1.3s,mb5.5
PTOM Tomar 85.22 314 *e*PcP PcP 05 38 30.5 +1.8
EJIF Jimena Fronter 85.23 310 P **P 05 38 29.3 +3.6**
EJIF pmax pmax
comp=Z,13nm,0.8s,mb5.1
EJIF Jimena Fronter 85.23 310 P **P 05 38 29.3 +3.6**
comp=Z,13nm,0.8s,mb5.1
PBAR Barrancos 85.23 312 *e*P **P 05 38 26.1 +0.5**
comp=Z,42nm,1.4s,mb5.4
PBAR Barrancos 85.23 312 *e*PcP PcP 05 38 30.6 +1.8
PBAR *e*S S 05 48 49.6 -6.5
PBAR *e*LQ 06 05 08.8
PBAR *e*LR LR 06 13 01.5
comp=Z,1µm,20.0s
EMIN Mina Concepcio 85.24 312 P **P 05 38 26.1 +0.4**
comp=Z,81nm,1.5s,mb5.6
ESPR Espera 85.24 311 P **P 05 38 25.6 -0.1**
comp=Z,57nm,1.2s,mb5.6
EVO Evora 85.63 313 *e*P **P 05 38 26.9 -0.7**
comp=Z,49nm,1.0s,mb5.4
EVO *e*MLR MLR
comp=Z,2µm,21.2s,MS5.2
EVO Evora 85.63 313 *e*P **P 05 38 27.9 +0.3**
comp=Z,48nm,1.3s,mb5.6
EVO Evora 85.63 313 *e*PcP PcP 05 38 32.2 +1.7
LSZ Lusaka 85.65 249 *e*P **P 05 38 30.2 +2.2**
LSZ pmax pmax
comp=Z,31nm,1.3s,mb5.4
LSZ MLR MLR
comp=Z,1µm,19.0s,MS5.4
LSZ Lusaka 85.65 249 *e*P **P 05 38 30.2 +2.2**
comp=Z,31nm,1.3s,mb5.4
LSZ LR LR
comp=Z,1µm,19.0s,MS5.4
SFS San Fernando 85.70 310 PFAKE 05 38 40.0 +12
SFS LR LR
comp=Z,2µm,20.0s,MS5.5
PBEJ Beja 85.84 312 *e*P **P 05 38 28.6 -0.1**
comp=Z,33nm,1.0s,mb5.5
PBEJ Beja 85.84 312 *e*PcP PcP 05 38 33.4 +1.9
EGRO El Granado 85.89 312 P **P 05 38 28.1 -0.8**
comp=Z,43nm,1.3s,mb5.5
PVAQ Vaqueiros 86.12 312 *e*P **P 05 38 21.9 -8.2**
comp=Z,45nm,1.8s,mb5.4
PVAQ Vaqueiros 86.12 312 *e*PcP PcP 05 38 34.6 +1.9
PVAQ *e*S S 05 48 48.0 -17
PVAQ *e*LQ 06 01 20.1
PVAQ *e*LR LR 06 09 13.8
comp=Z,1µm,18.0s
PMAFR Mafra 86.16 314 *e*PcP PcP 05 38 37.2 +4.3
PMAFR *e*S S 05 48 58.5 -6.8
PMAFR *e*LQ 06 05 05.2
PMAFR *e*LR LR 06 12 30.0
comp=Z,1µm,20.0s
PCVE Castro Verde 86.19 312 *e*P **P 05 38 30.5 +0.1**
comp=Z,42nm,1.6s,mb5.4
PCVE Castro Verde 86.19 312 *e*PcP PcP 05 38 34.1 +1.1
PCVE *e*S S 05 48 58.7 -6.8
PCVE *e*LQ 06 05 27.6
PCVE *e*LR LR 06 13 52.2
comp=Z,1µm,18.0s
PBDV Barranco-do-Ve 86.35 312 *e*P **P 05 38 32.2 +1.0**
comp=Z,53nm,1.8s,mb5.5
PBDV Barranco-do-Ve 86.35 312 *e*PcP PcP 05 38 38.5 +4.7
PBDV *e*S S 05 49 00.0 -7.2
PBDV *e*LQ 06 06 53.1
PBDV *e*LR LR 06 10 00.0
comp=Z,1µm,20.0s
MSVF Nonsavu 86.62 113 *e*P **P 05 38 33.4 +0.6**
comp=Z,45nm,1.5s,mb5.5
MSVF LR LR
comp=Z,623µm,20.0s
MORF Marmelete 86.77 312 *e*P **P 05 38 33.7 +0.4**
comp=Z,93nm,1.3s,mb5.9
MORF Marmelete 86.77 312 *e*PcP PcP 05 38 37.4 +1.8
MORF *e*S S 05 49 02.0 -9.2
MORF *e*LQ 06 08 04.4
MORF *e*LR LR 06 13 37.0
comp=Z,1µm,18.0s
PFVI Vila Bisbo 86.99 312 *e*PcP PcP 05 38 40.1 +3.5
PFVI *e*S S 05 49 10.6 -2.8
PFVI *e*LQ 06 05 22.0
PFVI *e*LR LR 06 10 23.3
comp=Z,1µm,20.0s
RTC Rabat Centre 87.59 309 PFAKE 05 38 50.0 +13
RTC LR LR
comp=Z,681nm,19.0s,MS5.1
POHA Pohakuloa 88.93 68 *e*P **P 05 38 44.7 +0.8**
comp=Z,133nm,1.1s,mb6.2
FCC Fort Churchill 89.08 9 *e*P **P 05 38 42.3 -1.5**
comp=Z,2.1nm,1.3s,mb4.3
EDM Edmonton 89.95 21 *e*P **P 05 38 48.2 +0.1**
A05A Maple Falls 90.35 28 ⇓P **P 05 38 49.8 -0.2**
baz=90
NLWA Neilton Lookou 90.87 30 PFAKE 05 39 00.0 +7.5
NLWA LR LR
comp=Z,2µm,19.0s,MS5.5
B06A Marblemount 90.97 28 ⇓P **P 05 38 53.1 +0.1**
baz=91
A07A Ashnola River, 90.98 27 ⇑P **P 05 38 52.8 -0.2**
baz=91,SNR=5.6
RPW Rockport 91.02 28 *e*P **P 05 38 53.4 +0.2**
comp=Z,6.4nm,0.8s,mb5.0
JCW Jim Creek 91.05 28 *e*P **P 05 38 54.0 +0.7**
GNW Green Mountain 91.18 29 *e*P **P 05 38 55.0 +1.1**
comp=Z,12nm,1.0s,mb5.2
FFC Flin Flon 91.56 14 *e*P **P 05 38 54.0 -1.5**
FFC pmax pmax
comp=Z,15nm,0.8s,mb5.4
FFC MLR MLR
comp=Z,1µm,20.0s,MS5.4
FFC Flin Flon 91.56 14 *e*P **P 05 38 54.0 -1.5**
comp=Z,15nm,0.8s,mb5.4
FFC LR LR
comp=Z,1µm,20.0s,MS5.4
A09A Danville 91.73 26 ⇓P **P 05 38 56.7 +0.3**
baz=91,SNR=7.0
D05A Enumclaw 91.83 29 ⇓P **P 05 38 56.5 -0.4**
baz=92
B08A Colville Reser 91.95 27 ⇑P **P 05 38 57.9 +0.5**
baz=92,SNR=10
F03A Seaside 92.14 31 ⇓P **P 05 38 58.9 +0.5**
baz=92
ETW Entiat 92.17 28 *e*P **P 05 38 58.9 +0.4**
comp=Z,14nm,0.7s,mb5.4
C07A Waterville 92.21 28 ⇓P **P 05 38 58.9 +0.2**
baz=92
B09A Rice 92.35 26 ⇑P **P 05 38 59.9 +0.6**
baz=92,SNR=8.0
A11A Hall Mountain, 92.57 25 ⇑P **P 05 39 01.2 +1.0**
baz=92
F04A Amboy 92.64 30 ⇑P **P 05 39 01.1 +0.5**
baz=92
C09A Chrisman Ranch 92.81 27 ⇓P **P 05 39 01.7 +0.2**
baz=92
NEW Newport 92.87 26 *e*P **P 05 39 00.3 -1.4**
NEW pmax pmax
comp=Z,16nm,0.8s
NEW MLR MLR
comp=Z,2µm,20.0s
NEW Newport 92.87 26 *e*P **P 05 39 00.3 -1.4**
comp=Z,16nm,0.8s,mb5.5
NEW LR LR
comp=Z,2µm,20.0s,MS5.6
TOA0 Torodi Ar. Sit 92.97 287 *e*P **P 05 39 02.6 -0.1**
TORD Torodi Ar. Bea 92.97 287 P **P 05 39 01.6 -1.2**
comp=Z,11nm,1.1s,mb5.2,baz=54,slow=3.1,SNR=19
TORD PP PP 05 42 47.2 +1.9
comp=Z,5.3nm,1.1s,baz=64,slow=7.5,SNR=4.8
TORD PKKPbc PKKPbc 05 56 16.4 +5.0
comp=Z,0.7nm,0.7s,baz=268,slow=2.0,SNR=4.6
TORD LR LR 06 26 19.6
comp=Z,1µm,18.6s,MS5.4,baz=45,slow=39
OD2 Odessa Site #2 92.98 27 *e*P **P 05 39 02.4 +0.1**
comp=Z,9.2nm,1.0s,mb5.2
B11A Sandpoint 93.00 25 ⇓P **P 05 39 03.3 +1.0**
baz=93
LBTB Lobatse 93.04 243 PFAKE 05 39 10.0 +7.2
LBTB LR LR
comp=Z,789nm,20.0s,MS5.2
B12A Libby 93.25 25 ⇑P **P 05 39 03.5 +0.1**
baz=93
A13A Flathead Natio 93.28 24 ⇑P **P 05 39 03.9 +0.3**
baz=93
COR Corvallis 93.31 31 PFAKE 05 39 10.0 +6.2
COR LR LR
comp=Z,253nm,20.0s,MS4.7
WALA Waterton Lakes 93.34 24 *e*P **P 05 39 02.4 -1.4**
comp=Z,0.3nm,0.8s
D09A Jones Farm, Ri 93.41 27 ⇓P **P 05 39 04.3 +0.1**
baz=93
HAWA Hanford 93.47 28 PFAKE 05 39 20.0 +15
HAWA LR LR
comp=Z,1µm,20.0s,MS5.4
A14A Double T Ranch 93.58 23 ⇑P **P 05 39 04.4 -0.6**
baz=93
H04A Detroit Lake 93.72 31 ⇑P **P 05 39 05.5 -0.2**
baz=93
B13A Whitefish 93.73 24 ⇑P **P 05 39 05.9 +0.2**
baz=93
SCHQ Schefferville 93.78 354 P **P 05 39 04.6 -1.1**
comp=Z,8.2nm,0.8s,mb5.2,baz=44,slow=7.2,SNR=8.2
SCHQ PKKPbc PKKPbc 05 56 10.2 +0.1
comp=Z,4.1nm,1.1s,baz=124,slow=5.3,SNR=3.7
SCHQ LR LR 06 24 45.0
comp=Z,1µm,20.5s,MS5.4,baz=127,slow=38
SCHQ Schefferville 93.78 354 *e*P **P 05 39 03.8 -1.9**
comp=Z,16nm,0.8s,mb5.5
SCHQ LR LR
comp=Z,2µm,20.0s,MS5.6
A15A Johnson Ranch, 93.81 23 ⇑P **P 05 39 05.8 -0.2**
baz=94
D10A Wagner Farm, O 93.81 27 ⇓P **P 05 39 05.9 -0.2**
baz=94
G06A Carlson Farm, 93.95 29 ⇑P **P 05 39 07.2 +0.4**
baz=94
BSMT Bassoo Peak 94.06 25 *e*P **P 05 39 07.3 +0.1**
comp=Z,5.3nm,0.5s,mb5.2
D11A Klaveano Farm, 94.18 26 ⇓P **P 05 39 07.8 0.0**
baz=94
A16A West Butte Ran 94.21 22 ⇑P **P 05 39 07.4 -0.5**
baz=94
C13A Hot Springs 94.29 25 ⇓P **P 05 39 09.0 +0.8**
baz=94,SNR=8.5
YBMT Yellow Bay 94.33 24 *e*P **P 05 39 09.1 +0.6**
comp=Z,11nm,1.0s,mb5.2
JTMT Jette 94.33 24 *e*P **P 05 39 08.8 +0.4**
comp=Z,5.4nm,0.7s,mb5.1
E10A Myers Farm, Un 94.35 27 ⇑P **P 05 39 08.5 -0.1**
baz=94
LNOR Lincton Mounta 94.40 28 *e*P **P 05 39 09.1 +0.3**
LNOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
LNOR Lincton Mounta 94.40 28 *e*P **P 05 39 09.1 +0.4**
comp=Z,1.9nm,0.6s,mb4.7
B15A Bradely Ranch, 94.44 23 ⇑P **P 05 39 08.3 -0.6**
baz=94,SNR=5.3
C14A Swan Lake 94.50 24 ⇑P **P 05 39 09.6 +0.4**
baz=94
D12A Red Ives Fores 94.54 25 ⇑P **P 05 39 09.0 -0.3**
baz=94
G08A Pilot Rock 94.60 28 ⇑P **P 05 39 09.6 -0.1**
baz=94
SWMT Swartz Lake 94.64 24 *e*P **P 05 39 10.4 +0.6**
comp=Z,5.2nm,0.7s,mb5.1
F10A Beach Ranch, E 94.73 27 ⇑P **P 05 39 10.9 +0.6**
baz=94
A18A Metzger Ranch, 94.79 21 ⇓P **P 05 39 09.9 -0.6**
baz=94
E11A Bogner Ranch, 94.80 26 ⇓P **P 05 39 10.7 +0.1**
baz=94
D13A Huson 94.83 25 ⇓P **P 05 39 09.9 -0.9**
baz=94
C15A Salmond Ranch, 94.89 23 ⇓P **P 05 39 10.7 -0.3**
baz=94,SNR=6.9
E12A Beaver Dam Sad 94.99 26 ⇓P **P 05 39 11.1 -0.4**
baz=95
HUMO Hull Mountain 95.01 32 PFAKE 05 39 20.0 +8.3
HUMO LR LR
comp=Z,1µm,22.0s,MS5.3
B17A L&G Farms, Che 95.04 22 ⇓P **P 05 39 10.9 -0.7**
baz=95,SNR=5.3
SLMT Seeley Lake 95.04 24 *e*P **P 05 39 11.0 -0.7**
comp=Z,19nm,0.9s,mb5.5
G09A Cove 95.09 28 ⇑P **P 05 39 11.7 -0.2**
baz=95
C16A Fuhringer Ranc 95.16 23 ⇑P **P 05 39 11.3 -1.0**
baz=95
D14A Greenough 95.18 24 ⇑P **P 05 39 11.9 -0.4**
baz=95
F11A Grangeville 95.21 27 ⇓P **P 05 39 12.3 -0.2**
baz=95
MSO Missoula 95.24 25 PFAKE 05 39 20.0 +7.4
MSO LR LR
comp=Z,1µm,20.0s,MS5.4
BOSA Boshof 95.25 240 LR LR 06 19 43.0
comp=Z,783nm,21.7s,MS5.1,baz=174,slow=34
BOSA Boshof 95.25 240 PFAKE 05 39 20.0 +7.2
BOSA LR LR
comp=Z,918nm,20.0s,MS5.2
B18A Beardsley Farm 95.27 21 ⇓P **P 05 39 12.1 -0.6**
baz=95
G10A Bishop Farm, J 95.34 27 ⇑P **P 05 39 13.0 -0.1**
baz=95
H08A Prairie City 95.35 29 ⇑P **P 05 39 13.0 -0.1**
baz=95
I07A Izee 95.36 30 ⇓P **P 05 39 13.2 0.0**
baz=95
CHMT Chamberlain Mo 95.41 24 *e*P **P 05 39 12.9 -0.5**
comp=Z,2.7nm,0.7s,mb4.8
E13A Victor 95.48 25 ⇑P **P 05 39 13.5 -0.3**
baz=95
D15A Lincoln 95.55 24 ⇑P **P 05 39 13.5 -0.5**
baz=95
G11A Walters Elk Ra 95.58 27 ⇓P **P 05 39 13.9 -0.3**
baz=95
EGMT Eagleton 95.61 22 PFAKE 05 39 30.0 +16
EGMT LR LR
comp=Z,2µm,21.0s,MS5.6
C17A Wharram Farm, 95.63 22 ⇑P **P 05 39 13.7 -0.6**
baz=95
F12A Elk City 95.67 26 ⇑P **P 05 39 13.9 -0.6**
baz=95
E14A Clinton 95.75 25 ⇓P **P 05 39 14.6 -0.4**
baz=95
K05A Summer Lake 95.85 31 ⇓P **P 05 39 15.5 0.0**
baz=96
D16A Dana Ranch, Ca 95.89 23 ⇑P **P 05 39 15.4 -0.2**
baz=96
F13A Darby 95.98 25 ⇓P **P 05 39 15.5 -0.5**
baz=96
E15A Deer Lodge 96.05 24 ⇓P **P 05 39 15.9 -0.4**
baz=96
H10A Noah's Angus R 96.07 28 ⇓P **P 05 39 16.3 -0.2**
baz=96
D17A Six Diamond Ra 96.08 23 ⇓P **P 05 39 16.4 0.0**
baz=96
HRY Holter Researc 96.08 24 *e*P **P 05 39 16.6 +0.2**
comp=Z,8.4nm,0.8s,mb5.2
I09A Lost Marbles R 96.18 29 ⇑P **P 05 39 16.8 -0.2**
baz=96
H11A Donnelly 96.26 27 ⇑P **P 05 39 16.9 -0.4**
baz=96
E16A East Helena 96.28 24 ⇓P **P 05 39 17.0 -0.4**
baz=96
D18A Linhart Farms, 96.32 22 ⇑P **P 05 39 17.0 -0.5**
baz=96
CMLA Cha da Macela 96.34 322 PFAKE 05 39 30.0 +12
CMLA LR LR
comp=Z,1µm,22.0s,MS5.3
J08A Circle Bar Ran 96.38 29 ⇓P **P 05 39 17.8 0.0**
baz=96
I10A Payette 96.47 28 ⇑P **P 05 39 18.3 +0.1**
baz=96
F15A Butte 96.60 24 ⇓P **P 05 39 18.4 -0.4**
baz=96
G13A Cobalt 96.61 26 ⇓P **P 05 39 18.6 -0.3**
baz=96
E17A Martinsdale 96.62 23 ⇑P **P 05 39 18.9 -0.1**
baz=96
LRM Limekiln Ridge 96.63 24 *e*P **P 05 39 17.4 -1.5**
comp=Z,16nm,0.8s,mb5.5
J09A Fry Pan Ranch, 96.69 29 ⇓P **P 05 39 19.1 -0.2**
baz=96
MOD Modoc 96.77 31 PFAKE 05 39 30.0 +10
MOD LR LR
comp=Z,1µm,19.0s,MS5.4
WDC Whiskeytown Da 96.80 33 PFAKE 05 39 30.0 +10
WDC LR LR
comp=Z,1µm,20.0s,MS5.3
DGMT Dagmar 96.82 18 PFAKE 05 39 30.0 +10
DGMT LR LR
comp=Z,3µm,21.0s,MS5.7
H12A Diamond D Ranc 96.84 26 ⇓P **P 05 39 19.6 -0.3**
baz=96
E18A Harlowton 96.84 22 ⇑P **P 05 39 20.3 +0.4**
baz=96
RPZ Rata Peaks 96.93 137 *e*P **P 05 39 25.2 +5.1**
DLMT Dillon 96.98 25 *e*P **P 05 39 20.8 +0.2**
comp=Z,5.3nm,0.8s,mb5.0
ULM Lac du Bonnet 97.01 12 P **P 05 39 21.8 +1.2**
comp=Z,2.9nm,0.8s,mb4.8,baz=335,slow=3.3,SNR=4.0
ULM PKKPbc PKKPbc 05 56 02.1 +0.6
comp=Z,1.2nm,0.7s,baz=155,slow=4.2,SNR=5.1
ULM LR LR 06 26 49.8
comp=Z,2µm,18.9s,MS5.5,baz=339,slow=38
H13A Challis 97.05 26 ⇓P **P 05 39 20.6 -0.3**
baz=97
BOZ Bozeman (W) 97.07 24 *e*P **P 05 39 21.0 0.0**
BOZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
BOZ MLR MLR
comp=Z,2µm,19.0s,MS5.6
BOZ Bozeman (W) 97.07 24 *e*P **P 05 39 21.0 +0.1**
comp=Z,3.8nm,0.8s,mb4.9
BOZ LR LR
comp=Z,2µm,19.0s,MS5.6
F17A Fitzpatrick Pl 97.18 23 ⇓P **P 05 39 21.5 0.0**
baz=97
G15A Dillon 97.19 25 ⇓P **P 05 39 21.3 -0.2**
baz=97
H14A Leadore 97.34 26 ⇓P **P 05 39 22.0 -0.2**
baz=97
MCMT McKenzie Canyo 97.35 25 *e*P **P 05 39 22.7 +0.5**
comp=Z,2.8nm,0.8s,mb4.7
I12A Atlanta 97.37 27 ⇑P **P 05 39 22.4 0.0**
baz=97
G16A Moss Hill, Enn 97.37 24 ⇑P **P 05 39 22.1 -0.2**
baz=97
CASY Casey 97.44 177 PFAKE 05 39 30.0 +8.1
CASY LR LR
comp=Z,875nm,20.0s,MS5.2
F18A Big Timber 97.49 23 ⇑P **P 05 39 22.9 0.0**
baz=97
H15A Lima 97.60 25 ⇑P **P 05 39 23.5 +0.1**
baz=97
I13A Wildhorse Cree 97.66 26 ⇑P **P 05 39 23.4 -0.2**
baz=97
G17A Pierce Place, 97.66 24 ⇑P **P 05 39 23.5 -0.1**
baz=97
SNZO South Karori 97.69 134 PFAKE 05 39 30.0 +6.4
SNZO LR LR
comp=Z,555nm,19.0s,MS5.1
HOPS Hopland 97.78 35 PFAKE 05 39 40.0 +16
HOPS LR LR
comp=Z,875nm,19.0s,MS5.3
J12A Stokes Ranch, 97.84 27 ⇓P **P 05 39 24.6 +0.1**
baz=98
HLID Hailey 97.84 27 *e*P **P 05 39 24.2 -0.3**
comp=Z,8.7nm,1.2s,mb5.2
HLID LR LR
comp=Z,2µm,20.0s,MS5.6
K11A Parker Ranch, 97.87 28 ⇑P **P 05 39 24.6 0.0**
baz=98
LAO LASA Array 97.88 20 *e*P **P 05 39 26.0 +1.4**
comp=Z,5.6nm,0.8s,mb5.2
LAO LR LR
comp=Z,2µm,20.0s,MS5.6
I14A Mackay 97.89 26 ⇓P **P 05 39 25.0 +0.2**
baz=98
H16A Russell Place, 98.02 24 ⇓P **P 05 39 25.3 0.0**
baz=98
J13A Cove Ranch, Pi 98.07 27 ⇑P **P 05 39 25.8 +0.3**
baz=98
L10A Juniper Basin 98.27 29 ⇓P **P 05 39 27.1 +0.6**
baz=98
RLMT Red Lodge 98.33 23 PFAKE 05 39 40.0 +13
RLMT LR LR
comp=Z,2µm,21.0s,MS5.6
BEKR Beckwourth 98.38 33 ⇑P **P 05 39 27.6 +0.6**
baz=98
K12A Draper Farm, C 98.44 28 ⇑P **P 05 39 27.4 +0.2**
baz=98
LKWY Lake 98.44 24 PFAKE 05 39 40.0 +13
LKWY LR LR
comp=Z,3µm,21.0s,MS5.7
L11A Cat Creek Ranc 98.49 28 ⇑P **P 05 39 28.1 +0.6**
baz=98
H17A Grant Village 98.53 24 ⇑P **P 05 39 27.9 +0.3**
baz=98
MCCM Marconi Confer 98.54 35 PFAKE 05 39 40.0 +12
MCCM LR LR
comp=Z,1µm,20.0s,MS5.3
I16A Newdale 98.66 25 ⇑P **P 05 39 28.4 +0.2**
baz=98
M10A I.L. Ranch, Tu 98.70 29 ⇓P **P 05 39 28.5 +0.1**
baz=98
J15A Blackfoot 98.73 26 ⇑P **P 05 39 28.8 +0.3**
baz=98
IMW Indian Meadow 98.84 24 *e*P **P 05 39 30.7 +1.8**
comp=Z,4.9nm,0.8s,mb5.1
AGMN Agassiz Refuge 98.89 13 PFAKE 05 39 40.0 +11
AGMN LR LR
comp=Z,2µm,21.0s,MS5.6
BMN Battle Mountai 99.32 30 PFAKE 05 39 40.0 +8.8
BMN LR LR
comp=Z,1µm,19.0s,MS5.5
J18A Kendall Valley 99.76 24 ⇑P Pdif 05 39 33.0 0.0
baz=99
AHID Auburn Hatcher 99.77 25 PFAKE 05 39 40.0 +7.0
AHID LR LR
comp=Z,2µm,20.0s,MS5.5
M13A Montello 99.81 28 ⇑P Pdif 05 39 32.9 -0.4
baz=100
CMB Columbia Colle 99.83 34 PFAKE 05 39 40.0 +6.7
CMB LR LR
comp=Z,707nm,21.0s,MS5.2
ELK Elko 99.89 29 PFAKE 05 39 50.0 +16
ELK LR LR
comp=Z,1µm,20.0s,MS5.4
EYMN Ely 99.97 10 PFAKE 05 39 50.0 +16
EYMN LR LR
comp=Z,2µm,20.0s,MS5.5
M14A Sheep Mountain 100.01 27 ⇓P Pdif 05 39 33.6 -0.5
baz=100
BW06 Boulder Array 100.31 24 PFAKE 05 39 50.0 +15
BW06 LR LR
comp=Z,2µm,20.0s,MS5.7
PDAR Pinedale Array 100.31 24 P Pdif 05 39 34.9 -0.6
comp=Z,0.2nm,0.7s,baz=338,slow=7.3,SNR=2.3
SAO San Andreas Ge 100.33 35 PFAKE 05 39 50.0 +14
SAO LR LR
comp=Z,732nm,20.0s,MS5.2
M15A Larsen Ranch, 100.39 27 ⇑P Pdif 05 39 34.3 -1.5
baz=100
NVAR Mina Array Bea 100.48 32 P Pdif 05 39 36.5 +0.3
comp=Z,0.1nm,0.5s,baz=350,slow=4.6,SNR=2.2

NVAR PP PP 05 43 43.5 +1.4
comp=Z,0.9nm,0.8s,baz=300,slow=6.7,SNR=4.8
NVAR Mina Array Bea 100.48 32 P Pdif 05 39 36.5 +0.3
NVAR PP PP 05 43 43.5 +1.4
SUR Sutherland 100.48 239 PFAKE 05 39 50.0 +14
SUR LR LR
comp=Z,2μm,20.0s,MS5.7
O12A Currie 100.50 29 ⇓P Pdif 05 39 35.4 -0.8
baz=100
HWUT Hardware Ranch 100.60 26 *e*Pdif Pdif 05 39 38.5 +1.7
comp=Z,3.2nm,0.8s
HWUT LR LR
comp=Z,1μm,20.0s,MS5.5
RSSD Black Hills 100.85 20 *e*P Pdif 05 39 38.4 +0.5
RSSD pmax pmax
comp=Z,6.0nm,0.8s
RSSD MLR MLR
comp=Z,463nm,19.0s,MS5.0
RSSD Black Hills 100.85 20 *e*Pdif Pdif 05 39 38.4 +0.5
comp=Z,6.2nm,0.8s
RSSD LR LR
comp=Z,463nm,19.0s,MS5.0
M17A Scullys Gap (B 101.05 25 ⇑P Pdif 05 39 38.3 -0.4
baz=101
TPH Tonopah 101.26 32 PFAKE 05 39 50.0 +10
TPH LR LR
comp=Z,750nm,19.0s,MS5.2
DUG Dugway 101.34 27 PFAKE 05 39 50.0 +10
DUG LR LR
comp=Z,1μm,21.0s,MS5.4
P13A Bates Ranch, G 101.48 29 ⇓P Pdif 05 39 40.4 -0.2
baz=101
DRV Dumont d'Urvil 101.59 166 SS SS 05 58 16.0 -7.6
DRV R 06 14 00.0
R11A Troy Canyon, C 101.75 30 ⇓P Pdif 05 39 41.5 -0.3
baz=101
L21A Rawlins 101.77 23 ⇓P Pdif 05 39 41.3 -0.7
baz=101
DBIC Dimbokro 101.90 285 PFAKE 05 39 50.0 +7.5
DBIC LR LR
comp=Z,1μm,20.0s,MS5.4
COWI Conover 102.11 9 PFAKE 05 39 50.0 +6.5
COWI LR LR
comp=Z,1μm,20.0s,MS5.5
DAC Darwin (Calif) 102.56 33 PFAKE 05 40 00.0 +15
DAC LR LR
comp=Z,822nm,21.0s,MS5.2
MVU Marysvale 103.03 28 PFAKE 05 40 00.0 +12
MVU LR LR
comp=Z,1μm,21.0s,MS5.4
ECSD EROS Data Cent 103.10 15 PFAKE 05 40 00.0 +12
ECSD LR LR
comp=Z,2μm,19.0s,MS5.6
MAW Mawson 103.20 195 PFAKE 05 40 00.0 +12
MAW LR LR
comp=Z,1μm,21.0s,MS5.4
PKME Peaks-Kenny Pk 103.49 355 PFAKE 05 40 00.0 +10
PKME LR LR
comp=Z,1μm,20.0s,MS5.4
GLMI Grayling 103.87 6 PFAKE 05 40 00.0 +8.7
GLMI LR LR
comp=Z,2μm,21.0s,MS5.6
ISCO Idaho Springs 104.30 23 PFAKE 05 40 00.0 +6.8
ISCO LR LR
comp=Z,3μm,20.0s,MS5.8
OGNE Ogallala 104.35 20 PFAKE 05 40 00.0 +6.6
OGNE LR LR
comp=Z,1μm,20.0s,MS5.4
SMCO Snowmass 104.39 24 *e*Pdif Pdif 05 39 54.5 +0.8
comp=Z,2.3nm,0.8s
LONY Lake Ozonia 104.40 358 PFAKE 05 40 00.0 +6.4
LONY LR LR
comp=Z,1μm,20.0s,MS5.5
LBNH Lisbon 104.68 357 PFAKE 05 40 10.0 +15
LBNH LR LR
comp=Z,1μm,22.0s,MS5.4
NCB Newcomb 105.04 358 PFAKE 05 44 20.0 +8.8
NCB LR LR
comp=Z,1μm,19.0s,MS5.5
JFWS Jewell Farm 105.08 10 PFAKE 05 44 20.0 +8.7
JFWS LR LR
comp=Z,2μm,20.0s,MS5.6
PFO Pinyon Flat Ob 105.28 34 PFAKE 05 44 20.0 +8.1
PFO LR LR
comp=Z,309nm,20.0s,MS4.8
SCIA State Center 105.55 13 PFAKE 05 44 20.0 +7.8
SCIA LR LR
comp=Z,2μm,20.0s,MS5.5
MVCO Mesa Verde 105.59 26 PFAKE 05 44 20.0 +7.6
MVCO LR LR
comp=Z,893nm,21.0s,MS5.3
SDCO Great Sand Dun 106.19 23 PFAKE 05 44 30.0 +17
SDCO LR LR
comp=Z,1μm,22.0s,MS5.5
AAM Ann Arbor 106.45 5 PFAKE 05 44 30.0 +16
AAM LR LR
comp=Z,2μm,21.0s,MS5.6
BINY Binghamton 106.84 360 PFAKE 05 44 30.0 +15
BINY LR LR
comp=Z,1μm,20.0s,MS5.5
ERPA Erie 106.86 3 PFAKE 05 44 30.0 +15
ERPA LR LR
comp=Z,2μm,20.0s,MS5.6
CBKS Cedar Bluff 106.98 19 PFAKE 05 44 30.0 +15
CBKS LR LR
comp=Z,2μm,20.0s,MS5.5
KSU1 Kansas State U 107.51 16 PFAKE 05 44 30.0 +14
KSU1 LR LR
comp=Z,2μm,19.0s,MS5.7
HDIL Hopedale 107.53 10 PFAKE 05 44 30.0 +14
HDIL LR LR
comp=Z,1μm,19.0s,MS5.5
ANMO Albuquerque 108.35 26 *e*PKPdf PKiKP 05 44 19.9 +2.3
SSPA Standing Stone 108.39 1 PFAKE 05 44 30.0 +13
SSPA LR LR
comp=Z,336nm,22.0s,MS4.9
ACSO Alum Creek Sta 108.56 5 PFAKE 05 44 30.0 +12
ACSO LR LR
comp=Z,1μm,21.0s,MS5.4
MCWV Mont Chateau 109.32 3 PFAKE 05 44 30.0 +11
MCWV LR LR
comp=Z,2μm,20.0s,MS5.8
CCM Cathedral Cave 109.64 12 PFAKE 05 44 30.0 +10
CCM LR LR
comp=Z,450nm,20.0s,MS5.0
AMTX Amarillo 110.05 22 PFAKE 05 44 30.0 +9.2
AMTX LR LR
comp=Z,1μm,20.0s,MS5.5
CBN Corbin 110.83 1 PFAKE 05 44 30.0 +7.9
CBN LR LR
comp=Z,2μm,20.0s,MS5.7
MNTX Cornudas Mount 111.66 26 *e*PKPdf PKiKP 05 44 23.0 -0.9
MNTX LR LR
comp=Z,894nm,19.0s,MS5.4
BLA Blacksburg 111.73 3 PFAKE 05 44 40.0 +16
BLA LR LR
comp=Z,2μm,21.0s,MS5.6
MIAR Mount Ida 112.57 15 PFAKE 05 44 40.0 +14
MIAR LR LR
comp=Z,2μm,21.0s,MS5.6
PLAL Pickwick Lake 113.17 10 PFAKE 05 44 40.0 +13
PLAL LR LR
comp=Z,1μm,19.0s,MS5.5
PPT Papeete 113.24 97 *e*PS PS 05 54 47.6 -5.5
comp=Z,401nm,26.2s
PPT *e*SS SS 06 00 54.0 -9.4
comp=Z,850nm,29.0s
PPT *e*LR LR 06 18 10.6
comp=Z,1μm,26.5s
OXF Oxford 113.42 11 PFAKE 05 44 40.0 +13
OXF LR LR
comp=Z,2μm,19.0s,MS5.7
CNNC Cliffs of the 113.78 1 PFAKE 05 44 40.0 +12
CNNC LR LR
comp=Z,2μm,20.0s,MS5.7
JCT Junction City 114.72 22 *e*PKIKP PKiKP 05 44 28.6 -1.2
JCT MLR MLR
comp=Z,2μm,19.0s,MS5.7
NATX Nacogdoches 114.98 17 PFAKE 05 44 40.0 +10
NATX LR LR
comp=Z,269nm,19.0s,MS4.9
SBA Scott Base 115.11 168 PFAKE 05 44 40.0 +11
SBA LR LR
comp=Z,680nm,19.0s,MS5.3
LRAL Lakeview Retre 115.24 10 PFAKE 05 44 40.0 +9.3
LRAL LR LR
comp=Z,1μm,22.0s,MS5.4
GOGA Godfrey 115.29 6 PFAKE 05 44 40.0 +9.2
GOGA LR LR
comp=Z,2μm,20.0s,MS5.6
VBMS Vicksburg 115.45 13 PFAKE 05 44 40.0 +8.9
VBMS LR LR
comp=Z,1μm,19.0s,MS5.5
BBSR BB Station 115.65 349 PFAKE 05 44 40.0 +8.5
BBSR LR LR
comp=Z,1μm,21.0s,MS5.4
NHSC New Hope 115.83 3 PFAKE 05 44 40.0 +8.1
NHSC LR LR
comp=Z,2μm,22.0s,MS5.7
HKT Hockley 116.39 19 PFAKE 05 44 40.0 +7.0
HKT LR LR
comp=Z,409nm,20.0s,MS5.0
TAOE Nuku Hiva Isla 117.14 84 *e*SP SP 05 55 19.2 -8.8
comp=Z,253nm,27.6s
TAOE *e*SS SS 06 01 49.4 -5.2
comp=Z,240nm,27.6s
TAOE *e*LR LR 06 20 06.4
comp=Z,973nm,24.1s
BRAL Brewton 117.22 10 PFAKE 05 44 50.0 +15
BRAL LR LR
comp=Z,2μm,19.0s,MS5.8
KVTX Kingsville 118.05 21 PFAKE 05 44 50.0 +14
KVTX LR LR
comp=Z,2μm,20.0s,MS5.7
NVL N'lazarevskaya 119.71 202 *e*PKIKP PKPdf 05 44 34.2 -3.8
NVL pmax pmax
comp=Z,15nm,0.9s
MAIT Maitri 119.75 202 *e*PKPab PKPdf 05 44 36.8 -1.2
DWPF Disney 120.72 5 PFAKE 05 44 50.0 +8.6
DWPF LR LR
comp=Z,332nm,19.0s,MS5.0
QSPA South Pole Qui 121.10 180 PKP PKPdf 05 44 39.1 -1.3
comp=Z,4.6nm,0.7s,baz=328,slow=2.0,SNR=18
QSPA South Pole Qui 121.10 180 *e*PKPdf PKPdf 05 44 38.5 -1.9
ICM Isla Caja Muer 130.11 347 *e*PKPdf PKPdf 05 45 00.5 +0.9
APG El Apazote 132.06 18 PKP PKPdf 05 45 03.5 +0.2
comp=Z,1.2nm,0.5s,baz=260,slow=18,SNR=2.5
TGUH Tegucigalpa,Un 133.74 14 *e*PKPdf PKPdf 05 45 07.3 +0.8
SDV Santo Domingo 139.61 351 PKhKP 05 45 01.8
comp=Z,0.9nm,0.2s,baz=66,slow=19,SNR=8.6
SDV PKP PKPdf 05 45 16.5 -0.9
comp=Z,13nm,0.6s,baz=61,slow=1.9,SNR=16
SDV Santo Domingo 139.61 351 PKP PKPdf 05 45 16.5 -0.9
ROSC El Rosal 143.96 356 PKP PKPdf 05 45 23.2 -2.0
comp=Z,39nm,0.7s,baz=312,slow=16,SNR=7.4
ROSC El Rosal 143.96 356 *e*PKPdf PKPdf 05 45 22.9 -2.3
PMSA Palmer Station 145.62 190 *e*PKPdf PKPdf 05 45 24.6 -1.8
PAYG Puerto Ayora 146.89 26 *e*PKPdf PKPdf 05 45 29.6 -0.6
OTAV Otavalo 148.56 3 *e*PKPdf PKPdf 05 45 33.4 +0.4
SPB Sao Paulo 153.03 279 *e*PKPdf PKPdf 05 45 40.4 +0.9
ATAH Atahualpa 155.88 4 PKP PKPdf 05 45 42.6 -1.2
comp=Z,2.7nm,0.6s,baz=61,slow=10,SNR=3.1
ATAH PKPab PKPab 05 46 06.6 -3.8
comp=Z,15nm,0.9s,baz=265,slow=2.4,SNR=6.4
SIV San Ignacio 159.16 314 PKP PKPdf 05 45 46.6 -1.2
comp=Z,4.7nm,1.2s,baz=270,slow=5.1,SNR=1.6
SIV PKPab PKPab 05 46 23.9 -0.7
comp=Z,4.9nm,1.1s,baz=45,slow=1.4,SNR=2.7
CPUP Villa Florida 162.38 282 PKP PKPdf 05 45 49.5 -1.6
comp=Z,5.5nm,1.1s,baz=281,slow=2.5,SNR=2.9
CPUP PKPab PKPab 05 46 39.0 +0.4
comp=Z,3.0nm,0.7s,baz=84,slow=8.1,SNR=4.5
LPAZ La Paz 163.15 331 PKP PKPdf 05 45 51.9 -0.1
comp=Z,6.2nm,0.9s,baz=23,slow=3.9,SNR=14
LPAZ La Paz 163.15 331 *e*PKPdf PKPdf 05 45 51.6 -0.5
PLCA Paso Flores 169.40 206 PKP PKPdf 05 45 55.4 -0.8
comp=Z,18nm,1.3s,baz=258,slow=3.0,SNR=2.9
PLCA PKPab PKPab 05 47 09.3 +0.4
comp=Z,9.4nm,0.7s,baz=153,slow=3.2,SNR=15
PLCA Paso Flores 169.40 206 PKP PKPdf 05 45 55.4 -0.8
PLCA PKPab PKPab 05 47 09.3 +0.4

IDC 16 05:45:23.2±7.2, 32°.12N×103°.57E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/26, mbtmp3.5/3, Error ellipse: s-maj=406.5km s-min=34.0km az=79.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**59.57**	**146**	P	P	05 55 28.5	-0.3
0.6nm,0.5s,baz=333,slow=6.9,SNR=5.8							
ASAR	**Alice Springs**	**62.59**	**149**	P	P	05 55 49.5	+0.3
0.2nm,0.3s,baz=332,slow=6.5,SNR=3.4							
YKA	**Yellowknife Ar**	**80.86**	**17**	P	P	05 57 38.7	+0.1
0.1nm,0.5s,baz=327,slow=5.3,SNR=2.9							

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*IDC **16** 05:53:06.2±1.8, 31°.07N×103°.86E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/24, mbtmp3.7/3, Error ellipse: s-maj=50.1km s-min=30.4km az=41.0*
*NEIC **16** 05:53:07.8±1.0, 31°.05N×103°.87E, h10km, mb3.7/1, Error ellipse: s-maj=40.8km s-min=12.1km az=214.0*
*BJI **16** 05:53:09.1, 31°.10N×103°.49E, h15km, ML3.7/8, Ms3.9/1, Ms7 3.8/1*
ISC 16 05:53:08.2±0.8, 31°.23N±0°.04×103°.91E±0°.06, h5km±7km, n10, σ0s94/15, mb3.6/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**202**	Pg	**Pg**	**05 53 14.5**	**-0.4**
CD2				Sg	**Sg**	**05 53 20.5**	**+1.1**
CD2				smax			
comp=N,6μm,0.5s							
LZH	**Lanzhou**	**4.84**	**359**	*e*Pg	**Pg**	**05 54 40.9**	**-0.1**
LZH				Sg	**Sg**	**05 55 43.8**	**+0.1**
LZH				smax			
comp=N,65nm,1.0s							
LZH				smax			
comp=E,64nm,1.1s							
ENH	**Enshi**	**4.89**	**100**	*e*Pn	**Pn**	**05 54 21.6**	**-0.7**
ENH				*e*Sn	**Sn**	**05 55 21.7**	**+2.4**
XAN	**Xi'an**	**5.07**	**55**	Pg	**Sn**	**05 55 24.3**	**+0.6**
XAN				Sg	**Sg**	**05 55 50.8**	**-0.2**
XAN				smax			
comp=N,150nm,0.7s							
XAN				smax			
comp=E,82nm,0.9s							
GYA	**Guiyang**	**5.33**	**152**	Pg	**Pg**	**05 54 45.9**	**-4.5**
GYA				Sg	**Sg**	**05 55 48.8**	**-11**
GYA				smax			
comp=N,80nm,0.8s							
GYA				smax			
comp=E,80nm,0.8s							
KSRS	**Korea Array**	**20.75**	**66**	P	**P**	**05 57 49.5**	**-0.2**
comp=E,1.9nm,0.6s,baz=262,slow=10,SNR=9.1							
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**	**05 58 12.4**	**+1.1**
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**05 58 11.1**	**-0.2**
comp=E,1.2nm,0.8s,mb3.4,baz=116,slow=11,SNR=9.8							
KURK	**Kurchatov**	**27.05**	**323**	*e*P	**P**	**05 58 50.9**	**-0.3**
comp=E,0.7nm,0.4s,mb3.5							
WRA	**Warramunga Arr**	**58.67**	**146**	P	**P**	**06 03 04.7**	**-1.9**
comp=E,0.8nm,0.7s,mb3.9,baz=340,slow=7.7,SNR=3.5							

IDC 16 06:03:00.9±1.3, 32°.85N×106°.17E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=194.0km s-min=21.9km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.91**	**314**	P	P	06 08 05.8	-0.4
0.3nm,0.4s,baz=114,slow=10,SNR=4.2							
ZALV	**Zalesovo Beam**	**25.99**	**331**	P	P	06 08 35.5	+0.3
0.4nm,0.4s,baz=140,slow=9.4,SNR=2.6							
WRA	**Warramunga Arr**	**59.00**	**149**	P	P	06 13 02.5	0.0
0.6nm,0.8s,baz=341,slow=7.7,SNR=8.3							
ASAR	**Alice Springs**	**62.12**	**151**	P	P	06 13 23.9	+0.2
0.9nm,0.8s,baz=334,slow=7.3,SNR=4.9							

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*ISK **16** 06:14:50.4, 36°.98N×29°.30E, h9km, MD2.8*
*ISCJB **16** 06:14:51.0±0.4, 36°.97N±0°.03×29°.31E±0°.03, h6km±5km, Error ellipse: s-maj=4.3km s-min=3.6km az=176.8*
*CSEM **16** 06:14:51.0±0.2, 36°.97N×29°.33E, h10km, MD2.8, Error ellipse: s-maj=3.9km s-min=3.6km az=15.0*
*DDA **16** 06:14:51.6, 37°.01N×29°.31E, h7km±7km, Md2.7*
ISC 16 06:14:51.5±0.4, 36°.97N±0°.03×29°.32E±0°.03, h12km±4km, n39, σ0s99/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.23**	**38**	*e*PG	**Pg**	**06 14 55.6**	**-0.9**
GLHS				*e*SG	**Sg**	**06 14 59.7**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.23**	**38**	*e*Pg	**Pg**	**06 14 55.6**	**-0.9**
GLHS				*e*Sg	**Sg**	**06 14 59.7**	**-0.1**
GOLH	**Golhisar**	**0.33**	**36**	*i* P	**Pg**	**06 15 01.1**	**+2.9**
GOLH				*i* S	**Sg**	**06 15 03.5**	**+0.8**
GOLH	**Golhisar**	**0.33**	**36**	*i* P	**Pg**	**06 15 01.1**	**+2.9**
GOLH				*i* S	**Sg**	**06 15 03.5**	**+0.9**
FETY	**Fethiye**	**0.38**	**210**	*e*PG	**Pg**	**06 14 57.9**	**-1.3**
FETY				*e*SG	**Sg**	**06 15 04.4**	**+0.1**
FETY	**Fethiye**	**0.38**	**210**	*e*Pg	**Pg**	**06 14 57.9**	**-1.3**
FETY				*e*Sg	**Sg**	**06 15 04.4**	**+0.1**
ELL	**Elmali**	**0.52**	**115**	*e*PG	**Pg**	**06 15 01.3**	**-0.5**
ELL				*e*SG	**Sg**	**06 15 09.6**	**+1.0**
ELL	**Elmali**	**0.52**	**115**	*e*Pg	**Pg**	**06 15 01.3**	**-0.4**
ELL				*e*Sg	**Sg**	**06 15 09.6**	**+1.0**
TURN	**Turunc**	**0.58**	**261**	*i* P	**Pg**	**06 15 07.3**	**+4.5**
TURN				*i* S	**Sg**	**06 15 20.4**	**+10**
DNZL	**Cakiroluk**	**0.75**	**343**	*i* P	**Pg**	**06 15 04.1**	**-2.0**
DNZL				*i* S	**Sg**	**06 15 16.8**	**+0.9**
DNZL	**Cakiroluk**	**0.75**	**343**	*i* P	**Pg**	**06 15 04.1**	**-2.0**
DNZL				*i* S	**Sg**	**06 15 16.8**	**+0.9**
AKAS	**Kas**	**0.77**	**163**	*i* P	**Pg**	**06 15 05.5**	**-0.9**
AKAS				*i* S	**Sg**	**06 15 20.4**	**+3.9**
AKAS	**Kas**	**0.77**	**163**	*i* P	**Pg**	**06 15 05.5**	**-0.9**
DENT	**Denizli**	**0.81**	**344**	*e*PG	**Pg**	**06 15 05.5**	**-1.8**
DENT	**Denizli**	**0.81**	**344**	*e*Pg	**Pg**	**06 15 05.5**	**-1.8**
KORT	**Korkueli**	**0.83**	**88**	*i* P	**Pg**	**06 15 06.9**	**-0.6**
KORT				*i* S	**Sg**	**06 15 20.1**	**+1.8**
KORT	**Korkueli**	**0.83**	**88**	*i* P	**Pg**	**06 15 06.9**	**-0.6**
KORT				*i* S	**Sg**	**06 15 20.1**	**+1.8**
YER	**Yerkesik**	**0.84**	**282**	*e*PG	**Pg**	**06 15 07.7**	**-0.2**
YER				*e*SG	**Sg**	**06 15 18.9**	**0.0**
YER	**Yerkesik**	**0.84**	**282**	*e*Pg	**Pg**	**06 15 07.7**	**-0.2**
YER				*e*Sg	**Sg**	**06 15 19.0**	**+0.1**
ANTB	**Antalya**	**1.07**	**93**	*e*PN	**Pg**	**06 15 12.0**	**-0.2**
ANTB	**Antalya**	**1.07**	**93**	*e*Pn	**Pg**	**06 15 12.0**	**-0.2**
BCK	**Bucak**	**1.13**	**64**	*e*PN	**Pg**	**06 15 12.7**	**-0.6**
BCK	**Bucak**	**1.13**	**64**	*e*Pn	**Pg**	**06 15 12.7**	**-0.5**
ISP	**Isparta**	**1.28**	**48**	*e*PN	**Pn**	**06 15 15.1**	**-0.2**
ISP	**Isparta**	**1.28**	**48**	*e*Pn	**Pn**	**06 15 15.1**	**-0.2**
AYDN	**Tasoluk**	**1.34**	**301**	*i* P	**Pn**	**06 15 17.0**	**+0.9**
AYDN				*i* S	**Sb**	**06 15 34.6**	**+0.8**
AYDN	**Tasoluk**	**1.34**	**301**	*i* P	**Pn**	**06 15 17.0**	**+0.9**
AYDN				*i* S	**Sb**	**06 15 34.6**	**+0.9**
KHL	**Karahalli**	**1.36**	**7**	*e*PN	**Pn**	**06 15 16.4**	**0.0**
KHL	**Karahalli**	**1.36**	**7**	*e*Pn	**Pn**	**06 15 16.4**	**0.0**
KHAL	**Karahalli**	**1.40**	**6**	*i* P	**Pn**	**06 15 17.4**	**+0.4**
KHAL				*i* S	**Sn**	**06 15 34.3**	**-1.2**
KHAL	**Karahalli**	**1.40**	**6**	*i* P	**Pn**	**06 15 17.4**	**+0.4**
KHAL				*i* S	**Sn**	**06 15 34.3**	**-1.2**
DAT	**Datca**	**1.42**	**261**	*e*PN	**Pn**	**06 15 16.7**	**-0.5**
DAT	**Datca**	**1.42**	**261**	*e*Pn	**Pn**	**06 15 16.7**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.43**	**69**	*e*PN	**Pn**	**06 15 17.4**	**0.0**
SUTC	**Sutluce-Ispart**	**1.43**	**69**	*e*Pn	**Pn**	**06 15 17.4**	**0.0**
BDRM	**Kayabasi**	**1.50**	**274**	*i* P	**Pn**	**06 15 19.6**	**+1.3**
BDRM				*i* S	**Sg**	**06 15 41.2**	**+1.3**
BDRM	**Kayabasi**	**1.50**	**274**	*i* P	**Pn**	**06 15 19.6**	**+1.2**
BDRM				*i* S	**Sg**	**06 15 41.2**	**+1.3**
KULA	**Kula-Manisa**	**1.63**	**341**	*e*PN	**Pn**	**06 15 19.6**	**-0.4**
KULA	**Kula-Manisa**	**1.63**	**341**	*e*Pn	**Pn**	**06 15 19.6**	**-0.5**

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*IDC **16** 06:30:50.5±2.8, 53°.74N×88°.11E, h0km, mb1 3.4/3, mb1mx3.2/27, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=26.9km s-min=15.4km az=41.0*
*NNC **16** 06:30:55.8±4.9, 53°.32N×87°.89E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=39.2km s-min=31.6km az=21.0*
ISC 16 06:30:51.5±1.9, 54°.0N±0°.1×87°.9E±0°.2, h10km, n8, σ1s23/12, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.82**	**270**	Pg	**Pg**	**06 31 24.9**	**-1.5**
6.7nm,0.3s,baz=94,slow=12,SNR=134							
ZALV				Lg		06 31 52.7	
20nm,0.3s,baz=90,slow=25,SNR=30							
KURK	**Kurchatov**	**6.57**	**244**	⇑Pn	**Pn**	**06 32 28.9**	**+0.9**
3.2nm,0.6s							
KURK				⇑Sn	**Sn**	**06 33 43.3**	**+0.5**
1.9nm,0.5s							
KURK				⇓Lg		06 34 14.5	
3.7nm,0.7s							
KURK	**Kurchatov**	**6.57**	**244**	Pn	**Pn**	**06 32 30.3**	**+2.4**
0.6nm,0.3s,baz=62,slow=14,SNR=57							
KURK				Sn	**Sn**	**06 33 45.8**	**+2.9**
0.2nm,0.3s,baz=56,slow=20,SNR=6.2							
KURK				Lg		06 34 22.1	
0.2nm,0.3s,baz=58,slow=30,SNR=8.9							
KURBB	**Kurchatov Arra**	**6.67**	**243**	⇑Pn	**Pn**	**06 32 30.3**	**+0.9**
0.5nm,0.3s,baz=62,slow=14							
KURBB				⇑Sn	**Sn**	**06 33 45.3**	**0.0**
1.4nm,0.5s,baz=58,slow=20							
KURBB				⇓Lg		06 34 21.7	
1.5nm,0.6s,baz=64,slow=34							
MK31	**Makanchi Array**	**8.05**	**209**	⇑Pn	**Pn**	**06 32 47.4**	**-0.9**
0.3nm,0.4s,baz=29,slow=13,SNR=26							
MK31				⇓Lg		06 34 57.2	
4.5nm,0.8s							
MKAR	**Makanchi Array**	**8.05**	**209**	Pn	**Pn**	**06 32 47.4**	**-1.0**
0.5nm,0.3s,baz=30,slow=14,SNR=21							
MKAR				Lg		06 34 59.7	
baz=32,slow=31,SNR=2.3							
BVAR	**Borovoye Array**	**10.48**	**272**	Pn	**Pn**	**06 33 23.4**	**+1.8**
0.1nm,0.3s,baz=54,slow=7.3,SNR=2.5							
BVAR				Sn	**Sn**	**06 35 17.6**	**-1.4**
0.6nm,0.3s,baz=74,slow=26,SNR=6.9							
SHL	**Shillong**	**28.55**	**172**	*e*P	**P**	**06 36 47.0**	**-0.2**

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*ISCJB **16** 06:34:34.3±0.9, 32°.47N±0°.03×105°.19E±0°.03, h3km±6km, mb4.4/47, MS3.6/2, Error ellipse: s-maj=5.3km s-min=4.6km az=152.8*
*IDC **16** 06:34:35.1±0.6, 32°.47N×105°.17E, h0km, mb4.3/18, mb1 4.3/20, mb1mx4.2/31, mbtmp4.2/20, ML3.4/2, MS3.6/2, Ms1 3.6/2, ms1mx3.1/38, Error ellipse: s-maj=20.9km s-min=13.0km az=43.0*
*BJI **16** 06:34:36.4, 32°.42N×105°.17E, h9km, mB4.8/15, mb4.4/23, ML4.3/20, Ms4.2/25, Ms7 4.0/23*
*NEIC **16** 06:34:37.0±0.3, 32°.51N×105°.22E, h10km, mb4.5/18, Error ellipse: s-maj=9.6km s-min=6.2km az=213.0*
*MOS **16** 06:34:37.2±1.0, 32°.38N×105°.24E, h29km, mb4.6/23, Error ellipse: s-maj=12.3km s-min=6.3km az=117.5*
ISC 16 06:34:36.0±0.8, 32°.49N±0°.03×105°.23E±0°.03, h3km±5km, n130, σ1s15/146, mb4.4/47, MS3.6/2, 15C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.02**	**219**	Pn	**Pn**	**06 35 11.4**	**+0.5**
CD2				Pg	**Pg**	**06 35 14.3**	**-0.3**
CD2				Sg	**Sg**	**06 35 41.3**	**+0.6**
CD2				smax			
comp=N,9μm,0.6s							
XAN	**Xi'an**	**3.45**	**62**	Pn	**Pn**	**06 35 33.0**	**+2.4**
XAN				Pg	**Pg**	**06 35 41.3**	**-0.9**
XAN				Sn	**Sn**	**06 36 12.5**	**+0.4**
XAN				Sg	**Sg**	**06 36 23.1**	**-3.8**
XAN				smax			
comp=N,1μm,0.6s							
XAN				smax			
comp=E,710nm,0.5s							
LZH	**Lanzhou**	**3.77**	**343**	Pn	**Pn**	**06 35 37.9**	**+3.0**
LZH				Pg	**Pg**	**06 35 47.9**	**-0.2**
LZH				Sg	**Sg**	**06 36 35.3**	**-1.7**
LZH				smax			
comp=N,4μm,0.5s							
LZH				smax			
comp=E,4μm,0.6s							
LZH				LR	LR		
comp=E,5μm,4.4s							
LZH				LR	LR		
comp=Z,6μm,6.9s							
ENH	**Enshi**	**4.26**	**120**	*e*Pn	**Pn**	**06 35 43.4**	**+1.7**
GYA	**Guiyang**	**6.14**	**168**	Pn	**Pn**	**06 36 08.4**	**+0.8**
GYA				Sn	**Sn**	**06 37 13.9**	**-4.4**
GYA				smax			
comp=N,470nm,0.7s							
GYA				smax			
comp=E,560nm,0.8s							
KMI	**Kunming**	**7.66**	**197**	Pn	**Pn**	**06 36 29.3**	**+0.9**
KMI				Sn	**Sn**	**06 37 50.9**	**-4.8**

KMI smax
comp=N,50nm,1.5s
KMI smax
comp=E,47nm,1.4s
KMI LR LR
comp=N,410nm,8.5s
KMI LR LR
comp=E,530nm,10.5s
KMI LR LR
comp=Z,420nm,15.0s
GTA Gaotai 8.18 329⇑ *e*P **Pn 06 36 36.8 +1.2**
GTA pP 06 36 40.3
GTA sP 06 36 42.8
GTA S **Sn 06 38 11.9 +3.4**
GTA sS 06 38 17.0
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,110nm,4.5s
GTA LR LR
comp=N,930nm,10.4s
GTA LR LR
comp=E,550nm,9.5s
GTA LR LR
comp=Z,1μm,11.6s
BTO Baotou 8.97 24 *e*P Px 06 37 00.9
HHC Hu-ho-hao-te 9.77 30 *e*P **Pn 06 37 02.6 +5.3**
HHC pP 06 37 09.8
HHC sP 06 37 14.6
HHC S **Sn 06 38 53.9 +6.5**
HHC sS 06 39 04.8
HHC SS 06 39 08.5
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,250nm,6.3s
HHC LR LR
comp=N,740nm,5.2s
HHC LR LR
comp=E,480nm,4.4s
HHC LR LR
comp=Z,550nm,5.4s
NJ2 Nanjing 11.54 89 *e*P **Pn 06 37 28.0 +6.4**
NJ2 pP 06 37 30.9
NJ2 sP 06 37 33.8
NJ2 PP 06 37 36.3
NJ2 S **Sn 06 39 38.5 +7.5**
NJ2 sS 06 39 46.5
NJ2 pmax pmax
comp=Z,20nm,0.7s
NJ2 pmax pmax
comp=Z,100nm,5.0s
NJ2 LR LR
comp=N,460nm,12.1s
NJ2 LR LR
comp=E,720nm,9.6s
NJ2 LR LR
comp=Z,720nm,12.0s
BJI Beijing 11.60 46 P **Pn 06 37 22.6 +0.2**
BJI pmax pmax
comp=Z,3.0nm,0.7s
BJI pmax pmax
comp=Z,110nm,5.4s
BJI LR LR
comp=N,540nm,5.6s
BJI LR LR
comp=E,550nm,5.0s
BJI LR LR
comp=Z,97nm,14.8s
LSA Lhasa 12.39 261 P **Pn 06 37 33.6 +0.4**
LSA Lhasa 12.39 261 *e*Pn **Pn 06 37 34.5 +1.3**
QZH Quanzhou 13.92 119 *e*P **Pn 06 37 56.8 +2.7**
QZH S **Sn 06 40 28.1 -1.1**
QZH LR LR
comp=N,1μm,6.0s
QZH LR LR
comp=E,1μm,6.0s
QZH LR LR
comp=Z,2μm,10.9s
QIZ Qiongzhong 14.03 162 P **Pn 06 37 59.8 +4.1**
QIZ S **Sn 06 40 36.5 +4.5**
QIZ pmax pmax
comp=Z,6.0nm,1.1s
QIZ pmax pmax
comp=Z,130nm,5.5s
QIZ LR LR
comp=N,730nm,8.3s
QIZ LR LR
comp=Z,590nm,8.5s
SONM Songino Array 15.35 3 Pn **Pn 06 38 11.7 -1.8**
comp=Z,0.2nm,0.3s,baz=181,slow=13,SNR=3.7
SONM Lg 06 42 41.2
comp=Z,0.1nm,0.3s,baz=160,slow=30,SNR=3.2
ULN Ulaanbaatar 15.42 5 *e*P **Pn 06 38 16.5 +2.2**
ULN pmax pmax
comp=Z,9.0nm,0.9s
ULN Ulaanbaatar 15.42 5 *e*P **Pn 06 38 16.5 +2.2**
comp=Z,9.1nm,0.9s
GUN Gumba 17.34 260 *e*P **Pn 06 38 37.7 -1.3**
comp=Z,84nm,1.0s
WMQ Urumqi 17.80 314 *e*P **Pn 06 38 45.4 +0.8**
WMQ pmax pmax
comp=Z,9.0nm,1.0s
PKI Pulchoki 17.85 259 *e*P **Pn 06 38 43.5 -1.8**
comp=Z,36nm,0.6s
PKIN Phulchoki 17.86 259 *e*P **Pn 06 38 43.8 -1.6**
comp=Z,56nm,0.8s
KKN Kakani 17.88 260 *e*P **Pn 06 38 44.0 -1.7**
ZAK Zakamensk 17.93 356 *e*P **Pn 06 38 49.6 +3.4**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
DMN Daman 18.09 260 *e*P **Pn 06 38 46.4 -1.9**
comp=Z,78nm,1.0s
TLY Talaya 19.21 357 *e*P **Pn 06 39 06.5 +4.7**
TLY *e*S **Sn 06 42 24.9 -12**
TLY pmax pmax
comp=Z,2.0nm,0.7s
TLY MLR MLR
comp=Z,157nm,12.0s
KSRS Korea Array 19.23 69 P **Pn 06 39 00.3 -1.8**
comp=Z,0.1nm,0.3s,baz=252,slow=10,SNR=4.2
KSRS LR LR 06 46 46.2
comp=Z,127nm,18.2s,baz=40,slow=38
MOY Mondy 19.41 352 *e*P **Pn 06 39 05.8 +1.6**
CN2 Changchun 19.45 49 *e*P **Pn 06 39 09.8 +5.1**
CN2 *e*S **Sn 06 42 42.3 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,200nm,14.0s
JOW Kunigami 20.79 100 P **P 06 39 20.2 +1.9**
comp=Z,13nm,0.4s,baz=300,slow=11,SNR=4.6
JOW Kunigami 20.79 100 P **P 06 39 20.2 +1.9**
MDJ Mudanjiang 22.48 50 P **P 06 39 35.6 -0.7**
MDJ S **S 06 43 42.3 -1.5**
MDJ ScP ScP 06 47 07.6 -1.4
MDJ PcS PcS 06 47 08.9 -0.2
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
MDJ pmax pmax
comp=Z,120nm,4.4s
MDJ LR LR
comp=N,100nm,14.2s,MS3.5
MDJ LR LR
comp=E,93nm,14.2s,MS3.5
MDJ LR LR
comp=Z,260nm,17.3s,MS3.7
MK31 Makanchi Array 22.61 316 *e*P **P 06 39 37.5 -0.2**
MKAR Makanchi Array 22.61 316 P **P 06 39 37.6 -0.1**
comp=Z,9.5nm,0.8s,mb4.3,baz=117,slow=12,SNR=44
AGRA Agra 24.21 265 *e*P **P 06 39 52.9 -0.9**
KSH Kashi 24.62 295 *e*P **P 06 40 01.1 +3.6**
KSH *e*pP 06 40 05.1
KSH *e*sP sP 06 40 08.3 +10
KSH *e*PP 06 40 38.3
KSH *e*PcP PcP 06 43 36.1 +1.0
KSH *e*S **S 06 44 21.0 +1.6**
KSH *e*sS sS 06 44 28.1 +7.3
KSH *e*SS 06 45 20.0
KSH pmax pmax
comp=Z,26nm,1.2s,mb4.6
KSH LR LR
comp=N,100nm,5.4s
KSH LR LR
comp=E,93nm,6.0s
KSH LR LR
comp=Z,88nm,4.8s
SONA Sohna 24.62 268 *e*P **P 06 39 56.2 -1.3**
TKM2 Tokmak 2 25.54 303 P **P 06 40 07.0 +1.2**
SNR=12
TKM2 Tokmak 2 25.54 303 *e*P **P 06 40 06.9 +1.1**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
TKM2 Tokmak 2 25.54 303 *e*P **P 06 40 06.9 +1.2**
comp=Z,9.4nm,0.6s,mb4.5
KZA Kyzart 25.59 301 P **P 06 40 08.3 +2.0**
SNR=19
KHET Khetri 25.75 268 *e*P **P 06 40 06.7 -1.1**
KLR Kul'dur 25.92 42 *e*P **P 06 40 07.7 -1.5**
ZALV Zalesovo Beam 25.92 332 P **P 06 40 09.2 +0.1**
comp=Z,3.5nm,0.7s,mb4.0,baz=132,slow=9.5,SNR=13
KBK Karagaybulak 25.94 302 P **P 06 40 10.8 +1.4**
SNR=9.0
BOD Bodaibo 26.03 11 *e*P **P 06 40 10.8 +0.7**
BOD pmax pmax
comp=Z,6.0nm,1.4s,mb3.9
UCH Uchtor 26.16 301 P **P 06 40 13.3 +1.9**
SNR=18
UCH Uchtor 26.16 301 *e*P **P 06 40 12.8 +1.4**
comp=Z,15nm,1.0s,mb4.5
BHPL Bhopal 26.19 256 *e*P **P 06 40 11.8 -0.1**
BHPL AMb AMB 06 40 17.3
comp=Z,15nm,1.8s,mb4.2
AAK Ala-Archa 26.26 302 P **P 06 40 13.7 +1.3**
comp=Z,1.9nm,0.6s,mb3.8,baz=126,slow=9.6,SNR=6.6
AAK LR LR 06 52 58.0
comp=Z,184nm,18.4s,MS3.7,baz=174,slow=42
AAK Ala-Archa 26.26 302 P **P 06 40 13.7 +1.4**
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
AAK MLR MLR
comp=Z,184nm,18.4s,MS3.7
AAK Ala-Archa 26.26 302 *e*P **P 06 40 13.3 +1.0**
comp=Z,12nm,1.3s,mb4.3
USP Ospenovka 26.40 303 P **P 06 40 14.7 +1.1**
SNR=12
AML Almayashu 26.74 300 P **P 06 40 18.4 +1.8**
SNR=19
AML Almayashu 26.74 300 *e*P **P 06 40 18.0 +1.4**
comp=Z,14nm,0.6s,mb4.7
KURK Kurchatov 26.75 321 P **P 06 40 16.6 0.0**
comp=Z,5.1nm,0.8s,mb4.1,baz=130,slow=8.8,SNR=35
KURK PcP PcP 06 43 38.4 -1.4
comp=Z,0.7nm,0.5s,baz=119,slow=1.7,SNR=4.1
KURK Kurchatov 26.75 321⇑ *i*P **P 06 40 15.1 -1.6**
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
KURK Kurchatov 26.75 321 *e*P **P 06 40 16.4 -0.2**
comp=Z,6.3nm,0.8s,mb4.2
EKS2 Erkin-Say 26.78 301 P **P 06 40 18.1 +1.0**
SNR=5.6
EKS2 Erkin-Say 26.78 301 *e*P **P 06 40 17.9 +0.9**
comp=Z,4.1nm,0.7s,mb4.1
AJM Ajmer 27.24 265 *e*P **P 06 40 21.6 +0.3**
KBL Kabul 30.14 284 *e*P **P 06 40 48.1 +1.0**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KBL Kabul 30.14 284 *e*P **P 06 40 48.1 +0.9**
comp=Z,10nm,0.9s,mb4.5
JASL Jaisalmer 30.25 268 *e*P **P 06 40 47.9 -0.2**
BVAR Borovoye Array 32.33 320 P **P 06 41 05.8 -0.3**
comp=Z,2.0nm,0.6s,mb4.1,baz=114,slow=9.1,SNR=10
BRVK Borovoye 32.40 320⇑ *e*P **P 06 41 06.8 0.0**
BRVK pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
BRVK Borovoye 32.40 320 *e*P **P 06 41 06.7 -0.1**
comp=Z,3.0nm,0.6s,mb4.3
ABKAR Akbulak array 37.49 310 *e*P **P 06 41 50.8 0.0**
comp=Z,3.3nm,0.4s,mb4.5
AKTK Aktyubinsk 38.92 312 P **P 06 42 03.1 +0.4**
AKTO Aktyubinsk 38.92 312 P **P 06 42 03.1 +0.4**
comp=Z,2.2nm,0.7s,mb4.0,baz=94,slow=8.0,SNR=9.6
TIXI Tiksi 41.21 11 *e*P **P 06 42 20.0 -1.5**
TIXI pmax pmax
comp=Z,7.0nm,1.3s,mb4.1
PETK Petropavlovsk- 42.53 45 P **P 06 42 34.5 +2.0**
comp=Z,1.4nm,0.7s,mb3.8,baz=251,slow=8.1,SNR=3.6
GNI Garni 48.52 297 *e*P **P 06 43 20.2 0.0**
GNI pmax pmax
comp=Z,5.0nm,0.6s
KIV Kislovodsk 49.37 302 *i*P **P 06 43 27.3 +0.6**
KIV *e* 06 44 48.7
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
BILL Bilibino 49.51 26 *e*P **P 06 43 29.3 +1.9**
BILL pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
OBN Obninsk 52.11 317 *e*P **P 06 43 46.2 -0.9**
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MALT Malatya 53.71 296 *e*P **P 06 44 00.0 +0.8**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
MALT Malatya 53.71 296 *e*P **P 06 43 60.0 +0.7**
comp=Z,2.2nm,0.6s,mb4.3
JOF Joensuu 54.38 327 *e*P **P 06 44 01.9 -1.8**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
JOF Joensuu 54.38 327 *e*p **P 06 44 01.9 -1.8**
comp=Z,1.5nm,0.5s,mb4.2
KEV Kevo 55.86 336 *e*P **P 06 44 17.7 +3.3**
KEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KEV Kevo 55.86 336 *e*p **P 06 44 17.7 +3.3**
comp=Z,4.8nm,0.7s,mb4.6
ARCES ARCESS Array B 56.40 335 P **P 06 44 17.6 -0.6**
comp=Z,4.5nm,0.8s,mb4.6,baz=75,slow=8.4,SNR=10
KAF Kangasniemi 56.76 327 *e*P **P 06 44 19.6 -1.3**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KAF Kangasniemi 56.76 327 *e*p **P 06 44 19.6 -1.3**
comp=Z,1.5nm,0.5s,mb4.3
BRTR Keskin Array B 56.90 299 P **P 06 44 21.9 -0.3**
comp=Z,2.9nm,0.8s,mb4.4,baz=98,slow=7.3,SNR=16
BRTR Keskin Array B 56.90 299 *ce*P **P 06 44 21.8 -0.4**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 56.96 326 P **P 06 44 21.6 -0.7**
comp=Z,3.1nm,0.6s,mb4.5,baz=94,slow=7.6,SNR=8.2
AKASG Malin Array Be 57.15 313 P **P 06 44 22.3 -1.5**
comp=Z,4.8nm,0.6s,mb4.7,baz=69,slow=6.3,SNR=14
AKASG Malin Array Be 57.15 313 *ce*P **P 06 44 22.8 -1.0**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
WRAB Tennant Creek 59.11 148 *e*P **P 06 44 36.6 -1.2**
WRAB pmax pmax
comp=Z,12nm,0.8s,mb5.0
WRAB Tennant Creek 59.11 148 *e*P **P 06 44 36.6 -1.2**
comp=Z,12nm,0.8s,mb5.0
WRA Warramunga Arr 59.11 148 P **P 06 44 37.1 -0.7**
comp=Z,7.9nm,0.7s,mb4.8,baz=340,slow=7.4,SNR=14
KWP Kalwaria Pacla 61.47 313 *e*P **P 06 44 53.4 -0.3**
KWP pmax pmax
comp=Z,10.0nm,0.3s,mb5.4
KWP Kalwaria Pacla 61.47 313 *e*P **P 06 44 53.4 -0.3**
comp=Z,10nm,0.3s,mb5.4
KOLS Kolonicke sedl 61.95 312 *e*P **P 06 44 56.8 -0.2**
KOLS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KOLS Kolonicke sedl 61.95 312 *e*P **P 06 44 56.8 -0.2**
ASAR Alice Springs 62.19 150 P **P 06 44 58.4 -0.4**
comp=Z,3.0nm,0.7s,mb4.5,baz=336,slow=6.7,SNR=18
STHS Stebnicka Huta 62.44 313 *e*P **P 06 45 00.8 +0.5**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
STHS Stebnicka Huta 62.44 313 *e*P **P 06 45 00.8 +0.5**
KECS Kecovo 63.22 312 *e*P **P 06 45 05.8 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KECS Kecovo 63.22 312 *e*P **P 06 45 05.8 +0.3**
NB2 NORSAR Subarra 64.01 327 P **P 06 45 08.7 -1.8**
comp=Z,2.2nm,0.5s,mb4.4,baz=71,slow=6.5
NOA NORSAR Array B 64.01 327 P **P 06 45 09.2 -1.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=71,slow=6.6,SNR=12
VYHS Vyhne 64.25 313 *e*P **P 06 45 12.3 +0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.5s,mb4.3
VYHS Vyhne 64.25 313 *e*P **P 06 45 12.3 +0.1**
MORC Moravsky Berou 64.59 314 *e*P **P 06 45 14.4 -0.1**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
MORC Moravsky Berou 64.59 314 *e*P **P 06 45 14.4 -0.1**
comp=Z,2.5nm,0.8s,mb4.3
UPC Upice 65.24 315 *e*P **P 06 45 19.0 +0.3**
UPC *e*pP pP 06 45 24.1 +4.4
CLL Collm 66.70 317 *e*P **P 06 45 28.0 -0.1**
CLL Collm 66.70 317 *e*P **P 06 45 28.0 -0.1**
GERES GERESS Array B 67.27 314 P **P 06 45 31.3 -0.5**
comp=Z,1.4nm,0.6s,mb4.2,baz=69,slow=7.3,SNR=9.2
CDF Champ du Feu 71.30 316⇑ *i*P **P 06 45 55.9 -0.8**
comp=Z,6.0nm,0.6s,mb4.4
CDF Champ du Feu 71.30 316⇑ *i*P **P 06 45 55.9 -0.8**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CDF Champ du Feu 71.30 316⇑ *i*P **P 06 45 55.9 -0.8**
comp=Z,3.0nm,0.6s,mb4.4
KMBO Kilima Mbogo 72.16 257 P **P 06 46 02.5 +0.1**
comp=Z,0.5nm,0.3s,mb3.9,baz=150,slow=20,SNR=2.6
RES Resolute Bay 72.27 6 *e*P **P 06 46 01.5 -0.6**
RES pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
RES Resolute Bay 72.27 6 *e*P **P 06 46 01.5 -0.6**
comp=Z,3.1nm,1.1s,mb4.2
LPG La Plagne 73.00 313⇑ *i*P **P 06 46 07.1 +0.1**
comp=Z,17nm,0.6s,mb4.9
LPG La Plagne 73.00 313⇑ *i*P **P 06 46 07.1 +0.1**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 73.00 313⇑ *i*P **P 06 46 07.1 +0.1**
comp=Z,8.4nm,0.6s,mb4.8
LPL La Plagne 73.00 313⇑ *i*P **P 06 46 07.0 0.0**
comp=Z,18nm,0.6s,mb4.9
LPL La Plagne 73.00 313⇑ *i*P **P 06 46 07.0 0.0**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LPL La Plagne 73.00 313⇑ *i*P **P 06 46 07.0 0.0**
comp=Z,8.8nm,0.6s,mb4.9
SMF Signal de Mont 74.19 315⇑ *i*P **P 06 46 12.9 -1.0**
YKA Yellowknife Ar 80.09 18 P **P 06 46 45.9 -0.8**
comp=Z,1.3nm,0.7s,mb4.0,baz=328,slow=5.1,SNR=17
YKA Yellowknife Ar 80.09 18 P **P 06 46 45.9 -0.8**
FCC Fort Churchill 87.67 10 *e*P **P 06 47 24.5 -1.1**
comp=Z,0.1nm,1.1s
FFC Flin Flon 90.03 15 *i*P **P 06 47 36.6 -0.2**
OTAV Otavalo 147.26 7 *e*PKPdf PKPdf 06 54 19.4 +0.2

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*CSEM **16** 06:48:46.0±0.4, 42°.62N×43°.37E, h5km, ML2.8, Error ellipse: s-maj=9.9km s-min=4.1km az=175.0*
*TIF **16** 06:48:47.9, 42°.49N×43°.38E, h10km*
*DDA **16** 06:48:51.6, 42°.20N×40°.45E, h7km±12km, Md2.7*
ISC 16 06:48:46.3±1.6, 42°.6N±0°.1×43°.39E±0°.06, h8km±5km, n15, σ0s54/30, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.06**	**133**	P	**Pg**	**06 48 48.1**	**-0.1**
ONI				S	**Sg**	**06 48 49.5**	**0.0**
ONI	**Oni**	**0.06**	**133**	P	**Pg**	**06 48 48.1**	**-0.1**
ONI				S	**Sg**	**06 48 49.5**	**0.0**
TBLG	**Delisi**	**1.34**	**132**	P	**Pn**	**06 49 11.1**	**-0.2**
TBLG				S	**Sb**	**06 49 29.4**	**+0.3**
TBLG	**Delisi**	**1.34**	**132**	P	**Pn**	**06 49 11.1**	**-0.2**
TBLG				S	**Sb**	**06 49 29.4**	**+0.3**
MTA	**Mtatsminda**	**1.40**	**132**	P	**Pn**	**06 49 11.9**	**-0.2**
MTA				S	**Sb**	**06 49 30.5**	**-0.2**
MTA	**Mtatsminda**	**1.40**	**132**	P	**Pn**	**06 49 11.9**	**-0.2**
MTA				S	**Sb**	**06 49 30.5**	**-0.1**
ARTV	**Artvin**	**1.81**	**218**	*i* P	**Pn**	**06 49 17.8**	**0.0**
ARTV				*i* S	**Sn**	**06 49 40.5**	**-0.4**
ARTV	**Artvin**	**1.81**	**218**	*i* P	**Pn**	**06 49 17.8**	**+0.1**
ARTV				*i* S	**Sn**	**06 49 40.5**	**-0.4**
DBOC	**Borcka**	**1.82**	**226**	*i* P	**Pn**	**06 49 16.9**	**-0.9**
DBOC				*i* S	**Sn**	**06 49 41.1**	**+0.1**
DBOC	**Borcka**	**1.82**	**226**	*i* P	**Pn**	**06 49 16.9**	**-0.9**
DBOC				*i* S	**Sn**	**06 49 41.1**	**+0.1**
DAGI	**Agillar**	**1.91**	**216**	*i* P	**Pn**	**06 49 19.4**	**+0.4**
DAGI				*i* S	**Sn**	**06 49 44.2**	**+1.1**
DBAD	**Bademkaya**	**2.05**	**219**	*i* P	**Pn**	**06 49 21.3**	**+0.3**
DBAD				*i* S	**Sn**	**06 49 46.6**	**-0.2**
DBAD	**Bademkaya**	**2.05**	**219**	*i* P	**Pn**	**06 49 21.3**	**+0.3**
DBAD				*i* S	**Sn**	**06 49 46.6**	**-0.2**
DDEM	**Demirkent**	**2.13**	**216**	*i* P	**Pn**	**06 49 23.1**	**+1.0**
DDEM				*i* S	**Sn**	**06 49 47.6**	**-1.0**
DDEM	**Demirkent**	**2.13**	**216**	*i* P	**Pn**	**06 49 23.1**	**+1.0**
DDEM				*i* S	**Sn**	**06 49 47.6**	**-1.1**

IDC 16 06:51:28.7±1.1, 31°.91N×104°.30E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.3/26, mbtmp3.3/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/26, Error ellipse: s-maj=85.6km s-min=21.0km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.49**	**318**	P	P	06 56 30.1	+0.6
	0.8nm,1.0s,baz=108,slow=9.4,SNR=5.7						
AAK	**Ala-Archa**	**25.90**	**303**	LR	LR	07 06 59.2	
	comp=Z,69nm,20.9s,baz=103,slow=36						
ZALV	**Zalesovo Beam**	**26.07**	**333**	P	P	06 57 02.8	-0.9
	0.6nm,0.4s,baz=131,slow=8.6,SNR=3.4						
WRA	**Warramunga Arr**	**59.05**	**147**	P	P	07 01 29.5	-1.1
	0.3nm,0.5s,baz=341,slow=7.9,SNR=6.3						
ASAR	**Alice Springs**	**62.09**	**149**	P	P	07 01 52.3	+0.9
	0.2nm,0.7s,baz=335,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	P	07 03 45.0	+0.8
	0.3nm,0.8s,baz=327,slow=5.1,SNR=3.9						

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*IDC **16** 06:57:09.5±0.7, 32°.28S×178°.09W, h0km, mb4.4/9, mb1 4.6/12, mb1mx4.4/19, mbtmp4.4/12, ML4.5/2, MS3.9/2, Ms1 3.9/2, ms1mx3.3/29, Error ellipse: s-maj=24.5km s-min=17.9km az=117.0*
*ISCJB **16** 06:57:12.7±0.8, 32°.30S±0°.06×178°.1W±0°.1, h33km, mb4.6/14, MS3.9/2, Error ellipse: s-maj=16.6km s-min=8.0km az=19.5*
*NEIC **16** 06:57:14.8±0.6, 32°.20S×178°.04W, h35km, mb4.7/9, Error ellipse: s-maj=17.6km s-min=10.6km az=134.0*
ISC 16 06:57:15.1±0.8, 32°.34S±0°.06×178°.2W±0°.1, h35km, n50, σ1s23/39, mb4.6/14, MS3.9/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.09**	**4**	Pn	**Pn**	**06 57 58.5**	**-2.9**
	115nm,0.3s,baz=89,slow=21,SNR=7.4						
RAO				Sn	**Sn**	**06 58 36.2**	**-0.9**
	95nm,0.3s,baz=293,slow=23,SNR=4.1						
RAO	**Raoul Island**	**3.09**	**4**	*e*Pn	**Pn**	**06 57 58.2**	**-3.2**
RAO				Sn	**Sn**	**06 58 36.2**	**-0.9**
URZ	**Urewera**	**7.05**	**212**	Pn	**Pn**	**06 58 53.2**	**-2.5**
	4.1nm,0.3s,baz=310,slow=3.5,SNR=24						
URZ				Sn	**Sn**	**07 00 11.2**	**-3.4**
	37nm,0.3s,baz=209,slow=21,SNR=18						
URZ	**Urewera**	**7.05**	**212**	*e*Pn	**Pn**	**06 58 51.0**	**-4.7**
URZ				Sn	**Sn**	**07 00 11.2**	**-3.4**
OUZ	**Omahuta**	**7.42**	**245**	*e*Pn	**Pn**	**06 59 04.3**	**+3.5**
	30nm,0.6s						
RPZ	**Rata Peaks**	**14.16**	**214**	Pn	**Pn**	**07 00 22.7**	**-10**
	0.5nm,0.3s,baz=76,slow=2.2,SNR=3.0						
RPZ				Sn	**Sn**	**07 02 51.9**	**-17**
	1.6nm,0.3s,baz=348,slow=16,SNR=8.7						
RPZ	**Rata Peaks**	**14.16**	**214**	Pn	**Pn**	**07 00 22.7**	**-10**
RPZ				Sn	**Sn**	**07 02 51.9**	**-17**
AFI	**Afiamalu**	**19.26**	**19**	P	**Pn**	**07 01 33.6**	**-4.2**
	1.1nm,0.3s,baz=326,slow=11,SNR=2.8						
AFI	**Afiamalu**	**19.26**	**19**	*e*P	**Pn**	**07 01 33.7**	**-4.2**
	20nm,0.7s						
EIDS	**Eidsvold**	**27.73**	**277**	*e*P	**P**	**07 03 02.0**	**+1.6**
EIDS	**Eidsvold**	**27.73**	**277**	*e*P	**P**	**07 03 01.6**	**+1.2**
	6.8nm,0.8s,mb4.3						
CMSA	**Cobar Meteorol**	**30.58**	**262**	*e*P	**P**	**07 03 26.6**	**+1.0**
STKA	**Stephens Creek**	**33.93**	**260**	P	**P**	**07 03 55.6**	**+0.6**
	1.7nm,0.5s,mb4.3,baz=180,slow=20,SNR=3.9						
STKA	**Stephens Creek**	**33.93**	**260**	*e*P	**P**	**07 03 56.7**	**+1.7**
	6.0nm,1.6s,mb4.3						
CTA	**Charters Tower**	**34.00**	**282**	*e*P	**P**	**07 03 57.6**	**+1.9**
	5.1nm,0.6s,mb4.6						
CTA	**Charters Tower**	**34.00**	**282**	P	**P**	**07 03 57.4**	**+1.7**
	5.9nm,0.5s,mb4.8,baz=94,slow=11,SNR=11						
CTA				LR	LR	07 16 14.2	

comp=Z,154nm,21.0s,MS3.7,baz=49,slow=34
CTAO Charters Tower 34.00 282 *eP* **P 07 03 57.1 +1.4**
6.1nm,0.6s,mb4.7
COEN Coen 39.69 288 *eP* **P 07 04 45.2 +1.1**
COEN Coen 39.69 288 *eP* **P 07 04 44.8 +0.6**
51nm,0.7s,mb5.4
ASAR Alice Springs 42.88 269 P **P 07 05 10.1 -0.2**
6.8nm,0.7s,mb4.5,baz=108,slow=7.5,SNR=36
WRAB Tennant Creek 44.04 274 *eP* **P 07 05 18.6 -1.0**
33nm,1.1s,mb5.0
WRA Warramunga Arr 44.05 274 P **P 07 05 19.4 -0.3**
8.8nm,0.4s,mb4.8,baz=113,slow=8.0,SNR=215
WRA LR LR 07 23 28.6
comp=Z,170nm,18.6s,MS4.0,baz=75,slow=36
FORT Forrest 45.43 257 *eP* **P 07 05 29.3 -1.3**
32nm,0.7s,mb5.3
FORT Forrest 45.43 257 *eP* **P 07 05 29.6 -1.0**
32nm,0.7s,mb5.2
FITZ Fitzroy Crossi 52.22 271 P **P 07 06 22.9 0.0**
4.3nm,0.8s,mb4.5,baz=66,slow=14,SNR=3.5
CASY Casey 53.36 209 *eP* **P 07 06 30.5 -0.1**
CASY Casey 53.36 209 *eP* **P 07 06 30.2 -0.4**
4.5nm,0.6s,mb4.6
QSPA South Pole Qui 57.77 180 P **P 07 07 03.2 +1.0**
3.2nm,1.0s,mb4.3,baz=50,slow=2.9,SNR=7.6
QSPA South Pole Qui 57.77 180 *eP* **P 07 07 03.3 +1.1**
8.5nm,0.8s,mb4.8
VNA2 Neumayer--Watz 76.82 177 *e* **P 07 09 02.9 +0.1**
VNA2 *e* pP 07 09 12.6 -1.1
VNA1 Neumayer--Stat 77.05 177 *e* PcP 07 09 14.4 -0.5
KSRS Korea Array 85.72 320 P **P 07 09 49.2 -1.1**
0.8nm,0.7s,mb4.1,baz=136,slow=5.5,SNR=3.7
PETK Petropavlovsk- 87.65 346 P **P 07 10 00.1 +0.7**
3.7nm,0.9s,mb4.6,baz=103,slow=12,SNR=4.6
NVAR Mina Array Bea 89.77 43 P **P 07 10 11.3 +1.5**
0.6nm,0.8s,mb4.0,baz=206,slow=5.7,SNR=2.5
MKAR Makanchi Array 118.89 309 PKP PKPdf 07 15 58.0 -1.5
0.7nm,0.9s,baz=79,slow=1.9,SNR=3.8
MKAR Makanchi Array 118.89 309 PKP PKPdf 07 15 58.0 -1.5
KURK Kurchatov 122.26 313 PKP PKPdf 07 16 05.6 -0.2
1.0nm,0.6s,baz=114,slow=2.1,SNR=9.2
BVAR Borovoye Array 127.67 315 PKP PKPdf 07 16 15.8 -0.3
0.9nm,0.8s,baz=132,slow=2.1,SNR=5.7
ARCES ARCESS Array B 140.44 347 PKhKP 07 16 34.5
4.0nm,1.0s,baz=60,slow=2.2,SNR=3.6
JOF Joensuu 144.15 337 *ep* PKPdf 07 16 43.4 -2.9
1.3nm,0.5s
KAF Kangasniemi 146.31 339 *ep* PKPdf 07 16 49.7 -0.3
3.4nm,0.5s
FINES FINESS Array B 146.90 339 PKPbc PKPbc 07 16 52.7 -0.3
6.9nm,0.4s,baz=39,slow=4.4,SNR=32
MALT Malatya 149.68 292 *e*PKPbc PKPbc 07 17 01.6 +0.5
NOA NORSAR Array B 150.64 351 PKPbc PKPbc 07 17 02.1 -0.5
1.2nm,0.5s,baz=14,slow=4.2,SNR=5.8
MMAI Mount Meron Ar 151.78 281 PKPbc PKPbc 07 17 06.7 +0.5
6.0nm,0.6s,baz=65,slow=8.8,SNR=4.6
MMAI PKPab PKPab 07 17 15.8 +0.6
3.5nm,0.5s,baz=64,slow=6.6,SNR=3.4
AKASG Malin Array Be 152.72 320 PKPbc PKPbc 07 17 06.8 -0.9
0.4nm,0.4s,baz=60,slow=1.9,SNR=4.8
AKASG PKPab PKPab 07 17 19.2 +0.6
0.8nm,0.5s,baz=52,slow=4.6,SNR=3.8
BRTR Keskin Array B 153.33 295 PKPbc PKPbc 07 17 09.5 +0.1
2.1nm,0.9s,baz=108,slow=4.0,SNR=9.0
CLL Collm 159.34 340 *e*PKPab PKPab 07 17 47.0 +0.1
TORD Torodi Ar. Bea 160.90 180 PKPab PKPab 07 17 54.4 -0.1
2.4nm,0.9s,baz=186,slow=3.9,SNR=5.7
GERES GERESS Array B 161.24 335 PKPab PKPab 07 17 54.1 -1.2

ISCJB ***16*** *07:01:05.9±0.3,2°.19N±0°.03×121°.08E±0°.06,h61km, mb4.1/14,Error ellipse: s-maj=8.1km s-min=4.2km az=168.4*
DJA ***16*** *07:01:07,2°.00N×120°.87E,h19km,MLv4.6/6*
NEIC ***16*** *07:01:08.1±0.4,1°.95N×120°.84E,mb4.0/5,Error ellipse: s-maj=22.4km s-min=6.7km az=64.0*
IDC ***16*** *07:01:08.8±0.7,1°.95N×120°.78E,h63km±5km, mb3.8/13, mb1 4.0/14,mb1mx3.9/25,mbtmp3.9/14,MS3.4/1, Ms1 3.4/1,ms1mx2.4/33,Error ellipse: s-maj=52.8km s-min=11.4km az=66.0*
ISC 16 07:01:07.8±0.4,2°.17N±0°.03×121°.12E±0°.06,h63km, h63km±1.2km:pP-P,n47,σ1§12/46,mb4.1/14,1D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.87**	**154**		P		**Pn**	**07 01 37.5**	**-0.1**
MRSI					S		**Sn**	**07 01 59.0**	**-1.2**
APSI	**Ampana**	**3.10**	**170**		P		**Pn**	**07 01 54.1**	**-0.3**
APSI					S		**Sn**	**07 02 31.5**	**+1.2**
PCI	**Palu**	**3.31**	**203**		P		**Pn**	**07 01 56.2**	**-1.0**
PCI					S		**Sn**	**07 02 31.7**	**-3.7**
LUWI	**Luwuk**	**3.59**	**153**		P		**Pn**	**07 02 06.1**	**+5.0**
LUWI	**Luwuk**	**3.59**	**153**		P		**Pn**	**07 02 03.2**	**+2.1**
LUWI					S		**Sn**	**07 02 45.2**	**+2.9**
SMKI	**Samarinda**	**4.69**	**236**		P		**Sn**	**07 03 09.4**	**+0.1**
	208nm,0.8s								
ZMPH	**Zamboanga City**	**4.85**	**11**	‖	*i*P		**Pn**	**07 02 17.5**	**-0.7**
ZMPH					*i* S		**Sn**	**07 03 09.6**	**-3.4**
TTSI	**Tana Toraja**	**5.34**	**194**		P		**Pn**	**07 02 24.1**	**-0.9**
TTSI	**Tana Toraja**	**5.34**	**194**		P		**Pn**	**07 02 24.5**	**-0.5**
	176nm,0.6s,2μm								
IPIL	**Ipil**	**5.77**	**15**	*eP*			**Pn**	**07 02 30.2**	**-0.7**
IPIL	**Ipil**	**5.77**	**15**	*eS*			Px	07 02 39.6	
PAGZ	**Pagadian**	**6.08**	**22**	*eP*			**Pn**	**07 02 34.1**	**-1.0**
PAGZ	**Pagadian**	**6.08**	**22**	*eS*			Px	07 02 44.4	
KKM	**Kota Kinabalu**	**6.22**	**308**	*eP*	n		**Pn**	**07 02 35.5**	**-1.6**
	45nm,0.3s								
KKM				*eS*	n		**Sn**	**07 03 42.4**	**-4.4**
KKM	**Kota Kinabalu**	**6.22**	**308**		P		**Pn**	**07 02 36.0**	**-1.1**
	63nm,0.4s,2μm0.6nm								
KDI	**Kendari**	**6.27**	**166**		P		**Pn**	**07 02 38.0**	**+0.3**
DAV	**Davao City (W)**	**6.59**	**42**		LR		LR	07 04 59.3	
	comp=Z,304nm,19.7s,baz=120,slow=33								
KAPI	**Kappang**	**7.26**	**191**		P		**Pn**	**07 02 48.8**	**-2.5**
	4.3nm,0.3s,baz=181,slow=17,SNR=9.1								
KAPI	**Kappang**	**7.26**	**191**	*e*P	n		**Pn**	**07 02 48.4**	**-3.0**
ENPP	**El Nido**	**9.13**	**349**	*eP*			**Pn**	**07 03 17.4**	**+0.4**
SJI	**Sawahan**	**13.56**	**223**		P		Px	07 04 26.4	
KAKA	**Kakadu**	**18.57**	**143**	*eP*			**Pn**	**07 05 19.1**	**-1.6**
	26nm,1.0s								
KAKA	**Kakadu**	**18.57**	**143**	*eP*			**Pn**	**07 05 18.6**	**-2.1**
FITZ	**Fitzroy Crossi**	**20.63**	**168**	*eP*			**P**	**07 05 41.3**	**-0.9**
	8.6nm,0.9s								
FITZ	**Fitzroy Crossi**	**20.63**	**168**		P		**P**	**07 05 42.1**	**-0.1**
	5.1nm,0.8s,baz=14,slow=7.0,SNR=9.9								
FITZ	**Fitzroy Crossi**	**20.63**	**168**	*eP*			**P**	**07 05 41.1**	**-1.1**
	3.3nm,0.6s								
WRAB	**Tennant Creek**	**25.52**	**150**	*eP*			**P**	**07 06 30.1**	**-0.5**
	8.4nm,0.6s,mb4.5								
WRA	**Warramunga Arr**	**25.52**	**150**		P		**P**	**07 06 30.8**	**+0.2**
	4.7nm,0.7s,mb4.2,baz=337,slow=9.2,SNR=15								
WRA	**Warramunga Arr**	**25.52**	**150**		P		**P**	**07 06 30.8**	**+0.2**
ASAR	**Alice Springs**	**28.54**	**155**		P		**P**	**07 06 58.1**	**+0.5**
	1.9nm,0.8s,mb3.9,baz=330,slow=7.4,SNR=7.2								
ASAR					PcP		PcP	07 10 09.1	+1.0
	1.2nm,0.6s,baz=351,slow=2.6,SNR=9.2								
KSRS	**Korea Array**	**35.67**	**9**		pP		pP	07 08 19.1	+3.6
	1.4nm,0.7s,baz=188,slow=10,SNR=2.9								
STKA	**Stephens Creek**	**39.04**	**152**		P		**P**	**07 08 30.0**	**+1.4**
	4.6nm,0.6s,mb4.4,baz=305,slow=8.0,SNR=6.9								
STKA	**Stephens Creek**	**39.04**	**152**	*eP*			**P**	**07 08 29.7**	**+1.1**
	0.8nm,0.5s,mb3.7								
SONM	**Songino Array**	**47.24**	**347**		P		**P**	**07 09 38.2**	**+3.8**
	0.2nm,0.4s,mb3.4,baz=129,slow=2.0,SNR=1.8								
SONM					pP		pP	07 09 52.4	+1.8
	0.5nm,0.3s,baz=158,slow=9.3,SNR=3.4								
SONM					PcP		PcP	07 11 05.7	+0.8
	0.6nm,0.6s,baz=96,slow=1.5,SNR=3.6								
MKAR	**Makanchi Array**	**55.79**	**329**		P		**P**	**07 10 39.8**	**+1.4**
	0.8nm,0.5s,mb4.0,baz=130,slow=9.2,SNR=12								
MKAR					pP		pP	07 10 55.9	+0.9
	0.9nm,0.5s,baz=125,slow=8.4,SNR=8.5								
MKAR					PcP		PcP	07 11 37.1	+0.3
	0.7nm,0.6s,baz=129,slow=5.2,SNR=4.1								
AAK	**Ala-Archa**	**57.87**	**321**		P		**P**	**07 10 55.6**	**+2.5**
	2.3nm,0.7s,mb4.3,baz=136,slow=3.7,SNR=6.1								
AAK					pP		pP	07 11 12.0	+2.2
	1.9nm,0.5s,baz=139,slow=9.5,SNR=2.7								
ZALV	**Zalesovo Beam**	**59.58**	**336**		P		**P**	**07 11 05.5**	**+0.8**
	1.1nm,0.5s,mb4.2,baz=160,slow=4.7,SNR=4.4								
KURK	**Kurchatov**	**60.17**	**330**		P		**P**	**07 11 09.9**	**+1.0**
	1.9nm,0.9s,mb4.1,baz=137,slow=6.7,SNR=12								
KURK					pP		pP	07 11 26.5	+0.8
	1.6nm,0.8s,baz=123,slow=7.2,SNR=6.9								
KURK	**Kurchatov**	**60.17**	**330**	*eP*			**P**	**07 11 09.5**	**+0.6**
	4.4nm,0.9s,mb4.5								
KURK				*e*pP			pP	07 11 26.1	+0.5
BVAR	**Borovoye Array**	**65.67**	**329**		P		**P**	**07 11 45.7**	**+0.4**
	1.7nm,0.7s,mb4.2,baz=118,slow=12,SNR=8.6								
AKTK	**Aktyubinsk**	**71.46**	**323**		P		**P**	**07 12 22.0**	**+0.5**
AKTK					pP		pP	07 12 39.5	+0.9
AKTO	**Aktyubinsk**	**71.46**	**323**		P		**P**	**07 12 22.0**	**+0.5**
	2.6nm,0.7s,mb4.3,baz=117,slow=8.2,SNR=12								
AKTO					pP		pP	07 12 39.5	+0.8
	1.6nm,0.8s,baz=128,slow=14,SNR=3.4								
MAW	**Mawson**	**80.40**	**199**	*eP*			**P**	**07 13 11.5**	**-0.6**
	0.6nm,0.6s,mb3.7								
BRTR	**Keskin Array B**	**86.68**	**309**		P		**P**	**07 13 45.1**	**+0.1**
	0.8nm,0.6s,mb4.1,baz=127,slow=5.1,SNR=5.0								
BRTR					pP		pP	07 14 02.2	-0.4
	1.0nm,0.7s,baz=132,slow=3.5,SNR=4.5								
ARCES	**ARCESS Array B**	**89.95**	**340**		P		**P**	**07 14 00.2**	**+0.4**
	1.7nm,0.8s,mb4.4,baz=86,slow=7.4,SNR=4.6								
CFAA	**Coronel Fontan**	**149.42**	**164**		PKPbc		PKPbc	07 20 51.2	+0.8
	0.3nm,0.4s,baz=194,slow=3.2,SNR=8.8								
CFAA	**Coronel Fontan**	**149.42**	**164**		PKPbc		PKPbc	07 20 51.2	+0.8

CASC 16 07:07:24.1±1.9,13°.49N×90°.96W,h19km±7km,MD3.9,5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.96**	**7**	‖	*e*P		Pb	07 07 42.2	+0.1
PCG	**Pacaya**	**0.96**	**21**	‖	*e*P		Pb	07 07 42.3	+0.2
JAT	**Jato**	**1.05**	**321**		*e*P		Pb	07 07 43.4	-0.3
FG6		**1.07**	**4**		*e*P		Pb	07 07 43.8	-0.2
NBG	**Las Nubes**	**1.24**	**29**	‖	*e*P		Pn	07 07 47.2	+0.8
TP2	**Tecpan 2**	**1.29**	**357**	‖	*e*P		Pn	07 07 47.4	+0.3
TP2					*e*S		Sn	07 08 04.3	+0.5
RTR	**El Retiro**	**1.34**	**72**		*e*P		Pn	07 07 47.2	-0.6
RTR					*e*S		Sn	07 08 06.6	+1.5
SBLS	**San Blas**	**1.34**	**75**		*e*P		Pn	07 07 47.0	-0.9
SNJE	**San Jose**	**1.37**	**74**		*e*P		Pn	07 07 47.5	-0.7
BOQS	**Boqueron**	**1.65**	**81**		*e*P		Pn	07 07 51.8	-0.3
BOQS					*e*S		Sn	07 08 14.3	+1.6
LFRS	**El Faro**	**1.85**	**86**		*e*P		Pn	07 07 54.9	+0.1
LFRS					*e*S		Sn	07 08 18.8	+1.1
LBRS	**Las Brisas**	**1.88**	**82**		*e*P		Pn	07 07 55.5	+0.3
MRL	**Marmol**	**1.99**	**38**	‖	*e*P		Pn	07 07 58.4	+1.7
SNVI	**San Vicente**	**2.07**	**86**		*e*P		Pn	07 07 58.0	+0.2
SNVI					*e*S		Sn	07 08 24.6	+1.6

SKHL 16 07:08:19.4±0.4,51°.55N×135°.16E,h10km,mb3.5/1, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRNR	**Gornyy**	**1.11**	**134**		*e*Pg		Pg	07 08 40.1	-0.7
GRNR					*e*Sg		Sg	07 08 54.1	-1.2
EKMR	**Ekimchan**	**2.04**	**319**		*e*Pg		Pg	07 08 56.5	-2.0
EKMR					AMB		AMB	07 08 58.1	
	2.0nm,0.2s								
EKMR					AMB		AMB	07 08 58.1	
	4.0nm,0.2s								
EKMR					*e*Sg		Sg	07 09 23.2	-1.7
EKMR					A			07 09 24.8	
	100nm,0.5s								
EKMR					A			07 09 24.8	
	91nm,0.5s								
EKMR					A			07 09 24.8	
	67nm,0.5s								
KLR	**Kul'dur**	**3.19**	**225**		*e*Sg		Sg	07 09 52.8	-8.9
NKL	**Nikolayevsk**	**3.75**	**63**		*e*Sg		Sg	07 10 16.0	-3.6
BMKR	**Bomnak**	**4.95**	**312**		*e*rx		rx	07 09 54.6	
BMKR					*e*Sg		Sg	07 10 54.0	-4.1
BMKR					A			07 10 59.3	
	15nm,0.6s								
BMKR					A			07 10 59.3	
	11nm,0.6s								
KROS	**Kirovskiy**	**5.73**	**303**		*e*Sg		Sg	07 11 17.0	-6.1
KROS					A			07 11 18.8	
	3.0nm,0.5s								
KROS					A			07 11 18.8	
	4.0nm,0.5s								

ISCJB ***16*** *07:13:47.7±0.6,32°.64N±0°.05×105°.43E±0°.06,h10km, mb3.8/10,Error ellipse: s-maj=8.3km s-min=6.6km az=34.9*
IDC ***16*** *07:13:48.1±1.1,32°.59N×105°.40E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.7/27,mbtmp3.7/9,ML3.5/1,Error ellipse: s-maj=55.8km s-min=22.0km az=53.0*
NEIC ***16*** *07:13:49.2±0.6,32°.60N×105°.49E,h10km,mb3.8/1,Error ellipse: s-maj=21.6km s-min=8.6km az=47.0*
BJI ***16*** *07:13:50.5,32°.49N×105°.25E,h25km,mB4.5/3,mb4.2/2, ML3.8/8,Ms3.6/7,Ms7 3.5/6*
ISC 16 07:13:49.8±0.6,32°.61N±0°.05×105°.39E±0°.06,h10km,n19, σ0§83/25,mb3.8/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.28**	**63**		Pn		**Pn**	**07 14 45.4**	**+4.2**
XAN					Sn		**Sn**	**07 15 25.8**	**+5.5**
XAN					Sg		**Sg**	**07 15 35.8**	**+0.7**
XAN					smax				
	comp=N,260nm,0.7s								
XAN					smax				
	comp=E,140nm,0.8s								
LZH	**Lanzhou**	**3.69**	**340**		Pn		**Pn**	**07 14 50.1**	**+3.2**
LZH					Pg		**Pg**	**07 15 00.0**	**-0.5**
LZH					Sg		**Sg**	**07 15 46.8**	**-1.6**
LZH					smax				
	comp=N,390nm,0.5s								
LZH					smax				
	comp=E,990nm,0.5s								
LZH					LR		LR		
	comp=N,690nm,7.6s								
LZH					LR		LR		
	comp=Z,780nm,8.2s								
ENH	**Enshi**	**4.21**	**123**	*e*Pn			**Pn**	**07 14 51.6**	**-2.3**
GYA	**Guiyang**	**6.23**	**169**		Pn		**Pn**	**07 15 21.9**	**+0.1**
GYA					Sn		**Sn**	**07 16 25.0**	**-8.1**
GYA					smax				
	comp=N,70nm,0.7s								
GYA					smax				
	comp=E,90nm,0.8s								
GTA	**Gaotai**	**8.15**	**328**	*eP*			**Pn**	**07 15 49.0**	**+0.9**
GTA					pP			07 15 52.3	
GTA					S		**Sn**	**07 17 20.3**	**+0.1**
GTA					pmax		pmax		
	comp=Z,4.0nm,0.8s								
GTA					pmax		pmax		
	comp=Z,100nm,4.8s								
GTA					LR		LR		
	comp=N,300nm,11.6s								
GTA					LR		LR		
	comp=E,230nm,12.8s								
GTA					LR		LR		
	comp=Z,200nm,10.7s								
SONM	**Songino Array**	**15.22**	**3**		Pn		**Pn**	**07 17 24.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=180,slow=7.2,SNR=2.4								
MK31	**Makanchi Array**	**22.61**	**315**	*eP*			**P**	**07 18 50.5**	**-0.1**
MKAR	**Makanchi Array**	**22.61**	**315**		P		**P**	**07 18 50.6**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.4,baz=116,slow=11,SNR=10								
KURK	**Kurchatov**	**26.74**	**320**		P		**P**	**07 19 29.4**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.3,baz=134,slow=9.2,SNR=5.7								
KURK	**Kurchatov**	**26.74**	**320**	*eP*			**P**	**07 19 29.0**	**-0.3**
	comp=Z,1.2nm,0.6s,mb3.6								
BVAR	**Borovoye Array**	**32.32**	**320**		P		**P**	**07 20 19.4**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=97,slow=8.0,SNR=3.0								
ARCES	**ARCESS Array B**	**56.34**	**335**		P		**P**	**07 23 30.4**	**-0.1**
	comp=Z,5.0nm,1.1s,mb4.5,baz=72,slow=7.8,SNR=4.5								
WRA	**Warramunga Arr**	**59.14**	**148**		P		**P**	**07 23 50.4**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=341,slow=7.8,SNR=9.1								
NOA	**NORSAR Array B**	**63.98**	**327**		P		**P**	**07 24 22.5**	**-0.5**
	comp=Z,0.5nm,0.8s,mb3.6,baz=112,slow=5.9,SNR=2.7								
GERES	**GERESS Array B**	**67.28**	**314**		P		**P**	**07 24 44.9**	**+0.4**
	comp=Z,0.2nm,0.3s,mb3.6,baz=75,slow=8.5,SNR=3.3								
LPG	**La Plagne**	**73.02**	**313**	*eP*			**P**	**07 25 20.1**	**+0.4**
	comp=Z,5.1nm,0.5s,mb4.4								
LPL	**La Plagne**	**73.02**	**313**	*eP*			**P**	**07 25 20.1**	**+0.4**
	comp=Z,6.3nm,0.6s,mb4.4								
YKA	**Yellowknife Ar**	**79.93**	**18**		P		**P**	**07 25 58.9**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=327,slow=5.1,SNR=6.7								
YKA	**Yellowknife Ar**	**79.93**	**18**		P		**P**	**07 25 58.9**	**+0.4**

ISCJB ***16*** *07:16:46.0±0.7,29°.57S±0°.09×179°.3W±0°.2,h320km±8km, mb3.5/5,Error ellipse: s-maj=24.0km s-min=13.4km az=18.6*
NEIC ***16*** *07:16:46.6±0.9,29°.45S×179°.20W,h323km±11km,mb4.9/2, Error ellipse: s-maj=21.7km s-min=16.3km az=117.0*
IDC ***16*** *07:16:46.2±1.0,29°.20S×179°.02W,h330km±12km,mb3.3/5, mb1 3.5/5,mb1mx3.3/13,mbtmp3.3/5,Error ellipse: s-maj=50.0km s-min=22.3km az=33.0*
ISC 16 07:16:46.8±0.7,29°.5S±0°.1×179°.3W±0°.2,h317km±9km,n14, σ0§67/15,mb3.6/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.19**	**80**		P		**Pn**	**07 17 31.1**	**+1.1**
	141nm,0.3s,baz=97,slow=8.9,SNR=33								
RAO					S		**S**	**07 18 04.2**	**-0.1**
	131nm,0.3s,baz=108,slow=22,SNR=7.2								
RAO	**Raoul Island**	**1.19**	**80**	*e*P	n		**Pn**	**07 17 30.6**	**+0.6**
RAO					S		**S**	**07 18 04.2**	**-0.1**
URZ	**Urewera**	**9.27**	**198**		P		**Pn**	**07 18 54.5**	**-1.2**
	3.3nm,0.3s,baz=308,slow=3.1,SNR=32								
URZ					S		**S**	**07 20 35.2**	**-5.8**
	3.1nm,0.3s,baz=122,slow=21,SNR=9.0								
AFI	**Afiamalu**	**16.97**	**26**	*eP*			**P**	**07 20 23.6**	**-0.9**
	6.9nm,0.4s								
STKA	**Stephens Creek**	**33.63**	**256**		P		**P**	**07 22 59.2**	**+0.8**
	1.7nm,0.4s,mb3.9,baz=96,slow=9.0,SNR=5.3								
STKA	**Stephens Creek**	**33.63**	**256**		P		**P**	**07 22 59.2**	**+0.8**
ASAR	**Alice Springs**	**42.07**	**266**		P		**P**	**07 24 08.4**	**-0.1**
	2.1nm,0.7s,mb3.5,baz=100,slow=6.9,SNR=24								
WB2	**Warramunga Arr**	**42.96**	**272**	*eP*			**P**	**07 24 15.9**	**+0.3**
WRA	**Warramunga Arr**	**42.97**	**272**		P		**P**	**07 24 15.4**	**-0.3**
	1.9nm,0.4s,mb3.7,baz=112,slow=6.5,SNR=14								
QSPA	**South Pole Qui**	**60.63**	**180**		P		**P**	**07 26 25.0**	**+0.8**
	0.5nm,0.6s,mb3.2,baz=30,slow=9.7,SNR=6.0								
MAW	**Mawson**	**72.78**	**201**		P		**P**	**07 27 40.2**	**-0.4**
	1.2nm,0.9s,mb3.6,baz=108,slow=3.2,SNR=2.9								
PMSA	**Palmer Station**	**73.55**	**156**	*eP*			**P**	**07 27 45.5**	**+0.3**
	46nm,0.5s								
FINES	**FINESS Array B**	**143.90**	**340**		PKP		PKPdf	07 35 40.5	-3.3
	0.6nm,0.3s,baz=29,slow=4.4,SNR=6.7								
FINES	**FINESS Array B**	**143.90**	**340**		PKP		PKPdf	07 35 40.5	-3.3

JMA ***16*** *07:27:16.8±0.2,36°.20N×142°.46E,h74km,M2.9*
ISCJB ***16*** *07:27:26.6±1.5,36°.53N±0°.07×141°.7E±0°.1,h51km±12km, mb3.6/5,Error ellipse: s-maj=19.2km s-min=11.2km az=11.7*
IDC ***16*** *07:27:32.6±4.7,36°.46N×141°.26E,h78km±41km,mb3.3/5, mb1 3.5/6,mb1mx3.2/24,mbtmp3.2/6,ML2.8/1,Error ellipse: s-maj=44.5km s-min=25.5km az=73.0*
ISC 16 07:27:27.6±1.8,36°.55N±0°.07×141°.7E±0°.2,h37km±16km, n15,σ0§80/19,mb3.6/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.87**	**274**		P		**Pn**	**07 27 43.3**	**0.0**
JHO					S		**Sn**	**07 28 03.3**	**+8.6**
ONAJ	**Iwakimizuishiy**	**0.88**	**309**		P		**Pn**	**07 27 43.7**	**+0.3**
JFK	**Kawauchi**	**1.02**	**323**		P		**Pn**	**07 27 45.1**	**-0.3**
JFK					S		**Sn**	**07 28 06.8**	**+8.2**
CHOJ	**Chosi**	**1.06**	**217**		P		**Pn**	**07 27 40.8**	**-5.1**
CHOJ					S		**Sn**	**07 27 58.9**	**-0.5**
JMM	**Marumori**	**1.48**	**333**		P		**Pn**	**07 27 50.6**	**-1.1**
JMM					S		Sx	07 28 17.0	
JAG	**Ashikaga**	**1.77**	**267**		P		**Pn**	**07 27 55.7**	**0.0**
BSO1	**Boso 1**	**1.97**	**196**		P		**Pn**	**07 27 48.9**	**-10**
BSO1					S		Sx	07 28 12.9	
JRY	**Ryogami san**	**2.28**	**257**		P		**Pn**	**07 28 02.3**	**-0.4**
MJAR	**Matsushiro Arr**	**2.77**	**271**		P		**Pn**	**07 28 10.3**	**+0.9**
	2.1nm,0.3s,baz=112,slow=8.2,SNR=9.4								
MAT	**Matsushiro**	**2.77**	**271**		P		**Pn**	**07 28 10.4**	**+1.0**
MAT				*e*S			**Sn**	**07 28 42.0**	**+0.4**
ZALV	**Zalesovo Beam**	**42.38**	**313**		P		**P**	**07 35 17.8**	**-0.2**
	0.9nm,0.6s,mb3.6,baz=109,slow=7.8,SNR=3.7								
MKAR	**Makanchi Array**	**44.53**	**303**		P		**P**	**07 35 34.3**	**-1.1**
	0.9nm,0.6s,mb3.8,baz=95,slow=9.1,SNR=6.3								
WRA	**Warramunga Arr**	**56.61**	**188**		P		**P**	**07 37 06.2**	**-0.5**
	0.6nm,0.9s,mb3.6,baz=5.7,slow=7.4,SNR=5.8								
ASAR	**Alice Springs**	**60.33**	**188**		P		**P**	**07 37 32.6**	**0.0**
	0.4nm,0.9s,mb3.5,baz=1.6,slow=6.5,SNR=2.9								
NVAR	**Mina Array Bea**	**75.13**	**53**		P		**P**	**07 39 08.3**	**+2.5**
	0.3nm,0.6s,mb3.4,baz=299,slow=8.0,SNR=2.6

GYA smax
comp=N,50nm,0.8s
GYA smax
comp=E,40nm,0.7s
SONM Songino Array 16.80 6 Pn **Pn 07 42 07.0 +0.3**
comp=E,0.1nm,0.3s,baz=152,slow=6.5,SNR=2.8
KSRS Korea Array 20.76 66 P **P 07 42 52.5 +0.1**
comp=E,0.9nm,0.5s,baz=260,slow=10,SNR=5.0
MKAR Makanchi Array 22.89 319 P **P 07 43 13.6 -1.5**
comp=E,1.5nm,1.1s,mb3.4,baz=128,slow=9.3,SNR=3.7
WRAB Tennant Creek 58.55 146 *e*P **P 07 48 08.5 +0.2**
comp=E,1.0nm,0.9s,mb3.9
WRA Warramunga Arr 58.55 146 P **P 07 48 08.1 -0.2**
comp=E,0.9nm,0.7s,mb3.9,baz=338,slow=7.7,SNR=19
WB2 Warramunga Arr 58.56 146 *e*P **P 07 48 08.4 0.0**
ASAR Alice Springs 61.56 149 P **P 07 48 28.4 -0.5**
comp=E,0.4nm,0.9s,mb3.6,baz=342,slow=6.6,SNR=6.6

CASC 16 07:41:21.8±1.7, 13°.33N×88°.85W, h114km±18km, MD4.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.36**	**325**	*e*P	Pn	07 41 38.4	0.0
LFRS				*e*S	Sn	07 41 52.1	+1.3
SNET	**Serv Nac Est T**	**0.51**	**314**	*e*P	Sn	07 41 55.3	+3.0
SBLS	**San Blas**	**0.91**	**304**	*e*P	Pn	07 41 42.8	+0.3
CNCH	**Conchagua**	**0.99**	**93**	*e*P	Pn	07 41 43.1	-0.1
MIRN	**Miramar**	**2.26**	**113**	*e*P	Pn	07 41 59.2	+0.8
COPN	**Copaltepe**	**2.48**	**117**	*e*P	Pn	07 42 01.8	+0.7
COPN				*e*S	Sn	07 42 31.2	-0.2
CSAN		**2.63**	**115**	*e*P	Pn	07 42 04.5	+1.4
CSAN				*e*S	Sn	07 42 36.4	+1.7

IDC 16 07:45:52.4±2.4, 6°.15S×130°.48E, h0km, mb3.2/1, mb1 3.6/4, mb1mx3.4/16, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=110.9km s-min=28.1km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.78**	**201**	Pn	Pn	07 48 56.5	+0.9
	0.2nm,0.3s,baz=36,slow=13,SNR=9.6						
FITZ				Sn	Sn	07 51 13.0	-5.7
	0.1nm,0.3s,baz=295,slow=23,SNR=3.1						
WRA	**Warramunga Arr**	**14.21**	**165**	Pn	Pn	07 49 14.0	-1.1
	0.1nm,0.3s,baz=338,slow=14,SNR=12						
WRA				Sn	Sn	07 51 43.5	-10
	0.2nm,0.3s,baz=335,slow=23,SNR=7.5						
ASAR	**Alice Springs**	**17.72**	**170**	P	Pn	07 50 00.9	+0.2
	0.1nm,0.3s,baz=350,slow=9.0,SNR=6.6						
MKAR	**Makanchi Array**	**67.78**	**326**	P	P	07 56 52.2	+0.1
	0.1nm,0.4s,baz=136,slow=6.4,SNR=3.0						

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*ISCJB **16** 07:58:00.0±0.9, 31°.35N±0°.06×104°.1E±0°.1, h10km, mb3.4/4, Error ellipse: s-maj=13.9km s-min=7.7km az=153.6*
*IDC **16** 07:58:00.5±1.2, 31°.27N×104°.07E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.4/5, Error ellipse: s-maj=43.3km s-min=23.8km az=62.0*
*NEIC **16** 07:58:02.2±0.7, 31°.36N×104°.24E, h10km, Error ellipse: s-maj=27.4km s-min=12.8km az=222.0*
ISC 16 07:58:02.0±0.9, 31°.27N±0°.06×104°.0E±0°.1, h10km, n8, σ0s84/10, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.81**	**100**	*e*Pn	**Pn**	**07 59 12.3**	**-2.2**
ENH				*e*Sn	**Sn**	**08 00 11.5**	**+1.3**
LZH	**Lanzhou**	**4.81**	**358**	*e*Pg	**Pg**	**07 59 43.4**	**+9.2**
LZH				Sg	**Sg**	**08 00 36.6**	**+0.1**
LZH				smax			
	comp=N,35nm,0.8s						
LZH				smax			
	comp=E,49nm,0.5s						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**08 02 41.4**	**-0.4**
	comp=E,1.4nm,0.7s,baz=261,slow=10,SNR=6.5						
MKAR	**Makanchi Array**	**22.81**	**319**	P	**P**	**08 03 05.4**	**+0.5**
	comp=E,0.2nm,0.4s,mb2.9,baz=140,slow=11,SNR=3.7						
WRAB	**Tennant Creek**	**58.64**	**146**	*e*P	**P**	**08 08 00.0**	**+0.5**
WRA	**Warramunga Arr**	**58.65**	**146**	P	**P**	**08 07 59.5**	**-0.1**
	comp=E,0.6nm,0.6s,mb3.8,baz=339,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**61.66**	**149**	P	**P**	**08 08 20.4**	**+0.1**
	comp=E,0.3nm,0.5s,mb3.7,baz=330,slow=6.3,SNR=4.1						
YKA	**Yellowknife Ar**	**81.56**	**17**	P	**P**	**08 10 19.4**	**-0.2**
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=5.0,SNR=3.9						

IDC 16 08:08:48.9±2.9, 2°.80N×124°.31E, h354km±33km, mb3.5/4, mb1 3.7/4, mb1mx3.1/20, mbtmp3.5/4, Error ellipse: s-maj=81.4km s-min=33.4km az=73.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.82**	**176**	P	P	08 13 04.1	-0.1
	10nm,0.3s,baz=9.9,slow=9.0,SNR=96						
WRA	**Warramunga Arr**	**24.66**	**157**	P	P	08 13 38.6	-0.4
	1.5nm,0.3s,baz=335,slow=11,SNR=80						
WRA				PcP	PcP	08 17 05.1	-0.5
	0.4nm,0.4s,baz=326,slow=2.2,SNR=4.9						
WRA				S	S	08 17 33.8	-0.2
	1.0nm,0.8s,baz=334,slow=16,SNR=4.9						
ASAR	**Alice Springs**	**27.92**	**161**	P	P	08 14 07.9	0.0
	0.4nm,0.4s,baz=340,slow=7.3,SNR=16						
ASAR				S	S	08 18 27.1	+1.8
	1.1nm,0.9s,baz=336,slow=12,SNR=4.9						
STKA	**Stephens Creek**	**38.20**	**156**	P	P	08 15 36.9	+0.9
	4.9nm,1.1s,baz=321,slow=13,SNR=2.4						

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*CSEM **16** 08:25:12.4±0.7, 37°.28N×26°.74E, h2km, MD3.0, Error ellipse: s-maj=12.9km s-min=6.0km az=56.0*
*DDA **16** 08:25:12.7, 37°.30N×26°.82E, h7km±4km, Md3.0*
*ISK **16** 08:25:12.7, 37°.31N×26°.81E, h3km, MD3.0*
ISC 16 08:25:13.2±1.2, 37°.31N±0°.04×26°.79E±0°.07, h4km±11km, n24, σ1s01/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.52**	**42**	*i*P	**Pg**	**08 25 23.0**	**-0.2**
GCAM				*i*S	**Sg**	**08 25 31.8**	**+1.8**
GCAM	**G?zelcaml?**	**0.52**	**42**	*i*P	**Pg**	**08 25 23.0**	**-0.2**
GCAM				*i*S	**Sg**	**08 25 31.8**	**+1.8**
BDRM	**Kayabasi**	**0.58**	**115**	*i*P	**Pg**	**08 25 23.6**	**-0.6**
BDRM				*i*S	**Sg**	**08 25 32.4**	**+0.6**
BDRM	**Kayabasi**	**0.58**	**115**	*i*P	**Pg**	**08 25 23.6**	**-0.7**
BDRM				*i*S	**Sg**	**08 25 32.4**	**+0.7**
MLSB	**Milas**	**0.78**	**91**	*e*PG	**Pg**	**08 25 27.8**	**-0.4**
MLSB				*e*SG	**Sg**	**08 25 39.1**	**+0.7**
MLSB	**Milas**	**0.78**	**91**	*e*Pg	**Pg**	**08 25 27.8**	**-0.5**
MLSB				*e*Sg	**Sg**	**08 25 39.1**	**+0.7**
DAT	**Datca**	**0.86**	**133**	*e*PG	**Pg**	**08 25 28.9**	**-0.8**
DAT				*e*SG	**Sg**	**08 25 42.6**	**+1.8**
DAT	**Datca**	**0.86**	**133**	*e*Pg	**Pg**	**08 25 28.9**	**-0.7**
DAT				*e*Sg	**Sg**	**08 25 42.6**	**+1.8**
AYDN	**Tasoluk**	**0.93**	**68**	*i*P	**Pg**	**08 25 29.6**	**-1.5**
AYDN				*i*S	**Sg**	**08 25 42.8**	**-0.4**
AYDN	**Tasoluk**	**0.93**	**68**	*i*P	**Pg**	**08 25 29.6**	**-1.5**
AYDN				*i*S	**Sg**	**08 25 42.8**	**-0.4**
URLA	**Izmir**	**1.06**	**352**	*i*P	**Pg**	**08 25 32.6**	**-0.9**
URLA				*i*S	**Sg**	**08 25 49.4**	**+2.2**
URLA	**Izmir**	**1.06**	**352**	*i*P	**Pg**	**08 25 32.6**	**-0.9**
URLA				*i*S	**Sg**	**08 25 49.4**	**+2.2**
BLCB	**Balcova**	**1.09**	**10**	*e*PN	**Pg**	**08 25 33.6**	**-0.5**
BLCB	**Balcova**	**1.09**	**10**	*e*Pn	**Pg**	**08 25 33.7**	**-0.4**
IZM	**Izmir**	**1.15**	**19**	*e*PN	**Pg**	**08 25 36.1**	**+0.9**
IZM	**Izmir**	**1.15**	**19**	*e*Pn	**Pg**	**08 25 36.1**	**+0.9**
YER	**Yerkesik**	**1.20**	**98**	*e*PN	**Pn**	**08 25 37.1**	**+0.3**
YER	**Yerkesik**	**1.20**	**98**	*e*Pn	**Pn**	**08 25 37.1**	**+0.3**
AKS	**Akhisar**	**1.76**	**27**	*e*PN	**Pn**	**08 25 45.0**	**+0.5**
AKS	**Akhisar**	**1.76**	**27**	*e*Pn	**Pn**	**08 25 45.0**	**+0.5**
MANT	**Manisa**	**1.82**	**49**	*i*P	**Pg**	**08 25 47.4**	**-0.8**
MANT				*i*S	**Sg**	**08 26 10.7**	**-1.2**
MANT	**Manisa**	**1.82**	**49**	*i*P	**Pg**	**08 25 47.4**	**-0.8**
MANT				*i*S	**Sg**	**08 26 10.7**	**-1.2**
KULA	**Kula-Manisa**	**1.90**	**50**	*e*PN	**Pb**	**08 25 47.7**	**-0.8**
KULA	**Kula-Manisa**	**1.90**	**50**	*e*Pn	**Pb**	**08 25 47.7**	**-0.8**

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*ISCJB **16** 08:26:01.1±0.7, 31°.84N±0°.05×104°.56E±0°.07, h10km, mb3.7/2, Error ellipse: s-maj=9.9km s-min=5.5km az=26.4*
*IDC **16** 08:26:04.7±3.2, 31°.52N×104°.77E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.4/26, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=83.7km s-min=34.6km az=100.0*
*BJI **16** 08:26:05.1, 31°.64N×104°.80E, h18km, ML3.4/9, Ms3.4/2, Ms7 3.4/2*
*NEIC **16** 08:26:06.3±1.0, 31°.57N×104°.91E, h10km, Error ellipse: s-maj=21.1km s-min=13.2km az=57.0*
ISC 16 08:26:03.4±0.6, 31°.82N±0°.04×104°.54E±0°.06, h10km, n10, σ1s22/15, mb3.7/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.13**	**217**	Pg	**Pg**	**08 26 24.0**	**-1.0**
CD2				Sg	**Sg**	**08 26 38.5**	**-1.1**
CD2				smax			
	comp=N,3μm,0.7s						
LZH	**Lanzhou**	**4.29**	**352**	*e*Pg	**Pg**	**08 27 26.9**	**+1.3**
LZH				Sg	**Sg**	**08 28 20.5**	**-0.8**
LZH				smax			
	comp=N,53nm,0.5s						
LZH				smax			
	comp=E,64nm,0.6s						
LZH				LR	LR		
	comp=N,170nm,6.3s						
LZH				LR	LR		
	comp=Z,290nm,7.5s						
XAN	**Xi'an**	**4.30**	**58**	Pn	**Pn**	**08 27 10.1**	**+1.3**
XAN				Pg	**Pg**	**08 27 23.3**	**-2.4**
XAN				Sg	**Sg**	**08 28 19.9**	**-1.5**
XAN				smax			
	comp=N,96nm,0.7s						
XAN				smax			
	comp=E,44nm,0.8s						
ENH	**Enshi**	**4.52**	**109**	*e*Pg	**Pg**	**08 27 25.6**	**-4.4**
GYA	**Guiyang**	**5.66**	**160**	Pn	**Pn**	**08 27 28.8**	**+1.3**
GYA				Sn	**Sn**	**08 28 32.1**	**-0.4**
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,40nm,0.9s						
SONM	**Songino Array**	**16.06**	**5**	Pn	**Pn**	**08 29 55.2**	**+6.0**
	comp=E,0.2nm,0.3s,baz=164,slow=5.8,SNR=2.5						
KSRS	**Korea Array**	**20.02**	**67**	P	**P**	**08 30 38.2**	**+1.9**
	baz=258,slow=10,SNR=8.6						
WRA	**Warramunga Arr**	**58.86**	**147**	P	**P**	**08 36 02.6**	**+0.2**
	comp=E,0.4nm,0.4s,mb3.8,baz=339,slow=7.7,SNR=16						
WB2	**Warramunga Arr**	**58.87**	**147**	*e*P	**P**	**08 36 02.6**	**+0.1**
ASAR	**Alice Springs**	**61.91**	**149**	P	**P**	**08 36 24.0**	**+0.8**
	comp=E,0.3nm,0.5s,mb3.7,baz=331,slow=6.6,SNR=4.3						

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*ISK **16** 08:29:06.8, 36°.99N×29°.17E, h2km, MD3.2*
*ISCJB **16** 08:29:07.9±0.5, 36°.99N±0°.03×29°.17E±0°.03, h4km±5km, Error ellipse: s-maj=4.6km s-min=4.3km az=175.3*
*CSEM **16** 08:29:08.1±0.2, 36°.99N×29°.19E, h8km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.3km az=11.0*
*DDA **16** 08:29:08.7, 37°.00N×29°.19E, h7km±5km, Md3.1*
ISC 16 08:29:08.5±0.5, 36°.99N±0°.03×29°.18E±0°.03, h8km±5km, n51, σ0s89/69, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**57**	PG	**Pg**	**08 29 13.7**	**-0.8**
GLHS				*e*SG	**Sg**	**08 29 19.3**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.31**	**57**	*i*Pg	**Pg**	**08 29 13.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**08 29 19.3**	**+0.7**
FETY	**Fethiye**	**0.36**	**192**	*e*PG	**Pg**	**08 29 14.9**	**-0.6**
FETY				*e*SG	**Sg**	**08 29 20.3**	**0.0**
FETY	**Fethiye**	**0.36**	**192**	*e*Pg	**Pg**	**08 29 14.9**	**-0.6**
FETY				*e*Sg	**Sg**	**08 29 20.3**	**0.0**
GOLH	**Golhisar**	**0.40**	**51**	*i*P	**Pg**	**08 29 15.7**	**-0.5**
GOLH				*i*S	**Sg**	**08 29 22.6**	**+1.2**
GOLH	**Golhisar**	**0.40**	**51**	*i*P	**Pg**	**08 29 15.7**	**-0.5**
GOLH				*i*S	**Sg**	**08 29 22.6**	**+1.2**
TURN	**Turunc**	**0.47**	**256**	*i*P	**Pg**	**08 29 23.2**	**+5.5**
TURN				*i*S	**Sg**	**08 29 35.5**	**+12**
ELL	**Elmali**	**0.63**	**112**	*e*PG	**Pg**	**08 29 19.8**	**-0.9**
ELL				*e*SG	**Sg**	**08 29 30.0**	**+1.1**
ELL	**Elmali**	**0.63**	**112**	*e*Pg	**Pg**	**08 29 19.8**	**-0.9**
ELL				*e*Sg	**Sg**	**08 29 30.0**	**+1.1**
DNZL	**Cakiroluk**	**0.71**	**352**	*i*P	**Pg**	**08 29 21.5**	**-0.6**
DNZL				*i*S	**Sg**	**08 29 31.7**	**+0.3**
DNZL	**Cakiroluk**	**0.71**	**352**	*i*P	**Pg**	**08 29 21.5**	**-0.6**
DNZL				*i*S	**Sg**	**08 29 31.7**	**+0.3**
YER	**Yerkesik**	**0.73**	**282**	*e*PG	**Pg**	**08 29 22.0**	**-0.5**
YER	**Yerkesik**	**0.73**	**282**	*e*Pg	**Pg**	**08 29 22.0**	**-0.6**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**08 29 22.3**	**-1.1**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**08 29 22.3**	**-1.1**
AKAS	**Kas**	**0.83**	**155**	*i*P	**Pg**	**08 29 24.4**	**0.0**
AKAS				*i*S	**Sg**	**08 29 42.5**	**+7.4**
AKAS	**Kas**	**0.83**	**155**	*i*P	**Pg**	**08 29 24.4**	**0.0**
KORT	**Korkueli**	**0.94**	**89**	*i*P	**Pg**	**08 29 26.9**	**+0.3**
KORT				*i*S	**Sg**	**08 29 42.0**	**+3.2**
KORT	**Korkueli**	**0.94**	**89**	*i*P	**Pg**	**08 29 26.9**	**+0.4**
KORT				*i*S	**Sg**	**08 29 42.0**	**+3.3**
MLSB	**Milas**	**1.16**	**286**	*e*PN	**Pn**	**08 29 29.9**	**-1.0**
MLSB	**Milas**	**1.16**	**286**	*e*Pn	**Pn**	**08 29 29.9**	**-1.1**
ANTB	**Antalya**	**1.19**	**94**	*e*PN	**Pn**	**08 29 29.9**	**-1.4**
ANTB	**Antalya**	**1.19**	**94**	*e*Pn	**Pn**	**08 29 29.9**	**-1.4**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**08 29 30.6**	**-1.2**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**08 29 30.6**	**-1.2**
AYDN	**Tasoluk**	**1.23**	**303**	*i*P	**Pb**	**08 29 32.5**	**+0.5**
AYDN				*i*S	**Sb**	**08 29 52.1**	**+4.1**
AYDN	**Tasoluk**	**1.23**	**303**	*i*P	**Pb**	**08 29 32.5**	**+0.5**
AYDN				*i*S	**Sb**	**08 29 52.1**	**+4.1**
DAT	**Datca**	**1.31**	**259**	*e*PN	**Pn**	**08 29 32.7**	**-0.3**
DAT	**Datca**	**1.31**	**259**	*e*Pn	**Pn**	**08 29 32.7**	**-0.3**
ISP	**Isparta**	**1.36**	**51**	*e*PN	**Pn**	**08 29 34.4**	**+0.7**
ISP	**Isparta**	**1.36**	**51**	*e*Pn	**Pn**	**08 29 34.4**	**+0.7**
KHL	**Karahalli**	**1.36**	**12**	*e*PN	**Pn**	**08 29 32.7**	**-1.1**
KHL	**Karahalli**	**1.36**	**12**	*e*Pn	**Pn**	**08 29 32.7**	**-1.0**
BDRM	**Kayabasi**	**1.39**	**274**	*i*P	**Pn**	**08 29 35.9**	**+1.8**
BDRM				*i*S	**Sb**	**08 29 54.9**	**+2.4**
BDRM	**Kayabasi**	**1.39**	**274**	*i*P	**Pn**	**08 29 35.9**	**+1.8**
BDRM				*i*S	**Sb**	**08 29 54.9**	**+2.4**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**08 29 36.1**	**0.0**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**08 29 36.1**	**0.0**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN	**Pn**	**08 29 36.4**	**-0.3**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn	**Pn**	**08 29 36.4**	**-0.3**
MANT	**Manisa**	**1.58**	**342**	*i*P	**Pn**	**08 29 36.8**	**+0.1**
MANT	**Manisa**	**1.58**	**342**	*i*P	**Pn**	**08 29 36.8**	**+0.1**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**08 29 41.6**	**+0.4**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**08 29 41.6**	**+0.4**
IZM	**Izmir**	**2.07**	**313**	*e*PN	**Pn**	**08 29 43.6**	**+0.2**
IZM	**Izmir**	**2.07**	**313**	*e*Pn	**Pn**	**08 29 43.6**	**+0.1**
AKS	**Akhisar**	**2.17**	**331**	*e*PN	**Pn**	**08 29 45.0**	**+0.1**
AKS	**Akhisar**	**2.17**	**331**	*e*Pn	**Pn**	**08 29 45.0**	**+0.1**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**08 29 45.0**	**-0.1**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**08 29 45.0**	**-0.1**
BLCB	**Balcova**	**2.19**	**310**	*e*PN	**Pn**	**08 29 45.4**	**+0.2**
BLCB	**Balcova**	**2.19**	**310**	*e*Pn	**Pn**	**08 29 45.4**	**+0.2**

IGQ 16 08:35:27.5, 0°.69S×79°.17W, h13km±2km, Mb4.0, Ms3.8, 11C-17D, Error ellipse: s-maj=1.4km s-min=0.7km az=173.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMI	**Rancho Maria**	**0.67**	**89**	⇓P	Pg	08 35 41.3	+0.8
NAS2	**Nasa**	**0.71**	**86**	⇓P	Pg	08 35 42.1	+0.9
MOV1	**Cotopaxi Vol s**	**0.73**	**92**	⇑P	Pg	08 35 42.1	+0.4
JUA2	**San Juan 2**	**0.74**	**50**	⇓P	Pg	08 35 42.5	+0.6
PITA	**Cotopaxi Volc**	**0.75**	**80**	⇓P	Pg	08 35 42.6	+0.5
TERV	**Terraza Guagua**	**0.77**	**48**	P	Pg	08 35 42.9	+0.5
VC1	**Cotopaxi 1**	**0.77**	**86**	⇓P	Pg	08 35 43.1	+0.7
GGP	**Refugio Guagua**	**0.78**	**48**	⇓P	Pg	08 35 42.9	+0.4
PINO	**Pino**	**0.78**	**47**	⇓P	Pg	08 35 42.8	+0.3
TAMB	**Tambo**	**0.81**	**90**	⇓P	Pg	08 35 43.4	+0.3
COV1	**Cotopaxi Volc**	**0.83**	**88**	⇓P	Pg	08 35 42.8	-0.8
YANA	**Yana**	**0.83**	**47**	P	Pg	08 35 43.5	0.0
PISA	**Pisayambo**	**0.87**	**115**	⇑P	Pg	08 35 44.5	+0.2
PISA	**Pisayambo**	**0.87**	**115**	⇑S	Sg	08 35 56.5	+0.8
IGUA	**Igualata**	**0.95**	**146**	S	Sg	08 35 58.9	+0.4
IGUA	**Igualata**	**0.95**	**146**	P	Pb	08 35 46.3	+0.4
BIL2	**Estacion Bilba**	**1.01**	**138**	P	Pb	08 35 47.0	+0.1
BIL2	**Estacion Bilba**	**1.01**	**138**	S	Sb	08 36 00.5	+0.4
JUI6	**Juive**	**1.01**	**136**	⇑S	Sb	08 36 00.5	+0.4
JUI6	**Juive**	**1.01**	**136**	⇑P	Pb	08 35 47.1	+0.2
RUN5	**Runtun**	**1.04**	**134**	⇑P	Pb	08 35 47.2	-0.1
RUN5	**Runtun**	**1.04**	**134**	⇑S	Sb	08 36 00.6	-0.3
ANTI	**Antisana**	**1.04**	**77**	⇓P	Pb	08 35 47.1	-0.3
RETU	**Refugio**	**1.05**	**136**	⇑S	Sb	08 36 02.8	+1.7
RETU	**Refugio**	**1.05**	**136**	⇑P	Pb	08 35 48.2	+0.7
ULBA	**Ulba**	**1.07**	**134**	S	Sb	08 36 01.5	-0.3
ULBA	**Ulba**	**1.07**	**134**	P	Pb	08 35 47.7	-0.2
ARRY	**Arrayan**	**1.08**	**138**	⇓P	Pb	08 35 47.8	-0.2
ARRY	**Arrayan**	**1.08**	**138**	⇓S	Sb	08 36 01.8	-0.3
PATA	**Patacocha**	**1.09**	**137**	⇑S	Sb	08 36 02.6	+0.2
PATA	**Patacocha**	**1.09**	**137**	⇑P	Pb	08 35 48.4	+0.1
JAMA	**Jama**	**1.12**	**293**	P	Pb	08 35 47.8	-0.9
RIOE	**Riobamba**	**1.18**	**153**	S	Sb	08 36 05.8	+0.7
RIOE	**Riobamba**	**1.18**	**153**	P	Pn	08 35 49.8	0.0
COTA	**Cotacachi**	**1.32**	**39**	S	Sb	08 36 09.6	+0.6
COTA	**Cotacachi**	**1.32**	**39**	P	Pn	08 35 52.6	+0.9
CAYR	**Refugio Cayamb**	**1.36**	**59**	⇓P	Pn	08 35 53.4	+1.2
CAYR	**Refugio Cayamb**	**1.36**	**59**	⇓S	Sn	08 36 11.4	+1.2
CAYA	**Cayambe**	**1.41**	**57**	⇓S	Sn	08 36 11.5	+0.2
CAYA	**Cayambe**	**1.41**	**57**	⇓P	Pn	08 35 53.8	+1.0
CHAR	**Charly**	**1.62**	**68**	⇓P	Pn	08 35 58.0	+2.2
CONE	**Cono NE Rev Vo**	**1.65**	**68**	P	Pn	08 35 58.3	+2.1
LAV3	**Lava3-Reventad**	**1.65**	**69**	P	Pn	08 35 58.3	+2.1
MACE	**Macas**	**1.83**	**148**	P	Pn	08 36 01.4	+2.7

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*ISCJB **16** 08:37:26.1±0.7, 31°.39N±0°.06×104°.45E±0°.07, h10km, mb3.6/5, Error ellipse: s-maj=10.0km s-min=6.3km az=137.7*
*IDC **16** 08:37:26.8±1.2, 31°.19N×104°.27E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.6/6, ML4.0/1, Error ellipse: s-maj=43.1km s-min=22.6km az=68.0*
*NEIC **16** 08:37:28.1±0.6, 31°.19N×104°.26E, h10km, mb4.0/1, Error ellipse: s-maj=16.1km s-min=8.4km az=225.0*
*BJI **16** 08:37:30.3, 31°.44N×104°.32E, h30km, ML3.3/5*
ISC 16 08:37:28.2±0.7, 31°.30N±0°.06×104°.33E±0°.07, h10km, n12, σ0s81/14, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.56**	**102**	*e*Pg	**Pg**	**08 38 55.6**	**0.0**
ENH				*e*Sg	**Sg**	**08 39 55.2**	**+0.6**
XAN	**Xi'an**	**4.74**	**54**	Pg	**Pg**	**08 38 57.8**	**-1.3**
XAN				Sg	**Sg**	**08 39 52.8**	**-7.7**
XAN				smax			
	comp=N,42nm,1.0s						
XAN				smax			
	comp=E,22nm,0.9s						
LZH	**Lanzhou**	**4.79**	**355**	*e*Pg	Px	08 39 12.8	
LZH				Sg	**Sg**	**08 40 01.8**	**-0.4**
LZH				smax			
	comp=N,35nm,0.6s						
LZH				smax			
	comp=E,57nm,0.8s						
SONM	**Songino Array**	**16.59**	**5**	Pn	**Pn**	**08 41 22.6**	**+1.8**
	comp=E,0.5nm,0.3s,baz=154,slow=11,SNR=8.0						
KSRS	**Korea Array**	**20.40**	**66**	P	**P**	**08 42 04.8**	**-0.4**
	comp=E,1.5nm,0.7s,baz=258,slow=10,SNR=6.6						
MK31	**Makanchi Array**	**22.96**	**319**	*e*P	**P**	**08 42 32.5**	**-0.1**
MKAR	**Makanchi Array**	**22.96**	**319**	P	**P**	**08 42 32.4**	**-0.3**
	comp=E,0.2nm,0.4s,mb2.9,baz=123,slow=12,SNR=4.4						
WRAB	**Tennant Creek**	**58.52**	**146**	*e*P	**P**	**08 47 24.7**	**-0.3**
	comp=E,1.5nm,0.9s,mb4.0						
WRA	**Warramunga Arr**	**58.53**	**147**	P	**P**	**08 47 24.6**	**-0.4**
	comp=E,1.3nm,0.6s,mb4.2,baz=340,slow=7.9,SNR=22						
WB2	**Warramunga Arr**	**58.53**	**147**	*e*P	**P**	**08 47 24.5**	**-0.5**
ASAR	**Alice Springs**	**61.56**	**149**	P	**P**	**08 47 45.5**	**-0.2**
	comp=E,0.4nm,0.4s,mb3.9,baz=337,slow=6.6,SNR=9.5						
YKA	**Yellowknife Ar**	**81.45**	**17**	P	**P**	**08 49 46.9**	**+1.7**
	comp=E,0.2nm,0.7s,mb3.2,baz=329,slow=5.4,SNR=3.9						

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*ISCJB **16** 08:40:05.7±0.6, 32°.52N±0°.04×104°.95E±0°.06, h10km, mb3.2/3, Error ellipse: s-maj=8.1km s-min=5.5km az=23.6*
*IDC **16** 08:40:05.7±1.5, 32°.43N×104°.77E, h0km, mb3.2/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=49.4km s-min=29.9km az=52.0*
*BJI **16** 08:40:06.1, 32°.57N×105°.16E, h10km, mB4.0/1, mb3.5/1, ML3.7/8, Ms3.3/3, Ms7 3.1/3*
*NEIC **16** 08:40:07.0±0.9, 32°.30N×104

*JMA **16** 08:46:44.8±0.1, 36°.05N×141°.33E, h33km±3km, M3.5*
ISC 16 08:46:44.2±1.2, 36°.06N±0°.04×141°.37E±0°.07, h16km±7km, n22, σ0°.82/26, mb3.7/10, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.54**	**230**	‖P	**Pg**	**08 46 55.2**	**+0.3**
CHOJ				S	**Sg**	**08 47 02.8**	**+0.7**
JHO	**Hitachi**	**0.85**	**311**	P	**Pb**	**08 47 00.1**	**-0.4**
JYT	**Yasato**	**0.96**	**281**	P	**Pb**	**08 47 01.3**	**-1.2**
JFK	**Kawauchi**	**1.37**	**343**	P	**Pn**	**08 47 07.7**	**-0.9**
BSO3	**Boso 3**	**1.43**	**209**	S	**Sn**	**08 47 25.2**	**-2.8**
BSO1	**Boso 1**	**1.44**	**193**	P	**Pn**	**08 47 09.4**	**-0.1**
BSO1				*e*S	**Sn**	**08 47 27.1**	**-0.9**
JAG	**Ashikaga**	**1.59**	**284**	P	**Pn**	**08 47 10.3**	**-1.3**
MJAR	**Matsushiro Arr**	**2.59**	**282**	Pn	**Pn**	**08 47 25.1**	**-0.4**
	5.0nm,0.3s,baz=115,slow=7.7,SNR=33						
MJAR				Sn	**Sn**	**08 47 58.1**	**+1.4**
	5.0nm,0.3s,baz=154,slow=22,SNR=5.9						
MAT	**Matsushiro**	**2.60**	**282**	P	**Pn**	**08 47 25.4**	**-0.1**
MAT				S	**Sn**	**08 47 57.1**	**+0.4**
JHJ	**Hachijo jima 2**	**3.21**	**204**	Pn	**Pn**	**08 47 35.3**	**+1.4**
	18nm,0.3s,baz=247,slow=19,SNR=7.4						
JHJ				Sn	**Sn**	**08 48 12.1**	**+0.3**
	32nm,0.3s,baz=254,slow=23,SNR=6.8						
ASAJ	**Asahikawa**	**8.11**	**6**	Pn	**Pn**	**08 48 40.4**	**-0.8**
	0.7nm,0.3s,baz=174,slow=15,SNR=4.5						
KSRS	**Korea Array**	**10.88**	**281**	LR	LR	08 53 03.0	
	comp=Z,31nm,18.7s,baz=341,slow=35						
SONM	**Songino Array**	**28.31**	**305**	P	**P**	**08 52 37.1**	**+0.2**
	0.5nm,0.5s,mb3.4,baz=104,slow=8.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**08 54 39.1**	**+0.2**
	1.6nm,0.5s,mb4.0,baz=91,slow=7.8,SNR=7.7						
MKAR	**Makanchi Array**	**44.61**	**303**	P	**P**	**08 54 56.3**	**+0.7**
	1.3nm,0.7s,mb3.9,baz=91,slow=9.6,SNR=16						
KURK	**Kurchatov**	**46.51**	**309**	P	**P**	**08 55 10.6**	**0.0**
	2.6nm,0.5s,mb4.5,baz=85,slow=7.7,SNR=12						
BVAR	**Borovoye Array**	**51.20**	**313**	P	**P**	**08 55 46.8**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=76,slow=8.4,SNR=3.8						
WRA	**Warramunga Arr**	**56.09**	**188**	P	**P**	**08 56 22.4**	**-0.2**
	0.4nm,0.5s,mb3.7,baz=6.5,slow=7.6,SNR=7.9						
YKA	**Yellowknife Ar**	**64.67**	**30**	P	**P**	**08 57 21.0**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=296,slow=6.7,SNR=7.2						
FINES	**FINESS Array B**	**69.66**	**332**	P	**P**	**08 57 52.5**	**0.0**
	0.8nm,0.6s,mb3.8,baz=45,slow=11,SNR=4.5						
NVAR	**Mina Array Bea**	**75.61**	**53**	P	**P**	**08 58 29.4**	**+1.0**
	0.2nm,0.6s,mb3.2,baz=292,slow=4.8,SNR=3.1						
PDAR	**Pinedale Array**	**78.38**	**45**	P	**P**	**08 58 44.7**	**+0.8**
	0.2nm,0.4s,mb3.4,baz=232,slow=1.0,SNR=2.8						

*IDC **16** 08:49:26.2±2.6, 6°.31S×106°.06E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=156.9km s-min=24.1km az=50.0*
*ISCJB **16** 08:49:36.5±0.7, 6°.94S±0°.08×105°.92E±0°.05, h74km±8km, mb3.8/5, Error ellipse: s-maj=14.5km s-min=5.4km az=23.7*
*DJA **16** 08:49:37, 6°.96S×105°.87E, h42km, MLv4.1/13*
ISC 16 08:49:37.5±0.7, 6°.92S±0°.08×105°.92E±0°.04, h71km±8km, n20, σ1°.05/29, mb3.8/5, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.38**	**324**	P	**Pn**	**08 49 48.8**	**-0.5**
CGJI				S	**Sn**	**08 49 57.5**	**-0.5**
SBJI	**Serang**	**0.82**	**15**	P	**Pn**	**08 49 52.7**	**-1.2**
SBJI				S	**Sn**	**08 50 04.5**	**-1.5**
DBJI	**Dramaga**	**0.91**	**66**	P	**Pn**	**08 49 54.3**	**-0.6**
DBJI				S	**Sn**	**08 50 07.7**	**-0.1**
TNG	**Tangerang**	**1.04**	**44**	S	**Sn**	**08 50 10.7**	**0.0**
CBJI	**Citeko**	**1.05**	**62**	P	**Pn**	**08 49 56.4**	**-0.3**
CBJI				S	**Sn**	**08 50 11.3**	**+0.3**
RBSI	**Rajabasa**	**1.08**	**351**	P	**Pn**	**08 49 56.4**	**-0.7**
RBSI				S	**Sn**	**08 50 10.5**	**-1.2**
BLSI	**Bandar Lampung**	**1.68**	**337**	P	**Pn**	**08 50 04.8**	**-0.1**
BLSI				S	**Sn**	**08 50 25.3**	**-0.3**
LEM	**Lembang**	**1.69**	**87**	P	**Pn**	**08 50 06.0**	**+0.9**
LEM				S	**Sn**	**08 50 28.2**	**+2.3**
KASI	**Kota Agung**	**1.98**	**314**	P	**Pn**	**08 50 09.0**	**+0.1**
KASI				S	**Sn**	**08 50 33.8**	**+1.0**
KLI	**Kotabumi**	**2.30**	**333**	P	**Pn**	**08 50 13.8**	**+0.6**
LWLI	**Liwa**	**2.64**	**316**	P	**Pn**	**08 50 19.1**	**+1.2**
LWLI				S	**Sn**	**08 50 50.4**	**+1.5**
MDSI	**Maura Dua**	**2.97**	**324**	P	**Pn**	**08 50 23.4**	**+1.0**
XMIS	**Christmas Isla**	**3.55**	**184**	P	**Pn**	**08 50 26.6**	**-3.6**
SJI	**Sawahan**	**5.86**	**98**	P	**Pn**	**08 51 04.2**	**+2.4**
	39nm,1.2s,0.2nm						
PWJI	**Pagerwojo**	**5.94**	**101**	P	**Pn**	**08 51 04.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**22.20**	**122**	P	**P**	**08 54 27.4**	**-0.8**
	1.0nm,0.6s,mb3.3,baz=302,slow=13,SNR=4.3						
WRA	**Warramunga Arr**	**30.46**	**118**	P	**P**	**08 55 42.2**	**-1.6**
	0.7nm,0.4s,mb3.6,baz=309,slow=8.7,SNR=22						
WRA				PcP	PcP	08 58 40.3	-1.5
	0.2nm,0.5s,baz=312,slow=2.1,SNR=5.8						
ASAR	**Alice Springs**	**31.61**	**125**	P	**P**	**08 55 53.0**	**-1.0**
	0.5nm,0.4s,mb3.6,baz=300,slow=8.3,SNR=12						
STKA	**Stephens Creek**	**41.50**	**132**	P	**P**	**08 57 17.6**	**-0.3**
	3.8nm,0.6s,mb4.4,baz=308,slow=10,SNR=11						
MKAR	**Makanchi Array**	**57.45**	**341**	P	**P**	**08 59 13.3**	**-5.7**
	0.7nm,0.6s,mb3.9,baz=143,slow=8.2,SNR=6.3						

*NIED **16** 08:58:00, 36°.10N×141°.40E, h17km, Mw3.6 Best double couple: M0=2.70000×10^14 NP1:φs=43.00000°, δ60.00000°, λ107.00000°. NP2:φs=191.00000°, δ34.00000°, λ63.00000°.*
*IDC **16** 08:58:44.8±1.0, 36°.06N×141°.57E, h0km, mb3.8/7, mb1 3.8/10, mb1mx3.7/27, mbtmp3.8/10, ML3.5/2, Error ellipse: s-maj=29.5km s-min=18.0km az=85.0*
*ISCJB **16** 08:58:46.9±1.3, 36°.05N±0°.04×141°.45E±0°.08, h26km±8km, mb3.8/7, Error ellipse: s-maj=11.0km s-min=7.4km az=178.8*
*JMA **16** 08:58:48.7±0.1, 36°.03N×141°.27E, h44km±2km, M3.6*
JMA Felt I J1.
ISC 16 08:58:46.8±1.3, 36°.10N±0°.04×141°.42E±0°.07, h13km±7km, n16, σ0°.84/21, mb3.8/7, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.60**	**229**	P	**Pg**	**08 58 59.1**	**+0.5**
CHOJ				S	**Sg**	**08 59 06.6**	**0.0**
JHO	**Hitachi**	**0.86**	**307**	‖P	**Pg**	**08 59 03.7**	**+0.2**
JYT	**Yasato**	**1.00**	**278**	‖P	**Pb**	**08 59 05.0**	**-1.1**
JFK	**Kawauchi**	**1.34**	**341**	P	**Pn**	**08 59 11.1**	**-0.2**
JFK				*e*S	**Sb**	**08 59 28.1**	**-0.8**
JAG	**Ashikaga**	**1.63**	**282**	‖P	**Pn**	**08 59 14.0**	**-1.2**
MJAR	**Matsushiro Arr**	**2.63**	**281**	Pn	**Pn**	**08 59 29.4**	**+0.4**
	5.5nm,0.3s,baz=113,slow=8.0,SNR=38						
MJAR				Sn	**Sn**	**09 00 01.2**	**+0.4**
	5.1nm,0.3s,baz=134,slow=13,SNR=6.7						
MAT	**Matsushiro**	**2.63**	**281**	P	**Pn**	**08 59 29.1**	**+0.1**
MAT				S	**Sn**	**09 00 01.1**	**+0.2**
JHJ	**Hachijo jima 2**	**3.27**	**205**	Pn	**Pn**	**08 59 38.9**	**+1.2**
	15nm,0.3s,baz=83,slow=23,SNR=7.1						
JHJ				Sn	**Sn**	**09 00 14.7**	**-1.8**
	18nm,0.3s,baz=258,slow=23,SNR=3.8						
ASAJ	**Asahikawa**	**8.06**	**6**	Pn	**Pn**	**09 00 42.1**	**-1.4**
	0.9nm,0.3s,baz=195,slow=7.1,SNR=5.8						
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**09 06 43.2**	**+1.2**
	1.3nm,0.4s,mb4.0,baz=95,slow=6.5,SNR=5.7						
MKAR	**Makanchi Array**	**44.63**	**303**	P	**P**	**09 06 59.6**	**+0.8**
	0.9nm,0.6s,mb3.8,baz=92,slow=9.5,SNR=7.6						
KURK	**Kurchatov**	**46.52**	**309**	P	**P**	**09 07 14.6**	**+0.9**
	2.5nm,0.6s,mb4.4,baz=85,slow=7.8,SNR=10						
WRA	**Warramunga Arr**	**56.13**	**188**	P	**P**	**09 08 25.2**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=5.9,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**59.86**	**188**	P	**P**	**09 08 52.1**	**0.0**
	0.3nm,0.8s,mb3.4,baz=19,slow=12,SNR=3.2						
YKA	**Yellowknife Ar**	**64.61**	**30**	P	**P**	**09 09 23.9**	**+0.3**
	0.2nm,0.8s,mb3.2,baz=300,slow=6.4,SNR=4.8						
NOA	**NORSAR Array B**	**75.05**	**337**	P	**P**	**09 10 28.8**	**+0.9**
	1.1nm,0.8s,mb3.8,baz=43,slow=5.4,SNR=3.0						

*IDC **16** 09:09:21.4±0.7, 31°.71N×104°.11E, h0km, mb4.0/12, mb1 4.2/12, mb1mx3.9/27, mbtmp4.0/12, MS2.5/1, Ms1 2.5/1, ms1mx2.2/42, Error ellipse: s-maj=37.3km s-min=14.0km az=54.0*
*NEIC **16** 09:09:23.0±0.6, 31°.60N×104°.09E, h10km, mb4.5/2, Error ellipse: s-maj=22.3km s-min=9.1km az=49.0*
*BJI **16** 09:09:25.6, 31°.77N×104°.31E, h16km, mB4.6/4, mb4.1/7, ML3.8/18, Ms3.8/4, Ms7 3.5/4*
ISC 16 09:09:23.1±0.8, 31°.76N±0°.03×104°.29E±0°.05, h7km±6km, n26, σ1°.02/31, mb4.0/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.96**	**209**	Pg	**Pg**	**09 09 41.4**	**-0.2**
CD2				Sg	**Sg**	**09 09 54.6**	**+0.5**
CD2				smax			
	comp=N,4μm,0.4s						
LZH	**Lanzhou**	**4.33**	**355**	Pn	**Pn**	**09 10 32.4**	**+3.0**
LZH				Sn	**Sn**	**09 11 23.0**	**+2.9**
LZH				Sg	**Sg**	**09 11 42.4**	**+0.1**
LZH				smax			
	comp=N,130nm,1.0s						
LZH				smax			
	comp=E,160nm,0.8s						
LZH				LR	LR		
	comp=N,380nm,6.1s						
LZH				LR	LR		
	comp=Z,430nm,9.9s						
XAN	**Xi'an**	**4.51**	**58**	Pg	**Pg**	**09 10 48.3**	**-1.2**
XAN				Sg	**Sg**	**09 11 47.6**	**-0.3**
XAN				smax			
	comp=N,200nm,0.9s						
XAN				smax			
	comp=E,94nm,0.8s						
ENH	**Enshi**	**4.70**	**107**	*e*Pn	**Pn**	**09 10 34.5**	**+0.1**
GYA	**Guiyang**	**5.67**	**158**	Pn	**Pn**	**09 10 52.8**	**+5.0**
GYA				Sn	**Sn**	**09 11 52.8**	**-0.4**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,80nm,0.9s						
KMI	**Kunming**	**6.75**	**192**	Pn	**Pn**	**09 11 04.4**	**+1.8**
KMI				smax			
	comp=N,29nm,0.7s						
KMI				smax			
	comp=E,34nm,0.8s						
KMI				LR	LR		
	comp=N,340nm,8.1s						
KMI				LR	LR		
	comp=E,260nm,7.2s						
KMI				LR	LR		
	comp=Z,240nm,12.3s						
SONM	**Songino Array**	**16.14**	**5**	Pn	**Pn**	**09 13 14.8**	**+4.5**
	comp=Z,0.0nm,0.3s,baz=192,slow=12,SNR=6.4						
KSRS	**Korea Array**	**20.24**	**67**	P	**P**	**09 14 00.3**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=258,slow=10,SNR=17						
CN2	**Changchun**	**20.53**	**48**	*e*P	**P**	**09 14 04.3**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	**Makanchi Array**	**22.60**	**318**	*e*P	**P**	**09 14 24.4**	**+0.2**
MKAR	**Makanchi Array**	**22.60**	**318**	P	**P**	**09 14 24.1**	**0.0**
	comp=Z,1.8nm,0.7s,mb3.6,baz=114,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**09 14 57.6**	**-0.6**
	comp=Z,2.9nm,0.7s,mb3.9,baz=126,slow=11,SNR=6.7						
ZALV				LR	LR	09 26 59.7	
	comp=Z,11nm,21.1s,baz=125,slow=40						
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**09 15 03.3**	**-0.5**
	comp=Z,1.2nm,0.7s,mb3.5,baz=130,slow=8.4,SNR=3.5						
KURK				PcP	PcP	09 18 25.2	-1.2
	comp=Z,1.1nm,0.6s,baz=114,slow=2.1,SNR=4.6						
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**09 15 03.3**	**-0.5**
KURK				PcP	PcP	09 18 25.2	-1.2
BVAR	**Borovoye Array**	**32.38**	**321**	P	**P**	**09 15 52.1**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.4,baz=51,slow=7.6,SNR=2.5						
BVAR				PcP	PcP	09 18 38.8	-1.8
	comp=Z,0.6nm,0.5s,baz=122,slow=7.2,SNR=3.9						
ABKAR	**Akbulak array**	**37.36**	**311**	*e*P	**P**	**09 16 36.3**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.6						
FITZ	**Fitzroy Crossi**	**53.64**	**155**	*e*P	**P**	**09 18 40.2**	**-5.1**
	comp=Z,2.4nm,0.4s,mb4.5						
ARCES	**ARCESS Array B**	**56.73**	**336**	P	**P**	**09 19 06.1**	**-1.0**
	comp=Z,3.9nm,1.0s,mb4.4,baz=73,slow=9.2,SNR=5.4						
ARCES	**ARCESS Array B**	**56.73**	**336**	P	**P**	**09 19 06.1**	**-1.0**
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**09 19 08.9**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.2,baz=77,slow=8.2,SNR=6.2						
WRAB	**Tennant Creek**	**58.92**	**147**	*e*P	**P**	**09 19 23.0**	**0.0**
	comp=Z,2.0nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**58.93**	**147**	P	**P**	**09 19 23.1**	**0.0**
	comp=Z,1.5nm,0.5s,mb4.2,baz=318,slow=11,SNR=18						
ASAR	**Alice Springs**	**61.97**	**149**	P	**P**	**09 19 43.7**	**-0.1**
	comp=Z,0.8nm,0.5s,mb4.1,baz=335,slow=6.8,SNR=15						
NOA	**NORSAR Array B**	**64.20**	**327**	P	**P**	**09 19 56.6**	**-1.6**
	comp=Z,0.6nm,0.8s,mb3.7,baz=38,slow=4.7,SNR=3.0						
STKA	**Stephens Creek**	**72.47**	**147**	P	**P**	**09 20 49.8**	**-0.5**
	comp=Z,5.1nm,1.1s,mb4.4,baz=7.1,slow=8.1,SNR=3.2						
YKA	**Yellowknife Ar**	**81.02**	**17**	P	**P**	**09 21 37.9**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=328,slow=5.1,SNR=15						

IDC 16 09:20:14.4±23.0, 29°.51N×106°.86E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.3/24, mbtmp3.6/3, Error ellipse: s-maj=560.0km s-min=42.0km az=117.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.25**	**60**	P	Pn	09 24 40.0	-1.2
	0.4nm,0.3s,baz=262,slow=11,SNR=15						
WRA	**Warramunga Arr**	**55.85**	**148**	P	P	09 29 53.6	-0.2
	0.5nm,0.6s,baz=339,slow=7.9,SNR=9.7						
ASAR	**Alice Springs**	**58.92**	**151**	P	P	09 30 15.6	+0.2
	0.5nm,0.8s,baz=342,slow=5.8,SNR=4.0						

*IDC **16** 09:22:01.6±2.2, 53°.60N×87°.89E, h0km, mb1 3.4/3, mb1mx3.2/27, mbtmp3.4/3, ML3.1/3, Error ellipse: s-maj=19.4km s-min=11.9km az=81.0*
*NNC **16** 09:22:05.6±3.7, 53°.26N×87°.70E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=28.2km s-min=23.4km az=22.0*
ISC 16 09:22:03.6±2.1, 53°.64N±0°.10×87°.8E±0°.2, h10km, n7, σ0°.50/12, 8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.80**	**281**	Pg	**Pn**	**09 22 34.0**	**-0.6**
	2.7nm,0.3s,baz=104,slow=12,SNR=33						
ZALV				Lg		09 22 59.7	
	3.7nm,0.3s,baz=91,slow=22,SNR=14						
KURK	**Kurchatov**	**6.36**	**246**	‖Pn	**Pn**	**09 23 37.1**	**-0.2**
	3.2nm,0.8s						
KURK				‖Sn	**Sn**	**09 24 50.7**	**+0.9**
	2.6nm,0.8s						
KURK				‖Lg		09 25 24.1	
	8.8nm,0.8s						
KURK	**Kurchatov**	**6.36**	**246**	Pn	**Pn**	**09 23 37.6**	**+0.3**
	0.1nm,0.3s,baz=62,slow=14,SNR=29						
KURK				Sn	**Sn**	**09 24 53.6**	**+3.8**
	0.1nm,0.3s,baz=134,slow=49,SNR=2.8						
KURK				Lg		09 25 26.0	
	0.1nm,0.3s,baz=323,slow=31,SNR=9.5						
KURBB	**Kurchatov Arra**	**6.46**	**246**	‖Pn	**Pn**	**09 23 38.5**	**0.0**
	0.8nm,0.7s						
KURBB				‖Sn	**Sn**	**09 24 52.0**	**-0.2**
	0.7nm,0.7s						
KURBB				‖Lg		09 25 22.8	
	1.8nm,0.8s						
MK31	**Makanchi Array**	**7.71**	**209**	‖Pn	**Pn**	**09 23 55.9**	**+0.2**
	1.3nm,0.7s,baz=29,slow=11,SNR=16						
MK31				‖Sn	**Sn**	**09 25 18.0**	**-4.9**
	1.5nm,0.8s						
MK31				Lg		09 26 03.4	
	2.8nm,0.7s,baz=34,slow=29,SNR=3.6						
MKAR	**Makanchi Array**	**7.71**	**209**	Pn	**Pn**	**09 23 56.2**	**+0.5**
	0.2nm,0.3s,baz=31,slow=12,SNR=17						
MKAR				Sn	**Sn**	**09 25 22.3**	**-0.6**
	0.1nm,0.3s,baz=30,slow=22,SNR=3.6						
MKAR				Lg		09 26 04.0	
	0.1nm,0.3s,baz=36,slow=31,SNR=5.8						
BVAR	**Borovoye Array**	**10.44**	**274**	Pn	**Pn**	**09 24 33.1**	**+0.1**
	0.2nm,0.3s,baz=78,slow=15,SNR=2.1						

*ISCJB **16** 09:46:17.0±1.4, 1°.7S±0°.3×23°.5W±0°.2, h10km, mb4.1/8, MS3.3/5, Error ellipse: s-maj=53.9km s-min=14.2km az=157.3*
*NEIC **16** 09:46:20.7±0.7, 1°.26S×23°.71W, h10km, mb4.3/1, Error ellipse: s-maj=29.2km s-min=13.0km az=154.0*
*IDC **16** 09:46:21.1±0.9, 0°.99S×23°.46W, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.9/25, mbtmp4.0/9, MS3.2/6, Ms1 3.3/6, ms1mx3.0/25, Error ellipse: s-maj=36.5km s-min=22.8km az=145.0*
ISC 16 09:46:19.6±1.4, 1°.6S±0°.3×23°.6W±0°.2, h10km, n18, σ0°.69/14, mb4.1/8, MS3.3/5, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.99**	**251**	*e*Pn	**Pn**	**09 49 24.1**	**-0.4**
RCBR				*e*Sn	**Sn**	**09 51 37.6**	**-12**
BBTS	**Babate**	**17.59**	**23**	LR	LR	09 55 58.8	
	comp=Z,48nm,19.0s,baz=139,slow=34						
DBIC	**Dimbokro**	**20.41**	**66**	P	**P**	**09 50 57.0**	**0.0**
	4.3nm,1.0s,baz=260,slow=11,SNR=2.7						
TORD	**Torodi Ar. Bea**	**29.04**	**59**	P	**P**	**09 52 20.6**	**+0.3**
	1.1nm,1.0s,mb3.5,baz=242,slow=10.0,SNR=4.5						
TORD				LR	LR	10 02 19.2	
	comp=Z,27nm,19.5s,MS2.9,baz=275,slow=34						
CPUP	**Villa Florida**	**40.71**	**230**	LR	LR	10 11 56.2	
	comp=Z,36nm,18.5s,MS3.3,baz=341,slow=37						
LPAZ	**La Paz**	**46.23**	**249**	P	**P**	**09 54 53.2**	**+7.8**
	2.6nm,0.9s,mb4.2,baz=81,slow=8.2,SNR=8.5						
LPAZ	**La Paz**	**46.23**	**249**	*e*P	**P**	**09 54 53.5**	**+8.1**
	3.1nm,0.9s,mb4.2						
KEST	**Kesra**	**48.19**	**36**	LR	LR	10 14 52.6	
	comp=Z,18nm,18.8s,MS3.1,baz=325,slow=36						
GERES	**GERESS Array B**	**59.68**	**28**	P	**P**	**09 56 23.2**	**-1.0**
	0.9nm,0.8s,mb3.8,baz=196,slow=9.2,SNR=3.5						
GERES				LR	LR	10 20 02.9	
	comp=Z,19nm,19.3s,MS3.2,baz=327,slow=34						
NB2	**NORSAR Subarra**	**67.94**	**17**	P	**P**	**09 57 18.8**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=209,slow=6.9						
NOA	**NORSAR Array B**	**67.94**	**17**	P	**P**	**09 57 17.4**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=212,slow=6.5,SNR=4.4						
HFS	**Hagfors**	**68.02**	**19**	P	**P**	**09 57 18.1**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.2,baz=277,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**73.33**	**22**	P	**P**	**09 57 52.2**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.2,baz=259,slow=3.9,SNR=5.7						
PDAR	**Pinedale Array**	**88.10**	**313**	P	**P**	**09 59 11.7**	**+1.0**
	comp=Z,1.1nm,1.1s,mb4.0,baz=95,slow=5.1,SNR=4.0						
YKA	**Yellowknife Ar**	**91.87**	**332**	P	**P**	**09 59 28.2**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.4,baz=96,slow=5.0,SNR=28						
YKA				LR	LR	10 39 11.9	
	comp=Z,60nm,19.5s,MS4.0,baz=180,slow=35						
YKA	**Yellowknife Ar**	**91.87**	**332**	P	**P**	**09 59 28.2**	**+0.3**
YKA				LR	LR	10 39 11.9	
ASAR	**Alice Springs**	**146.69**	**140**	PKPbc	PKPbc	10 06 06.1	+3.5
	comp=Z,3.7nm,0.5s,baz=210,slow=2.3,SNR=109						
WRA	**Warramunga Arr**	**149.56**	**136**	PKPbc	PKPbc	10 06 12.6	+2.3
	comp=Z,1.1nm,0.7s,baz=236,slow=2.3,SNR=12						

KRSC 16 10:04:07.9±0.5, 54°.52N×160°.56E, h112km±28km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.68**	**86**	*e*P	Pn	10 04 25.2	-1.0
MKZ				*i*S	Sn	10 04 37.6	-2.5
KMNR	**Kamenistaya**	**1.25**	**352**	*e*P	Pn	10 04 32.8	+0.9
KMNR				*i*S	Sn	10 04 51.2	+1.1
BZMR	**Bezymyannaya**	**1.42**	**358**	*e*P	Pn	10 04 35.9	+2.1
BZMR				*i*S	Sn	10 04 56.1	+2.6
KIRR	**Kirishev**	**1.44**	**355**	*e*P	Pn	10 04 35.7	+1.6
KIRR				*i*S	Sn	10 04 56.4	+2.4
SPN	**Mys Shipunski**	**1.46**	**193**	*e*P	Pn	10 04 35.7	+1.4
SPN				*i*S	Sn	10 04 55.8	+1.5
KPT	**Kopyto**	**1.46**	**353**	*e*P	Pn	10 04 35.9	+1.6
NLC	**Nalytchevo**	**1.53**	**209**	*e*P	Pn	10 04 36.9	+1.8
NLC				*i*S	Sn	10 04 58.4	+2.6
KOZ	**Kozyrevsk**	**1.59**	**346**	*e*P	Pn	10 04 37.6	+1.8
KOZ				*i*S	Sn	10 04 59.1	+2.0
CIRR	**Tsirk**	**1.60**	**4**	*e*P	Pn	10 04 38.9	+2.9
AVH	**Avacha**	**1.66**	**221**	*e*P	Pn	10 04 38.7	+2.1
AVH				*i*S	Sn	10 05 01.5	+3.0
KRSR	**Krestovskiy**	**1.70**	**0**	*e*P	Pn	10 04 39.3	+2.1
KRSR				*e*S	Sn	10 05 02.3	+2.8
GNL	**Ganaly**	**1.75**	**243**	*e*P	Pn	10 04 39.3	+1.5
KLY	**Klyuchi**	**1.80**	**2**	*e*P	Pn	10 04 41.6	+3.2
KLY				*i*S	Sn	10 05 06.6	+5.0
PET	**Petropavlovsk**	**1.88**	**218**	*e*P	Pn	10 04 42.5	+3.1
PET				*i*S	Sn	10 05 08.3	+4.9
BDR	**Baidarnaya**	**2.09**	**10**	*e*P	Pn	10 04 45.4	+3.4
RUS	**Russkaya**	**2.42**	**211**	*e*P	Pn	10 04 50.0	+3.7
RUS				*i*S	Sn	10 05 21.4	+5.6
MIPR	**Malaya Ipel'ka**	**3.20**	**227**	*e*P	Pn	10 05 01.2	+4.7
BKI	**Bering**	**3.20**	**75**	*e*P	Pn	10 05 02.6	+6.1
BKI				*i

KEK	**Kerkira**	**0.34**	**146**	*e*Pb	**Pg**	**10 17 16.7**	**+0.7**
KEK				S	**Sg**	**10 17 20.8**	**+0.2**
KEK				*e*Sb	**Sg**	**10 17 22.3**	**+1.7**
SRN	**Sarande**	**0.36**	**109**	*e*PG	**Pg**	**10 17 16.7**	**+0.3**
SRN				*i* SG	**Sg**	**10 17 21.8**	**+0.5**
SRN	**Sarande**	**0.36**	**109**	*e*Pg	**Pg**	**10 17 16.7**	**+0.3**
SRN				*i* Sg	**Sg**	**10 17 21.8**	**+0.5**
IGT	**Igoumenitsa**	**0.76**	**127**	P	**Pg**	**10 17 22.3**	**-1.6**
IGT				S	**Sg**	**10 17 32.6**	**-1.2**
IGT	**Igoumenitsa**	**0.76**	**127**	P	**Pg**	**10 17 22.3**	**-1.6**
IGT				S	**Sg**	**10 17 32.6**	**-1.2**
JAN	**Janina**	**1.06**	**108**	*e*PN	**Pg**	**10 17 29.8**	**+0.3**
JAN				*e*SN	**Sg**	**10 17 44.0**	**+0.8**
JAN	**Janina**	**1.06**	**108**	*e*Pn	**Pg**	**10 17 29.8**	**+0.3**
JAN				*e*Sn	**Sg**	**10 17 44.0**	**+0.8**
KBN	**Korca**	**1.13**	**56**	*e*PG	**Pg**	**10 17 31.2**	**+0.3**
KBN	**Korca**	**1.13**	**56**	*e*Pg	**Pg**	**10 17 31.2**	**+0.3**
TIR	**Tirane**	**1.37**	**10**	P	**Pn**	**10 17 36.0**	**+1.9**
TIR				S	**Sn**	**10 17 55.6**	**+3.5**
TIR	**Tirane**	**1.37**	**10**	Pg	**Pg**	**10 17 36.2**	**+0.8**
TIR				Sg	**Sg**	**10 17 56.8**	**+3.6**
	95nm,0.6s						
TIR	**Tirane**	**1.37**	**10**	Pg	**Pg**	**10 17 36.2**	**+0.8**
TIR				Sg	**Sg**	**10 17 56.8**	**+3.6**
	95nm,0.6s						
OHR	**Ohrid**	**1.46**	**40**	*e*Pn	**Pn**	**10 17 37.0**	**+1.7**
OHR				*e*Sg	**Sg**	**10 17 57.0**	**+0.8**
OHR				*e*Lg		10 17 58.1	
	comp=E,52nm,0.6s						
OHR				*e*Lg		10 18 00.1	
	comp=N,75nm,0.5s						
OHR	**Ohrid**	**1.46**	**40**	P	**Pn**	**10 17 35.1**	**-0.3**
OHR				S	**Sn**	**10 17 55.7**	**+1.3**
OHR	**Ohrid**	**1.46**	**40**	P	**Pn**	**10 17 35.1**	**-0.3**
OHR	**Ohrid**	**1.46**	**40**	*e*Pn	**Pn**	**10 17 37.0**	**+1.6**
OHR				S	**Sn**	**10 17 55.7**	**+1.3**
OHR				*e*Sg	**Sg**	**10 17 56.9**	**+0.7**
OHR				*e*Lg		10 17 58.0	
	comp=N,52nm,0.6s						
FNA	**Florina**	**1.60**	**60**	P	**Pn**	**10 17 36.6**	**-0.6**
FNA				S	**Sn**	**10 17 56.6**	**-1.2**
FNA	**Florina**	**1.60**	**60**	P	**Pn**	**10 17 36.6**	**-0.6**
FNA				S	**Sn**	**10 17 56.6**	**-1.2**
BIA	**Bitola**	**1.69**	**52**	*e*Pn	**Pn**	**10 17 40.5**	**+2.0**
BIA				*e*Sg	**Sg**	**10 18 02.6**	**-1.0**
BIA	**Bitola**	**1.69**	**52**	P	**Pn**	**10 17 39.1**	**+0.6**
BIA				S	**Sn**	**10 18 00.2**	**+0.1**
BIA	**Bitola**	**1.69**	**52**	P	**Pn**	**10 17 39.1**	**+0.6**
BIA				S	**Sn**	**10 18 00.2**	**+0.1**
BIA				*e*Sg	**Sg**	**10 18 02.5**	**-1.1**
TAR1	**Taranto**	**1.81**	**288**	*e*Pn	**Pg**	**10 17 43.9**	**0.0**
KRUS	**Krusevo**	**1.88**	**43**	*e*Pn	**Pn**	**10 17 42.7**	**+1.6**
KRUS				*e*Sg	**Sg**	**10 18 08.1**	**-1.6**
KRUS	**Krusevo**	**1.88**	**43**	*e*Pn	**Pn**	**10 17 42.7**	**+1.6**
KRUS				*e*Sg	**Sg**	**10 18 08.0**	**-1.6**
THL	**Klokotos Trika**	**1.95**	**102**	*e*PN	**Pn**	**10 17 42.4**	**+0.4**
THL	**Klokotos Trika**	**1.95**	**102**	P	**Pn**	**10 17 41.9**	**-0.1**
THL				S	**Sn**	**10 18 05.8**	**-0.6**
THL	**Klokotos Trika**	**1.95**	**102**	P	**Pn**	**10 17 41.9**	**-0.1**
THL	**Klokotos Trika**	**1.95**	**102**	*e*Pn	**Pn**	**10 17 42.4**	**+0.4**
THL				S	**Sn**	**10 18 05.8**	**-0.6**
VLS	**Valsamata**	**1.99**	**156**	*e*PN	**Pn**	**10 17 42.0**	**-0.6**
VLS	**Valsamata**	**1.99**	**156**	P	**Pn**	**10 17 43.0**	**+0.4**
VLS				S	**Sn**	**10 18 08.5**	**+1.1**
VLS	**Valsamata**	**1.99**	**156**	P	**Pn**	**10 17 43.0**	**+0.4**
VLS				S	**Sn**	**10 18 08.5**	**+1.1**
EVR	**Evrytania**	**2.05**	**121**	*e*PN	**Pn**	**10 17 43.3**	**-0.2**
EVR	**Evrytania**	**2.05**	**121**	*e*Pn	**Pn**	**10 17 43.3**	**-0.2**
NOCI	**Noci**	**2.06**	**293**	Pg	**Pg**	**10 17 48.1**	**-0.5**
NOCI	**Noci**	**2.06**	**293**	Pg	**Pg**	**10 17 48.1**	**-0.5**
LTRZ	**Laterza**	**2.17**	**287**	Pg	**Pg**	**10 17 49.5**	**-1.3**
LTRZ				Sg	**Sg**	**10 18 19.0**	**0.0**
LTRZ	**Laterza**	**2.17**	**287**	Pg	**Pg**	**10 17 49.5**	**-1.3**
LTRZ				Sg	**Sg**	**10 18 19.0**	**0.0**
LIT	**Litokhoron**	**2.26**	**86**	*e*PN	**Pn**	**10 17 47.3**	**+1.0**
LIT	**Litokhoron**	**2.26**	**86**	P	**Pn**	**10 17 46.0**	**-0.3**
LIT				S	**Sn**	**10 18 12.8**	**-1.2**
LIT	**Litokhoron**	**2.26**	**86**	P	**Pn**	**10 17 46.0**	**-0.3**
LIT				S	**Sn**	**10 18 12.8**	**-1.2**
TIP	**Timpagrande**	**2.31**	**250**	*e*Pn	**Pn**	**10 17 45.9**	**-1.1**
TIP	**Timpagrande**	**2.31**	**250**	Pg	**Pn**	**10 17 46.7**	**-0.3**
	comp=N,18nm,0.7s						
TIP	**Timpagrande**	**2.31**	**250**	*e*Pn	**Pn**	**10 17 45.9**	**-1.1**
AGG	**Agios Georgios**	**2.36**	**114**	*e*PN	**Pn**	**10 17 48.3**	**+0.6**
AGG	**Agios Georgios**	**2.36**	**114**	P	**Pn**	**10 17 48.3**	**+0.6**
AGG				S	**Sn**	**10 18 16.1**	**-0.5**
AGG	**Agios Georgios**	**2.36**	**114**	P	**Pn**	**10 17 48.3**	**+0.6**
AGG				S	**Sn**	**10 18 16.1**	**-0.5**
SERS	**Sersale**	**2.41**	**247**	Pg	**Pn**	**10 17 47.7**	**-0.7**
SIRI	**Monte Sirino -**	**2.83**	**275**	Pg	**Pn**	**10 17 55.4**	**+1.2**
	comp=N,22nm,0.3s						
PAIG	**Paliouri**	**3.17**	**90**	P	**Pn**	**10 17 57.6**	**-1.3**
PAIG	**Paliouri**	**3.17**	**90**	P	**Pn**	**10 17 57.6**	**-1.3**
STON	**Ston**	**3.19**	**335**	*e*Pn	**Pn**	**10 17 58.1**	**-1.0**
STON				Sn	**Sn**	**10 18 33.1**	**-4.0**
STON	**Ston**	**3.19**	**335**	*e*Pn	**Pn**	**10 17 58.1**	**-1.0**
STON				Sn	**Sn**	**10 18 33.1**	**-3.9**
CDRU	**Civita di Ruta**	**3.29**	**280**	Pg	**Pn**	**10 18 01.9**	**+1.5**
NVLJ	**Novalja**	**5.73**	**324**	*e*Pn	**Pn**	**10 18 31.9**	**-2.1**
NVLJ				Sn	**Sn**	**10 19 34.6**	**-5.1**
NVLJ	**Novalja**	**5.73**	**324**	*e*Pn	**Pn**	**10 18 31.9**	**-2.1**

*IDC **16** 10:17:14.2±0.8, 31°.11N×103°.71E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.0/25, mbtmp4.0/14, Error ellipse: s-maj=25.9km s-min=15.0km az=44.0*
*BJI **16** 10:17:15.1, 31°.16N×103°.74E, h14km, mB4.5/7, mb4.5/12, ML4.3/20, Ms4.3/16, Ms7 4.0/14*
*NEIC **16** 10:17:16.1±0.4, 31°.17N×103°.75E, h10km, mb4.4/7, Error ellipse: s-maj=11.4km s-min=7.6km az=33.0*

ISC 16 10:17:16.1±1.0, **31°.19N**±0°.03×**103°.68E**±0°.05, **h10**km±6km, **n52**, σ1¶**18**/63, **mb4.1**/21, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**166**	Pg	**Pg**	**10 17 22.6**	**+0.8**
CD2				Sg	**Sg**	**10 17 29.5**	**+3.8**
CD2				smax			
	comp=N,31μm,1.0s						
LZH	**Lanzhou**	**4.89**	**2**	Pn	**Pn**	**10 18 33.1**	**+3.4**
LZH				Sn	**Sn**	**10 19 33.3**	**+6.9**
LZH				Sg	**Sg**	**10 19 52.8**	**-0.3**
LZH				smax			
	comp=N,320nm,1.1s						
LZH				smax			
	comp=E,420nm,1.1s						
LZH				LR	LR		
	comp=E,2μm,4.7s						
LZH				LR	LR		
	comp=Z,2μm,5.2s						
LZH	**Lanzhou**	**4.89**	**2**	Pg	**Pg**	**10 18 48.6**	**-1.2**
LZH				Sn	**Sn**	**10 19 35.8**	**+9.4**
LZH				Sg	**Sg**	**10 19 58.5**	**+5.4**
LZH				smax			
	comp=N,320nm,1.1s						
LZH				smax			
	comp=E,420nm,1.1s						
LZH				LR	LR		
	comp=E,5μm,7.3s						
LZH				LR	LR		
	comp=Z,5μm,8.3s						
ENH	**Enshi**	**5.08**	**99**	*e*Pn	**Pn**	**10 18 33.3**	**+0.9**
	comp=Z,109nm,0.6s						
XAN	**Xi'an**	**5.26**	**56**	Pn	**Pn**	**10 18 33.6**	**-1.2**
XAN				Pg	**Pg**	**10 18 50.1**	**-6.8**
XAN				Sg	**Sg**	**10 19 58.0**	**-7.0**
XAN				smax			
	comp=N,480nm,1.0s						
XAN				smax			
	comp=E,210nm,1.0s						
GYA	**Guiyang**	**5.39**	**150**	Pn	**Pn**	**10 18 36.9**	**+0.2**
GYA				Sn	**Sn**	**10 19 44.1**	**+5.3**
GYA				smax			
	comp=N,550nm,1.0s						
GYA				smax			
	comp=E,510nm,1.1s						
KMI	**Kunming**	**6.10**	**188**	Pn	**Pn**	**10 18 47.0**	**+0.6**
KMI				Sn	**Sn**	**10 19 51.0**	**-5.2**
KMI				smax			
	comp=N,63nm,1.3s						
KMI				smax			
	comp=E,120nm,1.4s						
KMI				LR	LR		
	comp=N,820nm,9.2s						
KMI				LR	LR		
	comp=E,3μm,11.2s						
KMI				LR	LR		
	comp=Z,680nm,8.5s						
GTA	**Gaotai**	**8.79**	**340**	P	**Pn**	**10 19 30.4**	**+7.1**
GTA				smax			
	comp=N,14nm,1.3s						
GTA				smax			
	comp=E,9.0nm,1.7s						
LSA	**Lhasa**	**10.91**	**265**	P	**Pn**	**10 19 55.1**	**+2.7**
LSA				LR	LR		
	comp=N,540nm,14.3s						
LSA				LR	LR		
	comp=E,680nm,10.1s						
LSA				LR	LR		
	comp=Z,870nm,10.7s						
LSA	**Lhasa**	**10.91**	**265**	*e*Pn	**Pn**	**10 19 55.2**	**+2.7**
	comp=Z,5.6nm,0.5s						
HHC	**Hu-ho-hao-te**	**11.56**	**31**	*e*P	**Pn**	**10 19 59.9**	**-1.3**
HHC				pP		10 20 04.3	
HHC				PP		10 20 09.3	
HHC				S	**Sn**	**10 22 09.8**	**-0.5**
HHC				SS		10 22 25.4	
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,5.7s						
HHC				LR	LR		
	comp=N,500nm,5.3s						
HHC				LR	LR		
	comp=E,720nm,4.5s						
HHC				LR	LR		
	comp=Z,370nm,5.5s						
SHL	**Shillong**	**11.79**	**245**	*e*P	**Pn**	**10 20 03.5**	**-1.0**
QZH	**Quanzhou**	**14.56**	**112**	*e*P	**Pn**	**10 20 42.1**	**-0.1**
QZH				S	**Sn**	**10 23 27.8**	**+4.1**
QZH				LR	LR		
	comp=N,1μm,7.4s						
QZH				LR	LR		
	comp=E,890nm,6.3s						
QZH				LR	LR		
	comp=Z,2μm,8.7s						
GUN	**Gumba**	**15.83**	**263**	*e*P	**Pn**	**10 20 56.3**	**-2.9**
	comp=Z,29nm,0.6s						
PKI	**Pulchoki**	**16.33**	**262**	*e*P	**Pn**	**10 21 02.4**	**-3.2**
	comp=Z,21nm,0.6s						
PKIN	**Phulchoki**	**16.34**	**262**	*e*P	**Pn**	**10 21 02.8**	**-2.9**
	comp=Z,31nm,0.7s						
KKN	**Kakani**	**16.37**	**263**	*e*P	**Pn**	**10 21 03.4**	**-2.8**
	comp=Z,44nm,0.8s						
DMN	**Daman**	**16.57**	**262**	*e*P	**Pn**	**10 21 05.6**	**-3.1**
	comp=Z,36nm,0.8s						
SONM	**Songino Array**	**16.75**	**6**	Pn	**Pn**	**10 21 10.8**	**0.0**
	baz=186,slow=13,SNR=5.1						
ULN	**Ulaanbaatar**	**16.86**	**8**	*e*P	**Pn**	**10 21 13.1**	**+1.0**
	comp=Z,3.3nm,1.0s						
KSRS	**Korea Array**	**20.95**	**66**	P	**P**	**10 21 59.5**	**+0.3**
	comp=Z,9.4nm,0.7s,baz=262,slow=10,SNR=52						
CN2	**Changchun**	**21.30**	**48**	*e*P	**P**	**10 22 03.4**	**+0.5**
CN2				*ep*P		10 22 11.6	
CN2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,12.0s						
CN2				LR	LR		
	comp=E,200nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
MK31	**Makanchi Array**	**22.68**	**319**	*e*P	**P**	**10 22 18.6**	**+1.0**
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**10 22 17.9**	**+0.3**
	comp=Z,7.5nm,1.0s,mb4.1,baz=124,slow=10,SNR=39						
TKM2	**Tokmak 2**	**25.17**	**306**	*e*P	**P**	**10 22 42.0**	**+0.4**
	comp=Z,5.1nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**25.85**	**304**	P	**P**	**10 22 50.6**	**+2.7**
	comp=Z,2.8nm,0.6s,mb4.0,baz=118,slow=7.7,SNR=9.1						
AML	**Almayashu**	**26.29**	**303**	*e*P	**P**	**10 22 52.5**	**+0.7**
	comp=Z,10nm,1.1s,mb4.3						
ZAA0	**Zalesovo Array**	**26.49**	**335**	*e*P	**P**	**10 22 55.4**	**+1.9**
ZALV	**Zalesovo Beam**	**26.49**	**335**	P	**P**	**10 22 53.3**	**-0.1**
	comp=Z,3.4nm,0.8s,mb3.9,baz=134,slow=8.5,SNR=9.2						
KURK	**Kurchatov**	**26.96**	**324**	P	**P**	**10 22 57.9**	**+0.1**
	comp=Z,1.1nm,0.9s,mb4.0,baz=127,slow=10.0,SNR=13						
MJAR	**Matsushiro Arr**	**29.07**	**70**	P	**P**	**10 23 16.9**	**+0.2**
	comp=Z,1.1nm,0.9s,mb3.6,baz=272,slow=9.2,SNR=3.7						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**10 23 48.6**	**+1.8**
	comp=Z,0.9nm,0.6s,mb3.8,baz=140,slow=9.7,SNR=5.1						
BVAR	**Borovoye Array**	**32.50**	**322**	P	**P**	**10 23 48.6**	**+1.8**
PETK	**Petropavlovsk-**	**44.38**	**44**	P	**P**	**10 25 26.2**	**-0.4**
	comp=Z,1.8nm,0.8s,mb3.8,baz=334,slow=9.9,SNR=3.5						
BRTR	**Keskin Array B**	**56.38**	**299**	P	**P**	**10 26 58.2**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.6,baz=128,slow=6.4,SNR=3.4						
AKASG	**Malin Array Be**	**57.06**	**313**	P	**P**	**10 26 59.4**	**-2.9**
	comp=Z,0.2nm,0.3s,mb3.7,baz=67,slow=7.1,SNR=7.8						
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**10 27 04.2**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=58,slow=19,SNR=3.4						
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**10 27 14.0**	**-0.4**
	comp=Z,22nm,1.2s,mb5.1						
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**10 27 13.7**	**-0.7**
	comp=Z,5.1nm,0.7s,mb4.6,baz=338,slow=7.7,SNR=21						
WB2	**Warramunga Arr**	**58.75**	**146**	*e*P	**P**	**10 27 14.0**	**-0.5**
ASAR	**Alice Springs**	**61.75**	**148**	P	**P**	**10 27 34.0**	**-1.0**
	comp=Z,1.6nm,0.8s,mb4.2,baz=341,slow=6.6,SNR=12						
NB2	**NORSAR Subarra**	**64.39**	**327**	P	**P**	**10 27 52.1**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**10 27 51.5**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.4,baz=72,slow=8.6,SNR=2.6						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**10 27 51.5**	**-0.6**
COLA	**College**	**69.51**	**26**	*e*P	**P**	**10 28 23.8**	**-0.8**
	comp=Z,4.3nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**10 28 35.9**	**+0.1**
	comp=Z,3.4nm,0.7s,mb4.1						
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**10 28 35.9**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.1						
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**10 28 46.7**	**+1.1**
	comp=Z,6.5nm,0.8s,mb4.3						
LPG	**La Plagne**	**72.93**	**313**	*e*P	**P**	**10 28 46.7**	**+1.1**
	comp=Z,3.3nm,0.8s,mb4.3						
LPL	**La Plagne**	**72.93**	**313**	*e*P	**P**	**10 28 46.5**	**+0.9**
AVF	**Avril sur Loir**	**74.41**	**315**	*e*P	**P**	**10 28 54.3**	**0.0**
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**10 29 33.9**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=331,slow=5.3,SNR=4.5						

*ISK **16** 10:18:44.9, 38°.64N×39°.79E, h5km, MD3.1*
*DDA **16** 10:18:45.2, 38°.68N×39°.77E, h7km±1km, Md2.9*
*ISCJB **16** 10:18:46.6±0.6, 38°.66N±0°.04×39°.77E±0°.04, h10km, Error ellipse: s-maj=6.0km s-min=4.0km az=31.9*
*CSEM **16** 10:18:46.7±0.6, 38°.65N×39°.76E, h10km, MD3.1, Error ellipse: s-maj=13.5km s-min=8.8km az=65.0*

ISC 16 10:18:46.6±0.8, **38°.66N**±0°.04×**39°.80E**±0°.05, **h3**km±7km, **n26**, σ1¶**07**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.39**	**306**	PG	**Pg**	**10 18 54.4**	**+0.3**
PTK				*e*SG	**Sg**	**10 19 00.5**	**+1.2**
PTK	**Pertek**	**0.39**	**306**	*i* Pg	**Pg**	**10 18 54.4**	**+0.2**
PTK				*e*Sg	**Sg**	**10 19 00.5**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.48**	**234**	*e*PG	**Pg**	**10 18 55.5**	**-0.3**
SVRC				*e*SG	**Sg**	**10 19 02.6**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.48**	**234**	*e*Pg	**Pg**	**10 18 55.5**	**-0.3**
SVRC				*e*Sg	**Sg**	**10 19 02.6**	**+0.6**
ELZG	**Elazig**	**0.66**	**256**	*i* P	**Pg**	**10 18 57.9**	**-1.4**
ELZG				*i* S	**Sg**	**10 19 07.8**	**0.0**
ELZG	**Elazig**	**0.66**	**256**	*i* P	**Pg**	**10 18 57.8**	**-1.4**
ELZG				*i* S	**Sg**	**10 19 07.8**	**0.0**
DIYA	**Diyarbakir**	**0.78**	**161**	*i* P	**Pg**	**10 19 02.0**	**+0.5**
DIYA				*i* S	**Sg**	**10 19 12.3**	**+0.7**
DIYA	**Diyarbakir**	**0.78**	**161**	*i* P	**Pg**	**10 19 02.0**	**+0.5**
DIYA				*i* S	**Sg**	**10 19 12.3**	**+0.7**
MYA	**Malataya**	**1.13**	**253**	*e*PN	**Pg**	**10 19 07.1**	**-1.2**
MYA	**Malataya**	**1.13**	**253**	*e*Pn	**Pg**	**10 19 07.1**	**-1.1**
MALT	**Malatya**	**1.13**	**253**	*e*PN	**Pg**	**10 19 06.7**	**-1.6**
MALT	**Malatya**	**1.13**	**253**	*e*Pn	**Pg**	**10 19 06.7**	**-1.6**
EZC	**Erzincan**	**1.14**	**342**	*e*PN	**Pg**	**10 19 08.0**	**-0.5**
BEST	**Besiri**	**1.39**	**123**	*i* P	**Pn**	**10 19 12.2**	**-0.6**
BEST				*i* S	**Sb**	**10 19 31.9**	**+0.6**
URFA	**Urfa**	**1.44**	**213**	*e*PN	**Pn**	**10 19 12.5**	**-1.1**
URFA	**Urfa**	**1.44**	**213**	*e*Pn	**Pn**	**10 19 12.5**	**-1.1**
AKCD	**Akcadag**	**1.52**	**257**	*i* P	**Pn**	**10 19 13.5**	**-1.1**
AKCD				*i* S	**Sg**	**10 19 38.2**	**+2.9**
AKCD	**Akcadag**	**1.52**	**257**	*i* P	**Pn**	**10 19 13.5**	**-1.1**
AKCD				*i* S	**Sg**	**10 19 38.2**	**+2.8**
DARE	**Darende-Malaty**	**1.58**	**281**	*e*PN	**Pg**	**10 19 18.4**	**+1.4**
SARI	**SarD1z-Kayseri**	**2.43**	**271**	*e*PN	**Pg**	**10 19 31.2**	**-1.9**
SVSK	**Karacayir**	**2.51**	**301**	*e*PN	**Pn**	**10 19 29.1**	**+0.9**
SVSK	**Karacayir**	**2.51**	**301**	*e*Pn	**Pn**	**10 19 29.2**	**+1.0**
GAZ	**Gaziantep**	**2.53**	**235**	*e*PN	**Pn**	**10 19 29.3**	**+0.8**
GAZ	**Gaziantep**	**2.53**	**235**	*e*Pn	**Pn**	**10 19 29.3**	**+0.8**
KMRS	**Kahramanmaras**	**2.56**	**244**	*e*PN	**Pn**	**10 19 29.8**	**+0.8**
KMRS	**Kahramanmaras**	**2.56**	**244**	*e*Pn	**Pn**	**10 19 29.8**	**+0.8**

*ISCJB **16** 10:20:44.2±0.3, 32°.42N±0°.03×105°.10E±0°.04, h10km, mb4.1/21, Error ellipse: s-maj=5.3km s-min=3.7km az=8.5*
*IDC **16** 10:20:44.2±0.7, 32°.45N×105°.12E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/29, mbtmp4.0/16, ML3.6/2, Error ellipse: s-maj=33.8km s-min=14.9km az=50.0*
*NEIC **16** 10:20:46.0±0.4, 32°.53N×105°.31E, h10km, mb4.4/8, Error ellipse: s-maj=13.8km s-min=7.3km az=58.0*
*BJI **16** 10:20:46.5, 32°.40N×105°.24E, h14km, mB4.7/10, mb4.2/12, ML4.2/14, Ms4.0/15, Ms7 3.8/13*

ISC 16 10:20:46.5±0.3, **32°.45N**±0°.03×**105°.04E**±0°.04, **h10**km, **n48**, σ1¶**18**/60, **mb4.1**/21, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**216**	Pg	**Pg**	**10 21 21.0**	**-1.6**
CD2				Sg	**Sg**	**10 21 47.1**	**+0.1**
CD2				smax			
	comp=N,8μm,0.6s						
XAN	**Xi'an**	**3.62**	**63**	Pn	**Pn**	**10 21 42.3**	**-0.3**
XAN				Pg	**Pg**	**10 21 48.9**	**-7.0**
XAN				Sg	**Sg**	**10 22 34.4**	**-8.4**
XAN				smax			
	comp=N,900nm,1.0s						
XAN				smax			
	comp=E,370nm,1.0s						
XAN				LR	LR		
	comp=N,720nm,7.7s						
XAN				LR	LR		
	comp=E,340nm,8.1s						
XAN				LR	LR		
	comp=Z,350nm,7.9s						
LZH	**Lanzhou**	**3.76**	**345**	Pn	**Pn**	**10 21 47.3**	**+2.7**
LZH				Pg	**Pg**	**10 21 56.6**	**-2.0**
LZH				Sn	**Sn**	**10 22 29.8**	**+0.9**
LZH				Sg	**Sg**	**10 22 43.3**	**-4.1**
LZH				smax			
	comp=N,890nm,0.6s						
LZH				smax			
	comp=E,960nm,0.7s						
LZH				LR	LR		
	comp=N,1μm,6.0s						
LZH				LR	LR		
	comp=Z,2μm,6.4s						
GYA	**Guiyang**	**6.13**	**166**	Pg	**Pn**	**10 22 22.1**	**+4.9**
GYA				Sg	**Sn**	**10 23 26.8**	**-0.6**
GYA				smax			
	comp=N,280nm,0.7s						
GYA				smax			
	comp=E,370nm,0.8s						
KMI	**Kunming**	**7.57**	**196**	Pn	**Pn**	**10 22 36.8**	**-0.1**
KMI				Sn	**Sn**	**10 24 03.3**	**+0.5**
KMI				smax			
	comp=N,32nm,1.3s						
KMI				smax			
	comp=E,29nm,1.2s						
KMI				LR	LR		
	comp=N,330nm,13.2s						
KMI				LR	LR		
	comp=E,360nm,9.9s						
KMI				LR	LR		
	comp=Z,230nm,6.1s						
GTA	**Gaotai**	**8.14**	**330**	*e*P	**Pn**	**10 22 52.4**	**+7.7**
GTA				pP		10 22 55.8	
GTA				sP		10 22 58.3	
GTA				S	**Sn**	**10 24 27.6**	**+11**
GTA				sS		10 24 32.9	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,4.5s						
GTA				LR	LR		
	comp=N,400nm,9.2s						
GTA				LR	LR		
	comp=E,440nm,8.6s						
GTA				LR	LR		
	comp=Z,540nm,10.1s						
BTO	**Baotou**	**9.07**	**25**	*e*P	**Pn**	**10 22 52.8**	**-4.7**
HHC	**Hu-ho-hao-te**	**9.88**	**30**	*e*P	**Pn**	**10 23 10.8**	**+2.2**
HHC				pP		10 23 17.9	
HHC				sP		10 23 22.8	
HHC				S	**Sn**	**10 25 01.1**	**+1.5**
HHC				sS		10 25 12.0	
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				LR	LR		
	comp=N,350nm,5.0s						
HHC				LR	LR		
	comp=E,480nm,5.7s						
HHC				LR	LR		
	comp=Z,230nm,5.1s						
NJ2	**Nanjing**	**11.70**	**88**	*e*P	**Pn**	**10 23 35.9**	**+2.3**
NJ2				pP		10 23 42.6	
NJ2				PP		10 23 45.0	
NJ2				sP		10 23 46.6	
NJ2				S	**Sn**	**10 25 44.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		

comp=Z,1.0nm,0.6s,mb3.8,baz=104,slow=13,SNR=3.2
ARCES **ARCESS Array B 56.37 335** P **P** **10 30 27.0 -0.4**
comp=Z,4.8nm,0.8s,mb4.6,baz=80,slow=8.4,SNR=9.6
BRTR **Keskin Array B 56.78 299** P **P** **10 30 30.3 -0.5**
comp=Z,1.2nm,0.8s,mb4.0,baz=99,slow=7.8,SNR=5.8
FINES **FINESS Array B 56.90 326** P **P** **10 30 31.2 -0.1**
comp=Z,0.8nm,0.4s,mb4.1,baz=98,slow=6.6,SNR=6.6
FINES **FINESS Array B 56.90 326** P **P** **10 30 31.2 -0.2**
AKASG **Malin Array Be 57.06 313** P **P** **10 30 31.9 -0.6**
comp=Z,0.3nm,0.3s,mb3.8,baz=70,slow=5.5,SNR=5.4
AKASG **Malin Array Be 57.06 313** P **P** **10 30 31.9 -0.6**
WRAB **Tennant Creek 59.16 148** *eP* **P** **10 30 47.0 -0.6**
comp=Z,5.2nm,0.8s,mb4.6
WRA **Warramunga Arr 59.16 148** P **P** **10 30 46.7 -0.9**
comp=Z,3.4nm,0.8s,mb4.5,baz=340,slow=7.4,SNR=15
WB2 **Warramunga Arr 59.16 148** *eP* **P** **10 30 47.0 -0.6**
ASAR **Alice Springs 62.24 150** P **P** **10 31 07.9 -0.6**
comp=Z,1.7nm,0.8s,mb4.2,baz=335,slow=7.2,SNR=10
NB2 **NORSAR Subarra 63.96 327** P **P** **10 31 18.3 -1.3**
comp=Z,0.9nm,0.6s,mb4.0,baz=71,slow=6.9
NOA **NORSAR Array B 63.96 327** P **P** **10 31 18.6 -1.0**
comp=Z,1.5nm,0.7s,mb4.1,baz=70,slow=6.7,SNR=4.3
GERES **GERESS Array B 67.18 314** P **P** **10 31 40.7 +0.1**
comp=Z,0.4nm,0.3s,mb3.9,baz=73,slow=4.6,SNR=6.7
CDF **Champ du Feu 71.21 316** *eP* **P** **10 32 05.6 0.0**
LPG **La Plagne 72.91 313** *eP* **P** **10 32 16.5 +0.7**
comp=Z,14nm,0.8s,mb4.7
LPG **La Plagne 72.91 313** *eP* **P** **10 32 16.5 +0.7**
comp=Z,7.2nm,0.8s,mb4.7
LPL **La Plagne 72.92 313** *eP* **P** **10 32 16.4 +0.5**
comp=Z,7.2nm,0.5s,mb4.6
LPL **La Plagne 72.92 313** *eP* **P** **10 32 16.4 +0.5**
comp=Z,3.6nm,0.5s,mb4.6
SMF **Signal de Mont 74.11 315** *eP* **P** **10 32 22.3 -0.5**
comp=Z,9.0nm,0.8s,mb4.5
SMF **Signal de Mont 74.11 315** *eP* **P** **10 32 22.3 -0.5**
comp=Z,4.5nm,0.8s,mb4.5
TCF **Toulx Ste Croi 75.26 316** *eP* **P** **10 32 29.3 -0.2**
YKA **Yellowknife Ar 80.18 17** P **P** **10 32 55.2 -1.4**
comp=Z,0.6nm,0.5s,mb3.8,baz=327,slow=4.8,SNR=4.7
YKA **Yellowknife Ar 80.18 17** P **P** **10 32 55.2 -1.4**

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*CSEM **16** 10:22:00.9, 40.28N×41.06E, h5km, MD3.0, After ISK*
ISK 16 10:22:00.9, 40.28N×41.06E, h5km, MD3.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.44**	**148**	*e*PG	Pg	10 22 10.2	+0.9
EZM				*e*SG	Sg	10 22 17.8	+2.8
PZAR	**Pazar-Rize**	**0.91**	**352**	*e*PG	Pg	10 22 20.1	+1.7
PZAR				*e*SG	Sg	10 22 33.3	+3.2
PZAR	**Pazar-Rize**	**0.91**	**352**	*e*Pg	Pg	10 22 20.1	+1.7
PZAR				*e*Sg	Sg	10 22 33.3	+3.1
KTUT	**Trabzon**	**1.21**	**306**	*e*PN	Pn	10 22 24.6	+0.1
KTUT	**Trabzon**	**1.21**	**306**	*e*Pn	Pn	10 22 24.6	+0.1
GUMT	**Gumushane**	**1.22**	**279**	*e*PN	Pn	10 22 25.3	+0.7
GUMT	**Gumushane**	**1.22**	**279**	*e*Pn	Pn	10 22 25.3	+0.7
BCA	**Borcka**	**1.24**	**20**	*e*PN	Pn	10 22 25.1	+0.2
BCA	**Borcka**	**1.24**	**20**	*e*Pn	Pn	10 22 25.1	+0.2
EZC	**Erzincan**	**1.41**	**249**	*e*PN	Pn	10 22 28.7	+1.5
BINT	**Bingol**	**1.47**	**198**	*e*PN	Pn	10 22 29.6	+1.7
BINT	**Bingol**	**1.47**	**198**	*e*Pn	Pn	10 22 29.7	+1.7
AGRB	**Hanur-Agry**	**1.64**	**115**	*e*PN	Pn	10 22 32.8	+2.4
AGRB	**Hanur-Agry**	**1.64**	**115**	*e*Pn	Pn	10 22 32.8	+2.4
ESPY	**Espiye-Giresun**	**1.89**	**291**	*e*PN	Pn	10 22 36.1	+2.3
ESPY	**Espiye-Giresun**	**1.89**	**291**	*e*Pn	Pn	10 22 36.1	+2.3
PTK	**Pertek**	**1.89**	**224**	*e*PN	Pn	10 22 35.6	+1.8
PTK	**Pertek**	**1.89**	**224**	*e*Pn	Pn	10 22 35.6	+1.8

CASC 16 10:30:46.5±2.7, 14.04N×90.51W, h136km±13km, MD3.7, 2C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.36**	**345**↑	*e*P	Pn	10 31 06.5	+0.9
FUG	**Fuego 3**	**0.52**	**322**↓	*e*P	Pn	10 31 06.7	+0.4
NBG	**Las Nubes**	**0.56**	**16**↓	*e*P	Pn	10 31 07.6	+1.0
NBG				*e*S	Sn	10 31 23.7	+1.8
FG6		**0.63**	**325**	*e*P	Pn	10 31 08.0	+1.0
SBLS	**San Blas**	**0.89**	**103**	*e*P	Pn	10 31 09.1	+0.2
SBLS				*e*S	Sn	10 31 28.7	+2.7
TP2	**Tecpan 2**	**0.89**	**326**↓	*e*P	Pn	10 31 10.0	+1.0
TP2				*e*S	Sn	10 31 28.2	+2.2
SNJE	**San Jose**	**0.90**	**101**	*e*P	Pn	10 31 09.3	+0.3
JAT	**Jato**	**1.12**	**284**↑	*e*P	Pn	10 31 11.8	+0.7
JAT				*e*S	Sn	10 31 27.7	-2.1
BOQS	**Boqueron**	**1.23**	**104**	*e*P	Pn	10 31 12.5	+0.3
MRL	**Marmol**	**1.29**	**38**↓	*e*P	Pn	10 31 13.5	+0.8
MRL				*e*S	Sn	10 31 32.9	+0.1
LFRS	**El Faro**	**1.47**	**106**	*e*P	Pn	10 31 14.9	+0.3
LFRS				*e*S	Sn	10 31 38.6	+2.5
CAHU	**Cacacuatique**	**2.25**	**97**	*e*P	Pn	10 31 23.9	+0.1

IDC 16 10:41:34.8±1.2, 31.19N×103.78E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, MS2.7/1, Ms1 2.7/1, ms1mx2.0/23, Error ellipse: s-maj=45.1km s-min=22.0km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.87**	**66**	P	P	10 46 18.2	-0.1
	1.1nm,0.7s,baz=263,slow=10,SNR=8.4						
KSRS				LR	LR	10 56 00.7	
	comp=Z,18nm,18.5s,baz=155,slow=42						
MKAR	**Makanchi Array**	**22.74**	**319**	P	P	10 46 39.3	+1.0
	0.5nm,0.8s,baz=123,slow=11,SNR=3.2						
KURK	**Kurchatov**	**27.02**	**323**	P	P	10 47 17.2	-1.1
	0.2nm,0.5s,baz=132,slow=9.0,SNR=3.5						
WRA	**Warramunga Arr**	**58.69**	**146**	P	P	10 51 34.0	-0.2
	0.9nm,0.7s,baz=338,slow=7.9,SNR=13						
ASAR	**Alice Springs**	**61.70**	**148**	P	P	10 51 55.2	+0.4
	0.2nm,0.8s,baz=331,slow=5.5,SNR=4.1						

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*IDC **16** 10:47:42.8±0.9, 31.92N×104.56E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, ML3.5/1, Error ellipse: s-maj=40.3km s-min=17.5km az=56.0*
*NEIC **16** 10:47:44.2±0.7, 31.86N×104.53E, h10km, Error ellipse: s-maj=22.1km s-min=9.5km az=49.0*
*BJI **16** 10:47:46.5, 31.92N×104.67E, h12km, ML3.7/8, Ms3.5/1*
ISC 16 10:47:44.0±0.9, 32.09N±0.04×104.75E±0.07, h5km±7km, n13, σ0.86/18, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.44**	**216**	Pg	**Pg**	**10 48 11.0**	**-0.7**
CD2				Sg	**Sg**	**10 48 31.0**	**+0.6**
CD2				smax			
	comp=N,4μm,0.6s						
XAN	**Xi'an**	**4.01**	**60**	Pn	**Pn**	**10 48 47.3**	**+1.2**
XAN				Pg	**Pg**	**10 48 59.9**	**-1.0**
XAN				Sg	**Sg**	**10 49 47.9**	**-5.0**
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,34nm,0.6s						
LZH	**Lanzhou**	**4.06**	**350**	*e*Pg	**Pg**	**10 49 03.8**	**+1.9**
LZH				Sn	**Sn**	**10 49 39.9**	**+5.2**
LZH				Sg	**Sg**	**10 49 53.3**	**-1.2**
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,190nm,0.8s						
LZH				LR	LR		
	comp=E,570nm,8.8s						
ENH	**Enshi**	**4.45**	**113**	Pn	**Pn**	**10 48 52.6**	**+0.5**
SONM	**Songino Array**	**15.78**	**4**	Pn	**Pn**	**10 51 30.6**	**+3.8**
	baz=180,slow=9.5,SNR=2.0						
KSRS	**Korea Array**	**19.76**	**68**	P	**Pn**	**10 52 16.4**	**+0.2**
	comp=E,0.1nm,0.3s,baz=258,slow=9.9,SNR=4.4						
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**10 52 45.8**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.0,baz=103,slow=10,SNR=5.2						
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**10 53 19.0**	**+0.5**
	comp=E,1.2nm,0.6s,mb3.6,baz=133,slow=11,SNR=4.0						
KURK	**Kurchatov**	**26.80**	**322**	P	**P**	**10 53 24.4**	**-0.5**
	comp=E,0.2nm,0.5s,mb2.9,baz=128,slow=10,SNR=2.9						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**10 57 30.4**	**-0.4**
	comp=E,0.5nm,0.3s,mb4.0,baz=93,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**10 57 44.2**	**-0.6**
	comp=E,1.3nm,0.6s,mb4.1,baz=341,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**10 58 04.8**	**-0.8**
	comp=E,0.4nm,0.6s,mb3.8,baz=336,slow=6.5,SNR=7.3						
YKA	**Yellowknife Ar**	**80.60**	**17**	P	**P**	**10 59 57.1**	**-0.1**
	comp=E,0.2nm,0.5s,mb3.3,baz=329,slow=5.2,SNR=5.7						

KRSC 16 10:50:25.1±0.6, 53.87N×159.94E, h121km±31km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.33**	**300**	*e*P	Pn	10 50 42.7	+0.5
KII				*i* S	Sn	10 50 55.9	+0.7
SPN	**Mys Shipunski**	**0.78**	**176**	*i* P	Pn	10 50 46.4	+1.3
SPN				*i* S	Sn	10 51 01.3	+1.1
NLC	**Nalytchevo**	**0.79**	**207**	*i* P	Pn	10 50 46.2	+1.0
NLC				*i* S	Sn	10 51 01.4	+1.0
AVH	**Avacha**	**0.94**	**230**	*e*P	Pn	10 50 47.8	+1.2
AVH				*i* S	Sn	10 51 04.5	+1.7
PET	**Petropavlovsk**	**1.15**	**223**	*i* P	Pn	10 50 49.8	+1.2
PET				*i* S	Sn	10 51 07.1	+0.7
GNL	**Ganaly**	**1.20**	**262**	*e*P	Pn	10 50 49.4	+0.2
GNL				*i* S	Sn	10 51 07.2	-0.2
MKZ	**Mys Kozlova**	**1.26**	**56**	*e*P	Pn	10 50 51.1	+1.3
MKZ				*i* S	Sn	10 51 09.7	+1.1
RUS	**Russkaya**	**1.68**	**211**	*e*P	Pn	10 50 55.5	+0.9
RUS				*i* S	Sn	10 51 17.7	+0.6
GRL	**Gorelyy**	**1.73**	**221**	P	Pn	10 50 57.2	+1.9
KMNR	**Kamenistaya**	**1.90**	**5**	*e*P	Pn	10 50 58.6	+1.3
KMNR				*i* S	Sn	10 51 23.6	+1.7
BZMR	**Bezymyannaya**	**2.09**	**9**	*e*P	Pn	10 51 01.6	+1.9
BZMR				*i* S	Sn	10 51 28.3	+2.1
KPT	**Kopyto**	**2.11**	**4**	*e*P	Pn	10 51 01.0	+1.2
ZLN	**Zelenaya**	**2.21**	**13**	*e*P	Pn	10 51 03.8	+2.7
ZLN				*i* S	Sn	10 51 31.7	+2.9
CIRR	**Tsirk**	**2.30**	**11**	*e*P	Pn	10 51 03.6	+1.4
KRSR	**Krestovskiy**	**2.38**	**8**	P	Pn	10 51 04.9	+1.6
SRDR	**Sredinnyy**	**2.46**	**357**	*e*P	Pn	10 51 04.7	+0.4
MIPR	**Malaya Ipel'ka**	**2.50**	**232**	*e*P	Pn	10 51 06.2	+1.4
SMKR	**Semkarok**	**2.86**	**17**	*e*P	Pn	10 51 12.1	+2.7
KBTR	**Krutoberegovo**	**2.87**	**34**	*e*P	Pn	10 51 11.3	+1.7
KBTR				*i* S	Sn	10 51 44.2	+0.3
SRKR	**Sorokina**	**2.88**	**14**	*e*P	Pn	10 51 11.7	+2.0
BKI	**Bering**	**3.76**	**67**	*e*P	Pn	10 51 22.9	+1.6
BKI				*i* S	Sn	10 52 04.0	-0.9

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*IDC **16** 10:51:43.2±0.9, 31.25N×103.88E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/26, mbtmp3.9/10, ML3.6/1, MS3.1/5, Ms1 3.1/5, ms1mx3.0/30, Error ellipse: s-maj=35.9km s-min=16.0km az=54.0*
*NEIC **16** 10:51:45.5±0.7, 31.29N×103.84E, h10km, mb4.4/3, Error ellipse: s-maj=21.6km s-min=10.6km az=52.0*
*BJI **16** 10:51:45.6, 31.25N×103.94E, h19km, mB4.7/7, mb4.5/9, ML4.5/18, Ms4.2/10, Ms7 3.8/9*
ISC 16 10:51:44.4±0.8, 31.34N±0.03×103.94E±0.06, h2km±6km, n28, σ1.07/34, mb3.9/10, MS3.2/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**200**	Pg	**Pg**	**10 51 53.8**	**+0.6**
CD2				Sg	**Sg**	**10 52 00.3**	**+1.1**
CD2				smax			
	comp=N,80μm,0.5s						
LZH	**Lanzhou**	**4.73**	**359**	Pg	**Pg**	**10 53 14.9**	**-0.2**
LZH				Sg	**Sg**	**10 54 15.8**	**-0.6**
LZH				smax			
	comp=N,160nm,0.8s						
LZH				smax			
	comp=E,210nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,7.9s						
LZH				LR	LR		
	comp=Z,3μm,8.2s						
ENH	**Enshi**	**4.89**	**101**	*e*Pn	**Pn**	**10 53 02.9**	**+4.0**
XAN	**Xi'an**	**4.99**	**56**	Pn	**Pn**	**10 53 01.8**	**+1.6**
XAN				Pg	**Pg**	**10 53 18.9**	**-1.0**
XAN				Sg	**Sg**	**10 54 24.4**	**-0.1**
XAN				smax			
	comp=N,690nm,0.7s						
XAN				smax			
	comp=E,400nm,0.7s						
GYA	**Guiyang**	**5.42**	**153**	Pn	**Pn**	**10 53 09.8**	**+3.6**
GYA				Sn	**Sn**	**10 54 13.4**	**+4.2**
GYA				smax			
	comp=N,580nm,0.9s						
GYA				smax			
	comp=E,580nm,1.0s						
KMI	**Kunming**	**6.29**	**190**	Pn	**Pn**	**10 53 17.3**	**-0.8**
KMI				Sn	**Sn**	**10 54 26.8**	**-3.7**
KMI				Sg	**Sg**	**10 55 05.4**	**-1.0**
KMI				smax			
	comp=N,77nm,1.1s						
KMI				smax			
	comp=E,78nm,1.0s						
KMI				LR	LR		
	comp=N,640nm,11.4s						
KMI				LR	LR		
	comp=E,1μm,9.3s						
KMI				LR	LR		
	comp=Z,460nm,12.1s						
HHC	**Hu-ho-hao-te**	**11.31**	**31**	*e*P	**Pn**	**10 54 30.5**	**+3.6**
HHC				pP		10 54 33.9	
HHC				PP		10 54 39.6	
HHC				S	**Sn**	**10 56 39.9**	**+6.1**
HHC				SS		10 56 53.0	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.5s						
HHC				LR	LR		
	comp=N,200nm,4.0s						
HHC				LR	LR		
	comp=E,420nm,4.7s						
HHC				LR	LR		
	comp=Z,290nm,5.1s						
SONM	**Songino Array**	**16.58**	**6**	Pn	**Pn**	**10 55 38.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=190,slow=14,SNR=14						
SONM				LR	LR	11 02 39.6	
	comp=Z,102nm,18.9s,baz=241,slow=39						
ULN	**Ulaanbaatar**	**16.67**	**7**	*e*Pn	**Pn**	**10 55 39.2**	**+0.2**
	comp=Z,6.2nm,0.9s						
KSRS	**Korea Array**	**20.68**	**66**	P	**P**	**10 56 26.6**	**+1.1**
	comp=Z,11nm,0.6s,baz=261,slow=10,SNR=71						
KSRS				LR	LR	11 04 33.6	
	comp=Z,58nm,19.9s,MS3.0,baz=200,slow=37						
JOW	**Kunigami**	**21.72**	**96**	LR	LR	11 04 07.1	
	comp=Z,1μm,20.9s,MS4.3,baz=102,slow=34						
MK31	**Makanchi Array**	**22.71**	**319**	*e*P	**P**	**10 56 46.7**	**-0.5**
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**10 56 47.2**	**0.0**
	comp=Z,2.1nm,0.9s,mb3.6,baz=125,slow=12,SNR=11						
MKAR				LR	LR	11 06 15.9	
	comp=Z,49nm,18.9s,MS3.0,baz=248,slow=38						
MKAR	**Makanchi Array**	**22.71**	**319**	P	**P**	**10 56 47.2**	**0.0**
MKAR				LR	LR	11 06 15.9	
UCH	**Uchtor**	**25.83**	**303**	P	**P**	**10 57 19.8**	**+2.8**
	comp=Z,20nm,1.8s,mb4.3						
AAK	**Ala-Archa**	**25.95**	**304**	LR	LR	11 07 54.0	
	comp=Z,52nm,18.0s,MS3.1,baz=32,slow=37						
ZAA0	**Zalesovo Array**	**26.45**	**334**	*e*P	**P**	**10 57 23.9**	**+1.5**
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**10 57 21.1**	**-1.3**
	comp=Z,0.9nm,0.6s,mb3.5,baz=97,slow=12,SNR=4.8						
ZALV				LR	LR	11 08 20.2	
	comp=Z,19nm,21.8s,MS2.6,baz=39,slow=38						
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**10 57 26.3**	**-0.9**
	comp=Z,1.5nm,0.8s,mb3.6,baz=127,slow=8.9,SNR=7.4						
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**10 57 26.3**	**-0.9**
KURK				P	pP	10 57 28.7	+0.7
BVAR	**Borovoye Array**	**32.52**	**322**	P	**P**	**10 58 17.2**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.5,baz=106,slow=14,SNR=2.2						
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**11 01 33.2**	**0.0**
	comp=Z,1.8nm,0.8s,mb4.2,baz=46,slow=6.0,SNR=2.6						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**11 01 44.0**	**+0.1**
	comp=Z,3.5nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**11 01 42.8**	**-1.1**
	comp=Z,1.6nm,0.5s,mb4.3,baz=339,slow=7.9,SNR=28						
WB2	**Warramunga Arr**	**58.76**	**146**	*e*P	**P**	**11 01 42.8**	**-1.1**
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**11 02 03.5**	**-1.0**
	comp=Z,0.3nm,0.4s,mb3.8,baz=336,slow=6.9,SNR=13						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**11 04 01.8**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=329,slow=5.3,SNR=18						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**11 04 01.8**	**-1.1**

IDC 16 11:02:39.0±15.0, 19.79S×177.44W, h520km±193km, mb3.3/5, mb1 3.5/6, mb1mx3.2/16, mbtmp3.3/6, Error ellipse: s-maj=81.0km s-min=28.5km az=19.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.00**	**193**	P	P	11 06 27.1	-0.2
	0.9nm,0.3s,baz=220,slow=7.0,SNR=6.2						
CTA	**Charters Tower**	**34.09**	**263**	P	P	11 08 40.5	+0.4
	5.6nm,0.5s,baz=94,slow=11,SNR=12						
STKA	**Stephens Creek**	**38.57**	**243**	P	P	11 09 17.7	+0.6
	3.8nm,1.0s,baz=99,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**45.19**	**256**	P	P	11 10 09.3	-0.2
	3.1nm,0.4s,baz=87,slow=8.6,SNR=97						
WRA	**Warramunga Arr**	**45.22**	**261**	P	P	11 10 09.1	-0.6
	1.5nm,0.4s,baz=98,slow=7.4,SNR=84						
PDAR	**Pinedale Array**	**88.09**	**43**	P	P	11 14 34.4	+0.4
	0.3nm,0.6s,baz=203,slow=3.1,SNR=3.5						

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*IDC **16** 11:06:45.8±0.4, 32.24S×178.52W, h0km, mb5.0/10, mb1 5.2/11, mb1mx5.0/14, mbtmp5.0/11, ML5.3/1, MS5.1/20, Ms1 5.1/20, ms1mx4.9/28, Error ellipse: s-maj=16.8km s-min=14.2km az=177.0*
*ISCJB **16** 11:06:46.7±1.9, 32.52S±0.05×178.43W±0.05, h12km±11km, mb5.4/61, MS5.1/34, Error ellipse: s-maj=10.0km s-min=5.0km az=151.1*
*BJI **16** 11:06:48.8, 31.73S×177.39W, h31km, mB5.7/19, mb5.4/25, Ms5.3/21, Ms7 5.1/20*
*MOS **16** 11:06:50.7±1.8, 32.15S×178.45W, h35km, mb5.7/31, MS5.2/10, Error ellipse: s-maj=13.2km s-min=10.2km az=82.2*
*NEIC **16** 11:06:51.0±0.2, 32.54S×178.36W, h35km, mb5.4/47, Error ellipse: s-maj=10.6km s-min=6.5km az=151.0*
*GCMT **16** 11:06:51.0±0.1, 32.43S×177.75W, h20km, MW5.4/89, Moment Tensor Solution. s79,c128; s89,c158; Duration: 1s2 Moment tensor: Scale 1017Nm; Mrr0.91±.03; Mθθ-0.07±.02; Mφφ-0.84±.02; Mrθ0.25±.04; Mrφ-0.20±.01; Mθφ1.12±.04; Best double couple: Mo1.46000×1017 NP1φs195.00000°, δ19.00000°, λ92.00000°. NP2φs13.00000°, δ71.00000°, λ89.00000°. Principal axes: T 1.4680, Plg64.0000°, Azm282.0000°; N -0.0160, Plg1.0000°, Azm13.0000°; P -1.4520, Plg26.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **16** 11:07:19, 32.46S×178.89W, h281km, mb5.1/27*
ISC 16 11:06:50.4±2.1, 32.47S±0.06×178.41W±0.04, h25km±14km, h34km±1.1km: pP-P, n581, σ0.76/323, mb5.4/61, MS5.1/34, 107C-93D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.24**	**8**	Pn	**Pn**	**11 07 34.1**	**-5.4**
	412nm,0.3s,baz=70,slow=2.3,SNR=44						
RAO				Sn	**Sn**	**11 08 12.4**	**-4.9**
	967nm,0.3s,baz=160,slow=22,SNR=6.4						
RAO	**Raoul Island**	**3.24**	**8**	*e*Pn	**Pn**	**11 07 33.9**	**-5.6**
RAO				*e*Sn	**Sn**	**11 08 11.1**	**-6.2**
URZ	**Urewera**	**6.84**	**211**	Pn	**Pn**	**11 08 26.3**	**-2.8**
	12nm,0.3s,baz=38,slow=4.6,SNR=48						
URZ				Sn	**Sn**	**11 09 46.2**	**+0.1**
	122nm,0.3s,baz=145,slow=20,SNR=15						
URZ	**Urewera**	**6.84**	**211**	*e*Pn	**Pn**	**11 08 26.6**	**-2.4**
	65nm,0.1s						
OUZ	**Omahuta**	**7.20**	**245**	*e*Pn	**Pn**	**11 08 38.0**	**+4.0**
	631nm,1.0s						
KHZ	**Kahutara**	**11.81**	**210**	Pn	**Pn**	**11 09 34.1**	**-3.0**
	45nm,0.6s						
KHZ				*e*Sn	**Sn**	**11 11 34.2**	**-14**
RPZ	**Rata Peaks**	**13.95**	**213**	Pn	**Pn**	**11 10 01.5**	**-4.8**
	1.8nm,0.3s,baz=66,slow=3.1,SNR=10						
RPZ				Sn	**Sn**	**11 12 27.5**	**-13**
	16nm,0.3s,baz=290,slow=22,SNR=15						
RPZ	**Rata Peaks**	**13.95**	**213**	Pn	**Pn**	**11 10 01.2**	**-5.1**
	42nm,0.6s						
RPZ				*e*Sn	**Sn**	**11 12 24.5**	**-16**
ODZ	**Otahua Downs**	**15.17**	**211**	Pn	**Pn**	**11 10 14.3**	**-8.5**
	103nm,1.2s						
DZM	**Mont Dzumac**	**16.97**	**304**	*e*P	**Pn**	**11 10 51.3**	**+5.2**
	848nm,1.4s						
DZM				*e*LR	LR	11 14 48.8	
	12μm,22.5s						
DZM	**Mont Dzumac**	**16.97**	**304**	*e*P	**Pn**	**11 10 49.5**	**+3.4**
DZM	**Mont Dzumac**	**16.97**	**304**	*e*P	**Pn**	**11 10 51.1**	**+5.0**
	457nm,1.4s						
NOUC	**Port Laguerre**	**17.05**	**303**	*i* Pg	**Pn**	**11 10 51.3**	**+4.2**
AFI	**Afiamalu**	**19.45**	**20**	P	**Pn**	**11 11 06.8**	**-10**
	1.1nm,0.3s,baz=51,slow=6.5,SNR=4.1						
AFI				S	Sn	11 14 25.1	-29
	2.0nm,0.3s,baz=174,slow=17,SNR=4.3						
AFI	**Afiamalu**	**19.45**	**20**	*e*P	**Pn**	**11 11 09.1**	**-7.3**
	228nm,1.1s						
AFI				*e*S	Sn	11 14 22.7	-31
RIV	**Riverview**	**25.48**	**259**	*e*P	**P**	**11 12 19.9**	**+3.4**
ARMA	**Armidale**	**25.61**	**267**	*e*P	**P**	**11 12 20.9**	**+3.2**
ARMA	**Armidale**	**25.61**	**267**	*e*P	**P**	**11 12 20.7**	**+3.0**
	132nm,1.1s,mb5.4						
CNB	**Canberra Magne**	**26.84**	**255**	*e*P	**P**	**11 12 32.0**	**+3.2**
CNB				*e*		11 15 51.3	
CNB				*e*		11 19 28.3	
CAN	**Canberra**	**27.14**	**255**	*e*P	**P**	**11 12 33.1**	**+1.6**
CAN				pmax	pmax		
	comp=Z,45nm,1.3s,mb4.8						
CAN	**Canberra**	**27.14**	**255**	*e*P	**P**	**11 12 33.1**	**+1.6**
	comp=Z,45nm,1.3s,mb4.8						
EIDS	**Eidsvold**	**27.57**	**277**	*e*P	**P**	**11 12 36.8**	**+1.4**
	comp=Z,59nm,1.0s,mb5.2						
MOO	**Moorlands**	**28.90**	**240**	*e*P	**P**	**11 12 47.1**	**0.0**
TOO	**

WRA Warramunga Arr 43.87 275 P **P** **11 14 54.7 -0.1**
comp=Z,76nm,0.7s,mb5.6,baz=113,slow=8.0,SNR=764
WRA ScP ScP 11 20 33.4 +2.5
comp=Z,7.8nm,1.1s,baz=117,slow=4.0,SNR=8.3
WRA S **S** **11 21 23.7 -1.0**
comp=Z,6.5nm,1.2s,baz=117,slow=15,SNR=7.5
WRA LR LR 11 32 46.1
comp=Z,3μm,18.1s,MS5.3,baz=115,slow=36
WRA Warramunga Arr 43.87 275 P **P** **11 14 54.7 -0.2**
WRA S **S** **11 21 23.7 -1.0**
FORT Forrest 45.22 257 *e*P **P** **11 15 05.1 -0.4**
comp=Z,142nm,0.7s,mb5.9
FORT Forrest 45.22 257 *e*P **P** **11 15 05.2 -0.3**
comp=Z,214nm,0.8s,mb6.0
SBA Scott Base 45.95 184 *e*P **P** **11 15 14.1 +3.4**
SBA pmax pmax
comp=Z,503nm,2.8s,mb6.0
SBA Scott Base 45.95 184 *e*P **P** **11 15 14.1 +3.4**
comp=Z,503nm,2.8s,mb6.0
KAKA Kakadu 48.98 282 *e*P **P** **11 15 32.9 -2.2**
comp=Z,158nm,1.2s,mb5.9
KAKA Kakadu 48.98 282 *e*P **P** **11 15 33.5 -1.6**
comp=Z,220nm,0.9s,mb6.2
FITZ Fitzroy Crossi 52.04 272 *e*P **P** **11 15 57.5 -0.6**
comp=Z,74nm,0.9s,mb5.6
FITZ *e*S **S** **11 23 20.6 +0.1**
FITZ Fitzroy Crossi 52.04 272 LR LR 11 38 13.1
comp=Z,5μm,18.5s,MS5.6,baz=169,slow=36
FITZ Fitzroy Crossi 52.04 272 *e*P **P** **11 15 57.7 -0.4**
comp=Z,155nm,1.5s,mb5.7
FITZ *e*pP pP 11 16 14.6 +8.6
KLBR Kellerberrin 53.38 253 *e*P **P** **11 16 05.9 -2.0**
comp=Z,22nm,0.7s,mb5.2
MBWA Marble Bar 55.68 265 *e*P **P** **11 16 23.4 -1.4**
comp=Z,60nm,1.1s,mb5.5
QSPA South Pole Qui 57.65 180 P **P** **11 16 40.0 +2.2**
comp=Z,22nm,1.0s,mb5.2,baz=36,slow=3.0,SNR=41
QSPA LR LR 11 39 04.9
comp=Z,2μm,19.1s,MS5.3,baz=216,slow=34
QSPA South Pole Qui 57.65 180 *e*P **P** **11 16 39.5 +1.7**
comp=Z,132nm,1.1s,mb5.9
QSPA *e*pP pP 11 16 49.5 +3.7
RPN Rapa Nui 59.24 104 LR LR 11 38 09.8
comp=Z,1μm,18.4s,MS5.1,baz=251,slow=32
MIR Mirnyy 60.13 207 ⇓*i*P **P** **11 16 56.0 +0.8**
MIR pmax pmax
comp=Z,175nm,1.8s,mb5.8
KAPI Kappang 63.66 281 LR LR 11 45 43.5
comp=Z,2μm,18.0s,MS5.3,baz=158,slow=37
KAPI Kappang 63.66 281 *e*P **P** **11 17 18.4 -1.4**
comp=Z,90nm,1.7s,mb5.5
CBIJ Chichi jima 70.11 323 LR LR 11 43 22.6
comp=Z,492nm,19.3s,MS4.8,baz=108,slow=31
MAW Mawson 70.25 201 P **P** **11 18 00.9 +0.1**
comp=Z,9.9nm,1.2s,mb4.6,baz=86,slow=8.0,SNR=7.1
MAW Mawson 70.25 201 *e*P **P** **11 18 00.5 -0.4**
MAW pmax pmax
comp=Z,61nm,2.5s
MAW Mawson 70.25 201 *e*P **P** **11 18 00.5 -0.4**
comp=Z,62nm,2.5s,mb5.1
SYO Syowa Base 75.03 193⇑ *e*P **P** **11 18 27.5 -1.7**
KSM Kuching 75.08 282 *e*P **P** **11 18 29.4 -1.1**
comp=Z,83nm,1.6s,mb5.4
JHJ Hachijo jima 2 76.22 325 LR LR 11 45 28.2
comp=Z,478nm,19.2s,MS4.8,baz=120,slow=31
VNA2 Neumayer--Watz 76.70 177 *e*P **P** **11 18 38.4 -0.3**
VNA2 *e* pP 11 18 47.9 +1.0
MAIT Maitri 76.79 183 *e*P **P** **11 18 38.9 -0.4**
NVL N'lazarevskaya 76.80 183 *e*P **P** **11 18 32.2 -7.1**
NVL *e**PP pP 11 18 42.0 -5.5
NVL *e**SP sP 11 18 49.2 -1.3
NVL *e* 11 18 54.0
NVL pmax pmax
comp=Z,15nm,0.8s,mb5.0
VNA1 Neumayer--Stat 76.93 177 *e*P **P** **11 18 39.9 -0.2**
VNA1 *e* 11 18 49.7
MJAR Matsushiro Arr 79.75 326 P **P** **11 18 53.2 -2.8**
comp=Z,7.8nm,1.1s,mb4.5,baz=162,slow=5.2,SNR=10
MAJO Matsushiro 79.75 326 *e*P **P** **11 18 54.1 -1.9**
MAJO pmax pmax
comp=Z,12nm,0.9s,mb4.8
MAJO Matsushiro 79.75 326 *e*P **P** **11 18 54.1 -1.9**
comp=Z,12nm,0.9s,mb4.8
MAT Matsushiro 79.75 326 P **P** **11 18 53.2 -2.8**
MAT S S 11 28 58.0 +1.0
TPUB Ta-pu 80.38 305 *e*P **P** **11 18 58.1 -1.6**
comp=Z,28nm,0.9s,mb5.2
PLCA Paso Flores 81.35 133 P **P** **11 19 03.8 -1.0**
comp=Z,6.9nm,1.0s,mb4.5,baz=230,slow=4.6,SNR=7.8
PLCA LR LR 11 49 29.8
comp=Z,1μm,18.1s,MS5.3,baz=284,slow=31
ERM Erimo 82.12 332 *e*P **P** **11 19 08.8 +0.3**
ERM pmax pmax
comp=Z,33nm,1.0s,mb5.2
ERM Erimo 82.12 332 *e*P **P** **11 19 08.8 +0.3**
comp=Z,33nm,1.0s,mb5.2
QZH Quanzhou 82.86 305 *e*P **P** **11 19 12.1 -0.7**
QZH S S 11 29 28.0 -1.8
QZH pmax pmax
comp=Z,920nm,6.4s
ADK Adak 84.01 1 *e*P **P** **11 19 16.9 -1.1**
ADK pmax pmax
comp=Z,58nm,0.9s,mb5.7
ADK Adak 84.01 1 *e*P **P** **11 19 16.9 -1.1**
comp=Z,58nm,0.9s,mb5.7
SMY Shemya 85.09 355 *e*P **P** **11 19 22.9 -0.6**
SMY pmax pmax
comp=Z,109nm,1.1s,mb5.9
SMY Shemya 85.09 355 *e*P **P** **11 19 22.9 -0.6**
comp=Z,108nm,1.1s,mb5.9
KSRS Korea Array 85.70 320 P **P** **11 19 26.2 -0.7**
comp=Z,5.6nm,1.0s,mb4.8,baz=143,slow=5.7,SNR=25
KSRS LR LR 11 55 13.9
comp=Z,498nm,19.7s,MS4.9,baz=127,slow=34
YSS Yuzh-Sakhalins 86.46 335 *αe*P **P** **11 19 29.8 -0.6**
YSS *e*S S 11 29 54.0 -11
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 86.46 335 *e*P **P** **11 19 30.1 -0.3**
comp=Z,51nm,0.9s,mb5.8
SAO San Andreas Ge 87.04 42 *e*P **P** **11 19 33.1 -0.4**
SAO pmax pmax
comp=Z,230nm,2.9s,mb5.9
SAO San Andreas Ge 87.04 42 *e*P **P** **11 19 33.1 -0.4**
comp=Z,230nm,2.9s,mb5.9
MWC Mount Wilson 87.28 46 *e*P **P** **11 19 34.3 -0.5**
MWC pmax pmax
comp=Z,23nm,1.3s,mb5.2
MWC Mount Wilson 87.28 46 *e*P **P** **11 19 34.2 -0.5**
comp=Z,23nm,1.3s,mb5.3
MONP Monument Peak 87.40 48 ⇓P **P** **11 19 35.9 +0.6**
baz=88
ARVC Arvin 87.43 45 ⇓P **P** **11 19 35.9 +0.4**
baz=88
PET Petropavlovsk 87.45 346 *e*P **P** **11 19 28.6 -6.5**
PET *e*S S 11 30 04.8 -9.2
PET *e*PS 11 31 18.3
PET *e*SS SS 11 35 50.1 -10
PET pmax pmax
comp=Z,400nm,5.5s
PET pmax pmax
comp=Z,25nm,1.1s,mb5.4
PET pmax pmax
comp=Z,200nm,15.8s
PET MLR MLR
comp=Z,700nm,15.0s,MS5.2
PET MLR MLR
comp=Z,600nm,18.0s
PET Petropavlovsk 87.45 346 *e*P **P** **11 19 34.0 -1.1**
comp=Z,31nm,1.2s,mb5.4
BFSC Mount Baldy St 87.54 46 ⇑P **P** **11 19 36.2 +0.2**
baz=88
PEA0B Petropavlovsk- 87.73 346 *e*P **P** **11 19 35.3 -1.0**
PETK Petropavlovsk- 87.73 346 P **P** **11 19 35.7 -0.7**
comp=Z,27nm,0.9s,mb5.5,baz=111,slow=8.1,SNR=34
PETK LR LR 11 56 21.1
comp=Z,611nm,19.6s,MS5.0,baz=167,slow=34
VES Vestal, Richgr 87.77 44 ⇓P **P** **11 19 36.6 -0.5**
baz=88,SNR=5.5
EDW2 Edwards Air Fo 87.77 46 ⇑P **P** **11 19 36.7 -0.4**
baz=88,SNR=7.8
SWSC Sam W. Stewart 87.83 48 ⇑P **P** **11 19 37.2 -0.2**
baz=88
PFO Pinyon Flat Ob 87.86 47 ⇑P **P** **11 19 37.4 -0.2**
baz=88
PFO Pinyon Flat Ob 87.86 47 *e*P **P** **11 19 36.7 -0.8**
PFO pmax pmax
comp=Z,44nm,1.4s,mb5.5
PFO Pinyon Flat Ob 87.86 47 *e*P **P** **11 19 36.7 -0.8**
comp=Z,44nm,1.4s,mb5.5
VLA Vladivostok 87.91 326 *e*P **P** **11 19 35.4 -2.1**
VLA pmax pmax
comp=Z,26nm,1.1s,mb5.4
VLA MLR MLR
comp=Z,500nm,18.0s,MS5.0
ISA Isabella 88.01 45 ⇓P **P** **11 19 38.0 -0.2**
baz=88,SNR=14
ISA Isabella 88.01 45 *e*P **P** **11 19 38.0 -0.2**
ISA pmax pmax
comp=Z,220nm,2.5s,mb5.9
ISA Isabella 88.01 45 *e*P **P** **11 19 38.0 -0.2**
comp=Z,220nm,2.5s,mb5.9
LRMC Laurel Mountai 88.35 45 ⇓P **P** **11 19 40.1 +0.3**
baz=88,SNR=10
BELC Belle Mtn. 88.40 47 ⇓P **P** **11 19 39.8 -0.3**
baz=88,SNR=7.5
BC3 Big Chuckw Mtn 88.52 48 ⇑P **P** **11 19 40.8 +0.2**
baz=89,SNR=8.4
GLA Glamis 88.52 49 ⇑P **P** **11 19 40.6 -0.1**
baz=89
GLA Glamis 88.52 49 *e*P **P** **11 19 42.1 +1.4**
GLA pmax pmax
comp=Z,29nm,1.1s,mb5.5
GLA Glamis 88.52 49 *e*P **P** **11 19 42.1 +1.4**
comp=Z,30nm,1.1s,mb5.5
CMB Columbia Colle 88.53 42 *e*P **P** **11 19 39.7 -0.9**
CMB pmax pmax
comp=Z,27nm,1.4s,mb5.4
CMB Columbia Colle 88.53 42 *e*P **P** **11 19 39.7 -0.9**
comp=Z,27nm,1.4s,mb5.4
HEC Hector,Ludlow 88.75 47 ⇑P **P** **11 19 41.5 -0.2**
baz=89,SNR=7.3
CWC Cottonwood Cre 88.77 44 ⇑P **P** **11 19 41.9 +0.1**
baz=89
GSC Goldstone 88.77 46 ⇑P **P** **11 19 41.4 -0.4**
baz=89,SNR=6.5
GSC Goldstone 88.77 46 *e*P **P** **11 19 41.7 -0.1**
GSC pmax pmax
comp=Z,33nm,1.4s,mb5.5
GSC Goldstone 88.77 46 *e*P **P** **11 19 41.6 -0.2**
comp=Z,33nm,1.4s,mb5.5
MPMC Manual Prospec 88.86 45 ⇑P **P** **11 19 42.4 +0.1**
baz=89,SNR=9.9
IRM Iron Mountain 89.04 48 ⇑P **P** **11 19 43.5 +0.4**
baz=89,SNR=9.8
MTUM Tungsten Hills 89.11 44 *e*P **P** **11 19 44.3 +1.0**
214A Organ Pipe Nat 89.11 51 ⇑P **P** **11 19 43.5 0.0**
baz=89
GMRC Granite Mounta 89.13 47 ⇓P **P** **11 19 43.7 +0.2**
baz=89
MLAC Mammoth Lakes 89.14 43 ⇑P **P** **11 19 44.1 +0.7**
baz=89
WDC Whiskeytown Da 89.14 39 *e*P **P** **11 19 43.5 +0.1**
WDC pmax pmax
comp=Z,17nm,1.1s,mb5.3
WDC Whiskeytown Da 89.14 39 *e*P **P** **11 19 43.5 +0.1**
comp=Z,18nm,1.1s,mb5.3
Y12C Blythe 89.16 48 ⇑P **P** **11 19 43.9 +0.1**
baz=89
Z13A Yuma Proving G 89.36 49 ⇓P **P** **11 19 44.6 0.0**
baz=89,SNR=9.3
SHOC Shoshone 89.49 46 ⇑P **P** **11 19 45.1 0.0**
baz=90,SNR=5.1
FURC Furnace Creek, 89.52 45 ⇓P **P** **11 19 45.4 +0.1**
baz=90
GRAC Grapevine Rang 89.57 44 ⇓P **P** **11 19 46.4 +0.9**
baz=90
114A Black Gap (USA 89.57 50 ⇑P **P** **11 19 46.0 +0.3**
baz=90
Y13A Salome 89.65 49 ⇑P **P** **11 19 46.6 +0.6**
baz=90
WCN Washoe City 89.76 42 ⇑P **P** **11 19 46.5 +0.1**
baz=90
PDMCI Parker Dam,Lak 89.76 48 ⇑P **P** **11 19 46.5 0.0**
baz=90
NEE2 Needles Airpor 89.77 48 ⇑P **P** **11 19 46.5 0.0**
baz=90
U10A Ash Meadows, A 89.80 45 ⇓P **P** **11 19 47.2 +0.6**
baz=90
BEKR Beckwourth 89.82 41 ⇓P **P** **11 19 47.1 +0.5**
baz=90
YBH Yreka Blue Hor 89.87 38 *e*P **P** **11 19 47.0 +0.2**
YBH pmax pmax
comp=Z,14nm,1.3s
YBH Yreka Blue Hor 89.87 38 *e*P **P** **11 19 47.0 +0.2**
comp=Z,14nm,1.3s,mb5.1
Z14A Wintersburg 89.92 50 ⇓P **P** **11 19 47.6 +0.4**
baz=90
W12A Cal Nev Ari 89.96 47 ⇑P **P** **11 19 47.4 +0.1**
baz=90
V11A Goodsprings 89.96 46 ⇓P **P** **11 19 47.4 0.0**
baz=90
115A Sonoran Desert 89.97 50 ⇓P **P** **11 19 47.7 +0.2**
baz=90
NVAR Mina Array Bea 89.99 43 P **P** **11 19 47.4 0.0**
comp=Z,4.3nm,0.9s,mb4.8,baz=219,slow=7.9,SNR=27
NVAR Mina Array Bea 89.99 43 P **P** **11 19 47.4 0.0**
216A Three Points, 90.03 51 ⇓P **P** **11 19 48.2 +0.4**
baz=90
CHGN Chignik 90.05 11 P **P** **11 19 50.2 +3.0**
MDJ Mudanjiang 90.13 326 P **P** **11 19 47.1 -0.8**
MDJ pP pP 11 19 56.8 +0.5
MDJ sP sP 11 20 00.3 +1.1
MDJ S S 11 30 36.6 -3.0
MDJ sS sS 11 30 53.0 -0.4
MDJ pmax pmax
comp=Z,18nm,1.2s,mb5.3
MDJ pmax pmax
comp=Z,230nm,5.7s
MDJ LR LR
comp=N,290nm,19.4s,MS5.0
MDJ LR LR
comp=E,520nm,20.4s,MS5.0
MDJ LR LR
comp=Z,780nm,20.9s,MS5.1
MDJ Mudanjiang 90.13 326 *e*P **P** **11 19 47.3 -0.6**
comp=Z,17nm,0.9s,mb5.4
X13A Yucca 90.15 48 ⇑P **P** **11 19 48.4 +0.2**
baz=90,SNR=8.3
116A Eloy 90.22 51 ⇓P **P** **11 19 48.6 -0.1**
baz=90
V12A Nelson 90.25 47 ⇑P **P** **11 19 48.8 +0.1**
baz=90,SNR=6.5
PAHR Pah Rah Range 90.25 41 *e*P **P** **11 19 47.9 -0.7**
comp=Z,31nm,1.7s,mb5.4
Y14A Wickenburg 90.25 49 ⇓P **P** **11 19 48.8 0.0**
baz=90,SNR=7.3
217A Green Valley 90.31 52 ⇑P **P** **11 19 49.3 +0.2**
baz=90,SNR=6.8
HUMO Hull Mountain 90.37 37 *e*P **P** **11 19 48.8 -0.3**
comp=Z,54nm,1.6s,mb5.6
HUMO *e*pP pP 11 19 59.6 +2.2
W13A Hualapai Mount 90.44 48 ⇓P **P** **11 19 50.2 +0.5**
baz=90,SNR=5.2
SHPR Sheep Range 90.57 46 *e*P **P** **11 19 50.6 +0.5**
S10A Tonopah Range, 90.64 44 ⇓P **P** **11 19 50.4 -0.1**
baz=91
X14A Yava 90.66 49 ⇑P **P** **11 19 51.2 +0.5**
baz=91,SNR=6.8
TUC Tucson 90.67 52 *e*P **P** **11 19 51.6 +0.8**
TUC pmax pmax
comp=Z,89nm,2.4s,mb5.7
TUC Tucson 90.67 52 *e*P **P** **11 19 51.6 +0.8**
comp=Z,89nm,2.4s,mb5.7
Y15A Casa Rosa Ranc 90.69 49 ⇓P **P** **11 19 51.2 +0.4**
baz=91
117A Oracle 90.86 51 ⇑P **P** **11 19 52.7 +1.0**
baz=91,SNR=5.4
V13A Grand Canyon W 90.86 47 ⇑P **P** **11 19 51.5 -0.1**
baz=91,SNR=6.6
Z16A Peralta Trail, 90.89 50 ⇓P **P** **11 19 51.9 +0.1**
baz=91
U12A Valley of Fire 90.90 46 ⇑P **P** **11 19 52.2 +0.5**
baz=91
Dragoon 90.95 52 ⇑P **P** **11 19 52.6 +0.5**
baz=91
S11A Rachel 90.96 45 ⇓P **P** **11 19 51.9 -0.1**
baz=91
T12A Moapa 90.98 46 ⇓P **P** **11 19 52.3 +0.2**
baz=91
T11A Corn Creek, Al 91.01 45 ⇓P **P** **11 19 52.0 -0.3**
baz=91,SNR=13
W14A Seligman 91.02 48 ⇑P **P** **11 19 52.8 +0.5**
baz=91,SNR=5.7
R10A Warm Springs 91.06 44 ⇓P **P** **11 19 52.6 +0.1**
baz=91
X15A Humboldt 91.09 49 ⇑P **P** **11 19 52.9 +0.2**
baz=91,SNR=6.8
319A Douglas 91.10 53 ⇑P **P** **11 19 52.4 -0.4**
baz=91
Y16A Circle Bar Ran 91.19 50 ⇓P **P** **11 19 53.6 +0.5**
baz=91,SNR=13
U13A Pakoon Wash 91.24 47 ⇑P **P** **11 19 53.6 +0.3**
baz=91
MOD Modoc 91.27 39 *e*P **P** **11 19 53.2 0.0**
comp=Z,8.6nm,1.0s,mb5.0
V14A Boquillas Ranc 91.27 48 ⇑P **P** **11 19 54.1 +0.7**
baz=91,SNR=8.5
Q10A Clear Creek Ra 91.36 44 ⇑P **P** **11 19 54.1 +0.3**
baz=91
118A Homack Ranch, 91.41 52 ⇓P **P** **11 19 54.8 +0.5**
baz=92,SNR=7.2
Z17A San Carlos Hig 91.49 51 ⇑P **P** **11 19 55.4 +0.8**
baz=92
Y17A Roosevelt 91.49 50 ⇑P **P** **11 19 55.1 +0.6**
baz=92,SNR=7.0
R11A Troy Canyon, C 91.52 44 ⇑P **P** **11 19 54.8 +0.3**
baz=92
K05A Summer Lake 91.53 38 ⇑P **P** **11 19 55.0 +0.6**
baz=92
X16A Lo Mia Camp, P 91.56 50 ⇓P **P** **11 19 55.2 +0.3**
baz=92
CN2 Changchun 91.58 323 *e*P **P** **11 19 54.0 -0.7**
CN2 *e*pP pP 11 20 04.6 +1.6
CN2 *e*sP sP 11 20 08.5 +2.5
CN2 *e*S S 11 30 49.0 -3.9
CN2 pmax pmax
comp=Z,20nm,1.1s,mb5.4
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,18.0s,MS4.9
CN2 LR LR
comp=E,200nm,18.0s,MS4.9
CN2 LR LR
comp=Z,200nm,19.0s,MS4.6
T13A Saint George 91.66 46 ⇑P **P** **11 19 55.5 +0.2**
baz=92
U14A Mt Trumbull 91.72 47 ⇑P **P** **11 19 55.7 +0.2**
baz=92,SNR=6.6
P10A Eureka 91.85 43 ⇓P **P** **11 19 56.6 +0.5**
baz=92
W16A Flagstaff 91.92 49 ⇓P **P** **11 19 57.4 +0.9**
baz=92
220A Playas Peak, P 91.93 53 ⇑P **P** **11 19 57.1 +0.5**
baz=92
119A Ashpeak Ranch, 91.93 52 ⇑P **P** **11 19 57.4 +0.8**
baz=92
V15A Kaibab Nationa 91.97 48 ⇓P **P** **11 19 57.2 +0.5**
baz=92
S13A Holt Ranch, En 92.05 46 ⇑P **P** **11 19 57.5 +0.5**
baz=92
Y18A Canyon Day Jun 92.07 51 ⇑P **P** **11 19 57.1 -0.2**
baz=92,SNR=6.3
R12A Pony Springs, 92.09 45 ⇑P **P** **11 19 57.3 +0.1**
baz=92
T14A Hurricane 92.19 47 ⇓P **P** **11 19 58.2 +0.4**
baz=92
P11A Circle Ranch, 92.22 43 ⇓P **P** **11 19 58.0 +0.3**
baz=92
H04A Detroit Lake 92.24 36 ⇑P **P** **11 19 58.0 +0.2**
baz=92
120A U Bar Ranch, L 92.25 52 ⇑P **P** **11 19 58.2 +0.1**
baz=92
O10A Cortez Mining, 92.27 42 ⇑P **P** **11 19 57.9 -0.1**
baz=92
GYA Guiyang 92.28 300 P **P** **11 20 00.5 +2.1**
GYA pP pP 11 20 11.9 +5.2
GYA sP sP 11 20 17.8 +8.1
GYA PP PP 11 23 45.4 +6.0
GYA SKS 11 30 29.8
GYA S S 11 30 58.9 -1.1
GYA SS SS 11 37 13.3 +2.0
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,150nm,5.8s
GYA LR LR
comp=N,580nm,20.9s,MS5.2
GYA LR LR
comp=E,830nm,21.5s,MS5.2
GYA LR LR
comp=Z,730nm,22.8s,MS5.1
Z19A T-Link Ranch, 92.28 52 ⇓P **P** **11 19 59.5 +1.3**
baz=92
U15A North Rim 92.28 48 ⇓P **P** **11 19 59.1 +0.9**
baz=92,SNR=7.2
WUAZ Wupatki 92.29 49 ⇓P **P** **11 19 58.6 +0.4**
baz=92
WUAZ Wupatki 92.29 49 *e*P **P** **11 19 57.2 -1.0**
comp=Z,14nm,1.3s,mb5.1
WUAZ *e*pP pP 11 20 07.7 +1.1
WUAZ *e*sP sP 11 20 11.3 +1.8
CCUT Cedar City 92.34 46 *e*P **P** **11 19 58.5 +0.1**
comp=Z,29nm,2.0s,mb5.3
R13A O'Grain Ranch, 92.38 45 ⇓P **P** **11 19 59.1 +0.6**
baz=92
Q12A Willow Creek R 92.42 44 ⇓P **P** **11 19 59.3 +0.6**
baz=92
ENH Enshi 92.48 305 *e*P **P** **11 19 58.7 -0.5**
WVOR Wild Horse Val 92.53 40 *e*P **P** **11 19 58.4 -0.7**
WVOR pmax pmax
comp=Z,11nm,1.1s,mb5.2
WVOR Wild Horse Val 92.53 40 *e*P **P** **11 19 58.4 -0.7**
comp=Z,11nm,1.1s,mb5.2
S14A Cedar City 92.59 46 ⇑P **P** **11 20 00.1 +0.6**
baz=93
X18A Snowflake 92.59 50 ⇑P **P** **11 19 59.8 +0.2**
baz=93
T15A Red Dirt Ranch 92.60 47 ⇓P **P** **11 20 00.3 +0.7**
baz=93
Z20A Nine Sixteen R 92.62 52 ⇓P **P** **11 20 00.2 +0.4**
baz=93
KLR Kul'dur 92.64 330 *e*P **P** **11 19 54.7 -4.8**
O11A Cowboy Ranch, 92.65 43 ⇓P **P** **11 19 59.5 -0.2**
baz=93
P12A McGill 92.66 44 ⇓P **P** **11 19 59.3 -0.5**
baz=93
Y19A Nutrioso 92.69 51 ⇓P **P** **11 20 00.4 +0.3**
baz=93,SNR=6.8
V17A Tonalea, Kykot 92.72 49 ⇑P **P** **11 20 00.4 +0.2**
baz=93
U16A Tuba City 92.83 48 ⇓P **P** **11 20 01.3 +0.6**
baz=93
Q13A Wheeler Ranch, 92.84 45 ⇑P **P** **11 20 01.0 +0.4**
baz=93
M10A I.L. Ranch, Tu 93.07 42 ⇑P **P** **11 20 01.9 +0.2**
baz=93
P13A Bates Ranch, G 93.17 44 ⇓P **P** **11 20 02.3 +0.1**
baz=93
NNA Nana 93.18 106 LR LR 11 55 23.1
comp=Z,1μm,18.2s,MS5.4,baz=151,slow=31
I07A Izee 93.20 38 ⇑P **P** **11 20 02.3 +0.2**
baz=93
Y20A Horse Springs, 93.24 52 ⇑P **P** **11 20 02.7 0.0**
baz=93
J08A Circle Bar Ran 93.25 39 ⇑P **P** **11 20 02.2 -0.2**
baz=93
O12A Currie 93.27 43 ⇑P **P** **11 20 02.9 +0.3**
baz=93
Q14A Sevier Lake (B 93.31 45 ⇑P **P** **11 20 03.0 +0.2**
baz=93
V18A Ganado 93.33 49 ⇑P **P** **11 20 03.2 +0.2**
baz=93
Z21A St. Cloud Mine 93.35 52 ⇑P **P** **11 20 03.5 +0.4**
baz=93
G06A Carlson Farm, 93.41 37 ⇑P **P** **11 20 02.8 -0.3**
baz=94
M11A Holland Ranch, 93.43 42 ⇑P **P** **11 20 03.3 -0.1**
baz=94
L10A Juniper Basin 93.48 41 ⇓P **P** **11 20 03.2 -0.3**
baz=94
N12A Clover Valley, 93.48 43 ⇑P **P** **11 20 03.5 -0.1**
baz=94
X20A Quemado 93.55 51 ⇓P **P** **11 20 04.6 +0.5**
baz=94
T17A Navajo Res., N 93.57 48 ⇑P **P** **11 20 04.6 +0.5**
baz=94
626A Big Bend Ranch 93.59 57 ⇑P **P** **11 20 04.1 -0.3**
baz=94
J09A Fry Pan Ranch, 93.62 40 ⇓P **P** **11 20 04.3 +0.1**

baz=94
MSU Marysvale 93.67 46 *e*P **P 11 20 05.1 +0.6**
425A Indio Mountain 93.70 56 ⇓P **P 11 20 04.5 -0.4**
baz=94
CMIG Matias Romero 93.72 72 LR LR 11 50 14.5
comp=Z,156nm,21.4s,MS4.4,baz=300,slow=28
K10A MacKenzie Ranc 93.72 40 ⇓P **P 11 20 04.7 +0.1**
baz=94
324A Moseley Ranch, 93.74 55 ⇑P **P 11 20 04.7 -0.3**
baz=94
Y21A Point of Rocks 93.77 52 ⇑P **P 11 20 05.7 +0.6**
baz=94
U18A Rough Rock, Ch 93.80 49 ⇓P **P 11 20 05.6 +0.5**
baz=94
W20A Ramah 93.90 50 ⇑P **P 11 20 06.1 +0.4**
baz=94
526A Mary Lane Ranc 93.91 57 ⇓P **P 11 20 05.9 +0.1**
baz=94
M12A Wells 93.92 42 ⇑P **P 11 20 05.1 -0.5**
baz=94
H08A Prairie City 93.93 38 ⇓P **P 11 20 05.4 -0.1**
baz=94
L11A Cat Creek Ranc 93.94 41 ⇓P **P 11 20 05.3 -0.3**
baz=94
X21A Alamocita Cree 93.96 51 ⇑P **P 11 20 05.8 -0.1**
baz=94
S17A Black Ridge (B 93.97 47 ⇑P **P 11 20 05.5 -0.4**
baz=94
627A Terlingua Ranc 94.06 58 ⇑P **P 11 20 06.5 -0.1**
baz=94
224A Corundas Mount 94.08 54 ⇓P **P 11 20 06.3 -0.2**
baz=94
BJI Beiging 94.15 316 P **P 11 20 07.4 +0.7**
BJI S S 11 31 20.3 +4.3
BJI SS SS 11 37 38.8 +1.1
BJI pmax pmax
comp=Z,11nm,0.9s,mb5.3
BJI pmax pmax
comp=Z,140nm,6.6s
BJI LR LR
comp=N,430nm,20.1s,MS5.1
BJI LR LR
comp=E,550nm,18.1s,MS5.1
BJI LR LR
comp=Z,380nm,20.6s,MS4.8
K11A Parker Ranch, 94.18 41 ⇑P **P 11 20 06.2 -0.5**
baz=94
Y22A Socorro 94.20 52 ⇑P **P 11 20 06.5 -0.5**
baz=94
J10A Berg Farm, Mel 94.21 40 ⇓P **P 11 20 06.7 -0.2**
baz=94
T18A Mexican Hat 94.24 48 ⇑P **P 11 20 07.4 +0.2**
baz=94
527A Woodward Ranch 94.30 57 ⇑P **P 11 20 07.2 -0.4**
baz=94
426A McDonald Obser 94.30 56 ⇓P **P 11 20 07.5 -0.1**
baz=94
G08A Pilot Rock 94.31 38 ⇑P **P 11 20 06.9 -0.3**
baz=94
M13A Montello 94.31 43 ⇓P **P 11 20 07.3 -0.1**
baz=94
L12A House Creek Ra 94.34 42 ⇑P **P 11 20 07.1 -0.3**
baz=94
628A Black Gap, Mar 94.44 58 ⇑P **P 11 20 07.4 -0.8**
baz=94
KMI Kunming 94.44 297 P **P 11 20 09.3 +0.9**
KMI PP PP 11 23 58.6 +2.2
KMI SKS 11 30 35.6
KMI S S 11 31 11.8 -7.4
KMI pmax pmax
comp=Z,6.0nm,1.2s,mb4.9
KMI pmax pmax
comp=Z,160nm,5.8s
KMI LR LR
comp=N,230nm,23.5s,MS4.8
KMI LR LR
comp=E,280nm,19.4s,MS4.8
KMI LR LR
comp=Z,310nm,20.4s,MS4.8
ATAH Atahualpa 94.58 101 LR LR 11 57 19.2
comp=Z,830nm,18.1s,MS5.2,baz=237,slow=32
MFID Camas Ranch 94.72 40 ⇓P **P 11 20 09.0 -0.2**
baz=95
K12A Draper Farm, C 94.72 42 ⇓P **P 11 20 09.0 -0.2**
baz=95
Y23A Lovelace Mesa, 94.81 53 ⇓P **P 11 20 09.4 -0.4**
baz=95
427A Hayter Ranch, 94.85 56 ⇑P **P 11 20 09.6 -0.5**
baz=95
M14A Sheep Mountain 94.87 43 ⇓P **P 11 20 09.9 0.0**
baz=95
528A Cox Ranch, San 94.89 57 ⇑P **P 11 20 09.9 -0.4**
baz=95
L13A Double Diamond 94.91 42 ⇓P **P 11 20 09.8 -0.2**
baz=95
G09A Cove 94.91 38 ⇑P **P 11 20 09.8 -0.2**
baz=95
I11A Placerville 94.97 40 ⇓P **P 11 20 10.2 -0.2**
baz=95
R18A Canyonlands Na 94.99 47 ⇑P **P 11 20 10.5 -0.1**
baz=95
H10A Noah's Angus R 95.00 39 ⇓P **P 11 20 09.6 -0.8**
baz=95
J12A Stokes Ranch, 95.01 41 ⇑P **P 11 20 10.5 -0.1**
baz=95
125A Gardner Draw, 95.01 54 ⇓P **P 11 20 10.3 -0.5**
baz=95
SRU San Rafael 95.05 46 ⇑P **P 11 20 10.6 -0.2**
baz=95
SRU San Rafael 95.05 46 *e*P **P 11 20 09.4 -1.4**
SRU pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
SRU San Rafael 95.05 46 *e*P **P 11 20 09.4 -1.4**
comp=Z,2.7nm,0.8s,mb4.7
ANMO Albuquerque 95.13 52 LR LR 11 58 24.2
comp=Z,1μm,18.2s,MS5.4,baz=71,slow=33
K13A Stover Farm, H 95.19 42 ⇑P **P 11 20 11.4 0.0**
baz=95
Y24A Capitan 95.22 53 ⇑P **P 11 20 11.3 -0.4**
baz=95
G10A Bishop Farm, J 95.27 38 ⇓P **P 11 20 11.4 -0.3**
baz=95
L14A Malta 95.28 43 ⇓P **P 11 20 11.5 -0.3**
baz=95
428A Kincaid Ranch, 95.28 57 ⇓P **P 11 20 11.4 -0.7**
baz=95
I12A Atlanta 95.35 41 ⇓P **P 11 20 12.0 -0.1**
baz=95
M15A Larsen Ranch, 95.37 44 ⇓P **P 11 20 12.1 -0.2**
baz=95
HVU Hansel Valley 95.38 43 *e*P **P 11 20 11.3 -1.0**
HVU pmax pmax
comp=Z,15nm,1.4s,mb5.2
HVU Hansel Valley 95.38 43 *e*P **P 11 20 11.3 -1.0**
comp=Z,15nm,1.4s,mb5.2
H11A Donnelly 95.46 39 ⇓P **P 11 20 12.3 -0.3**
baz=96
P18A Preston Nutter 95.54 46 ⇓P **P 11 20 12.8 -0.2**
baz=96
O17A Robinson Place 95.59 45 ⇓P **P 11 20 13.2 -0.1**
baz=96
HLID Hailey 95.59 41 *e*P **P 11 20 12.8 -0.4**
comp=Z,5.5nm,1.2s,mb4.9
J13A Cove Ranch, Pi 95.62 41 ⇑P **P 11 20 13.1 -0.2**
baz=96
K14A Jones Ranch, D 95.64 42 ⇓P **P 11 20 13.0 -0.4**
baz=96
F10A Beach Ranch, E 95.67 38 ⇓P **P 11 20 13.1 -0.4**
baz=96
L15A Malad City 95.75 43 ⇓P **P 11 20 13.6 -0.3**
baz=96
I13A Wildhorse Cree 95.98 41 ⇑P **P 11 20 14.8 -0.1**
baz=96
H12A Diamond D Ranc 95.99 40 ⇑P **P 11 20 14.7 -0.2**
baz=96
H13A Challis 96.33 40 ⇓P **P 11 20 16.3 -0.2**
baz=96
I14A Mackay 96.36 41 ⇑P **P 11 20 16.5 -0.1**
baz=96
F12A Elk City 96.56 39 ⇑P **P 11 20 17.3 -0.2**
baz=97
J15A Blackfoot 96.60 42 ⇓P **P 11 20 17.4 -0.4**
baz=97
W25A X Bar L Ranch, 96.62 52 ⇓P **P 11 20 17.6 -0.5**
baz=97
CD2 Chengdu 96.89 302 P **P 11 20 21.5 +2.1**
CD2 PP PP 11 24 20.5 +5.1
CD2 S S 11 31 34.3 -5.9
CD2 SS SS 11 38 16.1 -0.9
CD2 pmax pmax
comp=Z,50nm,0.7s,mb6.0
CD2 pmax pmax
comp=Z,210nm,3.9s
CD2 LR LR
comp=N,680nm,19.6s
CD2 LR LR
comp=Z,570nm,16.6s,MS5.1
H15A Lima 97.25 41 ⇓P **P 11 20 19.9 -0.8**
baz=97
HHC Hu-ho-hao-te 97.42 314 *e*P **P 11 20 22.9 +1.4**
HHC PP PP 11 24 24.6 +5.4
HHC SKS 11 30 52.3
HHC S S 11 31 36.8 -7.4
HHC pmax pmax
comp=Z,13nm,1.1s,mb5.3
HHC pmax pmax
comp=Z,120nm,5.1s
HHC LR LR
comp=N,230nm,16.7s,MS5.2
HHC LR LR
comp=E,550nm,15.9s,MS5.2
HHC LR LR
comp=Z,470nm,16.5s,MS5.1
LPAZ La Paz 97.61 115 LR LR 11 54 59.3
comp=Z,281nm,21.5s,MS4.7,baz=149,slow=30
PDAR Pinedale Array 97.87 44 P **P 11 20 22.8 -0.8**
comp=Z,0.5nm,0.7s,baz=216,slow=1.3,SNR=5.1
PDAR LR LR 12 02 49.8
comp=Z,1μm,18.1s,baz=246,slow=34
SEY Seymchan 97.91 347 *c i*P **P 11 20 21.5 -1.7**
CPUP Villa Florida 98.97 129 LR LR 12 03 02.1
comp=Z,880nm,18.1s,MS5.3,baz=212,slow=34
LZH Lanzhou 99.67 307 *e*P Pdif 11 20 35.8 +4.0
LZH pP pP 11 20 46.0 +5.9
LZH sP 11 20 50.0
LZH PP PP 11 24 41.0 +4.4
LZH SKS 11 31 09.3
LZH *e*S S 11 32 04.4 +0.9
LZH sS sS 11 32 22.0 +4.6
LZH *e*SS SS 11 38 59.0 +3.1
LZH pmax pmax
comp=Z,15nm,1.1s,mb5.3
LZH pmax pmax
comp=Z,100nm,4.9s
LZH LR LR
comp=E,470nm,16.4s
LZH LR LR
comp=Z,670nm,17.7s,MS5.2
BILL Bilibino 100.86 354 *e*P Pdif 11 20 36.5 -0.6
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL Bilibino 100.86 354 *e*Pdif Pdif 11 20 36.4 -0.7
comp=Z,9.2nm,1.4s
GTA Gaotai 104.14 308 *e*P PKiKP 11 25 14.9 +6.4
GTA pP 11 25 27.4
GTA sP 11 25 31.3
GTA pmax pmax
comp=Z,4.0nm,1.3s
YKA Yellowknife Ar 107.45 26 PKiKP PKiKP 11 25 12.5 -1.4
comp=Z,0.3nm,0.7s,baz=239,slow=1.5,SNR=6.8
YKA PKKPbc PKKPbc 11 36 27.9 -2.9
comp=Z,1.7nm,0.9s,baz=47,slow=3.3,SNR=13
YKA PKKP PKKPab 11 36 48.1 +7.1
comp=Z,0.9nm,0.8s,baz=37,slow=3.0,SNR=5.7
YKA Yellowknife Ar 107.45 26 PKPdf PKiKP 11 25 12.6 -1.3
YKA PKKPbc PKKPbc 11 36 27.9 -2.9
YKA PKKP PKKPab 11 36 48.1 +7.1
WMQ Urumqi 114.22 308 *e*PKP PKiKP 11 25 27.5 +0.2
BOSA Boshof 115.22 203 PKP PKiKP 11 25 29.0 -0.9
comp=Z,4.5nm,1.1s,baz=90,slow=3.0,SNR=3.3
BOSA Boshof 115.22 203 PKP PKiKP 11 25 29.0 -0.9
MK31 Makanchi Array 118.82 309 *e*PKiKP PKPdf 11 25 34.3 -1.7
MKAR Makanchi Array 118.82 309 PKP PKPdf 11 25 33.8 -2.3
comp=Z,6.6nm,0.8s,baz=79,slow=2.6,SNR=40
MKAR SKP 11 29 12.6
comp=Z,2.2nm,1.0s,baz=46,slow=3.5,SNR=5.3
MKAR PKKPbc PKKPbc 11 35 51.5 -0.3
comp=Z,0.5nm,0.7s,baz=276,slow=5.6,SNR=3.8
MKAR Makanchi Array 118.82 309 PKP PKPdf 11 25 33.8 -2.3
MKAR SKP 11 29 12.6
MKAR PKKPbc PKKPbc 11 35 51.5 -0.3
RES Resolute Bay 119.32 18 *e*PKiKP PKPdf 11 25 34.4 -1.8
ZAA0 Zalesovo Array 119.33 318 *e*PKPdf PKPdf 11 25 34.7 -2.1
ZALV Zalesovo Beam 119.33 318 PKP PKPdf 11 25 34.6 -2.2
comp=Z,2.3nm,0.6s,baz=202,slow=1.6,SNR=12
NVS Novosibirsk 120.46 318 ⇑*i*PKiKP PKPdf 11 25 35.7 -3.2
NVS *e* 11 27 08.4
NVS pmax pmax
comp=Z,36nm,2.0s
NVS pmax pmax
comp=N,17nm,2.1s
NVS pmax pmax
comp=E,23nm,2.1s
KSH Kashi 120.98 300 *e*PKP PKPdf 11 25 40.6 +0.2
KURK Kurchatov 122.21 313 PKP PKPdf 11 25 40.4 -2.1
comp=E,14nm,0.8s,baz=106,slow=2.2,SNR=70
KURK SKP 11 29 19.8
comp=E,4.0nm,1.1s,baz=114,slow=1.5,SNR=5.9
KURK Kurchatov 122.21 313 *c i*PKiKP PKPdf 11 25 40.5 -1.9
KURK Kurchatov 122.21 313 *e*PKPdf PKPdf 11 25 40.6 -1.9
TKM2 Tokmak 2 122.25 303 P PKPdf 11 25 41.8 -1.0
SNR=8.6
TKM2 Tokmak 2 122.25 303 *e*PKPdf PKPdf 11 25 41.6 -1.2
KZA Kyzart 122.26 302 P PKPdf 11 25 43.2 +0.4
SNR=13
UCH Uchtor 122.83 302 P PKPdf 11 25 44.2 +0.3
SNR=25
UCH Uchtor 122.83 302 *e*PKPdf PKPdf 11 25 43.7 -0.2
CHMS Chumysh 122.87 303 P PKPdf 11 25 43.3 -0.7
SNR=6.5
FRU Bishkek 122.92 303 ⇓*i*PKiKP PKPdf 11 25 43.0 -1.1
FRU pmax pmax
comp=Z,58nm,2.0s
AAK Ala-Archa 122.96 303 P PKPdf 11 25 43.8 -0.3
SNR=8.9
AAK Ala-Archa 122.96 303 PKP PKPdf 11 25 43.3 -0.8
comp=Z,9.1nm,1.0s,baz=171,slow=1.8,SNR=15
AAK Ala-Archa 122.96 303 *e*PKPdf PKPdf 11 25 43.7 -0.4
AML Almayashu 123.39 302 P PKPdf 11 25 44.7 -0.3
SNR=20
AML Almayashu 123.39 302 *e*PKPdf PKPdf 11 25 44.5 -0.5
AML *ep*PKPdf pPKPdf 11 25 56.9 +3.4
EKS2 Erkin-Say 123.47 303 P PKPdf 11 25 41.9 -3.2
SNR=9.8
EKS2 Erkin-Say 123.47 303 *e*PKPdf PKPdf 11 25 44.3 -0.8
KBL Kabul 124.69 292 *e*PKiKP PKPdf 11 25 47.6 -0.1
PKME Peaks-Kenny Pk 125.01 55 *e*PKPdf PKPdf 11 25 47.2 -0.8
LSZ Lusaka 126.13 212 *e*PKiKP PKPdf 11 25 51.2 +0.1
BVAR Borovoye Array 127.63 315 PKP PKPdf 11 25 51.2 -1.5
comp=Z,13nm,0.9s,baz=111,slow=3.3,SNR=45
BRVK Borovoye 127.69 315 *c i*PKiKP PKPdf 11 25 51.3 -1.6
BRVK Borovoye 127.69 315 *e*PKPdf PKPdf 11 25 51.6 -1.2
SCHQ Schefferville 128.00 43 PKP PKPdf 11 25 52.5 -0.9
comp=Z,4.7nm,1.1s,baz=256,slow=10,SNR=4.0
KMBO Kilima Mbogo 132.55 232 PKP PKPdf 11 26 03.4 0.0
comp=Z,4.2nm,0.9s,baz=169,slow=11,SNR=7.8
KMBO SKPbc SKPbc 11 29 30.7 +1.9
comp=Z,16nm,1.0s,baz=105,slow=3.5,SNR=19
KMBO Kilima Mbogo 132.55 232 PKiKP PKPdf 11 26 03.4 0.0
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO pmax pmax
comp=N,17nm,1.0s
KMBO Kilima Mbogo 132.55 232 *e*PKPdf PKPdf 11 26 04.3 +0.9
ABKAR Akbulak array 133.97 309 *e*PKPdf PKPdf 11 26 04.0 -0.8
ARU Arti 134.45 319 *i*PKiKP PKPdf 11 26 02.1 -3.4
DAG Danmarks Havn 134.63 6 *e*PKiKP PKPdf 11 26 02.0 -3.4
DAG Danmarks Havn 134.63 6 *i P* PKPdf 11 26 02.0 -3.4
SUMG Summit 134.78 16 *e*PKPdf PKPdf 11 26 09.6 +3.9
SOKR Solikamsk 134.87 324 ⇑*i*PKiKP PKPdf 11 26 03.2 -3.0
SOKR pmax pmax
comp=Z,20nm,1.0s
KEV Kevo 140.06 347 *e*PKiKP PKiKP 11 26 21.5 +3.5
KEV pmax pmax
comp=Z,8.0nm,0.8s
KEV Kevo 140.06 347 *e*pkp PKiKP 11 26 21.5 +3.5
comp=Z,8.4nm,0.8s
QRN Al-Qurain 140.19 277 *e*P PKPdf 11 26 16.4 -0.6
QRN AMb AMB 11 26 27.9
comp=Z,112nm,1.5s
APA Apatity 140.27 342 ⇓*i*PKiKP PKiKP 11 26 20.8 +2.3
APA pmax pmax
comp=Z,65nm,1.4s
ARCES ARCESS Array B 140.53 347 PKhKP 11 26 09.8
comp=Z,6.2nm,0.8s,baz=36,slow=2.3,SNR=9.3
RDF Al-Radifah 140.56 277 *e*P PKPdf 11 26 17.0 -0.7
RDF AMb AMB 11 26 21.4
comp=Z,96nm,1.1s
MIB Mutribah 140.98 279 *e*P PKPdf 11 26 16.7 -1.8
MIB AMb AMB 11 26 21.8
comp=Z,56nm,1.2s
KLMR Klimovskoe 142.40 330 *e*PKHKP 11 26 12.0
KLMR pmax pmax
comp=Z,64nm,1.5s
MAK Makhachkala 142.61 300 *e*PKHKP 11 26 14.2
JOF Joensuu 144.20 337 *e*PKIKP 11 26 18.9
JOF pmax pmax
comp=Z,9.0nm,0.7s
JOF Joensuu 144.20 337 *e*pkp 11 26 18.9
comp=Z,8.7nm,0.7s
MTA Mtatsminda 144.64 298 P PKPdf 11 26 25.6 +1.1
GNI Garni 144.67 295 *e*P PKPdf 11 26 22.9 -1.8
GNI Garni 144.67 295 *i* PKIKP PKPdf 11 26 22.9 -1.8
GNI Garni 144.67 295 *e*PKPdf PKPdf 11 26 23.0 -1.7
KEH Kehvi 145.27 299 P PKPbc 11 26 23.3 -2.1
ZEI Tsey 145.27 300 *i* PKIKP PKPdf 11 26 24.6 -1.0
ZEI pmax pmax
comp=Z,104nm,1.8s
CLDR Caldiran 145.28 293 *e*P PKPbc 11 26 25.1 -0.5
VRHR Novokhopersk 145.37 314 *e*PKP2 PKPab 11 26 21.6 -4.0
VRHR pmax pmax
comp=Z,60nm,0.4s
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.7s
CUKT Cukurca 145.41 290 *e*P PKPbc 11 26 24.7 -1.3
ONI Oni 145.61 299 P PKPdf 11 26 25.4 -0.8
VANB Van 145.67 292 *e*P PKPdf 11 26 25.6 -0.8
GOF Gofitskoye 145.69 304 ⇓*i*PKHKP 11 26 05.5
GOF pmax pmax
comp=Z,169nm,1.1s
MOS Moscow 145.82 324 *e*PKHKP 11 26 22.3
MOS pmax pmax
comp=Z,499nm,1.2s
MOS pmax pmax
comp=Z,900nm,1.5s
KARS Kars 145.95 296 *e*P PKPdf 11 26 26.7 -0.2
AGRB Hanur-Agry 146.01 294 *e*P PKPdf 11 26 26.8 -0.2
KIV Kislovodsk 146.06 302 *i* PKP2 PKPab 11 26 26.7 -1.7
KIV pmax pmax
comp=Z,110nm,2.5s
KIV Kislovodsk 146.06 302 *e*PKPdf PKPdf 11 26 26.1 -0.8
KAF Kangasniemi 146.37 339 *e*PKIKP PKPdf 11 26 25.4 -1.4
KAF pmax pmax
comp=Z,53nm,0.8s
KAF Kangasniemi 146.37 339 *ep*kp PKPdf 11 26 25.4 -1.4
comp=Z,53nm,0.8s
VOR Voronezh 146.60 316 ⇑*i*PKIKP PKPdf 11 26 25.0 -2.6
VOR pmax pmax
comp=Z,500nm,1.6s
OBN Obninsk 146.64 323 *i* PKP2 PKPdf 11 26 28.1 +0.6
OBN pmax pmax
comp=Z,354nm,1.5s
OBN MLR MLR
comp=Z,400nm,19.0s,MS5.2
OBN Obninsk 146.64 323 *e*PKPbc PKPdf 11 26 28.3 +0.8
VSR Storozhevoye 146.80 316 *e*PKP2 PKPdf 11 26 28.5 +0.6
VSR pmax pmax
comp=Z,90nm,1.0s
VSR pmax pmax
comp=N,20nm,0.6s
VSR pmax pmax
comp=E,40nm,1.1s
VORD Divnogorie 146.81 315 *e*PKP2 PKPdf 11 26 28.2 +0.3
VORD pmax pmax
comp=Z,190nm,1.3s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.7s
FINES FINESS Array B 146.95 339 PKPbc PKPdf 11 26 28.3 +0.5
comp=E,98nm,0.8s,baz=54,slow=3.3,SNR=138
FINES SKPbc 11 30 11.1
comp=E,6.9nm,0.9s,baz=33,slow=7.3,SNR=5.3
FINES FINESS Array B 146.95 339 PKP2 PKPdf 11 26 28.3 +0.4
FINES pmax pmax
comp=Z,98nm,0.8s
FINES pmax pmax
comp=N,7.0nm,0.9s
BCA Borcka 147.03 297 *e*P PKPdf 11 26 28.8 +0.1
EZM Erzurum 147.27 294 *e*P PKPbc 11 26 31.8 +0.3
SOC Sochi 148.24 302 *e*PKIKP PKPdf 11 26 28.9 -1.7
SOC *i* 11 26 32.8
KTUT Trabzon 148.45 297 *e*P PKPbc 11 26 34.2 -0.3
GUMT Gumushane 148.69 296 *e*P PKPbc 11 26 36.2 +1.0
PTK Pertek 148.80 293 *e*P PKPbc 11 26 34.8 -0.8
EZC Erzincan 148.82 294 *e*P PKPdf 11 26 32.7 +1.1
SVRC Sivrice-ELAZID 148.86 292 *e*P PKPbc 11 26 35.4 -0.3
URFA Urfa 149.22 290 *e*P PKPbc 11 26 35.5 -1.1
ESPY Espiye-Giresun 149.24 297 *e*P PKPbc 11 26 34.7 -1.8
MALT Malatya 149.55 291 *e*P PKPbc 11 26 37.0 -0.4
MALT Malatya 149.55 291 *e*PKPdf PKPdf 11 26 32.5 -0.4
MALT *e*PKPbc PKPbc 11 26 37.6 +0.2
MYA Malataya 149.56 291 *e*P PKPbc 11 26 36.7 -0.7
ANN Anapa 149.66 304 *i* PKHKP PKPbc 11 26 35.8 -1.7
ANN *e*PPP 11 33 30.7
ANN pmax pmax
comp=Z,245nm,1.4s
DARE Darende-Malaty 150.03 293 *e*P PKPbc 11 26 39.0 +0.4
SVSK Karacayir 150.62 295 *e*P PKPbc 11 26 40.0 0.0
NB2 NORSAR Subarra 150.74 350 PKP PKPbc 11 26 37.8 -1.7
baz=18,slow=2.6
NOA NORSAR Array B 150.74 350 PKPbc PKPbc 11 26 37.7 -1.8
comp=Z,22nm,0.8s,baz=15,slow=4.2,SNR=61
NOA NORSAR Array B 150.74 350 PKIKP PKPbc 11 26 37.7 -1.8
NOA pmax pmax
comp=Z,22nm,0.8s
KMRS Kahramanmaras 150.75 290 *e*P PKPbc 11 26 40.1 -0.3
SARI SarD1z-Kayseri 150.91 292 *e*P PKPbc 11 26 40.4 -0.3
NAO01 NORSAR Array S 150.97 351 *e*PKPbc PKPbc 11 26 40.9 +0.8
IZAR Zarasai 151.05 331 *e*P PKPbc 11 26 40.2 -0.2
IDID Didziasalis 151.14 330 *e*P PKPbc 11 26 40.2 -0.4
MICGM Minsk 151.17 328 ⇑*i*P PKPdf 11 26 37.0 +2.1
MNK Minsk 151.19 328 ⇓*i*PKIKP PKPdf 11 26 37.0 +2.1
MNK *e* 11 26 47.0
MNK pmax pmax
comp=Z,220nm,1.0s
ISAL Salakas 151.23 331 *e*P PKPbc 11 26 40.5 -0.3
KVT Kavak 151.25 297 *e*P PKPbc 11 26 41.5 +0.1
IIGN Ignalina 151.34 330 *e*P PKPbc 11 26 40.9 -0.2
NACGM Naroch 151.40 329 *e*P PKPdf 11 26 36.0 +0.8
KOZT Kozan 151.61 290 *e*P PKPbc 11 26 41.7 -0.7
MMAI Mount Meron Ar 151.63 280 PKPbc PKPbc 11 26 43.0 +0.5
comp=Z,90nm,0.9s,baz=80,slow=4.6,SNR=38
DIKM Dikmen 151.76 299 *e*P PKPbc 11 26 41.4 -1.2
SIM Simferopol' 151.92 306 *e*PKIKP PKPbc 11 26 43.3 +0.5
SIM pmax pmax
comp=Z,48nm,1.1s
KONO Kongsberg 152.30 351 *e*PKIKP PKPbc 11 26 42.9 -0.3
CORM Corum 152.41 296 *e*P PKPbc 11 26 44.0 -0.1
BZK Bozkurt 152.64 300 *e*P PKPbc 11 26 43.6 -0.9
MERS Mersin 152.65 288 *e*P PKPbc 11 26 43.2 -1.5
AKASG Malin Array Be 152.70 320 PKP PKPdf 11 26 35.6 -1.7
comp=Z,3.1nm,1.0s,baz=63,slow=1.4,SNR=6.4
AKASG PKPbc PKPbc 11 26 42.9 -1.5
comp=Z,24nm,0.9s,baz=59,slow=2.5,SNR=46
AKBB Malin Array Si 152.70 320 *e*PKIKP PKPbc 11 26 43.3 -1.0
KIEV Kiev 152.71 320 *e*PKIKP PKPbc 11 26 43.3 -1.1
TOS Tosya 152.77 298 *e*P PKPbc 11 26 44.1 -0.7
CANT Cankiri 153.13 297 *e*P PKPbc 11 26 44.6 -1.0
LIC Lamto 153.17 165 *e*P PKPbc 11 26 47.2 +0.6
comp=Z,82nm,1.0s
BR131 Keskin Array S 153.22 295 *e*PKPbc PKPbc 11 26 45.0 -0.9
BRTR Keskin Array B 153.22 295 PKP PKPdf 11 26 36.4 -2.0
comp=Z,2.0nm,1.1s,baz=108,slow=4.0,SNR=7.9
BRTR PKPbc PKPbc 11 26 44.2 -1.6
comp=Z,19nm,0.9s,baz=132,slow=3.5,SNR=70
KIC Kosan Boka 153.36 166 *e*P PKPbc 11 26 43.9 -3.1
comp=Z,85nm,1.0s
SUW Suwalki 153.54 331 *e*PKP PKPbc 11 26 45.4 -0.7
TIC Toumodi 153.57 165 *e*P PKPbc 11 26 47.4 0.0
comp=Z,16nm,0.2s
DBIC Dimbokro 153.63 165 PKP PKPdf 11 26 38.4 -1.4
comp=Z,2.3nm,0.8s,baz=252,slow=6.4,SNR=2.2
DBIC PKPbc PKPbc 11 26 49.2 +1.6
comp=Z,11nm,1.0s,baz=218,slow=0.3,SNR=4.4

KIZT	Kizilcal	154.65 293	eP	PKPbc	11 26 48.7	-0.3
KIS	Kishinev	154.69 313	ePKP	PKPbc	11 26 46.0	-2.8
KIS			eSKP		11 30 11.0	
KIS			eL		12 28 46.0	
KIS			LRM		12 44 30.0	
	comp=Z,600nm,20.0s					
MDU	Mudurnu	154.97 297	eP	PKPbc	11 26 47.6	-2.0
MUD	Monsted U'grnd	155.45 350	ePKP2	PKPab	11 27 11.0	+4.4
MUD			pmax	pmax		
	comp=Z,11nm,0.9s					
MUD	Monsted U'grnd	155.45 350	i P	PKPab	11 27 11.0	+4.4
	comp=Z,11nm,0.9s					
BSD	Bornholm Skovb	155.49 341	i PKP2	PKPab	11 27 04.6	-2.2
BSD			pmax	pmax		
	comp=Z,21nm,0.9s					
BSD	Bornholm Skovb	155.49 341	i P	PKPab	11 27 04.6	-2.2
	comp=Z,21nm,0.9s					
LVV	L'vov	155.94 323	ePKP2	PKPab	11 27 07.0	-2.0
KWP	Kalwaria Pacla	156.73 324	ePKP	PKPab	11 27 11.7	-0.7
KOLS	Kolonicke sedl	157.40 323	ePKIKP	PKPdf	11 26 46.4	+2.7
KOLS			e		11 26 55.2	
KOLS	Kolonicke sedl	157.40 323	ePKP	PKPdf	11 26 46.4	+2.7
KOLS			e		11 26 55.2	
KOLS			e		11 27 13.1	
UZH	Uzhgorod	157.57 322	ePKIKP	pPKPdf	11 27 00.0	+7.5
STHS	Stebnicka Huta	157.60 325	ePKIKP	PKPdf	11 26 55.1	+11
STHS			e		11 27 06.7	
STHS	Stebnicka Huta	157.60 325	ePKP	PKPdf	11 26 55.1	+11
STHS			e		11 27 06.7	
STHS			e		11 27 15.7	
BSEG	Bad Segeberg	157.66 346	ePKPab	PKPab	11 27 14.9	-1.3
OJC	Ojcow	157.72 328	ePKPdf	PKPdf	11 26 50.3	+6.2
OJC			epPKPdf	pPKPdf	11 27 04.7	+12
OJC			e		11 27 15.2	
OJC	Ojcow	157.72 328	ePKIKP	PKPdf	11 26 50.3	+6.2
OJC			e		11 27 04.7	
OJC			e		11 27 15.2	
KECS	Kecovo	158.59 324	ePKP2	PKPab	11 27 20.0	-0.4
KECS	Kecovo	158.59 324	ePKP	PKPab	11 27 20.0	-0.4
KSP	Ksiaz	158.68 334	ePKP	PKPab	11 27 19.5	-1.2
KSP	Ksiaz	158.68 334	ePKP2	PKPab	11 27 18.9	-1.8
OKC	Ostrava-Krasne	158.72 329	ePKP2	PKPab	11 27 06.6	-14
OKC			MLR	MLR		
	comp=Z,400nm,25.5s,MS5.2					
OKC	Ostrava-Krasne	158.72 329⇑	ePKP	PKPab	11 27 06.6	-14
OKC			ePKPAB	PKPab	11 27 19.0	-1.9
OKC			AMS	AMS	12 50 10.0	
	comp=Z,400nm,25.5s					
VYHS	Vyhne	159.38 326	ePKIKP	pPKPdf	11 26 57.2	+2.5
VYHS			e		11 27 06.7	
VYHS			e		11 27 23.5	
VYHS	Vyhne	159.38 326	ePKP	pPKPdf	11 26 57.2	+2.5
VYHS			e		11 27 06.7	
VYHS			e		11 27 23.5	
CLL	Collm	159.40 339	ePKIKP	PKPdf	11 26 45.0	-1.1
CLL			e		11 27 22.0	
CLL			pmax	pmax		
	comp=Z,48nm,1.2s					
CLL			MLR	MLR		
	comp=Z,500nm,17.6s,MS5.4					
CLL	Collm	159.40 339	ePKPdf	PKPdf	11 26 45.0	-1.1
CLL			⇓iPKPab	PKPab	11 27 22.5	-1.3
	comp=Z,48nm,1.2s					
CLL			ePP	PP	11 31 03.0	-1.8
CLL			ePPP		11 34 43.0	
CLL			ePPPP		11 37 03.0	
CLL			eSKKSac	SKKSac	11 37 42.0	-10
CLL			e		11 38 47.0	
CLL			ePSKS		11 41 28.0	
CLL			e		11 42 23.0	
CLL			ePPS		11 44 32.0	
CLL			e		11 46 01.0	
CLL			eSS	SS	11 51 10.0	+1.4
CLL			ePSS		11 52 01.0	
CLL			ePSPS		11 52 54.0	
CLL			eSSS		11 57 12.0	
CLL			ePSSrev		11 59 18.0	
CLL			e		12 03 06.0	
CLL			LmH		12 46 00.0	
	comp=N,100nm,19.5s					
CLL			LmH		12 46 00.0	
	comp=E,300nm,20.0s					
BRG	Berggiesshubel	159.48 337	ePKPab	PKPab	11 27 22.9	-1.3
BRG	Berggiesshubel	159.48 337	ePKP	pPKPdf	11 26 57.4	+2.6
	comp=E,7.8nm,1.3s					
BRG			e		11 27 07.7	
	comp=E,28nm,1.6s					
BRG			e		11 27 22.0	
	comp=E,52nm,1.3s					
BRG			PP	PP	11 31 02.0	-3.3
BRG			e		11 37 55.0	
BRG			SS	SS	11 50 49.0	-21
BRG						
	comp=N,404nm,19.0s					
BRG						
	comp=E,160nm,16.7s					
BRG						
	comp=Z,544nm,19.1s					
BRG	Berggiesshubel	159.48 337	ePKIKP	pPKPdf	11 26 57.4	+2.6
BRG			e		11 27 07.7	
BRG			e		11 27 22.0	
BRG					11 31 02.0	
BRG			pmax	pmax		
	comp=Z,5.0nm,1.3s					
BRG			pmax	pmax		
	comp=Z,17nm,1.6s					
BRG			pmax	pmax		
	comp=Z,31nm,1.3s					
BRG			pmax	pmax		
	comp=Z,3.0nm,0.8s					
BRG			MLR	MLR		
	comp=N,242nm,19.0s,MS5.1					
BRG			MLR	MLR		
	comp=E,96nm,16.7s,MS5.1					
BRG			MLR	MLR		
	comp=Z,326nm,19.1s,MS5.2					
KOLL	Kolacno	159.53 327	ePKP2	PKPab	11 27 24.1	-0.4
KOLL	Kolacno	159.53 327	ePKP	PKPab	11 27 24.1	-0.4
PVCC	Panska Ves	159.56 336	ePKP2	PKPab	11 27 23.4	-1.1
PVCC			MLR	MLR		
	comp=Z,500nm,17.2s,MS5.4					
PVCC	Panska Ves	159.56 336	ePKPAB	PKPab	11 27 23.4	-1.1
PVCC			AMS	AMS	12 46 50.0	
	comp=Z,500nm,17.2s					
CLZ	Clausthal	159.61 344	ePKPab	PKPab	11 27 23.5	-1.2
IBBN	Ibbenburen	159.68 349	ePKPab	PKPab	11 27 23.5	-1.5
PRA	Prague	160.00 335	⇑PKP	PKPdf	11 27 06.0	+19
PRA			PKPAB	PKPab	11 27 26.0	-0.4
PRU	Pruhonice	160.03 335	ePKP2	PKPdf	11 27 06.5	+20
PRU			MLR	MLR		
	comp=Z,600nm,16.7s					
PRU	Pruhonice	160.03 335⇑	ePKP	PKPdf	11 27 06.5	+20
PRU			ePKPAB	PKPab	11 27 25.7	-0.9
PRU			AMS	AMS	12 46 40.0	
	comp=Z,600nm,16.7s					
TREC	Trest	160.24 332	AMS	AMS	12 44 40.0	
	comp=Z,600nm,17.4s					
TANN	Tannenbergstha	160.35 339	ePKPab	PKPab	11 27 27.0	-1.0
MOX	Moxa	160.39 341	ePKP	PKPab	11 27 26.8	-1.3
MOX						
	comp=Z,53nm,1.7s					
MOX						
	comp=Z,500nm,19.0s					
MOX	Moxa	160.39 341	ePKP2	PKPab	11 27 26.8	-1.3
MOX			pmax	pmax		
	comp=Z,53nm,1.7s					
MOX			MLR	MLR		
	comp=Z,500nm,19.0s					
BUG	Bochum--Univer	160.59 349	ePKPab	PKPab	11 27 27.5	-1.5
UBBA	Unterbreizbach	160.65 344	ePKPab	PKPab	11 27 27.7	-1.5
TORD	Torodi Ar. Bea	160.77 180	PKP	PKPdf	11 26 49.4	+0.7
	comp=Z,4.2nm,1.0s,baz=142,slow=0.5,SNR=10					
TORD			PKPab	PKPab	11 27 30.4	-0.2
	comp=Z,13nm,1.0s,baz=181,slow=3.3,SNR=12					
ROTZ	Rotzenmuhle	161.00 338	ePKPab	PKPab	11 27 30.2	-0.6
KHC	Kasperske Hory	161.09 335	ePKIKP	PKPdf	11 26 50.4	+2.4
KHC			e		11 27 07.8	
KHC			e		11 27 29.8	
KHC			MLR	MLR		
	comp=Z,800nm,17.6s					
KHC	Kasperske Hory	161.09 335	ePKPDF	PKPdf	11 26 50.4	+2.4
KHC			ex	x	11 27 07.8	
KHC			ePKPAB	PKPab	11 27 29.8	-1.4
KHC			AMS	AMS	12 48 00.0	
	comp=Z,800nm,17.6s					
CONA	Conrad Observa	161.15 329	⇓iPKPab	PKPab	11 27 31.0	-0.6
	comp=Z,23nm,1.0s					
GEC2	GERESS Array S	161.28 334	ePKPab	PKPab	11 27 30.7	-1.4
GERES	GERESS Array B	161.28 334	PKPab	PKPab	11 27 30.2	-1.8
	comp=Z,5.5nm,0.8s,baz=43,slow=4.7,SNR=11					
GERES	GERESS Array B	161.28 334	PKP2	PKPab	11 27 30.2	-1.9
GERES			pmax	pmax		
	comp=Z,6.0nm,0.9s					
WET	Wettzell	161.32 336	ePKPab	PKPab	11 27 31.5	-0.7
GRF	Grafenberg Arr	161.36 340	ePKPab	PKPab	11 27 31.6	-0.8
GRF			eL		12 48 04.6	
	comp=Z,807nm,18.3s					
HGN	Heimansgroeve	161.44 351	ePKP	PKPab	11 27 30.8	-1.9
	comp=Z,34nm,2.1s					
TNS	Taunus Mts	161.55 346	ePKPab	PKPab	11 27 31.6	-1.6
MEM	Membach	161.59 351	PKPab	PKPab	11 27 31.6	-1.7
BCLA	Clavier	161.86 352	PKPab	PKPab	11 27 34.5	0.0
SNF	Seneffe	161.87 354	PKPab	PKPab	11 27 33.6	-1.0
GIVF	Givet	162.22 353	ePKP2	PKPab	11 27 34.4	-1.7
DOU	Dourbes	162.25 354	PKPab	PKPab	11 27 35.8	-0.5
BAIF	Baives	162.32 354	ePKP2	PKPab	11 27 35.1	-1.5
SOKA	Sobotb	162.47 328	⇓iPKPab	PKPab	11 27 36.2	-1.2
	comp=Z,17nm,1.3s					
WLF	Walferdange	162.49 350	PKPab	PKPab	11 27 37.2	-0.1
WLF	Walferdange	162.49 350	ePKPab	PKPab	11 27 36.3	-1.0
RJOB	Jochberg	162.54 334	ePKPab	PKPab	11 27 36.7	-0.9
FUR	Furstenfeldbru	162.70 338	ePKPab	PKPab	11 27 37.4	-0.9
STU	Stuttgart	162.74 343	ePKPab	PKPab	11 27 37.2	-1.3
LANF	Langenberg	162.86 346	PKP	PKPab	11 27 37.6	-1.4
WTTA	Wattenberg	163.36 336	⇓iPKPab	PKPab	11 27 40.5	-0.7
	comp=Z,17nm,1.0s					
BFO	Black Forest	163.36 344	ePKPab	PKPab	11 27 39.4	-1.8
RETA	Reutte	163.46 338	⇓iPKPab	PKPab	11 27 40.8	-0.8
	comp=Z,31nm,1.1s					
MOTA	Moosalm	163.47 337	⇑iPKPab	PKPab	11 27 40.9	-0.9
	comp=Z,18nm,0.9s					
CDF	Champ du Feu	163.51 347	ePKP2	PKPab	11 27 40.1	-1.7
FLN	La Foliniere	163.65 5	ePKP2	PKPab	11 27 40.6	-1.8
FLN			eMLR	MLR		
	comp=Z,877nm,21.0s					
ECH	Echery	163.72 347	PKP	PKPab	11 27 41.0	-1.8
ROSF	Rostrenen	163.73 12	ePKP2	PKPab	11 27 42.1	-0.7
	comp=Z,23nm,1.0s					
MEZF	Maizieres J'vi	163.78 352	ePKP2	PKPab	11 27 41.5	-1.5
LDF	La Druitiere	163.84 4	ePKP2	PKPab	11 27 41.7	-1.6
FELD	Feldberg im Sc	163.86 344	PKP	PKPab	11 27 41.7	-1.7
DAVA	Damuels	163.91 339	⇓iPKPab	PKPab	11 27 42.8	-0.9
	comp=Z,28nm,1.1s					
THEF	They Montfort	163.91 349	PKP	PKPab	11 27 41.9	-1.7
SGMF	Saint Gilles	163.93 10	ePKP2	PKPab	11 27 42.8	-0.8
	comp=Z,85nm,1.4s					
GRR	Gorron	163.99 6	ePKP2	PKPab	11 27 42.5	-1.4
	comp=Z,26nm,1.3s					
HAU	Haudompre	164.07 348	ePKP2	PKPab	11 27 42.4	-1.9
HAU			eMLR	MLR		
	comp=Z,1µm,20.0s					
MOF	Molkenrain	164.07 346	PKP	PKPab	11 27 42.8	-1.5
QUIF	Quistinic	164.16 12	ePKP2	PKPab	11 27 43.9	-0.8
	comp=Z,41nm,1.3s					
LOMF	Lomont	164.61 346	PKP	PKPab	11 27 45.4	-1.3
LOR	Lormes	165.12 354	ePKP2	PKPab	11 27 47.2	-1.7
	comp=Z,53nm,1.5s					
LOR			eMLR	MLR		
	comp=Z,663nm,20.2s					
SSF	Saint Saulge	165.35 355	ePKP2	PKPab	11 27 48.3	-1.7
	comp=Z,20nm,0.8s					
CABF	La Chapelle	165.46 348	ePKP2	PKPab	11 27 48.9	-1.6
AVF	Avril sur Loir	165.64 355	ePKP2	PKPab	11 27 49.5	-1.7
	comp=Z,44nm,1.3s					
SMF	Signal de Mont	165.74 354	ePKP2	PKPab	11 27 50.0	-1.7
	comp=Z,41nm,0.9s					
MFF	Saint Martin d	165.82 5	ePKP2	PKPab	11 27 50.5	-1.5
	comp=Z,30nm,1.2s					
BGF	Bois d'Agland	165.90 356	ePKP2	PKPab	11 27 50.9	-1.5
TCF	Toulx Ste Croi	166.19 358	ePKP2	PKPab	11 27 52.0	-1.7
LPL	La Plagne	166.38 344	ePKP2	PKPab	11 27 54.0	-0.5
	comp=Z,39nm,1.1s					
AGO	Saint Agoulin	166.39 355	PKP	PKPab	11 27 58.2	+3.7
LPG	La Plagne	166.39 344	ePKP2	PKPab	11 27 54.2	-0.4
	comp=Z,56nm,1.2s					
PLDF	La Plantade	166.43 354	PKP	PKPab	11 27 54.4	-0.3
PYM	Petit Puy Mans	166.69 356	PKP	PKPab	11 27 55.4	-0.5
MBDF	Montbardon	167.12 343	ePKP2	PKPab	11 27 56.4	-1.4
	comp=Z,8.2nm,0.8s					
ORIF	Oris-en-Rattie	167.13 346	ePKP2	PKPab	11 27 57.0	-0.9
	comp=Z,17nm,0.9s					
ORIF			eMLR	MLR		
	comp=Z,802nm,20.2s					
RJF	Les Rejaudoux	167.19 0	ePKP2	PKPab	11 27 56.2	-1.9
	comp=Z,23nm,1.3s					
RJF			eMLR	MLR		
	comp=Z,878nm,20.2s					
LBL	Lubilhac	167.19 355	PKP	PKPab	11 27 58.2	+0.1
VIVF	Saint-Julien-l	167.40 350	ePKP2	PKPab	11 27 58.0	-1.1
	comp=Z,47nm,1.3s					
SAOF	Saorge	167.59 340	PKP	PKPab	11 27 58.1	-1.9
AUTN	L'Aution	167.62 340	PKP	PKPab	11 27 58.4	-1.7
LUCF	Luceram	167.74 340	PKP	PKPab	11 27 59.0	-1.6
SBF	Sospel	167.74 340	ePKP2	PKPab	11 27 58.9	-1.7
	comp=Z,135nm,1.3s					
MVIF	Mont Vial	167.79 341	PKP	PKPab	11 27 58.8	-2.0
CALN	Calern	168.00 341	PKP	PKPab	11 28 00.5	-1.2
SMRF	Simiane la Rot	168.10 346	ePKP2	PKPab	11 28 01.3	-0.9
FRF	La Foret Royal	168.24 342	ePKP2	PKPab	11 28 01.3	-1.5
	comp=Z,52nm,1.1s					
PGF	Pioggiola	168.35 332	ePKP2	PKPab	11 28 01.1	-2.3
	comp=Z,34nm,1.2s					
LMR	La Mourre	168.49 342	ePKP2	PKPab	11 28 02.5	-1.4
	comp=Z,121nm,1.3s					
SJPF	Ste Jean	169.15 11	ePKP2	PKPab	11 28 04.8	-2.0
EPF	Esparros	169.41 5	ePKP2	PKPab	11 28 05.2	-2.8
ETSF	Etsaut	169.45 9	ePKP2	PKPab	11 28 05.9	-2.3
ESDC	Sonseca Array	171.52 30	PKP	PKPdf	11 26 57.7	+1.1
	comp=Z,1.0nm,0.5s,baz=355,slow=1.5,SNR=9.7					
ESDC	Sonseca Array	171.52 30	PKP	PKPdf	11 26 57.6	+1.1

*ISCJB **16** 11:14:36.0±0.8, 76°.98N±0°.05×18°.8E±0°.2, h10km, Error ellipse: s-maj=8.2km s-min=5.6km az=31.3*
*NAO **16** 11:14:36.1±1.0, 76°.96N×18°.54E, ML2.4*
*CSEM **16** 11:14:36.5±0.2, 77°.03N×18°.68E, h10km, ML2.4, Error ellipse: s-maj=6.7km s-min=3.4km az=73.0*
*BER **16** 11:14:40.4±3.2, 77°.12N×18°.82E, h22km±22km, MD2.0, ML2.6, ML2.4(NAO)*

ISC 16 11:14:36.8±1.4, 77°.04N±0°.06×18°.9E±0°.4, h9km±18km, n9, σ0°.35/15, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	Hornsund	0.75	269	eP	Pg	11 14 51.6	+0.4
HSP				eS	Sg	11 15 00.8	-0.1
SPA0	Spitsbergen Ar	1.26	336	Pg	Pg	11 15 00.8	-0.2
	baz=149,slow=18						
SPA0				Lg		11 15 17.5	
	baz=161,slow=37						
SPA0	Spitsbergen Ar	1.26	336	Pg	Pg	11 15 00.8	-0.2
	SNR=44						
SPA0				Lg		11 15 17.5	
	SNR=6.6						
HOPEN	Hopen	1.51	108	eP	Pn	11 15 04.5	+0.6
HOPEN				eS	Sn	11 15 23.6	-0.1
HOPEN				AML	AML	11 15 30.2	
	comp=Z,143nm,0.4s						
HOPEN	Hopen	1.51	108	eP	Pn	11 15 04.5	+0.5
	SNR=55						
HOPEN				eS	Sn	11 15 23.6	-0.1
	comp=Z,143nm,0.4s,SNR=55						
BJO	Bjornoya	2.55	178	ePg	Pg	11 15 25.1	-0.5
BJO				eSg	Sg	11 15 58.9	+0.3
BJO				AML	AML	11 16 02.3	
	comp=Z,43nm,0.5s						
BJO	Bjornoya	2.55	178	ePg	Pg	11 15 25.1	-0.5
	SNR=92						
BJO				eSg	Sg	11 15 58.9	+0.3
	comp=Z,43nm,0.5s,SNR=92						
ARA0	ARCESS Array S	7.78	163	Pn	Pn	11 16 29.6	-0.3
	baz=356,slow=14						
ARA0				Sn	Sn	11 17 51.0	-6.9
	baz=3.9,slow=22						
ARA0	ARCESS Array S	7.78	163	Pn	Pn	11 16 29.6	-0.3

*ISCJB **16** 11:18:54.8±0.8, 31°.38N±0°.06×104°.34E±0°.08, h10km, mb3.4/6, Error ellipse: s-maj=10.1km s-min=8.0km az=6.0*
*IDC **16** 11:18:56.6±1.0, 31°.58N×104°.15E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/27, mbtmp3.5/6, Error ellipse: s-maj=73.6km s-min=19.2km az=58.0*

ISC 16 11:18:57.1±0.8, 31°.39N±0°.07×104°.19E±0°.08, h10km, n8, σ1°.36/10, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	4.79	55	Pg	Pg	11 20 33.0	+4.3
XAN				Sg	Sg	11 21 30.4	-0.3
XAN				smax			
	comp=N,28nm,1.0s						
XAN				smax			
	comp=E,11nm,1.0s						
GYA	Guiyang	5.37	156	Pg	Pn	11 20 14.9	-2.4
GYA				Sg	Sn	11 21 17.4	-1.8
GYA				smax			
	comp=N,30nm,0.7s						
GYA				smax			
	comp=E,30nm,0.7s						
MKAR	Makanchi Array	22.81	319	P	P	11 23 59.3	-0.6
	comp=E,1.0nm,0.9s,mb3.2,baz=124,slow=10,SNR=6.0						
ZALV	Zalesovo Beam	26.50	334	P	P	11 24 34.1	-0.2
	comp=E,1.2nm,0.5s,mb3.6,baz=140,slow=9.4,SNR=5.5						
KURK	Kurchatov	27.06	323	P	P	11 24 38.7	-0.8
	comp=E,1.0nm,0.8s,mb3.4,baz=124,slow=9.2,SNR=5.9						
WRA	Warramunga Arr	58.67	146	P	P	11 28 56.3	+1.6
	comp=E,0.5nm,0.7s,mb3.6,baz=339,slow=7.9,SNR=7.0						
ASAR	Alice Springs	61.70	149	P	P	11 29 18.5	+3.0
	comp=E,0.2nm,0.8s,mb3.3,baz=331,slow=6.2,SNR=2.8						
YKA	Yellowknife Ar	81.40	17	P	P	11 31 14.1	+0.4
	comp=E,0.1nm,0.6s,mb2.9,baz=332,slow=5.4,SNR=3.5						

CSEM 16 11:20:24.2, 42°.90N×2°.85W, h0km, ML1.0, Mining explosion. After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELAN	Lanestosa	0.54	308	Pg	Pg	11 20 34.2	-0.4
	SNR=7.9						
ELAN				Lg		11 20 43.4	
	1.4nm,0.2s,SNR=7.9						
ELAN	Lanestosa	0.54	308	Pg	Pg	11 20 33.9	-0.7
	1.2nm,0.3s,SNR=8.7						
ELAN				Lg		11 20 41.8	
	2.7nm,0.3s						
IUNC	Unciti	1.00	98	Pg	Pg	11 20 42.5	-0.9
	SNR=7.9						
IZUN	Zunzarren	1.02	92	Pg	Pg	11 20 43.3	-0.5
	SNR=7.9						
IZUN	Zunzarren	1.02	92	Pg	Pg	11 20 42.9	-0.9
	SNR=7.9						
IZUN				Lg		11 20 58.0	
	1.1nm,0.3s,SNR=7.9						
EALK	Alkurruntz	1.03	72	Pg	Pg	11 20 42.4	-1.6
	SNR=7.9						
EALK				Lg		11 20 57.7	
	SNR=7.9						
EALK	Alkurruntz	1.03	72	Pg	Pg	11 20 41.9	-2.1
	2.1nm,0.3s,SNR=5.6						
EALK				Lg		11 20 57.0	
	3.2nm,0.3s						
EORO	Oroz-Betelu	1.13	90	Pg	Pg	11 20 45.0	-0.9
	1.8nm,0.5s,SNR=6.0						
EORO	Oroz-Betelu	1.13	90	Pg	Pg	11 20 44.8	-1.1
	SNR=7.9						
EORO				Lg		11 21 01.7	
	1.8nm,0.3s,SNR=7.9						

*IDC **16** 11:22:52.8±0.7, 32°.34S×178°.12W, h0km, mb4.5/8, mb1 4.7/10, mb1mx4.6/16, mbtmp4.6/10, ML3.9/2, MS4.2/2, Ms1 4.2/2, ms1mx3.8/25, Error ellipse: s-maj=24.6km s-min=20.3km az=122.0*
*ISCJB **16** 11:22:55.1±2.6, 32°.26S±0°.06×178°.2W±0°.1, h25km±18km, mb4.8/14, MS4.2/2, Error ellipse: s-maj=16.3km s-min=7.8km az=27.8*
*NEIC **16** 11:22:58.4±0.5, 32°.25S×178°.12W, h35km, mb4.9/5, Error ellipse: s-maj=13.1km s-min=8.3km az=140.0*

ISC 16 11:22:58.6±1.4, 32°.19S±0°.07×178°.1W±0°.1, h41km±11km, n47, σ1°.14/38, mb4.8/14, MS4.2/2, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.93	3	Pn	Pn	11 23 42.3	-0.4
	104nm,0.3s,baz=108,slow=15,SNR=9.7						
RAO				Sn	Sn	11 24 16.8	+0.3
	357nm,0.3s,baz=161,slow=22,SNR=7.1						
URZ	Urewera	7.22	212	Pn	Pn	11 24 34.2	-7.3
	5.2nm,0.3s,baz=30,slow=2.4,SNR=27						
URZ				Sn	Sn	11 25 52.9	-9.4
	26nm,0.3s,baz=158,slow=22,SNR=22						
OUZ	Omahuta	7.56	244	ePn	Pn	11 24 45.6	-0.6
	236nm,1.3s						
RPZ	Rata Peaks	14.33	213	Pn	Pn	11 26 09.9	-8.8
	1.2nm,0.3s,baz=213,slow=0.7,SNR=6.7						
RPZ				Sn	Sn	11 28 35.8	-20
	2.0nm,0.3s,baz=354,slow=19,SNR=8.4						
RPZ	Rata Peaks	14.33	213	Pn	Pn	11 26 09.9	-8.8
RPZ				Sn	Sn	11 28 35.8	-20
DZM	Mont Dzumac	17.04	302	eP	Pn	11 26 54.6	+0.8
	70nm,0.7s						
AFI	Afiamalu	19.09	19	P	Pn	11 27 19.0	+0.1
	2.7nm,0.3s,baz=36,slow=20,SNR=5.6						
AFI				S	S	11 30 50.2	-2.1
	3.7nm,0.3s,baz=63,slow=19,SNR=5.2						
ARMA	Armidale	25.89	266	eP	P	11 28 30.3	+3.6
ARMA	Armidale	25.89	266	P	P	11 28 27.8	+1.0
	16nm,1.0s,mb4.5						
CNB	Canberra Magne	27.17	254	eP	P	11 28 40.4	+2.2
STKA	Stephens Creek	34.04	260	P	P	11 29 39.3	+0.5
	2.2nm,0.3s,mb4.5,baz=162,slow=23,SNR=3.0						
STKA				LR	LR	11 42 56.4	
	comp=Z,972nm,19.2s,MS4.5,baz=296,slow=35						
CTA	Charters Tower	34.05	282	eP	P	11 29 39.7	+0.7
	7.9nm,0.6s,mb4.8						
CTA	Charters Tower	34.05	282	P	P	11 29 40.2	+1.2
	11nm,0.7s,mb4.9,baz=111,slow=9.7,SNR=13						
CTA				LR	LR	11 40 56.5	
	comp=Z,177nm,20.5s,MS3.8,baz=200,slow=32						
CTA	Charters Tower	34.05	282	P	P	11 29 40.2	+1.2
CTA				LR	LR	11 40 56.5	
CTAO	Charters Tower	34.05	282	eP	P	11 29 39.2	+0.2
	37nm,1.2s,mb5.2						
ASAR	Alice Springs	42.96	269	P	P	11 30 53.5	-0.4
	12nm,0.9s,mb4.6,baz=109,slow=7.7,SNR=72						
ASAR				S	S	11 37 16.2	-0.1
	1.3nm,1.0s,baz=118,slow=15,SNR=4.7						
WRAB	Tennant Creek	44.11	274	eP	P	11 31 03.7	+0.6
	58nm,1.1s,mb5.2						
WRA	Warramunga Arr	44.11	274	P	P	11 31 02.4	-0.7
	13nm,0.6s,mb4.9,baz=114,slow=8.0,SNR=225						
FORT	Forrest	45.54	257	eP	P	11 31 13.1	-1.3
	44nm,0.6s,mb5.6						
KAKA	Kakadu	49.18	281	eP	P	11 31 41.1	-1.8
	16nm,0.7s,mb5.2						
KAKA	Kakadu	49.18	281	eP	P	11 31 41.6	-1.3
	58nm,0.8s,mb5.7						
FITZ	Fitzroy Crossi	52

BVAR	Borovoye Array	127.61	315	PKP	PKPdf	11 41 59.7	+0.9
	2.7nm,0.7s,baz=132,slow=2.2,SNR=13						
JOF	Joensuu	144.04	338	*e*pkp	PKPdf	11 42 27.3	-1.6
	2.1nm,0.5s						
KAF	Kangasniemi	146.19	340	*e*pkp	PKPdf	11 42 33.7	+1.1
	11nm,0.7s						
FINES	FINESS Array B	146.78	339	PKPbc	PKPbc	11 42 36.1	+0.7
	26nm,0.8s,baz=64,slow=4.4,SNR=53						
NOA	NORSAR Array B	150.50	351	PKPbc	PKPbc	11 42 45.7	+0.7
	3.8nm,0.7s,baz=14,slow=4.2,SNR=14						
NOA	NORSAR Array B	150.50	351	PKPbc	PKPbc	11 42 45.7	+0.7
MMAI	Mount Meron Ar	151.83	281	PKPbc	PKPbc	11 42 47.5	-1.6
	16nm,0.8s,baz=90,slow=4.2,SNR=8.1						
AKASG	Malin Array Be	152.65	321	PKPbc	PKPbc	11 42 51.0	+0.7
	3.2nm,0.7s,baz=63,slow=2.6,SNR=13						
BRTR	Keskin Array B	153.33	295	PKPbc	PKPbc	11 42 52.7	+0.5
	3.5nm,0.8s,baz=129,slow=3.3,SNR=22						
CLL	Collm	159.22	340	⇑*i*PKPab	PKPab	11 43 29.5	+0.3
	comp=Z,11nm,1.2s						
CLL				*e*pPKPab	pPKPab	11 43 42.0	+0.3
BRG	Berggiesshubel	159.32	338	*e*P	PKPab	11 43 30.7	+1.1
	comp=Z,4.8nm,0.8s						
TORD	Torodi Ar. Bea	161.05	179	PKPab	PKPab	11 43 38.2	+0.2
	comp=Z,2.4nm,0.9s,baz=180,slow=3.3,SNR=6.0						
GERES	GERESS Array B	161.13	335	PKPab	PKPab	11 43 38.6	+1.0
	comp=Z,0.6nm,0.4s,baz=350,slow=6.0,SNR=5.5						

*ISCJB **16** 11:35:13.0±1.0, 31°.3N±0°.2×104°.5E±0°.2, h10km, mb3.8/2, Error ellipse: s-maj=35.2km s-min=7.0km az=149.3*
*IDC **16** 11:35:12.3±31.0, 31°.39N×104°.18E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, Error ellipse: s-maj=738.2km s-min=45.6km az=122.0*
ISC 16 11:35:15.3±1.0, 31°.3N±0°.2×104°.4E±0°.2, h10km, n5, σ0s29/7, mb3.8/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.67	238	Pg	Pg	11 35 28.0	-0.3
CD2				Sg	Sg	11 35 37.3	+0.2
CD2				smax			
	comp=N,640nm,0.5s						
XAN	Xi'an	4.70	53	Pg	Pg	11 36 45.6	+0.4
XAN				Sg	Sg	11 37 39.4	-6.7
XAN				smax			
	comp=N,27nm,0.9s						
XAN				smax			
	comp=E,11nm,1.1s						
KSRS	Korea Array	20.34	66	P	P	11 39 51.2	-0.5
	comp=E,0.8nm,0.7s,baz=256,slow=10,SNR=4.5						
WRA	Warramunga Arr	58.47	147	P	P	11 45 11.7	+0.1
	comp=E,0.7nm,0.5s,mb4.0,baz=338,slow=7.6,SNR=19						
ASAR	Alice Springs	61.50	149	P	P	11 45 32.4	+0.1
	comp=E,0.3nm,0.7s,mb3.5,baz=329,slow=7.1,SNR=7.3						

*IDC **16** 11:39:48.9±3.2, 14°.30N×88°.36W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/21, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=67.7km s-min=16.8km az=4.0*
*NEIC **16** 11:39:49.8±1.1, 14°.20N×88°.41W, h10km, Error ellipse: s-maj=33.9km s-min=12.1km az=198.0*
*CASC **16** 11:39:50.7±1.7, 14°.27N×88°.40W, h2km±5km, MD4.0, ML3.3*
ISC 16 11:39:50.3±0.7, 14°.36N±0°.04×88°.39W±0°.02, h6km±5km, n32, σ0s82/47, mb3.7/3, 2C, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAHU	Cacacuatique	0.61	163	*e*P	Pg	11 40 02.2	+0.3
CAHU				*e*S	Sg	11 40 11.1	+1.1
SNVI	San Vicente	0.86	210	*e*P	Pg	11 40 06.5	-0.3
SNVI				*e*S	Sg	11 40 18.3	+0.4
LBRS	Las Brisas	0.88	226	⇑*i*P	Pg	11 40 06.9	-0.3
BLLM	Bellamira	0.92	171	*e*P	Pg	11 40 07.5	-0.5
BLLM				*e*S	Sg	11 40 20.3	+0.3
VSM	San Miguel	0.93	173	*e*P	Pg	11 40 08.9	+0.8
VSM				*e*S	Sg	11 40 20.4	+0.2
MTO2	Montecristo 2	0.94	273	*e*P	Pg	11 40 08.3	0.0
LFRS	El Faro	0.98	222	⇑*i*P	Pg	11 40 08.5	-0.6
SNET	Serv Nac Est T	1.05	231	*e*P	Pg	11 40 09.5	-1.0
SNET				*e*S	Sg	11 40 24.0	-0.2
BOQS	Boqueron	1.06	234	*e*P	Pg	11 40 10.0	-0.6
BOQS				*e*S	Sg	11 40 24.6	+0.1
TGUH	Tegucigalpa,Un	1.12	105	*e*Pn	Pg	11 40 11.6	-0.2
TGUH				Sn	Sg	11 40 28.0	+1.5
TGUH	Tegucigalpa,Un	1.12	105	*i* P	Pg	11 40 11.7	-0.2
TGUH				*e*S	Sg	11 40 27.0	+0.5
CNCH	Conchagua	1.20	153	*e*P	Pg	11 40 12.7	-0.6
CNCH				*e*S	Sg	11 40 28.8	-0.2
SNJE	San Jose	1.27	248	*e*P	Pn	11 40 13.8	-0.9
RBDL	Robledal	1.28	259	*e*P	Pn	11 40 13.5	-1.2
RTR	El Retiro	1.30	250	*i* P	Pn	11 40 14.4	-0.6
RTR				*e*S	Sg	11 40 33.2	+1.1
SBLS	San Blas	1.30	247	*e*P	Pn	11 40 14.4	-0.6
MRL	Marmol	1.44	299	*e*P	Pn	11 40 17.9	+0.9
MRL				*e*S	Sb	11 40 37.8	+1.5
NBG	Las Nubes	1.91	277	*e*P	Pn	11 40 24.3	+0.9
NBG				*e*S	Sg	11 40 52.9	+1.3
CRIN	San Cristobal	2.10	141	*e*P	Pn	11 40 26.0	-0.1
APG	El Apazote	2.11	288	Pn	Pn	11 40 26.2	0.0
	97nm,0.3s,baz=105,slow=9.5,SNR=459						
APG				Pg	Pg	11 40 28.3	-2.4
	96nm,0.3s,baz=112,slow=13,SNR=518						
APG				Lg		11 40 57.0	
	101nm,0.3s,baz=27,slow=23,SNR=16						
TEL3	Telica 3	2.33	140	*e*P	Pn	11 40 28.7	-0.5
FUG	Fuego 3	2.38	272	*e*P	Pn	11 40 30.8	+0.9
FUG				*e*S	Sg	11 41 06.0	-0.7
CNGN	Cerro Negro	2.47	138	*e*P	Pn	11 40 31.4	+0.2
CNGN				AML	AML	11 41 14.6	
	comp=E,281nm,0.7s						
TP2	Tecpan 2	2.58	280	*e*P	Pg	11 40 38.3	-1.5
TP2				*e*S	Sg	11 41 15.1	+1.8
COPN	Copaltepe	2.79	141	*e*P	Pn	11 40 35.4	-0.1
HUEN		2.95	133	*e*P	Pn	11 40 38.5	+0.7
BOAB	BOACO BROADBAN	3.26	125	*e*P	Pn	11 40 41.6	-0.4
BOAB				AML	AML	11 41 33.6	
	comp=Z,57nm,0.3s						
CMIG	Matias Romero	6.82	294	Pn	Pn	11 41 30.4	-0.5
	comp=Z,0.6nm,0.3s,baz=105,slow=9.4,SNR=6.7						
CMIG				Sn	Sn	11 42 45.0	-3.9
	comp=Z,0.7nm,0.3s,baz=259,slow=23,SNR=6.5						
CMIG				Lg		11 43 27.8	
	comp=Z,0.9nm,0.3s,baz=11,slow=19,SNR=4.3						
NVAR	Mina Array Bea	35.68	318	P	P	11 46 50.4	+0.9
	comp=Z,0.4nm,0.7s,mb3.4,baz=119,slow=7.3,SNR=3.1						
SCHQ	Schefferville	43.74	18	P	P	11 47 56.0	-0.4
	comp=Z,2.2nm,0.6s,mb4.0,baz=188,slow=7.0,SNR=5.7						
YKA	Yellowknife Ar	51.54	345	P	P	11 48 56.6	-0.2
	comp=Z,0.6nm,0.7s,mb3.6,baz=139,slow=7.8,SNR=13						
WRA	Warramunga Arr	138.88	256	PKP	PKPdf	11 59 16.9	-1.7
	comp=Z,0.6nm,1.0s,baz=86,slow=2.3,SNR=5.2						

*NEIC **16** 11:52:19.1, 35°.95S×71°.73W, h108km, MG4.3(GUC), After GUC.*
GUC 16 11:52:19.1±0.7, 35°.95S×71°.73W, h108km±6km, ML4.3, 9C-5D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	Los Niches	1.03	24	*i* P	Pn	11 52 40.5	+0.1
NICH				*i* S	Sn	11 52 56.7	+0.2
LNV	Longovilo	2.00	8	⇑*i*P	Pn	11 52 52.6	+0.6
LNV				*i* S	Sn	11 53 17.8	+0.6
CACH	El Canelo	2.05	27	⇓*i*P	Pn	11 52 53.2	+0.6
CACH				*i* S	Sn	11 53 19.6	+1.4
CHCH	Chadas Angostu	2.19	24	⇑*i*P	Pn	11 52 54.8	+0.3
CHCH				*i* S	Sn	11 53 22.1	+0.5
TACH	Talagante	2.38	16	⇑*i*P	Pn	11 52 57.1	+0.2
TACH				*i* S	Sn	11 53 26.4	+0.6
LMEL	Las Melosas	2.44	31	⇓*i*P	Pn	11 52 58.8	+1.1
LMEL				*i* S	Sn	11 53 28.4	+1.1
LMEL	Las Melosas	2.44	31	⇓*i*P	Pn	11 52 58.8	+1.1
LMEL				*i* S	Sn	11 53 28.4	+1.1
LMEL				AML	AML	11 53 31.4	
	comp=N,946nm,0.3s						
PCH	Pirque	2.53	24	⇑*i*P	Pn	11 52 59.4	+0.6
PCH				*i* S	Sn	11 53 29.9	+0.6
ANTU	Antumapu	2.54	21	⇑*i*P	Pn	11 52 59.6	+0.6
ANTU				*i* S	Sn	11 53 30.2	+0.6
ANTU	Antumapu	2.54	21	⇑*i*P	Pn	11 52 59.6	+0.6
ANTU				*i* S	Sn	11 53 30.2	+0.6
				AML	AML	11 53 34.3	
	comp=N,824nm,0.2s						
CLCH	Cerro Calan	2.73	21	⇓*i*P	Pn	11 53 02.6	+1.1
CLCH				*i* S	Sn	11 53 35.3	+1.3
CLCH	Cerro Calan	2.73	21	⇓*i*P	Pn	11 53 02.6	+1.1
CLCH				*i* S	Sn	11 53 35.3	+1.3
CLCH				AML	AML	11 53 42.4	
	comp=E,1μm,0.5s						
PEL	Peldehue	2.93	17	⇑*i*P	Pn	11 53 04.7	+0.6
PEL				*i* S	Sn	11 53 39.2	+0.6
PEL				AML	AML	11 53 43.9	
	comp=N,1μm,0.4s						
JACH	Jahuel	3.39	16	⇑*i*P	Pn	11 53 10.5	+0.3
JACH				*i* S	Sn	11 53 50.2	+0.4
PLCA	Paso Flores	4.87	169	⇑*i*Pn	Pn	11 53 29.0	-1.0

IGQ 16 11:56:09.2, 2°.67S×80°.96W, h12km±25km, Mb4.3, Ms4.1, 10C-5D, Error ellipse: s-maj=27.9km s-min=5.5km az=134.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	Riobamba	2.50	69	P	Pn	11 56 52.5	+2.8
JAMA	Jama	2.50	17	P	Pn	11 56 51.2	+1.4
JAMA	Jama	2.50	17	S	Sn	11 57 21.4	+1.0
IGUA	Igualata	2.59	63	⇓S	Sn	11 57 23.3	+0.8
IGUA	Igualata	2.59	63	⇓P	Pn	11 56 52.8	+1.8
ARRY	Arrayan	2.75	65	⇓P	Pn	11 56 54.8	+1.6
ARRY	Arrayan	2.75	65	⇓S	Sn	11 57 27.4	+1.0
PATA	Patacocha	2.77	65	P	Pn	11 56 55.4	+1.9
JUI6	Juive	2.78	64	P	Pn	11 56 55.6	+2.1
RETU	Refugio	2.78	64	P	Pn	11 56 56.1	+2.5
MACE	Macas	2.79	82	P	Pn	11 56 57.6	+3.9
RUN5	Runtun	2.82	64	S	Sn	11 57 29.3	+1.3
RUN5	Runtun	2.82	64	P	Pn	11 56 56.3	+2.2
PISA	Pisayambo	3.03	58	P	Pn	11 57 00.1	+3.1
CAMI	Rancho Maria	3.15	51	P	Pn	11 57 02.2	+3.5
MOV1	Cotopaxi Vol s	3.18	52	⇑S	Sn	11 57 40.3	+3.4
MOV1	Cotopaxi Vol s	3.18	52	⇑P	Pn	11 57 02.5	+3.4
NAS2	Nasa	3.20	51	⇑P	Pn	11 57 03.6	+4.2
NAS2	Nasa	3.20	51	⇑S	Sn	11 57 43.9	+6.5
TAMB	Tambo	3.25	53	⇑P	Pn	11 57 03.7	+3.7
VC1	Cotopaxi 1	3.25	52	S	Sn	11 57 46.7	+8.0
VC1	Cotopaxi 1	3.25	52	P	Pn	11 57 03.8	+3.7
PITA	Cotopaxi Volc	3.28	50	P	Pn	11 57 04.1	+3.6
COV1	Cotopaxi Volc	3.28	53	⇑S	Sn	11 57 43.9	+4.4
COV1	Cotopaxi Volc	3.28	53	⇑P	Pn	11 57 03.5	+2.9
JUA2	San Juan 2	3.38	44	⇑P	Pn	11 57 04.7	+2.7
TERV	Terraza Guagua	3.41	44	S	Sn	11 57 47.0	+4.2
TERV	Terraza Guagua	3.41	44	P	Pn	11 57 04.8	+2.4
GGP	Refugio Guagua	3.42	44	P	Pn	11 57 04.2	+1.8
PINO	Pino	3.42	43	P	Pn	11 57 04.5	+2.1
YANA	Yana	3.48	43	⇓P	Pn	11 57 05.3	+2.1
ANTI	Antisana	3.56	52	S	Sn	11 57 53.4	+7.0
ANTI	Antisana	3.56	52	P	Pn	11 57 07.8	+3.5
COTA	Cotacachi	3.97	41	S	Sn	11 57 59.2	+2.8
COTA	Cotacachi	3.97	41	P	Pn	11 57 12.7	+2.7
CAYR	Refugio Cayamb	3.97	48	S	Sn	11 58 03.8	+7.2
CAYR	Refugio Cayamb	3.97	48	P	Pn	11 57 14.4	+4.4
CAYA	Cayambe	4.02	48	⇑S	Sn	11 58 04.3	+6.5
CAYA	Cayambe	4.02	48	⇑P	Pn	11 57 14.9	+4.2

*BJI **16** 12:04:48.3, 46°.12N×153°.93E, h38km, mB4.8/4, mb4.1/6, Ms4.1/2, Ms7 4.0/2*
*JMA **16** 12:04:52.2±0.8, 46°.43N×153°.28E, h30km, M4.3*
*ISCJB **16** 12:04:53.8±1.0, 46°.09N±0°.10×153°.06E±0°.10, h39km±9km, mb4.1/22, Error ellipse: s-maj=18.7km s-min=6.4km az=146.6*
*SKHL **16** 12:04:54.3±0.6, 45°.92N×153°.50E, h76km±42km, mb5.3/1*
*MOS **16** 12:04:55.5±1.5, 46°.36N×153°.14E, h39km, mb4.7/8, Error ellipse: s-maj=12.4km s-min=8.8km az=72.2*
*NEIC **16** 12:04:57.4±0.9, 46°.48N×153°.00E, h38km±8km, mb4.4/3, Error ellipse: s-maj=12.7km s-min=7.1km az=139.0*
*IDC **16** 12:04:58.4±0.9, 46°.50N×153°.02E, h48km±7km, mb3.6/16, mb1 3.8/18, mb1mx3.7/27, mbtmp3.7/18, ML3.7/2, Error ellipse: s-maj=21.4km s-min=15.2km az=147.0*
ISC 16 12:04:55.2±1.4, 46°.26N±0°.09×153°.04E±0°.10, h28km±11km, h46km±2.8km: pP-P, n89, σ1s41/104, mb4.1/22, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.88	24	*e*PN	Pn	12 06 05.6	-1.1
SKR	Severo-Kuril's	4.88	24	*e*P	Pn	12 06 05.6	-1.1
YUK	Yuzh-Kuril'sk	5.54	249	*e*Pn	Pn	12 06 17.3	+1.5
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK	Yuzh-Kuril'sk	5.54	249	*e*P	Pn	12 06 17.3	+1.5
YUK				AMB	AMB	12 06 22.0	
	comp=Z,190nm,0.5s						
YUK				*e*S	Sn	12 07 20.0	+1.5
YUK				A		12 07 32.0	
	comp=Z,230nm,0.5s						
YUK				A		12 07 32.0	
	comp=Z,190nm,0.5s						
NEM2	Nemuro 2	5.94	244	P	Pn	12 06 20.2	-1.0
NEM2				*e*S	Sn	12 07 25.1	-3.2
JRA	Rausu	6.07	250	P	Pn	12 06 24.5	+1.6
JNK	Nakash	6.48	249	P	Pn	12 06 29.9	+1.2
JNK				*e*S	Sn	12 07 42.0	+0.4
JAK	Akkeshi	6.79	244	P	Pn	12 06 32.0	-0.8
JAK				*e*S	Sn	12 07 45.9	-3.2
JTKR	Abashiri--Toko	6.85	254	P	Pn	12 06 35.8	+2.0
YSS	Yuzh-Sakhalins	7.12	279	*e*PN	Pn	12 06 43.1	+5.7
YSS	Yuzh-Sakhalins	7.12	279	*e*P	Pn	12 06 43.1	+5.7
JMP	Maruseppu	7.21	255	P	Pn	12 06 40.9	+2.3
JAR	Ashorobuto	7.23	249	P	Pn	12 06 40.2	+1.3
JAR				*e*S	Sn	12 07 59.9	-0.1
JOB	Onbets	7.38	246	P	Pn	12 06 41.1	+0.1
JOB				*e*S	Sn	12 08 01.9	-1.8
PEA0B	Petropavlovsk-	7.50	22	Pn	Pn	12 06 40.1	-2.4
PETK	Petropavlovsk-	7.50	22	P	Pn	12 06 41.9	-0.6
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=4.0						
PETK	Petropavlovsk-	7.50	22	*e*PN	Pn	12 06 46.8	+4.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	7.50	22	P	Pn	12 06 41.9	-0.6
JKK2	Kamakawa 2	7.67	256	P	Pn	12 06 47.4	+2.5
ASAJ	Asahikawa	7.68	258	P	Pn	12 06 48.5	+3.4
ASAJ	Asahikawa	7.68	258	P	Pn	12 06 48.5	+3.4
	comp=Z,1.8nm,0.3s,baz=92,slow=21,SNR=14						
ASAJ	Asahikawa	7.68	258	PN	Pn	12 06 48.6	+3.5
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PET	Petropavlovsk	7.69	26	*e*PN	Pn	12 06 43.5	-1.7
PET				pmax	pmax		
	comp=Z,20nm,1.3s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
PET	Petropavlovsk	7.69	26	*e*Pn	Pn	12 06 45.0	-0.2
	comp=Z,17nm,0.9s						
PET				*e*Sn	Sn	12 08 07.7	-3.6
PET	Petropavlovsk	7.69	26	*e*P	Pn	12 06 47.8	+2.6
JCH	Churui	7.82	246	P	Pn	12 06 47.1	0.0
JCH				*e*S	Sn	12 08 10.7	-3.9
JEM	Erimo	8.27	243	P	Pn	12 06 53.3	0.0
JEM				*e*S	Sn	12 08 21.5	-4.2
ERM	Erimo	8.27	243	*e*PN	Pn	12 06 55.7	+2.4
ERM				pmax	pmax		
	comp=Z,46nm,1.1s						
ERM	Erimo	8.27	243	*e*Pn	Pn	12 06 55.7	+2.5
	comp=Z,46nm,1.1s						
ERM				*e*Sn	Sn	12 08 26.7	+1.0
TYV	Tymovskoe	8.29	308	*e*P	Pn	12 06 58.8	+5.4
JNBK	Urakawa-nobuka	8.38	245	P	Pn	12 06 53.9	-0.8
JBT2	Biratori 2	8.38	249	P	Pn	12 06 55.3	+0.6
JEW	Eniwo	8.95	252	P	Pn	12 07 05.1	+2.5
JNB	Noboribetsu	9.39	251	P	Pn	12 07 08.9	+0.3
JNB				*e*S	Sn	12 08 51.1	-2.1
JKB	Kayabe	9.68	247	P	Pn	12 07 10.9	-1.6
JKB				*e*S	Sn	12 08 54.0	-6.2
JYM2	Yakumo 2	9.99	250	P	Pn	12 07 16.6	-0.2
JANG	Nango	10.25	239	P	Pn	12 07 16.7	-3.6
JANG				*e*S	Sn	12 09 04.4	-10
JTM	Tenmabayashi	10.27	242	P	Pn	12 07 18.4	-2.1
JTM				*e*S	Sn	12 09 06.9	-7.7
JTH	Tanohata	10.32	236	P	Pn	12 07 17.9	-3.4
JTH				*e*S	Sn	12 09 05.1	-11
JOSM	Okushiri--Mats	10.60	252	P	Pn	12 07 25.2	+0.1
OFUJ	Ofunato	11.02	233	P	Pn	12 07 27.2	-3.6
JRG	Rokugo	11.39	237	P	Pn	12 07 33.7	-2.3
JIO	Ouri	11.63	232	*e*S	Sn	12 09 37.3	-11
MJAR	Matsushiro Arr	14.74	234	P	Pn	12 08 19.7	-2.0
	comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=5.3						
VLA	Vladivostok	15.36	266	*i* P	Pn	12 08 33.9	+4.1
KSRS	Korea Array	20.61	254	P	P	12 09 34.9	+2.9
	comp=Z,1.7nm,0.7s,baz=59,slow=11,SNR=12						
KSRS	Korea Array	20.61	254	*e*P	P	12 09 34.9	+2.9
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOD	Bodaibo	26.27	310	*e*P	P	12 10 24.0	-3.8
INK	Inuvik	42.10	32	P	P	12 12 44.0	-0.2
	comp=Z,1.3nm,0.7s,mb3.7,baz=298,slow=6.3,SNR=3.5						
ZALV	Zalesovo Beam	42.86	306	P	P	12 12 49.7	-0.9
	comp=Z,0.5nm,0.4s,mb3.6,baz=57,slow=11,SNR=3.8						
ZALV	Zalesovo Beam	42.86	306	*e*P	P	12 12 51.0	+0.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV	Zalesovo Beam	42.86	306	P	P	12 12 49.7	-0.9
MK31	Makanchi Array	47.13	298	*e*P	P	12 13 24.7	+0.1
MKAR	Makanchi Array	47.13	298	P	P	12 13 24.6	0.0
	comp=Z,1.2nm,0.5s,mb4.1,baz=64,slow=8.4,SNR=11						
MKAR	Makanchi Array	47.13	298	*e*P	P	12 13 24.5	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	47.60	304	*e*P	P	12 13 26.7	-1.5
BVAR	Borovoye Array	51.14	310	*e*P	P	12 13 54.5	-0.7
	comp=Z,0.4nm,0.3s,mb3.8,baz=69,slow=8.1,SNR=3.9						
BVAR	Borovoye Array	51.14	310	*e*P	P	12 13 56.9	+1.7
RES	Resolute Bay	51.32	18	P	P	12 13 55.2	-1.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=284,slow=4.2,SNR=5.7						
RES	Resolute Bay	51.32	18	P	P	12 13 55.2	-1.1
YKA	Yellowknife Ar	51.35	36	P	P	12 13 55.9	-0.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=295,slow=7.0,SNR=5.9						
YKA				pP	pP	12 14 09.7	+4.5
	comp=Z,0.7nm,0.8s,baz=299,slow=7.2,SNR=5.1						
YKA	Yellowknife Ar	51.35	36	P	P	12 13 55.9	-0.7
YKA				pP	pP	12 14 09.7	+4.5
ARCES	ARCESS Array B	58.30	341	P	P	12 14 46.1	-0.8
	comp=Z,2.8nm,0.8s,mb4.3,baz=18,slow=8.9,SNR=3.9						
ABKAR	Akbulak array	58.71	310	*e*P	P	12 14 49.8	-0.2
	comp=Z,1.5nm,0.5s,mb4.3						
SUMG	Summit	61.20	4	*e*P	P	12 15 07.3	+0.6
	comp=Z,4.8nm,0.4s,mb5.0						
NVAR	Mina Array Bea	62.71	62	P	P	12 15 17.9	+0.5
	comp=Z,0.4nm,0.7s,mb3.7,baz=308,slow=7.7,SNR=3.3						
NVAR				pP	pP	12 15 31.1	+5.0
	comp=Z,1.0nm,0.7s,baz=300,slow=6.5,SNR=7.6						
FINES	FINESS Array B	64.47	335	P	P	12 15 28.1	-0.5
	comp=Z,3.3nm,0.6s,mb4.5,baz=46,slow=8.2,SNR=8.8						
PDAR	Pinedale Array	65.08	54	P	P	12 15 33.0	+0.1
	comp=Z,0.7nm,0.8s,mb3.8,baz=10,slow=1.7,SNR=5.2						
PDAR				pP	pP	12 15 46.0	+4.3
	comp=Z,0.5nm,0.7s,baz=250,slow=3.0,SNR=3.4						
SRU	San Rafael	66.93	57	*e*P	P	12 15 45.1	+0.2
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
SRU	San Rafael	66.93	57	*e*P	P	12 15 45.1	+0.2
	comp=Z,2.2nm,0.7s,mb4.3						
WRA	Warramunga Arr	68.03	199	P	P	12 15 55.6	+3.8
	comp=Z,0.5nm,1.0s,mb3.5,baz=18,slow=6.6,SNR=3.2						
NB2	NORSAR Subarra	68.68	341	P	P	12 15 55.5	0.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=28,slow=6.2						
NOA	NORSAR Array B	68.68	341	P	P	12 15 55.5	-0.1
	comp=Z,2.3nm,0.6s,mb4.3,baz=28,slow=6.2,SNR=10.0						
ASAR	Alice Springs	71.72	198	P	P	12 16 15.4	+0.9
	comp=Z,0.3nm,0.8s,mb3.3,baz=14,slow=6.4,SNR=4.6						
ASAR	Alice Springs	71.72	198	*e*P	P	12 16 16.1	+1.6
AKASG	Malin Array Be	71.93	326	P	P	12 16 14.3	-1.2
	comp=Z,9.1nm,0.8s,mb4.8,baz=34,slow=6.1,SNR=12						
AKASG	Malin Array Be	71.93	326	*e*P	P	12 16 15.4	-0.2
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KOLS	Kolonicke sedl	75.96	329	*e*P	P	12 16 38.8	-0.4
KOLS				pmax	pmax		
	comp=Z,47nm,3.1s						
KOLS	Kolonicke sedl	75.96	329	*e*P	P	12 16 38.8	-0.4
CLL	Collm	76.90	336	⇓*i*P	P	12 16 45.4	+1.0
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CLL	Collm	76.90	336	⇓*i*P	P	12 16 45.4	+1.0
	comp=Z,5.0nm,0.8s,mb4.5						
CL

NNS	**Nan Shan**	**0.61 235**	⇓*i* P		**Pn**	**12 09 47.6**	**+0.1**
	baz=231						
NNS			*e*S		**Sn**	**12 09 59.1**	**0.0**
	baz=231						
NACB	**Ninganchiao**	**0.69 206**	*e*Pn		**Pn**	**12 09 47.4**	**-0.8**
NACB			*e*Sn		**Sn**	**12 10 02.9**	**+2.6**
NCU	**National Centr**	**0.69 285**	P		**Pn**	**12 09 48.0**	**-0.2**
	baz=284						
NCU			S		**Sn**	**12 10 00.6**	**+0.2**
	baz=284						
TWD	**Chiawan**	**0.77 203**	*e*P		**Pn**	**12 09 48.4**	**-0.7**
	baz=199						
TWD			*e*S		**Sn**	**12 10 00.5**	**-1.4**
	baz=199						
NSTT	**Nanjuang**	**0.85 259**	*i* P		**Pn**	**12 09 49.5**	**-0.3**
	baz=257						
NSTT			*i* S		**Sn**	**12 10 02.4**	**-0.9**
	baz=257						
HSN	**Hsinchu**	**0.86 271**	*i* P		**Pn**	**12 09 49.5**	**-0.5**
	baz=272						
HSN			*i* S		**Sn**	**12 10 02.6**	**-1.0**
	baz=272						
WHF	**Hehuan Shan**	**0.88 223**	*i* P		**Pn**	**12 09 50.5**	**+0.3**
	baz=220						
WHF			*e*S		**Sn**	**12 10 04.1**	**+0.2**
	baz=220						
YOJ	**Yonaguni jima**	**1.05 108**	P		**Pn**	**12 09 51.9**	**-0.1**
YOJ			S		**Sn**	**12 10 06.9**	**-0.3**
ESL	**Shilin**	**1.08 205**	*e*P		**Pn**	**12 09 51.1**	**-1.3**
	baz=202						
ESL			*e*S		**Sn**	**12 10 07.4**	**-0.4**
	baz=202						
NSY	**Sanyi**	**1.12 250**	*e*P		**Pn**	**12 09 52.9**	**0.0**
	baz=249						
NSY			*e*S		**Sn**	**12 10 07.9**	**-0.8**
	baz=249						
TWQ1	**Liyutan**	**1.14 247**	*e*P		**Pn**	**12 09 53.1**	**0.0**
	baz=245						
TWQ1			S		**Sn**	**12 10 08.7**	**-0.3**
	baz=245						
SMLT	**Sun Moon Lake**	**1.30 226**	*e*P		**Pn**	**12 09 55.8**	**+0.7**
	baz=224						
SMLT			*e*S		**Sn**	**12 10 11.9**	**-0.7**
	baz=224						
TYC	**Yuchr**	**1.32 228**	*e*P		**Pn**	**12 09 55.5**	**+0.2**
	baz=226						
TYC			*e*S		**Sn**	**12 10 12.3**	**-0.6**
	baz=226						
SSLB	**Suanglung**	**1.34 221**	*e*Pn		**Pn**	**12 09 55.8**	**+0.2**
SSLB			*e*Sn		**Sn**	**12 10 16.1**	**+2.6**
EHY	**Hungye**	**1.40 203**	*e*P		**Pn**	**12 09 56.0**	**-0.3**
	baz=201						
EHY			*e*S		**Sn**	**12 10 14.1**	**-0.7**
	baz=201						
YULB	**Yu-li**	**1.51 202**	*e*Pn		**Pn**	**12 09 57.6**	**-0.1**
YULB			*e*Sn		**Sn**	**12 10 21.0**	**+3.7**
TWF1	**Yuli**	**1.55 202**	*e*P		**Pn**	**12 09 58.2**	**0.0**
	baz=200						
TWF1			*e*S		**Sn**	**12 10 18.2**	**+0.1**
	baz=200						
YUS	**Yu-Shan**	**1.57 214**	P		**Pn**	**12 09 59.5**	**+1.0**
	baz=212						
YUS			S		**Sn**	**12 10 20.3**	**+1.5**
	baz=212						
ALS	**Alishan**	**1.64 219**	*e*P		**Pn**	**12 10 00.6**	**+1.3**
	baz=217						
ALS			*e*S		**Sn**	**12 10 20.1**	**-0.1**
	baz=217						
CHN5	**Tsauling**	**1.65 224**	*e*P		**Pn**	**12 09 59.7**	**+0.2**
	baz=222						
CHN5			*e*S		**Sn**	**12 10 20.6**	**+0.2**
	baz=222						
IRIF	**Iriomote-Funau**	**1.71 105**	P		**Pn**	**12 10 00.0**	**-0.2**
IRIF			S		**Sn**	**12 10 21.6**	**-0.2**
ELDTW	**Lidau**	**1.80 207**	*e*P		**Pn**	**12 10 01.4**	**0.0**
	baz=206						
ELDTW			*e*S		**Sn**	**12 10 23.5**	**-0.5**
	baz=206						
CHN4	**Tsaushan**	**1.88 220**	*e*P		**Pn**	**12 10 03.3**	**+0.8**
	baz=219						
CHN4			*e*S		**Sn**	**12 10 25.5**	**-0.4**
	baz=219						
STYT	**Tauyuan**	**1.94 213**	*e*P		**Pn**	**12 10 03.4**	**+0.1**
	baz=212						
STYT			*e*S		**Sn**	**12 10 26.7**	**-0.6**
	baz=212						
WTP	**Ta-pu**	**1.95 218**	*e*P		**Pn**	**12 10 04.4**	**+1.0**
	baz=216						
WTP			*e*S		**Sn**	**12 10 27.0**	**-0.5**
	baz=216						
JKRS	**Kuro-shima**	**1.98 106**	P		**Pn**	**12 10 04.4**	**+0.6**
JKRS			S		**Sn**	**12 10 28.0**	**-0.1**
TWK	**Hsinying**	**2.01 221**	*e*P		**Pn**	**12 10 03.9**	**-0.3**
	baz=219						
TWK			*e*S		**Sn**	**12 10 28.9**	**+0.1**
	baz=219						
CHN1	**Nanshi**	**2.05 219**	*e*P		**Pn**	**12 10 05.2**	**+0.5**
	baz=217						
CHN1			*e*S		**Sn**	**12 10 29.7**	**0.0**
	baz=217						
JIJ	**Ishigaki jima**	**2.07 102**	P		**Pn**	**12 10 05.0**	**+0.1**
JIJ			S		**Sn**	**12 10 29.1**	**-1.1**
SGST	**Jiashian**	**2.10 216**	*e*P		**Pn**	**12 10 05.6**	**+0.2**
	baz=214						
SGST			*e*S		**Sn**	**12 10 31.4**	**+0.4**
	baz=214						
TWG	**Pinlang**	**2.12 202**	*e*Sn		**Sn**	**12 10 30.2**	**-1.1**
JTJ	**Tarama**	**2.53 93**	S		**Sn**	**12 10 41.6**	**+0.4**

*DDA **16** 12:11:13.8, 40.°75N×30.°58E, h7km±3km, Md2.7*
*ISK **16** 12:11:13.3, 40.°74N×30.°67E, h7km, MD2.7*
*ISCJB **16** 12:11:14.1±0.6, 40.°74N±0.°03×30.°63E±0.°04, h8km±5km, Error ellipse: s-maj=6.3km s-min=4.4km az=145.1*
*CSEM **16** 12:11:14.3±0.1, 40.°73N×30.°64E, h8km, MD2.7, Error ellipse: s-maj=2.0km s-min=1.8km az=161.0*

ISC 16 12:11:14.4±0.6, 40.°73N±0.°03×30.°65E±0.°04, h12km±4km, n30, σ0.°77/45, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.21**	**64**	*i* P		**Pg**	**12 11 19.4**	**+0.4**
HENT				*i* S		**Sg**	**12 11 22.7**	**+0.6**
HENT	**Hendek**	**0.21**	**64**	*i* P		**Pg**	**12 11 19.4**	**+0.4**
HENT				*i* S		**Sg**	**12 11 22.7**	**+0.6**
GULT	**Gulveren**	**0.32**	**199**	*e*PG		**Pg**	**12 11 20.7**	**-0.1**
GULT				*e*SG		**Sg**	**12 11 25.2**	**+0.1**
GULT	**Gulveren**	**0.32**	**199**	*e*Pg		**Pg**	**12 11 20.7**	**-0.1**
GULT				*e*Sg		**Sg**	**12 11 25.2**	**+0.1**
MDU	**Mudurnu**	**0.51**	**121**	*e*PG		**Pg**	**12 11 23.1**	**-1.3**
MDU				*e*SG		**Sg**	**12 11 30.9**	**-0.2**
MDU	**Mudurnu**	**0.51**	**121**	*e*Pg		**Pg**	**12 11 23.1**	**-1.3**
MDU				*e*Sg		**Sg**	**12 11 30.9**	**-0.2**
GPA	**Golpazari**	**0.51**	**210**	*e*PG		**Pg**	**12 11 24.0**	**-0.4**
GPA				*e*SG		**Sg**	**12 11 31.7**	**+0.5**
GPA	**Golpazari**	**0.51**	**210**	*e*Pg		**Pg**	**12 11 24.0**	**-0.4**
GPA				*e*Sg		**Sg**	**12 11 31.7**	**+0.5**
ADVT	**Abdulvahap**	**0.75**	**247**	*e*PG		**Pg**	**12 11 28.6**	**-0.4**
ADVT	**Abdulvahap**	**0.75**	**247**	*e*Pg		**Pg**	**12 11 28.6**	**-0.4**
KDZE	**Karadeniz Ereo**	**0.84**	**46**	*e*PG		**Pg**	**12 11 29.5**	**-1.1**
KDZE	**Karadeniz Ereo**	**0.84**	**46**	*e*Pg		**Pg**	**12 11 29.5**	**-1.1**
BORA	**Eskisehir**	**0.86**	**190**	*i* P		**Pg**	**12 11 30.7**	**-0.4**
BORA				*i* S		**Sg**	**12 11 42.9**	**+0.5**
BORA	**Eskisehir**	**0.86**	**190**	*i* P		**Pg**	**12 11 30.7**	**-0.4**
BORA				*i* S		**Sg**	**12 11 42.9**	**+0.5**
SGKT	**Sivrigoynuk**	**1.08**	**98**	*i* P		**Pb**	**12 11 35.6**	**+0.5**
SGKT				*i* S		**Sb**	**12 11 49.2**	**0.0**
SGKT	**Sivrigoynuk**	**1.08**	**98**	*i* P		**Pb**	**12 11 35.6**	**+0.5**
SGKT				*i* S		**Sb**	**12 11 49.2**	**0.0**
GEMT	**Gemlik**	**1.15**	**256**	*e*PN		**Pn**	**12 11 35.6**	**-0.8**
GEMT	**Gemlik**	**1.15**	**256**	*e*Pn		**Pn**	**12 11 35.6**	**-0.7**
ESKT	**Eskisehir**	**1.22**	**173**	*e*PN		**Pn**	**12 11 37.8**	**+0.4**
ESKT	**Eskisehir**	**1.22**	**173**	*i* P		**Pn**	**12 11 38.1**	**+0.8**
ESKT				*i* S		**Sb**	**12 11 53.3**	**+0.2**
ESKT	**Eskisehir**	**1.22**	**173**	*e*Pn		**Pn**	**12 11 37.8**	**+0.5**
SEYT	**Eskypehyr**	**1.22**	**173**	*i* P		**Pn**	**12 11 38.1**	**+0.8**
SEYT				*i* S		**Sb**	**12 11 53.3**	**+0.2**
ISK	**Istanbul-Kandi**	**1.25**	**286**	*e*PN		**Pn**	**12 11 38.1**	**+0.4**
ISK	**Istanbul-Kandi**	**1.25**	**286**	*e*Pn		**Pn**	**12 11 38.1**	**+0.4**
KLYT	**Kilyos**	**1.32**	**294**	*e*PN		**Pn**	**12 11 39.1**	**+0.4**
KLYT	**Kilyos**	**1.32**	**294**	*e*Pn		**Pn**	**12 11 39.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.45**	**152**	*e*PN		**Pn**	**12 11 40.5**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.45**	**152**	*e*Pn		**Pn**	**12 11 40.5**	**+0.1**
GDZ	**Gediz**	**1.87**	**209**	*e*P		**Pn**	**12 11 48.5**	**+2.3**
GDZ				*i* S		**Sn**	**12 12 08.0**	**-1.8**
GDZ	**Gediz**	**1.87**	**209**	*e*P		**Pn**	**12 11 48.5**	**+2.3**

*NEIC **16** 12:11:39.2±0.7, 30.°18S×178.°95W, h325km±8km, mb3.7/1, Error ellipse: s-maj=27.2km s-min=14.8km az=127.0*

IDC 16 12:11:39.4±1.2, 30.°13S×179.°04W, h322km±12km, mb3.1/2, mb1 3.4/3, mb1mx3.2/13, mbtmp3.2/3, Error ellipse: s-maj=31.6km s-min=24.1km az=153.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.31**	**49**	P		Pn	12 12 23.7	0.0
	316nm,0.3s,baz=93,slow=22,SNR=51							
RAO				S		S	12 12 55.3	-3.6
	258nm,0.3s,baz=75,slow=22,SNR=6.0							
URZ	**Urewera**	**8.71**	**200**	P		Pn	12 13 41.3	-0.4
	2.3nm,0.3s,baz=154,slow=1.5,SNR=16							
URZ				S		S	12 15 16.7	-4.7
	3.8nm,0.3s,baz=343,slow=21,SNR=12							
ASAR	**Alice Springs**	**42.22**	**267**	P		P	12 19 02.0	0.0
	0.4nm,0.5s,baz=104,slow=7.8,SNR=9.9							
ASAR				PcP		PcP	12 20 48.7	-0.7
	0.6nm,0.9s,baz=129,slow=3.8,SNR=4.8							
WRAB	**Tennant Creek**	**43.18**	**272**	*e*P		P	12 19 10.4	+0.8
	3.2nm,0.7s							
WRA	**Warramunga Arr**	**43.19**	**272**	P		P	12 19 09.7	0.0
	1.9nm,0.5s,baz=110,slow=8.1,SNR=32							
KURK	**Kurchatov**	**120.21**	**314**	PKP		PKPdf	12 29 51.7	-0.2
	0.4nm,0.6s,baz=107,slow=2.1,SNR=3.1							
JOF	**Joensuu**	**141.83**	**338**	*e*p		PKPdf	12 30 25.8	-6.4
	1.6nm,0.6s							
KAF	**Kangasniemi**	**143.99**	**340**	*e*p		PKPdf	12 30 33.3	-2.7
	0.7nm,0.4s							
FINES	**FINESS Array B**	**144.58**	**339**	PKP		PKPdf	12 30 36.0	-1.0
	4.2nm,0.4s,baz=46,slow=3.6,SNR=34							
NOA	**NORSAR Array B**	**148.34**	**350**	PKPbc		PKPbc	12 30 47.2	0.0
	1.3nm,0.8s,baz=14,slow=4.2,SNR=3.7							
NOA	**NORSAR Array B**	**148.34**	**350**	PKPbc		PKPbc	12 30 47.2	0.0
AKASG	**Malin Array Be**	**150.54**	**322**	PKPbc		PKPbc	12 30 52.3	-0.6
	0.2nm,0.2s,baz=47,slow=2.9,SNR=4.2							
TORD	**Torodi Ar. Bea**	**163.09**	**182**	PKPab		PKPab	12 31 55.7	0.0
	0.4nm,0.5s,baz=174,slow=4.1,SNR=3.8							

IDC 16 12:17:01.7±1.2, 30.°74N×103.°34E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, Error ellipse: s-maj=45.3km s-min=21.5km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.40**	**65**	P		P	12 21 50.8	-0.1
	0.7nm,0.6s,baz=257,slow=10.0,SNR=3.8							
ZALV	**Zalesovo Beam**	**26.77**	**335**	P		P	12 22 42.7	-0.3
	1.2nm,0.7s,baz=140,slow=11,SNR=4.0							
KURK	**Kurchatov**	**27.16**	**324**	P		P	12 22 46.7	+0.2
	0.4nm,0.7s,baz=125,slow=9.7,SNR=3.8							
WRA	**Warramunga Arr**	**58.54**	**145**	P		P	12 27 01.4	+1.3
	0.6nm,0.6s,baz=338,slow=7.6,SNR=11							
ASAR	**Alice Springs**	**61.52**	**148**	P		P	12 27 19.2	-1.3
	0.2nm,0.6s,baz=338,slow=7.3,SNR=2.7							

*NEIC **16** 12:57:33.8±1.3, 6.°35N×125.°29E, h21km±9km, mb4.8/8, Error ellipse: s-maj=12.1km s-min=5.2km az=85.0*
NEIC Felt [III PIVS] at Davao and Malita; [II PIVS] at General Santos, Koronadal, Pikit and Talagutong.
*ISCJB **16** 12:57:34.4±0.5, 6.°37N±0.°03×125.°40E±0.°04, h42km±6km, mb4.4/22, MS3.7/9, Error ellipse: s-maj=7.4km s-min=5.6km az=16.1*
*IDC **16** 12:57:34.4±1.7, 6.°38N×125.°43E, h27km±12km, mb4.0/12, mb1 4.2/13, mb1mx4.0/25, mbtmp4.0/13, ML3.9/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/36, Error ellipse: s-maj=32.0km s-min=11.0km az=85.0*
*MAN **16** 12:57:35, 6.°51N×125.°43E, h33km, mb5.9, ML4.9, MS5.3*
MAN INTENSITY III - DAVAO CITY; INTENSITY II - MARBEL SOUTH COTABATO.
*DJA **16** 12:57:36, 6.°40N×125.°77E, h18km, Mw5.2/7*

ISC 16 12:57:34.8±0.7, 6.°39N±0.°03×125.°41E±0.°04, h28km±5km, n58, σ0.°86/58, mb4.4/22, MS3.7/9, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.55**	**237**	⇓*e*P		**Pb**	**12 57 45.9**	**-0.1**
GSPH				*e*S		**Sb**	**12 57 54.2**	**+0.7**
KCP	**Kidapawan**	**0.70**	**333**	⇑*i* P		**Pb**	**12 57 48.8**	**+0.4**
KCP				*i* S		**Sb**	**12 57 58.0**	**+0.3**
DMPH	**Davao City--Mi**	**0.70**	**8**	‖*e*P		**Pb**	**12 57 48.0**	**-0.4**
DMPH				*e*S		**Sb**	**12 57 56.5**	**-1.2**
DAV	**Davao City (W)**	**0.70**	**14**	Pg		**Pb**	**12 57 48.4**	**0.0**
	1μm,0.3s,baz=268,slow=2.4,SNR=197							
DAV				Lg			12 57 56.9	
	6μm,0.3s,baz=270,slow=20,SNR=47							
DAV				LR		LR	12 58 01.7	
	comp=Z,9μm,19.3s,baz=0.0,slow=39							
MATI	**Mati**	**1.00**	**56**	*e*P		**Pn**	**12 57 52.3**	**-0.7**
MATI				*e*S		**Sn**	**12 57 59.3**	**-6.9**
CTBH	**Cotabato--PC H**	**1.43**	**306**	⇓*e*P		**Pn**	**12 57 57.9**	**-0.9**
CTBH				*i* S		**Sn**	**12 58 14.8**	**-1.8**
BUKP	**Musuan**	**1.52**	**347**	*e*P		**Pn**	**12 58 00.7**	**+0.6**
BIPH	**Bislig**	**2.02**	**28**	⇓*e*P		**Pn**	**12 58 06.0**	**-0.9**
PAGZ	**Pagadian**	**2.48**	**306**	*e*P		**Pn**	**12 58 14.5**	**+1.2**
BUTP	**Butuan**	**2.57**	**5**	*e*P		**Pn**	**12 58 17.0**	**+2.4**
IPIL	**Ipil**	**3.15**	**296**	*e*P		**Pn**	**12 58 23.8**	**+1.3**
ZMPH	**Zamboanga City**	**3.38**	**280**	⇑*i* P		**Pn**	**12 58 26.8**	**+1.2**
ZMPH				*i* S		**Sn**	**12 59 04.1**	**-0.7**
TBP	**Tagbilaran**	**3.62**	**335**	*e*P		**Pn**	**12 58 28.6**	**-0.5**
TBP				*e*S		**Sn**	**12 59 18.7**	**+7.7**
KAPI	**Kappang**	**12.66**	**207**	Pn		**Pn**	**13 00 31.9**	**-1.2**
	0.7nm,0.3s,baz=72,slow=20,SNR=2.0							
KAPI				LR		LR	13 05 55.6	
	comp=Z,260nm,19.5s,baz=49,slow=40							
KAPI	**Kappang**	**12.66**	**207**	*e*Pn		**Pn**	**13 00 31.9**	**-1.2**
	37nm,1.2s							
KAPI				LR		LR	13 05 55.6	
KAKA	**Kakadu**	**20.22**	**160**	*e*P		**P**	**13 02 07.1**	**-0.6**
	22nm,0.6s							
KAKA	**Kakadu**	**20.22**	**160**	*e*P		**P**	**13 02 07.6**	**0.0**
	79nm,0.7s							
JOW	**Kunigami**	**20.52**	**7**	LR		LR	13 09 26.4	
	comp=Z,256nm,19.3s,MS3.6,baz=278,slow=35							
FITZ	**Fitzroy Crossi**	**24.33**	**179**	*e*P		**P**	**13 02 50.3**	**0.0**
	10nm,0.4s,mb4.6							
FITZ	**Fitzroy Crossi**	**24.33**	**179**	P		**P**	**13 02 50.1**	**-0.2**
	6.2nm,0.4s,mb4.4,baz=7.1,slow=8.2,SNR=75							
COEN	**Coen**	**26.82**	**139**	*e*P		**P**	**13 03 13.1**	**+0.2**
COEN	**Coen**	**26.82**	**139**	*e*P		**P**	**13 03 13.6**	**+0.7**
	145nm,1.0s,mb5.5							
WRAB	**Tennant Creek**	**27.59**	**162**	*e*P		**P**	**13 03 19.5**	**-0.3**
	16nm,1.0s,mb4.6							
WRA	**Warramunga Arr**	**27.60**	**162**	P		**P**	**13 03 18.8**	**-1.0**
	4.3nm,0.9s,mb4.1,baz=335,slow=10,SNR=32							
WRA				ScP		ScP	13 10 14.9	-1.2
	0.3nm,0.8s,baz=335,slow=2.8,SNR=4.8							
WB2	**Warramunga Arr**	**27.60**	**162**	*e*P		**P**	**13 03 19.5**	**-0.4**
KMI	**Kunming**	**28.60**	**313**	P		**P**	**13 03 32.3**	**+3.5**
KMI				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.2							
JHJ	**Hachijo jima 2**	**29.77**	**25**	LR		LR	13 14 30.9	
	comp=Z,44nm,18.9s,MS3.1,baz=266,slow=34							
ASAR	**Alice Springs**	**31.00**	**165**	P		**P**	**13 03 49.7**	**-0.3**
	comp=Z,1.9nm,0.5s,mb4.2,baz=340,slow=7.0,SNR=57							
ASAR				ScP		ScP	13 10 25.1	-1.7
	comp=Z,0.9nm,0.9s,baz=342,slow=3.1,SNR=6.1							
KSRS	**Korea Array**	**31.01**	**4**	P		**P**	**13 03 49.8**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.8,baz=183,slow=9.5,SNR=10							
KSRS				LR		LR	13 15 55.8	
	comp=Z,100nm,18.4s,MS3.5,baz=167,slow=36							
MJAR	**Matsushiro Arr**	**32.22**	**20**	LR		LR	13 15 02.9	
	comp=Z,88nm,18.8s,MS3.5,baz=200,slow=32							
MEEK	**Meekatharra**	**33.48**	**191**	*e*P		**P**	**13 04 11.0**	**-0.7**
KMBL	**Kambalda**	**37.69**	**185**	*e*P		**P**	**13 04 47.8**	**0.0**
	comp=Z,92nm,1.0s,mb5.5							
KLBR	**Kellerberrin**	**38.47**	**191**	*e*P		**P**	**13 04 53.5**	**-0.9**
	comp=Z,4.7nm,0.3s,mb4.7							
NWAO	**Narrogin (SRO)**	**39.86**	**191**	*e*P		**P**	**13 05 06.3**	**+0.3**
	comp=Z,70nm,0.9s,mb5.4							
NWAO	**Narrogin (SRO)**	**39.86**	**191**	P		**P**	**13 05 06.0**	**-0.1**
	comp=Z,7.1nm,0.3s,mb4.8,baz=23,slow=10.0,SNR=16							
GTA	**Gaotai**	**40.16**	**329**	*e*P		**P**	**13 05 18.3**	**+10**
GTA				pP		pP	13 05 25.4	+8.5
GTA				sP		sP	13 05 29.8	+9.4
GTA				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.1							
BBOO	**Buckleboo**	**40.27**	**166**	*e*P		**P**	**13 05 09.9**	**+0.5**
	comp=Z,18nm,0.3s,mb5.3							
ASAJ	**Asahikawa**	**40.49**	**19**	LR		LR	13 20 25.0	
	comp=Z,141nm,19.1s,MS3.8,baz=339,slow=34							
STKA	**Stephens Creek**	**41.06**	**159**	*e*P		**P**	**13 05 16.4**	**+0.4**
	comp=Z,13nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**41.06**	**159**	P		**P**	**13 05 15.5**	**-0.4**
	comp=Z,14nm,0.8s,mb4.7,baz=328,slow=10.0,SNR=13							
STKA	**Stephens Creek**	**41.06**	**159**	*e*P		**P**	**13 05 16.5**	**+0.5**
	comp=Z,3.0nm,0.8s,mb4.0							
CMSA	**Cobar Meteorol**	**42.39**	**154**	*e*P		**P**	**13 05 27.5**	**+0.6**
SONM	**Songino Array**	**44.38**	**342**	P		**P**	**13 05 43.7**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=144,slow=12,SNR=3.0							
SONM				LR		LR	13 28 06.5	
	comp=Z,97nm,18.4s,MS3.8,baz=265,slow=41							
ARPS	**Mount Arapiles**	**45.60**	**161**	*e*P		**P**	**13 05 53.5**	**+1.0**
	comp=Z,95nm,1.3s							
PETK	**Petropavlovsk-**	**53.51**	**24**	P		**P**	**13 06 53.3**	**+0.7**
	comp=Z,1.8nm,0.7s,mb4.1,baz=152,slow=6.6,SNR=4.4							
MK31	**Makanchi Array**	**54.64**	**325**	*e*P		**P**	**13 07 01.1**	**+0.1**
MKAR	**Makanchi Array**	**54.64**	**325**	P		**P**	**13 07 01.1**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=125,slow=8.1,SNR=7.1							
KURK	**Kurchatov**	**58.81**	**327**	P		**P**	**13 07 29.7**	**-0.8**
	comp=Z,1.5nm,0.7s,mb4.2,baz=127,slow=5.8,SNR=6.5							
BVAR	**Borovoye Array**	**64.39**	**327**	P		**P**	**13 08 07.2**	**-1.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=97,slow=12,SNR=3.7							
AFI	**Afiamalu**	**65.50**	**108**	LR		LR	13 36 55.4	
	comp=Z,58nm,18.4s,MS3.8,baz=254,slow=36							
ABKAR	**Akbulak array**	**69.28**	**320**	*e*P		**P**	**13 08 38.3**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.7							
UNV	**Unalaska Valle**	**72.01**	**35**	*e*P		**P**	**13 08 56.8**	**+0.9**
	comp=Z,31nm,1.3s,mb5.1							
BPAW	**Bear Paw Mtn.**	**81.49**	**26**	*e*P		**P**	**13 09 49.5**	**+0.3**
	comp=Z,34nm,2.3s,mb4.9							
EGAK	**Eagle**	**85.73**	**25**	*e*P		**P**	**13 10 12.9**	**+2.0**
	comp=Z,1.9nm,0.8s,mb4.4							
NOA	**NORSAR Array B**	**95.84**	**333**	LR		LR	13 55 08.2	
	comp=Z,36nm,20.9s,MS3.8,baz=30,slow=36							
VRAC	**Vranov**	**97.26**	**321**	LR		LR	13 55 19.3	
	comp=Z,48nm,19.0s,MS4.0,baz=224,slow=36							
YKA	**Yellowknife Ar**	**97.63**	**24**	P		**P**	**13 11 06.1**	**-0.3**
	comp=Z,0.2nm,0.6s,mb3.8,baz=301,slow=4.5,SNR=4.6							
YKA	**Yellowknife Ar**	**97.63**	**24**	P		**P**	**13 11 06.1**	**-0.4**

*IDC **16** 13:01:58.4±0.7, 21.°03S×174.°49W, h0km, mb4.3/12, mb1 4.4/13, mb1mx4.4/18, mbtmp4.3/13, ML4.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/22, Error ellipse: s-maj=30.1km s-min=17.3km az=130.0*
*NEIC **16** 13:01:59.3±0.5, 20.°98S×174.°42W, h10km, mb4.3/6, Error ellipse: s-maj=22.1km s-min=11.2km az=120.0*
*ISCJB **16** 13:02:01.6±0.6, 21.°10S±0.°09×174.°5W±0.°1, h33km, mb4.2/17, MS3.2/3, Error ellipse: s-maj=18.0km s-min=11.5km az=28.4*

ISC 16 13:02:03.2±0.6, 21.°22S±0.°07×174.°5W±0.°1, h35km, n38, σ1.°03/28, mb4.2/17, MS3.2/3, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.70**	**20**	Pn		**Pn**	**13 03 44.7**	**-8.2**
	4.4nm,0.3s,baz=134,slow=4.2,SNR=14							
AFI				Sn		**Sn**	**13 05 03.9**	**-15**
	2.3nm,0.3s,baz=221,slow=20,SNR=2.9							
AFI				T			13 11 27.5	
	2.8nm,0.3s,baz=262,slow=19,SNR=4.3							
AFI	**Afiamalu**	**7.70**	**20**	*e*Pn		**Pn**	**13 03 44.6**	**-8.3**
	21nm,0.6s							
AFI				*e*Sn		**Sn**	**13 05 01.1**	**-18**
RAO	**Raoul Island**	**8.59**	**201**	Sn		**Sn**	**13 05 39.6**	**-1.1**
	15nm,0.3s,baz=94,slow=19,SNR=2.6							
DZM	**Mont Dzumac**	**17.79**	**264**	*e*LR		LR	13 10 19.8	
	210nm,21.4s							
URZ	**Urewera**	**18.48**	**201**	P		**Pn**	**13 06 16.0**	**-0.4**
	0.6nm,0.3s,baz=247,slow=1.5,SNR=4.7							
URZ				S		**S**	**13 09 31.2**	**-14**
	0.4nm,0.3s,baz=306,slow=19,SNR=3.5							
URZ	**Urewera**	**18.48**

KFL				S	Sg	13 06 22.5	+0.9
VLS	**Valsamata**	**0.87**	**351**	*e*PN	**Pg**	**13 06 12.4**	**-0.4**
VLS				*e*SN	**Sg**	**13 06 25.7**	**+1.6**
VLS	**Valsamata**	**0.87**	**351**	P	**Pg**	**13 06 12.4**	**-0.4**
VLS				S	**Sg**	**13 06 24.9**	**+0.8**
VLS	**Valsamata**	**0.87**	**351**	*e*Pn	**Pg**	**13 06 12.4**	**-0.4**
VLS				S	**Sg**	**13 06 24.9**	**+0.8**
VLS				*e*Sn	**Sg**	**13 06 25.7**	**+1.6**
PYL	**PYLOS**	**0.88**	**118**	*e*PN	**Pg**	**13 06 12.9**	**-0.1**
PYL				*e*SN	**Sg**	**13 06 26.3**	**+1.8**
PYL	**PYLOS**	**0.88**	**118**	P	**Pg**	**13 06 13.3**	**+0.3**
PYL	**PYLOS**	**0.88**	**118**	*e*Pn	**Pg**	**13 06 12.9**	**-0.1**
PYL	**PYLOS**	**0.88**	**118**	P	**Pg**	**13 06 13.3**	**+0.3**
PYL				*e*Sn	**Sg**	**13 06 26.3**	**+1.8**
RLS	**Riolos of Patr**	**0.93**	**37**	*e*PB	**Pg**	**13 06 12.0**	**-1.8**
RLS				*e*SN	**Sg**	**13 06 25.0**	**-0.8**
RLS	**Riolos of Patr**	**0.93**	**37**	*e*Pb	**Pg**	**13 06 12.0**	**-1.8**
RLS				*e*Sn	**Sg**	**13 06 25.0**	**-0.8**
ITM	**Ithomi**	**0.93**	**98**	*e*PN	**Pg**	**13 06 13.9**	**-0.1**
ITM				*e*SN	**Sg**	**13 06 26.3**	**+0.2**
ITM	**Ithomi**	**0.93**	**98**	*e*Pn	**Pg**	**13 06 13.9**	**-0.1**
ITM				*e*Sn	**Sg**	**13 06 26.3**	**+0.2**
LAKA	**Lakka**	**1.33**	**46**	P	**Pn**	**13 06 21.2**	**0.0**
LAKA	**Lakka**	**1.33**	**46**	P	**Pn**	**13 06 21.2**	**0.0**
EFP	**Efpalio**	**1.43**	**39**	P	**Pn**	**13 06 23.1**	**+0.5**
EFP	**Efpalio**	**1.43**	**39**	P	**Pn**	**13 06 23.1**	**+0.5**
KYTH	**Kithira**	**2.09**	**119**	*e*PB	**Pb**	**13 06 32.2**	**-2.3**
KYTH	**Kithira**	**2.09**	**119**	*e*Pb	**Pb**	**13 06 32.2**	**-2.3**
AGG	**Agios Georgios**	**2.10**	**35**	P	**Pn**	**13 06 32.6**	**+0.8**
AGG	**Agios Georgios**	**2.10**	**35**	P	**Pn**	**13 06 32.6**	**+0.8**

*IDC **16** 13:06:45.2±1.1, 31°.66N×104°.20E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.5/27, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=42.5km s-min=20.1km az=61.0*
*NEIC **16** 13:06:46.8±0.7, 31°.65N×104°.22E, h10km, mb3.9/1, Error ellipse: s-maj=26.2km s-min=11.4km az=61.0*
*BJI **16** 13:06:47.7, 31°.68N×104°.11E, h8km, ML3.4/11*
ISC 16 13:06:45.2±0.8, 31°.63N±0°.03×104°.39E±0°.06, h0km±7km, n14, σ1§06/19, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.90**	**217**	Pg	**Pg**	**13 07 01.5**	**-0.8**
CD2				Sg	**Sg**	**13 07 15.5**	**+1.5**
CD2				smax			
	comp=N,1μm,0.4s						
LZH	**Lanzhou**	**4.47**	**354**	Pg	**Pg**	**13 08 15.3**	**+4.4**
LZH				Sg	**Sg**	**13 09 09.0**	**+0.2**
LZH				smax			
	comp=N,43nm,0.8s						
LZH				smax			
	comp=E,61nm,1.0s						
LZH				LR	LR		
	comp=E,290nm,5.3s						
LZH				LR	LR		
	comp=Z,450nm,6.5s						
XAN	**Xi'an**	**4.51**	**57**	Pg	**Pg**	**13 08 12.3**	**+0.6**
XAN				Sg	**Sg**	**13 09 09.6**	**-0.5**
XAN				smax			
	comp=N,69nm,1.0s						
XAN				smax			
	comp=E,43nm,1.0s						
GYA	**Guiyang**	**5.52**	**158**	Pg	**Pg**	**13 08 31.8**	**+0.8**
GYA				Sg	**Sg**	**13 09 40.0**	**-2.6**
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
KMI	**Kunming**	**6.64**	**193**	Pn	**Pb**	**13 08 34.8**	**-6.7**
KMI				Sn	**Sn**	**13 09 28.3**	**-12**
KMI				smax			
	comp=N,17nm,0.8s						
KMI				smax			
	comp=E,17nm,0.7s						
SONM	**Songino Array**	**16.26**	**5**	Pn	**Pn**	**13 10 35.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=4.1						
KSRS	**Korea Array**	**20.22**	**67**	P	**P**	**13 11 23.1**	**+1.5**
	comp=E,0.8nm,0.8s,baz=255,slow=10,SNR=4.1						
MK31	**Makanchi Array**	**22.75**	**318**	*e*P	**P**	**13 11 48.4**	**-0.4**
MKAR	**Makanchi Array**	**22.75**	**318**	*e*P	**P**	**13 11 48.3**	**-0.5**
	comp=E,0.6nm,0.4s,mb3.5,baz=122,slow=12,SNR=7.7						
ZALV	**Zalesovo Beam**	**26.36**	**334**	P	**P**	**13 12 21.3**	**-1.4**
	comp=E,1.8nm,0.6s,mb3.9,baz=132,slow=8.8,SNR=6.8						
KURK	**Kurchatov**	**26.98**	**322**	P	**P**	**13 12 26.9**	**-1.5**
	comp=E,1.2nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**58.77**	**147**	P	**P**	**13 16 45.8**	**+0.7**
	comp=E,0.3nm,0.7s,mb3.4,baz=341,slow=7.9,SNR=6.7						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**13 17 07.0**	**+1.0**
	comp=E,0.2nm,0.4s,mb3.7,baz=340,slow=7.1,SNR=3.3						
YKA	**Yellowknife Ar**	**81.12**	**17**	P	**P**	**13 19 02.0**	**0.0**
	comp=E,0.2nm,0.5s,mb3.4,baz=328,slow=5.2,SNR=3.0						

*ISK **16** 13:09:09.9, 38°.46N×38°.25E, h14km, MD2.9*
*ISCJB **16** 13:09:10.6±0.4, 38°.41N±0°.03×38°.19E±0°.03, h10km, Error ellipse: s-maj=4.7km s-min=3.6km az=5.2*
*DDA **16** 13:09:10.6, 38°.34N×38°.19E, h7km±3km, Md2.9*
*CSEM **16** 13:09:11.0±0.1, 38°.37N×38°.17E, h10km, MD2.9, Error ellipse: s-maj=2.8km s-min=2.4km az=31.0*
ISC 16 13:09:10.9±0.5, 38°.39N±0°.03×38°.18E±0°.03, h3km±7km, n25, σ1§03/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.20**	**107**	*e*PG	**Pg**	**13 09 15.1**	**+0.3**
MYA				*e*SG	**Sg**	**13 09 18.5**	**+1.1**
MYA	**Malataya**	**0.20**	**107**	*e*Pg	**Pg**	**13 09 15.1**	**+0.3**
MYA				*e*Sg	**Sg**	**13 09 18.5**	**+1.1**
MALT	**Malatya**	**0.21**	**110**	*e*PG	**Pg**	**13 09 14.5**	**-0.4**
MALT				*e*SG	**Sg**	**13 09 18.4**	**+0.8**
MALT	**Malatya**	**0.21**	**110**	*e*Pg	**Pg**	**13 09 14.5**	**-0.4**
MALT				*e*Sg	**Sg**	**13 09 18.4**	**+0.8**
AKCD	**Akcadag**	**0.22**	**246**	*i* P	**Sg**	**13 09 14.7**	**-0.4**
AKCD				*i* S	**Sg**	**13 09 18.1**	**+0.1**
DARE	**Darende-Malaty**	**0.64**	**333**	*e*PG	**Pg**	**13 09 21.6**	**-1.5**
DARE				*e*SG	**Sg**	**13 09 32.0**	**+0.6**
DARE	**Darende-Malaty**	**0.64**	**333**	*e*Pg	**Pg**	**13 09 21.6**	**-1.5**
DARE				*e*Sg	**Sg**	**13 09 32.0**	**+0.6**
ELZG	**Elazig**	**0.64**	**80**	*e*P	**Pg**	**13 09 23.0**	**-0.2**
ELZG				*i* S	**Sg**	**13 09 32.8**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.89**	**90**	*e*PG	**Pg**	**13 09 26.1**	**-1.8**
SVRC	**Sivrice-ELAZID**	**0.89**	**90**	*e*Pg	**Pg**	**13 09 26.1**	**-1.8**
KEMA	**Kemaliye**	**0.92**	**15**	*i* P	**Pg**	**13 09 29.1**	**+0.7**
KEMA				*i* S	**Sg**	**13 09 44.7**	**+4.3**
KEMA	**Kemaliye**	**0.92**	**15**	*i* P	**Pg**	**13 09 29.1**	**+0.6**
KEMA				*i* S	**Sg**	**13 09 44.7**	**+4.4**
URFA	**Urfa**	**1.07**	**152**	*e*PN	**Pn**	**13 09 32.4**	**-0.4**
URFA	**Urfa**	**1.07**	**152**	*e*Pn	**Pn**	**13 09 32.4**	**-0.3**
PTK	**Pertek**	**1.08**	**62**	*e*PG	**Pg**	**13 09 30.2**	**-1.3**
PTK	**Pertek**	**1.08**	**62**	*e*Pg	**Pg**	**13 09 30.3**	**-1.2**
GZT	**Gaziantep**	**1.14**	**206**	*i* P	**Pg**	**13 09 32.6**	**-0.1**
GZT				*i* S	**Sg**	**13 09 47.4**	**0.0**
SARI	**SarD1z-Kayseri**	**1.20**	**285**	*e*PN	**Pn**	**13 09 35.8**	**+1.2**
SARI	**SarD1z-Kayseri**	**1.20**	**285**	*e*Pn	**Pn**	**13 09 35.8**	**+1.3**
KMRS	**Kahramanmaras**	**1.34**	**229**	*e*PN	**Pn**	**13 09 35.5**	**-1.0**
KMRS	**Kahramanmaras**	**1.34**	**229**	*e*Pn	**Pn**	**13 09 35.5**	**-1.0**
PINB	**Pinarbasi**	**1.42**	**282**	*i* P	**Pn**	**13 09 38.2**	**+0.6**
PINB				*i* S	**Sb**	**13 09 58.9**	**+2.3**
PINB	**Pinarbasi**	**1.42**	**282**	*i* P	**Pn**	**13 09 38.2**	**+0.6**
PINB				*i* S	**Sb**	**13 09 58.9**	**+2.3**
SVSK	**Karacayir**	**1.79**	**329**	*e*PN	**Pn**	**13 09 40.6**	**-2.0**
SVSK	**Karacayir**	**1.79**	**329**	*e*Pn	**Pn**	**13 09 40.6**	**-2.0**

*PGC **16** 13:10:28.9±30.0, 66°.20N×142°.00W, h10km, ML2.9/2, 266km northwest of Dawson, Yt Alaska*
NEIC 16 13:10:27.0, 66°.25N×142°.19W, h8km, ML2.6(AEIC), 5D, After AEIC., Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM3	**Burnt Mountain**	**1.51**	**322**	P	Pn	13 10 53.9	-0.4
BM3				S	Sn	13 11 15.0	+0.8
EGAK	**Eagle**	**1.54**	**163**	P	Pn	13 10 54.6	-0.1
EGAK				S	Sn	13 11 15.7	+0.9
IL1	**Eielson Array**	**2.46**	**235**	P	Pn	13 11 07.3	+0.1
DAWY	**Dawson**	**2.49**	**150**	P	Pn	13 11 08.1	+0.3
DAWY				S	Sn	13 11 38.6	+0.3
DAWY	**Dawson**	**2.49**	**150**	⇓Pn	Pn	13 11 08.0	+0.2
DAWY				⇓Sn	Sn	13 11 38.6	+0.3
COLA	**College**	**2.73**	**242**	P	Pn	13 11 11.8	+0.7
BCA3	**Beaver Creek A**	**3.20**	**177**	P	Pn	13 11 17.2	-0.3
COLD	**Coldfoot**	**3.33**	**291**	P	Pn	13 11 20.6	+1.4
INK	**Inuvik**	**3.95**	**55**	*e*Pn	Pn	13 11 27.5	-0.2
INK				*e*Sn	Sn	13 12 13.1	-1.0
INK	**Inuvik**	**3.95**	**55**	⇓Pn	Pn	13 11 28.2	+0.4
INK				⇓Sn	Sn	13 12 13.3	-0.8
BPAW	**Bear Paw Mtn.**	**4.29**	**244**	P	Pn	13 11 33.5	+1.0
IM3	**Indian Mountai**	**4.71**	**272**	P	Pn	13 11 39.0	+0.8
HYT	**Haines Junctio**	**5.83**	**157**	⇑Sg	Sg	13 13 28.8	-5.3
CTLN	**Castor Lake**	**11.05**	**87**	⇑Pn	Pn	13 13 01.5	-3.5
CTLN				⇓Sn	Sn	13 14 57.9	-11
JERN	**Jeri Cho Mine,**	**12.38**	**77**	⇑Sn	Sn	13 15 28.7	-12
YKW3	**Yellowknife Ar**	**12.42**	**94**	⇑Pn	Pn	13 13 20.8	-3.0
YKW3				⇑Sn	Sn	13 15 28.7	-13

*NEIC **16** 13:11:41.2±3.8, 24°.53N×122°.28E, h10km, Error ellipse: s-maj=39.7km s-min=12.6km az=67.0*
*ISCJB **16** 13:11:48.7±0.4, 24°.50N±0°.02×121°.70E±0°.03, h45km±4km, Error ellipse: s-maj=4.9km s-min=2.6km az=14.3*
*TAP **16** 13:11:48.3, 24°.49N×121°.62E, h46km, ML3.8, B*
ISC 16 13:11:49.0±0.4, 24°.51N±0°.02×121°.70E±0°.03, h43km±4km, n55, σ0§88/102, 6C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.09**	**156**	⇓*i*P	**Pn**	**13 11 56.0**	**+0.1**
ENA	baz=119			*e*S	**Sn**	**13 12 01.1**	**+0.4**
TWC	**Suao**	**0.17**	**53**	⇑*i*P	**Pn**	**13 11 56.9**	**+0.6**
TWC	baz=63			*i* S	**Sn**	**13 12 02.5**	**+1.1**
TWE	**Neicheng**	**0.21**	**351**	⇑*i*P	**Pn**	**13 11 57.2**	**+0.5**
TWE	baz=21			*e*S	**Sn**	**13 12 02.6**	**+0.6**
ILA	**Ilan**	**0.26**	**9**	⇑*i*P	**Pn**	**13 11 57.9**	**+0.8**
ILA	baz=21			*e*S	**Sn**	**13 12 04.3**	**+1.5**
NNS	**Nan Shan**	**0.31**	**257**	⇓*i*P	**Pn**	**13 11 57.4**	**-0.2**
NNS	baz=255			S	**Sn**	**13 12 03.2**	**-0.4**
YHNB	**Yeheng**	**0.34**	**298**	*e*P	**Pn**	**13 11 56.9**	**-1.0**
YHNB				*e*S	**Sn**	**13 12 03.3**	**-0.8**
NACB	**Ninganchiao**	**0.35**	**196**	*e*P	**Pn**	**13 11 55.8**	**-2.2**
NSK	**Sanguang**	**0.35**	**298**	⇑*i*P	**Pn**	**13 11 57.5**	**-0.6**
NSK	baz=304			*i* S	**Sn**	**13 12 03.4**	**-1.0**
TWD	**Chiawan**	**0.44**	**193**	⇓*i*P	**Pn**	**13 11 57.9**	**-1.2**
TWD	baz=175			*e*S	**Sn**	**13 12 05.4**	**-0.8**
TWA	**Mucha**	**0.48**	**347**	*i* P	**Pn**	**13 11 59.6**	**0.0**
TWA	baz=349			*e*S	**Sn**	**13 12 07.5**	**+0.3**
TATO	**Taipei**	**0.50**	**337**	*e*P	**Pn**	**13 11 58.0**	**-2.0**
TATO				*e*S	**Sn**	**13 12 06.9**	**-0.8**
HWA	**Hwalien**	**0.54**	**190**	*e*P	**Pn**	**13 11 59.1**	**-1.2**
WHF	**Hehuan Shan**	**0.54**	**228**	⇓*i*P	**Pn**	**13 12 00.0**	**-0.3**
WHF	baz=216			*i* S	**Sn**	**13 12 08.4**	**0.0**
TAP1	**Taipei**	**0.55**	**343**	P	**Pn**	**13 12 00.3**	**-0.3**
TAP1	baz=350			*e*S	**Sn**	**13 12 08.7**	**-0.1**
TWB1	**Santiao Chiao**	**0.56**	**27**	*i* P	**Pn**	**13 12 01.4**	**+0.7**
TWB1	baz=34			*i* S	**Sn**	**13 12 10.3**	**+1.4**
NWF	**Wu-fen Shan**	**0.56**	**7**	*i* P	**Pn**	**13 12 01.2**	**+0.4**
NWF	baz=3.0			*i* S	**Sn**	**13 12 09.8**	**+0.7**
TWS1	**Kuangyinshan**	**0.64**	**336**	*e*P	**Pn**	**13 12 01.5**	**-0.3**
TWS1	baz=352			S	**Sn**	**13 12 11.1**	**+0.2**
NSTT	**Nanjuang**	**0.65**	**281**	*i* P	**Pn**	**13 12 01.2**	**-0.6**
NSTT	baz=284			*e*S	**Sn**	**13 12 10.4**	**-0.6**
NCU	**National Centr**	**0.66**	**315**	P	**Pn**	**13 12 01.4**	**-0.6**
NCU	baz=321			S	**Sn**	**13 12 10.7**	**-0.5**
HSN	**Hsinchu**	**0.73**	**294**	P	**Pn**	**13 12 02.2**	**-0.7**
HSN	baz=312			*e*S	**Sn**	**13 12 12.6**	**-0.3**
ESL	**Shilin**	**0.73**	**200**	*e*P	**Pn**	**13 12 00.9**	**-2.0**
ESL	baz=182			*e*S	**Sn**	**13 12 13.7**	**+0.7**
TWY	**Chenhua**	**0.77**	**353**	*e*P	**Pn**	**13 12 03.2**	**-0.3**
TWY	baz=351			*e*S	**Sn**	**13 12 13.7**	**-0.2**
TWQ1	**Liyutan**	**0.86**	**260**	*e*P	**Pn**	**13 12 04.9**	**+0.2**
TWQ1	baz=259			*e*S	**Sn**	**13 12 15.7**	**-0.4**
NSY	**Sanyi**	**0.86**	**264**	*e*P	**Pn**	**13 12 04.1**	**-0.6**
NSY	baz=264			*e*S	**Sn**	**13 12 16.1**	**0.0**
SMLT	**Sun Moon Lake**	**0.96**	**230**	*i* P	**Pn**	**13 12 06.5**	**+0.4**
SMLT	baz=220			S	**Sn**	**13 12 18.6**	**0.0**
TYC	**Yuchr**	**0.98**	**232**	P	**Pn**	**13 12 06.4**	**+0.1**
TYC	baz=229			S	**Sn**	**13 12 18.7**	**-0.3**
SSLB	**Suanglung**	**0.99**	**224**	*e*P	**Pn**	**13 12 05.4**	**-1.0**
SSLB				*e*S	**Sn**	**13 12 20.4**	**+1.1**
TCU	**Taichung**	**1.00**	**249**	*e*P	**Pn**	**13 12 06.4**	**-0.2**
TCU	baz=247			*e*S	**Sn**	**13 12 20.7**	**+1.1**
EHY	**Hungye**	**1.06**	**199**	*e*P	**Pn**	**13 12 05.1**	**-2.3**
EHY	baz=184			*e*S	**Sn**	**13 12 19.2**	**-1.7**
WNT	**Mingjian**	**1.12**	**236**	*e*P	**Pn**	**13 12 08.5**	**+0.3**
WNT	baz=246			*e*S	**Sn**	**13 12 23.6**	**+1.1**
PCYT	**Pengchaiyu**	**1.17**	**17**	*e*P	**Pn**	**13 12 08.9**	**0.0**
PCYT	baz=21			*e*S	**Sn**	**13 12 23.9**	**+0.4**
YULB	**Yu-li**	**1.17**	**199**	*e*Pn	**Pn**	**13 12 07.0**	**-1.9**
YULB				*e*Sn	**Sn**	**13 12 22.9**	**-0.9**
TWF1	**Yuli**	**1.21**	**198**	*e*P	**Pn**	**13 12 06.8**	**-2.7**
TWF1	baz=184			*e*S	**Sn**	**13 12 22.8**	**-1.9**
YUS	**Yu-Shan**	**1.23**	**214**	*e*P	**Pn**	**13 12 10.0**	**+0.3**
YUS	baz=199			*e*S	**Sn**	**13 12 25.6**	**+0.6**
ALS	**Alishan**	**1.29**	**220**	⇑P	**Pn**	**13 12 11.3**	**+0.8**
ALS	baz=226			*e*S	**Sn**	**13 12 27.3**	**+0.7**
CHN5	**Tsauling**	**1.30**	**226**	⇑P	**Pn**	**13 12 10.9**	**+0.1**
CHN5	baz=223			*e*S	**Sn**	**13 12 27.6**	**+0.6**
WGK	**Gukeng**	**1.32**	**232**	*e*P	**Pn**	**13 12 11.2**	**+0.1**
CHKT	**Chengkung**	**1.44**	**192**	*e*P	**Pn**	**13 12 11.5**	**-1.1**
CHKT	baz=188			*e*S	**Sn**	**13 12 28.9**	**-1.4**
ELDTW	**Lidau**	**1.46**	**206**	*e*P	**Pn**	**13 12 12.1**	**-0.7**
ELDTW	baz=193			*e*S	**Sn**	**13 12 30.8**	**+0.1**
CHN4	**Tsaushan**	**1.54**	**222**	*e*P	**Pn**	**13 12 14.7**	**+0.8**
CHN4	baz=218			*e*S	**Sn**	**13 12 33.4**	**+0.8**
TPUB	**Ta-pu**	**1.55**	**219**	*e*Pn	**Pn**	**13 12 14.1**	**-0.1**
TPUB				*e*Sn	**Sn**	**13 12 33.3**	**+0.2**
STYT	**Tauyuan**	**1.59**	**213**	P	**Pn**	**13 12 15.0**	**+0.2**
STYT	baz=199			S	**Sn**	**13 12 34.3**	**+0.1**
WTP	**Ta-pu**	**1.60**	**219**	*e*P	**Pn**	**13 12 15.2**	**+0.3**
WTP	baz=216			S	**Sn**	**13 12 36.0**	**+1.6**
TWK	**Hsinying**	**1.66**	**222**	*e*P	**Pn**	**13 12 15.9**	**+0.2**
TWK	baz=218			*e*S	**Sn**	**13 12 36.0**	**+0.2**
CHN1	**Nanshi**	**1.70**	**219**	*e*P	**Pn**	**13 12 16.5**	**+0.3**
CHN1	baz=216			*e*S	**Sn**	**13 12 37.1**	**+0.4**
SGST	**Jiashian**	**1.75**	**216**	P	**Pn**	**13 12 17.2**	**+0.3**
SGST	baz=223			S	**Sn**	**13 12 39.6**	**+1.6**
TWG	**Pinlang**	**1.78**	**199**	*e*Pn	**Pn**	**13 12 16.6**	**-0.7**
TWG				*e*Sn	**Sn**	**13 12 34.2**	**-4.4**
TWG	**Pinlang**	**1.78**	**199**	*e*P	**Pn**	**13 12 17.7**	**+0.5**
CHN8	**Yiju**	**1.79**	**230**	*e*P	**Pn**	**13 12 17.9**	**+0.5**
CHN8	baz=238			*e*S	**Sn**	**13 12 41.0**	**+2.1**
CHN3	**Shinhua**	**1.88**	**221**	*e*P	**Pn**	**13 12 19.4**	**+0.7**
SSD	**Sandimen**	**2.01**	**209**	*e*P	**Pn**	**13 12 21.3**	**+0.8**
SSD	baz=207			*e*S	**Sn**	**13 12 45.2**	**+0.8**
ECL	**Taimali**	**2.02**	**200**	*e*P	**Pn**	**13 12 21.2**	**+0.6**
TWM1	**Shoushan**	**2.05**	**215**	*e*P	**Pn**	**13 12 22.8**	**+1.9**
EAST	**Anshuo**	**2.26**	**201**	*e*P	**Pn**	**13 12 24.6**	**+0.8**
EAST	baz=188			*e*S	**Sn**	**13 12 50.8**	**+0.4**
SCZT	**Fangliau**	**2.35**	**205**	*e*P	**Pn**	**13 12 25.6**	**+0.5**

*CSEM **16** 13:12:13.9±0.4, 42°.66N×43°.40E, h4km±2km, ML3.2, Error ellipse: s-maj=12.6km s-min=4.4km az=21.0*
*TIF **16** 13:12:13.6, 42°.51N×43°.37E, h10km*
*DDA **16** 13:12:29.5, 41°.91N×42°.50E, h7km±2km, Md2.9*
ISC 16 13:12:13.9±1.9, 42°.7N±0°.1×43°.43E±0°.05, h7km±4km, n19, σ0§50/31, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.09**	**170**	P	**Pg**	**13 12 16.3**	**+0.3**
ONI				S	**Sg**	**13 12 17.8**	**+0.3**
ONI	**Oni**	**0.09**	**170**	P	**Pg**	**13 12 16.3**	**+0.3**
ONI				S	**Sg**	**13 12 17.8**	**+0.3**
GOR	**Gori**	**0.86**	**144**	P	**Sg**	**13 12 41.8**	**+0.3**
GOR	**Gori**	**0.86**	**144**	S	**Sg**	**13 12 41.8**	**+0.4**
TBLG	**Delisi**	**1.36**	**134**	P	**Sb**	**13 12 57.3**	**+0.2**
TBLG	**Delisi**	**1.36**	**134**	S	**Sb**	**13 12 57.3**	**+0.2**
MTA	**Mtatsminda**	**1.41**	**134**	P	**Sg**	**13 12 58.3**	**-0.9**
MTA	**Mtatsminda**	**1.41**	**134**	S	**Sb**	**13 12 58.3**	**-0.4**
BCA	**Borcka**	**1.83**	**228**	*e*PN	**Pn**	**13 12 45.2**	**-0.4**
BCA				*e*SN	**Sn**	**13 13 09.1**	**+0.2**
ARTV	**Artvin**	**1.87**	**217**	*i* P	**Pn**	**13 12 46.1**	**-0.1**
ARTV				*i* S	**Sn**	**13 13 09.9**	**-0.1**
ARTV	**Artvin**	**1.87**	**217**	*i* P	**Pn**	**13 12 46.1**	**-0.1**
ARTV				*i* S	**Sn**	**13 13 09.9**	**-0.1**
DBOC	**Borcka**	**1.87**	**225**	*i* P	**Pn**	**13 12 46.1**	**-0.1**
DBOC				*e*S	**Sn**	**13 13 09.4**	**-0.7**
DBOC	**Borcka**	**1.87**	**225**	*i* P	**Pn**	**13 12 46.1**	**-0.2**
DBOC				*e*S	**Sn**	**13 13 09.4**	**-0.7**
DAGI	**Agillar**	**1.96**	**216**	*i* P	**Pn**	**13 12 47.6**	**+0.1**
DAGI				*i* S	**Sn**	**13 13 12.3**	**0.0**
DBAD	**Bademkaya**	**2.11**	**219**	*i* P	**Pn**	**13 12 49.9**	**+0.5**
DBAD				*i* S	**Sn**	**13 13 15.4**	**-0.4**
DBAD	**Bademkaya**	**2.11**	**219**	*i* P	**Pn**	**13 12 49.9**	**+0.4**
DBAD				*i* S	**Sn**	**13 13 15.4**	**-0.5**
DDEM	**Demirkent**	**2.18**	**216**	*i* P	**Pn**	**13 12 51.2**	**+0.6**
DDEM				*i* S	**Sn**	**13 13 19.0**	**+1.3**
DDEM	**Demirkent**	**2.18**	**216**	*i* P	**Pn**	**13 12 51.2**	**+0.7**
DDEM				*i* S	**Sn**	**13 13 19.0**	**+1.2**
KTUT	**Trabzon**	**3.22**	**240**	*e*PN	**Sg**	**13 13 56.5**	**-0.7**

CSEM 16 13:15:23.9, 38°.32N×1°.04W, h0km, ML1.4, Mining explosion. After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETOB	**Tobarra**	**0.52**	**309**	Pg	Pg	13 15 33.2	-0.7
	5.6nm,0.3s,SNR=36						
ETOB				Lg		13 15 41.2	
	11nm,0.4s,SNR=6.1						
EBEN	**Beniarda**	**0.74**	**58**	Pg	Pg	13 15 37.8	-0.4
	SNR=7.9						
EBEN				Lg		13 15 53.3	
	7.2nm,0.4s,SNR=5.9						
EVIA	**Vianos**	**1.20**	**286**	Pg	Pg	13 15 44.9	-1.9
	6.6nm,0.4s,SNR=6.5						
EVIA				Lg		13 16 02.1	
	6.1nm,0.3s						
EHUE	**Huescar**	**1.33**	**248**	Pg	Pg	13 15 48.6	-0.7
	SNR=7.9						
EHUE				Lg		13 16 08.9	
	SNR=7.9						
EQES	**Quesada**	**1.69**	**253**	Pg	Pg	13 15 55.0	-1.2
	5.6nm,0.4s,SNR=5.2						
EQES				Lg		13 16 17.0	
	SNR=7.9						
ESBB	**Sonseca Array**	**2.65**	**302**	Pg	Pg	13 16 12.5	-2.3
	SNR=7.9						
ESBB				Lg		13 16 48.0	
	SNR=7.9						
ESDC	**Sonseca Array**	**2.65**	**302**	Pg	Pg	13 16 13.3	-1.5
ESDC				Lg		13 16 49.9	
ESDC	**Sonseca Array**	**2.65**	**302**	Pg	Pg	13 16 13.3	-1.5
	2.3nm,0.4s,SNR=9.3						

IDC 16 13:15:26.5±3.3, 32°.51S×178°.11W, h0km, mb3.7/1, mb1 3.8/2, mb1mx3.6/13, mbtmp3.7/2, ML3.5/1, Error ellipse: s-maj=74.8km s-min=37.4km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.94**	**213**	Pn	Pn	13 17 09.8	+0.4
	0.9nm,0.3s,baz=314,slow=5.5,SNR=5.3						
URZ				Sn	Sn	13 18 29.0	0.0
	3.5nm,0.3s,baz=314,slow=24,SNR=11						
ASAR	**Alice Springs**	**42.94**	**269**	P	P	13 23 27.6	+0.3
	0.7nm,0.6s,baz=108,slow=7.4,SNR=16						
WRA	**Warramunga Arr**	**44.12**	**274**	P	P	13 23 36.5	-0.4
FINES	**FINESS Array B**	**147.08**	**339**	PKPbc	PKPbc	13 35 09.7	-0.9
	1.4nm,0.8s,baz=66,slow=3.4,SNR=3.8						

*ISCJB **16** 13:21:09.0±0.9, 31°.94N±0°.03×104°.38E±0°.05, h9km±6km, mb4.0/19, Error ellipse: s-maj=7.6km s-min=5.1km az=8.2*
*IDC **16** 13:21:08.9±0.8, 31°.85N×104°.30E, h0km, mb3.9/16, mb1 4.0/17, mb1mx3.9/28, mbtmp3.9/17

CD2				Sg	Sg	13 21 47.8	+0.8
CD2				smax			
comp=N,2μm,0.7s							
LZH	**Lanzhou**	**4.21**	**355**	Pn	**Pn**	13 22 18.6	+3.2
LZH				Sg	**Sg**	13 23 26.9	-0.1
LZH				smax			
comp=N,200nm,0.6s							
LZH				smax			
comp=E,360nm,1.0s							
LZH				LR	LR		
comp=N,2μm,7.9s							
XAN	**Xi'an**	**4.41**	**60**	Pg	**Pg**	13 22 30.8	-5.4
XAN				Sg	**Sg**	13 23 30.1	-3.2
XAN				smax			
comp=N,310nm,1.0s							
XAN				smax			
comp=E,170nm,1.0s							
ENH	**Enshi**	**4.70**	**109**	*e*Pn	**Pn**	13 22 23.1	+1.0
ENH				*e*Sn	**Sn**	13 23 19.3	+2.9
GYA	**Guiyang**	**5.78**	**159**	Pn	**Pn**	13 22 37.8	+0.9
GYA				Sn	**Sn**	13 23 42.0	-0.9
GYA				smax			
comp=N,150nm,0.9s							
GYA				smax			
comp=E,120nm,0.8s							
KMI	**Kunming**	**6.88**	**192**	Pn	**Pn**	13 22 53.9	+1.8
KMI				Sn	**Sn**	13 24 07.8	-2.3
KMI				smax			
comp=N,22nm,0.9s							
KMI				smax			
comp=E,23nm,0.7s							
KMI				LR	LR		
comp=N,270nm,10.0s							
KMI				LR	LR		
comp=E,210nm,9.7s							
KMI				LR	LR		
comp=Z,200nm,10.0s							
HHC	**Hu-ho-hao-te**	**10.67**	**31**	*e*P	**Pn**	13 23 44.8	+0.8
HHC				pP		13 23 51.9	
HHC				sP		13 23 56.8	
HHC				S	**Sn**	13 25 44.1	+0.9
HHC				sS		13 25 54.8	
HHC				SS		13 25 58.9	
HHC				pmax	pmax		
comp=Z,11nm,1.0s							
HHC				pmax	pmax		
comp=Z,99nm,4.9s							
HHC				LR	LR		
comp=N,310nm,4.4s							
HHC				LR	LR		
comp=E,190nm,4.0s							
HHC				LR	LR		
comp=Z,150nm,5.3s							
SONM	**Songino Array**	**16.01**	**5**	Pn	**Pn**	13 24 56.5	+0.2
comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=6.9							
KSRS	**Korea Array**	**20.16**	**68**	P	**P**	13 25 45.8	+0.4
comp=Z,2.1nm,0.6s,baz=255,slow=10,SNR=15							
CN2	**Changchun**	**20.42**	**48**	*e*P	**P**	13 25 50.3	+2.1
CN2				pmax	pmax		
comp=Z,30nm,0.7s							
MK31	**Makanchi Array**	**22.53**	**318**	*e*P	**P**	13 26 10.7	-0.2
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	13 26 11.9	+1.1
comp=Z,2.4nm,0.7s,mb3.7,baz=116,slow=12,SNR=23							
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	**P**	13 26 44.6	-0.2
comp=Z,2.3nm,0.7s,mb3.8,baz=130,slow=10.0,SNR=9.7							
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	13 26 50.8	+0.2
comp=Z,1.0nm,0.8s,mb3.4,baz=126,slow=10,SNR=10							
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	13 27 40.5	+0.6
comp=Z,0.6nm,0.5s,mb3.7,baz=121,slow=11,SNR=3.9							
ABKAR	**Akbulak array**	**37.31**	**311**	*e*P	**P**	13 28 23.5	+0.4
comp=Z,2.0nm,0.8s,mb4.0							
AKTK	**Aktyubinsk**	**38.76**	**312**	P	**P**	13 28 33.4	-2.0
AKTO	**Aktyubinsk**	**38.76**	**312**	P	**P**	13 28 33.4	-2.0
comp=Z,0.5nm,0.4s,mb3.6,baz=97,slow=8.1,SNR=3.2							
PETK	**Petropavlovsk-**	**43.49**	**45**	P	**P**	13 29 13.1	-1.2
comp=Z,2.3nm,0.7s,mb4.0,baz=180,slow=4.3,SNR=4.1							
JOF	**Joensuu**	**54.48**	**327**	*e*p	**P**	13 30 31.0	-7.3
comp=Z,1.8nm,0.7s,mb4.1							
BRTR	**Keskin Array B**	**56.53**	**299**	P	**P**	13 30 52.7	-0.8
comp=Z,0.6nm,0.7s,mb3.7,baz=120,slow=8.5,SNR=3.8							
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	13 30 53.4	-0.3
comp=Z,2.8nm,0.8s,mb4.3,baz=84,slow=8.5,SNR=4.6							
AKASG	**Malin Array Be**	**57.00**	**313**	P	**P**	13 30 56.2	-0.4
comp=Z,0.8nm,0.4s,mb4.1,baz=68,slow=7.1,SNR=3.7							
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	13 30 56.6	0.0
comp=Z,2.6nm,0.6s,mb4.4,baz=88,slow=8.7,SNR=12							
ASAR	**Alice Springs**	**62.05**	**149**	P	**P**	13 31 31.8	+0.1
comp=Z,1.2nm,0.7s,mb4.1,baz=335,slow=6.8,SNR=18							
NB2	**NORSAR Subarra**	**64.11**	**327**	P	**P**	13 31 44.1	-0.9
comp=Z,0.9nm,0.5s,mb4.1,baz=73,slow=6.9							
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	13 31 43.2	-1.8
comp=Z,0.9nm,0.5s,mb4.0,baz=74,slow=6.6,SNR=5.3							
NOA	**NORSAR Array B**	**64.11**	**327**	P	**P**	13 31 43.2	-1.8
GERES	**GERESS Array B**	**67.15**	**314**	P	**P**	13 32 05.2	+0.4
comp=Z,0.4nm,0.4s,mb3.9,baz=56,slow=7.3,SNR=2.5							
CDF	**Champ du Feu**	**71.20**	**316**	*e*P	**P**	13 32 29.9	0.0
STKA	**Stephens Creek**	**72.55**	**147**	P	**P**	13 32 37.4	-0.7
comp=Z,2.2nm,0.8s,mb4.1,baz=342,slow=9.6,SNR=2.5							
STKA	**Stephens Creek**	**72.55**	**147**	P	**P**	13 32 37.4	-0.7
LPG	**La Plagne**	**72.86**	**313**	*e*P	**P**	13 32 40.5	+0.5
comp=Z,3.4nm,0.5s,mb4.2							
LPG	**La Plagne**	**72.86**	**313**	*e*P	**P**	13 32 40.5	+0.5
comp=Z,1.7nm,0.5s,mb4.2							
LPL	**La Plagne**	**72.87**	**313**	*e*P	**P**	13 32 40.5	+0.5
comp=Z,5.8nm,0.7s,mb4.3							
LPL	**La Plagne**	**72.87**	**313**	*e*P	**P**	13 32 40.5	+0.5
comp=Z,2.9nm,0.6s,mb4.4							
SMF	**Signal de Mont**	**74.09**	**315**	*e*P	**P**	13 32 47.0	-0.1
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	13 33 25.0	+0.2
comp=Z,0.4nm,0.6s,mb3.5,baz=326,slow=5.0,SNR=5.5							

FUNV **16** *13:41:57.3*±*6.98N*×*72.91W, h164*km*, MW3.5, 2D,*
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.06**	**34**	⇓*i*P	Pn	13 42 23.0	-0.9
CAPV				*e*S	Sn	13 42 42.8	-1.5
VIGV	**El Vigia**	**2.40**	**39**	*e*P	Pn	13 42 37.0	-1.0
VIGV				*e*S	Sn	13 43 07.2	-2.2
SOCV	**Socops**	**2.42**	**57**	⇓*e*P	Pn	13 42 37.5	-0.6
SOCV				*e*S	Sn	13 43 06.3	-3.3
ELOV	**Elorza**	**3.40**	**89**	*e*P	Pn	13 42 49.1	-1.2
VIRV	**Villa del Rosa**	**3.54**	**8**	*e*P	Pn	13 42 49.9	-2.1
VIRV				*e*S	Sn	13 43 30.1	-4.6
SANV	**Sanarito**	**4.18**	**53**	*e*P	Pn	13 42 58.5	-1.8
SANV				*e*S	Sn	13 43 44.2	-5.1
CURV	**Curarigua**	**4.20**	**44**	*e*P	Pn	13 42 59.6	-0.9
SIQV	**Siquisique**	**4.76**	**40**	*e*P	Pn	13 43 06.6	-1.3
SIQV				*e*S	Sn	13 43 57.1	-6.0
BAUV	**El Baul**	**5.20**	**68**	*e*P	Pn	13 43 11.1	-2.5
BAUV				*e*S	Sn	13 44 06.8	-6.6
MONV	**Montecano**	**5.73**	**30**	*e*P	Pn	13 43 19.4	-1.2
CAOV	**Caicara del Or**	**6.55**	**87**	*e*P	Pn	13 43 29.2	-2.2
BIRV	**Birongo**	**7.43**	**62**	*e*P	Pn	13 43 40.9	-2.2
CUPV	**Cœpira**	**7.68**	**66**	*e*P	Pn	13 43 44.1	-2.3

BYKL **16** *13:48:59.2*±*0.7, 57.40N*×*120.78E*
MOS 16 13:49:02.0±**2.5, 57.28N**×**120.57E, h22**km**, mb4.4/1, Error ellipse: s-maj=22.9km s-min=17.0km az=137.4, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.31**	**254**	*e*P	Pn	13 49 25.4	+0.5
CRS				*e*		13 49 43.2	
CRS				pmax	pmax		
comp=Z,163nm,0.8s							
CRS				smax			
comp=E,911nm,1.0s							
CRS	**Chara**	**1.31**	**254**	*e*Pg	Pn	13 49 25.4	+0.5
CRS				Pmax		13 49 26.9	
comp=E,165nm,0.8s							
CRS				*i* Sg	Sn	13 49 43.5	+1.7
CRS				Smax		13 49 43.9	
comp=E,911nm,1.0s							
NRGR	**Nerungri**	**2.36**	**104**	*e*P	Pn	13 49 40.4	+1.1
NRGR				S	Sn	13 50 08.5	+1.0
NRGR				smax			
comp=N,122nm,0.5s							
CLNS	**Chul'man**	**2.40**	**99**	*e*P	Pn	13 49 39.8	-0.1
CLNS				*e*		13 50 09.9	
CLNS				pmax	pmax		
comp=Z,26nm,0.3s							
CLNS				pmax	pmax		
comp=N,7.0nm,0.2s							
CLNS				pmax	pmax		
comp=E,12nm,0.3s							
CLNS				smax			
comp=E,145nm,0.3s							
CLNS				smax			
comp=Z,121nm,0.3s							
CLNS				smax			
comp=N,370nm,0.4s							
CLNS	**Chul'man**	**2.40**	**99**	*e*Pg	Pn	13 49 41.4	+1.5
CLNS				*e*Sg	Sn	13 50 11.6	+3.0
IENR	**Iengra**	**2.59**	**112**	*e*Pn	Pn	13 49 42.0	-0.5
IENR				*e*Pg	Pn	13 49 45.6	+3.1
IENR				*e*Sg	Sn	13 50 18.0	+4.8
NLYR	**Nelyaty**	**2.79**	**256**	*e*P	Pn	13 49 51.0	+5.8
NLYR				*e*		13 50 26.0	
NLYR				pmax	pmax		
comp=Z,126nm,0.4s							
NLYR				smax			
comp=N,484nm,1.1s							
NLYR	**Nelyaty**	**2.79**	**256**	*e*Pn	Pn	13 49 46.5	+1.3
NLYR				*e*Pg	Pn	13 49 51.3	+6.1
NLYR				Pmax		13 49 55.9	
comp=N,125nm,0.4s							
NLYR				*e*Sg	Sn	13 50 27.9	+10
NLYR				Smax		13 50 41.8	
comp=N,385nm,1.3s							
TUP	**Tupik**	**2.88**	**187**	*e*P	Pn	13 49 46.9	+0.4
TUP				*e*S	Sn	13 50 22.5	+2.0
TUP				pmax	pmax		
comp=Z,116nm,0.6s							
TUP				smax			
comp=E,821nm,0.8s							
TUP	**Tupik**	**2.88**	**187**	*e*Pn	Pn	13 49 47.2	+0.7
TUP				*e*Pg	Pn	13 49 52.7	+6.2
TUP				Pmax		13 49 55.8	
comp=E,137nm,0.6s							
TUP				*e*Sn	Sn	13 50 20.7	+0.2
TUP				*e*Sg	Sn	13 50 31.1	+11
TUP				Smax		13 50 32.7	
comp=E,818nm,0.5s							
TNDR	**Tynda**	**3.15**	**131**	*e*Pn	Pn	13 49 50.1	-0.1
TNDR				*e*Pg	Pn	13 49 56.3	+6.1
TNDR				*e*Sn	Sn	13 50 26.6	-0.5
TNDR				*e*Sg	Sn	13 50 36.3	+9.2
BOD	**Bodaibo**	**3.58**	**281**	*e*P	Pn	13 49 56.3	+0.2
BOD				pmax	pmax		
comp=Z,14nm,0.3s							
BOD	**Bodaibo**	**3.58**	**281**	*e*Pn	Pn	13 49 56.6	+0.5
BOD				*e*Pg	Pn	13 50 04.3	+8.2
BOD				Pmax		13 50 10.4	
comp=Z,18nm,0.6s							
BOD				*e*Sn	Sn	13 50 37.2	-0.4
BOD				*e*Sg	Sn	13 50 50.8	+13
BOD				Smax		13 50 57.1	
comp=Z,249nm,1.2s							
SVKR	**Severomuysk**	**4.04**	**256**	*e*Pn	Pn	13 50 04.7	+2.3
SVKR				*e*Pg	Pn	13 50 14.3	+12
SVKR				Pmax		13 50 25.5	
comp=Z,41nm,0.5s							
SVKR				*e*Sn	Sn	13 50 51.9	+3.0
SVKR				*e*Sg	Sn	13 51 08.1	+19
SVKR				Smax		13 51 17.6	
comp=Z,335nm,0.7s							
UKT	**Uakit**	**4.26**	**248**	*e*P	Pn	13 50 06.7	+1.3
UKT				*e*S	Sn	13 50 55.2	+0.9
UKT				pmax	pmax		
comp=Z,20nm,0.7s							
UKT				smax			
comp=N,157nm,0.9s							
UKT	**Uakit**	**4.26**	**248**	*e*Pn	Pn	13 50 07.2	+1.8
UKT				*e*Pg	Pn	13 50 18.1	+13
UKT				Pmax		13 50 22.4	
comp=N,20nm,0.6s							
UKT				*e*Sg	Sn	13 51 13.5	+19
UKT				Smax		13 51 21.6	
comp=N,158nm,0.9s							
KROS	**Kirovskiy**	**4.60**	**126**	*e*Pg	Pn	13 50 19.7	+10
KROS				*e*Sg	Sn	13 51 17.5	+15
YOA	**Uoyan**	**5.01**	**260**	*e*Sg	Sn	13 51 35.7	+23
YOA				Smax		13 51 48.8	
comp=N,668nm,1.1s							
ZEA	**Zeya**	**5.20**	**130**	*e*Pg	Pn	13 50 32.4	+14
ZEA				*e*Sg	Sn	13 51 38.3	+21
KMO	**Kumora**	**5.36**	**259**	*e*Pn	Pn	13 50 21.9	+1.3
KMO				*e*Pg	Pn	13 50 38.7	+18
KMO				Pmax		13 50 45.2	
comp=N,13nm,0.4s							
KMO				*e*Sn	Sn	13 51 25.1	+3.5
KMO				*e*Sg	Sn	13 51 48.2	+27
KMO				Smax		13 51 55.2	
comp=N,155nm,1.0s							
YLYR	**Ulyunkhan**	**5.79**	**249**	*e*Pn	Pn	13 50 28.0	+1.5
YLYR				*e*Pg	Pn	13 50 46.4	+20
YLYR				Pmax		13 50 53.8	
comp=N,6.0nm,1.4s							
YLYR				*e*Sn	Sn	13 51 36.0	+3.8
YLYR				*e*Sg	Sn	13 52 02.7	+31
YLYR				Smax		13 52 16.2	
comp=N,106nm,1.7s							
NIZ	**Nizh Angarsk**	**6.29**	**261**	*e*P	Pn	13 50 35.1	+1.8
NIZ	**Nizh Angarsk**	**6.29**	**261**	*e*Sg	Sn	13 52 15.8	+31
NIZ				Smax		13 52 39.5	
comp=N,62nm,1.1s							
YAK	**Yakutsk**	**6.63**	**40**	*e*P	Pn	13 50 34.9	-3.0
YAK				pmax	pmax		
comp=Z,5.0nm,0.4s							
YAK				pmax	pmax		
comp=E,1.0nm,0.3s							
YAK				pmax	pmax		
comp=N,2.0nm,0.4s							
YAK				pmax	pmax		
comp=Z,16nm,0.5s							
YAK				pmax	pmax		
comp=E,12nm,0.5s							
YAK				pmax	pmax		
comp=N,5.0nm,0.4s							
SYVR	**Suvo**	**7.02**	**243**	*e*Pn	Pn	13 50 47.4	+4.1
SYVR				*e*Pg	Pn	13 51 10.0	+27
SYVR				Pmax		13 51 13.1	
comp=N,11nm,1.1s							
SYVR				*e*Sn	Sn	13 52 02.7	+0.4
SYVR				*e*Sg	Sn	13 52 42.4	+40
SYVR				Smax		13 52 57.2	
comp=N,111nm,1.0s							
MXMB	**Maximikha**	**7.86**	**244**	*e*Sg	Sn	13 53 07.4	+44
MXMB				Smax		13 53 18.3	
comp=N,182nm,0.9s							
OGRR	**Ongureny**	**8.22**	**249**	*e*Sg	Sn	13 53 17.4	+45
OGRR				Smax		13 53 27.6	
comp=N,45nm,1.2s							
KPC	**Khapcheranga**	**9.02**	**216**	*e*Pn	Pn	13 51 10.7	0.0
KPC				*e*Pg	Pn	13 51 43.2	+32
KPC				Pmax		13 51 50.4	
comp=N,6.0nm,2.2s							
KPC				*e*Sg	Sn	13 53 41.2	+50
KPC				Smax		13 53 48.4	
comp=N,58nm,1.3s							
ZRHB	**Zarechye**	**9.06**	**244**	*e*Sg	Sn	13 53 43.9	+52
ZRHB				Smax		13 54 05.4	
comp=N,162nm,1.2s							
UUDB	**Ulan-Yde**	**9.24**	**240**	*e*Sg	Sn	13 53 51.3	+54
UUDB				Smax		13 54 05.7	
comp=N,93nm,1.0s							
TRG	**Tyrgan**	**9.33**	**247**	*e*Sg	Sn	13 53 54.0	+55
TRG				Smax		13 53 57.9	
comp=N,29nm,2.8s							
FFNB	**Fofonovo**	**9.56**	**243**	*e*Sg	Sn	13 54 01.7	+57
FFNB				Smax		13 54 09.2	
comp=N,129nm,1.1s							
HRMR	**Khuramsha**	**9.73**	**240**	*e*Pg	Pn	13 51 58.3	+38
HRMR				Pmax		13 52 04.7	
comp=N,8.0nm,1.0s							
HRMR				*e*Sg	Sn	13 54 06.8	+58
HRMR				Smax		13 54 18.0	
comp=N,175nm,1.1s							
LSTR	**Listvyanka**	**10.61**	**246**	*e*Sg	Sn	13 54 33.5	+63
LSTR				Smax		13 54 39.7	
comp=N,59nm,2.3s							
TLY	**Talaya**	**11.32**	**247**	*e*Sg	Sn	13 54 55.5	+68
TLY				Smax		13 55 18.4	
comp=N,23nm,1.7s							
MOY	**Mondy**	**12.68**	**252**	*e*Sg		13 55 35.1	
MOY				Smax		13 55 55.0	
comp=N,25nm,1.4s							

ISCJB **16** *14:01:16.6*±*0.5, 36.97N*±*0.02*×*29.20E*±*0.03, h5*km±*4km, Error ellipse: s-maj=4.3km s-min=3.6km az=142.6*
CSEM **16** *14:01:16.9*±*0.1, 36.97N*×*29.21E, h8*km*, MD3.0, Error ellipse: s-maj=1.7km s-min=1.6km az=8.0*
ISK **16** *14:01:16.0, 37.00N*×*29.18E, h6*km*, MD3.0*
IDC **16** *14:01:16.3*±*1.8, 36.76N*×*29.36E, h0*km*, mb3.7/1, mb1 3.4/5, mb1mx3.2/25, mbtmp3.4/5, ML3.0/4, Error ellipse: s-maj=37.8km s-min=21.5km az=158.0*
DDA **16** *14:01:17.6, 37.04N*×*29.25E, h28*km*±2*km*, Md3.3*
ISC 16 14:01:17.1±**0.5, 36.97N**±**0.02**×**29.20E**±**0.03, h6**km±4km**, n55,** σ**0.96/79, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*PG	**Pg**	**14 01 22.5**	**-0.4**
GLHS				*e*SG	**Sg**	**14 01 27.1**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*Pg	**Pg**	**14 01 22.5**	**-0.4**
GLHS				*e*Sg	**Sg**	**14 01 27.1**	**+0.3**
FETY	**Fethiye**	**0.35**	**196**	*e*PG	**Pg**	**14 01 23.7**	**-0.2**
FETY				*e*SG	**Sg**	**14 01 29.5**	**+1.1**
FETY	**Fethiye**	**0.35**	**196**	*e*Pg	**Pg**	**14 01 23.7**	**-0.2**
FETY				*e*Sg	**Sg**	**14 01 29.5**	**+1.0**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**14 01 24.3**	**-0.3**
GOLH				*i* S	**Sg**	**14 01 30.6**	**+0.9**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**14 01 24.3**	**-0.3**
GOLH				*i* S	**Sg**	**14 01 30.6**	**+0.9**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**14 01 30.7**	**+4.2**
TURN				*i* S	**Sg**	**14 01 43.4**	**+10**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**14 01 27.8**	**-1.0**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**14 01 27.8**	**-1.0**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**14 01 30.0**	**-1.0**
DNZL				*i* S	**Sg**	**14 01 42.0**	**+1.5**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* S	**Sg**	**14 01 42.0**	**+1.6**
YER	**Yerkesik**	**0.75**	**283**	*e*PG	**Pg**	**14 01 30.6**	**-1.0**
YER	**Yerkesik**	**0.75**	**283**	*e*Pg	**Pg**	**14 01 30.6**	**-0.9**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**14 01 30.6**	**-1.6**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**14 01 30.6**	**-1.6**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**14 01 32.6**	**+0.1**
AKAS				*i* S	**Sg**	**14 01 47.4**	**+4.4**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**14 01 32.6**	**0.0**
AKAS				*i* S	**Sg**	**14 01 47.4**	**+4.4**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**14 01 34.8**	**+0.1**
KORT				*i* S	**Sg**	**14 01 49.2**	**+2.6**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**14 01 34.8**	**+0.1**
KORT				*i* S	**Sg**	**14 01 49.2**	**+2.5**
ANTB	**Antalya**	**1.17**	**93**	*e*PN	**Pn**	**14 01 39.6**	**-0.3**
ANTB	**Antalya**	**1.17**	**93**	*e*Pn	**Pn**	**14 01 39.6**	**-0.3**
MLSB	**Milas**	**1.18**	**286**	*e*PN	**Pn**	**14 01 38.5**	**-1.7**
MLSB	**Milas**	**1.18**	**286**	*e*Pn	**Pn**	**14 01 38.5**	**-1.6**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**14 01 40.5**	**0.0**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**14 01 40.5**	**0.0**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**14 01 40.9**	**-0.2**
AYDN				*i* S	**Sg**	**14 01 58.0**	**+0.5**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**14 01 40.9**	**-0.2**
AYDN				*i* S	**Sg**	**14 01 58.0**	**+0.5**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**14 01 41.9**	**-0.2**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**14 01 41.9**	**-0.2**
ISP	**Isparta**	**1.35**	**50**	*e*PN	**Pn**	**14 01 42.1**	**-0.4**
ISP	**Isparta**	**1.35**	**50**	*e*Pn	**Pn**	**14 01 42.1**	**-0.4**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**14 01 41.6**	**-1.1**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**14 01 41.6**	**-1.1**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**14 01 44.3**	**+1.1**
BDRM				*i* S	**Sb**	**14 02 03.9**	**+1.9**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**14 01 44.3**	**+1.1**
BDRM				*i* S	**Sb**	**14 02 03.9**	**+1.9**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**14 01 43.4**	**+0.1**
KHAL				*i* S	**Sb**	**14 02 02.4**	**+0.4**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**14 01 43.4**	**+0.1**
KHAL				*i* S	**Sb**	**14 02 02.4**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**14 01 44.6**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**14 01 44.6**	**-0.2**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*PN	**Pn**	**14 01 45.3**	**-0.5**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*Pn	**Pn**	**14 01 45.3**	**-0.5**
MANT	**Manisa**	**1.60**	**342**	*i* P	**Pn**	**14 01 45.8**	**-0.1**
MANT				*i* S	**Sn**	**14 02 06.8**	**0.0**
MANT	**Manisa**	**1.60**	**342**	*i* P	**Pn**	**14 01 45.8**	**0.0**
MANT				*i* S	**Sn**	**14 02 06.8**	**0.0**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**14 01 51.1**	**-1.5**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**14 01 53.9**	**-0.2**
AKHS				*i* S	**Sn**	**14 02 22.0**	**+0.5**
AKHS	**Akhisar**	**2.19**	**330**	*i* P	**Pn**	**14 01 53.9**	**-0.1**
AKHS				*i* S	**Sn**	**14 02 22.0**	**+0.5**
ALT	**Altintas**	**2.20**	**19**	*e*PN	**Pn**	**14 01 53.5**	**-0.5**
ALT	**Altintas**	**2.20**	**19**	*e*Pn	**Pn**	**14 01 53.6**	**-0.5**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**14 01 53.9**	**-0.5**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**14 01 53.9**	**-0.5**
IDI	**Anoyia**	**3.88**	**246**	Pn	**Pn**	**14 02 18.4**	**+1.3**
1.2nm,0.3s,baz=70,slow=12,SNR=4.1							
IDI				Sn	**Sn**	**14 03 04.0**	**+1.0**
2.0nm,0.3s,baz=63,slow=6.8,SNR=6.0							
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**14 02 26.1**	**+1.2**
0.3nm,0.3s,baz=232,slow=14,SNR=8.8							
BRTR				Sn	**Sn**	**14 03 18.1**	**+1.2**
0.2nm,0.3s,baz=225,slow=23,SNR=5.7							
MMAI	**Mount Meron Ar**	**6.44**	**126**	Pn	**Pn**	**14 02 48.6**	**-3.8**
0.4nm,0.3s,baz=302,slow=13,SNR=2.5							
EIL	**Elat**	**8.73**	**145**	Pn	**Pn**	**14 03 21.8**	**-2.0**
0.3nm,0.3s,baz=325,slow=12,SNR=2.7							
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**14 08 02.9**	**-0.4**
0.6nm,0.6s,baz=32,slow=7.4,SNR=5.7							

ISCJB

ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,57nm,21.2s
JCH Churui 7.90 245 P **Pn 14 16 45.9 -0.8**
ERM Erimo 8.36 242 *e*PN **Pn 14 16 53.4 +0.4**
JNBK Urakawa-nobuka 8.46 244 *e*S **Sn 14 18 21.2 -8.1**
JKB Kayabe 9.75 247 P **Pn 14 17 10.1 -2.0**
JKB *e*S **Sn 14 18 52.6 -8.4**
JYM2 Yakumo 2 10.06 249 P **Pn 14 17 15.5 -0.8**
JANG Nango 10.34 238 P **Pn 14 17 16.1 -4.1**
JANG *e*S **Sn 14 19 02.1 -13**
JTH Tanohata 10.42 236 *e*S **Sn 14 19 02.9 -15**
JRG Rokugo 11.49 237 *e*S **Sn 14 19 33.2 -10**
MJAR Matsushiro Arr 14.85 234 LR LR 14 24 57.6
comp=Z,46nm,18.2s,baz=45,slow=41
YAK Yakutsk 20.57 328 *e*P **P 14 19 28.9 -1.4**
YAK pmax pmax
comp=Z,11nm,1.0s
KSRS Korea Array 20.66 253 P **P 14 19 31.6 +0.1**
comp=Z,0.8nm,0.6s,baz=59,slow=11,SNR=7.9
KSRS LR LR 14 26 41.0
comp=Z,106nm,18.7s,baz=161,slow=34
KSRS Korea Array 20.66 253 P **P 14 19 31.6 +0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.6s
KSRS MLR MLR
comp=Z,106nm,18.7s
BILL Biiibino 22.72 13 *e*P **P 14 19 52.5 -0.7**
BILL pmax pmax
comp=Z,2.0nm,0.6s,mb3.7
BILL Biiibino 22.72 13 *e*P **P 14 19 52.5 -0.7**
comp=Z,2.3nm,0.6s,mb3.8
BOD Bodaibo 26.16 310 *e*P **P 14 20 23.2 -2.5**
SONM Songino Array 31.40 290 P **P 14 21 11.9 -0.5**
comp=Z,0.2nm,0.5s,mb3.2,baz=79,slow=10,SNR=2.0
INK Inuvik 41.95 32 P **P 14 22 42.6 +0.6**
comp=Z,2.4nm,0.9s,mb3.8,baz=255,slow=7.3,SNR=6.9
MK31 Makanchi Array 47.05 298 *e*P **P 14 23 22.6 -0.4**
MKAR Makanchi Array 47.05 298 P **P 14 23 22.2 -0.8**
comp=Z,1.4nm,0.8s,mb4.0,baz=66,slow=8.7,SNR=8.9
MKAR Makanchi Array 47.05 298 *e*P **P 14 23 22.9 -0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 47.51 304 P **P 14 23 26.1 -0.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=69,slow=8.6,SNR=12
BVAR Borovoye Array 51.03 310 P **P 14 23 52.7 -0.7**
comp=Z,0.8nm,0.6s,mb3.9,baz=40,slow=7.6,SNR=5.8
BVAR Borovoye Array 51.03 310 *e*P **P 14 23 55.2 +1.8**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
RES Resolute Bay 51.16 18 P **P 14 23 55.0 +0.9**
comp=Z,0.8nm,0.5s,mb3.9,baz=312,slow=12,SNR=6.8
RES Resolute Bay 51.16 18 P **P 14 23 55.0 +0.9**
YKA Yellowknife Ar 51.21 37 P **P 14 23 54.6 0.0**
comp=Z,0.6nm,0.6s,mb3.7,baz=300,slow=7.6,SNR=9.8
ARCES ARCESS Array B 58.14 341 P **P 14 24 44.7 -0.1**
comp=Z,6.4nm,1.2s,mb4.5,baz=38,slow=8.0,SNR=3.9
ARCES ARCESS Array B 58.14 341 P **P 14 24 44.7 -0.1**
ARCES pmax pmax
comp=Z,6.0nm,1.2s
FFC Flin Flon 61.02 40 *i*P **P 14 25 05.9 +1.1**
NVAR Mina Array Bea 62.63 62 P **P 14 25 14.6 -1.3**
comp=Z,0.5nm,0.3s,mb4.2,baz=301,slow=7.3,SNR=9.2
NVAR pP pP 14 25 29.2 +7.3
comp=Z,1.0nm,0.6s,baz=293,slow=6.9,SNR=4.7
FINES FINESS Array B 64.31 335 P **P 14 25 26.9 +0.3**
comp=Z,2.7nm,0.6s,mb4.5,baz=42,slow=7.2,SNR=13
FINES FINESS Array B 64.31 335 P **P 14 25 27.0 +0.4**
FINES pmax pmax
comp=Z,3.0nm,0.6s
PDAR Pinedale Array 64.97 54 P **P 14 25 30.9 -0.3**
comp=Z,1.3nm,0.8s,mb4.0,baz=297,slow=3.3,SNR=12
PDAR pP pP 14 25 44.1 +6.7
comp=Z,1.1nm,0.8s,baz=298,slow=3.2,SNR=6.0
NB2 NORSAR Subarra 68.52 341 P **P 14 25 53.9 +0.3**
comp=Z,1.0nm,0.5s,mb4.0,baz=28,slow=6.5
NOA NORSAR Array B 68.52 341 P **P 14 25 54.4 +0.8**
comp=Z,1.2nm,0.6s,mb4.0,baz=27,slow=6.3,SNR=7.2
NOA NORSAR Array B 68.52 341 P **P 14 25 54.4 +0.8**
NOA pmax pmax
comp=Z,1.0nm,0.6s
HFS Hagfors 68.74 340 P **P 14 25 54.7 -0.2**
comp=Z,1.8nm,0.5s,mb4.3,baz=73,slow=5.4,SNR=8.0
HFS Hagfors 68.74 340 P **P 14 25 54.7 -0.3**
HFS pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 71.79 326 P **P 14 26 13.9 +0.1**
comp=Z,3.5nm,0.6s,mb4.4,baz=33,slow=6.1,SNR=14
AKASG Malin Array Be 71.79 326 *e*P **P 14 26 13.9 +0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
BRG Berggiesshubel 76.85 335 *i*PKP **P 14 26 47.0 +3.8**
comp=Z,10nm,0.4s,mb5.1
BRG Berggiesshubel 76.85 335 *i*P **P 14 26 47.0 +3.7**
BRG pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
TXAR Lajitas Array 77.69 60 P **P 14 26 47.5 -0.9**
comp=Z,1.6nm,0.6s,mb4.2,baz=307,slow=4.6,SNR=17
TXAR pP pP 14 26 59.9 +5.3
comp=Z,1.5nm,0.6s,baz=305,slow=3.9,SNR=9.7
TXAR Lajitas Array 77.69 60 P **P 14 26 47.5 -0.8**
TXAR *PP pP 14 26 59.9 +5.3
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 78.59 317 P **P 14 26 55.0 +1.8**
comp=Z,0.3nm,0.6s,mb3.4,baz=61,slow=7.4,SNR=2.6
GERES GERESS Array B 78.73 334 P **P 14 26 54.1 +0.4**
comp=Z,0.3nm,0.2s,mb3.8,baz=28,slow=7.0,SNR=3.8
MMAI Mount Meron Ar 82.99 311 P **P 14 27 18.6 +1.8**
comp=Z,0.9nm,0.5s,mb4.0,baz=48,slow=2.1,SNR=2.5
CPUP Villa Florida 148.66 61 PKPbc PKPbc 14 34 36.9 -1.8
comp=Z,0.4nm,0.4s,baz=297,slow=6.3,SNR=3.2

GUC 16 14:15:21.2±0.6, 19°.76S×69°.25W, h101km±5km, MD3.6, ML3.6, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miaee Miae**	**0.70**	**332**	⇓*i*P	Pn	14 15 39.4	+0.6
MNMC				*i* S	Sn	14 15 53.2	+1.3
MNMC				AML	AML	14 15 54.5	
	comp=N,6μm,0.5s						
PSGC	**Pisagua**	**0.84**	**281**	⇓*i*P	Pn	14 15 40.1	+0.1
PSGC				*i* S	Sn	14 15 54.7	+0.5
PSGC				AML	AML	14 15 56.0	
	comp=N,926nm,0.2s						
PB01	**Plate Boundary**	**1.30**	**190**	⇑*i*P	Pn	14 15 45.6	+0.5
PB01				*i* S	Sn	14 16 04.1	+0.9
PB01				AML	AML	14 16 05.8	
	comp=E,2μm,0.6s						
PB04	**Plate Boundary**	**2.51**	**185**	*e*P	Pn	14 16 03.2	+2.8
PB04				*i* S	Sn	14 16 35.4	+4.9
PB04				AML	AML	14 16 57.3	
	comp=N,147nm,0.3s						
PECH	**Pedro de Valdi**	**2.85**	**188**	*e*P	Pn	14 16 06.6	+1.6
PECH				*i* S	Sn	14 16 40.7	+1.9
PECH				AML	AML	14 16 47.3	
	comp=E,258nm,0.6s						
CEN1	**Los Morros**	**3.72**	**194**	*i* P	Pn	14 16 17.2	+0.6
CEN1				*i* S	Sn	14 17 02.6	+3.0

ISCJB ***16*** *14:29:53.2±0.5, 41°.83N±0°.02×22°.74E±0°.04, h8km±6km, Error ellipse: s-maj=4.8km s-min=3.5km az=3.5*
CSEM ***16*** *14:29:53.7±0.2, 41°.81N×22°.77E, h2km, MD2.7, Error ellipse: s-maj=5.1km s-min=4.2km az=41.0*
SOF ***16*** *14:29:53.2, 41°.82N×22°.77E, h7km, MD2.7*
SKO ***16*** *14:29:55.0, 41°.80N×22°.78E, h2km, M2.4, ML2.9*
NEIC ***16*** *14:29:54.6, 41°.76N×22°.83E, h23km, MD3.3(ATH), After ATH.*
ATH ***16*** *14:29:54.6, 41°.76N×22°.83E, h23km±4km, MD3.3/3*
BEO ***16*** *14:29:57.8±0.7, 41°.97N×22°.78E, h13km±5km, ML2.8/8*
ISC 16 14:29:53.8±0.4, 41°.81N±0°.02×22°.77E±0°.04, h9km±5km, n51, σ1°.28/74, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.24**	**76**	P	**Pg**	**14 29 59.1**	**+0.5**
KKB	**Krupnik**	**0.24**	**76**	P	**Pg**	**14 29 59.1**	**+0.5**
STIP	**Stip**	**0.46**	**255**	*i* Pg	**Pg**	**14 30 03.2**	**+0.6**
STIP				*i* Sg	**Sg**	**14 30 09.9**	**+1.3**
STIP				*e*Lg		14 30 10.2	
	comp=N,0.0nm,0.2s						
STIP				*e*Lg		14 30 11.1	
	comp=E,0.0nm,0.3s						
STIP	**Stip**	**0.46**	**255**	*i* Pg	**Pg**	**14 30 03.2**	**+0.6**
STIP				*i* Sg	**Sg**	**14 30 09.9**	**+1.3**
STIP				*e*Lg		14 30 10.1	
VAY	**Valandovo**	**0.51**	**197**	*i* Pg	**Pg**	**14 30 03.7**	**0.0**
VAY				*i* Sg	**Sg**	**14 30 10.8**	**+0.3**
VAY				*e*Lg		14 30 11.3	
	comp=N,480nm,0.4s						
VAY				*e*Lg		14 30 11.5	
	comp=E,408nm,0.4s						
VAY	**Valandovo**	**0.51**	**197**	*i* Pg	**Pg**	**14 30 03.7**	**0.0**
VAY				*i* Sg	**Sg**	**14 30 10.7**	**+0.2**
VAY				*e*Lg		14 30 11.2	
	comp=E,480nm,0.4s						
MMB	**Musomiste**	**0.75**	**107**	P	**Pg**	**14 30 08.6**	**+0.4**
MMB	**Musomiste**	**0.75**	**107**	P	**Pg**	**14 30 08.6**	**+0.4**
VTS	**Vitosha**	**0.84**	**22**	*e*Pg	**Pg**	**14 30 10.1**	**0.0**
VTS				*i* Sg	**Sg**	**14 30 21.9**	**+0.9**
VTS	**Vitosha**	**0.84**	**22**	P	**Pg**	**14 30 10.0**	**-0.1**
VTS	**Vitosha**	**0.84**	**22**	*e*Pg	**Pg**	**14 30 10.1**	**0.0**
NVR	**Nevrokopi**	**0.94**	**119**	*e*PN	**Pn**	**14 30 11.5**	**-1.7**
NVR				*e*SN	**Sn**	**14 30 23.4**	**-3.3**
NVR	**Nevrokopi**	**0.94**	**119**	*e*Pn	**Pn**	**14 30 11.5**	**-1.7**
NVR				*e*Sn	**Sn**	**14 30 23.4**	**-3.3**
SKO	**Skopje**	**1.01**	**280**	*e*Pg	**Pg**	**14 30 16.4**	**+3.2**
SKO	**Skopje**	**1.01**	**280**	*e*Pg	**Pg**	**14 30 16.4**	**+3.2**
SOH	**Sokhos**	**1.08**	**156**	*e*PN	**Pn**	**14 30 14.1**	**-1.0**
SOH				*e*SN	**Sn**	**14 30 28.6**	**-1.6**
SOH	**Sokhos**	**1.08**	**156**	*e*Pn	**Pn**	**14 30 14.1**	**-1.0**
SOH				*e*Sn	**Sn**	**14 30 28.6**	**-1.6**
KRUS	**Krusevo**	**1.23**	**249**	*i* Pg	**Pg**	**14 30 17.5**	**+0.2**
KRUS				*i* Sg	**Sg**	**14 30 33.6**	**+0.3**
	comp=N,0.0nm,0.3s						
KRUS				*e*Lg		14 30 33.8	
	comp=E,0.0nm,0.4s						
KRUS				*e*Lg		14 30 35.0	
	comp=N,0.0nm,0.3s						
KRUS	**Krusevo**	**1.23**	**249**	*i* Pg	**Pg**	**14 30 17.5**	**+0.2**
KRUS				*i* Sg	**Sg**	**14 30 33.5**	**+0.3**
KRUS				*e*Lg		14 30 33.7	
BARS	**Barje**	**1.23**	**325**	*i* Pg	**Pg**	**14 30 17.5**	**+0.1**
BARS				*i* Sg	**Sg**	**14 30 34.2**	**+0.8**
BARS	**Barje**	**1.23**	**325**	*i* Pg	**Pg**	**14 30 17.5**	**+0.1**
BARS				*i* Sg	**Sg**	**14 30 34.2**	**+0.8**
PGB	**Panagyurishte**	**1.27**	**54**	P	**Pn**	**14 30 17.4**	**-0.4**
PGB	**Panagyurishte**	**1.27**	**54**	P	**Pn**	**14 30 17.4**	**-0.4**
RZN	**Rozhen**	**1.46**	**94**	P	**Pn**	**14 30 21.1**	**+0.8**
RZN	**Rozhen**	**1.46**	**94**	P	**Pn**	**14 30 21.1**	**+0.8**
ZAPS	**Zavoj**	**1.47**	**356**	*e*Pg	**Pg**	**14 30 22.2**	**+0.3**
ZAPS				*i* Sg	**Sg**	**14 30 39.1**	**-1.8**
PLD	**Plovdiv**	**1.47**	**78**	P	**Pn**	**14 30 22.7**	**+2.2**
PLD	**Plovdiv**	**1.47**	**78**	P	**Pn**	**14 30 22.7**	**+2.2**
PLG	**Polygyros**	**1.52**	**160**	*e*PN	**Pn**	**14 30 21.3**	**+0.1**
PLG	**Polygyros**	**1.52**	**160**	*e*Pn	**Pn**	**14 30 21.3**	**+0.1**
NISS		**1.70**	**339**	*i* Pg	**Pg**	**14 30 25.2**	**-1.3**
NISS				*i* Sg	**Sg**	**14 30 47.1**	**-1.5**
NISS		**1.70**	**339**	*i* Pg	**Pg**	**14 30 25.2**	**-1.3**
NISS				*i* Sg	**Sg**	**14 30 47.1**	**-1.5**
LIT	**Litokhoron**	**1.72**	**187**	*e*PB	**Pb**	**14 30 23.3**	**-2.3**
LIT	**Litokhoron**	**1.72**	**187**	*e*Pb	**Pb**	**14 30 23.3**	**-2.3**
SELS	**Selova**	**1.86**	**320**	*i* Pg	**Pg**	**14 30 28.1**	**-1.5**
SELS				*e*Sg	**Sg**	**14 30 53.6**	**-0.1**
KDZ	**Kurdzhali**	**1.98**	**94**	P	**Pn**	**14 30 29.4**	**+1.8**
KDZ	**Kurdzhali**	**1.98**	**94**	P	**Pn**	**14 30 29.4**	**+1.8**
RDO	**Rodhopi**	**2.18**	**107**	*e*PB	**Pb**	**14 30 31.3**	**-2.1**
RDO	**Rodhopi**	**2.18**	**107**	*e*Pb	**Pb**	**14 30 31.3**	**-2.1**
PVL	**Pavlikeni**	**2.36**	**53**	P	**Pn**	**14 30 35.5**	**+2.8**
PVL	**Pavlikeni**	**2.36**	**53**	P	**Pn**	**14 30 35.5**	**+2.8**
GRUS	**Gruza**	**2.57**	**325**	*e*Pn	**Pn**	**14 30 35.9**	**+0.3**
GRUS				*e*Sg	**Sg**	**14 31 17.5**	**+1.2**
GRUS	**Gruza**	**2.57**	**325**	*e*Pn	**Pn**	**14 30 35.9**	**+0.3**
GRUS				*e*Sg	**Sg**	**14 31 17.5**	**+1.2**
ALN	**Alexandroupoli**	**2.63**	**109**	*e*PN	**Pn**	**14 30 37.3**	**+0.9**
ALN	**Alexandroupoli**	**2.63**	**109**	*e*Pn	**Pn**	**14 30 37.3**	**+0.9**
DIVS	**Divibare**	**3.06**	**319**	*i* Pn	**Pn**	**14 30 44.8**	**+2.4**
DIVS				*i* Sg	**Sg**	**14 31 30.2**	**-2.0**
DIVS	**Divibare**	**3.06**	**319**	*i* Pn	**Pn**	**14 30 44.8**	**+2.4**
DIVS				*i* Sg	**Sg**	**14 31 30.2**	**-2.0**
BBLS	**Lazići**	**3.22**	**311**	*e*Pn	**Pn**	**14 30 48.7**	**+4.2**
BBLS				*i* Sg	**Sg**	**14 31 36.0**	**-1.1**
BBLS	**Lazići**	**3.22**	**311**	*e*Pn	**Pn**	**14 30 48.7**	**+4.2**
BBLS				*i* Sg	**Sg**	**14 31 36.0**	**-1.1**
BZS	**Buzias**	**3.90**	**348**	⇓*i*P	**Pn**	**14 30 54.6**	**+0.8**
MLR	**Muntele Rosu**	**4.34**	**31**	⇑*i*P	**Pn**	**14 31 04.6**	**+4.7**

BJI ***16*** *14:44:18.4, 7°.70S×129°.42E, h139km, mB5.0/2, mb5.0/7*
IDC ***16*** *14:44:25.4±3.4, 7°.35S×128°.62E, h139km±33km, mb4.0/15, mb1 4.1/18, mb1mx4.0/23, mbtmp4.0/18, MS3.3/2, Ms1 3.3/2, ms1mx2.6/25, Error ellipse: s-maj=20.7km s-min=11.9km az=76.0*
NEIC ***16*** *14:44:26.4±1.2, 7°.36S×128°.61E, h149km±13km, mb4.4/16, Error ellipse: s-maj=11.4km s-min=7.1km az=48.0*
ISCJB ***16*** *14:44:27.5±1.0, 7°.46S±0°.05×128°.63E±0°.07, h181km±11km, mb4.3/32, Error ellipse: s-maj=12.8km s-min=6.7km az=151.6*
DJA ***16*** *14:44:29, 7°.58S×128°.53E, h165km, mb4.5/10*
ISC 16 14:44:28.2±1.0, 7°.43S±0°.06×128°.63E±0°.07, h166km±11km, n66, σ1°.04/72, mb4.3/32, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.45**	**145**	⇓*i*P	**Pn**	**14 46 00.2**	**-0.8**
	116nm,0.3s						
KAKA				*e*S	**Sn**	**14 47 08.2**	**-5.8**
KAKA	**Kakadu**	**6.45**	**145**	*e*Pn	**Pn**	**14 45 60.0**	**-1.1**
	300nm,0.5s						
KAKA				*e*Sn	**Sn**	**14 47 06.5**	**-7.5**
KAKA	**Kakadu**	**6.45**	**145**	P	**Pn**	**14 46 00.2**	**-0.8**
	233nm,0.6s,7.7nm						
KAKA				S	**Sn**	**14 46 56.7**	**-17**
	233nm,0.6s,7.7nm						
LBMI	**Labuha**	**6.84**	**350**	P	**Pn**	**14 46 08.3**	**+2.1**
	68nm,1.2s,0.3nm						
KAPI	**Kappang**	**9.15**	**285**	LR	LR	14 50 58.2	
	comp=Z,49nm,20.8s,baz=338,slow=43						
FITZ	**Fitzroy Crossi**	**11.00**	**195**	*e*P	**Pn**	**14 46 59.9**	**-1.2**
	8.7nm,0.2s						
FITZ				*e*S	**Sn**	**14 48 52.0**	**-11**
FITZ	**Fitzroy Crossi**	**11.00**	**195**	P	**Pn**	**14 46 60.0**	**-1.1**
	1.3nm,0.3s,baz=26,slow=9.9,SNR=38						
FITZ				S	**Sn**	**14 48 52.4**	**-11**
	2.5nm,0.3s,baz=336,slow=20,SNR=3.1						
WRAB	**Tennant Creek**	**13.61**	**157**	*e*Pn	**Pn**	**14 47 32.6**	**-2.0**
	50nm,0.6s						
WRAB				*e*P		14 47 38.9	
WRAB				*e*Sn	**Sn**	**14 49 56.1**	**-10**
WRAB	**Tennant Creek**	**13.61**	**157**	P	**Pn**	**14 47 32.7**	**-1.9**
	86nm,0.7s						
WRA	**Warramunga Arr**	**13.62**	**157**	P	**Pn**	**14 47 32.5**	**-2.1**
WRA				S	**Sn**	**14 49 56.7**	**-9.2**
	baz=326,slow=24						
COEN	**Coen**	**15.69**	**116**	*e*Pn	**Pn**	**14 48 00.4**	**-0.1**
	177nm,0.3s						
COEN	**Coen**	**15.69**	**116**	P	**Pn**	**14 48 00.9**	**+0.5**
	181nm,0.7s						
MBWA	**Marble Bar**	**16.14**	**211**	*e*Pn	**Pn**	**14 48 06.7**	**+0.9**
	4.0nm,0.5s						
ASAR	**Alice Springs**	**16.92**	**163**	P	**Pn**	**14 48 16.2**	**+0.9**
	4.5nm,0.3s,baz=340,slow=11,SNR=512						
ASAR				S	**S**	**14 51 13.9**	**-8.7**
	2.2nm,0.3s,baz=347,slow=25,SNR=7.3						
KKM	**Kota Kinabalu**	**18.23**	**317**	*e*P	**P**	**14 48 27.3**	**-1.7**
	139nm,1.5s						
MTSU	**Mount Surprise**	**18.62**	**126**	*e*P	**P**	**14 48 35.0**	**+1.9**
	26nm,0.5s						
STKI	**Sintang**	**18.66**	**293**	P	**P**	**14 48 34.7**	**+1.1**
	25nm,0.8s						
SBUM	**Sibu**	**19.09**	**300**	P	**P**	**14 48 40.2**	**+1.9**
	22nm,1.5s						
KSM	**Kuching**	**20.30**	**295**	*e*P	**P**	**14 48 50.7**	**-0.7**
	37nm,1.0s						
KSM	**Kuching**	**20.30**	**295**	P	**P**	**14 48 51.4**	**0.0**
	34nm,1.0s						
CTA	**Charters Tower**	**21.22**	**128**	*e*P	**P**	**14 49 02.9**	**+1.9**
	6.6nm,0.6s,mb4.1						
CTA	**Charters Tower**	**21.22**	**128**	P	**P**	**14 49 02.7**	**+1.7**
	8.5nm,0.6s,mb4.2,baz=302,slow=12,SNR=19						
CTA				S	**S**	**14 53 07.5**	**+20**
	2.3nm,0.8s,baz=233,slow=20,SNR=2.6						
CTAO	**Charters Tower**	**21.22**	**128**	*e*P	**P**	**14 49 02.5**	**+1.5**
	25nm,1.3s,mb4.4						
CTAO				*e*S	**S**	**14 52 53.1**	**+5.6**
CTAO	**Charters Tower**	**21.22**	**128**	P	**P**	**14 49 02.3**	**+1.3**
	13nm,1.0s,546nm,mb4.2						
STKA	**Stephens Creek**	**27.16**	**155**	*e*P	**P**	**14 49 57.0**	**+0.9**
	12nm,1.6s,mb4.3						
STKA	**Stephens Creek**	**27.16**	**155**	P	**P**	**14 49 55.3**	**-0.8**
	3.1nm,0.5s,mb4.2,baz=317,slow=13,SNR=12						
NWAO	**Narrogin (SRO)**	**27.49**	**201**	P	**P**	**14 49 58.1**	**-0.9**
	7.9nm,0.9s,mb4.3,baz=46,slow=14,SNR=5.7						
CMSA	**Cobar Meteorol**	**28.79**	**149**	*e*P	**P**	**14 50 11.9**	**+1.3**
KULM	**Kulim**	**30.64**	**294**	*e*P	**P**	**14 50 26.4**	**-0.8**
	1.6nm,0.5s,mb4.0						
CM31	**Chiang Mai Arr**	**38.98**	**312**	*e*P	**P**	**14 51 38.2**	**-0.3**
	1.0nm,0.4s,mb3.8						
CMAR	**Chiang Mai Arr**	**38.98**	**312**	P	**P**	**14 51 38.9**	**+0.4**
	2.8nm,0.7s,mb4.0,baz=142,slow=7.2,SNR=17						
CMAR				PcP	PcP	14 53 46.3	+0.7
	1.3nm,0.7s,baz=158,slow=2.4,SNR=6.8						
KMI	**Kunming**	**41.02**	**323**	P	**P**	**14 51 56.1**	**+0.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
KSRS	**Korea Array**	**44.65**	**359**	P	**P**	**14 52 24.1**	**-0.2**
	comp=Z,1.1nm,0.4s,mb3.8,baz=178,slow=9.6,SNR=11						
KSRS				PcP	PcP	14 54 04.3	+0.4
	comp=Z,0.4nm,0.4s,baz=168,slow=3.2,SNR=3.8						
MJAR	**Matsushiro Arr**	**44.65**	**11**	P	**P**	**14 52 22.2**	**-2.0**
	comp=Z,1.8nm,0.7s,mb3.8,baz=192,slow=10.0,SNR=10						
LSA	**Lhasa**	**51.58**	**317**	P	**P**	**14 53 18.1**	**+0.6**
LSA	**Lhasa**	**51.58**	**317**	*e*P	**P**	**14 53 18.3**	**+0.7**
	comp=Z,7.1nm,0.6s,mb4.5						
RPZ	**Rata Peaks**	**51.74**	**141**	P	**P**	**14 53 19.4**	**+0.9**
	comp=Z,2.7nm,0.5s,mb4.1,baz=299,slow=3.1,SNR=5.5						
ASAJ	**Asahikawa**	**52.84**	**13**	P	**P**	**14 53 24.7**	**-1.8**
	comp=Z,1.4nm,0.4s,mb4.0,baz=223,slow=19,SNR=3.7						
GTA	**Gaotai**	**53.70**	**332**	*e*P	**P**	**14 53 33.3**	**+0.4**
GTA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
GUN	**Gumba**	**54.22**	**312**	*e*P	**P**	**14 53 36.7**	**-0.2**
	comp=Z,27nm,0.6s,mb5.1						
PKI	**Pulchoki**	**54.38**	**312**	*e*P	**P**	**14 53 37.4**	**-0.7**
	comp=Z,7.8nm,0.5s,mb4.7						
PKIN	**Phulchoki**	**54.39**	**312**	*e*P	**P**	**14 53 38.0**	**-0.2**
	comp=Z,10nm,0.6s,mb4.8						
KKN	**Kakani**	**54.59**	**312**	*e*P	**P**	**14 53 39.1**	**-0.5**
	comp=Z,8.9nm,0.6s,mb4.7						
DMN	**Daman**	**54.62**	**311**	*e*P	**P**	**14 53 39.5**	**-0.3**
	comp=Z,12nm,0.6s,mb4.8						
ULN	**Ulaanbaatar**	**58.26**	**343**	*e*P	**P**	**14 54 05.3**	**+0.1**
	comp=Z,6.0nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**58.26**	**343**	P	**P**	**14 54 05.5**	**+0.4**
	comp=Z,5.9nm,1.0s,mb4.3						
SONM	**Songino Array**	**58.43**	**343**	P	**P**	**14 54 06.6**	**+0.4**
	comp=Z,3.5nm,0.7s,mb4.3,baz=162,slow=7.1,SNR=25						
PETK	**Petropavlovsk-**	**65.16**	**19**	P	**P**	**14 54 51.4**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.4,baz=167,slow=3.5,SNR=13						
MK31	**Makanchi Array**	**67.84**	**328**	*e*P	**P**	**14 55 08.2**	**-0.1**
MKAR	**Makanchi Array**	**67.84**	**328**	P	**P**	**14 55 08.4**	**+0.1**
	comp=Z,7.6nm,0.7s,mb4.5,baz=129,slow=8.0,SNR=45						
TKM2	**Tokmak 2**	**69.45**	**321**	*e*P	**P**	**14 55 18.9**	**+0.5**
	comp=Z,4.1nm,0.8s,mb4.2						
UCH	**Uchtor**	**69.77**	**320**	*e*P	**P**	**14 55 21.3**	**+0.9**
	comp=Z,2.3nm,0.8s,mb4.0						
AAK	**Ala-Archa**	**69.99**	**320**	*e*P	**P**	**14 55 21.6**	**-0.1**
	comp=Z,5.8nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**69.99**	**320**	P	**P**	**14 55 22.7**	**+1.0**
AML	**Almayashu**	**70.25**	**320**	*e*P	**P**	**14 55 24.0**	**+0.7**
	comp=Z,6.7nm,0.9s,mb4.4						
ZAA0	**Zalesovo Array**	**71.37**	**334**	*e*P	**P**	**14 55 28.6**	**-1.2**
ZALV	**Zalesovo Beam**	**71.37**	**334**	P	**P**	**14 55 29.0**	**-0.8**
	comp=Z,5.9nm,0.6s,mb4.5,baz=132,slow=5.4,SNR=30						
KURK	**Kurchatov**	**72.18**	**329**	P	**P**	**14 55 34.7**	**0.0**
	comp=Z,7.3nm,0.5s,mb4.7,baz=129,slow=5.0,SNR=22						
KURK	**Kurchatov**	**72.18**	**329**	*e*P	**P**	**14 55 34.4**	**-0.2**
	comp=Z,7.6nm,0.7s,mb4.5						
MAW	**Mawson**	**74.06**	**201**	P	**P**	**14 55 47.1**	**+1.7**
	comp=Z,1.7nm,0.8s,mb3.8,baz=90,slow=9.1,SNR=4.0						
BVAR	**Borovoye Array**	**77.70**	**328**	P	**P**	**14 56 05.9**	**-0.4**
	comp=Z,1.6nm,0.4s,mb4.0,baz=126,slow=10,SNR=11						
TIXI	**Tiksi**	**78.91**	**0**	*e*P	**P**	**14 56 11.4**	**-1.2**
	comp=Z,2.3nm,0.6s,mb4.0						
ABKAR	**Akbulak array**	**82.00**	**322**	*e*P	**P**	**14 56 28.7**	**-0.8**
	comp=Z,1.5nm,0.4s,mb4.0						
KDAK	**Kodiak Island**	**90.29**	**32**	LR	LR	15 38 55.5	
	comp=Z,49nm,19.4s,slow=36						
GERES	**GERESS Array B**	**111.87**	**320**	PKiKP	PKiKP	15 02 42.1	-1.3
	comp=Z,0.5nm,0.5s,baz=90,slow=1.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**127.56**	**281**	PKP	PKPdf	15 03 14.6	+0.1
	comp=Z,1.3nm,0.7s,baz=95,slow=2.0,SNR=6.9						

IDC ***16*** *14:49:37.6±1.1, 14°.81N×144°.82E, h0km, mb3.8/7, mb1 3.9/7, mb

	baz=251					
YOJ	**Yonaguni jima**	**0.73 68**	P	Pn	14 53 06.1	+0.1
YOJ			S	Sn	14 53 16.2	+0.3
ILA	**Ilan**	**0.75 320**	*e*P	Pn	14 53 07.1	+0.7
	baz=320					
TWE	**Neicheng**	**0.77 314**	P	Pn	14 53 07.3	+0.8
	baz=314					
TWE			*e*S	Sn	14 53 17.7	+0.8
	baz=314					
ESL	**Shilin**	**0.85 244**	*e*P	Pn	14 53 07.0	-0.7
	baz=235					
ESL			*e*S	Sn	14 53 18.6	-0.4
	baz=235					
NNS	**Nan Shan**	**0.86 287**	P	Pn	14 53 08.4	+0.6
	baz=287					
NNS			S	Sn	14 53 20.2	+1.1
	baz=287					
TWB1	**Santiao Chiao**	**0.86 342**	P	Pn	14 53 08.1	+0.3
	baz=341					
TWB1			*e*S	Sn	14 53 19.8	+0.7
	baz=341					
WHF	**Hehuan Shan**	**0.92 268**	P	Pn	14 53 09.0	+0.3
	baz=267					
WHF			*e*S	Sn	14 53 21.0	+0.3
	baz=267					
NSK	**Sanguang**	**0.97 301**	*i* P	Pn	14 53 10.2	+1.0
	baz=287					
NSK			S	Sn	14 53 22.8	+1.0
	baz=287					
NWF	**Wu-fen Shan**	**0.99 333**	P	Pn	14 53 10.4	+0.8
	baz=345					
NWF			*e*S	Sn	14 53 24.0	+1.6
	baz=345					
TWA	**Mucha**	**1.01 322**	P	Pn	14 53 11.1	+1.2
	baz=320					
TWA			*e*S	Sn	14 53 24.9	+2.0
	baz=320					
EHY	**Hungye**	**1.10 232**	*e*P	Pn	14 53 10.8	-0.4
	baz=232					
EHY			*e*S	Sn	14 53 24.3	-0.8
	baz=232					
TWS1	**Kuangyinshan**	**1.20 320**	*e*P	Pn	14 53 13.6	+1.1
	baz=332					
TWS1			*e*S	Sn	14 53 30.1	+2.6
	baz=332					
TWF1	**Yuli**	**1.22 227**	*e*P	Pn	14 53 12.6	-0.2
	baz=240					
TWF1			*e*S	Sn	14 53 27.6	-0.4
	baz=240					
NSTT	**Nanjuang**	**1.24 291**	*e*P	Pn	14 53 14.3	+1.2
	baz=290					
NSTT			*e*S	Sn	14 53 30.3	+1.7
	baz=290					
SMLT	**Sun Moon Lake**	**1.29 257** ⇑	*i* P	Pn	14 53 14.8	+1.0
	baz=256					
SMLT			*e*S	Sn	14 53 31.1	+1.3
	baz=256					
TYC	**Yuchr**	**1.32 258** ⇑	*i* P	Pn	14 53 15.2	+1.0
	baz=249					
TYC			*e*S	Sn	14 53 31.8	+1.1
	baz=249					
IRIF	**Iriomote-Funau**	**1.34 83**	P	Pn	14 53 14.7	+0.3
IRIF			S	Sn	14 53 32.0	+1.0
CHKT	**Chengkung**	**1.36 218**	*e*P	Pn	14 53 14.1	-0.7
	baz=210					
CHKT			*e*S	Sn	14 53 29.2	-2.4
	baz=210					
TWQ1	**Liyutan**	**1.38 277**	P	Pn	14 53 16.7	+1.8
	baz=276					
TWQ1			*e*S	Sn	14 53 34.3	+2.4
	baz=276					
YUS	**Yu-Shan**	**1.39 240**	P	Pn	14 53 16.3	+1.1
	baz=229					
YUS			*e*S	Sn	14 53 33.1	+0.7
	baz=229					
NSY	**Sanyi**	**1.40 280**	*e*P	Pn	14 53 17.0	+1.8
	baz=279					
TCU	**Taichung**	**1.46 269**	*e*P	Pn	14 53 18.2	+2.1
	baz=269					
WNT	**Mingjian**	**1.48 258**	*e*P	Pn	14 53 18.4	+2.0
	baz=259					
ALS	**Alishan**	**1.50 244**	P	Pn	14 53 18.1	+1.4
	baz=243					
ALS			S	Sn	14 53 36.4	+1.3
	baz=243					
ELDTW	**Lidau**	**1.52 229**	*e*P	Pn	14 53 16.7	-0.2
	baz=230					
ELDTW			*e*S	Sn	14 53 34.5	-1.0
	baz=230					
CHN5	**Tsauling**	**1.57 248**	P	Pn	14 53 19.5	+1.8
	baz=248					
CHN5			*e*S	Sn	14 53 38.8	+2.0
	baz=248					
JKRS	**Kuro-shima**	**1.59 88**	P	Pn	14 53 18.9	+1.1
JKRS			S	Sn	14 53 38.6	+1.5
WGK	**Gukeng**	**1.64 253**	*e*P	Pn	14 53 19.6	+1.0
	baz=253					
JIJ	**Ishigaki jima**	**1.72 84**	P	Pn	14 53 19.9	+0.3
JIJ			S	Sn	14 53 40.2	-0.1
STYT	**Tauyuan**	**1.72 234**	P	Pn	14 53 20.9	+1.2
	baz=234					
STYT			*e*S	Sn	14 53 41.4	+1.0
	baz=234					
CHN4	**Tsaushan**	**1.75 242**	*e*P	Pn	14 53 22.0	+1.9
	baz=234					
CHN4			*e*S	Sn	14 53 43.5	+2.4
	baz=234					
TWG	**Pinlang**	**1.75 219**	*e*P	Pn	14 53 19.8	-0.2
	baz=229					
TWG			*e*S	Sn	14 53 39.7	-1.4
	baz=229					
CHN2	**Minshiung**	**1.77 249**	*e*P	Pn	14 53 22.0	+1.7
	baz=248					
CHN2			*e*S	Sn	14 53 44.6	+3.0
	baz=248					
WTP	**Ta-pu**	**1.79 239**	*e*P	Pn	14 53 22.2	+1.6
	baz=239					
CHY	**Chiayi**	**1.83 248**	*e*P	Pn	14 53 22.6	+1.5
	baz=249					
WTCT	**Ta-ch'eng**	**1.85 260**	*e*P	Pn	14 53 23.2	+1.8
	baz=261					
TWK	**Hsinying**	**1.87 241**	*e*P	Pn	14 53 22.9	+1.1
	baz=241					
TWK			*e*S	Sn	14 53 46.4	+2.2
	baz=241					
CHN1	**Nanshi**	**1.89 238**	*e*P	Pn	14 53 23.8	+1.9
	baz=238					
CHN1			*e*S	Sn	14 53 47.3	+2.8
	baz=238					
SGST	**Jiashian**	**1.90 235**	*e*P	Pn	14 53 23.8	+1.6
	baz=235					
SGST			*e*S	Sn	14 53 47.9	+3.1
	baz=235					
WSF	**Szhu**	**1.96 254**	*e*P	Pn	14 53 25.1	+2.2
	baz=255					
ECL	**Taimali**	**1.99 218**	*e*P	Pn	14 53 24.4	+1.0
	baz=227					
SSD	**Sandimen**	**2.08 227**	*e*P	Pn	14 53 25.9	+1.3
	baz=221					
EAST	**Anshuo**	**2.22 216**	*e*P	Pn	14 53 27.8	+1.2
	baz=217					
LAY	**Lan-yu**	**2.24 197**	*e*P	Pn	14 53 27.0	+0.2
	baz=198					
JTJ	**Tarama**	**2.26 78**	P	Pn	14 53 28.0	+0.9
JTJ			S	Sn	14 53 55.9	+2.2
SCZT	**Fangliau**	**2.36 220**	*e*P	Pn	14 53 30.7	+2.3
	baz=217					
SCZT			*e*S	Sn	14 53 58.2	+2.0
	baz=217					
PNG	**Penghu**	**2.56 257**	*e*P	Pn	14 53 31.6	+0.4
	baz=257					

*IDC **16** 14:55:05.9±1.0, 31°.36N×103°.84E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, MS2.3/1, Ms1 2.3/1, ms1mx2.0/34, Error ellipse: s-maj=44.4km s-min=20.0km az=57.0*
*ISCJB **16** 14:55:06.2±0.9, 31°.49N±0°.03×103°.94E±0°.08, h12km±6km, mb3.7/5, Error ellipse: s-maj=11.0km s-min=5.6km az=7.6*
*NEIC **16** 14:55:07.5±0.7, 31°.29N×103°.69E, h10km, Error ellipse: s-maj=28.3km s-min=11.7km az=223.0*
*BJI **16** 14:55:12.2, 31°.36N×103°.89E, h6km, ML3.4/12*
ISC 16 14:55:08.2±0.8, 31°.44N±0°.03×103°.96E±0°.07, h9km±6km, n14, σ1§14/18, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**198**	Pg	**Pg**	**14 55 19.4**	**+0.5**
CD2				Sg	**Sg**	**14 55 26.5**	**+0.3**
CD2				smax			
	comp=N,2μm,0.6s						
LZH	**Lanzhou**	**4.64**	**359**	Pg	**Pg**	**14 56 40.1**	**+3.0**
LZH				Sg	**Sg**	**14 57 37.8**	**+0.7**
LZH				smax			
	comp=N,47nm,0.5s						
LZH				smax			
	comp=E,51nm,0.8s						
ENH	**Enshi**	**4.90**	**102**	*e*Pn	**Pn**	**14 56 24.0**	**+2.0**
	comp=E,18nm,0.5s						
ENH				*e*Sn	**Sn**	**14 57 20.0**	**+1.2**
XAN	**Xi'an**	**4.92**	**57**	Pg	**Pg**	**14 56 40.8**	**-1.7**
XAN				smax			
	comp=N,35nm,0.8s						
XAN				smax			
	comp=E,70nm,0.9s						
GYA	**Guiyang**	**5.50**	**154**	Pg	**Pg**	**14 56 51.8**	**-1.8**
GYA				smax			
	comp=N,50nm,1.0s						
GYA				smax			
	comp=E,80nm,0.9s						
KMI	**Kunming**	**6.38**	**190**	Pn	**Pb**	**14 56 53.8**	**-5.7**
KMI				Sn	**Sn**	**14 57 56.6**	**+1.2**
KMI				smax			
	comp=N,9.0nm,0.8s						
KMI				smax			
	comp=E,8.0nm,0.8s						
KSRS	**Korea Array**	**20.63**	**67**	P	**P**	**14 59 47.8**	**-0.1**
	comp=E,0.9nm,0.7s,baz=259,slow=10,SNR=5.3						
KSRS				LR	LR	15 09 03.0	
	comp=E,8.8nm,19.3s,baz=140,slow=40						
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**15 00 44.5**	**+0.1**
	comp=E,2.3nm,0.7s,mb3.8,baz=130,slow=9.6,SNR=8.6						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**15 04 54.9**	**-0.5**
	comp=E,0.8nm,0.5s,mb4.0,baz=54,slow=7.1,SNR=3.9						
FINES	**FINESS Array B**	**57.22**	**326**	P	**P**	**15 04 54.9**	**-0.5**
WRA	**Warramunga Arr**	**58.82**	**146**	P	**P**	**15 05 06.4**	**-0.7**
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**15 05 26.8**	**-0.9**
	comp=E,0.2nm,0.5s,mb3.5,baz=334,slow=6.3,SNR=6.7						
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	**15 05 42.3**	**-1.4**
	comp=E,0.4nm,0.5s,mb3.7,baz=62,slow=5.5,SNR=2.3						
YKA	**Yellowknife Ar**	**81.41**	**17**	P	**P**	**15 07 24.8**	**-0.3**
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.0,SNR=4.8						

*CSEM **16** 15:06:58.8±0.2, 42°.57N×43°.34E, h2km, ML3.5, Error ellipse: s-maj=4.6km s-min=2.9km az=129.0*
*TIF **16** 15:06:58.4, 42°.52N×43°.39E, h10km*
*MOS **16** 15:06:58.7±1.5, 42°.45N×43°.37E, h23km, mb4.4/1, Error ellipse: s-maj=20.0km s-min=7.2km az=68.6*
*DDA **16** 15:07:08.2, 42°.40N×41°.97E, h5km, Md3.3*
ISC 16 15:06:59.2±0.5, 42°.55N±0°.02×43°.35E±0°.04, h0km±5km, n73, σ1§17/120, 6C-5D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.09**	**64**	P	**Pg**	**15 07 00.7**	**-0.2**
ONI				S	**Sg**	**15 07 02.2**	**+0.2**
ONI	**Oni**	**0.09**	**64**	P	**Pg**	**15 07 00.7**	**-0.2**
ONI				S	**Sg**	**15 07 02.2**	**+0.2**
DIGR	**Digorskoe uzhe**	**0.39**	**26**	⇓*i*PG	**Pg**	**15 07 05.9**	**-0.7**
DIGR	**Digorskoe uzhe**	**0.39**	**26**	*i* Pg	**Pg**	**15 07 05.9**	**-0.7**
ZEI	**Tsey**	**0.46**	**62**	⇓*i*PG	**Pg**	**15 07 07.3**	**-0.8**
ZEI	**Tsey**	**0.46**	**62**	*i* Pg	**Pg**	**15 07 07.3**	**-0.8**
KEH	**Kehvi**	**0.50**	**119**	P	**Pg**	**15 07 07.3**	**-1.4**
KEH				S	**Sg**	**15 07 15.0**	**-0.1**
KEH	**Kehvi**	**0.50**	**119**	P	**Pg**	**15 07 07.3**	**-1.4**
KEH				S	**Sg**	**15 07 15.0**	**-0.2**
KORR	**Kora**	**0.75**	**45**	⇑*i*PG	**Pg**	**15 07 13.1**	**-0.5**
KORR				*i* S	**Sg**	**15 07 23.2**	**-0.2**
KORR	**Kora**	**0.75**	**45**	*i* Pg	**Pg**	**15 07 13.1**	**-0.5**
KORR				*i* Sg	**Sg**	**15 07 23.2**	**-0.2**
LSNR	**Lesken**	**0.80**	**25**	⇓*i*PG	**Pg**	**15 07 14.1**	**-0.4**
LSNR				*e*S	**Sg**	**15 07 25.2**	**+0.3**
LSNR	**Lesken**	**0.80**	**25**	*i* Pg	**Pg**	**15 07 14.1**	**-0.4**
LSNR				*e*Sg	**Sg**	**15 07 25.2**	**+0.3**
GOR	**Gori**	**0.80**	**135**	P	**Pg**	**15 07 14.3**	**-0.2**
GOR				S	**Sg**	**15 07 26.1**	**+1.2**
GOR	**Gori**	**0.80**	**135**	P	**Pg**	**15 07 14.3**	**-0.2**
GOR				S	**Sg**	**15 07 26.1**	**+1.2**
ARNR	**Ardon**	**0.94**	**47**	⇓*i*PG	**Pg**	**15 07 17.0**	**-0.1**
ARNR				*e*S	**Sg**	**15 07 29.9**	**+0.6**
ARNR	**Ardon**	**0.94**	**47**	*i* Pg	**Pg**	**15 07 17.0**	**-0.1**
ARNR				*e*Sg	**Sg**	**15 07 29.9**	**+0.6**
KMSR	**Komsomolskaya**	**1.07**	**40**	*e*PG	**Pg**	**15 07 20.8**	**+1.0**
KMSR				*e*S	**Sg**	**15 07 36.7**	**+3.0**
KMSR	**Komsomolskaya**	**1.07**	**40**	*e*Pg	**Pg**	**15 07 20.8**	**+1.0**
KMSR				*e*Sg	**Sg**	**15 07 36.7**	**+3.0**
VLKR	**Vladikavkaz**	**1.10**	**63**	*e*PG	**Pg**	**15 07 19.5**	**-0.7**
VLKR				*e*S	**Sg**	**15 07 34.7**	**+0.2**
VLKR	**Vladikavkaz**	**1.10**	**63**	*e*Pg	**Pg**	**15 07 19.5**	**-0.7**
VLKR				*e*Sg	**Sg**	**15 07 34.7**	**+0.2**
SNJR	**Sundja**	**1.20**	**64**	*e*PG	**Pg**	**15 07 21.6**	**-0.5**
SNJR				*e*S	**Sg**	**15 07 37.9**	**+0.3**
SNJR	**Sundja**	**1.20**	**64**	*e*Pg	**Pg**	**15 07 21.6**	**-0.5**
SNJR				*e*Sg	**Sg**	**15 07 37.9**	**+0.3**
BTKR	**Batakoyurt**	**1.20**	**47**	*e*PG	**Pg**	**15 07 23.0**	**+0.8**
BTKR				*i* S	**Sg**	**15 07 39.6**	**+1.8**
BTKR	**Batakoyurt**	**1.20**	**47**	*e*Pg	**Pg**	**15 07 23.0**	**+0.8**
BTKR				*i* Sg	**Sg**	**15 07 39.6**	**+1.8**
KUBR	**Kubataba**	**1.25**	**2**	⇓*i*PG	**Pg**	**15 07 23.0**	**-0.1**
KUBR				*i* S	**Sg**	**15 07 41.1**	**+1.8**
KUBR	**Kubataba**	**1.25**	**2**	*i* Pg	**Pg**	**15 07 23.0**	**-0.1**
KUBR				*i* Sg	**Sg**	**15 07 41.1**	**+1.8**
SHAR	**Shatzhatmas**	**1.29**	**338**	⇑*i*PG	**Pn**	**15 07 23.2**	**-1.2**
SHAR	**Shatzhatmas**	**1.29**	**338**	*i* Pg	**Pn**	**15 07 23.2**	**-1.2**
TBLG	**Delisi**	**1.32**	**128**	P	**Pn**	**15 07 23.1**	**-1.7**
TBLG				S	**Sg**	**15 07 41.9**	**+0.3**
TBLG	**Delisi**	**1.32**	**128**	P	**Pn**	**15 07 23.1**	**-1.7**
TBLG				S	**Sg**	**15 07 41.9**	**+0.3**
MTA	**Mtatsminda**	**1.38**	**128**	P	**Pn**	**15 07 24.8**	**-0.7**
MTA				S	**Sg**	**15 07 43.1**	**-0.3**
PRTR	**Priterechnaya**	**1.38**	**29**	*e*PG	**Pn**	**15 07 25.1**	**-0.6**
PRTR				*e*S	**Sg**	**15 07 44.3**	**+0.7**
PRTR	**Priterechnaya**	**1.38**	**29**	*e*Pg	**Pn**	**15 07 25.1**	**-0.6**
PRTR				*e*Sg	**Sg**	**15 07 44.3**	**+0.7**
KIV	**Kislovodsk**	**1.48**	**341**	*e*PG	**Pn**	**15 07 26.9**	**-0.2**
KIV				pmax	pmax		
	comp=Z,68nm,0.4s						
KIV	**Kislovodsk**	**1.48**	**341**	*e*Pg	**Pn**	**15 07 26.9**	**-0.2**
	comp=Z,68nm,0.4s						
TRKR	**Terskaya**	**1.55**	**40**	⇑*i*PG	**Pn**	**15 07 28.1**	**+0.1**
TRKR				*e*S	**Sg**	**15 07 49.0**	**0.0**
TRKR	**Terskaya**	**1.55**	**40**	*i* Pg	**Pn**	**15 07 28.1**	**+0.1**
TRKR				*e*Sg	**Sg**	**15 07 49.0**	**0.0**
BCA	**Borcka**	**1.69**	**230**	*e*PN	**Pn**	**15 07 29.5**	**-0.5**
BCA	**Borcka**	**1.69**	**230**	*e*Pn	**Pn**	**15 07 29.5**	**-0.4**
ARTV	**Artvin**	**1.73**	**218**	*i* P	**Pn**	**15 07 30.4**	**+0.1**
ARTV				*i* S	**Sn**	**15 07 54.2**	**+1.1**
ARTV	**Artvin**	**1.73**	**218**	*i* P	**Pn**	**15 07 30.5**	**+0.1**
ARTV				*i* S	**Sn**	**15 07 54.2**	**+1.1**
DBOC	**Borcka**	**1.74**	**227**	*i* P	**Pn**	**15 07 29.8**	**-0.7**
DBOC				*i* S	**Sn**	**15 07 53.4**	**+0.1**
DBOC	**Borcka**	**1.74**	**227**	*i* P	**Pn**	**15 07 29.8**	**-0.7**
DBOC				*i* S	**Sn**	**15 07 53.4**	**0.0**
DAGI	**Agillar**	**1.82**	**216**	*i* P	**Pn**	**15 07 32.1**	**+0.5**
DAGI				*i* S	**Sn**	**15 07 57.1**	**+1.7**
KARS	**Kars**	**1.93**	**186**	*e*PN	**Pn**	**15 07 34.3**	**+1.1**
DBAD	**Bademkaya**	**1.97**	**219**	*i* P	**Pn**	**15 07 34.0**	**+0.3**
DBAD				*i* S	**Sn**	**15 08 00.3**	**+1.3**
DBAD	**Bademkaya**	**1.97**	**219**	*i* P	**Pn**	**15 07 34.0**	**+0.3**
DBAD				*i* S	**Sn**	**15 08 00.3**	**+1.3**
DDEM	**Demirkent**	**2.04**	**216**	*i* P	**Pn**	**15 07 35.5**	**+0.8**
DDEM				*i* S	**Sn**	**15 08 03.9**	**+3.1**
DDEM	**Demirkent**	**2.04**	**216**	*i* P	**Pn**	**15 07 35.5**	**+0.8**
DDEM				*i* S	**Sn**	**15 08 03.9**	**+3.0**
DIGO	**Kars**	**2.13**	**179**	*e*P	**Pn**	**15 07 37.7**	**+1.7**
DIGO				*i* S	**Sg**	**15 08 08.5**	**+0.8**
DIGO	**Kars**	**2.13**	**179**	*e*P	**Pn**	**15 07 37.7**	**+1.7**
PZAR	**Pazar-Rize**	**2.29**	**234**	*e*PN	**Pn**	**15 07 38.7**	**+0.7**
PZAR	**Pazar-Rize**	**2.29**	**234**	*e*Pn	**Pn**	**15 07 38.7**	**+0.6**
GOF	**Gofitskoye**	**2.52**	**355**	*i* PN	Px	15 07 58.4	
GNI	**Garni**	**2.62**	**156**	*e*PN	**Pg**	**15 07 47.0**	**-2.3**
GNI	**Garni**	**2.62**	**156**	*e*Pn	**Pg**	**15 07 47.0**	**-2.4**
HOMI	**Horasan**	**2.73**	**204**	*e*P	**Pn**	**15 07 45.6**	**+1.4**
HOMI				*e*S	**Sg**	**15 08 29.7**	**+2.9**
AGRB	**Hanur-Agry**	**2.98**	**185**	*e*PN	**Pg**	**15 07 55.3**	**-1.1**
ERZM	**Erzurum**	**3.04**	**210**	*i* P	**Pn**	**15 07 53.1**	**+4.7**
ERZM				*i* S	**Sg**	**15 08 35.3**	**-1.4**
EZM	**Erzurum**	**3.04**	**210**	*e*PN	**Pg**	**15 07 55.9**	**-1.5**
MACK	**Trabzon**	**3.12**	**240**	*i* P	**Pn**	**15 07 46.6**	**-3.0**
MACK				*i* S	**Sn**	**15 08 22.6**	**-4.9**
MACK	**Trabzon**	**3.12**	**240**	*i* P	**Pn**	**15 07 46.6**	**-3.0**
MACK				*i* S	**Sn**	**15 08 22.6**	**-4.9**
KOPT	**Kop Dagi**	**3.32**	**221**	*e*P	**Pn**	**15 07 53.8**	**+1.5**
KOPT				*i* S	**Sn**	**15 08 38.8**	**+6.4**
KOPT	**Kop Dagi**	**3.32**	**221**	*e*P	**Pn**	**15 07 53.8**	**+1.5**
GUMT	**Gumushane**	**3.58**	**236**	*e*PN	**Pn**	**15 07 52.5**	**-3.3**
GUMT	**Gumushane**	**3.58**	**236**	*e*Pn	**Pn**	**15 07 52.5**	**-3.3**
ESPY	**Espiye-Giresun**	**3.82**	**246**	*e*PN	**Pn**	**15 07 56.6**	**-2.6**
ESPY	**Espiye-Giresun**	**3.82**	**246**	*e*Pn	**Pn**	**15 07 56.6**	**-2.6**
KELT	**Kelkit**	**3.90**	**233**	*i* P	**Pn**	**15 07 60.0**	**-0.4**
KELT				*i* S	**Sn**	**15 08 44.8**	**-2.0**
KELT	**Kelkit**	**3.90**	**233**	*i* P	**Pn**	**15 08 00.0**	**-0.3**
KELT				*i* S	**Sn**	**15 08 44.8**	**-2.0**
AKTO	**Aktyubinsk**	**12.80**	**47**	⇑Pn	**Pn**	**15 09 59.2**	**-3.1**
	comp=Z,0.2nm,0.6s						
AKTO				⇑Sn	**Sn**	**15 12 13.9**	**-11**
	comp=Z,0.4nm,0.8s						
AKTO	**Aktyubinsk**	**12.80**	**47**	Pn	**Pn**	**15 09 59.2**	**-3.1**
	comp=Z,0.2nm,0.6s						
AB31	**Akbulak array**	**13.35**	**54**	Pn	**Pn**	**15 10 06.5**	**-3.2**
	comp=Z,0.7nm,0.5s,baz=242,slow=11,SNR=20						
AB31				⇑Sn	**Sn**	**15 12 28.0**	**-11**
	comp=Z,1.4nm,0.8s,baz=243,slow=20,SNR=4.2						

IDC 16 15:15:25.9±1.1, 31°.21N×103°.50E, h0km, mb3.4/6, mb1 3.5/7, mb1mx3.4/26, mbtmp3.4/7, Error ellipse: s-maj=41.2km s-min=18.3km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.75**	**7**	Pn	Pn	15 19 20.1	-1.7
	baz=183,slow=13,SNR=4.0						
KSRS	**Korea Array**	**21.08**	**66**	P	P	15 20 11.9	+0.2
	1.1nm,0.8s,baz=261,slow=10.0,SNR=7.9						
MKAR	**Makanchi Array**	**22.56**	**320**	P	P	15 20 28.5	+1.0
	0.7nm,0.9s,baz=128,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.40**	**335**	P	P	15 21 04.3	+0.5
	0.4nm,0.5s,baz=133,slow=10,SNR=3.0						
KURK	**Kurchatov**	**26.85**	**324**	P	P	15 21 07.1	-0.9
	0.5nm,0.6s,baz=130,slow=9.8,SNR=3.6						
WRA	**Warramunga Arr**	**58.85**	**146**	P	P	15 25 25.9	-0.5
	0.5nm,0.8s,baz=339,slow=7.8,SNR=5.3						
ASAR	**Alice Springs**	**61.85**	**148**	P	P	15 25 47.3	+0.4
	0.4nm,1.0s,baz=330,slow=6.6,SNR=2.5						

IDC 16 15:15:27.7±5.0, 30°.73S×178°.95W, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.7/14, mbtmp4.0/2, Error ellipse: s-maj=192.8km s-min=53.2km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.28**	**268**	P	P	15 23 22.5	-0.6
	0.8nm,0.6s,baz=106,slow=7.9,SNR=27						
WRA	**Warramunga Arr**	**43.30**	**273**	P	P	15 23 31.7	+0.3
	1.3nm,0.4s,baz=113,slow=8.1						
FINES	**FINESS Array B**	**145.17**	**339**	PKPbc	PKPbc	15 35 05.4	-0.6
	1.3nm,0.4s,baz=35,slow=5.1,SNR=12						

*ISCJB **16** 15:21:03.5±1.1, 31°.44N±0°.03×104°.08E±0°.06, h2km±8km, mb3.7/7, Error ellipse: s-maj=9.1km s-min=5.6km az=2.4*
*IDC **16** 15:21:04.7±0.8, 31°.42N×104°.09E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.5/2, Error ellipse: s-maj=32.7km s-min=16.4km az=60.0*
*NEIC **16** 15:21:06.7±0.5, 31°.47N×104°.07E, h10km, Error ellipse: s-maj=12.1km s-min=7.8km az=75.0*
*BJI **16** 15:21:06.0, 31°.37N×104°.31E, h22km, ML3.5/7, Ms7 2.9/1*
ISC 16 15:21:05.6±1.0, 31°.42N±0°.03×104°.06E±0°.06, h2km±7km, n19, σ0§91/25, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**207**	Pg	**Pg**	**15 21 16.3**	**-0.2**
CD2				Sg	**Sg**	**15 21 22.4**	**-1.5**
CD2				smax			
	comp=N,2μm,0.7s						
LZH	**Lanzhou**	**4.66**	**358**	Pg	**Pg**	**15 22 35.8**	**+1.0**
LZH				Sg	**Sg**	**15 23 35.5**	**+0.3**
LZH				smax			
	comp=N,58nm,1.0s						
LZH				smax			
	comp=E,54nm,1.1s						
ENH	**Enshi**	**4.81**	**102**	*e*Pn	**Pn**	**15 22 20.4**	**+1.3**
ENH				*e*Sn	**Sn**	**15 23 15.1**	**-0.2**
XAN	**Xi'an**	**4.86**	**56**	Pn	**Pn**	**15 22 16.0**	**-3.7**
XAN				Sg	**Sg**	**15 23 36.8**	**-5.0**
XAN				smax			
	comp=N,88nm,0.8s						
XAN				smax			
	comp=E,42nm,0.8s						
GYA	**Guiyang**	**5.45**	**155**	Pg	**Pb**	**15 22 46.9**	**+5.4**
GYA				Sg	**Sb**	**15 23 46.9**	**-0.4**
GYA				smax			
	comp=N,80nm,0.9s						
GYA				smax			
	comp=E,140nm,0.8s						
KMI	**Kunming**	**6.38**	**191**	Pn	**Pn**	**15 22 40.6**	**0.0**
KMI				Sn	**Sn**	**15 23 56.0**	**+1.9**
KMI				smax			
	comp=N,13nm,0.8s						
KMI				smax			
	comp=E,12nm,1.2s						
KMI				LR	LR		
	comp=Z,120nm,11.3s						
CM31	**Chiang Mai Arr**	**13.71**	**201**	*e*Pn	**Pn**	**15 24 23.1**	**+2.1**
	comp=Z,3.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.71**	**201**	Pn	**Pn**	**15 24 21.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=3.2						
SONM	**Songino Array**	**16.49**	**6**	Pn	**Pn**	**15 24 58.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=2.3						
KSRS	**Korea Array**	**20.56**	**66**	P	**

SPITS	**Spitsbergen Ar**	**49.68 354**	P	**P**	**15 43 15.3**	**+0.5**
	6.2nm,1.0s,mb4.6,baz=64,slow=8.9,SNR=6.1					
KURK	**Kurchatov**	**54.88 309**	P	**P**	**15 43 54.6**	**+0.8**
	0.6nm,0.6s,mb3.8,baz=55,slow=7.4,SNR=5.2					
MKAR	**Makanchi Array**	**55.60 304**	P	**P**	**15 43 58.4**	**-0.6**
	0.4nm,0.8s,mb3.5,baz=41,slow=4.6,SNR=3.1					
BVAR	**Borovoye Array**	**57.13 315**	P	**P**	**15 44 09.7**	**-0.2**
	0.5nm,0.5s,mb3.8,baz=56,slow=5.6,SNR=3.0					
NB2	**NORSAR Subarra**	**66.74 350**	P	**P**	**15 45 14.9**	**+0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=13,slow=6.5					
NOA	**NORSAR Array B**	**66.74 350**	P	**P**	**15 45 14.9**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=12,slow=6.4,SNR=4.5					
BRTR	**Keskin Array B**	**82.28 329**	P	**P**	**15 46 45.1**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=62,slow=5.7,SNR=3.9					

*IDC **16** 15:51:39.6±1.1, 0°.83N×126°.03E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.9/8, ML3.6/1, Error ellipse: s-maj=120.0km s-min=16.2km az=69.0*
*ISCJB **16** 15:51:42.4±0.8, 0°.8N±0°.3×126°.0E±0°.7, h33km, mb4.0/9, Error ellipse: s-maj=102.9km s-min=11.2km az=157.6*
*NEIC **16** 15:51:44.6±0.6, 0°.76N×125°.96E, h35km, mb4.2/3, Error ellipse: s-maj=54.6km s-min=8.2km az=69.0*
ISC 16 15:51:44.7±0.7, 0°.7N±0°.2×125°.8E±0°.4, h35km, n12, σ0§63/14, mb4.0/9, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.68**	**181**	P	**Pn**	**15 56 00.1**	**-0.5**
	0.1nm,0.3s,baz=22,slow=11,SNR=4.9						
FITZ				S	**S**	**15 59 40.9**	**+10**
	0.1nm,0.3s,baz=43,slow=19,SNR=1.9						
WRAB	**Tennant Creek**	**22.14**	**158**	*e*P	**P**	**15 56 36.8**	**-0.7**
	5.6nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**22.15**	**158**	P	**P**	**15 56 37.7**	**+0.1**
	6.3nm,0.7s,mb4.1,baz=337,slow=11,SNR=60						
WRA				S	**S**	**16 00 28.4**	**-11**
	0.4nm,0.6s,baz=342,slow=22,SNR=5.5						
ASAR	**Alice Springs**	**25.46**	**163**	P	**P**	**15 57 10.4**	**+0.8**
	1.6nm,0.3s,mb4.0,baz=348,slow=13,SNR=68						
STKA	**Stephens Creek**	**35.68**	**157**	P	**P**	**15 58 40.1**	**+0.4**
	2.8nm,0.7s,mb4.3,baz=332,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**35.68**	**157**	*e*P	**P**	**15 58 40.0**	**+0.2**
	0.7nm,0.8s,mb3.6						
SONM	**Songino Array**	**49.89**	**343**	P	**P**	**16 00 33.6**	**-1.0**
	0.4nm,0.7s,mb3.6,baz=162,slow=9.1,SNR=2.9						
MK31	**Makanchi Array**	**59.55**	**327**	*e*P	**P**	**16 01 44.3**	**-0.4**
MKAR	**Makanchi Array**	**59.55**	**327**	P	**P**	**16 01 45.8**	**+1.1**
	1.4nm,0.7s,mb4.1,baz=127,slow=8.1,SNR=9.8						
ZALV	**Zalesovo Beam**	**62.88**	**334**	P	**P**	**16 02 07.2**	**0.0**
	0.4nm,0.3s,mb4.0,baz=136,slow=9.2,SNR=2.4						
BVAR	**Borovoye Array**	**69.37**	**328**	P	**P**	**16 02 48.5**	**-0.3**
	0.3nm,0.3s,mb3.7,baz=116,slow=6.6,SNR=3.5						
ARU	**Arti**	**77.01**	**328**	*e*P	**P**	**16 03 34.4**	**+0.6**
	3.9nm,0.7s,mb4.5						
ARU				*e*		16 03 47.8	

IDC 16 15:51:54.1±5.6, 15°.02S×70°.01W, h206km±38km, mb3.0/1, mb1 3.4/3, mb1mx3.1/19, mbtmp3.1/3, Error ellipse: s-maj=196.9km s-min=48.1km az=54.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.21**	**125**	P	Pn	15 52 36.5	+1.3
	8.1nm,0.3s,baz=308,slow=8.5,SNR=214						
LPAZ				S	Sn	15 53 08.7	+1.5
	2.3nm,0.3s,baz=176,slow=23,SNR=14						
CPUP	**Villa Florida**	**16.34**	**136**	P	P	15 55 30.9	-0.5
	0.6nm,0.3s,baz=306,slow=8.7,SNR=5.0						
YKA	**Yellowknife Ar**	**84.76**	**341**	P	P	16 04 03.8	-0.9
	0.2nm,0.5s,baz=135,slow=5.2,SNR=5.5						
SONM	**Songino Array**	**147.15**	**4**	PKPbc	PKPbc	16 11 12.9	+0.1
	0.3nm,0.4s,baz=263,slow=2.9,SNR=3.3						

IDC 16 16:09:00.9±1.7, 1°.34N×128°.45E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, MS3.5/1, Ms1 3.4/1, ms1mx2.5/18, Error ellipse: s-maj=125.3km s-min=21.4km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.92**	**165**	P	P	16 13 55.4	-0.6
	0.9nm,0.7s,baz=345,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**25.41**	**168**	P	P	16 14 30.9	+0.6
	0.5nm,0.9s,baz=353,slow=9.2,SNR=9.0						
STKA	**Stephens Creek**	**35.30**	**160**	LR	LR	16 30 20.3	
	comp=Z,72nm,18.1s,baz=24,slow=36						
MKAR	**Makanchi Array**	**60.49**	**325**	P	P	16 19 13.0	+0.3
	0.4nm,0.5s,baz=114,slow=7.9,SNR=11						
KURK	**Kurchatov**	**64.67**	**327**	P	P	16 19 40.2	-0.3
	0.4nm,0.4s,baz=127,slow=5.9,SNR=5.4						

*IDC **16** 16:14:41.6±0.5, 31°.07N×103°.61E, h0km, mb4.5/24, mb1 4.5/26, mb1mx4.5/30, mbtmp4.4/26, ML3.9/2, MS4.1/29, Ms1 4.1/29, ms1mx4.0/37, Error ellipse: s-maj=17.5km s-min=11.2km az=42.0*
*BJI **16** 16:14:42.4, 31°.08N×103°.69E, h9km, mB4.9/24, mb4.7/31, ML5.0/20, Ms5.0/61, Ms7 4.7/46*
*NEIC **16** 16:14:43.8±0.2, 31°.10N×103°.61E, h10km, mb4.9/47, MS4.5/3, Error ellipse: s-maj=5.9km s-min=4.8km az=211.0*
NEIC Felt at Chengdu.
*GCMT **16** 16:14:43.8±0.3, 31°.09N×103°.61E, h24km±1km, MW4.9/69, Moment Tensor Solution. s24,c24; s69,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.92±.13; $M_{\theta\theta}$-1.50±.09; $M_{\phi\phi}$0.58±.08; $M_{r\theta}$0.24±.11; $M_{\theta\phi}$2.01±.07; $M_{\phi r}$-0.81±.12; Best double couple: $M_0$2.46600×10^{16} NP1:ϕ_s258.00000°, δ64.00000°, λ13.00000°. NP2: ϕ_s162.00000°, δ78.00000°, λ153.00000°. Principal axes: T 2.1030, Plg27.0000°, Azm117.0000°; N 0.7280, Plg61.0000°, Azm320.0000°; P -2.8290, Plg10.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **16** 16:14:44.2±0.6, 31°.09N±0°.02×103°.57E±0°.02, h25km±4km, mb4.7/88, MS4.2/50 Error ellipse: s-maj=3.5km s-min=3.1km az=169.7*
*MOS **16** 16:14:45.2±1.2, 31°.04N×103°.69E, h33km, mb5.0/40, MS4.3/20, Error ellipse: s-maj=8.5km s-min=5.4km az=100.9*
*DJA **16** 16:14:48, 31°.14N×103°.94E, h10km, mb5.2/14*
*SZGRF **16** 16:14:54.1, 31°.44N×102°.62E, h33km, mb4.7, MS4.6, Sichuan, China*
ISC 16 16:14:45.5±0.6, 31°.11N±0°.02×103°.57E±0°.02, h19km±4km, h18km±5.4km: pP-P, n254, σ1§25/266, mb4.7/88, MS4.2/50, 15C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.26**	**142**	Pg	**Pg**	**16 14 50.6**	**-0.8**
CD2				Sg	**Sg**	**16 14 57.3**	**+1.9**
CD2				smax			
	comp=N,254μm,0.7s						
LZH	**Lanzhou**	**4.97**	**3**	Pn	**Pn**	**16 16 01.4**	**+2.3**
LZH				Sn	**Sn**	**16 16 58.3**	**+2.3**
LZH				Sg	**Sg**	**16 17 22.0**	**-3.0**
LZH				smax			
	comp=N,1μm,1.1s						
LZH				smax			
	comp=E,5μm,1.2s						
LZH				LR	LR		
	comp=E,9μm,6.6s						
LZH				LR	LR		
	comp=Z,11μm,7.2s						
ENH	**Enshi**	**5.16**	**98**	*e*Pn	**Pn**	**16 16 01.7**	**-0.1**
	comp=Z,808nm,0.6s						
GYA	**Guiyang**	**5.37**	**149**	Pn	**Pn**	**16 16 04.6**	**0.0**
GYA				Sn	**Sn**	**16 17 06.3**	**+0.3**
GYA				smax			
	comp=N,4μm,1.1s						
GYA				smax			
	comp=E,3μm,1.1s						
GYA				LR	LR		
	comp=N,10μm,5.9s						
GYA				LR	LR		
	comp=E,14μm,4.8s						
GYA				LR	LR		
	comp=Z,6μm,5.0s						
XAN	**Xi'an**	**5.38**	**56**	Pn	**Pn**	**16 16 03.5**	**-1.2**
XAN				Pg	**Pb**	**16 16 17.9**	**-0.9**
XAN				Sn	**Sn**	**16 17 07.3**	**+1.2**
XAN				Sg	**Sg**	**16 17 29.9**	**-8.2**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,1μm,0.9s						
KMI	**Kunming**	**6.01**	**187**	Pn	**Pn**	**16 16 14.3**	**+0.9**
KMI				Sn	**Sn**	**16 17 21.8**	**0.0**
KMI				smax			
	comp=N,420nm,0.9s						
KMI				smax			
	comp=E,360nm,0.9s						
KMI				LR	LR		
	comp=N,5μm,10.6s						
KMI				LR	LR		
	comp=E,15μm,10.3s						
KMI				LR	LR		
	comp=Z,7μm,10.1s						
GTA	**Gaotai**	**8.83**	**341**	⇓P	**Pn**	**16 16 54.5**	**+2.4**
GTA				S	**Sn**	**16 18 33.5**	**+2.4**
GTA				sS		16 18 38.9	
GTA				pmax	pmax		
	comp=Z,98nm,4.8s						
GTA				LR	LR		
	comp=N,3μm,12.5s						
GTA				LR	LR		
	comp=E,6μm,11.9s						
GTA				LR	LR		
	comp=Z,4μm,9.8s						
WHN	**Wuhan**	**9.28**	**91**	⇑P	**Pn**	**16 16 57.5**	**-0.9**
WHN				S	**Sn**	**16 18 38.0**	**-4.3**
WHN				LR	LR		
	comp=N,15μm,5.4s						
WHN				LR	LR		
	comp=E,19μm,7.6s						
WHN				LR	LR		
	comp=Z,24μm,7.2s						
TIY	**Taiyuan**	**9.84**	**46**	*e*P	**Pn**	**16 17 05.3**	**-0.7**
TIY				S	**Sn**	**16 18 55.9**	**0.0**
TIY				LR	LR		
	comp=N,2μm,7.3s						
TIY				LR	LR		
	comp=E,1μm,3.7s						
TIY				LR	LR		
	comp=Z,710nm,8.6s						
BTO	**Baotou**	**10.82**	**27**	*e*P	**Pn**	**16 17 18.0**	**-1.3**
BTO				LR	LR		
	comp=N,2μm,9.8s						
BTO				LR	LR		
	comp=E,780nm,9.8s						
LSA	**Lhasa**	**10.82**	**266**	P	**Pn**	**16 17 20.6**	**+1.2**
LSA				S	**Sn**	**16 19 19.9**	**-0.1**
LSA				LR	LR		
	comp=E,6μm,11.3s						
LSA				LR	LR		
	comp=Z,7μm,9.4s						
LSA	**Lhasa**	**10.82**	**266**	*e*P	**Pn**	**16 17 20.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,27nm,0.6s						
LSA	**Lhasa**	**10.82**	**266**	*e*P	**Pn**	**16 17 20.6**	**+1.2**
	comp=Z,27nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.67**	**31**	*e*P	**Pn**	**16 17 32.5**	**+1.5**
HHC				S	**Sn**	**16 19 41.9**	**+1.2**
HHC				sS		16 19 52.8	
HHC				SS		16 19 56.5	
HHC				LR	LR		
	comp=N,3μm,4.6s						
HHC				LR	LR		
	comp=E,2μm,4.8s						
HHC				LR	LR		
	comp=Z,3μm,6.4s						
SHL	**Shillong**	**11.68**	**245**	*ex*	**Pn**	**16 17 31.5**	**+0.3**
SHL				*ex*	x	16 21 04.5	
GZH	**Guangzhou**	**11.81**	**130**	P	**Pn**	**16 17 28.0**	**-5.0**
GZH				LR	LR		
	comp=N,5μm,6.3s						
GZH				LR	LR		
	comp=E,4μm,7.8s						
TIA	**Tai'an**	**12.38**	**62**	P	**Pn**	**16 17 41.3**	**+0.6**
TIA				LR	LR		
	comp=N,2μm,8.0s						
TIA				LR	LR		
	comp=E,930nm,8.0s						
NJ2	**Nanjing**	**13.06**	**82**	*e*P	**Pn**	**16 17 48.1**	**-2.0**
NJ2				pP		16 17 54.6	
NJ2				PP		16 17 59.0	
NJ2				sP		16 18 00.8	
NJ2				S	**Sn**	**16 20 13.0**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,70nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,170nm,4.2s						
NJ2				LR	LR		
	comp=N,8μm,12.6s						
NJ2				LR	LR		
	comp=E,6μm,12.1s						
NJ2				LR	LR		
	comp=Z,7μm,12.6s						
CM31	**Chiang Mai Arr**	**13.28**	**199**	*e*Pn	**Pn**	**16 17 52.5**	**-0.5**
	comp=Z,24nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.28**	**199**	Pn	**Pn**	**16 17 52.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=12,slow=12,SNR=14						
CMAR				ScP	ScP	16 26 55.8	+0.8
	comp=Z,0.0nm,0.3s,baz=270,slow=0.3,SNR=6.1						
QIZ	**Qiongzhong**	**13.30**	**153**	P	**Pn**	**16 17 54.4**	**+1.1**
QIZ				S	**Sn**	**16 20 23.5**	**+2.8**
QIZ				LR	LR		
	comp=N,5μm,7.8s						
QIZ				LR	LR		
	comp=E,2μm,8.0s						
QIZ				LR	LR		
	comp=Z,3μm,8.4s						
BJI	**Beijing**	**13.57**	**46**	P	**Pn**	**16 17 56.0**	**-1.0**
BJI				pmax	pmax		
	comp=Z,30nm,1.3s						
BJI				pmax	pmax		
	comp=Z,220nm,3.6s						
BJI				LR	LR		
	comp=N,1μm,7.2s						
BJI				LR	LR		
	comp=E,1μm,7.5s						
BJI				LR	LR		
	comp=Z,570nm,20.9s						
TAPN	**Taplejung**	**14.35**	**259**	*e*P	**Pn**	**16 18 07.5**	**-0.1**
BDT	**Bhumibol Dam**	**14.42**	**198**	P	**Pn**	**16 18 15.5**	**+6.9**
	comp=Z,1.8nm,19.0s						
QZH	**Quanzhou**	**14.61**	**111**	*e*P	**Pn**	**16 18 13.4**	**+2.2**
QZH				S	**Sn**	**16 20 58.6**	**+5.9**
QZH				LR	LR		
	comp=N,8μm,7.2s						
QZH				LR	LR		
	comp=E,8μm,8.2s						
QZH				LR	LR		
	comp=Z,13μm,9.6s						
KKTK	**Khon Kaen**	**14.72**	**183**	P	**Pn**	**16 18 20.5**	**+7.7**
SSE	**Sheshan**	**15.09**	**86**	P	**Pn**	**16 18 16.9**	**-0.8**
SSE				S	**Sn**	**16 21 04.9**	**+0.5**
SSE				pmax	pmax		
	comp=Z,36nm,0.6s						
SSE				pmax	pmax		
	comp=Z,77nm,3.4s						
SSE				LR	LR		
	comp=N,6μm,11.4s						
SSE				LR	LR		
	comp=E,1μm,11.4s						
SSE				LR	LR		
	comp=Z,3μm,6.5s						
RAMN	**Ramite**	**15.41**	**259**	*e*P	**Pn**	**16 18 19.7**	**-2.2**
NST	**Nakhon Sawan**	**15.69**	**192**	P	**Pn**	**16 18 30.0**	**+4.5**
	comp=Z,92nm,0.9s						
GUN	**Gumba**	**15.73**	**263**	*e*P	**Pn**	**16 18 23.2**	**-2.9**
	comp=Z,159nm,0.9s						
PKI	**Pulchoki**	**16.23**	**262**	*e*P	**Pn**	**16 18 29.5**	**-3.0**
	comp=Z,86nm,0.7s						
PKIN	**Phulchoki**	**16.24**	**262**	*e*P	**Pn**	**16 18 29.7**	**-2.9**
	comp=Z,159nm,0.7s						
KKN	**Kakani**	**16.27**	**263**	*e*P	**Pn**	**16 18 30.0**	**-3.1**
	comp=Z,109nm,0.7s						
DMN	**Daman**	**16.47**	**262**	*e*P	**Pn**	**16 18 32.6**	**-3.0**
	comp=Z,261nm,1.0s						
DL2	**Dalian**	**16.69**	**57**	P	**Pn**	**16 18 38.3**	**0.0**
DL2				S	**Sn**	**16 21 43.6**	**+0.4**
DL2				pmax	pmax		
	comp=Z,50nm,1.4s						
DL2				pmax	pmax		
	comp=Z,130nm,4.0s						
DL2				LR	LR		
	comp=E,880nm,13.9s						
DL2				LR	LR		
	comp=Z,920nm,16.3s						
SONM	**Songino Array**	**16.84**	**7**	Pn	**Pn**	**16 18 39.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=187,slow=13,SNR=26						
SONM				LR	LR	16 25 57.4	
	comp=Z,1μm,21.5s,baz=186,slow=40						
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*P	**Pn**	**16 18 40.8**	**-0.6**
ULN				pmax	pmax		
	comp=Z,143nm,2.0s						
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*Pn	**Pn**	**16 18 40.8**	**-0.6**
	comp=Z,143nm,2.0s						
YHNB	**Yeheng**	**16.99**	**108**	*e*P	**Pn**	**16 18 43.0**	**+0.9**
	comp=Z,57nm,0.6s						
TPUB	**Ta-pu**	**17.04**	**113**	*e*Pn	**Pn**	**16 18 44.5**	**+1.7**
	comp=Z,76nm,1.3s						
SSLB	**Suanglung**	**17.05**	**111**	*e*P	**Pn**	**16 18 44.0**	**+1.1**
	comp=Z,90nm,0.8s						
NACB	**Ninganchiao**	**17.39**	**109**	*e*P	**Pn**	**16 18 49.1**	**+2.0**
	comp=Z,63nm,1.0s						
YULB	**Yu-li**	**17.52**	**112**	*e*P	**Pn**	**16 18 50.3**	**+1.5**
	comp=Z,36nm,0.9s						
WMQ	**Urumqi**	**17.84**	**320**	*e*P	**Pn**	**16 18 51.0**	**-1.6**
WMQ				sP	sP	16 18 57.9	-3.2
WMQ				PP		16 19 06.0	
WMQ				S	**Sn**	**16 22 07.3**	**-3.7**
WMQ				SS		16 22 29.0	
WMQ				PcP	PcP	16 23 28.0	-0.9
WMQ				pmax	pmax		
	comp=Z,23nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,340nm,3.8s						
WMQ				LR	LR		
	comp=N,2μm,10.0s						
WMQ				LR	LR		
	comp=E,350nm,10.0s						
WMQ				LR	LR		
	comp=Z,480nm,18.0s						
ZAK	**Zakamensk**	**19.25**	**359**	*e*P	**Pn**	**16 19 10.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SNY	**Shenyang**	**19.27**	**51**	⇓P	**Pn**	**16 19 09.4**	**-0.7**
SNY				S	**Sn**	**16 22 43.8**	**-1.8**
SNY				pmax	pmax		
	comp=Z,40nm,1.6s						
SNY				pmax	pmax		
	comp=Z,420nm,4.3s						
SNY				LR	LR		
	comp=E,1μm,16.4s						
SNY				LR	LR		
	comp=Z,1μm,15.5s						
INCN	**Inchon**	**20.06**	**65**	P	**P**	**16 19 18.4**	**+0.8**
	comp=Z,29nm,0.7s						
TLY	**Talaya**	**20.55**	**0**	*e*P	**P**	**16 19 24.9**	**+2.1**
TLY				*e*S	**S**	**16 23 17.7**	**+5.9**
TLY				pmax	pmax		
	comp=Z,39nm,2.2s						
TLY				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.3						
TLY	**Talaya**	**20.55**	**0**	*e*P	**P**	**16 19 22.1**	**-0.7**
	comp=Z,22nm,1.2s						
JOSI	**Joshimath**	**20.62**	**275**	*e*P	**P**	**16 19 24.6**	**+0.8**
MOY	**Mondy**	**20.63**	**355**	*e*P	**P**	**16 19 25.1**	**+1.5**
MOY				pmax	pmax		
	comp=Z,66nm,1.6s						
KS15	**Wonju Array Si**	**21.03**	**66**	*e*P	**P**	**16 19 28.4**	**+0.3**
KSRS	**Korea Array**	**21.06**	**66**	P	**P**	**16 19 28.6**	**+0.1**
	comp=Z,40nm,0.6s,mb4.9,baz=259,slow=11,SNR=128						
KSRS				LR	LR	16 28 19.7	
	comp=Z,429nm,19.9s,MS3.8,baz=261,slow=39						
KSRS	**Korea Array**	**21.06**	**66**	P	**P**	**16 19 28.6**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,40nm,0.6s,mb4.9						
KSRS				MLR	MLR		
	comp=Z,429nm,19.9s,MS3.8						
IRK	**Irkutsk**	**21.12**	**1**	⇓*i*P	**P**	**16 19 30.2**	**+1.2**
IRK				pmax	pmax		
	comp=Z,87nm,1.4s,mb4.9						
CN2	**Changchun**	**21.42**	**48**	⇑P	**P**	**16 19 32.8**	**+0.6**
CN2				*e*sP	sP	16 19 39.8	-0.3
CN2				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,12.0s,MS4.5						
CN2				LR	LR		
	comp=E,900nm,12.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,12.0s,MS4.1						
KLP	**Kalpa**	**21.63**	**278**	*e*P	**P**	**16 19 35.3**	**+0.7**
KLP				AMb	AMB	16 19 40.3	
	comp=Z,146nm,0.8s,mb5.4						
HIA	**Hailar**	**21.86**	**29**	*e*P	**P**	**16 19 37.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,87nm,1.4s						
HIA	**Hailar**	**21.86**	**29**	*e*P	**P**	**16 19 37.4**	**+0.5**
	comp=Z,87nm,1.4s,mb5.0						
DDI	**Dehra Dun**	**21.94**	**275**	*ex*	x	16 19 35.0	
JOW	**Kunigami**	**22.01**	**95**	P	**P**	**16 19 37.6**	**-1.2**
	comp=Z,54nm,0.5s,mb5.2,baz=280,slow=3.0,SNR=21						
JOW				LR	LR	16 29 01.3	
	comp=Z,635nm,20.2s,MS4.0,baz=283,slow=39						
JOW	**Kunigami**	**22.01**	**95**	P	**P**	**16 19 37.6**	**-1.2**
JOW				LR	LR	16 29 01.3	
CIT	**Chita**	**22.15**	**17**	*e*P	**P**	**16 19 41.1**	**+1.2**
CIT				*e*		16 19 54.4	
CIT				*e*		16 20 10.2	
CIT				pmax	pmax		
	comp=Z,154nm,1.9s,mb5.1						
MK31	**Makanchi Array**	**22.68**	**320**	*e*P	**P**	**16 19 46.7**	**+1.0**
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**16 19 46.4**	**+0.7**
	comp=Z,15nm,0.8s,mb4.5,baz=120,slow=12,SNR=56						
MKAR				ScP	ScP	16 27 14.1	-0.3
	comp=Z,1.1nm,0.9s,baz=123,slow=5.3,SNR=4.3						
MKAR				LR	LR	16 29 19.9	
	comp=Z,671nm,19.4s,MS4.1,baz=124,slow=39						
AGRA	**Agra**	**22.69**	**267**	*e*P	**P**	**16 19 46.4**	**+0.4**
SDNR	**Sundarnagar**	**22.72**	**278**	*e*P	**P**	**16 19 45.1**	**-1.2**
BISR	**Bishrakh**	**22.80**	**270**	*e*P	**P**	**16 19 47.2**	**+0.2**
NDI	**New Delhi**	**22.96**	**271**	*ex*	**P**	**16 19 46.0**	**-2.8**
KKR	**Kurukshetra**	**23.05**	**274**	*ex*	x	16 19 55.0	
AYAN	**Aya Nagar**	**23.08**	**270**	*e*P	**P**	**16 19 49.9**	**-0.3**
AYAN				AMb	AMB	16 19 58.6	
	comp=Z,33nm,1.2s,mb4.6						
SONA	**Sohna**	**23.17**	**270**	*e*P	**P**	**16 19 50.5**	**-0.6**
SONA				AMb	AMB	16 19 58.3	
	comp=Z,40nm,0.5s,mb5.1						
RTK	**Rohtak**	**23.58**	**272**	*ex*	x	16 19 45.8	
KSH	**Kashi**	**23.96**	**298**	P	**P**	**16 20 04.6**	**+6.0**
KSH				*e*pP		16 20 07.9	
KSH				*e*sP	sP	16 20 11.0	+4.2
KSH				*e*PP		16 20 38.9	
KSH				*e*PcP	PcP	16 23 43.9	+3.3
KSH				*e*S	**S**	**16 24 21.6**	**+7.2**
KSH				*e*sS	sS	16 24 26.9	+3.1
KSH				*e*SS		16 25 13.9	
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
KSH				pmax	pmax		
	comp=Z,300nm,3.4s						
KSH				LR	LR		
	comp=N,1μm,11.7s,MS4.7						
KSH				LR	LR		
	comp=E,1μm,11.4s,MS4.7						
KSH				LR	LR		
	comp=Z,660nm,10.1s,MS4.4						
KHET	**Khetri**	**24.31**	**270**	*e*P	**P**	**16 20 00.9**	**-1.0**
KHET				AMb	AMB	16 20 06.9	
	comp=Z,22nm,0.8s,mb4.6						
MDJ	**Mudanjiang**	**24.45**	**49**	P	**P**	**16 20 02.4**	**-0.6**
MDJ				pP		16 20 05.3	
MDJ				sP	sP	16 20 06.8	-4.3
MDJ				S	**S**	**16 24 22.3**	**+0.2**
MDJ				sS	sS	16 24 28.3	-3.2
MDJ				ScP	ScP	16 27 19.8	+0.6
MDJ				PcS	PcS	16 27 21.0	-0.3
MDJ				ScS	ScS	16 31 07.4	+0.7
MDJ				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,260nm,5.2s						
MDJ				LR	LR		

comp=N,520nm,13.7s,MS4.4
MDJ LR LR
comp=E,650nm,14.7s,MS4.4
MDJ LR LR
comp=Z,560nm,18.3s,MS4.1
MDJ Mudanjiang 24.45 49 *e*P **P 16 20 03.7 +0.7**
comp=Z,151nm,1.6s,mb5.2
KZA Kyzart 25.13 304 P **P 16 20 11.2 +2.0**
SNR=17
TKM2 Tokmak 2 25.14 306 P **P 16 20 14.3 +5.0**
SNR=12
TKM2 Tokmak 2 25.14 306 *e*P **P 16 20 11.7 +2.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
TKM2 Tokmak 2 25.14 306 *e*P **P 16 20 11.7 +2.4**
comp=Z,10nm,0.8s,mb4.4
VLA Vladivostok 25.44 54 *e*P **P 16 20 14.6 +2.5**
VLA *e*S **S 16 24 41.8 +3.8**
VLA pmax pmax
comp=Z,54nm,1.8s,mb4.8
VLA MLR MLR
comp=Z,900nm,10.4s,MS4.6
KBK Karagaybulak 25.51 305 P **P 16 20 18.2 +5.5**
SNR=38
UCH Uchtor 25.70 304 P **P 16 20 19.9 +5.5**
SNR=46
UCH Uchtor 25.70 304 *e*P **P 16 20 18.0 +3.6**
comp=Z,42nm,1.0s,mb4.9
AJM Ajmer 25.73 267 *e*P **P 16 20 14.0 -0.9**
CHMS Chumysh 25.75 306 P **P 16 20 21.1 +6.2**
SNR=7.3
AAK Ala-Archa 25.82 305 P **P 16 20 20.2 +4.7**
SNR=33
AAK Ala-Archa 25.82 305 P **P 16 20 18.2 +2.7**
comp=Z,26nm,0.7s,mb4.8,baz=106,slow=7.7,SNR=40
AAK LR LR 16 31 57.5
comp=Z,824nm,19.2s,MS4.3,baz=74,slow=40
AAK Ala-Archa 25.82 305 *e*P **P 16 20 19.9 +4.4**
AAK pmax pmax
comp=Z,39nm,0.8s,mb5.0
AAK Ala-Archa 25.82 305 *e*P **P 16 20 19.9 +4.3**
comp=Z,39nm,0.8s,mb5.0
USP Ospenovka 26.01 306 P **P 16 20 21.6 +4.3**
SNR=30
AML Almayashu 26.26 303 P **P 16 20 23.1 +3.6**
SNR=15
AML Almayashu 26.26 303 *e*P **P 16 20 21.0 +1.5**
comp=Z,22nm,1.0s,mb4.6
EKS2 Erkin-Say 26.34 304 P **P 16 20 28.3 +8.1**
SNR=23
EKS2 Erkin-Say 26.34 304 *e*P **P 16 20 21.1 +0.8**
comp=Z,41nm,1.3s,mb4.8
HYB Hyderabad 26.49 245 *i*P **P 16 20 25.0 +3.2**
ZAA0 Zalesovo Array 26.52 335 *e*P **P 16 20 21.6 -0.1**
ZALV Zalesovo Beam 26.52 335 P **P 16 20 21.9 +0.3**
comp=Z,10nm,0.7s,mb4.5,baz=137,slow=9.7,SNR=30
ZALV LR LR 16 31 60.0
comp=Z,176nm,20.3s,MS3.6,baz=318,slow=39
KURK Kurchatov 26.97 324 P **P 16 20 25.7 -0.1**
comp=Z,14nm,0.7s,mb4.6,baz=129,slow=9.4,SNR=21
KURK LR LR 16 31 41.1
comp=Z,494nm,18.3s,MS4.1,baz=125,slow=38
KURK Kurchatov 26.97 324*c i*P **P 16 20 29.2 +3.4**
KURK pmax pmax
comp=Z,25nm,1.1s,mb4.7
KURK Kurchatov 26.97 324 *e*P **P 16 20 26.0 +0.2**
comp=Z,23nm,1.0s,mb4.7
BOD Bodaibo 27.66 12 *e*P **P 16 20 31.5 -0.4**
BOD pmax pmax
comp=Z,229nm,0.8s,mb5.9
NVS Novosibirsk 27.80 334 *i*P **P 16 20 32.1 -1.1**
NVS *e*S **S 16 25 04.7 -10**
NVS pmax pmax
comp=N,26nm,2.4s
NVS pmax pmax
comp=E,18nm,2.4s
NVS pmax pmax
comp=Z,29nm,2.4s,mb4.5
NVS smax
comp=N,11nm,2.4s
NVS smax
comp=E,27nm,2.4s
KLR Kul'dur 27.88 41 *e*P **P 16 20 28.8 -5.2**
KLR MLR MLR
comp=E,1μm,11.5s
KLR MLR MLR
comp=Z,2μm,11.5s,MS5.0
KBL Kabul 29.13 286 *e*P **P 16 20 46.6 +1.3**
KBL pmax pmax
comp=Z,24nm,1.2s,mb4.8
KBL Kabul 29.13 286 *e*P **P 16 20 46.6 +1.2**
comp=Z,24nm,1.2s,mb4.8
MAJO Matsushiro 29.18 70 *e*P **P 16 20 44.0 -1.7**
MAJO pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
MAJO Matsushiro 29.18 70 *e*P **P 16 20 44.0 -1.7**
comp=Z,4.4nm,0.8s,mb4.2
MAT Matsushiro 29.18 70 P **P 16 20 44.7 -1.0**
MAT *e*S **S 16 25 37.0 0.0**
MJAR Matsushiro Arr 29.18 70 P **P 16 20 44.8 -0.9**
comp=Z,2.5nm,0.8s,mb4.0,baz=267,slow=8.7,SNR=9.2
MJAR LR LR 16 33 04.2
comp=Z,299nm,18.1s,MS4.0,baz=240,slow=38
JHJ Hachijo jima 2 30.64 77 LR LR 16 34 11.4
comp=Z,746nm,19.0s,MS4.4,baz=87,slow=38
DAV Davao City (W) 31.56 135 LR LR 16 36 10.1
comp=Z,322nm,18.3s,MS4.0,baz=346,slow=41
PALK Pallekele 31.93 227 *e*P **P 16 21 10.5 +0.3**
PALK pmax pmax
comp=Z,142nm,1.7s,mb5.5
PALK Pallekele 31.93 227 *e*P **P 16 21 10.5 +0.3**
comp=Z,142nm,1.7s,mb5.5
BVAR Borovoye Array 32.51 322 P **P 16 21 14.4 -0.4**
comp=Z,3.2nm,0.7s,mb4.4,baz=114,slow=9.7,SNR=17
BVAR PcP PcP 16 23 58.9 -2.4
comp=Z,2.2nm,0.6s,baz=142,slow=3.6,SNR=7.4
BVAR LR LR 16 35 22.4
comp=Z,664nm,20.5s,MS4.3,baz=114,slow=38
BVAR Borovoye Array 32.51 322 P **P 16 21 14.4 -0.4**
BVAR 16 23 58.9
BRVK Borovoye 32.58 322*c i*P **P 16 21 19.0 +3.6**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRVK Borovoye 32.58 322 *e*P **P 16 21 14.4 -1.1**
comp=Z,5.9nm,0.8s,mb4.6
ASAJ Asahikawa 33.22 56 P **P 16 21 19.5 -1.7**
comp=Z,1.4nm,0.5s,mb4.2,baz=207,slow=6.8,SNR=2.6
ASAJ LR LR 16 34 39.3
comp=Z,244nm,19.4s,MS3.9,baz=242,slow=36
ASAJ Asahikawa 33.22 56 P **P 16 21 19.5 -1.7**
ASAJ pmax pmax
comp=Z,1.0nm,0.5s
ASAJ MLR MLR
comp=Z,244nm,19.4s
YSS Yuzh-Sakhalins 33.90 51 *e*P **P 16 21 26.7 -0.4**
YSS MLR MLR
comp=E,400nm,12.0s
YSS MLR MLR
comp=Z,400nm,12.0s,MS4.4
YAK Yakutsk 35.26 21 *e*P **P 16 21 37.2 -1.4**
YAK *e**PP pP 16 21 46.4 +1.9
YAK *e* 16 22 56.5
YAK *e*S **S 16 27 09.7 -1.5**
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.0
YAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
YAK smax
comp=N,19nm,8.9s
YAK smax
comp=E,7.0nm,6.5s
YAK MLR MLR
comp=N,297nm,11.0s,MS4.4
YAK MLR MLR
comp=Z,362nm,11.0s,MS4.4
YAK MLR MLR
comp=E,192nm,11.0s,MS4.4
YAK Yakutsk 35.26 21 *e*P **P 16 21 37.6 -1.0**
comp=E,20nm,0.7s,mb5.2
ABKAR Akbulak array 37.33 312 *e*P **P 16 21 55.8 -0.7**
comp=E,1.9nm,0.7s,mb4.0
KAPI Kappang 39.10 154 P **P 16 22 09.3 -2.4**
comp=E,8.4nm,0.7s,mb4.6,baz=116,slow=8.6,SNR=4.6
SVE Sverdlovsk 39.22 324 *e*P **P 16 22 13.2 +0.9**
SVE pmax pmax
comp=Z,18nm,1.0s,mb4.8
ARU Arti 40.15 322*d i*P **P 16 22 20.5 +0.5**
ARU *e* 16 23 51.9
ARU S **S 16 28 26.1 +0.6**
ARU SS SS 16 31 16.3 -6.9
ARU pmax pmax
comp=Z,11nm,0.7s,mb4.7
ARU MLR MLR
comp=Z,299nm,19.0s,MS4.2
ARU Arti 40.15 322 *e*P **P 16 22 19.8 -0.2**
comp=Z,16nm,0.7s,mb4.9
GUMO Guam 41.70 105 LR LR 16 40 02.0
comp=Z,147nm,20.1s,MS3.9,baz=88,slow=36
SOKR Solikamsk 42.14 326⇑*i*P **P 16 22 42.6 +6.3**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.6
SOKR MLR MLR
comp=Z,370nm,21.0s,MS4.2
TIXI Tiksi 42.84 11 *e*P **P 16 22 40.6 -1.3**
TIXI pmax pmax
comp=Z,17nm,1.1s,mb4.7
TIXI MLR MLR
comp=Z,724nm,17.0s,MS4.6
TIXI Tiksi 42.84 11 *e*P **P 16 22 40.4 -1.4**
comp=Z,10nm,0.7s,mb4.7
SEY Seymchan 44.31 30⇑*i*P **P 16 22 54.0 +0.2**
PETK Petropavlovsk- 44.50 44 P **P 16 22 55.0 -0.6**
comp=Z,4.1nm,0.7s,mb4.4,baz=352,slow=1.9,SNR=11
PETK LR LR 16 43 21.1
comp=Z,308nm,18.7s,MS4.2,baz=359,slow=39
GNI Garni 47.90 298 *e*P **P 16 23 27.1 +4.7**
GNI pmax pmax
comp=Z,9.0nm,1.3s
MIB Mutribah 48.04 284 *e*P **P 16 23 22.6 -1.1**
MIB AMb AMB 16 23 28.1
comp=Z,61nm,0.7s,mb5.7
RDF Al-Radifah 48.12 282 *e*P **P 16 23 23.1 -1.2**
RDF AMb AMB 16 23 28.5
comp=Z,53nm,0.8s,mb5.6
ZEI Tsey 48.18 301 *e*P **P 16 23 26.3 +1.7**
ZEI pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KIV Kislovodsk 48.93 303⇑*i*P **P 16 23 35.3 +5.0**
KIV pmax pmax
comp=Z,25nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.9
KIV Kislovodsk 48.93 303 *e*P **P 16 23 32.2 +1.9**
comp=Z,37nm,1.4s,mb5.2
KLMR Klimovskoe 50.80 325 P **P 16 23 41.2 -3.1**
KLMR pmax pmax
comp=Z,38nm,1.5s,mb5.1
SOC Sochi 51.11 303 *e*P sP 16 23 58.6 +3.4
SOC *e* 16 25 08.9
SOC *e*S **S 16 30 55.0 -8.7**
SOC MLR MLR
comp=Z,139nm,12.0s,MS4.2
BILL Bilibino 51.36 25*c i*P **P 16 23 48.1 -0.3**
BILL pmax pmax
comp=Z,27nm,1.6s,mb4.9
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.0
BILL Bilibino 51.36 25 *e*P **P 16 23 47.5 -0.9**
comp=Z,9.6nm,0.8s,mb4.8
KAKA Kakadu 51.64 143 *e*P **P 16 23 49.3 -1.8**
comp=Z,7.0nm,0.6s,mb4.8
KAKA Kakadu 51.64 143 *e*P **P 16 23 48.7 -2.4**
comp=Z,23nm,0.7s,mb5.2
OBN Obninsk 52.17 318⇑*i*P **P 16 23 57.7 +3.1**
OBN pmax pmax
comp=Z,29nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.4
ANN Anapa 52.55 305 *e*P **P 16 23 58.1 +0.5**
ANN *e*S **S 16 31 21.2 -2.3**
ANN pmax pmax
comp=Z,37nm,1.0s,mb5.3
ANN MLR MLR
comp=Z,199nm,17.0s,MS4.2
FITZ Fitzroy Crossi 53.33 154 *e*P **P 16 24 03.2 -0.3**
comp=Z,6.2nm,0.7s,mb4.7
FITZ Fitzroy Crossi 53.33 154 LR LR 16 49 39.0
comp=Z,71nm,20.1s,MS3.7,baz=340,slow=39
APA Apatity 54.09 334⇓*e*P **P 16 24 06.0 -2.6**
APA pmax pmax
comp=Z,21nm,1.1s,mb5.0
APA MLR MLR
comp=Z,2μm,15.0s,MS5.2
JOF Joensuu 54.78 328 *e*P **P 16 24 12.7 -1.0**
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
JOF Joensuu 54.78 328 *e*p **P 16 24 12.7 -1.0**
comp=Z,3.9nm,0.6s,mb4.6
ASF Jabal al Asfar 55.91 290 P **P 16 24 22.1 -0.3**
comp=Z,2.2nm,0.5s,mb4.4,baz=300,slow=1.9,SNR=5.9
BR131 Keskin Array S 56.34 300 *e*P **P 16 24 25.0 -0.3**
BRTR Keskin Array B 56.34 300 P **P 16 24 26.5 +1.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=100,slow=6.3,SNR=10
BRTR LR LR 16 50 34.9
comp=Z,77nm,20.4s,MS3.8,baz=214,slow=38
KEV Kevo 56.54 336 *e*P **P 16 24 25.2 -1.0**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KEV Kevo 56.54 336 *e*p **P 16 24 25.2 -1.0**
comp=Z,6.6nm,0.7s,mb4.8
MMAI Mount Meron Ar 56.85 291 LR LR 16 55 13.1
comp=Z,147nm,18.5s,MS4.1,baz=90,slow=43
AKASG Malin Array Be 57.05 313 P **P 16 24 28.8 -1.4**
comp=Z,3.8nm,0.7s,mb4.5,baz=68,slow=6.8,SNR=6.9
AKASG LR LR 16 50 15.7
comp=Z,171nm,20.4s,MS4.1,baz=115,slow=37
ARCES ARCESS Array B 57.07 336 P **P 16 24 29.6 -0.3**
comp=Z,3.7nm,0.8s,mb4.5,baz=81,slow=7.5,SNR=7.1
ARCES PcP PcP 16 25 24.0 -0.7
comp=Z,1.9nm,0.6s,baz=81,slow=5.6,SNR=6.6
ARCES LR LR 16 51 01.2
comp=Z,155nm,20.0s,MS4.1,baz=18,slow=38
ARCES ARCESS Array B 57.07 336 P **P 16 24 29.7 -0.2**
ARCES 16 25 24.0
KAF Kangasniemi 57.14 327 *e*P **P 16 24 33.3 +2.8**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 57.14 327 *e*p **P 16 24 33.3 +2.8**
comp=Z,1.9nm,0.6s,mb4.3
FINES FINESS Array B 57.31 326 P **P 16 24 31.3 -0.5**
comp=Z,3.1nm,0.7s,mb4.4,baz=85,slow=8.7,SNR=8.5
FINES FINESS Array B 57.31 326 P **P 16 24 31.3 -0.5**
EIL Elat 58.31 288 LR LR 16 54 46.5
comp=Z,217nm,22.0s,MS4.2,baz=89,slow=41
WRAB Tennant Creek 58.73 146 *e*P **P 16 24 40.8 -1.4**
WRAB pmax pmax
comp=Z,17nm,0.6s,mb5.2
WRAB Tennant Creek 58.73 146 *e*P **P 16 24 40.8 -1.4**
comp=Z,18nm,0.6s,mb5.3
WRA Warramunga Arr 58.73 146 P **P 16 24 42.2 0.0**
comp=Z,14nm,0.8s,mb5.0,baz=340,slow=7.9
COEN Coen 58.78 134 *e*P **P 16 24 42.3 -0.3**
comp=Z,86nm,0.6s
VRI Vrincioaia 59.72 308⇑*i*P **P 16 24 49.9 +1.0**
BURAR Bucovina Array 60.28 310⇑*i*P **P 16 24 54.5 +1.8**
MLR Muntele Rosu 60.35 308⇑*i*P **P 16 24 55.0 +1.8**
VOIR 60.97 308⇑*i*P **P 16 24 58.0 +0.6**
ASAR Alice Springs 61.73 148 P **P 16 25 01.3 -1.4**
comp=Z,4.4nm,0.7s,mb4.7,baz=333,slow=6.4,SNR=51
DRGR 62.15 310⇓*i*P **P 16 25 07.6 +2.2**
KLBR Kellerberrin 63.79 167 *e*P **P 16 25 16.8 +0.5**
comp=Z,19nm,0.8s,mb5.2
OKC Ostrava-Krasne 64.14 314 AMS AMS 16 54 10.0
comp=Z,300nm,16.8s
NB2 NORSAR Subarra 64.41 327 P **P 16 25 19.0 -1.1**
comp=Z,2.3nm,0.7s,mb4.3,baz=74,slow=6.9
NOA NORSAR Array B 64.41 327 P **P 16 25 17.8 -2.2**
comp=Z,3.0nm,0.9s,mb4.3,baz=74,slow=6.6,SNR=6.7
NOA LR LR 16 55 08.8
comp=Z,109nm,20.1s,MS4.0,baz=55,slow=38
NOA NORSAR Array B 64.41 327 P **P 16 25 17.8 -2.2**
NOA LR LR 16 55 08.8
MORC Moravsky Berou 64.54 314 *e*P **P 16 25 19.4 -1.7**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MORC Moravsky Berou 64.54 314 *e*P **P 16 25 19.4 -1.7**
comp=Z,3.0nm,0.7s,mb4.4
MORC Moravsky Berou 64.54 314⇓*i*P **P 16 25 20.8 -0.3**
PKSM Moragy 65.00 310⇑*i*P **P 16 25 24.2 0.0**
DPC Dobruska-Polom 65.09 315 *e*P **P 16 25 26.0 +1.3**
DPC *e*pP pP 16 25 30.3 -0.6
DPC AMS AMS 16 54 40.0
comp=Z,300nm,17.5s
UPC Upice 65.23 315 *e*P **P 16 25 27.1 +1.5**
UPC *e*pP pP 16 25 30.7 -1.0
CTA Charters Tower 65.35 135 *e*P **P 16 25 26.5 -0.2**
comp=Z,6.9nm,0.9s,mb4.7
CTA Charters Tower 65.35 135 LR LR 16 54 43.7
comp=Z,101nm,21.2s,MS4.0,baz=147,slow=37
CTAO Charters Tower 65.35 135 *e*P **P 16 25 26.0 -0.7**
CTAO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CTAO Charters Tower 65.35 135 *e*P **P 16 25 26.0 -0.7**
comp=Z,8.9nm,0.8s,mb4.8
TREC Trest 65.96 314 AMS AMS 16 55 00.0
comp=Z,400nm,15.9s
PRU Pruhonice 66.29 315 *e*P **P 16 25 37.9 +5.4**
PRU MLR MLR
comp=Z,300nm,20.6s,MS4.5
PRU Pruhonice 66.29 315 *e*P **P 16 25 37.9 +5.4**
PRU AMS AMS 16 55 30.0
comp=Z,300nm,20.6s
BRG Berggiesshubel 66.34 316 *e*P **P 16 25 35.0 +2.3**
comp=Z,3.2nm,0.8s,mb4.4
BRG S S 16 34 24.0 +2.6
BRG Berggiesshubel 66.34 316 *e*P **P 16 25 35.0 +2.2**
BRG S S 16 34 24.0 +2.6
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
CLL Collm 66.74 317 *e*P **P 16 25 37.0 +1.7**
CLL *e*S S 16 34 32.0 +5.7
CLL MLR MLR
comp=Z,300nm,20.0s,MS4.5
CLL Collm 66.74 317 *e*(P) **P 16 25 37.0 +1.7**
CLL LmV 16 20 00.0
comp=Z,100nm,18.4s
CLL *e*S S 16 34 32.0 +5.7
CLL *e*SS SS 16 38 48.0 +4.5
CLL LmV 16 41 00.0
comp=Z,100nm,20.5s
CLL *e*SSS 16 42 12.0
CLL *e*SSSS 16 43 12.0
KHC Kasperske Hory 67.19 315 *e*P **P 16 25 39.0 +0.8**
KHC MLR MLR
comp=Z,300nm,14.5s,MS4.7
KHC Kasperske Hory 67.19 315 *e*P **P 16 25 39.0 +0.8**
KHC AMS AMS 16 55 50.0
comp=Z,300nm,14.5s
GERES GERESS Array B 67.22 314 P **P 16 25 37.3 -1.1**
comp=Z,0.7nm,0.6s,mb3.9,baz=64,slow=6.1,SNR=6.8
GERES LR LR 16 56 30.6
comp=Z,280nm,20.5s,MS4.5,baz=65,slow=37
TTA Tatalina 67.28 29 *e*P **P 16 25 39.2 +0.7**
NKC Novy Kostel 67.46 316 AMS AMS 16 56 00.0
comp=Z,300nm,18.7s
COLD Coldfoot 67.65 24 *e*P **P 16 25 40.4 -0.4**
comp=Z,11nm,0.9s,mb4.9
SVW2 Sparrevohn 68.22 31 *e*P **P 16 25 45.8 +1.3**
GRA1 Grafenberg Arr 68.40 316 *e*P **P 16 25 46.7 +0.9**
comp=Z,6.0nm,1.2s,mb4.5
GRA1 LR LR
comp=Z,300nm,20.3s,MS4.5
GRF Grafenberg Arr 68.40 316 *e*P **P 16 25 46.7 +0.9**
comp=Z,6.0nm,1.2s,mb4.5
GRF *e*L 16 57 02.3
comp=Z,337nm,20.3s
GRF Grafenberg Arr 68.40 316 *e*P **P 16 25 46.7 +0.9**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
GRF MLR MLR
comp=Z,300nm,20.3s,MS4.5
GRF Grafenberg Arr 68.40 316 *e*P **P 16 25 46.7 +0.9**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
GRF MLR MLR
comp=Z,300nm,20.3s,MS4.5
COLA College 69.62 26 *e*P **P 16 25 53.0 -0.1**
COLA pmax pmax
comp=Z,16nm,0.8s,mb5.0
COLA College 69.62 26 *e*P **P 16 25 53.0 -0.2**
comp=Z,16nm,0.8s,mb5.0
KMBO Kilima Mbogo 70.47 256 P **P 16 26 01.8 +2.7**
comp=Z,1.4nm,0.5s,mb4.2,baz=64,slow=17,SNR=2.8
PMR Palmer 70.76 29 *e*P **P 16 26 00.1 0.0**
PMR pmax pmax
comp=Z,25nm,1.0s,mb5.1
PMR MLR MLR
comp=Z,200nm,17.0s,MS4.4
PMR Palmer 70.76 29 *e*P **P 16 26 00.1 0.0**
comp=Z,25nm,1.0s,mb5.1
PMR LR LR
comp=Z,200nm,17.0s,MS4.4
OHAK Old Harbor 71.01 34 *e*P **P 16 26 00.8 -1.0**
comp=Z,21nm,0.9s,mb5.1
KDAK Kodiak Island 71.08 33 *i*P **P 16 26 01.9 -0.3**
EIDS Eidsvold 72.24 136 *e*P **P 16 26 09.1 -0.4**
comp=Z,8.7nm,0.8s,mb4.7
STKA Stephens Creek 72.26 147 *e*P **P 16 26 09.2 -0.3**
comp=Z,3.3nm,0.6s,mb4.4
STKA Stephens Creek 72.26 147 P **P 16 26 09.1 -0.5**
comp=Z,4.5nm,0.7s,mb4.5,baz=315,slow=2.8,SNR=8.6
INK Inuvik 72.30 19 *e*P **P 16 26 08.7 -0.6**
INK pmax pmax
comp=Z,10.0nm,0.8s
INK Inuvik 72.30 19 *e*P **P 16 26 08.7 -0.7**
comp=Z,10nm,0.8s,mb4.8
DIV Divide 72.38 28 *e*P **P 16 26 10.3 +0.4**
comp=Z,9.5nm,0.6s,mb4.9
LPG La Plagne 72.91 313 *e*P **P 16 26 12.9 -0.5**
comp=Z,21nm,0.8s,mb4.8
LPG La Plagne 72.91 313 *e*P **P 16 26 12.9 -0.5**
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 72.91 313 *e*P **P 16 26 12.9 -0.5**
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 72.92 313 *e*P **P 16 26 12.8 -0.6**
comp=Z,13nm,0.6s,mb4.7
LPL La Plagne 72.92 313 *e*P **P 16 26 12.8 -0.6**
LPL pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPL La Plagne 72.92 313 *e*P **P 16 26 12.8 -0.6**
comp=Z,6.3nm,0.6s,mb4.7
BMRM Bremner River 72.94 28 *e*P **P 16 26 13.1 -0.2**
comp=Z,36nm,1.1s,mb5.2
RES Resolute Bay 73.77 5 *e*P **P 16 26 17.0 -1.0**
RES pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RES Resolute Bay 73.77 5 *e*P **P 16 26 17.0 -1.0**
comp=Z,2.9nm,0.9s,mb4.2
SMF Signal de Mont 74.17 315 *e*P **P 16 26 19.2 -1.6**
comp=Z,15nm,0.9s,mb4.6
SMF Signal de Mont 74.17 315 *e*P **P 16 26 19.2 -1.6**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SMF Signal de Mont 74.17 315 *e*P **P 16 26 19.2 -1.6**
comp=Z,7.5nm,0.9s,mb4.6
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 26 26.0 -1.5**
comp=Z,15nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 26 26.0 -1.5**
TCF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 75.33 315 *e*P **P 16 26 26.0 -1.5**
comp=Z,7.4nm,1.0s,mb4.6
CAF Calviac 76.10 314 *e*P **P 16 26 31.1 -0.8**
SKAG Skagway 77.54 27 *e*P **P 16 26 39.7 -0.1**
comp=Z,10nm,0.8s,mb4.8
TOO Toolangi 78.76 147 *e*P **P 16 26 47.6 +0.9**
YKA Yellowknife Ar 81.82 17 P **P 16 27 03.0 +0.1**
comp=Z,2.7nm,0.6s,mb4.3,baz=330,slow=5.2,SNR=29
YKA LR LR 17 07 05.7
comp=Z,133nm,20.1s,MS4.3,baz=340,slow=38
YKA Yellowknife Ar 81.82 17 P **P 16 27 03.0 0.0**
YKA LR LR 17 07 05.7
ESDC Sonseca Array 82.68 312 P **P 16 27 08.2 +0.3**
comp=Z,0.2nm,0.3s,mb3.7,baz=28,slow=6.1,SNR=3.1
ESDC LR LR 17 06 27.1
comp=Z,74nm,18.7s,MS4.1,baz=350,slow=38
EDM Edmonton 90.09 21 *e*P **P 16 27 44.6 +0.6**
FFC Flin Flon 91.72 14 *i*P **P 16 27 52.3 +0.7**
FFC Flin Flon 91.72 14 *e*P **P 16 27 51.2 -0.4**
comp=Z,3.3nm,0.8s,mb4.7
TORD Torodi Ar. Bea 93.20 287 P **P 16 27 59.0 -0.2**
comp=Z,1.5nm,1.0s,mb4.4,baz=60,slow=3.5,SNR=6.3
TORD LR LR 17 16 15.0
comp=Z,115nm,18.5s,MS4.4,baz=75,slow=40
SCHQ Schefferville 94.01 354 P **P 16 27 59.7 -2.4**
comp=Z,1.9nm,0.7s,mb4.7,baz=329,slow=5.4,SNR=5.2
SCHQ LR LR 17 18 46.6
comp=Z,91nm,18.8s,MS4.3,baz=358,slow=41

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**95.29**	**240**	LR	LR	17 07 49.9	
	comp=Z,121nm,18.3s,MS4.4,baz=295,slow=34						
ULM	**Lac du Bonnet**	**97.18**	**12**	LR	LR	17 14 28.4	
	comp=Z,214nm,20.4s,MS4.6,baz=320,slow=37						
TXAR	**Lajitas Array**	**114.54**	**26**	PKP	PKiKP	16 33 23.2	-1.5
	comp=Z,0.3nm,0.6s,baz=300,slow=2.0,SNR=2.7						
OTAV	**Otavalo**	**148.76**	**4**	*e*PKPdf	PKPdf	16 34 29.5	+0.9
OTAV				*e*PKPbc	PKPbc	16 34 33.4	+1.0

IDC 16 16:22:08.7±1.5, 18°.28S×173°.70W, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.8/19, mbtmp3.9/5, ML2.6/1, MS4.5/1, Ms1 4.4/1, ms1mx3.0/20, Error ellipse: s-maj=54.2km s-min=25.1km az=130.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.72**	**23**	Pn	Pn	16 23 22.3	+1.1
	16nm,0.3s,baz=204,slow=20,SNR=106						
AFI				Sn	Sn	16 24 07.1	-10
	23nm,0.3s,baz=49,slow=22,SNR=13						
RAO	**Raoul Island**	**11.58**	**199**	LR	LR	16 28 45.1	
	comp=Z,77nm,20.3s,baz=156,slow=34						
RPZ	**Rata Peaks**	**28.43**	**204**	P	P	16 28 05.4	+0.3
	1.5nm,0.3s,baz=15,slow=13,SNR=7.5						
WRA	**Warramunga Arr**	**48.96**	**259**	P	P	16 30 56.1	-1.1
	0.2nm,0.5s,baz=98,slow=6.9,SNR=6.4						
ASAR	**Alice Springs**	**49.00**	**254**	P	P	16 30 58.2	+0.8
	0.9nm,0.5s,baz=90,slow=8.7,SNR=21						
PDAR	**Pinedale Array**	**84.59**	**42**	P	P	16 34 43.9	-0.1
	0.4nm,0.6s,baz=230,slow=3.7,SNR=4.1						
MAW	**Mawson**	**84.99**	**199**	LR	LR	17 09 10.5	
	comp=Z,258nm,19.1s,baz=223,slow=33						

*NEIC **16** 16:37:23.3, 14°.79N×93°.84W, h16km, MD4.2(MEX), After MEX.*

MEX 16 16:37:23.3±1.3, 14°.79N×93°.84W, h16km±22km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.09**	**33**	*e*P	Pb	16 37 39.1	-4.8
PCIG				*i* S	Sb	16 37 52.2	-5.7
THIG		**1.53**	**85**	*i* P	Pn	16 37 42.0	-7.9
THIG				*i* S	Sn	16 38 03.8	-5.7
TGIG		**2.10**	**19**	*i* P	Pn	16 37 55.5	-2.4
TGIG				*i* S	Sn	16 38 20.0	-3.6
CCIG	**Comitan**	**2.21**	**48**	*e*P	Pn	16 37 57.2	-2.2
CCIG				*i* S	Sn	16 38 21.5	-4.9
CCIG	**Comitan**	**2.21**	**48**	*e*P	Pn	16 37 57.2	-2.2
CCIG				*i* S	Sn	16 38 21.5	-4.9
SCX	**San Cristobal**	**2.26**	**31**	*i* P	Pn	16 37 58.1	-1.9
SCX	**San Cristobal**	**2.26**	**31**	*i* P	Pn	16 37 58.1	-1.9
HUIG	**Huatulco**	**2.40**	**294**	*i* P	Pn	16 37 59.1	-2.8
HUIG				*i* S	Sn	16 38 26.2	-4.8
HUIG	**Huatulco**	**2.40**	**294**	*i* P	Pn	16 37 59.1	-2.8
HUIG				*i* S	Sn	16 38 26.2	-4.8
CMIG	**Matias Romero**	**2.50**	**336**	*e*P	Pn	16 38 00.0	-3.4
CMIG				*i* S	Sn	16 38 29.2	-4.3
CMIG	**Matias Romero**	**2.50**	**336**	*e*P	Pn	16 38 00.0	-3.4
CMIG				*i* S	Sn	16 38 29.2	-4.3
PNIG	**Pinotepa**	**4.43**	**292**	*i* P	Pn	16 38 26.9	-3.0
PNIG				*i* S	Sn	16 39 18.1	-3.0
PNIG	**Pinotepa**	**4.43**	**292**	*i* P	Pn	16 38 26.9	-3.0
PNIG				*i* S	Sn	16 39 18.1	-3.0
UTMO	**Huajuapan**	**4.86**	**309**	*i* P	Pn	16 38 32.8	-3.0
UTMO				*i* S	Sn	16 39 30.2	-1.6
JTS	**JuntasAbangare**	**9.76**	**116**	P	Pn	16 39 40.7	-2.3
	53nm,2.1s						
ELN	**Prospectdale**	**25.20**	**25**	*e*P	P	16 42 46.3	-1.9

*IDC **16** 16:47:31.3±1.4, 35°.42N×81°.00E, h0km, mb3.3/3, mb1 3.3/8, mb1mx3.2/29, mbtmp3.3/8, ML2.8/4, MS3.7/2, Ms1 3.7/2, ms1mx2.9/21, Error ellipse: s-maj=30.2km s-min=24.6km az=65.0*

*ISCJB **16** 16:47:32.1±1.1, 35°.6N±0°.1×81°.1E±0°.1, h10km, mb3.2/3, Error ellipse: s-maj=19.0km s-min=12.4km az=141.6*

*BJI **16** 16:47:34.2, 35°.62N×81°.80E, h22km, ML4.1/4*

*NEIC **16** 16:47:35.1±1.2, 35°.57N×81°.38E, h10km, mb3.5/1, Error ellipse: s-maj=21.1km s-min=12.1km az=39.0*

ISC 16 16:47:33.4±1.1, 35°.5N±0°.1×81°.1E±0°.1, h10km, n15, σ1§24/15, mb3.2/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.75**	**317**	Pg	**Pg**	**16 49 21.6**	**-1.8**
KSH				smax			
	comp=N,190nm,1.3s						
KSH				smax			
	comp=E,51nm,0.9s						
UCH	**Uchtor**	**8.49**	**325**	*e*Pn	**Pn**	**16 49 39.2**	**+2.8**
	comp=E,34nm,0.8s						
UCH				*e*Sn	**Sn**	**16 50 58.5**	**-14**
AAK	**Ala-Archa**	**8.81**	**326**	Pn	**Pn**	**16 49 42.3**	**+1.4**
	comp=E,0.0nm,0.3s,baz=210,slow=14,SNR=1.5						
AML	**Almayashu**	**8.82**	**321**	*e*Pn	**Pn**	**16 49 45.3**	**+4.4**
	comp=E,2.9nm,0.6s						
EKS2	**Erkin-Say**	**9.17**	**324**	*e*Pn	**Pn**	**16 49 46.7**	**+1.0**
	comp=E,2.0nm,0.7s						
MK31	**Makanchi Array**	**11.37**	**4**	*e*Pn	**Pn**	**16 50 15.2**	**-0.6**
MKAR	**Makanchi Array**	**11.37**	**4**	Pn	**Pn**	**16 50 15.7**	**-0.2**
	comp=E,0.1nm,0.3s,baz=179,slow=12,SNR=4.8						
KURK	**Kurchatov**	**15.37**	**354**	Pn	**Pn**	**16 51 06.7**	**-3.5**
	comp=E,0.0nm,0.3s,baz=173,slow=12,SNR=3.4						
KURK				LR	LR	16 58 19.9	
	comp=E,138nm,18.9s,baz=155,slow=42						
ZALV	**Zalesovo Beam**	**18.68**	**7**	Pn	**Pn**	**16 51 53.0**	**+1.2**
	comp=E,0.1nm,0.3s,baz=186,slow=13,SNR=3.0						
BVAR	**Borovoye Array**	**19.13**	**340**	P	**Pn**	**16 51 56.7**	**-0.6**
	comp=E,0.1nm,0.3s,baz=139,slow=11,SNR=3.5						
ABKAR	**Akbulak array**	**20.75**	**318**	*e*P	**P**	**16 52 18.4**	**+4.3**
	comp=E,2.5nm,1.0s						
SONM	**Songino Array**	**22.49**	**49**	P	**P**	**16 52 32.2**	**-0.6**
	comp=E,1.7nm,1.1s,mb3.4,baz=236,slow=10,SNR=5.9						
CMAR	**Chiang Mai Arr**	**23.17**	**132**	P	**P**	**16 52 40.6**	**+0.3**
	comp=E,0.4nm,0.8s,mb2.9,baz=309,slow=11,SNR=2.8						
FINES	**FINESS Array B**	**43.00**	**325**	LR	LR	17 15 02.7	
	comp=E,195nm,20.8s,baz=214,slow=38						
TORD	**Torodi Ar. Bea**	**73.92**	**275**	P	**P**	**16 59 08.1**	**-1.0**
	comp=E,0.3nm,0.8s,mb3.2,baz=42,slow=6.3,SNR=2.9						

*IDC **16** 16:48:18.5±0.6, 35°.23N×81°.42E, h0km, mb4.0/15, mb1 4.2/19, mb1mx4.1/29, mbtmp4.0/19, ML3.6/4, MS3.3/4, Ms1 3.3/4, ms1mx3.0/37, Error ellipse: s-maj=18.8km s-min=13.0km az=45.0*

*ISCJB **16** 16:48:19.5±1.7, 35°.49N±0°.04×81°.66E±0°.06, h1km±11km, mb4.2/34, MS3.5/9, Error ellipse: s-maj=9.4km s-min=4.9km az=147.4*

*NNC **16** 16:48:20.2±2.5, 35°.40N×81°.66E, h0km, mb4.0, mpv4.6, Error ellipse: s-maj=27.4km s-min=21.8km az=119.0*

*LDG **16** 16:48:21.3±0.2, 35°.29N×81°.45E, h10km, Mb4.5/12, Ms3.6/5, Error ellipse: s-maj=9.7km s-min=6.0km az=66.0*

*BJI **16** 16:48:21.6, 35°.46N×81°.47E, h10km, mB5.0/5, mb4.4/10, ML4.4/4, Ms4.1/7, Ms7 3.6/6*

*NEIC **16** 16:48:22.5±0.9, 35°.48N×81°.67E, h10km, mb4.3/10, Error ellipse: s-maj=16.7km s-min=13.4km az=195.0*

*MOS **16** 16:48:23.8±1.5, 35°.41N×81°.69E, h33km, mb4.5/16, Error ellipse: s-maj=12.1km s-min=5.9km az=117.9*

ISC 16 16:48:22.6±2.0, 35°.52N±0°.04×81°.70E±0°.06, h7km±13km, n111, σ1§31/110, mb4.2/34, MS3.5/9, 11C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**6.02**	**212**	*ex*	x	16 49 43.5	
KSH	**Kashi**	**6.05**	**313**	*e*Pn	Px	16 50 28.0	
KSH				Sn	**Sn**	**16 51 00.9**	**-1.1**
KSH				smax			
	comp=N,510nm,1.2s						
KSH				smax			
	comp=E,390nm,1.0s						
KKN	**Kakani**	**8.29**	**157**	*e*P	**Pn**	**16 50 23.9**	**+0.7**
	comp=E,37nm,0.5s						
GUN	**Gumba**	**8.38**	**154**	*e*P	**Pn**	**16 50 25.6**	**+1.2**
	comp=E,35nm,0.5s						
DMN	**Daman**	**8.40**	**159**	*e*P	**Pn**	**16 50 24.6**	**-0.2**
	comp=E,29nm,0.5s						
PKI	**Pulchoki**	**8.53**	**157**	*e*P	**Pn**	**16 50 26.8**	**+0.3**
	comp=E,41nm,0.5s						
TKM2	**Tokmak 2**	**8.78**	**329**	⇑Pg	Px	16 51 03.3	
	comp=E,24nm,1.0s						
TKM2				⇑Lg		16 52 58.1	
	comp=E,39nm,1.0s						
TKM2	**Tokmak 2**	**8.78**	**329**	*e*P	**Pn**	**16 50 29.3**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,20nm,0.9s						
TKM2	**Tokmak 2**	**8.78**	**329**	*e*Pn	**Pn**	**16 50 29.3**	**-0.5**
	comp=Z,20nm,0.9s						
AAK	**Ala-Archa**	**9.04**	**324**	Lg		16 53 03.3	
	comp=Z,0.0nm,0.3s,baz=262,slow=23,SNR=2.8						
AAK				LR	LR	16 53 49.5	
	comp=Z,233nm,18.8s,baz=130,slow=36						
AAK	**Ala-Archa**	**9.04**	**324**	*e*P	**Pn**	**16 50 35.8**	**+2.3**
AAK				*e*		16 52 18.3	
AAK				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**9.04**	**324**	*e*Pn	**Pn**	**16 50 35.8**	**+2.3**
	comp=Z,13nm,0.9s						
AAK				*e*Sn	**Sn**	**16 52 18.3**	**+2.8**
FRU	**Bishkek**	**9.14**	**325**	⇓*i*P	**Pn**	**16 50 40.0**	**+5.2**
FRU				*e*		16 52 31.0	
FRU				pmax	pmax		
	comp=Z,70nm,1.8s						
FRU				pmax	pmax		
	comp=E,200nm,1.8s						
WMQ	**Urumqi**	**9.49**	**27**	*e*P	**Pn**	**16 50 43.3**	**+3.7**
WMQ				pmax	pmax		
	comp=Z,120nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.0s						
WMQ				LR	LR		
	comp=N,260nm,21.0s						
WMQ				LR	LR		
	comp=E,470nm,19.0s						
WMQ				LR	LR		
	comp=Z,170nm,14.0s						
RAMN	**Ramite**	**9.51**	**153**	*e*P	**Pn**	**16 50 39.3**	**-0.7**
LSA	**Lhasa**	**9.86**	**123**	P	**Pn**	**16 50 50.1**	**+5.4**
LSA				LR	LR		
	comp=N,460nm,18.3s						
LSA				LR	LR		
	comp=E,570nm,16.3s						
LSA				LR	LR		
	comp=Z,610nm,7.1s						
MK31	**Makanchi Array**	**11.27**	**2**	Pn	**Pn**	**16 51 04.2**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=183,slow=12,SNR=23						
MK31				Sn	**Sn**	**16 53 17.0**	**+6.9**
	comp=Z,16nm,1.1s,baz=190,slow=27,SNR=4.7						
MKAR	**Makanchi Array**	**11.27**	**2**	Pn	**Pn**	**16 51 04.8**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=180,slow=13,SNR=16						
MKAR				Sn	**Sn**	**16 53 04.6**	**-5.5**
	comp=Z,0.3nm,0.3s,baz=178,slow=20,SNR=3.9						
KK31	**Karatay Array**	**11.50**	**315**	⇑Pn	**Pn**	**16 51 05.8**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=128,slow=15,SNR=6.1						
KK31				⇓Pg	Pn	16 51 50.8	+44
	comp=Z,2.5nm,0.6s,baz=124,slow=17,SNR=3.5						
KK31				⇑Lg		16 54 28.1	
	comp=Z,16nm,1.1s,baz=125,slow=27,SNR=4.1						
KURBB	**Kurchatov Arra**	**15.27**	**352**	⇑Pn	**Pn**	**16 51 58.0**	**-0.4**
	comp=Z,1.4nm,1.0s						
KURBB				⇓Lg		16 56 29.3	
	comp=Z,4.9nm,1.1s						
KURK	**Kurchatov**	**15.35**	**353**	⇑Pn	**Pn**	**16 51 57.0**	**-2.5**
	comp=Z,13nm,1.3s						
KURK				⇑Lg		16 56 27.0	
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	**15.35**	**353**	Pn	**Pn**	**16 51 55.7**	**-3.9**
	comp=Z,0.0nm,0.3s,baz=172,slow=11,SNR=10						
KURK				Lg		16 56 30.6	
	comp=Z,0.0nm,0.3s,baz=175,slow=27,SNR=3.6						
KURK	**Kurchatov**	**15.35**	**353**	⇑*e*P	**Pn**	**16 51 57.0**	**-2.5**
KURK				pmax	pmax		
	comp=Z,15nm,1.7s						
KURK	**Kurchatov**	**15.35**	**353**	*e*Pn	**Pn**	**16 51 56.6**	**-2.9**
	comp=Z,11nm,1.1s						
HYB	**Hyderabad**	**18.25**	**190**	*i* P	**Pn**	**16 52 36.5**	**+0.1**
ZAA0	**Zalesovo Array**	**18.56**	**6**	*e*P	**Pn**	**16 52 40.1**	**+0.2**
ZALV	**Zalesovo Beam**	**18.56**	**6**	P	**Pn**	**16 52 39.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=194,slow=12,SNR=16						
VOSK	**Vostochnaya**	**18.81**	**339**	⇓P	**Pn**	**16 52 41.1**	**-1.9**
	comp=Z,9.6nm,0.8s						
BVA0	**Borovoye Array**	**19.24**	**339**	P	**Pn**	**16 52 46.4**	**-1.8**
	comp=Z,0.9nm,0.9s,baz=149,slow=11,SNR=9.1						
BVAR	**Borovoye Array**	**19.24**	**339**	P	**Pn**	**16 52 46.4**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=143,slow=11,SNR=11						
BRVK	**Borovoye**	**19.30**	**339**	*e*P	**Pn**	**16 52 46.9**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**19.30**	**339**	*e*P	**Pn**	**16 52 46.9**	**-2.0**
	comp=Z,5.5nm,0.8s						
NVS	**Novosibirsk**	**19.35**	**3**	*i* P	**Pn**	**16 52 49.6**	**+0.1**
NVS				*e*S	**Sn**	**16 56 31.0**	**+4.5**
NVS				pmax	pmax		
	comp=Z,25nm,2.3s						
NVS				pmax	pmax		
	comp=N,16nm,2.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,2.0s						
NVS				smax			
	comp=N,19nm,2.6s						
NVS				smax			
	comp=E,14nm,2.0s						
KMI	**Kunming**	**20.87**	**114**	P	**P**	**16 53 05.6**	**+0.4**
KMI				pP		16 53 17.9	
KMI				pmax	pmax		
	comp=Z,15nm,0.8s						
AB31	**Akbulak array**	**21.04**	**317**	P	**P**	**16 53 08.0**	**+1.2**
	comp=Z,7.5nm,0.9s,mb4.0,baz=118,slow=9.8,SNR=23						
ABKAR	**Akbulak array**	**21.04**	**317**	*e*P	**P**	**16 53 04.9**	**-1.9**
	comp=Z,6.0nm,0.8s,mb4.0						
ZAK	**Zakamensk**	**21.57**	**40**	*e*P	**P**	**16 53 15.3**	**+2.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
SONM	**Songino Array**	**22.06**	**49**	P	**P**	**16 53 19.6**	**+1.8**
	comp=Z,6.7nm,1.0s,mb4.0,baz=237,slow=10,SNR=16						
ULN	**Ulaanbaatar**	**22.48**	**49**	*e*P	**P**	**16 53 25.3**	**+3.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**22.48**	**49**	*e*P	**P**	**16 53 25.3**	**+3.0**
	comp=Z,5.8nm,1.0s,mb4.0						
AKTK	**Aktyubinsk**	**22.72**	**318**	P	**P**	**16 53 23.4**	**-1.4**
AKTK				LR	LR	17 03 39.6	
AKTO	**Aktyubinsk**	**22.72**	**318**	⇑P	**P**	**16 53 25.0**	**+0.2**
	comp=Z,1.2nm,1.1s,mb3.3						
AKTO	**Aktyubinsk**	**22.72**	**318**	P	**P**	**16 53 23.4**	**-1.4**
	comp=Z,3.9nm,0.8s,mb3.9,baz=118,slow=11,SNR=10						
AKTO				LR	LR	17 03 39.6	
	comp=Z,15nm,19.3s,MS2.4,baz=128,slow=40						
CMAR	**Chiang Mai Arr**	**22.85**	**134**	P	**P**	**16 53 23.6**	**-2.8**
	comp=Z,1.0nm,0.9s,mb3.3,baz=316,slow=8.7,SNR=4.9						
SVE	**Sverdlovsk**	**25.62**	**333**	*e*P	**P**	**16 53 52.9**	**+0.5**
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
ARU	**Arti**	**26.15**	**330**	P	**P**	**16 53 58.5**	**+1.3**
QIZ	**Qiongzhong**	**29.78**	**116**	P	**P**	**16 54 30.3**	**+0.3**
QIZ				S	**S**	**16 59 24.9**	**-1.8**
QIZ				LR	LR		
	comp=E,36nm,22.1s						
QIZ				LR	LR		
	comp=Z,36nm,19.2s,MS3.0						
ANN	**Anapa**	**34.71**	**299**	*e*P	**P**	**16 55 20.2**	**+7.2**
ANN				pmax	pmax		
	comp=Z,108nm,6.3s						
ANN				MLR	MLR		
	comp=Z,295nm,23.0s,MS4.0						
OBN	**Obninsk**	**36.48**	**317**	⇑*i*P	**P**	**16 55 29.6**	**+1.5**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.7						
KSRS	**Korea Array**	**36.93**	**73**	P	**P**	**16 55 32.1**	**0.0**
	comp=Z,1.1nm,1.0s,mb3.6,baz=264,slow=8.7,SNR=4.9						
KSRS				PcP	PcP	16 57 54.0	+0.6
	comp=Z,0.8nm,0.8s,baz=336,slow=2.7,SNR=4.7						
KSRS	**Korea Array**	**36.93**	**73**	P	**P**	**16 55 32.1**	**0.0**
KSRS						16 57 54.0	
KSRS				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
BRTR	**Keskin Array B**	**37.94**	**291**	P	**P**	**16 55 40.7**	**0.0**
	comp=Z,1.4nm,0.9s,mb3.7,baz=94,slow=7.7,SNR=5.8						
EIL	**Elat**	**39.53**	**275**	LR	LR	17 14 00.7	
	comp=Z,59nm,20.0s,MS3.4,baz=63,slow=39						
AKASG	**Malin Array Be**	**40.33**	**309**	P	**P**	**16 55 57.0**	**-3.4**
	comp=Z,1.8nm,0.6s,mb4.0,baz=74,slow=8.2,SNR=3.9						
AKASG	**Malin Array Be**	**40.33**	**309**	*e*P	**P**	**16 56 00.6**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JOF	**Joensuu**	**41.21**	**328**	*e*P	**P**	**16 56 06.2**	**-1.4**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
JOF	**Joensuu**	**41.21**	**328**	*ep*	**P**	**16 56 06.2**	**-1.4**
	comp=Z,4.3nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**43.23**	**325**	P	**P**	**16 56 21.5**	**-2.6**
	comp=Z,4.1nm,0.7s,mb4.3,baz=111,slow=10,SNR=7.5						
KAF	**Kangasniemi**	**43.26**	**326**	*e*P	**P**	**16 56 25.0**	**+0.7**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
KAF	**Kangasniemi**	**43.26**	**326**	*ep*	**P**	**16 56 25.0**	**+0.7**
	comp=Z,2.4nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	**45.14**	**71**	P	**P**	**16 56 38.4**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=261,slow=35,SNR=5.3						
BRG	**Berggiesshubel**	**49.98**	**310**	*e*P	**P**	**16 57 18.5**	**+1.4**
	comp=Z,3.7nm,0.8s,mb4.5						
BRG	**Berggiesshubel**	**49.98**	**310**	*e*P	**P**	**16 57 18.5**	**+1.4**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
NB2	**NORSAR Subarra**	**50.37**	**323**	P	**P**	**16 57 17.4**	**-2.5**
	comp=Z,6.7nm,0.9s,mb4.7,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**50.37**	**323**	P	**P**	**16 57 17.3**	**-2.6**
	comp=Z,6.6nm,1.0s,mb4.6,baz=88,slow=7.4,SNR=7.4						
GERES	**GERESS Array B**	**50.50**	**307**	P	**P**	**16 57 19.5**	**-1.6**
	comp=Z,1.9nm,0.8s,mb4.2,baz=75,slow=7.1,SNR=12						
CDF	**Champ du Feu**	**54.74**	**308**	*e*P	**P**	**16 57 53.4**	**+0.8**
HINF	**Hinteralfeld**	**55.18**	**308**	*e*P	**P**	**16 57 56.4**	**+0.7**
	comp=Z,6.7nm,0.7s,mb4.5						
HINF	**Hinteralfeld**	**55.18**	**308**	*e*P	**P**	**16 57 56.4**	**+0.7**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
HINF	**Hinteralfeld**	**55.18**	**308**	*e*P	**P**	**16 57 56.4**	**+0.7**
	comp=Z,3.3nm,0.7s,mb4.5						
HAU	**Haudompre**	**55.45**	**308**	*e*P	**P**	**16 57 58.5**	**+0.8**
HAU				*e*MLR	MLR		
	comp=Z,114nm,21.5s,MS3.6						
HAU	**Haudompre**	**55.45**	**308**	*e*P	**P**	**16 57 58.5**	**+0.8**
HAU				LR	LR		
	comp=Z,110nm,21.5s,MS3.9						
BILL	**Bilibino**	**55.60**	**27**	⇓*i*P	**P**	**16 58 00.6**	**+2.2**
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.3						
LPG	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
	comp=Z,16nm,0.9s,mb4.7						
LPG	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
LPG	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
	comp=Z,7.9nm,0.9s,mb4.7						
LPL	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
	comp=Z,20nm,0.9s,mb4.8						
LPL	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
LPL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
LPL	**La Plagne**	**55.94**	**305**	*e*P	**P**	**16 58 02.5**	**+1.3**
	comp=Z,10nm,0.9s,mb4.8						
CABF	**La Chapelle**	**56.03**	**306**	*e*P	**P**	**16 58 02.6**	**+0.7**
MBDF	**Montbardon**	**56.16**	**304**	*e*P	**P**	**16 58 03.0**	**+0.2**
	comp=Z,20nm,1.1s,mb4.8						
ORIF	**Oris-en-Rattie**	**56.70**	**304**	*e*P	**P**	**16 58 07.3**	**+0.6**
ORIF				*e*MLR	MLR		
	comp=Z,116nm,17.2s,MS3.7						
LOR	**Lormes**	**57.28**	**308**	*e*P	**P**	**16 58 09.5**	**-1.2**
	comp=Z,5.8nm,0.8s,mb4.4						
LOR				*e*MLR	MLR		
	comp=Z,104nm,21.2s,MS3.6						
LOR	**Lormes**	**57.28**	**308**	*e*P	**P**	**16 58 09.5**	**-1.2**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
LOR				MLR	MLR		
	comp=Z,100nm,21.3s,MS3.9						
LOR	**Lormes**	**57.28**	**308**	*e*P	**P**	**16 58 09.5**	**-1.2**
	comp=Z,2.9nm,0.8s,mb4.4						
LOR				LR	LR		
	comp=Z,100nm,21.3s,MS3.9						
SMF	**Signal de Mont**	**57.49**	**307**	*e*P	**P**	**16 58 11.9**	**-0.3**
	comp=Z,8.6nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**57.49**	**307**	*e*P	**P**	**16 58 11.9**	**-0.3**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**57.49**	**307**	*e*P	**P**	**16 58 11.9**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**57.53**	**305**	*e*P	**P**	**16 58 13.1**	**+0.5**
SSF	**Saint Saulge**	**57.58**	**308**	*e*P	**P**	**16 58 13.1**	**+0.3**
AVF	**Avril sur Loir**	**57.76**	**307**	*e*P	**P**	**16 58 14.6**	**+0.5**
TCF	**Toulx Ste Croi**	**58.67**	**307**	*e*P	**P**	**16 58 21.5**	**+1.0**
	comp=Z,16nm,1.1s,mb4.7						
CAF	**Calviac**	**59.25**	**306**	*e*P	**P**	**16 58 25.6**	**+1.1**
	comp=Z,4.9nm,0.6s,mb4.4						
CAF	**Calviac**	**59.25**	**306**	*e*P	**P**	**16 58 25.6**	**+1.1**
CAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CAF	**Calviac**	**59.25**	**306**	*e*P	**P**	**16 58 25.6**	**+1.1**
	comp=Z,2.5nm,0.6s,mb4.4						
LDF	**La Druitiere**	**59.37**	**310**	*e*P	**P**	**16 58

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,13nm,0.8s						
TKM2				⇑Lg		17 14 14.2	
	comp=E,22nm,0.8s						
TKM2	**Tokmak 2**	**8.88**	**330**	*e*P	**Pn**	**17 11 48.8**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TKM2	**Tokmak 2**	**8.88**	**330**	*e*Pn	**Pn**	**17 11 48.8**	**+1.7**
	comp=Z,6.7nm,0.6s						
KBK	**Karagaybulak**	**8.94**	**327**	P	**Pn**	**17 11 48.8**	**+0.9**
	SNR=6.7						
AAK	**Ala-Archa**	**9.12**	**325**	Pn	**Pn**	**17 11 51.6**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=253,slow=12,SNR=8.6						
AAK				Sn	**Sn**	**17 13 47.8**	**+15**
	comp=Z,0.0nm,0.3s,baz=155,slow=22,SNR=2.2						
AAK				Lg		17 14 20.4	
	comp=Z,0.0nm,0.3s,baz=150,slow=22,SNR=3.6						
AAK				LR	LR	17 15 56.0	
	comp=Z,432nm,19.0s,baz=125,slow=41						
AAK	**Ala-Archa**	**9.12**	**325**	*e*Pn	**Pn**	**17 11 50.1**	**-0.3**
AAK				Pn	**Pn**	**17 11 51.6**	**+1.2**
AAK				Sn	**Sn**	**17 13 47.8**	**+15**
AAK				Lg		17 14 20.4	
AAK				LR	LR	17 15 56.0	
AML	**Almayashu**	**9.15**	**320**	P	**Pn**	**17 11 52.8**	**+2.0**
	SNR=15						
AML	**Almayashu**	**9.15**	**320**	*e*Pn	**Pn**	**17 11 51.4**	**+0.6**
	comp=Z,28nm,0.8s						
FRU	**Bishkek**	**9.22**	**326**	*e*P	**Pn**	**17 11 53.0**	**+1.2**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
FRU				pmax	pmax		
	comp=E,340nm,2.0s						
EKS2	**Erkin-Say**	**9.49**	**323**	P	**Pn**	**17 11 57.6**	**+2.1**
	SNR=8.8						
EKS2	**Erkin-Say**	**9.49**	**323**	*e*Pn	**Pn**	**17 11 56.5**	**+1.0**
	comp=E,13nm,0.9s						
WMQ	**Urumqi**	**9.72**	**27**	*e*P	**Pn**	**17 12 01.9**	**+3.3**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				LR	LR		
	comp=N,120nm,23.0s						
WMQ				LR	LR		
	comp=E,220nm,21.0s						
WMQ				LR	LR		
	comp=Z,68nm,12.0s						
LSA	**Lhasa**	**9.86**	**122**	P	**Pn**	**17 12 05.6**	**+5.0**
LSA				LR	LR		
	comp=E,410nm,8.1s						
LSA				LR	LR		
	comp=Z,490nm,8.6s						
LSA	**Lhasa**	**9.86**	**122**	*e*P	**Pn**	**17 12 06.5**	**+5.9**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LSA	**Lhasa**	**9.86**	**122**	*e*Pn	**Pn**	**17 12 06.5**	**+5.9**
	comp=Z,9.4nm,1.0s						
KBL	**Kabul**	**10.29**	**269**	*e*P	**Pn**	**17 12 06.8**	**+0.3**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KBL	**Kabul**	**10.29**	**269**	*e*Pn	**Pn**	**17 12 06.8**	**+0.3**
	comp=Z,3.7nm,0.5s						
MK31	**Makanchi Array**	**11.47**	**3**	⇑Pn	**Pn**	**17 12 22.5**	**-0.1**
	comp=Z,17nm,1.3s,baz=190,slow=13,SNR=7.5						
MK31				⇑Sn	**Sn**	**17 14 29.3**	**-1.3**
	comp=Z,8.2nm,0.8s,baz=159,slow=34,SNR=3.7						
MK31	**Makanchi Array**	**11.47**	**3**	*e*Pn	**Pn**	**17 12 22.5**	**-0.1**
MKAR	**Makanchi Array**	**11.47**	**3**	Pn	**Pn**	**17 12 22.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=190,slow=13,SNR=22						
MKAR				Sn	**Sn**	**17 14 24.3**	**-6.3**
	comp=Z,0.3nm,0.3s,baz=186,slow=21,SNR=4.4						
MKAR				Lg		17 15 46.3	
	baz=192,slow=25,SNR=2.5						
MKAR	**Makanchi Array**	**11.47**	**3**	P	**Pn**	**17 12 22.8**	**+0.3**
MKAR						17 14 24.3	
MKAR	**Makanchi Array**	**11.47**	**3**	Pn	**Pn**	**17 12 22.8**	**+0.2**
MKAR				Sn	**Sn**	**17 14 24.3**	**-6.3**
MKAR				Lg		17 15 46.3	
KK31	**Karatay Array**	**11.54**	**316**	⇑Pn	**Pn**	**17 12 23.9**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=127,slow=11,SNR=5.9						
KK31				⇑Lg		17 15 37.5	
	comp=Z,4.4nm,0.8s,baz=128,slow=25						
GTA	**Gaotai**	**15.09**	**69**	*e*P	**Pn**	**17 13 20.6**	**+8.6**
GTA				pP	pP	17 13 26.8	+6.7
GTA				sP	sP	17 13 30.3	+8.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURBB	**Kurchatov Arra**	**15.44**	**353**	⇓P	**Pn**	**17 13 15.2**	**-1.4**
	comp=Z,0.9nm,1.1s						
KURK	**Kurchatov**	**15.52**	**353**	⇓P	**Pn**	**17 13 14.7**	**-3.0**
	comp=Z,7.0nm,1.2s						
KURK	**Kurchatov**	**15.52**	**353**	Pn	**Pn**	**17 13 13.7**	**-4.0**
	comp=Z,0.0nm,0.3s,baz=173,slow=12,SNR=12						
KURK				Lg		17 17 47.1	
	comp=Z,0.0nm,0.3s,baz=174,slow=27,SNR=3.1						
KURK	**Kurchatov**	**15.52**	**353**	Pn	**Pn**	**17 13 13.7**	**-4.0**
KURK				*e*Pn	**Pn**	**17 13 14.2**	**-3.5**
KURK				Lg		17 17 47.1	
ZAA0	**Zalesovo Array**	**18.76**	**6**	*e*P	**Pn**	**17 13 56.9**	**-1.3**
ZALV	**Zalesovo Beam**	**18.76**	**6**	P	**Pn**	**17 13 58.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=202,slow=11,SNR=9.0						
VOSK	**Vostochnaya**	**18.94**	**340**	⇓P	**Pn**	**17 13 59.4**	**-0.9**
	comp=Z,5.9nm,1.1s						
BVA0	**Borovoye Array**	**19.37**	**339**	⇑P	**Pn**	**17 14 03.8**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=145,slow=10,SNR=6.7						
BVAR	**Borovoye Array**	**19.37**	**339**	P	**Pn**	**17 14 04.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=134,slow=11,SNR=12						
BRVK	**Borovoye**	**19.43**	**339**	*e*P	**Pn**	**17 14 06.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	**Borovoye**	**19.43**	**339**	*e*P	**Pn**	**17 14 06.8**	**+0.5**
	comp=Z,10nm,1.0s						
NVS	**Novosibirsk**	**19.55**	**3**	*e*P	**Pn**	**17 14 05.5**	**-2.2**
NVS				pmax	pmax		
	comp=N,11nm,1.7s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KMI	**Kunming**	**20.91**	**113**	P	**P**	**17 14 23.0**	**+1.5**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AB31	**Akbulak array**	**21.09**	**318**	⇓P	**P**	**17 14 22.5**	**-0.7**
	comp=Z,5.5nm,0.8s,mb3.9,baz=118,slow=7.1,SNR=47						
ABKAR	**Akbulak array**	**21.09**	**318**	*e*P	**P**	**17 14 22.4**	**-0.7**
	comp=Z,4.5nm,0.8s,mb3.9						
ZAK	**Zakamensk**	**21.80**	**40**	*e*P	**P**	**17 14 32.4**	**+1.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
SONM	**Songino Array**	**22.29**	**48**	P	**P**	**17 14 38.7**	**+2.6**
	comp=Z,3.8nm,0.9s,mb3.8,baz=236,slow=6.8,SNR=21						
ULN	**Ulaanbaatar**	**22.70**	**49**	P	**P**	**17 14 41.9**	**+1.4**
AKTK	**Aktyubinsk**	**22.78**	**319**	P	**P**	**17 14 41.9**	**+0.6**
AKTK				LR	LR	17 23 30.2	
AKTO	**Aktyubinsk**	**22.78**	**319**	⇓P	**P**	**17 14 40.6**	**-0.6**
	comp=Z,0.8nm,1.0s,mb3.1						
AKTO	**Aktyubinsk**	**22.78**	**319**	P	**P**	**17 14 41.9**	**+0.6**
	comp=Z,2.2nm,0.8s,mb3.7,baz=105,slow=7.8,SNR=8.4						
AKTO				LR	LR	17 23 30.2	
	comp=Z,41nm,18.7s,MS2.9,baz=286,slow=36						
CMAR	**Chiang Mai Arr**	**22.81**	**133**	P	**P**	**17 14 42.3**	**+0.4**
	comp=Z,1.1nm,0.9s,mb3.3,baz=326,slow=11,SNR=4.6						
KSRS	**Korea Array**	**37.11**	**73**	P	**P**	**17 16 48.9**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.5,baz=284,slow=9.3,SNR=5.2						
BRTR	**Keskin Array B**	**37.89**	**291**	P	**P**	**17 16 54.5**	**-1.5**
	comp=Z,0.3nm,0.5s,mb3.2,baz=75,slow=6.3,SNR=3.0						
JOF	**Joensuu**	**41.30**	**328**	*e*P	**P**	**17 17 21.8**	**-2.3**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
JOF	**Joensuu**	**41.30**	**328**	*e*p	**P**	**17 17 21.8**	**-2.3**
	comp=Z,4.6nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**43.31**	**325**	P	**P**	**17 17 40.5**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.1,baz=120,slow=9.9,SNR=8.8						
KAF	**Kangasniemi**	**43.34**	**326**	*e*P	**P**	**17 17 38.2**	**-2.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
KAF	**Kangasniemi**	**43.34**	**326**	*e*p	**P**	**17 17 38.2**	**-2.5**
	comp=Z,2.2nm,0.8s,mb3.9						
MJAR	**Matsushiro Arr**	**45.32**	**71**	P	**P**	**17 17 56.4**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.8,baz=285,slow=9.4,SNR=4.7						
NB2	**NORSAR Subarra**	**50.44**	**324**	P	**P**	**17 18 35.3**	**-0.9**
	comp=Z,5.0nm,1.1s,mb4.5,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**50.44**	**324**	P	**P**	**17 18 35.8**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=88,slow=7.5,SNR=5.0						
NOA				LR	LR	17 41 02.9	
	comp=Z,58nm,19.0s,MS3.6,baz=65,slow=37						
GERES	**GERESS Array B**	**50.51**	**308**	P	**P**	**17 18 37.7**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=101,slow=4.2,SNR=5.1						
GERES				LR	LR	17 44 41.7	
	comp=Z,33nm,18.6s,MS3.4,baz=256,slow=42						
TORD	**Torodi Ar. Bea**	**74.31**	**275**	P	**P**	**17 21 15.4**	**-1.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=46,slow=4.7,SNR=5.9						
ASAR	**Alice Springs**	**76.82**	**132**	P	**P**	**17 21 29.4**	**-1.5**
	comp=Z,0.6nm,1.0s,mb3.5,baz=317,slow=5.3,SNR=3.9						
YKA	**Yellowknife Ar**	**81.65**	**7**	P	**P**	**17 21 56.3**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=339,slow=5.2,SNR=5.5						
YKA	**Yellowknife Ar**	**81.65**	**7**	P	**P**	**17 21 56.3**	**-0.4**

ISCJB ***16*** *17:12:57.0±0.8, 31°.91N±0°.09×105°.0E±0°.3, h10km, mb3.8/5, Error ellipse: s-maj=31.6km s-min=11.6km az=171.6*

IDC ***16*** *17:12:57.4±1.1, 32°.01N×105°.01E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/27, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=53.6km s-min=21.3km az=69.0*

ISC 16 17:12:59.3±0.8**, 31°.89N**±0°.08×**105°.0E**±0°.3**, h10km, n7, σ1s.07**/8**, mb3.8**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.30**	**347**	*e*Pg	**Pg**	**17 14 23.6**	**+1.9**
LZH				Sg	**Sg**	**17 15 27.3**	**+10**
LZH				smax			
	comp=N,32nm,0.5s						
LZH				smax			
	comp=E,36nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.45**	**204**	Pn	**Pn**	**17 16 24.4**	**+0.5**
	comp=E,0.2nm,0.3s,baz=5.6,slow=9.3,SNR=9.2						
ZALV	**Zalesovo Beam**	**26.37**	**333**	P	**P**	**17 18 34.7**	**-0.8**
	comp=E,1.4nm,0.7s,mb3.6,baz=142,slow=11,SNR=5.1						
FINES	**FINESS Array B**	**57.35**	**326**	P	**P**	**17 22 45.9**	**-1.4**
	comp=E,0.8nm,0.7s,mb3.9,baz=84,slow=6.7,SNR=4.3						
WRA	**Warramunga Arr**	**58.70**	**147**	P	**P**	**17 22 58.0**	**+0.7**
	comp=E,0.4nm,0.5s,mb3.7,baz=340,slow=7.7						
ASAR	**Alice Springs**	**61.77**	**150**	P	**P**	**17 23 18.5**	**+0.3**
	comp=E,0.4nm,0.8s,mb3.6,baz=333,slow=6.4,SNR=5.2						
INK	**Inuvik**	**71.16**	**20**	P	**P**	**17 24 16.6**	**-1.2**
	comp=E,1.4nm,0.3s,mb4.3,baz=284,slow=4.2						

JMA 16 17:14:13.7±0.2**, 43°.71N**×**147°.30E, h30km, M3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.18**	**254**	P	Pn	17 14 34.7	+0.5
NEM2				S	Sn	17 14 50.3	+1.1
JRA	**Rausu**	**1.59**	**279**	P	Pn	17 14 40.6	+0.8
JRA				*e*S	Sn	17 15 00.2	+0.9
JNK	**Nakash**	**1.88**	**267**	P	Pn	17 14 44.6	+0.9
JNK				*e*S	Sn	17 15 07.4	+1.0
JAK	**Akkeshi**	**2.03**	**250**	P	Pn	17 14 46.7	+0.9
JAK				S	Sn	17 15 10.7	+0.6
JTKR	**Abashiri--Toko**	**2.47**	**277**	P	Pn	17 14 53.2	+1.4
JAR	**Ashorobuto**	**2.60**	**262**	P	Pn	17 14 55.4	+1.7
JAR				*e*S	Sn	17 15 25.8	+1.6
JOB	**Onbets**	**2.66**	**254**	P	Pn	17 14 55.9	+1.5
JMP	**Maruseppu**	**2.87**	**277**	P	Pn	17 14 59.0	+1.7
JCH	**Churui**	**3.08**	**251**	P	Pn	17 15 01.4	+1.1
JCH				*e*S	Sn	17 15 36.4	+0.3
JKK2	**Kamakawa 2**	**3.30**	**274**	P	Pn	17 15 05.7	+2.4
ASAJ	**Asahikawa**	**3.42**	**278**	P	Pn	17 15 07.2	+2.2
JFR	**Furan**	**3.47**	**263**	P	Pn	17 15 08.2	+2.6
JEM	**Erimo**	**3.48**	**242**	P	Pn	17 15 08.8	+3.0
JSE	**Soyaes**	**3.61**	**292**	P	Pn	17 15 08.4	+0.9
JNBK	**Urakawa-nobuka**	**3.63**	**248**	P	Pn	17 15 08.8	+1.0

NEIC ***16*** *17:22:20.5±3.7, 31°.09N×103°.70E, h7km±23km, mb4.1/13, Error ellipse: s-maj=8.6km s-min=6.5km az=212.0*

IDC ***16*** *17:22:20.0±0.8, 31°.11N×103°.67E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/27, mbtmp4.0/11, ML3.0/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/40, Error ellipse: s-maj=32.8km s-min=15.8km az=55.0*

ISCJB ***16*** *17:22:22.0±0.8, 31°.16N±0°.03×103°.74E±0°.05, h26km±7km, mb4.1/22, MS3.4/7, Error ellipse: s-maj=7.1km s-min=5.3km az=152.0*

BJI ***16*** *17:22:22.0, 31°.13N×103°.89E, h14km, mB4.7/9, mb4.4/17, ML4.4/18, Ms4.3/20, Ms7 4.0/19*

ISC 16 17:22:22.1±0.7**, 31°.20N**±0°.03×**103°.73E**±0°.05**, h11**km±5km**, n50, σ1s.10**/58**, mb4.1**/22**, MS3.4**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**174**	Pg	**Pg**	**17 22 27.8**	**-0.1**
CD2				Sg	**Sg**	**17 22 32.5**	**+0.7**
CD2				smax			
	comp=N,87μm,0.6s						
LZH	**Lanzhou**	**4.88**	**1**	Pg	**Pg**	**17 23 53.5**	**-2.1**
LZH				Sn	**Sn**	**17 24 39.6**	**+7.7**
LZH				Sg	**Sg**	**17 24 59.0**	**+0.2**
LZH				smax			
	comp=N,350nm,0.9s						
LZH				smax			
	comp=E,470nm,1.1s						
LZH				LR	LR		
	comp=N,1μm,6.2s						
LZH				LR	LR		
	comp=Z,2μm,8.0s						
ENH	**Enshi**	**5.05**	**99**	*e*Pn	**Pn**	**17 23 37.9**	**+0.2**
	comp=Z,115nm,0.4s						
ENH				*e*Sn	**Sn**	**17 24 36.0**	**-0.1**
XAN	**Xi'an**	**5.22**	**56**	Pn	**Pn**	**17 23 39.6**	**-0.5**
XAN				Pg	**Pg**	**17 23 57.3**	**-4.8**
XAN				Sn	**Sn**	**17 24 33.9**	**-6.4**
XAN				Sg	**Sg**	**17 24 59.6**	**-10**
XAN				smax			
	comp=N,690nm,1.0s						
XAN				smax			
	comp=E,330nm,1.0s						
GYA	**Guiyang**	**5.38**	**151**	Pn	**Pn**	**17 23 40.6**	**-1.7**
GYA				Sn	**Sn**	**17 24 45.1**	**+0.9**
GYA				smax			
	comp=N,890nm,1.3s						
GYA				smax			
	comp=E,1μm,1.4s						
GYA				LR	LR		
	comp=N,2μm,4.8s						
GYA				LR	LR		
	comp=E,3μm,4.4s						
GYA				LR	LR		
	comp=Z,1μm,3.9s						
KMI	**Kunming**	**6.11**	**188**	Pn	**Pn**	**17 23 53.1**	**+0.7**
KMI				Sn	**Sn**	**17 25 02.1**	**-0.2**
KMI				smax			
	comp=N,82nm,1.3s						
KMI				smax			
	comp=E,120nm,1.3s						
KMI				LR	LR		
	comp=N,910nm,8.8s						
KMI				LR	LR		
	comp=E,2μm,7.4s						
KMI				LR	LR		
	comp=Z,870nm,11.1s						
GTA	**Gaotai**	**8.80**	**340**	*e*P	**Pn**	**17 24 35.0**	**+5.8**
GTA				pP		17 24 38.3	
GTA				sP		17 24 41.0	
GTA				S	**Sn**	**17 26 10.5**	**+2.2**
GTA				sS		17 26 20.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,79nm,5.6s						
GTA				LR	LR		
	comp=N,810nm,13.4s						
GTA				LR	LR		
	comp=E,1μm,11.6s						
GTA				LR	LR		
	comp=Z,670nm,12.5s						
WHN	**Wuhan**	**9.16**	**91**	P	**Pn**	**17 24 35.8**	**+1.6**
WHN				S	**Sn**	**17 26 10.3**	**-6.9**
WHN				LR	LR		
	comp=N,4μm,8.8s						
WHN				LR	LR		
	comp=E,2μm,5.0s						
WHN				LR	LR		
	comp=Z,2μm,7.2s						
LSA	**Lhasa**	**10.96**	**265**	P	**Pn**	**17 25 00.9**	**+2.1**
LSA				LR	LR		
	comp=E,440nm,9.1s						
LSA				LR	LR		
	comp=Z,610nm,10.4s						
LSA	**Lhasa**	**10.96**	**265**	*e*Pn	**Pn**	**17 24 56.6**	**-2.2**
HHC	**Hu-ho-hao-te**	**11.53**	**31**	*e*P	**Pn**	**17 25 09.5**	**+2.9**
HHC				pP		17 25 12.9	
HHC				PP		17 25 19.0	
HHC				S	**Sn**	**17 27 20.8**	**+5.5**
HHC				sS		17 27 25.4	
HHC				SS		17 27 34.0	
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.3s						
HHC				LR	LR		
	comp=N,720nm,5.7s						
HHC				LR	LR		
	comp=E,490nm,4.1s						
HHC				LR	LR		
	comp=Z,440nm,6.2s						
QZH	**Quanzhou**	**14.52**	**112**	*e*P	**Pn**	**17 25 50.0**	**+2.4**
QZH				S	**Sn**	**17 28 33.0**	**+4.4**
QZH				LR	LR		
	comp=N,2μm,13.7s						
QZH				LR	LR		
	comp=E,1μm,10.8s						
QZH				LR	LR		
	comp=Z,1μm,13.4s						
SONM	**Songino Array**	**16.74**	**6**	Pn	**Pn**	**17 26 17.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=181,slow=13,SNR=19						
SONM				LR	LR	17 33 23.3	
	comp=Z,163nm,18.9s,baz=284,slow=39						
ULN	**Ulaanbaatar**	**16.84**	**8**	*e*Pn	**Pn**	**17 26 16.6**	**-1.2**
	comp=Z,4.7nm,0.9s						
KS15	**Wonju Array Si**	**20.88**	**66**	*e*P	**P**	**17 27 04.6**	**+0.4**
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**17 27 05.0**	**+0.5**
	comp=Z,3.9nm,0.6s,baz=265,slow=10,SNR=29						
CN2	**Changchun**	**21.27**	**48**	*e*P	**P**	**17 27 09.1**	**+0.8**
CN2				*e*sP	sP	17 27 16.0	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS3.8						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.7						
HIA	**Hailar**	**21.72**	**29**	P	**P**	**17 27 13.5**	**+0.4**
	comp=Z,4.1nm,0.5s,mb4.1						
MK31	**Makanchi Array**	**22.70**	**319**	*e*P	**P**	**17 27 24.0**	**+0.4**
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**17 27 24.4**	**+0.8**
	comp=Z,3.0nm,0.8s,mb3.8,baz=129,slow=11,SNR=21						
MKAR				LR	LR	17 38 04.0	
	comp=Z,16nm,19.5s,MS2.5,baz=125,slow=42						
MDJ	**Mudanjiang**	**24.29**	**49**	*e*P	**P**	**17 27 38.5**	**-0.9**
	comp=Z,10nm,1.0s,mb4.2						
TKM2	**Tokmak 2**	**25.20**	**306**	*e*P	**P**	**17 27 47.5**	**-0.1**
	comp=Z,3.6nm,0.9s,mb3.9						
UCH	**Uchtor**	**25.76**	**303**	*e*P	**P**	**17 27 55.3**	**+2.6**
	comp=Z,4.8nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**25.88**	**304**	P	**P**	**17 27 56.9**	**+3.0**
	comp=Z,2.1nm,0.6s,mb3.8,baz=122,slow=5.7,SNR=5.9						
AAK				LR	LR	17 38 55.2	
	comp=Z,198nm,19.2s,MS3.7,baz=86,slow=38						
AAK	**Ala-Archa**	**25.88**	**304**	P	**P**	**17 27 54.5**	**+0.6**
	comp=Z,2.9nm,0.8s,mb3.9						
AML	**Almayashu**	**26.32**	**303**	*e*P	**P**	**17 27 58.0**	**+0.2**
	comp=Z,6.3nm,1.5s,mb3.9						
EKS2	**Erkin-Say**	**26.40**	**304**	*e*P	**P**	**17 27 58.4**	**-0.2**
	comp=Z,3.5nm,1.0s,mb3.8						
ZAA0	**Zalesovo Array**	**26.50**	**335**	*e*P	**P**	**17 27 58.9**	**-0.5**
ZALV	**Zalesovo Beam**	**26.50**	**335**	P	**P**	**17 27 59.2**	**-0.1**
	comp=Z,4.3nm,0.8s,mb4.0,baz=128,slow=9.6,SNR=12						
ZALV				LR	LR	17 38 56.0	
	comp=Z,83nm,20.5s,MS3.3,baz=99,slow=38						
KURK	**Kurchatov**	**26.98**	**324**	P	**P**	**17 28 04.3**	**+0.6**
	comp=Z,2.4nm,0.8s,mb3.8,baz=126,slow=10,SNR=18						
KURK	**Kurchatov**	**26.98**	**324**	*e*P	**P**	**17 28 03.2**	**-0.4**
	comp=Z,3.9nm,1.1s,mb3.9						
KSM	**Kuching**	**30.21**	**167**	*e*P	**P**	**17 28 28.7**	**-4.1**
BVAR	**Borovoye Array**	**32.52**	**322**	P	**P**	**17 28 52.5**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=119,slow=9.7,SNR=3.3						
YAK	**Yakutsk**	**35.13**	**21**	P	**P**	**17 29 14.5**	**-0.9**
	comp=Z,8.2nm,0.8s,mb4.7						
AKTO	**Aktyubinsk**	**38.84**	**313**	LR	LR	17 46 09.2	
	comp=Z,36nm,18.5s,MS3.2,baz=110,slow=37						
ARU	**Arti**	**40.16**	**322**	*e*P	**P**	**17 29 57.9**	**-0.1**
	comp=Z,8.8nm,1.1s,mb4.4						
TIXI	**Tiksi**	**42.73**	**11**	*e*P	**P**	**17 30 18.1**	**-0.7**
	comp=Z,2.1nm,0.8s,mb3.9						
BILL	**Bilibino**	**51.23**	**25**	*e*P	**P**	**17 31 23.8**	**-1.6**
ARCES	**ARCESS Array B**	**57.04**	**336**	LR	LR	17 58 40.3	
	comp=Z,66nm,18.6s,MS3.8,baz=183,slow=38						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**17 32 09.2**	**-0.4**
	comp=Z,1.8nm,0.9s,mb4.1,baz=76,slow=8.0,SNR=3.9						
WRAB	**Tennant Creek**	**58.73**	**146**	*e*P	**P**	**17 32 19.4**	**-0.7**
	comp=Z,8.4nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**58.73**	**146**	P	**P**	**17 32 19.8**	**-0.3**
	comp=Z,4.0nm,0.7s,mb4.5,baz=339,slow=7.9,SNR=48						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**17 32 40.0**	**-0.6**
	comp=Z,0.7nm,0.5s,mb4.0,baz=337,slow=6.5,SNR=18						
NOA	**NORSAR Array B**	**64.41**	**327**	LR	LR	18 02 11.1	
	comp=Z,26nm,18.9s,MS3.4,baz=255,slow=37						
CTAO	**Charters Tower**	**65.32**	**136**	P	**P**	**17 33 01.7**	**-2.7**
INK	**Inuvik**	**72.18**	**19**	P	**P**	**17 33 46.3**	**-0.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=5.2,slow=3.7,SNR=2.8						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**17 33 48.8**	**-2.7**
	comp=Z,4.6nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**81.70**	**17**	P	**P**	**17 34 40.5**	**+0.3**
	comp=Z,0.5nm,0.6s,mb3.7,baz=328,slow=5.1,SNR=4.9						
NVAR	**Mina Array Bea**	**100.42**	**32**	P	Pdif	17 36 09.4	+0.2
	comp=Z,0.6nm,0.4s,baz=246,slow=8.8,SNR=5.3						
DBIC	**Dimbokro**	**102.23**	**286**	P	Pdif	17 36 15.9	-1.3
	comp=Z,0.9nm,0.3s,baz=358,slow=3.8,SNR=6.7						

IDC 16 17:34:57.0±2.2**, 31°.79N**×**104°.37E, h0km, mb3.3**/4**, mb1 3.3**/6**, mb1mx3.2**/28**, mbtmp3.3**/6**, ML2.8**/1**, Error ellipse: s-maj=39.6km s-min=32.6km az=16.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.15**	**202**	Pn	Pn	17 38 18.8	+0.1
	baz=13,slow=12,SNR=3.7						
SONM	**Songino Array**	**16.10**	**5**	Pn	Pn	17 38 45.7	+1.1
	0.0nm,0.3s,baz=191,slow=2.2,SNR=2.4						
KSRS	**Korea Array**	**20.17**	**67**	P	P	17 39 32.8	-0.1
	1.5nm,0.7s,baz=257,slow=10,SNR=13						
MKAR	**Makanchi Array**	**22.62**	**318**	P	P	17 40 00.4	+1.2
	1.1nm,0.9s,baz=119,slow=9.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	P	17 40 31.9	-1.3
	0.5nm,0.4s,baz=122,slow=7.2,SNR=4.7						
KURK	**Kurchatov**	**26.84**	**322**	P	P	17 40 39.2	+0.2
	0.1nm,0.3s,baz=126,slow=9.1,SNR=4.3						

BJI ***16*** *17:35:10.4, 6°.02S×148°.97E, h157km, mB5.0/28, mb4.9/36*

ISCJB ***16*** *17:35:13.3±0.1, 5°.66S±0°.03×148°.55E±0°.03, h150km, mb5.1/119, Error ellipse: s-maj=4.2km s-min=3.5km az=170.0*

MOS ***16*** *17:35:14.0±0.8, 5°.56S×148°.58E, h153km, mb5.2/18, Error ellipse: s-maj=10.3km s-min=6.5km az=93.6*

GCMT ***16*** *17:35:14.4±0.1, 5°.75S×148°.63E, h151km±1km, MW5.3/103, Moment Tensor Solution. s82,c124; s103,c189; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.59±.01; $M_{\theta\theta}$-0.06±.02; $M_{\phi\phi}$0.65±.02; $M_{r\theta}$-0.08±.01; $M_{\theta\phi}$0.00±.02; $M_{\phi r}$0.81±.01; Best double couple: $M_0$1.02400×10^{17} NP1:ϕ_s6.00000°, δ19.00000°, λ-80.00000°. NP2:ϕ_s175.00000°, δ71.00000°, λ-93.00000°. Principal axes: T 1.0510, Plg26.0000°, Azm268.0000°; N -0.0540, Plg3.0000°, Azm176.0000°; P -0.9970, Plg64.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***16*** *17:35:14.3±0.5, 5°.67S×148°.54E, h145km±3km, mb4.8/26, mb1 4.8/28, mb1mx4.8/28, mbtmp4.8/28, MS3.9/7, Ms1 3.9/7, ms1mx3.4/30 Error ellipse: s-maj=9.6km s-min=7.4km az=99.0*

NEIC ***16*** *17:35:14.4±0.1, 5°.60S×148°.56E, mb5.3/75, Error ellipse: s-maj=4.8km s-min=3.8km az=89.0*

DJA ***16*** *17:35:20, 5°.79S×148°.13E, h135km, mb4.9/4*

ISC 16 17:35:15.1±0.1**, 5°.63S**±0°.02×**148°.60E**±0°.03**, h152km, h152**km±1.1km**:pP-P, n463, σ0s.84**/321**, mb5.1**/118**,**

73C-101D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.85**	**212**	*e*Pn	**Pn**	**17 37 33.6**	**+0.5**
	2μm,0.9s						
COEN				*e*Sn	**Sn**	**17 39 17.6**	**-4.7**
CTA	**Charters Tower**	**14.55**	**189**	*e*P	**Pn**	**17 38 35.2**	**+1.3**
	17nm,0.6s						
CTA	**Charters Tower**	**14.55**	**189**	P	**Pn**	**17 38 34.6**	**+0.7**
	0.5nm,0.3s,baz=9.8,slow=14,SNR=18						
CTA				LR	LR	17 44 26.9	
	comp=Z,471nm,18.3s,baz=8.7,slow=38						
CTAO	**Charters Tower**	**14.55**	**189**	*e*P	**Pn**	**17 38 34.9**	**+1.0**
CTAO				*e*		17 41 18.3	
CTAO				pmax	pmax		
	comp=Z,25nm,0.7s						
CTAO	**Charters Tower**	**14.55**	**189**	*e*Pn	**Pn**	**17 38 34.9**	**+1.1**
	comp=Z,25nm,0.7s						
CTAO				*e*Sn	**Sn**	**17 41 18.3**	**+2.9**
KAKA	**Kakadu**	**17.43**	**245**	*e*P	**Pn**	**17 39 06.2**	**-2.9**
	comp=Z,997nm,0.6s						
KAKA	**Kakadu**	**17.43**	**245**	*e*P	**Pn**	**17 39 06.5**	**-2.7**
	comp=Z,3μm,0.6s						
KAKA				*e*S	**S**	**17 42 11.0**	**-11**
GUMO	**Guam**	**19.45**	**349**	P	**P**	**17 39 32.0**	**+1.8**
	comp=Z,4.1nm,0.3s,baz=216,slow=18,SNR=4.2						
GUMO	**Guam**	**19.45**	**349**	*e*P	**P**	**17 39 28.5**	**-1.6**
GUMO				pmax	pmax		
	comp=Z,223nm,1.3s						
GUMO	**Guam**	**19.45**	**349**	*e*P	**P**	**17 39 28.5**	**-1.6**
	comp=Z,223nm,1.3s						
EIDS	**Eidsvold**	**19.77**	**173**	*e*P	**P**	**17 39 34.5**	**+1.1**
	comp=Z,203nm,0.8s						
EIDS				*e*S	**S**	**17 43 09.2**	**+1.2**
WRAB	**Tennant Creek**	**19.86**	**223**	P	**P**	**17 39 35.0**	**+0.6**
	comp=Z,10μm,0.5s						
WRAB	**Tennant Creek**	**19.86**	**223**	⇑*i*P	**P**	**17 39 34.7**	**+0.3**
WRAB				*e*S	**S**	**17 43 08.9**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,857nm,0.6s						
WRAB	**Tennant Creek**	**19.86**	**223**	⇑*i*P	**P**	**17 39 34.6**	**+0.2**
	comp=Z,857nm,0.6s						
WRAB				*e*S	**S**	**17 43 08.9**	**-0.9**
WRA	**Warramunga Arr**	**19.87**	**223**	P	**P**	**17 39 34.9**	**+0.3**
	comp=Z,52nm,0.3s,baz=50,slow=11,SNR=801						
WRA				S	**S**	**17 43 09.3**	**-0.8**
	baz=36,slow=18						
WRA				LR	LR	17 47 48.1	
	comp=Z,639nm,20.7s,baz=50,slow=38						
WRA	**Warramunga Arr**	**19.87**	**223**	P	**P**	**17 39 34.9**	**+0.3**
WRA				S	**S**	**17 43 09.3**	**-0.8**
WRA	**Warramunga Arr**	**19.87**	**223**	P	**P**	**17 39 34.9**	**+0.3**
WRA				S	**S**	**17 43 09.3**	**-0.8**
WRA				LR	LR	17 47 48.1	
ASAR	**Alice Springs**	**22.84**	**217**	P	**P**	**17 40 06.2**	**+0.9**
	comp=Z,286nm,0.7s,mb5.8,baz=51,slow=8.9,SNR=3578						
ASAR				S	**S**	**17 44 03.6**	**+0.4**
	comp=Z,7.9nm,0.8s,baz=198,slow=38,SNR=5.8						
NOUC	**Port Laguerre**	**23.68**	**135**	*e*P	**P**	**17 40 12.1**	**-1.0**
DZM	**Mont Dzumac**	**23.76**	**135**	*e*P	**P**	**17 40 14.0**	**+0.2**
	comp=Z,2μm,1.0s						
DZM	**Mont Dzumac**	**23.76**	**135**	*e*P	**P**	**17 40 13.6**	**-0.2**
DZM	**Mont Dzumac**	**23.76**	**135**	*e*P	**P**	**17 40 13.6**	**-0.2**
	comp=Z,661nm,0.6s,mb6.3						
MVNO	**Noumea**	**23.89**	**136**	*e*P	**P**	**17 40 14.0**	**-0.9**
NORM	**Noumea**	**23.89**	**135**	*e*P	**P**	**17 40 14.2**	**-0.8**
ONTRN	**Noumea**	**23.93**	**136**	*e*P	**P**	**17 40 14.0**	**-1.2**
LASL	**Noumea**	**23.93**	**135**	*e*P	**P**	**17 40 14.2**	**-1.1**
PLUM	**Mont Dore**	**24.03**	**135**	*e*P	**P**	**17 40 15.5**	**-0.7**
BAYA	**Yate Dam**	**24.13**	**135**	*e*P	**P**	**17 40 17.5**	**+0.5**
ARMA	**Armidale**	**24.82**	**174**	*e*P	**P**	**17 40 24.1**	**+0.9**
ARMA	**Armidale**	**24.82**	**174**	⇓*i*P	**P**	**17 40 23.8**	**+0.6**
	comp=Z,221nm,1.3s,mb5.5						
FITZ	**Fitzroy Crossi**	**25.62**	**239**	⇑*i*P	**P**	**17 40 30.8**	**+0.2**
	comp=Z,1μm,0.5s						
FITZ	**Fitzroy Crossi**	**25.62**	**239**	P	**P**	**17 40 30.8**	**+0.1**
	comp=Z,982nm,0.7s,baz=71,slow=7.9,SNR=586						
STKA	**Stephens Creek**	**26.92**	**193**	*e*P	**P**	**17 40 41.8**	**-0.3**
	comp=Z,11nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**26.92**	**193**	*e*P	pP	17 41 12.6	-1.3
	comp=Z,45nm,1.1s						
STKA	**Stephens Creek**	**26.92**	**193**	P	**P**	**17 40 41.9**	**-0.2**
	comp=Z,11nm,0.5s,mb4.7,baz=340,slow=8.6,SNR=18						
STKA				ScP	ScP	17 47 26.4	-0.2
	comp=Z,15nm,1.1s,baz=321,slow=9.6,SNR=4.0						
STKA				LR	LR	17 51 30.8	
	comp=Z,295nm,19.0s,baz=129,slow=36						
STKA	**Stephens Creek**	**26.92**	**193**	*e*P	**P**	**17 40 41.5**	**-0.7**
	comp=Z,19nm,1.1s,mb4.6						
STKA				*e*pP	pP	17 41 12.6	-1.3
STKA				*e*ScP	ScP	17 47 24.4	-2.2
KAPI	**Kappang**	**28.73**	**270**	P	**P**	**17 40 56.5**	**-2.1**
	comp=Z,8.6nm,0.7s,mb4.6,baz=131,slow=14,SNR=4.1						
CAN	**Canberra**	**29.55**	**179**	⇓*i*P	**P**	**17 41 06.1**	**+0.7**
CAN				*e*		17 47 34.4	
CAN				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.1						
CAN	**Canberra**	**29.55**	**179**	⇓*i*P	**P**	**17 41 06.0**	**+0.6**
	comp=Z,19nm,0.5s,mb5.1						
CAN				*e*ScP	ScP	17 47 34.4	-0.3
CNB	**Canberra Magne**	**29.55**	**179**	*e*P	**P**	**17 41 06.3**	**+0.9**
FUNA	**Funafuti**	**30.49**	**97**	*e*P	**P**	**17 41 13.1**	**-1.0**
	comp=Z,74nm,0.9s,mb5.4						
FORT	**Forrest**	**31.60**	**215**	*e*P	**P**	**17 41 23.8**	**+0.2**
	comp=Z,213nm,0.8s,mb5.9						
FORT	**Forrest**	**31.60**	**215**	*e*P	**P**	**17 41 23.7**	**+0.1**
	comp=Z,211nm,0.8s,mb5.9						
TOO	**Toolangi**	**31.92**	**185**	*e*P	**P**	**17 41 27.1**	**+0.9**
MBWA	**Marble Bar**	**31.95**	**238**	*e*P	**P**	**17 41 26.5**	**-0.3**
	comp=Z,146nm,0.7s,mb5.8						
TGY	**Tagaytay City**	**33.74**	**306**	P	**P**	**17 41 42.4**	**+0.1**
	comp=Z,147nm,0.3s,mb6.1,baz=287,slow=14,SNR=4.6						
MOO	**Moorlands**	**36.67**	**182**	*e*P	**P**	**17 42 08.5**	**+1.4**
TAU	**Tasmania Unive**	**37.14**	**182**	*e*P	**P**	**17 42 09.4**	**-1.7**
TAU				*e**PP	pP	17 42 43.0	-0.9
TAU				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.2						
TAU	**Tasmania Unive**	**37.14**	**182**	*e*P	**P**	**17 42 09.4**	**-1.7**
	comp=Z,72nm,1.1s,mb5.2						
TAU				*e*pP	pP	17 42 43.0	-0.9
OUZ	**Omahuta**	**37.39**	**145**	*e*P	**P**	**17 42 14.2**	**+0.9**
	comp=Z,40nm,0.7s,mb5.2						
JOW	**Kunigami**	**37.80**	**330**	P	**P**	**17 42 16.1**	**-0.8**
	comp=Z,82nm,0.8s,mb5.4,baz=161,slow=8.2,SNR=12						
KLBR	**Kellerberrin**	**38.74**	**224**	*e*P	**P**	**17 42 24.2**	**-0.5**
	comp=Z,98nm,0.6s,mb5.6						
KLBR				*e*		17 42 35.5	
KSM	**Kuching**	**38.89**	**279**	*e*P	**P**	**17 42 24.1**	**-2.1**
	comp=Z,8.3nm,0.8s,mb4.4						
KSM				*e*pP	pP	17 42 59.4	+0.1
YULB	**Yu-li**	**39.28**	**318**	*e*P	**P**	**17 42 29.2**	**0.0**
	comp=Z,44nm,1.0s,mb5.0						
YULB				*e*pP	pP	17 43 02.8	+0.4
RAO	**Raoul Island**	**39.39**	**131**	LR	LR	17 56 49.0	
	comp=Z,157nm,19.8s,baz=146,slow=33						
NACB	**Ninganchiao**	**39.63**	**319**	*e*P	**P**	**17 42 31.4**	**-0.7**
	comp=Z,89nm,1.3s,mb5.2						
NACB				*e*pP	pP	17 43 07.3	+2.0
SSLB	**Suanglung**	**39.78**	**318**	*e*P	**P**	**17 42 32.6**	**-0.8**
	comp=Z,84nm,1.3s,mb5.2						
SSLB				*e*pP	pP	17 43 05.4	-1.2
AFI	**Afiamalu**	**39.85**	**105**	P	**P**	**17 42 34.2**	**+0.1**
	comp=Z,200nm,0.9s,mb5.7,baz=258,slow=1.3,SNR=34						
AFI	**Afiamalu**	**39.85**	**105**	*e*P	**P**	**17 42 33.9**	**-0.2**
AFI				*e**PP	pP	17 43 03.4	-3.9
AFI				pmax	pmax		
	comp=Z,229nm,0.9s,mb5.8						
AFI	**Afiamalu**	**39.85**	**105**	*e*P	**P**	**17 42 33.9**	**-0.2**
	comp=Z,229nm,0.9s,mb5.8						
AFI				*e*pP	pP	17 43 03.4	-4.0
NWAO	**Narrogin (SRO)**	**39.88**	**223**	*e*P	**P**	**17 42 33.6**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,77nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.88**	**223**	*e*P	**P**	**17 42 33.6**	**-0.5**
	comp=Z,77nm,1.1s,mb5.2						
NWAO				*e*		17 42 45.2	
NWAO				*e*PP	PP	17 43 58.3	-11
YHNB	**Yeheng**	**40.12**	**320**	*e*P	**P**	**17 42 36.9**	**+0.7**
	comp=Z,93nm,1.0s,mb5.4						
YHNB				*e*pP	pP	17 43 11.4	+2.0
URZ	**Urewera**	**41.53**	**145**	P	**P**	**17 42 47.6**	**0.0**
	comp=Z,50nm,0.7s,mb5.3,baz=319,slow=4.0,SNR=43						
URZ				PcP	PcP	17 44 39.7	-2.5
	comp=Z,33nm,0.8s,baz=343,slow=5.5,SNR=5.1						
URZ	**Urewera**	**41.53**	**145**	*e*P	**P**	**17 42 47.5**	**0.0**
	comp=Z,30nm,0.6s,mb5.1						
URZ				*e*PcP	PcP	17 44 39.5	-2.6
SNZO	**South Karori**	**42.49**	**151**	*e*P	**P**	**17 42 54.5**	**-0.8**
	comp=Z,98nm,0.7s,mb5.5						
RPZ	**Rata Peaks**	**42.77**	**156**	P	**P**	**17 42 57.3**	**-0.2**
	comp=Z,162nm,0.6s,mb5.8,baz=305,slow=2.5,SNR=150						
RPZ	**Rata Peaks**	**42.77**	**156**	*e*P	**P**	**17 42 57.0**	**-0.5**
	comp=Z,147nm,0.6s,mb5.8						
KHZ	**Kahutara**	**42.79**	**153**	*e*P	**P**	**17 42 57.1**	**-0.6**
	comp=Z,63nm,0.5s,mb5.5						
MJAR	**Matsushiro Arr**	**43.07**	**348**	P	**P**	**17 43 00.0**	**+0.1**
	comp=Z,14nm,0.9s,mb4.6,baz=168,slow=9.0,SNR=29						
MJAR				pP	pP	17 43 33.2	-0.4
	comp=Z,11nm,1.0s,baz=173,slow=8.3,SNR=4.4						
MJAR				ScP	ScP	17 48 21.6	-2.8
	comp=Z,1.9nm,0.9s,baz=176,slow=4.8,SNR=4.1						
MJAR	**Matsushiro Arr**	**43.07**	**348**	P	**P**	**17 43 00.0**	**0.0**
MJAR				*PP	pP	17 43 33.3	-0.3
MAJO	**Matsushiro**	**43.07**	**348**	*e*P	**P**	**17 43 00.3**	**+0.3**
MAJO				*e**PP	pP	17 43 35.4	+1.8
MAJO				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.3						
MAJO	**Matsushiro**	**43.07**	**348**	*e*P	**P**	**17 43 00.2**	**+0.3**
	comp=Z,114nm,1.4s,mb5.3						
MAJO				*e*pP	pP	17 43 35.4	+1.8
MAT	**Matsushiro**	**43.07**	**348**	P	**P**	**17 42 59.8**	**-0.2**
MAT				S	**S**	**17 49 12.0**	**-2.5**
ODZ	**Otahua Downs**	**43.72**	**157**	*e*P	**P**	**17 43 04.9**	**-0.2**
	comp=Z,24nm,0.8s,mb4.9						
ODZ				*e*pP	pP	17 43 39.3	+0.5
ODZ				*e*PcP	PcP	17 44 48.9	-0.4
NJ2	**Nanjing**	**46.98**	**325**	*e*P	**P**	**17 43 32.9**	**+1.9**
NJ2				pP	pP	17 44 05.6	+0.5
NJ2				sP	sP	17 44 20.8	-1.3
NJ2				PP	PP	17 45 22.1	-1.0
NJ2				S	**S**	**17 50 11.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.3						
NJ2				pmax	pmax		
	comp=Z,190nm,4.9s						
NJ2				LR	LR		
	comp=N,320nm,20.7s						
NJ2				LR	LR		
	comp=E,410nm,24.3s						
NJ2				LR	LR		
	comp=Z,170nm,22.1s						
KSRS	**Korea Array**	**47.00**	**337**	P	**P**	**17 43 32.4**	**+1.3**
	comp=Z,4.6nm,0.6s,mb4.3,baz=154,slow=8.7,SNR=37						
KSRS				pP	pP	17 44 04.8	-0.3
	comp=Z,14nm,0.9s,baz=153,slow=8.7,SNR=6.9						
KSRS				ScP	ScP	17 48 41.4	+0.7
	comp=Z,0.5nm,0.6s,baz=140,slow=4.1,SNR=4.9						
WHN	**Wuhan**	**48.67**	**320**	⇓P	**P**	**17 43 45.5**	**+1.5**
KULM	**Kulim**	**49.09**	**282**	*e*P	**P**	**17 43 44.7**	**-2.8**
	comp=Z,7.5nm,0.6s,mb4.5						
KULM				*e*pP	pP	17 44 21.8	-0.2
MCQ	**Macquarie Isla**	**49.44**	**172**	*e*P	**P**	**17 43 50.7**	**+1.3**
ASAJ	**Asahikawa**	**49.81**	**354**	P	**P**	**17 43 54.3**	**+1.9**
	comp=Z,25nm,0.9s,mb4.9,baz=224,slow=12,SNR=20						
KKTK	**Khon Kaen**	**50.27**	**297**	P	pP	17 44 29.0	-1.9
VLA	**Vladivostok**	**50.84**	**344**	*e*P	**P**	**17 44 01.2**	**+1.1**
VLA				*e**PP	pP	17 44 33.4	-1.4
VLA				*e**SP	sP	17 44 56.1	+4.5
VLA				*e*S	**S**	**17 51 06.8**	**+2.3**
VLA				*e**SS	sS	17 52 08.0	+3.4
VLA				pmax	pmax		
	comp=Z,79nm,2.3s,mb4.9						
DL2	**Dalian**	**50.87**	**333**	P	pP	17 44 36.8	+1.7
DL2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
GYA	**Guiyang**	**51.65**	**310**	P	**P**	**17 44 07.1**	**+0.6**
GYA				pP	pP	17 44 43.3	+2.0
GYA				sP	sP	17 45 01.8	+3.7
GYA				PcP	PcP	17 45 20.9	+2.8
GYA				ScP	ScP	17 49 01.0	+0.2
GYA				PcS	PcS	17 49 16.8	+0.4
GYA				S	**S**	**17 51 16.0**	**-0.3**
GYA				sS	sS	17 52 17.8	+1.3
GYA				SS	SS	17 54 54.3	-0.6
GYA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.0						
GYA				pmax	pmax		
	comp=Z,150nm,5.0s						
GYA				LR	LR		
	comp=N,830nm,19.8s						
GYA				LR	LR		
	comp=E,640nm,20.4s						
GYA				LR	LR		
	comp=Z,730nm,19.4s						
ENH	**Enshi**	**51.75**	**316**	*e*P	**P**	**17 44 06.7**	**-0.5**
	comp=Z,12nm,0.8s,mb4.6						
ENH				*e*pP	pP	17 44 39.8	-2.1
NST	**Nakhon Sawan**	**52.45**	**295**	P	**P**	**17 44 10.0**	**-2.6**
	comp=Z,75nm,1.0s,mb5.3						
SNY	**Shenyang**	**52.47**	**337**	⇓P	pP	17 44 47.5	+0.4
SNY				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.4						
YSS	**Yuzh-Sakhalins**	**52.61**	**355**	⇓*e*P	**P**	**17 44 14.0**	**+0.8**
YSS				*e*S	**S**	**17 51 30.0**	**+1.3**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
YSS				pmax	pmax		
	comp=Z,200nm,4.0s						
YSS				smax			
	comp=E,500nm,10.0s						
YSS	**Yuzh-Sakhalins**	**52.61**	**355**	*e*P	**P**	**17 44 14.2**	**+1.0**
	comp=E,32nm,0.8s,mb5.1						
YSS				*e*pP	pP	17 44 52.5	+4.4
MDJ	**Mudanjiang**	**52.86**	**343**	P	**P**	**17 44 16.5**	**+1.4**
MDJ				pP	pP	17 44 51.0	+1.0
MDJ				sP	sP	17 45 08.0	+1.3
MDJ				PcS	PcS	17 49 21.9	+1.0
MDJ				S	**S**	**17 51 35.4**	**+3.3**
MDJ				sS	sS	17 52 35.9	+3.3
MDJ				ScS	ScS	17 53 50.5	+1.1
MDJ				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,75nm,5.7s						
MDJ				LR	LR		
	comp=N,85nm,36.3s						
MDJ				LR	LR		
	comp=E,170nm,33.1s						
MDJ				LR	LR		
	comp=Z,89nm,26.9s						
MDJ	**Mudanjiang**	**52.86**	**343**	*e*P	**P**	**17 44 16.0**	**+0.9**
	comp=Z,15nm,0.8s,mb4.8						
MDJ				*e*pP	pP	17 44 49.2	-0.8
CN2	**Changchun**	**53.47**	**339**	*e*P	**P**	**17 44 20.4**	**+0.9**
CN2				*e*pP	pP	17 44 57.3	+2.8
CN2				*e*S	**S**	**17 51 39.4**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,21.0s						
CN2				LR	LR		
	comp=E,200nm,21.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
KMI	**Kunming**	**54.05**	**307**	P	**P**	**17 44 25.0**	**+0.8**
KMI				pP	pP	17 44 59.0	-0.2
KMI				sP	sP	17 45 15.3	-0.6
KMI				PP	PP	17 46 30.3	+2.9
KMI				S	**S**	**17 51 50.3**	**+1.4**
KMI				sS	sS	17 52 49.5	-0.1
KMI				SS	SS	17 55 34.3	+1.5
KMI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
KMI				pmax	pmax		
	comp=Z,50nm,5.5s						
KMI				LR	LR		
	comp=N,200nm,22.9s						
KMI				LR	LR		
	comp=E,95nm,22.9s						
KMI				LR	LR		
	comp=Z,150nm,22.5s						
BJI	**Beijing**	**54.38**	**330**	P	**P**	**17 44 27.1**	**+0.9**
BJI				pP	pP	17 45 01.8	+0.5
BJI				S	**S**	**17 51 51.9**	**-0.9**
BJI				sS	sS	17 52 56.8	+3.3
BJI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
BJI				pmax	pmax		
	comp=Z,97nm,4.2s						
XAN	**Xi'an**	**54.43**	**319**	P	**P**	**17 44 26.6**	**-0.1**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
XAN				pmax	pmax		
	comp=Z,35nm,8.0s						
CM31	**Chiang Mai Arr**	**54.49**	**297**	*e*P	**P**	**17 44 27.0**	**-0.5**
	comp=Z,49nm,1.0s,mb5.2						
CM31				*e*pP	pP	17 45 01.2	-1.3
CMAR	**Chiang Mai Arr**	**54.49**	**297**	P	**P**	**17 44 27.2**	**-0.2**
	comp=Z,6.8nm,0.7s,mb4.5,baz=119,slow=5.7,SNR=58						
CMAR				pP	pP	17 45 00.9	-1.6
	comp=Z,35nm,0.9s,baz=120,slow=5.7,SNR=8.1						
SKR	**Severo-Kuril's**	**56.46**	**6**	*e*P	**P**	**17 44 40.5**	**-0.4**
SKR				pmax	pmax		
	comp=N,130nm,0.9s						
SKR				pmax	pmax		
	comp=Z,200nm,0.9s,mb6.0						
KLR	**Kul'dur**	**56.58**	**347**	*e*P	**P**	**17 44 39.5**	**-2.3**
KLR				*e*	pP	17 45 15.8	-1.3
KLR				pmax	pmax		
	comp=Z,120μm,1.4s						
KLR				pmax	pmax		
	comp=E,80nm,1.4s						
HHC	**Hu-ho-hao-te**	**57.38**	**327**	*e*P	**P**	**17 44 51.4**	**+3.8**
HHC				pP	pP	17 45 29.0	+6.0
HHC				sP	sP	17 45 46.6	+7.0
HHC				PP	PP	17 47 02.6	+5.9
HHC				ScP	ScP	17 49 25.9	+0.4
HHC				PcS	PcS	17 49 42.8	+1.8
HHC				S	**S**	**17 52 35.3**	**+2.9**
HHC				sS	sS	17 53 40.3	+6.6
HHC				ScS	ScS	17 54 21.3	-0.7
HHC				SS	SS	17 56 27.9	+3.3
HHC				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
HHC				pmax	pmax		
	comp=Z,98nm,5.8s						
HHC				LR	LR		
	comp=N,290nm,18.6s						
HHC				LR	LR		
	comp=E,250nm,15.7s						
HHC				LR	LR		
	comp=Z,220nm,16.5s						
KIP	**Kipapa**	**58.82**	**61**	*e*P	**P**	**17 44 57.6**	**-0.4**
KIP				pmax	pmax		
	comp=Z,192nm,1.3s,mb5.8						
KIP	**Kipapa**	**58.82**	**61**	*e*P	**P**	**17 44 57.6**	**-0.4**
	comp=Z,192nm,1.3s,mb5.8						
LZH	**Lanzhou**	**58.99**	**318**	P	**P**	**17 45 02.0**	**+3.1**
LZH				pP	pP	17 45 36.3	+1.8
LZH				PP	PP	17 47 16.0	+4.9
LZH				S	**S**	**17 52 56.0**	**+2.5**
LZH				sS	sS	17 53 58.6	+3.5
LZH				SS	SS	17 56 52.0	+1.9
LZH				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.3						
LZH				pmax	pmax		
	comp=Z,190nm,5.2s						
PEA0B	**Petropavlovsk-**	**59.02**	**6**	*e*P	**P**	**17 45 00.2**	**+1.4**
PETK	**Petropavlovsk-**	**59.02**	**6**	P	**P**	**17 45 00.1**	**+1.3**
	comp=Z,84nm,0.6s,mb5.7,baz=154,slow=5.8,SNR=293						
PETK				LR	LR	18 07 29.2	
	comp=Z,31nm,19.0s,baz=22,slow=33						
PET	**Petropavlovsk**	**59.05**	**7κ**	*i*P	**P**	**17 44 59.7**	**+0.8**
PET				*e*S	**S**	**17 52 55.9**	**+2.2**
PET				pmax	pmax		
	comp=Z,136nm,0.9s,mb5.8						
PET				pmax	pmax		
	comp=Z,100nm,15.7s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
PET	**Petropavlovsk**	**59.05**	**7**	*e*P	**P**	**17 44 59.7**	**+0.8**
	comp=Z,114nm,0.9s,mb5.7						
HIA	**Hailar**	**60.18**	**339**	*e*P	**P**	**17 45 07.4**	**+0.7**
HIA				*e**PP	pP	17 45 43.5	+1.0
HIA				pmax	pmax		
	comp=Z,50nm,1.1s						
HIA	**Hailar**	**60.18**	**339**	*e*P	**P**	**17 45 07.4**	**+0.6**
	comp=Z,50nm,1.1s,mb5.3						
HIA				*e*pP	pP	17 45 43.5	+1.1
KHU	**Kahuku**	**60.21**	**64**	*e*P	**P**	**17 45 07.3**	**-0.2**
PPT	**Papeete**	**61.47**	**107**	*e*P	**P**	**17 45 17.1**	**+1.0**
	comp=Z,62nm,1.3s,mb5.3						
PPT	**Papeete**	**61.47**	**107**	P	**P**	**17 45 17.4**	**+1.3**
	comp=Z,18nm,0.5s,mb5.2,baz=222,slow=17,SNR=3.5						
PAE	**Paea**	**61.47**	**107**	*e*P	**P**	**17 45 17.0**	**+0.9**
	comp=Z,27nm,1.3s,mb4.9						
PAE	**Paea**	**61.47**	**107**	*e*P	**P**	**17 45 17.0**	**+0.9**
PAE				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.9						
TIAR	**Tiarei**	**61.69**	**107**	*e*P	**P**	**17 45 18.7**	**+1.1**
	comp=Z,261nm,1.2s,mb5.9						
MEH	**Mehetia**	**62.92**	**107**	*e*P	**P**	**17 45 26.6**	**+0.8**
	comp=Z,214nm,1.0s,mb6.0						
PMOR	**Pomariorio Ree**	**62.99**	**104**	*e*P	**P**	**17 45 27.2**	**+0.9**
	comp=Z,508nm,1.1s,mb6.3						
SHL	**Shillong**	**63.17**	**302**	*e*P	**P**	**17 45 28.0**	**+0.7**
GTA	**Gaotai**	**63.49**	**319**	P	**P**	**17 45 30.6**	**+1.5**
GTA				pP	pP	17 46 04.3	-0.9
GTA				sP	sP	17 46 19.8	-1.9
GTA				PP	PP	17 47 55.3	+4.5
GTA				S	**S**	**17 53 54.8**	**+4.4**
GTA				sS	sS	17 54 54.3	+1.5
GTA				SS	SS	17 58 08.0	+7.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GTA				pmax	pmax		
	comp=Z,45nm,4.8s						
GTA				LR	LR		
	comp=N,120nm,16.1s						
GTA				LR	LR		
	comp=E,120nm,15.5s						
GTA				LR	LR		
	comp=Z,120nm,16.7s						
ULN	**Ulaanbaatar**	**64.57**	**330**	*e*P	**P**	**17 45 36.5**	**+0.5**
ULN				*e*		17 46 05.5	
ULN				*e**PP	pP	17 46 12.9	+0

CASY Casey 66.04 196 *eP* **P 17 45 44.8 -0.3**
CASY Casey 66.04 196 *eP* **P 17 45 44.5 -0.6**
comp=Z,30nm,1.2s,mb5.0
ZAK Zakamensk 68.09 331 *eP* **P 17 45 59.0 +0.7**
ZAK *e* pP 17 46 32.0 -2.9
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
SEY Seymchan 68.43 2 *d iP* **P 17 46 01.1 +0.9**
TLY Talaya 68.77 332 *eP* **P 17 46 08.0 +5.5**
TLY *eS* S 17 54 51.7 -2.0
TLY *e*SS SS 17 59 18.0 -3.8
TLY *e*SSS 18 02 25.4
TLY pmax pmax
comp=Z,14nm,1.3s,mb4.5
YAK Yakutsk 69.03 351 *d iP* **P 17 46 04.3 +0.4**
YAK *e* 17 46 30.8
YAK *e**PP pP 17 46 40.5 0.0
YAK *e*S S 17 54 55.7 -0.7
YAK *e* 17 55 48.4
YAK pmax pmax
comp=Z,29nm,0.9s,mb5.0
YAK pmax pmax
comp=N,17nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,48nm,1.3s,mb5.1
YAK pmax pmax
comp=N,36nm,1.5s
YAK pmax pmax
comp=E,25nm,1.6s
YAK smax
comp=E,109nm,4.4s
YAK Yakutsk 69.03 351 *eP* **P 17 46 04.5 +0.6**
comp=E,91nm,1.3s,mb5.3
BOD Bodaibo 69.14 341⇑ *iP* **P 17 46 04.4 -0.3**
BOD pmax pmax
comp=Z,12nm,1.6s,mb4.4
MOY Mondy 70.03 331 *eP* **P 17 46 11.3 +1.1**
MOY *e* pP 17 46 47.0 0.0
UNV Unalaska Valle 70.17 26 *eP* **P 17 46 10.7 -0.4**
comp=Z,121nm,1.2s,mb5.5
TAOE Nuku Hiva Isla 70.67 97 *eP* **P 17 46 15.1 +0.2**
comp=Z,163nm,1.0s,mb5.7
AKUT Akutan 70.69 26 *eP* **P 17 46 13.7 -0.5**
comp=Z,364nm,1.3s,mb6.0
MIR Mirnyy 71.67 200⇑ *iP* **P 17 46 19.8 -0.1**
MIR pmax pmax
comp=Z,49nm,1.0s,mb5.2
SBA Scott Base 72.81 176 *eP* **P 17 46 27.7 +1.2**
SBA pmax pmax
comp=Z,39nm,1.3s,mb5.0
SBA Scott Base 72.81 176 *eP* **P 17 46 27.7 +1.2**
comp=Z,39nm,1.3s,mb5.0
WMQ Urumqi 73.56 319 *eP* **P 17 46 31.9 +0.4**
WMQ pmax pmax
comp=Z,11nm,1.2s,mb4.5
WMQ LR LR
comp=N,120nm,36.0s
WMQ LR LR
comp=E,41nm,32.0s
WMQ LR LR
comp=Z,46nm,28.0s
WMQ Urumqi 73.56 319 P pP 17 47 07.8 -0.8
WMQ pmax pmax
comp=Z,37nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,320nm,3.2s
WMQ pmax pmax
comp=Z,38nm,13.0s
BILL Bilibino 74.55 7 *d iP* **P 17 46 37.1 +0.3**
BILL *e* 17 46 50.3
BILL *i* *PP pP 17 47 15.5 +1.6
BILL *i* 17 49 27.7
BILL pmax pmax
comp=Z,40nm,1.2s,mb4.9
BILL Bilibino 74.55 7 *eP* **P 17 46 37.2 +0.4**
comp=Z,35nm,1.1s,mb4.9
BILL *e*pP pP 17 47 10.5 -3.4
RKT Rikitea 75.33 112 *eP* **P 17 46 42.5 +0.2**
comp=Z,213nm,1.0s,mb5.7
RKT Rikitea 75.33 112 *eP* **P 17 46 42.5 +0.2**
RKT pmax pmax
comp=Z,213nm,1.0s,mb5.7
GAMB Gambell 75.35 17 *eP* **P 17 46 42.1 +0.7**
comp=Z,34nm,1.1s,mb4.9
TNA Tin City 77.77 17 *eP* **P 17 46 55.1 +0.1**
comp=Z,20nm,0.9s,mb4.7
TIXI Tiksi 78.22 354 *eP* **P 17 46 56.0 -1.3**
TIXI *e* pP 17 47 33.0 -1.8
TIXI pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
TIXI Tiksi 78.22 354 *eP* **P 17 46 56.1 -1.3**
comp=Z,7.6nm,1.0s,mb4.3
TIXI *e*pP pP 17 47 33.5 -1.3
OHAK Old Harbor 78.22 28 *eP* **P 17 46 57.9 +0.2**
comp=Z,31nm,0.9s,mb4.9
MK31 Makanchi Array 78.24 320 *eP* **P 17 46 57.4 -0.6**
MK31 *e**PP pP 17 47 34.9 -0.6
MKAR Makanchi Array 78.24 320 P **P 17 46 57.5 -0.4**
comp=Z,2.1nm,0.6s,mb4.0,baz=98,slow=7.7,SNR=28
MKAR pP pP 17 47 33.5 -1.9
comp=Z,6.6nm,1.0s,baz=112,slow=5.4,SNR=5.2
MKAR PKKPbc PKKPbc 18 05 54.9 -2.7
comp=Z,0.8nm,0.6s,baz=0.0,slow=0.6,SNR=5.4
MKAR Makanchi Array 78.24 320 P **P 17 46 57.6 -0.4**
MKAR *PP pP 17 47 33.5 -2.0
KDAK Kodiak Island 78.83 28 P **P 17 47 00.8 -0.1**
comp=Z,26nm,0.9s,mb4.9
KDAK Kodiak Island 78.83 28 *i* P **P 17 47 02.0 +1.0**
KDAK Kodiak Island 78.83 28 P **P 17 47 00.8 -0.1**
SVW2 Sparrevohn 79.25 24 *eP* **P 17 47 03.8 +0.6**
SVW2 *e*pP pP 17 47 41.5 +0.7
ZAA0 Zalesovo Array 79.56 327 *eP* **P 17 47 03.4 -1.6**
ZAA0 *e*pP pP 17 47 40.1 -2.5
ZALV Zalesovo Beam 79.56 327 P **P 17 47 03.6 -1.4**
comp=Z,4.4nm,0.4s,mb4.4,baz=111,slow=6.3,SNR=20
ZALV pP pP 17 47 40.2 -2.4
comp=Z,17nm,0.9s,baz=110,slow=5.5,SNR=9.7
ZALV PKKPbc PKKPbc 18 05 52.1 -3.0
comp=Z,0.8nm,0.4s,baz=299,slow=3.1,SNR=5.5
ZALV PKPPKP 18 13 57.5
comp=Z,0.4nm,0.3s,baz=298,slow=3.2,SNR=4.3
ZALV Zalesovo Beam 79.56 327 P **P 17 47 03.7 -1.3**
ZALV *PP pP 17 47 40.3 -2.3
ZALV Zalesovo Beam 79.56 327 P **P 17 47 03.6 -1.4**
ZALV pP pP 17 47 40.2 -2.4
ZALV PKKPbc PKKPbc 18 05 52.1 -3.0
ZALV P'P' 18 13 57.5
TTA Tatalina 80.10 22 *eP* **P 17 47 07.7 0.0**
TTA *e**PP pP 17 47 47.0 +1.6
TTA pmax pmax
comp=Z,30nm,1.0s,mb4.9
TTA Tatalina 80.10 22 *eP* **P 17 47 07.7 0.0**
comp=Z,30nm,1.0s,mb4.9
TTA *e*pP pP 17 47 47.0 +1.6
RSO Redoubt South 80.10 25 *eP* **P 17 47 07.2 -0.6**
KSH Kashi 80.33 312 *eP* **P 17 47 01.6 -7.9**
KSH *e*PcP PcP 17 47 10.5 -5.6
KSH *e*pP pP 17 47 36.5 -11
KSH *e*sP sP 17 47 51.6 -12
KSH *e*PP PP 17 50 02.6 -12
KSH *e*S S 17 56 40.3 -22
KSH *e*SKS 17 56 57.6
KSH *e*ScS ScS 17 57 05.6 -16
KSH *e*sS sS 17 57 44.5 -23
KSH *e*SS SS 18 01 52.5 -25
KSH AMB AMB
comp=Z,1.0nm,0.3s,mb3.9
KSH LR LR
comp=N,490nm,9.7s
KSH LR LR
comp=E,470nm,9.7s
KSH LR LR
comp=Z,110nm,5.3s
NVS Novosibirsk 80.77 328 *eP* **P 17 47 10.0 -1.5**
NVS *i* *PP pP 17 47 48.0 -1.2
NVS *e*S S 17 57 06.0 -0.7
NVS *e* 17 57 52.3
NVS pmax pmax
comp=Z,11nm,1.1s,mb4.4
NVS pmax pmax
comp=N,9.0nm,1.3s
NVS pmax pmax
comp=E,8.0nm,1.3s
NVS smax
comp=N,11nm,1.6s
NVS smax
comp=E,23nm,2.0s
SEW Seward 81.37 27 *eP* **P 17 47 14.6 +0.1**
comp=E,93nm,1.0s,mb5.4
SEW *e*pP pP 17 47 52.8 +0.5
TKM2 Tokmak 2 81.52 315 P **P 17 47 15.7 0.0**
SNR=5.0
TKM2 Tokmak 2 81.52 315 *eP* **P 17 47 15.1 -0.6**
TKM2 *e**PP pP 17 47 52.4 -1.1
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
TKM2 Tokmak 2 81.52 315 *eP* **P 17 47 15.1 -0.6**
comp=Z,2.4nm,0.6s,mb4.0
TKM2 *e*pP pP 17 47 52.4 -1.1
KZA Kyzart 81.54 314 P **P 17 47 16.9 +1.1**
SNR=12
PPLA Purkeypile 81.56 23 *eP* **P 17 47 14.5 -1.0**
comp=Z,108nm,1.6s,mb5.2
RC01 Rabbit Creek A 81.70 26 *eP* **P 17 47 15.7 -0.5**
comp=Z,103nm,1.2s,mb5.3
KURK Kurchatov 81.88 323 P **P 17 47 16.5 -0.9**
comp=Z,1.9nm,0.7s,baz=102,slow=4.4,SNR=10.0
KURK pP pP 17 47 54.5 -0.6
comp=Z,10nm,1.0s,baz=103,slow=5.0,SNR=11
KURK PKPPKP 18 13 53.7
comp=Z,0.9nm,0.8s,baz=292,slow=3.2,SNR=5.1
KURK Kurchatov 81.88 323 *eP* **P 17 47 16.2 -1.2**
KURK *e**PP pP 17 47 51.9 -3.3
KURK pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
KURK Kurchatov 81.88 323 *eP* **P 17 47 16.2 -1.2**
comp=Z,4.9nm,0.9s,mb4.1
KURK *e*pP pP 17 47 51.9 -3.3
CHUM Lake Minchumin 82.02 23 *eP* **P 17 47 17.7 -0.1**
comp=Z,368nm,1.4s,mb5.8
CHUM *e*pP pP 17 47 54.9 -0.7
UCH Uchtor 82.11 314 P **P 17 47 19.4 +0.6**
SNR=6.3
UCH Uchtor 82.11 314 *eP* **P 17 47 19.2 +0.3**
comp=Z,25nm,1.3s,mb4.7
UCH *e*pP pP 17 47 57.1 +0.5
PMR Palmer 82.19 25 *eP* **P 17 47 18.1 -0.7**
PMR pmax pmax
comp=Z,57nm,1.0s,mb5.2
PMR Palmer 82.19 25 *eP* **P 17 47 18.1 -0.7**
comp=Z,57nm,1.0s,mb5.2
AAK Ala-Archa 82.22 314 P **P 17 47 19.5 0.0**
comp=Z,1.6nm,0.5s,mb3.9,baz=112,slow=4.5,SNR=6.3
AAK pP pP 17 47 55.9 -1.3
comp=Z,5.4nm,0.8s,baz=162,slow=8.3,SNR=2.5
AAK LR LR 18 22 28.5
comp=Z,92nm,20.5s,baz=355,slow=34
AAK Ala-Archa 82.22 314 *eP* **P 17 47 19.2 -0.2**
AAK *e**PP pP 17 47 56.4 -0.8
AAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
AAK Ala-Archa 82.22 314 *eP* **P 17 47 19.2 -0.2**
comp=Z,9.6nm,0.9s,mb4.4
AAK *e*pP pP 17 47 56.4 -0.9
KTH Kantishna Hill 82.39 23 *eP* **P 17 47 18.6 -1.2**
comp=Z,50nm,0.8s,mb5.2
KTH *e*pP pP 17 47 55.0 -2.6
KTH *e*PP PP 17 50 32.5 +1.6
TRF Thorofare Moun 82.59 23 *eP* **P 17 47 19.6 -1.3**
comp=Z,20nm,0.5s,mb5.1
AML Almayashu 82.67 314 P **P 17 47 22.5 +0.8**
SNR=7.8
AML Almayashu 82.67 314 *eP* **P 17 47 22.1 +0.4**
comp=Z,25nm,1.0s,mb4.9
AML *e*pP pP 17 48 00.4 +0.8
EKS2 Erkin-Say 82.74 314 P **P 17 47 22.4 +0.3**
SNR=5.0
EKS2 Erkin-Say 82.74 314 *eP* **P 17 47 21.4 -0.7**
comp=Z,17nm,1.1s,mb4.7
EKS2 *e*pP pP 17 47 59.9 -0.1
MAW Mawson 83.20 203 *eP* **P 17 47 23.7 -0.3**
comp=Z,6.7nm,0.6s,mb4.5
MAW Mawson 83.20 203 P **P 17 47 23.7 -0.3**
comp=Z,9.3nm,0.7s,mb4.7,baz=91,slow=5.7,SNR=24
MAW Mawson 83.20 203 *eP* **P 17 47 23.3 -0.7**
MAW *e**PP pP 17 47 59.1 -2.8
MAW pmax pmax
comp=Z,3.0nm,1.0s
MAW Mawson 83.20 203 *eP* **P 17 47 23.3 -0.7**
comp=Z,2.8nm,1.0s,mb4.0
MAW *e*pP pP 17 47 59.1 -2.8
MCK McKinley 83.26 23 *eP* **P 17 47 23.2 -1.1**
MCK *e**PP pP 17 48 00.8 -1.4
MCK pmax pmax
comp=Z,139nm,1.0s,mb5.6
MCK McKinley 83.26 23 *eP* **P 17 47 23.2 -1.1**
comp=Z,139nm,1.0s,mb5.6
MCK *e*pP pP 17 48 00.8 -1.4
DIV Divide 83.45 26 *eP* **P 17 47 25.4 +0.1**
comp=Z,79nm,1.0s,mb5.4
BMRM Bremner River 83.90 27 *eP* **P 17 47 27.2 -0.4**
comp=Z,56nm,1.1s,mb5.2
COLA College 84.19 23 *eP* **P 17 47 27.6 -1.4**
COLA pmax pmax
comp=Z,77nm,1.0s,mb5.4
COLA College 84.19 23 *eP* **P 17 47 27.6 -1.4**
comp=Z,77nm,1.0s,mb5.4
COLD Coldfoot 84.44 20 *eP* **P 17 47 30.5 +0.3**
comp=Z,64nm,1.1s,mb5.3
COLD *e*PP PP 17 50 44.7 -2.9
KBL Kabul 84.62 305 *eP* **P 17 47 30.8 -1.0**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
KBL Kabul 84.62 305 *eP* **P 17 47 30.8 -1.1**
comp=Z,3.9nm,0.5s,mb4.4
MENT Mentasta 85.06 25 *eP* **P 17 47 33.8 +0.4**
PNL Peninsula 85.87 29 *eP* **P 17 47 38.1 +0.7**
comp=Z,70nm,1.3s,mb5.2
EGAK Eagle 86.78 24 *eP* **P 17 47 41.3 -0.5**
comp=Z,121nm,1.1s,mb5.6
EGAK *e*pP pP 17 48 23.0 +2.9
DAWY Dawson 87.27 25 *eP* **P 17 47 44.3 +0.1**
DAWY *e*pP pP 17 48 22.4 0.0
DAWY *e*PP PP 17 51 08.3 -2.1
BVAR Borovoye Array 87.42 324 P **P 17 47 43.5 -1.6**
comp=Z,1.2nm,0.5s,mb4.0,baz=105,slow=7.0,SNR=8.9
BVAR pP pP 17 48 21.1 -2.3
comp=Z,12nm,0.9s,baz=104,slow=6.3,SNR=9.4
BRVK Borovoye 87.49 324 *eP* **P 17 47 42.2 -3.3**
BRVK *e**PP pP 17 48 19.1 -4.6
SKAG Skagway 87.79 30 *eP* **P 17 47 47.1 +0.4**
comp=Z,111nm,1.3s,mb5.5
DLBC Dease Lake 90.25 31 P **P 17 47 59.1 +0.8**
comp=Z,11nm,1.0s,mb4.7,baz=287,slow=3.7,SNR=8.8
INK Inuvik 90.73 21 P **P 17 48 00.4 +0.1**
comp=Z,53nm,1.0s,mb5.5,baz=251,slow=4.6,SNR=63
YBH Yreka Blue Hor 92.73 49 P **P 17 48 10.2 0.0**
comp=Z,10nm,0.9s,mb4.9,baz=246,slow=2.0,SNR=18
K05A Summer Lake 94.15 48 ⇓P **P 17 48 16.8 +0.1**
baz=94
SMMC Simmler 94.36 55 ⇓P **P 17 48 18.5 +0.6**
baz=94
BEKR Beckwourth 94.36 51 ⇑P **P 17 48 17.6 -0.2**
baz=94
PKM Peak Mountain 94.48 56 ⇑P **P 17 48 19.1 +0.7**
baz=94,SNR=7.5
BSC Santa Cruz Isl 94.57 56 ⇑P **P 17 48 19.1 +0.2**
baz=95
SNCC San Nicolas Is 94.61 57 ⇑P **P 17 48 19.6 +0.5**
baz=95
WCN Washoe City 94.80 51 ⇓P **P 17 48 20.0 +0.3**
baz=95
A07A Ashnola River, 94.88 41 ⇓P **P 17 48 19.8 -0.1**
baz=95
C07A Waterville 95.02 43 ⇑P **P 17 48 20.8 +0.2**
baz=95
I07A Izee 95.24 46 ⇓P **P 17 48 21.9 +0.2**
baz=95
B08A Colville Reser 95.54 42 ⇑P **P 17 48 22.4 -0.5**
baz=96
CIS Catalina Islan 95.56 57 ⇑P **P 17 48 23.5 +0.1**
baz=96
ISA Isabella 95.62 55 ⇓P **P 17 48 23.4 -0.2**
baz=96,SNR=6.4
ISA Isabella 95.62 55 *eP* **P 17 48 22.3 -1.3**
ISA pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
ISA Isabella 95.62 55 *eP* **P 17 48 22.3 -1.3**
comp=Z,7.0nm,1.0s,mb5.0
E08A Dider Farm, El 95.65 44 ⇓P **P 17 48 23.6 +0.1**
baz=96
G08A Pilot Rock 95.68 45 ⇓P **P 17 48 23.5 -0.1**
baz=96
H08A Prairie City 95.85 46 ⇑P **P 17 48 24.2 -0.2**
baz=96
NVAR Mina Array Bea 95.88 52 P **P 17 48 24.8 0.0**
comp=Z,2.9nm,0.7s,mb4.7,baz=261,slow=6.3,SNR=23
NVAR PP PP 17 52 17.4 -1.5
comp=Z,2.2nm,1.1s,baz=258,slow=7.4,SNR=5.2
NVAR Mina Array Bea 95.88 52 P **P 17 48 24.8 0.0**
NVAR PP PP 17 52 17.4 -1.5
MWC Mount Wilson 95.89 56 *eP* **P 17 48 24.7 -0.2**
MWC pmax pmax
comp=Z,24nm,1.1s,mb5.4
MWC Mount Wilson 95.89 56 *eP* **P 17 48 24.7 -0.2**
comp=Z,24nm,1.1s,mb5.5
J08A Circle Bar Ran 95.95 47 ⇑P **P 17 48 24.6 -0.3**
baz=96
EDW2 Edwards Air Fo 95.98 56 ⇓P **P 17 48 25.2 -0.1**
baz=96,SNR=6.0
A09A Danville 96.06 41 ⇑P **P 17 48 25.3 0.0**
baz=96
BFSC Mount Baldy St 96.22 56 ⇓P **P 17 48 26.8 +0.4**
baz=96
C09A Chrisman Ranch 96.23 43 ⇑P **P 17 48 25.4 -0.7**
baz=96
LRMC Laurel Mountai 96.25 55 ⇑P **P 17 48 26.8 +0.3**
baz=96
E09A Wood Farm, Sta 96.29 44 ⇓P **P 17 48 26.3 -0.1**
baz=96
B09A Rice 96.33 42 ⇓P **P 17 48 26.3 -0.2**
baz=96
MPMC Manual Prospec 96.44 54 ⇑P **P 17 48 27.2 -0.1**
baz=96,SNR=12
J09A Fry Pan Ranch, 96.48 47 ⇑P **P 17 48 27.1 -0.2**
baz=96
I09A Lost Marbles R 96.50 46 ⇑P **P 17 48 27.2 -0.2**
baz=96
G09A Cove 96.51 45 ⇓P **P 17 48 27.3 -0.1**
baz=96
GRAC Grapevine Rang 96.57 54 ⇓P **P 17 48 27.7 -0.2**
baz=97
MURC Murrieta 96.57 57 ⇓P **P 17 48 28.3 +0.4**
baz=97
D10A Wagner Farm, O 96.89 43 ⇓P **P 17 48 28.5 -0.6**
baz=97
F10A Beach Ranch, E 96.91 44 ⇑P **P 17 48 28.4 -0.8**
baz=97
FURC Furnace Creek, 96.96 54 ⇓P **P 17 48 29.8 +0.1**
baz=97
GSC Goldstone 96.96 55 ⇓P **P 17 48 30.2 +0.5**
baz=97
G10A Bishop Farm, J 96.97 45 ⇓P **P 17 48 28.9 -0.6**
baz=97
K10A MacKenzie Ranc 97.11 48 ⇓P **P 17 48 30.1 0.0**
baz=97
PFO Pinyon Flat Ob 97.19 57 ⇓P **P 17 48 31.1 +0.3**
baz=97
MONP Monument Peak 97.20 58 ⇓P **P 17 48 31.4 +0.5**
baz=97
S10A Tonopah Range, 97.21 53 ⇑P **P 17 48 30.9 +0.2**
baz=97,SNR=7.0
H10A Noah's Angus R 97.23 46 ⇓P **P 17 48 29.7 -0.9**
baz=97
HEC Hector,Ludlow 97.34 56 ⇑P **P 17 48 31.5 +0.1**
baz=97
L10A Juniper Basin 97.39 48 ⇑P **P 17 48 31.3 -0.1**
baz=97
A11A Hall Mountain, 97.52 41 ⇑P **P 17 48 32.2 +0.3**
baz=98,SNR=8.1
D11A Klaveano Farm, 97.54 43 ⇑P **P 17 48 31.8 -0.2**
baz=98
G11A Walters Elk Ra 97.58 45 ⇓P **P 17 48 31.7 -0.6**
baz=98
E11A Bogner Ranch, 97.62 44 ⇑P **P 17 48 31.7 -0.7**
baz=98
K11A Parker Ranch, 97.73 48 ⇓P **P 17 48 33.0 0.0**
baz=98
I11A Placerville 97.79 47 ⇓P **P 17 48 33.1 -0.1**
baz=98
MFID Camas Ranch 97.88 47 ⇓P **P 17 48 33.7 +0.1**
baz=98
GMRC Granite Mounta 97.89 56 ⇓P **P 17 48 34.5 +0.7**
baz=98
M11A Holland Ranch, 97.89 49 ⇓P **P 17 48 32.8 -1.0**
baz=98
L11A Cat Creek Ranc 97.93 48 ⇑P **P 17 48 34.0 +0.1**
baz=98
Q11A Duckwater 97.97 52 ⇓P **P 17 48 34.3 +0.1**
baz=98
O11A Cowboy Ranch, 97.98 50 ⇓P **P 17 48 34.3 +0.1**
baz=98
R11A Troy Canyon, C 98.02 52 ⇓P **P 17 48 34.4 0.0**
baz=98
YKA Yellowknife Ar 98.11 28 P **P 17 48 33.6 -0.6**
comp=Z,15nm,1.1s,mb5.3,baz=276,slow=4.7,SNR=49
YKA pP pP 17 49 11.8 -0.9
comp=Z,3.4nm,1.0s,baz=276,slow=4.7,SNR=3.5
YKA PP PP 17 52 25.0 -10
comp=Z,0.4nm,0.7s,baz=285,slow=7.9,SNR=3.8
YKA PKKPbc PKKPbc 18 05 04.9 -4.3
comp=Z,2.0nm,0.6s,baz=87,slow=2.8,SNR=25
YKA Yellowknife Ar 98.11 28 P **P 17 48 33.6 -0.6**
YKA *PP pP 17 49 11.8 -0.9
YKA Yellowknife Ar 98.11 28 P **P 17 48 33.6 -0.6**
YKA pP pP 17 49 11.8 -0.9
YKA PP PP 17 52 25.0 -10
YKA PKKPbc PKKPbc 18 05 04.9 -4.3
F12A Elk City 98.29 45 ⇓P **P 17 48 34.5 -0.9**
baz=98
T11A Corn Creek, Al 98.29 53 ⇑P **P 17 48 35.8 +0.1**
baz=98
J12A Stokes Ranch, 98.42 47 ⇑P **P 17 48 35.8 -0.2**
baz=98,SNR=8.6
N12A Clover Valley, 98.46 50 ⇓P **P 17 48 36.1 -0.2**
baz=98,SNR=5.9
L12A House Creek Ra 98.48 48 ⇑P **P 17 48 36.1 -0.2**
baz=98
M12A Wells 98.55 49 ⇓P **P 17 48 36.4 -0.3**
baz=99
P12A McGill 98.56 51 ⇑P **P 17 48 37.0 +0.3**
baz=99
V12A Nelson 98.57 55 ⇓P **P 17 48 37.5 +0.6**
baz=99
BSMT Bassoo Peak 98.58 43 *eP* **P 17 48 35.9 -0.7**
comp=Z,1.5nm,0.6s,mb4.6
H12A Diamond D Ranc 98.58 46 ⇓P **P 17 48 36.2 -0.5**
baz=99
S12A Delamar Landin 98.59 53 ⇓P **P 17 48 37.4 +0.5**
baz=99
O12A Currie 98.68 50 ⇑P **P 17 48 37.4 +0.1**
baz=99
C13A Hot Springs 98.73 43 ⇑P **P 17 48 37.3 0.0**
baz=99
B13A Whitefish 98.78 42 ⇓P **P 17 48 37.3 -0.2**
baz=99,SNR=5.3
D13A Huson 98.82 43 ⇑P **P 17 48 37.1 -0.6**
baz=99
HLID Hailey 98.91 47 ⇓P **P 17 48 37.9 -0.4**
baz=99
F13A Darby 98.93 45 ⇑P **P 17 48 37.3 -1.0**
baz=99,SNR=8.2
H13A Challis 99.01 46 ⇑P **P 17 48 38.5 -0.1**
baz=99,SNR=9.4
G13A Cobalt 99.02 45 ⇓P **P 17 48 38.5 -0.1**
baz=99
E13A Victor 99.02 44 ⇑P **P 17 48 38.4 -0.3**
baz=99
J13A Cove Ranch, Pi 99.09 47 ⇓P **P 17 48 38.8 -0.2**
baz=99
I13A Wildhorse Cree 99.12 47 ⇑P **P 17 48 39.3 +0.1**
baz=99,SNR=7.5
Q13A Wheeler Ranch, 99.25 52 ⇑P Pdif 17 48 40.2 +0.7
baz=99
P13A Bates Ranch, G 99.25 51 ⇑P Pdif 17 48 39.9 +0.4
baz=99
V13A Grand Canyon W 99.27 55 ⇓P Pdif 17 48 40.6 +0.9
baz=99
L13A Double Diamond 99.28 48 ⇑P Pdif 17 48 40.2 +0.6
baz=99
U13A Pakoon Wash 99.29 54 ⇑P Pdif 17 48 40.7 +1.0
baz=99
T13A Saint George 99.34 54 ⇑P Pdif 17 48 40.1 +0.2
baz=99
W13A Hualapai Mount 99.35 55 ⇓P Pdif 17 48 40.9 +0.9
baz=99
S13A Holt Ranch, En 99.38 53 ⇓P Pdif 17 48 41.0 +0.9

baz=99
X13A Yucca 99.39 56 ⇑P Pdif 17 48 40.8 +0.7
baz=99
A14A Double T Ranch 99.46 41 ⇑P Pdif 17 48 40.7 +0.2
baz=100
Z13A Yuma Proving G 99.53 57 ⇓P Pdif 17 48 41.8 +1.1
baz=100
CHMT Chamberlain Mo 99.65 44 *e*P Pdif 17 48 40.5 -0.8
comp=Z,3.4nm,1.3s
M14A Sheep Mountain 99.73 49 ⇑P Pdif 17 48 41.7 0.0
baz=100,SNR=8.2
L14A Malta 99.80 48 ⇓P Pdif 17 48 42.1 +0.1
baz=100
Q14A Sevier Lake (B 99.83 52 ⇑P Pdif 17 48 42.6 +0.5
baz=100
K14A Jones Ranch, D 99.84 48 ⇓P Pdif 17 48 42.4 +0.3
baz=100
N14A Grayback Hills 99.86 50 ⇓P Pdif 17 48 42.7 +0.4
baz=100
A15A Johnson Ranch, 99.91 41 ⇓P Pdif 17 48 42.2 -0.2
baz=100,SNR=5.8
U14A Mt Trumbull 99.92 54 ⇑P Pdif 17 48 43.5 +1.0
baz=100
P14A Drum Mountains 99.98 51 ⇓P Pdif 17 48 43.3 +0.5
baz=100
V14A Boquillas Ranc 99.99 55 ⇓P Pdif 17 48 43.4 +0.6
baz=100
T14A Hurricane 100.00 53 ⇓P Pdif 17 48 44.2 +1.3
baz=100
MCMT McKenzie Canyo 100.01 46 *e*Pdif Pdif 17 48 42.7 -0.2
comp=Z,1.1nm,0.8s
C15A Salmond Ranch, 100.05 43 ⇑P Pdif 17 48 42.7 -0.3
baz=100,SNR=6.8
B15A Bradely Ranch, 100.06 42 ⇑P Pdif 17 48 43.0 -0.1
baz=100
E15A Deer Lodge 100.09 44 ⇓P Pdif 17 48 43.2 -0.1
baz=100
D15A Lincoln 100.15 43 ⇑P Pdif 17 48 43.8 +0.3
baz=100
H15A Lima 100.16 46 ⇓P Pdif 17 48 44.1 +0.5
baz=100
F15A Butte 100.22 45 ⇑P Pdif 17 48 43.8 -0.1
baz=100
214A Organ Pipe Nat 100.23 59 ⇓P Pdif 17 48 44.2 +0.3
baz=100
G15A Dillon 100.25 45 ⇑P Pdif 17 48 44.3 +0.3
baz=100
K15A Arbon 100.31 48 ⇑P Pdif 17 48 44.8 +0.6
baz=100
J15A Blackfoot 100.36 47 ⇓P Pdif 17 48 45.1 +0.7
baz=100
M15A Larsen Ranch, 100.41 49 ⇑P Pdif 17 48 44.8 +0.1
baz=100
L15A Malad City 100.44 48 ⇓P Pdif 17 48 44.7 -0.1
baz=100
T15A Red Dirt Ranch 100.56 54 ⇓P Pdif 17 48 46.1 +0.8
baz=101
C16A Fuhringer Ranc 100.63 43 ⇑P Pdif 17 48 45.7 0.0
baz=101
U15A North Rim 100.64 54 ⇓P Pdif 17 48 46.1 +0.4
baz=101
A16A West Butte Ran 100.66 41 ⇑P Pdif 17 48 45.8 0.0
baz=101
X15A Humboldt 100.71 56 ⇑P Pdif 17 48 46.4 +0.4
baz=101
115A Sonoran Desert 100.73 58 ⇓P Pdif 17 48 46.2 +0.1
baz=101
V15A Kaibab Nationa 100.75 55 ⇑P Pdif 17 48 46.3 +0.2
baz=101
E16A East Helena 100.75 44 ⇑P Pdif 17 48 46.2 0.0
baz=101
BOZ Bozeman (W) 100.83 45 ⇑P Pdif 17 48 46.9 +0.3
baz=101
J16A Bone 100.96 47 ⇑P Pdif 17 48 47.7 +0.5
baz=101
K16A Soda Springs 101.00 48 ⇑P Pdif 17 48 47.8 +0.6
baz=101
L16A Fish Haven 101.15 48 ⇓P Pdif 17 48 48.3 +0.3
baz=101
H16A Russell Place, 101.15 46 ⇑P Pdif 17 48 47.7 -0.3
baz=101
B17A L&G Farms, Che 101.23 42 ⇓P Pdif 17 48 48.2 -0.1
baz=101
R16A Teasdale 101.24 52 ⇑P Pdif 17 48 49.2 +0.8
baz=101
C17A Wharram Farm, 101.31 43 ⇑P Pdif 17 48 48.3 -0.4
baz=101
Y16A Circle Bar Ran 101.34 57 ⇓P Pdif 17 48 49.6 +0.8
baz=101
D17A Six Diamond Ra 101.39 43 ⇓P Pdif 17 48 48.9 -0.1
baz=101,SNR=6.7
M17A Scullys Gap (B 101.75 49 ⇓P Pdif 17 48 50.4 -0.3
baz=102
O17A Robinson Place 101.75 50 ⇓P Pdif 17 48 50.3 -0.4
baz=102
T17A Navajo Res., N 101.82 54 ⇓P Pdif 17 48 51.1 +0.1
baz=102
R17A Hanksville Air 101.85 52 ⇑P Pdif 17 48 51.5 +0.4
baz=102
VNA2 Neumayer--Watz 101.94 188 *e*Pdiff Pdif 17 48 49.5 -2.0
VNA2 *e* 17 53 11.7
VNA2 *e* 18 04 53.2
E18A Harlowton 101.96 44 ⇓P Pdif 17 48 51.7 +0.1
baz=102
J18A Kendall Valley 102.12 47 ⇓P Pdif 17 48 52.6 +0.3
baz=102
K18A Toltan Ranch, 102.14 48 ⇓P Pdif 17 48 52.9 +0.5
baz=102
L18A Fontenelle, Gr 102.19 48 ⇓P Pdif 17 48 53.3 +0.7
baz=102
I18A Diamond G Ranc 102.24 47 ⇓P Pdif 17 48 53.2 +0.4
baz=102
Q18A Rafter H Ranch 102.27 51 ⇑P Pdif 17 48 53.5 +0.5
baz=102
S18A Hurst Farm, Bl 102.44 53 ⇓P Pdif 17 48 53.8 +0.1
baz=102
R18A Canyonlands Na 102.49 52 ⇓P Pdif 17 48 54.1 +0.2
baz=102
BW06 Boulder Array 102.49 48 ⇑P Pdif 17 48 53.7 -0.2
baz=102
PDAR Pinedale Array 102.49 48 P Pdif 17 48 53.4 -0.6
comp=Z,2.8nm,0.9s,baz=273,slow=2.0,SNR=22
PDAR PP PP 17 53 11.2 +2.2
comp=Z,0.6nm,0.6s,baz=268,slow=4.2,SNR=4.2
N18A Larsen Ranch, 102.52 49 ⇓P Pdif 17 48 53.9 -0.1
baz=102
V18A Ganado 102.57 55 ⇓P Pdif 17 48 54.8 +0.6
baz=103
L19A Farson 102.69 48 ⇓P Pdif 17 48 54.7 -0.1
baz=103
O19A Miners Draw (B 102.98 50 ⇑P Pdif 17 48 56.3 +0.2
baz=103
K19A Absolon Red Bu 103.01 47 ⇓P Pdif 17 48 56.0 -0.2
baz=103
S19A Harvey Farm, M 103.12 53 ⇓P Pdif 17 48 56.9 +0.2
baz=103
K20A Yellowstone Ra 103.39 48 ⇓P Pdif 17 48 57.6 -0.4
baz=103
N20A Spence Gulch, 103.60 49 ⇓P Pdif 17 48 59.0 +0.1
baz=104
M20A Sweetwater, Wa 103.60 49 ⇓P Pdif 17 48 59.1 +0.2
baz=104
Q20A Ridgley Place, 103.71 51 ⇓P Pdif 17 48 59.9 +0.6
baz=104
V20A Brimhall 103.76 55 ⇑P Pdif 17 49 00.8 +1.2
baz=104
Z20A Nine Sixteen R 103.78 57 ⇓P Pdif 17 49 00.5 +0.8
baz=104
N21A Black Mountain 104.17 50 ⇑P Pdif 17 49 01.8 +0.5
baz=104
L21A Rawlins 104.17 48 ⇓P Pdif 17 49 01.6 +0.1
baz=104
M21A Separation Pea 104.21 49 ⇓P Pdif 17 49 01.6 0.0
baz=104
Q21A Lamborn Mesa, 104.28 51 ⇑P Pdif 17 49 02.7 +0.9
baz=104
R21A Cimarron 104.33 52 ⇓P Pdif 17 49 02.2 +0.1
baz=104
ARCES ARCESS Array B 106.41 342 Pdiff Pdif 17 49 09.9 -1.4
comp=Z,3.9nm,0.8s,baz=354,slow=8.5,SNR=4.9
ARCES PKKPbc PKKPbc 18 04 40.6 -4.4
comp=Z,1.3nm,0.5s,baz=251,slow=2.9,SNR=9.7
TXAR Lajitas Array 108.19 61 PKiKP PKiKP 17 53 25.9 +0.1
comp=Z,1.0nm,0.9s,baz=339,slow=3.1,SNR=4.5
TXAR PP PP 17 53 50.9 -0.6
comp=Z,2.2nm,0.9s,baz=263,slow=7.1,SNR=9.6
FINES FINESS Array B 110.04 334 PKKPbc PKKPbc 18 04 28.5 -4.8
comp=Z,3.0nm,0.8s,baz=158,slow=2.1,SNR=6.2

AKASG Malin Array Be 112.69 323 PKKPbc PKKPbc 18 04 21.0 -3.2
comp=Z,2.6nm,0.5s,baz=262,slow=4.2,SNR=10
BRTR Keskin Array B 112.71 311 PKKPbc PKKPbc 18 04 20.6 -3.2
comp=Z,1.3nm,0.8s,baz=221,slow=4.2,SNR=7.7
NB2 NORSAR Subarra116.21 338 PKPdf PKPdf 17 53 39.7 -0.4
comp=Z,1.9nm,1.0s,baz=44,slow=1.9
NOA NORSAR Array B116.21 338 PKP PKPdf 17 53 38.4 -1.6
comp=Z,1.2nm,0.8s,baz=320,slow=2.5,SNR=4.4
NOA PKKPbc PKKPbc 18 04 08.7 -3.8
comp=Z,2.8nm,0.8s,baz=52,slow=3.6,SNR=9.7
KOLS Kolonicke sedl 117.53 323 *e*PKIKP PKPdf 17 53 43.2 +0.2
KOLS Kolonicke sedl 117.53 323 *e*PKP PKPdf 17 53 43.2 +0.2
KOLS *e* 18 04 14.0
STHS Stebnicka Huta 117.92 324 *e*PKIKP PKPdf 17 53 44.2 +0.5
STHS Stebnicka Huta 117.92 324 *e*PKP PKPdf 17 53 44.2 +0.5
KECS Kecovo 118.79 323 *e*PKIKP PKPdf 17 53 45.5 +0.1
KECS Kecovo 118.79 323 *e*PKP PKPdf 17 53 45.5 +0.1
KECS *e* 18 04 05.5
VYHS Vyhne 119.75 324 *e*PKIKP PKPdf 17 53 45.8 -1.5
VYHS Vyhne 119.75 324 *e*PKP PKPdf 17 53 45.8 -1.5
VYHS *e* 18 03 57.7
BRG Berggiesshubel 121.24 328 *e*PKPdf PKPdf 17 53 49.4 -0.7
BRG Berggiesshubel 121.24 328 *i* PKP PKPdf 17 53 49.3 -0.7
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 121.24 328 *i* PKIKP PKPdf 17 53 49.3 -0.8
BRG pmax pmax
comp=Z,4.0nm,1.0s
APG El Apazote 121.29 76 PKP PKPdf 17 53 50.3 -0.8
comp=Z,4.7nm,0.8s,baz=315,slow=7.6,SNR=6.9
CLL Collm 121.48 329 *e*PKPdf PKPdf 17 53 49.7 -0.8
CLL *e*PKKP PKKPbc 18 03 51.7 -1.4
CLL Collm 121.48 329 *i* PKIKP PKPdf 17 53 49.7 -0.8
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 121.48 329 *i* PKP PKPdf 17 53 49.7 -0.8
CLL *e* 17 54 40.0
CLL Collm 121.48 329 *i* PKPdf PKPdf 17 53 49.7 -0.8
comp=Z,4.0nm,0.8s
CLL *e* 17 54 40.0
CLL *e*PP PP 17 55 28.0 +4.2
PLCA Paso Flores 121.54 146 PKP PKPdf 17 53 50.4 -0.6
comp=Z,8.5nm,0.7s,baz=237,slow=3.3,SNR=20
NRDL Niedersach Rie 122.20 331 *e*PKPdf PKPdf 17 53 51.5 -0.3
TANN Tannenbergstha 122.28 328 *e*PKPdf PKPdf 17 53 51.4 -0.7
TANN *e*PKKP PKKPbc 18 03 48.3 -1.8
KHC Kasperske Hory 122.41 327 *e*PKPDF PKPdf 17 53 51.6 -0.7
KHC *e*pPKP pPKPdf 17 54 32.7 +0.2
KHC *es*PKP 17 54 44.8
CLZ Clausthal 122.48 331 *e*PKPdf PKPdf 17 53 51.9 -0.5
CLZ *e*PKKP PKKPbc 18 03 48.0 -1.4
GEC2 GERESS Array S 122.50 326 *e*PKPdf PKPdf 17 53 51.3 -1.2
GEC2 *e*PKKP PKKPbc 18 03 47.2 -2.0
GERES GERESS Array B 122.50 326 PKP PKPdf 17 53 50.6 -1.9
comp=Z,1.1nm,0.5s,baz=48,slow=2.0,SNR=18
GERES PKKPbc PKKPbc 18 03 47.3 -1.9
comp=Z,2.1nm,0.7s,baz=213,slow=3.1,SNR=19
GERES PKKP PKKPdf 18 04 23.1 -2.2
comp=Z,0.3nm,0.6s,baz=200,slow=2.7,SNR=3.6
WET Wettzell 122.78 327 *e*PKPdf PKPdf 17 53 52.1 -1.0
WET *e*PKKP PKKPbc 18 03 46.1 -2.0
ROTZ Rotzenmuhle 122.79 328 *e*PKKP PKKPbc 18 03 46.8 -1.3
SCHQ Schefferville 123.28 24 PKP PKPdf 17 53 51.9 -1.9
comp=Z,1.5nm,0.6s,baz=52,slow=9.7,SNR=4.3
SCHQ PKKPbc PKKPbc 18 03 43.7 -2.7
comp=Z,2.0nm,0.6s,baz=155,slow=4.0,SNR=5.1
SCHQ Schefferville 123.28 24 PKP PKPdf 17 53 51.9 -1.9
SCHQ PKKPbc PKKPbc 18 03 43.7 -2.7
GRA1 Grafenberg Arr 123.35 328 *e*PKPdf PKPdf 17 53 53.2 -0.9
GRF Grafenberg Arr 123.35 328 *e*PKPdf PKPdf 17 53 53.2 -0.9
IBBN Ibbenburen 123.42 332 *e*PKPdf PKPdf 17 53 52.9 -1.3
RJOB Jochberg 123.62 326 *e*PKPdf PKPdf 17 53 54.0 -0.7
RJOB *e*PKKP PKKPbc 18 03 43.3 -1.5
TNS Taunus Mts 124.44 330 *e*PKPdf PKPdf 17 53 55.0 -1.2
TNS *e*PKKP PKKPbc 18 03 40.0 -1.6
BFO Black Forest 125.69 328 *e*PKPdf PKPdf 17 53 56.8 -1.9
WLF Walferdange 125.93 331 *e*PKPdf PKPdf 17 53 58.9 -0.2
WLF *e*PKKP 18 03 34.3
GIVF Givet 126.27 332 *e*PKIKP PKPdf 17 53 59.2 -0.5
BAIF Baives 126.59 332 *e*PKIKP PKPdf 17 53 59.9 -0.4
comp=Z,7.2nm,0.9s
HINF Hinteralfeld 126.78 329 *e*PKIKP PKPdf 17 53 59.8 -1.0
comp=Z,12nm,0.9s
JTS JuntasAbangare 126.81 81 PKP PKPdf 17 54 01.9 +0.2
comp=Z,18nm,1.0s,baz=288,slow=5.0,SNR=7.6
HAU Haudompre 126.92 329 *e*PKIKP PKPdf 17 54 00.2 -0.8
comp=Z,14nm,0.9s
CABF La Chapelle 127.96 328 *e*PKIKP PKPdf 17 54 02.8 -0.3
comp=Z,29nm,1.2s
LPL La Plagne 128.30 326 *e*PKIKP PKPdf 17 54 03.5 -0.2
LPG La Plagne 128.30 326 *e*PKIKP PKPdf 17 54 03.4 -0.3
comp=Z,5.2nm,0.8s
CFAA Coronel Fontan 128.96 139 PKP PKPdf 17 54 05.0 -0.4
comp=Z,2.3nm,0.7s,baz=240,slow=2.7,SNR=31
CFAA SKPbc 17 57 13.4
comp=Z,0.8nm,0.8s,baz=262,slow=3.7,SNR=4.1
SSF Saint Saulge 128.99 330 *e*PKIKP PKPdf 17 54 04.6 -0.4
comp=Z,9.3nm,1.1s
SMF Signal de Mont 129.10 329 *e*PKIKP PKPdf 17 54 04.6 -0.6
comp=Z,13nm,1.0s
AVF Avril sur Loir 129.25 330 *e*PKIKP PKPdf 17 54 04.6 -0.9
LDF La Druitiere 129.62 333 *e*PKIKP PKPdf 17 54 05.1 -1.0
FLN La Foliniere 129.65 334 *e*PKIKP PKPdf 17 54 05.7 -0.5
GRR Gorron 130.10 334 *e*PKIKP PKPdf 17 54 06.7 -0.4
comp=Z,7.3nm,0.7s
SGMF Saint Gilles 130.93 335 *e*PKIKP PKPdf 17 54 08.3 -0.4
MFF Saint Martin d 131.09 332 *e*PKIKP PKPdf 17 54 08.2 -0.8
ROSF Rostrenen 131.17 335 *e*PKIKP PKPdf 17 54 08.6 -0.5
comp=Z,4.2nm,0.6s
ATAH Atahualpa 131.45 104 PKP PKPdf 17 54 12.6 +1.9
comp=Z,26nm,0.9s,baz=315,slow=1.7,SNR=13
ATAH SKPbc SKPbc 17 57 25.2 +3.2
comp=Z,7.5nm,0.6s,baz=342,slow=0.9,SNR=9.1
NNA Nana 131.53 111 PKP PKPdf 17 54 10.6 -0.2
comp=Z,20nm,0.9s,baz=303,slow=4.8,SNR=6.5
NNA SKPbc SKPbc 17 57 23.6 +1.3
comp=Z,3.5nm,0.4s,baz=304,slow=2.7,SNR=3.7
ETSF Etsaut 133.96 328 *e*PKIKP PKPdf 17 54 15.4 +0.9
comp=Z,14nm,1.0s
LPAZ La Paz 137.63 122 PKhKP 17 54 13.2
comp=Z,2.6nm,0.6s,baz=249,slow=3.5,SNR=13
LPAZ PKP PKPdf 17 54 22.9 +0.8
comp=Z,16nm,0.7s,baz=290,slow=0.8,SNR=20
LPAZ SKPbc SKPbc 17 57 44.0 +2.2
comp=Z,17nm,1.0s,baz=303,slow=1.2,SNR=19
LPAZ La Paz 137.63 122 PKHKP 17 54 13.2
LPAZ 17 54 22.9
CPUP Villa Florida 139.48 143 PKhKP 17 54 16.4
comp=Z,2.9nm,0.5s,baz=226,slow=3.4,SNR=16
SDV Santo Domingo 140.96 83 PKhKP 17 54 20.5
comp=Z,23nm,0.9s,baz=288,slow=1.4,SNR=13
SIV San Ignacio 143.61 127 PKhKP 17 54 29.0
comp=Z,33nm,0.8s,baz=240,slow=4.3,SNR=88
TORD Torodi Ar. Bea 146.54 285 PKPbc PKPbc 17 54 38.0 -1.7
comp=Z,3.3nm,0.4s,baz=48,slow=3.1,SNR=49
TORD Torodi Ar. Bea 146.54 285 PKPbc PKPbc 17 54 38.0 -1.7
PCRV Puerto La Cruz 146.78 80 PKPbc PKPbc 17 54 38.9 -1.5
comp=Z,34nm,0.6s,baz=191,slow=1.8,SNR=15
LZG Guadaloupe-1 148.44 68 *e*P PKPbc 17 54 44.9 +0.1
PHG Guadaloupe-2 148.60 68 *e*P PKPbc 17 54 45.5 +0.4
TBG Guadaloupe-3 148.64 69 *e*P PKPbc 17 54 45.6 +0.3
CAM4 Nova Friburgo 150.11 159 ⇓*i*P PKPbc 17 54 48.8 0.0
CAM4 *i* 17 54 50.7
CAM4 *i* 17 54 54.6
CAM4 *i* 17 54 56.9
CAM4 *i* 17 54 59.5
CAM4 *i* 17 55 04.4
CAM4 *i* 17 55 28.7

DJA 16 17:42:26.4°88S×102°85E, h39km, MLv3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.53**	**12**	P	Pn	17 42 37.0	-0.1
MNAI				S	Sn	17 42 45.2	+0.3
LWLI	**Liwa**	**1.21**	**97**	P	Pn	17 42 46.2	-0.3
KSI	**Kapahiang**	**1.25**	**348**	P	Pn	17 42 47.0	0.0
KSI				S	Sn	17 43 02.9	+0.4
MDSI	**Maura Dua**	**1.38**	**74**	P	Pn	17 42 49.2	+0.4
MDSI				S	Sn	17 43 06.6	+0.8
KASI	**Kota Agung**	**1.76**	**111**	P	Pn	17 42 53.9	-0.1

ISCJB ***16*** *17:51:32.1±0.5, 41°.83N±0°.02×2°.93E±0°.02, h3km±2km, Error ellipse: s-maj=3.9km s-min=2.5km az=149.4*
CSEM ***16*** *17:51:33.7±0.2, 41°.81N×2°.90E, h5km, ML2.7/22, Error ellipse: s-maj=3.2km s-min=2.2km az=146.0*
MDD ***16*** *17:51:35.7±0.4, 41°.81N×2°.85E, h8km±2km, mbLg2.4/36, Error ellipse: s-maj=3.5km s-min=2.2km az=147.0, PRIMO*
NEIC ***16*** *17:51:35.8, 41°.79N×2°.86E, h4km, ML2.7(LDG), ML2.9(STR), MN2.6(MDD), After MDD.*
LDG ***16*** *17:51:35.6±0.1, 41°.81N×2°.84E, h7km, Ml2.7/24, Error ellipse: s-maj=1.5km s-min=1.0km az=150.0*
STR ***16*** *17:51:36.3±0.2, 41°.86N×2°.81E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 16 17:51:34.2±0.4, 41°.83N±0°.02×2°.90E±0°.02, h9km±2km, n243, σ1.9±0.02/395, 3C, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCAS	**Cassa de la Se**	**0.05**	**8**	Pg	**Pg**	**17 51 37.7**	**+1.6**
CCAS				Lg		17 51 39.4	
1μm,0.1s							
CCAS	**Cassa de la Se**	**0.05**	**8**	Pg	**Pg**	**17 51 37.7**	**+1.6**
CCAS				Lg		17 51 39.4	
1μm,0.1s							
CBEU	**Beuda**	**0.45**	**339**	Pg	**Pg**	**17 51 44.5**	**+1.5**
CBEU				Lg		17 51 51.0	
165nm,0.2s							
CBEU	**Beuda**	**0.45**	**339**	Pg	**Pg**	**17 51 44.5**	**+1.5**
CBEU				Lg		17 51 51.0	
165nm,0.2s							
CPAL	**Palau Saverder**	**0.52**	**23**	Pg	**Pg**	**17 51 46.1**	**+1.9**
CPAL				Lg		17 51 53.8	
CPAL	**Palau Saverder**	**0.52**	**23**	Pg	**Pg**	**17 51 46.1**	**+1.9**
CPAL				Lg		17 51 53.8	
EJON	**La Jonquera**	**0.61**	**360**	⇑Pg	**Pg**	**17 51 47.7**	**+1.6**
EJON				Lg		17 51 57.0	
EJON	**La Jonquera**	**0.61**	**360**	⇑Pg	**Pg**	**17 51 47.7**	**+1.6**
8.2nm,0.1s,SNR=18							
EJON				Lg		17 51 57.0	
93nm,0.1s,SNR=35							
EJON	**La Jonquera**	**0.61**	**360**	⇑Pg	**Pg**	**17 51 47.7**	**+1.6**
8.2nm,0.1s,SNR=18							
EJON				Lg		17 51 57.0	
93nm,0.1s,SNR=35							
EJON	**La Jonquera**	**0.61**	**360**	Pg	**Pg**	**17 51 47.7**	**+1.6**
8.2nm,0.1s,SNR=18							
EJON				Lg		17 51 57.0	
93nm,0.1s,SNR=35							
CORI	**Orista**	**0.65**	**283**	Pg	**Pg**	**17 51 47.0**	**+0.3**
CORI				Lg		17 51 55.2	
130nm,0.2s							
CORI	**Orista**	**0.65**	**283**	Pg	**Pg**	**17 51 47.0**	**+0.3**
CORI				Lg		17 51 55.2	
130nm,0.2s							
SJAF	**Saint Jean de**	**0.65**	**359**	Pg	**Pg**	**17 51 48.3**	**+1.5**
SJAF				Sg	**Sg**	**17 51 57.1**	**+1.8**
SJAF	**Saint Jean de**	**0.65**	**359**	Pg	**Pg**	**17 51 48.2**	**+1.4**
SJAF				Sg	**Sg**	**17 51 57.5**	**+2.2**
SJAF	**Saint Jean de**	**0.65**	**359**	Pg	**Pg**	**17 51 48.4**	**+1.6**
SJAF				Lg		17 51 57.4	
SJAF	**Saint Jean de**	**0.65**	**359**	Pg	**Pg**	**17 51 48.4**	**+1.6**
SJAF				Lg		17 51 57.4	
SJAF	**Saint Jean de**	**0.65**	**359**	Pg	**Pg**	**17 51 48.2**	**+1.4**
SJAF				Sg	**Sg**	**17 51 57.1**	**+1.8**
CBRU	**Bruguera**	**0.70**	**311**	Pg	**Pg**	**17 51 48.4**	**+0.7**
CBRU				Lg		17 51 57.8	
16nm,0.1s							
CBRU	**Bruguera**	**0.70**	**311**	Pg	**Pg**	**17 51 48.4**	**+0.7**
CBRU				Lg		17 51 57.8	
16nm,0.1s							
FILF	**Fillols**	**0.77**	**341**	Pg	**Pg**	**17 51 50.6**	**+1.6**
FILF				Sg	**Sg**	**17 52 01.3**	**+2.3**
FILF	**Fillols**	**0.77**	**341**	Pg	**Pg**	**17 51 50.7**	**+1.7**
FILF				Sg	**Sg**	**17 52 01.8**	**+2.8**
FILF	**Fillols**	**0.77**	**341**	Pg	**Pg**	**17 51 50.6**	**+1.7**
FILF				Lg		17 52 01.6	
FILF	**Fillols**	**0.77**	**341**	Pg	**Pg**	**17 51 50.6**	**+1.7**
FILF				Lg		17 52 01.6	
FILF	**Fillols**	**0.77**	**341**	Pg	**Pg**	**17 51 50.6**	**+1.6**
FILF				Sg	**Sg**	**17 52 01.3**	**+2.3**
VALF	**Valcebollere**	**0.86**	**311**	Pg	**Pg**	**17 51 51.4**	**+0.6**
VALF				Sg	**Sg**	**17 52 02.5**	**+0.4**
VALF	**Valcebollere**	**0.86**	**311**	Pg	**Pg**	**17 51 51.4**	**+0.6**
VALF				Lg		17 52 03.2	
VALF	**Valcebollere**	**0.86**	**311**	Pg	**Pg**	**17 51 51.4**	**+0.6**
VALF				Lg		17 52 03.2	
VALF	**Valcebollere**	**0.86**	**311**	Pg	**Pg**	**17 51 51.4**	**+0.6**
VALF				Sg	**Sg**	**17 52 02.5**	**+0.4**
EMIR	**Miracle**	**1.03**	**275**	Pg	**Pg**	**17 51 54.2**	**+0.3**
EMIR				Lg		17 52 07.4	
EMIR	**Miracle**	**1.03**	**275**	Pg	**Pg**	**17 51 54.2**	**+0.4**
SNR=7.9							
EMIR				Lg		17 52 07.4	
80nm,0.1s,SNR=7.9							
EMIR	**Miracle**	**1.03**	**275**	Pg	**Pg**	**17 51 54.2**	**+0.4**
SNR=7.9							
EMIR				Lg		17 52 07.4	
80nm,0.1s,SNR=7.9							
EMIR	**Miracle**	**1.03**	**275**	Pg	**Pg**	**17 51 54.2**	**+0.3**
SNR=7.9							
EMIR				Lg		17 52 07.4	
80nm,0.1s,SNR=7.9							
CARF	**Carcanieres**	**1.06**	**327**	Pg	**Pg**	**17 51 55.3**	**+0.8**
CARF				Sg	**Sg**	**17 52 09.5**	**+1.2**
CARF	**Carcanieres**	**1.06**	**327**	Pg	**Pg**	**17 51 55.3**	**+0.8**
CARF				Lg		17 52 09.4	
CARF	**Carcanieres**	**1.06**	**327**	Pg	**Pg**	**17 51 55.3**	**+0.8**
CARF				Lg		17 52 09.4	
CARF	**Carcanieres**	**1.06**	**327**	Pg	**Pg**	**17 51 55.3**	**+0.8**
CARF				Sg	**Sg**	**17 52 09.5**	**+1.2**
LRDF	**Laroque-de-Fa**	**1.13**	**347**	Pg	**Pg**	**17 51 57.0**	**+1.0**
LRDF				Sg	**Sg**	**17 52 11.9**	**+1.2**
LRDF	**Laroque-de-Fa**	**1.13**	**347**	Pg	**Pg**	**17 51 57.1**	**+1.1**
LRDF				Lg		17 52 11.9	
LRDF	**Laroque-de-Fa**	**1.13**	**347**	Pg	**Pg**	**17 51 57.1**	**+1.1**
LRDF				Lg		17 52 11.9	
LRDF	**Laroque-de-Fa**	**1.13**	**347**	Pg	**Pg**	**17 51 57.0**	**+1.0**
LRDF				Sg	**Sg**	**17 52 11.9**	**+1.2**
FNEB	**N^bias**	**1.22**	**332**	Pg	**Pg**	**17 51 58.1**	**+0.5**
FNEB				Lg		17 52 14.3	
FNEB	**N^bias**	**1.22**	**332**	Pg	**Pg**	**17 51 58.1**	**+0.5**
FNEB				Lg		17 52 14.3	
CORG	**Organya**	**1.24**	**289**	Pg	**Pg**	**17 51 57.5**	**-0.5**
CORG				Lg		17 52 14.0	
16nm,0.1s							
CORG	**Organya**	**1.24**	**289**	Pg	**Pg**	**17 51 57.5**	**-0.5**
CORG				Lg		17 52 14.0	
16nm,0.1s							
LPEF	**Le Peyrat**	**1.33**	**327**	Pg	**Pg**	**17 52 00.1**	**+0.4**
LPEF				Lg		17 52 18.6	
LPEF	**Le Peyrat**	**1.33**	**327**	Pg	**Pg**	**17 52 00.1**	**+0.4**
LPEF				Lg		17 52 18.6	
GRBF	**Gourbit**	**1.42**	**315**	Pg	**Pg**	**17 52 01.7**	**+0.2**
GRBF				Lg		17 52 19.3	
GRBF	**Gourbit**	**1.42**	**315**	Pg	**Pg**	**17 52 01.7**	**+0.2**
GRBF				Lg		17 52 19.3	
CGAR	**Garraf**	**1.43**	**248**	Pg	**Pg**	**17 51 51.5**	**-10**
CGAR				Lg		17 52 03.1	
13nm,0.1s							
CGAR	**Garraf**	**1.43**	**248**	Pg	**Pg**	**17 51 51.5**	**-10**
CGAR				Lg		17 52 03.1	
13nm,0.1s							
CEST	**Esterri de Car**	**1.44**	**303**	Pg	**Pg**	**17 52 01.2**	**-0.6**
CEST				Lg		17 52 20.2	
13nm,0.2s							
CEST	**Esterri de Car**	**1.44**	**303**	Pg	**Pg**	**17 52 01.2**	**-0.6**
CEST				Lg		17 52 20.2	
13nm,0.2s							
EPOB	**Poblet**	**1.45**	**251**	Pn	**Pn**	**17 52 00.3**	**-0.2**
EPOB				Pn	**Pn**	**17 52 00.5**	**+0.1**
EPOB				Pg	**Pg**	**17 52 00.9**	**-1.0**
EPOB				Pg	**Pg**	**17 52 01.2**	**-0.7**
EPOB				Lg		17 52 19.2	
EPOB	**Poblet**	**1.45**	**251**	Pn	**Pn**	**17 52 00.5**	**+0.1**
0.4nm,0.1s,SNR=7.9							
EPOB				Pg	**Pg**	**17 52 01.2**	**-0.7**
3.8nm,0.1s,SNR=45							
EPOB				Lg		17 52 19.2	
25nm,0.1s,SNR=24							
EPOB	**Poblet**	**1.45**	**251**	Pn	**Pn**	**17 52 00.5**	**+0.1**
0.4nm,0.1s,SNR=7.9							
EPOB				Pg	**Pg**	**17 52 01.2**	**-0.7**
3.8nm,0.1s,SNR=45							

EPOB				Lg		17 52 19.2	
	25nm,0.1s,SNR=24						
EPOB	Poblet	1.45	251	Pn	Pn	17 52 00.3	-0.1
SALF	Salau	1.57	307	Pg	Pg	17 52 03.6	-0.7
SALF				Sg	Sg	17 52 24.4	-0.2
SALF	Salau	1.57	307	Pg	Pg	17 52 03.5	-0.7
SALF				Lg		17 52 23.6	
SALF	Salau	1.57	307	Pg	Pg	17 52 03.5	-0.7
SALF				Lg		17 52 23.6	
SALF	Salau	1.57	307	Pg	Pg	17 52 03.6	-0.7
SALF				Sg	Sg	17 52 24.4	-0.2
MTLF	Montolieu	1.59	342	ePg	Pg	17 52 05.2	+0.6
MTLF				eSn	Sn	17 52 23.7	+0.7
	27nm,0.2s						
MTLF	Montolieu	1.59	342	ePn	Pn	17 52 02.8	+0.4
MTLF				ePg	Pg	17 52 05.2	+0.6
MTLF				eSn	Sn	17 52 23.7	+0.7
MTLF	Montolieu	1.59	342	Pn	Pn	17 52 02.8	+0.4
MTLF				Pg	Pg	17 52 05.2	+0.6
MTLF				Sn	Sn	17 52 23.7	+0.7
	14nm,0.2s						
MTLF	Montolieu	1.59	342	Pn	Pn	17 52 02.8	+0.4
MTLF				Pg	Pg	17 52 05.2	+0.6
MTLF				Sn	Sn	17 52 23.7	+0.7
	14nm,0.2s						
MTLF	Montolieu	1.59	342	ePn	Pn	17 52 02.8	+0.4
CAVN	Les Avellanes	1.60	272	Pg	Pg	17 52 03.4	-1.5
CAVN				Lg		17 52 24.3	
	44nm,0.1s						
CAVN	Les Avellanes	1.60	272	Pg	Pg	17 52 03.4	-1.5
CAVN				Lg		17 52 24.3	
	44nm,0.1s						
CTRE	Tremp	1.65	288	Pn	Pn	17 52 04.1	+0.8
CTRE				Sn	Sn	17 52 25.6	+0.9
	16nm,0.2s						
CTRE	Tremp	1.65	288	Pn	Pn	17 52 04.1	+0.8
CTRE				Sn	Sn	17 52 25.6	+0.9
	16nm,0.2s						
MLS	Moulis	1.74	311	Pg	Pg	17 52 05.3	-2.3
MLS				Sg	Sg	17 52 28.5	-1.7
MLS	Moulis	1.74	311	Pn	Pn	17 52 05.1	+0.5
MLS				Sn	Sn	17 52 27.3	+0.4
MLS	Moulis	1.74	311	Pn	Pn	17 52 05.1	+0.5
MLS				Sn	Sn	17 52 27.3	+0.4
MLS	Moulis	1.74	311	Pg	Pg	17 52 05.3	-2.3
MLS				Sg	Sg	17 52 28.5	-1.7
MELF	Melles	1.89	304	Pn	Pn	17 52 08.4	+1.8
MELF				Sg	Sg	17 52 34.3	-0.7
MELF	Melles	1.89	304	Pg	Pg	17 52 08.4	-2.0
MELF				Lg		17 52 34.0	
MELF	Melles	1.89	304	Pg	Pg	17 52 08.4	-2.0
MELF				Lg		17 52 34.0	
MELF	Melles	1.89	304	Pn	Pn	17 52 08.4	+1.8
MELF				Sg	Sg	17 52 34.3	-0.7
ETOS	Mallorca	2.06	182	Pn	Pn	17 52 09.3	+0.3
ETOS				Sn	Sn	17 52 29.9	-4.9
ETOS	Mallorca	2.06	182	Pn	Pn	17 52 09.3	+0.3
	0.2nm,0.1s,SNR=6.9						
ETOS				Sn	Sn	17 52 29.9	-4.9
	0.5nm,0.1s,SNR=5.0						
ETOS	Mallorca	2.06	182	Pn	Pn	17 52 09.3	+0.3
	0.2nm,0.1s,SNR=6.9						
ETOS				Sn	Sn	17 52 29.9	-4.9
	0.5nm,0.1s,SNR=5.0						
ETOS	Mallorca	2.06	182	Pn	Pn	17 52 09.3	+0.3
	0.2nm,0.1s,SNR=6.9						
ETOS				Sn	Sn	17 52 29.9	-4.9
	0.5nm,0.1s,SNR=5.0						
ERTA	Horta de San J	2.12	246	Pn	Pn	17 52 11.0	+1.3
ERTA				Pg	Pg	17 52 14.1	-0.7
ERTA				Lg		17 52 40.4	
ERTA	Horta de San J	2.12	246	Pn	Pn	17 52 11.0	+1.3
	0.4nm,0.1s,SNR=4.0						
ERTA				Pg	Pg	17 52 14.1	-0.7
	1.7nm,0.1s,SNR=9.4						
ERTA				Lg		17 52 40.9	
	11nm,0.1s,SNR=5.0						
ERTA	Horta de San J	2.12	246	Pn	Pn	17 52 11.0	+1.3
	0.4nm,0.1s,SNR=4.0						
ERTA				Pg	Pg	17 52 14.1	-0.7
	1.7nm,0.1s,SNR=9.4						
ERTA				Lg		17 52 40.9	
	11nm,0.1s,SNR=5.0						
ERTA	Horta de San J	2.12	246	Pn	Pn	17 52 11.0	+1.3
	0.4nm,0.1s,SNR=4.0						
RESF	Ens	2.13	298	Lg		17 52 40.6	
RESF	Ens	2.13	298	Lg		17 52 40.6	
EBIE	Bielsa	2.21	294	Pn	Pn	17 52 12.3	+1.3
EBIE				Pg	Pg	17 52 15.1	-1.5
EBIE				Lg		17 52 42.8	
EBIE	Bielsa	2.21	294	Pn	Pn	17 52 12.3	+1.3
	0.2nm,0.0s,SNR=7.9						
EBIE				Pg	Pg	17 52 15.1	-1.5
	1.4nm,0.1s,SNR=10.0						
EBIE				Lg		17 52 42.8	
	7.2nm,0.2s,SNR=5.0						
EBIE	Bielsa	2.21	294	Pn	Pn	17 52 12.3	+1.3
	0.2nm,0.0s,SNR=7.9						
EBIE				Pg	Pg	17 52 15.1	-1.5
	1.4nm,0.1s,SNR=10.0						
EBIE				Lg		17 52 42.8	
	7.2nm,0.2s,SNR=5.0						
EBIE	Bielsa	2.21	294	Pn	Pn	17 52 12.3	+1.3
	0.2nm,0.0s,SNR=7.9						
CMAS	Mas de Barbera	2.24	241	Pn	Pn	17 52 12.1	+0.8
CMAS				Sn	Sn	17 52 39.0	0.0
	11nm,0.2s						
CMAS	Mas de Barbera	2.24	241	Pn	Pn	17 52 12.1	+0.8
CMAS				Sn	Sn	17 52 39.0	0.0
	11nm,0.2s						
EPF	Esparros	2.24	303	ePn	Pn	17 52 12.4	+1.0
EPF				eSn	Sn	17 52 38.3	-0.8
EPF				eSg	Sg	17 52 46.4	+0.3
	8.0nm,0.2s						
EPF	Esparros	2.24	303	Pn	Pn	17 52 12.4	+1.0
EPF				Sn	Sn	17 52 38.3	-0.8
EPF				Lg		17 52 46.4	
	4.0nm,0.2s						
EPF	Esparros	2.24	303	Pn	Pn	17 52 12.4	+1.0
EPF				Sn	Sn	17 52 38.3	-0.8
EPF				Lg		17 52 46.4	
	4.0nm,0.2s						
EPF	Esparros	2.24	303	ePn	Pn	17 52 12.4	+1.0
EPF				eSn	Sn	17 52 38.3	-0.8
EPF				eSg	Sg	17 52 46.4	+0.3
	4.0nm,0.2s						
LASF	Ste Croix	2.35	17	ePg	Pg	17 52 19.7	+0.5
LASF				eSn	Sn	17 52 41.9	+0.1
LASF				eSg	Sg	17 52 50.6	+0.9
	3.9nm,0.2s						
LASF	Ste Croix	2.35	17	ePn	Pn	17 52 12.9	0.0
LASF				ePg	Pg	17 52 19.7	+0.5
LASF				eSn	Sn	17 52 41.9	+0.1
LASF				eSg	Sg	17 52 50.6	+0.9
LASF	Ste Croix	2.35	17	Pn	Pn	17 52 12.9	0.0
LASF				Pg	Pg	17 52 19.7	+0.5
LASF				Sn	Sn	17 52 41.9	+0.1
LASF				Lg		17 52 50.6	
	1.9nm,0.2s						
LASF	Ste Croix	2.35	17	Pn	Pn	17 52 12.9	0.0
LASF				Pg	Pg	17 52 19.7	+0.5
LASF				Sn	Sn	17 52 41.9	+0.1
LASF				Lg		17 52 50.6	
	1.9nm,0.2s						
LASF	Ste Croix	2.35	17	ePn	Pn	17 52 12.9	0.0
LASF	Ste Croix	2.35	17	ePg	Pg	17 52 19.7	+0.5
LASF				eSn	Sn	17 52 41.9	+0.1
LASF				eSg	Sg	17 52 50.6	+0.9
	2.0nm,0.2s						
VIEF	Viey	2.37	297	Lg		17 52 48.3	
VIEF	Viey	2.37	297	Lg		17 52 48.3	
LABF	Labassere	2.42	301	Lg		17 52 49.8	
LABF	Labassere	2.42	301	Lg		17 52 49.8	
ESAC	San Caprasio	2.52	269	Pn	Pn	17 52 15.7	+0.4
ESAC				Pg	Pg	17 52 22.6	+0.1
ESAC				Lg		17 52 52.0	
ESAC	San Caprasio	2.52	269	Pn	Pn	17 52 15.7	+0.4
	1.3nm,0.1s,SNR=4.6						
ESAC				Pg	Pg	17 52 21.4	-1.0
	1.9nm,0.1s,SNR=7.9						
ESAC				Lg		17 52 52.0	
	33nm,0.2s,SNR=7.9						
ESAC	San Caprasio	2.52	269	Pn	Pn	17 52 15.7	+0.4
	1.3nm,0.1s,SNR=4.6						
ESAC				Pg	Pg	17 52 21.4	-1.0
	1.9nm,0.1s,SNR=7.9						
ESAC				Lg		17 52 52.0	
	33nm,0.2s,SNR=7.9						
ESAC	San Caprasio	2.52	269	Pn	Pn	17 52 15.7	+0.5
	1.3nm,0.1s,SNR=4.6						
ESAC	San Caprasio	2.52	269	Pg	Pg	17 52 22.5	+0.1
	1.9nm,0.1s,SNR=7.9						
ESAC				Lg		17 52 52.0	
	33nm,0.2s,SNR=7.9						
ETSF	Etsaut	2.77	294	ePg	Pg	17 52 27.2	-0.1
ETSF				eSn	Sn	17 52 51.2	-1.0
ETSF				eSg	Sg	17 53 02.6	-0.6
	8.6nm,0.3s						
ETSF	Etsaut	2.77	294	ePn	Pn	17 52 19.6	+0.9
ETSF				ePg	Pg	17 52 27.2	-0.1
ETSF				eSn	Sn	17 52 51.2	-1.0
ETSF				eSg	Sg	17 53 02.6	-0.6
ETSF	Etsaut	2.77	294	Pn	Pn	17 52 19.6	+0.9
ETSF				Pg	Pg	17 52 27.2	-0.1
ETSF				Sn	Sn	17 52 51.2	-1.0
ETSF				Lg		17 53 02.6	
	4.3nm,0.3s						
ETSF	Etsaut	2.77	294	Pn	Pn	17 52 19.6	+0.9
ETSF				Pg	Pg	17 52 27.2	-0.1
ETSF				Sn	Sn	17 52 51.2	-1.0
ETSF				Lg		17 53 02.6	
	4.3nm,0.3s						
ETSF	Etsaut	2.77	294	ePn	Pn	17 52 19.6	+0.9
ETSF	Etsaut	2.77	294	ePg	Pg	17 52 27.2	-0.1
ETSF				eSn	Sn	17 52 51.2	-1.0
ETSF				eSg	Sg	17 53 02.6	-0.6
	4.3nm,0.3s						
SMRF	Simiane la Rot	2.91	42	ePn	Pn	17 52 20.5	-0.1
SMRF				eSn	Sn	17 52 55.0	-0.6
SMRF				eSg	Sg	17 53 07.7	+0.1
	4.6nm,0.6s						
SMRF	Simiane la Rot	2.91	42	Pn	Pn	17 52 20.5	-0.1
SMRF				Sn	Sn	17 52 55.0	-0.6
SMRF				Lg		17 53 07.7	
	4.6nm,0.6s						
SMRF	Simiane la Rot	2.91	42	Pn	Pn	17 52 20.5	-0.1
SMRF				Sn	Sn	17 52 55.0	-0.6
SMRF				Lg		17 53 07.7	
	4.6nm,0.6s						
SMRF	Simiane la Rot	2.91	42	ePn	Pn	17 52 20.5	-0.1
SMRF				eSn	Sn	17 52 55.0	-0.6
SMRF				eSg	Sg	17 53 07.7	+0.1
	2.3nm,0.6s						
EMOS	Mosqueruela	2.94	241	Pg	Pg	17 52 29.7	-0.8
EMOS				Lg		17 53 06.0	
EMOS	Mosqueruela	2.94	241	Pg	Pg	17 52 29.7	-0.8
	3.2nm,0.3s,SNR=7.9						
EMOS				Lg		17 53 06.0	
	3.4nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.94	241	Pg	Pg	17 52 29.7	-0.8
	3.2nm,0.3s,SNR=7.9						
EMOS				Lg		17 53 06.0	
	3.4nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.94	241	Pg	Pg	17 52 29.7	-0.8
	3.2nm,0.3s,SNR=7.9						
EMOS				Lg		17 53 06.0	
	3.4nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.04	203	Pn	Pn	17 52 21.6	-0.8
EIBI				Sn	Sn	17 52 53.1	-5.8
EIBI	Ibiza	3.04	203	Pn	Pn	17 52 21.6	-0.8
	0.5nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	17 52 53.2	-5.8
	4.7nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.04	203	Pn	Pn	17 52 21.6	-0.8
	0.5nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	17 52 53.2	-5.8
	4.7nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.04	203	Pn	Pn	17 52 21.6	-0.8
	0.5nm,0.1s,SNR=7.9						
LMR	La Mourre	3.06	59	ePn	Pn	17 52 23.1	+0.4
LMR				eSn	Sn	17 52 58.5	-0.9
	3.2nm,0.3s						
LMR	La Mourre	3.06	59	Pn	Pn	17 52 23.1	+0.4
LMR				Sn	Sn	17 52 58.5	-0.9
	1.6nm,0.3s						
LMR	La Mourre	3.06	59	Pn	Pn	17 52 23.1	+0.4
LMR				Sn	Sn	17 52 58.5	-0.9
	1.6nm,0.3s						
LMR	La Mourre	3.06	59	ePn	Pn	17 52 23.1	+0.4
LMR				eSn	Sn	17 52 58.5	-0.9
	1.6nm,0.3s						
CAF	Calviac	3.15	349	ePn	Pn	17 52 25.1	+1.2
CAF				eSg	Sg	17 53 14.5	-0.8
	5.4nm,0.2s						
CAF	Calviac	3.15	349	Pn	Pn	17 52 25.1	+1.2
CAF				Lg		17 53 14.5	
	2.7nm,0.2s						
CAF	Calviac	3.15	349	Pn	Pn	17 52 25.1	+1.2
CAF				Lg		17 53 14.5	
	2.7nm,0.2s						
CAF	Calviac	3.15	349	ePn	Pn	17 52 25.1	+1.2
CAF				eSg	Sg	17 53 14.5	-0.8
	2.7nm,0.2s						
FRF	La Foret Royal	3.26	57	ePn	Pn	17 52 25.9	+0.5
FRF				eSn	Sn	17 53 03.2	-1.1
	3.6nm,0.4s						
FRF	La Foret Royal	3.26	57	Pn	Pn	17 52 25.9	+0.5
FRF				Sn	Sn	17 53 03.2	-1.1
	1.8nm,0.4s						
FRF	La Foret Royal	3.26	57	Pn	Pn	17 52 25.9	+0.5
FRF				Sn	Sn	17 53 03.2	-1.1
	1.8nm,0.4s						
FRF	La Foret Royal	3.26	57	ePn	Pn	17 52 25.9	+0.5
FRF				eSn	Sn	17 53 03.2	-1.1
	1.8nm,0.4s						
VIVF	Saint-Julien-l	3.29	23	ePn	Pn	17 52 26.3	+0.5
VIVF				eSn	Sn	17 53 04.2	-0.7
VIVF				eSg	Sg	17 53 19.7	0.0
	4.2nm,0.4s						
VIVF	Saint-Julien-l	3.29	23	Pn	Pn	17 52 26.3	+0.5
VIVF				Sn	Sn	17 53 04.2	-0.7
VIVF				Lg		17 53 19.7	
	2.1nm,0.4s						
VIVF	Saint-Julien-l	3.29	23	Pn	Pn	17 52 26.3	+0.5
VIVF				Sn	Sn	17 53 04.2	-0.7
VIVF				Lg		17 53 19.7	
	2.1nm,0.4s						
VIVF	Saint-Julien-l	3.29	23	ePn	Pn	17 52 26.3	+0.5
VIVF				eSn	Sn	17 53 04.2	-0.7
VIVF				eSg	Sg	17 53 19.7	0.0
	2.1nm,0.4s						
EORO	Oroz-Betelu	3.29	290	Pn	Pn	17 52 27.9	+2.1
	0.2nm,0.1s,SNR=4.0						
EORO				Pg	Pg	17 52 35.7	-1.5
	0.5nm,0.1s,SNR=7.8						
EORO				Lg		17 53 17.3	
	4.5nm,0.3s,SNR=4.0						
EORO	Oroz-Betelu	3.29	290	Pn	Pn	17 52 27.9	+2.1
	0.2nm,0.1s,SNR=4.0						
EORO				Pg	Pg	17 52 35.7	-1.5
	0.5nm,0.1s,SNR=7.8						
EORO				Lg		17 53 17.3	
	4.5nm,0.3s,SNR=4.0						
EORO	Oroz-Betelu	3.29	290	Pn	Pn	17 52 27.9	+2.1
	0.2nm,0.1s,SNR=4.0						
IPRE	Itoiz	3.30	289	Lg		17 53 17.3	
	2.2nm,0.2s,SNR=4.0						
IPRE	Itoiz	3.30	289	Lg		17 53 17.3	
	2.2nm,0.2s,SNR=4.0						
IPRE	Itoiz	3.30	289	Lg		17 53 17.3	
	2.2nm,0.2s,SNR=4.0						
SJPF	Ste Jean	3.31	294	ePg	Pg	17 52 36.6	-0.9
SJPF				eSg	Sg	17 53 19.2	-1.1
	7.6nm,0.3s						
SJPF	Ste Jean	3.31	294	ePn	Pn	17 52 26.5	+0.5
SJPF				ePg	Pg	17 52 36.6	-0.9
SJPF				eSg	Sg	17 53 19.2	-1.1
SJPF	Ste Jean	3.31	294	Pn	Pn	17 52 26.5	+0.5
SJPF				Pg	Pg	17 52 36.6	-0.9
SJPF				Lg		17 53 19.2	
	3.8nm,0.3s						
SJPF	Ste Jean	3.31	294	Pn	Pn	17 52 26.5	+0.5
SJPF				Pg	Pg	17 52 36.6	-0.9
SJPF				Lg		17 53 19.2	
	3.8nm,0.3s						
SJPF	Ste Jean	3.31	294	ePn	Pn	17 52 26.5	+0.5
SJPF	Ste Jean	3.31	294	ePg	Pg	17 52 36.6	-0.9
SJPF				eSg	Sg	17 53 19.2	-1.1
	3.8nm,0.3s						
IZUN	Zunzarren	3.38	289	Pg	Pg	17 52 38.1	-0.9
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		17 53 21.0	
	0.5nm,0.1s,SNR=7.9						
IZUN	Zunzarren	3.38	289	Pg	Pg	17 52 38.1	-0.9
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		17 53 21.0	
	0.5nm,0.1s,SNR=7.9						
IZUN	Zunzarren	3.38	289	Pg	Pg	17 52 38.1	-0.9
	0.3nm,0.1s,SNR=7.9						
IZUN				Lg		17 53 21.0	
	0.5nm,0.1s,SNR=7.9						
IUNC	Unciti	3.39	287	Lg		17 53 20.9	
	2.1nm,0.1s,SNR=7.9						
IUNC	Unciti	3.39	287	Lg		17 53 20.9	
	2.1nm,0.1s,SNR=7.9						
IUNC	Unciti	3.39	287	Lg		17 53 20.9	
	2.1nm,0.1s,SNR=7.9						
IUSE	Utxeti	3.47	290	Lg		17 53 24.4	
	0.7nm,0.1s,SNR=7.9						
IUSE	Utxeti	3.47	290	Lg		17 53 24.4	
	0.7nm,0.1s,SNR=7.9						
IUSE	Utxeti	3.47	290	Lg		17 53 24.4	
	0.7nm,0.1s,SNR=7.9						
LFF	La Frestale	3.48	334	ePg	Pg	17 52 40.3	-0.5
LFF				eSg	Sg	17 53 24.7	-1.2
	14nm,0.4s						
LFF	La Frestale	3.48	334	ePn	Pn	17 52 29.6	+1.2
LFF				ePg	Pg	17 52 40.3	-0.5
LFF				eSg	Sg	17 53 24.7	-1.2
LFF	La Frestale	3.48	334	Pn	Pn	17 52 29.6	+1.2
LFF				Pg	Pg	17 52 40.3	-0.5
LFF				Lg		17 53 24.7	
	6.8nm,0.4s						
LFF	La Frestale	3.48	334	Pn	Pn	17 52 29.6	+1.2
LFF				Pg	Pg	17 52 40.3	-0.5
LFF				Lg		17 53 24.7	
	6.8nm,0.4s						
LFF	La Frestale	3.48	334	ePn	Pn	17 52 29.6	+1.2
LFF	La Frestale	3.48	334	ePg	Pg	17 52 40.3	-0.5
LFF				eSg	Sg	17 53 24.7	-1.2
	6.8nm,0.4s						
ELIZ	Elizondo	3.53	294	Pn	Pn	17 52 30.6	+1.4
ELIZ				Pg	Pg	17 52 41.0	-0.8
ELIZ				Lg		17 53 24.4	
ELIZ	Elizondo	3.53	294	Pn	Pn	17 52 30.6	+1.4
	0.9nm,0.1s,SNR=7.9						
ELIZ				Pg	Pg	17 52 41.0	-0.8
	1.7nm,0.2s,SNR=7.9						
ELIZ				Lg		17 53 24.4	
	2.4nm,0.3s,SNR=7.9						
ELIZ	Elizondo	3.53	294	Pn	Pn	17 52 30.6	+1.4
	0.9nm,0.1s,SNR=7.9						
ELIZ				Pg	Pg	17 52 41.0	-0.8
	1.7nm,0.2s,SNR=7.9						
ELIZ				Lg		17 53 24.4	
	2.4nm,0.3s,SNR=7.9						
ELIZ	Elizondo	3.53	294	Pn	Pn	17 52 30.6	+1.5
	0.9nm,0.1s,SNR=7.9						
ELIZ	Elizondo	3.53	294	Pg	Pg	17 52 41.0	-0.8
	1.7nm,0.2s,SNR=7.9						
ELIZ				Lg		17 53 24.4	
	2.4nm,0.3s,SNR=7.9						
EALK	Alkurruntz	3.54	295	Pn	Pn	17 52 30.2	+1.0
EALK				Pg	Pg	17 52 41.2	-0.7
EALK				Lg		17 53 25.7	
EALK	Alkurruntz	3.54	295	Pn	Pn	17 52 30.2	+1.0
	0.2nm,0.1s,SNR=7.9						
EALK				Pg	Pg	17 52 41.2	-0.7
	0.4nm,0.1s,SNR=7.9						
EALK				Lg		17 53 25.7	
	3.8nm,0.3s,SNR=7.9						
EALK	Alkurruntz	3.54	295	Pn	Pn	17 52 30.2	+1.0
	0.2nm,0.1s,SNR=7.9						
EALK				Pg	Pg	17 52 41.2	-0.7
	0.4nm,0.1s,SNR=7.9						
EALK				Lg		17 53 25.7	
	3.8nm,0.3s,SNR=7.9						
EALK	Alkurruntz	3.54	295	Pn	Pn	17 52 30.2	+1.0
	0.2nm,0.1s,SNR=7.9						
RJF	Les Rejaudoux	3.61	344	ePn	Pn	17 52 31.7	+1.5
RJF				eSg	Sg	17 53 29.3	-0.8
	5.5nm,0.2s						
RJF	Les Rejaudoux	3.61	344	Pn	Pn	17 52 31.7	+1.5
RJF				Lg		17 53 29.3	
	2.8nm,0.2s						
RJF	Les Rejaudoux	3.61	344	Pn	Pn	17 52 31.7	+1.5
RJF				Lg		17 53 29.3	
	2.8nm,0.2s						
RJF	Les Rejaudoux	3.61	344	ePn	Pn	17 52 31.7	+1.5
RJF				eSg	Sg	17 53 29.3	-0.8
	2.8nm,0.2s						
ORIF	Oris-en-Rattie	3.77	34	ePn	Pn	17 52 33.1	+0.6
ORIF				eSn	Sn	17 53 16.0	-0.9
	1.2nm,0.3s						
ORIF	Oris-en-Rattie	3.77	34	Pn	Pn	17 52 33.1	+0.6
ORIF				Sn	Sn	17 53 16.0	-0.9
	0.6nm,0.3s						
ORIF	Oris-en-Rattie	3.77	34	Pn	Pn	17 52 33.1	+0.6
ORIF				Sn	Sn	17 53 16.0	-0.9
	0.6nm,0.3s						
ORIF	Oris-en-Rattie	3.77	34	ePn	Pn	17 52 33.1	+0.6
ORIF				eSn	Sn	17 53 16.0	-0.9
	0.6nm,0.3s						
ETOR	Torete	3.86	256	Pn	Pn	17 52 32.5	-1.2
ETOR				Pg	Pg	17 52 47.0	-1.2
ETOR				Sn	Sn	17 53 19.8	+0.7
ETOR				Lg		17 53 35.0	
ETOR	Torete	3.86	256	Pn	Pn	17 52 32.5	-1.2
	0.9nm,0.1s,SNR=4.0						
ETOR				Pg	Pg	17 52 46.5	-1.6
	2.2nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	17 53 17.9	-1.3
	1.4nm,0.2s,SNR=7.9						
ETOR				Lg		17 53 35.0	
	11nm,0.2s,SNR=7.9						
ETOR	Torete	3.86	256	Pn	Pn	17 52 32.5	-1.2
	0.9nm,0.1s,SNR=4.0						
ETOR				Pg	Pg	17 52 46.5	-1.6
	2.2nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	17 53 17.9	-1.3
	1.4nm,0.2s,SNR=7.9						
ETOR				Lg		17 53 35.0	
	11nm,0.2s,SNR=7.9						
ETOR	Torete	3.86	256	Pn	Pn	17 52 32.5	-1.2
	0.9nm,0.1s,SNR=4.0						
ETOR	Torete	3.86	256	Pg	Pg	17 52 47.0	-1.2
	2.2nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	17 53 19.8	+0.6
	1.4nm,0.2s,SNR=7.9						
ETOR				Lg		17 53 35.0	
	11nm,0.2s,SNR=7.9						
SBF	Sospel	3.91	57	ePg	Pg	17 52 48.0	-1.0
SBF				eSn	Sn	17 53 18.9	-1.3
	3.3nm,0.3s						
SBF	Sospel	3.91	57	ePn	Pn	17 52 34.5	+0.2
SBF				ePg	Pg	17 52 48.0	-1.0
SBF				eSn	Sn	17 53 18.9	-1.3
SBF	Sospel	3.91	57	Pn	Pn	17 52 34.5	+0.2
SBF				Pg	Pg	17 52 48.0	-1.0
SBF				Sn	Sn	17 53 18.9	-1.3
	1.7nm,0.3s						
SBF	Sospel	3.91	57	Pn	Pn	17 52 34.5	+0.2
SBF				Pg	Pg	17 52 48.0	-1.0
SBF				Sn	Sn	17 53 18.9	-1.3
	1.7nm,0.3s						
SBF	Sospel	3.91	57	ePn	Pn	17 52 34.5	+0.2
SBF	Sospel	3.91	57	ePg	Pg	17 52 48.0	-1.0
SBF				eSn	Sn	17 53 18.9	-1.3
	1.6nm,0.3s						
MBDF	Montbardon	4.05	43	ePn	Pn	17 52 36.9	+0.7
MBDF				eSn	Sn	17 53 22.2	-1.4
	6.1nm,0.8s						
MBDF	Montbardon	4.05	43	Pn	Pn	17 52 36.9	+0.7
MBDF				Sn	Sn	17 53 22.2	-1.4
	3.1nm,0.8s						
MBDF	Montbardon	4.05	43	Pn	Pn	17 52 36.9	+0.7
MBDF				Sn	Sn	17 53 22.2	-1.4
	3.1nm,0.8s						
MBDF	Montbardon	4.05	43	ePn	Pn	17 52 36.9	+0.7
MBDF				eSn	Sn	17 53 22.2	-1.4
	3.0nm,0.8s						
ECRI	Cripan	4.09	283	Pn	Pn	17 52 37.4	+0.6
ECRI				Lg		17 53 42.6	
ECRI	Cripan	4.09	283	Pn	Pn	17 52 37.4	+0.6
	0.6nm,0.1s,SNR=4.0						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECRI				Lg		17 53 42.6	
	1.5nm,0.2s,SNR=4.0						
ECRI	**Cripan**	**4.09**	**283**	Pn	**Pn**	**17 52 37.4**	**+0.6**
	0.6nm,0.2s,SNR=4.0						
ECRI				Lg		17 53 42.6	
	1.5nm,0.2s,SNR=4.0						
ECRI	**Cripan**	**4.09**	**283**	Pn	**Pn**	**17 52 37.3**	**+0.5**
ECRI				Lg		17 53 42.6	
	1.5nm,0.2s,SNR=4.0						
TCF	**Toulx Ste Croi**	**4.48**	**354**	*e*Pn	**Pn**	**17 52 42.7**	**+0.5**
TCF				*e*Sg	**Sg**	**17 53 56.9**	**-1.1**
	10nm,0.8s						
TCF	**Toulx Ste Croi**	**4.48**	**354**	Pn	**Pn**	**17 52 42.7**	**+0.5**
TCF				Lg		17 53 56.9	
	5.1nm,0.8s						
TCF	**Toulx Ste Croi**	**4.48**	**354**	Pn	**Pn**	**17 52 42.7**	**+0.5**
TCF				Lg		17 53 56.9	
	5.1nm,0.8s						
TCF	**Toulx Ste Croi**	**4.48**	**354**	*e*Pn	**Pn**	**17 52 42.7**	**+0.5**
TCF				*e*Sg	**Sg**	**17 53 56.9**	**-1.1**
	5.1nm,0.8s						
PGF	**Pioggiola**	**4.59**	**79**	*e*Pn	**Pn**	**17 52 43.7**	**0.0**
PGF				*e*Sn	**Sn**	**17 53 34.6**	**-2.5**
	3.8nm,0.3s						
PGF	**Pioggiola**	**4.59**	**79**	Pn	**Pn**	**17 52 43.7**	**0.0**
PGF				Sn	**Sn**	**17 53 34.6**	**-2.5**
	1.9nm,0.3s						
PGF	**Pioggiola**	**4.59**	**79**	Pn	**Pn**	**17 52 43.7**	**0.0**
PGF				Sn	**Sn**	**17 53 34.6**	**-2.5**
	1.9nm,0.3s						
PGF	**Pioggiola**	**4.59**	**79**	*e*Pn	**Pn**	**17 52 43.7**	**0.0**
PGF				*e*Sn	**Sn**	**17 53 34.6**	**-2.5**
	1.9nm,0.3s						
LPG	**La Plagne**	**4.61**	**36**	*e*Pn	**Pn**	**17 52 44.6**	**+0.7**
LPG				*e*Sn	**Sn**	**17 53 36.0**	**-1.5**
	0.6nm,0.3s						
LPG	**La Plagne**	**4.61**	**36**	Pn	**Pn**	**17 52 44.6**	**+0.7**
LPG				Sn	**Sn**	**17 53 36.0**	**-1.5**
	0.3nm,0.3s						
LPG	**La Plagne**	**4.61**	**36**	Pn	**Pn**	**17 52 44.6**	**+0.7**
LPG				Sn	**Sn**	**17 53 36.0**	**-1.5**
	0.3nm,0.3s						
LPG	**La Plagne**	**4.61**	**36**	*e*Pn	**Pn**	**17 52 44.6**	**+0.7**
LPG				*e*Sn	**Sn**	**17 53 36.0**	**-1.5**
	0.3nm,0.3s						
ETOB	**Tobarra**	**4.66**	**228**	Pn	**Pn**	**17 52 43.8**	**-0.9**
ETOB	**Tobarra**	**4.66**	**228**	Pn	**Pn**	**17 52 43.8**	**-0.8**
BGF	**Bois d'Agland**	**4.72**	**360**	*e*Pn	**Pn**	**17 52 46.1**	**+0.6**
BGF				*e*Sg	**Sg**	**17 54 04.6**	**-1.2**
	8.4nm,0.4s						
BGF	**Bois d'Agland**	**4.72**	**360**	Pn	**Pn**	**17 52 46.1**	**+0.6**
BGF				Lg		17 54 04.6	
	4.2nm,0.4s						
BGF	**Bois d'Agland**	**4.72**	**360**	Pn	**Pn**	**17 52 46.1**	**+0.6**
BGF				Lg		17 54 04.6	
	4.2nm,0.4s						
BGF	**Bois d'Agland**	**4.72**	**360**	*e*Pn	**Pn**	**17 52 46.1**	**+0.6**
BGF				*e*Sg	**Sg**	**17 54 04.6**	**-1.2**
	4.2nm,0.4s						
SMF	**Signal de Mont**	**4.86**	**8**	*e*Pn	**Pn**	**17 52 47.6**	**+0.2**
SMF				*e*Sg	**Sg**	**17 54 08.8**	**-1.3**
	1.3nm,0.3s						
SMF	**Signal de Mont**	**4.86**	**8**	Pn	**Pn**	**17 52 47.6**	**+0.2**
SMF				Lg		17 54 08.8	
	0.6nm,0.3s						
SMF	**Signal de Mont**	**4.86**	**8**	Pn	**Pn**	**17 52 47.6**	**+0.2**
SMF				Lg		17 54 08.8	
	0.6nm,0.3s						
SMF	**Signal de Mont**	**4.86**	**8**	*e*Pn	**Pn**	**17 52 47.6**	**+0.2**
SMF				*e*Sg	**Sg**	**17 54 08.8**	**-1.3**
	0.6nm,0.3s						
AVF	**Avril sur Loir**	**4.97**	**4**	*e*Pn	**Pn**	**17 52 49.0**	**+0.2**
AVF				*e*Sg	**Sg**	**17 54 12.1**	**-1.5**
	4.0nm,0.6s						
AVF	**Avril sur Loir**	**4.97**	**4**	Pn	**Pn**	**17 52 49.0**	**+0.2**
AVF				Lg		17 54 12.1	
	2.0nm,0.6s						
AVF	**Avril sur Loir**	**4.97**	**4**	Pn	**Pn**	**17 52 49.0**	**+0.2**
AVF				Lg		17 54 12.1	
	2.0nm,0.6s						
AVF	**Avril sur Loir**	**4.97**	**4**	*e*Pn	**Pn**	**17 52 49.0**	**+0.2**
AVF				*e*Sg	**Sg**	**17 54 12.1**	**-1.5**
	2.0nm,0.6s						
SSF	**Saint Saulge**	**5.25**	**5**	*e*Pn	**Pn**	**17 52 52.9**	**+0.2**
SSF				*e*Sg	**Sg**	**17 54 20.9**	**-1.6**
	2.8nm,0.5s						
SSF	**Saint Saulge**	**5.25**	**5**	Pn	**Pn**	**17 52 52.9**	**+0.2**
SSF				Lg		17 54 20.9	
	1.4nm,0.5s						
SSF	**Saint Saulge**	**5.25**	**5**	Pn	**Pn**	**17 52 52.9**	**+0.2**
SSF				Lg		17 54 20.9	
	1.4nm,0.5s						
SSF	**Saint Saulge**	**5.25**	**5**	*e*Pn	**Pn**	**17 52 52.9**	**+0.2**
SSF				*e*Sg	**Sg**	**17 54 20.9**	**-1.6**
	1.4nm,0.5s						
LOR	**Lormes**	**5.48**	**7**	*e*Pn	**Pn**	**17 52 55.9**	**+0.1**
LOR				*e*Sg	**Sg**	**17 54 28.2**	**-1.7**
	3.4nm,0.7s						
LOR	**Lormes**	**5.48**	**7**	Pn	**Pn**	**17 52 55.9**	**+0.1**
LOR				Lg		17 54 28.2	
	1.7nm,0.7s						
LOR	**Lormes**	**5.48**	**7**	Pn	**Pn**	**17 52 55.9**	**+0.1**
LOR				Lg		17 54 28.2	
	1.7nm,0.7s						
LOR	**Lormes**	**5.48**	**7**	*e*Pn	**Pn**	**17 52 55.9**	**+0.1**
LOR				*e*Sg	**Sg**	**17 54 28.2**	**-1.7**
	1.7nm,0.7s						

*ISCJB **16** 17:53:25.7±3.2, 5°.65S±0°.10×148°.5E±0°.1, h121km±32km, mb4.1/8, Error ellipse: s-maj=20.1km s-min=15.3km az=21.0*
*IDC **16** 17:53:35.5±3.3, 5°.72S×148°.48E, h200km±33km, mb3.9/6, mb1 4.1/7, mb1mx3.7/16, mbtmp4.0/7, MS3.3/1, Ms1 3.3/1, ms1mx2.6/23, Error ellipse: s-maj=24.0km s-min=11.9km az=106.0*
*NEIC **16** 17:53:36.3±6.7, 5°.72S×148°.37E, h209km±64km, mb4.9/3, Error ellipse: s-maj=31.3km s-min=21.8km az=72.0*
ISC 16 17:53:32.3±3.0, 5°.75S±0°.10×148°.5E±0°.1, h168km±30km, n15, σ0°91/14, mb4.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**17.30**	**245**	*e*P	**Pn**	**17 57 21.2**	**-2.7**
	76nm,0.5s						
WRAB	**Tennant Creek**	**19.71**	**223**	*e*P	**P**	**17 57 49.2**	**+0.4**
	22nm,0.6s						
WRA	**Warramunga Arr**	**19.72**	**223**	P	**P**	**17 57 49.7**	**+0.7**
	3.1nm,0.3s,baz=48,slow=11,SNR=44						
ASAR	**Alice Springs**	**22.70**	**217**	P	**P**	**17 58 20.7**	**+1.0**
	4.4nm,0.5s,mb4.1,baz=54,slow=8.7,SNR=146						
ASAR				S	**S**	**18 02 14.3**	**-1.1**
	0.5nm,0.8s,baz=39,slow=12,SNR=2.7						
DZM	**Mont Dzumac**	**23.74**	**135**	*e*P	**P**	**17 58 28.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**25.49**	**239**	P	**P**	**17 58 45.2**	**0.0**
	19nm,0.4s,mb5.0,baz=60,slow=8.2,SNR=65						
STKA	**Stephens Creek**	**26.79**	**193**	P	**P**	**17 58 57.7**	**+1.1**
	3.8nm,1.0s,mb4.0,baz=37,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**26.79**	**193**	P	**P**	**17 58 57.6**	**+0.9**
	0.3nm,0.6s,mb3.1						
KAPI	**Kappang**	**28.65**	**270**	LR	LR	18 13 46.1	
	comp=Z,56nm,18.2s,baz=47,slow=42						
MBWA	**Marble Bar**	**31.82**	**238**	*e*P	**P**	**17 59 40.8**	**-0.5**
	6.0nm,0.6s,mb4.5						
RPZ	**Rata Peaks**	**42.70**	**156**	P	**P**	**18 01 12.8**	**+0.3**
	6.3nm,0.5s,mb4.5,baz=183,slow=2.2,SNR=9.8						
KSRS	**Korea Array**	**47.08**	**338**	P	**P**	**18 01 47.3**	**+0.1**
	0.8nm,0.6s,mb3.5,baz=156,slow=9.1,SNR=6.4						
PETK	**Petropavlovsk-**	**59.15**	**6**	P	**P**	**18 03 14.6**	**-0.5**
	4.0nm,0.5s,mb4.5,baz=152,slow=6.0,SNR=24						
SONM	**Songino Array**	**64.93**	**330**	P	**P**	**18 03 54.6**	**+0.8**
	0.1nm,0.3s,mb3.1,baz=128,slow=6.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**146.49**	**285**	PKPbc	PKPbc	18 12 52.1	-2.6
	0.3nm,0.5s,baz=39,slow=2.9,SNR=5.5						

*TAP **16** 17:54:08.0, 24°.63N×122°.63E, h102km, ML2.9, C*
*ISCJB **16** 17:54:08.8±0.9, 24°.59N±0°.05×122°.65E±0°.02, h90km±10km, Error ellipse: s-maj=9.1km s-min=3.7km az=0.4*
*JMA **16** 17:54:08.2±0.2, 24°.80N×122°.69E, h96km, M1.6*
ISC 16 17:54:09.3±0.8, 24°.59N±0°.05×122°.65E±0°.02, h90km±9km, n27, σ0°59/46, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.36**	**111**	P	**Pn**	**17 54 23.2**	**+0.2**
TWC	**Suao**	**0.72**	**272**	P	**Pn**	**17 54 25.6**	**-0.4**
	baz=269						
TWC				*e*S	**Sn**	**17 54 37.7**	**-0.7**
	baz=269						
TWB1	**Santiao Chiao**	**0.73**	**305**	*e*P	**Pn**	**17 54 25.9**	**-0.1**
	baz=303						
TWB1				*e*S	**Sn**	**17 54 37.8**	**-0.7**
	baz=303						
ENA	**Nanau**	**0.84**	**259**	P	**Pn**	**17 54 27.1**	**0.0**
	baz=251						
ENA				*e*S	**Sn**	**17 54 41.3**	**+0.8**
	baz=251						
TWE	**Neicheng**	**0.90**	**279**	*i* P	**Pn**	**17 54 27.7**	**-0.1**
	baz=275						
TWE				*e*S	**Sn**	**17 54 41.9**	**+0.2**
	baz=275						
NWF	**Wu-fen Shan**	**0.92**	**302**	*e*P	**Pn**	**17 54 28.3**	**+0.2**
	baz=300						
NWF				*e*S	**Sn**	**17 54 42.0**	**-0.1**
	baz=300						
IRIF	**Iriomote-Funau**	**1.02**	**104**	P	**Pn**	**17 54 28.9**	**-0.3**
IRIF				*e*S	**Sn**	**17 54 44.6**	**+0.5**
TWD	**Chiawan**	**1.08**	**242**	*e*P	**Pn**	**17 54 29.4**	**-0.5**
	baz=235						
PCYT	**Pengchaiyu**	**1.16**	**333**	*e*P	**Pn**	**17 54 31.5**	**+0.7**
	baz=337						
NNS	**Nan Shan**	**1.17**	**263**	P	**Pn**	**17 54 30.8**	**-0.1**
	baz=255						
NNS				*e*S	**Sn**	**17 54 47.5**	**+0.4**
	baz=255						
NSK	**Sanguang**	**1.17**	**274⇓**	*i* P	**Pn**	**17 54 31.1**	**+0.1**
	baz=266						
NSK				*e*S	**Sn**	**17 54 47.4**	**+0.1**
	baz=266						
HATJ	**Hateruma jima**	**1.18**	**116**	P	**Pn**	**17 54 31.4**	**+0.3**
TWS1	**Kuangyinshan**	**1.23**	**295**	*e*P	**Pn**	**17 54 31.1**	**-0.5**
	baz=293						
TWS1				*e*S	**Sn**	**17 54 48.5**	**+0.1**
	baz=293						
JKRS	**Kuro-shima**	**1.29**	**105**	P	**Pn**	**17 54 32.4**	**0.0**
JKRS				*e*S	**Sn**	**17 54 51.1**	**+1.2**
WHF	**Hehuan Shan**	**1.33**	**251**	P	**Pn**	**17 54 32.9**	**0.0**
	baz=249						
WHF				*e*S	**Sn**	**17 54 51.0**	**+0.2**
	baz=249						
ESL	**Shilin**	**1.35**	**235**	P	**Pn**	**17 54 32.2**	**-0.9**
	baz=234						
ESL				*e*S	**Sn**	**17 54 49.7**	**-1.4**
	baz=234						
JIJ	**Ishigaki jima**	**1.38**	**99**	P	**Pn**	**17 54 33.1**	**-0.4**
JIJ				*e*S	**Sn**	**17 54 51.3**	**-0.6**
NSTT	**Nanjuang**	**1.50**	**272**	P	**Pn**	**17 54 34.7**	**-0.3**
	baz=271						
NSTT				*e*S	**Sn**	**17 54 54.3**	**-0.1**
	baz=271						
EHY	**Hungye**	**1.62**	**229**	*e*P	**Pn**	**17 54 35.0**	**-1.5**
	baz=235						
TWQ1	**Liyutan**	**1.72**	**262**	*e*P	**Pn**	**17 54 38.6**	**+0.7**
	baz=261						
TWQ1				*e*S	**Sn**	**17 54 59.8**	**+0.2**
	baz=261						
SMLT	**Sun Moon Lake**	**1.74**	**247**	P	**Pn**	**17 54 39.0**	**+0.9**
	baz=240						
SMLT				*e*S	**Sn**	**17 55 00.9**	**+0.9**
	baz=240						
TWF1	**Yuli**	**1.74**	**225**	P	**Pn**	**17 54 37.2**	**-0.9**
	baz=231						
TYC	**Yuchr**	**1.77**	**248**	P	**Pn**	**17 54 39.0**	**+0.5**
	baz=243						
TYC				*e*S	**Sn**	**17 55 01.0**	**+0.4**
	baz=243						
JTJ	**Tarama**	**1.87**	**88**	*e*S	**Sn**	**17 55 02.9**	**-0.1**
YUS	**Yu-Shan**	**1.90**	**235**	*e*P	**Pn**	**17 54 40.6**	**+0.5**
	baz=230						
YUS				*e*S	**Sn**	**17 55 03.5**	**-0.1**
	baz=230						
ALS	**Alishan**	**2.00**	**238**	P	**Pn**	**17 54 42.0**	**+0.6**
	baz=231						
ALS				*e*S	**Sn**	**17 55 06.8**	**+0.8**
	baz=231						
ELDTW	**Lidau**	**2.04**	**227**	*e*P	**Pn**	**17 54 41.2**	**-0.8**
	baz=226						

*IDC **16** 17:55:32.1±6.6, 1°.14N×96°.94E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, MLJ3.3/1, Error ellipse: s-maj=127.0km s-min=62.0km az=2.0*
*ISCJB **16** 17:55:38.1±1.8, 1°.3N±0°.1×96°.9E±0°.1, h56km±18km, mb3.9/5, Error ellipse: s-maj=23.8km s-min=20.1km az=12.0*
*DJA **16** 17:55:45, 1°.15N×97°.35E, h35km, MLv3.5/6*
ISC 16 17:55:39.2±2.3, 1°.3N±0°.1×96°.9E±0°.2, h46km±25km, n13, σ0°77/14, mb3.9/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.70**	**87**	P	**Pn**	**17 55 52.7**	**-0.1**
GSI				S	**Sn**	**17 56 02.7**	**+0.1**
TRSI	**Tarutung**	**2.21**	**70**	P	**Pn**	**17 56 12.7**	**-0.8**
TRSI				S	**Sn**	**17 56 39.6**	**0.0**
MNSI	**Mandailing Nat**	**2.74**	**100**	P	**Pn**	**17 56 20.1**	**-0.7**
PPI	**Padang Panjang**	**3.91**	**116**	P	**Pn**	**17 56 40.4**	**+3.5**
PDSI	**Padang**	**4.19**	**121**	P	**Pn**	**17 56 40.4**	**-0.2**
BSI	**Banda Aceh**	**4.48**	**339**	P	Px	17 56 57.3	
IPM	**Ipoh**	**5.22**	**52**	P	**Pn**	**17 56 56.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**17.20**	**7**	P	**Pn**	**17 59 35.2**	**-1.1**
	0.0nm,0.3s,baz=203,slow=13,SNR=4.3						
KSRS	**Korea Array**	**45.97**	**35**	P	**P**	**18 03 57.4**	**-0.5**
	1.1nm,0.9s,mb3.8,baz=223,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**47.09**	**346**	P	**P**	**18 04 07.5**	**+1.0**
	1.5nm,0.7s,mb4.1,baz=158,slow=7.3,SNR=9.0						
SONM	**Songino Array**	**47.11**	**9**	P	**P**	**18 04 06.8**	**+0.2**
	1.0nm,0.7s,mb3.9,baz=187,slow=10,SNR=9.3						
ZALV	**Zalesovo Beam**	**53.44**	**351**	P	**P**	**18 04 54.4**	**0.0**
	0.8nm,0.4s,mb4.0,baz=180,slow=6.8,SNR=7.4						
BVAR	**Borovoye Array**	**56.08**	**341**	P	**P**	**18 05 13.4**	**-0.1**
	0.4nm,0.5s,mb3.7,baz=119,slow=8.4,SNR=3.4						

*NEIC **16** 18:07:33.2±1.5, 35°.10N×81°.75E, h10km, mb3.5/1, Error ellipse: s-maj=20.3km s-min=14.5km az=135.0*
*BJI **16** 18:07:33.6, 35°.16N×81°.72E, h15km, ML3.7/6*
*IDC **16** 18:07:35.8±1.9, 35°.38N×81°.01E, h0km, mb3.7/3, mb1 3.7/8, mb1mx3.5/29, mbtmp3.7/8, ML2.9/4, Error ellipse: s-maj=31.0km s-min=23.8km az=104.0*
ISC 16 18:07:33.1±2.1, 35°.1N±0°.2×81°.9E±0°.2, h10km, n20, σ0°98/23, mb3.5/5, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**6.41**	**315**	Pn	**Pn**	**18 09 09.3**	**+1.7**
KSH				smax			
	comp=N,41nm,1.1s						
KSH				smax			
	comp=E,36nm,0.9s						
UCH	**Uchtor**	**9.11**	**323**	*e*Pn	**Pn**	**18 09 44.8**	**+0.2**
	comp=E,8.3nm,0.8s						
UCH				*e*Sg	Sn	18 12 10.1	+43
TKM2	**Tokmak 2**	**9.17**	**330**	*e*Pn	**Pn**	**18 09 44.9**	**-0.5**
	comp=E,2.3nm,0.9s						
TKM2				*e*Pg	Pn	18 10 16.0	+31
TKM2				*e*Sg	Sn	18 12 10.3	+42
AAK	**Ala-Archa**	**9.43**	**325**	Pn	**Pn**	**18 09 46.9**	**-2.0**
	comp=E,0.0nm,0.3s,baz=344,slow=9.9,SNR=1.8						
AAK				Pg	Pn	18 10 18.4	+29
	comp=E,0.0nm,0.3s,baz=108,slow=8.1,SNR=3.2						
AAK				Lg		18 12 18.1	
	comp=E,0.0nm,0.3s,baz=357,slow=17,SNR=3.1						
AAK	**Ala-Archa**	**9.43**	**325**	*e*Pn	**Pn**	**18 09 44.3**	**-4.7**
AAK				Pn	**Pn**	**18 09 46.9**	**-2.0**
AAK				Pg	Pn	18 10 18.4	+29
AAK				*e*Pg	Pn	18 10 20.9	+32
AAK				*e*Sg	Sn	18 12 17.6	+43
AAK				Lg		18 12 18.1	
AML	**Almayashu**	**9.46**	**320**	*e*Pn	**Pn**	**18 09 50.0**	**+0.6**
	comp=E,3.8nm,0.6s						
AML				*e*Pg	Pn	18 10 21.3	+32
EKS2	**Erkin-Say**	**9.80**	**322**	*e*Pn	**Pn**	**18 09 54.1**	**0.0**
	comp=E,2.5nm,0.7s						
MK31	**Makanchi Array**	**11.65**	**1**	*e*Pn	**Pn**	**18 10 20.0**	**+0.7**
MKAR	**Makanchi Array**	**11.65**	**1**	Pn	**Pn**	**18 10 19.6**	**+0.3**
	comp=E,0.1nm,0.3s,baz=189,slow=14,SNR=9.1						
MKAR				Sn	**Sn**	**18 12 25.9**	**-3.5**
	comp=E,0.1nm,0.3s,baz=158,slow=30,SNR=2.6						
MKAR				Lg		18 13 39.4	
	baz=199,slow=22,SNR=2.2						
MKAR	**Makanchi Array**	**11.65**	**1**	Pn	**Pn**	**18 10 19.6**	**+0.3**
MKAR				Sn	**Sn**	**18 12 25.9**	**-3.4**
MKAR				Lg		18 13 39.4	
KURK	**Kurchatov**	**15.75**	**352**	Pn	**Pn**	**18 11 11.0**	**-3.8**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=2.8						
KURK				Lg		18 15 44.1	
	comp=E,0.0nm,0.3s,baz=30,slow=18,SNR=2.7						
ZALV	**Zalesovo Beam**	**18.92**	**5**	P	**Pn**	**18 11 55.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=185,slow=16,SNR=5.3						
BVAR	**Borovoye Array**	**19.64**	**339**	P	**Pn**	**18 12 01.6**	**-1.6**
	baz=227,slow=39,SNR=4.3						
ABKAR	**Akbulak array**	**21.41**	**318**	P	**P**	**18 12 16.7**	**-4.2**
	comp=E,1.8nm,0.9s,mb3.4						
SONM	**Songino Array**	**22.22**	**48**	P	**P**	**18 12 38.4**	**+8.8**
	comp=E,0.8nm,0.7s,mb3.2,baz=236,slow=11,SNR=7.1						
AKTK	**Aktyubinsk**	**23.09**	**319**	P	**P**	**18 12 38.8**	**-0.1**
AKTO	**Aktyubinsk**	**23.09**	**319**	P	**P**	**18 12 38.8**	**-0.1**
	comp=E,0.6nm,0.6s,mb3.2,baz=99,slow=12,SNR=3.5						
FINES	**FINESS Array B**	**43.62**	**325**	P	**P**	**18 15 37.5**	**+0.2**
	comp=E,2.8nm,1.0s,mb3.9,baz=111,slow=11,SNR=3.2						
FINES	**FINESS Array B**	**43.62**	**325**	P	**P**	**18 15 37.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**74.58**	**275**	P	**P**	**18 19 12.3**	**-0.4**
	comp=E,1.0nm,1.0s,mb3.7,baz=57,slow=5.1,SNR=4.9						

DJA 16 18:14:24, 6°.81S×107°.07E, h30km, MLv3.1/8, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**0.41**	**309**	P	Pb	18 14 34.0	+1.0
DBJI				S	Sb	18 14 40.8	+1.7
LEM	**Lembang**	**0.54**	**92**	P	Pb	18 14 35.8	+0.6
LEM				S	Sb	18 14 47.6	+4.9
CGJI	**Cibinong**	**1.38**	**278**	P	Pn	18 14 48.1	+0.9
CGJI				S	Sn	18 15 07.3	+2.8
RBSI	**Rajabasa**	**1.63**	**306**	P	Pn	18 14 52.3	+1.6
CMJI	**Cimerak**	**1.68**	**125**	P	Pn	18 14 54.3	+3.0
KASI	**Kota Agung**	**2.86**	**296**	P	Pn	18 15 10.6	+3.0
MDSI	**Maura Dua**	**3.69**	**309**	P	Pn	18 15 17.6	-1.4
XMIS	**Christmas Isla**	**3.91**	**201**	P	Pn	18 15 21.7	-0.3
SJI	**Sawahan**	**4.75**	**101**	P	Pn	18 15 32.7	-0.9

*ISK **16** 18:17:34.6, 36°.96N×29°.24E, h5km, MD3.0*
*ISCJB **16** 18:17:35.8±0.5, 36°.98N±0°.03×29°.22E±0°.03, h1km±6km, Error ellipse: s-maj=4.9km s-min=4.0km az=37.5*
*CSEM **16** 18:17:35.9±0.1, 36°.97N×29°.24E, h5km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.6km az=5.0*
*DDA **16** 18:17:36.5, 37°.04N×29°.25E, h7km±7km, Md3.0*
ISC 16 18:17:36.2±0.5, 36°.97N±0°.03×29°.23E±0°.03, h6km±5km, n46, σ0°66/66, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**50**	*e*PG	**Pg**	**18 17 41.0**	**-0.8**
GLHS				*e*SG	**Sg**	**18 17 46.8**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.28**	**50**	*e*Pg	**Pg**	**18 17 41.0**	**-0.8**
GLHS				*e*Sg	**Sg**	**18 17 46.8**	**+1.2**
FETY	**Fethiye**	**0.35**	**199**	*e*PG	**Pg**	**18 17 42.3**	**-0.8**
FETY				*e*SG	**Sg**	**18 17 48.7**	**+0.9**
FETY	**Fethiye**	**0.35**	**199**	*e*Pg	**Pg**	**18 17 42.3**	**-0.8**
FETY				*e*Sg	**Sg**	**18 17 48.7**	**+0.9**
GOLH	**Golhisar**	**0.38**	**45**	*i* P	**Pg**	**18 17 43.1**	**-0.5**
GOLH				*i* S	**Sg**	**18 17 49.2**	**+0.7**
GOLH	**Golhisar**	**0.38**	**45**	*i* P	**Pg**	**18 17 43.1**	**-0.4**
GOLH				*i* S	**Sg**	**18 17 49.2**	**+0.7**
TURN	**Turunc**	**0.51**	**259**	*i* P	**Pg**	**18 17 50.5**	**+4.5**
TURN				*i* S	**Sg**	**18 18 02.4**	**+10**
TURN	**Turunc**	**0.51**	**259**	*i* P	**Pg**	**18 17 50.5**	**+4.4**
ELL	**Elmali**	**0.59**	**112**	*e*PG	**Pg**	**18 17 46.9**	**-0.7**
ELL	**Elmali**	**0.59**	**112**	*e*Pg	**Pg**	**18 17 46.9**	**-0.7**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P	**Pg**	**18 17 48.8**	**-1.5**
DNZL				*i* S	**Sg**	**18 18 00.3**	**+0.4**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P	**Pg**	**18 17 48.8**	**-1.5**
DNZL				*i* S	**Sg**	**18 18 00.3**	**+0.5**
YER	**Yerkesik**	**0.77**	**282**	*e*PG	**Pg**	**18 17 50.9**	**-0.2**
YER	**Yerkesik**	**0.77**	**282**	*e*Pg	**Pg**	**18 17 50.9**	**-0.2**
AKAS	**Kas**	**0.80**	**157**	*i* P	**Pg**	**18 17 51.8**	**+0.2**
AKAS				*i* S	**Sg**	**18 18 05.8**	**+4.0**
AKAS	**Kas**	**0.80**	**157**	*i* P	**Pg**	**18 17 51.8**	**+0.3**
DENT	**Denizli**	**0.80**	**349**	*e*PG	**Pg**	**18 17 51.6**	**0.0**
DENT	**Denizli**	**0.80**	**349**	*e*Pg	**Pg**	**18 17 51.6**	**0.0**
KORT	**Korkueli**	**0.90**	**88**	*i* P	**Pg**	**18 17 53.0**	**-0.5**
KORT				*i* S	**Sg**	**18 18 09.2**	**+4.0**
KORT	**Korkueli**	**0.90**	**88**	*i* P	**Pg**	**18 17 53.0**	**-0.5**
KORT				*i* S	**Sg**	**18 18 09.2**	**+4.0**
ANTB	**Antalya**	**1.15**	**93**	*e*PN	**Pg**	**18 17 57.7**	**-0.6**
ANTB	**Antalya**	**1.15**	**93**	*e*Pn	**Pg**	**18 17 57.7**	**-0.5**
BCK	**Bucak**	**1.19**	**65**	*e*PN	**Pn**	**18 17 59.1**	**-0.3**
BCK	**Bucak**	**1.19**	**65**	*e*Pn	**Pn**	**18 17 59.1**	**-0.3**

	comp=E,600nm,6.4s						
LZH				LR	LR		
	comp=Z,630nm,7.1s						
GYA	**Guiyang**	**5.73**	**169**	Pg	**Pb**	**18 20 20.6**	**-4.5**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,70nm,0.8s						
KMI	**Kunming**	**7.36**	**200**	Pn	**Pn**	**18 20 30.8**	**-1.8**
KMI				Sn	**Sn**	**18 21 56.8**	**+0.6**
KMI				smax			
	comp=N,12nm,0.9s						
KMI				smax			
	comp=E,11nm,0.7s						
WHN	**Wuhan**	**7.77**	**99**	Pg	**Pb**	**18 20 53.8**	**-6.0**
WHN				Sn	**Sn**	**18 22 07.1**	**+0.8**
GTA	**Gaotai**	**8.60**	**329**	*e*P	**Pn**	**18 20 53.5**	**+3.9**
GTA				pP		18 20 56.8	
GTA				sP		18 20 59.6	
GTA				S	**Sn**	**18 22 28.6**	**+1.8**
GTA				pmax	pmax		
	comp=Z,78nm,4.8s						
GTA				LR	LR		
	comp=N,120nm,10.1s						
GTA				LR	LR		
	comp=E,150nm,10.7s						
GTA				LR	LR		
	comp=Z,130nm,10.1s						
LSA	**Lhasa**	**12.52**	**263**	P	**Pn**	**18 21 43.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**14.81**	**205**	Pn	**Pn**	**18 22 19.2**	**+4.6**
	comp=Z,0.1nm,0.3s,baz=4.1,slow=14,SNR=5.1						
SONM	**Songino Array**	**15.72**	**2**	Pn	**Pn**	**18 22 28.1**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=3.6						
KSRS	**Korea Array**	**19.20**	**68**	P	**Pn**	**18 23 16.3**	**+6.4**
	comp=Z,0.1nm,0.3s,baz=263,slow=11,SNR=3.3						
MK31	**Makanchi Array**	**23.01**	**316**	*e*P	**P**	**18 23 48.2**	**-1.8**
MKAR	**Makanchi Array**	**23.01**	**316**	P	**P**	**18 23 48.8**	**-1.2**
	comp=Z,1.3nm,0.7s,mb3.5,baz=116,slow=11,SNR=11						
TKM2	**Tokmak 2**	**25.90**	**303**	P	**P**	**18 24 17.6**	**+0.5**
ZALV	**Zalesovo Beam**	**26.35**	**332**	P	**P**	**18 24 20.4**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.6,baz=134,slow=9.8,SNR=5.6						
UCH	**Uchtor**	**26.52**	**301**	P	**P**	**18 24 23.1**	**+0.4**
	comp=Z,7.1nm,1.4s,mb4.0						
KURK	**Kurchatov**	**27.16**	**321**	P	**P**	**18 24 27.6**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.5,baz=127,slow=10,SNR=8.0						
KURK	**Kurchatov**	**27.16**	**321**	P	**P**	**18 24 27.6**	**-0.8**
KURK				P		18 24 28.0	
ABKAR	**Akbulak array**	**37.88**	**310**	*e*P	**P**	**18 26 01.9**	**-0.2**
	comp=Z,1.5nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**57.25**	**299**	P	**P**	**18 28 32.7**	**0.0**
	comp=Z,1.3nm,0.8s,mb4.0,baz=96,slow=6.7,SNR=8.2						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**18 28 32.9**	**-0.4**
	comp=Z,2.4nm,0.9s,mb4.2,baz=83,slow=5.7,SNR=8.2						
AKASG	**Malin Array Be**	**57.54**	**313**	P	**P**	**18 28 33.7**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.2,baz=68,slow=7.4,SNR=4.2						
AKASG	**Malin Array Be**	**57.54**	**313**	P	**P**	**18 28 33.7**	**-0.9**
WRA	**Warramunga Arr**	**58.69**	**148**	P	**P**	**18 28 48.4**	**+5.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=341,slow=7.7,SNR=6.3						
ASAR	**Alice Springs**	**61.77**	**150**	P	**P**	**18 29 09.5**	**+5.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=332,slow=6.1,SNR=6.1						
NB2	**NORSAR Subarra**	**64.43**	**327**	P	**P**	**18 29 20.2**	**-1.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.43**	**327**	P	**P**	**18 29 20.5**	**-0.8**
	comp=Z,0.7nm,0.5s,mb4.0,baz=73,slow=6.9,SNR=4.0						
GERES	**GERESS Array B**	**67.67**	**314**	P	**P**	**18 29 42.8**	**+0.5**
	comp=Z,0.1nm,0.3s,mb3.3,baz=72,slow=4.3,SNR=3.4						
LPG	**La Plagne**	**73.40**	**313**	*e*P	**P**	**18 30 18.1**	**+0.8**
	comp=Z,8.8nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.40**	**314**	*e*P	**P**	**18 30 18.0**	**+0.7**
	comp=Z,3.1nm,0.5s,mb4.2						

IDC 16 18:22:49.9±5.2, 28°.93S×67°.18W, h141km±41km, mb3.2/1, mb1 3.1/3, mb1mx3.0/16, mbtmp2.9/3, Error ellipse: s-maj=107.9km s-min=21.0km az=137.0, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.82**	**199**	P	Pn	18 23 34.5	-0.1
	0.3nm,0.3s,baz=10.0,slow=8.7,SNR=76						
CFAA				S	Sn	18 24 09.9	+0.8
	2.3nm,0.3s,baz=128,slow=19,SNR=33						
CPUP	**Villa Florida**	**9.11**	**76**	P	Pn	18 24 56.6	-1.7
	0.6nm,0.3s,baz=212,slow=12,SNR=5.6						
TORD	**Torodi Ar. Bea**	**78.52**	**68**	P	P	18 34 36.7	+0.8
	0.3nm,0.5s,baz=270,slow=5.4,SNR=6.1						
ASAR	**Alice Springs**	**123.91**	**203**	PKP	PKPdf	18 41 30.7	-1.1
	0.4nm,0.6s,baz=140,slow=1.7,SNR=8.2						
WRA	**Warramunga Arr**	**127.16**	**206**	PKP	PKPdf	18 41 37.2	-0.9
	0.7nm,0.7s,baz=172,slow=1.8,SNR=13						
KURK	**Kurchatov**	**146.34**	**40**	PKPbc	PKPbc	18 42 13.8	+0.1
	0.5nm,0.5s,baz=287,slow=3.0,SNR=3.5						
ZALV	**Zalesovo Beam**	**147.74**	**31**	PKPbc	PKPbc	18 42 16.9	-0.6
	0.9nm,0.4s,baz=298,slow=3.2,SNR=4.9						
MKAR	**Makanchi Array**	**150.28**	**45**	PKPbc	PKPbc	18 42 23.8	-0.3
	0.6nm,0.8s,baz=29,slow=2.8,SNR=4.2						

*IDC **16** 18:24:27.4±1.3, 30°.95N×103°.69E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=41.9km s-min=24.1km az=64.0*
*ISCJB **16** 18:24:28.2±0.7, 31°.07N±0°.09×104°.0E±0°.1, h10km, mb3.4/3, Error ellipse: s-maj=17.6km s-min=6.8km az=40.2*

ISC 16 18:24:30.1±0.8, 31°.11N±0°.07×103°.8E±0°.1, h10km, n8, σ1§24/11, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.20**	**190**	Pg	**Pg**	**18 24 34.1**	**-0.3**
CD2				Sg	**Sg**	**18 24 39.3**	**+2.1**
CD2				smax			
	comp=N,7μm,0.8s						
XAN	**Xi'an**	**5.22**	**55**	Pg	**Pg**	**18 26 11.3**	**+1.3**
XAN				Sg	**Sg**	**18 27 09.9**	**-7.7**
XAN				smax			
	comp=N,54nm,0.6s						
XAN				smax			
	comp=E,16nm,0.7s						
KMI	**Kunming**	**6.04**	**189**	Pn	**Pn**	**18 25 59.1**	**-0.4**
KMI				Sn	**Sn**	**18 27 15.3**	**+6.6**
KMI				smax			
	comp=N,14nm,1.2s						
KMI				smax			
	comp=E,13nm,1.5s						
KMI				LR	LR		
	comp=N,140nm,11.8s						
KMI				LR	LR		
	comp=E,130nm,8.6s						
SONM	**Songino Array**	**16.82**	**6**	Pn	**Pn**	**18 28 27.1**	**+1.5**
	comp=E,0.1nm,0.3s,baz=187,slow=10,SNR=7.0						
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**18 29 12.4**	**0.0**
	comp=E,2.8nm,0.6s,baz=262,slow=11,SNR=26						
KURK	**Kurchatov**	**27.09**	**324**	P	**P**	**18 30 11.9**	**-0.9**
	comp=E,0.1nm,0.3s,mb2.9,baz=128,slow=9.8,SNR=2.3						
WRA	**Warramunga Arr**	**58.62**	**146**	P	**P**	**18 34 26.0**	**-1.5**
	comp=E,0.7nm,0.8s,mb3.8,baz=338,slow=7.9,SNR=8.7						
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**18 34 46.3**	**-1.8**
	comp=E,0.4nm,0.8s,mb3.6,baz=334,slow=7.0,SNR=4.0						

*NEIC **16** 18:24:48.8, 14°.74N×59°.90W, h142km, MD3.6(TRN), After TRN.*

TRN 16 18:24:49.9, 15°.10N×60°.95W, h147km, MD3.6, M2.4(FDF), 4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.41**	**208**	*e*Pn	Pn	18 25 11.4	+0.9
FDF				*e*Sn	Sn	18 25 26.5	+0.3
FDF	**Fort de France**	**0.41**	**208**	⇓*e*P	Pn	18 25 11.5	+1.0
FDF				⇓*e*S	Sn	18 25 27.0	+0.8
MVM	**Montagne Vaucl**	**0.54**	**174**	⇓*e*P	Pn	18 25 12.4	+1.2
MVM				⇓*e*S	Sn	18 25 27.9	+0.5
BIM	**Bigot**	**0.59**	**191**	*e*P	Pn	18 25 13.3	+1.9
BIM				*e*S	Sn	18 25 29.5	+1.7
DEG	**La Desirade**	**1.22**	**355**	*e*P	Pn	18 25 17.8	+1.5
DEG				*e*S	Sn	18 25 37.4	+0.8
SLB	**Belfond**	**1.26**	**184**	*e*P	Pn	18 25 18.4	+1.5
SLB				*e*S	Sn	18 25 40.0	+2.5
SLB	**Belfond**	**1.26**	**184**	*e*P	Pn	18 25 18.4	+1.5
SLB				*e*S	Sn	18 25 39.2	+1.7
MCLT	**Moule a Chique**	**1.38**	**180**	*e*P	Pn	18 25 18.8	+0.8
MCLT				*e*S	Sn	18 25 39.1	-0.4
MCLT	**Moule a Chique**	**1.38**	**180**	*e*P	Pn	18 25 18.8	+0.8
MCLT				*e*S	Sn	18 25 40.2	+0.7
SSV	**Crater Summit**	**1.77**	**188**	*e*P	Pn	18 25 20.9	-1.3
SSV				*e*S	Sn	18 25 49.5	+2.3
SSV	**Crater Summit**	**1.77**	**188**	*e*P	Pn	18 25 23.1	+0.9
SSV				*e*S	Sn	18 25 48.3	+1.2
SVV	**Soufriere Volc**	**1.79**	**188**	*e*P	Pn	18 25 22.8	+0.4
SVV				*e*P		18 25 24.0	
SVV				*e*S	Sn	18 25 50.8	+3.5
SVV	**Soufriere Volc**	**1.79**	**188**	*e*P	Pn	18 25 22.8	+0.4
SVV	**Soufriere Volc**	**1.79**	**188**	*e*P	Pn	18 25 24.0	+1.5
BHS	**Barnard House**	**1.80**	**185**	*e*P	Pn	18 25 23.3	+0.8
BHS				*e*S	Sn	18 25 48.9	+1.3
BHS	**Barnard House**	**1.80**	**185**	*e*P	Pn	18 25 23.3	+0.8
BHS				*e*S	Sn	18 25 48.9	+1.3
SVB	**Belmont**	**1.84**	**189**	*e*P	Pn	18 25 23.6	+0.6
SVB				*e*S	Sn	18 25 47.7	-0.7
SVB	**Belmont**	**1.84**	**189**	*e*P	Pn	18 25 23.6	+0.6
SVB				*e*S	Sn	18 25 49.0	+0.6
FCV	**Fort Charlotte**	**1.95**	**188**	*e*P	Pn	18 25 25.6	+1.3
FCV				*e*S	Sn	18 25 51.0	+0.3
FCV	**Fort Charlotte**	**1.95**	**188**	*e*P	Pn	18 25 25.6	+1.3
FCV				*e*S	Sn	18 25 51.0	+0.3

IDC 16 18:29:51.8±1.9, 19°.33N×145°.66E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.5/23, mbtmp3.8/4, MS2.4/1, Ms1 2.4/1, ms1mx1.7/38, Error ellipse: s-maj=177.5km s-min=24.8km az=115.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**24.23**	**261**	LR	LR	18 43 09.9	
	comp=Z,8.6nm,20.3s,baz=284,slow=33						
WRA	**Warramunga Arr**	**40.58**	**196**	P	P	18 37 33.1	-0.1
	1.3nm,0.5s,baz=18,slow=8.9,SNR=19						
ASAR	**Alice Springs**	**44.25**	**196**	P	P	18 38 03.1	+0.1
	0.4nm,0.6s,baz=18,slow=8.6,SNR=9.3						
YKA	**Yellowknife Ar**	**77.45**	**28**	P	P	18 41 48.9	+0.2
	1.3nm,1.1s,baz=284,slow=5.0,SNR=4.9						
NVAR	**Mina Array Bea**	**82.78**	**52**	P	P	18 42 18.3	+0.3
	1.1nm,0.8s,baz=266,slow=6.3,SNR=4.9						

*IDC **16** 18:32:47.9±2.2, 35°.51N×81°.30E, h0km, mb3.4/2, mb1 3.3/7, mb1mx3.2/29, mbtmp3.3/7, ML3.1/5, Error ellipse: s-maj=40.4km s-min=28.1km az=128.0*
*ISCJB **16** 18:32:49.0±3.5, 35°.7N±0°.1×81°.5E±0°.1, h6km±27km, mb3.6/3, Error ellipse: s-maj=20.6km s-min=14.6km az=44.2*
*NEIC **16** 18:32:50.0±1.2, 35°.55N×81°.52E, h10km, mb3.9/2, Error ellipse: s-maj=19.9km s-min=14.2km az=31.0*

ISC 16 18:32:50.7±4.2, 35°.56N±0°.10×81°.6E±0°.1, h13km±30km, n16, σ1§15/18, mb3.6/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.95**	**313**	Pn	**Pn**	**18 34 24.9**	**+6.4**
KSH				Sn	**Sb**	**18 35 46.9**	**+1.4**
KSH				smax			
	comp=N,46nm,0.8s						
KSH				smax			
	comp=E,59nm,0.7s						
UCH	**Uchtor**	**8.64**	**323**	*e*Pn	**Pn**	**18 34 55.2**	**-0.1**
	comp=E,4.1nm,0.7s						
TKM2	**Tokmak 2**	**8.69**	**330**	P	**Pn**	**18 34 56.5**	**+0.4**
AAK	**Ala-Archa**	**8.95**	**324**	Pn	**Pn**	**18 35 00.7**	**+1.0**
	comp=E,0.0nm,0.3s,baz=153,slow=4.5,SNR=3.0						
AAK				Lg		18 37 23.0	
	comp=E,0.0nm,0.3s,baz=196,slow=20,SNR=2.4						
AAK	**Ala-Archa**	**8.95**	**324**	P	**Pn**	**18 35 03.5**	**+3.8**
AAK				Lg		18 37 23.0	
AML	**Almayashu**	**8.99**	**319**	*e*P	**Pn**	**18 35 00.2**	**0.0**
	comp=E,3.3nm,0.6s						
EKS2	**Erkin-Say**	**9.32**	**322**	P	**Pn**	**18 35 03.9**	**-0.9**
MK31	**Makanchi Array**	**11.23**	**3**	*e*P	**Pn**	**18 35 30.7**	**-0.2**
MKAR	**Makanchi Array**	**11.23**	**3**	Pn	**Pn**	**18 35 30.6**	**-0.4**
	comp=E,0.1nm,0.3s,baz=172,slow=12,SNR=3.2						
MKAR				Sn	**Sn**	**18 37 36.3**	**-0.1**
	comp=E,0.1nm,0.3s,baz=189,slow=26,SNR=2.8						
KURK	**Kurchatov**	**15.30**	**353**	Pn	**Pn**	**18 36 22.0**	**-4.2**
	comp=E,0.0nm,0.3s,baz=168,slow=12,SNR=3.0						
ZALV	**Zalesovo Beam**	**18.52**	**6**	Pn	**Pn**	**18 37 05.6**	**-1.3**
	comp=E,0.1nm,0.3s,baz=182,slow=13,SNR=2.4						
BVAR	**Borovoye Array**	**19.17**	**339**	P	**Pn**	**18 37 12.3**	**-2.4**
	comp=E,0.3nm,0.3s,baz=169,slow=8.5,SNR=3.1						
ABKAR	**Akbulak array**	**20.94**	**317**	*e*P	**P**	**18 37 34.2**	**+1.1**
	comp=E,0.9nm,0.6s						
SONM	**Songino Array**	**22.11**	**49**	P	**P**	**18 37 47.2**	**+1.5**
	comp=E,0.7nm,0.8s,mb3.1,baz=236,slow=12,SNR=6.5						
ENH	**Enshi**	**23.97**	**95**	*e*P	**P**	**18 38 06.1**	**+1.2**
	comp=E,6.8nm,0.6s,mb4.2						
TORD	**Torodi Ar. Bea**	**74.31**	**275**	P	**P**	**18 44 26.3**	**-1.9**
	comp=E,0.5nm,0.8s,mb3.5,baz=39,slow=6.4,SNR=3.3						

*IDC **16** 18:39:05.2±2.0, 5°.63S×151°.52E, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/16, mbtmp4.1/6, MS2.6/2, Ms1 2.6/2, ms1mx2.4/27, Error ellipse: s-maj=76.5km s-min=24.1km az=114.0*
*NEIC **16** 18:39:09.0±1.4, 5°.57S×151°.33E, h20km, mb4.6/2, Error ellipse: s-maj=47.1km s-min=12.8km az=118.0*

ISC 16 18:39:13.7±2.3, 5°.4S±0°.2×150°.9E±0°.4, h35km, n18, σ0§84/12, mb4.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.24**	**197**	LR	LR	18 47 02.2	
	comp=Z,69nm,20.2s,baz=349,slow=31						
KAKA	**Kakadu**	**19.57**	**247**	*e*P	**Pn**	**18 43 39.1**	**-1.2**
	10nm,0.5s						
KAKA	**Kakadu**	**19.57**	**247**	*e*P	**Pn**	**18 43 39.2**	**-1.1**
	31nm,0.6s						
WRAB	**Tennant Creek**	**21.58**	**227**	*e*P	**P**	**18 44 00.7**	**+0.1**
	11nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**21.59**	**227**	*e*P	**P**	**18 44 00.8**	**+0.2**
WRA	**Warramunga Arr**	**21.60**	**227**	P	**P**	**18 44 00.7**	**0.0**
	9.7nm,0.6s,mb4.4,baz=53,slow=9.8,SNR=79						
WRA				PcP	PcP	18 47 59.7	-2.3
	0.4nm,0.6s,baz=39,slow=2.1,SNR=5.2						
KNA	**Kununurra**	**23.99**	**243**	*e*P	**P**	**18 44 26.5**	**+1.2**
	12nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**24.40**	**220**	P	**P**	**18 44 28.4**	**-0.5**
	4.7nm,0.6s,mb4.1,baz=57,slow=8.8,SNR=116						
FITZ	**Fitzroy Crossi**	**27.67**	**241**	*e*P	**P**	**18 44 58.9**	**+0.3**
	11nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**27.67**	**241**	P	**P**	**18 44 59.0**	**+0.4**
	6.2nm,0.5s,mb4.5,baz=78,slow=7.3,SNR=21						
TGY	**Tagaytay City**	**35.49**	**303**	LR	LR	18 59 17.0	
	comp=Z,3.6nm,20.5s,baz=293,slow=34						
SONM	**Songino Array**	**65.86**	**329**	P	**P**	**18 49 57.2**	**+1.5**
	0.4nm,0.6s,mb3.6,baz=140,slow=4.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**80.63**	**327**	P	**P**	**18 51 21.7**	**-1.0**
	0.4nm,0.4s,mb3.7,baz=93,slow=5.8,SNR=2.5						
BVAR	**Borovoye Array**	**88.60**	**323**	P	**P**	**18 52 02.2**	**-0.7**
	0.2nm,0.4s,mb3.8,baz=133,slow=6.1,SNR=2.3						
GERES	**GERESS Array B**	**123.58**	**327**	PKP	PKPdf	18 58 05.7	-1.9
	0.5nm,0.6s,baz=90,slow=0.5,SNR=6.0						
GERES	**GERESS Array B**	**123.58**	**327**	PKP	PKPdf	18 58 05.7	-1.9
TORD	**Torodi Ar. Bea**	**148.66**	**286**	PKPbc	PKPbc	18 58 56.7	-1.6
	3.0nm,0.7s,baz=68,slow=2.7,SNR=20						
TORD	**Torodi Ar. Bea**	**148.66**	**286**	PKPbc	PKPbc	18 58 56.7	-1.6

*IDC **16** 18:47:40.6±1.0, 31°.60N×103°.99E, h0km, mb3.4/7, mb1 3.5/8, mb1mx3.4/28, mbtmp3.4/8, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.1/32, Error ellipse: s-maj=44.7km s-min=18.3km az=55.0*
*BJI **16** 18:47:41.3, 31°.73N×104°.90E, h15km, ML3.5/5*
*NEIC **16** 18:47:42.1±0.7, 31°.70N×104°.22E, h10km, Error ellipse: s-maj=21.8km s-min=9.5km az=49.0*
*ISCJB **16** 18:47:43.4±1.4, 31°.64N±0°.07×104°.2E±0°.1, h35km±16km, mb3.4/6, Error ellipse: s-maj=17.2km s-min=10.9km az=153.5*

ISC 16 18:47:44.2±1.9, 31°.64N±0°.07×104°.2E±0°.1, h25km±16km, n14, σ0§83/14, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.80**	**205**	Pg	**Pb**	**18 47 59.8**	**+0.2**
CD2				smax			
	comp=N,840nm,0.7s						
XAN	**Xi'an**	**4.67**	**58**	Pn	**Pn**	**18 48 44.0**	**-9.1**
XAN				smax			
	comp=N,71nm,0.8s						
XAN				smax			
	comp=E,320nm,0.8s						
ENH	**Enshi**	**4.78**	**105**	*e*Pn	**Pn**	**18 48 53.5**	**-1.1**
GYA	**Guiyang**	**5.61**	**156**	*e*Pn	**Pn**	**18 49 06.3**	**+0.3**
GYA				Sn	**Sn**	**18 50 08.8**	**-0.8**
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,40nm,0.7s						
SONM	**Songino Array**	**16.27**	**5**	Pn	**Pn**	**18 51 30.3**	**-0.5**
	comp=E,0.2nm,0.3s,baz=194,slow=10,SNR=2.9						
KSRS	**Korea Array**	**20.39**	**67**	P	**P**	**18 52 21.0**	**+1.9**
	comp=E,0.3nm,0.4s,baz=256,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**18 52 43.2**	**+0.3**
	comp=E,0.2nm,0.6s,mb2.8,baz=113,slow=9.3,SNR=4.9						
MKAR	**Makanchi Array**	**22.61**	**318**	P	**P**	**18 52 43.2**	**+0.3**
ZALV	**Zalesovo Beam**	**26.26**	**334**	P	**P**	**18 53 16.2**	**-1.0**
	comp=E,1.1nm,0.6s,mb3.6,baz=135,slow=8.4,SNR=4.6						
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**18 53 22.4**	**-0.1**
	comp=E,0.2nm,0.5s,mb2.9,baz=129,slow=8.6,SNR=3.2						
GUMO	**Guam**	**41.36**	**106**	LR	LR	19 13 49.9	
	comp=E,30nm,19.9s,baz=250,slow=38						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**18 57 28.2**	**-0.2**
	comp=E,2.6nm,1.1s,mb4.2,baz=65,slow=6.6,SNR=3.6						
WRA	**Warramunga Arr**	**58.89**	**146**	P	**P**	**18 57 41.2**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.6,baz=340,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**18 58 03.0**	**+1.3**
	comp=E,0.3nm,0.8s,mb3.5,baz=341,slow=6.6,SNR=6.0						

DJA 16 18:48:12, 2°.16N×120°.88E, h12km, MLv3.1/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.98**	**148**	P	Pn	18 48 45.0	-0.4
MPSI	**Mapaga**	**2.06**	**208**	P	Pn	18 48 46.4	-0.1
APSI	**Ampana**	**3.15**	**166**	P	Pn	18 48 58.1	-3.3
APSI				S	Sn	18 49 41.5	+2.6
PCI	**Palu**	**3.22**	**199**	P	Pn	18 49 02.9	+0.5
LUWI	**Luwuk**	**3.70**	**149**	P	Pn	18 49 10.4	+1.4
LUWI				S	Sn	18 49 48.9	-3.7
KSM	**Kuching**	**10.59**	**266**	P	Pn	18 50 43.8	+0.1

*GUC **16** 18:48:37.4±0.7, 21°.21S×67°.49W, h200km, ML3.8*
*IDC **16** 18:48:42.0±8.7, 20°.74S×67°.04W, h232km±72km, mb3.6/1, mb1 3.5/2, mb1mx3.1/17, mbtmp3.4/2, Error ellipse: s-maj=101.0km s-min=82.6km az=22.0*

ISC 16 18:48:39.1±1.4, 21°.05S±0°.10×67°.6W±0°.4, h227km±32km, n8, σ1§01/13, 2C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.77**	**270**	⇓*i*P	**Pn**	**18 49 16.6**	**-0.9**
PB01				*i* S	**S**	**18 49 46.0**	**-1.6**
PB01				AML	AML	18 49 49.8	
	comp=E,330nm,0.3s						
PB04	**Plate Boundary**	**2.14**	**235**	⇑*i*P	**Pn**	**18 49 25.8**	**+4.8**
PB04				*i* S	**S**	**18 50 01.4**	**+7.5**
PB04				AML	AML	18 50 04.8	
	comp=N,130nm,0.2s						
HMBC	**Humberston**	**2.28**	**289**	⇓*i*P	**Pn**	**18 49 21.9**	**-0.6**
HMBC				*i* S	**S**	**18 49 55.5**	**-0.9**
HMBC				AML	AML	18 49 58.4	
	comp=N,432nm,0.2s						
MNMC	**Miæe Miæ**	**2.68**	**315**	⇓*i*P	**Pn**	**18 49 27.4**	**+0.7**
MNMC				*i* S	**S**	**18 50 05.6**	**+1.5**
MNMC				AML	AML	18 50 08.2	
	comp=N,484nm,0.2s						
CEN1	**Los Morros**	**3.36**	**226**	⇑*i*P	**Pn**	**18 49 35.4**	**+1.2**
CEN1				*e*S	**S**	**18 50 18.7**	**+0.9**
CEN1				AML	AML	18 50 20.7	
	comp=N,45nm,0.3s						
LPAZ	**La Paz**	**4.76**	**354**	P	**Pn**	**18 49 52.2**	**+0.9**
	comp=N,2.3nm,0.3s,baz=165,slow=7.4,SNR=43						
LPAZ				S	**S**	**18 50 48.4**	**-0.2**
	baz=281,slow=23,SNR=1.5						
TORD	**Torodi Ar. Bea**	**76.05**	**70**	P	**P**	**19 00 01.1**	**-1.0**
	comp=N,0.9nm,0.4s,baz=254,slow=5.5,SNR=26						
MKAR	**Makanchi Array**	**144.54**	**36**	PKP	PKPdf	19 07 49.1	+0.7
	comp=N,0.6nm,0.6s,baz=342,slow=3.7,SNR=6.1						

*CSEM **16** 18:54:54.6, 35°.12N×21°.42E, h77km, After ATH*
*NEIC **16** 18:54:54.6, 35°.12N×21°.42E, h77km, After ATH.*

ATH 16 18:54:54.6, 35°.18N×21°.48E, h29km±9km, MD3.6/6, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.68**	**49**	*e*PN	Pn	18 55 24.2	+2.2
KYTH	**Kithira**	**1.68**	**49**	*e*P	Pn	18 55 24.2	+2.2
PYL	**PYLOS**	**1.73**	**7**	*e*PN	Pn	18 55 24.9	+2.3
PYL				*e*SN	Sn	18 55 46.1	+2.4
PYL	**PYLOS**	**1.73**	**7**	*e*P	Pn	18 55 24.9	+2.3
VLI	**Veliai**	**1.94**	**37**	*e*PB	Pb	18 55 28.1	-1.1
VLI				*e*SN	Sn	18 55 52.0	+3.1
VLI	**Veliai**	**1

URFA				*e*Sg	**Sg**	**18 57 26.4**	**+1.2**
GZT	**Gaziantep**	**0.86**	**218**	*i* P	**Pg**	**18 57 17.8**	**+0.6**
GZT				*i* S	**Sg**	**18 57 29.5**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.92**	**68**	*e*PG	**Pg**	**18 57 17.5**	**-0.9**
SVRC	**Sivrice-ELAZID**	**0.92**	**68**	*e*Pg	**Pg**	**18 57 17.5**	**-0.9**
DARE	**Darende-Malaty**	**0.97**	**340**	*e*PG	**Pg**	**18 57 14.7**	**-4.7**
KMRS	**Kahramanmaras**	**1.17**	**244**	*e*PN	**Pn**	**18 57 21.8**	**-1.6**
KMRS	**Kahramanmaras**	**1.17**	**244**	*e*Pn	**Pn**	**18 57 21.8**	**-1.6**
GAZ	**Gaziantep**	**1.18**	**223**	*e*PN	**Pn**	**18 57 22.0**	**-1.4**
GAZ	**Gaziantep**	**1.18**	**223**	*e*Pn	**Pn**	**18 57 22.0**	**-1.4**
KEMA	**Kemaliye**	**1.25**	**10**	*i* P	**Pn**	**18 57 22.8**	**-1.6**
KEMA				*i* S	**Sb**	**18 57 40.1**	**-0.6**
KEMA	**Kemaliye**	**1.25**	**10**	*i* P	**Pn**	**18 57 22.8**	**-1.6**
KEMA				*i* S	**Sb**	**18 57 40.1**	**-0.6**
PTK	**Pertek**	**1.25**	**47**	*e*PN	**Pn**	**18 57 23.7**	**-0.8**
PTK	**Pertek**	**1.25**	**47**	*e*Pn	**Pn**	**18 57 23.7**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.36**	**299**	*e*PN	**Pn**	**18 57 27.3**	**+1.4**
SARI	**SarD1z-Kayseri**	**1.36**	**299**	*e*Pn	**Pn**	**18 57 27.3**	**+1.4**
DIYA	**Diyarbakir**	**1.50**	**94**	*e*P	**Pn**	**18 57 27.9**	**0.0**
DIYA				*i* S	**Sn**	**18 57 49.1**	**+1.5**
DIYA	**Diyarbakir**	**1.50**	**94**	*e*P	**Pn**	**18 57 27.9**	**0.0**
DIYA				*i* S	**Sn**	**18 57 49.1**	**+1.4**
KUZU	**Kuzuini**	**1.56**	**216**	*i* P	**Pn**	**18 57 29.5**	**+0.9**
KUZU				*i* S	**Sn**	**18 57 48.5**	**-0.5**
KUZU	**Kuzuini**	**1.56**	**216**	*i* P	**Pn**	**18 57 29.5**	**+0.9**
KUZU				*i* S	**Sn**	**18 57 48.5**	**-0.5**
EZC	**Erzincan**	**1.93**	**27**	*e*PN	**Pn**	**18 57 33.9**	**+0.2**
KOZT	**Kozan**	**1.98**	**254**	*e*PN	**Pn**	**18 57 34.2**	**-0.2**
SVSK	**Karacayir**	**2.11**	**333**	*e*PN	**Pn**	**18 57 36.4**	**+0.2**
SVSK	**Karacayir**	**2.11**	**333**	*e*Pn	**Pn**	**18 57 36.4**	**+0.2**
KELT	**Kelkit**	**2.26**	**21**	*i* P	**Pn**	**18 57 39.5**	**+1.2**
KELT				*i* S	**Sn**	**18 58 09.5**	**+3.2**
KELT	**Kelkit**	**2.26**	**21**	*i* P	**Pn**	**18 57 39.5**	**+1.2**
KELT				*i* S	**Sn**	**18 58 09.5**	**+3.2**

IDC 16 19:01:06.6±1.3, 31°43N×104°15E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML2.9/1, Error ellipse: s-maj=44.7km s-min=22.0km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.47**	**5**	Pn	Pn	19 04 58.1	-0.9
	0.0nm,0.3s,baz=184,slow=8.5,SNR=2.3						
KSRS	**Korea Array**	**20.48**	**66**	P	P	19 05 46.1	+0.2
	8.8nm,0.7s,baz=254,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**22.76**	**319**	P	P	19 06 11.6	+1.3
	0.7nm,0.7s,baz=110,slow=11,SNR=6.7						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	P	19 06 44.9	-0.1
	0.6nm,0.4s,baz=128,slow=10,SNR=4.2						
KURK	**Kurchatov**	**27.01**	**323**	P	P	19 06 50.0	-0.1
	0.8nm,0.7s,baz=127,slow=8.9,SNR=8.0						
FINES	**FINESS Array B**	**57.32**	**326**	P	P	19 10 55.2	-0.8
	0.2nm,0.4s,baz=56,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**58.72**	**146**	P	P	19 11 06.2	0.0
	1.0nm,0.8s,baz=339,slow=7.4,SNR=6.9						

*IDC **16** 19:06:21.8±1.9, 37°08N×29°21E, h0km, mb3.2/1, mb1 3.1/4, mb1mx3.0/25, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=50.7km s-min=21.7km az=155.0*
*ISCJB **16** 19:06:22.9±0.5, 36°97N±0°02×29°21E±0°02, h5km±4km, Error ellipse: s-maj=3.4km s-min=3.1km az=172.8*
*ISK **16** 19:06:22.6, 36°96N×29°19E, h5km, MD3.2*
*CSEM **16** 19:06:23.1±0.1, 36°95N×29°20E, h2km, MD3.1, Error ellipse: s-maj=1.7km s-min=1.4km az=8.0*
*DDA **16** 19:06:24.1, 37°08N×29°27E, h28km±2km, Md3.1*
ISC 16 19:06:23.4±0.4, 36°98N±0°02×29°20E±0°02, h5km±3km, n68, σ0°94/97, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*PG	**Pg**	**19 06 28.5**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.30**	**53**	*e*Pg	**Pg**	**19 06 28.5**	**-0.7**
FETY	**Fethiye**	**0.35**	**195**	*e*PG	**Pg**	**19 06 29.7**	**-0.6**
FETY				*e*SG	**Sg**	**19 06 35.3**	**+0.4**
FETY	**Fethiye**	**0.35**	**195**	*e*Pg	**Pg**	**19 06 29.7**	**-0.5**
FETY				*e*Sg	**Sg**	**19 06 35.3**	**+0.5**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**19 06 28.9**	**-2.0**
GOLH				*i* S	**Sg**	**19 06 36.0**	**0.0**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**19 06 28.9**	**-2.0**
GOLH				*i* S	**Sg**	**19 06 36.0**	**0.0**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**19 06 37.4**	**+4.6**
TURN				*i* S	**Sg**	**19 06 49.6**	**+10**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**19 06 34.0**	**-1.1**
ELL				*e*SG	**Sg**	**19 06 43.6**	**+0.5**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**19 06 34.1**	**-1.0**
ELL				*e*Sg	**Sg**	**19 06 43.6**	**+0.5**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**19 06 35.8**	**-1.5**
DNZL				*i* S	**Sg**	**19 06 47.2**	**+0.5**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**19 06 35.8**	**-1.5**
DNZL				*i* S	**Sg**	**19 06 47.2**	**+0.5**
YER	**Yerkesik**	**0.75**	**282**	*e*PG	**Pg**	**19 06 37.6**	**-0.2**
YER				*e*SG	**Sg**	**19 06 48.6**	**+1.1**
YER	**Yerkesik**	**0.75**	**282**	*e*Pg	**Pg**	**19 06 37.6**	**-0.2**
YER				*e*Sg	**Sg**	**19 06 48.7**	**+1.1**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**19 06 38.7**	**+0.2**
DENT				*e*SG	**Sg**	**19 06 50.0**	**+1.2**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**19 06 38.7**	**+0.2**
DENT				*e*Sg	**Sg**	**19 06 50.0**	**+1.3**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**19 06 38.4**	**-0.5**
AKAS				*i* S	**Sg**	**19 06 54.9**	**+5.5**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**19 06 38.4**	**-0.5**
KSL	**Kastellorizon**	**0.88**	**159**	*e*P	**Pg**	**19 06 39.8**	**-0.5**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**19 06 40.8**	**-0.2**
KORT				*i* S	**Sg**	**19 06 54.5**	**+1.6**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**19 06 40.8**	**-0.3**
KORT				*i* S	**Sg**	**19 06 54.5**	**+1.5**
ARG	**Arkhangelos**	**1.15**	**229**	*e*P	**Pg**	**19 06 44.6**	**-0.9**
ANTB	**Antalya**	**1.17**	**93**	*e*PN	**Pn**	**19 06 46.0**	**-0.3**
ANTB	**Antalya**	**1.17**	**93**	*e*Pn	**Pn**	**19 06 46.0**	**-0.3**
MLSB	**Milas**	**1.18**	**286**	*e*PN	**Pn**	**19 06 45.6**	**-1.0**
MLSB				*e*SN	**Sn**	**19 07 02.0**	**-1.0**
MLSB	**Milas**	**1.18**	**286**	*e*Pn	**Pn**	**19 06 45.6**	**-1.0**
MLSB				*e*Sn	**Sn**	**19 07 02.0**	**-1.0**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**19 06 47.0**	**0.0**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**19 06 47.0**	**+0.1**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pg**	**19 06 47.5**	**0.0**
AYDN				*i* S	**Sg**	**19 07 04.3**	**+0.6**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pg**	**19 06 47.5**	**0.0**
AYDN				*i* S	**Sg**	**19 07 04.3**	**+0.5**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**19 06 48.3**	**-0.2**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**19 06 48.3**	**-0.2**
ISP	**Isparta**	**1.35**	**50**	*e*PN	**Pn**	**19 06 49.5**	**+0.6**
ISP	**Isparta**	**1.35**	**50**	*e*Pn	**Pn**	**19 06 49.5**	**+0.6**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**19 06 49.4**	**+0.3**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**19 06 49.4**	**+0.3**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**19 06 49.9**	**+0.2**
BDRM				*i* S	**Sb**	**19 07 07.4**	**-1.0**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**19 06 49.9**	**+0.2**
BDRM				*i* S	**Sb**	**19 07 07.4**	**-1.0**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**19 06 48.6**	**-1.1**
KHAL				*i* S	**Sb**	**19 07 08.8**	**+0.3**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**19 06 48.7**	**-1.0**
KHAL				*i* S	**Sb**	**19 07 08.8**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**19 06 51.8**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**19 06 51.8**	**+0.6**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*PN	**Pn**	**19 06 52.4**	**+0.1**
KULA	**Kula-Manisa**	**1.59**	**345**	*e*Pn	**Pn**	**19 06 52.4**	**+0.2**
MANT	**Manisa**	**1.59**	**342**	*i* P	**Pn**	**19 06 51.7**	**-0.5**
MANT				*i* S	**Sn**	**19 07 12.6**	**-0.7**
MANT	**Manisa**	**1.59**	**342**	*i* P	**Pn**	**19 06 51.7**	**-0.5**
MANT				*i* S	**Sn**	**19 07 12.6**	**-0.6**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*PN	**Pn**	**19 06 57.1**	**+0.6**
SHUT	**Suhut-Afyon**	**1.90**	**34**	*e*Pn	**Pn**	**19 06 57.1**	**+0.6**
SMG	**Samos**	**2.02**	**292**	*e*P	**Pn**	**19 06 58.2**	**+0.1**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**19 07 00.2**	**+1.1**
IZM	**Izmir**	**2.09**	**313**	*e*Pn	**Pn**	**19 07 00.2**	**+1.1**
DEMI	**Demirci**	**2.10**	**350**	*i* P	**Pn**	**19 06 57.0**	**-2.2**
DEMI				*i* S	**Sn**	**19 07 25.3**	**-0.3**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**	**19 07 01.3**	**+0.8**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**	**19 07 01.3**	**+0.8**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**19 07 07.0**	**+0.5**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**19 07 07.0**	**+0.5**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**	**19 07 08.3**	**+0.9**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**	**19 07 08.3**	**+1.0**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*PN	**Pn**	**19 07 09.6**	**+0.8**
LADK	**Ladik-KONYA**	**2.79**	**63**	*e*Pn	**Pn**	**19 07 09.6**	**+0.9**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**19 07 10.4**	**+1.0**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**19 07 10.4**	**+1.0**
NPS	**Neapolis**	**3.37**	**241**	*e*P	**Pn**	**19 07 16.0**	**-0.7**
IDI	**Anoyia**	**3.88**	**245**	Pn	**Pn**	**19 07 25.3**	**+1.7**
	1.1nm,0.3s,baz=56,slow=11,SNR=10.0						
IDI				Sn	**Sn**	**19 08 09.5**	**0.0**
	1.8nm,0.3s,baz=225,slow=21,SNR=7.3						
VAM	**Vamos**	**4.34**	**250**	*e*P	**Pn**	**19 07 32.5**	**+2.5**
BRTR	**Keskin Array B**	**4.44**	**50**	Pn	**Pn**	**19 07 29.4**	**-1.9**
	0.1nm,0.3s,baz=230,slow=16,SNR=3.9						
BRTR				Sn	**Sn**	**19 08 22.6**	**-0.8**
	0.1nm,0.3s,baz=22,slow=34,SNR=3.3						
KYTH	**Kithira**	**5.01**	**264**	*e*P	**Pn**	**19 07 41.5**	**+2.4**
MMAI	**Mount Meron Ar**	**6.44**	**126**	Pn	**Pn**	**19 07 59.3**	**+0.4**
	1.2nm,0.3s,baz=313,slow=12,SNR=8.8						
TORD	**Torodi Ar. Bea**	**34.18**	**233**	P	**P**	**19 13 08.8**	**-0.9**
	0.2nm,0.6s,baz=41,slow=6.6,SNR=3.2						

*ISCJB **16** 19:10:59.0±0.6, 61°1S±0°1×26°1W±0°2, h10km, mb4.1/12, MS3.9/7, Error ellipse: s-maj=21.7km s-min=10.5km az=136.5*
*IDC **16** 19:11:00.6±0.7, 60°71S×25°96W, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/15, mbtmp4.1/9, MS3.9/7, Ms1 3.8/7, ms1mx3.5/19, Error ellipse: s-maj=26.9km s-min=18.2km az=43.0*
*NEIC **16** 19:11:02.3±12.0, 60°70S×25°95W, h11km±74km, mb4.3/5, Error ellipse: s-maj=21.1km s-min=12.8km az=221.0*
ISC 16 19:11:01.3±0.6, 61°0S±0°1×26°1W±0°2, h10km, n24, σ1°15/20, mb4.1/12, MS3.9/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.03**	**151**	*e*	**Pn**	**19 13 51.9**	**-0.5**
VNA1				*e*S	**Sn**	**19 15 55.3**	**-11**
VNA2	**Neumayer--Watz**	**12.43**	**151**	*e*	**Pn**	**19 13 56.4**	**-1.5**
VNA2				*e*S	**Sn**	**19 16 04.0**	**-12**
QSPA	**South Pole Qui**	**29.20**	**180**	P	**P**	**19 17 07.9**	**+5.6**
	10nm,1.0s,mb4.5,baz=199,slow=4.8,SNR=25						
QSPA				LR	LR	19 26 56.9	
	comp=Z,153nm,18.6s,MS3.6,baz=20,slow=32						
TRQA	**Tornquist**	**32.07**	**299**	*e*P	**P**	**19 17 29.0**	**+1.0**
	6.6nm,1.0s,mb4.4						
PLCA	**Paso Flores**	**33.73**	**286**	P	**P**	**19 17 41.8**	**-0.7**
	1.0nm,0.7s,mb3.9,baz=223,slow=16,SNR=3.1						
PLCA				LR	LR	19 31 26.8	
	comp=Z,68nm,18.8s,MS3.4,baz=184,slow=36						
PLCA	**Paso Flores**	**33.73**	**286**	P	**P**	**19 17 41.8**	**-0.7**
PLCA				LR	LR	19 31 26.8	
MAW	**Mawson**	**35.88**	**139**	P	**P**	**19 18 02.4**	**+1.7**
	4.1nm,1.0s,mb4.3,baz=238,slow=11,SNR=4.9						
MAW				LR	LR	19 30 09.8	
	comp=Z,220nm,19.8s,MS3.9,baz=204,slow=32						
MAW	**Mawson**	**35.88**	**139**	*e*P	**P**	**19 18 02.3**	**+1.6**
	1.4nm,1.1s,mb3.8						
MAW				LR	LR	19 30 09.8	
CFAA	**Coronel Fontan**	**40.24**	**298**	P	**P**	**19 18 37.4**	**-0.5**
	0.3nm,0.5s,mb3.3,baz=178,slow=4.9,SNR=4.7						
CPUP	**Villa Florida**	**40.64**	**314**	P	**P**	**19 18 39.8**	**-1.5**
	0.5nm,0.3s,mb3.6,baz=143,slow=7.7,SNR=3.3						
CPUP				LR	LR	19 34 21.5	
	comp=Z,68nm,19.3s,MS3.5,baz=160,slow=35						
SBA	**Scott Base**	**41.14**	**184**	*e*P	**P**	**19 18 51.4**	**+6.6**
	7.4nm,1.1s,mb4.2						
BOSA	**Boshof**	**46.87**	**70**	P	**P**	**19 19 32.0**	**+0.7**
	2.6nm,0.9s,mb4.2,baz=281,slow=10.0,SNR=5.6						
BOSA				LR	LR	19 34 32.4	
	comp=Z,107nm,19.7s,MS3.8,baz=66,slow=30						
LPAZ	**La Paz**	**53.81**	**307**	P	**P**	**19 20 25.6**	**+1.7**
	1.1nm,0.4s,mb4.2,baz=134,slow=6.7,SNR=8.6						
LPAZ	**La Paz**	**53.81**	**307**	*e*P	**P**	**19 20 25.3**	**+1.4**
	2.0nm,0.6s,mb4.2						
LSZ	**Lusaka**	**59.78**	**65**	P	**P**	**19 21 01.9**	**-4.5**
	1.8nm,0.7s,mb4.2						
TOA0	**Torodi Ar. Sit**	**77.16**	**28**	*e*P	**P**	**19 22 54.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**77.16**	**28**	P	**P**	**19 22 54.1**	**-0.7**
	2.5nm,0.7s,mb4.2,baz=199,slow=6.2,SNR=31						
STKA	**Stephens Creek**	**86.88**	**170**	LR	LR	20 00 10.8	
	comp=Z,113nm,18.1s,MS4.3,baz=197,slow=34						
ASAR	**Alice Springs**	**94.06**	**162**	P	**P**	**19 24 21.2**	**+1.6**
	1.2nm,0.9s,mb4.3,baz=187,slow=3.7,SNR=8.2						
CTA	**Charters Tower**	**98.93**	**173**	LR	LR	20 06 55.8	
	comp=Z,114nm,19.8s,MS4.4,baz=16,slow=34						
YKA	**Yellowknife Ar**	**140.17**	**314**	PKP	PKPdf	19 30 29.8	+1.4
	0.9nm,0.8s,baz=127,slow=2.2,SNR=5.9						
INK	**Inuvik**	**149.91**	**315**	PKPbc	PKPbc	19 30 50.9	+1.0
	4.0nm,0.9s,baz=204,slow=4.0,SNR=5.1						
SONM	**Songino Array**	**150.10**	**94**	PKPbc	PKPbc	19 30 50.9	0.0
	1.7nm,0.9s,baz=204,slow=2.3,SNR=12						
KSRS	**Korea Array**	**151.29**	**133**	PKPbc	PKPbc	19 30 54.4	+0.2
	1.0nm,0.8s,baz=202,slow=3.2,SNR=5.5						

*NEIC **16** 19:23:42.2±3.8, 18°41N×147°13E, h63km±22km, mb4.0/2, Error ellipse: s-maj=86.4km s-min=9.0km az=87.0*
*IDC **16** 19:23:42.5±6.6, 18°43N×147°06E, h63km±47km, mb3.5/7, mb1 3.7/9, mb1mx3.5/24, mbtmp3.6/9, ML4.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/35, Error ellipse: s-maj=86.9km s-min=15.2km az=84.0*
ISC 16 19:23:39.5±3.8, 18°49N±0°07×147°3E±0°5, h44km±26km, n12, σ0°43/14, mb3.9/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.41**	**206**	P	**Pn**	**19 24 58.3**	**+0.6**
	16nm,0.3s,baz=219,slow=1.2,SNR=11						
GUMO				S	**Sn**	**19 25 58.7**	**-0.1**
	4.3nm,0.3s,baz=140,slow=24,SNR=2.2						
GUMO				LR	LR	19 26 36.1	
	comp=Z,66nm,18.8s,baz=239,slow=33						
GUMO	**Guam**	**5.41**	**206**	P	**Pn**	**19 24 58.3**	**+0.6**
GUMO				*e*Sn	**Sn**	**19 25 54.9**	**-3.8**
GUMO				LR	LR	19 26 36.1	
MJAR	**Matsushiro Arr**	**19.70**	**338**	P	**Pn**	**19 28 06.7**	**-0.2**
	0.2nm,0.3s,baz=167,slow=11,SNR=3.7						
MAJO	**Matsushiro**	**19.70**	**338**	*e*P	**Pn**	**19 28 06.4**	**-0.5**
	3.8nm,0.7s						
KSRS	**Korea Array**	**25.41**	**322**	P	**P**	**19 29 03.2**	**+0.2**
	0.4nm,0.3s,mb3.4,baz=143,slow=9.6,SNR=3.2						
WRAB	**Tennant Creek**	**40.25**	**199**	*e*P	**P**	**19 31 12.3**	**+0.1**
	4.3nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**40.26**	**199**	P	**P**	**19 31 11.6**	**-0.7**
	0.5nm,0.3s,mb3.7,baz=30,slow=8.7,SNR=87						
WRA				PcP	PcP	19 33 16.7	+1.1
	0.2nm,0.3s,baz=18,slow=3.5,SNR=4.8						
ASAR	**Alice Springs**	**43.90**	**198**	P	**P**	**19 31 42.0**	**+0.1**
	0.5nm,0.3s,mb3.7,baz=30,slow=7.0,SNR=15						
ZALV	**Zalesovo Beam**	**59.12**	**322**	P	**P**	**19 33 35.3**	**-0.2**
	0.3nm,0.3s,mb3.9,baz=108,slow=9.3,SNR=3.3						
MKAR	**Makanchi Array**	**59.72**	**314**	P	**P**	**19 33 39.9**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=86,slow=8.8,SNR=3.6						
BVAR	**Borovoye Array**	**67.62**	**320**	P	**P**	**19 34 32.3**	**+0.6**
	1.7nm,0.5s,mb4.3,baz=96,slow=7.7,SNR=14						
FINES	**FINESS Array B**	**87.72**	**336**	P	**P**	**19 36 23.4**	**0.0**
	1.6nm,0.6s,mb4.4,baz=69,slow=6.3,SNR=6.8						

*IDC **16** 19:39:18.3±3.1, 8°88S×110°75E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/20, mbtmp3.3/4, Error ellipse: s-maj=135.2km s-min=24.4km az=52.0*
*DJA **16** 19:39:26, 8°92S×111°18E, h16km, MLv3.6/8*
*ISCJB **16** 19:39:27.7±1.4, 8°7S±0°2×111°19E±0°09, h78km±10km, mb3.1/4, Error ellipse: s-maj=29.4km s-min=11.5km az=21.3*
ISC 16 19:39:28.7±1.5, 8°7S±0°2×111°20E±0°10, h68km±12km, n13, σ1°10/15, mb3.1/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.54**	**358**	P	**Pn**	**19 39 40.3**	**-1.4**
PCJI				S	**Sn**	**19 39 50.2**	**-1.0**
PWJI	**Pagerwojo**	**0.93**	**40**	P	**Pn**	**19 39 45.5**	**-0.7**
UGM	**Wanagama**	**1.05**	**321**	P	**Pn**	**19 39 47.4**	**-0.4**
UGM				S	**Sn**	**19 40 03.0**	**+1.0**
SJI	**Sawahan**	**1.14**	**30**	P	**Pn**	**19 39 49.2**	**+0.3**
NGJI	**Ngawi**	**1.38**	**11**	P	**Pn**	**19 39 56.0**	**+3.9**
SMRI	**Semarang**	**1.83**	**336**	P	**Pn**	**19 40 00.0**	**+1.9**
GRJI	**Gresik**	**2.21**	**35**	P	**Pn**	**19 40 04.5**	**+1.4**
GMJI	**Gumukmas**	**2.27**	**79**	P	**Pn**	**19 40 02.9**	**-1.0**
ABJI	**Asem Bagus**	**3.15**	**73**	P	**Pn**	**19 40 17.1**	**+1.2**
WRA	**Warramunga Arr**	**25.00**	**119**	P	**P**	**19 44 46.3**	**-0.1**
	0.4nm,0.9s,mb2.8,baz=288,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**26.32**	**127**	P	**P**	**19 44 59.3**	**+1.0**
	0.3nm,0.6s,mb2.9,baz=305,slow=9.3,SNR=5.0						
SONM	**Songino Array**	**56.48**	**356**	P	**P**	**19 49 02.6**	**-1.0**
	0.1nm,0.4s,mb3.2,baz=180,slow=4.2,SNR=2.3						
MKAR	**Makanchi Array**	**60.99**	**338**	P	**P**	**19 49 33.6**	**-1.3**
	0.3nm,0.5s,mb3.6,baz=153,slow=7.8,SNR=5.4						

*IDC **16** 19:45:43.7±1.4, 24°64S×179°73E, h493km±13km, mb3.6/12, mb1 3.8/14, mb1mx3.7/20, mbtmp3.7/14, Error ellipse: s-maj=18.7km s-min=14.1km az=125.0*
*ISCJB **16** 19:45:44.1±0.7, 24°72S±0°06×179°56E±0°09, h505km±9km, mb4.0/22, Error ellipse: s-maj=13.2km s-min=9.6km az=4.7*
*NEIC **16** 19:45:45.3±0.8, 24°81S×179°72E, h520km±10km, mb4.4/15, Error ellipse: s-maj=12.9km s-min=11.9km az=113.0*
ISC 16 19:45:44.5±0.7, 24°81S±0°07×179°64E±0°10, h502km±10km, n57, σ0°97/51, mb4.0/22, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.94**	**154**	P	**P**	**19 47 13.9**	**+3.0**
	294nm,0.3s,baz=41,slow=22,SNR=18						
RAO				S	**S**	**19 48 20.9**	**-0.6**
	19nm,0.3s,baz=255,slow=23,SNR=1.7						
RAO	**Raoul Island**	**4.94**	**154**	P	**P**	**19 47 13.9**	**+3.0**
RAO				*e*Pn	**P**	**19 47 14.8**	**+3.9**
RAO				S	**S**	**19 48 20.9**	**-0.6**
MSVF	**Nonsavu**	**7.19**	**348**	*e*P	**P**	**19 47 32.9**	**+0.1**
	58nm,0.6s						
OUZ	**Omahuta**	**11.62**	**205**	*e*P	**P**	**19 48 23.1**	**+4.2**
	53nm,1.1s						
AFI	**Afiamalu**	**13.53**	**38**	P	**P**	**19 48 34.9**	**-4.4**
	9.6nm,0.3s,baz=39,slow=4.3,SNR=14						
AFI				S	**S**	**19 50 49.7**	**-14**
	2.8nm,0.3s,baz=42,slow=22,SNR=4.2						
AFI	**Afiamalu**	**13.53**	**38**	*e*P	**P**	**19 48 34.7**	**-4.6**
	92nm,0.8s						
AFI				S	**S**	**19 50 49.7**	**-14**
URZ	**Urewera**	**13.58**	**188**	P	**P**	**19 48 39.5**	**-0.1**
	7.3nm,0.3s,baz=322,slow=1.0,SNR=34						
URZ				S	**S**	**19 51 02.8**	**-1.2**
	2.1nm,0.3s,baz=210,slow=21,SNR=9.2						
SNZO	**South Karori**	**16.96**	**193**	*e*P	**P**	**19 49 15.0**	**+0.2**
	18nm,0.7s						
KHZ	**Kahutara**	**18.27**	**195**	*e*P	**P**	**19 49 26.6**	**-0.4**
	11nm,0.4s						
RPZ	**Rata Peaks**	**20.13**	**198**	P	**P**	**19 49 44.4**	**+0.4**
	8.6nm,0.4s,baz=300,slow=2.2,SNR=11						
EIDS	**Eidsvold**	**25.85**	**263**	*e*P	**P**	**19 50 36.5**	**+1.0**
	4.8nm,0.8s,mb4.0						
CTA	**Charters Tower**	**31.16**	**272**	*e*P	**P**	**19 51 23.0**	**+1.1**
	7.6nm,0.8s,mb4.2						
CTA	**Charters Tower**	**31.16**	**272**	P	**P**	**19 51 23.1**	**+1.2**
	8.5nm,0.6s,mb4.4,baz=103,slow=10.0,SNR=22						
CTAO	**Charters T

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.79**	**97**	*i* P	Pg	19 53 53.9	-2.5
PNIG				*i* S	Sg	19 54 03.8	-2.9
ACX	**Acapulco**	**1.01**	**292**	*i* P	Pb	19 53 56.8	-3.6
ACX				*i* S	Sb	19 54 09.7	-3.8
CAIG	**El Cayaco**	**1.39**	**294**	*i* P	Pn	19 54 02.0	-4.1
CAIG				*i* S	Sn	19 54 19.3	-5.0
UTMO	**Huajuapan**	**1.72**	**39**	*eP*	Pn	19 54 07.1	-3.6
UTMO				*i* S	Sn	19 54 28.1	-4.5
PLIG	**Platanillo**	**1.97**	**344**	*i* P	Pn	19 54 09.3	-4.9
VHO	**Vista Hermosa**	**2.19**	**74**	*i* P	Pn	19 54 16.0	-1.2
VHO				*i* S	Sn	19 54 43.0	-1.2
PPM	**Popocatepetl**	**2.58**	**7**	*i* P	Pn	19 54 17.4	-5.1
PPM				*i* S	Sn	19 54 52.2	-1.6

*IDC **16** 19:54:58.6±1.3, 36.°27N×141.°97E, h0km, mb3.9/8, mb1 3.9/12, mb1mx3.7/31, mbtmp3.8/12, ML3.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/43, Error ellipse: s-maj=26.7km s-min=22.3km az=99.0*
*ISCJB **16** 19:55:00.1±1.4, 36.°30N±0.°04×141.°98E±0.°07, h22km±9km, mb3.9/10, Error ellipse: s-maj=9.8km s-min=6.9km az=2.9*
*JMA **16** 19:55:02.3±0.2, 36.°32N×141.°80E, h63km±5km, M3.3*
*NEIC **16** 19:55:03.8±1.0, 36.°30N×141.°90E, h35km, mb4.2/2, Error ellipse: s-maj=19.6km s-min=15.8km az=161.0*
ISC 16 19:54:59.3±1.3, 36.°33N±0.°04×141.°95E±0.°06, h3km±7km, n31, σ0s82/38, mb3.9/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.08**	**235**	P	**Pg**	**19 55 20.4**	**+0.3**
CHOJ				S	**Sg**	**19 55 34.6**	**+0.5**
JHO	**Hitachi**	**1.15**	**285**	P	**Pg**	**19 55 20.6**	**-0.7**
JHO				*e*S	**Sg**	**19 55 34.7**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.21**	**310**	P	**Pg**	**19 55 22.0**	**-0.4**
ONAJ				*e*S	**Sg**	**19 55 38.7**	**+0.7**
JFK	**Kawauchi**	**1.35**	**320**	P	**Pn**	**19 55 24.7**	**-0.2**
JFT	**Otama**	**1.75**	**313**	P	**Pn**	**19 55 31.2**	**+0.7**
JMM	**Marumori**	**1.79**	**329**	P	**Pn**	**19 55 31.2**	**+0.2**
BSO1	**Boso 1**	**1.85**	**206**	P	**Pn**	**19 55 31.4**	**-0.5**
BSO3	**Boso 3**	**1.93**	**218**	P	**Pn**	**19 55 32.6**	**-0.3**
JAG	**Ashikaga**	**2.02**	**273**	P	**Pn**	**19 55 33.5**	**-0.7**
JFY	**Yanaizu**	**2.10**	**301**	P	**Pn**	**19 55 35.9**	**+0.6**
JRY	**Ryogami san**	**2.49**	**264**	P	**Pn**	**19 55 39.7**	**-0.9**
JOD2	**Odawara 2**	**2.56**	**246**	P	**Pn**	**19 55 42.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.03**	**275**	Pn	**Pn**	**19 55 48.2**	**+0.2**
	4.7nm,0.3s,baz=113,slow=10.0,SNR=57						
MJAR				Sn	**Sn**	**19 56 24.8**	**+0.1**
	4.1nm,0.3s,baz=52,slow=16,SNR=5.4						
MAJO	**Matsushiro**	**3.03**	**275**	*e*Pn	**Pn**	**19 55 48.6**	**+0.6**
MAT	**Matsushiro**	**3.03**	**275**	P	**Pn**	**19 55 48.7**	**+0.7**
MAT				*e*S	**Sn**	**19 56 24.5**	**-0.3**
JHJ	**Hachijo jima 2**	**3.67**	**210**	Pn	**Pn**	**19 55 56.6**	**-0.2**
	8.5nm,0.3s,baz=239,slow=17,SNR=22						
JHJ				Sn	**Sn**	**19 56 36.6**	**-4.0**
	25nm,0.3s,baz=235,slow=23,SNR=4.1						
ASAJ	**Asahikawa**	**7.79**	**3**	Pn	**Pn**	**19 56 54.5**	**+1.0**
	0.6nm,0.3s,baz=234,slow=14,SNR=4.2						
ASAJ				Sn	**Sn**	**19 58 19.5**	**-2.7**
	0.5nm,0.3s,baz=57,slow=32,SNR=4.5						
ASAJ				LR	LR	20 00 41.5	
	comp=Z,75nm,20.4s,baz=189,slow=44						
KSRS	**Korea Array**	**11.29**	**280**	Pn	**Pn**	**19 57 43.3**	**+1.8**
	0.1nm,0.3s,baz=100,slow=14,SNR=6.7						
KSRS				LR	LR	20 01 44.9	
	comp=Z,82nm,18.5s,baz=346,slow=36						
YHNB	**Yeheng**	**21.15**	**242**	P	**P**	**19 59 39.0**	**-6.5**
YAK	**Yakutsk**	**26.85**	**347**	*eP*	**P**	**20 00 38.3**	**-2.3**
	6.4nm,0.4s,mb4.5						
ULN	**Ulaanbaatar**	**28.11**	**305**	*eP*	**P**	**20 00 52.7**	**+0.6**
	2.5nm,1.2s,mb3.7						
SONM	**Songino Array**	**28.54**	**305**	P	**P**	**20 00 55.7**	**-0.2**
	2.1nm,0.9s,mb3.9,baz=93,slow=8.3,SNR=14						
ZAA0	**Zalesovo Array**	**42.71**	**313**	P	**P**	**20 02 57.1**	**-0.1**
ZALV	**Zalesovo Beam**	**42.71**	**313**	P	**P**	**20 02 57.4**	**+0.2**
	1.6nm,0.7s,mb3.8,baz=101,slow=6.2,SNR=8.6						
MKAR	**Makanchi Array**	**44.86**	**303**	P	**P**	**20 03 14.8**	**+0.2**
	1.3nm,0.8s,mb3.8,baz=90,slow=10.0,SNR=8.4						
KURK	**Kurchatov**	**46.71**	**309**	P	**P**	**20 03 29.4**	**+0.2**
	1.7nm,0.6s,mb4.1,baz=84,slow=7.9,SNR=10						
WRA	**Warramunga Arr**	**56.43**	**189**	P	**P**	**20 04 41.1**	**-1.0**
	0.5nm,0.6s,mb3.7,baz=5.4,slow=7.4,SNR=4.8						
RES	**Resolute Bay**	**63.17**	**14**	P	**P**	**20 05 28.5**	**+0.6**
	1.5nm,1.0s,mb4.1,baz=329,slow=9.4,SNR=3.7						
RES	**Resolute Bay**	**63.17**	**14**	P	**P**	**20 05 28.5**	**+0.6**
NOA	**NORSAR Array B**	**75.00**	**338**	P	**P**	**20 06 42.4**	**+0.8**
	1.3nm,0.8s,mb3.9,baz=39,slow=5.8,SNR=3.5						
GERES	**GERESS Array B**	**83.54**	**329**	P	**P**	**20 07 28.6**	**+0.1**
	0.2nm,0.3s,mb3.7,baz=38,slow=6.6,SNR=2.7						

*IDC **16** 19:59:06.8±0.7, 30.°76N×103.°59E, h0km, mb4.1/17, mb1 4.2/19, mb1mx4.1/30, mbtmp4.0/19, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/36, Error ellipse: s-maj=26.2km s-min=13.3km az=52.0*
*ISCJB **16** 19:59:07.7±0.8, 30.°81N±0.°03×103.°58E±0.°05, h16km±6km, mb4.2/32, MS3.5/2, Error ellipse: s-maj=6.7km s-min=5.7km az=177.1*
*NEIC **16** 19:59:08.9±0.3, 30.°79N×103.°60E, h10km, mb4.3/15, Error ellipse: s-maj=8.6km s-min=6.2km az=215.0*
*BJI **16** 19:59:08.2, 30.°76N×103.°72E, h13km, mB4.6/5, mb4.2/9, ML4.2/13, Ms4.3/10, Ms7 4.1/9*
ISC 16 19:59:08.7±0.9, 30.°82N±0.°03×103.°57E±0.°05, h8km±6km, n60, σ1s22/63, mb4.2/32, MS3.5/2, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.19**	**60**	Pg	**Pg**	**19 59 12.3**	**-0.3**
CD2				Sg	**Sg**	**19 59 15.6**	**+0.4**
CD2				smax			
	comp=N,38μm,0.7s						
GYA	**Guiyang**	**5.12**	**147**	⇑*i*Pn	**Pn**	**20 00 25.3**	**-0.4**
GYA				Sn	**Sn**	**20 01 27.3**	**+2.3**
GYA				smax			
	comp=N,400nm,0.9s						
GYA				smax			
	comp=E,560nm,1.0s						
ENH	**Enshi**	**5.13**	**95**	*e*Pn	**Pn**	**20 00 24.9**	**-1.0**
	comp=E,208nm,1.0s						
KMI	**Kunming**	**5.72**	**188**	Pn	**Pn**	**20 00 35.8**	**+1.9**
KMI				Sn	**Sn**	**20 01 38.9**	**-0.8**
KMI				smax			
	comp=N,87nm,0.9s						
KMI				smax			
	comp=E,110nm,0.6s						
KMI				LR	LR		
	comp=N,770nm,8.0s						
KMI				LR	LR		
	comp=E,2μm,9.6s						
KMI				LR	LR		
	comp=Z,790nm,7.5s						
LSA	**Lhasa**	**10.80**	**267**	P	**Pn**	**20 01 44.8**	**+1.2**
LSA				LR	LR		
	comp=E,1μm,9.3s						
LSA				LR	LR		
	comp=Z,1μm,10.4s						
LSA	**Lhasa**	**10.80**	**267**	*e*Pn	**Pn**	**20 01 45.3**	**+1.7**
	comp=Z,8.6nm,0.8s						
SHL	**Shillong**	**11.55**	**246**	*eP*	**Pn**	**20 02 00.0**	**+6.0**
HHC	**Hu-ho-hao-te**	**11.92**	**31**	*eP*	**Pn**	**20 01 58.3**	**-0.6**
HHC				pP		20 02 01.8	
HHC				sP		20 02 08.0	
HHC				S	**Sn**	**20 04 11.9**	**-0.2**
HHC				SS		20 04 25.1	
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,70nm,5.1s						
HHC				LR	LR		
	comp=N,650nm,4.6s						
HHC				LR	LR		
	comp=E,520nm,5.5s						
HHC				LR	LR		
	comp=Z,490nm,6.2s						
CMAR	**Chiang Mai Arr**	**13.00**	**200**	Pn	**Pn**	**20 02 13.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=226,slow=29,SNR=4.9						
GUN	**Gumba**	**15.69**	**264**	*eP*	**Pn**	**20 02 48.4**	**-1.7**
PKI	**Pulchoki**	**16.18**	**263**	*eP*	**Pn**	**20 02 53.6**	**-2.9**
KKN	**Kakani**	**16.24**	**264**	*eP*	**Pn**	**20 02 54.9**	**-2.3**
DMN	**Daman**	**16.43**	**263**	*eP*	**Pn**	**20 02 56.5**	**-3.2**
SSLB	**Suanglung**	**16.95**	**110**	*e*Pn	**Pn**	**20 03 07.5**	**+1.2**
	comp=Z,28nm,1.0s						
SONM	**Songino Array**	**17.14**	**6**	P	**Pn**	**20 03 08.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=187,slow=10.0,SNR=6.0						
ULN	**Ulaanbaatar**	**17.24**	**8**	*e*Pn	**Pn**	**20 03 06.2**	**-3.5**
	comp=Z,3.4nm,0.9s						
KS15	**Wonju Array Si**	**21.16**	**65**	*eP*	**P**	**20 03 56.0**	**+1.8**
KSRS	**Korea Array**	**21.19**	**65**	P	**P**	**20 03 54.3**	**-0.3**
	comp=Z,3.1nm,0.8s,mb3.7,baz=248,slow=9.3,SNR=22						
CN2	**Changchun**	**21.62**	**47**	*eP*	**P**	**20 03 58.8**	**-0.4**
CN2				*es*P	sP	20 04 05.0	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS3.8						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.7						
DDI	**Dehra Dun**	**21.96**	**275**	*ex*	x	20 04 06.0	
MKAR	**Makanchi Array**	**22.90**	**320**	P	**P**	**20 04 13.7**	**+0.9**
	comp=Z,1.6nm,0.7s,mb3.6,baz=121,slow=9.3,SNR=6.0						
KSH	**Kashi**	**24.10**	**299**	P	**P**	**20 04 28.3**	**+3.6**
KSH				pmax	pmax		
	comp=Z,88nm,3.5s						
MDJ	**Mudanjiang**	**24.64**	**49**	P	**P**	**20 04 30.0**	**+0.4**
	comp=Z,20nm,1.2s,mb4.5						
TKM2	**Tokmak 2**	**25.31**	**306**	P	**P**	**20 04 37.2**	**+1.5**
	comp=Z,3.2nm,0.8s,mb3.9						
KULM	**Kulim**	**25.54**	**187**	P	**P**	**20 04 38.5**	**+0.5**
	comp=Z,16nm,1.3s,mb4.4						
UCH	**Uchtor**	**25.86**	**304**	*eP*	**P**	**20 04 42.7**	**+2.0**
	comp=Z,7.2nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**25.99**	**305**	P	**P**	**20 04 43.3**	**+1.4**
	comp=Z,0.7nm,0.3s,mb3.6,baz=97,slow=10,SNR=4.5						
AML	**Almayashu**	**26.41**	**304**	*eP*	**P**	**20 04 47.7**	**+1.9**
	comp=Z,3.2nm,0.8s,mb3.9						
EKS2	**Erkin-Say**	**26.50**	**305**	P	**P**	**20 04 48.0**	**+1.5**
	comp=Z,2.8nm,0.7s,mb3.9						
ZAA0	**Zalesovo Array**	**26.79**	**335**	*eP*	**P**	**20 04 47.9**	**-1.0**
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**20 04 48.6**	**-0.3**
	comp=Z,3.4nm,0.7s,mb4.0,baz=134,slow=8.7,SNR=12						
KURK	**Kurchatov**	**27.21**	**324**	P	**P**	**20 04 52.7**	**0.0**
	comp=Z,3.9nm,0.8s,mb4.0,baz=129,slow=9.6,SNR=14						
KURK	**Kurchatov**	**27.21**	**324**	P	**P**	**20 04 52.7**	**0.0**
KBL	**Kabul**	**29.21**	**287**	P	**P**	**20 05 10.5**	**-0.3**
	comp=Z,2.5nm,0.5s,mb4.2						
BVAR	**Borovoye Array**	**32.74**	**322**	P	**P**	**20 05 41.5**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=91,slow=14,SNR=3.8						
BVAR				LR	LR	20 20 13.9	
	comp=Z,65nm,19.7s,MS3.3,baz=228,slow=39						
ARU	**Arti**	**40.38**	**323**	*eP*	**P**	**20 06 46.1**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.2						
KIV	**Kislovodsk**	**49.09**	**303**	*eP*	**P**	**20 07 57.1**	**+0.6**
	comp=Z,5.7nm,0.9s,mb4.6						
MALT	**Malatya**	**53.19**	**297**	P	**P**	**20 08 29.3**	**+2.0**
JOF	**Joensuu**	**55.03**	**328**	*ep*	**P**	**20 08 39.7**	**-0.7**
	comp=Z,3.0nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**56.48**	**300**	*eP*	**P**	**20 08 50.3**	**-0.9**
	comp=Z,1.5nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**56.48**	**300**	P	**P**	**20 08 50.5**	**-0.8**
	comp=Z,1.8nm,0.9s,mb4.1,baz=101,slow=6.7,SNR=8.0						
AKASG	**Malin Array Be**	**57.25**	**313**	P	**P**	**20 08 55.1**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=71,slow=6.1,SNR=2.5						
ARCES	**ARCESS Array B**	**57.33**	**336**	P	**P**	**20 08 56.0**	**-0.7**
	comp=Z,4.5nm,0.8s,mb4.6,baz=81,slow=7.5,SNR=3.8						
KAF	**Kangasniemi**	**57.38**	**327**	*ep*	**P**	**20 08 55.6**	**-1.6**
	comp=Z,1.4nm,0.5s,mb4.2						
FINES	**FINESS Array B**	**57.55**	**326**	P	**P**	**20 08 57.6**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.4,baz=95,slow=6.0,SNR=10						
WRAB	**Tennant Creek**	**58.49**	**146**	*eP*	**P**	**20 09 04.3**	**-1.1**
	comp=Z,7.3nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**58.49**	**146**	P	**P**	**20 09 04.3**	**-1.2**
	comp=Z,4.2nm,0.6s,mb4.6,baz=339,slow=7.9,SNR=34						
ASAR	**Alice Springs**	**61.48**	**148**	P	**P**	**20 09 25.1**	**-0.8**
	comp=Z,1.8nm,0.8s,mb4.2,baz=335,slow=6.5,SNR=14						
KWP	**Kalwaria Pacla**	**61.57**	**313**	*eP*	**P**	**20 09 26.0**	**-0.3**
	comp=Z,11nm,1.0s,mb5.0						
NB2	**NORSAR Subarra**	**64.66**	**327**	P	**P**	**20 09 45.1**	**-1.5**
	comp=Z,1.7nm,0.6s,mb4.2,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.66**	**327**	P	**P**	**20 09 45.6**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=74,slow=6.7,SNR=7.4						
CTA	**Charters Tower**	**65.14**	**135**	P	**P**	**20 09 49.4**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.2,baz=348,slow=4.0,SNR=3.4						
CTA	**Charters Tower**	**65.14**	**135**	P	**P**	**20 09 49.4**	**-0.9**
GERES	**GERESS Array B**	**67.42**	**314**	P	**P**	**20 10 05.6**	**+0.9**
	comp=Z,0.7nm,0.8s,mb3.8,baz=54,slow=6.8,SNR=5.6						
KMBO	**Kilima Mbogo**	**70.39**	**256**	P	**P**	**20 10 25.2**	**+1.5**
INK	**Inuvik**	**72.58**	**19**	P	**P**	**20 10 35.7**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=324,slow=5.7,SNR=3.1						
INK	**Inuvik**	**72.58**	**19**	P	**P**	**20 10 35.7**	**-0.3**
LPG	**La Plagne**	**73.11**	**313**	*eP*	**P**	**20 10 42.3**	**+2.8**
	comp=Z,9.7nm,1.0s,mb4.4						
LPG	**La Plagne**	**73.11**	**313**	*eP*	**P**	**20 10 42.3**	**+2.8**
	comp=Z,4.8nm,1.0s,mb4.4						
TORD	**Torodi Ar. Bea**	**93.28**	**287**	P	**P**	**20 12 24.1**	**-0.4**
	comp=Z,0.6nm,0.8s,mb4.1,baz=76,slow=4.9,SNR=2.4						

*IDC **16** 20:00:08.2±0.7, 32.°52N×105.°23E, h0km, mb4.2/17, mb1 4.2/19, mb1mx4.1/32, mbtmp4.2/19, ML3.8/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/40, Error ellipse: s-maj=24.7km s-min=14.4km az=44.0*
*NEIC **16** 20:00:09.3±0.4, 32.°51N×105.°33E, h10km, mb4.5/16, Error ellipse: s-maj=9.0km s-min=6.8km az=215.0*
*BJI **16** 20:00:10.4, 32.°53N×105.°49E, h11km, mB4.8/11, mb4.4/11, ML4.6/7, Ms4.3/13, Ms7 4.0/14*
ISC 16 20:00:11.7±2.0, 32.°65N±0.°04×105.°28E±0.°04, h19km±12km, n69, σ1s12/78, mb4.3/31, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.35**	**65**	Pn	**Pn**	**20 01 03.4**	**+0.4**
XAN				Pg	**Pg**	**20 01 09.3**	**-6.7**
XAN				Sn	**Sn**	**20 01 35.0**	**-7.3**
XAN				Sg	**Sg**	**20 01 48.4**	**-11**
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,910nm,1.0s						
XAN				LR	LR		
	comp=N,1μm,7.0s						
XAN				LR	LR		
	comp=E,490nm,8.1s						
XAN				LR	LR		
	comp=Z,400nm,9.0s						
LZH	**Lanzhou**	**3.63**	**341**	Pn	**Pn**	**20 01 11.3**	**+4.4**
LZH				Sg	**Sg**	**20 02 05.0**	**-3.3**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,6.8s						
LZH				LR	LR		
	comp=Z,4μm,9.0s						
ENH	**Enshi**	**4.31**	**122**	*e*Pn	**Pn**	**20 01 16.8**	**+0.7**
KMI	**Kunming**	**7.82**	**197**	Pn	**Pn**	**20 02 11.9**	**+7.5**
KMI				Sn	**Sn**	**20 03 31.8**	**-0.6**
KMI				smax			
	comp=N,73nm,0.8s						
KMI				smax			
	comp=E,62nm,0.9s						
KMI				LR	LR		
	comp=N,620nm,7.3s						
KMI				LR	LR		
	comp=E,500nm,8.5s						
KMI				LR	LR		
	comp=Z,320nm,7.2s						
WHN	**Wuhan**	**8.02**	**103**	Pn	**Pn**	**20 02 05.4**	**-1.8**
WHN				Sn	**Sn**	**20 03 28.5**	**-8.8**
WHN				LR	LR		
	comp=N,2μm,5.0s						
WHN				LR	LR		
	comp=E,3μm,6.6s						
WHN				LR	LR		
	comp=Z,4μm,6.7s						
BTO	**Baotou**	**8.81**	**24**	*eP*	**Pn**	**20 02 22.1**	**+4.1**
HHC	**Hu-ho-hao-te**	**9.62**	**30**	*eP*	**Pn**	**20 02 32.8**	**+3.8**
HHC				pP		20 02 39.8	
HHC				sP		20 02 44.8	
HHC				S	**Sn**	**20 04 20.4**	**+4.0**
HHC				sS		20 04 31.4	
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,670nm,5.7s						
HHC				LR	LR		
	comp=E,520nm,5.4s						
HHC				LR	LR		
	comp=Z,490nm,5.8s						
TIA	**Tai'an**	**10.41**	**67**	P	**Pn**	**20 02 43.0**	**+3.1**
TIA				LR	LR		
	comp=N,420nm,8.0s						
TIA				LR	LR		
	comp=E,400nm,8.0s						
BJI	**Beijing**	**11.47**	**47**	P	**Pn**	**20 02 49.5**	**-4.9**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,99nm,4.2s						
BJI				LR	LR		
	comp=N,670nm,5.7s						
BJI				LR	LR		
	comp=E,490nm,4.4s						
BJI				LR	LR		
	comp=Z,95nm,15.3s						
NJ2	**Nanjing**	**11.50**	**89**	*eP*	**Pn**	**20 02 56.6**	**+1.7**
NJ2				pP		20 03 04.3	
NJ2				PP		20 03 05.6	
NJ2				sP		20 03 07.0	
NJ2				S	**Sn**	**20 05 02.0**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,120nm,4.8s						
NJ2				LR	LR		
	comp=N,440nm,9.0s						
NJ2				LR	LR		
	comp=E,1μm,7.6s						
NJ2				LR	LR		
	comp=Z,1μm,9.3s						
LSA	**Lhasa**	**12.45**	**260**	*e*Pn	**Pn**	**20 03 07.6**	**-0.2**
QZH	**Quanzhou**	**13.96**	**120**	*eP*	**Pn**	**20 03 29.4**	**+0.9**
QZH				S	**Sn**	**20 06 04.6**	**+1.6**
QZH				LR	LR		
	comp=N,2μm,11.0s						
QZH				LR	LR		
	comp=E,1μm,5.5s						
QZH				LR	LR		
	comp=Z,2μm,9.6s						
QIZ	**Qiongzhong**	**14.16**	**162**	P	**Pn**	**20 03 31.1**	**-0.2**
QIZ				S	**Sn**	**20 06 07.6**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,11nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,120nm,4.5s						
QIZ				LR	LR		
	comp=N,450nm,7.8s						
QIZ				LR	LR		
	comp=Z,570nm,10.3s						
QIZ	**Qiongzhong**	**14.16**	**162**	*e*Pn	**Pn**	**20 03 27.1**	**-4.2**
SONM	**Songino Array**	**15.20**	**3**	Pn	**Pn**	**20 03 46.6**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=185,slow=15,SNR=5.1						
CM31	**Chiang Mai Arr**	**15.23**	**203**	*e*Pn	**Pn**	**20 03 48.8**	**+3.0**
ULN	**Ulaanbaatar**	**15.26**	**5**	Pn	**Pn**	**20 03 45.5**	**-0.5**
YHNB	**Yeheng**	**16.20**	**115**	*e*Pn	**Pn**	**20 03 53.9**	**-4.4**
	comp=Z,36nm,0.8s						
TLY	**Talaya**	**19.06**	**357**	P	**Pn**	**20 04 26.8**	**-6.7**
KS15	**Wonju Array Si**	**19.11**	**69**	*eP*	**Pn**	**20 04 31.9**	**-2.3**
KSRS	**Korea Array**	**19.14**	**69**	P	**Pn**	**20 04 35.4**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=256,slow=11,SNR=9.6						
HIA	**Hailar**	**19.82**	**29**	*eP*	**Pn**	**20 04 43.1**	**+0.5**
	comp=Z,7.5nm,0.7s						
JOW	**Kunigami**	**20.78**	**100**	P	**P**	**20 04 52.2**	**+0.6**
	comp=Z,21nm,0.7s,baz=328,slow=18,SNR=4.2						
JOW	**Kunigami**	**20.78**	**100**	P	**P**	**20 04 52.2**	**+0.6**
MDJ	**Mudanjiang**	**22.35**	**51**	P	**P**	**20 05 08.7**	**+0.3**
	comp=Z,10nm,0.9s,mb4.3						
MK31	**Makanchi Array**	**22.52**	**316**	P	**P**	**20 05 11.1**	**+1.0**
MKAR	**Makanchi Array**	**22.52**	**316**	P	**P**	**20 05 11.8**	**+1.7**
	comp=Z,3.5nm,0.7s,mb3.9,baz=112,slow=10,SNR=6.7						
KSH	**Kashi**	**24.59**	**295**	P	**P**	**20 05 39.6**	**+9.1**
KSH				pmax	pmax		
	comp=Z,130nm,4.4s						
TKM2	**Tokmak 2**	**25.48**	**302**	P	**P**	**20 05 38.1**	**-0.5**
	comp=Z,3.3nm,0.8s,mb3.9						
ZAA0	**Zalesovo Array**	**25.81**	**332**	*eP*	**P**	**20 05 44.8**	**+3.4**
ZALV	**Zalesovo Beam**	**25.81**	**332**	P	**P**	**20 05 42.7**	**+1.4**
	comp=Z,2.5nm,0.6s,mb3.9,baz=134,slow=10,SNR=6.0						
ZALV	**Zalesovo Beam**	**25.81**	**332**	P	**P**	**20 05 42.7**	**+1.3**
UCH	**Uchtor**	**26.11**	**300**	P	**P**	**20 05 46.4**	**+2.1**
	comp=Z,5.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**26.21**	**301**	LR	LR	20 18 10.5	
	comp=Z,124nm,18.3s,baz=71,slow=41						
KURK	**Kurchatov**	**26.65**	**321**	P	**P**	**20 05 50.0**	**+1.0**
	comp=Z,1.4nm,0.6s,mb3.7,baz=137,slow=8.6,SNR=4.4						
KURK				PcP	PcP	20 09 11.5	-1.0
	comp=Z,0.8nm,0.6s,baz=114,slow=2.1,SNR=5.0						
KURK	**Kurchatov**	**26.65**	**321**	P	**P**	**20 05 47.8**	**-1.3**
	comp=Z,3.7nm,0.7s,mb4.0						
KURK				PcP	PcP	20 09 11.5	-1.0
AKTK	**Aktyubinsk**	**38.84**	**312**	P	**P**	**20 07 36.2**	**+0.9**
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**20 07 36.2**	**+0.9**
	comp=Z,1.3nm,0.7s,mb3.8,baz=105,slow=9.7,SNR=3.0						
ARU	**Arti**	**39.85**	**321**	*eP*	**P**	**20 07 43.4**	**-0.2**
	comp=Z,13nm,1.2s,mb4.5						
KAPI	**Kappang**	**39.90**	**157**	P	**P**	**20 07 43.0**	**-1.5**
	comp=Z,13nm,0.8s,mb4.7,baz=16,slow=3.6,SNR=6.9						

mb4.1/26, Error ellipse: s-maj=6.9km s-min=5.3km az=7.2
*IDC **16** 20:15:18.4±0.7, 32°.25N×104°.90E, h0km, mb4.0/16, mb1 4.1/18, mb1mx4.0/30, mbtmp4.0/18, ML3.5/2, MS4.6/1, Ms1 4.6/1, ms1mx3.3/23, Error ellipse: s-maj=25.7km s-min=13.6km az=50.0*
*NEIC **16** 20:15:20.0±0.3, 32°.29N×105°.04E, h10km, mb4.1/10, Error ellipse: s-maj=9.0km s-min=5.5km az=71.0*
*BJI **16** 20:15:21.3, 32°.19N×104°.73E, h14km, mB4.6/7, mb4.3/10, ML4.6/12, Ms5.0/7, Ms7 4.5/9*

ISC 16 20:15:20.2±0.8, 32°.25N±0°.03×104°.90E±0°.04, h9km±5km, n60, σ1§11/68, mb4.1/26, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.65**	**216**	Pg	**Pg**	**20 15 51.4**	**-0.5**
CD2				Sg	**Sg**	**20 16 14.3**	**+1.0**
CD2				smax			
	comp=N,9μm,0.7s						
XAN	**Xi'an**	**3.82**	**61**	Pg	**Pg**	**20 16 34.8**	**+1.4**
XAN				Sn	**Sn**	**20 17 07.8**	**+3.6**
XAN				Sg	**Sg**	**20 17 20.4**	**-2.5**
XAN				smax			
	comp=N,510nm,0.8s						
XAN				smax			
	comp=E,180nm,0.8s						
LZH	**Lanzhou**	**3.92**	**347**	Pn	**Pn**	**20 16 23.3**	**+2.7**
LZH				Pg	**Pg**	**20 16 35.1**	**-0.3**
LZH				Sn	**Sn**	**20 17 11.1**	**+4.3**
LZH				Sg	**Sg**	**20 17 25.0**	**-1.2**
LZH				smax			
	comp=N,1μm,0.8s						
LZH				smax			
	comp=E,1μm,0.6s						
LZH				LR	LR		
	comp=E,4μm,8.8s						
LZH				LR	LR		
	comp=Z,4μm,10.5s						
ENH	**Enshi**	**4.40**	**115**	*e*Pn	**Pn**	**20 16 30.2**	**+3.0**
ENH				*e*Pg	**Pg**	**20 16 42.0**	**-2.5**
GYA	**Guiyang**	**5.97**	**165**	Pn	**Pn**	**20 16 50.6**	**+1.8**
GYA				Sn	**Sn**	**20 17 56.3**	**-1.1**
GYA				smax			
	comp=N,1μm,0.7s						
GYA				smax			
	comp=E,550nm,0.8s						
GTA	**Gaotai**	**8.25**	**331**	P	**Pn**	**20 17 20.5**	**+0.5**
GTA				pP		20 17 23.9	
GTA				S	**Sn**	**20 18 59.8**	**+6.5**
GTA				sS		20 19 05.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,88nm,5.1s						
GTA				LR	LR		
	comp=Z,590nm,10.1s						
BTO	**Baotou**	**9.30**	**25**	*e*P	Px	20 18 20.8	
BTO				S	Sx	20 20 14.8	
BTO				LR	LR		
	comp=N,2μm,8.4s						
BTO				LR	LR		
	comp=E,2μm,10.8s						
HHC	**Hu-ho-hao-te**	**10.12**	**30**	*e*P	**Pn**	**20 17 53.8**	**+8.2**
HHC				pP		20 18 00.9	
HHC				S	**Sn**	**20 19 50.0**	**+11**
HHC				sS		20 20 00.9	
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,2μm,5.3s						
HHC				LR	LR		
	comp=E,2μm,4.6s						
HHC				LR	LR		
	comp=Z,2μm,5.2s						
NJ2	**Nanjing**	**11.83**	**87**	*e*P	**Pn**	**20 18 17.9**	**+8.8**
NJ2				PP		20 18 28.3	
NJ2				S	**Sn**	**20 20 36.0**	**+15**
NJ2				pmax	pmax		
	comp=Z,280nm,5.9s						
NJ2				LR	LR		
	comp=N,10μm,12.8s						
NJ2				LR	LR		
	comp=E,6μm,9.2s						
NJ2				LR	LR		
	comp=Z,5μm,8.6s						
LSA	**Lhasa**	**12.07**	**261**	P	**Pn**	**20 18 14.4**	**+2.1**
LSA	**Lhasa**	**12.07**	**261**	*e*Pn	**Pn**	**20 18 14.7**	**+2.4**
	comp=Z,3.0nm,0.6s						
QIZ	**Qiongzhong**	**13.90**	**160**	*e*Pn	**Pn**	**20 18 36.0**	**-1.3**
CM31	**Chiang Mai Arr**	**14.74**	**203**	*e*Pn	**Pn**	**20 18 51.3**	**+2.3**
	comp=Z,4.9nm,0.5s						
SONM	**Songino Array**	**15.61**	**4**	Pn	**Pn**	**20 19 00.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=194,slow=17,SNR=5.1						
ULN	**Ulaanbaatar**	**15.68**	**5**	*e*Pn	**Pn**	**20 19 01.2**	**0.0**
	comp=Z,2.7nm,0.7s						
GUN	**Gumba**	**17.02**	**260**	*e*P	**Pn**	**20 19 18.7**	**+0.3**
	comp=Z,16nm,0.6s						
PKI	**Pulchoki**	**17.52**	**260**	*e*P	**Pn**	**20 19 23.8**	**-0.9**
	comp=Z,25nm,0.7s						
PKIN	**Phulchoki**	**17.53**	**260**	*e*P	**Pn**	**20 19 23.5**	**-1.3**
	comp=Z,35nm,0.6s						
KKN	**Kakani**	**17.55**	**260**	*e*P	**Pn**	**20 19 24.2**	**-1.0**
	comp=Z,19nm,0.8s						
DMN	**Daman**	**17.76**	**260**	*e*P	**Pn**	**20 19 26.7**	**-1.0**
	comp=Z,24nm,0.7s						
KSRS	**Korea Array**	**19.58**	**68**	P	**Pn**	**20 19 49.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=256,slow=10.0,SNR=9.9						
MK31	**Makanchi Array**	**22.58**	**317**	*e*Pn	**P**	**20 20 21.3**	**+0.6**
MKAR	**Makanchi Array**	**22.58**	**317**	P	**P**	**20 20 21.7**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.5,baz=119,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**22.58**	**317**	P	**P**	**20 20 21.7**	**+0.9**
TKM2	**Tokmak 2**	**25.43**	**303**	*e*Pn	**P**	**20 20 49.5**	**+1.4**
	comp=Z,2.3nm,0.5s,mb4.0						
ZAA0	**Zalesovo Array**	**26.00**	**332**	*e*P	**P**	**20 20 53.0**	**-0.2**
ZALV	**Zalesovo Beam**	**26.00**	**332**	P	**P**	**20 20 53.0**	**-0.1**
	comp=Z,1.1nm,0.5s,mb3.7,baz=126,slow=8.9,SNR=7.6						
UCH	**Uchtor**	**26.04**	**301**	*e*P	**P**	**20 20 55.8**	**+2.2**
	comp=Z,3.2nm,1.2s,mb3.7						
AML	**Almayashu**	**26.61**	**301**	*e*P	**P**	**20 20 57.6**	**-1.2**
	comp=Z,3.9nm,0.9s,mb3.9						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**20 20 59.9**	**-0.1**
	comp=Z,1.5nm,0.7s,mb3.6,baz=129,slow=8.9,SNR=13						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**20 20 59.9**	**-0.1**
KURK				*e*P		20 21 00.3	
KULM	**Kulim**	**27.11**	**189**	P	**P**	**20 21 04.8**	**+1.3**
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**20 21 49.6**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.6,baz=106,slow=9.4,SNR=6.2						
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**20 22 33.4**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**38.86**	**312**	P	**P**	**20 22 45.6**	**0.0**
AKTO	**Aktyubinsk**	**38.86**	**312**	P	**P**	**20 22 45.6**	**0.0**
	comp=Z,0.7nm,0.4s,mb3.7,baz=111,slow=11,SNR=5.3						
KAPI	**Kappang**	**39.66**	**156**	*e*P	**P**	**20 22 50.6**	**-2.0**
	comp=Z,20nm,1.2s,mb4.7						
ARU	**Arti**	**39.95**	**321**	*e*P	**P**	**20 22 54.4**	**-0.2**
	comp=Z,6.3nm,0.8s,mb4.4						
TIXI	**Tiksi**	**41.50**	**11**	*e*P	**P**	**20 23 12.1**	**+4.9**
	comp=Z,1.6nm,0.6s,mb3.8						
PETK	**Petropavlovsk-**	**42.90**	**45**	P	**P**	**20 23 18.6**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.0,baz=269,slow=2.9,SNR=7.8						
ARCES	**ARCESS Array B**	**56.50**	**336**	P	**P**	**20 25 01.3**	**-0.9**
	comp=Z,6.0nm,1.1s,mb4.5,baz=89,slow=9.9,SNR=4.5						
BRTR	**Keskin Array B**	**56.77**	**299**	P	**P**	**20 25 04.6**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.8,baz=107,slow=6.1,SNR=4.8						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**20 25 05.1**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.2,baz=86,slow=9.1,SNR=8.3						
WRA	**Warramunga Arr**	**59.06**	**147**	P	**P**	**20 25 20.4**	**-0.3**
	comp=Z,7.0nm,0.6s,mb4.8,baz=341,slow=7.4,SNR=9.2						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**20 25 41.5**	**-0.1**
	comp=Z,3.0nm,0.6s,mb4.6,baz=330,slow=6.6,SNR=59						
NB2	**NORSAR Subarra**	**64.06**	**327**	P	**P**	**20 25 52.9**	**-1.1**
	comp=Z,3.9nm,0.8s,mb4.6,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**20 25 53.1**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.8,baz=76,slow=5.3,SNR=3.7						
BRG	**Berggiesshubel**	**66.30**	**316**	*e*P	**P**	**20 26 08.6**	**-0.2**
	comp=Z,1.5nm,1.0s,mb4.0						
BRG				*e*		20 26 16.3	
	comp=Z,5.7nm,1.2s						
CLL	**Collm**	**66.68**	**317**	*e*pP	pP	20 26 16.0	+1.9
GERES	**GERESS Array B**	**67.23**	**314**	P	**P**	**20 26 14.8**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.4,baz=98,slow=7.0,SNR=2.9						
INK	**Inuvik**	**70.85**	**20**	P	**P**	**20 26 35.8**	**-1.1**
	comp=Z,2.2nm,0.8s,mb4.1,baz=290,slow=9.4,SNR=5.3						
STKA	**Stephens Creek**	**72.61**	**148**	P	**P**	**20 26 47.5**	**-0.4**
	comp=Z,2.5nm,0.5s,mb4.4,baz=286,slow=14,SNR=6.4						
STKA	**Stephens Creek**	**72.61**	**148**	*e*P	**P**	**20 26 47.3**	**-0.6**
LPG	**La Plagne**	**72.96**	**313**	*e*P	**P**	**20 26 50.1**	**+0.2**
	comp=Z,8.6nm,0.7s,mb4.5						
LPG	**La Plagne**	**72.96**	**313**	*e*P	**P**	**20 26 50.1**	**+0.2**
	comp=Z,4.3nm,0.7s,mb4.5						
LPL	**La Plagne**	**72.96**	**313**	*e*P	**P**	**20 26 50.1**	**+0.1**
	comp=Z,10nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.96**	**313**	*e*P	**P**	**20 26 50.1**	**+0.1**
	comp=Z,5.2nm,0.8s,mb4.5						
YKA	**Yellowknife Ar**	**80.40**	**17**	P	**P**	**20 27 30.9**	**-0.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=327,slow=5.1,SNR=6.6						
YKA	**Yellowknife Ar**	**80.40**	**17**	*e*P	**P**	**20 27 30.9**	**-0.7**
PDAR	**Pinedale Array**	**98.93**	**25**	LR	LR	21 20 09.8	
	comp=Z,271nm,19.4s,baz=346,slow=39						

*IDC **16** 20:16:50.4±0.5, 31°.26N×103°.72E, h0km, mb4.8/28, mb1 4.8/30, mb1mx4.7/37, mbtmp4.8/30, ML3.8/2, MS4.3/15, Ms1 4.4/15, ms1mx4.1/24, Error ellipse: s-maj=16.9km s-min=9.7km az=45.0*
*BJI **16** 20:16:50.8, 31°.21N×103°.67E, h14km, mB4.8/19, mb4.7/37, ML5.0/15, Ms4.9/50, Ms7 4.7/39*
*ISCJB **16** 20:16:52.3±0.8, 31°.23N±0°.02×103°.70E±0°.02, h24km±5km, mb4.9/128, MS4.6/42, Error ellipse: s-maj=3.8km s-min=3.2km az=11.3*
*NEIC **16** 20:16:52.2±0.2, 31°.29N×103°.67E, h10km, mb5.0/68, MS5.0/4, Error ellipse: s-maj=5.8km s-min=4.1km az=207.0*
*GCMT **16** 20:16:52.2±0.2, 31°.30N×103°.55E, h18km±1km, MW5.0/85, Moment Tensor Solution. s29,c43; s85,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.52±.10; $M_{\theta\theta}$-0.21±.09; $M_{\phi\phi}$-0.30±.09; $M_{r\theta}$1.19±.22; $M_{\theta\phi}$3.26±.08; $M_{\phi r}$0.10±.19; Best double couple: $M_0$3.48800×10^{16} NP1:ϕ_s360.00000°, δ69.00000°, λ174.00000°. NP2: ϕ_s92.00000°, δ84.00000°, λ21.00000°. Principal axes: T 3.3130, Plg19.0000°, Azm318.0000°; N 0.3510, Plg68.0000°, Azm106.0000°; P -3.6630, Plg11.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **16** 20:16:53.6±0.9, 31°.23N×103°.71E, h33km, mb5.1/55, MS4.7/24 Error ellipse: s-maj=7.5km s-min=4.2km az=116.7*
*DJA **16** 20:16:58, 31°.15N×103°.62E, h40km, mb5.0/22*
*SZGRF **16** 20:17:03.0, 32°.65N×103°.41E, h33km, mb5.0, MS5.2, Sichuan, China*

ISC 16 20:16:53.1±0.7, 31°.26N±0°.02×103°.67E±0°.02, h14km±4km, n374, σ1§08/399, mb4.9/128, MS4.6/42, 21C-24D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**168**	Pg	**Pg**	**20 16 59.8**	**-0.6**
CD2				Sg	**Sg**	**20 17 07.3**	**+2.0**
CD2				smax			
	comp=N,477μm,0.7s						
LZH	**Lanzhou**	**4.81**	**2**	*e*Pg	**Pg**	**20 18 23.3**	**-2.0**
LZH				Sg	**Sg**	**20 19 24.5**	**-3.1**
LZH				smax			
	comp=N,2μm,1.0s						
LZH				smax			
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=E,13μm,5.2s						
LZH				LR	LR		
	comp=Z,16μm,6.4s						
XAN	**Xi'an**	**5.22**	**57**	Pg	**Pg**	**20 18 25.8**	**-7.3**
XAN				Sg	**Sg**	**20 19 36.5**	**-4.3**
XAN				smax			
	comp=N,2μm,1.0s						
XAN				smax			
	comp=E,900nm,0.9s						
XAN				LR	LR		
	comp=N,4μm,5.9s						
XAN				LR	LR		
	comp=E,2μm,9.7s						
XAN				LR	LR		
	comp=Z,2μm,10.5s						
GYA	**Guiyang**	**5.46**	**151**	Pg	**Pn**	**20 18 19.3**	**+5.2**
GYA				Sg	**Sn**	**20 19 19.8**	**+3.1**
GYA				smax			
	comp=N,3μm,1.0s						
GYA				smax			
	comp=E,3μm,1.1s						
GYA				LR	LR		
	comp=N,16μm,5.8s						
GYA				LR	LR		
	comp=E,16μm,5.3s						
GYA				LR	LR		
	comp=Z,10μm,5.6s						
KMI	**Kunming**	**6.17**	**188**	Pn	**Pn**	**20 18 23.3**	**-0.5**
KMI				Sn	**Sn**	**20 19 33.8**	**-0.4**
KMI				smax			
	comp=N,530nm,1.4s						
KMI				smax			
	comp=E,560nm,1.4s						
KMI				LR	LR		
	comp=N,11μm,11.0s						
KMI				LR	LR		
	comp=E,33μm,10.6s						
KMI				LR	LR		
	comp=Z,7μm,10.7s						
GTA	**Gaotai**	**8.72**	**340**	⇓*e*P	**Pn**	**20 19 01.3**	**+2.6**
GTA				pP		20 19 04.5	
GTA				sP		20 19 07.3	
GTA				S	**Sn**	**20 20 40.6**	**+3.8**
GTA				sS		20 20 45.6	
GTA				pmax	pmax		
	comp=Z,23nm,1.0s						
GTA				pmax	pmax		
	comp=Z,78nm,4.6s						
GTA				LR	LR		
	comp=N,5μm,13.4s						
GTA				LR	LR		
	comp=E,8μm,12.2s						
GTA				LR	LR		
	comp=Z,6μm,10.7s						
WHN	**Wuhan**	**9.21**	**92**	⇓P	**Pn**	**20 19 04.6**	**-0.9**
WHN				S	**Sn**	**20 20 45.4**	**-3.5**
WHN				LR	LR		
	comp=N,32μm,6.6s						
WHN				LR	LR		
	comp=E,12μm,8.3s						
WHN				LR	LR		
	comp=Z,13μm,4.6s						
LSA	**Lhasa**	**10.91**	**265**	P	**Pn**	**20 19 28.8**	**-0.1**
LSA				S	**Sn**	**20 21 24.3**	**-6.5**
LSA				LR	LR		
	comp=E,1μm,9.3s						
LSA	**Lhasa**	**10.91**	**265**	*e*P	**Pn**	**20 19 28.7**	**-0.2**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**10.91**	**265**	*e*Pn	**Pn**	**20 19 28.7**	**-0.2**
	comp=Z,30nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.50**	**32**	*e*P	**Pn**	**20 19 36.9**	**+0.1**
HHC				pP		20 19 44.1	
HHC				sP		20 19 49.0	
HHC				S	**Sn**	**20 21 45.0**	**0.0**
HHC				sS		20 21 56.8	
HHC				SS		20 21 59.9	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=N,4μm,5.6s						
HHC				LR	LR		
	comp=E,3μm,5.7s						
HHC				LR	LR		
	comp=Z,4μm,5.8s						
SHL	**Shillong**	**11.82**	**244**	*e*P	**Pn**	**20 19 41.0**	**-0.3**
SHL				*ex*	x	20 23 08.0	
GZH	**Guangzhou**	**11.85**	**131**	P	**Pn**	**20 19 36.6**	**-5.1**
GZH				S	**Sn**	**20 21 40.6**	**-13**
GZH				LR	LR		
	comp=N,5μm,8.2s						
GZH				LR	LR		
	comp=E,6μm,11.5s						
TIA	**Tai'an**	**12.24**	**63**	P	**Pn**	**20 19 47.6**	**+0.7**
TIA				LR	LR		
	comp=N,880nm,7.0s						
TIA				LR	LR		
	comp=E,1μm,7.0s						
NJ2	**Nanjing**	**12.96**	**83**	*e*P	**Pn**	**20 19 58.1**	**+1.2**
NJ2				pP		20 20 05.6	
NJ2				PP		20 20 08.8	
NJ2				sP		20 20 10.1	
NJ2				S	**Sn**	**20 22 23.5**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,260nm,4.2s						
NJ2				LR	LR		
	comp=N,6μm,6.7s						
NJ2				LR	LR		
	comp=E,5μm,7.3s						
NJ2				LR	LR		
	comp=Z,3μm,7.4s						
CHG	**Chiang Mai**	**13.11**	**200**	⇑P	**Pn**	**20 20 04.5**	**+5.5**
	comp=Z,42nm,0.9s						
QIZ	**Qiongzhong**	**13.40**	**154**	P	**Pn**	**20 20 01.9**	**-1.0**
QIZ				S	**Sn**	**20 22 31.8**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,280nm,4.2s						
QIZ				LR	LR		
	comp=N,4μm,7.5s						
QIZ				LR	LR		
	comp=E,2μm,8.1s						
QIZ				LR	LR		
	comp=Z,5μm,11.1s						
BJI	**Beijing**	**13.41**	**46**	P	**Pn**	**20 20 06.5**	**+3.6**
BJI				S	**Sn**	**20 22 31.8**	**+0.1**
BJI				pmax	pmax		
	comp=Z,18nm,1.2s						
BJI				pmax	pmax		
	comp=Z,130nm,6.5s						
BJI				LR	LR		
	comp=N,3μm,13.4s						
BJI				LR	LR		
	comp=E,2μm,11.6s						
BJI				LR	LR		
	comp=Z,1μm,21.6s						
CM31	**Chiang Mai Arr**	**13.45**	**200**	*e*Pn	**Pn**	**20 20 03.3**	**-0.3**
	comp=Z,32nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.45**	**200**	Pn	**Pn**	**20 20 03.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=12,slow=12,SNR=12						
CMAR				LR	LR	20 25 28.5	
	comp=Z,933nm,18.9s,baz=189,slow=38						
CMAR				ScP	ScP	20 29 04.2	-0.1
	comp=Z,0.1nm,0.3s,baz=11,slow=0.9,SNR=5.3						
BDT	**Bhumibol Dam**	**14.59**	**198**	P	**Pn**	**20 20 18.5**	**-0.6**
	comp=Z,58nm,0.8s						
QZH	**Quanzhou**	**14.59**	**112**	P	**Pn**	**20 20 19.0**	**-0.1**
QZH				S	**Sn**	**20 22 59.8**	**-0.9**
QZH				LR	LR		
	comp=N,12μm,9.2s						
QZH				LR	LR		
	comp=E,6μm,10.4s						
QZH				LR	LR		
	comp=Z,10μm,9.5s						
KKTK	**Khon Kaen**	**14.88**	**183**	P	**Pn**	**20 20 24.0**	**+0.9**
SSE	**Sheshan**	**15.00**	**86**	P	**Pn**	**20 20 21.1**	**-3.6**
SSE				S	**Sn**	**20 23 06.8**	**-3.8**
SSE				pmax	pmax		
	comp=Z,18nm,0.6s						
SSE				pmax	pmax		
	comp=Z,48nm,4.4s						
SSE				LR	LR		
	comp=N,4μm,18.1s						
SSE				LR	LR		
	comp=E,1μm,18.1s						
SSE				LR	LR		
	comp=Z,740nm,17.2s						
GUN	**Gumba**	**15.83**	**262**	*e*P	**Pn**	**20 20 32.0**	**-3.6**
	comp=Z,360nm,1.0s						
NST	**Nakhon Sawan**	**15.85**	**193**	P	**Pn**	**20 20 35.0**	**-0.9**
	comp=Z,117nm,0.9s						
UBT	**Ubonrachathani**	**15.99**	**175**	⇑P	**Pn**	**20 20 41.5**	**+3.8**
CAL	**Calcutta**	**16.19**	**241**	*ex*	**Sn**	**20 23 51.2**	**+11**
PKI	**Pulchoki**	**16.33**	**262**	*e*P	**Pn**	**20 20 38.1**	**-3.9**
	comp=Z,131nm,0.8s						
PKIN	**Phulchoki**	**16.34**	**262**	*e*P	**Pn**	**20 20 38.5**	**-3.6**
KKN	**Kakani**	**16.38**	**262**	*e*P	**Pn**	**20 20 38.5**	**-4.1**
	comp=Z,436nm,1.1s						
DL2	**Dalian**	**16.54**	**58**	P	**Pn**	**20 20 47.1**	**+2.4**
DL2				S	**Sn**	**20 23 56.3**	**+8.2**
DL2				pmax	pmax		
	comp=Z,30nm,1.3s						
DL2				LR	LR		
	comp=N,630nm,15.9s						
DL2				LR	LR		
	comp=E,840nm,15.9s						
DL2				LR	LR		
	comp=Z,1μm,14.6s						
DMN	**Daman**	**16.57**	**262**	*e*P	**Pn**	**20 20 41.1**	**-4.0**
	comp=Z,449nm,1.1s						
SONM	**Songino Array**	**16.68**	**6**	Pn	**Pn**	**20 20 46.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=22						
SONM				LR	LR	20 28 01.9	
	comp=Z,2μm,21.8s,baz=186,slow=40						
ULN	**Ulaanbaatar**	**16.78**	**8**	*e*P	**Pn**	**20 20 45.7**	**-1.9**
YHNB	**Yeheng**	**16.96**	**108**	*e*Pn	**Pn**	**20 20 50.5**	**+0.5**
	comp=Z,138nm,1.3s						
TPUB	**Ta-pu**	**17.02**	**114**	*e*Pn	**Pn**	**20 20 52.6**	**+1.8**
	comp=Z,172nm,1.4s						
SSLB	**Suanglung**	**17.03**	**112**	*e*Pn	**Pn**	**20 20 53.1**	**+2.2**
	comp=Z,160nm,1.1s						
NACB	**Ninganchiao**	**17.36**	**110**	*e*Pn	**Pn**	**20 20 57.4**	**+2.4**
	comp=Z,119nm,1.3s						
YULB	**Yu-li**	**17.50**	**112**	*e*Pn	**Pn**	**20 20 57.2**	**+0.4**
WMQ	**Urumqi**	**17.78**	**319**	P	**Pn**	**20 20 58.6**	**-1.5**
WMQ				sP	sP	20 21 05.1	-1.5
WMQ				PP		20 21 13.3	
WMQ				S	**Sn**	**20 24 14.6**	**-3.4**
WMQ				SS		20 24 36.4	
WMQ				PcP	PcP	20 25 36.3	-0.9
WMQ				pmax	pmax		
	comp=Z,64nm,1.6s						
WMQ				pmax	pmax		
	comp=Z,310nm,3.2s						
WMQ				LR	LR		
	comp=N,4μm,10.0s						
WMQ				LR	LR		
	comp=E,2μm,9.0s						
WMQ				LR	LR		
	comp=Z,2μm,22.0s						
ZAK	**Zakamensk**	**19.10**	**359**	*e*P	**Pn**	**20 21 15.7**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,25nm,1.6s						
SNY	**Shenyang**	**19.11**	**51**	⇓P	**Pn**	**20 21 17.4**	**+1.0**
SNY				S	**Sn**	**20 24 52.3**	**+2.0**
SNY				pmax	pmax		
	comp=Z,17nm,1.3s						
SNY				pmax	pmax		
	comp=Z,220nm,3.5s						
SNY				LR	LR		
	comp=N,640nm,12.0s						
SNY				LR	LR		
	comp=E,1μm,18.4s						
SNY				LR	LR		
	comp=Z,1μm,19.6s						
INCN	**Inchon**	**19.92**	**66**	P	**Pn**	**20 21 24.7**	**-1.4**
	comp=Z,20nm,0.6s						
TLY	**Talaya**	**20.40**	**360**	Pn	**P**	**20 21 31.7**	**+2.2**
	comp=Z,93nm,1.0s,SNR=6.8						
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**20 21 30.6**	**+1.1**
TLY				*e*S	**S**	**20 25 21.1**	**+3.6**
TLY				pmax	pmax		
	comp=Z,25nm,1.2s						
TLY				MLR	MLR		
	comp=Z,1μm,11.0s,MS4.6						
TLY	**Talaya**	**20.40**	**360**	*e*P	**P**	**20 21 30.4**	**+1.0**
	comp=Z,24nm,1.1s						
MOY	**Mondy**	**20.48**	**355**	*e*P	**P**	**20 21 32.0**	**+1.7**
MOY				pmax	pmax		
	comp=Z,92nm,2.2s						
JOSI	**Joshimath**	**20.70**	**274**	*e*P	**P**	**20 21 33.6**	**+0.7**
KS15	**Wonju Array Si**	**20.89**	**66**	*e*P	**P**	**20 21 36.1**	**+1.2**
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**20 21 35.4**	**0.0**
	comp=Z,28nm,0.6s,baz=259,slow=10,SNR=61						
KSRS				LR	LR	20 30 37.3	
	comp=Z,404nm,18.9s,MS3.8,baz=262,slow=40						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**20 21 35.4**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,28nm,0.6s

IRK	**Irkutsk**	**20.97**	**1**	⇓*i*P	**P**	**20 21 36.7**	**+1.1**
IRK				*e*S	S	20 25 52.1	+23
IRK				pmax	pmax		
comp=Z,158nm,1.6s							
CN2	**Changchun**	**21.25**	**48**	*e*P	**P**	**20 21 38.3**	**-0.5**
CN2				*e*sP	sP	20 21 45.3	+0.8
CN2				*e*S	**S**	**20 25 22.5**	**-12**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.3							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,700nm,14.0s,MS4.4							
CN2				LR	LR		
comp=E,800nm,14.0s,MS4.4							
CN2				LR	LR		
comp=Z,1μm,16.0s,MS4.4							
HIA	**Hailar**	**21.69**	**29**	*e*P	**P**	**20 21 43.5**	**+0.1**
HIA				pmax	pmax		
comp=Z,44nm,1.1s							
HIA	**Hailar**	**21.69**	**29**	*e*P	**P**	**20 21 43.5**	**+0.1**
comp=Z,44nm,1.1s,mb4.8							
KLP	**Kalpa**	**21.69**	**277**	*e*P	**P**	**20 21 43.8**	**+0.2**
JOW	**Kunigami**	**21.94**	**95**	P	**P**	**20 21 46.2**	**-0.1**
comp=Z,15nm,0.5s,mb4.7,baz=295,slow=4.6,SNR=8.6							
DDI	**Dehra Dun**	**22.01**	**274**	*e*P	**P**	**20 21 40.8**	**-6.2**
DDI				*e*S	**S**	**20 25 46.5**	**-3.1**
MK31	**Makanchi Array**	**22.62**	**319**	*e*P	**P**	**20 21 52.8**	**-0.5**
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**20 21 53.2**	**-0.1**
comp=Z,145nm,1.0s,mb5.4,baz=122,slow=12,SNR=130							
MKAR				LR	LR	20 31 25.4	
comp=Z,2μm,18.7s,MS4.6,baz=135,slow=39							
SMLA	**Simla**	**22.66**	**277**	*i* x	**P**	**20 21 49.5**	**-4.5**
SMLA				*i* x	x	20 25 52.4	
SDNR	**Sundarnagar**	**22.78**	**278**	*e*P	**P**	**20 21 56.1**	**+0.9**
AGRA	**Agra**	**22.79**	**266**	*e*P	**P**	**20 21 53.6**	**-1.7**
BISR	**Bishrakh**	**22.88**	**270**	*e*P	**P**	**20 21 57.1**	**+0.9**
NDI	**New Delhi**	**23.04**	**270**	*e*P	**P**	**20 21 56.0**	**-2.0**
NDI				*e*S	**S**	**20 26 11.0**	**+2.6**
KKR	**Kurukshetra**	**23.13**	**274**	*e*P	**P**	**20 21 57.6**	**-1.2**
AYAN	**Aya Nagar**	**23.16**	**270**	*e*P	**P**	**20 21 59.0**	**-0.3**
AYAN				AMb	AMB	20 22 03.2	
comp=Z,55nm,0.7s,mb5.1							
SONA	**Sohna**	**23.26**	**269**	*e*P	**P**	**20 21 58.6**	**-1.6**
SONA				AMb	AMB	20 22 04.1	
comp=Z,40nm,0.8s,mb4.9							
BHK	**Bhakra**	**23.26**	**278**	*e*x	x	20 22 06.3	
KSH	**Kashi**	**23.96**	**298**	*e*P	**P**	**20 22 10.3**	**+3.3**
KSH				*e*pP		20 22 14.4	
KSH				*e*sP	sP	20 22 17.4	+4.5
KSH				*e*PP		20 22 45.3	
KSH				*e*PcP	PcP	20 25 50.3	+1.3
KSH				*e*S	**S**	**20 26 25.4**	**+2.2**
KSH				*e*sS	sS	20 26 33.3	+3.1
KSH				*e*SS		20 27 20.6	
KSH				pmax	pmax		
comp=Z,30nm,1.0s,mb4.7							
KSH				LR	LR		
comp=N,1μm,13.1s							
KSH				LR	LR		
comp=E,300nm,9.7s							
KSH				LR	LR		
comp=Z,270nm,8.0s							
NGP	**Nagpur**	**24.23**	**251**	*e*x	x	20 22 04.6	
NGP				*e*x	x	20 22 06.4	
comp=Z,50nm,0.8s							
NGP				*e*x	x	20 26 19.7	
MDJ	**Mudanjiang**	**24.28**	**49**	P	**P**	**20 22 08.3**	**-1.6**
MDJ				pP		20 22 11.3	
MDJ				S	**S**	**20 26 27.5**	**-0.8**
MDJ				sS	sS	20 26 32.6	-2.6
MDJ				ScP	ScP	20 29 27.1	-0.7
MDJ				PcS	PcS	20 29 28.5	-0.8
MDJ				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.0							
MDJ				pmax	pmax		
comp=Z,72nm,6.0s							
MDJ				LR	LR		
comp=N,670nm,12.6s,MS4.5							
MDJ				LR	LR		
comp=E,810nm,14.1s,MS4.5							
MDJ				LR	LR		
comp=Z,1μm,13.6s,MS4.5							
MDJ	**Mudanjiang**	**24.28**	**49**	*e*P	**P**	**20 22 10.7**	**+0.8**
comp=Z,87nm,1.4s,mb5.0							
KHET	**Khetri**	**24.39**	**270**	*e*P	**P**	**20 22 11.0**	**-0.1**
KHET				AMb	AMB	20 22 16.8	
comp=Z,42nm,1.1s,mb4.8							
ULHL	**Ulahol**	**24.46**	**304**	P	**P**	**20 22 12.9**	**+1.4**
SNR=25							
BHPL	**Bhopal**	**24.62**	**258**	*e*P	**P**	**20 22 11.4**	**-1.7**
BHPL				AMb	AMB	20 22 19.7	
comp=Z,52nm,0.8s,mb5.1							
KZA	**Kyzart**	**25.11**	**303**	P	**P**	**20 22 19.3**	**+1.9**
SNR=173							
TKM2	**Tokmak 2**	**25.12**	**305**	P	**P**	**20 22 18.6**	**+1.1**
SNR=43							
TKM2	**Tokmak 2**	**25.12**	**305**	*e*P	**P**	**20 22 18.2**	**+0.7**
TKM2				pmax	pmax		
comp=Z,78nm,1.2s,mb5.1							
TKM2	**Tokmak 2**	**25.12**	**305**	*e*P	**P**	**20 22 18.2**	**+0.7**
comp=Z,78nm,1.2s,mb5.1							
VLA	**Vladivostok**	**25.29**	**54**	*e*P	**P**	**20 22 19.1**	**+0.1**
VLA				*e*S	**S**	**20 26 42.0**	**-2.4**
VLA				pmax	pmax		
comp=Z,22nm,1.3s,mb4.5							
VLA				MLR	MLR		
comp=Z,1μm,16.8s,MS4.5							
KBK	**Karagaybulak**	**25.49**	**305**	P	**P**	**20 22 22.5**	**+1.7**
SNR=77							
UCH	**Uchtor**	**25.68**	**303**	P	**P**	**20 22 24.3**	**+1.7**
SNR=68							
UCH	**Uchtor**	**25.68**	**303**	*e*P	**P**	**20 22 24.1**	**+1.6**
comp=Z,144nm,1.1s,mb5.4							
CHMS	**Chumysh**	**25.73**	**305**	P	**P**	**20 22 23.9**	**+0.9**
SNR=22							
FRU	**Bishkek**	**25.78**	**305**	*i* P	**P**	**20 22 24.0**	**+0.5**
FRU				*i*		20 23 10.0	
FRU				pmax	pmax		
comp=Z,180nm,1.8s,mb5.3							
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**20 22 25.7**	**+2.0**
comp=Z,452nm,0.9s,mb6.0,SNR=29							
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**20 22 27.8**	**+4.1**
SNR=40							
AAK	**Ala-Archa**	**25.81**	**304**	P	**P**	**20 22 25.0**	**+1.3**
comp=Z,33nm,0.8s,mb4.9,baz=107,slow=6.2,SNR=60							
AAK				LR	LR	20 33 55.3	
comp=Z,1μm,18.9s,MS4.5,baz=97,slow=40							
AAK	**Ala-Archa**	**25.81**	**304**	*c i*P	**P**	**20 22 24.4**	**+0.7**
AAK				pmax	pmax		
comp=Z,61nm,1.2s,mb5.0							
AAK	**Ala-Archa**	**25.81**	**304**	*e*P	**P**	**20 22 24.7**	**+1.0**
comp=Z,80nm,1.0s,mb5.2							
AJM	**Ajmer**	**25.82**	**267**	*e*P	**P**	**20 22 22.0**	**-2.0**
USP	**Ospenovka**	**25.99**	**306**	P	**P**	**20 22 26.4**	**+1.1**
SNR=42							
AML	**Almayashu**	**26.24**	**303**	P	**P**	**20 22 29.5**	**+1.9**
SNR=60							
AML	**Almayashu**	**26.24**	**303**	*e*P	**P**	**20 22 29.2**	**+1.5**
comp=Z,59nm,0.9s,mb5.1							
EKS2	**Erkin-Say**	**26.32**	**304**	P	**P**	**20 22 29.7**	**+1.3**
SNR=40							
EKS2	**Erkin-Say**	**26.32**	**304**	*e*P	**P**	**20 22 29.2**	**+0.8**
comp=Z,50nm,1.0s,mb5.0							
ZAA0	**Zalesovo Array**	**26.42**	**335**	*e*P	**P**	**20 22 28.3**	**-0.8**
ZALV	**Zalesovo Beam**	**26.42**	**335**	P	**P**	**20 22 28.9**	**-0.2**
comp=Z,40nm,0.8s,mb5.0,baz=136,slow=9.3,SNR=82							
ZALV				LR	LR	20 33 23.7	
comp=Z,678nm,18.9s,MS4.2,baz=139,slow=38							
HYB	**Hyderabad**	**26.63**	**245**	*i* P	**P**	**20 22 35.0**	**+3.6**
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**20 22 34.0**	**+0.5**
comp=Z,710nm,1.1s,mb6.1,SNR=71							
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**20 22 32.9**	**-0.6**
comp=Z,95nm,0.8s,mb5.4,baz=128,slow=9.5,SNR=146							
KURK	**Kurchatov**	**26.90**	**323**	*c i*P	**P**	**20 22 33.0**	**-0.5**
KURK				pmax	pmax		
comp=Z,185nm,1.2s,mb5.5							
KURK	**Kurchatov**	**26.90**	**323**	*e*P	**P**	**20 22 33.5**	**0.0**
comp=Z,170nm,1.1s,mb5.5							
BOD	**Bodaibo**	**27.49**	**12**	*e*P	**P**	**20 22 39.0**	**+0.3**
BOD				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.2							
NVS	**Novosibirsk**	**27.70**	**334**	⇓*i*P	**P**	**20 22 40.3**	**-0.3**
NVS				*e*S	**S**	**20 27 22.9**	**+0.7**
NVS				pmax	pmax		
comp=N,32nm,1.6s							
NVS				pmax	pmax		
comp=E,27nm,1.6s							
NVS				pmax	pmax		
comp=Z,35nm,1.6s,mb4.7							
NVS				smax			
comp=N,27nm,2.0s							
NVS				smax			
comp=E,16nm,2.3s							
KLR	**Kul'dur**	**27.72**	**42**	*e*P	**P**	**20 22 33.9**	**-7.0**
KLR				MLR	MLR		
comp=E,1μm,11.5s							
KLR				MLR	MLR		
comp=Z,2μm,11.5s,MS5.0							
MAJO	**Matsushiro**	**29.05**	**70**	*e*P	**P**	**20 22 48.5**	**-4.4**
MAT	**Matsushiro**	**29.05**	**70**	P	**P**	**20 22 51.2**	**-1.7**
MAT				S	**S**	**20 27 46.0**	**+2.1**
MJAR	**Matsushiro Arr**	**29.05**	**70**	P	**P**	**20 22 52.8**	**-0.1**
comp=Z,3.0nm,0.9s,mb4.0,baz=272,slow=9.4,SNR=8.0							
MJAR				LR	LR	20 35 02.8	
comp=Z,372nm,18.1s,MS4.0,baz=215,slow=38							
KBL	**Kabul**	**29.17**	**286**	*e*P	**P**	**20 22 52.7**	**-1.3**
KBL				pmax	pmax		
comp=Z,58nm,1.4s,mb5.1							
KBL	**Kabul**	**29.17**	**286**	*e*P	**P**	**20 22 52.7**	**-1.3**
comp=Z,58nm,1.4s,mb5.1							
JHJ	**Hachijo jima 2**	**30.53**	**77**	LR	LR	20 36 19.0	
comp=Z,704nm,18.6s,MS4.3,baz=271,slow=38							
DAV	**Davao City (W)**	**31.61**	**135**	LR	LR	20 37 26.1	
comp=Z,608nm,19.7s,MS4.3,baz=343,slow=39							
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**20 23 22.8**	**+0.2**
comp=Z,13nm,0.7s,mb4.8,baz=118,slow=9.6,SNR=48							
BVAR				PcP	PcP	20 26 07.3	-2.2
comp=Z,1.7nm,0.8s,baz=85,slow=3.2,SNR=3.5							
BVAR				LR	LR	20 37 27.9	
comp=Z,2μm,21.9s,MS4.7,baz=118,slow=38							
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**20 23 22.8**	**+0.2**
BVAR						20 26 07.3	
BVAR	**Borovoye Array**	**32.44**	**322**	P	**P**	**20 23 22.8**	**+0.2**
BVAR				PcP	PcP	20 26 07.3	-2.2
BVAR				LR	LR	20 37 27.9	
BRVK	**Borovoye**	**32.51**	**322**	P	**P**	**20 23 23.2**	**0.0**
comp=Z,198nm,0.8s,mb6.1,SNR=21							
BRVK	**Borovoye**	**32.51**	**322**	*c i*P	**P**	**20 23 23.3**	**+0.1**
BRVK				pmax	pmax		
comp=Z,54nm,1.2s,mb5.3							
BRVK	**Borovoye**	**32.51**	**322**	*e*P	**P**	**20 23 22.5**	**-0.7**
comp=Z,54nm,1.2s,mb5.3							
ERM	**Erimo**	**33.19**	**60**	*e*P	**P**	**20 23 30.0**	**+0.7**
YSS	**Yuzh-Sakhalins**	**33.74**	**51**	*e*P	**P**	**20 23 35.0**	**+0.9**
YSS				pmax	pmax		
comp=Z,20nm,1.0s,mb5.0							
YSS				MLR	MLR		
comp=Z,500nm,14.0s,MS4.4							
YSS				MLR	MLR		
comp=E,500nm,12.0s							
YSS	**Yuzh-Sakhalins**	**33.74**	**51**	*e*P	**P**	**20 23 35.1**	**+1.1**
comp=E,26nm,1.1s,mb5.1							
YAK	**Yakutsk**	**35.09**	**21**	*e*P	**P**	**20 23 43.6**	**-1.9**
YAK				*e**PP	pP	20 23 50.0	+0.2
YAK				*e*		20 24 59.0	
YAK				*e*		20 26 19.5	
YAK				*e*S	**S**	**20 29 11.2**	**-6.2**
YAK				*e*SSS		20 31 35.2	
YAK				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
YAK				pmax	pmax		
comp=N,4.0nm,1.1s							
YAK				pmax	pmax		
comp=E,5.0nm,1.3s							
YAK				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.7							
YAK				pmax	pmax		
comp=E,10.0nm,1.4s							
YAK				smax			
comp=N,18nm,7.4s							
YAK				smax			
comp=E,57nm,14.6s							
YAK				MLR	MLR		
comp=N,403nm,11.0s,MS4.6							
YAK				MLR	MLR		
comp=Z,974nm,12.0s,MS4.8							
YAK				MLR	MLR		
comp=E,473nm,11.0s,MS4.6							
YAK	**Yakutsk**	**35.09**	**21**	P	**P**	**20 23 43.5**	**-2.0**
comp=E,9.8nm,0.6s,mb4.9							
ABKAR	**Akbulak array**	**37.29**	**312**	*e*P	**P**	**20 24 04.3**	**-0.2**
comp=E,24nm,1.2s,mb4.9							
IKRD	**Kardeh**	**37.56**	**291**	*e*P	**P**	**20 24 02.2**	**-4.8**
ABKT	**Ailbek**	**37.78**	**293**	P	**P**	**20 24 10.7**	**+1.8**
comp=E,206nm,0.9s,mb5.9,SNR=10							
ISFR	**Sfrayin**	**37.95**	**291**	*e*P	**P**	**20 24 11.1**	**+0.9**
AKTK	**Aktyubinsk**	**38.76**	**313**	P	**P**	**20 24 17.2**	**+0.4**
AKTK				LR	LR	20 42 18.3	
AKTO	**Aktyubinsk**	**38.76**	**313**	P	**P**	**20 24 17.2**	**+0.4**
comp=E,5.5nm,0.6s,mb4.4,baz=96,slow=8.8,SNR=20							
AKTO				LR	LR	20 42 18.3	
comp=E,89nm,19.4s,MS3.6,baz=296,slow=39							
SVE	**Sverdlovsk**	**39.15**	**324**	⇑*e*P	**P**	**20 24 21.2**	**+1.1**
SVE				*e*S	**S**	**20 30 09.8**	**-10**
SVE				pmax	pmax		
comp=Z,85nm,1.2s,mb5.3							
KAPI	**Kappang**	**39.20**	**154**	P	**P**	**20 24 19.1**	**-1.8**
comp=Z,25nm,1.1s,mb4.9,baz=355,slow=11,SNR=6.4							
ARU	**Arti**	**40.08**	**322**	P	**P**	**20 24 28.0**	**+0.2**
comp=Z,340nm,0.7s,SNR=23							
ARU	**Arti**	**40.08**	**322**	*c i*P	**P**	**20 24 28.0**	**+0.2**
ARU				*e*		20 26 00.0	
ARU				S	**S**	**20 30 32.7**	**-0.6**
ARU				SS	SS	20 33 26.0	-4.5
ARU				pmax	pmax		
comp=Z,94nm,1.2s,mb5.4							
ARU				MLR	MLR		
comp=Z,748nm,18.0s,MS4.6							
ARU	**Arti**	**40.08**	**322**	*e*P	**P**	**20 24 27.1**	**-0.7**
comp=Z,83nm,1.1s,mb5.4							
SOKR	**Solikamsk**	**42.06**	**326**	*c i*P	**P**	**20 24 45.5**	**+1.4**
SOKR				pmax	pmax		
comp=Z,70nm,1.0s,mb5.2							
SOKR				MLR	MLR		
comp=Z,630nm,21.0s,MS4.5							
IALA	**Alasht**	**42.21**	**291**	*e*P	**P**	**20 24 46.4**	**+0.7**
TIXI	**Tiksi**	**42.67**	**11**	*e*P	**P**	**20 24 47.5**	**-1.4**
TIXI				*e*S	**S**	**20 31 08.1**	**-3.3**
TIXI				*e*SS	SS	20 34 20.2	-1.3
TIXI				pmax	pmax		
comp=Z,27nm,1.5s,mb4.8							
TIXI				MLR	MLR		
comp=Z,1μm,19.0s,MS4.8							
TIXI	**Tiksi**	**42.67**	**11**	*e*P	**P**	**20 24 46.8**	**-2.1**
comp=Z,20nm,1.1s,mb4.8							
IZEF	**Zefreh**	**43.18**	**286**	*e*P	**P**	**20 24 53.0**	**-0.6**
IPAR	**Pars**	**43.30**	**282**	*e*P	**P**	**20 24 53.9**	**-0.7**
ISRV	**Sarvestan**	**43.37**	**281**	*e*P	**P**	**20 24 54.3**	**-0.9**
IKLH	**Kolahrood**	**43.71**	**287**	*e*P	**P**	**20 24 58.4**	**+0.6**
SEY	**Seymchan**	**44.14**	**30**	*c e*P	**P**	**20 25 01.0**	**+0.2**
PEA0B	**Petropavlovsk-**	**44.34**	**44**	*e*P	**P**	**20 25 02.0**	**-0.5**
PETK	**Petropavlovsk-**	**44.34**	**44**	P	**P**	**20 25 01.5**	**-1.0**
comp=Z,6.0nm,0.8s,mb4.4,baz=268,slow=3.2,SNR=9.9							
PETK				LR	LR	20 45 27.8	
comp=Z,413nm,18.3s,MS4.4,baz=253,slow=39							
PETK	**Petropavlovsk-**	**44.34**	**44**	P	**P**	**20 25 01.5**	**-1.0**
PETK				LR	LR	20 45 27.8	
IPIR	**Pirpir**	**44.41**	**286**	*e*P	**P**	**20 25 13.2**	**+10**
PET	**Petropavlovsk**	**44.90**	**44**	*e*P	**P**	**20 25 07.7**	**+0.6**
PET				*e*S	**S**	**20 31 39.9**	**-4.5**
PET				*e*SS	SS	20 35 04.5	-0.9
PET				pmax	pmax		
comp=Z,15nm,1.2s,mb4.7							
PET				MLR	MLR		
comp=Z,600nm,19.0s,MS4.5							
PET				MLR	MLR		
comp=Z,700nm,17.0s							
UMR	**Umm Al-Rimmam**	**47.84**	**283**	*e*P	**P**	**20 25 29.8**	**-0.8**
UMR				AMb	AMB	20 25 41.6	
comp=Z,34nm,1.1s,mb5.3							
GNI	**Garni**	**47.90**	**298**	P	**P**	**20 25 32.1**	**+1.3**
comp=Z,5.3nm,0.9s,mb4.6,baz=165,slow=20,SNR=2.8							
GNI	**Garni**	**47.90**	**298**	*e*P	**P**	**20 25 32.8**	**+2.0**
GNI				pmax	pmax		
comp=Z,30nm,1.9s							
GNI	**Garni**	**47.90**	**298**	*e*P	**P**	**20 25 32.1**	**+1.2**
comp=Z,31nm,1.4s,mb5.2							
MIB	**Mutribah**	**48.09**	**284**	*e*P	**P**	**20 25 31.1**	**-1.3**
MIB				AMb	AMB	20 25 38.8	
comp=Z,87nm,1.0s,mb5.7							
RDF	**Al-Radifah**	**48.17**	**282**	*e*P	**P**	**20 25 31.7**	**-1.4**
RDF				AMb	AMB	20 25 44.3	
comp=Z,71nm,1.3s,mb5.5							
ZEI	**Tsey**	**48.17**	**301**	*e*P	**P**	**20 25 32.4**	**-0.5**
ZEI				pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.8							
KIV	**Kislovodsk**	**48.91**	**303**	P	**P**	**20 25 40.7**	**+2.1**
comp=Z,163nm,1.1s,mb6.0,SNR=7.2							
KIV	**Kislovodsk**	**48.91**	**303**	*d i*P	**P**	**20 25 39.6**	**+1.0**
KIV				pmax	pmax		
comp=Z,22nm,1.0s,mb5.1							
KIV				MLR	MLR		
comp=Z,400nm,16.0s,MS4.5							
KIV	**Kislovodsk**	**48.91**	**303**	*e*P	**P**	**20 25 39.3**	**+0.7**
comp=Z,36nm,1.1s,mb5.3							
VRHR	**Novokhopersk**	**49.16**	**313**	*e*P	**P**	**20 25 40.5**	**+0.1**
VRHR				pmax	pmax		
comp=Z,10.0nm,0.5s,mb5.1							
VRHR				pmax	pmax		
comp=N,10.0nm,0.6s							
VRHR				pmax	pmax		
comp=E,20nm,0.8s							
VORD	**Divnogorie**	**50.64**	**312**	*e*P	**P**	**20 25 51.6**	**0.0**
VORD				pmax	pmax		
comp=N,6.0nm,0.9s							
VORD				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8							
VORD				pmax	pmax		
comp=E,9.0nm,0.7s							
VSR	**Storozhevoye**	**50.70**	**313**	*e*P	**P**	**20 25 51.7**	**-0.4**
VSR				pmax	pmax		
comp=Z,9.0nm,0.6s,mb4.9							
VSR				pmax	pmax		
comp=N,8.0nm,0.9s							
VSR				pmax	pmax		
comp=E,10.0nm,0.6s							
VSR				MLR	MLR		
comp=Z,340nm,16.0s,MS4.5							
VSR				MLR	MLR		
comp=N,160nm,10.0s							
VSR				MLR	MLR		
comp=E,190nm,14.0s							
KLMR	**Klimovskoe**	**50.72**	**325**	*e*P	**P**	**20 25 52.2**	**+0.1**
KLMR				*e*		20 27 47.4	
KLMR				*e*SS	SS	20 36 37.2	-3.6
KLMR				pmax	pmax		
comp=Z,68nm,1.3s,mb5.4							
KLMR				pmax	pmax		
comp=Z,97nm,6.1s							
KLMR				MLR	MLR		
comp=Z,720nm,19.0s,MS4.7							
SOC	**Sochi**	**51.10**	**303**	*e*P	**P**	**20 25 59.1**	**+3.9**
SOC				*e*PPP		20 28 48.3	
SOC				*e*S	**S**	**20 33 11.6**	**-0.8**
BILL	**Bilibino**	**51.19**	**25**	⇓*i*P	**P**	**20 25 54.9**	**-0.6**
BILL				pmax	pmax		
comp=Z,23nm,1.2s,mb5.0							
BILL				MLR	MLR		
comp=Z,500nm,16.0s,MS4.6							
BILL	**Bilibino**	**51.19**	**25**	*e*P	**P**	**20 25 54.2**	**-1.3**
comp=Z,34nm,1.3s,mb5.1							
MOS	**Moscow**	**51.50**	**319**	*e*P	**P**	**20 25 57.3**	**-0.7**
MOS				pmax	pmax		
comp=Z,72nm,1.2s,mb5.5							
OBN	**Obninsk**	**52.11**	**318**	*e*P	**P**	**20 26 01.9**	**-0.7**
OBN				*i*		20 28 00.2	
OBN				pmax	pmax		
comp=Z,35nm,1.2s,mb5.2							
OBN	**Obninsk**	**52.11**	**318**	*e*P	**P**	**20 26 00.3**	**-2.3**
comp=Z,28nm,1.1s,mb5.1							
KNA	**Kununurra**	**52.59**	**149**	*e*P	**P**	**20 26 05.3**	**-1.3**
comp=Z,17nm,0.8s,mb5.0							
MALT	**Malatya**	**53.06**	**297**	*e*P	**P**	**20 26 10.4**	**+0.5**
comp=Z,6.1nm,1.0s,mb4.5							
MALT	**Malatya**	**53.06**	**297**	⇓*i*P	**P**	**20 26 12.0**	**+2.1**
APA	**Apatity**	**54.00**	**333**	⇑*e*P	**P**	**20 26 17.6**	**+1.3**
APA				*e*S	**S**	**20 33 48.0**	**-3.4**
APA				pmax	pmax		
comp=Z,70nm,1.4s,mb5.4							
APA				MLR	MLR		
comp=Z,2μm,15.0s,MS5.3							
JOF	**Joensuu**	**54.69**	**328**	*e*P	**P**	**20 26 19.7**	**-1.7**
JOF				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.7							
JOF	**Joensuu**	**54.69**	**328**	*e*p	**P**	**20 26 19.7**	**-1.7**
comp=Z,5.4nm,0.6s,mb4.8							
ASF	**Jabal al Asfar**	**55.94**	**290**	P	**P**	**20 26 31.3**	**+0.3**
comp=Z,5.4nm,0.7s,mb4.7,baz=348,slow=2.6,SNR=11							
BRTR	**Keskin Array B**	**56.34**	**299**	P	**P**	**20 26 33.5**	**-0.2**
comp=Z,4.1nm,1.0s,mb4.4,baz=113,slow=5.6,SNR=15							
KEV	**Kevo**	**56.44**	**336**	*e*P	**P**	**20 26 32.4**	**-1.4**
KEV				pmax	pmax		
comp=Z,11nm,0.8s,mb4.9							
KEV	**Kevo**	**56.44**	**336**	*e*P	**P**	**20 26 33.2**	**-0.7**
comp=Z,26nm,1.0s,mb5.2							
KEV	**Kevo**	**56.44**	**336**	*e*p	**P**	**20 26 32.4**	**-1.4**
comp=Z,11nm,0.8s,mb4.9							
MMAI	**Mount Meron Ar**	**56.88**	**291**	LR	LR	20 53 50.2	
comp=Z,305nm,19.1s,MS4.4,baz=25,slow=39							
ARCES	**ARCESS Array B**	**56.96**	**336**	P	**P**	**20 26 36.7**	**-0.9**
comp=Z,8.9nm,0.9s,mb4.8,baz=64,slow=8.2,SNR=7.4							
ARE0	**ARCESS Array S**	**56.96**	**336**	P	**P**	**20 26 38.9**	**+1.3**
AKASG	**Malin Array Be**	**57.00**	**313**	P	**P**	**20 26 36.5**	**-1.6**
comp=Z,2.8nm,0.6s,mb4.5,baz=74,slow=5.3,SNR=8.8							
KIEV	**Kiev**	**57.02**	**313**	*e*P	**P**	**20 26 36.2**	**-2.1**
KIEV				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6							
KIEV	**Kiev**	**57.02**	**313**	*e*P	**P**	**20 26 36.2**	**-2.1**
comp=Z,4.0nm,0.6s,mb4.6							
KAF	**Kangasniemi**	**57.05**	**327**	*e*P	**P**	**20 26 37.2**	**-1.1**
KAF				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.6							
KAF	**Kangasniemi**	**57.05**	**327**	*e*p	**P**	**20 26 37.2**	**-1.1**
comp=Z,3.9nm,0.7s,mb4.5							
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**20 26 39.6**	**0.0**
comp=Z,8.2nm,0.9s,mb4.8,baz=76,slow=8.0,SNR=11							
IDID	**Didziasalis**	**57.70**	**319**	*e*P	**P**	**20 26 43.8**	**+0.8**
IIGN

OJC Ojcow 62.97 314 *eP* **P 20 27 19.2 +0.1**
KECS Kecovo 63.05 312 *eP* **P 20 27 20.6 +0.8**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KECS Kecovo 63.05 312 *eP* **P 20 27 20.6 +0.8**
BZS Buzias 63.20 309 ⇓P **P 20 27 20.6 -0.1**
BZS Buzias 63.20 309 ⇓*iP* **P 20 27 20.6 -0.1**
PSZ Piszkesteto 63.60 312 P **P 20 27 22.8 -0.6**
PSZ pmax pmax
comp=Z,13nm,1.4s,mb4.8
PSZ Piszkesteto 63.60 312 P **P 20 27 22.8 -0.6**
comp=Z,13nm,1.4s,mb4.8
PSZ Piszkesteto 63.60 312 ⇓*e*pP pP 20 27 27.4 -0.5
PSZ Piszkesteto 63.60 312 ⇑*iP* **P 20 27 18.1 -5.3**
VYHS Vyhne 64.09 313 *eP* **P 20 27 26.9 +0.3**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
VYHS Vyhne 64.09 313 *eP* **P 20 27 26.8 +0.2**
OKC Ostrava-Krasne 64.10 314 *eP* **P 20 27 26.8 +0.2**
OKC MLR MLR
comp=Z,800nm,16.2s,MS5.0
OKC Ostrava-Krasne 64.10 314 *eP* **P 20 27 26.8 +0.2**
OKC AMS AMS 20 56 10.0
comp=Z,800nm,16.2s
IDI Anoyia 64.32 297 P **P 20 27 27.3 -1.1**
comp=Z,21nm,0.9s,mb5.2,baz=56,slow=7.1,SNR=7.6
NB2 NORSAR Subarra 64.33 327 P **P 20 27 27.0 -0.9**
comp=Z,11nm,1.0s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 64.33 327 P **P 20 27 27.6 -0.3**
comp=Z,8.0nm,1.0s,mb4.7,baz=72,slow=6.6,SNR=8.6
KOLL Kolacno 64.34 313 *eP* **P 20 27 28.7 +0.5**
KOLL Kolacno 64.34 313 *eP* **P 20 27 28.7 +0.5**
MORC Moravsky Berou 64.49 314 *eP* **P 20 27 28.1 -1.1**
comp=Z,6.4nm,0.8s,mb4.7
MORC Moravsky Berou 64.49 314 ⇑*iP* **P 20 27 28.5 -0.7**
KSP Ksiaz 64.90 316 *eP* **P 20 27 33.2 +1.4**
KSP Ksiaz 64.90 316 *eP* **P 20 27 33.1 +1.3**
KSP MLR MLR
comp=Z,2μm,19.6s,MS5.4
PKSM Moragy 64.97 310 ⇓P **P 20 27 32.2 -0.2**
PKSM Moragy 64.97 310 ⇓*iP* **P 20 27 32.2 -0.2**
DPC Dobruska-Polom 65.05 315 *eP* **P 20 27 32.8 0.0**
DPC *e* 20 27 47.9
DPC MLR MLR
comp=Z,1μm,15.6s,MS5.2
DPC Dobruska-Polom 65.05 315 *eP* **P 20 27 32.8 0.0**
DPC *ex* x 20 27 47.9
DPC AMS AMS 20 56 30.0
comp=Z,1μm,15.6s
NWAO Narrogin (SRO) 65.12 167 P **P 20 27 32.7 -0.6**
comp=Z,10nm,0.8s,mb4.9,baz=122,slow=2.4,SNR=4.1
NWAO Narrogin (SRO) 65.12 167 P **P 20 27 32.7 -0.6**
NWAO pmax pmax
comp=Z,10.0nm,0.8s
NWAO Narrogin (SRO) 65.12 167 P **P 20 27 32.0 -1.4**
comp=Z,11nm,0.9s,mb4.9
VRAC Vranov 65.23 314 ⇓P **P 20 27 34.8 +0.8**
VRAC Vranov 65.23 314 ⇓*iP* **P 20 27 34.8 +0.8**
ZST Bratislava 65.28 313 *eP* **P 20 27 35.9 +1.5**
ZST pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
ZST Bratislava 65.28 313 *eP* **P 20 27 35.9 +1.5**
CTA Charters Tower 65.40 136 *eP* **P 20 27 36.0 +0.6**
comp=Z,5.3nm,0.9s,mb4.6
CTA Charters Tower 65.40 136 P **P 20 27 35.0 -0.4**
comp=Z,9.3nm,1.0s,mb4.8,baz=319,slow=8.7,SNR=8.0
CTA LR LR 20 56 38.1
comp=Z,121nm,19.2s,MS4.1,baz=335,slow=36
CTA Charters Tower 65.40 136 P **P 20 27 35.0 -0.4**
CTA LR LR 20 56 38.1
CTAO Charters Tower 65.40 136 *eP* **P 20 27 35.0 -0.4**
CTAO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CTAO Charters Tower 65.40 136 *eP* **P 20 27 35.0 -0.4**
comp=Z,8.5nm,1.0s,mb4.7
TREC Trest 65.91 314 *eP* **P 20 27 39.2 +0.8**
TREC MLR MLR
comp=Z,900nm,17.7s,MS5.0
TREC Trest 65.91 314 *eP* **P 20 27 39.2 +0.8**
TREC AMS AMS 20 57 10.0
comp=Z,900nm,17.7s
PVCC Panska Ves 66.04 316 *eP* **P 20 27 40.4 +1.2**
PVCC MLR MLR
comp=Z,1μm,17.6s,MS5.1
PVCC Panska Ves 66.04 316 *eP* **P 20 27 40.4 +1.2**
PVCC AMS AMS 20 57 20.0
comp=Z,1μm,17.6s
CSNA Conrad Observa 66.16 313 ⇓*iP* **P 20 27 40.6 +0.6**
comp=Z,8.6nm,1.0s,mb4.7
PRU Pruhonice 66.24 315 *eP* **P 20 27 41.7 +1.1**
PRU MLR MLR
comp=Z,1μm,18.1s,MS5.2
PRU Pruhonice 66.24 315 *eP* **P 20 27 41.7 +1.1**
PRU AMS AMS 20 57 30.0
comp=Z,1μm,18.1s
BRG Berggiesshubel 66.29 316 *eP* **P 20 27 40.7 -0.1**
BRG S S 20 36 23.0 -6.7
BRG
comp=N,546nm,21.1s
BRG
comp=E,635nm,18.3s
BRG
comp=Z,1μm,19.0s
BRG Berggiesshubel 66.29 316 *eP* **P 20 27 40.7 -0.1**
BRG S S 20 36 23.0 -6.7
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,327nm,21.1s,MS4.7
BRG MLR MLR
comp=E,380nm,18.3s,MS4.7
BRG MLR MLR
comp=Z,604nm,19.0s,MS4.8
CLL Collm 66.69 317 *eP* **P 20 27 43.6 +0.2**
comp=Z,8.0nm,1.0s,mb4.7
CLL Collm 66.69 317 ⇑*iP* **P 20 27 43.9 +0.5**
CLL *i* 20 28 00.2
CLL *e*S S 20 36 40.0 +5.5
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CLL MLR MLR
comp=Z,600nm,21.3s,MS4.8
CLL Collm 66.69 317 ⇑*iP* **P 20 27 43.9 +0.5**
comp=Z,8.0nm,1.0s,mb4.7
CLL *i* pP pP 20 27 47.0 -0.9
CLL *i* 20 28 00.2
CLL *e*S S 20 36 40.0 +5.5
CLL LR LR
comp=Z,600nm,21.3s,MS4.8
CLL Collm 66.69 317 ⇑*iP* **P 20 27 43.9 +0.5**
comp=Z,8.0nm,1.0s,mb4.7
CLL *i* pP pP 20 27 47.0 -0.9
CLL *i* 20 28 00.2
CLL *e*PP PP 20 30 16.0 +6.1
CLL *e*S S 20 36 40.0 +5.5
CLL *e*(SS) 20 41 24.0
CLL Lm 20 57 00.0
comp=N,600nm,19.9s
CLL Lm 20 57 00.0
comp=E,500nm,19.4s
CLL Lm 20 57 00.0
comp=Z,600nm,21.3s
TTA Tatalina 67.11 29 *eP* **P 20 27 45.0 -0.8**
TTA pmax pmax
comp=Z,12nm,1.1s,mb4.8
TTA Tatalina 67.11 29 *eP* **P 20 27 45.0 -0.8**
comp=Z,12nm,1.1s,mb4.8
KHC Kasperske Hory 67.14 315 *eP* **P 20 27 47.3 +1.0**
KHC *e* 20 28 03.2
KHC MLR MLR
comp=Z,1μm,18.7s,MS5.2
KHC Kasperske Hory 67.14 315 *eP* **P 20 27 47.3 +1.0**
KHC *ex* x 20 28 03.2
KHC AMS AMS 20 57 50.0
comp=Z,1μm,18.7s
GEC2 GERESS Array S 67.17 314 *eP* **P 20 27 46.6 +0.1**
comp=Z,8.0nm,1.0s,mb4.7
GEC2 GERESS Array S 67.17 314 *eP* **P 20 27 46.6 +0.1**
GEC2 pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
GERES GERESS Array B 67.17 314 P **P 20 27 47.4 +0.9**
comp=Z,6.0nm,1.0s,mb4.6,baz=72,slow=5.7,SNR=26
MOA Molln 67.19 313 ⇑*iP* **P 20 27 47.8 +1.1**
comp=Z,8.7nm,1.1s,mb4.7

BSEG Bad Segeberg 67.24 320 *eP* **P 20 27 47.0 +0.2**
comp=Z,11nm,1.0s,mb4.8
TANN Tannenbergstha 67.33 316 *eP* **P 20 27 47.2 -0.3**
comp=Z,8.0nm,1.0s,mb4.7
NKC Novy Kostel 67.41 316 *eP* **P 20 27 48.4 +0.4**
NKC MLR MLR
comp=Z,900nm,17.0s,MS5.1
NKC Novy Kostel 67.41 316 *eP* **P 20 27 48.4 +0.4**
NKC AMS AMS 20 58 10.0
comp=Z,900nm,17.0s
COLD Coldfoot 67.48 24 *eP* **P 20 27 47.7 -0.4**
comp=Z,20nm,0.9s,mb5.2
WET Wettzell 67.56 315 *eP* **P 20 27 49.8 +0.8**
comp=Z,6.0nm,1.1s,mb4.5
WET Wettzell 67.56 315 *eP* **P 20 27 49.8 +0.8**
WET pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
ROTZ Rotzenmuhle 67.73 316 *eP* **P 20 27 50.2 +0.2**
comp=Z,14nm,1.0s,mb5.0
MOX Moxa 67.75 317 *eP* **P 20 27 49.7 -0.4**
comp=Z,10.0nm,1.2s,mb4.7
MOX
comp=Z,500nm,21.0s
MOX Moxa 67.75 317 *eP* **P 20 27 49.8 -0.3**
comp=Z,6.0nm,0.9s,mb4.6
MOX Moxa 67.75 317 *eP* **P 20 27 49.7 -0.4**
MOX pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
MOX MLR MLR
comp=Z,500nm,21.0s,MS4.7
NRDL Niedersach Rie 67.91 319 *eP* **P 20 27 51.2 +0.1**
comp=Z,14nm,1.1s,mb4.9
CLZ Clausthal 68.01 318 *eP* **P 20 27 52.0 +0.3**
comp=Z,17nm,1.0s,mb5.0
CLZ Clausthal 68.01 318 *eP* **P 20 27 52.0 +0.3**
CLZ pmax pmax
comp=Z,17nm,1.0s,mb5.0
SVW2 Sparrevohn 68.05 31 P **P 20 27 51.9 0.0**
RJOB Jochberg 68.15 313 *eP* **P 20 27 53.7 +1.0**
comp=Z,13nm,1.4s,mb4.8
GRA1 Grafenberg Arr 68.35 316 *eP* **P 20 27 54.5 +0.6**
comp=Z,18nm,0.9s,mb5.1
GRA1 LR LR
comp=Z,1μm,18.7s,MS5.2
GRF Grafenberg Arr 68.35 316 *eP* **P 20 27 54.5 +0.6**
comp=Z,18nm,0.9s,mb5.1
GRF *e*L 20 59 19.3
comp=Z,1μm,18.7s
GRF Grafenberg Arr 68.35 316 *eP* **P 20 27 54.5 +0.6**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
GRF MLR MLR
comp=Z,1μm,18.7s,MS5.2
GRF Grafenberg Arr 68.35 316 *eP* **P 20 27 54.5 +0.6**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.1
GRF MLR MLR
comp=Z,1μm,18.7s,MS5.2
UBBA Unterbreizbach 68.62 317 *eP* **P 20 27 56.1 +0.5**
comp=Z,5.0nm,1.1s,mb4.4
PPLA Purkeypile 68.70 28 *eP* **P 20 27 55.6 -0.2**
comp=Z,64nm,1.4s,mb5.4
TIP Timpagrande 68.85 304 *eP* **P 20 27 56.0 -1.3**
comp=Z,30nm,1.5s,mb5.0
KTH Kantishna Hill 68.91 28 *eP* **P 20 27 56.6 -0.5**
comp=Z,67nm,1.7s,mb5.3
FUR Furstenfeldbru 68.92 314 *eP* **P 20 27 58.3 +0.8**
comp=Z,32nm,1.0s,mb5.2
FUR Furstenfeldbru 68.92 314 *eP* **P 20 27 58.3 +0.8**
FUR pmax pmax
comp=Z,32nm,1.0s,mb5.2
WTTA Wattenberg 69.06 313 ⇓*iP* **P 20 27 59.1 +0.7**
comp=Z,16nm,1.3s,mb4.8
MOTA Moosalm 69.36 313 ⇓*iP* **P 20 27 59.9 -0.3**
comp=Z,19nm,1.3s,mb4.9
COLA College 69.45 26 *eP* **P 20 27 59.8 -0.7**
COLA pmax pmax
comp=Z,24nm,1.0s,mb5.1
COLA College 69.45 26 *eP* **P 20 27 59.8 -0.7**
comp=Z,24nm,1.0s,mb5.1
RSO Redoubt South 69.58 31 *eP* **P 20 27 60.0 -1.3**
MCK McKinley 69.60 27 *eP* **P 20 28 00.8 -0.6**
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MCK McKinley 69.60 27 *eP* **P 20 28 00.8 -0.6**
comp=Z,6.7nm,0.8s,mb4.6
FETA Feichten 69.72 313 ⇑*iP* **P 20 28 02.8 +0.3**
comp=Z,12nm,0.9s,mb4.8
TNS Taunus Mts 69.77 317 *eP* **P 20 28 03.7 +1.0**
comp=Z,8.0nm,1.1s,mb4.6
TNS Taunus Mts 69.77 317 *eP* **P 20 28 03.7 +1.0**
TNS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AQU L'Aquila 69.90 308 *eP* **P 20 28 03.7 0.0**
AQU pmax pmax
comp=Z,20nm,1.1s,mb5.0
AQU L'Aquila 69.90 308 *eP* **P 20 28 03.7 +0.1**
comp=Z,20nm,1.1s,mb5.0
STU Stuttgart 69.94 315 *eP* **P 20 28 04.8 +1.0**
comp=Z,18nm,0.8s,mb5.0
PMR Palmer 70.58 29 *eP* **P 20 28 06.0 -1.5**
PMR pmax pmax
comp=Z,14nm,0.9s,mb4.9
PMR Palmer 70.58 29 *eP* **P 20 28 06.0 -1.5**
comp=Z,14nm,0.9s,mb4.9
BFO Black Forest 70.64 315 *eP* **P 20 28 07.8 -0.3**
comp=Z,12nm,1.1s,mb4.7
BFO Black Forest 70.64 315 *eP* **P 20 28 07.8 -0.3**
BFO pmax pmax
comp=Z,12nm,1.1s,mb4.7
KDAK Kodiak Island 70.91 33 LR LR 20 59 19.9
comp=Z,300nm,19.0s,MS4.6,slow=36
KDAK Kodiak Island 70.91 33 *i* P **P 20 28 09.1 -0.4**
MEM Membach 71.02 318 P **P 20 28 11.0 +0.6**
CDF Champ du Feu 71.24 316 *eP* **P 20 28 10.5 -1.2**
comp=Z,20nm,1.0s,mb4.7
CDF Champ du Feu 71.24 316 *eP* **P 20 28 10.5 -1.2**
CDF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CDF Champ du Feu 71.24 316 *eP* **P 20 28 10.5 -1.2**
comp=Z,9.9nm,1.0s,mb4.7
WLF Walferdange 71.35 317 P **P 20 28 13.2 +0.8**
comp=Z,24nm,1.2s,mb5.0
WLF Walferdange 71.35 317 *eP* **P 20 28 12.7 +0.3**
comp=Z,36nm,1.1s,mb5.2
WLF Walferdange 71.35 317 *eP* **P 20 28 13.1 +0.7**
WLF pmax pmax
comp=Z,35nm,1.1s,mb5.2
WLF Walferdange 71.35 317 *eP* **P 20 28 13.1 +0.7**
comp=Z,35nm,1.1s,mb5.2
ECH Echery 71.40 315 *eP* **P 20 28 12.9 +0.2**
ECH pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ECH Echery 71.40 315 *eP* **P 20 28 12.8 +0.2**
comp=Z,9.1nm,1.1s,mb4.6
BCLA Clavier 71.50 318 P **P 20 28 13.2 -0.1**
RMQ Roma 71.77 138 *eP* **P 20 28 16.1 +1.0**
comp=Z,14nm,0.8s,mb4.9
DOU Dourbes 72.06 318 P **P 20 28 19.1 +2.5**
comp=Z,4.1nm,1.6s,mb4.1
INK Inuvik 72.13 19 P **P 20 28 14.9 -1.8**
comp=Z,9.8nm,0.9s,mb4.7,baz=325,slow=7.9,SNR=13
INK Inuvik 72.13 19 *eP* **P 20 28 16.0 -0.7**
INK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 72.13 19 *eP* **P 20 28 15.9 -0.8**
comp=Z,11nm,0.9s,mb4.8
STKA Stephens Creek 72.34 147 *eP* **P 20 28 17.8 -0.6**
comp=Z,8.7nm,1.1s,mb4.6
STKA Stephens Creek 72.34 147 P **P 20 28 18.1 -0.3**
comp=Z,9.0nm,0.9s,mb4.7,baz=296,slow=7.7,SNR=8.6
STKA Stephens Creek 72.34 147 *eP* **P 20 28 17.6 -0.8**
comp=Z,3.4nm,1.1s,mb4.2
BMRM Bremner River 72.77 28 *eP* **P 20 28 19.4 -1.3**
comp=Z,442nm,0.6s
LPG La Plagne 72.87 313 *eP* **P 20 28 21.1 -0.5**
comp=Z,32nm,0.9s,mb5.0
LPG La Plagne 72.87 313 *eP* **P 20 28 21.1 -0.5**
LPG pmax pmax
comp=Z,16nm,0.9s,mb5.0
LPG La Plagne 72.87 313 *eP* **P 20 28 21.1 -0.5**
comp=Z,16nm,0.9s,mb5.0
DAWY Dawson 72.95 24 *eP* **P 20 28 20.3 -1.4**
SUMG Summit 73.22 349 *eP* **P 20 28 21.9 -1.2**
comp=Z,14nm,1.2s,mb4.8
RES Resolute Bay 73.61 5 *eP* **P 20 28 23.1 -2.4**
RES pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RES Resolute Bay 73.61 5 *eP* **P 20 28 23.1 -2.4**
comp=Z,3.4nm,0.9s,mb4.3
CMSA Cobar Meteorol 74.07 144 *eP* **P 20 28 29.1 +0.5**
SMF Signal de Mont 74.12 315 *eP* **P 20 28 27.5 -1.4**
comp=Z,33nm,1.1s,mb4.9
SMF Signal de Mont 74.12 315 *eP* **P 20 28 27.5 -1.4**
SMF pmax pmax
comp=Z,16nm,1.1s,mb4.9
SMF Signal de Mont 74.12 315 *eP* **P 20 28 27.5 -1.4**
comp=Z,16nm,1.1s,mb4.9
BORG Borgarnes 75.18 339 P **P 20 28 34.2 -0.5**
TCF Toulx Ste Croi 75.28 315 *eP* **P 20 28 34.5 -1.1**
comp=Z,27nm,1.1s,mb4.8
TCF Toulx Ste Croi 75.28 315 *eP* **P 20 28 34.5 -1.1**
TCF pmax pmax
comp=Z,14nm,1.1s,mb4.8
TCF Toulx Ste Croi 75.28 315 *eP* **P 20 28 34.5 -1.1**
comp=Z,14nm,1.1s,mb4.8
CAF Calviac 76.05 314 *eP* **P 20 28 39.3 -0.8**
comp=Z,24nm,1.2s,mb4.7
CAF Calviac 76.05 314 *eP* **P 20 28 39.3 -0.8**
CAF pmax pmax
comp=Z,12nm,1.3s,mb4.7
CAF Calviac 76.05 314 *eP* **P 20 28 39.3 -0.8**
comp=Z,12nm,1.3s,mb4.7
SKAG Skagway 77.36 27 *eP* **P 20 28 47.8 +0.6**
comp=Z,18nm,0.8s,mb5.0
YKA Yellowknife Ar 81.65 17 P **P 20 29 09.8 -0.6**
comp=Z,2.3nm,0.8s,mb4.2,baz=324,slow=4.8,SNR=9.1
FCC Fort Churchill 89.10 9 *eP* **P 20 29 47.0 -0.6**
comp=Z,0.4nm,1.3s
EDM Edmonton 89.92 21 *eP* **P 20 29 51.9 +0.3**
FFC Flin Flon 91.56 15 *eP* **P 20 29 58.7 -0.5**
TORD Torodi Ar. Bea 93.23 287 P **P 20 30 07.2 -0.4**
comp=Z,1.9nm,0.9s,mb4.5,baz=45,slow=2.7,SNR=9.3
BSMT Bassoo Peak 94.01 25 P **P 20 30 11.5 +0.8**
comp=Z,4.6nm,1.2s,mb4.8
JTMT Jette 94.28 25 P **P 20 30 12.3 +0.3**
comp=Z,6.3nm,1.4s,mb4.8
SWMT Swartz Lake 94.58 25 P **P 20 30 13.3 -0.1**
PDAR Pinedale Array 100.26 24 PP PP 20 34 47.5 +3.5
comp=Z,0.2nm,0.4s,baz=299,slow=6.1,SNR=4.5
DBIC Dimbokro 102.16 286 PP PP 20 34 56.9 -2.9
comp=Z,4.8nm,1.1s,baz=73,slow=9.3,SNR=3.2
OTAV Otavalo 148.61 4 *e*PKPbc PKPbc 20 36 39.0 -1.5

NNC ***16*** *20:25:07.8±3.5, 37°.98N×70°.22E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=30.3km s-min=15.3km az=176.0*
IDC ***16*** *20:25:08.8±2.1, 38°.09N×71°.40E, h0km, mb3.9/4, mb1 3.9/9, mb1mx3.6/29, mbtmp3.8/9, ML3.3/5, Error ellipse: s-maj=48.0km s-min=14.9km az=133.0*
NEIC ***16*** *20:25:17.8±0.9, 38°.41N×71°.27E, h59km±12km, Error ellipse: s-maj=23.2km s-min=9.2km az=125.0*

ISC 16 20:25:09.2±1.7, 38°.01N±0°.05×71°.40E±0°.08, h3km±12km, n29, σ1°.46/37, mb3.9/5, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.88**	**66**	Pn	**Pn**	**20 26 10.8**	**+1.1**
KSH				Sn	**Sn**	**20 26 54.3**	**-1.4**
KSH				smax			
	comp=N,260nm,0.6s						
KSH				smax			
	comp=E,250nm,0.8s						
KBL	**Kabul**	**3.95**	**209**	*e*Pn	**Pb**	**20 26 20.1**	**+0.7**
KBL				*e*Sn	**Sn**	**20 26 57.9**	**+0.5**
KBL				*e*Sg	**Sg**	**20 27 14.4**	**-1.6**
AML	**Almayashu**	**4.48**	**22**	*e*Pn	**Pn**	**20 26 18.6**	**+0.7**
UCH	**Uchtor**	**4.84**	**29**	*e*Pn	**Pn**	**20 26 24.8**	**+2.0**
EKS2	**Erkin-Say**	**4.99**	**21**	*e*Pn	**Pn**	**20 26 27.7**	**+2.8**
KK31	**Karatay Array**	**5.13**	**353**	⇑Pn	**Pn**	**20 26 26.6**	**-0.3**
	comp=E,6.2nm,0.5s,baz=181,slow=13,SNR=119						
KK31				⇓Sn	**Sn**	**20 27 25.7**	**-0.8**
	comp=E,29nm,0.8s,baz=178,slow=33,SNR=4.6						
AAK	**Ala-Archa**	**5.19**	**26**	Pn	**Pn**	**20 26 31.0**	**+3.3**
	comp=E,0.1nm,0.3s,baz=186,slow=3.2,SNR=11						
AAK				Sn	**Sn**	**20 27 30.2**	**+2.2**
	comp=E,0.0nm,0.3s,baz=126,slow=18,SNR=2.5						
AAK				Lg		20 27 52.0	
	comp=E,0.0nm,0.3s,baz=23,slow=9.6,SNR=3.7						
AAK	**Ala-Archa**	**5.19**	**26**	*e*Pn	**Pn**	**20 26 30.1**	**+2.5**
AAK				Sn	**Sn**	**20 27 30.2**	**+2.2**
AAK				Lg		20 27 52.0	
TKM2	**Tokmak 2**	**5.86**	**32**	⇓Pn	**Pn**	**20 26 42.1**	**+5.3**
	comp=E,4.6nm,0.6s						
TKM2				⇑Sn	**Sb**	**20 27 59.4**	**-3.0**
	comp=E,13nm,0.9s						
TKM2	**Tokmak 2**	**5.86**	**32**	*e*Pn	**Pn**	**20 26 37.7**	**+0.9**
MK31	**Makanchi Array**	**11.90**	**39**	*e*Pn	**Pn**	**20 27 56.5**	**-3.1**
MKAR	**Makanchi Array**	**11.90**	**39**	Pn	**Pn**	**20 28 00.5**	**+0.9**
	comp=E,0.1nm,0.3s,baz=231,slow=10,SNR=7.9						
KURK	**Kurchatov**	**13.70**	**20**	Pn	**Pn**	**20 28 20.1**	**-4.1**
	comp=E,0.0nm,0.3s,baz=216,slow=12,SNR=2.4						
KURK				Lg		20 32 20.9	
	comp=E,0.0nm,0.3s,baz=216,slow=28,SNR=4.0						
AB31	**Akbulak array**	**13.95**	**327**	⇓Pn	**Pn**	**20 28 20.4**	**-7.2**
	comp=E,0.6nm,0.5s,baz=148,slow=12,SNR=14						
AB31				⇑Sn	**Sn**	**20 30 51.8**	**-11**
	comp=E,3.3nm,0.7s,baz=145,slow=22,SNR=5.6						
BVAR	**Borovoye Array**	**15.03**	**358**	Pn	**Pn**	**20 28 39.2**	**-3.1**
	comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=2.7						
AKTK	**Aktyubinsk**	**15.66**	**327**	Pn	**Pn**	**20 28 54.9**	**+4.3**
AKTO	**Aktyubinsk**	**15.66**	**327**	Pn	**Pn**	**20 28 54.9**	**+4.3**
	comp=E,0.4nm,0.3s,baz=147,slow=7.9,SNR=6.2						
ZAA0	**Zalesovo Array**	**18.41**	**26**	*e*Pn	**Pn**	**20 29 24.3**	**-1.0**
ZALV	**Zalesovo Beam**	**18.41**	**26**	P	**Pn**	**20 29 24.9**	**-0.3**
	comp=E,0.3nm,0.3s,baz=218,slow=12,SNR=8.1						
ZALV	**Zalesovo Beam**	**18.41**	**26**	P	**Pn**	**20 29 24.9**	**-0.3**
KIV	**Kislovodsk**	**22.41**	**294**	P	**P**	**20 30 08.8**	**+0.1**
FINES	**FINESS Array B**	**36.42**	**325**	P	**P**	**20 32 13.9**	**-0.7**
	comp=E,1.6nm,0.7s,mb4.1,baz=101,slow=6.0,SNR=6.7						
ARCES	**ARCESS Array B**	**39.88**	**337**	P	**P**	**20 32 42.4**	**-1.3**
	comp=E,3.9nm,0.8s,mb4.2,baz=111,slow=6.9,SNR=4.2						
NB2	**NORSAR Subarra**	**43.38**	**322**	P	**P**	**20 33 14.8**	**+2.4**
	comp=Z,1.2nm,0.6s,mb3.8,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**43.38**	**322**	P	**P**	**20 33 15.0**	**+2.6**
	comp=Z,1.3nm,0.7s,mb3.8,baz=94,slow=7.7,SNR=4.2						
NOA	**NORSAR Array B**	**43.38**	**322**	P	**P**	**20 33 15.0**	**+2.6**
TIXI	**Tiksi**	**44.26**	**22**	*e*P	**P**	**20 33 17.6**	**-1.8**
TORD	**Torodi Ar. Bea**	**66.07**	**268**	P	**P**	**20 35 58.2**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=43,slow=6.2,SNR=9.8						
YKA	**Yellowknife Ar**	**79.72**	**3**	P	**P**	**20 37 17.5**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=358,slow=4.8,SNR=3.8						

IDC ***16*** *20:27:54.0±2.3, 17°.47S×178°.82W, h511km±27km, mb3.4/7, mb1 3.7/8, mb1mx3.4/17, mbtmp3.4/8, Error ellipse: s-maj=53.8km s-min=14.0km az=152.0*
NEIC ***16*** *20:27:55.7±1.1, 17°.47S×178°.80W, h544km±12km, mb4.1/7, Error ellipse: s-maj=56.0km s-min=15.0km az=157.0*
ISCJB ***16*** *20:27:57.5±1.3, 17°.3S±0°.3×179°.1W±0°.2, h565km±13km, mb3.9/14, Error ellipse: s-maj=43.1km s-min=16.7km az=151.3*

ISC 16 20:27:58.2±1.3, 17°.3S±0°.3×179°.1W±0°.2, h562km±13km, n23, σ0°.62/22, mb3.9/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.78**	**261**	*e*P	**P**	**20 29 12.7**	**-0.2**
AFI	**Afiamalu**	**7.79**	**65**	P	**P**	**20 29 47.0**	**-7.3**
	4.1nm,0.3s,baz=109,slow=-9.7,SNR=3.6						
AFI	**Afiamalu**	**7.79**	**65**	P	**P**	**20 29 47.0**	**-7.3**
EIDS	**Eidsvold**	**28.89**	**249**	*e*P	**P**	**20 33 11.3**	**-1.2**
	6.5nm,0.9s,mb4.3						
RMQ	**Roma**	**31.15**	**247**	*e*P	**P**	**20 33 32.7**	**+0.8**
	7.5nm,0.7s,mb4.3						
CTAO	**Charters Tower**	**32.93**	**260**	*e*P	**P**	**20 33 47.4**	**+0.3**
	5.3nm,0.9s,mb4.1						
CNB	**Canberra Magne**	**33.31**	**231**	*e*P	**P**	**20 33 50.8**	**+0.7**
CMSA	**Cobar Meteorol**	**34.91**	**239**	*e*P	**P**	**20 34 03.7**	**+0.1**
STKA	**Stephens Creek**	**38.38**	**240**	*e*P	**P**	**20 34 32.4**	**+0.4**
	3.9nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**38.38**	**240**	P	**P**	**20 34 32.8**	**+0.8**
	4.7nm,0.6s,mb4.2,baz=92,slow=13,SNR=16						
STKA	**Stephens Creek**	**38.38**	**240**	*e*P	**P**	**20 34 32.4**	**+0.4**
	1.2nm,0.7s,mb3.5						
WRAB	**Tennant Creek**	**44.12**	**259**	*e*P	**P**	**20 35 17.1**	**-0.5**
	6.5nm,1.2s,mb4.0						
WRA	**Warramunga Arr**	**44.13**	**259**	P	**P**	**20 35 17.6**	**0.0**
	1.3nm,0.5s,mb3.7,baz=96,slow=7.2,SNR=37						
ASAR	**Alice Springs**	**44.35**	**254**	P	**P**	**20 35 19.9**	**+0.5**

15nm,0.6s,mb4.7,baz=88,slow=7.9,SNR=337
ASAR PcP PcP 20 36 51.8 +0.7
0.9nm,0.7s,baz=100,slow=4.4,SNR=4.6
KAKA Kakadu 46.97 269 *e*P **P 20 35 39.1 -0.3**
8.3nm,0.5s,mb4.5
KSM Kuching 71.98 277 *e*P **P 20 38 26.7 +0.6**
7.7nm,0.9s,mb4.1
NVAR Mina Array Bea 79.42 44 P **P 20 39 07.2 +0.6**
1.0nm,0.7s,mb3.3,baz=216,slow=8.0,SNR=8.7
KULM Kulim 82.33 278 P **P 20 39 21.1 -1.1**
6.0nm,1.1s,mb3.9
MAW Mawson 84.22 200 P **P 20 39 29.8 -0.7**
1.9nm,0.8s,mb3.7,baz=131,slow=4.7,SNR=4.2
MAW Mawson 84.22 200 *e*P **P 20 39 29.6 -0.9**
0.5nm,0.7s,mb3.1
TXAR Lajitas Array 86.20 58 P **P 20 39 40.5 -0.3**
0.9nm,0.8s,mb3.5,baz=206,slow=6.1,SNR=6.9
PDAR Pinedale Array 87.35 44 P **P 20 39 46.1 +0.3**
0.7nm,0.6s,mb3.5,baz=243,slow=4.1,SNR=5.8
MMAI Mount Meron Ar 145.28 303 PKPbc PKPbc 20 46 35.3 +1.4
2.2nm,0.7s,baz=56,slow=7.4,SNR=3.8

IDC 16 20:28:22.1±2.4, 14°.26S×76°.27W, h0km, mb3.5/3, mb1 3.8/6, mb1mx3.7/18, mbtmp3.7/6, ML3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/18, Error ellipse: s-maj=73.4km s-min=20.1km az=54.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.33**	**346**	Pn	Pn	20 29 01.1	-0.6
	31nm,0.3s,baz=172,slow=12,SNR=39						
NNA				Sn	Sn	20 29 31.5	+0.4
	104nm,0.3s,baz=268,slow=17,SNR=7.5						
ATAH	**Atahualpa**	**7.51**	**344**	Pn	Pn	20 30 12.8	-0.2
	1.2nm,0.3s,baz=204,slow=3.8,SNR=6.6						
ATAH				Sn	Sn	20 31 38.9	0.0
	baz=45,slow=13,SNR=1.6						
ATAH				LR	LR	20 32 55.1	
	comp=Z,68nm,20.4s,baz=243,slow=37						
LPAZ	**La Paz**	**8.11**	**105**	Pn	Pn	20 30 27.3	+6.1
	1.4nm,0.3s,baz=285,slow=10,SNR=27						
SIV	**San Ignacio**	**14.77**	**99**	Pn	Pn	20 31 54.5	+2.0
	0.3nm,0.3s,baz=281,slow=10,SNR=6.3						
CPUP	**Villa Florida**	**21.41**	**127**	P	P	20 33 11.9	+0.2
	0.4nm,0.3s,baz=271,slow=6.6,SNR=3.1						
TXAR	**Lajitas Array**	**50.78**	**329**	P	P	20 37 24.6	+0.3
	0.3nm,0.5s,baz=158,slow=9.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**81.86**	**74**	P	P	20 40 43.5	-0.5
	0.7nm,0.6s,baz=249,slow=4.9,SNR=7.9						

*IDC **16** 20:29:03.4±0.6, 31°.33N×103°.35E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.2/27, mbtmp4.3/17, ML3.4/2, MS3.6/5, Ms1 3.6/5, ms1mx3.1/39, Error ellipse: s-maj=23.4km s-min=14.0km az=53.0*
*NEIC **16** 20:29:04.5±0.3, 31°.26N×103°.27E, h10km, mb4.4/14, Error ellipse: s-maj=8.6km s-min=6.3km az=58.0*
*MOS **16** 20:29:04.6±1.2, 31°.30N×103°.42E, h22km, mb4.7/18, Error ellipse: s-maj=11.5km s-min=6.6km az=98.4*
*BJI **16** 20:29:04.2, 31°.26N×103°.55E, h15km, mB4.9/8, mb4.4/13, ML4.5/18, Ms4.4/21, Ms7 4.0/17*
*ISCJB **16** 20:29:05.1±0.9, 31°.33N±0°.03×103°.48E±0°.04, h15km±6km, mb4.4/34, MS3.5/6, Error ellipse: s-maj=5.5km s-min=4.5km az=152.6*
ISC 16 20:29:05.8±0.8, 31°.36N±0°.02×103°.53E±0°.03, h11km±5km, n102, σ1°29/113, mb4.4/34, MS3.5/6, 4C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.49**	**156**	Pg	**Pg**	**20 29 15.4**	**+0.1**
CD2				Sg	**Sg**	**20 29 21.9**	**+0.1**
CD2				smax			
	comp=N,43μm,1.0s						
LZH	**Lanzhou**	**4.73**	**3**	Pg	**Pg**	**20 30 33.6**	**-2.7**
LZH				Sn	**Sn**	**20 31 17.3**	**+5.6**
LZH				Sg	**Sg**	**20 31 37.1**	**-0.4**
LZH				smax			
	comp=N,580nm,1.3s						
LZH				smax			
	comp=E,650nm,1.2s						
LZH				LR	LR		
	comp=E,2μm,5.1s						
LZH				LR	LR		
	comp=Z,3μm,6.4s						
ENH	**Enshi**	**5.24**	**100**	*e*Pn	**Pn**	**20 30 25.1**	**+1.1**
	comp=Z,1.6nm,0.4s						
ENH				*e*Sn	**Sn**	**20 31 24.3**	**-0.1**
ENH				*e*Sg	**Sg**	**20 31 53.0**	**-1.1**
XAN	**Xi'an**	**5.28**	**58**	Pg	**Pg**	**20 30 40.0**	**-6.8**
XAN				Sn	**Sn**	**20 31 29.4**	**+4.1**
XAN				Sg	**Sg**	**20 31 49.0**	**-6.2**
XAN				smax			
	comp=N,550nm,0.8s						
XAN				smax			
	comp=E,250nm,0.9s						
GYA	**Guiyang**	**5.60**	**150**	Pn	**Pn**	**20 30 30.8**	**+1.8**
GYA				Sn	**Sn**	**20 31 33.8**	**+0.5**
GYA				smax			
	comp=N,670nm,1.0s						
GYA				smax			
	comp=E,1μm,0.9s						
KMI	**Kunming**	**6.25**	**187**	Pn	**Pn**	**20 30 37.3**	**-0.6**
KMI				Sn	**Sn**	**20 31 49.8**	**+0.5**
KMI				smax			
	comp=N,110nm,1.6s						
KMI				smax			
	comp=E,130nm,1.2s						
KMI				LR	LR		
	comp=N,1μm,9.8s						
KMI				LR	LR		
	comp=E,6μm,10.6s						
KMI				LR	LR		
	comp=Z,780nm,10.2s						
GTA	**Gaotai**	**8.59**	**340**	*e*P	**Pn**	**20 31 13.0**	**+3.0**
GTA				pP		20 31 16.3	
GTA				sP		20 31 19.1	
GTA				S	**Sn**	**20 32 48.1**	**+1.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,60nm,4.5s						
GTA				LR	LR		
	comp=N,450nm,10.4s						
GTA				LR	LR		
	comp=E,650nm,12.2s						
GTA				LR	LR		
	comp=Z,620nm,10.4s						
WHN	**Wuhan**	**9.33**	**92**	P	**Pn**	**20 31 18.8**	**-1.4**
WHN				S	**Sn**	**20 33 01.1**	**-4.0**
WHN				LR	LR		
	comp=N,2μm,7.3s						
WHN				LR	LR		
	comp=E,2μm,6.2s						
WHN				LR	LR		
	comp=Z,1μm,6.8s						
LSA	**Lhasa**	**10.80**	**264**	P	**Pn**	**20 31 39.8**	**-0.5**
LSA				LR	LR		
	comp=E,810nm,8.7s						
LSA				LR	LR		
	comp=Z,870nm,7.6s						
LSA	**Lhasa**	**10.80**	**264**	*e*P	**Pn**	**20 31 40.5**	**+0.2**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**10.80**	**264**	*e*Pn	**Pn**	**20 31 40.5**	**+0.1**
	comp=Z,6.7nm,0.6s						
HHC	**Hu-ho-hao-te**	**11.48**	**32**	*e*P	**Pn**	**20 31 52.1**	**+2.5**
HHC				pP		20 31 55.5	
HHC				PP		20 32 01.8	
HHC				S	**Sn**	**20 34 03.3**	**+5.5**
HHC				SS		20 34 17.0	
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,6.1s						
HHC				LR	LR		
	comp=N,880nm,6.6s						
HHC				LR	LR		
	comp=E,740nm,5.8s						
HHC				LR	LR		
	comp=Z,550nm,5.7s						
SHL	**Shillong**	**11.75**	**244**	*e*P	**Pn**	**20 31 53.0**	**-0.4**
BJI	**Beijing**	**13.43**	**46**	P	**Pn**	**20 32 15.6**	**-0.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI				LR	LR		
	comp=N,1μm,13.4s						
BJI				LR	LR		
	comp=E,580nm,12.8s						
CM31	**Chiang Mai Arr**	**13.50**	**199**	*e*Pn	**Pn**	**20 32 13.6**	**-3.6**
	comp=E,5.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.50**	**199**	Pn	**Pn**	**20 32 17.1**	**-0.2**
	comp=E,0.1nm,0.3s,baz=8.6,slow=11,SNR=5.9						
QIZ	**Qiongzhong**	**13.53**	**154**	P	**Pn**	**20 32 13.4**	**-4.4**
QIZ				S	**Sn**	**20 34 45.3**	**-2.9**
QIZ				LR	LR		
	comp=N,640nm,8.0s						
QIZ				LR	LR		
	comp=Z,570nm,7.6s						
QIZ	**Qiongzhong**	**13.53**	**154**	*e*Pn	**Pn**	**20 32 15.8**	**-2.0**
GUN	**Gumba**	**15.72**	**262**	*e*P	**Pn**	**20 32 49.2**	**+2.0**
	comp=Z,83nm,0.8s						
PKI	**Pulchoki**	**16.22**	**261**	*e*P	**Pn**	**20 32 55.2**	**+1.5**
	comp=Z,47nm,0.6s						
PKIN	**Phulchoki**	**16.23**	**261**	*e*P	**Pn**	**20 32 55.8**	**+2.0**
	comp=Z,109nm,0.7s						
KKN	**Kakani**	**16.27**	**262**	*e*P	**Pn**	**20 32 56.2**	**+2.0**
	comp=Z,81nm,0.7s						
DMN	**Daman**	**16.47**	**262**	*e*P	**Pn**	**20 32 58.8**	**+2.0**
	comp=Z,96nm,0.8s						
SONM	**Songino Array**	**16.60**	**7**	Pn	**Pn**	**20 32 59.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=12						
ULN	**Ulaanbaatar**	**16.71**	**8**	*e*P	**Pn**	**20 32 58.6**	**-1.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**16.71**	**8**	*e*Pn	**Pn**	**20 32 58.6**	**-1.1**
	comp=Z,7.1nm,0.9s						
YHNB	**Yeheng**	**17.10**	**109**	*e*Pn	**Pn**	**20 33 10.1**	**+5.3**
	comp=Z,29nm,0.9s						
NACB	**Ninganchiao**	**17.51**	**110**	*e*Pn	**Pn**	**20 33 12.3**	**+2.5**
	comp=Z,23nm,0.8s						
ZAK	**Zakamensk**	**19.01**	**360**	*e*P	**Pn**	**20 33 28.0**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY	**Talaya**	**20.31**	**0**	*e*P	**P**	**20 33 43.8**	**+2.3**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,231nm,13.0s,MS3.7						
TLY	**Talaya**	**20.31**	**0**	*e*P	**P**	**20 33 43.2**	**+1.6**
	comp=Z,6.0nm,0.8s						
MOY	**Mondy**	**20.38**	**355**	*e*P	**P**	**20 33 44.3**	**+2.0**
MOY				pmax	pmax		
	comp=Z,40nm,3.6s						
IRK	**Irkutsk**	**20.88**	**1**	*e*P	**P**	**20 33 49.1**	**+1.4**
IRK				pmax	pmax		
	comp=Z,44nm,1.2s						
KS15	**Wonju Array Si**	**20.97**	**67**	*e*P	**P**	**20 33 51.2**	**+2.4**
KSRS	**Korea Array**	**21.00**	**67**	P	**P**	**20 33 49.1**	**0.0**
	comp=Z,19nm,0.7s,mb4.5,baz=257,slow=10,SNR=26						
KSRS				LR	LR	20 42 00.2	
	comp=Z,76nm,20.5s,MS3.1,baz=205,slow=37						
KSRS	**Korea Array**	**21.00**	**67**	P	**P**	**20 33 49.2**	**0.0**
KSRS				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.5						
KSRS				MLR	MLR		
	comp=Z,76nm,20.5s,MS3.1						
CN2	**Changchun**	**21.28**	**48**	*e*P	**P**	**20 33 53.4**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
HIA	**Hailar**	**21.67**	**30**	*e*P	**P**	**20 33 57.5**	**+1.3**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**21.67**	**30**	*e*P	**P**	**20 33 57.5**	**+1.2**
	comp=Z,10.0nm,0.8s,mb4.3						
JOW	**Kunigami**	**22.07**	**96**	P	**P**	**20 34 02.6**	**+1.8**
	comp=Z,8.7nm,0.5s,mb4.4,baz=257,slow=4.7,SNR=5.0						
MKAR	**Makanchi Array**	**22.47**	**319**	LR	LR	20 42 55.5	
	comp=Z,87nm,18.6s,MS3.2,baz=316,slow=37						
MDJ	**Mudanjiang**	**24.32**	**50**	P	**P**	**20 34 24.1**	**+0.8**
AAK	**Ala-Archa**	**25.65**	**304**	LR	LR	20 45 19.8	
	comp=Z,291nm,19.5s,MS3.8,baz=89,slow=38						
AAK	**Ala-Archa**	**25.65**	**304**	*e*P	**P**	**20 34 36.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.8						
ZALV	**Zalesovo Beam**	**26.28**	**335**	P	**P**	**20 34 40.6**	**-0.4**
	comp=Z,10nm,0.8s,mb4.4,baz=158,slow=9.1,SNR=13						
ZALV				LR	LR	20 45 58.7	
	comp=Z,126nm,21.1s,MS3.4,baz=245,slow=39						
KURBB	**Kurchatov Arra**	**26.74**	**323**	⇓Pg	**P**	**20 34 43.5**	**-1.6**
	comp=Z,2.3nm,0.9s,mb3.7						
KURBB				⇓Lg		20 38 10.3	
	comp=Z,3.7nm,1.0s						
KURK	**Kurchatov**	**26.75**	**323**	⇓Pg	**P**	**20 34 44.3**	**-0.9**
	comp=Z,22nm,1.4s,mb4.5						
KURK				⇑Lg		20 38 14.3	
	comp=Z,24nm,1.2s						
KURK	**Kurchatov**	**26.75**	**323**	P	**P**	**20 34 44.8**	**-0.4**
	comp=Z,13nm,0.9s,mb4.4,baz=127,slow=9.6,SNR=20						
KURK				LR	LR	20 46 32.4	
	comp=Z,163nm,19.2s,MS3.6,baz=150,slow=39						
KURK	**Kurchatov**	**26.75**	**323**	*c*e*P*	**P**	**20 34 44.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**32.29**	**322**	PcP	PcP	20 38 20.7	-1.5
	comp=Z,1.0nm,0.7s,baz=146,slow=3.1,SNR=4.1						
BRVK	**Borovoye**	**32.36**	**322**	P	**P**	**20 35 34.2**	**-0.8**
YSS	**Yuzh-Sakhalins**	**33.78**	**51**	*e*P	**P**	**20 35 49.8**	**+2.3**
SVE	**Sverdlovsk**	**39.00**	**324**	*e*P	**P**	**20 36 32.1**	**+0.2**
SVE				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
ARU	**Arti**	**39.93**	**322**	*c i*P	**P**	**20 36 39.3**	**-0.4**
ARU				S	**S**	**20 42 46.0**	**+1.6**
ARU				SS	SS	20 45 40.0	-0.8
ARU				pmax	pmax		
	comp=Z,31nm,1.7s,mb4.8						
ARU	**Arti**	**39.93**	**322**	*e*P	**P**	**20 36 38.6**	**-1.0**
	comp=Z,4.8nm,0.6s,mb4.4						
TIXI	**Tiksi**	**42.60**	**12**	*e*P	**P**	**20 36 58.4**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
TIXI	**Tiksi**	**42.60**	**12**	*e*P	**P**	**20 37 00.1**	**-1.3**
	comp=Z,3.6nm,0.6s,mb4.3						
PETK	**Petropavlovsk-**	**44.35**	**44**	P	**P**	**20 37 16.4**	**+0.6**
	comp=Z,3.2nm,0.9s,mb4.0,baz=227,slow=5.9,SNR=4.2						
ZEI	**Tsey**	**48.02**	**301**	*e*P	**P**	**20 37 44.9**	**+0.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KIV	**Kislovodsk**	**48.76**	**303**	*e*P	**P**	**20 37 49.2**	**-1.3**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BILL	**Bilibino**	**51.16**	**25**	*c i*P	**P**	**20 38 08.0**	**-0.4**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.3						
BILL	**Bilibino**	**51.16**	**25**	*e*P	**P**	**20 38 07.7**	**-0.7**
	comp=Z,4.0nm,0.8s,mb4.4						
OBN	**Obninsk**	**51.96**	**318**	*e*P	**P**	**20 38 13.5**	**-1.1**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
JOF	**Joensuu**	**54.55**	**328**	*e*P	**P**	**20 38 30.4**	**-3.1**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
JOF	**Joensuu**	**54.55**	**328**	*e*p	**P**	**20 38 30.4**	**-3.1**
	comp=Z,3.2nm,0.7s,mb4.5						
KEV	**Kevo**	**56.30**	**336**	*e*P	**P**	**20 38 44.3**	**-1.7**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KEV	**Kevo**	**56.30**	**336**	*e*p	**P**	**20 38 44.3**	**-1.7**
	comp=Z,6.3nm,0.7s,mb4.8						
ARCES	**ARCESS Array B**	**56.83**	**336**	P	**P**	**20 38 48.6**	**-1.1**
	comp=Z,4.3nm,0.8s,mb4.5,baz=82,slow=8.7,SNR=4.8						
AKASG	**Malin Array Be**	**56.85**	**313**	P	**P**	**20 38 48.9**	**-1.3**
	comp=Z,3.0nm,0.7s,mb4.5,baz=72,slow=7.1,SNR=5.3						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**20 38 50.9**	**-0.8**
	comp=Z,2.8nm,0.6s,mb4.5,baz=86,slow=7.8,SNR=5.5						
WRAB	**Tennant Creek**	**58.95**	**146**	*e*P	**P**	**20 39 04.2**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**58.95**	**146**	*e*P	**P**	**20 39 04.2**	**-1.1**
	comp=Z,16nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**58.96**	**146**	P	**P**	**20 39 04.7**	**-0.6**
	comp=Z,5.2nm,0.8s,mb4.6,baz=338,slow=7.6,SNR=23						
ASAR	**Alice Springs**	**61.96**	**148**	P	**P**	**20 39 25.4**	**-0.3**
	comp=Z,1.8nm,0.8s,mb4.3,baz=336,slow=6.4,SNR=12						
KECS	**Kecovo**	**62.90**	**312**	*e*P	**P**	**20 39 35.8**	**+4.0**
VYHS	**Vyhne**	**63.94**	**312**	*e*P	**P**	**20 39 39.1**	**+0.4**
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**20 39 37.8**	**-2.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=72,slow=6.8,SNR=3.4						
CLL	**Collm**	**66.54**	**317**	*e*P	**P**	**20 39 55.0**	**-0.5**
CLL	**Collm**	**66.54**	**317**	*e*P	**P**	**20 39 55.0**	**-0.5**
GERES	**GERESS Array B**	**67.02**	**314**	P	**P**	**20 39 58.0**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.7,baz=347,slow=1.8,SNR=3.6						
PPLA	**Purkeypile**	**68.68**	**28**	*e*P	**P**	**20 40 08.8**	**0.0**
	comp=Z,8.0nm,0.9s,mb4.7						
COLA	**College**	**69.42**	**26**	*e*P	**P**	**20 40 13.4**	**0.0**
KDAK	**Kodiak Island**	**70.90**	**33**	*i*P	**P**	**20 40 22.8**	**+0.2**
CDF	**Champ du Feu**	**71.09**	**316**	*e*P	**P**	**20 40 24.0**	**+0.1**
	comp=Z,5.1nm,0.8s,mb4.2						
CDF	**Champ du Feu**	**71.09**	**316**	*e*P	**P**	**20 40 24.0**	**+0.1**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CDF	**Champ du Feu**	**71.09**	**316**	*e*P	**P**	**20 40 24.0**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2						
INK	**Inuvik**	**72.08**	**19**	*e*P	**P**	**20 40 28.8**	**-0.7**
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	**Inuvik**	**72.08**	**19**	*e*P	**P**	**20 40 28.8**	**-0.7**
	comp=Z,3.5nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**72.49**	**147**	P	**P**	**20 40 33.6**	**+1.2**
	comp=Z,5.2nm,0.9s,mb4.5,baz=268,slow=22,SNR=3.8						
STKA	**Stephens Creek**	**72.49**	**147**	P	**P**	**20 40 32.5**	**+0.1**
LPG	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.1**	**-3.7**
	comp=Z,1.5nm,1.0s,mb4.6						
LPG	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.1**	**-3.7**
LPG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
LPG	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.1**	**-3.7**
	comp=Z,7.4nm,1.0s,mb4.6						
LPL	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.0**	**-3.8**
LPL	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.0**	**-3.8**
LPL	**La Plagne**	**72.72**	**313**	*e*P	**P**	**20 40 30.0**	**-3.8**
BMRM	**Bremner River**	**72.75**	**28**	*e*P	**P**	**20 40 32.8**	**-0.9**
	comp=Z,12nm,0.8s,mb4.9						
TCF	**Toulx Ste Croi**	**75.13**	**315**	*e*P	**P**	**20 40 46.6**	**-1.3**
TCF	**Toulx Ste Croi**	**75.13**	**315**	*e*P	**P**	**20 40 46.6**	**-1.3**
TCF	**Toulx Ste Croi**	**75.13**	**315**	*e*P	**P**	**20 40 46.6**	**-1.3**
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**20 41 22.5**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=325,slow=5.1,SNR=5.3						
BOSA	**Boshof**	**95.38**	**240**	P	**P**	**20 42 28.6**	**-1.7**
	comp=Z,5.4nm,1.1s,mb4.9,baz=60,slow=2.9,SNR=3.1						

*BJI **16** 20:30:01.7, 35°.05N×81°.80E, h18km, mb4.8/2, ML4.7/6, Ms4.2/1*
*IDC **16** 20:30:04.5±1.4, 35°.18N×81°.42E, h0km, mb4.0/10, mb1 4.1/15, mb1mx3.9/29, mbtmp4.0/15, ML3.5/5, MS3.0/1, Ms1 3.0/1, ms1mx2.7/32, Error ellipse: s-maj=27.7km s-min=20.2km az=169.0*
*NEIC **16** 20:30:06.4±1.1, 35°.23N×81°.49E, h10km, mb4.4/7, Error ellipse: s-maj=17.3km s-min=12.0km az=166.0*
*ISCJB **16** 20:30:06.3±0.8, 35°.47N±0°.06×81°.56E±0°.07, h10km, mb4.2/17, Error ellipse: s-maj=9.7km s-min=7.2km az=135.3*
*NNC **16** 20:30:10.7±6.0, 35°.57N×81°.07E, h0km, mb4.3, mpv4.4, Error ellipse: s-maj=56.9km s-min=52.7km az=170.0*
*SZGRF **16** 20:30:20.3, 36°.58N×81°.33E, h33km, mb4.5, Southern Xinjiang, China*
ISC 16 20:30:06.9±0.7, 35°.28N±0°.06×81°.54E±0°.07, h10km, n55, σ1°36/59, mb4.2/19, 5C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.12**	**315**	Pn	**Pn**	**20 31 38.4**	**+1.0**
KSH				Sn	**Sn**	**20 32 50.8**	**+3.4**
KSH				smax			
	comp=N,510nm,0.8s						
KSH				smax			
	comp=E,590nm,1.1s						
KZA	**Kyzart**	**8.38**	**326**	P	**Pn**	**20 32 10.2**	**+1.9**
	SNR=9.4						
UCH	**Uchtor**	**8.84**	**324**	P	**Pn**	**20 32 16.0**	**+1.4**
	SNR=52						
UCH	**Uchtor**	**8.84**	**324**	*e*Pn	**Pn**	**20 32 15.0**	**+0.3**
	comp=E,49nm,0.8s						
TKM2	**Tokmak 2**	**8.91**	**331**	⇓Pn	**Pn**	**20 32 18.8**	**+3.1**
	comp=E,12nm,0.9s						
TKM2				⇓Pg	Pn	20 32 44.8	+29
	comp=E,31nm,1.3s						
TKM2				⇑Lg		20 34 41.5	
	comp=E,64nm,1.0s						
TKM2	**Tokmak 2**	**8.91**	**331**	P	**Pn**	**20 32 19.7**	**+4.1**
	SNR=9.1						
TKM2	**Tokmak 2**	**8.91**	**331**	*e*Pn	**Pn**	**20 32 16.3**	**+0.7**
KBK	**Karagaybulak**	**8.97**	**327**	P	**Pn**	**20 32 17.9**	**+1.5**
	SNR=8.0						
AAK	**Ala-Archa**	**9.16**	**325**	Pn	**Pn**	**20 32 20.3**	**+1.3**
	comp=E,0.0nm,0.3s,baz=161,slow=13,SNR=7.7						
AAK				Lg		20 34 48.0	
	comp=E,0.0nm,0.3s,baz=300,slow=20,SNR=4.3						
AAK	**Ala-Archa**	**9.16**	**325**	*e*Pn	**Pn**	**20 32 19.8**	**+0.8**
AAK				Lg		20 34 48.0	
AML	**Almayashu**	**9.18**	**320**	P	**Pn**	**20 32 20.0**	**+0.7**
	SNR=27						
AML	**Almayashu**	**9.18**	**320**	*e*Pn	**Pn**	**20 32 19.8**	**+0.4**
CHMS	**Chumysh**	**9.33**	**328**	P	**Pn**	**20 32 22.7**	**+1.3**
	SNR=13						
EKS2	**Erkin-Say**	**9.53**	**323**	P	**Pn**	**20 32 25.4**	**+1.3**
	SNR=17						
EKS2	**Erkin-Say**	**9.53**	**323**	*e*Pn	**Pn**	**20 32 25.0**	**+0.9**
	comp=E,17nm,1.1s						
WMQ	**Urumqi**	**9.76**	**27**	Pn	**Pn**	**20 32 32.9**	**+5.7**
WMQ				Sg	Sn	20 35 23.1	+66
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,350nm,6.0s						
WMQ				smax			
	comp=N,37nm,1.1s						
WMQ				smax			
	comp=E,49nm,1.2s						
WMQ				LR	LR		
	comp=N,280nm,18.0s						
WMQ				LR	LR		
	comp=E,290nm,18.0s						
WMQ				LR	LR		
	comp=Z,170nm,14.0s						
KBL	**Kabul**	**10.29**	**269**	*e*Pn	**Pn**	**20 32 33.9**	**-0.6**
	comp=Z,9.3nm,0.7s						
MK31	**Makanchi Array**	**11.51**	**3**	⇑Pn	**Pn**	**20 32 50.8**	**-0.4**
	comp=Z,9.9nm,0.7s,baz=183,slow=13,SNR=11						
MK31				⇓Sn	**Sn**	**20 34 59.6**	**-0.2**
	comp=Z,14nm,0.7s,baz=191,slow=23,SNR=7.4						
MK31	**Makanchi Array**	**11.51**	**3**	*e*Pn	**Pn**	**20 32 50.4**	**-0.8**
MKAR	**Makanchi Array**	**11.51**	**3**	Pn	**Pn**	**20 32 50.7**	**-0.5**

KSRS	Korea Array	37.12	73	LR	LR	20 55 20.2
	comp=Z,23nm,18.9s,baz=170,slow=41					
BRTR	Keskin Array B	37.90	291	P	P	20 37 24.4 +0.2
	comp=Z,0.9nm,0.8s,mb3.5,baz=93,slow=2.5,SNR=4.2					
AKASG	Malin Array Be	40.38	309	P	P	20 37 43.5 -1.2
	comp=Z,0.3nm,0.3s,mb3.5,baz=78,slow=7.2,SNR=7.5					
JOF	Joensuu	41.34	328	ep	P	20 37 51.2 -1.3
	comp=Z,7.8nm,0.8s,mb4.4					
FINES	FINESS Array B	43.35	325	P	P	20 38 08.0 -0.9
	comp=Z,7.2nm,0.9s,mb4.4,baz=98,slow=7.0,SNR=11					
KAF	Kangasniemi	43.38	326	ep	P	20 38 02.8 -6.3
	comp=Z,6.5nm,1.1s,mb4.3					
MJAR	Matsushiro Arr	45.34	71	P	P	20 38 25.4 +0.3
	comp=Z,2.8nm,0.9s,mb4.1,baz=289,slow=8.5,SNR=7.3					
ARCES	ARCESS Array B	45.65	336	P	P	20 38 28.3 +1.1
	comp=Z,5.4nm,0.8s,mb4.5,baz=81,slow=7.5,SNR=5.7					
ARCES	ARCESS Array B	45.65	336	P	P	20 38 28.3 +1.1
BRG	Berggiesshubel	50.03	310	eP	P	20 39 04.0 +2.7
	comp=Z,5.0nm,0.9s,mb4.5					
NB2	NORSAR Subarra	50.48	324	P	P	20 39 03.3 -1.3
	comp=Z,10nm,1.1s,mb4.8,baz=88,slow=7.4					
NOA	NORSAR Array B	50.48	324	P	P	20 39 03.6 -1.0
	comp=Z,3.0nm,0.9s,mb4.3,baz=88,slow=7.4,SNR=5.7					
GERES	GERESS Array B	50.54	308	P	P	20 39 04.8 -0.4
	comp=Z,1.1nm,0.8s,mb3.8,baz=71,slow=8.6,SNR=8.4					
GRA1	Grafenberg Arr	51.96	309	eP	P	20 39 18.2 +2.3
	comp=Z,12nm,1.7s,mb4.5					
GRF	Grafenberg Arr	51.96	309	eP	P	20 39 18.2 +2.3
	comp=Z,12nm,1.7s,mb4.5					
LPG	La Plagne	55.96	305	eP	P	20 39 42.6 -2.6
	comp=Z,6.4nm,0.7s,mb4.4					
LPG	La Plagne	55.96	305	eP	P	20 39 42.6 -2.6
	comp=Z,3.2nm,0.7s,mb4.5					
LPL	La Plagne	55.97	305	eP	P	20 39 42.5 -2.8
TORD	Torodi Ar. Bea	74.31	275	P	P	20 41 42.3 -2.5
	comp=Z,2.6nm,1.0s,mb4.1,baz=65,slow=3.8,SNR=8.6					

MAN 16 20:30:56, 9°.97N×126°.37E, h73km, mb4.4, ML3.3, MS3.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.24	217	eP	Pn	20 31 19.1	+1.4
BUTP				eS	Sn	20 31 39.0	+5.1
MSLP	Maasin	1.50	276	eP	Pn	20 31 21.1	0.0
MSLP				eS	Sn	20 31 37.6	-2.4
BESP	Borongan	1.86	331	eP	Pn	20 31 28.1	+2.2
LLP	Lapu-Lapu	2.40	279	⇑eP	Pn	20 31 34.3	+1.3
LLP				i S	Sn	20 32 03.3	+1.9
BUKP	Musuan	2.45	212	eP	Pn	20 31 39.0	+5.3
TBP	Tagbilaran	2.49	264	eP	Pn	20 31 36.1	+1.8
TBP				eS	Sn	20 32 04.2	+0.5
CNP	Catarman	3.03	327	eP	Pn	20 31 42.2	+0.5
PVCP	Virac	4.21	329	eP	Pn	20 31 59.9	+2.1

MAN 16 20:32:16, 9°.85N×126°.33E, h75km, mb4.5, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.12	218	eP	Pn	20 32 39.3	+3.0
BUTP				eS	Sn	20 32 53.6	+2.2
MSLP	Maasin	1.47	281	eP	Pn	20 32 40.7	0.0
BESP	Borongan	1.95	333	eP	Pn	20 32 48.6	+1.6
BUKP	Musuan	2.32	213	eP	Pn	20 32 53.3	+1.2
TBP	Tagbilaran	2.43	266	eP	Pn	20 32 56.1	+2.5
TBP				eS	Sn	20 33 24.3	+1.8

CASC 16 20:38:04.7±2.3, 8°.25N×82°.73W, h17km±10km, MD3.8, 4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.55	4	⇓iP	Pg	20 38 15.5	-0.1
BRU2				eS	Sg	20 38 23.9	+0.9
TBS2		0.55	7	⇓eP	Pg	20 38 16.8	+1.2
TBS2				eS	Sg	20 38 24.8	+1.8
CTCR	Cotoan	0.65	357	⇓iP	Pg	20 38 16.8	-0.7
BAR1		1.15	330	eP	Pn	20 38 23.9	-2.1
CNI	Changuinola	1.18	10	⇓iP	Pn	20 38 25.7	-0.7
QCR	Quepos	1.84	310	eP	Pn	20 38 35.2	-0.3
QCR				eS	Sn	20 38 58.2	-0.3
URSC	Urasca	1.89	327	eP	Pn	20 38 35.7	-0.5
LAJ	Bijagual	2.12	319	eP	Pn	20 38 43.5	+4.1
CGA2	Cerro Gallo 2	2.46	316	eP	Pn	20 38 44.7	+0.7
CGA2				eS	Sn	20 39 15.0	+1.3

*IDC **16** 20:44:37.9±2.1, 5°.75S×154°.78E, h0km, mb4.3/5, mb1 4.5/5, mb1mx3.9/16, mbtmp4.3/5, Error ellipse: s-maj=75.0km s-min=30.4km az=101.0*
*ISCJB **16** 20:44:41.4±1.5, 5°.9S±0°.1×154°.8E±0°.3, h33km, mb4.3/7, Error ellipse: s-maj=39.0km s-min=18.2km az=1.3*
*NEIC **16** 20:44:43.6±1.2, 5°.89S×154°.74E, h35km, mb4.7/2, Error ellipse: s-maj=33.8km s-min=15.4km az=92.0*
ISC 16 20:44:43.8±1.6, 5°.9S±0°.1×154°.7E±0°.3, h35km, n10, σ0s80/9, mb4.3/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	24.22	233	eP	P	20 49 57.6	+0.1
	8.0nm,0.7s,mb4.3						
WRA	Warramunga Arr	24.24	233	P	P	20 49 58.1	+0.5
	4.9nm,0.5s,mb4.2,baz=55,slow=9.9						
ASAR	Alice Springs	26.71	226	P	P	20 50 20.3	+0.3
	2.5nm,0.4s,mb4.1,baz=57,slow=9.2,SNR=77						
STKA	Stephens Creek	28.61	204	P	P	20 50 37.5	+0.6
	2.3nm,0.6s,mb4.1,baz=61,slow=14,SNR=5.2						
TAU	Tasmania Unive	37.44	189	eP	P	20 51 52.7	-1.0
	24nm,1.1s,mb4.9						
KSM	Kuching	44.95	278	eP	P	20 52 54.8	-1.1
KS15	Wonju Array Si	49.86	332	eP	P	20 53 35.1	+1.4
SONM	Songino Array	68.28	327	P	P	20 55 40.2	-0.9
	0.3nm,0.4s,mb3.6,baz=146,slow=5.6,SNR=3.8						
MAW	Mawson	85.30	203	P	P	20 57 17.1	+0.3
	3.9nm,0.6s,mb4.7,baz=106,slow=4.1,SNR=18						
TORD	Torodi Ar. Bea	152.47	287	PKPbc	PKPbc	21 04 37.2	-0.2
	0.2nm,0.4s,baz=78,slow=1.9,SNR=5.9						

IDC 16 21:17:58.9±1.5, 30°.74N×103°.34E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=46.7km s-min=28.7km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.39	65	P	P	21 22 48.0	-0.1
	0.9nm,0.7s,baz=254,slow=10.0,SNR=5.5						
MKAR	Makanchi Array	22.83	321	P	P	21 23 03.5	0.0
	0.8nm,0.9s,baz=124,slow=12,SNR=4.5						
WRA	Warramunga Arr	58.54	145	P	P	21 27 57.3	0.0
	0.4nm,0.6s,baz=338,slow=7.6						
ASAR	Alice Springs	61.52	148	P	P	21 28 17.9	+0.1
	0.1nm,0.3s,baz=334,slow=6.6,SNR=4.3						

*CSEM **16** 21:30:29.1, 42°.71N×42°.77E, h9km, MD3.0, After DDA*
*DDA **16** 21:30:29.1, 42°.71N×42°.77E, h9km, Md3.0*
ISC 16 21:30:25.2±2.2, 42°.7N±0°.1×43°.4E±0°.1, h8km±8km, n11, σ0s63/21, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.10	176	P		21 30 27.8	
ONI	Oni	0.10	176	S	Sg	21 30 29.2	+0.1
KEH	Kehvi	0.52	136	P	Pg	21 30 34.6	-0.8
KEH				S	Sg	21 30 42.4	+0.2
ARTV	Artvin	1.88	218	i P	Pn	21 30 57.6	-0.1
ARTV				i S	Sn	21 31 21.1	-0.4
ARTV	Artvin	1.88	218	i P	Pn	21 30 57.6	0.0
ARTV				i S	Sn	21 31 21.1	-0.4
DBOC	Borcka	1.88	225	i P	Pn	21 30 57.0	-0.7
DBOC				i S	Sn	21 31 20.6	-1.0
DBOC	Borcka	1.88	225	i P	Pn	21 30 57.0	-0.7
DBOC				i S	Sn	21 31 20.6	-1.0
DAGI	Agillar	1.97	216	i P	Pn	21 30 59.3	+0.4
DAGI				i S	Sn	21 31 23.6	-0.2
DBAD	Bademkaya	2.12	219	i P	Pn	21 31 01.4	+0.5
DBAD				i S	Sn	21 31 27.2	-0.2
DBAD	Bademkaya	2.12	219	i P	Pn	21 31 01.4	+0.5
DBAD				i S	Sn	21 31 27.2	-0.2
DDEM	Demirkent	2.19	216	i P	Pn	21 31 03.0	+1.0
DDEM				i S	Sn	21 31 30.5	+1.2
DDEM	**Demirkent**	**2.19**	**216**	*i* P	**Pn**	**21 31 03.0**	**+1.0**
DDEM				*i* S	**Sn**	**21 31 30.5**	**+1.2**

IDC 16 21:42:13.7±3.8, 28°.70S×177°.62W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.6/2, Error ellipse: s-maj=76.4km s-min=21.4km az=94.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.60	205	Pn	Pg	21 42 30.1	+4.7
	735nm,0.3s,baz=219,slow=18,SNR=55						
RAO				Sn	Sg	21 42 39.9	+6.7
	707nm,0.3s,baz=65,slow=19,SNR=22						
ASAR	Alice Springs	43.55	265	P	P	21 50 19.7	+0.2
	0.2nm,0.7s,baz=104,slow=8.1,SNR=3.2						
WRA	Warramunga Arr	44.39	270	P	P	21 50 26.1	-0.2
	0.5nm,0.4s,baz=110,slow=8.1,SNR=10.0						
FINES	FINESS Array B	143.66	341	PKP	PKPdf	22 01 48.0	-1.9
	2.8nm,0.9s,baz=69,slow=6.3,SNR=7.2						

*IDC **16** 21:52:53.9±1.9, 50°.55N×130°.09W, h0km, mb3.5/1, mb1 3.8/6, mb1mx3.5/29, mbtmp3.4/6, ML3.4/4, MS3.1/6, Ms1 3.1/6, ms1mx2.8/36, Error ellipse: s-maj=27.1km s-min=14.6km az=79.0*
*PGC **16** 21:52:54.3±0.1, 50°.42N×130°.20W, h10km, ML3.3/10, Mw4.0, 199km west of Pt. Hardy, Bc Vancouver Island Region*
*NEIC **16** 21:52:54.3, 50°.42N×130°.20W, h10km, ML3.3(PGC), After PGC.*
ISC 16 21:52:55.1±1.3, 50°.64N±0°.05×129°.95W±0°.08, h7km±8km, n46, σ1s01/58, MS3.1/3, 12D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.16	89	P	Pg	21 53 16.9	-0.4
HOLB				S	Sg	21 53 32.7	+0.5
HOLB	Holberg	1.16	89	⇑P	Pg	21 53 16.9	-0.4
HOLB				⇓S	Sg	21 53 32.7	+0.5
HOLB	Holberg	1.16	89	⇑P	Pg	21 53 16.9	-0.4
HOLB				⇓S	Sg	21 53 32.7	+0.5
BPBC	Brooks Peninsu	1.47	108	Pn	Pn	21 53 19.8	-2.3
BPBC	Brooks Peninsu	1.47	108	⇑Pn	Pn	21 53 19.8	-2.3
BPBC	Brooks Peninsu	1.47	108	⇑Pn	Pn	21 53 19.8	-2.3
PHC	Port Hardy	1.60	87	Pn	Pn	21 53 23.5	-0.3
PHC				Sn	Sn	21 53 44.0	-0.6
PHC	Port Hardy	1.60	87	⇑Pn	Pn	21 53 23.5	-0.3
PHC				⇓Sn	Sn	21 53 44.0	-0.6
PHC	Port Hardy	1.60	87	⇑Pn	Pn	21 53 23.5	-0.3
PHC				⇓Sn	Sn	21 53 44.0	-0.6
MAYB	Maynard	1.79	97	Pn	Pn	21 53 25.4	-0.9
MAYB	Maynard	1.79	97	⇑Pn	Pn	21 53 25.4	-0.9
MAYB	Maynard	1.79	97	⇑Pn	Pn	21 53 25.4	-0.9
BBB	Bella Bella	1.92	36	Pn	Pn	21 53 29.2	+1.0
	11nm,0.3s,baz=225,slow=12,SNR=111						
BBB				Sn	Sn	21 53 52.7	+0.1
	52nm,0.3s,baz=287,slow=12,SNR=22						
BBB	Bella Bella	1.92	36	Pn	Pn	21 53 29.1	+0.9
BBB				Sn	Sn	21 53 52.7	+0.1
BBB	Bella Bella	1.92	36	⇓Pn	Pn	21 53 29.1	+0.9
BBB				⇑Sn	Sn	21 53 53.0	+0.3
BBB	Bella Bella	1.92	36	⇓Pn	Pn	21 53 29.1	+0.9
BBB				⇑Sn	Sn	21 53 53.0	+0.3
WOSB	Woss	2.21	101	⇑Pn	Pn	21 53 31.5	-0.6
WOSB	Woss	2.21	101	⇑Pn	Pn	21 53 31.5	-0.6
BNB	Barry Inlet	2.24	331	Pn	Pn	21 53 31.2	-1.3
BNB				Sn	Sn	21 54 00.7	+0.3
BNB	Barry Inlet	2.24	331	⇓Pn	Pn	21 53 31.2	-1.3
BNB				⇓Sn	Sn	21 54 00.7	+0.3
BNB	Barry Inlet	2.24	331	⇓Pn	Pn	21 53 31.2	-1.3
BNB				⇓Sn	Sn	21 54 00.7	+0.3
NCRB	Newcastle Ridg	2.49	94	⇑Pn	Pn	21 53 35.6	-0.4
NCRB	Newcastle Ridg	2.49	94	⇑Pn	Pn	21 53 35.6	-0.4
ETB	Estevan Point	2.54	119	Pn	Pn	21 53 35.0	-1.7
ETB	Estevan Point	2.54	119	⇑Pn	Pn	21 53 35.0	-1.7
ETB	Estevan Point	2.54	119	⇑Pn	Pn	21 53 35.0	-1.7
GDR	Gold River	2.66	107	Pn	Pn	21 53 37.0	-1.3
GDR	Gold River	2.66	107	⇓Pn	Pn	21 53 37.0	-1.3
GDR	Gold River	2.66	107	⇓Pn	Pn	21 53 37.0	-1.3
DIB	Dawson Inlet,	3.00	330	Pn	Pn	21 53 42.6	-0.4
JCW	Jim Creek	5.78	112	ePn	Pn	21 54 21.9	+0.7
JCW				eSn	Sn	21 55 25.8	-1.7
RPW	Rockport	5.91	109	ePn	Pn	21 54 23.9	+0.9
	6.8nm,0.5s						
RPW				eSn	Sn	21 55 32.5	+1.6
LON	Longmire	6.64	123	ePn	Pn	21 54 33.8	+0.7
	3.9nm,0.7s						
LON				Sn	Sn	21 55 48.9	-0.1
ETW	Entiat	7.00	112	ePn	Pn	21 54 39.2	+1.2
	3.0nm,0.3s						
DLBC	Dease Lake	7.81	360	Pn	Pn	21 54 49.9	+0.9
	0.4nm,0.3s,baz=190,slow=21,SNR=4.7						
DLBC				LR	LR	21 57 01.7	
	comp=Z,87nm,18.9s,baz=106,slow=31						
OD2	Odessa Site #2	8.07	109	ePn	Pn	21 54 52.9	+0.3
	9.2nm,0.5s						
YBH	Yreka Blue Hor	10.22	148	LR	LR	21 58 53.2	
	comp=Z,132nm,18.5s,baz=87,slow=35						
YKA	Yellowknife Ar	14.52	29	Pn	Pn	21 56 20.6	-0.1
	0.1nm,0.3s,baz=218,slow=12,SNR=4.8						
NVAR	Mina Array Bea	14.74	141	Pn	Pn	21 56 24.7	+0.8
	0.1nm,0.3s,baz=13,slow=8.3,SNR=2.4						
NVAR	Mina Array Bea	14.74	141	Pn	Pn	21 56 24.7	+0.8
PDAR	Pinedale Array	16.02	112	Pn	Pn	21 56 43.0	+2.4
	0.1nm,0.3s,baz=316,slow=12,SNR=17						
INK	Inuvik	17.81	356	LR	LR	22 02 55.4	
	comp=Z,49nm,20.1s,baz=307,slow=34						
RES	Resolute Bay	28.13	19	LR	LR	22 09 49.3	
	comp=Z,39nm,21.2s,MS3.0,baz=41,slow=36						
TXAR	Lajitas Array	29.03	127	P	P	21 58 56.2	+0.6
	0.7nm,0.9s,baz=308,slow=6.2,SNR=3.9						
TXAR				LR	LR	22 11 07.3	
	comp=Z,38nm,19.1s,MS3.0,baz=185,slow=38						
TXAR	Lajitas Array	29.03	127	P	P	21 58 56.2	+0.6
TXAR				LR	LR	22 11 07.3	
SCHQ	Schefferville	37.29	58	LR	LR	22 15 58.7	
	comp=Z,56nm,20.4s,MS3.4,baz=292,slow=37						

*DDA **16** 22:04:42.8, 39°.72N×38°.77E, h7km±3km, Md3.2*
*ISK **16** 22:04:42.4, 39°.74N×38°.74E, h5km, MD3.1*
*ISCJB **16** 22:04:43.4±0.7, 39°.73N±0°.02×38°.79E±0°.04, h3km±5km, Error ellipse: s-maj=5.2km s-min=3.4km az=19.2*
*CSEM **16** 22:04:43.4±0.1, 39°.72N×38°.77E, h8km, MD3.1, Error ellipse: s-maj=3.1km s-min=2.0km az=107.0*
ISC 16 22:04:43.7±0.5, 39°.73N±0°.02×38°.79E±0°.04, h4km±4km, n42, σ1s04/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.44	87	ePG	Pg	22 04 51.9	-0.2
EZC				eSG	Sg	22 04 58.9	+1.2
KEMA	Kemaliye	0.52	206	i P	Pg	22 04 53.0	-0.6
KEMA				i S	Sg	22 05 00.8	+0.5
KEMA	Kemaliye	0.52	206	i P	Pg	22 04 53.0	-0.6
KEMA				i S	Sg	22 05 00.8	+0.5
KELT	Kelkit	0.55	41	i P	Pg	22 04 54.3	0.0
KELT				i S	Sg	22 05 02.1	+0.6
KELT	Kelkit	0.55	41	i P	Pg	22 04 54.3	0.0
KELT				i S	Sg	22 05 02.1	+0.7
GUMT	Gumushane	0.90	36	ePG	Pg	22 05 00.4	-0.6
GUMT	Gumushane	0.90	36	ePg	Pg	22 05 00.4	-0.6
PTK	Pertek	0.96	151	ePG	Pg	22 05 01.7	-0.4
PTK				eSG	Sg	22 05 15.6	+1.0
PTK	Pertek	0.96	151	ePg	Pg	22 05 01.7	-0.4
PTK				eSg	Sg	22 05 15.6	+1.0
DARE	Darende-Malaty	1.09	225	ePN	Pn	22 05 10.5	+4.8
ESPY	Espiye-Giresun	1.18	358	ePN	Pn	22 05 05.4	-1.6
ESPY				eSN	Sn	22 05 21.9	-1.7
ESPY	Espiye-Giresun	1.18	358	ePn	Pn	22 05 05.4	-1.6
ESPY				eSn	Sn	22 05 21.9	-1.7
ELZG	Elazig	1.24	173	i P	Pg	22 05 06.2	-1.4
ELZG				i S	Sg	22 05 23.4	-0.2
ELZG	Elazig	1.24	173	i P	Pg	22 05 06.2	-1.3
ELZG				i S	Sg	22 05 23.4	-0.2
GRSN	GIRESUNGRSN	1.25	342	i P	Pg	22 05 06.9	-0.9
GRSN				i S	Sg	22 05 24.6	+0.6
GRSN	GIRESUNGRSN	1.25	342	i P	Pg	22 05 06.9	-0.9
GRSN				i S	Sg	22 05 24.6	+0.5
KOPT	Kop Dagi	1.35	77	i P	Pn	22 05 09.2	0.0
KOPT				i S	Sg	22 05 33.0	+6.0
KOPT	Kop Dagi	1.35	77	i P	Pn	22 05 09.2	-0.1
SVSK	Karacayir	1.39	278	ePN	Pn	22 05 08.7	-1.1
SVSK	Karacayir	1.39	278	ePn	Pn	22 05 08.7	-1.2
SVRC	Sivrice-ELAZID	1.41	163	ePN	Pn	22 05 09.7	-0.5
SVRC	Sivrice-ELAZID	1.41	163	ePn	Pn	22 05 09.7	-0.5
MACK	Trabzon	1.42	31	i P	Pn	22 05 10.2	-0.2
MACK				i S	Sb	22 05 29.6	+0.3
MACK	Trabzon	1.42	31	i P	Pn	22 05 10.2	-0.1
MACK				i S	Sb	22 05 29.6	+0.3
MYA	Malataya	1.43	191	ePN	Pn	22 05 09.6	-0.9
MYA	Malataya	1.43	191	ePn	Pn	22 05 09.6	-0.8
MALT	Malatya	1.45	191	ePN	Pn	22 05 09.4	-1.2
MALT	Malatya	1.45	191	ePn	Pn	22 05 09.5	-1.1
KTUT	Trabzon	1.46	31	ePN	Pn	22 05 10.8	-0.1
KTUT	Trabzon	1.46	31	ePn	Pn	22 05 10.8	0.0
BINT	Bingol	1.57	122	ePN	Pn	22 05 12.7	+0.3
BINT	Bingol	1.57	122	ePn	Pn	22 05 12.7	+0.3
AKCD	Akcadag	1.59	205	i P	Pn	22 05 12.4	-0.1
AKCD				i S	Sn	22 05 34.9	+1.4
AKCD	Akcadag	1.59	205	i P	Pn	22 05 12.4	-0.1
AKCD				i S	Sn	22 05 34.9	+1.4
ERBA	Erbaa	1.82	302	i P	Pn	22 05 17.4	+1.6
ERBA				i S	Sn	22 05 41.3	+2.0
ERBA	Erbaa	1.82	302	i P	Pn	22 05 17.4	+1.6
ERBA				i S	Sn	22 05 41.3	+1.9
SARI	SarD1z-Kayseri	1.94	238	ePN	Pn	22 05 20.8	+3.5
EZM	Erzurum	1.99	84	ePN	Pn	22 05 18.7	+0.6
ERZM	Erzurum	1.99	84	i P	Pn	22 05 20.9	+2.8
ERZM				i S	Sn	22 05 41.8	-1.7
ERZM	Erzurum	1.99	84	i P	Pn	22 05 21.0	+2.8
ERZM				i S	Sn	22 05 41.8	-1.7
BCA	Borcka	2.75	51	ePN	Pn	22 05 29.5	+0.8
BCA	Borcka	2.75	51	ePn	Pn	22 05 29.5	+0.9

*CSEM **16** 22:28:25.5±0.3, 42°.39N×21°.53E, h2km, ML1.6, Error ellipse: s-maj=7.8km s-min=4.1km az=104.0*
*BEO **16** 22:28:26.8±0.4, 42°.41N×21°.53E, h0km, ML1.2/5*
SKO 16 22:28:25.6, 42°.33N×21°.80E, h0km, M0.9, ML1.6, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	Skopje	0.45	217	i Pg	Pg	22 28 34.2	+0.1
SKO				i Sg	Sg	22 28 40.9	+1.0
SKO	Skopje	0.45	217	⇑iPg	Pg	22 28 34.3	+0.1
SKO				eSg	Sg	22 28 39.7	-0.2
SKO				eLg		22 28 40.2	
	comp=E,19nm,0.4s						
SKO				eLg		22 28 40.9	
	comp=N,46nm,0.5s						
SKO	Skopje	0.45	217	⇑iPg	Pg	22 28 34.2	+0.1
SKO				eLg		22 28 40.1	
	comp=N,19nm,0.4s						
SKO				i Sg	Sg	22 28 40.9	+1.0
SKO	Skopje	0.45	217	i Pg	Pg	22 28 34.2	+0.1
SKO				i Sg	Sg	22 28 40.9	+1.0
BARS	Barje	0.49	1	i Pg	Pg	22 28 34.3	-0.6
BARS				i Sg	Sg	22 28 40.6	-0.6
BARS	Barje	0.49	1	i Pg	Pg	22 28 34.3	-0.6
BARS				i Sg	Sg	22 28 40.6	-0.6
BARS	Barje	0.49	1	i Pg	Pg	22 28 34.3	-0.6
BARS				i Sg	Sg	22 28 40.6	-0.6
KRUS	Krusevo	1.04	203	i Pg	Pg	22 28 44.4	-1.2
KRUS				eLg		22 28 58.2	
	comp=N,1.3nm,0.3s						
KRUS				i Sg	Sg	22 28 58.6	-0.6
KRUS				eLg		22 28 59.1	
	comp=E,2.1nm,0.3s						
KRUS	Krusevo	1.04	203	i Pg	Pg	22 28 44.3	-1.3
KRUS				i Sg	Sg	22 28 58.5	-0.6
KRUS				eLg		22 28 59.0	
	comp=E,2.1nm,0.3s						
VTS	Vitosha	1.07	75	ePg	Pg	22 28 50.3	+4.1
VTS				eSg	Sg	22 29 07.2	+7.1
VTS	Vitosha	1.07	75	ePg	Pg	22 28 50.3	+4.1
VTS				eSg	Sg	22 29 07.2	+7.1
VTS	Vitosha	1.07	75	ePg	Pg	22 28 50.3	+4.1
VTS				eSg	Sg	22 29 07.2	+7.1
NISS		1.08	6	ePg	Pg	22 28 45.0	-1.3
NISS				eSg	Sg	22 28 59.8	-0.4
NISS		1.08	6	ePg	Pg	22 28 45.0	-1.3
NISS				eSg	Sg	22 28 59.8	-0.4
NISS		1.08	6	ePg	Pg	22 28 45.0	-1.3
NISS				eSg	Sg	22 28 59.8	-0.4
ZAPS	Zavoj	1.12	33	ePg	Pg	22 28 47.3	+0.1
ZAPS				i Sg	Sg	22 29 05.1	+3.4
DIVS	Divibare	2.21	324	ePn	Pn	22 29 01.9	-1.5
DIVS				eSg	Sg	22 29 32.2	-4.3
DIVS	Divibare	2.21	324	ePn	Pn	22 29 01.9	-1.5
DIVS				eSg	Sg	22 29 32.2	-4.3
DIVS	Divibare	2.21	324	ePn	Pn	22 29 01.9	-1.5
DIVS				eSg	Sg	22 29 32.2	-4.3

*IDC **16** 22:32:43.5±1.5, 63°.56N×149°.02W, h0km, mb3.4/4, mb1 3.7/6, mb1mx3.5/27, mbtmp3.4/6, ML3.4/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/31, Error ellipse: s-maj=27.0km s-min=23.9km az=14.0*
*ISCJB **16** 22:32:47.0±0.6, 63°.60N±0°.03×148°.36W±0°.07, h27km±5km, mb3.5/5, Error ellipse: s-maj=5.4km s-min=4.8km az=146.1*
*NEIC **16** 22:32:46.7, 63°.54N×148°.34W, h14km, ML3.4(AEIC), ML3.7(PMR), After

DLBC Dease Lake 10.27 112 Lg 22 38 14.4
0.3nm,0.3s,baz=141,slow=12,SNR=4.9
YKA Yellowknife Ar 15.25 79 Pn **Pn 22 36 23.7 +2.3**
0.1nm,0.3s,baz=291,slow=13,SNR=4.0
RES Resolute Bay 21.09 36 P **P 22 37 29.9 -0.3**
0.4nm,0.5s,mb3.0,baz=252,slow=12,SNR=3.7
PDAR Pinedale Array 30.49 115 P **P 22 39 00.0 +1.1**
0.4nm,0.7s,mb3.3,baz=336,slow=6.4,SNR=5.0
NVAR Mina Array Bea 30.96 130 P **P 22 39 03.2 +0.1**
0.1nm,0.3s,mb3.1,baz=306,slow=6.6,SNR=4.3
MDJ Mudanjiang 47.91 288 P **P 22 41 22.4 -1.6**
MDJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MDJ pmax pmax
comp=Z,53nm,3.6s
MKAR Makanchi Array 62.92 323 P **P 22 43 10.5 -1.4**
comp=Z,0.3nm,0.5s,mb3.7,baz=42,slow=5.9,SNR=4.3

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*IDC **16** 22:33:06.9±0.6, 32.°28N×105.°18E, h0km, mb4.5/24, mb1 4.6/25, mb1mx4.5/31, mbtmp4.5/25, ML4.0/1, MS3.4/11, Ms1 3.4/11, ms1mx3.2/30, Error ellipse: s-maj=18.6km s-min=12.4km az=43.0*
*ISCJB **16** 22:33:06.5±0.8, 32.°17N±0.°03×105.°18E±0.°02, h4km±5km, mb4.6/91, MS3.6/16, Error ellipse: s-maj=4.3km s-min=3.4km az=176.5*
*BJI **16** 22:33:08.0, 32.°23N×105.°15E, h15km, mB4.6/20, mb4.4/29, ML4.4/18, Ms4.3/43, Ms7 4.0/36*
*NEIC **16** 22:33:09.3±0.3, 32.°26N×105.°20E, h10km, mb4.7/46, Error ellipse: s-maj=9.2km s-min=7.0km az=215.0*
*MOS **16** 22:33:10.8±1.4, 32.°20N×105.°23E, h33km, mb4.8/47, Error ellipse: s-maj=8.1km s-min=4.7km az=114.2*
*DJA **16** 22:33:11, 32.°11N×105.°14E, h10km, mb4.8/8*
*SZGRF **16** 22:33:12.0, 31.°53N×104.°94E, h33km, mb4.8, Sichuan, China*
ISC 16 22:33:07.9±0.7,**32.°22N**±0.°02×**105.°17E**±0.°02,**h0**km±4km,
n261,σ1°**34**/280,**mb4.7**/91,**MS3.6**/16,**17C-3D**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CD2	**Chengdu**	**1.77**	**223**	Pg	**Pg**	**22 33 40.4**	**-1.5**
CD2				Sg	**Sg**	**22 34 03.8**	**-1.0**
CD2				smax			
comp=N,22μm,0.9s							
XAN	**Xi'an**	**3.64**	**59**	Pn	**Pn**	**22 34 06.5**	**+1.1**
XAN				Pg	**Pg**	**22 34 14.8**	**-2.8**
XAN				Sn	**Sn**	**22 34 49.1**	**+0.1**
XAN				Sg	**Sg**	**22 35 02.6**	**-2.2**
XAN				smax			
comp=N,1μm,0.8s							
XAN				smax			
comp=E,660nm,0.9s							
XAN				LR	LR		
comp=N,3μm,7.8s							
XAN				LR	LR		
comp=E,590nm,7.6s							
XAN				LR	LR		
comp=Z,610nm,7.7s							
LZH	**Lanzhou**	**4.01**	**345**	Pn	**Pn**	**22 34 11.8**	**+1.2**
LZH				Pg	**Pg**	**22 34 22.5**	**-2.4**
LZH				Sn	**Sn**	**22 34 58.0**	**-0.3**
LZH				Sg	**Sg**	**22 35 11.9**	**-5.0**
LZH				smax			
comp=N,4μm,0.8s							
LZH				smax			
comp=E,4μm,0.6s							
LZH				LR	LR		
comp=N,5μm,8.1s							
LZH				LR	LR		
comp=Z,5μm,8.5s							
ENH	**Enshi**	**4.18**	**117**	*e*Pn	**Pn**	**22 34 16.8**	**+4.0**
ENH				*e*Pg	**Pg**	**22 34 29.8**	**+1.8**
ENH				*e*Sg	**Sg**	**22 35 25.2**	**+3.1**
GYA	**Guiyang**	**5.88**	**167**	Pn	**Pn**	**22 34 38.1**	**+1.8**
GYA				Sn	**Sn**	**22 35 41.0**	**-3.4**
GYA				smax			
comp=N,540nm,0.7s							
GYA				smax			
comp=E,680nm,0.8s							
KMI	**Kunming**	**7.38**	**197**	Pn	**Pn**	**22 34 57.4**	**+0.6**
KMI				Sn	**Sn**	**22 36 17.9**	**-3.4**
KMI				smax			
comp=N,69nm,1.3s							
KMI				smax			
comp=E,55nm,1.1s							
KMI				LR	LR		
comp=N,650nm,10.7s							
KMI				LR	LR		
comp=E,910nm,10.4s							
KMI				LR	LR		
comp=Z,750nm,13.0s							
WHN	**Wuhan**	**8.03**	**100**	P	**Pn**	**22 35 04.6**	**-1.1**
WHN				S	**Sn**	**22 36 33.4**	**-3.8**
WHN				LR	LR		
comp=N,5μm,6.8s							
WHN				LR	LR		
comp=E,3μm,5.8s							
WHN				LR	LR		
comp=Z,3μm,6.8s							
GTA	**Gaotai**	**8.39**	**330**	⇑P	**Pn**	**22 35 09.8**	**-0.9**
GTA				pP		22 35 12.9	
GTA				sP		22 35 15.8	
GTA				S	**Sn**	**22 36 41.5**	**-4.6**
GTA				pmax	pmax		
comp=Z,7.0nm,0.7s							
GTA				pmax	pmax		
comp=Z,72nm,4.8s							
GTA				LR	LR		
comp=N,2μm,10.1s							
GTA				LR	LR		
comp=E,880nm,11.0s							
GTA				LR	LR		
comp=Z,2μm,11.0s							
BTO	**Baotou**	**9.24**	**24**	S	**Sn**	**22 37 03.8**	**-3.1**
BTO				LR	LR		
comp=N,390nm,7.9s							
BTO				LR	LR		
comp=E,220nm,9.3s							
HHC	**Hu-ho-hao-te**	**10.03**	**29**	*e*P	**Pn**	**22 35 37.1**	**+3.9**
HHC				pP		22 35 44.3	
HHC				sP		22 35 49.0	
HHC				S	**Sn**	**22 37 30.6**	**+4.2**
HHC				sS		22 37 41.4	
HHC				pmax	pmax		
comp=Z,15nm,1.1s							
HHC				pmax	pmax		
comp=Z,99nm,4.9s							
HHC				LR	LR		
comp=N,420nm,5.4s							
HHC				LR	LR		
comp=E,950nm,5.6s							
HHC				LR	LR		
comp=Z,570nm,6.5s							
TIA	**Tai'an**	**10.67**	**65**	P	Px	22 35 53.8	
TIA				S	Sx	22 38 32.0	
TIA				LR	LR		
comp=N,340nm,6.0s							
TIA				LR	LR		
comp=E,340nm,6.0s							
NJ2	**Nanjing**	**11.61**	**87**	*e*P	**Pn**	**22 35 58.5**	**+3.8**
NJ2				pP		22 36 05.3	
NJ2				PP		22 36 07.1	
NJ2				sP		22 36 09.8	
NJ2				S	**Sn**	**22 38 07.0**	**+2.0**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.9s							
NJ2				pmax	pmax		
comp=Z,120nm,5.4s							
NJ2				LR	LR		
comp=N,600nm,10.6s							
NJ2				LR	LR		
comp=E,880nm,8.6s							
NJ2				LR	LR		
comp=Z,950nm,7.8s							
GZH	**Guangzhou**	**11.62**	**139**	P	**Pn**	**22 35 51.8**	**-3.2**
GZH				S	**Sn**	**22 37 55.0**	**-10**
GZH				LR	LR		
comp=N,1μm,10.5s							
GZH				LR	LR		
comp=E,1μm,9.4s							
BJI	**Beijing**	**11.83**	**46**	P	**Pn**	**22 35 57.8**	**0.0**
BJI				pmax	pmax		
comp=Z,6.0nm,0.5s							
BJI				LR	LR		
comp=N,800nm,9.9s							
BJI				LR	LR		
comp=E,630nm,11.9s							
BJI				LR	LR		
comp=Z,98nm,15.0s							
LSA	**Lhasa**	**12.29**	**262**	P	**Pn**	**22 36 04.8**	**+0.7**
LSA				LR	LR		
comp=E,370nm,7.1s							
LSA				LR	LR		
comp=Z,530nm,8.8s							
LSA	**Lhasa**	**12.29**	**262**	*e*P	**Pn**	**22 36 04.6**	**+0.5**
LSA				pmax	pmax		
comp=Z,8.0nm,0.8s							
LSA	**Lhasa**	**12.29**	**262**	*e*Pn	**Pn**	**22 36 04.5**	**+0.4**
comp=Z,7.9nm,0.8s							
SHL	**Shillong**	**13.38**	**244**	*e*P	**Pn**	**22 36 19.0**	**-0.1**
QIZ	**Qiongzhong**	**13.79**	**161**	P	**Pn**	**22 36 25.1**	**+0.5**
QIZ				S	**Sn**	**22 38 58.5**	**0.0**
QIZ				pmax	pmax		
comp=Z,120nm,5.6s							
QIZ				LR	LR		
comp=N,1μm,10.7s							
QIZ				LR	LR		
comp=Z,2μm,11.0s							
QZH	**Quanzhou**	**13.84**	**118**	*e*P	**Pn**	**22 36 31.5**	**+6.2**
QZH				S	**Sn**	**22 39 07.4**	**+7.8**
QZH				LR	LR		
comp=N,3μm,7.9s							
QZH				LR	LR		
comp=E,3μm,9.3s							
CMAR	**Chiang Mai Arr**	**14.80**	**204**	Pn	**Pn**	**22 36 39.4**	**+1.0**
comp=E,0.2nm,0.3s,baz=14,slow=12,SNR=18							
CMAR				LR	LR	22 43 05.1	
comp=E,104nm,18.7s,baz=50,slow=40							
SONM	**Songino Array**	**15.63**	**3**	Pn	**Pn**	**22 36 50.2**	**+0.9**
comp=E,0.2nm,0.3s,baz=184,slow=14,SNR=12							
SONM				Lg		22 41 23.5	
comp=E,0.2nm,0.3s,baz=192,slow=28,SNR=3.6							
ULN	**Ulaanbaatar**	**15.70**	**5**	*e*P	**Pn**	**22 36 51.7**	**+1.5**
ULN				pmax	pmax		
comp=Z,13nm,1.0s							
ULN	**Ulaanbaatar**	**15.70**	**5**	*e*Pn	**Pn**	**22 36 51.7**	**+1.4**
comp=Z,13nm,1.0s							
GUN	**Gumba**	**17.24**	**261**	*e*P	**Pn**	**22 37 08.4**	**-1.6**
comp=Z,74nm,1.0s							
PKI	**Pulchoki**	**17.74**	**260**	*e*P	**Pn**	**22 37 15.8**	**-0.5**
PKIN	**Phulchoki**	**17.75**	**260**	*e*P	**Pn**	**22 37 16.1**	**-0.3**
KKN	**Kakani**	**17.78**	**261**	*e*P	**Pn**	**22 37 14.9**	**-1.8**
comp=Z,45nm,1.0s							
WMQ	**Urumqi**	**17.95**	**315**	*e*P	**Pn**	**22 37 18.8**	**0.0**
WMQ				pmax	pmax		
comp=Z,13nm,1.0s							
WMQ				LR	LR		
comp=N,770nm,11.0s							
WMQ				LR	LR		
comp=E,850nm,9.0s							
WMQ				LR	LR		
comp=Z,190nm,12.0s							
DMN	**Daman**	**17.98**	**260**	*e*P	**Pn**	**22 37 17.6**	**-1.7**
comp=Z,46nm,1.0s							
ZAK	**Zakamensk**	**18.20**	**356**	*e*P	**Pn**	**22 37 22.6**	**+0.8**
ZAK				pmax	pmax		
comp=Z,8.0nm,1.0s							
KSRS	**Korea Array**	**19.38**	**68**	P	**Pn**	**22 37 36.3**	**+0.1**
comp=Z,0.4nm,0.3s,baz=252,slow=10,SNR=27							
KSRS				LR	LR	22 46 08.9	
comp=Z,35nm,21.9s,baz=250,slow=40							
TLY	**Talaya**	**19.48**	**357**	*e*P	**Pn**	**22 37 40.6**	**+3.3**
TLY				pmax	pmax		
comp=Z,6.0nm,0.9s							
TLY				MLR	MLR		
comp=Z,119nm,12.0s							
CN2	**Changchun**	**19.67**	**48**	*e*P	**Pn**	**22 37 40.0**	**+0.4**
CN2				*es*P	sP	22 37 47.0	+8.5
CN2				*e*S	**Sn**	**22 41 14.8**	**-6.2**
CN2				pmax	pmax		
comp=Z,20nm,1.0s							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,200nm,14.0s							
CN2				LR	LR		
comp=E,200nm,14.0s							
CN2				LR	LR		
comp=Z,200nm,12.0s							
MOY	**Mondy**	**19.68**	**352**	*e*P	**Pn**	**22 37 39.9**	**+0.3**
MOY				pmax	pmax		
comp=Z,17nm,1.4s							
IRK	**Irkutsk**	**20.03**	**358**	*e*P	**P**	**22 37 43.2**	**+1.1**
IRK				pmax	pmax		
comp=Z,71nm,1.4s							
HIA	**Hailar**	**20.24**	**28**	*e*P	**P**	**22 37 45.9**	**+1.5**
HIA				pmax	pmax		
comp=Z,9.0nm,0.7s							
HIA	**Hailar**	**20.24**	**28**	*e*P	**P**	**22 37 45.9**	**+1.5**
comp=Z,8.6nm,0.7s							
JOW	**Kunigami**	**20.80**	**99**	LR	LR	22 46 08.7	
comp=Z,95nm,21.8s,MS3.1,baz=88,slow=38							
JOSI	**Joshimath**	**21.91**	**272**	*e*P	**P**	**22 38 01.7**	**-1.0**
MDJ	**Mudanjiang**	**22.70**	**50**	P	**P**	**22 38 10.8**	**-0.1**
MDJ				pP		22 38 13.6	
MDJ				S	**S**	**22 42 18.9**	**-1.6**
MDJ				ScP	ScP	22 45 41.1	-1.1
MDJ				PcS	PcS	22 45 42.3	+0.2
MDJ				ScS	ScS	22 49 26.3	-1.2
MDJ				pmax	pmax		
comp=Z,6.0nm,1.5s,mb3.9							
MDJ				pmax	pmax		
comp=Z,18nm,4.2s							
MDJ				LR	LR		
comp=N,94nm,11.9s,MS3.5							
MDJ				LR	LR		
comp=E,51nm,11.6s,MS3.5							
MDJ				LR	LR		
comp=Z,75nm,7.3s							
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**22 38 11.7**	**0.0**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**22 38 11.1**	**-0.6**
comp=Z,15nm,0.9s,mb4.5,baz=110,slow=10,SNR=28							
MKAR				LR	LR	22 47 57.6	
comp=Z,194nm,20.6s,MS3.5,baz=172,slow=39							
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**22 38 11.1**	**-0.6**
MKAR				LR	LR	22 47 57.6	
KLP	**Kalpa**	**22.85**	**276**	*e*P	**P**	**22 38 12.8**	**+0.1**
VLA	**Vladivostok**	**23.70**	**55**	*e*P	**P**	**22 38 20.1**	**-1.2**
VLA				pmax	pmax		
comp=Z,12nm,1.0s,mb4.4							
AGRA	**Agra**	**24.13**	**265**	*e*P	**P**	**22 38 24.4**	**-1.0**
KKR	**Kurukshetra**	**24.35**	**272**	*e*P	**P**	**22 38 26.9**	**-0.6**
AYAN	**Aya Nagar**	**24.45**	**269**	*e*P	**P**	**22 38 28.0**	**-0.4**
AYAN				AMb	AMB	22 38 31.7	
comp=Z,16nm,0.8s,mb4.6							
SONA	**Sohna**	**24.55**	**268**	*e*P	**P**	**22 38 29.3**	**0.0**
KSH	**Kashi**	**24.68**	**295**	*e*P	**P**	**22 38 32.8**	**+2.4**
KSH				*ep*P		22 38 36.8	
KSH				*es*P	sP	22 38 39.8	+9.2
KSH				*e*PP		22 39 10.8	
KSH				*e*PcP	PcP	22 42 06.8	-0.9
KSH				*e*S	**S**	**22 42 51.6**	**-1.4**
KSH				*es*S	sS	22 43 01.9	+8.7
KSH				*e*SS		22 43 54.8	
KSH				pmax	pmax		
comp=Z,10.0nm,1.1s,mb4.5							
KSH				LR	LR		
comp=N,170nm,6.2s							
KSH				LR	LR		
comp=E,250nm,11.7s							
KSH				LR	LR		
comp=Z,210nm,10.1s,MS3.9							
RTK	**Rohtak**	**24.91**	**270**	*ex*	**P**	**22 38 24.7**	**-7.9**
TKM2	**Tokmak 2**	**25.64**	**303**	P	**P**	**22 38 38.8**	**-0.3**
SNR=11							
TKM2	**Tokmak 2**	**25.64**	**303**	*e*P	**P**	**22 38 38.8**	**-0.2**
TKM2				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.5							
TKM2	**Tokmak 2**	**25.64**	**303**	*e*P	**P**	**22 38 38.8**	**-0.2**
comp=Z,9.1nm,0.8s,mb4.5							
KHET	**Khetri**	**25.68**	**268**	*e*P	**P**	**22 38 38.3**	**-1.3**
KHET				AMb	AMB	22 38 45.5	
comp=Z,14nm,0.5s,mb4.9							
KZA	**Kyzart**	**25.69**	**301**	P	**P**	**22 38 40.7**	**+1.2**
SNR=7.8							
KBK	**Karagaybulak**	**26.04**	**302**	P	**P**	**22 38 43.8**	**+1.1**
SNR=12							
BHPL	**Bhopal**	**26.07**	**257**	*e*P	**P**	**22 38 43.8**	**+0.6**
ZAA0	**Zalesovo Array**	**26.14**	**332**	*e*P	**P**	**22 38 42.4**	**-1.1**
ZALV	**Zalesovo Beam**	**26.14**	**332**	P	**P**	**22 38 42.2**	**-1.3**
comp=Z,7.4nm,0.6s,mb4.5,baz=134,slow=9.9,SNR=22							
ZALV				LR	LR	22 49 14.0	
comp=Z,32nm,21.5s,MS2.8,baz=265,slow=37							
ZALV	**Zalesovo Beam**	**26.14**	**332**	P	**P**	**22 38 42.2**	**-1.3**
ZALV				LR	LR	22 49 14.0	
KLR	**Kul'dur**	**26.16**	**42**	*e*P	**P**	**22 38 38.2**	**-5.5**
UCH	**Uchtor**	**26.25**	**301**	P	**P**	**22 38 45.7**	**+1.1**
SNR=25							
UCH	**Uchtor**	**26.25**	**301**	*e*P	**P**	**22 38 45.5**	**+0.9**
comp=Z,26nm,1.1s,mb4.8							
BOD	**Bodaibo**	**26.31**	**11**	*e*P	**P**	**22 38 45.1**	**+0.2**
BOD				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.0							
AAK	**Ala-Archa**	**26.36**	**302**	P	**P**	**22 38 45.8**	**+0.3**
comp=Z,1.2nm,0.4s,mb3.9,baz=122,slow=7.4,SNR=7.5							
AAK				LR	LR	22 51 05.9	
comp=Z,188nm,19.0s,MS3.6,baz=79,slow=41							
AAK	**Ala-Archa**	**26.36**	**302**	*e*P	**P**	**22 38 47.5**	**+2.0**
AAK				pmax	pmax		
comp=Z,5.0nm,0.9s,mb4.1							
AAK	**Ala-Archa**	**26.36**	**302**	*e*P	**P**	**22 38 47.5**	**+2.0**
comp=Z,5.4nm,0.9s,mb4.2							
USP	**Ospenovka**	**26.50**	**303**	P	**P**	**22 38 49.8**	**+2.9**
SNR=14							
AML	**Almayashu**	**26.83**	**301**	P	**P**	**22 38 53.7**	**+3.9**
SNR=7.7							
AML	**Almayashu**	**26.83**	**301**	*e*P	**P**	**22 38 50.5**	**+0.7**
comp=Z,7.8nm,0.7s,mb4.5							
EKS2	**Erkin-Say**	**26.88**	**302**	*e*P	**P**	**22 38 51.1**	**+0.9**
comp=Z,3.1nm,0.8s,mb4.1							
KURK	**Kurchatov**	**26.93**	**321**	P	**P**	**22 38 49.6**	**-1.0**
comp=Z,13nm,0.8s,mb4.7,baz=132,slow=8.3,SNR=36							
KURK				PcP	PcP	22 42 10.8	-1.8
comp=Z,1.6nm,0.5s,baz=118,slow=2.3,SNR=6.1							
KURK				LR	LR	22 48 42.1	
comp=Z,53nm,21.7s,MS3.1,baz=120,slow=35							
KURK	**Kurchatov**	**26.93**	**321**	P	**P**	**22 38 49.6**	**-1.0**
KURK						22 42 10.8	
KURK				pmax	pmax		
comp=Z,13nm,0.9s,mb4.7							
KURK				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.1							
KURK				MLR	MLR		
comp=Z,53nm,21.7s,MS3.1							
KURK	**Kurchatov**	**26.93**	**321**	*e*P	**P**	**22 38 49.8**	**-0.8**
comp=Z,21nm,0.9s,mb4.9							
AJM	**Ajmer**	**27.16**	**266**	*e*P	**P**	**22 38 54.3**	**+1.4**
NVS	**Novosibirsk**	**27.43**	**332**	*e*P	**P**	**22 38 56.7**	**+1.7**
MAJO	**Matsushiro**	**27.53**	**72**	*e*P	**P**	**22 38 55.0**	**-1.2**
MAJO				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.5							
MAJO	**Matsushiro**	**27.53**	**72**	*e*P	**P**	**22 38 55.0**	**-1.2**
comp=Z,4.6nm,0.6s,mb4.5							
MAT	**Matsushiro**	**27.53**	**72**	P	**P**	**22 38 54.9**	**-1.3**
MJAR	**Matsushiro Arr**	**27.53**	**72**	P	**P**	**22 38 55.3**	**-0.9**
comp=Z,2.1nm,0.6s,mb4.2,baz=274,slow=10,SNR=9.3							
KBL	**Kabul**	**30.16**	**284**	*e*P	**P**	**22 39 20.3**	**+0.7**
KBL				pmax	pmax		
comp=Z,11nm,1.1s,mb4.6							
KBL	**Kabul**	**30.16**	**284**	*e*P	**P**	**22 39 20.3**	**+0.7**
comp=Z,11nm,1.1s,mb4.6							
ASAJ	**Asahikawa**	**31.48**	**57**	P	**P**	**22 39 30.2**	**-0.9**
comp=Z,2.6nm,0.4s,mb4.5,baz=270,slow=6.1,SNR=3.5							
ASAJ	**Asahikawa**	**31.48**	**57**	P	**P**	**22 39 30.2**	**-0.9**
ASAJ				pmax	pmax		
comp=Z,3.0nm,0.4s							
YSS	**Yuzh-Sakhalins**	**32.15**	**52**	*e*P	**P**	**22 39 32.0**	**-5.0**
BVAR	**Borovoye Array**	**32.50**	**320**	P	**P**	**22 39 39.0**	**-1.0**
comp=Z,6.4nm,0.8s,mb4.6,baz=116,slow=10,SNR=27							
BVAR				PcP	PcP	22 42 25.1	-1.7
comp=Z,1.3nm,0.7s,baz=112,slow=3.5,SNR=4.4							
BVAR				LR	LR	22 53 54.8	
comp=Z,155nm,18.1s,MS3.7,baz=2.8,slow=38							
BVAR	**Borovoye Array**	**32.50**	**320**	P	**P**	**22 39 39.0**	**-1.0**
BVAR						22 42 25.1	
BRVK	**Borovoye**	**32.58**	**320**	*e*P	**P**	**22 39 39.4**	**-1.2**
BRVK				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.8							
BRVK	**Borovoye**	**32.58**	**320**	*e*P	**P**	**22 39 39.4**	**-1.2**
comp=Z,10nm,0.8s,mb4.8							
ABKAR	**Akbulak array**	**37.63**	**310**	*e*P	**P**	**22 40 23.4**	**-0.8**
comp=Z,5.7nm,0.6s,mb4.5							
SVE	**Sverdlovsk**	**39.16**	**322⇓**	*e*P	**P**	**22 40 37.2**	**+0.2**
SVE				*e*S	**S**	**22 46 33.8**	**-3.9**
SVE				pmax	pmax		
comp=Z,25nm,1.0s,mb4.8							
SVE				MLR	MLR		
comp=Z,223nm,16.0s,MS4.1							
KAPI	**Kappang**	**39.54**	**157**	P	**P**	**22 40 39.5**	**-1.1**
comp=Z,9.1nm,0.6s,mb4.6,baz=91,slow=16,SNR=6.3							
ARU	**Arti**	**40.12**	**321**	*d i*P	**P**	**22 40 44.5**	**-0.6**
ARU				*e*		22 42 15.4	
ARU				S	**S**	**22 46 51.1**	**-1.1**
ARU				SS	SS	22 49 40.3	-8.9
ARU				pmax	pmax		
comp=Z,59nm,1.2s,mb5.1							
ARU	**Arti**	**40.12**	**321**	*e*P	**P**	**22 40 43.9**	**-1.1**
comp=Z,40nm,0.9s,mb5.0							
TIXI	**Tiksi**	**41.49**	**11**	*e*P	**P**	**22 40 53.8**	**-2.4**
TIXI				pmax	pmax		
comp=Z,7.0nm,1.3s,mb4.2							
TIXI	**Tiksi**	**41.49**	**11**	*e*P	**P**	**22 40 54.8**	**-1.4**
comp=Z,3.0nm,0.7s,mb4.1							
SEY	**Seymchan**	**42.68**	**30⇓**	*i*P	**P**	**22 41 05.8**	**-0.2**
PETK	**Petropavlovsk-**	**42.77**	**45**	P	**P**	**22 41 06.2**	**-0.6**
comp=Z,6.1nm,0.7s,mb4.4,baz=226,slow=5.8,SNR=10							
PETK	**Petropavlovsk-**	**42.77**	**45**	P	**P**	**22 41 06.2**	**-0.6**
GNI	**Garni**	**48.59**	**297**	*e*P	**P**	**22 41 53.4**	**+0.3**
GNI				pmax	pmax		
comp=Z,9.0nm,1.3s							
GNI	**Garni**	**48.59**	**297**	*e*P	**P**	**22 41 55.4**	**+2.3**
comp=Z,9.4nm,1.0s,mb4.8							
ZEI	**Tsey**	**48.78**	**301**	*e*P	**P**	**22 41 53.0**	**-1.5**
ZEI				pmax	pmax		
comp=Z,10.0nm,1.4s,mb4.7							
KIV	**Kislovodsk**	**49.47**	**303⇑**	*i*P	**P**	**22 41 59.1**	**-0.7**
KIV				pmax	pmax		
comp=Z,27nm,1.2s,mb5.2							
KIV				MLR	MLR		
comp=Z,100nm,17.0s,MS3.9							
KIV	**Kislovodsk**	**49.47**	**303**	*e*P	**P**	**22 41 60.0**	**+0.2**
comp=Z,24nm,1.1s,mb5.1							
BILL	**Bilibino**	**49.79**	**26**	*e*P	**P**	**22 42 00.9**	**-0.9**
BILL				*e*S	**S**	**22 49 13.3**	**+1.5**
BILL				pmax	pmax		
comp=Z,7.0nm,1.6s,mb4.3							
BILL				MLR	MLR		
comp=Z,100nm,13.0s,MS4.0							
KLMR	**Klimovskoe**	**50.68**	**325**	*e*P	**P**	**22 42 09.7**	**+1.1**
KLMR				pmax	pmax		
comp=Z,51nm,1.4s,mb5.3							
VORD	**Divnogorie**	**50.94**	**312**	*e*P	**P**	**22 42 12.1**	**+1.3**
VORD				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.6							
VORD				pmax	pmax		
comp=N,10.0nm,0.8s							
VORD				pmax	pmax		
comp=E,9.0nm,0.4s							
VSR	**Storozhevoye**	**51.00**	**312**	*e*P	**P**	**22 42 12.5**	**+1.2**
VSR				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.9							
VSR				pmax	pmax		
comp=N,10.0nm,0.9s							
VSR				pmax	pmax		
comp=E,8.0nm,0.7s							
OBN	**Obninsk**	**52.27**	**317**	*e*P	**P**	**22 42 21.5**	**+0.8**
OBN				pmax	pmax		
comp=Z,24nm,1.6s,mb4.9							
OBN				MLR	MLR		
comp=Z,100nm,16.0s,MS4.0							
OBN	**Obninsk**	**52.27**	**317**	*e*P	**P**	**22 42 22.5**	**+1.8**
comp=Z,14nm,0.9s,mb4.9							
KNA	**Kununurra**	**52.78**	**151⇑**	*i*P	**P**	**22 42 24.7**	**-0.1**
comp=Z,24nm,0.8s,mb5.2							
ANN	**Anapa**	**53.04**	**304**	*e*P	**P**	**22 42 25.4**	**-1.2**
ANN				*e*		22 44 26.7	
ANN				pmax	pmax		
comp=Z,25nm,0.9s,mb5.1							
MALT	**Malatya**	**53.78**	**296**	*e*P	**P**	**22 42 31.8**	**-0.3**
**JOF

KEV pmax pmax
comp=Z,12nm,0.6s,mb5.1
KEV Kevo 56.09 336 *ep* **P 22 42 48.9 +0.6**
comp=Z,12nm,0.6s,mb5.1
ARCES ARCESS Array B 56.62 336 P **P 22 42 51.0 -1.2**
comp=Z,9.9nm,0.8s,mb4.9,baz=79,slow=7.5,SNR=17
KAF Kangasniemi 56.96 327 *eP* **P 22 42 52.3 -2.3**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF Kangasniemi 56.96 327 *ep* **P 22 42 52.3 -2.3**
comp=Z,7.1nm,0.6s,mb4.9
BR131 Keskin Array S 56.99 299 *eP* **P 22 42 54.0 -1.2**
comp=Z,2.0nm,0.6s,mb4.3
BRTR Keskin Array B 56.99 299 P **P 22 42 54.2 -1.0**
comp=Z,2.9nm,0.7s,mb4.4,baz=97,slow=6.7,SNR=18
BRTR Keskin Array B 56.99 299 *i* P **P 22 42 56.9 +1.7**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 57.16 326 P **P 22 42 54.5 -1.5**
comp=Z,15nm,0.7s,mb5.1,baz=82,slow=7.7,SNR=34
AKASG Malin Array Be 57.29 313 P **P 22 42 55.5 -1.6**
comp=Z,6.5nm,0.7s,mb4.8,baz=68,slow=6.5,SNR=9.3
AKBB Malin Array Si 57.29 313 *eP* **P 22 42 58.2 +1.0**
KIEV Kiev 57.30 313 *eP* **P 22 42 58.1 +0.9**
KIEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KIEV Kiev 57.30 313 *eP* **P 22 42 58.1 +0.8**
comp=Z,5.5nm,0.7s,mb4.7
MMAI Mount Meron Ar 57.72 291 LR LR 23 12 47.4
comp=Z,35nm,19.7s,MS3.5,baz=65,slow=41
IDID Didziasalis 57.83 319 *eP* **P 22 42 60.0 -0.9**
IIGN Ignalina 58.11 319 *eP* **P 22 43 02.0 -0.8**
ISAL Salakas 58.12 319 *eP* **P 22 43 02.2 -0.7**
COEN Coen 58.58 136 *eP* **P 22 43 06.6 0.0**
COEN Coen 58.58 136 *eP* **P 22 43 06.3 -0.3**
comp=Z,58nm,0.7s,mb5.7
WRAB Tennant Creek 58.90 148 *eP* **P 22 43 08.7 0.0**
WRAB pmax pmax
comp=Z,15nm,0.6s,mb5.2
WRAB Tennant Creek 58.90 148 *eP* **P 22 43 08.7 -0.1**
comp=Z,15nm,0.6s,mb5.2
VRI Vrincioaia 60.12 308 ⇑P **P 22 43 19.1 +2.2**
VRI Vrincioaia 60.12 308 ⇑*i*P **P 22 43 19.1 +2.2**
PLOR Plostina 60.17 308 ⇑P **P 22 43 18.7 +1.4**
PLOR Plostina 60.17 308 ⇑*i*P **P 22 43 18.7 +1.4**
MLR Muntele Rosu 60.75 308 ⇑P **P 22 43 23.3 +2.0**
MLR Muntele Rosu 60.75 308 ⇑*i*P **P 22 43 23.3 +2.0**
KWP Kalwaria Pacla 61.62 313 ⇑P **P 22 43 24.8 -2.3**
KWP Kalwaria Pacla 61.62 313 ⇑*i*P **P 22 43 24.8 -2.3**
ASAR Alice Springs 61.98 150 P **P 22 43 29.8 +0.1**
comp=Z,7.8nm,0.7s,mb5.0,baz=336,slow=7.0,SNR=70
ASAR Alice Springs 61.98 150 P **P 22 43 29.8 +0.1**
KOLS Kolonicke sedl 62.10 312 *eP* **P 22 43 32.4 +2.1**
KOLS pmax pmax
comp=Z,3.0nm,1.2s,mb4.4
KOLS Kolonicke sedl 62.10 312 *eP* **P 22 43 32.4 +2.1**
TRPA Tarpa 62.18 311 ⇑*i*P **P 22 43 34.3 +3.4**
MTSU Mount Surprise 62.55 137 *eP* **P 22 43 33.6 0.0**
comp=Z,12nm,0.7s,mb5.1
STHS Stebnicka Huta 62.59 313 *eP* **P 22 43 35.8 +2.2**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
STHS Stebnicka Huta 62.59 313 *eP* **P 22 43 35.8 +2.2**
OJC Ojcow 63.22 314 *eP* **P 22 43 39.7 +1.9**
KECS Kecovo 63.36 312 *eP* **P 22 43 43.8 +5.0**
KECS pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
KECS Kecovo 63.36 312 *eP* **P 22 43 43.8 +5.0**
BZS Buzias 63.59 309 ⇑P **P 22 43 39.5 -0.8**
BZS Buzias 63.59 309 ⇑*i*P **P 22 43 39.5 -0.8**
NB2 NORSAR Subarra 64.21 327 P **P 22 43 42.0 -2.1**
comp=Z,9.8nm,0.7s,mb5.2,baz=73,slow=6.9
NOA NORSAR Array B 64.21 327 P **P 22 43 42.1 -2.0**
comp=Z,9.3nm,0.7s,mb5.1,baz=71,slow=6.7,SNR=25
NOA LR LR 23 13 08.2
comp=Z,23nm,19.9s,MS3.4,baz=95,slow=37
OKC Ostrava-Krasne 64.35 314 *eP* **P 22 43 47.0 +1.7**
OKC Ostrava-Krasne 64.35 314 *eP* **P 22 43 47.0 +1.7**
VYHS Vyhne 64.39 313 *eP* **P 22 43 48.1 +2.6**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.5
VYHS Vyhne 64.39 313 *eP* **P 22 43 48.1 +2.6**
NAO01 NORSAR Array S 64.43 327 *eP* **P 22 43 46.4 +0.8**
comp=Z,6.3nm,0.8s,mb4.9
MORC Moravsky Berou 64.74 314 *eP* **P 22 43 49.7 +1.9**
comp=Z,5.5nm,1.0s,mb4.7
MORC Moravsky Berou 64.74 314 ⇑*i*P **P 22 43 50.3 +2.5**
CTAO Charters Tower 65.20 137 *eP* **P 22 43 51.3 +0.2**
CTAO pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
CTAO Charters Tower 65.20 137 *eP* **P 22 43 51.3 +0.2**
comp=Z,4.0nm,0.9s,mb4.7
DPC Dobruska-Polom 65.27 315 *eP* **P 22 43 50.1 -1.1**
DPC Dobruska-Polom 65.27 315 *eP* **P 22 43 50.1 -1.1**
DPC *ex* x 22 43 53.8
PKSM Moragy 65.33 310 ⇑P **P 22 43 53.8 +2.1**
PKSM Moragy 65.33 310 ⇑*i*P **P 22 43 53.8 +2.1**
UPC Upice 65.40 315 *eP* **P 22 43 51.2 -0.9**
UPC Upice 65.40 315 *eP* **P 22 43 51.2 -0.9**
UPC *ex* x 22 43 54.4
FORT Forrest 66.30 159 *eP* **P 22 43 57.9 0.0**
comp=Z,14nm,0.6s,mb5.4
PRU Pruhonice 66.47 315 *eP* **P 22 44 01.2 +2.2**
PRU Pruhonice 66.47 315 *eP* **P 22 44 01.2 +2.2**
BRG Berggiesshubel 66.49 316 *eP* **P 22 44 00.8 +1.7**
comp=Z,4.0nm,0.8s,mb4.7
BRG Berggiesshubel 66.49 316 *eP* **P 22 44 00.9 +1.8**
comp=Z,3.5nm,0.8s,mb4.6
BRG *e* 22 49 05.5
comp=Z,2.2nm,1.0s
BRG S S 22 52 51.0 +0.5
BRG *i* 22 53 09.0
BRG Berggiesshubel 66.49 316 *eP* **P 22 44 00.9 +1.8**
BRG S S 22 52 51.0 +0.5
BRG *i* 22 53 09.0
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb4.0
CLL Collm 66.87 317 *eP* **P 22 44 02.9 +1.4**
comp=Z,10.0nm,1.6s,mb4.8
CLL Collm 66.87 317 *eP* **P 22 44 03.0 +1.5**
CLL LR LR
comp=Z,100nm,17.7s,MS4.1
CLL Collm 66.87 317 *eP* **P 22 44 03.0 +1.5**
CLL *e*PP PP 22 46 35.0 +6.7
CLL *e*SSSS 23 01 30.0
PPLA Purkeypile 67.26 29 *eP* **P 22 44 03.1 -0.6**
comp=Z,9.0nm,0.7s,mb5.1
BSEG Bad Segeberg 67.33 320 *eP* **P 22 44 06.9 +2.5**
comp=Z,18nm,1.0s,mb5.3
KHC Kasperske Hory 67.38 315 *eP* **P 22 44 03.1 -1.7**
KHC Kasperske Hory 67.38 315 *eP* **P 22 44 03.1 -1.7**
GEC2 GERESS Array S 67.42 314 *eP* **P 22 44 06.2 +1.2**
comp=Z,5.0nm,1.0s,mb4.7
GEC2 GERESS Array S 67.42 314 *eP* **P 22 44 06.2 +1.2**
GEC2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
GERES GERESS Array B 67.42 314 P **P 22 44 03.8 -1.3**
comp=Z,1.3nm,0.8s,mb4.2,baz=64,slow=6.1,SNR=13
GERES LR LR 23 15 05.6
comp=Z,76nm,20.1s,MS3.9,baz=207,slow=37
TANN Tannenbergstha 67.53 316 *eP* **P 22 44 07.4 +1.7**
comp=Z,2.0nm,0.9s,mb4.3
WET Wettzell 67.80 315 *eP* **P 22 44 09.5 +2.1**
comp=Z,7.0nm,1.5s,mb4.7
WET Wettzell 67.80 315 *eP* **P 22 44 09.5 +2.1**
WET pmax pmax
comp=Z,7.0nm,1.5s,mb4.7
ROTZ Rotzenmuhle 67.95 316 *eP* **P 22 44 10.4 +2.1**
comp=Z,10.0nm,1.4s,mb4.8
NRDL Niedersach Rie 68.03 319 *eP* **P 22 44 11.0 +2.2**
comp=Z,10.0nm,1.3s,mb4.9
COLA College 68.04 26 *eP* **P 22 44 07.6 -1.0**
COLA pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
COLA College 68.04 26 *eP* **P 22 44 07.6 -1.0**
comp=Z,7.9nm,0.7s,mb5.0
CLZ Clausthal 68.15 318 *eP* **P 22 44 11.8 +2.2**
comp=Z,12nm,1.1s,mb5.0
CLZ Clausthal 68.15 318 *eP* **P 22 44 11.8 +2.2**
CLZ pmax pmax
comp=Z,12nm,1.1s,mb5.0
MCK McKinley 68.17 27 *eP* **P 22 44 08.7 -0.8**
MCK pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
MCK McKinley 68.17 27 *eP* **P 22 44 08.7 -0.8**
comp=Z,3.7nm,0.7s,mb4.7
GRA1 Grafenberg Arr 68.56 316 *eP* **P 22 44 14.5 +2.3**
comp=Z,14nm,1.4s,mb5.0
GRF Grafenberg Arr 68.56 316 *eP* **P 22 44 14.5 +2.3**
comp=Z,14nm,1.4s,mb5.0
GRF Grafenberg Arr 68.56 316 *eP* **P 22 44 14.5 +2.3**
GRF pmax pmax
comp=Z,14nm,1.4s,mb5.0
GRF Grafenberg Arr 68.56 316 *eP* **P 22 44 14.5 +2.3**
GRF pmax pmax
comp=Z,14nm,1.4s,mb5.0
FUR Furstenfeldbru 69.17 314 *eP* **P 22 44 19.0 +3.0**
comp=Z,16nm,1.0s,mb5.2
FUR Furstenfeldbru 69.17 314 *eP* **P 22 44 19.0 +3.0**
FUR pmax pmax
comp=Z,16nm,1.0s,mb5.2
TIP Timpagrande 69.39 304 *eP* **P 22 44 18.9 +1.4**
comp=Z,6.4nm,1.0s,mb4.8
KDAK Kodiak Island 69.41 34 *i* P **P 22 44 16.4 -0.9**
TNS Taunus Mts 69.95 317 *eP* **P 22 44 22.6 +1.8**
comp=Z,3.0nm,0.8s,mb4.5
TNS Taunus Mts 69.95 317 *eP* **P 22 44 22.6 +1.8**
TNS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
INK Inuvik 70.81 20 P **P 22 44 23.9 -1.9**
comp=Z,5.0nm,0.8s,mb4.7,baz=334,slow=7.4,SNR=16
INK Inuvik 70.81 20 *eP* **P 22 44 24.1 -1.6**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 70.81 20 *eP* **P 22 44 24.1 -1.6**
comp=Z,5.4nm,0.9s,mb4.7
BFO Black Forest 70.87 315 *eP* **P 22 44 27.2 +0.8**
comp=Z,3.0nm,1.1s,mb4.3
BFO Black Forest 70.87 315 *eP* **P 22 44 27.2 +0.8**
BFO pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
CDF Champ du Feu 71.45 316 *eP* **P 22 44 28.5 -1.5**
comp=Z,3.4nm,0.6s,mb4.3
CDF Champ du Feu 71.45 316 *eP* **P 22 44 28.5 -1.5**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
CDF Champ du Feu 71.45 316 *eP* **P 22 44 28.5 -1.5**
comp=Z,1.7nm,0.6s,mb4.3
WLF Walferdange 71.52 317 P **P 22 44 32.2 +1.8**
comp=Z,7.9nm,1.3s,mb4.7
WLF Walferdange 71.52 317 *eP* **P 22 44 32.3 +1.9**
comp=Z,19nm,1.3s,mb5.1
WLF Walferdange 71.52 317 *eP* **P 22 44 30.4 0.0**
WLF pmax pmax
comp=Z,15nm,1.2s,mb5.0
WLF Walferdange 71.52 317 *eP* **P 22 44 30.4 0.0**
comp=Z,15nm,1.2s,mb5.0
DAWY Dawson 71.56 25 *eP* **P 22 44 29.0 -1.3**
STKA Stephens Creek 72.45 148 *eP* **P 22 44 35.6 -0.5**
comp=Z,6.3nm,1.1s,mb4.7
STKA Stephens Creek 72.45 148 P **P 22 44 35.5 -0.6**
comp=Z,5.2nm,0.6s,mb4.8,baz=307,slow=5.7,SNR=9.1
STKA Stephens Creek 72.45 148 P **P 22 44 35.5 -0.6**
RES Resolute Bay 72.55 5 P **P 22 44 34.8 -1.3**
comp=Z,2.2nm,1.0s,mb4.2,baz=350,slow=7.2,SNR=4.4
RES Resolute Bay 72.55 5 *eP* **P 22 44 34.9 -1.3**
RES pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
RES Resolute Bay 72.55 5 *eP* **P 22 44 34.9 -1.3**
comp=Z,2.9nm,1.0s,mb4.4
LPG La Plagne 73.15 313 *eP* **P 22 44 39.5 -0.7**
comp=Z,25nm,0.9s,mb5.0
LPG La Plagne 73.15 313 *eP* **P 22 44 39.5 -0.7**
LPG pmax pmax
comp=Z,12nm,0.9s,mb5.0
LPG La Plagne 73.15 313 *eP* **P 22 44 39.5 -0.7**
comp=Z,12nm,0.9s,mb5.0
LPL La Plagne 73.15 313 *eP* **P 22 44 39.3 -0.9**
comp=Z,12nm,0.7s,mb4.9
LPL La Plagne 73.15 313 *eP* **P 22 44 39.3 -0.9**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
LPL La Plagne 73.15 313 *eP* **P 22 44 39.3 -0.9**
comp=Z,6.2nm,0.7s,mb4.8
CMSA Cobar Meteorol 74.09 145 *eP* **P 22 44 46.1 +0.3**
SMF Signal de Mont 74.35 315 *eP* **P 22 44 45.4 -1.8**
comp=Z,9.9nm,0.8s,mb4.6
SMF Signal de Mont 74.35 315 *eP* **P 22 44 45.4 -1.8**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SMF Signal de Mont 74.35 315 *eP* **P 22 44 45.4 -1.8**
comp=Z,4.9nm,0.8s,mb4.6
TCF Toulx Ste Croi 75.50 316 *eP* **P 22 44 52.3 -1.6**
comp=Z,15nm,1.2s,mb4.6
TCF Toulx Ste Croi 75.50 316 *eP* **P 22 44 52.3 -1.6**
TCF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
TCF Toulx Ste Croi 75.50 316 *eP* **P 22 44 52.3 -1.6**
comp=Z,7.6nm,1.2s,mb4.6
KEST Kesra 76.20 304 P **P 22 44 57.6 -0.5**
comp=Z,1.6nm,0.9s,mb4.1,baz=63,slow=4.2,SNR=3.0
YKA Yellowknife Ar 80.36 18 P **P 22 45 19.5 -1.1**
comp=Z,3.7nm,0.6s,mb4.5,baz=330,slow=5.2,SNR=46
ESDC Sonseca Array 82.94 313 P **P 22 45 36.7 +2.0**
comp=Z,0.5nm,0.5s,mb4.0,baz=15,slow=5.2,SNR=3.7
FRB Frobisher Bay 84.24 357 P **P 22 45 38.7 -2.1**
comp=Z,1.4nm,0.7s,mb4.3,baz=4.9,slow=7.1,SNR=3.1
FRB Frobisher Bay 84.24 357 P **P 22 45 38.7 -2.1**
FCC Fort Churchill 87.95 10 *eP* **P 22 45 58.2 -1.1**
comp=Z,0.3nm,1.3s
FFC Flin Flon 90.31 15 *eP* **P 22 46 09.1 -1.4**
FFC pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
FFC Flin Flon 90.31 15 *eP* **P 22 46 09.1 -1.4**
comp=Z,3.8nm,1.0s,mb4.6
SCHQ Schefferville 93.04 355 P **P 22 46 21.8 -1.3**
comp=Z,4.0nm,1.0s,mb4.8,baz=38,slow=5.3,SNR=4.1
SCHQ Schefferville 93.04 355 P **P 22 46 21.8 -1.3**
TORD Torodi Ar. Bea 94.16 288 P **P 22 46 27.1 -1.9**
comp=Z,0.7nm,0.9s,mb4.0,baz=36,slow=5.1,SNR=3.7
WVOR Wild Horse Val 95.52 31 *eP* **P 22 46 35.3 +0.5**
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb5.3
WVOR Wild Horse Val 95.52 31 *eP* **P 22 46 35.3 +0.6**
comp=Z,10nm,0.9s,mb5.3
BOZ Bozeman (W) 95.63 25 *eP* **P 22 46 34.7 -0.5**
VNA2 Neumayer--Watz 127.44 202 *e*PKPdf PKPdf 22 52 12.5 -1.1
OTAV Otavalo 147.54 7 *e*PKPbc PKPbc 22 52 54.5 -0.2

DDA ***16*** *22:36:24.9, 36.′49N×34.′58E, h7km±6km, Md3.5*
ISK ***16*** *22:36:24.7, 36.′47N×34.′59E, h8km, MD3.4*
ISCJB ***16*** *22:36:25.7±0.3, 36.′47N±0.′03×34.′60E±0.′02, h10km, Error ellipse: s-maj=3.9km s-min=2.7km az=165.4*
CSEM ***16*** *22:36:25.2±0.2, 36.′47N×34.′61E, h2km, MD3.4, Error ellipse: s-maj=4.2km s-min=3.1km az=168.0*
ISC 16 22:36:25.3±0.5, 36.′46N±0.′03×34.′61E±0.′02, h3km±4km, n48, σ0=96/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	Mersin	0.41	350	*e*PG	Pg	22 36 33.1	-0.2
MERS				*e*SG	Sg	22 36 38.9	+0.3
MERS	Mersin	0.41	350	*e*Pg	Pg	22 36 33.1	-0.2
MERS				*e*Sg	Sg	22 36 38.9	+0.2
IKL	Isikli	0.78	254	*e*PG	Pg	22 36 39.9	-0.4
IKL				*e*SG	Sg	22 36 50.6	+0.2
IKL	Isikli	0.78	254	*e*Pg	Pg	22 36 39.9	-0.4
IKL				*e*Sg	Sg	22 36 50.6	+0.2
GULE	Gulek	0.83	9	*i* P	Pg	22 36 40.0	-1.3
GULE				*i* S	Sg	22 36 52.6	+0.5
GULE	Gulek	0.83	9	*i* P	Pg	22 36 40.0	-1.3
GULE				*i* S	Sg	22 36 52.6	+0.5
KARA	Karaisali	0.87	24	*e*PG	Pg	22 36 40.7	-1.4
KARA	Karaisali	0.87	24	*e*Pg	Pg	22 36 40.7	-1.4
YURE	YUREGIR	0.90	66	*i* P	Pg	22 36 43.4	+0.8
YURE				*i* S	Sg	22 36 58.1	+3.9
YURE	YUREGIR	0.90	66	*i* P	Pg	22 36 43.4	+0.8
YURE				*i* S	Sg	22 36 58.1	+3.9
EREN	Erenkoy	0.99	201	*e*PG	Pg	22 36 45.0	+0.6
EREN	Erenkoy	0.99	201	*e*Pg	Pg	22 36 45.0	+0.6
HTY	Hatay	1.28	105	*e*PN	Pn	22 36 50.6	+0.5
HTY	Hatay	1.28	105	*e*Pn	Pn	22 36 50.6	+0.5
YAYL	Yayladag	1.28	109	*i* P	Pg	22 36 49.7	-0.2
YAYL				*i* S	Sg	22 37 08.1	+1.6
YAYL	Yayladag	1.28	109	*i* P	Pg	22 36 49.7	-0.2
YAYL				*i* S	Sg	22 37 08.1	+1.6
COBT	Iskenderun	1.33	87	*i* P	Pn	22 36 49.7	-1.0
COBT				*i* S	Sg	22 37 08.6	+0.6
COBT	Iskenderun	1.33	87	*i* P	Pn	22 36 49.7	-1.1
COBT				*i* S	Sg	22 37 08.6	+0.6
ERMK	Ermenek	1.38	278	*i* P	Pn	22 36 51.6	+0.1
ERMK				*i* S	Sg	22 37 09.6	-0.1
KOZT	Kozan	1.41	43	*e*PN	Pn	22 36 50.2	-1.7
KOZT				*e*SN	Sn	22 37 10.9	-0.1
LFK	Lefkose	1.47	217	*e*PN	Pn	22 36 50.2	-2.5
LFK				*e*SN	Sn	22 37 12.7	+0.3
HDMB	Hadim	1.78	287	*e*PN	Pn	22 36 56.2	-0.8
HDMB				*e*SN	Sn	22 37 19.1	-1.1
HDMB	Hadim	1.78	287	*e*Pn	Pn	22 36 56.2	-0.8
HDMB				*e*Sn	Sn	22 37 19.1	-1.1
GAZI	Gazipasa	1.87	264	*i* P	Pn	22 36 59.3	+1.1
GAZI				*i* S	Sn	22 37 24.0	+1.8
GAZI	Gazipasa	1.87	264	*i* P	Pn	22 36 59.3	+1.1
GAZI				*i* S	Sn	22 37 24.0	+1.7
LEF	Lefka	1.94	227	*e*PN	Pn	22 36 57.4	-1.8
LEF				*e*SN	Sn	22 37 24.1	+0.2
LEF	Lefka	1.94	227	*e*Pn	Pn	22 36 57.4	-1.7
LEF				*e*Sn	Sn	22 37 24.2	+0.2
SULT	Sultanhani-AKS	1.94	334	*e*PN	Pn	22 36 59.1	-0.1
SULT	Sultanhani-AKS	1.94	334	*e*Pn	Pn	22 36 59.1	-0.1
KUZU	Kuzuini	2.01	80	*i* P	Pn	22 36 59.2	-0.9
KUZU				*i* S	Sn	22 37 25.4	-0.3
KUZU	Kuzuini	2.01	80	*i* P	Pn	22 36 59.2	-0.9
KUZU				*i* S	Sn	22 37 25.4	-0.3
KMRS	Kahramanmaras	2.11	60	*e*PN	Pn	22 37 01.0	-0.5
KMRS	Kahramanmaras	2.11	60	*e*Pn	Pn	22 37 01.0	-0.5
GAZ	Gaziantep	2.20	70	*e*PN	Pn	22 37 03.1	+0.3
GAZ	Gaziantep	2.20	70	*e*Pn	Pn	22 37 03.1	+0.3
KONT	Konya--Tatoy	2.33	310	*e*PN	Pn	22 37 04.5	-0.1
KONT	Konya--Tatoy	2.33	310	*e*Pn	Pn	22 37 04.5	-0.1
LADK	Ladik-KONYA	2.49	315	*e*PN	Pn	22 37 07.2	+0.4
LADK	Ladik-KONYA	2.49	315	*e*Pn	Pn	22 37 07.2	+0.4
SARI	SarD1z-Kayseri	2.77	36	*e*PN	Pn	22 37 06.6	-3.9
KDHN	Kadinhani	2.86	317	*i* P	Pn	22 37 12.6	+0.7
KDHN				*i* S	Sn	22 37 49.1	+2.3
KDHN	Kadinhani	2.86	317	*i* P	Pn	22 37 12.6	+0.8
KDHN				*i* S	Sn	22 37 49.1	+2.4
YOZ	Yozgat	3.22	10	*e*PN	Pn	22 37 17.5	+0.7
YOZ	Yozgat	3.22	10	*e*Pn	Pn	22 37 17.5	+0.7
KIZT	Kizilcal	3.25	319	*e*PN	Pn	22 37 17.4	+0.2
KIZT	Kizilcal	3.25	319	*e*Pn	Pn	22 37 17.4	+0.3
MYA	Malataya	3.56	57	*e*PN	Pn	22 37 22.6	+1.1
MYA	Malataya	3.56	57	*e*Pn	Pn	22 37 22.6	+1.1

ISK ***16*** *22:52:38.3, 40.′53N×42.′39E, h5km, MD2.5*
ISCJB ***16*** *22:52:39.8±0.5, 40.′47N±0.′03×42.′39E±0.′04, h10km, Error ellipse: s-maj=4.8km s-min=3.2km az=40.3*
CSEM ***16*** *22:52:39.5±0.2, 40.′44N×42.′40E, h15km, MD2.5, Error ellipse: s-maj=7.1km s-min=3.1km az=32.0*
DDA ***16*** *22:52:39.9, 40.′45N×42.′40E, h7km±2km, Md2.8*
ISC 16 22:52:40.4±0.5, 40.′45N±0.′03×42.′40E±0.′04, h3km±11km, n16, σ0=85/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARS	Kars	0.55	71	*e*PG	Pg	22 52 49.5	-1.5
KARS				*e*SG	Sg	22 52 58.9	+0.8
KARS	Kars	0.55	71	*e*Pg	Pg	22 52 49.5	-1.4
KARS				*e*Sg	Sg	22 52 58.9	+0.8
HOMI	Horasan	0.55	223	*i* P	Pg	22 52 50.5	-0.5
HOMI				*i* S	Sg	22 52 59.2	+1.1
DDEM	Demirkent	0.66	312	*i* P	Pg	22 52 52.7	-0.3
DDEM				*i* S	Sg	22 53 02.0	+0.4
DDEM	Demirkent	0.66	312	*i* P	Pg	22 52 52.7	-0.3
DDEM				*i* S	Sg	22 53 02.0	+0.4
DAGI	Agillar	0.73	330	*i* P	Pg	22 52 54.1	-0.2
DAGI				*i* S	Sg	22 53 04.7	+1.0
DIGO	Kars	0.75	92	*i* P	Pg	22 52 54.3	-0.4
DIGO				*i* S	Sg	22 53 05.5	+1.1
DIGO	Kars	0.75	92	*i* P	Pg	22 52 54.3	-0.4
DIGO				*i* S	Sg	22 53 05.5	+1.1
DBAD	Bademkaya	0.78	317	*i* P	Pg	22 52 55.0	-0.3
DBAD				*i* S	Sg	22 53 05.8	+0.4
DBAD	Bademkaya	0.78	317	*i* P	Pg	22 52 55.0	-0.3
DBAD				*i* S	Sg	22 53 05.8	+0.4
ARTV	Artvin	0.81	334	*i* P	Pg	22 52 55.9	-0.2
ARTV				*i* S	Sg	22 53 08.1	+1.5
ARTV	Artvin	0.81	334	*i* P	Pg	22 52 55.8	-0.2
ARTV				*i* S	Sg	22 53 08.1	+1.5
AGRB	Hanur-Agry	0.99	152	*e*PG	Pg	22 52 58.9	-0.4
AGRB				*e*SG	Sn	22 53 15.6	+0.1
AGRB	Hanur-Agry	0.99	152	*e*Pg	Pg	22 52 58.9	-0.4
BCA	Borcka	1.15	330	*e*PN	Pg	22 53 01.0	-1.5
BCA				*e*SN	Sg	22 53 16.2	-1.3
BCA	Borcka	1.15	330	*e*Pn	Pg	22 53 01.0	-1.5
BCA				*e*Sn	Sg	22 53 16.2	-1.2

ISCJB ***16*** *22:55:59.0±0.4, 36.′67N±0.′03×22.′82E±0.′04, h10km, Error ellipse: s-maj=5.5km s-min=2.8km az=149.2*
CSEM ***16*** *22:55:59.0±0.2, 36.′69N×22.′86E, h2km, ML2.7, Error ellipse: s-maj=6.0km s-min=3.1km az=59.0*
THE ***16*** *22:55:59.6, 36.′68N×22.′86E, h2km±1km, ML3.4/4, Error ellipse: s-maj=2.1km s-min=0.6km az=245.0*
NEIC ***16*** *22:55:59.1, 36.′70N×22.′83E, h11km, ML2.7(ATH), After ATH.*
ATH ***16*** *22:55:59.1, 36.′70N×22.′83E, h11km±1km, MD3.6/7, ML2.7*
ISC 16 22:55:58.8±0.5, 36.′67N±0.′03×22.′81E±0.′04, h3km±4km, n67, σ1=91/83, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	Veliai	0.12	64	*e*PG	Pg	22 56 01.6	+0.5
VLI				*e*SG	Sg	22 56 03.7	+1.0
VLI	Veliai	0.12	64	*e*Pg	Pg	22 56 01.6	+0.5
VLI				*e*Sg	Sg	22 56 03.7	+1.0
KYTH	Kithira	0.43	154	*e*PB	Pg	22 56 08.8	+1.8
KYTH	Kithira	0.43	154	*e*Pb	Pg	22 56 08.8	+1.8
VLX	Vlachokerasia	0.78	334	*e*PB	Pb	22 56 14.2	-0.8
VLX				*e*SG	Sg	22 56 24.6	+0.7
VLX	Vlachokerasia	0.78	334	P	Pg	22 56 14.6	+0.8
VLX				S	Sg	22 56 25.9	+2.0
VLX	Vlachokerasia	0.78	334	*e*Pb	Pb	22 56 14.2	-0.8
VLX	Vlachokerasia	0.78	334	P	Pg	22 56 14.6	+0.8
VLX				*e*Sg	Sg	22 56 24.6	+0.7
VLX				S	Sg	22 56 25.9	+2.0
ITM	Ithomi	0.87	306	*e*PB	Pb	22 56 16.0	-0.6
ITM				*e*SB	Sb	22 56 27.0	-1.6
ITM	Ithomi	0.87	306	P	Pg	22 56 16.2	+0.7
ITM	Ithomi	0.87	306	P	Pg	22 56 16.2	+0.7
ITM				*e*Sb	Sb	22 56 27.0	-1.6
PYL	PYLOS	0.88	285	*e*PB	Pb	22 56 16.3	-0.5
PYL	PYLOS	0.88	285	P	Pg	22 56 16.5	+0.8
PYL	PYLOS	0.88	285	P	Pg	22 56 16.5	+0.8
NAIG	Nisos Aigina	1.22	26	*e*PB	Pb	22 56 21.8	-0.7
NAIG	Nisos Aigina	1.22	26	*e*Pb	Pb	22 56 21.8	-0.7
GUR	Goura	1.32	344	*e*PB	Pb	22 56 23.9	-0.3
GUR	Goura	1.32	344	P	Pn	22 56 24.0	-0.2
GUR	Goura	1.32	344	*e*Pb	Pb	22 56 23.9	-0.3
LTK	Loutraki	1.36	5	*e*PB	Pn	22 56 24.4	-0.3
LTK				*e*SG	Sg	22 56 43.2	+0.7
LTK	Loutraki	1.36	5	P	Pn	22 56 24.4	-0.3
LTK				S	Sg	22 56 43.4	+0.9
LTK	Loutraki	1.36	5	P	Pn	22 56 24.4	-0.3
LTK				*e*Sg	Sg	22 56 43.2	+0.7
VLY	Voula,Athens	1.42	33	*e*PB	Pb	22 56 25.2	-0.8
VLY	Voula,Athens	1.42	33	*e*Pb

DSF	Desfina	1.76 353	P	Pn	22 56 30.6 +0.5
EFP	Efpalio	1.90 338	*e*PG	Pg	22 56 33.8 -1.4
EFP	Efpalio	1.90 338	P	Pn	22 56 32.9 +0.8
EFP	Efpalio	1.90 338	P	Pn	22 56 32.9 +0.8
EFP	Efpalio	1.90 338	*e*Pg	Pg	22 56 33.8 -1.4
GVD	Gavdhos	2.10 150	*e*PG	Pg	22 56 38.3 -0.7
GVD	Gavdhos	2.10 150	P	Pn	22 56 35.4 +0.5
GVD	Gavdhos	2.10 150	P	Pn	22 56 35.4 +0.5
GVD	Gavdhos	2.10 150	*e*Pg	Pg	22 56 38.3 -0.7
IDI	Anoyia	2.18 128	*e*PN	Pn	22 56 37.4 +1.4
IDI	Anoyia	2.18 128	*e*Pn	Pn	22 56 37.4 +1.4
APE	Apeiranthos	2.22 79	P	Pn	22 56 35.7 -0.9
APE	Apeiranthos	2.22 79	P	Pn	22 56 35.7 -0.9
SIVA	Sivas	2.31 135	P	Pn	22 56 37.5 -0.3
SIVA	Sivas	2.31 135	P	Pn	22 56 37.5 -0.3
VLS	Valsamata	2.32 311	*e*PB	Pb	22 56 38.5 -2.8
AGG	Agios Georgios	2.38 351	*e*PN	Pn	22 56 40.4 +1.6
AGG	Agios Georgios	2.38 351	P	Pn	22 56 39.0 +0.2
AGG			S	Sn	22 57 09.6 +1.1
AGG	Agios Georgios	2.38 351	P	Pn	22 56 39.0 +0.2
AGG	Agios Georgios	2.38 351	*e*Pn	Pn	22 56 40.4 +1.6
AGG			S	Sn	22 57 09.6 +1.1
EVR	Evrytania	2.38 341	*e*PN	Pn	22 56 40.8 +2.1
EVR	Evrytania	2.38 341	*e*Pn	Pn	22 56 40.8 +2.1
LAST	Lasithi	2.64 124	P	Pn	22 56 42.6 +0.3
LAST	Lasithi	2.64 124	P	Pn	22 56 42.6 +0.3
AOS	Alonnisos	2.64 18	P	Pn	22 56 41.6 -0.7
AOS	Alonnisos	2.64 18	P	Pn	22 56 41.6 -0.7
NEO	Neokhori	2.66 7	*e*PB	Pb	22 56 42.7 -4.3
THL	Klokotos Trika	2.96 348	*e*PB	Pb	22 56 48.9 -3.3

ISCJB ***16*** *22:57:16.7±0.3, 32°.32N±0°.03×105°.32E±0°.04, h10km, mb3.7/18, Error ellipse: s-maj=5.4km s-min=4.3km az=158.1*
IDC ***16*** *22:57:17.6±0.8, 32°.38N×105°.23E, h0km, mb3.7/12, mb1 3.9/15, mb1mx3.8/29, mbtmp3.7/15, ML3.9/3, Error ellipse: s-maj=30.8km s-min=15.7km az=52.0*
NEIC ***16*** *22:57:18.9±0.3, 32°.42N×105°.36E, h10km, mb4.0/7, Error ellipse: s-maj=8.2km s-min=4.9km az=52.0*
BJI ***16*** *22:57:20.5, 32°.34N×104°.98E, h7km, mB4.3/2, mb3.8/2, ML3.8/9, Ms3.8/4, Ms7 3.4/5*
ISC 16 22:57:18.9±0.3, 32°.35N±0°.03×105°.27E±0°.04, h10km, n35, σ0°98/46, mb3.7/18, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.93**	**222**	Pg	**Pg**	**22 57 53.3**	**-2.7**
CD2				Sg	**Sg**	**22 58 19.6**	**-1.5**
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	**3.49**	**60**	Pn	**Pn**	**22 58 21.8**	**+8.5**
XAN				Pg	**Pg**	**22 58 25.3**	**-0.6**
XAN				Sn	**Sn**	**22 59 00.0**	**+5.3**
XAN				Sg	**Sg**	**22 59 07.3**	**-3.8**
XAN				smax			
	comp=N,310nm,0.8s						
XAN				smax			
	comp=E,120nm,0.9s						
LZH	**Lanzhou**	**3.91**	**343**	Pn	**Pn**	**22 58 21.5**	**+2.5**
LZH				Pg	**Pg**	**22 58 30.3**	**-3.5**
LZH				Sn	**Sn**	**22 59 04.4**	**-0.5**
LZH				Sg	**Sg**	**22 59 18.1**	**-6.3**
LZH				smax			
	comp=N,280nm,0.6s						
LZH				smax			
	comp=E,530nm,1.0s						
LZH				LR	LR		
	comp=N,2μm,6.6s						
LZH				LR	LR		
	comp=Z,2μm,7.9s						
ENH	**Enshi**	**4.16**	**119**	*e*Pg	**Pg**	**22 58 38.1**	**-0.6**
ENH				*e*Sg	**Sg**	**22 59 32.6**	**-0.1**
GYA	**Guiyang**	**6.00**	**168**	Pn	**Pn**	**22 58 49.9**	**+2.1**
GYA				Sn	**Sn**	**22 59 56.0**	**-0.5**
GYA				smax			
	comp=N,70nm,0.7s						
GYA				smax			
	comp=E,100nm,0.7s						
KMI	**Kunming**	**7.54**	**198**	Pn	**Pn**	**22 59 09.8**	**+0.9**
KMI				Sn	**Sn**	**23 00 29.0**	**-5.5**
KMI				smax			
	comp=N,14nm,0.9s						
KMI				smax			
	comp=E,9.0nm,0.7s						
KMI				LR	LR		
	comp=N,120nm,5.7s						
KMI				LR	LR		
	comp=E,210nm,6.2s						
KMI				LR	LR		
	comp=Z,70nm,5.9s						
GTA	**Gaotai**	**8.31**	**329**	*e*P	**Pn**	**22 59 25.8**	**+6.3**
GTA				pP		22 59 29.1	
GTA				sP		22 59 31.9	
GTA				S	**Sn**	**23 01 02.3**	**+8.8**
GTA				sS		23 01 06.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,59nm,4.8s						
GTA				LR	LR		
	comp=N,160nm,10.7s						
GTA				LR	LR		
	comp=E,120nm,11.3s						
GTA				LR	LR		
	comp=Z,220nm,9.2s						
CMAR	**Chiang Mai Arr**	**14.96**	**204**	Pn	**Pn**	**23 00 51.1**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=9.2,slow=12,SNR=4.0						
SONM	**Songino Array**	**15.49**	**3**	Pn	**Pn**	**23 00 56.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=190,slow=12,SNR=2.9						
ULN	**Ulaanbaatar**	**15.55**	**4**	*e*Pn	**Pn**	**23 00 57.2**	**-0.9**
KSRS	**Korea Array**	**19.25**	**68**	P	**Pn**	**23 01 45.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=254,slow=9.4,SNR=13						
MK31	**Makanchi Array**	**22.73**	**316**	*e*P	**P**	**23 02 20.7**	**-0.2**
MKAR	**Makanchi Array**	**22.73**	**316**	P	**P**	**23 02 20.8**	**-0.1**
	comp=Z,2.0nm,0.8s,mb3.6,baz=106,slow=12,SNR=10						
KSH	**Kashi**	**24.70**	**295**	*e*P	**P**	**23 02 45.1**	**+5.0**
KSH				pmax	pmax		
	comp=Z,61nm,5.6s						
TKM2	**Tokmak 2**	**25.64**	**303**	*e*P	**P**	**23 02 49.3**	**+0.7**
	comp=Z,1.6nm,0.6s,mb3.7						
ZAA0	**Zalesovo Array**	**26.06**	**332**	*e*P	**P**	**23 02 51.7**	**-0.6**
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**23 02 51.5**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.5,baz=140,slow=9.4,SNR=7.1						
UCH	**Uchtor**	**26.26**	**301**	*e*P	**P**	**23 02 55.9**	**+1.6**
	comp=Z,3.9nm,1.1s,mb3.9						
AML	**Almayashu**	**26.83**	**300**	*e*P	**P**	**23 03 00.7**	**+1.3**
	comp=Z,3.1nm,0.8s,mb3.9						
KURK	**Kurchatov**	**26.87**	**321**	P	**P**	**23 02 59.0**	**-0.7**
	comp=Z,1.6nm,0.9s,mb3.5,baz=130,slow=8.9,SNR=11						
KURK	**Kurchatov**	**26.87**	**321**	*e*P	**P**	**23 02 59.6**	**-0.1**
	comp=Z,1.5nm,0.6s,mb3.7						
EKS2	**Erkin-Say**	**26.88**	**302**	*e*P	**P**	**23 02 60.0**	**+0.1**
	comp=Z,2.6nm,0.8s,mb3.8						
BVAR	**Borovoye Array**	**32.45**	**320**	P	**P**	**23 03 49.1**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.4,baz=98,slow=6.0,SNR=2.9						
ABKAR	**Akbulak array**	**37.61**	**310**	*e*P	**P**	**23 04 33.6**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.6						
ARU	**Arti**	**40.07**	**321**	*e*P	**P**	**23 04 53.6**	**-0.6**
	comp=Z,1.9nm,0.4s,mb4.2						
BRTR	**Keskin Array B**	**56.99**	**299**	P	**P**	**23 07 04.8**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=109,slow=6.7,SNR=5.0						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**23 07 04.2**	**-0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=87,slow=8.0,SNR=4.2						
AKASG	**Malin Array Be**	**57.26**	**313**	P	**P**	**23 07 06.6**	**+0.2**
	comp=Z,0.3nm,0.3s,mb3.8,baz=69,slow=8.0,SNR=2.4						
AKASG	**Malin Array Be**	**57.26**	**313**	P	**P**	**23 07 06.6**	**+0.2**
WRA	**Warramunga Arr**	**58.98**	**148**	P	**P**	**23 07 19.0**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.2,baz=340,slow=7.5						
ASAR	**Alice Springs**	**62.06**	**150**	P	**P**	**23 07 40.1**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=344,slow=8.1,SNR=7.4						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**23 07 53.7**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=71,slow=6.6,SNR=2.6						
GERES	**GERESS Array B**	**67.39**	**314**	P	**P**	**23 08 15.9**	**+1.6**
	comp=Z,0.1nm,0.3s,mb3.4,baz=29,slow=3.3,SNR=4.0						
YKA	**Yellowknife Ar**	**80.21**	**18**	P	**P**	**23 09 28.6**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=330,slow=5.6,SNR=5.2						
YKA	**Yellowknife Ar**	**80.21**	**18**	P	**P**	**23 09 28.6**	**-0.6**

ISCJB ***16*** *23:00:23.6±0.8, 31°.11N±0°.04×103°.99E±0°.07, h8km±6km, mb3.7/6, Error ellipse: s-maj=10.7km s-min=5.5km az=32.4*

IDC ***16*** *23:00:23.8±1.1, 31°.04N×103°.86E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/26, mbtmp3.7/7, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/45, Error ellipse: s-maj=38.9km s-min=20.7km az=58.0*
NEIC ***16*** *23:00:25.3±0.7, 31°.05N×103°.91E, h10km, mb3.4/1, Error ellipse: s-maj=17.6km s-min=9.6km az=55.0*
BJI ***16*** *23:00:26.4, 31°.13N×103°.86E, h12km, mB4.4/1, mb4.5/5, ML3.9/5, Ms3.6/1, Ms7 3.4/1*
ISC 16 23:00:26.0±0.7, 31°.07N±0°.04×103°.89E±0°.07, h12km±5km, n18, σ0°58/19, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.20**	**215**	Pg	**Pg**	**23 00 29.9**	**-0.5**
CD2				Sg	**Sg**	**23 00 33.5**	**+0.2**
ENH	**Enshi**	**4.89**	**98**	*e*Pn	**Pn**	**23 01 38.7**	**-0.7**
LZH	**Lanzhou**	**5.00**	**360**	Sg	**Sg**	**23 03 06.8**	**+0.3**
LZH				smax			
	comp=N,110nm,1.2s						
LZH				smax			
	comp=E,100nm,1.0s						
XAN	**Xi'an**	**5.17**	**54**	Pg	**Pg**	**23 01 59.1**	**-6.0**
XAN				Sg	**Sg**	**23 03 12.5**	**+0.3**
XAN				smax			
	comp=N,180nm,0.9s						
XAN				smax			
	comp=E,68nm,0.9s						
GYA	**Guiyang**	**5.20**	**151**	Pg	**Pg**	**23 02 01.3**	**-4.4**
GYA				smax			
	comp=N,230nm,0.9s						
GYA				smax			
	comp=E,210nm,0.8s						
KMI	**Kunming**	**6.01**	**190**	Sn	**Sn**	**23 03 04.9**	**+1.2**
KMI				smax			
	comp=N,23nm,1.9s						
KMI				smax			
	comp=E,27nm,1.3s						
KMI				LR	LR		
	comp=N,280nm,8.3s						
KMI				LR	LR		
	comp=E,500nm,10.3s						
KMI				LR	LR		
	comp=Z,310nm,7.8s						
SONM	**Songino Array**	**16.85**	**6**	Pn	**Pn**	**23 04 21.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=3.5						
ULN	**Ulaanbaatar**	**16.94**	**7**	*e*P	**Pn**	**23 04 23.4**	**+0.6**
	comp=Z,2.5nm,0.9s						
KSRS	**Korea Array**	**20.83**	**66**	P	**P**	**23 05 07.6**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=265,slow=11,SNR=16						
CN2	**Changchun**	**21.24**	**47**	*e*P	**P**	**23 05 12.6**	**+0.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**22.88**	**319**	P	**P**	**23 05 29.6**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.2,baz=123,slow=12,SNR=3.8						
KURK	**Kurchatov**	**27.16**	**324**	P	**P**	**23 06 08.6**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.3,baz=128,slow=10,SNR=3.7						
KURK	**Kurchatov**	**27.16**	**324**	P	**P**	**23 06 08.6**	**-0.5**
GUMO	**Guam**	**41.43**	**105**	LR	LR	23 26 33.6	
	comp=Z,60nm,18.5s,baz=134,slow=38						
WRA	**Warramunga Arr**	**58.55**	**146**	P	**P**	**23 10 22.2**	**-0.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=339,slow=7.9,SNR=5.2						
ASAR	**Alice Springs**	**61.56**	**149**	P	**P**	**23 10 42.8**	**-0.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=332,slow=6.4,SNR=3.4						
YKA	**Yellowknife Ar**	**81.77**	**17**	P	**P**	**23 12 43.5**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=5.4,SNR=5.1						
YKA	**Yellowknife Ar**	**81.77**	**17**	P	**P**	**23 12 43.5**	**-0.9**

IDC ***16*** *23:00:33.7±1.0, 30°.50N×95°.52E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/27, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=59.0km s-min=19.1km az=52.0*
NEIC ***16*** *23:00:35.2±0.6, 30°.53N×95°.53E, h10km, mb3.6/5, Error ellipse: s-maj=14.9km s-min=10.1km az=46.0*
ISC 16 23:00:34.3±2.3, 30°.58N±0°.09×95°.61E±0°.09, h4km±15km, n17, σ0°61/18, mb3.6/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.96**	**258**	Pn	**Pn**	**23 01 35.3**	**-0.5**
LSA				Sn	**Sn**	**23 02 23.0**	**+0.3**
LSA				smax			
	comp=N,20nm,0.6s						
LSA				smax			
	comp=E,20nm,0.5s						
LSA	**Lhasa**	**3.96**	**258**	*e*Pn	**Pn**	**23 01 35.7**	**-0.1**
SHL	**Shillong**	**5.98**	**214**	*e*P	**Pg**	**23 02 29.0**	**+0.1**
MKAR	**Makanchi Array**	**19.19**	**331**	P	**Pn**	**23 04 59.2**	**-0.6**
	comp=E,0.1nm,0.3s,baz=145,slow=12,SNR=3.7						
AAK	**Ala-Archa**	**20.72**	**311**	P	**P**	**23 05 16.9**	**+1.3**
	comp=E,0.9nm,0.4s,baz=113,slow=5.1,SNR=4.6						
AAK	**Ala-Archa**	**20.72**	**311**	*e*P	**P**	**23 05 16.7**	**+1.0**
	comp=E,2.7nm,0.8s						
AML	**Almayashu**	**21.02**	**309**	*e*P	**P**	**23 05 19.3**	**+0.5**
	comp=E,1.9nm,0.7s,mb3.5						
KBL	**Kabul**	**22.71**	**287**	*e*P	**P**	**23 05 36.6**	**-0.5**
	comp=E,2.8nm,0.7s,mb3.8						
KURK	**Kurchatov**	**23.78**	**333**	P	**P**	**23 05 47.0**	**-0.9**
	comp=E,0.9nm,0.5s,mb3.5,baz=141,slow=10,SNR=7.4						
KURK	**Kurchatov**	**23.78**	**333**	*e*P	**P**	**23 05 47.3**	**-0.7**
	comp=E,1.5nm,0.7s,mb3.5						
ZALV	**Zalesovo Beam**	**24.62**	**345**	P	**P**	**23 05 56.7**	**+1.2**
	comp=E,0.4nm,0.3s,mb3.4,baz=172,slow=11,SNR=3.8						
ZALV	**Zalesovo Beam**	**24.62**	**345**	P	**P**	**23 05 56.7**	**+1.2**
ABKAR	**Akbulak array**	**32.70**	**315**	*e*P	**P**	**23 07 07.3**	**-0.4**
	comp=E,0.3nm,0.3s,mb3.7						
BRTR	**Keskin Array B**	**50.59**	**298**	P	**P**	**23 09 33.8**	**-0.5**
	comp=E,0.3nm,0.5s,mb3.5,baz=71,slow=6.2,SNR=3.1						
WRA	**Warramunga Arr**	**62.53**	**138**	P	**P**	**23 10 59.0**	**-0.4**
	comp=E,0.5nm,0.6s,mb3.8,baz=328,slow=8.9,SNR=5.0						
ASAR	**Alice Springs**	**65.26**	**141**	P	**P**	**23 11 17.9**	**+0.5**
	comp=E,0.3nm,0.4s,mb3.7,baz=328,slow=6.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**86.73**	**283**	P	**P**	**23 13 19.9**	**-0.1**
	comp=E,0.5nm,0.9s,mb3.7,baz=62,slow=2.7,SNR=3.0						

IDC ***16*** *23:19:50.6±1.0, 31°.77N×104°.56E, h0km, mb3.6/7, mb1 3.6/8, mb1mx3.5/27, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=86.5km s-min=17.2km az=57.0*
NEIC ***16*** *23:19:52.1±0.6, 31°.77N×104°.60E, h10km, mb3.9/1, Error ellipse: s-maj=19.2km s-min=7.6km az=221.0*
BJI ***16*** *23:19:52.9, 31°.77N×104°.50E, h7km, ML3.4/7*
ISC 16 23:19:51.0±0.8, 31°.85N±0°.03×104°.65E±0°.05, h0km±6km, n17, σ0°92/23, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.21**	**219**	Pg	**Pg**	**23 20 13.4**	**-0.7**
CD2				Sg	**Sg**	**23 20 29.4**	**-0.3**
CD2				smax			
	comp=N,5μm,0.5s						
XAN	**Xi'an**	**4.21**	**58**	Pn	**Pn**	**23 21 00.8**	**+4.4**
XAN				Pg	**Pg**	**23 21 09.8**	**-1.9**
XAN				Sn	**Sb**	**23 21 55.1**	**-2.1**
XAN				Sg	**Sg**	**23 22 07.1**	**+0.9**
XAN				smax			
	comp=N,79nm,0.7s						
XAN				smax			
	comp=E,45nm,0.6s						
LZH	**Lanzhou**	**4.28**	**351**	Pg	**Pg**	**23 21 13.3**	**+0.2**
LZH				Sg	**Sg**	**23 22 08.9**	**+0.4**
LZH				smax			
	comp=N,59nm,1.0s						
LZH				smax			
	comp=E,87nm,1.0s						
ENH	**Enshi**	**4.44**	**109**	*e*Pg	**Pg**	**23 21 17.3**	**+1.1**
GYA	**Guiyang**	**5.65**	**161**	Pn	**Pn**	**23 21 17.3**	**+1.0**
GYA				Sn	**Sn**	**23 22 22.3**	**+0.4**
GYA				smax			
	comp=N,30nm,0.7s						
GYA				smax			
	comp=E,40nm,0.7s						
SONM	**Songino Array**	**16.02**	**4**	Pn	**Pn**	**23 23 39.1**	**+1.5**
	comp=E,0.1nm,0.3s,baz=176,slow=10,SNR=2.5						
MKAR	**Makanchi Array**	**22.73**	**317**	P	**P**	**23 24 53.8**	**-0.6**
	comp=E,0.5nm,0.7s,mb3.1,baz=122,slow=12,SNR=3.6						
ZAA0	**Zalesovo Array**	**26.26**	**333**	*e*P	**P**	**23 25 27.9**	**+0.2**
ZALV	**Zalesovo Beam**	**26.26**	**333**	P	**P**	**23 25 26.9**	**-0.8**
	comp=E,1.3nm,0.5s,mb3.8,baz=130,slow=12,SNR=7.5						
KURK	**Kurchatov**	**26.94**	**322**	P	**P**	**23 25 32.9**	**-0.9**
	comp=E,0.7nm,0.7s,mb3.5,baz=126,slow=8.4,SNR=4.5						
KURK	**Kurchatov**	**26.94**	**322**	P	**P**	**23 25 32.9**	**-0.9**
BVAR	**Borovoye Array**	**32.50**	**321**	P	**P**	**23 26 24.0**	**+0.9**
	comp=E,0.3nm,0.6s,mb3.4,baz=130,slow=2.3,SNR=2.8						
ARU	**Arti**	**40.13**	**322**	*e*P	**P**	**23 27 28.8**	**+0.5**
	comp=E,2.9nm,0.9s,mb3.9						
FINES	**FINESS Array B**	**57.21**	**326**	P	**P**	**23 29 39.9**	**+0.4**
	comp=E,2.0nm,0.8s,mb4.2,baz=42,slow=8.8,SNR=4.7						
WRA	**Warramunga Arr**	**58.84**	**147**	P	**P**	**23 29 50.8**	**-0.6**
	comp=E,0.4nm,0.6s,mb3.6,baz=340,slow=7.6						
WRA	**Warramunga Arr**	**58.84**	**147**	P	**P**	**23 29 50.8**	**-0.6**
ASAR	**Alice Springs**	**61.89**	**149**	P	**P**	**23 30 11.8**	**-0.4**
	comp=E,0.2nm,0.4s,mb3.7,baz=342,slow=6.8,SNR=3.3						

IDC ***16*** *23:23:05.9±0.6, 31°.26N×103°.81E, h0km, mb4.2/23, mb1 4.3/24, mb1mx4.2/33, mbtmp4.2/24, ML3.6/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/40, Error ellipse: s-maj=21.2km s-min=12.5km az=40.0*
NEIC ***16*** *23:23:07.5±0.3, 31°.26N×103°.83E, h10km, mb4.3/8, Error ellipse: s-maj=7.7km s-min=5.2km az=217.0*
BJI ***16*** *23:23:07.3, 31°.21N×103°.93E, h13km, mB4.5/9, mb4.4/14, ML4.2/19, Ms4.1/16, Ms7 3.8/15*
ISCJB ***16*** *23:23:08.6±0.2, 31°.17N±0°.03×103°.75E±0°.04, h33km, mb4.3/33, MS3.2/3, Error ellipse: s-maj=4.8km s-min=4.2km az=142.4*
ISC 16 23:23:08.0±0.7, 31°.25N±0°.03×103°.83E±0°.03, h13km±4km, n65, σ1°07/78, mb4.3/33, MS3.2/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**190**	Pg	**Pg**	**23 23 15.0**	**+0.1**
CD2				Sg	**Sg**	**23 23 20.6**	**+1.1**
CD2				smax			
	comp=N,41μm,0.9s						
LZH	**Lanzhou**	**4.83**	**0**	Pg	**Pg**	**23 24 40.0**	**-0.4**
LZH				Sn	**Sn**	**23 25 25.8**	**+10**
LZH				Sg	**Sg**	**23 25 44.3**	**+1.4**
LZH				smax			
	comp=N,270nm,0.9s						
LZH				smax			
	comp=E,240nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,7.6s						
LZH				LR	LR		
	comp=Z,2μm,9.8s						
ENH	**Enshi**	**4.97**	**100**	*e*Pn	**Pn**	**23 24 22.6**	**+0.4**
ENH				*e*Pg	**Pg**	**23 24 40.4**	**-2.7**
ENH				*e*Sn	**Sn**	**23 25 20.2**	**+0.8**
ENH				*e*Sg	**Sg**	**23 25 43.5**	**-3.9**
XAN	**Xi'an**	**5.12**	**56**	Pg	**Pg**	**23 24 41.8**	**-4.2**
XAN				Sn	**Sn**	**23 25 22.0**	**-1.2**
XAN				Sg	**Sg**	**23 25 46.8**	**-5.5**
XAN				smax			
	comp=N,400nm,0.7s						
XAN				smax			
	comp=E,160nm,0.8s						
GYA	**Guiyang**	**5.38**	**152**	Pn	**Pn**	**23 24 30.4**	**+2.5**
GYA				Sg	**Sg**	**23 25 47.1**	**-14**
GYA				smax			
	comp=N,440nm,0.8s						
GYA				smax			
	comp=E,350nm,0.9s						
KMI	**Kunming**	**6.18**	**189**	Pn	**Pn**	**23 24 39.8**	**+1.0**
KMI				Sn	**Sn**	**23 25 46.8**	**-2.5**
KMI				smax			
	comp=N,44nm,0.7s						
KMI				smax			
	comp=E,50nm,0.7s						
KMI				LR	LR		
	comp=N,390nm,7.3s						
KMI				LR	LR		
	comp=E,620nm,6.4s						
KMI				LR	LR		
	comp=Z,350nm,11.0s						
WHN	**Wuhan**	**9.07**	**92**	P	**Pn**	**23 25 15.3**	**-3.2**
WHN				S	**Sn**	**23 26 52.8**	**-7.7**
WHN				LR	LR		
	comp=N,1μm,5.0s						
WHN				LR	LR		
	comp=E,1μm,7.4s						
WHN				LR	LR		
	comp=Z,2μm,6.6s						
LSA	**Lhasa**	**11.05**	**265**	P	**Pn**	**23 25 47.8**	**+2.1**
LSA				LR	LR		
	comp=E,340nm,9.6s						
LSA				LR	LR		
	comp=Z,420nm,9.4s						
LSA	**Lhasa**	**11.05**	**265**	*e*Pn	**Pn**	**23 25 47.6**	**+1.9**
	comp=Z,3.9nm,0.5s						
HHC	**Hu-ho-hao-te**	**11.44**	**31**	*e*P	**Pn**	**23 25 53.9**	**+3.0**
HHC				PP		23 26 02.8	
HHC				S	**Sn**	**23 28 03.6**	**+5.0**
HHC				SS		23 28 16.3	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,200nm,4.9s						
HHC				LR	LR		
	comp=E,250nm,4.1s						
HHC				LR	LR		
	comp=Z,170nm,5.5s						
CMAR	**Chiang Mai Arr**	**13.48**	**200**	Pn	**Pn**	**23 26 24.0**	**+5.0**
	comp=Z,0.4nm,0.3s,baz=0.0,slow=10,SNR=4.4						
QZH	**Quanzhou**	**14.46**	**112**	P	**Pn**	**23 26 33.1**	**+0.8**
QZH				S	**Sn**	**23 29 14.8**	**+2.3**
QZH				LR	LR		
	comp=N,740nm,9.3s						
QZH				LR	LR		
	comp=E,1μm,8.4s						
QZH				LR	LR		
	comp=Z,2μm,10.7s						
GUN	**Gumba**	**15.97**	**263**	*e*P	**Pn**	**23 26 51.2**	**-1.1**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**16.46**	**262**	*e*P	**Pn**	**23 26 56.5**	**-2.2**
	comp=Z,24nm,0.7s						
KKN	**Kakani**	**16.51**	**263**	*e*P	**Pn**	**23 26 56.3**	**-2.9**
	comp=Z,23nm,0.6s						
SONM	**Songino Array**	**16.68**	**6**	Pn	**Pn**	**23 27 01.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=190,slow=13,SNR=17						
DMN	**Daman**	**16.71**	**262**	*e*P	**Pn**	**23 26 58.2**	**-3.6**
	comp=Z,24nm,0.8s						
ULN	**Ulaanbaatar**	**16.78**	**8**	*e*P	**Pn**	**23 27 02.2**	**-0.3**
	comp=Z,3.9nm,0.7s						
TLY	**Talaya**	**20.42**	**360**	*e*P	**P**	**23 27 45.9**	**+1.3**
	comp=Z,2.5nm,0.7s						
KSRS	**Korea Array**	**20.81**	**66**	P	**P**	**23 27 49.6**	**+0.7**
	comp=Z,6.2nm,0.7s,baz=263,slow=10

MIB Mutribah 48.22 284 *eP* **P 23 31 47.9 -0.6**
MIB AMb AMB 23 31 48.8
comp=Z,16nm,0.9s,mb5.1
RDF Al-Radifah 48.30 282 *eP* **P 23 31 48.6 -0.4**
RDF AMb AMB 23 31 49.7
comp=Z,16nm,0.6s,mb5.2
JOF Joensuu 54.78 328 *ep* **P 23 32 35.7 -1.3**
comp=Z,1.8nm,0.5s,mb4.4
BRTR Keskin Array B 56.47 299 P **P 23 32 49.6 +0.1**
comp=Z,0.6nm,0.8s,mb3.7,baz=91,slow=8.6,SNR=4.4
KEV Kevo 56.51 336 *ep* **P 23 32 48.2 -1.1**
comp=Z,0.8nm,0.3s,mb4.2
MMAI Mount Meron Ar 57.01 291 P **P 23 32 55.0 +1.5**
comp=Z,1.2nm,0.6s,mb4.1,baz=83,slow=6.0,SNR=2.6
ARCES ARCESS Array B 57.03 336 P **P 23 32 52.6 -0.4**
comp=Z,4.4nm,0.9s,mb4.5,baz=85,slow=8.2,SNR=9.3
KAF Kangasniemi 57.14 327 *ep* **P 23 32 53.7 -0.2**
comp=Z,1.1nm,0.5s,mb4.1
FINES FINESS Array B 57.32 326 P **P 23 32 54.6 -0.6**
comp=Z,1.8nm,0.7s,mb4.2,baz=102,slow=7.5,SNR=9.9
WRAB Tennant Creek 58.72 146 *eP* **P 23 33 05.4 -0.1**
comp=Z,7.6nm,0.7s,mb4.8
WRA Warramunga Arr 58.72 146 P **P 23 33 05.5 0.0**
comp=Z,4.6nm,0.7s,mb4.6,baz=339,slow=7.8
ASAR Alice Springs 61.74 149 P **P 23 33 26.3 +0.2**
comp=Z,1.7nm,0.8s,mb4.2,baz=331,slow=7.0,SNR=13
NB2 NORSAR Subarra 64.41 327 P **P 23 33 42.2 -1.2**
comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.5
NOA NORSAR Array B 64.41 327 P **P 23 33 42.2 -1.2**
comp=Z,0.9nm,0.6s,mb4.0,baz=74,slow=6.6,SNR=4.3
NOA NORSAR Array B 64.41 327 P **P 23 33 42.2 -1.2**
IDI Anoyia 64.45 297 P **P 23 33 43.1 -1.0**
comp=Z,5.3nm,0.8s,mb4.6,baz=135,slow=8.6,SNR=4.3
GERES GERESS Array B 67.28 314 P **P 23 34 01.3 -0.9**
comp=Z,0.2nm,0.5s,mb3.4,baz=76,slow=8.3,SNR=4.4
DAVOX Davos/Dischmat 70.46 313 P **P 23 34 21.6 -0.4**
comp=Z,2.4nm,0.6s,mb4.3,baz=43,slow=18
KDAK Kodiak Island 70.85 33 P **P 23 34 24.1 0.0**
comp=Z,3.2nm,0.7s,mb4.4
INK Inuvik 72.10 19 P **P 23 34 31.8 +0.2**
comp=Z,1.4nm,0.5s,mb4.1,baz=322,slow=5.9,SNR=5.3
STKA Stephens Creek 72.26 147 P **P 23 34 32.9 0.0**
comp=Z,6.8nm,1.2s,mb4.5,baz=337,slow=7.7,SNR=3.0
LPG La Plagne 72.98 313 *eP* **P 23 34 37.6 +0.4**
comp=Z,6.9nm,0.7s,mb4.4
LPG La Plagne 72.98 313 *eP* **P 23 34 37.6 +0.4**
comp=Z,3.5nm,0.7s,mb4.4
LPL La Plagne 72.98 313 *eP* **P 23 34 37.6 +0.4**
SMF Signal de Mont 74.23 315 *eP* **P 23 34 43.8 -0.7**
TCF Toulx Ste Croi 75.39 315 *eP* **P 23 34 50.9 -0.3**
CAF Calviac 76.16 314 *eP* **P 23 34 55.8 +0.2**
YKA Yellowknife Ar 81.62 17 P **P 23 35 24.8 -0.5**
comp=Z,1.0nm,0.6s,mb3.9,baz=330,slow=5.1,SNR=12
BOSA Boshof 95.55 240 P **P 23 36 33.7 +0.8**
comp=Z,1.4nm,0.7s,mb4.5,baz=90,slow=1.0,SNR=3.4

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*HLW **16** 23:36:35.1, 35.°23N×23.°67E, h33km±30km, Ml3.2*
*ISCJB **16** 23:36:36.6±0.5, 34.°82N±0.°03×23.°24E±0.°05, h66km±5km, mb3.4/11, Error ellipse: s-maj=7.7km s-min=4.0km az=141.4*
*NEIC **16** 23:36:37.5, 34.°90N×23.°34E, h67km, mb3.5/2, After ATH.*
*ATH **16** 23:36:37.5, 34.°90N×23.°34E, h67km±4km, ML3.0*
*CSEM **16** 23:36:38.6±0.2, 34.°87N×23.°34E, h60km, ML3.0, Error ellipse: s-maj=7.2km s-min=3.7km az=52.0*
*THE **16** 23:36:39.3, 34.°94N×23.°31E, h50km±5km, ML3.7/5, Error ellipse: s-maj=5.9km s-min=1.2km az=75.0*
*IDC **16** 23:36:41.3±2.2, 35.°11N×23.°49E, h65km±21km, mb3.4/10, mb1 3.4/12, mb1mx3.2/29, mbtmp3.3/12, Error ellipse: s-maj=26.8km s-min=22.5km az=174.0*

ISC 16 23:36:38.2±0.4, 34.°84N±0.°03×23.°28E±0.°05, h58km±5km, n145, σ1°04/168, mb3.5/11, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.67**	**90**	*eP*	**Pn**	**23 36 51.8**	**-0.1**
GVD				*eS*	**Sn**	**23 37 02.2**	**+0.3**
GVD	**Gavdhos**	**0.67**	**90**	P	**Pn**	**23 36 51.8**	**-0.1**
GVD				S	**Sn**	**23 37 02.1**	**+0.2**
GVD	**Gavdhos**	**0.67**	**90**	*eP*	**Pn**	**23 36 51.8**	**-0.1**
GVD				*eS*	**Sn**	**23 37 02.2**	**+0.3**
KARN	**Karanos**	**0.77**	**43**	*eP*	**Pn**	**23 36 52.0**	**-1.1**
KARN				*eS*	**Sn**	**23 37 04.1**	**0.0**
KARN	**Karanos**	**0.77**	**43**	P	**Pn**	**23 36 51.9**	**-1.2**
KARN				S	**Sn**	**23 37 03.1**	**-1.0**
KARN	**Karanos**	**0.77**	**43**	*eP*	**Pn**	**23 36 52.0**	**-1.1**
KARN				*eS*	**Sn**	**23 37 04.1**	**0.0**
VAM	**Vamos**	**0.94**	**53**	*eP*	**Pn**	**23 36 54.7**	**-0.7**
VAM				*eS*	**Sn**	**23 37 08.2**	**+0.1**
VAM	**Vamos**	**0.94**	**53**	*eP*	**Pn**	**23 36 54.7**	**-0.7**
VAM				*eS*	**Sn**	**23 37 08.2**	**+0.1**
SIVA	**Sivas**	**1.27**	**82**	*eP*	**Pn**	**23 37 00.2**	**+0.5**
SIVA	**Sivas**	**1.27**	**82**	P	**Pn**	**23 37 00.2**	**+0.5**
SIVA	**Sivas**	**1.27**	**82**	*eP*	**Pn**	**23 37 00.2**	**+0.5**
IDI	**Anoyia**	**1.40**	**71**	P	**Pn**	**23 37 01.8**	**+0.4**
	5.9nm,0.3s,baz=259,slow=13,SNR=92						
IDI				S	**Sn**	**23 37 21.7**	**+2.9**
	15nm,0.3s,baz=315,slow=20,SNR=8.2						
IDI	**Anoyia**	**1.40**	**71**	*eP*	**Pn**	**23 37 01.7**	**+0.3**
IDI	**Anoyia**	**1.40**	**71**	*eP*	**Pn**	**23 37 01.7**	**+0.3**
KYTH	**Kithira**	**1.45**	**352**	*eP*	**Pn**	**23 37 02.5**	**+0.4**
KYTH	**Kithira**	**1.45**	**352**	*eP*	**Pn**	**23 37 02.5**	**+0.4**
LAST	**Lasithi**	**1.83**	**79**	P	**Pn**	**23 37 08.6**	**+1.3**
LAST				S	**Sn**	**23 37 30.2**	**+0.7**
LAST	**Lasithi**	**1.83**	**79**	P	**Pn**	**23 37 08.6**	**+1.3**
LAST				S	**Sn**	**23 37 30.2**	**+0.7**
VLI	**Veliai**	**1.89**	**352**	*eP*	**Pn**	**23 37 08.9**	**+0.8**
VLI	**Veliai**	**1.89**	**352**	*eP*	**Pn**	**23 37 08.9**	**+0.8**
NPS	**Neapolis**	**1.96**	**77**	*eP*	**Pn**	**23 37 09.5**	**+0.4**
NPS	**Neapolis**	**1.96**	**77**	*eP*	**Pn**	**23 37 09.5**	**+0.4**
THR5	**Thira Island,**	**2.31**	**46**	P	**Pn**	**23 37 13.1**	**-0.7**
THR5	**Thira Island,**	**2.31**	**46**	P	**Pn**	**23 37 13.1**	**-0.7**
THR3	**Thira Island,**	**2.33**	**47**	P	**Pn**	**23 37 13.7**	**-0.4**
THR3	**Thira Island,**	**2.33**	**47**	P	**Pn**	**23 37 13.7**	**-0.4**
ITM	**Ithomi**	**2.58**	**335**	*eP*	**Pn**	**23 37 18.1**	**+0.6**
ITM	**Ithomi**	**2.58**	**335**	P	**Pn**	**23 37 17.5**	**0.0**
ITM	**Ithomi**	**2.58**	**335**	*eP*	**Pn**	**23 37 18.1**	**+0.6**
VLX	**Vlachokerasia**	**2.63**	**344**	*eP*	**Pn**	**23 37 20.5**	**+2.4**
VLX	**Vlachokerasia**	**2.63**	**344**	P	**Pn**	**23 37 19.9**	**+1.8**
VLX				S	**Sn**	**23 37 47.8**	**-1.0**
VLX	**Vlachokerasia**	**2.63**	**344**	P	**Pn**	**23 37 19.9**	**+1.8**
VLX				S	**Sn**	**23 37 47.8**	**-1.0**
APE	**Apeiranthos**	**2.88**	**39**	*eP*	**Pn**	**23 37 20.4**	**-1.2**
APE	**Apeiranthos**	**2.88**	**39**	P	**Pn**	**23 37 20.2**	**-1.4**
APE	**Apeiranthos**	**2.88**	**39**	*eP*	**Pn**	**23 37 20.4**	**-1.2**
VLY	**Voula,Athens**	**3.03**	**8**	*eP*	**Pn**	**23 37 23.3**	**-0.4**
VLY	**Voula,Athens**	**3.03**	**8**	*eP*	**Pn**	**23 37 23.3**	**-0.4**
ATH	**Athens Observa**	**3.15**	**6**	*eP*	**Pn**	**23 37 24.6**	**-0.6**
ATH	**Athens Observa**	**3.15**	**6**	*eP*	**Pn**	**23 37 24.6**	**-0.6**
ATHU	**Athens Univers**	**3.15**	**7**	P	**Pn**	**23 37 24.9**	**-0.3**
ATHU	**Athens Univers**	**3.15**	**7**	P	**Pn**	**23 37 24.9**	**-0.3**
GUR	**Goura**	**3.18**	**347**	*eP*	**Pn**	**23 37 27.1**	**+1.4**
GUR	**Goura**	**3.18**	**347**	P	**Pn**	**23 37 26.2**	**+0.5**
GUR	**Goura**	**3.18**	**347**	P	**Pn**	**23 37 26.2**	**+0.5**
LTK	**Loutraki**	**3.19**	**356**	*eP*	**Pn**	**23 37 26.0**	**+0.2**
LTK	**Loutraki**	**3.19**	**356**	P	**Pn**	**23 37 26.0**	**+0.2**
LTK	**Loutraki**	**3.19**	**356**	*eP*	**Pn**	**23 37 26.0**	**+0.2**
PTL	**Penteli**	**3.24**	**8**	*eP*	**Pn**	**23 37 26.0**	**-0.5**
PTL	**Penteli**	**3.24**	**8**	*eP*	**Pn**	**23 37 26.0**	**-0.5**
KARP	**Karpathos**	**3.26**	**76**	*eP*	**Pn**	**23 37 26.4**	**-0.4**
KARP	**Karpathos**	**3.26**	**76**	*eP*	**Pn**	**23 37 26.4**	**-0.4**
RLS	**Riolos of Patr**	**3.53**	**336**	*eP*	**Pn**	**23 37 31.7**	**+1.3**
RLS	**Riolos of Patr**	**3.53**	**336**	*eP*	**Pn**	**23 37 31.7**	**+1.3**
LAKA	**Lakka**	**3.55**	**343**	P	**Pn**	**23 37 31.5**	**+0.7**
LAKA	**Lakka**	**3.55**	**343**	P	**Pn**	**23 37 31.5**	**+0.7**
DSF	**Desfina**	**3.61**	**351**	P	**Pn**	**23 37 32.1**	**+0.5**
DSF	**Desfina**	**3.61**	**351**	P	**Pn**	**23 37 32.1**	**+0.5**
SLUM		**3.71**	**154**	P	**Pn**	**23 37 33.8**	**+0.8**
	baz=160						
SLUM				AMP		23 38 00.0	
	comp=E,30μm,0.3s,logA/T=5.0,baz=160						
SLUM				S	**Sn**	**23 38 14.6**	**-0.9**
	baz=160						
SLUM		**3.71**	**154**	P	**Pn**	**23 37 33.8**	**+0.8**
SLUM				S	**Sn**	**23 38 14.6**	**-0.9**
EFP	**Efpalio**	**3.75**	**343**	*eP*	**Pn**	**23 37 34.7**	**+1.3**
EFP	**Efpalio**	**3.75**	**343**	P	**Pn**	**23 37 35.0**	**+1.6**
EFP	**Efpalio**	**3.75**	**343**	*eP*	**Pn**	**23 37 34.7**	**+1.3**
LKR	**Lokris**	**3.81**	**357**	P	**Pn**	**23 37 35.1**	**+0.8**
LKR	**Lokris**	**3.81**	**357**	P	**Pn**	**23 37 35.1**	**+0.8**
ATAL	**Atalanti**	**3.85**	**357**	P	**Pn**	**23 37 35.3**	**+0.4**
ATAL	**Atalanti**	**3.85**	**357**	P	**Pn**	**23 37 35.3**	**+0.4**
VLS	**Valsamata**	**3.97**	**328**	*eP*	**Pn**	**23 37 35.8**	**-0.7**
VLS	**Valsamata**	**3.97**	**328**	P	**Pn**	**23 37 35.9**	**-0.6**
VLS	**Valsamata**	**3.97**	**328**	P	**Pn**	**23 37 35.9**	**-0.6**
ARG	**Arkhangelos**	**4.19**	**69**	*eP*	**Pn**	**23 37 39.8**	**+0.3**
ARG	**Arkhangelos**	**4.19**	**69**	P	**Pn**	**23 37 40.0**	**+0.5**
ARG	**Arkhangelos**	**4.19**	**69**	*eP*	**Pn**	**23 37 39.8**	**+0.3**
EVR	**Evrytania**	**4.24**	**344**	*eP*	**Pn**	**23 37 41.9**	**+1.8**
EVR	**Evrytania**	**4.24**	**344**	*eP*	**Pn**	**23 37 41.9**	**+1.8**
AGG	**Agios Georgios**	**4.24**	**350**	*eP*	**Pn**	**23 37 40.7**	**+0.5**
AGG	**Agios Georgios**	**4.24**	**350**	P	**Pn**	**23 37 40.6**	**+0.4**
AGG	**Agios Georgios**	**4.24**	**350**	P	**Pn**	**23 37 40.6**	**+0.4**
NEO	**Neokhori**	**4.46**	**359**	*eP*	**Pn**	**23 37 43.3**	**+0.1**
NEO	**Neokhori**	**4.46**	**359**	*eP*	**Pn**	**23 37 43.3**	**+0.1**
XOR	**Xorichti**	**4.52**	**359**	P	**Pn**	**23 37 44.2**	**+0.2**
XOR	**Xorichti**	**4.52**	**359**	P	**Pn**	**23 37 44.2**	**+0.2**
THL	**Klokotos Trika**	**4.82**	**348**	*eP*	**Pn**	**23 37 48.2**	**0.0**
THL	**Klokotos Trika**	**4.82**	**348**	P	**Pn**	**23 37 48.1**	**-0.1**
THL	**Klokotos Trika**	**4.82**	**348**	*eP*	**Pn**	**23 37 48.2**	**0.0**
HMAT	**Matruh**	**4.93**	**138**	P	**Pn**	**23 37 49.1**	**-0.5**
	baz=144						
HMAT				S	**Sn**	**23 38 40.7**	**-4.6**
	baz=144						
HMAT	**Matruh**	**4.93**	**138**	P	**Pn**	**23 37 49.1**	**-0.5**
HMAT				S	**Sn**	**23 38 40.7**	**-4.6**
PRK	**Paraskevi**	**5.01**	**28**	*eP*	**Pn**	**23 37 49.8**	**-0.9**
PRK	**Paraskevi**	**5.01**	**28**	*eP*	**Pn**	**23 37 49.8**	**-0.9**
IGT	**Igoumenitsa**	**5.24**	**334**	P	**Pn**	**23 37 52.8**	**-1.1**
IGT	**Igoumenitsa**	**5.24**	**334**	P	**Pn**	**23 37 52.8**	**-1.1**
LIT	**Litokhoron**	**5.29**	**353**	*eP*	**Pn**	**23 37 53.8**	**-0.7**
LIT	**Litokhoron**	**5.29**	**353**	*eP*	**Pn**	**23 37 53.8**	**-0.7**
OUR	**Ouranopolis**	**5.51**	**6**	P	**Pn**	**23 37 56.5**	**-1.1**
OUR	**Ouranopolis**	**5.51**	**6**	P	**Pn**	**23 37 56.5**	**-1.1**
KEK	**Kerkira**	**5.60**	**331**	*eP*	**Pn**	**23 37 58.1**	**-0.7**
KEK	**Kerkira**	**5.60**	**331**	P	**Pn**	**23 37 57.4**	**-1.4**
KEK	**Kerkira**	**5.60**	**331**	*eP*	**Pn**	**23 37 58.1**	**-0.7**
SWA2		**5.88**	**161**	P	**Pn**	**23 38 04.1**	**+1.3**
	baz=165						
SWA2				AMP		23 39 00.0	
	comp=E,30μm,0.2s,logA/T=5.2,baz=165						
SWA2		**5.88**	**161**	P	**Pn**	**23 38 04.1**	**+1.4**
TIP	**Timpagrande**	**6.78**	**312**	*ePn*	**Pn**	**23 38 13.8**	**-1.1**
TIP				*eSn*	**Sn**	**23 39 23.7**	**-7.0**
HFRF	**Wahat Farafira**	**8.80**	**149**	P	**Pn**	**23 38 42.9**	**+0.2**
	baz=152						
HFRF	**Wahat Farafira**	**8.80**	**149**	P	**Pn**	**23 38 42.9**	**+0.2**
STON	**Ston**	**9.12**	**333**	*ePn*	**Pn**	**23 38 43.0**	**-4.0**
STON				Sn	**Sn**	**23 40 16.0**	**-12**
AMAG	**Maghara**	**9.35**	**114**	P	**Pn**	**23 38 47.0**	**-3.2**
	baz=117						
AMAG	**Maghara**	**9.35**	**114**	P	**Pn**	**23 38 47.0**	**-3.2**
BR131	**Keskin Array S**	**9.59**	**56**	*ePn*	**Pn**	**23 38 55.8**	**+2.5**
	comp=E,0.7nm,0.6s						
BR131	**Keskin Array S**	**9.59**	**56**	*ePn*	**Pn**	**23 38 55.8**	**+2.4**
	comp=E,0.7nm,0.6s						
BRTR	**Keskin Array B**	**9.59**	**56**	P	**Pn**	**23 38 53.4**	**0.0**
	comp=E,0.1nm,0.3s,baz=238,slow=14,SNR=2.4						
BRTR	**Keskin Array B**	**9.59**	**56**	P	**Pn**	**23 38 53.4**	**0.0**
MMAI	**Mount Meron Ar**	**10.24**	**97**	P	**Pn**	**23 39 01.8**	**-0.6**
	comp=E,0.7nm,0.3s,baz=278,slow=12,SNR=7.6						
MMAI				S	**Sn**	**23 40 49.9**	**-5.7**
	comp=E,0.7nm,0.3s,baz=287,slow=34,SNR=3.8						
HNKL	**Nakhl**	**10.29**	**115**	P	**Pn**	**23 39 00.6**	**-2.5**
	baz=118						
HNKL	**Nakhl**	**10.29**	**115**	P	**Pn**	**23 39 00.6**	**-2.4**
HDK1	**Dakhla**	**10.67**	**149**	P	**Pn**	**23 39 09.6**	**+1.3**
	baz=151						
HDK1	**Dakhla**	**10.67**	**149**	P	**Pn**	**23 39 09.6**	**+1.3**
EIL	**Elat**	**11.14**	**114**	P	**Pn**	**23 39 13.1**	**-1.6**
	comp=E,0.3nm,0.3s,baz=281,slow=2.9,SNR=5.1						
EIL				S	**Sn**	**23 41 10.8**	**-6.9**
	comp=E,0.3nm,0.3s,baz=236,slow=15,SNR=4.2						
EIL	**Elat**	**11.14**	**114**	P	**Pn**	**23 39 13.1**	**-1.6**
EIL				S	**Sn**	**23 41 10.8**	**-6.9**
EIL	**Elat**	**11.14**	**114**	P	**Pn**	**23 39 13.1**	**-1.6**
NVLJ	**Novalja**	**11.66**	**329**	*ePn*	**Pn**	**23 39 18.9**	**-2.8**
NVLJ				Sn	**Sn**	**23 41 19.9**	**-10**
GERES	**GERESS Array B**	**15.69**	**336**	P	**Pn**	**23 40 20.5**	**+5.1**
	comp=E,0.2nm,0.3s,baz=144,slow=10,SNR=8.7						
GERES	**GERESS Array B**	**15.69**	**336**	P	**Pn**	**23 40 20.5**	**+5.2**
MEM	**Membach**	**20.15**	**327**	P	**P**	**23 41 04.7**	**-2.7**
BCLA	**Clavier**	**20.34**	**325**	P	**P**	**23 41 13.3**	**+3.8**
HFS	**Hagfors**	**26.07**	**349**	P	**P**	**23 42 05.7**	**-0.1**
	comp=E,1.1nm,0.4s,mb3.8,baz=147,slow=12,SNR=9.0						
HFS	**Hagfors**	**26.07**	**349**	P	**P**	**23 42 05.7**	**-0.2**
FINES	**FINESS Array B**	**26.68**	**3**	P	**P**	**23 42 10.5**	**-0.9**
	comp=E,0.7nm,0.8s,mb3.3,baz=165,slow=12,SNR=3.2						
FINES	**FINESS Array B**	**26.68**	**3**	P	**P**	**23 42 10.5**	**-0.9**
NOA	**NORSAR Array B**	**27.34**	**347**	P	**P**	**23 42 19.5**	**+2.2**
	comp=E,0.6nm,0.7s,mb3.2,baz=155,slow=12,SNR=2.8						
NOA	**NORSAR Array B**	**27.34**	**347**	P	**P**	**23 42 19.5**	**+2.2**
EKA	**Eskdalemuir Ar**	**27.43**	**326**	P	**P**	**23 42 20.1**	**+1.9**
	comp=E,0.2nm,0.4s,mb3.0,baz=127,slow=8.3,SNR=4.0						
EKA	**Eskdalemuir Ar**	**27.43**	**326**	P	**P**	**23 42 20.1**	**+1.9**
TORD	**Torodi Ar. Bea**	**29.12**	**227**	P	**P**	**23 42 38.7**	**+5.1**
	comp=E,0.1nm,0.6s,mb2.7,baz=31,slow=8.7,SNR=3.1						
ARCES	**ARCESS Array B**	**34.77**	**1**	P	**P**	**23 43 21.6**	**-0.9**
	comp=E,2.3nm,0.8s,mb4.1,baz=181,slow=8.4,SNR=5.2						
ARCES	**ARCESS Array B**	**34.77**	**1**	P	**P**	**23 43 21.6**	**-1.0**
EKS2	**Erkin-Say**	**39.65**	**63**	*eP*	**P**	**23 44 03.9**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.4						
EKS2	**Erkin-Say**	**39.65**	**63**	*eP*	**P**	**23 44 03.9**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.4						
KURK	**Kurchatov**	**42.58**	**51**	P	**P**	**23 44 27.5**	**-0.7**
	comp=E,0.5nm,0.5s,mb3.5,baz=278,slow=8.3,SNR=4.3						
KURK	**Kurchatov**	**42.58**	**51**	*eP*	**P**	**23 44 27.7**	**-0.5**
	comp=E,0.5nm,0.6s,mb3.4						
KURK	**Kurchatov**	**42.58**	**51**	*eP*	**P**	**23 44 27.7**	**-0.5**
	comp=E,0.5nm,0.6s,mb3.4						
MK31	**Makanchi Array**	**45.24**	**56**	*eP*	**P**	**23 44 50.0**	**+0.4**
MK31	**Makanchi Array**	**45.24**	**56**	*eP*	**P**	**23 44 50.0**	**+0.4**
MKAR	**Makanchi Array**	**45.24**	**56**	P	**P**	**23 44 50.0**	**+0.4**
	comp=E,0.5nm,0.5s,mb3.6,baz=266,slow=7.7,SNR=9.8						
MKAR	**Makanchi Array**	**45.24**	**56**	P	**P**	**23 44 50.0**	**+0.4**
ZALV	**Zalesovo Beam**	**46.34**	**46**	P	**P**	**23 44 57.6**	**-0.5**
	comp=E,0.5nm,0.4s,mb3.8,baz=274,slow=9.0,SNR=2.8						
SONM	**Songino Array**	**60.88**	**50**	P	**P**	**23 46 45.9**	**+1.4**
	comp=E,0.4nm,0.4s,mb3.9,baz=270,slow=8.3,SNR=3.0						
SONM	**Songino Array**	**60.88**	**50**	P	**P**	**23 46 45.9**	**+1.3**

IDC 16 23:39:53.4±1.7, 1.°05N×126.°46E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, Error ellipse: s-maj=170.7km s-min=21.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.24**	**160**	P	P	23 44 50.9	-1.0
	0.9nm,0.5s,baz=338,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**25.61**	**164**	P	P	23 45 25.5	+0.9
	0.5nm,0.3s,baz=345,slow=11,SNR=9.7						
MKAR	**Makanchi Array**	**59.61**	**326**	P	P	23 49 59.4	+0.3
	0.2nm,0.4s,baz=127,slow=7.1,SNR=5.2						
KURK	**Kurchatov**	**63.86**	**328**	P	P	23 50 27.4	-0.3
	0.3nm,0.5s,baz=124,slow=4.9,SNR=2.5						

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*NEIC **16** 23:41:00.5, 32.°13S×71.°54W, h43km, MD3.9(GUC), After GUC.*

GUC 16 23:41:00.5±0.9, 32.°13S×71.°54W, h43km±3km, MD3.9, ML3.2, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.90**	**185**	*eP*	Pn	23 41 17.2	+0.5
IHA				*i* S	Sn	23 41 30.2	+1.5
ROCH	**El Roble**	**0.95**	**152**	*eS*	Sn	23 41 32.0	+2.1
JACH	**Jahuel**	**0.97**	**125**	*eP*	Pn	23 41 18.6	+0.9
JACH				*eS*	Sn	23 41 32.5	+2.1
PEL	**Peldehue**	**1.25**	**145**	⇓*iP*	Pn	23 41 22.6	+1.2
PEL				*i* S	Sn	23 41 38.9	+1.9
PEL				AML	AML	23 41 39.8	
	comp=E,620nm,0.4s						
RCDM	**Rinconada Maip**	**1.49**	**156**	*eP*	Pn	23 41 25.6	+0.7
RCDM				*i* S	Sn	23 41 44.6	+1.5
RCDM	**Rinconada Maip**	**1.49**	**156**	*eP*	Pn	23 41 25.6	+0.7
RCDM				*i* S	Sn	23 41 44.6	+1.5
RCDM				AML	AML	23 41 48.4	
	comp=E,831nm,0.1s						
CLCH	**Cerro Calan**	**1.52**	**147**	*eP*	Pn	23 41 26.6	+1.4
CLCH				*i* S	Sn	23 41 46.3	+2.4
CLCH	**Cerro Calan**	**1.52**	**147**	*eP*	Pn	23 41 26.6	+1.4
CLCH				*i* S	Sn	23 41 46.3	+2.4
CLCH				AML	AML	23 41 48.5	
	comp=E,561nm,0.2s						
FCH	**Farellones**	**1.60**	**139**	⇑*iP*	Pn	23 41 29.7	+3.4
FCH				*i* S	Sn	23 41 50.3	+4.7
FCH				AML	AML	23 41 54.1	
	comp=E,318nm,0.2s						
TACH	**Talagante**	**1.61**	**162**	*eP*	Pn	23 41 27.3	+0.9
TACH				*i* S	Sn	23 41 47.6	+1.7
ANTU	**Antumapu**	**1.63**	**152**	⇑*iP*	Pn	23 41 27.4	+0.7
ANTU				*i* S	Sn	23 41 48.1	+1.7
ANTU	**Antumapu**	**1.63**	**152**	⇑*iP*	Pn	23 41 27.4	+0.7
ANTU				*i* S	Sn	23 41 48.1	+1.7
ANTU				AML	AML	23 41 49.9	
	comp=E,543nm,0.2s						
PCH	**Pirque**	**1.72**	**150**	*eP*	Pn	23 41 28.9	+0.9
PCH				*eS*	Sn	23 41 50.4	+1.6
LNV	**Longovilo**	**1.83**	**177**	⇑*iP*	Pn	23 41 29.7	+0.3
TLL	**Tololo Astrono**	**2.05**	**18**	*i* P	Pn	23 41 25.8	-6.7
TLL				*i* S	Sn	23 41 50.5	-6.3
TLL				AML	AML	23 41 55.7	
	comp=E,118nm,0.3s						
LMEL	**Las Melosas**	**2.05**	**147**	*eP*	Pn	23 41 34.2	+1.7
LMEL				*eS*	Sn	23 41 59.1	+2.2
LMEL	**Las Melosas**	**2.05**	**147**	*eP*	Pn	23 41 34.2	+1.7
LMEL				*eS*	Sn	23 41 59.1	+2.2
LMEL				AML	AML	23 42 01.8	
	comp=N,642nm,0.2s						
CACH	**El Canelo**	**2.14**	**159**	*eP*	Pn	23 41 35.6	+1.9
CACH				*eS*	Sn	23 42 02.5	+3.5

IDC 16 23:48:18.6±6.0, 30.°58N×103.°52E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/26, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=118.9km s-min=32.6km az=10.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**17.37**	**6**	P	Pn	23 52 23.0	+0.7
	0.2nm,0.3s,baz=188,slow=9.0,SNR=4.8						
KSRS	**Korea Array**	**21.32**	**65**	P	P	23 53 06.8	-0.3
	3.0nm,0.7s,baz=261,slow=10,SNR=14						
MKAR	**Makanchi Array**	**23.06**	**321**	P	P	23 53 25.7	+0.2
	0.4nm,0.7s,baz=129,slow=12,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.98**	**335**	P	P	23 54 01.2	-0.6
	0.5nm,0.5s,baz=128,slow=9.3,SNR=2.6						
KURK	**Kurchatov**	**27.37**	**324**	P	P	23 54 05.7	+0.3
	0.3nm,0.3s,baz=128,slow=9.2,SNR=4.3						

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*NIED **16** 23:48:00, 36.°40N×141.°40E, h26km, Mw4.4 Best double couple: M0:3.92000×10^15 NP1:φ0=38.00000°, δ72.00000°, λ91.00000°. NP2:φ0=215.00000°, δ18.00000°, λ87.00000°.*
*IDC **16** 23:48:17.5±0.6, 36.°39N×141.°44E, h0km, mb4.2/26, mb1 4.3/29, mb1mx4.3/35, mbtmp4.2/29, ML4.0/3, MS3.7/12, Ms1 3.7/12, ms1mx3.4/32, Error ellipse: s-maj=15.6km s-min=14.0km az=113.0*
*BJI **16** 23:48:19.3, 36.°71N×141.°55E, h22km, mB4.8/17, mb4.5/24, Ms4.2/16, Ms7 4.1/16*
*ISCJB **16** 23:48:20.6±1.0, 36.°38N±0.°03×141.°50E±0.°04, h33km±7km, mb4.3/61, MS3.9/15, Error ellipse: s-maj=5.3km s-min=4.2km az=31.7

comp=N,210nm,18.0s
MDJ LR LR
comp=E,200nm,16.9s
MDJ LR LR
comp=Z,350nm,19.1s
KLR Kul'dur 14.65 334 *e*P **Pn 23 51 50.0 +3.2**
BJI Beijing 20.17 288 P **P 23 52 50.0 -3.8**
BJI pmax pmax
comp=Z,10.0nm,0.7s
PETK Petropavlovsk- 20.23 29 P **P 23 52 55.7 +1.3**
comp=Z,4.4nm,0.9s,baz=211,slow=11,SNR=5.4
PETK Petropavlovsk- 20.23 29 P **P 23 52 55.7 +1.3**
PETK pmax pmax
comp=Z,4.0nm,0.9s
PETK Petropavlovsk- 20.23 29 P **P 23 52 55.7 +1.3**
HHC Hu-ho-hao-te 23.71 290 *e*P **P 23 53 30.8 -0.6**
HHC pP 23 53 39.9
HHC sP sP 23 53 44.0 +3.9
HHC PP 23 54 02.6
HHC PcP PcP 23 57 17.8 +2.8
HHC S **S 23 57 39.5 -5.6**
HHC sS sS 23 57 53.5 -1.7
HHC ScP ScP 00 00 52.5 +0.4
HHC pmax pmax
comp=Z,11nm,1.1s,mb4.2
HHC pmax pmax
comp=Z,94nm,5.4s
HHC LR LR
comp=N,76nm,5.3s
HHC LR LR
comp=E,180nm,5.8s
HHC LR LR
comp=Z,150nm,5.7s
YAK Yakutsk 26.70 348 *e*P **P 23 53 57.6 -0.7**
YAK pmax pmax
comp=Z,38nm,1.0s,mb4.9
YAK pmax pmax
comp=N,15nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK Yakutsk 26.70 348 *e*P **P 23 53 58.3 0.0**
comp=E,31nm,0.7s,mb5.0
ENH Enshi 27.31 266 *e*P **P 23 54 03.4 -0.7**
comp=E,16nm,0.6s,mb4.7
SEY Seymchan 27.41 11⇑ *e*P **P 23 54 05.7 +1.0**
ULN Ulaanbaatar 27.74 305 *e*P **P 23 54 06.8 -1.0**
ULN pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
ULN Ulaanbaatar 27.74 305 *e*P **P 23 54 06.8 -1.0**
comp=Z,5.8nm,1.0s,mb4.2
BOD Bodaibo 28.09 328 *e*P **P 23 54 09.3 -1.5**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
SONM Songino Array 28.17 305 P **P 23 54 11.5 -0.2**
comp=Z,6.2nm,1.1s,mb4.2,baz=104,slow=9.0,SNR=16
SONM LR LR 00 05 29.7
comp=Z,178nm,20.9s,MS3.6,baz=245,slow=37
SONM Songino Array 28.17 305 P **P 23 54 11.5 -0.1**
SONM pmax pmax
comp=Z,6.0nm,1.1s
SONM MLR MLR
comp=Z,179nm,20.9s
SONM Songino Array 28.17 305 P **P 23 54 11.5 -0.2**
SONM LR LR 00 05 29.7
LZH Lanzhou 30.21 281 *e*P **P 23 54 34.4 +4.5**
LZH pmax pmax
comp=Z,17nm,1.0s,mb4.7
ZAK Zakamensk 30.69 309 *e*P **P 23 54 33.6 -0.4**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
TLY Talaya 30.77 312 *e*P **P 23 54 34.8 +0.1**
TLY *e* 23 55 29.5
TLY *e*S **S 23 59 38.6 +1.9**
TLY pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
TLY MLR MLR
comp=Z,193nm,16.0s,MS3.9
GYA Guiyang 31.15 261 P **P 23 54 40.9 +2.7**
GYA pP pP 23 54 52.3 +7.9
GYA sP sP 23 54 56.9 +10
GYA PP PP 23 55 44.3 -4.3
GYA PcP PcP 23 57 36.0 +2.9
GYA S **S 23 59 42.1 -0.9**
GYA ScP ScP 00 01 15.4 +0.5
GYA SS SS 00 01 27.6 -29
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA LR LR
comp=N,460nm,16.8s,MS4.3
GYA LR LR
comp=E,360nm,15.6s,MS4.3
GYA LR LR
comp=Z,320nm,15.9s,MS4.1
CD2 Chengdu 31.71 271 P **P 23 54 42.5 -0.7**
CD2 pP pP 23 54 52.0 +2.6
CD2 sP sP 23 54 56.3 +4.4
CD2 PP PP 23 55 47.5 -7.3
CD2 S **S 23 59 47.3 -4.4**
CD2 pmax pmax
comp=Z,20nm,0.7s,mb5.1
CD2 pmax pmax
comp=Z,170nm,5.4s
CD2 LR LR
comp=N,410nm,9.5s
CD2 LR LR
comp=Z,290nm,11.9s,MS4.2
BILL Bilibino 34.63 16⇑ *e*P **P 23 55 08.1 -0.1**
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
BILL MLR MLR
comp=Z,100nm,18.0s,MS3.6
KMI Kunming 34.90 262 P **P 23 55 10.5 -0.5**
KMI pP pP 23 55 24.3 +7.0
KMI sP sP 23 55 28.4 +8.6
KMI PP PP 23 56 31.8 +1.6
KMI S **S 00 00 40.3 -1.0**
KMI sS sS 00 00 58.3 +6.7
KMI SS SS 00 02 54.1 -19
KMI pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KMI pmax pmax
comp=Z,44nm,3.1s
KMI LR LR
comp=N,120nm,17.9s,MS3.9
KMI LR LR
comp=E,130nm,16.6s,MS3.9
KMI LR LR
comp=Z,180nm,16.2s,MS3.9
TIXI Tiksi 35.93 353 *e*P **P 23 55 18.6 -0.7**
TIXI *e* 23 55 35.9
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TIXI Tiksi 35.93 353 *e*P **P 23 55 18.9 -0.4**
comp=Z,6.7nm,0.6s,mb4.8
WMQ Urumqi 41.16 298 *e*P **P 23 56 04.8 +1.2**
CMAR Chiang Mai Arr 41.36 256 P **P 23 56 05.8 +0.2**
comp=Z,0.6nm,0.3s,mb3.7,baz=44,slow=4.4,SNR=4.7
CMAR LR LR 00 14 55.0
comp=Z,55nm,19.0s,MS3.4,baz=60,slow=39
CMAR Chiang Mai Arr 41.36 256 P **P 23 56 05.8 +0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,55nm,19.0s
ZAA0 Zalesovo Array 42.37 313 *e*P **P 23 56 12.9 -0.5**
ZALV Zalesovo Beam 42.37 313 P **P 23 56 13.3 0.0**
comp=Z,5.0nm,0.6s,mb4.3,baz=90,slow=6.9,SNR=26
ZALV LR LR 00 14 41.5
comp=Z,82nm,18.7s,MS3.6,baz=63,slow=37
ZALV Zalesovo Beam 42.37 313 P **P 23 56 13.4 0.0**
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
ZALV MLR MLR
comp=Z,82nm,18.7s,MS3.6
NVS Novosibirsk 43.30 314 *e*P **P 23 56 20.6 -0.3**
NVS pmax pmax
comp=N,5.0nm,1.6s
NVS pmax pmax
comp=E,11nm,1.6s
NVS pmax pmax
comp=Z,13nm,1.6s,mb4.4
MK31 Makanchi Array 44.48 303 *e*P **P 23 56 30.2 -0.3**
MKAR Makanchi Array 44.48 303 P **P 23 56 30.4 -0.1**
comp=Z,6.4nm,1.0s,mb4.3,baz=87,slow=8.2,SNR=20
MKAR LR LR 00 15 25.8
comp=Z,81nm,21.6s,MS3.6,baz=355,slow=37
MKAR Makanchi Array 44.48 303 P **P 23 56 30.4 -0.1**
MKAR pmax pmax
comp=Z,6.0nm,1.0s
MKAR MLR MLR
comp=Z,81nm,21.6s
MKAR Makanchi Array 44.48 303 P **P 23 56 30.4 -0.1**
MKAR LR LR 00 15 25.8
KURK Kurchatov 46.35 309 P **P 23 56 45.5 +0.3**
comp=Z,6.8nm,0.8s,mb4.7,baz=83,slow=8.1,SNR=14
KURK Kurchatov 46.35 309*c i*P **P 23 56 44.4 -0.9**
KURK pmax pmax
comp=Z,11nm,0.9s,mb4.8
KURK Kurchatov 46.35 309 *e*P **P 23 56 44.2 -1.0**
comp=Z,12nm,0.8s,mb4.9
TKM2 Tokmak 2 49.96 299 *e*P **P 23 57 14.0 +0.7**
TKM2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
TKM2 Tokmak 2 49.96 299 *e*P **P 23 57 14.0 +0.7**
comp=Z,10nm,1.0s,mb4.8
FRU Bishkek 50.68 299 *e*P **P 23 57 18.0 -0.7**
KSH Kashi 50.69 295 *e*P **P 23 57 23.1 +4.2**
KSH *e*pP pP 23 57 32.1 +6.8
KSH *e*sP sP 23 57 36.1 +8.3
KSH *e*PcP PcP 23 58 39.1 +3.1
KSH *e*PP PP 23 59 20.1 +5.3
KSH *e*ScP ScP 00 02 31.1 +0.1
KSH *e*PcS PcS 00 02 35.1 +1.8
KSH *e*S **S 00 04 33.8 +0.9**
KSH *e*sS sS 00 04 51.1 +7.6
KSH *e*ScS ScS 00 07 08.3 -0.3
KSH *e*SS SS 00 08 07.3 +0.2
KSH pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KSH pmax pmax
comp=Z,61nm,4.0s
KSH LR LR
comp=N,130nm,6.3s
KSH LR LR
comp=E,77nm,7.0s
KSH LR LR
comp=Z,130nm,5.1s
AAK Ala-Archa 50.82 299 P **P 23 57 20.2 +0.4**
comp=Z,1.0nm,0.4s,mb4.1,baz=93,slow=4.5,SNR=4.6
AAK Ala-Archa 50.82 299 *e*P **P 23 57 19.6 -0.2**
AAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
AAK Ala-Archa 50.82 299 *e*P **P 23 57 19.6 -0.2**
comp=Z,3.4nm,0.9s,mb4.3
BVAR Borovoye Array 51.02 313 P **P 23 57 21.0 -0.1**
comp=Z,1.1nm,0.6s,mb4.0,baz=72,slow=6.4,SNR=8.9
BVAR LR LR 00 20 00.5
comp=Z,100nm,19.5s,MS3.8,baz=90,slow=37
BVAR Borovoye Array 51.02 313 P **P 23 57 21.0 -0.2**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,100nm,19.5s
BRVK Borovoye 51.08 313 *e*P **P 23 57 21.1 -0.5**
BRVK pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BRVK Borovoye 51.08 313 *e*P **P 23 57 21.6 0.0**
comp=Z,4.8nm,0.8s,mb4.5
EKS2 Erkin-Say 51.32 299 *e*P **P 23 57 23.4 -0.1**
comp=Z,2.0nm,0.7s,mb4.2
INK Inuvik 54.95 27 P **P 23 57 50.5 +0.7**
comp=Z,3.4nm,0.8s,mb4.4,baz=279,slow=5.4,SNR=11
INK Inuvik 54.95 27 P **P 23 57 50.5 +0.7**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 54.95 27 *e*P **P 23 57 50.8 +1.0**
comp=Z,2.3nm,0.6s,mb4.4
SVE Sverdlovsk 55.65 319⇑ *e*P **P 23 57 55.4 +0.3**
SVE *e*S **S 00 05 33.0 -6.8**
SVE pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
SVE MLR MLR
comp=Z,117nm,12.0s,MS4.2
FITZ Fitzroy Crossi 56.22 198 P **P 23 57 59.8 +0.2**
comp=Z,2.1nm,0.8s,mb4.2,baz=27,slow=9.0,SNR=3.2
WRA Warramunga Arr 56.43 188 P **P 23 58 00.2 -0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=4.4,slow=7.3,SNR=7.3
WRA Warramunga Arr 56.43 188 P **P 23 58 00.2 -0.8**
WRA pmax pmax
comp=Z,2.0nm,0.7s
ARU Arti 56.86 319*c i*P **P 23 58 03.2 -0.5**
ARU *e* 00 00 05.2
ARU S **S 00 05 53.3 -2.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ARU Arti 56.86 319 *e*P **P 23 58 03.3 -0.4**
comp=Z,6.3nm,0.7s,mb4.8
ABKAR Akbulak array 58.37 310 *e*P **P 23 58 14.0 -0.5**
comp=Z,1.2nm,0.5s,mb4.2
AKTK Aktyubinsk 59.12 312 P **P 23 58 19.2 -0.5**
AKTO Aktyubinsk 59.12 312 P **P 23 58 19.2 -0.5**
comp=Z,2.2nm,0.8s,mb4.3,baz=74,slow=13,SNR=8.4
AKTO Aktyubinsk 59.12 312 P **P 23 58 19.2 -0.5**
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ASAR Alice Springs 60.16 188 P **P 23 58 26.1 -0.9**
comp=Z,0.2nm,0.4s,mb3.5,baz=360,slow=6.4,SNR=4.9
RES Resolute Bay 63.22 14 *e*P **P 23 58 47.1 +0.1**
RES pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
RES Resolute Bay 63.22 14 *e*P **P 23 58 47.1 0.0**
comp=Z,3.2nm,0.8s,mb4.5
YKA Yellowknife Ar 64.35 30 P **P 23 58 54.3 -0.3**
comp=Z,1.0nm,0.9s,mb3.9,baz=302,slow=6.5,SNR=10
YKA Yellowknife Ar 64.35 30 P **P 23 58 54.3 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.9s
ARCES ARCESS Array B 64.61 340 P **P 23 58 56.6 +0.4**
comp=Z,5.6nm,0.8s,mb4.7,baz=41,slow=8.4,SNR=4.2
ARCES LR LR 00 28 40.8
comp=Z,87nm,18.3s,MS4.0,baz=39,slow=38
ARCES ARCESS Array B 64.61 340 P **P 23 58 56.7 +0.4**
ARCES pmax pmax
comp=Z,6.0nm,0.8s
ARCES MLR MLR
comp=Z,87nm,18.3s
JOF Joensuu 66.54 332 *e*P **P 23 59 07.2 -1.7**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 66.54 332 *ep* **P 23 59 07.2 -1.7**
comp=Z,2.8nm,0.6s,mb4.5
KAF Kangasniemi 68.89 333 *e*P **P 23 59 22.5 -1.2**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KAF Kangasniemi 68.89 333 *ep* **P 23 59 22.5 -1.2**
comp=Z,4.6nm,0.7s,mb4.5
FINES FINESS Array B 69.39 332 P **P 23 59 26.8 0.0**
comp=Z,5.0nm,0.8s,mb4.5,baz=46,slow=5.5,SNR=14
FINES FINESS Array B 69.39 332 P **P 23 59 26.8 0.0**
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 69.39 332 P **P 23 59 26.8 0.0**
VSR Storozhevoye 69.43 319 *e*P **P 23 59 27.1 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.4s
ZEI Tsey 71.24 310 *e*P **P 23 59 31.5 -6.9**
ZEI pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
KIV Kislovodsk 71.35 311*c i*P **P 23 59 39.2 +0.1**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV Kislovodsk 71.35 311 *e*P **P 23 59 39.5 +0.4**
comp=Z,9.3nm,1.0s,mb4.7
IDID Didziasalis 73.03 327 *e*P **P 23 59 49.3 +0.4**
ISAL Salakas 73.13 328 *e*P **P 23 59 49.9 +0.4**
IIGN Ignalina 73.23 327 *e*P **P 23 59 50.6 +0.5**
FFC Flin Flon 74.23 33 *e*P **P 23 59 56.3 +0.3**
FFC pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
FFC Flin Flon 74.23 33 *e*P **P 23 59 56.2 +0.3**
comp=Z,2.4nm,0.8s,mb4.2
FCC Fort Churchill 74.56 26 *e*P **P 23 59 57.9 0.0**
comp=Z,0.1nm,0.8s
HFS Hagfors 74.68 336 P **P 23 59 58.1 -0.4**
comp=Z,2.1nm,0.7s,mb4.2,baz=198,slow=4.2,SNR=4.1
HFS Hagfors 74.68 336 P **P 23 59 58.1 -0.4**
HFS pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 74.79 337 P **P 23 59 59.0 -0.1**
comp=Z,4.9nm,0.8s,mb4.5,baz=39,slow=5.8,SNR=13
NOA LR LR 00 36 10.6
comp=Z,103nm,18.2s,MS4.2,baz=245,slow=38
NOA NORSAR Array B 74.79 337 P **P 23 59 59.0 -0.1**
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA MLR MLR
comp=Z,103nm,18.2s
AKASG Malin Array Be 74.82 322 P **P 23 59 58.9 -0.6**
comp=Z,5.7nm,0.7s,mb4.6,baz=47,slow=5.8,SNR=16
AKASG Malin Array Be 74.82 322*ce*P **P 23 59 59.2 -0.3**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
BOZ Bozeman (W) 75.15 44 *e*P **P 00 00 03.1 +1.6**
NVAR Mina Array Bea 75.35 53 P **P 00 00 04.4 +1.6**
comp=Z,0.8nm,0.7s,mb3.8,baz=285,slow=5.9,SNR=8.4
PDAR Pinedale Array 78.10 45 P **P 00 00 18.9 +0.6**
comp=Z,0.5nm,0.8s,mb3.5,baz=336,slow=3.3,SNR=4.6
KWP Kalwaria Pacla 78.67 324 *e*P **P 00 00 22.1 +0.9**
BR131 Keskin Array S 79.30 312 *e*P **P 00 00 25.4 +0.5**
comp=Z,1.5nm,0.8s,mb4.0
BRTR Keskin Array B 79.30 312 P **P 00 00 25.6 +0.7**
comp=Z,2.1nm,0.8s,mb4.1,baz=104,slow=5.2,SNR=16
BRTR Keskin Array B 79.30 312*ce*P **P 00 00 25.7 +0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
KOLS Kolonicke sedl 79.36 324 *e*P **P 00 00 25.0 0.0**
KOLS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KOLS Kolonicke sedl 79.36 324 *e*P **P 00 00 25.0 0.0**
STHS Stebnicka Huta 79.50 325 *e*P **P 00 00 26.0 +0.2**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
STHS Stebnicka Huta 79.50 325 *e*P **P 00 00 26.0 +0.2**
NIE Niedzica 79.93 325 *e*P **P 00 00 29.1 +1.0**
KECS Kecovo 80.51 325 *e*P **P 00 00 32.1 +0.8**
KECS pmax pmax
comp=Z,3.0nm,1.5s,mb4.0
KECS Kecovo 80.51 325 *e*P **P 00 00 32.0 +0.7**
OKC Ostrava-Krasne 80.60 327 *e*P **P 00 00 30.3 -1.4**
MORC Moravsky Berou 80.91 327 *e*P **P 00 00 33.6 +0.2**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MORC Moravsky Berou 80.91 327 *e*P **P 00 00 33.6 +0.2**
comp=Z,3.2nm,0.9s,mb4.2
DPC Dobruska-Polom 81.02 328 *e*P **P 00 00 34.7 +0.8**
UPC Upice 81.03 328 *e*P **P 00 00 34.3 +0.3**
PSZ Piszkesteto 81.19 325 *e*P **P 00 00 35.3 +0.4**
PSZ pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
PSZ Piszkesteto 81.19 325 *e*P **P 00 00 35.3 +0.4**
comp=Z,3.5nm,1.1s,mb4.2
VYHS Vyhne 81.27 325 *e*P **P 00 00 35.8 +0.5**
VYHS *e* 00 00 45.5
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
VYHS Vyhne 81.27 325 *e*P **P 00 00 35.8 +0.5**
VYHS *e* 00 00 45.5
CLL Collm 81.67 330⇑ *i*P **P 00 00 37.0 -0.4**
CLL *i* 00 00 49.3
CLL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CLL Collm 81.67 330⇑ *i*P **P 00 00 37.0 -0.4**
comp=Z,10.0nm,1.2s,mb4.6
CLL *i* 00 00 49.3
CLL Collm 81.67 330⇑ *i*P **P 00 00 37.0 -0.4**
comp=Z,10.0nm,1.2s,mb4.6
CLL *i* sP sP 00 00 49.3 +2.8
CLL *e* 00 00 57.0
CLL *e*PP PP 00 03 43.0 -0.4
PRU Pruhonice 82.04 329 *e*P **P 00 00 39.7 +0.3**
PRU *e* 00 00 50.8
MMAI Mount Meron Ar 82.36 305 P **P 00 00 41.7 +0.4**
comp=Z,2.5nm,0.7s,mb4.3,baz=61,slow=8.7,SNR=4.3
KHC Kasperske Hory 83.10 329 *e*P **P 00 00 44.9 0.0**
KHC *e* 00 00 59.6
GERES GERESS Array B 83.27 328 P **P 00 00 45.3 -0.5**
comp=Z,1.1nm,0.7s,mb4.0,baz=34,slow=5.5,SNR=13
GERES LR LR 00 41 38.1
comp=Z,56nm,18.3s,MS4.0,baz=237,slow=38
GERES GERESS Array B 83.27 328 P **P 00 00 45.3 -0.5**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,56nm,18.3s
GRA1 Grafenberg Arr 83.64 330 *e*P **P 00 00 47.9 +0.2**
comp=Z,7.0nm,1.3s,mb4.6
GRF Grafenberg Arr 83.64 330 *e*P **P 00 00 47.9 +0.2**
GRF pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
GRF Grafenberg Arr 83.64 330 *e*P **P 00 00 47.9 +0.2**
GRF pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
GRF Grafenberg Arr 83.64 330 *e*P **P 00 00 47.9 +0.2**
comp=Z,7.0nm,1.3s,mb4.6
EKA Eskdalemuir Ar 83.75 341 P **P 00 00 48.3 +0.2**
comp=Z,0.5nm,0.7s,mb3.8,baz=356,slow=3.5,SNR=3.8
EKA Eskdalemuir Ar 83.75 341 P **P 00 00 48.3 +0.2**
EKA pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 90.49 52 P **P 00 01 20.2 -1.2**
comp=Z,0.4nm,0.7s,mb3.8,baz=301,slow=2.6,SNR=6.3
TXAR LR LR 00 40 40.1
comp=Z,38nm,19.8s,MS3.8,baz=155,slow=35
TXAR Lajitas Array 90.49 52 P **P 00 01 20.2 -1.2**
TXAR LR LR 00 40 40.1
NVL N'lazarevskaya 136.71 202 *e*PKIKP PKPdf 00 07 44.7 +4.2
NVL *e**PP 00 07 54.1
NVL *e* 00 13 34.0
NVL pmax pmax
comp=Z,10.0nm,0.8s
LPAZ La Paz 146.99 60 PKPbc PKPbc 00 08 03.0 +0.6
comp=Z,0.9nm,0.6s,baz=265,slow=6.6,SNR=5.4

IDC ***17*** *00:28:59.5±0.6, 31°.45N×104°.09E, h0km, mb4.2/18, mb1 4.3/20, mb1mx4.2/31, mbtmp4.2/20, ML4.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/31, Error ellipse: s-maj=27.9km s-min=11.5km az=56.0*
BJI ***17*** *00:29:00.3, 31°.45N×104°.15E, h10km, mB4.5/9, mb4.4/13, ML4.4/17, Ms4.2/14, Ms7 3.9/14*
ISCJB ***17*** *00:29:01.5±0.9, 31°.43N±0°.03×103°.99E±0°.04, h27km±7km, mb4.2/37, MS3.2/5, Error ellipse: s-maj=6.1km s-min=4.9km az=138.3*
NEIC ***17*** *00:29:01.2±0.2, 31°.45N×104°.05E, h10km, mb4.3/21, Error ellipse: s-maj=7.9km s-min=4.5km az=50.0*
MOS ***17*** *00:29:02.3±0.8, 31°.42N×104°.05E, h33km, mb4.4/23, Error ellipse: s-maj=14.8km s-min=7.4km az=109.8*
ISC 17 00:29:02.6±0.7, 31°.43N±0°.02×104°.02E±0°.03, h20km±4km, n104, σ1°10/116, mb4.2/37, MS3.2/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**203**	Pg	**Pg**	**00 29 13.0**	**-0.9**
CD2				Sg	**Sg**	**00 29 20.6**	**-1.0**
CD2				smax			
comp=N,22μm,0.9s							
LZH	**Lanzhou**	**4.64**	**358**	Pn	**Pn**	**00 30 17.1**	**+5.5**
LZH				Pg	**Pg**	**00 30 32.6**	**+1.1**
LZH				Sn	**Sn**	**00 31 12.3**	**+7.4**
LZH				Sg	**Sg**	**00 31 33.9**	**+2.3**
LZH				smax			
comp=N,220nm,0.9s							
LZH				smax			
comp=E,550nm,1.0s							
LZH				LR	LR		
comp=E,3μm,7.9s							
LZH				LR	LR		
comp=Z,3μm,8.2s							
ENH	**Enshi**	**4.84**	**102**	*e*Pn	**Pn**	**00 30 16.0**	**+1.7**
ENH				*e*Pg	**Pg**	**00 30 34.7**	**-0.6**
ENH				*e*Sg	**Sg**	**00 31 33.1**	**-4.9**
XAN	**Xi'an**	**4.88**	**57**	Pn	**Pn**	**00 30 14.3**	**-0.5**
XAN				Sn	**Sn**	**00 31 08.8**	**-1.9**
XAN				Sg	**Sg**	**00 31 31.4**	**-7.8**
XAN				smax			
comp=N,530nm,0.8s							
XAN				smax			
comp=E,250nm,0.9s							
GYA	**Guiyang**	**5.47**	**154**	Pn	**Pn**	**00 30 23.5**	**+0.5**
GYA				Sn	**Sn**	**00 31 27.6**	**+2.2**

GYA smax
comp=N,510nm,0.9s
GYA smax
comp=E,390nm,1.0s
GYA LR LR
comp=N,600nm,5.6s
GYA LR LR
comp=E,530nm,5.6s
GYA LR LR
comp=Z,730nm,5.5s
KMI Kunming 6.39 191 Pn **Pn 00 30 36.8 +1.2**
KMI Sn **Sn 00 31 49.6 +1.6**
KMI smax
comp=N,100nm,1.5s
KMI smax
comp=E,110nm,1.4s
KMI LR LR
comp=N,560nm,6.8s
KMI LR LR
comp=E,650nm,6.3s
KMI LR LR
comp=Z,480nm,9.3s
GTA Gaotai 8.67 338 *e*P **Pn 00 31 12.9 +6.1**
GTA pP 00 31 16.4
GTA sP 00 31 19.0
GTA S **Sn 00 32 56.4 +12**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,52nm,4.2s
GTA LR LR
comp=N,400nm,10.7s
GTA LR LR
comp=E,290nm,11.6s
GTA LR LR
comp=Z,600nm,13.7s
WHN Wuhan 8.91 93 P **Pn 00 31 10.1 -0.1**
WHN S **Sn 00 32 46.8 -3.2**
WHN LR LR
comp=N,2μm,8.7s
WHN LR LR
comp=E,2μm,12.1s
WHN LR LR
comp=Z,2μm,8.2s
HHC Hu-ho-hao-te 11.20 31 *e*P **Pn 00 31 38.9 -2.6**
HHC pP 00 31 46.1
HHC sP 00 31 50.9
HHC S **Sn 00 33 43.8 -2.2**
HHC sS 00 33 54.0
HHC SS 00 33 58.0
HHC pmax pmax
comp=Z,21nm,1.1s
HHC pmax pmax
comp=Z,140nm,4.6s
HHC LR LR
comp=N,450nm,4.8s
HHC LR LR
comp=E,370nm,4.5s
HHC LR LR
comp=Z,240nm,4.9s
LSA Lhasa 11.23 264 P **Pn 00 31 41.1 -0.9**
LSA S Sn 00 33 20.4 -27
LSA LR LR
comp=E,400nm,9.5s
LSA LR LR
comp=Z,430nm,9.7s
CMAR Chiang Mai Arr 13.71 201 Pn **Pn 00 32 17.5 +1.5**
comp=Z,0.8nm,0.3s,baz=9.6,slow=12,SNR=5.6
CMAR Chiang Mai Arr 13.71 201 P **Pn 00 32 17.5 +1.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
QZH Quanzhou 14.38 113 *e*P **Pn 00 32 25.8 +0.8**
QZH S **Sn 00 35 07.3 +3.4**
QZH LR LR
comp=N,820nm,8.2s
QZH LR LR
comp=E,2μm,13.0s
QZH LR LR
comp=Z,2μm,11.1s
GUN Gumba 16.15 262 *e*P **Pn 00 32 47.1 -1.4**
comp=Z,50nm,0.9s
SONM Songino Array 16.48 6 Pn **Pn 00 32 52.9 +0.4**
comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=4.2
ULN Ulaanbaatar 16.57 7 *e*P **Pn 00 32 54.8 +1.1**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 16.57 7 *e*Pn **Pn 00 32 54.8 +1.1**
comp=Z,3.6nm,0.8s
PKI Pulchoki 16.65 261 *e*P **Pn 00 32 53.1 -1.8**
comp=Z,45nm,0.9s
PKIN Phulchoki 16.66 261 *e*P **Pn 00 32 52.8 -2.2**
KKN Kakani 16.70 262 *e*P **Pn 00 32 53.6 -1.8**
comp=Z,36nm,0.7s
SSLB Suanglung 16.82 113 *e*P **Pn 00 32 56.5 -0.4**
comp=Z,34nm,1.0s
DMN Daman 16.90 262 *e*P **Pn 00 32 56.2 -1.7**
comp=Z,57nm,0.9s
ZAK Zakamensk 18.94 359 *e*P **Pn 00 33 23.7 +0.8**
ZAK pmax pmax
comp=Z,3.0nm,1.7s
KSRS Korea Array 20.58 67 P **P 00 33 40.1 -0.2**
comp=Z,3.3nm,0.7s,baz=256,slow=9.7,SNR=16
KSRS LR LR 00 42 38.6
comp=Z,47nm,19.2s,MS2.9,baz=344,slow=40
KSRS Korea Array 20.58 67 P **P 00 33 40.1 -0.1**
KSRS pmax pmax
comp=Z,3.0nm,0.7s
KSRS MLR MLR
comp=Z,47nm,19.3s,MS2.9
CN2 Changchun 20.92 48 *e*P **P 00 33 45.0 +1.2**
CN2 pmax pmax
comp=Z,30nm,0.7s
JOW Kunigami 21.66 96 LR LR 00 42 46.9
comp=Z,79nm,18.5s,MS3.1,baz=216,slow=38
MK31 Makanchi Array 22.68 319 *e*P **P 00 34 03.2 +0.5**
MKAR Makanchi Array 22.68 319 P **P 00 34 03.3 +0.6**
comp=Z,7.4nm,1.1s,mb4.0,baz=116,slow=11,SNR=17
MKAR LR LR 00 43 36.7
comp=Z,118nm,19.5s,MS3.3,baz=335,slow=39
MKAR Makanchi Array 22.68 319 P **P 00 34 03.3 +0.6**
MKAR pmax pmax
comp=Z,7.0nm,1.1s
MKAR MLR MLR
comp=Z,118nm,19.5s
KSH Kashi 24.15 297 *e*P **P 00 34 20.6 +3.3**
KSH pmax pmax
comp=Z,31nm,3.8s
TKM2 Tokmak 2 25.27 305 *e*P **P 00 34 28.6 +1.2**
TKM2 pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
TKM2 Tokmak 2 25.27 305 *e*P **P 00 34 28.6 +1.2**
comp=Z,3.8nm,1.0s,mb3.9
UCH Uchtor 25.84 303 *e*P **P 00 34 34.7 +2.0**
comp=Z,5.8nm,1.0s,mb4.1
AAK Ala-Archa 25.96 304 P **P 00 34 35.0 +1.3**
comp=Z,0.8nm,0.3s,mb3.7,baz=32,slow=4.0,SNR=4.2
AAK LR LR 00 46 28.6
comp=Z,166nm,19.3s,MS3.6,baz=311,slow=40
AAK Ala-Archa 25.96 304 *e*P **P 00 34 34.6 +0.9**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
AAK Ala-Archa 25.96 304 *e*P **P 00 34 34.6 +0.8**
comp=Z,2.7nm,0.8s,mb3.8
AAK LR LR 00 46 28.6
ZAA0 Zalesovo Array 26.39 334 *e*P **P 00 34 37.9 +0.4**
ZALV Zalesovo Beam 26.39 334 P **P 00 34 37.7 +0.2**
comp=Z,6.3nm,0.8s,mb4.2,baz=133,slow=9.7,SNR=20
ZALV LR LR 00 46 01.2
comp=Z,49nm,21.3s,MS3.0,baz=128,slow=39
ZALV Zalesovo Beam 26.39 334 P **P 00 34 37.7 +0.2**
ZALV pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
ZALV MLR MLR
comp=Z,49nm,21.3s,MS3.0
ZALV Zalesovo Beam 26.39 334 P **P 00 34 37.7 +0.1**
ZALV LR LR 00 46 01.2
AML Almayashu 26.41 302 *e*P **P 00 34 39.2 +1.5**
comp=Z,7.8nm,1.2s,mb4.1
EKS2 Erkin-Say 26.48 304 *e*P **P 00 34 39.2 +0.8**
comp=Z,3.5nm,1.1s,mb3.8
KURK Kurchatov 26.94 323 P **P 00 34 43.1 +0.6**
comp=Z,2.5nm,0.7s,mb3.9,baz=125,slow=9.9,SNR=12
KURK Kurchatov 26.94 323 *e*P **P 00 34 42.7 +0.2**
KURK pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
KURK Kurchatov 26.94 323 *e*P **P 00 34 42.7 +0.2**
comp=Z,6.8nm,1.1s,mb4.1
KLR Kul'dur 27.39 42 *e*P **P 00 34 47.3 +0.8**
BVAR Borovoye Array 32.49 321 P **P 00 35 32.2 +0.6**
comp=Z,0.8nm,0.6s,mb3.7,baz=115,slow=9.0,SNR=6.4
BVAR Borovoye Array 32.49 321 P **P 00 35 32.2 +0.6**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 32.56 321 *e*P **P 00 35 33.0 +0.7**
BRVK pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
BRVK Borovoye 32.56 321 *e*P **P 00 35 33.0 +0.7**
comp=Z,1.3nm,0.6s,mb4.0
ABKAR Akbulak array 37.40 311 *e*P **P 00 36 14.6 +0.5**
comp=Z,0.7nm,0.4s,mb3.8
KAPI Kappang 39.23 155 P **P 00 36 29.1 -0.6**
comp=Z,10nm,0.8s,mb4.6,baz=317,slow=7.3,SNR=6.0
ARU Arti 40.13 322 *e*P **P 00 36 36.9 +0.1**
ARU pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
ARU Arti 40.13 322 *e*P **P 00 36 36.9 0.0**
comp=Z,5.1nm,0.7s,mb4.4
FITZ Fitzroy Crossi 53.45 154 P **P 00 38 21.0 -0.4**
comp=Z,3.6nm,0.9s,mb4.3,baz=14,slow=4.2,SNR=5.8
JOF Joensuu 54.71 328 *e*P **P 00 38 28.8 -1.3**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 54.71 328 *e*p **P 00 38 28.8 -1.3**
comp=Z,0.6nm,0.4s,mb4.0
KEV Kevo 56.40 336 *e*P **P 00 38 39.1 -3.1**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 56.40 336 *e*p **P 00 38 39.1 -3.1**
comp=Z,0.5nm,0.4s,mb3.9
BRTR Keskin Array B 56.52 299 P **P 00 38 44.6 +1.1**
comp=Z,0.4nm,0.7s,mb3.5,baz=85,slow=3.2,SNR=2.8
ARCES ARCESS Array B 56.93 336 P **P 00 38 44.9 -1.1**
comp=Z,7.9nm,1.0s,mb4.7,baz=40,slow=9.8,SNR=3.2
ARCES ARCESS Array B 56.93 336 P **P 00 38 44.9 -1.0**
ARCES pmax pmax
comp=Z,8.0nm,1.0s
KAF Kangasniemi 57.08 327 *e*P **P 00 38 42.1 -5.0**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 57.08 327 *e*p **P 00 38 42.1 -5.0**
comp=Z,0.6nm,0.4s,mb4.0
AKASG Malin Array Be 57.11 313 P **P 00 38 47.1 -0.4**
comp=Z,0.4nm,0.3s,mb3.9,baz=67,slow=7.1,SNR=2.4
FINES FINESS Array B 57.26 326 P **P 00 38 48.3 0.0**
comp=Z,3.9nm,0.9s,mb4.5,baz=79,slow=7.5,SNR=21
FINES FINESS Array B 57.26 326 P **P 00 38 48.3 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.9s
COEN Coen 58.72 134 *e*P **P 00 38 59.4 +0.2**
comp=Z,58nm,0.7s
WRAB Tennant Creek 58.78 146 *e*P **P 00 38 59.5 0.0**
WRAB pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
WRAB Tennant Creek 58.78 146 *e*P **P 00 38 59.5 0.0**
comp=Z,9.1nm,0.6s,mb5.0
WRA Warramunga Arr 58.78 146 P **P 00 38 59.6 +0.1**
comp=Z,7.1nm,0.6s,mb4.9,baz=340,slow=7.5
WRA Warramunga Arr 58.78 146 P **P 00 38 59.7 +0.2**
WRA pmax pmax
comp=Z,7.0nm,0.6s
BUR08 Bucovina Ar. S 60.37 310 *e*P **P 00 39 09.7 -0.5**
KWP Kalwaria Pacla 61.43 313 *e*P **P 00 39 17.7 +0.3**
KWP pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
KWP Kalwaria Pacla 61.43 313 *e*P **P 00 39 17.7 +0.3**
comp=Z,7.1nm,1.0s,mb4.8
ASAR Alice Springs 61.81 149 P **P 00 39 20.4 +0.3**
comp=Z,2.8nm,0.7s,mb4.5,baz=341,slow=7.0,SNR=31
ASAR Alice Springs 61.81 149 P **P 00 39 20.5 +0.3**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
NB2 NORSAR Subarra 64.34 327 P **P 00 39 35.6 -1.0**
comp=Z,1.2nm,0.5s,mb4.2,baz=73,slow=6.9
NOA NORSAR Array B 64.34 327 P **P 00 39 36.0 -0.5**
comp=Z,1.4nm,0.5s,mb4.3,baz=74,slow=6.8,SNR=7.4
NOA NORSAR Array B 64.34 327 P **P 00 39 36.1 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.5s
MORC Moravsky Berou 64.59 314 *e*P **P 00 39 36.5 -1.9**
MORC pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
MORC Moravsky Berou 64.59 314 *e*P **P 00 39 36.5 -1.8**
comp=Z,1.6nm,0.8s,mb4.1
CTAO Charters Tower 65.31 136 *e*P **P 00 39 43.2 -0.2**
CTAO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
CTAO Charters Tower 65.31 136 *e*P **P 00 39 43.2 -0.2**
comp=Z,2.5nm,0.5s,mb4.5
COLD Coldfoot 67.20 24 *e*P **P 00 39 54.8 -0.1**
comp=Z,2.8nm,0.8s,mb4.3
GERES GERESS Array B 67.27 314 P **P 00 39 55.6 0.0**
comp=Z,0.7nm,0.8s,mb3.7,baz=38,slow=5.0,SNR=2.5
GERES GERESS Array B 67.27 314 P **P 00 39 55.6 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.8s
COLA College 69.16 26 *e*P **P 00 40 06.8 -0.4**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
COLA College 69.16 26 *e*P **P 00 40 06.8 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
OHAK Old Harbor 70.53 34 *e*P **P 00 40 15.5 -0.2**
comp=Z,4.1nm,0.6s,mb4.5
EGAK Eagle 71.63 24 *e*P **P 00 40 21.9 -0.5**
comp=Z,2.0nm,0.9s,mb4.0
INK Inuvik 71.87 19 *e*P **P 00 40 23.0 -0.7**
INK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 71.87 19 *e*P **P 00 40 23.0 -0.7**
comp=Z,2.3nm,0.6s,mb4.3
STKA Stephens Creek 72.32 147 P **P 00 40 26.6 -0.3**
comp=Z,3.6nm,0.6s,mb4.5,baz=315,slow=8.8,SNR=8.6
LPG La Plagne 72.97 313 *e*P **P 00 40 30.9 +0.2**
comp=Z,4.0nm,0.6s,mb4.3
LPG La Plagne 72.97 313 *e*P **P 00 40 30.9 +0.2**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LPG La Plagne 72.97 313 *e*P **P 00 40 30.9 +0.2**
comp=Z,2.0nm,0.6s,mb4.2
LPL La Plagne 72.98 313 *e*P **P 00 40 30.7 0.0**
TCF Toulx Ste Croi 75.37 315 *e*P **P 00 40 44.2 -0.5**
YKA Yellowknife Ar 81.40 17 P **P 00 41 17.6 -0.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=329,slow=5.3,SNR=14
YKA Yellowknife Ar 81.40 17 P **P 00 41 17.6 -0.1**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 81.40 17 P **P 00 41 17.6 -0.1**
OTAV Otavalo 148.41 5 *e*PKPbc PKPbc 00 48 49.8 +1.4

IDC ***17*** *00:38:05.1±0.8, 31°.96N×104°.19E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/28, mbtmp4.0/16, ML4.1/2, MS3.6/10, Ms1 3.6/10, ms1mx3.3/29, Error ellipse: s-maj=24.0km s-min=15.9km az=31.0*
ISCJB ***17*** *00:38:06.3±1.3, 31°.92N±0°.03×104°.15E±0°.04, h21km±10km, mb4.1/31, MS3.6/10, Error ellipse: s-maj=6.1km s-min=5.4km az=6.6*
NEIC ***17*** *00:38:06.8±0.3, 31°.99N×104°.17E, h10km, mb4.3/17, Error ellipse: s-maj=8.3km s-min=6.2km az=219.0*
BJI ***17*** *00:38:06.9, 31°.96N×104°.37E, h12km, mB4.6/8, mb4.3/13, ML4.1/16, Ms4.1/16, Ms7 4.0/15*
MOS ***17*** *00:38:07.8±1.1, 31°.97N×104°.23E, h33km, mb4.4/25, Error ellipse: s-maj=13.8km s-min=8.2km az=107.7*
ISC 17 00:38:07.7±0.9, 31°.98N±0°.03×104°.13E±0°.04, h15km±6km, n95, σ1§07/102, mb4.1/31, MS3.6/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.11**	**197**	Pg	**Pg**	**Pg**	**00 38 30.4**	**+1.3**
CD2				Sg	**Sg**	**Sg**	**00 38 43.1**	**-0.5**
CD2				smax				
	comp=N,2μm,0.6s							
LZH	**Lanzhou**	**4.11**	**357**	Pg	**Pb**		**00 39 17.5**	**-2.2**
LZH				Sn	**Sn**		**00 40 01.8**	**+4.2**
LZH				Sg	**Sg**		**00 40 18.3**	**-1.3**
LZH				smax				
	comp=N,330nm,0.6s							
LZH				smax				
	comp=E,460nm,0.5s							
LZH				LR	LR			
	comp=E,3μm,6.0s							
LZH				LR	LR			
	comp=Z,3μm,7.2s							
XAN	**Xi'an**	**4.52**	**62**	Pn	**Pn**		**00 39 14.6**	**-0.9**
XAN				Sn	**Sn**		**00 40 05.9**	**-1.9**
XAN				Sg	**Sg**		**00 40 27.0**	**-5.8**
XAN				smax				
	comp=N,630nm,0.6s							
XAN				smax				
	comp=E,200nm,0.6s							
XAN				LR	LR			
	comp=N,570nm,9.2s							
XAN				LR	LR			
	comp=E,430nm,14.5s							
XAN				LR	LR			
	comp=Z,470nm,11.2s							
ENH	**Enshi**	**4.90**	**109**	*e*Pn	**Pn**		**00 39 21.8**	**+1.0**
GYA	**Guiyang**	**5.93**	**157**	Pn	**Pn**		**00 39 36.1**	**+1.2**
GYA				Sn	**Sn**		**00 40 40.0**	**-2.5**
GYA				smax				
	comp=N,250nm,0.8s							
GYA				smax				
	comp=E,250nm,0.8s							
KMI	**Kunming**	**6.94**	**191**	Pn	**Pn**		**00 39 55.0**	**+6.2**
KMI				Sn	**Sn**		**00 41 07.0**	**-0.4**
KMI				smax				
	comp=N,54nm,1.2s							
KMI				smax				
	comp=E,45nm,1.0s							
KMI				LR	LR			
	comp=N,610nm,9.2s							
KMI				LR	LR			
	comp=E,930nm,6.9s							
KMI				LR	LR			
	comp=Z,510nm,13.0s							
GTA	**Gaotai**	**8.21**	**336**	*e*P	**Pn**		**00 40 14.3**	**+8.1**
GTA				pP			00 40 17.8	
GTA				sP			00 40 20.5	
GTA				S	**Sn**		**00 41 53.8**	**+15**
GTA				sS			00 41 59.1	
GTA				pmax	pmax			
	comp=Z,4.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,58nm,3.9s							
GTA				LR	LR			
	comp=N,620nm,10.4s							
GTA				LR	LR			
	comp=E,440nm,13.4s							
GTA				LR	LR			
	comp=Z,480nm,11.3s							
WHN	**Wuhan**	**8.86**	**97**	P	**Pn**		**00 40 15.0**	**-0.2**
WHN				LR	LR			
	comp=N,2μm,15.0s							
WHN				LR	LR			
	comp=E,2μm,11.5s							
WHN				LR	LR			
	comp=Z,2μm,6.4s							
HHC	**Hu-ho-hao-te**	**10.69**	**32**	*e*P	**Pn**		**00 40 42.4**	**+2.3**
HHC				pP			00 40 45.8	
HHC				PP			00 40 50.9	
HHC				S	**Sn**		**00 42 43.3**	**+3.9**
HHC				sS			00 42 47.4	
HHC				SS			00 42 56.8	
HHC				pmax	pmax			
	comp=Z,15nm,1.1s							
HHC				pmax	pmax			
	comp=Z,150nm,5.8s							
HHC				LR	LR			
	comp=N,460nm,6.9s							
HHC				LR	LR			
	comp=E,590nm,6.1s							
HHC				LR	LR			
	comp=Z,440nm,5.9s							
CMAR	**Chiang Mai Arr**	**14.25**	**200**	Pn	**Pn**		**00 41 29.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=5.5,slow=10,SNR=4.4							
CMAR	**Chiang Mai Arr**	**14.25**	**200**	P	**Pn**		**00 41 29.3**	**+0.3**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
QZH	**Quanzhou**	**14.51**	**115**	P	**Pn**		**00 41 34.3**	**+1.8**
QZH				S	**Sn**		**00 44 17.9**	**+4.7**
QZH				LR	LR			
	comp=N,1μm,7.6s							
QZH				LR	LR			
	comp=E,2μm,9.6s							
QZH				LR	LR			
	comp=Z,3μm,10.6s							
SONM	**Songino Array**	**15.93**	**6**	Pn	**Pn**		**00 41 51.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=194,slow=18,SNR=4.2							
SONM				LR	LR		00 48 57.1	
	comp=Z,139nm,18.7s,baz=203,slow=41							
ULN	**Ulaanbaatar**	**16.03**	**7**	*e*P	**Pn**		**00 41 51.7**	**-0.7**
ULN				pmax	pmax			
	comp=Z,13nm,1.3s							
ULN	**Ulaanbaatar**	**16.03**	**7**	*e*Pn	**Pn**		**00 41 51.7**	**-0.7**
	comp=Z,12nm,1.3s							
GUN	**Gumba**	**16.33**	**260**	*e*P	**Pn**		**00 41 55.3**	**-1.1**
	comp=Z,51nm,0.9s							
PKI	**Pulchoki**	**16.84**	**260**	*e*P	**Pn**		**00 42 01.8**	**-1.0**
	comp=Z,60nm,1.2s							
KKN	**Kakani**	**16.87**	**261**	*e*P	**Pn**		**00 42 01.9**	**-1.4**
DMN	**Daman**	**17.08**	**260**	*e*P	**Pn**		**00 42 04.9**	**-1.0**
	comp=Z,55nm,1.1s							
ZAK	**Zakamensk**	**18.40**	**358**	*e*P	**Pn**		**00 42 27.5**	**+5.4**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.7s							
MOY	**Mondy**	**19.81**	**354**	*e*P	**Pn**		**00 42 46.3**	**+7.3**
KSRS	**Korea Array**	**20.29**	**68**	P	**P**		**00 42 43.2**	**+0.4**
	comp=Z,11nm,0.6s,baz=256,slow=10,SNR=42							
KSRS				LR	LR		00 51 15.2	
	comp=Z,69nm,22.0s,MS3.0,baz=76,slow=39							
KSRS	**Korea Array**	**20.29**	**68**	P	**P**		**00 42 43.2**	**+0.4**
KSRS				pmax	pmax			
	comp=Z,11nm,0.6s							
KSRS				MLR	MLR			
	comp=Z,69nm,22.0s,MS3.0							
CN2	**Changchun**	**20.49**	**49**	*e*P	**P**		**00 42 46.3**	**+1.4**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
JOW	**Kunigami**	**21.63**	**98**	LR	LR		00 51 17.2	
	comp=Z,221nm,19.3s,MS3.6,baz=144,slow=37							
MK31	**Makanchi Array**	**22.34**	**318**	*e*P	**P**		**00 43 05.9**	**+1.1**
MKAR	**Makanchi Array**	**22.34**	**318**	P	**P**		**00 43 06.0**	**+1.2**
	comp=Z,3.4nm,0.9s,mb3.8,baz=115,slow=13,SNR=13							
MKAR				LR	LR		00 52 39.7	
	comp=Z,313nm,18.6s,MS3.8,baz=132,slow=39							
MKAR	**Makanchi Array**	**22.34**	**318**	P	**P**		**00 43 06.0**	**+1.2**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MKAR				MLR	MLR			
	comp=Z,313nm,18.6s							
MKAR	**Makanchi Array**	**22.34**	**318**	P	**P**		**00 43 06.0**	**+1.2**
MKAR				LR	LR		00 52 39.7	
KSH	**Kashi**	**24.00**	**296**	*e*P	**P**		**00 43 25.8**	**+4.1**
KSH				pmax	pmax			
	comp=Z,20nm,1.9s,mb4.2							
VLA	**Vladivostok**	**24.55**	**55**	*e*P	**P**		**00 43 21.7**	**-5.0**
VLA				pmax	pmax			
	comp=Z,17nm,0.7s,mb4.7							
TKM2	**Tokmak 2**	**25.04**	**304**	*e*P	**P**		**00 43 32.6**	**+1.5**
TKM2				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb3.8							
TKM2	**Tokmak 2**	**25.04**	**304**	*e*P	**P**		**00 43 32.6**	**+1.5**
	comp=Z,1.8nm,0.6s,mb3.8							
UCH	**Uchtor**	**25.63**	**302**	*e*P	**P**		**00 43 37.8**	**+1.2**
	comp=Z,9.6nm,1.0s,mb4.3							
AAK	**Ala-Archa**	**25.74**	**303**	LR	LR		00 55 38.5	
	comp=Z,255nm,19.2s,MS3.8,baz=29,slow=41							
ZAA0	**Zalesovo Array**	**25.95**	**333**	*e*P	**P**		**00 43 39.5**	**+0.2**
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**		**00 43 39.9**	**+0.6**
	comp=Z,4.3nm,0.7s,mb4.1,baz=135,slow=9.2,SNR=17							
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**		**00 43 39.9**	**+0.6**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.1							
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**		**00 43 39.9**	**+0.6**
AML	**Almayashu**	**26.20**	**301**	*e*P	**P**		**00 43 42.5**	**+0.9**
	comp=Z,6.2nm,1.0s,mb4.1							
EKS2	**Erkin-Say**	**26.26**	**303**	*e*P	**P**		**00 43 43.0**	**+0.8**
	comp=Z,1.3nm,0.5s,mb3.7							
KURK	**Kurchatov**	**26.57**	**322**	P	**P**		**00 43 45.3**	**+0.4**
	comp=Z,2.2nm,0.7s,mb3.8,baz=126,slow=8.3,SNR=8.6							
KURK	**Kurchatov**	**26.57**	**322**	*e*P	**P**		**00 43 44.7**	**-0.2**
KURK				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb3.9							
KURK	**Kurchatov**	**26.57**	**322**	*e*P	**P**		**00 43 44.7**	**-0.2**
	comp=Z,4.2nm,1.1s,mb3.9							
KLR	**Kul'dur**	**26.92**	**42**	*e*P	**P**		**00 43 44.8**	**-3.3**
KLR				MLR	MLR			
	comp=Z,1μm,12.0s,MS4.6							

MJAR	**Matsushiro Arr**	**28.44**	**71**	P	**P**	**00 44 00.7**	**-1.2**
	comp=Z,1.7nm,0.7s,mb3.8,baz=285,slow=9.8,SNR=6.9						
MJAR				LR	LR	00 56 07.9	
	comp=Z,50nm,18.2s,MS3.1,baz=255,slow=38						
MJAR	**Matsushiro Arr**	**28.44**	**71**	P	**P**	**00 44 00.7**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,50nm,18.2s						
JHJ	**Hachijo jima 2**	**29.99**	**78**	LR	LR	00 56 17.4	
	comp=Z,76nm,21.3s,MS3.3,baz=186,slow=36						
BVAR	**Borovoye Array**	**32.13**	**321**	P	**P**	**00 44 34.4**	**+0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=90,slow=4.8,SNR=3.1						
BVAR				PcP	PcP	00 47 23.7	+0.6
	comp=Z,1.0nm,0.8s,baz=193,slow=4.4,SNR=4.4						
BVAR				LR	LR	00 57 21.0	
	comp=Z,66nm,18.3s,MS3.4,baz=124,slow=36						
BVAR	**Borovoye Array**	**32.13**	**321**	P	**P**	**00 44 34.4**	**+0.2**
BVAR						00 47 23.7	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,66nm,18.3s						
ABKAR	**Akbulak array**	**37.12**	**311**	*e*P	**P**	**00 45 18.0**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.0						
ARU	**Arti**	**39.76**	**322**	P	**P**	**00 45 40.6**	**+1.0**
ARU	**Arti**	**39.76**	**322**	*e*P	**P**	**00 45 39.5**	**-0.1**
	comp=Z,13nm,1.2s,mb4.5						
TIXI	**Tiksi**	**41.90**	**11**	*e*P	**P**	**00 45 59.1**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
PETK	**Petropavlovsk-**	**43.55**	**45**	P	**P**	**00 46 10.3**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.6,baz=288,slow=2.3,SNR=3.0						
PETK				LR	LR	01 06 22.4	
	comp=Z,85nm,18.1s,MS3.7,baz=113,slow=39						
PETK	**Petropavlovsk-**	**43.55**	**45**	P	**P**	**00 46 10.3**	**-0.3**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
PETK				MLR	MLR		
	comp=Z,85nm,18.1s,MS3.7						
JOF	**Joensuu**	**54.31**	**327**	*e*P	**P**	**00 47 31.9**	**-1.1**
JOF	**Joensuu**	**54.31**	**327**	*e*p	**P**	**00 47 31.9**	**-1.1**
	comp=Z,0.4nm,0.3s,mb3.8						
BR131	**Keskin Array S**	**56.34**	**299**	*e*P	**P**	**00 47 47.0**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**56.34**	**299**	P	**P**	**00 47 48.4**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=97,slow=6.5,SNR=12						
BRTR	**Keskin Array B**	**56.34**	**299**	P	**P**	**00 47 48.4**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**56.81**	**313**	P	**P**	**00 47 50.3**	**-0.9**
	comp=Z,1.1nm,0.3s,mb4.3,baz=70,slow=7.7,SNR=4.4						
AKASG	**Malin Array Be**	**56.81**	**313**	P	**P**	**00 47 50.3**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**00 47 51.2**	**-0.1**
	comp=Z,1.4nm,0.4s,mb4.4,baz=100,slow=7.9,SNR=24						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**00 47 51.2**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**00 47 51.2**	**-0.1**
COEN	**Coen**	**59.03**	**135**	*e*P	**P**	**00 48 07.1**	**-0.1**
	comp=Z,37nm,0.9s						
KWP	**Kalwaria Pacla**	**61.13**	**313**	*e*P	**P**	**00 48 22.0**	**+0.8**
KWP				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
KWP	**Kalwaria Pacla**	**61.13**	**313**	*e*P	**P**	**00 48 22.0**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**62.22**	**149**	P	**P**	**00 48 28.4**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.1,baz=335,slow=6.7,SNR=14						
ASAR	**Alice Springs**	**62.22**	**149**	P	**P**	**00 48 28.5**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**63.94**	**327**	P	**P**	**00 48 38.8**	**-0.9**
	comp=Z,2.5nm,0.9s,mb4.2,baz=75,slow=6.5						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**00 48 38.9**	**-0.9**
	comp=Z,1.8nm,0.9s,mb4.1,baz=36,slow=8.9,SNR=3.1						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**00 48 38.9**	**-0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MORC	**Moravsky Berou**	**64.28**	**314**	*e*P	**P**	**00 48 42.2**	**0.0**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
MORC	**Moravsky Berou**	**64.28**	**314**	*e*P	**P**	**00 48 42.2**	**0.0**
	comp=Z,2.2nm,0.8s,mb4.2						
GERES	**GERESS Array B**	**66.96**	**314**	P	**P**	**00 48 60.0**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=90,slow=5.3,SNR=9.7						
GERES				LR	LR	01 19 48.7	
	comp=Z,96nm,18.4s,MS4.0,baz=260,slow=37						
GERES	**GERESS Array B**	**66.96**	**314**	P	**P**	**00 49 00.0**	**+0.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,96nm,18.4s						
COLA	**College**	**68.64**	**26**	*e*P	**P**	**00 49 09.3**	**-0.5**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
COLA	**College**	**68.64**	**26**	*e*P	**P**	**00 49 09.3**	**-0.5**
	comp=Z,3.1nm,0.5s,mb4.5						
INK	**Inuvik**	**71.33**	**19**	*e*P	**P**	**00 49 27.7**	**+1.4**
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**71.33**	**19**	*e*P	**P**	**00 49 27.7**	**+1.5**
	comp=Z,2.4nm,0.9s,mb4.1						
LPG	**La Plagne**	**72.67**	**313**	*e*P	**P**	**00 49 34.6**	**-0.1**
	comp=Z,10.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.67**	**313**	*e*P	**P**	**00 49 34.6**	**-0.1**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**72.67**	**313**	*e*P	**P**	**00 49 34.6**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.68**	**313**	*e*P	**P**	**00 49 34.4**	**-0.4**
	comp=Z,11nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.68**	**313**	*e*P	**P**	**00 49 34.4**	**-0.4**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPL	**La Plagne**	**72.68**	**313**	*e*P	**P**	**00 49 34.4**	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.5						
BNI	**Bardonecchia**	**72.93**	**313**	*e*P	**P**	**00 49 37.0**	**+0.7**
BNI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BNI	**Bardonecchia**	**72.93**	**313**	*e*P	**P**	**00 49 37.0**	**+0.7**
	comp=Z,8.8nm,1.2s,mb4.6						
SMF	**Signal de Mont**	**73.90**	**315**	*e*P	**P**	**00 49 40.6**	**-1.3**
TCF	**Toulx Ste Croi**	**75.05**	**315**	*e*P	**P**	**00 49 47.7**	**-1.0**
	comp=Z,10nm,1.1s,mb4.4						
TCF	**Toulx Ste Croi**	**75.05**	**315**	*e*P	**P**	**00 49 47.7**	**-1.0**
TCF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
TCF	**Toulx Ste Croi**	**75.05**	**315**	*e*P	**P**	**00 49 47.7**	**-1.0**
	comp=Z,5.2nm,1.1s,mb4.4						
YKA	**Yellowknife Ar**	**80.86**	**17**	P	**P**	**00 50 20.1**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=324,slow=5.3,SNR=5.8						

*ISCJB **17** 00:46:41.7±0.9, 31°.49N×0°.03×103°.97E±0°.07, h10km±6km, mb3.6/11, Error ellipse: s-maj=10.3km s-min=5.3km az=178.9*
*IDC **17** 00:46:41.7±0.9, 31°.44N×103°.86E, h0km, mb3.6/9, mb1 3.8/11, mb1mx3.6/27, mbtmp3.7/11, ML4.1/2, Error ellipse: s-maj=33.7km s-min=17.6km az=58.0*
*BJI **17** 00:46:42.2, 31°.47N×103°.85E, h7km, mB4.2/1, mb3.7/2, ML3.8/9, Ms3.4/3, Ms7 3.1/3*
*NEIC **17** 00:46:43.1±0.4, 31°.42N×103°.83E, h10km, mb3.5/4, Error ellipse: s-maj=10.8km s-min=7.1km az=62.0*

ISC 17 00:46:43.7±0.8, 31°.47N±0°.03×103°.91E±0°.08, h12km±6km, n24, σ0°.90/31, mb3.6/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.58**	**193**	Pg	**Pg**	**00 46 54.8**	**-0.2**
CD2				Sg	**Sg**	**00 47 03.1**	**+0.5**
CD2				smax			
	comp=N,5μm,0.8s						
LZH	**Lanzhou**	**4.60**	**359**	*e*Pg	**Pg**	**00 48 11.0**	**-0.9**
LZH				Sn	**Sn**	**00 48 51.3**	**+4.9**
LZH				Sg	**Sg**	**00 49 11.3**	**-0.2**
LZH				smax			
	comp=N,73nm,1.0s						
LZH				smax			
	comp=E,140nm,1.4s						
LZH				LR	LR		
	comp=E,750nm,7.8s						
LZH				LR	LR		
	comp=Z,770nm,8.0s						
XAN	**Xi'an**	**4.94**	**57**	Pn	**Pn**	**00 47 56.3**	**-1.3**
XAN				Pg	**Pg**	**00 48 12.1**	**-6.2**
XAN				smax			
	comp=N,140nm,0.8s						
XAN				smax			
	comp=E,70nm,0.8s						
ENH	**Enshi**	**4.94**	**103**	*e*Pn	**Pn**	**00 47 58.4**	**+0.6**
GYA	**Guiyang**	**5.55**	**154**	Pn	**Pn**	**00 48 06.9**	**+0.8**
GYA				Sn	**Sn**	**00 49 05.8**	**-3.9**
GYA				smax			
	comp=N,110nm,0.9s						
GYA				smax			
	comp=E,100nm,0.9s						
KMI	**Kunming**	**6.41**	**190**	Pn	**Pn**	**00 48 19.1**	**+1.2**
KMI				Sn	**Sn**	**00 49 30.4**	**-0.6**
KMI				smax			
	comp=N,26nm,0.7s						
KMI				smax			
	comp=E,36nm,0.8s						
KMI				LR	LR		
	comp=N,240nm,8.3s						
KMI				LR	LR		
	comp=E,300nm,8.1s						
KMI				LR	LR		
	comp=Z,160nm,11.3s						
GTA	**Gaotai**	**8.60**	**338**	*e*P	**Pn**	**00 48 50.6**	**+2.7**
GTA				pP		00 48 54.0	
GTA				sP		00 48 56.6	
GTA				S	**Sn**	**00 50 29.0**	**+4.3**
GTA				sS		00 50 34.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,55nm,4.5s						
GTA				LR	LR		
	comp=N,120nm,11.3s						
GTA				LR	LR		
	comp=E,210nm,12.8s						
GTA				LR	LR		
	comp=Z,110nm,11.3s						
CMAR	**Chiang Mai Arr**	**13.72**	**200**	Pn	**Pn**	**00 49 56.2**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=357,slow=12,SNR=3.0						
SONM	**Songino Array**	**16.45**	**6**	Pn	**Pn**	**00 50 35.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=170,slow=9.6,SNR=2.5						
ULN	**Ulaanbaatar**	**16.55**	**7**	*e*Pn	**Pn**	**00 50 35.9**	**+0.4**
	comp=Z,4.5nm,1.1s						
KSRS	**Korea Array**	**20.65**	**67**	P	**P**	**00 51 23.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=254,slow=10,SNR=6.8						
MK31	**Makanchi Array**	**22.59**	**319**	*e*P	**P**	**00 51 42.8**	**-1.1**
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**00 51 45.1**	**+1.1**
	comp=Z,2.9nm,1.2s,mb3.6,baz=91,slow=11,SNR=5.8						
TKM2	**Tokmak 2**	**25.17**	**305**	*e*P	**P**	**00 52 08.4**	**-0.4**
	comp=Z,1.1nm,0.8s,mb3.4						
ZAA0	**Zalesovo Array**	**26.32**	**334**	*e*P	**P**	**00 52 19.5**	**+0.4**
ZALV	**Zalesovo Beam**	**26.32**	**334**	P	**P**	**00 52 18.8**	**-0.3**
	comp=Z,1.5nm,0.8s,mb3.6,baz=144,slow=10,SNR=6.8						
KURK	**Kurchatov**	**26.86**	**323**	P	**P**	**00 52 24.0**	**+0.1**
	comp=Z,0.9nm,0.2s,mb3.9,baz=137,slow=8.4,SNR=4.2						
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**	**00 53 12.1**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.4,baz=107,slow=9.2,SNR=3.0						
ABKAR	**Akbulak array**	**37.31**	**311**	*e*P	**P**	**00 53 55.9**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.5						
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**00 54 18.7**	**+0.3**
	comp=Z,1.8nm,0.7s,mb3.9						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**00 56 29.8**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=90,slow=4.2,SNR=3.2						
WRA	**Warramunga Arr**	**58.87**	**146**	P	**P**	**00 56 41.7**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=339,slow=7.7,SNR=5.8						
ASAR	**Alice Springs**	**61.89**	**149**	P	**P**	**00 57 04.1**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.7,baz=338,slow=6.9,SNR=4.5						
YKA	**Yellowknife Ar**	**81.39**	**17**	P	**P**	**00 58 59.5**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=327,slow=4.6,SNR=3.0						

*ISCJB **17** 00:50:49.0±0.5, 50°.12N±0°.04×19°.11E±0°.03, h0km, Error ellipse: s-maj=5.8km s-min=2.8km az=5.2*
*IPEC **17** 00:50:49.8±0.1, 50°.15N×19°.09E, h1km±1km, ML1.6/4, Error ellipse: s-maj=2.5km s-min=0.8km az=166.0*
*CSEM **17** 00:50:49.1±0.2, 50°.17N×19°.06E, h2km, ML2.5/8, Error ellipse: s-maj=6.4km s-min=2.7km az=4.0*
*PRU **17** 00:50:49.8, 50°.16N×19°.06E, h0km*
*WAR **17** 00:50:49.7, 50°.08N×19°.15E*

ISC 17 00:50:49.9±0.5, 50°.11N±0°.04×19°.10E±0°.03, h0km, n27, σ1°.10/44, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.46**	**76**	*e*Pg	**Pg**	**00 50 58.5**	**-0.2**
OJC				*e*Sg	**Sg**	**00 51 04.8**	**+0.1**
OJC	**Ojcow**	**0.46**	**76**	*e*Pg	**Pg**	**00 50 58.3**	**-0.4**
	baz=261						
OJC				*e*Sg	**Sg**	**00 51 04.8**	**+0.1**
	baz=261						
OKC	**Ostrava-Krasne**	**0.68**	**247**	*e*PG	**Pg**	**00 51 02.3**	**-0.5**
OKC				*e*SG	**Sg**	**00 51 11.5**	**-0.1**
	comp=Z,14nm,0.3s						
OKC	**Ostrava-Krasne**	**0.68**	**247**	Pg	**Pg**	**00 51 02.3**	**-0.5**
OKC				Sg	**Sg**	**00 51 11.5**	**-0.1**
	comp=Z,14nm,0.3s						
NIE	**Niedzica**	**1.05**	**131**	*e*Pg	**Pg**	**00 51 09.1**	**-0.8**
NIE				*e*Sg	**Sg**	**00 51 25.1**	**+1.6**
NIE	**Niedzica**	**1.05**	**131**	*e*Pg	**Pg**	**00 51 09.1**	**-0.8**
NIE				*e*Sg	**Sg**	**00 51 25.1**	**+1.6**
MORC	**Moravsky Berou**	**1.06**	**252**	*e*Pg	**Pg**	**00 51 09.8**	**-0.4**
	baz=69						
MORC				*e*Sg	**Sg**	**00 51 24.1**	**+0.1**
	comp=Z,12nm,0.3s,baz=69						
STHS	**Stebnicka Huta**	**1.55**	**116**	*e*PN	**Pg**	**00 51 19.4**	**-0.2**
STHS				*e*SN	**Sn**	**00 51 41.4**	**+1.9**
STHS	**Stebnicka Huta**	**1.55**	**116**	*e*Pn	**Pg**	**00 51 19.4**	**-0.2**
STHS				*e*Sn	**Sn**	**00 51 41.4**	**+1.9**
JAVC	**Velka Javorina**	**1.56**	**217**	*e*Pn	**Pn**	**00 51 19.0**	**+0.1**
	baz=35						
JAVC				*e*Sg	**Sg**	**00 51 42.2**	**+2.1**
	comp=Z,2.5nm,0.3s						
VYHS	**Vyhne**	**1.63**	**186**	*e*PN	**Pn**	**00 51 18.4**	**-1.4**
VYHS				*e*SN	**Sn**	**00 51 39.8**	**-1.6**
DPC	**Dobruska-Polom**	**1.80**	**279**	*e*PG	**Pn**	**00 51 22.0**	**-0.2**
DPC				*e*SG	**Sn**	**00 51 45.8**	**+0.1**
	comp=Z,8.4nm,0.3s						
DPC	**Dobruska-Polom**	**1.80**	**279**	*e*Pn	**Pn**	**00 51 21.5**	**-0.7**
	baz=95						
DPC	**Dobruska-Polom**	**1.80**	**279**	Pg	**Pn**	**00 51 22.0**	**-0.2**
DPC				Sg	**Sn**	**00 51 45.8**	**+0.1**
	comp=Z,8.4nm,0.3s						
VRAC	**Vranov**	**1.82**	**245**	*e*Sg	**Sn**	**00 51 46.9**	**+0.8**
	comp=Z,6.3nm,0.3s,baz=62						
KECS	**Kecovo**	**1.86**	**150**	*e*PN	**Pg**	**00 51 24.7**	**-0.9**
KECS				*e*SN	**Sn**	**00 51 46.4**	**-0.8**
UPC	**Upice**	**2.02**	**283**	*e*SG	**Sn**	**00 51 52.0**	**+0.9**
UPC	**Upice**	**2.02**	**283**	Sg	**Sn**	**00 51 52.0**	**+0.9**
KRUC	**Moravsky**	**2.05**	**240**	*e*Pn	**Pn**	**00 51 26.2**	**+0.6**
	baz=57						
KRUC				*e*Sg	**Sn**	**00 51 53.7**	**+1.8**
	comp=Z,3.7nm,0.3s,baz=57						
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*PN	**Pg**	**00 51 34.8**	**-0.6**
KOLS				*e*SN	**Sn**	**00 52 00.1**	**+0.2**
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*Pg	**Pg**	**00 51 34.8**	**-0.6**
KOLS				*e*Sn	**Sn**	**00 52 00.1**	**+0.2**
PRU	**Pruhonice**	**2.94**	**269**	*e*SG	**Sg**	**00 52 20.6**	**-3.8**
	comp=Z,1.6nm,0.4s						
PRU	**Pruhonice**	**2.94**	**269**	Sg	**Sg**	**00 52 20.6**	**-3.8**
	comp=Z,1.6nm,0.4s						
BRG	**Berggiesshubel**	**3.38**	**285**	SG	**Sg**	**00 52 37.2**	**-1.3**
	comp=Z,1.5nm,0.5s						
KHC	**Kasperske Hory**	**3.72**	**257**	*e*SG	**Sg**	**00 52 47.1**	**-2.4**
	comp=Z,1.5nm,0.3s						
KHC	**Kasperske Hory**	**3.72**	**257**	Sg	**Sg**	**00 52 47.1**	**-2.4**
	comp=Z,1.5nm,0.3s						
CLL	**Collm**	**4.06**	**290**	*e*Sg	**Sg**	**00 53 02.0**	**+1.8**

*ISCJB **17** 00:54:10.1±0.6, 30°.88N±0°.05×103°.14E±0°.05, h10km, mb3.6/12, MS3.2/2, Error ellipse: s-maj=7.2km s-min=6.3km az=13.1*
*IDC **17** 00:54:10.4±1.0, 31°.29N×103°.94E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/26, mbtmp3.7/8, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/27, Error ellipse: s-maj=38.4km s-min=18.5km az=51.0*
*NEIC **17** 00:54:12.0±0.6, 31°.42N×104°.08E, h10km, mb3.8/5, Error ellipse: s-maj=16.9km s-min=10.0km az=220.0*
*BJI **17** 00:54:13.8, 30°.86N×103°.42E, h20km, mb3.9/1, ML4.0/13, Ms3.7/3, Ms7 3.5/3*

ISC 17 00:54:12.4±0.5, 30°.84N±0°.04×103°.21E±0°.05, h10km, n23, σ1°.25/27, mb3.6/12, MS3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**81**	Pg	**Pg**	**00 54 21.5**	**-0.3**
CD2				Sg	**Sg**	**00 54 28.3**	**+0.2**
CD2				smax			
	comp=N,17μm,0.8s						
LZH	**Lanzhou**	**5.26**	**6**	*e*Pg	**Pg**	**00 55 54.8**	**+1.6**
LZH				Sg	**Sg**	**00 57 00.3**	**-1.1**
LZH				smax			
	comp=N,190nm,1.0s						
LZH				smax			
	comp=E,75nm,1.0s						
GYA	**Guiyang**	**5.32**	**144**	Pn	**Pn**	**00 55 32.8**	**+0.9**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,170nm,0.9s						
ENH	**Enshi**	**5.45**	**94**	*e*Pn	**Pn**	**00 55 24.9**	**-8.8**
KMI	**Kunming**	**5.71**	**184**	Pn	**Pn**	**00 55 35.9**	**-1.4**
KMI				Sn	**Sn**	**00 56 48.4**	**+5.5**
KMI				LR	LR		
	comp=N,180nm,6.3s						
KMI				LR	LR		
	comp=E,510nm,7.8s						
KMI				LR	LR		
	comp=Z,150nm,7.8s						
XAN	**Xi'an**	**5.79**	**55**	Pn	**Pn**	**00 55 36.8**	**-1.6**
XAN				Pg	**Pb**	**00 55 52.3**	**-1.2**
XAN				Sg	**Sb**	**00 57 04.3**	**+1.4**
XAN				smax			
	comp=N,190nm,0.8s						
XAN				smax			
	comp=E,58nm,0.8s						
WHN	**Wuhan**	**9.60**	**89**	P	**Pn**	**00 56 31.6**	**+0.9**
WHN				LR	LR		
	comp=N,270nm,4.5s						
WHN				LR	LR		
	comp=E,580nm,5.6s						
WHN				LR	LR		
	comp=Z,500nm,5.3s						
SONM	**Songino Array**	**17.15**	**7**	Pn	**Pn**	**00 58 03.6**	**-8.5**
	comp=Z,0.4nm,0.3s,baz=174,slow=14,SNR=2.5						
ULN	**Ulaanbaatar**	**17.26**	**9**	*e*Pn	**Pn**	**00 58 03.8**	**-10**
KSRS	**Korea Array**	**21.46**	**65**	P	**P**	**00 58 52.5**	**-8.4**
	comp=Z,0.3nm,0.4s,mb3.0,baz=269,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**22.68**	**321**	P	**P**	**00 59 14.0**	**+0.1**
	comp=Z,0.6nm,0.8s,mb3.1,baz=132,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**22.68**	**321**	P	**P**	**00 59 14.0**	**+0.1**
TKM2	**Tokmak 2**	**25.05**	**306**	*e*P	**P**	**00 59 36.2**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.5						
UCH	**Uchtor**	**25.59**	**304**	*e*P	**P**	**00 59 46.0**	**+4.3**
	comp=Z,3.2nm,1.2s,mb3.7						
AAK	**Ala-Archa**	**25.72**	**305**	P	**P**	**00 59 45.8**	**+2.9**
	comp=Z,1.3nm,0.3s,mb3.9,baz=111,slow=16,SNR=6.2						
AAK				LR	LR	01 11 23.0	
	comp=Z,66nm,19.2s,MS3.2,baz=278,slow=40						
AML	**Almayashu**	**26.14**	**304**	*e*P	**P**	**00 59 50.0**	**+3.3**
	comp=Z,2.2nm,0.9s,mb3.7						
EKS2	**Erkin-Say**	**26.24**	**305**	*e*P	**P**	**00 59 50.6**	**+3.0**
	comp=Z,0.9nm,0.4s,mb3.6						
ZALV	**Zalesovo Beam**	**26.63**	**335**	P	**P**	**00 59 49.3**	**-1.7**
	comp=Z,1.3nm,0.8s,mb3.5,baz=152,slow=9.4,SNR=4.1						
KURK	**Kurchatov**	**27.01**	**324**	*e*P	**P**	**00 59 53.9**	**-0.5**
	comp=Z,1.4nm,0.8s,mb3.5						
BVAR	**Borovoye Array**	**32.53**	**322**	LR	LR	01 14 48.2	
	comp=Z,56nm,19.3s,MS3.3,baz=344,slow=38						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**01 03 59.3**	**-1.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=88,slow=8.5,SNR=2.8						
WRA	**Warramunga Arr**	**58.69**	**145**	P	**P**	**01 04 10.1**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.1,baz=338,slow=7.5						
ASAR	**Alice Springs**	**61.67**	**148**	P	**P**	**01 04 30.3**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.9,baz=340,slow=6.8,SNR=6.7						

CASC 17 00:57:53.7±1.9, 12°.45N×86°.52W, h12km±5km, ML3.5, 7C-5D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMN	**Momotombo**	**0.05**	**204⇑**	*e*P	Pg	00 57 56.1	0.0
CNGN	**Cerro Negro**	**0.18**	**285⇑**	*e*P	Pg	00 57 57.8	0.0
CNGN				*e*S	Sg	00 58 02.7	+2.1
CNGN				AML	AML	00 58 05.2	
	comp=N,20μm,0.5s						
MIRN	**Miramar**	**0.19**	**266**	*e*P	Pg	00 57 58.1	+0.2
APYN	**Apoyeque**	**0.27**	**143⇑**	*i*P	Pg	00 57 59.5	+0.1
COPN	**Copaltepe**	**0.28**	**195⇑**	*e*P	Pg	00 57 59.5	0.0
COPN				*e*S	Sg	00 58 05.1	+1.7
CSAN		**0.28**	**160⇑**	*i*P	Pg	00 58 00.4	+0.9
TELN	**Telica**	**0.34**	**296⇓**	*i*P	Pg	00 58 01.1	+0.6
XAVN	**Gruta Xavier**	**0.36**	**148⇓**	*i*P	Pg	00 58 01.1	+0.2
HUEN		**0.36**	**108⇑**	*i*P	Pg	00 58 01.1	+0.2
HUEN				*e*S	Sg	00 58 06.0	+0.3
MGAN	**Managua**	**0.40**	**139⇓**	*i*P	Pg	00 58 01.8	+0.1
MGAN				AML	AML	00 58 08.7	
	comp=N,1μm,0.5s						
WILN	**Americas 2**	**0.43**	**132⇓**	*i*P	Pg	00 58 02.2	-0.1
TICN	**Ticuantepe**	**0.50**	**146⇓**	*i*P	Pg	00 58 03.7	+0.1
CRIN	**San Cristobal**	**0.57**	**296**	*i* P	Pg	00 58 04.6	-0.3
CRIN				AML	AML

8.6nm,0.1s,SNR=7.9
STS Pg **Pg** **01 05 00.1 +0.3**
44nm,0.1s,SNR=18
STS Sn **Sn** **01 05 15.4 -1.9**
25nm,0.2s,SNR=4.0
STS Lg 01 05 18.3
52nm,0.2s,SNR=14
STS Santiago 1.44 215 Pn **Pn** **01 04 57.6 -0.7**
8.6nm,0.1s,SNR=7.9
STS Santiago 1.44 215 Pg **Pg** **01 05 00.1 +0.3**
44nm,0.1s,SNR=18
STS Sn **Sn** **01 05 15.4 -1.9**
25nm,0.2s,SNR=4.0
STS Lg 01 05 18.3
52nm,0.2s,SNR=14
EMAZ Mazaricos 1.59 226 Pn **Pn** **01 04 59.5 -0.9**
EMAZ Pg **Pg** **01 05 02.4 -0.3**
EMAZ Sn **Sn** **01 05 18.1 -2.9**
EMAZ Lg 01 05 22.4
EMAZ Mazaricos 1.59 226 Pn **Pn** **01 04 59.5 -0.9**
1.2nm,0.1s,SNR=34
EMAZ Pg **Pg** **01 05 02.4 -0.3**
15nm,0.1s,SNR=12
EMAZ Sn **Sn** **01 05 18.1 -2.9**
12nm,0.1s,SNR=7.9
EMAZ Lg 01 05 22.4
48nm,0.1s,SNR=21
EMAZ Mazaricos 1.59 226 Pn **Pn** **01 04 59.5 -0.9**
1.2nm,0.1s,SNR=34
EMAZ Pg **Pg** **01 05 02.4 -0.3**
15nm,0.1s,SNR=12
EMAZ Sn **Sn** **01 05 18.1 -2.9**
12nm,0.1s,SNR=7.9
EMAZ Lg 01 05 22.4
48nm,0.1s,SNR=21
EMAZ Mazaricos 1.59 226 Pn **Pn** **01 04 59.5 -0.9**
1.2nm,0.1s,SNR=34
ERUA La Rua 1.69 173 Pg **Pg** **01 05 05.4 +0.9**
ERUA Sn **Sn** **01 05 22.7 -0.7**
ERUA Lg 01 05 28.0
ERUA La Rua 1.69 173 Pg **Pg** **01 05 05.4 +0.9**
18nm,0.1s,SNR=4.0
ERUA Sn **Sn** **01 05 22.7 -0.7**
10nm,0.2s,SNR=7.9
ERUA Lg 01 05 28.0
38nm,0.1s,SNR=7.9
ERUA La Rua 1.69 173 Pg **Pg** **01 05 05.4 +0.9**
18nm,0.1s,SNR=4.0
ERUA Sn **Sn** **01 05 22.7 -0.7**
10nm,0.2s,SNR=7.9
ERUA Lg 01 05 28.0
38nm,0.1s,SNR=7.9
ERUA La Rua 1.69 173 Pg **Pg** **01 05 05.4 +0.8**
18nm,0.1s,SNR=4.0
ERUA Sn **Sn** **01 05 22.7 -0.7**
10nm,0.2s,SNR=7.9
ERUA Lg 01 05 28.0
38nm,0.1s,SNR=7.9
EARI Arriondas 1.78 115 Pn **Pn** **01 05 05.3 +2.4**
EARI Pg **Pg** **01 05 08.1 +1.8**
EARI Sn **Sn** **01 05 27.9 +2.2**
EARI Lg 01 05 33.4
EARI Arriondas 1.78 115 Pn **Pn** **01 05 05.3 +2.4**
0.8nm,0.1s,SNR=13
EARI Pg **Pg** **01 05 08.1 +1.8**
0.9nm,0.1s,SNR=4.0
EARI Sn **Sn** **01 05 27.9 +2.2**
3.4nm,0.2s,SNR=6.7
EARI Lg 01 05 33.4
6.6nm,0.1s,SNR=5.0
EARI Arriondas 1.78 115 Pn **Pn** **01 05 05.3 +2.4**
0.8nm,0.1s,SNR=13
EARI Pg **Pg** **01 05 08.1 +1.8**
0.9nm,0.1s,SNR=4.0
EARI Sn **Sn** **01 05 27.9 +2.2**
3.4nm,0.2s,SNR=6.7
EARI Lg 01 05 33.4
6.6nm,0.1s,SNR=5.0
EARI Arriondas 1.78 115 Pn **Pn** **01 05 05.3 +2.3**
0.8nm,0.1s,SNR=13
EARI Arriondas 1.78 115 Pg **Pg** **01 05 08.1 +1.8**
0.9nm,0.1s,SNR=4.0
EARI Sn **Sn** **01 05 27.9 +2.3**
3.4nm,0.2s,SNR=6.7
EARI Lg 01 05 33.4
6.6nm,0.1s,SNR=5.0
EZAM Zamans 2.13 206 Pn **Pn** **01 05 07.3 -0.6**
EZAM Pg **Pg** **01 05 12.6 -0.5**
EZAM Sn **Sn** **01 05 32.9 -1.5**
EZAM Lg 01 05 39.3
EZAM Zamans 2.13 206 Pn **Pn** **01 05 07.3 -0.6**
2.8nm,0.1s,SNR=7.9
EZAM Pg **Pg** **01 05 12.6 -0.5**
6.4nm,0.1s,SNR=7.9
EZAM Sn **Sn** **01 05 32.9 -1.5**
5.6nm,0.2s,SNR=7.9
EZAM Lg 01 05 39.3
44nm,0.4s,SNR=7.9
EZAM Zamans 2.13 206 Pn **Pn** **01 05 07.3 -0.6**
2.8nm,0.1s,SNR=7.9
EZAM Pg **Pg** **01 05 12.6 -0.5**
6.4nm,0.1s,SNR=7.9
EZAM Sn **Sn** **01 05 32.9 -1.5**
5.6nm,0.2s,SNR=7.9
EZAM Lg 01 05 39.3
44nm,0.4s,SNR=7.9
EZAM Zamans 2.13 206 Pn **Pn** **01 05 07.3 -0.5**
2.8nm,0.1s,SNR=7.9
EZAM Zamans 2.13 206 Pg **Pg** **01 05 12.6 -0.5**
6.4nm,0.1s,SNR=7.9
EZAM Sn **Sn** **01 05 32.9 -1.5**
5.6nm,0.2s,SNR=7.9
EZAM Lg 01 05 39.3
44nm,0.4s,SNR=7.9
ECAL Calabor 2.19 166 Pn **Pn** **01 05 10.2 +1.6**
ECAL Pg **Pg** **01 05 14.1 0.0**
ECAL Lg 01 05 42.6
ECAL Calabor 2.19 166 Pn **Pn** **01 05 10.2 +1.6**
6.9nm,0.1s,SNR=24
ECAL Pg **Pg** **01 05 14.1 0.0**
9.8nm,0.1s,SNR=5.0
ECAL Lg 01 05 42.6
75nm,0.2s,SNR=13
ECAL Calabor 2.19 166 Pn **Pn** **01 05 10.2 +1.6**
6.9nm,0.1s,SNR=24
ECAL Pg **Pg** **01 05 14.1 0.0**
9.8nm,0.1s,SNR=5.0
ECAL Lg 01 05 42.6
75nm,0.2s,SNR=13
ECAL Calabor 2.19 166 Pn **Pn** **01 05 10.2 +1.6**
6.9nm,0.1s,SNR=24
ELOB Lobios 2.25 192 Pn **Pn** **01 05 09.5 0.0**
ELOB Pg **Pg** **01 05 14.7 -0.7**
ELOB Lg 01 05 43.5
ELOB Lobios 2.25 192 Pn **Pn** **01 05 09.5 0.0**
1.7nm,0.1s,SNR=25
ELOB Pg **Pg** **01 05 14.7 -0.7**
2.8nm,0.1s,SNR=20
ELOB Lg 01 05 43.5
31nm,0.2s,SNR=12
ELOB Lobios 2.25 192 Pn **Pn** **01 05 09.5 0.0**
1.7nm,0.1s,SNR=25
ELOB Pg **Pg** **01 05 14.7 -0.7**
2.8nm,0.1s,SNR=20
ELOB Lg 01 05 43.5
31nm,0.2s,SNR=12
ELOB Lobios 2.25 192 Pn **Pn** **01 05 09.5 +0.1**
1.7nm,0.1s,SNR=25
ELOB Lobios 2.25 192 Pg **Pg** **01 05 14.6 -0.7**
2.8nm,0.1s,SNR=20
ELOB Lg 01 05 43.5
31nm,0.2s,SNR=12
PBRG Braganca 2.32 167 *e*Pn **Pn** **01 05 12.3 +1.9**
PBRG *e*Sg **Sg** **01 05 46.2 -0.4**
PBRG A 01 05 51.0
26nm,0.5s
PBRG Braganca 2.32 167 Pn **Pn** **01 05 12.3 +1.9**
PBRG Lg 01 05 46.2
13nm,0.5s
PBRG Braganca 2.32 167 Pn **Pn** **01 05 12.3 +1.9**
PBRG Lg 01 05 46.2
13nm,0.5s
PBRG Braganca 2.32 167 *e*Pn **Pn** **01 05 12.3 +1.9**
PBRG *e*Sg **Sg** **01 05 46.2 -0.4**
26nm,0.5s
PCAB Cabril 2.40 191 *e*Pn **Pn** **01 05 12.0 +0.5**
PCAB *e*Sg **Sg** **01 05 49.0 -0.3**
PCAB A 01 05 55.3
34nm,0.5s
PCAB Cabril 2.40 191 Pn **Pn** **01 05 12.0 +0.5**
PCAB Lg 01 05 49.0
17nm,0.5s
PCAB Cabril 2.40 191 Pn **Pn** **01 05 12.0 +0.5**
PCAB Lg 01 05 49.0
17nm,0.5s
PCAB Cabril 2.40 191 *e*Pn **Pn** **01 05 12.0 +0.5**
PCAB *e*Sg **Sg** **01 05 49.0 -0.3**
34nm,0.5s
PVRL Vila Real 2.80 185 *e*Pn **Pn** **01 05 18.0 +1.0**
PVRL Vila Real 2.80 185 *e*Pg **Pg** **01 05 26.9 +1.1**
PVRL *e*Sg **Sg** **01 06 02.7 +0.6**
PVRL A 01 06 05.2
22nm,0.4s
PVRL Vila Real 2.80 185 Pn **Pn** **01 05 18.0 +1.0**
PVRL Pg **Pg** **01 05 26.9 +1.1**
PVRL Lg 01 06 02.7
11nm,0.4s
PVRL Vila Real 2.80 185 Pn **Pn** **01 05 18.0 +1.0**
PVRL Pg **Pg** **01 05 26.9 +1.1**
PVRL Lg 01 06 02.7
11nm,0.4s
PVRL Vila Real 2.80 185 *e*Pn **Pn** **01 05 18.0 +1.0**
PVRL Vila Real 2.80 185 *e*Pg **Pg** **01 05 26.9 +1.1**
PVRL *e*Sg **Sg** **01 06 02.7 +0.6**
22nm,0.4s
MVO Moncorvo 2.92 174 *e*Pn **Pn** **01 05 20.1 +1.5**
MVO *e*Sg **Sg** **01 06 05.2 -0.7**
MVO A 01 06 08.7
25nm,0.4s
MVO Moncorvo 2.92 174 *e*Pn **Pn** **01 05 20.1 +1.5**
MVO *e*Sg **Sg** **01 06 05.2 -0.7**
25nm,0.4s
ELAN Lanestosa 3.01 105 Pn **Pn** **01 05 21.8 +1.8**
ELAN Sn **Sn** **01 05 56.7 +0.6**
ELAN Lanestosa 3.01 105 Pn **Pn** **01 05 21.8 +1.8**
0.8nm,0.1s,SNR=14
ELAN Sn **Sn** **01 05 56.7 +0.6**
1.9nm,0.1s,SNR=5.0
ELAN Lanestosa 3.01 105 Pn **Pn** **01 05 21.8 +1.8**
0.8nm,0.1s,SNR=14
ELAN Sn **Sn** **01 05 56.7 +0.6**
1.9nm,0.1s,SNR=5.0
ELAN Lanestosa 3.01 105 Pn **Pn** **01 05 21.8 +1.9**
0.8nm,0.1s,SNR=14
ELAN Sn **Sn** **01 05 56.7 +0.6**
1.9nm,0.1s,SNR=5.0
MTE Manteigas 3.67 181 *e*Sg **Sg** **01 06 29.4 -0.6**
MTE A 01 06 37.5
21nm,0.4s
MTE Manteigas 3.67 181 *e*Sg **Sg** **01 06 29.4 -0.6**
21nm,0.4s
ECRI Cripan 3.87 110 Pn **Pn** **01 05 35.7 +4.0**
ECRI Sn **Sn** **01 06 17.9 +0.7**
ECRI Cripan 3.87 110 Pn **Pn** **01 05 35.7 +4.0**
0.8nm,0.2s,SNR=7.9
ECRI Sn **Sn** **01 06 17.9 +0.7**
0.6nm,0.1s,SNR=7.9
ECRI Cripan 3.87 110 Pn **Pn** **01 05 35.7 +4.0**
0.8nm,0.2s,SNR=7.9
ECRI Sn **Sn** **01 06 17.9 +0.7**
0.6nm,0.1s,SNR=7.9
ECRI Cripan 3.87 110 Pn **Pn** **01 05 35.7 +4.0**
0.8nm,0.2s,SNR=7.9
ECRI Sn **Sn** **01 06 17.9 +0.7**
0.6nm,0.1s,SNR=7.9
GUD Guadarrama 4.19 144 Pn **Pn** **01 05 38.2 +2.0**
GUD Sn **Sn** **01 06 23.6 -1.6**
GUD Lg 01 06 47.1
GUD Guadarrama 4.19 144 Pn **Pn** **01 05 38.2 +2.0**
0.6nm,0.2s,SNR=7.9
GUD Sn **Sn** **01 06 23.6 -1.6**
2.2nm,0.4s,SNR=7.9
GUD Lg 01 06 47.1
6.0nm,0.4s,SNR=7.9
GUD Guadarrama 4.19 144 Pn **Pn** **01 05 38.2 +2.0**
0.6nm,0.2s,SNR=7.9
GUD Sn **Sn** **01 06 23.6 -1.6**
2.2nm,0.4s,SNR=7.9
GUD Lg 01 06 47.1
6.0nm,0.4s,SNR=7.9
GUD Guadarrama 4.19 144 Pn **Pn** **01 05 38.2 +2.0**
0.6nm,0.2s,SNR=7.9
GUD Sn **Sn** **01 06 23.6 -1.6**
2.2nm,0.4s,SNR=7.9
GUD Lg 01 06 47.1
6.0nm,0.4s,SNR=7.9
PCBR Castelo Branco 4.23 181 *e*Pn **Pn** **01 05 38.0 +1.4**
PCBR *e*Sn **Sn** **01 06 25.0 -1.0**
PCBR *e*Sg **Sg** **01 06 48.6 +0.7**
PCBR A 01 06 58.8
5.9nm,0.4s
PCBR Castelo Branco 4.23 181 Pn **Pn** **01 05 38.0 +1.4**
PCBR Sn **Sn** **01 06 25.0 -1.0**
PCBR Lg 01 06 48.6
3.0nm,0.4s
PCBR Castelo Branco 4.23 181 Pn **Pn** **01 05 38.0 +1.4**
PCBR Sn **Sn** **01 06 25.0 -1.0**
PCBR Lg 01 06 48.6
3.0nm,0.4s
PCBR Castelo Branco 4.23 181 *e*Pn **Pn** **01 05 38.0 +1.4**
PCBR *e*Sn **Sn** **01 06 25.0 -1.0**
ELIZ Elizondo 4.37 100 Pn **Pn** **01 05 39.9 +1.3**
ELIZ Sn **Sn** **01 06 24.8 -4.8**
ELIZ Elizondo 4.37 100 Pn **Pn** **01 05 39.9 +1.3**
0.7nm,0.1s,SNR=7.9
ELIZ Sn **Sn** **01 06 24.8 -4.8**
0.5nm,0.2s,SNR=7.9
ELIZ Elizondo 4.37 100 Pn **Pn** **01 05 39.9 +1.3**
0.7nm,0.1s,SNR=7.9
ELIZ Sn **Sn** **01 06 24.8 -4.8**
0.5nm,0.2s,SNR=7.9
ELIZ Elizondo 4.37 100 Pn **Pn** **01 05 39.9 +1.3**
0.7nm,0.1s,SNR=7.9
ELIZ Sn **Sn** **01 06 24.8 -4.8**
0.5nm,0.2s,SNR=7.9
EALK Alkurruntz 4.38 99 Pn **Pn** **01 05 40.1 +1.5**
EALK Sn **Sn** **01 06 27.7 -2.0**
EALK Alkurruntz 4.38 99 Pn **Pn** **01 05 40.1 +1.4**
0.9nm,0.1s,SNR=13
EALK Sn **Sn** **01 06 27.7 -2.0**
3.0nm,0.3s,SNR=5.0
EALK Alkurruntz 4.38 99 Pn **Pn** **01 05 40.1 +1.4**
0.9nm,0.1s,SNR=13
EALK Sn **Sn** **01 06 27.7 -2.0**
3.0nm,0.3s,SNR=5.0
EALK Alkurruntz 4.38 99 Pn **Pn** **01 05 40.1 +1.4**
0.9nm,0.1s,SNR=13
EALK Sn **Sn** **01 06 27.7 -2.0**
3.0nm,0.3s,SNR=5.0
IZUN Zunzarren 4.51 103 Pn **Pn** **01 05 43.1 +2.6**
0.2nm,0.1s,SNR=7.9
IZUN Zunzarren 4.51 103 Pn **Pn** **01 05 43.1 +2.6**
0.2nm,0.1s,SNR=7.9
IZUN Zunzarren 4.51 103 Pn **Pn** **01 05 43.1 +2.6**
0.2nm,0.1s,SNR=7.9
EORO Oroz-Betelu 4.60 103 Pn **Pn** **01 05 44.3 +2.6**
0.7nm,0.1s,SNR=4.0
EORO Sn **Sn** **01 06 35.1 -0.1**
1.6nm,0.2s,SNR=7.9
EORO Oroz-Betelu 4.60 103 Pn **Pn** **01 05 44.3 +2.6**
0.7nm,0.1s,SNR=4.0
EORO Sn **Sn** **01 06 35.1 -0.1**
1.6nm,0.2s,SNR=7.9
EORO Oroz-Betelu 4.60 103 Pn **Pn** **01 05 44.3 +2.6**
0.7nm,0.1s,SNR=4.0
EORO Sn **Sn** **01 06 35.1 -0.1**
1.6nm,0.2s,SNR=7.9
SJPF Ste Jean 4.60 100 *e*Pn **Pn** **01 05 43.1 +1.3**
SJPF *e*Sn **Sn** **01 06 34.1 -1.1**
1.5nm,0.2s
SJPF Ste Jean 4.60 100 Pn **Pn** **01 05 43.1 +1.3**
SJPF Sn **Sn** **01 06 34.1 -1.1**
0.8nm,0.2s
SJPF Ste Jean 4.60 100 Pn **Pn** **01 05 43.1 +1.3**
SJPF Sn **Sn** **01 06 34.1 -1.1**
0.8nm,0.2s
SJPF Ste Jean 4.60 100 *e*Pn **Pn** **01 05 43.1 +1.3**
SJPF *e*Sn **Sn** **01 06 34.1 -1.1**
0.8nm,0.2s
PMRV Marv??o 4.64 180 *e*Pn **Pn** **01 05 43.5 +1.2**
PMRV *e*Sg **Sg** **01 07 00.8 -0.3**
PMRV A 01 07 06.6
7.7nm,0.5s
PMRV Marv??o 4.64 180 Pn **Pn** **01 05 43.5 +1.2**
PMRV Lg 01 07 00.8
3.8nm,0.5s
PMRV Marv??o 4.64 180 Pn **Pn** **01 05 43.5 +1.2**
PMRV Lg 01 07 00.8
3.8nm,0.5s
PMRV Marv??o 4.64 180 *e*Pn **Pn** **01 05 43.5 +1.2**
QUIF Quistinic 4.86 36 *e*Pn **Pn** **01 05 44.1 -1.2**
QUIF *e*Sn **Sn** **01 06 34.0 -7.5**
2.4nm,0.3s
QUIF Quistinic 4.86 36 Pn **Pn** **01 05 44.1 -1.2**
QUIF Sn **Sn** **01 06 34.0 -7.5**
1.2nm,0.3s
QUIF Quistinic 4.86 36 Pn **Pn** **01 05 44.1 -1.2**
QUIF Sn **Sn** **01 06 34.0 -7.5**
1.2nm,0.3s
QUIF Quistinic 4.86 36 *e*Pn **Pn** **01 05 44.1 -1.2**
ESDC Sonseca Array 5.09 148 Sn **Sn** **01 06 46.0 -1.3**
1.2nm,0.2s,baz=328,slow=22,SNR=4.7
ESDC Lg 01 07 11.3
1.8nm,0.2s,baz=333,slow=29,SNR=4.0
ESDC Sonseca Array 5.09 148 Sn **Sn** **01 06 46.0 -1.3**
1.2nm,0.2s,baz=328,slow=22,SNR=4.7
ESDC Lg 01 07 11.3
1.8nm,0.2s,baz=333,slow=29,SNR=4.0
ESDC Sonseca Array 5.09 148 Sn **Sn** **01 06 46.0 -1.4**
1.2nm,0.2s,baz=328,slow=22,SNR=4.7
ESDC Lg 01 07 11.3
1.8nm,0.2s,SNR=4.0
ETOR Torete 5.13 127 Pn **Pn** **01 05 51.3 +2.3**
ETOR Sn **Sn** **01 06 47.8 -0.5**
ETOR Lg 01 07 15.8
ETOR Torete 5.13 127 Pn **Pn** **01 05 51.3 +2.3**
1.6nm,0.1s,SNR=7.9
ETOR Sn **Sn** **01 06 47.8 -0.5**
0.9nm,0.4s,SNR=7.9
ETOR Lg 01 07 14.2
2.7nm,0.8s,SNR=4.0
ETOR Torete 5.13 127 Pn **Pn** **01 05 51.3 +2.3**
1.6nm,0.1s,SNR=7.9
ETOR Sn **Sn** **01 06 47.8 -0.5**
0.9nm,0.4s,SNR=7.9
ETOR Lg 01 07 14.2
2.7nm,0.8s,SNR=4.0
ETOR Torete 5.13 127 Pn **Pn** **01 05 51.3 +2.3**
1.6nm,0.1s,SNR=7.9
ETOR Sn **Sn** **01 06 47.8 -0.4**
0.9nm,0.4s,SNR=7.9
ETOR Lg 01 07 15.8
2.7nm,0.8s,SNR=4.0
ETSF Etsaut 5.13 101 *e*Pn **Pn** **01 05 50.1 +1.1**
ETSF *e*Sn **Sn** **01 06 47.0 -1.2**
1.7nm,0.3s
ETSF Etsaut 5.13 101 Pn **Pn** **01 05 50.1 +1.1**
ETSF Sn **Sn** **01 06 47.0 -1.2**
0.9nm,0.3s
ETSF Etsaut 5.13 101 Pn **Pn** **01 05 50.1 +1.1**
ETSF Sn **Sn** **01 06 47.0 -1.2**
0.9nm,0.3s
ETSF Etsaut 5.13 101 *e*Pn **Pn** **01 05 50.1 +1.1**
ETSF *e*Sn **Sn** **01 06 47.0 -1.2**
0.9nm,0.3s
ROSF Rostrenen 5.15 33 *e*Pn **Pn** **01 05 47.8 -1.4**
ROSF *e*Sn **Sn** **01 06 41.0 -7.7**
0.9nm,0.2s
ROSF Rostrenen 5.15 33 Pn **Pn** **01 05 47.8 -1.4**
ROSF Sn **Sn** **01 06 41.0 -7.7**
0.4nm,0.2s
ROSF Rostrenen 5.15 33 Pn **Pn** **01 05 47.8 -1.4**
ROSF Sn **Sn** **01 06 41.0 -7.7**
0.4nm,0.2s
ROSF Rostrenen 5.15 33 *e*Pn **Pn** **01 05 47.8 -1.4**
PESTR Estremoz 5.20 181 *e*Sn **Sn** **01 06 48.2 -1.8**
PESTR *e*Sg **Sg** **01 07 18.6 -0.5**
PESTR A 01 07 20.7
4.7nm,0.6s
PESTR Estremoz 5.20 181 Sn **Sn** **01 06 48.2 -1.8**
PESTR Lg 01 07 18.6
2.3nm,0.6s
PESTR Estremoz 5.20 181 Sn **Sn** **01 06 48.2 -1.8**
PESTR Lg 01 07 18.6
2.3nm,0.6s
PESTR Estremoz 5.20 181 *e*Sn **Sn** **01 06 48.2 -1.8**
EBAD Badajoz 5.32 177 Pn **Pn** **01 05 53.2 +1.6**
EBAD Sn **Sn** **01 06 49.3 -3.6**
EBAD Lg 01 07 19.9
EBAD Badajoz 5.32 177 Pn **Pn** **01 05 53.2 +1.6**
0.2nm,0.1s,SNR=7.9
EBAD Sn **Sn** **01 06 49.3 -3.6**
0.6nm,0.2s,SNR=4.0
EBAD Lg 01 07 16.6
5.1nm,0.5s,SNR=5.7
EBAD Badajoz 5.32 177 Pn **Pn** **01 05 53.2 +1.6**
0.2nm,0.1s,SNR=7.9
EBAD Sn **Sn** **01 06 49.3 -3.6**
0.6nm,0.2s,SNR=4.0
EBAD Lg 01 07 16.6
5.1nm,0.5s,SNR=5.7
EBAD Badajoz 5.32 177 Pn **Pn** **01 05 53.2 +1.6**
0.2nm,0.1s,SNR=7.9
EBAD Sn **Sn** **01 06 49.3 -3.6**
0.6nm,0.2s,SNR=4.0
EBAD Lg 01 07 19.9
5.1nm,0.5s,SNR=5.7
SGMF Saint Gilles 5.38 37 *e*Pn **Pn** **01 05 51.1 -1.3**
SGMF *e*Sn **Sn** **01 06 46.7 -7.6**
1.7nm,0.4s
SGMF Saint Gilles 5.38 37 Pn **Pn** **01 05 51.1 -1.3**
SGMF Sn **Sn** **01 06 46.7 -7.6**
0.9nm,0.4s
SGMF Saint Gilles 5.38 37 Pn **Pn** **01 05 51.1 -1.3**
SGMF Sn **Sn** **01 06 46.7 -7.6**
0.9nm,0.4s
EVO Evora 5.55 185 *e*Pn **Pn** **01 05 54.8 0.0**
EVO *e*Sg **Sg** **01 07 28.2 -2.1**
12nm,0.6s
ESAC San Caprasio 5.62 112 Pn **Pn** **01 05 57.9 +2.1**
ESAC Sn **Sn** **01 06 59.5 -0.8**
ESAC San Caprasio 5.62 112 Pn **Pn** **01 05 57.9 +2.1**
1.3nm,0.2s,SNR=7.9
ESAC Sn **Sn** **01 06 59.5 -0.8**
3.2nm,0.3s,SNR=7.9
ESAC San Caprasio 5.62 112 Pn **Pn** **01 05 57.9 +2.1**
1.3nm,0.2s,SNR=7.9
ESAC Sn **Sn** **01 06 59.5 -0.8**
3.2nm,0.3s,SNR=7.9
ESAC San Caprasio 5.62 112 Pn **Pn** **01 05 57.9 +2.2**
1.3nm,0.2s,SNR=7.9
ESAC Sn **Sn** **01 06 59.5 -0.8**
3.2nm,0.3s,SNR=7.9
EBIE Bielsa 5.68 101 Pn **Pn** **01 05 59.3 +2.6**
EBIE Sn **Sn** **01 07 01.4 -0.5**
EBIE Bielsa 5.68 101 Pn **Pn** **01 05 59.3 +2.6**
0.6nm,0.2s,SNR=7.9
EBIE Sn **Sn** **01 07 01.4 -0.5**
0.5nm,0.2s,SNR=7.9
EBIE Bielsa 5.68 101 Pn **Pn** **01 05 59.3 +2.6**
0.6nm,0.2s,SNR=7.9
EBIE Sn **Sn** **01 07 01.4 -0.5**
0.5nm,0.2s,SNR=7.9
EBIE Bielsa 5.68 101 Pn **Pn** **01 05 59.3 +2.7**
0.6nm,0.2s,SNR=7.9
EBIE Sn **Sn** **01 07 01.4 -0.5**
0.5nm,0.2s,SNR=7.9
MFF Saint Martin d 5.72 61 *e*Pn **Pn** **01 05 56.7 -0.4**
MFF *e*Sn **Sn** **01 06 57.2 -5.6**
1.8nm,0.3s
MFF Saint Martin d 5.72 61 Pn **Pn** **01 05 56.7 -0.4**
MFF Sn **Sn** **01 06 57.2 -5.6**
0.9nm,0.3s
MFF Saint Martin d 5.72 61 Pn **Pn** **01 05 56.7 -0.4**
MFF Sn **Sn** **01 06 57.2 -5.6**
0.9nm,0.3s
MFF Saint Martin d 5.72 61 *e*Pn **Pn** **01 05 56.7 -0.4**
EPF Esparros 5.74 98 *e*Pn **Pn** **01 05 58.4 +1.1**
EPF *e*Sn **Sn** **01 07 01.3 -1.9**
1.1nm,0.2s
EPF Esparros 5.74 98 Pn **Pn** **01 05 58.4 +1.1**
EPF Sn **Sn** **01 07 01.3 -1.9**
0.6nm,0.2s
EPF Esparros 5.74 98 Pn **Pn** **01 05 58.4 +1.1**
EPF Sn **Sn** **01 07 01.3 -1.9**
0.6nm,0.2s
EPF Esparros 5.74 98 *e*Pn **Pn** **01 05 58.4 +1.1**
PBAR Barrancos 5.90 177 *e*Pn **Pn** **01 06 03.0 +3.4**
PBAR *e*Sg **Sg** **01 07 38.8 -2.6**

PBAR				A		01 07 53.3	
	4.0nm,0.6s						
PBAR	Barrancos	5.90	177	Pn	Pn	01 06 03.0	+3.4
PBAR				Lg		01 07 38.8	
	4.0nm,0.6s						
PBAR	Barrancos	5.90	177	Pn	Pn	01 06 03.0	+3.4
PBAR				Lg		01 07 38.8	
	4.0nm,0.6s						
LFF	La Frestale	5.90	79	ePn	Pn	01 06 00.0	+0.4
LFF				eSn	Sn	01 07 03.8	-3.5
	1.4nm,0.2s						
LFF	La Frestale	5.90	79	Pn	Pn	01 06 00.0	+0.4
LFF				Sn	Sn	01 07 03.8	-3.5
	0.7nm,0.2s						
LFF	La Frestale	5.90	79	Pn	Pn	01 06 00.0	+0.4
LFF				Sn	Sn	01 07 03.8	-3.5
	0.7nm,0.2s						
LFF	La Frestale	5.90	79	ePn	Pn	01 06 00.0	+0.4
GRR	Gorron	6.27	44	ePn	Pn	01 06 03.6	-1.1
GRR				eSn	Sn	01 07 08.7	-7.7
	1.5nm,0.2s						
GRR	Gorron	6.27	44	Pn	Pn	01 06 03.6	-1.1
GRR				Sn	Sn	01 07 08.7	-7.7
	0.8nm,0.2s						
GRR	Gorron	6.27	44	Pn	Pn	01 06 03.6	-1.1
GRR				Sn	Sn	01 07 08.7	-7.7
	0.8nm,0.2s						
GRR	Gorron	6.27	44	ePn	Pn	01 06 03.6	-1.1
EADA	Adamuz	6.28	159	Sn	Sn	01 07 11.7	-4.8
	0.5nm,0.4s,SNR=7.9						
EADA				Lg		01 07 48.6	
	2.3nm,0.5s,SNR=7.9						
EADA	Adamuz	6.28	159	Sn	Sn	01 07 11.7	-4.8
	0.5nm,0.4s,SNR=7.9						
EADA				Lg		01 07 48.6	
	2.3nm,0.5s,SNR=7.9						
EADA	Adamuz	6.28	159	Sn	Sn	01 07 11.7	-4.8
	0.5nm,0.4s,SNR=7.9						
EADA				Lg		01 07 48.6	
	2.3nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	6.32	175	Pn	Pn	01 06 06.8	+1.4
EMIN				Lg		01 07 50.5	
EMIN	Mina Concepcio	6.32	175	Pn	Pn	01 06 06.8	+1.4
	0.1nm,0.1s,SNR=7.9						
EMIN				Lg		01 07 50.5	
	3.8nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	6.32	175	Pn	Pn	01 06 06.8	+1.4
	0.1nm,0.1s,SNR=7.9						
EMIN				Lg		01 07 50.5	
	3.8nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	6.32	175	Pn	Pn	01 06 06.8	+1.4
	0.1nm,0.1s,SNR=7.9						
EMIN				Lg		01 07 50.5	
	3.8nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	6.35	123	Pn	Pn	01 06 07.1	+1.4
EMOS	Mosqueruela	6.35	123	Pn	Pn	01 06 07.1	+1.4
	0.3nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	6.35	123	Pn	Pn	01 06 07.1	+1.4
	0.3nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	6.35	123	Pn	Pn	01 06 07.1	+1.3
	0.3nm,0.1s,SNR=7.9						
RJF	Les Rejaudoux	6.49	76	ePn	Pn	01 06 07.6	-0.1
RJF				eSn	Sn	01 07 17.1	-4.6
	1.3nm,0.3s						
RJF	Les Rejaudoux	6.49	76	Pn	Pn	01 06 07.6	-0.1
RJF				Sn	Sn	01 07 17.1	-4.6
	0.6nm,0.3s						
RJF	Les Rejaudoux	6.49	76	Pn	Pn	01 06 07.6	-0.1
RJF				Sn	Sn	01 07 17.1	-4.6
	0.6nm,0.3s						
RJF	Les Rejaudoux	6.49	76	ePn	Pn	01 06 07.6	-0.1
ERTA	Horta de San J	6.52	116	Pn	Pn	01 06 10.4	+2.3
ERTA				Sn	Sn	01 07 21.0	-1.5
ERTA	Horta de San J	6.52	116	Pn	Pn	01 06 10.4	+2.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	01 07 21.0	-1.5
	0.3nm,0.2s,SNR=7.9						
ERTA	Horta de San J	6.52	116	Pn	Pn	01 06 10.4	+2.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	01 07 21.0	-1.5
	0.3nm,0.2s,SNR=7.9						
ERTA	Horta de San J	6.52	116	Pn	Pn	01 06 10.4	+2.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	01 07 21.0	-1.5
	0.3nm,0.2s,SNR=7.9						
EGRO	El Granado	6.53	180	Lg		01 07 56.2	
	6.5nm,0.7s,SNR=4.0						
FLN	La Foliniere	6.71	43	ePn	Pn	01 06 09.3	-1.4
FLN				eSn	Sn	01 07 18.7	-8.4
	2.5nm,0.4s						
FLN	La Foliniere	6.71	43	Pn	Pn	01 06 09.3	-1.4
FLN				Sn	Sn	01 07 18.7	-8.4
	1.2nm,0.4s						
FLN	La Foliniere	6.71	43	Pn	Pn	01 06 09.3	-1.4
FLN				Sn	Sn	01 07 18.7	-8.4
	1.2nm,0.4s						
FLN	La Foliniere	6.71	43	ePn	Pn	01 06 09.3	-1.4
LDF	La Druitiere	6.78	46	ePn	Pn	01 06 10.2	-1.5
LDF				eSn	Sn	01 07 21.2	-7.7
	1.2nm,0.3s						
LDF	La Druitiere	6.78	46	ePn	Pn	01 06 10.2	-1.5
EPOB	Poblet	6.82	111	Pn	Pn	01 06 14.4	+2.1
EPOB				Sn	Sn	01 07 27.3	-2.7
EPOB	Poblet	6.82	111	Pn	Pn	01 06 14.4	+2.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	01 07 27.3	-2.7
	0.3nm,0.2s,SNR=7.9						
EPOB	Poblet	6.82	111	Pn	Pn	01 06 14.4	+2.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	01 07 27.3	-2.7
	0.3nm,0.2s,SNR=7.9						
EPOB	Poblet	6.82	111	Pn	Pn	01 06 14.4	+2.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	01 07 27.3	-2.7
	0.3nm,0.2s,SNR=7.9						
CAF	Calviac	6.84	80	ePn	Pn	01 06 12.7	+0.2
CAF				eSn	Sn	01 07 25.6	-4.7
	2.0nm,0.4s						
CAF	Calviac	6.84	80	Pn	Pn	01 06 12.7	+0.2
CAF				Sn	Sn	01 07 25.6	-4.7
	1.0nm,0.4s						
CAF	Calviac	6.84	80	Pn	Pn	01 06 12.7	+0.2
CAF				Sn	Sn	01 07 25.6	-4.7
	1.0nm,0.4s						
CAF	Calviac	6.84	80	ePn	Pn	01 06 12.7	+0.2
ETOB	Tobarra	6.99	139	Pn	Pn	01 06 16.0	+1.4
ETOB				Sn	Sn	01 07 30.4	-3.7
ETOB				Lg		01 08 13.3	
ETOB	Tobarra	6.99	139	Pn	Pn	01 06 16.0	+1.4
	0.3nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	01 07 30.4	-3.7
	0.7nm,0.3s,SNR=7.9						
ETOB				Lg		01 08 13.3	
	1.5nm,0.6s,SNR=4.0						
ETOB	Tobarra	6.99	139	Pn	Pn	01 06 16.0	+1.4
	0.3nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	01 07 30.4	-3.7
	0.7nm,0.3s,SNR=7.9						
ETOB				Lg		01 08 13.3	
	1.5nm,0.6s,SNR=4.0						
ETOB	Tobarra	6.99	139	Pn	Pn	01 06 16.0	+1.4
	0.3nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	01 07 30.4	-3.7
	0.7nm,0.3s,SNR=7.9						
ETOB				Lg		01 08 13.3	
	1.5nm,0.6s,SNR=4.0						
MTLF	Montolieu	7.02	93	ePn	Pn	01 06 15.6	+0.6
MTLF				eSn	Sn	01 07 31.7	-3.2
	0.9nm,0.3s						
MTLF	Montolieu	7.02	93	Pn	Pn	01 06 15.6	+0.6
MTLF				Sn	Sn	01 07 31.7	-3.2
	0.4nm,0.3s						
MTLF	Montolieu	7.02	93	Pn	Pn	01 06 15.6	+0.6
MTLF				Sn	Sn	01 07 31.7	-3.2
	0.4nm,0.3s						
MTLF	Montolieu	7.02	93	ePn	Pn	01 06 15.6	+0.6
TCF	Toulx Ste Croi	7.16	69	ePn	Pn	01 06 16.5	-0.4
TCF				eSn	Sn	01 07 31.6	-6.6
	2.1nm,0.4s						
TCF	Toulx Ste Croi	7.16	69	Pn	Pn	01 06 16.5	-0.4
TCF				Sn	Sn	01 07 31.6	-6.6
	1.1nm,0.4s						
TCF	Toulx Ste Croi	7.16	69	Pn	Pn	01 06 16.5	-0.4
TCF				Sn	Sn	01 07 31.6	-6.6
	1.1nm,0.4s						
TCF	Toulx Ste Croi	7.16	69	ePn	Pn	01 06 16.5	-0.4
BGF	Bois d'Agland	7.65	67	ePn	Pn	01 06 23.2	-0.5
BGF				eSn	Sn	01 07 43.5	-6.9
	1.9nm,0.2s						
BGF	Bois d'Agland	7.65	67	Pn	Pn	01 06 23.2	-0.5
BGF				Sn	Sn	01 07 43.5	-6.9
	0.9nm,0.2s						
BGF	Bois d'Agland	7.65	67	Pn	Pn	01 06 23.2	-0.5
BGF				Sn	Sn	01 07 43.5	-6.9
	0.9nm,0.2s						
BGF	Bois d'Agland	7.65	67	ePn	Pn	01 06 23.2	-0.5
HYF	Humbligny	7.74	62	ePn	Pn	01 06 24.0	-0.8
HYF				eSn	Sn	01 07 45.4	-7.0
HYF	Humbligny	7.74	62	Pn	Pn	01 06 24.0	-0.8
HYF				Sn	Sn	01 07 45.4	-7.0
HYF	Humbligny	7.74	62	Pn	Pn	01 06 24.0	-0.8
HYF				Sn	Sn	01 07 45.4	-7.0
HYF	Humbligny	7.74	62	ePn	Pn	01 06 24.0	-0.8
AVF	Avril sur Loir	8.05	66	ePn	Pn	01 06 28.5	-0.6
AVF				eSn	Sn	01 07 51.7	-8.5
	0.7nm,0.3s						
AVF	Avril sur Loir	8.05	66	Pn	Pn	01 06 28.5	-0.6
AVF				Sn	Sn	01 07 51.7	-8.5
	0.3nm,0.3s						
AVF	Avril sur Loir	8.05	66	Pn	Pn	01 06 28.5	-0.6
AVF				Sn	Sn	01 07 51.7	-8.5
	0.3nm,0.3s						
AVF	Avril sur Loir	8.05	66	ePn	Pn	01 06 28.5	-0.6
SSF	Saint Saulge	8.23	65	ePn	Pn	01 06 31.0	-0.6
SSF				eSn	Sn	01 07 55.7	-8.8
	0.5nm,0.3s						
SSF	Saint Saulge	8.23	65	Pn	Pn	01 06 31.0	-0.6
SSF				Sn	Sn	01 07 55.7	-8.8
	0.2nm,0.3s						
SSF	Saint Saulge	8.23	65	Pn	Pn	01 06 31.0	-0.6
SSF				Sn	Sn	01 07 55.7	-8.8
	0.2nm,0.3s						
SSF	Saint Saulge	8.23	65	ePn	Pn	01 06 31.0	-0.6
SMF	Signal de Mont	8.34	68	ePn	Pn	01 06 32.4	-0.7
SMF				eSn	Sn	01 08 00.2	-7.0
	1.4nm,0.3s						
SMF	Signal de Mont	8.34	68	Pn	Pn	01 06 32.4	-0.7
SMF				Sn	Sn	01 08 00.2	-7.0
	0.7nm,0.3s						
SMF	Signal de Mont	8.34	68	Pn	Pn	01 06 32.4	-0.7
SMF				Sn	Sn	01 08 00.2	-7.0
	0.7nm,0.3s						
SMF	Signal de Mont	8.34	68	ePn	Pn	01 06 32.4	-0.7
LOR	Lormes	8.52	64	ePn	Pn	01 06 34.9	-0.7
LOR				eSn	Sn	01 08 02.8	-8.9
	0.9nm,0.3s						
LOR	Lormes	8.52	64	Pn	Pn	01 06 34.9	-0.7
LOR				Sn	Sn	01 08 02.8	-8.9
	0.4nm,0.3s						
LOR	Lormes	8.52	64	Pn	Pn	01 06 34.9	-0.7
LOR				Sn	Sn	01 08 02.8	-8.9
	0.4nm,0.3s						
LOR	Lormes	8.52	64	ePn	Pn	01 06 34.9	-0.7

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*SOF **17** 01:08:34.3, 39°.43N×21°.46E, h7km, MD2.6*
*ATH **17** 01:08:49.3, 39°.89N×21°.87E, h5km, MD3.2/6*
*NEIC **17** 01:08:49.3, 39°.89N×21°.87E, h5km, MD3.2(ATH), After ATH.*
*CSEM **17** 01:08:50.4±0.3, 39°.89N×21°.92E, h15km, MD3.2, Error ellipse: s-maj=6.4km s-min=5.9km az=93.0*
*ISCJB **17** 01:08:50.5±0.3, 39°.91N±0°.02×21°.92E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.4km az=166.5*
*THE **17** 01:08:50.6, 39°.91N×21°.95E, h4km±31km, ML3.1/9, Error ellipse: s-maj=31.6km s-min=0.9km az=0.0*
ISC 17 01:08:50.3±0.4, **39°.90N**±0°.02×**21°.94E**±0°.03, **h3**km±4km, **n61**, σ**1s.11**/97, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THL	Klokotos Trika	0.34	170	ePB	Pg	01 08 56.1	-0.7
THL				eSB	Sg	01 09 01.5	+0.2
THL	Klokotos Trika	0.34	170	P	Pg	01 08 56.2	-0.6
THL				S	Sg	01 09 01.0	-0.3
THL	Klokotos Trika	0.34	170	P	Pg	01 08 56.2	-0.6
THL				S	Sg	01 09 01.0	-0.3
THL				eSb	Sg	01 09 01.5	+0.2
KZN	Kozani	0.42	342	ePB	Pg	01 08 57.7	-0.8
KZN				eSB	Sg	01 09 04.5	+0.5
KZN	Kozani	0.42	342	P	Pg	01 08 57.8	-0.7
KZN				S	Sg	01 09 04.2	+0.2
KZN	Kozani	0.42	342	ePb	Pg	01 08 57.7	-0.8
KZN				S	Sg	01 09 04.2	+0.2
KZN				eSb	Sg	01 09 04.5	+0.5
LIT	Litokhoron	0.47	65	ePB	Pg	01 08 59.0	-0.2
LIT				eSB	Sg	01 09 07.3	+2.0
LIT	Litokhoron	0.47	65	P	Pg	01 08 58.7	-0.5
LIT				S	Sg	01 09 07.2	+1.9
LIT	Litokhoron	0.47	65	P	Pg	01 08 58.7	-0.5
LIT	Litokhoron	0.47	65	ePb	Pg	01 08 59.0	-0.2
LIT				eSb	Sg	01 09 07.3	+2.0
JAN	Janina	0.88	254	ePB	Pg	01 09 04.0	-3.0
JAN	Janina	0.88	254	ePb	Pg	01 09 04.0	-3.0
AGG	Agios Georgios	0.93	161	ePN	Pg	01 09 07.8	-0.3
AGG	Agios Georgios	0.93	161	P	Pg	01 09 07.8	-0.3
AGG				S	Sg	01 09 22.4	+2.3
AGG	Agios Georgios	0.93	161	ePn	Pg	01 09 07.8	-0.3
AGG				S	Sg	01 09 22.4	+2.3
FNA	Florina	0.98	334	P	Pg	01 09 08.3	-0.8
FNA				S	Sg	01 09 22.5	+0.7
EVR	Evrytania	0.99	186	ePN	Pg	01 09 08.3	-0.9
EVR	Evrytania	0.99	186	ePn	Pg	01 09 08.3	-0.9
XOR	Xorichti	1.10	119	P	Pg	01 09 11.4	0.0
XOR				S	Sg	01 09 28.4	+2.6
XOR	Xorichti	1.10	119	P	Pg	01 09 11.4	0.0
XOR				S	Sg	01 09 28.4	+2.6
NEO	Neokhori	1.16	121	ePB	Pb	01 09 12.2	-0.6
NEO	Neokhori	1.16	121	ePb	Pb	01 09 12.2	-0.6
BIA	Bitola	1.21	337	ePg	Pg	01 09 12.5	-1.1
BIA				i Sg	Sg	01 09 31.7	+2.5
BIA	Bitola	1.21	337	P	Pg	01 09 12.4	-1.1
BIA				S	Sg	01 09 31.6	+2.4
BIA	Bitola	1.21	337	P	Pg	01 09 12.4	-1.1
BIA				S	Sg	01 09 31.6	+2.4
PLG	Polygyros	1.25	67	ePB	Pb	01 09 13.4	-1.0
PLG	Polygyros	1.25	67	P	Pg	01 09 13.2	-1.0
PLG				S	Sg	01 09 31.3	+1.0
PLG	Polygyros	1.25	67	ePb	Pb	01 09 13.4	-1.0
PLG				S	Sg	01 09 31.3	+1.0
IGT	Igoumenitsa	1.29	254	P	Pg	01 09 15.1	0.0
IGT				S	Sg	01 09 34.8	+2.9
IGT	Igoumenitsa	1.29	254	P	Pg	01 09 15.1	0.0
IGT				S	Sg	01 09 34.8	+2.9
PAIG	Paliouri	1.34	88	P	Pn	01 09 14.6	-1.2
PAIG				S	Sg	01 09 32.9	-0.4
PAIG	Paliouri	1.34	88	P	Pn	01 09 14.6	-1.2
PAIG				S	Sg	01 09 32.9	-0.4
SOH	Sokhos	1.42	49	ePG	Pg	01 09 16.8	-0.7
SOH	Sokhos	1.42	49	P	Pn	01 09 17.2	+0.3
SOH				S	Sg	01 09 37.5	+1.7
SOH	Sokhos	1.42	49	ePg	Pg	01 09 16.8	-0.7
SOH	Sokhos	1.42	49	P	Pn	01 09 17.2	+0.3
SOH				S	Sg	01 09 37.5	+1.7
EFP	Efpalio	1.47	181	P	Pn	01 09 18.1	+0.5
EFP				S	Sb	01 09 38.8	+1.5
OHR	Ohrid	1.49	325	ePn	Pn	01 09 18.2	+0.4
OHR	Ohrid	1.49	325	ePn	Pn	01 09 18.2	+0.3
LKR	Lokris	1.50	146	ePG	Pg	01 09 17.3	-1.6
LKR	Lokris	1.50	146	P	Pn	01 09 16.6	-1.3
LKR				S	Sn	01 09 36.8	-1.1
LKR	Lokris	1.50	146	P	Pn	01 09 16.6	-1.3
LKR	Lokris	1.50	146	ePg	Pg	01 09 17.3	-1.6
LKR				S	Sn	01 09 36.8	-1.1
DSF	Desfina	1.56	163	P	Pn	01 09 18.1	-0.7
DSF				S	Sn	01 09 40.9	+1.5
DSF	Desfina	1.56	163	P	Pn	01 09 18.1	-0.7
DSF				S	Sn	01 09 40.9	+1.5
KRUS	Krusevo	1.56	340	i Pn	Pn	01 09 19.0	+0.2
KRUS	Krusevo	1.56	340	i Pn	Pn	01 09 18.9	+0.1
OUR	Ouranopolis	1.62	74	P	Pn	01 09 19.0	-0.7
OUR				S	Sn	01 09 40.6	-0.5
OUR	Ouranopolis	1.62	74	P	Pn	01 09 19.0	-0.7
OUR				S	Sn	01 09 40.6	-0.5
KEK	Kerkira	1.66	264	ePB	Pb	01 09 20.6	-0.9
KEK	Kerkira	1.66	264	ePb	Pb	01 09 20.6	-0.9
AOS	Alonnisos	1.67	115	P	Pn	01 09 19.3	-1.0
AOS	Alonnisos	1.67	115	P	Pn	01 09 19.3	-1.0
SRS	Serrai	1.75	46	P	Pn	01 09 21.1	-0.3
SRS				S	Sn	01 09 44.9	+0.7
GUR	Goura	1.99	171	P	Pn	01 09 24.4	-0.3
GUR				S	Sn	01 09 51.7	+1.6
VLS	Valsamata	2.02	212	ePN	Pn	01 09 26.5	+1.4
VLS	Valsamata	2.02	212	ePn	Pn	01 09 26.5	+1.4
KKB	Krupnik	2.15	23	P	Pn	01 09 20.2	-6.7
MMB	Musomiste	2.16	38	P	Pn	01 09 20.5	-6.7
RZN	Rozhen	2.76	49	P	Pn	01 09 35.5	+0.1
RZN	Rozhen	2.76	49	P	Pn	01 09 35.5	+0.1

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*CSEM **17** 01:30:58.1±0.7, 42°.94N×42°.83E, h10km, MD3.1, Error ellipse: s-maj=54.8km s-min=15.5km az=111.0*
*DDA **17** 01:31:03.1, 42°.55N×42°.88E, h9km, Md3.1*
ISC 17 01:30:58.1±2.1, **42°.7N**±0°.1×**43°.4E**±0°.1, **h10**km, **n10**, σ**0s.79**/18, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.09	158	P	Pg	01 31 00.5	-0.1
ONI				S	Sg	01 31 02.0	-0.3
BCA	Borcka	1.81	228	ePN	Pn	01 31 28.3	-1.0
BCA	Borcka	1.81	228	ePn	Pn	01 31 28.3	-0.9
ARTV	Artvin	1.85	217	i P	Pn	01 31 30.3	+0.4
ARTV				i S	Sn	01 31 53.3	0.0
ARTV	Artvin	1.85	217	i P	Pn	01 31 30.3	+0.5
ARTV				i S	Sn	01 31 53.3	0.0
DBOC	Borcka	1.86	225	i P	Pn	01 31 29.6	-0.3
DBOC				i S	Sn	01 31 52.7	-0.6
DBOC	Borcka	1.86	225	i P	Pn	01 31 29.5	-0.4
DBOC				i S	Sn	01 31 52.7	-0.7
DAGI	Agillar	1.95	215	i P	Pn	01 31 31.5	+0.4
DAGI				i S	Sn	01 31 54.5	-1.1
DDEM	Demirkent	2.17	215	i P	Pn	01 31 35.2	+1.0
DDEM				i S	Sn	01 32 02.8	+1.7
DDEM	Demirkent	2.17	215	i P	Pn	01 31 35.2	+1.0
DDEM				i S	Sn	01 32 02.8	+1.7

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*ISCJB **17** 01:34:04.6±0.4, 31°.96N±0°.03×104°.74E±0°.05, h10km, mb3.6/8, Error ellipse: s-maj=5.6km s-min=4.7km az=168.0*
*IDC **17** 01:34:05.5±1.2, 32°.08N×104°.71E, h0km, mb3.6/6, mb1 3.9/9, mb1mx3.6/28, mbtmp3.7/9, ML4.0/3, Error ellipse: s-maj=34.8km s-min=22.5km az=56.0*
*NEIC **17** 01:34:06.7±0.5, 32°.09N×104°.76E, h10km, mb3.7/2, Error ellipse: s-maj=12.0km s-min=7.3km az=50.0*
*BJI **17** 01:34:06.4, 32°.05N×104°.72E, h8km, mB4.6/2, mb4.3/2, ML3.9/12, Ms3.8/4, Ms7 3.5/4*
ISC 17 01:34:06.5±0.4, **32°.02N**±0°.03×**104°.68E**±0°.04, **h10**km, **n19**, σ**1s.26**/26, **mb3.6**/8, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	1.35	216	Pg	Pg	01 34 31.3	-1.2
CD2				Sg	Sg	01 34 48.9	-1.2
CD2				smax			
	comp=N,3μm,0.7s						
XAN	Xi'an	4.10	59	Pn	Pn	01 35 11.1	+1.9
XAN				Pg	Pg	01 35 22.6	-2.4
XAN				Sg	Sg	01 36 13.8	-4.3
XAN				smax			
	comp=N,280nm,0.8s						
XAN				smax			
	comp=E,90nm,0.7s						
LZH	Lanzhou	4.12	351	Pn	Pn	01 35 12.5	+3.0
LZH				Sn	Sn	01 36 00.1	+2.4
LZH				Sg	Sg	01 36 16.0	-2.8
LZH				smax			
	comp=N,280nm,0.6s						
LZH				smax			
	comp=E,400nm,0.7s						
LZH				LR	LR		
	comp=N,970nm,7.7s						
LZH				LR	LR		
	comp=Z,2μm,8.6s						
ENH	Enshi	4.48	112	ePg	Pg	01 35 31.1	-1.2
ENH				eSg	Sg	01 36 31.1	+0.8
GYA	Guiyang	5.80	162	Pn	Pn	01 35 34.4	+1.7
GYA				Sn	Sn	01 36 38.8	-0.5
GYA				smax			
	comp=N,70nm,0.6s						
GYA				smax			
	comp=E,120nm,0.7s						
KMI	Kunming	7.08	194	P	Pg	01 36 22.1	0.0
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	14.46	202	Pn	Pn	01 37 33.3	+2.0
	comp=Z,0.5nm,0.3s,baz=9.9,slow=11,SNR=3.5						
SONM	Songino Array	15.85	4	Pn	Pn	01 37 50.2	+0.5
	comp=Z,0.4nm,0.3s,baz=209,slow=15,SNR=2.4						
KSRS	Korea Array	19.84	68	P	Pn	01 38 37.6	-1.5
	comp=Z,0.2nm,0.3s,baz=255,slow=10.0,SNR=13						
MK31	Makanchi Array	22.63	317	eP	P	01 39 07.6	+0.2
MKAR	Makanchi Array	22.63	317	P	P	01 39 07.6	+0.2
	comp=Z,0.4nm,0.5s,mb3.1,baz=130,slow=13,SNR=4.7						
TKM2	Tokmak 2	25.40	304	eP	P	01 39 33.5	-0.5
	comp=Z,0.6nm,0.6s,mb3.3						
ZAA0	Zalesovo Array	26.12	333	eP	P	01 39 39.3	-1.2
ZALV	Zalesovo Beam	26.12	333	P	P	01 39 40.8	+0.3
	comp=Z,1.2nm,0.6s,mb3.6,baz=127,slow=8.4,SNR=5.6						
KURK	Kurchatov	26.82	322	P	P	01 39 47.5	+0.7
	comp=Z,0.2nm,0.4s,mb3.0,baz=139,slow=8.3,SNR=3.0						
ARU	Arti	40.02	321	eP	P	01 41 41.3	0.0
	comp=Z,1.1nm,0.3s,mb4.1						
ARCES	ARCESS Array B	56.63	336	P	P	01 43 49.1	-0.2
	comp=Z,3.3nm,0.8s,mb4.4,baz=84,slow=8.3,SNR=3.6						
ASAR	Alice Springs	62.02	150	P	P	01 44 27.9	+0.8
	comp=Z,0.2nm,0.5s,mb3.5,baz=354,slow=8.4,SNR=4.2						
YKA	Yellowknife Ar	80.68	17	P	P	01 46 19.3	-0.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=328,slow=5.0,SNR=5.8						

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*DDA **17** 01:37:24.7, 37°.09N×29°.51E, h6km±7km, Md2.9*
*ISCJB **17** 01:37:25.9±0.6, 37°.01N±0°.03×29°.22E±0°.03, h5km±6km, Error ellipse: s-maj=5.7km s-min=4.5km az=17.6*
*ISK **17** 01:37:25.6, 37°.04N×29°.24E, h8km, MD2.9*
*CSEM **17** 01:37:26.1±0.2, 37°.04N×29°.25E, h10km, MD2.9, Error ellipse: s-maj=5.4km s-min=4.3km az=27.0*
ISC 17 01:37:26.6±0.5, **37°.03N**±0°.03×**29°.23E**±0°.04, **h10**km±5km, **n29**, σ**1s.01**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.25	60	ePG	Pg	01 37 30.4	-1.2
GLHS				eSG	Sg	01 37 35.1	+0.1
GLHS	Glhisar (BURDU	0.25	60	ePg	Pg	01 37 30.5	-1.1
GLHS				eSg	Sg	01 37 35.2	+0.2
GOLH	Golhisar	0.34	52	i P	Pg	01 37 32.2	-1.0
GOLH				i S	Sg	01 37 39.0	+1.3
GOLH	Golhisar	0.34	52	i P	Pg	01 37 32.2	-1.0
GOLH				i S	Sg	01 37 39.0	+1.3
TURN	Turunc	0.53	253	i P	Pg	01 37 40.8	+4.0
TURN				i S	Sg	01 37 50.3	+6.6
ELL	Elmali	0.61	117	ePG	Pg	01 37 36.9	-1.5
ELL				eSG	Sg	01 37 47.0	+0.5
ELL	Elmali	0.61	117	ePg	Pg	01 37 36.9	-1.5
ELL				eSg	Sg	01 37 47.0	+0.6
DNZL	Cakiroluk	0.68	348	i P	Pg	01 37 38.8	-0.8
DNZL				i S	Sg	01 37 49.5	+1.1
DNZL	Cakiroluk	0.68	348	i P	Pg	01 37 38.8	-0.8
DNZL				i S	Sg	01 37 49.5	+1.0
DENT	Denizli	0.74	348	ePG	Pg	01 37 40.0	-0.8
DENT	Denizli	0.74	348	ePg	Pg	01 37 40.0	-0.9
YER	Yerkesik	0.77	278	ePG	Pg	01 37 41.4	+0.1
YER				eSG	Sg	01 37 52.1	+0.8
YER	Yerkesik	0.77	278	ePg	Pg	01 37 41.4	+0.1
YER				eSg	Sg	01 37 52.1	+0.8
AKAS	Kas	0.85	159	i P	Pg	01 37 41.3	-1.6
AKAS				i S	Sg	01 37 57.1	+3.2
AKAS	Kas	0.85	159	i P	Pg	01 37 41.3	-1.6
AKAS				i S	Sg	01 37 57.2	+3.2
MLSB	Milas	1.19	283	ePN	Pn	01 37 49.5	+0.2
MLSB	Milas	1.19	283	ePn	Pn	01 37 49.5	+0.2
AYDN	Tasoluk	1.25	301	i P	Pn	01 37 49.4	-0.7
AYDN				i S	Sb	01 38 05.8	-0.5
AYDN	Tasoluk	1.25	301	i P	Pn	01 37 49.3	-0.8
AYDN				i S	Sb	01 38 05.8	-0.5
KHL	Karahalli	1.31	10	ePN	Pn	01 37 50.5	-0.5

KHL	**Karahalli**	**1.31**	**10**	*e*Pn	**Pn**	**01 37 50.5**	**-0.5**
KHAL	**Karahalli**	**1.35**	**9**	*i* P	**Pn**	**01 37 51.5**	**-0.1**
KHAL				*i* S	**Sb**	**01 38 11.4**	**+2.0**
KHAL	**Karahalli**	**1.35**	**9**	*i* P	**Pn**	**01 37 51.5**	**-0.1**
DAT	**Datca**	**1.36**	**258**	*e*PN	**Pn**	**01 37 52.1**	**+0.5**
DAT	**Datca**	**1.36**	**258**	*e*Pn	**Pn**	**01 37 52.1**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.48**	**72**	*e*PN	**Pn**	**01 37 53.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.48**	**72**	*e*Pn	**Pn**	**01 37 53.9**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**343**	*e*PN	**Pn**	**01 37 53.6**	**-0.6**
KULA	**Kula-Manisa**	**1.55**	**343**	*e*Pn	**Pn**	**01 37 53.6**	**-0.6**

*ISCJB **17** 01:38:34.8±1.0, 31°.90N±0°.04×104°.42E±0°.07, h4km±7km, mb3.6/12, Error ellipse: s-maj=10.7km s-min=6.2km az=12.5*
*IDC **17** 01:38:36.3±1.1, 31°.91N×104°.31E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.7/28, mbtmp3.7/12, ML4.6/1, Error ellipse: s-maj=32.3km s-min=20.5km az=50.0*
*NEIC **17** 01:38:37.8±0.5, 31°.91N×104°.34E, h10km, mb3.8/4, Error ellipse: s-maj=12.0km s-min=7.9km az=56.0*
*BJI **17** 01:38:38.2, 31°.87N×104°.22E, h10km, mb4.2/1, ML3.6/7, Ms3.4/2, Ms7 3.1/2*

ISC 17 01:38:36.8±0.9, 31°.86N±0°.04×104°.44E±0°.06, h5km±7km, n21, σ1°.01/24, mb3.6/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.11**	**212**	Pg	**Pg**	**01 38 58.4**	**+0.3**
CD2				Sg	**Sg**	**01 39 11.8**	**-0.7**
CD2	comp=N,3μm,0.7s			smax			
LZH	**Lanzhou**	**4.24**	**354**	*e*Pg	**Pg**	**01 40 02.3**	**+4.2**
LZH				Sg	**Sg**	**01 40 55.1**	**+2.0**
LZH	comp=N,110nm,0.6s			smax			
LZH	comp=E,77nm,0.5s			smax			
XAN	**Xi'an**	**4.35**	**59**	Pg	**Pg**	**01 39 58.8**	**-1.4**
XAN				Sg	**Sg**	**01 40 55.1**	**-1.4**
XAN	comp=N,100nm,0.6s			smax			
ENH	**Enshi**	**4.62**	**109**	*e*Pn	**Pn**	**01 39 48.6**	**+1.5**
CMAR	**Chiang Mai Arr**	**14.24**	**202**	Pn	**Pn**	**01 42 00.7**	**+1.6**
SONM	**Songino Array**	**16.02**	**5**	Pn	**Pn**	**01 42 23.7**	**+1.0**
KSRS	**Korea Array**	**20.09**	**67**	P	**P**	**01 43 12.3**	**+1.2**
MK31	**Makanchi Array**	**22.60**	**318**	*e*P	**P**	**01 43 38.0**	**-0.1**
MKAR	**Makanchi Array**	**22.60**	**318**	P	**P**	**01 43 37.8**	**-0.3**
UCH	**Uchtor**	**25.91**	**302**	*e*P	**P**	**01 44 09.3**	**-0.3**
ZALV	**Zalesovo Beam**	**26.17**	**333**	P	**P**	**01 44 11.9**	**0.0**
AML	**Almayashu**	**26.48**	**301**	*e*P	**P**	**01 44 13.5**	**-1.3**
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**01 44 17.7**	**0.0**
KURK	**Kurchatov**	**26.82**	**322**	*e*P	**P**	**01 44 17.9**	**+0.2**
BVAR	**Borovoye Array**	**32.38**	**321**	P	**P**	**01 45 07.1**	**+0.1**
ARU	**Arti**	**40.01**	**322**	*e*P	**P**	**01 46 11.9**	**-0.4**
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**01 48 19.7**	**-0.9**
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**01 48 23.1**	**-0.6**
ASAR	**Alice Springs**	**61.99**	**149**	P	**P**	**01 48 59.0**	**+1.2**
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**01 49 10.5**	**-1.5**
YKA	**Yellowknife Ar**	**80.89**	**17**	P	**P**	**01 50 51.1**	**-0.3**

comp=N,0.2nm,0.5s,mb3.3,baz=333,slow=6.1,SNR=2.7

*DDA **17** 01:50:16.5, 36°.95N×29°.18E, h5km±3km, Md3.0*
*ISK **17** 01:50:16.0, 36°.95N×29°.22E, h5km, MD2.9*
*ISCJB **17** 01:50:17.4±0.5, 36°.97N±0°.03×29°.20E±0°.03, h2km±6km, Error ellipse: s-maj=5.2km s-min=4.3km az=143.4*
*CSEM **17** 01:50:17.2±0.2, 36°.97N×29°.21E, h2km, MD2.9, Error ellipse: s-maj=4.0km s-min=3.2km az=164.0*

ISC 17 01:50:17.9±0.5, 36°.97N±0°.03×29°.21E±0°.04, h7km±6km, n24, σ0°.92/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*e*PG	**Pg**	**01 50 22.8**	**-0.9**
GLHS				*e*SG	**Sg**	**01 50 28.4**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*e*Pg	**Pg**	**01 50 22.8**	**-0.9**
GLHS				*e*Sg	**Sg**	**01 50 28.4**	**+0.7**
FETY	**Fethiye**	**0.35**	**197**	*e*PG	**Pg**	**01 50 23.5**	**-1.1**
FETY				*e*SG	**Sg**	**01 50 29.2**	**0.0**
FETY	**Fethiye**	**0.35**	**197**	*e*Pg	**Pg**	**01 50 23.5**	**-1.1**
FETY				*e*Sg	**Sg**	**01 50 29.2**	**0.0**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**01 50 24.6**	**-0.8**
GOLH				*i* S	**Sg**	**01 50 31.7**	**+1.1**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**01 50 24.6**	**-0.8**
GOLH				*i* S	**Sg**	**01 50 31.7**	**+1.1**
TURN	**Turunc**	**0.50**	**259**	*i* P	**Pg**	**01 50 31.1**	**+3.6**
TURN				*i* S	**Sg**	**01 50 42.2**	**+8.3**
TURN	**Turunc**	**0.50**	**259**	*i* P	**Pg**	**01 50 31.1**	**+3.7**
ELL	**Elmali**	**0.60**	**111**	*e*PG	**Pg**	**01 50 28.4**	**-1.1**
ELL				*e*SG	**Sg**	**01 50 38.6**	**+1.3**
ELL	**Elmali**	**0.60**	**111**	*e*Pg	**Pg**	**01 50 28.4**	**-1.0**
ELL				*e*Sg	**Sg**	**01 50 38.6**	**+1.3**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**01 50 30.7**	**-1.3**
DNZL				*i* S	**Sg**	**01 50 42.3**	**+0.8**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**01 50 30.7**	**-1.3**
DNZL				*i* S	**Sg**	**01 50 42.3**	**+0.8**
YER	**Yerkesik**	**0.76**	**283**	*e*PG	**Pg**	**01 50 32.2**	**-0.3**
YER				*e*SG	**Sg**	**01 50 43.5**	**+1.1**
YER	**Yerkesik**	**0.76**	**283**	*e*Pg	**Pg**	**01 50 32.2**	**-0.3**
YER				*e*Sg	**Sg**	**01 50 43.5**	**+1.1**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**01 50 40.8**	**-0.1**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**01 50 40.8**	**-0.1**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**01 50 41.2**	**-0.7**
AYDN				*i* S	**Sb**	**01 50 58.1**	**-0.4**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**01 50 41.2**	**-0.7**
AYDN				*i* S	**Sb**	**01 50 58.1**	**-0.4**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**01 50 42.4**	**-0.4**
DAT				*e*SN	**Sn**	**01 51 02.4**	**+1.6**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**01 50 42.4**	**-0.4**
DAT				*e*Sn	**Sn**	**01 51 02.4**	**+1.7**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**01 50 43.5**	**-0.5**
KHAL				*i* S	**Sb**	**01 51 02.3**	**-0.5**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**01 50 43.5**	**-0.5**
KHAL				*i* S	**Sb**	**01 51 02.3**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**01 50 46.2**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**01 50 46.2**	**+0.9**

IDC 17 02:10:31.2±5.3, 32°.95S×178°.18W, h0km, mb3.5/1, mb1 3.7/1, mb1mx3.6/14, mbtmp3.5/1, Error ellipse: s-maj=324.4km s-min=60.2km az=163.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.88**	**270**	P	P	02 18 31.4	0.0
	0.3nm,0.4s,baz=108,slow=7.2,SNR=7.9						
FINES	**FINESS Array B**	**147.47**	**338**	PKPbc	PKPbc	02 30 15.7	-0.7
	1.2nm,0.6s,baz=44,slow=4.6,SNR=7.0						
BRTR	**Keskin Array B**	**153.58**	**294**	PKPbc	PKPbc	02 30 31.9	+0.1
	0.3nm,0.5s,baz=101,slow=2.8,SNR=3.2						

*ISCJB **17** 02:13:20.8±0.4, 39°.78N±0°.02×26°.10E±0°.03, h8km±3km, Error ellipse: s-maj=4.4km s-min=3.4km az=151.8*
*DDA **17** 02:13:20.7, 39°.81N×26°.15E, h7km±3km, Md2.9*
*ISK **17** 02:13:20.9, 39°.82N×26°.13E, h5km, MD2.8*
*CSEM **17** 02:13:21.0±0.1, 39°.79N×26°.12E, h10km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.7km az=68.0*
*THE **17** 02:13:21.4, 39°.78N×26°.10E, h10km±2km, ML2.2/4, Error ellipse: s-maj=2.6km s-min=0.7km az=194.0*

ISC 17 02:13:21.1±0.4, 39°.79N±0°.02×26°.11E±0°.03, h10km±3km, n27, σ0°.55/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.07**	**319**	*i* P	**Pg**	**02 13 23.0**	**-0.3**
BOZC				*i* S	**Sg**	**02 13 24.3**	**-0.6**
EZN	**Ezine**	**0.17**	**78**	*e*PG	**Pg**	**02 13 24.4**	**-0.3**
EZN				*e*SG	**Sg**	**02 13 27.1**	**-0.2**
EZN	**Ezine**	**0.17**	**78**	*e*Pg	**Pg**	**02 13 24.4**	**-0.4**
EZN				*e*Sg	**Sg**	**02 13 27.1**	**-0.2**
GADA	**Gvkgeada**	**0.43**	**338**	*e*PG	**Pg**	**02 13 29.4**	**-0.1**
GADA				*e*SG	**Sg**	**02 13 35.6**	**+0.4**
GADA	**Gvkgeada**	**0.43**	**338**	*e*Pg	**Pg**	**02 13 29.4**	**-0.2**
GADA				*e*Sg	**Sg**	**02 13 35.6**	**+0.3**
PRK	**Paraskevi**	**0.56**	**167**	P	**Pg**	**02 13 31.7**	**-0.2**
PRK				S	**Sg**	**02 13 39.9**	**+0.6**
PRK	**Paraskevi**	**0.56**	**167**	P	**Pg**	**02 13 31.7**	**-0.2**
PRK				S	**Sg**	**02 13 39.9**	**+0.6**
SIGR	**SIGRI**	**0.61**	**199**	P	**Pg**	**02 13 32.8**	**-0.1**
SIGR				S	**Sg**	**02 13 41.8**	**+0.8**
SIGR	**SIGRI**	**0.61**	**199**	P	**Pg**	**02 13 32.8**	**-0.1**
SIGR				S	**Sg**	**02 13 41.8**	**+0.8**
AYVA	**Ayvalik**	**0.66**	**137**	*i* P	**Pg**	**02 13 33.5**	**-0.3**
AYVA				*i* S	**Sg**	**02 13 42.5**	**0.0**
AYVA	**Ayvalik**	**0.66**	**137**	*i* P	**Pg**	**02 13 33.5**	**-0.3**
AYVA				*i* S	**Sg**	**02 13 42.5**	**+0.1**
LIA	**Limnos Island**	**0.72**	**279**	P	**Pg**	**02 13 34.8**	**-0.2**
LIA				S	**Sg**	**02 13 45.2**	**+0.7**
LIA	**Limnos Island**	**0.72**	**279**	P	**Pg**	**02 13 34.8**	**-0.2**
LIA				S	**Sg**	**02 13 45.2**	**+0.7**
ENEZ	**Enez**	**0.94**	**2**	*e*PG	**Pg**	**02 13 39.1**	**-0.2**
ENEZ				*e*SG	**Sg**	**02 13 52.1**	**+0.5**
ENEZ	**Enez**	**0.94**	**2**	*e*Pg	**Pg**	**02 13 39.1**	**-0.2**
ENEZ				*e*Sg	**Sg**	**02 13 52.1**	**+0.5**
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**02 13 41.9**	**-0.4**
ALN				S	**Sg**	**02 13 57.1**	**+0.4**
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**02 13 41.9**	**-0.4**
ALN				S	**Sg**	**02 13 57.1**	**+0.4**
BALY	**Balya**	**1.16**	**92**	*i* P	**Pb**	**02 13 43.2**	**-0.1**
BALY				*i* S	**Sb**	**02 13 58.1**	**-0.4**
BALY	**Balya**	**1.16**	**92**	*i* P	**Pb**	**02 13 43.2**	**-0.1**
BALY				*i* S	**Sb**	**02 13 58.1**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.21**	**42**	*e*PN	**Pn**	**02 13 43.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.21**	**42**	*e*Pn	**Pn**	**02 13 43.9**	**-0.2**
SART	**Tekirdag**	**1.21**	**42**	*i* P	**Pn**	**02 13 43.4**	**-0.7**
SART				*i* S	**Sb**	**02 14 02.0**	**+2.1**
SART	**Tekirdag**	**1.21**	**42**	*i* P	**Pn**	**02 13 43.4**	**-0.7**
SART				*i* S	**Sb**	**02 14 02.0**	**+2.1**
RDO	**Rodhopi**	**1.42**	**342**	P	**Pn**	**02 13 47.2**	**+0.2**
RDO				S	**Sn**	**02 14 05.4**	**-0.3**
RDO	**Rodhopi**	**1.42**	**342**	P	**Pn**	**02 13 47.2**	**+0.2**
RDO				S	**Sn**	**02 14 05.4**	**-0.3**
OUR	**Ouranopolis**	**1.72**	**289**	P	**Pn**	**02 13 51.0**	**-0.1**
OUR				S	**Sn**	**02 14 12.5**	**-0.6**
OUR	**Ouranopolis**	**1.72**	**289**	P	**Pn**	**02 13 51.0**	**-0.1**
OUR				S	**Sn**	**02 14 12.5**	**-0.6**

*MOS **17** 02:23:11.4±1.0, 33°.59S×179°.44E, h113km, mb5.5/14, Error ellipse: s-maj=15.7km s-min=11.8km az=55.5*
*GCMT **17** 02:23:15.6±0.2, 33°.66S×179°.80E, h154km±1km, MW5.2/89, Moment Tensor Solution. s71,c93; s89,c146; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.33±.16; $M_{\theta\theta}$=0.63±.20; $M_{\phi\phi}$=4.96±.20; $M_{r\theta}$=2.03±.14; $M_{\theta\phi}$=4.89±.18; $M_{\phi r}$=5.03±.15; Best double couple: M_0=8.67100×10^{16} NP1:φs=64.00000°, δ43.00000°, λ-30.00000°. NP2:φs=177.00000°, δ70.00000°, λ-129.00000°. Principal axes: T 8.7560, Plg16.0000°, Azm294.0000°; N -0.1680, Plg36.0000°, Azm192.0000°; P -8.5860, Plg49.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **17** 02:23:15.2±0.2, 33°.78S±0°.05×179°.48E±0°.05, h150km, mb4.8/55 Error ellipse: s-maj=7.5km s-min=5.3km az=154.3*
*NEIC **17** 02:23:15.6±0.3, 33°.68S×179°.39E, mb5.1/37, Error ellipse: s-maj=11.0km s-min=8.2km az=154.0*
NEIC Felt on the Mahia Peninsula and at Whakatane, New Zealand.
*IDC **17** 02:23:16.1±0.5, 33°.54S×179°.44E, h154km±3km, mb4.4/16, mb1 4.6/17, mb1mx4.6/19, mbtmp4.5/17, MS3.6/4, Ms1 3.6/4, ms1mx3.3/26, Error ellipse: s-maj=11.9km s-min=11.4km az=52.0*
*BJI **17** 02:23:16.7, 33°.19S×179°.81E, h152km, mB5.1/12, mb5.2/15*

ISC 17 02:23:15.6±1.1, 33°.75S±0°.06×179°.52E±0°.06, h142km±10km, h152km±2.3km; pP-P, n396, σ0°.80/308, mb4.8/55, 113C-90D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.91**	**203**	P	**Pn**	**02 24 29.0**	**+1.5**
	114nm,0.3s,baz=24,slow=1.1,SNR=182						
URZ				S	**Sn**	**02 25 21.9**	**-1.7**
	525nm,0.3s,baz=359,slow=12,SNR=8.2						
URZ				LR	LR	02 26 32.7	
	comp=Z,681nm,20.5s,baz=17,slow=39						
URZ	**Urewera**	**4.91**	**203**	*e*Pn	**Pn**	**02 24 28.2**	**+0.6**
URZ				*e*Sn	**Sn**	**02 25 26.0**	**+2.4**
RAO	**Raoul Island**	**4.99**	**27**	P	**Pn**	**02 24 23.4**	**-5.4**
	85nm,0.3s,baz=62,slow=22,SNR=9.1						
RAO				S	**Sn**	**02 25 19.5**	**-6.2**
	842nm,0.3s,baz=218,slow=22,SNR=11						
RAO				LR	LR	02 25 33.9	
	comp=Z,746nm,19.8s,baz=210,slow=28						
RAO	**Raoul Island**	**4.99**	**27**	P	**Pn**	**02 24 23.4**	**-5.4**
RAO				S	**Sn**	**02 25 19.6**	**-6.2**
RAO	**Raoul Island**	**4.99**	**27**	P	**Pn**	**02 24 23.4**	**-5.4**
RAO				S	**Sn**	**02 25 19.6**	**-6.2**
RAO				LR	LR	02 25 33.9	
OUZ	**Omahuta**	**5.11**	**252**	*e*Pn	**Pn**	**02 24 33.9**	**+3.6**
	342nm,1.0s						
SNZO	**South Karori**	**8.46**	**205**	*e*Pn	**Pn**	**02 25 11.1**	**-4.0**
	110nm,0.5s						
SNZO				*e*Sn	**Sn**	**02 26 41.4**	**-7.5**
KHZ	**Kahutara**	**9.85**	**207**	*e*Pn	**Pn**	**02 25 28.8**	**-4.8**
	287nm,0.3s						
KHZ				*e*Sn	**Sn**	**02 27 11.1**	**-11**
RPZ	**Rata Peaks**	**11.94**	**211**	P	**Pn**	**02 25 56.0**	**-5.2**
	14nm,0.3s,baz=41,slow=2.3,SNR=51						
RPZ				S	**Sn**	**02 28 01.7**	**-11**
	37nm,0.3s,baz=18,slow=20,SNR=14						
RPZ	**Rata Peaks**	**11.94**	**211**	*e*Pn	**Pn**	**02 25 56.1**	**-5.0**
	40nm,0.4s						
RPZ				*e*Sn	**Sn**	**02 28 03.2**	**-10**
ODZ	**Otahua Downs**	**13.19**	**209**	*e*Pn	**Pn**	**02 26 12.3**	**-5.1**
	29nm,0.7s						
ODZ				*e*Sn	**Sn**	**02 28 24.8**	**-18**
MSVF	**Nonsavu**	**16.00**	**355**	P	**Pn**	**02 26 53.9**	**+1.0**
	932nm,0.6s,SNR=45						
MSVF	**Nonsavu**	**16.00**	**355**	*e*P	**Pn**	**02 26 52.4**	**-0.4**
	104nm,0.7s						
DZM	**Mont Dzumac**	**16.38**	**312**	*e*P	**Pn**	**02 26 57.5**	**+0.1**
	94nm,0.9s						
DZM				*e*LR	LR	02 30 49.9	
	1μm,29.4s						
DZM	**Mont Dzumac**	**16.38**	**312**	*e*P	**Pn**	**02 26 59.3**	**+1.9**
NOUC	**Port Laguerre**	**16.44**	**312**	*e*P	**Pn**	**02 27 01.0**	**+2.8**
AFI	**Afiamalu**	**21.28**	**24**	P	**P**	**02 27 50.3**	**-0.5**
	41nm,0.2s,mb5.3,baz=117,slow=6.4,SNR=7.3						
AFI				S	**S**	**02 31 26.4**	**-13**
	11nm,0.3s,baz=109,slow=12,SNR=2.8						
AFI	**Afiamalu**	**21.28**	**24**	P	**P**	**02 27 50.3**	**-0.5**
AFI				S	**S**	**02 31 26.4**	**-13**
ARMA	**Armidale**	**23.83**	**270**	*e*P	**P**	**02 28 19.4**	**+3.7**
EIDS	**Eidsvold**	**26.05**	**281**	*e*P	**P**	**02 28 37.7**	**+1.9**
	27nm,1.1s,mb4.8						
EIDS				*e*pP	pP	02 29 07.6	+2.1
STKA	**Stephens Creek**	**31.81**	**263**	P	**P**	**02 29 24.8**	**-2.0**
	1.5nm,0.2s,mb4.3,baz=54,slow=8.4,SNR=2.7						
STKA	**Stephens Creek**	**31.81**	**263**	P	**P**	**02 29 24.8**	**-2.0**
PAE	**Paea**	**31.96**	**68**	*e*P	**P**	**02 29 27.7**	**-0.5**
	9.7nm,1.1s,mb4.4						
PAE	**Paea**	**31.96**	**68**	*e*P	**P**	**02 29 27.7**	**-0.5**
PAE				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
PPT	**Papeete**	**32.02**	**68**	*e*LR	LR	02 37 02.2	
	comp=Z,487nm,29.8s						
PPT	**Papeete**	**32.02**	**68**	LR	LR	02 40 50.3	
	comp=Z,180nm,19.2s,baz=19,slow=33						
CTA	**Charters Tower**	**32.48**	**286**	*e*P	**P**	**02 29 34.0**	**+1.3**
	comp=Z,16nm,0.7s,mb4.8						
CTA	**Charters Tower**	**32.48**	**286**	P	**P**	**02 29 32.1**	**-0.6**
	comp=Z,18nm,0.6s,mb5.0,baz=118,slow=10,SNR=41						
CTAO	**Charters Tower**	**32.48**	**286**	*e*P	**P**	**02 29 33.7**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.2						
CTAO	**Charters Tower**	**32.48**	**286**	*e*P	**P**	**02 29 33.7**	**+1.0**
	comp=Z,50nm,1.1s,mb5.2						
PMOR	**Pomariorio Ree**	**34.85**	**66**	*e*P	**P**	**02 29 52.7**	**-0.6**
	comp=Z,52nm,1.3s,mb5.0						
COEN	**Coen**	**38.36**	**292**	*e*P	**P**	**02 30 23.8**	**+0.8**
	comp=Z,166nm,1.0s,mb5.6						
ASAR	**Alice Springs**	**40.97**	**272**	P	**P**	**02 30 45.0**	**+0.4**
	comp=Z,20nm,0.8s,mb4.8,baz=112,slow=7.9,SNR=114						
ASAR				pP	pP	02 31 18.2	+2.4
	comp=Z,11nm,0.9s,baz=112,slow=7.7,SNR=2.9						
ASAR				S	**S**	**02 36 43.5**	**-2.5**
	comp=Z,1.8nm,1.0s,baz=116,slow=16,SNR=4.4						
RKT	**Rikitea**	**41.11**	**87**	*e*P	**P**	**02 30 46.3**	**+0.6**
	comp=Z,96nm,1.2s,mb5.3						
RKT	**Rikitea**	**41.11**	**87**	*e*P	**P**	**02 30 46.3**	**+0.6**
RKT				pmax	pmax		
	comp=Z,96nm,1.2s,mb5.3						
WRAB	**Tennant Creek**	**42.26**	**277**	P	**P**	**02 30 54.2**	**-0.9**
	comp=Z,177nm,0.9s,mb5.7,SNR=12						
WRAB	**Tennant Creek**	**42.26**	**277**	*e*P	**P**	**02 30 54.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**42.26**	**277**	*e*P	**P**	**02 30 54.6**	**-0.5**
	comp=Z,27nm,0.9s,mb4.9						
SBA	**Scott Base**	**44.56**	**184**	*e*P	**P**	**02 31 16.1**	**+3.4**
SBA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
SBA	**Scott Base**	**44.56**	**184**	*e*P	**P**	**02 31 16.1**	**+3.4**
	comp=Z,9.2nm,0.9s,mb4.4						
KAKA	**Kakadu**	**47.58**	**285**	*e*P	**P**	**02 31 35.9**	**-1.3**
	comp=Z,12nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**50.36**	**274**	*e*P	**P**	**02 31 58.6**	**+0.2**
	comp=Z,10nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.36**	**274**	P	**P**	**02 31 58.4**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.1,baz=138,slow=5.4,SNR=14						
FITZ				pP	pP	02 32 31.8	+0.9
	comp=Z,13nm,1.0s,baz=150,slow=6.5,SNR=4.4						
FITZ	**Fitzroy Crossi**	**50.36**	**274**	*e*P	**P**	**02 31 58.1**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.2						
FITZ				*e*pP	pP	02 32 32.3	+1.4
KLBR	**Kellerberrin**	**51.34**	**254**	*e*P	**P**	**02 32 05.0**	**-0.6**
	comp=Z,35nm,1.2s,mb4.9						
QSPA	**South Pole Qui**	**56.37**	**180**	P	**P**	**02 32 43.3**	**+1.9**
	comp=Z,41nm,0.7s,mb5.4,baz=38,slow=2.4,SNR=220						
QSPA				pP	pP	02 33 17.3	+2.8
	comp=Z,11nm,0.7s,baz=358,slow=3.7,SNR=2.5						
QSPA	**South Pole Qui**	**56.37**	**180**	*e*P	**P**	**02 32 43.3**	**+1.9**
	comp=Z,65nm,1.0s,mb5.4						
KAPI	**Kappang**	**62.23**	**283**	pP	pP	02 33 58.6	+2.3
	comp=Z,9.3nm,0.9s,baz=169,slow=9.1,SNR=2.1						
MAW	**Mawson**	**68.43**	**202**	*e*P	**P**	**02 34 00.9**	**-0.8**
	comp=Z,1.7nm,0.4s,mb4.1						
MAW	**Mawson**	**68.43**	**202**	P	**P**	**02 34 00.8**	**-0.9**
	comp=Z,1.6nm,0.4s,mb4.1,baz=134,slow=4.1,SNR=13						
PMSA	**Palmer Station**	**70.08**	**156**	P	**P**	**02 34 12.9**	**+1.1**
	comp=Z,7.1nm,0.4s,mb4.7,baz=204,slow=7.6,SNR=4.8						
VNA2	**Neumayer--Watz**	**75.50**	**178**	*e*P	**P**	**02 34 43.3**	**-0.4**
VNA1	**Neumayer--Stat**	**75.75**	**177**	*e*P	**P**	**02 34 45.1**	**0.0**
MJAR	**Matsushiro Arr**	**79.85**	**327**	P	**P**	**02 35 04.2**	**-4.0**
	comp=Z,1.4nm,0.6s,mb3.8,baz=175,slow=4.9,SNR=7.7						
MJAR				pP	pP	02 35 45.3	+1.8
	comp=Z,1.9nm,0.7s,baz=168,slow=5.4,SNR=2.9						
MAT	**Matsushiro**	**79.85**	**327**	P	**P**	**02 35 05.4**	**-2.8**
MAT				eS	S	02 45 01.0	+1.4
PLCA	**Paso Flores**	**81.74**	**134**	P	**P**	**02 35 19.0**	**+0.6**
	comp=Z,14nm,0.7s,mb4.7,baz=213,slow=6.1,SNR=33						
PLCA	**Paso Flores**	**81.74**	**134**	*e*P	**P**	**02 35 19.3**	**+0.9**
PLCA				pmax	pmax		
	comp=Z,49nm,1.4s						
PLCA	**Paso Flores**	**81.74**	**134**	*e*P	**P**	**02 35 19.2**	**+0.8**
	comp=Z,49nm,1.4s,mb4.9						
ERM	**Erimo**	**82.46**	**334**	*ce*P	**P**	**02 35 20.0**	**-1.8**
ERM				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
KSRS	**Korea Array**	**85.58**	**321**	P	**P**	**02 35 36.2**	**-1.5**
	comp=Z,1.4nm,0.7s,mb3.8,baz=143,slow=5.5,SNR=8.5						
KSRS				pP	pP	02 36 13.1	-0.4
	comp=Z,4.7nm,1.1s,baz=137,slow=5.3,SNR=2.8						
NJ2	**Nanjing**	**86.87**	**312**	*e*P	**P**	**02 35 44.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
YSS	**Yuzh-Sakhalins**	**86.88**	**336**	*e*P	**P**	**02 35 43.0**	**-0.9**
TRQA	**Tornquist**	**88.53**	**136**	*e*P	**P**	**02 35 52.9**	**+0.6**
	comp=Z,23nm,1.2s,mb5.0						
PETK	**Petropavlovsk-**	**88.56**	**347**	P	**P**	**02 35 51.0**	**-0.7**
	comp=Z,14nm,1.0s,mb4.8,baz=101,slow=7.7,SNR=14						
PKM	**Peak Mountain**	**88.82**	**46**	⇑P	**P**	**02 35 54.5**	**+1.1**
	baz=

GSC	Goldstone	90.91	47	P	P	02 36 03.7	+0.5
	baz=91,SNR=16						
GSC	Goldstone	90.91	47	eP	P	02 36 03.5	+0.3
GSC				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.3						
GSC	Goldstone	90.91	47	eP	P	02 36 03.5	+0.4
	comp=Z,41nm,1.3s,mb5.3						
MPMC	Manual Prospec	91.00	46	⇓P	P	02 36 03.6	0.0
	baz=91,SNR=9.9						
113A	Mohawk Valley,	91.17	51	⇓P	P	02 36 04.5	0.0
	baz=91,SNR=10						
IRM	Iron Mountain	91.19	49	⇓P	P	02 36 05.4	+0.9
	baz=91,SNR=23						
MLAC	Mammoth Lakes	91.26	44	⇓P	P	02 36 05.5	+0.8
	baz=91						
214A	Organ Pipe Nat	91.27	52	⇑P	P	02 36 05.1	+0.2
	baz=91,SNR=15						
GMRC	Granite Mounta	91.27	48	⇑P	P	02 36 04.3	-0.6
	baz=91,SNR=8.7						
Y12C	Blythe	91.32	50	⇑P	P	02 36 05.7	+0.6
	baz=92,SNR=10						
GYA	Guiyang	91.42	301	P	P	02 36 06.9	+1.2
GYA				pP	pP	02 36 46.5	+4.7
GYA				sP	sP	02 37 01.8	+5.2
GYA				SKS		02 46 24.9	
GYA				S	S	02 46 50.8	-2.3
GYA				sS	sS	02 47 59.6	+3.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=N,570nm,18.9s						
GYA				LR	LR		
	comp=E,480nm,19.4s						
GYA				LR	LR		
	comp=Z,590nm,20.5s						
Z13A	Yuma Proving G	91.52	50	⇓P	P	02 36 06.3	+0.3
	baz=92,SNR=23						
TUQ	Turquoise Moun	91.54	48	⇑P	P	02 36 06.5	+0.4
	baz=92						
CN2	Changchun	91.57	324	eP	P	02 36 05.8	-0.2
CN2				epP	pP	02 36 46.3	+4.3
CN2				esP	sP	02 37 02.5	+5.6
CN2				eS	S	02 46 49.9	-3.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
SHOC	Shoshone	91.63	47	⇓P	P	02 36 06.8	+0.3
	baz=92,SNR=6.2						
FURC	Furnace Creek,	91.66	46	⇓P	P	02 36 06.6	0.0
	baz=92						
GRAC	Grapevine Rang	91.70	46	⇓P	P	02 36 06.8	+0.1
	baz=92,SNR=20						
114A	Black Gap (USA	91.73	51	⇑P	P	02 36 07.1	+0.1
	baz=92,SNR=7.7						
Y13A	Salome	91.80	50	⇑P	P	02 36 08.1	+0.8
	baz=92,SNR=11						
LDFC	Landfair	91.81	48	eP	P	02 36 08.5	+1.1
	comp=Z,43nm,1.0s,mb5.4						
WCN	Washoe City	91.88	43	⇑P	P	02 36 07.1	-0.4
	baz=92,SNR=6.6						
PDMCI	Parker Dam,Lak	91.91	49	⇑P	P	02 36 08.5	+0.7
	baz=92						
NEE2	Needles Airpor	91.92	49	⇓P	P	02 36 09.0	+1.2
	baz=92						
BEKR	Beckwourth	91.93	42	⇑P	P	02 36 07.4	-0.3
	baz=92,SNR=15						
U10A	Ash Meadows, A	91.94	47	⇓P	P	02 36 07.6	-0.2
	baz=92,SNR=10.0						
Z14A	Wintersburg	92.08	51	⇓P	P	02 36 09.6	+1.0
	baz=92,SNR=5.7						
V11A	Goodsprings	92.11	47	⇑P	P	02 36 09.5	+0.8
	baz=92						
NVAR	Mina Array Bea	92.11	44	P	P	02 36 08.6	0.0
	comp=Z,9.1nm,0.8s,mb4.9,baz=222,slow=7.4,SNR=68						
216A	Three Points,	92.19	53	⇓P	P	02 36 09.6	+0.5
	baz=92,SNR=12						
X13A	Yucca	92.30	49	⇓P	P	02 36 10.3	+0.7
	baz=92						
116A	Eloy	92.38	52	⇑P	P	02 36 10.8	+0.8
	baz=92,SNR=8.9						
V12A	Nelson	92.39	48	⇑P	P	02 36 10.0	0.0
	baz=93,SNR=7.8						
Y14A	Wickenburg	92.41	50	⇑P	P	02 36 09.9	-0.2
	baz=93,SNR=10						
217A	Green Valley	92.47	53	⇑P	P	02 36 11.3	+0.8
	baz=93,SNR=19						
CMAR	Chiang Mai Arr	92.55	290	PP	PP	02 39 54.5	-0.2
	comp=Z,1.1nm,0.3s,baz=128,slow=6.1,SNR=5.0						
W13A	Hualapai Mount	92.59	49	⇑P	P	02 36 11.1	+0.2
	baz=93,SNR=11						
S10A	Tonopah Range,	92.78	45	⇑P	P	02 36 11.5	-0.2
	baz=93,SNR=19						
X14A	Yava	92.82	50	⇑P	P	02 36 12.8	+0.8
	baz=93,SNR=9.4						
318A	Bisbee	92.82	54	⇑P	P	02 36 13.0	+1.0
	baz=93,SNR=22						
TUC	Tucson	92.83	53	eP	P	02 36 13.1	+1.0
TUC				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.1						
TUC	Tucson	92.83	53	eP	P	02 36 13.1	+1.0
	comp=Z,14nm,0.8s,mb5.2						
Y15A	Casa Rosa Ranc	92.85	51	P	P	02 36 13.2	+1.0
	baz=93,SNR=8.0						
V13A	Grand Canyon W	93.01	48	⇑P	P	02 36 13.4	+0.5
	baz=93,SNR=14						
117A	Oracle	93.02	52	⇑P	P	02 36 13.8	+0.8
	baz=93,SNR=11						
U12A	Valley of Fire	93.04	48	⇓P	P	02 36 13.7	+0.8
	baz=93						
Z16A	Peralta Trail,	93.05	52	⇓P	P	02 36 13.7	+0.6
	baz=93,SNR=8.8						
218A	Dragoon	93.11	53	⇑P	P	02 36 14.2	+0.8
	baz=93,SNR=31						
T11A	Corn Creek, Al	93.15	47	⇑P	P	02 36 14.0	+0.5
	baz=93,SNR=25						
W14A	Seligman	93.17	49	⇓P	P	02 36 14.2	+0.6
	baz=93,SNR=7.9						
R10A	Warm Springs	93.19	45	⇓P	P	02 36 13.7	+0.1
	baz=93,SNR=8.9						
X15A	Humboldt	93.24	50	⇓P	P	02 36 14.3	+0.4
	baz=93,SNR=7.5						
319A	Douglas	93.26	54	⇓P	P	02 36 14.3	+0.2
	baz=93,SNR=7.2						
Y16A	Circle Bar Ran	93.35	51	⇓P	P	02 36 15.1	+0.6
	baz=94,SNR=14						
MOD	Modoc	93.36	40	eP	P	02 36 14.3	0.0
	comp=Z,18nm,0.9s,mb5.2						
U13A	Pakoon Wash	93.38	48	⇓P	P	02 36 14.7	+0.2
	baz=94,SNR=12						
V14A	Boquillas Ranc	93.42	49	⇓P	P	02 36 15.0	+0.3
	baz=94,SNR=13						
KMI	Kunming	93.48	298	P	P	02 36 17.8	+2.5
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
Q10A	Clear Creek Ra	93.49	45	⇑P	P	02 36 15.0	0.0
	baz=94,SNR=8.4						
118A	Homack Ranch,	93.57	53	⇓P	P	02 36 15.9	+0.3
	baz=94,SNR=28						
K05A	Summer Lake	93.61	40	⇓P	P	02 36 15.5	0.0
	baz=94						
S12A	Delamar Landin	93.61	46	⇑P	P	02 36 16.2	+0.6
	baz=94,SNR=7.6						
Y17A	Roosevelt	93.65	52	⇓P	P	02 36 15.8	-0.1
	baz=94,SNR=14						
219A	White Tail Can	93.66	54	⇓P	P	02 36 15.8	-0.1
	baz=94,SNR=6.6						
R11A	Troy Canyon, C	93.66	46	⇓P	P	02 36 15.8	0.0
	baz=94						
X16A	Lo Mia Camp, P	93.71	51	⇓P	P	02 36 14.9	-1.2
	baz=94,SNR=7.3						
320A	Kipp Ranch, An	93.75	55	⇓P	P	02 36 16.8	+0.5
	baz=94,SNR=6.9						
BJI	Beijing	93.86	317	P	P	02 36 16.9	+0.2
BJI				pP	pP	02 36 54.3	+1.6
BJI				S	S	02 47 12.6	-1.4
BJI				sS	sS	02 48 22.3	+5.4
BJI				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.3						
BJI				pmax	pmax		
	comp=Z,31nm,4.7s						
U14A	Mt Trumbull	93.87	48	⇑P	P	02 36 17.3	+0.5
	baz=94,SNR=17						
Q11A	Duckwater	93.94	45	⇑P	P	02 36 16.4	-0.6
	baz=94,SNR=5.2						
W16A	Flagstaff	94.08	50	⇓P	P	02 36 18.4	+0.6
	baz=94,SNR=8.9						
220A	Playas Peak, P	94.09	54	⇑P	P	02 36 17.9	0.0
	baz=94,SNR=6.9						
119A	Ashpeak Ranch,	94.09	53	⇑P	P	02 36 18.7	+0.8
	baz=94,SNR=5.1						
V15A	Kaibab Nationa	94.12	49	⇓P	P	02 36 18.9	+0.9
	baz=94,SNR=7.4						
S13A	Holt Ranch, En	94.20	47	⇑P	P	02 36 18.0	-0.3
	baz=94						
R12A	Pony Springs,	94.22	46	⇓P	P	02 36 18.9	+0.6
	baz=94,SNR=8.3						
Y18A	Canyon Day Jun	94.23	52	⇑P	P	02 36 19.5	+1.0
	baz=94,SNR=9.2						
H04A	Detroit Lake	94.31	37	⇓P	P	02 36 18.7	+0.1
	baz=94						
T14A	Hurricane	94.34	48	⇑P	P	02 36 18.9	0.0
	baz=94						
P11A	Circle Ranch,	94.34	45	⇓P	P	02 36 18.5	-0.4
	baz=94						
O10A	Cortez Mining,	94.40	44	⇓P	P	02 36 18.6	-0.5
	baz=95						
120A	U Bar Ranch, L	94.41	54	⇑P	P	02 36 19.7	+0.3
	baz=95,SNR=8.9						
U15A	North Rim	94.43	49	P	P	02 36 20.4	+1.0
	baz=95,SNR=19						
Z19A	T-Link Ranch,	94.44	53	⇓P	P	02 36 20.4	+0.9
	baz=95						
WUAZ	Wupatki	94.44	50	⇓P	P	02 36 19.9	+0.4
	baz=95,SNR=5.3						
WUAZ	Wupatki	94.44	50	eP	P	02 36 20.0	+0.6
	comp=Z,3.2nm,0.8s,mb4.5						
R13A	O'Grain Ranch,	94.51	46	⇑P	P	02 36 19.9	+0.2
	baz=95						
Q12A	Willow Creek R	94.55	45	⇑P	P	02 36 20.4	+0.6
	baz=95						
WVOR	Wild Horse Val	94.63	41	eP	P	02 36 20.2	+0.1
WVOR				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.2						
WVOR	Wild Horse Val	94.63	41	eP	P	02 36 20.2	+0.1
	comp=Z,21nm,1.4s,mb5.2						
X18A	Snowflake	94.75	51	⇑P	P	02 36 20.6	-0.3
	baz=95						
T15A	Red Dirt Ranch	94.75	48	⇑P	P	02 36 20.3	-0.5
	baz=95						
O11A	Cowboy Ranch,	94.78	44	P	P	02 36 21.0	+0.2
	baz=95,SNR=8.5						
Z20A	Nine Sixteen R	94.78	53	⇑P	P	02 36 21.9	+0.8
	baz=95,SNR=9.8						
P12A	McGill	94.79	45	⇓P	P	02 36 20.5	-0.4
	baz=95						
Y19A	Nutrioso	94.85	52	⇑P	P	02 36 21.7	+0.4
	baz=95,SNR=9.4						
V17A	Tonalea, Kykot	94.88	50	⇑P	P	02 36 21.7	+0.2
	baz=95,SNR=7.7						
121A	Cookes Peak, D	94.97	54	⇑P	P	02 36 21.6	-0.3
	baz=95						
Q13A	Wheeler Ranch,	94.98	46	⇓P	P	02 36 21.9	+0.1
	baz=95,SNR=5.2						
U16A	Tuba City	94.99	49	⇑P	P	02 36 22.2	+0.3
	baz=95						
X19A	St. Johns	95.12	52	⇑P	P	02 36 23.2	+0.6
	baz=95						
222A	Williams Famil	95.18	55	⇓P	P	02 36 22.4	-0.5
	baz=95						
M10A	I.L. Ranch, Tu	95.18	43	⇑P	P	02 36 22.5	-0.2
	baz=95,SNR=5.4						
I07A	Izee	95.28	39	⇓P	P	02 36 23.0	0.0
	baz=96,SNR=8.5						
P13A	Bates Ranch, G	95.30	45	⇑P	P	02 36 23.3	+0.1
	baz=96,SNR=7.0						
J08A	Circle Bar Ran	95.34	40	⇓P	P	02 36 23.1	-0.2
	baz=96,SNR=5.9						
O12A	Currie	95.40	44	⇑P	P	02 36 23.4	-0.3
	baz=96,SNR=6.1						
Y20A	Horse Springs,	95.40	53	⇓P	P	02 36 24.8	+0.9
	baz=96,SNR=12						
Q14A	Sevier Lake (B	95.45	46	⇑P	P	02 36 23.6	-0.3
	baz=96,SNR=8.7						
Z21A	St. Cloud Mine	95.51	53	⇓P	P	02 36 25.1	+0.7
	baz=96,SNR=5.3						
M11A	Holland Ranch,	95.55	43	⇓P	P	02 36 24.4	+0.1
	baz=96,SNR=6.5						
L10A	Juniper Basin	95.59	42	⇑P	P	02 36 24.1	-0.4
	baz=96,SNR=16						
N12A	Clover Valley,	95.60	44	⇑P	P	02 36 24.3	-0.3
	baz=96,SNR=7.6						
X20A	Quemado	95.70	52	⇑P	P	02 36 25.2	-0.1
	baz=96,SNR=7.0						
T17A	Navajo Res., N	95.72	49	⇓P	P	02 36 24.9	-0.3
	baz=96,SNR=5.1						
J09A	Fry Pan Ranch,	95.72	41	⇓P	P	02 36 25.1	0.0
	baz=96,SNR=5.9						
626A	Big Bend Ranch	95.74	58	⇓P	P	02 36 25.1	-0.4
	baz=96,SNR=6.8						
K10A	MacKenzie Ranc	95.83	42	⇑P	P	02 36 25.0	-0.5
	baz=96,SNR=13						
425A	Indio Mountain	95.86	57	⇓P	P	02 36 25.9	-0.1
	baz=96,SNR=7.1						
324A	Moseley Ranch,	95.90	56	⇑P	P	02 36 25.0	-1.2
	baz=96						
Y21A	Point of Rocks	95.93	53	⇓P	P	02 36 25.7	-0.6
	baz=96,SNR=6.2						
TXAR	Lajitas Array	95.94	59	P	P	02 36 26.7	+0.2
	comp=Z,1.6nm,1.0s,mb4.3,baz=211,slow=3.9,SNR=16						
TXAR				pP	pP	02 37 03.1	+0.6
	comp=Z,1.3nm,1.3s,baz=265,slow=4.5,SNR=1.1						
TXAR				PP	PP	02 40 21.2	+0.2
	comp=Z,0.7nm,1.1s,baz=246,slow=5.3,SNR=5.8						
TXAR	Lajitas Array	95.94	59	P	P	02 36 26.7	+0.2
TXAR				pP	pP	02 37 03.1	+0.6
TXAR				PP	PP	02 40 21.2	+0.2
M12A	Wells	96.04	44	⇑P	P	02 36 25.5	-1.1
	baz=96,SNR=6.1						
L11A	Cat Creek Ranc	96.05	43	⇓P	P	02 36 25.2	-1.4
	baz=96,SNR=7.6						
W20A	Ramah	96.06	52	⇑P	P	02 36 25.9	-0.9
	baz=96,SNR=7.4						
526A	Mary Lane Ranc	96.06	58	⇑P	P	02 36 26.7	-0.2
	baz=96,SNR=7.0						
N13A	Wendover, West	96.09	44	⇑P	P	02 36 25.4	-1.5
	baz=96						
CD2	Chengdu	96.11	303	P	P	02 36 19.0	-8.2
CD2				SKS		02 36 39.0	
CD2				pP	pP	02 36 57.4	-5.9
CD2				sP	sP	02 37 13.5	-4.6
CD2				PP	PP	02 40 17.5	-4.8
CD2				S	S	02 47 22.3	-12
CD2				sS	sS	02 48 29.6	-7.4
CD2				SS	SS	02 54 01.0	-8.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
MNTX	Cornudas Mount	96.12	56	eP	P	02 36 26.8	-0.4
	comp=Z,1.2nm,0.6s,mb4.4						
S17A	Black Ridge (B	96.12	48	⇑P	P	02 36 26.6	-0.4
	baz=96						
X21A	Alamocita Cree	96.12	53	⇓P	P	02 36 26.3	-0.8
	baz=96,SNR=7.5						
I09A	Lost Marbles R	96.15	40	⇓P	P	02 36 26.5	-0.4
	baz=96						
325A	Bean Ranch, Si	96.21	56	⇓P	P	02 36 26.2	-1.4
	baz=96						
627A	Terlingua Ranc	96.21	59	⇑P	P	02 36 26.2	-1.5
	baz=96						
K11A	Parker Ranch,	96.29	42	⇑P	P	02 36 27.6	0.0
	baz=96,SNR=7.4						
U19A	Dine' College,	96.30	50	⇑P	P	02 36 28.0	+0.1
	baz=96						
G08A	Pilot Rock	96.39	39	⇓P	P	02 36 27.4	-0.6
	baz=97,SNR=8.0						
T18A	Mexican Hat	96.39	49	⇑P	P	02 36 28.2	-0.1
	baz=97,SNR=5.9						
P15A	Leamington	96.42	46	⇓P	P	02 36 28.0	-0.3
	baz=97						
M13A	Montello	96.44	44	⇑P	P	02 36 28.5	+0.1
	baz=97						
527A	Woodward Ranch	96.45	58	⇓P	P	02 36 27.9	-0.8
	baz=97,SNR=5.9						
L12A	House Creek Ra	96.45	43	⇓P	P	02 36 29.2	+0.8
	baz=97,SNR=6.3						
426A	McDonald Obser	96.46	57	⇓P	P	02 36 28.7	-0.1
	baz=97,SNR=6.3						
LAZ	Ladron	96.52	53	eP	P	02 36 29.2	+0.3
	comp=Z,0.8nm,0.9s,mb4.0						
628A	Black Gap, Mar	96.59	59	⇑P	P	02 36 29.2	-0.1
	baz=97,SNR=5.8						
H09A	Durkee	96.65	40	⇓P	P	02 36 28.8	-0.5
	baz=97						
R17A	Hanksville Air	96.66	48	⇑P	P	02 36 28.6	-0.8
	baz=97						
Q16A	Castle Valley	96.68	47	⇓P	P	02 36 28.5	-1.0
	baz=97						
N14A	Grayback Hills	96.68	45	⇓P	P	02 36 29.1	-0.4
	baz=97						
MFID	Camas Ranch	96.82	42	⇑P	P	02 36 29.3	-0.8
	baz=97,SNR=6.9						
K12A	Draper Farm, C	96.83	43	⇓P	P	02 36 28.7	-1.5
	baz=97						
M14A	Sheep Mountain	97.00	44	⇓P	P	02 36 30.9	-0.1
	baz=97,SNR=12						
427A	Hayter Ranch,	97.00	58	⇓P	P	02 36 30.5	-0.7
	baz=97,SNR=7.5						
HHC	Hu-ho-hao-te	97.07	315	eP	P	02 36 33.0	+1.8
HHC				pP	pP	02 37 13.8	+6.4
HHC				sP	sP	02 37 30.8	+8.6
HHC				PP	PP	02 40 34.3	+4.8
HHC				SKS		02 46 53.8	
HHC				S	S	02 47 39.0	-2.8
HHC				sS	sS	02 48 50.3	+5.5
HHC				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
HHC				pmax	pmax		
	comp=Z,92nm,5.7s						
HHC				LR	LR		
	comp=N,200nm,15.0s						
HHC				LR	LR		
	comp=E,190nm,15.1s						
HHC				LR	LR		
	comp=Z,140nm,14.6s						
I11A	Placerville	97.08	41	⇓P	P	02 36 30.2	-1.0
	baz=97						
H10A	Noah's Angus R	97.09	40	⇑P	P	02 36 30.5	-0.8
	baz=97						
N15A	Stansbury Isla	97.10	45	⇑P	P	02 36 29.9	-1.5
	baz=97						
GDL2	Guadalupe Moun	97.11	56	eP	P	02 36 31.9	+0.2
	comp=Z,0.8nm,0.6s,mb4.2						
J12A	Stokes Ranch,	97.12	42	⇑P	P	02 36 31.3	-0.1
	baz=97,SNR=14						
R18A	Canyonlands Na	97.14	48	⇑P	P	02 36 31.2	-0.4
	baz=97						
125A	Gardner Draw,	97.17	56	⇑P	P	02 36 30.5	-1.4
	baz=97						
SRU	San Rafael	97.20	47	⇓P	P	02 36 31.0	-0.9
	baz=97,SNR=6.2						
S19A	Harvey Farm, M	97.23	49	⇑P	P	02 36 32.4	+0.4
	baz=97						
ETW	Entiat	97.27	36	eP	P	02 36 32.3	+0.3
	comp=Z,8.4nm,1.3s,mb4.9						
ANMO	Albuquerque	97.29	53	eP	P	02 36 32.9	+0.5
ANMO				pmax	pmax		
	comp=Z,33nm,2.3s						
ANMO	Albuquerque	97.29	53	eP	P	02 36 32.9	+0.5
	comp=Z,33nm,2.3s,mb5.3						
K13A	Stover Farm, H	97.31	43	⇑P	P	02 36 32.7	+0.4
	baz=98						
G10A	Bishop Farm, J	97.36	40	⇑P	P	02 36 32.0	-0.4
	baz=98						
Y24A	Capitan	97.38	54	⇓P	P	02 36 32.9	+0.1
	baz=98						
L14A	Malta	97.40	44	⇑P	P	02 36 32.5	-0.2
	baz=98						
428A	Kincaid Ranch,	97.44	58	⇑P	P	02 36 32.1	-1.1
	baz=98						
I12A	Atlanta	97.45	42	⇓P	P	02 36 32.3	-0.6
	baz=98,SNR=5.7						
Z25A	Roswell	97.49	55	⇑P	P	02 36 33.0	-0.3
	baz=98						
M15A	Larsen Ranch,	97.50	45	⇓P	P	02 36 32.2	-1.0
	baz=98						
H11A	Donnelly	97.56	40	⇓P	P	02 36 32.5	-0.8
	baz=98						
W23A	Werner Place,	97.62	53	⇑P	P	02 36 32.4	-1.5
	baz=98						
P18A	Preston Nutter	97.68	47	⇓P	P	02 36 33.9	-0.2
	baz=98						
HLID	Hailey	97.70	42	⇑P	P	02 36 34.0	-0.1
	baz=98,SNR=7.4						
HLID	Hailey	97.70	42	eP	P	02 36 34.1	+0.1
	comp=Z,5.0nm,1.3s,mb4.8						
O17A	Robinson Place	97.73	46	⇓P	P	02 36 33.6	-0.7
	baz=98						
J13A	Cove Ranch, Pi	97.73	42	⇓P	P	02 36 33.4	-0.7
	baz=98,SNR=9.2						
G11A	Walters Elk Ra	97.88	40	⇓P	P	02 36 33.7	-1.1
	baz=98						
Y25A	Mesa, Roswell	97.88	54	⇑P	P	02 36 32.8	-2.3
	baz=98,SNR=5.8						
Z26A	Caprock	97.99	55	⇑P	P	02 36 34.3	-1.3
	baz=98,SNR=6.0						
J14A	Carey	98.06	43	⇑P	P	02 36 35.2	-0.4
	baz=98						
HWUT	Hardware Ranch	98.11	45	eP	P	02 36 36.3	+0.4
	comp=Z,2.3nm,0.8s,mb4.7						
W24A	Lazy 6 Ranch,	98.14	53	⇓P	P	02 36 35.6	-0.6
	baz=98						
G12A	Big Creek, Yel	98.21	40	⇑P	P	02 36 36.3	+0.1
	baz=98						
K15A	Arbon	98.22	44	⇑P	P	02 36 36.3	-0.1
	baz=98						
H13A	Challis	98.43	41	⇑P	P	02 36 36.3	-1.0
	baz=99						
L16A	Fish Haven	98.44	45	⇑P	P	02 36 35.9	-1.4
	baz=99						
Y26A	Elida	98.47	55	⇑P	P	02 36 36.8	-0.9
	baz=99						
LPAZ	La Paz	98.64	116	P	P	02 36 40.4	+1.4
	comp=Z,1.4nm,0.8s,mb4.4,baz=245,slow=3.8,SNR=6.3						
LPAZ				PP	PP	02 40 43.3	+2.1
	comp=Z,1.3nm,1.0s,baz=232,slow=4.1,SNR=4.2						
F12A	Elk City	98.65	40	⇑P	P	02 36 37.5	-0.8
	baz=99						
G13A	Cobalt	98.78	41	⇓P	P	02 36 38.6	-0.2
	baz=99						
W25A	X Bar L Ranch,	98.78	54	⇑P	P	02 36 38.2	-0.9
	baz=99						
X26A	CR and CF Fran	98.84	54	⇓P	P	02 36 38.6	-0.8
	baz=99						
Y27A	Causey	98.90	55	⇑P	P	02 36 38.4	-1.2
	baz=99						
H14A	Leadore	98.95	42	⇓P	P	02 36 38.6	-1.0
	baz=99						
LZH	Lanzhou	99.05	307	eP	P	02 36 43.6	+3.3
LZH				pP	pP	02 37 20.3	+3.8
LZH				sP	sP	02 37 36.1	+4.8
LZH				PP	PP	02 40 50.0	+5.3
LZH				SKS		02 47 05.0	
LZH				eS	S	02 47 57.0	-1.8
LZH				sS	sS	02 49 06.0	+4.0
LZH				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.3						
LZH				pmax	pmax		
	comp=Z,52nm,4.0s						
MSTX	Muleshoe	99.22	55	⇑P	P	02 36 40.5	-0.6
	baz=99						
NEW	Newport	99.31	37	eP	Pdif	02 36 41.5	0.0
N20A	Spence Gulch,	99.62	47	⇑P	Pdif	02 36 41.9	-1.0
	baz=100						
L19A	Farson	99.72	46	⇑P	Pdif	02 36 41.7	-1.6
	baz=100						
G15A	Dillon	99.79

RES	Resolute Bay	121.07	18	*e*PKIKP	PKPdf	02 41 48.3	-1.9
KURK	Kurchatov	121.80	313	PKP	PKPdf	02 41 49.6	-2.7
	comp=Z,1.2nm,0.5s,baz=116,slow=1.9,SNR=7.7						
KURK				PKKPbc	PKKPbc	02 51 52.3	+0.5
	comp=Z,1.6nm,0.6s,baz=281,slow=4.9,SNR=8.1						
KURK	Kurchatov	121.80	313	*c i*PKIKP	PKPdf	02 41 50.7	-1.6
BVAR	Borovoye Array	127.27	314	PKP	PKPdf	02 42 01.8	-0.9
	comp=Z,0.8nm,0.5s,baz=80,slow=3.5,SNR=4.6						
SCHQ	Schefferville	130.12	44	PKP	PKPdf	02 42 06.7	-1.3
	comp=Z,1.2nm,0.6s,baz=38,slow=18,SNR=4.4						
AKTK	Aktyubinsk	134.71	310	PKP	PKPdf	02 42 14.8	-2.0
AKTO	Aktyubinsk	134.71	310	PKP	PKPdf	02 42 14.8	-2.0
	comp=Z,1.0nm,0.5s,baz=150,slow=3.5,SNR=5.5						
SPITS	Spitsbergen Ar	134.87	355	PKP	PKPdf	02 42 14.9	-1.5
	comp=Z,3.0nm,0.6s,baz=35,slow=3.1,SNR=8.8						
SPITS	Spitsbergen Ar	134.87	355	PKP	PKPdf	02 42 14.9	-1.5
ARCES	ARCESS Array B	141.36	346	PKhKP		02 42 23.4	
	comp=Z,4.3nm,0.9s,baz=50,slow=1.6,SNR=9.7						
ZEI	Tsey	144.35	298	*i* PKIKP	PKPdf	02 42 36.1	+1.5
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	Joensuu	144.67	335	*e*pkp	PKPdf	02 42 30.4	-4.1
VRHR	Novokhopersk	144.98	313	*e*PKIKP	PKPdf	02 42 33.2	-2.2
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
MOS	Moscow	145.78	322	*e*PKIKP	PKPdf	02 42 35.3	-1.3
MOS				*e*		02 43 13.9	
MOS				pmax	pmax		
	comp=Z,71nm,1.2s						
OBN	Obninsk	146.58	321	*i* PKP2	PKPdf	02 42 38.3	+0.3
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
KAF	Kangasniemi	146.91	337	*e*pkp	PKPdf	02 42 36.7	-1.6
FINES	FINESS Array B	147.47	336	PKPbc	PKPdf	02 42 39.1	-0.1
	comp=Z,6.7nm,0.5s,baz=44,slow=4.1,SNR=56						
FINES				pKPPbc	pKPPbc	02 43 20.3	+0.9
	comp=Z,6.0nm,0.8s,baz=64,slow=4.4,SNR=2.5						
ASF	Jabal al Asfar	148.71	278	pKPPbc	pKPPbc	02 43 25.4	+1.7
	comp=Z,3.0nm,0.8s,baz=326,slow=3.6,SNR=2.0						
VSU	Vasula	149.31	332	*c i*PKHKP	PKPdf	02 42 45.1	+2.7
EIL	Elat	149.68	272	pKPPbc	pKPPbc	02 43 28.9	+2.8
	comp=Z,7.2nm,0.9s,baz=64,slow=8.9,SNR=3.6						
MMAI	Mount Meron Ar	150.12	279	PKPbc	PKPbc	02 42 48.4	-1.3
	comp=Z,3.9nm,0.5s,baz=81,slow=6.8,SNR=15						
MMAI				pKPPbc	pKPPbc	02 43 30.0	+2.8
	comp=Z,15nm,0.9s,baz=91,slow=6.7,SNR=4.9						
IZAR	Zarasai	151.27	328	*e*P	PKPbc	02 42 48.9	-2.8
IDID	Didziasalis	151.31	327	*e*P	PKPbc	02 42 49.3	-2.4
IIGN	Ignalina	151.53	327	*e*P	PKPbc	02 42 50.2	-2.1
NACGM	Naroch	151.55	326	*e*	PKPdf	02 42 45.0	-1.0
NOA	NORSAR Array B	151.66	348	PKPbc	PKPbc	02 42 49.0	-3.4
	comp=Z,1.2nm,0.7s,baz=24,slow=4.3,SNR=9.8						
NOA				PKPab	PKPab	02 42 59.7	-1.9
	comp=Z,2.2nm,0.7s,baz=23,slow=4.3,SNR=4.5						
NOA				pPKPab	pPKPab	02 43 38.0	-0.1
	comp=Z,2.1nm,0.9s,baz=31,slow=2.0,SNR=2.5						
NOA	NORSAR Array B	151.66	348	PKIKP	PKPbc	02 42 49.0	-3.4
NOA						02 42 59.7	
NAO01	NORSAR Array S	151.90	348	*e*PKPbc	PKPbc	02 42 51.1	-1.8
NAO01				*e*PKPab	PKPab	02 42 60.0	-2.7
HFS	Hagfors	152.01	345	PKPbc	PKPbc	02 42 51.5	-1.7
	comp=Z,2.9nm,0.6s,baz=106,slow=3.2,SNR=14						
HFS				PKPab	PKPab	02 42 58.8	-4.3
	comp=Z,2.0nm,0.5s,baz=153,slow=1.0,SNR=9.8						
BR131	Keskin Array S	152.12	292	*e*PKPbc	PKPbc	02 42 52.9	-1.2
BRTR	Keskin Array B	152.12	292	PKPbc	PKPdf	02 42 50.9	+3.5
	comp=Z,0.6nm,0.4s,baz=144,slow=3.5,SNR=7.7						
BRTR				pKPPbc	pKPPbc	02 43 31.7	0.0
	comp=Z,2.8nm,1.0s,baz=134,slow=3.6,SNR=4.4						
BRTR	Keskin Array B	152.12	292	PKPbc	PKPdf	02 42 50.9	+3.5
BRTR				pKPPbc	pKPPbc	02 43 31.7	0.0
LIC	Lamto	152.29	170	*e*PKP1	PKPbc	02 42 54.4	-0.9
	comp=Z,70nm,1.0s						
KIC	Kosan Boka	152.46	171	*e*PKP1	PKPbc	02 42 55.3	-0.3
	comp=Z,20nm,0.8s						
AKASG	Malin Array Be	152.50	317	PKPbc	PKPdf	02 42 50.9	+3.4
	comp=Z,1.2nm,0.5s,baz=54,slow=2.1,SNR=6.3						
AKASG				pKPPbc	pKPPbc	02 43 33.5	+1.4
	comp=Z,2.1nm,0.7s,baz=58,slow=2.8,SNR=2.3						
TIC	Toumodi	152.70	170	*e*PKP1	PKPbc	02 42 55.3	-0.9
	comp=Z,18nm,0.7s						
DBIC	Dimbokro	152.75	170	PKPbc	PKPbc	02 42 55.7	-0.6
	comp=Z,2.8nm,0.4s,baz=104,slow=2.3,SNR=18						
DBIC				PKPab	PKPab	02 43 07.1	-0.3
	comp=Z,5.1nm,0.6s,baz=112,slow=2.4,SNR=4.9						
DBIC	Dimbokro	152.75	170	*e*PKPdf	PKPdf	02 42 49.1	0.0
DBIC				*e*PKPbc	PKPbc	02 42 55.6	-0.7
DBIC				PKPbc	PKPbc	02 42 55.7	-0.6
DBIC				PKPab	PKPab	02 43 07.1	-0.3
DBIC				*e*PKPab	PKPab	02 43 07.2	-0.2
VRI	Vrincioaia	155.97	308	||*i*P	pPKPab	02 43 57.7	+0.9
BURAR	Bucovina Array	156.23	313	||*i*P	pPKPab	02 43 59.3	+1.5
MLR	Muntele Rosu	156.62	308	PKP	PKPdf	02 42 50.9	-2.5
	comp=Z,0.8nm,0.7s,baz=300,slow=21,SNR=3.1						
MLR	Muntele Rosu	156.62	308	||*i*P	pPKPab	02 43 58.2	-1.4
KWP	Kalwaria Pacla	156.65	320	⇑*i*P	pPKPab	02 44 00.5	+0.9
KOLS	Kolonicke sedl	157.28	319	*e*PKIKP	PKPdf	02 43 00.8	+6.7
KOLS				*e*		02 43 32.3	
KOLS	Kolonicke sedl	157.28	319	*e*PKP	PKPdf	02 43 00.8	+6.7
KOLS				*e*		02 43 32.3	
KOLS				*e*		02 44 03.0	
UZH	Uzhgorod	157.43	318	*e*PKP2	PKPab	02 43 26.0	-0.7
STHS	Stebnicka Huta	157.56	321	*e*PKIKP	PKPdf	02 43 00.4	+6.0
STHS				*e*		02 43 28.2	
STHS	Stebnicka Huta	157.56	321	*e*PKP	PKPdf	02 43 00.4	+6.0
STHS				*e*		02 43 28.2	
EKA	Eskdalemuir Ar	158.34	4	PKPab	PKPab	02 43 27.9	-2.4
	comp=Z,0.7nm,0.7s,baz=360,slow=3.7,SNR=4.0						
DPC	Dobruska-Polom	159.32	328	*e*PKPAB	PKPab	02 43 33.7	-1.1
DPC				*ex*	x	02 44 15.2	
VYHS	Vyhne	159.38	321	*e*PKP2	PKPab	02 43 33.9	-1.2
VYHS	Vyhne	159.38	321	*e*PKP	PKPab	02 43 33.9	-1.2
VYHS				*e*		02 44 12.2	
TORD	Torodi Ar. Bea	159.40	186	PKPab	PKPab	02 43 35.5	-0.3
	comp=Z,0.5nm,0.3s,baz=170,slow=4.3,SNR=12						
CLL	Collm	159.89	335	*e*PKPab	PKPab	02 43 34.9	-2.3
CLL	Collm	159.89	335	||*e*PKIKP	PKPdf	02 42 57.0	-0.2
CLL				*i*		02 43 34.9	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.5s						
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	Collm	159.89	335	*e*PKPdf	PKPdf	02 42 57.0	-0.2
	comp=Z,7.0nm,1.5s						
CLL				⇑*i*PKPab	PKPab	02 43 35.4	-1.8
	comp=Z,7.0nm,1.2s						
CLL				*e*pPKPab	pPKPab	02 44 13.0	-0.5
BRG	Berggiesshubel	159.90	333	*e*PKPab	PKPab	02 43 35.8	-1.4
BRG	Berggiesshubel	159.90	333	*e*PKP	PKPab	02 43 36.0	-1.2
	comp=Z,5.2nm,1.2s						
BRG	Berggiesshubel	159.90	333	*e*PKP2	PKPab	02 43 36.0	-1.2
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VRAC	Vranov	159.95	326	PKPab	PKPab	02 43 35.7	-1.8
	comp=Z,1.6nm,0.5s,baz=59,slow=21,SNR=4.2						
CLZ	Clausthal	160.28	340	*e*PKPab	PKPab	02 43 36.7	-2.2
NEUB	Neuenburg	160.40	337	*e*PKPab	PKPab	02 43 38.3	-1.1
GUNZ	Gunzen	160.91	334	*e*PKPab	PKPab	02 43 40.4	-1.3
MOX	Moxa	160.93	336	*e*PKP	PKPab	02 43 39.7	-2.0
MOX	Moxa	160.93	336	*e*PKPab	PKPab	02 43 39.6	-2.1
UBBA	Unterbreizbach	161.30	339	*e*PKPab	PKPab	02 43 41.3	-2.0
ROTZ	Rotzenmuhle	161.45	333	*e*PKPab	PKPab	02 43 42.8	-1.2
GERES	GERESS Array B	161.58	329	PKP	PKPdf	02 42 57.9	-1.1
	comp=Z,0.7nm,1.1s,baz=182,slow=6.4,SNR=3.6						
GERES				PKPab	PKPab	02 43 41.7	-3.0
	comp=Z,0.1nm,0.3s,baz=67,slow=4.5,SNR=4.4						
GERES				pPKPab	pPKPab	02 44 24.0	+3.0
	comp=Z,0.7nm,1.0s,baz=17,slow=1.4,SNR=3.0						
GERES	GERESS Array B	161.58	329	PKIKP	PKPdf	02 42 57.9	-1.2
GERES						02 43 41.7	
GRF	Grafenberg Arr	161.87	335	*e*PKPab	PKPab	02 43 44.6	-1.3
TNS	Taunus Mts	162.28	341	*e*PKPab	PKPab	02 43 46.3	-1.3
BFO	Black Forest	164.01	338	*e*PKPab	PKPab	02 43 53.5	-1.8
PVRL	Vila Real	170.55	35	*e*PKPab	PKPab	02 44 23.6	-0.8
MVO	Moncorvo	170.96	33	*e*PKPab	PKPab	02 44 25.6	-0.6
MTE	Manteigas	171.29	38	*e*PKPab	PKPab	02 44 26.3	-1.5
PTOM	Tomar	171.35	45	*e*PKPab	PKPab	02 44 27.0	-1.1
PCBR	Castelo Branco	171.73	41	*e*PKPab	PKPab	02 44 27.9	-1.9
PMRV	Marv??o	172.07	42	*e*PKPab	PKPab	02 44 30.6	-0.7
EVO	Evora	172.26	50	*e*PKPab	PKPab	02 44 31.4	-0.8
PESTR	Estremoz	172.32	46	*e*PKPab	PKPab	02 44 31.1	-1.3
PFVI	Vila Bisbo	172.40	61	*e*PKPab	PKPab	02 44 32.7	-0.2
MORF	Marmelete	172.46	60	*e*PKPab	PKPab	02 44 31.8	-1.4
PBEJ	Beja	172.65	52	*e*PKPab	PKPab	02 44 32.6	-1.3
PBAR	Barrancos	173.09	48	*e*PKPab	PKPab	02 44 35.1	-0.8

*ISCJB **17** 02:29:48.8±0.4, 37°.46N±0°.03×72°.29E±0°.06, h193km±6km, mb3.3/5, Error ellipse: s-maj=7.5km s-min=4.2km az=169.2*
*IDC **17** 02:29:48.6±4.1, 37°.44N×72°.05E, h170km±33km, mb3.3/5, mb1 3.4/11, mb1mx3.2/29, mbtmp3.3/11, MS2.7/1, Ms1 2.7/1, ms1mx2.1/34, Error ellipse: s-maj=37.7km s-min=29.0km az=141.0*
*NEIC **17** 02:29:51.1±0.9, 37°.59N×72°.03E, h189km±8km, mb3.9/4, Error ellipse: s-maj=19.3km s-min=8.9km az=128.0*
*NNC **17** 02:29:53.5±7.8, 38°.13N×71°.62E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=60.9km s-min=51.5km az=16.0*

ISC 17 02:29:49.6±0.4, 37°.47N±0°.03×72°.23E±0°.06, h188km±6km, n46, σ1§24/64, mb3.5/5, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.58	54	⇑*i*Pn	Pn	02 30 42.4	-3.2
KSH				Sn	Sn	02 31 20.6	-8.8
KSH				smax			
	comp=N,170nm,0.3s						
KSH				smax			
	comp=E,160nm,0.3s						
KBL	Kabul	3.90	222	*e*Pn	Pn	02 30 51.4	+1.6
KBL				*e*Sn	Sn	02 31 36.9	+0.1
AML	Almayashu	4.79	13	P	Pn	02 31 02.4	+1.5
SNR=83							
AML	Almayashu	4.79	13	*e*Pn	Pn	02 31 02.1	+1.2
AML				*e*Sn	Sn	02 31 55.1	-1.9
UCH	Uchtor	5.06	20	P	Pn	02 31 06.1	+1.6
SNR=36							
UCH	Uchtor	5.06	20	*e*Pn	Pn	02 31 05.8	+1.4
UCH				*e*Sn	Sn	02 32 02.2	-1.2
KZA	Kyzart	5.15	26	P	Pn	02 31 06.6	+1.0
SNR=16							
EKS2	Erkin-Say	5.32	12	P	Pn	02 31 09.8	+2.1
SNR=5.5							
EKS2	Erkin-Say	5.32	12	*e*Pn	Pn	02 31 08.9	+1.2
EKS2				*e*Sn	Sn	02 32 08.3	-1.0
AAK	Ala-Archa	5.44	18	P	Pn	02 31 11.0	+1.7
SNR=14							
AAK	Ala-Archa	5.44	18	P	Pn	02 31 10.3	+1.0
	comp=E,0.1nm,0.3s,baz=164,slow=4.5,SNR=35						
AAK				S	Sn	02 32 11.2	-0.9
	comp=E,0.1nm,0.3s,baz=312,slow=22,SNR=33						
AAK	Ala-Archa	5.44	18	P	Pn	02 31 10.3	+1.0
AAK				S	Sn	02 32 11.2	-0.9
KBK	Karagaybulak	5.58	21	P	Pn	02 31 13.5	+2.4
SNR=5.9							
ULHL	Ulahol	5.68	32	P	Pn	02 31 13.4	+1.0
SNR=12							
KK31	Karatay Array	5.78	347	||Pn	Pn	02 31 14.3	+0.7
	comp=E,6.1nm,0.5s,baz=153,slow=10,SNR=154						
KK31				⇑Sn	Sn	02 32 16.1	-3.9
	comp=E,46nm,0.5s,baz=168,slow=22,SNR=25						
THN	Thein Dam	5.78	149	*e*P	Pn	02 31 13.7	-0.2
THN				*ex*	x	02 32 18.5	
TKM2	Tokmak 2	6.02	24	⇑Pn	Pn	02 31 18.1	+1.2
	comp=E,4.2nm,0.8s						
TKM2				⇑Sn	Sn	02 32 26.0	+0.2
	comp=E,6.3nm,0.8s						
TKM2	Tokmak 2	6.02	24	P	Pn	02 31 18.2	+1.3
SNR=6.7							
TKM2	Tokmak 2	6.02	24	*e*Pn	Pn	02 31 17.9	+1.0
	comp=E,3.6nm,0.4s						
SDNR	Sundarnagar	7.12	145	*e*P	Pn	02 31 31.1	-0.3
SMLA	Simla	7.53	146	*i* P	Pn	02 31 33.5	-3.2
SMLA				*i* S	Sn	02 32 52.7	-8.8
SMLA				*i* S	Sn	02 32 52.8	-8.7
KLP	Kalpa	7.73	138	*e*P	Pn	02 31 38.7	-0.6
KLP				*e*S	Sn	02 33 03.7	-2.6
KLP				AML	AML	02 33 07.6	
	comp=E,116nm,0.6s						
KLP				AML	AML	02 33 08.1	
	comp=N,97nm,0.6s						
JOSI	Joshimath	9.19	136	*e*P	Pn	02 31 58.6	+0.1
JOSI				*e*S	Sn	02 33 35.3	-5.9
JOSI				AML	AML	02 33 39.4	
	comp=E,72nm,0.4s						
JOSI				AML	AML	02 33 40.2	
	comp=N,66nm,0.4s						
KHET	Khetri	9.84	161	*e*S	Sn	02 33 48.1	-8.6
KHET				AML	AML	02 34 07.1	
	comp=N,6.7nm,0.2s						
KHET				AML	AML	02 34 07.7	
	comp=E,5.0nm,0.1s						
SONA	Sohna	10.06	155	*e*S	Sn	02 33 53.4	-8.5
MKAR	Makanchi Array	11.93	35	P	Pn	02 32 36.6	+3.0
	comp=E,0.1nm,0.3s,baz=221,slow=9.1,SNR=3.1						
KURK	Kurchatov	14.01	17	P	Pn	02 33 00.7	+0.9
	comp=E,0.1nm,0.3s,baz=206,slow=9.9,SNR=9.3						
KURK	Kurchatov	14.01	17	*e*P	Pn	02 32 58.9	-0.9
	comp=E,2.1nm,0.8s						
KKN	Kakani	14.62	128	*e*P	Pn	02 33 08.2	+0.6
	comp=E,20nm,0.4s						
DMN	Daman	14.63	129	*e*P	Pn	02 33 07.5	-0.3
	comp=E,13nm,0.3s						
AB31	Akbulak array	14.76	327	⇑Pn	Pn	02 33 08.8	-0.4
	comp=E,2.9nm,0.3s,baz=135,slow=13,SNR=131						
AB31				Sn	Sn	02 35 43.6	-10
	comp=E,1.0nm,0.4s,baz=152,slow=22,SNR=11						
ABKAR	Akbulak array	14.76	327	*e*Pn	Pn	02 33 08.3	-0.9
	comp=E,7.2nm,0.4s						
ABKAR				*e*S	Sn	02 35 41.6	-12
PKI	Pulchoki	14.85	128	*e*P	Pn	02 33 10.7	+0.2
	comp=E,17nm,0.4s						
GUN	Gumba	14.91	126	*e*P	Pn	02 33 10.5	-0.8
	comp=E,24nm,0.4s						
BVAR	Borovoye Array	15.61	356	P	Pn	02 33 19.2	-0.3
	comp=E,0.5nm,0.3s,baz=179,slow=9.5,SNR=9.7						
BRVK	Borovoye	15.65	356	*e*P	Pn	02 33 18.2	-1.8
	comp=E,3.1nm,0.6s						
AKTK	Aktyubinsk	16.48	326	P	Pn	02 33 29.2	-0.7
AKTK				S	S	02 36 29.0	-2.8
AKTO	Aktyubinsk	16.48	326	||Pn	Pn	02 33 30.3	+0.4
	comp=E,0.6nm,0.4s						
AKTO				⇑Sn	Sn	02 36 27.2	-7.6
	comp=E,0.5nm,0.7s						
AKTO	Aktyubinsk	16.48	326	P	Pn	02 33 29.2	-0.7
	comp=E,2.0nm,0.3s,baz=131,slow=9.0,SNR=25						
AKTO				S	S	02 36 29.0	-2.8
	comp=E,0.4nm,0.3s,baz=318,slow=22,SNR=6.0						
ZAA0	Zalesovo Array	18.63	24	*e*P	P	02 33 53.7	+1.0
ZALV	Zalesovo Beam	18.63	24	P	P	02 33 53.5	+0.7
	comp=E,0.8nm,0.3s,baz=222,slow=10,SNR=14						
ZALV				LR	LR	02 42 45.2	
	comp=E,23nm,18.5s,baz=253,slow=42						
FINES	FINESS Array B	37.24	325	P	P	02 36 43.6	+1.0
	comp=E,0.4nm,0.3s,mb3.5,baz=111,slow=8.6,SNR=6.2						
ARCES	ARCESS Array B	40.63	337	P	P	02 37 12.1	+1.5
	comp=E,3.9nm,0.9s,mb4.0,baz=116,slow=8.4,SNR=6.9						
NOA	NORSAR Array B	44.21	322	P	P	02 37 40.1	+0.6
	comp=E,0.6nm,0.5s,mb3.5,baz=94,slow=7.8,SNR=3.0						
TORD	Torodi Ar. Bea	66.73	269	P	P	02 40 20.2	-0.5
	comp=E,0.6nm,0.4s,mb3.8,baz=48,slow=5.7,SNR=14						
YKA	Yellowknife Ar	80.23	3	P	P	02 41 39.3	+0.6
	comp=E,0.1nm,0.5s,mb2.7,baz=351,slow=5.5,SNR=4.9						

*DJA **17** 02:29:43, 56°.125×161°.69E, h10km, mb5.1/7*
*ISCJB **17** 02:29:51.9±0.6, 55°.31S±0°.06×158°.3E±0°.1, h10km, mb4.8/16, MS4.1/9, Error ellipse: s-maj=11.4km s-min=9.2km az=178.7*
*IDC **17** 02:29:51.3±0.6, 55°.43S×158°.28E, h0km, mb4.5/9, mb1 4.6/10, mb1mx4.4/16, mbtmp4.5/10, ML4.0/1, MS4.1/10, Ms1 4.1/10, ms1mx4.0/21, Error ellipse: s-maj=26.7km s-min=19.0km az=76.0*
*NEIC **17** 02:29:52.8±0.2, 55°.39S×158°.27E, h10km, mb4.9/8, Error ellipse: s-maj=8.1km s-min=6.4km az=74.0*

ISC 17 02:29:53.4±0.5, 55°.31S±0°.06×158°.4E±0°.1, h10km, n83, σ1§04/32, mb4.8/16, MS4.1/9, 2C, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	0.89	24	*e*P	Pg	02 30 08.9	-1.6
ODZ	Otahua Downs	12.93	42	*e*Pn	Pn	02 32 55.9	-1.1
RPZ	Rata Peaks	14.21	41	Pn	Pn	02 33 17.2	+2.7
	0.7nm,0.3s,baz=217,slow=12,SNR=2.4						
RPZ				LR	LR	02 38 27.8	
	comp=Z,286nm,18.7s,baz=132,slow=36						
RPZ	Rata Peaks	14.21	41	Pn	Pn	02 33 17.2	+2.7
RPZ				LR	LR	02 38 27.8	
TAU	Tasmania Unive	14.33	325	*e*Pn	Pn	02 33 15.4	-0.8
	106nm,0.8s						
MOO	Moorlands	14.80	326	*e*P	Pn	02 33 21.8	-0.7
TOO	Toolangi	19.77	328	||*i*P	Pn	02 34 25.0	0.0
CNB	Canberra Magne	20.94	339	||*i*P	P	02 34 38.1	+2.0
URZ	Urewera	21.24	44	P	P	02 34 39.7	+0.3
	21nm,0.9s,mb4.5,baz=176,slow=10,SNR=3.6						
URZ				LR	LR	02 42 38.5	
	comp=Z,558nm,19.9s,MS4.0,baz=110,slow=36						
URZ	Urewera	21.24	44	*e*P	P	02 34 39.6	+0.3
	62nm,1.4s,mb4.8						
URZ				LR	LR	02 42 38.5	
SBA	Scott Base	22.83	175	*e*P	P	02 34 56.3	+0.2
	30nm,1.4s,mb4.5						
ARMA	Armidale	25.34	346	*e*P	P	02 35 20.9	+0.6
ARMA	Armidale	25.34	346	*e*P	P	02 35 21.9	+1.7
	44nm,1.2s,mb4.9						
STKA	Stephens Creek	26.24	326	*e*P	P	02 35 30.2	+1.8
	12nm,1.2s,mb4.3						
STKA	Stephens Creek	26.24	326	P	P	02 35 29.8	+1.4
	15nm,1.0s,mb4.5,baz=139,slow=9.5,SNR=6.3						
STKA				LR	LR	02 44 38.2	
	comp=Z,245nm,19.4s,MS3.8,baz=210,slow=34						
FORT	Forrest	32.58	306	*e*P	P	02 36 23.7	-1.0
	56nm,1.0s,mb5.5						
QSPA	South Pole Qui	34.80	180	P	P	02 36 43.4	-0.2
	1.6nm,0.8s,mb4.0,baz=18,slow=6.3,SNR=2.5						
CTA	Charters Tower	36.34	341	*e*P	P	02 36 57.9	+0.6
	9.1nm,1.5s,mb4.5						
CTA	Charters Tower	36.34	341	P	P	02 36 57.5	+0.1
	6.0nm,0.8s,mb4.6,baz=183,slow=7.9,SNR=8.4						
CTA				LR	LR	02 50 13.6	
	comp=Z,269nm,18.2s,MS4.1,baz=228,slow=34						
CTAO	Charters Tower	36.34	341	*e*P	P	02 36 58.0	+0.7
	40nm,1.5s,mb5.1						
ASAR	Alice Springs	36.42	320	P	P	02 36 58.0	0.0
	5.3nm,1.1s,mb4.4,baz=125,slow=15,SNR=4.2						
ASAR				PcP	PcP	02 39 21.1	-0.9
	0.6nm,0.6s,baz=140,slow=4.3,SNR=4.5						
KLBR	Kellerberrin	37.04	293	*e*P	P	02 37 03.8	+0.5
	90nm,1.6s,mb5.3						
WRAB	Tennant Creek	39.70	323	*e*P	P	02 37 25.1	-0.5
	20nm,0.9s,mb4.8						
MAW	Mawson	42.53	214	LR	LR	02 54 17.3	
	comp=Z,205nm,18.1s,MS4.1,baz=305,slow=35						
COEN	Coen	42.92	338	*e*P	P	02 37 52.5	+0.3
	225nm,1.1s,mb5.8						
FITZ	Fitzroy Crossi	44.69	313	*e*P	P	02 38 07.2	+0.8
	16nm,1.0s,mb4.8						
FITZ	Fitzroy Crossi	44.69	313	P	P	02 38 06.5	+0.1
	8.6nm,0.9s,mb4.6,baz=170,slow=11,SNR=6.0						
FITZ				LR	LR	02 55 27.6	
	comp=Z,288nm,18.9s,MS4.2,baz=135,slow=34						
KAKA	Kakadu	47.06	324	*e*P	P	02 38 22.5	-2.6
	18nm,0.8s,mb5.1						
PPT	Papeete	54.46	68	*e*S	S	02 47 14.4	+15
	398nm,33.8s						
PPT				*e*LR	LR	02 55 25.8	
	557nm,23.2s,baz=219						
PPT	Papeete	54.46	68	LR	LR	02 57 39.0	
	comp=Z,376nm,18.6s,MS4.5,baz=190,slow=31						
RKT	Rikitea	58.08	85	*e*T		03 43 04.8	
	4.1nm,0.4s						
DAV	Davao City (W)	67.86	325	LR	LR	03 09 20.6	
	comp=Z,138nm,19.6s,MS4.2,baz=48,slow=35						
PLCA	Paso Flores	75.66	144	LR	LR	03 07 43.7	
	comp=Z,118nm,19.9s,MS4.2,baz=107,slow=30						
BOSA	Boshof	87.28	220	P	P	02 42 39.5	-0.7
	2.2nm,0.5s,mb4.7,baz=153,slow=3.8,SNR=14						
BOSA	Boshof

IRIF				S	Sn	02 38 01.1	+2.5
HATJ	**Hateruma jima**	**1.53**	**242**	P	Pn	02 37 44.1	+3.1
HATJ				S	Sn	02 38 02.9	+3.2
JKE	**Kume jima 2**	**2.05**	**41**	*e*S	Sn	02 38 13.0	+0.6
YOJ	**Yonaguni jima**	**2.09**	**261**	P	Pn	02 37 48.8	+0.1
YOJ				S	Sn	02 38 11.8	-1.7
JAGN	**Aguni-jima**	**2.52**	**44**	*e*S	Sn	02 38 24.6	+0.6

IDC ***17*** *02:45:00.9±1.0, 31°.12N×103°.54E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, ML4.1/2, Error ellipse: s-maj=30.5km s-min=20.9km az=51.0*
NEIC ***17*** *02:45:02.7±0.5, 31°.11N×103°.52E, h10km, mb4.3/7, Error ellipse: s-maj=12.2km s-min=8.8km az=58.0*
BJI ***17*** *02:45:02.0, 31°.16N×103°.44E, h13km, mB4.4/2, mb3.9/2, ML3.9/14, Ms3.6/4, Ms7 3.4/4*
ISCJB ***17*** *02:45:03.4±0.3, 31°.05N±0°.04×103°.66E±0°.06, h33km, mb3.9/17, Error ellipse: s-maj=7.9km s-min=4.1km az=152.7*
ISC 17 02:45:03.8±0.7,**31°.07N**±0°.04×**103°.65E**±0°.06,**h19**km±5km, **n35**,σ1s**05**/43,**mb3.9**/17,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.18**	**150**	Pg	**Pg**	**02 45 08.3**	**-0.3**
CD2				Sg	**Sg**	**02 45 13.1**	**+1.3**
CD2	comp=N,40μm,0.7s			smax			
LZH	**Lanzhou**	**5.01**	**2**	Pn	**Pn**	**02 46 15.3**	**-2.5**
LZH	comp=N,78nm,0.6s			smax			
LZH	comp=E,170nm,0.7s			smax			
LZH	comp=N,250nm,4.0s			LR	LR		
LZH	comp=Z,270nm,4.6s			LR	LR		
ENH	**Enshi**	**5.09**	**97**	*e*Pn	**Pn**	**02 46 21.6**	**+2.7**
ENH	comp=Z,80nm,0.8s			*e*Pg	**Pg**	**02 46 39.2**	**-2.0**
ENH				*e*Sg	**Sg**	**02 47 51.1**	**+3.9**
GYA	**Guiyang**	**5.30**	**149**	Pg	**Pb**	**02 46 34.1**	**-1.7**
GYA				Sn	**Sb**	**02 47 37.1**	**-1.9**
GYA	comp=N,100nm,0.8s			smax			
GYA	comp=E,130nm,0.8s			smax			
XAN	**Xi'an**	**5.34**	**55**	Pg	**Pg**	**02 46 40.8**	**-5.3**
XAN				Sg	**Sg**	**02 47 50.8**	**-4.5**
XAN	comp=N,180nm,1.0s			smax			
XAN	comp=E,81nm,0.8s			smax			
KMI	**Kunming**	**5.98**	**188**	Pn	**Pn**	**02 46 32.1**	**+0.9**
KMI				Sn	**Sn**	**02 47 39.8**	**+0.6**
KMI	comp=N,36nm,1.0s			smax			
KMI	comp=E,34nm,1.2s			smax			
KMI	comp=N,330nm,6.3s			LR	LR		
KMI	comp=E,810nm,11.6s			LR	LR		
KMI	comp=Z,190nm,8.2s			LR	LR		
GTA	**Gaotai**	**8.89**	**340**	*e*P	**Pn**	**02 47 11.8**	**+0.6**
GTA				pP		02 47 15.3	
GTA				sP		02 47 18.0	
GTA				S	**Sn**	**02 48 52.1**	**+1.3**
GTA				sS		02 48 57.4	
GTA	comp=Z,1.0nm,1.0s			pmax	pmax		
GTA	comp=Z,70nm,4.8s			pmax	pmax		
GTA	comp=N,170nm,11.6s			LR	LR		
GTA	comp=E,160nm,12.2s			LR	LR		
GTA	comp=Z,86nm,11.3s			LR	LR		
WHN	**Wuhan**	**9.22**	**91**	P	**Pn**	**02 47 23.8**	**+8.1**
WHN				S	**Sn**	**02 48 59.4**	**+0.6**
WHN	comp=N,930nm,4.7s			LR	LR		
WHN	comp=E,860nm,4.2s			LR	LR		
WHN	comp=Z,1μm,5.3s			LR	LR		
CMAR	**Chiang Mai Arr**	**13.26**	**200**	Pn	**Pn**	**02 48 11.2**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=8.5,slow=9.6,SNR=4.3						
SONM	**Songino Array**	**16.88**	**6**	Pn	**Pn**	**02 48 58.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=142,slow=17,SNR=2.2						
KSRS	**Korea Array**	**21.02**	**66**	P	**P**	**02 49 47.2**	**+1.0**
	comp=Z,2.0nm,0.6s,mb3.6,baz=259,slow=11,SNR=6.5						
MK31	**Makanchi Array**	**22.75**	**320**	*e*P	**P**	**02 50 06.4**	**+1.7**
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**02 50 04.0**	**-0.6**
	comp=Z,2.1nm,0.9s,mb3.6,baz=127,slow=11,SNR=8.0						
ZAA0	**Zalesovo Array**	**26.59**	**335**	*e*P	**P**	**02 50 40.7**	**+0.2**
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**02 50 39.6**	**-0.9**
	comp=Z,1.3nm,0.4s,mb3.8,baz=145,slow=8.3,SNR=8.8						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**02 50 43.2**	**-1.5**
	comp=Z,1.1nm,0.6s,mb3.6,baz=128,slow=9.4,SNR=8.8						
KURK	**Kurchatov**	**27.04**	**324**	*e*P	**P**	**02 50 42.2**	**-2.5**
	comp=Z,1.4nm,0.8s,mb3.5						
ABKAR	**Akbulak array**	**37.41**	**312**	*e*P	**P**	**02 52 15.5**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.7						
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**02 54 48.1**	**-0.5**
	comp=Z,2.7nm,0.9s,mb4.3,baz=93,slow=9.1,SNR=4.1						
ARCES				PcP	PcP	02 55 43.3	+0.1
	comp=Z,1.9nm,0.7s,baz=93,slow=4.9,SNR=6.7						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**02 54 50.5**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=90,slow=7.6,SNR=7.0						
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**02 54 50.5**	**0.0**
ASAR	**Alice Springs**	**61.66**	**148**	P	**P**	**02 55 21.2**	**+0.8**
	comp=Z,0.5nm,0.8s,mb3.7,baz=331,slow=7.8,SNR=4.3						
HFS	**Hagfors**	**63.58**	**326**	P	**P**	**02 55 32.8**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=182,slow=40,SNR=3.7						
MORC	**Moravsky Berou**	**64.61**	**314**	*e*P	**P**	**02 55 39.0**	**-0.8**
	comp=Z,0.9nm,0.6s,mb4.0						
GERES	**GERESS Array B**	**67.29**	**314**	P	**P**	**02 55 56.8**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.4,baz=79,slow=6.9,SNR=4.1						
CDF	**Champ du Feu**	**71.37**	**316**	*e*P	**P**	**02 56 22.1**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.1						
CDF	**Champ du Feu**	**71.37**	**316**	*e*P	**P**	**02 56 22.1**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.1						
INK	**Inuvik**	**72.32**	**19**	P	**P**	**02 56 27.7**	**+0.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=268,slow=9.3,SNR=5.4						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**02 56 32.7**	**+0.6**
	comp=Z,6.6nm,0.7s,mb4.4						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**02 56 32.7**	**+0.6**
	comp=Z,3.3nm,0.7s,mb4.4						
LPL	**La Plagne**	**72.99**	**313**	*e*P	**P**	**02 56 32.6**	**+0.5**
	comp=Z,10nm,0.9s,mb4.5						
LPL	**La Plagne**	**72.99**	**313**	*e*P	**P**	**02 56 32.6**	**+0.5**
	comp=Z,5.2nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**74.25**	**315**	*e*P	**P**	**02 56 39.1**	**-0.3**
	comp=Z,17nm,1.2s,mb4.5						
SMF	**Signal de Mont**	**74.25**	**315**	*e*P	**P**	**02 56 39.1**	**-0.3**
	comp=Z,8.3nm,1.2s,mb4.5						
YKA	**Yellowknife Ar**	**81.84**	**17**	P	**P**	**02 57 21.0**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=328,slow=5.2,SNR=8.1						

ISCJB ***17*** *02:46:51.4±0.7, 31°.41N±0°.07×103°.82E±0°.06, h10km, mb3.8/7, Error ellipse: s-maj=10.6km s-min=6.8km az=178.5*
IDC ***17*** *02:46:52.4±1.9, 31°.50N×103°.81E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/27, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=39.0km s-min=32.8km az=14.0*
NEIC ***17*** *02:46:53.5±0.6, 31°.49N×103°.91E, h10km, mb4.1/2, Error ellipse: s-maj=12.6km s-min=9.6km az=66.0*
ISC 17 02:46:53.7±0.7,**31°.50N**±0°.09×**103°.86E**±0°.08,**h10**km,**n13**, σ0s**59**/15,**mb3.8**/7,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.96**	**58**	Pg	**Pg**	**02 48 41.6**	**+13**
XAN				Sg	**Sg**	**02 49 40.3**	**+7.4**
XAN	comp=N,170nm,1.1s			smax			
XAN	comp=E,78nm,0.8s			smax			
ENH	**Enshi**	**4.99**	**103**	*e*Pn	**Pn**	**02 48 07.6**	**-0.9**
ENH				*e*Sn	**Sn**	**02 49 06.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**13.72**	**200**	Pn	**Pn**	**02 50 08.4**	**+0.1**
	baz=8.2,slow=8.5,SNR=4.2						
SONM	**Songino Array**	**16.43**	**6**	Pn	**Pn**	**02 50 44.3**	**0.0**
	comp=E,0.3nm,0.3s,baz=171,slow=20,SNR=3.3						
KSRS	**Korea Array**	**20.68**	**67**	P	**P**	**02 51 34.0**	**+0.2**
	comp=E,0.7nm,0.5s,baz=255,slow=9.7,SNR=2.6						
TKM2	**Tokmak 2**	**25.12**	**305**	*e*P	**P**	**02 52 19.6**	**+0.9**
	comp=E,1.0nm,0.7s,mb3.5						
ZAA0	**Zalesovo Array**	**26.28**	**334**	*e*P	**P**	**02 52 28.3**	**-0.7**
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**02 52 29.6**	**+0.6**
	comp=E,0.5nm,0.5s,mb3.3,baz=132,slow=8.5,SNR=5.3						
KURK	**Kurchatov**	**26.81**	**323**	P	**P**	**02 52 34.0**	**+0.2**
	comp=E,0.9nm,0.6s,mb3.5,baz=126,slow=9.9,SNR=4.6						
ARU	**Arti**	**40.00**	**322**	*e*P	**P**	**02 54 27.7**	**-0.7**
	comp=E,5.9nm,0.5s,mb4.6						
ARCES	**ARCESS Array B**	**56.82**	**336**	P	**P**	**02 56 38.2**	**+0.4**
	comp=E,4.7nm,1.0s,mb4.5,baz=81,slow=7.4,SNR=2.3						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**02 56 39.1**	**-0.9**
	comp=E,1.1nm,0.7s,mb4.0,baz=106,slow=9.3,SNR=3.9						
YKA	**Yellowknife Ar**	**81.38**	**17**	P	**P**	**02 59 10.8**	**+0.5**
	comp=E,0.1nm,0.4s,mb3.1,baz=325,slow=4.5,SNR=2.9						

IDC ***17*** *02:51:34.8±2.4, 35°.09N×81°.31E, h0km, mb3.6/3, mb1 3.7/8, mb1mx3.5/28, mbtmp3.6/8, ML3.2/5, MS3.4/4, Ms1 3.4/4, ms1mx2.8/35, Error ellipse: s-maj=49.0km s-min=34.3km az=54.0*
ISCJB ***17*** *02:51:35.7±1.4, 35°.3N±0°.1×81°.3E±0°.2, h10km, mb3.8/4, MS3.6/3, Error ellipse: s-maj=26.8km s-min=11.8km az=41.6*
NEIC ***17*** *02:51:36.0±1.0, 35°.06N×81°.39E, h10km, mb3.5/2, Error ellipse: s-maj=19.2km s-min=11.0km az=40.0*
ISC 17 02:51:36.6±1.4,**35°.2N**±0°.1×**81°.4E**±0°.2,**h10**km,**n14**, σ0s**65**/13,**mb3.8**/4,**MS3.6**/3,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**8.96**	**332**	*e*P	**Pn**	**02 53 46.2**	**+0.2**
	1.7nm,0.5s						
AAK	**Ala-Archa**	**9.19**	**326**	Pn	**Pn**	**02 53 49.9**	**+0.8**
	0.0nm,0.3s,baz=173,slow=10,SNR=3.6						
AAK				Pg	Pn	02 54 25.0	+36
	0.0nm,0.3s,baz=158,slow=19,SNR=1.7						
AAK				Sn	**Sn**	**02 55 31.4**	**-1.1**
	0.0nm,0.3s,baz=222,slow=23,SNR=2.3						
AAK				Lg		02 56 30.6	
	0.0nm,0.3s,baz=90,slow=22,SNR=3.7						
AAK				LR	LR	02 57 02.7	
	comp=Z,43nm,20.9s,baz=142,slow=36						
MKAR	**Makanchi Array**	**11.64**	**3**	Pn	**Pn**	**02 54 23.4**	**+0.7**
	0.2nm,0.3s,baz=182,slow=13,SNR=4.0						
KURK	**Kurchatov**	**15.68**	**353**	Pn	**Pn**	**02 55 14.1**	**-3.2**
	0.0nm,0.3s,baz=173,slow=11,SNR=5.5						
KURK	**Kurchatov**	**15.68**	**353**	*e*P	**Pn**	**02 55 18.0**	**+0.6**
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**18.94**	**6**	P	**Pn**	**02 55 58.4**	**+0.2**
	0.2nm,0.3s,baz=201,slow=12,SNR=4.1						
BVAR	**Borovoye Array**	**19.48**	**340**	P	**Pn**	**02 56 04.6**	**-0.1**
	0.2nm,0.3s,baz=130,slow=13,SNR=3.1						
BRVK	**Borovoye**	**19.54**	**340**	*e*P	**Pn**	**02 56 05.1**	**-0.3**
	3.1nm,0.8s						
ENH	**Enshi**	**24.11**	**94**	*e*P	**P**	**02 56 51.6**	**-0.8**
	12nm,0.5s,mb4.6						
FINES	**FINESS Array B**	**43.37**	**325**	P	**P**	**02 59 39.0**	**+0.3**
	0.6nm,0.5s,mb3.6,baz=100,slow=7.9,SNR=4.3						
FINES				LR	LR	03 20 14.3	
	comp=Z,92nm,18.5s,MS3.7,baz=137,slow=40						
MJAR	**Matsushiro Arr**	**45.50**	**71**	LR	LR	03 21 31.3	
	comp=Z,74nm,20.6s,MS3.6,baz=190,slow=39						
GERES	**GERESS Array B**	**50.51**	**308**	P	**P**	**03 00 34.7**	**0.0**
	0.3nm,0.6s,mb3.4,baz=100,slow=7.0,SNR=3.5						
PETK	**Petropavlovsk-**	**54.96**	**46**	LR	LR	03 24 44.9	
	comp=Z,46nm,21.8s,MS3.5,baz=20,slow=36						
YKA	**Yellowknife Ar**	**81.83**	**7**	P	**P**	**03 03 55.6**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=340,slow=5.1,SNR=7.3						

DDA ***17*** *03:00:54.9, 40°.14N×34°.38E, h7km±2km, Md3.2*
ISCJB ***17*** *03:00:55.1±0.5, 40°.16N±0°.03×34°.37E±0°.04, h3km±6km, Error ellipse: s-maj=5.1km s-min=4.6km az=2.4*
CSEM ***17*** *03:00:55.4±0.1, 40°.14N×34°.38E, h2km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.5km az=20.0*
ISK ***17*** *03:00:55.1, 40°.20N×34°.41E, h5km, MD3.1*
ISC 17 03:00:55.6±0.5,**40°.15N**±0°.03×**34°.38E**±0°.04,**h6**km±6km, **n27**,σ0s**77**/41,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORM	**Corum**	**0.20**	**83**	*e*PG	**Pg**	**03 00 59.1**	**-0.3**
CORM				*e*SG	**Sg**	**03 01 01.8**	**-0.2**
CORM	**Corum**	**0.20**	**83**	*e*Pg	**Pg**	**03 00 59.1**	**-0.3**
CORM				*e*Sg	**Sg**	**03 01 01.8**	**-0.3**
CDAG	**Cicekdag**	**0.53**	**180**	*i* P	**Pg**	**03 01 05.1**	**-0.6**
CDAG				*i* S	**Sg**	**03 01 13.0**	**+0.3**
CDAG	**Cicekdag**	**0.53**	**180**	*i* P	**Pg**	**03 01 05.1**	**-0.7**
CDAG				*i* S	**Sg**	**03 01 13.0**	**+0.4**
CTKT	**Corum**	**0.56**	**34**	*i* P	**Pg**	**03 01 06.5**	**0.0**
CTKT				*i* S	**Sg**	**03 01 14.7**	**+0.8**
CTKT	**Corum**	**0.56**	**34**	*i* P	**Pg**	**03 01 06.5**	**+0.1**
CTKT				*i* S	**Sg**	**03 01 14.6**	**+0.8**
CANT	**Cankiri**	**0.73**	**308**	*e*PG	**Pg**	**03 01 09.6**	**-0.1**
ELDT	**Eldivan**	**0.80**	**295**	*i* P	**Pg**	**03 01 10.9**	**0.0**
ELDT				*i* S	**Sg**	**03 01 22.3**	**+1.0**
ELDT	**Eldivan**	**0.80**	**295**	*i* P	**Pg**	**03 01 10.9**	**0.0**
ELDT				*i* S	**Sg**	**03 01 22.3**	**+1.0**
YOZ	**Yozgat**	**0.89**	**125**	*e*PG	**Pg**	**03 01 12.6**	**0.0**
YOZ	**Yozgat**	**0.89**	**125**	*e*Pg	**Pg**	**03 01 12.6**	**0.0**
TOS	**Tosya**	**0.92**	**343**	*e*PG	**Pg**	**03 01 12.6**	**-0.7**
TOS	**Tosya**	**0.92**	**343**	*e*Pg	**Pg**	**03 01 12.6**	**-0.7**
ILGA	**Ilgaz**	**1.03**	**331**	*i* P	**Pg**	**03 01 14.9**	**-0.4**
ILGA				*e*S	**Sg**	**03 01 29.4**	**+0.8**
ILGA	**Ilgaz**	**1.03**	**331**	*i* P	**Pg**	**03 01 14.9**	**-0.4**
ILGA				*e*S	**Sg**	**03 01 29.5**	**+0.8**
BBAL	**Bala**	**1.14**	**238**	*i* P	**Pg**	**03 01 16.4**	**-1.1**
BBAL				*i* S	**Sg**	**03 01 31.9**	**-0.4**
BBAL	**Bala**	**1.14**	**238**	*i* P	**Pg**	**03 01 16.4**	**-1.1**
BBAL				*i* S	**Sg**	**03 01 31.9**	**-0.4**
LOD	**Lodumlu**	**1.27**	**258**	*e*PN	**Pn**	**03 01 20.4**	**+0.6**
LOD	**Lodumlu**	**1.27**	**258**	*e*Pn	**Pn**	**03 01 20.4**	**+0.6**
BALT	**Daday**	**1.57**	**332**	*i* P	**Pn**	**03 01 24.6**	**+0.6**
BALT				*i* S	**Sn**	**03 01 42.4**	**-2.3**
BALT	**Daday**	**1.57**	**332**	*i* P	**Pn**	**03 01 24.6**	**+0.6**
BALT				*i* S	**Sn**	**03 01 42.3**	**-2.4**
DIKM	**Dikmen**	**1.64**	**24**	*e*PN	**Pn**	**03 01 24.4**	**-0.5**
DIKM	**Dikmen**	**1.64**	**24**	*e*Pn	**Pn**	**03 01 24.5**	**-0.4**
SVSK	**Karacayir**	**2.03**	**96**	*e*PN	**Pn**	**03 01 30.6**	**+0.3**
SVSK	**Karacayir**	**2.03**	**96**	*e*Pn	**Pn**	**03 01 30.6**	**+0.3**
SULT	**Sultanhani-AKS**	**2.06**	**199**	*e*PN	**Pn**	**03 01 32.3**	**+1.5**
SULT	**Sultanhani-AKS**	**2.06**	**199**	*e*Pn	**Pn**	**03 01 32.3**	**+1.5**

CSEM ***17*** *03:05:21.4±0.6, 42°.87N×43°.05E, h10km, MD3.1, Error ellipse: s-maj=41.8km s-min=11.2km az=116.0*
DDA ***17*** *03:05:25.4, 42°.61N×42°.90E, h9km, Md3.1*
ISC 17 03:05:20.7±2.0,**42°.7N**±0°.1×**43°.4E**±0°.1,**h8**km±8km,**n13**, σ0s**58**/24,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.12**	**172**	P	**Pg**	**03 05 23.6**	**+0.3**
ONI				S	**Sg**	**03 05 25.0**	**0.0**
KEH	**Kehvi**	**0.54**	**137**	P	**Pg**	**03 05 30.4**	**-0.8**
KEH				S	**Sg**	**03 05 38.5**	**+0.2**
BCA	**Borcka**	**1.84**	**228**	*e*PN	**Pn**	**03 05 52.4**	**-0.3**
BCA	**Borcka**	**1.84**	**228**	*e*Pn	**Pn**	**03 05 52.4**	**-0.3**
ARTV	**Artvin**	**1.89**	**217**	*i* P	**Pn**	**03 05 53.4**	**+0.1**
ARTV				*i* S	**Sn**	**03 06 16.9**	**-0.4**
ARTV	**Artvin**	**1.89**	**217**	*i* P	**Pn**	**03 05 53.4**	**+0.1**
ARTV				*i* S	**Sn**	**03 06 16.9**	**-0.4**
DBOC	**Borcka**	**1.89**	**225**	*i* P	**Pn**	**03 05 52.7**	**-0.6**
DBOC				*i* S	**Sn**	**03 06 16.0**	**-1.3**
DBOC	**Borcka**	**1.89**	**225**	*i* P	**Pn**	**03 05 52.7**	**-0.6**
DBOC				*i* S	**Sn**	**03 06 16.0**	**-1.3**
DAGI	**Agillar**	**1.98**	**215**	*i* P	**Pn**	**03 05 55.1**	**+0.5**
DAGI				*i* S	**Sn**	**03 06 19.7**	**+0.1**
DBAD	**Bademkaya**	**2.13**	**218**	*i* P	**Pn**	**03 05 57.0**	**+0.5**
DBAD				*i* S	**Sn**	**03 06 23.2**	**0.0**
DBAD	**Bademkaya**	**2.13**	**218**	*i* P	**Pn**	**03 05 57.0**	**+0.4**
DBAD				*i* S	**Sn**	**03 06 23.2**	**0.0**
DDEM	**Demirkent**	**2.21**	**215**	*i* P	**Pn**	**03 05 58.4**	**+0.8**
DDEM				*i* S	**Sn**	**03 06 26.0**	**+0.9**
DDEM	**Demirkent**	**2.21**	**215**	*i* P	**Pn**	**03 05 58.4**	**+0.8**
DDEM				*i* S	**Sn**	**03 06 26.0**	**+0.9**

ISK ***17*** *03:12:27.9, 36°.96N×29°.20E, h3km, MD3.2*
CSEM ***17*** *03:12:28.7±0.1, 36°.97N×29°.21E, h2km, MD3.2, Error ellipse: s-maj=2.9km s-min=2.5km az=5.0*
DDA ***17*** *03:12:29.0, 37°.01N×29°.21E, h8km±5km, Md3.2*
ISCJB ***17*** *03:12:29.2±0.4, 36°.95N±0°.03×29°.23E±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=3.1km az=177.2*
ISC 17 03:12:29.1±0.5,**36°.97N**±0°.03×**29°.21E**±0°.03,**h3**km±4km, **n59**,σ0s**63**/81,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**51**	PG	**Pg**	**03 12 34.3**	**-0.5**
GLHS				*e*SG	**Sg**	**03 12 39.5**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*i* Pg	**Pg**	**03 12 34.3**	**-0.5**
GLHS				*e*Sg	**Sg**	**03 12 39.5**	**+0.8**
FETY	**Fethiye**	**0.35**	**197**	PG	**Pg**	**03 12 35.3**	**-0.5**
FETY				*e*SG	**Sg**	**03 12 40.8**	**+0.6**
FETY	**Fethiye**	**0.35**	**197**	*i* Pg	**Pg**	**03 12 35.3**	**-0.4**
FETY				*e*Sg	**Sg**	**03 12 40.8**	**+0.6**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**03 12 36.1**	**-0.4**
GOLH				*i* S	**Sg**	**03 12 42.8**	**+1.2**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**03 12 36.1**	**-0.4**
GOLH				*i* S	**Sg**	**03 12 42.8**	**+1.2**
TURN	**Turunc**	**0.49**	**259**	*i* P	**Pg**	**03 12 43.7**	**+5.2**
TURN				*i* S	**Sg**	**03 12 55.3**	**+10**
ELL	**Elmali**	**0.60**	**111**	*e*PG	**Pg**	**03 12 40.3**	**-0.4**
ELL				*e*SG	**Sg**	**03 12 49.4**	**+0.9**
ELL	**Elmali**	**0.60**	**111**	*e*Pg	**Pg**	**03 12 40.3**	**-0.3**
ELL				*e*Sg	**Sg**	**03 12 49.4**	**+0.9**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**03 12 41.8**	**-1.3**
DNZL				*i* S	**Sg**	**03 12 52.0**	**-0.6**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**03 12 41.8**	**-1.3**
DNZL				*i* S	**Sg**	**03 12 52.0**	**-0.6**
YER	**Yerkesik**	**0.76**	**283**	*e*PG	**Pg**	**03 12 43.4**	**-0.2**
YER	**Yerkesik**	**0.76**	**283**	*e*Pg	**Pg**	**03 12 43.4**	**-0.2**
DENT	**Denizli**	**0.80**	**350**	*e*PG	**Pg**	**03 12 44.2**	**-0.1**
DENT	**Denizli**	**0.80**	**350**	*e*Pg	**Pg**	**03 12 44.2**	**-0.1**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**03 12 44.4**	**0.0**
AKAS				*i* S	**Sg**	**03 13 00.5**	**+5.7**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**03 12 44.4**	**0.0**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**03 12 51.1**	**-1.1**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**03 12 51.1**	**-1.1**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**03 12 51.1**	**-1.4**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**03 12 51.1**	**-1.5**
BCK	**Bucak**	**1.21**	**66**	*e*PN	**Pn**	**03 12 52.1**	**-0.7**
BCK	**Bucak**	**1.21**	**66**	*e*Pn	**Pn**	**03 12 52.1**	**-0.7**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pg**	**03 12 53.6**	**+0.3**
AYDN				*i* S	**Sg**	**03 13 10.3**	**+0.6**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pg**	**03 12 53.6**	**+0.3**
AYDN				*i* S	**Sg**	**03 13 10.3**	**+0.6**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**03 12 53.5**	**-0.9**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**03 12 53.6**	**-0.9**
ISP	**Isparta**	**1.35**	**50**	*e*PN	**Pn**	**03 12 54.7**	**-0.1**
ISP	**Isparta**	**1.35**	**50**	*e*Pn	**Pn**	**03 12 54.7**	**-0.2**
KHL	**Karahalli**	**1.38**	**10**	*e*PN	**Pn**	**03 12 54.8**	**-0.4**
KHL	**Karahalli**	**1.38**	**10**	*e*Pn	**Pn**	**03 12 54.8**	**-0.3**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**03 12 56.3**	**+0.6**
BDRM				*i* S	**Sb**	**03 13 15.7**	**+1.2**
BDRM	**Kayabasi**	**1.41**	**274**	*i* P	**Pn**	**03 12 56.3**	**+0.6**
BDRM				*i* S	**Sb**	**03 13 15.7**	**+1.2**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**03 12 55.4**	**-0.3**
KHAL				*i* S	**Sb**	**03 13 15.0**	**+0.4**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**03 12 55.4**	**-0.3**
KHAL				*i* S	**Sb**	**03 13 15.0**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**03 12 56.9**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**03 12 56.9**	**-0.2**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*PN	**Pn**	**03 12 57.9**	**-0.3**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*Pn	**Pn**	**03 12 57.9**	**-0.4**
MANT	**Manisa**	**1.60**	**341**	*i* P	**Pn**	**03 12 57.7**	**-0.6**
MANT				*i* S	**Sn**	**03 13 19.8**	**+0.4**
MANT	**Manisa**	**1.60**	**341**	*i* P	**Pn**	**03 12 57.7**	**-0.6**
MANT				*i* S	**Sn**	**03 13 19.8**	**+0.3**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**	**03 13 00.3**	**+0.2**
GCAM				*i* S	**Sn**	**03 13 23.5**	**+0.8**
GCAM	**G?zel

GTA pP 03 15 32.1
GTA sP 03 15 34.6
GTA S Sn 03 17 09.4 +4.8
GTA sS 03 17 13.3
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,73nm,4.5s
GTA LR LR
comp=N,240nm,11.6s
GTA LR LR
comp=E,260nm,14.0s
GTA LR LR
comp=Z,120nm,12.8s
SONM Songino Array 16.59 6 Pn Pn 03 17 13.6 +0.4
comp=Z,0.2nm,0.3s,baz=180,slow=12,SNR=5.4
SONM Songino Array 16.59 6 Pn Pn 03 17 13.6 +0.4
ZAK Zakamensk 19.03 359 eP Pn 03 17 44.4 +1.1
ZAK pmax pmax
comp=Z,2.0nm,0.9s
KSRS Korea Array 20.80 66 P P 03 18 03.2 +1.1
comp=Z,6.1nm,0.7s,baz=259,slow=10,SNR=22
KSRS LR LR 03 25 30.4
comp=Z,29nm,21.4s,baz=150,slow=35
KSRS Korea Array 20.80 66 P P 03 18 03.2 +1.1
KSRS pmax pmax
comp=Z,6.0nm,0.7s
KSRS MLR MLR
comp=Z,29nm,21.4s
CN2 Changchun 21.13 48 eP P 03 18 04.9 -0.7
MK31 Makanchi Array 22.62 319 eP P 03 18 20.7 -0.9
MKAR Makanchi Array 22.62 319 P P 03 18 20.7 -0.8
comp=Z,12nm,1.0s,mb4.3,baz=125,slow=12,SNR=42
MKAR Makanchi Array 22.62 319 P P 03 18 20.7 -0.9
MKAR pmax pmax
comp=Z,12nm,1.0s
TKM2 Tokmak 2 25.16 305 eP P 03 18 45.2 -0.9
TKM2 pmax pmax
comp=Z,3.0nm,1.0s,mb3.8
TKM2 Tokmak 2 25.16 305 eP P 03 18 45.2 -0.9
comp=Z,3.5nm,1.0s,mb3.8
UCH Uchtor 25.72 303 eP P 03 18 51.9 +0.6
comp=Z,8.0nm,1.1s,mb4.2
AAK Ala-Archa 25.85 304 P P 03 18 52.0 -0.4
comp=Z,3.1nm,0.7s,mb3.9,baz=111,slow=6.7,SNR=9.0
AAK Ala-Archa 25.85 304 eP P 03 18 53.6 +1.3
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
AAK Ala-Archa 25.85 304 eP P 03 18 53.6 +1.2
comp=Z,4.2nm,0.8s,mb4.0
AML Almayashu 26.29 303 eP P 03 18 57.3 +0.9
comp=Z,7.6nm,1.2s,mb4.1
EKS2 Erkin-Say 26.36 304 eP P 03 18 57.8 +0.8
comp=Z,3.1nm,1.0s,mb3.8
ZAA0 Zalesovo Array 26.39 334 eP P 03 18 56.4 -0.7
ZALV Zalesovo Beam 26.39 334 P P 03 18 56.1 -1.0
comp=Z,2.2nm,0.6s,mb3.8,baz=132,slow=9.6,SNR=9.0
ZALV Zalesovo Beam 26.39 334 P P 03 18 56.2 -0.9
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
KURK Kurchatov 26.90 323 P P 03 18 59.5 -2.2
comp=Z,4.9nm,0.7s,mb4.1,baz=129,slow=9.5,SNR=32
KURK Kurchatov 26.90 323 P P 03 18 59.5 -2.2
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
BVAR Borovoye Array 32.44 322 P P 03 19 50.0 -0.9
comp=Z,0.9nm,0.3s,mb4.0,baz=160,slow=40,SNR=4.7
BVAR Borovoye Array 32.44 322 P P 03 19 50.0 -0.9
BVAR pmax pmax
comp=Z,1.0nm,0.3s
FINES FINESS Array B 57.22 326 P P 03 23 07.4 -0.5
comp=Z,0.6nm,0.7s,mb3.8,baz=83,slow=4.3,SNR=3.7
FINES FINESS Array B 57.22 326 P P 03 23 07.4 -0.5
FINES pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 61.83 149 P P 03 23 38.5 -1.6
comp=Z,0.5nm,0.6s,mb3.8,baz=342,slow=7.3,SNR=6.1
ASAR Alice Springs 61.83 149 P P 03 23 38.5 -1.6
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 61.83 149 P P 03 23 38.5 -1.6
COLA College 69.33 26 eP P 03 24 28.2 0.0
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 69.33 26 eP P 03 24 28.2 0.0
comp=Z,2.8nm,0.8s,mb4.2
PMR Palmer 70.47 29 eP P 03 24 35.6 +0.4
PMR pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
PMR Palmer 70.47 29 eP P 03 24 35.6 +0.4
comp=Z,1.5nm,0.5s,mb4.2
OHAK Old Harbor 70.72 34 eP P 03 24 35.7 -1.1
comp=Z,4.2nm,0.6s,mb4.5
YKA Yellowknife Ar 81.55 17 P P 03 25 36.7 -1.6
comp=Z,0.3nm,0.7s,mb3.3,baz=330,slow=5.6,SNR=3.3
YKA Yellowknife Ar 81.55 17 P P 03 25 36.7 -1.6

MAN 17 03:17:11,6.61N×125.57E,h34km,mb4.4,ML3.2,MS3.1, 1C-1D,Mindanao

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DMPH Davao City--Mi 0.48 353⇑iP Pb 03 17 22.8 +1.5
DMPH iS Sb 03 17 31.2 +2.8
KCP Kidapawan 0.62 310⇓eP Pn 03 17 24.8 +1.4
KCP iS Sb 03 17 33.6 +1.5
MATI Mati 0.76 64 eP Pn 03 17 26.8 +1.4
MATI eS Sn 03 17 36.9 +1.2
BUKP Musuan 1.36 338 eP Pn 03 17 35.8 +2.2
BUKP eS Sn 03 17 48.6 -1.9

ISCJB 17 03:20:50.9±0.7, 1.0N±0.2×29.3W±0.1, h10km, mb3.9/15, MS3.8/7, Error ellipse: s-maj=25.5km s-min=11.3km az=151.6
IDC 17 03:20:50.5±0.8, 0.91N×29.25W, h0km, mb3.9/14, mb1 4.1/14, mb1mx3.9/27, mbtmp3.9/14, MS3.8/7, Ms1 3.8/7, ms1mx3.5/24, Error ellipse: s-maj=29.0km s-min=15.0km az=151.0
NEIC 17 03:20:51.9±0.5, 0.85N×29.28W, h10km, mb4.1/4, Error ellipse: s-maj=19.0km s-min=8.7km az=144.0
ISC 17 03:20:52.3±0.6, 0.9N±0.1×29.3W±0.1, h10km, n28, σ0§85/24, mb3.9/15, MS3.8/7, Central Mid-Atlantic Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RCBR Riachuelo 9.39 225 ePn Pn 03 23 05.7 -2.0
DBIC Dimbokro 25.04 76 P P 03 26 17.1 +0.2
24nm,1.1s,mb4.7,baz=241,slow=9.9,SNR=9.5
DBIC LR LR 03 33 57.3
comp=Z,183nm,20.8s,MS3.6,baz=212,slow=32
DBIC Dimbokro 25.04 76 eP P 03 26 18.2 +1.3
45nm,1.3s,mb4.8
DBIC LR LR 03 33 57.3
SCG Saint Claude 35.30 297 eP P 03 27 44.1 -3.6
SIV San Ignacio 35.59 241 P P 03 27 50.4 +0.2
1.0nm,0.8s,mb3.8,baz=92,slow=12,SNR=6.3
CPUP Villa Florida 38.26 223 P P 03 28 13.3 +0.4
0.2nm,0.4s,mb3.2,baz=53,slow=15,SNR=3.3
CPUP LR LR 03 43 42.2
comp=Z,188nm,18.7s,MS3.9,baz=28,slow=36
CPUP Villa Florida 38.26 223 P P 03 28 13.3 +0.4
CPUP LR LR 03 43 42.1
TAM Tamanrasset 40.22 55 eP P 03 28 28.7 -0.6
0.7nm,0.6s,mb3.6
SDV Santo Domingo 41.91 282 P P 03 28 43.9 +0.5
3.8nm,0.8s,mb4.1,baz=106,slow=3.7,SNR=6.0
SDV Santo Domingo 41.91 282 eP P 03 28 44.5 +1.1
6.2nm,0.9s,mb4.2
LPAZ La Paz 41.96 244 P P 03 28 45.0 +1.3
2.0nm,0.8s,mb3.8,baz=54,slow=2.1,SNR=8.9
LPAZ LR LR 03 45 50.0
comp=Z,58nm,20.9s,MS3.4,baz=224,slow=36
LPAZ La Paz 41.96 244 eP P 03 28 44.5 +0.8
2.3nm,0.9s,mb3.8
LPAZ LR LR 03 45 50.0
ESDC Sonseca Array 44.98 28 P P 03 29 08.2 +0.4
0.6nm,0.5s,mb3.6,baz=297,slow=38,SNR=6.4
ROSC El Rosal 45.14 276 P P 03 29 10.6 +1.1
5.0nm,0.6s,mb4.5,baz=133,slow=14,SNR=6.4
ROSC LR LR 03 47 11.3
comp=Z,137nm,18.8s,MS3.9,baz=27,slow=35
ROSC El Rosal 45.14 276 eP P 03 29 10.2 +0.6
ROSC LR LR 03 47 11.3

PLCA Paso Flores 55.87 217 LR LR 03 54 33.1
comp=Z,85nm,18.2s,MS3.9,baz=18,slow=36
GERES GERESS Array B 60.34 31 P P 03 31 00.5 -0.9
0.2nm,0.3s,mb3.6,baz=223,slow=5.1,SNR=6.9
SCHQ Schefferville 61.88 336 P P 03 31 10.7 -1.0
2.5nm,0.9s,mb4.3,baz=56,slow=11,SNR=3.0
NOA NORSAR Array B 67.44 20 LR LR 03 56 16.1
comp=Z,33nm,18.1s,MS3.6,baz=270,slow=32
BRTR Keskin Array B 68.85 47 P P 03 31 57.6 +0.4
0.8nm,0.9s,mb3.6,baz=224,slow=5.2,SNR=5.4
AKASG Malin Array Be 69.88 35 P P 03 32 03.3 0.0
1.0nm,0.6s,mb3.9,baz=243,slow=6.9,SNR=7.7
TXAR Lajitas Array 75.95 300 P P 03 32 40.0 +0.2
0.7nm,0.8s,mb3.6,baz=120,slow=7.4,SNR=10.0
PDAR Pinedale Array 82.24 313 LR LR 04 02 31.6
comp=Z,62nm,19.5s,MS4.0,baz=347,slow=30
YKA Yellowknife Ar 87.04 332 P P 03 33 37.5 -0.2
0.1nm,0.3s,mb3.5,baz=89,slow=5.1,SNR=4.0
YKA Yellowknife Ar 87.04 332 P P 03 33 37.5 -0.2
NVAR Mina Array Bea 88.67 308 P P 03 33 46.2 +0.1
0.1nm,0.3s,mb3.6,baz=101,slow=7.7,SNR=3.9
NVAR Mina Array Bea 88.67 308 P P 03 33 46.2 +0.1
ASAR Alice Springs 152.11 145 PKPbc PKPbc 03 40 47.1 -1.8
0.5nm,1.0s,baz=206,slow=2.8,SNR=10

MAN 17 03:34:31,14.11N×120.10E,h20km,mb4.3,ML3.1,MS2.9, 1C,Luzon

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LUBP Lubang 0.40 159 eP Pb 03 34 40.3 +1.0
LUBP eS Sb 03 34 43.3 -1.6
TGY Tagaytay City 0.81 90⇑eP Pb 03 34 46.7 +0.3
TGY eS Sb 03 34 59.6 +2.6
SJMP San Jose 1.91 149 eP Pn 03 35 03.2 +0.8
SJMP eS Sn 03 35 22.0 -3.9
BALP Baler 2.16 41 eP Pn 03 35 06.6 +0.7

BJI 17 03:52:43.1, 34.98N×81.77E, h10km, ML4.0/6
IDC 17 03:52:44.0±1.0, 34.91N×81.65E, h0km, mb3.7/9, mb1 3.8/14, mb1mx3.7/29, mbtmp3.7/14, ML3.4/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/36, Error ellipse: s-maj=23.7km s-min=20.1km az=76.0
NEIC 17 03:52:45.8±0.8, 34.96N×81.66E, h10km, mb3.7/1, Error ellipse: s-maj=13.6km s-min=11.3km az=61.0
NNC 17 03:53:03.2±2.5, 36.57N×82.00E, h0km, mb4.0, mpv4.0, Error ellipse: s-maj=28.3km s-min=12.0km az=126.0
ISC 17 03:52:45.5±8.9, 35.0N±0.2×81.9E±0.1, h10km±53km, n27, σ1§00/28, mb3.6/10, 5C-1D, Southern Xinjiang

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 6.50 316 Pn Pn 03 54 21.4 +0.3
KSH smax
comp=N,70nm,0.6s
KSH smax
comp=E,120nm,1.0s
UCH Uchtor 9.21 324 ePn Pn 03 54 56.9 -1.5
comp=E,9.1nm,0.7s
TKM2 Tokmak 2 9.28 330 ⇑Pn Pn 03 54 59.7 +0.5
comp=E,9.9nm,1.3s
TKM2 ⇑Lg 03 57 20.0
comp=E,13nm,0.9s
TKM2 Tokmak 2 9.28 330 ePn Pn 03 54 59.2 -0.1
comp=E,5.5nm,0.7s
AAK Ala-Archa 9.53 325 Pn Pn 03 55 04.2 +1.5
comp=E,0.0nm,0.3s,baz=349,slow=1.5,SNR=4.0
AAK Pg Pn 03 55 34.7 +32
comp=E,0.0nm,0.3s,baz=147,slow=11,SNR=8.7
AAK Lg 03 57 31.7
comp=E,0.0nm,0.3s,baz=285,slow=20,SNR=3.5
AAK Ala-Archa 9.53 325 ePn Pn 03 55 03.3 +0.6
comp=E,18nm,1.0s
AML Almayashu 9.56 321 ePn Pn 03 55 03.6 +0.5
comp=E,140nm,0.7s
EKS2 Erkin-Say 9.90 323 ePn Pn 03 55 07.8 +0.1
comp=E,1.8nm,0.7s
MK31 Makanchi Array 11.78 1 ⇑Pn Pn 03 55 33.8 +0.4
comp=E,3.0nm,0.9s,baz=198,slow=18,SNR=18
MK31 ⇓Sn Sn 03 57 32.8 -12
comp=E,2.2nm,0.8s
MK31 Makanchi Array 11.78 1 ePn Pn 03 55 34.2 +0.7
MKAR Makanchi Array 11.78 1 Pn Pn 03 55 33.6 +0.2
comp=E,0.3nm,0.3s,baz=191,slow=12,SNR=16
KK31 Karatay Array 11.95 316 ⇑Pn Pn 03 55 44.2 +8.4
comp=E,0.8nm,0.6s,baz=133,slow=12,SNR=5.4
KK31 ⇑Lg 03 58 47.5
comp=E,1.3nm,0.7s,baz=121,slow=25,SNR=3.5
KURK Kurchatov 15.87 352 Pn Pn 03 56 25.8 -3.0
comp=E,0.1nm,0.3s,baz=173,slow=11,SNR=5.3
ZALV Zalesovo Beam 19.05 5 P P 03 57 08.2 -0.2
comp=E,0.1nm,0.3s,baz=188,slow=8.0,SNR=5.3
BVAR Borovoye Array 19.76 339 P P 03 57 14.4 -2.5
comp=E,0.2nm,0.3s,baz=133,slow=8.7,SNR=3.3
BVAR LR LR 04 05 33.0
comp=E,56nm,18.6s,baz=18,slow=39
ABKAR Akbulak array 21.50 318 eP P 03 57 33.6 -0.7
comp=E,2.5nm,0.8s,mb3.6
SONM Songino Array 22.31 47 P P 03 57 47.0 +4.1
comp=E,1.8nm,0.8s,mb3.6,baz=230,slow=12,SNR=5.3
AKTK Aktyubinsk 23.19 319 P P 03 57 53.0 +0.8
AKTO Aktyubinsk 23.19 319 P P 03 57 53.0 +0.8
comp=E,0.6nm,0.6s,mb3.2,baz=83,slow=13,SNR=4.0
BRTR Keskin Array B 38.24 292 P P 04 00 06.2 +0.6
comp=E,0.2nm,0.4s,mb3.2,baz=82,slow=8.9,SNR=3.9
FINES FINESS Array B 43.72 325 P P 04 00 51.9 +1.4
comp=E,1.4nm,0.6s,mb3.9,baz=62,slow=8.9,SNR=4.0
GERES GERESS Array B 50.91 308 P P 04 01 46.7 0.0
comp=E,0.3nm,0.5s,mb3.5,baz=80,slow=5.5,SNR=3.8
TORD Torodi Ar. Bea 74.59 275 P P 04 04 23.2 -1.8
comp=E,0.9nm,0.7s,mb3.8,baz=48,slow=5.3,SNR=12
ASAR Alice Springs 76.41 132 P P 04 04 35.6 +0.4
comp=E,0.4nm,0.7s,mb3.5,baz=329,slow=6.5,SNR=5.0
YKA Yellowknife Ar 81.94 8 P P 04 05 05.1 +0.2
comp=E,0.2nm,0.5s,mb3.3,baz=347,slow=4.3,SNR=6.0
YKA Yellowknife Ar 81.94 8 P P 04 05 05.1 +0.2
BOSA Boshof 82.81 228 P P 04 05 09.5 -0.4
comp=E,3.0nm,1.0s,mb4.3,baz=79,slow=5.2,SNR=3.1

STR 17 04:10:10.9±0.4, 42.81N×1.10W, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
CSEM 17 04:10:10.7±0.1, 42.89N×1.01W, h5km, ML2.7/22, Error ellipse: s-maj=2.6km s-min=2.1km az=175.0
MDD 17 04:10:11.7±0.1, 42.84N×1.07W, h6km±2km, mb3.2/1, mbLg2.3/23, Error ellipse: s-maj=2.1km s-min=1.3km az=179.0, PRIMO
NEIC 17 04:10:11.7, 42.84N×1.05W, h2km, ML2.5(STR), ML2.7(LDG), MN2.5(MDD), After LDG.
LDG 17 04:10:11.7±0.1, 42.84N×1.05W, h2km, Md2.6/3, Ml2.7/25, Error ellipse: s-maj=1.2km s-min=1.0km az=9.0
ISC 17 04:10:11.6±0.2, 42.93N±0.01×1.03W±0.02, h17km±1km, n261, σ1§13/429, 14C, Pyrenees

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EORO Oroz-Betelu 0.21 261 ⇑Pg Pg 04 10 15.2 -1.4
92nm,0.1s,SNR=18
EORO Lg 04 10 18.0
884nm,0.2s,SNR=7.9
EORO Oroz-Betelu 0.21 261 ⇑Pg Pg 04 10 15.2 -1.4
92nm,0.1s,SNR=18
EORO Lg 04 10 18.0
884nm,0.2s,SNR=7.9
EORO Oroz-Betelu 0.21 261 Pg Pg 04 10 15.2 -1.3
92nm,0.1s,SNR=18
EORO Lg 04 10 18.0
884nm,0.2s,SNR=7.9
SJPF Ste Jean 0.24 322 ePg Pg 04 10 17.5 +0.5
SJPF eSg Sg 04 10 21.4 +0.8
240nm,0.4s
SJPF Ste Jean 0.24 322 Pg Pg 04 10 17.5 +0.5
SJPF Lg 04 10 21.4
120nm,0.4s
SJPF Ste Jean 0.24 322 Pg Pg 04 10 17.5 +0.5
SJPF Lg 04 10 21.4
120nm,0.4s
SJPF Ste Jean 0.24 322 ePg Pg 04 10 17.5 +0.5
SJPF eSg Sg 04 10 21.4 +0.8
120nm,0.4s
IPRE Itoiz 0.27 244 ⇑Pg Pg 04 10 15.4 -2.1
157nm,0.3s,SNR=18

IPRE Lg 04 10 19.3
325nm,0.3s,SNR=36
IPRE Itoiz 0.27 244 ⇑Pg Pg 04 10 15.4 -2.1
157nm,0.3s,SNR=18
IPRE Lg 04 10 19.3
325nm,0.3s,SNR=36
IPRE Itoiz 0.27 244 Pg Pg 04 10 15.4 -2.1
157nm,0.3s,SNR=18
IPRE Lg 04 10 19.3
325nm,0.3s,SNR=36
ATE Arette 0.29 56 Pg Pg 04 10 19.0 +1.2
ATE Sg Sg 04 10 25.1 +3.1
ATE Arette 0.29 56 Pg Pg 04 10 19.0 +1.2
ATE Sg Sg 04 10 25.1 +3.1
ORDF Ordiarp 0.29 13 Pg Pg 04 10 19.5 +1.6
ORDF Sg Sg 04 10 25.5 +3.3
ORDF Ordiarp 0.29 13 Pg Pg 04 10 19.6 +1.6
ORDF Lg 04 10 25.5
ORDF Ordiarp 0.29 13 Pg Pg 04 10 19.6 +1.6
ORDF Lg 04 10 25.5
ORDF Ordiarp 0.29 13 Pg Pg 04 10 19.5 +1.6
ORDF Sg Sg 04 10 25.5 +3.3
IZUN Zunzarren 0.32 258 Pg Pg 04 10 16.9 -1.4
78nm,0.1s,SNR=7.9
IZUN Lg 04 10 21.3
146nm,0.2s,SNR=7.9
IZUN Zunzarren 0.32 258 Pg Pg 04 10 16.9 -1.4
78nm,0.1s,SNR=7.9
IZUN Lg 04 10 21.3
146nm,0.2s,SNR=7.9
IZUN Zunzarren 0.32 258 Pg Pg 04 10 17.0 -1.4
78nm,0.1s,SNR=7.9
IZUN Lg 04 10 21.3
146nm,0.2s,SNR=7.9
ETSF Etsaut 0.34 95 ePg Pg 04 10 18.8 0.0
ETSF eSg Sg 04 10 23.8 +0.2
92nm,0.2s
ETSF Etsaut 0.34 95 Pg Pg 04 10 18.8 0.0
ETSF Lg 04 10 23.8
46nm,0.2s
ETSF Etsaut 0.34 95 Pg Pg 04 10 18.8 0.0
ETSF Lg 04 10 23.8
46nm,0.2s
ETSF Etsaut 0.34 95 ePg Pg 04 10 18.8 0.0
ETSF eSg Sg 04 10 23.8 +0.2
46nm,0.2s
FDAF Les Forges d'A 0.35 108 Pg Pg 04 10 18.6 -0.3
FDAF Lg 04 10 24.9
FDAF Les Forges d'A 0.35 108 Pg Pg 04 10 18.6 -0.3
FDAF Lg 04 10 24.9
OSSF Osses 0.37 332 Pg Pg 04 10 20.3 +1.0
OSSF Sg Sg 04 10 25.6 +1.2
OSSF Osses 0.37 332 Pg Pg 04 10 20.2 +0.9
OSSF Lg 04 10 26.6
OSSF Osses 0.37 332 Pg Pg 04 10 20.2 +0.9
OSSF Lg 04 10 26.6
OSSF Osses 0.37 332 Pg Pg 04 10 20.3 +1.0
OSSF Sg Sg 04 10 25.6 +1.2
IUSE Utxeti 0.38 273 ⇑Pg Pg 04 10 18.8 -0.7
12nm,0.1s,SNR=18
IUSE Lg 04 10 24.2
90nm,0.2s,SNR=7.9
IUSE Utxeti 0.38 273 ⇑Pg Pg 04 10 18.8 -0.7
12nm,0.1s,SNR=18
IUSE Lg 04 10 24.2
90nm,0.2s,SNR=7.9
IUSE Utxeti 0.38 273 Pg Pg 04 10 18.8 -0.7
12nm,0.1s,SNR=18
IUSE Lg 04 10 24.2
90nm,0.2s,SNR=7.9
IUNC Unciti 0.39 244 ⇑Pg Pg 04 10 17.9 -1.7
46nm,0.2s,SNR=18
IUNC Lg 04 10 23.4
250nm,0.2s,SNR=7.9
IUNC Unciti 0.39 244 ⇑Pg Pg 04 10 17.9 -1.7
46nm,0.2s,SNR=18
IUNC Lg 04 10 23.4
250nm,0.2s,SNR=7.9
IUNC Unciti 0.39 244 Pg Pg 04 10 17.9 -1.6
46nm,0.2s,SNR=18
IUNC Lg 04 10 23.4
250nm,0.2s,SNR=7.9
EARA Aranguren 0.43 249 Pg Pg 04 10 19.1 -1.3
30nm,0.1s,SNR=13
EARA Lg 04 10 25.1
239nm,0.3s,SNR=35
EARA Aranguren 0.43 249 Pg Pg 04 10 19.1 -1.3
30nm,0.1s,SNR=13
EARA Lg 04 10 25.1
239nm,0.3s,SNR=35
EARA Aranguren 0.43 249 Pg Pg 04 10 19.1 -1.3
30nm,0.1s,SNR=13
EARA Lg 04 10 25.1
239nm,0.3s,SNR=35
ELIZ Elizondo 0.44 303 ⇑Pg Pg 04 10 20.5 +0.1
ELIZ Lg 04 10 27.2
ELIZ Elizondo 0.44 303 ⇑Pg Pg 04 10 20.5 +0.1
38nm,0.1s,SNR=18
ELIZ Lg 04 10 27.2
49nm,0.2s,SNR=14
ELIZ Elizondo 0.44 303 ⇑Pg Pg 04 10 20.5 +0.1
38nm,0.1s,SNR=18
ELIZ Lg 04 10 27.2
49nm,0.2s,SNR=14
ELIZ Elizondo 0.44 303 Pg Pg 04 10 20.5 +0.1
38nm,0.1s,SNR=18
ELIZ Lg 04 10 27.2
49nm,0.2s,SNR=14
EALK Alkurruntz 0.46 310 ⇑Pg Pg 04 10 21.1 +0.3
EALK Lg 04 10 28.0
EALK Alkurruntz 0.46 310 ⇑Pg Pg 04 10 21.1 +0.3
34nm,0.2s,SNR=18
EALK Lg 04 10 28.0
174nm,0.3s,SNR=21
EALK Alkurruntz 0.46 310 ⇑Pg Pg 04 10 21.1 +0.3
34nm,0.2s,SNR=18
EALK Lg 04 10 28.0
174nm,0.3s,SNR=21
EALK Alkurruntz 0.46 310 Pg Pg 04 10 21.1 +0.3
34nm,0.2s,SNR=18
EALK Lg 04 10 28.0
174nm,0.3s,SNR=21
REYF Montagne du Re 0.49 73 Pg Pg 04 10 22.0 +0.7
REYF Sg Sg 04 10 29.5 +1.6
REYF Montagne du Re 0.49 73 Pg Pg 04 10 22.1 +0.8
REYF Lg 04 10 29.5
REYF Montagne du Re 0.49 73 Pg Pg 04 10 22.1 +0.8
REYF Lg 04 10 29.5
REYF Montagne du Re 0.49 73 Pg Pg 04 10 22.0 +0.7
REYF Sg Sg 04 10 29.5 +1.6
VIEF Viey 0.77 93 Pg Pg 04 10 26.3 -0.4
VIEF Sg Sg 04 10 37.2 +0.3
VIEF Viey 0.77 93 Pg Pg 04 10 26.3 -0.3
VIEF Lg 04 10 36.9
VIEF Viey 0.77 93 Pg Pg 04 10 26.3 -0.3
VIEF Lg 04 10 36.9
VIEF Viey 0.77 93 Pg Pg 04 10 26.3 -0.4
VIEF Sg Sg 04 10 37.2 +0.3
LABF Labassere 0.82 81 Pg Pg 04 10 27.6 +0.1
LABF Sg Sg 04 10 39.9 +1.6
LABF Labassere 0.82 81 Pg Pg 04 10 27.6 +0.1
LABF Lg 04 10 39.5
LABF Labassere 0.82 81 Pg Pg 04 10 27.6 +0.1
LABF Lg 04 10 39.5
LABF Labassere 0.82 81 Pg Pg 04 10 27.6 +0.1
LABF Sg Sg 04 10 39.9 +1.6
EBIE Bielsa 0.89 105 Pg Pg 04 10 28.1 -0.8
EBIE Lg 04 10 42.4
EBIE Bielsa 0.89 105 Pg Pg 04 10 28.1 -0.8
7.7nm,0.1s,SNR=19
EBIE Lg 04 10 42.4
16nm,0.1s,SNR=5.0
EBIE Bielsa 0.89 105 Pg Pg 04 10 28.1 -0.8
7.7nm,0.1s,SNR=19
EBIE Lg 04 10 42.4
16nm,0.1s,SNR=5.0
EBIE Bielsa 0.89 105 Pg Pg 04 10 28.1 -0.8
7.7nm,0.1s,SNR=19
EBIE Lg 04 10 42.4
16nm,0.1s,SNR=5.0
EPF Esparros 1.01 84 ePg Pg 04 10 31.0 -0.1
EPF eSg Sg 04 10 44.9 +0.6
42nm,0.3s
EPF Esparros 1.01 84 Pg Pg 04 10 31.0 -0.1
EPF Lg 04 10 44.9

	21nm,0.3s						
EPF	Esparros	1.01	84	Pg	Pg	04 10 31.0	-0.1
EPF				Lg		04 10 44.9	
	21nm,0.3s						
EPF	Esparros	1.01	84	ePg	Pg	04 10 31.0	-0.1
EPF				eSg	Sg	04 10 44.9	+0.6
	21nm,0.3s						
RESF	Ens	1.01	96	Pg	Pg	04 10 30.5	-0.6
RESF	Ens	1.01	96	Pg	Pg	04 10 29.9	-1.3
RESF				Lg		04 10 44.9	
RESF	Ens	1.01	96	Pg	Pg	04 10 29.9	-1.3
RESF				Lg		04 10 44.9	
RESF	Ens	1.01	96	Pg	Pg	04 10 30.5	-0.6
ECRI	Cripan	1.14	254	Pg	Pg	04 10 32.7	-0.8
ECRI				Lg		04 10 48.5	
ECRI	Cripan	1.14	254	Pg	Pg	04 10 32.7	-0.8
	15nm,0.2s,SNR=7.9						
ECRI				Lg		04 10 48.5	
	29nm,0.3s,SNR=7.9						
ECRI	Cripan	1.14	254	Pg	Pg	04 10 32.7	-0.8
	15nm,0.2s,SNR=7.9						
ECRI				Lg		04 10 48.5	
	29nm,0.3s,SNR=7.9						
ECRI	Cripan	1.14	254	Pg	Pg	04 10 32.7	-0.8
	15nm,0.2s,SNR=7.9						
ECRI				Lg		04 10 48.5	
	29nm,0.3s,SNR=7.9						
ESAC	San Caprasio	1.27	161	Pg	Pn	04 10 33.9	-0.7
ESAC				Lg		04 10 52.1	
ESAC	San Caprasio	1.27	161	Pg	Pn	04 10 33.9	-0.7
	49nm,0.2s,SNR=42						
ESAC				Lg		04 10 52.1	
	152nm,0.2s,SNR=23						
ESAC	San Caprasio	1.27	161	Pg	Pn	04 10 33.9	-0.7
	49nm,0.2s,SNR=42						
ESAC				Lg		04 10 52.1	
	152nm,0.2s,SNR=23						
ESAC	San Caprasio	1.27	161	Pg	Pn	04 10 33.9	-0.6
	49nm,0.2s,SNR=42						
ESAC				Lg		04 10 52.1	
	152nm,0.2s,SNR=23						
MELF	Melles	1.31	92	Pg	Pg	04 10 36.5	-0.4
MELF				Sg	Sg	04 10 56.9	+2.9
MELF	Melles	1.31	92	Pg	Pg	04 10 36.3	-0.6
MELF				Lg		04 10 55.1	
MELF	Melles	1.31	92	Pg	Pg	04 10 36.3	-0.6
MELF				Lg		04 10 55.1	
MELF	Melles	1.31	92	Pg	Pg	04 10 36.5	-0.4
MELF				Sg	Sg	04 10 56.9	+2.9
MLS	Moulis	1.56	88	Lg		04 11 00.7	
MLS	Moulis	1.56	88	Lg		04 11 00.7	
SALF	Salau	1.64	95	Pg	Pg	04 10 43.3	+0.2
SALF				Lg		04 11 05.3	
SALF	Salau	1.64	95	Pg	Pg	04 10 43.3	+0.2
SALF				Lg		04 11 05.3	
ELAN	Lanestosa	1.79	281	Pg	Pn	04 10 44.0	+2.3
ELAN				Lg		04 11 09.1	
ELAN	Lanestosa	1.79	281	Pg	Pn	04 10 44.0	+2.3
	3.1nm,0.1s,SNR=36						
ELAN				Lg		04 11 09.1	
	7.7nm,0.3s,SNR=7.0						
ELAN	Lanestosa	1.79	281	Pg	Pn	04 10 44.0	+2.3
	3.1nm,0.1s,SNR=36						
ELAN				Lg		04 11 09.1	
	7.7nm,0.3s,SNR=7.0						
ELAN	Lanestosa	1.79	281	Pg	Pn	04 10 44.0	+2.4
	3.1nm,0.1s,SNR=36						
ELAN				Lg		04 11 09.1	
	7.7nm,0.3s,SNR=7.0						
GRBF	Gourbit	1.89	92	Pg	Pg	04 10 47.8	0.0
GRBF				Lg		04 11 14.3	
GRBF	Gourbit	1.89	92	Pg	Pg	04 10 47.8	0.0
GRBF				Lg		04 11 14.3	
EMIR	Miracle	2.14	117	Pg	Pn	04 10 50.2	+3.7
EMIR				Lg		04 11 19.1	
EMIR	Miracle	2.14	117	Pg	Pn	04 10 50.2	+3.7
	4.1nm,0.1s,SNR=7.9						
EMIR				Lg		04 11 19.1	
	9.2nm,0.2s,SNR=7.9						
EMIR	Miracle	2.14	117	Pg	Pn	04 10 50.2	+3.7
	4.1nm,0.1s,SNR=7.9						
EMIR				Lg		04 11 19.1	
	9.2nm,0.2s,SNR=7.9						
EMIR	Miracle	2.14	117	Pg	Pn	04 10 50.2	+3.7
	4.1nm,0.1s,SNR=7.9						
EMIR				Lg		04 11 19.1	
	9.2nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.21	152	Pn	Pn	04 10 47.0	-0.5
ERTA				Pg	Pg	04 10 51.7	-2.4
ERTA				Lg		04 11 19.3	
ERTA	Horta de San J	2.21	152	Pn	Pn	04 10 47.0	-0.5
	0.4nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	04 10 51.7	-2.4
	3.7nm,0.2s,SNR=10.0						
ERTA				Lg		04 11 19.3	
	10nm,0.2s,SNR=5.3						
ERTA	Horta de San J	2.21	152	Pn	Pn	04 10 47.0	-0.5
	0.4nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	04 10 51.7	-2.4
	3.7nm,0.2s,SNR=10.0						
ERTA				Lg		04 11 19.3	
	10nm,0.2s,SNR=5.3						
ERTA	Horta de San J	2.21	152	Pn	Pn	04 10 47.0	-0.5
	0.4nm,0.1s,SNR=7.9						
EPOB	Poblet	2.22	134	Pn	Pn	04 10 48.0	+0.4
EPOB				Pg	Pg	04 10 51.5	-2.6
EPOB				Lg		04 11 19.0	
EPOB	Poblet	2.22	134	Pn	Pn	04 10 48.0	+0.4
	0.7nm,0.1s,SNR=7.9						
EPOB				Pg	Pg	04 10 51.5	-2.6
	2.2nm,0.1s,SNR=11						
EPOB				Lg		04 11 19.6	
	10nm,0.2s,SNR=6.0						
EPOB	Poblet	2.22	134	Pn	Pn	04 10 48.0	+0.4
	0.7nm,0.1s,SNR=7.9						
EPOB				Pg	Pg	04 10 51.5	-2.6
	2.2nm,0.1s,SNR=11						
EPOB				Lg		04 11 19.6	
	10nm,0.2s,SNR=6.0						
EPOB	Poblet	2.22	134	Pn	Pn	04 10 48.0	+0.5
	0.7nm,0.1s,SNR=7.9						
ETOR	Torete	2.24	200	Pg	Pn	04 10 47.7	-0.2
ETOR				Pg	Pg	04 10 49.9	-4.6
ETOR				Lg		04 11 15.8	
ETOR	Torete	2.24	200	Pn	Pn	04 10 47.7	-0.2
	4.3nm,0.1s,SNR=5.5						
ETOR				Pg	Pg	04 10 49.9	-4.6
	15nm,0.3s,SNR=12						
ETOR				Sn	Sn	04 11 15.8	+0.7
	28nm,0.2s,SNR=5.0						
ETOR	Torete	2.24	200	Pn	Pn	04 10 47.7	-0.2
	4.3nm,0.1s,SNR=5.5						
ETOR				Pg	Pg	04 10 49.9	-4.6
	15nm,0.3s,SNR=12						
ETOR				Sn	Sn	04 11 15.8	+0.7
	28nm,0.2s,SNR=5.0						
ETOR	Torete	2.24	200	Pg	Pg	04 10 49.9	-4.7
	15nm,0.3s,SNR=12						
ETOR				Lg		04 11 15.8	
	28nm,0.2s,SNR=5.0						
VALF	Valcebollere	2.31	102	Pg	Pg	04 10 54.7	-1.1
VALF				Sg	Sg	04 11 27.7	+2.0
VALF	Valcebollere	2.31	102	Pg	Pg	04 10 54.8	-1.0
VALF				Lg		04 11 24.8	
VALF	Valcebollere	2.31	102	Pg	Pg	04 10 54.8	-1.0
VALF				Lg		04 11 24.8	
VALF	Valcebollere	2.31	102	Pg	Pg	04 10 54.7	-1.1
VALF				Sg	Sg	04 11 27.7	+2.0
LFF	La Frestale	2.38	32	ePn	Pn	04 10 51.2	+1.4
LFF				eSn	Sn	04 11 20.0	+1.4
	12nm,0.3s						
LFF	La Frestale	2.38	32	Pn	Pn	04 10 51.2	+1.4
LFF				Sn	Sn	04 11 20.0	+1.4
	6.2nm,0.3s						
LFF	La Frestale	2.38	32	Pn	Pn	04 10 51.2	+1.4
LFF				Sn	Sn	04 11 20.0	+1.4
	6.2nm,0.3s						
LFF	La Frestale	2.38	32	ePn	Pn	04 10 51.2	+1.4
LFF				eSn	Sn	04 11 20.0	+1.4
	6.2nm,0.3s						
MTLF	Montolieu	2.41	79	ePg	Pg	04 10 56.9	-0.9
MTLF				eSn	Sn	04 11 19.5	+0.2
MTLF				eSg	Sg	04 11 28.0	-1.1
	8.7nm,0.3s						
MTLF	Montolieu	2.41	79	ePn	Pn	04 10 51.2	+1.0
MTLF				ePg	Pg	04 10 56.9	-0.9
MTLF				eSn	Sn	04 11 19.5	+0.2
MTLF				eSg	Sg	04 11 28.0	-1.1
MTLF	Montolieu	2.41	79	Pn	Pn	04 10 51.2	+1.0
MTLF				Pg	Pg	04 10 56.9	-0.9
MTLF				Sn	Sn	04 11 19.5	+0.2
MTLF				Lg		04 11 28.0	
	4.3nm,0.3s						
MTLF	Montolieu	2.41	79	Pn	Pn	04 10 51.2	+1.0
MTLF				Pg	Pg	04 10 56.9	-0.9
MTLF				Sn	Sn	04 11 19.5	+0.2
MTLF				Lg		04 11 28.0	
	4.3nm,0.3s						
MTLF	Montolieu	2.41	79	ePn	Pn	04 10 51.2	+1.0
MTLF	Montolieu	2.41	79	ePg	Pg	04 10 56.9	-0.9
MTLF				eSn	Sn	04 11 19.5	+0.2
MTLF				eSg	Sg	04 11 28.0	-1.1
	4.3nm,0.3s						
EMOS	Mosqueruela	2.59	171	Pn	Pn	04 10 52.3	-0.4
EMOS				Pg	Pg	04 10 57.2	-4.1
EMOS				Lg		04 11 29.6	
EMOS	Mosqueruela	2.59	171	Pn	Pn	04 10 52.3	-0.4
	0.1nm,0.2s,SNR=4.0						
EMOS				Pg	Pg	04 10 57.2	-4.1
	0.7nm,0.2s,SNR=7.9						
EMOS				Lg		04 11 29.6	
	7.2nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	2.59	171	Pn	Pn	04 10 52.3	-0.4
	0.1nm,0.2s,SNR=4.0						
EMOS				Pg	Pg	04 10 57.2	-4.1
	0.7nm,0.2s,SNR=7.9						
EMOS				Lg		04 11 29.6	
	7.2nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	2.59	171	Pn	Pn	04 10 52.3	-0.4
	0.1nm,0.2s,SNR=4.0						
EMOS				Lg		04 11 29.6	
	7.2nm,0.3s,SNR=7.9						
EJON	La Jonquera	2.93	98	Pn	Pn	04 10 58.1	+0.9
EJON				Pg	Pg	04 11 04.8	-2.9
EJON				Lg		04 11 45.5	
EJON	La Jonquera	2.93	98	Pn	Pn	04 10 58.1	+0.9
	0.1nm,0.1s,SNR=4.0						
EJON				Pg	Pg	04 11 04.8	-2.9
	2.0nm,0.2s,SNR=7.9						
EJON				Lg		04 11 45.5	
	40nm,0.7s,SNR=7.9						
EJON	La Jonquera	2.93	98	Pn	Pn	04 10 58.1	+0.9
	0.1nm,0.1s,SNR=4.0						
EJON				Pg	Pg	04 11 04.8	-2.9
	2.0nm,0.2s,SNR=7.9						
EJON				Lg		04 11 45.5	
	40nm,0.7s,SNR=7.9						
EJON	La Jonquera	2.93	98	Pn	Pn	04 10 58.1	+0.8
	0.1nm,0.1s,SNR=4.0						
CAF	Calviac	3.00	47	eP	Pn	04 11 02.4	+4.2
CAF				eSn	Sn	04 11 34.6	+0.9
	4.7nm,0.2s						
CAF	Calviac	3.00	47	ePn	Pn	04 10 59.5	+1.3
CAF				eP		04 11 02.4	
CAF				eSn	Sn	04 11 34.6	+0.9
CAF	Calviac	3.00	47	Pn	Pn	04 10 59.5	+1.3
CAF				Sn	Sn	04 11 34.6	+0.9
	2.3nm,0.2s						
CAF	Calviac	3.00	47	Pn	Pn	04 10 59.5	+1.3
CAF				Sn	Sn	04 11 34.6	+0.9
	2.3nm,0.2s						
CAF	Calviac	3.00	47	ePn	Pn	04 10 59.5	+1.3
CAF	Calviac	3.00	47	eP	Pn	04 11 02.4	+4.2
CAF				eSn	Sn	04 11 34.6	+0.9
	2.3nm,0.2s						
RJF	Les Rejaudoux	3.00	37	ePn	Pn	04 10 59.5	+1.2
RJF				eSn	Sn	04 11 34.8	+1.0
	10nm,0.3s						
RJF	Les Rejaudoux	3.00	37	Pn	Pn	04 10 59.5	+1.2
RJF				Sn	Sn	04 11 34.8	+1.0
	5.2nm,0.3s						
RJF	Les Rejaudoux	3.00	37	Pn	Pn	04 10 59.5	+1.2
RJF				Sn	Sn	04 11 34.8	+1.0
	5.2nm,0.3s						
RJF	Les Rejaudoux	3.00	37	ePn	Pn	04 10 59.5	+1.2
RJF				eSn	Sn	04 11 34.8	+1.0
	5.2nm,0.3s						
EARI	Arriondas	3.08	278	Pn	Pn	04 11 01.7	+2.3
EARI				Sn	Sn	04 11 36.8	+0.9
EARI	Arriondas	3.08	278	Pn	Pn	04 11 00.2	+0.8
	0.5nm,0.1s,SNR=11						
EARI				Sn	Sn	04 11 36.8	+0.9
	0.8nm,0.2s,SNR=7.9						
EARI	Arriondas	3.08	278	Pn	Pn	04 11 00.2	+0.8
	0.5nm,0.1s,SNR=11						
EARI				Sn	Sn	04 11 36.8	+0.9
	0.8nm,0.2s,SNR=7.9						
EARI	Arriondas	3.08	278	Pn	Pn	04 11 01.7	+2.3
	0.5nm,0.1s,SNR=11						
EARI				Sn	Sn	04 11 36.8	+0.9
	0.8nm,0.2s,SNR=7.9						
GUD	Guadarrama	3.27	227	Pn	Pn	04 11 02.7	+0.8
GUD				Sn	Sn	04 11 37.5	-2.9
GUD	Guadarrama	3.27	227	Pn	Pn	04 11 02.7	+0.8
	3.0nm,0.4s,SNR=7.9						
GUD				Sn	Sn	04 11 37.5	-2.9
	2.6nm,0.4s,SNR=7.9						
GUD	Guadarrama	3.27	227	Pn	Pn	04 11 02.7	+0.8
	3.0nm,0.4s,SNR=7.9						
GUD				Sn	Sn	04 11 37.5	-2.9
	2.6nm,0.4s,SNR=7.9						
GUD	Guadarrama	3.27	227	Pn	Pn	04 11 02.7	+0.8
	3.0nm,0.4s,SNR=7.9						
GUD				Sn	Sn	04 11 37.5	-2.9
	SNR=7.9						
ECHE	Chera	3.33	179	Lg		04 11 52.9	
	4.4nm,0.4s,SNR=4.7						
ECHE	Chera	3.33	179	Lg		04 11 52.9	
	4.4nm,0.4s,SNR=4.7						
ECHE	Chera	3.33	179	Lg		04 11 52.9	
	4.4nm,0.4s,SNR=4.7						
MFF	Saint Martin d	3.73	9	ePn	Pn	04 11 09.4	+1.1
MFF				eSn	Sn	04 11 52.4	+0.7
MFF				eSg	Sg	04 12 11.0	-0.2
	4.4nm,0.4s						
MFF	Saint Martin d	3.73	9	Pn	Pn	04 11 09.4	+1.1
MFF				Sn	Sn	04 11 52.4	+0.7
MFF				Lg		04 12 11.0	
	2.2nm,0.4s						
MFF	Saint Martin d	3.73	9	Pn	Pn	04 11 09.4	+1.1
MFF				Sn	Sn	04 11 52.4	+0.7
MFF				Lg		04 12 11.0	
	2.2nm,0.4s						
MFF	Saint Martin d	3.73	9	ePn	Pn	04 11 09.4	+1.1
MFF				eSn	Sn	04 11 52.4	+0.7
MFF				eSg	Sg	04 12 11.0	-0.2
	2.2nm,0.4s						
LASF	Ste Croix	3.73	70	ePn	Pn	04 11 09.2	+0.8
LASF				eSn	Sn	04 11 50.8	-1.1
	1.7nm,0.3s						
LASF	Ste Croix	3.73	70	Pn	Pn	04 11 09.2	+0.8
LASF				Sn	Sn	04 11 50.8	-1.1
	0.9nm,0.3s						
LASF	Ste Croix	3.73	70	Pn	Pn	04 11 09.2	+0.8
LASF				Sn	Sn	04 11 50.8	-1.1
	0.9nm,0.3s						
LASF	Ste Croix	3.73	70	ePn	Pn	04 11 09.2	+0.8
LASF				eSn	Sn	04 11 50.8	-1.1
	0.9nm,0.3s						
ESDC	Sonseca Array	3.93	215	Pn	Pn	04 11 11.2	+0.1
ESDC	Sonseca Array	3.93	215	Pn	Pn	04 11 11.2	+0.1
	0.2nm,0.2s,baz=39,slow=14,SNR=6.0						
ESDC	Sonseca Array	3.93	215	Pn	Pn	04 11 11.2	+0.1
	0.2nm,0.2s,baz=39,slow=14,SNR=6.0						
ESDC	Sonseca Array	3.93	215	Pn	Pn	04 11 11.2	+0.1
	0.2nm,0.2s,SNR=6.0						
TCF	Toulx Ste Croi	4.08	33	ePn	Pn	04 11 14.2	+1.1
TCF				eSn	Sn	04 12 00.4	0.0
	2.0nm,0.3s						
TCF	Toulx Ste Croi	4.08	33	Pn	Pn	04 11 14.2	+1.1
TCF				Sn	Sn	04 12 00.4	0.0
	1.0nm,0.3s						
TCF	Toulx Ste Croi	4.08	33	Pn	Pn	04 11 14.2	+1.1
TCF				Sn	Sn	04 12 00.4	0.0
	1.0nm,0.3s						
TCF	Toulx Ste Croi	4.08	33	ePn	Pn	04 11 14.2	+1.1
TCF				eSn	Sn	04 12 00.4	0.0
	1.0nm,0.3s						
EIBI	Ibiza	4.29	154	Pn	Pn	04 11 15.5	-0.5
EIBI	Ibiza	4.29	154	Pn	Pn	04 11 15.5	-0.5
	0.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	4.29	154	Pn	Pn	04 11 15.5	-0.5
	0.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	4.29	154	Pn	Pn	04 11 15.5	-0.5
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.30	185	Pn	Pn	04 11 16.5	+0.4
ETOB	Tobarra	4.30	185	Pn	Pn	04 11 16.5	+0.4
	0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.30	185	Pn	Pn	04 11 16.5	+0.4
	0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.30	185	Pn	Pn	04 11 16.5	+0.4
	0.2nm,0.1s,SNR=7.9						
ECAL	Calabor	4.34	259	Pn	Pn	04 11 18.0	+1.3
ECAL				Sn	Sn	04 12 06.0	-0.9
ECAL	Calabor	4.34	259	Pn	Pn	04 11 18.0	+1.3
	1.2nm,0.2s,SNR=7.0						
ECAL				Sn	Sn	04 12 06.0	-0.9
	0.8nm,0.1s,SNR=5.0						
ECAL	Calabor	4.34	259	Pn	Pn	04 11 18.0	+1.3
	1.2nm,0.2s,SNR=7.0						
ECAL				Sn	Sn	04 12 06.0	-0.9
	0.8nm,0.1s,SNR=5.0						
ECAL	Calabor	4.34	259	Pn	Pn	04 11 18.0	+1.3
	1.2nm,0.2s,SNR=7.0						
ECAL				Sn	Sn	04 12 06.0	-0.8
	0.8nm,0.1s,SNR=5.0						
EPON	Pontenova	4.50	277	Pn	Pn	04 11 20.7	+1.8
EPON				Sn	Sn	04 12 14.3	+3.6
EPON	Pontenova	4.50	277	Pn	Pn	04 11 20.7	+1.8
	1.3nm,0.2s,SNR=7.9						
EPON				Sn	Sn	04 12 12.0	+1.3
	0.7nm,0.2s,SNR=7.9						
EPON	Pontenova	4.50	277	Pn	Pn	04 11 20.7	+1.8
	1.3nm,0.2s,SNR=7.9						
EPON				Sn	Sn	04 12 12.0	+1.3
	0.7nm,0.2s,SNR=7.9						
EPON	Pontenova	4.50	277	Pn	Pn	04 11 20.7	+1.8
	1.3nm,0.2s,SNR=7.9						
EPON				Sn	Sn	04 12 14.3	+3.5
	0.7nm,0.2s,SNR=7.9						
VIVF	Saint-Julien-l	4.55	63	ePn	Pn	04 11 20.3	+0.8
VIVF				eSn	Sn	04 12 10.5	-1.5
	5.2nm,0.7s						
VIVF	Saint-Julien-l	4.55	63	Pn	Pn	04 11 20.3	+0.8
VIVF				Sn	Sn	04 12 10.5	-1.5
	2.6nm,0.7s						
VIVF	Saint-Julien-l	4.55	63	Pn	Pn	04 11 20.3	+0.8
VIVF				Sn	Sn	04 12 10.5	-1.5
	2.6nm,0.7s						
VIVF	Saint-Julien-l	4.55	63	ePn	Pn	04 11 20.3	+0.8
VIVF				eSn	Sn	04 12 10.5	-1.5
	2.6nm,0.7s						
BGF	Bois d'Agland	4.56	36	ePn	Pn	04 11 20.6	+0.9
BGF				eSn	Sn	04 12 12.1	-0.1
	29nm,0.6s						
BGF	Bois d'Agland	4.56	36	Pn	Pn	04 11 20.6	+0.9
BGF				Sn	Sn	04 12 12.1	-0.1
	14nm,0.6s						
BGF	Bois d'Agland	4.56	36	Pn	Pn	04 11 20.6	+0.9
BGF				Sn	Sn	04 12 12.1	-0.1
	14nm,0.6s						
BGF	Bois d'Agland	4.56	36	ePn	Pn	04 11 20.6	+0.9
BGF				eSn	Sn	04 12 12.1	-0.1
	14nm,0.6s						
SMRF	Simiane la Rot	4.92	75	ePn	Pn	04 11 24.2	-0.4
SMRF				eSn	Sn	04 12 19.1	-2.0
	2.4nm,0.6s						
SMRF	Simiane la Rot	4.92	75	Pn	Pn	04 11 24.2	-0.4
SMRF				Sn	Sn	04 12 19.1	-2.0
	2.4nm,0.6s						
SMRF	Simiane la Rot	4.92	75	Pn	Pn	04 11 24.2	-0.4
SMRF				Sn	Sn	04 12 19.1	-2.0
	2.4nm,0.6s						
SMRF	Simiane la Rot	4.92	75	ePn	Pn	04 11 24.2	-0.4
SMRF				eSn	Sn	04 12 19.1	-2.0
	1.2nm,0.6s						
AVF	Avril sur Loir	4.96	37	ePn	Pn	04 11 26.1	+0.9
AVF				eSn	Sn	04 12 21.3	-0.8
	0.8nm,0.2s						
AVF	Avril sur Loir	4.96	37	Pn	Pn	04 11 26.1	+0.9
AVF				Sn	Sn	04 12 21.3	-0.8
	0.4nm,0.2s						
AVF	Avril sur Loir	4.96	37	Pn	Pn	04 11 26.1	+0.9
AVF				Sn	Sn	04 12 21.3	-0.8
	0.4nm,0.2s						
AVF	Avril sur Loir	4.96	37	ePn	Pn	04 11 26.1	+0.9
AVF				eSn	Sn	04 12 21.3	-0.8
	0.4nm,0.2s						
HYF	Humbligny	5.06	30	ePn	Pn	04 11 27.4	+0.9
HYF				eSn	Sn	04 12 23.8	-0.7
HYF	Humbligny	5.06	30	Pn	Pn	04 11 27.4	+0.9
HYF				Sn	Sn	04 12 23.8	-0.7
HYF	Humbligny	5.06	30	Pn	Pn	04 11 27.4	+0.9
HYF				Sn	Sn	04 12 23.8	-0.7
HYF	Humbligny	5.06	30	ePn	Pn	04 11 27.4	+0.9
HYF				eSn	Sn	04 12 23.8	-0.7
SMF	Signal de Mont	5.08	41	ePn	Pn	04 11 27.7	+0.8
SMF				eSn	Sn	04 12 24.3	-0.8
	2.4nm,0.4s						
SMF	Signal de Mont	5.08	41	Pn	Pn	04 11 27.7	+0.8
SMF				Sn	Sn	04 12 24.3	-0.8
	1.2nm,0.4s						
SMF	Signal de Mont	5.08	41	Pn	Pn	04 11 27.7	+0.8
SMF				Sn	Sn	04 12 24.3	-0.8
	1.2nm,0.4s						
SMF	Signal de Mont	5.08	41	ePn	Pn	04 11 27.7	+0.8
SMF				eSn	Sn	04 12 24.3	-0.8
	1.2nm,0.4s						
QUIF	Quistinic	5.21	344	ePn	Pn	04 11 30.0	+1.4
QUIF				eSn	Sn	04 12 27.4	-0.9
QUIF				eSg	Sg	04 12 57.4	-1.4
	1.0nm,0.3s						
QUIF	Quistinic	5.21	344	Pn	Pn	04 11 30.0	+1.4
QUIF				Sn	Sn	04 12 27.4	-0.9
QUIF				Lg		04 12 57.4	
	0.0nm,0.3s						
QUIF	Quistinic	5.21	344	Pn	Pn	04 11 30.0	+1.4
QUIF				Sn	Sn	04 12 27.4	-0.9
QUIF				Lg		04 12 57.4	
	0.0nm,0.3s						
QUIF	Quistinic	5.21	344	ePn	Pn	04 11 30.0	+1.4
QUIF				eSn	Sn	04 12 27.4	-0.9
QUIF				eSg	Sg	04 12 57.4	-1.4
	0.5nm,0.3s						
SSF	Saint Saulge	5.24	36	ePn	Pn	04 11 29.8	+0.8
SSF				eSn	Sn	04 12 28.1	-0.8
	4.5nm,0.5s						
SSF	Saint Saulge	5.24	36	Pn	Pn	04 11 29.8	+0.8
SSF				Sn	Sn	04 12 28.1	-0.8
	2.2nm,0.5s						
SSF	Saint Saulge	5.24	36	Pn	Pn	04 11 29.8	+0.8
SSF				Sn	Sn	04 12 28.1	-0.8
	2.2nm,0.5s						
SSF	Saint Saulge	5.24	36	ePn	Pn	04 11 29.8	+0.8
SSF				eSn	Sn	04 12 28.1	-0.8
	2.2nm,0.5s						
ELOB	Lobios	5.32	261	Pn	Pn	04 11 31.1	+1.0
ELOB	Lobios	5.32	261	Pn	Pn	04 11 31.1	+1.0
	0.4nm,0.2s,SNR=4.0						
ELOB	Lobios	5.32	261	Pn	Pn	04 11 31.1	+1.0
	0.4nm,0.2s,SNR=4.0						
ELOB	Lobios	5.32	261	Pn	Pn	04 11 31.1	+1.0
	0.4nm,0.2s,SNR=4.0						
ORIF	Oris-en-Rattie	5.37	66	ePn	Pn	04 11 30.7	-0.1
ORIF				eSn	Sn	04 12 30.6	-1.7
	1.9nm,0.5s						
ORIF	Oris-en-Rattie	5.37	66	Pn	Pn	04 11 30.7	-0.1
ORIF				Sn	Sn	04 12 30.6	-1.7
	0.9nm,0.5s						
ORIF	Oris-en-Rattie	5.37	66	Pn	Pn	04 11 30.7	-0.1
ORIF				Sn	Sn	04 12 30.6	-1.7
	0.9nm,0.5s						
ORIF	Oris-en-Rattie	5.37	66	ePn	Pn	04 11 30.7	-0.1
ORIF				eSn	Sn	04 12 30.6	-1.7
	0.9nm,0.5s						
SGMF	Saint Gilles	5.43	349	ePn	Pn	04 11 32.2	+0.5
SGMF				eSn	Sn	04 12 32.9	-0.9
SGMF				eSg	Sg	04 13 04.4	-1.5
	1.1nm,0.3s						
SGMF	Saint Gilles	5.43	349	Pn	Pn	04 11 32.2	+0.5
SGMF				Sn	Sn	04 12 32.9	-0.9
SGMF				Lg		04 13 04.4	
	0.6nm,0.3s						
SGMF	Saint Gilles	5.43	349	Pn	Pn	04 11 32.2	+0.5
SGMF				Sn	Sn	04 12 32.9	-0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGMF				Lg		04 13 04.4	
	0.6nm,0.3s						
SGMF	**Saint Gilles**	**5.43**	**349**	*e*Pn	**Pn**	**04 11 32.2**	**+0.5**
SGMF				*e*Sn	**Sn**	**04 12 32.9**	**-0.9**
SGMF				*e*Sg	**Sg**	**04 13 04.4**	**-1.5**
	0.6nm,0.3s						
GRR	**Gorron**	**5.46**	**1**	*e*Pn	**Pn**	**04 11 33.2**	**+1.1**
GRR				*e*Sn	**Sn**	**04 12 33.6**	**-0.9**
GRR				*e*Sg	**Sg**	**04 13 05.3**	**-1.5**
	1.4nm,0.3s						
GRR	**Gorron**	**5.46**	**1**	Pn	**Pn**	**04 11 33.2**	**+1.1**
GRR				Sn	**Sn**	**04 12 33.6**	**-0.9**
GRR				Lg		04 13 05.3	
	0.7nm,0.3s						
GRR	**Gorron**	**5.46**	**1**	Pn	**Pn**	**04 11 33.2**	**+1.1**
GRR				Sn	**Sn**	**04 12 33.6**	**-0.9**
GRR				Lg		04 13 05.3	
	0.7nm,0.3s						
GRR	**Gorron**	**5.46**	**1**	*e*Pn	**Pn**	**04 11 33.2**	**+1.1**
GRR				*e*Sn	**Sn**	**04 12 33.6**	**-0.9**
GRR				*e*Sg	**Sg**	**04 13 05.3**	**-1.5**
	0.7nm,0.3s						
EADA	**Adamuz**	**5.47**	**211**	Pn	**Pn**	**04 11 32.4**	**+0.1**
EADA	**Adamuz**	**5.47**	**211**	Pn	**Pn**	**04 11 32.3**	**+0.1**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.47**	**211**	Pn	**Pn**	**04 11 32.3**	**+0.1**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.47**	**211**	Pn	**Pn**	**04 11 32.3**	**+0.1**
	0.2nm,0.1s,SNR=7.9						
LOR	**Lormes**	**5.55**	**37**	*e*Pn	**Pn**	**04 11 34.0**	**+0.7**
LOR				*e*Sn	**Sn**	**04 12 35.6**	**-1.0**
LOR				*e*Sg	**Sg**	**04 13 08.0**	**-1.6**
	2.2nm,0.4s						
LOR	**Lormes**	**5.55**	**37**	Pn	**Pn**	**04 11 34.0**	**+0.7**
LOR				Sn	**Sn**	**04 12 35.6**	**-1.0**
LOR				Lg		04 13 08.0	
	1.1nm,0.4s						
LOR	**Lormes**	**5.55**	**37**	Pn	**Pn**	**04 11 34.0**	**+0.7**
LOR				Sn	**Sn**	**04 12 35.6**	**-1.0**
LOR				Lg		04 13 08.0	
	1.1nm,0.4s						
LOR	**Lormes**	**5.55**	**37**	*e*Pn	**Pn**	**04 11 34.0**	**+0.7**
LOR				*e*Sn	**Sn**	**04 12 35.6**	**-1.0**
LOR				*e*Sg	**Sg**	**04 13 08.0**	**-1.6**
	1.1nm,0.4s						
ROSF	**Rostrenen**	**5.63**	**345**	*e*Pn	**Pn**	**04 11 34.7**	**+0.3**
ROSF				*e*Sn	**Sn**	**04 12 37.8**	**-0.9**
	1.2nm,0.2s						
ROSF	**Rostrenen**	**5.63**	**345**	Pn	**Pn**	**04 11 34.7**	**+0.3**
ROSF				Sn	**Sn**	**04 12 37.8**	**-0.9**
	0.6nm,0.2s						
ROSF	**Rostrenen**	**5.63**	**345**	Pn	**Pn**	**04 11 34.7**	**+0.3**
ROSF				Sn	**Sn**	**04 12 37.8**	**-0.9**
	0.6nm,0.2s						
ROSF	**Rostrenen**	**5.63**	**345**	*e*Pn	**Pn**	**04 11 34.7**	**+0.3**
ROSF				*e*Sn	**Sn**	**04 12 37.8**	**-0.9**
	0.6nm,0.2s						
LDF	**La Druitiere**	**5.70**	**6**	*e*Pn	**Pn**	**04 11 36.6**	**+1.2**
LDF				*e*Sn	**Sn**	**04 12 39.5**	**-0.9**
LDF				*e*Sg	**Sg**	**04 13 12.9**	**-1.6**
	3.4nm,0.7s						
LDF	**La Druitiere**	**5.70**	**6**	*e*Pn	**Pn**	**04 11 36.6**	**+1.2**
LDF				*e*Sn	**Sn**	**04 12 39.5**	**-0.9**
LDF				*e*Sg	**Sg**	**04 13 12.9**	**-1.6**
	1.7nm,0.7s						
EMAZ	**Mazaricos**	**5.84**	**273**	Pn	**Pn**	**04 11 38.2**	**+0.9**
	1.1nm,0.2s,SNR=7.9						
EMAZ				Sn	**Sn**	**04 12 42.9**	**-0.8**
	2.2nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**5.84**	**273**	Pn	**Pn**	**04 11 38.2**	**+0.9**
	1.1nm,0.2s,SNR=7.9						
EMAZ				Sn	**Sn**	**04 12 42.9**	**-0.8**
	2.2nm,0.2s,SNR=7.9						
FLN	**La Foliniere**	**5.85**	**4**	*e*Pn	**Pn**	**04 11 38.5**	**+1.1**
FLN				*e*Sn	**Sn**	**04 12 43.0**	**-1.0**
FLN				*e*Sg	**Sg**	**04 13 17.5**	**-1.7**
	2.2nm,0.5s						
FLN	**La Foliniere**	**5.85**	**4**	Pn	**Pn**	**04 11 38.5**	**+1.1**
FLN				Sn	**Sn**	**04 12 43.0**	**-1.0**
FLN				Lg		04 13 17.5	
	1.1nm,0.5s						
FLN	**La Foliniere**	**5.85**	**4**	Pn	**Pn**	**04 11 38.5**	**+1.1**
FLN				Sn	**Sn**	**04 12 43.0**	**-1.0**
FLN				Lg		04 13 17.5	
	1.1nm,0.5s						
FLN	**La Foliniere**	**5.85**	**4**	*e*Pn	**Pn**	**04 11 38.5**	**+1.1**
FLN				*e*Sn	**Sn**	**04 12 43.0**	**-1.0**
FLN				*e*Sg	**Sg**	**04 13 17.5**	**-1.7**
	1.1nm,0.5s						
MBDF	**Montbardon**	**5.92**	**70**	*e*Pn	**Pn**	**04 11 38.6**	**+0.2**
MBDF				*e*Sn	**Sn**	**04 12 43.9**	**-1.9**
	1.1nm,0.4s						
MBDF	**Montbardon**	**5.92**	**70**	Pn	**Pn**	**04 11 38.6**	**+0.2**
MBDF				Sn	**Sn**	**04 12 43.9**	**-1.9**
	0.6nm,0.4s						
MBDF	**Montbardon**	**5.92**	**70**	Pn	**Pn**	**04 11 38.6**	**+0.2**
MBDF				Sn	**Sn**	**04 12 43.9**	**-1.9**
	0.6nm,0.4s						
MBDF	**Montbardon**	**5.92**	**70**	*e*Pn	**Pn**	**04 11 38.6**	**+0.2**
EBAD	**Badajoz**	**6.16**	**229**	Pn	**Pn**	**04 11 41.7**	**0.0**
	0.2nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**04 12 44.7**	**-7.0**
	0.6nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	**6.16**	**229**	Pn	**Pn**	**04 11 41.7**	**0.0**
	0.2nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**04 12 44.7**	**-7.0**
	0.6nm,0.4s,SNR=7.9						
CABF	**La Chapelle**	**6.26**	**52**	*e*Pn	**Pn**	**04 11 43.7**	**+0.6**
CABF				*e*Sn	**Sn**	**04 12 52.1**	**-2.1**
	4.0nm,0.7s						
CABF	**La Chapelle**	**6.26**	**52**	Pn	**Pn**	**04 11 43.7**	**+0.6**
CABF				Sn	**Sn**	**04 12 52.1**	**-2.1**
	2.0nm,0.7s						
CABF	**La Chapelle**	**6.26**	**52**	Pn	**Pn**	**04 11 43.7**	**+0.6**
CABF				Sn	**Sn**	**04 12 52.1**	**-2.1**
	2.0nm,0.7s						
CABF	**La Chapelle**	**6.26**	**52**	*e*Pn	**Pn**	**04 11 43.7**	**+0.6**

*BJI **17** 04:19:48.9, 43°.53N×96°.18E, h5km, mb4.3/1, ML4.2/9, Ms3.7/2, Ms7 3.5/2*
*IDC **17** 04:19:52.9±0.9, 43°.83N×96°.03E, h0km, mb3.6/8, mb1 3.8/13, mb1mx3.6/30, mbtmp3.7/13, ML3.7/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/26, Error ellipse: s-maj=21.8km s-min=14.4km az=23.0*
*ISCJB **17** 04:19:52.7±0.5, 43°.87N±0°.08×95°.98E±0°.05, h10km, mb3.6/11, Error ellipse: s-maj=11.2km s-min=5.7km az=179.9*
*NEIC **17** 04:19:54.3±0.6, 43°.77N×96°.00E, h10km, mb4.0/5, Error ellipse: s-maj=11.9km s-min=7.4km az=180.0*
*MOS **17** 04:19:55.5±1.6, 43°.82N×95°.89E, h33km, mb4.1/5, Error ellipse: s-maj=12.2km s-min=10.2km az=128.4*
*NNC **17** 04:20:00.1±5.1, 41°.35N×93°.13E, h0km, mb3.9, Error ellipse: s-maj=266.1km s-min=36.7km az=37.0*

ISC 17 04:19:54.4±0.6, 43°.78N±0°.08×95°.97E±0°.05, h10km, n42, σ0°91/47, mb3.6/11, 4C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**5.23**	**145**	⇑Pn	**Pn**	**04 21 03.5**	**-9.0**
GTA				Pg	**Pb**	**04 21 14.8**	**-11**
GTA				Sn	**Sn**	**04 21 55.3**	**-18**
GTA				smax			
	comp=N,300nm,0.7s						
GTA				smax			
	comp=E,230nm,0.7s						
GTA				LR	LR		
	comp=N,500nm,13.1s						
GTA				LR	LR		
	comp=E,400nm,10.4s						
GTA				LR	LR		
	comp=Z,440nm,11.0s						
WMQ	**Urumqi**	**5.99**	**273**	*e*Pg	**Pb**	**04 21 37.3**	**-1.5**
WMQ				Sg	**Sg**	**04 23 02.9**	**-3.7**
WMQ				smax			
	comp=N,270nm,0.7s						
WMQ				smax			
	comp=E,290nm,0.6s						
ZAK	**Zakamensk**	**8.28**	**34**	*e*P	**Pn**	**04 21 59.0**	**+4.7**
ZAK				*e*		04 23 30.8	
ZAK				pmax	pmax		
	comp=Z,12nm,0.8s						
ZAK				smax			
	comp=E,190nm,1.3s						
SONM	**Songino Array**	**8.33**	**57**	Pn	**Pn**	**04 21 55.1**	**0.0**
	comp=E,1.3nm,0.3s,baz=236,slow=15,SNR=7.4						
SONM				Sn	**Sn**	**04 23 27.8**	**-1.4**
	comp=E,1.2nm,0.3s,baz=236,slow=12,SNR=4.3						
SONM				Lg		04 24 15.9	
	comp=E,5.3nm,0.3s,baz=230,slow=31,SNR=13						
SONM				LR	LR	04 25 38.5	
	comp=E,98nm,21.4s,baz=90,slow=42						
SONM	**Songino Array**	**8.33**	**57**	P	**Pn**	**04 21 55.1**	**-0.1**
SONM						04 23 27.8	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				smax			
	comp=N,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,98nm,21.4s						
ULN	**Ulaanbaatar**	**8.75**	**58**	*e*P	**Pn**	**04 22 00.0**	**-0.9**
MK31	**Makanchi Array**	**10.10**	**292**	⇑Pn	**Pn**	**04 22 20.3**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=102,slow=15,SNR=20						
MK31				⇓Sn	**Sn**	**04 24 12.3**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=111,slow=22,SNR=5.2						
MK31				⇓Lg		04 24 56.8	
	comp=Z,5.8nm,0.6s,baz=94,slow=32,SNR=3.8						
MK31	**Makanchi Array**	**10.10**	**292**	*e*P	**Pn**	**04 22 19.8**	**+0.4**
MK31				*e*		04 24 12.7	
MK31	**Makanchi Array**	**10.10**	**292**	*e*Pn	**Pn**	**04 22 19.8**	**+0.4**
MK31				*e*Sn	**Sn**	**04 24 12.7**	**0.0**
MKAR	**Makanchi Array**	**10.10**	**292**	Pn	**Pn**	**04 22 20.3**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=105,slow=14,SNR=13						
MKAR				Sn	**Sn**	**04 24 12.3**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=91,slow=26,SNR=8.0						
MKAR				Lg		04 25 26.1	
	comp=Z,1.0nm,0.3s,baz=107,slow=29,SNR=2.7						
MKAR	**Makanchi Array**	**10.10**	**292**	P	**Pn**	**04 22 20.3**	**+0.9**
MKAR						04 24 12.3	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				smax			
	comp=N,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**12.53**	**328**	Pn	**Pn**	**04 22 53.6**	**+1.0**
	comp=N,0.1nm,0.3s,baz=168,slow=15,SNR=2.4						
ZALV				Lg		04 26 42.0	
	comp=N,0.2nm,0.3s,baz=124,slow=24,SNR=3.5						
ZALV				LR	LR	04 28 06.6	
	comp=N,54nm,19.6s,baz=273,slow=40						
KURK	**Kurchatov**	**13.66**	**307**	⇓Pn	Px	04 23 17.8	
	comp=N,2.4nm,0.8s						
KURK				⇑Lg		04 27 15.7	
	comp=N,34nm,1.1s						
KURK	**Kurchatov**	**13.66**	**307**	Pn	**Pn**	**04 23 08.2**	**+0.2**
	comp=N,0.1nm,0.3s,baz=114,slow=13,SNR=5.0						
KURK				Lg		04 27 17.4	
	comp=N,0.1nm,0.3s,baz=143,slow=28,SNR=5.6						
KURK	**Kurchatov**	**13.66**	**307**	*e*Pn	**Pn**	**04 23 07.7**	**-0.3**
KURK				Lg		04 27 17.4	
KURBB	**Kurchatov Arra**	**13.68**	**306**	⇓Pn	Px	04 23 19.4	
	comp=N,0.6nm,0.6s						
KURBB				⇑Lg		04 27 14.3	
	comp=N,9.9nm,1.2s						
TKM2	**Tokmak 2**	**14.85**	**274**	*e*P	**Pn**	**04 23 23.9**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TKM2	**Tokmak 2**	**14.85**	**274**	*e*P	**Pn**	**04 23 23.9**	**-0.4**
	comp=Z,1.5nm,0.6s						
UCH	**Uchtor**	**15.77**	**272**	*e*P	**Pn**	**04 23 37.4**	**+0.9**
	comp=Z,5.0nm,1.0s						
BOD	**Bodaibo**	**18.01**	**32**	*e*P	**Pn**	**04 24 06.0**	**+1.5**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**19.25**	**308**	P	**Pn**	**04 24 20.6**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=112,slow=10,SNR=16						
BVAR	**Borovoye Array**	**19.25**	**308**	P	**Pn**	**04 24 20.6**	**+0.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**19.32**	**308**	*e*P	**Pn**	**04 24 20.0**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**19.32**	**308**	*e*P	**Pn**	**04 24 20.0**	**-0.5**
	comp=Z,7.4nm,0.8s						
KBL	**Kabul**	**22.75**	**255**	*e*P	**P**	**04 24 55.4**	**-1.1**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
KBL	**Kabul**	**22.75**	**255**	*e*P	**P**	**04 24 55.4**	**-1.2**
	comp=Z,4.9nm,0.6s,mb4.1						
KSRS	**Korea Array**	**24.96**	**94**	P	**P**	**04 25 17.7**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=285,slow=9.7,SNR=5.5						
ABKAR	**Akbulak array**	**25.23**	**295**	*e*P	**P**	**04 25 22.0**	**+1.8**
	comp=Z,1.8nm,0.9s,mb3.6						
CMAR	**Chiang Mai Arr**	**25.37**	**173**	P	**P**	**04 25 23.1**	**+1.5**
	comp=Z,2.3nm,0.8s,mb3.8,baz=356,slow=9.4,SNR=7.7						
CMAR	**Chiang Mai Arr**	**25.37**	**173**	P	**P**	**04 25 23.1**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTK	**Aktyubinsk**	**26.46**	**298**	P	**P**	**04 25 31.6**	**+0.4**
AKTO	**Aktyubinsk**	**26.46**	**298**	P	**P**	**04 25 31.6**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.4,baz=90,slow=2.0,SNR=2.2						
AKTO	**Aktyubinsk**	**26.46**	**298**	P	**P**	**04 25 31.7**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
FINES	**FINESS Array B**	**43.59**	**319**	P	**P**	**04 27 57.8**	**-0.5**
	comp=Z,2.1nm,1.1s,mb3.8,baz=172,slow=31,SNR=5.8						
FINES	**FINESS Array B**	**43.59**	**319**	P	**P**	**04 27 57.8**	**-0.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRTR	**Keskin Array B**	**45.71**	**287**	P	**P**	**04 28 14.2**	**-1.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=79,slow=6.4,SNR=4.3						
NOA	**NORSAR Array B**	**50.62**	**321**	P	**P**	**04 28 52.6**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.4,baz=71,slow=6.7,SNR=2.7						
MCK	**McKinley**	**61.27**	**27**	*e*P	**P**	**04 30 09.5**	**+0.3**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
MCK	**McKinley**	**61.27**	**27**	*e*P	**P**	**04 30 09.5**	**+0.2**
	comp=Z,2.7nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**71.27**	**14**	P	**P**	**04 31 13.2**	**-0.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=336,slow=5.8,SNR=2.4						
YKA	**Yellowknife Ar**	**71.27**	**14**	P	**P**	**04 31 13.2**	**-0.1**
ASAR	**Alice Springs**	**75.60**	**144**	P	**P**	**04 31 39.0**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=335,slow=6.2,SNR=4.8						

KRSC 17 05:15:19.6±0.4, 53°.28N×160°.65E, h41km±30km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.42**	**244**	*i* P	Pn	05 15 29.7	+0.4
SPN				*i* S	Sn	05 15 36.5	+0.4
NLC	**Nalytchevo**	**0.79**	**263**	*e*P	Pn	05 15 34.2	-0.1
NLC				*i* S	Sn	05 15 44.7	-0.2
KII	**Karymskiy**	**1.04**	**317**	*e*P	Pn	05 15 36.9	-0.8
KII				*i* S	Sn	05 15 49.4	-1.6
AVH	**Avacha**	**1.15**	**270**	*e*P	Pn	05 15 39.6	+0.5
PET	**Petropavlovsk**	**1.23**	**259**	*e*P	Pn	05 15 40.4	+0.1
PET				*i* S	Sn	05 15 55.3	-0.3
MKZ	**Mys Kozlova**	**1.43**	**26**	*e*P	Pn	05 15 42.1	-0.9
MKZ				*i* S	Sn	05 15 58.2	-2.3
RUS	**Russkaya**	**1.55**	**238**	*e*P	Pn	05 15 44.9	+0.3
RUS				*i* S	Sn	05 16 02.6	-0.9
GNL	**Ganaly**	**1.67**	**285**	*e*P	Pn	05 15 47.0	+0.7
GRL	**Gorelyy**	**1.72**	**246**	P	Pn	05 15 48.3	+1.3
KMNR	**Kamenistaya**	**2.49**	**355**	*e*P	Pn	05 15 59.5	+1.9
KMNR				*i* S	Sn	05 16 28.7	+2.0
MIPR	**Malaya Ipel'ka**	**2.57**	**249**	*e*P	Pn	05 16 00.8	+2.2
BZMR	**Bezymyannaya**	**2.66**	**358**	*e*P	Pn	05 16 03.1	+3.2
BZMR				*i* S	Sn	05 16 35.6	+4.7
ZLN	**Zelenaya**	**2.74**	**2**	*e*P	Pn	05 16 03.5	+2.5
ZLN				*i* S	Sn	05 16 34.9	+2.0
CIRR	**Tsirk**	**2.84**	**1**	*e*P	Pn	05 16 05.3	+2.9
SRDR	**Sredinnyy**	**3.09**	**350**	*e*P	Pn	05 16 07.6	+1.8
KBTR	**Krutoberegovo**	**3.19**	**22**	*e*P	Pn	05 16 08.0	+0.8
KBTR				*i* S	Sn	05 16 43.5	-0.4
BDR	**Baidarnaya**	**3.31**	**5**	P	Pn	05 16 12.9	+4.1
SMKR	**Semkarok**	**3.34**	**8**	*e*P	Pn	05 16 11.0	+1.8
SRKR	**Sorokina**	**3.40**	**5**	P	Pn	05 16 12.9	+2.9
BKI	**Bering**	**3.67**	**56**	*e*P	Pn	05 16 14.3	+0.6
BKI				*i* S	Sn	05 16 52.8	-2.9

IDC 17 05:15:48.2±1.9, 28°.53S×62°.55E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, MS3.6/1, Ms1 3.6/1, ms1mx2.8/35, Error ellipse: s-maj=77.3km s-min=39.9km az=25.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**39.67**	**29**	LR	LR	05 36 28.7	
	comp=Z,83nm,20.1s,baz=101,slow=31						
ASAR	**Alice Springs**	**63.41**	**104**	P	P	05 26 19.9	0.0
	0.4nm,0.8s,baz=244,slow=6.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**71.94**	**297**	P	P	05 27 13.6	-0.1
	0.4nm,0.8s,baz=114,slow=7.1,SNR=2.6						
MKAR	**Makanchi Array**	**77.07**	**14**	P	P	05 27 43.0	+0.1
	0.2nm,0.4s,baz=183,slow=5.8,SNR=2.5						
ZALV	**Zalesovo Beam**	**84.37**	**13**	P	P	05 28 21.7	-0.1
	1.3nm,0.7s,baz=180,slow=5.9,SNR=5.5						
YKA	**Yellowknife Ar**	**145.99**	**358**	PKPbc	PKPbc	05 35 28.7	-0.4
	0.3nm,0.4s,baz=346,slow=3.6,SNR=10						

MAN 17 05:36:25, 13°.44N×121°.32E, h6km, mb4.7, ML3.6, MS3.5, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.37**	**280**	*e*P	Pg	05 36 32.5	+0.4
BOAC	**Boac**	**0.51**	**87**	*e*P	Pg	05 36 35.8	+1.0
BOAC				*e*S	Sg	05 36 41.8	+0.4
TGY	**Tagaytay City**	**0.76**	**330**	⇓*i*P	Pg	05 36 40.0	+0.4
TGY				*i* S	Sg	05 36 54.0	+4.5
SJMP	**San Jose**	**0.99**	**192**	*e*P	Pg	05 36 46.2	+2.2
SJMP				*e*S	Sg	05 36 59.8	+2.9
LUBP	**Lubang**	**1.09**	**286**	*e*P	Pg	05 36 45.4	-0.5
GQP	**Guinayangan**	**1.19**	**67**	⇓*e*P	Pg	05 36 47.4	-0.4
GQP				*e*S	Sg	05 37 04.7	+1.5
OTRP	**Odiongan**	**1.27**	**147**	*e*P	Pn	05 36 47.3	-2.0
AUQP	**San Andres**	**1.32**	**95**	*e*P	Pn	05 36 50.9	+0.9
POLP	**Polilio Island**	**1.42**	**25**	*e*P	Pn	05 36 50.6	-0.7
BUSP	**Coron**	**1.80**	**218**	*e*P	Pn	05 36 57.6	+1.1
BALP	**Baler**	**2.30**	**6**	*e*P	Pn	05 37 05.5	+2.0

*DDA **17** 06:02:54.0, 36°.95N×29°.21E, h7km±2km, Md2.9*
*ISCJB **17** 06:02:54.3±0.5, 36°.96N±0°.02×29°.21E±0°.03, h7km±5km, Error ellipse: s-maj=4.5km s-min=4.1km az=21.3*
*CSEM **17** 06:02:54.3±0.2, 36°.96N×29°.22E, h8km, MD3.0, Error ellipse: s-maj=3.4km s-min=3.3km az=121.0*
*ISK **17** 06:02:54.0, 36°.97N×29°.22E, h8km, MD3.0*

ISC 17 06:02:54.7±0.5, 36°.96N±0°.03×29°.23E±0°.03, h7km±4km, n37, σ0°89/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**48**	*e*PG	**Pg**	**06 02 59.7**	**-0.9**
GLHS				*e*SG	**Sg**	**06 03 04.4**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**48**	*e*Pg	**Pg**	**06 02 59.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**06 03 04.4**	**0.0**
FETY	**Fethiye**	**0.34**	**200**	*e*PG	**Pg**	**06 03 00.8**	**-0.6**
FETY				*e*SG	**Sg**	**06 03 06.8**	**+0.9**
FETY	**Fethiye**	**0.34**	**200**	*e*Pg	**Pg**	**06 03 00.8**	**-0.6**
FETY				*e*Sg	**Sg**	**06 03 06.8**	**+0.9**
GOLH	**Golhisar**	**0.39**	**44**	*i* P	**Pg**	**06 03 01.5**	**-0.8**
GOLH				*i* S	**Sg**	**06 03 08.4**	**+1.0**
GOLH	**Golhisar**	**0.39**	**44**	*i* P	**Pg**	**06 03 01.5**	**-0.8**
GOLH				*i* S	**Sg**	**06 03 08.4**	**+1.0**
TURN	**Turunc**	**0.51**	**261**	*i* P	**Pg**	**06 03 09.2**	**+4.7**
TURN				*i* S	**Sg**	**06 03 21.3**	**+10**
ELL	**Elmali**	**0.59**	**111**	*e*PG	**Pg**	**06 03 05.6**	**-0.4**
ELL				*e*SG	**Sg**	**06 03 15.4**	**+1.7**
ELL	**Elmali**	**0.59**	**111**	*e*Pg	**Pg**	**06 03 05.6**	**-0.4**
ELL				*e*Sg	**Sg**	**06 03 15.4**	**+1.7**
DNZL	**Cakiroluk**	**0.74**	**349**	*i* P	**Pg**	**06 03 07.1**	**-2.0**
DNZL				*i* S	**Sg**	**06 03 19.7**	**+1.0**
DNZL	**Cakiroluk**	**0.74**	**349**	*i* P	**Pg**	**06 03 07.1**	**-2.0**
DNZL				*i* S	**Sg**	**06 03 19.7**	**+0.9**
YER	**Yerkesik**	**0.78**	**283**	*e*PG	**Pg**	**06 03 09.4**	**-0.2**
YER				*e*SG	**Sg**	**06 03 20.4**	**+0.7**
YER	**Yerkesik**	**0.78**	**283**	*e*Pg	**Pg**	**06 03 09.4**	**-0.2**
YER				*e*Sg	**Sg**	**06 03 20.4**	**+0.7**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**06 03 09.4**	**-0.4**
AKAS				*i* S	**Sg**	**06 03 24.9**	**+4.9**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**06 03 09.4**	**-0.4**
DENT	**Denizli**	**0.81**	**349**	*e*PG	**Pg**	**06 03 09.7**	**-0.6**
DENT				*e*SG	**Sg**	**06 03 21.9**	**+1.1**
DENT	**Denizli**	**0.81**	**349**	*e*Pg	**Pg**	**06 03 09.7**	**-0.6**
DENT				*e*Sg	**Sg**	**06 03 21.9**	**+1.1**
BCK	**Bucak**	**1.20**	**65**	*e*PN	**Pn**	**06 03 17.6**	**-0.3**
BCK	**Bucak**	**1.20**	**65**	*e*Pn	**Pn**	**06 03 17.6**	**-0.3**
MLSB	**Milas**	**1.21**	**287**	*e*PN	**Pn**	**06 03 17.1**	**-0.9**
MLSB	**Milas**	**1.21**	**287**	*e*Pn	**Pn**	**06 03 17.1**	**-0.9**
DAT	**Datca**	**1.34**	**261**	*e*PN	**Pn**	**06 03 19.4**	**-0.4**
DAT	**Datca**	**1.34**	**261**	*e*Pn	**Pn**	**06 03 19.4**	**-0.4**
ISP	**Isparta**	**1.35**	**49**	*e*PN	**Pn**	**06 03 20.1**	**+0.1**
ISP	**Isparta**	**1.35**	**49**	*e*Pn	**Pn**	**06 03 20.1**	**+0.1**
KHL	**Karahalli**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2				smax			
	comp=N,21μm,0.6s						
LZH	**Lanzhou**	**4.93**	**3**	Pg	**Pg**	**06 29 07.8**	**-3.5**
LZH				Sg	**Sg**	**06 30 15.1**	**-0.1**
LZH				smax			
	comp=N,63nm,0.8s						
LZH				smax			
	comp=E,69nm,0.8s						
LZH				LR	LR		
	comp=N,670nm,6.5s						
LZH				LR	LR		
	comp=Z,700nm,8.1s						
ENH	**Enshi**	**5.22**	**98**	*e*Pn	**Pn**	**06 28 56.4**	**+0.9**
	comp=Z,73nm,0.6s						
ENH				*e*Pg	**Pg**	**06 29 14.8**	**-2.1**
ENH				*e*Sn	**Sn**	**06 29 56.0**	**0.0**
XAN	**Xi'an**	**5.40**	**56**	Pn	**Pn**	**06 28 58.8**	**+0.9**
XAN				Sg	**Sg**	**06 30 24.3**	**-6.0**
XAN				smax			
	comp=N,160nm,0.6s						
XAN				smax			
	comp=E,92nm,0.9s						
GYA	**Guiyang**	**5.43**	**149**	Pg	**Pg**	**06 29 20.3**	**-0.6**
GYA				Sg	**Sg**	**06 30 29.4**	**-2.0**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,140nm,0.9s						
GTA	**Gaotai**	**8.78**	**341**	*e*P	**Pn**	**06 29 49.5**	**+5.3**
GTA				pP		06 29 52.8	
GTA				sP		06 29 55.5	
GTA				S	**Sn**	**06 31 28.3**	**+4.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=N,300nm,11.0s						
GTA				LR	LR		
	comp=E,370nm,11.6s						
GTA				LR	LR		
	comp=Z,200nm,12.5s						
WHN	**Wuhan**	**9.34**	**91**	P	**Pn**	**06 29 58.1**	**+6.1**
WHN				LR	LR		
	comp=Z,520nm,4.2s						
CMAR	**Chiang Mai Arr**	**13.30**	**199**	Pn	**Pn**	**06 30 47.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=8.5,slow=13,SNR=3.1						
SONM	**Songino Array**	**16.81**	**7**	Pn	**Pn**	**06 31 33.7**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=190,slow=16,SNR=2.4						
ULN	**Ulaanbaatar**	**16.91**	**8**	*e*P	**Pn**	**06 31 36.2**	**+2.2**
	comp=Z,2.0nm,0.6s						
KSRS	**Korea Array**	**21.10**	**66**	P	**P**	**06 32 21.6**	**-0.4**
	comp=Z,2.1nm,0.6s,mb3.6,baz=267,slow=11,SNR=11						
CN2	**Changchun**	**21.43**	**48**	*e*P	**P**	**06 32 26.4**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**22.61**	**320**	*e*P	**P**	**06 32 38.4**	**+0.2**
MKAR	**Makanchi Array**	**22.61**	**320**	P	**P**	**06 32 38.5**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.2,baz=135,slow=12,SNR=7.5						
MKAR	**Makanchi Array**	**22.61**	**320**	P	**P**	**06 32 38.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.46**	**335**	P	**P**	**06 33 13.6**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.4,baz=141,slow=7.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**26.46**	**335**	P	**P**	**06 33 13.6**	**-0.9**
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**06 33 17.8**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.4,baz=128,slow=9.2,SNR=4.5						
KURK	**Kurchatov**	**26.91**	**324**	*e*P	**P**	**06 33 22.8**	**+4.3**
	comp=Z,2.4nm,0.9s,mb3.7						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**06 37 37.6**	**+1.6**
	comp=Z,3.2nm,0.9s,mb4.3						
SVW2	**Sparrevohn**	**68.22**	**31**	*e*P	**P**	**06 38 35.9**	**-2.0**
WLF	**Walferdange**	**71.34**	**317**	*e*P	**P**	**06 38 55.6**	**-1.7**
	comp=Z,6.1nm,0.4s,mb4.9						
YKA	**Yellowknife Ar**	**81.80**	**17**	P	**P**	**06 39 54.8**	**-1.5**
	comp=Z,0.2nm,0.8s,mb3.1,baz=328,slow=5.0,SNR=3.4						

IDC ***17*** *06:35:20.3±0.9, 32°.40S×177°.96W, h0km, mb4.3/4, mb1 4.4/6, mb1mx4.1/18, mbtmp4.3/6, ML4.4/2, Error ellipse: s-maj=32.8km s-min=23.3km az=96.0*
NEIC ***17*** *06:35:25.2±0.8, 32°.37S×177°.91W, h35km, mb4.5/4, Error ellipse: s-maj=22.8km s-min=12.6km az=114.0*
ISC 17 06:35:25.4±1.3, 32.42S±0.07×178.1W±0.2, h35km, n27, σ1.54/20, mb4.3/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.16**	**3**	Pn	**Pn**	**06 36 09.4**	**-3.3**
	71nm,0.3s,baz=58,slow=21,SNR=4.1						
RAO				Sn	**Sn**	**06 36 48.2**	**-1.0**
	140nm,0.3s,baz=31,slow=22,SNR=8.1						
RAO	**Raoul Island**	**3.16**	**3**	*e*Pn	**Pn**	**06 36 09.4**	**-3.3**
RAO				*e*Sn	**Sn**	**06 36 48.4**	**-0.9**
URZ	**Urewera**	**7.02**	**213**	Pn	**Pn**	**06 37 03.3**	**-2.4**
	3.4nm,0.3s,baz=14,slow=3.4,SNR=23						
URZ				Sn	**Sn**	**06 38 20.9**	**-3.4**
	9.8nm,0.3s,baz=162,slow=18,SNR=14						
URZ	**Urewera**	**7.02**	**213**	*e*Pn	**Pn**	**06 37 03.9**	**-1.8**
URZ				*e*Sn	**Sn**	**06 38 22.8**	**-1.4**
OUZ	**Omahuta**	**7.46**	**246**	*e*Pn	**Pn**	**06 37 15.2**	**+3.5**
	20nm,0.9s						
RPZ	**Rata Peaks**	**14.14**	**214**	Pn	**Pn**	**06 38 36.2**	**-6.8**
	1.1nm,0.3s,baz=343,slow=16,SNR=5.1						
RPZ				Sn	**Sn**	**06 41 04.1**	**-14**
	0.5nm,0.3s,baz=292,slow=23,SNR=4.1						
RPZ	**Rata Peaks**	**14.14**	**214**	*e*Pn	**Pn**	**06 38 38.5**	**-4.6**
ODZ	**Otahua Downs**	**15.35**	**212**	*e*P	**Pn**	**06 39 01.1**	**+1.9**
	36nm,1.3s						
EIDS	**Eidsvold**	**27.83**	**277**	*e*P	**P**	**06 41 12.8**	**+1.3**
	4.6nm,0.9s,mb4.1						
CTA	**Charters Tower**	**34.10**	**282**	P	**P**	**06 42 08.9**	**+2.1**
	4.6nm,0.6s,mb4.6,baz=111,slow=9.8,SNR=9.2						
CTAO	**Charters Tower**	**34.10**	**282**	*e*P	**P**	**06 42 08.6**	**+1.8**
	5.3nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**42.96**	**269**	P	**P**	**06 43 21.4**	**+0.1**
	3.5nm,0.7s,mb4.2,baz=108,slow=7.5,SNR=34						
WRAB	**Tennant Creek**	**44.13**	**274**	*e*P	**P**	**06 43 30.4**	**-0.3**
	8.6nm,0.7s,mb4.6						
QSPA	**South Pole Qui**	**57.70**	**180**	P	**P**	**06 45 13.2**	**+1.3**
	1.7nm,1.0s,mb4.0,baz=72,slow=1.9,SNR=4.4						
PETK	**Petropavlovsk-**	**87.75**	**346**	P	**P**	**06 48 11.2**	**+1.1**
	2.7nm,0.9s,mb4.5,baz=109,slow=13,SNR=4.4						
KURK	**Kurchatov**	**122.38**	**313**	PKP	PKPdf	06 54 16.3	-0.1
	0.8nm,0.9s,baz=104,slow=1.6,SNR=4.2						
KURK	**Kurchatov**	**122.38**	**313**	PKP	PKPdf	06 54 16.3	-0.1
KEV	**Kevo**	**140.07**	**347**	*ep*	PKiKP	06 54 58.8	+7.2
	0.4nm,0.4s						
JOF	**Joensuu**	**144.26**	**337**	*ep*	PKiKP	06 55 06.1	+5.7
	0.6nm,0.4s						
KAF	**Kangasniemi**	**146.42**	**339**	*ep*	PKPdf	06 55 01.4	+0.9
	1.0nm,0.4s						
FINES	**FINESS Array B**	**147.00**	**339**	PKPbc	PKPbc	06 55 03.7	+0.1
	8.4nm,0.8s,baz=45,slow=3.2,SNR=21						
NOA	**NORSAR Array B**	**150.73**	**351**	PKPbc	PKPbc	06 55 14.2	+1.1
	2.7nm,1.0s,baz=14,slow=4.2,SNR=2.8						
HFS	**Hagfors**	**151.20**	**348**	PKPbc	PKPbc	06 55 13.4	-0.9
	3.9nm,0.9s,baz=90,slow=7.2,SNR=3.1						
MMAI	**Mount Meron Ar**	**151.88**	**280**	PKPbc	PKPbc	06 55 18.0	+1.3
	3.3nm,0.6s,baz=71,slow=5.4,SNR=6.3						
AKASG	**Malin Array Be**	**152.83**	**320**	PKPbc	PKPbc	06 55 18.8	+0.6
	0.2nm,0.2s,baz=81,slow=1.4,SNR=4.9						
BRTR	**Keskin Array B**	**153.44**	**295**	PKPbc	PKPbc	06 55 20.4	+0.5
	0.8nm,0.6s,baz=143,slow=4.3,SNR=6.8						
TORD	**Torodi Ar. Bea**	**160.81**	**179**	PKPab	PKPab	06 56 04.3	-0.1
	0.5nm,0.6s,baz=179,slow=2.8,SNR=4.5						

HLW ***17*** *06:39:17.3, 37°.18N×31°.04E, h33km±31km, Ml4.0*
ISCJB ***17*** *06:39:18.2±0.2, 37°.17N±0.02×31°.03E±0.02, h132km±2km, mb3.8/12, Error ellipse: s-maj=3.7km s-min=2.7km az=135.3*
NIC ***17*** *06:39:18.0±0.2, 37°.25N×31°.02E, h70km, mb4.1, ML3.7, MW3.5*
DDA ***17*** *06:39:20.0, 37°.26N×31°.01E, h29km±2km, Md3.3*
CSEM ***17*** *06:39:19.1±0.1, 37°.19N×31°.03E, h128km±1km, mb3.8/5, Mw3.5, Error ellipse: s-maj=2.9km s-min=2.4km az=49.0*
IDC ***17*** *06:39:19.3±1.2, 37°.23N×31°.05E, h122km±12km, mb3.5/7, mb1 3.6/14, mb1mx3.4/31, mbtmp3.5/14, Error ellipse: s-maj=16.1km s-min=11.0km az=124.0*
ISK ***17*** *06:39:20.6, 37°.25N×31°.04E, h100km, ML3.5*
NEIC ***17*** *06:39:20.0, 37°.27N×31°.04E, h99km, mb3.8/10, After ISK.*
ISC 17 06:39:19.2±0.2, 37.17N±0.02×31.03E±0.02, h127km±2km, n195, σ0.90/242, mb3.8/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUTC	**Sutluce-Ispart**	**0.31**	**355**	*e*PG	**Pn**	**06 39 36.5**	**-0.5**
SUTC	**Sutluce-Ispart**	**0.31**	**355**	*e*Pg	**Pn**	**06 39 36.5**	**-0.5**
ANTB	**Antalya**	**0.40**	**229**	*e*PG	**Pn**	**06 39 37.5**	**+0.1**
ANTB	**Antalya**	**0.40**	**229**	*e*Pg	**Pn**	**06 39 37.6**	**+0.2**
BCK	**Bucak**	**0.46**	**310**	*e*PG	**Pn**	**06 39 37.1**	**-0.6**
BCK	**Bucak**	**0.46**	**310**	*e*Pg	**Pn**	**06 39 37.1**	**-0.6**
ISP	**Isparta**	**0.79**	**329**	*e*PG	**Pn**	**06 39 39.4**	**-0.6**
ISP	**Isparta**	**0.79**	**329**	*e*Pn	**Pn**	**06 39 39.6**	**-0.4**
ISP				*e*Sn	**Sn**	**06 39 54.7**	**-1.1**
ELL	**Elmali**	**0.99**	**245**	*e*PG	**Pn**	**06 39 42.4**	**+0.7**
ELL	**Elmali**	**0.99**	**245**	*e*Pg	**Pn**	**06 39 42.4**	**+0.6**
GOLH	**Golhisar**	**1.18**	**274**	*i* P	**Pn**	**06 39 44.5**	**+0.9**
GOLH				*i* S	**Sn**	**06 40 02.8**	**+0.7**
GOLH	**Golhisar**	**1.18**	**274**	*i* P	**Pn**	**06 39 44.5**	**+0.9**
GOLH				*i* S	**Sn**	**06 40 02.8**	**+0.7**
HDMB	**Hadim**	**1.18**	**99**	*e*PN	**Pn**	**06 39 44.2**	**+0.6**
HDMB	**Hadim**	**1.18**	**99**	*e*Pn	**Pn**	**06 39 44.2**	**+0.6**
GLHS	**Glhisar (BURDU**	**1.23**	**270**	*e*PN	**Pn**	**06 39 45.0**	**+1.0**
GLHS	**Glhisar (BURDU**	**1.23**	**270**	*e*Pn	**Pn**	**06 39 45.1**	**+1.0**
KONT	**Konya--Tatoy**	**1.31**	**53**	*e*PN	**Pn**	**06 39 45.1**	**+0.1**
KONT	**Konya--Tatoy**	**1.31**	**53**	*e*Pn	**Pn**	**06 39 45.1**	**+0.1**
GAZI	**Gazipasa**	**1.39**	**132**	*i* P	**Pn**	**06 39 46.7**	**+0.8**
GAZI				*i* S	**Sn**	**06 40 07.8**	**+1.7**
GAZI	**Gazipasa**	**1.39**	**132**	*i* P	**Pn**	**06 39 46.7**	**+0.8**
GAZI				*i* S	**Sn**	**06 40 07.8**	**+1.7**
SHUT	**Suhut-Afyon**	**1.43**	**345**	*e*PN	**Pn**	**06 39 46.2**	**-0.2**
SHUT	**Suhut-Afyon**	**1.43**	**345**	*e*Pn	**Pn**	**06 39 46.2**	**-0.1**
LADK	**Ladik-KONYA**	**1.48**	**45**	*e*PN	**Pn**	**06 39 46.6**	**-0.2**
LADK	**Ladik-KONYA**	**1.48**	**45**	*e*Pn	**Pn**	**06 39 46.6**	**-0.2**
AKAS	**Kas**	**1.48**	**231**	*i* P	**Pn**	**06 39 48.1**	**+1.2**
AKAS				*i* S	**Sn**	**06 40 09.4**	**+1.5**
AKAS	**Kas**	**1.48**	**231**	*i* P	**Pn**	**06 39 48.1**	**+1.2**
AKAS				*i* S	**Sn**	**06 40 09.4**	**+1.5**
BOLV	**Bolvadin**	**1.55**	**358**	*i* P	**Pn**	**06 39 47.1**	**-0.5**
BOLV				*i* S	**Sn**	**06 40 07.9**	**-1.5**
BOLV	**Bolvadin**	**1.55**	**358**	*i* P	**Pn**	**06 39 47.1**	**-0.5**
BOLV				*i* S	**Sn**	**06 40 07.9**	**-1.5**
ERMK	**Ermenek**	**1.60**	**109**	*i* P	**Pn**	**06 39 49.8**	**+1.6**
ERMK				*i* S	**Sn**	**06 40 11.3**	**+1.1**
ERMK	**Ermenek**	**1.60**	**109**	*i* P	**Pn**	**06 39 49.8**	**+1.6**
ERMK				*i* S	**Sn**	**06 40 11.3**	**+1.0**
KDHN	**Kadinhani**	**1.60**	**32**	*i* P	**Pn**	**06 39 47.9**	**-0.3**
KDHN				*i* S	**Sn**	**06 40 09.1**	**-1.3**
KDHN	**Kadinhani**	**1.60**	**32**	*i* P	**Pn**	**06 39 47.9**	**-0.3**
KDHN				*i* S	**Sn**	**06 40 09.1**	**-1.3**
FETY	**Fethiye**	**1.65**	**252**	*e*PN	**Pn**	**06 39 49.7**	**+0.9**
FETY				*e*SN	**Sn**	**06 40 11.2**	**-0.2**
FETY	**Fethiye**	**1.65**	**252**	*e*Pn	**Pn**	**06 39 49.7**	**+0.9**
FETY				*e*Sn	**Sn**	**06 40 11.2**	**-0.2**
KHL	**Karahalli**	**1.66**	**314**	*e*PN	**Pn**	**06 39 49.1**	**+0.2**
KHL	**Karahalli**	**1.66**	**314**	*e*Pn	**Pn**	**06 39 49.1**	**+0.2**
DNZL	**Cakiroluk**	**1.66**	**289**	*i* P	**Pn**	**06 39 49.5**	**+0.6**
DNZL				*i* S	**Sn**	**06 40 12.3**	**+0.6**
DNZL	**Cakiroluk**	**1.66**	**289**	*i* P	**Pn**	**06 39 49.5**	**+0.5**
DNZL				*i* S	**Sn**	**06 40 12.3**	**+0.6**
DENT	**Denizli**	**1.69**	**291**	*e*PN	**Pn**	**06 39 49.6**	**+0.3**
DENT	**Denizli**	**1.69**	**291**	*e*Pn	**Pn**	**06 39 49.6**	**+0.3**
KHAL	**Karahalli**	**1.71**	**315**	*i* P	**Pn**	**06 39 49.3**	**-0.2**
KHAL				*i* S	**Sn**	**06 40 12.1**	**-0.6**
KHAL	**Karahalli**	**1.71**	**315**	*i* P	**Pn**	**06 39 49.3**	**-0.2**
KHAL				*i* S	**Sn**	**06 40 12.1**	**-0.6**
KIZT	**Kizilcal**	**1.84**	**21**	*e*PN	**Pn**	**06 39 50.8**	**-0.2**
KIZT	**Kizilcal**	**1.84**	**21**	*e*Pn	**Pn**	**06 39 50.8**	**-0.2**
TURN	**Turunc**	**1.97**	**262**	*i* P	**Pn**	**06 39 56.9**	**+4.4**
TURN				*i* S	**Sn**	**06 40 24.7**	**+6.5**
TURN	**Turunc**	**1.97**	**262**	*i* P	**Pn**	**06 39 56.9**	**+4.3**
ALT	**Altintas**	**2.02**	**339**	*e*PN	**Pn**	**06 39 53.1**	**-0.2**
ALT	**Altintas**	**2.02**	**339**	*e*Pn	**Pn**	**06 39 53.1**	**-0.1**
YER	**Yerkesik**	**2.20**	**270**	*e*PN	**Pn**	**06 39 56.4**	**+1.0**
YER	**Yerkesik**	**2.20**	**270**	*e*Pn	**Pn**	**06 39 56.4**	**+1.0**
SULT	**Sultanhani-AKS**	**2.22**	**62**	*e*PN	**Pn**	**06 39 56.3**	**+0.5**
SULT	**Sultanhani-AKS**	**2.22**	**62**	*e*Pn	**Pn**	**06 39 56.3**	**+0.6**
GDZ	**Gediz**	**2.27**	**328**	*i* P	**Pn**	**06 39 56.5**	**+0.1**
GDZ				*i* S	**Sn**	**06 40 23.6**	**-1.3**
GDZ	**Gediz**	**2.27**	**328**	*i* P	**Pn**	**06 39 56.5**	**+0.1**
GDZ				*i* S	**Sn**	**06 40 23.6**	**-1.4**
SVRH	**Sivrihisar-ESK**	**2.31**	**9**	*e*PN	**Pn**	**06 39 56.5**	**-0.4**
SVRH	**Sivrihisar-ESK**	**2.31**	**9**	*e*Pn	**Pn**	**06 39 56.5**	**-0.3**
KULA	**Kula-Manisa**	**2.31**	**306**	*e*PN	**Pn**	**06 39 57.2**	**+0.4**
KULA	**Kula-Manisa**	**2.31**	**306**	*e*Pn	**Pn**	**06 39 57.2**	**+0.4**
IKL	**Isikli**	**2.33**	**113**	*e*PN	**Pn**	**06 39 57.9**	**+0.9**
IKL	**Isikli**	**2.33**	**113**	*e*Pn	**Pn**	**06 39 57.9**	**+0.8**
ESKT	**Eskisehir**	**2.35**	**357**	*e*PN	**Pn**	**06 39 57.2**	**-0.2**
ESKT	**Eskisehir**	**2.35**	**357**	*i* P	**Pn**	**06 39 57.7**	**-0.4**
ESKT				*i* S	**Sn**	**06 40 25.5**	**-1.2**
ESKT	**Eskisehir**	**2.35**	**357**	*e*PN	**Pn**	**06 39 57.2**	**-0.2**
SEYT	**Eskypehyr**	**2.35**	**357**	*i* P	**Pn**	**06 39 57.0**	**-0.4**
SEYT				*i* S	**Sn**	**06 40 25.5**	**-1.2**
MANT	**Manisa**	**2.36**	**305**	*i* P	**Pn**	**06 39 57.9**	**+0.4**
MANT				*i* S	**Sn**	**06 40 27.4**	**+0.5**
MANT	**Manisa**	**2.36**	**305**	*i* P	**Pn**	**06 39 57.9**	**+0.4**
MANT				*i* S	**Sn**	**06 40 27.5**	**+0.6**
ALFC	**Alevga**	**2.37**	**147**	P	**Pn**	**06 39 56.4**	**-1.3**
	32nm,0.2s						
ALFC				S	**Sn**	**06 40 26.1**	**-1.1**
ALFC	**Alevga**	**2.37**	**147**	P	**Pn**	**06 39 56.4**	**-1.3**
	32nm,0.2s						
ALFC				S	**Sn**	**06 40 26.1**	**-1.1**
PPCY	**Paphos**	**2.51**	**155**	P	**Pn**	**06 39 58.1**	**-1.4**
PPCY	**Paphos**	**2.51**	**155**	P	**Pn**	**06 39 58.1**	**-1.4**
AYDN	**Tasoluk**	**2.56**	**282**	*i* P	**Pn**	**06 40 00.4**	**+0.4**
AYDN				*i* S	**Sn**	**06 40 30.6**	**-0.8**
AYDN	**Tasoluk**	**2.56**	**282**	*i* P	**Pn**	**06 40 00.4**	**+0.4**
AYDN				*i* S	**Sn**	**06 40 30.6**	**-0.8**
DEMI	**Demirci**	**2.62**	**316**	*i* P	**Pn**	**06 40 01.1**	**+0.3**
DEMI				*i* S	**Sn**	**06 40 31.0**	**-1.7**
DEMI	**Demirci**	**2.62**	**316**	*i* P	**Pn**	**06 40 01.1**	**+0.4**
DEMI				*i* S	**Sn**	**06 40 31.0**	**-1.7**
MAMC	**Mammari**	**2.66**	**138**	P	**Pn**	**06 40 00.5**	**-0.9**
MAMC	**Mammari**	**2.66**	**138**	P	**Pn**	**06 40 00.5**	**-0.9**
DAT	**Datca**	**2.80**	**262**	*e*PN	**Pn**	**06 40 05.3**	**+2.2**
DAT	**Datca**	**2.80**	**262**	*e*Pn	**Pn**	**06 40 05.3**	**+2.2**
MERS	**Mersin**	**2.81**	**95**	*e*PN	**Pn**	**06 40 04.4**	**+1.2**
MERS	**Mersin**	**2.81**	**95**	*e*Pn	**Pn**	**06 40 04.4**	**+1.2**
BDRM	**Kayabasi**	**2.87**	**269**	*i* P	**Pn**	**06 40 04.5**	**+0.5**
BDRM	**Kayabasi**	**2.87**	**269**	*i* P	**Pn**	**06 40 04.5**	**+0.5**
CSS	**Prodhromos**	**2.88**	**139**	P	**Pn**	**06 40 03.0**	**-1.2**
	4.4nm,0.4s						
CSS				S	**Sn**	**06 40 38.1**	**-0.8**
CSS	**Prodhromos**	**2.88**	**139**	P	**Pn**	**06 40 03.0**	**-1.2**
	4.4nm,0.4s						
CSS				S	**Sn**	**06 40 38.1**	**-0.8**
EREN	**Erenkoy**	**3.02**	**122**	*e*PN	**Pn**	**06 40 07.7**	**+1.8**
EREN	**Erenkoy**	**3.02**	**122**	*e*Pn	**Pn**	**06 40 07.7**	**+1.8**
KARA	**Karaisali**	**3.21**	**87**	*e*PN	**Pn**	**06 40 09.8**	**+1.3**
KARA	**Karaisali**	**3.21**	**87**	*e*Pn	**Pn**	**06 40 09.8**	**+1.3**
PHNC	**Paralimni**	**3.25**	**131**	P	**Pn**	**06 40 07.3**	**-1.7**
	4.8nm,0.5s						
PHNC				S	**Sn**	**06 40 47.4**	**0.0**
PHNC	**Paralimni**	**3.25**	**131**	P	**Pn**	**06 40 07.3**	**-1.7**
	4.8nm,0.5s						
PHNC				S	**Sn**	**06 40 47.4**	**0.0**
BRTR	**Keskin Array B**	**3.27**	**38**	P	**Pn**	**06 40 09.2**	**0.0**
	4.5nm,0.3s,baz=203,slow=14,SNR=250						
BRTR				S	**Sn**	**06 40 46.9**	**-1.1**
	1.8nm,0.3s,baz=219,slow=25,SNR=15						
BRTR	**Keskin Array B**	**3.27**	**38**	P	**Pn**	**06 40 09.2**	**0.0**
BRTR				S	**Sn**	**06 40 46.8**	**-1.1**
BR131	**Keskin Array S**	**3.27**	**38**	*e*Pn	**Pn**	**06 40 09.1**	**-0.1**
BR131	**Keskin Array S**	**3.27**	**38**	*e*Pn	**Pn**	**06 40 09.1**	**-0.1**
GULT	**Gulveren**	**3.29**	**353**	*e*PN	**Pn**	**06 40 09.7**	**+0.3**
GULT	**Gulveren**	**3.29**	**353**	*e*Pn	**Pn**	**06 40 09.7**	**+0.3**
MDU	**Mudurnu**	**3.30**	**2**	*e*PN	**Pn**	**06 40 10.0**	**+0.5**
MDU	**Mudurnu**	**3.30**	**2**	*e*Pn	**Pn**	**06 40 10.0**	**+0.5**
KRTS	**Karatas**	**3.53**	**98**	*e*PN	**Pn**	**06 40 15.1**	**+2.4**
KRTS	**Karatas**	**3.53**	**98**	*e*Pn	**Pn**	**06 40 15.1**	**+2.4**
YLV	**Yalova**	**3.63**	**340**	*e*PN	**Pn**	**06 40 15.3**	**+1.3**
YLV	**Yalova**	**3.63**	**340**	*e*Pn	**Pn**	**06 40 15.3**	**+1.3**
CORM	**Corum**	**4.12**	**42**	*e*PN	**Pn**	**06 40 21.4**	**+1.0**
CORM	**Corum**	**4.12**	**42**	*e*Pn	**Pn**	**06 40 21.4**	**+1.0**
HWQ	**Hawqa**	**4.93**	**124**	*e*Pn	**Pn**	**06 40 31.4**	**+0.1**
HWQ	**Hawqa**	**4.93**	**124**	*e*Pn	**Pn**	**06 40 31.4**	**+0.1**
IDI	**Anoyia**	**5.31**	**251**	P	**Pn**	**06 40 36.5**	**+0.1**
	1.6nm,0.3s,baz=307,slow=14,SNR=7.4						
IDI				S	**Sn**	**06 41 33.6**	**-2.8**
	2.4nm,0.3s,baz=6.2,slow=19,SNR=6.5						
IDI	**Anoyia**	**5.31**	**251**	P	**Pn**	**06 40 36.5**	**+0.1**
IDI				S	**Sn**	**06 41 33.6**	**-2.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**5.37**	**132**	*e*Pn	**Pn**	**06 40 37.2**	**0.0**
RCY	**Rachaya**	**5.37**	**132**	*e*Pn	**Pn**	**06 40 37.2**	**0.0**
MMAI	**Mount Meron Ar**	**5.48**	**138**	P	**Pn**	**06 40 38.5**	**-0.2**
	24nm,0.3s,baz=310,slow=13,SNR=100						
MMAI				S	**Sn**	**06 41 37.2**	**-3.3**
	22nm,0.3s,baz=312,slow=26,SNR=13						
RSH		**6.58**	**159**	P	**Pn**	**06 40 52.5**	**-1.1**
AMAG	**Maghara**	**6.75**	**164**	P	**Pn**	**06 40 54.8**	**-1.1**
	baz=163						
AMAG	**Maghara**	**6.75**	**164**	P	**Pn**	**06 40 54.8**	**-1.1**
HMAT	**Matruh**	**6.88**	**209**	P	**Pn**	**06 40 56.7**	**-0.9**
	baz=210						
HMAT				AMP		06 42 00.0	
	comp=N,60μm,0.3s,logA/T=5.3,baz=210						
HMAT				S	**Sn**	**06 42 07.5**	**-6.9**
	baz=210						
HMAT	**Matruh**	**6.88**	**209**	P	**Pn**	**06 40 56.7**	**-0.9**
HMAT				S	**Sn**	**06 42 07.5**	**-6.9**
ASF	**Jabal al Asfar**	**6.94**	**134**	P	**Pn**	**06 41 00.5**	**+2.1**
	comp=N,1.4nm,0.3s,baz=219,slow=21,SNR=7.8						
ASF				S	**Sn**	**06 42 16.7**	**+0.9**
	comp=N,0.9nm,0.3s,baz=68,slow=5.4,SNR=2.2						
KOT	**Kottamia**	**7.25**	**175**	P	**Pn**	**06 41 02.2**	**-0.4**
	baz=174						
KOT				S	**Sn**	**06 42 15.6**	**-7.9**
	baz=174						
KOT	**Kottamia**	**7.25**	**175**	P	**Pn**	**06 41 02.2**	**-0.4**
KOT				S	**Sn**	**06 42 15.6**	**-7.8**
SLUM		**7.43**	**222**	P	**Pn**	**06 41 04.3**	**-0.7**
	baz=222						
SLUM		**7.43**	**222**	P	**Pn**	**06 41 04.3**	**-0.7**
SUZ		**7.46**	**168**	P	**Pn**	**06 41 04.7**	**-0.8**
	baz=167						
SUZ		**7.46**	**168**	P	**Pn**	**06 41 04.7**	**-0.7**
HNAT	**Natroun**	**7.52**	**183**	P	**Pn**	**06 41 05.8**	**-0.5**
	baz=183						
HNAT	**Natroun**	**7.52**	**183**	P	**Pn**	**06 41 05.8**	**-0.5**
HSAF	**As Saff**	**7.54**	**177**	P	**Pn**	**06 41 05.8**	**-0.8**
	baz=176						
HSAF	**As Saff**	**7.54**	**177**	P	**Pn**	**06 41 05.8**	**-0.7**
GLL	**Jalalah**	**7.59**	**176**	P	**Pn**	**06 41 06.7**	**-0.5**
	baz=175						
GLL	**Jalalah**	**7.59**	**176**	P	**Pn**	**06 41 06.7**	**-0.5**
EIL	**Elat**	**8.16**	**155**	P	**Pn**	**06 41 14.0**	**-0.9**
	comp=N,2.2nm,0.3s,baz=342,slow=16,SNR=3.4						
EIL				S	**Sn**	**06 42 42.0**	**-3.5**
	comp=N,2.1nm,0.3s,baz=128,slow=18,SNR=5.1						
EIL	**Elat**	**8.16**	**155**	P	**Pn**	**06 41 14.0**	**-

BOQS	**Boqueron**	**0.64**	**16**	*e*P	Pn	06 41 13.2 +0.3
BOQS				*e*S	Sn	06 41 24.0 +1.5
LFU	**La Fuente**	**0.72**	**28**	*e*P	Pn	06 41 14.4 +0.5
LFU				*e*S	Sn	06 41 25.3 +1.1
SBLS	**San Blas**	**0.74**	**348**	*e*P	Pn	06 41 14.5 +0.3
SBLS				*e*S	Sn	06 41 26.2 +1.5
LBRS	**Las Brisas**	**0.74**	**33**	*e*P	Pn	06 41 14.8 +0.6
LBRS				*e*S	Sn	06 41 25.8 +1.1
SNJE	**San Jose**	**0.77**	**349**	*e*P	Pn	06 41 14.7 +0.2
SNJE				*e*S	Sn	06 41 25.9 +0.7
SNVI	**San Vicente**	**0.78**	**51**	*e*P	Pn	06 41 14.6 -0.1
SNVI				*e*S	Sn	06 41 26.6 +0.9
RTR	**El Retiro**	**0.80**	**347**	*e*P	Pn	06 41 15.3 +0.4
RTR				*e*S	Sn	06 41 27.5 +1.4
RBDL	**Robledal**	**1.02**	**348**	*e*P	Pn	06 41 18.2 +0.4
RBDL				*e*S	Sn	06 41 32.5 +1.4
VSM	**San Miguel**	**1.20**	**75**	*e*P	Pn	06 41 20.6 +0.5
VSM				*e*S	Sn	06 41 36.9 +1.4
BLLM	**Bellamira**	**1.23**	**74**	*e*P	Pn	06 41 20.9 +0.2
BLLM				*e*S	Sn	06 41 37.1 +0.8
MTO2	**Montecristo 2**	**1.28**	**4**	*e*P	Pn	06 41 21.8 +0.4
MTO2				*e*S	Sn	06 41 38.5 +0.9
CAHU	**Cacacuatique**	**1.38**	**62**	*e*P	Pn	06 41 22.9 +0.2
CAHU				*e*S	Sn	06 41 41.2 +1.3
CNCH	**Conchagua**	**1.59**	**84**	*e*P	Pn	06 41 25.4 -0.2
CNCH				*e*S	Sn	06 41 46.0 +0.9
TGUH	**Tegucigalpa,Un**	**2.33**	**66**	*e*P	Pn	06 41 35.2 -0.3
TGUH				*e*S	Sn	06 42 04.8 +1.8
TGUH				AML	AML	06 42 29.0
	comp=N,67nm,0.8s					

IDC ***17*** *06:41:12.5±1.9,9.°60S×112.°59E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.9/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/2, Error ellipse: s-maj=82.4km s-min=28.3km az=51.0*
DJA ***17*** *06:41:17, 9.°71S×112.°77E, h11km, MLv4.1/11*
ISCJB ***17*** *06:41:18.8±1.4, 9.°7S±0.°1×112.°76E±0.°05, h68km±12km, mb3.8/4, Error ellipse: s-maj=18.6km s-min=6.9km az=9.6*
ISC 17 06:41:20.2±1.3, 9.°7S±0.°1×112.°76E±0.°05, h61km±12km, n19,σ1°08/24, mb3.9/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.56**	**349**	P	**Pn**	**06 41 44.8**	**-0.9**
KRKI				S	**Sn**	**06 42 06.1**	**+1.3**
GMJI	**Gumukmas**	**1.57**	**26**	P	**Pn**	**06 41 42.3**	**-3.5**
GMJI				S	**Sn**	**06 42 03.2**	**-1.9**
PWJI	**Pagerwojo**	**1.91**	**330**	P	**Pn**	**06 41 48.6**	**-1.9**
PWJI				S	**Sn**	**06 42 14.6**	**+1.2**
PCJI	**Pacitan**	**2.16**	**314**	P	**Pn**	**06 41 53.0**	**-0.8**
PCJI				S	**Sn**	**06 42 18.8**	**-0.7**
SJI	**Sawahan**	**2.18**	**333**	P	**Pn**	**06 41 53.9**	**-0.2**
SJI				S	**Sn**	**06 42 26.8**	**+6.8**
NBBI	**Negara**	**2.26**	**55**	P	**Pn**	**06 41 55.3**	**+0.1**
NBBI				S	**Sn**	**06 42 24.2**	**+2.2**
ABJI	**Asem Bagus**	**2.38**	**38**	P	**Pn**	**06 41 56.6**	**-0.3**
NGJI	**Ngawi**	**2.64**	**331**	P	**Pn**	**06 42 02.3**	**+1.8**
UGM	**Wanagama**	**2.83**	**309**	P	**Pn**	**06 42 02.7**	**-0.3**
UGM				S	**Sn**	**06 42 37.2**	**+1.2**
KMMI	**Kalianget**	**2.89**	**25**	P	**Pn**	**06 42 03.4**	**-0.4**
SRBI	**Singaraja**	**2.91**	**57**	P	**Pn**	**06 42 03.9**	**-0.1**
KHKI	**Kahang-Kahang**	**3.11**	**65**	P	**Pn**	**06 42 06.5**	**-0.3**
SMRI	**Semarang**	**3.49**	**319**	P	**Pn**	**06 42 12.5**	**+0.5**
KAPI	**Kappang**	**8.35**	**57**	LR	LR	06 46 54.8	
	comp=Z,69nm,20.9s,baz=318,slow=41						
ASAR	**Alice Springs**	**24.51**	**127**	P	**P**	**06 46 35.6**	**+1.5**
	1.1nm,0.7s,mb3.5,baz=305,slow=8.9,SNR=7.7						
KSRS	**Korea Array**	**49.01**	**16**	P	**P**	**06 50 00.4**	**-0.5**
	0.7nm,0.4s,mb4.0,baz=205,slow=8.0,SNR=4.6						
MKAR	**Makanchi Array**	**62.46**	**337**	P	**P**	**06 51 36.7**	**-0.4**
	1.3nm,0.5s,mb4.4,baz=148,slow=7.8,SNR=11						
AFI	**Afiamalu**	**73.73**	**102**	LR	LR	07 19 46.4	
	comp=Z,52nm,21.1s,baz=55,slow=31						
AKTO	**Aktyubinsk**	**76.39**	**328**	P	**P**	**06 53 02.6**	**-0.4**
	0.9nm,0.6s,mb3.9,baz=135,slow=8.6,SNR=4.8						

ISCJB ***17*** *06:46:17.3±2.0, 31.°7N±0.°1×104.°17E±0.°08, h1km±11km, mb3.6/5, Error ellipse: s-maj=18.0km s-min=11.3km az=3.7*
IDC ***17*** *06:46:17.2±10.0, 31.°48N×104.°06E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.6/5, MS2.3/1, Ms1 2.3/1, ms1mx2.0/30, Error ellipse: s-maj=258.4km s-min=30.8km az=14.0*
NEIC ***17*** *06:46:21.0±1.0, 31.°81N×104.°16E, h10km, mb3.7/1, Error ellipse: s-maj=40.0km s-min=11.1km az=218.0*
BJI ***17*** *06:46:24.7, 31.°61N×104.°06E, h20km, ML3.4/7, Ms3.1/1*
ISC 17 06:46:21.2±2.3, 31.°7N±0.°1×104.°11E±0.°08, h15km±13km, n10,σ0°93/13, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.42**	**357**	Pg	**Pg**	**06 47 47.6**	**+1.7**
LZH				Sg	**Sg**	**06 48 50.0**	**+6.9**
LZH				smax			
	comp=N,38nm,0.8s						
LZH				smax			
	comp=E,48nm,1.0s						
LZH				LR	LR		
	comp=E,200nm,7.2s						
XAN	**Xi'an**	**4.69**	**58**	Pg	**Pg**	**06 47 47.5**	**-3.6**
XAN				Sn	**Sn**	**06 48 26.4**	**+0.7**
XAN				Sg	**Sg**	**06 48 47.1**	**-4.8**
XAN				smax			
	comp=N,73nm,0.7s						
XAN				smax			
	comp=E,32nm,0.9s						
ENH	**Enshi**	**4.82**	**105**	*e*Pn	**Pn**	**06 47 34.1**	**+0.9**
KSRS	**Korea Array**	**20.42**	**67**	P	**P**	**06 50 57.3**	**-0.5**
	comp=E,0.4nm,0.3s,baz=263,slow=9.7,SNR=3.3						
KSRS				LR	LR	07 00 19.5	
	comp=E,7.8nm,19.5s,baz=135,slow=41						
MK31	**Makanchi Array**	**22.56**	**318**	*e*P	**P**	**06 51 20.9**	**+0.2**
MKAR	**Makanchi Array**	**22.56**	**318**	P	**P**	**06 51 20.6**	**-0.2**
	comp=E,1.0nm,0.7s,mb3.4,baz=123,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**26.22**	**334**	P	**P**	**06 51 54.6**	**-0.7**
	comp=E,1.7nm,0.5s,mb3.8,baz=137,slow=9.1,SNR=8.5						
KURK	**Kurchatov**	**26.80**	**323**	P	**P**	**06 52 00.1**	**-0.5**
	comp=E,0.8nm,0.7s,mb3.4,baz=129,slow=9.2,SNR=6.1						
WRAB	**Tennant Creek**	**58.93**	**146**	*e*P	**P**	**06 56 21.0**	**+1.1**
	comp=E,0.4nm,0.6s,mb3.6						
YKA	**Yellowknife Ar**	**81.16**	**17**	P	**P**	**06 58 34.9**	**-0.9**
	comp=E,0.2nm,0.5s,mb3.3,baz=327,slow=5.2,SNR=3.9						

GEN ***17*** *06:58:29.5, 43.°94N×10.°31E, h7km, ML2.4*
CSEM ***17*** *06:58:29.1±0.1, 43.°91N×10.°28E, h10km, ML2.8/13, Error ellipse: s-maj=3.6km s-min=2.3km az=15.0*
NEIC ***17*** *06:58:29.0, 43.°93N×10.°30E, h3km, ML2.4(ROM), ML2.6(LDG), After ROM.*
NEIC Felt [III] at Cepezzano Pianore. Also felt at Massarosa, Pietrasanta and Pisa.
ROM ***17*** *06:58:29.0±0.2, 43.°93N×10.°30E, h3km±2km, Md2.6/22, Ml2.4/21, Error ellipse: s-maj=2.4km s-min=1.4km az=70.0*
ISCJB ***17*** *06:58:29.0±0.3, 43.°92N±0.°02×10.°21E±0.°02, h18km±4km, Error ellipse: s-maj=3.7km s-min=2.8km az=26.2*
LDG ***17*** *06:58:32.4±0.1, 43.°81N×10.°14E, h10km, ML2.6/24, Error ellipse: s-maj=2.1km s-min=1.4km az=90.0*
ISC 17 06:58:29.0±0.3, 43.°91N±0.°02×10.°22E±0.°02, h12km±2km, n110,σ1°22/174, 5C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIM	**Mastiano**	**0.20**	**88**	⇑*i*Pg	**Pg**	**06 58 32.5**	**-0.8**
MAIM				Sg	**Sg**	**06 58 34.6**	**-1.6**
	2μm,0.3s						
MAIM	**Mastiano**	**0.20**	**88**	P	**Pg**	**06 58 32.5**	**-0.8**
MAIM				Sg	**Sg**	**06 58 34.6**	**-1.6**
	2μm,0.3s						
VLC	**Villacollemand**	**0.28**	**26**	*e*Pg	**Pg**	**06 58 34.2**	**-0.6**
VLC	**Villacollemand**	**0.28**	**26**	⇓*i*Pg	**Pg**	**06 58 34.3**	**-0.4**
VLC				Sg	**Sg**	**06 58 37.9**	**-0.7**
	467nm,0.4s						
VLC	**Villacollemand**	**0.28**	**26**	⇓*i*Pg	**Pg**	**06 58 34.3**	**-0.4**
VLC				Sg	**Sg**	**06 58 37.9**	**-0.7**
	467nm,0.4s						
PII	**Pisa**	**0.29**	**130**	⇓*i*Pg	**Pg**	**06 58 35.0**	**+0.1**
PII				Sg	**Sg**	**06 58 38.9**	**+0.1**
PII	**Pisa**	**0.29**	**130**	⇓*i*Pg	**Pg**	**06 58 35.0**	**+0.1**
PII				Sg	**Sg**	**06 58 38.9**	**+0.1**
SARO	**Sassorosso**	**0.31**	**26**	P	**Pg**	**06 58 34.8**	**-0.4**
SARO				S	**Sg**	**06 58 38.3**	**-1.1**
BDI	**Bagni Di Lucca**	**0.32**	**60**	⇑*i*Pg	**Pg**	**06 58 34.6**	**-0.8**
BDI				Sg	**Sg**	**06 58 38.2**	**-1.5**
	1μm,0.4s						
BDI	**Bagni Di Lucca**	**0.32**	**60**	⇑*i*Pg	**Pg**	**06 58 34.6**	**-0.8**
BDI				Sg	**Sg**	**06 58 38.2**	**-1.5**
	1μm,0.4s						
ERBM	**Eremo**	**0.53**	**15**	Pg	**Pg**	**06 58 39.7**	**+0.3**
ERBM				Sg	**Sg**	**06 58 47.3**	**+0.9**
	245nm,0.3s						
ERBM	**Eremo**	**0.53**	**15**	Pg	**Pg**	**06 58 39.7**	**+0.3**
ERBM				Sg	**Sg**	**06 58 47.3**	**+0.9**
	245nm,0.3s						
GROG	**Isola di Gorgo**	**0.54**	**206**	Pg	**Pg**	**06 58 41.0**	**+1.6**
	159nm,0.4s						
GROG	**Isola di Gorgo**	**0.54**	**206**	Pg	**Pg**	**06 58 41.0**	**+1.6**
	159nm,0.4s						
CODM	**Codolo**	**0.55**	**332**	P	**Pg**	**06 58 39.7**	**-0.1**
CODM				S	**Sg**	**06 58 46.9**	**-0.1**
CRMI	**Carmignano**	**0.56**	**102**	⇑*i*Pg	**Pg**	**06 58 39.7**	**-0.2**
	131nm,0.4s						
CRMI	**Carmignano**	**0.56**	**102**	⇑*i*Pg	**Pg**	**06 58 39.7**	**-0.2**
	131nm,0.4s						
GRAM	**Graiana**	**0.59**	**350**	P	**Pg**	**06 58 41.1**	**+0.5**
GRAM				S	**Sg**	**06 58 48.3**	**-0.1**
SC2M	**Scurtabo**	**0.70**	**316**	Pg	**Pg**	**06 58 43.6**	**+1.1**
	402nm,0.4s						
SC2M	**Scurtabo**	**0.70**	**316**	P	**Pg**	**06 58 43.4**	**+0.9**
SC2M				S	**Sg**	**06 58 52.5**	**+0.8**
FNVD	**Fontana Vidola**	**0.70**	**68**	Pg	**Pg**	**06 58 42.7**	**+0.1**
	335nm,0.7s						
FNVD	**Fontana Vidola**	**0.70**	**68**	Pg	**Pg**	**06 58 42.7**	**+0.1**
	335nm,0.7s						
ZCCA	**Zocca**	**0.70**	**51**	Pg	**Pg**	**06 58 43.5**	**+0.8**
	216nm,0.4s						
ZCCA	**Zocca**	**0.70**	**51**	Pg	**Pg**	**06 58 43.5**	**+0.8**
	216nm,0.4s						
SEI	**Scarperia**	**0.84**	**79**	Pg	**Pg**	**06 58 44.8**	**-0.3**
	249nm,0.4s						
SEI	**Scarperia**	**0.84**	**79**	Pg	**Pg**	**06 58 44.8**	**-0.3**
	249nm,0.4s						
CSNT	**Castellina Chi**	**0.89**	**119**	Pg	**Pg**	**06 58 46.1**	**-0.1**
CSNT				Sg	**Sg**	**06 58 57.1**	**-0.7**
	186nm,0.7s						
CSNT	**Castellina Chi**	**0.89**	**119**	Pg	**Pg**	**06 58 46.1**	**-0.1**
CSNT				Sg	**Sg**	**06 58 57.1**	**-0.7**
	186nm,0.7s						
VMG	**Vicchio**	**0.96**	**86**	Pg	**Pg**	**06 58 47.2**	**-0.3**
	41nm,0.2s						
VMG	**Vicchio**	**0.96**	**86**	Pg	**Pg**	**06 58 47.2**	**-0.3**
	41nm,0.2s						
BOB	**Bobbio (Coli)**	**1.02**	**328**	Pg	**Pg**	**06 58 49.3**	**+0.6**
	179nm,0.8s						
BOB	**Bobbio (Coli)**	**1.02**	**328**	Pg	**Pg**	**06 58 49.3**	**+0.6**
	179nm,0.8s						
ASQU	**Asqua**	**1.14**	**95**	Pg	**Pg**	**06 58 50.2**	**-0.8**
	47nm,0.5s						
ASQU	**Asqua**	**1.14**	**95**	Pg	**Pg**	**06 58 50.2**	**-0.8**
	47nm,0.5s						
SFI	**Santa Sofia**	**1.18**	**90**	Pg	**Pg**	**06 58 50.6**	**-1.0**
	48nm,0.7s						
SFI	**Santa Sofia**	**1.18**	**90**	Pg	**Pg**	**06 58 50.6**	**-1.0**
	48nm,0.7s						
CRE	**Caprese Michel**	**1.29**	**102**	Pg	**Pg**	**06 58 52.9**	**-0.8**
	30nm,0.7s						
CRE	**Caprese Michel**	**1.29**	**102**	Pg	**Pg**	**06 58 52.9**	**-0.8**
	30nm,0.7s						
PCP	**Piancastagn**	**1.36**	**298**	P	**Pn**	**06 58 54.6**	**+0.8**
CAFI	**Castiglion Fio**	**1.40**	**114**	Pg	**Pn**	**06 58 54.7**	**+0.4**
	62nm,1.4s						
CAFI	**Castiglion Fio**	**1.40**	**114**	Pg	**Pn**	**06 58 54.7**	**+0.4**
	62nm,1.4s						
PARC	**Parchiule**	**1.49**	**99**	Pg	**Pn**	**06 58 56.0**	**+0.5**
	41nm,0.8s						
PARC	**Parchiule**	**1.49**	**99**	Pg	**Pn**	**06 58 56.0**	**+0.5**
	41nm,0.8s						
BADI	**Badiali**	**1.52**	**104**	Pg	**Pn**	**06 58 56.8**	**+0.8**
	48nm,0.8s						
BADI	**Badiali**	**1.52**	**104**	Pg	**Pn**	**06 58 56.8**	**+0.8**
	48nm,0.8s						
RORO	**Rocca Rossa**	**1.56**	**278**	P	**Pn**	**06 58 56.4**	**-0.2**
PGF	**Pioggiola**	**1.62**	**214**	*e*Pn	**Pn**	**06 58 58.2**	**+0.8**
PGF				*e*Sn	**Sn**	**06 59 17.1**	**-1.2**
	17nm,0.4s						
PGF	**Pioggiola**	**1.62**	**214**	*e*Pn	**Pn**	**06 58 58.2**	**+0.8**
PGF				*e*Sn	**Sn**	**06 59 17.1**	**-1.2**
	8.6nm,0.4s						
IMI	**Imperia**	**1.68**	**271**	P	**Pn**	**06 58 58.4**	**+0.2**
PIEI	**Pieia**	**1.72**	**102**	Pg	**Pn**	**06 58 59.3**	**+0.5**
	38nm,1.3s						
PIEI	**Pieia**	**1.72**	**102**	Pg	**Pn**	**06 58 59.3**	**+0.5**
	38nm,1.3s						
MONE	**Monesi**	**1.79**	**276**	P	**Pn**	**06 59 00.1**	**+0.5**
MONE				S	**Sn**	**06 59 21.3**	**-1.0**
NEGI	**Seborga**	**1.82**	**269**	P	**Pn**	**06 59 00.1**	**0.0**
NEGI				S	**Sn**	**06 59 20.7**	**-2.4**
MAGA	**Magasa**	**1.89**	**9**	Pg	**Pg**	**06 59 03.8**	**-1.5**
	207nm,0.5s						
MAGA	**Magasa**	**1.89**	**9**	Pg	**Pg**	**06 59 03.8**	**-1.5**
	207nm,0.5s						
RONM	**Roccetta Nervi**	**1.89**	**270**	P	**Pn**	**06 59 00.9**	**-0.2**
RONM				S	**Sn**	**06 59 22.3**	**-2.6**
MDI	**Monti di Nese**	**1.90**	**349**	Pg	**Pg**	**06 59 04.5**	**-1.0**
	42nm,0.5s						
MDI	**Monti di Nese**	**1.90**	**349**	Pg	**Pg**	**06 59 04.5**	**-1.0**
	42nm,0.5s						
SBF	**Sospel**	**2.01**	**270**	*e*Pn	**Pn**	**06 59 03.8**	**+1.0**
SBF				*e*Sn	**Sn**	**06 59 26.9**	**-0.9**
	21nm,0.4s						
SBF	**Sospel**	**2.01**	**270**	*e*Pn	**Pn**	**06 59 03.8**	**+1.0**
SBF				*e*Sn	**Sn**	**06 59 26.9**	**-0.9**
	10nm,0.4s						
ENR	**Entracque**	**2.04**	**280**	P	**Pn**	**06 59 03.5**	**+0.3**
ENR				S	**Sn**	**06 59 26.4**	**-2.2**
STV	**Sant Anna di V**	**2.11**	**280**	P	**Pn**	**06 59 03.8**	**-0.3**
STV				S	**Sn**	**06 59 28.3**	**-2.0**
MABI	**Malga Bissina**	**2.16**	**6**	Pg	**Pg**	**06 59 07.9**	**-2.5**
	19nm,0.3s						
MABI	**Malga Bissina**	**2.16**	**6**	Pg	**Pg**	**06 59 07.9**	**-2.5**
	19nm,0.3s						
PZZ	**Stroppo**	**2.31**	**286**	P	**Pn**	**06 59 07.9**	**+1.0**
PZZ				S	**Sn**	**06 59 33.7**	**-1.5**
MBDF	**Montbardon**	**2.60**	**290**	*e*Pn	**Pn**	**06 59 13.0**	**+2.1**
MBDF				*e*Sn	**Sn**	**06 59 42.4**	**-0.1**
	3.8nm,0.3s						
MBDF	**Montbardon**	**2.60**	**290**	*e*Pn	**Pn**	**06 59 13.0**	**+2.1**
MBDF				*e*Sn	**Sn**	**06 59 42.4**	**-0.1**
	1.9nm,0.3s						
FRF	**La Foret Royal**	**2.61**	**264**	*e*Pn	**Pn**	**06 59 12.1**	**+1.1**
FRF				*e*Sn	**Sn**	**06 59 41.2**	**-1.4**
	4.4nm,0.3s						
FRF	**La Foret Royal**	**2.61**	**264**	*e*Pn	**Pn**	**06 59 12.1**	**+1.1**
FRF				*e*Sn	**Sn**	**06 59 41.2**	**-1.4**
	2.2nm,0.3s						
LMR	**La Mourre**	**2.75**	**259**	*e*Pn	**Pn**	**06 59 13.9**	**+1.0**
LMR				*e*Sn	**Sn**	**06 59 44.1**	**-2.0**
	5.2nm,0.4s						
LMR	**La Mourre**	**2.75**	**259**	*e*Pn	**Pn**	**06 59 13.9**	**+1.0**
LMR				*e*Sn	**Sn**	**06 59 44.1**	**-2.0**
	2.6nm,0.4s						
LPG	**La Plagne**	**2.94**	**304**	*e*Pn	**Pn**	**06 59 18.2**	**+2.7**
LPG				*e*Sn	**Sn**	**06 59 51.5**	**+0.8**
	2.0nm,0.4s						
LPG	**La Plagne**	**2.94**	**304**	*e*Pn	**Pn**	**06 59 18.2**	**+2.7**
LPG				*e*Sn	**Sn**	**06 59 51.5**	**+0.8**
	1.0nm,0.4s						
LPL	**La Plagne**	**2.96**	**304**	*e*Pn	**Pn**	**06 59 18.4**	**+2.6**
LPL				*e*Sn	**Sn**	**06 59 52.0**	**+0.8**
	3.5nm,0.4s						
LPL	**La Plagne**	**2.96**	**304**	*e*Pn	**Pn**	**06 59 18.4**	**+2.6**
LPL				*e*Sn	**Sn**	**06 59 52.0**	**+0.8**
	1.8nm,0.4s						
SKDS	**Skadanscina**	**3.16**	**57**	*i* Pn	**Pn**	**06 59 18.4**	**-0.2**
SKDS				*e*Sn	**Sn**	**06 59 55.9**	**-0.4**
ORIF	**Oris-en-Rattie**	**3.27**	**290**	*e*Pn	**Pn**	**06 59 21.9**	**+1.9**
ORIF				*e*Sn	**Sn**	**06 59 58.1**	**-0.7**
	2.0nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.27**	**290**	*e*Pn	**Pn**	**06 59 21.9**	**+1.9**
ORIF				*e*Sn	**Sn**	**06 59 58.1**	**-0.7**
	1.0nm,0.3s						
SMRF	**Simiane la Rot**	**3.35**	**273**	*e*Pn	**Pn**	**06 59 22.1**	**+0.9**
SMRF				*e*Sn	**Sn**	**06 59 59.5**	**-1.4**
	3.7nm,0.4s						
SMRF	**Simiane la Rot**	**3.35**	**273**	*e*Pn	**Pn**	**06 59 22.1**	**+0.9**
SMRF				*e*Sn	**Sn**	**06 59 59.5**	**-1.4**
	1.9nm,0.4s						
VISS	**Visnje**	**3.79**	**58**	*i* Pn	**Pn**	**06 59 27.9**	**+0.6**
VISS				*e*Sn	**Sn**	**07 00 11.4**	**-0.4**
VISS	**Visnje**	**3.79**	**58**	*i* Pn	**Pn**	**06 59 27.9**	**+0.6**
VISS				*e*Sn	**Sn**	**07 00 11.4**	**-0.4**
CABF	**La Chapelle**	**3.98**	**314**	*e*Pn	**Pn**	**06 59 31.1**	**+1.3**
CABF				*e*Sn	**Sn**	**07 00 16.4**	**+0.1**
	7.2nm,0.7s						
CABF	**La Chapelle**	**3.98**	**314**	*e*Pn	**Pn**	**06 59 31.1**	**+1.3**
CABF				*e*Sn	**Sn**	**07 00 16.4**	**+0.1**
	3.6nm,0.7s						
VIVF	**Saint-Julien-l**	**4.09**	**285**	*e*Pn	**Pn**	**06 59 32.6**	**+1.3**
VIVF				*e*Sn	**Sn**	**07 00 17.6**	**-1.4**
	0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**4.09**	**285**	*e*Pn	**Pn**	**06 59 32.6**	**+1.3**
VIVF				*e*Sn	**Sn**	**07 00 17.6**	**-1.4**
	0.4nm,0.3s						
HINF	**Hinteralfeld**	**4.56**	**330**	*e*Pn	**Pn**	**06 59 40.9**	**+3.1**
HINF				*e*Sn	**Sn**	**07 00 31.3**	**+0.6**
	5.7nm,0.4s						
HINF	**Hinteralfeld**	**4.56**	**330**	*e*Pn	**Pn**	**06 59 40.9**	**+3.1**
HINF				*e*Sn	**Sn**	**07 00 31.3**	**+0.6**
	2.8nm,0.4s						
LASF	**Ste Croix**	**4.59**	**274**	*e*Pn	**Pn**	**06 59 39.0**	**+0.8**
LASF				*e*Sn	**Sn**	**07 00 29.0**	**-2.5**
	0.6nm,0.3s						
LASF	**Ste Croix**	**4.59**	**274**	*e*Pn	**Pn**	**06 59 39.0**	**+0.8**
LASF				*e*Sn	**Sn**	**07 00 29.0**	**-2.5**
	0.3nm,0.3s						
HAU	**Haudompre**	**4.91**	**328**	*e*Pn	**Pn**	**06 59 44.8**	**+2.3**
HAU				*e*Sn	**Sn**	**07 00 39.2**	**0.0**
	9.9nm,0.5s						
HAU	**Haudompre**	**4.91**	**328**	*e*Pn	**Pn**	**06 59 44.8**	**+2.3**
HAU				*e*Sn	**Sn**	**07 00 39.2**	**0.0**
	4.9nm,0.5s						
CDF	**Champ du Feu**	**4.95**	**337**	*e*Pn	**Pn**	**06 59 45.5**	**+2.4**
CDF				*e*Sn	**Sn**	**07 00 40.9**	**+0.7**
	8.9nm,0.5s						
CDF	**Champ du Feu**	**4.95**	**337**	*e*Pn	**Pn**	**06 59 45.5**	**+2.4**
CDF				*e*Sn	**Sn**	**07 00 40.9**	**+0.7**
	4.4nm,0.5s						
SMF	**Signal de Mont**	**5.27**	**304**	*e*Pn	**Pn**	**06 59 49.3**	**+1.8**
SMF				*e*Sn	**Sn**	**07 00 46.7**	**-1.4**
	1.0nm,0.3s						
SMF	**Signal de Mont**	**5.27**	**304**	*e*Pn	**Pn**	**06 59 49.3**	**+1.8**
SMF				*e*Sn	**Sn**	**07 00 46.7**	**-1.4**
	0.5nm,0.3s						
LOR	**Lormes**	**5.59**	**309**	*e*Pn	**Pn**	**06 59 53.8**	**+1.9**
LOR				*e*Sn	**Sn**	**07 00 54.4**	**-1.5**
	2.7nm,0.4s						
LOR	**Lormes**	**5.59**	**309**	*e*Pn	**Pn**	**06 59 53.8**	**+1.9**
AVF	**Avril sur Loir**	**5.63**	**303**	*e*Pn	**Pn**	**06 59 54.2**	**+1.7**
AVF				*e*Sn	**Sn**	**07 00 55.3**	**-1.8**
	0.5nm,0.4s						
AVF	**Avril sur Loir**	**5.63**	**303**	*e*Pn	**Pn**	**06 59 54.2**	**+1.7**
SSF	**Saint Saulge**	**5.67**	**306**	*e*Pn	**Pn**	**06 59 54.7**	**+1.6**
SSF				*e*Sn	**Sn**	**07 00 56.6**	**-1.5**
	1.7nm,0.4s						
SSF	**Saint Saulge**	**5.67**	**306**	*e*Pn	**Pn**	**06 59 54.7**	**+1.6**
BGF	**Bois d'Agland**	**5.84**	**300**	*e*Pn	**Pn**	**06 59 57.1**	**+1.7**
BGF				*e*Sn	**Sn**	**07 01 00.3**	**-1.9**
	6.6nm,0.7s						
BGF	**Bois d'Agland**	**5.84**	**300**	*e*Pn	**Pn**	**06 59 57.1**	**+1.7**
CAF	**Calviac**	**5.93**	**283**	*e*Pn	**Pn**	**06 59 58.0**	**+1.4**
CAF				*e*Sn	**Sn**	**07 01 01.1**	**-3.3**
	0.7nm,0.3s						
CAF	**Calviac**	**5.93**	**283**	*e*Pn	**Pn**	**06 59 58.0**	**+1.4**
RJF	**Les Rejaudoux**	**6.37**	**286**	*e*Pn	**Pn**	**07 00 03.7**	**+1.1**
RJF				*e*Sn	**Sn**	**07 01 12.1**	**-3.1**
	1.3nm,0.4s						
RJF	**Les Rejaudoux**	**6.37**	**286**	*e*Pn	**Pn**	**07 00 03.7**	**+1.1**
MFF	**Saint Martin d**	**7.79**	**294**	*e*Pn	**Pn**	**07 00 23.2**	**+1.0**
MFF				*e*Sn	**Sn**	**07 01 46.4**	**-3.9**
	1.5nm,0.5s						
MFF	**Saint Martin d**	**7.79**	**294**	*e*Pn	**Pn**	**07 00 23.2**	**+1.0**

IDC 17 06:58:43.7±1.9, 12.°21N×86.°60W, h0km, mb3.2/3, mb1 3.4/5, mb1mx3.3/22, mbtmp3.1/5, ML2.0/2, Error ellipse: s-maj=69.1km s-min=25.6km az=51.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.50**	**140**	Pn

mb4.0/18, Error ellipse: s-maj=22.1km s-min=12.7km az=141.6
NEIC ***17*** *07:07:57.0±0.9, 17°.99S×178°.82W, h592km±10km, mb4.2/11, Error ellipse: s-maj=15.9km s-min=10.7km az=131.0*
ISC 17 07:07:57.7±1.0, **17°.9S**±0°.1×**178°.9W**±0°.1, **h595**km±12km, **n65**, σ0**68**/26, **mb4.0**/18, **1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.90**	**273**	*e*Pn	**P**	**07 09 15.4**	**-0.5**
OUZ	**Omahuta**	**18.48**	**200**	*e*P	**P**	**07 11 38.5**	**+0.8**
10nm,0.6s							
URZ	**Urewera**	**20.57**	**189**	P	**P**	**07 11 52.2**	**-4.3**
9.3nm,0.5s,baz=11,slow=2.4,SNR=13							
URZ	**Urewera**	**20.57**	**189**	*e*P	**P**	**07 11 53.2**	**-3.3**
8.5nm,0.5s							
CTA	**Charters Tower**	**32.98**	**261**	P	**P**	**07 13 45.2**	**+0.1**
3.0nm,0.5s,mb4.1,baz=92,slow=10,SNR=6.7							
CTA	**Charters Tower**	**32.98**	**261**	P	**P**	**07 13 45.2**	**+0.1**
CTAO	**Charters Tower**	**32.98**	**261**	*e*P	**P**	**07 13 45.5**	**+0.4**
3.6nm,0.7s,mb4.1							
COEN	**Coen**	**36.63**	**271**	*e*P	**P**	**07 14 16.4**	**+0.9**
35nm,0.6s,mb5.1							
STKA	**Stephens Creek**	**38.21**	**241**	P	**P**	**07 14 28.8**	**+0.7**
1.0nm,0.4s,mb3.7,baz=16,slow=15,SNR=4.4							
STKA	**Stephens Creek**	**38.21**	**241**	*e*P	**P**	**07 14 28.9**	**+0.8**
5.8nm,1.7s,mb3.8							
WRAB	**Tennant Creek**	**44.15**	**260**	*e*P	**P**	**07 15 14.9**	**-0.2**
3.5nm,0.7s,mb4.0							
ASAR	**Alice Springs**	**44.33**	**254**	P	**P**	**07 15 16.8**	**+0.3**
16nm,0.6s,mb4.7,baz=88,slow=8.4,SNR=259							
ASAR				S	**S**	**07 21 07.5**	**-1.0**
0.6nm,0.8s,baz=83,slow=17,SNR=5.5							
MJAR	**Matsushiro Arr**	**67.63**	**324**	P	**P**	**07 17 56.6**	**+0.1**
2.6nm,0.6s,mb3.9,baz=155,slow=6.0,SNR=6.0							
QSPA	**South Pole Qui**	**72.14**	**180**	*e*P	**P**	**07 18 21.9**	**-0.6**
13nm,1.2s,mb4.3							
PETK	**Petropavlovsk-**	**73.57**	**346**	P	**P**	**07 18 30.9**	**0.0**
3.8nm,0.6s,mb4.1,baz=111,slow=6.6,SNR=8.4							
ISA	**Isabella**	**78.17**	**46**	*e*P	**P**	**07 18 56.9**	**+0.3**
4.2nm,1.0s,mb3.8							
YBH	**Yreka Blue Hor**	**78.83**	**39**	P	**P**	**07 19 00.4**	**+0.3**
2.4nm,0.6s,mb3.7,baz=210,slow=1.5,SNR=9.7							
NVAR	**Mina Array Bea**	**79.76**	**44**	P	**P**	**07 19 05.4**	**+0.4**
1.5nm,0.7s,mb3.5,baz=224,slow=8.5,SNR=14							
MAW	**Mawson**	**83.69**	**200**	P	**P**	**07 19 23.8**	**-0.7**
1.3nm,0.6s,mb3.6,baz=45,slow=1.4,SNR=3.8							
TRF	**Thorofare Moun**	**84.12**	**12**	*e*P	**P**	**07 19 25.3**	**-1.2**
7.1nm,0.8s,mb4.2							
MCK	**McKinley**	**84.65**	**13**	*e*P	**P**	**07 19 28.2**	**-0.9**
2.5nm,0.7s,mb4.0							
TXAR	**Lajitas Array**	**86.40**	**58**	P	**P**	**07 19 39.4**	**+1.1**
1.3nm,0.8s,mb3.6,baz=223,slow=5.2,SNR=22							
RRI2	**Red Ridge**	**86.81**	**42**	*e*P	**P**	**07 19 40.4**	**+0.5**
2.5nm,0.8s,mb4.0							
PDAR	**Pinedale Array**	**87.69**	**44**	P	**P**	**07 19 44.0**	**+0.1**
1.4nm,0.6s,mb3.9,baz=216,slow=2.7,SNR=14							
YKA	**Yellowknife Ar**	**94.54**	**25**	P	**P**	**07 20 14.4**	**-0.6**
0.3nm,0.5s,mb3.7,baz=241,slow=4.5,SNR=7.0							
BVAR	**Borovoye Array**	**116.55**	**321**	PKP	PKPdf	07 25 33.6	-1.0
0.7nm,0.3s,baz=120,slow=1.8,SNR=4.0							
BVAR	**Borovoye Array**	**116.55**	**321**	PKP	PKPdf	07 25 33.6	-1.0
ARCES	**ARCESS Array B**	**126.24**	**350**	PKP	PKPdf	07 25 52.1	-0.7
2.0nm,0.8s,baz=90,slow=2.5,SNR=6.6							
FINES	**FINESS Array B**	**133.06**	**344**	PKP	PKPdf	07 26 04.0	-2.0
0.5nm,0.5s,baz=28,slow=4.5,SNR=5.4							
BUR08	**Bucovina Ar. S**	**144.38**	**332**	*e*PKPdf	PKPdf	07 26 28.5	+1.6
BR131	**Keskin Array S**	**144.45**	**314**	*e*PKPdf	PKPdf	07 26 27.5	+0.2
BRTR	**Keskin Array B**	**144.45**	**314**	PKP	PKPdf	07 26 27.9	+0.6
1.4nm,0.6s,baz=116,slow=2.9,SNR=8.1							
CLL	**Collm**	**145.37**	**347**	*e*PKPbc	PKPbc	07 26 29.9	+0.1
CLL	**Collm**	**145.37**	**347**	‖ *i*PKPbc	PKPbc	07 26 29.9	+0.1
comp=Z,12nm,0.7s							
BRG	**Berggiesshubel**	**145.56**	**346**	*e*P	PKPbc	07 26 30.8	+0.5
comp=Z,4.7nm,0.6s							
NEUB	**Neuenburg**	**145.71**	**348**	*e*PKPbc	PKPbc	07 26 31.1	+0.3
MMAI	**Mount Meron Ar**	**145.75**	**303**	PKPbc	PKPbc	07 26 32.2	+0.7
comp=Z,2.8nm,0.5s,baz=70,slow=5.4,SNR=6.7							
PLN	**Plauen**	**146.32**	**347**	*e*PKPbc	PKPbc	07 26 32.8	+0.3
TANN	**Tannenbergstha**	**146.32**	**347**	*e*PKPbc	PKPbc	07 26 32.9	+0.4
WERD	**Werda**	**146.32**	**347**	*e*PKPbc	PKPbc	07 26 32.7	+0.2
GUNZ	**Gunzen**	**146.40**	**347**	*e*PKPbc	PKPbc	07 26 33.0	+0.3
WERN	**Wernitzgruen**	**146.46**	**347**	*e*PKPbc	PKPbc	07 26 33.3	+0.4
NKC	**Novy Kostel**	**146.50**	**347**	*e*PKPbc	PKPbc	07 26 33.0	0.0
ROTZ	**Rotzenmuhle**	**146.99**	**347**	*e*PKPbc	PKPbc	07 26 34.9	+0.6
KHC	**Kasperske Hory**	**147.26**	**345**	*e*PKP	PKPbc	07 26 35.0	-0.1
GRF	**Grafenberg Arr**	**147.27**	**348**	*e*PKPbc	PKPbc	07 26 35.3	+0.2
GRF	**Grafenberg Arr**	**147.27**	**348**	*e*PKP	PKPbc	07 26 35.3	+0.2
GEC2	**GERESS Array S**	**147.50**	**344**	*e*PKPbc	PKPbc	07 26 35.8	+0.1
GERES	**GERESS Array B**	**147.50**	**344**	PKPbc	PKPbc	07 26 36.2	+0.5
comp=Z,3.5nm,0.6s,baz=27,slow=3.3,SNR=20							
GIVF	**Givet**	**147.75**	**355**	*e*PKP1	PKPbc	07 26 36.5	+0.2
comp=Z,10.0nm,0.5s							
BAIF	**Baives**	**147.84**	**356**	*e*PKP1	PKPbc	07 26 36.8	+0.3
comp=Z,7.7nm,0.6s							
CDF	**Champ du Feu**	**149.17**	**352**	*e*PKP1	PKPbc	07 26 40.1	+0.3
comp=Z,2.9nm,0.3s							
FLN	**La Foliniere**	**149.21**	**2**	*e*PKP1	PKPbc	07 26 39.7	-0.2
comp=Z,11nm,0.6s							
MEZF	**Maizieres J'vi**	**149.32**	**355**	*e*PKP1	PKPbc	07 26 40.2	0.0
comp=Z,6.0nm,0.4s							
LDF	**La Drutiere**	**149.39**	**2**	*e*PKP1	PKPbc	07 26 40.0	-0.3
comp=Z,7.9nm,0.5s							
GRR	**Gorron**	**149.57**	**3**	*e*PKP1	PKPbc	07 26 40.7	-0.1
comp=Z,7.8nm,0.5s							
SGMF	**Saint Gilles**	**149.59**	**5**	*e*PKP1	PKPbc	07 26 40.4	-0.5
comp=Z,7.3nm,0.7s							
HAU	**Haudompre**	**149.68**	**353**	*e*PKP1	PKPbc	07 26 41.2	+0.1
LOR	**Lormes**	**150.64**	**356**	*e*PKP1	PKPbc	07 26 43.4	+0.1
comp=Z,4.8nm,0.4s							
SSF	**Saint Saulge**	**150.87**	**357**	*e*PKP1	PKPbc	07 26 44.0	+0.2
comp=Z,3.3nm,0.5s							
CABF	**La Chapelle**	**151.09**	**353**	*e*PKP1	PKPbc	07 26 45.0	+0.6
AVF	**Avril sur Loir**	**151.15**	**357**	*e*PKP1	PKPbc	07 26 44.1	-0.4
comp=Z,1.1nm,0.5s							
MFF	**Saint Martin d**	**151.38**	**2**	*e*PKP1	PKPbc	07 26 44.8	-0.2
comp=Z,3.6nm,0.5s							
BGF	**Bois d'Agland**	**151.40**	**357**	*e*PKP1	PKPbc	07 26 45.1	0.0
TCF	**Toulx Ste Croi**	**151.69**	**358**	*e*PKP1	PKPbc	07 26 45.6	-0.1

ISCJB ***17*** *07:38:40.7±0.9, 31°.93N±0°.03×104°.62E±0°.04, h8km±5km, mb4.3/46, Error ellipse: s-maj=5.5km s-min=4.3km az=172.6*
IDC ***17*** *07:38:41.3±0.6, 31°.93N×104°.45E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.2/32, mbtmp4.2/24, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/31, Error ellipse: s-maj=19.9km s-min=14.5km az=52.0*
NEIC ***17*** *07:38:42.9±0.3, 31°.92N×104°.49E, h10km, mb4.3/16, Error ellipse: s-maj=7.2km s-min=5.9km az=90.0*
BJI ***17*** *07:38:43.9, 32°.00N×104°.59E, h12km, mB4.7/8, mb4.4/11, ML4.2/16, Ms4.1/10, Ms7 3.8/8*
MOS ***17*** *07:38:44.5±1.0, 31°.95N×104°.49E, h33km, mb4.4/28, Error ellipse: s-maj=12.3km s-min=6.5km az=102.5*
ISC 17 07:38:42.4±0.7, **31°.98N**±0°.02×**104°.58E**±0°.03, **h6**km±4km, **n108**, σ0**88**/119, **mb4.3**/46, **10C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.28**	**213**	Pg	**Pg**	**07 39 07.3**	**+0.4**
CD2				Sg	**Sg**	**07 39 24.3**	**+0.9**
CD2				smax			
comp=N,16μm,0.7s							
LZH	**Lanzhou**	**4.14**	**352**	Pn	**Pn**	**07 39 49.3**	**+3.1**
LZH				Sn	**Sn**	**07 40 37.8**	**+2.9**
LZH				Sg	**Sg**	**07 40 54.3**	**-1.1**
LZH				smax			
comp=N,610nm,0.7s							
LZH				smax			
comp=E,730nm,0.8s							
LZH				LR	LR		
comp=N,1μm,7.5s							
LZH				LR	LR		
comp=Z,1μm,7.6s							
XAN	**Xi'an**	**4.19**	**59**	Pn	**Pn**	**07 39 51.8**	**+5.0**
XAN				Pg	**Pg**	**07 40 00.4**	**-2.2**
XAN				Sn	**Sn**	**07 40 48.0**	**+12**
XAN				Sg	**Sg**	**07 40 56.8**	**-0.1**
XAN				smax			
comp=N,610nm,1.1s							
XAN				smax			
comp=E,270nm,0.9s							
ENH	**Enshi**	**4.54**	**111**	*e*Pn	**Pn**	**07 39 57.3**	**+5.6**
ENH				*e*Pg	**Pg**	**07 40 09.1**	**-0.3**
ENH				*e*Sg	**Sg**	**07 41 08.4**	**+0.2**
GYA	**Guiyang**	**5.80**	**161**	Pn	**Pn**	**07 40 10.6**	**+1.6**
GYA				Sn	**Sn**	**07 41 16.8**	**+1.0**
GYA				smax			
comp=N,250nm,0.9s							
GYA				smax			
comp=E,160nm,0.8s							
KMI	**Kunming**	**7.02**	**194**	Pn	**Pn**	**07 40 34.0**	**+8.2**
KMI				Sn	**Sn**	**07 41 45.3**	**-0.7**
KMI				smax			
comp=N,32nm,1.0s							
KMI				smax			
comp=E,43nm,0.7s							
KMI				LR	LR		
comp=N,330nm,6.6s							
KMI				LR	LR		
comp=E,350nm,6.2s							
KMI				LR	LR		
comp=Z,320nm,7.3s							
WHN	**Wuhan**	**8.49**	**97**	P	Px	07 40 58.3	
WHN				S	**Sn**	**07 42 20.5**	**-1.5**
WHN				LR	LR		
comp=N,810nm,4.4s							
WHN				LR	LR		
comp=E,950nm,3.2s							
WHN				LR	LR		
comp=Z,1μm,4.5s							
HHC	**Hu-ho-hao-te**	**10.48**	**30**	*e*P	**Pn**	**07 41 18.1**	**+4.9**
HHC				pP		07 41 21.5	
HHC				PP		07 41 26.8	
HHC				S	**Sn**	**07 43 16.9**	**+5.9**
HHC				sS		07 43 23.5	
HHC				SS		07 43 33.6	
HHC				pmax	pmax		
comp=Z,17nm,1.1s							
HHC				pmax	pmax		
comp=Z,100nm,4.8s							
HHC				LR	LR		
comp=N,290nm,5.3s							
HHC				LR	LR		
comp=E,440nm,4.7s							
HHC				LR	LR		
comp=Z,270nm,6.9s							
QIZ	**Qiongzhong**	**13.74**	**159**	P	**Pn**	**07 41 56.5**	**-1.4**
QIZ				S	**Sn**	**07 44 31.1**	**+0.2**
QIZ				pmax	pmax		
comp=Z,11nm,2.2s							
QIZ				pmax	pmax		
comp=Z,64nm,3.6s							
QIZ				LR	LR		
comp=N,250nm,12.4s							
QIZ				LR	LR		
comp=Z,240nm,12.7s							
QZH	**Quanzhou**	**14.17**	**116**	P	**Pn**	**07 42 07.6**	**+3.9**
QZH				S	**Sn**	**07 44 47.3**	**+5.9**
QZH				LR	LR		
comp=N,600nm,5.9s							
QZH				LR	LR		
comp=E,830nm,12.5s							
QZH				LR	LR		
comp=Z,780nm,9.8s							
CMAR	**Chiang Mai Arr**	**14.39**	**202**	Pn	**Pn**	**07 42 06.4**	**-0.4**
comp=Z,0.5nm,0.3s,baz=12,slow=11,SNR=2.5							
CMAR	**Chiang Mai Arr**	**14.39**	**202**	P	**Pn**	**07 42 06.4**	**-0.4**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**15.89**	**4**	Pn	**Pn**	**07 42 28.8**	**+2.2**
comp=Z,0.4nm,0.3s,baz=184,slow=19,SNR=6.8							
SONM				LR	LR	07 49 13.6	
comp=Z,108nm,18.2s,baz=260,slow=40							
ULN	**Ulaanbaatar**	**15.98**	**6**	*e*P	**Pn**	**07 42 27.7**	**0.0**
ULN				pmax	pmax		
comp=Z,5.0nm,0.9s							
ULN	**Ulaanbaatar**	**15.98**	**6**	*e*Pn	**Pn**	**07 42 27.7**	**0.0**
comp=Z,4.6nm,0.9s							
ULN				*e*P		07 42 33.5	
ZAK	**Zakamensk**	**18.41**	**357**	*e*P	**Pn**	**07 42 58.8**	**+0.7**
ZAK				pmax	pmax		
comp=Z,2.0nm,1.0s							
TLY	**Talaya**	**19.70**	**358**	*e*P	**Pn**	**07 43 15.5**	**+1.8**
TLY				pmax	pmax		
comp=Z,1.0nm,0.6s							
TLY	**Talaya**	**19.70**	**358**	*e*P	**Pn**	**07 43 15.5**	**+1.9**
comp=Z,1.2nm,0.6s							
KSRS	**Korea Array**	**19.93**	**68**	P	**Pn**	**07 43 17.4**	**+0.8**
comp=Z,1.3nm,0.7s,baz=259,slow=10,SNR=4.3							
KSRS				LR	LR	07 50 57.3	
comp=Z,19nm,18.8s,baz=175,slow=37							
KSRS	**Korea Array**	**19.93**	**68**	P	**Pn**	**07 43 17.4**	**+0.8**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.7s							
KSRS				MLR	MLR		
comp=Z,19nm,18.8s							
HIA	**Hailar**	**20.68**	**29**	*e*P	**P**	**07 43 24.4**	**+1.4**
HIA				pmax	pmax		
comp=Z,10.0nm,0.6s							
HIA	**Hailar**	**20.68**	**29**	*e*P	**P**	**07 43 24.4**	**+1.4**
comp=Z,9.5nm,0.6s							
MK31	**Makanchi Array**	**22.60**	**317**	*e*P	**P**	**07 43 43.3**	**-0.3**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**07 43 44.0**	**+0.4**
comp=Z,4.0nm,0.6s,mb4.0,baz=117,slow=12,SNR=25							
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**07 43 44.0**	**+0.4**
MKAR				pmax	pmax		
comp=Z,4.0nm,0.6s							
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**07 43 44.0**	**+0.4**
UCH	**Uchtor**	**25.95**	**302**	*e*P	**P**	**07 44 16.0**	**+0.5**
comp=Z,6.3nm,1.1s,mb4.1							
AAK	**Ala-Archa**	**26.06**	**303**	P	**P**	**07 44 16.8**	**+0.2**
comp=Z,1.3nm,0.6s,mb3.7,baz=170,slow=6.1,SNR=3.2							
AAK				LR	LR	07 55 35.7	
comp=Z,52nm,18.2s,baz=223,slow=39							
AAK	**Ala-Archa**	**26.06**	**303**	*de*P	**P**	**07 44 18.4**	**+1.9**
AAK				pmax	pmax		
comp=Z,1.0nm,0.9s,mb3.4							
AAK	**Ala-Archa**	**26.06**	**303**	*e*P	**P**	**07 44 17.4**	**+0.9**
comp=Z,2.6nm,0.8s,mb3.8							
AAK				LR	LR	07 55 35.7	
ZAA0	**Zalesovo Array**	**26.12**	**333**	*e*P	**P**	**07 44 16.6**	**-0.4**
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**07 44 17.0**	**+0.1**
comp=Z,8.3nm,0.6s,mb4.5,baz=128,slow=10.0,SNR=34							
ZALV	**Zalesovo Beam**	**26.12**	**333**	P	**P**	**07 44 17.0**	**+0.1**
ZALV				pmax	pmax		
comp=Z,8.0nm,0.6s,mb4.4							
BOD	**Bodaibo**	**26.63**	**11**	*e*P	**P**	**07 44 22.9**	**+1.4**
BOD				pmax	pmax		
comp=Z,2.0nm,0.9s,mb3.6							
KURK	**Kurchatov**	**26.80**	**322**	P	**P**	**07 44 23.1**	**-0.1**
comp=Z,3.1nm,0.6s,mb4.0,baz=270,slow=14,SNR=18							
KURK	**Kurchatov**	**26.80**	**322**	*ce*P	**P**	**07 44 23.5**	**+0.4**
KURK				pmax	pmax		
comp=Z,6.0nm,1.2s,mb4.0							
KURK	**Kurchatov**	**26.80**	**322**	*e*P	**P**	**07 44 23.2**	**0.0**
comp=Z,2.9nm,0.5s,mb4.1							
BVAR	**Borovoye Array**	**32.36**	**321**	P	**P**	**07 45 12.7**	**+0.2**
comp=Z,1.2nm,0.6s,mb3.9,baz=108,slow=9.5,SNR=7.1							
BVAR				PcP	PcP	07 47 59.3	-0.8
comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=4.5							
BVAR	**Borovoye Array**	**32.36**	**321**	P	**P**	**07 45 12.7**	**+0.2**
BVAR						07 47 59.3	
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BVAR				pmax	pmax		
comp=Z,1.0nm,0.6s							
BRVK	**Borovoye**	**32.44**	**321**	*ce*P	**P**	**07 45 13.6**	**+0.5**
BRVK				pmax	pmax		
comp=Z,4.0nm,1.7s,mb4.0							
ABKAR	**Akbulak array**	**37.40**	**311**	*e*P	**P**	**07 45 55.9**	**-0.2**
comp=Z,2.8nm,0.9s,mb4.1							
AKTK	**Aktyubinsk**	**38.84**	**312**	P	**P**	**07 46 07.1**	**-1.0**
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**07 46 07.1**	**-1.0**
comp=Z,1.4nm,0.5s,mb4.0,baz=101,slow=19,SNR=6.8							
AKTO	**Aktyubinsk**	**38.84**	**312**	P	**P**	**07 46 07.1**	**-1.0**
AKTO				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.8							
ARU	**Arti**	**39.99**	**322**	*c i*P	**P**	**07 46 17.8**	**+0.1**
ARU				S	**S**	**07 52 23.4**	**0.0**
ARU				SS	SS	07 55 18.1	-1.8
ARU				pmax	pmax		
comp=Z,17nm,1.0s,mb4.7							
ARU	**Arti**	**39.99**	**322**	*e*P	**P**	**07 46 18.0**	**+0.3**
comp=Z,13nm,0.8s,mb4.7							
TIXI	**Tiksi**	**41.82**	**11**	*e*P	**P**	**07 46 31.6**	**-0.9**
TIXI				pmax	pmax		
comp=Z,2.0nm,0.7s,mb3.9							
PETK	**Petropavlovsk-**	**43.28**	**45**	P	**P**	**07 46 45.5**	**+0.8**
comp=Z,3.7nm,0.7s,mb4.2,baz=214,slow=7.2,SNR=5.4							
PETK	**Petropavlovsk-**	**43.28**	**45**	P	**P**	**07 46 45.5**	**+0.8**
PETK				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.3							
KIV	**Kislovodsk**	**49.18**	**303**	*e*P	**P**	**07 47 32.2**	**+1.0**
KIV				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.7							
BILL	**Bilibino**	**50.21**	**26**	*e*P	**P**	**07 47 38.8**	**+0.1**
BILL				pmax	pmax		
comp=Z,2.0nm,1.2s,mb4.0							
BILL	**Bilibino**	**50.21**	**26**	*e*P	**P**	**07 47 38.9**	**+0.1**
comp=Z,2.9nm,0.7s,mb4.4							
OBN	**Obninsk**	**52.10**	**318**	*e*P	**P**	**07 47 53.1**	**0.0**
OBN				pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.3							
JOF	**Joensuu**	**54.51**	**327**	*e*P	**P**	**07 48 10.1**	**-0.6**
JOF				pmax	pmax		
comp=Z,1.0nm,0.3s,mb4.3							
JOF	**Joensuu**	**54.51**	**327**	*e*p	**P**	**07 48 10.1**	**-0.6**
comp=Z,0.9nm,0.3s,mb4.3							
KEV	**Kevo**	**56.10**	**336**	*e*P	**P**	**07 48 20.9**	**-1.1**
KEV				pmax	pmax		
comp=Z,2.0nm,0.4s,mb4.5							
KEV	**Kevo**	**56.10**	**336**	*e*p	**P**	**07 48 20.9**	**-1.1**
comp=Z,2.0nm,0.4s,mb4.5							
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**07 48 25.4**	**-0.4**
comp=Z,2.2nm,0.5s,mb4.5,baz=76,slow=7.9,SNR=24							
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**07 48 25.4**	**-0.4**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.5s							
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**07 48 25.4**	**-0.4**
BR131	**Keskin Array S**	**56.66**	**299**	*e*P	**P**	**07 48 25.9**	**-0.7**
comp=Z,1.4nm,0.8s,mb4.0							
BRTR	**Keskin Array B**	**56.66**	**299**	P	**P**	**07 48 26.0**	**-0.6**
comp=Z,1.6nm,0.8s,mb4.1,baz=89,slow=7.8,SNR=10.0							
BRTR	**Keskin Array B**	**56.66**	**299**	P	**P**	**07 48 26.0**	**-0.6**
BRTR				pmax	pmax		
comp=Z,2.0nm,0.8s							
KAF	**Kangasniemi**	**56.88**	**327**	*e*P	**P**	**07 48 26.5**	**-1.2**
KAF	**Kangasniemi**	**56.88**	**327**	*e*p	**P**	**07 48 26.5**	**-1.2**
comp=Z,0.4nm,0.3s,mb3.9							
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 48 28.5**	**-0.6**
comp=Z,2.7nm,0.5s,mb4.5,baz=82,slow=6.8,SNR=22							
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**07 48 28.5**	**-0.6**
FINES				pmax	pmax		
comp=Z,3.0nm,0.5s							
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**07 48 28.1**	**-1.2**
comp=Z,3.7nm,0.6s,mb4.6,baz=70,slow=6.6,SNR=9.1							
AKASG	**Malin Array Be**	**57.08**	**313**	*ce*P	**P**	**07 48 28.5**	**-0.8**
AKASG				pmax	pmax		
comp=Z,4.0nm,0.6s							
VSU	**Vasula**	**57.15**	**322**	*ce*P	**P**	**07 48 28.9**	**-0.8**
VSU				pmax	pmax		
comp=Z,18nm,1.0s,mb5.1							
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**07 48 42.9**	**0.0**
WRAB				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.8							
WRAB	**Tennant Creek**	**58.98**	**147**	*e*P	**P**	**07 48 42.9**	**0.0**
comp=Z,7.5nm,0.7s,mb4.8							
ATD	**Arta Tunnel**	**60.06**	**265**	P	**P**	**07 48 50.2**	**-0.4**
comp=Z,4.0nm,0.6s,mb4.7,baz=253,slow=23,SNR=4.0							
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**07 49 04.3**	**+0.6**
comp=Z,1.4nm,0.7s,mb4.2,baz=335,slow=6.8,SNR=13							
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**07 49 04.3**	**+0.6**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
NB2	**NORSAR Subarra**	**64.14**	**327**	P	**P**	**07 49 16.0**	**-1.3**
comp=Z,1.5nm,0.5s,mb4.3,baz=73,slow=6.9							
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**07 49 16.4**	**-1.0**
comp=Z,2.3nm,0.7s,mb4.3,baz=73,slow=6.8,SNR=6.7							
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**07 49 16.4**	**-0.9**
NOA				pmax	pmax		
comp=Z,2.0nm,0.7s							
MORC	**Moravsky Berou**	**64.55**	**314**	*e*P	**P**	**07 49 20.3**	**+0.1**
MORC				pmax	pmax		
comp=Z,2.0nm,0.9s,mb4.2							
MORC	**Moravsky Berou**	**64.55**	**314**	*e*P	**P**	**07 49 20.3**	**+0.1**
comp=Z,2.5nm,0.9s,mb4.2							
BRG	**Berggiesshubel**	**66.31**	**316**	*e*P	**P**	**07 49 27.0**	**-4.5**
comp=Z,1.7nm,0.5s,mb4.4							
BRG	**Berggiesshubel**	**66.31**	**316**	*e*P	**P**	**07 49 27.0**	**-4.6**
BRG				pmax	pmax		
comp=Z,1.0nm,0.5s,mb4.1							
CLL	**Collm**	**66.69**	**317**	*e*P	**P**	**07 49 33.0**	**-1.0**
CLL				*e*		07 50 15.0	
CLL	**Collm**	**66.69**	**317**	*e*P	**P**	**07 49 33.0**	**-1.0**
CLL				*e*		07 50 15.0	
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**07 49 37.7**	**+0.2**
comp=Z,1.6nm,0.6s,mb4.2,baz=72,slow=4.3,SNR=12							
GERES	**GERESS Array B**	**67.22**	**314

SCHQ	**Schefferville**	**6.87 220**	PN	**Pn**	**07 54 04.3**	**+3.1**
SCHQ			mb		07 54 06.7	
comp=Z,2.6nm,0.2s						
SCHQ			SN	**Sn**	**07 55 18.6**	**-0.7**
SCHQ			Trac		07 55 22.6	
comp=Z,10nm,0.3s						
SFJD	**Kangerlussuaq**	**7.71 26**	*e*Pn	**Pn**	**07 54 11.6**	**-1.1**
SFJD			*e*Sn	**Sn**	**07 55 33.6**	**-6.3**
SFJD	**Kangerlussuaq**	**7.71 26**	*i* P	**Pn**	**07 54 11.2**	**-1.5**
SFJD			*i* S	**Sn**	**07 55 33.4**	**-6.4**
SFJD			*i* S	**Sn**	**07 55 36.7**	**-3.1**
SFJD	**Kangerlussuaq**	**7.71 26**	PN	**Pn**	**07 54 11.1**	**-1.6**
SFJD			mb		07 54 12.4	
comp=Z,2.2nm,0.3s						
SFJD			SN	**Sn**	**07 55 31.8**	**-8.0**
SFJD			Trac		07 55 35.0	
comp=Z,10nm,0.7s						
IVKQ	**Ivujivik**	**9.24 291**	PN	**Pn**	**07 54 35.2**	**+1.6**
IVKQ			SN	**Sn**	**07 56 15.0**	**-2.6**
IVKQ			Trac		07 56 17.0	
comp=Z,7.2nm,0.8s						
AKVQ	**Akulivik**	**9.38 281**	PN	**Pn**	**07 54 38.6**	**+3.0**
AKVQ			mb		07 54 40.8	
comp=Z,8.5nm,0.3s						
AKVQ			SN	**Sn**	**07 56 20.7**	**-0.3**
AKVQ			Trac		07 56 24.5	
comp=Z,14nm,0.3s						
INUQ	**Inukjuak**	**9.84 267**	PN	**Pn**	**07 54 43.5**	**+1.5**
INUQ			SN	**Sn**	**07 56 27.4**	**-4.9**
INUQ			Trac		07 56 32.7	
comp=Z,9.2nm,0.3s						
NATG	**Natashquan Que**	**10.26 193**	Pn	**Pn**	**07 54 46.9**	**-0.8**
NATG			Sn	**Sn**	**07 56 35.9**	**-6.7**
NATG	**Natashquan Que**	**10.26 193**	PN	**Pn**	**07 54 46.3**	**-1.4**
NATG			mb		07 54 47.1	
comp=Z,4.9nm,0.4s						
NATG			SN	**Sn**	**07 56 33.5**	**-9.1**
NATG			Trac		07 56 37.6	
comp=Z,25nm,0.3s						
LG4Q	**La Grande 4**	**10.53 237**	Pn	**Pn**	**07 54 52.8**	**+1.4**
LG4Q	**La Grande 4**	**10.53 237**	PN	**Pn**	**07 54 52.5**	**+1.1**
LG4Q			mb		07 54 56.1	
comp=Z,0.9nm,0.2s						
LG4Q			SN	**Sn**	**07 56 42.3**	**-7.0**
LG4Q			Trac		07 56 49.8	
comp=Z,12nm,0.3s						
SMQ	**Clarke City**	**10.98 206**	PN	**Pn**	**07 54 57.0**	**-0.6**
SMQ			mb		07 55 00.1	
comp=Z,9.9nm,0.7s						
SMQ			SN	**Sn**	**07 56 52.8**	**-7.4**
SMQ			Trac		07 56 55.9	
comp=Z,3.1nm,0.2s						
MNQ	**Manicouagan**	**11.20 213**	PN	**Pn**	**07 54 59.3**	**-1.3**
MNQ			SN	**Sn**	**07 56 57.9**	**-7.8**
MNQ			Trac		07 57 03.4	
comp=Z,1.6nm,0.1s						
SRLN	**Sarcpa Lake, N**	**13.21 319**	Pn	**Pn**	**07 55 28.6**	**+0.7**
SRLN			Sn	**Sn**	**07 57 47.1**	**-7.5**
SRLN	**Sarcpa Lake, N**	**13.21 319**	PN	**Pn**	**07 55 28.2**	**+0.3**
SRLN			mb		07 55 35.5	
comp=Z,22nm,0.8s						
SRLN			SN	**Sn**	**07 57 45.7**	**-8.9**
SRLN			Trac		07 57 49.7	
comp=Z,33nm,1.3s						
LAIN	**Lailor River,**	**13.54 321**	PN	**Pn**	**07 55 32.5**	**+0.1**
LAIN			SN	**Sn**	**07 57 54.3**	**-8.3**
QILN	**Qililugaq Expl**	**13.62 309**	PN	**Pn**	**07 55 33.5**	**-0.1**
QILN			SN	**Sn**	**07 57 56.9**	**-7.8**
WAGN	**Wager Bay**	**14.68 305**	PN	**Pn**	**07 55 47.8**	**-0.2**
WAGN			SN	**Sn**	**07 58 19.9**	**-11**
SILO	**Sutton Inlier**	**14.99 258**	PN	**Pn**	**07 55 52.8**	**+0.5**
SILO			SN	**Sn**	**07 58 29.6**	**-8.6**
NUNN	**Nunuq Camp, NU**	**15.29 302**	PN	**Pn**	**07 55 55.5**	**-0.7**
NUNN			mb		07 55 58.2	
comp=Z,1.1nm,0.3s						
NUNN			SN	**Sn**	**07 58 40.6**	**-4.7**
SEDN	**First Sedna Si**	**15.34 295**	PN	**Pn**	**07 55 57.8**	**+1.0**
SEDN			mb		07 55 58.7	
comp=Z,0.5nm,0.2s						
SEDN			SN	**Sn**	**07 58 40.2**	**-6.4**
JOSN	**Second Sedna S**	**15.50 295**	PN	**Pn**	**07 56 01.6**	**+2.7**
JOSN			SN	**Sn**	**07 58 42.5**	**-7.9**
BULN	**Bullion Camp,**	**16.23 306**	PN	**Pn**	**07 56 08.6**	**+0.2**
STLN	**Stellar Camp,**	**16.30 310**	PN	**Pn**	**07 56 08.3**	**-0.9**
STLN			SN	**Sn**	**07 59 00.4**	**-9.4**
ARVN	**Arviat, NU**	**16.98 288**	PN	**Pn**	**07 56 16.9**	**-1.0**
FCC	**Fort Churchill**	**17.65 280**	Pn	**Pn**	**07 56 27.2**	**+1.0**
FCC			Sn	**Sn**	**07 59 32.5**	**-10**
FCC	**Fort Churchill**	**17.65 280**	PN	**Pn**	**07 56 26.4**	**+0.2**
FCC			mb		07 56 27.9	
comp=Z,2.5nm,0.8s						
FCC			SN	**Sn**	**07 59 31.7**	**-11**
RES	**Resolute Bay**	**19.36 332**	Pn	**Pn**	**07 56 48.3**	**+1.4**

*ISCJB **17** 07:52:39.8±0.6, 26°.45S±0°.02×27°.53E±0°.02, h6km±4km, mb3.9/8, Error ellipse: s-maj=4.1km s-min=3.4km az=44.1*
*PRE **17** 07:52:40.4±0.6, 26°.46S×27°.56E, h2km, ML3.6*
*NEIC **17** 07:52:41.6±0.6, 26°.41S×27°.56E, h5km, mb3.9/1, Error ellipse: s-maj=13.0km s-min=8.1km az=110.0*
*IDC **17** 07:52:41.1±0.9, 26°.37S×27°.57E, h0km, mb4.0/8, mb1 4.1/13, mb1mx3.9/28, mbtmp4.1/13, ML4.1/4, Error ellipse: s-maj=17.2km s-min=15.0km az=64.0*
ISC 17 07:52:40.9±0.5, 26°.47S±0°.02×27°.54E±0°.02, h3km±3km, n37, σ1§03/67, mb3.9/8, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.48**	**199**	*e*P	**Pg**	**07 52 49.7**	**-0.5**
PRYS				*e*S	**Sg**	**07 52 57.1**	**+0.6**
PRYS				AML	AML	07 53 03.7	
comp=Z,1μm,0.7s							
ERPM	**east rand prop**	**0.65**	**79**	*e*P	**Pg**	**07 52 53.2**	**0.0**
ERPM				*e*S	**Sg**	**07 53 01.5**	**-0.1**
ERPM				AML	AML	07 53 06.8	
comp=Z,414nm,0.6s							
KSR	**Koster**	**0.84**	**317**	*e*P	**Pg**	**07 52 56.6**	**-0.3**
KSR				*e*S	**Sg**	**07 53 08.6**	**+0.8**
KSR				AML	AML	07 53 16.5	
comp=Z,481nm,0.1s							
TAUL	**Tau Lekoa**	**0.98**	**237**	*e*P	**Pg**	**07 52 59.7**	**0.0**
TAUL				*e*S	**Sg**	**07 53 13.7**	**+1.2**
TAUL				AML	AML	07 53 18.8	
comp=Z,826nm,0.4s							
SLR	**Silverton**	**0.99**	**43**	*e*P	**Pg**	**07 52 59.0**	**-0.8**
SLR				*e*S	**Sg**	**07 53 12.7**	**0.0**
SLR				AML	AML	07 53 17.2	
comp=Z,443nm,0.4s							
SEK	**Senekal**	**1.85**	**178**	*e*P	**Pn**	**07 53 14.1**	**+0.6**
SEK				*e*S	**Sn**	**07 53 38.5**	**+1.0**
SEK				AML	AML	07 53 41.6	
comp=Z,629nm,0.4s							
SWZ	**Schweizer**	**2.10**	**250**	*e*P	**Pn**	**07 53 17.7**	**+0.8**
SWZ				*e*S	**Sn**	**07 53 44.2**	**+0.7**
SWZ				AML	AML	07 53 48.4	
comp=Z,406nm,0.3s							
LBTB	**Lobatse**	**2.27**	**309**	Pn	**Pn**	**07 53 21.0**	**+1.7**
comp=Z,104nm,0.3s,baz=139,slow=15,SNR=764							
LBTB				Pg	**Pg**	**07 53 22.2**	**-2.1**
comp=Z,104nm,0.3s,baz=140,slow=16,SNR=750							
LBTB				Lg		07 53 51.4	
comp=Z,116nm,0.3s,baz=46,slow=22,SNR=47							
LBTB				Rg		07 54 00.6	
comp=Z,108nm,0.3s,baz=37,slow=17,SNR=3.7							
LBTB	**Lobatse**	**2.27**	**309**	*e*Pn	**Pn**	**07 53 20.6**	**+1.4**
LBTB				*e*Sg	**Sg**	**07 53 51.8**	**-1.9**
LBTB	**Lobatse**	**2.27**	**309**	*e*P	**Pn**	**07 53 19.6**	**+0.3**
LBTB				*e*S	**Sn**	**07 53 48.6**	**+0.8**
LBTB				AML	AML	07 53 52.5	
comp=Z,530nm,0.3s							
BOSA	**Boshof**	**2.95**	**223**	Pn	**Pn**	**07 53 29.5**	**+0.9**
comp=Z,12nm,0.3s,baz=48,slow=13,SNR=194							
BOSA				Pg	**Pg**	**07 53 38.0**	**+0.6**
comp=Z,19nm,0.3s,baz=46,slow=17,SNR=42							
BOSA				Sn	**Sn**	**07 54 04.2**	**-0.3**
comp=Z,8.5nm,0.3s,baz=50,slow=15,SNR=9.4							
BOSA				Lg		07 54 12.6	
comp=Z,29nm,0.3s,baz=311,slow=17,SNR=9.1							
BOSA	**Boshof**	**2.95**	**223**	*e*Pn	**Pn**	**07 53 29.0**	**+0.4**
BOSA				*e*Pg	**Pg**	**07 53 37.2**	**-0.1**
BOSA				*e*Sn	**Sn**	**07 54 04.1**	**-0.4**
BOSA				*e*Sg	**Sg**	**07 54 14.7**	**-0.9**
BOSA	**Boshof**	**2.95**	**223**	*e*P	**Pn**	**07 53 28.9**	**+0.3**
BOSA				*e*S	**Sn**	**07 54 04.8**	**+0.3**
BOSA				AML	AML	07 54 20.7	
comp=Z,124nm,0.4s							
POGA	**Pongola**	**3.75**	**105**	*e*P	**Pn**	**07 53 40.7**	**+1.0**
POGA				*e*S	**Sn**	**07 54 24.8**	**+0.4**
POGA				AML	AML	07 54 41.3	
comp=Z,154nm,0.5s							
KSD	**Kokstad**	**4.38**	**158**	*e*P	**Pn**	**07 53 48.4**	**0.0**
KSD				*e*S	**Sn**	**07 54 38.5**	**-1.5**
KSD				AML	AML	07 55 03.4	
comp=Z,87nm,0.8s							
HVD	**Gariep Dam**	**4.50**	**203**	*e*P	**Pn**	**07 53 50.6**	**+0.7**
HVD				*e*S	**Sn**	**07 54 41.8**	**-1.0**
HVD				AML	AML	07 55 14.7	
comp=Z,61nm,0.5s							
MOPA	**Mopani**	**4.57**	**51**	*e*P	**Pn**	**07 53 50.9**	**0.0**
MOPA				*e*S	**Sn**	**07 54 42.5**	**-2.1**
MOPA				AML	AML	07 55 09.9	
comp=Z,279nm,0.4s							
PKA	**Prieska**	**5.29**	**232**	*e*P	**Pn**	**07 54 01.4**	**+0.6**
PKA				*e*S	**Sn**	**07 55 00.9**	**-1.5**
PKA				AML	AML	07 55 39.7	
comp=Z,131nm,0.5s							
UPI	**Upington**	**5.89**	**250**	*e*P	**Pn**	**07 54 09.6**	**+0.5**
UPI				*e*S	**Sn**	**07 55 15.3**	**-1.9**
UPI				AML	AML	07 55 53.8	
comp=Z,49nm,0.4s							
SOE	**Somerset East**	**6.46**	**195**	*e*P	**Pn**	**07 54 17.5**	**+0.6**
SOE				*e*S	**Sn**	**07 55 28.3**	**-2.8**
SOE				AML	AML	07 56 09.2	
comp=Z,25nm,0.7s							
GRM	**Grahamstown**	**6.88**	**187**	*e*P	**Pn**	**07 54 23.7**	**+1.0**
GRM				*e*S	**Sn**	**07 55 39.0**	**-2.5**
GRM				AML	AML	07 56 21.6	
comp=Z,29nm,0.6s							
SUR	**Sutherland**	**8.31**	**223**	Pn	**Pn**	**07 54 45.2**	**+2.9**
comp=Z,3.0nm,0.3s,baz=56,slow=16,SNR=28							
SUR				Sn	**Sn**	**07 56 13.0**	**-3.7**
comp=Z,2.8nm,0.3s,baz=28,slow=16,SNR=8.3							
SUR				Lg		07 57 00.2	
comp=Z,2.0nm,0.3s,baz=137,slow=21,SNR=5.4							
SUR	**Sutherland**	**8.31**	**223**	*e*Pn	**Pn**	**07 54 44.4**	**+2.1**
SUR				*e*Sn	**Sn**	**07 56 13.6**	**-3.2**
SUR				Lg		07 57 00.2	
SUR	**Sutherland**	**8.31**	**223**	*e*P	**Pn**	**07 54 43.5**	**+1.2**
SUR				*e*S	**Sn**	**07 56 13.4**	**-3.4**
SUR				AML	AML	07 57 03.4	
comp=Z,18nm,0.6s							
LSZ	**Lusaka**	**11.15**	**3**	Pn	**Pn**	**07 55 20.1**	**-1.1**
comp=Z,2.0nm,0.3s,baz=189,slow=14,SNR=10							
LSZ				Sn	**Sn**	**07 57 18.9**	**-7.6**
comp=Z,0.6nm,0.3s,baz=66,slow=21,SNR=4.0							
LSZ				Lg		07 58 26.7	
comp=Z,0.5nm,0.3s,baz=74,slow=10,SNR=4.4							
LSZ	**Lusaka**	**11.15**	**3**	*e*Pn	**Pn**	**07 55 20.2**	**-1.0**
TSUM	**Tsumeb**	**11.68**	**306**	Pn	**Pn**	**07 55 28.6**	**+0.1**
comp=Z,1.4nm,0.3s,baz=125,slow=13,SNR=21							
TSUM				Sn	**Sn**	**07 57 33.7**	**-5.7**
comp=Z,0.2nm,0.3s,baz=257,slow=2.2,SNR=2.3							
TSUM				Lg		07 58 41.8	
comp=Z,1.0nm,0.3s,baz=78,slow=22,SNR=3.7							
TSUM	**Tsumeb**	**11.68**	**306**	*e*Pn	**Pn**	**07 55 28.1**	**-0.4**
TSUM				*e*Sn	**Sn**	**07 57 41.0**	**+1.6**
TSUM				Lg		07 58 41.8	
KMBO	**Kilima Mbogo**	**26.87**	**22**	P	**P**	**07 58 23.2**	**+0.2**
comp=Z,0.8nm,0.2s,mb3.9,baz=180,slow=20,SNR=4.9							
KMBO	**Kilima Mbogo**	**26.87**	**22**	*e*P	**P**	**07 58 22.9**	**-0.2**
comp=Z,3.3nm,1.1s,mb3.8							
DBIC	**Dimbokro**	**45.52**	**312**	P	**P**	**08 01 01.9**	**0.0**
comp=Z,2.9nm,0.7s,mb4.3,baz=120,slow=8.8,SNR=2.8							
TORD	**Torodi Ar. Bea**	**46.71**	**324**	P	**P**	**08 01 11.1**	**-0.2**
comp=Z,1.4nm,0.6s,mb4.0,baz=138,slow=6.4,SNR=31							
QSPA	**South Pole Qui**	**63.72**	**180**	P	**P**	**08 03 14.3**	**+1.0**
comp=Z,0.7nm,0.5s,mb3.9,baz=225,slow=2.9,SNR=4.1							
BRTR	**Keskin Array B**	**66.09**	**5**	P	**P**	**08 03 30.1**	**+1.0**
comp=Z,0.4nm,0.6s,mb3.6,baz=214,slow=6.0,SNR=4.7							
ESDC	**Sonseca Array**	**72.06**	**335**	P	**P**	**08 04 06.5**	**+0.3**
comp=Z,0.8nm,0.5s,mb3.9,baz=149,slow=5.9,SNR=4.5							
FINES	**FINESS Array B**	**87.60**	**359**	P	**P**	**08 05 30.6**	**+0.7**
comp=Z,0.5nm,0.5s,mb4.0,baz=142,slow=4.3,SNR=7.0							
MKAR	**Makanchi Array**	**88.09**	**34**	P	**P**	**08 05 32.9**	**+0.3**
comp=Z,0.3nm,0.6s,mb3.7,baz=232,slow=6.0,SNR=4.1							

*ISCJB **17** 08:08:03.4±0.7, 24°.3N±0°.1×94°.28E±0°.08, h89km±7km, mb3.7/3, Error ellipse: s-maj=20.8km s-min=7.0km az=30.5*
*IDC **17** 08:08:05.1±4.3, 24°.47N×94°.55E, h81km±41km, mb3.6/3, mb1 3.6/4, mb1mx3.2/26, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=73.7km s-min=21.0km az=68.0*
ISC 17 08:08:04.9±0.7, 24°.4N±0°.1×94°.35E±0°.08, h81km±8km, n15, σ1§06/21, mb3.7/3, 1C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.56**	**317**	*i* PG	**Pn**	**08 08 18.0**	**-1.2**
IMP				*i* SG	**Sn**	**08 08 30.0**	**+0.1**
SHL	**Shillong**	**2.53**	**299**	*i* PN	**Pn**	**08 08 44.5**	**+0.6**
SHL				*e*SN	**Sn**	**08 09 13.5**	**-0.4**
TAPN	**Taplejung**	**6.67**	**298**	*e*Pn	**Pn**	**08 09 41.5**	**+1.3**
ODAN	**Odare**	**6.75**	**293**	*e*Pn	**Pn**	**08 09 43.3**	**+2.0**
CHG	**Chiang Mai**	**6.99**	**141**	PG	**Pn**	**08 09 42.9**	**-1.7**
CHG				SG		08 09 45.6	
CMAR	**Chiang Mai Arr**	**7.28**	**143**	P	**Pn**	**08 09 48.4**	**-0.1**
0.4nm,0.3s,baz=323,slow=13,SNR=9.8							
RAMN	**Ramite**	**7.45**	**292**	*e*Pn	**Pn**	**08 09 52.9**	**+2.1**
GUN	**Gumba**	**8.38**	**297**	*e*Pn	**Pn**	**08 10 04.4**	**+0.8**
GUN				*e*Sn	**Sn**	**08 11 34.9**	**-1.8**
54nm,0.4s							
PKI	**Pulchoki**	**8.65**	**294**	*e*Pn	**Pn**	**08 10 08.0**	**+0.8**
PKIN	**Phulchoki**	**8.66**	**294**	*e*Pn	**Pn**	**08 10 08.0**	**+0.6**
PKIN				*e*Sn	**Sn**	**08 11 41.9**	**-1.6**
50nm,0.4s							
KKN	**Kakani**	**8.83**	**295**	*e*Pn	**Pn**	**08 10 10.5**	**+0.8**
KKN				*e*Sn	**Sn**	**08 11 46.3**	**-1.3**
14nm,0.2s							
DMN	**Daman**	**8.92**	**293**	*e*Pn	**Pn**	**08 10 11.2**	**+0.3**
DMN				*e*Sn	**Sn**	**08 11 49.1**	**-0.6**
39nm,0.6s							
MKAR	**Makanchi Array**	**24.37**	**340**	P	**P**	**08 13 15.1**	**-0.1**
1.0nm,0.6s,mb3.3,baz=148,slow=9.6,SNR=12							
SONM	**Songino Array**	**25.30**	**19**	P	**P**	**08 13 23.0**	**-0.5**
2.1nm,0.7s,mb3.7,baz=196,slow=11,SNR=3.2							
ASAR	**Alice Springs**	**61.26**	**138**	P	**P**	**08 18 11.7**	**0.0**
0.7nm,0.3s,mb4.1,baz=315,slow=6.5,SNR=30							

*ISCJB **17** 08:29:36.3±0.4, 31°.00N±0°.03×103°.71E±0°.04, h10km, mb3.7/10, MS2.8/2, Error ellipse: s-maj=5.0km s-min=4.3km az=2.8*
*IDC **17** 08:29:36.6±1.0, 31°.06N×103°.74E, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, ML4.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/36, Error ellipse: s-maj=28.9km s-min=19.4km az=57.0*
*NEIC **17** 08:29:38.5±0.5, 31°.04N×103°.59E, h10km, mb4.1/2, Error ellipse: s-maj=13.1km s-min=8.8km az=62.0*
*BJI **17** 08:29:40.1, 30°.89N×103°.52E, h15km, mb4.4/1, ML3.7/12, Ms3.6/1, Ms7 3.4/1*
ISC 17 08:29:38.5±0.5, 31°.03N±0°.04×103°.58E±0°.04, h10km, n23, σ1§09/30, mb3.7/10, MS2.8/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.19**	**128**	Pg	**Pg**	**08 29 44.6**	**+2.0**
CD2				Sg	**Sg**	**08 29 49.4**	**+4.1**
CD2				smax			
comp=N,35μm,1.0s							
LZH	**Lanzhou**	**5.05**	**2**	Pg	**Pg**	**08 31 19.0**	**+3.8**
LZH				Sg	**Sg**	**08 32 26.1**	**+5.5**
LZH				smax			
comp=N,99nm,1.0s							
LZH				smax			
comp=E,47nm,0.8s							
ENH	**Enshi**	**5.14**	**97**	Pn	**Pn**	**08 30 56.7**	**+1.1**
comp=E,81nm,0.6s							
ENH				*e*Pg	**Pg**	**08 31 16.7**	**-0.4**
ENH				*e*Sg	**Sg**	**08 32 25.2**	**+1.5**
GYA	**Guiyang**	**5.30**	**149**	Pn	**Pn**	**08 30 56.8**	**-0.9**
GYA				Sn	**Sn**	**08 31 58.3**	**-0.5**
GYA				smax			
comp=N,100nm,1.0s							
GYA				smax			
comp=E,90nm,1.0s							
XAN	**Xi'an**	**5.42**	**55**	Pg	**Pg**	**08 31 20.8**	**-1.4**
XAN				Sn	**Sn**	**08 32 02.9**	**+1.2**
XAN				Sg	**Sg**	**08 32 32.6**	**+0.2**
XAN				smax			
comp=N,130nm,1.1s							
XAN				smax			
comp=E,48nm,1.0s							
XAN	**Xi'an**	**5.42**	**55**	Pg	Px	08 31 39.4	
XAN				Sg	**Sg**	**08 32 32.6**	**+0.2**
XAN				smax			
comp=N,130nm,1.1s							
XAN				smax			
comp=E,48nm,1.0s							
KMI	**Kunming**	**5.93**	**187**	Pn	**Pn**	**08 31 06.8**	**+0.4**
KMI				Sn	**Sn**	**08 32 14.1**	**-0.3**
KMI				smax			
comp=N,41nm,1.2s							
KMI				smax			
comp=E,23nm,1.0s							
KMI				LR	LR		
comp=N,230nm,3.8s							
KMI				LR	LR		
comp=E,490nm,10.7s							
KMI				LR	LR		
comp=Z,170nm,5.4s							
WHN	**Wuhan**	**9.28**	**90**	P	Px	08 31 35.8	
WHN				S	**Sn**	**08 33 34.3**	**-2.4**
WHN				LR	LR		
comp=N,450nm,3.8s							
WHN				LR	LR		
comp=E,810nm,7.4s							
WHN				LR	LR		
comp=Z,1μm,6.0s							
CMAR	**Chiang Mai Arr**	**13.20**	**200**	Pn	**Pn**	**08 32 47.2**	**+1.1**
comp=Z,0.6nm,0.3s,baz=16,slow=20,SNR=3.0							
SONM	**Songino Array**	**16.92**	**7**	Pn	**Pn**	**08 33 35.4**	**+0.1**
comp=Z,0.2nm,0.3s,baz=184,slow=19,SNR=2.3							
SONM				Lg		08 38 33.6	
comp=Z,0.3nm,0.3s,baz=190,slow=32,SNR=2.9							
KSRS	**Korea Array**	**21.09**	**66**	P	**P**	**08 34 20.5**	**-2.5**
comp=Z,0.9nm,0.6s,mb3.3,baz=251,slow=9.3,SNR=7.8							
MKAR	**Makanchi Array**	**22.74**	**320**	P	**P**	**08 34 41.0**	**+0.4**
comp=Z,0.7nm,0.5s,mb3.3,baz=122,slow=9.8,SNR=6.5							
AAK	**Ala-Archa**	**25.88**	**305**	P	**P**	**08 35 11.6**	**+1.3**
comp=Z,0.6nm,0.3s,mb3.6,baz=90,slow=10,SNR=2.9							
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**08 35 17.0**	**+0.3**
comp=Z,3.0nm,0.7s,mb4.0,baz=139,slow=9.0,SNR=9.7							
ZALV				LR	LR	08 48 10.5	
comp=Z,14nm,22.0s,MS2.5,baz=73,slow=42							
ZALV	**Zalesovo Beam**	**26.60**	**335**	P	**P**	**08 35 17.0**	**+0.3**
ZALV				LR	LR	08 48 10.5	
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**08 35 20.7**	**0.0**
comp=Z,1.6nm,0.8s,mb3.6,baz=130,slow=9.1,SNR=8.4							
KURK	**Kurchatov**	**27.04**	**324**	*e*P	**P**	**08 35 20.6**	**-0.1**
comp=Z,1.3nm,0.6s,mb3.6							
BVAR	**Borovoye Array**	**32.57**	**322**	LR	LR	08 50 17.3	
comp=Z,39nm,20.1s,MS3.1,baz=264,slow=38							
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**08 39 25.9**	**-0.8**
comp=Z,0.9nm,0.8s,mb3.9,baz=90,slow=6.9,SNR=3.8							
WRAB	**Tennant Creek**	**58.66**	**146**	*e*P	**P**	**08 39 35.1**	**-1.0**
comp=Z,2.4nm,0.7s,mb4.3							
ASAR	**Alice Springs**	**61.66**	**148**	P	**P**	**08 39 56.0**	**-0.6**
comp=Z,0.4nm,0.6s,mb3.8,baz=339,slow=6.6,SNR=6.8							
NOA	**NORSAR Array B**	**64.48**	**327**	P	**P**	**08 40 14.4**	**-0.6**
comp=Z,0.7nm,0.6s,mb3.9,baz=63,slow=7.8,SNR=3.2							
YKA	**Yellowknife Ar**	**81.89**	**17**	P	**P**	**08 41 57.6**	**-0.1**
comp=Z,0.1nm,0.4s,mb3.1,baz=330,slow=5.4,SNR=3.8							

*ISCJB **17** 08:35:56.4±0.6, 32°.12N±0°.06×105°.16E±0°.08, h10km, mb3.7/9, Error ellipse: s-maj=10.3km s-min=7.4km az=142.6*
*IDC **17** 08:35:57.3±1.3, 31°.97N×104°.74E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/27, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=40.2km s-min=23.5km az=41.0*
*NEIC **17** 08:35:58.1±0.8, 31°.92N×104°.97E, h10km, mb3.8/1, Error ellipse: s-maj=24.9km s-min=10.1km az=218.0*
*BJI **17** 08:36:00.2, 32°.17N×105°.24E, h20km, mB4.4/2, mb4.1/3, ML3.5/9, Ms3.5/4, Ms7 3.1/5*
ISC 17 08:35:58.5±0.6, 32°.17N±0°.06×105°.16E±0°.07, h10km, n17, σ0§98/22, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.67**	**58**	Pg	**Pg**	**08 37 05.1**	**-3.6**
XAN				Sn	**Sn**	**08 37 39.4**	**+0.9**
XAN				Sg	**Sg**	**08 37 49.8**	**-6.4**
XAN				smax			
comp=N,180nm,0.6s							
XAN				smax			
comp=E,91nm,0.5s							
XAN				LR	LR		
comp=N,220nm,10.1s							
XAN				LR	LR		
comp=E,43nm,9.7s							
XAN				LR	LR		
comp=Z,43nm,10.9s							
LZH	**Lanzhou**	**4.05**	**345**	Pn	**Pn**	**08 37 02.3**	**+1.7**
LZH				Pg	**Pg**	**08 37 12.8**	**-3.4**
LZH				Sn	**Sn**	**08 37 46.9**	**-1.2**
LZH				smax			
comp=N,310nm,0.9s							
LZH				smax			
comp=E,410nm,0.9s							
LZH				LR	LR		
comp=N,880nm,3.6s							
LZH				LR	LR		
comp=Z,920nm,4.5s							
ENH	**Enshi**	**4.16**	**116**	*e*Pg	**Pg**	**08 37 17.8**	**-0.5**
GYA	**Guiyang**	**5.84**	**167**	Pn	**Pn**	**08 37 24.1**	**-1.1**
GYA				Sn	**Sn**	**08 38 39.4**	**+7.1**
GYA				smax			
comp=N,40nm,0.6s							
GYA				smax			
comp=E,50nm,0.7s							
GTA	**Gaotai**	**8.42**	**330**	*e*P	**Pn**	**08 38 08.5**	**+7.9**
GTA				pP	

YER	**Yerkesik**	**0.14**	**168**	*e*PG	**Pg**	**09 04 16.2**	**-0.7**
YER				*e*SG	**Sg**	**09 04 18.6**	**-0.2**
YER	**Yerkesik**	**0.14**	**168**	*e*Pg	**Pg**	**09 04 16.2**	**-0.7**
YER				*e*Sg	**Sg**	**09 04 18.6**	**-0.1**
MLSB	**Milas**	**0.38**	**274**	*e*PG	**Pg**	**09 04 20.9**	**-0.5**
MLSB				*e*SG	**Sg**	**09 04 27.1**	**+0.8**
MLSB	**Milas**	**0.38**	**274**	*e*Pg	**Pg**	**09 04 20.9**	**-0.4**
MLSB				*e*Sg	**Sg**	**09 04 27.1**	**+0.8**
AYDN	**Tasoluk**	**0.49**	**323**	*i* P	**Pg**	**09 04 23.4**	**-0.1**
AYDN				*i* S	**Sg**	**09 04 30.0**	**+0.2**
AYDN	**Tasoluk**	**0.49**	**323**	*i* P	**Pg**	**09 04 23.4**	**-0.1**
AYDN				*i* S	**Sg**	**09 04 30.0**	**+0.2**
BDRM	**Kayabasi**	**0.67**	**253**	*i* P	**Pg**	**09 04 25.5**	**-1.5**
BDRM				*i* S	**Sg**	**09 04 35.5**	**-0.2**
BDRM	**Kayabasi**	**0.67**	**253**	*i* P	**Pg**	**09 04 25.5**	**-1.5**
BDRM				*i* S	**Sg**	**09 04 35.5**	**-0.2**
DAT	**Datca**	**0.76**	**225**	*e*PG	**Pg**	**09 04 27.9**	**-0.8**
DAT				*e*SG	**Sg**	**09 04 40.5**	**+2.0**
DAT	**Datca**	**0.76**	**225**	*e*Pg	**Pg**	**09 04 27.9**	**-0.8**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pg**	**09 04 29.4**	**+0.7**
DNZL				*i* S	**Sg**	**09 04 46.4**	**+7.8**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pg**	**09 04 29.4**	**+0.7**
KULA	**Kula-Manisa**	**1.28**	**15**	*e*PN	**Pn**	**09 04 38.5**	**-0.1**
KULA	**Kula-Manisa**	**1.28**	**15**	*e*Pn	**Pn**	**09 04 38.5**	**-0.2**
AKAS	**Kas**	**1.50**	**133**	*i* P	**Pg**	**09 04 43.5**	**+0.6**
AKAS				*i* S	**Sg**	**09 05 08.1**	**+5.7**
AKAS	**Kas**	**1.50**	**133**	*i* P	**Pg**	**09 04 43.5**	**+0.6**

IDC 17 09:08:58.2±2.0, 31°.00N×103°.34E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/25, mbtmp3.6/5, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/28, Error ellipse: s-maj=40.5km s-min=32.5km az=20.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.11**	**199**	P	Pn	09 12 06.5	+0.8
	0.3nm,0.3s,baz=14,slow=12,SNR=3.3						
KSRS	**Korea Array**	**21.29**	**66**	P	P	09 13 46.5	+0.2
	0.6nm,0.5s,baz=249,slow=10.0,SNR=4.0						
MKAR	**Makanchi Array**	**22.63**	**320**	P	P	09 14 02.3	+1.7
	0.4nm,0.5s,baz=118,slow=10.0,SNR=4.7						
KURK	**Kurchatov**	**26.94**	**324**	P	P	09 14 41.5	+0.5
	0.8nm,0.7s,baz=132,slow=9.3,SNR=3.7						
BVAR	**Borovoye Array**	**32.47**	**322**	LR	LR	09 29 48.6	
	comp=Z,30nm,20.7s,baz=252,slow=38						
FINES	**FINESS Array B**	**57.29**	**326**	P	P	09 18 45.7	-1.6
	3.7nm,1.1s,baz=94,slow=6.0,SNR=3.2						

ISCJB 17 09:10:40.2±0.7, 9°.26S±0°.06×124°.04E±0°.06, h100km, mb3.7/3, Error ellipse: s-maj=10.3km s-min=6.4km az=139.3
IDC 17 09:10:40.8±4.5, 9°.05S×124°.13E, h80km±39km, mb3.5/3, mb1 3.7/6, mb1mx3.4/19, mbtmp3.6/6, Error ellipse: s-maj=131.1km s-min=22.5km az=59.0
NEIC 17 09:10:42.0±1.0, 9°.21S×123°.86E, h89km±13km, mb4.6/1, Error ellipse: s-maj=17.1km s-min=9.0km az=47.0
ISC 17 09:10:41.9±0.7, 9°.34S±0°.06×123°.98E±0°.07, h100km, n14, σ1§60/22, mb3.7/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.01**	**315**	P	Pn	**09 12 06.2**	**-2.1**
	0.8nm,0.3s,baz=138,slow=14,SNR=2.9						
KNA	**Kununurra**	**7.90**	**144**	*e*P	**Pn**	**09 12 36.7**	**+2.7**
	10.0nm,0.2s						
KNA				*e*S	**Sn**	**09 14 01.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**8.85**	**170**	*e*P	**Pn**	**09 12 49.0**	**+2.0**
	19nm,0.9s						
FITZ				*e*S	**Sn**	**09 14 22.0**	**-3.1**
FITZ	**Fitzroy Crossi**	**8.85**	**170**	P	**Pn**	**09 12 49.2**	**+2.2**
	1.3nm,0.3s,baz=353,slow=11,SNR=46						
FITZ				S	**Sn**	**09 14 22.4**	**-2.7**
	7.6nm,0.3s,baz=18,slow=13,SNR=21						
KAKA	**Kakadu**	**8.96**	**113**	*e*P	**Pn**	**09 12 49.3**	**+0.9**
	9.7nm,0.5s						
KAKA				*e*S	**Sn**	**09 14 22.0**	**-5.6**
KAKA	**Kakadu**	**8.96**	**113**	*e*Pn	**Pn**	**09 12 49.3**	**+0.9**
	29nm,0.5s						
KAKA				*e*Sn	**Sn**	**09 14 25.0**	**-2.6**
MBWA	**Marble Bar**	**12.44**	**199**	*e*Pn	**Pn**	**09 13 37.4**	**+2.0**
MBWA				*e*Sn	**Sn**	**09 15 51.8**	**-0.5**
WRAB	**Tennant Creek**	**14.54**	**138**	*e*Pn	**Pn**	**09 14 04.5**	**+1.7**
WRAB				*e*Sn	**Sn**	**09 16 38.4**	**-4.6**
ASAR	**Alice Springs**	**17.11**	**148**	P	**Pn**	**09 14 38.5**	**+3.6**
	0.7nm,0.3s,baz=319,slow=12,SNR=48						
ASAR				S	**S**	**09 17 42.1**	**-4.0**
	0.6nm,0.3s,baz=313,slow=21,SNR=13						
COEN	**Coen**	**19.35**	**106**	*e*P	**P**	**09 15 04.1**	**+4.4**
	16nm,0.5s						
COEN				*e*S	**S**	**09 18 26.3**	**-7.1**
CMAR	**Chiang Mai Arr**	**37.06**	**318**	P	**P**	**09 17 42.5**	**-0.1**
	1.2nm,0.5s,mb4.1,baz=144,slow=6.3,SNR=4.9						
MKAR	**Makanchi Array**	**67.10**	**330**	P	**P**	**09 21 24.6**	**0.0**
	0.6nm,0.6s,mb3.6,baz=145,slow=6.6,SNR=4.2						
KURK	**Kurchatov**	**71.56**	**332**	P	**P**	**09 21 51.6**	**-0.4**
	0.2nm,0.3s,mb3.4,baz=147,slow=4.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**123.36**	**280**	PKP	PKPdf	09 29 29.3	+1.0
	0.3nm,0.6s,baz=88,slow=2.1,SNR=4.3						

ISCJB 17 09:10:49.3±0.2, 10°.97N±0°.02×62°.22W±0°.02, h107km±3km, mb3.8/12, Error ellipse: s-maj=4.0km s-min=2.6km az=35.2
IDC 17 09:10:51.9±0.9, 11°.15N×62°.36W, h122km±8km, mb3.6/11, mb1 3.7/13, mb1mx3.5/27, mbtmp3.6/13, Error ellipse: s-maj=13.0km s-min=11.3km az=117.0
NEIC 17 09:10:51.6, 10°.95N×62°.16W, h90km, mb3.8/1, MD3.9(TRN), After TRN.
NEIC Felt [III] on Trinidad.
FUNV 17 09:10:51.9, 10°.99N×62°.20W, h95km, MW4.2
TRN 17 09:10:51.4, 10°.94N×62°.13W, h100km, MD3.9
TRN Felt Trinidada III.
ISC 17 09:10:50.4±0.2, 10°.96N±0°.02×62°.21W±0°.02, h100km±3km, h123km±2.6km; pP-P, n101, σ1§07/155, mb3.8/12, 24C-6D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**182**	⇑*i*P	**Pn**	**09 11 06.2**	**+1.1**
GUIV				*e*S	**Sn**	**09 11 15.4**	**-0.6**
TCE	**Chacachacare**	**0.52**	**121**	*e*P	**Pn**	**09 11 07.2**	**+0.8**
TCE				*e*S	**Sn**	**09 11 15.5**	**-2.8**
TCE	**Chacachacare**	**0.52**	**121**	⇓*i*P	**Pn**	**09 11 07.2**	**+0.8**
TCE				*e*S	**Sn**	**09 11 18.0**	**-0.2**
TCE	**Chacachacare**	**0.52**	**121**	⇓*i*P	**Pn**	**09 11 07.2**	**+0.8**
TRN	**Trinidad (W)**	**0.85**	**112**	⇑*i*P	**Pn**	**09 11 10.0**	**+0.7**
TRN				*e*S	**Sn**	**09 11 22.6**	**-0.9**
TRN	**Trinidad (W)**	**0.85**	**112**	⇑*i*P	**Pn**	**09 11 10.0**	**+0.7**
TRN	**Trinidad (W)**	**0.85**	**112**	*e*	**Pn**	**09 11 18.7**	**+9.4**
TRN				*e*S	**Sn**	**09 11 22.6**	**-0.9**
TRN	**Trinidad (W)**	**0.85**	**112**	⇑*i*P	**Pn**	**09 11 10.0**	**+0.7**
TPP	**Pointe-a-Pierr**	**0.98**	**131**	⇑*i*P	**Pn**	**09 11 12.1**	**+1.4**
TPP				*e*S	**Sn**	**09 11 23.1**	**-2.8**
TPP	**Pointe-a-Pierr**	**0.98**	**131**	⇑*e*P	**Pn**	**09 11 11.5**	**+0.8**
TPP				*e*S	**Sn**	**09 11 25.8**	**-0.1**
TPP	**Pointe-a-Pierr**	**0.98**	**131**	⇑*i*P	**Pn**	**09 11 12.1**	**+1.4**
ITEV	**Isla Los Testi**	**0.98**	**293**	⇓*i*P	**Pn**	**09 11 11.0**	**+0.3**
ITEV				*e*S	**Sn**	**09 11 25.0**	**-0.9**
CRUV	**Carupano**	**1.05**	**254**	⇓*i*P	**Pn**	**09 11 12.4**	**+1.0**
CRUV				*e*S	**Sn**	**09 11 27.2**	**+0.1**
GUNV	**Guanoco**	**1.07**	**222**	⇑*e*P	**Pn**	**09 11 13.3**	**+1.6**
GUNV				*e*S	**Sn**	**09 11 28.4**	**+0.7**
TBH	**Brigand Hill**	**1.22**	**113**	⇑*e*P	**Pn**	**09 11 14.1**	**+0.8**
TBH				*e*S	**Sn**	**09 11 29.0**	**-1.6**
TBH	**Brigand Hill**	**1.22**	**113**	⇑*i*P	**Pn**	**09 11 14.1**	**+0.8**
TBH				*e*S	**Sn**	**09 11 29.0**	**-1.6**
TBH	**Brigand Hill**	**1.22**	**113**	⇑*i*P	**Pn**	**09 11 14.1**	**+0.8**
GRGR	**Grenville**	**1.28**	**25**	*e*Pg	**Pn**	**09 11 13.8**	**-0.3**
GRGR				*e*Sg	**Sn**	**09 11 30.9**	**-1.1**
GRW	**Mount Saint Ca**	**1.30**	**24**	*e*P	**Pn**	**09 11 14.4**	**+0.1**
GRW				*e*S	**Sn**	**09 11 31.4**	**-1.0**
GRW	**Mount Saint Ca**	**1.30**	**24**	*e*P	**Pn**	**09 11 14.4**	**+0.1**
GRHS	**Sauteurs**	**1.37**	**24**	*e*P	**Pn**	**09 11 15.7**	**+0.6**
GRHS				*e*S	**Sn**	**09 11 33.5**	**-0.3**
GRHS	**Sauteurs**	**1.37**	**24**	*e*P	**Pn**	**09 11 15.7**	**+0.6**
GRHS				*e*S	**Sn**	**09 11 33.5**	**-0.3**
TPR	**Prospect**	**1.42**	**81**	*e*P	**Pn**	**09 11 15.8**	**0.0**
TPR				*e*S	**Sn**	**09 11 33.8**	**-1.1**
TPR	**Prospect**	**1.42**	**81**	*e*P	**Pn**	**09 11 15.8**	**0.0**
TPR				*e*S	**Sn**	**09 11 33.8**	**-1.1**
GRIC	**Isle de Caille**	**1.45**	**25**	*e*P	**Pn**	**09 11 16.8**	**+0.7**
GRIC				*e*S	**Sn**	**09 11 35.8**	**+0.3**
GRSS	**Sisters**	**1.45**	**24**	⇑*e*P	**Pn**	**09 11 17.1**	**+1.1**
GRSS				*e*S	**Sn**	**09 11 36.2**	**+0.7**
GRSS	**Sisters**	**1.45**	**24**	⇑*e*P	**Pn**	**09 11 17.1**	**+1.1**
GRSS				*e*S	**Sn**	**09 11 36.2**	**+0.7**
GRSS	**Sisters**	**1.45**	**24**	⇑*e*P	**Pn**	**09 11 17.1**	**+1.1**
BOT	**Bacolet**	**1.48**	**82**	*e*P	**Pn**	**09 11 16.3**	**-0.1**
BOT				*e*S	**Sn**	**09 11 34.7**	**-1.4**
BOT	**Bacolet**	**1.48**	**82**	*e*P	**Pn**	**09 11 16.3**	**-0.1**
BOT				*e*S	**Sn**	**09 11 34.7**	**-1.4**
TOSP	**Speyside**	**1.68**	**78**	*e*P	**Pn**	**09 11 18.3**	**-0.6**
TOSP				*e*S	**Sn**	**09 11 39.9**	**-0.6**
ORIV	**Oritupano**	**2.22**	**212**	⇑*e*P	**Pn**	**09 11 27.3**	**+1.4**
ORIV				*e*S	**Sn**	**09 11 52.9**	**-0.1**
FCV	**Fort Charlotte**	**2.38**	**23**	*e*P	**Pn**	**09 11 29.1**	**+1.2**
FCV				*e*S	**Sn**	**09 11 56.9**	**+0.3**
FCV	**Fort Charlotte**	**2.38**	**23**	⇑*e*P	**Pn**	**09 11 29.1**	**+1.2**
FCV				*e*S	**Sn**	**09 11 56.9**	**+0.3**
FCV	**Fort Charlotte**	**2.38**	**23**	⇑*e*P	**Pn**	**09 11 29.1**	**+1.2**
IBAV	**Isla La Blanqu**	**2.47**	**290**	⇓*i*P	**Pn**	**09 11 29.3**	**+0.1**
IBAV				*e*S	**Sn**	**09 11 57.5**	**-1.5**
SVB	**Belmont**	**2.48**	**22**	*e*P	**Pn**	**09 11 28.6**	**-0.6**
SVB				*e*S	**Sn**	**09 11 57.9**	**-1.1**
SVB	**Belmont**	**2.48**	**22**	*e*P	**Pn**	**09 11 29.6**	**+0.3**
SVB				*e*S	**Sn**	**09 11 57.9**	**-1.1**
PCRV	**Puerto La Cruz**	**2.51**	**252**	P	**Pn**	**09 11 31.0**	**+1.3**
	50nm,0.3s,baz=74,slow=2.7,SNR=230						
PCRV				S	**Sn**	**09 12 01.0**	**+1.1**
	36nm,0.3s,baz=33,slow=15,SNR=13						
PCRV	**Puerto La Cruz**	**2.51**	**252**	⇑*e*P	**Pn**	**09 11 30.9**	**+1.3**
PCRV				*e*S	**Sn**	**09 11 58.3**	**-1.5**
SVV	**Soufriere Volc**	**2.53**	**22**	*e*P	**Pn**	**09 11 31.3**	**+1.3**
SVV				*e*S	**Sn**	**09 12 00.9**	**+0.5**
SVV	**Soufriere Volc**	**2.53**	**22**	*e*P	**Pn**	**09 11 31.3**	**+1.3**
SVV				*e*S	**Sn**	**09 12 00.9**	**+0.5**
BHS	**Barnard House**	**2.55**	**24**	*e*P	**Pn**	**09 11 32.3**	**+2.1**
BHS				*e*S	**Sn**	**09 12 00.4**	**-0.3**
BHS	**Barnard House**	**2.55**	**24**	*e*P	**Pn**	**09 11 31.7**	**+1.5**
BHS				*e*S	**Sn**	**09 12 00.4**	**-0.3**
SSV	**Crater Summit**	**2.55**	**23**	*e*P	**Pn**	**09 11 31.6**	**+1.4**
SSV				*e*S	**Sn**	**09 12 01.0**	**+0.2**
SSV	**Crater Summit**	**2.55**	**23**	*e*P	**Pn**	**09 11 31.6**	**+1.4**
SSV				*e*S	**Sn**	**09 12 01.0**	**+0.2**
RIOV	**Rio Grande**	**2.90**	**172**	⇑*e*P	**Pn**	**09 11 35.8**	**+0.9**
RIOV				*e*S	**Sn**	**09 12 08.3**	**-0.8**
MCLT	**Moule a Chique**	**3.00**	**24**	*e*P	**Pn**	**09 11 35.6**	**-0.6**
MCLT				*e*S	**Sn**	**09 12 09.1**	**-2.3**
MCLT	**Moule a Chique**	**3.00**	**24**	*e*P	**Pn**	**09 11 35.6**	**-0.6**
MCLT				*e*S	**Sn**	**09 12 10.5**	**-0.9**
SLDE	**Delcer**	**3.04**	**22**	*e*P	**Pn**	**09 11 37.3**	**+0.6**
SLDE				*e*S	**Sn**	**09 12 11.5**	**-0.9**
SLDE	**Delcer**	**3.04**	**22**	*e*P	**Pn**	**09 11 37.3**	**+0.6**
SLDE				*e*S	**Sn**	**09 12 11.5**	**-0.9**
SLB	**Belfond**	**3.07**	**22**	*e*P	**Pn**	**09 11 38.8**	**+1.7**
SLB				*e*S	**Sn**	**09 12 12.6**	**-0.4**
SLB	**Belfond**	**3.07**	**22**	*e*P	**Pn**	**09 11 38.8**	**+1.7**
SLB				*e*S	**Sn**	**09 12 12.6**	**-0.4**
SLPE	**Piton Saint Es**	**3.10**	**22**	*e*P	**Pn**	**09 11 37.8**	**+0.3**
SLPE				*e*S	**Sn**	**09 12 13.7**	**0.0**
SLPE	**Piton Saint Es**	**3.10**	**22**	*e*P	**Pn**	**09 11 37.8**	**+0.3**
SLPE				*e*S	**Sn**	**09 12 13.7**	**0.0**
SLW	**Petit Monier**	**3.28**	**22**	*e*P	**Pn**	**09 11 40.5**	**+0.6**
SLW				*e*S	**Sn**	**09 12 17.9**	**-0.3**
SLW	**Petit Monier**	**3.28**	**22**	*e*P	**Pn**	**09 11 40.5**	**+0.6**
SLW				*e*S	**Sn**	**09 12 17.9**	**-0.3**
GURV	**El Guri**	**3.30**	**195**	⇑*i*P	**Pn**	**09 11 40.8**	**+0.6**
BBGH	**Gun Hill**	**3.38**	**50**	*e*Pn	**Pn**	**09 11 42.2**	**+1.0**
CUPV	**Cœpira**	**3.63**	**256**	*e*P	**Pn**	**09 11 45.6**	**+1.0**
BIM	**Bigot**	**3.70**	**17**	*e*P	**Pn**	**09 11 45.1**	**-0.5**
MVM	**Montagne Vaucl**	**3.79**	**20**	*e*P	**Pn**	**09 11 46.7**	**-0.2**
FDF	**Fort de France**	**3.89**	**15**	*e*Pn	**Pn**	**09 11 47.5**	**-0.6**
FDF				*e*Sn	**Sn**	**09 12 31.4**	**-1.4**
FDF	**Fort de France**	**3.89**	**15**	⇑*e*P	**Pn**	**09 11 47.6**	**-0.5**
FDF				⇑*e*S	**Sn**	**09 12 30.1**	**-2.7**
ORCV	**Isla La Orchil**	**4.00**	**283**	*e*P	**Pn**	**09 11 49.4**	**-0.2**
BIRV	**Birongo**	**4.02**	**263**	*e*P	**Pn**	**09 11 50.9**	**+1.0**
MERV	**Las Mercedes**	**4.37**	**247**	*e*P	**Pn**	**09 11 54.6**	**0.0**
MERV				*e*S	**Sn**	**09 12 41.8**	**-2.7**
FUNV	**FUNVISIS**	**4.55**	**264**	⇓*e*P	**Pn**	**09 11 57.9**	**+0.9**
PHG	**Guadaloupe-2**	**5.05**	**6**	*e*P	**Pn**	**09 12 04.1**	**+0.3**
SCG	**Saint Claude**	**5.06**	**6**	*e*P	**Pn**	**09 12 05.2**	**+1.3**
BCG	**Bois Riant Cap**	**5.12**	**6**	*e*P	**Pn**	**09 12 06.1**	**+1.2**
LUEV	**Luepa**	**5.14**	**172**	⇑*e*P	**Pn**	**09 12 04.0**	**-1.1**
LZG	**Guadaloupe-1**	**5.16**	**5**	*e*P	**Pn**	**09 12 08.4**	**+3.0**
CAOV	**Caicara del Or**	**5.44**	**229**	*e*P	**Pn**	**09 12 08.6**	**-0.5**
TURV	**Turiamo**	**5.56**	**265**	*e*P	**Pn**	**09 12 10.9**	**+0.2**
BAUV	**El Baul**	**6.09**	**251**	*e*P	**Pn**	**09 12 16.9**	**-1.0**
SKI	**Saint Kitts**	**6.35**	**355**	*e*P	**Pn**	**09 12 23.8**	**+2.3**
SKI	**Saint Kitts**	**6.35**	**355**	*e*P	**Pn**	**09 12 23.8**	**+2.3**
TEPV	**Terepaima**	**6.94**	**262**	*e*P	**Pn**	**09 12 28.1**	**-1.4**
SANV	**Sanarito**	**7.36**	**259**	⇑*e*P	**Pn**	**09 12 34.6**	**-0.6**
SIQV	**Siquisique**	**7.47**	**268**	*e*P	**Pn**	**09 12 36.3**	**-0.5**
CURV	**Curarigua**	**7.68**	**264**	*e*P	**Pn**	**09 12 39.2**	**-0.5**
MTP	**Monte Pirata**	**7.79**	**336**	*e*Pn	**Pn**	**09 12 41.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**8.46**	**326**	*e*Pn	**Pn**	**09 12 52.2**	**+2.0**
SDV	**Santo Domingo**	**8.55**	**257**	P	**Pn**	**09 12 50.0**	**-1.5**
	0.4nm,0.3s,baz=115,slow=12,SNR=12						
SDV				S	**Sn**	**09 14 21.6**	**-4.7**
	2.6nm,0.3s,baz=43,slow=20,SNR=7.4						
SOCV	**Socops**	**8.93**	**253**	*e*P	**Pn**	**09 12 54.7**	**-1.9**
SDDR	**Presa de Saban**	**11.85**	**313**	Pn	**Pn**	**09 13 41.6**	**+5.5**
SDDR				Sn	**Sn**	**09 15 42.6**	**-3.9**
SIV	**San Ignacio**	**26.80**	**178**	P	**P**	**09 16 22.4**	**+1.1**
	2.1nm,0.6s,mb3.9,baz=12,slow=8.5,SNR=20						
SIV				pP	pP	09 16 49.1	+5.5
	2.4nm,0.7s,baz=15,slow=10,SNR=6.4						
NNA	**Nana**	**27.04**	**213**	P	**P**	**09 16 23.9**	**+0.4**
	1.8nm,0.3s,mb4.1,baz=12,slow=12,SNR=3.8						
LPAZ	**La Paz**	**27.70**	**192**	P	**P**	**09 16 31.4**	**+2.0**
	1.2nm,0.8s,mb3.5,baz=5.4,slow=8.8,SNR=6.7						
LPAZ				pP	pP	09 16 57.1	+5.4
	0.9nm,0.7s,baz=0.0,slow=9.1,SNR=2.3						
CPUP	**Villa Florida**	**37.37**	**173**	P	**P**	**09 17 53.5**	**-0.1**
	0.2nm,0.3s,mb3.5,baz=330,slow=11,SNR=4.0						
TXAR	**Lajitas Array**	**42.72**	**302**	P	**P**	**09 18 35.8**	**-2.1**
	0.3nm,0.6s,mb3.2,baz=126,slow=6.5,SNR=5.8						
TXAR				pP	pP	09 19 04.3	+3.1
	0.4nm,0.7s,baz=117,slow=5.7,SNR=4.7						
SCHQ	**Schefferville**	**43.91**	**356**	P	**P**	**09 18 45.4**	**-1.6**
	2.0nm,0.8s,mb3.9,baz=186,slow=10,SNR=3.2						
CPRX	**Cap Rock**	**44.04**	**307**	*e*P	**P**	**09 18 45.9**	**-2.5**
	0.9nm,0.6s,mb3.7						
PDAR	**Pinedale Array**	**51.84**	**316**	P	**P**	**09 19 45.8**	**-2.7**
	0.7nm,0.6s,mb3.9,baz=118,slow=9.4,SNR=7.8						
PDAR				pP	pP	09 20 12.8	+0.3
	0.4nm,0.6s,baz=114,slow=8.6,SNR=3.4						
PLCA	**Paso Flores**	**52.01**	**188**	P	**P**	**09 19 49.7**	**+0.2**
	4.3nm,1.1s,mb4.4,baz=356,slow=9.2,SNR=7.2						
PLCA	**Paso Flores**	**52.01**	**188**	P	**P**	**09 19 49.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**62.39**	**81**	P	**P**	**09 21 03.1**	**-0.1**
	1.4nm,0.6s,mb4.2,baz=283,slow=6.0,SNR=24						
YKA	**Yellowknife Ar**	**63.54**	**336**	P	**P**	**09 21 06.1**	**-3.9**
	0.2nm,0.5s,mb3.2,baz=110,slow=7.4,SNR=7.0						
YKA	**Yellowknife Ar**	**63.54**	**336**	P	**P**	**09 21 06.1**	**-3.9**
FINES	**FINESS Array B**	**79.64**	**29**	P	**P**	**09 22 46.3**	**-0.3**
	2.0nm,0.8s,mb4.0,baz=242,slow=4.1,SNR=7.0						

IDC 17 09:19:23.5±1.1, 31°.13N×103°.93E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/24, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=35.2km s-min=21.9km az=58.0
ISCJB 17 09:19:26.0±1.0, 30°.95N±0°.05×103°.42E±0°.07, h26km±7km, mb3.5/6, Error ellipse: s-maj=10.5km s-min=8.7km az=18.0
NEIC 17 09:19:26.0±0.7, 31°.01N×103°.43E, h10km, Error ellipse: s-maj=16.8km s-min=12.7km az=60.0
BJI 17 09:19:28.3, 30°.79N×103°.49E, h16km, mB4.2/1, mb4.1/2, ML3.8/15, Ms4.0/2, Ms7 3.6/2
ISC 17 09:19:25.8±1.2, 31°.12N±0°.05×103°.43E±0°.06, h8km±7km, n16, σ1§06/23, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**126**	Pg	**Pg**	**09 19 32.5**	**-0.1**
CD2				Sg	**Sg**	**09 19 38.0**	**+0.8**
CD2				smax			
	comp=N,40μm,0.7s						
LZH	**Lanzhou**	**4.97**	**4**	Pg	**Pg**	**09 21 10.3**	**+9.3**
LZH				Sg	**Sb**	**09 22 02.8**	**+10**
LZH				smax			
	comp=N,90nm,1.0s						
LZH				smax			
	comp=E,41nm,0.9s						
ENH	**Enshi**	**5.29**	**98**	*e*Pn	**Pn**	**09 20 45.8**	**+0.7**
	comp=E,69nm,0.5s						
ENH				*e*Sn	**Sn**	**09 21 46.6**	**+0.3**
GYA	**Guiyang**	**5.44**	**148**	Pn	**Pn**	**09 20 47.8**	**+0.6**
GYA				Sn	**Sn**	**09 21 50.8**	**+0.8**
GYA				smax			
	comp=N,220nm,0.9s						
GYA				smax			
	comp=E,190nm,0.9s						
XAN	**Xi'an**	**5.48**	**56**	Pn	**Pn**	**09 20 47.6**	**-0.1**
XAN				Pg	**Pg**	**09 21 10.3**	**-0.4**
XAN				Sn	**Sn**	**09 21 50.0**	**-0.9**
XAN				Sg	**Sg**	**09 22 18.6**	**-3.0**
XAN				smax			
	comp=N,130nm,0.8s						
XAN				smax			
	comp=E,65nm,1.0s						
KMI	**Kunming**	**6.00**	**186**	Pn	**Pn**	**09 20 53.1**	**-1.8**
KMI				Sn	**Sn**	**09 21 58.9**	**-4.9**
KMI				smax			
	comp=N,37nm,1.2s						
KMI				smax			
	comp=E,39nm,1.3s						
KMI				LR	LR		
	comp=N,220nm,5.2s						
KMI				LR	LR		
	comp=E,390nm,6.6s						
KMI				LR	LR		
	comp=Z,210nm,11.9s						
GTA	**Gaotai**	**8.79**	**341**	*e*P	Px	09 21 51.8	
GTA				pP		09 21 56.0	
GTA				sP		09 21 58.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WHN	**Wuhan**	**9.41**	**91**	S	**Sn**	**09 23 21.5**	**-6.2**
WHN				LR	LR		
	comp=N,700nm,6.1s						
WHN				LR	LR		
	comp=E,560nm,7.4s						
WHN				LR	LR		
	comp=Z,850nm,6.2s						
CMAR	**Chiang Mai Arr**	**13.24**	**199**	Pn	**Pn**	**09 22 33.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=4.4						
KSRS	**Korea Array**	**21.18**	**66**	P	**P**	**09 24 04.3**	**-7.2**
	comp=Z,2.3nm,0.9s,mb3.5,baz=256,slow=9.5,SNR=15						
MKAR	**Makanchi Array**	**22.59**	**320**	P	**P**	**09 24 28.5**	**+1.8**
	comp=Z,0.2nm,0.3s,mb3.0,baz=116,slow=9.8,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.46**	**335**	P	**P**	**09 25 02.6**	**-0.5**
	comp=Z,1.4nm,0.6s,mb3.7,baz=136,slow=9.0,SNR=2.4						
KURK	**Kurchatov**	**26.89**	**324**	P	**P**	**09 25 08.2**	**+1.1**
	comp=Z,0.5nm,0.7s,mb3.1,baz=130,slow=9.6,SNR=4.5						
ASAR	**Alice Springs**	**61.80**	**148**	P	**P**	**09 29 43.1**	**-2.1**
	comp=Z,0.3nm,0.4s,mb3.8,baz=337,slow=6.8,SNR=11						
COLA	**College**	**69.67**	**26**	*e*P	**P**	**09 30 36.2**	**+0.7**
	comp=Z,50nm,1.1s						
YKA	**Yellowknife Ar**	**81.85**	**17**	P	**P**	**09 31 45.3**	**+0.1**

TNA **Tin City** 10.48 277 *e*Pn Pn 09 22 33.8 +1.2
13nm,0.8s
OHAK **Old Harbor** 10.69 214 Pn Pn 09 22 31.3 -4.2
CTLN **Castor Lake** 11.04 89 ⇓Pn Pn 09 22 35.0 -5.2
CTLN ⇓Sn Sn 09 24 29.9 -14
FNBB **Fort Nelson** 11.62 122 ⇑Pn Pn 09 22 47.2 -1.0
FNBB ⇓Sg Sn 09 25 58.9 +61
JERN **Jeri Cho Mine,** 12.31 78 ⇓Pn Pn 09 22 51.2 -6.5
JERN ⇑Sn Sn 09 25 00.1 -15
YKW3 **Yellowknife Ar** 12.44 96 ⇑Pn Pn 09 22 54.3 -5.2
YKW3 ⇑Sn Sn 09 25 03.7 -14
YKA **Yellowknife Ar** 12.48 96 Pn Pn 09 22 54.6 -5.3
5.3nm,0.3s,baz=300,slow=13,SNR=282
YKA Sn Sn 09 25 07.1 -12
6.0nm,0.3s,baz=302,slow=22,SNR=7.2
YKA LR LR 09 28 53.6
comp=Z,27nm,19.2s,baz=145,slow=43
YKA **Yellowknife Ar** 12.48 96 Pn Pn 09 22 54.6 -5.3
YKA Sn Sn 09 25 07.1 -12
YKA LR LR 09 28 53.6
BBB **Bella Bella** 16.01 147 Pn Pn 09 23 54.5 +7.0
0.3nm,0.3s,baz=333,slow=14,SNR=5.4
BBB Lg 09 28 28.6
0.1nm,0.3s,baz=56,slow=16,SNR=5.2
BBB LR LR 09 29 14.9
comp=Z,114nm,21.7s,baz=65,slow=34
RES **Resolute Bay** 17.15 41 Pn Pn 09 23 56.3 -5.6
baz=264,slow=15
EDM **Edmonton** 19.42 119 *e*P Pn 09 24 29.2 -0.6
BILL **Bilibino** 19.49 298 *e*P Pn 09 24 29.1 -1.4
BILL pmax pmax
comp=Z,30nm,2.5s
BILL MLR MLR
comp=Z,200nm,13.0s
BILL **Bilibino** 19.49 298 *e*Pn Pn 09 24 31.0 +0.4
comp=Z,28nm,1.1s
PGC **Sidney** 20.39 142 *e*P P 09 24 37.7 -1.5
comp=Z,0.8nm,0.9s
A05A **Maple Falls** 20.41 140 ⇑P P 09 24 39.4 -0.1
baz=20
A07A **Ashnola River,** 20.82 137 ⇓P P 09 24 46.0 +2.1
baz=21,SNR=5.7
RPW **Rockport** 21.07 139 P P 09 24 49.3 +2.8
comp=Z,3.2nm,0.7s,mb3.8
JCW **Jim Creek** 21.19 140 P P 09 24 52.0 +4.1
A09A **Danville** 21.39 134 P P 09 24 50.8 +0.7
baz=21,SNR=6.3
NLWA **Neilton Lookou** 21.46 144 *e*P P 09 24 55.9 +5.0
comp=Z,15nm,0.9s,mb4.3
NLW **Nelson Butte** 21.72 138 P P 09 24 57.5 +4.0
B08A **Colville Reser** 21.74 136 ⇑P P 09 24 54.5 +0.7
baz=22,SNR=13
B09A **Rice** 22.02 134 ⇑P P 09 24 57.0 +0.2
baz=22
A11A **Hall Mountain,** 22.07 130 ⇑P P 09 24 56.2 -1.2
baz=22
ETW **Entiat** 22.16 138 *e*P P 09 25 00.8 +2.6
comp=Z,12nm,1.2s,mb4.2
NEW **Newport** 22.46 132 *e*P P 09 24 58.6 -2.9
NEW pmax pmax
comp=Z,5.0nm,0.8s
NEW **Newport** 22.46 132 *e*P P 09 24 58.5 -2.9
comp=Z,5.3nm,0.8s,mb4.0
FFC **Flin Flon** 22.51 102 *e*P P 09 25 00.0 -2.0
FFC pmax pmax
comp=Z,22nm,0.8s,mb4.6
FFC **Flin Flon** 22.51 102 *e*P P 09 25 00.0 -1.9
comp=Z,22nm,0.8s,mb4.6
B11A **Sandpoint** 22.54 131 ⇓P P 09 25 02.4 +0.2
baz=22
C09A **Chrisman Ranch** 22.55 135 ⇑P P 09 25 03.1 +0.7
baz=22
LON **Longmire** 22.56 141 *e*P P 09 25 01.6 -1.0
LON pmax pmax
comp=Z,16nm,0.8s,mb4.5
LON **Longmire** 22.56 141 *e*P P 09 25 01.6 -1.0
comp=Z,16nm,0.8s,mb4.5
A13A **Flathead Natio** 22.70 127 ⇑P P 09 25 04.6 +0.6
baz=23
WALA **Waterton Lakes** 22.75 126 *e*P P 09 25 01.9 -2.7
comp=Z,0.7nm,1.0s
OD2 **Odessa Site #2** 22.79 136 *e*P P 09 25 01.2 -3.8
comp=Z,14nm,1.2s,mb4.3
FCC **Fort Churchill** 22.86 87 *e*P P 09 25 03.6 -2.1
comp=Z,0.4nm,0.8s
FCC *e*S S 09 29 13.0 -2.0
A14A **Double T Ranch** 22.99 126 ⇓P P 09 25 06.8 -0.2
baz=23
D08A **Wollman Farm,** 23.04 136 ⇓P P 09 25 08.1 +0.5
baz=23
B13A **Whitefish** 23.18 128 ⇑P P 09 25 06.9 -2.1
baz=23
A15A **Johnson Ranch,** 23.21 125 ⇓P P 09 25 08.7 -0.7
baz=23
A16A **West Butte Ran** 23.61 123 ⇓P P 09 25 12.6 -0.9
baz=24
C13A **Hot Springs** 23.76 129 ⇓P P 09 25 14.9 +0.1
baz=24
D11A **Klaveano Farm,** 23.79 132 ⇑P P 09 25 14.7 -0.5
baz=24
B15A **Bradely Ranch,** 23.84 125 ⇓P P 09 25 14.8 -0.8
baz=24
G04A **Mulino** 23.85 144 ⇑P P 09 25 17.7 +2.0
baz=24,SNR=5.5
A17A **Triple J Farms** 23.92 122 ⇑P P 09 25 16.6 +0.3
baz=24
HOOD **Mount Hood Mea** 23.94 142 *e*P P 09 25 14.8 -1.7
comp=Z,88nm,1.0s,mb5.2
C14A **Swan Lake** 23.94 128 ⇓P P 09 25 16.7 +0.2
baz=24
B16A **M & M Farms, S** 24.04 124 ⇑P P 09 25 16.9 -0.5
baz=24
D12A **Red Ives Fores** 24.08 131 ⇑P P 09 25 16.9 -0.9
baz=24
A18A **Metzger Ranch,** 24.23 121 ⇓P P 09 25 18.1 -1.1
baz=24
C15A **Salmond Ranch,** 24.30 126 ⇓P P 09 25 20.1 +0.3
baz=24
D13A **Huson** 24.32 129 ⇓P P 09 25 19.6 -0.4
baz=24
B17A **L&G Farms, Che** 24.45 123 ⇓P P 09 25 20.2 -0.9
baz=24,SNR=10
E11A **Bogner Ranch,** 24.45 133 ⇑P P 09 25 20.4 -0.8
baz=24
F10A **Beach Ranch, E** 24.51 135 ⇓P P 09 25 21.3 -0.3
baz=24,SNR=5.8
C16A **Fuhringer Ranc** 24.56 125 ⇑P P 09 25 21.1 -1.1
baz=24
E12A **Beaver Dam Sad** 24.59 132 ⇓P P 09 25 21.7 -0.8
baz=25
D14A **Greenough** 24.62 128 ⇓P P 09 25 21.8 -0.9
baz=25
G08A **Pilot Rock** 24.66 138 ⇑P P 09 25 23.3 +0.2
baz=25,SNR=15
B18A **Beardsley Farm** 24.71 121 ⇓P P 09 25 23.4 -0.1
baz=25
MSO **Missoula** 24.71 129 *e*P P 09 25 19.5 -4.1
comp=Z,5.4nm,1.0s,mb4.0
F11A **Grangeville** 24.89 133 ⇑P P 09 25 25.4 +0.2
baz=25,SNR=11
VIPM **Ingram Point** 24.96 141 P P 09 25 28.8 +3.0
D15A **Lincoln** 24.97 127 ⇓P P 09 25 26.1 +0.2
baz=25,SNR=11
E13A **Victor** 24.98 130 ⇓P P 09 25 25.0 -1.0
baz=25
G09A **Cove** 24.99 136 ⇑P P 09 25 25.6 -0.5
baz=25
C17A **Wharram Farm,** 25.03 124 ⇑P P 09 25 26.1 -0.4
baz=25
EGMT **Eagleton** 25.03 122 ⇓P P 09 25 25.1 -1.3
baz=25
EGMT **Eagleton** 25.03 122 P P 09 25 23.1 -3.4
comp=Z,9.4nm,0.8s,mb4.4
E14A **Clinton** 25.22 129 ⇑P P 09 25 27.8 -0.4
baz=25
F12A **Elk City** 25.28 132 ⇓P P 09 25 28.5 -0.2
baz=25
D16A **Dana Ranch, Ca** 25.30 125 ⇑P P 09 25 28.5 -0.4
baz=25
H08A **Prairie City** 25.45 138 ⇑P P 09 25 30.9 +0.6
baz=25,SNR=10
D17A **Six Diamond Ra** 25.48 124 ⇑P P 09 25 29.7 -0.8
baz=25
E15A **Deer Lodge** 25.48 128 ⇓P P 09 25 28.7 -1.9
baz=25
F13A **Darby** 25.52 131 ⇑P P 09 25 30.7 -0.2
baz=26

H09A **Durkee** 25.59 137 ⇓P P 09 25 31.1 -0.4
baz=26
I07A **Izee** 25.64 140 ⇓P P 09 25 32.6 +0.6
baz=26,SNR=8.3
G12A **Big Creek, Yel** 25.83 133 ⇓P P 09 25 33.3 -0.4
baz=26
H10A **Noah's Angus R** 25.91 135 ⇓P P 09 25 35.0 +0.6
baz=26
H11A **Donnelly** 26.01 134 ⇓P P 09 25 33.0 -2.4
baz=26,SNR=8.8
E17A **Martinsdale** 26.02 125 ⇓P P 09 25 34.9 -0.5
baz=26
HUMO **Hull Mountain** 26.20 147 P P 09 25 34.3 -2.9
comp=Z,13nm,1.2s,mb4.3
E18A **Harlowton** 26.25 124 ⇑P P 09 25 37.6 +0.2
baz=26
F16A **Kennard Place,** 26.38 127 ⇓P P 09 25 38.1 -0.5
baz=26
DLMT **Dillon** 26.44 129 P P 09 25 34.4 -4.9
comp=Z,8.6nm,0.9s,mb4.3
BOZ **Bozeman (W)** 26.50 127 ⇓P P 09 25 39.6 -0.1
baz=26
BOZ **Bozeman (W)** 26.50 127 P P 09 25 37.9 -1.8
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
BOZ **Bozeman (W)** 26.50 127 P P 09 25 37.9 -1.8
comp=Z,2.0nm,0.8s,mb3.7
K05A **Sumner Lake** 26.57 143 ⇑P P 09 25 41.0 +0.6
baz=26,SNR=6.6
F17A **Fitzpatrick Pl** 26.58 125 ⇑P P 09 25 41.5 +1.0
baz=26
DGMT **Dagmar** 26.62 114 *e*P P 09 25 39.8 -1.1
comp=Z,16nm,0.7s,mb4.7
H13A **Challis** 26.66 132 ⇓P P 09 25 41.1 -0.1
baz=27
I11A **Placerville** 26.76 135 ⇑P P 09 25 40.8 -1.3
baz=27,SNR=5.9
J09A **Fry Pan Ranch,** 26.78 138 ⇓P P 09 25 42.1 -0.2
baz=27,SNR=9.2
H14A **Leadore** 26.88 130 ⇑P P 09 25 40.7 -2.5
baz=27
SEY **Seymchan** 27.01 294 *ce*P P 09 25 45.1 +0.9
YBH **Yreka Blue Hor** 27.09 147 P P 09 25 44.0 -1.1
comp=Z,0.4nm,0.7s,baz=342,slow=19,SNR=2.2
YBH LR LR 09 36 17.9
comp=Z,211nm,18.7s,baz=341,slow=36
I12A **Atlanta** 27.10 134 ⇓P P 09 25 46.1 +0.9
baz=27
I13A **Wildhorse Cree** 27.29 132 ⇓P P 09 25 46.0 -0.9
baz=27,SNR=5.6
WVOR **Wild Horse Val** 27.40 140 P P 09 25 45.0 -2.9
WVOR pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
WVOR **Wild Horse Val** 27.40 140 P P 09 25 45.0 -2.9
comp=Z,10nm,1.2s,mb4.2
LAO **LASA Array** 27.41 119 *e*P P 09 25 48.2 +0.3
comp=Z,13nm,1.0s,mb4.4
H16A **Russell Place,** 27.46 127 ⇓P P 09 25 47.6 -0.8
baz=27
G18A **Lazy EL Ranch,** 27.46 124 ⇑P P 09 25 47.5 -0.9
baz=27
I14A **Mackay** 27.48 131 ⇑P P 09 25 48.3 -0.2
baz=27,SNR=11
MOD **Modoc** 27.49 143 *e*P P 09 25 49.7 +1.1
comp=Z,10nm,0.7s,mb4.5
HLID **Hailey** 27.52 133 ⇓P P 09 25 48.5 -0.5
baz=28
HLID **Hailey** 27.52 133 *e*P P 09 25 49.6 +0.6
comp=Z,3.5nm,0.9s,mb4.0
K10A **MacKenzie Ranc** 27.55 137 ⇓P P 09 25 46.8 -2.4
baz=28,SNR=6.1
J12A **Stokes Ranch,** 27.61 134 ⇓P P 09 25 50.1 +0.3
baz=28
I15A **Monteview** 27.70 130 ⇓P P 09 25 51.9 +1.3
baz=28
K11A **Parker Ranch,** 27.79 136 ⇑P P 09 25 51.4 0.0
baz=28
I16A **Newdale** 28.13 128 ⇓P P 09 25 55.4 +1.0
baz=28,SNR=8.6
K12A **Draper Farm, C** 28.23 134 ⇓P P 09 25 55.9 +0.6
baz=28,SNR=6.5
WDC **Whiskeytown Da** 28.23 147 *e*P P 09 25 59.2 +3.9
WDC pmax pmax
comp=Z,14nm,1.4s,mb4.4
WDC **Whiskeytown Da** 28.23 147 *e*P P 09 25 59.2 +3.9
comp=Z,14nm,1.4s,mb4.4
J15A **Blackfoot** 28.26 130 ⇓P P 09 25 55.2 -0.4
baz=28
IMW **Indian Meadow** 28.28 128 *e*P P 09 25 57.5 +1.7
comp=Z,8.5nm,0.8s,mb4.4
L10A **Juniper Basin** 28.31 137 ⇑P P 09 25 56.9 +0.9
baz=28
ULM **Lac du Bonnet** 28.34 102 P P 09 25 56.1 -0.1
comp=Z,2.0nm,0.7s,mb3.9,baz=330,slow=9.4,SNR=2.6
ULM LR LR 09 37 53.1
comp=Z,78nm,18.6s,MS3.3,baz=299,slow=38
L11A **Cat Creek Ranc** 28.42 136 ⇓P P 09 25 58.2 +1.1
baz=28
K13A **Stover Farm, H** 28.46 133 ⇓P P 09 25 57.1 -0.2
baz=28,SNR=6.9
DCID1 **Drake Creek** 28.48 128 *e*P P 09 25 58.8 +1.3
comp=Z,16nm,0.8s,mb4.7
J16A **Bone** 28.63 129 ⇓P P 09 26 00.3 +1.4
baz=29
LOHW **Long Hollow** 28.64 127 *e*P P 09 25 57.5 -1.5
comp=Z,5.1nm,0.8s,mb4.3
TPAW **Teton Pass** 28.64 128 *e*P P 09 26 01.0 +2.0
comp=Z,5.8nm,1.0s,mb4.3
TPAW *e*PP PP 09 27 02.8 -0.6
RRI2 **Red Ridge** 28.66 129 *e*P P 09 26 01.3 +2.2
comp=Z,4.9nm,0.8s,mb4.3
SNOW **Snow King Moun** 28.73 128 *e*P P 09 26 01.8 +2.0
comp=Z,7.3nm,0.9s,mb4.4
REDW **Red Top Meadow** 28.79 128 *e*P P 09 25 58.5 -1.8
comp=Z,20nm,1.4s,mb4.7
M10A **I.L. Ranch, Tu** 28.81 138 ⇓P P 09 26 01.6 +1.1
baz=29
I18A **Diamond G Ranc** 28.82 126 ⇓P P 09 26 00.1 -0.4
baz=29
J17A **Brown Place, J** 28.83 128 ⇑P P 09 26 01.6 +1.0
baz=29
L13A **Double Diamond** 29.01 133 ⇑P P 09 26 01.2 -1.0
baz=29
J18A **Kendall Valley** 29.19 127 ⇓P P 09 26 04.9 +1.1
baz=29
TIXI **Tiksi** 29.37 320 *e*P P 09 26 05.0 -0.2
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TIXI **Tiksi** 29.37 320 *e*P P 09 26 03.4 -1.8
comp=Z,3.2nm,0.7s,mb4.2
BEKR **Beckwourth** 29.41 144 ⇓P P 09 26 06.7 +0.9
baz=29,SNR=7.7
FRB **Frobisher Bay** 29.44 60 P P 09 26 04.5 -1.3
comp=Z,2.1nm,0.5s,mb4.2,baz=305,slow=11,SNR=8.7
FRB LR LR 09 38 44.4
comp=Z,100nm,18.2s,MS3.5,baz=273,slow=38
M13A **Montello** 29.62 134 ⇑P P 09 26 08.4 +0.7
baz=30,SNR=10
K18A **Toltan Ranch,** 29.70 128 ⇓P P 09 26 07.6 -0.8
baz=30
BW06 **Boulder Array** 29.74 127 ⇓P P 09 26 09.4 +0.7
baz=30,SNR=8.3
BW06 **Boulder Array** 29.74 127 *e*P P 09 26 10.0 +1.4
comp=Z,8.6nm,1.1s,mb4.4
PDAR **Pinedale Array** 29.74 127 P P 09 26 09.6 +0.9
comp=Z,3.6nm,0.9s,mb4.1,baz=352,slow=6.0,SNR=22
L16A **Fish Haven** 29.83 130 ⇓P P 09 26 10.0 +0.4
baz=30
ELK **Elko** 29.89 136 P P 09 26 12.4 +2.4
comp=Z,2.4nm,0.9s,mb3.9,baz=344,slow=6.0,SNR=11
AGMN **Agassiz Refuge** 29.91 104 *e*P P 09 26 09.9 -0.3
comp=Z,4.9nm,0.8s,mb4.3
K19A **Absolon Red Bu** 29.91 126 ⇓P P 09 26 10.9 +0.7
baz=30
HWUT **Hardware Ranch** 30.16 131 *e*P P 09 26 15.6 +3.2
comp=Z,3.2nm,0.8s,mb4.1
K20A **Yellowstone Ra** 30.23 125 ⇑P P 09 26 12.8 -0.3
baz=30
N14A **Grayback Hills** 30.37 133 ⇓P P 09 26 14.9 +0.6
baz=30
O12A **Currie** 30.47 136 ⇑P P 09 26 15.8 +0.6
baz=30
N15A **Stansbury Isla** 30.53 132 ⇓P P 09 26 14.7 -1.1
baz=30,SNR=5.5
DUG **Dugway** 31.09 133 ⇓P P 09 26 20.8 +0.2
baz=31,SNR=14
DUG **Dugway** 31.09 133 *e*P P 09 26 22.0 +1.4
DUG pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
DUG **Dugway** 31.09 133 *e*P P 09 26 22.0 +1.4
comp=Z,10nm,1.1s,mb4.6
CMB **Columbia Colle** 31.15 145 *e*P P 09 26 28.5 +7.3
CMB pmax pmax
comp=Z,47nm,3.0s
CMB **Columbia Colle** 31.15 145 *e*P P 09 26 28.5 +7.3
comp=Z,47nm,3.0s
L21A **Rawlins** 31.17 125 ⇑P P 09 26 20.9 -0.4
baz=31
NVAR **Mina Array Bea** 31.26 142 P P 09 26 23.8 +1.6
comp=Z,5.8nm,0.7s,mb4.5,baz=337,slow=7.8,SNR=44
Q10A **Clear Creek Ra** 31.37 139 ⇓P P 09 26 24.4 +1.3
baz=31
P13A **Bates Ranch, G** 31.43 136 ⇑P P 09 26 24.5 +0.9
baz=31
Q11A **Duckwater** 31.55 138 ⇑P P 09 26 25.2 +0.5
baz=32,SNR=7.0
N19A **John Jarvie Ra** 31.55 128 ⇓P P 09 26 24.2 -0.5
baz=32
P14A **Drum Mountains** 31.57 134 ⇑P P 09 26 25.5 +0.6
baz=32,SNR=9.5
PETK **Petropavlovsk-** 31.64 275 P P 09 26 27.1 +1.7
comp=Z,2.4nm,0.7s,mb4.1,baz=77,slow=11,SNR=5.7
PETK LR LR 09 42 24.9
comp=Z,92nm,18.6s,MS3.5,baz=296,slow=42
O17A **Robinson Place** 31.70 131 ⇑P P 09 26 27.0 +1.0
baz=32
N20A **Spence Gulch,** 31.90 127 ⇑P P 09 26 28.7 +0.9
baz=32
R10A **Warm Springs** 31.90 139 ⇓P P 09 26 28.5 +0.7
baz=32
EYMN **Ely** 31.91 100 *e*P P 09 26 27.1 -0.7
comp=Z,5.9nm,0.6s,mb4.6
R11A **Troy Canyon, C** 32.03 138 ⇓P P 09 26 28.5 -0.5
baz=32
Q14A **Sevier Lake (B** 32.07 135 ⇓P P 09 26 26.9 -2.4
baz=32,SNR=5.1
S10A **Tonopah Range,** 32.17 140 ⇓P P 09 26 29.4 -0.8
baz=32,SNR=12
SUMG **Summit** 32.32 33 *e*P P 09 26 30.6 -0.6
SUMG pmax pmax
comp=Z,5.0nm,0.6s
SUMG **Summit** 32.32 33 *e*P P 09 26 30.6 -0.6
comp=Z,5.0nm,0.6s,mb4.5
P18A **Preston Nutter** 32.38 130 ⇓P P 09 26 32.5 +0.6
baz=32,SNR=9.2
SRU **San Rafael** 32.77 131 ⇑P P 09 26 35.9 +0.6
baz=33
SRU **San Rafael** 32.77 131 *e*P P 09 26 35.4 0.0
SRU pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SRU **San Rafael** 32.77 131 *e*P P 09 26 35.4 0.0
comp=Z,2.5nm,0.6s,mb4.3
MSU **Marysvale** 32.83 134 *e*P P 09 26 38.0 +2.1
MSU pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MSU **Marysvale** 32.83 134 *e*P P 09 26 38.0 +2.0
comp=Z,6.2nm,1.1s,mb4.5
SFJD **Kangerlussuaq** 33.04 46 ⇓*i*P P 09 26 36.7 -0.8
SFJD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SFJD **Kangerlussuaq** 33.04 46 ⇓*i*P P 09 26 36.7 -0.8
comp=Z,9.5nm,0.8s,mb4.8
T11A **Corn Creek, Al** 33.17 139 ⇑P P 09 26 39.3 +0.3
baz=33
S13A **Holt Ranch, En** 33.22 137 ⇓P P 09 26 40.4 +1.0
baz=33
R16A **Teasdale** 33.24 133 ⇑P P 09 26 40.2 +0.7
baz=33
S14A **Cedar City** 33.25 135 ⇓P P 09 26 40.3 +0.7
baz=33
R17A **Hanksville Air** 33.35 132 ⇑P P 09 26 41.3 +0.8
baz=33
CCUT **Cedar City** 33.39 136 *e*P P 09 26 42.2 +1.4
comp=Z,5.3nm,0.9s,mb4.5
ECSD **EROS Data Cent** 33.44 110 *e*P P 09 26 41.8 +0.6
comp=Z,2.9nm,0.8s,mb4.3
ISCO **Idaho Springs** 33.70 124 *e*P P 09 26 41.2 -2.3
ISCO pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
ISCO **Idaho Springs** 33.70 124 *e*P P 09 26 41.2 -2.3
comp=Z,5.8nm,1.2s,mb4.4
MPMC **Manual Prospec** 33.71 142 ⇓P P 09 26 45.5 +1.8
baz=34
T13A **Saint George** 33.73 137 ⇓P P 09 26 44.4 +0.6
baz=34,SNR=7.8
ISA **Isabella** 33.86 144 ⇑P P 09 26 46.9 +2.0
baz=34
ISA **Isabella** 33.86 144 *e*P P 09 26 48.7 +3.8
ISA pmax pmax
comp=Z,12nm,1.4s,mb4.6
ISA **Isabella** 33.86 144 *e*P P 09 26 48.7 +3.8
comp=Z,12nm,1.4s,mb4.6
SHPR **Sheep Range** 33.88 139 *e*P P 09 26 48.7 +3.6
T14A **Hurricane** 33.92 136 ⇓P P 09 26 46.5 +1.0
baz=34,SNR=5.4
S17A **Black Ridge (B** 34.05 132 ⇑P P 09 26 46.7 +0.1
baz=34
T15A **Red Dirt Ranch** 34.16 135 ⇑P P 09 26 47.6 0.0
baz=34
SHOC **Shoshone** 34.17 141 ⇓P P 09 26 47.5 -0.1
baz=34,SNR=9.1
S18A **Hurst Farm, Bl** 34.23 131 ⇑P P 09 26 49.1 +0.9
baz=34
PV01 **Paradox Valley** 34.26 129 *e*P P 09 26 46.1 -2.3
comp=Z,222nm,0.8s
U13A **Pakoon Wash** 34.29 137 ⇑P P 09 26 49.6 +1.0
baz=34,SNR=6.4
V11A **Goodsprings** 34.44 140 ⇑P P 09 26 50.8 +0.8
baz=34
U14A **Mt Trumbull** 34.50 136 ⇑P P 09 26 51.6 +1.1
baz=34
GSC **Goldstone** 34.60 142 ⇑P P 09 26 52.2 +0.9
baz=35,SNR=6.7
GSC **Goldstone** 34.60 142 *e*P P 09 26 55.8 +4.4
GSC pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
GSC **Goldstone** 34.60 142 *e*P P 09 26 55.8 +4.4
comp=Z,6.4nm,0.9s,mb4.5
T17A **Navajo Res., N** 34.64 133 ⇓P P 09 26 52.5 +0.8
baz=35
TUQ **Turquoise Moun** 34.70 141 ⇑P P 09 26 52.9 +0.7
baz=35
T18A **Mexican Hat** 34.78 132 ⇓P P 09 26 54.3 +1.4
baz=35
U17A **Shonto** 35.05 133 ⇓P P 09 26 56.0 +0.8
baz=35,SNR=6.4
MWC **Mount Wilson** 35.33 144 *e*P P 09 27 02.1 +4.4
MWC pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MWC **Mount Wilson** 35.33 144 *e*P P 09 27 02.1 +4.4
comp=Z,5.9nm,0.8s,mb4.6
U18A **Rough Rock, Ch** 35.45 132 ⇓P P 09 26 59.3 +0.7
baz=35
U19A **Dine' College,** 35.77 131 ⇑P P 09 27 02.2 +0.8
baz=36
WUAZ **Wupatki** 35.85 134 *e*P P 09 27 05.8 +3.6
comp=Z,4.4nm,0.8s,mb4.4
V17A **Tonalea, Kykot** 35.92 134 ⇓P P 09 27 03.8 +1.1
baz=36,SNR=7.4
V18A **Ganado** 36.09 133 ⇑P P 09 27 04.8 +0.7
baz=36
SCHQ **Schefferville** 36.30 71 P P 09 27 04.3 -1.4
comp=Z,3.6nm,0.9s,mb4.3,baz=302,slow=11,SNR=5.0
SCHQ LR LR 09 43 37.5
comp=Z,60nm,19.2s,MS3.4,baz=9.1,slow=39
SCHQ **Schefferville** 36.30 71 *e*P P 09 27 03.0 -2.8
comp=Z,22nm,1.4s,mb4.9
Y13A **Salome** 36.78 139 ⇑P P 09 27 10.9 +0.8
baz=37,SNR=5.3
W19A **Sanders** 36.81 132 ⇓P P 09 27 11.6 +1.4
baz=37
MONP **Monument Peak** 36.99 143 ⇓P P 09 27 12.4 +0.4
baz=37
Y15A **Casa Rosa Ranc** 37.05 137 ⇓P P 09 27 13.1 +0.7
baz=37,SNR=7.0
U26A **Atchley Ranch,** 37.40 124 ⇑P P 09 27 15.8 +0.5
baz=37
Z13A **Yuma Proving G** 37.40 139 ⇓P P 09 27 16.2 +0.9
baz=37
ANMO **Albuquerque** 37.85 129 P P 09 27 19.0 -0.1
ANMO pmax pmax
comp=Z,2.0nm,0.7s
ANMO **Albuquerque** 37.85 129 P P 09 27 19.0 -0.1
comp=Z,2.1nm,0.7s,mb4.0
X21A **Alamocita Cree** 37.91 131 ⇑P P 09 27 20.8 +1.2
baz=38,SNR=6.9

Y19A	**Nutrioso**	37.92	133	⇓P		P	09 27 20.3	+0.5
	baz=38							
V26A	**Tequesquite Ra**	37.93	125	⇓P		P	09 27 20.7	+0.9
	baz=38							
Y20A	**Horse Springs,**	38.23	132	⇑P		P	09 27 23.5	+1.2
	baz=38							
Y21A	**Point of Rocks**	38.35	131	⇓P		P	09 27 23.7	+0.4
	baz=38							
Y22A	**Socorro**	38.63	130	⇓P		P	09 27 27.1	+1.3
	baz=39							
W27A	**Bowe Ranch, En**	38.84	124	⇓P		P	09 27 28.6	+1.2
	baz=39							
Z20A	**Nine Sixteen R**	38.90	132	⇑P		P	09 27 29.0	+1.0
	baz=39,SNR=5.5							
HDIL	**Hopedale**	38.96	105	P		P	09 27 26.2	-2.3
	comp=Z,10nm,0.7s,mb4.7							
119A	**Ashpeak Ranch,**	39.02	133	⇑P		P	09 27 30.6	+1.6
	baz=39							
216A	**Three Points,**	39.13	137	⇑P		P	09 27 30.6	+0.7
	baz=39							
121A	**Cookes Peak, D**	39.69	132	⇑P		P	09 27 35.5	+1.0
	baz=40							
219A	**White Tail Can**	39.75	134	⇓P		P	09 27 36.2	+1.1
	baz=40							
Z25A	**Roswell**	39.94	127	⇑P		P	09 27 37.3	+0.6
	baz=40							
Z26A	**Caprock**	40.18	127	⇑P		P	09 27 39.6	+0.9
	baz=40							
WMOK	**Wichita Mounta**	40.59	120	P		P	09 27 37.2	-4.8
WMOK				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.1							
WMOK	**Wichita Mounta**	40.59	120	P		P	09 27 37.2	-4.8
	comp=Z,5.2nm,0.9s,mb4.2							
GDL2	**Guadalupe Moun**	41.05	128	*e*P		P	09 27 39.7	-6.1
226A	**Malaga, Loving**	41.26	127	⇓P		P	09 27 47.8	+0.2
	baz=41							
YSS	**Yuzh-Sakhalins**	42.42	281	*e*P		sP	09 28 08.9	+7.7
527A	**Woodward Ranch**	43.19	128	⇓P		P	09 28 04.3	+1.0
	baz=43							
WVT	**Waverly**	43.38	107	*e*P		P	09 28 03.5	-1.3
WVT				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.5							
WVT	**Waverly**	43.38	107	*e*P		P	09 28 03.5	-1.3
	comp=Z,8.7nm,0.9s,mb4.5							
626A	**Big Bend Ranch**	43.58	129	⇑P		P	09 28 07.8	+1.4
	baz=44							
BOD	**Bodaibo**	43.71	311	*e*P		P	09 28 06.4	-0.8
BOD				*e*			09 28 11.5	
BOD				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.3							
BOD				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.6							
KEV	**Kevo**	43.77	5	*e*P		P	09 28 06.8	-0.8
KEV				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.0							
KEV	**Kevo**	43.77	5	*e*p		P	09 28 06.8	-0.8
	comp=Z,1.2nm,0.3s,mb4.1							
627A	**Terlingua Ranc**	43.91	128	⇓P		P	09 28 09.9	+0.8
	baz=44							
TXAR	**Lajitas Array**	43.93	128	P		P	09 28 10.4	+1.1
	comp=Z,1.5nm,0.9s,mb3.7,baz=343,slow=6.2,SNR=11							
TXAR				LR		LR	09 46 52.7	
	comp=Z,234nm,19.0s,MS4.1,baz=0.0,slow=37							
ARCES	**ARCESS Array B**	43.93	6	P		P	09 28 08.7	-0.2
	comp=Z,2.6nm,0.5s,mb4.2,baz=10,slow=7.4,SNR=13							
JCT	**Junction City**	44.12	123	P		P	09 28 07.9	-2.9
JCT				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.5							
JCT	**Junction City**	44.12	123	P		P	09 28 07.9	-2.9
	comp=Z,8.9nm,0.8s,mb4.5							
OXF	**Oxford**	44.20	109	P		P	09 28 10.2	-1.3
OXF				pmax		pmax		
	comp=Z,51nm,0.9s,mb5.2							
OXF	**Oxford**	44.20	109	P		P	09 28 10.2	-1.3
	comp=Z,51nm,0.9s,mb5.3							
PLAL	**Pickwick Lake**	44.29	108	*e*P		P	09 28 09.1	-3.1
	comp=Z,9.9nm,1.0s,mb4.5							
ASAJ	**Asahikawa**	44.83	279	LR		LR	09 48 06.6	
	comp=Z,68nm,19.1s,MS3.6,baz=160,slow=38							
JSC	**Jenkinsville**	47.55	101	P		P	09 28 35.8	-2.1
MDJ	**Mudanjiang**	49.44	290	P		P	09 28 49.4	-2.9
MDJ				pP		pP	09 28 55.8	+0.4
MDJ				sP		sP	09 28 58.4	+1.7
MDJ				PP		PP	09 30 41.8	-4.3
MDJ				S		S	09 35 55.4	-3.6
MDJ				ScS		ScS	09 38 36.0	-7.6
MDJ				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.6							
MDJ				pmax		pmax		
	comp=Z,47nm,5.4s							
MDJ				LR		LR		
	comp=N,170nm,13.4s,MS4.3							
MDJ				LR		LR		
	comp=E,87nm,13.8s,MS4.3							
MDJ				LR		LR		
	comp=Z,210nm,15.1s,MS4.3							
JOF	**Joensuu**	50.76	4	*e*P		P	09 29 02.8	+0.8
JOF				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.2							
JOF	**Joensuu**	50.76	4	*e*p		P	09 29 02.8	+0.8
	comp=Z,1.1nm,0.3s,mb4.3							
NB2	**NORSAR Subarra**	51.23	16	P		P	09 29 05.0	-0.6
	comp=Z,1.2nm,0.6s,mb4.0,baz=348,slow=7.9							
NOA	**NORSAR Array B**	51.23	16	P		P	09 29 05.3	-0.3
	comp=Z,4.6nm,1.0s,mb4.4,baz=347,slow=7.6,SNR=5.8							
NOA				LR		LR	09 51 07.8	
	comp=Z,31nm,20.6s,MS3.3,baz=340,slow=37							
FINES	**FINESS Array B**	52.04	7	P		P	09 29 11.2	-0.5
	comp=Z,3.0nm,0.4s,mb4.5,baz=1.7,slow=8.0,SNR=19							
KLMR	**Klimovskoe**	52.91	359	*e*P		P	09 29 17.2	-0.9
KLMR				pmax		pmax		
	comp=Z,40nm,1.4s,mb5.2							
MJAR	**Matsushiro Arr**	53.03	278	P		P	09 29 21.6	+2.3
	comp=Z,0.3nm,0.4s,mb3.6,baz=20,slow=7.1,SNR=2.3							
MJAR				LR		LR	09 52 12.0	
	comp=Z,49nm,21.0s,MS3.5,baz=260,slow=36							
NVS	**Novosibirsk**	54.21	329	*e*P		P	09 29 27.2	-0.5
ESK	**Eskdalemuir**	54.61	27	*i* P		P	09 29 30.9	+0.3
SONM	**Songino Array**	54.65	310	P		P	09 29 32.5	+1.5
	comp=Z,2.5nm,1.0s,mb4.2,baz=29,slow=6.6,SNR=2.6							
SONM				LR		LR	09 54 02.0	
	comp=Z,140nm,18.6s,MS4.1,baz=289,slow=37							
ZALV	**Zalesovo Beam**	54.72	328	P		P	09 29 31.4	+0.1
	comp=Z,1.7nm,0.4s,mb4.4,baz=24,slow=8.1,SNR=8.0							
ZALV				LR		LR	09 54 58.5	
	comp=Z,50nm,19.6s,MS3.6,baz=51,slow=38							
VSU	**Vasula**	55.05	7	*ce*P		P	09 29 33.6	-0.1
VSU				pmax		pmax		
	comp=Z,21nm,0.9s,mb5.2							
SVE	**Sverdlovsk**	55.77	345	⇓*e*P		P	09 29 40.3	+1.3
SVE				pmax		pmax		
	comp=Z,17nm,1.0s,mb5.0							
KSRS	**Korea Array**	56.26	287	P		P	09 29 45.8	+3.0
	comp=Z,0.3nm,0.3s,mb3.8,baz=23,slow=7.6,SNR=2.8							
KSRS				LR		LR	09 58 02.2	
	comp=Z,107nm,18.8s,MS4.0,baz=15,slow=40							
ARU	**Arti**	56.37	346	*d i*P		P	09 29 43.9	+0.7
ARU				*e*			09 31 45.9	
ARU				S		S	09 37 37.4	+4.3
ARU				SS		SS	09 41 16.4	-2.7
ARU				pmax		pmax		
	comp=Z,18nm,1.7s,mb4.8							
ARU	**Arti**	56.37	346	*e*P		P	09 29 41.7	-1.6
	comp=Z,7.5nm,0.8s,mb4.8							
BRVK	**Borovoye**	58.22	338	P		P	09 29 56.6	+0.2
BRVK				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
BRVK	**Borovoye**	58.22	338	P		P	09 29 56.5	+0.2
	comp=Z,6.0nm,0.8s,mb4.7							
BVAR	**Borovoye Array**	58.24	338	P		P	09 29 57.2	+0.7
	comp=Z,2.6nm,0.6s,mb4.5,baz=37,slow=6.1,SNR=16							
BVAR	**Borovoye Array**	58.24	338	P		P	09 29 57.2	+0.7
BVAR	**Borovoye Array**	58.24	338	P		P	09 29 57.2	+0.8
BJI	**Beijing**	58.33	298	P		P	09 29 54.3	-3.0
BJI				PP		PP	09 32 03.3	-2.6
BJI				S		S	09 37 55.3	-4.0
BJI				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.1							
BJI				pmax		pmax		
	comp=Z,31nm,3.6s							
BJI				LR		LR		
	comp=N,190nm,20.0s,MS4.5							
BJI				LR		LR		
	comp=E,280nm,18.3s,MS4.5							
BJI				LR		LR		
	comp=Z,76nm,21.8s,MS3.8							
OBN	**Obninsk**	58.67	1	*e*P		P	09 30 00.3	+0.8
OBN				pmax		pmax		
	comp=Z,24nm,1.2s,mb5.1							
KURK	**Kurchatov**	59.03	331	P		P	09 30 02.8	+0.7
	comp=Z,3.4nm,1.0s,mb4.3,baz=15,slow=6.4,SNR=8.3							
KURK				LR		LR	09 58 01.9	
	comp=Z,72nm,19.9s,MS3.8,baz=285,slow=39							
KURK	**Kurchatov**	59.03	331	*ce*P		P	09 30 02.1	+0.1
KURK				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.4							
KURK	**Kurchatov**	59.03	331	P		P	09 29 58.7	-3.4
	comp=Z,9.4nm,1.3s,mb4.7							
KURK				LR		LR	09 58 01.9	
MEM	**Membach**	60.70	23	P		P	09 30 13.7	+0.2
	comp=Z,8.2nm,1.2s,mb4.7							
BAIF	**Baives**	60.95	24	*e*P		P	09 30 15.1	-0.1
	comp=Z,7.4nm,0.6s,mb4.7							
BAIF	**Baives**	60.95	24	*e*P		P	09 30 15.1	-0.1
BAIF				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.7							
BAIF	**Baives**	60.95	24	*e*P		P	09 30 15.1	-0.1
	comp=Z,3.7nm,0.6s,mb4.7							
DOU	**Dourbes**	60.98	24	P		P	09 30 13.4	-2.0
	comp=Z,5.6nm,1.7s,mb4.4							
CLL	**Collm**	60.98	18	⇓*i*P		P	09 30 15.1	-0.3
CLL				pmax		pmax		
	comp=Z,9.0nm,1.3s,mb4.7							
CLL	**Collm**	60.98	18	⇓*i*P		P	09 30 15.1	-0.3
	comp=Z,9.0nm,1.3s,mb4.7							
CLL	**Collm**	60.98	18	⇓*i*P		P	09 30 15.1	-0.3
	comp=Z,9.0nm,1.3s,mb4.7							
CLL				*i* PcP		PcP	09 30 58.9	+0.3
GIVF	**Givet**	61.01	24	*e*P		P	09 30 15.4	-0.2
FLN	**La Foliniere**	61.38	28	*e*P		P	09 30 17.3	-0.8
	comp=Z,10nm,0.5s,mb4.9							
FLN				*e*MLR		MLR		
	comp=Z,98nm,22.0s,MS3.6							
FLN	**La Foliniere**	61.38	28	*e*P		P	09 30 17.3	-0.8
FLN				pmax		pmax		
	comp=Z,5.0nm,0.5s,mb4.9							
FLN				MLR		MLR		
	comp=Z,100nm,22.0s,MS3.9							
FLN	**La Foliniere**	61.38	28	*e*P		P	09 30 17.3	-0.8
	comp=Z,5.2nm,0.5s,mb4.9							
FLN				LR		LR		
	comp=Z,100nm,22.0s,MS3.9							
MOX	**Moxa**	61.46	19	*e*P		P	09 30 19.1	+0.5
	comp=Z,13nm,1.1s,mb5.0							
MOX	**Moxa**	61.46	19	*e*P		P	09 30 19.1	+0.5
MOX				pmax		pmax		
	comp=Z,13nm,1.1s,mb5.0							
SGMF	**Saint Gilles**	61.47	30	*e*P		P	09 30 18.1	-0.6
BRG	**Berggiesshubel**	61.52	17	*e*P		P	09 30 19.3	+0.3
	comp=Z,8.0nm,1.0s,mb4.8							
BRG	**Berggiesshubel**	61.52	17	*e*P		P	09 30 19.3	+0.2
BRG				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.6							
LDF	**La Druitiere**	61.61	28	*e*P		P	09 30 18.9	-0.8
	comp=Z,6.0nm,0.5s,mb4.7							
LDF	**La Druitiere**	61.61	28	*e*P		P	09 30 18.9	-0.8
LDF				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.7							
LDF	**La Druitiere**	61.61	28	*e*P		P	09 30 18.9	-0.8
	comp=Z,3.0nm,0.5s,mb4.7							
GRR	**Gorron**	61.66	28	*e*P		P	09 30 19.5	-0.6
	comp=Z,12nm,0.7s,mb4.8							
GRR	**Gorron**	61.66	28	*e*P		P	09 30 19.5	-0.6
GRR				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.8							
GRR	**Gorron**	61.66	28	*e*P		P	09 30 19.5	-0.6
	comp=Z,5.8nm,0.7s,mb4.8							
NKC	**Novy Kostel**	61.97	18	*e*P		P	09 30 22.3	+0.2
NKC	**Novy Kostel**	61.97	18	*e*P		P	09 30 22.3	+0.2
MKAR	**Makanchi Array**	62.00	327	P		P	09 30 21.5	-0.8
	comp=Z,0.3nm,0.5s,mb3.7,baz=35,slow=7.9,SNR=3.0							
MKAR				LR		LR	10 01 19.2	
	comp=Z,56nm,18.1s,MS3.8,baz=211,slow=40							
UPC	**Upice**	62.11	16	*e*P		P	09 30 23.3	+0.3
UPC	**Upice**	62.11	16	*e*P		P	09 30 23.3	+0.3
DPC	**Dobruska-Polom**	62.30	15	*e*P		P	09 30 24.8	+0.5
DPC	**Dobruska-Polom**	62.30	15	*e*P		P	09 30 24.8	+0.5
GRA1	**Grafenberg Arr**	62.34	19	*e*P		P	09 30 25.0	+0.4
	comp=Z,11nm,1.3s,mb4.8							
GRF	**Grafenberg Arr**	62.34	19	*e*P		P	09 30 25.0	+0.4
	comp=Z,11nm,1.3s,mb4.8							
GRF	**Grafenberg Arr**	62.34	19	*e*P		P	09 30 25.0	+0.4
GRF				pmax		pmax		
	comp=Z,11nm,1.3s,mb4.8							
GRF	**Grafenberg Arr**	62.34	19	*e*P		P	09 30 25.0	+0.4
GRF				pmax		pmax		
	comp=Z,11nm,1.3s,mb4.8							
PRU	**Pruhonice**	62.46	17	*e*P		P	09 30 26.0	+0.6
PRU	**Pruhonice**	62.46	17	*e*P		P	09 30 26.0	+0.6
OJC	**Ojcow**	62.77	13	*e*P		P	09 30 27.3	-0.1
AKASG	**Malin Array Be**	62.91	6	P		P	09 30 27.9	-0.5
	comp=Z,2.5nm,0.5s,mb4.6,baz=355,slow=6.6,SNR=18							
KIEV	**Kiev**	62.92	6	*e*P		P	09 30 26.2	-2.2
KIEV				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.9							
KIEV	**Kiev**	62.92	6	*e*P		P	09 30 26.2	-2.2
	comp=Z,6.9nm,0.7s,mb4.9							
MORC	**Moravsky Berou**	62.99	15	*e*P		P	09 30 25.0	-3.9
	comp=Z,2.5nm,0.8s,mb4.4							
MORC	**Moravsky Berou**	62.99	15	⇑*i*P		P	09 30 29.6	+0.7
OKC	**Ostrava-Krasne**	62.99	14	*e*P		P	09 30 28.1	-0.8
OKC	**Ostrava-Krasne**	62.99	14	*e*P		P	09 30 28.1	-0.8
CDF	**Champ du Feu**	63.03	22	*e*P		P	09 30 29.4	+0.2
KHC	**Kasperske Hory**	63.19	18	*e*P		P	09 30 30.9	+0.6
KHC	**Kasperske Hory**	63.19	18	*e*P		P	09 30 30.2	0.0
	comp=Z,6.3nm,1.1s,mb4.7							
KHC	**Kasperske Hory**	63.19	18	*e*P		P	09 30 30.9	+0.6
ECH	**Echery**	63.21	22	P		P	09 30 29.8	-0.6
ECH				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.8							
ECH	**Echery**	63.21	22	P		P	09 30 29.8	-0.6
	comp=Z,9.4nm,1.2s,mb4.8							
HAU	**Haudompre**	63.28	23	*e*P		P	09 30 30.7	-0.2
HAU				*e*MLR		MLR		
	comp=Z,55nm,21.2s,MS3.4							
HAU	**Haudompre**	63.28	23	*e*P		P	09 30 30.7	-0.2
HAU				LR		LR		
	comp=Z,50nm,21.3s,MS3.7							
GERES	**GERESS Array B**	63.49	18	P		P	09 30 32.6	+0.4
	comp=Z,2.2nm,0.7s,mb4.4,baz=345,slow=4.7,SNR=16							
MFF	**Saint Martin d**	63.52	28	*e*P		P	09 30 32.2	-0.3
	comp=Z,12nm,0.7s,mb4.8							
MFF	**Saint Martin d**	63.52	28	*e*P		P	09 30 32.2	-0.3
MFF				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.8							
MFF	**Saint Martin d**	63.52	28	*e*P		P	09 30 32.2	-0.3
	comp=Z,6.3nm,0.6s,mb4.8							
HINF	**Hinteralfeld**	63.55	23	*e*P		P	09 30 32.4	-0.2
	comp=Z,4.1nm,0.6s,mb4.3							
HINF	**Hinteralfeld**	63.55	23	*e*P		P	09 30 32.4	-0.2
HINF				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
HINF	**Hinteralfeld**	63.55	23	*e*P		P	09 30 32.4	-0.2
	comp=Z,2.0nm,0.6s,mb4.3							
WMQ	**Urumqi**	63.55	322	*e*P		P	09 30 36.3	+3.6
WMQ				LR		LR		
	comp=Z,73nm,21.0s,MS3.8							
LOR	**Lormes**	63.59	25	*e*P		P	09 30 32.6	-0.4
	comp=Z,7.5nm,0.6s,mb4.6							
LOR				*e*MLR		MLR		
	comp=Z,70nm,20.5s,MS3.5							
LOR	**Lormes**	63.59	25	*e*P		P	09 30 32.6	-0.4
LOR				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
LOR				MLR		MLR		
	comp=Z,70nm,20.5s,MS3.8							
LOR	**Lormes**	63.59	25	*e*P		P	09 30 32.6	-0.4
	comp=Z,3.8nm,0.6s,mb4.6							
LOR				LR		LR		
	comp=Z,70nm,20.5s,MS3.8							
STHS	**Stebnicka Huta**	63.69	12	*e*P		P	09 30 34.9	+1.3
STHS				pmax		pmax		
	comp=Z,10.0nm,1.4s,mb4.7							
STHS	**Stebnicka Huta**	63.69	12	*e*P		P	09 30 34.9	+1.3
SSF	**Saint Saulge**	63.73	25	*e*P		P	09 30 33.7	-0.2
	comp=Z,13nm,0.8s,mb4.7							
SSF	**Saint Saulge**	63.73	25	*e*P		P	09 30 33.7	-0.2
SSF				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
SSF	**Saint Saulge**	63.73	25	*e*P		P	09 30 33.7	-0.2
	comp=Z,6.3nm,0.8s,mb4.7							
AVF	**Avril sur Loir**	63.97	26	*e*P		P	09 30 35.0	-0.4
	comp=Z,7.8nm,0.7s,mb4.5							
AVF	**Avril sur Loir**	63.97	26	*e*P		P	09 30 35.0	-0.4
AVF				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
AVF	**Avril sur Loir**	63.97	26	*e*P		P	09 30 35.0	-0.4
	comp=Z,3.9nm,0.7s,mb4.5							
SMF	**Signal de Mont**	64.19	25	*e*P		P	09 30 36.2	-0.7
KOLS	**Kolonicke sedl**	64.25	11	*e*P		P	09 30 38.1	+0.8
KOLS				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.5							
KOLS	**Kolonicke sedl**	64.25	11	*e*P		P	09 30 38.1	+0.8
TCF	**Toulx Ste Croi**	64.25	27	*e*P		P	09 30 36.8	-0.5
	comp=Z,9.0nm,0.8s,mb4.6							
TCF	**Toulx Ste Croi**	64.25	27	*e*P		P	09 30 36.8	-0.5
TCF				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.6							
TCF	**Toulx Ste Croi**	64.25	27	*e*P		P	09 30 36.8	-0.5
	comp=Z,4.5nm,0.8s,mb4.5							
GTA	**Gaotai**	64.30	311	*e*P		P	09 30 38.8	+1.1
GTA				pP		pP	09 30 48.8	+7.9
GTA				sP		sP	09 30 53.0	+11
GTA				PP		PP	09 33 04.4	+5.8
GTA				S		S	09 39 17.3	+2.1
GTA				pmax		pmax		
	comp=Z,3.0nm,1.1s,mb4.2							
GTA				pmax		pmax		
	comp=Z,44nm,5.0s							
GTA				LR		LR		
	comp=N,450nm,17.5s,MS4.9							
GTA				LR		LR		
	comp=E,460nm,16.9s,MS4.9							
GTA				LR		LR		
	comp=Z,87nm,17.0s,MS4.0							
VYHS	**Vyhne**	64.39	14	*e*P		P	09 30 38.6	+0.4
VYHS				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb4.5							
VYHS	**Vyhne**	64.39	14	*e*P		P	09 30 38.6	+0.4
NJ2	**Nanjing**	64.47	292	*e*P		P	09 30 40.4	+1.4
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb5.0							
ZST	**Bratislava**	64.51	15	*e*P		P	09 30 40.3	+1.3
ZST				pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.7							
ZST	**Bratislava**	64.51	15	*e*P		P	09 30 40.3	+1.3
KECS	**Kecovo**	64.55	13	*e*P		P	09 30 39.8	+0.6
KECS				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.4							
KECS	**Kecovo**	64.55	13	*e*P		P	09 30 39.8	+0.6
CABF	**La Chapelle**	64.60	24	*e*P		P	09 30 39.7	+0.1
	comp=Z,24nm,1.0s,mb4.9							
CABF	**La Chapelle**	64.60	24	*e*P		P	09 30 39.7	+0.1
CABF				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.9							
CABF	**La Chapelle**	64.60	24	*e*P		P	09 30 39.7	+0.1
	comp=Z,12nm,1.0s,mb4.9							
PSZ	**Piszkesteto**	65.06	13	P		P	09 30 42.6	0.0
	comp=Z,18nm,1.2s,mb5.0							
PSZ	**Piszkesteto**	65.06	13	⇓*i*P		P	09 30 43.3	+0.8
TRPA	**Tarpa**	65.07	11	⇑*i*P		P	09 30 43.4	+0.8
RJF	**Les Rejaudoux**	65.08	27	*e*P		P	09 30 42.3	-0.4
RJF				*e*MLR		MLR		
	comp=Z,66nm,22.2s,MS3.5							
RJF	**Les Rejaudoux**	65.08	27	*e*P		P	09 30 42.3	-0.4
RJF				LR		LR		
	comp=Z,70nm,22.3s,MS3.8							
LFF	**La Frestale**	65.28	28	*e*P		P	09 30 43.7	-0.4
CAF	**Calviac**	65.54	27	*e*P		P	09 30 45.3	-0.4
	comp=Z,5.2nm,0.6s,mb4.4							
CAF	**Calviac**	65.54	27	*e*P		P	09 30 45.3	-0.4
CAF				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
CAF	**Calviac**	65.54	27	*e*P		P	09 30 45.3	-0.4
	comp=Z,2.6nm,0.6s,mb4.4							
BUR08	**Bucovina Ar. S**	65.75	9	*e*P		P	09 30 45.0	-2.0
BURAR	**Bucovina Array**	65.78	9	⇓P		P	09 30 48.0	+0.8
BURAR	**Bucovina Array**	65.78	9	⇓*i*P		P	09 30 48.0	+0.8
OBKA	**Obir**	65.89	17	⇓*i*P		P	09 30 48.3	+0.4
	comp=Z,25nm,0.8s,mb5.3							
ORIF	**Oris-en-Rattie**	66.21	24	*e*P		P	09 30 50.0	0.0
ORIF				*e*MLR		MLR		
	comp=Z,65nm,21.8s,MS3.5							
BZS	**Buzias**	67.50	12	⇑P		P	09 30 58.7	+0.5
BZS	**Buzias**	67.50	12	⇑*i*P		P	09 30 58.7	+0.5
AAK	**Ala-Archa**	67.58	332	LR		LR	10 03 10.4	
	comp=Z,87nm,21.0s,MS4.0,baz=209,slow=38							
AAK	**Ala-Archa**	67.58	332	*ce*P		P	09 31 01.1	+2.3
AAK				pmax		pmax		
	comp=Z,1.0nm,1.2s,mb3.7							
EKS2	**Erkin-Say**	67.69	332	*e*P		P	09 30 58.9	-0.6
EKS2				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.7							
EKS2	**Erkin-Say**	67.69	332	*e*P		P	09 30 58.9	-0.6
	comp=Z,

comp=Z,62nm,19.0s,MS4.0,baz=40,slow=38
LPAZ La Paz 98.61 111 LR LR 10 20 39.4
comp=Z,52nm,18.6s,MS4.0,baz=90,slow=37

*ISK **17** 09:35:17.6, 36.96N×29.25E, h5km, MD3.0*
*ISCJB **17** 09:35:18.7±0.5, 36.97N±0.03×29.24E±0.03, h4km±5km, Error ellipse: s-maj=4.7km s-min=3.9km az=150.5*
*CSEM **17** 09:35:18.8±0.2, 36.98N×29.24E, h8km, MD3.0, Error ellipse: s-maj=3.6km s-min=3.1km az=179.0*
*DDA **17** 09:35:19.5, 37.06N×29.19E, h7km±5km, Md3.1*
ISC 17 09:35:19.1±0.5, 36.96N±0.03×29.24E±0.03, h8km±4km, n38, σ0.80/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**47**	*e*PG	**Pg**	**09 35 23.9**	**-0.8**
GLHS				*e*SG	**Sg**	**09 35 28.8**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.28**	**47**	*e*Pg	**Pg**	**09 35 23.9**	**-0.8**
GLHS				*e*Sg	**Sg**	**09 35 28.8**	**+0.4**
FETY	**Fethiye**	**0.35**	**202**	*e*PG	**Pg**	**09 35 25.4**	**-0.6**
FETY				*e*SG	**Sg**	**09 35 31.3**	**+0.6**
FETY	**Fethiye**	**0.35**	**202**	*e*Pg	**Pg**	**09 35 25.4**	**-0.6**
FETY				*e*Sg	**Sg**	**09 35 31.3**	**+0.6**
GOLH	**Golhisar**	**0.37**	**43**	*i* P	**Pg**	**09 35 25.6**	**-0.9**
GOLH				*i* S	**Sg**	**09 35 32.8**	**+1.5**
GOLH	**Golhisar**	**0.37**	**43**	*i* P	**Pg**	**09 35 25.6**	**-0.8**
GOLH				*i* S	**Sg**	**09 35 32.8**	**+1.4**
ELL	**Elmali**	**0.57**	**112**	*e*PG	**Pg**	**09 35 29.9**	**-0.3**
ELL	**Elmali**	**0.57**	**112**	*e*Pg	**Pg**	**09 35 29.9**	**-0.3**
DNZL	**Cakiroluk**	**0.74**	**348**	*i* P	**Pg**	**09 35 31.4**	**-2.1**
DNZL				*i* S	**Sg**	**09 35 44.0**	**+0.9**
DNZL	**Cakiroluk**	**0.74**	**348**	*i* P	**Pg**	**09 35 31.4**	**-2.0**
DNZL				*i* S	**Sg**	**09 35 44.0**	**+0.9**
AKAS	**Kas**	**0.78**	**158**	*i* P	**Pg**	**09 35 34.0**	**-0.2**
AKAS				*i* S	**Sg**	**09 35 49.7**	**+5.3**
AKAS	**Kas**	**0.78**	**158**	*i* P	**Pg**	**09 35 34.0**	**-0.2**
YER	**Yerkesik**	**0.79**	**283**	*e*PG	**Pg**	**09 35 33.8**	**-0.5**
YER				*e*SG	**Sg**	**09 35 46.0**	**+1.5**
YER	**Yerkesik**	**0.79**	**283**	*e*Pg	**Pg**	**09 35 33.8**	**-0.5**
YER				*e*Sg	**Sg**	**09 35 46.0**	**+1.4**
DENT	**Denizli**	**0.81**	**348**	*e*PG	**Pg**	**09 35 34.1**	**-0.6**
DENT	**Denizli**	**0.81**	**348**	*e*Pg	**Pg**	**09 35 34.1**	**-0.6**
KORT	**Korkueli**	**0.89**	**87**	*i* P	**Pg**	**09 35 36.4**	**+0.2**
KORT				*i* S	**Sg**	**09 35 51.9**	**+4.2**
KORT	**Korkueli**	**0.89**	**87**	*i* P	**Pg**	**09 35 36.4**	**+0.2**
KORT				*i* S	**Sg**	**09 35 51.9**	**+4.2**
BCK	**Bucak**	**1.18**	**65**	*e*PN	**Pn**	**09 35 41.4**	**-0.6**
BCK	**Bucak**	**1.18**	**65**	*e*Pn	**Pn**	**09 35 41.4**	**-0.5**
MLSB	**Milas**	**1.22**	**286**	*e*PN	**Pn**	**09 35 41.8**	**-0.6**
MLSB	**Milas**	**1.22**	**286**	*e*Pn	**Pn**	**09 35 41.8**	**-0.6**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**09 35 42.7**	**-0.7**
AYDN				*i* S	**Sb**	**09 36 01.4**	**+1.0**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**09 35 42.7**	**-0.7**
AYDN				*i* S	**Sb**	**09 36 01.4**	**+1.0**
ISP	**Isparta**	**1.34**	**49**	*e*PN	**Pn**	**09 35 44.3**	**+0.3**
ISP	**Isparta**	**1.34**	**49**	*e*Pn	**Pn**	**09 35 44.3**	**+0.3**
DAT	**Datca**	**1.36**	**261**	*e*PN	**Pn**	**09 35 44.6**	**+0.3**
DAT	**Datca**	**1.36**	**261**	*e*Pn	**Pn**	**09 35 44.6**	**+0.3**
KHAL	**Karahalli**	**1.42**	**8**	*i* P	**Pn**	**09 35 45.0**	**-0.2**
KHAL				*i* S	**Sn**	**09 36 04.5**	**+0.5**
KHAL	**Karahalli**	**1.42**	**8**	*i* P	**Pn**	**09 35 45.0**	**-0.2**
KHAL				*i* S	**Sn**	**09 36 04.5**	**+0.5**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**09 35 45.7**	**+0.2**
BDRM				*i* S	**Sn**	**09 36 04.8**	**+0.1**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**09 35 45.7**	**+0.2**
BDRM				*i* S	**Sn**	**09 36 04.8**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.49**	**69**	*e*PN	**Pn**	**09 35 46.9**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.49**	**69**	*e*Pn	**Pn**	**09 35 46.9**	**+0.7**
MANT	**Manisa**	**1.62**	**341**	*i* P	**Pn**	**09 35 47.3**	**-0.6**
MANT				*i* S	**Sn**	**09 36 08.0**	**-0.9**
MANT	**Manisa**	**1.62**	**341**	*i* P	**Pn**	**09 35 47.3**	**-0.6**
MANT				*i* S	**Sn**	**09 36 08.0**	**-1.0**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**09 36 02.5**	**+1.2**
HDMB	**Hadim**	**2.60**	**89**	*e*Pn	**Pn**	**09 36 02.5**	**+1.1**

*IDC **17** 09:40:41.4±0.6, 32.25S×178.13W, h0km, mb4.4/10, mb1 4.5/12, mb1mx4.4/18, mbtmp4.4/12, ML3.5/2, MS4.0/6, Ms1 4.0/6, ms1mx3.7/19, Error ellipse: s-maj=25.1km s-min=18.0km az=102.0*
*ISCJB **17** 09:40:44.6±0.6, 32.22S±0.06×178.1W±0.1, h33km, mb4.7/18, MS4.0/6, Error ellipse: s-maj=13.6km s-min=8.2km az=21.3*
*NEIC **17** 09:40:46.6±0.4, 32.22S×178.09W, h35km, mb5.2/7, Error ellipse: s-maj=13.1km s-min=9.4km az=139.0*
ISC 17 09:40:46.5±0.6, 32.19S±0.06×178.1W±0.1, h35km, n75, σ1.09/41, mb4.7/18, MS4.0/6, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.93**	**2**	Pn	**Pn**	**09 41 30.1**	**-0.3**
	62nm,0.3s,baz=128,slow=20,SNR=6.1						
RAO				Sn	**Sn**	**09 42 04.2**	**-0.2**
	100nm,0.3s,baz=90,slow=21,SNR=4.8						
RAO	**Raoul Island**	**2.93**	**2**	*e*Pn	**Pn**	**09 41 30.7**	**+0.2**
RAO				*e*Sn	**Sn**	**09 42 03.1**	**-1.3**
RAO				Sn	**Sn**	**09 42 04.2**	**-0.2**
URZ	**Urewera**	**7.23**	**212**	Pn	**Pn**	**09 42 23.0**	**-6.7**
	8.8nm,0.3s,baz=69,slow=6.1,SNR=34						
URZ				Sn	**Sn**	**09 43 41.4**	**-9.1**
	17nm,0.3s,baz=130,slow=22,SNR=16						
OUZ	**Omahuta**	**7.58**	**244**	*e*Pn	**Pn**	**09 42 35.3**	**+0.9**
	85nm,0.9s						
RPZ	**Rata Peaks**	**14.35**	**214**	Pn	**Pn**	**09 43 57.0**	**-10**
	1.5nm,0.3s,baz=0.3,slow=3.4,SNR=9.2						
RPZ				Sn	**Sn**	**09 46 23.3**	**-21**
	2.4nm,0.3s,baz=348,slow=18,SNR=13						
DZM	**Mont Dzumac**	**17.06**	**302**	*e*P	**Pn**	**09 44 47.6**	**+5.3**
	70nm,1.0s						
DZM				*e*LR	LR	09 48 39.3	
	1μm,22.6s						
DZM	**Mont Dzumac**	**17.06**	**302**	*e*P	**Pn**	**09 44 43.3**	**+1.0**
	32nm,0.9s						
AFI	**Afiamalu**	**19.08**	**19**	P	**Pn**	**09 45 06.0**	**-1.0**
	0.8nm,0.3s,baz=227,slow=19,SNR=3.3						
EIDS	**Eidsvold**	**27.82**	**276**	*e*P	**P**	**09 46 33.5**	**+1.0**
EIDS	**Eidsvold**	**27.82**	**276**	*e*P	**P**	**09 46 33.6**	**+1.1**
	7.5nm,0.7s,mb4.4						
PPT	**Papeete**	**29.54**	**67**	*e*LR	LR	09 54 35.1	
	165nm,22.0s,baz=241						
PPT	**Papeete**	**29.54**	**67**	LR	LR	09 55 23.7	
	comp=Z,136nm,19.2s,MS3.6,baz=332,slow=30						
CMSA	**Cobar Meteorol**	**30.70**	**261**	*e*P	**P**	**09 46 58.5**	**+0.5**
STKA	**Stephens Creek**	**34.06**	**260**	P	**P**	**09 47 27.2**	**-0.3**
	3.1nm,0.6s,mb4.4,baz=112,slow=8.4,SNR=7.8						
STKA				LR	LR	10 01 09.4	
	comp=Z,464nm,18.9s,MS4.2,baz=31,slow=36						
STKA	**Stephens Creek**	**34.06**	**260**	P	**P**	**09 47 27.2**	**-0.3**
STKA				LR	LR	10 01 09.4	
CTA	**Charters Tower**	**34.07**	**282**	*e*P	**P**	**09 47 29.0**	**+1.4**
	7.4nm,0.6s,mb4.8						
CTA	**Charters Tower**	**34.07**	**282**	P	**P**	**09 47 28.8**	**+1.1**
	7.2nm,0.5s,mb4.9,baz=107,slow=11,SNR=18						
CTAO	**Charters Tower**	**34.07**	**282**	*e*P	**P**	**09 47 28.9**	**+1.3**
	69nm,1.5s,mb5.4						
MTSU	**Mount Surprise**	**36.62**	**283**	*e*P	**P**	**09 47 50.7**	**+1.2**
	28nm,0.7s,mb5.2						
COEN	**Coen**	**39.74**	**288**	*e*P	**P**	**09 48 17.0**	**+1.1**
COEN	**Coen**	**39.74**	**288**	*e*P	**P**	**09 48 17.1**	**+1.2**
	75nm,0.9s,mb5.4						
ASAR	**Alice Springs**	**42.99**	**269**	P	**P**	**09 48 41.5**	**-1.0**
	10nm,0.8s,mb4.6,baz=111,slow=7.9,SNR=62						
WRAB	**Tennant Creek**	**44.14**	**274**	*e*P	**P**	**09 48 50.4**	**-1.4**
	25nm,0.7s,mb5.0						
FORT	**Forrest**	**45.56**	**257**	*e*P	**P**	**09 49 00.8**	**-2.2**
	47nm,0.6s,mb5.6						
KAKA	**Kakadu**	**49.21**	**281**	*e*P	**P**	**09 49 29.4**	**-2.2**
	9.6nm,0.8s,mb4.9						
KAKA	**Kakadu**	**49.21**	**281**	*e*P	**P**	**09 49 29.9**	**-1.6**
	24nm,0.6s,mb5.4						
KNA	**Kununurra**	**50.77**	**276**	*e*P	**P**	**09 49 42.7**	**-0.7**
	20nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**52.33**	**271**	*e*P	**P**	**09 49 53.8**	**-1.2**
	14nm,0.6s,mb5.1						
QSPA	**South Pole Qui**	**57.93**	**180**	P	**P**	**09 50 35.5**	**+0.9**
	4.7nm,1.0s,mb4.5,baz=11,slow=3.6,SNR=16						
MAW	**Mawson**	**70.62**	**201**	P	**P**	**09 51 57.1**	**-0.8**
	2.2nm,0.9s,mb4.1,baz=103,slow=16,SNR=2.5						
VNA2	**Neumayer--Watz**	**76.97**	**177**	*e*	**P**	**09 52 33.9**	**-1.0**
VNA2				*e*	pP	09 52 43.8	-2.1
VNA1	**Neumayer--Stat**	**77.20**	**177**	*e*	**P**	**09 52 36.2**	**0.0**
VNA1				*e*	pP	09 52 45.8	-1.4
MJAR	**Matsushiro Arr**	**79.68**	**326**	P	**P**	**09 52 50.1**	**-0.2**
	1.3nm,0.9s,mb3.9,baz=131,slow=5.0,SNR=3.9						
PLCA	**Paso Flores**	**81.33**	**133**	LR	LR	10 24 02.5	
	comp=Z,114nm,18.8s,MS4.2,baz=32,slow=32						
ASAJ	**Asahikawa**	**84.00**	**333**	P	**P**	**09 53 13.2**	**+0.4**
	3.8nm,0.7s,mb4.7,baz=240,slow=7.9,SNR=6.9						
KSRS	**Korea Array**	**85.67**	**320**	P	**P**	**09 53 22.4**	**+0.9**
	1.3nm,0.8s,mb4.2,baz=146,slow=5.5,SNR=7.1						
PETK	**Petropavlovsk-**	**87.52**	**346**	P	**P**	**09 53 31.3**	**+1.2**
	5.9nm,0.8s,mb4.9,baz=113,slow=8.9,SNR=10						
PETK				LR	LR	10 30 16.3	
	comp=Z,44nm,18.5s,MS3.9,baz=326,slow=34						
PETK	**Petropavlovsk-**	**87.52**	**346**	P	**P**	**09 53 31.3**	**+1.2**
PETK				LR	LR	10 30 16.3	
NVAR	**Mina Array Bea**	**89.58**	**43**	P	**P**	**09 53 42.9**	**+2.7**
	0.9nm,0.8s,mb4.1,baz=213,slow=7.3,SNR=6.5						
CMAR	**Chiang Mai Arr**	**93.94**	**289**	PP	PP	09 57 49.8	+2.5
	0.4nm,0.3s,baz=146,slow=5.0,SNR=3.1						
PDAR	**Pinedale Array**	**97.46**	**44**	LR	LR	10 31 39.8	
	comp=Z,67nm,19.3s,MS4.1,baz=248,slow=31						
CPUP	**Villa Florida**	**98.92**	**129**	LR	LR	10 33 03.2	
	comp=Z,55nm,18.1s,MS4.1,baz=66,slow=32						
YKA	**Yellowknife Ar**	**107.07**	**26**	PKKPbc	PKKPbc	10 10 24.8	-1.8
	0.1nm,0.7s,baz=36,slow=2.9,SNR=3.0						
YKA				PKKPab	PKKPab	10 10 30.4	-7.0
	0.3nm,0.7s,baz=45,slow=3.3,SNR=5.9						
HYB	**Hyderabad**	**110.19**	**278**	*i* P	PKiKP	09 59 11.5	-3.5
MKAR	**Makanchi Array**	**118.87**	**309**	PKP	PKPdf	09 59 30.3	-0.4
	1.2nm,0.8s,baz=90,slow=1.2,SNR=8.6						
ZALV	**Zalesovo Beam**	**119.32**	**318**	PKP	PKPdf	09 59 31.2	-0.2
	0.5nm,0.3s,baz=101,slow=2.9,SNR=3.1						
KURK	**Kurchatov**	**122.23**	**313**	PKP	PKPdf	09 59 37.1	0.0
	2.8nm,0.9s,baz=106,slow=1.9,SNR=13						
TKM2	**Tokmak 2**	**122.34**	**303**	*e*PKPdf	PKPdf	09 59 37.8	+0.2
UCH	**Uchtor**	**122.93**	**302**	*e*P	PKPdf	09 59 39.9	+1.1
AML	**Almayashu**	**123.49**	**302**	*e*P	PKPdf	09 59 40.1	+0.4
BVAR	**Borovoye Array**	**127.63**	**315**	PKP	PKPdf	09 59 47.4	0.0
	2.2nm,0.7s,baz=114,slow=3.6,SNR=13						
BRVK	**Borovoye**	**127.70**	**315**	*e*PKPdf	PKPdf	09 59 47.5	+0.1
AKTK	**Aktyubinsk**	**135.25**	**311**	PKP	PKPdf	10 00 01.5	-0.3
AKTO	**Aktyubinsk**	**135.25**	**311**	PKP	PKPdf	10 00 01.5	-0.3
	1.1nm,0.5s,baz=90,slow=3.0,SNR=4.3						
KEV	**Kevo**	**139.84**	**347**	*e*pkp	PKPdf	10 00 14.7	+4.9
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**140.32**	**347**	PKP	PKPdf	10 00 12.7	+2.0
	4.4nm,0.8s,baz=15,slow=3.7,SNR=3.8						
JOF	**Joensuu**	**144.05**	**338**	*e*pkp	PKPdf	10 00 11.2	-6.2
	0.7nm,0.4s						
KAF	**Kangasniemi**	**146.20**	**340**	*e*pkp	PKPdf	10 00 21.7	+0.5
	1.5nm,0.5s						
FINES	**FINESS Array B**	**146.79**	**339**	PKPbc	PKPbc	10 00 24.3	+0.3
	12nm,0.6s,baz=50,slow=2.9,SNR=66						
MALT	**Malatya**	**149.72**	**292**	*e*PKPbc	PKPbc	10 00 33.4	+0.9
NOA	**NORSAR Array B**	**150.50**	**351**	PKPbc	PKPbc	10 00 34.2	+0.6
	6.9nm,0.9s,baz=15,slow=4.2,SNR=12						
NOA	**NORSAR Array B**	**150.50**	**351**	PKPbc	PKPbc	10 00 34.2	+0.6
IZAR	**Zarasai**	**150.95**	**331**	*e*P	PKPbc	10 00 34.9	+0.1
IDID	**Didziasalis**	**151.04**	**330**	*e*	PKPbc	10 00 36.2	+1.1
MICGM	**Minsk**	**151.09**	**328**	*e*	PKPbc	10 00 34.0	-1.2
ISAL	**Salakas**	**151.12**	**331**	*e*P	PKPbc	10 00 35.1	-0.1
IIGN	**Ignalina**	**151.23**	**331**	*e*P	PKPbc	10 00 35.5	+0.1
NACGM	**Naroch**	**151.30**	**330**	*e*	PKPbc	10 00 33.0	-2.7
MMAI	**Mount Meron Ar**	**151.86**	**281**	PKPbc	PKPbc	10 00 38.9	+1.2
	14nm,0.8s,baz=88,slow=4.8,SNR=16						
AKASG	**Malin Array Be**	**152.66**	**321**	PKPbc	PKPbc	10 00 39.1	+0.2
	3.6nm,0.8s,baz=60,slow=1.7,SNR=13						
AKBB	**Malin Array Si**	**152.66**	**321**	*e*PKPbc	PKPbc	10 00 39.3	+0.4
AKBB				*e*PKPab	PKPab	10 00 50.4	+0.7
BRTR	**Keskin Array B**	**153.36**	**295**	PKPbc	PKPbc	10 00 40.8	0.0
	3.3nm,0.7s,baz=95,slow=1.7,SNR=20						
CLL	**Collm**	**159.23**	**340**	*i*PKPab	PKPab	10 01 18.4	+0.7
	comp=Z,10.0nm,1.3s						
CLL				*i*		10 01 22.4	
	comp=Z,5.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**161.05**	**179**	PKPab	PKPab	10 01 26.4	0.0
	comp=Z,2.9nm,1.0s,baz=175,slow=4.6,SNR=7.4						
GERES	**GERESS Array B**	**161.15**	**335**	PKPab	PKPab	10 01 27.0	+0.8
	comp=Z,1.4nm,0.8s,baz=45,slow=5.8,SNR=8.8						

*NEIC **17** 09:47:31.6, 16.61N×99.52W, h2km, MD4.0(MEX), After MEX.*
MEX 17 09:47:31.6±0.3, 16.61N×99.52W, h2km±2km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.45**	**304**	*i* P	Pg	09 47 40.0	-0.3
ACX				*i* S	Sg	09 47 46.7	+0.5
ACX	**Acapulco**	**0.45**	**304**	*i* P	Pg	09 47 40.0	-0.3
ACX				*i* S	Sg	09 47 46.7	+0.5
CAIG	**El Cayaco**	**0.83**	**301**	*e*P	Pg	09 47 46.1	-1.5
CAIG				*i* S	Sg	09 47 58.0	-0.5
CAIG	**El Cayaco**	**0.83**	**301**	*e*P	Pg	09 47 46.1	-1.5
CAIG				*i* S	Sg	09 47 58.0	-0.5
PNIG	**Pinotepa**	**1.36**	**99**	*i* P	Pn	09 47 53.1	-4.5
PNIG				*i* S	Sg	09 48 11.2	-4.0
PNIG	**Pinotepa**	**1.36**	**99**	*i* P	Pn	09 47 53.1	-4.5
PNIG				*i* S	Sg	09 48 11.2	-4.0
PLIG	**Platanillo**	**1.77**	**1**	*i* P	Pn	09 47 59.9	-3.4
PLIG				*i* S	Sn	09 48 21.5	-4.8
PLIG	**Platanillo**	**1.77**	**1**	*i* P	Pn	09 47 59.9	-3.4
PLIG				*i* S	Sn	09 48 21.5	-4.8
UTMO	**Huajuapan**	**2.04**	**53**	*e*P	Pn	09 48 04.0	-3.0
UTMO				*i* S	Sn	09 48 28.7	-4.4
ZIIG	**Zihuatanejo**	**2.10**	**298**	*e*P	Pn	09 48 04.8	-3.1
ZIIG				*i* S	Sn	09 48 30.1	-4.4
ZIIG	**Zihuatanejo**	**2.10**	**298**	*e*P	Pn	09 48 04.8	-3.1
ZIIG				*i* S	Sn	09 48 30.1	-4.4
YAIG	**Yautepec**	**2.28**	**11**	*i* P	Pn	09 48 08.1	-2.2
YAIG				*i* S	Sn	09 48 34.5	-4.4
YAIG	**Yautepec**	**2.28**	**11**	*i* P	Pn	09 48 08.1	-2.2
YAIG				*i* S	Sn	09 48 34.5	-4.4
PPM	**Popocatepetl**	**2.59**	**19**	*e*P	Pn	09 48 12.2	-2.3
PPM				*i* S	Sn	09 48 42.7	-3.8
PPM	**Popocatepetl**	**2.59**	**19**	*e*P	Pn	09 48 12.2	-2.3
PPM				*i* S	Sn	09 48 42.7	-3.8
VHO	**Vista Hermosa**	**2.71**	**80**	*e*P	Pn	09 48 13.9	-2.3
VHO				*i* S	Sn	09 48 46.6	-3.0
VHO	**Vista Hermosa**	**2.71**	**80**	*e*P	Pn	09 48 13.9	-2.3
VHO				*i* S	Sn	09 48 46.6	-3.0
MOIG	**Morelia**	**3.44**	**333**	*i* P	Pn	09 48 24.5	-1.6
MOIG				*i* S	Sn	09 49 03.9	-3.6
MOIG	**Morelia**	**3.44**	**333**	*i* P	Pn	09 48 24.5	-1.6
MOIG				*i* S	Sn	09 49 03.9	-3.6
MMIG	**Aquila**	**4.01**	**295**	*i* P	Pn	09 48 31.5	-2.6
MMIG				*i* S	Sn	09 49 17.9	-3.8

*IDC **17** 09:51:42.5±1.1, 31.76N×104.25E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/28, mbtmp3.7/9, ML4.1/1, Error ellipse: s-maj=35.0km s-min=21.1km az=57.0*
*NEIC **17** 09:51:44.0±0.8, 31.75N×104.31E, h10km, Error ellipse: s-maj=24.9km s-min=11.3km az=88.0*
*BJI **17** 09:51:45.5, 31.84N×104.37E, h15km, ML3.5/9, Ms3.4/3, Ms7 3.0/3*
ISC 17 09:51:45.6±1.9, 32.04N±0.06×104.51E±0.06, h14km±12km, n13, σ0.87/18, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.08**	**352**	Pg	**Pg**	**09 53 03.8**	**0.0**
LZH				Sn	**Sn**	**09 53 42.1**	**+7.1**
LZH				Sg	**Sg**	**09 53 55.6**	**-1.0**
LZH				smax			
	comp=N,130nm,0.6s						
LZH				smax			
	comp=E,160nm,0.8s						
LZH				LR	LR		
	comp=N,320nm,5.8s						
LZH				LR	LR		
	comp=Z,760nm,8.8s						
XAN	**Xi'an**	**4.21**	**60**	Pg	**Pb**	**09 53 00.8**	**+1.4**
XAN				Sn	**Sb**	**09 53 49.4**	**-0.7**
XAN				Sg	**Sg**	**09 54 00.6**	**-0.2**
XAN				smax			
	comp=N,120nm,0.6s						
XAN				smax			
	comp=E,49nm,0.9s						
GYA	**Guiyang**	**5.87**	**161**	Pn	**Pn**	**09 53 12.8**	**+0.7**
GYA				Sn	**Sn**	**09 54 18.3**	**-0.9**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,40nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.42**	**202**	Pn	**Pn**	**09 55 04.1**	**-5.3**
	comp=E,0.1nm,0.3s,baz=0.7,slow=14,SNR=2.2						
SONM	**Songino Array**	**15.85**	**5**	Pn	**Pn**	**09 55 32.3**	**+4.2**
	comp=E,0.7nm,0.3s,baz=189,slow=7.3,SNR=2.6						
KSRS	**Korea Array**	**19.97**	**68**	P	**Pn**	**09 56 20.9**	**+1.8**
	comp=E,1.2nm,0.7s,baz=262,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**22.52**	**317**	P	**P**	**09 56 45.3**	**+0.6**
	comp=E,0.7nm,0.6s,mb3.3,baz=115,slow=12,SNR=8.9						
ZALV	**Zalesovo Beam**	**26.04**	**333**	P	**P**	**09 57 18.3**	**+0.1**
	comp=E,1.9nm,0.6s,mb3.8,baz=130,slow=11,SNR=8.2						
ZALV	**Zalesovo Beam**	**26.04**	**333**	P	**P**	**09 57 18.3**	**+0.1**
KURK	**Kurchatov**	**26.72**	**322**	P	**P**	**09 57 24.7**	**+0.4**
	comp=E,0.7nm,0.6s,mb3.4,baz=131,slow=8.6,SNR=5.0						
ARCES	**ARCESS Array B**	**56.55**	**336**	P	**P**	**10 01 27.0**	**-0.2**
	comp=E,7.2nm,1.0s,mb4.6,baz=54,slow=6.2,SNR=4.2						
ASAR	**Alice Springs**	**62.11**	**149**	P	**P**	**10 02 04.6**	**-1.5**
	comp=E,0.2nm,0.5s,mb3.5,baz=330,slow=6.6,SNR=6.4						
YKA	**Yellowknife Ar**	**80.70**	**17**	P	**P**	**10 03 57.6**	**-0.3**
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.4,SNR=7.1						

*CSEM **17** 09:54:00.2, 38.17N×21.86E, h0km, ML1.9/2, After THE*
THE 17 09:54:00.2, 38.17N×21.86E, h0km±2km, ML1.9/2, Error ellipse: s-maj=3.0km s-min=0.7km az=230.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.12**	**55**	P	Pg	09 54 02.6	+0.1
LAKA				S	Sg	09 54 04.2	+0.2
LAKA	**Lakka**	**0.12**	**55**	P	Pg	09 54 02.6	+0.1
LAKA				S	Sg	09 54 04.2	+0.2
LAKA	**Lakka**	**0.12**	**55**	P	Pg	09 54 02.6	+0.1
LAKA				S	Sg	09 54 04.2	+0.2
UPR	**University Cam**	**0.12**	**334**	P	Pg	09 54 02.6	0.0
UPR				S	Sg	09 54 04.8	+0.6
UPR	**University Cam**	**0.12**	**334**	P	Pg	09 54 02.6	0.0
UPR				S	Sg	09 54 04.8	+0.6
UPR	**University Cam**	**0.12**	**334**	P	Pg	09 54 02.6	0.0
UPR				S	Sg	09 54 04.8	+0.6
EFP	**Efpalio**	**0.26**	**9**	P	Pg	09 54 05.2	0.0
EFP				S	Sg	09 54 08.8	+0.3
EFP	**Efpalio**	**0.26**	**9**	P	Pg	09 54 05.2	0.0
EFP				S	Sg	09 54 08.8	+0.3
EFP	**Efpalio**	**0.26**	**9**	P	Pg	09 54 05.2	0.0
EFP				S	Sg	09 54 08.8	+0.3
GUR	**Goura**	**0.45**	**121**	P	Pg	09 54 08.6	-0.2
GUR				S	Sg	09 54 15.9	+1.2
GUR	**Goura**	**0.45**	**121**	P	Pg	09 54 08.6	-0.2
GUR				S	Sg	09 54 15.9	+1.2
GUR	**Goura**	**0.45**	**121**	P	Pg	09 54 08.6	-0.2
GUR				S	Sg	09 54 15.9	+1.2
AGG	**Agios Georgios**	**0.93**	**24**	P	Pg	09 54 17.8	-0.2
AGG				S	Sg	09 54 31.8	+1.8
AGG	**Agios Georgios**	**0.93**	**24**	P	Pg	09 54 17.8	-0.2
AGG				S	Sg	09 54 31.8	+1.8
AGG	**Agios Georgios**	**0.93**	**24**	P	Pg	09 54 17.8	-0.2
AGG				S	Sg	09 54 31.8	+1.8

*ISCJB **17** 10:01:22.2±0.6, 31.77N±0.04×104.5E±0.1, h10km, mb3.5/8, Error ellipse: s-maj=13.5km s-min=5.4km az=163.6*
*IDC **17** 10:01:23.4±1.0, 31.90N×104.34E, h0km, mb3.5/9, mb1 3.7/11, mb1mx3.5/28, mbtmp3.5/11, ML3.7/2, MS2.7/1, Ms1 2.7/1, ms

NVAR	Mina Array Bea	79.28	42	P		P		10 15 59.6	+0.9
	0.7nm,0.8s,mb3.3,baz=220,slow=7.6,SNR=5.1								
NVAR				pP		pP		10 16 38.4	-4.9
	1.8nm,1.0s,baz=223,slow=8.6,SNR=4.9								
TXAR	Lajitas Array	84.89	56	pP		pP		10 17 07.9	-5.4
	0.4nm,1.0s,baz=234,slow=6.0,SNR=3.1								
TRF	Thorofare Moun	85.97	11	eP		P		10 16 31.5	-1.1
	3.7nm,0.7s,mb4.2								
PDAR	Pinedale Array	87.22	42	P		P		10 16 39.4	+0.2
	0.2nm,0.6s,mb3.1,baz=243,slow=4.0,SNR=3.7								
YKA	Yellowknife Ar	95.47	24	P		P		10 17 17.0	0.0
	0.3nm,0.7s,mb3.6,baz=238,slow=4.5,SNR=6.2								
MKAR	Makanchi Array	113.12	313	PKiKP		PKiKP		10 22 28.8	-0.3
	0.4nm,0.4s,baz=85,slow=1.6,SNR=4.0								
KURK	Kurchatov	115.79	317	PKP		PKPdf		10 22 34.1	0.0
	0.3nm,0.3s,baz=101,slow=1.9,SNR=5.6								
BVAR	Borovoye Array	120.78	320	PKP		PKPdf		10 22 43.7	+0.1
	1.0nm,0.6s,baz=64,slow=3.4,SNR=5.3								
ARCES	ARCESS Array B	129.41	351	PKP		PKPdf		10 23 00.4	+0.8
	2.5nm,0.8s,baz=11,slow=1.8,SNR=4.7								
FINES	FINESS Array B	136.51	345	PKP		PKPdf		10 23 14.7	+1.5
	2.5nm,0.9s,baz=64,slow=4.4,SNR=4.7								
AKASG	Malin Array Be	144.27	333	PKP		PKPdf		10 23 24.8	-2.7
	1.3nm,0.4s,baz=39,slow=3.9,SNR=12								
BUR08	Bucovina Ar. S	148.31	333	ePKPbc		PKPbc		10 23 40.0	+1.9
STHS	Stebnicka Huta	148.33	339	ePKP		PKPab		10 23 43.2	+1.4
CLL	Collm	148.62	350	⇑/P		PKPbc		10 23 39.2	+0.4
CLL				e				10 23 43.0	
CLL	Collm	148.62	350	⇑/PKPbc		PKPbc		10 23 39.2	+0.4
	comp=Z,10.0nm,1.1s								
CLL				ePKPab		PKPab		10 23 43.0	+0.1
	comp=Z,4.0nm,0.8s								
BR131	Keskin Array S	148.77	314	ePKPbc		PKPbc		10 23 40.5	+1.0
BR131				ePKPab		PKPab		10 23 44.9	+1.0
BRTR	Keskin Array B	148.77	314	PKPbc		PKPbc		10 23 39.2	-0.3
	comp=Z,1.6nm,0.7s,baz=59,slow=2.7,SNR=9.6								
UPC	Upice	148.80	346	ePKPbc		PKPbc		10 23 40.2	+0.9
BRG	Berggiesshubel	148.88	349	eP		PKPbc		10 23 40.9	+1.5
	comp=Z,3.2nm,1.2s								
BRG				e				10 32 49.1	
	comp=Z,3.7nm,1.1s								
DPC	Dobruska-Polom	148.88	346	ePKPbc		PKPbc		10 23 40.4	+0.9
DPC				ePKPab		PKPab		10 23 44.4	+0.5
OKC	Ostrava-Krasne	148.89	343	ePKPbc		PKPbc		10 23 40.0	+0.5
PVCC	Panska Ves	149.09	348	ePKPbc		PKPbc		10 23 41.4	+1.4
KECS	Kecovo	149.39	339	ePKP		PKPbc		10 23 42.4	+1.6
PRU	Pruhonice	149.61	348	ePKPbc		PKPbc		10 23 42.0	+0.7
PRU				ePKPab		PKPab		10 23 47.7	+0.8
NKC	Novy Kostel	149.75	350	ePKPbc		PKPbc		10 23 41.5	-0.1
VYHS	Vyhne	149.91	341	ePKP		PKPbc		10 23 43.0	+1.0
KOLL	Kolacno	149.96	342	ePKP		PKPbc		10 23 44.0	+1.8
TREC	Trest	150.06	346	ePKPbc		PKPbc		10 23 43.0	+0.6
MMAI	Mount Meron Ar	150.09	301	PKPbc		PKPbc		10 23 44.3	+1.3
	comp=Z,3.4nm,0.5s,baz=87,slow=9.3,SNR=7.8								
KHC	Kasperske Hory	150.62	348	ePKPbc		PKPbc		10 23 44.6	+0.9
KHC				ePKPab		PKPab		10 23 51.7	+0.6
GERES	GERESS Array B	150.87	348	PKPbc		PKPbc		10 23 44.8	+0.5
	comp=Z,3.9nm,1.0s,baz=38,slow=1.7,SNR=16								
ECH	Echery	152.32	357	ePKPbc		PKPbc		10 23 45.5	-2.2

*IDC **17** 10:22:11.3±1.1, 35°.50N×141°.05E, h0km, mb3.5/4, mb1 3.5/8, mb1mx3.4/29, mbtmp3.4/8, ML3.1/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/27, Error ellipse: s-maj=27.9km s-min=22.4km az=107.0*
*ISCJB **17** 10:22:18.3±0.5, 35°.34N±0°.04×140°.50E±0°.05, h66km±4km, mb3.4/4, Error ellipse: s-maj=7.7km s-min=5.6km az=148.5*
*NEIC **17** 10:22:19.1, 35°.42N×140°.46E, h54km, MG3.1(JMA), After JMA.*
*JMA **17** 10:22:19.1±0.2, 35°.42N×140°.46E, h55km±2km, M3.1*
ISC 17 10:22:19.1±0.5, 35°.35N±0°.04×140°.49E±0°.05, h61km±4km, n21, σ1§16/32, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JCN	Nagara	0.24	287	P		Pn	10 22 28.5	-0.4
JCN				S		Sn	10 22 35.8	-0.3
KTR	Katsuura	0.24	215	P		Pn	10 22 28.5	-0.5
KTR				S		Sn	10 22 35.4	-0.7
BSO4	Boso 4	0.38	199	P		Pn	10 22 30.1	+0.1
BSO4				S		Sn	10 22 39.7	+1.8
CHOJ	Chosi	0.47	41	P		Pn	10 22 30.3	-0.5
CHOJ				S		Sn	10 22 38.4	-0.9
BSO3	Boso 3	0.55	178	P		Pn	10 22 31.7	0.0
BSO3				S		Sn	10 22 41.7	+0.9
BSO2	Boso 2	0.64	160	eS		Sn	10 22 44.5	+2.0
BSO1	Boso 1	0.80	150	P		Pn	10 22 34.3	-0.4
BSO1				S		Sn	10 22 47.0	+0.9
JIM2	Oshima 3	1.07	234	P		Pn	10 22 37.2	-0.9
JIM2				S		Sn	10 22 51.1	-1.1
JOD2	Odawara 2	1.15	266	P		Pn	10 22 38.5	-0.6
JOD2				eS		Sn	10 22 52.3	-1.7
JAG	Ashikaga	1.36	322	P		Pn	10 22 41.4	-0.6
JRY	Ryogami san	1.45	298	P		Pn	10 22 42.9	-0.3
MJAR	Matsushiro Arr	2.20	303	Pn		Pn	10 22 53.3	+0.1
	9.2nm,0.3s,baz=112,slow=9.7,SNR=90							
MJAR				Sn		Sn	10 23 22.2	+2.9
	9.4nm,0.3s,baz=119,slow=14,SNR=7.1							
MAJO	Matsushiro	2.20	303	ePn		Pn	10 22 54.5	+1.2
MAT	Matsushiro	2.20	303	P		Pn	10 22 53.8	+0.5
MAT				S		Sn	10 23 21.7	+2.3
JHJ	Hachijo jima 2	2.30	195	Pn		Pn	10 22 54.0	-0.7
	20nm,0.3s,baz=55,slow=16,SNR=17							
JHJ				Sn		Sn	10 23 20.3	-1.5
	64nm,0.3s,baz=320,slow=22,SNR=12							
ASAJ	Asahikawa	8.91	10	Pn		Pn	10 24 18.4	-6.5
	0.1nm,0.3s,baz=216,slow=17,SNR=1.7							
ASAJ				LR		LR	10 28 31.7	
	comp=Z,82nm,18.2s,baz=167,slow=44							
KSRS	Korea Array	10.34	285	Pn		Pn	10 24 48.8	+4.1
	0.2nm,0.3s,baz=110,slow=13,SNR=3.8							
KURK	Kurchatov	46.40	309	P		P	10 30 40.5	+1.3
	0.5nm,0.4s,mb3.8,baz=83,slow=7.4,SNR=3.8							
ASAR	Alice Springs	59.02	187	P		P	10 32 14.8	+2.2
	0.2nm,0.6s,mb3.4,baz=17,slow=13,SNR=4.8							
YKA	Yellowknife Ar	65.64	30	P		P	10 32 55.5	-0.8
	0.2nm,0.8s,mb3.2,baz=291,slow=10,SNR=4.0							
PDAR	Pinedale Array	79.39	45	P		P	10 34 16.3	-2.1
	0.2nm,0.3s,mb3.6,baz=306,slow=2.1,SNR=3.7							

IDC 17 10:29:05.9±1.2, 32°.10N×104°.29E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/26, mbtmp3.4/6, Error ellipse: s-maj=46.8km s-min=22.1km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.11	68	P		P	10 33 42.4	+1.1
	0.4nm,0.4s,baz=246,slow=11,SNR=3.0							
MKAR	Makanchi Array	22.35	317	P		P	10 34 06.8	+1.6
	0.6nm,0.7s,baz=123,slow=10,SNR=4.4							
ZALV	Zalesovo Beam	25.91	333	P		P	10 34 38.1	-1.3
	0.4nm,0.3s,baz=127,slow=9.2,SNR=2.8							
KURK	Kurchatov	26.56	322	P		P	10 34 45.7	+0.3
	0.4nm,0.3s,baz=126,slow=9.4,SNR=4.0							
ASAR	Alice Springs	62.26	149	P		P	10 39 29.8	+0.1
	0.8nm,0.7s,baz=333,slow=6.6,SNR=18							
YKA	Yellowknife Ar	80.70	17	P		P	10 41 19.8	-0.8
	0.1nm,0.3s,baz=329,slow=5.3,SNR=2.7							

*IDC **17** 10:35:29.0±0.8, 42°.47N×82°.14E, h0km, mb3.8/11, mb1 3.9/18, mb1mx3.8/32, mbtmp3.7/18, ML3.4/6, Error ellipse: s-maj=13.4km s-min=11.3km az=74.0*
*NNC **17** 10:35:29.8±2.2, 42°.56N×82°.18E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=23.9km s-min=10.1km az=134.0*
*NEIC **17** 10:35:30.9±0.7, 42°.59N×82°.29E, h10km, mb4.0/5, Error ellipse: s-maj=12.2km s-min=8.0km az=160.0*
*BJI **17** 10:35:31.4, 42°.37N×82°.25E, h24km, mB4.6/2, mb4.2/2, ML3.7/10*
*MOS **17** 10:35:32.8±1.1, 42°.64N×82°.25E, h38km, mb4.1/8, Error ellipse: s-maj=12.3km s-min=7.6km az=117.6*
ISC 17 10:35:29.5±1.2, 42°.59N±0°.04×82°.30E±0°.05, h1km±6km, n77, σ1§30/98, mb3.9/14, 10C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KNDC	Almaty	3.97	281	⇓Pn		Pn	10 36 30.7	-0.8
	79nm,0.8s							
KNDC				⇓Lg			10 37 32.9	
	180nm,0.9s							
MK31	Makanchi Array	4.20	360	⇓Pn		Pn	10 36 37.6	+2.9
	1.5nm,0.3s,baz=184,slow=12,SNR=70							
MK31				Pg		Pg	10 36 48.5	-1.5
	17nm,0.5s,baz=181,slow=15,SNR=10.0							
MK31				⇑Lg			10 37 45.6	
	46nm,0.7s,baz=180,slow=26,SNR=4.1							
MK31	Makanchi Array	4.20	360	ePn		Pn	10 36 37.5	+2.9
MK31				eSg		Sg	10 37 46.8	+2.4
MKAR	Makanchi Array	4.20	360	Pn		Pn	10 36 37.6	+3.0
	2.0nm,0.3s,baz=185,slow=11,SNR=24							
MKAR				Pg		Pg	10 36 47.7	-2.2
	10nm,0.3s,baz=184,slow=15,SNR=45							
MKAR				Sn		Sn	10 37 29.7	+5.4
	3.0nm,0.3s,baz=175,slow=20,SNR=3.5							
MKAR				Lg			10 37 47.8	
	13nm,0.3s,baz=188,slow=28,SNR=10							
MKAR	Makanchi Array	4.20	360	PN		Pn	10 36 37.7	+3.1
MKAR							10 37 29.7	
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.3s							
MKAR				pmax		pmax		
	comp=Z,10.0nm,0.3s							
MKAR				smax				
	comp=N,3.0nm,0.3s							
MKAR	Makanchi Array	4.20	360	Pn		Pn	10 36 37.6	+3.0
MKAR				Pg		Pg	10 36 47.7	-2.2
MKAR				Sn		Sn	10 37 29.7	+5.4
MKAR				Lg			10 37 47.8	
TKM2	Tokmak 2	4.95	276	⇑Pn		Pn	10 36 47.0	+2.1
	comp=N,16nm,0.6s							
TKM2				⇑Pg		Pg	10 36 57.4	-6.8
	comp=N,37nm,0.8s							
TKM2				⇓Lg			10 38 02.8	
	comp=N,68nm,0.7s							
TKM2	Tokmak 2	4.95	276	ePn		Pn	10 36 46.8	+1.9
FRU	Bishkek	5.67	275	ePN		Pn	10 37 00.0	+5.2
FRU				pmax		pmax		
	comp=Z,120nm,1.6s							
KSH	Kashi	5.69	239	Pg		Pg	10 37 15.9	-2.5
KSH				Sg		Sg	10 38 39.1	+7.0
KSH				smax				
	comp=N,58nm,0.9s							
KSH				smax				
	comp=E,43nm,0.8s							
AAK	Ala-Archa	5.76	273	Pn		Pn	10 36 57.1	+1.0
	comp=E,0.0nm,0.3s,baz=85,slow=12,SNR=7.0							
AAK				Pg		Pg	10 37 11.4	-8.5
	comp=E,0.0nm,0.3s,baz=78,slow=10.0,SNR=15							
AAK				Lg			10 38 27.8	
	comp=E,0.1nm,0.3s,baz=139,slow=9.3,SNR=4.8							
AAK	Ala-Archa	5.76	273	Pn		Pn	10 36 57.1	+1.0
AAK				Pg		Pg	10 37 11.4	-8.5
AAK				Lg			10 38 27.8	
UCH	Uchtor	5.78	269	ePn		Pn	10 36 58.5	+2.2
	comp=E,21nm,0.7s							
UCH				eSg		Sg	10 38 36.1	+1.1
EKS2	Erkin-Say	6.29	273	Pn		Pn	10 37 05.9	+2.5
	comp=E,15nm,0.6s							
EKS2				eSg		Sg	10 38 45.0	-6.4
AML	Almayashu	6.39	269	ePn		Pn	10 37 06.0	+1.3
	comp=E,28nm,0.7s							
AML				eSn		Sn	10 38 20.7	+2.3
KURBB	Kurchatov Arra	8.44	343	⇓Pn		Pn	10 37 36.4	+3.6
	comp=E,0.3nm,0.4s							
KURBB				⇑Sn		Sn	10 39 12.9	+4.2
	comp=E,6.3nm,0.8s							
KURBB				⇑Lg			10 40 01.7	
	comp=E,7.5nm,0.8s							
KURK	Kurchatov	8.51	344	⇓Pn		Pn	10 37 35.5	+1.8
	comp=E,4.8nm,0.6s							
KURK				⇓Sn		Sn	10 39 08.0	-2.4
	comp=E,35nm,1.0s							
KURK				⇓Lg			10 40 04.7	
	comp=E,74nm,1.1s							
KURK	Kurchatov	8.51	344	Pn		Pn	10 37 34.5	+0.7
	comp=E,0.1nm,0.3s,baz=166,slow=13,SNR=5.1							
KURK				Sn		Sn	10 39 08.8	-1.5
	comp=E,0.2nm,0.3s,baz=160,slow=23,SNR=5.6							
KURK				Lg			10 39 59.7	
	comp=E,0.1nm,0.3s,baz=214,slow=27,SNR=5.3							
KURK	Kurchatov	8.51	344	P		Pn	10 37 34.5	+0.8
KURK							10 39 08.9	
KURK	Kurchatov	8.51	344	Pn		Pn	10 37 34.5	+0.7
KURK				eSn		Sn	10 39 05.8	-4.5
KURK				Sn		Sn	10 39 08.8	-1.5
KURK				Lg			10 39 59.7	
KK31	Karatay Array	8.68	277	Pn		Pn	10 37 37.8	+1.7
	comp=E,1.6nm,0.7s,baz=76,slow=14,SNR=13							
KK31				⇑Pg		Pg	10 38 10.3	-5.3
	comp=E,4.7nm,0.7s,baz=90,slow=16,SNR=7.7							
KK31				⇓Lg			10 39 59.4	
	comp=E,24nm,1.1s,baz=79,slow=27,SNR=6.0							
ZALV	Zalesovo Beam	11.48	7	Pn		Pn	10 38 14.2	-0.3
	comp=E,0.4nm,0.3s,baz=182,slow=15,SNR=4.7							
ZALV				Sn		Sn	10 40 23.9	+0.6
	comp=E,0.4nm,0.3s,baz=193,slow=25,SNR=4.1							
ZALV				Lg			10 41 35.1	
	comp=E,0.1nm,0.3s,baz=191,slow=29,SNR=2.6							
ZALV	Zalesovo Beam	11.48	7	P		Pn	10 38 14.2	-0.3
ZALV							10 40 23.9	
ZALV	Zalesovo Beam	11.48	7	Pn		Pn	10 38 14.2	-0.3
ZALV				Sn		Sn	10 40 23.9	+0.6
ZALV				Lg			10 41 35.1	
VOSK	Vostochnaya	12.67	327	⇑Pn		Pn	10 38 28.4	-2.3
	comp=E,3.0nm,1.4s							
VOSK				⇓Lg			10 42 09.6	
	comp=E,24nm,1.2s							
BVA0	Borovoye Array	13.13	327	⇑Pn		Pn	10 38 36.9	-0.1
	comp=E,0.2nm,0.6s							
BVA0				⇑Lg			10 42 23.8	
	comp=E,7.2nm,1.4s							
BVAR	Borovoye Array	13.13	327	Pn		Pn	10 38 36.2	-0.8
	baz=141,slow=15,SNR=12							
BVAR				Lg			10 42 24.7	
	comp=E,0.3nm,0.3s,baz=130,slow=25,SNR=5.6							
GTA	Gaotai	13.60	98	eP		Pn	10 38 47.3	+3.8
GTA				pP			10 38 57.1	
GTA				sP			10 39 01.0	
GTA				S		Sn	10 41 23.8	+8.6
GTA				pmax		pmax		
	comp=Z,4.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,72nm,5.7s							
AB31	Akbulak array	16.89	301	⇑Pn		Pn	10 39 24.7	-2.2
	comp=Z,1.4nm,0.6s,baz=101,slow=11,SNR=4.1							
ABKAR	Akbulak array	16.89	301	ePn		Pn	10 39 24.6	-2.3
	comp=Z,2.2nm,0.7s							
SONM	Songino Array	17.73	65	P		Pn	10 39 37.9	+0.4
	comp=Z,0.4nm,0.3s,baz=262,slow=11,SNR=2.6							
ULN	Ulaanbaatar	18.18	65	P		Pn	10 39 43.7	+0.7
ULN				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ULN	Ulaanbaatar	18.18	65	Pn		Pn	10 39 43.7	+0.7
	comp=Z,2.5nm,0.7s							
AKTK	Aktyubinsk	18.41	304	P		Pn	10 39 45.0	-0.7
AKTO	Aktyubinsk	18.41	304	⇓Pn		Pn	10 39 45.1	-0.7
	comp=Z,1.4nm,1.8s							
AKTO	Aktyubinsk	18.41	304	P		Pn	10 39 45.0	-0.7
	comp=Z,0.1nm,0.3s,baz=114,slow=12,SNR=7.7							
BOD	Bodaibo	25.06	42	eP		P	10 40 59.7	+4.6
CMAR	Chiang Mai Arr	27.90	144	P		P	10 41 21.8	+0.8
	comp=Z,0.9nm,0.5s,mb3.8,baz=327,slow=11,SNR=4.8							
CMAR	Chiang Mai Arr	27.90	144	P		P	10 41 21.8	+0.8
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
KSRS	Korea Array	34.98	83	P		P	10 42 23.6	+0.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=289,slow=7.8,SNR=5.7							
KSRS	Korea Array	34.98	83	P		P	10 42 23.6	+0.4
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb4.0							
BRTR	Keskin Array B	36.35	282	P		P	10 42 33.8	-1.2
	comp=Z,1.3nm,0.7s,mb3.9,baz=96,slow=8.6,SNR=8.2							
BRTR	Keskin Array B	36.35	282	P		P	10 42 33.8	-1.1
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
FINES	FINESS Array B	37.94	319	P		P	10 42 48.1	0.0
	comp=Z,1.3nm,0.8s,mb3.7,baz=97,slow=11,SNR=2.8							
FINES	FINESS Array B	37.94	319	P		P	10 42 48.1	-0.1
FINES				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ARCES	ARCESS Array B	39.34	332	P		P	10 43 00.1	+0.4
	comp=Z,9.9nm,1.1s,mb4.4,baz=96,slow=9.9,SNR=6.4							
ARCES	ARCESS Array B	39.34	332	P		P	10 43 00.2	+0.4
ARCES				pmax		pmax		
	comp=Z,10.0nm,1.1s							
HFS	Hagfors	44.06	318	P		P	10 43 39.2	+0.6
	comp=Z,2.3nm,0.8s,mb4.0,baz=96,slow=10,SNR=4.6							
HFS	Hagfors	44.06	318	P		P	10 43 39.2	+0.6
HFS				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NOA	NORSAR Array B	45.13	319	P		P	10 43 46.9	-0.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=82,slow=8.0,SNR=3.0							
NOA	NORSAR Array B	45.13	319	P		P	10 43 46.9	-0.2
NOA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
CLL	Collm	46.47	306	eP		P	10 43 57.0	-0.8
GERES	GERESS Array B	46.83	302	P		P	10 44 00.6	-0.1
	comp=Z,0.4nm,0.6s,mb3.7,baz=44,slow=7.8,SNR=4.1							
CDF	Champ du Feu	50.95	304	eP		P	10 44 32.8	+0.5
HINF	Hinteralfeld	51.45	303	eP		P	10 44 35.8	-0.3
	comp=Z,4.1nm,0.7s,mb4.1							
HINF	Hinteralfeld	51.45	303	eP		P	10 44 35.8	-0.3
HINF				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
HINF	Hinteralfeld	51.45	303	eP		P	10 44 35.8	-0.3
	comp=Z,2.0nm,0.7s,mb4.2							
BAIF	Baives	52.14	307	eP		P	10 44 38.8	-2.4
MEZF	Maizieres J'vi	52.27	305	eP		P	10 44 42.4	+0.2
LPG	La Plagne	52.49	301	eP		P	10 44 44.3	+0.5
	comp=Z,8.4nm,0.7s,mb4.5							
LPG	La Plagne	52.49	301	eP		P	10 44 44.3	+0.5
LPG				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
LPG	La Plagne	52.49	301	eP		P	10 44 44.3	+0.5
	comp=Z,4.2nm,0.7s,mb4.5							
LPL	La Plagne	52.49	301	eP		P	10 44 44.1	+0.2
	comp=Z,9.1nm,0.7s,mb4.5							
LPL	La Plagne	52.49	301	eP		P	10 44 44.1	+0.2
LPL				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
LPL	La Plagne	52.49	301	eP		P	10 44 44.1	+0.2
	comp=Z,4.6nm,0.7s,mb4.5							
MBDF	Montbardon	52.81	300	eP		P	10 44 47.1	+0.9
ORIF	Oris-en-Rattie	53.30	301	eP		P	10 44 49.2	-0.6
LOR	Lormes	53.52	304	eP		P	10 44 50.3	-1.1
SMF	Signal de Mont	53.81	303	eP		P	10 44 52.7	-0.8
SSF	Saint Saulge	53.83	304	eP		P	10 44 53.1	-0.6
AVF	Avril sur Loir	54.04	304	eP		P	10 44 54.7	-0.6
LASF	Ste Croix	54.97	300	eP		P	10 45 01.9	-0.1
TORD	Torodi Ar. Bea	74.35	274	P		P	10 47 06.7	-2.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=46,slow=5.5,SNR=5.8							
YKA	Yellowknife Ar	74.39	8	P		P	10 47 08.9	+0.4
	comp=Z,0.5nm,0.9s,mb3.5,baz=338,slow=6.2,SNR=5.9							
YKA	Yellowknife Ar	74.39	8	P		P	10 47 08.9	+0.4
YKA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
ASAR	Alice Springs	81.29	133	P		P	10 47 46.8	-0.6
	comp=Z,0.6nm,0.9s,mb3.6,baz=327,slow=5.0,SNR=4.1							
ASAR	Alice Springs	81.29	133	P		P	10 47 46.8	-0.6
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.9s							

*ISCJB **17** 10:41:42.4±1.0, 31°.11N±0°.04×103°.27E±0°.06, h13km±7km, mb3.5/7, Error ellipse: s-maj=9.2km s-min=6.2km az=163.9*
*IDC **17** 10:41:43.0±1.1, 31°.12N×103°.31E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, ML4.0/1, Error ellipse: s-maj=35.3km s-min=20.8km az=55.0*
*NEIC **17** 10:41:44.4±0.6, 31°.10N×103°.35E, h10km, Error ellipse: s-maj=14.5km s-min=10.1km az=57.0*
*BJI **17** 10:41:44.6, 30°.99N×103°.28E, h11km, mb4.1/1, ML3.3/11, Ms3.6/2, Ms7 3.3/2*
ISC 17 10:41:44.8±1.0, 31°.04N±0°.04×103°.30E±0°.06, h15km±7km, n16, σ0§69/22, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.41	108	Pg		Pg	10 41 52.3	-0.8
CD2				Sg		Sg	10 41 59.1	+0.4
CD2				smax				
	comp=N,8μm,0.5s							
LZH	Lanzhou	5.05	5	Pg		Pg	10 43 21.8	+0.2
LZH				Sg		Sg	10 44 27.3	+0.3
LZH				smax				
	comp=N,47nm,0.9s							
LZH				smax				
	comp=E,77nm,1.2s							
LZH				LR		LR		
	comp=N,490nm,5.9s							
LZH				LR		LR		
	comp=Z,770nm,7.8s							
ENH	Enshi	5.38	97	ePn		Pn	10 43 04.4	-0.2
	comp=Z,19nm,0.6s							
GYA	Guiyang	5.44	146	Pg		Pg	10 43 24.6	-4.3
GYA				smax				
	comp=N,130nm,0.9s							
GYA				smax				
	comp=E,90nm,0.9s							
XAN	Xi'an	5.61	56	Pn		Pn	10 43 08.3	+0.6
XAN				Pg		Pg	10 43 25.3	-6.9
XAN				Sn		S

XAN				smax			
	comp=N,91nm,0.6s						
XAN				smax			
	comp=E,30nm,0.8s						
GYA	**Guiyang**	**5.43**	**158**	Pg	**Pg**	**10 50 11.9**	**+0.8**
GYA				Sn	**Sb**	**10 51 06.0**	**-0.8**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,110nm,0.9s						
GTA	**Gaotai**	**8.70**	**336**	*e*P	**Pn**	**10 50 35.3**	**+2.9**
GTA				pP		10 50 38.8	
GTA				sP		10 50 41.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LSA	**Lhasa**	**11.53**	**264**	*e*Pn	**Pn**	**10 51 10.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**13.90**	**202**	Pn	**Pn**	**10 51 43.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=15,slow=14,SNR=3.1						
ULN	**Ulaanbaatar**	**16.45**	**6**	*e*Pn	**Pn**	**10 52 16.9**	**-0.4**
	comp=Z,1.1nm,0.5s						
KSRS	**Korea Array**	**20.28**	**67**	P	**P**	**10 53 03.6**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=254,slow=10,SNR=7.9						
MKAR	**Makanchi Array**	**22.81**	**318**	P	**P**	**10 53 29.4**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.2,baz=114,slow=11,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**10 54 02.6**	**-0.6**
	comp=Z,0.7nm,0.3s,mb3.6,baz=132,slow=8.6,SNR=2.3						
AML	**Almayashu**	**26.61**	**302**	*e*P	**P**	**10 54 04.4**	**-0.4**
	comp=Z,1.0nm,0.4s,mb3.7						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**10 54 08.0**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.3,baz=126,slow=9.5,SNR=5.4						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**10 58 13.9**	**-0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=94,slow=8.9,SNR=3.1						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**10 58 46.2**	**+1.2**
	comp=Z,0.5nm,0.4s,mb4.0,baz=337,slow=6.7,SNR=26						
YKA	**Yellowknife Ar**	**81.23**	**17**	P	**P**	**11 00 42.3**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.2,SNR=5.8						

*NEIC **17** 11:10:31.5, 16°.49N×99°.62W, h4km, After MEX.*

MEX 17 11:10:31.5±0.6, 16°.49N×99°.62W, h4km±4km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.47**	**323**	*i* P	Pg	11 10 40.3	-0.3
ACX				*i* S	Sg	11 10 46.8	+0.1
ACX	**Acapulco**	**0.47**	**323**	*i* P	Pg	11 10 40.3	-0.3
ACX				*i* S	Sg	11 10 46.8	+0.1
CAIG	**El Cayaco**	**0.83**	**312**	*e*P	Pg	11 10 46.3	-1.2
CAIG				*e*S	Sg	11 10 57.1	-1.2
CAIG	**El Cayaco**	**0.83**	**312**	*e*P	Pg	11 10 46.3	-1.2
CAIG				*e*S	Sg	11 10 57.1	-1.2
PNIG	**Pinotepa**	**1.44**	**94**	*i* P	Pn	11 10 54.6	-3.8
PNIG				*i* S	Sb	11 11 11.4	-6.1
PNIG	**Pinotepa**	**1.44**	**94**	*i* P	Pn	11 10 54.6	-3.8
PNIG				*i* S	Sb	11 11 11.4	-6.1
ZIIG	**Zihuatanejo**	**2.08**	**302**	*i* P	Pn	11 11 02.7	-4.5
ZIIG				*i* S	Sn	11 11 28.8	-4.9
ZIIG	**Zihuatanejo**	**2.08**	**302**	*i* P	Pn	11 11 02.7	-4.5
ZIIG				*i* S	Sn	11 11 28.8	-4.9
UTMO	**Huajuapan**	**2.19**	**52**	*i* P	Pn	11 11 05.5	-3.2
UTMO				*e*S	Sn	11 11 31.8	-4.5
PPM	**Popocatepetl**	**2.73**	**20**	*e*P	Pn	11 11 15.0	-1.2
PPM				*i* S	Sn	11 11 47.6	-2.1
PPM	**Popocatepetl**	**2.73**	**20**	*e*P	Pn	11 11 15.0	-1.2
PPM				*i* S	Sn	11 11 47.6	-2.1

DJA 17 11:26:06, 1°.34N×121°.91E, h10km, MLv3.9/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.86**	**178**	P	Pg	11 26 20.5	-2.1
MRSI				S	Sg	11 26 32.9	-0.9
APSI	**Ampana**	**2.25**	**187**	P	Pn	11 26 45.3	+2.0
APSI				S	Sn	11 27 13.3	+2.1
LUWI	**Luwuk**	**2.52**	**160**	P	Pn	11 26 45.1	-1.9
LUWI				S	Sn	11 27 20.0	+2.2
TTSI	**Tana Toraja**	**4.83**	**206**	P	Pn	11 27 20.9	+2.1
KDI	**Kendari**	**5.31**	**172**	P	Pn	11 27 24.9	-0.5

*ISCJB **17** 11:27:42.6±0.6, 40°.42N±0°.03×21°.80E±0°.05, h10km, Error ellipse: s-maj=6.2km s-min=4.3km az=147.0*
*CSEM **17** 11:27:42.6±0.1, 40°.42N×21°.83E, h2km, ML2.5/3, Error ellipse: s-maj=4.2km s-min=2.7km az=55.0*
*THE **17** 11:27:43.0, 40°.42N×21°.83E, h1km±2km, ML2.5/3, Error ellipse: s-maj=2.7km s-min=0.7km az=331.0*

ISC 17 11:27:42.9±0.6, 40°.42N±0°.03×21°.82E±0°.05, h6km±9km, n16, σ0°.55/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.12**	**198**	P	**Pg**	**11 27 44.9**	**-0.5**
KZN				S	**Sg**	**11 27 47.0**	**0.0**
KZN	**Kozani**	**0.12**	**198**	P	**Pg**	**11 27 44.9**	**-0.5**
KZN				S	**Sg**	**11 27 47.0**	**0.0**
FNA	**Florina**	**0.49**	**317**	P	**Pg**	**11 27 52.5**	**+0.1**
FNA				S	**Sg**	**11 27 59.5**	**+0.6**
FNA	**Florina**	**0.49**	**317**	P	**Pg**	**11 27 52.5**	**+0.1**
FNA				S	**Sg**	**11 27 59.5**	**+0.6**
LIT	**Litokhoron**	**0.60**	**122**	P	**Pg**	**11 27 53.7**	**-0.8**
LIT				S	**Sg**	**11 28 02.2**	**-0.2**
LIT	**Litokhoron**	**0.60**	**122**	P	**Pg**	**11 27 53.7**	**-0.8**
LIT				S	**Sg**	**11 28 02.2**	**-0.2**
THL	**Klokotos Trika**	**0.87**	**170**	P	**Pg**	**11 27 59.3**	**-0.3**
THL				S	**Sg**	**11 28 12.0**	**+1.2**
THL	**Klokotos Trika**	**0.87**	**170**	P	**Pg**	**11 27 59.3**	**-0.3**
THL				S	**Sg**	**11 28 12.0**	**+1.2**
HORT	**Hortiatis**	**0.99**	**79**	P	**Pg**	**11 28 01.6**	**-0.4**
HORT				S	**Sg**	**11 28 15.7**	**+0.9**
HORT	**Hortiatis**	**0.99**	**79**	P	**Pg**	**11 28 01.6**	**-0.4**
HORT				S	**Sg**	**11 28 15.7**	**+0.9**
KRUS	**Krusevo**	**1.04**	**336**	*i* Pg	**Pg**	**11 28 02.4**	**-0.5**
KRUS				*e*Sg	**Sg**	**11 28 22.1**	**+5.7**
KRUS	**Krusevo**	**1.04**	**336**	*i* Pg	**Pg**	**11 28 02.4**	**-0.5**
VAY	**Valandovo**	**1.06**	**32**	*e*Pn	**Pn**	**11 28 04.5**	**0.0**
VAY	**Valandovo**	**1.06**	**32**	*e*Pn	**Pn**	**11 28 04.4**	**0.0**
AGG	**Agios Georgios**	**1.45**	**164**	P	**Pn**	**11 28 09.6**	**-0.1**
AGG	**Agios Georgios**	**1.45**	**164**	P	**Pn**	**11 28 09.6**	**-0.1**

IDC 17 12:02:04.9±1.2, 32°.02N×104°.43E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/33, Error ellipse: s-maj=44.7km s-min=21.9km az=46.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.03**	**68**	P	P	12 06 39.0	-0.3
	0.1nm,0.3s,baz=247,slow=12,SNR=3.4						
KSRS				LR	LR	12 14 20.3	
	comp=Z,22nm,19.3s,baz=145,slow=37						
MKAR	**Makanchi Array**	**22.49**	**317**	P	P	12 07 05.8	+0.1
	0.6nm,0.4s,baz=122,slow=9.2,SNR=8.1						
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	P	12 07 39.0	-0.5
	0.7nm,0.6s,baz=144,slow=10,SNR=2.8						
KURK	**Kurchatov**	**26.70**	**322**	P	P	12 07 45.4	-0.1
	0.4nm,0.2s,baz=132,slow=8.6,SNR=4.9						
FINES	**FINESS Array B**	**56.97**	**326**	P	P	12 11 52.2	+0.5
	1.9nm,1.0s,baz=87,slow=9.9,SNR=4.1						
ASAR	**Alice Springs**	**62.12**	**149**	P	P	12 12 27.8	0.0
	0.3nm,0.5s,baz=331,slow=6.6,SNR=8.1						
YKA	**Yellowknife Ar**	**80.74**	**17**	P	P	12 14 19.8	+0.1
	0.1nm,0.6s,baz=328,slow=5.4,SNR=3.8						

*ISCJB **17** 12:09:29.3±0.4, 23°.96N±0°.03×122°.41E±0°.02, h21km±4km, Error ellipse: s-maj=4.4km s-min=2.7km az=164.5*
*TAP **17** 12:09:29.5, 24°.00N×122°.45E, h41km, ML3.1, D*
*JMA **17** 12:09:30.9±0.4, 24°.15N×122°.41E, h34km, M2.2*

ISC 17 12:09:29.1±0.9, 23°.97N±0°.02×122°.41E±0°.02, h17km±6km, n41, σ0°.84/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.73**	**48**	P	**Pb**	**12 09 43.3**	**-0.2**
YOJ				*e*S	**Sb**	**12 09 51.9**	**-1.3**
HWA	**Hwalien**	**0.73**	**270**	*e*P	**Pb**	**12 09 43.8**	**+0.3**
	baz=258						
TWD	**Chiawan**	**0.75**	**278**	*e*P	**Pb**	**12 09 43.3**	**-0.5**
	baz=276						
TWD				S	**Sb**	**12 09 54.5**	**+0.8**
	baz=276						
ENA	**Nanau**	**0.76**	**307**	*e*P	**Pb**	**12 09 43.6**	**-0.3**
	baz=310						
ENA				*e*S	**Sb**	**12 09 53.8**	**-0.2**
	baz=310						
TWC	**Suao**	**0.81**	**321**	*i* P	**Pb**	**12 09 44.5**	**-0.3**
	baz=318						
TWC				*e*S	**Sb**	**12 09 55.2**	**-0.3**
	baz=318						
ESL	**Shilin**	**0.91**	**260**	*e*P	**Pb**	**12 09 45.6**	**-0.8**
	baz=252						
ESL				*e*S	**Sb**	**12 09 57.8**	**-0.3**
	baz=252						
ILA	**Ilan**	**0.99**	**323**	*e*P	**Pb**	**12 09 47.3**	**-0.5**
	baz=311						
ILA				*e*S	**Sb**	**12 10 01.1**	**+0.4**
	baz=311						
TWE	**Neicheng**	**1.01**	**318**	*e*P	**Pb**	**12 09 48.4**	**+0.3**
	baz=315						
TWE				*e*S	**Sb**	**12 10 01.6**	**+0.5**
	baz=315						
NNS	**Nan Shan**	**1.05**	**296**	*e*P	**Pb**	**12 09 48.9**	**-0.1**
	baz=286						
NNS				*e*S	**Sb**	**12 10 03.0**	**+0.6**
	baz=286						
WHF	**Hehuan Shan**	**1.06**	**280**	P	**Pb**	**12 09 48.5**	**-0.5**
	baz=277						
WHF				*e*S	**Sb**	**12 10 03.0**	**+0.4**
	baz=277						
EHY	**Hungye**	**1.10**	**245**	*e*P	**Pb**	**12 09 49.3**	**-0.3**
	baz=258						
EHY				*e*S	**Sb**	**12 10 03.1**	**-0.6**
	baz=258						
TWB1	**Santiao Chiao**	**1.10**	**340**	*e*P	**Pb**	**12 09 48.8**	**-0.9**
	baz=350						
TWB1				*e*S	**Sb**	**12 10 03.8**	**+0.1**
	baz=350						
NSK	**Sanguang**	**1.19**	**306**	*e*P	**Pn**	**12 09 50.9**	**0.0**
	baz=304						
NSK				*e*S	**Sb**	**12 10 06.9**	**+0.6**
	baz=304						
TWF1	**Yuli**	**1.19**	**239**	*i* P	**Pn**	**12 09 50.5**	**-0.5**
	baz=230						
TWF1				*e*S	**Sb**	**12 10 05.6**	**-0.8**
	baz=230						
NWF	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	**12 09 51.0**	**-0.6**
	baz=330						
NWF				*e*S	**Sb**	**12 10 06.7**	**-0.9**
	baz=330						
TWA	**Mucha**	**1.25**	**323**	*e*P	**Pn**	**12 09 52.3**	**+0.5**
	baz=336						
TWA				*e*S	**Sb**	**12 10 07.8**	**-0.4**
	baz=336						
IRIF	**Iriomote-Funau**	**1.26**	**73**	P	**Pn**	**12 09 52.4**	**+0.5**
IRIF				*e*S	**Sb**	**12 10 08.5**	**+0.1**
HATJ	**Hateruma jima**	**1.28**	**86**	*e*S	**Sb**	**12 10 09.1**	**+0.2**
CHKT	**Chengkung**	**1.29**	**228**	*e*P	**Pn**	**12 09 51.8**	**-0.6**
	baz=227						
SMLT	**Sun Moon Lake**	**1.38**	**267**	*e*P	**Pn**	**12 09 53.4**	**-0.3**
	baz=265						
SMLT				*e*S	**Sn**	**12 10 10.3**	**-1.3**
	baz=265						
YUS	**Yu-Shan**	**1.42**	**250**	*e*P	**Pn**	**12 09 54.0**	**-0.1**
	baz=249						
YUS				*e*S	**Sn**	**12 10 11.9**	**-0.5**
	baz=249						
TYC	**Yuchr**	**1.42**	**268**	*e*P	**Pn**	**12 09 54.3**	**+0.1**
	baz=266						
TYC				*e*S	**Sn**	**12 10 12.0**	**-0.5**
	baz=266						
NSTT	**Nanjuang**	**1.44**	**297**	*e*P	**Pn**	**12 09 54.9**	**+0.4**
	baz=295						
NSTT				*e*S	**Sn**	**12 10 13.0**	**+0.1**
	baz=295						
JKRS	**Kuro-shima**	**1.49**	**79**	P	**Pn**	**12 09 55.5**	**+0.4**
JKRS				*e*S	**Sn**	**12 10 15.5**	**+1.4**
ELDTW	**Lidau**	**1.50**	**239**	*e*P	**Pn**	**12 09 54.5**	**-0.7**
	baz=238						
ELDTW				*e*S	**Sn**	**12 10 12.5**	**-1.8**
	baz=238						
ALS	**Alishan**	**1.54**	**253**	*e*P	**Pn**	**12 09 56.0**	**+0.3**
	baz=251						
ALS				*e*S	**Sn**	**12 10 15.1**	**-0.3**
	baz=251						
TWQ1	**Liyutan**	**1.54**	**284**	*e*P	**Pn**	**12 09 56.1**	**+0.3**
	baz=283						
TWQ1				*e*S	**Sn**	**12 10 16.0**	**+0.6**
	baz=283						
TCU	**Taichung**	**1.59**	**277**	*e*P	**Pn**	**12 09 56.0**	**-0.5**
	baz=276						
CHN5	**Tsauling**	**1.63**	**257**	*e*P	**Pn**	**12 09 57.3**	**+0.3**
	baz=248						
CHN5				*e*S	**Sn**	**12 10 17.2**	**-0.4**
	baz=248						
JIJ	**Ishigaki jima**	**1.63**	**76**	P	**Pn**	**12 09 56.7**	**-0.4**
JIJ				*e*S	**Sn**	**12 10 16.8**	**-0.8**
TWG	**Pinlang**	**1.68**	**227**	*e*P	**Pn**	**12 09 57.1**	**-0.6**
	baz=238						
TWG				*e*S	**Sn**	**12 10 17.3**	**-1.6**
	baz=238						
STYT	**Tauyuan**	**1.72**	**242**	*e*P	**Pn**	**12 09 58.5**	**+0.3**
	baz=234						
STYT				*e*S	**Sn**	**12 10 19.6**	**-0.1**
	baz=234						
CHN4	**Tsaushan**	**1.78**	**250**	*e*P	**Pn**	**12 10 01.5**	**+2.5**
	baz=249						
CHN4				*e*S	**Sn**	**12 10 23.3**	**+2.1**
	baz=249						
CHN1	**Nanshi**	**1.90**	**246**	*e*P	**Pn**	**12 10 02.8**	**+2.1**
	baz=245						
CHN1				*e*S	**Sn**	**12 10 26.4**	**+2.3**
	baz=245						
SGST	**Jiashian**	**1.90**	**242**	*e*P	**Pn**	**12 10 01.7**	**+1.0**
	baz=232						
SGST				*e*S	**Sn**	**12 10 24.6**	**+0.4**
	baz=232						
TWK	**Hsinying**	**1.90**	**249**	*e*P	**Pn**	**12 10 02.8**	**+2.1**
	baz=247						
TWK				*e*S	**Sn**	**12 10 26.4**	**+2.2**
	baz=247						
ECL	**Taimali**	**1.91**	**225**	*e*P	**Pn**	**12 10 00.8**	**-0.1**
	baz=233						
SSD	**Sandimen**	**2.04**	**234**	*e*P	**Pn**	**12 10 04.0**	**+1.3**
	baz=229						
SSD				*e*S	**Sn**	**12 10 27.0**	**-0.7**
	baz=229						
CHN8	**Yiju**	**2.11**	**253**	*e*P	**Pn**	**12 10 03.3**	**-0.3**
	baz=252						
CHN8				*e*S	**Sn**	**12 10 28.8**	**-0.7**
	baz=252						
EAST	**Anshuo**	**2.14**	**223**	*e*P	**Pn**	**12 10 03.9**	**-0.1**
	baz=229						
EAST				*e*S	**Sn**	**12 10 29.1**	**-1.0**
	baz=229						
SCZT	**Fangliau**	**2.29**	**226**	*e*P	**Pn**	**12 10 07.7**	**+1.6**
	baz=220						
SCZT				*e*S	**Sn**	**12 10 33.1**	**-0.9**
	baz=220						

MAN 17 12:18:17, 11°.18N×124°.70E, h32km, mb4.1, ML2.9, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.16**	**214**	*e*P	Pb	12 18 25.0	+1.9
OCLP				*e*S	Sb	12 18 29.5	+2.3
PLP	**Palo**	**0.28**	**94**	⇓*e*P	Pb	12 18 25.9	+1.6
PLP				*e*S	Sb	12 18 30.6	+1.3
MSLP	**Maasin**	**1.05**	**171**	*e*P	Pn	12 18 36.5	+1.0
MSLP				*e*S	Sn	12 18 45.7	-3.5

*ISCJB **17** 12:23:35.4±0.6, 48°.40N±0°.03×124°.61W±0°.06, h41km±10km, Error ellipse: s-maj=6.8km s-min=3.9km az=158.1*
*PGC **17** 12:23:35.1±0.2, 48°.37N×124°.64W, h43km, ML2.7/11, 83km Wsw of Duncan, Bc Vancouver Island Region*
*NEIC **17** 12:23:35.2, 48°.40N×124°.64W, h47km, MD2.9(SEA), After SEA.*
*PNSN **17** 12:23:35.2, 48°.40N×124°.64W, h47km, MD2.9, Fault plane solution: NP1:ϕs350.00000°, δ65.00000°, NP2: ϕs94.00000°, δ63.00000°, Principal axes: T Plg38.0000°, Azm311.0000°; P Plg1.0000°, Azm42.0000°;*

ISC 17 12:23:35.7±0.5, 48°.40N±0°.03×124°.63W±0°.06, h37km±10km, n39, σ0°.55/55, 7C-20D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFB	**Port Renfrew**	**0.22**	**36**	⇓P	**Pn**	**12 23 42.8**	**0.0**
PFB	**Port Renfrew**	**0.22**	**36**	⇓P	**Pn**	**12 23 42.8**	**0.0**
PFB				⇓S	**Sn**	**12 23 48.0**	**+0.3**
OTR	**Olympics--Tyee**	**0.37**	**149**	⇑P	**Pn**	**12 23 44.6**	**+0.1**
OBC	**Olympics--Boni**	**0.52**	**134**	⇑P	**Pn**	**12 23 46.4**	**-0.2**
BMSB	**Bamfield Mari**	**0.55**	**323**	⇑P	**Pn**	**12 23 46.6**	**-0.5**
BMSB				⇑S	**Sn**	**12 23 54.7**	**-0.4**
MGB	**Mount Grey**	**0.61**	**356**	⇓P	**Pn**	**12 23 47.6**	**-0.2**
MGB				⇑S	**Sn**	**12 23 56.1**	**-0.2**
STW	**Striped Peak**	**0.69**	**111**	⇑P	**Pn**	**12 23 48.5**	**-0.4**
STW				S	**Sn**	**12 23 58.5**	**+0.1**
OOW	**Octopus West**	**0.72**	**156**	⇑P	**Pn**	**12 23 49.2**	**-0.2**
PGC	**Sidney**	**0.82**	**72**	*e*Pg	**Pn**	**12 23 50.0**	**-0.8**
PGC				*e*Sg	**Sn**	**12 24 00.9**	**-0.8**
PGC	**Sidney**	**0.82**	**72**	⇓P	**Pn**	**12 23 50.2**	**-0.6**
PGC				⇓S	**Sn**	**12 24 00.7**	**-1.1**
OSD	**Olympics--Snow**	**0.85**	**132**	P	**Pn**	**12 23 50.9**	**-0.2**
VGZ	**Gonzales**	**0.87**	**88**	⇑P	**Pn**	**12 23 50.6**	**-0.9**
VGZ	**Gonzales**	**0.87**	**88**	⇓P	**Pn**	**12 23 50.6**	**-0.8**
VGZ				⇓S	**Sn**	**12 24 01.7**	**-1.1**
ALB	**Alberni**	**0.89**	**351**	⇑P	**Pn**	**12 23 51.2**	**-0.5**
ALB				⇓S	**Sn**	**12 24 02.5**	**-0.8**
GOBB	**Galiano Island**	**0.93**	**53**	⇓P	**Pn**	**12 23 52.1**	**-0.1**
NLLB	**Nanaimo Lost L**	**0.93**	**27**	⇓P	**Pn**	**12 23 52.3**	**-0.1**
NLLB				⇓S	**Sn**	**12 24 04.8**	**+0.3**
GHNB	**Nanoose**	**0.95**	**16**	⇓P	**Pn**	**12 23 52.6**	**+0.1**
GHNB				⇑S	**Sn**	**12 24 05.1**	**+0.3**
SNB	**Saturna Island**	**1.04**	**68**	P	**Pn**	**12 23 53.8**	**+0.1**
SNB	**Saturna Island**	**1.04**	**68**	P	**Pn**	**12 23 53.8**	**+0.1**
SNB				⇑S	**Sn**	**12 24 06.9**	**-0.2**
SQM	**Sequim**	**1.11**	**106**	⇑P	**Pn**	**12 23 54.8**	**+0.1**
NLWA	**Neilton Lookou**	**1.13**	**153**	⇑P	**Pn**	**12 23 54.4**	**-0.6**
BLN	**Blyn Mountain**	**1.18**	**109**	⇓P	**Pn**	**12 23 55.6**	**-0.1**
MOW	**Mount Constitu**	**1.23**	**76**	P	**Pn**	**12 23 56.5**	**+0.2**
HDW	**Hoodsport**	**1.30**	**125**	P	**Pn**	**12 23 57.2**	**-0.1**
SHB	**Sechelt**	**1.30**	**22**	P	**Pn**	**12 23 57.9**	**+0.5**
SHB				⇑S	**Sn**	**12 24 13.9**	**+0.4**
TXB	**Texada**	**1.31**	**6**	⇓P	**Pn**	**12 23 57.7**	**+0.2**
TXB				⇓S	**Sn**	**12 24 14.2**	**+0.5**
BIB	**Bowen Island**	**1.34**	**40**	⇓P	**Pn**	**12 23 58.0**	**+0.2**
BIB				⇓S	**Sn**	**12 24 14.3**	**-0.1**
GNW	**Green Mountain**	**1.47**	**124**	*e*Pn	**Pn**	**12 23 59.1**	**-0.6**
VDB	**Vedder Mountai**	**1.79**	**68**	⇓P	**Pn**	**12 24 04.3**	**+0.3**
MEW	**McNeil Island**	**1.79**	**131**	P	**Pn**	**12 24 04.8**	**+0.7**
JCW	**Jim Creek**	**1.81**	**95**	⇓P	**Pn**	**12 24 05.1**	**+0.6**
BLH	**Bald Hill**	**1.83**	**107**	P	**Pn**	**12 24 05.1**	**+0.5**
MBW	**Mount Baker**	**1.85**	**77**	P	**Pn**	**12 24 06.2**	**+1.2**
RPW	**Rockport**	**2.08**	**87**	*e*Pn	**Pn**	**12 24 08.7**	**+0.6**
RPW				*e*Sn	**Sn**	**12 24 32.4**	**-0.2**
RCM	**Mount Rainier-**	**2.51**	**127**	P	**Pn**	**12 24 14.5**	**+0.5**
LON	**Longmire**	**2.52**	**130**	*e*Pn	**Pn**	**12 24 14.1**	**0.0**
LON				*e*Sn	**Sn**	**12 24 42.3**	**-1.3**
MTMW	**Mount Mitchell**	**2.89**	**144**	P	**Pn**	**12 24 20.3**	**+1.1**
LTY	**Liberty**	**2.90**	**112**	P	**Pn**	**12 24 20.4**	**+1.0**
ETW	**Entiat**	**2.99**	**104**	P	**Pn**	**12 24 21.4**	**+0.8**

*CSEM **17** 12:24:33.1±0.2, 38°.38N×21°.73E, h8km, ML3.0/7, Error ellipse: s-maj=4.6km s-min=3.6km az=105.0*
*THE **17** 12:24:33.7, 38°.39N×21°.77E, h7km±1km, ML3.0/7, Error ellipse: s-maj=1.1km s-min=0.6km az=168.0*

ATH 17 12:24:33.0, 38°.40N×21°.75E, h16km±1km, MD2.8/9, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.12**	**166**	*e*PB	Pg	12 24 36.4	-0.2
UPR				*e*SB	Sg	12 24 39.2	+0.2
UPR	**University Cam**	**0.12**	**166**	P	Pg	12 24 36.4	-0.2
UPR				S	Sg	12 24 38.9	-0.1
UPR	**University Cam**	**0.12**	**166**	P	Pg	12 24 36.4	-0.2
UPR				S	Sg	12 24 38.9	-0.1
UPR				*e*Sb	Sg	12 24 39.2	+0.2
EFP	**Efpalio**	**0.12**	**78**	*e*PB	Pg	12 24 36.5	-0.2
EFP				*e*SB	Sg	12 24 39.5	+0.4
EFP	**Efpalio**	**0.12**	**78**	P	Pg	12 24 36.5	-0.2
EFP				S	Sg	12 24 38.2	-0.9
EFP	**Efpalio**	**0.12**	**78**	P	Pg	12 24 36.5	-0.2
EFP				S	Sg	12 24 38.2	-0.9
EFP				*e*Sb	Sg	12 24 39.5	+0.4
LAKA	**Lakka**	**0.24**	**132**	P	Pg	12 24 38.2	-0.2
LAKA				S	Sg	12 24 42.1	+0.1
LAKA	**Lakka**	**0.24**	**132**	P	Pg	12 24 38.2	-0.2
LAKA				S	Sg	12 24 42.1	+0.1
RLS	**Riolos of Patr**	**0.41**	**213**	*e*PB	Pg	12 24 41.3	0.0
RLS	**Riolos of Patr**	**0.41**	**213**	*e*Pb	Pg	12 24 41.3	0.0
RLS	**Riolos of Patr**	**0.41**	**213**	*e*Pb	Pg	12 24 41.3	0.0
EVR	**Evrytania**	**0.52**	**5**	*e*PN	Pg	12 24 43.2	-0.1
EVR	**Evrytania**	**0.52**	**5**	*e*Pn	Pg	12 24 43.2	-0.1
EVR	**Evrytania**	**0.52**	**5**	*e*Pn	Pg	12 24 43.2	-0.1
GUR	**Goura**	**0.66**	**135**	*e*PB	Pb	12 24 45.4	-0.7
GUR	**Goura**	**0.66**	**135**	P	Pg	12 24 45.2	-0.7
GUR				S	Sg	12 24 55.0	+0.4
GUR	**Goura**	**0.66**	**135**	*e*Pb	Pb	12 24 45.4	-0.7
GUR				S	Sg	12 24 55.0	+0.4
AGG	**Agios Georgios**	**0.77**	**36**	P	Pb	12 24 47.8	-0.2
AGG				S	Sg	12 24 59.7	+1.5
AGG	**Agios Georgios**	**0.77**	**36**	P	Pb	12 24 47.8	-0.2
AGG				S	Sg	12 24 59.7	+1.5
KFL	**Anninata**	**0.81**	**249**	P	Pb	12 24 48.7	0.0
VLS	**Valsamata**	**0.94**	**257**	*e*PN	Pn	12 24 51.0	-0.5
VLS				*e*SN	Sn	12 25 04.8	+0.2
VLS	**Valsamata**	**0.94**	**257**	*e*Pn	Pn	12 24 51.0	-0.5
VLS				*e*Sn	Sn	12 25 04.8

KRUS	Krusevo	2.99	353	ePn	Pn	12 25 23.3 +3.6

IDC 17 12:28:39.7±1.1, 54°.03N×163°.13W, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.7/31, mbtmp3.7/11, ML3.5/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/39, Error ellipse: s-maj=35.8km s-min=16.0km az=11.0

NEIC 17 12:28:44.2, 54°.01N×162°.95W, h27km, ML3.5(AEIC), After AEIC.

ISCJB 17 12:28:45.9±0.8, 54°.13N±0°.07×163°.00W±0°.08, h58km±9km, mb3.7/8, MS3.4/4, Error ellipse: s-maj=11.6km s-min=7.9km az=163.6

ISC 17 12:28:46.2±0.9, 54°.06N±0°.07×163°.02W±0°.08, h44km±10km, n86, σ0§67/86, mb3.7/8, MS3.4/4, 33C-29D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.84**	**344**	P	**Pn**	**12 29 00.2**	**-1.3**
FALS				S	**Sn**	**12 29 12.8**	**+0.1**
AKUT	**Akutan**	**1.62**	**274**	eP	**Pn**	**12 29 13.2**	**+1.0**
SDPT	**Sand Point**	**1.96**	**48**	P	**Pn**	**12 29 16.5**	**-0.5**
UNV	**Unalaska Valle**	**2.07**	**266**	P	**Pn**	**12 29 18.9**	**+0.5**
CHGN	**Chignik**	**3.47**	**48**	ePn	**Pn**	**12 29 37.2**	**-0.4**
CHGN				eSn	**Sn**	**12 30 22.1**	**+4.7**
OHAK	**Old Harbor** 24nm,0.8s	**6.36**	**56**	ePn	**Pn**	**12 30 15.0**	**-2.1**
KDAK	**Kodiak Island**	**6.95**	**53**	Pn	**Pn**	**12 30 22.6**	**-2.8**
SVW2	**Sparrevohn**	**8.11**	**26**	ePn	**Pn**	**12 30 43.0**	**+1.9**
SVW2				eSn	**Sn**	**12 32 12.5**	**+1.2**
RSO	**Redoubt South**	**8.49**	**37**	ePn	**Pn**	**12 30 49.2**	**+2.8**
DAWY	**Dawson**	**15.65**	**41**	ePn	**Pn**	**12 32 23.4**	**+0.1**
DLBC	**Dease Lake** 0.1nm,0.3s,baz=288,slow=13,SNR=2.5	**18.73**	**63**	P	**Pn**	**12 33 01.3**	**-0.3**
INK	**Inuvik** baz=238,slow=11,SNR=3.2	**19.85**	**33**	P	**Pn**	**12 33 11.7**	**-3.2**
BBB	**Bella Bella** comp=Z,50nm,20.0s,MS2.9,baz=288,slow=30	**20.91**	**81**	LR	LR	12 39 17.6	
PETK	**Petropavlovsk-** 2.1nm,0.8s,mb3.6,baz=85,slow=12,SNR=5.3	**23.14**	**284**	P	**P**	**12 33 47.5**	**-0.8**
YKA	**Yellowknife Ar** 0.8nm,0.7s,mb3.4,baz=272,slow=9.2,SNR=15	**26.23**	**52**	P	**P**	**12 34 17.1**	**+0.6**
YKA				PcP	PcP	12 37 41.0	-0.9
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=279,slow=2.3,SNR=3.8	**26.23**	**52**	P	**P**	**12 34 17.1**	**+0.6**
YKA				PcP	PcP	12 37 41.0	-0.9
YBH	**Yreka Blue Hor** 1.0nm,0.7s,mb3.7,baz=288,slow=3.2,SNR=4.1	**29.29**	**98**	P	**P**	**12 34 44.6**	**+0.5**
YBH				LR	LR	12 43 14.8	
I07A	**Izee** comp=Z,75nm,20.1s,MS3.3,baz=328,slow=30	**29.76**	**92**	⇓P	**P**	**12 34 47.6**	**-0.6**
H08A	**Prairie City** baz=30	**30.00**	**90**	⇑P	**P**	**12 34 50.1**	**-0.3**
G10A	**Bishop Farm, J** baz=30	**30.49**	**88**	⇓P	**P**	**12 34 54.8**	**+0.2**
J08A	**Circle Bar Ran** baz=31	**30.79**	**92**	⇓P	**P**	**12 34 58.0**	**+0.6**
H10A	**Noah's Angus R** baz=31,SNR=7.6	**31.10**	**88**	⇓P	**P**	**12 35 00.1**	**0.0**
J09A	**Fry Pan Ranch,** baz=31,SNR=5.1	**31.22**	**91**	⇑P	**P**	**12 35 01.3**	**+0.1**
K10A	**MacKenzie Ranc** baz=32,SNR=5.4	**32.08**	**91**	⇓P	**P**	**12 35 09.1**	**+0.4**
MFID	**Camas Ranch** baz=32	**32.32**	**90**	⇓P	**P**	**12 35 10.5**	**-0.3**
K11A	**Parker Ranch,** baz=32	**32.58**	**91**	⇑P	**P**	**12 35 13.3**	**+0.2**
L10A	**Juniper Basin** baz=33	**32.74**	**92**	⇑P	**P**	**12 35 13.9**	**-0.6**
L11A	**Cat Creek Ranc** baz=33,SNR=9.7	**33.11**	**91**	⇑P	**P**	**12 35 18.1**	**+0.4**
J13A	**Cove Ranch, Pi** baz=33	**33.30**	**88**	⇑P	**P**	**12 35 19.5**	**+0.2**
EGMT	**Eagleton** baz=33	**33.34**	**78**	⇓P	**P**	**12 35 19.3**	**-0.4**
M11A	**Holland Ranch,** baz=33	**33.54**	**92**	⇑P	**P**	**12 35 22.0**	**+0.5**
L12A	**House Creek Ra** baz=33	**33.56**	**91**	⇓P	**P**	**12 35 21.9**	**+0.3**
NVAR	**Mina Array Bea** 1.3nm,0.7s,mb4.0,baz=297,slow=8.8,SNR=11	**34.00**	**99**	P	**P**	**12 35 26.2**	**+0.7**
M12A	**Wells** baz=34	**34.06**	**92**	⇓P	**P**	**12 35 26.9**	**+0.9**
N12A	**Clover Valley,** baz=34	**34.34**	**93**	⇑P	**P**	**12 35 28.5**	**0.0**
Q10A	**Clear Creek Ra** baz=35	**34.85**	**97**	⇓P	**P**	**12 35 33.4**	**+0.5**
O12A	**Currie** baz=35,SNR=7.5	**34.89**	**93**	⇓P	**P**	**12 35 33.6**	**+0.5**
Q11A	**Duckwater** baz=35	**35.28**	**96**	⇑P	**P**	**12 35 36.6**	**+0.2**
P12A	**McGill** baz=35,SNR=8.0	**35.30**	**94**	⇑P	**P**	**12 35 37.1**	**+0.4**
S10A	**Tonopah Range,** baz=35,SNR=6.0	**35.34**	**98**	⇑P	**P**	**12 35 37.5**	**+0.4**
Q12A	**Willow Creek R** baz=36	**35.63**	**95**	⇓P	**P**	**12 35 39.7**	**+0.1**
R11A	**Troy Canyon, C** baz=36,SNR=6.9	**35.65**	**96**	⇑P	**P**	**12 35 40.2**	**+0.5**
P13A	**Bates Ranch, G** baz=36	**35.84**	**94**	⇑P	**P**	**12 35 41.5**	**+0.1**
DUG	**Dugway** baz=36	**36.07**	**92**	⇓P	**P**	**12 35 43.0**	**-0.3**
MPMC	**Manual Prospec** baz=36	**36.10**	**101**	⇑P	**P**	**12 35 43.9**	**+0.3**
Q13A	**Wheeler Ranch,** baz=36	**36.16**	**94**	⇑P	**P**	**12 35 43.7**	**-0.4**
FURC	**Furnace Creek,** baz=36	**36.18**	**100**	⇑P	**P**	**12 35 44.3**	**0.0**
S12A	**Delamar Landin** baz=36	**36.57**	**97**	⇓P	**P**	**12 35 47.7**	**+0.1**
Q14A	**Sevier Lake (B** baz=36	**36.58**	**94**	⇓P	**P**	**12 35 47.7**	**+0.1**
T11A	**Corn Creek, Al** baz=36,SNR=7.4	**36.60**	**97**	⇑P	**P**	**12 35 48.1**	**+0.2**
N19A	**John Jarvie Ra** baz=38	**37.77**	**88**	⇑P	**P**	**12 35 57.3**	**-0.5**
T14A	**Hurricane** baz=38	**37.98**	**96**	⇑P	**P**	**12 35 59.8**	**+0.3**
GMRC	**Granite Mounta** baz=38	**38.06**	**101**	⇓P	**P**	**12 36 00.1**	**-0.1**
R16A	**Teasdale** baz=38	**38.10**	**93**	⇑P	**P**	**12 36 00.3**	**-0.2**
SRU	**San Rafael** baz=38	**38.12**	**91**	⇓P	**P**	**12 36 00.7**	**0.0**
V13A	**Grand Canyon W** baz=38	**38.28**	**98**	⇑P	**P**	**12 36 02.0**	**-0.1**
N20A	**Spence Gulch,** baz=38	**38.35**	**87**	⇓P	**P**	**12 36 02.3**	**-0.3**
U14A	**Mt Trumbull** baz=38,SNR=5.2	**38.36**	**97**	⇓P	**P**	**12 36 02.7**	**0.0**
R17A	**Hanksville Air** baz=38	**38.47**	**92**	⇓P	**P**	**12 36 03.4**	**-0.1**
P19A	**Cripple Cowboy** baz=39	**38.69**	**89**	⇓P	**P**	**12 36 05.1**	**-0.3**
N21A	**Black Mountain** baz=39	**38.83**	**87**	⇓P	**P**	**12 36 06.3**	**-0.4**
W13A	**Hualapai Mount** baz=39	**38.86**	**99**	⇓P	**P**	**12 36 07.1**	**+0.1**
U15A	**North Rim** baz=39	**38.87**	**96**	⇓P	**P**	**12 36 06.8**	**-0.2**
S17A	**Black Ridge (B** baz=39,SNR=6.4	**38.93**	**93**	⇓P	**P**	**12 36 07.5**	**0.0**
V14A	**Boquillas Ranc** baz=39	**38.95**	**97**	⇑P	**P**	**12 36 07.9**	**+0.2**
W14A	**Seligman** baz=39	**39.25**	**98**	⇑P	**P**	**12 36 09.4**	**-0.8**
X13A	**Yucca** baz=39	**39.25**	**99**	⇑P	**P**	**12 36 10.0**	**-0.3**
V15A	**Kaibab Nationa** baz=39,SNR=7.0	**39.36**	**96**	⇓P	**P**	**12 36 11.6**	**+0.4**
S18A	**Hurst Farm, Bl** baz=39	**39.37**	**92**	⇑P	**P**	**12 36 10.3**	**-0.9**
N22A	**Wattenberg Ran** baz=39	**39.43**	**86**	⇓P	**P**	**12 36 11.7**	**0.0**
Y13A	**Salome** baz=40	**39.81**	**100**	⇑P	**P**	**12 36 15.3**	**+0.5**
T18A	**Mexican Hat** baz=40	**39.81**	**93**	⇑P	**P**	**12 36 14.3**	**-0.6**
S19A	**Harvey Farm, M** baz=40	**39.84**	**92**	⇑P	**P**	**12 36 15.0**	**0.0**
X14A	**Yava** baz=40	**39.89**	**99**	⇑P	**P**	**12 36 15.8**	**+0.3**
Y14A	**Wickenburg** baz=40	**40.20**	**99**	⇑P	**P**	**12 36 18.3**	**+0.2**
V17A	**Tonalea, Kykot** baz=40	**40.31**	**95**	⇓P	**P**	**12 36 19.1**	**+0.1**
Z13A	**Yuma Proving G** baz=40	**40.35**	**101**	⇑P	**P**	**12 36 19.3**	**0.0**
T19A	**Beclabito** baz=40	**40.52**	**93**	⇓P	**P**	**12 36 19.5**	**-1.2**
219A	**White Tail Can** baz=44	**43.77**	**98**	⇑P	**P**	**12 36 47.2**	**-0.1**
220A	**Playas Peak, P** baz=44	**44.27**	**97**	⇑P	**P**	**12 36 50.9**	**-0.4**
TXAR	**Lajitas Array** 1.2nm,0.8s,mb4.0,baz=300,slow=5.3,SNR=14	**49.00**	**95**	P	**P**	**12 37 28.1**	**-0.1**
TXAR				PcP	PcP	12 38 50.8	-0.9
TXAR	0.3nm,0.6s,baz=327,slow=0.9,SNR=4.0						
SCHQ	**Schefferville** comp=Z,31nm,19.0s,MS3.4,baz=51,slow=36	**51.54**	**47**	LR	LR	12 59 44.3	
SONM	**Songino Array** 0.8nm,0.7s,mb3.8,baz=38,slow=7.3,SNR=2.9	**53.64**	**303**	P	**P**	**12 38 02.8**	**-0.1**
BVAR	**Borovoye Array** 0.7nm,0.7s,mb3.8,baz=46,slow=8.4,SNR=3.3	**64.44**	**327**	P	**P**	**12 39 18.0**	**+0.5**
MKAR	**Makanchi Array** 0.2nm,0.6s,mb3.3,baz=64,slow=6.6,SNR=2.3	**65.31**	**317**	P	**P**	**12 39 21.8**	**-1.4**
CTA	**Charters Tower** comp=Z,64nm,18.7s,MS4.0,baz=140,slow=32	**85.70**	**227**	LR	LR	13 15 04.3	

JMA 17 12:43:01.9±0.2, 25°.07N×122°.81E, h6km, M1.9

TAP 17 12:43:01.3, 24°.02N×122°.50E, h60km±1km, ML3.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.64**	**47**	P	Pn	12 43 14.2	-0.6
YOJ				eS	Sn	12 43 22.7	-2.0
ENA	**Nanau** baz=306	**0.80**	**300**	P	Pn	12 43 16.9	+0.1
ENA				eS	Sn	12 43 28.6	+0.3
TWD	**Chiawan** baz=275	**0.83**	**274**	P	Pn	12 43 17.0	-0.1
TWD				S	Sn	12 43 28.3	-0.5
TWC	**Suao** baz=315	**0.83**	**315**	P	Pn	12 43 17.2	0.0
TWC				eS	Sn	12 43 29.1	+0.1
ESL	**Shilin** baz=258	**1.00**	**258**	eP	Pn	12 43 19.3	0.0
ILA	**Ilan** baz=327	**1.01**	**317**	eP	Pn	12 43 21.9	+2.4
TWE	**Neicheng** baz=313	**1.03**	**313**	eP	Pn	12 43 21.2	+1.4
TWE				eS	Sn	12 43 35.1	+1.6
NNS	**Nan Shan** baz=292	**1.11**	**292**	eP	Pn	12 43 21.2	+0.4
NNS				eS	Sn	12 43 36.0	+0.7
WHF	**Hehuan Shan** baz=277	**1.14**	**276**	P	Pn	12 43 21.7	+0.6
WHF				S	Sn	12 43 36.4	+0.4
IRIF	**Iriomote-Funau**	**1.16**	**74**	P	Pn	12 43 22.8	+1.3
IRIF				eS	Sn	12 43 38.5	+1.9
EHY	**Hungye** baz=256	**1.20**	**245**	eP	Pn	12 43 21.9	-0.1
EHY				eS	Sn	12 43 37.1	-0.2
NSK	**Sanguang** baz=294	**1.23**	**302**	eP	Pn	12 43 23.5	+1.2
NSK				eS	Sn	12 43 39.8	+1.6
NWF	**Wu-fen Shan** baz=328	**1.23**	**328**	eP	Pn	12 43 24.2	+1.8
NWF				eS	Sn	12 43 41.2	+3.0
TWF1	**Yuli** baz=234	**1.29**	**239**	P	Pn	12 43 23.2	0.0
TWF1				eS	Sn	12 43 39.3	-0.3
CHKT	**Chengkung** baz=229	**1.39**	**229**	eP	Pn	12 43 24.1	-0.4
JKRS	**Kuro-shima**	**1.39**	**81**	P	Pn	12 43 27.6	+3.0
JKRS				eS	Sn	12 43 45.3	+3.3
SMLT	**Sun Moon Lake** baz=257	**1.47**	**265**	eP	Pn	12 43 27.0	+1.4
TYC	**Yuchr** baz=266	**1.51**	**266**	eP	Pn	12 43 27.8	+1.7
JIJ	**Ishigaki jima**	**1.54**	**77**	P	Pn	12 43 27.6	+1.1
JIJ				eS	Sn	12 43 46.2	+0.7
ELDTW	**Lidau** baz=239	**1.59**	**239**	eP	Pn	12 43 27.7	+0.5
ELDTW				eS	Sn	12 43 46.7	-0.1
TWQ1	**Liyutan** baz=282	**1.61**	**282**	eP	Pn	12 43 29.0	+1.5
ALS	**Alishan** baz=253	**1.64**	**252**	eP	Pn	12 43 28.9	+1.1
ALS				eS	Sn	12 43 47.8	0.0
NSY	**Sanyi** baz=284	**1.64**	**284**	eP	Pn	12 43 29.1	+1.3
CHN5	**Tsauling** baz=257	**1.72**	**256**	eP	Pn	12 43 29.6	+0.6
CHN5				eS	Sn	12 43 52.4	+2.4
WTP	**Ta-pu** baz=247	**1.90**	**246**	eP	Pn	12 43 32.1	+0.8
WTP				eS	Sn	12 43 54.6	+0.4
CHN1	**Nanshi** baz=246	**1.99**	**246**	eP	Pn	12 43 32.9	+0.2
CHN1				eS	Sn	12 43 57.8	+1.2
SGST	**Jiashian** baz=235	**1.99**	**242**	eP	Pn	12 43 32.5	-0.1

ISCJB 17 12:46:25.3±0.8, 30°.96N±0°.06×103°.4E±0°.1, h10km, mb3.1/4, Error ellipse: s-maj=12.7km s-min=8.6km az=12.3

IDC 17 12:46:27.9±2.0, 31°.41N×103°.65E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/24, mbtmp3.4/5, ML4.1/1, Error ellipse: s-maj=42.1km s-min=34.5km az=17.0

BJI 17 12:46:29.5, 30°.95N×103°.40E, h14km, ML3.6/11, Ms3.2/1, Ms7 3.2/1

ISC 17 12:46:27.1±0.8, 30°.99N±0°.06×103°.37E±0°.07, h10km, n9, σ1§00/15, mb3.1/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**103**	Pg	**Pg**	**12 46 33.9**	**0.0**
CD2				Sg	**Sg**	**12 46 39.3**	**+0.8**
CD2	comp=N,17μm,0.8s			smax			
GYA	**Guiyang**	**5.36**	**146**	Pg	**Pg**	**12 48 06.0**	**-3.7**
GYA				Sg	**Sg**	**12 49 11.9**	**-7.3**
GYA	comp=N,80nm,0.9s			smax			
GYA	comp=E,40nm,0.8s			smax			
XAN	**Xi'an**	**5.59**	**56**	Pn	**Pn**	**12 47 50.8**	**+0.5**
XAN				Pg	**Pg**	**12 48 08.3**	**-5.9**
XAN				Sn	**Sn**	**12 49 01.5**	**+6.9**
XAN				Sg	**Sg**	**12 49 22.1**	**-4.5**
XAN	comp=N,80nm,0.9s			smax			
XAN	comp=E,35nm,0.9s			smax			
KMI	**Kunming**	**5.87**	**186**	Pn	**Pn**	**12 47 55.6**	**+1.5**
KMI				Sn	**Sn**	**12 49 00.8**	**-0.6**
KMI	comp=N,17nm,0.7s			smax			
KMI	comp=E,18nm,0.7s			smax			
CMAR	**Chiang Mai Arr** comp=E,0.3nm,0.3s,baz=16,slow=11,SNR=3.5	**13.10**	**199**	Pn	**Pn**	**12 49 41.9**	**+8.6**
KSRS	**Korea Array** comp=E,0.6nm,0.6s,mb3.1,baz=259,slow=10,SNR=2.8	**21.27**	**66**	P	**P**	**12 51 11.4**	**-2.1**
MKAR	**Makanchi Array** comp=E,0.3nm,0.4s,mb3.1,baz=133,slow=11,SNR=2.4	**22.66**	**320**	P	**P**	**12 51 28.6**	**+0.3**
ZALV	**Zalesovo Beam** comp=E,0.7nm,0.6s,mb3.4,baz=128,slow=9.5,SNR=3.5	**26.56**	**335**	P	**P**	**12 52 05.2**	**+0.3**
YKA	**Yellowknife Ar** comp=E,0.1nm,0.6s,mb3.0,baz=332,slow=5.7,SNR=2.9	**81.99**	**17**	P	**P**	**12 58 46.6**	**-0.3**

NOU 17 13:10:20.7±0.9, 20°.32S×168°.45E, h30km, MD2.9, ML2.7

ISCJB 17 13:10:22.5±2.6, 20°.4S±0°.2×168°.1E±0°.3, h33km±25km, mb4.0/4, Error ellipse: s-maj=57.3km s-min=19.7km az=39.1

IDC 17 13:10:22.2±2.1, 18°.27S×167°.27E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.0/4, MS3.5/1, Ms1 3.4/1, ms1mx2.7/22, Error ellipse: s-maj=107.1km s-min=31.5km az=156.0

ISC 17 13:10:22.0±4.5, 20°.5S±0°.3×168°.3E±0°.3, h20km±28km, n11, σ0§18/10, mb4.0/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.11**	**218**	eS	**Sn**	**13 11 21.6**	**-0.3**
LASL	**Noumea**	**2.38**	**223**	eP	**Pn**	**13 10 60.0**	**+0.1**
NORM	**Noumea**	**2.41**	**224**	eP	**Pn**	**13 11 00.3**	**0.0**
NORM				eS	**Sn**	**13 11 29.7**	**+0.3**
NOUC	**Port Laguerre**	**2.45**	**229**	eP	**Pn**	**13 11 00.9**	**0.0**
NOUC	comp=Z,67nm,0.8s			AMP		13 11 45.6	
STKA	**Stephens Creek** comp=Z,103nm,19.9s,baz=26,slow=32	**26.43**	**239**	LR	LR	13 24 45.0	
ASAR	**Alice Springs** comp=Z,1.4nm,0.7s,mb3.9,baz=82,slow=9.5,SNR=15	**31.97**	**258**	P	**P**	**13 16 46.8**	**-0.2**
SONM	**Songino Array** comp=Z,0.3nm,0.6s,mb3.7,baz=113,slow=3.7,SNR=2.0	**87.67**	**324**	P	**P**	**13 23 01.3**	**-7.7**
SONM	**Songino Array** comp=Z,0.9nm,0.6s,mb4.3,baz=267,slow=2.1,SNR=5.2	**87.67**	**324**	P	**P**	**13 23 01.3**	**-7.7**
YBH	**Yreka Blue Hor**	**88.81**	**44**	P	**P**	**13 23 14.6**	**0.0**
NVAR	**Mina Array Bea** comp=Z,1.0nm,0.7s,mb4.2,baz=222,slow=7.9,SNR=7.8	**90.29**	**49**	P	**P**	**13 23 21.6**	**+0.1**
GERES	**GERESS Array B** comp=Z,0.5nm,0.8s,baz=38,slow=1.7,SNR=3.7	**145.14**	**330**	PKP	PKPdf	13 29 57.0	-0.9

ISCJB 17 13:19:04.5±0.9, 31°.26N±0°.08×103°.3E±0°.1, h10km, mb3.3/5, Error ellipse: s-maj=16.1km s-min=6.2km az=142.1

IDC 17 13:19:06.5±16.0, 31°.70N×103°.56E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/25, mbtmp3.4/4, Error ellipse: s-maj=365.7km s-min=34.5km az=13.0

NEIC 17 13:19:07.3±1.5, 31°.40N×103°.44E, h10km, mb3.9/1, Error ellipse: s-maj=34.3km s-min=17.2km az=203.0

BJI 17 13:19:07.5, 31°.24N×103°.35E, h14km, ML3.3/7

ISC 17 13:19:07.0±0.8, 31°.24N±0°.07×103°.29E±0°.09, h10km, n10, σ1§42/15, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**129**	Pg	**Pg**	**13 19 15.6**	**-1.5**
CD2				Sg	**Sg**	**13 19 23.8**	**-0.1**
CD2	comp=N,4μm,0.8s			smax			
LZH	**Lanzhou**	**4.86**	**5**	Pg	**Pg**	**13 20 40.5**	**+0.5**
LZH				Sg	**Sg**	**13 21 49.9**	**+7.0**
LZH	comp=N,77nm,0.7s			smax			
LZH	comp=E,74nm,0.6s			smax			
ENH	**Enshi** comp=E,28nm,0.9s	**5.42**	**99**	ePn	**Pn**	**13 20 26.7**	**-1.1**
XAN	**Xi'an**	**5.51**	**58**	Pn	**Pn**	**13 20 30.0**	**+0.9**
XAN				Pg	**Pb**	**13 20 44.5**	**+1.2**
XAN				Sn	**Sn**	**13 21 25.9**	**-6.6**
XAN	comp=N,33nm,0.8s			smax			
XAN	comp=E,19nm,1.0s			smax			
GYA	**Guiyang**	**5.61**	**147**	Pg	**Pg**	**13 20 56.3**	**+1.9**
GYA				Sg	**Sb**	**13 21 59.3**	**+7.0**
GYA	comp=N,50nm,0.8s			smax			
GYA	comp=E,40nm,0.8s			smax			
KSRS	**Korea Array** comp=E,0.6nm,0.6s,mb3.1,baz=256,slow=9.8,SNR=4.2	**21.23**	**66**	P	**P**	**13 23 49.6**	**-3.5**
MKAR	**Makanchi Array** comp=E,0.7nm,0.9s,mb3.1,baz=129,slow=11,SNR=2.1	**22.42**	**320**	P	**P**	**13 24 05.7**	**0.0**
ZALV	**Zalesovo Beam** comp=E,0.4nm,0.5s,mb3.2,baz=150,slow=6.1,SNR=2.1	**26.30**	**335**	P	**P**	**13 24 40.3**	**-2.2**
KURK	**Kurchatov** comp=E,0.6nm,0.6s,mb3.3,baz=130,slow=9.3,SNR=5.7	**26.72**	**324**	P	**P**	**13 24 45.1**	**-1.3**
KBL	**Kabul** comp=E,1.6nm,0.7s,mb3.9	**28.86**	**286**	eP	**P**	**13 25 08.7**	**+3.0**

SZGRF 17 13:32:09.7, 32°.95N×107°.30E, h12km, mb4.9, Sichuan, China

IDC 17 13:32:11.3±0.5, 32°.04N×104°.70E, h0km, mb4.5/24, mb1 4.6/27, mb1mx4.5/34, mbtmp4.5/27, ML4.0/3, MS3.8/19, Ms1 3.9/19, ms1mx3.6/36, Error ellipse: s-maj=17.7km s-min=10.1km az=51.0

NEIC 17 13:32:12.9±0.2, 32°.00N×104°.70E, h10km, mb4.8/43, Error ellipse: s-maj=5.7km s-min=4.4km az=222.0

BJI 17 13:32:12.5, 32°.05N×104°.74E, h15km, mB4.6/21, mb4.6/31, ML4.8/22, Ms4.5/47, Ms7 4.2/40

TEH 17 13:32:12.0, 31°.93N×104°.60E, h10km

ISCJB 17 13:32:12.1±1.1, 32°.02N±0°.02×104°.69E±0°.03, h14km±7km, mb4.7/82, MS4.0/29, Error ellipse: s-maj=4.3km s-min=3.8km az=151.0

MOS 17 13:32:14.2±0.9, 32°.02N×104°.77E, h31km, mb4.8/52, MS4.1/19, Error ellipse: s-maj=8.9km s-min=4.7km az=115.4

DJA 17 13:32:18, 31°.99N×104°.83E, h26km, mb5.2/19

ISC 17 13:32:13.8±1.0, 32°.03N±0°.02×104°.67E±0°.03, h12km±6km, h12km±.6km:pP-P, n284, σ1§14/293, mb4.7/82, MS4.0/29, 24C-12D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.36**	**215**	Pg	**Pg**	**13 32 41.3**	**+1.3**
CD2				Sg	**Sg**	**13 33 02.1**	**+4.4**
CD2	comp=N,65μm,0.7s			smax			
XAN	**Xi'an**	**4.09**	**60**	Pn	**Pn**	**13 33 15.6**	**-0.6**
XAN				Pg	**Pg**	**13 33 25.3**	**-6.9**
XAN				Sn	**Sn**	**13 34 10.3**	**+6.3**
XAN				Sg	**Sg**	**13 34 22.3**	**-2.9**
XAN	comp=N,3μm,0.8s			smax			
XAN	comp=E,1μm,0.8s			smax			
XAN	comp=N,6μm,8.5s			LR	LR		
XAN	comp=E,1μm,9.0s			LR	LR		
XAN	comp=Z,610nm,9.4s			LR	LR		
LZH	**Lanzhou**	**4.11**	**351**	ePn	**Pn**	**13 33 18.0**	**+1.7**
LZH				Pg	**Pg**	**13 33 29.5**	**-2.9**
LZH				Sn	**Sn**	**13 34 06.0**	**+1.7**
LZH				Sg	**Sg**	**13 34 20.3**	**-5.3**
LZH	comp=N,10μm,1.2s			smax			
LZH	comp=E,9μm,1.0s			smax			
LZH	comp=N,12μm,7.8s			LR	LR		
LZH	comp=Z,18μm,9.0s			LR	LR		
ENH	**Enshi**	**4.48**	**112**	ePn	**Pn**	**13 33 22.2**	**+0.7**
ENH				eS	Sg	13 34 34.2	-3.6
GYA	**Guiyang**	**5.82**	**162**	Pn	**Pn**	**13 33 41.3**	**+1.4**
GYA				Sn	**Sn**	**13 34 48.8**	**+2.2**
GYA	comp=N,830nm,0.9s			smax			
GYA	comp=E,1μm,0.9s			smax			
GYA	comp=N,1μm,4.0s			LR	LR		
GYA	comp=E,1μm,3.9s			LR	LR		
GYA	comp=Z,2μm,5.9s			LR	LR		
KMI	**Kunming**	**7.09**	**194**	Pn	**Pn**	**13 33 59.0**	**+1.6**
KMI				Sn	**Sn**	**13 35 20.4**	**+2.5**
KMI	comp=N,140nm,1.6s			smax			
KMI	comp=E,99nm,1.3s			smax			

KMI LR LR
comp=N,1μm,6.1s
KMI LR LR
comp=E,2μm,6.1s
KMI LR LR
comp=Z,1μm,9.1s
GTA Gaotai 8.36 333 ⇑P **Pn 13 34 14.8 +0.1**
GTA pP 13 34 17.9
GTA sP 13 34 20.6
GTA S **Sn 13 35 49.3 +0.3**
GTA pmax pmax
comp=Z,11nm,1.1s
GTA pmax pmax
comp=Z,79nm,4.5s
GTA LR LR
comp=N,2μm,10.4s
GTA LR LR
comp=E,770nm,11.3s
GTA LR LR
comp=Z,2μm,10.7s
WHN Wuhan 8.41 98 P Px 13 34 02.6
WHN S **Sn 13 35 45.1 -5.3**
WHN LR LR
comp=N,5μm,4.0s
WHN LR LR
comp=E,5μm,8.0s
WHN LR LR
comp=Z,5μm,5.8s
TIA Tai'an 11.13 65 P **Pn 13 34 53.8 +1.1**
TIA LR LR
comp=N,420nm,8.0s
TIA LR LR
comp=E,530nm,8.0s
GZH Guangzhou 11.76 137 P **Pn 13 34 56.9 -4.6**
GZH S **Sn 13 36 56.0 -17**
GZH LR LR
comp=N,2μm,7.5s
GZH LR LR
comp=E,1μm,12.0s
LSA Lhasa 11.85 262 P **Pn 13 35 00.8 -1.8**
LSA LR LR
comp=N,780nm,14.5s
LSA LR LR
comp=E,770nm,9.9s
LSA LR LR
comp=Z,770nm,11.7s
LSA Lhasa 11.85 262 *e*Pn **Pn 13 35 00.5 -2.1**
NJ2 Nanjing 12.03 86 *e*P **Pn 13 35 09.3 +4.2**
NJ2 pP 13 35 12.4
NJ2 sP 13 35 15.5
NJ2 PP 13 35 19.5
NJ2 S **Sn 13 37 26.0 +6.7**
NJ2 sS 13 37 31.4
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,50nm,5.6s
NJ2 LR LR
comp=N,590nm,17.6s
NJ2 LR LR
comp=E,1μm,17.0s
NJ2 LR LR
comp=Z,1μm,17.6s
BJI Beijing 12.26 46 P **Pn 13 35 09.4 +1.2**
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI pmax pmax
comp=Z,30nm,3.5s
BJI LR LR
comp=N,2μm,14.0s
BJI LR LR
comp=E,2μm,16.1s
SHL Shillong 12.93 243 *e*P **Pn 13 35 18.0 +0.6**
SHL *e*S Sx 13 39 16.0
QIZ Qiongzhong 13.76 159 P **Pn 13 35 27.8 -0.9**
QIZ S **Sn 13 38 01.4 -0.1**
QIZ pmax pmax
comp=Z,20nm,0.9s
QIZ LR LR
comp=N,2μm,11.5s
QIZ LR LR
comp=Z,3μm,11.9s
QIZ Qiongzhong 13.76 159 *e*Pn **Pn 13 35 27.2 -1.5**
QIZ *e*Sn **Sn 13 37 58.3 -3.2**
QZH Quanzhou 14.12 116 P **Pn 13 35 33.6 -0.1**
QZH S **Sn 13 38 11.1 +0.7**
QZH LR LR
comp=N,3μm,6.5s
QZH LR LR
comp=E,3μm,9.4s
QZH LR LR
comp=Z,6μm,9.8s
CMAR Chiang Mai Arr 14.47 202 Pn **Pn 13 35 39.1 +0.7**
comp=Z,0.3nm,0.3s,baz=9.2,slow=12,SNR=15
CMAR Lg 13 40 06.4
comp=Z,0.1nm,0.3s,baz=11,slow=29,SNR=2.2
CMAR LR LR 13 41 56.7
comp=Z,303nm,19.2s,baz=247,slow=40
CMAR Chiang Mai Arr 14.47 202 Pn **Pn 13 35 39.1 +0.7**
CMAR Lg 13 40 06.4
CMAR LR LR 13 41 56.6
TAPN Taplejung 15.46 257 *e*P **Pn 13 35 49.9 -1.8**
comp=Z,64nm,1.0s
BDT Bhumibol Dam 15.59 201 P **Pn 13 35 58.0 +4.5**
KKTK Khon Kaen 15.71 187 P **Pn 13 36 02.0 +7.0**
comp=Z,432nm,0.7s
SONM Songino Array 15.84 4 Pn **Pn 13 35 56.7 +0.2**
comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=18
SONM Lg 13 40 29.6
comp=Z,0.1nm,0.3s,baz=177,slow=30,SNR=3.6
SONM LR LR 13 42 25.0
comp=Z,511nm,20.9s,baz=177,slow=39
ODAN Odare 15.91 256 *e*P **Pn 13 35 55.9 -1.6**
comp=Z,45nm,0.7s
ULN Ulaanbaatar 15.92 6 *e*P **Pn 13 35 58.2 +0.7**
ULN pmax pmax
comp=Z,14nm,0.8s
ULN Ulaanbaatar 15.92 6 *e*Pn **Pn 13 35 58.2 +0.7**
comp=Z,14nm,0.8s
RAMN Ramite 16.53 257 *e*P **Pn 13 36 03.5 -2.0**
comp=Z,42nm,0.8s
JIRN Jiri 16.61 260 *e*P **Pn 13 36 05.4 -1.2**
comp=Z,51nm,0.8s
GUN Gumba 16.79 261 *e*P **Pn 13 36 07.3 -1.5**
comp=Z,41nm,0.5s
PKI Pulchoki 17.30 260 *e*P **Pn 13 36 13.6 -1.6**
comp=Z,36nm,0.6s
PKIN Phulchoki 17.31 260 *e*P **Pn 13 36 14.2 -1.1**
comp=Z,47nm,0.6s
KKN Kakani 17.33 261 *e*P **Pn 13 36 13.9 -1.7**
comp=Z,28nm,0.6s
DMN Daman 17.54 260 *e*P **Pn 13 36 16.7 -1.5**
comp=Z,62nm,0.9s
WMQ Urumqi 17.79 316 *e*P **Pn 13 36 18.6 -2.6**
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ pmax pmax
comp=Z,110nm,3.6s
WMQ LR LR
comp=N,1μm,11.0s
WMQ LR LR
comp=E,1μm,10.6s
WMQ LR LR
comp=Z,630nm,20.0s
SNY Shenyang 17.97 52 ⇑P **Pn 13 36 23.8 +0.4**
SNY S **Sn 13 39 46.8 +3.1**
SNY pmax pmax
comp=Z,7.0nm,0.7s
SNY pmax pmax
comp=Z,140nm,10.4s
SNY LR LR
comp=N,730nm,19.0s
SNY LR LR
comp=E,260nm,18.2s
SNY LR LR
comp=Z,240nm,13.1s
ZAK Zakamensk 18.36 357 *e*P **Pn 13 36 28.0 -0.2**
ZAK pmax pmax
comp=Z,10.0nm,2.3s
INCN Inchon 18.83 67 *e*P **Pn 13 36 30.3 -3.7**
comp=Z,22nm,0.9s
TLY Talaya 19.65 358 *e*P **Pn 13 36 44.9 +1.2**
TLY *e*S **Sn 13 40 24.2 +0.1**
TLY pmax pmax
comp=Z,10.0nm,1.4s
TLY MLR MLR
comp=Z,436nm,11.0s
TLY Talaya 19.65 358 *e*Pn **Pn 13 36 44.4 +0.7**
comp=Z,5.3nm,0.7s
MOY Mondy 19.81 353 *e*P **Pn 13 36 45.6 +0.1**
MOY pmax pmax
comp=Z,57nm,2.5s
KSRS Korea Array 19.84 68 P **Pn 13 36 44.4 -1.7**
comp=Z,1.1nm,0.3s,baz=254,slow=9.9,SNR=35
KSRS LR LR 13 44 59.2
comp=Z,133nm,20.1s,baz=100,slow=39
KSRS Korea Array 19.84 68 P **Pn 13 36 44.4 -1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,133nm,20.1s
NNT Nongplab 19.87 194 P **Pn 13 36 47.0 +0.4**
CN2 Changchun 20.11 48 ⇓P **P 13 36 48.3 +1.0**
CN2 *e*sP sP 13 36 55.3 +3.1
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.0
CN2 LR LR
comp=E,400nm,19.0s,MS4.0
CN2 LR LR
comp=Z,500nm,20.0s,MS3.9
IRK Irkutsk 20.20 359 *e*P **P 13 36 49.7 +1.4**
IRK pmax pmax
comp=Z,159nm,0.9s
HIA Hailar 20.60 29 *e*P **P 13 36 52.7 +0.1**
HIA pmax pmax
comp=Z,12nm,0.7s
HIA Hailar 20.60 29 *e*P **P 13 36 52.7 +0.1**
comp=Z,12nm,0.7s
JOW Kunigami 21.18 98 P **P 13 36 59.5 +0.4**
comp=Z,11nm,0.4s,mb4.5,baz=114,slow=23,SNR=6.1
JOW LR LR 13 46 03.1
comp=Z,307nm,20.9s,MS3.7,baz=140,slow=39
MK31 Makanchi Array 22.62 317 *e*P **P 13 37 14.5 +0.2**
MKAR Makanchi Array 22.62 317 P **P 13 37 14.4 +0.1**
comp=Z,5.8nm,0.5s,mb4.2,baz=115,slow=11,SNR=77
MKAR LR LR 13 46 53.0
comp=Z,768nm,18.7s,MS4.2,baz=29,slow=39
MKAR Makanchi Array 22.62 317 P **P 13 37 14.4 +0.1**
MKAR pmax pmax
comp=Z,6.0nm,0.5s
MKAR MLR MLR
comp=Z,768nm,18.7s
DDI Dehra Dun 22.82 273 *e*x x 13 37 21.5
MDJ Mudanjiang 23.14 50 P **P 13 37 19.8 0.0**
MDJ pP 13 37 22.8
MDJ sP sP 13 37 24.1 -0.6
MDJ PcP PcP 13 41 05.5 -2.7
MDJ S **S 13 41 29.8 -1.1**
MDJ sS sS 13 41 36.8 +0.1
MDJ pmax pmax
comp=Z,6.0nm,1.1s,mb3.9
MDJ pmax pmax
comp=Z,27nm,3.1s
MDJ LR LR
comp=N,180nm,14.8s,MS3.8
MDJ LR LR
comp=E,180nm,13.9s,MS3.8
MDJ LR LR
comp=Z,150nm,12.3s,MS3.6
MDJ Mudanjiang 23.14 50 *e*P **P 13 37 19.9 0.0**
comp=Z,18nm,1.1s,mb4.4
KSH Kashi 24.39 296 P **P 13 37 35.6 +3.8**
KSH pP 13 37 39.8
KSH sP sP 13 37 42.8 +5.9
KSH PP 13 38 11.5
KSH PcP PcP 13 41 12.5 +1.5
KSH S **S 13 41 54.3 +3.1**
KSH sS sS 13 42 01.6 +4.5
KSH SS 13 42 51.3
KSH pmax pmax
comp=Z,20nm,0.7s,mb4.7
KSH LR LR
comp=N,260nm,7.7s
KSH LR LR
comp=E,300nm,7.7s
KSH LR LR
comp=Z,430nm,10.3s,MS4.2
TKM2 Tokmak 2 25.39 304 P **P 13 37 42.4 +1.5**
SNR=17
TKM2 Tokmak 2 25.39 304 *e*P **P 13 37 42.0 +1.1**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
TKM2 Tokmak 2 25.39 304 *e*P **P 13 37 42.0 +1.1**
comp=Z,10.0nm,0.8s,mb4.4
KZA Kyzart 25.43 302 P **P 13 37 43.4 +2.1**
SNR=24
KBK Karagaybulak 25.78 303 P **P 13 37 46.4 +1.9**
SNR=6.9
UCH Uchtor 25.99 302 P **P 13 37 48.5 +2.1**
SNR=22
UCH Uchtor 25.99 302 *e*P **P 13 37 47.9 +1.5**
comp=Z,23nm,1.1s,mb4.6
AAK Ala-Archa 26.10 303 P **P 13 37 47.9 +0.5**
comp=Z,2.9nm,0.7s,mb3.9,baz=156,slow=7.3,SNR=6.4
AAK LR LR 13 48 37.6
comp=Z,575nm,18.1s,MS4.2,baz=82,slow=38
AAK Ala-Archa 26.10 303 *ce*P **P 13 37 49.9 +2.5**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
AAK Ala-Archa 26.10 303 *e*P **P 13 37 46.4 -1.0**
comp=Z,14nm,1.2s,mb4.4
ZAA0 Zalesovo Array 26.11 333 *e*P **P 13 37 47.0 -0.4**
ZALV Zalesovo Beam 26.11 333 P **P 13 37 47.1 -0.3**
comp=Z,17nm,0.7s,mb4.7,baz=130,slow=9.8,SNR=74
ZALV LR LR 13 47 50.4
comp=Z,103nm,21.1s,MS3.3,baz=244,slow=36
ZALV Zalesovo Beam 26.11 333 P **P 13 37 47.1 -0.2**
ZALV pmax pmax
comp=Z,17nm,0.7s,mb4.7
ZALV MLR MLR
comp=Z,103nm,21.1s,MS3.3
ZALV Zalesovo Beam 26.11 333 P **P 13 37 47.1 -0.3**
ZALV LR LR 13 47 50.4
USP Ospenovka 26.26 304 P **P 13 37 50.0 +1.2**
SNR=6.2
AML Almayashu 26.57 301 P **P 13 37 53.4 +1.8**
SNR=11
AML Almayashu 26.57 301 *e*P **P 13 37 52.1 +0.6**
comp=Z,127nm,0.6s,mb5.6
BOD Bodaibo 26.57 11 *e*P **P 13 37 52.1 +0.7**
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
EKS2 Erkin-Say 26.62 302 *e*P **P 13 37 52.8 +0.7**
comp=Z,4.9nm,0.8s,mb4.1
KURK Kurchatov 26.81 322 P **P 13 37 53.6 -0.1**
comp=Z,5.9nm,0.7s,mb4.2,baz=129,slow=8.7,SNR=55
KURK LR LR 13 49 06.5
comp=Z,302nm,19.5s,MS3.9,baz=145,slow=38
KURK Kurchatov 26.81 322 *ce*P **P 13 37 53.4 -0.3**
KURK pmax pmax
comp=Z,16nm,1.2s,mb4.4
KURK Kurchatov 26.81 322 *e*P **P 13 37 53.6 -0.1**
comp=Z,40nm,1.3s,mb4.8
NVS Novosibirsk 27.39 333 *e*P **P 13 37 57.8 -1.1**
NVS *e*PPP 13 38 56.2
NVS *e*S **S 13 42 26.0 -13**
NVS pmax pmax
comp=Z,25nm,1.7s,mb4.5
NVS pmax pmax
comp=N,22nm,1.6s
NVS pmax pmax
comp=E,18nm,1.5s
NVS smax
comp=E,5.0nm,1.5s
MAJO Matsushiro 27.98 71 *e*P **P 13 38 03.3 -1.1**
MAT Matsushiro 27.98 71 P **P 13 38 05.5 +1.1**
MAT *e*S **S 13 43 00.0 +12**
MJAR Matsushiro Arr 27.99 71 P **P 13 38 02.9 -1.5**
comp=E,1.9nm,0.6s,mb3.9,baz=278,slow=11,SNR=13
MJAR Matsushiro Arr 27.99 71 P **P 13 38 02.9 -1.5**
MJAR pmax pmax
comp=Z,2.0nm,0.6s
KKM Kota Kinabalu 28.01 155 *e*P **P 13 38 01.2 -3.5**
comp=Z,16nm,0.9s,mb4.6
NRGR Nerungri 28.28 24 *e*P Px 13 38 17.2
JHJ Hachijo jima 2 29.53 78 LR LR 13 50 03.9
comp=Z,90nm,19.6s,baz=350,slow=36
KBL Kabul 29.80 285 *e*P **P 13 38 21.1 +0.6**
KBL pmax pmax
comp=Z,12nm,0.8s,mb4.7
KBL Kabul 29.80 285 *e*P **P 13 38 21.1 +0.6**
comp=Z,12nm,0.8s,mb4.7
DAV Davao City (W) 31.57 137 LR LR 13 53 28.0
comp=Z,180nm,19.3s,MS3.8,baz=268,slow=40
BVAR Borovoye Array 32.38 321 P **P 13 38 42.4 -0.6**
comp=Z,3.2nm,0.6s,mb4.3,baz=106,slow=9.4,SNR=15
BVAR PcP PcP 13 41 30.0 -0.4
comp=Z,1.4nm,0.8s,baz=130,slow=2.3,SNR=2.9
BVAR Borovoye Array 32.38 321 P **P 13 38 42.4 -0.6**
BVAR 13 41 30.0
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BRVK Borovoye 32.45 321 *ce*P **P 13 38 43.8 +0.1**
BRVK pmax pmax
comp=Z,12nm,1.2s,mb4.6
BRVK Borovoye 32.45 321 *e*P **P 13 38 43.9 +0.3**
comp=Z,8.0nm,0.9s,mb4.5
YAK Yakutsk 34.07 21 *e*P **P 13 38 57.3 -0.4**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.9
YAK MLR MLR
comp=Z,105nm,10.0s,MS3.9
YAK MLR MLR
comp=N,97nm,11.0s,MS3.9
YAK MLR MLR
comp=E,81nm,10.0s,MS3.9
YAK Yakutsk 34.07 21 *e*P **P 13 38 58.2 +0.6**
comp=E,21nm,0.7s,mb5.2
IMYA Miami 36.88 289 *e*P **P 13 39 23.8 +1.6**
ISRO Mashad 37.39 289 *e*P **P 13 39 28.3 +1.8**
ABKAR Akbulak array 37.43 311 *e*P **P 13 39 26.9 +0.2**
comp=E,6.6nm,0.7s,mb4.6
IDAH Dahanechah 37.63 283 *e*P **P 13 39 29.2 +0.6**
IAKL Akhelmad 37.92 290 *e*P **P 13 39 32.1 +1.1**
AKTO Aktyubinsk 38.87 312 LR LR 13 55 18.9
comp=E,103nm,18.8s,MS3.7,baz=275,slow=36
SVE Sverdlovsk 39.05 323 ⇑*e*P **P 13 39 40.7 +0.4**
SVE *e*S **S 13 45 32.3 -6.8**
SVE pmax pmax
comp=Z,34nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,331nm,18.0s,MS4.2
KAPI Kappang 39.54 156 P **P 13 39 43.7 -1.0**
comp=Z,25nm,0.8s,mb5.0,baz=331,slow=9.6,SNR=12
KAPI Kappang 39.54 156 *e*P **P 13 39 43.5 -1.2**
comp=Z,585nm,1.2s
ARU Arti 40.01 321 *d*iP **P 13 39 48.1 -0.1**
ARU *e**PP pP 13 40 04.2 +12
ARU S **S 13 45 51.5 -1.9**
ARU SS SS 13 48 48.0 -2.2
ARU pmax pmax
comp=Z,19nm,0.8s,mb4.9
ARU Arti 40.01 321 *e*P **P 13 39 47.8 -0.4**
comp=Z,86nm,1.4s,mb5.3
TIXI Tiksi 41.75 11 *e*P **P 13 40 01.1 -1.3**
TIXI pmax pmax
comp=Z,12nm,1.0s,mb4.5
TIXI MLR MLR
comp=Z,372nm,16.0s,MS4.4
TIXI Tiksi 41.75 11 *e*P **P 13 40 01.3 -1.1**
comp=Z,17nm,1.2s,mb4.6
SOKR Solikamsk 41.90 326 *c i*P **P 13 40 05.2 +1.4**
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.1
SEY Seymchan 43.05 30 *de*P **P 13 40 12.1 -1.0**
PETK Petropavlovsk- 43.19 45 P **P 13 40 13.4 -0.9**
comp=Z,6.2nm,0.8s,mb4.4,baz=214,slow=5.1,SNR=10
PETK LR LR 13 59 54.3
comp=Z,68nm,19.2s,MS3.6,baz=74,slow=38
PETK Petropavlovsk- 43.19 45 P **P 13 40 13.4 -1.0**
PETK pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
PETK MLR MLR
comp=Z,68nm,19.2s,MS3.6
GNI Garni 48.31 297 LR LR 14 04 17.5
comp=Z,104nm,20.6s,MS3.8,baz=305,slow=40
GNI Garni 48.31 297 *ce*P **P 13 40 56.5 +1.5**
GNI pmax pmax
comp=Z,9.0nm,1.7s
ZEI Tsey 48.51 301 *e*P **P 13 40 56.1 -0.4**
ZEI pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
MIB Mutribah 48.74 283 *e*P **P 13 40 58.1 -0.4**
MIB AMb AMB 13 41 08.2
comp=Z,18nm,0.7s,mb5.2
RDF Al-Radifah 48.84 282 *e*P **P 13 40 58.6 -0.7**
RDF AMb AMB 13 41 02.1
comp=Z,18nm,1.2s,mb5.0
KIV Kislovodsk 49.22 303 *e*P **P 13 41 02.9 +1.0**
KIV pmax pmax
comp=Z,26nm,1.6s,mb5.0
KIV MLR MLR
comp=Z,200nm,15.0s,MS4.2
KIV Kislovodsk 49.22 303 *e*P **P 13 41 02.0 +0.1**
comp=Z,18nm,0.9s,mb5.1
VRHR Novokhopersk 49.28 312 *e*P **P 13 41 02.0 -0.3**
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.5s
BILL Bilibino 50.13 26 *e*P **P 13 41 08.3 -0.2**
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.2
BILL Bilibino 50.13 26 *e*P **P 13 41 07.4 -1.1**
comp=Z,3.2nm,0.6s,mb4.5
KLMR Klimovskoe 50.59 325 *e*P **P 13 41 10.3 -1.8**
KLMR pmax pmax
comp=Z,37nm,0.9s,mb5.3
VSR Storozhevoye 50.82 312 *e*P **P 13 41 13.5 -0.5**
VSR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,0.4s
SOC Sochi 51.40 303 *e*P **P 13 41 21.6 +3.1**
SOC *e* 13 43 18.0
SOC *e*S **S 13 48 40.7 +2.8**
SOC *e* 13 50 58.3
SOC MLR MLR
comp=Z,216nm,14.0s,MS4.3
MOS Moscow 51.49 318 *e*P **P 13 41 20.7 +1.7**
MOS pmax pmax
comp=Z,63nm,0.8s,mb5.6
OBN Obninsk 52.12 318 *e*P **P 13 41 23.4 -0.3**
OBN pmax pmax
comp=Z,26nm,1.6s,mb4.9
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.2
ANN Anapa 52.80 304 *e*P **P 13 41 31.7 +2.8**
ANN pmax pmax
comp=Z,22nm,0.8s,mb5.1
MALT Malatya 53.49 296 *e*P **P 13 41 34.5 +0.5**
MALT pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MALT Malatya 53.49 296 *e*P **P 13 41 34.5 +0.5**
comp=Z,4.5nm,0.9s,mb4.4
APA Apatity 53.70 333 ⇓*e*P **P 13 41 35.2 +0.1**
APA MLR MLR
comp=Z,800nm,17.0s,MS4.8
FITZ Fitzroy Crossi 53.74 155 *e*P **P 13 41 35.3 -0.7**
comp=Z,14nm,0.7s,mb5.0
FITZ Fitzroy Crossi 53.74 155 P **P 13 41 35.4 -0.5**
comp=Z,8.7nm,0.6s,mb4.8,baz=342,slow=6.3,SNR=22
JOF Joensuu 54.51 327 *e*P **P 13 41 40.1 -1.0**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 54.51 327 *ep* **P 13 41 40.1 -1.0**
comp=Z,2.0nm,0.4s,mb4.5
KEV Kevo 56.09 336 *e*P **P 13 41 48.7 -3.7**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KEV Kevo 56.09 336 *ep* **P 13 41 48.7 -3.7**
comp=Z,3.0nm,0.4s,mb4.7
ARCES ARCESS Array B 56.62 336 P **P 13 41 54.9 -1.3**
comp=Z,4.1nm,0.4s,mb4.8,baz=84,slow=7.7,SNR=33
ARCES LR LR 14 11 25.4
comp=Z,50nm,18.0s,MS3.7,baz=84,slow=42

ARCES **ARCESS Array B 56.62 336** P **P** **13 41 54.9 -1.3**
ARCES pmax pmax
comp=Z,4.0nm,0.4s
ARCES MLR MLR
comp=Z,50nm,18.0s
BR131 Keskin Array S 56.71 299 *e*P **P** **13 41 53.3 -4.0**
BRTR Keskin Array B 56.71 299 P **P** **13 41 57.2 -0.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=85,slow=6.7,SNR=5.1
BRTR LR LR 14 10 27.8
comp=Z,66nm,18.5s,MS3.8,baz=261,slow=40
BRTR Keskin Array B 56.71 299 P **P** **13 41 57.3 0.0**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR MLR MLR
comp=Z,66nm,18.5s
KAF Kangasniemi 56.88 327 *e*P **P** **13 41 55.1 -3.1**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 56.88 327 *e*p **P** **13 41 55.1 -3.1**
comp=Z,1.6nm,0.4s,mb4.4
FINES FINESS Array B 57.07 326 P **P** **13 41 59.0 -0.5**
comp=Z,6.1nm,0.5s,mb4.9,baz=84,slow=7.0,SNR=62
FINES FINESS Array B 57.07 326 P **P** **13 41 59.0 -0.5**
FINES pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 57.11 313 P **P** **13 41 59.1 -0.9**
comp=Z,2.6nm,0.4s,mb4.6,baz=67,slow=7.3,SNR=6.6
AKASG LR LR 14 07 55.5
comp=Z,255nm,19.9s,MS4.3,baz=65,slow=38
AKASG Malin Array Be 57.11 313 P **P** **13 41 59.1 -0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG MLR MLR
VSU Vasula 57.16 322 *c*e*P **P** **13 41 59.7 -0.5**
VSU pmax pmax
comp=Z,34nm,1.7s,mb5.1
WRAB Tennant Creek 58.97 147 *e*P **P** **13 42 13.3 0.0**
WRAB pmax pmax
comp=Z,23nm,0.8s,mb5.3
WRAB Tennant Creek 58.97 147 *e*P **P** **13 42 13.3 0.0**
comp=Z,23nm,0.8s,mb5.2
HARR Harsova 59.41 306 ⇑P **P** **13 42 16.4 +0.2**
HARR Harsova 59.41 306 ⇑*i*P **P** **13 42 16.4 +0.2**
VRI Vrincioaia 59.90 308 P **P** **13 42 20.3 +0.8**
VRI Vrincioaia 59.90 308 ⇓*i*P **P** **13 42 20.3 +0.8**
PLOR Plostina 59.96 308 P **P** **13 42 21.0 +1.1**
PLOR Plostina 59.96 308 ⇓*i*P **P** **13 42 21.0 +1.1**
BURAR Bucovina Array 60.41 310 P **P** **13 42 21.9 -1.1**
BURAR Bucovina Array 60.41 310 ⇓*i*P **P** **13 42 21.9 -1.1**
MLR Muntele Rosu 60.53 308 ⇓P **P** **13 42 24.2 +0.4**
MLR Muntele Rosu 60.53 308 ⇓*i*P **P** **13 42 24.2 +0.4**
VOIR 61.15 308 P **P** **13 42 28.5 +0.5**
VOIR 61.15 308 ⇓*i*P **P** **13 42 28.5 +0.5**
KOLS Kolonicke sedl 61.91 312 *e*P **P** **13 42 33.1 0.0**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
KOLS Kolonicke sedl 61.91 312 *e*P **P** **13 42 33.1 0.0**
TRPA Tarpa 61.98 311 ⇑*i*P **P** **13 42 35.2 +1.6**
ASAR Alice Springs 62.03 150 P **P** **13 42 34.4 +0.2**
comp=Z,8.3nm,0.9s,mb4.9,baz=334,slow=6.5,SNR=39
ASAR Alice Springs 62.03 150 P **P** **13 42 34.4 +0.3**
ASAR pmax pmax
comp=Z,8.0nm,0.9s
DRGR 62.28 310 ⇑P **P** **13 42 36.3 +0.6**
DRGR 62.28 310 ⇑*i*P **P** **13 42 36.3 +0.6**
STHS Stebnicka Huta 62.41 313 *e*P **P** **13 42 37.4 +1.0**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS Stebnicka Huta 62.41 313 *e*P **P** **13 42 37.3 +0.9**
STHS *e*pP pP 13 42 40.9 +0.7
GZR Gura Zlata 62.69 308 ⇑P **P** **13 42 47.0 +8.6**
GZR Gura Zlata 62.69 308 ⇑*i*P **P** **13 42 47.0 +8.6**
OJC Ojcow 63.05 314 *e*P **P** **13 42 38.5 -2.2**
KECS Kecovo 63.18 312 *e*P **P** **13 42 41.8 +0.2**
KECS *e* pP 13 42 46.2 +0.8
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
KECS Kecovo 63.18 312 *e*P **P** **13 42 41.8 +0.2**
KECS *e*pP pP 13 42 46.2 +0.8
BZS Buzias 63.38 309 ⇑P **P** **13 42 42.9 -0.1**
BZS Buzias 63.38 309 ⇑*i*P **P** **13 42 42.9 -0.1**
PSZ Piszkesteto 63.73 312 ⇑*e*P **P** **13 42 46.1 +0.8**
PSZ Piszkesteto 63.73 312 ⇑*i*P **P** **13 42 46.1 +0.8**
NB2 NORSAR Subarra 64.14 327 P **P** **13 42 46.3 -1.4**
comp=Z,10nm,1.0s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 64.14 327 P **P** **13 42 46.2 -1.6**
comp=Z,2.7nm,0.5s,mb4.5,baz=72,slow=6.8,SNR=11
NOA LR LR 14 12 03.2
comp=Z,56nm,20.0s,MS3.7,baz=10.0,slow=37
NOA NORSAR Array B 64.14 327 P **P** **13 42 46.2 -1.5**
NOA pmax pmax
comp=Z,3.0nm,0.5s
NOA MLR MLR
comp=Z,56nm,20.0s
NOA NORSAR Array B 64.14 327 P **P** **13 42 46.2 -1.6**
NOA LR LR 14 12 03.2
OKC Ostrava-Krasne 64.18 314 AMS AMS 14 11 50.0
comp=Z,200nm,16.1s
VYHS Vyhne 64.21 313 *e*P **P** **13 42 49.0 +0.6**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
VYHS Vyhne 64.21 313 *e*P **P** **13 42 49.0 +0.6**
VYHS *e*pP pP 13 42 52.4 +0.2
BUD Budapest 64.44 311 ⇑*e*pP pP 13 42 55.5 +1.8
KOLL Kolacno 64.45 313 *e*P **P** **13 42 55.0 +5.0**
KOLL Kolacno 64.45 313 *e*pP pP 13 42 55.0 +1.2
KLBR Kellerberrin 64.48 168 *e*P **P** **13 42 50.6 +0.4**
comp=Z,62nm,1.8s,mb5.3
MORC Moravsky Berou 64.57 314 *e*P **P** **13 42 50.5 -0.2**
comp=Z,7.2nm,0.9s,mb4.7
MORC Moravsky Berou 64.57 314 ⇑*i*P **P** **13 42 51.1 +0.4**
DPC Dobruska-Polom 65.11 315 *e*P **P** **13 42 54.2 0.0**
DPC *e*pP pP 13 42 58.3 +0.3
DPC AMS AMS 14 12 10.0
comp=Z,300nm,17.8s
PKSM Moragy 65.13 310 ⇓P **P** **13 42 54.8 +0.4**
PKSM Moragy 65.13 310 ⇓*i*P **P** **13 42 54.8 +0.4**
UPC Upice 65.24 315 *e*P **P** **13 42 55.2 +0.1**
UPC *e*pP pP 13 42 59.3 +0.4
VRAC Vranov 65.31 314 ⇑P **P** **13 42 59.7 +4.1**
VRAC Vranov 65.31 314 ⇑*i*P **P** **13 42 59.7 +4.1**
CTA Charters Tower 65.36 137 *e*P **P** **13 42 55.9 -0.2**
comp=Z,4.5nm,0.9s,mb4.5
CTA Charters Tower 65.36 137 P **P** **13 42 55.7 -0.4**
comp=Z,5.3nm,0.8s,mb4.6,baz=321,slow=7.9,SNR=8.2
CTA Charters Tower 65.36 137 P **P** **13 42 55.7 -0.4**
CTA pmax pmax
comp=Z,5.0nm,0.8s
CTAO Charters Tower 65.36 137 *e*P **P** **13 42 55.4 -0.7**
CTAO pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
CTAO Charters Tower 65.36 137 *e*P **P** **13 42 55.4 -0.8**
comp=Z,10nm,1.1s,mb4.8
NWAO Narrogin (SRO) 65.69 168 P **P** **13 42 57.4 -0.6**
comp=Z,9.4nm,0.7s,mb5.0,baz=357,slow=11,SNR=8.1
NWAO Narrogin (SRO) 65.69 168 P **P** **13 42 57.4 -0.6**
NWAO pmax pmax
comp=Z,9.0nm,0.7s
TREC Trest 65.99 314 AMS AMS 14 12 50.0
comp=Z,300nm,16.3s
PVCC Panska Ves 66.09 316 AMS AMS 14 13 00.0
comp=Z,200nm,17.4s
FORT Forrest 66.28 158 *e*P PcP 13 43 28.0 -3.8
comp=Z,28nm,0.9s
PRU Pruhonice 66.31 315 *e*P **P** **13 43 02.7 +0.7**
PRU *e*pP pP 13 43 05.7 -0.1
PRU AMS AMS 14 13 10.0
comp=Z,300nm,15.3s
BRG Berggiesshubel 66.33 316 *e*P **P** **13 43 01.6 -0.5**
comp=Z,3.5nm,0.9s,mb4.4
BRG *e* pP 13 43 04.5 -1.4
comp=Z,8.3nm,1.1s
BRG
comp=N,129nm,14.4s
BRG
comp=E,165nm,18.0s
BRG
comp=Z,249nm,19.2s
BRG Berggiesshubel 66.33 316 *e*P **P** **13 43 01.6 -0.5**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
BRG MLR MLR
comp=N,77nm,14.4s,MS4.2
BRG MLR MLR
comp=E,99nm,18.0s,MS4.2
BRG MLR MLR
comp=Z,149nm,19.2s,MS4.2
COLD Coldfoot 66.43 24 *e*P **P** **13 43 03.0 +0.6**
comp=Z,4.3nm,0.9s,mb4.5
CLL Collm 66.72 317 *e*P **P** **13 43 05.0 +0.5**
CLL *i* 13 43 17.6
CLL MLR MLR
comp=Z,100nm,19.9s,MS4.0
CLL Collm 66.72 317 *e*P **P** **13 43 05.0 +0.5**
CLL *e* pP 13 43 09.0 +0.6
CLL *i* 13 43 17.6
CLL Collm 66.72 317 *e*P **P** **13 43 05.0 +0.5**
CLL LmV 13 13 00.0
comp=Z,100nm,19.9s
CLL *e*(pP) pP 13 43 09.0 +0.6
CLL *i* 13 43 17.6
CLL *e*(PcP) PcP 13 43 30.0 -3.5
CLL *e*PP PP 13 45 28.0 -3.1
SVW2 Sparrevohn 66.95 31 *e*P **P** **13 43 10.2 +4.3**
KHC Kasperske Hory 67.21 315 *e*P **P** **13 43 09.8 +2.0**
KHC MLR MLR
comp=Z,300nm,17.5s,MS4.6
KHC Kasperske Hory 67.21 315 *e*P **P** **13 43 09.8 +2.0**
KHC AMS AMS 14 13 30.0
comp=Z,300nm,17.5s
GEC2 GERESS Array S 67.25 314 *e*P **P** **13 43 08.2 +0.2**
GEC2 pmax pmax
comp=Z,2μm,1.1s
GEC2 GERESS Array S 67.25 314 *e*P **P** **13 43 08.2 +0.1**
comp=Z,2μm,1.1s
GERES GERESS Array B 67.25 314 P **P** **13 43 07.8 -0.2**
comp=Z,2.7nm,0.8s,mb4.3,baz=71,slow=5.8,SNR=10
GERES LR LR 14 14 19.7
comp=Z,239nm,18.8s,MS4.4,baz=69,slow=38
GERES GERESS Array B 67.25 314 P **P** **13 43 07.8 -0.2**
GERES pmax pmax
comp=Z,3.0nm,0.8s
GERES MLR MLR
comp=Z,239nm,18.8s
NKC Novy Kostel 67.46 316 AMS AMS 14 13 50.0
comp=Z,200nm,18.8s
KTH Kantishna Hill 67.83 28 *e*P **P** **13 43 10.8 -0.6**
comp=Z,18nm,1.5s,mb4.9
COLA College 68.39 26 *e*P **P** **13 43 13.9 -1.0**
COLA pmax pmax
comp=Z,12nm,1.0s,mb4.9
COLA College 68.39 26 *e*P **P** **13 43 13.9 -1.0**
comp=Z,12nm,1.0s,mb4.9
GRA1 Grafenberg Arr 68.40 316 *e*P **P** **13 43 15.7 +0.5**
comp=Z,9.0nm,1.1s,mb4.7
GRA1 *e*pP pP 13 43 19.0 -0.1
GRF Grafenberg Arr 68.40 316 *e*P **P** **13 43 15.7 +0.5**
comp=Z,9.0nm,1.1s,mb4.7
GRF *e*pP pP 13 43 19.0 -0.1
comp=Z,9.0nm,1.1s
GRF Grafenberg Arr 68.40 316 *e*P **P** **13 43 15.7 +0.5**
GRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.40 316 *e*P **P** **13 43 15.7 +0.5**
GRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 68.40 316 *e*P **P** **13 43 15.7 +0.5**
comp=Z,9.0nm,1.1s,mb4.7
GRF *e*pP pP 13 43 19.0 -0.1
RSO Redoubt South 68.48 31 *e*P **P** **13 43 18.1 +2.6**
OHAK Old Harbor 69.73 35 *e*P **P** **13 43 22.2 -1.1**
KDAK Kodiak Island 69.80 34 *i* P **P** **13 43 23.2 -0.6**
EGAK Eagle 70.86 24 *e*P **P** **13 43 28.3 -1.8**
INK Inuvik 71.12 20 *e*P **P** **13 43 31.2 -0.5**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 71.12 20 *e*P **P** **13 43 31.2 -0.5**
comp=Z,5.4nm,0.9s,mb4.5
CDF Champ du Feu 71.29 316 *e*P **P** **13 43 32.3 -0.8**
comp=Z,9.0nm,0.8s,mb4.4
CDF Champ du Feu 71.29 316 *e*P **P** **13 43 32.3 -0.8**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 71.29 316 *e*P **P** **13 43 32.3 -0.8**
comp=Z,4.5nm,0.8s,mb4.5
WLF Walferdange 71.37 317 P **P** **13 43 34.4 +0.9**
comp=Z,12nm,1.1s,mb4.7
WLF Walferdange 71.37 317 *e*P **P** **13 43 34.5 +1.0**
WLF pmax pmax
comp=Z,20nm,1.0s,mb5.0
WLF Walferdange 71.37 317 *e*P **P** **13 43 34.5 +1.0**
comp=Z,20nm,1.0s,mb5.0
ECH Echery 71.45 316 *e*P **P** **13 43 31.9 -2.1**
ECH pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
ECH Echery 71.45 316 *e*P **P** **13 43 31.9 -2.2**
comp=Z,7.3nm,1.3s,mb4.5
KMBO Kilima Mbogo 71.59 257 P **P** **13 43 35.1 -0.3**
comp=Z,2.5nm,0.9s,mb4.2,baz=15,slow=21,SNR=4.7
KMBO Kilima Mbogo 71.59 257 P **P** **13 43 35.2 -0.2**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
BMRM Bremner River 71.69 29 *e*P **P** **13 43 34.0 -1.2**
comp=Z,11nm,0.9s,mb4.8
DAWY Dawson 71.90 25 *e*P **P** **13 43 35.8 -0.6**
STKA Stephens Creek 72.52 148 *e*P **P** **13 43 39.0 -1.5**
comp=Z,3.2nm,0.5s,mb4.5
STKA Stephens Creek 72.52 148 P **P** **13 43 39.2 -1.3**
comp=Z,4.6nm,0.6s,mb4.6,baz=329,slow=4.8,SNR=7.6
STKA Stephens Creek 72.52 148 P **P** **13 43 39.2 -1.3**
SUMG Summit 72.63 349 *e*P **P** **13 43 41.2 +0.5**
comp=Z,13nm,1.2s,mb4.7
RES Resolute Bay 72.78 5 *e*P **P** **13 43 39.8 -1.7**
LPG La Plagne 72.97 313 *e*P **P** **13 43 43.4 +0.2**
comp=Z,20nm,0.5s,mb5.0
LPG La Plagne 72.97 313 *e*P **P** **13 43 43.4 +0.2**
LPG pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
LPG La Plagne 72.97 313 *e*P **P** **13 43 43.4 +0.2**
comp=Z,10nm,0.5s,mb5.0
LPL La Plagne 72.97 313 *e*P **P** **13 43 43.3 +0.1**
comp=Z,18nm,0.5s,mb5.0
LPL La Plagne 72.97 313 *e*P **P** **13 43 43.3 +0.1**
LPL pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
LPL La Plagne 72.97 313 *e*P **P** **13 43 43.3 +0.1**
comp=Z,9.0nm,0.5s,mb5.0
BNI Bardonecchia 73.23 313 *e*P **P** **13 43 42.8 -1.9**
BNI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BNI Bardonecchia 73.23 313 *e*P **P** **13 43 42.8 -1.9**
comp=Z,7.5nm,0.9s,mb4.6
SMF Signal de Mont 74.18 315 *e*P **P** **13 43 49.4 -0.9**
comp=Z,22nm,0.9s,mb4.8
SMF Signal de Mont 74.18 315 *e*P **P** **13 43 49.4 -0.9**
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.8
SMF Signal de Mont 74.18 315 *e*P **P** **13 43 49.4 -0.9**
comp=Z,11nm,0.9s,mb4.8
TCF Toulx Ste Croi 75.34 316 *e*P **P** **13 43 56.3 -0.7**
comp=Z,20nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.34 316 *e*P **P** **13 43 56.3 -0.7**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.34 316 *e*P **P** **13 43 56.3 -0.7**
comp=Z,9.9nm,1.1s,mb4.7
CAF Calviac 76.13 314 *e*P **P** **13 44 01.3 -0.2**
comp=Z,9.3nm,0.9s,mb4.4
CAF Calviac 76.13 314 *e*P **P** **13 44 01.3 -0.2**
CAF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CAF Calviac 76.13 314 *e*P **P** **13 44 01.3 -0.2**
comp=Z,4.7nm,0.9s,mb4.4
YKA Yellowknife Ar 80.67 17 P **P** **13 44 25.8 -0.4**
comp=Z,1.8nm,0.5s,mb4.2,baz=328,slow=5.1,SNR=22
YKA LR LR 14 25 39.6
comp=Z,47nm,19.9s,MS3.8,baz=325,slow=40
YKA Yellowknife Ar 80.67 17 P **P** **13 44 25.8 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 80.67 17 P **P** **13 44 25.8 -0.4**
YKA LR LR 14 25 39.6
ESDC Sonseca Array 82.75 313 P **P** **13 44 37.6 -0.1**
comp=Z,1.5nm,0.7s,mb4.1,baz=41,slow=5.6,SNR=4.9
FCC Fort Churchill 88.21 10 *e*P **P** **13 45 04.6 +0.1**
FCC pmax pmax
comp=Z,3.0nm,3.0s
FCC Fort Churchill 88.21 10 *e*P **P** **13 45 04.6 +0.1**
comp=Z,2.8nm,3.0s
FFC Flin Flon 90.60 15 *e*P **P** **13 45 18.7 +2.9**
FFC pmax pmax
comp=Z,34nm,2.1s,mb5.3
FFC Flin Flon 90.60 15 *e*P **P** **13 45 18.7 +2.9**
comp=Z,34nm,2.1s,mb5.3
SCHQ Schefferville 93.19 355 P **P** **13 45 26.9 -0.9**
comp=Z,3.7nm,0.9s,mb4.8,baz=160,slow=6.1,SNR=3.8
GDL2 Guadalupe Moun 110.47 26 *e*Pdif Pdif 13 46 48.2 +2.8
OTAV Otavalo 147.77 6 *e*PKPbc PKPbc 13 51 59.0 -0.2

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*ISCJB **17** 13:34:32.9±0.6, 13°.99N±0°.08×144°.5E±0°.2, h187km±6km, mb3.9/15, Error ellipse: s-maj=25.4km s-min=12.9km az=176.0*
*IDC **17** 13:34:33.7±0.4, 14°.01N×144°.66E, h180km±3km, mb3.6/12, mb1 3.7/12, mb1mx3.6/25, mbtmp3.6/12, Error ellipse: s-maj=23.3km s-min=12.2km az=85.0*
*NEIC **17** 13:34:34.3±0.7, 14°.02N×144°.65E, h186km±6km, mb4.2/5, Error ellipse: s-maj=16.3km s-min=8.2km az=89.0*
ISC 17 13:34:34.1±0.6, 14°.01N±0°.08×144°.6E±0°.2, h184km±6km, n26, σ0s58/25, mb3.9/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.48**	**152**	P		**Pn**		**13 34 59.9**	**+0.7**
	142nm,0.3s,baz=269,slow=0.7,SNR=301								
GUMO				S		**Sn**		**13 35 18.3**	**-0.4**
	456nm,0.3s,baz=352,slow=22,SNR=38								
GUMO	**Guam**	**0.48**	**152**	P		**Pn**		**13 34 59.9**	**+0.7**
GUMO				S		**Sn**		**13 35 18.3**	**-0.4**
MJAR	**Matsushiro Arr**	**23.16**	**347**	P		**P**		**13 39 23.9**	**-0.3**
	5.8nm,0.8s,mb4.1,baz=175,slow=11,SNR=18								
MAJO	**Matsushiro**	**23.16**	**347**	*e*P		**P**		**13 39 23.5**	**-0.7**
	15nm,1.0s,mb4.4								
MAT	**Matsushiro**	**23.16**	**347**	P		**P**		**13 39 23.9**	**-0.3**
KSRS	**Korea Array**	**27.69**	**330**	P		**P**		**13 40 04.8**	**-0.2**
	2.3nm,0.8s,mb3.9,baz=144,slow=9.8,SNR=8.1								
CTA	**Charters Tower**	**33.92**	**177**	P		**P**		**13 40 59.9**	**+0.1**
	1.2nm,0.5s,mb3.9,baz=15,slow=7.3,SNR=3.7								
CTA	**Charters Tower**	**33.92**	**177**	P		**P**		**13 40 59.9**	**+0.1**
CTAO	**Charters Tower**	**33.92**	**177**	*e*P		**P**		**13 40 59.9**	**+0.1**
	5.8nm,1.0s,mb4.3								
FITZ	**Fitzroy Crossi**	**37.00**	**211**	P		**P**		**13 41 26.2**	**+0.1**
	3.3nm,1.0s,mb3.9,baz=29,slow=13,SNR=7.0								
FITZ	**Fitzroy Crossi**	**37.00**	**211**	P		**P**		**13 41 26.2**	**+0.1**
ASAR	**Alice Springs**	**38.89**	**196**	P		**P**		**13 41 41.5**	**-0.3**
	0.3nm,0.4s,mb3.2,baz=14,slow=14,SNR=8.0								
STKA	**Stephens Creek**	**45.72**	**184**	P		**P**		**13 42 36.2**	**-0.6**
	4.2nm,1.0s,mb4.0,baz=341,slow=11,SNR=5.6								
STKA	**Stephens Creek**	**45.72**	**184**	*e*P		**P**		**13 42 36.4**	**-0.5**
	1.1nm,0.9s,mb3.5								
MKAR	**Makanchi Array**	**61.03**	**316**	P		**P**		**13 44 29.3**	**+1.1**
	1.2nm,0.7s,mb3.8,baz=94,slow=8.7,SNR=4.8								
KURK	**Kurchatov**	**64.11**	**320**	P		**P**		**13 44 49.3**	**+0.7**
	3.0nm,0.6s,mb4.3,baz=102,slow=6.6,SNR=8.1								
BVAR	**Borovoye Array**	**69.45**	**322**	P		**P**		**13 45 21.9**	**-0.3**
	1.5nm,0.6s,mb3.9,baz=108,slow=8.3,SNR=7.1								
YKA	**Yellowknife Ar**	**82.59**	**27**	P		**P**		**13 46 34.9**	**-1.3**
	0.4nm,0.6s,mb3.3,baz=289,slow=5.3,SNR=4.5								
YKA	**Yellowknife Ar**	**82.59**	**27**	P		**P**		**13 46 34.9**	**-1.3**
NVAR	**Mina Array Bea**	**86.83**	**51**	P		**P**		**13 46 58.6**	**+0.6**
	1.2nm,0.6s,mb3.9,baz=261,slow=6.2,SNR=11								
HLID	**Hailey**	**88.21**	**46**	*e*P		**P**		**13 47 05.1**	**+0.6**
	1.6nm,0.9s,mb3.9								
LDFC	**Landfair**	**90.23**	**54**	*e*P		**P**		**13 47 14.2**	**+0.1**
	7.3nm,0.8s,mb4.7								
PDAR	**Pinedale Array**	**91.83**	**45**	P		**P**		**13 47 21.6**	**+0.3**
	0.4nm,0.6s,mb3.6,baz=17,slow=1.5,SNR=4.9								
TXAR	**Lajitas Array**	**101.31**	**56**	P			Pdif	13 48 04.4	+0.5
	0.2nm,0.7s,baz=262,slow=3.8,SNR=3.5								
PLCA	**Paso Flores**	**139.40**	**138**	PKP			PKPdf	13 53 40.9	+1.2
	3.1nm,1.0s,baz=283,slow=8.4,SNR=2.8								
CFAA	**Coronel Fontan**	**145.19**	**126**	PKPbc			PKPbc	13 53 50.3	+0.1
	0.3nm,0.4s,baz=288,slow=6.4,SNR=2.7								

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*ISCJB **17** 13:47:08.6±0.6, 23°.02S±0°.05×66°.31W±0°.06, h223km±4km, mb3.8/10, Error ellipse: s-maj=8.5km s-min=7.8km az=155.4*
*NEIC **17** 13:47:09.5±0.6, 23°.00S×66°.27W, h222km±6km, mb4.3/7, Error ellipse: s-maj=8.7km s-min=7.6km az=85.0*
*IDC **17** 13:47:09.5±1.5, 22°.97S×66°.18W, h218km±14km, mb3.6/6, mb1 3.7/13, mb1mx3.6/20, mbtmp3.5/13, Error ellipse: s-maj=19.0km s-min=13.2km az=60.0*
*GUC **17** 13:47:11.5±0.9, 22°.87S×66°.84W, h258km±33km, ML5.1*
ISC 17 13:47:09.3±0.6, 22°.99S±0°.05×66°.29W±0°.06, h213km±4km, n137, σ0s78/143, mb3.8/10, 48C-60D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**3.04**	**283**	⇑*i*P		**Pn**		**13 48 08.2**	**+8.1**
PB04				*i*	S	**S**		**13 48 51.0**	**+11**
PB04					AML	AML		13 48 53.2	
	comp=N,2μm,0.4s								
PECH	**Pedro de Valdi**	**3.15**	**276**	⇑*i*P		**Pn**		**13 48 02.8**	**+1.4**
PECH				*i*	S	**S**		**13 48 42.3**	**+0.1**
PECH					AML	AML		13 48 45.5	
	comp=N,2μm,0.5s								
PB01	**Plate Boundary**	**3.54**	**303**	⇑*i*P		**Pn**		**13 48 07.3**	**+1.2**
PB01				*i*	S	**S**		**13 48 50.0**	**-0.7**
PB01					AML	AML		13 48 52.4	
	comp=E,1μm,0.6s								
CEN1	**Los Morros**	**3.62**	**263**	⇓*i*P		**Pn**		**13 48 07.0**	**0.0**
CEN1				*i*	S	**S**		**13 48 51.6**	**-0.7**
CEN1					AML	AML		13 48 54.7	
	comp=N,972nm,0.5s								
MECH	**Mejillones**	**3.83**	**267**	⇑*i*P		**Pn**		**13 48 10.8**	**+1.2**
MECH				*i*	S	**S**		**13 48 55.8**	**-1.1**
ANCH	**Antofagasta**	**3.85**	**259**	⇑*i*P		**Pn**		**13 48 10.9**	**+1.1**
ANCH				*i*	S	**S**		**13 48 56.0**	**-1.4**
ANCH	**Antofagasta**	**3.85**	**259**	⇑*i*P		**Pn**		**13 48 10.9**	**+1.1**
ANCH				*i*	S	**S**		**13 48 56.0**	**-1.4**
ANCH					AML	AML		13 48 59.3	
	comp=E,2μm,0.5s								
LPAZ	**La Paz**	**6.89**	**345**	P		**Pn**		**13 48 50.0**	**+1.8**
	comp=E,7.6nm,0.3s,baz=156,slow=8.7,SNR=139								
LPAZ					S	**S**		**13 50 06.8**	**-0.2**
	comp=E,0.7nm,0.3s,baz=267,slow=20,SNR=5.7								
LPAZ	**La Paz**	**6.89**	**345**	*e*Pn		**Pn**		**13 48 49.8**	**+1.5**
	comp=E,22nm,0.6s								
LPAZ				*e*S		**S**		**13 50 06.7**	**-0.4**
LCO	**Las Campanas**	**7.19**	**213**	*e*Pn		**Pn**		**13 48 51.5**	**-0.5**
	comp=E,17nm,0.4s								
LCO				*e*S		**S**		**13 50 03.1**	**-11**
SIV	**San Ignacio**	**8.52**	**36**	P		**Pn**		**13 49 10.0**	**+0.6**
	baz=230,slow=10								
CFAA	**Coronel Fontan**	**8.76**	**191**	P		**Pn**		**13 49 12.2**	**-0.1**
	comp=E,0.2nm,0.3s,baz=28,slow=12,SNR=28								
CFAA					S	**S**		**13 50 43.9**	**-6.9**
	comp=E,1.0nm,0.3s,baz=256,slow=22,SNR=24								
CPUP	**Villa Florida**	**8.80**	**114**	P		**Pn**		**13 49 12.9**	**0.0**
	comp=E,0.4nm,0.3s,baz=271,slow=13,SNR=5.8								
NNA	**Nana**	**14.86**	**316**	P		**Pn**		**13 50 28.8**	**-0.6**
	comp=E,2.4nm,0.3s,baz=166,slow=11,SNR=10								
NNA	**Nana**	**14.86**	**316**	*e*Pn		**Pn**		**13 50 28.4**	**-1.0**
NNA				*e*Pn		**Pn**		**13 50 28.8**	**-0.6**
PLCA	**Paso Flores**	**18.05**	**191**	P		**P**		**13 51 05.2**	**+0.5**
	comp=E,0.1nm,0.3s,baz=18,slow=13,SNR=3.5								
PLCA	**Paso Flores**	**18.05**	**191**	P		**P**		**13 51 05.2**	**+0.5**
ATAH	**Atahualpa**	**19.71**	**322**	P		**P**		**13 51 23.1**	**+0.3**
	comp=E,0.3nm,0.3s,baz=180,slow=9.9,SNR=4.0								
RCBR	**Riachuelo**	**33.90**	**64**	*e*P		**P**		**13 53 31.4**	**-0.9**
	comp=E,4.9nm,0.5s,mb4.3								
JTS	**JuntasAbangare**	**37.79**	**329**	*e*P		**P**		**13 54 04.5**	**-0.8**
	comp=E,2.8nm,0.5s,mb4.0								
TEIG	**Tepich**	**48.01**	**332**	*e*P		**P**		**13 55 25.0**	**-2.1**
	comp=E,7.0nm,0.7s,mb4.1								
628A	**Black Gap, Mar**	**62.94**	**324**	⇑P		**P**		**13 57 13.0**	**-0.2**
	baz=63,SNR=5.2								
627A	**Terlingua Ranc**	**63.19**	**324**	⇓P		**P**		**13 57 14.3**	**-0.6**
	baz=63								
528A	**Cox Ranch, San**	**63.42**	**325**	⇓P		**P**		**13 57 15.1**	**-1.3**
	baz=64								
626A	**Big Bend Ranch**	**63.67**	**323**	⇓P		**P**		**13 57 17.4**	**-0.6**
	baz=64,SNR=6.2								
526A	**Mary Lane Ranc**	**64.04**	**324**	⇓P		**P**		**13 57 19.5**	**-0.9**
	baz=64								
328A	**Wristen Ranch,**	**64.40**	**326**	⇓P		**P**		**13 57 21.2**	**-1.5**
	baz=65								
426A	**McDonald Obser**	**64.48**	**324**	⇑P		**P**		**13 57 22.4**	**-0.9**
	baz=65								
326A	**Caldwell Ranch**	**64.96**	**325**	⇑P		**P**		**13 57 25.3**	**-1.0**
	baz=65								

425A	Indio Mountain	65.09	324	⇓P	P	13 57 26.1 -1.1
	baz=65,SNR=7.6					
325A	Bean Ranch, Si	65.53	324	⇑P	P	13 57 28.9 -1.2
	baz=66,SNR=9.0					
324A	Moseley Ranch,	65.87	324	P	P	13 57 30.9 -1.2
	baz=66,SNR=6.1					
126A	Clayton Basin,	66.02	326	⇓P	P	13 57 32.2 -0.9
	baz=66					
Z27A	Tatum	66.14	327	⇓P	P	13 57 32.6 -1.3
	baz=66					
125A	Gardner Draw,	66.37	325	⇓P	P	13 57 33.9 -1.5
	baz=67					
224A	Corundas Mount	66.38	324	⇓P	P	13 57 34.2 -1.2
	baz=67,SNR=8.5					
Z26A	Caprock	66.49	326	⇓P	P	13 57 35.1 -1.0
	baz=67					
124A	Stringfield Ra	66.82	325	⇓P	P	13 57 37.8 -0.4
	baz=67					
DBIC	Dimbokro	66.86	72	P	P	13 57 36.9 -2.0
	comp=E,4.3nm,0.9s,mb4.1,baz=224,slow=8.0,SNR=3.7					
Z25A	Roswell	66.88	326	⇓P	P	13 57 37.6 -0.9
	baz=67					
222A	Williams Famil	67.26	323	⇓P	P	13 57 41.4 +0.4
	baz=68					
Y25A	Mesa, Roswell	67.37	326	⇑P	P	13 57 40.2 -1.4
	baz=68					
220A	Playas Peak, P	67.91	322	⇓P	P	13 57 45.6 +0.5
	baz=68					
319A	Douglas	67.96	321	⇓P	P	13 57 45.7 +0.3
	baz=68					
Z22A	Elephant Butte	68.06	324	⇑P	P	13 57 45.7 -0.2
	baz=68,SNR=12					
W25A	X Bar L Ranch,	68.27	327	⇓P	P	13 57 45.8 -1.4
	baz=68					
219A	White Tail Can	68.40	321	⇑P	P	13 57 48.5 +0.4
	baz=69					
318A	Bisbee	68.42	321	⇓P	P	13 57 47.9 -0.3
	baz=69					
120A	U Bar Ranch, L	68.45	322	⇑P	P	13 57 48.7 +0.3
	baz=69					
Z21A	St. Cloud Mine	68.48	323	⇓P	P	13 57 48.7 +0.2
	baz=69					
218A	Dragoon	68.84	321	⇑P	P	13 57 51.5 +0.7
	baz=69					
Z20A	Nine Sixteen R	68.85	323	⇑P	P	13 57 50.9 +0.1
	baz=69					
Y21A	Point of Rocks	69.01	324	⇓P	P	13 57 51.7 -0.1
	baz=69					
217A	Green Valley	69.14	320	⇑P	P	13 57 52.6 -0.1
	baz=69					
117A	Oracle	69.67	321	⇓P	P	13 57 56.7 +0.8
	baz=70					
216A	Three Points,	69.69	320	⇑P	P	13 57 57.0 +1.0
	baz=70					
Y19A	Nutrioso	69.84	323	⇓P	P	13 57 57.3 +0.3
	baz=70					
Y17A	Roosevelt	70.55	322	⇓P	P	13 58 02.0 +0.8
	baz=71					
X17A	Forest Lakes	70.99	322	⇓P	P	13 58 04.3 +0.4
	baz=71					
V19A	Window Rock	71.04	324	⇑P	P	13 58 04.7 +0.6
	baz=71					
Y16A	Circle Bar Ran	71.05	321	⇑P	P	13 58 04.8 +0.6
	baz=71					
Y15A	Casa Rosa Ranc	71.59	321	⇓P	P	13 58 08.1 +0.6
	baz=72					
T19A	Beclabito	71.86	325	⇑P	P	13 58 08.1 -0.9
	baz=72					
V17A	Tonalea, Kykot	71.92	323	⇑P	P	13 58 09.0 -0.4
	baz=72					
W16A	Flagstaff	71.95	322	⇓P	P	13 58 10.2 +0.6
	baz=72					
U18A	Rough Rock, Ch	72.01	324	⇓P	P	13 58 09.8 -0.1
	baz=72					
WUAZ	Wupatki	72.17	323	⇓P	P	13 58 11.1 +0.2
	baz=72					
Y13A	Salome	72.37	320	⇑P	P	13 58 12.5 +0.4
	baz=73					
U16A	Tuba City	72.49	323	⇑P	P	13 58 13.0 +0.3
	baz=73					
T18A	Mexican Hat	72.54	325	⇓P	P	13 58 13.1 +0.1
	baz=73,SNR=5.9					
R20A	Redvale	72.56	326	⇑P	P	13 58 12.6 -0.5
	baz=73					
S19A	Harvey Farm, M	72.61	326	⇓P	P	13 58 12.5 -0.9
	baz=73					
V15A	Kaibab Nationa	72.84	322	⇑P	P	13 58 15.1 +0.3
	baz=73					
S18A	Hurst Farm, Bl	73.02	325	⇓P	P	13 58 15.7 -0.1
	baz=73					
U15A	North Rim	73.34	323	⇓P	P	13 58 18.7 +1.0
	baz=74					
R18A	Canyonlands Na	73.49	326	⇑P	P	13 58 18.3 -0.2
	baz=74					
U14A	Mt Trumbull	73.83	322	⇓P	P	13 58 21.4 +0.8
	baz=74					
V13A	Grand Canyon W	73.89	321	⇑P	P	13 58 21.8 +0.8
	baz=74					
R17A	Hanksville Air	73.94	325	⇓P	P	13 58 21.6 +0.4
	baz=74,SNR=5.2					
P19A	Cripple Cowboy	73.96	327	⇓P	P	13 58 21.6 +0.3
	baz=74,SNR=5.7					
T14A	Hurricane	74.24	323	⇑P	P	13 58 24.0 +1.0
	baz=74					
SRU	San Rafael	74.35	326	⇑P	P	13 58 23.6 +0.1
	baz=75,SNR=5.7					
SRU	San Rafael	74.35	326	eP	P	13 58 23.5 0.0
	comp=E,3.3nm,1.0s,mb3.9					
P18A	Preston Nutter	74.60	326	⇓P	P	13 58 25.0 +0.1
	baz=75,SNR=5.6					
T13A	Saint George	74.67	322	⇓P	P	13 58 26.6 +1.2
	baz=75					
P17A	Butcher Ranch,	74.73	326	⇓P	P	13 58 26.2 +0.5
	baz=75					
N19A	John Jarvie Ra	75.01	328	⇑P	P	13 58 27.6 +0.3
	baz=75					
O17A	Robinson Place	75.27	326	⇓P	P	13 58 28.7 0.0
	baz=76					
R13A	O'Grain Ranch,	75.53	323	⇓P	P	13 58 31.6 +1.3
	baz=76					
T11A	Corn Creek, Al	75.57	322	⇑P	P	13 58 31.5 +0.9
	baz=76					
TORD	Torodi Ar. Bea	75.59	69	P	P	13 58 29.4 -1.7
	comp=E,2.0nm,0.5s,mb4.0,baz=253,slow=5.7,SNR=20					
S12A	Delamar Landin	75.62	322	⇓P	P	13 58 31.5 +0.7
	baz=76					
Q14A	Sevier Lake (B	75.73	324	⇑P	P	13 58 31.9 +0.5
	baz=76					
R12A	Pony Springs,	75.99	323	⇑P	P	13 58 34.4 +1.5
	baz=76					
P14A	Drum Mountains	76.05	325	⇓P	P	13 58 33.8 +0.6
	baz=76					
PDAR	Pinedale Array	76.62	329	P	P	13 58 36.0 -0.4
	comp=E,0.5nm,0.6s,mb3.3,baz=126,slow=7.7,SNR=4.4					
S10A	Tonopah Range,	76.83	321	⇓P	P	13 58 38.4 +0.8
	baz=77					
Q11A	Duckwater	76.94	323	⇑P	P	13 58 38.7 +0.5
	baz=77					
M15A	Larsen Ranch,	77.08	326	⇓P	P	13 58 38.7 -0.2
	baz=77					
J18A	Kendall Valley	77.18	329	⇑P	P	13 58 38.8 -0.6
	baz=78,SNR=5.6					
Q10A	Clear Creek Ra	77.34	322	⇑P	P	13 58 41.3 +0.9
	baz=78					
O12A	Currie	77.43	324	⇑P	P	13 58 42.1 +1.2
	baz=78					
L15A	Malad City	77.44	327	⇑P	P	13 58 41.1 +0.1
	baz=78					
I18A	Diamond G Ranc	77.45	329	⇓P	P	13 58 40.3 -0.7
	baz=78					
M14A	Sheep Mountain	77.57	326	⇑P	P	13 58 41.6 0.0
	baz=78					
L14A	Malta	77.90	326	⇓P	P	13 58 43.3 -0.1
	baz=78					
NVAR	Mina Array Bea	78.17	321	P	P	13 58 45.3 +0.3
	comp=E,0.7nm,0.6s,mb3.4,baz=153,slow=5.7,SNR=7.6					
L13A	Double Diamond	78.31	326	⇓P	P	13 58 46.2 +0.5
	baz=79					
M12A	Wells	78.33	325	⇑P	P	13 58 46.1 +0.2
	baz=79					
M11A	Holland Ranch,	78.81	324	⇓P	P	13 58 49.3 +0.8
	baz=79					
L12A	House Creek Ra	78.91	325	⇓P	P	13 58 49.7 +0.8
	baz=79					
L11A	Cat Creek Ranc	79.31	325	⇑P	P	13 58 51.9 +0.7
	baz=80					
HLID	Hailey	79.60	327	⇓P	P	13 58 53.3 +0.7
	baz=80,SNR=6.7					
L10A	Juniper Basin	79.63	324	⇑P	P	13 58 53.2 +0.4
	baz=80					
J12A	Stokes Ranch,	79.73	326	⇓P	P	13 58 54.1 +0.7
	baz=80					
K11A	Parker Ranch,	79.88	325	⇓P	P	13 58 54.2 0.0
	baz=80					
H13A	Challis	80.24	327	⇑P	P	13 58 56.2 +0.1
	baz=80,SNR=5.1					
BEKR	Beckwourth	80.31	321	⇓P	P	13 58 56.4 -0.2
	baz=81					
K10A	MacKenzie Ranc	80.33	325	⇑P	P	13 58 56.6 +0.1
	baz=81					
H12A	Diamond D Ranc	80.53	327	⇓P	P	13 58 57.1 -0.5
	baz=81					
G13A	Cobalt	80.61	328	⇓P	P	13 58 58.5 +0.4
	baz=81,SNR=5.3					
H10A	Noah's Angus R	81.52	326	⇓P	P	13 59 02.4 -0.4
	baz=82					
J08A	Circle Bar Ran	81.58	324	⇑P	P	13 59 03.9 +0.7
	baz=82					
I09A	Lost Marbles R	81.61	325	⇑P	P	13 59 03.3 0.0
	baz=82					
C15A	Salmond Ranch,	81.80	330	⇓P	P	13 59 03.8 -0.5
	baz=82					
G10A	Bishop Farm, J	82.20	326	⇓P	P	13 59 06.7 +0.4
	baz=82					
K05A	Summer Lake	82.48	323	⇓P	P	13 59 08.7 +0.8
	baz=83					
I07A	Izee	82.62	324	⇑P	P	13 59 09.0 +0.5
	baz=83					
ESDC	Sonseca Array	85.22	43	P	P	13 59 21.4 -0.4
	comp=E,0.6nm,0.6s,mb3.5,baz=226,slow=5.0,SNR=6.2					
ESDC	Sonseca Array	85.22	43	P	P	13 59 21.4 -0.4
YKA	Yellowknife Ar	93.41	340	P	P	13 59 58.9 -0.9
	comp=E,0.4nm,0.5s,mb3.7,baz=128,slow=4.6,SNR=13					
ZALV	Zalesovo Beam	142.20	28	PKP	PKPdf	14 06 16.0 +0.2
	comp=E,0.9nm,0.7s,baz=281,slow=2.4,SNR=4.3					
ZALV	Zalesovo Beam	142.20	28	PKP	PKPdf	14 06 16.0 +0.2
MK31	Makanchi Array	145.33	39	ePKP	PKPdf	14 06 21.5 -0.1
MKAR	Makanchi Array	145.33	39	PKPbc	PKPbc	14 06 21.8 -0.1
	comp=E,1.8nm,0.8s,baz=311,slow=3.4,SNR=20					
MKAR	Makanchi Array	145.33	39	PKPbc	PKPbc	14 06 21.8 -0.1
CMAR	Chiang Mai Arr	165.47	105	PKPab	PKPab	14 07 46.5 -2.0
	comp=E,0.4nm,0.4s,baz=234,slow=6.3,SNR=4.5					

CSEM 17 13:52:32.9±0.3, 42°.54N×43°.31E, h2km, ML2.8, Error ellipse: s-maj=5.0km s-min=3.0km az=64.0
TIF 17 13:52:32.9, 42°.54N×43°.39E, h10km
MOS 17 13:52:35.2±1.7, 42°.60N×43°.48E, h19km, mb3.9/1, Error ellipse: s-maj=14.9km s-min=7.1km az=70.3

ISC 17 13:52:32.8±0.8, 42°.53N±0°.02×43°.31E±0°.05, h2km±7km, n39, σ0°72/73, 1C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.12	60	P	Pg	13 52 35.0	-0.2
ONI				S	Sg	13 52 36.5	-0.4
ONI	Oni	0.12	60	P	Pg	13 52 35.0	-0.3
ONI				S	Sg	13 52 36.5	-0.4
DIGR	Digorskoe uzhe	0.42	28	⇓iPG	Pg	13 52 40.2	-0.8
DIGR				i S	Sg	13 52 45.5	-1.0
DIGR	Digorskoe uzhe	0.42	28	i Pg	Pg	13 52 40.2	-0.8
DIGR				i Sg	Sg	13 52 45.5	-1.0
ZEI	Tsey	0.50	61	⇓iPG	Pg	13 52 41.7	-0.7
ZEI				i S	Sg	13 52 48.0	-0.9
ZEI	Tsey	0.50	61	i Pg	Pg	13 52 41.7	-0.7
ZEI				i Sg	Sg	13 52 48.0	-0.9
KEH	Kehvi	0.51	115	P	Pg	13 52 41.9	-0.8
KEH				S	Sg	13 52 49.2	-0.1
KEH	Kehvi	0.51	115	P	Pg	13 52 41.9	-0.8
KEH				S	Sg	13 52 49.2	-0.1
KORR	Kora	0.79	45	⇑iPG	Pg	13 52 47.4	-0.6
KORR				eS	Sg	13 52 58.0	-0.3
KORR	Kora	0.79	45	i Pg	Pg	13 52 47.4	-0.6
KORR				eSg	Sg	13 52 58.0	-0.3
GOR	Gori	0.81	132	P	Sg	13 53 00.3	+1.6
GOR	Gori	0.81	132	S	Sg	13 53 00.3	+1.6
LSNR	Lesken	0.83	26	ePG	Pg	13 52 48.5	-0.3
LSNR				eS	Sg	13 52 59.7	0.0
LSNR	Lesken	0.83	26	eSg	Sg	13 52 59.7	0.0
ARNR	Ardon	0.97	47	ePG	Pg	13 52 51.3	-0.2
ARNR				eS	Sg	13 53 04.4	+0.3
ARNR	Ardon	0.97	47	eSg	Sg	13 53 04.4	+0.3
KMSR	Komsomolskaya	1.11	40	ePG	Pg	13 52 55.0	+0.9
KMSR				eS	Sg	13 53 09.6	+1.1
KMSR	Komsomolskaya	1.11	40	ePg	Pg	13 52 55.0	+0.9
KMSR				eSg	Sg	13 53 09.6	+1.1
VLKR	Vladikavkaz	1.13	62	ePG	Pg	13 52 53.8	-0.8
VLKR				eS	Sg	13 53 09.3	0.0
VLKR	Vladikavkaz	1.13	62	eSg	Sg	13 53 09.3	0.0
SNJR	Sundja	1.23	63	ePG	Pg	13 52 56.2	-0.3
SNJR				eS	Sg	13 53 12.7	+0.3
SNJR	Sundja	1.23	63	ePg	Pg	13 52 56.2	-0.3
SNJR				eSg	Sg	13 53 12.7	+0.3
BTKR	Batakoyurt	1.24	47	ePG	Pg	13 52 57.5	+0.9
BTKR				eS	Sg	13 53 14.1	+1.4
BTKR	Batakoyurt	1.24	47	ePg	Pg	13 52 57.5	+0.9
BTKR				eSg	Sg	13 53 14.1	+1.4
KUBR	Kubataba	1.27	3	ePG	Pg	13 52 58.5	+1.2
KUBR				eS	Sg	13 53 15.3	+1.5
KUBR	Kubataba	1.27	3	ePg	Pg	13 52 58.5	+1.2
KUBR				eSg	Sg	13 53 15.3	+1.5
SHAR	Shatzhatmas	1.30	339	⇓iPG	Pg	13 52 57.6	-0.2
SHAR				i S	Sg	13 53 14.5	-0.2
SHAR	Shatzhatmas	1.30	339	i Pg	Pg	13 52 57.6	-0.2
SHAR				i Sg	Sg	13 53 14.5	-0.2
TBLG	Delisi	1.33	126	ePG	Pg	13 52 58.3	0.0
TBLG				eS	Sg	13 53 15.9	+0.4
TBLG	Delisi	1.33	126	P	Pg	13 52 58.3	0.0
TBLG				S	Sg	13 53 15.9	+0.3
TBLG	Delisi	1.33	126	P	Pg	13 52 58.3	0.0
TBLG				S	Sg	13 53 15.9	+0.4
MTA	Mtatsminda	1.38	127	P	Pn	13 52 59.6	+0.5
MTA				S	Sg	13 53 16.9	-0.4
MTA	Mtatsminda	1.38	127	P	Pn	13 52 59.6	+0.5
MTA				S	Sg	13 53 16.9	-0.4
PRTR	Priterechnaya	1.42	30	ePG	Pg	13 52 59.5	-0.5
PRTR				eS	Sg	13 53 19.1	+0.7
PRTR	Priterechnaya	1.42	30	ePg	Pg	13 52 59.5	-0.5
PRTR				eSg	Sg	13 53 19.1	+0.7
KIV	Kislovodsk	1.50	343	⇓ePG	Pg	13 53 01.7	+0.1
KIV				i S	Sb	13 53 20.4	-0.4
KIV	Kislovodsk	1.50	343	ePg	Pg	13 53 01.7	+0.1
KIV				i Sg	Sb	13 53 20.4	-0.4
TRKR	Terskaya	1.59	41	ePG	Pg	13 53 01.9	-1.4
TRKR				eS	Sn	13 53 22.6	-0.4
TRKR	Terskaya	1.59	41	ePg	Pg	13 53 01.9	-1.4
TRKR				eSg	Sn	13 53 22.6	-0.4

AUST 17 13:57:41.8, 40°.82S×138°.64E, h15km, ML3.6, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARPS	Mount Arapiles	4.75	33	eP	Pn	13 58 55.4	+2.6
ARPS				eS	Sn	13 59 46.2	-1.4
	20nm,0.2s						
TOO	Toolangi	6.23	61	eP	Pn	13 59 15.6	+2.4
TOO				eS	Sn	14 00 21.8	-2.3
MOO	Moorlands	6.61	107	eP	Pn	13 59 18.2	-0.1
MOO				eS	Sn	14 00 25.6	-7.8
BBOO	Buckleboo	8.26	345	eP	Pn	13 59 42.6	+1.7
BBOO				eS	Sn	14 01 09.3	-4.6
	9.5nm,0.4s						

DJA 17 14:15:58, 8°.62S×110°.48E, h27km, MLv3.6/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	Wanagama	0.70	3	P	Pb	14 16 11.0	-0.7
UGM				S	Sb	14 16 22.8	+1.8
PCJI	Pacitan	0.81	59	P	Pb	14 16 12.9	-0.6
PCJI				S	Sb	14 16 25.6	+1.6
PWJI	Pagerwojo	1.44	66	P	Pn	14 16 21.7	-0.6
PWJI				S	Sn	14 16 40.9	+0.6
SJI	Sawahan	1.55	55	P	Pn	14 16 24.3	+0.5
SMRI	Semarang	1.56	359	P	Pn	14 16 23.5	-0.5
SMRI				S	Sn	14 16 44.4	+1.0
NGJI	Ngawi	1.58	38	P	Pn	14 16 24.5	+0.3
KRKI	Karangkates	2.00	77	P	Pn	14 16 31.7	+1.6
KRKI				S	Sn	14 16 56.3	+2.0
GRJI	Gresik	2.61	50	P	Pn	14 16 40.1	+1.7
GRJI				S	Sn	14 17 09.4	+0.2
GMJI	Gumukmas	2.95	84	P	Pn	14 16 42.3	-0.8
GMJI				S	Sn	14 17 19.0	+1.3

BJI 17 14:17:24.8, 5°.55N×125°.53E, h125km, mB5.0/31, mb4.8/44
MOS 17 14:17:27.0±1.1, 6°.09N×125°.20E, h112km, mb5.0/22, Error ellipse: s-maj=12.4km s-min=6.6km az=106.4
ISCJB 17 14:17:28.3±0.2, 6°.00N±0°.02×125°.35E±0°.03, h120km, mb5.0/118, Error ellipse: s-maj=4.0km s-min=2.9km az=160.0
IDC 17 14:17:29.9±0.4, 6°.05N×125°.13E, h121km±3km, mb4.4/26, mb1 4.5/27, mb1mx4.4/31, mbtmp4.4/27, MS4.0/20, Ms1 4.0/20, ms1mx3.7/37, Error ellipse: s-maj=10.3km s-min=6.8km az=91.0
GCMT 17 14:17:30.3±0.2, 6°.05N×125°.32E, h125km±1km, MW5.2/94, Moment Tensor Solution. s70,c109; s94,c176; Duration: 1s0 Moment tensor: Scale 1017Nm; Mrr0.62±.01; Mθθ-0.04±.02; Mφφ-0.58±.02; Mrθ-0.21±.01; Mθφ-0.21±.02; Mφr-0.49±.01; Best double couple: M0 0.83200×1017 NP1:φs16.00000°, δ25.00000°, λ85.00000°. NP2:φs202.00000°, δ65.00000°, λ93.00000°. Principal axes: T 0.8160, Plg70.0000°, Azm117.0000°; N 0.0320, Plg2.0000°, Azm21.0000°; P -0.8480, Plg20.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 17 14:17:30.3±0.6, 6°.07N×125°.25E, h125km±5km, mb5.2/55 Error ellipse: s-maj=6.1km s-min=4.0km az=77.0
NEIC Felt [IV PIVS] at General Santos; [III PIVS] at Alabel, Glan and Talagutang; [II PIVS] at Mati, Polomolok and Santa Cruz.
MAN 17 14:17:30.0, 6°.01N×125°.14E, h111km, mb5.8, ML4.8, MS5.2
MAN INTENSITY IV - GENERAL SANTOS; INTENSITY III - ALABEL & GLAN.
TEH 17 14:17:30.0, 6°.03N×125°.30E, h127km
DJA 17 14:17:31, 6°.17N×125°.52E, h115km, Mw5.4/34

ISC 17 14:17:30.2±0.2, 6°.03N±0°.02×125°.33E±0°.03, h122km, h122km±1.0km; pP-P, n350, σ1°19/298, mb5.0/118, 30C-32D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.39	278	⇓iP	Pn	14 17 46.0	-1.7
GSPH				i S	Sn	14 17 58.8	-2.1
KCP	Kidapawan	1.00	346	⇑iP	Pn	14 17 54.1	+1.7
KCP				i S	Sn	14 18 10.8	+1.6
DMPH	Davao City--Mi	1.06	9	⇑eP	Pn	14 17 53.0	0.0
DMPH				eS	Sn	14 18 11.0	+0.8
DAV	Davao City (W)	1.06	13	P	Pn	14 17 53.1	+0.1
	902nm,0.3s,baz=198,slow=1.6,SNR=114						
DAV				S	Sn	14 18 10.8	+0.6
	3μm,0.3s,baz=18,slow=20,SNR=20						
DAV	Davao City (W)	1.06	13	ePn	Pn	14 17 53.1	+0.1
MATI	Mati	1.29	45	eP	Pn	14 17 54.3	-1.1
CTBH	Cotabato--PC H	1.60	318	⇑iP	Pn	14 17 57.5	-1.4
CTBH				i S	Sn	14 18 18.7	-2.1
BUKP	Musuan	1.85	352	eP	Pn	14 18 01.9	-0.1
CGP	Cagayan de Oro	2.49	345	⇑iP	Pn	14 18 10.0	+0.1
CGP				i S	Sn	14 18 56.7	+16
PAGZ	Pagadian	2.65	313	eP	Pn	14 18 11.1	-0.8
BUTP	Butuan	2.93	6	eP	Pn	14 18 16.6	+0.9
DCPH	Dipolog City	3.21	322	⇑iP	Pn	14 18 19.9	+0.6
IPIL	Ipil	3.25	303	eP	Pn	14 18 18.8	-1.0
ZMPH	Zamboanga City	3.37	286	⇓iP	Pn	14 18 20.1	-1.4
ZMPH				i S	Sn	14 18 50.3	-11
TBP	Tagbilaran	3.92	338	eP	Pn	14 18 28.5	-0.2
TBP				eS	Sn	14 19 12.6	-1.4
MSLP	Maasin	4.10	353	eP	Pn	14 18 31.8	+0.6
LLP	Lapu-Lapu	4.46	342	⇓eP	Pn	14 18 36.1	+0.1
LLP				eS	Sn	14 19 28.2	+1.0
PLP	Palo	5.11	356	⇓eP	Pn	14 18 44.2	-0.5
GUIM	Jordan	5.31	329	eP	Pn	14 18 47.4	0.0
RCP	Roxas	6.06	335	⇓eP	Pn	14 18 57.8	+0.3
KALP	Kalibo	6.34	332	⇓eP	Pn	14 19 10.3	+9.0
CUYO	Cuyo Island	6.41	319	eP	Pn	14 19 02.2	-0.1
CNP	Catarman	6.47	354	eP	Pn	14 19 04.8	+1.8
OTRP	Odiongan	7.09	333	eP	Pn	14 19 12.6	+1.2
PPR	Puerto Princes	7.52	300	⇓eP	Pn	14 19 17.7	+0.4
SJMP	San Jose	7.62	327	eP	Pn	14 19 18.9	+0.3
ENPP	El Nido	7.78	312	eP	Pn	14 19 19.9	-0.9
BUSP	Coron	7.80	320	eP	Pn	14 19 21.3	+0.2
BATP	Bataraza	7.96	291	eP	Pn	14 19 21.5	-1.7
SDKM	Sandakan	8.11	268	P	Pn	14 19 26.4	+1.2
KDM	Kudat	8.49	276	P	Pn	14 19 34.0	+3.6
KKM	Kota Kinabalu	9.07	271	P	Pn	14 19 40.3	+2.0
KKM	Kota Kinabalu	9.07	271	ePn	Pn	14 19 39.6	+1.4
TGY	Tagaytay City	9.11	332	P	Pn	14 19 42.2	+3.4
	25nm,0.3s,baz=188,slow=5.0,SNR=5.4						
LUBP	Lubang	9.14	327	eP	Pn	14 19 42.0	+2.8
BALP	Baler	10.33	339	eP	Pn	14 19 58.5	+3.4
CAUP	Cauayan	11.37	343	eP	Pn	14 20 10.8	+1.7
KAPI	Kappang	12.31	207	P	Pn	14 20 20.3	-1.1
	1.5nm,0.3s,baz=29,slow=5.7,SNR=8.1						
APYP	Conner	12.42	342	eP	Pn	14 20 21.1	-1.7
BTM	Bintulu	12.53	258	P	Pn	14 20 25.0	+0.7
SBUM	Sibu	13.55	255	P	Pn	14 20 39.4	+1.7
KSM	Kuching	15.66	254	P	Pn	14 21 06.3	+2.0
KSM	Kuching	15.66	254	ePn	Pn	14 21 04.8	+0.5
	167nm,1.4s						
TWG	Pinlang	17.19	347	ePn	Pn	14 21 20.8	-2.1
	42nm,0.6s						
YULB	Yu-li	17.69	348	ePn	Pn	14 21 26.4	-2.6
	20nm,0.6s						
TPUB	Ta-pu	17.75	346	ePn	Pn	14 21 29.5	-0.3
	117nm,0.8s						
SSLB	Suanglung	18.15	347	ePn	Pn	14 21 29.2	-5.3
	45nm,0.8s						
YHNB	Yeheng	18.91	349	ePn	Pn	14 21 41.5	-2.1
	69nm,1.2s						
QIZ	Qiongzhong	19.86	312	P	P	14 21 48.8	-3.1
QIZ				S	S	14 25 24.1	-4.9
QIZ				pmax	pmax		
	comp=Z,15nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,220nm,4.6s						
QIZ				LR	LR		
	comp=N,870nm,15.1s						
QIZ				LR	LR		
	comp=E,290nm,13.3s						
QIZ				LR	LR		
	comp=Z,750nm,19.1s						
QIZ	Qiongzhong	19.86	312	ePn	Pn	14 21 52.6	-2.0
	comp=Z,116nm,1.4s						
QZH	Quanzhou	19.88	342	⇑iP	P	14 21 54.3	+2.3
QZH				sP	sP	14 22 34.4	+4.8
QZH				S	S	14 25 25

SNG	**Songkhla**	**24.58 274**	P	**P**		**14 22 40.0 +0.9**
	comp=Z,220nm,0.7s,mb5.7					
SSE	**Sheshan**	**25.23 352**	*e*P	**P**		**14 22 46.5 +1.7**
SSE			pP	pP		14 23 13.5 +2.5
SSE			sP	sP		14 23 29.3 +4.1
SSE			S	**S**		**14 27 03.0 +1.6**
SSE			sS	sS		14 27 51.9 +4.6
SSE			ScS	ScS		14 33 29.0 -3.3
SSE			pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4					
SSE			pmax	pmax		
	comp=Z,150nm,4.9s					
SSE			LR	LR		
	comp=N,150nm,25.3s					
SSE			LR	LR		
	comp=E,73nm,25.3s					
SSE			LR	LR		
	comp=Z,180nm,24.3s					
CBIJ	**Chichi jima**	**26.38 36**	P	**P**		**14 22 54.9 -0.4**
	comp=Z,200nm,0.5s,mb5.8,baz=282,slow=13,SNR=7.9					
CBIJ			LR	LR		14 32 23.7
	comp=Z,250nm,18.4s,baz=334,slow=34					
WHN	**Wuhan**	**26.48 338**	P	pP		14 23 23.3 +1.0
WHN			S	**S**		**14 27 22.1 +1.0**
WHN			pmax	pmax		
	comp=Z,50nm,1.0s,mb4.9					
WHN			LR	LR		
	comp=N,920nm,8.2s					
WHN			LR	LR		
	comp=E,2μm,9.2s					
WHN			LR	LR		
	comp=Z,2μm,35.5s					
NST	**Nakhon Sawan**	**26.51 293**	P	**P**		**14 22 57.7 +1.2**
NJ2	**Nanjing**	**26.58 348**	*e*P	**P**		**14 22 59.1 +2.1**
NJ2			pP	pP		14 23 25.4 +2.2
NJ2			sP	sP		14 23 40.5 +3.1
NJ2			PP			14 23 48.6
NJ2			S	**S**		**14 27 24.0 +1.2**
NJ2			sS	sS		14 28 10.0 +1.1
NJ2			SS			14 28 45.0
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5					
NJ2			pmax	pmax		
	comp=Z,70nm,5.8s					
NJ2			LR	LR		
	comp=N,250nm,22.3s					
NJ2			LR	LR		
	comp=E,330nm,22.6s					
NJ2			LR	LR		
	comp=Z,250nm,10.6s					
COEN	**Coen**	**26.61 138**	*e*P	**P**		**14 22 57.2 -0.2**
	comp=Z,239nm,0.9s,mb5.7					
GYA	**Guiyang**	**27.01 321** ⇑	*i*P	**P**		**14 23 02.8 +1.9**
GYA			pP	pP		14 23 32.1 +4.9
GYA			sP	sP		14 23 46.0 +4.6
GYA			PP	PP		14 23 55.3 -9.0
GYA			PcP	PcP		14 26 20.9 +1.4
GYA			S	**S**		**14 27 30.3 +0.6**
GYA			sS	sS		14 28 19.0 +3.1
GYA			SS			14 28 55.3
GYA			ScP	ScP		14 29 48.5 -0.2
GYA			PcS	PcS		14 30 01.3 +0.1
GYA			ScS	ScS		14 33 38.0 -2.1
GYA			pmax	pmax		
	comp=Z,30nm,0.7s,mb4.9					
GYA			LR	LR		
	comp=N,260nm,21.1s					
GYA			LR	LR		
	comp=E,570nm,19.3s					
GYA			LR	LR		
	comp=Z,980nm,18.0s					
WRAB	**Tennant Creek**	**27.29 161**	P	**P**		**14 23 03.0 -0.4**
	comp=Z,398nm,0.8s,mb6.0,SNR=67					
WRAB	**Tennant Creek**	**27.29 161**	*e*P	**P**		**14 23 01.9 -1.5**
WRAB			pmax	pmax		
	comp=Z,68nm,1.1s,mb5.1					
WRAB	**Tennant Creek**	**27.29 161**	*e*P	**P**		**14 23 01.9 -1.5**
	comp=Z,68nm,1.1s,mb5.1					
MBWA	**Marble Bar**	**27.58 191**	*e*P	**P**		**14 23 04.8 -1.2**
	comp=Z,73nm,1.3s,mb5.0					
BDT	**Bhumibol Dam**	**28.05 296**	P	**P**		**14 23 15.0 +4.7**
ENH	**Enshi**	**28.35 330**	*e*P	**P**		**14 23 12.9 +0.1**
	comp=Z,32nm,0.8s,mb4.9					
CMAR	**Chiang Mai Arr**	**28.54 298**	P	**P**		**14 23 14.2 -0.4**
	comp=Z,5.5nm,0.8s,mb4.2,baz=105,slow=7.1,SNR=21					
CHG	**Chiang Mai**	**28.67 299** ⇑	P	**P**		**14 23 16.6 +0.8**
	comp=Z,16nm,0.8s,mb4.7					
KMI	**Kunming**	**28.78 314**	P	**P**		**14 23 18.5 +1.8**
KMI			pP	pP		14 23 46.4 +3.2
KMI			sP	sP		14 24 01.9 +4.6
KMI			PP	PP		14 24 16.3 -7.8
KMI			S	**S**		**14 27 56.5 -1.1**
KMI			sS	sS		14 28 45.8 +1.9
KMI			pmax	pmax		
	comp=Z,19nm,1.2s,mb4.6					
KMI			pmax	pmax		
	comp=Z,190nm,6.8s					
KMI			LR	LR		
	comp=N,540nm,17.8s					
KMI			LR	LR		
	comp=E,450nm,18.9s					
KMI			LR	LR		
	comp=Z,510nm,15.6s					
JHJ	**Hachijo jima 2**	**30.12 25**	LR	LR		14 33 37.1
	comp=Z,208nm,20.7s,baz=95,slow=32					
ASAR	**Alice Springs**	**30.68 164**	P	**P**		**14 23 33.4 -0.1**
	comp=Z,20nm,0.5s,mb5.1,baz=344,slow=6.9,SNR=615					
ASAR			PcP	PcP		14 26 28.4 -0.4
	comp=Z,3.4nm,0.3s,baz=355,slow=2.1,SNR=7.1					
ASAR			S	**S**		**14 28 27.0 -0.3**
	comp=Z,1.8nm,0.7s,baz=350,slow=22,SNR=4.4					
ASAR			ScP	ScP		14 29 59.0 -1.4
	comp=Z,2.7nm,0.6s,baz=344,slow=1.9,SNR=8.3					
ASAR	**Alice Springs**	**30.68 164**	P	**P**		**14 23 33.4 -0.1**
ASAR			PcP	PcP		14 26 28.4
ASAR			S	**S**		**14 28 27.0 -0.3**
KS15	**Wonju Array Si**	**31.35 4**	*e*P	**P**		**14 23 38.9 -0.3**
KSRS	**Korea Array**	**31.36 4**	P	**P**		**14 23 39.1 -0.2**
	comp=Z,10nm,0.7s,mb4.7,baz=182,slow=10,SNR=60					
KSRS			pP	pP		14 24 05.8 -0.2
	comp=Z,12nm,1.0s,baz=184,slow=9.8,SNR=7.2					
KSRS			PcP	PcP		14 26 30.5 +0.2
	comp=Z,3.8nm,0.8s,baz=186,slow=2.5,SNR=10					
KSRS			pPcP			14 26 59.2
	comp=Z,2.5nm,1.0s,baz=179,slow=3.0,SNR=5.8					
KSRS			ScP	ScP		14 30 01.2 -1.1
	comp=Z,5.6nm,0.9s,baz=191,slow=3.4,SNR=25					
KSRS			LR	LR		14 36 58.6
	comp=Z,126nm,19.7s,baz=178,slow=37					
XAN	**Xi'an**	**31.75 334**	P	**P**		**14 23 42.3 -0.4**
XAN			pP	pP		14 24 09.0 -0.4
XAN			sP	sP		14 24 24.3 +0.9
XAN			pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5					
XAN			pmax	pmax		
	comp=Z,26nm,4.8s					
CD2	**Chengdu**	**31.98 323**	P	**P**		**14 23 47.3 +2.5**
CD2			pP	pP		14 24 14.8 +3.4
CD2			sP	sP		14 24 29.6 +4.1
CD2			PP	PP		14 24 59.3 -0.1
CD2			S	**S**		**14 28 49.3 +1.9**
CD2			sS	sS		14 29 37.3 +3.4
CD2			SS	SS		14 30 51.5 -18
CD2			pmax	pmax		
	comp=Z,70nm,0.5s,mb5.7					
CD2			pmax	pmax		
	comp=Z,150nm,3.7s					
CD2			LR	LR		
	comp=N,530nm,14.3s					
CD2			LR	LR		
	comp=Z,610nm,16.1s					
MAJO	**Matsushiro**	**32.57 19**	*e*P	**P**		**14 23 49.7 -0.2**
MAT	**Matsushiro**	**32.57 19**	P	**P**		**14 23 48.5 -1.4**
MAT			S	**S**		**14 29 00.0 +3.4**
MJAR	**Matsushiro Arr**	**32.57 19**	P	**P**		**14 23 48.7 -1.2**
	comp=Z,3.6nm,0.9s,mb4.2,baz=194,slow=8.7,SNR=7.2					
MJAR			PcP	PcP		14 26 33.7 0.0
	comp=Z,4.1nm,0.8s,baz=185,slow=2.8,SNR=10					
MJAR			pPcP			14 27 04.0
	comp=Z,2.7nm,0.9s,baz=189,slow=2.7,SNR=5.5					
MJAR			ScP	ScP		14 30 06.5 0.0
	comp=Z,5.7nm,1.1s,baz=197,slow=4.2,SNR=16					
MJAR			LR	LR		14 37 15.6
	comp=Z,138nm,18.4s,baz=215,slow=36					
MJAR	**Matsushiro Arr**	**32.57 19**	P	**P**		**14 23 48.7 -1.2**
MJAR						14 26 33.7
CTA	**Charters Tower**	**33.12 142** ⇑	*i*P	**P**		**14 23 56.0 +1.1**
	comp=Z,19nm,0.6s,mb5.1					
CTA			*e*PCP	PcP		14 26 36.3 +0.8
CTA			*e*SCP	ScP		14 30 09.5 +0.8
CTA	**Charters Tower**	**33.12 142**	P	**P**		**14 23 56.1 +1.2**
	comp=Z,26nm,0.6s,mb5.3,baz=301,slow=10,SNR=57					
CTA			PcP	PcP		14 26 36.2 +0.8
	comp=Z,9.7nm,0.8s,baz=342,slow=4.2,SNR=4.1					
CTA			ScP	ScP		14 30 08.9 +0.2
	comp=Z,6.9nm,0.8s,baz=264,slow=2.1,SNR=6.2					
CTA	**Charters Tower**	**33.12 142**	P	**P**		**14 23 56.2 +1.3**
CTA						14 26 36.3
CTAO	**Charters Tower**	**33.12 142**	*e*P	**P**		**14 23 55.8 +0.9**
CTAO			pmax	pmax		
	comp=Z,51nm,1.0s,mb5.3					
CTAO	**Charters Tower**	**33.12 142**	*e*P	**P**		**14 23 55.8 +0.8**
	comp=Z,51nm,1.0s,mb5.3					
BJI	**Beijing**	**34.84 348**	P	**P**		**14 24 11.5 +1.9**
BJI			pP	pP		14 24 35.4 -1.0
BJI			S	**S**		**14 29 29.9 -1.6**
BJI			pmax	pmax		
	comp=Z,14nm,0.7s,mb4.9					
SNY	**Shenyang**	**35.68 358** ⇓	P	**P**		**14 24 16.4 -0.3**
SNY			pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9					
SNY	**Shenyang**	**35.68 358** ⇓	P	pP		14 24 42.3 -1.3
SNY			S	sS		14 30 34.3 +3.2
SNY			pmax	pmax		
	comp=Z,30nm,1.8s,mb4.9					
SNY			pmax	pmax		
	comp=Z,240nm,3.5s					
SNY			LR	LR		
	comp=E,390nm,23.0s					
SNY			LR	LR		
	comp=Z,240nm,22.1s					
LZH	**Lanzhou**	**35.82 330**	*e*P	**P**		**14 24 19.4 +1.4**
LZH			pP	pP		14 24 48.4 +3.4
LZH			sP	sP		14 25 04.6 +5.6
LZH			PP	PP		14 25 45.0 +3.1
LZH			PcP	PcP		14 26 45.3 +2.3
LZH			S	**S**		**14 29 48.0 +1.4**
LZH			sS	sS		14 30 39.0 +5.4
LZH			SS	SS		14 32 16.5 -8.5
LZH			pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2					
LZH			pmax	pmax		
	comp=Z,210nm,5.8s					
FORT	**Forrest**	**36.70 176**	*e*P	**P**		**14 24 25.1 -0.4**
	comp=Z,49nm,0.5s,mb5.7					
FORT	**Forrest**	**36.70 176**	*e*P	**P**		**14 24 24.8 -0.6**
	comp=Z,60nm,0.6s,mb5.7					
HHC	**Hu-ho-hao-te**	**36.79 342**	*e*P	**P**		**14 24 28.8 +2.6**
HHC			pP	pP		14 24 56.9 +3.7
HHC			sP	sP		14 25 11.5 +4.3
HHC			PP	PP		14 25 59.5 +7.0
HHC			PcP	PcP		14 26 47.8 +2.0
HHC			S	**S**		**14 30 03.4 +2.2**
HHC			ScP	ScP		14 30 20.9 -0.7
HHC			PcS	PcS		14 30 34.8 +0.9
HHC			sS	sS		14 30 53.3 +5.0
HHC			ScS	ScS		14 34 28.0 -0.7
HHC			pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8					
HHC			pmax	pmax		
	comp=Z,130nm,6.2s					
HHC			LR	LR		
	comp=N,260nm,10.6s					
HHC			LR	LR		
	comp=E,290nm,12.0s					
HHC			LR	LR		
	comp=Z,390nm,12.7s					
VLA	**Vladivostok**	**37.39 8**	*e*P	**P**		**14 24 30.0 -1.1**
VLA			*e**PP	pP		14 24 58.7 +0.4
VLA			*e**SP	sP		14 25 09.6 -2.6
VLA			*e*S	**S**		**14 30 09.9 -0.3**
VLA			pmax	pmax		
	comp=Z,48nm,1.2s,mb5.3					
SHL	**Shillong**	**37.41 305**	*e*P	**P**		**14 24 31.0 -0.6**
SHL			*e*S	**S**		**14 30 11.0 -0.1**
CN2	**Changchun**	**37.62 0**	*e*P	**P**		**14 24 34.8 +1.7**
CN2			*e*pP	pP		14 25 02.9 +2.7
CN2			*e*sP	sP		14 25 17.6 +3.5
CN2			*e*S	**S**		**14 30 18.9 +5.3**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=N,300nm,18.0s					
CN2			LR	LR		
	comp=E,300nm,18.0s					
CN2			LR	LR		
	comp=Z,300nm,18.0s					
KLBR	**Kellerberrin**	**38.11 191**	*e*P	**P**		**14 24 36.5 -0.8**
	comp=Z,42nm,0.5s,mb5.5					
KLBR			*e*PCP	PcP		14 26 49.5 -0.5
MDJ	**Mudanjiang**	**38.61 5**	P	**P**		**14 24 41.6 +0.2**
MDJ			pP	pP		14 25 08.1 -0.6
MDJ			sP	sP		14 25 22.5 -0.1
MDJ			PP	PP		14 26 12.3 0.0
MDJ			PcP	PcP		14 26 49.6 -1.7
MDJ			ScP	ScP		14 30 26.1 -2.2
MDJ			S	**S**		**14 30 29.1 +0.5**
MDJ			sS	sS		14 31 16.3 +0.4
MDJ			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0					
MDJ			pmax	pmax		
	comp=Z,47nm,4.3s					
MDJ			LR	LR		
	comp=N,91nm,13.6s					
MDJ			LR	LR		
	comp=E,79nm,13.6s					
MDJ			LR	LR		
	comp=Z,110nm,16.0s					
MDJ	**Mudanjiang**	**38.61 5**	*e*P	**P**		**14 24 41.4 -0.1**
	comp=Z,14nm,0.8s,mb4.8					
ERM	**Erimo**	**39.18 21**	*c i*P	**P**		**14 24 44.6 -1.6**
ERM			pmax	pmax		
	comp=Z,25nm,1.6s,mb4.8					
NWAO	**Narrogin (SRO)**	**39.50 191**	P	**P**		**14 24 48.9 -0.1**
	comp=Z,31nm,0.3s,mb5.6,baz=25,slow=7.4,SNR=96					
NWAO			ScP	ScP		14 30 30.4 -1.6
	comp=Z,4.3nm,0.7s,baz=11,slow=5.2,SNR=3.4					
LSA	**Lhasa**	**39.89 310**	P	pP		14 25 14.5 -5.2
LSA			sP	sP		14 25 30.3 -3.2
LSA			S	**S**		**14 30 42.5 -5.7**
LSA			LR	LR		
	comp=Z,410nm,57.1s					
LSA	**Lhasa**	**39.89 310**	*e*P	**P**		**14 24 53.0 +0.7**
LSA			pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8					
LSA	**Lhasa**	**39.89 310**	*e*P	**P**		**14 24 53.0 +0.7**
	comp=Z,8.8nm,0.6s,mb4.8					
EIDS	**Eidsvold**	**40.01 142**	*e*P	**P**		**14 24 53.1 -0.2**
	comp=Z,30nm,0.8s,mb5.2					
GTA	**Gaotai**	**40.42 329** ⇓	P	**P**		**14 24 57.3 +0.8**
GTA			pP	pP		14 25 24.6 +0.7
GTA			sP	sP		14 25 39.9 +2.1
GTA			PcP	PcP		14 26 57.6 +0.4
GTA			ScP	ScP		14 30 33.3 -2.2
GTA			S	**S**		**14 30 56.9 +1.1**
GTA			sS	sS		14 31 46.9 +3.5
GTA			SS	SS		14 33 56.6 -3.3
GTA			ScS	ScS		14 34 46.3 -3.5
GTA			pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5					
GTA			pmax	pmax		
	comp=Z,71nm,6.2s					
GTA			LR	LR		
	comp=N,520nm,17.8s					
GTA			LR	LR		
	comp=E,440nm,16.1s					
GTA			LR	LR		
	comp=Z,420nm,17.8s					
STKA	**Stephens Creek**	**40.77 159** ⇑	*i*P	**P**		**14 24 59.7 +0.3**
	comp=Z,22nm,0.6s,mb5.2					
STKA			*e*PCP	PcP		14 26 57.8 -0.6
STKA			*e*SCP	ScP		14 30 36.7 -0.2
STKA	**Stephens Creek**	**40.77 159**	P	**P**		**14 25 00.1 +0.7**
	comp=Z,34nm,0.7s,mb5.3,baz=334,slow=7.9,SNR=102					
STKA			pP	pP		14 25 27.9 +1.0
	comp=Z,24nm,0.7s,baz=331,slow=8.6,SNR=4.8					
STKA			PcP	PcP		14 26 58.2 -0.2
	comp=Z,18nm,0.6s,baz=54,slow=2.3,SNR=4.1					
STKA			ScP	ScP		14 30 36.8 -0.2
	comp=Z,5.4nm,0.8s,baz=306,slow=10,SNR=4.1					
STKA	**Stephens Creek**	**40.77 159**	*e*P	**P**		**14 25 00.2 +0.7**
	comp=Z,10nm,0.8s,mb4.7					
ASAJ	**Asahikawa**	**40.84 19**	P	**P**		**14 25 01.5 +1.6**
	comp=Z,2.5nm,0.3s,mb4.5,baz=243,slow=17,SNR=9.3					
ASAJ			pP	pP		14 25 28.9 +1.5
	comp=Z,28nm,1.0s,baz=242,slow=14,SNR=9.7					
ASAJ			ScP	ScP		14 30 37.2 +0.1
	comp=Z,2.8nm,1.0s,baz=229,slow=11,SNR=3.6					
ASAJ			LR	LR		14 41 26.0
	comp=Z,148nm,20.5s,baz=342,slow=35					
TAPN	**Taplejung**	**41.55 305**	*e*P	**P**		**14 25 06.9 +0.9**
	comp=Z,41nm,0.8s,mb5.2					
ODAN	**Odare**	**41.62 304**	*e*P	**P**		**14 25 07.2 +0.7**
	comp=Z,30nm,0.6s,mb5.2					
RAMN	**Ramite**	**42.30 304**	*e*P	**P**		**14 25 12.9 +0.8**
	comp=Z,39nm,0.7s,mb5.2					
JIRN	**Jiri**	**42.91 305**	*e*P	**P**		**14 25 17.9 +0.9**
	comp=Z,38nm,0.8s,mb5.2					
GUN	**Gumba**	**43.26 305**	*e*P	**P**		**14 25 20.6 +0.8**
	comp=Z,48nm,0.6s,mb5.4					
YSS	**Yuzh-Sakhalins**	**43.44 17**	*e*P	**P**		**14 25 21.3 +0.4**
YSS			pmax	pmax		
	comp=Z,43nm,1.3s,mb5.0					
YSS	**Yuzh-Sakhalins**	**43.44 17**	*e*P	**P**		**14 25 21.3 +0.4**
	comp=Z,43nm,1.3s,mb5.0					
PKI	**Pulchoki**	**43.52 304**	*e*P	**P**		**14 25 22.1 +0.2**
PKIN	**Phulchoki**	**43.53 304**	*e*P	**P**		**14 25 23.1 +1.1**
	comp=Z,19nm,0.7s,mb5.0					
ARMA	**Armidale**	**44.14 147**	*e*P	**P**		**14 25 27.9 +1.1**
ARMA	**Armidale**	**44.14 147**	*e*P	**P**		**14 25 28.1 +1.3**
	comp=Z,71nm,0.9s,mb5.4					
ULN	**Ulaanbaatar**	**44.51 342**	*e*P	**P**		**14 25 28.5 -1.0**
ULN			pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6					
ULN	**Ulaanbaatar**	**44.51 342**	*e*P	**P**		**14 25 28.5 -1.0**
	comp=Z,19nm,1.4s,mb4.6					
SONM	**Songino Array**	**44.69 342**	P	**P**		**14 25 29.9 -1.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=154,slow=8.9,SNR=13					
SONM			pP	pP		14 25 58.5 -0.2
	comp=Z,3.5nm,0.8s,baz=158,slow=8.5,SNR=5.5					
SONM			ScP	ScP		14 30 50.6 -1.9
	comp=Z,0.6nm,0.8s,baz=116,slow=3.4,SNR=3.2					
SONM			LR	LR		14 45 44.8
	comp=Z,133nm,18.6s,baz=149,slow=38					
SONM	**Songino Array**	**44.69 342**	P	**P**		**14 25 29.9 -1.0**
SONM			*PP	pP		14 25 58.5 -0.3
RIV	**Riverview**	**46.58 150**	*e*P	**P**		**14 25 48.6 +2.6**
CAN	**Canberra**	**46.78 153**	*e*P	**P**		**14 25 49.1 +1.6**
CAN			pmax	pmax		
	comp=Z,44nm,0.8s,mb5.2					
CAN	**Canberra**	**46.78 153**	*e*P	**P**		**14 25 49.1 +1.6**
	comp=Z,44nm,0.8s,mb5.2					
CNB	**Canberra Magne**	**46.94 153**	*e*P	**P**		**14 25 50.6 +1.9**
HYB	**Hyderabad**	**47.05 288**	*i* P	**P**		**14 25 50.5 +0.5**
HYB			*e*pP	pP		14 26 17.0 -1.1
HYB			*e*sP	sP		14 26 30.0 -1.8
TOO	**Toolangi**	**47.28 158**	*e*P	**P**		**14 25 53.5 +2.2**
TLY	**Talaya**	**48.92 342**	*e*P	**P**		**14 26 03.7 -0.1**
TLY			*e*	pP		14 26 34.1 +2.0
TLY			*e*			14 33 10.3
TLY			pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4					
TLY			MLR	MLR		
	comp=Z,107nm,17.0s					
DZM	**Mont Dzumac**	**49.00 126**	*e*LR	LR		14 40 04.3
	comp=Z,629nm,38.9s					
BHPL	**Bhopal**	**49.14 296**	*e*P	**P**		**14 26 05.9 -0.1**
BHPL			AMb	AMB		14 26 07.4
	comp=Z,12nm,0.5s,mb5.1					
JOSI	**Joshimath**	**49.37 305**	*e*P	**P**		**14 26 07.5 0.0**
JOSI			AMb	AMB		14 26 09.9
	comp=Z,138nm,0.6s,mb6.0					
JOSI			*e*x	x		14 26 37.6
AGRA	**Agra**	**49.68 301**	*e*x	pP		14 26 36.3 -2.1
AGRA			AMb	AMB		14 26 37.9
	comp=Z,70nm,0.3s,mb6.1					
MOY	**Mondy**	**49.76 340**	*e*P	**P**		**14 26 10.2 +0.1**
WMQ	**Urumqi**	**50.05 325**	*e*P	**P**		**14 26 12.4 -0.1**
WMQ			pP	pP		14 26 41.4 +0.5
WMQ			sP	sP		14 27 01.3 +6.8
WMQ			PP	PP		14 28 10.9 +2.2
WMQ			S	**S**		**14 33 12.8 -1.5**
WMQ			sS	sS		14 34 04.6 +1.2
WMQ			pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8					
WMQ			pmax	pmax		
	comp=Z,450nm,3.6s					
WMQ			LR	LR		
	comp=N,560nm,24.0s					
WMQ			LR	LR		
	comp=E,340nm,25.0s					
WMQ			LR	LR		
	comp=Z,360nm,20.0s					
DDI	**Dehra Dun**	**50.51 305**	*e*x	x		14 26 16.0
SONA	**Sohna**	**50.70 302**	*e*P	**P**		**14 26 15.9 -1.7**
SONA			AMb	AMB		14 26 18.9
	comp=Z,15nm,0.4s,mb5.4					
KLP	**Kalpa**	**50.76 306**	*e*P	**P**		**14 26 17.6 -0.4**
KLP			*e*x	x		14 26 47.2
KAD	**Karad**	**51.18 287**	*e*P	**P**		**14 26 20.0 -1.4**
KKR	**Kurukshetra**	**51.42 304**	*e*x	x		14 26 49.6
KKR			AMb	AMB		14 26 52.5
	comp=Z,176nm,0.3s					
RTK	**Rohtak**	**51.48 302**	*e*x	x		14 26 40.6
SMLA	**Simla**	**51.50 305**	*i* P	**P**		**14 26 20.9 -2.7**
SMLA			*i x*	x		14 26 47.4
SMLA			*i x*	x		14 26 48.8
POO	**Poona**	**51.64 289**	*e*x	pP		14 26 51.6 -1.7
POO			AMb	AMB		14 26 53.1
	comp=Z,46nm,0.7s,mb5.6					
KHET	**Khetri**	**51.73 301**	*e*P	**P**		**14 26 24.6 -0.7**
KHET			AMb	AMB		14 26 54.6
	comp=Z,29nm,1.0s,mb5.2					
BOD	**Bodaibo**	**52.41 352**	*e*P	**P**		**14 26 28.4 -1.4**
BOD			*e*	pP		14 26 56.5 -1.9
BOD			pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.9					
BOD			pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6					
PETK	**Petropavlovsk-**	**53.86 24**	P	**P**		**14 26 41.5 +0.9**
	comp=Z,9.5nm,0.6s,mb5.0,baz=192,slow=4.7,SNR=12					
PETK			pP	pP		14 27 09.4 +0.1
	comp=Z,5.6nm,0.7s,baz=222,slow=2.0,SNR=3.2					
PETK			PcP	PcP		14 27 44.1 -0.5
	comp=Z,7.7nm,0.7s,baz=201,slow=2.9,SNR=3.7					
PETK			ScP	ScP		14 31 30.2 -1.2
	comp=Z,2.4nm,1.0s,baz=252,slow=0.9,SNR=3.6					
PETK			LR	LR		14 49 50.7
	comp=Z,78nm,18.6s,baz=226,slow=36					
PETK	**Petropavlovsk-**	**53.86 24**	P	**P**		**14 26 41.5 +1.0**
PETK			*PP	pP		14 27 09.5 +0.2
PETK						14 27 44.2
PETK	**Petropavlovsk-**	**53.86 24**	P	**P**		**14 26 41.5 +0.9**
PETK			pP	pP		14 27 09.4 +0.1
PETK			PcP	PcP		14 27 44.1 -0.5
PETK			ScP	ScP		14 31 30.2 -1.2
PETK			LR	LR		14 49 50.7
MK31	**Makanchi Array**	**54.88 325**	*e*P	**P**		**14 26 47.1 -1.0**
MKAR	**Makanchi Array**	**54.88 325**	P	**P**		**14 26 47.5 -0.6**
	comp=Z,5.2nm,0.5s,mb4.8,baz=120,slow=8.0,SNR=68					
MKAR			pP	pP		14 27 15.8 -1.1
	comp=Z,14nm,1.0s,baz=119,slow=7.5,SNR=7.8					
MKAR			ScP	ScP		14 31 31.5 -4.6
	comp=Z,1.0nm,0.7s,baz=132,slow=4.2,SNR=4.7					
MKAR			LR	LR		14 51 11.4
	comp=Z,225nm,19.9s,baz=262,slow=37					
MKAR	**Makanchi Array**	**54.88 325**	P	**P**		**14 26 47.5 -0.6**
MKAR			*PP	pP		14 27 15.9 -1.0
KSH	**Kashi**	**55.44 315**	*e*P	**P**		**14 26 53.9 +1.7**
KSH			*e*pP	pP		14 27 22.9 +1.7
KSH			*e*sP	sP		14 27 36.9 +2.3
KSH			*e*PcP	PcP		14 27 52.1 +1.1
KSH			*e*PP	PP		14 29 00.0 +2.6
KSH			*e

KSH LR LR
comp=E,160nm,5.0s
KSH LR LR
comp=Z,140nm,5.7s
JASL Jaisalmer 55.70 298 *ex* pP 14 27 21.9 -1.4
JASL AMb AMB 14 27 22.6
comp=Z,20nm,0.4s,mb5.5
YAK Yakutsk 55.97 2 *eP* **P 14 26 54.6 -1.0**
YAK *e* pP 14 27 21.2 -3.4
YAK pmax pmax
comp=Z,36nm,0.9s,mb5.4
YAK pmax pmax
comp=N,13nm,1.1s
YAK Yakutsk 55.97 2 *eP* **P 14 26 55.2 -0.3**
comp=N,66nm,1.0s,mb5.6
YAK *e*pP pP 14 27 25.2 +0.7
KZA Kyzart 56.99 317 P **P 14 27 04.4 +1.3**
SNR=9.4
TKM2 Tokmak 2 57.11 318 P **P 14 27 04.5 +0.5**
SNR=7.4
TKM2 Tokmak 2 57.11 318 *eP* **P 14 27 03.8 -0.2**
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TKM2 Tokmak 2 57.11 318 *eP* **P 14 27 03.8 -0.2**
comp=Z,2.2nm,0.6s,mb4.4
UCH Uchtor 57.55 317 P **P 14 27 08.4 +1.3**
SNR=13
UCH Uchtor 57.55 317 *eP* **P 14 27 08.1 +1.0**
comp=Z,69nm,1.6s,mb5.4
UCH *e*pP pP 14 27 36.9 +0.7
AAK Ala-Archa 57.73 317 P **P 14 27 08.8 +0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=166,slow=12,SNR=5.7
AAK pP pP 14 27 36.4 -1.1
comp=Z,2.3nm,0.5s,baz=162,slow=12,SNR=1.9
AAK LR LR 14 55 04.7
comp=Z,112nm,18.5s,baz=103,slow=39
AAK Ala-Archa 57.73 317 *eP* **P 14 27 09.0 +0.7**
AAK *e*pP pP 14 27 38.8 +1.3
ZAA0 Zalesovo Array 57.92 333 *eP* **P 14 27 07.8 -1.6**
ZAA0 *e*pP pP 14 27 37.2 -1.4
ZAA0 sP sP 14 27 51.6 -0.4
ZALV Zalesovo Beam 57.92 333 P **P 14 27 08.3 -1.1**
comp=Z,1.3nm,0.3s,mb4.4,baz=132,slow=7.1,SNR=10
ZALV pP pP 14 27 37.2 -1.4
comp=Z,17nm,1.0s,baz=110,slow=6.5,SNR=12
ZALV LR LR 14 53 00.2
comp=Z,64nm,18.0s,baz=247,slow=37
ZALV PKP2bc 14 57 01.6
comp=Z,0.9nm,0.3s,baz=298,slow=3.1,SNR=6.0
ZALV Zalesovo Beam 57.92 333 P **P 14 27 08.3 -1.1**
ZALV *PP pP 14 27 37.2 -1.4
ZALV Zalesovo Beam 57.92 333 P **P 14 27 08.3 -1.1**
ZALV pP pP 14 27 37.2 -1.4
ZALV LR LR 14 53 00.2
ZALV ⇑*e* 14 57 01.6
USP Ospenovka 57.98 318 P **P 14 27 10.7 +0.6**
SNR=6.3
AML Almayashu 58.07 317 P **P 14 27 11.7 +0.9**
SNR=9.7
AML Almayashu 58.07 317 *eP* **P 14 27 11.6 +0.8**
comp=Z,48nm,1.4s,mb5.3
AML *e*pP pP 14 27 40.0 +0.1
EKS2 Erkin-Say 58.22 317 P **P 14 27 12.5 +0.7**
SNR=7.1
KBL Kabul 59.03 307 *eP* **P 14 27 17.8 +0.2**
KBL *e**PP pP 14 27 46.2 -0.6
KURK Kurchatov 59.06 327 P **P 14 27 16.1 -1.3**
comp=Z,90nm,0.7s,mb5.9,SNR=15
KURK Kurchatov 59.06 327 P **P 14 27 16.6 -0.9**
comp=Z,5.9nm,0.6s,mb4.8,baz=126,slow=6.2,SNR=34
KURK pP pP 14 27 44.9 -1.8
comp=Z,39nm,0.9s,baz=127,slow=5.8,SNR=17
KURK PKPPKP 14 56 45.6
comp=Z,0.4nm,0.2s,baz=282,slow=3.2,SNR=4.4
KURK Kurchatov 59.06 327 *ceP* **P 14 27 16.0 -1.4**
KURK pmax pmax
comp=Z,17nm,1.0s,mb5.0
KURK Kurchatov 59.06 327 *eP* **P 14 27 16.4 -1.0**
comp=Z,78nm,1.0s,mb5.7
NVS Novosibirsk 59.20 333 *eP* **P 14 27 15.5 -2.8**
NVS *i* pP 14 27 43.8 -3.8
NVS *e*S **S 14 35 08.9 -7.5**
NVS pmax pmax
comp=Z,21nm,2.0s,mb4.8
NVS smax
comp=E,30nm,2.5s
SEY Seymchan 60.13 14 *d iP* **P 14 27 25.6 +1.1**
RPZ Rata Peaks 64.43 145 *eP* **P 14 27 54.3 +0.8**
comp=E,35nm,0.7s,mb5.3
BVAR Borovoye Array 64.64 327 P **P 14 27 53.8 -1.0**
comp=E,5.5nm,0.9s,mb4.4,baz=134,slow=8.5,SNR=18
BVAR pP pP 14 28 22.3 -2.2
comp=E,30nm,1.0s,baz=123,slow=7.3,SNR=20
BVAR LR LR 14 58 04.8
comp=E,144nm,21.8s,baz=114,slow=38
BVAR Borovoye Array 64.64 327 P **P 14 27 53.8 -1.0**
BVAR *PP pP 14 28 22.3 -2.2
BRVK Borovoye 64.71 327 *eP* **P 14 27 53.5 -1.7**
BRVK *e* pP 14 28 24.0 -1.0
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BRVK Borovoye 64.71 327 *eP* **P 14 27 53.5 -1.7**
comp=Z,6.5nm,0.8s,mb4.5
BRVK *e* pP 14 28 24.0 -1.0
KHZ Kahutara 65.13 143 *eP* **P 14 27 57.4 -0.7**
comp=Z,28nm,0.6s,mb5.3
URZ Urewera 65.16 137 *eP* **P 14 27 58.7 +0.3**
comp=Z,30nm,0.5s,mb5.4
TIXI Tiksi 65.58 1 *c iP* **P 14 27 58.3 -2.2**
TIXI *e**PP pP 14 28 27.4 -2.9
TIXI *e*S S 14 36 30.1 -5.7
TIXI pmax pmax
comp=Z,18nm,1.4s,mb4.7
TIXI Tiksi 65.58 1 *eP* **P 14 27 59.1 -1.4**
IDAH Dahanechab 66.16 303 *eP* PP 14 30 48.2 +16
IMYA Miami 66.55 307 *eP* **P 14 28 06.8 -0.6**
ISRO Mashad 67.04 307 *eP* pP 14 28 38.3 -2.1
ITEG Tejag 67.11 303 *eP* **P 14 28 11.6 +0.6**
BILL Bilibino 67.71 15 *eP* **P 14 28 13.5 -0.6**
BILL *i* pP 14 28 40.7 -3.3
BILL *i* *PP pP 14 28 43.5 -0.5
BILL pmax pmax
comp=Z,41nm,2.1s,mb4.9
BILL Bilibino 67.71 15 *eP* **P 14 28 13.3 -0.8**
comp=Z,17nm,1.0s,mb4.8
ABKAR Akbulak array 69.50 321 *eP* **P 14 28 23.7 -1.8**
comp=Z,11nm,0.8s,mb4.8
ABKAR *e*PcP PcP 14 28 46.9 -1.1
ABKAR *e*pP pP 14 28 53.3 -2.4
AKTK Aktyubinsk 71.00 321 P **P 14 28 33.6 -1.0**
AKTK pP pP 14 29 03.5 -1.4
AKTK LR LR 15 01 57.5
AKTO Aktyubinsk 71.00 321 P **P 14 28 33.6 -1.1**
comp=Z,4.1nm,0.8s,mb4.3,baz=98,slow=8.4,SNR=17
AKTO pP pP 14 29 03.5 -1.4
comp=Z,14nm,0.8s,baz=108,slow=7.6,SNR=11
AKTO LR LR 15 01 57.5
comp=Z,111nm,19.5s,baz=309,slow=38
AKTO Aktyubinsk 71.00 321 P **P 14 28 33.6 -1.1**
AKTO *PP pP 14 29 03.5 -1.4
IANJ Anjilo 71.40 305 *eP* pP 14 29 06.2 -1.4
ARU Arti 72.26 328 *eP* **P 14 28 39.9 -2.2**
ARU *e**PP pP 14 29 09.2 -3.2
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ARU Arti 72.26 328 *eP* **P 14 28 39.9 -2.2**
comp=Z,4.5nm,0.8s,mb4.3
ARU *e*pP pP 14 29 09.2 -3.1
UNV Unalaska Valle 72.34 35 *eP* **P 14 28 41.6 -1.0**
comp=Z,82nm,1.0s,mb5.5
IZEF Zefreh 72.48 302 *eP* pP 14 29 13.9 -0.3
ISFB Sefidab 72.67 304 *eP* **P 14 28 44.0 -1.0**
IPRN Peran 72.75 306 *eP* pP 14 29 13.2 -2.6
AKUT Akutan 72.83 35 *eP* **P 14 28 46.5 +1.0**
comp=Z,255nm,1.6s,mb5.8
AKUT LR LR
comp=Z,100nm,21.0s
GAMB Gambell 72.88 24 *eP* **P 14 28 46.6 +1.0**
comp=Z,8.6nm,0.7s,mb4.7
CASY Casey 72.93 186 *eP* **P 14 28 45.7 -0.1**
IDMV Damavand 72.94 305 *eP* **P 14 28 44.9 -1.7**
IVRN Varamin 73.14 305 *eP* pP 14 29 15.6 -2.5
IKLH Kolahrood 73.14 303 *eP* **P 14 28 48.2 +0.4**
IKLH *e*P pP 14 29 16.4 -1.8
IPIR Pirpir 73.67 302 *eP* PcP 14 29 04.9 -1.3

TNA Tin City 75.03 23 *eP* **P 14 28 57.9 -0.2**
comp=Z,5.1nm,1.0s,mb4.2
MIR Mirnyy 76.07 193 ⇓*iP* **P 14 29 03.6 -0.4**
MIR pmax pmax
comp=Z,41nm,1.0s,mb5.1
SDPT Sand Point 76.09 34 *eP* **P 14 29 05.0 +0.7**
comp=Z,105nm,0.7s,mb5.7
QRN Al-Qurain 76.10 298 *eP* pP 14 29 31.9 -3.7
QRN AMb AMB 14 29 35.8
comp=Z,80nm,1.4s,mb5.2
RDF Al-Radifah 76.42 298 *eP* pP 14 29 33.9 -3.6
RDF AMb AMB 14 29 35.9
comp=Z,59nm,1.3s,mb5.2
MIB Mutribah 76.62 299 *eP* pP 14 29 34.9 -3.6
MIB AMb AMB 14 29 36.7
comp=Z,64nm,1.0s,mb5.3
IBST Bostanabad 77.19 307 *eP* Px 14 29 31.4
IFTB Fath-abad 77.60 307 *eP* sP 14 29 55.2 -1.7
ISHB Shabestar 78.22 308 *eP* **P 14 29 16.3 -0.3**
GNI Garni 78.95 310 *ceP* **P 14 29 20.9 +0.3**
GNI pmax pmax
comp=Z,25nm,1.6s
SVW2 Sparrevohn 79.47 29 *eP* **P 14 29 23.4 +0.4**
TTA Tatalina 79.49 27 *eP* **P 14 29 24.1 +1.0**
ZEI Tsey 79.65 312 *eP* **P 14 29 21.5 -2.8**
ZEI *e* pP 14 29 52.2 -2.9
ZEI pmax pmax
comp=Z,19nm,1.5s,mb4.7
ONI Oni 79.97 312 P pP 14 29 55.0 -1.9
OHAK Old Harbor 80.29 33 *eP* **P 14 29 27.9 +0.4**
comp=Z,48nm,0.8s,mb5.4
KIV Kislovodsk 80.55 313 *i P* **P 14 29 28.5 -0.7**
KIV *i* *PP pP 14 29 57.9 -2.1
KIV pmax pmax
comp=Z,17nm,1.6s,mb4.6
KDAK Kodiak Island 80.70 33 P **P 14 29 30.2 +0.6**
comp=Z,45nm,0.7s,mb5.4
KDAK LR LR 14 59 09.4
comp=Z,82nm,21.9s,slow=31
RSO Redoubt South 80.79 30 *eP* **P 14 29 30.2 +0.1**
PPLA Purkeypile 81.23 27 *eP* **P 14 29 32.8 +0.5**
comp=Z,39nm,0.7s,mb5.3
CHUM Lake Minchumin 81.25 26 *eP* **P 14 29 33.1 +0.7**
comp=Z,38nm,0.7s,mb5.3
KTH Kantishna Hill 81.84 27 *eP* **P 14 29 35.6 +0.1**
comp=Z,75nm,1.2s,mb5.4
TRF Thorofare Moun 82.12 27 *eP* **P 14 29 37.1 +0.1**
comp=Z,79nm,1.1s,mb5.5
RC01 Rabbit Creek A 82.30 29 *eP* **P 14 29 37.6 -0.4**
comp=Z,46nm,0.9s,mb5.3
COLD Coldfoot 82.33 23 *eP* **P 14 29 38.5 +0.5**
comp=Z,21nm,0.6s,mb5.2
SEW Seward 82.42 30 *eP* **P 14 29 38.6 0.0**
comp=Z,109nm,1.2s,mb5.6
PMR Palmer 82.60 29 *eP* **P 14 29 39.2 -0.4**
PMR pmax pmax
comp=Z,105nm,1.2s,mb5.5
PMR Palmer 82.60 29 *eP* **P 14 29 39.2 -0.4**
comp=Z,105nm,1.2s,mb5.5
MCK McKinley 82.74 27 *eP* **P 14 29 40.0 -0.2**
MCK pmax pmax
comp=Z,151nm,1.0s,mb5.8
MCK McKinley 82.74 27 *eP* **P 14 29 40.0 -0.2**
comp=Z,151nm,1.0s,mb5.8
COLA College 83.22 25 *eP* **P 14 29 42.0 -0.7**
COLA pmax pmax
comp=Z,38nm,0.8s,mb5.3
COLA College 83.22 25 *eP* **P 14 29 42.0 -0.7**
comp=Z,38nm,0.8s,mb5.3
MALT Malatya 83.88 308 *eP* **P 14 29 46.1 -0.5**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
MALT Malatya 83.88 308 *eP* **P 14 29 46.1 -0.5**
comp=Z,1.7nm,0.6s,mb4.0
DIV Divide 84.23 29 *eP* **P 14 29 48.3 +0.4**
comp=Z,80nm,1.1s,mb5.5
ANN Anapa 84.30 314 *eP* **P 14 29 46.0 -2.6**
ANN *e**PP pP 14 30 16.0 -3.8
ANN *e*S S 14 39 56.0 -8.3
ANN pmax pmax
comp=Z,24nm,1.0s,mb5.0
OBN Obninsk 84.39 325 *eP* **P 14 29 47.3 -1.5**
OBN *i* *PP pP 14 30 19.7 -0.3
OBN pmax pmax
comp=Z,37nm,1.6s,mb5.0
BMRM Bremner River 84.80 29 *eP* **P 14 29 51.4 +0.6**
comp=Z,447nm,0.6s
MENT Mentasta 85.11 27 *eP* **P 14 29 53.1 +0.8**
MAW Mawson 85.42 200 *eP* **P 14 29 52.6 -1.1**
comp=Z,10.0nm,1.3s,mb4.6
MAW Mawson 85.42 200 P **P 14 29 53.4 -0.3**
comp=Z,10nm,0.8s,mb4.8,baz=55,slow=4.4,SNR=16
EGAK Eagle 86.09 25 *eP* **P 14 29 56.3 -0.8**
comp=Z,11nm,0.6s,mb5.0
JOF Joensuu 86.51 333 *eP* **P 14 29 56.5 -2.7**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
JOF Joensuu 86.51 333 *ep* **P 14 29 56.5 -2.7**
comp=Z,0.5nm,0.3s,mb3.9
DAWY Dawson 86.93 26 *eP* **P 14 30 01.3 +0.1**
PPT Papeete 87.14 108 *eLR* LR 14 58 01.1
comp=Z,228nm,28.0s
PPT Papeete 87.14 108 LR LR 15 02 47.3
comp=Z,187nm,18.8s,baz=255,slow=31
KEV Kevo 87.26 340 *eP* **P 14 30 02.6 -0.1**
KEV Kevo 87.26 340 *ep* **P 14 30 02.6 -0.1**
comp=Z,0.4nm,0.4s
BR131 Keskin Array S 87.49 309 *eP* **P 14 30 03.1 -1.3**
comp=Z,0.7nm,0.6s,mb3.8
BRTR Keskin Array B 87.49 309 P **P 14 30 02.4 -2.1**
comp=Z,2.0nm,0.9s,mb4.1,baz=122,slow=4.7,SNR=9.4
BRTR pP pP 14 30 31.8 -4.0
comp=Z,2.0nm,0.9s,baz=116,slow=5.6,SNR=5.3
ARCES ARCESS Array B 87.82 340 P **P 14 30 03.2 -2.2**
comp=Z,2.7nm,0.6s,mb4.5,baz=74,slow=6.4,SNR=7.5
ARCES LR LR 15 10 27.3
comp=Z,69nm,19.0s,baz=222,slow=36
ARCES ARCESS Array B 87.82 340 P **P 14 30 03.2 -2.2**
ARCES LR LR 15 10 27.3
SPITS Spitsbergen Ar 87.96 349 LR LR 15 10 16.5
comp=Z,88nm,21.8s,baz=280,slow=36
INK Inuvik 88.54 21 *eP* **P 14 30 07.3 -1.5**
INK pmax pmax
comp=Z,22nm,1.1s
INK Inuvik 88.54 21 *eP* **P 14 30 07.3 -1.5**
comp=Z,22nm,1.1s,mb5.1
KAF Kangasniemi 88.92 332 *eP* **P 14 30 06.3 -4.4**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KAF Kangasniemi 88.92 332 *ep* **P 14 30 06.3 -4.4**
comp=Z,0.5nm,0.3s,mb4.0
FINES FINESS Array B 89.16 332 P **P 14 30 09.6 -2.2**
comp=Z,0.9nm,0.5s,mb4.0,baz=343,slow=2.0,SNR=9.8
FINES LR LR 15 12 25.7
comp=Z,108nm,19.0s,baz=175,slow=37
FINES FINESS Array B 89.16 332 P **P 14 30 09.6 -2.2**
FINES LR LR 15 12 25.7
AKASG Malin Array Be 89.24 321 P **P 14 30 10.7 -1.8**
comp=Z,0.4nm,0.4s,mb3.8,baz=74,slow=4.7,SNR=4.4
AKASG pP pP 14 30 39.9 -4.0
comp=Z,1.9nm,0.7s,baz=73,slow=3.6,SNR=2.9
AKASG LR LR 15 12 13.0
comp=Z,78nm,21.7s,baz=90,slow=37
AKASG Malin Array Be 89.24 321 P **P 14 30 10.7 -1.7**
AKASG *PP pP 14 30 39.9 -4.0
SKAG Skagway 89.58 30 *eP* **P 14 30 14.3 +0.4**
comp=Z,12nm,0.9s,mb5.0
DAG Danmarks Havn 94.80 352 *eP* **P 14 30 35.0 -2.7**
DAG pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
DAG Danmarks Havn 94.80 352 *i P* **P 14 30 35.0 -2.7**
comp=Z,2.7nm,0.7s,mb4.8
TAOE Nuku Hiva Isla 95.36 98 *eLR* LR 15 01 24.4
comp=Z,140nm,23.7s
NOA NORSAR Array B 96.12 333 LR LR 15 18 24.9
comp=Z,70nm,18.9s,baz=40,slow=38
JMIC Jan Mayen 97.31 346 LR LR 15 19 01.3
comp=Z,47nm,18.7s,baz=71,slow=38
YKA Yellowknife Ar 97.98 24 P **P 14 30 52.3 0.0**
comp=Z,5.3nm,0.8s,mb5.1,baz=300,slow=4.8,SNR=50
YKA PKiKP PKiKP 14 35 25.1 +0.1
comp=Z,0.5nm,0.6s,baz=305,slow=1.6,SNR=8.5
YKA PKKPbc PKKPbc 14 47 23.3 -4.7
comp=Z,0.7nm,0.5s,baz=122,slow=3.1,SNR=14
YKA Yellowknife Ar 97.98 24 P **P 14 30 52.3 0.0**
BRG Berggiesshubel 98.57 323 *eP* pP 14 31 23.6 -3.1

comp=Z,12nm,1.6s
CLL Collm 98.97 324 *e*(pPdif) 14 31 25.0
GERES GERESS Array B 99.43 322 pP pP 14 31 27.4 -3.3
comp=Z,0.2nm,0.4s,baz=58,slow=3.5,SNR=3.1
GERES PKKPbc PKKPbc 14 47 22.0 -1.5
comp=Z,0.2nm,0.3s,baz=318,slow=1.8,SNR=3.5
NVAR Mina Array Bea 106.39 47 Pdiff Pdif 14 31 31.7 +1.8
comp=Z,0.6nm,0.7s,baz=284,slow=5.5,SNR=5.9
NVAR PKiKP PKiKP 14 35 42.6 +1.6
comp=Z,0.8nm,0.7s,baz=259,slow=3.0,SNR=6.5
T11A Corn Creek, Al 109.10 47 ⇓PKiKP PKiKP 14 35 45.3 -0.8
baz=109
P14A Drum Mountains 109.66 44 ⇓PKiKP PKiKP 14 35 47.7 +0.6
baz=110
PDAR Pinedale Array 110.52 40 PKiKP PKiKP 14 35 49.6 +1.1
comp=Z,0.3nm,0.6s,baz=339,slow=4.8,SNR=2.8
V15A Kaibab Nationa 111.92 48 ⇓PKiKP PKiKP 14 35 52.6 +1.2
baz=112
X14A Yava 111.95 49 ⇓PKiKP PKiKP 14 35 52.6 +1.0
baz=112
113A Mohawk Valley, 111.97 51 ⇓PKiKP PKiKP 14 35 51.0 -0.6
baz=112
R18A Canyonlands Na 112.41 44 ⇑PKiKP PKiKP 14 35 52.9 +0.6
baz=112
ULM Lac du Bonnet 113.60 27 PKiKP PKiKP 14 35 52.2 -2.0
comp=Z,4.1nm,0.6s,baz=232,slow=2.0,SNR=4.8
X21A Alamocita Cree 115.75 47 ⇑PKiKP PKiKP 14 35 59.8 +1.0
baz=116
Z20A Nine Sixteen R 115.77 49 ⇑PKiKP PKiKP 14 35 59.3 +0.4
baz=116
120A U Bar Ranch, L 115.99 49 ⇑PKiKP PKiKP 14 35 59.8 +0.4
baz=116
Z21A St. Cloud Mine 116.37 48 ⇑PKiKP PKiKP 14 36 00.9 +0.8
baz=116
121A Cookes Peak, D 116.64 49 ⇑PKiKP PKiKP 14 36 00.7 +0.1
baz=117
Z22A Elephant Butte 116.92 48 ⇓PKiKP PKiKP 14 36 01.8 +0.7
baz=117
W24A Lazy 6 Ranch, 117.09 45 ⇓PKiKP PKiKP 14 36 01.0 -0.4
baz=117
Y23A Lovelace Mesa, 117.26 47 ⇓PKiKP PKiKP 14 36 03.2 +1.4
baz=117
ECSD EROS Data Cent 117.66 33 *e*PKPdf PKPdf 14 36 01.1 -1.1
Y24A Capitan 117.71 47 ⇑PKiKP PKiKP 14 36 02.6 0.0
baz=118
W25A X Bar L Ranch, 117.76 45 ⇑PKiKP PKiKP 14 36 02.8 +0.1
baz=118
Y25A Mesa, Roswell 118.25 46 ⇑PKiKP PKiKP 14 36 03.7 0.0
baz=118
124A Stringfield Ra 118.29 48 ⇑PKiKP PKiKP 14 36 04.4 +0.6
baz=118
SCHQ Schefferville 118.51 8 PKP PKPdf 14 36 03.2 -0.3
comp=Z,2.6nm,0.3s,baz=346,slow=1.8,SNR=18
SCHQ Schefferville 118.51 8 PKP PKPdf 14 36 03.2 -0.3
125A Gardner Draw, 118.90 48 ⇑PKiKP PKiKP 14 36 04.8 -0.2
baz=119
325A Bean Ranch, Si 119.29 49 ⇓PKiKP PKiKP 14 36 05.7 -0.1
baz=119
Y27A Causey 119.36 46 ⇑PKiKP PKiKP 14 36 05.9 0.0
baz=119
425A Indio Mountain 119.56 50 ⇓PKiKP PKiKP 14 36 06.3 0.0
baz=120
226A Malaga, Loving 119.60 48 ⇓PKiKP PKiKP 14 36 06.6 +0.3
baz=120
Z27A Tatum 119.62 46 ⇓PKiKP PKiKP 14 36 05.6 -0.8
baz=120,SNR=7.0
426A McDonald Obser 120.34 49 ⇓PKiKP PKiKP 14 36 07.9 +0.1
baz=120
526A Mary Lane Ranc 120.58 50 ⇓PKiKP PKiKP 14 36 07.9 -0.5
baz=120
427A Hayter Ranch, 120.72 49 ⇓PKiKP PKiKP 14 36 07.9 -0.7
baz=121
626A Big Bend Ranch 120.79 50 ⇓PKiKP PKiKP 14 36 08.1 -0.6
baz=121
TORD Torodi Ar. Bea 120.87 289 PKP PKPdf 14 36 08.0 -1.2
comp=Z,1.8nm,0.6s,baz=54,slow=1.6,SNR=13
TORD PKKPbc PKKPbc 14 46 13.1 0.0
comp=Z,0.8nm,1.0s,baz=271,slow=4.6,SNR=3.9
328A Wristen Ranch, 120.90 48 ⇓PKiKP PKiKP 14 36 08.8 -0.1
baz=121,SNR=5.4
527A Woodward Ranch 120.91 50 ⇓PKiKP PKiKP 14 36 09.0 0.0
baz=121,SNR=5.4
428A Kincaid Ranch, 121.32 49 ⇓PKiKP PKiKP 14 36 10.1 +0.3
baz=121,SNR=6.8
627A Terlingua Ranc 121.41 50 ⇓PKiKP PKiKP 14 36 09.7 -0.3
baz=121,SNR=10
528A Cox Ranch, San 121.52 49 ⇓PKiKP PKiKP 14 36 09.7 -0.5
baz=121
JFWS Jewell Farm 121.56 30 *e*PKIKP PKPdf 14 36 08.1 -1.7
628A Black Gap, Mar 121.78 50 ⇑PKiKP PKiKP 14 36 09.9 -0.8
baz=122,SNR=5.7
JCT Junction City 123.57 47 *e*PKIKP PKPdf 14 36 13.2 -0.8
PLCA Paso Flores 142.64 160 PKHKP 14 36 46.0
comp=Z,3.9nm,0.8s,baz=230,slow=3.3,SNR=8.5
PLCA SKPbc SKPbc 14 40 15.8 -0.4
comp=Z,4.4nm,0.9s,baz=146,slow=4.1,SNR=3.7
PLCA Paso Flores 142.64 160 PKP PKPdf 14 36 46.0 -3.3
PLCA SKPbc SKPbc 14 40 15.8 -0.4
JTS JuntasAbangare 145.75 62 *e*PKIKP PKPdf 14 36 54.1 -1.4
TRQA Tornquist 147.44 169 *e*PKPdf PKPdf 14 36 59.7 +2.0
SDDR Presa de Saban 150.23 33 *e*PKPbc PKPbc 14 37 07.9 0.0
LCO Las Campanas 152.57 148 *e*PKPbc PKPbc 14 37 13.7 +0.7
CPUP Villa Florida 159.66 173 PKP PKPdf 14 37 15.3 0.0
comp=Z,0.4nm,0.4s,baz=146,slow=2.9,SNR=6.1
CPUP PKPab PKPab 14 37 54.6 +0.5
comp=Z,3.2nm,0.6s,baz=151,slow=4.3,SNR=9.0
LPAZ La Paz 163.33 129 PKP PKPdf 14 37 21.1 +1.7
comp=Z,6.1nm,1.1s,baz=266,slow=3.1,SNR=14
LPAZ PKPab PKPab 14 38 13.4 +2.8
comp=Z,8.4nm,1.0s,baz=179,slow=1.5,SNR=12

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*IDC **17** 14:35:33.1±6.6, 35°.90N×70°.70E, h74km±60km, mb3.7/4, mb1 3.6/9, mb1mx3.2/29, mbtmp3.5/9, ML3.4/4, Error ellipse: s-maj=62.0km s-min=40.3km az=132.0*
*ISCJB **17** 14:35:36.9±0.7, 36°.41N±0°.05×70°.42E±0°.08, h81km±14km, mb3.9/3, Error ellipse: s-maj=13.1km s-min=6.2km az=34.8*
*NEIC **17** 14:35:37.1±1.1, 36°.15N×70°.59E, h98km±13km, mb4.1/1, Error ellipse: s-maj=25.4km s-min=10.1km az=128.0*
*NNC **17** 14:35:45.6±6.1, 36°.77N×70°.73E, h194km±61km, mb3.0, mpv4.0, Error ellipse: s-maj=54.8km s-min=39.3km az=36.0*

ISC 17 14:35:37.8±0.7, 36°.29N±0°.06×70°.6E±0°.1, h82km±11km, σ1°.04/42, mb3.9/3, 3C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.13**	**216**	*e*Pn		**Pn**		**14 36 11.2**	**-0.3**
KBL				*e*Sn		**Sn**		**14 36 36.4**	**-0.8**
KSH	**Kashi**	**5.37**	**51**	Pn		**Pn**		**14 36 53.5**	**-1.8**
KSH				Sn		**Sn**		**14 37 45.9**	**-10**
KSH				smax					
	comp=N,100nm,0.4s								
KSH				smax					
	comp=E,69nm,0.5s								
AML	**Almayashu**	**6.33**	**22**	P		**Pn**		**14 37 09.5**	**+1.1**
	SNR=65								
AML	**Almayashu**	**6.33**	**22**	*e*Pn		**Pn**		**14 37 09.3**	**+0.9**
	comp=E,18nm,0.4s								
AML				*e*Sn		**Sn**		**14 38 17.8**	**-1.3**
UCH	**Uchtor**	**6.68**	**26**	P		**Pn**		**14 37 14.6**	**+1.3**
	SNR=16								
UCH	**Uchtor**	**6.68**	**26**	*e*Pn		**Pn**		**14 37 14.0**	**+0.7**
	comp=E,5.1nm,0.4s								
UCH				*e*Sn		**Sn**		**14 38 26.4**	**-1.4**
KK31	**Karatay Array**	**6.81**	**360**	⇑P		**Pn**		**14 37 15.6**	**+0.7**
	comp=E,4.3nm,0.3s,baz=175,slow=13,SNR=177								
KK31				⇓S			**Sn**	**14 38 30.6**	**-0.3**
	comp=E,1.3nm,0.2s,baz=189,slow=25,SNR=4.8								
EKS2	**Erkin-Say**	**6.84**	**20**	P		**Pn**		**14 37 16.5**	**+1.1**
	SNR=12								
EKS2	**Erkin-Say**	**6.84**	**20**	*e*Pn		**Pn**		**14 37 16.1**	**+0.7**
	comp=E,6.9nm,0.6s								
KZA	**Kyzart**	**6.84**	**31**	P		**Pn**		**14 37 16.0**	**+0.7**
	SNR=18								
AAK	**Ala-Archa**	**7.03**	**24**	P		**Pn**		**14 37 19.3**	**+1.3**
	SNR=6.6								
AAK	**Ala-Archa**	**7.03**	**24**	P		**Pn**		**14 37 19.2**	**+1.2**
	comp=E,0.1nm,0.3s,baz=172,slow=7.4,SNR=14								
AAK				S		**Sn**		**14 38 36.3**	**-0.2**
	baz=114,slow=19								
AAK	**Ala-Archa**	**7.03**	**24**	P		**Pn**		**14 37 19.2**	**+1.1**
AAK				S		**Sn**		**14 38 36.3**	**-0.2**
CHMS	**Chumysh**	**7.45**	**25**	P		**Pn**		**14 37 24.8**	**+1.1**
	SNR=7.3								

USP Ospenovka 7.61 22 P **Pn 14 37 26.7 +0.9**
SNR=8.7
TKM2 Tokmak 2 7.69 29 ⇑P **Pn 14 37 28.0 +1.2**
comp=E,4.0nm,0.5s
TKM2 ⇓S **Sn 14 38 50.3 -2.0**
comp=E,7.2nm,0.7s
TKM2 Tokmak 2 7.69 29 P **Pn 14 37 28.3 +1.4**
SNR=5.6
TKM2 Tokmak 2 7.69 29 *e*Pn **Pn 14 37 27.3 +0.4**
comp=E,6.6nm,0.4s
MKAR Makanchi Array 13.68 36 P **Pn 14 38 48.1 +0.1**
comp=E,0.0nm,0.3s,baz=220,slow=13,SNR=2.3
AB31 Akbulak array 15.10 332 P **Pn 14 39 05.0 -1.4**
comp=E,3.4nm,0.5s,baz=140,slow=12,SNR=77
AB31 ⇓S **S 14 41 46.9 -18**
comp=E,0.7nm,0.5s,baz=150,slow=23,SNR=4.3
ABKAR Akbulak array 15.10 332 *e*Pn **Pn 14 39 04.7 -1.7**
comp=E,5.6nm,0.4s
ABKAR *e*Sn **Sn 14 41 45.4 -7.2**
KURK Kurchatov 15.55 19 P **Pn 14 39 12.0 -0.1**
comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=3.9
BVAR Borovoye Array 16.74 360 P **Pn 14 39 28.5 +1.6**
comp=E,0.2nm,0.3s,baz=171,slow=13,SNR=3.7
AKTK Aktyubinsk 16.79 331 P **Pn 14 39 28.3 +0.8**
AKTO Aktyubinsk 16.79 331 ⇑P **Pn 14 39 28.5 +1.0**
comp=E,0.7nm,0.8s
AKTO ⇓S **S 14 42 25.1 -14**
comp=E,0.6nm,1.4s
AKTO Aktyubinsk 16.79 331 P **Pn 14 39 28.3 +0.8**
comp=E,0.3nm,0.3s,baz=146,slow=14,SNR=11
ZALV Zalesovo Beam 20.26 25 P **P 14 40 05.7 -0.7**
comp=E,2.9nm,0.4s,baz=215,slow=12,SNR=12
FINES FINESS Array B 37.46 326 P **P 14 42 42.5 -0.3**
comp=E,0.9nm,0.7s,mb3.8,baz=116,slow=9.4,SNR=4.2
ARCES ARCESS Array B 41.20 338 P **P 14 43 14.2 +0.2**
comp=E,4.4nm,0.9s,mb4.3,baz=110,slow=7.8,SNR=3.5
ARCES ARCESS Array B 41.20 338 P **P 14 43 14.2 +0.2**
TORD Torodi Ar. Bea 65.35 268 P **P 14 46 07.3 -4.3**
comp=E,0.6nm,0.6s,mb3.6,baz=50,slow=5.4,SNR=5.5

*NNC **17** 14:50:15.8±5.6, 36°.91N×70°.54E, h183km±64km, mb2.8, mpv3.9, Error ellipse: s-maj=50.5km s-min=33.4km az=33.0*
*IDC **17** 14:50:34.2±4.9, 39°.16N×70°.34E, h0km, mb1 3.5/5, mb1mx3.2/29, mbtmp3.5/5, ML3.2/5, Error ellipse: s-maj=60.6km s-min=21.3km az=179.0*
*NEIC **17** 14:50:41.8±7.4, 39°.56N×70°.01E, h35km, Error ellipse: s-maj=98.1km s-min=13.7km az=188.0*
ISC 17 14:50:39.4±1.8, 39°.6N±0°.1×70°.02E±0°.07, h10km, n20, σ1°29/27, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.54**	**6**	P		**Pg**	**14 51 46.0 -1.2**
	4.6nm,0.6s,baz=185,slow=14,SNR=45						
KK31				⇓S		**Sg**	**14 52 56.4 +23**
	7.4nm,0.3s,baz=193,slow=25,SNR=6.9						
AML	**Almayashu**	**3.78**	**46**	P		**Pn**	**14 51 39.4 +1.8**
	SNR=59						
AML	**Almayashu**	**3.78**	**46**	*e*Pn		**Pn**	**14 51 39.0 +1.4**
AML				*e*Sn		**Sg**	**14 52 39.1 -1.6**
EKS2	**Erkin-Say**	**4.19**	**41**	P		**Pn**	**14 51 46.0 +2.8**
	SNR=8.2						
EKS2	**Erkin-Say**	**4.19**	**41**	*e*Pn		**Pn**	**14 51 45.4 +2.1**
UCH	**Uchtor**	**4.31**	**51**	P		**Pn**	**14 51 44.4 -0.6**
	SNR=9.7						
UCH	**Uchtor**	**4.31**	**51**	*e*Pn		**Pn**	**14 51 43.9 -1.1**
UCH				*e*Sn		**Sg**	**14 52 54.1 -3.7**
AAK	**Ala-Archa**	**4.55**	**46**	Pn		**Pn**	**14 51 48.5 +0.1**
	0.0nm,0.3s,baz=191,slow=8.8,SNR=10.0						
AAK				Lg			14 53 03.3
	0.0nm,0.3s,baz=336,slow=20,SNR=17						
AAK	**Ala-Archa**	**4.55**	**46**	*e*Pn		**Pn**	**14 51 48.3 0.0**
AAK				*e*Sn		**Sb**	**14 52 50.8 -3.5**
KBK	**Karagaybulak**	**4.83**	**49**	P		**Pn**	**14 51 51.2 -0.9**
	SNR=5.9						
TKM2	**Tokmak 2**	**5.37**	**50**	⇑P		**Pn**	**14 51 56.9 -2.6**
	4.8nm,0.5s						
TKM2				⇓S		**Sb**	**14 53 19.2 +1.6**
	3.5nm,0.7s						
TKM2	**Tokmak 2**	**5.37**	**50**	P		**Pn**	**14 51 57.2 -2.3**
	SNR=12						
MKAR	**Makanchi Array**	**11.49**	**47**	Pn		**Pn**	**14 53 22.9 -0.6**
	0.0nm,0.3s,baz=239,slow=9.9,SNR=3.9						
AB31	**Akbulak array**	**12.05**	**327**	P		**Pn**	**14 53 32.3 +1.3**
	0.5nm,0.3s,baz=143,slow=12,SNR=24						
AB31				⇑S		**Sn**	**14 56 10.8 +25**
	0.4nm,0.4s,baz=163,slow=21,SNR=4.5						
ABKAR	**Akbulak array**	**12.05**	**327**	*e*Pn		**Pn**	**14 53 31.6 +0.5**
	2.3nm,0.6s						
BVAR	**Borovoye Array**	**13.45**	**1**	Pn		**Pn**	**14 53 49.2 -1.0**
	0.1nm,0.3s,baz=179,slow=8.6,SNR=2.1						
AKTK	**Aktyubinsk**	**13.76**	**326**	Pn		**Pn**	**14 53 54.1 -0.3**
AKTO	**Aktyubinsk**	**13.76**	**326**	⇑P		**Pn**	**14 53 54.3 -0.1**
	1.1nm,0.9s						
AKTO				⇑S		**Sn**	**14 56 56.1 +29**
	1.0nm,1.9s						
AKTO	**Aktyubinsk**	**13.76**	**326**	Pn		**Pn**	**14 53 54.1 -0.3**
	0.8nm,0.3s,baz=140,slow=9.2,SNR=17						
ZALV	**Zalesovo Beam**	**17.53**	**30**	P		**Pn**	**14 54 44.5 +0.8**
	0.2nm,0.3s,baz=212,slow=14,SNR=2.2						

*ISCJB **17** 14:55:51.5±0.8, 31°.92N±0°.03×104°.69E±0°.05, h0km±5km, mb4.2/22, Error ellipse: s-maj=6.8km s-min=4.7km az=17.7*
*IDC **17** 14:55:53.5±0.9, 31°.90N×104°.57E, h0km, mb4.0/15, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.8/3, Error ellipse: s-maj=25.4km s-min=17.8km az=37.0*
*NEIC **17** 14:55:55.1±0.3, 31°.92N×104°.60E, h10km, mb4.4/8, Error ellipse: s-maj=6.7km s-min=6.3km az=70.0*
*BJI **17** 14:55:55.5, 31°.80N×104°.70E, h13km, mB4.3/4, mb4.1/5, ML3.7/14, Ms3.5/4, Ms7 3.4/4*
ISC 17 14:55:54.2±0.8, 31°.91N±0°.03×104°.65E±0°.04, h5km±5km, n45, σ0°78/57, mb4.1/22, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.25**	**218**	Pg		**Pg**	**14 56 16.8 -1.5**
CD2				Sg		**Sg**	**14 56 35.4 +0.9**
CD2				smax			
	comp=N,9μm,0.7s						
XAN	**Xi'an**	**4.17**	**58**	Pn		**Pn**	**14 57 02.3 +3.8**
XAN				Pg		**Pg**	**14 57 13.4 -0.8**
XAN				Sn		**Sn**	**14 57 53.0 +5.4**
XAN				Sg		**Sg**	**14 58 08.1 -0.2**
XAN				smax			
	comp=N,180nm,0.8s						
XAN				smax			
	comp=E,85nm,0.9s						
LZH	**Lanzhou**	**4.22**	**351**	Pn		**Pn**	**14 57 03.3 +4.1**
LZH				Pg		**Pg**	**14 57 15.8 +0.7**
LZH				Sn		**Sn**	**14 57 48.4 -0.4**
LZH				Sg		**Sg**	**14 58 09.3 -0.5**
LZH				smax			
	comp=N,270nm,0.9s						
LZH				smax			
	comp=E,270nm,0.8s						
LZH				LR		LR	
	comp=N,1μm,6.9s						
LZH				LR		LR	
	comp=Z,2μm,7.7s						
ENH	**Enshi**	**4.46**	**110**	*e*Pn		**Pn**	**14 57 04.2 +1.7**
ENH				*e*Sn		**Sn**	**14 58 00.3 +5.5**
GYA	**Guiyang**	**5.71**	**162**	Pn		**Pn**	**14 57 21.1 +1.4**
GYA				Sn		**Sn**	**14 58 25.3 -0.3**
GYA				smax			
	comp=N,70nm,1.2s						
GYA				smax			
	comp=E,80nm,1.1s						
KMI	**Kunming**	**6.97**	**194**	Pn		**Pn**	**14 57 36.3 -0.6**
KMI				Sn		**Sn**	**14 58 55.1 -1.4**
KMI				smax			
	comp=N,18nm,1.0s						
KMI				smax			
	comp=E,17nm,0.9s						
KMI	**Kunming**	**6.97**	**194**	Pn		**Pn**	**14 57 46.4 +9.5**
KMI				Sn		**Sn**	**14 58 55.1 -1.4**
KMI				smax			
	comp=N,18nm,1.0s						
KMI				smax			
	comp=E,17nm,0.9s						
GTA	**Gaotai**	**8.45**	**334**	*e*P		**Pn**	**14 58 06.4 +9.1**
GTA				pP			14 58 09.6
GTA				sP			14 58 12.5
GTA				S		**Sn**	**14 59 47.1 +14**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,22nm,4.2s						
GTA				LR	LR		
	comp=N,140nm,10.7s						
GTA				LR	LR		
	comp=E,240nm,13.4s						
GTA				LR	LR		
	comp=Z,170nm,12.2s						
LSA	**Lhasa**	**11.81**	**263**	Pn		**Pn**	**14 58 44.7 +1.3**
	comp=Z,2.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**14.35**	**202**	Pn		**Pn**	**14 59 18.1 0.0**
	comp=Z,0.3nm,0.3s,baz=17,slow=13,SNR=3.1						
SONM	**Songino Array**	**15.96**	**4**	Pn		**Pn**	**14 59 39.1 -0.3**
	comp=Z,0.2nm,0.3s,baz=182,slow=9.2,SNR=10						
ULN	**Ulaanbaatar**	**16.04**	**6**	*e*Pn		**Pn**	**14 59 41.3 +0.9**
	comp=Z,3.6nm,0.8s						
KSRS	**Korea Array**	**19.90**	**67**	P		**Pn**	**15 00 26.4 -1.8**
	comp=Z,0.2nm,0.3s,baz=260,slow=10,SNR=8.7						
MK31	**Makanchi Array**	**22.69**	**317**	*e*P		**P**	**15 00 56.9 +0.4**
MKAR	**Makanchi Array**	**22.69**	**317**	P		**P**	**15 00 56.9 +0.4**
	comp=Z,1.7nm,0.7s,mb3.6,baz=113,slow=12,SNR=20						
UCH	**Uchtor**	**26.04**	**302**	*e*P		**P**	**15 01 26.8 -1.5**
	comp=Z,5.6nm,1.4s,mb3.9						
ZALV	**Zalesovo Beam**	**26.21**	**333**	P		**P**	**15 01 29.9 +0.2**
	comp=Z,3.9nm,0.5s,mb4.2,baz=130,slow=9.6,SNR=19						
NIL	**Nilore**	**26.41**	**282**	*e*P		**P**	**15 01 32.9 +1.2**
	comp=Z,14nm,0.8s,mb4.5						
KURK	**Kurchatov**	**26.89**	**322**	P		**P**	**15 01 35.6 -0.3**
	comp=Z,2.1nm,0.8s,mb3.7,baz=128,slow=8.2,SNR=13						
BVAR	**Borovoye Array**	**32.46**	**321**	P		**P**	**15 02 25.3 +0.1**
	comp=Z,0.7nm,0.4s,mb3.9,baz=126,slow=9.8,SNR=3.2						
PALK	**Pallekele**	**33.15**	**227**	*e*P		**P**	**15 02 31.0 -0.6**
	comp=Z,64nm,1.5s,mb5.3						
ABKAR	**Akbulak array**	**37.49**	**311**	*e*P		**P**	**15 03 08.2 -0.5**
	comp=Z,0.4nm,0.4s,mb3.6						
AKTK	**Aktyubinsk**	**38.93**	**312**	P		**P**	**15 03 21.1 +0.3**
AKTO	**Aktyubinsk**	**38.93**	**312**	P		**P**	**15 03 21.1 +0.3**
	comp=Z,1.1nm,0.5s,mb3.9,baz=94,slow=12,SNR=5.7						
ARU	**Arti**	**40.09**	**322**	*e*P		**P**	**15 03 30.8 +0.4**
	comp=Z,6.0nm,0.8s,mb4.4						
PETK	**Petropavlovsk-**	**43.29**	**45**	P		**P**	**15 03 57.3 +0.7**
	comp=Z,1.5nm,0.7s,mb3.9,baz=230,slow=2.8,SNR=5.4						
ARCES	**ARCESS Array B**	**56.72**	**336**	P		**P**	**15 05 38.3 -0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=81,slow=7.5,SNR=5.3						
BRTR	**Keskin Array B**	**56.75**	**299**	P		**P**	**15 05 38.1 -0.9**
	comp=Z,0.6nm,0.6s,mb3.8,baz=104,slow=5.2,SNR=4.2						
FINES	**FINESS Array B**	**57.16**	**326**	P		**P**	**15 05 41.2 -0.4**
	comp=Z,1.9nm,0.6s,mb4.3,baz=80,slow=7.4,SNR=19						
FINES	**FINESS Array B**	**57.16**	**326**	P		**P**	**15 05 41.2 -0.4**
AKASG	**Malin Array Be**	**57.18**	**313**	P		**P**	**15 05 41.1 -0.8**
	comp=Z,1.0nm,0.4s,mb4.2,baz=65,slow=7.8,SNR=3.7						
ASAR	**Alice Springs**	**61.94**	**149**	P		**P**	**15 06 15.5 +0.5**
	comp=Z,0.5nm,0.5s,mb3.9,baz=335,slow=6.6,SNR=9.3						
NOA	**NORSAR Array B**	**64.23**	**327**	P		**P**	**15 06 29.2 -0.7**
	comp=Z,0.6nm,0.7s,mb3.7,baz=72,slow=6.9,SNR=3.7						
GERES	**GERESS Array B**	**67.32**	**314**	P		**P**	**15 06 49.9 -0.1**
	comp=Z,0.5nm,0.8s,mb3.6,baz=82,slow=9.6,SNR=4.3						
INK	**Inuvik**	**71.25**	**19**	P		**P**	**15 07 14.3 +0.4**
	comp=Z,0.5nm,0.3s,mb4.0,baz=342,slow=9.6,SNR=4.1						
INK	**Inuvik**	**71.25**	**19**	P		**P**	**15 07 14.3 +0.4**
CDF	**Champ du Feu**	**71.36**	**316**	*e*P		**P**	**15 07 14.8 -0.2**
LPG	**La Plagne**	**73.04**	**313**	*e*P		**P**	**15 07 25.6 +0.5**
	comp=Z,10nm,0.9s,mb4.5						
LPG	**La Plagne**	**73.04**	**313**	*e*P		**P**	**15 07 25.6 +0.5**
	comp=Z,5.1nm,0.9s,mb4.5						
LPL	**La Plagne**	**73.04**	**313**	*e*P		**P**	**15 07 25.6 +0.5**
SMF	**Signal de Mont**	**74.25**	**315**	*e*P		**P**	**15 07 31.9 -0.3**
TCF	**Toulx Ste Croi**	**75.41**	**316**	*e*P		**P**	**15 07 39.4 +0.5**
CAF	**Calviac**	**76.20**	**314**	*e*P		**P**	**15 07 43.6 +0.2**
YKA	**Yellowknife Ar**	**80.79**	**17**	P		**P**	**15 08 08.8 +0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=331,slow=5.3,SNR=6.2						
M13A	**Montello**	**98.78**	**29**	P		**P**	**15 09 34.6 -0.4**
	comp=Z,2.6nm,0.4s,mb5.1						

IDC 17 14:58:50.0±2.4, 32°.49N×105°.09E, h0km, mb3.6/2, mb1 3.4/4, mb1mx3.2/27, mbtmp3.4/4, Error ellipse: s-maj=48.7km s-min=34.3km az=14.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.03**	**203**	Pn		Pn	15 02 23.8 +0.1
	baz=12,slow=9.6,SNR=2.9						
KSRS	**Korea Array**	**19.34**	**69**	P		Pn	15 03 16.6 -1.3
	baz=259,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**22.53**	**316**	P		P	15 03 51.3 0.0
	0.5nm,0.6s,baz=123,slow=10,SNR=5.9						
KURK	**Kurchatov**	**26.68**	**321**	P		P	15 04 30.6 +0.1
	0.2nm,0.3s,baz=126,slow=11,SNR=3.6						

*NIED **17** 15:06:00, 37°.20N×139°.90E, h195km, Mw3.7 Best double couple: M0=4.39000×10^14 NP1:φs=36.00000°, δ83.00000°, λ-85.00000°. NP2:φs=181.00000°, δ8.00000°, λ-125.00000°.*
*ISCJB **17** 15:06:11.9±0.4, 37°.24N±0°.03×139°.87E±0°.05, h132km±2km, mb3.9/10, Error ellipse: s-maj=7.0km s-min=4.7km az=31.5*
*IDC **17** 15:06:12.6±1.6, 37°.16N×139°.99E, h130km±14km, mb3.7/8, mb1 3.7/10, mb1mx3.4/28, mbtmp3.7/10, Error ellipse: s-maj=23.5km s-min=13.7km az=60.0*
*NEIC **17** 15:06:13.4, 37°.23N×139°.87E, h123km, MG3.3(JMA), After JMA.*
*JMA **17** 15:06:13.4±0.1, 37°.23N×139°.87E, h123km±1km, M3.3*
JMA Felt I J1.
ISC 17 15:06:13.0±0.4, 37°.23N±0°.03×139°.88E±0°.05, h127km±2km, n33, σ0°63/52, mb4.0/10, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFY	**Yanaizu**	**0.23**	**322**	P		**Pn**	**15 06 30.6 +0.1**
JFY				S		**Sn**	**15 06 43.1 -0.6**
JSB	**Shiboa**	**0.26**	**173**	P		**Pn**	**15 06 30.8 +0.2**
JSB				S		**Sn**	**15 06 44.0 +0.1**
JFT	**Otama**	**0.47**	**51**	P		**Pn**	**15 06 31.8 +0.3**
JFT				*e*S		**Sn**	**15 06 45.5 0.0**
JKT	**Katashina**	**0.68**	**228**	P		**Pn**	**15 06 33.2 +0.3**
JKT				S		**Sn**	**15 06 48.2 +0.3**
JHK	**Hiroka**	**0.69**	**272**	P		**Pn**	**15 06 32.7 -0.2**
JHK				*e*S		**Sn**	**15 06 47.2 -0.8**
JNS	**Sasagawa**	**0.74**	**323**	P		**Pn**	**15 06 33.0 -0.3**
JNS				*e*S		**Sn**	**15 06 47.4 -1.3**
JFK	**Kawauchi**	**0.81**	**80**	P		**Pn**	**15 06 33.8 -0.1**
JFK				S		**Sn**	**15 06 49.6 0.0**
JAG	**Ashikaga**	**0.87**	**203**	P		**Pn**	**15 06 34.7 +0.2**
JAG				*e*S		**Sn**	**15 06 50.4 -0.3**
JMM	**Marumori**	**0.97**	**48**	P		**Pn**	**15 06 35.5 +0.2**
JAW	**Awa shima**	**1.32**	**338**	P		**Pn**	**15 06 39.1 +0.2**
JAW				*e*S		**Sn**	**15 06 58.4 -0.2**
JRY	**Ryogami san**	**1.44**	**213**	P		**Pn**	**15 06 40.6 +0.4**
JRY				*e*S		**Sn**	**15 07 00.8 -0.1**
MJAR	**Matsushiro Arr**	**1.50**	**243**	P		**Pn**	**15 06 40.9 0.0**
	20nm,0.3s,baz=48,slow=10.0,SNR=625						
MJAR				S		**Sn**	**15 07 02.8 +0.6**
	4.7nm,0.3s,baz=39,slow=16,SNR=9.4						
MAJO	**Matsushiro**	**1.50**	**243**	*e*Pn		**Pn**	**15 06 41.1 +0.2**
MAJO				*e*Sn		**Sn**	**15 07 03.5 +1.3**
MAT	**Matsushiro**	**1.50**	**243**	P		**Pn**	**15 06 41.3 +0.4**
MAT				S		**Sn**	**15 07 02.8 +0.6**
MAT	**Matsushiro**	**1.50**	**243**	P		**Pn**	**15 06 41.3 +0.4**
MAT				*e*S		**Sn**	**15 07 02.2 0.0**
JSD	**Sado**	**1.52**	**303**	P		**Pn**	**15 06 40.8 -0.2**
JSD				*e*S		**Sn**	**15 07 01.8 -0.6**
JYK	**Kaneyama**	**1.73**	**13**	P		**Pn**	**15 06 44.3 +0.8**
JYK				*e*S		**Sn**	**15 07 08.1 +1.3**
JSZ	**Suzu**	**2.02**	**277**	P		**Pn**	**15 06 46.8 -0.2**
JSZ				*e*S		**Sn**	**15 07 12.1 -0.9**
JMK	**Ichinoseki**	**2.02**	**31**	P		**Pn**	**15 06 47.5 +0.5**
JYN	**Shimob**	**2.04**	**212**	P		**Pn**	**15 06 48.0 +0.7**
JHJ	**Hachijo jima 2**	**4.10**	**181**	P		**Pn**	**15 07 13.6 -0.5**
	11nm,0.3s,baz=285,slow=23,SNR=15						
JHJ				S		**Sn**	**15 07 59.8 -1.6**
	56nm,0.3s,baz=102,slow=24,SNR=13						
ASAJ	**Asahikawa**	**7.18**	**16**	P		**Pn**	**15 07 55.0 -0.4**
	0.2nm,0.3s,baz=225,slow=16,SNR=3.5						
ASAJ				S		**Sn**	**15 09 15.2 -0.2**
	0.3nm,0.3s,baz=288,slow=26,SNR=3.6						
KSRS	**Korea Array**	**9.53**	**275**	P		**Pn**	**15 08 29.6 +2.6**
	0.3nm,0.3s,baz=86,slow=14,SNR=12						
SONM	**Songino Array**	**26.66**	**304**	P		**P**	**15 11 39.7 -0.1**
	1.2nm,0.6s,mb3.6,baz=112,slow=8.5,SNR=5.5						
ZALV	**Zalesovo Beam**	**40.88**	**312**	P		**P**	**15 13 42.3 +0.1**
	1.9nm,0.5s,mb4.2,baz=93,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**42.98**	**302**	P		**P**	**15 13 59.8 +0.5**
	0.5nm,0.7s,mb3.4,baz=89,slow=9.6,SNR=6.1						
KURK	**Kurchatov**	**44.85**	**308**	P		**P**	**15 14 14.2 0.0**
	2.0nm,0.4s,mb4.2,baz=85,slow=8.5,SNR=13						
AKTO	**Aktyubinsk**	**57.63**	**311**	P		**P**	**15 15 49.1 -0.4**
	0.7nm,0.3s,mb4.2,baz=49,slow=11,SNR=3.0						
ARCES	**ARCESS Array B**	**63.38**	**339**	P		**P**	**15 16 28.5 +0.2**
	9.8nm,1.2s,mb4.6,baz=71,slow=8.9,SNR=2.6						
JOF	**Joensuu**	**65.21**	**331**	*e*p		**P**	**15 16 39.7 -0.6**
	0.9nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**67.57**	**332**	*e*p		**P**	**15 16 54.1 -1.2**
	0.9nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**68.07**	**332**	P		**P**	**15 16 58.7 +0.2**
	1.8nm,0.8s,mb3.9,baz=52,slow=7.5,SNR=9.0						
AKASG	**Malin Array Be**	**73.39**	**322**	P		**P**	**15 17 30.8 0.0**
	0.6nm,0.5s,mb3.7,baz=52,slow=4.8,SNR=3.4						

IDC 17 15:10:19.6±2.3, 32°.06N×105°.34E, h0km, mb3.8/3, mb1 3.7/5, mb1mx3.4/27, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=44.9km s-min=34.2km az=16.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**3.59**	**56**	Pg		Pg	15 11 30.3 +1.7
XAN				Sn		Sn	15 12 23.8 +24
XAN				Sg		Sg	15 12 45.8 +31
XAN				smax			
	comp=N,55nm,0.9s						
XAN				smax			
	comp=E,32nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.72**	**205**	Pn		Pn	15 13 49.0 -0.2
	comp=E,0.1nm,0.3s,baz=11,slow=11,SNR=4.3						
KSRS	**Korea Array**	**19.30**	**68**	P		Pn	15 14 45.9 -1.2
	comp=E,0.2nm,0.3s,baz=267,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**22.98**	**316**	P		P	15 15 26.2 +0.5
	comp=E,1.8nm,1.1s,baz=125,slow=12,SNR=9.8						
ZALV	**Zalesovo Beam**	**26.35**	**332**	P		P	15 15 56.5 -0.6
	comp=E,0.3nm,0.4s,baz=134,slow=10,SNR=2.2						
KURK	**Kurchatov**	**27.14**	**321**	P		P	15 16 04.6 +0.2
	comp=E,0.5nm,0.3s,baz=127,slow=9.7,SNR=3.7						

BJI 17 15:10:20.4, 31°.19N×103°.04E, h18km, ML3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.68**	**114**	Pg		Pg	15 10 33.0 -0.7
CD2				Sg		Sg	15 10 37.9 -4.8
CD2				smax			
	comp=N,14μm,0.7s						
LZH	**Lanzhou**	**4.93**	**8**	*e*Pn		Pn	15 11 37.6 +4.0
LZH				Sn		Sn	15 12 42.1 +12
LZH				smax			
	comp=N,49nm,1.0s						
LZH				smax			
	comp=E,70nm,1.1s						
GYA	**Guiyang**	**5.69**	**145**	Pn		Pn	15 11 44.0 0.0
GYA				Sn		Sn	15 12 50.0 +1.2
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,90nm,0.9s						
KMI	**Kunming**	**6.05**	**183**	Pn		Pn	15 11 51.4 +2.4
KMI				Sn		Sn	15 13 04.0 +6.2
KMI				smax			
	comp=N,19nm,1.2s						
KMI				smax			
	comp=E,15nm,1.0s						

IDC 17 15:36:29.9±1.7, 30°.87N×104°.24E, h0km, mb3.2/3, mb1 3.3/4, mb1mx3.2/24, mbtmp3.2/4, ML2.9/1, Error ellipse: s-maj=46.1km s-min=28.8km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**17.02**	**5**	P		Pn	15 40 29.0 -0.3
	0.1nm,0.3s,baz=182,slow=11,SNR=2.5						
KSRS	**Korea Array**	**20.64**	**65**	P		P	15 41 10.9 -0.1
	0.7nm,0.6s,baz=260,slow=9.9,SNR=4.0						
MKAR	**Makanchi Array**	**23.24**	**319**	P		P	15 41 38.8 +0.1
	0.4nm,0.5s,baz=123,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**61.23**	**149**	P		P	15 46 46.8 0.0
	0.2nm,0.5s,baz=334,slow=7.1,SNR=6.5						

*ISCJB **17** 15:54:07.3±0.4, 51°.47N±0°.02×16°.10E±0°.03, h0km, Error ellipse: s-maj=3.4km s-min=2.9km az=38.4*
*IPEC **17** 15:54:08.6±0.3, 51°.54N×16°.19E, h0km, ML2.0/4, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*CSEM **17** 15:54:09.2±0.1, 51°.48N×16°.07E, h2km, ML3.2/10, Error ellipse: s-maj=3.5km s-min=2.6km az=93.0*
*PRU **17** 15:54:10.9, 51°.42N×16°.09E, h0km*
*WAR **17** 15:54:10.5, 51°.47N×16°.10E, ML2.5, Mining Induced*
*VIE **17** 15:54:11.7±0.3, 51°.27N×16°.14E, h0km, mb2.1/4, ML2.6/4, Error ellipse: s-maj=2.2km s-min=2.0km az=173.0 64 km WNW of Wroclaw Suspected Mining induced.*
*UPP **17** 15:54:15.1, 51°.86N×15°.43E, h0km, ML1.9, Suspected Mining explosion.*
ISC 17 15:54:09.1±0.4, 51°.48N±0°.02×16°.10E±0°.03, h0km, n37, σ0°83/67, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**169**	*e*Pg		**Pg**	**15 54 22.1 +0.6**
KSP				*e*Sg		**Sg**	**15 54 31.3 +1.5**
KSP	**Ksiaz**	**0.65**	**169**	*e*Pg		**Pg**	**15 54 22.0 +0.5**
	baz=355						
KSP				*e*Sg		**Sg**	**15 54 30.9 +1.1**
UPC	**Up

OJC Ojcow 2.66 117 *e*Pg **Pg 15 55 01.2 +1.2**
OJC *e*Sg **Sg 15 55 35.8 +1.4**
JAVC Velka Javorina 2.81 158 *e*Sg **Sg 15 55 41.6 +2.4**
comp=Z,3.6nm,0.4s
KHC Kasperske Hory 2.85 216 *e*PN **Pn 15 54 56.1 +0.3**
KHC *e*PG **Pg 15 55 01.5 -2.2**
KHC *e*SN **Sn 15 55 29.3 -1.5**
KHC *e*SG **Sg 15 55 39.2 -1.5**
comp=Z,8.6nm,0.5s
KHC Kasperske Hory 2.85 216 Pn **Pn 15 54 56.1 +0.3**
KHC Kasperske Hory 2.85 216 Pg **Pg 15 55 01.5 -2.2**
KHC Sn **Sn 15 55 29.3 -1.5**
KHC Sg **Sg 15 55 39.2 -1.5**
comp=Z,8.6nm,0.5s
MOX Moxa 2.95 255 *e*PG **Pg 15 55 05.6 0.0**
MOX *e*SG **Sg 15 55 45.0 +1.1**
NIE Niedzica 3.39 126 *e*Pg **Pg 15 55 13.3 -0.7**
NIE *e*Sg **Sg 15 55 56.7 -1.2**
CONA Conrad Observa 3.56 183 ⇑*i*Pn **Pn 15 55 05.5 +0.1**
CONA ⇑*i*Sg **Sg 15 56 02.7 -0.5**
comp=Z,7.5nm,0.3s
CONA Conrad Observa 3.56 183 Pn **Pn 15 55 05.5 0.0**
CONA Sg **Sg 15 56 02.7 -0.6**
comp=Z,7.5nm,0.3s
MOA Molln 3.82 199 ⇑*i*Pn **Pn 15 55 09.8 +0.7**
MOA ⇑*i*Sg **Sg 15 56 12.0 +0.2**
comp=Z,6.6nm,0.3s
MOA Molln 3.82 199 Pn **Pn 15 55 09.8 +0.7**
MOA Sg **Sg 15 56 12.0 +0.2**
comp=Z,6.6nm,0.3s
VXJU Vaexsjoe 5.50 353 P **Pn 15 55 31.6 -0.5**
OSKU Oskarshamn 5.73 360 P **Pn 15 55 35.1 -0.2**
BYXU Byxelkrok 5.85 5 P **Pn 15 55 36.6 -0.3**
VSTU Vaestervik 6.20 2 P **Pn 15 55 41.6 -0.2**
ESKU Eskilstuna 7.77 1 P **Pn 15 56 03.1 -0.2**

IDC ***17*** *16:06:33.8±0.7, 13°.03N×120°.72E, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.2/27, mbtmp4.2/21, MS3.6/7, Ms1 3.6/7, ms1mx3.2/34, Error ellipse: s-maj=20.6km s-min=11.0km az=99.0*
BJI ***17*** *16:06:34.0, 13°.13N×120°.93E, h10km, mB4.7/6, mb4.6/11, Ms3.7/2, Ms7 3.5/2*
ISCJB ***17*** *16:06:36.9±0.5, 13°.12N±0°.02×120°.83E±0°.03, h27km±4km, mb4.5/50, MS3.6/6, Error ellipse: s-maj=5.5km s-min=4.0km az=169.7*
MAN ***17*** *16:06:36, 13°.08N×120°.82E, h7km, mb5.0, ML4.0, MS4.0*
MAN INTENSITY II - ILIJAN BATANGAS.
MOS ***17*** *16:06:36.6±1.2, 13°.00N×120°.88E, h33km, mb4.8/12, Error ellipse: s-maj=14.7km s-min=7.4km az=109.1*
NEIC ***17*** *16:06:38.7±0.4, 13°.04N×120°.93E, h35km, mb4.6/14, Error ellipse: s-maj=12.2km s-min=8.8km az=72.0*
DJA ***17*** *16:07:01, 12°.88N×121°.17E, h239km, mb4.4/8*
ISC 17 16:06:36.5±0.6, 13°.11N±0°.02×120°.84E±0°.03, h12km±4km, n109, σ1°.14/114, mb4.5/50, MS3.6/6, 7C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.40**	**15**	⇑*i*P	**Pg**	**16 06 43.7**	**-0.9**
PGP				*i* S	**Sg**	**16 06 49.0**	**-1.0**
SJMP	**San Jose**	**0.70**	**157**	*e*P	**Pg**	**16 06 50.2**	**+0.1**
SJMP				*e*S	**Sg**	**16 06 58.9**	**-0.5**
LUBP	**Lubang**	**0.85**	**317**	*e*P	**Pg**	**16 06 52.8**	**-0.2**
TGY	**Tagaytay City**	**0.99**	**5**	Pg	**Pg**	**16 06 55.5**	**-0.2**
	3μm,0.3s,baz=186,slow=3.6,SNR=297						
TGY				Lg		16 07 09.3	
	4μm,0.3s,baz=348,slow=20,SNR=24						
TGY	**Tagaytay City**	**0.99**	**5**	⇑*i*P	**Pb**	**16 06 55.3**	**-0.4**
TGY				*e*S	**Sb**	**16 07 09.3**	**+0.7**
BOAC	**Boac**	**1.03**	**70**	*e*P	**Pb**	**16 06 55.7**	**-0.6**
BUSP	**Coron**	**1.27**	**210**	*e*P	**Pn**	**16 07 00.2**	**+0.1**
OTRP	**Odiongan**	**1.37**	**123**	*e*P	**Pn**	**16 07 01.1**	**-0.4**
GQP	**Guinayangan**	**1.75**	**63**	⇑*e*P	**Pn**	**16 07 06.8**	**+0.1**
GQP				*e*S	**Sn**	**16 07 26.4**	**-2.5**
AUQP	**San Andres**	**1.80**	**83**	*e*P	**Pn**	**16 07 08.7**	**+1.4**
POLP	**Polilio Island**	**1.93**	**33**	*e*P	**Pn**	**16 07 10.2**	**+1.1**
CUYO	**Cuyo Island**	**2.25**	**176**	*e*P	**Pn**	**16 07 12.1**	**-1.5**
ENPP	**El Nido**	**2.35**	**216**	*e*P	**Pn**	**16 07 15.0**	**+0.1**
RCP	**Roxas**	**2.41**	**129**	⇑*e*P	**Pn**	**16 07 16.1**	**+0.3**
RCP				*e*S	**Sn**	**16 07 46.7**	**+1.4**
BALP	**Baler**	**2.71**	**15**	*e*P	**Pn**	**16 07 22.4**	**+2.5**
GUIM	**Jordan**	**3.00**	**145**	*e*P	**Pn**	**16 07 24.7**	**+0.8**
PVCP	**Virac**	**3.26**	**81**	*e*P	**Pn**	**16 07 28.8**	**+1.3**
PPR	**Puerto Princes**	**3.91**	**212**	‖*e*P	**Pn**	**16 07 37.2**	**+0.8**
CAUP	**Cauayan**	**3.93**	**14**	*e*P	**Pn**	**16 07 40.6**	**+3.9**
ABRA	**Dolores**	**4.51**	**358**	*e*P	**Pn**	**16 07 48.5**	**+3.7**
APYP	**Conner**	**4.74**	**5**	*e*P	**Pn**	**16 07 55.1**	**+7.2**
BATP	**Bataraza**	**5.22**	**215**	*e*P	**Pn**	**16 07 55.1**	**+0.6**
PAGZ	**Pagadian**	**5.79**	**154**	*e*P	**Pn**	**16 08 04.2**	**+1.9**
YULB	**Yu-li**	**10.24**	**2**	*e*Pn	**Pn**	**16 09 08.1**	**+4.8**
YULB				*e*Sn	**Sn**	**16 10 44.3**	**-14**
YHNB	**Yeheng**	**11.51**	**2**	*e*P	**Pn**	**16 09 20.9**	**+0.2**
	15nm,0.8s						
QIZ	**Qiongzhong**	**12.10**	**301**	P	**Pn**	**16 09 26.3**	**-2.5**
QIZ				pmax	pmax		
	comp=Z,14nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,96nm,12.9s						
QIZ				LR	LR		
	comp=N,290nm,14.5s						
QIZ				LR	LR		
	comp=E,140nm,20.8s						
QIZ				LR	LR		
	comp=Z,360nm,19.3s						
KAPI	**Kappang**	**18.04**	**184**	LR	LR	16 17 18.3	
	comp=Z,148nm,21.7s,baz=351,slow=36						
NJ2	**Nanjing**	**18.94**	**355**	*e*P	**Pn**	**16 11 00.1**	**+2.0**
NJ2				S	**Sn**	**16 14 23.0**	**-7.1**
NJ2				SS		16 14 50.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,7.5s						
NJ2				LR	LR		
	comp=N,170nm,16.9s						
NJ2				LR	LR		
	comp=E,210nm,13.4s						
NJ2				LR	LR		
	comp=Z,150nm,13.4s						
CMAR	**Chiang Mai Arr**	**21.73**	**287**	P	**P**	**16 11 30.1**	**+2.3**
	comp=Z,4.2nm,0.9s,mb3.9,baz=95,slow=7.8,SNR=16						
GUMO	**Guam**	**23.38**	**86**	LR	LR	16 20 54.0	
	comp=Z,85nm,20.3s,MS3.2,baz=269,slow=37						
KS15	**Wonju Array Si**	**25.03**	**13**	*e*P	**P**	**16 12 00.2**	**-0.3**
KSRS	**Korea Array**	**25.05**	**13**	P	**P**	**16 12 00.7**	**0.0**
	comp=Z,3.6nm,1.0s,mb3.9,baz=189,slow=9.8,SNR=14						
LZH	**Lanzhou**	**27.52**	**329**	P	**P**	**16 12 25.3**	**+2.3**
LZH				pP	pP	16 12 29.6	+2.9
LZH				sP	sP	16 12 33.1	+4.9
LZH				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.6						
MJAR	**Matsushiro Arr**	**28.06**	**31**	P	**P**	**16 12 29.9**	**+2.0**
	comp=Z,1.3nm,1.0s,mb3.5,baz=148,slow=9.6,SNR=4.7						
SHL	**Shillong**	**29.93**	**299**	*e*P	**P**	**16 12 45.0**	**+0.4**
VLA	**Vladivostok**	**31.39**	**16**	*c*e*P	**P**	**16 12 59.1**	**+1.8**
VLA				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
LSA	**Lhasa**	**32.06**	**306**	P	**P**	**16 13 05.0**	**+1.6**
LSA	**Lhasa**	**32.06**	**306**	*e*P	**P**	**16 13 04.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**32.06**	**306**	*e*P	**P**	**16 13 04.6**	**+1.2**
	comp=Z,5.8nm,0.6s,mb4.6						
GTA	**Gaotai**	**32.11**	**328**	*e*P	**P**	**16 13 04.8**	**+1.1**
GTA				pP	pP	16 13 09.1	+1.7
GTA				sP	sP	16 13 11.8	+2.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
MDJ	**Mudanjiang**	**32.28**	**12**	*e*P	**P**	**16 13 05.3**	**+0.2**
	comp=Z,8.2nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**35.42**	**158**	*e*P	**P**	**16 13 30.6**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**35.42**	**158**	*e*P	**P**	**16 13 30.6**	**-2.1**
	comp=Z,10nm,0.8s,mb4.8						
GUN	**Gumba**	**35.75**	**300**	*e*P	**P**	**16 13 36.5**	**+1.0**
	comp=Z,42nm,0.6s,mb5.6						
PKI	**Pulchoki**	**36.06**	**299**	*e*P	**P**	**16 13 38.4**	**+0.3**
	comp=Z,18nm,0.6s,mb5.2						
PKIN	**Phulchoki**	**36.07**	**299**	*e*P	**P**	**16 13 39.0**	**+0.8**
	comp=Z,27nm,0.7s,mb5.3						
ASAJ	**Asahikawa**	**36.09**	**27**	P	**P**	**16 13 38.0**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.7,baz=230,slow=9.9,SNR=11						
KKN	**Kakani**	**36.23**	**299**	*e*P	**P**	**16 13 39.7**	**+0.1**
	comp=Z,22nm,0.7s,mb5.2						
DMN	**Daman**	**36.33**	**299**	*e*P	**P**	**16 13 40.9**	**+0.5**
	comp=Z,37nm,1.0s,mb5.3						
ULN	**Ulaanbaatar**	**36.51**	**344**	*e*P	**P**	**16 13 42.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**36.51**	**344**	*e*P	**P**	**16 13 42.1**	**+0.4**
	comp=Z,1.8nm,0.7s,mb4.0						
SONM	**Songino Array**	**36.66**	**344**	P	**P**	**16 13 42.6**	**-0.3**
	comp=Z,1.2nm,0.7s,mb3.9,baz=165,slow=8.8,SNR=7.8						
SONM				LR	LR	16 28 02.2	
	comp=Z,91nm,20.6s,MS3.5,baz=281,slow=35						
YSS	**Yuzh-Sakhalins**	**38.43**	**24**	*e*P	**P**	**16 13 57.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**38.43**	**24**	*e*P	**P**	**16 13 58.0**	**+0.1**
	comp=Z,7.6nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**38.72**	**161**	P	**P**	**16 13 59.9**	**-0.8**
	comp=Z,4.5nm,0.6s,mb4.4,baz=340,slow=7.1,SNR=109						
CTAO	**Charters Tower**	**41.39**	**142**	*e*P	**P**	**16 14 18.4**	**-4.5**
CTAO				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.5						
CTAO	**Charters Tower**	**41.39**	**142**	*e*P	**P**	**16 14 18.4**	**-4.6**
	comp=Z,17nm,1.5s,mb4.5						
MK31	**Makanchi Array**	**46.59**	**324**	*e*P	**P**	**16 15 04.2**	**-0.1**
MKAR	**Makanchi Array**	**46.59**	**324**	P	**P**	**16 15 04.4**	**+0.1**
	comp=Z,6.0nm,0.8s,mb4.6,baz=127,slow=8.5,SNR=48						
MKAR				LR	LR	16 36 11.4	
	comp=Z,66nm,18.1s,MS3.6,baz=292,slow=38						
ULHL	**Ulahol**	**48.24**	**316**	P	**P**	**16 15 18.5**	**+1.2**
	SNR=7.2						
KZA	**Kyzart**	**48.85**	**315**	P	**P**	**16 15 23.5**	**+1.5**
	SNR=9.6						
TKM2	**Tokmak 2**	**48.94**	**316**	P	**P**	**16 15 23.6**	**+0.9**
	SNR=5.5						
TKM2	**Tokmak 2**	**48.94**	**316**	*e*P	**P**	**16 15 23.3**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
TKM2	**Tokmak 2**	**48.94**	**316**	*e*P	**P**	**16 15 23.3**	**+0.6**
	comp=Z,2.2nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**48.95**	**156**	P	**P**	**16 15 22.1**	**-0.8**
	comp=Z,8.3nm,0.8s,mb4.8,baz=76,slow=5.2,SNR=7.4						
STKA				LR	LR	16 36 51.5	
	comp=Z,100nm,21.4s,MS3.8,baz=186,slow=37						
KBK	**Karagaybulak**	**49.28**	**316**	P	**P**	**16 15 26.4**	**+1.2**
	SNR=6.8						
UCH	**Uchtor**	**49.41**	**315**	P	**P**	**16 15 28.2**	**+1.8**
	SNR=13						
PETK	**Petropavlovsk-**	**49.47**	**28**	P	**P**	**16 15 26.8**	**+0.2**
	comp=Z,4.5nm,0.7s,mb4.6,baz=195,slow=3.4,SNR=14						
AAK	**Ala-Archa**	**49.58**	**315**	P	**P**	**16 15 27.4**	**-0.2**
	comp=Z,0.9nm,0.3s,mb4.2,baz=185,slow=9.3,SNR=4.9						
AAK				LR	LR	16 39 38.6	
	comp=Z,51nm,18.1s,MS3.6,baz=96,slow=40						
AAK	**Ala-Archa**	**49.58**	**315**	*c*e*P**	**P**	**16 15 28.5**	**+0.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.9						
ZALV	**Zalesovo Beam**	**49.64**	**333**	P	**P**	**16 15 27.1**	**-0.8**
	comp=Z,1.4nm,0.5s,mb4.3,baz=127,slow=5.5,SNR=6.1						
ZALV				LR	LR	16 37 47.8	
	comp=Z,70nm,18.1s,MS3.7,baz=74,slow=38						
PET	**Petropavlovsk**	**49.87**	**29**	*i* P	**P**	**16 15 30.4**	**+0.8**
PET				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.8						
AML	**Almayashu**	**49.95**	**315**	P	**P**	**16 15 31.9**	**+1.5**
	SNR=8.0						
KURK	**Kurchatov**	**50.76**	**327**	*e*P	**P**	**16 15 35.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
KURK	**Kurchatov**	**50.76**	**327**	*e*P	**P**	**16 15 35.8**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9						
NVS	**Novosibirsk**	**50.93**	**333**	*e*P	**P**	**16 15 30.8**	**-6.8**
KBL	**Kabul**	**51.35**	**304**	*e*P	**P**	**16 15 41.3**	**+0.2**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
KBL	**Kabul**	**51.35**	**304**	*e*P	**P**	**16 15 41.3**	**+0.2**
	comp=Z,6.7nm,0.7s,mb4.7						
SEY	**Seymchan**	**54.53**	**17**	*c i*P	**P**	**16 16 04.9**	**+0.8**
BVAR	**Borovoye Array**	**56.34**	**326**	P	**P**	**16 16 16.6**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.2,baz=122,slow=10.0,SNR=10						
BRVK	**Borovoye**	**56.41**	**326**	*e*P	**P**	**16 16 17.3**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**56.41**	**326**	*e*P	**P**	**16 16 17.3**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.5						
TIXI	**Tiksi**	**58.71**	**3**	*e*P	**P**	**16 16 31.3**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
TIXI	**Tiksi**	**58.71**	**3**	*e*P	**P**	**16 16 31.4**	**-2.3**
	comp=Z,2.6nm,0.6s,mb4.4						
ABKAR	**Abkulak array**	**61.27**	**319**	*e*P	**P**	**16 16 50.6**	**-1.0**
	comp=Z,3.3nm,0.6s,mb4.6						
BILL	**Biiibino**	**62.22**	**18**	*e*P	**P**	**16 16 58.5**	**+0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.6						
BILL	**Biiibino**	**62.22**	**18**	*e*P	**P**	**16 16 57.2**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.6						
AKTK	**Aktyubinsk**	**62.76**	**320**	P	**P**	**16 17 00.7**	**-0.9**
AKTO	**Aktyubinsk**	**62.76**	**320**	P	**P**	**16 17 00.7**	**-0.9**
	comp=Z,1.9nm,0.7s,mb4.3,baz=97,slow=10,SNR=11						
ARU	**Arti**	**63.95**	**327**	*d i*P	**P**	**16 17 08.9**	**-0.5**
ARU				*e*		16 19 27.8	
ARU				S	**S**	**16 25 42.0**	**-3.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.6						
RDF	**Al-Radifah**	**69.27**	**296**	*e*P	**P**	**16 17 42.7**	**-1.3**
RDF				AMb	AMB	16 17 44.7	
	comp=Z,31nm,0.9s,mb5.2						
MIB	**Mutribah**	**69.40**	**297**	*e*P	**P**	**16 17 43.7**	**-1.0**
MIB				AMb	AMB	16 17 44.7	
	comp=Z,40nm,0.6s,mb5.5						
NAY	**Al-Naaiem**	**69.52**	**296**	*e*P	**P**	**16 17 44.4**	**-1.1**
NAY				AMb	AMB	16 17 45.4	
	comp=Z,16nm,0.7s,mb5.0						
ZEI	**Tsey**	**71.67**	**311**	*e*P	**P**	**16 17 53.0**	**-5.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BPAW	**Bear Paw Mtn.**	**77.52**	**27**	*e*P	**P**	**16 18 31.8**	**-0.1**
	comp=Z,15nm,1.5s,mb4.7						
ASF	**Jabal al Asfar**	**78.08**	**300**	P	**P**	**16 18 36.2**	**+0.6**
	comp=Z,3.5nm,0.9s,mb4.3,baz=326,slow=2.7,SNR=5.1						
BRTR	**Keskin Array B**	**79.62**	**308**	P	**P**	**16 18 43.0**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=132,slow=3.5,SNR=4.5						
ARCES	**ARCESS Array B**	**79.68**	**339**	P	**P**	**16 18 42.6**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.2,baz=72,slow=7.8,SNR=7.5						
EIL	**Elat**	**80.11**	**298**	P	**P**	**16 18 47.0**	**+0.2**
	comp=Z,6.3nm,0.9s,mb4.6,baz=29,slow=6.4,SNR=5.1						
SPITS	**Spitsbergen Ar**	**80.19**	**348**	P	**P**	**16 18 44.3**	**-2.0**
	comp=Z,5.2nm,0.8s,mb4.5,baz=92,slow=9.2,SNR=5.7						
FINES	**FINESS Array B**	**80.86**	**331**	P	**P**	**16 18 48.1**	**-2.1**
	comp=Z,1.1nm,0.8s,mb3.8,baz=278,slow=5.6,SNR=4.0						
BUR08	**Bucovina Ar. S**	**84.19**	**317**	*e*P	**P**	**16 19 06.6**	**-1.2**
NOA	**NORSAR Array B**	**87.84**	**333**	P	**P**	**16 19 23.3**	**-2.4**
	comp=Z,1.2nm,0.9s,mb4.1,baz=67,slow=4.7,SNR=3.5						
NOA	**NORSAR Array B**	**87.84**	**333**	P	**P**	**16 19 23.3**	**-2.4**
CLL	**Collm**	**90.68**	**323**	*e*P	**P**	**16 19 38.0**	**-1.2**
CLL	**Collm**	**90.68**	**323**	*e*P	**P**	**16 19 38.0**	**-1.2**
GERES	**GERESS Array B**	**91.17**	**321**	P	**P**	**16 19 39.4**	**-2.1**
	comp=Z,0.2nm,0.5s,mb3.7,baz=66,slow=4.5,SNR=3.8						
YKA	**Yellowknife Ar**	**93.26**	**23**	P	**P**	**16 19 49.8**	**-1.0**
	comp=Z,0.5nm,0.7s,mb4.0,baz=310,slow=4.1,SNR=11						
LAZ	**Ladron**	**114.36**	**42**	*e*PKPdf	PKiKP	16 25 20.2	+3.5

ISCJB ***17*** *16:17:37.5±0.5, 31°.41N±0°.05×104°.32E±0°.06, h10km, mb3.8/9, Error ellipse: s-maj=8.8km s-min=6.2km az=38.0*
IDC ***17*** *16:17:37.4±0.9, 31°.37N×104°.26E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.7/28, mbtmp3.9/11, Error ellipse: s-maj=31.4km s-min=17.2km az=55.0*
BJI ***17*** *16:17:38.7, 31°.41N×104°.36E, h11km, mB4.6/2, mb4.1/2, ML3.6/12, Ms3.4/3, Ms7 3.3/3*
NEIC ***17*** *16:17:40.0±0.7, 31°.41N×104°.25E, h10km, mb3.6/1, Error ellipse: s-maj=17.2km s-min=11.5km az=51.0*
ISC 17 16:17:38.9±0.5, 31°.36N±0°.05×104°.36E±0°.05, h10km, n20, σ1°.09/22, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.69**	**229**	Pg	**Pg**	**16 17 51.5**	**-0.7**
CD2				Sg	**Sg**	**16 18 00.9**	**-0.2**
CD2				smax			
	comp=N,6μm,0.9s						
ENH	**Enshi**	**4.54**	**103**	*e*Pn	**Pn**	**16 18 50.4**	**+2.7**
XAN	**Xi'an**	**4.68**	**54**	Pn	**Pn**	**16 18 49.8**	**+0.2**
XAN				Sg	**Sg**	**16 20 02.3**	**-7.0**
XAN				smax			
	comp=N,240nm,0.9s						
XAN				smax			
	comp=E,100nm,0.8s						
XAN				LR	LR		
	comp=N,240nm,7.0s						
XAN				LR	LR		
	comp=E,59nm,7.4s						
XAN				LR	LR		
	comp=Z,100nm,8.1s						
GYA	**Guiyang**	**5.29**	**157**	Pg	**Pb**	**16 19 11.1**	**-0.4**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,80nm,0.9s						
WHN	**Wuhan**	**8.62**	**93**	P	Px	16 19 57.1	
WHN				S	**Sn**	**16 21 18.4**	**-2.6**
WHN				LR	LR		
	comp=N,570nm,5.5s						
WHN				LR	LR		
	comp=E,370nm,7.0s						
WHN				LR	LR		
	comp=Z,460nm,7.9s						
CMAR	**Chiang Mai Arr**	**13.75**	**202**	Pn	**Pn**	**16 20 55.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=4.4						
KSRS	**Korea Array**	**20.35**	**66**	P	**P**	**16 22 16.4**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=257,slow=10,SNR=16						
MK31	**Makanchi Array**	**22.93**	**319**	*e*P	**P**	**16 22 44.2**	**+1.2**
MKAR	**Makanchi Array**	**22.93**	**319**	P	**P**	**16 22 43.6**	**+0.6**
	comp=Z,0.9nm,0.5s,mb3.5,baz=119,slow=9.9,SNR=12						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**16 23 16.7**	**-0.4**
	comp=Z,1.6nm,0.6s,mb3.8,baz=136,slow=10,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.59**	**334**	P	**P**	**16 23 16.7**	**-0.4**
KURK	**Kurchatov**	**27.17**	**323**	P	**P**	**16 23 22.2**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.5,baz=128,slow=8.8,SNR=12						
KURK	**Kurchatov**	**27.17**	**323**	*e*P	**P**	**16 23 23.0**	**+0.6**
	comp=Z,1.0nm,0.7s,mb3.5						
AKTK	**Aktyubinsk**	**39.12**	**313**	P	**P**	**16 25 05.5**	**-0.8**
AKTO	**Aktyubinsk**	**39.12**	**313**	P	**P**	**16 25 05.5**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.6,baz=115,slow=9.9,SNR=2.1						
FINES	**FINESS Array B**	**57.47**	**326**	P	**P**	**16 27 25.9**	**-1.9**
	comp=Z,1.6nm,0.8s,mb4.1,baz=69,slow=6.3,SNR=7.0						
ASAR	**Alice Springs**	**61.60**	**149**	P	**P**	**16 27 57.2**	**+0.6**
	comp=Z,0.7nm,0.4s,mb4.1,baz=336,slow=6.5,SNR=42						
INK	**Inuvik**	**71.84**	**19**	P	**P**	**16 29 02.8**	**+1.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=16,slow=2.6,SNR=4.0						
STKA	**Stephens Creek**	**72.11**	**147**	P	**P**	**16 29 03.2**	**-0.2**
	comp=Z,9.0nm,1.2s,mb4.6,baz=328,slow=9.5,SNR=2.9						
YKA	**Yellowknife Ar**	**81.38**	**17**	P	**P**	**16 29 54.5**	**-1.0**
	comp=Z,0.2nm,0.6s,mb3.3,baz=328,slow=5.3,SNR=3.3						

IDC 17 16:47:05.6±1.6, 31°.44N×103°.17E, h0km, mb3.2/4, mb1 3.3/5, mb1mx3.2/25, mbtmp3.3/5, ML3.4/1, Error ellipse: s-maj=45.4km s-min=25.6km az=49.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.56**	**8**	Pn	Pn	16 51 00.0	+1.0
	0.1nm,0.3s,baz=184,slow=12,SNR=2.3						
KSRS	**Korea Array**	**21.25**	**67**	P	P	16 51 52.5	-0.7
	0.5nm,0.6s,baz=269,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**22.21**	**320**	P	P	16 52 03.4	-0.1
	0.2nm,0.3s,baz=127,slow=13,SNR=7.5						
KURK	**Kurchatov**	**26.51**	**324**	P	P	16 52 44.5	0.0
	0.3nm,0.8s,baz=126,slow=9.3,SNR=2.9						
ASAR	**Alice Springs**	**62.19**	**148**	P	P	16 57 29.1	+0.2
	0.3nm,0.7s,baz=329,slow=6.6,SNR=4.6						

NEIC ***17*** *16:47:26.8±1.7, 21°.05S×178°.75W, h585km±14km, mb4.2/6, Error ellipse: s-maj=38.5km s-min=13.4km az=150.0*
ISCJB ***17*** *16:47:27.1±1.8, 20°.9S±0°.3×178°.9W±0°.2, h590km±16km, mb3.8/14, Error ellipse: s-maj=47.6km s-min=16.2km az=149.7*
IDC ***17*** *16:47:28.8±3.9, 20°.94S×178°.82W, h598km±42km, mb3.2/10, mb1 3.5/10, mb1mx3.3/16, mbtmp3.2/10, Error ellipse: s-maj=36.6km s-min=19.8km az=146.0*
ISC 17 16:47:27.6±1.9, 20°.9S±0°.3×178°.8W±0°.2, h583km±16km, n36, σ0°.72/19, mb3.8/14, 3C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.30**	**317**	*e*P	**P**	**16 48 54.3**	**+0.2**
CTA	**Charters Tower**	**32.67**	**265**	P	**P**	**16 53 13.5**	**+0.4**
	3.8nm,0.4s,mb4.4,baz=95,slow=9.9,SNR=12						
CTA	**Charters Tower**	**32.67**	**265**	P	**P**	**16 53 13.5**	**+0.4**
CTAO	**Charters Tower**	**32.67

Error ellipse: s-maj=8.8km s-min=6.7km az=47.0
ISC 17 17:04:41.0±0.3,31°.31N±0°.03×103°.43E±0°.04,h10km,n45,σ1§29/49,mb3.9/18,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.49**	**145**	Pg	**Pg**	**17 04 51.8**	**+1.2**
CD2				Sg	**Sg**	**17 05 01.1**	**+4.1**
CD2				smax			
	comp=N,22μm,0.8s						
LZH	**Lanzhou**	**4.78**	**4**	Pg	**Pg**	**17 06 13.5**	**+1.0**
LZH				Sg	**Sg**	**17 07 15.0**	**+0.6**
LZH				smax			
	comp=N,170nm,1.2s						
LZH				smax			
	comp=E,450nm,1.2s						
LZH				LR	LR		
	comp=E,2μm,8.7s						
LZH				LR	LR		
	comp=Z,3μm,8.8s						
ENH	**Enshi**	**5.31**	**100**	*e*Pn	**Pn**	**17 06 01.1**	**+0.7**
	comp=Z,1.3nm,0.3s						
ENH				*e*Sn	**Sn**	**17 07 00.8**	**-0.9**
ENH				*e*Sg	**Sg**	**17 07 32.1**	**+0.5**
GYA	**Guiyang**	**5.60**	**149**	Pn	**Pn**	**17 06 05.3**	**+0.9**
GYA				Sn	**Sn**	**17 07 08.9**	**0.0**
GYA				smax			
	comp=N,160nm,1.0s						
GYA				smax			
	comp=E,210nm,1.0s						
KMI	**Kunming**	**6.20**	**186**	Pn	**Pn**	**17 06 12.3**	**-0.3**
KMI				Sn	**Sn**	**17 07 24.3**	**+0.8**
KMI				smax			
	comp=N,42nm,1.3s						
KMI				smax			
	comp=E,48nm,1.1s						
KMI				LR	LR		
	comp=N,450nm,10.1s						
KMI				LR	LR		
	comp=E,2μm,10.6s						
KMI				LR	LR		
	comp=Z,440nm,11.4s						
GTA	**Gaotai**	**8.60**	**341**	*e*P	**Pn**	**17 06 47.9**	**+2.3**
GTA				pP		17 06 51.3	
GTA				sP		17 06 53.8	
GTA				S	**Sn**	**17 08 27.5**	**+4.9**
GTA				sS		17 08 32.6	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,50nm,4.5s						
GTA				LR	LR		
	comp=N,120nm,11.3s						
GTA				LR	LR		
	comp=E,130nm,13.4s						
GTA				LR	LR		
	comp=Z,130nm,11.6s						
LSA	**Lhasa**	**10.71**	**265**	Pn	**Pn**	**17 07 11.8**	**-2.7**
CMAR	**Chiang Mai Arr**	**13.43**	**199**	Pn	**Pn**	**17 07 49.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=13,slow=13,SNR=3.5						
GUN	**Gumba**	**15.64**	**262**	*e*P	**Pn**	**17 08 24.5**	**+3.0**
	comp=Z,33nm,0.7s						
PKI	**Pulchoki**	**16.14**	**261**	*e*P	**Pn**	**17 08 30.4**	**+2.4**
	comp=Z,13nm,0.5s						
PKIN	**Phulchoki**	**16.14**	**261**	*e*P	**Pn**	**17 08 31.0**	**+2.9**
	comp=Z,29nm,0.6s						
KKN	**Kakani**	**16.18**	**262**	*e*P	**Pn**	**17 08 31.0**	**+2.5**
	comp=Z,42nm,0.8s						
DMN	**Daman**	**16.38**	**262**	*e*P	**Pn**	**17 08 33.4**	**+2.3**
	comp=Z,28nm,0.8s						
SONM	**Songino Array**	**16.66**	**7**	Pn	**Pn**	**17 08 34.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=6.1						
ULN	**Ulaanbaatar**	**16.76**	**8**	*e*Pn	**Pn**	**17 08 35.8**	**0.0**
	comp=Z,2.7nm,0.9s						
KS15	**Wonju Array Si**	**21.06**	**66**	*e*P	**P**	**17 09 28.0**	**+2.8**
KSRS	**Korea Array**	**21.09**	**66**	P	**P**	**17 09 25.9**	**+0.3**
	comp=Z,6.4nm,0.7s,mb4.1,baz=253,slow=9.0,SNR=22						
MK31	**Makanchi Array**	**22.45**	**320**	*e*P	**P**	**17 09 39.1**	**-0.9**
MKAR	**Makanchi Array**	**22.45**	**320**	P	**P**	**17 09 40.0**	**0.0**
	comp=Z,2.5nm,0.9s,mb3.6,baz=125,slow=12,SNR=19						
MKAR	**Makanchi Array**	**22.45**	**320**	P	**P**	**17 09 40.0**	**0.0**
TKM2	**Tokmak 2**	**24.92**	**306**	*e*P	**P**	**17 10 04.6**	**+0.3**
	comp=Z,4.7nm,1.1s,mb3.9						
UCH	**Uchtor**	**25.48**	**303**	*e*P	**P**	**17 10 08.6**	**-0.7**
	comp=Z,5.1nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**25.61**	**304**	P	**P**	**17 10 08.4**	**-2.1**
	comp=Z,0.5nm,0.3s,mb3.5,baz=354,slow=10,SNR=2.3						
AML	**Almayashu**	**26.05**	**303**	*e*P	**P**	**17 10 14.5**	**+0.1**
	comp=Z,3.0nm,1.1s,mb3.7						
EKS2	**Erkin-Say**	**26.13**	**304**	*e*P	**P**	**17 10 15.8**	**+0.6**
	comp=Z,2.3nm,0.9s,mb3.7						
ZAA0	**Zalesovo Array**	**26.29**	**335**	*e*P	**P**	**17 10 15.3**	**-1.2**
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**17 10 16.0**	**-0.4**
	comp=Z,2.1nm,0.7s,mb3.8,baz=138,slow=9.6,SNR=10						
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**17 10 16.0**	**-0.4**
KURK	**Kurchatov**	**26.74**	**324**	P	**P**	**17 10 20.2**	**-0.4**
	comp=Z,3.8nm,0.8s,mb4.0,baz=128,slow=9.6,SNR=32						
KURK	**Kurchatov**	**26.74**	**324**	*e*P	**P**	**17 10 19.9**	**-0.7**
	comp=Z,5.4nm,1.0s,mb4.0						
PALK	**Pallekele**	**31.98**	**226**	LR	LR	17 23 41.1	
	comp=Z,613nm,20.3s,baz=132,slow=36						
BVAR	**Borovoye Array**	**32.27**	**322**	P	**P**	**17 11 09.5**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=101,slow=7.7,SNR=5.7						
ARU	**Arti**	**39.92**	**322**	*e*P	**P**	**17 12 14.2**	**-0.8**
	comp=Z,4.9nm,0.7s,mb4.3						
ARU				*e*		17 12 19.6	
BRTR	**Keskin Array B**	**56.14**	**299**	P	**P**	**17 14 19.2**	**-1.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=95,slow=6.1,SNR=2.8						
AKASG	**Malin Array Be**	**56.82**	**313**	P	**P**	**17 14 24.5**	**-0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=70,slow=6.0,SNR=2.4						
AKASG	**Malin Array Be**	**56.82**	**313**	P	**P**	**17 14 24.5**	**-0.9**
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**17 14 26.3**	**-0.8**
	comp=Z,1.3nm,0.6s,mb4.1,baz=90,slow=9.7,SNR=3.9						
WRAB	**Tennant Creek**	**58.96**	**146**	*e*P	**P**	**17 14 40.0**	**-0.8**
	comp=Z,7.4nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**61.97**	**148**	P	**P**	**17 15 00.8**	**-0.4**
	comp=Z,0.9nm,0.7s,mb4.0,baz=343,slow=6.6,SNR=12						
NWAO	**Narrogin (SRO)**	**65.21**	**167**	P	**P**	**17 15 19.4**	**-3.1**
CTAO	**Charters Tower**	**65.58**	**135**	P	**P**	**17 15 22.8**	**-2.3**
	comp=Z,7.8nm,1.1s,mb4.7						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**17 16 58.5**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.4,baz=320,slow=4.8,SNR=3.8						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**17 16 58.5**	**-0.6**
TXAR	**Lajitas Array**	**114.41**	**26**	PKP	PKiKP	17 23 19.7	-1.8
	comp=Z,0.1nm,0.6s,baz=35,slow=3.4,SNR=3.1						
TXAR	**Lajitas Array**	**114.41**	**26**	P	PKiKP	17 23 19.7	-1.8

*BGS **17** 17:08:15.4±1.3,30°.52N×105°.52E,h10km,mb5.5,MS5.8*
*ISCJB **17** 17:08:22.8±0.5,32°.26N±0°.01×104°.91E±0°.01,h1km±3km, mb5.8/363,MS5.6/260,Error ellipse: s-maj=2.4km s-min=1.9km az=12.3*
*IDC **17** 17:08:23.5±0.3,32°.24N×105°.08E,h0km,mb5.5/40, mb1 5.4/43,mb1mx5.4/43,mbtmp5.4/43,ML4.8/3,MS5.4/28, Ms1 5.4/28,ms1mx5.2/42,Error ellipse: s-maj=9.5km s-min=6.9km az=33.0*
*BJI **17** 17:08:24.2,32°.20N×105°.08E,h13km,mB6.1/33,mb5.5/34, ML5.9/22,Ms6.1/51,Ms7 5.9/46*
*GCMT **17** 17:08:25.5±0.1,32°.21N×105°.08E,h16km,MW5.8/104, Moment Tensor Solution. s88,c191; s104,c326; Duration: 1§8 Moment tensor: Scale 10^17^Nm; M_{rr}5.03±.05; $M_{\theta\theta}$-2.71±.04; $M_{\phi\phi}$-2.32±.05; $M_{r\theta}$-0.61±.13; $M_{\theta\phi}$-3.12±.04; $M_{\phi r}$0.42±.14; Best double couple: $M_0$5.39600×10^17^ NP1:ϕ_s38.00000°,δ45.00000°, λ77.00000°. NP2:ϕ_s236.00000°,δ47.00000°,λ103.00000°. Principal axes: T 5.1480, Plg81.0000°, Azm222.0000°; N 0.4950, Plg9.0000°, Azm47.0000°; P -5.6430, Plg1.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **17** 17:08:25.5±0.1,32°.24N×104°.98E,h9km,mb5.8/203, ME6.0,MS5.6/185,MW5.7,MW5.7 Error ellipse: s-maj=2.8km s-min=2.0km az=33.0,Moment Tensor Solution. s62 Moment tensor: Scale 10^17^Nm; M_{rr}3.55; $M_{\theta\theta}$-2.18; $M_{\phi\phi}$-1.37; $M_{r\theta}$-0.73; $M_{\theta\phi}$-2.96; $M_{\phi r}$0.47; Best double couple: $M_0$4.40000×10^17^ NP1:ϕ_s32.00000°, δ46.00000°,λ66.00000°. NP2:ϕ_s246.00000°,δ49.00000°, λ114.00000°. Principal axes: T 3.8200, Plg72.0000°, Azm223.0000°; N 0.9500, Plg17.0000°, Azm49.0000°; P -4.7700, Plg1.0000°, Azm319.0000°; Depth from synthetics of broadband displacement seismograms.*

Energy computed from CMT mechanism.
NEIC Felt [IV] at Chengdu and [III] at Chongqing and Xi'an. Felt at Baoji, Dawan, Deyang, Hanzhong, Lanzhou, Luzhou, Mianyang, Pingliang, Qincheng, Wuwei, Ya'an, Yanliang and Ziyang.
*TEH **17** 17:08:26.0,32°.27N×104°.98E,h10km*
*MOS **17** 17:08:27.4±0.8,32°.26N×105°.07E,h37km,mb6.0/130, MS5.6/102,Error ellipse: s-maj=5.8km s-min=3.3km az=120.2*
*SZGRF **17** 17:08:30.0,32°.51N×104°.97E,h33km,mb6.0,MS5.7, Sichuan, China*
*DJA **17** 17:08:31,32°.20N×104°.93E,h44km,Mw6.3/71*
ISC 17 17:08:26.4±0.5,32°.26N±0°.01×104°.94E±0°.01,h13km±3km, h14km±1.1km:pP-P,n1623,σ0§93/1542,mb5.7/362, MS5.6/260,485C-125D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.68**	**217**	Pn	**Pn**	**17 08 56.5**	**+1.0**
CD2				Pg	**Pg**	**17 08 59.0**	**+0.3**
CD2				Sg	**Sg**	**17 09 19.6**	**-0.9**
CD2				smax			
	comp=N,277μm,0.2s						
XAN	**Xi'an**	**3.78**	**61**	Pn	**Pn**	**17 09 24.9**	**+0.5**
XAN				Pg	**Pg**	**17 09 34.8**	**-4.0**
XAN				Sn	**Sn**	**17 10 07.1**	**-1.7**
XAN				Sg	**Sb**	**17 10 17.6**	**-1.2**
XAN				smax			
	comp=N,41μm,1.2s						
XAN				smax			
	comp=E,27μm,0.9s						
XAN				LR	LR		
	comp=N,135μm,9.4s						
XAN				LR	LR		
	comp=E,89μm,10.1s						
XAN				LR	LR		
	comp=Z,105μm,8.1s						
LZH	**Lanzhou**	**3.93**	**347**	⇓Pn	**Pn**	**17 09 28.9**	**+2.5**
LZH				Sn	**Sn**	**17 10 12.6**	**+0.2**
LZH				Sg	**Sg**	**17 10 30.3**	**-2.2**
GYA	**Guiyang**	**5.97**	**165**	Pn	**Pn**	**17 09 54.8**	**+0.3**
GYA				Sn	**Sn**	**17 10 57.0**	**-5.8**
GYA				smax			
	comp=N,16μm,0.9s						
GYA				smax			
	comp=E,27μm,0.9s						
GYA				LR	LR		
	comp=N,119μm,6.7s						
GYA				LR	LR		
	comp=E,142μm,6.5s						
GYA				LR	LR		
	comp=Z,176μm,7.2s						
KMI	**Kunming**	**7.37**	**196**	Pn	**Pn**	**17 10 14.0**	**+0.3**
KMI				Sn	**Sn**	**17 11 36.8**	**-0.4**
KMI				smax			
	comp=N,4μm,1.8s						
KMI				smax			
	comp=E,4μm,2.5s						
KMI				LR	LR		
	comp=N,137μm,7.0s						
KMI				LR	LR		
	comp=E,154μm,8.4s						
KMI				LR	LR		
	comp=Z,96μm,12.6s						
TIY	**Taiyuan**	**8.21**	**46**	*e*P	**Pn**	**17 10 24.8**	**-0.4**
TIY				S	**Sn**	**17 11 57.9**	**+0.1**
TIY				pmax	pmax		
	comp=Z,2μm,5.4s						
TIY				LR	LR		
	comp=N,36μm,4.4s						
TIY				LR	LR		
	comp=E,11μm,3.7s						
TIY				LR	LR		
	comp=Z,29μm,7.1s						
WHN	**Wuhan**	**8.22**	**100**	P	**Pn**	**17 10 24.6**	**-0.8**
WHN				S	**Sn**	**17 11 53.4**	**-4.8**
GTA	**Gaotai**	**8.26**	**331**	⇑P	**Pn**	**17 10 26.8**	**+0.9**
GTA				pP		17 10 30.3	
GTA				sP		17 10 32.6	
GTA				S	**Sn**	**17 12 03.3**	**+4.2**
GTA				sS		17 12 07.9	
GTA				pmax	pmax		
	comp=Z,57nm,0.9s						
GTA				pmax	pmax		
	comp=Z,2μm,5.6s						
GTA				LR	LR		
	comp=N,150μm,10.1s						
GTA				LR	LR		
	comp=E,71μm,11.3s						
GTA				LR	LR		
	comp=Z,160μm,10.1s						
BTO	**Baotou**	**9.28**	**25**	*e*P	**Pn**	**17 10 39.8**	**-0.1**
BTO				S	**Sn**	**17 12 35.0**	**+11**
BTO				LR	LR		
	comp=N,58μm,7.8s						
BTO				LR	LR		
	comp=E,18μm,7.8s						
HHC	**Hu-ho-hao-te**	**10.09**	**30**	⇑P	**Pn**	**17 10 50.4**	**-0.6**
HHC				pP		17 10 57.6	
HHC				sP		17 11 02.3	
HHC				S	**Sn**	**17 12 45.1**	**+1.1**
HHC				sS		17 12 55.5	
HHC				SS		17 12 57.5	
HHC				pmax	pmax		
	comp=Z,77nm,1.2s						
HHC				pmax	pmax		
	comp=Z,2μm,7.1s						
HHC				LR	LR		
	comp=N,77μm,6.9s						
HHC				LR	LR		
	comp=E,48μm,5.3s						
HHC				LR	LR		
	comp=Z,48μm,6.1s						
TIA	**Tai'an**	**10.82**	**65**	⇑P	**Pn**	**17 11 01.3**	**+0.2**
TIA				S	**Sn**	**17 13 11.0**	**+8.9**
TIA				pmax	pmax		
	comp=Z,4μm,10.0s						
TIA				LR	LR		
	comp=N,57μm,10.0s						
TIA				LR	LR		
	comp=E,45μm,10.0s						
GZH	**Guangzhou**	**11.78**	**139**	P	**Pn**	**17 11 09.8**	**-4.4**
GZH				S	**Sn**	**17 13 15.9**	**-10**
NJ2	**Nanjing**	**11.79**	**87**	*e*P	**Pn**	**17 11 13.4**	**-1.0**
NJ2				pP		17 11 16.6	
NJ2				sP		17 11 19.8	
NJ2				PP		17 11 23.0	
NJ2				S	**Sn**	**17 13 26.1**	**+0.2**
NJ2				sS		17 13 32.6	
NJ2				pmax	pmax		
	comp=Z,90nm,0.8s						
NJ2				LR	LR		
	comp=N,62μm,16.7s						
NJ2				LR	LR		
	comp=E,61μm,17.1s						
NJ2				LR	LR		
	comp=Z,81μm,16.3s						
BJT	**Baijiatuan**	**11.92**	**46**	*e*P	**Pn**	**17 11 14.8**	**-1.3**
BJT				pmax	pmax		
	comp=Z,104nm,0.6s						
BJT	**Baijiatuan**	**11.92**	**46**	*e*Pn	**Pn**	**17 11 14.8**	**-1.2**
	comp=Z,104nm,0.6s						
BJI	**Beijing**	**11.94**	**46**	P	**Pn**	**17 11 19.4**	**+3.1**
BJI				S	**Sn**	**17 13 36.3**	**+6.9**
BJI				pmax	pmax		
	comp=Z,60nm,1.7s						
BJI				pmax	pmax		
	comp=Z,3μm,11.6s						
BJI				LR	LR		
	comp=N,58μm,12.2s						
BJI				LR	LR		
	comp=E,63μm,8.6s						
BJI				LR	LR		
	comp=Z,20μm,14.0s						
LSA	**Lhasa**	**12.11**	**261**	P	**Pn**	**17 11 20.1**	**+1.4**
LSA				S	**Sn**	**17 13 30.1**	**-3.5**
LSA				LR	LR		
	comp=N,49μm,8.9s						
LSA				LR	LR		
	comp=E,58μm,13.9s						
LSA	**Lhasa**	**12.11**	**261**	⇑*e*P	**Pn**	**17 11 19.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,502nm,1.3s						
LSA	**Lhasa**	**12.11**	**261**	⇑*e*Pn	**Pn**	**17 11 19.5**	**+0.8**
	comp=Z,502nm,1.3s						
IMP	**Imphal**	**12.21**	**235**	*e*P	**Pn**	**17 11 18.0**	**-2.0**
IMP				*ex*	x	17 14 50.0	
HKC	**Hong Kong Obse**	**12.87**	**138**	⇓*i*P	**Pn**	**17 11 29.0**	**-0.1**
HKC				*i* S	**Sn**	**17 13 50.0**	**-2.2**
CHRT	**Chiangrai**	**13.17**	**202**	⇓P	**Pn**	**17 11 33.0**	**-0.3**
	comp=Z,868nm,0.9s						
SHL	**Shillong**	**13.23**	**243**	*e*P	**Pn**	**17 11 33.0**	**-1.1**
SHL				*ex*	x	17 15 32.0	
SSE	**Sheshan**	**13.88**	**90**	⇑P	**Pn**	**17 11 41.3**	**-1.6**
SSE				pP		17 11 44.8	
SSE				S	**Sn**	**17 14 14.3**	**-2.7**
SSE				pmax	pmax		
	comp=Z,22nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1μm,7.5s						
SSE				LR	LR		
	comp=N,62μm,9.4s						
SSE				LR	LR		
	comp=E,35μm,9.4s						
SSE				LR	LR		
	comp=Z,62μm,11.8s						
QIZ	**Qiongzhong**	**13.89**	**160**	P	**Pn**	**17 11 40.8**	**-2.3**
QIZ				S	**Sn**	**17 14 15.3**	**-1.9**
QIZ				pmax	pmax		
	comp=Z,77nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,4μm,10.0s						
QIZ	**Qiongzhong**	**13.89**	**160**	*e*Pn	**Pn**	**17 11 39.5**	**-3.5**
	comp=Z,171nm,0.8s						
QZH	**Quanzhou**	**14.02**	**118**	⇓*i*P	**Pn**	**17 11 45.1**	**+0.3**
QZH				S	**Sn**	**17 14 21.4**	**+1.0**
QZH				pmax	pmax		
	comp=Z,460nm,0.8s						
QZH				pmax	pmax		
	comp=Z,10μm,8.0s						
CHG	**Chiang Mai**	**14.43**	**203**	⇑P	**Pn**	**17 11 50.3**	**-0.2**
	comp=Z,200nm,0.7s						
AGT	**Agartala**	**14.68**	**239**	*ex*	x	17 11 46.0	
AGT				*ex*	x	17 12 50.0	
CMAR	**Chiang Mai Arr**	**14.77**	**203**	Pn	**Pn**	**17 11 55.2**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=17,slow=11,SNR=101						
CMAR				Lg		17 16 19.6	
	comp=Z,0.1nm,0.3s,baz=58,slow=34,SNR=2.7						
CMAR				LR	LR	17 18 21.3	
	comp=Z,25μm,19.7s,baz=17,slow=40						
CMAR				PKiKP	PKiKP	17 25 00.7	-1.3
	comp=Z,0.1nm,0.3s,baz=284,slow=1.6,SNR=7.6						
CMAR	**Chiang Mai Arr**	**14.77**	**203**	Pn	**Pn**	**17 11 55.2**	**+0.2**
CMAR				Lg		17 16 19.6	
CMAR				LR	LR	17 18 21.3	
DL2	**Dalian**	**15.10**	**59**	P	**Pn**	**17 11 59.6**	**+0.2**
DL2				S	**Sn**	**17 14 49.0**	**+2.5**
DL2				pmax	pmax		
	comp=Z,320nm,1.3s						
DL2				pmax	pmax		
	comp=Z,3μm,8.2s						
DL2				LR	LR		
	comp=N,15μm,14.7s						
DL2				LR	LR		
	comp=E,12μm,12.6s						
DL2				LR	LR		
	comp=Z,23μm,13.4s						
SONM	**Songino Array**	**15.60**	**4**	Pn	**Pn**	**17 12 05.5**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=185,slow=12,SNR=104						
SONM				Lg		17 16 42.7	
	comp=Z,2.9nm,0.3s,baz=195,slow=32,SNR=5.0						
SONM				LR	LR	17 19 13.4	
	comp=Z,8μm,21.9s,baz=2.6,slow=42						
SONM				P3KPbc		17 47 36.3	
	comp=Z,0.1nm,0.3s,baz=346,slow=4.8,SNR=13						
SONM	**Songino Array**	**15.60**	**4**	Pn	**Pn**	**17 12 05.5**	**-0.4**
SONM				Lg		17 16 42.7	
SONM				LR	LR	17 19 13.4	
ULN	**Ulaanbaatar**	**15.67**	**5**	⇑*e*P	**Pn**	**17 12 05.8**	**-1.1**
ULN				*e*		17 15 08.1	
ULN				pmax	pmax		
	comp=Z,396nm,1.3s						
ULN	**Ulaanbaatar**	**15.67**	**5**	⇑*e*Pn	**Pn**	**17 12 05.8**	**-1.0**
	comp=Z,396nm,1.3s						
ULN				*e*Sn	**Sn**	**17 15 08.1**	**+7.8**
ULN	**Ulaanbaatar**	**15.67**	**5**	Pn	**Pn**	**17 12 07.2**	**+0.3**
	SNR=250						
ULN				Pn	**Pn**	**17 12 07.2**	**+0.3**
	SNR=250						
TAPN	**Taplejung**	**15.73**	**256**	*e*P	**Pn**	**17 12 06.2**	**-1.6**
BDT	**Bhumibol Dam**	**15.88**	**201**	⇑P	**Pn**	**17 12 10.0**	**+0.2**
	comp=Z,247nm,1.0s						
KKTK	**Khon Kaen**	**15.97**	**187**	P	**Pn**	**17 12 10.0**	**-0.8**
	comp=Z,1μm,0.7s						
TATO	**Taipei**	**16.23**	**112**	*e*Pn	**Pn**	**17 12 15.1**	**+0.9**
	comp=Z,542nm,1.1s						
TATO				*e*Sn	**Sn**	**17 15 10.6**	**-3.6**
TATO	**Taipei**	**16.23**	**112**	Pn	**Pn**	**17 12 20.1**	**+6.0**
TATO	SNR=9.8						
				Pn	**Pn**	**17 12 20.1**	**+6.0**
	SNR=9.8						
YHNB	**Yeheng**	**16.30**	**113**	*e*Pn	**Pn**	**17 12 15.6**	**+0.6**
	comp=Z,465nm,0.9s						
YHNB				*e*Sn	**Sn**	**17 15 18.7**	**+2.9**
SSLB	**Suanglung**	**16.45**	**117**	*e*Pn	**Pn**	**17 12 15.7**	**-1.3**
	comp=Z,442nm,0.9s						
SSLB				*e*S	**Sn**	**17 15 26.7**	**+7.2**
TPUB	**Ta-pu**	**16.49**	**119**	*e*Pn	**Pn**	**17 12 15.9**	**-1.6**
	comp=Z,540nm,1.1s						
TPUB				*e*S	**Sn**	**17 15 24.7**	**+4.3**
NACB	**Ninganchiao**	**16.73**	**115**	*e*Pn	**Pn**	**17 12 18.2**	**-2.3**
	comp=Z,2μm,1.7s						
NACB				*e*Sn	**Sn**	**17 15 27.9**	**+1.6**
YULB	**Yu-li**	**16.93**	**117**	*e*Pn	**Pn**	**17 12 21.8**	**-1.3**
	comp=Z,3μm,2.0s						
YULB				*e*Sn	**Sn**	**17 15 36.0**	**+4.8**
UBT	**Ubonrachathani**	**16.93**	**180**	⇓P	**Pn**	**17 12 24.5**	**+1.3**
	comp=Z,521nm,0.5s						
GUN	**Gumba**	**17.06**	**260**	*e*P	**Pn**	**17 12 22.5**	**-2.2**
	comp=Z,1μm,1.0s						
NST	**Nakhon Sawan**	**17.08**	**196**	P	**Pn**	**17 12 25.0**	**0.0**
TWG	**Pinlang**	**17.10**	**119**	*e*Pn	**Pn**	**17 12 24.5**	**-0.8**
	comp=Z,4μm,2.0s						
TWG				*e*Sn	**Sn**	**17 15 36.2**	**+0.9**
PKI	**Pulchoki**	**17.56**	**260**	*e*P	**Pn**	**17 12 28.9**	**-2.1**
	comp=Z,3μm,1.3s						
PKIN	**Phulchoki**	**17.57**	**260**	*e*P	**Pn**	**17 12 29.4**	**-1.7**
	comp=Z,830nm,0.7s						
KKN	**Kakani**	**17.60**	**260**	*e*P	**Pn**	**17 12 29.2**	**-2.2**
	comp=Z,3μm,1.5s						
CAL	**Calcutta**	**17.62**	**241**	*e*P	**Pn**	**17 12 30.8**	**-1.0**
CAL				*ex*	x	17 15 55.5	
SNY	**Shenyang**	**17.65**	**52**	⇑P	**Pn**	**17 12 31.9**	**-0.1**
SNY				S	**Sn**	**17 15 48.3**	**-0.1**
SNY				pmax	pmax		
	comp=Z,110nm,1.3s						
SNY				pmax	pmax		
	comp=Z,7μm,7.6s						
SNY				LR	LR		
	comp=N,21μm,9.4s						
SNY				LR	LR		
	comp=E,23μm,18.8s						
SNY				LR	LR		
	comp=Z,25μm,9.6s						
WMQ	**Urumqi**	**17.79**	**315**	P	**Pn**	**17 12 34.8**	**+1.1**
WMQ				PP		17 12 49.3	
WMQ				S	**Sn**	**17 15 50.3**	**-1.4**
WMQ				sS	sS	17 15 56.3	-8.0
WMQ				SS		17 16 13.1	
WMQ				PcP	PcP	17 17 14.8	+4.1
WMQ				pmax	pmax		
	comp=Z,250nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,12μm,8.0s						
WMQ				LR	LR		
	comp=Z,23μm,12.0s						
DMN	**Daman**	**17.80**	**260**	*e*P	**Pn**	**17 12 31.9**	**-2.1**
	comp=Z,2μm,1.3s						
ZAK	**Zakamensk**	**18.15**	**357**	⇑*i*P	**Pn**	**17 12 38.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,186nm,1.4s						
INCN	**Inchon**	**18.53**	**68**	⇑*i*P	**Pn**	**17 12 41.9**	**-1.0**
	comp=Z,319nm,1.2s						
INCN				*e*S	**Sn**	**17 16 11.7**	**+1.9**
INCN				*e*PcP	PcP	17 17 11.6	-0.5
INCN	**Inchon**	**18.53**	**68**	P	**Pn**	**17 12 42.6**	**-0.2**
	SNR=59

BBP Basco 19.23 124 *e*P **Pn 17 12 52.8 +1.4**
TLY Talaya 19.43 358 Pn **Pn 17 12 55.0 +1.4**
comp=Z,793nm,1.5s,SNR=62
TLY Talaya 19.43 358*c i*P **Pn 17 12 54.7 +1.1**
TLY pmax pmax
comp=Z,378nm,2.1s
TLY MLR MLR
comp=Z,38μm,19.0s
TLY Talaya 19.43 358 *e*Sn **Sn 17 16 35.5 +4.1**
TLY Talaya 19.43 358 P **Pn 17 12 55.3 +1.7**
SNR=69
TLY P 17 12 55.3
SNR=69
KSRS Korea Array 19.54 68 P **Pn 17 12 53.0 -2.0**
comp=Z,4.4nm,0.3s,baz=253,slow=9.8,SNR=264
KSRS S **Sn 17 16 29.8 -4.4**
baz=241,slow=12,SNR=2.7
KSRS PcP PcP 17 17 15.4 +1.6
comp=Z,0.5nm,0.3s,baz=280,slow=1.8,SNR=4.8
KSRS Lg 17 18 42.5
comp=Z,0.2nm,0.3s,baz=260,slow=15,SNR=4.3
KSRS LR LR 17 20 16.4
comp=Z,6μm,21.0s,baz=262,slow=37
KSRS Korea Array 19.54 68 P **Pn 17 12 53.0 -2.0**
KSRS S **Sn 17 16 29.8 -4.4**
KSRS pmax pmax
comp=Z,4.0nm,0.3s
KSRS MLR MLR
comp=Z,6μm,21.0s
MOY Mondy 19.61 353⇑*i*P **Pn 17 12 56.6 +0.9**
MOY pmax pmax
comp=Z,1μm,2.6s
CN2 Changchun 19.79 49 ⇑P **Pn 17 12 57.3 -0.6**
CN2 *es*P sP 17 13 04.5 +2.9
CN2 *e*S **Sn 17 16 34.6 -5.4**
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 LR LR
comp=N,16μm,10.0s
CN2 LR LR
comp=E,17μm,10.0s
CN2 LR LR
comp=Z,26μm,10.0s
IRK Irkutsk 19.98 359⇑*i*P **Pn 17 13 01.4 +1.3**
IRK pmax pmax
comp=Z,2μm,1.3s
NNT Nongplab 20.15 195 P **P 17 13 01.5 +1.0**
HIA Hailar 20.29 29⇑*i*P **P 17 13 02.5 +0.7**
HIA pmax pmax
comp=Z,2μm,1.9s
HIA Hailar 20.29 29⇑*i*P **P 17 13 02.5 +0.7**
comp=Z,2μm,1.9s
HIA *e*S **S 17 16 53.0 +4.1**
ABRA Dolores 20.36 132 *e*P **P 17 13 07.2 +4.5**
APYP Conner 20.54 130 *e*P **P 17 13 07.7 +3.0**
CIT Chita 20.73 15⇑*i*P **P 17 13 08.2 +1.7**
CIT *e* 17 13 25.6
CIT pmax pmax
comp=Z,1μm,2.2s
BWNR Bhubaneshwar 20.85 240 *ex* x 17 13 00.0
JOW Kunigami 20.99 99 P **P 17 13 08.8 -0.8**
comp=Z,72nm,0.3s,baz=284,slow=9.8,SNR=34
JOW S **S 17 16 56.1 -7.1**
comp=Z,14nm,0.8s,baz=81,slow=19,SNR=1.9
PTH Pithoragarh 21.38 269 *e*P **P 17 13 14.0 +0.3**
PTH *ex* x 17 18 25.0
ALBI Allahabad 21.40 257 *ex* x 17 13 10.5
CAUP Cauayan 21.59 131 *e*P **P 17 13 18.7 +2.7**
JNU Nakatsue 21.83 81 P **P 17 13 18.4 -0.2**
PALP Palanan 21.89 130 *e*P **P 17 13 26.1 +6.8**
BALP Baler 22.34 134 *e*P **P 17 13 26.0 +2.0**
MKAR Makanchi Array 22.61 316 P **P 17 13 27.4 +0.6**
comp=Z,166nm,0.8s,mb5.5,baz=111,slow=10,SNR=269
MKAR S **S 17 17 34.4 0.0**
comp=Z,21nm,0.9s,baz=103,slow=10,SNR=2.1
MKAR LR LR 17 23 14.9
comp=Z,22μm,19.1s,MS5.6,baz=131,slow=39
MKAR P3KPbc 17 47 07.2
comp=Z,1.6nm,1.0s,baz=298,slow=4.1,SNR=4.3
MKAR Makanchi Array 22.61 316 P **P 17 13 27.4 +0.7**
MKAR S **S 17 17 34.4 0.0**
MKAR pmax pmax
comp=Z,167nm,0.8s
MKAR smax
comp=N,21nm,0.9s
MKAR MLR MLR
comp=Z,22μm,19.1s
MKAR Makanchi Array 22.61 316 P **P 17 13 27.4 +0.6**
MKAR S **S 17 17 34.4 0.0**
MKAR LR LR 17 23 14.9
MDJ Mudanjiang 22.82 50 P **P 17 13 28.8 -0.1**
MDJ pP 17 13 31.6
MDJ sP sP 17 13 32.9 -1.3
MDJ S **S 17 17 38.6 +0.6**
MDJ ScP ScP 17 20 55.4 -2.1
MDJ pmax pmax
comp=Z,460nm,1.7s,mb5.6
MDJ pmax pmax
comp=Z,4μm,5.8s
MDJ LR LR
comp=N,11μm,13.6s,MS5.7
MDJ LR LR
comp=E,13μm,13.9s,MS5.7
MDJ LR LR
comp=Z,17μm,14.7s,MS5.6
MDJ Mudanjiang 22.82 50⇑*i*P **P 17 13 28.6 -0.3**
comp=Z,1μm,1.5s,mb6.1
MDJ LR LR
comp=Z,15μm,22.0s,MS5.4
DDI Dehra Dun 23.04 272 *e*P **P 17 13 32.3 +0.8**
DDI *ex* x 17 17 51.0
LUBP Lubang 23.15 139 *e*P **P 17 13 35.0 +2.3**
TGY Tagaytay City 23.24 137 P **P 17 13 34.8 +1.2**
comp=Z,112nm,0.4s,mb5.6,baz=93,slow=18,SNR=3.2
TGY Tagaytay City 23.24 137 P **P 17 13 34.8 +1.2**
TGY pmax pmax
comp=Z,112nm,0.4s
POLP Polillo Island 23.34 134 *e*P **P 17 13 36.6 +1.9**
SMLA Simla 23.64 275 *i* P **P 17 13 37.2 -0.4**
SMLA *ex* x 17 13 39.6
comp=Z,456nm,0.4s
SMLA *i* x x 17 17 47.1
SDNR Sundarnagar 23.74 276 *e*P **P 17 13 40.1 +1.6**
SDNR *e*S **S 17 17 55.1 +1.7**
VLA Vladivostok 23.83 55 *e*P **P 17 13 36.1 -3.1**
VLA *e*S **S 17 17 52.4 -2.1**
VLA MLR MLR
comp=Z,19μm,17.9s,MS5.6
JBP Jabalpur 23.84 254⇑*e*P **P 17 13 38.7 -0.8**
JBP *i* S **S 17 17 56.2 +1.2**
NDI New Delhi 24.13 269 *e*P **P 17 13 39.0 -3.1**
NDI *e*S **S 17 17 58.0 -1.8**
BHK Bhakra 24.22 276 *ex* x 17 13 39.0
BHK *ex* x 17 14 08.4
BOAC Boac 24.28 137 *e*P **P 17 13 43.8 +0.3**
GQP Guinayangan 24.29 135‖*e*P **P 17 13 44.5 +0.9**
VIS Vishakhapatnam 24.29 239 *i* P **P 17 13 43.7 0.0**
VIS *i* x x 17 18 06.7
VIS *ex* x 17 18 06.8
comp=E,23nm,1.0s
DLH Dalhousie 24.44 278 *e*P **P 17 13 46.0 +1.1**
DLH *ex* x 17 18 12.0
KSH Kashi 24.49 295⇑*i*P **P 17 13 49.3 +4.0**
KSH *e*pP 17 13 53.3
KSH *es*P sP 17 13 56.1 +5.4
KSH *e*PP 17 14 26.1
KSH *e*PcP PcP 17 17 24.1 +0.4
KSH *e*S **S 17 18 09.0 +3.6**
KSH *es*S sS 17 18 16.1 +4.4
KSH *e*SS 17 19 08.3
KSH pmax pmax
comp=Z,170nm,0.8s,mb5.5
KSH pmax pmax
comp=Z,4μm,4.0s
KSH LR LR
comp=N,20μm,10.3s,MS6.0
KSH LR LR
comp=E,16μm,10.1s,MS6.0
KSH LR LR
comp=Z,19μm,10.3s,MS5.9
BUSP Coron 24.56 142 *e*P **P 17 13 46.7 +0.6**
AAA Alma-Ata 24.60 305 *i* P **P 17 13 48.9 +2.6**
AAA pmax pmax
comp=Z,9μm,6.5s
AAA MLR MLR
comp=Z,20μm,10.0s,MS5.9
THN Them Dam 24.66 278 *ex* x 17 13 51.1
SJMP San Jose 24.68 139 *e*P **P 17 13 46.7 -0.4**
ULHL Ulahol 24.82 302 P **P 17 13 50.8 +2.5**
SNR=7.8
ENPP El Nido 24.84 144 *e*P **P 17 13 48.8 +0.1**
AUQP San Andres 24.88 135 *e*P **P 17 13 50.1 +1.1**
SNG Songkhla 25.28 190 P **P 17 13 52.0 -0.6**
comp=Z,700nm,1.1s,mb6.1
TKM2 Tokmak 2 25.46 303 P **P 17 13 55.5 +1.5**
SNR=223
TKM2 Tokmak 2 25.46 303 *e*P **P 17 13 55.2 +1.2**
TKM2 *e* 17 17 25.1
TKM2 pmax pmax
comp=Z,147nm,0.9s,mb5.5
TKM2 MLR MLR
comp=Z,23μm,21.0s,MS5.7
TKM2 Tokmak 2 25.46 303 *e*P **P 17 13 55.1 +1.1**
comp=Z,147nm,0.9s,mb5.5
TKM2 *e*PcP PcP 17 17 25.1 -0.7
TKM2 LR LR
comp=Z,23μm,21.0s,MS5.7
KZA Kyzart 25.50 301 P **P 17 13 56.5 +2.1**
SNR=170
PVCP Virac 25.57 132 *e*P **P 17 13 56.2 +0.9**
NGP Nagpur 25.57 251⇑*i*P **P 17 13 51.1 -4.2**
NGP *ex* x 17 13 57.3
comp=Z,709nm,1.4s
NGP *e*S **S 17 18 20.4 -2.5**
PPR Puerto Princes 25.75 147 *e*P **P 17 13 57.4 +0.5**
KBK Karagaybulak 25.85 302 P **P 17 13 59.4 +1.8**
SNR=163
BHPL Bhopal 25.90 257 *e*P **P 17 13 57.0 -1.2**
BHPL AMb AMB 17 14 05.5
comp=Z,999nm,1.4s,mb6.2
BHPL *e*S **S 17 18 30.3 +2.2**
ZAA0 Zalesovo Array 26.02 332⇑*i*P **P 17 13 58.9 0.0**
ZAA0 *e*S **S 17 18 28.4 -0.9**
ZALV Zalesovo Beam 26.02 332 P **P 17 13 59.1 +0.2**
comp=Z,129nm,0.7s,mb5.6,baz=130,slow=9.8,SNR=264
ZALV PcP PcP 17 17 25.6 -1.1
comp=Z,14nm,0.6s,baz=157,slow=3.5,SNR=7.2
ZALV P3KPbc 17 46 50.7
comp=Z,5.0nm,0.9s,baz=331,slow=4.9,SNR=11
ZALV Zalesovo Beam 26.02 332 P **P 17 13 59.1 +0.2**
ZALV PcP PcP 17 17 25.6 -1.1
ZALV *e* 17 46 50.7
UCH Uchtor 26.07 301 P **P 17 14 01.8 +2.2**
SNR=236
UCH Uchtor 26.07 301⇑*i*P **P 17 14 01.4 +1.8**
comp=Z,881nm,0.6s,mb6.5
UCH LR LR
comp=Z,18μm,19.0s,MS5.6
CHMS Chumysh 26.08 303 P **P 17 14 01.5 +1.8**
SNR=53
FRU Bishkek 26.13 303 *i* P **P 17 14 00.0 -0.2**
FRU pmax pmax
comp=Z,440nm,1.6s,mb5.7
FRU pmax pmax
comp=Z,12μm,12.0s
AAK Ala-Archa 26.17 302 P **P 17 14 02.3 +1.8**
comp=Z,479nm,0.7s,mb6.1,SNR=38
AAK Ala-Archa 26.17 302 P **P 17 14 02.7 +2.2**
SNR=40
AAK Ala-Archa 26.17 302 P **P 17 14 01.6 +1.0**
comp=Z,30nm,0.6s,mb5.0,baz=112,slow=6.7,SNR=44
AAK PcP PcP 17 17 27.2 -0.2
comp=Z,16nm,0.7s,baz=173,slow=7.6,SNR=4.8
AAK S **S 17 18 45.0 +13**
comp=Z,4.3nm,0.7s,baz=151,slow=13,SNR=1.6
AAK LR LR 17 25 25.5
comp=Z,20μm,19.3s,MS5.7,baz=12,slow=39
AAK Ala-Archa 26.17 302⇑*i*P **P 17 14 01.7 +1.2**
comp=Z,135nm,1.1s,mb5.4
AAK *e*S **S 17 18 25.4 -6.6**
AAK LR LR
comp=Z,21μm,20.0s,MS5.7
AAK Ala-Archa 26.17 302 P **P 17 14 02.1 +1.6**
SNR=87
AAK P 17 14 02.1
SNR=87
BATP Bataraza 26.21 150 *e*P **P 17 14 01.9 +0.8**
BOD Bodaibo 26.30 11 *e*P **P 17 14 02.2 +0.7**
BOD pmax pmax
comp=Z,158nm,1.6s,mb5.3
USP Ospenovka 26.32 303 P **P 17 14 02.9 +1.0**
SNR=135
RCP Roxas 26.32 137⇑*e*P **P 17 14 02.4 +0.3**
AML Almayashu 26.64 301 P **P 17 14 06.9 +2.1**
SNR=90
AML Almayashu 26.64 301⇑*i*P **P 17 14 06.4 +1.6**
comp=Z,1μm,1.8s,mb6.1
AML *e*PcP PcP 17 17 28.8 +0.3
AML LR LR
comp=Z,16μm,19.0s,MS5.6
EKS2 Erkin-Say 26.70 302 P **P 17 14 06.6 +1.3**
SNR=50
EKS2 Erkin-Say 26.70 302⇑*i*P **P 17 14 06.2 +1.0**
comp=Z,881nm,0.6s,mb6.5
EKS2 LR LR
comp=Z,15μm,20.0s,MS5.6
CNP Catarman 26.72 133 *e*P **P 17 14 05.3 -0.4**
KURK Kurchatov 26.77 321 P **P 17 14 06.9 +1.0**
comp=Z,2μm,1.2s,mb6.5
KURK Kurchatov 26.77 321 P **P 17 14 06.2 +0.4**
comp=Z,230nm,1.0s,mb5.7,baz=129,slow=8.2,SNR=232
KURK PcP PcP 17 17 27.8 -0.8
comp=Z,39nm,0.6s,baz=119,slow=2.2,SNR=12
KURK S **S 17 18 40.5 -0.8**
comp=Z,8.8nm,1.0s,baz=178,slow=4.6,SNR=2.1
KURK PKiKP PKiKP 17 25 05.6 -1.1
comp=Z,2.4nm,0.7s,baz=117,slow=0.3,SNR=4.2
KURK Kurchatov 26.77 321 P **P 17 14 06.2 +0.3**
KURK 17 17 27.8
KURK S **S 17 18 40.5 -0.9**
KURK pmax pmax
comp=Z,230nm,1.0s,mb5.7
KURK smax
comp=N,9.0nm,1.0s
KURK Kurchatov 26.77 321⇑*i*P **P 17 14 06.2 +0.3**
comp=N,404nm,1.1s,mb5.9
KURK *e*S **S 17 18 39.1 -2.3**
KURK LR LR
comp=Z,11μm,19.0s,MS5.5
KURK Kurchatov 26.77 321 P **P 17 14 06.7 +0.8**
SNR=214
KURK P 17 14 06.7
SNR=214
KTGM Kuala Trenggan 26.84 184 P **P 17 14 07.0 +0.2**
AJM Ajmer 26.97 266 *i* P **P 17 14 07.0 -0.9**
KULM Kulim 27.13 189 P **P 17 14 09.0 -0.3**
KULM Kulim 27.13 189⇑*i*P **P 17 14 08.1 -1.2**
comp=Z,126nm,1.0s,mb5.4
KULM LR LR
comp=Z,12μm,20.0s,MS5.5
NVS Novosibirsk 27.30 332⇑*i*P **P 17 14 10.2 -0.3**
NVS *e*S **S 17 18 43.9 -5.7**
NVS pmax pmax
comp=Z,195nm,1.7s,mb5.4
NVS pmax pmax
comp=N,164nm,1.8s
NVS pmax pmax
comp=E,132nm,1.8s
NVS smax
comp=N,380nm,2.7s
NVS smax
comp=E,335nm,2.5s
KDM Kudat 27.54 154 P **P 17 14 14.8 +1.8**
MAJO Matsushiro 27.70 72⇑*i*P **P 17 14 12.0 -2.3**
MAJO pmax pmax
comp=Z,92nm,0.9s,mb5.4
MAJO MLR MLR
comp=Z,3μm,19.0s,MS4.9
MAJO Matsushiro 27.70 72⇑*i*P **P 17 14 12.0 -2.3**
comp=Z,92nm,0.9s,mb5.4
MAJO LR LR
comp=Z,3μm,19.0s,MS4.9
MAT Matsushiro 27.70 72 P **P 17 14 12.2 -2.1**
MAT S **S 17 19 01.0 +4.8**
MJAR Matsushiro Arr 27.70 72 P **P 17 14 12.7 -1.7**
comp=Z,37nm,0.6s,mb5.2,baz=273,slow=9.4,SNR=191
MJAR PcP PcP 17 17 30.2 -0.9
comp=Z,3.5nm,0.6s,baz=238,slow=1.2,SNR=8.6
MJAR S **S 17 18 52.7 -3.6**
comp=Z,2.4nm,1.1s,baz=50,slow=42,SNR=1.9
MJAR ScP ScP 17 21 09.9 -1.7
comp=Z,6.8nm,1.1s,baz=266,slow=3.7,SNR=5.4
MJAR Matsushiro Arr 27.70 72 P **P 17 14 12.7 -1.6**
MJAR 17 17 30.2
MJAR S **S 17 18 52.7 -3.6**
MJAR pmax pmax
comp=Z,37nm,0.6s
MJAR smax
comp=N,2.0nm,1.1s
IPM Ipoh 27.88 188 P **P 17 14 14.6 -1.4**
IPM Ipoh 27.88 188 P **P 17 14 14.3 -1.8**
PLP Palo 27.95 134‖*e*P **P 17 14 16.0 -0.8**
NRGR Nerungri 27.98 23 *i* P **P 17 14 18.1 +1.5**
LLP Lapu-Lapu 28.03 137⇑*e*P **P 17 14 17.7 +0.3**
HYB Hyderabad 28.04 245 *i* P **P 17 14 17.0 -0.5**
HYB *e*S **S 17 19 00.0 -1.9**
HYB LR LR 17 25 52.0
comp=N,8.8nm,12.0s
BSI Banda Aceh 28.11 201 P **P 17 14 18.3 +0.2**
KKM Kota Kinabalu 28.12 156 P **P 17 14 18.0 -0.3**
KKM Kota Kinabalu 28.12 156⇑*i*P **P 17 14 17.4 -0.9**
comp=N,276nm,1.1s,mb5.8
KKM *e*PcP PcP 17 17 32.9 +0.4
KKM LR LR
comp=Z,6μm,20.0s,MS5.2
CLNS Chul'man 28.18 23 *e*P **P 17 14 19.0 +0.6**
CLNS *e*S **S 17 18 52.4 -11**
CLNS *e* 17 24 58.7
CLNS pmax pmax
comp=E,34nm,1.5s
CLNS pmax pmax
comp=Z,48nm,1.3s,mb5.0
CLNS pmax pmax
comp=N,38nm,1.5s
CLNS smax
comp=E,2μm,17.6s
CLNS smax
comp=N,2μm,17.3s
CLNS MLR MLR
comp=N,18μm,13.0s,MS6.0
CLNS MLR MLR
comp=Z,26μm,14.0s,MS6.0
CLNS MLR MLR
comp=E,20μm,14.0s,MS6.0
MSLP Maasin 28.70 136 *e*P **P 17 14 24.1 +0.7**
SDKM Sandakan 28.85 154 P **P 17 14 24.5 -0.2**
LATR Latur 29.01 249 *e*P **P 17 14 27.0 +0.8**
FRIM Kepong 29.04 187 P **P 17 14 26.3 -0.1**
JHJ Hachijo jima 2 29.26 79 P **P 17 14 26.9 -1.4**
comp=E,353nm,0.9s,mb6.1,baz=240,slow=7.5,SNR=7.6
JHJ LR LR 17 26 58.1
comp=E,4μm,18.2s,MS5.1,baz=86,slow=38
JHJ2 Mitsune 29.29 79 P **P 17 14 28.3 -0.2**
BTM Bintulu 29.90 164 P **P 17 14 34.6 +0.6**
KBL Kabul 29.96 284 P **P 17 14 35.7 +1.2**
KGM Kluang 30.12 183 P **P 17 14 36.5 +0.5**
MYKOM Kota Tinggi 30.32 182 P **P 17 14 38.0 +0.2**
SBUM Sibu 30.43 166 P **P 17 14 39.6 +0.8**
BUKP Musuan 30.63 138 *e*P **P 17 14 41.9 +1.4**
KSM Kuching 31.03 170 P **P 17 14 44.1 +0.1**
KSM Kuching 31.03 170⇑*i*P **P 17 14 43.8 -0.3**
comp=E,66nm,0.6s,mb5.6
KSM *e*PcP PcP 17 17 40.0 +0.1
KSM *e*ScP ScP 17 21 22.2 -0.3
KSM LR LR
comp=Z,6μm,20.0s,MS5.2
POO Poona 31.11 252 *e*P **P 17 14 44.9 +0.2**
POO AMb AMB 17 14 48.9
comp=Z,96nm,1.2s,mb5.5
KAD Karad 31.51 249 *e*P **P 17 14 47.9 -0.4**
KAD AMb AMB 17 14 52.1
comp=Z,81nm,1.2s,mb5.4
DAV Davao City (W) 31.58 138 P **P 17 14 49.8 +0.9**
comp=Z,156nm,0.4s,mb6.2,baz=341,slow=4.8,SNR=5.6
DAV Davao City (W) 31.58 138 P **P 17 14 49.8 +0.9**
DAV LR LR
comp=Z,7μm,22.0s,MS5.3
DAV Davao City (W) 31.58 138⇑*e*P **P 17 14 49.0 +0.1**
ASAJ Asahikawa 31.61 57 P **P 17 14 47.6 -1.3**
comp=Z,32nm,0.6s,mb5.3,baz=265,slow=10,SNR=42
ASAJ LR LR 17 27 43.2
comp=Z,5μm,19.7s,MS5.2,baz=143,slow=37
ASAJ Asahikawa 31.61 57 P **P 17 14 47.6 -1.3**
ASAJ pmax pmax
comp=Z,32nm,0.6s
ASAJ MLR MLR
comp=Z,5μm,19.7s
ASAJ Asahikawa 31.61 57 P **P 17 14 48.4 -0.5**
ERM Erimo 31.76 61 P **P 17 14 49.3 -0.9**
comp=Z,320nm,0.6s,mb6.3,SNR=7.2
ERM Erimo 31.76 61⇑*e*P **P 17 14 47.5 -2.7**
ERM *e* 17 15 59.3
ERM pmax pmax
comp=Z,30nm,0.6s,mb5.3
ERM MLR MLR
comp=Z,6μm,19.0s,MS5.3
ERM Erimo 31.76 61⇑*e*P **P 17 14 47.5 -2.8**
comp=Z,30nm,0.6s,mb5.3
ERM *e*PP PP 17 15 59.3 -2.6
ERM LR LR
comp=Z,6μm,19.0s,MS5.3
YSS Yuzh-Sakhalins 32.27 52α*i*P **P 17 14 54.0 -0.7**
YSS *e* 17 15 03.5
YSS *e* 17 16 05.0
YSS *e* 17 17 41.0
YSS *e*S **S 17 20 04.0 -3.8**
YSS *e*SSS 17 22 18.0
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,70nm,1.0s
YSS pmax pmax
comp=Z,200nm,1.0s,mb5.9
YSS MLR MLR
comp=E,10μm,13.0s,MS5.8
YSS MLR MLR
comp=Z,12μm,13.0s,MS5.8
YSS MLR MLR
comp=N,10μm,15.0s,MS5.8
YSS Yuzh-Sakhalins 32.27 52⇑*i*P **P 17 14 53.9 -0.8**
comp=N,268nm,1.2s,mb6.0
YSS *e*PP PP 17 16 06.7 -0.9
YSS *e*PcP PcP 17 17 42.8 0.0
YSS LR LR
comp=Z,3μm,20.0s,MS5.0
BVAR Borovoye Array 32.35 320 P **P 17 14 55.9 +0.6**
comp=Z,53nm,0.7s,mb5.5,baz=114,slow=9.5,SNR=288
BVAR PcP PcP 17 17 42.6 -0.3
comp=Z,36nm,0.6s,baz=129,slow=2.7,SNR=12
BVAR S **S 17 20 08.9 0.0**
comp=Z,4.7nm,0.9s,baz=232,slow=7.1,SNR=2.7
BVAR LR LR 17 29 13.3
comp=Z,7μm,18.7s,MS5.4,baz=4.7,slow=38
BVAR P3KPbc 17 46 22.0
comp=Z,0.5nm,0.4s,baz=284,slow=3.7,SNR=5.0
BVAR Borovoye Array 32.35 320 P **P 17 14 55.9 +0.6**
BVAR 17 17 42.6
BVAR S **S 17 20 08.9 +0.1**
BVAR pmax pmax
comp=Z,53nm,0.7s
BVAR smax
comp=N,5.0nm,0.9s
BVAR MLR MLR
comp=Z,7μm,18.7s
BVAR Borovoye Array 32.35 320 P **P 17 14 55.9 +0.6**
BVAR PcP PcP 17 17 42.6 -0.3
BVAR S **S 17 20 08.9 0.0**
BVAR LR LR 17 29 13.2
BVAR *e* 17 46 22.0
BHJ Bhuj 32.37 263 *e*P **P 17 14 55.5 -0.4**
BHJ AMb AMB 17 15 02.4
comp=Z,302nm,1.3s,mb6.0
BRVK Borovoye 32.42 320 P **P 17 14 56.0 +0.1**
comp=Z,820nm,0.7s,mb6.7
BRVK Borovoye 32.42 320⇑*i*P **P 17 14 56.2 +0.3**
BRVK *e* 17 17 41.8
BRVK *e*S **S 17 20 11.1 +1.2**
BRVK pmax pmax
comp=Z,99nm,0.8s,mb5.7
BRVK MLR MLR
comp=Z,5μm,21.0s,MS5.2
BRVK Borovoye 32.42 320⇑*i*P **P 17 14 56.2 +0.3**
comp=Z,99nm,0.8s,mb5.7
BRVK *e*PcP PcP 17 17 41.8 -1.2
BRVK *e*S **S 17 20 11.1 +1.2**

BRVK LR LR
comp=Z,5μm,21.0s,MS5.2
BRVK Borovoye 32.42 320 P P 17 14 57.0 +1.1
SNR=65
BRVK P 17 14 57.0
SNR=65
CBIJ Chichi jima 32.65 89 P P 17 14 55.1 -3.1
comp=Z,121nm,0.6s,mb6.0,baz=261,slow=13,SNR=4.7
CBIJ LR LR 17 26 60.0
comp=Z,5μm,19.7s,MS5.2,baz=293,slow=34
PPI Padang Panjang 32.82 188 P P 17 14 58.2 -1.6
GOA Goa 32.83 247⇑ iP P 17 14 58.8 -1.1
PALK Pallekele 33.57 227 P P 17 15 07.7 +1.4
comp=Z,846nm,1.3s,mb6.5,SNR=7.8
PALK Pallekele 33.57 227 P P 17 15 06.7 +0.4
comp=Z,69nm,0.9s,mb5.6,baz=34,slow=8.5,SNR=19
PALK Pallekele 33.57 227 i P P 17 15 07.8 +1.5
PALK Pallekele 33.57 227⇑ iP P 17 15 06.7 +0.3
comp=Z,634nm,1.6s,mb6.3
PALK Pallekele 33.57 227 P P 17 15 08.2 +1.9
SNR=12
PALK P 17 15 08.2
SNR=12
YAK Yakutsk 33.78 21c iP P 17 15 07.6 0.0
YAK e*PP pP 17 15 16.7 +5.2
YAK e 17 16 21.9
YAK ePPP 17 16 33.9
YAK e 17 17 45.9
YAK eS **S 17 20 30.2 -0.6**
YAK eSS SS 17 22 38.0 -19
YAK eSSS 17 22 56.5
YAK e 17 25 30.2
YAK pmax pmax
comp=Z,162nm,0.9s,mb6.0
YAK pmax pmax
comp=N,40nm,1.1s
YAK pmax pmax
comp=E,55nm,1.4s
YAK pmax pmax
comp=Z,458nm,4.2s
YAK pmax pmax
comp=E,544nm,7.3s
YAK pmax pmax
comp=N,416nm,5.3s
YAK smax
comp=E,713nm,4.0s
YAK smax
comp=N,555nm,3.6s
YAK MLR MLR
comp=Z,23μm,12.0s,MS6.1
YAK MLR MLR
comp=E,7μm,10.0s,MS6.0
YAK MLR MLR
comp=N,16μm,12.0s,MS6.0
YAK Yakutsk 33.78 21⇑ iP P 17 15 07.1 -0.5
comp=N,183nm,0.8s,mb6.1
YAK LR LR
comp=Z,772nm,22.0s,MS4.4
YUK Yuzh-Kuril'sk 33.93 58⇑ iP P 17 15 08.0 -1.3
YUK e 17 16 18.0
YUK ePPP 17 16 35.0
YUK e 17 17 44.0
YUK eS **S 17 20 32.0 -1.6**
YUK eSSS 17 22 37.0
YUK pmax pmax
comp=N,2μm,2.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK pmax pmax
comp=Z,3μm,2.0s,mb6.9
YUK pmax pmax
comp=N,2μm,2.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK pmax pmax
comp=Z,2μm,2.0s,mb6.8
YUK smax
comp=N,3μm,4.0s
YUK MLR MLR
comp=N,5μm,14.0s,MS5.6
YUK MLR MLR
comp=E,5μm,14.0s,MS5.6
YUK MLR MLR
comp=Z,5μm,14.0s,MS5.4
TPI Tanjungpandan 34.92 175 P P 17 15 18.7 +0.7
TRD Trivandrum 35.10 234⇓ ex x 17 15 24.0
TRD ex x 17 21 09.0
KSI Kapahiang 35.78 184 P P 17 15 24.4 -1.0
KLI Kotabumi 36.91 180 P P 17 15 34.9 -0.2
ABKAR Akbulak array 37.46 310⇑ eP P 17 15 40.0 +0.5
comp=Z,89nm,0.7s,mb5.7
IDAH Dahanechah 37.80 283 eP P 17 15 42.5 -0.1
IEMG Emamgholi 38.05 291 eP P 17 15 45.8 +1.2
IAKL Akhelmad 38.06 290 eP P 17 15 47.3 +2.6
TNG Tangerang 38.25 177 P P 17 15 48.3 +1.9
ABKT Ailbek 38.41 292 P P 17 15 49.2 +1.6
comp=Z,1μm,1.0s,mb6.6,SNR=98
VAN Vannovskaya 38.42 292 P P 17 15 49.4 +1.7
VAN S **S 17 21 47.5 +5.1**
AKTK Aktyubinsk 38.89 312 P P 17 15 51.9 +0.4
AKTK PcP PcP 17 18 01.1 -1.1
AKTK S **S 17 21 46.2 -2.9**
AKTK e 17 45 55.2
AKTO Aktyubinsk 38.89 312 P P 17 15 51.9 +0.4
comp=Z,80nm,0.8s,mb5.5,baz=95,slow=8.7,SNR=106
AKTO PcP PcP 17 18 01.1 -1.1
comp=Z,26nm,0.7s,baz=111,slow=7.3,SNR=4.9
AKTO S **S 17 21 46.2 -2.9**
comp=Z,6.0nm,1.0s,baz=107,slow=17,SNR=1.5
AKTO P3KPbc 17 45 55.2
comp=Z,1.0nm,0.6s,baz=63,slow=2.3,SNR=2.3
AKTO Aktyubinsk 38.89 312 P P 17 15 51.9 +0.4
AKTO 17 18 01.1
AKTO S **S 17 21 46.3 -2.9**
AKTO pmax pmax
comp=Z,80nm,0.8s,mb5.5
AKTO smax
comp=N,6.0nm,1.0s
LEM Lembang 38.95 176 P P 17 15 53.1 +0.8
SVE Sverdlovsk 39.01 322⇓ eP P 17 15 53.5 +1.1
SVE eS **S 17 21 53.8 +2.9**
SVE eSS SS 17 24 35.5 -7.2
SVE pmax pmax
comp=Z,414nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,9μm,17.0s,MS5.6
KAPI Kappang 39.65 156 P P 17 15 56.0 -2.2
comp=Z,1μm,1.3s,mb6.5,SNR=20
KAPI Kappang 39.65 156 P P 17 15 56.7 -1.5
comp=Z,187nm,1.0s,mb5.8,baz=309,slow=5.4,SNR=36
KAPI S **S 17 21 57.6 -3.6**
comp=Z,7.9nm,1.0s,baz=27,slow=9.0,SNR=2.9
ARU Arti 39.97 321 P P 17 16 01.2 +0.8
comp=Z,3μm,1.0s,mb7.0
ARU Arti 39.97 321c iP P 17 16 00.9 +0.5
ARU e 17 17 36.2
ARU e 17 18 07.1
ARU S **S 17 22 08.5 +3.2**
ARU SSS 17 25 25.0
ARU pmax pmax
comp=Z,602nm,1.2s,mb6.2
ARU MLR MLR
comp=Z,5μm,15.0s,MS5.5
ARU Arti 39.97 321⇑ iP P 17 16 00.7 +0.3
comp=Z,173nm,1.1s,mb5.7
ARU ePP PP 17 17 36.3 +4.1
ARU eS **S 17 22 04.8 -0.5**
ARU LR LR
comp=Z,4μm,19.0s,MS5.2
KMMI Kalianget 40.02 166 P P 17 16 04.3 +3.1
UGM Wanagama 40.30 171 P P 17 16 05.6 +2.1
GUMO Guam 40.90 108 P P 17 16 07.9 -0.7
comp=Z,139nm,0.5s,mb5.8,baz=200,slow=2.3,SNR=28
GUMO LR LR 17 33 30.5
comp=Z,3μm,19.8s,MS5.2,baz=316,slow=37
GUMO Guam 40.90 108⇑ iP P 17 16 08.0 -0.6
GUMO pmax pmax
comp=Z,241nm,0.9s,mb5.8
GUMO MLR MLR
comp=Z,4μm,20.0s,MS5.3
GUMO Guam 40.90 108⇑ iP P 17 16 08.0 -0.6
comp=Z,241nm,0.9s,mb5.8
GUMO LR LR
comp=Z,4μm,20.0s,MS5.3
TIXI Tiksi 41.49 11c iP P 17 16 12.0 -0.7
TIXI e 17 17 45.8
TIXI eS **S 17 22 24.4 -3.1**
TIXI eSS SS 17 25 27.8 -3.9
TIXI pmax pmax
comp=Z,344nm,2.0s,mb5.6
TIXI pmax pmax
comp=E,43nm,1.2s
TIXI pmax pmax
comp=N,83nm,1.5s
TIXI pmax pmax
comp=Z,632nm,6.5s
TIXI smax
comp=N,569nm,8.2s
TIXI smax
comp=E,379nm,10.8s
TIXI MLR MLR
comp=E,11μm,13.0s,MS6.0
TIXI MLR MLR
comp=Z,22μm,14.0s,MS6.2
TIXI MLR MLR
comp=N,12μm,19.0s,MS6.0
TIXI Tiksi 41.49 11⇑ iP P 17 16 11.8 -1.0
comp=N,82nm,0.8s,mb5.4
TIXI ePP PP 17 17 48.8 +0.4
TIXI LR LR
comp=Z,20μm,20.0s,MS6.0
SKR Severo-Kuril's 41.60 48 eP P 17 16 12.0 -2.0
SKR ePPP 17 18 10.0
SKR pmax pmax
comp=N,2μm,2.0s
SKR pmax pmax
comp=Z,2μm,2.0s,mb6.4
SKR pmax pmax
comp=Z,180nm,1.0s,mb5.7
SKR pmax pmax
comp=N,50nm,0.5s
SKR pmax pmax
comp=E,50nm,0.5s
SKR MLR MLR
comp=N,8μm,18.0s,MS5.7
SKR MLR MLR
comp=E,5μm,18.0s,MS5.7
SKR MLR MLR
comp=Z,9μm,18.0s,MS5.7
IBAF Bafgh 41.61 283 eP P 17 16 15.0 +0.7
WBK Wadi Bani Khal 41.65 269 P P 17 16 16.6 +1.9
SNR=14
KHKI Kahang-Kahang 41.66 164 P P 17 16 15.3 +0.6
SOKR Solikamsk 41.85 325c iP P 17 16 16.4 +0.6
SOKR 17 18 07.3
SOKR S **S 17 22 34.5 +1.4**
SOKR SS SS 17 25 39.8 +0.7
SOKR SSS 17 26 12.4
SOKR pmax pmax
comp=Z,450nm,1.3s,mb5.9
SOKR MLR MLR
comp=Z,4μm,16.0s,MS5.4
BIDO Bidbid 42.01 270 P P 17 16 19.4 +1.7
SNR=14
AAI Ambon 42.02 144 P P 17 16 17.9 +0.2
IANJ Anjilo 42.12 289 eP P 17 16 19.6 +1.2
SMDO Samad 42.26 270 P P 17 16 21.0 +1.3
SNR=34
ICHK Chekchek 42.41 284 eP P 17 16 21.8 +1.0
JMDO Jabal Madar 42.48 269 P P 17 16 23.1 +1.6
SNR=13
XMIS Christmas Isla 42.50 179 eP P 17 16 20.5 -1.1
XMIS Christmas Isla 42.50 179⇑ eP P 17 16 19.9 -1.7
comp=Z,98nm,0.7s,mb5.7
HOQ Hoqain 42.68 271 P P 17 16 24.7 +1.6
SNR=18
SEY Seymchan 42.74 30c eP P 17 16 22.9 -0.1
PETK Petropavlovsk- 42.87 45 P P 17 16 23.7 -0.6
comp=Z,95nm,0.7s,mb5.7,baz=232,slow=3.4,SNR=149
PETK LR LR 17 36 03.7
comp=Z,5μm,19.3s,MS5.4,baz=345,slow=39
PETK Petropavlovsk- 42.87 45 P P 17 16 23.7 -0.5
PETK pmax pmax
comp=Z,95nm,0.7s,mb5.6
PETK MLR MLR
comp=Z,5μm,19.3s,MS5.4
PETK Petropavlovsk- 42.87 45 P P 17 16 23.7 -0.6
PETK LR LR 17 36 03.7
IALA Alasht 42.88 290 eP P 17 16 26.0 +1.4
IFIR Firoozkooh 43.01 289 eP P 17 16 27.1 +1.4
BSY Bisya 43.10 270 P P 17 16 27.5 +1.0
SNR=48
HATD Hatta, Dubai 43.22 273 P P 17 16 29.3 +1.9
SNR=20
ASHO Ashiyiah 43.33 273 P P 17 16 31.1 +2.7
SNR=54
PET Petropavlovsk 43.43 45 eP P 17 16 26.2 -2.6
PET e 17 18 08.8
PET e 17 18 15.5
PET eS **S 17 22 51.0 -5.6**
PET eSS SS 17 26 05.8 -4.6
PET pmax pmax
comp=Z,91nm,0.7s,mb5.6
PET pmax pmax
comp=Z,2μm,5.9s
PET pmax pmax
comp=Z,1μm,7.2s
PET pmax pmax
comp=Z,800nm,6.1s
PET pmax pmax
comp=Z,2μm,8.1s
PET MLR MLR
comp=Z,10μm,17.0s,MS5.8
PET MLR MLR
comp=Z,10μm,17.0s
PET Petropavlovsk 43.43 45⇑ iP P 17 16 27.3 -1.5
comp=Z,212nm,1.1s,mb5.8
PET LR LR
comp=Z,7μm,19.0s,MS5.6
ARQ Araqi 43.44 271 P P 17 16 31.3 +2.0
SNR=25
NAZ Nazwa, Dubai 43.55 273 P P 17 16 32.1 +1.9
SNR=24
IDMV Damavand 43.60 289 eP P 17 16 31.2 +0.8
FAQ Al Faqa, Dubai 43.70 273 P P 17 16 33.4 +2.1
SNR=20
ASUD Al Ashush, Dub 43.97 273 P P 17 16 35.9 +2.4
SNR=23
COCO West Island 44.87 191 P P 17 16 42.3 +1.6
comp=Z,2μm,1.0s,mb6.9,SNR=5.0
COCO West Island 44.87 191 i P P 17 16 42.6 +1.9
COCO West Island 44.87 191 eP P 17 16 40.4 -0.2
comp=Z,427nm,1.1s,mb6.2
COCO LR LR
comp=Z,6μm,19.0s,MS5.5
COCO West Island 44.87 191 P P 17 16 42.5 +1.9
SNR=5.0
COCO P 17 16 42.5
SNR=5.0
MAK Makhachkala 45.94 301c iP P 17 16 49.4 +0.4
MAK e 17 18 19.0
MAK e 17 18 35.8
MAK i S **S 17 23 35.3 +2.0**
MAK pmax pmax
comp=Z,233nm,1.6s,mb5.9
TLE Tual 46.04 140 P P 17 16 52.2 +2.2
IBST Bostanabad 47.23 294 eP P 17 16 59.8 +0.6
RBK Rabkut 47.90 265 P P 17 17 05.3 +0.8
SNR=9.7
IAZR Azarshahr 47.94 294 eP P 17 17 06.1 +1.4
WHFO Wadi Hawf 48.07 266 P P 17 17 06.2 +0.3
SNR=16
MTA Mtatsminda 48.10 299 P P 17 17 06.1 +0.3
TBLG Delisi 48.14 299 P P 17 17 07.3 +1.1
IDHR Dehrash 48.30 290 eP P 17 17 08.3 +0.7
GNI Garni 48.41 297 ceP P 17 17 09.9 +1.7
GNI pmax pmax
comp=Z,183nm,1.7s
GNI MLR MLR
comp=Z,4μm,23.0s
GNI Garni 48.41 297⇑ iP P 17 17 09.1 +0.8
GNI LR LR
comp=Z,2μm,20.0s,MS5.2
GNI Garni 48.41 297 P P 17 17 10.6 +2.4
SNR=33
GNI P 17 17 10.6
SNR=33
GOR Gori 48.56 300 P P 17 17 11.4 +2.0
ZEI Tsey 48.59 301 eP P 17 17 10.1 +0.5
ZEI e 17 19 04.2
ZEI ePPP 17 19 55.8
ZEI eS **S 17 24 18.0 +6.9**
ZEI eSSS 17 29 03.2
ZEI pmax pmax
comp=Z,80nm,0.7s,mb5.9
ZEI pmax pmax
comp=E,59nm,0.5s
ZEI pmax pmax
comp=N,68nm,0.7s
KEH Kehvi 48.64 300 P P 17 17 10.2 +0.2
ABTO Aybut 48.73 265 P P 17 17 11.4 +0.4
SNR=10.0
MIB Mutribah 48.91 283 eP P 17 17 11.8 -0.5
MIB AMb AMB 17 17 17.5
comp=Z,385nm,1.6s,mb6.2
ONI Oni 48.95 301 P P 17 17 13.7 +1.3
RDF Al-Radifah 49.02 282 eP P 17 17 12.9 -0.2
RDF AMb AMB 17 17 17.9
comp=Z,433nm,1.2s,mb6.3
NAY Al-Naaiem 49.17 283 eP P 17 17 13.7 -0.5
NAY AMb AMB 17 17 18.7
comp=Z,295nm,1.0s,mb6.3
KIV Kislovodsk 49.29 303 P P 17 17 15.0 0.0
comp=Z,1μm,1.1s,mb6.9,SNR=57
KIV Kislovodsk 49.29 303 eP P 17 17 15.5 +0.5
KIV e 17 18 36.3
KIV i S **S 17 24 25.3 +4.4**
KIV i SS SS 17 27 53.4 +1.3
KIV pmax pmax
comp=Z,541nm,2.5s,mb6.1
KIV MLR MLR
comp=Z,5μm,16.0s,MS5.6
KIV Kislovodsk 49.29 303⇑ iP P 17 17 15.3 +0.3
KIV LR LR
comp=Z,1μm,20.0s,MS4.9
KIV Kislovodsk 49.29 303 P P 17 17 15.8 +0.9
SNR=149
KIV P 17 17 15.8
SNR=149
VRHR Novokhopersk 49.30 312 eP P 17 17 14.8 -0.1
VRHR e 17 19 09.7
VRHR eS **S 17 24 19.7 -1.1**
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,140nm,0.8s,mb6.0
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,760nm,9.9s
VRHR pmax pmax
comp=N,180nm,14.0s
VRHR pmax pmax
comp=E,450nm,11.6s
VRHR smax
comp=N,920nm,3.7s
VRHR smax
comp=Z,330nm,4.4s
VRHR smax
comp=E,880nm,5.3s
VRHR MLR MLR
comp=Z,4μm,14.0s,MS5.6
VRHR MLR MLR
comp=N,1μm,10.0s,MS5.5
VRHR MLR MLR
comp=E,3μm,13.0s,MS5.5
DYDN Diyadin 49.32 297 i P P 17 17 16.9 +1.6
DIGO Kars 49.38 298 i P P 17 17 17.6 +1.9
HAKT HAKKARI 49.73 294 i P P 17 17 18.8 +0.4
BILL Bilibino 49.83 26 eP P 17 17 18.2 -0.5
BILL e 17 18 39.1
BILL i 17 19 10.2
BILL i S **S 17 24 27.0 -0.8**
BILL pmax pmax
comp=Z,414nm,2.5s,mb6.0
BILL MLR MLR
comp=Z,3μm,15.0s,MS5.4
BILL Bilibino 49.83 26⇑ iP P 17 17 18.2 -0.5
comp=Z,209nm,1.3s,mb6.0
BILL LR LR
comp=Z,11μm,19.0s,MS5.9
DGAR Diego Garcia 50.16 224 ceP P 17 17 21.3 -0.6
DGAR Diego Garcia 50.16 224 PFAKE 17 17 30.0 +8.1
DGAR LR LR
comp=Z,3μm,19.0s,MS5.4
ARTV Artvin 50.31 299 i P P 17 17 23.9 +1.1
DAGI Agillar 50.34 299 i P P 17 17 23.9 +0.9
DBOC Borcka 50.48 299 i P P 17 17 24.7 +0.7
DDEM Demirkent 50.50 299 i P P 17 17 25.1 +0.8
DBAD Bademkaya 50.52 299 i P P 17 17 25.4 +1.1
KLMR Klimovskoe 50.53 325c iP P 17 17 24.1 0.0
KLMR e 17 19 19.5
KLMR i S **S 17 24 36.5 -1.2**
KLMR i SS SS 17 28 10.7 -0.6
KLMR pmax pmax
comp=Z,543nm,6.1s
KLMR pmax pmax
comp=Z,514nm,1.2s,mb6.3
KLMR MLR MLR
comp=Z,6μm,16.0s,MS5.7
HOMI Horasan 50.56 298 i P P 17 17 26.2 +1.5
TATV Tatvan 50.62 296 i P P 17 17 26.0 +0.9
VOR Voronezh 50.77 313 eP P 17 17 25.0 -1.1
VOR pmax pmax
comp=Z,500nm,2.0s,mb6.1
VORD Divnogorie 50.77 312 eP P 17 17 25.7 -0.4
VORD e 17 19 22.0
VORD eS **S 17 24 39.5 -1.9**
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.3
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,60nm,1.2s
VORD pmax pmax
comp=N,260nm,3.2s
VORD pmax pmax
comp=Z,310nm,3.2s
VORD pmax pmax
comp=E,110nm,0.9s
VORD smax
comp=N,890nm,4.4s
VORD smax
comp=Z,200nm,3.5s
VORD smax
comp=E,840nm,4.7s
VORD MLR MLR
comp=Z,4μm,14.0s,MS5.6
VORD MLR MLR
comp=N,940nm,10.0s,MS5.6
VORD MLR MLR
comp=E,3μm,13.0s,MS5.6
VSR Storozhevoye 50.83 312c iP P 17 17 26.1 -0.5
VSR e 17 19 22.9
VSR eS **S 17 24 40.7 -1.5**
VSR pmax pmax
comp=Z,80nm,0.7s,mb5.8
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,70nm,0.8s
VSR pmax pmax
comp=Z,230nm,3.2s
VSR pmax pmax
comp=N,110nm,1.0s
VSR pmax pmax
comp=E,490nm,3.0s
VSR smax
comp=N,230nm,1.9s
VSR smax
comp=Z,210nm,3.7s
VSR smax
comp=E,170nm,2.4s
VSR MLR MLR
comp=Z,3μm,12.0s,MS5.5
VSR MLR MLR
comp=N,3μm,16.0s
VSR MLR MLR
comp=E,2μm,10.0s
ERZM Erzurum 50.99 298 i P P 17 17 29.9 +2.0
SOC Sochi 51.47 302c iP P 17 17 31.4 -0.1
SOC e 17 18 41.3
SOC e 17 19 29.2
SOC ePPP 17 20 25.4
SOC eS **S 17 24 52.9 +1.6**
SOC e*SS sS 17 24 57.8 -0.1
SOC eSSS 17 29 56.3

SOC pmax pmax
comp=Z,165nm,1.4s,mb5.8
SOC pmax pmax
comp=Z,988nm,5.5s
SOC MLR MLR
comp=Z,4μm,14.0s,MS5.6
MOS Moscow 51.48 318 *e*P **P 17 17 30.0 -1.3**
MOS *e* 17 19 25.9
MOS *e*S **S 17 24 50.3 -0.7**
MOS *e* 17 27 16.8
MOS *e*SSS 17 30 01.1
MOS pmax pmax
comp=Z,2μm,1.8s,mb6.7
MOS pmax pmax
comp=Z,665nm,1.3s,mb6.4
MOS MLR MLR
comp=E,8μm,15.0s
MOS MLR MLR
comp=Z,8μm,15.0s,MS5.9
BEST Besiri 51.53 295 *i* P **P 17 17 33.2 +1.2**
KOPT Kop Dagi 51.62 298 *i* P **P 17 17 33.7 +1.0**
KAKA Kakadu 51.88 145 *e*P **P 17 17 32.3 -2.5**
comp=Z,49nm,0.6s,mb5.6
KAKA Kakadu 51.88 145 *e*P **P 17 17 32.0 -2.8**
comp=Z,141nm,0.6s,mb6.1
MACK Trabzon 51.96 299 *i* P **P 17 17 35.5 +0.3**
OBN Obninsk 52.11 317 P **P 17 17 36.9 +0.8**
comp=Z,1μm,1.4s,mb6.6,SNR=20
OBN Obninsk 52.11 317 *e*P **P 17 17 35.7 -0.4**
OBN *i* 17 19 34.5
OBN *i* S **S 17 25 00.0 +0.3**
OBN *i* SS SS 17 28 38.6 +2.1
OBN pmax pmax
comp=Z,490nm,2.5s,mb6.0
OBN MLR MLR
comp=Z,6μm,14.0s,MS5.8
OBN Obninsk 52.11 317 *e*P **P 17 17 35.4 -0.7**
comp=Z,384nm,1.3s,mb6.2
OBN LR LR
comp=Z,5μm,21.0s,MS5.5
DIYA Diyarbakir 52.40 295 *i* P **P 17 17 38.9 +0.4**
KELT Kelkit 52.52 298 *i* P **P 17 17 40.4 +1.1**
SMY Shemya 52.77 46 *e*P **P 17 17 40.7 -0.3**
SMY pmax pmax
comp=Z,440nm,0.9s,mb6.4
SMY MLR MLR
comp=Z,3μm,20.0s,MS5.4
SMY Shemya 52.77 46 *e*P **P 17 17 40.7 -0.3**
comp=Z,440nm,0.9s,mb6.4
SMY LR LR
comp=Z,3μm,20.0s,MS5.4
ANN Anapa 52.86 304 *e*P **P 17 17 40.9 -0.9**
ANN *e* 17 19 40.8
ANN *e*PPP 17 20 45.8
ANN *e*S **S 17 25 09.8 -0.5**
ANN pmax pmax
comp=Z,141nm,0.7s,mb6.0
ANN MLR MLR
comp=N,910nm,15.0s,MS5.6
ANN MLR MLR
comp=E,4μm,15.0s,MS5.6
ANN MLR MLR
comp=Z,4μm,15.0s,MS5.6
GRSN GIRESUNGRSN 53.07 299 *i* P **P 17 17 43.1 -0.3**
ELZG Elazig 53.12 296 *i* P **P 17 17 44.9 +1.1**
LVZ Lovozero 53.15 334 P **P 17 17 43.7 +0.2**
comp=Z,640nm,1.2s,mb6.4,SNR=18
LVZ Lovozero 53.15 334 *ce*P **P 17 17 43.5 0.0**
LVZ pmax pmax
comp=Z,239nm,1.7s,mb5.8
LVZ MLR MLR
comp=Z,5μm,16.0s,MS5.7
LVZ Lovozero 53.15 334 PFAKE 17 18 00.0 +16
LVZ LR LR
comp=Z,2μm,22.0s,MS5.0
KEMA Kemaliye 53.30 297 *i* P **P 17 17 45.8 +0.7**
MALT Malatya 53.59 296⇑ *e*P **P 17 17 48.0 +0.7**
MALT MLR MLR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 53.59 296⇑ *e*P **P 17 17 48.0 +0.7**
MALT LR LR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 53.59 296⇑ *i*P **P 17 17 48.3 +1.0**
APA Apatity 53.60 333⇑ *i*P **P 17 17 47.4 +0.5**
APA *i* S **S 17 25 20.0 +0.4**
APA *i* 17 27 30.0
APA pmax pmax
comp=Z,2μm,6.0s
APA pmax pmax
comp=Z,320nm,1.2s,mb6.1
APA MLR MLR
comp=Z,9μm,15.0s,MS5.9
FITZ Fitzroy Crossi 53.85 155⇑ *i*P **P 17 17 48.4 -0.9**
comp=Z,85nm,0.9s,mb5.7
FITZ *e*S **S 17 25 19.4 -4.7**
FITZ Fitzroy Crossi 53.85 155⇑ *i*P **P 17 17 48.2 -1.1**
comp=Z,234nm,1.4s,mb5.9
ATAB Bozova 53.92 295 *i* P **P 17 17 50.7 +1.0**
AKCD Akcadag 53.98 296 *i* P **P 17 17 51.5 +1.4**
ERBA Erbaa 54.25 300 *i* P **P 17 17 52.3 +0.2**
JOF Joensuu 54.44 327 *e*P **P 17 17 53.0 -0.1**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
JOF Joensuu 54.44 327 *ep* **P 17 17 53.0 -0.1**
comp=Z,5.2nm,0.4s,mb4.8
MBWA Marble Bar 54.97 163⇑ *i*P **P 17 17 56.4 -0.9**
comp=Z,113nm,1.0s,mb5.8
MBWA LR LR
comp=Z,1μm,19.0s,MS5.1
MBWA Marble Bar 54.97 163 P **P 17 17 58.1 +0.8**
SNR=7.6
MBWA P 17 17 58.1
SNR=7.6
PINB Pinarbasi 55.03 297 *i* P **P 17 17 58.1 +0.4**
KUZU Kuzuini 55.05 295 *i* P **P 17 17 58.3 +0.3**
PUL Pulkovo 55.12 324 *ce*P **P 17 17 58.8 +0.7**
PUL pmax pmax
comp=Z,632nm,1.2s,mb6.5
PUL MLR MLR
comp=Z,4μm,17.0s,MS5.6
SIM Simferopol' 55.14 305 *ce*P **P 17 17 59.1 +0.6**
SIM *e*S **S 17 25 41.0 -0.1**
SIM pmax pmax
comp=Z,116nm,0.7s,mb6.0
ANDN Andirin 55.38 296 *i* P **P 17 18 00.5 +0.3**
CTKT Corum 55.71 300 *i* P **P 17 18 02.8 +0.2**
COBT Iskenderun 55.75 295 *i* P **P 17 18 04.1 +1.1**
KEV Kevo 55.97 336⇑ *i*P **P 17 18 03.7 -0.4**
KEV MLR MLR
comp=Z,2μm,21.0s,MS5.1
KEV Kevo 55.97 336 *ep* **P 17 18 03.4 -0.7**
comp=Z,10nm,0.4s,mb5.2
YAYL Yayladag 56.01 294 *i* P **P 17 18 04.2 -0.6**
YURE YUREGIR 56.14 295 *i* P **P 17 18 05.7 -0.1**
CDAG Cicekdag 56.29 299 *i* P **P 17 18 05.8 -0.9**
FKH Fakeheh 56.34 292 *e*P **P 17 18 07.5 +0.2**
ILGA Ilgaz 56.38 301 *i* P **P 17 18 07.8 +0.4**
WAKE Wake Island 56.38 87 PFAKE 17 18 20.0 +12
WAKE LR LR
comp=Z,2μm,19.0s,MS5.1
BALT Daday 56.49 301 *i* P **P 17 18 08.4 +0.3**
ARCES ARCESS Array B 56.51 336 P **P 17 18 07.7 -0.2**
comp=Z,63nm,0.7s,mb5.8,baz=81,slow=7.4,SNR=94
ARCES ARCESS Array B 56.51 336 P **P 17 18 07.7 -0.2**
ARCES pmax pmax
comp=Z,63nm,0.7s
ARE0 ARCESS Array S 56.51 336 *e*P **P 17 18 07.8 -0.1**
ASF Jabal al Asfar 56.63 290 LR LR 17 45 22.9
comp=Z,2μm,18.8s,MS5.3,baz=191,slow=39
GULE Gulek 56.66 296 *i* P **P 17 18 09.9 +0.5**
HWQ Hawqa 56.69 292 *e*P **P 17 18 10.1 +0.4**
ELDT Eldivan 56.74 300 *i* P **P 17 18 10.6 +0.6**
BRTR Keskin Array B 56.80 299 P **P 17 18 10.2 -0.2**
comp=Z,31nm,0.7s,mb5.4,baz=98,slow=6.7,SNR=185
BRTR S **S 17 26 00.9 -2.4**
comp=Z,0.4nm,0.7s,baz=139,slow=44,SNR=2.7
BRTR LR LR 17 46 42.7
comp=Z,2μm,18.5s,MS5.2,baz=262,slow=40
BRTR PKPPKP 17 47 56.8
comp=Z,0.5nm,0.8s,baz=214,slow=1.3,SNR=3.6
BRTR PKP2bc 17 48 18.4
comp=Z,0.8nm,0.9s,baz=158,slow=1.3,SNR=3.7
BRTR Keskin Array B 56.80 299 P **P 17 18 10.3 -0.1**
BRTR S **S 17 26 00.9 -2.4**
BRTR pmax pmax
comp=Z,31nm,0.7s
BRTR MLR MLR
comp=Z,2μm,18.5s
BRTR Keskin Array B 56.80 299 P **P 17 18 10.2 -0.2**
BRTR S **S 17 26 00.9 -2.4**
BRTR LR LR 17 46 42.7
BRTR P'P' 17 47 56.8
BRTR ⇑*e* 17 48 18.4
KAF Kangasniemi 56.82 327 *e*P **P 17 18 09.7 -0.5**
KAF pmax pmax
comp=Z,6.0nm,0.3s,mb5.1
KAF Kangasniemi 56.82 327 *ep* **P 17 18 09.7 -0.5**
comp=Z,6.1nm,0.3s,mb5.1
FINES FINESS Array B 57.02 326 P **P 17 18 11.3 -0.3**
comp=Z,111nm,0.7s,mb6.0,baz=87,slow=7.8,SNR=218
FINES LR LR 17 42 17.9
comp=Z,3μm,19.5s,MS5.4,baz=88,slow=36
FINES PKP2bc 17 48 17.1
comp=Z,2.6nm,0.9s,baz=28,slow=8.6,SNR=3.4
FINES FINESS Array B 57.02 326 P **P 17 18 11.3 -0.3**
FINES LR LR 17 42 17.9
FINES ⇑*e* 17 48 17.1
BHL Bhannes 57.04 292 *e*P **P 17 18 12.2 0.0**
RCY Rachaya 57.04 291 *e*P **P 17 18 12.9 +0.6**
AKASG Malin Array Be 57.12 313 P **P 17 18 11.3 -1.2**
comp=Z,38nm,0.7s,mb5.5,baz=68,slow=6.6,SNR=80
AKASG LR LR 17 44 07.5
comp=Z,7μm,18.5s,MS5.8,baz=70,slow=38
AKASG Malin Array Be 57.12 313 P **P 17 18 11.3 -1.2**
AKASG pmax pmax
comp=Z,38nm,0.7s
AKASG MLR MLR
comp=Z,7μm,18.5s
AKASG Malin Array Be 57.12 313 P **P 17 18 11.3 -1.2**
AKASG LR LR 17 44 07.5
KIEV Kiev 57.13 313⇑ *i*P **P 17 18 11.6 -1.0**
KIEV *e* 17 20 19.4
KIEV *e*S **S 17 26 06.1 -1.3**
KIEV pmax pmax
comp=Z,151nm,1.4s,mb5.8
KIEV MLR MLR
comp=Z,8μm,19.0s,MS5.8
KIEV Kiev 57.13 313⇑ *i*P **P 17 18 11.6 -1.0**
comp=Z,151nm,1.4s,mb5.8
KIEV *e*PP PP 17 20 19.4 +0.1
KIEV *e*S **S 17 26 06.1 -1.3**
KIEV LR LR
comp=Z,8μm,19.0s,MS5.8
MICGM Minsk 57.17 317 *e*P **P 17 18 10.0 -2.8**
MNK Minsk 57.20 317 *ce*P **P 17 18 10.0 -3.0**
MNK *e* 17 19 06.0
MNK *e* 17 20 24.0
MNK *e*PPP 17 21 46.0
MNK *e*S **S 17 26 04.0 -4.2**
MNK pmax pmax
comp=E,370nm,1.8s
MNK pmax pmax
comp=Z,260nm,1.2s,mb6.1
MNK MLR MLR
comp=Z,24μm,12.0s,MS6.5
MNK MLR MLR
comp=E,17μm,14.0s
BBAL Bala 57.23 299 *i* P **P 17 18 13.4 -0.1**
KSDI Kefar Szold 57.27 291 P **P 17 18 15.2 +1.4**
KTK1 Kautokeino 57.35 335 *e*S **S 17 26 12.9 +3.2**
MMAI Mount Meron Ar 57.53 291 P **P 17 18 17.3 +1.6**
comp=E,85nm,1.2s,mb5.7,baz=69,slow=8.3,SNR=22
MMAI LR LR 17 49 31.1
comp=E,2μm,18.1s,MS5.2,baz=65,slow=43
DHBB Dhamar BB 57.58 267⇑ *i*P **P 17 18 17.4 +1.1**
IDID Didziasalis 57.67 319 *e*P **P 17 18 16.6 +0.3**
MMLI Mount Malkishu 57.71 290 P **P 17 18 18.4 +1.4**
NACGM Naroch 57.73 318 *e*P **P 17 18 13.0 -3.7**
IZAR Zarasai 57.86 319 *e*P **P 17 18 17.5 -0.1**
IIGN Ignalina 57.95 319 *e*P **P 17 18 18.7 +0.4**
ISAL Salakas 57.96 319 *e*P **P 17 18 18.7 +0.3**
MEF Metsahovi 58.02 325 P **P 17 18 18.7 0.0**
BJO Bjornoya 58.10 342 *e* **P 17 18 20.5 +1.4**
BJO AMS AMS 17 47 37.6
comp=Z,8μm,18.7s,MS5.9
SRPE Suurupi 58.16 324 P **P 17 18 19.5 -0.1**
KIS Kishinev 58.24 309 *i* P **P 17 18 17.0 -3.5**
comp=Z,400nm,1.6s,mb6.2
KIS Kishinev 58.24 309 *e*PcP PcP 17 19 10.0 -1.7
KIS Kishinev 58.24 309 *e*PP PP 17 20 28.0 -1.2
KIS Kishinev 58.24 309α *i*P **P 17 18 17.0 -3.5**
KIS *i* 17 18 27.0
KIS *e* 17 19 10.0
KIS *e* 17 20 28.0
KIS *i* 17 21 58.0
KIS *e*S **S 17 26 14.0 -8.1**
KIS *e*PS 17 26 30.0
KIS *e*SS SS 17 30 12.0 -1.4
KIS pmax pmax
comp=Z,360nm,1.6s,mb6.2
KIS pmax pmax
comp=E,290nm,2.0s
KIS pmax pmax
comp=Z,2μm,7.0s
KIS pmax pmax
comp=Z,1μm,9.0s
KIS MLR MLR
comp=Z,4μm,15.0s,MS5.7
KIS MLR MLR
comp=N,1μm,11.0s,MS5.6
KIS MLR MLR
comp=E,3μm,16.0s,MS5.6
KIS MLR MLR
comp=Z,4μm,16.0s
KDHN Kadinhani 58.29 298 *i* P **P 17 18 20.2 -0.7**
CSS Prodhromos 58.50 294 *e*P **P 17 18 21.5 -1.0**
comp=Z,80nm,0.9s,mb5.8
CSS Prodhromos 58.50 294 P **P 17 18 21.1 -1.4**
GAMB Gambell 58.71 31⇑ *i*P **P 17 18 22.8 -0.6**
comp=Z,98nm,1.2s,mb5.7
TLCR 58.72 307⇑ P **P 17 18 24.1 +0.3**
TLCR 58.72 307⇑ *i*P **P 17 18 24.1 +0.3**
COEN Coen 58.74 135⇑ *i*P **P 17 18 23.6 -0.7**
comp=Z,660nm,0.8s,mb6.7
TRO Tromso 58.79 336⇑ *i*P **P 17 18 23.1 -0.8**
TRO AMB AMB 17 18 25.6
comp=Z,96nm,1.6s,mb5.6
TRO *e*S **S 17 26 29.3 +0.7**
TRO *e*SS SS 17 30 36.3 +15
TRO AMS AMS 17 46 11.7
comp=Z,7μm,15.1s,MS5.9
TRO Tromso 58.79 336 P **P 17 18 24.1 +0.2**
GAZI Gazipasa 58.86 296 *i* P **P 17 18 23.3 -1.6**
HRFI Mount Harif 58.87 288 P **P 17 18 25.4 +0.3**
ESKT Eskisehir 58.92 300 *i* P **P 17 18 23.9 -1.4**
WRAB Tennant Creek 59.04 147 P **P 17 18 25.0 -1.2**
comp=Z,3μm,0.6s
WRAB Tennant Creek 59.04 147⇑ *i*P **P 17 18 25.4 -0.8**
WRAB *e*S **S 17 26 29.0 -3.8**
WRAB pmax pmax
comp=Z,249nm,0.6s,mb6.4
WRAB MLR MLR
comp=Z,2μm,21.0s,MS5.2
WRAB Tennant Creek 59.04 147⇑ *i*P **P 17 18 25.4 -0.8**
comp=Z,249nm,0.6s,mb6.4
WRAB *e*S **S 17 26 29.0 -3.9**
WRAB LR LR
comp=Z,2μm,21.0s,MS5.2
KZIT Kziot 59.07 289 P **P 17 18 26.7 +0.2**
BOLV Bolvadin 59.09 299 *i* P **P 17 18 26.2 -0.3**
CFR Carcaliu 59.19 307⇑ *i*P **P 17 18 27.3 +0.2**
TIRR Tirgusor 59.20 306 *e*P **P 17 18 26.6 -0.6**
TIRR pmax pmax
comp=Z,147nm,1.4s,mb5.8
TIRR Tirgusor 59.20 306 *e*P **P 17 18 26.6 -0.6**
comp=Z,147nm,1.4s,mb5.8
HARR Harsova 59.46 306⇓ P **P 17 18 29.4 +0.4**
HARR Harsova 59.46 306⇓ *i*P **P 17 18 29.4 +0.4**
MSEY Mahe Island 59.61 241 PFAKE 17 18 40.0 +10
MSEY LR LR
comp=Z,2μm,20.0s,MS5.2
ISP Isparta 59.70 298 P **P 17 18 30.5 -0.2**
ISP Isparta 59.70 298⇑ *i*P **P 17 18 29.9 -0.9**
comp=Z,98nm,0.8s,mb5.9
ISP LR LR
comp=Z,2μm,21.0s,MS5.3
ISP Isparta 59.70 298⇑ *i*P **P 17 18 30.2 -0.5**
ISP Isparta 59.70 298 P **P 17 18 30.0 -0.7**
TNA Tin City 59.96 29⇑ *i*P **P 17 18 31.2 -0.9**
comp=Z,154nm,1.4s,mb5.8
TNA *e*PP PP 17 20 44.4 +0.5
SUW Suwalki 59.97 318 *e*P **P 17 18 32.3 0.0**
SUW *e*S **S 17 26 44.0 -0.2**
SUW LMZ 17 45 31.4
comp=Z,9μm,16.5s
SUW Suwalki 59.97 318⇑ *i*P **P 17 18 31.2 -1.1**
comp=Z,218nm,1.1s,mb6.1
ULDT Uludag 59.98 301 *i* P **P 17 18 32.6 0.0**
PLOR Plostina 60.00 308 P **P 17 18 33.9 +1.2**
PLOR Plostina 60.00 308⇑ *i*P **P 17 18 33.3 +0.6**
GDZ Gediz 60.06 300 *i* P **P 17 18 32.6 -0.6**
KORT Korkueli 60.10 297 *i* P **P 17 18 31.3 -2.2**
ELBA Catalca 60.17 302 *i* P **P 17 18 32.8 -1.1**
KHAL Karahalli 60.29 299 *i* P **P 17 18 33.2 -1.6**
BURAR Bucovina Array 60.44 310 P **P 17 18 36.7 +1.1**
BURAR Bucovina Array 60.44 310 P **P 17 18 36.1 +0.5**
BURAR Bucovina Array 60.44 310⇓ *i*P **P 17 18 36.0 +0.4**
BUR08 Bucovina Ar. S 60.44 310⇑ *i*P **P 17 18 35.5 -0.1**
LVV L'vov 60.57 313 *d*P **P 17 18 36.5 0.0**
LVV *e* 17 20 47.0
LVV *i* S **S 17 26 52.0 -0.1**
LVV MLR MLR
comp=Z,3μm,20.0s,MS5.4
MLR Muntele Rosu 60.58 308⇑ *i*P **P 17 18 37.2 +0.6**
GOLH Golhisar 60.61 298 *i* P **P 17 18 35.6 -1.5**
DURS Dursunbey 60.63 300 *i* P **P 17 18 36.3 -0.8**
DEMI Demirci 60.64 300 *i* P **P 17 18 36.5 -0.6**
DNZL Cakiroluk 60.85 298 *i* P **P 17 18 37.6 -1.0**
BUC1 Bucharest 60.87 306 P **P 17 18 40.6 +2.0**
AKAS Kas 60.92 296 *i* P **P 17 18 36.4 -2.7**
MANT Manisa 60.94 299 *i* P **P 17 18 39.4 +0.1**
LOF Lofoten 61.01 335 *e*P **P 17 18 40.6 +1.4**
LOF AMB AMB 17 18 41.7
comp=Z,149nm,1.1s,mb6.0
JMB Yambol 61.07 304 P **P 17 18 41.1 +1.1**
JMB Yambol 61.07 304 P **P 17 18 40.7 +0.7**
JMB Yambol 61.07 304 *i* P **P 17 18 41.1 +1.1**
MOR8 Moi Rana 61.16 332 *e*P **P 17 18 38.1 -2.2**
MOR8 AMB AMB 17 18 39.8
comp=Z,94nm,0.9s,mb5.9
VOIR 61.19 308 P **P 17 18 41.6 +0.8**
VOIR 61.19 308 P **P 17 18 41.5 +0.7**
VOIR 61.19 308⇓ *i*P **P 17 18 41.4 +0.6**
BALY Balya 61.21 301 *i* P **P 17 18 40.7 -0.4**
SART Tekirdag 61.22 302 *i* P **P 17 18 40.0 -1.1**
SZH Strazhica 61.27 305 *i* P **P 17 18 41.4 0.0**
AKHS Akhisar 61.36 300 *i* P **P 17 18 41.1 -0.9**
KWP Kalwaria Pacla 61.45 313 *e*P **P 17 18 43.4 +1.0**
KWP LMZ 17 45 47.3
comp=Z,5μm,20.2s
KWP Kalwaria Pacla 61.45 313⇑ *i*P **P 17 18 42.5 0.0**
KWP LR LR
comp=Z,5μm,19.0s,MS5.7
KWP Kalwaria Pacla 61.45 313⇓ *i*P **P 17 18 43.3 +0.8**
TURN Turunc 61.46 297 *i* P **P 17 18 43.3 +0.5**
BMR Baia Mare 61.53 311 P **P 17 18 44.1 +1.0**
BMR Baia Mare 61.53 311 P **P 17 18 44.0 +0.9**
BMR Baia Mare 61.53 311⇓ *i*P **P 17 18 43.8 +0.7**
WAR Warsaw 61.70 316 *e*P **P 17 18 44.9 +0.7**
WAR LMZ 17 46 41.4
comp=Z,6μm,19.6s
AYDN Tasoluk 61.73 299 *i* P **P 17 18 45.1 +0.5**
KOLS Kolonicke sedl 61.93 312 *e*P **P 17 18 46.3 +0.6**
KOLS pmax pmax
comp=Z,58nm,1.3s,mb5.5
KOLS Kolonicke sedl 61.93 312 P **P 17 18 46.0 +0.3**
KOLS Kolonicke sedl 61.93 312 *e*P **P 17 18 46.3 +0.6**
KOLS *e*S **S 17 27 10.9 +1.6**
KOLS *e*SS SS 17 31 43.1 +32
ALN Alexandroupoli 61.96 303 P **P 17 18 45.7 -0.4**
TRPA Tarpa 62.01 311⇑ *i*P **P 17 18 46.5 +0.2**
UZH Uzhgorod 62.01 312⇓ *i*P **P 17 18 46.1 -0.2**
UZH *e* 17 18 56.7
UZH *i* 17 19 29.0
UZH *i* 17 21 01.0
UZH *i*PPP 17 22 36.0
UZH *e*S **S 17 27 08.0 -2.4**
UZH *e*PS 17 28 29.0
UZH MLR MLR
comp=N,2μm,15.0s,MS5.7
UZH MLR MLR
comp=E,3μm,15.0s,MS5.7
UZH MLR MLR
comp=Z,2μm,15.0s,MS5.4
UZH Uzhgorod 62.01 312 *i* P **P 17 18 46.0 -0.3**
AYVA Ayvalik 62.03 301 *i* P **P 17 18 46.5 -0.1**
ARG Arkhangelos 62.05 297 *e*P **P 17 18 45.7 -1.1**
ASAR Alice Springs 62.11 150 P **P 17 18 46.8 -0.4**
comp=Z,69nm,0.5s,mb6.0,baz=330,slow=6.6,SNR=905
ASAR S **S 17 27 10.2 -1.9**
comp=Z,4.6nm,1.1s,baz=328,slow=8.6,SNR=6.9
ASAR PKPPKP 17 47 45.2
comp=Z,1.0nm,0.7s,baz=143,slow=2.9,SNR=8.2
ASAR PKP2bc 17 48 03.9
comp=Z,3.3nm,0.7s,baz=140,slow=2.6,SNR=6.9
ASAR Alice Springs 62.11 150 P **P 17 18 46.8 -0.4**
ASAR S **S 17 27 10.2 -1.9**
ASAR P'P' 17 47 45.2
ASAR ⇑*e* 17 48 03.9
KDZ Kurdzhali 62.16 304 *i* P **P 17 18 47.9 +0.5**
GCAM G?zelcaml? 62.19 299 *i* P **P 17 18 47.4 -0.3**
RDO Rodhopi 62.24 303 P **P 17 18 47.4 -0.5**
BDRM Kayabasi 62.26 298 *i* P **P 17 18 47.0 -1.2**
DRGR 62.32 310 P **P 17 18 49.2 +0.8**
DRGR 62.32 310 P **P 17 18 49.1 +0.7**
DRGR 62.32 310⇑ *i*P **P 17 18 46.8 -1.6**
STHS Stebnicka Huta 62.42 313 P **P 17 18 49.8 +0.8**
STHS Stebnicka Huta 62.42 313 *e*P **P 17 18 49.7 +0.7**
URLA Izmir 62.43 300 *i* P **P 17 18 48.6 -0.6**
PLD Plovdiv 62.50 304 P **P 17 18 50.5 +0.8**
PLD Plovdiv 62.50 304 P **P 17 18 49.2 -0.5**
NSS Namsos 62.62 331⇑ *i*P **P 17 18 48.3 -1.8**
NSS *e*S **S 17 27 17.0 -0.6**
NSS *e*SS SS 17 31 23.6 +2.4
NSS AMS AMS 17 48 01.6
comp=Z,7μm,17.1s,MS5.9
RZN Rozhen 62.64 304 *i* P **P 17 18 51.2 +0.6**
GZR Gura Zlata 62.73 308 P **P 17 18 51.7 +0.6**
GZR Gura Zlata 62.73 308⇓ *i*P **P 17 18 51.4 +0.3**
PGB Panagyurishte 62.73 305 *i* P **P 17 18 52.4 +1.2**
CHOS Chios island 62.82 300 P **P 17 18 51.6 -0.3**
LIA Limnos Island 62.92 302 *e*P **P 17 18 51.8 -0.7**
LIA Limnos Island 62.92 302 P **P 17 18 51.7 -0.8**
NIE Niedzica 63.00 313⇑ *e*P **P 17 18 53.7 +0.8**
NIE Niedzica 63.00 313 P **P 17 18 54.0 +1.1**
KAVA Kavala 63.02 303 P **P 17 18 52.5 -0.6**
KARP Karpathos 63.02 297 *e*P **P 17 18 52.6 -0.7**
OJC Ojcow 63.06 314 *i* P **P 17 18 53.1 -0.1**
OJC *e*sP sP 17 18 56.9 -1.9
OJC *e*PcP PcP 17 19 30.1 -0.9
OJC *i* S **S 17 27 23.1 -0.4**
OJC L 17 47 44.0
comp=Z,10nm,19.2s
OJC Ojcow 63.06 314 P **P 17 18 53.6 +0.4**
DJES Djerdap 63.14 308 P **P 17 18 54.5 +0.6**
KECS Kecovo 63.19 312 *e*P **P 17 18 55.0 +0.8**
KECS pmax pmax
comp=Z,18nm,0.9s,mb5.2
KECS Kecovo 63.19 312 *e*P **P 17 18 55.0 +0.8**
HFA0 Hagfors New Ar 63.22 326 P **P 17 18 52.0 -2.1**
DESE Dese 63.31 266 *e*P **P 17 18 57.6 +2.1**
DESE S **S 17 27 35.3 +7.6**
NVR Nevrokopi 63.35 304 P **P 17 18 57.2 +1.8**
MMB Musomiste 63.37 304 *i* P **P 17 18 54.9 -0.5**
VTS Vitosha 63.38 305 P **P 17 18 55.9 +0.4**
VTS Vitosha 63.38 305 P **P 17 18 55.5 0.0**
VTS Vitosha 63.38 305 *i* P **P 17 18 55.9 +0.4**
BZS Buzias 63.42 309⇑ *i*P **P 17 18 55.9 +0.2**
GKP Gorka Klasztor 63.58 318 *e*P **P 17 18 57.0 +0.3**
GKP *e*S **S 17 27 31.5 +1.6**
GKP LMZ 17 47 55.8
comp=Z,13μm,16.8s
GKP Gorka Klasztor 63.58 318⇑ *e*P **P 17 18 56.9 +0.3**
GKP *e*S **S 17 27 31.5 +1.6**
GKP MLR MLR
comp=Z,13μm,16.8s,MS6.2
SRS Serrai 63.63 304 P **P 17 18 56.1 -1.1**
OUR Ouranopolis 63.63 303 P **P 17 18 55.9 -1.3**
TIM Timisoara 63.64 309 P **P 17 18 58.4 +1.2**
APE Apeiranthos 63.69 299 *e*P **P 17 18 56.7 -0.9**
APE Apeiranthos 63.69 299 P **P 17 18 57.5 -0.1**

APE Apeiranthos 63.69 299⇓ iP P 17 18 56.5 -1.1
APE Apeiranthos 63.69 299 P P 17 18 56.0 -1.6
KKB Krupnik 63.72 304 i P P 17 18 57.6 -0.2
PSZ Piszkesteto 63.76 312 P P 17 18 58.5 +0.6
PSZ Piszkesteto 63.76 312⇑ iP P 17 18 57.8 -0.1
PSZ LR LR
comp=Z,5µm,19.0s,MS5.7
PSZ Piszkesteto 63.76 312⇑ eP P 17 18 58.4 +0.5
PSZ Piszkesteto 63.76 312⇑ iP P 17 18 58.2 +0.3
UNV Unalaska Valle 63.86 41 eP P 17 18 56.5 -2.0
comp=Z,150nm,1.4s,mb5.8
LIKS Likavka 63.87 313 eP P 17 18 59.8 +1.2
LIKS pmax pmax
comp=Z,34nm,1.2s,mb5.2
LIKS Likavka 63.87 313 eP P 17 18 59.8 +1.2
ZKR Zakros 63.90 296 P P 17 18 58.3 -0.8
PAIG Paliouri 63.99 302 P P 17 18 57.7 -1.9
PLG Polygyros 64.00 303 P P 17 18 58.7 -0.9
THR1 Thera Island 64.00 298 P P 17 18 58.5 -1.2
RAC Raciborz 64.08 314 eP P 17 19 00.5 +0.5
RAC eS S 17 27 38.6 +2.4
RAC MLR MLR
comp=Z,8µm,18.0s,MS6.0
NB2 NORSAR Subarra 64.08 327 P P 17 18 58.7 -1.1
comp=Z,77nm,0.8s,mb5.8,baz=72,slow=6.9
NOA NORSAR Array B 64.08 327 P P 17 18 58.7 -1.1
comp=Z,50nm,0.7s,mb5.7,baz=71,slow=6.6,SNR=177
NOA NORSAR Array B 64.08 327 P P 17 18 58.7 -1.1
NOA pmax pmax
comp=Z,50nm,0.7s
AOS Alonnisos 64.12 301 P P 17 18 52.4 -8.1
OKC Ostrava-Krasne 64.19 314 P P 17 19 01.3 +0.6
OKC Ostrava-Krasne 64.19 314 eP P 17 19 00.7 0.0
OKC epP pP 17 19 04.9 +0.1
OKC ePP PP 17 21 21.6 +0.1
OKC ePKPPKP 17 47 59.5
OKC AMS AMS 17 48 10.0
comp=Z,7µm,17.2s
VYHS Vyhne 64.22 313 eP P 17 19 01.4 +0.4
VYHS pmax pmax
comp=Z,83nm,1.4s,mb5.6
VYHS Vyhne 64.22 313 P P 17 19 01.5 +0.5
VYHS Vyhne 64.22 313 eP P 17 19 01.4 +0.4
VYHS eS S 17 27 39.7 +1.6
VYHS eSS SS 17 32 18.5 +32
VYHS e 17 47 05.2
VYHS e 17 47 58.1
BSD Bornholm Skovb 64.25 320⇑ iP P 17 18 59.8 -1.2
BSD i 17 21 21.3
BSD i S S 17 27 34.8 -3.4
BSD pmax pmax
comp=Z,42nm,1.0s,mb5.4
BSD MLR MLR
comp=Z,3µm,18.0s,MS5.5
BSD Bornholm Skovb 64.25 320⇑ iP P 17 18 59.8 -1.2
comp=Z,42nm,1.0s,mb5.4
BSD i 17 21 21.3
BSD i S S 17 27 34.8 -3.4
BSD
comp=Z,3µm,18.0s
BARS Barje 64.26 306 P P 17 19 01.7 +0.4
BARS Barje 64.26 306⇑ iP P 17 19 01.2 -0.1
VAY Valandovo 64.27 304 i P P 17 19 00.3 -1.1
NAO01 NORSAR Array S 64.29 327⇑ iP P 17 18 59.5 -1.8
NAO01 LR LR
comp=Z,3µm,19.0s,MS5.5
NPS Neapolis 64.30 297 eP P 17 19 00.8 -0.9
NPS Neapolis 64.30 297 P P 17 19 01.9 +0.2
STIP Stip 64.41 305 i P P 17 19 01.4 -1.0
STIP Stip 64.41 305 i P P 17 19 01.3 -1.0
LAST Lasithi 64.44 297 P P 17 19 02.2 -0.4
BUD Budapest 64.46 311⇑ eP P 17 19 03.1 +0.6
BEO Beograd 64.46 308⇓ iP P 17 19 01.7 -0.9
KOLL Kolacno 64.47 313 eP P 17 19 03.2 +0.6
KOLL Kolacno 64.47 313 P P 17 19 03.4 +0.8
KOLL Kolacno 64.47 313 eP P 17 19 03.2 +0.6
KOLL epP pP 17 19 08.0 +1.4
XOR Xorichti 64.55 302 P P 17 19 01.9 -1.4
PTL Penteli 64.55 300 eP P 17 19 02.1 -1.2
MORC Moravsky Berou 64.58 314⇑ iP P 17 19 03.1 -0.2
MORC e 17 21 24.0
MORC Moravsky Berou 64.58 314⇓ iP P 17 19 03.8 +0.5
GRUS Gruza 64.62 307 P P 17 19 04.0 +0.3
ATHU Athens Univers 64.64 300 P P 17 19 05.3 +1.4
KLBR Kellerberrin 64.65 168 eP P 17 19 03.6 -0.2
comp=Z,48nm,0.5s,mb5.8
VLY Voula,Athens 64.67 300 eP P 17 19 02.4 -1.7
DOMB Dombas 64.69 329 eP P 17 19 03.1 -0.7
DOMB AMB AMB 17 19 07.3
comp=Z,93nm,1.0s,mb5.8
OSL Oslo 64.69 326 eP P 17 19 03.5 -0.3
LIT Litokhoron 64.78 303 P P 17 19 03.1 -1.7
SKO Skopje 64.83 305 i P P 17 19 05.4 +0.4
IDI Anoyia 64.84 297 P P 17 19 06.2 +1.0
KSP Ksiaz 64.95 316 eP P 17 19 05.8 +0.2
KSP eS S 17 27 47.5 +0.6
KSP LMZ 17 48 47.5
comp=Z,16µm,17.9s
KSP Ksiaz 64.95 316⇑ eP P 17 19 05.8 +0.1
KSP e 17 21 27.5
KSP eS S 17 27 44.0 -3.0
KSP eSS SS 17 31 51.0 -7.1
KSP MLR MLR
comp=Z,18µm,17.9s,MS6.3
LKR Lokris 64.95 301 eP P 17 19 04.4 -1.5
LKR Lokris 64.95 301 P P 17 19 04.2 -1.7
LKR Lokris 64.95 301 P P 17 19 04.2 -1.7
SIVA Sivas 65.00 297 P P 17 19 05.4 -0.9
DIVS Divibare 65.04 308 P P 17 19 06.1 -0.3
DPC Dobruska-Polom 65.11 315 eP P 17 19 07.3 +0.6
DPC epP pP 17 19 11.1 +0.3
DPC ePP PP 17 21 29.9 +0.3
DPC eS S 17 27 51.2 +2.3
DPC ePKPPKP 17 47 48.3
DPC AMS AMS 17 48 20.0
comp=Z,9µm,14.9s
MOL Molde 65.15 330 e P 17 19 07.9 +1.1
MOL eS S 17 27 49.8 +0.8
MOL eSS SS 17 32 08.0 +7.3
MOL AMS AMS 17 49 41.5
comp=Z,7µm,14.7s,MS6.0
PKSM Moragy 65.16 310⇑ iP P 17 19 07.3 +0.2
KRUS Krusevo 65.18 304 i P P 17 19 05.9 -1.5
KZN Kozani 65.21 303 eP P 17 19 06.5 -1.1
UPC Upice 65.24 315 eP P 17 19 07.8 +0.3
UPC epP pP 17 19 11.9 +0.3
UPC ePKPPKP 17 47 48.4
FURI Furi 65.25 265 eP P 17 19 10.6 +2.4
FURI S S 17 27 57.6 +5.9
BIA Bitola 65.26 304 eP P 17 19 06.5 -1.4
ALE Alert 65.29 358 P P 17 19 08.0 +0.5
comp=Z,219nm,2.0s,mb5.8,SNR=22
AGG Agios Georgios 65.30 302 P P 17 19 06.6 -1.5
FNA Florina 65.31 304 P P 17 19 06.8 -1.4
THL Klokotos Trika 65.32 302 P P 17 19 06.4 -1.9
VRAC Vranov 65.32 314⇑ iP P 17 19 08.6 +0.5
KONO Kongsberg 65.33 326⇑ iP P 17 19 07.3 -0.6
KONO AMB AMB 17 19 11.3
comp=Z,97nm,1.6s,mb5.6
KONO eS S 17 27 52.2 +0.9
KONO eSS SS 17 32 09.6 +6.1
KONO AMS AMS 17 51 17.2
comp=Z,6µm,12.7s,MS6.0
KONO Kongsberg 65.33 326⇑ eP P 17 19 06.2 -1.7
KONO pmax pmax
comp=Z,81nm,1.0s,mb5.7
KONO MLR MLR
comp=Z,2µm,19.0s,MS5.4
KONO Kongsberg 65.33 326⇑ eP P 17 19 06.2 -1.7
comp=Z,81nm,1.0s,mb5.7
KONO LR LR
comp=Z,2µm,19.0s,MS5.4
CTA Charters Tower 65.36 137 eP P 17 19 08.1 -0.6
comp=Z,38nm,1.0s,mb5.4
CTAO Charters Tower 65.36 137⇑ iP P 17 19 07.9 -0.8
CTAO pmax pmax
comp=Z,257nm,1.6s,mb6.0
CTAO MLR MLR
comp=Z,1µm,21.0s,MS5.1
CTAO Charters Tower 65.36 137⇑ iP P 17 19 07.9 -0.7
comp=Z,257nm,1.6s,mb6.0
CTAO LR LR
comp=Z,1µm,21.0s,MS5.1

COP Copenhagen 65.37 322⇑ iP P 17 19 08.5 +0.2
COP i S S 17 27 54.9 +2.9
COP pmax pmax
comp=Z,43nm,0.9s,mb5.5
COP MLR MLR
comp=Z,900nm,18.0s,MS5.0
COP Copenhagen 65.37 322⇑ iP P 17 19 08.5 +0.2
comp=Z,43nm,0.9s,mb5.5
COP i S S 17 27 54.9 +2.9
COP
comp=Z,900nm,18.0s
DSF Desfina 65.39 301 P P 17 19 06.1 -2.6
ZST Bratislava 65.41 313 eP P 17 19 09.9 +1.2
ZST eS S 17 27 54.1 +1.4
ZST pmax pmax
comp=Z,39nm,1.6s,mb5.2
ZST MLR MLR
comp=Z,8µm,18.1s,MS5.9
ZST Bratislava 65.41 313 eP P 17 19 09.9 +1.2
ZST epP pP 17 19 13.7 +0.9
ZST eS S 17 27 54.1 +1.4
ZST eSS SS 17 32 41.9 +36
BBLS Lazići 65.52 308 P P 17 19 10.2 +0.7
KARN Karanos 65.53 298 P P 17 19 08.6 -1.1
IVA Berane 65.55 306⇓ iP P 17 19 10.1 +0.4
OHR Ohrid 65.59 304 i P P 17 19 08.3 -1.7
PVY Plav 65.61 306⇓ iP P 17 19 00.0 -10
GVD Gavdhos 65.62 297⇑ iP P 17 19 09.1 -1.2
GVD Gavdhos 65.62 297 P P 17 19 09.1 -1.2
BCI Bajram Curri 65.63 306 ePN P 17 19 11.6 +1.4
GUR Goura 65.70 301 P P 17 19 08.3 -2.5
TTA Tatalina 65.71 30 eP P 17 19 10.3 -0.1
EVR Evrytania 65.71 302 eP P 17 19 10.3 -0.5
PLE Pljevlja 65.72 307⇓ iP P 17 19 11.6 +0.8
PLE Pljevlja 65.72 307⇓ iP P 17 19 11.6 +0.8
VLI Veliai 65.74 299 eP P 17 19 07.9 -3.2
KBN Korca 65.79 304 ePN P 17 19 10.8 -0.5
RUE Ruedersdorf 65.81 318⇑ iP P 17 19 11.0 -0.2
comp=Z,133nm,1.1s,mb5.9
EFP Efpalio 65.83 301 P P 17 19 09.2 -2.4
KYTH Kithira 65.84 299 eP P 17 19 09.7 -2.0
MIDW Midway 65.84 71 PFAKE 17 19 20.0 +8.2
MIDW LR LR
comp=Z,1µm,19.0s,MS5.2
LAKA Lakka 65.85 301 P P 17 19 10.1 -1.6
NWAO Narrogin (SRO) 65.86 169⇑ iP P 17 19 11.5 -0.1
NWAO pmax pmax
comp=Z,57nm,0.6s
NWAO MLR MLR
comp=Z,2µm,20.0s
NWAO Narrogin (SRO) 65.86 169⇑ iP P 17 19 11.5 -0.1
comp=Z,57nm,0.6s,mb5.8
NWAO LR LR
comp=Z,2µm,20.0s,MS5.4
NWAO Narrogin (SRO) 65.86 169 P P 17 19 12.6 +0.9
SNR=9.6
NWAO P 17 19 12.6
SNR=9.6
DAG Danmarks Havn 65.86 348⇓ eP P 17 19 09.8 -1.4
DAG pmax pmax
comp=Z,16nm,0.6s,mb5.2
DAG MLR MLR
comp=Z,7µm,18.0s,MS5.9
DAG Danmarks Havn 65.86 348⇓ iP P 17 19 09.8 -1.4
comp=Z,16nm,0.6s,mb5.2
DAG
comp=Z,7µm,18.0s
PUK Puka 65.87 306 ePN P 17 19 11.4 -0.4
VLX Vlachokerasia 65.90 300 P P 17 19 09.5 -2.6
TREC Trest 66.00 314 eP P 17 19 13.5 +1.0
TREC eS S 17 28 02.4 +2.5
TREC MLR MLR
comp=Z,7µm,17.4s,MS5.9
TREC Trest 66.00 314 eP P 17 19 13.5 +1.0
TREC eS S 17 28 02.4 +2.5
TREC ePKPPKP 17 47 48.2
TREC AMS AMS 17 49 10.0
comp=Z,7µm,17.4s
PVCC Panska Ves 66.09 316 eP P 17 19 13.4 +0.4
PVCC epP pP 17 19 18.0 +0.9
PVCC eS S 17 28 02.3 +1.4
PVCC AMS AMS 17 49 20.0
comp=Z,8µm,15.5s
UPM Unac-Piva 66.10 307⇓ iP P 17 19 13.2 0.0
UPM Unac-Piva 66.10 307⇓ iP P 17 19 13.3 0.0
JAN Janina 66.11 303 eP P 17 19 12.7 -0.7
COLD Coldfoot 66.13 24⇑ iP P 17 19 12.7 -0.3
comp=Z,54nm,0.8s,mb5.6
TIR Tirane 66.15 305⇑ iP P 17 19 12.6 -1.0
TIR pmax pmax
comp=Z,109nm,0.9s,mb5.9
TIR MLR MLR
comp=Z,2µm,19.0s,MS5.4
TIR Tirane 66.15 305⇑ iP P 17 19 12.6 -1.1
comp=Z,109nm,0.9s,mb5.9
TIR LR LR
comp=Z,2µm,19.0s,MS5.4
TTG Podgorica 66.16 306⇓ iP P 17 19 13.2 -0.4
TTG Podgorica 66.16 306⇓ iP P 17 19 13.2 -0.4
NKY Niksic 66.19 307⇓ iP P 17 19 13.4 -0.4
NKY Niksic 66.19 307⇓ iP P 17 19 13.4 -0.4
WNDE Wendo Genet 66.23 263 i P P 17 19 16.4 +1.9
CONA Conrad Observa 66.28 313⇑ iP P 17 19 14.7 +0.4
comp=Z,110nm,1.3s,mb5.7,SNR=52
ITM Ithomi 66.30 300 eP P 17 19 12.5 -2.2
ITM Ithomi 66.30 300 P P 17 19 14.5 -0.2
ITM Ithomi 66.30 300 P P 17 19 12.1 -2.6
PRU Pruhonice 66.31 315 eP P 17 19 14.8 +0.3
PRU epP pP 17 19 18.8 +0.2
PRU ePP PP 17 21 39.9 -0.2
PRU eS S 17 28 02.8 -0.8
PRU ePKPPKP 17 47 48.4
PRU AMS AMS 17 49 20.0
comp=Z,10µm,15.9s
BRG Berggiesshubel 66.33 316 eP P 17 19 14.1 -0.5
comp=Z,90nm,1.3s,mb5.6
BRG Berggiesshubel 66.33 316 eP P 17 19 14.7 +0.1
comp=Z,50nm,1.0s,mb5.5
BRG i pP 17 19 18.0 -0.6
comp=Z,89nm,1.3s
BRG PP PP 17 21 38.0 -2.2
BRG i 17 23 18.0
BRG S S 17 28 04.0 +0.2
BRG SS SS 17 32 21.0 +1.5
BRG ePKPPKP 17 47 44.2
comp=Z,35nm,2.1s
BRG
comp=N,6µm,20.2s
BRG
comp=E,5µm,18.8s
BRG
comp=Z,8µm,16.3s
PRA Prague 66.34 315 ⇑P P 17 19 15.0 +0.3
PRA S S 17 28 06.0 +2.0
PRA AMS AMS 17 49 40.0
ULC Ulcinj 66.34 306⇓ iP P 17 19 14.7 -0.1
ULC Ulcinj 66.34 306⇓ iP P 17 19 14.7 -0.1
FORT Forrest 66.41 158 eP P 17 19 14.9 -0.3
comp=Z,166nm,0.6s,mb6.2
FORT Forrest 66.41 158⇑ iP P 17 19 14.9 -0.3
comp=Z,161nm,0.6s,mb6.2
BUM Brajici-Budva 66.45 306⇓ iP P 17 19 15.1 -0.4
BUM Brajici-Budva 66.45 306⇓ iP P 17 19 15.1 -0.4
BRY Bratogost 66.46 307⇓ iP P 17 19 15.1 -0.5
BRY Bratogost 66.46 307⇓ iP P 17 19 15.1 -0.5
IGT Igoumenitsa 66.53 303 P P 17 19 14.3 -1.8
PYL PYLOS 66.55 300 P P 17 19 13.9 -2.4
KOGS Kog 66.60 311 eP P 17 19 16.3 -0.1
FOO Floro 66.62 329 eP P 17 19 14.7 -1.6
FOO eS S 17 28 09.0 +2.0
FOO AMS AMS 17 50 38.5
comp=Z,6µm,24.0s,MS5.7
SRN Sarande 66.63 303 ePN P 17 19 15.2 -1.5
SVW2 Sparrevohn 66.64 31 eP P 17 19 16.9 +0.5
BLY Banja Luka 66.66 309 P P 17 19 17.0 +0.2
HCY Herceg Novi 66.67 306⇓ iP P 17 19 16.9 0.0
HCY Herceg Novi 66.67 306⇓ iP P 17 19 16.9 0.0
CLL Collm 66.70 317 eP P 17 19 16.2 -0.8
comp=Z,141nm,1.5s,mb5.8
CLL Collm 66.70 317⇑ iP P 17 19 16.4 -0.6
CLL eS S 17 28 07.0 -1.4
CLL pmax pmax
comp=Z,96nm,1.4s,mb5.6
CLL MLR MLR
comp=Z,4µm,15.9s,MS5.8
CLL Collm 66.70 317⇑ iP P 17 19 16.4 -0.6
comp=Z,96nm,1.4s,mb5.6
CLL i pP 17 19 20.3 -0.8
CLL i 17 19 37.2
CLL eS S 17 28 07.0 -1.4
CLL LR LR
comp=Z,4µm,15.9s,MS5.8
CLL Collm 66.70 317⇑ iP P 17 19 16.4 -0.6
comp=Z,96nm,1.4s,mb5.6
CLL i pP pP 17 19 20.3 -0.8
comp=Z,142nm,1.5s
CLL i 17 19 37.2
CLL ePP PP 17 21 36.0 -7.5
CLL e 17 21 43.0
CLL ePPP 17 23 24.0
CLL eS S 17 28 07.0 -1.4
CLL e 17 28 53.0
CLL e(SS) 17 32 54.0
CLL eSSS 17 35 36.0
CLL i PKPPKPbc 17 47 48.6
comp=Z,52nm,2.3s
ARSA Arzberg 66.75 312 P P 17 19 17.7 +0.3
ARSA Arzberg 66.75 312⇑ iP P 17 19 17.1 -0.3
comp=Z,54nm,1.4s,mb5.4,SNR=8.8
MUD Monsted U'grnd 66.77 323⇑ iP P 17 19 17.1 -0.2
MUD pmax pmax
comp=Z,74nm,1.0s,mb5.7
MUD MLR MLR
comp=Z,3µm,19.0s,MS5.5
MUD Monsted U'grnd 66.77 323⇑ iP P 17 19 17.1 -0.2
comp=Z,74nm,1.0s,mb5.7
MUD
comp=Z,3µm,19.0s
CHUM Lake Minchumin 66.82 28⇑ iP P 17 19 17.6 +0.1
comp=Z,2µm,0.5s
KEK Kerkira 66.84 303 eP P 17 19 15.9 -2.1
KEK Kerkira 66.84 303 P P 17 19 16.4 -1.6
VLS Valsamata 66.88 301 P P 17 19 16.2 -2.1
BLS5 Blasjo 66.89 327 eP P 17 19 18.3 +0.3
BLS5 i P pP 17 19 23.0 +0.9
BLS5 i P pP 17 19 23.0 +0.9
BLS5 Blasjo 66.89 327 i P P 17 19 23.0 +5.0
SISC Sisak 66.91 310 P P 17 19 18.9 +0.5
SISC Sisak 66.91 310 i P P 17 19 18.9 +0.5
JMIC Jan Mayen 66.97 341⇑ iP P 17 19 18.8 +0.4
JMIC eS S 17 28 15.2 +4.3
JMIC AMS AMS 17 51 29.0
comp=Z,3µm,18.0s,MS5.5
SNART Snartemo 66.98 325 eP P 17 19 18.7 +0.1
BER Bergen 67.00 328 eP P 17 19 18.4 -0.3
BER AMB AMB 17 19 22.3
comp=Z,96nm,1.8s,mb5.5
BER eS S 17 28 12.6 +1.0
BER AMS AMS 17 50 47.2
comp=Z,4µm,8.7s
STON Ston 67.05 307 P P 17 19 18.2 -1.1
STON Ston 67.05 307 i P P 17 19 18.2 -1.1
BSEG Bad Segeberg 67.17 320 eP P 17 19 20.0 +0.1
comp=Z,226nm,1.4s,mb6.0
KHC Kasperske Hory 67.22 315⇑ iP P 17 19 20.0 -0.3
comp=Z,120nm,1.7s,mb5.7
KHC Kasperske Hory 67.22 315 eP P 17 19 20.3 0.0
KHC epP pP 17 19 23.9 -0.5
KHC ePP PP 17 21 51.4 +3.4
KHC eS S 17 28 15.3 +0.7
KHC ePKPPKP 17 47 48.0
KHC AMS AMS 17 49 50.0
comp=Z,8µm,16.4s
BPAW Bear Paw Mtn. 67.25 28⇑ iP P 17 19 19.9 -0.3
comp=Z,37nm,0.3s,mb5.9
PERS Pernice 67.25 312 eP P 17 19 20.3 -0.2
PERS eS S 17 28 16.8 +1.7
GEC2 GERESS Array S 67.26 314 eP P 17 19 20.3 -0.2
comp=Z,88nm,1.3s,mb5.6
GEC2 GERESS Array S 67.26 314 eP P 17 19 20.3 -0.2
GEC2 pmax pmax
comp=Z,88nm,1.3s,mb5.6
GERES GERESS Array B 67.26 314 P P 17 19 20.1 -0.4
comp=Z,12nm,0.8s,mb5.0,baz=68,slow=5.7,SNR=92
GERES PKPPKP 17 47 41.9
comp=Z,0.5nm,0.8s,baz=205,slow=2.8,SNR=3.7
GERES LR LR 17 50 33.2
comp=Z,6µm,18.6s,MS5.8,baz=68,slow=38
SOKA Soboth 67.29 312⇑ iP P 17 19 20.6 -0.2
comp=Z,118nm,1.5s,mb5.7
MOA Molln 67.30 313 P P 17 19 21.9 +1.0
MOA Molln 67.30 313⇓ iP P 17 19 21.0 +0.2
comp=Z,92nm,1.2s,mb5.7,SNR=23
PPLA Purkeyjle 67.31 29⇑ iP P 17 19 20.7 +0.1
comp=Z,877nm,0.5s,mb7.0
TANN Tannenbergstha 67.37 316 eP P 17 19 20.9 -0.3
comp=Z,85nm,1.3s,mb5.6
NKC Novy Kostel 67.45 316 eP P 17 19 21.8 +0.1
NKC ePP PP 17 21 52.0 +1.9
NKC eS S 17 28 19.4 +2.0
NKC ePKPPKP 17 47 46.0
NKC AMS AMS 17 50 00.0
comp=Z,7µm,15.6s
KTH Kantishna Hill 67.53 28⇑ iP P 17 19 21.5 -0.5
comp=Z,158nm,1.3s,mb5.9
BOJS Bojanci 67.62 310 i P P 17 19 23.0 +0.2
BOJS eS S 17 28 20.6 +1.1
WET Wettzell 67.63 315 eP P 17 19 22.8 -0.1
comp=Z,140nm,1.6s,mb5.7
WET Wettzell 67.63 315 eP P 17 19 22.8 -0.1
WET pmax pmax
comp=Z,140nm,1.6s,mb5.7
OBKA Obir 67.66 312 P P 17 19 23.8 +0.7
OBKA Obir 67.66 312⇑ iP P 17 19 23.2 0.0
comp=Z,57nm,1.6s,mb5.3,SNR=5.2
MOX Moxa 67.77 317 ceP P 17 19 24.2 +0.4
comp=Z,163nm,1.8s,mb5.8
MOX e 17 19 45.9
MOX eS S 17 28 16.0 -5.3
MOX
comp=Z,4µm,18.0s
MOX Moxa 67.77 317 eP P 17 19 23.4 -0.4
comp=Z,99nm,1.4s,mb5.7
MOX Moxa 67.77 317⇑ eP P 17 19 24.2 +0.4
MOX e 17 19 45.9
MOX eS S 17 28 16.0 -5.3
MOX pmax pmax
comp=Z,163nm,1.8s,mb5.8
MOX MLR MLR
comp=Z,4µm,18.0s,MS5.7
ROTZ Rotzenmuhle 67.78 316 eP P 17 19 24.0 +0.2
comp=Z,156nm,1.3s,mb5.9
TRF Thorofare Moun 67.83 28⇑ iP P 17 19 23.2 -0.6
comp=Z,202nm,0.4s,mb6.5
LJU Ljubljana 67.86 311 i P P 17 19 23.9 -0.6
LJU eS S 17 28 20.8 -1.7
LJU e 17 29 22.4
NRDL Niedersach Rie 67.88 319 eP P 17 19 24.5 +0.1
comp=Z,224nm,1.5s,mb6.0
CLZ Clausthal 68.00 318 eP P 17 19 25.1 0.0
comp=Z,256nm,1.5s,mb6.0
CLZ Clausthal 68.00 318 eP P 17 19 25.1 0.0
CLZ pmax pmax
comp=Z,256nm,1.5s,mb6.0
CEY Cerknica 68.05 311 P P 17 19 25.0 -0.6
COLA College 68.08 26⇑ iP P 17 19 24.9 -0.6
COLA MLR MLR
comp=Z,6µm,19.0s,MS5.8
RSO Redoubt South 68.17 31 eP P 17 19 25.8 -0.2
MYKA Terra Mystica 68.19 312⇑ iP P 17 19 25.8 -0.6
comp=Z,37nm,1.9s,mb5.1
KBA Koelnbreinsper 68.19 313⇑ iP P 17 19 26.2 -0.2
comp=Z,84nm,1.2s,mb5.6,SNR=15
JAVS Javornik 68.22 311 eP P 17 19 25.9 -0.7
JAVS eS S 17 28 26.1 -0.7
MCK McKinley 68.22 27⇑ iP P 17 19 25.1 -1.3
MCK pmax pmax
comp=Z,65nm,0.8s,mb5.7
MCK McKinley 68.22 27⇑ iP P 17 19 25.1 -1.2
comp=Z,65nm,0.8s,mb5.7
NVLJ Novalja 68.24 310 P P 17 19 23.8 -3.0
NVLJ Novalja 68.24 310 i P P 17 19 23.8 -3.0
RJOB Jochberg 68.26 313 eP P 17 19 27.1 +0.2
comp=Z,137nm,1.6s,mb5.7
VOY Vojsko 68.27 311 eP P 17 19 26.9 -0.1
VOY e 17 19 46.7
VOY e 17 19 54.7
VOY e 17 20 08.7
VOY e 17 20 19.1

GRA1 **Grafenberg Arr 68.40 316** *eP* **P 17 19 27.7 0.0**
comp=Z,202nm,1.3s,mb6.0
GRA1 *eS* S 17 28 31.1 +2.4
GRA1 *eP*'P'ab 17 47 44.7
GRA1 LR LR
comp=Z,4μm,18.5s,MS5.7
GRF Grafenberg Arr 68.40 316 *eP* **P 17 19 27.7 0.0**
comp=Z,202nm,1.3s,mb6.0
GRF *eS* S 17 28 31.1 +2.4
GRF *e*PKPPKPab 17 47 44.7
GRF *eL* 17 50 19.9
comp=Z,4μm,18.5s
GRF Grafenberg Arr 68.40 316 *eP* **P 17 19 27.7 0.0**
GRF *eS* S 17 28 31.1 +2.4
GRF pmax pmax
comp=Z,202nm,1.3s,mb6.0
GRF MLR MLR
comp=Z,4μm,18.5s,MS5.7
GRF Grafenberg Arr 68.40 316 *eP* **P 17 19 27.7 0.0**
GRF *eS* S 17 28 31.1 +2.4
GRF pmax pmax
comp=Z,202nm,1.3s,mb6.0
GRF Grafenberg Arr 68.40 316 *eP* **P 17 19 27.7 0.0**
comp=Z,202nm,1.3s,mb6.0
GRF *eS* S 17 28 31.1 +2.4
TRI Trieste 68.49 311⇑ *eP* **P 17 19 26.9 -1.4**
TRI pmax pmax
comp=Z,64nm,1.0s,mb5.6
TRI MLR MLR
comp=Z,2μm,22.0s,MS5.3
TRI Trieste 68.49 311⇑ *eP* **P 17 19 26.9 -1.4**
comp=Z,64nm,1.0s,mb5.6
TRI LR LR
comp=Z,2μm,22.0s,MS5.3
UBBA Unterbreizbach 68.64 317 *eP* **P 17 19 28.6 -0.6**
comp=Z,147nm,1.8s,mb5.6
ABTA Abfaltersbach 68.84 313⇑ *iP* **P 17 19 29.5 -1.1**
comp=Z,53nm,1.5s,mb5.2,SNR=15
RGNG Rignano Grg 68.96 307 P **P 17 19 31.1 -0.3**
FUR Furstenfeldbru 69.01 314 *eP* **P 17 19 31.7 +0.2**
comp=Z,302nm,1.2s,mb6.1
FUR Furstenfeldbru 69.01 314 *eP* **P 17 19 31.7 +0.2**
FUR pmax pmax
comp=Z,302nm,1.2s,mb6.1
PTRP Pietrapertosa 69.12 305 P **P 17 19 33.1 +0.7**
WTTA Wattenberg 69.17 313⇑ *iP* **P 17 19 32.3 -0.3**
comp=Z,128nm,1.4s,mb5.7,SNR=39
WATA Walderalm 69.17 313⇓ *iP* **P 17 19 32.0 -0.5**
comp=Z,54nm,1.1s,mb5.4,SNR=9.0
RC01 Rabbit Creek A 69.18 30 *eP* **P 17 19 31.9 -0.5**
comp=Z,124nm,1.0s,mb5.8
PMR Palmer 69.19 29 *eP* **P 17 19 31.7 -0.7**
PMR pmax pmax
comp=Z,116nm,0.7s,mb5.9
PMR Palmer 69.19 29 *eP* **P 17 19 31.7 -0.7**
comp=Z,116nm,0.7s,mb5.9
TIP Timpagrande 69.20 304⇑ *iP* **P 17 19 32.3 -0.6**
comp=Z,48nm,0.8s,mb5.5
TIP LR LR
comp=Z,2μm,21.0s,MS5.2
IBBN Ibbenburen 69.26 319 *eP* **P 17 19 32.7 -0.3**
comp=Z,120nm,1.3s,mb5.7
FG5 Orsara di Pugl 69.35 306 P **P 17 19 34.8 +1.0**
OHAK Old Harbor 69.41 35 *eP* **P 17 19 33.5 -0.4**
comp=Z,282nm,0.9s,mb6.2
OHAK LR LR
comp=Z,4μm,17.0s,MS5.7
MOTA Moosalm 69.46 314⇑ *iP* **P 17 19 33.9 -0.5**
comp=Z,48nm,1.0s,mb5.4,SNR=23
HDH Heidenheim-Cha 69.47 315 P **P 17 19 34.8 +0.4**
KDAK Kodiak Island 69.48 34 P **P 17 19 34.0 -0.3**
comp=Z,1μm,0.6s,mb7.0,SNR=60
KDAK Kodiak Island 69.48 34 LR LR 17 49 07.5
comp=Z,2μm,22.0s,MS5.2,slow=35
KDAK Kodiak Island 69.48 34 *i* P **P 17 19 33.5 -0.8**
SIND Sindeldorf 69.50 316 P **P 17 19 35.0 +0.5**
RETA Reutte 69.61 314⇑ *iP* **P 17 19 35.0 -0.3**
comp=Z,74nm,1.9s,mb5.3,SNR=16
MRB1 Monte Rocchett 69.61 306 P **P 17 19 35.8 +0.4**
WIT Witteveen 69.63 320⇑ *eP* **P 17 19 36.5 +1.2**
comp=Z,577nm,1.2s,mb6.4
PSB1 Pescosannita 69.68 306 P **P 17 19 35.8 -0.1**
CSSN Cassano Irpino 69.69 306 P **P 17 19 36.0 +0.1**
APPI Appiano 69.76 313 P **P 17 19 36.1 -0.1**
SEW Seward 69.79 31⇑ *iP* **P 17 19 34.8 -1.3**
comp=Z,104nm,1.0s,mb5.7
TNS Taunus Mts 69.79 317 *eP* **P 17 19 36.0 -0.3**
comp=Z,85nm,1.2s,mb5.5
TNS Taunus Mts 69.79 317 *eP* **P 17 19 36.0 -0.3**
TNS pmax pmax
comp=Z,85nm,1.2s,mb5.5
FETA Feichten 69.83 313⇑ *iP* **P 17 19 36.4 -0.2**
comp=Z,77nm,0.9s,mb5.6,SNR=33
TOD Tromm 69.85 316 *eP* **P 17 19 36.5 -0.2**
MIDA Miranda 69.88 307 P **P 17 19 38.6 +1.5**
SGG Gregorio Mates 69.91 307 P **P 17 19 38.4 +1.2**
BUG Bochum--Univer 69.91 319 *eP* **P 17 19 36.8 -0.3**
comp=Z,133nm,1.3s,mb5.7
RNI2 Rionero Sannit 69.92 307 P **P 17 19 38.0 +0.7**
UBR Ueberruh 69.92 314 P **P 17 19 37.3 +0.1**
WTSB Winterswijk 69.94 319⇑ *eP* **P 17 19 37.2 0.0**
comp=Z,205nm,1.9s,mb5.7
INTR Introdacqua 69.96 308 P **P 17 19 37.7 +0.2**
FSSB Fossombrone 69.98 310 P **P 17 19 38.2 +0.6**
STU Stuttgart 69.99 316 *eP* **P 17 19 37.1 -0.5**
comp=Z,97nm,1.3s,mb5.6
STU Stuttgart 69.99 316⇑ *iP* **P 17 19 37.3 -0.3**
STU pmax pmax
comp=Z,52nm,0.9s,mb5.5
STU Stuttgart 69.99 316⇑ *iP* **P 17 19 37.3 -0.3**
comp=Z,52nm,0.9s,mb5.5
LRW Lerwick 70.00 329⇑ *eP* **P 17 19 37.3 -0.1**
LRW AMb AMB 17 19 45.3
comp=Z,78nm,1.1s,mb5.5
LRW AMS AMS 17 52 53.8
comp=Z,4μm,15.9s,MS5.8
BUCH Bad Urach 70.04 315 P **P 17 19 38.4 +0.5**
SNTG Esanatoglia 70.06 309 P **P 17 19 39.1 +1.0**
WAL1 Walls 70.12 329 *eP* **P 17 19 38.5 +0.3**
NRCA Norcia 70.13 309 P **P 17 19 39.1 +0.5**
AQU L'Aquila 70.15 308 P **P 17 19 40.1 +1.4**
AQU L'Aquila 70.15 308⇑ *iP* **P 17 19 38.4 -0.3**
AQU LR LR
comp=Z,4μm,20.0s,MS5.7
AQU L'Aquila 70.15 308⇑ *iP* **P 17 19 38.0 -0.7**
PIEI Pieia 70.20 309 P **P 17 19 39.7 +0.7**
CEL Celeste 70.21 303⇑ *iP* **P 17 19 38.4 -0.7**
comp=Z,103nm,0.8s,mb5.8
CEL LR LR
comp=Z,1μm,20.0s,MS5.2
VVLD Villa Vallelon 70.21 307 P **P 17 19 39.1 0.0**
RFI Roccamonfina 70.21 307 P **P 17 19 39.9 +0.8**
DAVA Damuels 70.24 314 *eP* **P 17 19 39.4 +0.3**
DAVA Damuels 70.24 314⇑ *iP* **P 17 19 38.7 -0.5**
comp=Z,35nm,0.9s,mb5.3,SNR=15
LBG Lerchenberg 70.28 316 P **P 17 19 39.6 +0.2**
BRMO Bormio 70.29 313 P **P 17 19 39.3 -0.2**
PTQR Pietraquaria 70.29 308 P **P 17 19 40.4 +0.8**
FUORN Ofenpass-Fuorn 70.30 313⇑ *iP* **P 17 19 39.5 0.0**
comp=Z,675nm,2.3s,mb6.2
MURB Monte Urbino 70.33 309 P **P 17 19 41.0 +1.2**
GUT Gutenstein 70.35 315 P **P 17 19 40.7 +0.9**
FIAM Fiamignano 70.37 308 P **P 17 19 40.6 +0.5**
KTD Kalmit 70.40 316 *eP* **P 17 19 40.0 -0.1**
CDCA Citt' di Caste 70.44 309 P **P 17 19 42.0 +1.6**
MAGA Magasa 70.44 312 P **P 17 19 39.7 -0.7**
GUAR Guarcino 70.45 308 P **P 17 19 40.3 -0.3**
ABH Alteburg 70.46 317 *eP* **P 17 19 40.6 +0.2**
DAVOX Davos/Dischmat 70.46 313⇑ *iP* **P 17 19 40.2 -0.3**
comp=Z,401nm,2.3s,mb6.0
DAVOX Davos/Dischmat 70.46 313 LR LR 17 51 43.2
comp=Z,3μm,19.3s,MS5.6,baz=49,slow=37
MTTG Motta San Giov 70.46 303 P **P 17 19 40.7 0.0**
LIENZ Kamor/St.Gall 70.47 314⇑ *iP* **P 17 19 40.3 -0.3**
comp=Z,732nm,4.2s
SPAK Spaichingen-Ko 70.53 315 *eP* **P 17 19 41.0 +0.1**
BERNI Berninapass 70.54 313⇑ *iP* **P 17 19 40.8 -0.2**
comp=Z,425nm,2.2s,mb6.0
EGAK Eagle 70.56 25⇑ *iP* **P 17 19 39.9 -0.9**
comp=Z,42nm,0.8s,mb5.4
EGAK LR LR
comp=Z,5μm,20.0s,MS5.7
CERT Cerreto 70.60 308 P **P 17 19 41.0 -0.5**
PLONS Plons/SG 70.65 314⇑ *iP* **P 17 19 41.1 -0.6**
comp=Z,911nm,5.3s

MENT Mentasta 70.65 27 *eP* **P 17 19 41.3 -0.1**
WEIN Weingarten 70.67 314⇑ *iP* **P 17 19 41.3 -0.5**
STEIN Stein am Rhein 70.68 315⇑ *iP* **P 17 19 41.5 -0.3**
BFO Black Forest 70.70 315 P **P 17 19 42.0 0.0**
comp=Z,225nm,1.5s,mb5.9,SNR=19
BFO Black Forest 70.70 315 *eP* **P 17 19 41.3 -0.7**
comp=Z,158nm,1.7s,mb5.7
BFO Black Forest 70.70 315 *eP* **P 17 19 41.3 -0.7**
BFO pmax pmax
comp=Z,158nm,1.7s,mb5.7
LANF Langenberg 70.72 316 *eP* **P 17 19 41.9 -0.1**
TARA Tarawa 70.73 101⇑ *eP* **P 17 19 43.3 +0.6**
comp=Z,730nm,1.7s,mb6.3
TARA LR LR
comp=Z,1μm,19.0s,MS5.1
MTCE Montecelio 70.73 308 P **P 17 19 41.7 -0.6**
WILA Wila 70.77 314⇑ *iP* **P 17 19 42.0 -0.4**
comp=Z,640nm,2.4s,mb6.1
SCO Scoresbysund 70.77 343⇑ *iP* **P 17 19 41.4 -0.6**
SCO *i* 17 22 20.2
SCO *i* S S 17 28 57.2 +1.1
SCO pmax pmax
comp=Z,12nm,0.9s,mb4.8
SCO MLR MLR
comp=Z,3μm,18.0s,MS5.6
SCO Scoresbysund 70.77 343⇑ *iP* **P 17 19 41.4 -0.6**
comp=Z,12nm,0.9s,mb4.8
SCO *i* 17 22 20.2
SCO *i* S S 17 28 57.2 +1.1
SCO
comp=Z,3μm,18.0s
TRULL Truellikon 70.80 315⇑ *iP* **P 17 19 42.2 -0.4**
DIV Divide 70.82 29⇑ *iP* **P 17 19 42.2 -0.2**
comp=Z,229nm,1.3s,mb6.0
RUP Ruppelstein 70.82 317 *eP* **P 17 19 42.8 +0.1**
INK Inuvik 70.83 20⇑ *iP* **P 17 19 41.6 -0.8**
FNVD Fontana Vidola 70.84 311 P **P 17 19 44.4 +1.5**
SLE Schleitheim 70.86 315⇑ *iP* **P 17 19 42.5 -0.5**
comp=Z,851nm,2.4s,mb6.2
RDP Rocca di Papa 70.87 308 P **P 17 19 42.6 -0.5**
FLACH Flaach 70.91 315⇑ *iP* **P 17 19 42.8 -0.4**
RER Riviere de l'E 70.96 228 *eP* **P 17 19 42.8 -1.0**
comp=Z,104nm,0.7s,mb5.9
LLS Linth-Limmern 70.97 314⇑ *iP* **P 17 19 43.2 -0.4**
comp=Z,623nm,3.9s
HGN Heimansgroeve 70.97 318⇑ *eP* **P 17 19 43.4 -0.1**
comp=Z,109nm,2.5s,mb5.3
HGN Heimansgroeve 70.97 318 *e*PP PP 17 22 21.3 +0.9
HGN Heimansgroeve 70.97 318 *eS* S 17 28 59.8 +0.8
ZUR Degenried 70.99 314⇑ *iP* **P 17 19 43.3 -0.4**
comp=Z,723nm,2.4s,mb6.2
MEM Membach 71.00 318 P **P 17 19 44.1 +0.3**
comp=Z,40nm,2.6s,mb4.9
CSNT Castellina Chi 71.04 310 P **P 17 19 43.6 -0.5**
LATE Laterza 71.09 309 P **P 17 19 44.2 -0.2**
BEBN Eben Emael 71.10 319 P **P 17 19 44.5 +0.1**
FELD Feldberg im Sc 71.11 315 *eP* **P 17 19 43.6 -0.8**
KIZ Kirchzarten 71.12 315 P **P 17 19 44.3 -0.2**
MUO Muotathal 71.14 314⇑ *iP* **P 17 19 44.3 -0.3**
comp=Z,1μm,4.0s
SULZ Cheisacher 71.20 315⇑ *iP* **P 17 19 44.5 -0.5**
comp=Z,753nm,2.2s,mb6.2
TOLF Tolfa 71.21 308 P **P 17 19 44.8 -0.4**
LIBD Limburg 71.22 315 *eP* **P 17 19 44.9 -0.2**
CDF Champ du Feu 71.29 316⇑ *iP* **P 17 19 45.2 -0.3**
comp=Z,89nm,0.9s,mb5.4
CDF Champ du Feu 71.29 316⇑ *iP* **P 17 19 45.2 -0.3**
CDF pmax pmax
comp=Z,45nm,0.9s,mb5.4
CDF Champ du Feu 71.29 316⇑ *iP* **P 17 19 45.2 -0.3**
comp=Z,44nm,0.9s,mb5.4
BNALP Bannalp 71.31 314⇑ *iP* **P 17 19 44.7 -1.0**
comp=Z,806nm,3.9s
VLC Villacollemand 71.32 311 P **P 17 19 46.5 +0.7**
VLC LR LR
comp=Z,3μm,20.0s,MS5.5
SOFL Sornfelli, Far 71.36 333⇑ *eP* **P 17 19 45.5 -0.1**
FUSIO Fusio 71.36 314⇑ *iP* **P 17 19 45.4 -0.6**
comp=Z,618nm,1.9s,mb6.2
WLF Walferdange 71.36 317 P **P 17 19 46.3 +0.4**
comp=Z,144nm,2.0s,mb5.6
WLF Walferdange 71.36 317 *eP* **P 17 19 46.1 +0.2**
comp=Z,305nm,1.5s,mb6.0
WLF Walferdange 71.36 317⇑ *iP* **P 17 19 46.2 +0.3**
WLF pmax pmax
comp=Z,191nm,1.2s,mb5.9
WLF MLR MLR
comp=Z,3μm,19.0s,MS5.5
WLF Walferdange 71.36 317⇑ *iP* **P 17 19 46.2 +0.3**
comp=Z,191nm,1.2s,mb5.9
WLF LR LR
comp=Z,3μm,19.0s,MS5.5
MUGIO Muggio 71.37 313⇑ *iP* **P 17 19 45.8 -0.2**
comp=Z,434nm,2.5s,mb5.9
ECH Echery 71.45 316 *eP* **P 17 19 46.2 -0.3**
ECH Echery 71.45 316⇑ *iP* **P 17 19 45.8 -0.7**
ECH pmax pmax
comp=Z,58nm,1.3s,mb5.3
ECH MLR MLR
comp=Z,3μm,21.0s,MS5.6
ECH Echery 71.45 316⇑ *iP* **P 17 19 45.8 -0.7**
comp=Z,58nm,1.3s,mb5.3
ECH LR LR
comp=Z,3μm,21.0s,MS5.6
BCLA Clavier 71.49 318 P **P 17 19 46.5 -0.2**
comp=Z,44nm,1.6s,mb5.1
HVZN Vizzini 71.53 303 P **P 17 19 47.9 +0.7**
HASLI Hasliberg/Brie 71.53 314⇑ *iP* **P 17 19 46.5 -0.5**
comp=Z,850nm,2.6s,mb6.2
BALST Balsthal 71.54 315⇑ *iP* **P 17 19 46.6 -0.5**
comp=Z,703nm,2.7s,mb6.1
BBS Basel-Blauen 71.59 315 *eP* **P 17 19 46.7 -0.7**
DAWY Dawson 71.60 25⇑ *iP* **P 17 19 46.3 -0.8**
VAE Valguarnera 71.61 303 LR LR 17 55 44.8
comp=Z,2μm,21.5s,MS5.3,baz=47,slow=40
MAON Monte Argentar 71.62 309 P **P 17 19 47.8 +0.2**
MOF Molkenrain 71.64 315 *eP* **P 17 19 47.3 -0.3**
BOURR Bourrignon 71.79 315⇑ *iP* **P 17 19 48.1 -0.5**
comp=Z,633nm,2.5s,mb6.1
HINF Hinteralfeld 71.82 315 *eP* **P 17 19 48.1 -0.6**
comp=Z,73nm,1.0s,mb5.2
HINF Hinteralfeld 71.82 315 *eP* **P 17 19 48.1 -0.6**
HINF pmax pmax
comp=Z,36nm,1.0s,mb5.3
HINF Hinteralfeld 71.82 315 *eP* **P 17 19 48.1 -0.6**
comp=Z,36nm,1.0s,mb5.3
UCC Uccle 71.84 319 P **P 17 19 49.1 +0.3**
KMBO Kilima Mbogo 71.87 257 P **P 17 19 50.2 +0.6**
comp=Z,20nm,0.7s,mb5.2,baz=46,slow=11,SNR=39
KMBO Kilima Mbogo 71.87 257⇑ *iP* **P 17 19 49.8 +0.2**
KMBO LR LR
comp=Z,2μm,20.0s,MS5.3
KMBO Kilima Mbogo 71.87 257 P **P 17 19 50.6 +1.1**
SNR=38
KMBO P 17 19 50.6
SNR=38
WIMIS Wimmis 71.89 314⇑ *iP* **P 17 19 48.8 -0.4**
comp=Z,403nm,1.5s,mb6.1
GIVF Givet 71.91 318 *eP* **P 17 19 49.1 -0.1**
comp=Z,87nm,1.0s,mb5.3
GIVF Givet 71.91 318 *eP* **P 17 19 49.1 -0.1**
GIVF pmax pmax
comp=Z,44nm,1.0s,mb5.3
GIVF Givet 71.91 318 *eP* **P 17 19 49.1 -0.1**
comp=Z,44nm,1.0s,mb5.3
ORE Reay 71.95 329⇑ *eP* **P 17 19 49.1 -0.2**
MMK Mattmark 71.97 313⇑ *iP* **P 17 19 49.7 0.0**
comp=Z,773nm,2.1s,mb6.3
SNF Seneffe 72.02 319 P **P 17 19 50.3 +0.4**
comp=Z,62nm,2.5s,mb5.1
LKBD Leukerbad 72.02 314⇑ *iP* **P 17 19 49.8 -0.2**
HAU Haudompre 72.03 316 *eP* **P 17 19 49.5 -0.5**
HAU *e*MLR MLR
comp=Z,7μm,18.0s,MS5.7
HAU Haudompre 72.03 316 *eP* **P 17 19 49.5 -0.5**
HAU LR LR
comp=Z,7μm,18.0s,MS6.0
DOU Dourbes 72.04 318 P **P 17 19 50.0 0.0**
comp=Z,55nm,2.5s,mb5.0
LOMF Lomont 72.05 315 *eP* **P 17 19 49.7 -0.5**
THEF They Montfort 72.14 316 *eP* **P 17 19 50.3 -0.3**
SENIN Lac Senin/Sane 72.23 314⇑ *iP* **P 17 19 50.8 -0.5**
comp=Z,579nm,2.7s,mb6.0
MCD Coleburn Disti 72.24 327⇑ *iP* **P 17 19 51.3 +0.3**
TORNY Torny/Romont 72.25 314⇑ *iP* **P 17 19 51.1 -0.2**
comp=Z,645nm,2.7s,mb6.1

EIDS Eidsvold 72.25 137⇑ *iP* **P 17 19 51.2 -0.3**
comp=Z,365nm,1.6s,mb6.1
MME1 Meikle Cairn 72.25 327⇑ *eP* **P 17 19 50.5 -0.7**
WDD Wield Dalam 72.25 301 PFAKE 17 20 00.0 +8.4
WDD LR LR
comp=Z,1μm,20.0s,MS5.1
BAIF Baives 72.28 318⇑ *iP* **P 17 19 51.5 +0.1**
comp=Z,66nm,0.9s,mb5.3
BAIF Baives 72.28 318⇑ *iP* **P 17 19 51.5 +0.1**
BAIF pmax pmax
comp=Z,33nm,0.9s,mb5.3
BAIF Baives 72.28 318⇑ *iP* **P 17 19 51.5 +0.1**
comp=Z,33nm,0.9s,mb5.3
DIX Grande Dixence 72.30 314⇑ *iP* **P 17 19 51.9 +0.2**
comp=Z,805nm,2.6s,mb6.2
GRYON Gryon 72.40 314⇑ *iP* **P 17 19 52.0 -0.3**
SUMG Summit 72.45 349 *eP* **P 17 19 52.1 0.0**
comp=Z,153nm,1.4s,mb5.7
AIGLE Aigle 72.46 314⇑ *iP* **P 17 19 52.1 -0.5**
comp=Z,455nm,1.6s,mb6.2
BRANT Les Verrieres 72.46 315⇑ *iP* **P 17 19 52.3 -0.3**
comp=Z,622nm,2.4s,mb6.1
MVH1 Achvaich 72.48 328⇑ *eP* **P 17 19 52.4 -0.1**
SALAN Lac Salanfe 72.54 314⇑ *iP* **P 17 19 52.8 -0.3**
MEZF Maizieres J'vi 72.55 317 *eP* **P 17 19 52.8 -0.3**
STKA Stephens Creek 72.59 148 *eP* **P 17 19 52.6 -0.8**
comp=Z,40nm,0.4s,mb5.7
STKA Stephens Creek 72.59 148 P **P 17 19 52.8 -0.6**
comp=Z,69nm,0.6s,mb5.8,baz=339,slow=5.7,SNR=62
EMV Vieux Emosson 72.62 314⇑ *iP* **P 17 19 53.5 -0.1**
comp=Z,1μm,4.0s
OG01 Vacheresse 72.63 314 *eP* **P 17 19 53.4 -0.2**
GIMEL St. Georges / 72.78 314⇑ *iP* **P 17 19 54.1 -0.4**
comp=Z,679nm,4.0s
MDO Dochfour 72.82 328⇑ *iP* **P 17 19 54.3 -0.3**
ESY Stoneypath 72.84 326⇑ *eP* **P 17 19 54.3 -0.4**
CABF La Chapelle 72.85 315 *eP* **P 17 19 54.5 -0.4**
PGF Pioggiola 72.96 310⇑ *iP* **P 17 19 55.9 +0.2**
comp=Z,223nm,0.9s,mb5.8
PGF Pioggiola 72.96 310⇑ *iP* **P 17 19 55.9 +0.2**
PGF pmax pmax
comp=Z,112nm,0.9s,mb5.8
PGF Pioggiola 72.96 310⇑ *iP* **P 17 19 55.9 +0.2**
comp=Z,112nm,0.9s,mb5.8
RSL Roselend 72.97 313 *eP* **P 17 19 55.2 -0.4**
LPG La Plagne 72.98 313⇑ *iP* **P 17 19 56.4 +0.7**
comp=Z,217nm,0.8s,mb5.8
LPG La Plagne 72.98 313⇑ *iP* **P 17 19 56.4 +0.7**
LPG pmax pmax
comp=Z,108nm,0.8s,mb5.8
LPG La Plagne 72.98 313⇑ *iP* **P 17 19 56.4 +0.7**
comp=Z,108nm,0.8s,mb5.8
LPL La Plagne 72.99 313⇑ *iP* **P 17 19 56.2 +0.5**
comp=Z,277nm,1.0s,mb5.9
LPL La Plagne 72.99 313⇑ *iP* **P 17 19 56.2 +0.5**
LPL pmax pmax
comp=Z,139nm,1.0s,mb5.8
LPL La Plagne 72.99 313⇑ *iP* **P 17 19 56.2 +0.5**
comp=Z,139nm,1.0s,mb5.8
IMI Imperia 73.03 311 P **P 17 19 56.1 +0.1**
EBH Black Hill 73.08 326⇑ *eP* **P 17 19 55.6 -0.5**
EDI Edinburgh 73.11 326⇑ *eP* **P 17 19 55.4 -0.9**
EDI AMb AMB 17 19 56.7
comp=Z,104nm,2.0s,mb5.4
EDI AMS AMS 17 55 36.2
comp=Z,3μm,14.7s,MS5.8
EBL Broad Law 73.12 326⇑ *iP* **P 17 19 56.3 0.0**
MENF Mencas 73.17 319 *eP* **P 17 19 56.7 -0.1**
SAOF Saorge 73.21 312 *eP* **P 17 19 57.1 0.0**
XAL Allendale 73.21 325⇑ *eP* **P 17 19 56.4 -0.5**
KAC Achnashellach 73.21 328⇑ *eP* **P 17 19 56.8 -0.1**
BNI Bardonecchia 73.24 313⇑ *iP* **P 17 19 57.0 -0.3**
BNI pmax pmax
comp=Z,152nm,1.4s,mb5.7
BNI MLR MLR
comp=Z,5μm,20.0s,MS5.8
BNI Bardonecchia 73.24 313⇑ *iP* **P 17 19 57.0 -0.3**
comp=Z,152nm,1.4s,mb5.7
BNI LR LR
comp=Z,5μm,20.0s,MS5.8
EAU Auchinoon 73.27 326⇑ *iP* **P 17 19 57.4 +0.1**
AUTN L'Aution 73.28 312 *eP* **P 17 19 57.9 +0.4**
SBF Sospel 73.34 312⇑ *iP* **P 17 19 57.7 -0.2**
comp=Z,144nm,0.7s,mb5.7
SBF Sospel 73.34 312⇑ *iP* **P 17 19 57.7 -0.2**
SBF pmax pmax
comp=Z,72nm,0.7s,mb5.7
SBF Sospel 73.34 312⇑ *iP* **P 17 19 57.7 -0.2**
comp=Z,72nm,0.7s,mb5.7
MBDF Montbardon 73.34 313⇑ *iP* **P 17 19 57.0 -0.9**
comp=Z,51nm,0.7s,mb5.3
MBDF Montbardon 73.34 313⇑ *iP* **P 17 19 57.0 -0.9**
MBDF pmax pmax
comp=Z,25nm,0.7s,mb5.2
MBDF Montbardon 73.34 313⇑ *iP* **P 17 19 57.0 -0.9**
comp=Z,25nm,0.7s,mb5.3
LUCF Luceram 73.38 312 *eP* **P 17 19 58.0 -0.1**
TOUF Mont Tournerai 73.39 312 *eP* **P 17 19 58.2 +0.1**
SURF Saint Ours 73.44 312 *eP* **P 17 19 58.6 +0.2**
REVF Revere 73.44 311 *eP* **P 17 19 58.0 -0.5**
ESK Eskdalemuir 73.44 325 P **P 17 19 58.6 +0.3**
comp=Z,241nm,1.3s,mb6.0,SNR=5.3
ESK Eskdalemuir 73.44 325⇑ *eP* **P 17 19 57.5 -0.8**
ESK AMb AMB 17 19 58.8
comp=Z,89nm,2.1s,mb5.3
ESK AMS AMS 17 52 24.1
comp=Z,3μm,16.9s,MS5.6
ESK Eskdalemuir 73.44 325⇑ *iP* **P 17 19 57.4 -0.9**
ESK pmax pmax
comp=Z,62nm,1.2s,mb5.4
ESK MLR MLR
comp=Z,3μm,21.0s,MS5.5
ESK Eskdalemuir 73.44 325⇑ *iP* **P 17 19 57.4 -0.9**
comp=Z,62nm,1.2s,mb5.4
ESK LR LR
comp=Z,3μm,21.0s,MS5.5
TFO1 Folkestone 73.45 320⇑ *eP* **P 17 19 57.7 -0.7**
TFO1 AMb AMB 17 19 59.3
comp=Z,163nm,1.2s,mb5.8
TFO1 AMS AMS 17 55 06.6
comp=Z,6μm,14.1s,MS6.0
TFO1 Folkestone 73.45 320 P **P 17 19 57.7 -0.7**
TFO1 AMb AMB 17 19 59.3
comp=Z,163nm,1.2s,mb5.8
TFO1 AMS AMS 17 55 06.6
comp=Z,6μm,14.1s
KPL Plockton 73.46 328 *eP* **P 17 19 58.1 -0.2**
KPL AMb AMB 17 20 02.3
comp=Z,73nm,1.7s,mb5.3
KPL AMS AMS 17 50 00.3
comp=Z,3μm,18.6s,MS5.5
ECK Cauldkaine Hil 73.48 325⇑ *iP* **P 17 19 58.3 -0.2**
EAB Aberfoyle 73.50 327⇑ *iP* **P 17 19 58.0 -0.6**
MVIF Mont Vial 73.50 312 *eP* **P 17 19 59.0 +0.2**
GDM Grand'Maison 73.52 313 *eP* **P 17 19 59.3 +0.4**
GRN Grenoble 73.73 313 *eP* **P 17 20 00.6 +0.5**
LHO Holmfirth 73.74 323⇑ *iP* **P 17 19 59.9 -0.1**
CALN Calern 73.74 312 *eP* **P 17 20 00.6 +0.4**
KAR1 Arisaig 73.78 328⇑ *eP* **P 17 19 59.7 -0.5**
PGBU Glenifferbraes 73.78 326⇑ *eP* **P 17 19 59.3 -0.9**
PGBU AMb AMB 17 20 01.1
comp=Z,158nm,2.0s,mb5.6
PGBU AMS AMS 17 56 36.8
comp=Z,3μm,13.4s,MS5.8
ORIF Oris-en-Rattie 73.80 313⇑ *iP* **P 17 20 00.5 -0.1**
comp=Z,134nm,0.9s,mb5.6
ORIF *e*MLR MLR
comp=Z,7μm,18.8s,MS5.7
ORIF Oris-en-Rattie 73.80 313⇑ *iP* **P 17 20 00.5 -0.1**
ORIF pmax pmax
comp=Z,67nm,0.9s,mb5.6
ORIF Oris-en-Rattie 73.80 313⇑ *iP* **P 17 20 00.5 -0.1**
comp=Z,67nm,0.9s,mb5.6
LOR Lormes 73.86 316 *eP* **P 17 20 00.0 -0.9**
LOR *e*MLR MLR
comp=Z,4μm,17.8s,MS5.5
LOR Lormes 73.86 316 *eP* **P 17 20 00.0 -0.9**
LOR LR LR
comp=Z,4μm,17.8s,MS5.8
CWF Charnwood Fore 73.89 323⇑ *eP* **P 17 19 59.5 -1.4**
CWF AMb AMB 17 20 01.0
comp=Z,68nm,2.5s,mb5.1
CWF AMS AMS 17 55 27.1
comp=Z,4μm,15.5s,MS5.8
FRF La Foret Royal 73.99 312 *eP* **P 17 20 01.1 -0.6**

XDE Dent Fell 74.03 325⇑eP P 17 20 01.1 -0.6
STNC Stoke 74.16 323⇑eP P 17 20 01.9 -0.6
VSL Villasalto 74.16 307 PFAKE 17 20 10.0 +7.2
VSL LR LR
comp=Z,1µm,19.0s,MS5.3
SSF Saint Saulge 74.17 316 eP **P 17 20 02.1 -0.6**
comp=Z,57nm,1.0s,mb5.2
SSF Saint Saulge 74.17 316 eP **P 17 20 02.1 -0.6**
SSF pmax pmax
comp=Z,28nm,1.0s,mb5.2
SSF Saint Saulge 74.17 316 eP **P 17 20 02.1 -0.6**
comp=Z,28nm,1.0s,mb5.2
SMF Signal de Mont 74.18 315⇑iP **P 17 20 02.3 -0.5**
comp=Z,151nm,1.0s,mb5.6
SMF Signal de Mont 74.18 315⇑iP **P 17 20 02.3 -0.5**
SMF pmax pmax
comp=Z,75nm,1.0s,mb5.6
SMF Signal de Mont 74.18 315⇑iP **P 17 20 02.3 -0.5**
comp=Z,75nm,1.0s,mb5.6
LMR La Mourre 74.19 311⇑iP **P 17 20 02.5 -0.3**
comp=Z,78nm,0.9s,mb5.3
LMR La Mourre 74.19 311⇑iP **P 17 20 02.5 -0.3**
LMR pmax pmax
comp=Z,39nm,0.9s,mb5.3
LMR La Mourre 74.19 311⇑iP **P 17 20 02.5 -0.3**
comp=Z,39nm,0.9s,mb5.3
PNL Peninsula 74.25 28⇑iP **P 17 20 03.4 +0.5**
comp=Z,192nm,0.8s,mb6.1
OCF Saint Nazaire 74.33 313 eP **P 17 20 03.8 +0.2**
OG26 St.-Nazaire-De 74.33 313 eP **P 17 20 03.8 +0.2**
AVF Avril sur Loir 74.40 316 eP **P 17 20 03.5 -0.5**
comp=Z,162nm,1.2s,mb5.5
AVF Avril sur Loir 74.40 316 eP **P 17 20 03.5 -0.5**
AVF pmax pmax
comp=Z,81nm,1.2s,mb5.5
AVF Avril sur Loir 74.40 316 eP **P 17 20 03.5 -0.5**
comp=Z,81nm,1.2s,mb5.5
GAL1 Galloway 74.42 326⇑eP **P 17 20 03.5 -0.5**
GAL1 AMb AMB 17 20 04.6
comp=Z,80nm,2.2s,mb5.3
GAL1 AMS AMS 17 57 42.7
comp=Z,3µm,12.1s,MS5.8
SSB Saint Sauveur 74.45 314⇑iP **P 17 20 03.4 -0.9**
SSB pmax pmax
comp=Z,78nm,1.5s,mb5.4
SSB MLR MLR
comp=Z,3µm,21.0s,MS5.6
SSB Saint Sauveur 74.45 314⇑iP **P 17 20 03.4 -1.0**
comp=Z,78nm,1.5s,mb5.4
SSB LR LR
comp=Z,3µm,21.0s,MS5.6
SMRF Simiane la Rot 74.46 312 eP **P 17 20 04.4 0.0**
HYF Humbligny 74.58 316 eP **P 17 20 05.0 0.0**
VIVF Saint-Julien-I 74.58 313⇑iP **P 17 20 04.8 -0.3**
comp=Z,83nm,0.9s,mb5.3
VIVF Saint-Julien-I 74.58 313⇑iP **P 17 20 04.8 -0.3**
VIVF pmax pmax
comp=Z,42nm,0.9s,mb5.4
VIVF Saint-Julien-I 74.58 313⇑iP **P 17 20 04.8 -0.3**
comp=Z,42nm,0.9s,mb5.4
WOL Wolverton 74.61 321⇑eP **P 17 20 04.2 -0.9**
WOL AMb AMB 17 20 07.0
comp=Z,145nm,2.0s,mb5.6
BORG Borgarnes 74.65 339 eP **P 17 20 06.2 +1.1**
BORG pmax pmax
comp=Z,72nm,1.0s
BORG MLR MLR
comp=Z,2µm,20.0s
BORG Borgarnes 74.65 339 eP **P 17 20 06.2 +1.1**
comp=Z,72nm,1.0s,mb5.6
BORG LR LR
comp=Z,2µm,20.0s,MS5.3
PLDF La Plantade 74.66 315 eP **P 17 20 05.4 -0.1**
SWN1 Swindon 74.80 322⇑eP **P 17 20 04.9 -1.3**
SWN1 AMb AMB 17 20 06.8
comp=Z,167nm,2.0s,mb5.6
SWN1 AMS AMS 17 55 50.6
comp=Z,4µm,13.2s,MS5.9
HLM1 Long Mynd 74.81 323⇑eP **P 17 20 05.6 -0.7**
BGF Bois d'Agland 74.82 316 eP **P 17 20 05.8 -0.6**
COLF Collangettes 74.84 314 eP **P 17 20 05.8 -0.8**
AGO Saint Agoulin 74.91 315 eP **P 17 20 06.9 -0.1**
PYM Petit Puy Mans 75.14 315 eP **P 17 20 08.1 -0.2**
ABPO Ambohimpanom 75.16 236 eP **P 17 20 08.0 -0.7**
ABPO pmax pmax
comp=Z,235nm,1.8s,mb5.8
ABPO MLR MLR
comp=Z,1µm,19.0s,MS5.3
ABPO Ambohimpanom 75.16 236 eP **P 17 20 08.0 -0.7**
comp=Z,236nm,1.8s,mb5.8
ABPO LR LR
comp=Z,1µm,19.0s,MS5.3
HTR Trewern Hill 75.26 323⇑eP **P 17 20 08.1 -0.7**
LBL Lubilhac 75.26 314 eP **P 17 20 09.2 +0.2**
HGH Gray Hill 75.26 322⇑eP **P 17 20 07.9 -1.0**
TCF Toulx Ste Croi 75.33 316 eP **P 17 20 09.3 -0.1**
LDF La Druitiere 75.46 319⇑iP **P 17 20 09.7 -0.4**
comp=Z,76nm,1.0s,mb5.3
LDF La Druitiere 75.46 319⇑iP **P 17 20 09.7 -0.4**
LDF pmax pmax
comp=Z,38nm,1.0s,mb5.3
LDF La Druitiere 75.46 319⇑iP **P 17 20 09.7 -0.4**
comp=Z,38nm,1.0s,mb5.3
LASF Ste Croix 75.48 313⇑iP **P 17 20 10.4 +0.1**
comp=Z,113nm,1.0s,mb5.5
FLN La Foliniere 75.58 319 eP **P 17 20 10.2 -0.6**
FLN eMLR MLR
comp=Z,4µm,19.5s,MS5.4
FLN La Foliniere 75.58 319 eP **P 17 20 10.2 -0.6**
FLN LR LR
comp=Z,4µm,19.5s,MS5.7
GRR Gorron 75.99 319⇑iP **P 17 20 12.8 -0.3**
comp=Z,110nm,0.9s,mb5.5
GRR Gorron 75.99 319⇑iP **P 17 20 12.8 -0.3**
GRR pmax pmax
comp=Z,55nm,0.9s,mb5.5
GRR Gorron 75.99 319⇑iP **P 17 20 12.8 -0.3**
comp=Z,55nm,0.9s,mb5.5
SKAG Skagway 75.99 27 eP **P 17 20 13.6 +0.7**
comp=Z,248nm,0.9s,mb6.1
SKAG LR LR
comp=Z,5µm,17.0s,MS5.9
KEST Kesra 76.02 303 P **P 17 20 13.7 +0.1**
comp=Z,6.3nm,0.7s,mb4.7,baz=298,slow=0.8,SNR=6.2
DMUB Kingscourt 76.02 326 eP **P 17 20 12.6 -0.6**
CAF Calviac 76.13 314⇑iP **P 17 20 14.3 +0.3**
comp=Z,66nm,0.9s,mb5.2
CAF Calviac 76.13 314⇑iP **P 17 20 14.3 +0.3**
CAF pmax pmax
comp=Z,33nm,0.9s,mb5.3
CAF Calviac 76.13 314⇑iP **P 17 20 14.3 +0.3**
comp=Z,33nm,0.9s,mb5.3
DSB Dublin 76.15 325⇑iP **P 17 20 13.8 -0.2**
comp=Z,56nm,1.1s,mb5.4
RJF Les Rejaudoux 76.26 315 eP **P 17 20 15.0 +0.2**
RJF eMLR MLR
comp=Z,3µm,18.2s,MS5.4
RJF Les Rejaudoux 76.26 315 eP **P 17 20 15.0 +0.2**
RJF LR LR
comp=Z,3µm,18.3s,MS5.7
JSA Saint Aubin 76.28 320⇑eP **P 17 20 13.5 -1.2**
JSA AMb AMB 17 20 15.3
comp=Z,94nm,2.2s,mb5.3
ARMA Armidale 76.44 140 eP **P 17 20 15.9 +0.1**
ARMA Armidale 76.44 140⇑eP **P 17 20 16.6 +0.8**
comp=Z,316nm,1.8s,mb5.9
HTL Hartland 76.50 322⇑eP **P 17 20 14.9 -1.0**
HTL AMb AMB 17 20 16.7
comp=Z,93nm,2.0s,mb5.4
HTL AMS AMS 17 58 00.8
comp=Z,3µm,13.6s,MS5.8
DYA Yadsworthy 76.52 322⇑eP **P 17 20 15.2 -1.0**
DYA AMb AMB 17 20 16.4
comp=Z,86nm,2.0s,mb5.3
DYA AMS AMS 17 57 34.1
comp=Z,5µm,14.0s,MS6.0
DCN Croghan 76.53 325 eP **P 17 20 15.4 -0.7**
MFF Saint Martin d 76.55 317 eP **P 17 20 16.3 -0.1**
MTLF Montolieu 76.88 313 eP **P 17 20 18.1 -0.2**
LRDF Laroque-de-Fa 76.89 313 eP **P 17 20 18.3 -0.1**
SJAF Saint Jean de 76.91 312 eP **P 17 20 18.4 -0.1**
LFF La Frestale 76.92 315 eP **P 17 20 18.8 +0.3**
CMAH Djebel Manchou 76.92 305 P **P 17 20 19.9 +1.2**
EJON La Jonquera 76.93 312 P **P 17 20 17.9 -0.6**
comp=Z,350nm,2.9s,mb5.8
SGMF Saint Gilles 77.01 319⇑iP **P 17 20 18.9 0.0**
comp=Z,121nm,0.9s,mb5.5
SGMF Saint Gilles 77.01 319⇑iP **P 17 20 18.9 0.0**
SGMF pmax pmax
comp=Z,61nm,0.9s,mb5.5
SGMF Saint Gilles 77.01 319⇑iP **P 17 20 18.9 0.0**
comp=Z,60nm,0.9s,mb5.5
ABSA Djebel Ababsia 77.06 305 P **P 17 20 19.9 +0.4**
FILF Fillols 77.07 312 eP **P 17 20 19.7 +0.3**
CARF Carcanieres 77.28 313 eP **P 17 20 20.0 -0.5**
CCA1 Carnmenellis 77.35 322⇑eP **P 17 20 19.4 -1.3**
CCA1 AMb AMB 17 20 21.2
comp=Z,64nm,2.5s,mb5.1
ROSF Rostrenen 77.36 319⇑iP **P 17 20 20.9 0.0**
comp=Z,121nm,1.0s,mb5.5
ROSF Rostrenen 77.36 319⇑iP **P 17 20 20.9 0.0**
ROSF pmax pmax
comp=Z,60nm,1.0s,mb5.5
ROSF Rostrenen 77.36 319⇑iP **P 17 20 20.9 0.0**
comp=Z,60nm,1.0s,mb5.5
VALF Valcebollere 77.50 312 eP **P 17 20 22.0 +0.2**
CKFL Kef-Lekhel 77.52 305 P **P 17 20 22.5 +0.5**
QUIF Quistinic 77.53 319 eP **P 17 20 21.7 -0.2**
SIT Sitka 77.57 29⇑eP **P 17 20 21.7 -0.2**
SIT pmax pmax
comp=Z,70nm,1.0s,mb5.5
SIT Sitka 77.57 29⇑eP **P 17 20 21.7 -0.2**
comp=Z,70nm,1.0s,mb5.5
CASM Ain Smara 77.75 305 P **P 17 20 23.8 +0.5**
MLS Moulis 77.78 313 eP **P 17 20 21.3 -2.0**
CTEI Djebel Teioual 77.91 305 P **P 17 20 25.2 +1.0**
DFRA Djebel Bou Aff 78.03 306 P **P 17 20 25.6 +0.7**
EMIR Miracle 78.07 312 P **P 17 20 25.5 +0.5**
EPF Esparros 78.20 314 eP **P 17 20 25.0 -0.7**
RESF Ens 78.32 313 eP **P 17 20 27.1 +0.7**
LABF Labassere 78.35 314 eP **P 17 20 26.1 -0.4**
ETOS Mallorca 78.39 310 P **P 17 20 27.4 +0.6**
comp=Z,680nm,2.9s,mb6.1
VIEF Viey 78.47 314 eP **P 17 20 27.8 +0.6**
EBIE Bielsa 78.51 313 ⇑P **P 17 20 27.5 +0.1**
comp=Z,564nm,2.6s,mb6.0
SET Setif 78.54 306 P **P 17 20 28.0 +0.3**
CKHR Kef el Ahmar 78.56 305 P **P 17 20 28.5 +0.7**
EPOB Poblet 78.65 312 ⇑P **P 17 20 27.5 -0.7**
comp=Z,784nm,2.9s,mb6.1
DLBC Dease Lake 78.70 26 P **P 17 20 28.2 0.0**
comp=Z,22nm,0.9s,mb5.1,baz=312,slow=6.0,SNR=34
DLBC Dease Lake 78.70 26⇑iP **P 17 20 28.1 0.0**
ATE Arette 78.81 314 eP **P 17 20 28.7 -0.3**
ETSF Etsaut 78.82 314⇑iP **P 17 20 29.6 +0.5**
comp=Z,45nm,0.8s,mb5.2
ETSF Etsaut 78.82 314⇑iP **P 17 20 29.6 +0.5**
ETSF pmax pmax
comp=Z,22nm,0.8s,mb5.1
ETSF Etsaut 78.82 314⇑iP **P 17 20 29.6 +0.5**
comp=Z,22nm,0.8s,mb5.2
ORDF Ordiarp 78.88 314 eP **P 17 20 29.4 0.0**
CAN Canberra 78.92 145⇑iP **P 17 20 28.1 -1.4**
CAN pmax pmax
comp=Z,57nm,0.8s,mb5.5
CAN MLR MLR
comp=Z,2µm,19.0s,MS5.4
CAN Canberra 78.92 145⇑iP **P 17 20 28.1 -1.5**
comp=Z,57nm,0.8s,mb5.5
CAN LR LR
comp=Z,2µm,19.0s,MS5.4
OSSF Osses 79.05 314 eP **P 17 20 29.6 -0.8**
CNB Canberra Magne 79.09 144 eP **P 17 20 30.4 -0.1**
TOO Toolangi 79.10 148 eP **P 17 20 30.4 -0.1**
SJPF Ste Jean 79.11 314⇑iP **P 17 20 31.4 +0.7**
EALK Alkurruntz 79.22 314 ⇑P **P 17 20 31.0 -0.3**
comp=Z,643nm,2.6s,mb6.1
ELIZ Elizondo 79.27 314 P **P 17 20 31.6 +0.1**
ELIZ pmax pmax
comp=Z,49nm,1.3s,mb5.3
ELIZ Elizondo 79.27 314 P **P 17 20 31.6 +0.1**
comp=Z,49nm,1.3s,mb5.3
SFJD Kangerlussuaq 79.33 350⇑iP **P 17 20 30.2 -1.2**
SFJD pmax pmax
comp=Z,49nm,0.7s,mb5.5
SFJD MLR MLR
comp=Z,2µm,20.0s,MS5.5
SFJD Kangerlussuaq 79.33 350⇑iP **P 17 20 30.2 -1.2**
comp=Z,49nm,0.7s,mb5.5
SFJD LR LR
comp=Z,2µm,20.0s,MS5.5
SFJD Kangerlussuaq 79.33 350⇑iP **P 17 20 30.7 -0.7**
comp=Z,47nm,0.7s,mb5.5
SFJD
comp=Z,5µm,17.0s
ERTA Horta de San J 79.34 312 ⇑P **P 17 20 31.4 -0.6**
comp=Z,648nm,2.7s,mb6.1
ESAC San Caprasio 79.42 313 ⇑P **P 17 20 31.9 -0.5**
comp=Z,850nm,2.7s,mb6.2
CRAG Craig 79.55 29 eP **P 17 20 33.3 +0.4**
comp=Z,33nm,0.7s,mb5.4
EIBI Ibiza 79.75 310 P **P 17 20 33.9 -0.4**
comp=Z,691nm,3.1s
DZM Mont Dzumac 79.83 124 eP **P 17 20 35.8 +1.0**
comp=Z,54nm,0.8s,mb5.5
DZM Mont Dzumac 79.83 124 ePP PP 17 23 34.2 -2.3
comp=Z,246nm,26.4s
DZM eSS SS 17 35 44.0 -3.6
comp=Z,1µm,31.5s
DZM eLR LR 17 45 21.8
comp=Z,4µm,32.8s
DZM Mont Dzumac 79.83 124 eP **P 17 20 35.5 +0.7**
DZM Mont Dzumac 79.83 124 eP **P 17 20 35.4 +0.6**
comp=Z,44nm,1.0s,mb5.3
ECRI Cripan 80.17 314 P **P 17 20 36.9 +0.4**
ECRI pmax pmax
comp=Z,40nm,1.4s,mb5.2
ECRI Cripan 80.17 314 P **P 17 20 36.9 +0.4**
comp=Z,40nm,1.4s,mb5.2
EMOS Mosqueruela 80.18 312 ⇑P **P 17 20 36.9 +0.3**
comp=Z,818nm,3.1s
EMHD Djebel Mahouad 80.22 307 P **P 17 20 37.8 +1.0**
ELAN Lanestosa 80.37 315 ⇑P **P 17 20 37.5 0.0**
comp=Z,864nm,2.9s,mb6.2
YKA Yellowknife Ar 80.38 17 P **P 17 20 36.8 -0.4**
comp=Z,44nm,0.6s,mb5.6,baz=328,slow=5.2,SNR=522
YKA PKKPbc PKKPbc 17 39 16.4 -3.1
comp=Z,8.4nm,0.6s,baz=154,slow=2.0,SNR=119
YKA PKPPKP 17 47 17.6
comp=Z,0.4nm,0.6s,baz=164,slow=2.5,SNR=6.9
YKA LR LR 18 00 32.1
comp=Z,1µm,18.4s,MS5.3,baz=115,slow=39
YKA Yellowknife Ar 80.38 17 P **P 17 20 36.8 -0.4**
YKA PKKPbc PKKPbc 17 39 16.4 -3.1
YKA P'P' 17 47 17.6
YKA LR LR 18 00 32.1
ETOR Torete 80.92 313 ⇑P **P 17 20 40.1 -0.4**
ETOR pmax pmax
comp=Z,25nm,0.8s,mb5.2
ETOR Torete 80.92 313 ⇑P **P 17 20 40.1 -0.5**
comp=Z,25nm,0.8s,mb5.2
ECHE Chera 80.93 311 P **P 17 20 40.0 -0.6**
ECHE pmax pmax
comp=Z,12nm,0.9s,mb4.8
ECHE Chera 80.93 311 P **P 17 20 40.0 -0.6**
comp=Z,12nm,0.9s,mb4.8
EBEN Beniarda 80.95 310 ⇑P **P 17 20 41.0 +0.2**
comp=Z,244nm,2.4s,mb5.7
EBNR Beni Rached 81.13 307 P **P 17 20 41.0 -0.7**
ECHA Ech Chlef 81.32 307 P **P 17 20 42.5 -0.2**
EARI Arriondas 81.38 316 ⇑P **P 17 20 43.1 +0.2**
comp=Z,660nm,2.8s,mb6.1
FUNA Funafuti 81.42 106 PFAKE 17 20 50.0 +6.5
FUNA LR LR
comp=Z,4µm,20.0s,MS5.8
EANR 'Ain N'Sour 81.61 307 P **P 17 20 44.6 +0.3**
ETRT Tiaret 81.78 307 P **P 17 20 46.5 +1.3**
ETOB Tobarra 81.84 311 ⇑P **P 17 20 45.6 +0.2**
comp=Z,975nm,3.3s
OKGL Djebel Kef Gue 81.87 307 P **P 17 20 48.0 +2.4**
OJGS Djebel Guires 82.09 307 P **P 17 20 47.0 +0.2**
GUD Guadarrama 82.32 313 P **P 17 20 47.8 -0.1**
GUD pmax pmax
comp=Z,33nm,0.8s,mb5.3
GUD Guadarrama 82.32 313 P **P 17 20 47.8 -0.1**
comp=Z,33nm,0.8s,mb5.3
EVIA Vianos 82.45 311 P **P 17 20 48.6 -0.1**
EVIA pmax pmax
comp=Z,27nm,0.9s,mb5.2
EVIA Vianos 82.45 311 P **P 17 20 48.6 -0.1**
comp=Z,27nm,0.9s,mb5.2
EPON Pontenova 82.50 317 ⇑P **P 17 20 48.8 0.0**
comp=Z,646nm,2.8s,mb6.1
ESDC Sonseca Array 82.77 313 P **P 17 20 50.0 -0.2**
comp=Z,7.8nm,0.7s,mb4.8,baz=42,slow=5.2,SNR=28
ESDC PKKPbc PKKPbc 17 39 08.8 -4.7
comp=Z,0.5nm,0.6s,baz=272,slow=3.7,SNR=4.2
ESDC LR LR 18 00 31.8
comp=Z,2µm,21.4s,MS5.5,baz=45,slow=38
ESDC Sonseca Array 82.77 313 P **P 17 20 49.9 -0.4**
comp=Z,14nm,0.8s,mb5.0
ODJA Bouhanifia 82.80 307 P **P 17 20 51.0 +0.5**
EHUE Huescar 82.99 310 P **P 17 20 51.9 +0.4**
EHUE pmax pmax
comp=Z,12nm,0.8s,mb5.0
EHUE Huescar 82.99 310 P **P 17 20 51.9 +0.4**
comp=Z,12nm,0.8s,mb5.0
ERUA La Rua 83.06 316 P **P 17 20 52.3 +0.5**
ERUA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ERUA La Rua 83.06 316 P **P 17 20 52.3 +0.5**
comp=Z,10nm,1.0s,mb4.8
PAB San Pablo 83.09 313⇑iP **P 17 20 51.7 -0.2**
PAB pmax pmax
comp=Z,16nm,0.9s,mb5.0
PAB MLR MLR
comp=Z,3µm,21.0s,MS5.7
PAB San Pablo 83.09 313⇑iP **P 17 20 51.7 -0.2**
comp=Z,16nm,0.9s,mb5.1
PAB LR LR
comp=Z,3µm,21.0s,MS5.7
ECAL Calabor 83.10 316 ⇑P **P 17 20 51.5 -0.5**
comp=Z,677nm,3.2s
ENIJ Nijar 83.22 310 P **P 17 20 52.0 -0.7**
ENIJ pmax pmax
comp=Z,124nm,1.8s,mb5.6
ENIJ Nijar 83.22 310 P **P 17 20 52.0 -0.7**
comp=Z,124nm,1.8s,mb5.6
EQES Quesada 83.30 311 ⇑P **P 17 20 52.9 -0.2**
comp=Z,1µm,3.5s
EBAN Banos Encina 83.55 311 P **P 17 20 53.0 -1.3**
EBAN pmax pmax
comp=Z,27nm,0.8s,mb5.4
EBAN Banos Encina 83.55 311 P **P 17 20 53.0 -1.3**
comp=Z,27nm,0.8s,mb5.4
STS Santiago 83.58 317 P **P 17 20 54.6 +0.2**
STS pmax pmax
comp=Z,48nm,1.4s,mb5.4
STS Santiago 83.58 317 P **P 17 20 54.6 +0.2**
comp=Z,48nm,1.4s,mb5.4
EBER Berja 83.71 310 P **P 17 20 54.6 -0.6**
comp=Z,705nm,3.7s
MVO Moncorvo 83.75 315 iP **P 17 20 55.6 +0.3**
comp=Z,122nm,2.0s,mb5.7
MVO eLQ 17 51 52.7
MVO eLR LR 17 54 11.2
comp=Z,2µm,14.9s
MVO Moncorvo 83.75 315 eP **P 17 20 55.5 +0.2**
EMAZ Mazaricos 83.78 318 ⇑P **P 17 20 55.4 0.0**
comp=Z,691nm,2.3s,mb6.4
MOO Moorlands 83.85 150 eP **P 17 20 56.5 +1.0**
ECOG Cogollos-Vega 83.93 310 P **P 17 20 54.7 -1.6**
ECOG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ECOG Cogollos-Vega 83.93 310 P **P 17 20 54.7 -1.7**
comp=Z,3.6nm,0.9s,mb4.5
BBB Bella Bella 83.97 30 P **P 17 20 55.5 -0.7**
comp=Z,13nm,0.9s,mb5.1,baz=292,slow=2.7,SNR=5.4
PCAB Cabril 84.00 316 iP **P 17 20 57.2 +0.6**
comp=Z,193nm,2.0s,mb5.9
EADA Adamuz 84.05 312 ⇑P **P 17 20 56.7 -0.2**
comp=Z,738nm,3.1s
PVRL Vila Real 84.09 316 eP **P 17 20 57.6 +0.6**
comp=Z,104nm,1.9s,mb5.6
EZAM Zamans 84.12 317 P **P 17 20 57.6 +0.4**
EZAM pmax pmax
comp=Z,36nm,1.0s,mb5.5
EZAM Zamans 84.12 317 P **P 17 20 57.6 +0.4**
comp=Z,36nm,1.0s,mb5.5
ELUQ Luque 84.21 311 P **P 17 20 57.2 -0.6**
ELUQ pmax pmax
comp=Z,45nm,0.7s,mb5.7
ELUQ Luque 84.21 311 P **P 17 20 57.2 -0.5**
comp=Z,45nm,0.7s,mb5.7
ERON Agron 84.24 310 P **P 17 20 55.8 -2.0**
comp=Z,12nm,0.6s,mb5.2
TAU Tasmania Unive 84.29 150 P **P 17 20 58.4 +0.7**
comp=Z,353nm,0.9s,mb6.5,SNR=5.2
TAU Tasmania Unive 84.29 150 PFAKE 17 21 10.0 +12
TAU LR LR
comp=Z,2µm,20.0s,MS5.5
EALB Alboran 84.37 309 P **P 17 20 58.0 -0.6**
comp=Z,1µm,2.5s,mb6.5
ELOJ Sierra Loja 84.38 311 P **P 17 20 56.9 -1.7**
ELOJ pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
ELOJ Sierra Loja 84.38 311 P **P 17 20 56.9 -1.8**
comp=Z,6.4nm,0.6s,mb4.9
KIP Kipapa 84.49 68 eP **P 17 20 59.1 -0.3**
KIP pmax pmax
comp=Z,67nm,0.9s,mb5.8
KIP Kipapa 84.49 68 eP **P 17 20 59.1 -0.3**
comp=Z,67nm,0.9s,mb5.8
MTE Manteigas 84.53 315 iP **P 17 21 00.1 +0.8**
comp=Z,213nm,2.1s,mb5.9
MTE eLQ 17 51 20.8
MTE eLR LR 17 54 38.9
comp=Z,2µm,25.2s
MTE Manteigas 84.53 315⇑iP **P 17 20 59.8 +0.5**
comp=Z,89nm,1.3s,mb5.7
MTE LR LR
comp=Z,3µm,19.0s,MS5.7
PVIS Viseu 84.54 315 iP **P 17 21 00.1 +0.7**
comp=Z,161nm,1.6s,mb5.9
PCBR Castelo Branco 84.83 314 eP **P 17 21 01.3 +0.5**
comp=Z,67nm,2.0s,mb5.4
PMRV Marv??o 85.03 314 iP **P 17 21 02.0 +0.1**
comp=Z,133nm,2.1s,mb5.7
PMRV eLQ 17 53 27.4
PMRV eLR LR 17 56 51.2
comp=Z,1µm,18.2s
PMRV Marv??o 85.03 314 eP **P 17 21 01.9 0.0**
EMIJ Mijas 85.13 310 P **P 17 21 00.7 -1.8**
comp=Z,188nm,2.7s,mb5.7
EBAD Badajoz 85.21 313 ⇑P **P 17 21 02.5 -0.3**
comp=Z,685nm,3.2s
PESTR Estremoz 85.50 314 iP **P 17 21 04.4 +0.2**
comp=Z,104nm,1.8s,mb5.8
PESTR eLQ 17 50 52.6
PESTR eLR LR 17 56 22.8
comp=Z,2µm,23.8s
PTOM Tomar 85.53 315 eP **P 17 21 05.4 +1.0**
comp=Z,169nm,2.5s,mb5.8
PBAR Barrancos 85.59 313 iP **P 17 21 04.9 +0.2**
comp=Z,139nm,1.7s,mb5.9
PBAR eLQ 17 51 21.1
PBAR eLR LR 17 55 57.9
comp=Z,2µm,21.1s
EMIN Mina Concepcio 85.61 312 ⇑P **P 17 21 04.7 -0.1**
comp=Z,574nm,2.8s,mb6.3
ESPR Espera 85.64 311 ⇑P **P 17 21 04.3 -0.6**
comp=Z,826nm,3.4s
EJIF Jimena Fronter 85.64 311 P **P 17 21 04.4 -0.6**
EJIF pmax pmax
comp=Z,67nm,1.6s,mb5.6
EJIF Jimena Fronter 85.64 311 P **P 17 21 04.4 -0.6**
comp=Z,66nm,1.6s,mb5.6
MSVF Nonsavu 85.76 114 P **P 17 21 08.0 +2.3**
comp=Z,458nm,1.1s,mb6.6,SNR=6.7
MSVF Nonsavu 85.76 114⇑iP **P 17 21 07.2 +1.5**
comp=Z,206nm,1.4s,mb6.2
MSVF LR LR
comp=Z,758nm,20.0s,MS5.1
EVO Evora 85.97 314 eP **P 17 21 07.1 +0.6**
comp=Z,73nm,1.0s,mb5.6
EVO eMLR MLR
comp=Z,3µm,23.0s,MS5.4
EVO Evora 85.97 314 iP **P 17 21 06.7 +0.2**
comp=Z,148nm,1.8s,mb5.9
EVO Evora 85.97 314 eP **P 17 21 06.5 0.0**
EVOP Sao Brissos 86.04 314 eP **P 17 21 06.8 -0.1**
EVOP ePP PP 17 24 26.1 -0.4
EVOP eS S 17 31 31.3 -10
EVOP eS S 17 31 31.6 -9.3
EVOP AMS AMS 17 56 47.5
comp=E,3µm,22.1s
EVOP Sao Brissos 86.04 314 eP **P 17 21 06.8 -0.1**
EVOP e 17 24 26.1
EVOP eS SKSac 17 31 31.3 -1.4

SFS San Fernando 86.11 311 PFAKE 17 21 20.0 +13
SFS LR LR
comp=Z,4µm,20.0s,MS5.8
PBEJ Beja 86.19 313 *i* P **P 17 21 07.8 +0.1**
comp=Z,100nm,1.5s,mb5.8
EGRO El Granado 86.26 313 P **P 17 21 08.4 +0.5**
comp=Z,621nm,2.7s,mb6.4
PMAFR Mafra 86.47 315 *e*P **P 17 21 09.1 +0.1**
comp=Z,197nm,1.8s,mb6.0
PMAFR *e*LQ 17 51 22.6
PMAFR *e*LR LR 17 54 37.6
comp=Z,2µm,16.0s
PVAQ Vaqueiros 86.48 313 *i* P **P 17 21 09.1 0.0**
comp=Z,114nm,2.3s,mb5.7
PVAQ *e*LQ 17 51 51.3
PVAQ *e*LR LR 17 55 26.9
comp=Z,2µm,14.0s
LIS Lisbon 86.54 314 *e*P **P 17 21 08.8 -0.5**
LIS *e*S SKSac 17 31 35.0 -0.9
LIS *e*S SKSac 17 31 35.0 -0.9
LIS AMS AMS 17 57 20.2
comp=E,3µm,21.8s
LIS Lisbon 86.54 314 *e*P **P 17 21 08.9 -0.5**
LIS *e*S SKSac 17 31 35.0 -0.9
PCVE Castro Verde 86.54 313 *i* P **P 17 21 10.1 +0.7**
comp=E,126nm,1.9s,mb5.8
PCVE *e*LQ 17 52 01.8
PCVE *e*LR LR 17 55 53.6
comp=E,2µm,20.0s
PBDV Barranco-do-Ve 86.72 313 *i* P **P 17 21 11.2 +0.9**
comp=E,159nm,1.9s,mb5.9
PBDV *e*LQ 17 51 53.9
PBDV *e*LR LR 17 57 44.7
comp=E,2µm,31.8s
PTEO Sao Teotonio 87.02 313 *e*P **P 17 21 11.1 -0.6**
comp=E,229nm,1.7s,mb6.1
MORF Marmelete 87.13 313 *i* P **P 17 21 13.0 +0.7**
comp=E,176nm,1.7s,mb6.0
MORF *e*LQ 17 54 00.1
MORF *e*LR LR 17 57 59.0
comp=E,2µm,22.8s
MORF Marmelete 87.13 313 *e*P **P 17 21 11.8 -0.5**
MORF *e*S SKSac 17 31 37.9 -1.6
MORF Marmelete 87.13 313 *e*P **P 17 21 13.3 +1.0**
LSZ Lusaka 87.23 250⇑ *i*P **P 17 21 12.5 -0.5**
LSZ pmax pmax
comp=Z,119nm,1.2s,mb6.0
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.5
LSZ Lusaka 87.23 250⇑ *i*P **P 17 21 12.5 -0.5**
comp=Z,119nm,1.2s,mb6.0
LSZ LR LR
comp=Z,2µm,19.0s,MS5.5
LSZ Lusaka 87.23 250 P **P 17 21 13.2 +0.2**
SNR=25
LSZ P 17 21 13.2
SNR=25
MDT Midelt 87.27 307 PKKPbc PKKPbc 17 39 04.6 +1.8
comp=Z,1.3nm,0.6s,baz=214,slow=3.6,SNR=4.6
MDT LR LR 18 06 26.8
comp=Z,956nm,21.4s,MS5.2,baz=36,slow=40
POHA Pohakuloa 87.34 68 P **P 17 21 14.0 +0.4**
comp=Z,196nm,1.2s,mb6.2
POHA LR LR
comp=Z,1µm,19.0s,MS5.3
PFVI Vila Bisbo 87.34 313 *i* P **P 17 21 13.4 +0.1**
comp=Z,159nm,2.3s,mb5.8
PFVI *e*LQ 17 52 32.2
PFVI *e*LR LR 17 56 58.4
comp=Z,2µm,15.3s
PFVI Vila Bisbo 87.34 313 *e*P **P 17 21 13.4 +0.1**
KHU Kahuku 87.55 69 *e*P **P 17 21 15.1 +0.5**
FCC Fort Churchill 87.94 10⇑ *i*P **P 17 21 15.2 -0.5**
RTC Rabat Centre 88.05 309 PFAKE 17 21 30.0 +13
RTC LR LR
comp=Z,780nm,19.0s,MS5.1
EDM Edmonton 88.59 22⇑ *i*P **P 17 21 19.1 +0.2**
PGC Sidney 88.60 30⇑ *e*P **P 17 21 19.4 +0.4**
comp=Z,2.0nm,0.8s,mb4.5
A05A Maple Falls 88.89 29 ⇓P **P 17 21 20.1 -0.3**
baz=89
OSD Olympics--Snow 89.13 30 P **P 17 21 23.6 +2.1**
NLWA Neilton Lookou 89.39 31 ⇓P **P 17 21 24.2 +1.4**
baz=89
NLWA Neilton Lookou 89.39 31⇑ *e*P **P 17 21 23.8 +1.0**
comp=Z,309nm,1.8s,mb6.3
NLWA LR LR
comp=Z,2µm,22.0s,MS5.5
B06A Marblemount 89.52 29 ⇑P **P 17 21 23.9 +0.5**
baz=89
A07A Ashnola River, 89.54 28 ⇑P **P 17 21 23.9 +0.4**
baz=89
RPW Rockport 89.56 29 *e*P **P 17 21 23.3 -0.3**
comp=Z,97nm,1.9s,mb5.8
JCW Jim Creek 89.59 29 *e*P **P 17 21 24.0 +0.3**
GNW Green Mountain 89.71 30⇑ *e*P **P 17 21 24.9 +0.7**
comp=Z,211nm,2.2s,mb6.1
HTW Haystack Looko 89.96 29 P **P 17 21 26.5 +1.0**
E03A Lebam 90.18 31 ⇑P **P 17 21 28.0 +1.5**
baz=90,SNR=8.1
FFC Flin Flon 90.32 15 P **P 17 21 26.9 -0.1**
comp=Z,677nm,0.7s,mb7.1,SNR=44
FFC Flin Flon 90.32 15⇑ *e*P **P 17 21 26.5 -0.5**
FFC LR LR
comp=Z,2µm,20.0s,MS5.6
NLW Nelson Butte 90.33 28 P **P 17 21 28.6 +1.5**
D05A Enumclaw 90.36 30 ⇓P **P 17 21 28.8 +1.5**
baz=90
GSM Grass Mountain 90.42 30 P **P 17 21 29.2 +1.6**
B08A Colville Reser 90.51 28 ⇑P **P 17 21 28.3 +0.3**
baz=90
SLFW Sugar Loaf 90.51 29 P **P 17 21 29.5 +1.4**
ETW Entiat 90.71 29 *e*P **P 17 21 28.9 0.0**
comp=Z,144nm,0.5s,mb6.6
LON Longmire 90.78 30⇑ *e*P **P 17 21 29.2 -0.1**
LON pmax pmax
comp=Z,19nm,0.9s,mb5.4
LON Longmire 90.78 30⇑ *e*P **P 17 21 29.1 -0.1**
comp=Z,19nm,0.9s,mb5.4
WTV Waterville 90.79 28 P **P 17 21 30.4 +1.1**
B09A Rice 90.92 27 ⇑P **P 17 21 30.6 +0.7**
baz=91
HEBO Mount Hebo 91.12 32 *e*P **P 17 21 32.3 +1.3**
comp=Z,275nm,1.6s,mb6.3
A11A Hall Mountain, 91.15 26 ⇓P **P 17 21 31.2 +0.2**
baz=91
F04A Amboy 91.16 31 ⇑P **P 17 21 31.3 +0.3**
baz=91,SNR=9.9
C09A Chrisman Ranch 91.38 28 ⇓P **P 17 21 32.5 +0.5**
baz=91
NEW Newport 91.44 27⇑ *i*P **P 17 21 32.8 +0.5**
NEW pmax pmax
comp=Z,273nm,1.9s
NEW MLR MLR
comp=Z,2µm,19.0s
NEW Newport 91.44 27⇑ *i*P **P 17 21 32.8 +0.5**
comp=Z,273nm,1.9s,mb6.3
NEW LR LR
comp=Z,2µm,19.0s,MS5.7
OD2 Odessa Site #2 91.54 28 *e*P **P 17 21 33.5 +0.7**
comp=Z,122nm,1.8s,mb5.9
B11A Sandpoint 91.58 26 ⇓P **P 17 21 34.0 +1.1**
baz=91
G04A Mulino 91.70 31 ⇓P **P 17 21 34.4 +0.8**
baz=91,SNR=8.2
D08A Wollman Farm, 91.72 28 P **P 17 21 35.1 +1.4**
baz=91,SNR=10
MDW Midway 91.74 29 P **P 17 21 35.3 +1.5**
E07A Sunnyside 91.75 29 ⇓P **P 17 21 33.8 0.0**
baz=91
COR Corvallis 91.81 32⇑ *i*P **P 17 21 35.5 +1.4**
COR pmax pmax
comp=Z,58nm,0.8s,mb6.0
COR MLR MLR
comp=Z,2µm,20.0s,MS5.4
COR Corvallis 91.81 32⇑ *i*P **P 17 21 35.5 +1.3**
comp=Z,58nm,0.8s,mb6.0
COR LR LR
comp=Z,2µm,20.0s,MS5.4
B12A Libby 91.84 26 ⇑P **P 17 21 35.2 +1.0**
baz=92
A13A Flathead Natio 91.88 25 ⇓P **P 17 21 35.0 +0.7**
baz=92
WALA Waterton Lakes 91.95 24⇑ *i*P **P 17 21 34.9 +0.2**
comp=Z,0.7nm,0.8s
WALA *e*PP PP 17 25 11.9 -1.2

D09A Jones Farm, Ri 91.96 28 ⇑P **P 17 21 36.0 +1.2**
baz=92,SNR=7.4
HOOD Mount Hood Mea 91.97 31⇑ *e*P **P 17 21 35.6 +0.8**
comp=Z,119nm,0.8s,mb6.3
RSW Rattlesnake Hi 91.99 29 *e*P **P 17 21 36.2 +1.3**
comp=Z,44nm,1.2s,mb5.7
HAWA Hanford 92.01 29⇑ *e*P **P 17 21 35.7 +0.7**
comp=Z,24nm,0.8s,mb5.6
HAWA LR LR
comp=Z,2µm,20.0s,MS5.5
E08A Dider Farm, El 92.13 29 ⇑P **P 17 21 36.7 +1.1**
baz=92
A14A Double T Ranch 92.19 24 ⇑P **P 17 21 36.6 +0.9**
baz=92
H04A Detroit Lake 92.23 32 ⇓P **P 17 21 36.5 +0.4**
baz=92,SNR=12
F07A Phinny Hill Vi 92.25 30 ⇑P **P 17 21 35.7 -0.4**
baz=92
B13A Whitefish 92.33 25 P **P 17 21 37.5 +1.1**
baz=92,SNR=25
D10A Wagner Farm, O 92.38 27 P **P 17 21 37.2 +0.6**
baz=92,SNR=12
A15A Johnson Ranch, 92.42 24 ⇓P **P 17 21 36.7 -0.2**
baz=92,SNR=14
G06A Carlson Farm, 92.47 30 ⇓P **P 17 21 38.4 +1.2**
baz=92,SNR=18
E09A Wood Farm, Sta 92.48 28 ⇑P **P 17 21 38.4 +1.2**
baz=92,SNR=5.9
D11A Klaveano Farm, 92.75 27 ⇓P **P 17 21 38.6 +0.2**
baz=92,SNR=10
F08A Pendleton 92.80 29 P **P 17 21 39.9 +1.2**
baz=92,SNR=6.9
A16A West Butte Ran 92.83 23 ⇑P **P 17 21 38.6 -0.1**
baz=92,SNR=26
C13A Hot Springs 92.88 26 ⇑P **P 17 21 39.6 +0.6**
baz=93,SNR=27
E10A Myers Farm, Un 92.91 28 ⇓P **P 17 21 39.8 +0.7**
baz=93,SNR=8.2
LNOR Lincton Mounta 92.94 29 *e*P **P 17 21 40.4 +1.1**
LNOR pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LNOR Lincton Mounta 92.94 29 *e*P **P 17 21 40.4 +1.1**
comp=Z,5.5nm,0.8s,mb5.0
SCHQ Schefferville 92.98 355 P **P 17 21 38.6 -0.6**
comp=Z,30nm,0.7s,mb5.8,baz=21,slow=5.4,SNR=58
SCHQ PKKP PKKPbc 17 38 47.0 -2.4
comp=Z,4.2nm,0.5s,baz=181,slow=1.7,SNR=14
SCHQ LR LR 18 08 06.6
comp=Z,2µm,18.8s,MS5.6,baz=172,slow=38
SCHQ Schefferville 92.98 355 *e*P **P 17 21 39.0 -0.3**
comp=Z,52nm,0.9s,mb6.0
B15A Bradely Ranch, 93.05 24 ⇓P **P 17 21 38.8 -1.0**
baz=93,SNR=20
C14A Swan Lake 93.10 25 ⇑P **P 17 21 40.3 +0.3**
baz=93
D12A Red Ives Fores 93.11 26 ⇑P **P 17 21 40.1 0.0**
baz=93
A17A Triple J Farms 93.13 23 ⇑P **P 17 21 40.3 +0.2**
baz=93,SNR=25
G08A Pilot Rock 93.14 29 ⇓P **P 17 21 40.9 +0.7**
baz=93
F10A Beach Ranch, E 93.28 28 ⇓P **P 17 21 42.3 +1.4**
baz=93,SNR=12
E11A Bogner Ranch, 93.37 27 ⇓P **P 17 21 41.4 +0.1**
baz=93,SNR=32
D13A Huson 93.41 26 ⇑P **P 17 21 40.4 -1.0**
baz=93,SNR=11
A18A Metzger Ranch, 93.43 22 ⇑P **P 17 21 40.7 -0.8**
baz=93,SNR=27
C15A Salmond Ranch, 93.50 24 ⇓P **P 17 21 41.7 -0.1**
baz=93,SNR=39
HUMO Hull Mountain 93.50 33⇑ *i*P **P 17 21 42.8 +0.8**
comp=Z,80nm,1.5s,mb5.9
HUMO LR LR
comp=Z,2µm,22.0s,MS5.6
E12A Beaver Dam Sad 93.56 27 ⇑P **P 17 21 42.2 0.0**
baz=93,SNR=9.1
G09A Cove 93.63 29 ⇓P **P 17 21 43.4 +0.9**
baz=93,SNR=16
B17A L&G Farms, Che 93.67 23 ⇓P **P 17 21 42.8 +0.2**
baz=93,SNR=20
D14A Greenough 93.77 25 ⇑P **P 17 21 42.4 -0.7**
baz=93,SNR=21
C16A Fuhringer Ranc 93.77 24 ⇓P **P 17 21 42.8 -0.3**
baz=93,SNR=20
F11A Grangeville 93.78 27 ⇑P **P 17 21 43.1 -0.1**
baz=94,SNR=20
MSO Missoula 93.83 26⇑ *e*P **P 17 21 42.9 -0.5**
comp=Z,16nm,0.9s,mb5.5
MSO *e*PP PP 17 25 27.5 -0.4
MSO LR LR
comp=Z,2µm,20.0s,MS5.6
H08A Prairie City 93.88 30 ⇑P **P 17 21 43.7 +0.1**
baz=94,SNR=17
I07A Izee 93.88 30 ⇓P **P 17 21 44.7 +1.1**
baz=94,SNR=18
G10A Bishop Farm, J 93.89 28 ⇑P **P 17 21 44.2 +0.5**
baz=94,SNR=19
B18A Beardsley Farm 93.91 22 ⇑P **P 17 21 44.2 +0.5**
baz=94,SNR=7.6
TORD Torodi Ar. Bea 93.96 288 P **P 17 21 43.4 -1.1**
comp=Z,15nm,1.1s,mb5.3,baz=46,slow=4.5,SNR=40
TORD PP PP 17 25 25.4 -4.9
comp=Z,7.1nm,1.1s,baz=51,slow=6.1,SNR=3.1
TORD PKiKP PKiKP 17 26 27.6 -1.7
comp=Z,3.0nm,1.0s,baz=40,slow=3.3,SNR=3.9
TORD PKKP PKKPbc 17 38 42.2 -3.8
comp=Z,0.7nm,0.6s,baz=281,slow=2.0,SNR=5.1
TORD LR LR 18 09 58.5
comp=Z,2µm,18.3s,MS5.5,baz=25,slow=39
TORD Torodi Ar. Bea 93.96 288 P **P 17 21 43.4 -1.1**
TORD PP PP 17 25 25.4 -4.9
E13A Victor 94.06 26 ⇑P **P 17 21 44.3 -0.1**
baz=94,SNR=16
G11A Walters Elk Ra 94.14 28 ⇑P **P 17 21 45.3 +0.5**
baz=94,SNR=9.9
D15A Lincoln 94.16 25 ⇑P **P 17 21 45.4 +0.5**
baz=94,SNR=8.3
H09A Durkee 94.18 29 ⇓P **P 17 21 46.1 +1.1**
baz=94,SNR=5.2
F12A Elk City 94.23 27 ⇓P **P 17 21 44.9 -0.3**
baz=94,SNR=15
EGMT Eagleton 94.24 23 ⇓P **P 17 21 44.9 -0.4**
baz=94,SNR=9.3
EGMT Eagleton 94.24 23⇑ *e*P **P 17 21 45.1 -0.1**
comp=Z,46nm,0.9s,mb5.9
EGMT LR LR
comp=Z,3µm,21.0s,MS5.7
C17A Wharram Farm, 94.25 23 ⇑P **P 17 21 44.8 -0.5**
baz=94,SNR=7.1
YBH Yreka Blue Hor 94.30 34 P **P 17 21 46.0 +0.4**
comp=Z,5.4nm,1.1s,mb4.9,baz=69,slow=3.2,SNR=11
YBH PP PP 17 25 34.8 +2.9
comp=Z,2.6nm,0.9s,baz=36,slow=4.5,SNR=4.3
YBH Yreka Blue Hor 94.30 34 P **P 17 21 46.0 +0.3**
YBH 17 25 34.8
YBH pmax pmax
comp=Z,5.0nm,1.1s
YBH pmax pmax
comp=Z,3.0nm,1.0s
YBH Yreka Blue Hor 94.30 34⇑ *e*P **P 17 21 46.0 +0.4**
comp=Z,11nm,1.1s,mb5.2
YBH LR LR
comp=Z,1µm,21.0s,MS5.3
E14A Clinton 94.34 26 ⇓P **P 17 21 45.4 -0.3**
baz=94,SNR=13
K05A Summer Lake 94.35 32 ⇑P **P 17 21 47.1 +1.2**
baz=94,SNR=16
D16A Dana Ranch, Ca 94.50 24 ⇑P **P 17 21 45.4 -1.0**
baz=94
F13A Darby 94.56 26 ⇓P **P 17 21 46.8 0.0**
baz=94,SNR=8.2
H10A Noah's Angus R 94.62 28 ⇑P **P 17 21 47.0 -0.1**
baz=94,SNR=6.9
E15A Deer Lodge 94.64 25 ⇑P **P 17 21 46.6 -0.5**
baz=94,SNR=19
LBTB Lobatse 94.66 243⇑ *e*P **P 17 21 46.5 -0.9**
LBTB MLR MLR
comp=Z,939nm,20.0s,MS5.2
D17A Six Diamond Ra 94.69 24 ⇓P **P 17 21 47.0 -0.3**
baz=94,SNR=12
I09A Lost Marbles R 94.72 29 ⇑P **P 17 21 48.9 +1.4**
baz=94
G12A Big Creek, Yel 94.73 27 ⇓P **P 17 21 47.7 +0.1**
baz=94
H11A Donnelly 94.82 28 ⇓P **P 17 21 47.5 -0.5**
baz=94,SNR=7.9
E16A East Helena 94.89 24 ⇑P **P 17 21 48.6 +0.3**

baz=95,SNR=16
F14A Wisdom 94.90 26 ⇑P **P 17 21 49.5 +1.2**
baz=95
J08A Circle Bar Ran 94.91 30 ⇓P **P 17 21 49.7 +1.3**
baz=95,SNR=11
D18A Linhart Farms, 94.95 23 ⇓P **P 17 21 48.9 +0.4**
baz=95
G13A Cobalt 95.18 27 ⇑P **P 17 21 49.2 -0.4**
baz=95,SNR=6.8
F15A Butte 95.19 25 ⇓P **P 17 21 49.8 +0.2**
baz=95,SNR=6.5
J09A Fry Pan Ranch, 95.22 30 ⇓P **P 17 21 51.0 +1.1**
baz=95,SNR=10.0
E17A Martinsdale 95.23 24 ⇑P **P 17 21 50.1 +0.3**
baz=95,SNR=8.6
MOD Modoc 95.27 32 *e*P **P 17 21 50.7 +0.6**
comp=Z,17nm,1.1s,mb5.4
MOD LR LR
comp=Z,2µm,20.0s,MS5.6
WDC Whiskeytown Da 95.28 34 PFAKE 17 22 00.0 +10
WDC LR LR
comp=Z,1µm,19.0s,MS5.4
G14A Jackson 95.35 26 ⇑P **P 17 21 51.3 +0.9**
baz=95
RAO Raoul Island 95.36 121 PFAKE 17 22 00.0 +9.4
RAO LR LR
comp=Z,754nm,19.0s,MS5.2
H12A Diamond D Ranc 95.40 27 ⇑P **P 17 21 49.5 -1.1**
baz=95
E18A Harlowton 95.47 23 ⇑P **P 17 21 48.2 -2.6**
baz=95,SNR=16
I11A Placerville 95.50 28 ⇓P **P 17 21 50.8 -0.2**
baz=95
DGMT Dagmar 95.51 19 ⇑P **P 17 21 50.1 -1.0**
baz=95
DGMT Dagmar 95.51 19 *e*P **P 17 21 50.9 -0.1**
comp=Z,51nm,0.8s,mb6.0
DGMT LR LR
comp=Z,2µm,20.0s,MS5.6
F16A Kennard Place, 95.55 25 ⇓P **P 17 21 51.2 -0.1**
baz=95
DLMT Dillon 95.56 26⇑ *i*P **P 17 21 51.5 +0.2**
comp=Z,18nm,0.9s,mb5.5
DLMT *e*PP PP 17 25 42.5 +1.0
WVOR Wild Horse Val 95.58 31⇑ *i*P **P 17 21 51.9 +0.4**
WVOR *e* 17 25 42.2
WVOR pmax pmax
comp=Z,11nm,0.9s,mb5.3
WVOR MLR MLR
comp=Z,1µm,19.0s,MS5.4
WVOR Wild Horse Val 95.58 31⇑ *i*P **P 17 21 51.9 +0.4**
comp=Z,11nm,0.9s,mb5.3
WVOR *e*PP PP 17 25 42.2 +0.5
WVOR LR LR
comp=Z,1µm,19.0s,MS5.4
H13A Challis 95.62 27 ⇑P **P 17 21 50.7 -1.0**
baz=95
BOZ Bozeman (W) 95.67 25 ⇑P **P 17 21 52.2 +0.4**
baz=95,SNR=18
BOZ Bozeman (W) 95.67 25⇑ *i*P **P 17 21 51.9 +0.1**
BOZ *e* 17 25 38.8
BOZ pmax pmax
comp=Z,11nm,0.9s,mb5.3
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.5
BOZ Bozeman (W) 95.67 25⇑ *i*P **P 17 21 51.9 +0.1**
comp=Z,11nm,0.9s,mb5.3
BOZ *e*PP PP 17 25 38.8 -3.4
BOZ LR LR
comp=Z,2µm,20.0s,MS5.5
G15A Dillon 95.77 26 ⇑P **P 17 21 53.0 +0.6**
baz=96,SNR=8.9
F17A Fitzpatrick Pl 95.79 24 ⇓P **P 17 21 51.6 -0.8**
baz=96,SNR=15
ULM Lac du Bonnet 95.81 13 P **P 17 21 50.9 -1.5**
comp=Z,7.9nm,0.6s,mb5.3,baz=345,slow=4.9,SNR=8.1
ULM PKKP PKKPbc 17 38 39.2 -2.7
comp=Z,5.9nm,0.6s,baz=220,slow=2.8,SNR=7.1
ULM LR LR 18 07 25.1
comp=Z,3µm,21.7s,MS5.7,baz=152,slow=37
ULM Lac du Bonnet 95.81 13 P **P 17 21 50.9 -1.5**
ULM PKKP PKKPbc 17 38 39.2 -2.7
ULM LR LR 18 07 25.1
I12A Atlanta 95.92 28 ⇑P **P 17 21 53.5 +0.5**
baz=96,SNR=16
MFID Camas Ranch 95.96 29 ⇑P **P 17 21 52.5 -0.7**
baz=96
G16A Moss Hill, Enn 95.97 25 ⇑P **P 17 21 52.8 -0.4**
baz=96,SNR=5.8
K10A MacKenzie Ranc 96.06 30 ⇓P **P 17 21 53.2 -0.4**
baz=96
F18A Big Timber 96.11 24 ⇑P **P 17 21 54.0 +0.1**
baz=96,SNR=14
H15A Lima 96.18 26 ⇓P **P 17 21 54.0 -0.2**
baz=96,SNR=6.2
I13A Wildhorse Cree 96.22 27 ⇑P **P 17 21 54.0 -0.4**
baz=96,SNR=7.4
HOPS Hopland 96.25 36 PFAKE 17 22 10.0 +15
HOPS LR LR
comp=Z,1µm,21.0s,MS5.4
J12A Stokes Ranch, 96.39 28 ⇓P **P 17 21 54.3 -0.8**
baz=96
HLID Hailey 96.40 28 ⇑P **P 17 21 55.1 -0.1**
baz=96
HLID Hailey 96.40 28⇑ *i*P **P 17 21 56.1 +0.9**
comp=Z,90nm,1.8s,mb5.9
HLID *e*PP PP 17 25 48.3 +0.4
HLID LR LR
comp=Z,3µm,21.0s,MS5.7
K11A Parker Ranch, 96.41 29 ⇑P **P 17 21 55.3 +0.1**
baz=96
CMLA Cha da Macela 96.43 323 PFAKE 17 22 10.0 +15
CMLA LR LR
comp=Z,1µm,21.0s,MS5.4
I14A Mackay 96.47 27 ⇑P **P 17 21 55.1 -0.4**
baz=96
LAO LASA Array 96.54 21⇑ *i*P **P 17 21 55.6 -0.1**
comp=Z,13nm,0.8s,mb5.4
LAO LR LR
comp=Z,2µm,19.0s,MS5.6
H16A Russell Place, 96.62 25 ⇓P **P 17 21 56.4 +0.2**
baz=96
J13A Cove Ranch, Pi 96.63 28 ⇓P **P 17 21 57.2 +0.9**
baz=96
G18A Lazy EL Ranch, 96.68 24 ⇑P **P 17 21 56.7 +0.3**
baz=96
RPZ Rata Peaks 96.72 138 P **P 17 21 56.0 -0.3**
comp=Z,7.5nm,0.5s,mb5.4,baz=297,slow=3.2,SNR=6.4
RPZ Rata Peaks 96.72 138 *e*P **P 17 21 55.6 -0.8**
L10A Juniper Basin 96.80 30 ⇑P **P 17 21 57.6 +0.5**
baz=96
BEKR Beckwourth 96.87 33 ⇓P **P 17 21 57.2 -0.2**
baz=97
BOSA Boshof 96.87 241 P **P 17 21 56.2 -1.2**
comp=Z,8.4nm,0.6s,mb5.3,baz=85,slow=2.5,SNR=28
BOSA PKKP PKKPbc 17 38 40.0 +1.0
comp=Z,2.3nm,0.9s,baz=348,slow=14,SNR=3.3
BOSA LR LR 18 04 46.4
comp=Z,833nm,18.3s,MS5.3,baz=43,slow=35
BOSA Boshof 96.87 241 *e*P **P 17 21 55.6 -1.9**
BOSA LR LR
comp=Z,2µm,19.0s,MS5.6
K12A Draper Farm, C 96.98 28 ⇓P **P 17 21 58.3 +0.5**
baz=97
MCCM Marconi Confer 97.00 36 PFAKE 17 22 10.0 +12
MCCM LR LR
comp=Z,1µm,22.0s,MS5.4
L11A Cat Creek Ranc 97.03 29 ⇑P **P 17 21 58.6 +0.5**
baz=97
LKWY Lake 97.04 25 *e*P **P 17 22 00.1 +2.0**
LKWY pmax pmax
comp=Z,21nm,1.1s,mb5.5
LKWY MLR MLR
comp=Z,5µm,20.0s,MS6.0
LKWY Lake 97.04 25 *e*P **P 17 22 00.1 +2.1**
comp=Z,21nm,1.1s,mb5.5
LKWY LR LR
comp=Z,5µm,20.0s,MS6.0
URZ Urewera 97.08 131 P **P 17 21 57.2 -1.0**
comp=Z,12nm,1.1s,mb5.3,baz=166,slow=9.2,SNR=5.6
M10A I.L. Ranch, Tu 97.23 30 ⇑P **P 17 21 57.4 -1.6**
baz=97
K13A Stover Farm, H 97.30 28 ⇑P **P 17 21 59.9 +0.6**
baz=97
J15A Blackfoot 97.30 26 ⇓P **P 17 22 00.1 +0.8**
baz=97
L12A House Creek Ra 97.35 29 ⇑P **P 17 22 00.3 +0.7**

baz=97
SNZO South Karori 97.38 135 PFAKE 17 22 10.0 +11
SNZO LR LR
comp=Z,911nm,19.0s,MS5.3
IMW Indian Meadow 97.43 25⇑*iP* **P 17 22 00.7 +0.8**
comp=Z,9.9nm,0.8s,mb5.3
IMW *e*PP PP 17 25 54.3 -1.5
M11A Holland Ranch, 97.62 30⇑P **P 17 22 02.6 +1.8**
baz=97
AGMN Agassiz Refuge 97.67 14 PFAKE 17 22 10.0 +9.2
AGMN LR LR
comp=Z,3μm,19.0s,MS5.8
J16A Bone 97.72 26⇓P **P 17 22 01.8 +0.7**
baz=97
K14A Jones Ranch, D 97.75 27⇑P **P 17 22 02.4 +1.0**
baz=97
RRI2 Red Ridge 97.76 26⇑*e*P **P 17 22 01.2 -0.1**
comp=Z,23nm,1.5s,mb5.5
RRI2 *e*PP PP 17 25 56.3 -2.1
TPAW Teton Pass 97.78 26 *e*P **P 17 22 02.2 +0.8**
comp=Z,4.1nm,0.8s,mb5.0
TPAW *e*PP PP 17 25 58.2 -0.4
L13A Double Diamond 97.83 28⇓P **P 17 22 02.9 +1.2**
baz=98
BMN Battle Mountai 97.83 31 PFAKE 17 22 10.0 +8.3
BMN LR LR
comp=Z,1μm,20.0s,MS5.4
TSUM Tsumeb 97.86 252 *e*P **P 17 22 01.5 -0.6**
TSUM LR LR
comp=Z,1μm,19.0s,MS5.3
REDW Red Top Meadow 97.92 26 *e*P **P 17 21 58.1 -4.0**
comp=Z,12nm,1.3s,mb5.2
REDW *e*PP PP 17 25 56.3 -3.4
M12A Wells 98.00 29⇑P **P 17 22 02.7 +0.3**
baz=98
CMB Columbia Colle 98.31 35 *e*P **P 17 22 03.9 0.0**
CMB *e* 17 26 03.7
CMB pmax pmax
comp=Z,4.0nm,0.8s,mb5.0
CMB MLR MLR
comp=Z,1μm,21.0s,MS5.4
CMB Columbia Colle 98.31 35 *e*P **P 17 22 03.9 0.0**
comp=Z,4.3nm,0.8s,mb5.0
CMB *e*PP PP 17 26 03.7 +0.9
CMB LR LR
comp=Z,1μm,21.0s,MS5.4
CASY Casey 98.31 178 *e*P **P 17 22 01.8 -1.2**
CASY Casey 98.31 178 *e*P **P 17 22 01.4 -1.6**
comp=Z,26nm,1.0s,mb5.7
CASY LR LR
comp=Z,2μm,21.0s,MS5.6
AHID Auburn Hatcher 98.35 26 PFAKE 17 22 20.0 +16
AHID LR LR
comp=Z,3μm,19.0s,MS5.8
J18A Kendall Valley 98.36 25⇓P **P 17 22 03.2 -0.8**
baz=98
N12A Clover Valley, 98.42 30⇑P **P 17 22 05.4 +1.1**
baz=98
N12A Clover Valley, 98.42 30 *e*P **P 17 22 05.4 +1.1**
comp=Z,11nm,1.0s,mb5.3
ELK Elko 98.42 30 P **P 17 22 03.9 -0.5**
comp=Z,1.1nm,0.6s,mb4.6,baz=304,slow=1.2,SNR=9.2
ELK PP PP 17 25 57.8 -5.8
comp=Z,0.8nm,0.6s,baz=304,slow=8.2,SNR=3.0
ELK Elko 98.42 30 P **P 17 22 03.9 -0.5**
ELK PP PP 17 25 57.8 -5.8
ELK LR LR
comp=Z,3μm,20.0s,MS5.7
M14A Sheep Mountain 98.56 28⇑P **P 17 22 03.4 -1.6**
baz=98
O11A Cowboy Ranch, 98.76 30⇑P **P 17 22 07.2 +1.3**
baz=98
N13A Wendover, West 98.76 29⇑P **P 17 22 06.5 +0.6**
baz=98
N13A Wendover, West 98.76 29 *e*P **P 17 22 06.8 +0.9**
comp=Z,31nm,0.9s,mb5.8
SAO San Andreas Ge 98.79 36 PFAKE 17 22 20.0 +14
SAO LR LR
comp=Z,1μm,20.0s,MS5.4
EYMN Ely 98.81 11 PFAKE 17 22 20.0 +14
EYMN LR LR
comp=Z,2μm,19.0s,MS5.6
L16A Fish Haven 98.87 27⇓P **P 17 22 07.3 +0.9**
baz=98
BW06 Boulder Array 98.91 25⇓P **P 17 22 06.9 +0.4**
baz=99
BW06 Boulder Array 98.91 25 PFAKE 17 22 20.0 +13
BW06 LR LR
comp=Z,2μm,19.0s,MS5.7
PDAR Pinedale Array 98.91 25 P **P 17 22 06.2 -0.4**
comp=Z,1.9nm,0.8s,mb4.7,baz=2.0,slow=3.1,SNR=7.8
PDAR PP PP 17 26 03.4 -3.8
comp=Z,4.0nm,1.2s,baz=330,slow=5.2,SNR=3.8
PDAR PKKPbc PKKPbc 17 38 30.7 -2.5
comp=Z,0.8nm,0.4s,baz=142,slow=4.3,SNR=9.3
PDAR LR LR 18 08 50.7
comp=Z,2μm,18.9s,MS5.6,baz=338,slow=37
M15A Larsen Ranch, 98.95 28⇓P **P 17 22 06.8 +0.1**
baz=99
NVAR Mina Array Bea 98.97 33 P **P 17 22 06.8 0.0**
comp=Z,0.9nm,0.7s,mb4.4,baz=308,slow=4.4,SNR=6.7
NVAR PKKPbc PKKPbc 17 38 33.0 0.0
comp=Z,2.0nm,0.7s,baz=148,slow=2.8,SNR=17
NVAR PKPPKP 17 46 44.1
comp=Z,0.6nm,0.6s,baz=176,slow=2.4,SNR=4.2
O12A Currie 99.03 30⇓P **P 17 22 07.7 +0.5**
baz=99
HWUT Hardware Ranch 99.17 27⇑*e*P **P 17 22 08.1 +0.4**
comp=Z,7.8nm,0.9s,mb5.2
HWUT *e*PP PP 17 25 57.8 -11
HWUT LR LR
comp=Z,2μm,19.0s,MS5.6
N14A Grayback Hills 99.18 28⇓P **P 17 22 05.6 -2.1**
baz=99
K20A Yellowstone Ra 99.43 24⇓P **P 17 22 09.5 +0.6**
baz=99
L18A Fontenelle, Gr 99.47 26⇑P **P 17 22 09.4 +0.4**
baz=99
Q10A Clear Creek Ra 99.51 32⇓P **P 17 22 09.8 +0.5**
baz=99
RSSD Black Hills 99.52 21⇑*e*P **P 17 22 09.3 +0.1**
RSSD *e* 17 26 10.5
RSSD pmax pmax
comp=Z,33nm,1.1s,mb5.7
RSSD MLR MLR
comp=Z,3μm,22.0s,MS5.7
RSSD Black Hills 99.52 21⇑*e*P **P 17 22 09.3 +0.1**
comp=Z,33nm,1.1s,mb5.7
RSSD *e*PP PP 17 26 10.5 -1.3
RSSD LR LR
comp=Z,3μm,22.0s,MS5.7
L19A Farson 99.56 25⇑P **P 17 22 09.9 +0.5**
baz=99
M17A Scullys Gap (B 99.63 26⇑P Pdif 17 22 10.3 +0.6
baz=99
TPH Tonopah 99.76 33 PFAKE 17 22 20.0 +10
TPH LR LR
comp=Z,1μm,22.0s,MS5.3
Q11A Duckwater 99.82 31⇓P Pdif 17 22 11.0 +0.5
baz=100
DUG Dugway 99.89 28⇓P Pdif 17 22 11.4 +0.6
baz=100
DUG Dugway 99.89 28⇑*iP* Pdif 17 22 10.8 0.0
DUG pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
DUG MLR MLR
comp=Z,1μm,20.0s,MS5.5
DUG Dugway 99.89 28⇑*i*Pdif Pdif 17 22 10.8 0.0
comp=Z,3.0nm,0.7s
DUG LR LR
comp=Z,1μm,20.0s,MS5.5
M18A Lyman 99.89 26⇑P Pdif 17 22 12.0 +1.1
baz=100
R10A Warm Springs 100.00 32⇓P Pdif 17 22 13.5 +2.2
baz=100
P13A Bates Ranch, G 100.02 30⇓P Pdif 17 22 11.8 +0.4
baz=100
Q12A Willow Creek R 100.02 30⇓P Pdif 17 22 11.8 +0.4
baz=100
N17A Moffit Pass 100.02 27⇑P Pdif 17 22 12.9 +1.5
baz=100
S10A Tonopah Range, 100.17 32⇑P Pdif 17 22 13.5 +1.4
baz=100
R11A Troy Canyon, C 100.26 31⇑P Pdif 17 22 12.9 +0.4
baz=100
P14A Drum Mountains 100.29 29⇑P Pdif 17 22 13.1 +0.5
baz=100

DAU Daniels Canyon 100.32 27 *e*P Pdif 17 22 13.5 +0.8
DAU *e* 17 26 16.1
DAU pmax pmax
comp=Z,3.0nm,0.7s
DAU Daniels Canyon 100.32 27 *e*Pdif Pdif 17 22 13.5 +0.8
comp=Z,2.9nm,0.7s
DAU *e*PP PP 17 26 16.1 -1.9
Q13A Wheeler Ranch, 100.43 30⇑P Pdif 17 22 14.4 +1.2
baz=100
M20A Sweetwater, Wa 100.52 25⇓P Pdif 17 22 14.5 +0.9
baz=100
GRAC Grapevine Rang 100.56 33⇓P Pdif 17 22 15.6 +1.8
baz=100
L22A Ellis Ranch, M 100.64 23⇓P Pdif 17 22 15.4 +1.3
baz=100
N19A John Jarvie Ra 100.68 26⇓P Pdif 17 22 13.9 -0.5
baz=100
O17A Robinson Place 100.70 27⇓P Pdif 17 22 10.5 -3.9
baz=100
Q14A Sevier Lake (B 100.72 29⇑P Pdif 17 22 14.0 -0.5
baz=100
COWI Conover 100.97 10 PFAKE 17 22 30.0 +14
COWI LR LR
comp=Z,3μm,21.0s,MS5.8
DAC Darwin (Calif) 101.05 34 PFAKE 17 22 30.0 +14
DAC LR LR
comp=Z,1μm,21.0s,MS5.4
N20A Spence Gulch, 101.07 25⇓P Pdif 17 22 16.1 0.0
baz=101
T11A Corn Creek, Al 101.34 32⇑P Pdif 17 22 15.8 -1.5
baz=101
P18A Preston Nutter 101.38 27⇓P Pdif 17 22 15.6 -1.9
baz=101
MVU Marysvale 101.57 29 PFAKE 17 22 30.0 +12
MVU LR LR
comp=Z,1μm,19.0s,MS5.5
MSU Marysvale 101.58 29 *e*P Pdif 17 22 19.5 +1.2
MSU *e* 17 26 26.7
MSU pmax pmax
comp=Z,31nm,1.9s
MSU Marysvale 101.58 29 *e*Pdif Pdif 17 22 19.5 +1.2
comp=Z,31nm,1.9s
MSU *e*PP PP 17 26 26.7 -0.9
PHWY Pilot Hill 101.62 23 *e*Pdif Pdif 17 22 16.4 -2.1
comp=Z,5.2nm,0.7s
SRU San Rafael 101.72 27 *e*P Pdif 17 22 17.2 -1.8
SRU *e* 17 26 25.1
SRU pmax pmax
comp=Z,3.0nm,0.7s
SRU San Rafael 101.72 27 *e*Pdif Pdif 17 22 17.2 -1.8
comp=Z,2.7nm,0.7s
SRU *e*PP PP 17 26 25.1 -3.5
ECSD EROS Data Cent 101.85 16 PFAKE 17 22 30.0 +10
ECSD LR LR
comp=Z,4μm,19.0s,MS5.9
EDW2 Edwards Air Fo 101.98 35⇑P Pdif 17 22 20.8 +0.6
baz=102
R16A Teasdale 102.05 29⇑P Pdif 17 22 21.4 +1.0
baz=102
DRV Dumont d'Urvil 102.18 166 SP SP 17 35 29.0 -6.9
DRV SS SS 17 41 04.0 -4.6
DRV R 17 58 00.0
R17A Hanksville Air 102.25 28⇓P Pdif 17 22 20.0 -1.3
baz=102
Q19A Hogan Spring (102.34 27⇑P Pdif 17 22 21.8 0.0
baz=102
PKME Peaks-Kenny Pk 102.67 356 PFAKE 17 22 30.0 +6.8
PKME LR LR
comp=Z,2μm,20.0s,MS5.7
GLMI Grayling 102.79 7 PFAKE 17 22 30.0 +6.2
GLMI LR LR
comp=Z,2μm,20.0s,MS5.6
ISCO Idaho Springs 102.91 24 PFAKE 17 22 40.0 +16
ISCO LR LR
comp=Z,3μm,19.0s,MS5.8
U14A Mt Trumbull 102.93 31⇑P Pdif 17 22 25.6 +1.3
baz=103
DBIC Dimbokro 102.93 286 PKiKP PKiKP 17 26 44.5 -0.7
comp=Z,6.9nm,0.9s,baz=14,slow=4.9,SNR=4.4
DBIC Dimbokro 102.93 286 *e*P Pdif 17 22 23.5 -0.9
DBIC MLR MLR
comp=Z,1μm,20.0s
SMCO Snowmass 102.99 25 *e*Pdif Pdif 17 22 26.0 +1.4
comp=Z,3.6nm,0.7s
OGNE Ogallala 103.02 21 PFAKE 17 22 40.0 +15
OGNE LR LR
comp=Z,2μm,19.0s,MS5.7
PV01 Paradox Valley 103.32 27 *e*Pdif Pdif 17 22 26.4 +0.3
comp=Z,281nm,0.7s
PV01 *e*PP PP 17 26 35.1 -5.5
LONY Lake Ozonia 103.49 360 PFAKE 17 22 40.0 +13
LONY LR LR
comp=Z,2μm,20.0s,MS5.7
PFO Pinyon Flat Ob 103.76 35 PFAKE 17 22 40.0 +12
PFO LR LR
comp=Z,586nm,20.0s,MS5.1
LBNH Lisbon 103.82 358 PFAKE 17 22 40.0 +12
LBNH LR LR
comp=Z,2μm,20.0s,MS5.7
JFWS Jewell Farm 103.91 11 PFAKE 17 22 40.0 +11
JFWS LR LR
comp=Z,2μm,20.0s,MS5.7
IRM Iron Mountain 103.92 33⇓P Pdif 17 22 30.9 +2.1
baz=104
NCB Newcomb 104.14 359 PFAKE 17 22 40.0 +10
NCB LR LR
comp=Z,2μm,19.0s,MS5.6
MVCO Mesa Verde 104.16 27 PFAKE 17 22 40.0 +10
MVCO LR LR
comp=Z,2μm,20.0s,MS5.6
X13A Yucca 104.17 32⇓P Pdif 17 22 31.6 +1.8
baz=104
T19A Beclabito 104.29 28⇑P Pdif 17 22 31.0 +0.6
baz=104
SCIA State Center 104.33 14 PFAKE 17 22 40.0 +9.4
SCIA LR LR
comp=Z,3μm,19.0s,MS5.9
MAW Mawson 104.45 195 PKiKP PKiKP 17 26 45.7 -0.6
comp=Z,2.0nm,0.6s,baz=68,slow=6.0,SNR=5.8
MAW PKKPbc PKKPbc 17 38 15.7 -2.7
comp=Z,3.0nm,0.6s,baz=26,slow=14,SNR=10
WUAZ Wupatki 104.46 30 PFAKE 17 22 40.0 +8.8
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.5
SDCO Great Sand Dun 104.79 25 PFAKE 17 22 40.0 +7.4
SDCO LR LR
comp=Z,2μm,19.0s,MS5.7
AAM Ann Arbor 105.39 7 PFAKE 17 27 00.0 +11
AAM LR LR
comp=Z,2μm,19.0s,MS5.7
CBKS Cedar Bluff 105.66 20 PFAKE 17 27 00.0 +10
CBKS LR LR
comp=Z,2μm,19.0s,MS5.8
ERPA Erie 105.85 4 PFAKE 17 27 00.0 +10
ERPA LR LR
comp=Z,1μm,20.0s,MS5.5
BINY Binghamton 105.91 1 PFAKE 17 27 00.0 +10
BINY LR LR
comp=Z,2μm,20.0s,MS5.7
KSU1 Kansas State U 106.23 17 *e*PKPdf PKiKP 17 26 46.4 -4.3
KSU1 LR LR
comp=Z,3μm,21.0s,MS5.9
HDIL Hopedale 106.36 11 PFAKE 17 27 00.0 +9.1
HDIL LR LR
comp=Z,3μm,20.0s,MS5.8
ANMO Albuquerque 106.93 27 PKiKP PKiKP 17 26 51.9 -0.2
comp=Z,1.3nm,0.6s,baz=309,slow=5.7,SNR=3.9
ANMO Albuquerque 106.93 27 PKPdf PKiKP 17 26 51.9 -0.2
ANMO LR LR
comp=Z,2μm,20.0s,MS5.6
LAZ Ladron 107.15 27 *e*PKPdf PKiKP 17 26 52.9 +0.3
LAZ *e*PP PP 17 27 06.3 -2.7
SSPA Standing Stone 107.42 2 PFAKE 17 27 00.0 +7.1
SSPA LR LR
comp=Z,1μm,20.0s,MS5.5
TUC Tucson 107.45 31 PFAKE 17 27 00.0 +6.8
TUC LR LR
comp=Z,2μm,19.0s,MS5.6
ACSO Alum Creek Sta 107.50 6 PFAKE 17 27 00.0 +7.0
ACSO LR LR
comp=Z,3μm,19.0s,MS5.8
BNM Barren Site 107.57 27 *e*PKPdf PKiKP 17 26 52.9 -0.5
BNM *e*PP PP 17 27 12.4 +0.3
X24A Lazy VL Ranch, 107.65 26⇑P PKiKP 17 26 53.9 +0.5
baz=107
X25A Clemmons Ranch 107.97 25⇓P PKiKP 17 26 54.8 +0.8
baz=108
Y23A Lovelace Mesa, 107.98 27⇑P PKiKP 17 26 54.0 -0.2
baz=108
W27A Bowe Ranch, En 108.05 24⇑P PKiKP 17 26 53.8 -0.4
baz=108
Y24A Capitan 108.22 26⇓P PKiKP 17 26 52.4 -2.1
baz=108
Z22A Elephant Butte 108.23 28⇑P PKiKP 17 26 52.9 -1.7
baz=108
MCWV Mont Chateau 108.31 4 PFAKE 17 27 10.0 +15
MCWV LR LR
comp=Z,3μm,19.0s,MS5.9
219A White Tail Can 108.38 30⇑P PKiKP 17 26 55.6 +0.7
baz=108
CCM Cathedral Cave 108.44 13 PFAKE 17 27 10.0 +15
CCM LR LR
comp=Z,3μm,19.0s,MS5.8
AMTX Amarillo 108.68 23 PFAKE 17 27 10.0 +15
AMTX LR LR
comp=Z,2μm,20.0s,MS5.6
WCI Wyandotte Cave 109.10 9 PFAKE 17 27 10.0 +14
WCI LR LR
comp=Z,2μm,19.0s,MS5.7
124A Stringfield Ra 109.31 27⇑P PKiKP 17 26 55.7 -0.9
baz=109
Z27A Tatum 109.58 25⇓P PKiKP 17 26 56.5 -0.6
baz=109
125A Gardner Draw, 109.64 26⇓P PKiKP 17 26 56.5 -0.8
baz=109
WMOK Wichita Mounta 109.73 21 PFAKE 17 27 10.0 +13
WMOK LR LR
comp=Z,3μm,19.0s,MS5.8
224A Corundas Mount 109.83 27⇓P PKiKP 17 26 57.1 -0.5
baz=110
CBN Corbin 109.87 2 PFAKE 17 27 10.0 +12
CBN LR LR
comp=Z,2μm,19.0s,MS5.6
MNTX Cornudas Mount 110.22 27 *e*PKPdf PKiKP 17 26 57.4 -1.0
MNTX LR LR
comp=Z,2μm,19.0s,MS5.6
324A Moseley Ranch, 110.41 28⇓P PKiKP 17 26 57.0 -1.7
baz=110
BLA Blacksburg 110.71 5 PFAKE 17 27 10.0 +11
BLA LR LR
comp=Z,1μm,21.0s,MS5.5
WVT Waverly 110.93 11 PFAKE 17 27 10.0 +10
WVT LR LR
comp=Z,2μm,19.0s,MS5.7
326A Caldwell Ranch 111.10 26⇓P PKiKP 17 26 58.9 -1.1
baz=111
425A Indio Mountain 111.19 27⇑P PKiKP 17 26 58.9 -1.3
baz=111
MIAR Mount Ida 111.31 16 PFAKE 17 27 10.0 +10
MIAR LR LR
comp=Z,4μm,19.0s,MS6.0
426A McDonald Obser 111.66 27⇓P PKiKP 17 26 58.2 -3.0
baz=111,SNR=5.6
PLAL Pickwick Lake 112.01 12 PFAKE 17 27 10.0 +8.3
PLAL LR LR
comp=Z,2μm,19.0s,MS5.6
PPT Papeete 112.03 97 *e*PP PP 17 27 32.6 -13
comp=Z,109nm,24.5s
PPT Papeete 112.03 97 *e*PS PS 17 37 14.8 -4.4
comp=Z,710nm,28.5s
PPT *e*SS SS 17 43 23.3 -0.8
comp=Z,1μm,29.5s
PPT *e*LQ 17 55 38.8
comp=Z,4μm,35.2s
PPT *e*LR LR 18 00 20.4
comp=Z,2μm,25.5s
428A Kincaid Ranch, 112.11 26⇑P PKiKP 17 27 00.4 -1.6
baz=112,SNR=12
OXF Oxford 112.23 13 PFAKE 17 27 10.0 +7.9
OXF LR LR
comp=Z,2μm,20.0s,MS5.7
528A Cox Ranch, San 112.58 26⇓P PKiKP 17 27 00.5 -2.4
baz=112
626A Big Bend Ranch 112.62 27⇑P PKiKP 17 27 00.6 -2.4
baz=112
CNNC Cliffs of the 112.81 3 PFAKE 17 27 10.0 +6.8
CNNC LR LR
comp=Z,3μm,19.0s,MS5.9
627A Terlingua Ranc 112.99 27⇓P PKiKP 17 27 02.1 -1.6
baz=113
TXAR Lajitas Array 112.99 27 PKiKP PKiKP 17 27 03.4 -0.3
comp=Z,1.8nm,0.6s,baz=193,slow=0.2,SNR=21
TXAR PP PP 17 27 52.6 +1.3
comp=Z,4.2nm,1.1s,baz=303,slow=5.5,SNR=7.5
TXAR PKKPbc PKKPbc 17 37 49.8 -0.2
comp=Z,3.6nm,0.7s,baz=161,slow=6.6,SNR=47
TXAR PKPPKP 17 46 18.7
comp=Z,0.3nm,0.7s,baz=149,slow=4.2,SNR=4.9
TXAR Lajitas Array 112.99 27 PKPdf PKiKP 17 27 03.4 -0.3
TXAR PP PP 17 27 52.6 +1.3
TXAR PKKPbc PKKPbc 17 37 49.8 -0.2
TXAR P'P' 17 46 18.7
628A Black Gap, Mar 113.15 26⇓P PKiKP 17 27 02.8 -1.2
baz=113,SNR=8.1
JCT Junction City 113.34 23 *e*PKPdf PKiKP 17 27 03.4 -1.0
JCT LR LR
comp=Z,2μm,20.0s,MS5.7
NATX Nacogdoches 113.69 18 PFAKE 17 27 20.0 +15
NATX LR LR
comp=Z,2μm,21.0s,MS5.8
LRAL Lakeview Retre 114.09 11 PFAKE 17 27 20.0 +14
LRAL LR LR
comp=Z,3μm,20.0s,MS5.8
GOGA Godfrey 114.20 8 PFAKE 17 27 20.0 +14
GOGA LR LR
comp=Z,2μm,19.0s,MS5.8
VBMS Vicksburg 114.23 14 PFAKE 17 27 20.0 +14
VBMS LR LR
comp=Z,2μm,20.0s,MS5.8
NHSC New Hope 114.81 5 PFAKE 17 27 20.0 +13
NHSC LR LR
comp=Z,2μm,19.0s,MS5.8
BBSR BB Station 114.98 350 PFAKE 17 27 20.0 +13
BBSR LR LR
comp=Z,1μm,19.0s,MS5.6
HKT Hockley 115.07 20 *e*PKPdf PKiKP 17 27 05.3 -2.3
HKT *e*PP PP 17 28 06.4 +0.5
HKT LR LR
comp=Z,2μm,21.0s,MS5.7
TAOE Nuku Hiva Isla 115.71 84 *e*PP PP 17 28 11.0 -1.1
comp=Z,179nm,26.9s
TAOE Nuku Hiva Isla 115.71 84 *e*PS PS 17 37 52.5 -0.5
comp=Z,435nm,28.3s
TAOE *e*LR LR 18 01 57.9
comp=Z,1μm,22.6s
SBA Scott Base 115.74 168 *e*PKIKP PKPdf 17 27 07.6 +0.2
SBA MLR MLR
comp=Z,952nm,21.0s,MS5.4
BRAL Brewton 116.06 11 PFAKE 17 27 20.0 +10
BRAL LR LR
comp=Z,2μm,19.0s,MS5.8
KVTX Kingsville 116.68 23 PFAKE 17 27 20.0 +9.2
KVTX LR LR
comp=Z,2μm,19.0s,MS5.8
ASCN Ascension 118.92 279 PFAKE 17 27 30.0 +15
ASCN LR LR
comp=Z,844nm,21.0s,MS5.3
DWPF Disney 119.66 6 PFAKE 17 27 30.0 +13
DWPF LR LR
comp=Z,2μm,19.0s,MS5.8
NVL N'lazarevskaya 121.09 203⇑*i*PKIKP PKPdf 17 27 14.7 -3.1
NVL *e**PP 17 27 22.9
NVL *e**SP 17 27 27.9
NVL pmax pmax
comp=Z,46nm,0.6s
MAIT Maitri 121.12 203 *e*PKPab PKPdf 17 27 17.7 -0.2
QSPA South Pole Qui 122.03 180 PKP PKPdf 17 27 18.5 -1.0
comp=Z,62nm,0.7s,baz=294,slow=1.2,SNR=152
QSPA PP PP 17 28 48.8 -5.5
comp=Z,7.0nm,1.0s,baz=319,slow=9.3,SNR=1.3
QSPA PKKPbc PKKPbc 17 37 17.6 -0.9
comp=Z,4.0nm,0.9s,baz=159,slow=4.8,SNR=9.7
GRTK Grand Turk 126.41 355 PFAKE 17 27 40.0 +10
GRTK LR LR
comp=Z,1μm,20.0s,MS5.6
RKT Rikitea 126.75 96 *e*LR LR 18 07 03.4
comp=Z,1μm,37.8s
CMIG Matias Romero 127.38 24 PKP PKPdf 17 27 31.1 -0.5
comp=Z,5.2nm,0.7s,baz=357,slow=3.2,SNR=12
GTBY Guantanamo Bay 128.11 0 PFAKE 17 27 40.0 +7.1
GTBY LR LR
comp=Z,1μm,19.0s,MS5.7

ANWB Willy Bob 128.76 344 PFAKE 17 27 50.0 +16
ANWB LR LR
comp=Z,1μm,19.0s,MS5.7
SDDR Presa de Saban 128.93 355 PFAKE 17 27 50.0 +15
SDDR LR LR
comp=Z,1μm,19.0s,MS5.6
MTDJ Mount Denham 129.75 3 PFAKE 17 27 50.0 +14
MTDJ LR LR
comp=Z,1μm,19.0s,MS5.7
FDF Fort de France 131.42 342 PFAKE 17 27 50.0 +11
FDF LR LR
comp=Z,860nm,20.0s,MS5.5
BBGH Gun Hill 132.48 339 PFAKE 17 27 50.0 +8.7
BBGH LR LR
comp=Z,2μm,20.0s,MS5.7
TGUH Tegucigalpa,Un 132.49 16 *e*PKPdf PKPdf 17 27 40.6 -0.7
TGUH LR LR
comp=Z,1μm,21.0s,MS5.6
GRGR Grenville 134.04 342 PFAKE 17 28 00.0 +16
GRGR LR LR
comp=Z,1μm,21.0s,MS5.5
RCBR Riachuelo 135.01 297 PFAKE 17 28 00.0 +14
RCBR LR LR
comp=Z,955nm,20.0s,MS5.5
JTS JuntasAbangare 136.65 14 PFAKE 17 28 00.0 +11
JTS LR LR
comp=Z,992nm,21.0s,MS5.5
BCIP Isla Barro Col 138.56 7 PFAKE 17 28 00.0 +7.3
BCIP LR LR
comp=Z,942nm,21.0s,MS5.5
SDV Santo Domingo 138.87 353 *e*PKPpre 17 27 43.0
SDV LR LR
comp=Z,398nm,19.0s,MS5.2
ROSC El Rosal 143.09 359 PKP PKPdf 17 27 57.7 -3.1
comp=Z,29nm,0.6s,baz=115,slow=7.6,SNR=7.9
ROSC El Rosal 143.09 359 *e*PKPdf PKPdf 17 27 57.7 -3.2
PAYG Puerto Ayora 145.46 28 *e*PKPdf PKPdf 17 28 05.5 +0.6
PAYG LR LR
comp=Z,707nm,21.0s,MS5.4
PMSA Palmer Station 146.75 189 PKPbc PKPdf 17 28 04.1 -1.4
comp=Z,47nm,0.6s,baz=197,slow=3.3,SNR=23
PMSA Palmer Station 146.75 189 *e*PKPdf PKPdf 17 28 05.4 -0.1
OTAV Otavalo 147.52 6 *e*PKPdf PKPdf 17 28 09.6 +1.1
OTAV LR LR
comp=Z,773nm,20.0s,MS5.5
CAM4 Nova Friburgo 149.59 281 *i*P PKPdf 17 28 11.4 -0.2
CAM4 *i* 17 28 14.9
CAM4 *i* 17 28 19.7
CAM4 *i* 17 28 30.5
CAM4 *i* 17 28 49.4
CAM4 *i* 17 28 53.3
CAM4 *i* 17 29 01.7
CAM4 *i* 17 29 05.8
ATAH Atahualpa 154.81 8 PKP PKPdf 17 28 19.7 +0.1
comp=Z,4.7nm,0.7s,baz=121,slow=4.7,SNR=8.5
ATAH PKPab PKPab 17 28 43.6 +0.5
comp=Z,20nm,0.7s,baz=360,slow=6.8,SNR=8.2
SIV San Ignacio 159.42 319 PKP PKPdf 17 28 23.8 -1.5
comp=Z,8.4nm,0.9s,baz=108,slow=1.8,SNR=31
SIV PKPab PKPab 17 29 02.2 -0.7
comp=Z,11nm,0.8s,baz=82,slow=4.3,SNR=14
NNA Nana 159.76 5 PKP PKPdf 17 28 24.5 -1.2
comp=Z,3.7nm,0.3s,baz=266,slow=7.0,SNR=5.6
NNA PKPab PKPab 17 29 02.9 -1.4
comp=Z,8.9nm,0.8s,baz=283,slow=8.3,SNR=5.0
NNA Nana 159.76 5 *e*PKPdf PKPdf 17 28 25.6 -0.2
NNA LR LR
comp=Z,683nm,19.0s,MS5.5
LPAZ La Paz 162.90 337 PKP PKPdf 17 28 29.3 +0.3
comp=Z,16nm,1.1s,baz=30,slow=1.6,SNR=35
LPAZ La Paz 162.90 337 PKIKP PKPdf 17 28 29.3 +0.3
LPAZ pmax pmax
comp=Z,16nm,1.1s
LPAZ La Paz 162.90 337 PKP PKPdf 17 28 29.3 +0.3
CPUP Villa Florida 163.45 286 PKP PKPdf 17 28 27.5 -1.8
comp=Z,12nm,1.0s,baz=58,slow=1.5,SNR=12
CPUP PKPab PKPab 17 29 19.0 -1.5
comp=Z,4.7nm,0.8s,baz=66,slow=4.3,SNR=3.6
CPUP Villa Florida 163.45 286 PKIKP PKPdf 17 28 27.5 -1.8
CPUP 17 29 19.0
CPUP pmax pmax
comp=Z,12nm,1.0s
CPUP pmax pmax
comp=Z,5.0nm,0.8s
CPUP Villa Florida 163.45 286 PKP PKPdf 17 28 27.5 -1.8
CPUP PKPab PKPab 17 29 19.0 -1.5
CPUP LR LR
comp=Z,239nm,20.0s
TRQA Tornquist 167.84 238 PFAKE 17 28 40.0 +7.5
TRQA LR LR
comp=Z,1μm,20.0s
PLCA Paso Flores 170.80 202 PKP PKPdf 17 28 34.6 +0.4
comp=Z,8.3nm,0.9s,baz=15,slow=2.1,SNR=6.5
PLCA PKPab PKPab 17 29 50.9 -1.4
comp=Z,8.3nm,0.9s,baz=254,slow=2.0,SNR=7.0
PLCA Paso Flores 170.80 202 PKIKP PKPdf 17 28 34.6 +0.4
PLCA 17 29 50.9
PLCA pmax pmax
comp=Z,8.0nm,0.9s
PLCA pmax pmax
comp=Z,8.0nm,0.9s
PLCA Paso Flores 170.80 202 PKP PKPdf 17 28 34.6 +0.4
PLCA PKPab PKPab 17 29 50.9 -1.4
PLCA LR LR
comp=Z,1μm,22.0s
CFAA Coronel Fontan 174.17 275 PKP PKPdf 17 28 35.6 -0.4
comp=Z,3.1nm,1.1s,baz=288,slow=0.6,SNR=16
CFAA PKPab PKPab 17 30 06.9 -1.0
comp=Z,1.2nm,0.9s,baz=77,slow=4.6,SNR=5.1
LCO Las Campanas 175.04 310 PFAKE 17 28 50.0 +14
LCO LR LR
comp=Z,882nm,21.0s

NEIC ***17*** *17:15:55.2±1.7,36°.57N×7°.14E,h10km,MG4.3(MDD), Error ellipse: s-maj=20.3km s-min=5.6km az=142.0*
CRAAG ***17*** *17:15:56.9,36°.50N×6°.91E,Ml3.9*
ISCJB ***17*** *17:15:57.1±0.5,36°.92N±0°.03×6°.83E±0°.04,h10km,Error ellipse: s-maj=4.7km s-min=3.4km az=136.1*
CSEM ***17*** *17:15:57.7±0.3,36°.63N×7°.01E,h20km,ML3.9,Error ellipse: s-maj=7.3km s-min=5.2km az=159.0*
LDG ***17*** *17:15:57.9±0.2,36°.59N×7°.12E,h10km,Ml3.4/10,Error ellipse: s-maj=5.4km s-min=4.5km az=150.0*
ISC 17 17:15:58.8±0.5,36°.86N±0°.03×6°.88E±0°.04,h10km,n114,σ1§26/160,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKFL	**Kef-Lekhel**	**0.47**	**196**	P	**Pg**	**17 16 01.3**	**-6.7**
CKFL	**Kef-Lekhel**	**0.47**	**196**	P	**Pg**	**17 16 01.3**	**-6.7**
CMAH	**Djebel Manchou**	**0.49**	**118**	P	**Pg**	**17 16 06.5**	**-1.9**
CMAH	**Djebel Manchou**	**0.49**	**118**	P	**Pg**	**17 16 06.5**	**-1.9**
CASM	**Ain Smara**	**0.67**	**208**	P	**Pg**	**17 16 05.4**	**-6.4**
CASM	**Ain Smara**	**0.67**	**208**	P	**Pg**	**17 16 05.4**	**-6.4**
ABSA	**Djebel Ababsia**	**0.75**	**140**	P	**Pg**	**17 16 07.7**	**-5.7**
ABSA	**Djebel Ababsia**	**0.75**	**140**	P	**Pg**	**17 16 07.7**	**-5.7**
DFRA	**Djebel Bou Aff**	**0.86**	**249**	P	**Pg**	**17 16 13.7**	**-1.8**
DFRA	**Djebel Bou Aff**	**0.86**	**249**	P	**Pg**	**17 16 13.7**	**-1.8**
CTEI	**Djebel Teioual**	**0.88**	**206**	P	**Pg**	**17 16 09.6**	**-6.1**
CTEI	**Djebel Teioual**	**0.88**	**206**	P	**Pg**	**17 16 09.6**	**-6.1**
CKHR	**Kef el Ahmar**	**1.39**	**233**	P	**Pn**	**17 16 20.4**	**-3.8**
CKHR	**Kef el Ahmar**	**1.39**	**233**	P	**Pn**	**17 16 20.4**	**-3.8**
AKF	**Akfadou**	**1.87**	**264**	P	**Pn**	**17 16 29.7**	**-1.2**
AKF	**Akfadou**	**1.87**	**264**	P	**Pn**	**17 16 29.7**	**-1.2**
VSL	**Villasalto**	**3.29**	**36**	*e*Pn	**Pn**	**17 16 50.2**	**-0.2**
VSL				*e*Sn	**Sn**	**17 17 28.2**	**-1.4**
VSL	**Villasalto**	**3.29**	**36**	*e*Pn	**Pn**	**17 16 50.2**	**-0.2**
VSL				*e*Sn	**Sn**	**17 17 28.2**	**-1.3**
ETOS	**Mallorca**	**4.32**	**314**	Pn	**Pn**	**17 17 05.7**	**+1.1**
ETOS				Sn	**Sn**	**17 17 55.1**	**+0.1**
ETOS	**Mallorca**	**4.32**	**314**	Pn	**Pn**	**17 17 05.7**	**+1.1**
ETOS	7.2nm,0.2s,SNR=36			Sn	**Sn**	**17 17 55.1**	**+0.1**
	6.0nm,0.3s,SNR=5.2						
EIBI	**Ibiza**	**4.88**	**298**	Pn	**Pn**	**17 17 12.8**	**+0.5**
EIBI				Sn	**Sn**	**17 18 08.3**	**-0.6**
EIBI	**Ibiza**	**4.88**	**298**	Pn	**Pn**	**17 17 12.9**	**+0.6**
EIBI	7.8nm,0.3s,SNR=14			Sn	**Sn**	**17 18 08.3**	**-0.6**
	6.9nm,0.3s,SNR=7.9						
PGF	**Pioggiola**	**5.92**	**15**	*e*Pn	**Pn**	**17 17 26.7**	**+0.2**
PGF				*e*Sn	**Sn**	**17 18 32.9**	**-1.4**
	6.3nm,0.5s						
PGF	**Pioggiola**	**5.92**	**15**	*e*Pn	**Pn**	**17 17 26.7**	**+0.2**
PGF				*e*Sn	**Sn**	**17 18 32.9**	**-1.4**
	3.2nm,0.5s						
EBEN	**Beniarda**	**5.92**	**290**	Pn	**Pn**	**17 17 27.3**	**+0.7**
EBEN				Sn	**Sn**	**17 18 32.3**	**-2.2**
EBEN	**Beniarda**	**5.92**	**290**	Pn	**Pn**	**17 17 27.3**	**+0.7**
EBEN	0.9nm,0.2s,SNR=8.9			Sn	**Sn**	**17 18 32.3**	**-2.2**
	0.5nm,0.2s,SNR=5.0						
CART	**Cartagena**	**6.33**	**279**	*e*Pn	**Pn**	**17 17 30.7**	**-1.6**
CART	**Cartagena**	**6.33**	**279**	*e*Pn	**Pn**	**17 17 30.7**	**-1.5**
EPOB	**Poblet**	**6.37**	**317**	Pn	**Pn**	**17 17 33.7**	**+1.1**
EPOB				Sn	**Sn**	**17 18 44.8**	**-0.6**
EPOB	**Poblet**	**6.37**	**317**	Pn	**Pn**	**17 17 33.7**	**+1.0**
	1.4nm,0.2s,SNR=8.4						
EPOB				Sn	**Sn**	**17 18 44.8**	**-0.6**
	2.5nm,0.4s,SNR=5.0						
EJON	**La Jonquera**	**6.38**	**332**	Pn	**Pn**	**17 17 32.1**	**-0.8**
EJON				Sn	**Sn**	**17 18 46.1**	**+0.5**
EJON	**La Jonquera**	**6.38**	**332**	Pn	**Pn**	**17 17 32.1**	**-0.7**
	2.1nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**17 18 46.1**	**+0.4**
	0.5nm,0.1s,SNR=7.9						
LMR	**La Mourre**	**6.48**	**358**	*e*Pn	**Pn**	**17 17 33.9**	**-0.3**
LMR				*e*Sn	**Sn**	**17 18 47.4**	**-0.7**
	6.3nm,0.2s						
LMR	**La Mourre**	**6.48**	**358**	*e*Pn	**Pn**	**17 17 33.9**	**-0.3**
LMR				*e*Sn	**Sn**	**17 18 47.4**	**-0.7**
	3.2nm,0.2s						
EMIR	**Miracle**	**6.54**	**322**	Pn	**Pn**	**17 17 36.9**	**+1.9**
EMIR				Sn	**Sn**	**17 18 48.9**	**-0.7**
EMIR	**Miracle**	**6.54**	**322**	Pn	**Pn**	**17 17 36.8**	**+1.8**
	SNR=7.9						
EMIR				Sn	**Sn**	**17 18 48.9**	**-0.7**
	2.2nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**6.54**	**311**	Pn	**Pn**	**17 17 36.0**	**+0.9**
ERTA				Sn	**Sn**	**17 18 48.4**	**-1.4**
ERTA	**Horta de San J**	**6.54**	**311**	Pn	**Pn**	**17 17 36.0**	**+0.9**
ERTA				Sn	**Sn**	**17 18 48.3**	**-1.5**
	0.2nm,0.1s,SNR=7.9						
FRF	**La Foret Royal**	**6.70**	**359**	*e*Pn	**Pn**	**17 17 36.9**	**-0.3**
FRF				*e*Sn	**Sn**	**17 18 52.8**	**-0.8**
	5.3nm,0.3s						
FRF	**La Foret Royal**	**6.70**	**359**	*e*Pn	**Pn**	**17 17 36.9**	**-0.3**
FRF				*e*Sn	**Sn**	**17 18 52.8**	**-0.8**
	2.7nm,0.3s						
EMOS	**Mosqueruela**	**6.74**	**304**	Pn	**Pn**	**17 17 39.2**	**+1.4**
EMOS				Sn	**Sn**	**17 18 53.2**	**-1.4**
EMOS	**Mosqueruela**	**6.74**	**304**	Pn	**Pn**	**17 17 39.2**	**+1.4**
	1.0nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**17 18 53.2**	**-1.4**
	0.4nm,0.1s,SNR=7.9						
ECHE	**Chera**	**6.76**	**296**	Pn	**Pn**	**17 17 39.9**	**+1.8**
ECHE				Sn	**Sn**	**17 18 50.1**	**-4.8**
ECHE	**Chera**	**6.76**	**296**	Pn	**Pn**	**17 17 39.9**	**+1.9**
	3.6nm,0.3s,SNR=11						
ETOB	**Tobarra**	**6.91**	**288**	Pn	**Pn**	**17 17 41.9**	**+1.8**
ETOB				Sn	**Sn**	**17 18 54.3**	**-4.6**
ETOB	**Tobarra**	**6.91**	**288**	Pn	**Pn**	**17 17 41.9**	**+1.7**
	5.3nm,0.3s,SNR=25						
SBF	**Sospel**	**7.01**	**3**	*e*Pn	**Pn**	**17 17 42.1**	**+0.6**
SBF				*e*Sn	**Sn**	**17 19 00.1**	**-1.2**
	6.9nm,0.4s						
SBF	**Sospel**	**7.01**	**3**	*e*Pn	**Pn**	**17 17 42.1**	**+0.6**
SBF				*e*Sn	**Sn**	**17 19 00.1**	**-1.2**
	3.5nm,0.4s						
SMRF	**Simiane la Rot**	**7.18**	**352**	*e*Pn	**Pn**	**17 17 44.8**	**+0.9**
SMRF				*e*Sn	**Sn**	**17 19 04.5**	**-1.0**
	3.3nm,0.4s						
SMRF	**Simiane la Rot**	**7.18**	**352**	*e*Pn	**Pn**	**17 17 44.8**	**+0.9**
SMRF				*e*Sn	**Sn**	**17 19 04.5**	**-1.0**
	1.6nm,0.4s						
ENIJ	**Nijar**	**7.28**	**274**	Pn	**Pn**	**17 17 44.8**	**-0.4**
ENIJ	**Nijar**	**7.28**	**274**	Pn	**Pn**	**17 17 44.8**	**-0.5**
	1.3nm,0.1s,SNR=4.0						
MTLF	**Montolieu**	**7.40**	**333**	*e*Pn	**Pn**	**17 17 46.1**	**-0.7**
MTLF				*e*Sn	**Sn**	**17 19 10.5**	**-0.3**
	1.6nm,0.3s						
MTLF	**Montolieu**	**7.40**	**333**	*e*Pn	**Pn**	**17 17 46.1**	**-0.7**
MTLF				*e*Sn	**Sn**	**17 19 10.5**	**-0.3**
	0.8nm,0.3s						
ESAC	**San Caprasio**	**7.49**	**313**	Pn	**Pn**	**17 17 50.4**	**+2.3**
ESAC	**San Caprasio**	**7.49**	**313**	Pn	**Pn**	**17 17 50.4**	**+2.3**
	7.2nm,0.2s,SNR=8.1						
LASF	**Ste Croix**	**7.57**	**343**	*e*Pn	**Pn**	**17 17 49.7**	**+0.5**
LASF				*e*Sn	**Sn**	**17 19 14.2**	**-0.8**
	2.6nm,0.3s						
LASF	**Ste Croix**	**7.57**	**343**	*e*Pn	**Pn**	**17 17 49.7**	**+0.5**
LASF				*e*Sn	**Sn**	**17 19 14.2**	**-0.8**
	1.3nm,0.3s						
EHUE	**Huescar**	**7.61**	**280**	Pn	**Pn**	**17 17 49.8**	**+0.1**
EHUE				Sn	**Sn**	**17 19 15.1**	**-0.9**
EHUE	**Huescar**	**7.61**	**280**	Pn	**Pn**	**17 17 49.8**	**+0.1**
	1.7nm,0.3s,SNR=7.9						
EHUE				Sn	**Sn**	**17 19 15.1**	**-0.9**
	0.5nm,0.1s,SNR=4.0						
EVIA	**Vianos**	**7.65**	**286**	Pn	**Pn**	**17 17 50.3**	**+0.1**
EVIA	**Vianos**	**7.65**	**286**	Pn	**Pn**	**17 17 50.3**	**+0.1**
	0.9nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**7.80**	**320**	Pn	**Pn**	**17 17 54.2**	**+1.9**
EBIE				Sn	**Sn**	**17 19 22.5**	**+1.9**
EBIE	**Bielsa**	**7.80**	**320**	Pn	**Pn**	**17 17 54.2**	**+1.9**
	2.9nm,0.2s,SNR=14						
EBIE				Sn	**Sn**	**17 19 22.5**	**+1.9**
	0.2nm,0.1s,SNR=5.9						
EBER	**Berja**	**7.83**	**273**	Pn	**Pn**	**17 17 50.4**	**-2.4**
MBDF	**Montbardon**	**7.87**	**359**	*e*Pn	**Pn**	**17 17 53.8**	**+0.6**
MBDF	**Montbardon**	**7.87**	**359**	*e*Pn	**Pn**	**17 17 53.8**	**+0.6**
EPF	**Esparros**	**7.95**	**323**	*e*Pn	**Pn**	**17 17 56.8**	**+2.4**
EPF				*e*Sn	**Sn**	**17 19 23.9**	**-0.5**
	5.3nm,0.5s						
EPF	**Esparros**	**7.95**	**323**	*e*Pn	**Pn**	**17 17 56.8**	**+2.4**
EPF				*e*Sn	**Sn**	**17 19 23.9**	**-0.5**
	2.7nm,0.5s						
EQES	**Quesada**	**7.99**	**280**	Pn	**Pn**	**17 17 55.6**	**+0.7**
EQES				Sn	**Sn**	**17 19 24.8**	**-0.5**
EQES	**Quesada**	**7.99**	**280**	Pn	**Pn**	**17 17 55.6**	**+0.7**
	7.4nm,0.2s,SNR=33						
EQES				Sn	**Sn**	**17 19 24.8**	**-0.5**
EALB	**Alboran**	**8.05**	**266**	Pn	**Pn**	**17 17 55.2**	**-0.6**
EALB	**Alboran**	**8.05**	**266**	Pn	**Pn**	**17 17 55.2**	**-0.6**
	1.5nm,0.1s,SNR=4.0						
ORIF	**Oris-en-Rattie**	**8.09**	**355**	*e*Pn	**Pn**	**17 17 56.6**	**+0.3**
ORIF	**Oris-en-Rattie**	**8.09**	**355**	*e*Pn	**Pn**	**17 17 56.6**	**+0.3**
VIVF	**Saint-Julien-l**	**8.17**	**349**	*e*Pn	**Pn**	**17 17 57.1**	**-0.2**
VIVF				*e*Sn	**Sn**	**17 19 28.3**	**-1.3**
	3.5nm,0.4s						
VIVF	**Saint-Julien-l**	**8.17**	**349**	*e*Pn	**Pn**	**17 17 57.1**	**-0.2**
VIVF				*e*Sn	**Sn**	**17 19 28.3**	**-1.3**
	1.8nm,0.4s						
EQUE	**Quentar**	**8.26**	**276**	Pn	**Pn**	**17 17 57.6**	**-1.1**
	1.3nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**8.31**	**319**	*e*Pn	**Pn**	**17 18 01.0**	**+1.6**
ETSF	**Etsaut**	**8.31**	**319**	*e*Pn	**Pn**	**17 18 01.0**	**+1.6**
EGUA	**Guajares**	**8.38**	**273**	Pn	**Pn**	**17 17 57.8**	**-2.5**
LPG	**La Plagne**	**8.64**	**359**	*e*Pn	**Pn**	**17 18 04.6**	**+0.8**
LPG	**La Plagne**	**8.64**	**359**	*e*Pn	**Pn**	**17 18 04.6**	**+0.8**
LPL	**La Plagne**	**8.65**	**359**	*e*Pn	**Pn**	**17 18 04.8**	**+0.8**
LPL	**La Plagne**	**8.65**	**359**	*e*Pn	**Pn**	**17 18 04.8**	**+0.8**
IPRE	**Itoiz**	**8.69**	**316**	Pn	**Pn**	**17 18 05.5**	**+1.0**
	1.0nm,0.1s,SNR=4.0						
IUNC	**Unciti**	**8.73**	**315**	Pn	**Pn**	**17 18 08.3**	**+3.2**
	1.0nm,0.2s,SNR=4.0						
SJPF	**Ste Jean**	**8.82**	**318**	*e*Pn	**Pn**	**17 18 07.6**	**+1.3**
SJPF				*e*Sn	**Sn**	**17 19 44.4**	**-1.2**
	2.2nm,0.4s						
SJPF	**Ste Jean**	**8.82**	**318**	*e*Pn	**Pn**	**17 18 07.6**	**+1.3**
SJPF				*e*Sn	**Sn**	**17 19 44.4**	**-1.2**
	1.1nm,0.4s						
ELOJ	**Sierra Loja**	**8.83**	**275**	Pn	**Pn**	**17 18 06.8**	**+0.3**
ELOJ	**Sierra Loja**	**8.83**	**275**	Pn	**Pn**	**17 18 06.8**	**+0.3**
	0.6nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**8.98**	**292**	Pn	**Pn**	**17 18 10.3**	**+1.8**
ESDC	**Sonseca Array**	**8.98**	**292**	Pn	**Pn**	**17 18 10.3**	**+1.7**
	1.2nm,0.2s,slow=14,SNR=12						
ESLA	**Sonseca Array**	**8.98**	**292**	*e*Pn	**Pn**	**17 18 08.4**	**-0.1**
ESLA	**Sonseca Array**	**8.98**	**292**	*e*Pn	**Pn**	**17 18 08.4**	**-0.2**
ELIZ	**Elizondo**	**9.02**	**317**	Pn	**Pn**	**17 18 05.6**	**-3.4**
EALK	**Alkurruntz**	**9.04**	**317**	Pn	**Pn**	**17 18 12.1**	**+2.8**
EALK	**Alkurruntz**	**9.04**	**317**	Pn	**Pn**	**17 18 12.1**	**+2.8**
	2.9nm,0.2s,SNR=9.0						
EADA	**Adamuz**	**9.20**	**282**	Pn	**Pn**	**17 18 11.2**	**-0.4**
EADA	**Adamuz**	**9.20**	**282**	Pn	**Pn**	**17 18 11.1**	**-0.4**
	0.7nm,0.2s,SNR=7.9						
ECRI	**Cripan**	**9.24**	**311**	Pn	**Pn**	**17 18 14.8**	**+2.8**
ECRI	**Cripan**	**9.24**	**311**	Pn	**Pn**	**17 18 14.8**	**+2.8**
	1.7nm,0.2s,SNR=7.9						
LFF	**La Frestale**	**9.32**	**332**	*e*Pn	**Pn**	**17 18 12.5**	**-0.6**
LFF	**La Frestale**	**9.32**	**332**	*e*Pn	**Pn**	**17 18 12.5**	**-0.6**
RJF	**Les Rejaudoux**	**9.36**	**336**	*e*Pn	**Pn**	**17 18 13.2**	**-0.5**
RJF	**Les Rejaudoux**	**9.36**	**336**	*e*Pn	**Pn**	**17 18 13.2**	**-0.5**
GUD	**Guadarrama**	**9.41**	**297**	Pn	**Pn**	**17 18 16.9**	**+2.5**
GUD	**Guadarrama**	**9.41**	**297**	Pn	**Pn**	**17 18 16.9**	**+2.4**
	1.0nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**10.15**	**312**	Pn	**Pn**	**17 18 27.3**	**+2.7**
	0.7nm,0.2s						
ELAN	**Lanestosa**	**10.15**	**312**	Pn	**Pn**	**17 18 27.3**	**+2.8**
	0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**10.84**	**279**	Pn	**Pn**	**17 18 32.8**	**-1.2**
	0.3nm,0.2s						
EMIN	**Mina Concepcio**	**10.84**	**279**	Pn	**Pn**	**17 18 32.8**	**-1.2**
	0.3nm,0.2s						
ECAL	**Calabor**	**11.69**	**300**	Pn	**Pn**	**17 18 47.4**	**+1.8**
	0.9nm,0.2s						
ECAL	**Calabor**	**11.69**	**300**	Pn	**Pn**	**17 18 47.4**	**+1.7**
	0.9nm,0.2s,SNR=4.0						

KRSC ***17*** *17:22:13.7±0.1,56°.24N×163°.63E,h5km±5km,ML4.4*
MOS ***17*** *17:22:14.5±0.7,56°.24N×163°.50E,h6km,mb3.9/7,Error ellipse: s-maj=18.2km s-min=8.3km az=63.4*
ISCJB ***17*** *17:22:15.4±0.4,56°.17N±0°.03×163°.61E±0°.04,h10km, mb3.8/12,Error ellipse: s-maj=4.5km s-min=3.4km az=178.1*
IDC ***17*** *17:22:15.4±0.8,56°.25N×163°.27E,h0km,mb3.7/11, mb1 3.9/13,mb1mx3.7/29,mbtmp3.8/13,ML3.4/2,MS3.0/1, Ms1 3.0/1,ms1mx2.6/49,Error ellipse: s-maj=27.8km s-min=16.4km az=145.0*
NEIC ***17*** *17:22:18.6±3.0,56°.22N×163°.34E,h22km±23km,mb4.3/1, Error ellipse: s-maj=15.8km s-min=8.2km az=136.0*
ISC 17 17:22:16.8±0.4,56°.20N±0°.03×163°.53E±0°.04,h10km,n54,σ1§15/75,mb3.8/12,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.40**	**271**	*e*P	**Pg**	**17 22 22.5**	**-2.1**
SMKR	**Semkarok**	**1.21**	**289**	*e*P	**Pn**	**17 22 37.7**	**-2.0**
SMKR				*i* S	**Sb**	**17 22 54.2**	**-1.2**
BDR	**Baidarnaya**	**1.34**	**287**	*e*P	**Pn**	**17 22 39.8**	**-1.8**
BDR				*i* S	**Sb**	**17 22 59.7**	**+0.4**
SRKR	**Sorokina**	**1.39**	**290**	*e*P	**Pn**	**17 22 40.4**	**-1.8**
SRKR				*i* S	**Sb**	**17 23 00.1**	**-0.5**
ZLN	**Zelenaya**	**1.54**	**264**	*e*P	**Pn**	**17 22 43.7**	**-0.6**
ZLN				*i* S	**Sn**	**17 23 04.9**	**+0.6**
CIRR	**Tsirk**	**1.56**	**268**	*e*P	**Pn**	**17 22 43.9**	**-0.7**
CIRR				*e*S	**Sn**	**17 23 06.1**	**+1.3**
KLY	**Klyuchi**	**1.61**	**275**	*e*P	**Pn**	**17 22 42.2**	**-3.1**
KLY				*i* S	**Sn**	**17 23 02.5**	**-3.6**
KRSR	**Krestovskiy**	**1.66**	**272**	*e*P	**Pn**	**17 22 44.9**	**-1.0**
KRSR				*i* S	**Sn**	**17 23 07.1**	**-0.1**
BKI	**Bering**	**1.70**	**125**	*e*P	**Pn**	**17 22 45.8**	**-0.7**
BKI				*i* S	**Sn**	**17 23 09.0**	**+0.7**
BZMR	**Bezymyannaya**	**1.73**	**262**	*e*P	**Pn**	**17 22 46.4**	**-0.4**
BZMR				*i* S	**Sn**	**17 23 10.1**	**+1.2**
KIRR	**Kirishev**	**1.81**	**263**	*e*P	**Pn**	**17 22 47.8**	**-0.1**
KPT	**Kopyto**	**1.87**	**264**	*e*P	**Pn**	**17 22 48.7**	**-0.1**
KMNR	**Kamenistaya**	**1.91**	**258**	*e*P	**Pn**	**17 22 49.6**	**+0.3**
KMNR				*i* S	**Sn**	**17 23 15.6**	**+2.3**
MKZ	**Mys Kozlova**	**1.94**	**213**	*e*P	**Pn**	**17 22 48.5**	**-1.3**
MKZ				*i* S	**Sn**	**17 23 13.6**	**-0.6**
KOZR	**Kozyr**	**2.04**	**268**	PN	**Pn**	**17 22 51.8**	**+0.7**
KOZR				S	**Sn**	**17 23 19.0**	**+2.4**
KOZ	**Kozyrevsk**	**2.05**	**268**	*e*P	**Pn**	**17 22 51.8**	**+0.5**
KOZ				*i* S	**Sn**	**17 23 19.0**	**+2.0**
SRDR	**Sredinnyy**	**2.13**	**275**	*e*P	**Pn**	**17 22 52.7**	**+0.3**
SRDR				*i* S	**Sn**	**17 23 20.6**	**+1.7**
KII	**Karymskiy**	**3.19**	**229**	*e*P	**Pn**	**17 23 07.8**	**+0.8**
KII				*i* S	**Sn**	**17 23 46.1**	**+1.0**
SPN	**Mys Shipunski**	**3.72**	**215**	*e*P	**Pn**	**17 23 13.1**	**-1.1**
SPN				*i* S	**Sn**	**17 23 56.2**	**-1.8**
NLC	**Nalytchevo**	**3.89**	**220**	*e*P	**Pn**	**17 23 16.7**	**+0.2**
NLC				*i* S	**Sn**	**17 24 01.2**	**-1.0**
AVH	**Avacha**	**4.05**	**225**	*e*P	**Pn**	**17 23 19.6**	**+0.9**
GNL	**Ganaly**	**4.09**	**234**	*e*P	**Pn**	**17 23 20.2**	**+1.0**
PET	**Petropavlovsk**	**4.26**	**224**	*e*PN	**Pn**	**17 23 23.6**	**+1.9**
PET				*e*S	**Sn**	**17 24 13.6**	**+2.2**
PET				pmax	pmax		
	comp=Z,58nm,0.5s						
PET				smax			
	comp=N,54nm,0.6s						
PET	**Petropavlovsk**	**4.26**	**224**	*e*P	**Pn**	**17 23 22.2**	**+0.5**
PET				*i* S	**Sn**	**17 24 11.2**	**-0.2**
PET	**Petropavlovsk**	**4.26**	**224**	*e*Pn	**Pn**	**17 23 20.6**	**-1.1**
PET				*e*Sn	**Sn**	**17 24 07.3**	**-4.1**
PETK	**Petropavlovsk-**	**4.59**	**230**	Pn	**Pn**	**17 23 26.7**	**+0.5**
	comp=N,2.0nm,0.3s,baz=59,slow=15,SNR=48						
PETK				Sn	**Sn**	**17 24 26.2**	**+6.7**
	comp=N,0.2nm,0.3s,baz=75,slow

Error ellipse: s-maj=3.0km s-min=2.4km az=159.9
*ECX **17** 17:25:14.2±0.6, 32°.83N×115°.60W, h10km, MD2.7, ML2.7*
ISC 17 17:25:13.0±0.3, 32°.84N±0°.02×115°.59W±0°.02, h18km±2km, n42, σ0°98/66, 34C-22D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK	**Cook Ranch**	**0.12**	**277**	⇑*i*P	**Pg**	**17 25 16.9**	**0.0**
SNR	**Schaffner Ranc**	**0.13**	**78**	⇑*i*P	**Pg**	**17 25 17.2**	**+0.2**
SWSC	**Sam W. Stewart**	**0.20**	**301**	⇓P	**Pg**	**17 25 18.0**	**-0.1**
	baz=0.2,SNR=89						
SWSC				⇑S	**Sg**	**17 25 21.5**	**+0.1**
	baz=0.2						
SGL	**Mount Signal**	**0.22**	**212**	*i* P	**Pg**	**17 25 18.0**	**-0.3**
CRR	**Carrizo Plain**	**0.33**	**279**	⇑*i*P	**Pg**	**17 25 20.1**	**+0.1**
YUH	**Yuha Desert**	**0.34**	**237**	⇑*i*P	**Pg**	**17 25 20.0**	**-0.2**
COA	**Coachella**	**0.39**	**86**	⇑*i*P	**Pg**	**17 25 21.6**	**+0.5**
DVTC	**Desert V Tower**	**0.47**	**248**	⇓P	**Pg**	**17 25 22.3**	**-0.1**
	baz=0.5,SNR=40						
DVTC				⇓S	**Sg**	**17 25 28.8**	**-0.1**
	baz=0.5						
RMX	**La Rumorosa**	**0.47**	**241**	*e*P	**Pg**	**17 25 22.8**	**+0.2**
CPBX	**Cerro Prieto**	**0.48**	**150**	⇑*e*P	**Pg**	**17 25 22.7**	**0.0**
CPBX				*e*S	**Sg**	**17 25 30.1**	**+0.9**
CPBX				⇑*e*		17 25 31.0	
	comp=N,1μm,0.2s						
RUN	**Ruthven**	**0.53**	**75**	⇑*i*P	**Pg**	**17 25 23.4**	**-0.2**
GLA	**Glamis**	**0.68**	**71**	⇑P	**Pb**	**17 25 25.6**	**-0.5**
	baz=0.7,SNR=16						
GLA				⇑S	**Sb**	**17 25 34.3**	**-0.9**
	baz=0.7						
GLA	**Glamis**	**0.68**	**71**	⇑*i*P	**Pb**	**17 25 25.9**	**-0.3**
MONP	**Monument Peak**	**0.70**	**275**	⇑P	**Pb**	**17 25 26.6**	**0.0**
	baz=0.7,SNR=38						
MONP				⇓S	**Sb**	**17 25 35.8**	**-0.1**
	baz=0.7						
BC3	**Big Chuckw Mtn**	**0.82**	**8**	⇑P	**Pb**	**17 25 27.9**	**-0.8**
	baz=0.9,SNR=48						
BC3				⇑S	**Sb**	**17 25 39.7**	**+0.2**
	baz=0.9						
EMX	**El Mayor**	**0.89**	**161**	⇓*e*P	**Pb**	**17 25 29.3**	**-0.6**
EMX				*e*S	**Sb**	**17 25 41.5**	**0.0**
112A	**Yuma**	**0.90**	**109**	⇑P	**Pb**	**17 25 29.0**	**-1.0**
	baz=0.9,SNR=7.9						
112A				⇑S	**Sb**	**17 25 40.8**	**-0.9**
	baz=0.9						
YMD	**Yuma Desert**	**0.92**	**107**	⇓*i*P	**Pb**	**17 25 30.2**	**-0.2**
BAR	**Barrett**	**0.93**	**261**	⇑*e*P	**Pb**	**17 25 30.4**	**-0.1**
RDX	**Rancho Dawling**	**0.95**	**198**	*e*P	**Pb**	**17 25 30.4**	**-0.5**
RDX				*e*S	**Sb**	**17 25 42.9**	**-0.3**
RDX				⇑*e*		17 25 44.4	
	comp=N,148nm,0.3s						
CBX	**Cerro Bola**	**1.05**	**240**	⇑*e*P	**Pb**	**17 25 32.6**	**0.0**
CBX				*e*S	**Sb**	**17 25 46.3**	**+0.5**
PFO	**Pinyon Flat Ob**	**1.06**	**317**	⇓P	**Pb**	**17 25 31.5**	**-1.2**
	baz=1.1,SNR=18						
PFO				⇓Sn	**Sn**	**17 25 45.6**	**-1.6**
	baz=1.1						
BELC	**Belle Mtn.**	**1.21**	**344**	⇓Pb	**Pb**	**17 25 34.9**	**-0.5**
	baz=1.3,SNR=16						
Y12C	**Blythe**	**1.27**	**44**	⇓Pb	**Pb**	**17 25 35.4**	**-1.0**
	baz=1.3,SNR=5.3						
Y12C				⇑Sb	**Sb**	**17 25 53.2**	**+0.7**
	baz=1.3						
109C	**Camp Elliot, M**	**1.28**	**273**	⇓Pb	**Pb**	**17 25 35.4**	**-1.1**
	baz=1.3						
109C				⇑Sn	**Sn**	**17 25 51.4**	**-1.1**
	baz=1.3						
109C				⇓Sb	**Sb**	**17 25 52.5**	**-0.1**
	baz=1.3						
IRM	**Iron Mountain**	**1.37**	**15**	⇑Pb	**Pb**	**17 25 37.2**	**-0.9**
	baz=1.4						
IRM				⇑Pg	**Pg**	**17 25 39.1**	**-0.3**
	baz=1.4,SNR=20						
ECBX	**El Chinero**	**1.43**	**161**	*e*P	**Pn**	**17 25 38.7**	**+0.7**
ECBX				*e*S	**Sn**	**17 25 57.8**	**+1.5**
PBX	**Punta Banda**	**1.46**	**222**	⇓*e*P	**Pn**	**17 25 39.4**	**+1.1**
PBX				*e*S	**Sn**	**17 25 58.3**	**+1.4**
113A	**Mohawk Valley,**	**1.54**	**92**	⇓Pb	**Pb**	**17 25 39.7**	**-1.1**
	baz=1.5						
113A				⇓Sn	**Sn**	**17 25 56.8**	**-2.0**
	baz=1.5						
113A				⇓Sb	**Sb**	**17 25 59.8**	**-0.1**
	baz=1.5						
MURC	**Murrieta**	**1.55**	**300**	⇑Sb	**Sb**	**17 26 00.7**	**+0.3**
	baz=1.6						
Z13A	**Yuma Proving G**	**1.66**	**77**	⇑Pb	**Pb**	**17 25 41.8**	**-1.2**
	baz=1.7,SNR=26						
Z13A				⇓Sb	**Sb**	**17 26 03.8**	**+0.2**
	baz=1.7						
Y13A	**Salome**	**1.77**	**56**	⇓Sb	**Sb**	**17 26 07.1**	**+0.5**
	baz=1.8						
SPX	**San Pedro Mart**	**1.79**	**177**	*e*P	**Pn**	**17 25 45.1**	**+2.2**
SPX				*e*S	**Sn**	**17 26 08.4**	**+3.3**
GMRC	**Granite Mounta**	**1.94**	**358**	⇑Pg	**Pg**	**17 25 50.9**	**+0.6**
	baz=2.0,SNR=10						
HEC	**Hector,Ludlow**	**2.08**	**343**	⇑Pb	**Pb**	**17 25 49.5**	**-0.7**
	baz=2.1						
HEC				⇓Pg	**Pg**	**17 25 55.0**	**+2.0**
	baz=2.1,SNR=7.5						
Z14A	**Wintersburg**	**2.28**	**76**	⇑Pb	**Pb**	**17 25 52.7**	**-0.9**
	baz=2.3						
Z14A				⇑Sb	**Sb**	**17 26 22.4**	**+1.0**
	baz=2.3						
X13A	**Yucca**	**2.29**	**39**	⇑Sb	**Sb**	**17 26 23.3**	**+1.8**
	baz=2.3						
214A	**Organ Pipe Nat**	**2.51**	**110**	⇓Pn	**Pn**	**17 25 51.0**	**-1.7**
	baz=2.5						
214A				⇓Sn	**Sn**	**17 26 19.9**	**-3.0**
	baz=2.5						
X14A	**Yava**	**2.78**	**53**	⇑Sb	**Sb**	**17 26 37.3**	**+1.5**
	baz=2.8						
EDW2	**Edwards Air Fo**	**2.85**	**316**	⇑Sb	**Sb**	**17 26 40.4**	**+2.4**
	baz=2.9						
Y15A	**Casa Rosa Ranc**	**2.94**	**67**	⇓Sb	**Sb**	**17 26 42.0**	**+1.5**
	baz=3.0						
X15A	**Humboldt**	**3.24**	**59**	⇑Sb	**Sb**	**17 26 50.6**	**+1.5**
	baz=3.3						

*NEIC **17** 17:28:28.2, 15°.74N×98°.78W, h10km, MD3.9(MEX), After MEX.*
MEX 17 17:28:28.2±0.9, 15°.74N×98°.78W, h10km±38km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.90**	**44**	*i* P	Pg	17 28 42.7	-2.9
PNIG				*i* S	Sg	17 28 54.8	-2.6
PNIG	**Pinotepa**	**0.90**	**44**	*i* P	Pg	17 28 42.7	-2.9
PNIG				*i* S	Sg	17 28 54.8	-2.6
ACX	**Acapulco**	**1.57**	**316**	*i* P	Pn	17 28 52.6	-3.5
ACX				*i* S	Sn	17 29 10.9	-5.5
ACX	**Acapulco**	**1.57**	**316**	*i* P	Pn	17 28 52.6	-3.5
ACX				*i* S	Sn	17 29 10.9	-5.5
CAIG	**El Cayaco**	**1.93**	**313**	*i* P	Pn	17 28 58.5	-2.7
CAIG				*i* S	Sn	17 29 22.0	-3.5
CAIG	**El Cayaco**	**1.93**	**313**	*i* P	Pn	17 28 58.5	-2.7
CAIG				*i* S	Sn	17 29 22.0	-3.5
UTMO	**Huajuapan**	**2.28**	**24**	*i* P	Pn	17 29 04.3	-1.6
UTMO				*i* S	Sn	17 29 31.2	-2.9
VHO	**Vista Hermosa**	**2.37**	**56**	*i* P	Pn	17 29 05.1	-2.0
VHO				*i* S	Sn	17 29 32.4	-3.9
VHO	**Vista Hermosa**	**2.37**	**56**	*i* P	Pn	17 29 05.1	-2.0
VHO				*i* S	Sn	17 29 32.4	-3.9
PLIG	**Platanillo**	**2.73**	**345**	*i* P	Pn	17 29 09.0	-3.1
PLIG				*i* S	Sn	17 29 40.4	-4.7
PLIG	**Platanillo**	**2.73**	**345**	*i* P	Pn	17 29 09.0	-3.1
PLIG				*i* S	Sn	17 29 40.4	-4.7
PPM	**Popocatepetl**	**3.31**	**2**	*i* P	Pn	17 29 17.5	-2.6
PPM	**Popocatepetl**	**3.31**	**2**	*i* P	Pn	17 29 17.5	-2.6

IDC 17 17:39:29.5±1.6, 31°.62N×103°.81E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/25, mbtmp3.6/5, ML2.7/1, MS4.3/1, Ms1 4.3/1, ms1mx2.9/43, Error ellipse: s-maj=92.3km s-min=27.2km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.32**	**6**	Pn	Pn	17 43 20.4	+0.5
	0.0nm,0.3s,baz=181,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**22.43**	**319**	P	P	17 44 30.6	+0.9
	0.7nm,0.8s,baz=112,slow=9.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**26.15**	**334**	P	P	17 45 05.1	-0.1
	0.2nm,0.3s,baz=152,slow=6.5,SNR=2.8						
KURK	**Kurchatov**	**26.69**	**323**	LR	LR	17 56 03.4	
	comp=Z,542nm,18.4s,baz=25,slow=37						
FINES	**FINESS Array B**	**57.00**	**326**	P	P	17 49 16.0	-0.6
	3.2nm,1.0s,baz=99,slow=12,SNR=4.2						
ASAR	**Alice Springs**	**62.06**	**149**	P	P	17 49 52.1	+0.2
	0.5nm,0.9s,baz=326,slow=6.2,SNR=3.0						

*NEIC **17** 17:51:07.0±0.8, 24°.11N×122°.20E, h45km±10km, MG3.4(JMA), Error ellipse: s-maj=12.6km s-min=9.3km az=131.0*
*ISCJB **17** 17:51:07.4±0.2, 24°.14N±0°.02×122°.19E±0°.02, h46km±5km, mb3.3/3, Error ellipse: s-maj=3.1km s-min=2.1km az=149.1*
*TAP **17** 17:51:07.5, 24°.15N×122°.14E, h43km, ML4.3, B*
*IDC **17** 17:51:08.5±8.7, 24°.22N×122°.30E, h55km±55km, mb3.3/3, mb1 3.6/5, mb1mx3.2/25, mbtmp3.5/5, ML3.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=97.9km s-min=31.0km az=4.0*
*JMA **17** 17:51:08.0±0.2, 24°.31N×122°.18E, h63km±3km, M3.8*
ISC 17 17:51:08.2±0.2, 24°.15N±0°.02×122°.18E±0°.02, h40km±7km, n91, σ1°06/152, mb3.3/3, 15C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.43**	**292**	*e*P	**Pn**	**17 51 21.4**	**+3.4**
	baz=293						
ENA	**Nanau**	**0.49**	**304**	⇑*i*P	**Pn**	**17 51 18.3**	**-0.5**
	baz=315						
ENA				S	**Sn**	**17 51 26.0**	**-0.2**
	baz=315						
NACB	**Ninganchiao**	**0.54**	**273**	*e*Pn	**Pn**	**17 51 18.0**	**-1.4**
NACB				*e*Sn	**Sn**	**17 51 23.8**	**-3.6**
TWD	**Chiawan**	**0.54**	**263**	⇓*i*P	**Pn**	**17 51 18.4**	**-1.1**
	baz=254						
TWD				S	**Sn**	**17 51 26.3**	**-1.1**
	baz=254						
TWC	**Suao**	**0.55**	**326**	P	**Pn**	**17 51 18.8**	**-0.7**
	baz=335						
TWC				*e*S	**Sn**	**17 51 26.9**	**-0.7**
	baz=335						
HWA	**Hwalien**	**0.56**	**252**	*i* P	**Pn**	**17 51 18.9**	**-0.8**
	baz=243						
HWA				S	**Sn**	**17 51 27.2**	**-0.6**
	baz=243						
ESF	**Shoufeng Towns**	**0.68**	**246**	*e*P	**Pn**	**17 51 19.3**	**-2.0**
	baz=244						
ILA	**Ilan**	**0.73**	**327**	P	**Pn**	**17 51 22.1**	**+0.1**
	baz=329						
ILA				S	**Sn**	**17 51 32.3**	**+0.3**
	baz=329						
TEGC	**Jichi Village**	**0.73**	**233**	*e*P	**Pn**	**17 51 20.7**	**-1.4**
	baz=222						
TEGC				*e*S	**Sn**	**17 51 31.8**	**-0.3**
	baz=222						
TWE	**Neicheng**	**0.74**	**320**	⇑*i*P	**Pn**	**17 51 22.1**	**0.0**
	baz=322						
TWE				*i* S	**Sn**	**17 51 32.0**	**-0.2**
	baz=322						
ESL	**Shilin**	**0.76**	**244**	⇓*i*P	**Pn**	**17 51 21.2**	**-1.3**
	baz=235						
ESL				*e*S	**Sn**	**17 51 31.0**	**-1.8**
	baz=235						
NNS	**Nan Shan**	**0.79**	**291**	⇑*i*P	**Pn**	**17 51 22.3**	**-0.6**
	baz=292						
NNS				*e*S	**Sn**	**17 51 32.8**	**-0.7**
	baz=292						
YOJ	**Yonaguni jima**	**0.82**	**68**	P	**Pn**	**17 51 23.3**	**+0.1**
YOJ				S	**Sn**	**17 51 34.7**	**+0.6**
YOJ	**Yonaguni jima**	**0.82**	**68**	P	**Pn**	**17 51 23.1**	**-0.1**
	baz=68						
YOJ				*e*S	**Sn**	**17 51 33.8**	**-0.3**
	baz=68						
WHF	**Hehuan Shan**	**0.84**	**270**	⇑*i*P	**Pn**	**17 51 22.8**	**-0.6**
	baz=269						
WHF				*e*S	**Sn**	**17 51 33.8**	**-0.9**
	baz=269						
TWB1	**Santiao Chiao**	**0.87**	**348**	⇓*i*P	**Pn**	**17 51 23.8**	**-0.2**
	baz=350						
TWB1				S	**Sn**	**17 51 34.6**	**-0.8**
	baz=350						
YHNB	**Yeheng**	**0.90**	**305**	*e*Pn	**Pn**	**17 51 23.7**	**-0.6**
YHNB				*e*Sn	**Sn**	**17 51 37.0**	**+0.8**
NSK	**Sanguang**	**0.92**	**305**	⇑*i*P	**Pn**	**17 51 24.2**	**-0.3**
	baz=295						
NSK				*e*S	**Sn**	**17 51 34.9**	**-1.7**
	baz=295						
NWF	**Wu-fen Shan**	**0.99**	**338**	⇓*i*P	**Pn**	**17 51 25.7**	**+0.2**
	baz=354						
NWF				S	**Sn**	**17 51 38.2**	**-0.1**
	baz=354						
TWA	**Mucha**	**0.99**	**327**	⇑*i*P	**Pn**	**17 51 26.3**	**+0.8**
	baz=328						
TWA				S	**Sn**	**17 51 39.1**	**+0.8**
	baz=328						
EHY	**Hungye**	**1.02**	**231**	⇓*i*P	**Pn**	**17 51 24.6**	**-1.3**
	baz=239						
TATO	**Taipei**	**1.04**	**323**	*e*Pn	**Pn**	**17 51 25.8**	**-0.5**
TATO				*e*Sn	**Sn**	**17 51 39.6**	**+0.1**
TAP1	**Taipei**	**1.07**	**326**	P	**Pn**	**17 51 26.6**	**0.0**
	baz=327						
TAP1				*e*S	**Sn**	**17 51 40.9**	**+0.5**
	baz=327						
YULB	**Yu-li**	**1.11**	**227**	*e*Pn	**Pn**	**17 51 25.4**	**-1.8**
TWF1	**Yuli**	**1.14**	**226**	⇓*i*P	**Pn**	**17 51 26.5**	**-1.0**
	baz=237						
TWF1				*e*S	**Sn**	**17 51 39.8**	**-2.1**
	baz=237						
TWS1	**Kuangyinshan**	**1.18**	**324**	⇑*i*P	**Pn**	**17 51 28.4**	**+0.3**
	baz=325						
TWS1				S	**Sn**	**17 51 43.7**	**+0.8**
	baz=325						
NSTT	**Nanjuang**	**1.18**	**294**	⇑*i*P	**Pn**	**17 51 28.8**	**+0.6**
	baz=294						
NSTT				S	**Sn**	**17 51 42.8**	**-0.2**
	baz=294						
SSLB	**Suanglung**	**1.18**	**252**	*e*Pn	**Pn**	**17 51 27.3**	**-0.9**
SSLB				*e*Sn	**Sn**	**17 51 41.1**	**-1.9**
SMLT	**Sun Moon Lake**	**1.20**	**257**	⇑*i*P	**Pn**	**17 51 28.3**	**-0.2**
	baz=256						
SMLT				S	**Sn**	**17 51 42.9**	**-0.7**
	baz=256						
NCU	**National Centr**	**1.22**	**312**	P	**Pn**	**17 51 28.9**	**+0.2**
	baz=313						
NCU				*e*S	**Sn**	**17 51 44.8**	**+0.8**
	baz=313						
TYC	**Yuchr**	**1.24**	**259**	⇑*i*P	**Pn**	**17 51 28.8**	**-0.2**
	baz=251						
TYC				*e*S	**Sn**	**17 51 43.5**	**-1.0**
	baz=251						
TWY	**Chenhua**	**1.24**	**335**	*e*P	**Pn**	**17 51 29.5**	**+0.5**
	baz=350						
TWY				*e*S	**Sn**	**17 51 44.3**	**-0.2**
	baz=350						
HSN	**Hsinchu**	**1.28**	**301**	*e*P	**Pn**	**17 51 29.0**	**-0.5**
	baz=317						
HSN				*e*S	**Sn**	**17 51 45.6**	**0.0**
	baz=317						
CHKT	**Chengkung**	**1.29**	**216**	⇓*i*P	**Pn**	**17 51 28.1**	**-1.6**
	baz=205						
CHKT				*e*S	**Sn**	**17 51 42.3**	**-3.4**
	baz=205						
TWQ1	**Liyutan**	**1.30**	**279**	⇑*i*P	**Pn**	**17 51 30.8**	**+0.9**
	baz=279						
TWQ1				*e*S	**Sn**	**17 51 46.8**	**+0.7**
	baz=279						
YUS	**Yu-Shan**	**1.31**	**240**	⇓*i*P	**Pn**	**17 51 30.2**	**+0.4**
	baz=238						
YUS				*e*S	**Sn**	**17 51 45.2**	**-0.9**
	baz=238						
NSY	**Sanyi**	**1.32**	**282**	⇑*i*P	**Pn**	**17 51 31.1**	**+1.0**
	baz=282						
NSY				S	**Sn**	**17 51 48.5**	**+1.9**
	baz=282						
TCU	**Taichung**	**1.38**	**270**	⇑*i*P	**Pn**	**17 51 31.8**	**+0.9**
	baz=270						
TCU				*e*S	**Sn**	**17 51 48.8**	**+1.0**
	baz=270						
WNT	**Mingjian**	**1.40**	**259**	⇑*i*P	**Pn**	**17 51 32.1**	**+1.0**
	baz=258						
WNT				*e*S	**Sn**	**17 51 49.3**	**+0.9**
	baz=258						
ALS	**Alishan**	**1.41**	**243**	*e*P	**Pn**	**17 51 31.9**	**+0.6**
	baz=234						
ALS				*e*S	**Sn**	**17 51 49.1**	**+0.4**
	baz=234						
IRIF	**Iriomote-Funau**	**1.42**	**82**	P	**Pn**	**17 51 31.6**	**+0.1**
IRIF				S	**Sn**	**17 51 49.7**	**+0.7**
ELDTW	**Lidau**	**1.44**	**228**	⇓*i*P	**Pn**	**17 51 30.6**	**-1.1**
	baz=227						
PCYT	**Pengchaiyu**	**1.48**	**356**	*e*P	**Pn**	**17 51 32.3**	**+0.1**
	baz=346						
CHN5	**Tsauling**	**1.48**	**249**	⇑P	**Pn**	**17 51 33.0**	**+0.6**
	baz=237						
CHN5				*e*S	**Sn**	**17 51 51.0**	**+0.5**
	baz=237						
HATJ	**Hateruma jima**	**1.48**	**93**	P	**Pn**	**17 51 33.1**	**+0.7**
HATJ				*e*S	**Sn**	**17 51 52.0**	**+1.5**
WGK	**Gukeng**	**1.55**	**253**	*e*P	**Pn**	**17 51 34.0**	**+0.7**
	baz=252						
STYT	**Tauyuan**	**1.64**	**233**	*e*P	**Pn**	**17 51 34.5**	**+0.1**
	baz=225						
STYT				*e*S	**Sn**	**17 51 54.4**	**+0.2**
	baz=225						
TPUB	**Ta-pu**	**1.66**	**240**	*e*Pn	**Pn**	**17 51 35.1**	**+0.4**
TPUB				*e*Sn	**Sn**	**17 51 54.2**	**-0.5**
CHN4	**Tsaushan**	**1.66**	**242**	*e*P	**Pn**	**17 51 35.8**	**+1.0**
	baz=240						
CHN4				*e*S	**Sn**	**17 51 56.4**	**+1.6**
	baz=240						
JKRS	**Kuro-shima**	**1.67**	**87**	P	**Pn**	**17 51 35.8**	**+0.9**
JKRS				S	**Sn**	**17 51 56.2**	**+1.1**
TWG	**Pinlang**	**1.67**	**218**	*e*Pn	**Pn**	**17 51 32.7**	**-2.2**
TWG				*e*Sn	**Sn**	**17 51 45.3**	**-10**
TWG	**Pinlang**	**1.67**	**218**	*e*P	**Pn**	**17 51 33.3**	**-1.6**
	baz=216						
CHN2	**Minshiung**	**1.68**	**249**	*e*P	**Pn**	**17 51 36.1**	**+1.1**
	baz=248						
CHN2				*e*S	**Sn**	**17 51 57.3**	**+1.9**
	baz=248						
TTN	**Taitung**	**1.69**	**215**	*e*P	**Pn**	**17 51 34.0**	**-1.1**
	baz=207						
WTP	**Ta-pu**	**1.70**	**238**	*e*P	**Pn**	**17 51 36.2**	**+0.9**
	baz=237						
WTP				*e*S	**Sn**	**17 51 56.8**	**+1.0**
	baz=237						
CHY	**Chiayi**	**1.74**	**248**	*e*P	**Pn**	**17 51 36.6**	**+0.8**
	baz=247						
CHY				*e*S	**Sn**	**17 51 57.9**	**+1.2**
	baz=247						
WTCT	**Ta-ch'eng**	**1.76**	**261**	*e*P	**Pn**	**17 51 36.7**	**+0.6**
	baz=272						
WTCT				*e*S	**Sn**	**17 51 58.0**	**+0.6**
	baz=272						
TWK	**Hsinying**	**1.79**	**241**	*e*P	**Pn**	**17 51 37.5**	**+1.1**
	baz=240						
CHN1	**Nanshi**	**1.80**	**238**	*e*P	**Pn**	**17 51 37.6**	**+1.0**
	baz=236						
CHN1				*e*S	**Sn**	**17 51 59.4**	**+1.2**
	baz=236						
JIJ	**Ishigaki jima**	**1.80**	**83**	P	**Pn**	**17 51 36.9**	**+0.2**
JIJ				S	**Sn**	**17 51 58.1**	**-0.2**
SGST	**Jiashian**	**1.81**	**234**	P	**Pn**	**17 51 37.9**	**+1.0**
	baz=233						
SGST				*e*S	**Sn**	**17 52 00.3**	**+1.7**
	baz=233						
WSF	**Szhu**	**1.87**	**255**	*e*P	**Pn**	**17 51 38.2**	**+0.6**
	baz=267						
WSF				*e*S	**Sn**	**17 52 02.2**	**+2.2**
	baz=267						
ECL	**Taimali**	**1.92**	**216**	⇓*e*P	**Pn**	**17 51 36.5**	**-1.8**
	baz=215						
CHN8	**Yiju**	**1.98**	**247**	*e*P	**Pn**	**17 51 39.6**	**+0.4**
	baz=245						
CHN8				*e*S	**Sn**	**17 52 03.7**	**+1.0**
	baz=245						
CHN3	**Shinhua**	**1.98**	**238**	*e*P	**Pn**	**17 51 40.5**	**+1.3**
	baz=236						
CHN3				*e*S	**Sn**	**17 52 05.5**	**+2.7**
	baz=236						
SSD	**Sandimen**	**2.00**	**226**	*e*P	**Pn**	**17 51 39.4**	**0.0**
	baz=224						
SCLT	**Jiali**	**2.07**	**242**	*e*P	**Pn**	**17 51 40.8**	**+0.5**
	baz=241						
SCLT				*e*S	**Sn**	**17 52 06.7**	**+1.8**
	baz=241						
TWM1	**Shoushan**	**2.09**	**231**	*e*P	**Pn**	**17 51 42.6**	**+1.9**
	baz=230						
SGLT	**Jiouru**	**2.10**	**228**	*e*P	**Pn**	**17 51 43.1**	**+2.2**
	baz=216						
TAW	**Tawu**	**2.14**	**214**	*e*P	**Pn**	**17 51 40.4**	**-1.0**
	baz=212						
EAST	**Anshuo**	**2.15**	**215**	*e*P	**Pn**	**17 51 40.2**	**-1.2**
	baz=205						
LAY	**Lan-yu**	**2.18**	**196**	*e*P	**Pn**	**17 51 39.9**	**-2.0**
	baz=187						
SCZT	**Fangliau**	**2.28**	**219**	*e*P	**Pn**	**17 51 43.5**	**+0.2**
	baz=213						
SCZT				*e*S	**Sn**	**17 52 12.1**	**+1.9**
	baz=213						
JTJ	**Tarama**	**2.35**	**77**	P	**Pn**	**17 51 44.8**	**+0.6**
JTJ				*e*S	**Sn**	**17 52 11.5**	**-0.3**
PNG	**Penghu**	**2.48**	**257**	*e*P	**Pn**	**17 51 45.2**	**-0.8**
	baz=256						
PNG				*e*S	**Sn**	**17 52 14.0**	**-1.0**
	baz=256						
HEN	**Hengchun**	**2.52**	**212**	*e*P	**Pn**	**17 51 47.9**	**+1.4**
	baz=204						
TSEB	**Hengchuen, Pin**	**2.53**	**208**	*e*P	**Pn**	**17 51 47.3**	**+0.5**
	baz=208						
TWK1	**Hengchun**	**2.54**	**210**	*e*P	**Pn**	**17 51 45.4**	**-1.5**
	baz=209						
TWK1				*e*S	**Sn**	**17 52 14.5**	**-2.0**
	baz=209						
JMJ	**Miyako jima 2**	**2.91**	**76**	*e*S	**Sn**	**17 52 26.2**	**+0.5**
JOGS	**Gusukube**	**3.00**	**78**	*e*S	**Sn**	**17 52 29.4**	**+1.5**
QZH	**Quanzhou**	**3.36**	**284**	⇓*i*Pn	**Pn**	**17 51 57.5**	**-0.7**
QZH				Sn	**Sn**	**17 52 33.8**	**-3.1**
QZH				smax			
	comp=N,120nm,0.7s						
QZH				smax			
	comp=E,90nm,0.5s						
KNM	**Kinmen**	**3.43**	**275**	*e*P	**Pn**	**17 51 59.0**	**-0.2**
	baz=263						
JKE	**Kume jima 2**	**4.70**	**62**	P	**Pn**	**17 52 16.4**	**-0.1**
JKE				*e*S	**Sn**	**17 53 09.5**	**-0.3**
JOW	**Kunigami**	**6.12**	**63**	P	**Pn**	**17 52 35.1**	**-0.9**
	comp=E,6.7nm,0.3s,baz=156,slow=14,SNR=28						
JOW				S	**Sn**	**17 53 41.9**	**-2.9**
	baz=114,slow=18						
JOW	**Kunigami**	**6.12**	**63**	*e*P	**Pn**	**17 52 34.9**	**-1.1**
	baz=63						
KSRS	**Korea Array**	**14.14**	**19**	P	**

XAN			smax			
	comp=E,190nm,0.8s					
LZH	**Lanzhou**	**4.08 345**	Pn	**Pn**	**18 17 27.0**	**+0.9**
LZH			Pg	**Pg**	**18 17 38.8**	**-3.1**
LZH			Sn	**Sn**	**18 18 15.5**	**+1.5**
LZH			Sg	**Sg**	**18 18 27.4**	**-7.4**
LZH			smax			
	comp=N,650nm,1.1s					
LZH			smax			
	comp=E,840nm,0.9s					
LZH			LR	LR		
	comp=N,1μm,7.1s					
LZH			LR	LR		
	comp=Z,2μm,8.2s					
ENH	**Enshi**	**4.18 115**	*e*Pn	**Pn**	**18 17 31.9**	**+4.3**
ENH			*e*Pg	**Pg**	**18 17 44.0**	**+0.1**
GYA	**Guiyang**	**5.81 166**	Pn	**Pn**	**18 17 51.5**	**+1.6**
GYA			Sn	**Sn**	**18 19 01.3**	**+4.7**
GYA			smax			
	comp=N,130nm,0.9s					
GYA			smax			
	comp=E,270nm,0.9s					
KMI	**Kunming**	**7.28 197**	Pn	**Pn**	**18 18 10.6**	**+0.5**
KMI			Sn	**Sn**	**18 19 33.3**	**+0.4**
KMI			smax			
	comp=N,15nm,0.9s					
KMI			smax			
	comp=E,15nm,0.7s					
KMI			LR	LR		
	comp=N,290nm,11.0s					
KMI			LR	LR		
	comp=E,500nm,13.8s					
KMI			LR	LR		
	comp=Z,390nm,13.1s					
GTA	**Gaotai**	**8.44 331**	*e*P	**Pn**	**18 18 26.9**	**+1.0**
GTA			pP		18 18 30.3	
GTA			sP		18 18 33.0	
GTA			S	**Sn**	**18 20 03.0**	**+1.7**
GTA			sS		18 20 08.5	
GTA			pmax	pmax		
	comp=Z,2.0nm,1.0s					
GTA			LR	LR		
	comp=N,330nm,12.5s					
GTA			LR	LR		
	comp=E,280nm,11.3s					
GTA			LR	LR		
	comp=Z,360nm,11.0s					
CM31	**Chiang Mai Arr**	**14.70 204**	*e*Pn	**Pn**	**18 19 58.5**	**+6.7**
	comp=Z,2.6nm,0.8s					
CMAR	**Chiang Mai Arr**	**14.70 204**	Pn	**Pn**	**18 19 52.7**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=12,slow=11,SNR=5.3					
SONM	**Songino Array**	**15.72 3**	Pn	**Pn**	**18 20 04.2**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=180,slow=16,SNR=7.9					
ULN	**Ulaanbaatar**	**15.79 5**	*e*Pn	**Pn**	**18 20 05.3**	**-0.6**
	comp=Z,3.4nm,1.0s					
KSRS	**Korea Array**	**19.46 68**	P	**Pn**	**18 20 50.3**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=254,slow=10,SNR=2.6					
MKAR	**Makanchi Array**	**22.80 317**	P	**Pn**	**18 21 24.9**	**-1.4**
	comp=Z,1.3nm,0.7s,mb3.5,baz=115,slow=12,SNR=9.9					
TKM2	**Tokmak 2**	**25.64 303**	P	**P**	**18 21 54.5**	**+1.1**
	comp=Z,1.8nm,0.5s,mb3.9					
ZALV	**Zalesovo Beam**	**26.19 332**	P	**P**	**18 21 59.4**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.5,baz=138,slow=10,SNR=5.4					
KURK	**Kurchatov**	**26.96 321**	P	**P**	**18 22 03.9**	**-1.3**
	comp=Z,1.3nm,0.8s,mb3.5,baz=125,slow=11,SNR=10					
KURK	**Kurchatov**	**26.96 321**	P	**P**	**18 22 03.9**	**-1.3**
MJAR	**Matsushiro Arr**	**27.61 72**	P	**P**	**18 22 10.0**	**-1.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=276,slow=9.6,SNR=4.9					
ABKAR	**Akbulak array**	**37.65 310**	P	**P**	**18 23 37.9**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.5					
ARU	**Arti**	**40.16 321**	*e*P	**P**	**18 23 58.0**	**-1.6**
FINES	**FINESS Array B**	**57.20 326**	P	**P**	**18 26 11.2**	**+0.6**
	comp=Z,1.9nm,0.9s,mb4.1,baz=225,slow=0.5,SNR=3.7					
ASAR	**Alice Springs**	**61.93 150**	P	**P**	**18 26 44.4**	**+0.7**
	comp=Z,0.9nm,0.4s,mb4.2,baz=331,slow=6.6,SNR=22					
YKA	**Yellowknife Ar**	**80.46 18**	P	**P**	**18 28 34.6**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=326,slow=4.5,SNR=3.7					

*ISCJB **17** 18:16:38.0±0.5, 6°.69S±0°.06×155°.8E±0°.1, h112km, mb4.0/22, Error ellipse: s-maj=16.1km s-min=7.9km az=11.4*
*NEIC **17** 18:16:39.5±0.5, 6°.66S×155°.81E, mb4.2/8, Error ellipse: s-maj=19.5km s-min=9.2km az=108.0*
*IDC **17** 18:16:39.6±0.9, 6°.78S×155°.74E, h112km±7km, mb3.7/14, mb1 3.9/14, mb1mx3.8/17, mbtmp3.7/14, Error ellipse: s-maj=25.1km s-min=14.3km az=93.0*

ISC 17 18:16:39.9±0.5, 6°.69S±0°.06×155°.8E±0°.1, h114km, h114km±1.8km; pP-P, n35, σ0s90/34, mb4.0/22, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.22**	**214**	*e*P	**Pn**	**18 20 23.3**	**+2.1**
	7.8nm,1.0s						
CTA	**Charters Tower**	**16.22**	**214**	P	**Pn**	**18 20 23.6**	**+2.5**
	1.1nm,0.3s,baz=31,slow=13,SNR=15						
CTAO	**Charters Tower**	**16.22**	**214**	*e*Pn	**Pn**	**18 20 22.3**	**+1.1**
	11nm,0.8s						
EIDS	**Eidsvold**	**19.11**	**193**	*e*P	**P**	**18 20 54.8**	**+0.9**
RMQ	**Roma**	**20.80**	**198**	*e*P	**P**	**18 21 12.8**	**+0.7**
	11nm,0.8s						
GUMO	**Guam**	**22.88**	**332**	P	**P**	**18 21 31.5**	**-2.4**
KAKA	**Kakadu**	**23.77**	**254**	*e*P	**P**	**18 21 41.9**	**-0.2**
	7.5nm,0.6s,mb4.2						
ARMA	**Armidale**	**23.93**	**189**	*e*P	**P**	**18 21 42.9**	**-0.4**
WRAB	**Tennant Creek**	**24.62**	**236**	*e*P	**P**	**18 21 49.9**	**+0.1**
	5.6nm,0.8s,mb4.0						
CMSA	**Cobar Meteorol**	**26.46**	**200**	*e*P	**P**	**18 22 05.7**	**-0.6**
ASAR	**Alice Springs**	**26.96**	**229**	P	**P**	**18 22 10.3**	**-0.6**
	1.5nm,0.5s,mb3.8,baz=59,slow=9.6,SNR=50						
ASAR				pP	pP	18 22 34.1	-1.6
	1.2nm,0.7s,baz=58,slow=10,SNR=4.6						
STKA	**Stephens Creek**	**28.35**	**206**	P	**P**	**18 22 22.9**	**-0.2**
	1.7nm,0.5s,mb3.8,baz=34,slow=7.3,SNR=3.5						
STKA	**Stephens Creek**	**28.35**	**206**	P	**P**	**18 22 22.5**	**-0.6**
	3.1nm,1.2s,mb3.7						
FITZ	**Fitzroy Crossi**	**31.50**	**246**	*e*P	**P**	**18 22 50.7**	**-0.5**
	5.5nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**37.72**	**244**	P	**P**	**18 23 44.0**	**-0.7**
	18nm,1.1s,mb4.8						
RPZ	**Rata Peaks**	**39.24**	**162**	P	**P**	**18 23 56.5**	**-0.6**
	3.4nm,0.5s,mb4.5,baz=12,slow=5.2,SNR=7.3						
MJAR	**Matsushiro Arr**	**46.05**	**340**	P	**P**	**18 24 52.3**	**+0.1**
	0.7nm,0.7s,mb3.5,baz=177,slow=9.1,SNR=5.7						
KSRS	**Korea Array**	**51.04**	**331**	P	**P**	**18 25 31.4**	**+1.0**
	1.6nm,0.8s,mb4.1,baz=152,slow=8.1,SNR=7.4						
KSRS				pP	pP	18 25 57.8	+0.4
	0.8nm,0.6s,baz=161,slow=6.8,SNR=2.0						
PETK	**Petropavlovsk-**	**59.59**	**1**	P	**P**	**18 26 32.3**	**+0.8**
	2.4nm,0.6s,mb4.4,baz=155,slow=4.4,SNR=3.8						
CMAR	**Chiang Mai Arr**	**61.37**	**295**	P	**P**	**18 26 44.4**	**+0.2**
	0.5nm,0.7s,mb3.7,baz=123,slow=5.4,SNR=3.6						
CMAR				pP	pP	18 27 10.8	-1.2
	0.5nm,0.6s,baz=131,slow=6.0,SNR=2.8						
ULN	**Ulaanbaatar**	**69.17**	**327**	*e*P	**P**	**18 27 35.0**	**+1.0**
	2.8nm,0.8s,mb4.1						
SONM	**Songino Array**	**69.51**	**327**	P	**P**	**18 27 37.2**	**+1.2**
	1.4nm,0.4s,mb4.1,baz=138,slow=6.2,SNR=15						
BILL	**Bilibino**	**74.92**	**4**	*e*P	**P**	**18 28 07.8**	**0.0**
	3.8nm,0.8s,mb4.2						
BILL				*e*pP	pP	18 28 37.7	+1.1
TIXI	**Tiksi**	**80.17**	**352**	*e*P	**P**	**18 28 38.3**	**+1.3**
MCK	**McKinley**	**81.48**	**22**	*e*P	**P**	**18 28 42.8**	**-1.3**
	2.7nm,0.7s,mb4.2						
COLA	**College**	**82.51**	**21**	*e*P	**P**	**18 28 48.2**	**-1.3**
	4.4nm,1.0s,mb4.2						
MK31	**Makanchi Array**	**83.70**	**318**	*e*P	**P**	**18 28 56.1**	**+0.1**
MKAR	**Makanchi Array**	**83.70**	**318**	P	**P**	**18 28 56.3**	**+0.3**
	0.9nm,0.6s,mb3.8,baz=97,slow=6.4,SNR=11						
ZALV	**Zalesovo Beam**	**84.37**	**326**	P	**P**	**18 28 59.0**	**-0.3**
	1.3nm,0.6s,mb3.9,baz=114,slow=5.7,SNR=7.5						
ZALV	**Zalesovo Beam**	**84.37**	**326**	P	**P**	**18 28 59.0**	**-0.3**
MAW	**Mawson**	**84.98**	**203**	P	**P**	**18 29 01.5**	**-0.6**
	2.0nm,0.7s,mb4.1,baz=99,slow=12,SNR=4.3						
KURK	**Kurchatov**	**87.08**	**322**	P	**P**	**18 29 11.8**	**-1.0**
	0.3nm,0.6s,mb3.4,baz=104,slow=3.6,SNR=2.8						
NVAR	**Mina Array Bea**	**90.92**	**52**	P	**P**	**18 29 32.7**	**+1.6**
	0.2nm,0.6s,mb3.5,baz=219,slow=7.0,SNR=2.3						
YKA	**Yellowknife Ar**	**95.70**	**28**	P	**P**	**18 29 52.1**	**-0.4**
	0.4nm,0.4s,mb4.2,baz=265,slow=4.5,SNR=9.2						
YKA				pP	pP	18 30 22.1	0.0
	0.4nm,0.6s,baz=269,slow=4.6,SNR=6.0						
TORD	**Torodi Ar. Bea**	**153.70**	**286**	PKPbc	PKPbc	18 36 24.7	-1.8
	0.2nm,0.5s,baz=33,slow=3.0,SNR=4.8						
TORD				PKPab	PKPab	18 36 39.2	-0.5
	0.2nm,0.6s,baz=67,slow=3.9,SNR=3.7						
TORD				pPKPab	pPKPab	18 37 07.5	-2.1
	0.3nm,0.5s,baz=79,slow=1.4,SNR=3.7						

IDC 17 18:21:59.0±1.9, 31°.96N×104°.49E, h0km, mb3.2/4, mb1 3.2/4, mb1mx3.1/25, mbtmp3.2/4, Error ellipse: s-maj=163.4km s-min=24.0km az=51.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.56**	**317**	P	P	18 27 00.2	-0.4
	0.4nm,0.6s,baz=113,slow=9.5,SNR=6.5						
KURK	**Kurchatov**	**26.77**	**322**	P	P	18 27 40.5	+0.2
	0.2nm,0.4s,baz=132,slow=8.6,SNR=2.6						
BRTR	**Keskin Array B**	**56.61**	**299**	P	P	18 31 44.0	+0.3
	0.3nm,0.7s,baz=76,slow=6.1,SNR=2.8						
ASAR	**Alice Springs**	**62.05**	**149**	P	P	18 32 21.4	0.0
	0.1nm,0.6s,baz=328,slow=6.5,SNR=3.2						

*ISCJB **17** 18:33:48.6±0.3, 32°.12N±0°.03×105°.03E±0°.05, h10km, mb3.8/16, Error ellipse: s-maj=5.5km s-min=4.2km az=178.2*
*IDC **17** 18:33:48.7±0.8, 32°.18N×104°.84E, h0km, mb3.7/11, mb1 3.8/14, mb1mx3.7/27, mbtmp3.7/14, ML3.0/3, Error ellipse: s-maj=24.6km s-min=16.8km az=35.0*
*NEIC **17** 18:33:50.5±0.5, 32°.17N×104°.97E, h10km, mb4.0/7, Error ellipse: s-maj=11.8km s-min=10.2km az=63.0*
*MOS **17** 18:33:51.7±0.9, 32°.16N×104°.93E, h33km, mb4.0/12, Error ellipse: s-maj=14.9km s-min=9.4km az=99.7*
*BJI **17** 18:33:51.8, 32°.18N×104°.84E, h12km, mB4.6/1, mb4.1/5, ML3.8/12, Ms3.6/3, Ms7 3.4/3*

ISC 17 18:33:50.6±0.3, 32°.17N±0°.03×104°.96E±0°.05, h10km, n45, σ1s23/53, mb3.8/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.62**	**220**	Pg	**Pg**	**18 34 21.5**	**-0.2**
CD2				Sg	**Sg**	**18 34 44.3**	**+1.6**
CD2				smax			
	comp=N,5μm,0.7s						
LZH	**Lanzhou**	**4.02**	**347**	Pn	**Pn**	**18 34 53.8**	**+1.6**
LZH				Pg	**Pg**	**18 35 05.1**	**-2.5**
LZH				Sn	**Sn**	**18 35 40.8**	**+1.4**
LZH				Sg	**Sg**	**18 35 55.1**	**-4.6**
LZH				smax			
	comp=N,290nm,0.8s						
LZH				smax			
	comp=E,650nm,1.2s						
LZH				LR	LR		
	comp=E,1μm,7.7s						
LZH				LR	LR		
	comp=Z,2μm,9.3s						
ENH	**Enshi**	**4.31**	**115**	*e*Pn	**Pn**	**18 35 01.1**	**+4.9**
ENH				*e*Sg	**Sg**	**18 36 10.8**	**+1.7**
GYA	**Guiyang**	**5.88**	**165**	Pn	**Pn**	**18 35 22.3**	**+4.5**
GYA				Sn	**Sn**	**18 36 23.5**	**-1.7**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,150nm,0.8s						
KMI	**Kunming**	**7.28**	**196**	Pn	**Pn**	**18 35 38.3**	**+1.2**
KMI				Sn	**Sn**	**18 36 58.3**	**-1.5**
KMI				smax			
	comp=N,14nm,0.9s						
KMI				smax			
	comp=E,19nm,0.9s						
GTA	**Gaotai**	**8.35**	**331**	P	**Pn**	**18 35 56.0**	**+4.3**
GTA				pP		18 35 59.3	
GTA				sP		18 36 02.1	
GTA				S	**Sn**	**18 37 34.8**	**+8.8**
GTA				sS		18 37 39.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,150nm,5.1s						
GTA				LR	LR		
	comp=N,280nm,9.8s						
GTA				LR	LR		
	comp=E,180nm,10.7s						
GTA				LR	LR		
	comp=Z,280nm,11.0s						
CMAR	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**18 37 18.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=8.5,slow=9.5,SNR=3.5						
SONM	**Songino Array**	**15.69**	**4**	Pn	**Pn**	**18 37 33.0**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=184,slow=14,SNR=3.5						
ULN	**Ulaanbaatar**	**15.76**	**5**	P	**Pn**	**18 37 33.6**	**+1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.76**	**5**	P	**Pn**	**18 37 33.6**	**+1.1**
	comp=Z,3.8nm,1.0s						
ZAK	**Zakamensk**	**18.24**	**357**	*e*P	**Pn**	**18 38 02.4**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSRS	**Korea Array**	**19.56**	**68**	P	**Pn**	**18 38 19.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=245,slow=11,SNR=7.3						
MK31	**Makanchi Array**	**22.68**	**317**	*e*P	**P**	**18 38 52.0**	**-0.1**
MKAR	**Makanchi Array**	**22.68**	**317**	P	**P**	**18 38 52.6**	**+0.5**
	comp=Z,1.5nm,0.7s,mb3.5,baz=118,slow=11,SNR=16						
MKAR				PcP	PcP	18 42 43.6	-0.7
	comp=Z,0.1nm,0.5s,baz=125,slow=2.3,SNR=2.6						
MKAR	**Makanchi Array**	**22.68**	**317**	P	**P**	**18 38 52.6**	**+0.5**
MKAR						18 42 43.6	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	**P**	**18 39 24.1**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.6,baz=138,slow=10,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	**P**	**18 39 24.2**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
UCH	**Uchtor**	**26.13**	**301**	*e*P	**P**	**18 39 27.3**	**+2.6**
	comp=Z,3.0nm,1.0s,mb3.8						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**18 39 31.2**	**0.0**
	comp=Z,1.4nm,0.8s,mb3.6,baz=133,slow=8.5,SNR=13						
KURK				PcP	PcP	18 42 52.6	-0.8
	comp=Z,0.5nm,0.5s,baz=114,slow=2.0,SNR=5.8						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**18 39 31.2**	**0.0**
KURK						18 42 52.6	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**18 39 31.1**	**-0.1**
	comp=Z,2.7nm,0.7s,mb3.9						
KURK				PcP	PcP	18 42 52.6	-0.8
MAJO	**Matsushiro**	**27.71**	**72**	P	**P**	**18 39 38.1**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
MAJO	**Matsushiro**	**27.71**	**72**	P	**P**	**18 39 38.1**	**-1.0**
	comp=Z,2.1nm,0.8s,mb3.8						
MJAR	**Matsushiro Arr**	**27.71**	**72**	P	**P**	**18 39 40.6**	**+1.5**
	comp=Z,0.4nm,0.6s,mb3.2,baz=276,slow=12,SNR=3.6						
KBL	**Kabul**	**30.00**	**284**	P	**P**	**18 40 00.7**	**+1.3**
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**18 40 19.3**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=102,slow=13,SNR=3.6						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**18 40 19.3**	**-1.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARU	**Arti**	**40.05**	**321**	*e*P	**P**	**18 41 25.6**	**-0.1**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ARU	**Arti**	**40.05**	**321**	*e*P	**P**	**18 41 25.6**	**-0.1**
	comp=Z,2.0nm,0.8s,mb3.9						
PETK	**Petropavlovsk-**	**42.92**	**45**	P	**P**	**18 41 49.3**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.7,baz=273,slow=4.0,SNR=3.8						
PETK	**Petropavlovsk-**	**42.92**	**45**	P	**P**	**18 41 49.3**	**0.0**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
BRTR	**Keskin Array B**	**56.86**	**299**	P	**P**	**18 43 34.7**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.6,baz=108,slow=6.9,SNR=3.7						
BRTR	**Keskin Array B**	**56.86**	**299**	P	**P**	**18 43 34.7**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**18 43 35.9**	**-0.9**
	comp=Z,2.4nm,0.8s,mb4.3,baz=86,slow=8.6,SNR=4.7						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**18 43 35.9**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**18 43 35.9**	**-0.9**
WRAB	**Tennant Creek**	**58.96**	**147**	*e*P	**P**	**18 43 49.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**58.96**	**147**	*e*P	**P**	**18 43 49.8**	**-0.5**
	comp=Z,7.9nm,1.1s,mb4.7						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**18 44 11.6**	**+0.4**
	comp=Z,0.9nm,0.7s,mb4.0,baz=331,slow=6.4,SNR=14						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**18 44 11.6**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**18 44 22.5**	**-2.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=53,slow=8.9,SNR=2.4						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**18 44 22.5**	**-2.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BPAW	**Bear Paw Mtn.**	**67.33**	**27**	*e*P	**P**	**18 44 44.0**	**-1.4**
	comp=Z,1.4nm,0.7s,mb4.1						
YKA	**Yellowknife Ar**	**80.47**	**17**	P	**P**	**18 46 01.2**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=328,slow=5.1,SNR=9.3						
YKA	**Yellowknife Ar**	**80.47**	**17**	P	**P**	**18 46 01.2**	**-1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC 17 18:39:05.7±1.3, 32°.19N×105°.01E, h0km, mb3.3/4, mb1 3.4/6, mb1mx3.3/26, mbtmp3.3/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/21, Error ellipse: s-maj=44.0km s-min=24.3km az=44.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**15.66**	**3**	Pn	Pn	18 42 46.8	-0.8
	baz=183,slow=22,SNR=2.5						
KSRS	**Korea Array**	**19.52**	**68**	P	Pn	18 43 35.0	-0.6
	baz=263,slow=9.9,SNR=2.7						
MKAR	**Makanchi Array**	**22.70**	**317**	P	P	18 44 07.7	-1.0
	0.6nm,0.8s,baz=123,slow=9.3,SNR=6.8						
KURK	**Kurchatov**	**26.86**	**321**	P	P	18 44 47.5	-0.4
	0.6nm,0.7s,baz=131,slow=8.5,SNR=5.6						
PETK	**Petropavlovsk-**	**42.88**	**45**	LR	LR	19 04 44.4	
	comp=Z,62nm,20.6s,baz=123,slow=36						
BRTR	**Keskin Array B**	**56.88**	**299**	P	P	18 48 54.1	+1.8
	0.3nm,0.6s,baz=90,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**62.03**	**150**	P	P	18 49 27.4	-0.5
	0.3nm,0.7s,baz=328,slow=6.3,SNR=4.6						

*DDA **17** 19:07:53.4, 36°.09N×30°.33E, h7km±3km, Md3.0*
*ISCJB **17** 19:07:54.6±1.1, 36°.10N±0°.05×30°.18E±0°.05, h10km±5km, Error ellipse: s-maj=9.0km s-min=6.3km az=173.7*
*ISK **17** 19:07:54.2, 36°.10N×30°.13E, h11km, MD2.9*
*CSEM **17** 19:07:55.0±0.3, 36°.08N×30°.16E, h15km, MD3.0, Error ellipse: s-maj=5.1km s-min=2.8km az=154.0*

ISC 17 19:07:55.2±1.1, 36°.11N±0°.06×30°.18E±0°.05, h13km±5km, n28, σ1s10/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.48**	**285**	*i* P	**Pg**	**19 08 05.8**	**+1.0**
AKAS				*i* S	**Sg**	**19 08 13.6**	**+2.4**
AKAS	**Kas**	**0.48**	**285**	*i* P	**Pg**	**19 08 05.8**	**+1.1**
AKAS				*i* S	**Sg**	**19 08 13.6**	**+2.4**
ELL	**Elmali**	**0.67**	**341**	*e*PG	**Pg**	**19 08 07.0**	**-1.4**
ELL				*e*SG	**Sg**	**19 08 17.4**	**+0.3**
ELL	**Elmali**	**0.67**	**341**	*e*Pg	**Pg**	**19 08 07.0**	**-1.3**
ELL				*e*Sg	**Sg**	**19 08 17.5**	**+0.3**
ANTB	**Antalya**	**0.87**	**26**	*e*PG	**Pg**	**19 08 12.6**	**+0.5**
ANTB				*e*SG	**Sg**	**19 08 24.6**	**+1.0**
ANTB	**Antalya**	**0.87**	**26**	*e*Pg	**Pg**	**19 08 12.6**	**+0.5**
ANTB				*e*Sg	**Sg**	**19 08 24.6**	**+1.1**
KORT	**Korkueli**	**0.90**	**9**	*i* P	**Pg**	**19 08 10.8**	**-1.8**
KORT	**Korkueli**	**0.90**	**9**	*i* P	**Pg**	**19 08 10.8**	**-1.8**
FETY	**Fethiye**	**1.03**	**301**	*e*PG	**Pg**	**19 08 13.9**	**-1.2**
FETY				*e*SG	**Sg**	**19 08 28.2**	**-0.3**
FETY	**Fethiye**	**1.03**	**301**	*e*Pg	**Pg**	**19 08 13.9**	**-1.2**
FETY				*e*Sg	**Sg**	**19 08 28.2**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.18**	**332**	*e*PN	**Pn**	**19 08 17.1**	**-0.3**
GLHS				*e*SN	**Sn**	**19 08 34.2**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.18**	**332**	*e*Pn	**Pn**	**19 08 17.1**	**-0.3**
GLHS				*e*Sn	**Sn**	**19 08 34.2**	**+0.8**
GOLH	**Golhisar**	**1.23**	**336**	*i* P	**Pn**	**19 08 18.3**	**+0.2**
GOLH				*i* S	**Sb**	**19 08 31.9**	**-2.2**
GOLH	**Golhisar**	**1.23**	**336**	*i* P	**Pn**	**19 08 18.3**	**+0.2**
GOLH				*i* S	**Sb**	**19 08 31.9**	**-2.2**
BCK	**Bucak**	**1.39**	**13**	*e*PN	**Pn**	**19 08 19.8**	**-0.5**
BCK				*e*SN	**Sn**	**19 08 39.5**	**+1.0**
BCK	**Bucak**	**1.39**	**13**	*e*Pn	**Pn**	**19 08 19.8**	**-0.5**
BCK				*e*Sn	**Sn**	**19 08 39.5**	**+1.0**
TURN	**Turunc**	**1.48**	**301**	*i* P	**Pn**	**19 08 21.1**	**-0.5**
TURN	**Turunc**	**1.48**	**301**	*i* P	**Pn**	**19 08 21.1**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.51**	**25**	*e*PN	**Pn**	**19 08 22.1**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.51**	**25**	*e*Pn	**Pn**	**19 08 22.1**	**+0.1**
GAZI	**Gazipasa**	**1.73**	**85**	*i* P	**Pn**	**19 08 23.7**	**-1.3**
GAZI	**Gazipasa**	**1.73**	**85**	*i* P	**Pn**	**19 08 23.7**	**-1.3**
DNZL	**Cakiroluk**	**1.82**	**330**	*i* P	**Pn**	**19 08 27.1**	**+0.8**
DNZL	**Cakiroluk**	**1.82**	**330**	*i* P	**Pn**	**19 08 27.1**	**+0.9**
HDMB	**Hadim**	**2.04**	**65**	*e*PN	**Pn**	**19 08 31.0**	**+1.7**
HDMB	**Hadim**	**2.04**	**65**	*e*Pn	**Pn**	**19 08 31.0**	**+1.7**
DAT	**

KCT	Karacabey	1.38	15	*e*PN	Pn	19 17 18.8	-0.1
KCT	Karacabey	1.38	15	*e*Pn	Pn	19 17 18.8	-0.2
KHL	Karahalli	1.41	115	*e*PN	Pn	19 17 19.7	+0.4
KHL	Karahalli	1.41	115	*e*Pn	Pn	19 17 19.7	+0.4
EDC	Edincik	1.42	359	*e*PN	Pn	19 17 18.9	-0.6
EDC	Edincik	1.42	359	*e*Pn	Pn	19 17 18.9	-0.6
BNT	Bandirma	1.43	1	*e*PN	Pn	19 17 18.6	-1.0
BNT	Bandirma	1.43	1	*e*Pn	Pn	19 17 18.6	-1.0
SMG	Samos	1.48	215	*e*PN	Pn	19 17 21.2	+0.9
EZN	Ezine	1.51	307	*e*PN	Pn	19 17 20.3	-0.5
EZN	Ezine	1.51	307	*e*Pn	Pn	19 17 20.3	-0.5
DNZL	Cakiroluk	1.53	144	*i* P	Pn	19 17 20.9	-0.1
DNZL				*i* S	Sn	19 17 44.4	+3.2
DNZL	Cakiroluk	1.53	144	*i* P	Pn	19 17 20.9	-0.1
MLSB	Milas	1.63	183	*e*PN	Pn	19 17 23.3	+0.8
MLSB	Milas	1.63	183	*e*Pn	Pn	19 17 23.3	+0.9
LPK	Lapseki	1.69	329	*e*PN	Pn	19 17 23.0	-0.2
LPK	Lapseki	1.69	329	*e*Pn	Pn	19 17 23.0	-0.2
BOZC	Bozcaada	1.70	303	*i* P	Pn	19 17 22.6	-0.7
ALT	Altintas	1.73	85	*e*PN	Pn	19 17 23.9	+0.2
ALT	Altintas	1.73	85	*e*Pn	Pn	19 17 23.9	+0.2
GEMT	Gemlik	1.80	33	*e*PN	Pn	19 17 25.2	+0.4
GEMT	Gemlik	1.80	33	*e*Pn	Pn	19 17 25.2	+0.4
RKY	Sarkoy-Tekirda	1.84	343	*e*PN	Pn	19 17 25.5	+0.2
RKY	Sarkoy-Tekirda	1.84	343	*e*Pn	Pn	19 17 25.5	+0.2
SART	Tekirdag	1.84	343	*i* P	Pn	19 17 24.2	-1.1
SART				*i* S	Sn	19 17 49.1	+0.1
SART	Tekirdag	1.84	343	*i* P	Pn	19 17 24.2	-1.1
SART				*i* S	Sn	19 17 49.1	+0.2
BDRM	Kayabasi	1.90	191	*i* P	Pn	19 17 27.6	+1.6
BDRM				*i* S	Sn	19 17 47.2	-3.0
BDRM	Kayabasi	1.90	191	*i* P	Pn	19 17 27.6	+1.6
GADA	Gvkgeada	2.00	310	*e*PN	Pn	19 17 27.3	-0.1
GADA	Gvkgeada	2.00	310	*e*Pn	Pn	19 17 27.3	-0.1
ADVT	Abdulvahap	2.07	43	*e*PN	Pn	19 17 28.9	+0.5
ADVT	Abdulvahap	2.07	43	*e*Pn	Pn	19 17 28.9	+0.5
DAT	Datca	2.21	187	*e*PN	Pn	19 17 31.5	+1.1
DAT	Datca	2.21	187	*e*Pn	Pn	19 17 31.5	+1.1
ENEZ	Enez	2.25	324	*e*PN	Pn	19 17 30.9	0.0
ENEZ	Enez	2.25	324	*e*Pn	Pn	19 17 31.0	+0.1
ESKT	Eskisehir	2.37	75	*e*PN	Pn	19 17 33.7	+1.2
ESKT	Eskisehir	2.37	75	*i* P	Pn	19 17 35.7	+3.2
ESKT	Eskisehir	2.37	75	*e*Pn	Pn	19 17 33.7	+1.2
GULT	Gulveren	2.52	53	*e*PN	Pn	19 17 35.3	+0.7
GULT	Gulveren	2.52	53	*e*Pn	Pn	19 17 35.3	+0.7

HLW 17 19:17:00.7, 34°.23N×25°.95E, h31km±20km, MI2.9, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	1.00	337	*e*PN	Pn	19 17 19.3	+0.7
NPS	Neapolis	1.06	345	*e*PN	Pn	19 17 19.6	+0.2
KARP	Karpathos	1.64	37	*e*PN	Pn	19 17 33.3	+5.9
SLUM		2.81	193	P	Pn	19 17 43.2	-0.1
	baz=194						
SLUM				AMP		19 18 00.0	
	comp=N,40μm,0.2s,logA/T=5.2,baz=194						
SLUM				S	Sn	19 18 13.4	-2.7
	baz=194						
HMAT	Matruh	3.28	163	P	Pn	19 17 49.6	-0.3
	baz=162						
HMAT				S	Sn	19 18 24.4	-3.4
	baz=162						
SWA2		4.99	185	P	Pn	19 18 13.4	-0.1
	baz=185						
SWA2				AMP		19 19 00.0	
	comp=E,10μm,0.5s,logA/T=4.3,baz=185						
SWA2				S	Sn	19 19 05.7	-4.4
	baz=185						
AMAG	Maghara	7.10	118	P	Pn	19 18 43.4	+0.9
	baz=118						

NEIC 17 19:39:23.0, 13°.42S×76°.17W, h54km, MG4.1(LIM), After LIM., Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	1.57	335	*e*Pn	Pn	19 39 50.1	+1.6
NNA				*e*Sn	Sn	19 40 08.1	+0.4
LPAZ	La Paz	8.28	111	*e*Pn	Pn	19 41 28.8	+8.3
OTAV	Otavalo	13.76	350	Pn	Pn	19 42 32.4	-3.0
	10nm,1.9s						
ROSC	El Rosal	18.25	6	*e*P	Pn	19 43 36.1	+3.6

*IDC **17** 19:51:47.7±1.2, 31°.36N×103°.98E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/24, mbtmp3.7/10, ML3.0/1, Error ellipse: s-maj=40.3km s-min=21.5km az=45.0*
*NEIC **17** 19:51:49.6±0.7, 31°.42N×104°.00E, h10km, mb3.9/3, Error ellipse: s-maj=23.5km s-min=11.2km az=222.0*
*BJI **17** 19:51:50.6, 31°.34N×104°.18E, h18km, ML3.4/10*
ISC 17 19:51:49.7±0.9, 31°.46N±0°.03×104°.02E±0°.06, h8km±6km, n23, σ0s95/30, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.60	202	Pg	Pg	19 52 01.3	+0.1
CD2				Sg	Sg	19 52 09.3	+0.3
CD2				smax			
	comp=N,5μm,0.8s						
LZH	Lanzhou	4.61	358	Pg	Pg	19 53 18.1	0.0
LZH				Sn	Sb	19 54 06.5	-0.1
LZH				smax			
	comp=N,37nm,0.6s						
LZH				smax			
	comp=E,43nm,0.6s						
ENH	Enshi	4.84	103	*e*Pn	Pn	19 53 04.4	+1.5
ENH				*e*Sn	Sn	19 54 00.3	+1.1
XAN	Xi'an	4.86	57	Pn	Pn	19 53 03.8	+0.7
XAN				Pg	Pg	19 53 20.5	-2.3
XAN				Sg	Sg	19 54 20.3	-5.5
XAN				smax			
	comp=N,51nm,0.7s						
XAN				smax			
	comp=E,22nm,0.6s						
GYA	Guiyang	5.50	154	Pn	Pn	19 53 13.0	+1.1
GYA				Sn	Sn	19 54 14.6	-0.7
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,70nm,0.9s						
KMI	Kunming	6.42	190	Pn	Pn	19 53 17.5	-7.0
KMI				Sn	Sn	19 54 37.3	-0.7
KMI				smax			
	comp=N,18nm,0.8s						
KMI				smax			
	comp=E,19nm,0.9s						
SONM	Songino Array	16.45	6	Pn	Pn	19 55 42.2	+1.4
	comp=E,0.1nm,0.3s,baz=197,slow=15,SNR=2.9						
KSRS	Korea Array	20.57	67	P	P	19 56 28.9	0.0
	comp=E,1.4nm,0.8s,baz=250,slow=9.2,SNR=3.8						
MK31	Makanchi Array	22.66	319	*e*P	P	19 56 51.7	+0.4
MKAR	Makanchi Array	22.66	319	P	P	19 56 51.5	+0.3
	comp=E,2.2nm,1.1s,mb3.5,baz=119,slow=10.0,SNR=11						
UCH	Uchtor	25.82	303	P	P	19 57 22.9	+1.5
	comp=E,2.6nm,1.2s,mb3.6						
ZALV	Zalesovo Beam	26.37	334	P	P	19 57 26.4	+0.2
	comp=E,1.7nm,0.7s,mb3.7,baz=136,slow=8.9,SNR=9.8						
ZALV	Zalesovo Beam	26.37	334	P	P	19 57 26.4	+0.2
KURK	Kurchatov	26.92	323	P	P	19 57 31.5	+0.3
	comp=E,1.2nm,0.8s,mb3.5,baz=124,slow=10,SNR=10						
KURK	Kurchatov	26.92	323	*e*P	P	19 57 30.9	-0.2
	comp=E,1.9nm,1.0s,mb3.6						
ARCES	ARCESS Array B	56.91	336	P	P	20 01 35.1	+0.4
	comp=E,7.0nm,1.1s,mb4.6,baz=76,slow=8.7,SNR=2.8						
FINES	FINESS Array B	57.23	326	P	P	20 01 36.5	-0.7
	comp=E,1.5nm,0.8s,mb4.1,baz=96,slow=7.7,SNR=5.9						
FINES	FINESS Array B	57.23	326	P	P	20 01 36.5	-0.7
WRAB	Tennant Creek	58.81	146	*e*P	P	20 01 48.1	-0.6
	comp=E,2.0nm,0.6s,mb4.3						
ASAR	Alice Springs	61.83	149	P	P	20 02 08.6	-0.8
	comp=E,0.1nm,0.7s,mb3.1,baz=326,slow=6.7,SNR=5.2						
NOA	NORSAR Array B	64.32	327	P	P	20 02 24.2	-1.3
	comp=E,0.6nm,0.5s,mb3.9,baz=74,slow=6.6,SNR=3.3						
PNL	Peninsula	75.32	28	*e*P	P	20 03 30.1	-3.0
	comp=E,17nm,0.7s						
YKA	Yellowknife Ar	81.37	17	P	P	20 04 05.8	-0.8
	comp=E,0.3nm,0.7s,mb3.4,baz=332,slow=5.4,SNR=4.1						

*LDG **17** 19:59:24.8±0.9, 20°.51S×171°.21E, h200km, Error ellipse: s-maj=108.1km s-min=2.7km az=149.0*
*ISCJB **17** 19:59:32.4±1.3, 18°.9S±0°.1×169°.09E±0°.09, h224km±14km, mb4.4/14, Error ellipse: s-maj=22.9km s-min=10.9km az=158.0*
*NEIC **17** 19:59:33.0±1.4, 18°.81S×169°.11E, h221km±14km, mb4.5/7, Error ellipse: s-maj=21.2km s-min=11.2km az=162.0*
*IDC **17** 19:59:43.1±7.4, 19°.02S×168°.97E, h318km±77km, mb3.7/8, mb1 3.9/8, mb1mx3.6/16, mbtmp3.7/8, Error ellipse: s-maj=32.5km s-min=19.2km az=18.0*
ISC 17 19:59:33.0±1.3, 18°.8S±0°.1×169°.09E±0°.08, h215km±14km, n72, σ0s89/30, mb4.4/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.06	217	*e*Pn	Pn	20 00 35.2	-0.8
MSVF	Nonsavu	8.58	84	*e*Pn	Pn	20 01 33.6	-0.2
	42nm,1.3s						
EIDS	Eidsvold	17.90	246	*e*P	P	20 03 28.7	+1.9
EIDS	Eidsvold	17.90	246	*e*P	P	20 03 28.4	+1.6
	14nm,0.6s						
RMQ	Roma	20.23	244	*e*P	P	20 03 53.0	+1.1
	9.6nm,0.5s						
URZ	Urewera	20.58	162	P	P	20 03 57.0	+1.6
	6.5nm,0.9s,baz=40,slow=14,SNR=2.9						
CTA	Charters Tower	21.57	263	*e*P	P	20 04 06.8	+0.8
	5.7nm,0.5s,mb4.4						
CTA	Charters Tower	21.57	263	P	P	20 04 07.0	+0.9
	8.5nm,0.6s,mb4.5,baz=90,slow=11,SNR=19						
CTA	Charters Tower	21.57	263	P	P	20 04 07.0	+0.9
CTAO	Charters Tower	21.57	263	*e*P	P	20 04 06.7	+0.7
	8.6nm,0.6s,mb4.5						
MTSU	Mount Surprise	23.50	268	*e*P	P	20 04 25.0	+1.2
	44nm,0.6s,mb5.3						
CMSA	Cobar Meteorol	24.60	235	*e*P	P	20 04 33.3	-0.3
STKA	Stephens Creek	27.94	237	*e*P	P	20 05 03.6	+0.1
	7.3nm,0.6s,mb4.5						
STKA	Stephens Creek	27.94	237	P	P	20 05 03.7	+0.2
	9.2nm,0.6s,mb4.6,baz=64,slow=9.1,SNR=28						
STKA	Stephens Creek	27.94	237	*e*P	P	20 05 03.3	-0.3
	2.2nm,0.7s,mb3.9						
BBOO	Buckleboo	32.67	238	*e*P	P	20 05 44.6	-0.5
	5.3nm,0.4s,mb4.4						
WRAB	Tennant Creek	32.76	262	*e*P	P	20 05 44.6	-1.4
	5.7nm,0.4s,mb4.5						
ASAR	Alice Springs	33.09	255	P	P	20 05 48.3	-0.5
	41nm,0.4s,mb5.3,baz=81,slow=8.8,SNR=1416						
KNA	Kununurra	38.57	268	*e*P	P	20 06 34.8	-0.6
	9.0nm,0.4s,mb4.7						
FITZ	Fitzroy Crossi	41.14	264	*e*P	P	20 06 56.6	0.0
	18nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	41.14	264	*e*P	P	20 06 56.6	+0.1
	5.4nm,0.6s,mb4.2						
MBWA	Marble Bar	46.30	258	*e*P	P	20 07 37.2	-0.3
MBWA	Marble Bar	46.30	258	*e*P	P	20 07 37.0	-0.6
	8.0nm,0.4s,mb4.4						
MEEK	Meekatharra	46.95	251	*e*P	P	20 07 41.8	-0.8
SBA	Scott Base	59.06	181	P	P	20 09 08.7	-1.4
PETK	Petropavlovsk-	72.32	353	P	P	20 10 35.1	+0.2
	4.5nm,0.7s,mb4.2,baz=136,slow=5.6,SNR=17						
SONM	Songino Array	86.81	323	P	P	20 11 53.2	+0.2
	0.9nm,0.8s,mb3.5,baz=170,slow=5.1,SNR=6.6						
YBH	Yreka Blue Hor	87.11	44	P	P	20 11 54.3	-0.2
	2.0nm,0.6s,mb4.0,baz=234,slow=2.0,SNR=4.0						
NVAR	Mina Array Bea	88.64	49	P	P	20 12 03.1	+1.3
	1.3nm,0.7s,mb3.8,baz=181,slow=4.2,SNR=2.8						
DLBC	Dease Lake	91.75	27	P	P	20 12 15.1	-0.8
	1.8nm,0.8s,mb4.1,baz=224,slow=11,SNR=3.5						
ARCES	ARCESS Array B	124.65	345	PKP	PKPdf	20 18 04.0	-2.2
	1.9nm,0.6s,baz=55,slow=2.3,SNR=11						
GERES	GERESS Array B	144.07	332	PKP	PKPdf	20 18 40.4	-2.5
	1.6nm,0.7s,baz=35,slow=3.7,SNR=13						
GRA1	Grafenberg Arr	144.47	335	*e*PKP	PKPdf	20 18 41.7	-1.8
GRF	Grafenberg Arr	144.47	335	*e*PKP	PKPdf	20 18 41.7	-1.8
BAIF	Baives	146.59	342	*e*PKP1	PKPdf	20 18 47.9	+0.8
	3.4nm,0.5s						
BAIF	Baives	146.59	342	*e*PKP	PKPdf	20 18 47.9	+0.8
CDF	Champ du Feu	147.02	338	*e*PKP1	PKPbc	20 18 49.1	-1.2
	3.2nm,0.5s						
CDF	Champ du Feu	147.02	338	*e*PKP	PKPbc	20 18 49.1	-1.2
HINF	Hinterlalfeld	147.67	337	*e*PKP1	PKPbc	20 18 51.4	-0.7
HINF	Hinterlalfeld	147.67	337	*e*PKP	PKPbc	20 18 51.4	-0.7
HAU	Haudompre	147.69	338	*e*PKP1	PKPbc	20 18 50.8	-1.3
	3.2nm,0.5s						
HAU	Haudompre	147.69	338	*e*PKP	PKPbc	20 18 50.8	-1.3
MEZF	Maizieres J'vi	147.70	340	*e*PKP1	PKPbc	20 18 51.3	-0.8
	4.1nm,0.6s						
MEZF	Maizieres J'vi	147.70	340	*e*PKP	PKPbc	20 18 51.3	-0.8
CABF	La Chapelle	148.97	337	*e*PKP1	PKPbc	20 18 54.6	-0.8
	6.9nm,0.6s						
CABF	La Chapelle	148.97	337	*e*PKP	PKPbc	20 18 54.6	-0.8
FLN	La Foliniere	148.98	347	*e*PKP1	PKPbc	20 18 53.8	-1.6
FLN	La Foliniere	148.98	347	*e*PKP	PKPbc	20 18 53.8	-1.6
LOR	Lormes	149.17	340	*e*PKP1	PKPbc	20 18 54.6	-1.3
	5.3nm,0.6s						
LOR	Lormes	149.17	340	*e*PKP	PKPbc	20 18 54.6	-1.3
GRR	Gorron	149.41	347	*e*PKP1	PKPbc	20 18 55.2	-1.3
GRR	Gorron	149.41	347	*e*PKP	PKPbc	20 18 55.2	-1.3
SSF	Saint Saulge	149.47	340	*e*PKP1	PKPbc	20 18 55.4	-1.2
	3.8nm,0.6s						
SSF	Saint Saulge	149.47	340	*e*PKP	PKPbc	20 18 55.4	-1.2
LPG	La Plagne	149.64	335	*e*PKP1	PKPbc	20 18 56.5	-0.6
LPG	La Plagne	149.64	335	*e*PKP	PKPbc	20 18 56.5	-0.6
SGMF	Saint Gilles	149.88	349	*e*PKP1	PKPbc	20 18 55.8	-1.8
SGMF	Saint Gilles	149.88	349	*e*PKP	PKPbc	20 18 55.8	-1.8
ROSF	Rostrenen	149.93	350	*e*PKP1	PKPbc	20 18 55.9	-1.8
ROSF	Rostrenen	149.93	350	*e*PKP	PKPbc	20 18 55.9	-1.8
BGF	Bois d'Agland	150.12	341	*e*PKP1	PKPbc	20 18 56.7	-1.5
BGF	Bois d'Agland	150.12	341	*e*PKP	PKPbc	20 18 56.7	-1.5
QUIF	Quistinic	150.32	349	*e*PKP1	PKPbc	20 18 56.6	-2.1
QUIF	Quistinic	150.32	349	*e*PKP	PKPbc	20 18 56.6	-2.1
ORIF	Oris-en-Rattie	150.47	335	*e*PKP1	PKPbc	20 18 58.0	-1.1
	3.8nm,0.5s						
ORIF	Oris-en-Rattie	150.47	335	*e*PKP	PKPbc	20 18 58.0	-1.1
TCF	Toulx Ste Croi	150.56	341	*e*PKP1	PKPbc	20 18 57.8	-1.5
	3.4nm,0.7s						
TCF	Toulx Ste Croi	150.56	341	*e*PKP	PKPbc	20 18 57.8	-1.5
MFF	Saint Martin d	150.93	345	*e*PKP1	PKPbc	20 18 58.4	-1.7
MFF	Saint Martin d	150.93	345	*e*PKP	PKPbc	20 18 58.4	-1.7
PGF	Pioggiola	150.96	329	*e*PKP1	PKPbc	20 18 59.0	-1.4
	24nm,0.9s						
PGF	Pioggiola	150.96	329	*e*PKP	PKPbc	20 18 59.0	-1.4

NOU 17 20:00:20.1±1.8, 22°.92S×166°.66E, h30km, MD2.5, ML2.9, New Caledonia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	0.79	15	*e*P	Pn	20 00 33.5	-1.7
BAYA				*e*S	Sb	20 00 44.8	-0.9
DZM	Mont Dzumac	0.87	346	*e*P	Pn	20 00 34.6	-1.7
DZM				*e*S	Sn	20 00 47.0	-1.0
DZM				AMP		20 00 47.2	
	comp=Z,1μm,1.0s						
NOUC	Port Laguerre	0.88	338	*e*P	Pn	20 00 37.9	+1.4
NOUC				*e*S	Sn	20 00 48.0	-0.3
NOUC				AMP		20 00 49.1	
	comp=Z,150nm,0.8s						

*NEIC **17** 20:02:55.9±0.7, 27°.32N×140°.16E, h400km, mb3.7/1, Error ellipse: s-maj=20.3km s-min=17.6km az=90.0*
*ISCJB **17** 20:02:56.1±0.7, 27°.44N±0°.06×140°.2E±0°.2, h413km±7km, mb3.3/8, Error ellipse: s-maj=25.2km s-min=7.3km az=166.7*
*IDC **17** 20:02:56.1±0.8, 27°.35N×140°.23E, h405km±12km, mb3.1/7, mb1 3.2/8, mb1mx2.9/24, mbtmp3.1/8, Error ellipse: s-maj=34.6km s-min=17.7km az=70.0*
*JMA **17** 20:02:58.8±0.2, 27°.61N×140°.73E, h414km, M3.7*
ISC 17 20:02:57.4±0.7, 27°.52N±0°.06×140°.2E±0°.2, h403km±6km, n22, σ1s26/33, mb3.3/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.82	103	P	Pn	20 03 53.2	+0.6
CBIJ				*e*S	S	20 04 35.3	-1.9
CBIJ	Chichi jima	1.82	103	P	Pn	20 03 52.9	+0.2
	13nm,0.3s,baz=294,slow=18,SNR=3.3						
CBIJ				S	S	20 04 35.4	-1.8
	50nm,0.3s,baz=280,slow=23,SNR=12						
JHHJ	Haha-jima-NKT	1.98	116	P	Pn	20 03 54.0	+0.4
JHHJ				*e*S	S	20 04 38.6	-0.3
JHJ2	Mitsune	5.59	357	P	Pn	20 04 27.3	+1.7
JHJ2				*e*S	S	20 05 35.8	-1.7
JHJ	Hachijo jima 2	5.60	356	P	Pn	20 04 27.6	+1.9
	14nm,0.3s,baz=56,slow=22,SNR=8.7						
BSO1	Boso 1	7.15	5	P	Pn	20 04 44.9	+2.2
BSO1				*e*S	S	20 06 08.0	-0.8
BSO3	Boso 3	7.27	2	P	P	20 04 45.9	+1.5
BSO3				*e*S	S	20 06 10.5	-0.8
JOD2	Odawara 2	7.78	353	P	P	20 04 54.2	+4.1
JOD2				*e*S	S	20 06 21.6	-0.3
JHU	Hanno	8.35	355	P	P	20 04 57.3	+0.9
JHU				*e*S	S	20 06 29.5	-4.3
JYT	Yasato	8.69	0	P	P	20 05 01.2	+1.1
JYT				*e*S	S	20 06 35.4	-5.5
JAG	Ashikaga	8.91	356	P	P	20 05 03.5	+0.9
JAG				*e*S	S	20 06 39.4	-6.1
JHO	Hitachi	9.07	2	P	P	20 05 06.1	+1.7
JHO				*e*S	S	20 06 45.8	-3.2
MJAR	Matsushiro Arr	9.15	350	S	S	20 06 48.4	-2.2
	0.3nm,0.3s,baz=170,slow=21,SNR=5.2						
BILL	Bilibino	43.46	14	P	P	20 10 23.4	+1.2
	3.2nm,0.8s,mb3.7						
MKAR	Makanchi Array	48.84	309	P	P	20 11 03.5	-0.4
	0.1nm,0.4s,mb2.5,baz=88,slow=11,SNR=4.3						
ASAR	Alice Springs	51.24	187	P	P	20 11 19.5	-2.4
	0.1nm,0.3s,mb2.5,baz=7.2,slow=7.2,SNR=6.7						
KURK	Kurchatov	51.43	314	P	P	20 11 22.6	-0.3
	0.8nm,0.4s,mb3.3,baz=90,slow=7.2,SNR=12						
SVW2	Sparrevohn	53.90	33	*e*P	P	20 11 40.2	-0.4
BVAR	Borovoye Array	56.53	317	P	P	20 11 58.8	-0.5
	0.7nm,0.5s,mb3.2,baz=93,slow=8.7,SNR=4.3						
ARCES	ARCESS Array B	72.56	340	P	P	20 13 41.5	+0.1
	1.7nm,0.8s,mb3.6,baz=59,slow=7.6,SNR=3.8						
FINES	FINESS Array B	76.78	333	P	P	20 14 04.5	-1.0
	1.2nm,0.3s,mb4.0,baz=70,slow=4.8,SNR=18						
NVAR	Mina Array Bea	81.64	51	P	P	20 14 31.6	-0.4
	0.2nm,0.4s,mb3.2,baz=276,slow=8.1,SNR=1.7						

IDC 17 20:03:39.8±1.2, 32°.24N×105°.17E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/26, mbtmp3.3/7, ML3.3/2, Error ellipse: s-maj=48.5km s-min=22.1km az=64.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.82	204	Pn	Pn	20 07 11.0	+0.3
	0.1nm,0.3s,baz=6.0,slow=9.1,SNR=3.4						
SONM	Songino Array	15.61	3	Pn	Pn	20 07 21.4	+0.4
	0.1nm,0.3s,baz=182,slow=8.7,SNR=2.6						
MKAR	Makanchi Array	22.75	316	P	P	20 08 43.1	-0.4
	0.7nm,0.8s,baz=118,slow=9.8,SNR=5.7						
ZALV	Zalesovo Beam	26.12	332	P	P	20 09 16.5	+1.2
	0.3nm,0.4s,baz=134,slow=10,SNR=2.4						
KURK	Kurchatov	26.91	321	P	P	20 09 21.7	-0.7
	0.3nm,0.8s,baz=122,slow=10,SNR=2.6						
ASAR	Alice Springs	62.00	150	P	P	20 14 02.0	+0.2
	0.3nm,0.4s,baz=332,slow=6.6,SNR=7.7						
YKA	Yellowknife Ar	80.34	18	P	P	20 15 52.2	-0.3
	0.2nm,0.5s,baz=326,slow=4.9,SNR=2.9						

*MOS **17** 20:04:05.6±1.0, 16°.38N×97°.79W, h11km, mb5.1/61, MS4.8/8, Error ellipse: s-maj=8.2km s-min=4.1km az=93.2*
*IDC **17** 20:04:05.5±0.6, 16°.37N×97°.87W, h0km, mb4.5/26, mb1 4.6/30, mb1mx4.6/35, mbtmp4.5/30, ML3.9/3, MS4.5/30, Ms1 4.5/30, ms1mx4.5/35, Error ellipse: s-maj=19.9km s-min=10.4km az=58.0*
*ISCJB **17** 20:04:08.8±0.2, 16°.42N±0°.03×97°.86W±0°.02, h30km, mb4.8/185, MS4.6/41, Error ellipse: s-maj=4.9km s-min=2.0km az=32.0*
*MEX **17** 20:04:08.9±1.0, 16°.23N×98°.04W, h5km, MD4.6*
*GCMT **17** 20:04:10.1±0.2, 16°.42N×97°.84W, h28km±1km, MW5.2/77, Moment Tensor Solution. s64,c98; s77,c127; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.48±.02; $M_{\theta\theta}$-0.43±.01; $M_{\phi\phi}$-0.04±.01; $M_{r\theta}$0.62±.03; $M_{\theta\phi}$0.18±.01; $M_{\phi r}$-0.43±.03; Best double couple: $M_0$0.89900×10^{17} NP1:φs280.00000°, δ18.00000°, λ68.00000°. NP2: φs123.00000°, δ74.00000°, λ97.00000°. Principal axes: T 0.8950, Plg61.0000°, Azm43.0000°; N 0.0060, Plg6.0000°, Azm301.0000°; P -0.9020, Plg28.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **17** 20:04:10.1±0.2, 16°.42N×97°.83W, mb4.9/168, MS4.8/2, MD4.6(MEX) Error ellipse: s-maj=5.4km s-min=3.1km az=216.0*
*BJI **17** 20:04:11.0, 16°.40N×97°.80W, h40km, mB5.3/6, Ms5.3/6, Ms7 5.0/6*
ISC 17 20:04:11.1±0.2, 16°.46N±0°.03×97°.80W±0°.02, h32km, h32km±4km: pP-P, n692, σ0s98/678, mb4.8/185, MS4.6/41, 128C-137D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.32	258	*e*P	Pb	20 04 11.5	-7.5
PNIG				*i* S	Sb	20 04 14.4	-10
PNIG	Pinotepa	0.32	258	*e*P	Pb	20 04 11.5	-7.5
PNI

comp=Z,70nm,1.5s
HKT Hockley 13.55 7 ePn Pn 20 07 20.7 -0.5
comp=Z,70nm,1.5s
628A Black Gap, Mar 13.78 341 ⇑P Pn 20 07 25.9 +1.5
baz=14,SNR=12
TXAR Lajitas Array 13.90 338 Pn Pn 20 07 27.0 +1.0
comp=Z,0.0nm,0.3s,baz=157,slow=11,SNR=15
TXAR Lg 20 11 36.8
comp=Z,0.0nm,0.3s,baz=165,slow=26,SNR=2.2
627A Terlingua Ranc 13.91 339 ⇑P Pn 20 07 27.2 +1.1
baz=14,SNR=20
JTS JuntasAbangare 13.92 115 Pn Pn 20 07 26.7 +0.3
comp=Z,1.3nm,0.3s,baz=269,slow=8.3,SNR=8.1
JTS JuntasAbangare 13.92 115c iP Pn 20 07 28.8 +2.5
JTS JuntasAbangare 13.92 115 ePn Pn 20 07 29.2 +2.9
comp=Z,54nm,0.8s
JCT Junction City 14.07 353 eP Pn 20 07 28.7 +0.4
JCT pmax pmax
comp=Z,35nm,0.9s
JCT Junction City 14.07 353 ePn Pn 20 07 28.6 +0.3
comp=Z,35nm,0.9s
528A Cox Ranch, San 14.38 342 ⇑P Pn 20 07 34.1 +1.6
baz=14
527A Woodward Ranch 14.62 340 ⇓P Pn 20 07 37.2 +1.4
baz=15,SNR=19
526A Mary Lane Ranc 14.71 338 ⇓P Pn 20 07 38.1 +1.0
baz=15,SNR=14
428A Kincaid Ranch, 14.88 343 ⇓P Pn 20 07 40.9 +1.6
baz=15,SNR=26
URSC Urasca 15.16 114 eP Pn 20 07 45.8 +2.8
427A Hayter Ranch, 15.21 341 ⇓P Pn 20 07 44.1 +0.5
baz=15,SNR=17
426A McDonald Obser 15.24 339 ⇑P Pn 20 07 44.4 +0.4
baz=15,SNR=12
SOR Soroa 15.29 63 eP Pn 20 07 46.8 +2.1
BUS Buena Vista 15.30 115 eP Pn 20 07 48.7 +3.8
NATX Nacogdoches 15.50 10 ePn Pn 20 07 42.5 -4.9
comp=Z,142nm,1.3s
328A Wristen Ranch, 15.54 344 ⇑P Pn 20 07 47.9 0.0
baz=16,SNR=21
425A Indio Mountain 15.70 337 ⇑P Pn 20 07 49.8 -0.1
baz=16,SNR=22
326A Caldwell Ranch 15.82 340 ⇑P Pn 20 07 51.9 +0.3
baz=16,SNR=18
BAR1 15.84 115 eP Pn 20 07 55.4 +3.5
325A Bean Ranch, Si 16.22 338 ⇑P Pn 20 07 56.7 +0.1
baz=16,SNR=31
324A Moseley Ranch, 16.47 336 ⇓P Pn 20 07 59.5 -0.4
baz=17,SNR=18
226A Malaga, Loving 16.55 341 ⇓P Pn 20 08 01.5 +0.6
baz=17,SNR=16
MNTX Cornudas Mount 16.66 337 ePn Pn 20 08 01.9 -0.4
comp=Z,11nm,0.9s
CLNB Carlsbad 16.67 342 ePn Pn 20 08 01.6 -0.8
comp=Z,21nm,1.3s
GDL2 Guadalupe Moun 16.76 340 ePn Pn 20 08 02.9 -0.6
comp=Z,11nm,0.7s
127A Arkansas Junct 16.91 344 ⇓P Pn 20 08 05.3 -0.1
baz=17,SNR=7.6
VBMS Vicksburg 17.02 22 ePn Pn 20 08 07.3 +0.5
comp=Z,126nm,0.9s
224A Corundas Mount 17.05 337 ⇓P Pn 20 08 07.1 -0.1
baz=17,SNR=15
125A Gardner Draw, 17.28 340 ⇓P Pn 20 08 10.8 +0.8
baz=17,SNR=18
CPRX Cap Rock 17.39 343 ePn Pn 20 08 10.9 -0.4
comp=Z,21nm,0.9s
Z27A Tatum 17.48 345 ⇑P Pn 20 08 11.2 -1.3
baz=18,SNR=61
124A Stringfield Ra 17.59 338 ⇑P Pn 20 08 14.2 +0.4
baz=18,SNR=8.5
Z26A Caprock 17.64 343 ⇓P Pn 20 08 13.8 -0.7
baz=18,SNR=20
320A Kipp Ranch, An 17.74 328 ⇑P Pn 20 08 16.4 +0.7
baz=18,SNR=16
Z25A Roswell 17.87 341 ⇑P Pn 20 08 17.3 -0.1
baz=18,SNR=14
221A Mesquite Ranch 17.94 331 ⇓P Pn 20 08 17.6 -0.5
baz=18,SNR=7.2
MSTX Muleshoe 18.00 347 ⇑P Pn 20 08 18.8 -0.1
baz=18,SNR=5.4
Y27A Causey 18.01 345 ⇓P Pn 20 08 18.1 -0.9
baz=18,SNR=8.6
Z24A Sheeppen Canyo 18.13 339 ⇓P Pn 20 08 19.3 -1.2
baz=18
319A Douglas 18.16 327 ⇓P Pn 20 08 20.4 -0.5
baz=18,SNR=9.1
220A Playas Peak, P 18.20 330 ⇓P Pn 20 08 21.7 +0.3
baz=18,SNR=35
Y26A Elida 18.21 344 ⇑P Pn 20 08 20.7 -0.9
baz=18
WMOK Wichita Mounta 18.22 357 eP Pn 20 08 19.9 -1.7
WMOK pmax pmax
comp=Z,126nm,1.8s
WMOK Wichita Mounta 18.22 357 eP Pn 20 08 19.9 -1.7
comp=Z,126nm,1.8s
Z23A Rita Site, Whi 18.38 337 ⇑P Pn 20 08 24.9 +1.3
baz=18
121A Cookes Peak, D 18.38 332 ⇑P Pn 20 08 24.6 +1.1
baz=18
MIAR Mount Ida 18.41 11 eP Pn 20 08 23.1 -0.7
MIAR pmax pmax
comp=Z,52nm,0.9s
MIAR Mount Ida 18.41 11 eP Pn 20 08 23.1 -0.7
comp=Z,52nm,0.9s
Y25A Mesa, Roswell 18.46 342 ⇓P Pn 20 08 23.6 -0.9
baz=19,SNR=17
318A Bisbee 18.59 326 ⇑P Pn 20 08 25.3 -0.8
baz=19,SNR=20
219A White Tail Can 18.64 328 ⇓P Pn 20 08 26.5 -0.3
baz=19,SNR=19
Z22A Elephant Butte 18.66 335 ⇓P Pn 20 08 27.2 +0.3
baz=19,SNR=18
AMTX Amarillo 18.67 350 eP Pn 20 08 25.3 -1.8
comp=Z,92nm,1.2s
Y24A Capitan 18.70 340 ⇓P Pn 20 08 27.2 -0.2
baz=19,SNR=22
X27A F and S Farms, 18.72 346 ⇓P Pn 20 08 27.3 -0.4
baz=19,SNR=6.8
120A U Bar Ranch, L 18.78 330 ⇑P Pn 20 08 28.3 -0.1
baz=19,SNR=32
X26A CR and CF Fran 18.80 344 ⇑P Pn 20 08 27.6 -1.0
baz=19,SNR=12
Y23A Lovelace Mesa, 18.92 338 ⇓P Pn 20 08 30.2 +0.2
baz=19,SNR=6.7
BCIP Isla Barro Col 18.95 110 P Pn 20 08 29.2 -1.4
comp=Z,35nm,1.1s
Z21A St. Cloud Mine 18.99 334 ⇓P Pn 20 08 30.0 -1.0
baz=19,SNR=14
X25A Clemmons Ranch 19.02 342 ⇓P Pn 20 08 30.8 -0.4
baz=19
218A Dragoon 19.03 326 ⇓P Pn 20 08 30.1 -1.3
baz=19,SNR=6.9
DWPF Disney 19.05 50 eP Pn 20 08 32.8 +1.1
comp=Z,526nm,1.9s
W27A Bowe Ranch, En 19.11 347 ⇑P Pn 20 08 31.5 -1.0
baz=19
LRAL Lakeview Retre 19.18 29 eP Pn 20 08 32.1 -1.1
comp=Z,28nm,0.9s
Z20A Nine Sixteen R 19.23 332 ⇓P Pn 20 08 32.6 -1.3
baz=19
Y22A Socorro 19.26 336 ⇓P Pn 20 08 33.0 -1.1
baz=19,SNR=27
119A Ashpeak Ranch, 19.28 329 ⇓P Pn 20 08 33.0 -1.5
baz=19,SNR=13
X24A Lazy VL Ranch, 19.29 341 ⇓P Pn 20 08 33.9 -0.6
baz=19
W26A Owens Ranch, T 19.30 345 ⇓P Pn 20 08 35.4 +0.8
baz=19
BNM Barren Site 19.32 337 eP Pn 20 08 34.8 -0.1
comp=Z,58nm,1.1s
MTDJ Mount Denham 19.43 82 eP Pn 20 08 36.0 -0.4
comp=Z,84nm,0.9s
MTDJ e 20 08 44.1
LENM Lemitar 19.46 337 eP Pn 20 08 36.6 0.0
comp=Z,26nm,0.9s
OXF Oxford 19.49 21 eP Pn 20 08 35.3 -1.6
OXF pmax pmax
comp=Z,285nm,1.6s
OXF Oxford 19.49 21 eP Pn 20 08 35.3 -1.6
comp=Z,285nm,1.6s
118A Homack Ranch, 19.52 328 ⇓P Pn 20 08 36.7 -0.6
baz=20,SNR=15
CCCC Cccc 19.54 73 eP Pn 20 08 39.5 +1.9
Y21A Point of Rocks 19.60 335 ⇓P Pn 20 08 36.7 -1.5
baz=20,SNR=32
W25A X Bar L Ranch, 19.61 344 ⇓P Pn 20 08 36.4 -1.8
baz=20,SNR=10

TUC Tucson 19.69 326 eP Pn 20 08 38.4 -0.9
TUC pmax pmax
comp=Z,15nm,0.9s
TUC Tucson 19.69 326 eP Pn 20 08 38.4 -0.9
comp=Z,15nm,0.9s
Z19A T-Link Ranch, 19.70 330 ⇑P Pn 20 08 38.3 -1.1
baz=20,SNR=7.6
LAZ Ladron 19.73 337 eP Pn 20 08 40.3 +0.5
comp=Z,20nm,1.1s
X22A Bernardo 19.78 337 ⇑P Pn 20 08 41.0 +0.6
baz=20
Y20A Horse Springs, 19.81 333 ⇑P Pn 20 08 39.9 -0.8
baz=20,SNR=16
216A Three Points, 19.83 324 ⇓P Pn 20 08 39.9 -1.0
baz=20,SNR=9.0
117A Oracle 19.86 326 ⇓P Pn 20 08 40.2 -1.2
baz=20,SNR=50
W24A Lazy 6 Ranch, 19.87 341 ⇑P Pn 20 08 39.8 -1.6
baz=20,SNR=19
ANMO Albuquerque 19.98 339 P Pn 20 08 41.5 -1.2
comp=Z,35nm,1.1s,baz=145,slow=12,SNR=25
ANMO Lg 20 14 52.5
comp=Z,1.6nm,0.9s,baz=353,slow=9.9,SNR=3.0
ANMO LR LR 20 17 06.7
comp=Z,6μm,18.5s,baz=9.5,slow=39
ANMO Albuquerque 19.98 339 eP Pn 20 08 41.3 -1.4
ANMO pmax pmax
comp=Z,43nm,1.2s
ANMO Albuquerque 19.98 339 eP Pn 20 08 41.3 -1.4
comp=Z,43nm,1.2s
V26A Tequesquite Ra 19.98 346 ⇓P Pn 20 08 41.8 -0.9
baz=20
HBAR Harrisburg 20.06 17 eP P 20 08 41.1 -0.6
W23A Werner Place, 20.06 340 ⇓P P 20 08 42.8 +1.0
baz=20,SNR=16
LMGC Las Mercedes 20.07 77 eP P 20 08 41.6 -0.4
W22A Albuquerque 20.23 338 ⇑P P 20 08 45.6 +2.0
baz=20
Y19A Nutrioso 20.24 332 ⇑P P 20 08 44.7 +1.0
baz=20
Z17A San Carlos Hig 20.29 328 ⇓P P 20 08 45.9 +1.6
baz=20
116A Eloy 20.38 324 ⇓P P 20 08 46.4 +1.1
baz=20,SNR=14
PLAL Pickwick Lake 20.40 23 eP P 20 08 44.8 -0.6
comp=Z,245nm,1.6s
PLAL eS S 20 12 30.8 -1.4
X20A Quemado 20.40 334 ⇑P P 20 08 47.3 +1.8
baz=20,SNR=58
Y18A Canyon Day Jun 20.46 330 ⇓P P 20 08 47.3 +1.2
baz=20,SNR=44
U26A Atchley Ranch, 20.54 346 ⇓P P 20 08 48.4 +1.4
baz=21
W21A San Fidel 20.56 336 ⇓P P 20 08 49.5 +2.3
baz=21,SNR=7.9
214A Organ Pipe Nat 20.59 321 ⇓P P 20 08 47.8 +0.3
baz=21,SNR=12
V23A Ortiz Mt. (NFS 20.61 340 ⇑P P 20 08 48.9 +1.2
baz=21,SNR=16
GNAR Gosnell 20.63 18 eP P 20 08 49.3 +1.4
comp=Z,2μm,1.3s
X19A St. Johns 20.65 332 ⇓P P 20 08 49.2 +1.1
baz=21,SNR=36
115A Sonoran Desert 20.78 324 ⇑P P 20 08 50.2 +0.6
baz=21,SNR=12
HALT Halls 20.79 20 P P 20 08 50.6 +1.0
Y17A Roosevelt 20.80 328 ⇑P P 20 08 50.0 +0.3
baz=21,SNR=33
Z16A Peralta Trail, 20.82 326 ⇓P P 20 08 50.9 +0.9
baz=21,SNR=10
W20A Ramah 20.91 335 ⇑P P 20 08 52.8 +1.9
baz=21,SNR=14
V22A San Miguel Ran 21.00 339 ⇑P P 20 08 52.7 +0.8
baz=21,SNR=16
X18A Snowflake 21.04 331 ⇑P P 20 08 53.3 +1.0
baz=21,SNR=20
V21A Milan 21.17 337 ⇑P P 20 08 55.3 +1.6
baz=21,SNR=7.9
114A Black Gap (USA 21.20 323 ⇓P P 20 08 54.8 +0.7
baz=21
GOGA Godfrey 21.26 35 eP P 20 08 54.4 -0.4
GOGA e 20 09 02.3
GOGA pmax pmax
comp=Z,97nm,1.0s,mb5.1
GOGA Godfrey 21.26 35 eP P 20 08 54.4 -0.4
comp=Z,97nm,1.0s,mb5.1
GOGA e 20 09 02.3
Y16A Circle Bar Ran 21.27 327 ⇑P P 20 08 55.8 +1.0
baz=21,SNR=21
W19A Sanders 21.27 333 P P 20 08 56.0 +1.2
baz=21,SNR=12
X17A Forest Lakes 21.29 329 ⇓P P 20 08 56.7 +1.7
baz=21,SNR=13
UTMT University of 21.34 20 eP P 20 08 53.8 -1.8
comp=Z,466nm,1.0s,mb5.8
PARMO Parma 21.35 18 P P 20 08 55.7 0.0
V20A Brimhall 21.48 336 ⇓P P 20 08 58.5 +1.4
baz=22,SNR=16
SWET Sewanee 21.48 27 eP P 20 08 56.3 -0.8
WVT Waverly 21.51 22 eP P 20 08 56.2 -1.2
WVT pmax pmax
comp=Z,154nm,1.4s,mb5.2
WVT Waverly 21.51 22 eP P 20 08 56.2 -1.2
comp=Z,154nm,1.4s,mb5.2
V19A Window Rock 21.64 335 ⇑P P 20 08 60.0 +1.2
baz=22,SNR=13
X16A Lo Mia Camp, P 21.67 328 ⇑P P 20 09 00.3 +1.1
baz=22,SNR=36
Z14A Wintersburg 21.68 324 ⇓P P 20 08 59.7 +0.5
baz=22,SNR=6.8
Y15A Casa Rosa Ranc 21.78 326 ⇓P P 20 09 01.0 +0.7
baz=22,SNR=11
GTBY Guantanamo Bay 21.83 77 eP P 20 09 01.4 +0.4
comp=Z,232nm,1.2s,mb5.5
Z13A Yuma Proving G 21.97 322 ⇓P P 20 09 02.5 +0.1
baz=22,SNR=17
T22A Edith 22.00 340 ⇑P P 20 09 03.8 +1.2
baz=22,SNR=54
U20A Newcomb 22.00 336 ⇓P P 20 09 03.6 +0.9
baz=22,SNR=9.4
V18A Ganado 22.01 333 P P 20 09 04.0 +1.2
baz=22,SNR=33
X15A Humboldt 22.13 327 ⇑P P 20 09 03.7 -0.4
baz=22,SNR=16
Y14A Wickenburg 22.13 325 ⇑P P 20 09 04.2 +0.1
baz=22,SNR=24
U19A Dine' College, 22.20 335 ⇓P P 20 09 05.5 +0.7
baz=22,SNR=39
W16A Flagstaff 22.25 329 ⇓P P 20 09 06.7 +1.3
baz=22,SNR=8.5
SDCO Great Sand Dun 22.26 344 eP P 20 09 05.5 0.0
comp=Z,49nm,1.3s,mb4.8
CCM Cathedral Cave 22.27 14 eP P 20 09 04.0 -1.5
CCM pmax pmax
comp=Z,53nm,1.0s,mb4.9
CCM Cathedral Cave 22.27 14 eP P 20 09 04.0 -1.6
comp=Z,53nm,1.0s,mb4.9
CPCT Cooper Cave 22.32 30 eP P 20 09 04.5 -1.6
V17A Tonalea, Kykot 22.33 331 ⇑P P 20 09 06.9 +0.8
baz=22,SNR=21
CBKS Cedar Bluff 22.33 356 eP P 20 09 05.4 -0.8
CBKS pmax pmax
comp=Z,135nm,1.4s,mb5.2
CBKS Cedar Bluff 22.33 356 eP P 20 09 05.3 -0.8
comp=Z,135nm,1.4s,mb5.2
FVM French Village 22.40 15 eP P 20 09 06.5 -0.4
FVM pmax pmax
comp=Z,46nm,1.1s,mb4.8
FVM French Village 22.40 15 eP P 20 09 06.5 -0.5
comp=Z,46nm,1.1s,mb4.8
SIUC Southern Illin 22.49 18 eP P 20 09 07.1 -0.7
comp=Z,129nm,1.1s,mb5.3
Y13A Salome 22.51 323 ⇑P P 20 09 08.3 +0.2
baz=23,SNR=6.1
WUAZ Wupatki 22.51 330 ⇑P P 20 09 08.9 +0.8
baz=23,SNR=18
WUAZ Wupatki 22.51 330 eP P 20 09 10.2 +2.1
comp=Z,42nm,1.0s,mb4.8
GLA Glamis 22.57 320 ⇑P P 20 09 08.7 -0.1
baz=23
GLA Glamis 22.57 320 eP P 20 09 09.5 +0.7
GLA pmax pmax
comp=Z,38nm,1.1s,mb4.7
GLA Glamis 22.57 320 eP P 20 09 09.5 +0.7
comp=Z,38nm,1.1s,mb4.7
KSU1 Kansas State U 22.58 2 eP P 20 09 08.8 0.0
comp=Z,73nm,0.9s,mb5.1

KSU1 e 20 09 17.5
U18A Rough Rock, Ch 22.59 334 ⇑P P 20 09 08.1 -0.8
baz=23,SNR=24
T19A Beclabito 22.60 336 ⇑P P 20 09 09.2 +0.2
baz=23,SNR=20
W15A Williams 22.69 328 ⇓P P 20 09 11.2 +1.3
baz=23,SNR=9.8
MVCO Mesa Verde 22.73 337 ⇑P P 20 09 10.2 -0.2
baz=23,SNR=42
MVCO Mesa Verde 22.73 337 eP P 20 09 10.2 -0.2
comp=Z,177nm,1.3s,mb5.3
COW Cow Castle Cre 22.84 39 eP P 20 09 11.2 -0.4
COW e 20 09 21.5
TKL Tuckaleechee C 22.85 31 P P 20 09 12.1 +0.4
comp=Z,28nm,1.0s,mb4.7,baz=196,slow=13,SNR=16
TKL LR LR 20 22 14.4
comp=Z,531nm,18.0s,MS4.0,baz=226,slow=47
TKL Tuckaleechee C 22.85 31 eP P 20 09 12.0 +0.4
Y12C Blythe 22.87 322 ⇑P P 20 09 11.9 0.0
baz=23
S21A Coal Bank Pass 22.89 339 ⇓P P 20 09 12.0 0.0
baz=23,SNR=23
U16A Tuba City 22.91 331 ⇓P P 20 09 12.8 +0.4
baz=23,SNR=25
NHSC New Hope 22.98 41 eP P 20 09 11.3 -1.8
comp=Z,234nm,1.1s,mb5.5
SLM Saint Louis 23.07 15 eP P 20 09 14.1 +0.1
SLM pmax pmax
comp=Z,165nm,1.5s,mb5.2
SLM Saint Louis 23.07 15 eP P 20 09 14.1 +0.1
comp=Z,165nm,1.5s,mb5.2
R22A Saguache, Gunn 23.07 342 ⇑P P 20 09 15.0 +1.0
baz=23,SNR=23
X13A Yucca 23.08 324 ⇑P P 20 09 13.3 -0.8
baz=23,SNR=13
U17A Shonto 23.08 333 ⇓P P 20 09 13.7 -0.3
baz=23,SNR=13
JSC Jenkinsville 23.14 37 eP P 20 09 11.9 -2.9
V15A Kaibab Nationa 23.14 329 ⇑P P 20 09 14.9 +0.1
baz=23,SNR=24
T18A Mexican Hat 23.20 335 ⇓P P 20 09 14.9 -0.5
baz=23,SNR=20
USIN University of 23.21 21 eP P 20 09 15.1 -0.4
comp=Z,212nm,1.4s,mb5.4
BC3 Big Chuckw Mtn 23.36 320 ⇓P P 20 09 17.1 0.0
baz=23,SNR=14
S19A Harvey Farm, M 23.44 337 ⇓P P 20 09 17.3 -0.5
baz=24,SNR=8.0
R21A Cimarron 23.45 340 ⇓P P 20 09 19.0 +1.1
baz=24,SNR=31
MONP Monument Peak 23.47 318 ⇑P P 20 09 17.5 -0.7
baz=24
V14A Boquillas Ranc 23.47 327 ⇑P P 20 09 18.2 +0.1
baz=24,SNR=15
T17A Navajo Res., N 23.47 333 ⇓P P 20 09 18.5 +0.4
baz=24,SNR=25
W13A Hualapai Mount 23.48 325 ⇓P P 20 09 19.0 +0.8
baz=24,SNR=10
BAR Barrett 23.50 317 eP P 20 09 18.6 +0.2
comp=Z,14nm,1.2s,mb4.3
IRM Iron Mountain 23.53 322 ⇓P P 20 09 18.4 -0.3
baz=24,SNR=14
R20A Redvale 23.56 339 ⇑P P 20 09 18.9 0.0
baz=24,SNR=8.4
PV01 Paradox Valley 23.58 338 eP P 20 09 19.2 +0.1
comp=Z,7μm,1.4s
TZTN Tazewell 23.67 30 eP P 20 09 19.4 -0.5
comp=Z,73nm,1.1s,mb5.0
U15A North Rim 23.69 330 ⇑P P 20 09 20.9 +0.7
baz=24,SNR=25
Q22A Crested Butte, 23.70 342 ⇓P P 20 09 21.1 +0.9
baz=24,SNR=12
S18A Hurst Farm, Bl 23.73 335 ⇓P P 20 09 20.5 0.0
baz=24,SNR=17
OLIL Olney 23.77 19 eP P 20 09 19.5 -1.3
comp=Z,80nm,1.0s,mb5.1
Q21A Lamborn Mesa, 23.88 341 ⇑P P 20 09 22.5 +0.7
baz=24,SNR=35
PV04 Paradox Valley 23.93 338 eP P 20 09 22.4 +0.1
BELC Belle Mtn. 23.93 320 ⇓P P 20 09 22.0 -0.4
baz=24,SNR=11
WCI Wyandotte Cave 23.93 23 eP P 20 09 22.4 +0.1
WCI pmax pmax
comp=Z,105nm,1.1s,mb5.2
WCI Wyandotte Cave 23.93 23 eP P 20 09 22.4 +0.1
comp=Z,105nm,1.1s,mb5.2
PFO Pinyon Flat Ob 23.96 319 eP P 20 09 23.5 +0.9
PFO pmax pmax
comp=Z,53nm,1.5s,mb4.8
PFO Pinyon Flat Ob 23.96 319 eP P 20 09 23.5 +0.9
comp=Z,53nm,1.5s,mb4.8
R19A Curley Farm, L 23.97 337 P P 20 09 23.3 +0.6
baz=24,SNR=6.6
S17A Black Ridge (B 24.01 334 ⇑P P 20 09 23.6 +0.5
baz=24,SNR=11
SMCO Snowmass 24.01 342 eP P 20 09 22.8 -0.3
comp=Z,87nm,1.3s,mb5.0
V13A Grand Canyon W 24.10 326 ⇓P P 20 09 24.3 +0.4
baz=24,SNR=20
U14A Mt Trumbull 24.12 328 ⇓P P 20 09 24.8 +0.7
baz=24,SNR=13
LDFC Landfair 24.15 323 eP P 20 09 25.9 +1.5
comp=Z,40nm,1.2s,mb4.7
T15A Red Dirt Ranch 24.20 331 ⇑P P 20 09 25.9 +1.0
baz=24,SNR=14
Q20A Ridgley Place, 24.22 340 ⇓P P 20 09 26.2 +1.2
baz=24,SNR=14
ISCO Idaho Springs 24.23 345 eP P 20 09 25.6 +0.6
ISCO pmax pmax
comp=Z,81nm,1.2s,mb5.0
ISCO Idaho Springs 24.23 345 eP P 20 09 25.6 +0.5
comp=Z,81nm,1.2s,mb5.0
GMRC Granite Mounta 24.26 322 ⇑P P 20 09 22.8 -2.6
baz=24,SNR=5.8
R18A Canyonlands Na 24.29 336 ⇑P P 20 09 24.7 -0.9
baz=24,SNR=14
P21A Newcastle 24.47 342 ⇓P P 20 09 27.0 -0.2
baz=25
V12A Nelson 24.48 325 ⇑P P 20 09 25.9 -1.4
baz=24,SNR=8.6
U13A Pakoon Wash 24.52 327 ⇑P P 20 09 27.3 -0.4
baz=25,SNR=29
Q19A Hogan Spring (24.55 338 ⇑P P 20 09 28.6 +0.6
baz=25,SNR=12
R17A Hanksville Air 24.64 335 ⇑P P 20 09 28.0 -0.8
baz=25,SNR=18
OGNE Ogallala 24.67 352 eP P 20 09 29.4 +0.3
comp=Z,49nm,1.0s,mb5.0
OGNE e 20 09 38.4
BLO Bloomington 24.68 21 eP P 20 09 28.8 -0.4
BLO pmax pmax
comp=Z,343nm,1.9s,mb5.6
BLO Bloomington 24.68 21 eP P 20 09 28.8 -0.4
comp=Z,344nm,1.9s,mb5.6
HEC Hector,Ludlow 24.69 321 ⇓P P 20 09 28.6 -0.8
baz=25,SNR=13
S15A Panguitch 24.73 332 ⇑P P 20 09 30.3 +0.7
baz=25,SNR=6.9
P20A De Beque 24.75 340 ⇓P P 20 09 30.9 +1.1
baz=25,SNR=24
R16A Teasdale 24.84 334 ⇓P P 20 09 31.1 +0.4
baz=25,SNR=17
TUQ Turquoise Moun 24.87 323 ⇓P P 20 09 31.1 +0.1
baz=25,SNR=8.6
T13A Saint George 24.95 328 ⇑P P 20 09 32.1 +0.5
baz=25,SNR=14
OTAV Otavalo 24.98 128 eP P 20 09 33.3 +1.2
comp=Z,4.9nm,0.6s,mb4.2
Q18A Rafter H Ranch 25.00 337 ⇓P P 20 09 31.4 -0.7
baz=25
P19A Cripple Cowboy 25.06 339 ⇓P P 20 09 33.2 +0.5
baz=25,SNR=32
CCUT Cedar City 25.10 330 eP P 20 09 33.8 +0.9
comp=Z,15nm,1.2s,mb4.4
O21A Pagoda 25.12 342 ⇑P P 20 09 33.9 +0.8
baz=25,SNR=26
HDIL Hopedale 25.12 15 eP P 20 09 32.2 -0.9
comp=Z,53nm,1.0s,mb5.0
HDIL e pP 20 09 41.6 -0.7
R15A Junction 25.13 332 ⇓P P 20 09 33.8 +0.6
baz=25,SNR=7.9
SRU San Rafael 25.16 336 ⇓P P 20 09 34.3 +0.8
baz=25,SNR=16
SRU San Rafael 25.16 336 eP P 20 09 34.3 +0.8
SRU pmax pmax
comp=Z,43nm,1.0s,mb4.9
SRU San Rafael 25.16 336 eP P 20 09 34.3 +0.7
comp=Z,43nm,1.0s,mb4.9

Q16A Castle Valley 25.25 335 ⇊P P 20 09 34.7 +0.4
baz=25,SNR=22
O20A White River Ci 25.27 341 ⇑P P 20 09 35.4 +0.9
baz=25,SNR=11
GSC Goldstone 25.30 321 *eP* **P 20 09 35.5 +0.7**
GSC pmax pmax
comp=Z,29nm,1.4s,mb4.6
GSC Goldstone 25.30 321 *eP* **P 20 09 35.5 +0.6**
comp=Z,29nm,1.4s,mb4.6
ARUT Antelope Range 25.32 330 *eP* **P 20 09 36.1 +1.1**
ARUT *e* pP 20 09 45.4 +1.2
ARUT pmax pmax
comp=Z,67nm,1.1s,mb5.1
ARUT Antelope Range 25.32 330 *eP* **P 20 09 36.0 +1.0**
comp=Z,67nm,1.1s,mb5.1
ARUT *e* pP 20 09 45.4 +1.2
MSU Marysvale 25.33 333 *eP* **P 20 09 35.1 0.0**
MSU pmax pmax
comp=Z,56nm,0.9s,mb5.1
MSU Marysvale 25.33 333 *eP* **P 20 09 35.1 0.0**
comp=Z,56nm,0.9s,mb5.1
S13A Holt Ranch, En 25.36 329 ⇑P P 20 09 35.6 +0.2
baz=25,SNR=13
SDDR Presa de Saban 25.37 80 *eP* **P 20 09 37.4 +1.8**
comp=Z,345nm,1.7s,mb5.6
N22A Wattenberg Ran 25.39 345 ⇊P P 20 09 36.4 +0.9
baz=26,SNR=6.1
P18A Preston Nutter 25.51 337 ⇊P P 20 09 36.4 -0.2
baz=26,SNR=31
P17A Butcher Ranch, 25.56 336 ⇑P P 20 09 37.0 -0.1
baz=26,SNR=8.3
TMUT Trail Mountain 25.59 335 *eP* **P 20 09 36.9 -0.6**
comp=Z,42nm,1.4s,mb4.8
ELN Prospectdale 25.60 33 *eP* **P 20 09 35.2 -2.3**
PHWY Pilot Hill 25.62 347 *eP* **P 20 09 37.8 +0.1**
comp=Z,60nm,0.6s,mb5.3
N21A Black Mountain 25.64 343 ⇊P P 20 09 39.4 +1.6
baz=26,SNR=46
SCIA State Center 25.66 8 *eP* **P 20 09 38.2 +0.1**
comp=Z,158nm,1.1s,mb5.5
SCIA *e* pP 20 09 47.0 -0.2
O19A Miners Draw (B 25.71 340 P **P 20 09 39.4 +0.9**
baz=26,SNR=14
EDW2 Edwards Air Fo 25.75 319 ⇑P P 20 09 38.3 -0.6
baz=26
ROSC El Rosal 25.75 114 P **P 20 09 43.9 +4.7**
comp=Z,6.3nm,0.4s,mb4.5,baz=96,slow=18,SNR=6.6
ROSC El Rosal 25.75 114 *eP* **P 20 09 43.8 +4.6**
BLA Blacksburg 25.76 33 *eP* **P 20 09 39.1 +0.1**
BLA pmax pmax
comp=Z,125nm,1.2s,mb5.3
BLA Blacksburg 25.76 33 *eP* **P 20 09 39.1 +0.1**
comp=Z,125nm,1.2s,mb5.3
BLA *e* pP 20 09 49.3 +1.2
T11A Corn Creek, Al 25.80 327 ⇊P P 20 09 39.5 +0.2
baz=26
Q15A Fillmore 25.83 333 ⇑P P 20 09 39.8 +0.3
baz=26,SNR=14
R13A O'Grain Ranch, 25.89 330 ⇊P P 20 09 41.7 +1.5
baz=26,SNR=11
N20A Spence Gulch, 25.92 342 ⇊P P 20 09 40.9 +0.5
baz=26,SNR=16
M22A Cedar Creek Ra 25.99 345 ⇊P P 20 09 40.0 -0.9
baz=26
P16A Fountain Green 26.04 335 ⇊P P 20 09 41.4 -0.1
baz=26
O17A Robinson Place 26.18 337 ⇊P P 20 09 43.6 +0.8
baz=26,SNR=19
Q14A Sevier Lake (B 26.21 332 ⇊P P 20 09 43.3 +0.3
baz=26,SNR=46
MPMC Manual Prospec 26.22 322 ⇑P P 20 09 42.4 -0.8
baz=26,SNR=14
P15A Leamington 26.26 334 ⇑P P 20 09 43.8 +0.3
baz=26,SNR=9.7
N19A John Jarvie Ra 26.26 340 ⇑P P 20 09 43.2 -0.3
baz=26,SNR=8.8
MPU Maple Canyon 26.38 336 *eP* **P 20 09 45.5 +1.0**
comp=Z,33nm,1.1s,mb4.8
M21A Separation Pea 26.38 344 P **P 20 09 41.6 -2.9**
baz=26,SNR=64
O16A Springville 26.49 336 ⇊P P 20 09 45.3 -0.2
baz=27,SNR=11
N18A Larsen Ranch, 26.50 340 ⇑P P 20 09 46.2 +0.6
baz=27,SNR=14
NLU North Lily Min 26.50 335 *eP* **P 20 09 46.1 +0.4**
comp=Z,37nm,1.1s,mb4.8
M20A Sweetwater, Wa 26.50 342 ⇑P P 20 09 46.6 +0.9
baz=27,SNR=11
Q13A Wheeler Ranch, 26.53 331 ⇑P P 20 09 47.1 +1.2
baz=27,SNR=24
DAU Daniels Canyon 26.57 337 *eP* **P 20 09 46.5 +0.2**
DAU pmax pmax
comp=Z,27nm,1.0s,mb4.7
DAU Daniels Canyon 26.57 337 *eP* **P 20 09 46.5 +0.2**
comp=Z,27nm,1.0s,mb4.7
P14A Drum Mountains 26.61 333 ⇑P P 20 09 47.8 +1.1
baz=27,SNR=17
JLU Jordanelle 26.81 337 *eP* **P 20 09 48.6 +0.2**
comp=Z,21nm,1.2s,mb4.5
R11A Troy Canyon, C 26.82 328 ⇑P P 20 09 49.4 +0.8
baz=27,SNR=6.6
P13A Bates Ranch, G 26.93 331 ⇊P P 20 09 49.5 0.0
baz=27,SNR=26
ACSO Alum Creek Sta 26.96 26 *eP* **P 20 09 52.1 +2.3**
comp=Z,37nm,0.9s,mb4.9
Q12A Willow Creek R 26.98 330 ⇊P P 20 09 50.8 +0.8
baz=27,SNR=5.9
DUG Dugway 27.01 334 ⇊P P 20 09 50.5 +0.3
baz=27,SNR=6.9
DUG Dugway 27.01 334 *eP* **P 20 09 50.5 +0.3**
DUG pmax pmax
comp=Z,23nm,1.1s,mb4.6
DUG Dugway 27.01 334 *eP* **P 20 09 50.5 +0.3**
comp=Z,23nm,1.1s,mb4.6
L20A Wamsutter 27.02 343 ⇑P P 20 09 49.0 -1.3
baz=27,SNR=34
M18A Lyman 27.04 339 ⇊P P 20 09 50.3 -0.2
baz=27
S10A Tonopah Range, 27.04 326 ⇑P P 20 09 51.1 +0.6
baz=27,SNR=10.0
JFWS Jewell Farm 27.14 12 *eP* **P 20 09 50.5 -0.9**
JFWS pmax pmax
comp=Z,49nm,1.0s,mb5.0
JFWS Jewell Farm 27.14 12 *eP* **P 20 09 50.5 -0.9**
comp=Z,49nm,1.0s,mb5.0
ECSD EROS Data Cent 27.20 2 *eP* **P 20 09 50.1 -1.8**
comp=Z,31nm,1.3s,mb4.7
Q11A Duckwater 27.24 328 ⇊P P 20 09 52.4 +0.1
baz=27
M17A Scullys Gap (B 27.28 339 ⇊P P 20 09 53.0 +0.3
baz=27,SNR=7.9
P12A McGill 27.36 330 ⇑P P 20 09 53.9 +0.5
baz=27,SNR=11
L19A Farson 27.41 341 ⇊P P 20 09 53.9 0.0
baz=28,SNR=10
L18A Fontenelle, Gr 27.47 340 ⇊P P 20 09 53.4 -0.9
baz=28,SNR=7.7
M16A Huntsville 27.49 337 ⇊P P 20 09 53.5 -1.1
baz=28
SDV Santo Domingo 27.53 103 P **P 20 09 55.5 +0.3**
comp=Z,25nm,0.8s,mb4.9,baz=325,slow=3.6,SNR=34
SDV LR LR 20 22 22.4
comp=Z,628nm,19.1s,MS4.2,baz=323,slow=40
SDV Santo Domingo 27.53 103 *eP* **P 20 09 56.0 +0.8**
comp=Z,31nm,0.7s,mb5.0
Q10A Clear Creek Ra 27.60 327 ⇊P P 20 09 55.9 +0.3
baz=28,SNR=7.0
BGU Big Grassy Mou 27.71 335 *eP* **P 20 09 56.3 -0.2**
comp=Z,21nm,1.2s,mb4.6
N14A Grayback Hills 27.71 334 ⇑P P 20 09 57.5 +1.0
baz=28,SNR=30
HWUT Hardware Ranch 27.72 337 *eP* **P 20 09 56.4 -0.2**
comp=Z,9.1nm,0.4s,mb4.8
SPUT South Promonto 27.80 336 *eP* **P 20 09 57.5 +0.2**
comp=Z,8.9nm,0.8s,mb4.5
MCWV Mont Chateau 27.91 31 *eP* **P 20 09 59.6 +1.2**
comp=Z,25nm,0.9s,mb4.8
O12A Currie 27.91 332 ⇑P P 20 09 59.4 +1.1
baz=28,SNR=11
M15A Larsen Ranch, 27.93 336 ⇑P P 20 09 59.1 +0.6
baz=28,SNR=5.7
BW06 Boulder Array 28.08 341 *eP* **P 20 10 00.6 +0.8**
PDAR Pinedale Array 28.08 341 LR LR 20 22 28.2
comp=Z,2µm,20.1s,MS4.7,baz=348,slow=39
O11A Cowboy Ranch, 28.23 330 ⇊P P 20 10 01.0 -0.2
baz=28,SNR=12
M14A Sheep Mountain 28.32 335 ⇊P P 20 10 02.2 +0.2
baz=28,SNR=35
HVU Hansel Valley 28.33 336 *eP* **P 20 10 02.5 +0.5**
HVU *e* pP 20 10 11.3 +0.1
HVU pmax pmax
comp=Z,13nm,1.1s,mb4.5
HVU Hansel Valley 28.33 336 *eP* **P 20 10 02.5 +0.4**
comp=Z,14nm,1.1s,mb4.5
HVU *e* pP 20 10 11.2 0.0
NVAR Mina Array Bea 28.33 325 P **P 20 10 02.6 +0.5**
comp=Z,13nm,1.1s,mb4.5,baz=147,slow=9.3,SNR=41
L15A Malad City 28.37 337 ⇊P P 20 10 03.0 +0.6
baz=28,SNR=5.3
N12A Clover Valley, 28.52 332 ⇑P P 20 10 04.1 +0.4
baz=29,SNR=13
ELK Elko 28.52 332 P **P 20 10 04.5 +0.8**
comp=Z,3.6nm,0.8s,mb4.1,baz=149,slow=8.5,SNR=10
ELK LR LR 20 21 18.8
comp=Z,3µm,18.4s,MS4.9,baz=152,slow=36
M13A Montello 28.55 334 ⇊P P 20 10 03.4 -0.6
baz=29,SNR=26
L14A Malta 28.73 336 ⇑P P 20 10 05.7 +0.2
baz=29,SNR=20
M12A Wells 28.92 333 ⇊P P 20 10 07.9 +0.7
baz=29,SNR=16
J17A Brown Place, J 28.98 340 ⇑P P 20 10 07.8 0.0
baz=29,SNR=14
K15A Arbon 29.01 337 ⇊P P 20 10 08.1 0.0
baz=29
REDW Red Top Meadow 29.02 340 *eP* **P 20 10 08.3 +0.1**
comp=Z,88nm,1.6s,mb5.2
L13A Double Diamond 29.06 335 ⇑P P 20 10 09.0 +0.5
baz=29
SNOW Snow King Moun 29.08 340 *eP* **P 20 10 08.9 +0.2**
comp=Z,29nm,0.6s,mb5.2
RRI2 Red Ridge 29.17 340 *eP* **P 20 10 08.0 -1.4**
comp=Z,18nm,0.6s,mb5.0
LOHW Long Hollow 29.17 341 *eP* **P 20 10 08.9 -0.6**
comp=Z,14nm,0.6s,mb4.9
TPAW Teton Pass 29.17 340 *eP* **P 20 10 03.2 -6.3**
comp=Z,23nm,0.9s,mb4.9
J16A Bone 29.20 339 ⇑P P 20 10 09.6 -0.1
baz=29,SNR=11
BMN Battle Mountai 29.23 329 *eP* **P 20 10 10.3 +0.3**
BMN *e* pP 20 10 19.9 +0.7
BMN pmax pmax
comp=Z,11nm,1.1s,mb4.5
BMN Battle Mountai 29.23 329 *eP* **P 20 10 10.3 +0.2**
comp=Z,12nm,1.1s,mb4.5
BMN *e* pP 20 10 19.9 +0.7
M11A Holland Ranch, 29.32 332 ⇑P P 20 10 11.7 +0.9
baz=29,SNR=26
I17A Pilgrim Ck. 29.44 341 ⇑P P 20 10 10.3 -1.6
baz=30
J15A Blackfoot 29.60 338 ⇊P P 20 10 12.5 -0.8
baz=30,SNR=7.5
M10A I.L. Ranch, Tu 29.74 331 ⇑P P 20 10 15.0 +0.5
baz=30,SNR=6.0
L11A Cat Creek Ranc 29.89 333 ⇊P P 20 10 16.4 +0.5
baz=30,SNR=17
K12A Draper Farm, C 29.91 334 ⇑P P 20 10 16.3 +0.2
baz=30,SNR=7.1
YFT Old Faithful 30.00 341 *eP* **P 20 10 13.0 -3.8**
comp=Z,15nm,0.4s,mb5.1
L10A Juniper Basin 30.14 332 ⇊P P 20 10 18.8 +0.7
baz=30,SNR=21
ATAH Atahualpa 30.20 139 P **P 20 10 20.7 +1.8**
comp=Z,6.3nm,0.7s,mb4.4,baz=302,slow=6.2,SNR=5.2
ATAH LR LR 20 20 03.2
comp=Z,1µm,19.7s,MS4.5,baz=334,slow=32
YMR Madison River 30.23 341 *eP* **P 20 10 15.8 -3.0**
comp=Z,13nm,0.6s,mb4.8
J13A Cove Ranch, Pi 30.25 336 ⇑P P 20 10 18.2 -0.8
baz=30
I14A Mackay 30.43 337 ⇊P P 20 10 21.4 +0.8
baz=30,SNR=6.8
BEKR Beckwourth 30.48 324 ⇊P P 20 10 21.3 +0.1
baz=30,SNR=6.6
HLID Hailey 30.48 336 ⇊P P 20 10 21.2 +0.1
baz=31,SNR=10
HLID Hailey 30.48 336 *eP* **P 20 10 20.6 -0.5**
comp=Z,7.2nm,0.9s,mb4.4
CBYP Canovanas 30.52 82 *eP* **P 20 10 20.0 -1.7**
comp=Z,38nm,0.8s,mb5.3
QLMT Earthquake Lak 30.52 341 P **P 20 10 20.8 -0.6**
comp=Z,4.4nm,0.5s,mb4.5
I13A Wildhorse Cree 30.66 337 ⇊P P 20 10 23.1 +0.4
baz=31
H15A Lima 30.74 339 ⇑P P 20 10 24.9 +1.5
baz=31,SNR=5.5
MTP Monte Pirata 30.82 82 *eP* **P 20 10 22.9 -1.5**
comp=Z,58nm,0.7s,mb5.5
K10A MacKenzie Ranc 30.88 332 ⇊P P 20 10 24.9 +0.3
baz=31
I12A Atlanta 30.96 335 ⇊P P 20 10 26.0 +0.7
baz=31
H14A Leadore 30.99 338 ⇊P P 20 10 27.4 +1.8
baz=31,SNR=7.4
MCMT McKenzie Canyo 30.99 339 *eP* **P 20 10 25.2 -0.3**
comp=Z,3.7nm,0.7s,mb4.3
G16A Moss Hill, Enn 31.00 341 ⇊P P 20 10 26.6 +1.0
baz=31
F18A Big Timber 31.00 344 ⇊P P 20 10 27.1 +1.4
baz=31
G15A Dillon 31.17 340 ⇑P P 20 10 28.7 +1.6
baz=31
H13A Challis 31.27 337 ⇑P P 20 10 28.6 +0.6
baz=31
BOZ Bozeman (W) 31.32 341 P **P 20 10 23.2 -5.2**
BOZ pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
BOZ Bozeman (W) 31.32 341 P **P 20 10 23.2 -5.2**
comp=Z,4.6nm,0.6s,mb4.5
DLMT Dillon 31.38 340 *eP* **P 20 10 29.1 +0.1**
comp=Z,40nm,1.1s,mb5.2
WVOR Wild Horse Val 31.44 330 *eP* **P 20 10 29.6 +0.1**
WVOR *e* pP 20 10 39.3 +0.5
WVOR pmax pmax
comp=Z,63nm,1.3s,mb5.3
WVOR Wild Horse Val 31.44 330 *eP* **P 20 10 29.6 +0.1**
comp=Z,63nm,1.3s,mb5.3
WVOR *e* pP 20 10 39.2 +0.5
H12A Diamond D Ranc 31.48 336 ⇑P P 20 10 30.6 +0.7
baz=32,SNR=14
J09A Fry Pan Ranch, 31.72 332 ⇑P P 20 10 32.5 +0.4
baz=32,SNR=30
LRM Limekiln Ridge 31.73 340 *eP* **P 20 10 32.4 +0.3**
comp=Z,145nm,1.2s,mb5.7
LRM *e*PP PP 20 11 42.7 -1.4
F15A Butte 31.77 340 ⇊P P 20 10 31.7 -0.7
baz=32,SNR=8.4
EYMN Ely 31.82 8 *eP* **P 20 10 35.8 +3.0**
comp=Z,25nm,1.2s,mb4.9
MOD Modoc 31.88 327 *eP* **P 20 10 33.6 +0.1**
comp=Z,36nm,1.1s,mb5.1
J08A Circle Bar Ran 32.06 331 ⇑P P 20 10 33.5 -1.5
baz=32,SNR=18
H11A Donnelly 32.07 335 ⇑P P 20 10 35.1 0.0
baz=32,SNR=13
E16A East Helena 32.13 342 ⇊P P 20 10 36.3 +0.8
baz=32,SNR=5.1
G12A Big Creek, Yel 32.15 336 ⇊P P 20 10 35.5 -0.3
baz=32
I09A Lost Marbles R 32.21 332 ⇑P P 20 10 36.4 +0.1
baz=32,SNR=7.2
H10A Noah's Angus R 32.28 334 ⇊P P 20 10 36.4 -0.5
baz=32,SNR=9.0
SADO Sadowa 32.31 25 P **P 20 10 38.0 +0.9**
comp=Z,5.7nm,0.8s,mb4.4,baz=238,slow=13,SNR=1.7
SADO LR LR 20 28 12.2
comp=Z,365nm,18.9s,MS4.1,baz=17,slow=45
E15A Deer Lodge 32.33 341 ⇊P P 20 10 35.8 -1.5
baz=32,SNR=5.6
F13A Darby 32.35 338 ⇊P P 20 10 37.2 -0.3
baz=32,SNR=12
F12A Elk City 32.66 337 ⇑P P 20 10 40.3 +0.1
baz=33,SNR=31
H09A Durkee 32.73 333 ⇑P P 20 10 39.7 -1.1
baz=33,SNR=11
G11A Walters Elk Ra 32.75 336 ⇑P P 20 10 40.7 -0.2
baz=33,SNR=19
PCRV Puerto La Cruz 32.84 97 LR LR 20 27 00.2
comp=Z,336nm,18.0s,MS4.1,baz=283,slow=42
E13A Victor 32.86 339 ⇊P P 20 10 42.2 +0.2
baz=33
C17A Wharram Farm, 32.87 344 ⇑P P 20 10 40.6 -1.4
baz=33
CHMT Chamberlain Mo 32.96 340 *eP* **P 20 10 35.8 -7.0**
comp=Z,5.1nm,0.8s,mb4.5
G10A Bishop Farm, J 33.00 335 ⇑P P 20 10 42.8 -0.4
baz=33,SNR=9.0
H08A Prairie City 33.05 332 ⇑P P 20 10 42.7 -0.9
baz=33
YBH Yreka Blue Hor 33.06 325 P **P 20 10 42.8 -0.9**
comp=Z,1.0nm,0.5s,mb4.0,baz=159,slow=5.0,SNR=4.9
YBH LR LR 20 24 15.5
comp=Z,844nm,19.5s,MS4.5,baz=150,slow=37
I07A Izee 33.10 331 ⇊P P 20 10 43.6 -0.5
baz=33
F11A Grangeville 33.11 336 ⇑P P 20 10 43.0 -1.1
baz=33
MSO Missoula 33.11 340 *eP* **P 20 10 42.0 -2.1**
comp=Z,6.4nm,0.9s,mb4.5
G09A Cove 33.27 334 ⇑P P 20 10 44.1 -1.4
baz=33,SNR=11
SLMT Seeley Lake 33.33 340 *eP* **P 20 10 45.8 -0.3**
comp=Z,6.1nm,0.8s,mb4.6
SLMT *e* pP 20 10 54.7 -0.6
E12A Beaver Dam Sad 33.33 337 ⇑P P 20 10 45.5 -0.6
baz=33
B17A L&G Farms, Che 33.49 344 ⇊P P 20 10 47.4 -0.1
baz=34
D13A Huson 33.52 339 ⇊P P 20 10 47.2 -0.4
baz=34,SNR=15
E11A Bogner Ranch, 33.52 337 ⇊P P 20 10 46.7 -1.0
baz=34,SNR=14
C15A Salmond Ranch, 33.53 342 ⇑P P 20 10 47.7 0.0
baz=34,SNR=6.4
F10A Beach Ranch, E 33.60 335 ⇊P P 20 10 48.6 +0.2
baz=34
SWMT Swartz Lake 33.73 340 *eP* **P 20 10 48.7 -0.8**
comp=Z,9.4nm,0.9s,mb4.7
ULM Lac du Bonnet 33.74 2 P **P 20 10 48.5 -1.1**
comp=Z,17nm,1.1s,mb4.9,baz=180,slow=9.1,SNR=6.4
ULM LR LR 20 26 21.4
comp=Z,595nm,18.3s,MS4.3,baz=189,slow=40
G08A Pilot Rock 33.78 333 ⇊P P 20 10 49.2 -0.8
baz=34,SNR=10
A18A Metzger Ranch, 33.83 346 ⇊P P 20 10 47.1 -3.3
baz=34
C14A Swan Lake 33.87 341 ⇑P P 20 10 46.5 -4.3
baz=34
LNOR Lincton Mounta 33.95 334 P **P 20 10 50.2 -1.3**
LNOR pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
LNOR Lincton Mounta 33.95 334 P **P 20 10 50.2 -1.3**
comp=Z,5.3nm,1.1s,mb4.4
B15A Bradely Ranch, 34.00 342 ⇑P P 20 10 48.9 -2.9
baz=34
JTMT Jette 34.03 340 *eP* **P 20 10 50.8 -1.3**
comp=Z,7.7nm,1.1s,mb4.5
YBMT Yellow Bay 34.04 340 *eP* **P 20 10 50.0 -2.2**
comp=Z,9.7nm,0.7s,mb4.8
C13A Hot Springs 34.06 340 ⇊P P 20 10 50.7 -1.7
baz=34
A17A Triple J Farms 34.07 345 ⇑P P 20 10 50.9 -1.6
baz=34
A16A West Butte Ran 34.30 344 ⇊P P 20 10 53.6 -0.8
baz=34
B13A Whitefish 34.64 340 ⇑P P 20 10 57.2 -0.2
baz=35,SNR=7.8
HOOD Mount Hood Mea 35.04 330 *eP* **P 20 10 59.7 -1.3**
comp=Z,111nm,1.0s,mb5.8
NNA Nana 35.05 142 P **P 20 11 00.9 -0.4**
comp=Z,2.6nm,0.3s,mb4.6,baz=333,slow=9.7,SNR=1.3
NNA Nana 35.05 142 *eP* **P 20 11 03.2 +1.9**
NNA pmax pmax
comp=Z,13nm,1.0s
NNA Nana 35.05 142 *eP* **P 20 11 03.2 +1.9**
comp=Z,13nm,1.0s,mb4.8
COR Corvallis 35.33 328 *eP* **P 20 11 02.6 -0.8**
COR pmax pmax
comp=Z,26nm,1.0s,mb5.1
COR Corvallis 35.33 328 *eP* **P 20 11 02.6 -0.8**
comp=Z,26nm,1.0s,mb5.1
NEW Newport 35.46 338 *eP* **P 20 11 04.6 +0.1**
NEW *e* pP 20 11 13.0 -0.7
NEW pmax pmax
comp=Z,9.0nm,1.2s
NEW Newport 35.46 338 *eP* **P 20 11 04.6 +0.2**
comp=Z,9.0nm,1.2s,mb4.6
NEW *e* pP 20 11 13.0 -0.7
A11A Hall Mountain, 35.77 339 ⇊P P 20 11 06.4 -0.7
baz=36,SNR=5.8
B09A Rice 35.97 337 ⇊P P 20 11 08.2 -0.6
baz=36,SNR=14
HEBO Mount Hebo 36.00 328 P **P 20 11 11.2 +2.0**
LON Longmire 36.18 332 *eP* **P 20 11 10.1 -0.6**
LON pmax pmax
comp=Z,15nm,1.2s,mb4.8
LON Longmire 36.18 332 *eP* **P 20 11 10.1 -0.5**
comp=Z,15nm,1.2s,mb4.8
ETW Entiat 36.19 334 *eP* **P 20 11 10.7 0.0**
comp=Z,31nm,1.2s,mb5.1
ETW *e* pP 20 11 18.6 -1.4
B08A Colville Reser 36.38 336 ⇑P P 20 11 11.3 -1.0
baz=36,SNR=6.0
GNW Green Mountain 37.25 332 *eP* **P 20 11 19.7 0.0**
comp=Z,20nm,1.1s,mb4.9
GNW *e* pP 20 11 28.3 -0.8
NLWA Neilton Lookou 37.60 331 *eP* **P 20 11 23.1 +0.3**
comp=Z,32nm,1.3s,mb4.9
NLWA *e* pP 20 11 32.6 +0.5
FFC Flin Flon 38.32 356 *eP* **P 20 11 28.0 -0.7**
FFC *e* pP 20 11 36.6 -1.5
FFC pmax pmax
comp=Z,50nm,1.1s,mb5.2
FFC Flin Flon 38.32 356 *eP* **P 20 11 27.9 -0.8**
comp=Z,50nm,1.1s,mb5.2
FFC *e* pP 20 11 36.6 -1.5
EDM Edmonton 38.66 345 *eP* **P 20 11 31.1 -0.5**
EDM *e* pP 20 11 40.3 -0.6
FCC Fort Churchill 42.32 3 *eP* **P 20 12 01.1 -0.7**
FCC *e* pP 20 12 10.4 -0.8
FCC pmax pmax
comp=Z,1.0nm,1.4s
FCC Fort Churchill 42.32 3 *eP* **P 20 12 01.1 -0.7**
comp=Z,1.4nm,1.4s
FCC *e* pP 20 12 10.4 -0.8
LPAZ La Paz 43.77 137 P **P 20 12 13.8 -0.2**
comp=Z,6.7nm,1.0s,mb4.3,baz=327,slow=9.0,SNR=11
LPAZ LR LR 20 29 04.7
comp=Z,487nm,18.7s,MS4.4,baz=353,slow=34
LPAZ La Paz 43.77 137 P **P 20 12 13.8 -0.2**
LPAZ LR LR 20 29 04.7
SCHQ Schefferville 45.11 25 P **P 20 12 24.1 -0.2**
comp=Z,5.1nm,0.9s,mb4.4,baz=248,slow=5.8,SNR=4.9
SCHQ LR LR 20 35 35.9
comp=Z,614nm,19.9s,MS4.5,baz=27,slow=42
SCHQ Schefferville 45.11 25 *eP* **P 20 12 23.5 -0.8**
comp=Z,15nm,1.1s,mb4.7
YKA Yellowknife Ar 47.48 350 P **P 20 12 41.2 -1.5**
comp=Z,5.8nm,0.9s,mb4.5,baz=157,slow=7.5,SNR=51
YKA LR LR 20 32 22.5
comp=Z,356nm,19.9s,MS4.3,baz=185,slow=36
DLBC Dease Lake 48.20 338 P **P 20 12 49.8 +1.4**
comp=Z,12nm,1.1s,mb4.9,baz=143,slow=4.3,SNR=10
DLBC LR LR 20 32 19.7
comp=Z,1µm,20.6s,MS4.8,baz=131,slow=35
DLBC Dease Lake 48.20 338 *eP* **P 20 12 49.9 +1.5**
DLBC *e* pP 20 12 59.3 +1.3
SIV San Ignacio 48.51 130 P **P 20 12 49.7 -1.6**
comp=Z,1.5nm,0.8s,mb4.1,baz=321,slow=7.9,SNR=8.1
TAOE Nuku Hiva Isla 48.87 242 *eS* **S 20 19 57.3 +1.3**
comp=Z,359nm,24.8s
TAOE *e*LR LR 20 26 30.3
comp=Z,1µm,24.7s,baz=63
FRB Frobisher Bay 51.35 16 P **P 20 13 12.2 0.0**
comp=Z,11nm,0.9s,mb4.8,baz=222,slow=8.9,SNR=9.2
FRB LR LR 20 36 52.9
comp=Z,605nm,19.6s,MS4.6,baz=356,slow=38
LCO Las Campanas 52.24 150 *eP* **P 20 13 24.3 +4.9**
comp=Z,17nm,0.9s,mb5.0
RKT Rikitea 53.56 224 *eS* **S 20 21 06.5 +5.9**
comp=Z,675nm,28.8s
RKT *e*LR LR 20 29 07.4
comp=Z,1µm,25.8s,baz=36
DAWY Dawson 55.35 339 *eP* **P 20 13 41.4 -0.3**
DAWY *e* pP 20 13 50.6 -0.8
CFAA Coronel Fontan 55.58 149 P **P 20 13 44.4 +0.6**
comp=Z,0.8nm,1.0s,mb3.7,baz=15,slow=12,SNR=1.6
CFAA LR LR 20 32 00.1
comp=Z,77nm,21.1s,MS3.8,baz=316,slow=30
EGAK Eagle 56.40 339 *eP* **P 20 13 48.2 -1.0**
comp=Z,19nm,1.1s,mb5.0
EGAK *e* pP 20 13 57.0 -1.9
INK Inuvik 56.56 345 P **P 20 13 50.0 -0.3**

comp=Z,17nm,0.9s,mb5.1,baz=129,slow=7.7,SNR=44
INK LR LR 20 40 53.8
comp=Z,1µm,18.3s,MS5.0,baz=332,slow=39
INK Inuvik 56.56 345 *e*P **P** **20 13 49.5 -0.8**
INK pmax pmax
comp=Z,27nm,1.1s
INK Inuvik 56.56 345 *e*P **P** **20 13 49.5 -0.8**
comp=Z,27nm,1.1s,mb5.2
KIP Kipapa 56.88 285 *c*e P **P** **20 13 51.6 -1.7**
PMR Palmer 57.72 334 *e*P **P** **20 13 58.1 -0.5**
PMR *e* pP 20 14 07.4 -0.9
PMR pmax pmax
comp=Z,23nm,1.1s,mb5.1
PMR Palmer 57.72 334 *e*P **P** **20 13 58.1 -0.5**
comp=Z,23nm,1.1s,mb5.1
PMR *e* pP 20 14 07.4 -0.9
CPUP Villa Florida 57.94 137 P **P** **20 13 58.3 -2.3**
comp=Z,0.8nm,0.6s,mb4.0,baz=310,slow=5.8,SNR=4.9
CPUP LR LR 20 38 08.0
comp=Z,314nm,21.5s,MS4.4,baz=308,slow=35
COLA College 58.82 338 *e*P **P** **20 14 05.5 -0.7**
COLA pmax pmax
comp=Z,14nm,1.1s,mb4.9
COLA College 58.82 338 *e*P **P** **20 14 05.5 -0.7**
comp=Z,14nm,1.1s,mb4.9
RSO Redoubt South 58.83 332 *e*P **P** **20 14 05.9 -0.4**
SFJD Kangerlussuaq 58.98 20⇑ *i*P **P** **20 14 06.7 -0.6**
SFJD pmax pmax
comp=Z,11nm,0.9s,mb4.9
SFJD Kangerlussuaq 58.98 20⇑ *i*P **P** **20 14 06.7 -0.6**
comp=Z,11nm,0.9s,mb4.9
TRF Thorofare Moun 59.06 335 *e*P **P** **20 14 07.2 -0.7**
comp=Z,44nm,1.1s,mb5.4
TRF *e* pP 20 14 17.4 -0.2
KTH Kantishna Hill 59.36 335 *e*P **P** **20 14 09.1 -0.9**
comp=Z,20nm,1.0s,mb5.1
KTH *e* pP 20 14 18.1 -1.6
PPLA Purkeypile 59.59 334 *e*P **P** **20 14 11.2 -0.4**
comp=Z,48nm,1.4s,mb5.3
SVW2 Sparrevohn 60.35 332 *e*P **P** **20 14 15.2 -1.6**
SVW2 *e* pP 20 14 23.4 -3.1
COLD Coldfoot 60.84 339 *e*P **P** **20 14 20.0 -0.1**
comp=Z,17nm,1.3s,mb5.0
PPT Papeete 61.19 239 *e*S **S** **20 22 44.5 +3.4**
comp=Z,295nm,24.8s
PPT *e*SS SS 20 26 45.0 +3.2
comp=Z,157nm,27.5s
PPT *e*LQ 20 29 33.8
comp=Z,580nm,29.5s
PPT *e*LR LR 20 32 13.3
comp=Z,980nm,25.5s,baz=56
PPT Papeete 61.19 239 LR LR 20 33 44.1
comp=Z,411nm,18.0s,MS4.6,baz=152,slow=29
TTA Tatalina 61.20 334 *e*P **P** **20 14 21.2 -1.4**
TTA *e* pP 20 14 30.7 -1.7
TTA pmax pmax
comp=Z,17nm,1.1s,mb5.1
TTA Tatalina 61.20 334 *e*P **P** **20 14 21.2 -1.4**
comp=Z,17nm,1.1s,mb5.1
TTA *e* pP 20 14 30.6 -1.7
PLCA Paso Flores 62.28 157 P **P** **20 14 28.7 -1.4**
comp=Z,10nm,0.9s,mb5.0,baz=1.5,slow=19,SNR=2.9
PLCA LR LR 20 36 46.7
comp=Z,699nm,18.4s,MS4.9,baz=359,slow=32
PLCA Paso Flores 62.28 157 P **P** **20 14 28.7 -1.4**
PLCA LR LR 20 36 46.7
TRQA Tornquist 63.81 149 *e*P **P** **20 14 43.6 +3.3**
comp=Z,14nm,1.0s,mb4.9
RCBR Riachuelo 65.09 105 *e*P **P** **20 14 49.6 +0.4**
SUMG Summit 65.42 17 *e*P **P** **20 14 50.6 +0.2**
SUMG *e* pP 20 14 59.8 -0.4
SUMG pmax pmax
comp=Z,113nm,2.0s
SUMG Summit 65.42 17 *e*P **P** **20 14 50.6 +0.2**
comp=Z,113nm,2.0s,mb5.5
SUMG *e* pP 20 14 59.8 -0.4
TNA Tin City 66.93 335 *e*P **P** **20 14 59.5 -0.7**
comp=Z,18nm,1.1s,mb5.0
TNA *e* pP 20 15 08.9 -1.1
TNA *e*PcP PcP 20 15 28.4 -0.2
DAG Danmarks Havn 71.60 14⇑ *i*P **P** **20 15 28.1 -0.8**
DAG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
DAG Danmarks Havn 71.60 14⇑ *i*P **P** **20 15 28.1 -0.8**
comp=Z,2.1nm,0.7s,mb4.2
USHA Ushuaia 75.28 163 LR LR 20 43 24.7
comp=Z,494nm,18.0s,MS4.8,baz=308,slow=31
EFI East Falkland 76.17 156 P **P** **20 16 00.1 +4.2**
BILL Bilibino 77.08 337 *e*P **P** **20 15 59.9 -1.0**
BILL *i* pP 20 16 10.3 -0.6
BILL *e* 20 18 57.7
BILL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BILL MLR MLR
comp=Z,600nm,15.0s,MS5.0
BILL Bilibino 77.08 337 *e*P **P** **20 15 59.7 -1.2**
comp=Z,17nm,1.3s,mb4.8
STS Santiago 78.45 49 P **P** **20 16 09.8 +0.7**
STS pmax pmax
comp=Z,13nm,1.0s,mb4.8
STS Santiago 78.45 49 P **P** **20 16 09.8 +0.7**
comp=Z,13nm,1.0s,mb4.8
PMAFR Mafra 78.72 53 *e*LR LR 20 41 41.0
comp=Z,224nm,24.0s
ELOB Lobios 79.02 50 P **P** **20 16 12.5 +0.3**
comp=Z,6.4nm,0.9s,mb4.5
PCAB Cabril 79.08 50 *e*P **P** **20 16 11.5 -1.0**
comp=Z,36nm,1.3s,mb5.2
PCAB Cabril 79.08 50 *e*PcP PcP 20 16 20.0 -0.9
PTOM Tomar 79.24 52 *e*P **P** **20 16 13.7 +0.3**
comp=Z,56nm,1.2s,mb5.4
PTOM Tomar 79.24 52 *e*PcP PcP 20 16 22.1 +0.4
EPON Pontenova 79.36 48 P **P** **20 16 13.8 -0.3**
comp=Z,8.1nm,1.0s,mb4.6
PVIS Viseu 79.39 51 *e*P **P** **20 16 14.3 +0.1**
comp=Z,32nm,1.3s,mb5.1
PVIS Viseu 79.39 51 *e*PcP PcP 20 16 23.1 +0.8
PFVI Vila Bisbo 79.46 54 *e*PcP PcP 20 16 25.2 +2.5
PFVI *e*LR LR 20 41 28.9
comp=Z,392nm,20.0s
MORF Marmelete 79.56 54 *e*LR LR 20 43 05.3
comp=Z,370nm,18.0s
MTE Manteigas 79.72 51 *e*P **P** **20 16 16.0 0.0**
comp=Z,29nm,1.1s,mb5.1
MTE Manteigas 79.72 51 *e*PcP PcP 20 16 24.7 +1.0
MTE *e*LR LR 20 41 37.0
comp=Z,186nm,24.0s
MTE Manteigas 79.72 51 *e*P **P** **20 16 14.5 -1.6**
comp=Z,21nm,0.9s,mb5.1
MTE *e* pP 20 16 24.5 -1.6
EVO Evora 79.78 53 *e*P **P** **20 16 15.6 -0.8**
comp=Z,48nm,1.0s,mb5.1
EVO *e*pP pP 20 16 24.9 -1.6
EVO *e*MLR MLR
comp=Z,328nm,20.5s,MS4.4
EVO Evora 79.78 53 *e*P **P** **20 16 16.2 -0.2**
comp=Z,33nm,1.5s,mb5.0
EVO Evora 79.78 53 *e*PcP PcP 20 16 24.8 +0.8
PCBR Castelo Branco 79.89 51 *e*P **P** **20 16 16.7 -0.3**
comp=Z,20nm,1.2s,mb4.9
PCBR Castelo Branco 79.89 51 *e*PcP PcP 20 16 26.2 +1.7
MVO Moncorvo 79.93 50 *e*P **P** **20 16 17.4 +0.2**
comp=Z,24nm,1.3s,mb5.0
MVO Moncorvo 79.93 50 *e*PcP PcP 20 16 24.8 +0.2
MVO *e*LR LR 20 42 25.3
comp=Z,140nm,22.0s
PCVE Castro Verde 79.96 54 *e*P **P** **20 16 18.0 +0.6**
comp=Z,29nm,1.4s,mb5.0
PCVE *e*LR LR 20 41 46.5
comp=Z,198nm,20.0s
PBEJ Beja 80.00 53 *e*P **P** **20 16 17.9 +0.3**
comp=Z,25nm,1.3s,mb5.0
PBEJ Beja 80.00 53 *e*PcP PcP 20 16 25.4 +0.4
PESTR Estremoz 80.03 52 *e*P **P** **20 16 18.5 +0.8**
comp=Z,26nm,1.2s,mb5.0
PESTR Estremoz 80.03 52 *e*PcP PcP 20 16 25.3 +0.2
PESTR *e*S S 20 26 22.0 +2.1
PESTR *e*LR LR 20 42 31.2
comp=Z,231nm,20.0s
PMRV Marv??o 80.05 52 *e*P **P** **20 16 17.9 0.0**
comp=Z,37nm,1.5s,mb5.1
PMRV Marv??o 80.05 52 *e*PcP PcP 20 16 26.1 +0.9
PMRV *e*LR LR 20 41 44.7
comp=Z,314nm,24.0s
PBDV Barranco-do-Ve 80.13 54 *e*PcP PcP 20 16 28.1 +2.5
PBDV *e*LR LR 20 41 45.7
comp=Z,394nm,18.0s
PVAQ Vaqueiros 80.26 54 *e*P **P** **20 16 19.5 +0.5**
comp=Z,35nm,1.4s,mb5.1
PVAQ *e*LR LR 20 41 55.5
comp=Z,313nm,18.0s
EGRO El Granado 80.41 54 P **P** **20 16 20.4 +0.6**
comp=Z,10nm,1.1s,mb4.7
EBAD Badajoz 80.49 52 P **P** **20 16 21.1 +0.9**
comp=Z,2.8nm,0.7s,mb4.3
PBAR Barrancos 80.60 53 *e*P **P** **20 16 21.2 +0.3**
comp=Z,30nm,1.5s,mb5.0
PBAR *e*LR LR 20 42 06.5
comp=Z,196nm,18.0s
EARI Arriondas 80.75 48 P **P** **20 16 21.2 -0.3**
comp=Z,11nm,1.2s,mb4.7
EMIN Mina Concepcio 80.98 53 P **P** **20 16 22.9 0.0**
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 81.01 43 *e*P **P** **20 16 21.7 -1.1**
ESPR Espera 81.83 54 P **P** **20 16 27.0 -0.4**
comp=Z,10.0nm,1.0s,mb4.7
GUD Guadarrama 82.17 50 P **P** **20 16 29.9 +0.8**
GUD pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
GUD Guadarrama 82.17 50 P **P** **20 16 29.9 +0.7**
comp=Z,3.4nm,0.6s,mb4.5
EJIF Jimena Fronter 82.24 54 P **P** **20 16 31.7 +2.1**
EJIF pmax pmax
comp=Z,14nm,1.0s,mb4.8
EJIF Jimena Fronter 82.24 54 P **P** **20 16 31.7 +2.2**
comp=Z,14nm,1.0s,mb4.8
PAB San Pablo 82.31 51 *e*P **P** **20 16 29.4 -0.5**
PAB *e* pP 20 16 38.7 -1.2
PAB pmax pmax
comp=Z,20nm,1.1s,mb5.0
PAB San Pablo 82.31 51 *e*P **P** **20 16 29.4 -0.4**
comp=Z,20nm,1.1s,mb5.0
PAB *e* pP 20 16 38.7 -1.2
GRR Gorron 82.38 42 *e*P **P** **20 16 29.2 -0.8**
comp=Z,46nm,1.4s,mb4.9
GRR Gorron 82.38 42 *e*P **P** **20 16 29.2 -0.8**
GRR pmax pmax
comp=Z,23nm,1.4s,mb4.9
GRR Gorron 82.38 42 *e*P **P** **20 16 29.2 -0.8**
comp=Z,23nm,1.4s,mb4.9
EADA Adamuz 82.49 53 P **P** **20 16 31.4 +0.5**
comp=Z,4.0nm,0.8s,mb4.4
FLN La Foliniere 82.52 41 *e*P **P** **20 16 30.0 -0.7**
comp=Z,34nm,1.2s,mb5.0
FLN *e*pP pP 20 16 39.4 -1.4
FLN *e*MLR MLR
comp=Z,471nm,19.2s,MS4.6
FLN La Foliniere 82.52 41 *e*P **P** **20 16 30.0 -0.7**
FLN *e**PP pP 20 16 39.4 -1.4
FLN pmax pmax
comp=Z,17nm,1.2s,mb5.0
FLN MLR MLR
comp=Z,470nm,19.3s,MS4.9
FLN La Foliniere 82.52 41 *e*P **P** **20 16 30.0 -0.7**
comp=Z,17nm,1.2s,mb5.0
FLN *e*pP pP 20 16 39.4 -1.4
FLN LR LR
comp=Z,470nm,19.3s,MS4.9
ESDC Sonseca Array 82.56 51 P **P** **20 16 31.1 -0.1**
comp=Z,4.1nm,1.0s,mb4.4,baz=296,slow=4.5,SNR=16
ESDC Sonseca Array 82.56 51 P **P** **20 16 31.3 +0.1**
comp=Z,3.5nm,0.9s,mb4.4
ESDC pP pP 20 16 41.2 -0.1
ESLA Sonseca Array 82.56 51 *e*P **P** **20 16 30.6 -0.6**
comp=Z,3.9nm,1.1s,mb4.3
ESLA *e* pP 20 16 39.7 -1.6
ECRI Cripan 82.84 48 P **P** **20 16 33.1 +0.5**
ECRI pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ECRI Cripan 82.84 48 P **P** **20 16 33.1 +0.5**
comp=Z,2.4nm,0.8s,mb4.3
ELOJ Sierra Loja 83.08 53 P **P** **20 16 34.6 +0.7**
ELOJ pmax pmax
comp=Z,11nm,1.1s,mb4.8
ELOJ Sierra Loja 83.08 53 P **P** **20 16 34.6 +0.7**
comp=Z,11nm,1.1s,mb4.8
EBAN Banos Encina 83.09 52 P **P** **20 16 34.9 +0.9**
EBAN pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
EBAN Banos Encina 83.09 52 P **P** **20 16 34.9 +0.9**
comp=Z,6.0nm,0.9s,mb4.6
MFF Saint Martin d 83.35 43 *e*P **P** **20 16 34.1 -1.0**
comp=Z,35nm,1.4s,mb4.9
MFF Saint Martin d 83.35 43 *e*P **P** **20 16 34.1 -1.0**
MFF pmax pmax
comp=Z,17nm,1.4s,mb4.9
MFF Saint Martin d 83.35 43 *e*P **P** **20 16 34.1 -1.0**
comp=Z,18nm,1.4s,mb4.9
ERON Agron 83.38 53 P **P** **20 16 36.6 +1.1**
comp=Z,9.0nm,0.8s,mb4.8
ECOG Cogollos-Vega 83.49 53 P **P** **20 16 37.2 +1.1**
ECOG pmax pmax
comp=Z,14nm,0.9s,mb5.0
ECOG Cogollos-Vega 83.49 53 P **P** **20 16 37.2 +1.2**
comp=Z,14nm,0.9s,mb5.0
SJPF Ste Jean 83.61 47 *e*P **P** **20 16 35.8 -0.7**
comp=Z,12nm,1.1s,mb4.6
SJPF Ste Jean 83.61 47 *e*P **P** **20 16 35.8 -0.7**
SJPF pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
SJPF Ste Jean 83.61 47 *e*P **P** **20 16 35.8 -0.7**
comp=Z,6.1nm,1.1s,mb4.6
ETOR Torete 83.66 49 P **P** **20 16 37.3 +0.5**
ETOR pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
ETOR Torete 83.66 49 P **P** **20 16 37.3 +0.4**
comp=Z,5.5nm,1.1s,mb4.6
EHUE Huescar 84.09 52 P **P** **20 16 39.8 +0.7**
EHUE pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
EHUE Huescar 84.09 52 P **P** **20 16 39.8 +0.7**
comp=Z,6.1nm,1.1s,mb4.6
ETSF Etsaut 84.14 47 *e*P **P** **20 16 38.5 -0.7**
comp=Z,12nm,1.0s,mb4.7
ETSF Etsaut 84.14 47 *e*P **P** **20 16 38.5 -0.7**
ETSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
ETSF Etsaut 84.14 47 *e*P **P** **20 16 38.5 -0.7**
comp=Z,6.1nm,1.0s,mb4.7
SEY Seymchan 84.17 334 *c*e P **P** **20 16 37.8 -1.2**
LFF La Frestale 84.43 45 *e*P **P** **20 16 39.6 -1.1**
comp=Z,7.5nm,0.7s,mb4.6
LFF La Frestale 84.43 45 *e*P **P** **20 16 39.6 -1.1**
LFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
LFF La Frestale 84.43 45 *e*P **P** **20 16 39.6 -1.1**
comp=Z,3.8nm,0.7s,mb4.6
NB2 NORSAR Subarra 84.62 28 P **P** **20 16 42.4 +1.1**
comp=Z,56nm,2.0s,mb5.3,baz=294,slow=5.1
NOA NORSAR Array B 84.62 28 P **P** **20 16 42.4 +1.1**
comp=Z,2.7nm,1.0s,mb4.3,baz=292,slow=4.8,SNR=4.2
NOA LR LR 20 53 20.8
comp=Z,170nm,21.3s,MS4.4,baz=305,slow=35
RJF Les Rejaudoux 84.84 44 *e*P **P** **20 16 41.8 -1.0**
comp=Z,34nm,1.5s,mb5.0
RJF *e*MLR MLR
comp=Z,455nm,22.2s,MS4.5
RJF Les Rejaudoux 84.84 44 *e*P **P** **20 16 41.8 -1.0**
RJF pmax pmax
comp=Z,17nm,1.5s,mb5.0
RJF MLR MLR
comp=Z,450nm,22.3s,MS4.8
RJF Les Rejaudoux 84.84 44 *e*P **P** **20 16 41.8 -1.0**
comp=Z,17nm,1.5s,mb5.0
RJF LR LR
comp=Z,450nm,22.3s,MS4.8
PET Petropavlovsk 84.91 324 *e*P **P** **20 16 44.3 +1.4**
PET *e*S S 20 27 10.4 +1.0
PET *e*PS 20 28 23.1
PET *e*SS SS 20 32 52.9 +11
PET *e*SSS 20 36 20.9
PET pmax pmax
comp=Z,100nm,21.3s
PET MLR MLR
comp=Z,200nm,18.0s,MS4.5
PET MLR MLR
comp=Z,300nm,18.0s
EMOS Mosqueruela 84.94 50 P **P** **20 16 44.6 +1.2**
comp=Z,6.2nm,1.1s,mb4.7
TCF Toulx Ste Croi 85.00 43 *e*P **P** **20 16 42.4 -1.1**
comp=Z,23nm,1.1s,mb4.9
TCF *e*pP pP 20 16 51.7 -1.9
TCF Toulx Ste Croi 85.00 43 *e*P **P** **20 16 42.4 -1.1**
TCF *e**PP pP 20 16 51.7 -1.9
TCF pmax pmax
comp=Z,11nm,1.1s,mb4.9
TCF Toulx Ste Croi 85.00 43 *e*P **P** **20 16 42.4 -1.1**
comp=Z,11nm,1.1s,mb4.9
TCF *e*pP pP 20 16 51.7 -1.9
BAIF Baives 85.03 39 *e*P **P** **20 16 42.9 -0.7**
comp=Z,26nm,1.2s,mb4.9
BAIF *e*pP pP 20 16 52.2 -1.5
BAIF Baives 85.03 39 *e*P **P** **20 16 42.9 -0.7**
BAIF *e**PP pP 20 16 52.2 -1.5
BAIF pmax pmax
comp=Z,13nm,1.2s,mb4.9
BAIF Baives 85.03 39 *e*P **P** **20 16 42.9 -0.7**
comp=Z,13nm,1.2s,mb4.9
BAIF *e*pP pP 20 16 52.2 -1.5
BGF Bois d'Agland 85.33 43 *e*P **P** **20 16 44.0 -1.1**
comp=Z,23nm,1.1s,mb4.9
BGF *e*pP pP 20 16 53.4 -1.9
BGF Bois d'Agland 85.33 43 *e*P **P** **20 16 44.0 -1.1**
BGF *e**PP pP 20 16 53.4 -1.9
BGF pmax pmax
comp=Z,12nm,1.1s,mb4.9
BGF Bois d'Agland 85.33 43 *e*P **P** **20 16 44.0 -1.1**
comp=Z,12nm,1.1s,mb4.9
BGF *e*pP pP 20 16 53.4 -1.9
CAF Calviac 85.33 45 *e*P **P** **20 16 44.1 -1.1**
comp=Z,4.1nm,0.8s,mb4.3
CAF Calviac 85.33 45 *e*P **P** **20 16 44.1 -1.1**
CAF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CAF Calviac 85.33 45 *e*P **P** **20 16 44.1 -1.1**
comp=Z,2.0nm,0.8s,mb4.3
GIVF Givet 85.39 39 *e*P **P** **20 16 44.8 -0.6**
PETK Petropavlovsk- 85.42 324 P **P** **20 16 44.2 -1.3**
comp=Z,4.1nm,0.9s,mb4.6,baz=72,slow=11,SNR=7.1
ARCES ARCESS Array B 85.51 17 P **P** **20 16 45.5 -0.1**
comp=Z,11nm,1.0s,mb5.0,baz=323,slow=11,SNR=5.4
ARCES LR LR 20 59 18.1
comp=Z,218nm,20.2s,MS4.5,baz=17,slow=39
AVF Avril sur Loir 85.58 43 *e*P **P** **20 16 44.9 -1.5**
comp=Z,10nm,1.0s,mb4.7
AVF *e*pP pP 20 16 54.3 -2.2
AVF Avril sur Loir 85.58 43 *e*P **P** **20 16 44.9 -1.5**
AVF *e**PP pP 20 16 54.3 -2.2
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
AVF Avril sur Loir 85.58 43 *e*P **P** **20 16 44.9 -1.5**
comp=Z,5.1nm,1.0s,mb4.7
AVF *e*pP pP 20 16 54.3 -2.2
SSF Saint Saulge 85.59 42 *e*P **P** **20 16 45.2 -1.2**
comp=Z,17nm,1.1s,mb4.9
SSF Saint Saulge 85.59 42 *e*P **P** **20 16 45.2 -1.2**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
SSF Saint Saulge 85.59 42 *e*P **P** **20 16 45.2 -1.2**
comp=Z,8.6nm,1.1s,mb4.9
EBEN Beniarda 85.62 51 P **P** **20 16 48.0 +1.2**
comp=Z,2.7nm,1.1s,mb4.4
LOR Lormes 85.75 42 *e*P **P** **20 16 46.2 -1.0**
comp=Z,29nm,1.0s,mb5.2
LOR *e*pP pP 20 16 55.6 -1.8
LOR *e*MLR MLR
comp=Z,373nm,19.0s,MS4.5
LOR Lormes 85.75 42 *e*P **P** **20 16 46.2 -1.0**
LOR *e**PP pP 20 16 55.6 -1.8
LOR pmax pmax
comp=Z,14nm,1.0s,mb5.2
LOR MLR MLR
comp=Z,370nm,19.0s,MS4.8
LOR Lormes 85.75 42 *e*P **P** **20 16 46.2 -1.0**
comp=Z,14nm,1.0s,mb5.2
LOR *e*pP pP 20 16 55.6 -1.8
LOR LR LR
comp=Z,370nm,19.0s,MS4.8
MTLF Montolieu 85.94 46 *e*P **P** **20 16 47.3 -1.0**
comp=Z,15nm,1.0s,mb4.9
MTLF *e*pP pP 20 16 56.7 -1.7
MTLF Montolieu 85.94 46 *e*P **P** **20 16 47.3 -1.0**
MTLF *e**PP pP 20 16 56.7 -1.7
MTLF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
MTLF Montolieu 85.94 46 *e*P **P** **20 16 47.3 -1.0**
comp=Z,7.5nm,1.0s,mb4.9
MTLF *e*pP pP 20 16 56.7 -1.7
SMF Signal de Mont 85.95 43 *e*P **P** **20 16 46.7 -1.5**
comp=Z,7.7nm,1.0s,mb4.6
SMF Signal de Mont 85.95 43 *e*P **P** **20 16 46.7 -1.5**
SMF pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
SMF Signal de Mont 85.95 43 *e*P **P** **20 16 46.7 -1.5**
comp=Z,3.8nm,1.0s,mb4.6
MEZF Maizieres J'vi 86.08 41 *e*P **P** **20 16 48.0 -0.9**
comp=Z,13nm,0.9s,mb4.8
MEZF Maizieres J'vi 86.08 41 *e*P **P** **20 16 48.0 -0.9**
comp=Z,13nm,0.9s,mb5.2
TIXI Tiksi 86.64 347 *c*i P **P** **20 16 49.5 -1.7**
TIXI *e* 20 16 56.4
TIXI *e*S S 20 27 25.3 -0.4
TIXI pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
TIXI MLR MLR
comp=Z,312nm,17.0s,MS4.8
TIXI Tiksi 86.64 347 *e*P **P** **20 16 49.3 -1.8**
comp=Z,25nm,1.6s,mb5.2
TIXI *e* pP 20 16 57.0 -4.4
EJON La Jonquera 86.70 47 P **P** **20 16 52.5 +0.5**
comp=Z,3.8nm,0.6s,mb4.8
LASF Ste Croix 86.82 45 *e*P **P** **20 16 52.1 -0.5**
comp=Z,17nm,1.0s,mb4.9
HAU Haudompre 87.07 41 *e*P **P** **20 16 52.8 -0.9**
HAU *e*MLR MLR
comp=Z,526nm,22.2s,MS4.6
HAU Haudompre 87.07 41 *e*P **P** **20 16 52.8 -0.9**
HAU LR LR
comp=Z,530nm,22.3s,MS4.9
VIVF Saint-Julien-l 87.10 44 *e*P **P** **20 16 53.2 -0.7**
CDF Champ du Feu 87.50 40 *e*P **P** **20 16 54.4 -1.4**
MBDF Montbardon 88.55 44 *e*P **P** **20 16 59.9 -0.9**
comp=Z,12nm,1.2s,mb4.8
MBDF Montbardon 88.55 44 *e*P **P** **20 16 59.9 -0.9**
MBDF pmax pmax
comp=Z,6.0nm,1.2s,mb4.8
MBDF Montbardon 88.55 44 *e*P **P** **20 16 59.9 -0.9**
comp=Z,5.8nm,1.2s,mb4.8
SBF Sospel 89.31 44 *e*P **P** **20 17 02.9 -1.5**
comp=Z,46nm,1.1s,mb5.4
SBF Sospel 89.31 44 *e*P **P** **20 17 02.9 -1.5**
SBF pmax pmax
comp=Z,23nm,1.1s,mb5.4
SBF Sospel 89.31 44 *e*P **P** **20 17 02.9 -1.5**
comp=Z,23nm,1.1s,mb5.4
CLL Collm 89.70 36 *e*(sP) sP 20 17 21.0 +1.1
BRG Berggiesshubel 90.42 36 P **P** **20 17 12.0 +2.5**
BRG MLR MLR
comp=N,87nm,24.0s
BRG MLR MLR
comp=E,160nm,17.2s
BRG MLR MLR
comp=Z,250nm,20.9s,MS4.6
BRG Berggiesshubel 90.42 36 PDIFF **P** **20 17 12.0 +2.5**
BRG SKS 20 27 47.0
BRG S S 20 28 40.0 +38
BRG
comp=N,145nm,24.0s
BRG
comp=E,267nm,17.2s
BRG
comp=Z,417nm,20.9s
FINES FINESS Array B 90.58 24 LR LR 21 01 07.0
comp=Z,327nm,20.0s,MS4.8,baz=2.3,slow=38
PGF Pioggiola 90.87 45 *e*P **P** **20 17 10.2 -1.6**
comp=Z,17nm,1.1s,mb5.0
PGF Pioggiola 90.87 45 *e*P **P** **20 17 10.2 -1.6**
PGF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
PGF Pioggiola 90.87 45 *e*P **P** **20 17 10.2 -1.6**
comp=Z,8.4nm,1.1s,mb5.0
DBIC Dimbokro 90.94 83 P **P** **20 17 12.1 -0.5**
comp=Z,3.1nm,0.8s,mb4.7,baz=260,slow=22,SNR=3.6
DBIC LR LR 20 56 34.7
comp=Z,149nm,19.7s,MS4.4,baz=265,slow=35
GERES GERESS Array B 91.20 38 P **P** **20 17 13.4 +0.3**
comp=Z,0.1nm,0.3s,mb3.6,baz=290,slow=4.1,SNR=2.4
GERES LR LR 21 00 31.4
comp=Z,275nm,18.9s,MS4.7,baz=295,slow=37

KEST	**Kesra**	**93.81**	**51**	LR	LR	20 57 37.1	
	comp=Z,93nm,19.8s,MS4.2,baz=300,slow=34						
TORD	**Torodi Ar. Bea**	**95.20**	**75**	P	**P**	**20 17 30.2**	**-2.0**
	comp=Z,1.0nm,0.8s,mb4.3,baz=286,slow=5.2,SNR=5.9						
TORD				LR	LR	20 58 33.7	
	comp=Z,406nm,20.3s,MS4.9,baz=290,slow=34						
AKASG	**Malin Array Be**	**98.63**	**31**	LR	LR	21 05 17.8	
	comp=Z,255nm,19.2s,MS4.7,baz=310,slow=37						
DZM	**Mont Dzumac**	**101.21**	**250**	*e*SP	SP	20 31 05.6	-2.3
	comp=Z,119nm,26.5s						
DZM				*e*LR	LR	20 51 04.3	
	comp=Z,493nm,23.5s						
BRTR	**Keskin Array B**	**108.09**	**37**	PP	PP	20 23 03.8	+5.5
	comp=Z,0.2nm,0.4s,baz=332,slow=5.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**109.84**	**358**	PP	PP	20 23 08.0	-2.2
	comp=Z,0.2nm,0.3s,baz=339,slow=7.7,SNR=1.8						
BVAR	**Borovoye Array**	**110.06**	**8**	PP	PP	20 23 11.2	-0.7
	comp=Z,1.4nm,0.9s,baz=344,slow=3.7,SNR=4.7						
SONM	**Songino Array**	**112.43**	**343**	PP	PP	20 23 28.0	-1.0
	comp=Z,0.4nm,0.9s,baz=259,slow=2.2,SNR=2.3						
KURK	**Kurchatov**	**113.04**	**2**	PKiKP	PKiKP	20 22 43.8	-1.4
	comp=Z,0.3nm,0.6s,baz=332,slow=1.6,SNR=3.8						
KURK				PP	PP	20 23 21.7	-12
	comp=Z,0.3nm,0.4s,baz=346,slow=5.6,SNR=4.0						
BJI	**Beijing**	**115.50**	**332**	PKP	PKPdf	20 22 49.3	-0.9
BJI				PP	PP	20 23 53.8	+2.7
BJI				AMB	AMB		
	comp=Z,140nm,4.6s						
BJI				LR	LR		
	comp=N,180nm,30.0s,MS4.8						
BJI				LR	LR		
	comp=E,240nm,25.6s,MS4.8						
BJI				LR	LR		
	comp=Z,140nm,23.4s,MS4.5						
MKAR	**Makanchi Array**	**117.04**	**360**	PKP	PKPdf	20 22 50.6	-2.4
	comp=Z,0.1nm,0.5s,baz=44,slow=4.4,SNR=3.6						
WMQ	**Urumqi**	**119.81**	**355**	*e*PKP	PKPdf	20 23 00.8	+2.4
NJ2	**Nanjing**	**120.33**	**324**	*e*PKP	PKPdf	20 22 54.5	-5.2
AAK	**Ala-Archa**	**120.78**	**7**	*c i*PKIKP	PKPdf	20 22 56.5	-3.8
AAK				pmax	pmax		
	comp=Z,2.0nm,2.5s						
LZH	**Lanzhou**	**123.87**	**339**	*e*PKP	PKPdf	20 23 10.8	+4.4
MAW	**Mawson**	**127.38**	**171**	PKP	PKPdf	20 23 10.7	-1.3
	comp=Z,1.4nm,0.8s,baz=188,slow=7.1,SNR=2.1						
LSZ	**Lusaka**	**128.16**	**97**	*e*PKIKP	PKPdf	20 23 14.4	-0.7
CD2	**Chengdu**	**128.54**	**336**	PKP	PKPdf	20 23 17.0	+1.5
CD2				sPKP		20 23 31.4	
CD2				PP	PP	20 25 24.8	+5.2
CD2				PKS		20 26 52.3	
CD2				SKS	SKSdf	20 30 23.5	-1.7
CD2				SKKS	SKKSac	20 32 12.6	-3.5
CD2				SS	SS	20 42 33.3	-0.2
CD2				AMB	AMB		
	comp=Z,110nm,6.5s						
CD2				LR	LR		
	comp=N,670nm,4.7s						
CD2				LR	LR		
	comp=Z,680nm,12.5s,MS5.5						
ASAR	**Alice Springs**	**131.12**	**253**	PKP	PKPdf	20 23 19.1	-1.3
	comp=Z,0.4nm,0.8s,baz=68,slow=1.6,SNR=4.4						
GYA	**Guiyang**	**131.16**	**330**	*e*Pdif	Pdif	20 20 10.9	-0.7
GYA				PP	PP	20 25 40.4	+3.6
GYA				PKS		20 26 54.3	
GYA				SKKS	SKKSac	20 32 25.0	-7.5
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,150nm,20.9s,MS4.8						
GYA				LR	LR		
	comp=E,140nm,21.8s,MS4.8						
GYA				LR	LR		
	comp=Z,120nm,21.0s,MS4.6						
KMI	**Kunming**	**134.07**	**334**	PKP	PKPdf	20 23 27.3	+1.2
KMI				AMB	AMB		
	comp=Z,110nm,4.1s						
KMI				LR	LR		
	comp=N,170nm,25.8s,MS4.8						
KMI				LR	LR		
	comp=E,190nm,24.4s,MS4.8						
KMI				LR	LR		
	comp=Z,200nm,19.6s,MS4.8						
HYB	**Hyderabad**	**146.15**	**6**	*i* PKP	PKPdf	20 23 47.5	-0.6
KSM	**Kuching**	**147.02**	**300**	*e*PKPdf	PKPdf	20 23 48.9	-0.8

*ISK **17** 20:06:25.6, 36.°94N×29.°27E, h8km, MD2.9*
*ISCJB **17** 20:06:26.0±0.5, 36.°96N±0.°03×29.°25E±0.°04, h10km±6km, Error ellipse: s-maj=5.4km s-min=4.7km az=145.0*
*CSEM **17** 20:06:26.0±0.2, 36.°95N×29.°27E, h8km, MD3.0, Error ellipse: s-maj=4.1km s-min=3.8km az=9.0*
*DDA **17** 20:06:29.1, 37.°18N×29.°35E, h7km±7km, Md3.0*
ISC 17 20:06:26.4±0.5, 36.°96N±0.°03×29.°25E±0.°04, h8km±10km, n23, σ0s90/37, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**45**	*e*PG	**Pg**	**20 06 31.3**	**-0.7**
GLHS				*e*SG	**Sg**	**20 06 36.2**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.28**	**45**	*e*Pg	**Pg**	**20 06 31.3**	**-0.7**
GLHS				*e*Sg	**Sg**	**20 06 36.2**	**+0.5**
FETY	**Fethiye**	**0.35**	**203**	*e*PG	**Pg**	**20 06 32.2**	**-1.1**
FETY				*e*SG	**Sg**	**20 06 38.3**	**+0.3**
FETY	**Fethiye**	**0.35**	**203**	*e*Pg	**Pg**	**20 06 32.2**	**-1.1**
GOLH	**Golhisar**	**0.37**	**42**	↑*i* P	**Pg**	**20 06 33.1**	**-0.6**
GOLH				*i* S	**Sg**	**20 06 39.8**	**+1.1**
GOLH	**Golhisar**	**0.37**	**42**	*i* P	**Pg**	**20 06 33.1**	**-0.6**
GOLH				*i* S	**Sg**	**20 06 39.8**	**+1.2**
TURN	**Turunc**	**0.53**	**261**	*e*P	**Pg**	**20 06 41.3**	**+4.7**
TURN				*e*S	**Sg**	**20 06 52.8**	**+9.3**
ELL	**Elmali**	**0.57**	**112**	*e*PG	**Pg**	**20 06 36.2**	**-1.2**
ELL				*e*SG	**Sg**	**20 06 45.4**	**+0.5**
ELL	**Elmali**	**0.57**	**112**	*e*Pg	**Pg**	**20 06 36.2**	**-1.2**
ELL				*e*Sg	**Sg**	**20 06 45.4**	**+0.6**
DNZL	**Cakiroluk**	**0.74**	**347**	*e*P	**Pg**	**20 06 40.0**	**-0.8**
DNZL				*e*S	**Sg**	**20 06 49.2**	**-1.4**
DNZL	**Cakiroluk**	**0.74**	**347**	*e*P	**Pg**	**20 06 40.0**	**-0.8**
DNZL				*e*S	**Sg**	**20 06 49.2**	**-1.3**
AKAS	**Kas**	**0.78**	**158**	*e*P	**Pg**	**20 06 41.3**	**-0.1**
AKAS				*e*S	**Sg**	**20 06 57.5**	**+5.9**
AKAS	**Kas**	**0.78**	**158**	*e*P	**Pg**	**20 06 41.3**	**-0.1**
YER	**Yerkesik**	**0.79**	**283**	*e*PG	**Pg**	**20 06 41.8**	**0.0**
YER				*e*SG	**Sg**	**20 06 53.8**	**+1.8**
YER	**Yerkesik**	**0.79**	**283**	*e*Pg	**Pg**	**20 06 41.8**	**+0.1**
YER				*e*Sg	**Sg**	**20 06 53.8**	**+1.8**
DENT	**Denizli**	**0.81**	**348**	*e*PG	**Pg**	**20 06 42.4**	**+0.3**
DENT	**Denizli**	**0.81**	**348**	*e*Pg	**Pg**	**20 06 42.4**	**+0.4**
KORT	**Korkueli**	**0.88**	**87**	*e*P	**Pg**	**20 06 43.5**	**+0.1**
KORT				*e*S	**Sg**	**20 06 58.1**	**+3.3**
KORT	**Korkueli**	**0.88**	**87**	*e*P	**Pg**	**20 06 43.5**	**+0.1**
MLSB	**Milas**	**1.23**	**286**	*e*PN	**Pn**	**20 06 50.0**	**+0.2**
MLSB	**Milas**	**1.23**	**286**	*e*Pn	**Pn**	**20 06 50.0**	**+0.2**
DAT	**Datca**	**1.36**	**261**	*e*PN	**Pn**	**20 06 51.9**	**+0.1**
DAT	**Datca**	**1.36**	**261**	*e*Pn	**Pn**	**20 06 51.9**	**+0.2**

IDC 17 20:18:01.4±2.9, 0.°69N×97.°31E, h0km, mb3.5/5, mb1 3.5/6, mb1mx3.3/23, mbtmp3.4/6, ML3.6/1, Error ellipse: s-maj=116.2km s-min=29.8km az=61.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.73**	**5**	P	Pn	20 22 09.3	-0.5
	0.1nm,0.3s,baz=198,slow=11,SNR=4.5						
ASAR	**Alice Springs**	**43.00**	**127**	P	P	20 26 02.8	0.0
	0.1nm,0.6s,baz=291,slow=7.8,SNR=2.6						
SONM	**Songino Array**	**47.62**	**8**	P	P	20 26 39.2	+0.1
	0.2nm,0.3s,baz=202,slow=6.2,SNR=2.5						
MKAR	**Makanchi Array**	**47.76**	**346**	P	P	20 26 40.4	+0.2
	0.4nm,0.5s,baz=161,slow=7.5,SNR=4.9						
KURK	**Kurchatov**	**52.31**	**345**	P	P	20 27 14.3	-0.4
	0.3nm,0.5s,baz=159,slow=6.4,SNR=2.4						
ZALV	**Zalesovo Beam**	**54.08**	**351**	P	P	20 27 27.5	-0.2
	0.5nm,0.5s,baz=161,slow=6.1,SNR=4.0						

*IDC **17** 20:20:33.1±0.6, 57.°99S×24.°72W, h0km, mb4.3/8, mb1 4.4/9, mb1mx4.2/15, mbtmp4.3/9, ML4.9/1, Error ellipse: s-maj=22.9km s-min=18.3km az=56.0*
*NEIC **17** 20:20:43.0±3.1, 58.°02S×24.°96W, h77km±28km, mb4.7/10, Error ellipse: s-maj=10.9km s-min=10.5km az=88.0*
ISC 17 20:20:41.5±6.1, 58.°1S±0.°1×24.°9W±0.°2, h63km±59km, n31, σ0s75/22, mb4.5/16, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.61**	**234**	P	**Pn**	**20 25 05.1**	**-0.9**
	0.4nm,0.3s,baz=45,slow=2.9,SNR=2.2						
PMSA	**Palmer Station**	**19.61**	**234**	P	**Pn**	**20 25 04.5**	**-1.5**
	42nm,1.1s						
QSPA	**South Pole Qui**	**32.19**	**180**	P	**P**	**20 27 03.1**	**+0.3**
	5.6nm,0.9s,mb4.4,baz=215,slow=2.6,SNR=24						
PLCA	**Paso Flores**	**33.57**	**281**	P	**P**	**20 27 15.5**	**+0.3**
	3.6nm,0.9s,mb4.3,baz=150,slow=7.7,SNR=3.4						
MAW	**Mawson**	**37.81**	**141**	P	**P**	**20 27 50.6**	**-0.5**
	5.3nm,0.9s,mb4.3,baz=263,slow=9.1,SNR=15						
CPUP	**Villa Florida**	**39.05**	**310**	P	**P**	**20 28 02.5**	**+0.5**
	0.5nm,0.4s,mb3.6,baz=100,slow=7.9,SNR=1.3						
CPUP	**Villa Florida**	**39.05**	**310**	P	**P**	**20 28 02.5**	**+0.5**
CFAA	**Coronel Fontan**	**39.48**	**293**	P	**P**	**20 28 06.6**	**+1.1**
	0.1nm,0.4s,baz=128,slow=11,SNR=1.5						
SBA	**Scott Base**	**44.16**	**184**	*e*P	**P**	**20 28 44.2**	**+1.1**
	4.1nm,1.0s,mb4.1						
SHEL	**Horse Pasture**	**44.40**	**27**	P	**P**	**20 28 41.1**	**-4.6**
	33nm,0.6s,mb5.2						
LBTB	**Lobatse**	**48.49**	**69**	*e*P	**P**	**20 29 18.8**	**+1.1**
	3.7nm,0.7s,mb4.5						
TSUM	**Tsumeb**	**49.67**	**57**	*e*P	**P**	**20 29 27.8**	**+1.1**
	2.2nm,0.7s,mb4.3						
LPAZ	**La Paz**	**52.53**	**304**	P	**P**	**20 29 48.1**	**-0.1**
	0.9nm,0.5s,mb3.9,baz=193,slow=5.0,SNR=5.7						
LSZ	**Lusaka**	**58.02**	**66**	*e*P	**P**	**20 30 27.7**	**0.0**
	5.2nm,0.8s,mb4.6						
LIC	**Lamto**	**66.06**	**22**	*e*P	**P**	**20 31 21.1**	**-0.4**
	24nm,0.6s,mb5.4						
KIC	**Kosan Boka**	**66.25**	**22**	*e*P	**P**	**20 31 21.8**	**-0.9**
	8.2nm,0.7s,mb4.9						
TIC	**Toumodi**	**66.47**	**22**	*e*P	**P**	**20 31 23.5**	**-0.6**
	15nm,0.7s,mb5.1						
DBIC	**Dimbokro**	**66.53**	**22**	P	**P**	**20 31 23.9**	**-0.6**
	4.2nm,0.6s,mb4.6,baz=176,slow=8.0,SNR=8.3						
DBIC	**Dimbokro**	**66.53**	**22**	*e*P	**P**	**20 31 23.6**	**-0.9**
	4.0nm,0.6s,mb4.6						
TOA0	**Torodi Ar. Sit**	**74.24**	**27**	*e*P	**P**	**20 32 11.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**74.24**	**27**	P	**P**	**20 32 11.3**	**-0.2**
	2.9nm,0.6s,mb4.4,baz=197,slow=6.3,SNR=30						
ASAR	**Alice Springs**	**96.70**	**161**	P	**P**	**20 34 03.8**	**-0.9**
	0.7nm,0.8s,mb4.2,baz=187,slow=4.1,SNR=9.9						
CMAR	**Chiang Mai Arr**	**123.22**	**110**	PKP	PKPdf	20 39 31.6	+0.9
	1.1nm,0.6s,baz=217,slow=3.9,SNR=5.0						
NVAR	**Mina Array Bea**	**123.28**	**290**	PKP	PKPdf	20 39 31.6	+1.3
	0.2nm,0.5s,baz=209,slow=4.6,SNR=1.8						
FINES	**FINESS Array B**	**125.59**	**27**	PKP	PKPdf	20 39 34.3	+0.4
	0.9nm,0.7s,baz=143,slow=3.5,SNR=4.2						
AAK	**Ala-Archa**	**129.48**	**71**	PKP	PKPdf	20 39 42.7	+0.8
	0.7nm,0.4s,baz=188,slow=7.1,SNR=1.7						
BVAR	**Borovoye Array**	**134.81**	**58**	PKP	PKPdf	20 39 53.7	+2.0
	0.4nm,0.5s,baz=316,slow=6.0,SNR=2.3						
KURK	**Kurchatov**	**137.14**	**65**	PKP	PKPdf	20 39 56.7	+0.7
	0.1nm,0.3s,baz=258,slow=2.7,SNR=1.7						
YKA	**Yellowknife Ar**	**138.47**	**316**	PKP	PKPdf	20 39 56.3	-1.9
	0.8nm,0.6s,baz=129,slow=2.1,SNR=9.9						
INK	**Inuvik**	**148.12**	**318**	PKPbc	PKPbc	20 40 16.5	-1.8
	0.8nm,0.4s,baz=31,slow=5.5,SNR=4.2						
SONM	**Songino Array**	**149.59**	**88**	PKPbc	PKPbc	20 40 22.9	+0.3
	0.8nm,0.6s,baz=243,slow=3.5,SNR=5.1						

*IDC **17** 20:26:03.4±0.7, 31.°13N×103.°87E, h0km, mb4.0/15, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, ML3.7/2, MS3.8/2, Ms1 3.8/2, ms1mx2.8/31, Error ellipse: s-maj=23.3km s-min=15.3km az=43.0*
*BJI **17** 20:26:03.9, 31.°14N×103.°72E, h12km, mB4.5/13, mb4.4/20, ML4.3/19, Ms4.2/24, Ms7 3.9/18*
*NEIC **17** 20:26:04.8±0.3, 31.°09N×103.°73E, h10km, mb4.4/16, Error ellipse: s-maj=6.9km s-min=6.4km az=196.0*
*MOS **17** 20:26:06.3±0.7, 31.°09N×103.°88E, h33km, mb4.4/19, Error ellipse: s-maj=12.2km s-min=7.4km az=98.9*
ISC 17 20:26:05.7±0.8, 31.°20N±0.°02×103.°72E±0.°03, h9km±5km, n113, σ1s25/127, mb4.2/32, 3C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**174**	Pg	**Pg**	**20 26 11.5**	**+0.1**
CD2				Sg	**Sg**	**20 26 17.6**	**+2.4**
CD2				smax			
	comp=N,78μm,0.6s						
LZH	**Lanzhou**	**4.88**	**1**	Pn	**Pn**	**20 27 25.0**	**+5.8**
LZH				Pg	**Pg**	**20 27 37.1**	**-2.0**
LZH				Sg	**Sg**	**20 28 35.8**	**-6.5**
LZH				smax			
	comp=N,260nm,0.8s						
LZH				smax			
	comp=E,260nm,0.9s						
LZH				LR	LR		
	comp=N,2μm,5.2s						
LZH				LR	LR		
	comp=Z,2μm,8.1s						
ENH	**Enshi**	**5.05**	**99**	*e*Pn	**Pn**	**20 27 21.9**	**+0.3**
	comp=Z,219nm,0.5s						
ENH				*e*Sn	**Sn**	**20 28 22.6**	**+2.7**
XAN	**Xi'an**	**5.22**	**56**	Pn	**Pn**	**20 27 23.8**	**-0.1**
XAN				Sn	**Sn**	**20 28 25.1**	**+0.9**
XAN				Sg	**Sg**	**20 28 52.3**	**-1.0**
XAN				smax			
	comp=N,510nm,0.9s						
XAN				smax			
	comp=E,220nm,0.8s						
XAN				LR	LR		
	comp=N,1μm,15.1s						
XAN				LR	LR		
	comp=E,250nm,8.9s						
XAN				LR	LR		
	comp=Z,300nm,8.3s						
GYA	**Guiyang**	**5.38**	**151**	Pn	**Pn**	**20 27 26.3**	**+0.2**
GYA				Sn	**Sn**	**20 28 29.0**	**+0.9**
GYA				smax			
	comp=N,550nm,1.0s						
GYA				smax			
	comp=E,580nm,1.0s						
GYA				LR	LR		
	comp=N,2μm,5.2s						
GYA				LR	LR		
	comp=E,2μm,6.1s						
KMI	**Kunming**	**6.11**	**188**	Pn	**Pn**	**20 27 35.1**	**-1.1**
KMI				Sn	**Sn**	**20 28 44.3**	**-1.9**
KMI				smax			
	comp=N,68nm,1.4s						
KMI				smax			
	comp=E,54nm,1.1s						
KMI				LR	LR		
	comp=N,760nm,7.9s						
KMI				LR	LR		
	comp=E,1μm,5.7s						
KMI				LR	LR		
	comp=Z,850nm,9.7s						
GTA	**Gaotai**	**8.79**	**340**	*e*P	**Pn**	**20 28 16.8**	**+3.9**
GTA				pP		20 28 20.4	
GTA				sP		20 28 22.8	
GTA				S	**Sn**	**20 29 57.0**	**+4.8**
GTA				sS		20 30 03.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,83nm,4.2s						
GTA				LR	LR		
	comp=N,440nm,11.9s						
GTA				LR	LR		
	comp=E,930nm,12.2s						
GTA				LR	LR		
	comp=Z,400nm,10.7s						
WHN	**Wuhan**	**9.16**	**91**	P	**Pn**	**20 28 17.8**	**-0.1**
WHN				S	**Sn**	**20 29 57.8**	**-3.3**
WHN				LR	LR		
	comp=N,2μm,7.0s						
WHN				LR	LR		
	comp=E,1μm,7.8s						
WHN				LR	LR		
	comp=Z,2μm,7.0s						
BTO	**Baotou**	**10.68**	**27**	*e*P	Px	20 29 26.5	
LSA	**Lhasa**	**10.96**	**265**	P	**Pn**	**20 28 40.9**	**-1.7**
LSA				LR	LR		
	comp=N,330nm,13.7s						
LSA				LR	LR		
	comp=E,510nm,10.3s						
LSA				LR	LR		
	comp=Z,590nm,10.4s						
LSA	**Lhasa**	**10.96**	**265**	*e*P	**Pn**	**20 28 40.9**	**-1.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LSA	**Lhasa**	**10.96**	**265**	*e*P	**Pn**	**20 28 40.9**	**-1.7**
	comp=Z,5.8nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.53**	**31**	*e*P	**Pn**	**20 28 48.9**	**-1.5**
HHC				sP		20 29 01.0	
HHC				S	**Sn**	**20 30 58.3**	**-0.9**
HHC				sS		20 31 09.1	
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
HHC				LR	LR		
	comp=N,340nm,6.9s						
HHC				LR	LR		
	comp=E,460nm,5.4s						
HHC				LR	LR		
	comp=Z,560nm,7.1s						
NJ2	**Nanjing**	**12.93**	**82**	*e*P	**Pn**	**20 29 11.6**	**+2.1**
NJ2				pP		20 29 15.1	
NJ2				sP		20 29 18.1	
NJ2				PP		20 29 22.1	
NJ2				S	**Sn**	**20 31 33.3**	**-0.2**
NJ2				sS		20 31 38.4	
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,50nm,5.8s						
NJ2				LR	LR		
	comp=N,480nm,11.0s						
NJ2				LR	LR		
	comp=E,850nm,11.0s						
NJ2				LR	LR		
	comp=Z,650nm,12.9s						
QIZ	**Qiongzhong**	**13.32**	**154**	P	**Pn**	**20 29 20.8**	**+5.9**
QIZ				S	**Sn**	**20 31 47.3**	**+4.1**
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,46nm,7.2s						
QIZ				LR	LR		
	comp=N,710nm,7.5s						
QIZ				LR	LR		
	comp=E,180nm,9.0s						
QIZ				LR	LR		
	comp=Z,460nm,7.8s						
CM31	**Chiang Mai Arr**	**13.40**	**200**	*e*Pn	**Pn**	**20 29 13.6**	**-2.5**
	comp=Z,8.1nm,0.6s						
CM31				*e*		20 29 24.3	
CMAR	**Chiang Mai Arr**	**13.40**	**200**	Pn	**Pn**	**20 29 14.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=10,slow=11,SNR=8.7						
BJT	**Baijiatuau**	**13.40**	**46**	*e*P	**Pn**	**20 29 17.1**	**+1.1**
BJI	**Beijing**	**13.42**	**45**	P	**Pn**	**20 29 18.8**	**+2.5**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI				pmax	pmax		
	comp=Z,49nm,3.8s						
BJI				LR	LR		
	comp=N,370nm,16.9s						
BJI				LR	LR		
	comp=E,330nm,16.3s						
QZH	**Quanzhou**	**14.52**	**112**	P	**Pn**	**20 29 30.9**	**-0.5**
QZH				S	**Sn**	**20 32 14.8**	**+2.3**
QZH				LR	LR		
	comp=N,970nm,10.8s						
QZH				LR	LR		
	comp=E,600nm,7.7s						
QZH				LR	LR		
	comp=Z,840nm,14.5s						
BDT	**Bhumibol Dam**	**14.54**	**198**	P	**Pn**	**20 29 37.0**	**+5.4**
	comp=Z,20nm,0.8s						
KKTK	**Khon Kaen**	**14.81**	**183**	P	**Pn**	**20 29 36.0**	**+0.6**
	comp=Z,309nm,0.7s						
NST	**Nakhon Sawan**	**15.80**	**193**	P	**Pn**	**20 29 49.1**	**+0.7**
GUN	**Gumba**	**15.87**	**263**	*e*P	**Pn**	**20 29 45.0**	**-4.3**
	comp=Z,34nm,0.8s						
PKI	**Pulchoki**	**16.37**	**262**	*e*P	**Pn**	**20 29 50.0**	**-5.7**
	comp=Z,22nm,0.6s						
PKIN	**Phulchoki**	**16.38**	**262**	*e*P	**Pn**	**20 29 50.3**	**-5.5**
	comp=Z,32nm,0.7s						
KKN	**Kakani**	**16.41**	**263**	*e*P	**Pn**	**20 29 51.8**	**-4.5**
	comp=Z,27nm,0.7s						
DMN	**Daman**	**16.61**	**262**	*e*P	**Pn**	**20 29 53.5**	**-5.3**
	comp=Z,37nm,0.9s						
SONM	**Songino Array**	**16.74**	**6**	Pn	**Pn**	**20 30 00.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=182,slow=9.3,SNR=16						
SONM				LR	LR	20 37 06.3	
	comp=Z,192nm,19.4s,baz=118,slow=40						
ULN	**Ulaanbaatar**	**16.84**	**8**	*e*P	**Pn**	**20 30 01.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**16.84**	**8**	*e*Pn	**Pn**	**20 30 01.2**	**-0.3**
	comp=Z,4.7nm,0.9s						
SSLB	**Suanglung**	**16.96**	**112**	*e*P	**Pn**	**20 30 02.4**	**-0.9**
	comp=Z,26nm,0.8s						
ZAK	**Zakamensk**	**19.17**	**359**	*e*P	**Pn**	**20 30 30.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MOY	**Mondy**	**20.55**	**355**	*e*P	**P**	**20 30 46.0**	**+1.6**
KS15	**Wonju Array Si**	**20.88**	**66**	*e*P	**P**	**20 30 48.7**	**+0.6**
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**20 30 48.1**	**-0.3**
	comp=Z,9.1nm,0.6s,baz=259,slow=11,SNR=33						
KSRS	**Korea Array**	**20.91**	**66**	P	**P**	**20 30 48.1**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HIA	**Hailar**	**21.72**	**29**	*e*P	**P**	**20 30 57.3**	**+0.3**
HIA				pmax	pmax		
	comp=Z,11nm,1.1s						
HIA	**Hailar**	**21.72**	**29**	*e*P	**P**	**20 30 57.3**	**+0.3**
	comp=Z,11nm,1.1s,mb4.2						
MK31	**Makanchi Array**	**22.70**	**319**	*e*P	**P**	**20 31 08.0**	**+0.6**
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**20 31 07.7**	**+0.3**
	comp=Z,14nm,1.0s,mb4.3,baz=122,slow=12,SNR=65						
MKAR	**Makanchi Array**	**22.70**	**319**	*ce*P	**P**	**20 31 08.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**24.04**	**298**	*e*P	**P**	**20 31 24.8**	**+3.8**
KSH				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.4						
MDJ	**Mudanjiang**	**24.29**	**49**	P	**P**	**20 31 23.6**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,23nm,3.4s						
MDJ	**Mudanjiang**	**24.29**	**49**	*e*P	**P**	**20 31 23.3**	**0.0**
ULHL	**Ulahol**	**24.53**	**304**	P	**P**	**20 31 27.4**	**+2.0**
	SNR=8.3						
KZA	**Kyzart**	**25.19**	**303**	P	**P**	**20 31 32.0**	**+0.6**
	SNR=18						
**T

KURK pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
KURK Kurchatov 26.98 324 *e*P P **20 31 47.7 +0.2**
MJAR Matsushiro Arr 29.03 70 P P **20 32 04.7 -1.3**
comp=Z,0.4nm,0.4s,mb3.5,baz=284,slow=9.7,SNR=4.5
KBL Kabul 29.23 286 P P **20 32 03.9 -4.0**
KBL pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
KBL Kabul 29.23 286 P P **20 32 03.9 -4.0**
comp=Z,6.1nm,1.2s,mb4.2
BVAR Borovoye Array 32.52 322 P P **20 32 37.4 +0.8**
comp=Z,1.3nm,0.7s,mb4.0,baz=108,slow=8.0,SNR=7.1
BVAR PcP PcP 20 35 22.9 -0.3
comp=Z,0.7nm,0.5s,baz=130,slow=2.3,SNR=4.0
BVAR Borovoye Array 32.52 322 P P **20 32 37.4 +0.8**
BVAR 20 35 22.9
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
ARU Arti 40.16 322 *d i*P P **20 33 42.0 +0.2**
ARU *e* 20 35 16.0
ARU S S **20 39 44.1 -4.2**
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.3
ARU Arti 40.16 322 *e*P P **20 33 42.2 +0.4**
comp=Z,8.1nm,1.0s,mb4.4
TIXI Tiksi 42.73 11 *e*P P **20 33 56.0 -6.7**
TIXI pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
TIXI Tiksi 42.73 11 *e*P P **20 34 00.6 -2.1**
comp=Z,1.2nm,0.6s,mb3.8
PETK Petropavlovsk- 44.35 44 LR LR 20 54 32.4
comp=Z,154nm,20.1s,baz=284,slow=39
GNI Garni 47.97 298 *e*P P **20 34 46.3 +1.6**
ZEI Tsey 48.25 301 *e*P P **20 34 41.4 -5.4**
ZEI pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KIV Kislovodsk 48.99 303 *e*P P **20 34 54.1 +1.6**
KIV pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
BILL Bilibino 51.23 25 *e*P P **20 35 08.5 -0.6**
BILL *e*S S **20 42 32.1 +4.7**
BILL pmax pmax
comp=Z,9.0nm,2.5s,mb4.3
BILL Bilibino 51.23 25 *e*P P **20 35 07.6 -1.5**
comp=Z,4.4nm,1.0s,mb4.3
BRTR Keskin Array B 56.41 299 P P **20 35 47.8 +0.3**
comp=Z,0.4nm,0.7s,mb3.6,baz=103,slow=6.0,SNR=2.8
FINES FINESS Array B 57.31 326 P P **20 35 53.2 -0.3**
comp=Z,2.4nm,0.9s,mb4.2,baz=116,slow=9.4,SNR=2.7
FINES FINESS Array B 57.31 326 P P **20 35 53.2 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.9s
WRAB Tennant Creek 58.73 146 *e*P P **20 36 02.8 -1.1**
WRAB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WRAB Tennant Creek 58.73 146 *e*P P **20 36 02.8 -1.2**
comp=Z,8.6nm,0.8s,mb4.8
ASAR Alice Springs 61.74 148 P P **20 36 23.2 -1.3**
comp=Z,0.8nm,0.6s,mb4.0,baz=331,slow=6.9,SNR=15
ASAR Alice Springs 61.74 148 P P **20 36 23.2 -1.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 67.25 314 P P **20 37 00.3 0.0**
comp=Z,0.5nm,0.7s,mb3.6,baz=56,slow=3.8,SNR=4.8
GERES GERESS Array B 67.25 314 P P **20 37 00.3 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.7s
PPLA Purkeypile 68.74 28 *e*P P **20 37 08.8 -0.6**
comp=Z,4.5nm,0.7s,mb4.5
COLA College 69.49 26 *e*P P **20 37 12.9 -1.2**
MCK McKinley 69.64 27 *e*P P **20 37 18.0 +3.0**
PMR Palmer 70.62 29 *e*P P **20 37 19.8 -1.3**
KDAK Kodiak Island 70.94 33 *i*P P **20 37 22.2 -0.9**
CDF Champ du Feu 71.32 316 *e*P P **20 37 25.3 -0.3**
INK Inuvik 72.18 19 P P **20 37 29.1 -1.3**
comp=Z,2.4nm,0.8s,mb4.2,baz=324,slow=10,SNR=6.2
INK Inuvik 72.18 19 P P **20 37 29.1 -1.3**
INK pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 72.26 147 P P **20 37 29.4 -1.9**
comp=Z,1.8nm,0.8s,mb4.1,baz=307,slow=5.1,SNR=1.4
STKA Stephens Creek 72.26 147 P P **20 37 29.4 -1.9**
BMRM Bremner River 72.81 28 *e*P P **20 37 32.8 -1.5**
comp=Z,8.3nm,0.8s,mb4.7
LPG La Plagne 72.95 313 *e*P P **20 37 35.9 +0.5**
comp=Z,5.7nm,0.8s,mb4.2
LPG La Plagne 72.95 313 *e*P P **20 37 35.9 +0.5**
LPG pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LPG La Plagne 72.95 313 *e*P P **20 37 35.9 +0.5**
comp=Z,2.8nm,0.8s,mb4.2
LPL La Plagne 72.95 313 *e*P P **20 37 35.7 +0.3**
SMF Signal de Mont 74.20 315 *e*P P **20 37 42.2 -0.5**
YKA Yellowknife Ar 81.70 17 P P **20 38 22.6 -1.5**
comp=Z,0.7nm,0.7s,mb3.7,baz=328,slow=5.1,SNR=11
YKA Yellowknife Ar 81.70 17 P P **20 38 22.6 -1.5**
YKA pmax pmax
comp=Z,1.0nm,0.7s
LSZ Lusaka 85.89 250 P P **20 38 42.3 -4.0**
TORD Torodi Ar. Bea 93.30 287 P P **20 39 20.2 -1.2**
comp=Z,0.4nm,0.9s,mb3.9,baz=132,slow=2.1,SNR=1.8
RAO Raoul Island 95.71 121 P P **20 39 28.3 -3.7**
BOZ Bozeman (W) 97.06 24 *e*P P **20 39 39.2 +1.2**
BOZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
BOZ Bozeman (W) 97.06 24 *e*P P **20 39 39.2 +1.2**
comp=Z,3.8nm,1.0s,mb4.8

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*IDC **17** 20:39:06.5±5.3, 12.°90N×86.°60W, h0km, mb3.1/2, mb1 3.6/2, mb1mx3.3/20, mbtmp3.1/2, Error ellipse: s-maj=140.5km s-min=90.1km az=45.0*
*ISCJB **17** 20:39:31.9±0.6, 13.°16N±0.°09×87.°67W±0.°08, h189km±5km, mb3.0/2, Error ellipse: s-maj=17.8km s-min=5.4km az=39.1*
*CASC **17** 20:39:32.0±2.1, 13.°04N×87.°69W, h186km±11km, MD4.2, ML3.0*
ISC 17 20:39:32.5±0.6, **13.°17N**±0.°08×**87.°66W**±0.°07, **h188**km±5km, **n26**, σ0**86**/32, **mb3.0**/2, **3C-1D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.20**	**303**	*e*P	**Pn**	**20 39 56.8**	**-0.5**
CNCH				*e*P		20 39 57.0	
BLLM	**Bellamira**	**0.62**	**296**	⇑*e*P	**Pn**	**20 39 58.6**	**-0.1**
VSM	**San Miguel**	**0.65**	**293**	*e*P	**Pn**	**20 39 58.8**	**-0.1**
CRIN	**San Cristobal**	**0.76**	**128**	⇑*i*P	**Pn**	**20 39 59.2**	**-0.2**
CRIN				*e*S	**Sn**	**20 40 21.0**	**+0.8**
CRIN				AML	AML	20 40 27.2	
	comp=N,770nm,0.1s						
CAHU	**Cacacuatique**	**0.80**	**318**	*e*P	**Pn**	**20 39 59.8**	**+0.1**
CAHU				*e*P		20 39 60.0	
TGUH	**Tegucigalpa,Un**	**0.96**	**23**	*e*P	**Pn**	**20 40 00.6**	**-0.2**
TGUH				*e*S	**Sn**	**20 40 23.2**	**+0.5**
TGUH				AML	AML	20 40 24.1	
	comp=N,491nm,0.8s						
TELN	**Telica**	**0.98**	**125**	*e*P	**Pn**	**20 40 00.6**	**-0.4**
CNGN	**Cerro Negro**	**1.15**	**125**	*e*P	**Pn**	**20 40 02.3**	**+0.1**
MOMN	**Momotombo**	**1.33**	**124**	*e*P	**Pn**	**20 40 03.4**	**-0.2**
COPN	**Copaltepe**	**1.43**	**133**	*e*P	**Pn**	**20 40 04.1**	**-0.5**
COPN				*e*S	**Sn**	**20 40 27.6**	**-1.7**
LFRS	**El Faro**	**1.44**	**289**	⇑*e*P	**Pn**	**20 40 04.5**	**-0.1**
LFRS				*e*S	**Sn**	**20 40 30.1**	**+0.8**
LBRS	**Las Brisas**	**1.46**	**293**	*e*P	**Pn**	**20 40 05.0**	**+0.2**
CSAN		**1.56**	**129**	*e*P	**Pn**	**20 40 05.7**	**+0.1**
APYN	**Apoyeque**	**1.58**	**126**	*e*P	**Pn**	**20 40 05.1**	**-0.8**
BOQS	**Boqueron**	**1.67**	**290**	*e*P	**Pn**	**20 40 07.0**	**+0.3**
APON	**Apoyo**	**1.99**	**128**	AML	AML	20 40 43.7	
	comp=Z,57nm,0.2s						
BOAB	**BOACO BROADBAN**	**2.07**	**110**	⇓*i*P	**Pn**	**20 40 10.7**	**-0.3**
BOAB				*e*S	**Sn**	**20 40 40.5**	**-0.1**
BOAB				AML	AML	20 40 48.9	
	comp=N,10nm,0.6s						
JCR	**Jicaral**	**4.14**	**143**	*e*P	**Pn**	**20 40 36.0**	**+0.3**
JCR				*e*S	**Sn**	**20 41 22.6**	**-2.5**
CGA2	**Cerro Gallo 2**	**4.43**	**135**	*e*S	**Sn**	**20 41 32.5**	**+0.7**
LAJ	**Bijagual**	**4.78**	**133**	*e*P	**Pn**	**20 40 42.3**	**-1.5**
URSC	**Urasca**	**5.05**	**131**	*e*P	**Pn**	**20 40 48.8**	**+1.5**
URSC				*e*S	**Sn**	**20 41 48.1**	**+2.1**
BUS	**Buena Vista**	**5.25**	**133**	*e*P	**Pn**	**20 40 51.5**	**+1.6**
BUS				*e*S	**Sn**	**20 41 50.4**	**-0.3**
BAR1		**5.78**	**132**	*e*P	**Pn**	**20 40 57.8**	**+1.0**
TXAR	**Lajitas Array**	**21.89**	**320**	P	**P**	**20 44 10.8**	**0.0**
	comp=N,0.4nm,0.7s,mb3.0,baz=147,slow=9.4,SNR=5.4						
YKA	**Yellowknife Ar**	**52.87**	**345**	P	**P**	**20 48 27.6**	**-1.0**
	comp=N,0.1nm,0.4s,mb2.9,baz=140,slow=7.6,SNR=4.7						
ASAR	**Alice Springs**	**139.34**	**249**	PKP	PKPdf	20 58 37.9	-0.1
	comp=N,0.5nm,0.6s,baz=97,slow=2.0,SNR=6.7						

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*ISCJB **17** 20:40:44.5±0.5, 50.°07N±0.°04×19.°06E±0.°03, h0km, Error ellipse: s-maj=5.8km s-min=2.6km az=5.6*
*PRU **17** 20:40:45.0, 50.°19N×19.°03E, h0km*
*IPEC **17** 20:40:45.2±0.2, 50.°14N×19.°07E, h0km, ML1.6/3, Error ellipse: s-maj=2.5km s-min=1.0km az=166.0*
*CSEM **17** 20:40:45.1±0.2, 50.°11N×19.°06E, h2km, ML2.5/5, Error ellipse: s-maj=5.1km s-min=2.3km az=2.0*
*WAR **17** 20:40:45.0, 50.°08N×19.°12E*
ISC 17 20:40:45.2±0.5, **50.°10N**±0.°04×**19.°06E**±0.°03, **h0**km, **n27**, σ0**89**/47, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.49**	**75**	*e*Pg	**Pg**	**20 40 54.2**	**-0.4**
OJC				*e*Sg	**Sg**	**20 41 00.9**	**-0.1**
OJC	**Ojcow**	**0.49**	**75**	*e*Pg	**Pg**	**20 40 54.2**	**-0.4**
	baz=261						
OJC				*e*Sg	**Sg**	**20 41 00.9**	**-0.1**
OKC	**Ostrava-Krasne**	**0.64**	**247**	*e*PG	**Pg**	**20 40 57.7**	**+0.3**
OKC				*e*SG	**Sg**	**20 41 07.1**	**+1.4**
	comp=Z,14nm,0.6s						
OKC	**Ostrava-Krasne**	**0.64**	**247**	Pg	**Pg**	**20 40 57.7**	**+0.3**
OKC				Sg	**Sg**	**20 41 07.1**	**+1.4**
	comp=Z,14nm,0.6s						
MORC	**Moravsky Berou**	**1.03**	**253**	*e*Pg	**Pg**	**20 41 04.8**	**-0.1**
	baz=69						
MORC				*e*Sg	**Sg**	**20 41 18.9**	**+0.7**
	comp=Z,11nm,0.3s,baz=69						
NIE	**Niedzica**	**1.06**	**129**	*e*Pg	**Pg**	**20 41 04.9**	**-0.6**
NIE				*e*Sg	**Sg**	**20 41 20.4**	**+1.2**
NIE	**Niedzica**	**1.06**	**129**	*e*Pg	**Pg**	**20 41 04.9**	**-0.6**
NIE				*e*Sg	**Sg**	**20 41 20.4**	**+1.2**
JAVC	**Velka Javorina**	**1.53**	**217**	*e*Pn	**Pn**	**20 41 14.5**	**+0.8**
	baz=35						
STHS	**Stebnicka Huta**	**1.57**	**115**	*e*PN	**Pg**	**20 41 15.2**	**-0.1**
STHS				*e*SN	**Sg**	**20 41 38.6**	**+2.9**
STHS	**Stebnicka Huta**	**1.57**	**115**	*e*Pn	**Pg**	**20 41 15.3**	**0.0**
STHS				*e*Sn	**Sg**	**20 41 38.6**	**+2.9**
KOLL	**Kolacno**	**1.58**	**196**	*e*PN	**Pn**	**20 41 14.5**	**+0.2**
KOLL				*e*SN	**Sn**	**20 41 35.6**	**+0.2**
KOLL	**Kolacno**	**1.58**	**196**	*e*Pn	**Pn**	**20 41 14.5**	**+0.2**
KOLL				*e*Sn	**Sn**	**20 41 35.6**	**+0.2**
VYHS	**Vyhne**	**1.61**	**185**	*e*PN	**Pn**	**20 41 14.2**	**-0.6**
VYHS				*e*SN	**Sn**	**20 41 34.9**	**-1.3**
VYHS	**Vyhne**	**1.61**	**185**	*e*Pn	**Pn**	**20 41 14.2**	**-0.6**
VYHS				*e*Sn	**Sn**	**20 41 34.9**	**-1.3**
DPC	**Dobruska-Polom**	**1.77**	**279**	*e*PG	**Pn**	**20 41 17.1**	**0.0**
DPC				*e*SG	**Sn**	**20 41 40.0**	**-0.3**
	comp=Z,11nm,0.7s						
DPC	**Dobruska-Polom**	**1.77**	**279**	*e*Pn	**Pn**	**20 41 17.0**	**-0.1**
	baz=96						
DPC				*e*Sg	**Sg**	**20 41 40.8**	**-1.3**
	baz=96						
VRAC	**Vranov**	**1.78**	**245**	*e*Pn	**Pn**	**20 41 17.7**	**+0.5**
	baz=62						
VRAC				*e*Sg	**Sg**	**20 41 41.8**	**-0.6**
	comp=Z,3.6nm,0.2s,baz=62						
KECS	**Kecovo**	**1.87**	**149**	*e*PG	**Pg**	**20 41 19.6**	**-1.3**
KECS				*e*SN	**Sn**	**20 41 41.6**	**-1.0**
UPC	**Upice**	**1.99**	**283**	*e*SG	**Sb**	**20 41 47.0**	**-0.6**
UPC	**Upice**	**1.99**	**283**	Sg	**Sb**	**20 41 47.0**	**-0.6**
KRUC	**Moravsky**	**2.02**	**240**	*e*Pn	**Pn**	**20 41 21.5**	**+1.1**
	baz=57						
KRUC				*e*Sg	**Sg**	**20 41 49.0**	**-0.9**
	comp=Z,3.9nm,0.3s,baz=57						
KOLS	**Kolonicke sedl**	**2.40**	**118**	*e*PG	**Pg**	**20 41 30.6**	**-0.5**
KOLS				*e*SG	**Sg**	**20 42 02.7**	**+0.5**
KOLS	**Kolonicke sedl**	**2.40**	**118**	*e*Pg	**Pg**	**20 41 30.6**	**-0.5**
KOLS				*e*Sg	**Sg**	**20 42 02.7**	**+0.5**
PRU	**Pruhonice**	**2.91**	**270**	*e*SG	**Sb**	**20 42 15.9**	**+1.9**
	comp=Z,2.6nm,0.6s						
PRU	**Pruhonice**	**2.91**	**270**	Sg	**Sb**	**20 42 15.9**	**+1.9**
	comp=Z,2.6nm,0.6s						
KHC	**Kasperske Hory**	**3.69**	**257**	*e*SG	**Sg**	**20 42 43.5**	**-0.1**
	comp=Z,2.3nm,0.6s						
KHC	**Kasperske Hory**	**3.69**	**257**	Sg	**Sg**	**20 42 43.5**	**-0.1**
	comp=Z,2.3nm,0.6s						

IDC 17 21:16:44.5±1.6, **31.°21N**×**104.°17E**, **h0**km, **mb3.3**/5, **mb1 3.3**/6, **mb1mx3.2**/24, **mbtmp3.2**/6, **ML3.2**/1, **Error ellipse: s-maj=44.4km s-min=24.5km az=47.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.69**	**5**	Pn	Pn	21 20 38.3	-1.3
	0.1nm,0.3s,baz=185,slow=13,SNR=2.8						
KSRS	**Korea Array**	**20.55**	**66**	P	P	21 21 24.6	-0.1
	0.2nm,0.3s,baz=247,slow=8.9,SNR=2.7						
MKAR	**Makanchi Array**	**22.94**	**319**	P	P	21 21 50.3	+0.1
	0.4nm,0.7s,baz=138,slow=9.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.65**	**334**	P	P	21 22 25.8	+1.0
	0.3nm,0.5s,baz=157,slow=7.8,SNR=3.0						
KURK	**Kurchatov**	**27.20**	**323**	P	P	21 22 28.9	-0.9
	0.6nm,0.8s,baz=128,slow=9.5,SNR=4.5						
ASAR	**Alice Springs**	**61.55**	**149**	P	P	21 27 03.6	0.0
	0.3nm,0.8s,baz=339,slow=7.3,SNR=3.3						

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*KRSC **17** 21:20:06.4±0.3, 56.°22N×163.°57E, h5km±5km, ML4.8*
*IDC **17** 21:20:07.8±0.6, 56.°30N×163.°20E, h0km, mb4.1/25, mb1 4.3/27, mb1mx4.3/32, mbtmp4.2/27, ML4.2/2, MS4.0/30, Ms1 4.0/30, ms1mx3.8/52, Error ellipse: s-maj=17.6km s-min=11.5km az=154.0*
*MOS **17** 21:20:08.7±0.8, 56.°21N×163.°43E, h18km, mb4.5/34, Error ellipse: s-maj=10.2km s-min=5.8km az=85.0*
*ISCJB **17** 21:20:09.6±0.8, 56.°18N±0.°03×163.°54E±0.°04, h26km±5km, mb4.4/62, MS4.2/42, Error ellipse: s-maj=4.5km s-min=3.3km az=159.9*
*BJI **17** 21:20:10.8, 56.°67N×163.°20E, h31km, mB4.9/20, mb4.5/29, Ms4.8/20, Ms7 4.3/17*
*NEIC **17** 21:20:13.1±0.3, 56.°23N×163.°29E, h35km, mb4.4/18, Error ellipse: s-maj=7.2km s-min=4.2km az=144.0*
ISC 17 21:20:09.3±0.9, **56.°21N**±0.°02×**163.°48E**±0.°04, **h10**km±5km, **h35**km±.3km: **pP-P**, **n196**, σ1**22**/212, **mb4.4**/62, **MS4.2**/42, **11C-10D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.37**	**270**	*i*P	**Pg**	**21 20 14.8**	**-1.8**
SMKR	**Semkarok**	**1.18**	**289**	*e*P	**Pb**	**21 20 30.1**	**-1.6**
SMKR				*i*S	**Sb**	**21 20 46.7**	**-0.3**
BDR	**Baidarnaya**	**1.31**	**287**	*e*P	**Pn**	**21 20 32.1**	**-1.6**
BDR				*i*S	**Sb**	**21 20 50.2**	**-0.7**
SRKR	**Sorokina**	**1.36**	**290**	*e*P	**Pn**	**21 20 32.9**	**-1.4**
SRKR				*i*S	**Sb**	**21 20 52.8**	**+0.6**
ZLN	**Zelenaya**	**1.51**	**264**	*e*P	**Pn**	**21 20 35.7**	**-0.7**
ZLN				*i*S	**Sn**	**21 20 57.5**	**+1.5**
CIRR	**Tsirk**	**1.53**	**268**	*e*P	**Pn**	**21 20 35.8**	**-0.8**
KLY	**Klyuchi**	**1.58**	**275**	*e*P	**Pn**	**21 20 34.6**	**-2.7**
KLY				*i*S	**Sn**	**21 20 55.2**	**-2.6**
KRSR	**Krestovskiy**	**1.63**	**272**	*e*P	**Pn**	**21 20 37.1**	**-0.9**
KRSR				*i*S	**Sn**	**21 20 59.7**	**+0.8**
BZMR	**Bezymyannaya**	**1.70**	**262**	*e*P	**Pn**	**21 20 38.8**	**-0.1**
BKI	**Bering**	**1.73**	**124**	*e*P	**Pn**	**21 20 37.6**	**-1.8**
BKI				*i*S	**Sn**	**21 20 59.9**	**-1.6**
KIRR	**Kirishev**	**1.78**	**263**	*e*P	**Pn**	**21 20 39.7**	**-0.3**
KIRR				*i*S	**Sn**	**21 21 03.8**	**+1.2**
KPT	**Kopyto**	**1.84**	**264**	*e*P	**Pn**	**21 20 40.7**	**-0.2**
KPT				*i*S	**Sn**	**21 21 05.5**	**+1.3**
KMNR	**Kamenistaya**	**1.88**	**257**	*e*P	**Pn**	**21 20 41.6**	**+0.2**
KMNR				*i*S	**Sn**	**21 21 08.2**	**+3.1**
MKZ	**Mys Kozlova**	**1.93**	**212**	*e*P	**Pn**	**21 20 41.2**	**-1.0**
MKZ				*i*S	**Sn**	**21 21 06.1**	**-0.3**
KOZR	**Kozyr**	**2.01**	**267**	PN	**Pn**	**21 20 43.9**	**+0.7**
KOZR				S	**Sn**	**21 21 10.7**	**+2.3**
KOZ	**Kozyrevsk**	**2.02**	**267**	*e*P	**Pn**	**21 20 43.9**	**+0.5**
KOZ				*i*S	**Sn**	**21 21 10.7**	**+2.0**
SRDR	**Sredinnyy**	**2.10**	**275**	*e*P	**Pn**	**21 20 44.5**	**0.0**
SRDR				*i*S	**Sn**	**21 21 12.4**	**+1.8**
SPN	**Mys Shipunski**	**3.71**	**214**	*e*P	**Pn**	**21 21 06.2**	**-0.3**
SPN				*i*S	**Sn**	**21 21 48.4**	**-1.8**
NLC	**Nalytchevo**	**3.87**	**220**	*e*P	**Pn**	**21 21 08.7**	**-0.1**
NLC				*i*S	**Sn**	**21 21 53.0**	**-1.3**
AVH	**Avacha**	**4.03**	**225**	*e*P	**Pn**	**21 21 12.3**	**+1.3**
GNL	**Ganaly**	**4.07**	**234**	*e*P	**Pn**	**21 21 12.6**	**+1.1**
INSR	**Institute**	**4.23**	**224**	*e*P	**Pn**	**21 21 14.9**	**+1.1**
INSR				*i*S	**Sn**	**21 22 03.7**	**+0.5**
PET	**Petropavlovsk**	**4.25**	**223**	‖*i*PN	**Pn**	**21 21 15.2**	**+1.2**
PET				*e*S	**Sn**	**21 22 04.5**	**+1.0**
PET				pmax	pmax		
	comp=Z,900nm,1.3s						
PET				pmax	pmax		
	comp=Z,397nm,0.9s						
PET				smax			
	comp=N,2μm,21.4s						
PET				smax			
	comp=N,522nm,0.8s						
PET				MLR	MLR		
	comp=Z,2μm,11.0s						
PET				MLR	MLR		
	comp=Z,3μm,12.0s						
PET	**Petropavlovsk**	**4.25**	**223**	*e*P	**Pn**	**21 21 15.0**	**+1.0**
PET				*i*S	**Sn**	**21 22 03.1**	**-0.4**
PET	**Petropavlovsk**	**4.25**	**223**	*e*Pn	**Pn**	**21 21 14.7**	**+0.7**
PET				*e*S	**Sn**	**21 22 04.4**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.57**	**230**	*e*Pn	**Pn**	**21 21 20.0**	**+1.6**
PETK	**Petropavlovsk-**	**4.57**	**230**	Pn	**Pn**	**21 21 19.4**	**+1.0**
	comp=Z,8.3nm,0.3s,baz=57,slow=15,SNR=72						
PETK				LR	LR	21 23 19.4	
	comp=Z,1μm,20.6s,baz=33,slow=42						
PETK	**Petropavlovsk-**	**4.57**	**230**	PN	**Pn**	**21 21 19.4**	**+1.0**
PETK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,1μm,20.6s						
RUS	**Russkaya**	**4.77**	**220**	*e*P	**Pn**	**21 21 21.2**	**+0.1**
MIPR	**Malaya Ipel'ka**	**5.57**	**228**	*e*P	**Pn**	**21 21 34.7**	**+2.6**
SKR	**Severo-Kuril's**	**7.07**	**222**	*e*PN	**Pn**	**21 21 53.5**	**+0.9**
SKR				pmax	pmax		
	comp=Z,180nm,1.0s						
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				MLR	MLR		
	comp=N,3μm,14.0s						
SKR				MLR	MLR		
	comp=E,3μm,14.0s						
SKR				MLR	MLR		
	comp=Z,2μm,14.0s						
ALID	**Alaid**	**7.13**	**225**	*e*P	**Pn**	**21 21 55.2**	**+1.6**
SEY	**Seymchan**	**8.77**	**325**	*c i*PN	**Pn**	**21 22 17.9**	**+1.9**
BILL	**Bilibino**	**11.95**	**5**	*e*PN	**Pn**	**21 23 01.3**	**+1.9**
BILL				pmax	pmax		
	comp=Z,21nm,1.6s						
BILL				MLR	MLR		
	comp=Z,500nm,14.0s						
BILL	**Bilibino**	**11.95**	**5**	*e*Pn	**Pn**	**21 23 01.8**	**+2.4**
	comp=Z,5.4nm,0.5s						
YSS	**Yuzh-Sakhalins**	**15.81**	**243**	*e*P	**Pn**	**21 23 53.1**	**+1.4**
YSS				pmax	pmax		
	comp=Z,70nm,1.5s						
YSS				MLR	MLR		
	comp=Z,900nm,13.0s						
YSS				MLR	MLR		
	comp=E,500nm,11.0s						
YSS	**Yuzh-Sakhalins**	**15.81**	**243**	*e*Pn	**Pn**	**21 23 52.3**	**+0.6**
TNA	**Tin City**	**16.61**	**44**	*e*Pn	**Pn**	**21 24 04.5**	**+2.5**
	comp=E,31nm,1.1s						
ASAJ	**Asahikawa**	**17.95**	**236**	P	**Pn**	**21 24 18.4**	**-0.3**
	comp=E,1.6nm,0.3s,baz=42,slow=6.0,SNR=29						
ASAJ				LR	LR	21 31 30.1	
	comp=E,476nm,18.9s,baz=6.6,slow=38						
ASAJ	**Asahikawa**	**17.95**	**236**	P	**Pn**	**21 24 18.5**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,476nm,18.9s						
YAK	**Yakutsk**	**18.14**	**303**	*e*P	**Pn**	**21 24 20.9**	**-0.1**
YAK				*e*S	**Sn**	**21 27 43.0**	**-0.1**
YAK				pmax	pmax		
	comp=Z,20nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				pmax	pmax		
	comp=Z,68nm,2.6s						
YAK				pmax	pmax		
	comp=N,52nm,3.5s						
YAK				pmax	pmax		
	comp=E,80nm,1.7s						
YAK				smax			
	comp=N,72nm,4.2s						
YAK				smax			
	comp=E,67nm,4.1s						
YAK				MLR	MLR		
	comp=Z,490nm,15.0s						
YAK				MLR	MLR		
	comp=N,337nm,11.0s						
YAK				MLR	MLR		
	comp=E,474nm,16.0s						
YAK	**Yakutsk**	**18.14**	**303**	*e*Pn	**Pn**	**21 24 20.8**	**-0.1**
	comp=E,20nm,0.8s						
ERM	**Erimo**	**19.35**	**231**	*e*P	**Pn**	**21 24 32.8**	**-3.0**
ERM				pmax	pmax		
	comp=Z,33nm,1.4s						
ERM	**Erimo**	**19.35**	**231**	*e*P	**Pn**	**21 24 32.8**	**-3.0**
	comp=Z,33nm,1.4s						
CLNS	**Chul'man**	**21.11**	**288**	*e*P	**P**	**21 24 57.2**	**+3.5**
CLNS				pmax	pmax		
	comp=E,18nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.2						
CLNS				pmax	pmax		
	comp=N,14nm,1.1s						
CLNS				MLR	MLR		
	comp=N,569nm,13.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,343nm,15.0s,MS4.2						
CLNS				MLR	MLR		
	comp=Z,465nm,16.0s,MS4.0						
TIXI	**Tiksi**	**21.21**	**330**	*e*P	**P**	**21 24 55.7**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.4						
TIXI	**Tiksi**	**21.21**	**330**	*e*P	**P**	**21 24 55.7**	**+1.1**
	comp=Z,13nm,0.7s,mb4.4						
NRGR	**Nerungri**	**21.25**	**287**	*e*P	**P**	**21 24 57.0**	**+1.8**
MAJO	**Matsushiro**	**26.03**	**232**	*e*P	**P**	**21 25 41.8**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**26.03**	**232**	*e*P	**P**	**21 25 41.8**	**-0.5**
	comp=Z,16nm,0.9s,mb4.5						
MAT	**Matsushiro**	**26.03**	**232**	P	**P**	**21 25 41.5**	**-0.8**
MAT				S	**S**	**21 30 13.0**	**0.0**
MJAR	**Matsushiro Arr**	**26.03**	**232**	P	**P**	**21 25

comp=Z,5.5nm,0.9s,mb4.5,baz=279,slow=14,SNR=5.8
DLBC LR LR 21 41 20.0
comp=Z,350nm,18.0s,MS4.2,baz=268,slow=37
BJI Beijing 34.68 263 P **P** **21 26 56.3 -2.5**
BJI S **S** **21 32 24.5 -3.8**
BJI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BJI pmax pmax
comp=Z,86nm,3.5s
BJI LR LR
comp=N,820nm,15.3s,MS4.7
BJI LR LR
comp=E,850nm,15.8s,MS4.7
BJI LR LR
comp=Z,190nm,15.8s,MS3.9
ULN Ulaanbaatar 34.79 281 *e*P **P** **21 26 59.1 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
ULN Ulaanbaatar 34.79 281 *e*P **P** **21 26 59.1 -0.6**
comp=Z,3.9nm,1.1s,mb4.2
SONM Songino Array 35.17 281 P **P** **21 27 03.1 +0.2**
comp=Z,1.0nm,0.5s,mb4.0,baz=51,slow=9.4,SNR=14
SONM LR LR 21 42 05.8
comp=Z,211nm,19.6s,MS3.9,baz=57,slow=38
SONM Songino Array 35.17 281 P **P** **21 27 03.1 +0.1**
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,211nm,19.6s
ZAK Zakamensk 35.42 287 *e*P **P** **21 27 02.4 -2.7**
ZAK pmax pmax
comp=Z,3.0nm,1.5s,mb4.0
HHC Hu-ho-hao-te 36.70 268 *e*P **P** **21 27 16.9 +0.8**
HHC pP pP 21 27 26.6 +7.4
HHC sP sP 21 27 30.8 +10
HHC PP PP 21 28 42.6 +3.1
HHC PcP PcP 21 29 40.9 +2.4
HHC S **S** **21 32 56.8 -2.4**
HHC sS sS 21 33 12.3 +7.9
HHC ScP ScP 21 33 23.8 -1.1
HHC SS SS 21 35 24.6 -15
HHC ScS ScS 21 37 28.4 -3.2
HHC pmax pmax
comp=Z,18nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,100nm,6.2s
HHC LR LR
comp=N,770nm,15.6s,MS4.7
HHC LR LR
comp=E,740nm,15.3s,MS4.7
HHC LR LR
comp=Z,340nm,13.2s,MS4.3
BBB Bella Bella 38.73 66 LR LR 21 44 37.6
comp=Z,123nm,18.4s,MS3.8,baz=111,slow=38
NJ2 Nanjing 39.13 251 *e*P **P** **21 27 37.6 +0.9**
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.0
YKA Yellowknife Ar 39.56 46 P **P** **21 27 40.4 +0.5**
comp=Z,1.4nm,0.5s,mb4.0,baz=296,slow=8.0,SNR=13
YKA LR LR 21 46 45.8
comp=Z,87nm,18.1s,MS3.6,baz=340,slow=40
YKA Yellowknife Ar 39.56 46 P **P** **21 27 40.4 +0.5**
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA MLR MLR
comp=Z,87nm,18.1s
ZALV Zalesovo Beam 42.79 301 LR LR 21 47 52.7
comp=Z,183nm,19.7s,MS4.0,baz=157,slow=39
NVS Novosibirsk 43.01 303 *e*P **P** **21 28 05.0 -3.4**
GTA Gaotai 44.24 276 ⇑P **P** **21 28 18.8 +0.3**
GTA pP pP 21 28 28.9 +7.2
GTA sP sP 21 28 32.8 +10
GTA PP PP 21 30 03.8 +2.4
GTA S **S** **21 34 50.4 -1.3**
GTA sS sS 21 35 07.3 +10
GTA SS SS 21 38 01.1 -8.3
GTA pmax pmax
comp=Z,16nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,100nm,5.9s
GTA LR LR
comp=N,510nm,19.6s,MS4.5
GTA LR LR
comp=E,410nm,21.4s,MS4.5
GTA LR LR
comp=Z,370nm,17.8s,MS4.3
LZH Lanzhou 44.35 269 *e*P **P** **21 28 20.8 +1.4**
LZH pP pP 21 28 31.3 +8.7
LZH sP sP 21 28 36.8 +13
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.6
SPITS Spitsbergen Ar 44.38 351 LR LR 21 48 54.7
comp=Z,91nm,19.4s,MS3.7,baz=15,slow=39
DAG Danmarks Havn 47.28 1 *e*P **P** **21 28 41.0 -1.0**
DAG Danmarks Havn 47.28 1 *i*P **P** **21 28 41.0 -1.0**
KURK Kurchatov 47.78 301 P **P** **21 28 45.6 -0.6**
comp=Z,2.6nm,0.7s,mb4.4,baz=55,slow=8.1,SNR=19
KURK PP PP 21 30 39.5 +1.9
comp=Z,0.9nm,0.8s,baz=48,slow=9.6,SNR=3.8
KURK LR LR 21 49 56.6
comp=Z,245nm,18.2s,MS4.2,baz=45,slow=38
KURK Kurchatov 47.78 301 *ce*P **P** **21 28 45.7 -0.5**
KURK pmax pmax
comp=Z,11nm,1.7s,mb4.6
KURK Kurchatov 47.78 301 *e*P **P** **21 28 45.6 -0.7**
comp=Z,7.7nm,1.1s,mb4.7
WMQ Urumqi 47.81 289 P **P** **21 28 46.3 -0.3**
WMQ pmax pmax
comp=Z,12nm,1.7s,mb4.7
WMQ pmax pmax
comp=Z,150nm,5.0s
WMQ LR LR
comp=N,970nm,18.0s,MS4.9
WMQ LR LR
comp=E,350nm,16.0s,MS4.9
WMQ LR LR
comp=Z,260nm,15.0s,MS4.3
CD2 Chengdu 48.24 264 P **P** **21 28 49.8 -0.2**
CD2 pP pP 21 28 59.6 +6.4
CD2 sP sP 21 29 03.5 +9.0
CD2 S **S** **21 35 44.4 -4.9**
CD2 sS sS 21 36 00.9 +6.3
CD2 SS SS 21 39 08.0 -10
CD2 pmax pmax
comp=Z,250nm,5.1s
CD2 LR LR
comp=N,580nm,16.7s
CD2 LR LR
comp=Z,340nm,16.1s,MS4.4
MK31 Makanchi Array 48.59 295 *e*P **P** **21 28 50.7 -1.9**
MKAR Makanchi Array 48.59 295 P **P** **21 28 50.2 -2.4**
comp=Z,1.7nm,0.5s,mb4.3,baz=57,slow=6.1,SNR=37
MKAR LR LR 21 50 12.8
comp=Z,210nm,18.9s,MS4.1,baz=34,slow=37
MKAR Makanchi Array 48.59 295 P **P** **21 28 50.2 -2.4**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR MLR MLR
comp=Z,210nm,19.0s
SLMT Seeley Lake 49.22 63 *e*P **P** **21 28 58.3 +1.0**
MOD Modoc 49.37 73 *e*P **P** **21 28 59.9 +1.3**
FFC Flin Flon 49.47 50 *i*P **P** **21 29 02.4 +3.2**
FCC Fort Churchill 49.83 42 *e*P **P** **21 29 01.8 0.0**
comp=Z,0.4nm,1.0s,mb3.4
BVAR Borovoye Array 50.00 308 P **P** **21 29 02.5 -0.8**
comp=Z,1.1nm,0.6s,mb4.1,baz=48,slow=6.2,SNR=9.2
BVAR LR LR 21 52 48.7
comp=Z,593nm,18.1s,MS4.6,baz=48,slow=39
BVAR Borovoye Array 50.00 308 P **P** **21 29 02.5 -0.8**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,593nm,18.1s
BRVK Borovoye 50.03 308 *ce*P **P** **21 29 03.4 0.0**
BRVK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
BRVK Borovoye 50.03 308 *e*P **P** **21 29 03.0 -0.5**
comp=Z,39nm,2.5s,mb5.0
GYA Guiyang 50.08 258 P **P** **21 29 05.9 +1.7**
GYA pP pP 21 29 16.0 +8.6
GYA sP sP 21 29 20.8 +12
GYA PcP PcP 21 30 25.4 +1.7
GYA PP PP 21 31 01.3 +2.2
GYA ScP ScP 21 34 16.0 -3.2
GYA S **S** **21 36 11.3 -4.0**
GYA sS sS 21 36 29.0 +8.4
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KEV Kevo 50.47 342 *e*P **P** **21 29 06.0 -0.6**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 50.47 342 *ep* **P** **21 29 06.0 -0.6**
comp=Z,0.5nm,0.4s,mb3.9
ARCES ARCESS Array B 50.92 342 P **P** **21 29 10.2 +0.2**
comp=Z,3.6nm,0.8s,mb4.3,baz=31,slow=11,SNR=3.3
ARCES LR LR 21 52 41.0
comp=Z,152nm,19.3s,MS4.0,baz=203,slow=38
ARCES ARCESS Array B 50.92 342 P **P** **21 29 10.2 +0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES MLR MLR
comp=Z,152nm,19.3s
APA Apatity 51.12 338 ⇑*e*P **P** **21 29 21.0 +10**
APA MLR MLR
comp=Z,500nm,16.0s,MS4.6
ARU Arti 52.43 317 *d i*P **P** **21 29 22.0 +0.6**
ARU 21 31 16.0
ARU S **S** **21 36 47.2 +0.2**
ARU SS SS 21 40 19.5 -4.6
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
ARU MLR MLR
comp=Z,310nm,17.0s,MS4.4
ARU Arti 52.43 317 *e*P **P** **21 29 22.1 +0.6**
comp=Z,11nm,1.4s,mb4.6
NVAR Mina Array Bea 52.92 75 P **P** **21 29 26.8 +1.5**
comp=Z,1.1nm,0.8s,mb3.9,baz=293,slow=7.9,SNR=6.2
KMI Kunming 53.29 261 P **P** **21 29 29.6 +1.4**
KMI pP pP 21 29 39.8 +8.4
KMI sP sP 21 29 43.4 +11
KMI PP PP 21 31 30.6 +2.4
KMI S **S** **21 36 55.4 -4.1**
KMI sS sS 21 37 13.8 +9.0
KMI SS SS 21 40 34.0 -4.9
KMI pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KMI pmax pmax
comp=Z,150nm,8.9s
KMI LR LR
comp=N,470nm,19.3s,MS4.7
KMI LR LR
comp=E,400nm,19.8s,MS4.7
KMI LR LR
comp=Z,170nm,18.1s,MS4.1
FRB Frobisher Bay 53.85 26 LR LR 21 56 15.2
comp=Z,166nm,18.4s,MS4.1,baz=262,slow=40
PDAR Pinedale Array 54.35 65 P **P** **21 29 36.4 +0.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=319,slow=5.9,SNR=6.5
PDAR LR LR 21 53 31.3
comp=Z,96nm,21.3s,MS3.8,baz=185,slow=37
QIZ Qiongzhong 54.39 250 P **P** **21 29 33.9 -2.4**
QIZ pP pP 21 29 44.1 +4.5
QIZ S **S** **21 37 08.4 -6.1**
QIZ sS sS 21 37 25.8 +6.0
QIZ pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
QIZ LR LR
comp=N,150nm,6.1s
KLMR Klimovskoe 55.23 330 P **P** **21 29 41.3 -0.5**
KLMR pmax pmax
comp=Z,24nm,1.5s,mb5.0
ULM Lac du Bonnet 55.28 50 LR LR 21 55 42.6
comp=Z,160nm,19.6s,MS4.1,baz=298,slow=39
AAK Ala-Archa 55.46 296 P **P** **21 29 41.8 -2.0**
comp=Z,1.7nm,0.4s,mb4.5,baz=109,slow=3.3,SNR=11
AAK Ala-Archa 55.46 296 *e*P **P** **21 29 42.7 -1.1**
AAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
AAK Ala-Archa 55.46 296 *e*P **P** **21 29 42.6 -1.1**
comp=Z,6.4nm,1.0s,mb4.6
JOF Joensuu 55.55 336 *e*P **P** **21 29 41.7 -2.4**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 55.55 336 *ep* **P** **21 29 41.7 -2.4**
comp=Z,1.4nm,0.4s,mb4.3
LSA Lhasa 56.19 274 P **P** **21 29 50.4 +1.2**
LSA sP sP 21 30 06.4 +13
LSA LR LR
comp=N,160nm,14.3s,MS4.5
LSA LR LR
comp=E,220nm,16.7s,MS4.5
SRU San Rafael 56.54 68 *e*P **P** **21 29 52.1 +0.6**
SRU pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
SRU San Rafael 56.54 68 *e*P **P** **21 29 52.0 +0.5**
comp=Z,8.2nm,1.2s,mb4.6
KSH Kashi 57.02 293 *e*P **P** **21 29 58.1 +3.2**
KSH *ep*P pP 21 30 08.1 +10
KSH *es*P sP 21 30 12.1 +13
KSH *e*PcP PcP 21 30 52.0 +2.1
KSH *e*PP PP 21 32 06.1 +4.9
KSH *e*ScP ScP 21 34 48.1 -1.1
KSH *e*PcS PcS 21 34 52.3 +1.6
KSH *e*S **S** **21 37 47.6 -1.5**
KSH *es*S sS 21 38 05.1 +11
KSH *e*ScS ScS 21 39 42.3 -1.7
KSH *e*SS SS 21 41 38.1 +1.1
KSH pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KSH pmax pmax
comp=Z,72nm,3.8s
KSH LR LR
comp=N,120nm,7.4s
KSH LR LR
comp=E,260nm,8.2s
KSH LR LR
comp=Z,180nm,6.5s
AKTO Aktyubinsk 57.16 313 LR LR 21 56 59.5
comp=Z,273nm,21.0s,MS4.3,baz=261,slow=39
KAF Kangasniemi 57.37 338 *e*P **P** **21 29 53.7 -3.3**
KAF Kangasniemi 57.37 338 *ep* **P** **21 29 53.7 -3.3**
comp=Z,0.3nm,0.4s,mb3.7
FINES FINESS Array B 58.02 337 P **P** **21 30 00.3 -1.3**
comp=Z,2.7nm,0.9s,mb4.3,baz=66,slow=6.5,SNR=9.3
FINES LR LR 21 56 33.6
comp=Z,182nm,21.8s,MS4.2,baz=357,slow=38
FINES FINESS Array B 58.02 337 P **P** **21 30 00.3 -1.3**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES MLR MLR
comp=Z,183nm,21.8s
GUN Gumba 60.50 277 *e*P **P** **21 30 18.2 -1.1**
comp=Z,12nm,0.5s,mb5.3
CMAR Chiang Mai Arr 60.72 259 P **P** **21 30 20.6 -0.3**
comp=Z,0.3nm,0.3s,mb3.8,baz=32,slow=7.8,SNR=3.5
OBN Obninsk 60.92 328 *e*P **P** **21 30 23.1 +1.3**
OBN pmax pmax
comp=Z,12nm,1.3s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.1
KKN Kakani 60.93 277 *e*P **P** **21 30 21.3 -0.9**
comp=Z,12nm,0.7s,mb5.1
PKI Pulchoki 61.03 277 *e*P **P** **21 30 21.9 -1.0**
PKIN Phulchoki 61.03 277 *e*P **P** **21 30 21.8 -1.1**
comp=Z,21nm,0.9s,mb5.3
NB2 NORSAR Subarra 61.07 345 P **P** **21 30 21.8 -0.9**
comp=Z,5.3nm,1.2s,mb4.5,baz=17,slow=7.4
NOA NORSAR Array B 61.07 345 P **P** **21 30 22.1 -0.6**
comp=Z,1.3nm,0.9s,mb4.1,baz=18,slow=7.0,SNR=3.1
NOA LR LR 22 02 04.6
comp=Z,102nm,18.9s,MS4.0,baz=0.0,slow=41
NOA NORSAR Array B 61.07 345 P **P** **21 30 22.1 -0.6**
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA MLR MLR
comp=Z,102nm,18.9s
DMN Daman 61.17 277 *e*P **P** **21 30 23.2 -0.6**
comp=Z,7.5nm,0.7s,mb4.9
HFS Hagfors 61.56 343 P **P** **21 30 24.6 -1.4**
comp=Z,4.0nm,1.1s,mb4.5,baz=74,slow=18,SNR=2.4
HFS Hagfors 61.56 343 P **P** **21 30 24.6 -1.4**
HFS pmax pmax
comp=Z,4.0nm,1.1s
SCHQ Schefferville 61.97 30 P **P** **21 30 27.8 -1.1**
comp=Z,6.4nm,0.8s,mb4.8,baz=348,slow=5.6,SNR=8.6
SCHQ LR LR 21 58 28.0
comp=Z,89nm,18.9s,MS4.0,baz=335,slow=37
SCHQ Schefferville 61.97 30 P **P** **21 30 27.8 -1.1**
SCHQ LR LR 21 58 28.0
VSR Storozhevoye 63.47 325 *e*P **P** **21 30 38.6 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,9.0nm,1.3s
WMOK Wichita Mounta 65.89 63 *e*P **P** **21 30 55.0 0.0**
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
WMOK Wichita Mounta 65.89 63 *e*P **P** **21 30 55.0 0.0**
comp=Z,2.9nm,0.9s,mb4.3
SADO Sadowa 66.48 44 LR LR 22 01 58.8
comp=Z,55nm,18.5s,MS3.8,baz=263,slow=38
AKASG Malin Array Be 66.92 330 P **P** **21 30 59.9 -1.3**
comp=Z,2.5nm,0.7s,mb4.3,baz=25,slow=5.9,SNR=11
AKASG LR LR 22 04 19.7
comp=Z,255nm,18.4s,MS4.5,baz=25,slow=40
AKASG Malin Array Be 66.92 330 *ce*P **P** **21 31 02.2 +0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
MAK Makhachkala 67.45 314 *e*P **P** **21 31 12.0 +7.2**
MAK MLR MLR
comp=Z,255nm,15.0s,MS4.6
TXAR Lajitas Array 67.67 71 P **P** **21 31 07.5 +1.1**
comp=Z,2.3nm,0.7s,mb4.3,baz=312,slow=4.7,SNR=15
TXAR Lajitas Array 67.67 71 P **P** **21 31 07.5 +1.1**
TXAR pmax pmax
comp=Z,2.0nm,0.7s
ZEI Tsey 69.02 317 *e*P **P** **21 31 13.6 -1.0**
ZEI pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
LVV L'vov 69.09 333 *e*P **P** **21 31 05.5 -9.5**
LVV MLR MLR
comp=N,100nm,16.0s,MS4.3
LVV MLR MLR
comp=Z,100nm,16.0s,MS4.2
LVV MLR MLR
comp=E,100nm,15.0s,MS4.3
KWP Kalwaria Pacla 69.60 334 ⇓P **P** **21 31 18.4 +0.3**
KWP Kalwaria Pacla 69.60 334 ⇓*i*P **P** **21 31 18.4 +0.3**
CLL Collm 70.10 341 *e*P **P** **21 31 21.0 -0.1**
CLL Lm 22 03 00.0
comp=Z,100nm,19.8s
MORC Moravsky Berou 70.65 337 ⇓P **P** **21 31 24.6 +0.1**
MORC Moravsky Berou 70.65 337 ⇓*i*P **P** **21 31 24.6 +0.1**
SWET Sewanee 71.63 54 *e*P **P** **21 31 31.1 +0.4**
PSZ Piszkesteto 71.87 335 ⇓P **P** **21 31 30.5 -1.4**
PSZ Piszkesteto 71.87 335 ⇓*i*P **P** **21 31 30.5 -1.4**
GERES GERESS Array B 72.32 340 P **P** **21 31 34.5 -0.1**
comp=Z,0.5nm,0.7s,mb3.6,baz=34,slow=5.0,SNR=6.3
GERES LR LR 22 08 26.8
comp=Z,191nm,18.3s,MS4.4,baz=15,slow=40
GERES GERESS Array B 72.32 340 P **P** **21 31 34.5 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,191nm,18.3s
MLR Muntele Rosu 72.57 330 ⇑P **P** **21 31 37.8 +1.6**
MLR Muntele Rosu 72.57 330 ⇑*i*P **P** **21 31 37.8 +1.6**
VOIR 72.87 331 ⇓P **P** **21 31 39.8 +1.9**
VOIR 72.87 331 ⇓*i*P **P** **21 31 39.8 +1.9**
BZS Buzias 73.60 333 ⇑P **P** **21 31 41.2 -1.1**
BZS Buzias 73.60 333 ⇑*i*P **P** **21 31 41.2 -1.1**
CDF Champ du Feu 73.87 344 *e*P **P** **21 31 43.4 -0.4**
comp=Z,4.1nm,0.9s,mb4.1
CDF Champ du Feu 73.87 344 *e*P **P** **21 31 43.4 -0.4**
CDF pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
CDF Champ du Feu 73.87 344 *e*P **P** **21 31 43.4 -0.4**
comp=Z,2.0nm,0.9s,mb4.0
FLN La Foliniere 74.55 349 *e*P **P** **21 31 47.8 +0.1**
comp=Z,5.7nm,0.7s,mb4.3
FLN La Foliniere 74.55 349 *e*P **P** **21 31 47.8 +0.1**
FLN pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FLN La Foliniere 74.55 349 *e*P **P** **21 31 47.8 +0.1**
comp=Z,2.8nm,0.7s,mb4.3
LDF La Druitiere 74.67 349 *e*P **P** **21 31 48.4 -0.1**
GRR Gorron 74.96 349 *e*P **P** **21 31 50.4 +0.3**
BRTR Keskin Array B 75.41 322 P **P** **21 31 52.8 -0.2**
comp=Z,2.2nm,0.9s,mb4.1,baz=71,slow=3.1,SNR=13
BRTR LR LR 22 10 59.7
comp=Z,68nm,19.2s,MS4.0,baz=178,slow=41
BRTR Keskin Array B 75.41 322 *ce*P **P** **21 31 55.5 +2.6**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
SSF Saint Saulge 75.74 346 *e*P **P** **21 31 54.1 -0.5**
comp=Z,6.7nm,1.2s,mb4.2
SSF Saint Saulge 75.74 346 *e*P **P** **21 31 54.1 -0.5**
SSF pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
SSF Saint Saulge 75.74 346 *e*P **P** **21 31 54.1 -0.5**
comp=Z,3.3nm,1.2s,mb4.1
CABF La Chapelle 75.81 344 *e*P **P** **21 31 54.7 -0.3**
comp=Z,9.0nm,1.1s,mb4.3
CABF La Chapelle 75.81 344 *e*P **P** **21 31 54.7 -0.3**
CABF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CABF La Chapelle 75.81 344 *e*P **P** **21 31 54.7 -0.3**
comp=Z,4.5nm,1.1s,mb4.3
MBDF Montbardon 77.54 343 *e*P **P** **21 32 06.0 +1.1**
comp=Z,8.1nm,1.0s,mb4.3
MBDF Montbardon 77.54 343 *e*P **P** **21 32 06.0 +1.1**
MBDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MBDF Montbardon 77.54 343 *e*P **P** **21 32 06.0 +1.1**
comp=Z,4.1nm,1.0s,mb4.3
DZM Mont Dzumac 78.01 177 *e*LR LR 21 56 16.8
comp=Z,183nm,30.9s
TAOE Nuku Hiva Isla 79.69 123 *e*LR LR 21 56 52.9
comp=Z,190nm,33.4s
MMAI Mount Meron Ar 80.78 318 P **P** **21 32 22.3 -0.5**
comp=Z,1.5nm,0.6s,mb4.1,baz=18,slow=7.9,SNR=2.9
MMAI LR LR 22 14 36.7
comp=Z,136nm,18.3s,MS4.3,baz=125,slow=41
PMOR Pomariorio Ree 81.75 133 *e*T 23 02 28.7
comp=Z,12nm,0.2s
PPT Papeete 83.39 135 *e*LR LR 21 58 43.7
comp=Z,142nm,22.5s
PPT Papeete 83.39 135 LR LR 22 08 09.8
comp=Z,111nm,19.1s,MS4.2,baz=2.7,slow=34
ASAR Alice Springs 83.42 207 P **P** **21 32 36.8 +0.3**
comp=Z,3.2nm,1.0s,mb4.3,baz=17,slow=5.0,SNR=17
ASAR Alice Springs 83.42 207 P **P** **21 32 36.8 +0.3**
ASAR pmax pmax
comp=Z,3.0nm,1.0s
ESDC Sonseca Array 83.89 350 P **P** **21 32 38.5 -0.4**
comp=Z,1.5nm,0.9s,mb4.1,baz=5.0,slow=5.6,SNR=7.8
KEST Kesra 85.81 339 LR LR 22 16 04.7
comp=Z,37nm,18.0s,MS3.8,baz=310,slow=39
RPZ Rata Peaks 99.76 174 LR LR 22 14 53.6
comp=Z,108nm,18.9s,MS4.4,baz=208,slow=33
QSPA South Pole Qui 145.96 180 PKPbc PKPbc 21 39 46.5 -0.7
comp=Z,4.3nm,0.7s,baz=41,slow=0.9,SNR=30

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*IDC **17** 21:22:51.9±2.1, 64.°07N×148.°53W, h79km±22km, mb3.4/10, mb1 3.7/13, mb1mx3.5/29, mbtmp3.5/13, MS3.5/1, Ms1 3.5/1, ms1mx2.6/35, Error ellipse: s-maj=14.6km s-min=13.2km az=126.0*
*ISCJB **17** 21:22:54.2±0.3, 63.°98N±0.°03×148.°28W±0.°07, h124km±3km, mb3.7/10, Error ellipse: s-maj=6.0km s-min=5.0km az=150.9*
*NEIC **17** 21:22:56.0, 63.°96N×148.°31W, h115km, MG3.6(AEIC), After AEIC.*
ISC 17 21:22:55.4±0.3, 63.°97N±0.°03×148.°26W±0.°07, h117km±3km, n50, σ0s 84/55, mb3.7/10, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Time ISC	h m s	Res ISC
MCK	**McKinley**	**0.38**	**232**	P	**Pn**	**21 23 12.3**	**+0.1**
MCK				S	**Sn**	**21 23 25.0**	**+0.1**
COLA	**College**	**0.93**	**11**	P	**Pn**	**21 23 16.8**	**+0.4**
COLA				S	**Sn**	**21 23 32.2**	**0.0**
IL1	**Eielson Array**	**1.00**	**36**	P	**Pn**	**21 23 17.4**	**+0.3**
TRF	**Thorofare Moun**	**1.04**	**241**	P	**Pn**	**21 23 18.0**	**+0.5**
TRF				S	**Sn**	**21 23 34.5**	**+0.3**
KTH	**Kantishna Hill**	**1.26**	**252**	P	**Pn**	**21 23 20.0**	**+0.2**
KTH				S	**Sn**	**21 23 38.0**	**-0.3**
CHUM	**Lake Minchumin**	**1.80**	**269**	P	**Pn**	**21 23 26.1**	**0.0**
DOT	**Dot Lake**	**1.89**	**98**	P	**Pn**	**21 23 27.3**	**+0.1**
DOT				S	**Sn**	**21 23 51.2**	**-0.2**
PPLA	**Purkeypile**	**2.07**	**240**	P	**Pn**	**21 23 29.8**	**+0.4**
SML	**Sawmill**	**2.17**	**181**	P	**Pn**	**21 23 31.2**	**+0.5**
MENT	**Mentasta**	**2.29**	**115**	*e*P	**Pn**	**21 23 32.5**	**+0.3**

PMR	**Palmer**	**2.42 190**	*e*P	**Pn**	**21 23 34.9 +1.0**
SKT	**Skwentna**	**2.49 218**	P	**Pn**	**21 23 34.6 -0.2**
FIB	**Fire Island**	**2.95 198**	P	**Pn**	**21 23 40.8 -0.1**
RC01	**Rabbit Creek A**	**2.97 194**	P	**Pn**	**21 23 41.8 +0.7**
BCA3	**Beaver Creek A**	**3.04 104**	P	**Pn**	**21 23 41.7 -0.2**
DIV	**Divide**	**3.07 157**	P	**Pn**	**21 23 42.2 -0.3**
IM3	**Indian Mountai**	**3.09 313**	P	**Pn**	**21 23 42.8 +0.1**
EGAK	**Eagle**	**3.19 72**	P	**Pn**	**21 23 44.1 +0.2**
COLD	**Coldfoot**	**3.37 347**	P	**Pn**	**21 23 46.9 +0.6**
BMRM	**Bremner River**	**3.46 149**	P	**Pn**	**21 23 47.3 -0.2**
SLKM	**Skilak Lake**	**3.59 196**	P	**Pn**	**21 23 49.8 +0.5**
EYAK	**Cordova Ski Ar**	**3.63 160**	P	**Pn**	**21 23 49.9 +0.1**
TTA	**Tatalina**	**3.64 257**	*e*P	**Pn**	**21 23 49.6 -0.3**
TT01	**Tatalina**	**3.65 257**	P	**Pn**	**21 23 49.6 -0.4**
BM3	**Burnt Mountain**	**3.78 22**	P	**Pn**	**21 23 52.2 +0.5**
GCSA	**Galena City Sc**	**3.83 286**	P	**Pn**	**21 23 52.8 +0.4**
DAWY	**Dawson**	**3.90 85**	P	**Pn**	**21 23 53.5 +0.1**
SEW	**Seward**	**3.92 189**	P	**Pn**	**21 23 53.5 -0.2**
RSO	**Redoubt South**	**4.10 213**	*e*Pn	**Pn**	**21 23 51.5 -4.6**
SVW2	**Sparrevohn**	**4.45 233**	*e*P	**Pn**	**21 24 00.6 -0.2**
HYT	**Haines Junctio**	**5.91 117**	*e*Pn	Px	21 24 32.0
KDAK	**Kodiak Island**	**6.56 201**	P	**Pn**	**21 24 26.6 -2.5**
KDAK			S	**Sn**	**21 25 39.5 -2.8**
OHAK	**Old Harbor**	**7.21 202**	*e*Pn	**Pn**	**21 24 36.7 -1.3**
INK	**Inuvik**	**7.38 47**	P	**Pn**	**21 24 38.4 -1.8**
	0.7nm,0.3s,baz=248,slow=16,SNR=31				
INK			S	**Sn**	**21 25 59.5 -2.8**
	baz=101,slow=16,SNR=2.4				
INK	**Inuvik**	**7.38 47**	*e*Pn	**Pn**	**21 24 40.0 -0.2**
YKA	**Yellowknife Ar**	**15.13 80**	P	**Pn**	**21 26 21.9 -0.6**
	0.3nm,0.3s,baz=284,slow=9.1,SNR=19				
YKA	**Yellowknife Ar**	**15.13 80**	P	**Pn**	**21 26 21.9 -0.6**
RES	**Resolute Bay**	**20.75 37**	P	**P**	**21 27 25.3 -1.0**
	baz=249,slow=9.9				
PDAR	**Pinedale Array**	**30.60 115**	P	**P**	**21 29 00.5 +2.6**
	1.3nm,0.8s,mb3.7,baz=336,slow=6.5,SNR=13				
NVAR	**Mina Array Bea**	**31.16 131**	P	**P**	**21 29 04.5 +1.7**
	0.6nm,0.6s,mb3.5,baz=327,slow=8.7,SNR=5.5				
NVAR	**Mina Array Bea**	**31.16 131**	P	**P**	**21 29 04.5 +1.6**
SCHQ	**Schefferville**	**39.65 64**	P	**P**	**21 30 14.3 -0.9**
	1.0nm,0.5s,mb3.9,baz=264,slow=10,SNR=3.3				
JMIC	**Jan Mayen**	**42.48 18**	LR	LR	21 50 06.6
	comp=Z,55nm,18.3s,baz=274,slow=38				
TXAR	**Lajitas Array**	**44.62 119**	P	**P**	**21 30 57.9 +2.1**
	1.3nm,0.7s,mb3.8,baz=329,slow=6.4,SNR=18				
SONM	**Songino Array**	**54.24 307**	P	**P**	**21 32 08.9 +0.4**
	0.4nm,0.5s,mb3.8,baz=28,slow=6.5,SNR=4.0				
KSRS	**Korea Array**	**54.47 284**	P	**P**	**21 32 10.3 0.0**
	1.0nm,0.8s,mb3.9,baz=27,slow=9.1,SNR=4.6				
FINES	**FINESS Array B**	**54.83 3**	P	**P**	**21 32 13.2 +0.6**
	3.8nm,1.1s,mb4.3,baz=355,slow=11,SNR=5.9				
BVAR	**Borovoye Array**	**59.54 334**	P	**P**	**21 32 45.7 -0.1**
	0.3nm,0.5s,mb3.6,baz=22,slow=8.7,SNR=3.2				
KURK	**Kurchatov**	**59.94 328**	P	**P**	**21 32 48.4 -0.2**
	0.2nm,0.4s,mb3.5,baz=32,slow=6.5,SNR=2.9				
MKAR	**Makanchi Array**	**62.65 323**	P	**P**	**21 33 05.8 -1.1**
	0.2nm,0.5s,mb3.4,baz=32,slow=6.2,SNR=4.3				

*ISCJB **17** 21:50:20.0±0.5, 32°.24N±0°.04×105°.14E±0°.05, h10km, mb3.7/9, Error ellipse: s-maj=6.4km s-min=5.5km az=40.2*
*IDC **17** 21:50:20.8±1.0, 32°.14N×104°.72E, h0km, mb3.8/9, mb1 3.8/12, mb1mx3.6/27, mbtmp3.6/12, ML3.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/44, Error ellipse: s-maj=31.4km s-min=19.8km az=50.0*
*NEIC **17** 21:50:22.4±0.5, 32°.18N×104°.76E, h10km, Error ellipse: s-maj=13.2km s-min=8.4km az=64.0*
*BJI **17** 21:50:23.3, 32°.23N×105°.19E, h19km, mb3.7/5, ML3.7/8, Ms3.6/5, Ms7 3.4/4*

ISC 17 21:50:22.2±0.5, 32°.28N±0°.04×105°.04E±0°.05, h10km, n20, σ1§21/25, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.70**	**61**	Pn	**Pn**	**21 51 19.5**	**+0.1**
XAN				Pg	**Pg**	**21 51 30.8**	**-2.3**
XAN				Sg	**Sg**	**21 52 20.4**	**-0.6**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,66nm,0.6s						
LZH	**Lanzhou**	**3.93**	**346**	Pn	**Pn**	**21 51 25.0**	**+2.4**
LZH				Sg	**Sg**	**21 52 25.1**	**-3.3**
LZH				smax			
	comp=N,370nm,0.6s						
LZH				smax			
	comp=E,390nm,0.6s						
LZH				LR	LR		
	comp=E,750nm,5.9s						
LZH				LR	LR		
	comp=Z,940nm,7.8s						
ENH	**Enshi**	**4.30**	**117**	*e*Pn	**Pn**	**21 51 30.9**	**+3.3**
ENH				*e*S	**Sg**	**21 52 40.4**	**+0.2**
GYA	**Guiyang**	**5.97**	**166**	Pn	**Pn**	**21 51 51.3**	**+0.7**
GYA				Sn	**Sn**	**21 52 58.8**	**-0.2**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
GTA	**Gaotai**	**8.29**	**331**	P	**Pn**	**21 52 31.6**	**+9.2**
GTA				pP		21 52 35.0	
GTA				sP		21 52 37.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=N,180nm,9.5s						
GTA				LR	LR		
	comp=E,100nm,11.0s						
GTA				LR	LR		
	comp=Z,240nm,11.9s						
CMAR	**Chiang Mai Arr**	**14.82**	**203**	Pn	**Pn**	**21 53 49.7**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=8.7,slow=9.4,SNR=2.8						
CMAR	**Chiang Mai Arr**	**14.82**	**203**	Pn	**Pn**	**21 53 49.7**	**-2.2**
SONM	**Songino Array**	**15.57**	**3**	Pn	**Pn**	**21 54 03.6**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=184,slow=17,SNR=3.8						
KSRS	**Korea Array**	**19.46**	**68**	P	**Pn**	**21 54 53.6**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=246,slow=10,SNR=4.1						
MK31	**Makanchi Array**	**22.65**	**316**	*e*P	**P**	**21 55 23.2**	**-0.2**
MKAR	**Makanchi Array**	**22.65**	**316**	P	**P**	**21 55 23.6**	**+0.2**
	comp=Z,2.0nm,0.9s,mb3.5,baz=116,slow=11,SNR=15						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**21 55 55.8**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.4,baz=134,slow=12,SNR=4.6						
KURK	**Kurchatov**	**26.81**	**321**	P	**P**	**21 56 02.8**	**+0.4**
	comp=Z,1.5nm,0.9s,mb3.5,baz=128,slow=8.9,SNR=6.2						
BVAR	**Borovoye Array**	**32.39**	**320**	P	**P**	**21 56 52.2**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=104,slow=9.0,SNR=3.5						
ARCES	**ARCESS Array B**	**56.52**	**336**	P	**P**	**22 00 04.0**	**-0.2**
	comp=Z,7.0nm,1.1s,mb4.6,baz=79,slow=8.4,SNR=4.1						
ARCES				LR	LR	22 29 44.3	
	comp=Z,34nm,19.5s,baz=18,slow=42						
BRTR	**Keskin Array B**	**56.86**	**299**	P	**P**	**22 00 05.6**	**-1.5**
	comp=Z,0.3nm,0.6s,mb3.5,baz=54,slow=7.3,SNR=3.1						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**22 00 07.1**	**-1.0**
	comp=Z,3.5nm,1.0s,mb4.3,baz=79,slow=9.9,SNR=6.3						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**22 00 43.6**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.7,baz=336,slow=6.8,SNR=6.9						
YKA	**Yellowknife Ar**	**80.34**	**17**	P	**P**	**22 02 33.4**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.1,SNR=5.0						
YKA	**Yellowknife Ar**	**80.34**	**17**	P	**P**	**22 02 33.4**	**+0.2**

KRSC 17 21:56:27.7±0.5, 56°.25N×163°.68E, h5km±5km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.48**	**265**	*e*P	Pg	21 56 37.0	0.0
KBTR				*i* S	Sg	21 56 43.6	+0.4
SMKR	**Semkarok**	**1.27**	**286**	*e*P	Pg	21 56 52.4	+0.3
SMKR				*i* S	Sg	21 57 10.5	+1.9
BDR	**Baidarnaya**	**1.41**	**284**	*e*P	Pn	21 56 55.0	+1.0
BDR				*i* S	Sb	21 57 14.6	+1.9
SRKR	**Sorokina**	**1.45**	**287**	*e*P	Pn	21 56 55.5	+0.9
SRKR				*i* S	Sb	21 57 16.3	+2.4
ZLN	**Zelenaya**	**1.63**	**263**	*e*P	Pn	21 56 57.7	+0.7
ZLN				*i* S	Sn	21 57 19.5	+1.3
CIRR	**Tsirk**	**1.65**	**267**	*e*P	Pn	21 56 58.2	+1.0
BKI	**Bering**	**1.67**	**128**	*e*P	Pn	21 57 00.1	+2.6
BKI				*i* S	Sn	21 57 23.1	+3.9
BZMR	**Bezymyannaya**	**1.81**	**261**	*e*P	Pn	21 57 00.6	+1.1
KIRR	**Kirishev**	**1.89**	**262**	*e*P	Pn	21 57 02.2	+1.6
KIRR				*i* S	Sn	21 57 27.1	+2.3
KPT	**Kopyto**	**1.96**	**263**	*e*P	Pn	21 57 03.3	+1.8
KPT				*i* S	Sn	21 57 29.5	+3.1
KMNR	**Kamenistaya**	**2.00**	**257**	*e*P	Pn	21 57 04.7	+2.7
MKZ	**Mys Kozlova**	**2.03**	**214**	*e*P	Pn	21 57 03.4	+0.9
MKZ				*i* S	Sn	21 57 29.3	+1.1
KOZ	**Kozyrevsk**	**2.14**	**266**	*e*P	Pn	21 57 06.3	+2.3
KOZ				*i* S	Sn	21 57 34.6	+3.7
SRDR	**Sredinnyy**	**2.21**	**273**	*e*P	Pn	21 57 07.1	+2.1
SRDR				*i* S	Sn	21 57 35.2	+2.6
SPN	**Mys Shipunski**	**3.81**	**215**	*e*P	Pn	21 57 29.2	+2.3
SPN				*i* S	Sn	21 58 13.5	+1.5
NLC	**Nalytchevo**	**3.98**	**221**	*e*P	Pn	21 57 30.4	+1.1
NLC				*i* S	Sn	21 58 15.4	-0.8
AVH	**Avacha**	**4.14**	**226**	*e*P	Pn	21 57 34.4	+2.9
GNL	**Ganaly**	**4.18**	**235**	*e*P	Pn	21 57 34.9	+2.9
RUS	**Russkaya**	**4.87**	**220**	*e*P	Pn	21 57 44.3	+2.7

IDC 17 22:01:31.6±1.1, 31°.80N×104°.70E, h0km, mb3.4/5, mb1 3.4/8, mb1mx3.3/26, mbtmp3.3/8, ML3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/30, Error ellipse: s-maj=34.1km s-min=21.3km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.27**	**203**	Pn	Pn	22 04 56.3	+1.4
	0.1nm,0.3s,baz=8.3,slow=8.6,SNR=3.2						
SONM	**Songino Array**	**16.06**	**4**	Pn	Pn	22 05 19.1	+0.4
	0.1nm,0.3s,baz=186,slow=8.9,SNR=5.4						
KSRS	**Korea Array**	**19.90**	**67**	P	Pn	22 06 03.9	-2.3
	0.1nm,0.3s,baz=274,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**22.80**	**317**	P	P	22 06 35.3	-0.4
	0.4nm,0.8s,baz=122,slow=13,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	P	22 07 10.1	+1.2
	0.4nm,0.4s,baz=131,slow=10,SNR=2.7						
MJAR	**Matsushiro Arr**	**28.04**	**71**	LR	LR	22 17 13.4	
	comp=Z,31nm,21.0s,baz=75,slow=34						
BRTR	**Keskin Array B**	**56.84**	**299**	P	P	22 11 17.2	-0.7
	0.2nm,0.3s,baz=78,slow=9.5,SNR=4.9						
FINES	**FINESS Array B**	**57.27**	**326**	P	P	22 11 20.6	-0.1
	0.9nm,0.9s,baz=85,slow=5.9,SNR=3.0						
ASAR	**Alice Springs**	**61.83**	**150**	P	P	22 11 52.5	+0.1
	0.2nm,0.7s,baz=335,slow=6.8,SNR=3.7						

KRSC 17 22:01:53.8±0.1, 56°.21N×163°.68E, h9km±11km, ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.48**	**270**	*e*P	Pg	22 02 02.8	-0.3
KBTR				*i* S	Sg	22 02 08.4	-1.0
SMKR	**Semkarok**	**1.28**	**288**	*e*P	Pn	22 02 18.1	+0.2
SMKR				*i* S	Sb	22 02 35.4	+0.7
BDR	**Baidarnaya**	**1.42**	**286**	*e*P	Pn	22 02 20.4	+0.7
BDR				*i* S	Sn	22 02 39.9	+1.4
SRKR	**Sorokina**	**1.47**	**289**	*e*P	Pn	22 02 21.2	+0.9
SRKR				*i* S	Sn	22 02 40.5	+0.9
ZLN	**Zelenaya**	**1.62**	**264**	*e*P	Pn	22 02 23.7	+1.2
ZLN				*i* S	Sn	22 02 45.0	+1.5
BKI	**Bering**	**1.64**	**127**	*e*P	Pn	22 02 25.7	+2.9
BKI				*i* S	Sn	22 02 48.7	+4.7
CIRR	**Tsirk**	**1.64**	**268**	*e*P	Pn	22 02 24.0	+1.2
CIRR				*i* S	Sn	22 02 45.7	+1.7
KLY	**Klyuchi**	**1.69**	**275**	*e*P	Pn	22 02 22.6	-0.9
KLY				*i* S	Sn	22 02 42.9	-2.3
KRSR	**Krestovskiy**	**1.74**	**272**	P	Pn	22 02 25.2	+1.1
KRSR				*i* S	Sn	22 02 47.7	+1.3
BZMR	**Bezymyannaya**	**1.81**	**263**	*e*P	Pn	22 02 26.8	+1.7
BZMR				*i* S	Sn	22 02 51.7	+3.6
KIRR	**Kirishev**	**1.89**	**264**	*e*P	Pn	22 02 27.7	+1.5
KIRR				*i* S	Sn	22 02 53.2	+3.1
KPT	**Kopyto**	**1.95**	**264**	*e*P	Pn	22 02 29.0	+1.9
KPT				*i* S	Sn	22 02 55.7	+4.0
KMNR	**Kamenistaya**	**1.99**	**258**	*e*P	Pn	22 02 30.2	+2.7
MKZ	**Mys Kozlova**	**2.00**	**215**	*e*P	Pn	22 02 28.5	+0.9
MKZ				*i* S	Sn	22 02 53.6	+0.9
KOZ	**Kozyrevsk**	**2.14**	**267**	*e*P	Pn	22 02 31.8	+2.2
KOZ				*i* S	Sn	22 03 00.2	+4.0
SRDR	**Sredinnyy**	**2.21**	**274**	*e*P	Pn	22 02 33.3	+2.7
SRDR				*i* S	Sn	22 03 01.6	+3.5
SPN	**Mys Shipunski**	**3.77**	**216**	*e*P	Pn	22 02 51.9	-0.2
SPN				*i* S	Sn	22 03 35.0	-1.5
NLC	**Nalytchevo**	**3.95**	**221**	*e*P	Pn	22 02 55.5	+1.0
NLC				*i* S	Sn	22 03 41.7	+0.8
AVH	**Avacha**	**4.11**	**226**	*e*P	Pn	22 03 00.2	+3.5
GNL	**Ganaly**	**4.16**	**235**	*e*P	Pn	22 03 00.7	+3.4
RUS	**Russkaya**	**4.84**	**221**	*e*P	Pn	22 03 08.6	+1.8

*IDC **17** 22:09:54.0±1.1, 31°.52N×103°.98E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/26, mbtmp3.6/10, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/34, Error ellipse: s-maj=33.2km s-min=20.3km az=56.0*
*NEIC **17** 22:09:55.9±0.9, 31°.53N×104°.05E, h10km, Error ellipse: s-maj=26.8km s-min=13.0km az=85.0*
*BJI **17** 22:09:57.7, 31°.38N×104°.05E, h11km, ML3.5/16*

ISC 17 22:09:54.8±0.8, 31°.51N±0°.03×104°.19E±0°.05, h1km±6km, n18, σ1§05/26, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.71**	**212**	Pg	**Pg**	**22 10 08.3**	**0.0**
CD2				Sg	**Sg**	**22 10 17.3**	**-0.2**
CD2				smax			
	comp=N,1μm,0.8s						
LZH	**Lanzhou**	**4.57**	**356**	*e*Pn	**Pn**	**22 11 10.9**	**+5.9**
LZH				Pg	**Pg**	**22 11 23.3**	**+0.9**
LZH				Sn	**Sn**	**22 12 06.1**	**+7.3**
LZH				Sg	**Sg**	**22 12 22.6**	**+0.9**
LZH				smax			
	comp=N,67nm,1.1s						
LZH				smax			
	comp=E,64nm,1.1s						
XAN	**Xi'an**	**4.71**	**56**	Pn	**Pn**	**22 11 07.3**	**+0.3**
XAN				Pg	**Pg**	**22 11 24.6**	**-0.5**
XAN				Sn	**Sn**	**22 12 03.3**	**+1.1**
XAN				Sg	**Sg**	**22 12 24.8**	**-1.4**
XAN				smax			
	comp=N,95nm,0.9s						
XAN				smax			
	comp=E,51nm,0.8s						
GYA	**Guiyang**	**5.48**	**156**	Pn	**Pn**	**22 11 23.1**	**+5.6**
GYA				Sn	**Sn**	**22 12 20.4**	**-0.8**
GYA				smax			
	comp=N,120nm,0.9s						
GYA				smax			
	comp=E,130nm,0.9s						
KMI	**Kunming**	**6.49**	**192**	Pn	**Pn**	**22 11 24.4**	**-7.0**
KMI				Sn	**Sn**	**22 12 47.8**	**+1.7**
KMI				smax			
	comp=N,9.0nm,0.5s						
KMI				smax			
	comp=E,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.84**	**201**	Pn	**Pn**	**22 13 12.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=9.3,slow=9.4,SNR=3.2						
SONM	**Songino Array**	**16.39**	**5**	Pn	**Pn**	**22 13 47.2**	**+1.3**
	comp=E,0.2nm,0.3s,baz=184,slow=15,SNR=8.0						
KSRS	**Korea Array**	**20.42**	**67**	P	**Pn**	**22 14 34.6**	**+1.4**
	comp=E,0.7nm,0.6s,baz=263,slow=9.7,SNR=3.7						
MK31	**Makanchi Array**	**22.72**	**318**	*e*P	**P**	**22 14 58.0**	**0.0**
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**22 14 55.4**	**-2.5**
	comp=E,1.4nm,1.1s,mb3.4,baz=119,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**22.72**	**318**	P	**P**	**22 14 55.4**	**-2.5**
AAK	**Ala-Archa**	**26.04**	**304**	LR	LR	22 26 37.2	
	comp=E,68nm,18.3s,baz=200,slow=39						
ZALV	**Zalesovo Beam**	**26.39**	**334**	P	**P**	**22 15 31.6**	**-0.8**
	comp=E,0.6nm,0.4s,mb3.6,baz=161,slow=11,SNR=2.9						
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**22 15 37.7**	**0.0**
	comp=E,0.6nm,0.7s,mb3.5,baz=130,slow=8.6,SNR=6.3						
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**22 19 42.6**	**-1.0**
	comp=E,1.6nm,0.8s,mb4.1,baz=21,slow=24,SNR=3.5						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**22 20 15.3**	**+0.1**
	comp=E,0.6nm,0.7s,mb3.9,baz=338,slow=6.7,SNR=7.7						
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**22 20 28.8**	**-3.0**
	comp=E,0.7nm,0.7s,mb4.0,baz=62,slow=6.6,SNR=3.4						
YKA	**Yellowknife Ar**	**81.28**	**17**	P	**P**	**22 22 11.7**	**-0.6**
	comp=E,0.2nm,0.6s,mb3.4,baz=330,slow=5.4,SNR=4.3						

*NIED **17** 22:15:00, 30°.80N×129°.60E, h270km, Mw4.7 Best double couple: M0=1.27000×10^16 NP1:φs=163.00000°, δ76.00000°, λ-65.00000°. NP2:φs=280.00000°, δ28.00000°, λ-150.00000°.*
*BJI **17** 22:15:04.8, 30°.80N×129°.71E, h260km, mB4.4/17, mb4.4/33*
*MOS **17** 22:15:05.4±1.0, 30°.91N×129°.46E, h249km, mb4.2/20, Error ellipse: s-maj=11.0km s-min=7.8km az=98.5*
*NEIC **17** 22:15:06.5±0.5, 30°.84N×129°.46E, h243km±5km, mb4.4/31, Error ellipse: s-maj=6.6km s-min=4.8km az=132.0*
NEIC Recorded [1 JMA] in Kagoshima, Kumamoto, Miyazaki and Oita.
*ISCJB **17** 22:15:06.1±0.2, 30°.78N±0°.03×129°.41E±0°.03, h252km±1km, mb4.1/64, Error ellipse: s-maj=4.7km s-min=3.3km az=144.3*
*JMA **17** 22:15:07.3±0.1, 30°.83N×129°.61E, h254km±1km, M4.5*
JMA Felt I J1.
*IDC **17** 22:15:07.6±0.5, 30°.89N×129°.45E, h258km±4km, mb3.8/27, mb1 4.0/30, mb1mx3.9/36, mbtmp3.8/30, Error ellipse: s-maj=10.2km s-min=7.5km az=60.0*
*DJA **17** 22:15:09, 30°.87N×129°.51E, h261km, mb5.0/18*

ISC 17 22:15:07.1±0.2, 30°.84N±0°.03×129°.46E±0°.03, h249km±1km, h256km±1.4km: pP-P, n333, σ0§80/353, mb4.1/64, 83C-73D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**0.74**	**120**	⇓P	**Pn**	**22 15 41.2**	**+0.4**
JKC				*e*S	**S**	**22 16 07.6**	**+0.4**
JSJ	**Shimokoshiki**	**0.87**	**15**	⇓P	**Pn**	**22 15 42.1**	**+0.8**
JSJ				*e*S	**S**	**22 16 08.9**	**+0.6**
JNN	**Nakanoshima**	**1.05**	**160**	⇓P	**Pn**	**22 15 42.8**	**+0.4**
JNN				*e*S	**S**	**22 16 10.5**	**+0.4**
JSU	**Suzuyama**	**1.09**	**52**	⇑P	**Pn**	**22 15 43.0**	**+0.5**
JSU				*e*S	**S**	**22 16 10.3**	**0.0**
JTSR	**Tashiro 2**	**1.30**	**75**	⇑P	**Pn**	**22 15 43.6**	**-0.2**
JTSR				S	**S**	**22 16 11.1**	**-1.7**
JTN	**Tanegashima 3**	**1.32**	**97**	⇑P	**Pn**	**22 15 44.0**	**0.0**
JTN				*e*S	**S**	**22 16 12.6**	**-0.5**
JTZ	**Takazaki**	**1.75**	**52**	⇑P	**Pn**	**22 15 47.1**	**-0.2**
JTZ				*e*S	**S**	**22 16 18.3**	**-0.7**
JIU2	**Izumi 2**	**2.06**	**34**	⇑P	**Pn**	**22 15 50.3**	**+0.3**
JIU2				*e*S	**S**	**22 16 24.0**	**+0.1**
JAM	**Amami Oshima**	**2.42**	**177**	⇑P	**Pn**	**22 15 53.0**	**-0.5**
JOW	**Kunigami**	**4.12**	**195**	P	**Pn**	**22 16 11.0**	**-1.3**
	50nm,0.3s,baz=65,slow=7.2,SNR=87						
JOW				S	**S**	**22 16 59.6**	**-4.5**
	236nm,0.3s,baz=126,slow=19,SNR=57						
KSRS	**Korea Array**	**6.72**	**350**	P	**Pn**	**22 16 44.9**	**+0.8**
	5.6nm,0.3s,baz=168,slow=13,SNR=281						
INCN	**Inchon**	**7.03**	**341**	*e*Pn	**Pn**	**22 16 49.2**	**+1.2**
	36nm,0.9s						
NJ2	**Nanjing**	**9.14**	**280**	*e*P	**Pn**	**22 17 13.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
TATO	**Taipei**	**9.15**	**232**	*e*Pn	**Pn**	**22 17 16.9**	**+2.0**
MAJO	**Matsushiro**	**9.25**	**50**	*e*P	**Pn**	**22 17 15.8**	**-0.3**
MAT	**Matsushiro**	**9.25**	**50**	P	**Pn**	**22 17 15.6**	**-0.5**
MAT				S	**S**	**22 19 00.7**	**+0.3**
MJAR	**Matsushiro Arr**	**9.25**	**50**	P	**Pn**	**22 17 15.9**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=234,slow=11,SNR=53						
MJAR				S	**S**	**22 19 17.8**	**+17**
	baz=243,slow=25,SNR=6.2						
MJAR	**Matsushiro Arr**	**9.25**	**50**	P	**Pn**	**22 17 15.9**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**9.25**	**50**	P	**Pn**	**22 17 15.9**	**-0.2**
MJAR				S	**S**	**22 19 17.8**	**+17**
YHNB	**Yeheng**	**9.43**	**231**	*e*Pn	**Pn**	**22 17 19.3**	**+0.8**
	comp=Z,187nm,0.5s						
NACB	**Ninganchiao**	**9.63**	**228**	*e*Pn	**Pn**	**22 17 18.2**	**-2.8**
	comp=Z,66nm,0.3s						
NACB				*e*S	**S**	**22 19 03.6**	**-6.0**
DL2	**Dalian**	**10.30**	**324**	P	**Pn**	**22 17 31.6**	**+2.3**
DL2				pmax	pmax		
	comp=Z,20nm,0.7s						
SSLB	**Suanglung**	**10.31**	**229**	*e*Pn	**Pn**	**22 17 28.1**	**-1.6**
	comp=Z,210nm,0.4s						
SSLB				*e*S	**S**	**22 19 19.1**	**-6.4**
YULB	**Yu-li**	**10.38**	**226**	*e*Pn	**Pn**	**22 17 25.8**	**-4.7**
	comp=Z,84nm,0.4s						
YULB				*e*S	**S**	**22 19 17.3**	**-10**
TPUB	**Ta-pu**	**10.87**	**228**	*e*Pn	**Pn**	**22 17 34.0**	**-2.6**
	comp=Z,157nm,0.4s						
TPUB				*e*S	**S**	**22 19 32.0**	**-6.3**
TWG	**Pinlang**	**10.94**	**225**	*e*Pn	**Pn**	**22 17 33.4**	**-4.1**
	comp=Z,72nm,0.5s						
TWG				*e*S	**S**	**22 19 28.2**	**-12**
QZH	**Quanzhou**	**11.26**	**241**	⇑*i*P	**Pn**	**22 17 43.3**	**+1.8**
QZH				S	**S

comp=Z,143nm,0.9s,baz=328,slow=0.0,SNR=7.4
GUMO Guam 22.27 137 P **P** **22 19 43.8 +0.1**
GUMO pmax pmax
comp=Z,143nm,0.9s
ULN Ulaanbaatar 24.14 321 *eP* **P** **22 20 00.6 +0.2**
ULN pmax pmax
comp=Z,11nm,1.1s,mb4.4
ULN Ulaanbaatar 24.14 321 *eP* **P** **22 20 00.6 +0.2**
comp=Z,10nm,1.1s,mb4.4
KMI Kunming 24.24 263 P **P** **22 20 03.5 +2.0**
KMI PP 22 20 50.8
KMI pmax pmax
comp=Z,13nm,0.8s,mb4.6
SONM Songino Array 24.48 320 P **P** **22 20 02.6 -0.8**
comp=Z,2.4nm,0.7s,mb4.0,baz=129,slow=8.8,SNR=16
SONM pP 22 20 50.5
comp=Z,2.3nm,0.7s,baz=131,slow=8.1,SNR=4.4
SONM ScP ScP 22 26 47.6 -1.9
comp=Z,1.6nm,0.9s,baz=101,slow=2.1,SNR=8.5
SONM Songino Array 24.48 320 P **P** **22 20 02.6 -0.8**
SONM *PP 22 20 50.5
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM pmax pmax
comp=N,2.0nm,0.9s
GTA Gaotai 25.62 298 *eP* **P** **22 20 14.5 +0.7**
GTA pmax pmax
comp=Z,3.0nm,1.3s,mb3.8
SDKM Sandakan 27.59 207 P **P** **22 20 23.3 -8.2**
CMAR Chiang Mai Arr 30.24 253 P **P** **22 20 55.9 +0.9**
comp=Z,7.0nm,0.6s,mb4.5,baz=50,slow=7.9,SNR=50
CMAR Chiang Mai Arr 30.24 253 P **P** **22 20 55.9 +0.9**
CMAR pmax pmax
comp=Z,7.0nm,0.6s
PETK Petropavlovsk- 30.26 34 P **P** **22 20 53.2 -1.6**
comp=Z,2.6nm,1.0s,mb3.8,baz=219,slow=9.1,SNR=3.2
PETK Petropavlovsk- 30.26 34 P **P** **22 20 53.2 -1.5**
PETK pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
SBUM Sibu 32.60 213 P **P** **22 21 10.0 -5.6**
KSM Kuching 34.38 215 P **P** **22 21 26.3 -4.6**
KSM Kuching 34.38 215 *eP* **P** **22 21 32.2 +1.3**
comp=Z,15nm,0.6s,mb4.7
KTGM Kuala Trenggan 35.44 230 P **P** **22 21 40.7 +0.8**
KULM Kulim 37.13 233 P **P** **22 21 55.7 +1.4**
KULM Kulim 37.13 233 *eP* **P** **22 21 55.5 +1.2**
comp=Z,16nm,0.9s,mb4.5
IPM Ipoh 37.47 231 P **P** **22 21 58.0 +1.0**
MYKOM Kota Tinggi 37.71 225 P **P** **22 21 57.9 -1.2**
KGM Kluang 37.86 226 P **P** **22 21 59.4 -0.9**
FRIM Kepong 37.99 229 P **P** **22 22 01.7 +0.2**
ZALV Zalesovo Beam 39.36 319 P **P** **22 22 12.3 0.0**
comp=Z,0.3nm,0.3s,mb3.3,baz=112,slow=11,SNR=2.9
ZALV pP pP 22 23 04.1 +0.6
comp=Z,1.9nm,0.7s,baz=109,slow=8.0,SNR=3.8
ZALV ScP ScP 22 27 36.7 -3.0
comp=Z,4.0nm,0.8s,baz=112,slow=4.2,SNR=19
ZALV Zalesovo Beam 39.36 319 P **P** **22 22 12.3 0.0**
ZALV *PP pP 22 23 04.1 +0.7
ZALV pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
ZALV pmax pmax
comp=N,4.0nm,0.8s
ZALV Zalesovo Beam 39.36 319 P **P** **22 22 12.3 0.0**
ZALV pP pP 22 23 04.1 +0.6
ZALV ScP ScP 22 27 36.7 -3.0
MK31 Makanchi Array 39.43 308 *eP* **P** **22 22 12.7 -0.3**
MKAR Makanchi Array 39.43 308 P **P** **22 22 12.3 -0.6**
comp=N,0.5nm,0.5s,mb3.3,baz=88,slow=11,SNR=9.9
MKAR pP pP 22 23 04.3 +0.2
comp=N,5.4nm,0.8s,baz=96,slow=9.9,SNR=10
MKAR PcP PcP 22 24 14.3 -1.3
comp=N,0.5nm,0.4s,baz=74,slow=4.3,SNR=5.7
MKAR ScP ScP 22 27 38.0 -2.1
comp=N,4.0nm,0.8s,baz=84,slow=5.3,SNR=26
MKAR Makanchi Array 39.43 308 P **P** **22 22 12.4 -0.6**
MKAR *PP pP 22 23 04.3 +0.1
MKAR 22 24 14.3
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR pmax pmax
comp=N,4.0nm,0.9s
MKAR Makanchi Array 39.43 308 P **P** **22 22 12.3 -0.6**
MKAR pP pP 22 23 04.3 +0.2
MKAR PcP PcP 22 24 14.3 -1.3
MKAR ScP ScP 22 27 38.0 -2.1
TIXI Tiksi 40.87 360 *eP* **P** **22 22 22.8 -1.6**
TIXI pmax pmax
comp=Z,4.0nm,2.0s,mb3.5
KURK Kurchatov 42.35 313 P **P** **22 22 36.5 -0.1**
comp=Z,0.8nm,0.6s,mb3.3,baz=100,slow=9.2,SNR=6.2
KURK pP pP 22 23 30.1 +1.6
comp=Z,3.3nm,0.7s,baz=99,slow=8.9,SNR=6.6
KURK ScP ScP 22 27 49.3 -2.4
comp=Z,1.4nm,0.6s,baz=96,slow=4.0,SNR=5.2
KURK Kurchatov 42.35 313 P **P** **22 22 36.5 -0.2**
KURK *PP pP 22 23 30.1 +1.6
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.4
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
KURK pmax pmax
comp=N,1.0nm,0.6s
KURK Kurchatov 42.35 313 *eP* **P** **22 22 36.5 -0.2**
comp=N,3.3nm,0.7s,mb3.9
KSH Kashi 44.01 297 *eP* **P** **22 22 53.5 +3.4**
KSH *e*PcP PcP 22 24 34.6 +3.6
KSH *e*PcS PcS 22 28 27.1 +2.7
KSH *e*S **S** **22 29 06.5 +3.6**
KSH *e*SS SS 22 32 23.5 -3.7
KSH *e*ScS ScS 22 32 25.1 +3.7
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb3.6
KSH pmax pmax
comp=Z,49nm,4.4s
KSH LR LR
comp=N,110nm,6.5s
KSH LR LR
comp=E,82nm,5.9s
KSH LR LR
comp=Z,130nm,5.5s
AAK Ala-Archa 44.88 301 P **P** **22 22 56.5 -0.4**
comp=Z,0.6nm,0.3s,mb3.4,baz=256,slow=4.2,SNR=3.5
AAK pP pP 22 23 49.8 +0.5
comp=Z,0.8nm,0.4s,baz=104,slow=1.7,SNR=2.1
AAK Ala-Archa 44.88 301 P **P** **22 22 56.5 -0.4**
AAK *PP pP 22 23 49.8 +0.5
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.6
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb3.5
AAK Ala-Archa 44.88 301 P **P** **22 22 56.5 -0.4**
AAK pP pP 22 23 49.8 +0.4
UCH Uchtor 44.89 301 *eP* **P** **22 22 58.2 +1.3**
comp=Z,4.4nm,0.8s,mb3.8
AML Almayashu 45.50 300 *eP* **P** **22 23 02.9 +1.1**
comp=Z,1.8nm,0.6s,mb3.6
BVAR Borovoye Array 47.66 315 P **P** **22 23 18.2 -0.1**
comp=Z,1.2nm,0.5s,mb3.5,baz=94,slow=8.9,SNR=8.3
BVAR pP pP 22 24 12.7 +1.3
comp=Z,1.8nm,0.8s,baz=96,slow=9.1,SNR=2.3
BVAR ScP ScP 22 28 11.1 -2.5
comp=Z,1.5nm,0.7s,baz=95,slow=3.7,SNR=8.4
BVAR Borovoye Array 47.66 315 P **P** **22 23 18.2 -0.1**
BVAR *PP pP 22 24 12.7 +1.3
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR pmax pmax
comp=N,2.0nm,0.7s
BRVK Borovoye 47.72 316 *ceP* **P** **22 23 19.1 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,1.2s,mb3.5
BRVK Borovoye 47.72 316 *eP* **P** **22 23 19.5 +0.8**
comp=Z,5.2nm,0.5s,mb4.1
FITZ Fitzroy Crossi 48.79 185 *eP* **P** **22 23 28.4 +1.1**
comp=Z,7.3nm,0.9s,mb4.0
FITZ Fitzroy Crossi 48.79 185 P **P** **22 23 27.3 0.0**
comp=Z,3.8nm,0.8s,mb3.8,baz=328,slow=5.8,SNR=6.5

WRAB Tennant Creek 50.69 174 *eP* **P** **22 23 41.4 -0.1**
WRAB pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
WRAB Tennant Creek 50.69 174 *eP* **P** **22 23 41.4 -0.1**
comp=Z,5.4nm,0.9s,mb4.0
CTA Charters Tower 53.14 160 *eP* **P** **22 24 00.2 +0.7**
comp=Z,9.4nm,0.7s,mb4.3
CTA Charters Tower 53.14 160 P **P** **22 23 59.9 +0.3**
comp=Z,17nm,0.8s,mb4.5,baz=335,slow=9.1,SNR=14
CTA Charters Tower 53.14 160 P **P** **22 23 59.9 +0.4**
CTA pmax pmax
comp=Z,17nm,0.8s
CTAO Charters Tower 53.14 160 *eP* **P** **22 24 00.1 +0.6**
ASAR Alice Springs 54.36 175 P **P** **22 24 08.1 -0.2**
comp=Z,3.6nm,0.6s,mb4.1,baz=4.2,slow=13,SNR=49
ASAR PcP PcP 22 25 08.8 0.0
comp=Z,1.3nm,0.5s,baz=357,slow=3.5,SNR=8.4
ASAR Alice Springs 54.36 175 P **P** **22 24 08.1 -0.2**
ASAR 22 25 08.8
ASAR pmax pmax
comp=Z,4.0nm,0.6s
ASAR pmax pmax
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 54.37 311 *eP* **P** **22 24 08.5 +0.4**
comp=Z,1.3nm,0.6s,mb3.6
CHUM Lake Minchumin 57.66 31 *eP* **P** **22 24 31.6 +0.5**
comp=Z,9.4nm,0.9s,mb4.4
PPLA Purkeypile 57.80 32 *eP* **P** **22 24 32.1 0.0**
comp=Z,6.6nm,0.9s,mb4.3
KDAK Kodiak Island 58.21 38 *i P* **P** **22 24 34.0 -1.0**
MCK McKinley 59.16 31 *eP* **P** **22 24 41.0 -0.5**
MCK pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
MCK McKinley 59.16 31 *eP* **P** **22 24 41.0 -0.4**
comp=Z,9.2nm,1.0s,mb4.4
DIV Divide 61.06 34 *eP* **P** **22 24 54.4 +0.1**
comp=Z,12nm,0.8s,mb4.6
MENT Mentasta 61.62 31 *eP* **P** **22 24 58.4 +0.4**
EGAK Eagle 62.30 29 *eP* **P** **22 25 02.1 -0.5**
comp=Z,7.8nm,1.0s,mb4.3
DAWY Dawson 63.23 30 *eP* **P** **22 25 08.4 -0.2**
STKA Stephens Creek 63.42 168 *eP* **P** **22 25 10.6 +0.3**
comp=Z,8.6nm,0.6s,mb4.6
STKA Stephens Creek 63.42 168 P **P** **22 25 10.0 -0.3**
comp=Z,12nm,0.7s,mb4.7,baz=336,slow=6.5,SNR=15
DZM Mont Dzumac 63.46 141 *eP* **P** **22 25 11.3 +0.6**
INK Inuvik 64.26 24 P **P** **22 25 14.9 -0.4**
comp=Z,4.7nm,0.5s,mb4.4,baz=313,slow=7.4,SNR=20
INK Inuvik 64.26 24 P **P** **22 25 14.9 -0.4**
INK pmax pmax
comp=Z,5.0nm,0.5s
INK Inuvik 64.26 24 *eP* **P** **22 25 14.9 -0.4**
comp=Z,11nm,1.1s,mb4.4
ARMA Armidale 64.46 159 *eP* **P** **22 25 18.0 +1.0**
SPITS Spitsbergen Ar 64.56 348 P **P** **22 25 15.7 -1.4**
comp=Z,4.8nm,0.9s,mb4.1,baz=64,slow=9.4,SNR=5.3
SPITS Spitsbergen Ar 64.56 348 P **P** **22 25 15.7 -1.4**
SPITS pmax pmax
comp=Z,5.0nm,0.9s
KIP Kipapa 64.80 79 *deP* **P** **22 25 16.4 -3.2**
HYT Haines Junctio 65.02 33 *eP* **P** **22 25 22.0 +1.7**
KEV Kevo 65.57 338 *eP* **P** **22 25 22.4 -1.3**
KEV Kevo 65.57 338 *ep* **P** **22 25 22.4 -1.3**
comp=Z,0.2nm,0.3s,mb3.2
ARCES ARCESS Array B 66.14 338 P **P** **22 25 25.9 -1.4**
comp=Z,2.6nm,0.9s,mb3.9,baz=75,slow=6.9,SNR=3.8
ARCES ARCESS Array B 66.14 338 P **P** **22 25 25.9 -1.4**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
JOF Joensuu 66.56 330 *eP* **P** **22 25 28.5 -1.6**
JOF Joensuu 66.56 330 *ep* **P** **22 25 28.5 -1.6**
comp=Z,0.4nm,0.3s,mb3.5
ZEI Tsey 66.79 307 *eP* **P** **22 25 30.7 -1.2**
GNI Garni 67.15 304 *ceP* **P** **22 25 35.5 +1.3**
GNI pmax pmax
comp=Z,9.0nm,1.5s
KIV Kislovodsk 67.18 309 *eP* **P** **22 25 34.5 +0.1**
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
KIV Kislovodsk 67.18 309 *eP* **P** **22 25 35.1 +0.7**
KAF Kangasniemi 69.02 331 *eP* **P** **22 25 45.5 +0.1**
KAF Kangasniemi 69.02 331 *ep* **P** **22 25 45.5 +0.1**
comp=Z,0.2nm,0.4s,mb3.1
MIB Mutribah 69.22 293 *eP* **P** **22 25 46.9 -0.3**
MIB AMb AMB 22 25 47.8
comp=Z,18nm,0.9s,mb4.7
FINES FINESS Array B 69.41 330 P **P** **22 25 46.6 -1.2**
comp=Z,0.9nm,0.3s,mb3.8,baz=51,slow=5.6,SNR=10
FINES pP pP 22 26 45.2 +0.1
comp=Z,1.5nm,0.7s,baz=62,slow=4.5,SNR=1.8
FINES FINESS Array B 69.41 330 P **P** **22 25 46.6 -1.2**
FINES *PP pP 22 26 45.3 +0.2
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES pmax pmax
comp=Z,2.0nm,0.7s
RDF Al-Radifah 69.42 292 *eP* **P** **22 25 48.1 -0.3**
RDF AMb AMB 22 25 48.8
comp=Z,21nm,0.6s,mb5.0
DLBC Dease Lake 69.44 34 P **P** **22 25 48.0 0.0**
comp=Z,4.3nm,0.8s,mb4.2,baz=290,slow=7.0,SNR=7.9
NAY Al-Naaiem 69.53 292 *eP* **P** **22 25 48.6 -0.6**
NAY AMb AMB 22 25 49.2
comp=Z,9.0nm,0.8s,mb4.5
AKASG Malin Array Be 72.75 319 P **P** **22 26 07.0 -1.0**
comp=Z,2.3nm,0.5s,mb4.1,baz=55,slow=6.9,SNR=5.5
AKASG pP pP 22 27 06.4 +0.5
comp=Z,0.2nm,0.3s,baz=55,slow=4.5,SNR=1.8
AKASG Malin Array Be 72.75 319 P **P** **22 26 07.0 -1.0**
AKASG *PP pP 22 27 06.4 +0.5
AKASG pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 73.92 26 P **P** **22 26 14.2 -0.4**
comp=Z,3.9nm,0.6s,mb4.2,baz=303,slow=5.9,SNR=48
YKA pP pP 22 27 13.7 +1.1
comp=Z,0.8nm,0.8s,baz=309,slow=5.5,SNR=3.2
YKA Yellowknife Ar 73.92 26 P **P** **22 26 14.2 -0.4**
YKA *PP pP 22 27 13.7 +1.1
YKA pmax pmax
comp=Z,4.0nm,0.6s
YKA pmax pmax
comp=Z,1.0nm,0.8s
BR131 Keskin Array S 75.08 307 *eP* **P** **22 26 21.8 +0.1**
comp=Z,2.5nm,0.7s,mb4.0
BRTR Keskin Array B 75.08 307 P **P** **22 26 21.3 -0.4**
comp=Z,5.1nm,0.8s,mb4.2,baz=93,slow=5.1,SNR=38
BRTR pP pP 22 27 22.1 +2.1
comp=Z,0.7nm,0.7s,baz=94,slow=5.1,SNR=2.7
BRTR Keskin Array B 75.08 307 P **P** **22 26 21.3 -0.4**
BRTR *PP pP 22 27 22.1 +2.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 75.67 334 P **P** **22 26 23.2 -1.4**
comp=Z,2.0nm,0.7s,mb3.8,baz=50,slow=5.4,SNR=6.2
NOA NORSAR Array B 75.67 334 P **P** **22 26 23.2 -1.4**
NOA pmax pmax
comp=Z,2.0nm,0.7s
SUMG Summit 76.53 356 *eP* **P** **22 26 29.1 -0.1**
comp=Z,5.2nm,0.7s,mb4.3
MMAI Mount Meron Ar 76.97 301 P **P** **22 26 32.9 +0.5**
comp=Z,1.8nm,0.5s,mb3.9,baz=64,slow=7.7,SNR=6.7
A07A Ashnola River, 79.10 39 ⇓P **P** **22 26 43.5 -0.3**
baz=79
D05A Enumclaw 79.26 41 ⇑P **P** **22 26 44.6 -0.2**
baz=79
DPC Dobruska-Polom 79.91 323 *ep*P pP 22 27 54.9 +7.8
B08A Colville Reser 80.07 39 ⇑P **P** **22 26 48.5 -0.5**
baz=80
C09A Chrisman Ranch 80.97 39 ⇓P **P** **22 26 53.9 +0.1**
baz=81
CLL Collm 81.00 325 *eP* **P** **22 26 53.0 -0.9**
CLL Collm 81.00 325 *eP* **P** **22 26 53.0 -0.9**
CLL *e* 22 03 54.0
comp=Z,8.0nm,0.9s
D08A Wollman Farm, 81.06 40 ⇑P **P** **22 26 54.2 -0.1**
baz=81
G06A Carlson Farm, 81.14 42 ⇑P **P** **22 26 54.7 -0.1**
baz=81
HUMO Hull Mountain 81.25 45 *eP* **P** **22 26 55.8 +0.4**
A11A Hall Mountain, 81.30 37 ⇓P **P** **22 26 55.6 +0.1**
baz=81
NEW Newport 81.32 38 *eP* **P** **22 26 55.3 -0.3**
NEW pmax pmax
comp=Z,9.0nm,1.1s

NEW Newport 81.32 38 *eP* **P** **22 26 55.2 -0.4**
comp=Z,9.1nm,1.1s,mb4.3
B11A Sandpoint 81.61 38 ⇓P **P** **22 26 57.8 +0.6**
baz=81
KHMM Horse Mountain 81.73 47 *eP* **P** **22 26 59.2 +1.2**
URZ Urewera 81.86 144 P **P** **22 26 57.5 -0.9**
comp=Z,6.9nm,0.6s,mb4.5,baz=346,slow=4.2,SNR=8.8
YBH Yreka Blue Hor 81.89 46 P **P** **22 26 59.3 +0.5**
comp=Z,5.5nm,0.9s,mb4.2,baz=268,slow=2.3,SNR=16
YBH Yreka Blue Hor 81.89 46 P **P** **22 26 59.3 +0.5**
YBH pmax pmax
comp=Z,6.0nm,0.9s
G08A Pilot Rock 82.08 42 ⇑P **P** **22 26 60.0 +0.3**
baz=82
E10A Myers Farm, Un 82.40 40 ⇑P **P** **22 27 01.2 -0.1**
baz=82
K05A Summer Lake 82.44 44 ⇓P **P** **22 27 02.4 +0.8**
baz=82
I07A Izee 82.47 43 ⇑P **P** **22 27 01.4 -0.3**
baz=82
D11A Klaveano Farm, 82.48 39 ⇓P **P** **22 27 01.2 -0.5**
baz=82
B13A Whitefish 82.65 37 ⇓P **P** **22 27 02.4 -0.1**
baz=82,SNR=6.9
H08A Prairie City 82.70 42 ⇑P **P** **22 27 02.6 -0.3**
baz=82
G09A Cove 82.75 41 ⇓P **P** **22 27 02.9 -0.2**
baz=82,SNR=7.3
A14A Double T Ranch 82.81 36 ⇑P **P** **22 27 03.0 -0.3**
baz=82,SNR=13
BSMT Bassoo Peak 82.81 38 *eP* **P** **22 27 04.9 +1.6**
E11A Bogner Ranch, 82.97 39 ⇓P **P** **22 27 03.7 -0.5**
baz=83
D12A Red Ives Fores 83.00 39 ⇑P **P** **22 27 03.9 -0.5**
baz=83
C13A Hot Springs 83.03 38 ⇑P **P** **22 27 04.2 -0.3**
baz=83,SNR=5.7
G10A Bishop Farm, J 83.11 41 ⇑P **P** **22 27 04.0 -1.0**
baz=83,SNR=5.3
JTMT Jette 83.14 38 *eP* **P** **22 27 05.9 +0.8**
A15A Johnson Ranch, 83.15 36 ⇑P **P** **22 27 04.5 -0.6**
baz=83,SNR=6.0
H09A Durkee 83.19 41 ⇑P **P** **22 27 06.1 +0.7**
baz=83
MOD Modoc 83.27 45 *eP* **P** **22 27 06.0 +0.1**
comp=Z,17nm,1.2s,mb4.7
E12A Beaver Dam Sad 83.28 39 ⇑P **P** **22 27 05.8 -0.1**
baz=83
F11A Grangeville 83.29 40 ⇑P **P** **22 27 05.4 -0.4**
baz=83
C14A Swan Lake 83.40 37 ⇑P **P** **22 27 05.7 -0.7**
baz=83
SWMT Swartz Lake 83.44 38 *eP* **P** **22 27 06.4 -0.2**
J08A Circle Bar Ran 83.50 43 ⇑P **P** **22 27 07.4 +0.4**
baz=83,SNR=11
G11A Walters Elk Ra 83.53 40 ⇓P **P** **22 27 06.7 -0.4**
baz=83,SNR=6.8
I09A Lost Marbles R 83.56 42 ⇑P **P** **22 27 07.1 -0.2**
baz=83
FCC Fort Churchill 83.67 21 *eP* **P** **22 27 06.6 -0.9**
B15A Bradely Ranch, 83.67 36 ⇑P **P** **22 27 07.4 -0.4**
baz=83,SNR=6.5
A16A West Butte Ran 83.74 35 ⇓P **P** **22 27 07.8 -0.3**
baz=84,SNR=6.1
H10A Noah's Angus R 83.75 41 ⇑P **P** **22 27 07.9 -0.4**
baz=84,SNR=12
F12A Elk City 83.86 40 P **P** **22 27 08.7 -0.1**
baz=84,SNR=15
J09A Fry Pan Ranch, 83.93 43 ⇑P **P** **22 27 09.5 +0.3**
baz=84,SNR=12
D14A Greenough 83.97 38 ⇓P **P** **22 27 08.7 -0.5**
baz=84
C15A Salmond Ranch, 83.99 37 ⇑P **P** **22 27 09.3 -0.1**
baz=84,SNR=8.7
FFC Flin Flon 84.01 27 *i P* **P** **22 27 08.8 -0.5**
FFC Flin Flon 84.01 27 *eP* **P** **22 27 08.6 -0.7**
comp=Z,15nm,0.9s,mb4.7
B16A M & M Farms, S 84.03 36 ⇓P **P** **22 27 08.7 -0.9**
baz=84
H11A Donnelly 84.10 41 ⇓P **P** **22 27 09.1 -0.9**
baz=84
A17A Triple J Farms 84.19 35 ⇓P **P** **22 27 10.2 -0.1**
baz=84,SNR=5.8
G12A Big Creek, Yel 84.22 40 ⇓P **P** **22 27 10.0 -0.5**
baz=84
C16A Fuhringer Ranc 84.42 36 ⇓P **P** **22 27 11.3 -0.2**
baz=84,SNR=5.7
BEKR Beckwourth 84.42 47 ⇓P **P** **22 27 11.1 -0.6**
baz=84,SNR=7.4
B17A L&G Farms, Che 84.57 36 ⇓P **P** **22 27 12.0 -0.3**
baz=84,SNR=7.6
A18A Metzger Ranch, 84.63 35 ⇑P **P** **22 27 11.5 -1.0**
baz=84,SNR=5.7
K10A MacKenzie Ranc 84.79 43 ⇑P **P** **22 27 12.9 -0.5**
baz=84,SNR=5.9
H12A Diamond D Ranc 84.84 40 ⇑P **P** **22 27 13.3 -0.4**
baz=85,SNR=12
B18A Beardsley Farm 85.01 35 ⇓P **P** **22 27 13.9 -0.6**
baz=85
D16A Dana Ranch, Ca 85.02 37 ⇓P **P** **22 27 14.1 -0.5**
baz=85
PAHR Pah Rah Range 85.12 46 *eP* **P** **22 27 15.7 +0.5**
I12A Atlanta 85.16 41 ⇓P **P** **22 27 14.9 -0.4**
baz=85
H13A Challis 85.16 40 ⇓P **P** **22 27 14.7 -0.6**
baz=85
EGMT Eagleton 85.27 35 ⇓P **P** **22 27 14.9 -0.8**
baz=85
K11A Parker Ranch, 85.28 42 ⇑P **P** **22 27 15.9 0.0**
baz=85
E16A East Helena 85.28 37 ⇑P **P** **22 27 15.8 -0.1**
baz=85
D17A Six Diamond Ra 85.38 36 ⇓P **P** **22 27 16.2 -0.1**
baz=85
L10A Juniper Basin 85.45 43 ⇑P **P** **22 27 17.2 +0.5**
baz=85,SNR=7.1
CMB Columbia Colle 85.48 48 *eP* **P** **22 27 16.8 -0.2**
CMB pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CMB Columbia Colle 85.48 48 *eP* **P** **22 27 16.8 -0.2**
comp=Z,8.8nm,1.1s,mb4.4
J12A Stokes Ranch, 85.52 41 ⇓P **P** **22 27 17.2 +0.1**
baz=85
DLMT Dillon 85.56 39 *eP* **P** **22 27 17.5 +0.2**
comp=Z,4.1nm,0.5s,mb4.4
I13A Wildhorse Cree 85.65 40 ⇓P **P** **22 27 18.0 +0.3**
baz=85,SNR=15
HLID Hailey 85.71 41 ⇓P **P** **22 27 17.9 -0.1**
baz=86,SNR=12
HLID Hailey 85.71 41 *eP* **P** **22 27 18.8 +0.8**
comp=Z,5.3nm,0.8s,mb4.3
G15A Dillon 85.74 39 ⇓P **P** **22 27 17.8 -0.3**
baz=86,SNR=9.0
E17A Martinsdale 85.75 37 ⇓P **P** **22 27 18.0 -0.2**
baz=86,SNR=7.9
M10A I.L. Ranch, Tu 85.75 43 ⇓P **P** **22 27 18.3 +0.1**
baz=86,SNR=5.4
F16A Kennard Place, 85.80 38 ⇓P **P** **22 27 18.6 +0.2**
baz=86
L11A Cat Creek Ranc 85.81 43 ⇓P **P** **22 27 18.9 +0.4**
baz=86,SNR=11
BOZ Bozeman (W) 85.89 38 ⇑P **P** **22 27 18.8 0.0**
baz=86,SNR=5.6
BOZ Bozeman (W) 85.89 38 *eP* **P** **22 27 19.3 +0.5**
BOZ pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
BOZ Bozeman (W) 85.89 38 *eP* **P** **22 27 19.3 +0.4**
comp=Z,3.2nm,1.1s,mb4.0
J13A Cove Ranch, Pi 85.95 41 ⇓P **P** **22 27 19.2 0.0**
baz=86,SNR=9.7
I14A Mackay 86.01 40 ⇓P **P** **22 27 19.9 +0.4**
baz=86,SNR=9.9
K12A Draper Farm, C 86.01 42 ⇓P **P** **22 27 19.0 -0.6**
baz=86
G16A Moss Hill, Enn 86.07 38 ⇑P **P** **22 27 18.7 -1.0**
baz=86,SNR=5.1
E18A Harlowton 86.17 37 ⇓P **P** **22 27 18.9 -1.3**
baz=86,SNR=8.1
F17A Fitzpatrick Pl 86.23 37 ⇑P **P** **22 27 20.5 +0.1**
baz=86
M11A Holland Ranch, 86.25 43 ⇑P **P** **22 27 20.1 -0.6**
baz=86,SNR=5.2
L12A House Creek Ra 86.26 42 ⇓P **P** **22 27 20.3 -0.4**
baz=86,SNR=6.4
NVAR Mina Array Bea 86.56 47 P **P** **22 27 23.1 +0.8**
comp=Z,2.5nm,0.6s,mb4.1,baz=306,slow=5.5,SNR=15
H16A Russell Place, 86.71 39 ⇑P **P** **22 27 22.3 -0.6**
baz=86

F18A	Big Timber	86.72	37	⇑P		P	22 27 22.8 -0.1
	baz=86,SNR=7.7						
M12A	Wells	86.78	43	⇑P		P	22 27 24.2 +1.0
	baz=86						
L13A	Double Diamond	86.91	42	⇑P		P	22 27 24.8 +0.9
	baz=87						
J15A	Blackfoot	86.92	40	⇑P		P	22 27 23.3 -0.6
	baz=87						
P10A	Eureka	86.97	45	⇑P		P	22 27 24.3 +0.1
	baz=87						
K14A	Jones Ranch, D	87.06	41	⇑P		P	22 27 25.3 +0.7
	baz=87						
N12A	Clover Valley,	87.06	43	⇑P		P	22 27 25.1 +0.5
	baz=87						
M13A	Montello	87.25	42	⇑P		P	22 27 25.8 +0.4
	baz=87						
H17A	Grant Village	87.27	38	⇑P		P	22 27 27.6 +2.1
	baz=87,SNR=5.6						
L14A	Malta	87.35	42	⇓P		P	22 27 26.9 +0.9
	baz=87,SNR=5.0						
J16A	Bone	87.45	40	⇑P		P	22 27 26.7 +0.3
	baz=87						
RRI2	Red Ridge	87.57	40	*e*P		P	22 27 28.2 +1.2
O12A	Currie	87.60	44	⇓P		P	22 27 27.3 +0.1
	baz=87						
M14A	Sheep Mountain	87.63	42	⇓P		P	22 27 27.6 +0.3
	baz=87,SNR=8.9						
TPAW	Teton Pass	87.67	39	*e*P		P	22 27 28.8 +1.3
L15A	Malad City	87.85	41	⇓P		P	22 27 29.1 +0.7
	baz=88						
S10A	Tonopah Range,	87.94	46	⇑P		P	22 27 29.2 +0.4
	baz=88						
Q11A	Duckwater	87.94	45	⇓P		P	22 27 28.6 -0.3
	baz=88						
P12A	McGill	88.00	44	⇓P		P	22 27 29.1 0.0
	baz=88						
N14A	Grayback Hills	88.14	42	⇓P		P	22 27 30.1 +0.4
	baz=88,SNR=8.9						
I18A	Diamond G Ranc	88.14	39	⇓P		P	22 27 30.3 +0.7
	baz=88						
M15A	Larsen Ranch,	88.17	42	⇑P		P	22 27 29.7 -0.1
	baz=88,SNR=5.5						
R11A	Troy Canyon, C	88.30	45	⇓P		P	22 27 30.8 +0.3
	baz=88						
J18A	Kendall Valley	88.36	39	⇓P		P	22 27 31.0 +0.3
	baz=88						
N15A	Stansbury Isla	88.50	42	⇓P		P	22 27 31.9 +0.5
	baz=88,SNR=8.6						
MPMC	Manual Prospec	88.51	48	⇑P		P	22 27 32.0 +0.4
	baz=88						
HWUT	Hardware Ranch	88.58	41	*e*P		P	22 27 32.6 +0.9
	comp=Z,3.8nm,0.9s,mb4.2						
FURC	Furnace Creek,	88.66	48	⇑P		P	22 27 32.7 +0.4
	baz=88						
DUG	Dugway	88.78	43	⇑P		P	22 27 33.1 +0.4
	baz=88,SNR=6.6						
DUG	Dugway	88.78	43	*e*P		P	22 27 33.3 +0.6
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
DUG	Dugway	88.78	43	*e*P		P	22 27 33.3 +0.6
	comp=Z,4.2nm,1.0s,mb4.2						
BW06	Boulder Array	88.92	39	⇓P		P	22 27 32.5 -0.8
	baz=89						
PDAR	Pinedale Array	88.92	39	P		P	22 27 33.0 -0.3
	comp=Z,1.9nm,0.7s,mb4.1,baz=359,slow=1.3,SNR=20						
PDAR				pP	pP		22 28 35.2 +1.7
	comp=Z,0.8nm,0.8s,baz=352,slow=3.0,SNR=4.0						
P14A	Drum Mountains	89.02	43	⇑P		P	22 27 34.2 +0.3
	baz=89,SNR=5.4						
T11A	Corn Creek, Al	89.22	46	⇓P		P	22 27 34.5 -0.4
	baz=89						
Q14A	Sevier Lake (B	89.29	44	⇑P		P	22 27 35.4 +0.2
	baz=89,SNR=9.5						
Q15A	Fillmore	89.81	43	⇑P		P	22 27 38.4 +0.8
	baz=90						
S13A	Holt Ranch, En	89.84	45	P		P	22 27 38.6 +0.9
	baz=90,SNR=5.7						
ULM	Lac du Bonnet	89.84	27	P		P	22 27 36.6 -0.8
	comp=Z,5.9nm,0.7s,mb4.5,baz=267,slow=3.7,SNR=4.4						
O17A	Robinson Place	89.98	42	⇑P		P	22 27 38.6 +0.3
	baz=90,SNR=5.1						
T13A	Saint George	90.17	46	⇑P		P	22 27 40.3 +1.0
	baz=90						
MSU	Marysvale	90.25	44	*e*P		P	22 27 41.3 +1.7
O18A	Roosevelt	90.35	41	⇑P		P	22 27 40.6 +0.6
	baz=90						
N19A	John Jarvie Ra	90.39	40	⇓P		P	22 27 40.1 -0.1
	baz=90						
P17A	Butcher Ranch,	90.46	42	⇑P		P	22 27 41.0 +0.5
	baz=90,SNR=6.3						
U13A	Pakoon Wash	90.52	46	⇓P		P	22 27 41.4 +0.5
	baz=90						
Q16A	Castle Valley	90.58	43	⇓P		P	22 27 41.1 0.0
	baz=90						
P18A	Preston Nutter	90.64	42	⇑P		P	22 27 41.2 -0.2
	baz=90,SNR=15						
R16A	Teasdale	90.81	43	⇓P		P	22 27 41.7 -0.5
	baz=91,SNR=11						
SRU	San Rafael	90.82	42	⇑P		P	22 27 42.3 +0.1
	baz=91,SNR=7.2						
SRU	San Rafael	90.82	42	*e*P		P	22 27 43.0 +0.8
N20A	Spence Gulch,	90.94	40	⇑P		P	22 27 42.6 -0.2
	baz=91						
U14A	Mt Trumbull	91.00	46	⇑P		P	22 27 43.1 0.0
	baz=91						
Q18A	Rafter H Ranch	91.06	42	⇑P		P	22 27 43.0 -0.3
	baz=91						
T15A	Red Dirt Ranch	91.10	45	⇑P		P	22 27 43.6 0.0
	baz=91,SNR=7.3						
R17A	Hanksville Air	91.18	43	⇑P		P	22 27 44.3 +0.4
	baz=91,SNR=8.5						
IRM	Iron Mountain	91.19	49	⇓P		P	22 27 43.8 -0.3
	baz=91						
BC3	Big Chuckw Mtn	91.31	49	⇑P		P	22 27 44.4 -0.2
	baz=91						
P19A	Cripple Cowboy	91.36	41	⇑P		P	22 27 45.2 +0.5
	baz=91,SNR=7.4						
W13A	Hualapai Mount	91.41	47	⇑P		P	22 27 45.7 +0.7
	baz=91						
O20A	White River Ci	91.43	40	⇓P		P	22 27 44.7 -0.3
	baz=91						
U15A	North Rim	91.54	45	⇑P		P	22 27 46.6 +1.0
	baz=91,SNR=7.5						
V14A	Boquillas Ranc	91.55	46	⇑P		P	22 27 45.4 -0.3
	baz=91,SNR=7.9						
S17A	Black Ridge (B	91.64	44	⇓P		P	22 27 46.0 -0.1
	baz=91						
R18A	Canyonlands Na	91.67	43	⇓P		P	22 27 46.3 +0.1
	baz=91,SNR=5.0						
X13A	Yucca	91.76	47	⇓P		P	22 27 46.3 -0.4
	baz=92						
W14A	Seligman	91.84	47	⇓P		P	22 27 47.5 +0.5
	baz=92						
Y12C	Blythe	91.86	49	⇓P		P	22 27 46.9 -0.3
	baz=92						
V15A	Kaibab Nationa	92.01	46	⇑P		P	22 27 48.5 +0.7
	baz=92,SNR=6.1						
S18A	Hurst Farm, Bl	92.08	43	⇑P		P	22 27 48.0 -0.1
	baz=92						
Q20A	Ridgley Place,	92.21	41	⇑P		P	22 27 49.2 +0.5
	baz=92						
Y13A	Salome	92.26	48	⇓P		P	22 27 48.8 -0.3
	baz=92						
U17A	Shonto	92.41	44	⇓P		P	22 27 50.7 +1.0
	baz=92						
T18A	Mexican Hat	92.53	43	⇑P		P	22 27 49.6 -0.6
	baz=92						
R20A	Redvale	92.68	42	⇑P		P	22 27 51.4 +0.5
	baz=92						
Y14A	Wickenburg	92.71	48	⇑P		P	22 27 50.6 -0.5
	baz=92						
V17A	Tonalea, Kykot	92.98	45	⇓P		P	22 27 52.1 -0.2
	baz=93,SNR=7.6						
U18A	Rough Rock, Ch	93.01	44	⇓P		P	22 27 53.0 +0.5
	baz=93						
Q22A	Crested Butte,	93.05	41	⇓P		P	22 27 52.6 +0.1
	baz=93						
T19A	Beclabito	93.23	43	⇓P		P	22 27 53.1 -0.3
	baz=93						
X16A	Lo Mia Camp, P	93.38	46	⇓P		P	22 27 54.2 0.0
	baz=93						
TXAR	Lajitas Array	101.66	45	P		Pdif	22 28 32.0 +0.8
	comp=Z,0.3nm,0.7s,baz=306,slow=2.1,SNR=3.8						
TXAR	Lajitas Array	101.66	45	P		Pdif	22 28 32.0 +0.8
TORD	Torodi Ar. Bea	113.44	303	PKiKP		PKiKP	22 33 14.4 -1.6
	comp=Z,0.2nm,0.8s,baz=100,slow=1.3,SNR=7.0						
QSPA	South Pole Qui	120.60	180	PKP		PKPdf	22 33 27.0 -0.9
	comp=Z,1.1nm,0.8s,baz=284,slow=1.5,SNR=10.0						
NNA	Nana	149.29	58	*e*PKPbc		PKPbc	22 34 26.2 -0.7
LPAZ	La Paz	158.38	52	PKP		PKPdf	22 34 35.4 +0.4
	comp=Z,0.7nm,0.7s,baz=15,slow=5.8,SNR=3.9						
LPAZ				PKPab		PKPab	22 35 10.2 -0.6
	comp=Z,1.3nm,0.8s,baz=326,slow=5.1,SNR=5.2						
LPAZ	La Paz	158.38	52	PKIKP		PKPdf	22 34 35.4 +0.4
LPAZ							22 35 10.2
LPAZ				pmax		pmax	
	comp=Z,1.0nm,0.7s						
LPAZ				pmax		pmax	
	comp=Z,1.0nm,0.9s						

IDC 17 22:20:43.5±1.8, 15°.41N×145°.94E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=55.0km s-min=24.3km az=112.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.09	210	Pn	Pn	22 21 20.4	+0.7
	16nm,0.3s,baz=23,slow=0.0,SNR=14						
GUMO				Sn	Sn	22 21 46.0	-0.5
	9.0nm,0.3s,baz=250,slow=0.0,SNR=3.1						
MKAR	Makanchi Array	60.92	315	P	P	22 30 59.0	+0.8
	0.3nm,0.5s,baz=86,slow=8.7,SNR=3.9						
KURK	Kurchatov	63.88	319	P	P	22 31 18.0	0.0
	1.0nm,0.6s,baz=99,slow=6.8,SNR=5.5						
BVAR	Borovoye Array	69.15	321	P	P	22 31 51.3	-0.4
	0.4nm,0.5s,baz=100,slow=7.9,SNR=4.1						
YKA	Yellowknife Ar	80.77	28	P	P	22 32 58.7	+0.1
	0.1nm,0.4s,baz=284,slow=5.1,SNR=3.0						

KRSC 17 22:26:18.0±0.1, 51°.97N×158°.79E, h41km±31km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.49	340	*i* P	Pn	22 26 29.5	+0.8
RUS				*i* S	Sn	22 26 37.5	+1.3
GRL	Gorelyy	0.73	323	*e*P	Pn	22 26 33.0	+1.2
GRL				*i* S	Sn	22 26 44.1	+2.3
PET	Petropavlovsk	1.06	356	*e*P	Pn	22 26 36.8	+0.5
PET				*i* S	Sn	22 26 50.2	+0.4
NLC	Nalytchevo	1.25	16	*e*P	Pn	22 26 38.4	-0.5
NLC				*i* S	Sn	22 26 53.0	-1.5
MIPR	Malaya Ipel'ka	1.29	285	*e*P	Pn	22 26 40.3	+0.8
AVH	Avacha	1.30	359	*e*P	Pn	22 26 40.6	+1.0
SPN	Mys Shipunski	1.36	33	*e*P	Pn	22 26 41.7	+1.3
SPN				*i* S	Sn	22 26 58.7	+1.5
GNL	Ganaly	1.80	344	*e*P	Pn	22 26 47.8	+1.3
GNL				*i* S	Sn	22 27 09.2	+1.1
KII	Karymskiy	2.11	11	P	Pn	22 26 53.7	+3.0
KII				*i* S	Sn	22 27 18.8	+3.2
ALID	Alaid	2.31	243	*e*P	Pn	22 26 54.1	+0.6
ALID				*i* S	Sn	22 27 21.6	+1.0
MKZ	Mys Kozlova	3.13	33	*e*P	Pn	22 27 07.1	+2.3
MKZ				*i* S	Sn	22 27 42.1	+1.2
KMNR	Kamenistaya	3.89	12	*e*P	Pn	22 27 18.7	+3.6
CIRR	Tsirk	4.31	15	P	Pn	22 27 24.8	+3.9
KBTR	Krutoberegovo	4.86	28	*e*P	Pn	22 27 31.4	+2.9

IDC 17 22:29:39.5±1.1, 32°.25N×105°.41E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/26, mbtmp3.5/8, ML3.3/2, Error ellipse: s-maj=48.7km s-min=20.4km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.91	205	Pn	Pn	22 33 10.6	-1.1
	0.1nm,0.3s,baz=198,slow=26,SNR=4.3						
SONM	Songino Array	15.59	2	Pn	Pn	22 33 20.8	+0.4
	0.1nm,0.3s,baz=184,slow=10,SNR=3.7						
MKAR	Makanchi Array	22.88	316	P	P	22 34 44.6	0.0
	0.2nm,0.3s,baz=110,slow=12,SNR=7.2						
ZALV	Zalesovo Beam	26.21	332	P	P	22 35 16.0	+0.3
	0.3nm,0.3s,baz=135,slow=8.9,SNR=3.4						
KURK	Kurchatov	27.03	321	P	P	22 35 22.6	-0.6
	0.3nm,0.4s,baz=120,slow=12,SNR=3.6						
FINES	FINESS Array B	57.24	326	P	P	22 39 29.0	+0.7
	4.0nm,1.1s,baz=105,slow=12,SNR=4.1						
ASAR	Alice Springs	61.91	150	P	P	22 40 01.2	+0.3
	0.7nm,0.5s,baz=330,slow=6.6,SNR=15						
YKA	Yellowknife Ar	80.27	18	P	P	22 41 51.2	-0.6
	0.2nm,0.5s,baz=328,slow=5.1,SNR=5.1						

ISCJB 17 22:42:34.1±1.1, 40°.37N±0°.04×138°.95E±0°.08, h25km±8km, Error ellipse: s-maj=10.4km s-min=6.4km az=23.0
JMA 17 22:42:34.5±0.1, 40°.37N×138°.95E, h28km±2km, M3.6
ISC 17 22:42:33.7±2.3, 40°.37N±0°.05×138°.99E±0°.07, h12km±18km, n15, σ0°70/21, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOG2	Oga 2	0.77	126	P	Pb	22 42 49.4	+0.4
JOG2				S	Sb	22 42 59.8	+0.5
JIW	Iwasaki	0.81	74	P	Pb	22 42 50.0	+0.3
JIW				S	Sb	22 43 00.6	0.0
JAH	Hinai	1.27	98	P	Pn	22 42 57.0	-0.3
JAH				*e*S	Sb	22 43 13.1	-0.8
JSR	Shiriuchi	1.59	43	P	Pn	22 43 01.6	0.0
JTM	Tenmabayashi	1.64	75	P	Pn	22 43 02.5	+0.2
JOSM	Okushiri--Mats	1.75	12	P	Pn	22 43 02.5	-1.3
JYK	Kaneyama	1.80	143	P	Pn	22 43 04.1	-0.4
JYK				*e*S	Sn	22 43 26.3	-0.9
JOT	Ohata	1.86	56	P	Pn	22 43 05.7	+0.3
JYA	Atsumi	1.86	162	P	Pn	22 43 05.1	-0.3
JAW	Awa shima	1.92	174	P	Pn	22 43 05.7	-0.5
JANG	Nango	1.93	89	P	Pn	22 43 07.0	+0.7
JOM	Ohasama	1.99	116	P	Pn	22 43 07.5	+0.4
JKB	Kayabe	2.17	45	P	Pn	22 43 10.1	+0.6
MAT	Matsushiro	3.87	189	P	Pn	22 43 34.6	+1.6
MAT				S	Sn	22 44 18.9	+0.6
MAT	Matsushiro	3.87	189	P	Pb	22 43 40.5	-1.4
MAT				S	Sb	22 44 35.5	+6.9

ISCJB 17 22:55:13.6±0.6, 22°.63S±0°.05×65°.99W±0°.07, h255km±9km, mb3.9/7, Error ellipse: s-maj=10.9km s-min=7.6km az=3.9
NEIC 17 22:55:14.5±0.6, 22°.57S×65°.95W, h249km±7km, mb4.2/4, Error ellipse: s-maj=9.7km s-min=7.2km az=98.0
IDC 17 22:55:14.4±1.3, 22°.52S×65°.85W, h247km±14km, mb3.6/6, mb1 3.6/12, mb1mx3.5/20, mbtmp3.5/12, Error ellipse: s-maj=19.8km s-min=12.4km az=87.0
GUC 17 22:55:16.3±0.6, 22°.43S×66°.55W, h279km±23km, ML5.3
ISC 17 22:55:14.4±0.6, 22°.58S±0°.05×65°.98W±0°.07, h246km±9km, n25, σ1°03/32, mb3.8/7, 2C-3D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	Pedro de Valdi	3.41	269	⇓*i* P	Pn	22 56 12.4	+1.2
PECH				*i* S	S	22 56 55.3	-0.9
PECH				AML	AML	22 56 57.5	
	comp=E,3μm,0.4s						
MACH	Maria Elena	3.51	276	⇓*i* P	Pn	22 56 13.4	+1.1
MACH				*i* S	S	22 56 57.1	-1.2
CEN1	Los Morros	3.97	258	⇓*i* P	Pn	22 56 22.1	+4.5
CEN1				*i* S	S	22 57 09.9	+2.1
MECH	Mejillones	4.15	262	⇑*i* P	Pn	22 56 21.0	+1.2
MECH				*e*S	S	22 57 09.9	-1.8
ANCH	Antofagasta	4.22	254	⇑*i* P	Pn	22 56 21.2	+0.6
ANCH				*i* S	S	22 57 11.2	-2.0
LPAZ	La Paz	6.58	342	P	Pn	22 56 51.1	+1.3
	comp=E,3.8nm,0.3s,baz=150,slow=8.0,SNR=75						
LPAZ				S	S	22 58 06.0	-0.2
	comp=E,1.1nm,0.3s,baz=298,slow=16,SNR=19						
LCO	Las Campanas	7.68	213	*e*Pn	Pn	22 57 03.3	-0.3
	comp=E,15nm,0.6s						
LCO				*e*S	S	22 58 21.3	-10
SIV	San Ignacio	8.03	36	P	Pn	22 57 07.9	-0.3
	comp=E,7.0nm,0.3s,baz=234,slow=11,SNR=119						
CPUP	Villa Florida	8.72	117	P	Pn	22 57 16.3	-0.6
	comp=E,0.4nm,0.3s,baz=285,slow=11,SNR=7.3						
CPUP	Villa Florida	8.72	117	*e*Pn	Pn	22 57 17.4	+0.5
CFAA	Coronel Fontan	9.21	192	P	Pn	22 57 22.4	-0.5
	comp=E,0.6nm,0.3s,baz=20,slow=12,SNR=23						
CFAA				S	S	22 59 00.3	-6.5
	comp=E,1.6nm,0.3s,baz=92,slow=23,SNR=18						
CFAA	Coronel Fontan	9.21	192	P	Pn	22 57 22.4	-0.5
CFAA				S	S	22 59 00.3	-6.5
NNA	Nana	14.77	314	P	Pn	22 58 32.8	+0.7
	comp=E,0.7nm,0.3s,baz=184,slow=12,SNR=6.0						
TRQA	Tornquist	15.80	168	*e*P	Pn	22 58 44.3	+0.1
	comp=E,2.3nm,0.5s						
PLCA	Paso Flores	18.50	191	P	P	22 59 13.2	+0.7
	comp=E,0.5nm,0.3s,baz=1.2,slow=12,SNR=8.0						
PLCA	Paso Flores	18.50	191	*e*P	P	22 59 13.1	+0.6
	comp=E,8.8nm,0.9s						
USHA	Ushuaia	32.26	183	P	P	23 01 21.0	+1.3
	comp=E,5.9nm,0.8s,mb4.2,baz=18,slow=9.6,SNR=2.4						
RCBR	Riachuelo	33.47	65	*e*P	P	23 01 30.4	-0.4
	comp=E,6.9nm,0.6s,mb4.4						
DBIC	Dimbokro	66.47	72	P	P	23 05 36.5	-1.5
	comp=E,4.1nm,1.1s,mb4.0,baz=209,slow=6.0,SNR=4.5						
TORD	Torodi Ar. Bea	75.19	69	P	P	23 06 29.1	-1.3
	comp=E,3.4nm,0.5s,mb4.3,baz=264,slow=6.0,SNR=107						
TORD				pP	pP	23 07 32.4	+4.3
	comp=E,1.6nm,0.8s,baz=249,slow=5.8,SNR=5.1						
PDAR	Pinedale Array	76.42	329	P	P	23 06 37.1	+0.4
	comp=E,0.2nm,0.4s,mb3.1,baz=189,slow=9.9,SNR=2.7						
ESDC	Sonseca Array	84.73	43	P	P	23 07 20.7	-0.1
	comp=E,0.6nm,0.8s,mb3.4,baz=225,slow=5.3,SNR=3.9						
YKA	Yellowknife Ar	93.12	340	P	P	23 07 59.6	-0.3
	comp=E,0.4nm,0.6s,mb3.6,baz=129,slow=4.2,SNR=9.8						
ASAR	Alice Springs	130.13	204	PKP	PKPdf	23 13 55.5	-0.1
	comp=E,0.4nm,0.6s,baz=126,slow=1.6,SNR=6.5						
MKAR	Makanchi Array	144.84	39	PKP	PKPdf	23 14 21.9	0.0
	comp=E,1.2nm,0.5s,baz=336,slow=2.8,SNR=16						

SOF 17 23:43:24.6, 40°.14N×26°.87E, h10km, MD2.7
NEIC 17 23:43:25.0, 40°.39N×27°.09E, h6km, MD3.1(ISK), MD3.6(ATH), After ISK.
ATH 17 23:43:25.2, 40°.42N×27°.21E, h31km±4km, MD3.6/8
ISCJB 17 23:43:26.0±0.4, 40°.38N±0°.02×27°.09E±0°.02, h8km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=7.4
ISK 17 23:43:25.8, 40°.37N×27°.11E, h9km, MD3.2
DDA 17 23:43:26.8, 40°.34N×27°.09E, h3km, Md2.9
CSEM 17 23:43:26.4±0.1, 40°.38N×27°.09E, h10km, MD3.2, Error ellipse: s-maj=2.1km s-min=1.7km az=5.0
THE 17 23:43:27.5, 40°.39N×27°.02E, h8km±3km, ML3.3/5, Error ellipse: s-maj=5.3km s-min=1.3km az=64.0
ISC 17 23:43:26.4±0.4, 40°.38N±0°.02×27°.08E±0°.02, h9km±3km, n103, σ0°73/138, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	Lapseki	0.24	268	PG	Pg	23 43 31.9	+0.6
LPK				*e*SG	Sg	23 43 36.0	+1.4
LPK	Lapseki	0.24	268	*i* Pg	Pg	23 43 31.9	+0.6
LPK				*e*Sg	Sg	23 43 36.0	+1.4
RKY	Sarkoy-Tekirda	0.32	14	*e*PG	Pg	23 43 33.0	+0.3
RKY				*e*SG	Sg	23 43 37.9	+0.9
RKY	Sarkoy-Tekirda	0.32	14	*e*Pg	Pg	23 43 33.0	+0.3
RKY				*e*Sg	Sg	23 43 37.9	+0.9
EDC	Edincik	0.60	93	*e*PG	Pg	23 43 37.8	-0.3
EDC	Edincik	0.60	93	*e*Pg	Pg	23 43 37.8	-0.3
BNT	Bandirma	0.65	92	*e*PG	Pg	23 43 37.8	-1.1
BALY	Balya	0.76	147	*i* P	Pg	23 43 40.5	-0.7
BALY				*i* S	Sg	23 43 54.7	+3.6
BALY	Balya	0.76	147	*i* P	Pg	23 43 40.5	-0.7
BALY				*i* S	Sg	23 43 54.7	+3.6
ENEZ	Enez	0.79	297	*e*PG	Pg	23 43 41.5	-0.1
ENEZ	Enez	0.79	297	*e*Pg	Pg	23 43 41.5	-0.1
EZN	Ezine	0.80	226	*e*PG	Pg	23 43 41.5	-0.3
EZN	Ezine	0.80	226	*e*Pg	Pg	23 43 41.5	-0.3
CRLT	Corlu	0.90	34	*e*PG	Pg	23 43 43.7	0.0
CRLT	Corlu	0.90	34	*e*Pg	Pg	23 43 43.7	-0.1
GADA	Gvkgeada	0.92	258	*e*PG	Pg	23 43 43.8	-0.4
GADA	Gvkgeada	0.92	258	*e*Pg	Pg	23 43 43.8	-0.3
ALN	Alexandroupoli	0.94	304	*e*PN	Pg	23 43 44.2	-0.3
ALN				*e*SN	Sn	23 43 58.0	-1.2
ALN	Alexandroupoli	0.94	304	P	Pg	23 43 44.1	-0.4
ALN				S	Sg	23 43 57.2	+0.5
ALN	Alexandroupoli	0.94	304	P	Pg	23 43 44.1	-0.4
ALN				S	Sg	23 43 57.2	+0.5
ALN				*e*Sn	Sn	23 43 58.0	-1.2
BOZC	Bozcaada	0.95	236	*i* P	Pg	23 43 44.4	-0.3
BOZC				*i* S	Sg	23 43 57.6	+0.5
BALB	Balikesir	0.96	140	*e*PG	Pg	23 43 43.8	-1.1
BALB	Balikesir	0.96	140	*e*Pg	Pg	23 43 43.8	-1.2
KCT	Karacabey	0.99	96	*e*PG	Pg	23 43 44.3	-1.1
KCT	Karacabey	0.99	96	*e*Pg	Pg	23 43 44.3	-1.1
AYVA	Ayvalik	1.11	196	*i* P	Pb	23 43 47.5	-0.2
AYVA				*i* S	Sg	23 44 02.5	+0.3
AYVA	Ayvalik	1.11	196	*i* P	Pb	23 43 47.5	-0.3
AYVA				*i* S	Sg	23 44 02.5	+0.3
SLVT	Silivri	1.21	45	*e*PN	Pn	23 43 48.8	-0.6
SLVT	Silivri	1.21	45	*e*Pn	Pn	23 43 48.8	-0.7
PRK	Paraskevi	1.29	209	*e*PN	Pn	23 43 50.3	-0.3
PRK				*e*SN	Sn	23 44 08.3	+0.4
PRK	Paraskevi	1.29	209	P	Pn	23 43 50.5	-0.1
PRK				S	Sn	23 44 08.3	+0.4
PRK	Paraskevi	1.29	209	P	Pn	23 43 50.5	-0.1
PRK				S	Sn	23 44 08.3	+0.4
DURS	Dursunbey	1.33	125	*i* P	Pn	23 43 50.6	-0.4
DURS				*i* S	Sb	23 44 09.5	+1.0
DURS	Dursunbey	1.33	125	*i* P	Pn	23 43 50.6	-0.5
DURS				*i* S	Sb	23 44 09.5	+1.0
CTKS	Kestanelik-??a	1.38	51	*e*PN	Pn	23 43 51.2	-0.6
CTKS	Kestanelik-??a	1.38	51	*e*Pn	Pn	23 43 51.2	-0.6
RDO	Rodhopi	1.40	304	*e*PN	Pn	23 43 51.7	-0.3
RDO	Rodhopi	1.40	304	P	Pn	23 43

KULA	**Kula-Manisa**	**2.23 146**	*e*PN	**Pn**	**23 44 03.9**	**+0.3**
KULA	**Kula-Manisa**	**2.23 146**	*e*Pn	**Pn**	**23 44 03.9**	**+0.4**
OUR	**Ouranopolis**	**2.36 270**	P	**Pn**	**23 44 04.4**	**-0.9**
OUR			S	**Sn**	**23 44 33.4**	**-1.0**
OUR	**Ouranopolis**	**2.36 270**	P	**Pn**	**23 44 04.4**	**-0.9**
OUR			S	**Sn**	**23 44 33.4**	**-1.0**
GULT	**Gulveren**	**2.63 88**	*e*PN	**Pn**	**23 44 09.7**	**+0.7**
GULT	**Gulveren**	**2.63 88**	*e*Pn	**Pn**	**23 44 09.7**	**+0.8**
SMG	**Samos**	**2.67 184**	*e*PN	**Pn**	**23 44 08.9**	**-0.7**
SMG			*e*SN	**Sn**	**23 44 41.5**	**-0.6**
SMG	**Samos**	**2.67 184**	*e*Pn	**Pn**	**23 44 08.9**	**-0.7**
SMG			*e*Sn	**Sn**	**23 44 41.5**	**-0.6**
ALT	**Altintas**	**2.69 119**	*e*PN	**Pn**	**23 44 10.4**	**+0.6**
ALT	**Altintas**	**2.69 119**	*e*Pn	**Pn**	**23 44 10.4**	**+0.6**
PLG	**Polygyros**	**2.77 271**	*e*PN	**Pn**	**23 44 11.0**	**+0.1**
PLG	**Polygyros**	**2.77 271**	*e*Pn	**Pn**	**23 44 11.0**	**+0.1**
MMB	**Musomiste**	**2.81 297**	*i* P	**Pn**	**23 44 12.4**	**+1.0**
MMB	**Musomiste**	**2.81 297**	*i* P	**Pn**	**23 44 12.4**	**+1.0**
MMB	**Musomiste**	**2.81 297**	*i* P	**Pn**	**23 44 12.4**	**+1.0**
ESKT	**Eskisehir**	**3.03 105**	*e*PN	**Pn**	**23 44 15.2**	**+0.7**
ESKT	**Eskisehir**	**3.03 105**	*e*Pn	**Pn**	**23 44 15.2**	**+0.8**
APE	**Apeiranthos**	**3.52 201**	*e*PN	**Pn**	**23 44 21.2**	**0.0**
APE	**Apeiranthos**	**3.52 201**	*e*Pn	**Pn**	**23 44 21.2**	**0.0**
KFL	**Anninata**	**5.38 247**	P	**Sg**	**23 46 17.5**	**-1.7**

IDC 18 00:22:54.5±4.3, 31°.48N×104°.67E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.0/1, Error ellipse: s-maj=100.2km s-min=30.6km az=11.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.39**	**4**	Pn	Pn	00 26 44.5	-1.3
	0.1nm,0.3s,baz=205,slow=6.2,SNR=2.9						
KSRS	**Korea Array**	**20.05**	**66**	P	P	00 27 29.9	+0.7
	0.9nm,0.7s,baz=250,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**23.02**	**318**	P	P	00 28 01.2	+0.2
	0.5nm,0.6s,baz=119,slow=9.9,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.60**	**333**	P	P	00 28 35.6	+1.3
	0.7nm,0.5s,baz=134,slow=11,SNR=3.5						
KURK	**Kurchatov**	**27.24**	**322**	P	P	00 28 39.9	-0.2
	0.6nm,0.8s,baz=132,slow=8.2,SNR=5.1						
FINES	**FINESS Array B**	**57.53**	**326**	P	P	00 32 45.2	-0.1
	2.4nm,0.8s,baz=96,slow=14,SNR=2.7						
YKA	**Yellowknife Ar**	**81.19**	**17**	P	P	00 35 10.9	-0.8
	0.3nm,0.9s,baz=329,slow=5.0,SNR=3.5						

ISC 18 00:37:38.7±0.9, 40°.53N±0°.06×75°.9E±0°.3, h10km, n6, σ1§30/7, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.02 175**		Pg	**Pg**	**00 37 56.0**	**-2.3**
KSH				Sg	**Sg**	**00 38 12.9**	**+1.4**
KSH				smax			
	comp=N,32nm,0.3s						
KSH				smax			
	comp=E,39nm,0.3s						
KZA	**Kyzart**	**1.61 344**		P	**Pn**	**00 38 05.8**	**-1.3**
	SNR=13						
ULHL	**Ulahol**	**1.74 10**		P	**Pn**	**00 38 09.2**	**+0.3**
	SNR=17						
UCH	**Uchtor**	**1.97 330**		P	**Pn**	**00 38 11.6**	**-0.4**
	SNR=18						
KBK	**Karagaybulak**	**2.23 343**		P	**Pn**	**00 38 17.6**	**+2.0**
	SNR=14						
AML	**Almayashu**	**2.28 315**		P	**Pn**	**00 38 16.5**	**+0.2**
	SNR=10						

*IDC **18** 00:45:53.8±0.7, 31°.79N×104°.12E, h0km, mb4.2/21, mb1 4.2/23, mb1mx4.2/30, mbtmp4.1/23, ML3.7/2, MS3.5/18, Ms1 3.5/18, ms1mx3.4/35, Error ellipse: s-maj=20.7km s-min=13.5km az=31.0*

*ISCJB **18** 00:45:54.0±0.9, 31°.82N±0°.02×104°.06E±0°.03, h9km±6km, mb4.2/40, MS3.5/19, Error ellipse: s-maj=4.5km s-min=4.0km az=159.5*

*BJI **18** 00:45:55.7, 31°.80N×104°.25E, h15km, mB4.6/17, mb4.4/27, ML4.5/20, Ms4.2/34, Ms7 4.0/32*

*NEIC **18** 00:45:55.9±0.3, 31°.81N×104°.05E, h10km, mb4.4/19, Error ellipse: s-maj=8.4km s-min=6.3km az=214.0*

*MOS **18** 00:45:56.5±1.1, 31°.74N×104°.07E, h33km, mb4.4/25, Error ellipse: s-maj=11.5km s-min=6.7km az=108.8*

*SZGRF **18** 00:46:00.2, 32°.13N×104°.41E, h33km, mb4.5, MS4.3, Sichuan, China*

ISC 18 00:45:55.0±0.8, 31°.82N±0°.02×104°.04E±0°.03, h1km±5km, n129, σ1§14/142, mb4.2/40, MS3.5/19, 6C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.94 195**		Pg	**Pg**	**00 46 14.4**	**+1.3**
CD2				Sg	**Sg**	**00 46 26.9**	**+1.7**
CD2				smax			
	comp=N,12μm,0.6s						
LZH	**Lanzhou**	**4.26 358**		⇓Pn	**Pn**	**00 47 03.6**	**+2.7**
LZH				Pg	**Pg**	**00 47 15.8**	**-0.8**
LZH				Sn	**Sn**	**00 47 53.5**	**+2.3**
LZH				Sg	**Sg**	**00 48 11.1**	**-0.7**
LZH				smax			
	comp=N,1μm,1.6s						
LZH				smax			
	comp=E,1μm,1.5s						
LZH				LR	LR		
	comp=N,2μm,4.8s						
LZH				LR	LR		
	comp=Z,2μm,4.2s						
XAN	**Xi'an**	**4.66 60**		Pn	**Pn**	**00 47 05.5**	**-1.0**
XAN				Pg	**Pg**	**00 47 20.5**	**-3.9**
XAN				Sn	**Sn**	**00 48 05.1**	**+3.9**
XAN				Sg	**Sg**	**00 48 21.1**	**-3.7**
XAN				smax			
	comp=N,930nm,0.8s						
XAN				smax			
	comp=E,300nm,0.7s						
XAN				LR	LR		
	comp=N,630nm,4.0s						
XAN				LR	LR		
	comp=E,150nm,6.3s						
XAN				LR	LR		
	comp=Z,130nm,3.1s						
ENH	**Enshi**	**4.92 107**		*e*Pn	**Pn**	**00 47 10.5**	**+0.5**
GYA	**Guiyang**	**5.82 156**		Pn	**Pn**	**00 47 22.1**	**-0.3**
GYA				smax			
	comp=N,730nm,0.7s						
GYA				smax			
	comp=E,680nm,0.7s						
KMI	**Kunming**	**6.77 190**		Pn	**Pn**	**00 47 36.9**	**+1.4**
KMI				Sn	**Sn**	**00 48 52.3**	**-0.9**
KMI				smax			
	comp=N,75nm,0.8s						
KMI				smax			
	comp=E,100nm,0.8s						
KMI				LR	LR		
	comp=N,820nm,4.6s						
KMI				LR	LR		
	comp=E,1μm,8.6s						
KMI				LR	LR		
	comp=Z,730nm,9.6s						
GTA	**Gaotai**	**8.31 337**		⇓P	**Pn**	**00 47 58.1**	**+1.5**
GTA				pP		00 48 01.3	
GTA				sP		00 48 03.8	
GTA				S	**Sn**	**00 49 32.8**	**+1.7**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,96nm,4.8s						
GTA				LR	LR		
	comp=N,2μm,11.6s						
GTA				LR	LR		
	comp=E,820nm,10.4s						
GTA				LR	LR		
	comp=Z,1μm,13.1s						
WHN	**Wuhan**	**8.93 96**		⇑P	**Pn**	**00 48 02.8**	**-2.2**
WHN				S	**Sn**	**00 49 38.4**	**-7.8**
WHN				LR	LR		
	comp=Z,2μm,9.4s						
HHC	**Hu-ho-hao-te**	**10.86 32**		*e*P	**Pn**	**00 48 34.1**	**+2.7**
HHC				pP		00 48 37.3	
HHC				sP		00 48 42.6	
HHC				S	**Sn**	**00 50 37.6**	**+4.1**
HHC				sS		00 50 43.1	
HHC				SS		00 50 50.1	
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,89nm,5.0s						
HHC				LR	LR		
	comp=N,420nm,4.7s						
HHC				LR	LR		
	comp=E,340nm,5.1s						
HHC				LR	LR		
	comp=Z,190nm,4.8s						
LSA	**Lhasa**	**11.29 263**		P	**Pn**	**00 48 44.4**	**+7.0**
LSA				S	**Sn**	**00 50 53.3**	**+9.1**
LSA				LR	LR		
	comp=N,240nm,13.3s						
LSA				LR	LR		
	comp=E,400nm,10.5s						
LSA				LR	LR		
	comp=Z,470nm,11.6s						
LSA	**Lhasa**	**11.29 263**		*e*Pn	**Pn**	**00 48 36.2**	**-1.2**
TIA	**Tai'an**	**11.70 64**		*e*P	**Pn**	**00 48 42.3**	**-0.8**
GZH	**Guangzhou**	**11.99 134**		P	**Pn**	**00 48 42.1**	**-5.0**
GZH				S	**Sn**	**00 50 51.1**	**-10**
GZH				LR	LR		
	comp=N,1μm,11.3s						
GZH				LR	LR		
	comp=E,860nm,10.7s						
SHL	**Shillong**	**12.35 243**		*e*P	**Pn**	**00 48 52.0**	**0.0**
NJ2	**Nanjing**	**12.59 85**		*e*P	**Pn**	**00 48 57.9**	**+2.7**
NJ2				pP		00 49 01.3	
NJ2				sP		00 49 04.5	
NJ2				PP		00 49 08.3	
NJ2				S	**Sn**	**00 51 17.0**	**+1.0**
NJ2				sS		00 51 22.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.7s						
NJ2				LR	LR		
	comp=N,250nm,11.0s						
NJ2				LR	LR		
	comp=E,710nm,15.6s						
NJ2				LR	LR		
	comp=Z,770nm,16.1s						
BJI	**Beijing**	**12.79 47**		P	**Pn**	**00 48 59.1**	**+1.1**
BJI				S	**Sn**	**00 51 22.3**	**+1.3**
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI				pmax	pmax		
	comp=Z,61nm,4.2s						
BJI				LR	LR		
	comp=N,650nm,26.7s						
BJI				LR	LR		
	comp=E,430nm,27.3s						
QIZ	**Qiongzhong**	**13.77 156**		P	**Pn**	**00 49 13.0**	**+1.6**
QIZ				S	**Sn**	**00 51 47.8**	**+2.8**
QIZ				LR	LR		
	comp=N,560nm,11.7s						
QIZ				LR	LR		
	comp=Z,820nm,10.9s						
CMAR	**Chiang Mai Arr**	**14.08 200**		Pn	**Pn**	**00 49 15.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=190,slow=30,SNR=3.9						
QZH	**Quanzhou**	**14.52 115**		P	**Pn**	**00 49 21.1**	**-0.5**
QZH				S	**Sn**	**00 52 03.3**	**0.0**
QZH				LR	LR		
	comp=N,1μm,7.3s						
QZH				LR	LR		
	comp=E,2μm,10.0s						
QZH				LR	LR		
	comp=Z,3μm,10.4s						
SONM	**Songino Array**	**16.09 6**		Pn	**Pn**	**00 49 41.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=16						
SONM				LR	LR	00 56 20.4	
	comp=Z,168nm,18.8s,baz=352,slow=39						
ULN	**Ulaanbaatar**	**16.19 7**		*e*P	**Pn**	**00 49 43.3**	**-0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.19 7**		*e*Pn	**Pn**	**00 49 43.2**	**-0.3**
	comp=Z,7.0nm,0.8s						
GUN	**Gumba**	**16.23 261**		*e*P	**Pn**	**00 49 43.3**	**-0.9**
	comp=Z,55nm,0.8s						
PKI	**Pulchoki**	**16.73 260**		*e*P	**Pn**	**00 49 49.7**	**-0.9**
	comp=Z,59nm,0.8s						
PKIN	**Phulchoki**	**16.74 260**		*e*P	**Pn**	**00 49 49.6**	**-1.1**
	comp=Z,29nm,0.6s						
KKN	**Kakani**	**16.77 261**		*e*P	**Pn**	**00 49 50.2**	**-0.9**
	comp=Z,20nm,0.6s						
SSLB	**Suanglung**	**16.96 114**		*e*Pn	**Pn**	**00 49 55.7**	**+2.2**
	comp=Z,15nm,0.8s						
DMN	**Daman**	**16.97 261**		*e*P	**Pn**	**00 49 52.9**	**-0.8**
	comp=Z,64nm,0.9s						
WMQ	**Urumqi**	**17.57 318**		*e*P	**Pn**	**00 50 01.3**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,42nm,3.0s						
WMQ				LR	LR		
	comp=N,560nm,13.0s						
WMQ				LR	LR		
	comp=E,290nm,14.0s						
WMQ				LR	LR		
	comp=Z,270nm,25.0s						
ZAK	**Zakamensk**	**18.55 358**		*e*P	**Pn**	**00 50 12.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	**Talaya**	**19.84 359**		*e*P	**Pn**	**00 50 24.2**	**-4.4**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,201nm,12.0s						
TLY	**Talaya**	**19.84 359**		*e*P	**Pn**	**00 50 25.2**	**-3.4**
	comp=Z,4.8nm,0.7s						
MOY	**Mondy**	**19.95 354**		*e*P	**Pn**	**00 50 30.6**	**+0.7**
KSRS	**Korea Array**	**20.42 67**		P	**P**	**00 50 32.5**	**-1.0**
	comp=Z,16nm,0.7s,baz=255,slow=10,SNR=64						
KSRS				LR	LR	00 57 56.5	
	comp=Z,62nm,19.5s,MS3.0,baz=339,slow=36						
KSRS	**Korea Array**	**20.42 67**		P	**P**	**00 50 32.5**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,16nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,62nm,19.5s,MS3.0						
CN2	**Changchun**	**20.65 49**		*e*P	**P**	**00 50 36.8**	**+0.9**
CN2				*es*P	sP	00 50 42.9	+6.4
CN2				*e*S	**S**	**00 54 21.8**	**-5.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
JOW	**Kunigami**	**21.69 97**		LR	LR	00 59 45.8	
	comp=Z,139nm,20.8s,MS3.3,baz=145,slow=38						
DDI	**Dehra Dun**	**22.29 273**		*ex*	**P**	**00 50 57.0**	**+3.3**
MK31	**Makanchi Array**	**22.41 318**		*e*P	**P**	**00 50 55.3**	**+0.5**
MKAR	**Makanchi Array**	**22.41 318**		P	**P**	**00 50 55.6**	**+0.9**
	comp=Z,8.2nm,0.7s,mb4.2,baz=119,slow=12,SNR=90						
MKAR				ScP	ScP	00 58 24.8	-3.4
	comp=Z,0.8nm,0.8s,baz=90,slow=4.9,SNR=4.5						
MKAR				LR	LR	01 00 32.4	
	comp=Z,397nm,18.7s,MS3.9,baz=154,slow=39						
MKAR	**Makanchi Array**	**22.41 318**		P	**P**	**00 50 55.6**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,397nm,18.7s						
MDJ	**Mudanjiang**	**23.68 50**		P	**P**	**00 51 13.3**	**+5.1**
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,62nm,5.1s						
MDJ	**Mudanjiang**	**23.68 50**		*e*P	**P**	**00 51 09.6**	**+1.5**
	comp=Z,24nm,1.2s,mb4.5						
KSH	**Kashi**	**23.99 296**		*e*P	**P**	**00 51 15.1**	**+4.1**
KSH				*ep*P		00 51 19.0	
KSH				*es*P	sP	00 51 22.1	+10
KSH				*e*PP		00 51 50.0	
KSH				*e*PcP	PcP	00 54 55.1	+2.0
KSH				*e*S	**S**	**00 55 30.3**	**+1.6**
KSH				*es*S	sS	00 55 38.1	+8.7
KSH				*e*SS		00 56 25.3	
KSH				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
KSH				pmax	pmax		
	comp=Z,35nm,2.9s,mb4.3						
KSH				LR	LR		
	comp=N,150nm,7.9s						
KSH				LR	LR		
	comp=E,160nm,10.5s						
KSH				LR	LR		
	comp=Z,170nm,6.9s						
UCH	**Uchtor**	**25.64 302**		*e*P	**P**	**00 51 27.4**	**+1.4**
	comp=Z,11nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**25.76 303**		P	**P**	**00 51 28.5**	**+1.4**
	comp=Z,1.6nm,0.5s,mb3.8,baz=168,slow=4.9,SNR=8.5						
AAK				LR	LR	01 03 18.7	
	comp=Z,254nm,19.6s,MS3.8,baz=84,slow=40						
AAK	**Ala-Archa**	**25.76 303**		*e*P	**P**	**00 51 28.2**	**+1.1**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**25.76 303**		*e*P	**P**	**00 51 28.2**	**+1.1**
	comp=Z,8.6nm,1.1s,mb4.2						
ZAA0	**Zalesovo Array**	**26.05 334**		*e*P	**P**	**00 51 29.3**	**-0.3**
ZALV	**Zalesovo Beam**	**26.05 334**		P	**P**	**00 51 29.3**	**-0.3**
	comp=Z,8.2nm,0.8s,mb4.3,baz=132,slow=9.6,SNR=35						
ZALV				LR	LR	01 02 22.1	
	comp=Z,93nm,20.9s,MS3.3,baz=241,slow=38						
ZALV	**Zalesovo Beam**	**26.05 334**		P	**P**	**00 51 29.3**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,93nm,20.9s,MS3.3						
AML	**Almayashu**	**26.21 302**		*e*P	**P**	**00 51 32.9**	**+1.7**
	comp=Z,3.2nm,0.8s,mb3.9						
KURK	**Kurchatov**	**26.64 323**		P	**P**	**00 51 35.0**	**0.0**
	comp=Z,5.4nm,0.9s,mb4.1,baz=131,slow=8.9,SNR=34						
KURK				PcP	PcP	00 54 55.9	-2.9
	comp=Z,0.6nm,0.6s,baz=115,slow=1.8,SNR=2.9						
KURK				LR	LR	01 03 00.7	
	comp=Z,216nm,20.2s,MS3.7,baz=135,slow=38						
KURK	**Kurchatov**	**26.64 323**		P	**P**	**00 51 35.0**	**0.0**
KURK						00 54 55.9	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
KURK				MLR	MLR		
	comp=Z,216nm,20.2s,MS3.7						
KURK	**Kurchatov**	**26.64 323**		*e*P	**P**	**00 51 34.7**	**-0.3**
	comp=Z,6.7nm,1.0s,mb4.1						
BOD	**Bodaibo**	**26.88 12**		*e*P	**P**	**00 51 36.6**	**-0.4**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.4						
NVS	**Novosibirsk**	**27.34 333**		*e*P	**P**	**00 51 40.0**	**-1.2**
MJAR	**Matsushiro Arr**	**28.56 71**		P	**P**	**00 51 50.7**	**-1.7**
	comp=Z,1.1nm,0.5s,mb3.8,baz=275,slow=11,SNR=8.0						
MJAR				LR	LR	01 04 34.8	
	comp=Z,21nm,20.3s,MS2.7,baz=255,slow=39						
MJAR	**Matsushiro Arr**	**28.56 71**		P	**P**	**00 51 50.7**	**-1.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR				MLR	MLR		
	comp=Z,21nm,20.3s						
JHJ	**Hachijo jima 2**	**30.10 78**		LR	LR	01 05 59.0	
	comp=Z,100nm,18.7s,MS3.5,baz=261,slow=40						
BVAR	**Borovoye Array**	**32.20 321**		P	**P**	**00 52 24.7**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=134,slow=8.5,SNR=5.4						
BVAR				LR	LR	01 06 31.8	
	comp=Z,109nm,20.5s,MS3.5,baz=124,slow=38						
BVAR	**Borovoye Array**	**32.20 321**		P	**P**	**00 52 24.7**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,109nm,20.5s						
BRVK	**Borovoye**	**32.27 321**		*e*P	**P**	**00 52 25.6**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
BRVK	**Borovoye**	**32.27 321**		*e*P	**P**	**00 52 25.6**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.1						
ASAJ	**Asahikawa**	**32.49 57**		P	**P**	**00 52 27.4**	**+0.5**
	comp=Z,1.7nm,0.3s,mb4.4,baz=212,slow=33,SNR=2.6						
ASAJ	**Asahikawa**	**32.49 57**		P	**P**	**00 52 27.5**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PALK	**Pallekele**	**32.71 227**		LR	LR	01 07 58.7	
	comp=Z,36nm,18.0s,MS3.1,baz=247,slow=40						
CBIJ	**Chichi jima**	**33.43 88**		LR	LR	01 07 41.7	
	comp=Z,86nm,18.4s,MS3.5,baz=98,slow=39						
ABKAR	**Akbulak array**	**37.16 311**		*e*P	**P**	**00 53 07.5**	**+0.2**
	comp=Z,3.2nm,0.6s,mb4.3						
AKTK	**Aktyubinsk**	**38.61 312**		P	**P**	**00 53 20.1**	**+0.6**
AKTK				LR	LR	01 12 12.6	
AKTO	**Aktyubinsk**	**38.61 312**		P	**P**	**00 53 20.1**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.1,baz=111,slow=13,SNR=8.8						
AKTO				LR	LR	01 12 12.6	
	comp=Z,41nm,19.7s,MS3.3,baz=306,slow=41						
AKTO	**Aktyubinsk**	**38.61 312**		P	**P**	**00 53 20.1**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
AKTO				MLR	MLR		
	comp=Z,41nm,19.7s,MS3.2						
ARU	**Arti**	**39.83 322**		P	**P**	**00 53 29.5**	**-0.1**
ARU	**Arti**	**39.83 322**		*e*P	**P**	**00 53 29.6**	**0.0**
	comp=Z,11nm,0.8s,mb4.6						
GUMO	**Guam**	**41.51 106**		LR	LR	01 12 12.1	
	comp=Z,58nm,18.4s,MS3.5,baz=135,slow=38						
PETK	**Petropavlovsk-**	**43.72 45**		P	**P**	**00 53 59.7**	**-1.8**
	comp=Z,1.7nm,0.8s,mb3.8,baz=228,slow=7.6,SNR=3.6						
PETK				LR	LR	01 14 07.9	
	comp=Z,39nm,20.3s,MS3.3,baz=46,slow=39						
PETK	**Petropavlovsk-**	**43.72 45**		P	**P**	**00 53 59.7**	**-1.8**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
PETK				MLR	MLR		
	comp=Z,39nm,20.3s,MS3.3						
GNI	**Garni**	**47.92 297**		LR	LR	01 18 12.5	
	comp=Z,45nm,19.4s,MS3.5,baz=98,slow=40						
ZEI	**Tsey**	**48.16 301**		*e*P	**P**	**00 54 33.4**	**-3.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KIV	**Kislovodsk**	**48.88 303**		*e*P	**P**	**00 54 42.8**	**+0.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,68nm,17.0s,MS3.7						
KIV	**Kislovodsk**	**48.88 303**		*e*P	**P**	**00 54 43.0**	**+0.8**
	comp=Z,6.5nm,0.9s,mb4.7						
JOF	**Joensuu**	**54.39 327**		*e*P	**P**	**00 55 22.6**	**-0.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
JOF	**Joensuu**	**54.39 327**		*ep*	**P**	**00 55 22.6**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.3						
KEV	**Kevo**	**56.05 336**		*e*P	**P**	**00 55 34.2**	**-0.8**
KEV	**Kevo**	**56.05 336**		*ep*	**P**	**00 55 34.2**	**-0.8**
BR131	**Keskin Array S**	**56.34 299**		*e*P	**P**	**00 55 37.2**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.7						
BRTR	**Keskin Array B**	**56.34 299**		P	**P**	**00 55 37.0**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=105,slow=6.4,SNR=9.5						
BRTR	**Keskin Array B**	**56.34 299**		P	**P**	**00 55 37.1**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**56.58 336**		P	**P**	**00 55 37.8**	**-1.0**
	comp=Z,2.2nm,0.6s,mb4.3,baz=78,slow=7.9,SNR=7.0						
ARCES				LR	LR	01 21 57.7	
	comp=Z,84nm,20.6s,MS3.8,baz=1.0,slow=38						
ARCES	**ARCESS Array B**	**56.58 336**		P	**P**	**00 55 37.8**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,84nm,20.6s						
KAF	**Kangasniemi**	**56.76 327**		*e*P	**P**	**00 55 39.4**	**-0.8**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**56.76 327**		*ep*	**P**	**00 55 39.4**	**-0.8**
	comp=Z,2.7nm,0.7s,mb4.4						
AKASG	**Malin Array Be**	**56.85 313**		P	**P**	**00 55 40.0**	**-1.1**

ASAR Alice Springs 62.13 149 P **P** **00 56 16.6 -1.1**
comp=Z,2.5nm,0.8s,mb4.4,baz=337,slow=6.7,SNR=22
ASAR Alice Springs 62.13 149 P **P** **00 56 16.6 -1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
NB2 NORSAR Subarra 64.03 327 P **P** **00 56 28.3 -1.6**
comp=Z,1.4nm,0.6s,mb4.2,baz=74,slow=6.9
NOA NORSAR Array B 64.03 327 P **P** **00 56 28.4 -1.5**
comp=Z,2.2nm,0.8s,mb4.2,baz=72,slow=7.0,SNR=5.1
NOA LR LR 01 26 16.7
comp=Z,61nm,18.2s,MS3.8,baz=80,slow=38
NOA NORSAR Array B 64.03 327 P **P** **00 56 28.4 -1.5**
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA MLR MLR
comp=Z,61nm,18.2s
MORC Moravsky Berou 64.33 314 *e*P **P** **00 56 33.6 +1.6**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
MORC Moravsky Berou 64.33 314 *e*P **P** **00 56 33.6 +1.5**
comp=Z,3.0nm,0.8s,mb4.4
MORC Moravsky Berou 64.33 314⇑*i*P **P** **00 56 34.0 +2.0**
BRG Berggiesshubel 66.11 316 *e*P **P** **00 56 49.1 +5.5**
comp=Z,3.3nm,0.8s,mb4.4
BRG Berggiesshubel 66.11 316 *e*P **P** **00 56 49.1 +5.5**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
GERES GERESS Array B 67.01 314 P **P** **00 56 48.9 -0.5**
comp=Z,0.5nm,0.7s,mb3.7,baz=87,slow=5.5,SNR=6.5
GERES GERESS Array B 67.01 314 P **P** **00 56 48.9 -0.5**
GERES pmax pmax
comp=Z,1.0nm,0.7s
PPLA Purkeypile 68.06 29 *e*P **P** **00 56 55.3 -0.5**
comp=Z,1.6nm,0.6s,mb4.2
GRA1 Grafenberg Arr 68.17 316 *e*P **P** **00 56 56.3 -0.4**
comp=Z,4.0nm,1.2s,mb4.3
GRA1 LR LR
comp=Z,200nm,20.2s,MS4.3
GRF Grafenberg Arr 68.17 316 *e*P **P** **00 56 56.3 -0.4**
comp=Z,4.0nm,1.2s,mb4.3
GRF *e*L 01 28 15.9
comp=Z,188nm,20.2s
GRF Grafenberg Arr 68.17 316 *e*P **P** **00 56 56.3 -0.4**
GRF pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
GRF MLR MLR
comp=Z,200nm,20.2s,MS4.3
GRF Grafenberg Arr 68.17 316 *e*P **P** **00 56 56.3 -0.4**
GRF pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
GRF MLR MLR
comp=Z,200nm,20.2s,MS4.3
INK Inuvik 71.50 19 *e*P **P** **00 57 17.4 +0.5**
INK pmax pmax
comp=Z,34nm,2.3s
INK Inuvik 71.50 19 *e*P **P** **00 57 17.4 +0.5**
comp=Z,34nm,2.3s,mb4.9
STKA Stephens Creek 72.64 147 P **P** **00 57 22.9 -1.2**
comp=Z,2.5nm,0.7s,mb4.2,baz=132,slow=10,SNR=3.9
LPG La Plagne 72.72 313⇑*i*P **P** **00 57 24.7 +0.1**
comp=Z,17nm,0.7s,mb4.8
LPL La Plagne 72.72 313⇑*i*P **P** **00 57 24.6 0.0**
comp=Z,8.8nm,0.6s,mb4.6
SMF Signal de Mont 73.95 315 *e*P **P** **00 57 30.8 -1.0**
TCF Toulx Ste Croi 75.11 315 *e*P **P** **00 57 37.7 -0.9**
YKA Yellowknife Ar 81.02 17 P **P** **00 58 09.8 -1.3**
comp=Z,0.7nm,0.6s,mb3.8,baz=329,slow=5.2,SNR=14
SCHQ Schefferville 93.34 355 P **P** **00 59 10.2 -1.2**
comp=Z,1.9nm,0.8s,mb4.6,baz=18,slow=9.1,SNR=3.2
TORD Torodi Ar. Bea 93.36 288 P **P** **00 59 11.6 -0.7**
comp=Z,0.9nm,1.0s,mb4.2,baz=54,slow=4.8,SNR=5.3

*ISCJB **18** 00:54:34.1±0.6,39°.87N±0°.03×17°.08E±0°.04,h11km±5km,*
Error ellipse: s-maj=5.7km s-min=4.5km az=1.9
*CSEM **18** 00:54:34.4±0.3,39°.85N×17°.03E,h5km,ML3.9/7,Error*
ellipse: s-maj=4.8km s-min=3.5km az=91.0
*ROM **18** 00:54:34.2±0.2,39°.87N×17°.03E,h3km,Md2.8/16,*
Ml2.8/18,Error ellipse: s-maj=2.8km s-min=2.0km az=80.0
ISC 18 00:54:34.9±0.6,39°.87N±0°.03×17°.07E±0°.04,h11km±4km,
n47,σ1°09/70,2C-1D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORI	**Oriolo Calabro**	**0.52**	**293**	⇑*i*Pg	**Pg**	**00 54 45.0**	**+0.1**
ORI				Sg	**Sg**	**00 54 52.5**	**+0.7**
	2μm,0.5s						
ORI	**Oriolo Calabro**	**0.52**	**293**	⇑*i*Pg	**Pg**	**00 54 45.0**	**+0.1**
ORI				Sg	**Sg**	**00 54 52.5**	**+0.7**
	2μm,0.5s						
TAR1	**Taranto**	**0.68**	**14**	*e*Pg	**Pg**	**00 54 48.2**	**+0.2**
TAR1				*e*Sg	**Sg**	**00 55 00.9**	**+4.0**
CRAC	**Craco**	**0.70**	**316**	Pg	**Pg**	**00 54 48.6**	**+0.2**
CRAC				Sg	**Sg**	**00 55 00.1**	**+2.6**
	564nm,0.2s						
CRAC	**Craco**	**0.70**	**316**	Pg	**Pg**	**00 54 48.6**	**+0.2**
CRAC				Sg	**Sg**	**00 55 00.1**	**+2.6**
	564nm,0.2s						
TIP	**Timpagrande**	**0.73**	**200**	Pg	**Pg**	**00 54 48.9**	**0.0**
	156nm,1.1s						
TIP	**Timpagrande**	**0.73**	**200**	Pg	**Pg**	**00 54 48.9**	**0.0**
	156nm,1.1s						
LTRZ	**Laterza**	**0.76**	**345**	Pg	**Pg**	**00 54 49.3**	**-0.3**
LTRZ				Sg	**Sg**	**00 55 00.5**	**+1.0**
	906nm,0.2s						
LTRZ	**Laterza**	**0.76**	**345**	Pg	**Pg**	**00 54 49.3**	**-0.3**
LTRZ				Sg	**Sg**	**00 55 00.5**	**+1.0**
	906nm,0.2s						
MATE	**Matera**	**0.83**	**340**	Pg	**Pg**	**00 54 50.2**	**-0.7**
MATE				Sg	**Sg**	**00 55 02.2**	**+0.4**
	469nm,0.1s						
MATE	**Matera**	**0.83**	**340**	Pg	**Pg**	**00 54 50.2**	**-0.7**
MATE				Sg	**Sg**	**00 55 02.2**	**+0.4**
	469nm,0.1s						
SCHR	**S. Chirico Rap**	**0.83**	**294**	Pg	**Pg**	**00 54 50.6**	**-0.3**
SCHR				Sg	**Sg**	**00 55 03.4**	**+1.6**
	141nm,0.6s						
SCHR	**S. Chirico Rap**	**0.83**	**294**	Pg	**Pg**	**00 54 50.6**	**-0.3**
SCHR				Sg	**Sg**	**00 55 03.4**	**+1.6**
	141nm,0.6s						
SERS	**Sersale**	**0.88**	**200**	Pg	**Pg**	**00 54 51.4**	**-0.4**
	61nm,0.6s						
SERS	**Sersale**	**0.88**	**200**	Pg	**Pg**	**00 54 51.4**	**-0.4**
	61nm,0.6s						
MIGL	**Miglionico**	**0.88**	**327**	Pg	**Pg**	**00 54 51.1**	**-0.8**
MIGL				Sg	**Sg**	**00 55 04.3**	**+0.9**
	920nm,0.5s						
MIGL	**Miglionico**	**0.88**	**327**	Pg	**Pg**	**00 54 51.1**	**-0.8**
MIGL				Sg	**Sg**	**00 55 04.3**	**+0.9**
	920nm,0.5s						
CARO	**Carolei**	**0.90**	**227**	Pg	**Pg**	**00 54 51.6**	**-0.5**
	398nm,0.7s						
CARO	**Carolei**	**0.90**	**227**	Pg	**Pg**	**00 54 51.6**	**-0.5**
	398nm,0.7s						
NOCI	**Noci**	**0.92**	**360**	Pg	**Pg**	**00 54 52.2**	**-0.4**
	611nm,0.3s						
NOCI	**Noci**	**0.92**	**360**	Pg	**Pg**	**00 54 52.2**	**-0.4**
	611nm,0.3s						
SIRI	**Monte Sirino -**	**0.98**	**289**	Pg	**Pg**	**00 54 52.3**	**-1.4**
	198nm,0.2s						
SIRI	**Monte Sirino -**	**0.98**	**289**	Pg	**Pg**	**00 54 52.3**	**-1.4**
	198nm,0.2s						
PTRP	**Pietrapertosa**	**1.01**	**311**	Pg	**Pg**	**00 54 54.7**	**+0.3**
	263nm,0.6s						
PTRP	**Pietrapertosa**	**1.01**	**311**	Pg	**Pg**	**00 54 54.7**	**+0.3**
	263nm,0.6s						
SG1	**Sgolgore (BA)**	**1.02**	**343**	*e*Pg	**Pg**	**00 54 53.6**	**-0.9**
SG1				*e*Sg	**Sg**	**00 55 11.7**	**+4.0**
MCEL	**Monticello**	**1.08**	**296**	Pg	**Pg**	**00 54 53.8**	**-1.8**
MCEL				Sg	**Sg**	**00 55 09.2**	**-0.4**
	293nm,0.6s						
MCEL	**Monticello**	**1.08**	**296**	Pg	**Pg**	**00 54 53.8**	**-1.8**
MCEL				Sg	**Sg**	**00 55 09.2**	**-0.4**
	293nm,0.6s						
MTSN	**Montesano sull**	**1.09**	**292**	Pg	**Pg**	**00 54 54.2**	**-1.6**
MTSN				Sg	**Sg**	**00 55 10.5**	**+0.5**
	255nm,0.6s						
MTSN	**Montesano sull**	**1.09**	**292**	Pg	**Pg**	**00 54 54.2**	**-1.6**
MTSN				Sg	**Sg**	**00 55 10.5**	**+0.5**
	255nm,0.6s						
SCTE	**Santa Cesarea**	**1.09**	**79**	Pg	**Pg**	**00 54 56.9**	**+1.0**
	215nm,0.7s						
SCTE	**Santa Cesarea**	**1.09**	**79**	Pg	**Pg**	**00 54 56.9**	**+1.0**
	215nm,0.7s						
AMUR	**Altamura**	**1.10**	**341**	Pg	**Pg**	**00 54 54.8**	**-1.2**
	161nm,0.3s						
AMUR	**Altamura**	**1.10**	**341**	Pg	**Pg**	**00 54 54.8**	**-1.2**
	161nm,0.3s						
MGR	**Morigerati**	**1.20**	**284**	Pg	**Pn**	**00 54 55.9**	**-1.7**
	140nm,0.6s						
MGR	**Morigerati**	**1.20**	**284**	Pg	**Pn**	**00 54 55.9**	**-1.7**
	140nm,0.6s						
BAI	**Bari**	**1.25**	**353**	*e*Pg	**Pn**	**00 54 53.8**	**-4.5**
BAI				*e*Sg	**Sg**	**00 55 14.4**	**-0.7**
MRVN	**Minervino Murg**	**1.37**	**331**	Pg	**Pn**	**00 55 00.8**	**+0.9**
MRVN				Sg	**Sg**	**00 55 18.4**	**-0.5**
MRVN	**Minervino Murg**	**1.37**	**331**	Pg	**Pn**	**00 55 00.8**	**+0.9**
MRVN				Sg	**Sg**	**00 55 18.4**	**-0.5**
CDRU	**Civita di Ruta**	**1.49**	**295**	Pg	**Pn**	**00 55 01.6**	**0.0**
CDRU	**Civita di Ruta**	**1.49**	**295**	Pg	**Pn**	**00 55 01.6**	**0.0**
MRLC	**Muro Lucano**	**1.50**	**307**	Pg	**Pn**	**00 55 03.6**	**+1.8**
	127nm,2.2s						
MRLC	**Muro Lucano**	**1.50**	**307**	Pg	**Pn**	**00 55 03.6**	**+1.8**
	127nm,2.2s						
SOI	**Samo**	**1.96**	**204**	Pg	**Pn**	**00 55 10.0**	**+2.0**
	11nm,0.6s						
SOI	**Samo**	**1.96**	**204**	Pg	**Pn**	**00 55 10.0**	**+2.0**
	11nm,0.6s						
STON	**Ston**	**3.04**	**9**	*e*Pn	**Pn**	**00 55 25.2**	**+2.3**
STON				Sn	**Sn**	**00 55 58.2**	**-1.1**
NVLJ	**Novalja**	**4.97**	**342**	⇓*i*Pn	**Pn**	**00 55 50.1**	**+0.7**
NVLJ				Sn	**Sn**	**00 56 45.1**	**-1.8**

IDC 18 00:55:16.6±1.2,31°.83N×104°.30E,h0km,mb3.5/8,
mb1 3.6/9,mb1mx3.4/26,mbtmp3.5/9,ML3.1/1,Error
ellipse: s-maj=36.9km s-min=22.0km az=45.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.07**	**5**	Pn	Pn	00 59 05.8	+2.0
	0.1nm,0.3s,baz=153,slow=9.7,SNR=2.5						
KSRS	**Korea Array**	**20.21**	**67**	P	P	00 59 53.9	+0.9
	0.5nm,0.6s,baz=256,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**22.55**	**318**	P	P	01 00 18.7	+0.6
	0.4nm,0.6s,baz=102,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.15**	**333**	P	P	01 00 52.5	+0.2
	0.4nm,0.4s,baz=152,slow=13,SNR=3.5						
KURK	**Kurchatov**	**26.77**	**322**	P	P	01 00 58.4	+0.4
	0.4nm,0.5s,baz=122,slow=7.6,SNR=3.1						
PETK	**Petropavlovsk-**	**43.56**	**45**	P	P	01 03 21.6	-0.5
	1.1nm,0.8s,baz=251,slow=4.4,SNR=2.3						
FINES	**FINESS Array B**	**57.06**	**326**	P	P	01 05 03.9	-0.3
	2.5nm,0.8s,baz=73,slow=8.6,SNR=9.9						
ASAR	**Alice Springs**	**62.02**	**149**	P	P	01 05 39.1	+0.3
	0.2nm,0.4s,baz=336,slow=7.0,SNR=6.9						
YKA	**Yellowknife Ar**	**80.96**	**17**	P	P	01 07 31.4	-1.2
	0.2nm,0.7s,baz=328,slow=5.4,SNR=4.6						

*ISCJB **18** 01:04:55.6±0.8,31°.10N±0°.03×103°.49E±0°.03,h5km±5km,*
mb4.1/41,MS3.3/9,Error ellipse: s-maj=5.1km
s-min=4.3km az=136.2
*IDC **18** 01:04:56.9±0.7,31°.10N×103°.47E,h0km,mb4.0/17,*
mb1 4.1/19,mb1mx4.0/26,mbtmp4.0/19,ML4.2/2,MS3.4/10,
Ms1 3.4/10,ms1mx3.1/33,Error ellipse: s-maj=22.8km
s-min=14.7km az=41.0
*NEIC **18** 01:04:58.3±0.3,31°.11N×103°.51E,h10km,mb4.3/21,Error*
ellipse: s-maj=7.3km s-min=5.7km az=212.0
*MOS **18** 01:04:58.6±0.9,31°.03N×103°.54E,h27km,mb4.4/29,Error*
ellipse: s-maj=13.0km s-min=7.1km az=106.4
*BJI **18** 01:04:58.1,31°.08N×103°.72E,h8km,mB4.4/6,mb4.2/11,*
ML4.3/18,Ms4.2/15,Ms7 3.8/15
ISC 18 01:04:57.7±0.8,31°.07N±0°.03×103°.48E±0°.03,h6km±5km,
n107,σ0°96/119,mb4.1/41,MS3.3/9,16C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**123**	Pg	**Pg**	**01 05 03.0**	**-0.3**
CD2				Sg	**Sg**	**01 05 07.3**	**+0.2**
CD2				smax			
	comp=N,45μm,0.5s						
LZH	**Lanzhou**	**5.02**	**3**	Pg	**Pg**	**01 06 33.9**	**+0.1**
LZH				Sn	**Sn**	**01 07 17.5**	**+5.7**
LZH				Sg	**Sg**	**01 07 38.8**	**0.0**
LZH				smax			
	comp=N,220nm,0.9s						
LZH				smax			
	comp=E,390nm,1.2s						
LZH				LR	LR		
	comp=E,2μm,6.4s						
LZH				LR	LR		
	comp=Z,3μm,7.2s						
ENH	**Enshi**	**5.24**	**97**	*e*Pn	**Pn**	**01 06 16.9**	**+0.3**
	comp=Z,133nm,0.8s						
ENH				*e*Pg	**Pg**	**01 06 38.8**	**+0.8**
ENH				*e*Sn	**Sn**	**01 07 18.4**	**+1.1**
ENH				*e*Sg	**Sg**	**01 07 42.8**	**-3.2**
GYA	**Guiyang**	**5.38**	**148**	Pn	**Pn**	**01 06 21.9**	**+3.4**
GYA				Sn	**Sn**	**01 07 28.6**	**+7.9**
GYA				smax			
	comp=N,290nm,0.9s						
GYA				smax			
	comp=E,410nm,0.8s						
XAN	**Xi'an**	**5.47**	**56**	Pn	**Pn**	**01 06 17.4**	**-2.3**
XAN				Pg	**Pg**	**01 06 35.5**	**-7.0**
XAN				Sn	**Sn**	**01 07 18.3**	**-4.7**
XAN				Sg	**Sg**	**01 07 38.8**	**-15**
XAN				smax			
	comp=N,370nm,1.2s						
XAN				smax			
	comp=E,230nm,0.7s						
KMI	**Kunming**	**5.96**	**186**	Pn	**Pn**	**01 06 27.5**	**+1.1**
KMI				Sn	**Sn**	**01 07 35.6**	**+0.6**
KMI				smax			
	comp=N,83nm,1.7s						
KMI				smax			
	comp=E,85nm,1.1s						
KMI				LR	LR		
	comp=N,880nm,7.7s						
KMI				LR	LR		
	comp=E,1μm,7.0s						
KMI				LR	LR		
	comp=Z,790nm,11.9s						
GTA	**Gaotai**	**8.85**	**341**	⇓P	**Pn**	**01 07 15.1**	**+9.1**
GTA				pP		01 07 18.5	
GTA				sP		01 07 21.4	
GTA				S	**Sn**	**01 08 49.6**	**+3.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,65nm,4.2s						
GTA				LR	LR		
	comp=N,410nm,11.6s						
GTA				LR	LR		
	comp=E,490nm,14.0s						
GTA				LR	LR		
	comp=Z,460nm,14.9s						
WHN	**Wuhan**	**9.37**	**90**	P	**Pn**	**01 07 16.8**	**+3.6**
WHN				S	**Sn**	**01 08 48.8**	**-10**
WHN				LR	LR		
	comp=N,3μm,8.2s						
WHN				LR	LR		
	comp=Z,1μm,5.0s						
HHC	**Hu-ho-hao-te**	**11.75**	**32**	*e*P	**Pn**	**01 07 47.4**	**+1.6**
HHC				pP		01 07 50.8	
HHC				sP		01 07 57.0	
HHC				S	**Sn**	**01 09 58.8**	**+1.5**
HHC				sS		01 10 04.4	
HHC				SS		01 10 13.1	
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,500nm,4.7s						
HHC				LR	LR		
	comp=E,360nm,5.8s						
HHC				LR	LR		
	comp=Z,250nm,6.0s						
CMAR	**Chiang Mai Arr**	**13.21**	**199**	Pn	**Pn**	**01 08 06.8**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=206,slow=32,SNR=3.4						
CMAR	**Chiang Mai Arr**	**13.21**	**199**	P	**Pn**	**01 08 06.8**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
QZH	**Quanzhou**	**14.68**	**111**	P	**Pn**	**01 08 25.9**	**+0.1**
QZH				S	**Sn**	**01 11 08.6**	**-0.3**
QZH				LR	LR		
	comp=N,600nm,5.3s						
QZH				LR	LR		
	comp=E,960nm,8.9s						
QZH				LR	LR		
	comp=Z,1μm,9.8s						
GUN	**Gumba**	**15.64**	**263**	*e*P	**Pn**	**01 08 39.3**	**+0.6**
	comp=Z,16nm,0.6s						
PKI	**Pulchoki**	**16.14**	**262**	*e*P	**Pn**	**01 08 44.0**	**-1.2**
	comp=Z,15nm,0.6s						
PKIN	**Phulchoki**	**16.15**	**262**	*e*P	**Pn**	**01 08 44.1**	**-1.2**
	comp=Z,10nm,0.4s						
KKN	**Kakani**	**16.18**	**263**	*e*P	**Pn**	**01 08 44.8**	**-1.0**
	comp=Z,26nm,0.7s						
DMN	**Daman**	**16.38**	**262**	*e*P	**Pn**	**01 08 47.3**	**-1.0**
	comp=Z,35nm,0.8s						
SONM	**Songino Array**	**16.89**	**7**	Pn	**Pn**	**01 08 55.0**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=188,slow=12,SNR=22						
SONM				LR	LR	01 15 59.8	
	comp=Z,174nm,19.9s,baz=17,slow=39						
SONM	**Songino Array**	**16.89**	**7**	P	**Pn**	**01 08 55.0**	**+0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,174nm,19.9s						
ULN	**Ulaanbaatar**	**17.00**	**8**	*e*P	**Pn**	**01 08 56.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**17.00**	**8**	*e*Pn	**Pn**	**01 08 56.9**	**+1.0**
	comp=Z,6.3nm,1.0s						
ZAK	**Zakamensk**	**19.30**	**360**	*e*P	**Pn**	**01 09 24.5**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MOY	**Mondy**	**20.66**	**356**	*e*P	**P**	**01 09 40.2**	**+2.1**
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**01 09 42.9**	**-0.7**
	comp=Z,10nm,0.6s,mb4.3,baz=263,slow=11,SNR=41						
KSRS				LR	LR	01 18 07.0	
	comp=Z,51nm,18.4s,MS2.9,baz=160,slow=37						
KSRS	**Korea Array**	**21.16**	**66**	P	**P**	**01 09 42.9**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,51nm,18.4s,MS2.9						
CN2	**Changchun**	**21.51**	**48**	*e*P	**P**	**01 09 46.4**	**-0.9**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.9						
MK31	**Makanchi Array**	**22.66**	**320**	*e*P	**P**	**01 10 00.8**	**+1.3**
MKAR	**Makanchi Array**	**22.66**	**320**	P	**P**	**01 10 00.4**	**+0.9**
	comp=Z,5.4nm,1.0s,mb4.0,baz=125,slow=10,SNR=24						
MKAR	**Makanchi Array**	**22.66**	**320**	P	**P**	**01 10 00.4**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
UCH	**Uchtor**	**25.65**	**304**	*e*P	**P**	**01 10 29.3**	**+1.2**
	comp=Z,3.9nm,0.9s,mb3.9						
AAK	**Ala-Archa**	**25.78**	**305**	LR	LR	01 22 25.5	
	comp=Z,91nm,18.6s,MS3.3,baz=252,slow=41						
AAK	**Ala-Archa**	**25.78**	**305**	*e*P	**P**	**01 10 29.8**	**+0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
AAK	**Ala-Archa**	**25.78**	**305**	*e*P	**P**	**01 10 29.8**	**+0.5**
	comp=Z,5.7nm,1.0s,mb4.1						
AML	**Almayashu**	**26.21**	**303**	*e*P	**P**	**01 10 32.8**	**-0.4**
	comp=Z,2.4nm,0.7s,mb3.8						
EKS2	**Erkin-Say**	**26.29**	**304**	*e*P	**P**	**01 10 33.7**	**-0.3**
ZAA0	**Zalesovo Array**	**26.52**	**335**	*e*P	**P**	**01 10 35.7**	**-0.2**
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**01 10 36.1**	**+0.2**
	comp=Z,2.4nm,0.7s,mb3.8,baz=136,slow=9.4,SNR=12						
ZALV				LR	LR	01 21 51.8	
	comp=Z,72nm,18.4s,MS3.2,baz=356,slow=38						
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**01 10 36.1**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,72nm,18.4s,MS3.3						
KURK	**Kurchatov**	**26.96**	**324**	P	**P**	**01 10 40.5**	**+0.7**
	comp=Z,2.1nm,0.4s,mb4.0,baz=129,slow=9.4,SNR=17						
KURK				LR	LR	01 22 02.8	
	comp=Z,75nm,18.8s,MS3.3,baz=105,slow=38						
KURK	**Kurchatov**	**26.96**	**324**	P	**P**	**01 10 40.6**	**+0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
KURK				MLR	MLR		
	comp=Z,75nm,18.8s,MS3.3						
MJAR	**Matsushiro Arr**	**29.27**	**70**	P	**P**	**01 11 01.4**	**+0.7**
	comp=Z,0.4nm,0.4s,mb3.5,baz=269,slow=10,SNR=3.5						
POO	**Poona**	**29.55**	**252**	*ex*	x	01 11 49.0	
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**01 11 29.5**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.7,baz=138,slow=12,SNR=5.5						
BVAR				LR	LR	01 25 46.8	
	comp=Z,54nm,20.8s,MS3.2,baz=37,slow=38						
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**01 11 29.5**	**+0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,54nm,20.8s						
BVAR	**Borovoye Array**	**32.49**	**322**	P	**P**	**01 11 29.5**	**+0.6**
BVAR				LR	LR	01 25 46.8	
BRVK	**Borovoye**	**32.56**	**322**	*e*P	**P**	**01 11 29.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**32.56**	**322**	*e*P	**P**	**01 11 29.7**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**37.30**	**312**	*e*P	**P**	**01 12 11.1**	**+0.7**
	comp=Z,1.1nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**38.77**	**313**	P	**P**	**01 12 23.0**	**+0.2**
AKTO	**Aktyubinsk**	**38.77**	**313**	P	**P**	**01 12 23.0**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.7,baz=88,slow=14,SNR=5.7						
AKTO	**Aktyubinsk**	**38.77**	**313**	P	**P**	**01 12 23.0**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
TIXI	**Tiksi**	**42.90**	**12**	*e*P	**P**	**01 12 53.9**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TIXI	**Tiksi**	**42.90**	**12**	*e*P	**P**	**01 12 54.8**	**-1.8**
	comp=Z,2.0nm,0.6s,mb4.0						
PETK	**Petropavlovsk-**	**44.59**	**44**	P	**P**	**01 13 11.2**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.7,baz=285,slow=7.3,SNR=2.9						
PETK				LR	LR	01 33 30.6	
	comp=Z,26nm,18.3s,MS3.2,baz=16,slow=38						
PETK	**Petropavlovsk-**	**44.59**	**44**	P	**P**	**01 13 11.2**	**+0.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
PETK				MLR	MLR		
	comp=Z,26nm,18.3s,MS3.2						
ZEI	**Tsey**	**48.13**	**302**	*e*P	**P**	**01 13 38.3**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KIV	**Kislovodsk**	**48.88**	**303**	*e*P	**P**	**01 13 46.4**	**+2.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BILL	**Bilibino**	**51.44**	**25**	*e*P	**P**	**01 14 01.9**	**-1.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BILL	**Bilibino**	**51.44**	**25**	*e*P	**P**	**01 14 01.9**	**-1.4**
	comp=Z,2.1nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**56.29**	**300**	P	**P**	**01 14 38.8**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=72,slow=11,SNR=2.8						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**01 14 43.4**	**-0.8**
	comp=Z,1.2nm,0.4s,mb4.3,baz=69,slow=7.4,SNR=5.4						
**

comp=Z,0.8nm,0.7s,mb3.9,baz=65,slow=4.4,SNR=3.3
NOA NORSAR Array B 64.40 327 P P 01 15 33.2 -1.1
NOA pmax pmax
comp=Z,1.0nm,0.7s
MORC Moravsky Berou 64.51 314 *eP* **P 01 15 35.1 -0.1**
MORC pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
MORC Moravsky Berou 64.51 314 *eP* **P 01 15 35.1 -0.1**
comp=Z,2.0nm,0.8s,mb4.2
GERES GERESS Array B 67.19 314 P P 01 15 52.8 +0.3
comp=Z,0.5nm,0.6s,mb3.7,baz=64,slow=6.1,SNR=6.8
GERES LR LR 01 47 02.1
comp=Z,42nm,20.0s,MS3.6,baz=164,slow=38
GERES GERESS Array B 67.19 314 P P 01 15 52.8 +0.3
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,42nm,20.0s
COLD Coldfoot 67.72 24 *eP* **P 01 15 54.5 -1.1**
comp=Z,2.5nm,0.9s,mb4.2
KTH Kantishna Hill 69.16 27 *eP* **P 01 16 03.5 -1.1**
comp=Z,2.2nm,1.0s,mb4.0
TRF Thorofare Moun 69.46 27 *eP* **P 01 16 06.2 -0.2**
comp=Z,1.6nm,0.7s,mb4.1
COLA College 69.69 26 *eP* **P 01 16 06.9 -1.0**
COLA pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
COLA College 69.69 26 *eP* **P 01 16 06.9 -1.0**
comp=Z,5.6nm,1.1s,mb4.4
OHAK Old Harbor 71.10 34 *eP* **P 01 16 15.3 -1.3**
comp=Z,6.3nm,0.7s,mb4.7
KDAK Kodiak Island 71.17 33 LR LR 01 49 12.9
comp=Z,41nm,19.1s,MS3.7,slow=37
CDF Champ du Feu 71.27 316⇑*iP* **P 01 16 17.3 -0.5**
comp=Z,2.6nm,0.5s,mb4.1
CDF Champ du Feu 71.27 316⇑*iP* **P 01 16 17.3 -0.5**
CDF pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
CDF Champ du Feu 71.27 316⇑*iP* **P 01 16 17.3 -0.5**
comp=Z,1.3nm,0.5s,mb4.1
STKA Stephens Creek 72.27 147 P **P 01 16 26.0 +2.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=340,slow=15,SNR=3.4
INK Inuvik 72.37 19 *eP* **P 01 16 22.8 -1.3**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 72.37 19 *eP* **P 01 16 22.8 -1.3**
comp=Z,3.3nm,1.0s,mb4.2
LPG La Plagne 72.88 313⇑*iP* **P 01 16 28.0 +0.5**
comp=Z,6.2nm,0.7s,mb4.4
LPG La Plagne 72.88 313⇑*iP* **P 01 16 28.0 +0.5**
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
LPG La Plagne 72.88 313⇑*iP* **P 01 16 28.0 +0.5**
comp=Z,3.1nm,0.7s,mb4.3
LPL La Plagne 72.89 313⇑*iP* **P 01 16 28.0 +0.4**
comp=Z,8.0nm,0.6s,mb4.5
LPL La Plagne 72.89 313⇑*iP* **P 01 16 28.0 +0.4**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 72.89 313⇑*iP* **P 01 16 28.0 +0.4**
comp=Z,4.0nm,0.6s,mb4.5
BNI Bardonecchia 73.13 313 *eP* **P 01 16 28.4 -0.6**
BNI pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BNI Bardonecchia 73.13 313 *eP* **P 01 16 28.4 -0.6**
comp=Z,2.4nm,0.8s,mb4.2
SMF Signal de Mont 74.14 315⇑*iP* **P 01 16 34.4 -0.5**
comp=Z,8.3nm,1.0s,mb4.3
SMF Signal de Mont 74.14 315⇑*iP* **P 01 16 34.4 -0.5**
SMF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
SMF Signal de Mont 74.14 315⇑*iP* **P 01 16 34.4 -0.5**
comp=Z,4.2nm,1.0s,mb4.3
TCF Toulx Ste Croi 75.30 315⇑*iP* **P 01 16 41.3 -0.4**
comp=Z,7.5nm,1.1s,mb4.2
TCF Toulx Ste Croi 75.30 315⇑*iP* **P 01 16 41.3 -0.4**
TCF pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
TCF Toulx Ste Croi 75.30 315⇑*iP* **P 01 16 41.3 -0.4**
comp=Z,3.8nm,1.1s,mb4.2
CAF Calviac 76.07 314⇑*iP* **P 01 16 46.2 +0.1**
YKA Yellowknife Ar 81.89 17 P **P 01 17 16.7 -0.9**
comp=Z,0.7nm,0.6s,mb3.8,baz=330,slow=5.3,SNR=12
YKA Yellowknife Ar 81.89 17 P **P 01 17 16.7 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 81.89 17 P **P 01 17 16.7 -0.9**

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*NEIC **18** 01:17:49.0±0.7, 18°.61N×96°.24E, h10km, mb4.0/4, Error ellipse: s-maj=18.5km s-min=8.3km az=212.0*
*IDC **18** 01:17:52.4±5.8, 18°.61N×96°.31E, h33km±45km, mb3.7/10, mb1 3.8/11, mb1mx3.6/25, mbtmp3.7/11, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/41, Error ellipse: s-maj=44.5km s-min=20.0km az=50.0*
ISC 18 01:17:47.8±1.8, 18°.48N±0°.08×96°.15E±0°.08, h5km±11km, n36, σ1§10/44, mb3.8/14, MS3.4/2, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**2.65**	**90**	*e*Pn	**Pn**	**01 18 30.5**	**-0.7**
CM31				*e*Pg	**Pg**	**01 18 38.0**	**-0.6**
CM31				*e*Sg	**Sg**	**01 19 12.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**2.65**	**90**	Pn	**Pn**	**01 18 31.6**	**+0.5**
CMAR	4.3nm,0.3s,baz=263,slow=14,SNR=26			Pg	**Pg**	**01 18 38.0**	**-0.5**
CMAR	49nm,0.3s,baz=263,slow=18,SNR=70			Sn	**Sn**	**01 19 00.0**	**-3.7**
CMAR	26nm,0.3s,baz=255,slow=18,SNR=7.0			Lg		01 19 13.1	
CMAR	**Chiang Mai Arr**	**2.65**	**90**	Pn	**Pn**	**01 18 31.6**	**+0.5**
CMAR	60nm,0.3s,baz=240,slow=18,SNR=7.3			Pg	**Pg**	**01 18 38.0**	**-0.5**
CMAR				Sn	**Sn**	**01 19 00.0**	**-3.7**
CMAR				Lg		01 19 13.1	
CHG	**Chiang Mai**	**2.67**	**82**	PG	**Pn**	**01 18 32.0**	**+0.6**
CHG				SG	**Pg**	**01 18 38.5**	**-0.4**
CHRT	**Chiangrai**	**3.70**	**67**	⇓PN	**Pn**	**01 18 46.5**	**+0.9**
CHRT	**Chiangrai**	**3.70**	**67**	PG	**Pg**	**01 19 00.0**	**+1.3**
CHRT				SG	**Sg**	**01 19 57.0**	**+10**
NST	**Nakhon Sawan**	**4.72**	**126**	PN	**Pn**	**01 18 58.0**	**-1.7**
NST	**Nakhon Sawan**	**4.72**	**126**	PG	**Pb**	**01 19 13.0**	**+1.9**
NST				SG	**Sb**	**01 20 13.0**	**+4.7**
KKTK	**Khon Kaen**	**6.71**	**108**	PN	**Pg**	**01 20 02.0**	**+5.5**
KKTK				SG	Sx	01 21 03.6	
SHL	**Shillong**	**8.09**	**331**	*e*P	**Pn**	**01 19 47.5**	**+1.6**
SHL				*e*S	**Sn**	**01 21 18.0**	**+0.2**
LSA	**Lhasa**	**12.06**	**339**	P	**Pn**	**01 20 42.5**	**+2.1**
LSA	**Lhasa**	**12.06**	**339**	*e*Pn	**Pn**	**01 20 40.3**	**-0.2**
GUN	**Gumba**	**13.31**	**317**	*e*P	**Pn**	**01 20 57.7**	**+0.2**
PKI	**Pulchoki**	**13.40**	**314**	*e*P	**Pn**	**01 20 55.9**	**-2.8**
PKIN	13nm,0.6s						
PKIN	**Phulchoki**	**13.41**	**314**	*e*P	**Pn**	**01 20 55.4**	**-3.4**
PKIN	15nm,0.5s						
KKN	**Kakani**	**13.63**	**315**	*e*P	**Pn**	**01 20 57.3**	**-4.5**
KKN	13nm,0.6s						
DMN	**Daman**	**13.63**	**314**	*e*P	**Pn**	**01 20 56.3**	**-5.5**
DMN	14nm,0.8s						
GTA	**Gaotai**	**21.10**	**8**	*e*P	**P**	**01 22 40.6**	**+7.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
UCH	**Uchtor**	**29.98**	**327**	*e*P	**P**	**01 23 58.2**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.5						
MK31	**Makanchi Array**	**30.46**	**341**	*e*P	**P**	**01 24 00.8**	**-0.5**
MKAR	**Makanchi Array**	**30.46**	**341**	P	**P**	**01 24 01.1**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.6,baz=152,slow=9.0,SNR=7.9						
ULN	**Ulaanbaatar**	**30.63**	**14**	*e*P	**P**	**01 24 01.0**	**-1.9**
	comp=Z,1.2nm,0.6s,mb3.9						
KSRS	**Korea Array**	**33.60**	**49**	LR	LR	01 38 11.0	
	comp=Z,78nm,18.5s,MS3.5,baz=330,slow=36						
KURK	**Kurchatov**	**35.06**	**341**	P	**P**	**01 24 40.4**	**-1.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=150,slow=8.7,SNR=11						
KURK	**Kurchatov**	**35.06**	**341**	*e*P	**P**	**01 24 41.1**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.2						
ZAA0	**Zalesovo Array**	**36.47**	**349**	*e*P	**P**	**01 24 53.9**	**+0.3**
ZALV	**Zalesovo Beam**	**36.47**	**349**	P	**P**	**01 24 53.8**	**+0.2**
	comp=Z,3.0nm,0.7s,mb4.3,baz=165,slow=9.3,SNR=15						
ABKAR	**Akbulak array**	**42.29**	**325**	*e*P	**P**	**01 25 41.3**	**-0.9**
	comp=Z,2.0nm,0.6s,mb3.9						
ASAR	**Alice Springs**	**55.79**	**137**	P	**P**	**01 27 25.8**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=320,slow=7.6,SNR=6.7						
BRTR	**Keskin Array B**	**57.43**	**306**	P	**P**	**01 27 38.3**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.5,baz=109,slow=14,SNR=4.1						
FINES	**FINESS Array B**	**64.42**	**330**	P	**P**	**01 28 24.2**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.1,baz=102,slow=26,SNR=3.1						
ARCES	**ARCESS Array B**	**66.07**	**339**	P	**P**	**01 28 34.9**	**-0.5**
	comp=Z,3.7nm,0.9s,mb4.4,baz=96,slow=4.5,SNR=3.3						
HFS	**Hagfors**	**70.42**	**328**	LR	LR	02 02 47.5	
	comp=Z,14nm,18.2s,MS3.3,baz=125,slow=38						
GERES	**GERESS Array B**	**71.40**	**316**	P	**P**	**01 29 08.4**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=88,slow=6.0,SNR=9.0						
NOA	**NORSAR Array B**	**71.58**	**329**	P	**P**	**01 29 11.5**	**+1.7**
	comp=Z,0.3nm,0.6s,mb3.4,baz=86,slow=6.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**90.04**	**284**	P	**P**	**01 30 51.5**	**+2.2**
	comp=Z,0.2nm,0.7s,mb3.6,baz=77,slow=5.3,SNR=2.5						

PRE 18 01:30:51.6±0.5, 20°.97S×33°.30E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.35**	**245**	*e*P	Pn	01 31 46.0	+1.4
MSNA				*e*S	Sn	01 32 25.5	+0.8
MSNA				AML	AML	01 32 39.1	
	comp=Z,97nm,0.4s						
POGA	**Pongola**	**6.56**	**193**	*e*P	Pn	01 32 29.1	+0.4
POGA				*e*S	Sn	01 33 40.3	-3.6
POGA				AML	AML	01 34 25.9	
	comp=Z,18nm,0.5s						
SLR	**Silverton**	**6.62**	**223**	*e*P	Pn	01 32 30.5	+0.9
SLR				*e*S	Sn	01 33 42.6	-2.8
SLR				AML	AML	01 34 25.6	
	comp=Z,22nm,0.6s						
KSR	**Koster**	**7.63**	**229**	*e*P	Pn	01 32 44.4	+0.9
KSR				*e*S	Sn	01 34 07.2	-3.2
KSR				AML	AML	01 34 55.4	
	comp=Z,16nm,0.9s						
PRYS	**Parys**	**8.04**	**221**	*e*P	Pn	01 32 50.3	+1.1
PRYS				*e*S	Sn	01 34 16.7	-3.8
PRYS				AML	AML	01 35 12.6	
	comp=Z,7.2nm,0.5s						
LBTB	**Lobatse**	**8.16**	**239**	*e*P	Pn	01 32 52.0	+1.2
LBTB				*e*S	Sn	01 34 19.9	-3.6
LBTB				AML	AML	01 35 21.4	
	comp=Z,11nm,0.5s						
SWZ	**Schweizer**	**9.55**	**228**	*e*P	Pn	01 33 10.9	+1.0
SWZ				*e*S	Sn	01 34 52.8	-4.9
SWZ				AML	AML	01 34 54.9	
	comp=Z,3.7nm,0.5s						
PKA	**Prieska**	**12.88**	**226**	*e*P	Pn	01 33 57.0	+1.6
PKA				*e*S	Sn	01 36 12.7	-6.5
PKA				AML	AML	01 37 05.9	
	comp=Z,2.2nm,0.5s						

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*IDC **18** 01:31:13.2±4.8, 41°.02N×142°.65E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/25, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=102.3km s-min=39.9km az=106.0*
*JMA **18** 01:31:15.8±0.2, 40°.68N×142°.65E, h27km±4km, M3.4*
*ISCJB **18** 01:31:17.1±0.7, 40°.73N±0°.05×142°.56E±0°.08, h47km±7km, mb3.9/6, Error ellipse: s-maj=11.3km s-min=5.1km az=33.4*
*NEIC **18** 01:31:19.3±1.6, 40°.84N×142°.58E, h51km±24km, mb4.1/2, Error ellipse: s-maj=73.4km s-min=9.1km az=119.0*
ISC 18 01:31:17.3±1.3, 40°.77N±0°.04×142°.53E±0°.08, h27km±10km, n23, σ0§89/29, mb3.9/6, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.87**	**243**	⇓P	**Pb**	**01 31 32.8**	**-0.9**
JANG				*e*S	**Sb**	**01 31 43.8**	**-1.2**
JTH	**Tanohata**	**0.98**	**212**	⇓P	**Pn**	**01 31 33.1**	**-2.1**
JTM	**Tenmabayashi**	**1.11**	**271**	⇓P	**Pn**	**01 31 37.1**	**+0.1**
JTM				*e*S	**Sb**	**01 31 52.4**	**+0.6**
JOT	**Ohata**	**1.27**	**299**	⇓P	**Pn**	**01 31 39.3**	**0.0**
JOT				*e*S	**Sn**	**01 31 55.6**	**+0.1**
ERM	**Erimo**	**1.33**	**21**	*e*Pn	**Pn**	**01 31 40.5**	**+0.5**
ERM				*e*Sn	**Sn**	**01 31 57.0**	**+0.1**
JEM	**Erimo**	**1.33**	**21**	P	**Pn**	**01 31 39.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**1.52**	**6**	P	**Pn**	**01 31 43.2**	**+0.6**
JAH	**Hinai**	**1.56**	**249**	⇓P	**Pn**	**01 31 43.7**	**+0.5**
JKB	**Kayabe**	**1.58**	**315**	⇑P	**Pn**	**01 31 43.9**	**+0.3**
JOM	**Ohasama**	**1.61**	**217**	P	**Pn**	**01 31 43.3**	**-0.6**
JSR	**Shiriuchi**	**1.76**	**296**	⇓P	**Pn**	**01 31 46.9**	**+0.9**
JCH	**Churui**	**1.94**	**18**	P	**Pn**	**01 31 48.4**	**-0.1**
JCH				*e*S	**Sn**	**01 32 12.1**	**+0.1**
MAJO	**Matsushiro**	**5.41**	**220**	*e*Pn	**Pn**	**01 32 38.6**	**+2.4**
	9.4nm,0.6s						
MAT	**Matsushiro**	**5.41**	**220**	P	**Pn**	**01 32 37.4**	**+1.2**
MAT				*e*S	**Sn**	**01 33 37.7**	**+0.2**
MJAR	**Matsushiro Arr**	**5.41**	**220**	Pn	**Pn**	**01 32 38.3**	**+2.1**
	0.7nm,0.3s,baz=29,slow=13,SNR=10						
ZALV	**Zalesovo Beam**	**40.13**	**309**	P	**P**	**01 38 49.7**	**-0.8**
	0.7nm,0.5s,mb3.6,baz=80,slow=7.1,SNR=3.6						
MK31	**Makanchi Array**	**42.97**	**299**	*e*P	**P**	**01 39 13.1**	**-0.7**
MKAR	**Makanchi Array**	**42.97**	**299**	P	**P**	**01 39 13.2**	**-0.7**
	0.4nm,0.5s,mb3.4,baz=86,slow=10,SNR=5.7						
KURK	**Kurchatov**	**44.40**	**305**	P	**P**	**01 39 25.6**	**+0.3**
	0.4nm,0.3s,mb3.6,baz=78,slow=8.9,SNR=4.0						
KURK	**Kurchatov**	**44.40**	**305**	*e*P	**P**	**01 39 24.2**	**-1.1**
	0.7nm,0.5s,mb3.6						
TKM2	**Tokmak 2**	**48.70**	**296**	*e*P	**P**	**01 39 59.4**	**+0.2**
	2.3nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**48.77**	**310**	P	**P**	**01 39 59.3**	**-0.2**
	0.6nm,0.5s,mb3.9,baz=76,slow=7.6,SNR=5.4						
FINES	**FINESS Array B**	**65.92**	**332**	P	**P**	**01 41 59.1**	**-1.3**
	1.1nm,0.5s,mb4.1,baz=37,slow=7.8,SNR=7.7						

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*ISCJB **18** 01:41:45.9±0.4, 30°.91N±0°.03×103°.46E±0°.04, h10km, mb4.0/17, MS3.2/2, Error ellipse: s-maj=5.3km s-min=4.3km az=147.3*
*IDC **18** 01:41:46.1±0.9, 30°.86N×103°.29E, h0km, mb4.0/12, mb1 4.1/13, mb1mx3.8/25, mbtmp4.0/13, ML3.5/1, MS3.3/2, Ms1 3.3/2, ms1mx2.4/44, Error ellipse: s-maj=32.1km s-min=16.5km az=48.0*
*NEIC **18** 01:41:47.6±0.4, 30°.90N×103°.36E, h10km, mb4.1/7, Error ellipse: s-maj=12.4km s-min=6.8km az=33.0*
*BJI **18** 01:41:49.6, 30°.84N×103°.40E, h14km, mb4.2/5, ML3.8/15, Ms3.7/3, Ms7 3.3/3*
ISC 18 01:41:48.1±0.4, 30°.93N±0°.04×103°.37E±0°.04, h10km, n32, σ0§90/41, mb4.0/17, MS3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**93**	Pg	**Pg**	**01 41 56.8**	**+2.0**
CD2				Sg	**Sg**	**01 42 04.1**	**+4.8**
CD2				smax			
	comp=N,14μm,0.7s						
LZH	**Lanzhou**	**5.16**	**4**	Pg	**Pg**	**01 43 29.8**	**+2.9**
LZH				Sg	**Sg**	**01 44 37.8**	**+4.1**
LZH				smax			
	comp=N,100nm,1.2s						
LZH				smax			
	comp=E,69nm,0.8s						
LZH				LR	LR		
	comp=E,410nm,5.2s						
LZH				LR	LR		
	comp=Z,580nm,7.3s						
GYA	**Guiyang**	**5.31**	**146**	Pg	**Pn**	**01 43 13.3**	**+5.8**
GYA				Sg	**Sb**	**01 44 20.9**	**-4.0**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,140nm,0.8s						
ENH	**Enshi**	**5.32**	**96**	*e*Pn	**Pn**	**01 43 07.6**	**0.0**
	comp=E,48nm,0.6s						
ENH				*e*Sn	**Sn**	**01 44 09.1**	**+0.2**
ENH				*e*Sg	**Sg**	**01 44 38.8**	**-0.1**
XAN	**Xi'an**	**5.63**	**55**	Pn	**Pn**	**01 43 12.0**	**+0.2**
XAN				Pg	**Pg**	**01 43 31.4**	**-4.4**
XAN				Sn	**Sn**	**01 44 13.8**	**-2.7**
XAN				Sg	**Sg**	**01 44 43.0**	**-5.7**
XAN				smax			
	comp=N,260nm,1.0s						
XAN				smax			
	comp=E,93nm,0.9s						
KMI	**Kunming**	**5.81**	**186**	Pn	**Pn**	**01 43 15.0**	**+0.7**
KMI				Sn	**Sn**	**01 44 21.3**	**+0.2**
KMI				smax			
	comp=N,46nm,1.0s						
KMI				smax			
	comp=E,44nm,0.8s						
KMI				LR	LR		
	comp=N,410nm,9.2s						
KMI				LR	LR		
	comp=E,470nm,7.7s						
KMI				LR	LR		
	comp=Z,320nm,8.7s						
GTA	**Gaotai**	**8.95**	**342**	*e*P	**Pn**	**01 44 03.1**	**+5.8**
GTA				pP		01 44 07.4	
GTA				sP		01 44 09.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WHN	**Wuhan**	**9.46**	**90**	P	**Pn**	**01 43 59.9**	**-4.6**
WHN				S	**Sn**	**01 45 45.8**	**-5.1**
WHN				LR	LR		
	comp=N,410nm,7.2s						
WHN				LR	LR		
	comp=E,810nm,5.1s						
WHN				LR	LR		
	comp=Z,1μm,5.5s						
SONM	**Songino Array**	**17.04**	**7**	P	**Pn**	**01 45 46.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=6.3						
KSRS	**Korea Array**	**21.30**	**66**	P	**P**	**01 46 35.8**	**+0.9**
	comp=Z,3.0nm,0.7s,mb3.7,baz=251,slow=9.9,SNR=9.8						
MK31	**Makanchi Array**	**22.70**	**320**	*e*P	**P**	**01 46 50.1**	**+0.4**
MKAR	**Makanchi Array**	**22.70**	**320**	P	**P**	**01 46 50.3**	**+0.5**
	comp=Z,2.9nm,1.0s,mb3.7,baz=129,slow=11,SNR=17						
TKM2	**Tokmak 2**	**25.10**	**306**	*e*P	**P**	**01 47 12.9**	**0.0**
	comp=Z,5.8nm,1.0s,mb4.1						
UCH	**Uchtor**	**25.65**	**304**	*e*P	**P**	**01 47 17.9**	**0.0**
	comp=Z,3.0nm,1.1s,mb3.7						
AAK	**Ala-Archa**	**25.78**	**305**	P	**P**	**01 47 19.8**	**+0.7**
	comp=Z,0.6nm,0.3s,mb3.6,baz=127,slow=8.6,SNR=6.0						
AAK				LR	LR	01 58 27.6	
	comp=Z,35nm,18.8s,MS2.9,baz=46,slow=39						
AAK	**Ala-Archa**	**25.78**	**305**	*e*P	**P**	**01 47 18.9**	**-0.2**
	comp=Z,3.3nm,0.8s,mb3.9						
AAK				LR	LR	01 58 27.6	
AML	**Almayashu**	**26.21**	**304**	*e*P	**P**	**01 47 24.4**	**+1.5**
	comp=Z,5.3nm,1.2s,mb4.0						
ZAA0	**Zalesovo Array**	**26.61**	**335**	*e*P	**P**	**01 47 25.9**	**-0.6**
ZALV	**Zalesovo Beam**	**26.61**	**335**	P	**P**	**01 47 26.3**	**-0.1**
	comp=Z,2.4nm,0.8s,mb3.8,baz=130,slow=8.0,SNR=4.3						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**01 47 29.8**	**-0.3**
	comp=Z,1.8nm,0.6s,mb3.8,baz=128,slow=9.3,SNR=11						
KURK	**Kurchatov**	**27.01**	**324**	*e*P	**P**	**01 47 29.8**	**-0.3**
	comp=Z,3.6nm,1.1s,mb3.8						
BRTR	**Keskin Array B**	**56.28**	**300**	P	**P**	**01 51 28.0**	**-0.8**
	comp=Z,0.2nm,0.5s,mb3.4,baz=42,slow=2.3,SNR=2.6						
ARCES	**ARCESS Array B**	**57.16**	**336**	P	**P**	**01 51 34.6**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.4,baz=90,slow=7.6,SNR=5.5						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**01 51 35.3**	**-0.9**
	comp=Z,2.6nm,0.9s,mb4.2,baz=86,slow=5.9,SNR=6.8						
EIL	**Elat**	**58.20**	**288**	LR	LR	02 17 37.1	
	comp=Z,38nm,19.3s,MS3.5,baz=81,slow=37						
ASAR	**Alice Springs**	**61.67**	**148**	P	**P**	**01 52 06.0**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.2,baz=339,slow=6.9,SNR=15						
NB2	**NORSAR Subarra**	**64.46**	**327**	P	**P**	**01 52 22.9**	**-1.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.46**	**327**	P	**P**	**01 52 23.3**	**-1.2**
	comp=Z,0.6nm,0.8s,mb3.7,baz=76,slow=5.7,SNR=3.7						
KTH	**Kantishna Hill**	**69.32**	**27**	*e*P	**P**	**01 52 55.0**	**-0.4**
	comp=Z,3.7nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**72.21**	**146**	P	**P**	**01 53 12.8**	**-0.4**
	comp=Z,1.4nm,0.3s,mb4.3,baz=302,slow=13,SNR=3.6						
INK	**Inuvik**	**72.53**	**19**	*e*P	**P**	**01 53 13.9**	**-0.8**
	comp=Z,2.3nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	**82.04**	**17**	P	**P**	**01 54 07.8**	**-0.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=330,slow=5.5,SNR=18						

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*ISCJB **18** 01:57:19.0±0.2, 43°.19N±0°.01×0°.19W±0°.01, h8km±1km, mb3.8/8, Error ellipse: s-maj=1.9km s-min=1.5km az=145.9*
*IDC **18** 01:57:20.1±1.1, 43°.10N×0°.40W, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.6/32, mbtmp3.7/12, ML3.8/5, Error ellipse: s-maj=29.5km s-min=12.2km az=129.0*
*CSEM **18** 01:57:20.4±0.1, 43°.16N×0°.14W, h2km, ML4.2, ML4.4/40, Error ellipse: s-maj=1.7km s-min=1.3km az=144.0*
*STR **18** 01:57:21.7±0.2, 43°.04N×0°.13W, h5km, Ml4.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MDD **18** 01:57:21.6±0.2, 43°.13N×0°.13W, h0km, mbLg3.9/68, Error ellipse: s-maj=2.2km s-min=1.3km az=2.0, PRIMO*
MDD EMS: III INTENSIDAD MAXIMA ESPA.
*INMG **18** 01:57:22.6±1.7, 43°.13N×0°.15W, h12km±3km, MD3.9, ML3.4, Error ellipse: s-maj=3.2km s-min=2.3km az=29.0*
*NEIC **18** 01:57:22.5, 43°.12N×0°.14W, h5km, mb4.0/3, ML4.2(STR), ML4.6(LDG), MN3.8(MDD), After LDG.*
NEIC Felt at Lourdes, Pau and Tarbes, France.
*IGIL **18** 01:57:22.4, 43°.00N×0°.10E, h0km, ML3.4*
*LDG **18** 01:57:22.7±0.1, 43°.12N×0°.10W, h5km, Md4.5/3, Ml4.6/38, Error ellipse: s-maj=1.4km s-min=1.1km az=137.0*
*MRB **18** 01:57:23.7, 42°.97N×0°.13W, h0km±4km, ML4.2/14, Error ellipse: s-maj=2.5km s-min=1.3km az=266.0*
*PRU **18** 01:57:25.7, 43°.24N×0°.08E, h0km, M4.0*
*SZGRF **18** 01:57:29.3, 43°.28N×0°.04W, h10km, Pyrenees*
ISC 18 01:57:20.5±0.2, 43°.161N±0°.009×0°.15W±0°.01, h5km±1km, n664, σ1§22/1038, mb3.8/8, 13C-18D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.20**	**125**	Pg	**Pg**	**01 57 25.9**	**+1.5**
LABF	**Labassere**	**0.20**	**125**	Pg	**Pg**	**01 57 25.9**	**+1.5**
LABF				Lg		01 57 29.3	
LABF	**Labassere**	**0.20**	**125**	Pg	**Pg**	**01 57 25.9**	**+1.5**
LABF				Lg		01 57 29.3	
LABF	**Labassere**	**0.20**	**125**	Pg	**Pg**	**01 57 25.9**	**+1.5**
REYF	**Montagne du Re**	**0.20**	**243**	Pg	**Pg**	**01 57 25.6**	**+1.1**
REYF	**Montagne du Re**	**0.20**	**243**	Pg	**Pg**	**01 57 25.6**	**+1.1**
REYF				Lg		01 57 28.2	
REYF	**Montagne du Re**	**0.20**	**243**	Pg	**Pg**	**01 57 25.6**	**+1.1**
REYF				Lg		01 57 28.2	
REYF	**Montagne du Re**	**0.20**	**243**	Pg	**Pg**	**01 57 25.6**	**+1.1**
VIEF	**Viey**	**0.30**	**156**	Pg	**Pg**	**01 57 26.5**	**+0.1**
VIEF	**Viey**	**0.30**	**156**	Pg	**Pg**	**01 57 26.5**	**0.0**
VIEF				Lg		01 57 29.4	
VIEF	**Viey**	**0.30**	**156**	Pg	**Pg**	**01 57 26.5**	**0.0**
VIEF				Lg		01

EBIE Lg 01 57 36.0
805nm,0.1s,SNR=7.9
EBIE Bielsa 0.52 156 P **Pg** **01 57 30.2 -0.3**
EBIE S **Sg** **01 57 35.8 -1.5**
EBIE Lg 01 57 36.0
805nm,0.1s,SNR=7.9
ORDF Ordiarp 0.58 275 Pg **Pg** **01 57 32.8 +1.1**
ORDF Ordiarp 0.58 275 Pg **Pg** **01 57 32.6 +0.9**
ORDF Lg 01 57 41.4
ORDF Ordiarp 0.58 275 Pg **Pg** **01 57 32.6 +0.9**
ORDF Lg 01 57 41.4
ORDF Ordiarp 0.58 275 Pg **Pg** **01 57 32.8 +1.1**
MELF Melles 0.72 113 Pg **Pg** **01 57 35.1 +0.7**
MELF Sg **Sg** **01 57 43.8 0.0**
MELF Melles 0.72 113 Pg **Pg** **01 57 34.9 +0.5**
MELF Lg 01 57 44.9
MELF Melles 0.72 113 Pg **Pg** **01 57 34.9 +0.5**
MELF Lg 01 57 44.9
MELF Melles 0.72 113 Pg **Pg** **01 57 35.1 +0.7**
MELF Sg **Sg** **01 57 43.8 0.0**
SJPF Ste Jean 0.79 267 *e*Pg **Pg** **01 57 36.2 +0.5**
SJPF *e*Sg **Sg** **01 57 47.8 +1.8**
912nm,0.2s
SJPF Ste Jean 0.79 267 Pg **Pg** **01 57 36.2 +0.5**
SJPF Lg 01 57 47.8
456nm,0.2s
SJPF Ste Jean 0.79 267 Pg **Pg** **01 57 36.2 +0.5**
SJPF Lg 01 57 47.8
456nm,0.2s
SJPF Ste Jean 0.79 267 *e*Pg **Pg** **01 57 36.2 +0.5**
SJPF *e*Sg **Sg** **01 57 47.8 +1.8**
456nm,0.2s
OSSF Osses 0.82 277 Pg **Pg** **01 57 36.8 +0.5**
OSSF Osses 0.82 277 Pg **Pg** **01 57 36.1 -0.1**
OSSF Lg 01 57 48.0
OSSF Osses 0.82 277 Pg **Pg** **01 57 36.1 -0.1**
OSSF Lg 01 57 48.0
OSSF Osses 0.82 277 Pg **Pg** **01 57 36.8 +0.5**
EORO Oroz-Betelu 0.89 253 ⇓Pg **Pg** **01 57 37.7 0.0**
13nm,0.2s,SNR=18
EORO Lg 01 57 50.5
565nm,0.1s,SNR=7.9
EORO Oroz-Betelu 0.89 253 ⇓Pg **Pg** **01 57 37.7 0.0**
13nm,0.2s,SNR=18
EORO Lg 01 57 50.5
565nm,0.1s,SNR=7.9
EORO Oroz-Betelu 0.89 253 Pg **Pg** **01 57 37.7 0.0**
13nm,0.2s,SNR=18
EORO Lg 01 57 50.5
565nm,0.1s,SNR=7.9
MLS Moulis 0.93 102 Pg **Pg** **01 57 38.0 -0.4**
MLS Sg **Sg** **01 57 50.2 -0.3**
MLS Moulis 0.93 102 Pg **Pg** **01 57 36.2 -2.2**
MLS Lg 01 57 49.3
MLS Moulis 0.93 102 Pg **Pg** **01 57 36.2 -2.2**
MLS Lg 01 57 49.3
MLS Moulis 0.93 102 Pg **Pg** **01 57 38.0 -0.4**
MLS Sg **Sg** **01 57 50.2 -0.3**
IPRE Itoiz 0.96 249 ⇑Pg **Pg** **01 57 39.3 +0.5**
15nm,0.3s,SNR=18
IPRE Lg 01 57 51.7
837nm,0.5s,SNR=7.9
IPRE Itoiz 0.96 249 ⇑Pg **Pg** **01 57 39.3 +0.5**
15nm,0.3s,SNR=18
IPRE Lg 01 57 51.7
837nm,0.5s,SNR=7.9
IPRE Itoiz 0.96 249 Pg **Pg** **01 57 39.3 +0.4**
15nm,0.3s,SNR=18
IPRE Lg 01 57 51.7
837nm,0.5s,SNR=7.9
EALK Alkurruntz 1.00 274 Pg **Pg** **01 57 39.3 -0.3**
EALK Lg 01 57 53.8
EALK Alkurruntz 1.00 274 Pg **Pg** **01 57 39.3 -0.3**
0.8nm,0.1s,SNR=176
EALK Lg 01 57 53.8
2µm,0.4s,SNR=7.9
EALK Alkurruntz 1.00 274 Pg **Pg** **01 57 39.3 -0.3**
0.8nm,0.1s,SNR=176
EALK Lg 01 57 53.8
2µm,0.4s,SNR=7.9
EALK Alkurruntz 1.00 274 Pg **Pg** **01 57 39.3 -0.3**
0.8nm,0.1s,SNR=176
EALK Lg 01 57 53.8
2µm,0.4s,SNR=7.9
IZUN Zunzarren 1.01 253 ⇑Pg **Pg** **01 57 39.9 +0.1**
1.7nm,0.1s,SNR=18
IZUN Lg 01 57 55.1
358nm,0.2s,SNR=7.9
IZUN Zunzarren 1.01 253 ⇑Pg **Pg** **01 57 39.9 +0.1**
1.7nm,0.1s,SNR=18
IZUN Lg 01 57 55.1
358nm,0.2s,SNR=7.9
IZUN Zunzarren 1.01 253 Pg **Pg** **01 57 39.9 +0.1**
1.7nm,0.1s,SNR=18
IZUN Lg 01 57 55.1
358nm,0.2s,SNR=7.9
ELIZ Elizondo 1.01 271 Pg **Pg** **01 57 39.5 -0.4**
ELIZ Lg 01 57 55.2
ELIZ Elizondo 1.01 271 Pg **Pg** **01 57 39.5 -0.4**
0.7nm,0.2s,SNR=266
ELIZ Lg 01 57 55.2
224nm,0.2s,SNR=7.9
ELIZ Elizondo 1.01 271 Pg **Pg** **01 57 39.5 -0.4**
0.7nm,0.2s,SNR=266
ELIZ Lg 01 57 55.2
224nm,0.2s,SNR=7.9
ELIZ Elizondo 1.01 271 Pg **Pg** **01 57 39.5 -0.4**
0.7nm,0.2s,SNR=266
ELIZ Lg 01 57 55.2
224nm,0.2s,SNR=7.9
IUSE Utxeti 1.05 259 Pg **Pg** **01 57 40.7 +0.1**
3.5nm,0.1s,SNR=74
IUSE Lg 01 57 56.6
310nm,0.2s,SNR=7.9
IUSE Utxeti 1.05 259 Pg **Pg** **01 57 40.7 +0.1**
3.5nm,0.1s,SNR=74
IUSE Lg 01 57 56.6
310nm,0.2s,SNR=7.9
IUSE Utxeti 1.05 259 Pg **Pg** **01 57 40.7 +0.1**
3.5nm,0.1s,SNR=74
IUSE Lg 01 57 56.6
310nm,0.2s,SNR=7.9
IUNC Unciti 1.07 248 Pg **Pg** **01 57 41.8 +0.7**
5.2nm,0.1s,SNR=91
IUNC Lg 01 57 56.4
216nm,0.2s,SNR=7.9
IUNC Unciti 1.07 248 Pg **Pg** **01 57 41.8 +0.7**
5.2nm,0.1s,SNR=91
IUNC Lg 01 57 56.4
216nm,0.2s,SNR=7.9
IUNC Unciti 1.07 248 Pg **Pg** **01 57 41.8 +0.7**
5.2nm,0.1s,SNR=91
IUNC Lg 01 57 56.4
216nm,0.2s,SNR=7.9
CTRE Tremp 1.08 141 Pg **Pg** **01 57 40.9 -0.3**
CTRE Lg 01 57 54.6
2µm,0.3s
CTRE Tremp 1.08 141 Pg **Pg** **01 57 40.9 -0.3**
CTRE Lg 01 57 54.6
2µm,0.3s
CTRE Tremp 1.08 141 P **Pg** **01 57 40.9 -0.3**
CTRE S **Sg** **01 57 54.6 -0.5**
2µm,0.3s
EARA Aranguren 1.12 250 Pg **Pg** **01 57 42.7 +0.6**
4.0nm,0.1s,SNR=98
EARA Lg 01 57 58.6
297nm,0.1s,SNR=7.9
EARA Aranguren 1.12 250 Pg **Pg** **01 57 42.7 +0.6**
4.0nm,0.1s,SNR=98
EARA Lg 01 57 58.6
297nm,0.1s,SNR=7.9
EARA Aranguren 1.12 250 Pg **Pg** **01 57 42.7 +0.7**
4.0nm,0.1s,SNR=98
EARA Lg 01 57 58.6
297nm,0.1s,SNR=7.9
CEST Esterri de Car 1.17 118 Pg **Pg** **01 57 42.8 -0.2**
CEST Lg 01 57 59.2
1µm,0.3s
CEST Esterri de Car 1.17 118 Pg **Pg** **01 57 42.8 -0.2**
CEST Lg 01 57 59.2
1µm,0.3s
CEST Esterri de Car 1.17 118 P **Pg** **01 57 42.9 -0.1**
CEST S **Sg** **01 57 59.2 +1.0**
1µm,0.3s
CSOR Sort 1.23 129 P **Pg** **01 57 43.7 -0.4**
CSOR S **Sg** **01 57 59.6 -0.4**

4µm,0.3s
GRBF Gourbit 1.28 104 Pg **Pg** **01 57 45.1 +0.1**
GRBF Lg 01 58 03.0
GRBF Gourbit 1.28 104 Pg **Pg** **01 57 45.1 +0.1**
GRBF Lg 01 58 03.0
CORG Organya 1.43 130 Pg **Pn** **01 57 47.3 +0.3**
CORG Lg 01 58 06.2
417nm,0.3s
CORG Organya 1.43 130 Pg **Pn** **01 57 47.3 +0.3**
CORG Lg 01 58 06.2
417nm,0.3s
CORG Organya 1.43 130 P **Pn** **01 57 47.3 +0.3**
CORG S **Sb** **01 58 06.2 +0.2**
834nm,0.3s
CAVN Les Avellanes 1.44 152 Pg **Pg** **01 57 47.0 -1.1**
CAVN Les Avellanes 1.44 152 Pg **Pg** **01 57 47.0 -1.1**
CAVN Les Avellanes 1.44 152 P **Pn** **01 57 47.1 -0.1**
ESAC San Caprasio 1.46 190 Pg **Pg** **01 57 47.6 -0.9**
ESAC Lg 01 58 06.0
ESAC San Caprasio 1.46 190 Pg **Pg** **01 57 47.6 -0.9**
92nm,0.1s,SNR=490
ESAC Lg 01 58 06.0
2µm,0.3s,SNR=7.9
ESAC San Caprasio 1.46 190 Pg **Pg** **01 57 47.6 -0.9**
92nm,0.1s,SNR=490
ESAC Lg 01 58 06.0
2µm,0.3s,SNR=7.9
ESAC San Caprasio 1.46 190 Pg **Pg** **01 57 47.6 -0.9**
92nm,0.1s,SNR=490
ESAC Lg 01 58 06.0
2µm,0.3s,SNR=7.9
LPEF Le Peyrat 1.52 97 Pg **Pg** **01 57 49.2 -0.5**
LPEF Lg 01 58 11.5
LPEF Le Peyrat 1.52 97 Pg **Pg** **01 57 49.2 -0.5**
LPEF Lg 01 58 11.5
CLLI Llivia 1.70 113 P **Pn** **01 57 53.0 +2.2**
CARF Carcanieres 1.71 104 Pg **Pg** **01 57 53.6 +0.2**
CARF Sg **Sg** **01 58 15.9 +0.3**
CARF Carcanieres 1.71 104 Pg **Pg** **01 57 53.4 0.0**
CARF Lg 01 58 15.9
CARF Carcanieres 1.71 104 Pg **Pg** **01 57 53.4 0.0**
CARF Lg 01 58 15.9
MTLF Montolieu 1.74 83 *e*Pg **Pg** **01 57 55.5 +1.7**
MTLF *e*Sg **Sg** **01 58 16.9 +0.6**
506nm,0.2s
MTLF Montolieu 1.74 83 *e*Pn **Pn** **01 57 51.7 +0.4**
MTLF *e*Pg **Pg** **01 57 55.5 +1.7**
MTLF *e*Sg **Sg** **01 58 16.9 +0.6**
MTLF Montolieu 1.74 83 Pn **Pn** **01 57 51.7 +0.4**
MTLF Pg **Pg** **01 57 55.5 +1.7**
MTLF Lg 01 58 16.9
253nm,0.2s
MTLF Montolieu 1.74 83 Pn **Pn** **01 57 51.7 +0.4**
MTLF Pg **Pg** **01 57 55.5 +1.7**
MTLF Lg 01 58 16.9
253nm,0.2s
MTLF Montolieu 1.74 83 *e*Pn **Pn** **01 57 51.7 +0.4**
MTLF Montolieu 1.74 83 *e*Pg **Pg** **01 57 55.5 +1.7**
MTLF *e*Sg **Sg** **01 58 16.9 +0.6**
253nm,0.2s
EMIR Miracle 1.76 135 Pg **Pg** **01 57 53.5 -0.7**
EMIR Lg 01 58 16.7
EMIR Lg 01 58 17.3
EMIR Miracle 1.76 135 Pg **Pg** **01 57 53.5 -0.7**
6.6nm,0.1s,SNR=7.3
EMIR Lg 01 58 16.7
4µm,0.4s,SNR=19
EMIR Miracle 1.76 135 Pg **Pg** **01 57 53.5 -0.7**
6.6nm,0.1s,SNR=7.3
EMIR Lg 01 58 16.7
4µm,0.4s,SNR=19
EMIR Miracle 1.76 135 Pg **Pg** **01 57 53.5 -0.7**
6.6nm,0.1s,SNR=7.3
EMIR Lg 01 58 16.7
4µm,0.4s,SNR=19
VALF Valcebollere 1.77 115 Pg **Pg** **01 57 54.2 -0.2**
VALF Sg **Sg** **01 58 17.1 -0.1**
VALF Valcebollere 1.77 115 Pg **Pg** **01 57 54.3 -0.1**
VALF Lg 01 58 17.2
VALF Valcebollere 1.77 115 Pg **Pg** **01 57 54.3 -0.1**
VALF Lg 01 58 17.2
VALF Valcebollere 1.77 115 Pg **Pg** **01 57 54.2 -0.2**
VALF Sg **Sg** **01 58 17.1 -0.1**
ECRI Cripan 1.82 253 Pg **Pg** **01 57 54.7 -0.8**
ECRI Lg 01 58 20.9
ECRI Cripan 1.82 253 Pg **Pg** **01 57 54.7 -0.8**
1.5nm,0.1s,SNR=7.9
ECRI Lg 01 58 21.0
211nm,0.2s,SNR=7.9
ECRI Cripan 1.82 253 Pg **Pg** **01 57 54.7 -0.8**
1.5nm,0.1s,SNR=7.9
ECRI Lg 01 58 21.0
211nm,0.2s,SNR=7.9
ECRI Cripan 1.82 253 Pg **Pg** **01 57 54.7 -0.8**
1.5nm,0.1s,SNR=7.9
ECRI Lg 01 58 21.0
211nm,0.2s,SNR=7.9
LFF La Frestale 1.89 19 *e*Pg **Pg** **01 57 59.6 +2.9**
LFF *e*Sg **Sg** **01 58 23.4 +2.2**
4µm,0.3s
LFF La Frestale 1.89 19 *e*Pn **Pn** **01 57 54.4 +1.0**
LFF *e*Pg **Pg** **01 57 59.6 +2.9**
LFF *e*Sg **Sg** **01 58 23.4 +2.2**
LFF La Frestale 1.89 19 Pn **Pn** **01 57 54.4 +1.0**
LFF Pg **Pg** **01 57 59.6 +2.9**
LFF Lg 01 58 23.4
2µm,0.3s
LFF La Frestale 1.89 19 Pn **Pn** **01 57 54.4 +1.0**
LFF Pg **Pg** **01 57 59.6 +2.9**
LFF Lg 01 58 23.4
2µm,0.3s
LFF La Frestale 1.89 19 *e*Pn **Pn** **01 57 54.4 +1.0**
LFF La Frestale 1.89 19 *e*Pg **Pg** **01 57 59.6 +2.9**
LFF *e*Sg **Sg** **01 58 23.4 +2.2**
2µm,0.3s
CBRU Bruguera 1.93 116 Pg **Pg** **01 57 57.5 +0.1**
CBRU Bruguera 1.93 116 Pg **Pg** **01 57 57.5 +0.1**
CBRU Bruguera 1.93 116 P **Pg** **01 57 57.5 +0.1**
LRDF Laroque-de-Fa 1.98 96 Pg **Pg** **01 57 58.6 +0.1**
LRDF Sg **Sg** **01 58 24.9 +0.7**
LRDF Laroque-de-Fa 1.98 96 Pg **Pg** **01 57 56.7 -1.8**
LRDF Lg 01 58 24.4
LRDF Laroque-de-Fa 1.98 96 Pg **Pg** **01 57 56.7 -1.8**
LRDF Lg 01 58 24.4
LRDF Laroque-de-Fa 1.98 96 Pg **Pg** **01 57 58.6 +0.1**
LRDF Sg **Sg** **01 58 24.9 +0.7**
CORI Orista 2.01 125 Pg **Pg** **01 57 57.2 -1.9**
CORI Orista 2.01 125 Pg **Pg** **01 57 57.2 -1.9**
CORI Orista 2.01 125 P **Pg** **01 57 57.2 -1.9**
EPOB Poblet 2.02 153 Pn **Pn** **01 57 55.5 +0.2**
EPOB Pg **Pg** **01 57 57.8 -1.5**
EPOB Lg 01 58 22.8
EPOB Poblet 2.02 153 Pn **Pn** **01 57 55.4 +0.2**
0.4nm,0.1s,SNR=248
EPOB Pg **Pg** **01 57 57.8 -1.5**
12nm,0.1s,SNR=7.9
EPOB Lg 01 58 22.8
999nm,0.4s,SNR=53
EPOB Poblet 2.02 153 Pn **Pn** **01 57 55.4 +0.2**
0.4nm,0.1s,SNR=248
EPOB Pg **Pg** **01 57 57.8 -1.5**
12nm,0.1s,SNR=7.9
EPOB Lg 01 58 22.8
999nm,0.4s,SNR=53
EPOB Poblet 2.02 153 Pn **Pn** **01 57 55.5 +0.3**
EPOB Poblet 2.02 153 Pg **Pg** **01 57 57.8 -1.5**
12nm,0.1s,SNR=7.9
EPOB Lg 01 58 22.8
999nm,0.4s,SNR=53
FILF Fillols 2.08 106 Pg **Pg** **01 57 58.6 -1.8**
FILF Sg **Sg** **01 58 24.6 -2.7**
FILF Fillols 2.08 106 Pg **Pg** **01 57 58.6 -1.8**
FILF Lg 01 58 23.8
FILF Fillols 2.08 106 Pg **Pg** **01 57 58.6 -1.8**
FILF Lg 01 58 23.8
FILF Fillols 2.08 106 Pg **Pg** **01 57 58.6 -1.8**
CGAR Garraf 2.09 153 Pg **Pg** **01 58 01.6 +0.9**
CGAR Garraf 2.09 153 Pg **Pg** **01 58 01.6 +0.9**
ERTA Horta de San J 2.23 171 Pn **Pn** **01 57 58.0 -0.1**
ERTA Pg **Pg** **01 58 01.3 -2.0**
ERTA Lg 01 58 28.6
ERTA Horta de San J 2.23 171 Pn **Pn** **01 57 58.0 -0.1**
0.5nm,0.1s,SNR=172

ERTA Pg **Pg** **01 58 01.3 -2.0**
35nm,0.2s,SNR=7.9
ERTA Lg 01 58 28.6
519nm,0.3s,SNR=7.9
ERTA Horta de San J 2.23 171 Pn **Pn** **01 57 58.0 -0.1**
0.5nm,0.1s,SNR=172
ERTA Pg **Pg** **01 58 01.3 -2.0**
35nm,0.2s,SNR=7.9
ERTA Lg 01 58 28.6
519nm,0.3s,SNR=7.9
ERTA Horta de San J 2.23 171 Pn **Pn** **01 57 58.0 -0.1**
0.5nm,0.1s,SNR=172
CBEU Beuda 2.27 113 Pg **Pg** **01 58 01.8 -2.2**
CBEU Beuda 2.27 113 Pg **Pg** **01 58 01.8 -2.2**
CBEU Beuda 2.27 113 P **Pn** **01 58 01.9 +3.3**
SJAF Saint Jean de 2.33 106 Pg **Pg** **01 58 05.3 +0.1**
SJAF Sg **Sg** **01 58 36.3 +1.0**
SJAF Saint Jean de 2.33 106 Pg **Pg** **01 58 02.6 -2.6**
SJAF Lg 01 58 35.3
SJAF Saint Jean de 2.33 106 Pg **Pg** **01 58 02.6 -2.6**
SJAF Lg 01 58 35.3
SJAF Saint Jean de 2.33 106 Pg **Pg** **01 58 05.3 +0.1**
SJAF Sg **Sg** **01 58 36.3 +1.0**
EJON La Jonquera 2.34 107 Pn **Pn** **01 57 59.3 -0.4**
EJON Pg **Pg** **01 58 03.2 -2.2**
EJON Lg 01 58 36.7
EJON La Jonquera 2.34 107 Pn **Pn** **01 57 59.3 -0.4**
0.1nm,0.1s,SNR=81
EJON Pg **Pg** **01 58 03.2 -2.2**
4.3nm,0.3s,SNR=7.9
EJON Lg 01 58 36.7
1µm,0.6s,SNR=7.9
EJON La Jonquera 2.34 107 Pn **Pn** **01 57 59.3 -0.4**
0.1nm,0.1s,SNR=81
EJON Pg **Pg** **01 58 03.2 -2.2**
4.3nm,0.3s,SNR=7.9
EJON Lg 01 58 36.7
1µm,0.6s,SNR=7.9
EJON La Jonquera 2.34 107 Pn **Pn** **01 57 59.3 -0.4**
0.1nm,0.1s,SNR=81
CFON Fontmartina 2.37 125 P **Pn** **01 58 02.2 +2.2**
CAF Calviac 2.38 41 *e*Pg **Pg** **01 58 08.7 +2.6**
CAF *e*Sn **Sn** **01 58 28.6 -1.0**
CAF *e*Sg **Sg** **01 58 38.0 +1.1**
1µm,0.2s
CAF Calviac 2.38 41 *e*Pn **Pn** **01 58 00.4 +0.3**
CAF *e*Pg **Pg** **01 58 08.7 +2.6**
CAF *e*Sn **Sn** **01 58 28.6 -1.0**
CAF *e*Sg **Sg** **01 58 38.0 +1.1**
CAF Calviac 2.38 41 Pn **Pn** **01 58 00.4 +0.3**
CAF Pg **Pg** **01 58 08.7 +2.6**
CAF Sn **Sn** **01 58 28.6 -1.0**
CAF Lg 01 58 38.0
606nm,0.2s
CAF Calviac 2.38 41 Pn **Pn** **01 58 00.4 +0.3**
CAF Pg **Pg** **01 58 08.7 +2.6**
CAF Sn **Sn** **01 58 28.6 -1.0**
CAF Lg 01 58 38.0
606nm,0.2s
CAF Calviac 2.38 41 *e*Pn **Pn** **01 58 00.4 +0.3**
CAF Calviac 2.38 41 *e*Pg **Pg** **01 58 08.7 +2.6**
CAF *e*Sn **Sn** **01 58 28.6 -1.0**
CAF *e*Sg **Sg** **01 58 38.0 +1.1**
606nm,0.2s
ELAN Lanestosa 2.41 273 Pn **Pn** **01 58 03.0 +2.5**
ELAN Sn **Sn** **01 58 32.2 +1.9**
ELAN Lanestosa 2.41 273 Pn **Pn** **01 58 03.0 +2.5**
2.6nm,0.2s,SNR=112
ELAN Sn **Sn** **01 58 32.2 +1.9**
25nm,0.2s,SNR=7.9
ELAN Lanestosa 2.41 273 Pn **Pn** **01 58 03.0 +2.5**
2.6nm,0.2s,SNR=112
ELAN Sn **Sn** **01 58 32.2 +1.9**
25nm,0.2s,SNR=7.9
ELAN Lanestosa 2.41 273 Pn **Pn** **01 58 03.0 +2.5**
2.6nm,0.2s,SNR=112
ELAN Sn **Sn** **01 58 32.2 +1.9**
25nm,0.2s,SNR=7.9
RJF Les Rejaudoux 2.45 29 *e*Pg **Pg** **01 58 09.7 +2.1**
RJF *e*Sg **Sg** **01 58 40.8 +1.5**
948nm,0.2s
RJF Les Rejaudoux 2.45 29 *e*Pn **Pn** **01 58 01.0 -0.2**
RJF *e*Pg **Pg** **01 58 09.7 +2.1**
RJF *e*Sg **Sg** **01 58 40.8 +1.5**
RJF Les Rejaudoux 2.45 29 Pn **Pn** **01 58 01.0 -0.2**
RJF Pg **Pg** **01 58 09.7 +2.1**
RJF Lg 01 58 40.8
474nm,0.2s
RJF Les Rejaudoux 2.45 29 Pn **Pn** **01 58 01.0 -0.2**
RJF Pg **Pg** **01 58 09.7 +2.1**
RJF Lg 01 58 40.8
474nm,0.2s
RJF Les Rejaudoux 2.45 29 *e*Pn **Pn** **01 58 01.0 -0.2**
RJF Les Rejaudoux 2.45 29 *e*Pg **Pg** **01 58 09.7 +2.1**
RJF *e*Sg **Sg** **01 58 40.8 +1.5**
474nm,0.2s
CMAS Mas de Barbera 2.46 172 Pg **Pn** **01 58 00.8 -0.4**
CMAS Mas de Barbera 2.46 172 Pg **Pn** **01 58 00.8 -0.4**
CMAS Mas de Barbera 2.46 172 P **Pn** **01 58 00.8 -0.4**
CPAL Palau Saverder 2.58 108 Pg **Pg** **01 58 05.5 -4.5**
CPAL Palau Saverder 2.58 108 Pg **Pg** **01 58 05.5 -4.5**
CPAL Palau Saverder 2.58 108 P **Pn** **01 58 05.6 +2.7**
CCAS Cassa de la Se 2.59 118 Pg **Pg** **01 58 05.0 -5.2**
CCAS Cassa de la Se 2.59 118 Pg **Pg** **01 58 05.0 -5.2**
CCAS Cassa de la Se 2.59 118 P **Pn** **01 58 05.1 +2.0**
COBS Casablanca 2.69 155 Pg **Pn** **01 58 06.6 +2.2**
COBS Casablanca 2.69 155 Pg **Pn** **01 58 06.6 +2.2**
COBS Casablanca 2.69 155 P **Pn** **01 58 06.6 +2.2**
ETOR Torete 2.74 212 ⇓Pn **Pn** **01 58 05.6 +0.5**
ETOR Sn **Sn** **01 58 37.9 -0.6**
ETOR Torete 2.74 212 ⇓Pn **Pn** **01 58 05.6 +0.5**
134nm,0.1s,SNR=18
ETOR Sn **Sn** **01 58 37.9 -0.6**
451nm,0.2s,SNR=7.9
ETOR Torete 2.74 212 ⇓Pn **Pn** **01 58 05.6 +0.5**
134nm,0.1s,SNR=18
ETOR Sn **Sn** **01 58 37.9 -0.6**
451nm,0.2s,SNR=7.9
ETOR Torete 2.74 212 Pn **Pn** **01 58 05.6 +0.5**
134nm,0.1s,SNR=18
ETOR Sn **Sn** **01 58 37.9 -0.6**
451nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.81 185 Pn **Pn** **01 58 06.4 +0.4**
EMOS Pg **Pg** **01 58 10.1 -4.2**
EMOS Lg 01 58 50.6
EMOS Mosqueruela 2.81 185 Pn **Pn** **01 58 06.4 +0.4**
0.2nm,0.1s,SNR=7.9
EMOS Pg **Pg** **01 58 10.1 -4.2**
7.1nm,0.1s,SNR=7.9
EMOS Lg 01 58 50.6
2µm,0.9s,SNR=7.9
EMOS Mosqueruela 2.81 185 Pn **Pn** **01 58 06.4 +0.4**
0.2nm,0.1s,SNR=7.9
EMOS Pg **Pg** **01 58 10.1 -4.2**
7.1nm,0.1s,SNR=7.9
EMOS Lg 01 58 50.6
2µm,0.9s,SNR=7.9
EMOS Mosqueruela 2.81 185 Pn **Pn** **01 58 06.4 +0.4**
0.2nm,0.1s,SNR=7.9
EMOS Mosqueruela 2.81 185 P **Pn** **01 58 06.7 +0.7**
FRNF Fournols 2.96 40 Pn **Pn** **01 58 08.0 -0.1**
FRNF Fournols 2.96 40 Pn **Pn** **01 58 08.0 -0.1**
CHIF Chize 2.98 357 Pn **Pn** **01 58 10.0 +1.6**
CHIF Pg **Pg** **01 58 19.3 +1.7**
CHIF Chize 2.98 357 Pn **Pn** **01 58 10.0 +1.6**
LASF Ste Croix 3.05 71 *e*Pn **Pn** **01 58 09.1 -0.2**
LASF *e*Sg **Sg** **01 58 58.1 -0.3**
408nm,0.3s
LASF Ste Croix 3.05 71 Pn **Pn** **01 58 09.1 -0.2**
LASF Lg 01 58 58.1
204nm,0.3s
LASF Ste Croix 3.05 71 Pn **Pn** **01 58 09.1 -0.2**
LASF Lg 01 58 58.1
204nm,0.3s
LASF Ste Croix 3.05 71 *e*Pn **Pn** **01 58 09.1 -0.2**
LASF *e*Sg **Sg** **01 58 58.1 -0.3**
204nm,0.3s
LBL Lubilhac 3.20 49 Pn **Pn** **01 58 12.5 +1.1**
LBL Lubilhac 3.20 49 Pn **Pn** **01 58 12.5 +1.1**
PYM Petit Puy Mans 3.44 40 Pn **Pn** **01 58 16.1 +1.4**
PYM Petit Puy Mans 3.44 40 Pn **Pn** **01 58 16.1 +1.4**
MFF Saint Martin d 3.44 0 *e*Pg **Pg** **01 58 28.2 +1.8**
MFF *e*Sg **Sg** **01 59 11.7 +0.7**
756nm,0.4s

MFF	Saint Martin d	3.44	0	ePn	Pn	01 58 15.2	+0.5
MFF				ePg	Pg	01 58 28.2	+1.8
MFF				eSg	Sg	01 59 11.7	+0.7
MFF	Saint Martin d	3.44	0	Pn	Pn	01 58 15.2	+0.5
MFF				Pg	Pg	01 58 28.2	+1.8
MFF				Lg		01 59 11.7	
	378nm,0.4s						
MFF	Saint Martin d	3.44	0	Pn	Pn	01 58 15.2	+0.5
MFF				Pg	Pg	01 58 28.2	+1.8
MFF				Lg		01 59 11.7	
	378nm,0.4s						
MFF	Saint Martin d	3.44	0	ePn	Pn	01 58 15.2	+0.5
MFF	Saint Martin d	3.44	0	ePg	Pg	01 58 28.2	+1.8
MFF				eSg	Sg	01 59 11.7	+0.7
	378nm,0.4s						
TCF	Toulx Ste Croi	3.55	27	ePg	Pg	01 58 29.8	+1.3
TCF				eSn	Sn	01 58 57.5	-1.0
TCF				eSg	Sg	01 59 14.9	+0.4
	606nm,0.3s						
TCF	Toulx Ste Croi	3.55	27	ePn	Pn	01 58 15.5	-0.7
TCF				ePg	Pg	01 58 29.8	+1.3
TCF				eSn	Sn	01 58 57.5	-1.0
TCF				eSg	Sg	01 59 14.9	+0.4
TCF	Toulx Ste Croi	3.55	27	Pn	Pn	01 58 15.5	-0.7
TCF				Pg	Pg	01 58 29.8	+1.3
TCF				Sn	Sn	01 58 57.5	-1.0
TCF				Lg		01 59 14.9	
	303nm,0.3s						
TCF	Toulx Ste Croi	3.55	27	Pn	Pn	01 58 15.5	-0.7
TCF				Pg	Pg	01 58 29.8	+1.3
TCF				Sn	Sn	01 58 57.5	-1.0
TCF				Lg		01 59 14.9	
	303nm,0.3s						
TCF	Toulx Ste Croi	3.55	27	ePn	Pn	01 58 15.5	-0.7
TCF	Toulx Ste Croi	3.55	27	ePg	Pg	01 58 29.8	+1.3
TCF				eSn	Sn	01 58 57.5	-1.0
TCF				eSg	Sg	01 59 14.9	+0.4
	303nm,0.3s						
ECHE	Chera	3.62	190	Pn	Pn	01 58 17.3	+0.1
ECHE				Pg	Pg	01 58 26.9	-3.0
ECHE				Lg		01 59 14.7	
ECHE	Chera	3.62	190	Pn	Pn	01 58 17.3	+0.1
	1.1nm,0.2s,SNR=22						
ECHE				Pg	Pg	01 58 26.9	-3.0
	4.2nm,0.2s,SNR=7.9						
ECHE				Lg		01 59 14.7	
	285nm,0.8s,SNR=8.7						
ECHE	Chera	3.62	190	Pn	Pn	01 58 17.3	+0.1
	1.1nm,0.2s,SNR=22						
ECHE				Pg	Pg	01 58 26.9	-3.0
	4.2nm,0.2s,SNR=7.9						
ECHE				Lg		01 59 14.7	
	285nm,0.8s,SNR=8.7						
ECHE	Chera	3.62	190	Pn	Pn	01 58 17.3	+0.1
	1.1nm,0.2s,SNR=22						
COLF	Collangettes	3.62	48	Pn	Pn	01 58 17.4	+0.1
COLF	Collangettes	3.62	48	Pn	Pn	01 58 17.4	+0.1
EARI	Arriondas	3.70	274	Pn	Pn	01 58 20.0	+1.7
EARI				Sn	Sn	01 59 04.2	+1.9
EARI	Arriondas	3.70	274	Pn	Pn	01 58 20.0	+1.7
	2.1nm,0.2s,SNR=90						
EARI				Sn	Sn	01 59 03.1	+0.9
	37nm,0.2s,SNR=5.9						
EARI	Arriondas	3.70	274	Pn	Pn	01 58 20.0	+1.7
	2.1nm,0.2s,SNR=90						
EARI				Sn	Sn	01 59 03.1	+0.9
	37nm,0.2s,SNR=5.9						
EARI	Arriondas	3.70	274	Pn	Pn	01 58 20.0	+1.7
	2.1nm,0.2s,SNR=90						
EARI				Sn	Sn	01 59 04.2	+1.9
	37nm,0.2s,SNR=5.9						
AGO	Saint Agoulin	3.72	38	Pn	Pn	01 58 19.2	+0.6
AGO	Saint Agoulin	3.72	38	Pn	Pn	01 58 19.2	+0.6
VIVF	Saint-Julien-l	3.87	62	ePg	Pg	01 58 36.1	+1.5
VIVF				eSg	Sg	01 59 23.9	-0.8
	404nm,0.5s						
VIVF	Saint-Julien-l	3.87	62	ePn	Pn	01 58 20.9	+0.3
VIVF				ePg	Pg	01 58 36.1	+1.5
VIVF				eSg	Sg	01 59 23.9	-0.8
VIVF	Saint-Julien-l	3.87	62	Pn	Pn	01 58 20.9	+0.3
VIVF				Pg	Pg	01 58 36.1	+1.5
VIVF				Lg		01 59 23.9	
	202nm,0.5s						
VIVF	Saint-Julien-l	3.87	62	Pn	Pn	01 58 20.9	+0.3
VIVF				Pg	Pg	01 58 36.1	+1.5
VIVF				Lg		01 59 23.9	
	202nm,0.5s						
VIVF	Saint-Julien-l	3.87	62	ePn	Pn	01 58 20.9	+0.3
VIVF	Saint-Julien-l	3.87	62	ePg	Pg	01 58 36.1	+1.5
VIVF				eSg	Sg	01 59 23.9	-0.8
	202nm,0.5s						
PLDF	La Plantade	3.89	43	Pn	Pn	01 58 22.1	+1.2
PLDF	La Plantade	3.89	43	Pn	Pn	01 58 22.1	+1.2
GUD	Guadarrama	3.91	231	⇓Pn	Pn	01 58 22.0	+0.8
GUD				Sn	Sn	01 59 07.5	+0.1
GUD	Guadarrama	3.91	231	⇓Pn	Pn	01 58 22.0	+0.8
	2.4nm,0.2s,SNR=18						
GUD				Sn	Sn	01 59 06.4	-1.0
	34nm,0.3s,SNR=7.9						
GUD	Guadarrama	3.91	231	⇓Pn	Pn	01 58 22.0	+0.8
	2.4nm,0.2s,SNR=18						
GUD				Sn	Sn	01 59 06.4	-1.0
	34nm,0.3s,SNR=7.9						
GUD	Guadarrama	3.91	231	Pn	Pn	01 58 22.0	+0.8
	2.4nm,0.2s,SNR=18						
GUD				Sn	Sn	01 59 07.5	+0.1
	34nm,0.3s,SNR=7.9						
SSB	Saint Sauveur	3.98	56	Pn	Pn	01 58 22.0	-0.1
SSB	Saint Sauveur	3.98	56	Pn	Pn	01 58 22.0	-0.1
BGF	Bois d'Agland	4.01	31	ePg	Pg	01 58 37.4	+0.1
BGF				eSg	Sg	01 59 28.7	-0.5
	3μm,0.3s						
BGF	Bois d'Agland	4.01	31	ePn	Pn	01 58 22.2	-0.3
BGF				ePg	Pg	01 58 37.4	+0.1
BGF				eSg	Sg	01 59 28.7	-0.5
BGF	Bois d'Agland	4.01	31	Pn	Pn	01 58 22.2	-0.3
BGF				Pg	Pg	01 58 37.4	+0.1
BGF				Lg		01 59 28.7	
	1μm,0.3s						
BGF	Bois d'Agland	4.01	31	Pn	Pn	01 58 22.2	-0.3
BGF				Pg	Pg	01 58 37.4	+0.1
BGF				Lg		01 59 28.7	
	1μm,0.3s						
BGF	Bois d'Agland	4.01	31	ePn	Pn	01 58 22.2	-0.3
BGF	Bois d'Agland	4.01	31	ePg	Pg	01 58 37.4	+0.1
BGF				eSg	Sg	01 59 28.7	-0.5
	1μm,0.3s						
ETOS	Mallorca	4.05	146	Pn	Pn	01 58 23.4	+0.2
ETOS				Sn	Sn	01 59 09.1	-1.9
ETOS				Lg		01 59 31.6	
ETOS	Mallorca	4.05	146	Pn	Pn	01 58 23.3	+0.2
	1.9nm,0.1s,SNR=34						
ETOS				Sn	Sn	01 59 09.1	-1.9
	11nm,0.2s,SNR=6.6						
ETOS				Lg		01 59 30.8	
	81nm,0.5s,SNR=7.9						
ETOS	Mallorca	4.05	146	Pn	Pn	01 58 23.3	+0.2
	1.9nm,0.1s,SNR=34						
ETOS				Sn	Sn	01 59 09.1	-1.9
	11nm,0.2s,SNR=6.6						
ETOS				Lg		01 59 30.8	
	81nm,0.5s,SNR=7.9						
ETOS	Mallorca	4.05	146	Pn	Pn	01 58 23.3	+0.1
	1.9nm,0.1s,SNR=34						
ETOS				Sn	Sn	01 59 09.1	-1.9
	11nm,0.2s,SNR=6.6						
ETOS				Lg		01 59 31.6	
	81nm,0.5s,SNR=7.9						
OCF	Saint Nazaire	4.19	68	Pn	Pn	01 58 26.4	+1.4
OCF	Saint Nazaire	4.19	68	Pn	Pn	01 58 26.4	+1.4
OG26	St.-Nazaire-De	4.19	68	Pn	Pn	01 58 26.4	+1.4
OG26	St.-Nazaire-De	4.19	68	Pn	Pn	01 58 26.4	+1.4
SMRF	Simiane la Rot	4.24	77	ePn	Pn	01 58 26.4	+0.7
SMRF				eSg	Sg	01 59 35.5	-1.1
	123nm,0.5s						
SMRF	Simiane la Rot	4.24	77	Pn	Pn	01 58 26.4	+0.7
SMRF				Lg		01 59 35.5	
	123nm,0.5s						
SMRF	Simiane la Rot	4.24	77	Pn	Pn	01 58 26.4	+0.7
SMRF				Lg		01 59 35.5	
	123nm,0.5s						
SMRF	Simiane la Rot	4.24	77	ePn	Pn	01 58 26.4	+0.7
SMRF				eSg	Sg	01 59 35.5	-1.1
	62nm,0.5s						
EIBI	Ibiza	4.28	164	Pn	Pn	01 58 26.1	-0.2
EIBI				Sn	Sn	01 59 11.1	-5.5
EIBI	Ibiza	4.28	164	Pn	Pn	01 58 26.1	-0.2
	2.5nm,0.2s,SNR=24						
EIBI				Sn	Sn	01 59 11.1	-5.5
	37nm,0.2s,SNR=11						
EIBI	Ibiza	4.28	164	Pn	Pn	01 58 26.1	-0.2
	2.5nm,0.2s,SNR=24						
EIBI				Sn	Sn	01 59 11.1	-5.5
	37nm,0.2s,SNR=11						
EIBI	Ibiza	4.28	164	Pn	Pn	01 58 26.1	-0.2
	2.5nm,0.2s,SNR=24						
AVF	Avril sur Loir	4.40	33	ePn	Pn	01 58 27.3	-0.6
AVF				eSg	Sg	01 59 41.4	-0.3
	461nm,0.4s						
AVF	Avril sur Loir	4.40	33	Pn	Pn	01 58 27.3	-0.6
AVF				Lg		01 59 41.4	
	231nm,0.4s						
AVF	Avril sur Loir	4.40	33	Pn	Pn	01 58 27.3	-0.6
AVF				Lg		01 59 41.4	
	231nm,0.4s						
AVF	Avril sur Loir	4.40	33	ePn	Pn	01 58 27.3	-0.6
AVF				eSg	Sg	01 59 41.4	-0.3
	231nm,0.4s						
EBEN	Beniarda	4.45	181	Pn	Pn	01 58 28.4	-0.2
EBEN				Sn	Sn	01 59 18.6	-2.2
EBEN				Lg		01 59 43.1	
EBEN	Beniarda	4.45	181	Pn	Pn	01 58 28.5	-0.2
	SNR=7.9						
EBEN				Sn	Sn	01 59 18.6	-2.2
	59nm,0.6s,SNR=7.9						
EBEN				Lg		01 59 43.1	
	109nm,0.9s,SNR=7.9						
EBEN	Beniarda	4.45	181	Pn	Pn	01 58 28.5	-0.2
	SNR=7.9						
EBEN				Sn	Sn	01 59 18.6	-2.2
	59nm,0.6s,SNR=7.9						
EBEN				Lg		01 59 43.1	
	109nm,0.9s,SNR=7.9						
EBEN	Beniarda	4.45	181	Pn	Pn	01 58 28.5	-0.2
	SNR=7.9						
EBEN				Sn	Sn	01 59 18.6	-2.2
	59nm,0.6s,SNR=7.9						
EBEN				Lg		01 59 43.1	
	109nm,0.9s,SNR=7.9						
SMF	Signal de Mont	4.49	38	ePn	Pn	01 58 28.7	-0.4
SMF				eSg	Sg	01 59 44.3	-0.4
	353nm,0.4s						
SMF	Signal de Mont	4.49	38	Pn	Pn	01 58 28.7	-0.4
SMF				Lg		01 59 44.3	
	176nm,0.4s						
SMF	Signal de Mont	4.49	38	Pn	Pn	01 58 28.7	-0.4
SMF				Lg		01 59 44.3	
	176nm,0.4s						
SMF	Signal de Mont	4.49	38	ePn	Pn	01 58 28.7	-0.4
SMF				eSg	Sg	01 59 44.3	-0.4
	176nm,0.4s						
ESDC	Sonseca Array	4.51	221	Pn	Pn	01 58 28.8	-0.7
	8.0nm,0.3s,baz=42,slow=14,SNR=105						
ESDC				Sn	Sn	01 59 18.6	-3.7
	31nm,0.3s,baz=42,slow=24,SNR=6.8						
ESDC				Lg		01 59 38.9	
	16nm,0.3s,baz=43,slow=29,SNR=5.7						
ESDC	Sonseca Array	4.51	221	⇓Pn	Pn	01 58 28.9	-0.6
ESDC				Sn	Sn	01 59 17.4	-4.9
ESDC				Lg		01 59 42.5	
ESDC	Sonseca Array	4.51	221	⇓Pn	Pn	01 58 28.9	-0.6
	5.0nm,0.2s,baz=42,slow=14,SNR=18						
ESDC				Sn	Sn	01 59 17.4	-4.9
	56nm,0.2s,baz=41,slow=24,SNR=7.9						
ESDC				Lg		01 59 42.5	
	39nm,0.5s,baz=44,slow=29,SNR=7.9						
ESDC	Sonseca Array	4.51	221	⇓Pn	Pn	01 58 28.9	-0.6
	5.0nm,0.2s,baz=42,slow=14,SNR=18						
ESDC				Sn	Sn	01 59 17.4	-4.9
	56nm,0.2s,baz=41,slow=24,SNR=7.9						
ESDC				Lg		01 59 42.5	
	39nm,0.5s,baz=44,slow=29,SNR=7.9						
ESDC	Sonseca Array	4.51	221	Pn	Pn	01 58 28.9	-0.6
	5.0nm,0.2s,baz=42,slow=14,SNR=18						
ESDC				Lg		01 59 42.5	
	39nm,0.5s,SNR=7.9						
ESLA	Sonseca Array	4.51	221	ePn	Pn	01 58 28.8	-0.6
ESLA	Sonseca Array	4.51	221	ePn	Pn	01 58 28.8	-0.7
HYF	Humbligny	4.55	25	ePn	Pn	01 58 30.0	0.0
HYF				eSg	Sg	01 59 46.1	-0.6
HYF	Humbligny	4.55	25	Pn	Pn	01 58 30.0	0.0
HYF				Lg		01 59 46.1	
HYF	Humbligny	4.55	25	Pn	Pn	01 58 30.0	0.0
HYF				Lg		01 59 46.1	
HYF	Humbligny	4.55	25	ePn	Pn	01 58 30.0	0.0
HYF				eSg	Sg	01 59 46.1	-0.6
ETOB	Tobarra	4.63	194	Pn	Pn	01 58 31.5	+0.3
ETOB				Sn	Sn	01 59 22.9	-2.4
ETOB				Lg		01 59 48.5	
ETOB	Tobarra	4.63	194	Pn	Pn	01 58 31.5	+0.3
	1.7nm,0.1s,SNR=45						
ETOB				Sn	Sn	01 59 22.9	-2.4
	7.4nm,0.2s,SNR=7.9						
ETOB				Lg		01 59 48.5	
	139nm,0.6s,SNR=7.9						
ETOB	Tobarra	4.63	194	Pn	Pn	01 58 31.5	+0.3
	1.7nm,0.1s,SNR=45						
ETOB				Sn	Sn	01 59 22.9	-2.4
	7.4nm,0.2s,SNR=7.9						
ETOB				Lg		01 59 48.5	
	139nm,0.6s,SNR=7.9						
ETOB	Tobarra	4.63	194	Pn	Pn	01 58 31.5	+0.3
	1.7nm,0.1s,SNR=45						
ETOB				Sn	Sn	01 59 22.9	-2.4
	7.4nm,0.2s,SNR=7.9						
ETOB				Lg		01 59 48.5	
	139nm,0.6s,SNR=7.9						
SSF	Saint Saulge	4.68	32	ePn	Pn	01 58 30.9	-0.8
SSF				eSg	Sg	01 59 49.8	-0.9
	523nm,0.5s						
SSF	Saint Saulge	4.68	32	Pn	Pn	01 58 30.9	-0.8
SSF				Lg		01 59 49.8	
	262nm,0.5s						
SSF	Saint Saulge	4.68	32	Pn	Pn	01 58 30.9	-0.8
SSF				Lg		01 59 49.8	
	262nm,0.5s						
SSF	Saint Saulge	4.68	32	ePn	Pn	01 58 30.9	-0.8
SSF				eSg	Sg	01 59 49.8	-0.9
	262nm,0.5s						
ORIF	Oris-en-Rattie	4.69	66	ePn	Pn	01 58 32.7	+0.9
ORIF				eSg	Sg	01 59 49.5	-1.5
	169nm,0.9s						
ORIF	Oris-en-Rattie	4.69	66	Pn	Pn	01 58 32.7	+0.9
ORIF				Lg		01 59 49.5	
	84nm,0.9s						
ORIF	Oris-en-Rattie	4.69	66	Pn	Pn	01 58 32.7	+0.9
ORIF				Lg		01 59 49.5	
	84nm,0.9s						
ORIF	Oris-en-Rattie	4.69	66	ePn	Pn	01 58 32.7	+0.9
ORIF				eSg	Sg	01 59 49.5	-1.5
	84nm,0.9s						
PAB	San Pablo	4.80	223	ePn	Pn	01 58 33.0	-0.4
PAB	San Pablo	4.80	223	ePn	Pn	01 58 33.0	-0.4
EVIA	Vianos	4.86	202	Pn	Pn	01 58 35.0	+0.8
EVIA	Vianos	4.86	202	Pn	Pn	01 58 35.0	+0.8
	5.1nm,0.3s,SNR=18						
EVIA	Vianos	4.86	202	Pn	Pn	01 58 35.0	+0.8
	5.1nm,0.3s,SNR=18						
EVIA	Vianos	4.86	202	Pn	Pn	01 58 35.0	+0.8
	5.1nm,0.3s,SNR=18						
LMR	La Mourre	4.87	86	ePg	Pg	01 58 52.2	-1.5
LMR				eSg	Sg	01 59 54.5	-2.2
	64nm,0.6s						
LMR	La Mourre	4.87	86	ePn	Pn	01 58 34.0	-0.3
LMR				ePg	Pg	01 58 52.2	-1.5
LMR				eSg	Sg	01 59 54.5	-2.2
LMR	La Mourre	4.87	86	Pn	Pn	01 58 34.0	-0.3
LMR				Pg	Pg	01 58 52.2	-1.5
LMR				Lg		01 59 54.5	
	32nm,0.6s						
LMR	La Mourre	4.87	86	Pn	Pn	01 58 34.0	-0.3
LMR				Pg	Pg	01 58 52.2	-1.5
LMR				Lg		01 59 54.5	
	32nm,0.6s						
LMR	La Mourre	4.87	86	ePn	Pn	01 58 34.0	-0.3
LMR	La Mourre	4.87	86	ePg	Pg	01 58 52.2	-1.5
LMR				eSg	Sg	01 59 54.5	-2.2
	32nm,0.6s						
FRF	La Foret Royal	4.97	83	ePn	Pn	01 58 35.8	+0.1
FRF				eSg	Sg	01 59 58.0	-2.1
	108nm,0.6s						
FRF	La Foret Royal	4.97	83	Pn	Pn	01 58 35.8	+0.1
FRF				Lg		01 59 58.0	
	54nm,0.6s						
FRF	La Foret Royal	4.97	83	Pn	Pn	01 58 35.8	+0.1
FRF				Lg		01 59 58.0	
	54nm,0.6s						
FRF	La Foret Royal	4.97	83	ePn	Pn	01 58 35.8	+0.1
FRF				eSg	Sg	01 59 58.0	-2.1
	54nm,0.6s						
LOR	Lormes	4.99	33	ePn	Pn	01 58 35.1	-0.9
	baz=214						
LOR	Lormes	4.99	33	ePg	Pg	01 58 57.4	+1.4
	baz=219						
LOR				eSg	Sg	01 59 59.5	-1.1
	367nm,0.4s,baz=209						
LOR	Lormes	4.99	33	ePn	Pn	01 58 35.1	-0.9
LOR				ePg	Pg	01 58 57.4	+1.4
LOR				eSg	Sg	01 59 59.5	-1.1
LOR	Lormes	4.99	33	Pn	Pn	01 58 35.1	-0.9
LOR				Pg	Pg	01 58 57.4	+1.4
LOR				Lg		01 59 59.5	
	183nm,0.4s						
LOR	Lormes	4.99	33	Pn	Pn	01 58 35.1	-0.9
LOR				Pg	Pg	01 58 57.4	+1.4
LOR				Lg		01 59 59.5	
	183nm,0.4s						
LOR	Lormes	4.99	33	ePn	Pn	01 58 35.1	-0.9
LOR	Lormes	4.99	33	ePg	Pg	01 58 57.4	+1.4
	baz=222						
LOR				eSg	Sg	01 59 59.5	-1.1
	183nm,0.4s						
ECAL	Calabor	5.02	258	⇓Pn	Pn	01 58 37.4	+0.9
ECAL				Sn	Sn	01 59 34.9	+0.2
ECAL				Lg		02 00 01.4	
ECAL	Calabor	5.02	258	⇓Pn	Pn	01 58 37.4	+0.9
	2.7nm,0.2s,SNR=18						
ECAL				Sn	Sn	01 59 33.5	-1.2
	101nm,0.3s,SNR=15						
ECAL				Lg		02 00 01.4	
	50nm,0.2s,SNR=7.9						
ECAL	Calabor	5.02	258	⇓Pn	Pn	01 58 37.4	+0.9
	2.7nm,0.2s,SNR=18						
ECAL				Sn	Sn	01 59 33.5	-1.2
	101nm,0.3s,SNR=15						
ECAL				Lg		02 00 01.4	
	50nm,0.2s,SNR=7.9						
ECAL	Calabor	5.02	258	⇓Pn	Pn	01 58 37.3	+0.9
ECAL				Sn	Sn	01 59 34.9	+0.2
	101nm,0.3s,SNR=15						
ECAL				Lg		02 00 01.4	
	50nm,0.2s,SNR=7.9						
PBRG	Braganca	5.06	257	ePn	Pn	01 58 38.1	+1.1
PBRG				eSn	Sn	01 59 33.5	-2.3
PBRG				A		01 59 37.4	
	70nm,0.7s						
PBRG	Braganca	5.06	257	Pn	Pn	01 58 38.1	+1.1
PBRG				Sn	Sn	01 59 33.5	-2.3
	35nm,0.7s						
PBRG	Braganca	5.06	257	Pn	Pn	01 58 38.1	+1.1
PBRG				Sn	Sn	01 59 33.5	-2.3
	35nm,0.7s						
PBRG	Braganca	5.06	257	ePn	Pn	01 58 38.1	+1.1
PBRG				eSn	Sn	01 59 33.5	-2.3
	70nm,0.7s						
EPON	Pontenova	5.12	274	Pn	Pn	01 58 39.8	+2.0
EPON				Sn	Sn	01 59 37.0	-0.2
EPON	Pontenova	5.12	274	Pn	Pn	01 58 39.8	+2.0
	13nm,0.2s,SNR=52						
EPON				Sn	Sn	01 59 37.0	-0.2
	9.1nm,0.2s,SNR=11						
EPON	Pontenova	5.12	274	Pn	Pn	01 58 39.8	+2.0
	13nm,0.2s,SNR=52						
EPON				Sn	Sn	01 59 37.0	-0.2
	9.1nm,0.2s,SNR=11						
EPON	Pontenova	5.12	274	Pn	Pn	01 58 39.8	+2.0
	13nm,0.2s,SNR=52						
EPON				Sn	Sn	01 59 37.0	-0.2
	9.1nm,0.2s,SNR=11						
ERUA	La Rua	5.21	264	Pn	Pn	01 58 40.9	+2.0
ERUA				Sn	Sn	01 59 39.3	0.0
ERUA	La Rua	5.21	264	Pn	Pn	01 58 40.9	+2.0
	7.7nm,0.2s,SNR=7.9						
ERUA				Sn	Sn	01 59 36.7	-2.6
	18nm,0.1s,SNR=7.9						
ERUA	La Rua	5.21	264	Pn	Pn	01 58 40.9	+2.0
	7.7nm,0.2s,SNR=7.9						
ERUA				Sn	Sn	01 59 36.7	-2.6
	18nm,0.1s,SNR=7.9						
ERUA	La Rua	5.21	264	Pn	Pn	01 58 40.9	+1.9
	7.7nm,0.2s,SNR=7.9						
ERUA				Sn	Sn	01 59 39.3	-0.1
	18nm,0.1s,SNR=7.9						
QUIF	Quistinic	5.21	337	ePg	Pg	01 58 59.4	-0.8
QUIF				eSn	Sn	01 59 37.3	-2.0
QUIF				eSg	Sg	02 00 06.5	-1.2
	201nm,0.4s						
QUIF	Quistinic	5.21	337	ePn	Pn	01 58 39.1	+0.1
QUIF				ePg	Pg	01 58 59.4	-0.8
QUIF				eSn	Sn	01 59 37.3	-2.0
QUIF				eSg	Sg	02 00 06.5	-1.2
QUIF	Quistinic	5.21	337	Pn	Pn	01 58 39.1	+0.1
QUIF				Pg	Pg	01 58 59.4	-0.8
QUIF				Sn	Sn	01 59 37.3	-2.0
QUIF				Lg		02 00 06.5	
	101nm,0.4s						
QUIF	Quistinic	5.21	337	Pn	Pn	01 58 39.1	+0.1
QUIF				Pg	Pg	01 58 59.4	-0.8
QUIF				Sn	Sn	01 59 37.3	-2.0
QUIF				Lg		02 00 06.5	
	101nm,0.4s						
QUIF	Quistinic	5.21	337	ePn	Pn	01 58 39.1	+0.1
QUIF	Quistinic	5.21	337	ePg	Pg	01 58 59.4	-0.8
QUIF				eSn	Sn	01 59 37.3	-2.0
QUIF				eSg	Sg	02 00 06.5	-1.2
	101nm,0.4s						
MBDF	Montbardon	5.24	70	ePn	Pn	01 58 39.8	+0.4
MBDF				eSg	Sg	02 00 06.7	-1.9
	55nm,0.7s						
MBDF	Montbardon	5.24	70	Pn	Pn	01 58 39.8	+0.4
MBDF				Lg		02 00 06.7	
	28nm,0.7s						
MBDF	Montbardon	5.24	70	Pn	Pn	01 58 39.8	+0.4
MBDF				Lg		02 00 06.7	
	28nm,0.7s						
MBDF	Montbardon	5.24	70	ePn	Pn	01 58 39.8	+0.4
MBDF				eSg	Sg	02 00 06.7	-1.9
	28nm,0.7s						
GRR	Gorron	5.25	355	ePn	Pn	01 58 39.3	-0.3
GRR				eSn	Sn	01 59 35.5	-4.9
GRR				eSg	Sg	02 00 08.0	-1.1
	180nm,0.3s						
GRR	Gorron	5.25	355	Pn	Pn	01 58 39.3	-0.3
GRR				Sn	Sn	01 59 35.5	-4.9
GRR				Lg		02 00 08.0	
	90nm,0.3s						
GRR	Gorron	5.25	355	Pn	Pn	01 58 39.3	-0.3
GRR				Sn	Sn	01 59 35.5	-4.9
GRR				Lg		02 00 08.0	
	90nm,0.3s						
GRR	Gorron	5.25	355	ePn	Pn	01 58 39.3	-0.3
GRR				eSn	Sn	01 59 35.5	-4.9
GRR				eSg	Sg	02 00 08.0	-1.1
	90nm,0.3s						
BNI	Bardonecchia	5.27	67	ePn	Pn	01 58 42.1	+2.3
	10nm,0.8s						
BNI	Bardonecchia	5.27	67	ePn	Pn	01 58 42.1	+2.3
	10nm,0.8s						
SGMF	Saint Gilles	5.37	343	ePg	Pg	01 59 02.6	-0.7
SGMF				eSn	Sn	01 59 41.0	-2.3
SGMF				eSg	Sg	02 00 11.7	-1.1
	276nm,0.6s						
SGMF	Saint Gilles	5.37	343	ePn	Pn	01 58 41.1	-0.1
SGMF				ePg	Pg	01 59 02.6	-0.7
SGMF				eSn	Sn	01 59 41.0	-2.3
SGMF				eSg	Sg	02 00 11.7	-1.1
SGMF	Saint Gilles	5.37	343	Pn	Pn	01 58 41.1	-0.1
SGMF				Pg	Pg	01 59 02.6	-0.7
SGMF				Sn	Sn	01 59 41.0	-2.3
SGMF				Lg		02 00 11.7	
	138nm,0.6s						
SGMF	Saint Gilles	5.37	343	Pn	Pn	01 58 41.1	-0.1
SGMF				Pg	Pg	01 59 02.6	-0.7
SGMF				Sn	Sn	01 59 41.0	-2.3

SGMF Lg 02 00 11.7
138nm,0.6s
SGMF Saint Gilles 5.37 343 *e*Pn **Pn 01 58 41.1 -0.1**
SGMF Saint Gilles 5.37 343 *e*Pg **Pg 01 59 02.6 -0.7**
SGMF *e*Sn **Sn 01 59 41.0 -2.3**
SGMF *e*Sg **Sg 02 00 11.7 -1.1**
138nm,0.6s
LDF La Druitiere 5.43 0 *e*Pg **Pg 01 59 04.1 -0.5**
LDF *e*Sn **Sn 01 59 41.4 -3.5**
LDF *e*Sg **Sg 02 00 13.7 -1.2**
473nm,0.6s
LDF La Druitiere 5.43 0 *e*Pn **Pn 01 58 41.6 -0.5**
LDF *e*Pg **Pg 01 59 04.1 -0.5**
LDF *e*Sn **Sn 01 59 41.4 -3.5**
LDF *e*Sg **Sg 02 00 13.7 -1.2**
LDF La Druitiere 5.43 0 *e*Pn **Pn 01 58 41.6 -0.5**
LDF La Druitiere 5.43 0 *e*Pg **Pg 01 59 04.1 -0.5**
LDF *e*Sg **Sg 02 00 13.7 -1.2**
236nm,0.6s
TOUF Mont Tournerai 5.44 78 Pn **Pn 01 58 42.2 0.0**
TOUF Mont Tournerai 5.44 78 Pn **Pn 01 58 42.2 0.0**
LPL La Plagne 5.47 62 *e*Pn **Pn 01 58 43.3 +0.7**
LPL *e*Sg **Sg 02 00 13.8 -2.2**
74nm,0.6s
LPL La Plagne 5.47 62 Pn **Pn 01 58 43.3 +0.7**
LPL Lg 02 00 13.8
37nm,0.6s
LPL La Plagne 5.47 62 Pn **Pn 01 58 43.3 +0.7**
LPL Lg 02 00 13.8
37nm,0.6s
LPL La Plagne 5.47 62 *e*Pn **Pn 01 58 43.3 +0.7**
LPL *e*Sg **Sg 02 00 13.8 -2.2**
37nm,0.6s
LPG La Plagne 5.47 62 *e*Pn **Pn 01 58 43.9 +1.3**
LPG *e*Sg **Sg 02 00 14.6 -1.6**
200nm,0.9s
LPG La Plagne 5.47 62 Pn **Pn 01 58 43.9 +1.3**
LPG Lg 02 00 14.6
100nm,0.9s
LPG La Plagne 5.47 62 Pn **Pn 01 58 43.9 +1.3**
LPG Lg 02 00 14.6
100nm,0.9s
LPG La Plagne 5.47 62 *e*Pn **Pn 01 58 43.9 +1.3**
LPG *e*Sg **Sg 02 00 14.6 -1.6**
100nm,0.9s
MVO Moncorvo 5.49 251 *e*Pn **Pn 01 58 43.5 +0.6**
MVO *e*Sn **Sn 01 59 43.5 -2.9**
MVO *e*Sg **Sg 02 00 10.3 -6.5**
MVO A 02 00 13.7
41nm,0.4s
MVO Moncorvo 5.49 251 *e*Pn **Pn 01 58 43.5 +0.6**
LUCF Luceram 5.50 80 Pn **Pn 01 58 43.3 +0.3**
LUCF Luceram 5.50 80 Pn **Pn 01 58 43.3 +0.3**
SBF Sospel 5.56 80 *e*Pn **Pn 01 58 44.2 +0.4**
SBF *e*Sg **Sg 02 00 16.2 -2.8**
176nm,1.0s
SBF Sospel 5.56 80 Pn **Pn 01 58 44.2 +0.4**
SBF Lg 02 00 16.2
88nm,1.0s
SBF Sospel 5.56 80 Pn **Pn 01 58 44.2 +0.4**
SBF Lg 02 00 16.2
88nm,1.0s
SBF Sospel 5.56 80 *e*Pn **Pn 01 58 44.2 +0.4**
AUTN L'Aution 5.57 79 Pn **Pn 01 58 43.6 -0.3**
AUTN L'Aution 5.57 79 Pn **Pn 01 58 43.6 -0.3**
CART Cartagena 5.61 187 *e*Pn **Pn 01 58 45.0 +0.5**
CART Cartagena 5.61 187 *e*Pn **Pn 01 58 45.0 +0.5**
FLN La Foliniere 5.61 358 *e*Pn **Pn 01 58 44.3 -0.2**
baz=180
FLN La Foliniere 5.61 358 *e*Pg **Pg 01 59 07.0 -0.9**
baz=175
FLN *e*Sg **Sg 02 00 19.4 -1.1**
170nm,0.3s,baz=181
FLN La Foliniere 5.61 358 *e*Pn **Pn 01 58 44.3 -0.2**
FLN *e*Pg **Pg 01 59 07.0 -0.9**
FLN *e*Sg **Sg 02 00 19.4 -1.1**
FLN La Foliniere 5.61 358 Pn **Pn 01 58 44.3 -0.2**
FLN Pg **Pg 01 59 07.0 -0.9**
FLN Lg 02 00 19.4
85nm,0.3s
FLN La Foliniere 5.61 358 Pn **Pn 01 58 44.3 -0.2**
FLN Pg **Pg 01 59 07.0 -0.9**
FLN Lg 02 00 19.4
85nm,0.3s
FLN La Foliniere 5.61 358 *e*Pn **Pn 01 58 44.3 -0.2**
FLN La Foliniere 5.61 358 *e*Pg **Pg 01 59 07.0 -0.9**
baz=175
FLN *e*Sg **Sg 02 00 19.4 -1.1**
85nm,0.3s
CABF La Chapelle 5.61 50 *e*Pn **Pn 01 58 44.9 +0.3**
CABF *e*Sg **Sg 02 00 19.1 -1.6**
536nm,0.9s
CABF La Chapelle 5.61 50 Pn **Pn 01 58 44.9 +0.3**
CABF Lg 02 00 19.1
268nm,0.9s
CABF La Chapelle 5.61 50 Pn **Pn 01 58 44.9 +0.3**
CABF Lg 02 00 19.1
268nm,0.9s
CABF La Chapelle 5.61 50 *e*Pn **Pn 01 58 44.9 +0.3**
CABF *e*Sg **Sg 02 00 19.1 -1.6**
268nm,0.9s
ROSF Rostrenen 5.62 338 *e*Pg **Pg 01 59 07.0 -1.1**
ROSF *e*Sn **Sn 01 59 46.8 -2.7**
ROSF *e*Sg **Sg 02 00 19.5 -1.4**
101nm,0.4s
ROSF Rostrenen 5.62 338 *e*Pn **Pn 01 58 44.7 +0.1**
ROSF *e*Pg **Pg 01 59 07.0 -1.1**
ROSF *e*Sn **Sn 01 59 46.8 -2.7**
ROSF *e*Sg **Sg 02 00 19.5 -1.4**
ROSF Rostrenen 5.62 338 Pn **Pn 01 58 44.7 +0.1**
ROSF Pg **Pg 01 59 07.0 -1.1**
ROSF Sn **Sn 01 59 46.8 -2.7**
ROSF Lg 02 00 19.5
51nm,0.4s
ROSF Rostrenen 5.62 338 Pn **Pn 01 58 44.7 +0.1**
ROSF Pg **Pg 01 59 07.0 -1.1**
ROSF Sn **Sn 01 59 46.8 -2.7**
ROSF Lg 02 00 19.5
51nm,0.4s
ROSF Rostrenen 5.62 338 *e*Pn **Pn 01 58 44.7 +0.1**
ROSF Rostrenen 5.62 338 *e*Pg **Pg 01 59 07.0 -1.1**
ROSF *e*Sn **Sn 01 59 46.8 -2.7**
ROSF *e*Sg **Sg 02 00 19.5 -1.4**
51nm,0.4s
EHUE Huescar 5.66 200 Pn **Pn 01 58 45.2 +0.1**
EHUE Sn **Sn 01 59 46.8 -3.7**
EHUE Lg 02 00 18.4
EHUE Huescar 5.66 200 Pn **Pn 01 58 45.2 +0.1**
1.4nm,0.4s,SNR=7.9
EHUE Sn **Sn 01 59 46.8 -3.7**
14nm,0.8s,SNR=7.9
EHUE Lg 02 00 18.4
4.7nm,0.3s,SNR=7.9
EHUE Huescar 5.66 200 Pn **Pn 01 58 45.2 +0.1**
1.4nm,0.4s,SNR=7.9
EHUE Sn **Sn 01 59 46.8 -3.7**
14nm,0.8s,SNR=7.9
EHUE Lg 02 00 18.4
4.7nm,0.3s,SNR=7.9
EHUE Huescar 5.66 200 Pn **Pn 01 58 45.2 0.0**
1.4nm,0.4s,SNR=7.9
EBAN Banos Encina 5.71 210 Pn **Pn 01 58 45.4 -0.5**
EBAN Sn **Sn 01 59 47.0 -4.7**
EBAN Lg 02 00 21.4
EBAN Banos Encina 5.71 210 Pn **Pn 01 58 45.3 -0.5**
4.8nm,0.2s,SNR=15
EBAN Sn **Sn 01 59 47.0 -4.7**
21nm,0.5s,SNR=7.9
EBAN Lg 02 00 21.4
9.9nm,0.3s,SNR=7.9
EBAN Banos Encina 5.71 210 Pn **Pn 01 58 45.3 -0.5**
4.8nm,0.2s,SNR=15
EBAN Sn **Sn 01 59 47.0 -4.7**
21nm,0.5s,SNR=7.9
EBAN Lg 02 00 21.4
9.9nm,0.3s,SNR=7.9
EBAN Banos Encina 5.71 210 Pn **Pn 01 58 45.3 -0.6**
4.8nm,0.2s,SNR=15
EQES Quesada 5.80 204 Pn **Pn 01 58 47.3 +0.1**
EQES Sn **Sn 01 59 48.6 -5.3**
EQES Lg 02 00 22.5
EQES Quesada 5.80 204 Pn **Pn 01 58 47.3 +0.1**
0.3nm,0.2s,SNR=28
EQES Sn **Sn 01 59 48.6 -5.3**
SNR=7.9
EQES Lg 02 00 22.5
106nm,1.1s,SNR=7.9
EQES Quesada 5.80 204 Pn **Pn 01 58 47.3 +0.2**
0.3nm,0.2s,SNR=28
PVRL Vila Real 5.93 254 *e*Pn **Pn 01 58 49.7 +0.8**
PVRL *e*Sn **Sn 01 59 54.5 -2.6**
PVRL A 01 59 58.2
41nm,0.5s
PVRL Vila Real 5.93 254 Pn **Pn 01 58 49.7 +0.8**
PVRL Sn **Sn 01 59 54.5 -2.6**
20nm,0.5s
PVRL Vila Real 5.93 254 Pn **Pn 01 58 49.7 +0.8**
PVRL Sn **Sn 01 59 54.5 -2.6**
20nm,0.5s
PVRL Vila Real 5.93 254 *e*Pn **Pn 01 58 49.7 +0.8**
ELOB Lobios 5.99 260 Pn **Pn 01 58 50.4 +0.6**
ELOB Sn **Sn 01 59 57.4 -1.3**
ELOB Lg 02 00 30.4
ELOB Lobios 5.99 260 Pn **Pn 01 58 50.4 +0.6**
0.4nm,0.1s,SNR=7.9
ELOB Sn **Sn 01 59 55.1 -3.6**
6.2nm,0.1s,SNR=7.9
ELOB Lg 02 00 30.4
23nm,0.7s,SNR=7.9
ELOB Lobios 5.99 260 Pn **Pn 01 58 50.4 +0.6**
0.4nm,0.1s,SNR=7.9
ELOB Sn **Sn 01 59 55.1 -3.6**
6.2nm,0.1s,SNR=7.9
ELOB Lg 02 00 30.4
23nm,0.7s,SNR=7.9
ELOB Lobios 5.99 260 Pn **Pn 01 58 50.4 +0.6**
0.4nm,0.1s,SNR=7.9
ELOB Sn **Sn 01 59 57.3 -1.4**
6.2nm,0.1s,SNR=7.9
PCAB Cabril 6.01 259 *e*Pn **Pn 01 58 50.6 +0.6**
PCAB *e*Sn **Sn 01 59 56.7 -2.4**
PCAB A 02 00 11.2
30nm,0.6s
PCAB Cabril 6.01 259 Pn **Pn 01 58 50.6 +0.6**
PCAB Sn **Sn 01 59 56.7 -2.4**
15nm,0.6s
PCAB Cabril 6.01 259 Pn **Pn 01 58 50.6 +0.6**
PCAB Sn **Sn 01 59 56.7 -2.4**
15nm,0.6s
PCAB Cabril 6.01 259 *e*Pn **Pn 01 58 50.6 +0.6**
EADA Adamuz 6.02 215 ⇓Pn **Pn 01 58 49.8 -0.3**
EADA Sn **Sn 01 59 54.1 -5.3**
EADA Lg 02 00 32.7
EADA Adamuz 6.02 215 ⇓Pn **Pn 01 58 49.8 -0.3**
0.3nm,0.1s,SNR=18
EADA Sn **Sn 01 59 54.1 -5.3**
2.7nm,0.1s,SNR=7.9
EADA Lg 02 00 32.7
111nm,1.1s,SNR=5.2
EADA Adamuz 6.02 215 ⇓Pn **Pn 01 58 49.8 -0.3**
0.3nm,0.1s,SNR=18
EADA Sn **Sn 01 59 54.1 -5.3**
2.7nm,0.1s,SNR=7.9
EADA Lg 02 00 32.7
111nm,1.1s,SNR=5.2
EADA Adamuz 6.02 215 Pn **Pn 01 58 49.8 -0.4**
0.3nm,0.1s,SNR=18
STS Santiago 6.17 270 Pn **Pn 01 58 53.3 +1.2**
STS Sn **Sn 02 00 01.4 -1.6**
STS Santiago 6.17 270 Pn **Pn 01 58 53.3 +1.2**
1.4nm,0.2s,SNR=17
STS Sn **Sn 02 00 01.4 -1.6**
5.2nm,0.2s,SNR=7.9
STS Santiago 6.17 270 Pn **Pn 01 58 53.3 +1.2**
1.4nm,0.2s,SNR=17
STS Sn **Sn 02 00 01.4 -1.6**
5.2nm,0.2s,SNR=7.9
STS Santiago 6.17 270 Pn **Pn 01 58 53.3 +1.1**
1.4nm,0.2s,SNR=17
STS Sn **Sn 02 00 01.4 -1.6**
5.2nm,0.2s,SNR=7.9
MTE Manteigas 6.18 246 *e*Pn **Pn 01 58 53.3 +0.9**
MTE *e*Sn **Sn 02 00 00.8 -2.5**
MTE A 02 00 43.1
34nm,0.5s
PVIS Viseu 6.27 250 *e*Pn **Pn 01 58 54.2 +0.6**
PVIS *e*Sn **Sn 02 00 02.2 -3.4**
PVIS A 02 00 04.3
21nm,0.4s
PVIS *e*Sg **Sg 02 00 36.5 -5.4**
PVIS Viseu 6.27 250 Pn **Pn 01 58 54.2 +0.6**
PVIS Sn **Sn 02 00 02.2 -3.4**
11nm,0.4s
PVIS Lg 02 00 36.5
PVIS Viseu 6.27 250 Pn **Pn 01 58 54.2 +0.6**
PVIS Sn **Sn 02 00 02.2 -3.4**
11nm,0.4s
PVIS Lg 02 00 36.5
PVIS Viseu 6.27 250 *e*Pn **Pn 01 58 54.2 +0.6**
EZAM Zamans 6.38 264 Pn **Pn 01 58 56.0 +0.8**
EZAM Sn **Sn 02 00 07.6 -0.8**
EZAM Zamans 6.38 264 Pn **Pn 01 58 56.0 +0.8**
5.5nm,0.3s,SNR=7.9
EZAM Sn **Sn 02 00 07.6 -0.8**
5.1nm,0.2s,SNR=7.9
EZAM Zamans 6.38 264 Pn **Pn 01 58 56.0 +0.8**
5.5nm,0.3s,SNR=7.9
EZAM Sn **Sn 02 00 07.6 -0.8**
5.1nm,0.2s,SNR=7.9
EZAM Zamans 6.38 264 Pn **Pn 01 58 56.0 +0.8**
5.5nm,0.3s,SNR=7.9
EZAM Sn **Sn 02 00 07.6 -0.8**
5.1nm,0.2s,SNR=7.9
ELUQ Luque 6.42 211 Pn **Pn 01 58 56.1 +0.5**
ELUQ Sn **Sn 02 00 06.0 -3.3**
ELUQ Lg 02 00 44.4
ELUQ Luque 6.42 211 Pn **Pn 01 58 56.1 +0.5**
1.3nm,0.2s,SNR=7.9
ELUQ Sn **Sn 02 00 06.0 -3.3**
1.7nm,0.2s,SNR=7.9
ELUQ Lg 02 00 44.4
7.2nm,0.3s,SNR=7.9
ELUQ Luque 6.42 211 Pn **Pn 01 58 56.1 +0.5**
1.3nm,0.2s,SNR=7.9
ELUQ Sn **Sn 02 00 06.0 -3.3**
1.7nm,0.2s,SNR=7.9
ELUQ Lg 02 00 44.4
7.2nm,0.3s,SNR=7.9
ELUQ Luque 6.42 211 Pn **Pn 01 58 56.1 +0.5**
1.3nm,0.2s,SNR=7.9
PCBR Castelo Branco 6.42 241 *e*Pn **Pn 01 58 55.9 +0.2**
PCBR *e*Sn **Sn 02 00 05.6 -3.8**
PCBR *e*Sg **Sg 02 00 41.1 -5.7**
PCBR A 02 00 49.2
29nm,0.6s
PCBR Castelo Branco 6.42 241 Pn **Pn 01 58 55.9 +0.2**
PCBR Sn **Sn 02 00 05.6 -3.8**
PCBR Lg 02 00 41.1
15nm,0.6s
PCBR Castelo Branco 6.42 241 Pn **Pn 01 58 55.9 +0.2**
PCBR Sn **Sn 02 00 05.6 -3.8**
PCBR Lg 02 00 41.1
15nm,0.6s
PCBR Castelo Branco 6.42 241 *e*Pn **Pn 01 58 55.9 +0.2**
ECOG Cogollos-Vega 6.43 205 Pn **Pn 01 58 56.8 +0.9**
ECOG Sn **Sn 02 00 06.4 -3.2**
ECOG Lg 02 00 46.9
ECOG Cogollos-Vega 6.43 205 Pn **Pn 01 58 56.8 +0.9**
0.5nm,0.2s,SNR=7.9
ECOG Sn **Sn 02 00 06.4 -3.2**
0.6nm,0.1s,SNR=7.9
ECOG Lg 02 00 46.9
24nm,0.7s,SNR=7.9
ECOG Cogollos-Vega 6.43 205 Pn **Pn 01 58 56.8 +0.9**
0.5nm,0.2s,SNR=7.9
ECOG Sn **Sn 02 00 06.4 -3.2**
0.6nm,0.1s,SNR=7.9
ECOG Lg 02 00 46.9
24nm,0.7s,SNR=7.9
ECOG Cogollos-Vega 6.43 205 Pn **Pn 01 58 56.8 +1.0**
0.5nm,0.2s,SNR=7.9
MEZF Maizieres J'vi 6.46 32 *e*Pn **Pn 01 58 56.6 +0.5**
baz=209
MEZF *e*Sg **Sg 02 00 45.8 -2.0**
247nm,0.4s,baz=209
MEZF Maizieres J'vi 6.46 32 Pn **Pn 01 58 56.6 +0.5**
MEZF Lg 02 00 45.8
247nm,0.4s
MEZF Maizieres J'vi 6.46 32 Pn **Pn 01 58 56.6 +0.5**
MEZF Lg 02 00 45.8
247nm,0.4s
MEZF Maizieres J'vi 6.46 32 *e*Pn **Pn 01 58 56.6 +0.5**
MEZF *e*Sg **Sg 02 00 45.8 -2.0**
124nm,0.4s
EQUE Quentar 6.46 204 Pn **Pn 01 58 57.3 +1.1**
1.5nm,0.2s,SNR=7.9
EQUE Lg 02 00 46.0
122nm,1.3s,SNR=7.9
EQUE Quentar 6.46 204 Pn **Pn 01 58 57.3 +1.1**
1.5nm,0.2s,SNR=7.9
EQUE Lg 02 00 46.0
122nm,1.3s,SNR=7.9
EQUE Quentar 6.46 204 Pn **Pn 01 58 57.3 +1.1**
1.5nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.47 271 Pn **Pn 01 58 57.5 +1.1**
EMAZ Sn **Sn 02 00 06.9 -3.7**
EMAZ Mazaricos 6.47 271 Pn **Pn 01 58 57.5 +1.1**
3.0nm,0.1s,SNR=32
EMAZ Sn **Sn 02 00 06.9 -3.7**
6.2nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.47 271 Pn **Pn 01 58 57.5 +1.1**
3.0nm,0.1s,SNR=32
EMAZ Sn **Sn 02 00 06.9 -3.7**
6.2nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.47 271 Pn **Pn 01 58 57.5 +1.1**
3.0nm,0.1s,SNR=32
EBER Berja 6.60 199 Pn **Pn 01 58 59.4 +1.2**
EBER Lg 02 00 54.8
EBER Berja 6.60 199 Pn **Pn 01 58 59.4 +1.2**
7.3nm,0.4s,SNR=9.0
EBER Lg 02 00 54.8
60nm,0.8s,SNR=7.9
EBER Berja 6.60 199 Pn **Pn 01 58 59.4 +1.2**
7.3nm,0.4s,SNR=9.0
EBER Lg 02 00 54.8
60nm,0.8s,SNR=7.9
EBER Berja 6.60 199 Pn **Pn 01 58 59.4 +1.3**
7.3nm,0.4s,SNR=9.0
PTO Porto 6.60 255 *e*Pn **Pn 01 58 58.9 +0.8**
PTO *e*Sn **Sn 02 00 10.1 -3.6**
PTO A 02 00 26.1
21nm,0.7s
PTO Porto 6.60 255 Pn **Pn 01 58 58.9 +0.8**
PTO Sn **Sn 02 00 10.1 -3.6**
10nm,0.7s
PTO Porto 6.60 255 Pn **Pn 01 58 58.9 +0.8**
PTO Sn **Sn 02 00 10.1 -3.6**
10nm,0.7s
PTO Porto 6.60 255 *e*Pn **Pn 01 58 58.9 +0.8**
PMRV Marv??o 6.61 238 *e*Pn **Pn 01 58 58.2 0.0**
PMRV *e*Sn **Sn 02 00 09.6 -4.3**
PMRV A 02 00 11.1
28nm,0.7s
PMRV Marv??o 6.61 238 Pn **Pn 01 58 58.2 0.0**
PMRV Sn **Sn 02 00 09.6 -4.3**
14nm,0.7s
PMRV Marv??o 6.61 238 Pn **Pn 01 58 58.2 0.0**
PMRV Sn **Sn 02 00 09.6 -4.3**
14nm,0.7s
PMRV Marv??o 6.61 238 *e*Pn **Pn 01 58 58.2 0.0**
HAU Haudompre 6.65 41 *e*Pn **Pn 01 58 59.3 +0.5**
HAU *e*Sg **Sg 02 00 51.5 -2.4**
155nm,0.5s
HAU Haudompre 6.65 41 Pn **Pn 01 58 59.3 +0.5**
HAU Lg 02 00 51.5
77nm,0.5s
HAU Haudompre 6.65 41 Pn **Pn 01 58 59.3 +0.5**
HAU Lg 02 00 51.5
77nm,0.5s
HAU Haudompre 6.65 41 *e*Pn **Pn 01 58 59.3 +0.5**
HAU *e*Sg **Sg 02 00 51.5 -2.4**
77nm,0.5s
RFYF Reffroy 6.73 34 *e*Pn **Pn 01 58 59.1 -0.8**
baz=218
RFYF *e*Sg **Sg 02 00 53.9 -2.5**
561nm,0.8s
RFYF Reffroy 6.73 34 Pn **Pn 01 58 59.1 -0.8**
RFYF Lg 02 00 53.9
561nm,0.8s
RFYF Reffroy 6.73 34 Pn **Pn 01 58 59.1 -0.8**
RFYF Lg 02 00 53.9
561nm,0.8s
RFYF Reffroy 6.73 34 *e*Pn **Pn 01 58 59.1 -0.8**
RFYF *e*Sg **Sg 02 00 53.9 -2.5**
280nm,0.8s
ELOJ Sierra Loja 6.74 208 Pn **Pn 01 59 01.3 +1.1**
ELOJ Lg 02 00 54.4
ELOJ Sierra Loja 6.74 208 Pn **Pn 01 59 01.3 +1.1**
4.8nm,0.4s,SNR=19
ELOJ Lg 02 00 54.4
7.8nm,0.6s,SNR=7.9
ELOJ Sierra Loja 6.74 208 Pn **Pn 01 59 01.3 +1.1**
4.8nm,0.4s,SNR=19
ELOJ Lg 02 00 54.4
7.8nm,0.6s,SNR=7.9
ELOJ Sierra Loja 6.74 208 Pn **Pn 01 59 01.3 +1.2**
4.8nm,0.4s,SNR=19
ERON Agron 6.75 206 Pn **Pn 01 59 01.3 +1.1**
ERON Lg 02 00 57.4
ERON Agron 6.75 206 Pn **Pn 01 59 01.3 +1.1**
18nm,0.7s,SNR=7.9
ERON Lg 02 00 57.4
9.6nm,0.6s,SNR=7.9
ERON Agron 6.75 206 Pn **Pn 01 59 01.3 +1.1**
18nm,0.7s,SNR=7.9
ERON Lg 02 00 57.4
9.6nm,0.6s,SNR=7.9
ERON Agron 6.75 206 Pn **Pn 01 59 01.3 +1.2**
18nm,0.7s,SNR=7.9
PGF Pioggiola 6.75 92 *e*Pn **Pn 01 58 59.7 -0.5**
PGF *e*Sn **Sn 02 00 12.6 -4.8**
24nm,0.3s
PGF Pioggiola 6.75 92 Pn **Pn 01 58 59.7 -0.5**
PGF Sn **Sn 02 00 12.6 -4.8**
12nm,0.3s
PGF Pioggiola 6.75 92 Pn **Pn 01 58 59.7 -0.5**
PGF Sn **Sn 02 00 12.6 -4.8**
12nm,0.3s
PGF Pioggiola 6.75 92 *e*Pn **Pn 01 58 59.7 -0.5**
HINF Hinteralfeld 6.77 44 *e*Pn **Pn 01 59 01.0 +0.5**
HINF *e*Sg **Sg 02 00 55.0 -2.8**
69nm,0.4s
HINF Hinteralfeld 6.77 44 Pn **Pn 01 59 01.0 +0.5**
HINF Lg 02 00 55.0
34nm,0.4s
HINF Hinteralfeld 6.77 44 Pn **Pn 01 59 01.0 +0.5**
HINF Lg 02 00 55.0
34nm,0.4s
HINF Hinteralfeld 6.77 44 *e*Pn **Pn 01 59 01.0 +0.5**
HINF *e*Sg **Sg 02 00 55.0 -2.8**
34nm,0.4s
EBAD Badajoz 6.81 232 Pn **Pn 01 59 00.4 -0.6**
EBAD Sn **Sn 02 00 13.0 -5.8**
EBAD Lg 02 00 58.6
EBAD Badajoz 6.81 232 Pn **Pn 01 59 00.4 -0.6**
0.6nm,0.1s,SNR=30
EBAD Sn **Sn 02 00 13.0 -5.8**
5.5nm,0.2s,SNR=7.9
EBAD Lg 02 00 58.6
53nm,1.0s,SNR=7.9
EBAD Badajoz 6.81 232 Pn **Pn 01 59 00.4 -0.6**
0.6nm,0.1s,SNR=30
EBAD Sn **Sn 02 00 13.0 -5.8**
5.5nm,0.2s,SNR=7.9
EBAD Lg 02 00 58.6
53nm,1.0s,SNR=7.9
EBAD Badajoz 6.81 232 Pn **Pn 01 59 00.4 -0.6**
0.6nm,0.1s,SNR=30
PESTR Estremoz 7.08 235 *e*Pn **Pn 01 59 04.3 -0.4**
PESTR *e*Sn **Sn 02 00 19.8 -5.6**
PESTR A 02 01 13.5
17nm,0.6s
PESTR Estremoz 7.08 235 Pn **Pn 01 59 04.3 -0.4**
PESTR Sn **Sn 02 00 19.8 -5.6**
8.5nm,0.6s
PESTR Estremoz 7.08 235 Pn **Pn 01 59 04.3 -0.4**
PESTR Sn **Sn 02 00 19.8 -5.6**
8.5nm,0.6s
PESTR Estremoz 7.08 235 *e*Pn **Pn 01 59 04.3 -0.4**
PTOM Tomar 7.15 243 *e*Pn **Pn 01 59 05.8 +0.1**

PTOM			*e*Sn	Sn	02 00 23.6	-3.6
PTOM			A		02 01 16.5	
29nm,0.8s						
PTOM	**Tomar**	**7.15 243**	Pn	Pn	01 59 05.8	+0.1
PTOM			Sn	Sn	02 00 23.6	-3.6
15nm,0.8s						
PTOM	**Tomar**	**7.15 243**	Pn	Pn	01 59 05.8	+0.1
PTOM			Sn	Sn	02 00 23.6	-3.6
15nm,0.8s						
PTOM	**Tomar**	**7.15 243**	*e*Pn	Pn	01 59 05.8	+0.1
PBAR	**Barrancos**	**7.23 229**	*e*Pn	Pn	01 59 06.8	+0.1
PBAR			*e*Sn	Sn	02 00 23.9	-5.2
PBAR			A		02 01 16.4	
21nm,0.5s						
PBAR	**Barrancos**	**7.23 229**	Pn	Pn	01 59 06.8	+0.1
PBAR			Sn	Sn	02 00 23.9	-5.2
21nm,0.5s						
PBAR	**Barrancos**	**7.23 229**	Pn	Pn	01 59 06.8	+0.1
PBAR			Sn	Sn	02 00 23.9	-5.2
21nm,0.5s						
PBAR	**Barrancos**	**7.23 229**	*e*Pn	Pn	01 59 06.8	+0.1
EMIN	**Mina Concepcio**	**7.33 225**	Pn	Pn	01 59 07.8	-0.4
EMIN			Sn	Sn	02 00 24.2	-7.5
EMIN			Lg		02 01 13.6	
EMIN	**Mina Concepcio**	**7.33 225**	Pn	Pn	01 59 07.7	-0.4
0.3nm,0.1s,SNR=4.0						
EMIN			Sn	Sn	02 00 24.2	-7.5
5.3nm,0.4s,SNR=7.9						
EMIN			Lg		02 01 13.6	
37nm,0.9s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.33 225**	Pn	Pn	01 59 07.7	-0.4
0.3nm,0.1s,SNR=4.0						
EMIN			Sn	Sn	02 00 24.2	-7.5
5.3nm,0.4s,SNR=7.9						
EMIN			Lg		02 01 13.6	
37nm,0.9s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.33 225**	Pn	Pn	01 59 07.8	-0.4
CDF	**Champ du Feu**	**7.38 42**	*e*Pn	Pn	01 59 08.8	0.0
CDF			*e*Sg	Sg	02 01 14.0	-3.3
144nm,0.8s						
CDF	**Champ du Feu**	**7.38 42**	Pn	Pn	01 59 08.8	0.0
CDF			Lg		02 01 14.0	
72nm,0.8s						
CDF	**Champ du Feu**	**7.38 42**	Pn	Pn	01 59 08.8	0.0
CDF			Lg		02 01 14.0	
72nm,0.8s						
CDF	**Champ du Feu**	**7.38 42**	*e*Pn	Pn	01 59 08.8	0.0
EMIJ	**Mijas**	**7.49 210**	Pn	Pn	01 59 10.8	+0.5
EMIJ			Sn	Sn	02 00 30.7	-4.9
EMIJ			Lg		02 01 15.0	
EMIJ	**Mijas**	**7.49 210**	Pn	Pn	01 59 10.8	+0.5
0.1nm,0.2s,SNR=4.0						
EMIJ			Sn	Sn	02 00 30.7	-4.9
18nm,0.8s,SNR=7.9						
EMIJ			Lg		02 01 15.0	
29nm,0.8s,SNR=7.9						
EMIJ	**Mijas**	**7.49 210**	Pn	Pn	01 59 10.8	+0.5
0.1nm,0.2s,SNR=4.0						
EMIJ			Sn	Sn	02 00 30.7	-4.9
18nm,0.8s,SNR=7.9						
EMIJ			Lg		02 01 15.0	
29nm,0.8s,SNR=7.9						
EMIJ	**Mijas**	**7.49 210**	Pn	Pn	01 59 10.8	+0.5
0.1nm,0.2s,SNR=4.0						
ALMR	**Almeirim**	**7.51 241**	*e*P	Pn	01 59 10.8	+0.1
ALMR			*e*S	Sn	02 00 30.4	-5.8
ALMR			*e*S	Sn	02 00 30.4	-5.8
ALMR			AML	AML	02 00 32.9	
comp=E,29nm,1.0s						
ALMR	**Almeirim**	**7.51 241**	P	Pn	01 59 10.8	+0.1
ALMR			S	Sn	02 00 30.4	-5.8
ALMR	**Almeirim**	**7.51 241**	P	Pn	01 59 10.8	+0.1
ALMR			S	Sn	02 00 30.4	-5.8
BAIF	**Baives**	**7.52 22**	*e*Pn	Pn	01 59 10.4	-0.3
BAIF			*e*Sn	Sn	02 00 32.3	-4.0
BAIF			*e*Sg	Sg	02 01 18.7	-3.2
comp=E,201nm,0.9s						
BAIF	**Baives**	**7.52 22**	Pn	Pn	01 59 10.4	-0.3
BAIF			Sn	Sn	02 00 32.3	-4.0
BAIF			Lg		02 01 18.7	
comp=E,100nm,0.9s						
BAIF	**Baives**	**7.52 22**	Pn	Pn	01 59 10.4	-0.3
BAIF			Sn	Sn	02 00 32.3	-4.0
BAIF			Lg		02 01 18.7	
comp=E,100nm,0.9s						
BAIF	**Baives**	**7.52 22**	*e*Pn	Pn	01 59 10.4	-0.3
EVO	**Evora**	**7.54 235**	*e*Pn	Pn	01 59 11.4	+0.3
EVO			*e*Sn	Sn	02 00 32.9	-4.0
EVO			*e*Sg	Sg	02 01 22.7	0.0
comp=E,44nm,0.6s						
EVO	**Evora**	**7.54 235**	*e*Pn	Pn	01 59 10.8	-0.3
EVO			*e*Sn	Sn	02 00 31.5	-5.4
EVO			A		02 00 34.9	
comp=E,8.7nm,0.4s						
EVO	**Evora**	**7.54 235**	Pn	Pn	01 59 10.8	-0.3
EVO			Sn	Sn	02 00 31.5	-5.4
comp=E,8.7nm,0.4s						
EVO	**Evora**	**7.54 235**	Pn	Pn	01 59 10.8	-0.3
EVO			Sn	Sn	02 00 31.5	-5.4
comp=E,8.7nm,0.4s						
EVO	**Evora**	**7.54 235**	*e*Pn	Pn	01 59 10.8	-0.3
ESPR	**Espera**	**7.66 217**	Pn	Pn	01 59 13.5	+0.8
ESPR			Sn	Sn	02 00 36.1	-3.7
ESPR			Lg		02 01 27.4	
ESPR	**Espera**	**7.66 217**	Pn	Pn	01 59 13.5	+0.8
comp=E,3.4nm,0.3s,SNR=8.9						
ESPR			Sn	Sn	02 00 34.5	-5.3
comp=E,9.5nm,0.4s,SNR=7.9						
ESPR			Lg		02 01 24.6	
comp=E,80nm,1.2s,SNR=7.9						
ESPR	**Espera**	**7.66 217**	Pn	Pn	01 59 13.5	+0.8
comp=E,3.4nm,0.3s,SNR=8.9						
ESPR			Sn	Sn	02 00 34.5	-5.3
comp=E,9.5nm,0.4s,SNR=7.9						
ESPR			Lg		02 01 24.6	
comp=E,80nm,1.2s,SNR=7.9						
ESPR	**Espera**	**7.66 217**	Pn	Pn	01 59 13.5	+0.8
comp=E,3.4nm,0.3s,SNR=8.9						
DOU	**Dourbes**	**7.66 24**	P	Pn	01 59 12.4	-0.3
DOU			SN	Sn	02 00 33.2	-6.6
comp=E,12nm,0.0s						
DOU	**Dourbes**	**7.66 24**	P	Pn	01 59 12.3	-0.4
GIVF	**Givet**	**7.74 24**	*e*Pn	Pn	01 59 13.6	-0.1
GIVF			*e*Sn	Sn	02 00 37.5	-4.1
GIVF			*e*Sg	Sg	02 01 25.4	-3.4
comp=E,94nm,0.6s						
GIVF	**Givet**	**7.74 24**	Pn	Pn	01 59 13.6	-0.1
GIVF			Sn	Sn	02 00 37.5	-4.1
GIVF			Lg		02 01 25.4	
comp=E,47nm,0.6s						
GIVF	**Givet**	**7.74 24**	Pn	Pn	01 59 13.6	-0.1
GIVF			Sn	Sn	02 00 37.5	-4.1
GIVF			Lg		02 01 25.4	
comp=E,47nm,0.6s						
GIVF	**Givet**	**7.74 24**	*e*Pn	Pn	01 59 13.6	-0.1
MOE	**Montemor**	**7.75 236**	*e*Pn	Pn	01 59 14.0	0.0
MOE			*e*Sn	Sn	02 00 36.7	-5.4
MOE	**Montemor**	**7.75 236**	*e*Pn	Pn	01 59 14.0	0.0
PBEJ	**Beja**	**7.80 231**	*e*Pn	Pn	01 59 13.9	-0.6
PBEJ			*e*Sn	Sn	02 00 37.4	-5.7
PBEJ			A		02 01 35.5	
comp=E,12nm,0.7s						
PBEJ	**Beja**	**7.80 231**	Pn	Pn	01 59 13.9	-0.6
PBEJ			Sn	Sn	02 00 37.4	-5.7
comp=E,6.1nm,0.7s						
PBEJ	**Beja**	**7.80 231**	Pn	Pn	01 59 13.9	-0.6
PBEJ			Sn	Sn	02 00 37.4	-5.7
comp=E,6.1nm,0.7s						
PBEJ	**Beja**	**7.80 231**	*e*Pn	Pn	01 59 13.9	-0.6
WLF	**Walferdange**	**7.82 32**	P	Pn	01 59 10.7	-4.2
WLF			SN	Sn	02 00 34.5	-9.2
comp=N,8.6nm,0.0s						
WLF	**Walferdange**	**7.82 32**	*e*Sg	Sg	02 01 33.2	+1.6
WLF	**Walferdange**	**7.82 32**	*e*Pn	Pn	01 59 17.1	+2.2
WLF			*e*Pg	Pg	01 59 52.1	+1.8
WLF	**Walferdange**	**7.82 32**	*e*Pn	Pn	01 59 17.1	+2.2
WLF	**Walferdange**	**7.82 32**	*e*Pg	Pg	01 59 52.1	+1.8
EJIF	**Jimena Fronter**	**7.85 213**	Pn	Pn	01 59 16.2	+0.9
EJIF			Lg		02 01 32.6	
EJIF	**Jimena Fronter**	**7.85 213**	Pn	Pn	01 59 16.2	+0.9
comp=N,2.9nm,0.3s,SNR=7.9						
EJIF			Lg		02 01 32.6	
comp=N,9.6nm,0.7s,SNR=7.9						
EJIF	**Jimena Fronter**	**7.85 213**	Pn	Pn	01 59 16.2	+0.9
comp=N,2.9nm,0.3s,SNR=7.9						
EJIF			Lg		02 01 32.6	
comp=N,9.6nm,0.7s,SNR=7.9						
EJIF	**Jimena Fronter**	**7.85 213**	Pn	Pn	01 59 16.2	+0.9
comp=N,2.9nm,0.3s,SNR=7.9						
BFO	**Black Forest**	**7.86 46**	*e*Pn	Pn	01 59 19.4	+4.0
BFO			*e*Sg	Sg	02 01 33.7	+0.9
EGRO	**El Granado**	**7.93 227**	Pn	Pn	01 59 15.8	-0.6
EGRO			Sn	Sn	02 00 38.5	-8.0
EGRO			Lg		02 01 35.8	
EGRO	**El Granado**	**7.93 227**	Pn	Pn	01 59 15.8	-0.6
comp=N,3.9nm,0.3s,SNR=8.0						
EGRO			Sn	Sn	02 00 38.5	-8.0
comp=N,6.0nm,0.5s,SNR=7.9						
EGRO			Lg		02 01 35.8	
comp=N,77nm,1.2s,SNR=7.9						
EGRO	**El Granado**	**7.93 227**	Pn	Pn	01 59 15.8	-0.6
comp=N,3.9nm,0.3s,SNR=8.0						
EGRO			Sn	Sn	02 00 38.5	-8.0
comp=N,6.0nm,0.5s,SNR=7.9						
EGRO			Lg		02 01 35.8	
comp=N,77nm,1.2s,SNR=7.9						
EGRO	**El Granado**	**7.93 227**	Pn	Pn	01 59 15.8	-0.6
comp=N,3.9nm,0.3s,SNR=8.0						
SNF	**Seneffe**	**7.95 21**	P	Pn	01 59 16.6	0.0
SNF	**Seneffe**	**7.95 21**	P	Pn	01 59 16.6	0.0
DAVOX	**Davos/Dischmat**	**7.98 60**	Pn	Pn	01 59 20.5	+3.5
comp=N,0.2nm,0.3s,baz=315,slow=21,SNR=2.0						
DAVOX			Sn	Sn	02 00 52.7	+5.2
comp=N,0.5nm,0.3s,baz=326,slow=21,SNR=2.0						
DAVOX			Lg		02 01 40.4	
comp=N,0.7nm,0.3s,baz=19,slow=22,SNR=6.6						
PMAFR	**Mafra**	**8.08 242**	*e*Pn	Pn	01 59 19.6	+1.2
PMAFR			*e*Sn	Sn	02 00 46.4	-3.7
PMAFR			A		02 00 55.2	
comp=N,12nm,0.6s						
PMAFR	**Mafra**	**8.08 242**	*e*Pn	Pn	01 59 19.6	+1.2
PVAQ	**Vaqueiros**	**8.15 228**	*e*Pn	Pn	01 59 18.4	-1.1
PVAQ			*e*Sn	Sn	02 00 44.2	-7.8
PVAQ			A		02 01 58.9	
comp=N,15nm,0.6s						
PVAQ	**Vaqueiros**	**8.15 228**	Pn	Pn	01 59 18.4	-1.1
PVAQ			Sn	Sn	02 00 44.2	-7.8
comp=N,15nm,0.6s						
PVAQ	**Vaqueiros**	**8.15 228**	Pn	Pn	01 59 18.4	-1.1
PVAQ			Sn	Sn	02 00 44.2	-7.8
comp=N,15nm,0.6s						
PVAQ	**Vaqueiros**	**8.15 228**	*e*Pn	Pn	01 59 18.4	-1.1
BCLA	**Clavier**	**8.16 25**	P	Pn	01 59 21.2	+1.7
BCLA			SN	Sn	02 00 46.2	-5.9
comp=E,16nm,0.0s						
BCLA	**Clavier**	**8.16 25**	P	Pn	01 59 21.2	+1.6
PCVE	**Castro Verde**	**8.17 230**	*e*Pn	Pn	01 59 19.7	0.0
PCVE			*e*Sn	Sn	02 00 47.8	-4.5
PCVE			A		02 01 50.8	
comp=E,18nm,0.7s						
PCVE	**Castro Verde**	**8.17 230**	Pn	Pn	01 59 19.7	0.0
PCVE			Sn	Sn	02 00 47.8	-4.5
comp=E,18nm,0.7s						
PCVE	**Castro Verde**	**8.17 230**	Pn	Pn	01 59 19.7	0.0
PCVE			Sn	Sn	02 00 47.8	-4.5
comp=E,18nm,0.7s						
PCVE	**Castro Verde**	**8.17 230**	*e*Pn	Pn	01 59 19.7	0.0
PBDV	**Barranco-do-Ve**	**8.39 228**	*e*Pn	Pn	01 59 22.2	-0.5
PBDV			*e*Sn	Sn	02 00 50.9	-6.8
PBDV			A		02 00 58.4	
comp=E,5.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**8.39 228**	Pn	Pn	01 59 22.2	-0.5
PBDV			Sn	Sn	02 00 50.9	-6.8
comp=E,5.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**8.39 228**	Pn	Pn	01 59 22.2	-0.5
PBDV			Sn	Sn	02 00 50.9	-6.8
comp=E,5.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**8.39 228**	*e*Pn	Pn	01 59 22.2	-0.5
MEM	**Membach**	**8.56 27**	P	Pn	01 59 25.4	+0.5
MEM			SN	Sn	02 00 55.4	-6.4
comp=N,23nm,0.0s						
MEM	**Membach**	**8.56 27**	P	Pn	01 59 25.4	+0.5
FETA	**Feichten**	**8.61 60**	⇑*i*Pn	Pn	01 59 29.3	+3.7
FETA			⇑*i*Sn	Sn	02 01 12.2	+9.2
PTEO	**Sao Teotonio**	**8.62 232**	*e*Pn	Pn	01 59 25.6	-0.2
PTEO			*e*Sn	Sn	02 00 59.1	-4.3
PTEO			A		02 01 10.6	
comp=N,16nm,0.6s						
PTEO	**Sao Teotonio**	**8.62 232**	Pn	Pn	01 59 25.6	-0.2
PTEO			Sn	Sn	02 00 59.1	-4.3
comp=N,8.0nm,0.6s						
PTEO	**Sao Teotonio**	**8.62 232**	Pn	Pn	01 59 25.6	-0.2
PTEO			Sn	Sn	02 00 59.1	-4.3
comp=N,8.0nm,0.6s						
PTEO	**Sao Teotonio**	**8.62 232**	*e*Pn	Pn	01 59 25.6	-0.2
HGN	**Heimansgroeve**	**8.66 27**	*e*Pn	Sn	02 00 58.1	-6.3
comp=N,3.8nm,0.1s						
HGN	**Heimansgroeve**	**8.66 27**	*e*Sn	Sx	02 01 55.2	
MORF	**Marmelete**	**8.74 231**	*e*Pn	Pn	01 59 27.8	+0.3
MORF			*e*Sn	Sn	02 01 01.8	-4.6
MORF	**Marmelete**	**8.74 231**	Pn	Pn	01 59 27.8	+0.3
MORF			Sn	Sn	02 01 01.8	-4.6
MORF	**Marmelete**	**8.74 231**	Pn	Pn	01 59 27.8	+0.3
MORF			Sn	Sn	02 01 01.8	-4.6
MORF	**Marmelete**	**8.74 231**	*e*Pn	Pn	01 59 27.8	+0.3
RETA	**Reutte**	**8.82 57**	⇑*i*Pn	Pn	01 59 31.2	+2.7
PFVI	**Vila Bisbo**	**8.96 231**	*e*Pn	Pn	01 59 30.7	+0.1
PFVI			*e*Sn	Sn	02 01 05.8	-6.1
PFVI			A		02 01 08.9	
comp=N,9.0nm,0.8s						
PFVI	**Vila Bisbo**	**8.96 231**	*e*Pn	Pn	01 59 30.7	+0.1
MOTA	**Moosalm**	**8.97 58**	⇑*i*Pn	Pn	01 59 33.0	+2.4
MOTA	**Moosalm**	**8.97 58**	Pn	Pn	01 59 33.0	+2.4
WTTA	**Wattenberg**	**9.27 60**	⇑*i*Pn	Pn	01 59 38.5	+3.8
WTTA			⇑*i*Sn	Sn	02 01 29.3	+10
WTSB	**Winterswijk**	**9.98 26**	*e*Pn	Sn	02 01 35.3	-1.3
comp=N,6.3nm,0.4s						
RJOB	**Jochberg**	**10.18 59**	*e*Pn	Pn	01 59 53.1	+5.9
GRF	**Grafenberg Arr**	**10.20 46**	*e*Sg	Sx	02 02 50.8	
KEST	**Kesra**	**10.43 132**	Pn	Pn	01 59 53.6	+3.0
comp=N,0.1nm,0.3s,baz=164,slow=22,SNR=5.1						
WET	**Wettzell**	**10.83 52**	*e*Pn	Pn	02 00 00.7	+4.6
WET			*e*Sn	Sn	02 01 53.4	-4.2
PLN	**Plauen**	**11.16 45**	*e*Pn	Pn	02 00 05.7	+5.1
NKC	**Novy Kostel**	**11.16 46**	*e*SG	Sx	02 03 18.5	
NKC	**Novy Kostel**	**11.16 46**	Sg	Sx	02 03 18.5	
GEC2	**GERESS Array S**	**11.18 55**	*e*Pn	Pn	02 00 06.4	+5.6
GEC2			*e*Sn	Sn	02 02 03.8	-2.3
GERES	**GERESS Array B**	**11.18 55**	Pn	Pn	02 00 03.0	+2.2
comp=N,0.3nm,0.3s,baz=246,slow=13,SNR=12						
GERES			Sn	Sn	02 02 04.1	-2.0
comp=N,0.3nm,0.3s,baz=251,slow=23,SNR=5.2						
GERES			Lg		02 03 21.2	
baz=288,slow=35,SNR=3.0						
GERES	**GERESS Array B**	**11.18 55**	Pn	Pn	02 00 03.0	+2.2
GERES			Sn	Sn	02 02 04.1	-2.0
KHC	**Kasperske Hory**	**11.23 53**	*e*Pn	Pn	02 00 05.0	+3.5
comp=N,1.1nm,0.4s						
KHC			*e*Sn	Sn	02 02 10.2	+2.8
KHC	**Kasperske Hory**	**11.23 53**	*e*PN	Pn	02 00 06.9	+5.3
KHC			*e*SN	Sn	02 02 03.9	-3.5
KHC			*ex*	x	02 03 19.5	
KHC	**Kasperske Hory**	**11.23 53**	Pn	Pn	02 00 06.9	+5.3
KHC			Sn	Sn	02 02 03.9	-3.5
KHC			Sg		02 03 19.5	
PRU	**Pruhonice**	**12.19 51**	*e*SG	Sx	02 03 50.0	
PRU	**Pruhonice**	**12.19 51**	Sg	Sx	02 03 50.0	
ESK	**Eskdalemuir**	**12.33 352**	*e*Pn	Pn	02 00 17.7	+1.2
ESK	**Eskdalemuir**	**12.33 352**	*e*Pn	Pn	02 00 17.7	+1.2
EKA	**Eskdalemuir Ar**	**12.34 352**	Pn	Pn	02 00 15.8	-0.8
baz=158,slow=15,SNR=9.2						
EKA	**Eskdalemuir Ar**	**12.34 352**	Pn	Pn	02 00 15.9	-0.8
DPC	**Dobruska-Polom**	**13.37 52**	*e*SG	Sx	02 04 26.8	
DPC	**Dobruska-Polom**	**13.37 52**	Sg	Sx	02 04 26.8	
MORC	**Moravsky Berou**	**13.85 55**	*e*Pn	Pn	02 00 40.0	+2.6
IDI	**Anoyia**	**20.88 104**	P	P	02 02 05.0	+1.6
comp=N,1.6nm,0.8s,baz=283,slow=12,SNR=4.0						
IDI	**Anoyia**	**20.88 104**	P	P	02 02 05.0	+1.6
FINES	**FINESS Array B**	**24.05 31**	P	P	02 02 38.0	+1.7
comp=N,1.9nm,0.8s,mb3.6,baz=256,slow=7.7,SNR=4.7						
FINES	**FINESS Array B**	**24.05 31**	P	P	02 02 38.0	+1.8
BR131	**Keskin Array S**	**25.46 86**	*e*P	P	02 02 51.0	+1.7
comp=N,0.4nm,0.6s,mb3.1						
BR131	**Keskin Array S**	**25.46 86**	*e*P	P	02 02 51.0	+1.8
comp=N,0.4nm,0.6s,mb3.1						
BRTR	**Keskin Array B**	**25.46 86**	P	P	02 02 50.9	+1.6
comp=N,0.4nm,0.6s,mb3.1,baz=284,slow=9.4,SNR=4.2						
BRTR	**Keskin Array B**	**25.46 86**	P	P	02 02 50.9	+1.6
TOA0	**Torodi Ar. Sit**	**29.95 176**	*e*P	P	02 03 28.8	-0.8
TOA0	**Torodi Ar. Sit**	**29.95 176**	*e*P	P	02 03 28.8	-0.8
TORD	**Torodi Ar. Bea**	**29.95 176**	P	P	02 03 28.7	-0.9
comp=N,1.4nm,0.9s,mb3.7,baz=355,slow=9.5,SNR=11						
DBIC	**Dimbokro**	**36.58 188**	P	P	02 04 27.2	-0.2
comp=N,9.7nm,1.3s,mb4.5,baz=14,slow=8.3,SNR=2.5						
DBIC	**Dimbokro**	**36.58 188**	P	P	02 04 27.2	-0.2
KURK	**Kurchatov**	**51.92 52**	P	P	02 06 31.5	+1.6
comp=N,0.5nm,0.5s,mb3.7,baz=294,slow=9.2,SNR=6.1						
KURK	**Kurchatov**	**51.92 52**	P	P	02 06 31.5	+1.6
KURK	**Kurchatov**	**51.92 52**	P	P	02 06 31.5	+1.6
EKS2	**Erkin-Say**	**52.43 63**	*e*P	P	02 06 36.3	+2.4
comp=N,1.0nm,0.4s,mb4.1						
EKS2	**Erkin-Say**	**52.43 63**	*e*P	P	02 06 36.3	+2.5
comp=N,1.0nm,0.4s,mb4.1						
TKM2	**Tokmak 2**	**53.50 62**	*e*P	P	02 06 44.0	+2.3
comp=N,1.7nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**53.50 62**	*e*P	P	02 06 44.0	+2.3
comp=N,1.7nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**55.85 55**	P	P	02 07 01.1	+2.4
comp=N,0.2nm,0.6s,mb3.4,baz=301,slow=7.3,SNR=2.8						

OTT 18 01:59:10.3±0.5, 71°.96N×74°.80W, h18km, MN3.5/12, 136km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt., Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIFN	**Gifford Fjord,**	**2.98**	**232**	PN	Pn	01 59 56.5	-0.1
GIFN				SN	Sn	02 00 30.7	-1.2
GIFN				LG		02 00 37.4	
GIFN				Trac		02 00 45.8	
comp=Z,31nm,0.2s							
AP3N	**Apex site 3 Nu**	**4.07**	**237**	PN	Pn	02 00 11.5	0.0
AP3N				SN	Sn	02 00 57.2	-1.3
AP3N				LG		02 01 09.9	
AP3N				Trac		02 01 16.2	
comp=Z,24nm,0.3s							
LAIN	**Lailor River,**	**4.09**	**230**	PN	Pn	02 00 11.2	-0.6
LAIN				SN	Sn	02 00 57.4	-1.7
LAIN				LG		02 01 10.1	
LAIN				Trac		02 01 13.7	
comp=Z,32nm,0.3s							
SRLN	**Sarcpa Lake, N**	**4.48**	**224**	PN	Pn	02 00 16.2	-0.9
SRLN				SN	Sn	02 01 05.0	-3.6
SRLN				LG		02 01 24.1	
SRLN				Trac		02 01 33.7	
comp=Z,35nm,0.5s							
RES	**Resolute Bay**	**6.38**	**305**	PN	Pn	02 00 42.2	-1.0
RES				SN	Sn	02 01 51.5	-3.9
RES				LG		02 02 23.2	
STLN	**Stellar Camp,**	**7.84**	**243**	PN	Pn	02 01 01.8	-1.5
STLN				SN	Sn	02 02 24.7	-6.7
STLN				LG		02 03 07.5	
STLN				Trac		02 03 15.6	
comp=Z,100nm,1.0s							
WAGN	**Wager Bay**	**8.04**	**228**	SN	Sn	02 02 29.5	-6.8
WAGN				LG		02 03 12.0	
BULN	**Bullion Camp,**	**8.55**	**238**	SN	Sn	02 02 41.0	-7.7
BULN				LG		02 03 29.2	
BULN				Trac		02 03 43.1	
comp=Z,18nm,0.8s							
FRB	**Frobisher Bay**	**8.57**	**161**	PN	Pn	02 01 12.1	-1.2
FRB				SN	Sn	02 02 45.1	-4.2
FRB				LG		02 03 32.3	
FRB				Trac		02 03 53.2	
comp=Z,45nm,0.7s							
EUNU	**Eureka**	**8.58**	**346**	PN	Pn	02 01 14.6	+1.3
EUNU				SN	Sn	02 02 45.5	-4.0
NUNN	**Nunuq Camp, NU**	**8.98**	**229**	PN	Pn	02 01 17.9	-0.9
NUNN				SN	Sn	02 02 50.5	-8.8
NUNN				LG		02 03 40.9	
NUNN				Trac		02 03 50.9	
comp=Z,83nm,0.4s							
IVKQ	**Ivujivik**	**9.66**	**189**	PN	Pn	02 01 26.6	-1.5
IVKQ				SN	Sn	02 03 08.2	-7.7
IVKQ				Trac		02 04 06.0	
comp=Z,14nm,0.8s							
IVKQ				LG		02 04 13.1	
SEDN	**First Sedna Si**	**10.70**	**224**	PN	Pn	02 01 41.2	-1.1
SEDN				SN	Sn	02 03 31.1	-10
SEDN				LG		02 04 33.6	
SEDN				Trac		02 04 44.1	
comp=Z,41nm,0.6s							
JOSN	**Second Sedna S**	**10.85**	**224**	PN	Pn	02 01 43.1	-1.2
JOSN				SN	Sn	02 03 35.8	-9.2
JOSN				LG		02 04 39.7	
JOSN				Trac		02 04 48.9	
comp=Z,33nm,0.6s							
YBKN	**Baker Lake, Hu**	**10.93**	**236**	SN	Sn	02 03 38.7	-8.4
YBKN				LG		02 04 41.1	
YBKN				Trac		02 04 52.8	
comp=Z,7.6nm,0.6s							
AKVQ	**Akulivik**	**11.28**	**189**	PN	Pn	02 01 50.1	-0.2
AKVQ				SN	Sn	02 03 45.2	-10
AKVQ				LG		02 04 50.5	
AKVQ				Trac		02 04 55.2	
comp=Z,6.9nm,1.9s							
ARVN	**Arviat, NU**	**13.24**	**224**	SN	Sn	02 04 30.9	-13
ARVN				LG		02 05 55.2	
JERN	**Jeri Cho Mine,**	**14.22**	**264**	PN	Pn	02 02 26.3	-4.0
JERN				SN	Sn	02 04 51.6	-16
JERN				LG		02 06 20.9	
CTLN

*IDC **18** 02:19:50.1±3.9, 32°21'N×104°50'E, h0km, mb3.9/7, mb1 3.9/9, mb1mx3.6/27, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=91.9km s-min=28.4km az=10.0*
*BJI **18** 02:19:53.4, 32°00'N×104°68'E, h8km, ML3.6/9*
ISC 18 02:19:49.7±0.7, 32°17'N±0°03'×104°81'E±0°04, h1km±5km, n29, σ0°96/39, mb3.9/15, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.54**	**216**	Pg	**Pg**	**02 20 19.0**	**-0.2**
CD2				Sg	**Sg**	**02 20 39.1**	**-0.1**
XAN	**Xi'an**	**3.92**	**60**	Pn	**Pn**	**02 20 56.6**	**+5.6**
XAN				Pg	**Pg**	**02 21 05.8**	**+0.9**
XAN				Sn	**Sn**	**02 21 42.4**	**+4.8**
XAN				Sg	**Sg**	**02 21 54.5**	**-1.2**
XAN				smax			
	comp=N,160nm,0.9s						
XAN				smax			
	comp=E,94nm,0.7s						
LZH	**Lanzhou**	**3.99**	**349**	Pn	**Pn**	**02 20 57.9**	**+6.0**
LZH				Pg	**Pg**	**02 21 07.4**	**+1.2**
LZH				Sn	**Sn**	**02 21 42.6**	**+3.3**
LZH				Sg	**Sg**	**02 21 57.8**	**-0.2**
LZH				smax			
	comp=N,280nm,0.7s						
LZH				smax			
	comp=E,280nm,0.7s						
ENH	**Enshi**	**4.43**	**114**	*e*Pg	**Pg**	**02 21 14.7**	**+0.1**
ENH				*e*Sg	**Sg**	**02 22 11.4**	**-0.6**
GYA	**Guiyang**	**5.91**	**164**	Pg	**Pn**	**02 21 26.1**	**+7.8**
GYA				Sg	**Sn**	**02 22 27.1**	**+0.4**
GYA				smax			
	comp=N,60nm,0.6s						
GYA				smax			
	comp=E,60nm,0.7s						
KMI	**Kunming**	**7.25**	**195**	Pn	**Pn**	**02 21 36.3**	**-0.4**
KMI				Sn	**Sn**	**02 23 00.8**	**+1.2**
KMI				smax			
	comp=N,18nm,0.7s						
KMI				smax			
	comp=E,18nm,1.2s						
SONM	**Songino Array**	**15.70**	**4**	Pn	**Pn**	**02 23 33.2**	**+1.3**
	baz=169,slow=2.9,SNR=1.8						
KSRS	**Korea Array**	**19.68**	**68**	P	**Pn**	**02 24 23.6**	**+2.1**
	comp=E,0.3nm,0.3s,baz=253,slow=9.1,SNR=3.6						
MK31	**Makanchi Array**	**22.60**	**317**	*e*P	**P**	**02 24 52.1**	**+0.7**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**02 24 50.9**	**-0.5**
	comp=E,0.5nm,0.4s,mb3.3,baz=101,slow=12,SNR=9.2						
TKM2	**Tokmak 2**	**25.41**	**303**	*e*P	**P**	**02 25 17.8**	**-0.8**
	comp=E,2.0nm,0.6s,mb3.8						
UCH	**Uchtor**	**26.02**	**301**	*e*P	**P**	**02 25 22.8**	**-1.4**
	comp=E,1.7nm,0.9s,mb3.6						
ZAA0	**Zalesovo Array**	**26.05**	**333**	*e*P	**P**	**02 25 24.4**	**+0.3**
ZALV	**Zalesovo Beam**	**26.05**	**333**	P	**P**	**02 25 23.5**	**-0.7**
	comp=E,3.2nm,0.6s,mb4.1,baz=128,slow=9.7,SNR=12						
AML	**Almayashu**	**26.59**	**301**	*e*P	**P**	**02 25 30.0**	**+0.7**
	comp=E,1.2nm,0.6s,mb3.6						
KURK	**Kurchatov**	**26.78**	**321**	P	**P**	**02 25 28.1**	**-2.8**
	comp=E,0.5nm,0.6s,mb3.2,baz=128,slow=8.8,SNR=7.1						
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**02 27 04.6**	**+0.4**
	comp=E,0.8nm,0.4s,mb3.9						
AKTK	**Aktyubinsk**	**38.87**	**312**	P	**P**	**02 27 15.7**	**-0.6**
AKTO	**Aktyubinsk**	**38.87**	**312**	P	**P**	**02 27 15.7**	**-0.6**
	comp=E,0.8nm,0.5s,mb3.7,baz=98,slow=8.1,SNR=5.6						
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**02 29 32.3**	**-0.8**
	comp=E,3.0nm,1.0s,mb4.3,baz=74,slow=8.9,SNR=4.5						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**02 29 36.7**	**0.0**
	comp=E,0.8nm,0.4s,mb4.1,baz=82,slow=6.4,SNR=8.8						
COLD	**Coldfoot**	**66.26**	**24**	*e*P	**P**	**02 30 38.1**	**-0.8**
	comp=E,1.2nm,0.6s,mb4.1						
INK	**Inuvik**	**70.96**	**20**	*e*P	**P**	**02 31 06.6**	**-1.6**
	comp=E,2.3nm,1.1s,mb4.0						
LPG	**La Plagne**	**72.96**	**313**	⇑*i*P	**P**	**02 31 21.3**	**+0.6**
	comp=E,5.6nm,0.8s,mb4.3						
LPG	**La Plagne**	**72.96**	**313**	⇑*i*P	**P**	**02 31 21.3**	**+0.6**
	comp=E,2.8nm,0.8s,mb4.2						
LPL	**La Plagne**	**72.97**	**313**	⇑*i*P	**P**	**02 31 21.1**	**+0.4**
	comp=E,4.4nm,0.7s,mb4.2						
LPL	**La Plagne**	**72.97**	**313**	⇑*i*P	**P**	**02 31 21.1**	**+0.4**
	comp=E,2.2nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**80.50**	**17**	P	**P**	**02 32 03.4**	**+0.5**
	comp=E,0.5nm,0.6s,mb3.6,baz=328,slow=5.1,SNR=7.5						
YKA	**Yellowknife Ar**	**80.50**	**17**	P	**P**	**02 32 03.4**	**+0.5**

*ISCJB **18** 02:33:37.4±0.1, 45°489N±0°010×10°91E±0°01, h10km, Error ellipse: s-maj=1.6km s-min=1.2km az=43.8*
*SZGRF **18** 02:33:37.0, 45°27N×10°80E, h10km, mb3.0, Northern Italy*
*GEN **18** 02:33:38.5, 45°48N×11°04E, h6km, ML2.8*
*CSEM **18** 02:33:38.3±0.1, 45°44N×11°00E, h12km, ML3.0/22, Error ellipse: s-maj=1.8km s-min=1.5km az=135.0*
*ROM **18** 02:33:38.8±0.1, 45°43N×11°07E, h10km, Md3.1/36, Ml2.8/29, Error ellipse: s-maj=2.7km s-min=1.5km az=101.0*
*VIE **18** 02:33:38.5±0.5, 45°44N×11°00E, h11km±2km, mb2.7/12, ML3.3/13, Error ellipse: s-maj=2.9km s-min=1.7km az=14.0 70 km S of Trento*
*NEIC **18** 02:33:38.9, 45°44N×11°14E, h10km, ML2.8(FUR), ML3.0(LDG), ML3.2(SZGRF), After LDG.*
NEIC Felt [IV] at Verona. Also felt at Bussolengo, San Giovanni Lupatoto and Zevio.
*LDG **18** 02:33:38.9±0.1, 45°44N×11°14E, h10km, Ml3.0/28, Error ellipse: s-maj=1.9km s-min=1.4km az=9.0*
*PRU **18** 02:33:42.2, 45°55N×11°33E, h8km*
*STR **18** 02:33:47.3±0.7, 45°47N×10°12E, h10km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 18 02:33:38.4±0.1, 45°441N±0°009×10°95E±0°01, h10km, n317, σ1°18/480, 15C-15D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALD	**Monte Baldo**	**0.26**	**339**	⇓*i*Pg	**Pg**	**02 33 45.3**	**+1.6**
BALD	**Monte Baldo**	**0.26**	**339**	*i* Pg	**Pg**	**02 33 45.3**	**+1.6**
SALO	**Salr**	**0.35**	**301**	Pg	**Pg**	**02 33 47.0**	**+1.7**
	1μm,0.4s						
SALO	**Salr**	**0.35**	**301**	Pg	**Pg**	**02 33 47.0**	**+1.7**
	1μm,0.4s						
SBPO	**S.Benedetto Po**	**0.39**	**183**	Pg	**Pg**	**02 33 46.7**	**+0.6**
SBPO				Sg	**Sg**	**02 33 53.6**	**+2.4**
	4μm,0.2s						
SBPO	**S.Benedetto Po**	**0.39**	**183**	Pg	**Pg**	**02 33 46.7**	**+0.6**
MAGA	**Magasa**	**0.41**	**326**	⇓*i*Pg	**Pg**	**02 33 47.6**	**+1.2**
	1μm,0.4s						
MAGA	**Magasa**	**0.41**	**326**	⇓*i*Pg	**Pg**	**02 33 47.6**	**+1.2**
	1μm,0.4s						
NOVE	**Novellara**	**0.66**	**195**	Pg	**Pg**	**02 33 52.1**	**+0.9**
NOVE				Sg	**Sg**	**02 34 02.6**	**+2.7**
NOVE	**Novellara**	**0.66**	**195**	Pg	**Pg**	**02 33 52.1**	**+0.9**
NOVE				Sg	**Sg**	**02 34 02.6**	**+2.7**
	942nm,0.3s						
NOVE	**Novellara**	**0.66**	**195**	Pg	**Pg**	**02 33 52.1**	**+0.9**
MABI	**Malga Bissina**	**0.69**	**334**	Pg	**Pg**	**02 33 52.5**	**+0.8**
MABI	**Malga Bissina**	**0.69**	**334**	Pg	**Pg**	**02 33 52.5**	**+0.8**
	216nm,0.2s						
MABI	**Malga Bissina**	**0.69**	**334**	Pg	**Pg**	**02 33 52.5**	**+0.8**
	216nm,0.2s						
RAVA	**Ravarino**	**0.69**	**170**	Pg	**Pg**	**02 33 52.4**	**+0.6**
RAVA	**Ravarino**	**0.69**	**170**	Pg	**Pg**	**02 33 52.4**	**+0.6**
	987nm,0.2s						
RAVA	**Ravarino**	**0.69**	**170**	Pg	**Pg**	**02 33 52.4**	**+0.6**
	987nm,0.2s						
CGRP	**Cima Grappa**	**0.74**	**53**	⇑*i*Pg	**Pg**	**02 33 52.9**	**+0.2**
CGRP				*i* Sg	**Sg**	**02 34 03.6**	**+1.3**
CGRP	**Cima Grappa**	**0.74**	**53**	*i* Pg	**Pg**	**02 33 52.9**	**+0.2**
CGRP				*i* Sg	**Sg**	**02 34 03.6**	**+1.3**
ADRI	**Adria, Italy**	**0.85**	**118**	⇓*i*Pg	**Pg**	**02 33 55.0**	**+0.1**
ADRI				*i* Sg	**Sg**	**02 34 07.4**	**+1.4**
ADRI	**Adria, Italy**	**0.85**	**118**	*i* Pg	**Pg**	**02 33 55.0**	**+0.2**
ADRI				*i* Sg	**Sg**	**02 34 07.4**	**+1.5**
MTLO	**Montello**	**0.89**	**65**	⇑*i*Pg	**Pg**	**02 33 55.9**	**+0.4**
MTLO				*i* Sg	**Sg**	**02 34 08.7**	**+1.8**
MTLO	**Montello**	**0.89**	**65**	*i* Pg	**Pg**	**02 33 55.9**	**+0.5**
MTLO				*i* Sg	**Sg**	**02 34 08.7**	**+1.7**
FIU	**Minerbio Fiu**	**0.89**	**154**	Pg	**Pg**	**02 33 55.8**	**+0.3**
FIU	**Minerbio Fiu**	**0.89**	**154**	Pg	**Pg**	**02 33 55.8**	**+0.3**
	551nm,0.2s						
FIU	**Minerbio Fiu**	**0.89**	**154**	Pg	**Pg**	**02 33 55.8**	**+0.3**
	551nm,0.2s						
MDI	**Monti di Nese**	**0.93**	**292**	Pg	**Pg**	**02 33 57.0**	**+0.6**
	401nm,0.2s						
MDI	**Monti di Nese**	**0.93**	**292**	Pg	**Pg**	**02 33 57.0**	**+0.6**
	401nm,0.2s						
VARN	**Col Varnada, M**	**0.98**	**55**	*e*Pg	**Pg**	**02 33 56.7**	**-0.5**
VARN				*e*Sg	**Sg**	**02 34 10.4**	**+0.4**
VARN	**Col Varnada, M**	**0.98**	**55**	*e*Pg	**Pg**	**02 33 56.7**	**-0.5**
VARN				*e*Sg	**Sg**	**02 34 10.4**	**+0.5**
APPI	**Appiano**	**1.06**	**10**	Pg	**Pg**	**02 33 59.5**	**+0.8**
APPI				Sg	**Sg**	**02 34 14.1**	**+1.7**
APPI	**Appiano**	**1.06**	**10**	Pg	**Pg**	**02 33 59.5**	**+0.8**
APPI				Sg	**Sg**	**02 34 14.1**	**+1.7**
	859nm,0.2s						
APPI	**Appiano**	**1.06**	**10**	Pg	**Pg**	**02 33 59.5**	**+0.8**
APPI				Sg	**Sg**	**02 34 14.1**	**+1.7**
	859nm,0.2s						
FAU	**Forcella Aurin**	**1.07**	**42**	*e*Pg	**Pg**	**02 33 59.1**	**+0.2**
FAU	**Forcella Aurin**	**1.07**	**42**	*e*Pg	**Pg**	**02 33 59.1**	**+0.2**
ZCCA	**Zocca**	**1.09**	**179**	Pg	**Pg**	**02 34 00.4**	**+1.1**
ZCCA	**Zocca**	**1.09**	**179**	Pg	**Pg**	**02 34 00.4**	**+1.1**
	170nm,0.7s						
ZCCA	**Zocca**	**1.09**	**179**	Pg	**Pg**	**02 34 00.4**	**+1.1**
	170nm,0.7s						
ERBM	**Eremo**	**1.09**	**201**	Pg	**Pg**	**02 34 00.6**	**+1.2**
ERBM	**Eremo**	**1.09**	**201**	Pg	**Pg**	**02 34 00.6**	**+1.2**
	224nm,1.0s						
ERBM	**Eremo**	**1.09**	**201**	Pg	**Pg**	**02 34 00.6**	**+1.2**
	224nm,1.0s						
BRMO	**Bormio**	**1.11**	**339**	Pg	**Pg**	**02 34 00.3**	**+0.5**
BRMO				Sg	**Sg**	**02 34 16.3**	**+2.1**
BRMO	**Bormio**	**1.11**	**339**	Pg	**Pg**	**02 34 00.3**	**+0.5**
BRMO				Sg	**Sg**	**02 34 16.3**	**+2.1**
	181nm,0.2s						
BRMO	**Bormio**	**1.11**	**339**	Pg	**Pg**	**02 34 00.3**	**+0.5**
BRMO				Sg	**Sg**	**02 34 16.3**	**+2.1**
	181nm,0.2s						
GSCL	**Gusciola**	**1.12**	**194**	Pg	**Pg**	**02 34 00.7**	**+0.8**
GSCL	**Gusciola**	**1.12**	**194**	Pg	**Pg**	**02 34 00.7**	**+0.8**
	60nm,0.4s						
GSCL	**Gusciola**	**1.12**	**194**	Pg	**Pg**	**02 34 00.7**	**+0.8**
	60nm,0.4s						
GRAM	**Graiana**	**1.14**	**214**	P	**Pb**	**02 34 00.4**	**+0.2**
GRAM				S	**Sb**	**02 34 15.6**	**+0.6**
BERNI	**Berninapass**	**1.17**	**327**	Pg	**Pn**	**02 34 01.6**	**+0.8**
BERNI	**Berninapass**	**1.17**	**327**	Pg	**Pn**	**02 34 01.6**	**+0.8**
VALM	**Valbona**	**1.20**	**205**	P	**Pb**	**02 34 01.4**	**+0.2**
VALM				S	**Sb**	**02 34 17.1**	**+0.3**
BOB	**Bobbio (Coli)**	**1.26**	**238**	Pg	**Pn**	**02 34 03.1**	**+1.1**
BOB	**Bobbio (Coli)**	**1.26**	**238**	Pg	**Pn**	**02 34 03.1**	**+1.1**
	155nm,0.8s						
BOB	**Bobbio (Coli)**	**1.26**	**238**	Pg	**Pn**	**02 34 03.1**	**+1.1**
	155nm,0.8s						
CSO	**Casso**	**1.27**	**49**	⇑*e*Pg	**Pn**	**02 34 02.0**	**-0.2**
CSO	**Casso**	**1.27**	**49**	*e*Pg	**Pn**	**02 34 02.0**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**1.27**	**338**	⇓*i*Pg	**Pn**	**02 34 04.3**	**+2.1**
FUORN				Sg	**Sg**	**02 34 21.2**	**+1.8**
FUORN	**Ofenpass-Fuorn**	**1.27**	**338**	⇓*i*Pg	**Pn**	**02 34 04.3**	**+2.1**
FUORN				Sg	**Sg**	**02 34 21.2**	**+1.8**
FNVD	**Fontana Vidola**	**1.28**	**175**	Pg	**Pn**	**02 34 02.1**	**-0.2**
FNVD	**Fontana Vidola**	**1.28**	**175**	Pg	**Pn**	**02 34 02.1**	**-0.2**
	130nm,0.2s						
FNVD	**Fontana Vidola**	**1.28**	**175**	Pg	**Pn**	**02 34 02.1**	**-0.2**
	130nm,0.2s						
CODM	**Codolo**	**1.31**	**217**	P	**Pn**	**02 34 03.1**	**+0.4**
CODM				S	**Sb**	**02 34 20.0**	**+0.1**
SARO	**Sassorosso**	**1.32**	**198**	P	**Pn**	**02 34 02.8**	**0.0**
SARO				S	**Sb**	**02 34 19.4**	**-0.7**
VLC	**Villacollemand**	**1.34**	**198**	Pg	**Pn**	**02 34 03.8**	**+0.6**
VLC				*e*Pn	**Pn**	**02 34 04.6**	**+1.4**
VLC				*e*Sn	**Sn**	**02 34 23.6**	**+2.6**
VLC	**Villacollemand**	**1.34**	**198**	Pg	**Pn**	**02 34 03.8**	**+0.6**
	69nm,0.7s						
VLC	**Villacollemand**	**1.34**	**198**	Pg	**Pn**	**02 34 03.8**	**+0.6**
	69nm,0.7s						
VLC	**Villacollemand**	**1.34**	**198**	*e*Pn	**Pn**	**02 34 04.6**	**+1.4**
CIMO	**Cimolais**	**1.35**	**50**	*e*Pg	**Pn**	**02 34 03.3**	**-0.1**
CIMO				*e*Sg	**Sg**	**02 34 22.6**	**+0.6**
CIMO	**Cimolais**	**1.35**	**50**	*e*Pg	**Pn**	**02 34 03.3**	**0.0**
CIMO				*e*Sg	**Sg**	**02 34 22.5**	**+0.5**
MLNI	**Malnisio**	**1.36**	**58**	⇑*e*Pg	**Pn**	**02 34 03.0**	**-0.4**
MLNI				*e*Sg	**Sg**	**02 34 24.0**	**+1.9**
MLNI	**Malnisio**	**1.36**	**58**	*e*Pg	**Pn**	**02 34 03.0**	**-0.4**
MLNI				*e*Sg	**Sg**	**02 34 24.0**	**+1.9**
AFL	**Alpe Faloria**	**1.39**	**38**	⇓*i*Pg	**Pn**	**02 34 05.2**	**+1.5**
AFL	**Alpe Faloria**	**1.39**	**38**	*i* Pg	**Pn**	**02 34 05.2**	**+1.4**
BDI	**Bagni Di Lucca**	**1.40**	**191**	Pg	**Pn**	**02 34 04.2**	**+0.2**
BDI	**Bagni Di Lucca**	**1.40**	**191**	Pg	**Pn**	**02 34 04.2**	**+0.2**
	93nm,0.3s						
BDI	**Bagni Di Lucca**	**1.40**	**191**	Pg	**Pn**	**02 34 04.2**	**+0.2**
	93nm,0.3s						
SEI	**Scarperia**	**1.42**	**168**	Pg	**Pn**	**02 34 05.5**	**+1.3**
SEI	**Scarperia**	**1.42**	**168**	Pg	**Pn**	**02 34 05.5**	**+1.3**
	174nm,0.4s						
SEI	**Scarperia**	**1.42**	**168**	Pg	**Pn**	**02 34 05.5**	**+1.3**
	174nm,0.4s						
SC2M	**Scurtabo**	**1.45**	**225**	Pg	**Pn**	**02 34 05.7**	**+1.1**
SC2M	**Scurtabo**	**1.45**	**225**	Pg	**Pn**	**02 34 05.7**	**+1.1**
	144nm,0.4s						
SC2M	**Scurtabo**	**1.45**	**225**	P	**Pn**	**02 34 05.0**	**+0.4**
SC2M	**Scurtabo**	**1.45**	**225**	Pg	**Pn**	**02 34 05.7**	**+1.1**
	144nm,0.4s						
SC2M				S	**Sn**	**02 34 22.8**	**-0.8**
DAVOX	**Davos/Dischmat**	**1.53**	**331**	Pg	**Pn**	**02 34 08.3**	**+2.5**
DAVOX	**Davos/Dischmat**	**1.53**	**331**	Pg	**Pn**	**02 34 08.3**	**+2.5**
MAIM	**Mastiano**	**1.56**	**192**	Pg	**Pn**	**02 34 06.3**	**+0.1**
MAIM	**Mastiano**	**1.56**	**192**	Pg	**Pn**	**02 34 06.3**	**+0.1**
	81nm,0.6s						
MAIM	**Mastiano**	**1.56**	**192**	P	**Pn**	**02 34 06.4**	**+0.2**
MAIM				S	**Sn**	**02 34 25.3**	**-1.1**
TLI	**Talmassons**	**1.58**	**72**	⇑*i*Pg	**Pn**	**02 34 05.8**	**-0.7**
TLI				*i* Sg	**Sg**	**02 34 28.1**	**-1.1**
TLI	**Talmassons**	**1.58**	**72**	*i* Pg	**Pn**	**02 34 05.8**	**-0.7**
TLI				*i* Sg	**Sg**	**02 34 28.1**	**-1.1**
FETA	**Feichten**	**1.59**	**354**	*e*Pg	**Pn**	**02 34 09.5**	**+2.9**
	SNR=33						
FETA				⇓*i*Sg	**Sg**	**02 34 31.1**	**+1.6**
	14nm,0.1s						
FETA	**Feichten**	**1.59**	**354**	Pg	**Pn**	**02 34 09.5**	**+2.9**
	SNR=33						
FETA				Sg	**Sg**	**02 34 31.1**	**+1.6**
	14nm,0.1s						
CSMI	**Casera Mimoias**	**1.60**	**47**	*e*Pg	**Pn**	**02 34 07.2**	**+0.5**
CSMI				Sg	**Sg**	**02 34 30.7**	**+0.9**
CSMI	**Casera Mimoias**	**1.60**	**47**	*e*Pg	**Pn**	**02 34 07.2**	**+0.5**
CSMI				Sg	**Sg**	**02 34 30.7**	**+0.9**
MPRI	**Monte Prat**	**1.63**	**60**	⇓*i*Pg	**Pn**	**02 34 07.0**	**-0.1**
MPRI	**Monte Prat**	**1.63**	**60**	*i* Pg	**Pn**	**02 34 07.0**	**-0.2**
CRMI	**Carmignano**	**1.65**	**180**	Pg	**Pn**	**02 34 07.2**	**-0.2**
	34nm,0.5s						
SFI	**Santa Sofia**	**1.66**	**157**	Pg	**Pn**	**02 34 07.2**	**-0.4**
SFI	**Santa Sofia**	**1.66**	**157**	Pg	**Pn**	**02 34 07.2**	**-0.4**
	42nm,0.5s						
ABTA	**Abfaltersbach**	**1.70**	**39**	⇓*e*Pg	**Pn**	**02 34 10.6**	**+2.5**
	SNR=16						
ABTA				⇓*i*Sg	**Sg**	**02 34 34.9**	**+1.9**
	33nm,0.2s						
ABTA	**Abfaltersbach**	**1.70**	**39**	Pg	**Pn**	**02 34 10.6**	**+2.5**
	SNR=16						
ABTA				Sg	**Sg**	**02 34 34.9**	**+1.9**
	33nm,0.2s						
BUA	**Buia**	**1.71**	**62**	*e*Pg	**Pn**	**02 34 07.9**	**-0.3**
BUA	**Buia**	**1.71**	**62**	*e*Pg	**Pn**	**02 34 07.9**	**-0.3**
FVI	**Forni Avoltri**	**1.72**	**47**	Pg	**Pn**	**02 34 09.1**	**+0.7**
FVI	**Forni Avoltri**	**1.72**	**47**	Pg	**Pn**	**02 34 09.1**	**+0.7**
	101nm,0.5s						
FVI	**Forni Avoltri**	**1.72**	**47**	Pg	**Pn**	**02 34 09.1**	**+0.7**
	101nm,0.5s						
FUSE	**Fusea**	**1.73**	**55**	*e*Pn	**Pn**	**02 34 08.4**	**-0.1**
FUSE				*e*Sn	**Sn**	**02 34 35.1**	**+4.5**
FUSE	**Fusea**	**1.73**	**55**	*e*Pn	**Pn**	**02 34 08.4**	**-0.1**
ASQU	**Asqua**	**1.75**	**160**	Pg	**Pg**	**02 34 09.3**	**-2.6**
	41nm,0.4s						
ASQU	**Asqua**	**1.75**	**160**	Pg	**Pg**	**02 34 09.3**	**-2.6**
	41nm,0.4s						
BAD	**Bernadia**	**1.79**	**63**	⇑*i*Pn	**Pn**	**02 34 08.6**	**-0.7**
BAD				*i* Sn	**Sn**	**02 34 35.7**	**+3.7**
BAD	**Bernadia**	**1.79**	**63**	*i* Pn	**Pn**	**02 34 08.6**	**-0.7**
BAD				*i* Sn	**Sn**	**02 34 35.7**	**+3.7**
GMNA	**Gemona**	**1.80**	**62**	Pg	**Pg**	**02 34 08.5**	**-4.4**
GMNA	**Gemona**	**1.80**	**62**	Pg	**Pg**	**02 34 08.5**	**-4.4**
	148nm,0.4s						
VINO	**Villanova**	**1.82**	**63**	⇑*i*Pn	**Pn**	**02 34 09.0**	**-0.7**
VINO				*i* Sn	**Sn**	**02 34 37.4**	**+4.5**
VINO	**Villanova**	**1.82**	**63**	*i* Pn	**Pn**	**02 34 09.0**	**-0.7**
COLI	**Coloredo**	**1.83**	**67**	⇑*i*Pn	**Pn**	**02 34 09.4**	**-0.6**
COLI	**Coloredo**	**1.83**	**67**	*i* Pn	**Pn**	**02 34 09.4**	**-0.5**
RSM	**Repubblica di**	**1.85**	**144**	Pg	**Pg**	**02 34 10.0**	**-3.9**
RSM	**Repubblica di**	**1.85**	**144**	Pg	**Pg**	**02 34 10.0**	**-3.9**
	120nm,1.2s						
WTTA	**Wattenberg**	**1.88**	**14**	⇓*e*Pg	**Pg**	**02 34 14.6**	**+0.1**
	SNR=49						
WTTA	**Wattenberg**	**1.88**	**14**	Pg	**Pg**	**02 34 14.6**	**+0.1**
	SNR=49						
PLRO	**Paularo**	**1.89**	**53**	*e*Pn	**Pn**	**02 34 14.0**	**+3.3**
PLRO				*e*Sn	**Sn**	**02 34 39.8**	**+5.2**
PLRO	**Paularo**	**1.89**	**53**	*e*Pn	**Pn**	**02 34 14.0**	**+3.3**
MOTA	**Moosalm**	**1.91**	**3**	⇑*e*Pg	**Pg**	**02 34 13.4**	**-1.5**
	SNR=39						
MOTA				⇑*i*Sn	**Sn**	**02 34 35.9**	**+0.9**
MOTA				⇑*i*Sg	**Sg**	**02 34 41.0**	**+1.3**
	36nm,0.2s						
MOTA	**Moosalm**	**1.91**	**3**	Pg	**Pg**	**02 34 13.4**	**-1.6**
	SNR=39						
MOTA				Sn	**Sn**	**02 34 35.9**	**+0.9**
MOTA				Sg	**Sg**	**02 34 41.0**	**+1.3**
	36nm,0.2s						
SABO	**M.te Sabotino**	**1.93**	**73**	⇑*e*Pn	**Pn**	**02 34 10.9**	**-0.4**
SABO				*e*Sn	**Sn**	**02 34 40.5**	**+4.9**
SABO	**M.te Sabotino**	**1.93**	**73**	*e*Pn	**Pn**	**02 34 10.9**	**-0.4**
PTCC	**Patocco-Chiusa**	**1.93**	**59**	Pg	**Pn**	**02 34 10.9**	**-0.4**
PTCC	**Patocco-Chiusa**	**1.93**	**59**	Pg	**Pn**	**02 34 10.9**	**-0.4**
	47nm,0.2s						
ROTM	**Rocchetta Tana**	**1.93**	**253**	P	**Pn**	**02 34 12.3**	**+1.0**
ROTM				S	**Sn**	**02 34 35.1**	**-0.5**
CRE	**Caprese Michel**	**1.96**	**158**	Pg	**Pn**	**02 34 12.0**	**+0.4**
CRE	**Caprese Michel**	**1.96**	**158**	Pg	**Pn**	**02 34 12.0**	**+0.4**
	17nm,0.3s						
CSNT	**Castellina Chi**	**1.98**	**173**	Pg	**Pn**	**02 34 11.3**	**-0.7**
CSNT	**Castellina Chi**	**1.98**	**173**	Pg	**Pn**	**02 34 11.3**	**-0.7**
	27nm,0.5s						
DAVA	**Damuels**	**1.99**	**338**	⇑*e*Pg	**Pg**	**02 34 16.6**	**+0.1**
	SNR=12						
DAVA				⇓*i*Sg	**Sg**	**02 34 44.8**	**+2.5**
	20nm,0.2s						
DAVA	**Damuels**	**1.99**	**338**	Pg	**Pg**	**02 34 16.6**	**+0.1**
	SNR=12						
DAVA				Sg	**Sg**	**02 34 44.8**	**+2.5**
	20nm,0.2s						
TRI	**Trieste**	**1.99**	**81**	⇓*i*Pn	**Pn**	**02 34 11.0**	**-1.1**
TRI	**Trieste**	**1.99**	**81**	*e*Pn	**Pn**	**02 34 10.1**	**-2.0**
TRI				Pg	**Pn**	**02 34 11.0**	**-1.1**
TRI				*e*Pg	**Pg**	**02 34 14.6**	**-2.0**
TRI				*e*Sn	**Sn**	**02 34 34.3**	**-2.8**
TRI				*e*Sg	**Sg**	**02 34 40.3**	**-2.1**
TRI	**Trieste**	**1.99**	**81**	Pg	**Pn**	**02 34 11.0**	**-1.1**
	68nm,0.4s						
TRI	**Trieste**	**1.99**	**81**	*e*Pn	**Pn**	**02 34 10.1**	**-2.0**
TRI				*e*Sg	**Sg**	**02 34 40.3**	**-2.1**
PARC	**Parchiule**	**2.01**	**152**	Pg	**Pn**	**02 34 12.7**	**+0.3**
	29nm,0.7s						
DRE	**Drenchia**	**2.02**	**68**	⇑*i*Pn	**Pn**	**02 34 11.8**	**-0.7**
DRE				Sn	**Sn**	**02 34 43.2**	**+5.5**
DRE	**Drenchia**	**2.02**	**68**	*i* Pn	**Pn**	**02 34 11.8**	**-0.7**
LSR	**Lussari**	**2.07**	**59**	*e*Pn	**Pn**	**02 34 13.7**	**+0.5**
LSR	**Lussari**	**2.07**	**59**	*e*Pn	**Pn**	**02 34 13.7**	**+0.5**
ORO	**Oropa**	**2.10**	**276**	Pg	**Pn**	**02 34 14.8**	**+1.3**
ORO	**Oropa**	**2.10**	**276**	Pg	**Pn**	**02 34 14.8**	**+1.3**
	82nm,0.2s						
CADS	**Cadrg**	**2.10**	**67**	*i* Pn	**

FELD	**Feldberg im Sc**	**3.17 321**	Pn		**Pn**	**02 34 29.8**	**+1.5**
FELD			Sg		**Sg**	**02 35 20.0**	**-0.2**
FELD	**Feldberg im Sc**	**3.17 321**	Pn		**Pn**	**02 34 29.8**	**+1.5**
FELD			Sg		**Sg**	**02 35 20.0**	**-0.2**
PGF	**Pioggiola**	**3.22 207**	*e*Pn		**Pn**	**02 34 28.5**	**-0.4**
PGF			*e*Sn		**Sn**	**02 35 05.8**	**-1.5**
8.8nm,0.3s							
PGF	**Pioggiola**	**3.22 207**	*e*Pn		**Pn**	**02 34 28.5**	**-0.4**
PGF			*e*Sn		**Sn**	**02 35 05.8**	**-1.5**
4.4nm,0.3s							
MOA	**Molln**	**3.32 42**	*i* Pn		**Pn**	**02 34 31.3**	**+1.0**
SNR=12							
MOA	**Molln**	**3.32 42**	Pn		**Pn**	**02 34 31.3**	**+1.0**
SNR=12							
BFO	**Black Forest**	**3.40 329**	*e*Pn		**Pn**	**02 34 32.0**	**+0.5**
BFO			*e*Pg		**Pg**	**02 34 45.5**	**+1.9**
BFO			*e*Sg		**Sg**	**02 35 30.0**	**+2.3**
BFO	**Black Forest**	**3.40 329**	*e*Pn		**Pn**	**02 34 32.0**	**+0.5**
LOMF	**Lomont**	**3.44 305**	Pg		**Pg**	**02 34 43.0**	**-1.2**
LOMF	**Lomont**	**3.44 305**	Pg		**Pg**	**02 34 43.0**	**-1.2**
STU	**Stuttgart**	**3.54 341**	*e*Pg		**Pg**	**02 34 47.4**	**+1.1**
STU			*e*Sg		**Sg**	**02 35 33.5**	**+1.4**
STU	**Stuttgart**	**3.54 341**	*e*Pg		**Pg**	**02 34 47.4**	**+1.2**
STU			*e*Sg		**Sg**	**02 35 33.5**	**+1.4**
CABF	**La Chapelle**	**3.59 291**	*e*Pg		**Pg**	**02 34 46.6**	**-0.5**
CABF			*e*Sn		**Sn**	**02 35 16.0**	**-0.4**
5.3nm,0.4s							
CABF	**La Chapelle**	**3.59 291**	*e*Pn		**Pn**	**02 34 34.8**	**+0.8**
CABF			*e*Pg		**Pg**	**02 34 46.6**	**-0.5**
CABF			*e*Sn		**Sn**	**02 35 16.0**	**-0.4**
CABF	**La Chapelle**	**3.59 291**	*e*Pn		**Pn**	**02 34 34.8**	**+0.8**
CABF	**La Chapelle**	**3.59 291**	*e*Pg		**Pg**	**02 34 46.6**	**-0.5**
CABF			*e*Sn		**Sn**	**02 35 16.0**	**-0.4**
2.7nm,0.4s							
FRF	**La Foret Royal**	**3.61 240**	*e*Pn		**Pn**	**02 34 34.4**	**+0.1**
FRF			*e*Sn		**Sn**	**02 35 16.3**	**-0.7**
9.7nm,0.4s							
FRF	**La Foret Royal**	**3.61 240**	*e*Pn		**Pn**	**02 34 34.4**	**+0.1**
FRF			*e*Sn		**Sn**	**02 35 16.3**	**-0.7**
4.8nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.62 264**	*e*Pn		**Pn**	**02 34 35.8**	**+1.3**
ORIF			*e*Sn		**Sn**	**02 35 17.1**	**-0.3**
15nm,0.6s							
ORIF	**Oris-en-Rattie**	**3.62 264**	*e*Pn		**Pn**	**02 34 35.8**	**+1.3**
ORIF			*e*Sn		**Sn**	**02 35 17.1**	**-0.3**
7.4nm,0.6s							
HINF	**Hinteralfeld**	**3.69 312**	*e*Pn		**Pn**	**02 34 35.8**	**+0.3**
HINF			*e*Sn		**Sn**	**02 35 17.9**	**-1.1**
6.8nm,0.2s							
HINF	**Hinteralfeld**	**3.69 312**	*e*Pn		**Pn**	**02 34 35.8**	**+0.3**
HINF			*e*Sn		**Sn**	**02 35 17.9**	**-1.1**
3.4nm,0.2s							
ECH	**Echery**	**3.81 318**	Pn		**Pn**	**02 34 38.2**	**+1.2**
ECH	**Echery**	**3.81 318**	Pn		**Pn**	**02 34 38.2**	**+1.2**
LMR	**La Mourre**	**3.82 238**	*e*Pn		**Pn**	**02 34 37.2**	**0.0**
LMR			*e*Sn		**Sn**	**02 35 20.8**	**-1.3**
7.0nm,0.3s							
LMR	**La Mourre**	**3.82 238**	*e*Pn		**Pn**	**02 34 37.2**	**0.0**
LMR			*e*Sn		**Sn**	**02 35 20.8**	**-1.3**
3.5nm,0.3s							
GEC2	**GERESS Array S**	**3.89 28**	*e*Pn		**Pn**	**02 34 37.8**	**-0.3**
GEC2			*e*Sn		**Sn**	**02 35 23.6**	**-0.2**
GEC2	**GERESS Array S**	**3.89 28**	*e*Pn		**Pn**	**02 34 37.5**	**-0.7**
GEC2			*e*Pg		**Pg**	**02 34 51.1**	**-1.8**
GEC2			*e*Sg		**Sg**	**02 35 40.4**	**-2.8**
GEC2	**GERESS Array S**	**3.89 28**	*e*Pn		**Pn**	**02 34 37.5**	**-0.6**
GEC2	**GERESS Array S**	**3.89 28**	*e*Pg		**Pg**	**02 34 51.1**	**-1.7**
CDF	**Champ du Feu**	**3.90 321**	*e*Pg		**Pg**	**02 34 52.8**	**-0.2**
CDF			*e*Sn		**Sn**	**02 35 22.6**	**-1.4**
5.7nm,0.3s							
CDF	**Champ du Feu**	**3.90 321**	*e*Pn		**Pn**	**02 34 38.8**	**+0.5**
CDF			*e*Pg		**Pg**	**02 34 52.8**	**-0.2**
CDF			*e*Sn		**Sn**	**02 35 22.6**	**-1.4**
CDF	**Champ du Feu**	**3.90 321**	*e*Pn		**Pn**	**02 34 38.8**	**+0.5**
CDF	**Champ du Feu**	**3.90 321**	*e*Pg		**Pg**	**02 34 52.8**	**-0.2**
CDF			*e*Sn		**Sn**	**02 35 22.6**	**-1.4**
2.8nm,0.3s							
WET	**Wettzell**	**3.93 19**	*e*Pn		**Pn**	**02 34 39.0**	**+0.3**
WET			*e*Sn		**Sn**	**02 35 24.7**	**-0.1**
WET	**Wettzell**	**3.93 19**	*e*Pn		**Pn**	**02 34 39.0**	**+0.3**
WET			*e*Sn		**Sn**	**02 35 24.7**	**-0.1**
HAU	**Haudompre**	**4.08 311**	*e*Pn		**Pn**	**02 34 41.3**	**+0.6**
HAU			*e*Sn		**Sn**	**02 35 27.4**	**-1.0**
16nm,0.4s							
HAU	**Haudompre**	**4.08 311**	*e*Pn		**Pn**	**02 34 41.3**	**+0.6**
HAU			*e*Sn		**Sn**	**02 35 27.4**	**-1.0**
8.1nm,0.4s							
KHC	**Kasperske Hory**	**4.10 25**	*e*Pn		**Pn**	**02 34 40.6**	**-0.4**
KHC			*e*Pg		**Pg**	**02 34 56.8**	**-0.1**
KHC			*e*Sg		**Sg**	**02 35 47.8**	**-2.2**
KHC	**Kasperske Hory**	**4.10 25**	*e*PN		**Pn**	**02 34 40.9**	**-0.2**
KHC			*e*PG		**Pg**	**02 34 58.0**	**+1.1**
KHC			*e*SN		**Sn**	**02 35 27.3**	**-1.8**
KHC			*e*SG		**Sg**	**02 35 45.2**	**-4.8**
comp=Z,19nm,0.8s							
KHC	**Kasperske Hory**	**4.10 25**	Pn		**Pn**	**02 34 40.9**	**-0.2**
KHC	**Kasperske Hory**	**4.10 25**	*e*Pg		**Pg**	**02 34 56.8**	**-0.1**
KHC			Sn		**Sn**	**02 35 27.3**	**-1.8**
KHC			Sg		**Sg**	**02 35 45.2**	**-4.8**
comp=Z,19nm,0.8s							
SMRF	**Simiane la Rot**	**4.10 251**	*e*Pn		**Pn**	**02 34 41.3**	**+0.2**
SMRF			*e*Sn		**Sn**	**02 35 28.5**	**-0.7**
comp=Z,4.5nm,0.5s							
SMRF	**Simiane la Rot**	**4.10 251**	*e*Pn		**Pn**	**02 34 41.3**	**+0.2**
SMRF			*e*Sn		**Sn**	**02 35 28.5**	**-0.7**
comp=Z,2.2nm,0.5s							
CONA	**Conrad Observa**	**4.20 52**	*i* Pn		**Pn**	**02 34 43.2**	**+0.8**
SNR=8.2							
CONA			⇑*i*Sg		**Sg**	**02 35 56.1**	**+3.1**
comp=Z,2.2nm,0.3s							
CONA	**Conrad Observa**	**4.20 52**	Pn		**Pn**	**02 34 43.2**	**+0.8**
SNR=8.2							
CONA			Sg		**Sg**	**02 35 56.1**	**+3.0**
comp=Z,2.2nm,0.3s							
GRA1	**Grafenberg Arr**	**4.26 2**	*e*Pn		**Pn**	**02 34 43.3**	**+0.1**
GRA1			*e*Pg		**Pg**	**02 34 59.4**	**-0.5**
GRA1			*e*Sn		**Sn**	**02 35 31.1**	**-1.8**
GRA1	**Grafenberg Arr**	**4.26 2**	*e*Pn		**Pn**	**02 34 43.3**	**+0.1**
GRF	**Grafenberg Arr**	**4.26 2**	*e*Pn		**Pn**	**02 34 43.3**	**+0.1**
GRF			*e*Pg		**Pg**	**02 34 59.4**	**-0.5**
GRF			*e*Sn		**Sn**	**02 35 31.1**	**-1.8**
GRF	**Grafenberg Arr**	**4.26 2**	*e*Pn		**Pn**	**02 34 43.3**	**+0.1**
THEF	**They Montfort**	**4.40 311**	Pn		**Pn**	**02 34 46.4**	**+1.2**
THEF	**They Montfort**	**4.40 311**	Pn		**Pn**	**02 34 46.4**	**+1.2**
ROTZ	**Rotzenmuhle**	**4.41 11**	*e*Pn		**Pn**	**02 34 45.2**	**-0.1**
ROTZ			*e*Sn		**Sn**	**02 35 35.0**	**-1.7**
VIVF	**Saint-Julien-l**	**4.48 265**	*e*Pn		**Pn**	**02 34 46.9**	**+0.6**
VIVF			*e*Sn		**Sn**	**02 35 37.1**	**-1.4**
comp=Z,1.9nm,0.2s							
VIVF	**Saint-Julien-l**	**4.48 265**	*e*Pn		**Pn**	**02 34 46.9**	**+0.6**
VIVF			*e*Sn		**Sn**	**02 35 37.1**	**-1.4**
comp=Z,0.9nm,0.2s							
NKC	**Novy Kostel**	**4.90 11**	*e*SN		**Sn**	**02 35 46.5**	**-2.2**
NKC			*e*SG		**Sg**	**02 36 12.5**	**-3.1**
comp=Z,6.9nm,0.3s							
NKC	**Novy Kostel**	**4.90 11**	Sn		**Sn**	**02 35 46.5**	**-2.2**
NKC			Sg		**Sg**	**02 36 12.5**	**-3.1**
comp=Z,6.9nm,0.3s							
TREC	**Trest**	**4.93 37**	*e*PN		**Pn**	**02 34 52.9**	**+0.4**
TREC	**Trest**	**4.93 37**	Pn		**Pn**	**02 34 52.9**	**+0.4**
WERN	**Wernitzgruen**	**4.94 11**	*e*Pn		**Pn**	**02 34 52.4**	**-0.2**
WERN			*e*Sn		**Sn**	**02 35 47.7**	**-2.1**
GUNZ	**Gunzen**	**5.01 10**	*e*Pn		**Pn**	**02 34 53.2**	**-0.4**
GUNZ			*e*Sn		**Sn**	**02 35 49.4**	**-2.1**
MEZF	**Maizieres J'vi**	**5.07 309**	*e*Pn		**Pn**	**02 34 54.4**	**0.0**
MEZF			*e*Sn		**Sn**	**02 35 51.2**	**-1.7**
MEZF			*e*Sg		**Sg**	**02 36 19.9**	**-1.1**
comp=Z,13nm,0.8s							
MEZF	**Maizieres J'vi**	**5.07 309**	*e*Pn		**Pn**	**02 34 54.4**	**0.0**
MEZF			*e*Sn		**Sn**	**02 35 51.2**	**-1.7**
MEZF			*e*Sg		**Sg**	**02 36 19.9**	**-1.1**
comp=Z,6.4nm,0.8s							
TANN	**Tannenbergstha**	**5.08 11**	*e*Pn		**Pn**	**02 34 54.4**	**-0.1**
WERD	**Werda**	**5.09 10**	*e*Pn		**Pn**	**02 34 54.8**	**+0.1**
SMF	**Signal de Mont**	**5.10 286**	*e*Pn		**Pn**	**02 34 54.9**	**+0.1**
SMF			*e*Sn		**Sn**	**02 35 50.9**	**-2.7**
comp=Z,4.0nm,0.2s							
SMF	**Signal de Mont**	**5.10 286**	*e*Pn		**Pn**	**02 34 54.9**	**+0.1**
SMF			*e*Sn		**Sn**	**02 35 50.9**	**-2.7**
comp=Z,2.0nm,0.2s							
PLN	**Plauen**	**5.11 9**	*e*Pn		**Pn**	**02 34 54.5**	**-0.5**
PRU	**Pruhonice**	**5.15 27**	*e*SN		**Sn**	**02 35 52.2**	**-2.8**
PRU			*e*SG		**Sg**	**02 36 19.8**	**-4.0**
comp=Z,3.8nm,0.5s							
PRU	**Pruhonice**	**5.15 27**	Sn		**Sn**	**02 35 52.2**	**-2.8**
PRU			Sg		**Sg**	**02 36 19.8**	**-4.0**
comp=Z,3.8nm,0.5s							
MOX	**Moxa**	**5.23 5**	*e*Pn		**Pn**	**02 34 56.8**	**+0.3**
MOX			*e*Sn		**Sn**	**02 35 54.0**	**-2.8**
LOR	**Lormes**	**5.24 293**	*e*Pn		**Pn**	**02 34 56.6**	**-0.1**
LOR			*e*Sn		**Sn**	**02 35 55.3**	**-1.8**
comp=Z,6.8nm,0.3s							
LOR	**Lormes**	**5.24 293**	*e*Pn		**Pn**	**02 34 56.6**	**-0.1**
LOR			*e*Sn		**Sn**	**02 35 55.3**	**-1.8**
comp=Z,3.4nm,0.3s							
SSF	**Saint Saulge**	**5.41 290**	*e*Pn		**Pn**	**02 34 59.0**	**-0.1**
SSF			*e*Sn		**Sn**	**02 35 59.5**	**-1.9**
comp=Z,1.9nm,0.2s							
SSF	**Saint Saulge**	**5.41 290**	*e*Pn		**Pn**	**02 34 59.0**	**-0.1**
SSF			*e*Sn		**Sn**	**02 35 59.5**	**-1.9**
comp=Z,0.9nm,0.2s							
AVF	**Avril sur Loir**	**5.45 287**	*e*Pn		**Pn**	**02 34 59.7**	**0.0**
AVF			*e*Sn		**Sn**	**02 35 59.0**	**-3.4**
comp=Z,1.5nm,0.2s							
AVF	**Avril sur Loir**	**5.45 287**	*e*Pn		**Pn**	**02 34 59.7**	**0.0**
STON	**Ston**	**5.49 116**	*e*Pn		**Pn**	**02 34 59.6**	**-0.6**
STON			Sn		**Sn**	**02 35 57.7**	**-5.6**
STON	**Ston**	**5.49 116**	*e*Pn		**Pn**	**02 34 59.5**	**-0.7**
BGF	**Bois d'Agland**	**5.76 284**	*e*Pn		**Pn**	**02 35 04.0**	**+0.2**
BGF			*e*Sn		**Sn**	**02 36 07.7**	**-2.2**
comp=Z,5.3nm,0.4s							
BGF	**Bois d'Agland**	**5.76 284**	*e*Pn		**Pn**	**02 35 04.0**	**+0.2**
BRG	**Berggiesshubel**	**5.79 19**	SG		**Sg**	**02 36 40.0**	**-4.2**
comp=Z,5.7nm,0.7s							
KOLL	**Kolacno**	**5.98 56**	*e*PN		**Pn**	**02 35 05.2**	**-1.7**
CLL	**Collm**	**6.03 12**	*i* Pn		**Pn**	**02 35 07.3**	**-0.2**
CLL			*e*Pg		**Pg**	**02 35 37.0**	**+3.2**
CLL			*e*Sg		**Sg**	**02 36 50.0**	**-1.8**
CLL	**Collm**	**6.03 12**	*i* Pn		**Pn**	**02 35 07.3**	**-0.2**
CLL			*e*			02 35 15.0	
CLL			*e*Pg		**Pg**	**02 35 37.0**	**+3.2**
CLL			*e*Sg		**Sg**	**02 36 50.0**	**-1.8**
comp=Z,7.0nm,1.0s							
CLL	**Collm**	**6.03 12**	*i* Pn		**Pn**	**02 35 07.3**	**-0.2**
HYF	**Humbligny**	**6.04 291**	*e*Pn		**Pn**	**02 35 04.9**	**-2.8**
HYF			*e*Sn		**Sn**	**02 36 14.4**	**-2.4**
DPC	**Dobruska-Polom**	**6.09 34**	*e*SG		**Sg**	**02 36 47.9**	**-6.0**
comp=Z,3.8nm,0.8s							
TCF	**Toulx Ste Croi**	**6.17 281**	*e*Pn		**Pn**	**02 35 09.5**	**+0.1**
TCF			*e*Sn		**Sn**	**02 36 17.5**	**-2.4**
comp=Z,4.3nm,0.5s							
TCF	**Toulx Ste Croi**	**6.17 281**	*e*Pn		**Pn**	**02 35 09.5**	**+0.1**
VYHS	**Vyhne**	**6.20 58**	*e*PN		**Pn**	**02 35 09.0**	**-0.9**
VYHS			*e*SN		**Sn**	**02 36 06.4**	**-14**
VYHS	**Vyhne**	**6.20 58**	*e*Pn		**Pn**	**02 35 09.0**	**-0.9**
CAF	**Calviac**	**6.30 268**	*e*Pn		**Pn**	**02 35 11.7**	**+0.4**
CAF			*e*Sn		**Sn**	**02 36 21.2**	**-2.2**
comp=Z,0.7nm,0.3s							
CAF	**Calviac**	**6.30 268**	*e*Pn		**Pn**	**02 35 11.7**	**+0.4**
CAF			*e*Sn		**Sn**	**02 36 21.2**	**-2.2**
comp=Z,0.3nm,0.3s							
MFF	**Saint Martin d**	**7.81 283**	*e*Pn		**Pn**	**02 35 32.0**	**-0.1**
MFF			*e*Sn		**Sn**	**02 36 56.9**	**-3.6**
comp=Z,0.7nm,0.3s							
MFF	**Saint Martin d**	**7.81 283**	*e*Pn		**Pn**	**02 35 32.0**	**-0.1**
LDF	**La Druitiere**	**8.20 297**	*e*Pn		**Pn**	**02 35 36.5**	**-0.8**
LDF			*e*Sn		**Sn**	**02 37 06.0**	**-3.9**
comp=Z,0.4nm,0.3s							
LDF	**La Druitiere**	**8.20 297**	*e*Pn		**Pn**	**02 35 36.5**	**-0.8**
FLN	**La Foliniere**	**8.48 297**	*e*Pn		**Pn**	**02 35 41.0**	**-0.2**
FLN			*e*Sn		**Sn**	**02 37 12.8**	**-4.0**
comp=Z,0.6nm,0.2s							
FLN	**La Foliniere**	**8.48 297**	*e*Pn		**Pn**	**02 35 41.0**	**-0.2**
GRR	**Gorron**	**8.61 294**	*e*Pn		**Pn**	**02 35 42.5**	**-0.4**
GRR			*e*Sn		**Sn**	**02 37 15.8**	**-4.2**
comp=Z,1.6nm,0.3s							
GRR	**Gorron**	**8.61 294**	*e*Pn		**Pn**	**02 35 42.5**	**-0.4**
SGMF	**Saint Gilles**	**9.68 292**	*e*Pn		**Pn**	**02 35 56.7**	**-0.9**
SGMF			*e*Sn		**Sn**	**02 37 41.3**	**-4.9**
comp=Z,0.7nm,0.3s							
SGMF	**Saint Gilles**	**9.68 292**	*e*Pn		**Pn**	**02 35 56.7**	**-0.9**

SZGRF ***18*** *02:59:50.0,0.˚15S×98.˚21E,h25km,mb4.8, Southern Sumatera, Indonesia*
IDC ***18*** *02:59:54.8±0.5,1.˚23N×97.˚07E,h0km,mb4.6/21, mb1 4.6/23,mb1mx4.5/26,mbtmp4.6/23,ML4.5/2,MS3.8/13, Ms1 3.9/13,ms1mx3.5/43,Error ellipse: s-maj=18.5km s-min=13.2km az=54.0*
BJI ***18*** *02:59:55.2,0.˚76N×97.˚14E,h38km,mB4.9/27,mb5.0/39, Ms4.6/34,Ms7 4.5/31*
ISCJB ***18*** *02:59:57.4±0.2,1.˚23N±0.˚03×97.˚07E±0.˚03,h26km, mb4.8/105,MS4.2/30,Error ellipse: s-maj=5.2km s-min=3.3km az=29.8*
NEIC ***18*** *02:59:58.0±3.1,1.˚20N×97.˚12E,h20km±18km,mb4.9/43, Error ellipse: s-maj=8.3km s-min=4.8km az=220.0*
NEIC Felt [II] at Gunungsitoli.
DJA ***18*** *02:59:57,1.˚19N×96.˚92E,h15km,mb4.9/17*
MOS ***18*** *02:59:59.0±0.9,1.˚37N×97.˚17E,h33km,mb5.0/48, MS4.4/5,Error ellipse: s-maj=11.5km s-min=5.6km az=111.9*
ISC 18 02:59:59.5±0.2,1.˚23N±0.˚03×97.˚05E±0.˚03,h27km, h27km±1.5km:pP-P,n269,σ0.96/258,mb4.8/105,MS4.2/30, 20C-8D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.53**	**82**	P	**Pb**	**03 00 10.3**	**0.0**
GSI				S	**Sb**	**03 00 19.1**	**+1.5**
TRSI	**Tarutung**	**2.06**	**68**	P	**Pn**	**03 00 32.4**	**+0.1**
MNSI	**Mandailing Nat**	**2.56**	**100**	P	**Pn**	**03 00 39.7**	**+0.5**
TSI	**Tuntungan**	**2.71**	**34**	P	**Pn**	**03 00 41.9**	**+0.6**
SISI	**Saibi**	**3.26**	**141**	P	**Pn**	**03 00 48.9**	**+0.1**
PPI	**Padang Panjang**	**3.74**	**117**	P	**Pn**	**03 00 56.5**	**+1.1**
LHMI	**Lhok Sumawe**	**3.97**	**359**	P	**Pn**	**03 00 58.8**	**+0.2**
PDSI	**Padang**	**4.02**	**122**	P	**Pn**	**03 00 59.0**	**-0.3**
BKNI	**Bangkinang**	**4.09**	**103**	P	**Pn**	**03 01 00.5**	**+0.3**
BSI	**Banda Aceh**	**4.58**	**338**	P	**Pn**	**03 01 04.7**	**-2.3**
FRIM	**Kepong**	**4.99**	**66**	P	**Pn**	**03 01 13.1**	**+0.5**
IPM	**Ipoh**	**5.12**	**51**	P	**Pn**	**03 01 14.3**	**-0.1**
IPM	**Ipoh**	**5.12**	**51**	P	**Pn**	**03 01 14.3**	**0.0**
159nm,0.9s,2μm0.7nm							
KULM	**Kulim**	**5.40**	**42**	P	**Pn**	**03 01 18.3**	**0.0**
KULM	**Kulim**	**5.40**	**42**	*e*Pn	**Pn**	**03 01 17.5**	**-0.8**
216nm,1.0s							
KRJI	**Kerinci**	**5.51**	**127**	P	**Pn**	**03 01 23.2**	**+3.5**
KGM	**Kluang**	**6.31**	**83**	P	**Pn**	**03 01 31.5**	**+0.7**
MYKOM	**Kota Tinggi**	**6.82**	**85**	P	**Pn**	**03 01 39.2**	**+1.4**
MYKOM	**Kota Tinggi**	**6.82**	**85**	P	**Pn**	**03 01 38.3**	**+0.5**
64nm,0.9s,783nm0.3nm							
KTGM	**Kuala Trenggan**	**7.31**	**56**	P	**Pn**	**03 01 44.6**	**+0.1**
MNAI	**Manna**	**8.10**	**133**	P	**Pn**	**03 01 54.9**	**-0.5**
253nm,0.8s							
MDSI	**Maura Dua**	**9.11**	**129**	P	**Pn**	**03 02 08.5**	**-0.7**
47nm,0.7s							
KASI	**Kota Agung**	**10.02**	**132**	P	**Pn**	**03 02 20.3**	**-1.3**
39nm,1.0s							
TPI	**Tanjungpandan**	**11.31**	**111**	P	**Pn**	**03 02 40.6**	**+1.1**
28nm,1.1s							
KSM	**Kuching**	**13.26**	**89**	P	**Pn**	**03 03 07.2**	**+1.2**
KSM	**Kuching**	**13.26**	**89**	*e*Pn	**Pn**	**03 03 05.0**	**-1.0**
KSM	**Kuching**	**13.26**	**89**	P	Px	03 03 17.1	
SBUM	**Sibu**	**15.21**	**85**	P	**Pn**	**03 03 33.5**	**+1.0**
SBUM	**Sibu**	**15.21**	**85**	P	**Pn**	**03 03 33.2**	**+0.7**
26nm,1.3s							
BTM	**Bintulu**	**16.14**	**83**	P	**Pn**	**03 03 45.1**	**+0.6**
CM31	**Chiang Mai Arr**	**17.22**	**6**	*e*P	**Pn**	**03 03 59.7**	**+1.5**
7.9nm,0.5s							
CMAR	**Chiang Mai Arr**	**17.22**	**6**	P	**Pn**	**03 03 56.3**	**-1.8**
1.5nm,0.3s,baz=195,slow=13,SNR=15							
CMAR				LR	LR	03 11 33.7	
comp=Z,426nm,19.3s,baz=190,slow=41							
PALK	**Pallekele**	**17.37**	**291**	P	**Pn**	**03 04 00.2**	**+0.1**
0.5nm,0.3s,baz=125,slow=15,SNR=2.8							
PALK				LR	LR	03 10 22.7	
comp=Z,399nm,18.7s,baz=107,slow=36							
CHG	**Chiang Mai**	**17.57**	**6**	⇑P	**Pn**	**03 04 03.1**	**+0.6**
15nm,0.8s							
CHRT	**Chiangrai**	**18.72**	**8**	⇓P	**Pn**	**03 04 15.5**	**-1.0**
158nm,1.0s							
KKM	**Kota Kinabalu**	**19.71**	**75**	P	**Pn**	**03 04 28.1**	**-0.5**
KKM	**Kota Kinabalu**	**19.71**	**75**	*e*P	**Pn**	**03 04 26.4**	**-2.2**
53nm,1.1s							
KKM	**Kota Kinabalu**	**19.71**	**75**	P	**Pn**	**03 04 27.2**	**-1.3**
49nm,1.2s,558nm							
KDM	**Kudat**	**20.52**	**73**	P	**P**	**03 04 36.1**	**+0.4**
SDKM	**Sandakan**	**20.57**	**77**	P	**P**	**03 04 36.8**	**+0.4**
KHKI	**Kahang-Kahang**	**20.81**	**118**	P	**P**	**03 04 40.5**	**+1.5**
35nm,1.4s							
QIZ	**Qiongzhong**	**21.68**	**35**	P	**P**	**03 04 48.0**	**-0.3**
QIZ				S	**S**	**03 08 44.6**	**-2.4**
QIZ				sS	sS	03 08 57.5	-1.5
QIZ				pmax	pmax		
comp=Z,13nm,0.9s,mb4.4							
QIZ				LR	LR		
comp=N,400nm,14.7s,MS4.0							
QIZ				LR	LR		
comp=E,160nm,16.0s,MS4.0							
QIZ				LR	LR		
comp=Z,340nm,13.5s,MS3.9							
KAPI	**Kappang**	**23.51**	**105**	P	**P**	**03 05 04.0**	**-3.6**
comp=Z,12nm,0.8s,mb4.4,baz=283,slow=10.0,SNR=6.4							
KMI	**Kunming**	**24.38**	**13**	P	**P**	**03 05 16.0**	**+0.6**
KMI				pP		03 05 22.9	
KMI				sP	sP	03 05 25.6	-1.2
KMI				PP		03 05 49.9	
KMI				S	**S**	**03 09 30.3**	**-3.2**
KMI				pmax	pmax		
comp=Z,66nm,1.2s,mb4.9							
KMI				pmax	pmax		
comp=Z,220nm,3.9s							
KMI				LR	LR		
comp=N,1μm,16.3s,MS4.5							
KMI				LR	LR		
comp=E,560nm,13.9s,MS4.5							
KMI				LR	LR		
comp=Z,1μm,15.0s,MS4.5							
APSI	**Ampana**	**24.69**	**95**	P	**P**	**03 05 18.2**	**-0.2**
comp=Z,99nm,0.9s,comp=Z,902nm,mb5.3							
SHL	**Shillong**	**24.70**	**349**	*e*P	**P**	**03 05 17.5**	**-0.9**
SHL				*e*S	**S**	**03 09 40.0**	**+1.3**
MRSI	**Marisa**	**24.90**	**92**	P	**P**	**03 05 19.3**	**-1.1**
comp=Z,47nm,0.8s,comp=Z,446nm,mb5.1							
KDI	**Kendari**	**26.07**	**102**	P	**P**	**03 05 30.9**	**-0.1**
comp=Z,23nm,0.9s,mb4.7							
GYA	**Guiyang**	**26.73**	**19**	⇑*i*P	**P**	**03 05 36.3**	**-0.5**
GYA				pP	pP	03 05 48.0	+3.2
GYA				sP	sP	03 05 54.8	+6.6
GYA				PP		03 06 25.4	
GYA				S	**S**	**03 10 12.4**	**+1.5**
GYA				sS	sS	03 10 27.9	+3.7
GYA				SS		03 11 27.3	
GYA				pmax	pmax		
comp=Z,30nm,0.9s,mb4.8							
GYA				pmax	pmax		
comp=Z,120nm,4.8s							
GYA				LR	LR		
comp=N,750nm,14.6s,MS4.5							
GYA				LR	LR		
comp=E,580nm,15.0s,MS4.5							
GYA				LR	LR		
comp=Z,680nm,14.3s,MS4.3							
PKI	**Pulchoki**	**28.47**	**338**	*e*P	**P**	**03 05 53.5**	**+1.2**
comp=Z,46nm,0.9s,mb5.1							
PKIN	**Phulchoki**	**28.48**	**338**	*e*P	**P**	**03 05 53.3**	**+0.9**
comp=Z,30nm,0.6s,mb5.1							
GUN	**Gumba**	**28.60**	**339**	*e*P	**P**	**03 05 55.0**	**+1.5**
comp=Z,97nm,0.7s,mb5.7							
DMN	**Daman**	**28.62**	**337**	*e*P	**P**	**03 05 55.1**	**+1.4**
comp=Z,64nm,1.0s,mb5.3							
KKN	**Kakani**	**28.71**	**338**	*e*P	**P**	**03 05 55.8**	**+1.3**
comp=Z,64nm,0.9s,mb5.3							
LSA	**Lhasa**	**28.86**	**349**	P	**P**	**03 05 57.3**	**+1.5**
LSA	**Lhasa**	**28.86**	**349**	*e*P	**P**	**03

WRAB Tennant Creek 42.18 122 *e*P **P 03 07 49.6 -0.6**
WRAB pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
WRAB Tennant Creek 42.18 122 *e*P **P 03 07 49.6 -0.5**
comp=Z,9.3nm,0.6s,mb4.6
WRAB Tennant Creek 42.18 122 P **P 03 07 49.9 -0.3**
comp=Z,20nm,1.4s,mb4.5
BJT Baijiatuau 42.34 22 *e*P **P 03 07 51.4 +0.2**
BJT pmax pmax
comp=Z,36nm,0.6s
BJT Baijiatuau 42.34 22 *e*P **P 03 07 51.4 +0.2**
comp=Z,36nm,0.6s,mb5.2
BJI Beijing 42.37 22 P **P 03 07 51.6 +0.3**
BJI pmax pmax
comp=Z,54nm,0.7s,mb5.3
BJI pmax pmax
comp=Z,77nm,3.5s
BJI LR LR
comp=N,180nm,10.1s,MS4.3
BJI LR LR
comp=E,150nm,12.3s,MS4.3
BJI LR LR
comp=Z,98nm,20.9s
KSH Kashi 42.68 336 *e*P **P 03 07 53.1 -0.8**
KSH *ep*P pP 03 08 02.1 -0.1
KSH *es*P sP 03 08 06.1 +0.6
KSH *e*PP PP 03 09 34.3 +1.0
KSH *e*PcP PcP 03 09 46.4 +0.9
KSH *e*ScP ScP 03 13 33.1 -1.7
KSH *e*PcS PcS 03 13 37.3 -0.3
KSH *e*S **S 03 14 11.1 -4.5**
KSH *e*ScS ScS 03 17 49.3 -4.2
KSH pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KSH pmax pmax
comp=Z,81nm,4.2s
KSH LR LR
comp=N,78nm,5.2s
KSH LR LR
comp=E,72nm,6.4s
KSH LR LR
comp=Z,140nm,5.3s
WMQ Urumqi 43.22 350 *e*P **P 03 07 59.3 +1.1**
WMQ pmax pmax
comp=Z,31nm,1.0s,mb5.0
WMQ LR LR
comp=N,19nm,19.0s,MS3.8
WMQ LR LR
comp=E,140nm,24.0s,MS3.8
WMQ LR LR
comp=Z,72nm,26.0s,MS3.5
ASAR Alice Springs 43.53 127 P **P 03 08 00.9 -0.2**
comp=Z,5.5nm,0.8s,mb4.4,baz=297,slow=8.1,SNR=45
ASAR PcP PcP 03 09 48.0 -0.7
comp=Z,1.6nm,0.8s,baz=307,slow=3.2,SNR=6.8
ASAR ScP ScP 03 13 38.5 -0.1
comp=Z,1.0nm,0.9s,baz=293,slow=4.7,SNR=5.0
ASAR Alice Springs 43.53 127 P **P 03 08 00.9 -0.2**
ASAR 03 09 48.1
ULHL Ulahol 44.91 338 P **P 03 08 13.1 +1.3**
SNR=13
UCH Uchtor 45.56 337 P **P 03 08 18.6 +1.6**
SNR=19
UCH Uchtor 45.56 337 *e*P **P 03 08 18.3 +1.3**
UCH pmax pmax
comp=Z,11nm,0.8s,mb4.8
UCH Uchtor 45.56 337 *e*P **P 03 08 18.3 +1.3**
comp=Z,11nm,0.8s,mb4.8
TKM2 Tokmak 2 45.73 338 P **P 03 08 19.6 +1.3**
SNR=7.3
TKM2 Tokmak 2 45.73 338 *e*P **P 03 08 19.3 +1.0**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TKM2 Tokmak 2 45.73 338 *e*P **P 03 08 19.3 +1.0**
comp=Z,8.2nm,0.9s,mb4.7
KBK Karagaybulak 45.75 337 P **P 03 08 20.8 +2.3**
SNR=8.3
AML Almayashu 45.81 336 P **P 03 08 20.6 +1.7**
SNR=13
AML Almayashu 45.81 336 *e*P **P 03 08 19.9 +0.9**
AML pmax pmax
comp=Z,17nm,0.8s,mb5.0
AML Almayashu 45.81 336 *e*P **P 03 08 19.9 +1.0**
comp=Z,18nm,0.8s,mb5.0
KSRS Korea Array 45.91 35 P **P 03 08 18.9 -0.9**
comp=Z,21nm,0.9s,mb5.1,baz=222,slow=9.0,SNR=66
KSRS LR LR 03 27 51.9
comp=Z,108nm,20.5s,MS3.8,baz=218,slow=37
AAK Ala-Archa 45.91 337 LR LR 03 30 42.0
comp=Z,122nm,18.0s,MS3.9,baz=256,slow=40
AAK Ala-Archa 45.91 337 *ce*P **P 03 08 21.2 +1.5**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AAK Ala-Archa 45.91 337 *e*P **P 03 08 21.7 +2.0**
comp=Z,7.3nm,0.9s,mb4.6
AAK Ala-Archa 45.91 337 P **P 03 08 25.6 +5.9**
EKS2 Erkin-Say 46.22 336 P **P 03 08 23.9 +1.7**
SNR=10
EKS2 Erkin-Say 46.22 336 *e*P **P 03 08 23.6 +1.4**
EKS2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
EKS2 Erkin-Say 46.22 336 *e*P **P 03 08 23.6 +1.5**
comp=Z,9.4nm,0.8s,mb4.8
USP Ospenovka 46.45 337 P **P 03 08 24.9 +1.0**
SNR=8.7
SNY Shenyang 46.94 27 ⇓P **P 03 08 27.4 -0.4**
SNY pmax pmax
comp=Z,16nm,0.7s,mb5.1
SNY LR LR
comp=N,250nm,15.6s,MS4.5
SNY LR LR
comp=E,300nm,16.5s,MS4.5
SNY LR LR
comp=Z,380nm,15.3s,MS4.5
SONM Songino Array 47.12 9 P **P 03 08 29.4 +0.3**
comp=Z,15nm,0.8s,mb5.0,baz=189,slow=8.8,SNR=78
SONM PcP PcP 03 10 00.7 +0.1
comp=Z,3.5nm,0.7s,baz=196,slow=3.1,SNR=5.1
SONM LR LR 03 30 43.1
comp=Z,274nm,18.2s,MS4.3,baz=177,slow=39
SONM Songino Array 47.12 9 P **P 03 08 29.4 +0.3**
SONM 03 10 00.7
MK31 Makanchi Array 47.17 346 *e*P **P 03 08 29.9 +0.3**
MKAR Makanchi Array 47.17 346 P **P 03 08 29.9 +0.4**
comp=Z,8.9nm,0.5s,mb5.0,baz=160,slow=8.2,SNR=134
MKAR LR LR 03 31 32.6
comp=Z,74nm,21.2s,MS3.6,baz=162,slow=40
ULN Ulaanbaatar 47.25 9 *e*P **P 03 08 30.4 +0.2**
ULN pmax pmax
comp=Z,11nm,0.9s,mb4.8
ULN Ulaanbaatar 47.25 9 *e*P **P 03 08 30.4 +0.2**
comp=Z,11nm,0.9s,mb4.8
ULN Ulaanbaatar 47.25 9 P **P 03 08 30.5 +0.3**
comp=Z,13nm,1.1s,mb4.8
COEN Coen 48.12 110 *e*P **P 03 08 36.2 -1.2**
comp=Z,56nm,1.0s,mb5.5
COEN Coen 48.12 110 P **P 03 08 36.5 -0.9**
ZAK Zakamensk 49.26 5 *e*P **P 03 08 43.4 -2.2**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
CN2 Changchun 49.34 27 ⇑P **P 03 08 45.6 -0.8**
CN2 *ep*P pP 03 08 51.3 -3.4
CN2 *e*S **S 03 15 49.8 -1.5**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.5
CN2 LR LR
comp=E,400nm,18.0s,MS4.5
CN2 LR LR
comp=Z,300nm,17.0s,MS4.4
TLY Talaya 50.58 5 *e*P **P 03 08 56.1 +0.5**
TLY pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
TLY MLR MLR
comp=Z,205nm,16.0s,MS4.2
TLY Talaya 50.58 5 *e*P **P 03 08 56.3 +0.8**
HIA Hailar 51.66 19 *e*P **P 03 09 03.6 -0.2**
HIA pmax pmax
comp=Z,9.0nm,0.6s
HIA Hailar 51.66 19 *e*P **P 03 09 03.6 -0.2**
comp=Z,9.1nm,0.6s,mb4.9
KURK Kurchatov 51.72 345 *ce*P **P 03 09 04.3 +0.1**
KURK pmax pmax
comp=Z,16nm,1.0s,mb4.9
KURK Kurchatov 51.72 345 *e*P **P 03 09 04.1 -0.1**
comp=Z,15nm,1.0s,mb4.9
MAT Matsushiro 51.77 42 P **P 03 09 02.9 -1.9**
MJAR Matsushiro Arr 51.77 42 P **P 03 09 03.7 -1.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=220,slow=6.4,SNR=14
MDJ Mudanjiang 51.91 29 P **P 03 09 06.4 +0.7**
MDJ pmax pmax
comp=Z,15nm,0.8s,mb5.0
MDJ pmax pmax
comp=Z,34nm,4.1s
MDJ LR LR
comp=N,81nm,17.1s,MS3.9
MDJ LR LR
comp=E,67nm,19.4s,MS3.9
MDJ LR LR
comp=Z,120nm,16.0s,MS4.0
MDJ Mudanjiang 51.91 29 *e*P **P 03 09 05.5 -0.3**
comp=Z,12nm,0.8s,mb4.9
VLA Vladivostok 52.02 32 *ce*P **P 03 09 06.5 -0.1**
VLA pmax pmax
comp=Z,51nm,1.2s,mb5.3
STKA Stephens Creek 53.49 132 P **P 03 09 18.6 +1.0**
comp=Z,8.7nm,0.9s,mb4.7,baz=303,slow=3.6,SNR=12
ZAA0 Zalesovo Array 53.50 351 *e*P **P 03 09 17.2 -0.1**
ZALV Zalesovo Beam 53.50 351 P **P 03 09 17.4 +0.1**
comp=Z,44nm,0.8s,mb5.4,baz=179,slow=6.7,SNR=112
NVS Novosibirsk 54.62 350 *e*P **P 03 09 23.9 -1.6**
NVS *e*S **S 03 16 59.8 -3.6**
NVS pmax pmax
comp=N,11nm,0.8s
NVS pmax pmax
comp=E,10.0nm,0.8s
NVS pmax pmax
comp=Z,15nm,0.8s,mb5.1
NVS smax
comp=E,11nm,1.7s
BVAR Borovoye Array 56.17 341 P **P 03 09 36.3 -0.4**
comp=E,13nm,0.7s,mb5.1,baz=145,slow=8.5,SNR=64
BVAR LR LR 03 37 11.3
comp=E,96nm,19.7s,MS3.9,baz=147,slow=40
BRVK Borovoye 56.23 341 *ce*P **P 03 09 36.3 -0.8**
BRVK pmax pmax
comp=Z,13nm,0.9s,mb5.0
BRVK Borovoye 56.23 341 *e*P **P 03 09 36.7 -0.4**
comp=Z,12nm,0.7s,mb5.0
ABKAR Akbulak array 57.42 332 *e*P **P 03 09 45.2 -0.4**
comp=Z,21nm,0.7s,mb5.3
ABKAR *ep*P pP 03 09 52.8 -1.3
BOD Bodaibo 58.01 11 *e*P **P 03 09 49.2 -0.4**
BOD pmax pmax
comp=Z,17nm,0.9s,mb5.1
EIDS Eidsvold 58.52 121 *e*P **P 03 09 54.4 +0.5**
comp=Z,24nm,1.0s,mb5.2
EIDS *ep*P pP 03 10 01.2 -1.1
ASAJ Asahikawa 58.73 37 P **P 03 09 54.5 -0.4**
comp=Z,3.1nm,0.6s,mb4.5,baz=196,slow=3.3,SNR=6.0
CLNS Chul'man 59.75 17 *e*P **P 03 10 01.4 -0.3**
CLNS pmax pmax
comp=Z,16nm,0.7s,mb5.2
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,0.9s
YSS Yuzh-Sakhalins 60.41 34 ⇑*e*P **P 03 10 05.1 -1.3**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 60.41 34 *e*P **P 03 10 06.2 -0.2**
comp=Z,31nm,1.0s,mb5.3
GNI Garni 61.17 316 LR LR 03 41 01.2
comp=Z,36nm,18.1s,MS3.6,baz=256,slow=40
GNI Garni 61.17 316 *ce*P **P 03 10 13.7 +2.0**
GNI pmax pmax
comp=Z,4.0nm,0.7s
SVE Sverdlovsk 62.60 338 ⇓*e*P **P 03 10 20.7 -0.3**
SVE pmax pmax
comp=Z,24nm,0.9s,mb5.3
ZEI Tsey 62.88 319 *e*P **P 03 10 21.4 -1.8**
ZEI pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
KIV Kislovodsk 64.19 319 *e*P **P 03 10 31.9 +0.1**
KIV *e*S **S 03 19 04.8 -2.7**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.8
KIV Kislovodsk 64.19 319 *e*P **P 03 10 32.2 +0.4**
comp=Z,14nm,1.1s,mb4.9
YAK Yakutsk 65.43 16 *c i*P **P 03 10 38.5 -1.0**
YAK *e**PP pP 03 10 50.7 +2.6
YAK *e* 03 11 14.9
YAK *e*S S 03 19 16.6 -5.5
YAK *e* 03 20 30.4
YAK *e*SSS 03 26 25.6
YAK pmax pmax
comp=Z,45nm,1.0s,mb5.5
YAK pmax pmax
comp=E,13nm,1.2s
YAK pmax pmax
comp=N,13nm,1.0s
YAK smax
comp=E,71nm,4.2s
YAK smax
comp=N,36nm,3.3s
YAK MLR MLR
comp=Z,248nm,18.0s,MS4.5
YAK MLR MLR
comp=E,124nm,18.0s,MS4.3
YAK MLR MLR
comp=N,142nm,19.0s,MS4.3
YAK Yakutsk 65.43 16 *e*P **P 03 10 38.8 -0.8**
comp=N,58nm,0.9s,mb5.6
SOC Sochi 66.00 318 *e*P **P 03 10 41.5 -2.1**
SOC *e* 03 13 10.0
SOC *e*PPP 03 14 50.5
SOC *e*S S 03 19 30.1 +0.4
SOC *e*SS SS 03 23 40.1 -5.3
SOC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ANN Anapa 67.98 319 *e*P **P 03 10 54.5 -1.6**
ANN *e*S S 03 19 51.9 -1.7
ANN pmax pmax
comp=Z,11nm,0.9s,mb4.9
VRHR Novokhopersk 68.02 326 *e*P **P 03 10 55.3 -0.9**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,5.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.4s
BR131 Keskin Array S 68.98 312 *e*P **P 03 11 02.3 -0.2**
comp=E,3.0nm,0.8s,mb4.3
BRTR Keskin Array B 68.98 312 P **P 03 11 01.4 -1.1**
comp=E,1.4nm,0.7s,mb4.0,baz=130,slow=8.0,SNR=15
BRTR Keskin Array B 68.98 312 *i* P **P 03 11 02.0 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
VSR Storozhevoye 69.46 325 *e*P **P 03 11 03.9 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,9.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.7s
PETK Petropavlovsk- 71.79 34 P **P 03 11 18.9 -0.5**
comp=E,3.8nm,0.7s,mb4.4,baz=214,slow=4.4,SNR=7.9
OBN Obninsk 72.51 328 ⇑*e*P **P 03 11 23.5 -0.2**
OBN *e* 03 14 05.0
OBN *e*S S 03 20 53.1 +6.9
OBN pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.1
MAW Mawson 72.71 193 P **P 03 11 24.7 +0.1**
comp=Z,1.5nm,0.8s,mb4.0,baz=356,slow=12,SNR=3.7
TIXI Tiksi 73.18 10 *e*P **P 03 11 25.8 -1.5**
TIXI pmax pmax
comp=Z,11nm,0.8s,mb4.8
TIXI MLR MLR
comp=Z,247nm,15.0s,MS4.6
TIXI Tiksi 73.18 10 *e*P **P 03 11 26.0 -1.4**
comp=Z,9.3nm,0.8s,mb4.8
SEY Seymchan 73.79 23 *ce*P **P 03 11 30.5 -0.6**
IDI Anoyia 74.76 306 LR LR 03 44 39.8
comp=Z,46nm,20.2s,MS3.8,baz=343,slow=36
AKASG Malin Array Be 75.14 322 P **P 03 11 38.0 -1.2**
comp=Z,2.3nm,0.6s,mb4.3,baz=94,slow=4.5,SNR=8.8
AKASG Malin Array Be 75.14 322 *i* P **P 03 11 38.5 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 75.14 322 *e*P **P 03 11 38.2 -1.0**
KIEV Kiev 75.15 322 *e*P **P 03 11 38.1 -1.1**
KIEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
KIEV Kiev 75.15 322 *e*P **P 03 11 38.1 -1.1**
comp=Z,1.7nm,0.4s,mb4.3
VRI Vrincioaia 75.49 317 ⇑P **P 03 11 42.2 +0.9**
VRI Vrincioaia 75.49 317 ⇑*i*P **P 03 11 42.2 +0.9**
MLR Muntele Rosu 75.94 317 ⇓P **P 03 11 44.1 +0.2**
MLR Muntele Rosu 75.94 317 ⇓*i*P **P 03 11 44.1 +0.2**
BURAR Bucovina Array 76.90 319 ⇑P **P 03 11 50.1 +0.8**
BURAR Bucovina Array 76.90 319 ⇑*i*P **P 03 11 50.1 +0.8**
BUR08 Bucovina Ar. S 76.92 319 *e*P **P 03 11 50.3 +0.9**
JOF Joensuu 78.05 335 *e*P **P 03 11 55.4 0.0**
JOF Joensuu 78.05 335 *ep* **P 03 11 55.4 0.0**
DRGR 78.41 318 ⇓P **P 03 11 57.9 +0.2**
DRGR 78.41 318 ⇓*i*P **P 03 11 57.9 +0.2**
APA Apatity 79.05 339 ⇑*e*P **P 03 12 02.0 +1.2**
APA MLR MLR
comp=Z,500nm,18.0s,MS4.9
KOLS Kolonicke sedl 79.10 320 *e*P **P 03 12 02.5 +1.0**
KOLS *e* pP 03 12 09.6 -0.6
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 79.10 320 *e*P **P 03 12 02.5 +1.0**
KOLS *ep*P pP 03 12 09.6 -0.6
STHS Stebnicka Huta 79.85 320 *e*P **P 03 12 07.2 +1.7**
STHS *e* 03 12 13.4
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 79.85 320 *e*P **P 03 12 07.2 +1.7**
STHS *ep*P pP 03 12 13.4 -0.9
FINES FINESS Array B 79.90 333 P **P 03 12 05.4 -0.2**
comp=Z,4.8nm,0.8s,mb4.5,baz=99,slow=5.7,SNR=18
KAF Kangasniemi 79.99 333 *e*P **P 03 12 06.1 +0.1**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KAF Kangasniemi 79.99 333 *ep* **P 03 12 06.1 +0.1**
comp=Z,5.6nm,0.6s,mb4.7
PSZ Piszkesteto 80.49 318 *e*P **P 03 12 08.7 -0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ Piszkesteto 80.49 318 *e*P **P 03 12 08.7 -0.3**
comp=Z,4.0nm,0.8s,mb4.4
PKSM Moragy 81.09 316 ⇑P **P 03 12 07.3 -5.0**
PKSM Moragy 81.09 316 ⇑*i*P **P 03 12 07.3 -5.0**
BILL Bilibino 81.19 21 *e*P **P 03 12 11.8 -0.5**
BILL pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BILL Bilibino 81.19 21 *e*P **P 03 12 11.8 -0.5**
comp=Z,2.2nm,0.6s,mb4.3
VYHS Vyhne 81.27 319 *e*P **P 03 12 12.9 -0.3**
VYHS *e* pP 03 12 20.9 -1.1
VYHS pmax pmax
comp=Z,14nm,2.5s,mb4.5
VYHS Vyhne 81.27 319 *e*P **P 03 12 12.9 -0.3**
VYHS *ep*P pP 03 12 20.9 -1.1
KOLL Kolacno 81.57 319 *e*P **P 03 12 15.6 +0.8**
KOLL Kolacno 81.57 319 *e*P **P 03 12 15.6 +0.8**
MORC Moravsky Berou 82.28 320 *e*P **P 03 12 18.6 +0.1**
comp=Z,1.8nm,0.8s,mb4.0
MORC Moravsky Berou 82.28 320 ⇓*i*P **P 03 12 18.7 +0.2**
ZST Bratislava 82.38 318 *e*P **P 03 12 19.6 +0.6**
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ZST Bratislava 82.38 318 *e*P **P 03 12 19.6 +0.6**
ARCES ARCESS Array B 82.45 340 P **P 03 12 19.2 +0.3**
comp=Z,8.6nm,0.9s,mb4.7,baz=100,slow=4.7,SNR=17
ARCES LR LR 03 55 19.4
comp=Z,62nm,18.8s,MS4.0,baz=65,slow=40
GEC2 GERESS Array S 84.69 319 *e*P **P 03 12 30.9 0.0**
comp=Z,6.0nm,1.1s,mb4.6
GEC2 *ep*P pP 03 12 38.6 -1.1
GEC2 GERESS Array S 84.69 319 *e*P **P 03 12 30.9 0.0**
GEC2 *e**PP pP 03 12 38.6 -1.1
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
GERES GERESS Array B 84.69 319 P **P 03 12 31.5 +0.6**
comp=Z,2.4nm,0.9s,mb4.3,baz=99,slow=4.3,SNR=20
RJOB Jochberg 85.22 318 *e*P **P 03 12 32.7 -0.9**
comp=Z,8.0nm,1.5s,mb4.6
WET Wettzell 85.25 319 *e*P **P 03 12 33.9 +0.2**
comp=Z,3.0nm,0.9s,mb4.4
WET *ep*P pP 03 12 41.0 -1.5
WET Wettzell 85.25 319 *e*P **P 03 12 33.9 +0.2**
WET *e**PP pP 03 12 41.0 -1.5
WET pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
TANN Tannenbergstha 85.60 320 *ep*P pP 03 12 43.6 -0.7
HFS Hagfors 85.62 330 LR LR 03 56 24.2
comp=Z,45nm,19.8s,MS3.9,baz=281,slow=40
ROTZ Rotzenmuhle 85.73 320 *e*P **P 03 12 36.6 +0.5**
comp=Z,4.0nm,0.9s,mb4.7
ROTZ *ep*P pP 03 12 44.1 -0.8
GRA1 Grafenberg Arr 86.36 320 *e*P **P 03 12 39.5 +0.3**
comp=Z,5.0nm,0.7s,mb4.8
GRA1 *ep*P pP 03 12 46.3 -1.7
GRF Grafenberg Arr 86.36 320 *e*P **P 03 12 39.5 +0.3**
comp=Z,5.0nm,0.7s,mb4.8
GRF *ep*P pP 03 12 46.3 -1.7
GRF Grafenberg Arr 86.36 320 *e*P **P 03 12 39.5 +0.3**
GRF *e**PP pP 03 12 46.3 -1.7
GRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
GRF Grafenberg Arr 86.36 320 *e*P **P 03 12 39.5 +0.3**
GRF *e**PP pP 03 12 46.3 -1.7
GRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
NB2 NORSAR Subarra 86.91 331 P **P 03 12 41.2 -0.4**
comp=Z,2.0nm,0.8s,mb4.4,baz=98,slow=4.8
NOA NORSAR Array B 86.91 331 P **P 03 12 41.5 -0.1**
comp=Z,3.3nm,0.8s,mb4.5,baz=95,slow=5.0,SNR=6.7
NOA LR LR 03 57 28.5
comp=Z,41nm,19.6s,MS3.8,baz=40,slow=40
CLZ Clausthal 86.98 322 *e*P **P 03 12 43.0 +0.8**
comp=Z,26nm,2.0s,mb5.1
CLZ Clausthal 86.98 322 *e*P **P 03 12 43.0 +0.8**
CLZ pmax pmax
comp=Z,26nm,2.0s,mb5.1
BSEG Bad Segeberg 87.08 324 *ep*P pP 03 12 50.4 -1.1
NRDL Niedersach Rie 87.16 322 *e*P **P 03 12 42.9 -0.2**
comp=Z,27nm,2.1s,mb5.1
NRDL *ep*P pP 03 12 50.9 -1.0
KEST Kesra 87.42 306 P **P 03 12 44.5 -0.2**
comp=Z,1.6nm,0.9s,mb4.2,baz=354,slow=7.9,SNR=3.7
BFO Black Forest 88.24 318 *e*P **P 03 12 47.7 -0.6**
comp=Z,2.0nm,0.9s,mb4.3
BFO Black Forest 88.24 318 *e*P **P 03 12 47.7 -0.6**
BFO pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
IBBN Ibbenburen 88.60 322 *e*P **P 03 12 50.3 +0.4**
comp=Z,13nm,1.0s,mb5.2
CDF Champ du Feu 88.94 318 *e*P **P 03 12 51.0 -0.6**
LPG La Plagne 89.34 315 *e*P **P 03 12 53.8 +0.2**
comp=Z,8.0nm,0.9s,mb4.7
LPG La Plagne 89.34 315 *e*P **P 03 12 53.8 +0.2**
LPG pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LPG La Plagne 89.34 315 *e*P **P 03 12 53.8 +0.2**
comp=Z,4.0nm,0.9s,mb4.8
LPL La Plagne 89.35 315 *e*P **P 03 12 53.8 +0.2**
comp=Z,12nm,1.1s,mb4.8
LPL La Plagne 89.35 315 *e*P **P 03 12 53.8 +0.2**
LPL pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
LPL La Plagne 89.35 315 *e*P **P 03 12 53.8 +0.2**
comp=Z,6.1nm,1.1s,mb4.8
HAU Haudompre 89.57 318 *e*P **P 03 12 54.2 -0.4**
WLF Walferdange 89.65 319 *e*P **P 03 12 54.5 -0.4**
comp=Z,16nm,1.4s,mb5.2
CABF La Chapelle 89.78 316 *e*P **P 03 12 55.8 +0.2**
BAIF Baives 90.90 320 *e*P **P 03 13 00.5 -0.2**
comp=Z,12nm,0.9s,mb4.9
BAIF Baives 90.90 320 *e*P **P 03 13 00.5 -0.2**
BAIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
BAIF Baives 90.90 320 *e*P **P 03 13 00.5 -0.2**
comp=Z,5.8nm,0.9s,mb4.9
LOR Lormes 91.28 317 *e*P **P 03 13 02.6 +0.1**
comp=Z,5.2nm,0.8s,mb4.6
LOR Lormes 91.28 317 *e*P **P 03 13 02.6 +0.1**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.7

LOR	**Lormes**	**91.28**	**317**	*e*P	**P**	**03 13 02.6**	**+0.1**
	comp=Z,2.6nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**91.32**	**317**	*e*P	**P**	**03 13 02.7**	**-0.1**
SSF	**Saint Saulge**	**91.53**	**317**	*e*P	**P**	**03 13 03.8**	**+0.1**
AVF	**Avril sur Loir**	**91.65**	**317**	*e*P	**P**	**03 13 04.4**	**+0.1**
	comp=Z,4.7nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**91.65**	**317**	*e*P	**P**	**03 13 04.4**	**+0.1**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**91.65**	**317**	*e*P	**P**	**03 13 04.4**	**+0.1**
	comp=Z,2.3nm,0.9s,mb4.5						
BGF	**Bois d'Agland**	**92.01**	**316**	*e*P	**P**	**03 13 06.4**	**+0.4**
	comp=Z,20nm,1.1s,mb5.1						
BGF	**Bois d'Agland**	**92.01**	**316**	*e*P	**P**	**03 13 06.4**	**+0.4**
BGF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
BGF	**Bois d'Agland**	**92.01**	**316**	*e*P	**P**	**03 13 06.4**	**+0.4**
	comp=Z,9.8nm,1.1s,mb5.0						
TCF	**Toulx Ste Croi**	**92.47**	**316**	*e*P	**P**	**03 13 09.1**	**+1.0**
MFF	**Saint Martin d**	**94.07**	**317**	*e*P	**P**	**03 13 15.4**	**0.0**
TORD	**Torodi Ar. Bea**	**94.94**	**283**	P	**P**	**03 13 20.4**	**+0.3**
	comp=Z,0.3nm,0.8s,mb3.8,baz=90,slow=4.0,SNR=3.0						
ROSF	**Rostrenen**	**95.95**	**319**	*e*P	**P**	**03 13 22.3**	**-1.7**
	comp=Z,54nm,1.4s,mb5.5						
ROSF	**Rostrenen**	**95.95**	**319**	*e*P	**P**	**03 13 22.3**	**-1.7**
ROSF				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.5						
ROSF	**Rostrenen**	**95.95**	**319**	*e*P	**P**	**03 13 22.3**	**-1.7**
	comp=Z,27nm,1.4s,mb5.5						
MDT	**Midelt**	**99.13**	**303**	LR	LR	04 04 47.5	
	comp=Z,59nm,19.1s,MS4.1,baz=141,slow=39						
FFC	**Flin Flon**	**122.06**	**13**	*i* PKIKP	PKPdf	03 18 51.8	+0.3
SCHQ	**Schefferville**	**122.57**	**349**	PKP	PKPdf	03 18 51.3	-1.2
	comp=Z,2.0nm,0.9s,baz=124,slow=3.6,SNR=3.2						
NVAR	**Mina Array Bea**	**128.84**	**36**	PKP	PKPdf	03 19 05.7	+0.7
	comp=Z,0.9nm,0.8s,baz=274,slow=1.6,SNR=6.2						
PDAR	**Pinedale Array**	**130.08**	**26**	PKhKP		03 18 59.6	
	comp=Z,0.3nm,0.6s,baz=13,slow=29,SNR=3.6						
PDAR				PP	PP	03 21 20.9	+2.2
	comp=Z,0.5nm,0.9s,baz=11,slow=3.0,SNR=3.8						
DUG	**Dugway**	**130.57**	**30**	*e*PKIKP	PKPdf	03 19 08.9	+0.7
TUC	**Tucson**	**137.50**	**36**	*e*PKIKP	PKPdf	03 19 21.8	+0.4
ANMO	**Albuquerque**	**137.81**	**29**	*e*PKIKP	PKPdf	03 19 22.3	+0.4
MNTX	**Cornudas Mount**	**140.95**	**31**	*e*PKPdf	PKPdf	03 19 28.4	+0.7
TXAR	**Lajitas Array**	**143.72**	**31**	PKP	PKPdf	03 19 30.4	-2.3
	comp=Z,1.4nm,0.7s,baz=94,slow=0.4,SNR=24						
TXAR	**Lajitas Array**	**143.72**	**31**	PKP	PKPdf	03 19 30.4	-2.3
JCT	**Junction City**	**144.61**	**26**	*e*PKIKP	PKPdf	03 19 32.7	-1.6
CPUP	**Villa Florida**	**144.93**	**222**	PKP	PKPdf	03 19 34.5	-0.4
	comp=Z,2.0nm,0.7s,baz=62,slow=3.0,SNR=7.1						
CPUP	**Villa Florida**	**144.93**	**222**	*e*PKPdf	PKPdf	03 19 35.0	+0.1
NATX	**Nacogdoches**	**145.36**	**18**	*e*PKPbc	PKPbc	03 19 35.6	+0.3
LRAL	**Lakeview Retre**	**145.70**	**6**	*e*PKPbc	PKPbc	03 19 35.2	-1.1
HKT	**Hockley**	**146.64**	**21**	*e*PKP2	PKPab	03 19 39.5	-0.8

*ISCJB **18** 03:09:49.7±0.4, 30°.89N±0°.04×103°.33E±0°.06, h10km, mb3.7/13, Error ellipse: s-maj=7.8km s-min=5.2km az=150.8*
*IDC **18** 03:09:50.0±1.1, 30°.88N×103°.33E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.7/25, mbtmp3.7/10, ML4.6/1, Error ellipse: s-maj=33.6km s-min=20.8km az=49.0*
*NEIC **18** 03:09:51.4±0.5, 30°.83N×103°.25E, h10km, mb3.9/5, Error ellipse: s-maj=12.7km s-min=9.4km az=44.0*
*BJI **18** 03:09:53.5, 30°.86N×103°.32E, h9km, ML3.5/13, Ms3.3/1, Ms7 3.2/1*

ISC 18 03:09:51.5±0.5, 30°.80N±0°.04×103°.23E±0°.05, h10km, n24, σ1ŝ10/32, mb3.7/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**77**	Pg	**Pg**	**03 10 01.4**	**+0.8**
CD2				Sg	**Sg**	**03 10 09.3**	**+2.4**
CD2				smax			
	comp=N,6μm,0.6s						
GYA	**Guiyang**	**5.28**	**144**	Pg	**Pb**	**03 11 19.8**	**-4.1**
GYA				Sg	**Sb**	**03 12 25.8**	**-1.5**
GYA				smax			
	comp=N,80nm,0.7s						
GYA				smax			
	comp=E,10.0nm,0.7s						
LZH	**Lanzhou**	**5.29**	**5**	*e*Pg	**Pg**	**03 11 40.0**	**+7.1**
LZH				Sg	**Sg**	**03 12 40.8**	**-0.6**
LZH				smax			
	comp=N,35nm,0.7s						
LZH				smax			
	comp=E,43nm,0.5s						
ENH	**Enshi**	**5.43**	**94**	*e*Pn	**Pn**	**03 11 12.6**	**+0.2**
	comp=E,51nm,0.6s						
ENH				*e*Sn	**Sn**	**03 12 14.5**	**-0.5**
KMI	**Kunming**	**5.68**	**184**	Pn	**Pn**	**03 11 19.0**	**+3.1**
KMI				Sn	**Sn**	**03 12 26.3**	**+5.2**
KMI				smax			
	comp=N,24nm,0.5s						
KMI				smax			
	comp=E,23nm,1.3s						
XAN	**Xi'an**	**5.80**	**55**	Pn	**Pn**	**03 11 20.8**	**+3.3**
XAN				Pg	**Pg**	**03 11 33.8**	**-8.7**
XAN				Sn	**Sn**	**03 12 35.8**	**+12**
XAN				Sg	**Sg**	**03 12 49.9**	**-7.7**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,45nm,0.8s						
CMAR	**Chiang Mai Arr**	**12.89**	**199**	Pn	**Pn**	**03 12 54.9**	**+0.1**
	comp=E,0.9nm,0.3s,baz=205,slow=30,SNR=4.3						
KSRS	**Korea Array**	**21.46**	**65**	P	**P**	**03 14 38.5**	**-1.5**
	comp=E,0.9nm,0.6s,mb3.3,baz=240,slow=9.7,SNR=3.3						
MK31	**Makanchi Array**	**22.72**	**321**	*e*P	**P**	**03 14 54.8**	**+1.5**
MKAR	**Makanchi Array**	**22.72**	**321**	P	**P**	**03 14 54.4**	**+1.0**
	comp=E,2.4nm,1.0s,mb3.6,baz=123,slow=13,SNR=8.5						
AAK	**Ala-Archa**	**25.75**	**305**	P	**P**	**03 15 23.7**	**+1.5**
	comp=E,1.5nm,0.6s,mb3.7,baz=101,slow=17,SNR=4.1						
AML	**Almayashu**	**26.18**	**304**	*e*P	**P**	**03 15 25.6**	**-0.4**
	comp=E,1.4nm,0.7s,mb3.6						
ZALV	**Zalesovo Beam**	**26.67**	**335**	P	**P**	**03 15 30.6**	**+0.2**
	comp=E,0.4nm,0.3s,mb3.4,baz=126,slow=9.7,SNR=3.1						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**03 15 33.6**	**-0.1**
	comp=E,0.8nm,0.5s,mb3.5,baz=128,slow=9.4,SNR=6.0						
KURK	**Kurchatov**	**27.04**	**324**	*e*P	**P**	**03 15 32.9**	**-0.8**
	comp=E,2.9nm,1.0s,mb3.8						
FINES	**FINESS Array B**	**57.40**	**326**	P	**P**	**03 19 38.8**	**-1.0**
	comp=E,2.0nm,0.8s,mb4.2,baz=100,slow=7.9,SNR=6.4						
BUR08	**Bucovina Ar. S**	**60.26**	**310**	*e*P	**P**	**03 19 59.1**	**-0.8**
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**03 20 10.3**	**+0.9**
	comp=E,0.4nm,0.5s,mb3.8,baz=328,slow=7.0,SNR=5.4						
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**03 20 45.4**	**-0.4**
	comp=E,0.1nm,0.4s,mb3.2,baz=61,slow=6.1,SNR=2.7						
COLD	**Coldfoot**	**68.05**	**24**	*e*P	**P**	**03 20 49.8**	**-0.9**
	comp=E,0.6nm,0.8s,mb3.7						
COLA	**College**	**70.02**	**25**	*e*P	**P**	**03 21 02.9**	**-0.2**
	comp=E,0.5nm,0.4s,mb3.8						
INK	**Inuvik**	**72.69**	**19**	*e*P	**P**	**03 21 18.2**	**-0.9**
	comp=E,1.3nm,0.8s,mb3.9						
YKA	**Yellowknife Ar**	**82.20**	**17**	P	**P**	**03 22 11.9**	**-0.4**
	comp=E,0.7nm,0.6s,mb3.7,baz=330,slow=5.3,SNR=9.0						
YKA	**Yellowknife Ar**	**82.20**	**17**	P	**P**	**03 22 11.9**	**-0.4**

DJA 18 03:22:19, 5°.38S×131°.11E, h89km, MLv4.3/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.64**	**99**	P	Pn	03 22 48.0	+1.5
TLE				S	Sn	03 23 07.9	+0.5
AAI	**Ambon**	**3.36**	**300**	P	Pn	03 23 09.4	0.0
SWI	**Sorong**	**4.49**	**2**	P	Pn	03 23 10.3	-14
SWI				S	Sn	03 24 18.5	+2.7
NLAI	**Namlea**	**4.53**	**298**	P	Pn	03 23 26.2	+1.0
LBMI	**Labuha**	**5.93**	**322**	P	Pn	03 23 43.0	-1.3

*ISCJB **18** 03:23:50.1±0.7, 31°.25N±0°.03×103°.89E±0°.04, h8km±5km, mb3.8/10, Error ellipse: s-maj=5.8km s-min=4.5km az=11.2*
*IDC **18** 03:23:50.6±1.2, 31°.18N×103°.70E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.4/1, MS4.1/2, Ms1 4.1/2, ms1mx2.8/44, Error ellipse: s-maj=33.2km s-min=22.0km az=58.0*
*NEIC **18** 03:23:52.0±0.4, 31°.21N×103°.80E, h10km, mb4.0/6, Error ellipse: s-maj=9.9km s-min=6.9km az=51.0*
*BJI **18** 03:23:53.3, 31°.05N×103°.90E, h15km, mB4.4/3, mb4.2/4, ML4.0/17, Ms3.9/7, Ms7 3.8/8*

ISC 18 03:23:52.7±0.7, 31°.20N±0°.03×103°.80E±0°.04, h13km±5km, n25, σ1ŝ11/38, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**187**	Pg	**Pg**	**03 23 57.8**	**-0.9**
CD2				Sg	**Sg**	**03 24 03.3**	**+0.7**
CD2				smax			
	comp=N,29μm,0.7s						
LZH	**Lanzhou**	**4.88**	**0**	*e*Pn	**Pn**	**03 25 13.3**	**+7.5**
LZH				Pg	**Pg**	**03 25 24.6**	**-1.6**
LZH				Sn	**Sn**	**03 26 08.3**	**+6.2**
LZH				Sg	**Sg**	**03 26 30.3**	**+1.0**
LZH				smax			
	comp=N,230nm,1.0s						
LZH				smax			
	comp=E,170nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,7.2s						
ENH	**Enshi**	**4.99**	**99**	*e*Pn	**Pn**	**03 25 07.3**	**0.0**
ENH				*e*Sg	**Sg**	**03 26 34.2**	**+1.4**
XAN	**Xi'an**	**5.17**	**55**	Pn	**Pn**	**03 25 12.6**	**+2.8**
XAN				Pg	**Pg**	**03 25 25.6**	**-6.2**
XAN				Sn	**Sn**	**03 26 19.3**	**+10**
XAN				Sg	**Sg**	**03 26 38.1**	**-0.6**
XAN				smax			
	comp=N,200nm,0.8s						
XAN				smax			
	comp=E,130nm,0.9s						
XAN				LR	LR		
	comp=N,290nm,6.7s						
XAN				LR	LR		
	comp=E,160nm,8.1s						
XAN				LR	LR		
	comp=Z,200nm,9.2s						
GYA	**Guiyang**	**5.35**	**151**	Pg	**Pn**	**03 25 16.9**	**+4.6**
GYA				Sg	**Sn**	**03 26 24.8**	**+11**
GYA				smax			
	comp=N,160nm,0.9s						
GYA				smax			
	comp=E,190nm,0.8s						
KMI	**Kunming**	**6.12**	**189**	Pn	**Pn**	**03 25 21.6**	**-1.3**
KMI				Sn	**Sn**	**03 26 35.3**	**+2.4**
KMI				smax			
	comp=N,33nm,1.8s						
KMI				smax			
	comp=E,39nm,1.3s						
GTA	**Gaotai**	**8.82**	**339**	*e*P	**Pn**	**03 26 06.1**	**+6.2**
GTA				pP		03 26 08.9	
GTA				sP		03 26 11.3	
GTA				S	**Sn**	**03 27 41.1**	**+2.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				LR	LR		
	comp=N,220nm,10.7s						
GTA				LR	LR		
	comp=E,200nm,10.7s						
GTA				LR	LR		
	comp=Z,270nm,10.7s						
WHN	**Wuhan**	**9.09**	**91**	P	**Pn**	**03 26 03.1**	**-0.6**
WHN				S	**Sn**	**03 27 44.1**	**-1.9**
WHN				LR	LR		
	comp=N,990nm,6.2s						
WHN				LR	LR		
	comp=E,780nm,7.3s						
WHN				LR	LR		
	comp=Z,810nm,6.4s						
CMAR	**Chiang Mai Arr**	**13.42**	**200**	Pn	**Pn**	**03 27 03.8**	**+0.7**
	baz=97,slow=36,SNR=2.2						
SONM	**Songino Array**	**16.73**	**6**	Pn	**Pn**	**03 27 47.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=189,slow=13,SNR=8.3						
ULN	**Ulaanbaatar**	**16.83**	**8**	*e*P	**Pn**	**03 27 47.9**	**-0.1**
	comp=Z,2.1nm,0.6s						
SSLB	**Suanglung**	**16.91**	**112**	*e*P	**Pn**	**03 27 48.2**	**-1.0**
	comp=Z,7.5nm,0.8s						
KSRS	**Korea Array**	**20.85**	**66**	P	**P**	**03 28 35.8**	**+1.5**
	comp=Z,9.1nm,0.7s,baz=262,slow=10,SNR=45						
CN2	**Changchun**	**21.22**	**48**	*e*P	**P**	**03 28 39.9**	**+1.7**
CN2				*es*P	sP	03 28 47.0	+3.5
CN2				*e*S	**S**	**03 32 27.8**	**-5.9**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
MK31	**Makanchi Array**	**22.74**	**319**	*e*P	**P**	**03 28 55.1**	**+0.7**
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	**03 28 54.0**	**-0.4**
	comp=Z,7.2nm,1.0s,mb3.6,baz=125,slow=12,SNR=18						
TKM2	**Tokmak 2**	**25.25**	**306**	*e*P	**P**	**03 29 17.3**	**-1.1**
	comp=Z,4.3nm,1.2s,mb3.9						
UCH	**Uchtor**	**25.81**	**303**	*e*P	**P**	**03 29 23.1**	**-0.5**
	comp=Z,2.2nm,1.0s,mb3.6						
ZAA0	**Zalesovo Array**	**26.52**	**335**	*e*P	**P**	**03 29 29.2**	**-0.7**
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**03 29 29.4**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.6,baz=134,slow=8.4,SNR=5.9						
KURK	**Kurchatov**	**27.02**	**323**	P	**P**	**03 29 34.2**	**-0.2**
	comp=Z,2.0nm,0.9s,mb3.6,baz=130,slow=9.3,SNR=4.2						
ASAR	**Alice Springs**	**61.71**	**149**	P	**P**	**03 34 10.4**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.7,baz=336,slow=6.1,SNR=4.7						
COLA	**College**	**69.46**	**26**	*e*P	**P**	**03 35 00.5**	**+0.1**
	comp=Z,2.4nm,0.9s,mb4.1						
INK	**Inuvik**	**72.16**	**19**	*e*P	**P**	**03 35 15.4**	**-1.3**
	comp=Z,1.3nm,0.7s,mb4.0						
YKA	**Yellowknife Ar**	**81.68**	**17**	P	**P**	**03 36 09.8**	**-0.6**
	comp=Z,0.2nm,0.4s,mb3.4,baz=325,slow=5.2,SNR=5.3						

CASC 18 03:28:17.4±1.6, 13°.50N×90°.85W, h20km±7km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.78**	**30**	*e*P	Pb	03 28 32.8	+0.6
PCG	**Pacaya**	**0.93**	**15**	*e*P	Pb	03 28 35.0	+0.3
FUG	**Fuego 3**	**0.95**	**1**	*e*P	Pb	03 28 35.0	-0.1
FG6		**1.06**	**358**	*e*P	Pb	03 28 36.9	-0.2
JAT	**Jato**	**1.12**	**317**	*e*P	Pn	03 28 37.4	-0.5
NBG	**Las Nubes**	**1.19**	**24**	*e*P	Pn	03 28 39.9	+0.9
NBG				*e*S	Sb	03 28 56.7	+2.4
RTR	**El Retiro**	**1.24**	**71**	*e*P	Pn	03 28 39.1	-0.5
SBLS	**San Blas**	**1.25**	**74**	*e*P	Pn	03 28 38.9	-0.8
SNJE	**San Jose**	**1.27**	**73**	*e*P	Pn	03 28 39.5	-0.5
RBDL	**Robledal**	**1.29**	**61**	*e*P	Pn	03 28 40.2	-0.1
RBDL				*e*S	Sn	03 28 57.9	+0.9
TP2	**Tecpan 2**	**1.29**	**353**	*e*P	Pn	03 28 40.7	+0.4
TP2				*e*S	Sn	03 28 57.6	+0.6
BOQS	**Boqueron**	**1.55**	**81**	*e*P	Pn	03 28 43.9	0.0
SNET	**Serv Nac Est T**	**1.59**	**83**	*e*P	Pn	03 28 44.1	-0.3
SNET				*e*S	Sn	03 29 04.4	0.0
MTO2	**Montecristo 2**	**1.71**	**58**	*e*P	Pn	03 28 46.5	+0.5
LFRS	**El Faro**	**1.75**	**86**	*e*P	Pn	03 28 46.6	+0.1
LFRS				*e*S	Sn	03 29 09.5	+1.2
LBRS	**Las Brisas**	**1.78**	**82**	*e*P	Pn	03 28 47.4	+0.4
MRL	**Marmol**	**1.93**	**36**	*e*P	Pn	03 28 50.4	+1.4
SNVI	**San Vicente**	**1.96**	**86**	*e*P	Pn	03 28 50.4	+0.8
SNVI				*e*S	Sn	03 29 15.3	+1.7
CNCH	**Conchagua**	**2.95**	**94**	*e*P	Pn	03 29 04.2	+1.1

*NEIC **18** 03:41:50.0, 36°.99N×29°.20E, h5km, MD3.4(ISK), MD3.5(ATH), After ISK.*
*ISK **18** 03:41:50.9, 36°.99N×29°.20E, h5km, MD3.5*
*IDC **18** 03:41:50.9±1.5, 36°.93N×29°.18E, h0km, mb3.5/2, mb1 3.5/6, mb1mx3.3/25, mbtmp3.4/6, ML3.3/4, Error ellipse: s-maj=30.3km s-min=20.1km az=168.0*
*DDA **18** 03:41:51.9, 36°.97N×29°.24E, h24km±1km, Md3.4*
*ISCJB **18** 03:41:52.1±0.5, 36°.97N±0°.02×29°.20E±0°.02, h3km±4km, mb3.3/2, Error ellipse: s-maj=3.7km s-min=2.9km az=170.4*
*CSEM **18** 03:41:52.2±0.1, 36°.97N×29°.21E, h2km, MD3.5, Error ellipse: s-maj=3.3km s-min=2.7km az=173.0*

ISC 18 03:41:52.7±0.5, 36°.97N±0°.02×29°.21E±0°.02, h5km±3km, n122, σ0ŝ92/161, mb3.3/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**50**	PG	**Pg**	**03 41 57.7**	**-0.7**
GLHS				*e*SG	**Sg**	**03 42 03.1**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.30**	**50**	*i* Pg	**Pg**	**03 41 57.7**	**-0.7**
GLHS				*e*Sg	**Sg**	**03 42 03.1**	**+0.8**
FETY	**Fethiye**	**0.35**	**197**	PG	**Pg**	**03 41 58.8**	**-0.5**
FETY	**Fethiye**	**0.35**	**197**	*i* Pg	**Pg**	**03 41 58.8**	**-0.6**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**03 41 59.6**	**-0.6**
GOLH				*i* S	**Sg**	**03 42 06.3**	**+1.1**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**03 41 59.6**	**-0.6**
GOLH				*i* S	**Sg**	**03 42 06.3**	**+1.1**
TURN	**Turunc**	**0.50**	**259**	*i* P	**Pg**	**03 42 06.8**	**+4.5**
TURN				*i* S	**Sg**	**03 42 18.8**	**+10**
TURN				*i* S	**Sg**	**03 42 20.4**	**+12**
ELL	**Elmali**	**0.60**	**111**	*e*PG	**Pg**	**03 42 04.0**	**-0.2**
ELL				*e*SG	**Sg**	**03 42 13.9**	**+1.9**
ELL	**Elmali**	**0.60**	**111**	*e*Pg	**Pg**	**03 42 04.0**	**-0.2**
ELL				*e*Sg	**Sg**	**03 42 13.9**	**+1.9**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**03 42 05.5**	**-1.3**
DNZL				*i* S	**Sg**	**03 42 16.8**	**+0.5**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**03 42 05.5**	**-1.3**
DNZL				*i* S	**Sg**	**03 42 16.8**	**+0.5**
YER	**Yerkesik**	**0.76**	**283**	*e*PG	**Pg**	**03 42 06.6**	**-0.7**
YER				*e*SG	**Sg**	**03 42 18.4**	**+1.2**
YER	**Yerkesik**	**0.76**	**283**	*e*Pg	**Pg**	**03 42 06.6**	**-0.7**
YER				*e*Sg	**Sg**	**03 42 18.4**	**+1.2**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**03 42 07.8**	**-0.2**
AKAS				*i* S	**Sg**	**03 42 23.6**	**+5.3**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**03 42 07.8**	**-0.2**
DENT	**Denizli**	**0.80**	**350**	*e*PG	**Pg**	**03 42 06.8**	**-1.3**
DENT	**Denizli**	**0.80**	**350**	*e*Pg	**Pg**	**03 42 06.8**	**-1.2**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**03 42 08.9**	**-1.2**
KORT				*i* S	**Sg**	**03 42 26.7**	**+4.7**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**03 42 08.9**	**-1.3**
KORT				*i* S	**Sg**	**03 42 26.7**	**+4.7**
ARG	**Arkhangelos**	**1.15**	**230**	*e*Pb	**Pb**	**03 42 13.8**	**-1.3**
ARG				*e*Sb	**Sb**	**03 42 32.8**	**+2.5**
ARG	**Arkhangelos**	**1.15**	**230**	*e*Pb	**Pb**	**03 42 13.8**	**-1.3**
ARG				*e*Sb	**Sb**	**03 42 32.8**	**+2.5**
ANTB	**Antalya**	**1.16**	**93**	*e*PN	**Pn**	**03 42 14.6**	**-1.0**
ANTB	**Antalya**	**1.16**	**93**	*e*Pn	**Pn**	**03 42 14.6**	**-1.0**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**03 42 14.8**	**-1.3**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**03 42 14.8**	**-1.3**
BCK	**Bucak**	**1.21**	**65**	*e*PN	**Pn**	**03 42 15.3**	**-1.0**
BCK	**Bucak**	**1.21**	**65**	*e*Pn	**Pn**	**03 42 15.3**	**-0.9**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P	**Pg**	**03 42 16.2**	**-0.8**
AYDN				*i* S	**Sg**	**03 42 35.2**	**+1.7**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P	**Pg**	**03 42 16.2**	**-0.8**
AYDN				*i* S	**Sg**	**03 42 35.2**	**+1.7**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**03 42 17.5**	**-0.5**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**03 42 17.5**	**-0.5**
ISP	**Isparta**	**1.35**	**49**	*e*PN	**Pn**	**03 42 17.3**	**-1.0**
ISP	**Isparta**	**1.35**	**49**	P	**Pn**	**03 42 18.3**	**0.0**
ISP	**Isparta**	**1.35**	**49**	*e*Pn	**Pn**	**03 42 17.3**	**-1.0**
ISP	**Isparta**	**1.35**	**49**	P	**Pn**	**03 42 18.3**	**0.0**
KHL	**Karahalli**	**1.38**	**10**	*e*PN	**Pn**	**03 42 17.9**	**-0.7**
KHL	**Karahalli**	**1.38**	**10**	*e*Pn	**Pn**	**03 42 17.9**	**-0.7**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**03 42 19.0**	**-0.1**
BDRM				*i* S	**Sb**	**03 42 38.6**	**+0.6**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**03 42 19.0**	**-0.2**
BDRM				*i* S	**Sb**	**03 42 38.6**	**+0.6**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**03 42 18.6**	**-0.6**
KHAL				*i* S	**Sb**	**03 42 39.5**	**+1.4**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**03 42 18.6**	**-0.6**
KHAL				*i* S	**Sb**	**03 42 39.5**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**03 42 20.4**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**03 42 20.4**	**-0.1**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*PN	**Pn**	**03 42 20.9**	**-0.8**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*Pn	**Pn**	**03 42 20.9**	**-0.9**
MANT	**Manisa**	**1.61**	**341**	*i* P	**Pn**	**03 42 21.3**	**-0.5**
MANT				*i* S	**Sn**	**03 42 41.9**	**-1.0**
MANT	**Manisa**	**1.61**	**341**	*i* P	**Pn**	**03 42 21.3**	**-0.5**
MANT				*i* S	**Sn**	**03 42 41.9**	**-1.0**
GCAM	**G?zelcaml?**	**1.74**	**295**	*i* P	**Pn**	**03 42 23.7**	**+0.1**
GCAM				*i* S	**Sn**	**03 42 47.0**	**+0.9**
GCAM	**G?zelcaml?**	**1.74**	**295**	*i* P	**Pn**	**03 42 23.7**	**+0.1**
GCAM				*i* S	**Sn**	**03 42 47.0**	**+0.9**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*PN	**Pn**	**03 42 25.5**	**-0.4**
SHUT	**Suhut-Afyon**	**1.91**	**33**	*e*Pn	**Pn**	**03 42 25.5**	**-0.4**
SMG	**Samos**	**2.03**	**292**	*e*Pn	**Pn**	**03 42 27.4**	**-0.2**
SMG	**Samos**	**2.03**	**292**	*e*Pn	**Pn**	**03 42 27.4**	**-0.2**
IZM	**Izmir**	**2.10**	**313**	*e*PN	**Pn**	**03 42 28.4**	**-0.2**
DEMI	**Demirci**	**2.11**	**349**	*i* P	**Pn**	**03 42 28.2**	**-0.5**
DEMI				*i* S	**Sn**	**03 42 55.6**	**+0.3**
DEMI	**Demirci**	**2.11**	**349**	*i

TORD Torodi Ar. Bea 34.18 233 P P 03 48 37.8 -1.3
0.4nm,0.5s,mb3.6,baz=34,slow=8.6,SNR=18

*ISK **18** 03:47:54.0,37.°01N×29.°16E,h5km,MD2.8*
*ISCJB **18** 03:47:56.1±0.6,36.°98N±0.°03×29.°19E±0.°05,h3km±9km, Error ellipse: s-maj=6.5km s-min=4.9km az=13.9*
*CSEM **18** 03:47:56.2±0.2,36.°97N×29.°22E,h8km,MD2.8,Error ellipse: s-maj=4.3km s-min=3.0km az=92.0*
*DDA **18** 03:47:58.3,37.°09N×29.°21E,h7km±4km,Md3.0*
ISC 18 03:47:56.6±0.6,36.°98N±0.°03×29.°20E±0.°04,h11km±8km, n20,σ0°87/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**54**	*e*PG	**Pg**	**03 48 01.4**	**-1.2**
GLHS				*e*SG	**Sg**	**03 48 06.4**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.30**	**54**	*e*Pg	**Pg**	**03 48 01.4**	**-1.2**
GLHS				*e*Sg	**Sg**	**03 48 06.4**	**-0.3**
FETY	**Fethiye**	**0.35**	**195**	*e*PG	**Pg**	**03 48 02.6**	**-1.1**
FETY				*e*SG	**Sg**	**03 48 08.8**	**+0.4**
FETY	**Fethiye**	**0.35**	**195**	*e*Pg	**Pg**	**03 48 02.6**	**-1.1**
FETY				*e*Sg	**Sg**	**03 48 08.8**	**+0.4**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**03 48 03.8**	**-0.5**
GOLH				*i* S	**Sg**	**03 48 10.0**	**+0.5**
GOLH	**Golhisar**	**0.39**	**48**	*i* P	**Pg**	**03 48 03.8**	**-0.5**
GOLH				*i* S	**Sg**	**03 48 10.0**	**+0.5**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**03 48 07.5**	**-1.0**
ELL				*e*SG	**Sg**	**03 48 18.3**	**+1.7**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**03 48 07.5**	**-1.0**
ELL				*e*Sg	**Sg**	**03 48 18.3**	**+1.7**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**03 48 10.4**	**-0.2**
DNZL				*i* S	**Sg**	**03 48 19.7**	**-0.2**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**03 48 10.4**	**-0.2**
DNZL				*i* S	**Sg**	**03 48 19.7**	**-0.3**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**03 48 12.4**	**+0.1**
AKAS				*i* S	**Sg**	**03 48 29.2**	**+6.3**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**03 48 12.4**	**+0.1**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pb**	**03 48 20.6**	**+0.3**
AYDN				*i* S	**Sg**	**03 48 38.7**	**+1.7**
AYDN	**Tasoluk**	**1.25**	**303**	*i* P	**Pb**	**03 48 20.6**	**+0.3**
AYDN				*i* S	**Sg**	**03 48 38.7**	**+1.7**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**03 48 19.9**	**-1.1**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**03 48 20.0**	**-1.1**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**03 48 21.6**	**-0.1**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**03 48 21.6**	**-0.1**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**03 48 40.0**	**+0.9**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**03 48 40.0**	**+0.9**

*IDC **18** 03:50:40.1±1.3,31.°11N×103.°78E,h0km,mb3.7/6, mb1 3.8/7,mb1mx3.5/24,mbtmp3.8/7,ML3.5/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/31,Error ellipse: s-maj=40.8km s-min=22.1km az=48.0*
*ISCJB **18** 03:50:41.2±0.5,31.°29N±0.°04×103.°91E±0.°06,h10km, mb3.6/6,Error ellipse: s-maj=7.2km s-min=5.8km az=16.4*
*NEIC **18** 03:50:41.8±0.7,31.°13N×103.°81E,h10km,mb3.7/3,Error ellipse: s-maj=16.9km s-min=9.7km az=38.0*
*BJI **18** 03:50:42.3,31.°26N×103.°72E,h8km,ML3.9/11,Ms3.9/2, Ms7 3.5/2*
ISC 18 03:50:42.6±0.5,31.°27N±0.°03×103.°92E±0.°05,h10km,n21, σ1°07/29,mb3.6/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.39**	**200**	Pg	**Pg**	**03 50 49.3**	**-0.9**
CD2				Sg	**Sg**	**03 50 55.5**	**+0.1**
CD2				smax			
	comp=N,10μm,1.0s						
LZH	**Lanzhou**	**4.80**	**359**	Pg	**Pg**	**03 52 14.3**	**-0.3**
LZH				Sn	**Sn**	**03 52 59.9**	**+9.2**
LZH				Sg	**Sg**	**03 53 15.8**	**-1.0**
LZH				smax			
	comp=N,110nm,1.2s						
LZH				smax			
	comp=E,110nm,1.1s						
LZH				LR	LR		
	comp=E,700nm,6.1s						
LZH				LR	LR		
	comp=Z,940nm,7.3s						
ENH	**Enshi**	**4.90**	**100**	*e*Pn	**Pn**	**03 51 56.9**	**+0.6**
ENH				*e*Pg	**Pg**	**03 52 15.1**	**-1.4**
ENH				*e*Sn	**Sn**	**03 52 53.9**	**+0.8**
XAN	**Xi'an**	**5.04**	**56**	Pg	**Pg**	**03 52 13.6**	**-5.6**
XAN				Sg	**Sg**	**03 53 23.0**	**-1.6**
XAN				smax			
	comp=N,100nm,0.6s						
XAN				smax			
	comp=E,40nm,0.7s						
GYA	**Guiyang**	**5.37**	**153**	Pg	**Pg**	**03 52 21.4**	**-4.1**
GYA				smax			
	comp=N,190nm,0.9s						
GYA				smax			
	comp=E,160nm,0.9s						
WHN	**Wuhan**	**8.99**	**92**	P	**Pn**	**03 53 01.8**	**+9.2**
NJ2	**Nanjing**	**12.75**	**83**	*e*P	**Pn**	**03 53 47.6**	**+3.6**
NJ2				pP		03 53 50.9	
NJ2				sP		03 53 54.3	
NJ2				PP		03 53 58.0	
NJ2				S	**Sn**	**03 56 13.0**	**+6.9**
NJ2				sS		03 56 19.0	
NJ2				LR	LR		
	comp=N,560nm,15.9s						
NJ2				LR	LR		
	comp=E,240nm,8.3s						
NJ2				LR	LR		
	comp=Z,280nm,10.6s						
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**03 54 37.7**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=192,slow=12,SNR=8.2						
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**03 54 37.7**	**+1.7**
ULN	**Ulaanbaatar**	**16.74**	**7**	*e*P	**Pn**	**03 54 38.4**	**+1.2**
	comp=Z,1.2nm,0.5s						
KSRS	**Korea Array**	**20.73**	**66**	P	**P**	**03 55 24.3**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=255,slow=9.7,SNR=11						
KSRS				LR	LR	04 04 43.1	
	comp=Z,64nm,18.1s,baz=230,slow=40						
CN2	**Changchun**	**21.09**	**48**	*e*P	**P**	**03 55 29.0**	**+1.9**
CN2				*e*S	**S**	**03 59 16.8**	**-5.0**
MK31	**Makanchi Array**	**22.75**	**319**	*e*P	**P**	**03 55 45.0**	**+0.2**
MKAR	**Makanchi Array**	**22.75**	**319**	P	**P**	**03 55 44.0**	**-0.7**
	comp=Z,1.9nm,0.8s,mb3.6,baz=126,slow=12,SNR=16						
AML	**Almayashu**	**26.41**	**303**	*e*P	**P**	**03 56 19.8**	**+0.4**
	comp=Z,2.0nm,0.9s,mb3.6						
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**03 56 20.2**	**+0.2**
	comp=Z,1.3nm,0.4s,mb3.8,baz=134,slow=8.5,SNR=6.3						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	**03 56 24.7**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.5,baz=128,slow=9.6,SNR=8.6						
KURK	**Kurchatov**	**27.01**	**323**	*e*P	**P**	**03 56 23.9**	**-0.7**
	comp=Z,3.4nm,1.2s,mb3.8						
ASAR	**Alice Springs**	**61.72**	**149**	P	**P**	**04 00 60.0**	**-1.2**
	comp=Z,0.6nm,0.8s,mb3.8,baz=337,slow=6.3,SNR=6.4						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**04 02 59.1**	**-1.1**
	comp=Z,0.1nm,0.5s,mb3.0,baz=330,slow=5.2,SNR=3.0						
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**04 02 59.1**	**-1.1**

*IDC **18** 03:51:41.4±0.5,30.°86N×103.°45E,h0km,mb4.2/29, mb1 4.3/31,mb1mx4.3/36,mbtmp4.2/31,ML4.1/1,Error ellipse: s-maj=19.9km s-min=12.3km az=46.0*
*ISCJB **18** 03:51:43.0±0.7,30.°83N±0.°04×103.°47E±0.°04,h21km±5km, mb4.3/80,MS3.6/3,Error ellipse: s-maj=6.3km s-min=5.1km az=163.2*
*BJI **18** 03:51:43.1,30.°88N×103.°67E,h10km,mB4.6/6,mb4.5/13, ML4.2/15,Ms4.2/15,Ms7 4.0/12*
*NEIC **18** 03:51:43.1±0.2,30.°86N×103.°55E,h10km,mb4.5/31,Error ellipse: s-maj=5.9km s-min=4.2km az=28.0*
*MOS **18** 03:51:44.5±0.9,30.°84N×103.°50E,h33km,mb4.5/50,Error ellipse: s-maj=10.3km s-min=5.3km az=111.3*
*SZGRF **18** 03:51:48.9,30.°51N×102.°63E,h33km,mb4.7,Sichuan, China*
ISC 18 03:51:43.8±0.7,30.°80N±0.°03×103.°52E±0.°04,h15km±4km, n185,σ0°87/190,mb4.3/80,MS3.6/3,3C-3D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.23**	**62**	Pg	**Pg**	**03 51 49.8**	**+0.8**
CD2				Sg	**Sg**	**03 51 53.8**	**+1.2**
CD2				smax			
	comp=N,67μm,0.4s						
ENH	**Enshi**	**5.18**	**94**	*e*Pg	**Pg**	**03 53 21.2**	**-1.8**
ENH				*e*Sg	**Sg**	**03 54 28.0**	**-2.1**
XAN	**Xi'an**	**5.60**	**53**	Pn	**Pn**	**03 53 05.9**	**-0.6**
XAN				Sg	**Sg**	**03 54 41.0**	**-2.5**
XAN				smax			
	comp=N,730nm,1.0s						
XAN				smax			
	comp=E,170nm,0.8s						
XAN				LR	LR		
	comp=E,170nm,4.6s						
XAN				LR	LR		
	comp=Z,160nm,3.9s						
KMI	**Kunming**	**5.70**	**187**	Pn	**Pn**	**03 53 08.9**	**+1.0**
KMI				Sn	**Sn**	**03 54 10.9**	**-2.1**
KMI				smax			
	comp=N,62nm,1.1s						
KMI				smax			
	comp=E,73nm,1.0s						
KMI				LR	LR		
	comp=N,530nm,5.8s						
KMI				LR	LR		
	comp=E,640nm,4.7s						
LSA	**Lhasa**	**10.75**	**267**	P	**Pn**	**03 54 22.0**	**+4.8**
LSA				LR	LR		
	comp=E,450nm,7.9s						
LSA				LR	LR		
	comp=Z,620nm,8.4s						
LSA	**Lhasa**	**10.75**	**267**	*e*P	**Pn**	**03 54 20.0**	**+2.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	**Lhasa**	**10.75**	**267**	*e*Pn	**Pn**	**03 54 19.9**	**+2.7**
	comp=Z,6.6nm,0.5s						
SHL	**Shillong**	**11.51**	**246**	*e*P	**Pn**	**03 54 28.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**11.96**	**31**	*e*P	**Pn**	**03 54 34.4**	**+0.7**
HHC				PP		03 54 43.8	
HHC				S	**Sn**	**03 56 48.1**	**+1.3**
HHC				SS		03 57 01.8	
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,88nm,4.3s						
HHC				LR	LR		
	comp=N,270nm,6.1s						
HHC				LR	LR		
	comp=E,630nm,5.7s						
HHC				LR	LR		
	comp=Z,210nm,5.4s						
CMAR	**Chiang Mai Arr**	**12.97**	**200**	Pn	**Pn**	**03 54 48.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=205,slow=33,SNR=3.0						
QZH	**Quanzhou**	**14.55**	**110**	P	**Pn**	**03 55 11.8**	**+2.6**
QZH				S	**Sn**	**03 57 54.9**	**+4.7**
QZH				LR	LR		
	comp=N,540nm,4.0s						
QZH				LR	LR		
	comp=E,1μm,6.1s						
QZH				LR	LR		
	comp=Z,2μm,10.2s						
GUN	**Gumba**	**15.65**	**264**	*e*P	**Pn**	**03 55 22.7**	**-1.1**
	comp=Z,35nm,0.8s						
PKI	**Pulchoki**	**16.14**	**263**	*e*P	**Pn**	**03 55 29.9**	**-0.2**
	comp=Z,30nm,0.5s						
PKIN	**Phulchoki**	**16.15**	**263**	*e*P	**Pn**	**03 55 30.0**	**-0.2**
	comp=Z,38nm,0.6s						
KKN	**Kakani**	**16.19**	**264**	*e*P	**Pn**	**03 55 29.8**	**-1.0**
	comp=Z,58nm,0.6s						
DMN	**Daman**	**16.39**	**263**	*e*P	**Pn**	**03 55 32.8**	**-0.5**
	comp=Z,18nm,0.5s						
SSLB	**Suanglung**	**16.99**	**110**	*e*Pn	**Pn**	**03 55 41.5**	**+0.5**
	comp=Z,19nm,1.0s						
SONM	**Songino Array**	**17.15**	**7**	P	**Pn**	**03 55 42.7**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=187,slow=11,SNR=17						
SONM	**Songino Array**	**17.15**	**7**	P	**Pn**	**03 55 42.7**	**-0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**17.15**	**7**	P	**Pn**	**03 55 42.6**	**-0.2**
ULN	**Ulaanbaatar**	**17.26**	**8**	*e*P	**Pn**	**03 55 45.5**	**+1.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ULN	**Ulaanbaatar**	**17.26**	**8**	*e*P	**Pn**	**03 55 45.5**	**+1.3**
	comp=Z,3.8nm,0.6s						
ZAK	**Zakamensk**	**19.56**	**360**	*e*P	**Pn**	**03 56 10.6**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TLY	**Talaya**	**20.86**	**0**	*e*P	**P**	**03 56 24.7**	**-0.3**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	**Talaya**	**20.86**	**0**	*e*P	**P**	**03 56 24.7**	**-0.3**
	comp=Z,3.8nm,0.9s						
MOY	**Mondy**	**20.93**	**356**	*e*P	**P**	**03 56 27.3**	**+1.5**
KSRS	**Korea Array**	**21.23**	**65**	P	**P**	**03 56 29.8**	**+0.6**
	comp=Z,3.8nm,0.6s,mb3.9,baz=242,slow=9.0,SNR=13						
KSRS	**Korea Array**	**21.23**	**65**	P	**P**	**03 56 29.8**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
IRK	**Irkutsk**	**21.43**	**1**	*e*P	**P**	**03 56 31.8**	**+0.7**
IRK				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.6						
JOW	**Kunigami**	**22.04**	**94**	P	**P**	**03 56 39.3**	**+1.4**
	comp=Z,21nm,0.8s,mb4.6,baz=246,slow=14,SNR=3.8						
MK31	**Makanchi Array**	**22.88**	**320**	*e*P	**P**	**03 56 47.2**	**+0.5**
MKAR	**Makanchi Array**	**22.88**	**320**	P	**P**	**03 56 47.2**	**+0.5**
	comp=Z,2.2nm,0.5s,mb3.8,baz=122,slow=10,SNR=11						
MKAR				PcP	PcP	04 00 35.8	-1.3
	comp=Z,0.6nm,0.7s,baz=100,slow=1.4,SNR=3.6						
MKAR	**Makanchi Array**	**22.88**	**320**	P	**P**	**03 56 47.2**	**+0.5**
MKAR						04 00 35.8	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSH	**Kashi**	**24.07**	**299**	*e*P	**P**	**03 57 02.3**	**+3.8**
KSH				pmax	pmax		
	comp=Z,50nm,3.3s						
TKM2	**Tokmak 2**	**25.28**	**306**	*e*P	**P**	**03 57 11.0**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TKM2	**Tokmak 2**	**25.28**	**306**	*e*P	**P**	**03 57 11.0**	**+1.5**
	comp=Z,3.1nm,0.8s,mb3.9						
AAK	**Ala-Archa**	**25.96**	**305**	P	**P**	**03 57 16.1**	**+0.5**
	comp=Z,1.9nm,0.6s,mb3.8,baz=129,slow=6.1,SNR=7.4						
AAK	**Ala-Archa**	**25.96**	**305**	*ce*P	**P**	**03 57 18.4**	**+2.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb3.7						
AAK	**Ala-Archa**	**25.96**	**305**	*e*P	**P**	**03 57 16.1**	**+0.4**
	comp=Z,6.7nm,0.9s,mb4.2						
AML	**Almayashu**	**26.39**	**304**	*e*P	**P**	**03 57 21.0**	**+1.5**
	comp=Z,2.9nm,0.8s,mb3.9						
EKS2	**Erkin-Say**	**26.47**	**305**	*e*P	**P**	**03 57 21.1**	**+0.8**
	comp=Z,2.6nm,0.8s,mb3.8						
ZAA0	**Zalesovo Array**	**26.78**	**335**	*e*P	**P**	**03 57 22.3**	**-0.6**
ZALV	**Zalesovo Beam**	**26.78**	**335**	P	**P**	**03 57 22.6**	**-0.3**
	comp=Z,8.8nm,0.6s,mb4.5,baz=135,slow=9.3,SNR=28						
ZALV	**Zalesovo Beam**	**26.78**	**335**	P	**P**	**03 57 22.6**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**27.19**	**324**	P	**P**	**03 57 26.6**	**-0.1**
	comp=Z,5.9nm,0.8s,mb4.2,baz=129,slow=9.4,SNR=20						
KURK				PcP	PcP	04 00 46.0	-0.7
	comp=Z,0.9nm,0.4s,baz=106,slow=1.8,SNR=3.6						
KURK	**Kurchatov**	**27.19**	**324**	*ce*P	**P**	**03 57 26.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
BOD	**Bodaibo**	**27.97**	**12**	*e*P	**P**	**03 57 33.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
BVAR	**Borovoye Array**	**32.72**	**322**	P	**P**	**03 58 15.8**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=101,slow=7.9,SNR=6.5						
BVAR				PcP	PcP	04 01 00.9	+0.1
	comp=Z,1.7nm,0.5s,baz=136,slow=2.9,SNR=9.1						
BVAR	**Borovoye Array**	**32.72**	**322**	P	**P**	**03 58 15.8**	**+0.2**
BVAR						04 01 00.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**32.79**	**322**	*de*P	**P**	**03 58 16.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
YAK	**Yakutsk**	**35.57**	**21**	*e*P	**P**	**03 58 39.2**	**-1.0**
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
ABKAR	**Akbulak array**	**37.50**	**312**	*e*P	**P**	**03 58 57.1**	**+0.3**
	comp=N,2.0nm,0.8s,mb4.0						
KAPI	**Kappang**	**38.85**	**154**	P	**P**	**03 59 08.0**	**-0.5**
	comp=N,3.4nm,0.4s,mb4.5,baz=336,slow=12,SNR=3.2						
AKTK	**Aktyubinsk**	**38.98**	**314**	P	**P**	**03 59 08.7**	**-0.6**
AKTO	**Aktyubinsk**	**38.98**	**314**	P	**P**	**03 59 08.7**	**-0.6**
	comp=N,0.7nm,0.5s,mb3.7,baz=85,slow=12,SNR=3.4						
AKTO	**Aktyubinsk**	**38.98**	**314**	P	**P**	**03 59 08.7**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARU	**Arti**	**40.37**	**323**	*d*P	**P**	**03 59 20.9**	**+0.2**
ARU				S	**S**	**04 05 27.7**	**-0.3**
ARU				SS	SS	04 08 20.1	-6.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
ARU	**Arti**	**40.37**	**323**	*e*P	**P**	**03 59 20.7**	**-0.1**
	comp=Z,6.9nm,0.7s,mb4.5						
TIXI	**Tiksi**	**43.15**	**11**	*e*P	**P**	**03 59 42.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
TIXI	**Tiksi**	**43.15**	**11**	*e*P	**P**	**03 59 41.9**	**-1.4**
	comp=Z,4.0nm,0.4s,mb4.5						
PEA0B	**Petropavlovsk-**	**44.76**	**44**	*e*P	**P**	**03 59 56.1**	**-0.4**
PETK	**Petropavlovsk-**	**44.76**	**44**	P	**P**	**03 59 56.3**	**-0.2**
	comp=Z,2.5nm,0.8s,mb4.1,baz=223,slow=5.9,SNR=4.3						
PETK	**Petropavlovsk-**	**44.76**	**44**	P	**P**	**03 59 56.3**	**-0.2**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ZEI	**Tsey**	**48.30**	**302**	*e*P	**P**	**04 00 24.5**	**0.0**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KIV	**Kislovodsk**	**49.06**	**303**	*e*P	**P**	**04 00 30.7**	**+0.5**
KIV				*e*S	**S**	**04 07 33.0**	**-1.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,21nm,16.0s,MS3.2						
KLMR	**Klimovskoe**	**51.03**	**326**	*e*P	**P**	**04 00 43.5**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.8						
BILL	**Bilibino**	**51.66**	**25**	*e*P	**P**	**04 00 49.1**	**-0.5**
BILL				*e*		04 02 44.6	
BILL				*e*S	**S**	**04 08 11.8**	**+1.8**
BILL				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.9						
BILL	**Bilibino**	**51.66**	**25**	*e*P	**P**	**04 00 48.7**	**-0.9**
	comp=Z,3.3nm,0.8s,mb4.3						
OBN	**Obninsk**	**52.37**	**318**	*e*P	**P**	**04 00 54.7**	**-0.3**
OBN				*e*S	**S**	**04 08 19.9**	**-0.1**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.8						
ANN	**Anapa**	**52.69**	**305**	*e*P	**P**	**04 00 56.2**	**-1.4**
ANN				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
JOF	**Joensuu**	**55.01**	**328**	*e*P	**P**	**04 01 14.2**	**-0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
JOF	**Joensuu**	**55.01**	**328**	*ep*	**P**	**04 01 14.2**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.4						
BRTR	**Keskin Array B**	**56.45**	**300**	P	**P**	**04 01 25.1**	**+0.1**
	comp=Z,1.3nm,0.9s,mb4.0,baz=80,slow=5.6,SNR=5.8						
BRTR	**Keskin Array B**	**56.45**	**300**	P	**P**	**04 01 25.1**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KEV	**Kevo**	**56.80**	**336**	*e*P	**P**	**04 01 26.6**	**-0.4**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KEV	**Kevo**	**56.80**	**336**	*ep*	**P**	**04 01 26.6**	**-0.4**
	comp=Z,0.7nm,0.4s,mb4.0						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**04 01 28.7**	**-1.5**
	comp=Z,4.5nm,0.7s,mb4.6,baz=71,slow=7.7,SNR=4.9						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**04 01 28.7**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**57.33**	**336**	P	**P**	**04 01 29.9**	**-0.9**
	comp=Z,4.4nm,0.8s,mb4.5,baz=88,slow=7.5,SNR=11						
ARCES				PcP	PcP	04 02 24.5	-0.1
	comp=Z,2.8nm,0.6s,baz=85,slow=4.1,SNR=19						
ARCES	**ARCESS Array B**	**57.33**	**336**	P	**P**	**04 01 29.9**	**-0.8**
ARCES						04 02 24.5	
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	**ARCESS Array B**	**57.33**	**336**	P	**P**	**04 01 29.9**	**-0.9**
ARCES				PcP	PcP	04 02 24.5	-0.1
KAF	**Kangasniemi**	**57.37**	**327**	*e*P	**P**	**04 01 30.9**	**-0.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**57.37**	**327**	*ep*	**P**	**04 01 30.9**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**57.54**	**326**	P	**P**	**04 01 31.9**	**-0.4**
	comp=Z,4.5nm,0.6s,mb4.7,baz=94,slow=7.5,SNR=27						
FINES	**FINESS Array B**	**57.54**	**326**	P	**P**	**04 01 31.9**	**-0.4**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES	**FINESS Array B**	**57.54**	**326**	P	**P**	**04 01 31.9**	**-0.4**
WRAB	**Tennant Creek**	**58.50**	**146**	*e*P	**P**	**04 01 40.3**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**58.50**	**146**	*e*P	**P**	**04 01 40.3**	**+0.8**
	comp=Z,7.9nm,0.8s,mb4.8						
COEN	**Coen**	**58.60**	**133**	*e*P	**P**	**04 01 40.8**	**+0.5**
	comp=Z,28nm,0.7s,mb5.4						
SPITS	**Spitsbergen Ar**	**59.51**	**346**	P	**P**	**04 01 43.6**	**-2.3**
	comp=Z,10.0nm,1.0s,mb4.8,baz=83,slow=7.6,SNR=10.0						
SPITS	**Spitsbergen Ar**	**59.51**	**346**	P	**P**	**04 01 43.6**	**-2.2**
SPITS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLR	**Muntele Rosu**	**60.50**	**308**	P	**P**	**04 01 53.2**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.3,baz=126,slow=8.3,SNR=3.5						
MLR	**Muntele Rosu**	**60.50**	**308**

BRG Berggiesshubel 66.53 316 *eP* **P 04 02 32.9 0.0**
comp=Z,2.0nm,0.5s,mb4.4
CLL Collm 66.93 317 *eP* **P 04 02 35.8 +0.3**
comp=Z,2.0nm,1.0s,mb4.1
CLL Collm 66.93 317 *eP* **P 04 02 36.0 +0.5**
CLL Collm 66.93 317 *eP* **P 04 02 36.0 +0.5**
GEC2 GERESS Array S 67.40 314 *eP* **P 04 02 38.6 +0.1**
comp=Z,3.0nm,1.2s,mb4.2
GEC2 GERESS Array S 67.40 314 *eP* **P 04 02 38.6 +0.1**
GEC2 pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
GERES GERESS Array B 67.40 314 P **P 04 02 38.6 +0.1**
comp=Z,0.9nm,0.6s,mb4.0,baz=74,slow=5.7,SNR=10.0
GERES GERESS Array B 67.40 314 P **P 04 02 38.6 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.6s
BSEG Bad Segeberg 67.51 320 *eP* **P 04 02 39.7 +0.6**
comp=Z,10.0nm,1.0s,mb4.8
TANN Tannenbergstha 67.58 316 *eP* **P 04 02 39.9 +0.3**
comp=Z,2.0nm,1.1s,mb4.1
GUNZ Gunzen 67.67 316 *eP* **P 04 02 40.2 0.0**
WET Wettzell 67.79 315 *eP* **P 04 02 41.2 +0.3**
comp=Z,3.0nm,1.2s,mb4.2
WET Wettzell 67.79 315 *eP* **P 04 02 41.2 +0.3**
WET pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
COLD Coldfoot 67.95 24 *eP* **P 04 02 41.8 +0.2**
comp=Z,4.0nm,0.9s,mb4.5
ROTZ Rotzenmuhle 67.97 316 *eP* **P 04 02 41.5 -0.5**
comp=Z,4.0nm,1.0s,mb4.4
MOX Moxa 67.99 317 *eP* **P 04 02 42.9 +0.7**
comp=Z,2.0nm,1.0s,mb4.1
NRDL Niedersach Rie 68.17 319 *eP* **P 04 02 43.7 +0.5**
comp=Z,6.0nm,1.0s,mb4.6
CLZ Clausthal 68.27 318 *eP* **P 04 02 44.3 +0.4**
comp=Z,8.0nm,0.9s,mb4.8
CLZ Clausthal 68.27 318 *eP* **P 04 02 44.3 +0.4**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
RJOB Jochberg 68.37 313 *eP* **P 04 02 45.3 +0.7**
comp=Z,11nm,1.6s,mb4.6
GRA1 Grafenberg Arr 68.59 316 *eP* **P 04 02 45.7 -0.2**
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 68.59 316 *eP* **P 04 02 45.7 -0.2**
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 68.59 316 *eP* **P 04 02 45.7 -0.2**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 68.59 316 *eP* **P 04 02 45.7 -0.2**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PPLA Purkeypile 69.17 28 *eP* **P 04 02 49.5 +0.2**
comp=Z,5.4nm,0.9s,mb4.5
KTH Kantishna Hill 69.38 27 *eP* **P 04 02 50.1 -0.5**
comp=Z,1.5nm,0.5s,mb4.2
TRF Thorofare Moun 69.68 27 *eP* **P 04 02 52.8 +0.3**
comp=Z,2.5nm,1.0s,mb4.1
COLA College 69.92 26 *eP* **P 04 02 53.6 -0.3**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 69.92 26 *eP* **P 04 02 53.5 -0.3**
comp=Z,9.6nm,0.8s,mb4.8
KMBO Kilima Mbogo 70.35 256 P **P 04 02 57.2 -0.1**
comp=Z,1.7nm,0.8s,mb4.0,baz=175,slow=24,SNR=2.7
KMBO Kilima Mbogo 70.35 256 P **P 04 02 57.3 0.0**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
DAVOX Davos/Dischmat 70.57 313 P **P 04 02 58.1 -0.1**
comp=Z,2.5nm,0.6s,mb4.3,baz=119,slow=5.0,SNR=4.4
PMR Palmer 71.05 29 *eP* **P 04 03 00.0 -0.9**
PMR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
PMR Palmer 71.05 29 *eP* **P 04 02 60.0 -0.9**
comp=Z,3.9nm,0.5s,mb4.6
OHAK Old Harbor 71.30 34 *eP* **P 04 03 02.4 0.0**
comp=Z,32nm,1.4s,mb5.1
CDF Champ du Feu 71.48 316 *eP* **P 04 03 03.6 -0.1**
comp=Z,6.1nm,0.8s,mb4.3
CDF Champ du Feu 71.48 316 *eP* **P 04 03 03.6 -0.1**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CDF Champ du Feu 71.48 316 *eP* **P 04 03 03.6 -0.1**
comp=Z,3.0nm,0.8s,mb4.3
WLF Walferdange 71.60 317 *eP* **P 04 03 05.0 +0.6**
comp=Z,11nm,1.0s,mb4.7
STKA Stephens Creek 72.03 147 P **P 04 03 07.5 +0.4**
comp=Z,1.7nm,0.6s,mb4.2,baz=321,slow=21,SNR=4.6
STKA Stephens Creek 72.03 147 P **P 04 03 07.5 +0.4**
INK Inuvik 72.61 19 *eP* **P 04 03 09.8 -0.3**
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 72.61 19 *eP* **P 04 03 09.8 -0.3**
comp=Z,4.1nm,0.9s,mb4.4
LPG La Plagne 73.09 313 *eP* **P 04 03 14.1 +0.7**
comp=Z,14nm,0.8s,mb4.6
LPG La Plagne 73.09 313 *eP* **P 04 03 14.1 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPG La Plagne 73.09 313 *eP* **P 04 03 14.1 +0.7**
comp=Z,7.2nm,0.8s,mb4.7
LPG La Plagne 73.09 313 *eP* **P 04 03 14.1 +0.7**
comp=Z,14nm,0.8s,mb4.9
LPL La Plagne 73.09 313 *eP* **P 04 03 14.0 +0.6**
comp=Z,8.2nm,0.6s,mb4.5
LPL La Plagne 73.09 313 *eP* **P 04 03 14.0 +0.6**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 73.09 313 *eP* **P 04 03 14.0 +0.6**
comp=Z,4.1nm,0.6s,mb4.5
LPL La Plagne 73.09 313 *eP* **P 04 03 14.0 +0.6**
comp=Z,8.0nm,0.6s,mb4.8
BNI Bardonecchia 73.33 313 *eP* **P 04 03 14.7 -0.1**
BNI pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
BNI Bardonecchia 73.33 313 *eP* **P 04 03 14.7 -0.1**
comp=Z,1.5nm,0.6s,mb4.1
EKA Eskdalemuir Ar 73.92 325 P **P 04 03 17.2 -0.8**
comp=Z,1.2nm,0.7s,mb3.9,baz=70,slow=4.4,SNR=4.9
EKA Eskdalemuir Ar 73.92 325 P **P 04 03 17.3 -0.7**
EKA pmax pmax
comp=Z,1.0nm,0.7s
SMF Signal de Mont 74.36 315 *eP* **P 04 03 20.6 -0.2**
AVF Avril sur Loir 74.58 315 *eP* **P 04 03 21.8 -0.3**
BORG Borgarnes 75.56 339 P **P 04 03 27.7 +0.3**
comp=Z,14nm,1.1s,mb4.8,baz=315,slow=5.7,SNR=2.6
BORG Borgarnes 75.56 339 P **P 04 03 27.7 +0.3**
BORG pmax pmax
comp=Z,14nm,1.1s
YKA Yellowknife Ar 82.13 17 P **P 04 04 03.4 -0.1**
comp=Z,1.5nm,0.7s,mb4.0,baz=329,slow=5.2,SNR=19
YKA Yellowknife Ar 82.13 17 P **P 04 04 03.4 -0.1**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 82.13 17 P **P 04 04 03.4 -0.1**
ESDC Sonseca Array 82.85 312 P **P 04 04 07.6 -0.1**
comp=Z,0.2nm,0.5s,mb3.4,baz=49,slow=5.1,SNR=6.0
EDM Edmonton 90.39 21 *eP* **P 04 04 45.4 +1.0**
FFC Flin Flon 92.04 14 *iP* **P 04 04 52.9 +0.9**
TORD Torodi Ar. Bea 93.24 287 P **P 04 04 56.8 -1.5**
comp=Z,0.7nm,1.0s,mb4.0,baz=67,slow=3.1,SNR=11
TXAR Lajitas Array 114.84 26 PKP PKiKP 04 10 24.2 0.0
comp=Z,0.2nm,0.5s,baz=161,slow=1.7,SNR=6.1
TXAR Lajitas Array 114.84 26 PKiKP 04 10 24.2 -0.1
TXAR Lajitas Array 114.84 26 PKP PKiKP 04 10 24.2 0.0
ROSC El Rosal 144.49 356 PKP PKPdf 04 11 19.7 -0.6
comp=Z,9.2nm,0.5s,baz=283,slow=10,SNR=10
OTAV Otavalo 149.08 4 *e*PKPbc PKPbc 04 11 32.7 +0.5

IDC 18 03:54:00.7±1.1, 15°.11S×177°.42W, h0km, mb3.9/7, mb1 4.2/8, mb1mx4.1/16, mbtmp3.9/8, ML1.9/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/20, Error ellipse: s-maj=50.9km s-min=20.7km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.59**	**78**		Pn		Pn	03 55 26.2	+1.1
	2.3nm,0.3s,baz=83,slow=21,SNR=4.0								
AFI					LR		LR	03 57 10.6	
	comp=Z,396nm,18.3s,baz=270,slow=34								
URZ	**Urewera**	**23.57**	**191**		LR		LR	04 06 51.3	
	comp=Z,171nm,19.6s,baz=212,slow=33								
PPT	**Papeete**	**26.82**	**99**		LR		LR	04 07 27.1	
	comp=Z,176nm,20.1s,baz=272,slow=30								
STKA	**Stephens Creek**	**40.85**	**239**		P		P	04 01 44.2	-0.2
	7.4nm,0.9s,baz=110,slow=3.1,SNR=5.6								
STKA					LR		LR	04 16 44.6	
	comp=Z,166nm,19.2s,baz=26,slow=33								
ASAR	**Alice Springs**	**46.52**	**252**		P		P	04 02 29.9	-0.3
	2.0nm,0.7s,baz=84,slow=8.0,SNR=17								
MJAR	**Matsushiro Arr**	**66.27**	**322**		P		P	04 04 50.1	-0.7
	1.3nm,0.9s,baz=127,slow=8.1,SNR=4.0								
YBH	**Yreka Blue Hor**	**75.76**	**39**		LR		LR	04 30 24.1	
	comp=Z,105nm,20.4s,baz=168,slow=29								
NVAR	**Mina Array Bea**	**76.75**	**44**		P		P	04 05 54.7	+0.6
	0.7nm,0.6s,baz=221,slow=8.9,SNR=3.7								
TXAR	**Lajitas Array**	**83.70**	**58**		P		P	04 06 30.6	-1.1
	0.5nm,0.9s,baz=251,slow=3.8,SNR=5.1								
TXAR	**Lajitas Array**	**83.70**	**58**		P		P	04 06 30.6	-1.1
TXAR	**Lajitas Array**	**83.70**	**58**		P		P	04 06 30.7	-1.1
PDAR	**Pinedale Array**	**84.67**	**43**		P		P	04 06 36.2	-0.2
	0.2nm,0.3s,baz=90,slow=0.4,SNR=2.7								
YKA	**Yellowknife Ar**	**91.40**	**24**		P		P	04 07 08.9	+0.6
	0.4nm,0.8s,baz=243,slow=4.6,SNR=4.3								
GERES	**GERESS Array B**	**145.14**	**347**		PKPbc		PKPbc	04 13 40.2	+0.5
	0.6nm,0.8s,baz=27,slow=3.3,SNR=6.3								
MMAI	**Mount Meron Ar**	**145.33**	**307**		PKPbc		PKPbc	04 13 41.6	+0.8
	0.5nm,0.2s,baz=84,slow=8.5,SNR=4.4								

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*CSEM **18** 04:02:08.5±0.3, 43°.85N×12°.71E, h52km±3km, ML2.4/9, Error ellipse: s-maj=5.5km s-min=3.9km az=12.0*

ROM 18 04:02:10.1±0.2, 43°.83N×12°.72E, h37km±1km, Md2.3/14, Ml2.0/10, 6C-2D, Error ellipse: s-maj=2.8km s-min=2.1km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PESA	**Pesaro**	**0.14**	**39**	⇑*iP*	g		Pn	04 02 16.5	-0.1
PESA					Sg		Sn	04 02 22.2	+1.1
	471nm,0.2s								
PESA	**Pesaro**	**0.14**	**39**	⇑*iP*	g		Pn	04 02 16.5	-0.1
PESA					Sg		Sn	04 02 22.2	+1.1
	471nm,0.2s								
FSSB	**Fossombrone**	**0.15**	**163**		Pg		Pn	04 02 16.6	-0.1
FSSB					Sg		Sn	04 02 22.2	+1.1
	68nm,0.2s								
FSSB	**Fossombrone**	**0.15**	**163**		Pg		Pn	04 02 16.6	-0.1
FSSB					Sg		Sn	04 02 22.2	+1.1
	68nm,0.2s								
RSM	**Repubblica di**	**0.22**	**296**		Pg		Pn	04 02 17.2	0.0
RSM					Sg		Sn	04 02 22.4	+0.3
	24nm,0.3s								
RSM	**Repubblica di**	**0.22**	**296**		Pg		Pn	04 02 17.2	0.0
RSM					Sg		Sn	04 02 22.4	+0.3
	24nm,0.3s								
PIEI	**Pieia**	**0.33**	**204**		Pg		Pn	04 02 18.2	-0.2
PIEI					Sg		Sn	04 02 25.1	+0.9
	171nm,0.2s								
PIEI	**Pieia**	**0.33**	**204**		Pg		Pn	04 02 18.2	-0.2
PIEI					Sg		Sn	04 02 25.1	+0.9
	171nm,0.2s								
ARVD	**Arcevia**	**0.37**	**154**		Pg		Pn	04 02 18.9	-0.1
ARVD					Sg		Sn	04 02 26.6	+1.4
	63nm,0.5s								
ARVD	**Arcevia**	**0.37**	**154**		Pg		Pn	04 02 18.9	-0.1
ARVD					Sg		Sn	04 02 26.6	+1.4
	63nm,0.5s								
PARC	**Parchiule**	**0.39**	**242**		Pg		Pn	04 02 19.1	-0.2
PARC					Sg		Sn	04 02 26.7	+1.0
	40nm,0.2s								
PARC	**Parchiule**	**0.39**	**242**		Pg		Pn	04 02 19.1	-0.2
PARC					Sg		Sn	04 02 26.7	+1.0
	40nm,0.2s								
SENI	**Senigallia**	**0.40**	**109**		Pg		Pn	04 02 20.1	+0.8
SENI					Sg		Sn	04 02 28.0	+2.3
SENI	**Senigallia**	**0.40**	**109**		Pg		Pn	04 02 20.1	+0.8
SENI					Sg		Sn	04 02 28.0	+2.3
BADI	**Badiali**	**0.47**	**227**	⇑*iP*	g		Pn	04 02 20.3	-0.1
BADI					Sg		Sn	04 02 28.9	+1.4
	112nm,0.2s								
BADI	**Badiali**	**0.47**	**227**	⇑*iP*	g		Pn	04 02 20.3	-0.1
BADI					Sg		Sn	04 02 28.9	+1.4
	112nm,0.2s								
MURB	**Monte Urbino**	**0.59**	**194**		Pg		Pn	04 02 23.0	+1.1
	148nm,0.3s								
MURB	**Monte Urbino**	**0.59**	**194**		Pg		Pn	04 02 23.0	+1.1
	148nm,0.3s								
CRE	**Caprese Michel**	**0.60**	**249**		Pg		Pn	04 02 23.1	+1.1
CRE					Sg		Sn	04 02 33.4	+2.9
	27nm,0.4s								
CRE	**Caprese Michel**	**0.60**	**249**		Pg		Pn	04 02 23.1	+1.1
SNTG	**Esanatoglia**	**0.60**	**164**		Pg		Pn	04 02 22.3	+0.2
SNTG					Sg		Sn	04 02 32.3	+1.7
	32nm,0.1s								
SNTG	**Esanatoglia**	**0.60**	**164**		Pg		Pn	04 02 22.3	+0.2
SNTG					Sg		Sn	04 02 32.3	+1.7
	32nm,0.1s								
SFI	**Santa Sofia**	**0.63**	**277**	⇓*iP*	g		Pn	04 02 22.8	+0.2
SFI					Sg		Sn	04 02 33.3	+1.9
	36nm,0.2s								
SFI	**Santa Sofia**	**0.63**	**277**	⇓*iP*	g		Pn	04 02 22.8	+0.2
SFI					Sg		Sn	04 02 33.3	+1.9
	36nm,0.2s								
ASQU	**Asqua**	**0.67**	**267**		Pg		Pn	04 02 23.5	+0.4
ASQU					Sg		Sn	04 02 35.1	+2.7
	72nm,0.8s								
ASQU	**Asqua**	**0.67**	**267**		Pg		Pn	04 02 23.5	+0.4
ASQU					Sg		Sn	04 02 35.1	+2.7
	72nm,0.8s								
CAFI	**Castiglion Fio**	**0.74**	**228**	⇑*iP*	g		Pn	04 02 24.5	+0.4
	24nm,0.6s								
CAFI	**Castiglion Fio**	**0.74**	**228**	⇑*iP*	g		Pn	04 02 24.5	+0.4
	24nm,0.6s								
FDMO	**Fiordimonte**	**0.84**	**161**		Pg		Pn	04 02 25.6	+0.2
FDMO	**Fiordimonte**	**0.84**	**161**		Pg		Pn	04 02 25.6	+0.2
MGAB	**Montegabbione**	**1.02**	**206**		Pg		Pn	04 02 28.3	+0.4
MGAB	**Montegabbione**	**1.02**	**206**		Pg		Pn	04 02 28.3	+0.4
NRCA	**Norcia**	**1.04**	**164**		Pg		Pn	04 02 28.9	+0.7
	5.0nm,0.3s								
NRCA	**Norcia**	**1.04**	**164**		Pg		Pn	04 02 28.9	+0.7
	5.0nm,0.3s								
NVLJ	**Novalja**	**1.71**	**64**	*iP*	n		Pn	04 02 36.8	-0.6
NVLJ					Sn		Sn	04 02 57.0	-1.0
NVLJ	**Novalja**	**1.71**	**64**	*iP*	n		Pn	04 02 36.7	-0.7
NVLJ					Sn		Sn	04 02 56.9	-1.1
STON	**Ston**	**3.76**	**103**	*eP*	n		Pn	04 03 04.9	-0.6
STON					Sn		Sn	04 03 46.1	-2.4
STON	**Ston**	**3.76**	**103**	*eP*	n		Pn	04 03 04.9	-0.6
STON					Sn		Sn	04 03 46.0	-2.5

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*ISCJB **18** 04:13:00.1±0.4, 51°.45N±0°.02×16°.08E±0°.02, h0km, Error ellipse: s-maj=3.1km s-min=2.0km az=20.7*
*CSEM **18** 04:13:00.5±0.1, 51°.54N×16°.12E, h2km, ML3.5/11, Error ellipse: s-maj=3.1km s-min=2.8km az=25.0*
*NEIC **18** 04:13:00.3±0.4, 51°.64N×16°.20E, h5km, ML2.9(FUR), ML2.9(SZGRF), Error ellipse: s-maj=5.9km s-min=5.3km az=130.0*
*IDC **18** 04:13:01.8±0.7, 51°.52N×16°.03E, h0km, mb1 3.5/7, mb1mx3.3/28, mbtmp3.3/7, ML3.0/6, Error ellipse: s-maj=12.5km s-min=7.0km az=100.0*
*IPEC **18** 04:13:01.0±0.3, 51°.53N×16°.12E, h0km, ML2.5/4, Error ellipse: s-maj=4.2km s-min=2.0km az=81.0*
*PRU **18** 04:13:02.1, 51°.47N×16°.12E, h0km*
*WAR **18** 04:13:02.5, 51°.50N×16°.09E, ML2.7, Mining Induced*
*VIE **18** 04:13:03.8±0.6, 51°.33N×16°.09E, h0km, mb2.4/5, ML2.9/5, Error ellipse: s-maj=3.6km s-min=3.4km az=111.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 18 04:13:00.5±0.3, 51°.54N±0°.02×16°.12E±0°.03, h0km, n90, σ0=97/148, 4C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**171**	*iP*	g		**Pg**	**04 13 14.9**	**+0.9**
KSP					*e*Sg		**Sg**	**04 13 24.1**	**+1.1**
KSP	**Ksiaz**	**0.70**	**171**	*e*Sg			**Sg**	**04 13 23.8**	**+0.8**
UPC	**Upice**	**1.03**	**184**	*e*PG			**Pg**	**04 13 20.8**	**+0.5**
UPC	**Upice**	**1.03**	**184**	Pg			**Pg**	**04 13 20.8**	**+0.5**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*PG			**Pg**	**04 13 23.6**	**+0.2**
DPC				*e*SG			**Sg**	**04 13 38.3**	**-0.5**
	comp=Z,38nm,0.4s								
DPC	**Dobruska-Polom**	**1.19**	**174**	Pg			**Pg**	**04 13 23.6**	**+0.2**
DPC				*e*Sg			**Sg**	**04 13 38.5**	**-0.3**
	baz=354								
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG			**Pg**	**04 13 27.5**	**+0.1**
PVCC				*e*SG			**Sg**	**04 13 46.0**	**+0.3**
	comp=Z,135nm,0.2s								
PVCC	**Panska Ves**	**1.41**	**225**	Pg			**Pg**	**04 13 27.5**	**+0.1**
PVCC				Sg			**Sg**	**04 13 46.0**	**+0.3**
	comp=Z,135nm,0.2s								
BRG	**Berggiesshubel**	**1.52**	**245**		PN		**Pn**	**04 13 28.4**	**-0.5**
BRG					PG		**Pg**	**04 13 30.0**	**+0.3**
BRG					SG		**Sg**	**04 13 49.9**	**+0.5**
	comp=Z,74nm,0.5s								
RUE	**Ruedersdorf**	**1.73**	**304**	*e*Pn			**Pn**	**04 13 31.4**	**-0.4**
RUE				*e*Sg			**Sg**	**04 13 56.2**	**+0.2**
RUE	**Ruedersdorf**	**1.73**	**304**	*e*Pn			**Pn**	**04 13 31.4**	**-0.4**
RUE				*e*Sg			**Sg**	**04 13 56.2**	**+0.2**
PRU	**Pruhonice**	**1.85**	**214**	*e*PN			**Pn**	**04 13 33.5**	**+0.1**
PRU				*e*PG			**Pg**	**04 13 35.3**	**-0.6**
PRU				*e*SG			**Sg**	**04 13 58.4**	**-1.4**
	comp=Z,31nm,0.4s								
PRU	**Pruhonice**	**1.85**	**214**	Pn			**Pn**	**04 13 33.5**	**+0.1**
PRU	**Pruhonice**	**1.85**	**214**	Pg			**Pg**	**04 13 35.3**	**-0.6**
PRU				Sg			**Sg**	**04 13 58.4**	**-1.4**
	comp=Z,31nm,0.4s								
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pn			**Pn**	**04 13 35.7**	**+2.1**
GKP				*e*				04 13 43.3	
GKP				*e*Sn			**Sn**	**04 14 06.0**	**+8.1**
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pn			**Pn**	**04 13 35.7**	**+2.0**
RAC	**Raciborz**	**1.96**	**137**	*e*Pg			**Pg**	**04 13 37.7**	**-0.3**
RAC				*e*Sg			**Sg**	**04 14 03.6**	**+0.2**
CLL	**Collm**	**1.97**	**265**	*i*Pn			**Pn**	**04 13 34.9**	**-0.1**
CLL				*i*Pg			**Pg**	**04 13 38.0**	**-0.2**
CLL				*i*Sg			**Sg**	**04 14 04.0**	**+0.4**
CLL	**Collm**	**1.97**	**265**	*i*Pn			**Pn**	**04 13 34.9**	**-0.1**
CLL				*e*				04 13 37.0	
CLL				*i*Pg			**Pg**	**04 13 38.0**	**-0.2**
CLL				*e*				04 13 41.0	
CLL				*i*Sg			**Sg**	**04 14 04.0**	**+0.4**
	comp=Z,34nm,0.7s								
CLL	**Collm**	**1.97**	**265**	*i*Pn			**Pn**	**04 13 34.9**	**-0.1**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn			**Pn**	**04 13 35.0**	**-0.2**
MORC				*e*Sg			**Sg**	**04 14 03.1**	**-0.9**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn			**Pn**	**04 13 35.0**	**-0.2**
MORC				*e*Sg			**Sg**	**04 14 03.1**	**-0.9**
	comp=Z,40nm,0.5s,baz=333								
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PN			**Pn**	**04 13 37.2**	**-0.1**
OKC				*e*PG			**Pg**	**04 13 40.9**	**-0.5**
OKC				*e*SG			**Sg**	**04 14 07.4**	**-1.6**
OKC	**Ostrava-Krasne**	**2.13**	**142**	Pn			**Pn**	**04 13 37.2**	**-0.1**
VRAC	**Vranov**	**2.25**	**172**	Pn			**Pn**	**04 13 39.8**	**+0.8**
	comp=Z,3.3nm,0.3s,baz=347,slow=17,SNR=9.1								
VRAC				Pg			**Pg**	**04 13 43.4**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=346,slow=17,SNR=11								
VRAC				Lg				04 14 11.2	
	comp=Z,2.5nm,0.3s,baz=84,slow=19,SNR=4.8								
VRAC	**Vranov**	**2.25**	**172**	Pn			**Pn**	**04 13 39.8**	**+0.9**
VRAC	**Vranov**	**2.25**	**172**	Pg			**Pg**	**04 13 43.4**	**-0.2**
VRAC				*e*Sg			**Sg**	**04 14 11.4**	**-1.3**
	comp=Z,18nm,0.4s,baz=352								
TREC	**Trest**	**2.28**	**191**	*e*PN			**Pn**	**04 13 40.0**	**+0.7**
TREC				*e*PG			**Pg**	**04 13 43.0**	**-1.2**
TREC	**Trest**	**2.28**	**191**	Pn			**Pn**	**04 13 40.0**	**+0.7**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn			**Pn**	**04 13 43.0**	**+0.9**
	baz=356								
KRUC				*e*Sg			**Sg**	**04 14 18.5**	**-1.7**
	comp=Z,18nm,0.4s,baz=356								
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN			**Pn**	**04 13 45.4**	**+0.7**
NKC				*e*PG			**Pg**	**04 13 51.0**	**-0.6**
NKC				*e*SG			**Sg**	**04 14 26.1**	**-0.1**
	comp=Z,50nm,0.3s								
NKC	**Novy Kostel**	**2.67**	**242**	Pn			**Pn**	**04 13 45.4**	**+0.7**
NKC	**Novy Kostel**	**2.67**	**242**	Pg			**Pg**	**04 13 51.0**	**-0.6**
NKC				Sg			**Sg**	**04 14 26.1**	**-0.1**
	comp=Z,50nm,0.3s								
OJC	**Ojcow**	**2.67**	**118**	*e*Pn			**Pn**	**04 13 44.5**	**-0.3**
OJC				*e*Pg			**Pg**	**04 13 51.6**	**-0.1**
OJC				*e*Sg			**Sg**	**04 14 26.4**	**0.0**
OJC	**Ojcow**	**2.67**	**118**	*e*Pn			**Pn**	**04 13 44.5**	**-0.3**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Sg			**Sg**	**04 14 33.5**	**+1.2**
	comp=Z,18nm,0.6s								
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pn			**Pn**	**04 13 48.0**	**0.0**
KHC				*e*Pg			**Pg**	**04 13 54.6**	**-1.6**
KHC				*e*Sn			**Sn**	**04 14 23.4**	**-0.2**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN			**Pn**	**04 13 48.1**	**+0.1**
KHC				*e*PG			**Pg**	**04 13 54.2**	**-2.0**
KHC				*e*SN			**Sn**	**04 14 22.9**	**-0.7**
KHC				*e*SG			**Sg**	**04 14 31.8**	**-2.0**
	comp=Z,17nm,0.5s								
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pn			**Pn**	**04 13 48.0**	**0.0**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pg			**Pg**	**04 13 54.6**	**-1.6**
KHC				Sn			**Sn**	**04 14 22.9**	**-0.7**
KHC				Sg			**Sg**	**04 14 31.8**	**-2.0**
	comp=Z,17nm,0.5s								
MOX	**Moxa**	**2.98**	**254**	*e*PN			**Pn**	**04 13 49.6**	**+0.7**
MOX				*e*PG			**Pg**	**04 13 57.5**	**-0.1**
MOX				*e*SG			**Sg**	**04 14 37.5**	**+1.4**
MOX	**Moxa**	**2.98**	**254**	*e*Pn			**Pn**	**04 13 49.6**	**+0.7**
GEC2	**GERESS Array S**	**3.11**	**211**	*e*Pn			**Pn**	**04 13 51.1**	**+0.3**
GEC2	**GERESS Array S**	**3.11**	**211**	*e*Pn			**Pn**	**04 13 51.1**	**+0.3**
GERES	**GERESS Array B**	**3.11**	**211**	Pn			**Pn**	**04 13 51.6**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=33,slow=12,SNR=69								
GERES				Pg			**Pg**	**04 13 58.8**	**-1.3**
	comp=Z,3.7nm,0.3s,baz=27,slow=15,SNR=34								
GERES				Lg				04 14 38.3	
	comp=Z,3.2nm,0.3s,baz=30,slow=28,SNR=6.5								
GERES	**GERESS Array B**	**3.11**	**211**	Pn			**Pn**	**04 13 51.6**	**+0.8**
GERES	**GERESS Array B**	**3.11**	**211**	Pg			**Pg**	**04 13 58.8**	**-1.3**
WET	**Wettzell**	**3.17**	**222**	*e*Pn			**Pn**	**04 13 51.8**	**+0.2**
**WET

comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=3.7
AKASG **Malin Array Be** 8.29 91 Pn Pn 04 15 01.0 -0.8
AKBB **Malin Array Si** 8.29 91 *e*Pn Pn 04 15 00.9 -0.9
AKBB **Malin Array Si** 8.29 91 *e*Pn Pn 04 15 00.9 -0.9
HFS **Hagfors** 8.73 352 Pn Pn 04 15 06.0 -1.8
comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=4.2
HFS **Hagfors** 8.73 352 Pn Pn 04 15 06.0 -1.8
NOA **NORSAR Array B** 9.91 346 Pn Pn 04 15 21.7 -2.3
comp=Z,0.1nm,0.3s,baz=160,slow=14,SNR=3.3
NOA **NORSAR Array B** 9.91 346 Pn Pn 04 15 21.7 -2.3
FINES **FINESS Array B** 11.34 25 Pn Pn 04 15 41.8 -1.7
comp=Z,0.2nm,0.3s,baz=204,slow=12,SNR=9.9
FINES **FINESS Array B** 11.34 25 Pn Pn 04 15 41.8 -1.7
ARCES **ARCESS Array B** 18.60 10 Pn Pn 04 17 14.1 -4.9
comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=5.6

DJA 18 04:14:27,0.65N×98.32E,h10km,MLv3.7/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.99**	**311**	P	Pg	04 14 43.7	-2.3
GSI				S	Sg	04 15 00.1	+1.2
MNSI	**Mandailing Nat**	**1.27**	**83**	P	Pn	04 14 46.0	-4.8
MNSI				S	Sb	04 15 03.2	-4.2
TRSI	**Tarutung**	**1.51**	**25**	P	Pn	04 14 53.2	-0.9
TRSI				S	Sn	04 15 14.8	+1.0
SISI	**Saibi**	**2.11**	**159**	P	Pn	04 15 02.4	0.0
PPI	**Padang Panjang**	**2.35**	**118**	P	Pn	04 15 05.2	-0.5
PDSI	**Padang**	**2.64**	**126**	P	Pn	04 15 12.9	+3.2
BKNI	**Bangkinang**	**2.74**	**97**	P	Pn	04 15 12.1	+1.1
SDSI	**Sungai Dareh**	**3.48**	**117**	P	Pn	04 15 23.0	+1.7

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*CSEM **18** 04:40:22.5±0.6,51.38N×16.16E,h2km,ML3.0/4,Error ellipse: s-maj=10.4km s-min=5.5km az=3.0*
*PRU **18** 04:40:24.1,51.34N×16.13E,h0km*
WAR 18 04:40:22.9,51.45N×16.18E,ML2.4,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**173**	*e*Pg	Pg	04 40 34.0	-0.6
KSP				*e*Sg	Sg	04 40 42.0	-0.5
KSP	**Ksiaz**	**0.61**	**173**	*e*Pg	Pg	04 40 34.0	-0.6
KSP				*e*Sg	Sg	04 40 41.9	-0.6
UPC	**Upice**	**0.95**	**186**	*e*PG	Pg	04 40 40.1	-0.9
UPC	**Upice**	**0.95**	**186**	Pg	Pg	04 40 40.1	-0.9
DPC	**Dobruska-Polom**	**1.10**	**175**	*e*PG	Pg	04 40 42.8	-1.2
DPC				*e*SG	Sg	04 40 56.8	-1.5
DPC	**Dobruska-Polom**	**1.10**	**175**	Pg	Pg	04 40 42.8	-1.2
DPC				Sg	Sg	04 40 56.8	-1.5
PVCC	**Panska Ves**	**1.37**	**228**	*e*PG	Pg	04 40 48.4	-0.8
PVCC				*e*SG	Sg	04 41 06.3	-0.6
comp=Z,48nm,0.4s							
PVCC	**Panska Ves**	**1.37**	**228**	Pg	Pg	04 40 48.4	-0.8
PVCC				Sg	Sg	04 41 06.3	-0.6
comp=Z,48nm,0.4s							
BRG	**Berggiesshubel**	**1.52**	**249**	PG	Pg	04 40 50.6	-1.4
BRG				SG	Sg	04 41 11.3	-0.4
comp=Z,27nm,0.5s							
PRU	**Pruhonice**	**1.79**	**216**	*e*PG	Pg	04 40 55.7	-1.6
PRU				*e*SG	Sg	04 41 19.0	-1.5
comp=Z,13nm,0.4s							
PRU	**Pruhonice**	**1.79**	**216**	Pg	Pg	04 40 55.7	-1.6
PRU				Sg	Sg	04 41 19.0	-1.5
comp=Z,13nm,0.4s							
MORC	**Moravsky Berou**	**1.89**	**152**	*e*Pn	Pn	04 40 54.5	-1.8
MORC				*e*Sg	Sg	04 41 19.1	-4.3
CLL	**Collm**	**2.00**	**267**	*e*Pg	Pg	04 40 59.0	-2.1
CLL				*e*Sg	Sg	04 41 26.0	-1.0
comp=Z,8.0nm,0.5s							
OKC	**Ostrava-Krasne**	**2.04**	**141**	*e*SG	Sg	04 41 25.7	-2.8
OKC	**Ostrava-Krasne**	**2.04**	**141**	Sg	Sg	04 41 25.7	-2.8
VRAC	**Vranov**	**2.16**	**173**	*e*Pn	Pn	04 41 00.0	-0.1
VRAC				*e*Sg	Sg	04 41 28.0	-4.2
OJC	**Ojcow**	**2.60**	**117**	*e*Pg	Pg	04 41 11.6	-1.2
OJC				*e*Sg	Sg	04 41 46.2	-0.3
OJC	**Ojcow**	**2.60**	**117**	*e*Pg	Pg	04 41 11.6	-1.2
OJC				*e*Sg	Sg	04 41 46.2	-0.3
NKC	**Novy Kostel**	**2.66**	**244**	*e*PN	Pn	04 41 05.8	-1.2
NKC				*e*SG	Sg	04 41 46.1	-2.2
comp=Z,11nm,0.4s							
NKC	**Novy Kostel**	**2.66**	**244**	Pn	Pn	04 41 05.8	-1.2
NKC				Sg	Sg	04 41 46.1	-2.2
comp=Z,11nm,0.4s							
KHC	**Kasperske Hory**	**2.86**	**217**	*e*PN	Pn	04 41 08.7	-1.0
KHC				*e*PG	Pg	04 41 14.2	-3.4
KHC				*e*SN	Sn	04 41 41.9	-2.8
KHC				*e*SG	Sg	04 41 51.3	-3.3
comp=Z,4.5nm,0.4s							
KHC	**Kasperske Hory**	**2.86**	**217**	Pn	Pn	04 41 08.7	-1.0
KHC	**Kasperske Hory**	**2.86**	**217**	Pg	Pg	04 41 14.2	-3.4
KHC				Sn	Sn	04 41 41.9	-2.8
KHC				Sg	Sg	04 41 51.3	-3.3
comp=Z,4.5nm,0.4s							
MOX	**Moxa**	**2.99**	**256**	*e*PG	Pg	04 41 18.8	-1.4
MOX				*e*SG	Sg	04 41 58.5	-0.4
NIE	**Niedzica**	**3.33**	**126**	*e*Pg	Pg	04 41 28.1	+1.4
NIE				*e*Sg	Sg	04 42 11.0	+1.1

IDC 18 04:44:06.8±1.4,31.63N×104.37E,h0km,mb3.4/5, mb1 3.5/6,mb1mx3.3/27,mbtmp3.5/6,ML3.3/1,Error ellipse: s-maj=44.2km s-min=23.3km az=51.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.25**	**5**	Pn	Pn	04 47 55.5	-0.8
0.1nm,0.3s,baz=181,slow=5.8,SNR=2.4							
KSRS	**Korea Array**	**20.23**	**67**	P	P	04 48 43.0	-0.4
2.1nm,0.7s,baz=258,slow=10,SNR=7.6							
MKAR	**Makanchi Array**	**22.73**	**318**	P	P	04 49 10.2	-0.1
0.5nm,0.6s,baz=113,slow=12,SNR=4.0							
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	P	04 49 46.2	+1.9
0.5nm,0.4s,baz=117,slow=12,SNR=2.1							
KURK	**Kurchatov**	**26.96**	**322**	P	P	04 49 48.4	-1.4
0.2nm,0.3s,baz=132,slow=8.4,SNR=2.3							
ASAR	**Alice Springs**	**61.83**	**149**	P	P	04 54 27.7	+0.1
0.3nm,0.4s,baz=333,slow=6.2,SNR=6.8							

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*MOS **18** 05:31:21.0±0.9,7.76N×127.44E,h33km,mb4.7/9,Error ellipse: s-maj=25.7km s-min=8.8km az=112.7*
*DJA **18** 05:31:22,7.93N×127.63E,h10km,Mw5.2/4*
*ISCJB **18** 05:31:23.3±1.2,7.75N±0.05×127.42E±0.07,h54km±11km, mb4.3/31,MS3.8/4,Error ellipse: s-maj=12.2km s-min=7.0km az=159.9*
*NEIC **18** 05:31:24.6±0.3,7.82N×127.55E,mb4.7/7,Error ellipse: s-maj=12.4km s-min=7.3km az=75.0*
*IDC **18** 05:31:24.7±0.6,7.83N×127.54E,h50km±5km,mb3.9/18, mb1 4.0/19,mb1mx3.9/29,mbtmp3.9/19,MS3.5/2, Ms1 3.5/2,ms1mx2.9/33,Error ellipse: s-maj=13.1km s-min=9.3km az=131.0*
*BJI **18** 05:31:29.6,8.02N×126.51E,h54km,mB4.8/1,mb4.5/4, Ms4.7/1,Ms7 4.4/1*
ISC 18 05:31:24.8±1.2,7.73N±0.05×127.40E±0.07,h50km±11km, h50km±1.0km:pP-P,n67,σ1.04/69,mb4.3/31,MS3.8/4, 6C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.38**	**236**	*e*P	Pn	05 31 47.3	-0.4
MATI				*e*S	Sn	05 32 03.0	-1.8
DAV	**Davao City (W)**	**1.93**	**250**	P	Pn	05 31 57.9	+2.8
77nm,0.3s,baz=173,slow=1.6,SNR=9.1							
DAV				S	Sn	05 32 23.0	+4.8
110nm,0.3s,baz=72,slow=22,SNR=5.3							
DMPH	**Davao City--Mi**	**1.99**	**251**	↑*e*P	Pn	05 31 59.0	+3.0
BUTP	**Butuan**	**2.15**	**305**	*e*P	Pn	05 31 57.6	-0.6
BUTP				*e*S	Sn	05 32 22.5	-1.2
BUKP	**Musuan**	**2.32**	**274**	*e*P	Pn	05 32 02.2	+1.6
BUKP				*e*S	Sn	05 32 26.1	-1.9
KCP	**Kidapawan**	**2.40**	**253**	↓*e*P	Pn	05 32 06.1	+4.4
KCP				*i* S	Sn	05 32 37.4	+7.4
CGP	**Cagayan de Oro**	**2.78**	**285**	↑*i*P	Pn	05 32 06.2	-0.6
CGP				*i* S	Sn	05 32 40.8	+1.7
GSPH	**General Santos**	**2.93**	**236**	↑*e*P	Pn	05 32 08.6	-0.4
GSPH				*e*S	Sn	05 32 42.7	-0.3
PAGZ	**Pagadian**	**3.99**	**272**	*e*P	Pn	05 32 24.4	+1.1
TBP	**Tagbilaran**	**4.01**	**299**	*e*P	Pn	05 32 22.7	-1.0
TBP				*e*S	Sn	05 33 10.1	+0.7
KAPI	**Kappang**	**14.78**	**211**	P	Pn	05 34 48.5	-2.4
1.0nm,0.3s,baz=58,slow=17,SNR=2.4							
KAKA	**Kakadu**	**20.92**	**166**	*e*P	P	05 36 03.0	-0.3
36nm,0.8s							
FITZ	**Fitzroy Crossi**	**25.73**	**184**	P	P	05 36 52.9	+2.3
3.0nm,0.8s,mb3.9,baz=39,slow=10.0,SNR=6.8							
WHN	**Wuhan**	**25.78**	**333**	*e*P	P	05 36 51.3	+0.3
KSRS	**Korea Array**	**29.59**	**1**	P	P	05 37 23.8	-1.2
0.7nm,0.4s,mb3.8,baz=176,slow=9.3,SNR=4.1							
KSRS				pP	pP	05 37 37.9	-0.2
2.5nm,0.9s,baz=176,slow=11,SNR=4.0							
MJAR	**Matsushiro Arr**	**30.32**	**17**	LR	LR	05 48 32.6	
comp=Z,64nm,19.9s,MS3.3,baz=190,slow=34							
ASAR	**Alice Springs**	**31.84**	**169**	P	P	05 37 45.1	0.0
0.6nm,0.6s,mb3.6,baz=352,slow=8.7,SNR=8.2							
ASAR				PcP	PcP	05 40 34.5	-0.6
1.1nm,0.5s,baz=344,slow=2.5,SNR=13							
CTA	**Charters Tower**	**33.29**	**146**	P	P	05 37 58.2	+0.4
4.7nm,0.8s,mb4.5,baz=336,slow=8.4,SNR=3.5							
CTA	**Charters Tower**	**33.29**	**146**	P	P	05 37 58.2	+0.4
SHL	**Shillong**	**38.20**	**302**	*e*P	P	05 38 39.0	-0.8
ASAJ	**Asahikawa**	**38.60**	**18**	P	P	05 38 43.5	+0.5
3.7nm,0.8s,mb4.2,baz=199,slow=7.9,SNR=2.9							
LSA	**Lhasa**	**40.43**	**307**	P	P	05 38 58.4	0.0
STKA	**Stephens Creek**	**41.65**	**162**	P	P	05 39 08.4	+0.1
4.1nm,0.5s,mb4.3,baz=347,slow=7.1,SNR=9.8							
STKA	**Stephens Creek**	**41.65**	**162**	*e*P	P	05 39 08.8	+0.4
ULN	**Ulaanbaatar**	**43.58**	**340**	*e*P	P	05 39 24.7	+0.9
ULN				*e**PP	pP	05 39 38.0	+0.8
ULN				pmax	pmax		
comp=Z,22nm,1.1s,mb4.8							
ULN	**Ulaanbaatar**	**43.58**	**340**	*e*P	P	05 39 24.7	+0.9
comp=Z,22nm,1.1s,mb4.8							
ULN				*e*pP	pP	05 39 38.0	+0.8
SONM	**Songino Array**	**43.77**	**340**	P	P	05 39 26.6	+1.2
comp=Z,11nm,1.0s,mb4.5,baz=156,slow=8.9,SNR=46							
SONM				pP	pP	05 39 39.8	+1.0
comp=Z,3.6nm,0.9s,baz=155,slow=8.7,SNR=5.1							
ZAK	**Zakamensk**	**47.02**	**339**	*e*P	P	05 39 50.9	-0.1
ZAK				pmax	pmax		
comp=Z,5.0nm,1.4s,mb4.2							
TLY	**Talaya**	**47.99**	**340**	*e*P	P	05 39 59.8	+1.3
TLY				pmax	pmax		
comp=Z,19nm,0.8s,mb5.2							
TLY	**Talaya**	**47.99**	**340**	*e*P	P	05 40 00.2	+1.7
comp=Z,9.2nm,0.8s,mb4.9							
MOY	**Mondy**	**48.90**	**338**	*e*P	P	05 40 07.2	+1.7
MOY				pmax	pmax		
comp=Z,28nm,2.2s,mb4.9							
BOD	**Bodaibo**	**51.04**	**351**	*e*P	P	05 40 21.7	+0.1
BOD				pmax	pmax		
comp=Z,5.0nm,1.2s,mb4.3							
PEA0B	**Petropavlovsk-**	**51.50**	**23**	*e*P	P	05 40 24.2	-1.0
PETK	**Petropavlovsk-**	**51.50**	**23**	P	P	05 40 25.0	-0.2
comp=Z,1.4nm,0.7s,mb4.0,baz=194,slow=1.6,SNR=7.9							
PETK				pP	pP	05 40 37.6	-1.3
comp=Z,2.6nm,0.7s,baz=189,slow=6.8,SNR=4.8							
MK31	**Makanchi Array**	**54.72**	**323**	*e*P	P	05 40 49.1	+0.1
MK31				*e**PP	pP	05 41 02.5	-0.3
MKAR	**Makanchi Array**	**54.72**	**323**	P	P	05 40 49.3	+0.3
comp=Z,1.8nm,0.4s,mb4.5,baz=116,slow=8.2,SNR=32							
MKAR				pP	pP	05 41 02.2	-0.6
comp=Z,3.4nm,0.6s,baz=128,slow=7.9,SNR=13							
ZALV	**Zalesovo Beam**	**57.38**	**332**	P	P	05 41 06.7	-1.2
comp=Z,1.3nm,0.5s,mb4.2,baz=116,slow=6.2,SNR=5.0							
ZALV				pP	pP	05 41 21.5	-0.2
comp=Z,1.8nm,0.5s,baz=122,slow=7.0,SNR=4.1							
ZALV	**Zalesovo Beam**	**57.38**	**332**	P	P	05 41 06.7	-1.2
ZALV				pP	pP	05 41 21.5	-0.3
UCH	**Uchtor**	**57.75**	**316**	*e*P	P	05 41 12.0	+1.3
UCH				*e**PP	pP	05 41 25.6	+0.9
UCH				pmax	pmax		
comp=Z,9.0nm,1.1s,mb4.7							
UCH	**Uchtor**	**57.75**	**316**	*e*P	P	05 41 12.0	+1.3
comp=Z,9.1nm,1.1s,mb4.7							
UCH				*e*pP	pP	05 41 25.6	+1.0
SEY	**Seymchan**	**58.01**	**13**	*ce*P	P	05 41 12.5	+0.4
AML	**Almayashu**	**58.29**	**315**	*e*P	P	05 41 15.5	+1.0
AML				*e**PP	pP	05 41 28.6	+0.2
AML				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.6							
AML	**Almayashu**	**58.29**	**315**	*e*P	P	05 41 15.4	+1.0
comp=Z,5.9nm,0.9s,mb4.6							
AML				*e*pP	pP	05 41 28.6	+0.2
NVS	**Novosibirsk**	**58.65**	**332**	*e*P	P	05 41 08.8	-8.0
KURK	**Kurchatov**	**58.78**	**326**	P	P	05 41 17.8	+0.1
comp=Z,3.6nm,0.7s,mb4.5,baz=126,slow=6.2,SNR=29							
KURK				pP	pP	05 41 30.9	-0.9
comp=Z,1.6nm,0.6s,baz=122,slow=7.2,SNR=6.7							
TIXI	**Tiksi**	**63.86**	**1**	*e*P	P	05 41 51.9	+0.2
TIXI				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.4							
TIXI	**Tiksi**	**63.86**	**1**	*e*P	P	05 41 51.4	-0.3
comp=Z,4.9nm,0.8s,mb4.6							
TIXI				*e*pP	pP	05 42 04.9	-0.9
BVAR	**Borovoye Array**	**64.38**	**326**	P	P	05 41 55.0	-0.4
comp=Z,1.8nm,0.5s,mb4.3,baz=120,slow=8.8,SNR=9.6							
BVAR				pP	pP	05 42 08.5	-1.1
baz=116,slow=6.8,SNR=4.3							
BRVK	**Borovoye**	**64.45**	**326**	*ce*P	P	05 41 55.1	-0.8
BRVK				pmax	pmax		
comp=Z,3.0nm,1.0s,mb4.3							
BILL	**Bilibino**	**65.54**	**15**	↓*e*P	P	05 42 01.7	-1.0
BILL				*e*		05 44 23.7	
BILL				pmax	pmax		
comp=Z,2.0nm,1.2s,mb4.0							
BILL				MLR	MLR		
comp=Z,100nm,20.0s,MS4.0							
ABKAR	**Akbulak array**	**69.52**	**320**	*e*P	P	05 42 28.1	-0.1
comp=Z,1.1nm,0.8s,mb3.8							
ABKAR				*e*pP	pP	05 42 42.5	0.0
AKTK	**Aktyubinsk**	**70.98**	**321**	P	P	05 42 35.8	-1.3
AKTO	**Aktyubinsk**	**70.98**	**321**	P	P	05 42 35.8	-1.3
comp=Z,2.6nm,0.8s,mb4.2,baz=102,slow=6.0,SNR=8.3							
ZEI	**Tsey**	**80.04**	**312**	*e*P	P	05 43 28.8	-0.4
ZEI				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.4							
OBN	**Obninsk**	**84.20**	**325**	↑*e*P	P	05 43 50.9	+0.2
OBN				*e*		05 47 06.6	
OBN				pmax	pmax		
comp=Z,11nm,1.5s,mb4.8							
OBN				MLR	MLR		
comp=Z,100nm,17.0s,MS4.3							
INK	**Inuvik**	**86.22**	**22**	P	P	05 44 00.5	0.0
comp=Z,0.6nm,0.4s,mb4.2,baz=288,slow=7.8,SNR=3.2							
INK	**Inuvik**	**86.22**	**22**	P	P	05 44 00.5	0.0
ASF	**Jabal al Asfar**	**86.36**	**302**	P	P	05 44 02.7	+0.7
comp=Z,2.7nm,0.7s,mb4.6,baz=300,slow=0.8,SNR=5.3							
SPITS	**Spitsbergen Ar**	**86.71**	**349**	LR	LR	06 26 51.3	
comp=Z,30nm,19.5s,MS3.7,baz=255,slow=38							
BRTR	**Keskin Array B**	**88.00**	**310**	P	P	05 44 09.2	-0.6
comp=Z,0.4nm,0.5s,mb3.9,baz=142,slow=3.5,SNR=3.0							
FINES	**FINESS Array B**	**88.64**	**332**	P	P	05 44 11.9	-0.5
comp=Z,0.4nm,0.4s,mb4.1,baz=22,slow=2.1,SNR=6.5							
FINES				pP	pP	05 44 25.3	-1.8
comp=Z,1.4nm,0.6s,baz=86,slow=5.9,SNR=1.8							
AKASG	**Malin Array Be**	**89.23**	**321**	*i* P	P	05 44 16.3	+1.0
YKA	**Yellowknife Ar**	**95.60**	**24**	P	P	05 44 42.8	-1.7
comp=Z,0.4nm,0.7s,mb4.0,baz=304,slow=4.5,SNR=6.1							
TXAR	**Lajitas Array**	**118.60**	**51**	PKP	PKPdf	05 50 08.4	+0.6
comp=Z,0.2nm,0.6s,baz=252,slow=4.6,SNR=3.3							
TORD	**Torodi Ar. Bea**	**122.22**	**291**	PKP	PKPdf	05 50 14.2	-0.9
comp=Z,0.7nm,0.7s,baz=9.8,slow=2.5,SNR=4.6							
TORD	**Torodi Ar. Bea**	**122.22**	**291**	PKP	PKPdf	05 50 14.2	-0.9
MTP	**Monte Pirata**	**151.33**	**26**	*e*PKPbc	PKPbc	05 51 13.6	-0.2

KRSC 18 05:39:59.7±0.2,56.16N×163.49E,h9km±10km,ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.38**	**278**	*i* P	Pg	05 40 06.8	-0.3
KBTR				*i* S	Sg	05 40 11.6	-0.5
SRKR	**Sorokina**	**1.38**	**292**	*e*P	Pn	05 40 25.7	+0.6
SRKR				*i* S	Sb	05 40 45.2	+1.8
ZLN	**Zelenaya**	**1.51**	**266**	*e*P	Pn	05 40 27.9	+1.0
ZLN				*i* S	Sn	05 40 49.2	+2.5
BZGR	**Bezymyannyi-Gr**	**1.58**	**263**	*i* P	Pn	05 40 29.9	+2.0
BZGR				*i* S	Sn	05 40 51.3	+2.9
KLY	**Klyuchi**	**1.59**	**277**	*e*P	Pn	05 40 26.9	-1.1
KLY				*i* S	Sn	05 40 47.1	-1.5
KRSR	**Krestovskiy**	**1.64**	**273**	P	Pn	05 40 29.9	+1.3
KRSR				*i* S	Sn	05 40 51.9	+2.2
BKI	**Bering**	**1.70**	**123**	*e*P	Pn	05 40 29.6	+0.1
BKI				*i* S	Sn	05 40 51.6	+0.3
KPT	**Kopyto**	**1.84**	**265**	*e*P	Pn	05 40 32.6	+1.2
KPT				*i* S	Sn	05 40 56.7	+1.9
KMNR	**Kamenistaya**	**1.87**	**259**	*e*P	Pn	05 40 34.2	+2.3
KMNR				*e*S	Sn	05 40 58.4	+2.8
MKZ	**Mys Kozlova**	**1.90**	**213**	*e*P	Pn	05 40 32.6	+0.4
MKZ				*e*S	Sn	05 40 56.1	0.0
KOZ	**Kozyrevsk**	**2.03**	**269**	*e*P	Pn	05 40 35.4	+1.4
KOZ				*i* S	Sn	05 41 02.4	+3.0
SRDR	**Sredinnyy**	**2.11**	**276**	*e*P	Pn	05 40 37.5	+2.4
SRDR				*i* S	Sn	05 41 04.5	+3.0
KII	**Karymskiy**	**3.15**	**229**	P	Pn	05 40 52.7	+3.3
SPN	**Mys Shipunski**	**3.67**	**215**	P	Pn	05 40 57.3	+0.8
SPN				*i* S	Sn	05 41 39.6	-0.3
NLC	**Nalytchevo**	**3.84**	**220**	P	Pn	05 41 00.6	+1.7
NLC				*i* S	Sn	05 41 43.5	-0.6
AVH	**Avacha**	**4.00**	**225**	*e*P	Pn	05 41 02.7	+1.6
GNL	**Ganaly**	**4.04**	**235**	*e*P	Pn	05 41 04.4	+2.7

FUNV 18 05:45:36.2,5.48N×72.59W,h13km,MW3.5,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**2.39**	**6**	*e*P	Pn	05 46 15.2	+0.1
CAPV				*e*S	Sn	05 46 42.9	-1.3
SOCV	**Socops**	**3.27**	**32**	*e*P	Pn	05 46 25.6	-1.6
SOCV				*e*S	Sn	05 47 04.0	-2.1
VIGV	**El Vigia**	**3.55**	**20**	*e*P	Pn	05 46 30.1	-1.0
VIRV	**Villa del Rosa**	**5.00**	**2**	*e*P	Pn	05 46 49.7	-1.2
VIRV				*e*S	Sn	05 47 43.0	-5.6
SANV	**Sanarito**	**5.01**	**37**	*e*P	Pn	05 46 49.9	-1.2
CURV	**Curarigua**	**5.20**	**30**	*e*P	Pn	05 46 52.0	-1.8
BAUV	**El Baul**	**5.67**	**52**	*e*P	Pn	05 46 57.9	-2.4
CAOV	**Caicara del Or**	**6.49**	**73**	*e*P	Pn	05 47 09.9	-1.6
CAOV				*e*S	Sn	05 48 18.2	-7.3
MONV	**Montecano**	**6.93**	**22**	*e*P	Pn	05 47 15.2	-2.4
CUPV	**Cœpira**	**8.13**	**56**	*e*P	Pn	05 47 31.4	-2.6

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*IDC **18** 06:12:44.5±2.6,54.00N×85.99E,h0km,mb1 3.7/3, mb1mx3.3/28,mbtmp3.7/3,ML3.6/3,Error ellipse: s-maj=27.6km s-min=13.0km az=28.0*
*NNC **18** 06:12:46.1±8.0,54.69N×85.24E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=70.1km s-min=56.9km az=32.0*
ISC 18 06:12:51.4±3.0,54.0N±0.2×85.2E±0.3,h13km±10km,n7, σ1.03/10,3C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.23**	**270**	Pg	Pg	06 12 56.0	-0.2
2.5nm,0.3s,baz=66,slow=18,SNR=41							
ZALV				Lg		06 13 08.2	
15nm,0.3s,baz=70,slow=30,SNR=53							
KURK	**Kurchatov**	**5.17**	**234**	Pn	Pn	06 14 10.6	+2.2
0.5nm,0.3s,baz=52,slow=14,SNR=41							
KURK				Lg		06 15 45.6	
0.1nm,0.3s,baz=58,slow=34,SNR=3.7							
KURBB	**Kurchatov Arra**	**5.28**	**234**	⇑Pn	Pn	06 14 10.7	+0.9
1.2nm,0.6s,baz=70,slow=23							
KURBB				⇑Lg		06 15 50.6	
1.0nm,0.7s,baz=70,slow=23							
MKAR	**Makanchi Array**	**7.40**	**196**	Pn	Pn	06 14 37.2	-1.7
1.1nm,0.3s,baz=24,slow=13,SNR=63							
MKAR				Lg		06 16 46.9	
0.1nm,0.3s,baz=26,slow=28,SNR=5.4							
VOSK	**Vostochnaya**	**8.60**	**268**	⇓Pn	Pn	06 14 54.6	-0.9
2.2nm,0.6s,baz=70,slow=23							
VOSK				⇓Sn	Sn	06 16 32.0	-0.2
2.9nm,0.9s,baz=70,slow=23							
BVA0	**Borovoye Array**	**8.89**	**270**	⇑Pn	Pn	06 14 58.8	-0.5
0.4nm,0.7s,baz=71,slow=15,SNR=6.0							
BVA0				⇓Sn	Sn	06 16 38.6	-0.5
0.2nm,0.5s,baz=70,slow=23,SNR=7.6							
BVAR	**Borovoye Array**	**8.89**	**270**	Pn	Pn	06 15 00.6	+1.3
0.5nm,0.3s,baz=74,slow=15,SNR=7.8							
BVAR				Sn	Sn	06 16 39.1	0.0
0.5nm,0.3s,baz=68,slow=24,SNR=5.4							

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*IDC **18** 06:19:54.3±1.1,45.78N×154.11E,h0km,mb3.7/11, mb1 3.7/14,mb1mx3.6/29,mbtmp3.7/14,ML3.4/3,Error ellipse: s-maj=27.3km s-min=21.1km az=153.0*
*NEIC **18** 06:19:55.8±3.8,45.75N×154.07E,h10km±24km,mb3.9/1, Error ellipse: s-maj=16.8km s-min=8.6km az=130.0*
*ISCJB **18** 06:19:57.7±0.9,45.7N±0.1×153.9E±0.2,h33km,mb3.6/12,

BOSA	**Boshof**	**136.51**	**275**	PKIKP	PKPdf	06 39 17.0	-0.6
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOSA	**Boshof**	**136.51**	**275**	PKP	PKPdf	06 39 17.0	-0.5

BJI ***18*** *06:26:35.2, 4.°04N×118.°32E, h10km, mB4.8/27, mb4.8/39, Ms4.6/32, Ms7 4.4/31*
IDC ***18*** *06:26:40.2±0.5, 4.°69N×118.°16E, h0km, mb4.3/22, mb1 4.4/23, mb1mx4.3/30, mbtmp4.4/23, ML4.8/1, MS4.2/21, Ms1 4.2/21, ms1mx4.1/33, Error ellipse: s-maj=25.1km s-min=12.1km az=64.0*
GCMT ***18*** *06:26:41.3±0.2, 4.°66N×118.°28E, h12km, MW5.0/80, Moment Tensor Solution. s28,c35; s80,c129; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.86±.10; Mθθ4.48±.07; Mφφ=-3.62±.10; Mrθ1.25±.27; Mrφ0.27±.08; Mθφ0.12±.29; Best double couple: M0=4.20000×10^16 NP1:φs=134.00000°, δ80.00000°, λ8.00000°. NP2: φs=42.00000°, δ82.00000°, λ170.00000°. Principal axes: T 4.7680, Plg13.0000°, Azm358.0000°; N -1.1340, Plg77.0000°, Azm186.0000°; P -3.6310, Plg2.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***18*** *06:26:41.3±0.3, 4.°60N×118.°17E, h10km, mb4.9/27 Error ellipse: s-maj=9.8km s-min=5.7km az=65.0*
NEIC Felt at Lahad Datu and Tawau. Felt [III] at Tanjungselor and Tarakan, Kalimantan, Indonesia.
MOS ***18*** *06:26:42.4±1.5, 4.°72N×118.°26E, h31km, mb4.9/24, MS4.2/6, Error ellipse: s-maj=16.9km s-min=6.9km az=114.1*
ISCJB ***18*** *06:26:43.8±0.6, 4.°59N±0.°03×118.°19E±0.°03, h42km±6km, mb4.7/72, MS4.3/39, Error ellipse: s-maj=6.5km s-min=4.5km az=138.1*
DJA ***18*** *06:26:46, 4.°67N×118.°26E, h29km, Mw5.3/15*
ISC 18 06:26:46.1±0.5, 4.°60N±0.°03×118.°17E±0.°03, h46km±5km, h9km±5.6km; pP-P, n183, σ19.21/183, mb4.7/72, MS4.3/39, 11C-2D, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDKM	**Sandakan**	**1.42**	**317**	P	**Pn**	**06 27 05.4**	**-4.1**
KKM	**Kota Kinabalu**	**2.42**	**307**	*e*Pn	**Pn**	**06 27 21.9**	**-1.3**
KKM	**Kota Kinabalu**	**2.42**	**307**	P	**Pn**	**06 27 22.1**	**-1.1**
KDM	**Kudat**	**2.66**	**330**	P	**Pn**	**06 27 26.2**	**-0.2**
SMKI	**Samarinda**	**5.10**	**191**	P	**Pn**	**06 28 02.9**	**+2.9**
	360nm,0.8s,3.2nm						
BTM	**Bintulu**	**5.26**	**255**	P	**Pn**	**06 28 01.7**	**-0.5**
MRSI	**Marisa**	**5.56**	**137**	P	**Pn**	**06 28 05.0**	**-1.4**
	2μm,0.6s,6.9nm						
SBUM	**Sibu**	**6.31**	**250**	P	**Pn**	**06 28 16.7**	**0.0**
SBUM	**Sibu**	**6.31**	**250**	P	**Pn**	**06 28 16.7**	**+0.1**
	62nm,1.3s,978nm0.5nm						
APSI	**Ampana**	**6.48**	**147**	P	**Pn**	**06 28 19.4**	**+0.4**
	976nm,0.8s,4.4nm						
LUWI	**Luwuk**	**7.25**	**140**	P	**Pn**	**06 28 31.7**	**+2.2**
	2μm,1.0s,6.5nm						
TTSI	**Tana Toraja**	**7.77**	**168**	P	**Pn**	**06 28 37.0**	**+0.3**
	484nm,0.7s						
DAV	**Davao City (W)**	**7.77**	**71**	LR	LR	06 31 35.4	
	comp=Z,2μm,21.6s,baz=103,slow=38						
KBKI	**Kotabaru**	**8.10**	**194**	P	**Pn**	**06 28 40.8**	**-0.3**
	58nm,0.6s,1μm						
KSM	**Kuching**	**8.44**	**249**	P	**Pn**	**06 28 45.9**	**0.0**
KSM	**Kuching**	**8.44**	**249**	*e*Pn	**Pn**	**06 28 43.7**	**-2.2**
	14nm,0.7s						
KSM	**Kuching**	**8.44**	**249**	P	Px	06 28 56.3	
KDI	**Kendari**	**9.59**	**152**	P	**Pn**	**06 29 00.4**	**-1.3**
	106nm,1.1s,1μm						
KAPI	**Kappang**	**9.68**	**171**	Pn	**Pn**	**06 29 02.3**	**-0.5**
	7.7nm,0.3s,baz=342,slow=8.2,SNR=35						
TNTI	**Ternate**	**9.94**	**112**	P	**Pn**	**06 29 07.4**	**+0.9**
	194nm,1.5s,3μm						
LBMI	**Labuha**	**10.68**	**119**	P	**Pn**	**06 29 17.9**	**+1.4**
	517nm,1.1s,4μm						
NLAI	**Namlea**	**11.84**	**131**	P	**Pn**	**06 29 32.0**	**-0.5**
	117nm,1.3s,1μm						
TPI	**Tanjungpandan**	**12.79**	**235**	P	**Pn**	**06 29 48.7**	**+3.2**
	32nm,1.2s,512nm						
AAI	**Ambon**	**12.96**	**129**	P	**Pn**	**06 29 53.2**	**+5.4**
PWJI	**Pagerwojo**	**14.05**	**207**	P	Px	06 30 15.1	
MYKOM	**Kota Tinggi**	**14.56**	**259**	P	**Pn**	**06 30 10.1**	**+0.5**
KTGM	**Kuala Trenggan**	**14.99**	**273**	P	**Pn**	**06 30 14.7**	**-0.5**
KGM	**Kluang**	**15.04**	**261**	P	**Pn**	**06 30 16.3**	**+0.5**
QIZ	**Qiongzhong**	**16.48**	**331**	P	**Pn**	**06 30 33.8**	**-0.4**
QIZ				S	**S**	**06 33 38.8**	**-7.7**
QIZ				pmax	pmax		
	comp=Z,12nm,1.3s						
QIZ				LR	LR		
	comp=N,1μm,14.3s						
QIZ				LR	LR		
	comp=Z,1μm,19.0s						
QIZ	**Qiongzhong**	**16.48**	**331**	*e*Pn	**Pn**	**06 30 33.6**	**-0.6**
	comp=Z,86nm,1.5s						
FRIM	**Kepong**	**16.56**	**266**	P	**Pn**	**06 30 36.0**	**+0.8**
MDSI	**Maura Dua**	**16.63**	**237**	P	**Pn**	**06 30 37.9**	**+1.7**
	comp=Z,68nm,1.4s,comp=Z,828nm						
IPM	**Ipoh**	**17.09**	**270**	P	**Pn**	**06 30 42.4**	**+0.5**
IPM	**Ipoh**	**17.09**	**270**	P	**Pn**	**06 30 41.7**	**-0.2**
	comp=Z,29nm,1.7s,comp=Z,497nm						
KULM	**Kulim**	**17.46**	**273**	P	**Pn**	**06 30 47.0**	**+0.5**
KSI	**Kapahiang**	**17.59**	**242**	P	**Pn**	**06 30 52.2**	**+4.2**
	comp=Z,99nm,1.1s						
PPI	**Padang Panjang**	**18.45**	**255**	P	**Pn**	**06 31 05.7**	**+7.1**
PDSI	**Padang**	**18.52**	**253**	P	**Pn**	**06 31 04.8**	**+5.4**
	comp=Z,48nm,1.3s						
TPUB	**Ta-pu**	**18.75**	**7**	*e*Pn	**Pn**	**06 31 01.7**	**-0.4**
	comp=Z,18nm,0.4s						
MNSI	**Mandailing Nat**	**18.94**	**259**	P	**Pn**	**06 31 04.8**	**+0.3**
	comp=Z,70nm,0.9s,comp=Z,1μm						
GZH	**Guangzhou**	**18.96**	**346**	P	**Pn**	**06 31 06.6**	**+1.9**
GZH				S	**S**	**06 34 49.5**	**+13**
GZH				LR	LR		
	comp=N,1μm,15.5s						
GZH				LR	LR		
	comp=E,1μm,12.4s						
GZH				LR	LR		
	comp=Z,2μm,19.4s						
SSLB	**Suanglung**	**19.27**	**8**	*e*P	**Pn**	**06 31 06.6**	**-1.6**
	comp=Z,21nm,0.9s						
QZH	**Quanzhou**	**20.23**	**1**	P	**P**	**06 31 19.8**	**+2.3**
QZH				S	**S**	**06 35 03.3**	**+1.2**
QZH				LR	LR		
	comp=N,2μm,17.1s						
QZH				LR	LR		
	comp=E,2μm,22.9s						
QZH				LR	LR		
	comp=Z,2μm,18.7s,MS4.4						
GSI	**Gunungsitoli**	**20.82**	**262**	P	**P**	**06 31 23.3**	**-0.7**
	comp=Z,128nm,0.6s						
NST	**Nakhon Sawan**	**20.86**	**303**	P	**P**	**06 31 25.0**	**+0.6**
KAKA	**Kakadu**	**22.29**	**141**	*e*P	**P**	**06 31 38.1**	**-1.6**
	comp=Z,78nm,1.0s,mb5.1						
KAKA	**Kakadu**	**22.29**	**141**	*e*P	**P**	**06 31 37.9**	**-1.8**
	comp=Z,240nm,1.0s,mb5.6						
KAKA	**Kakadu**	**22.29**	**141**	P	**P**	**06 31 39.0**	**-0.7**
	comp=Z,100nm,1.0s,comp=Z,754nm,mb5.2						
CM31	**Chiang Mai Arr**	**23.30**	**308**	*e*P	**P**	**06 31 50.2**	**0.0**
CHRT	**Chiangrai**	**23.48**	**312**	⇑P	**P**	**06 31 51.0**	**-0.9**
	comp=Z,105nm,2.0s,mb4.9						
CHG	**Chiang Mai**	**23.49**	**309**	⇓P	**P**	**06 31 51.3**	**-0.8**
	comp=Z,20nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**23.73**	**162**	*e*P	**P**	**06 31 52.3**	**-1.9**
	comp=Z,17nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**23.73**	**162**	P	**P**	**06 31 53.6**	**-0.6**
	comp=Z,7.0nm,0.9s,mb4.1,baz=1.2,slow=12,SNR=7.1						
FITZ				LR	LR	06 41 14.9	
	comp=Z,361nm,21.6s,MS3.8,baz=349,slow=37						
FITZ	**Fitzroy Crossi**	**23.73**	**162**	*e*P	**P**	**06 31 52.5**	**-1.7**
	comp=Z,67nm,1.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**23.73**	**162**	P	**P**	**06 31 52.7**	**-1.5**
	comp=Z,35nm,1.6s,mb4.5						
GYA	**Guiyang**	**24.36**	**334**	⇑*i*P	**P**	**06 32 01.1**	**+1.2**
GYA				PcP	PcP	06 35 41.0	+2.3
GYA				S	**S**	**06 36 19.3**	**+2.9**
GYA				SS		06 37 14.9	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,530nm,15.9s,MS4.4						
GYA				LR	LR		
	comp=E,730nm,14.8s,MS4.4						
GYA				LR	LR		
	comp=Z,630nm,14.7s,MS4.2						
KMI	**Kunming**	**25.22**	**326**	P	**P**	**06 32 08.3**	**+0.5**
KMI				S	**S**	**06 36 31.9**	**+1.7**
KMI				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.6						
KMI				LR	LR		
	comp=N,530nm,16.5s,MS4.3						
KMI				LR	LR		
	comp=E,550nm,15.5s,MS4.3						
KMI				LR	LR		
	comp=Z,650nm,19.5s,MS4.2						
MBWA	**Marble Bar**	**25.64**	**177**	*e*P	**P**	**06 32 12.5**	**+0.9**
MBWA	**Marble Bar**	**25.64**	**177**	P	**P**	**06 32 10.2**	**-1.4**
	comp=Z,33nm,1.2s,mb4.7						
ENH	**Enshi**	**26.82**	**343**	*e*P	**P**	**06 32 20.7**	**-1.4**
	comp=Z,10.0nm,0.4s,mb4.7						
NJ2	**Nanjing**	**27.32**	**1**	*e*P	**P**	**06 32 30.3**	**+3.7**
NJ2				pP	pP	06 32 34.6	-4.1
NJ2				sP	sP	06 32 37.3	-6.9
NJ2				PP		06 33 17.6	
NJ2				S	**S**	**06 37 11.0**	**+7.8**
NJ2				sS	sS	06 37 20.0	-3.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,100nm,10.2s						
NJ2				LR	LR		
	comp=N,900nm,16.7s,MS4.6						
NJ2				LR	LR		
	comp=E,1μm,16.7s,MS4.6						
NJ2				LR	LR		
	comp=Z,740nm,15.8s,MS4.4						
WRAB	**Tennant Creek**	**29.11**	**147**	*e*P	**P**	**06 32 41.9**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.8						
WRAB	**Tennant Creek**	**29.11**	**147**	*e*P	**P**	**06 32 41.9**	**-0.8**
	comp=Z,24nm,1.1s,mb4.8						
WRAB	**Tennant Creek**	**29.11**	**147**	P	**P**	**06 32 44.7**	**+2.0**
	comp=Z,24nm,1.2s,mb4.8						
CD2	**Chengdu**	**29.48**	**334**	P	**P**	**06 32 47.8**	**+1.9**
CD2				pP	pP	06 32 52.1	-6.0
CD2				sP	sP	06 32 56.8	-6.7
CD2				PP	PP	06 33 43.9	-9.2
CD2				S	**S**	**06 37 41.3**	**+4.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				pmax	pmax		
	comp=Z,180nm,5.9s						
CD2				LR	LR		
	comp=N,650nm,16.0s						
CD2				LR	LR		
	comp=Z,760nm,18.4s,MS4.4						
MEEK	**Meekatharra**	**31.05**	**179**	*e*P	**P**	**06 32 59.4**	**-0.4**
ASAR	**Alice Springs**	**32.01**	**152**	P	**P**	**06 33 08.2**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.3,baz=339,slow=13,SNR=22						
ASAR				PcP	PcP	06 35 59.8	+2.3
	comp=Z,1.1nm,0.7s,baz=341,slow=2.4,SNR=5.7						
SHL	**Shillong**	**32.71**	**312**	*e*P	**P**	**06 33 13.0**	**-1.4**
KSRS	**Korea Array**	**33.90**	**14**	P	**P**	**06 33 24.6**	**0.0**
	comp=Z,2.9nm,0.7s,mb4.3,baz=197,slow=8.5,SNR=9.3						
KSRS				LR	LR	06 49 11.6	
	comp=Z,74nm,18.4s,MS3.4,baz=331,slow=40						
LZH	**Lanzhou**	**34.00**	**339**	*e*P	**P**	**06 33 27.1**	**+1.6**
LZH				pP	pP	06 33 30.1	-7.7
LZH				sP	sP	06 33 31.8	-11
LZH				*e*S	**S**	**06 38 53.3**	**+5.7**
LZH				SS	SS	06 41 02.4	-14
LZH				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
LZH				pmax	pmax		
	comp=Z,80nm,4.0s						
LZH				LR	LR		
	comp=E,770nm,12.9s						
LZH				LR	LR		
	comp=Z,940nm,14.6s,MS4.7						
BJT	**Baijiatuau**	**35.31**	**357**	*e*P	**P**	**06 33 36.8**	**0.0**
BJI	**Beijing**	**35.33**	**357**	P	**P**	**06 33 38.3**	**+1.4**
BJI				S	**S**	**06 39 09.3**	**+1.3**
BJI				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
BJI				pmax	pmax		
	comp=Z,82nm,3.5s						
BJI				LR	LR		
	comp=N,260nm,24.8s,MS4.1						
BJI				LR	LR		
	comp=E,340nm,26.1s,MS4.1						
BJI				LR	LR		
	comp=Z,510nm,33.0s						
LSA	**Lhasa**	**35.72**	**317**	P	**P**	**06 33 41.9**	**+1.4**
FORT	**Forrest**	**36.43**	**166**	*e*P	**P**	**06 33 49.6**	**+3.2**
	comp=Z,20nm,0.7s,mb5.2						
HHC	**Hu-ho-hao-te**	**36.58**	**352**	*e*P	**P**	**06 33 51.1**	**+3.5**
HHC				pP	pP	06 33 55.6	-4.3
HHC				sP	sP	06 33 58.1	-7.3
HHC				PP	PP	06 35 17.8	+6.2
HHC				PcP	PcP	06 36 12.9	+2.6
HHC				S	**S**	**06 39 35.3**	**+8.2**
HHC				sS	sS	06 39 42.3	-5.4
HHC				ScP	ScP	06 39 57.1	+3.7
HHC				SS	SS	06 42 04.8	-3.6
HHC				ScS	ScS	06 44 03.8	+4.0
HHC				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
HHC				pmax	pmax		
	comp=Z,92nm,5.4s						
HHC				LR	LR		
	comp=N,740nm,15.7s,MS4.8						
HHC				LR	LR		
	comp=E,1μm,16.2s,MS4.8						
HHC				LR	LR		
	comp=Z,820nm,16.8s,MS4.6						
MAT	**Matsushiro**	**36.74**	**27**	P	**P**	**06 33 47.7**	**-1.4**
MJAR	**Matsushiro Arr**	**36.74**	**27**	P	**P**	**06 33 49.7**	**+0.7**
	comp=Z,0.9nm,0.7s,mb3.7,baz=200,slow=11,SNR=5.4						
MJAR				LR	LR	06 48 11.0	
	comp=Z,298nm,20.3s,MS4.1,baz=195,slow=35						
CTA	**Charters Tower**	**36.93**	**133**	P	**P**	**06 33 50.2**	**-0.7**
	comp=Z,5.7nm,0.9s,mb4.4,baz=300,slow=9.6,SNR=4.0						
CTA				LR	LR	06 49 15.3	
	comp=Z,251nm,19.9s,MS4.0,baz=93,slow=37						
CTAO	**Charters Tower**	**36.93**	**133**	*e*P	**P**	**06 33 50.9**	**0.0**
CTAO				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.9						
CTAO	**Charters Tower**	**36.93**	**133**	*e*P	**P**	**06 33 50.9**	**0.0**
	comp=Z,27nm,1.4s,mb4.9						
SNY	**Shenyang**	**37.38**	**7**	⇓P	**P**	**06 33 54.4**	**-0.1**
SNY				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.0						
SNY				LR	LR		
	comp=N,380nm,17.1s,MS4.4						
SNY				LR	LR		
	comp=E,320nm,17.7s,MS4.4						
SNY				LR	LR		
	comp=Z,270nm,16.2s,MS4.1						
GTA	**Gaotai**	**38.43**	**337**	*e*P	**P**	**06 34 04.5**	**+1.1**
GTA				pP	pP	06 34 07.9	-7.8
GTA				sP	sP	06 34 10.6	-11
GTA				PP	PP	06 35 37.8	+5.8
GTA				S	**S**	**06 40 00.6**	**+5.3**
GTA				sS	sS	06 40 10.8	-5.3
GTA				SS	SS	06 42 43.3	-2.7
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
GTA				pmax	pmax		
	comp=Z,74nm,4.8s						
GTA				LR	LR		
	comp=N,410nm,18.1s,MS4.4						
GTA				LR	LR		
	comp=E,330nm,14.9s,MS4.4						
GTA				LR	LR		
	comp=Z,480nm,17.5s,MS4.4						
GUN	**Gumba**	**38.48**	**311**	*e*P	**P**	**06 34 03.8**	**-0.1**
	comp=Z,104nm,1.2s,mb5.5						
PKI	**Pulchoki**	**38.66**	**310**	*e*P	**P**	**06 34 05.3**	**-0.2**
	comp=Z,58nm,1.2s,mb5.2						
PKIN	**Phulchoki**	**38.68**	**310**	*e*P	**P**	**06 34 05.3**	**-0.3**
	comp=Z,19nm,0.5s,mb5.0						
KKN	**Kakani**	**38.87**	**310**	*e*P	**P**	**06 34 06.7**	**-0.5**
	comp=Z,35nm,0.9s,mb5.1						
DMN	**Daman**	**38.91**	**310**	*e*P	**P**	**06 34 07.4**	**-0.2**
	comp=Z,37nm,0.9s,mb5.1						
CN2	**Changchun**	**39.57**	**8**	*e*P	**P**	**06 34 14.0**	**+1.2**
CN2				*es*P	sP	06 34 20.0	-11
CN2				*e*S	**S**	**06 40 17.6**	**+5.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,20.0s,MS4.4						
CN2				LR	LR		
	comp=E,400nm,20.0s,MS4.4						
CN2				LR	LR		
	comp=Z,200nm,20.0s,MS4.0						
HYB	**Hyderabad**	**40.81**	**291**	*i*P	**P**	**06 34 21.0**	**-2.5**
MDJ	**Mudanjiang**	**41.10**	**12**	P	**P**	**06 34 25.3**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
MDJ				pmax	pmax		
	comp=Z,76nm,5.5s						
MDJ				LR	LR		
	comp=N,150nm,21.1s,MS4.4						
MDJ				LR	LR		
	comp=E,530nm,24.6s,MS4.4						
MDJ				LR	LR		
	comp=Z,390nm,31.6s						
MDJ	**Mudanjiang**	**41.10**	**12**	*e*P	**P**	**06 34 25.5**	**+0.1**
	comp=Z,14nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**42.58**	**150**	*e*P	**P**	**06 34 37.8**	**+0.1**
	comp=Z,20nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**42.58**	**150**	P	**P**	**06 34 40.0**	**+2.2**
	comp=Z,18nm,0.9s,mb4.8,baz=317,slow=6.6,SNR=12						
STKA				LR	LR	06 55 41.7	
	comp=Z,333nm,18.3s,MS4.3,baz=172,slow=41						
STKA	**Stephens Creek**	**42.58**	**150**	*e*P	**P**	**06 34 38.3**	**+0.6**
STKA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
STKA	**Stephens Creek**	**42.58**	**150**	*e*P	**P**	**06 34 38.3**	**+0.6**
	comp=Z,10.0nm,1.2s,mb4.4						
ULN	**Ulaanbaatar**	**44.15**	**349**	*e*P	**P**	**06 34 49.4**	**-0.7**
ULN				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
ULN	**Ulaanbaatar**	**44.15**	**349**	*e*P	**P**	**06 34 49.4**	**-0.8**
	comp=Z,22nm,1.4s,mb4.7						
ULN	**Ulaanbaatar**	**44.15**	**349**	P	**P**	**06 34 50.8**	**+0.7**
	comp=Z,12nm,1.5s,mb4.4						
SONM	**Songino Array**	**44.25**	**349**	P	**P**	**06 34 51.5**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.0,baz=166,slow=8.9,SNR=12						
SONM				LR	LR	06 54 45.4	
	comp=Z,549nm,20.1s,MS4.5,baz=166,slow=38						
CMSA	**Cobar Meteorol**	**44.49**	**146**	*e*P	**P**	**06 34 53.7**	**+0.6**
ZAK	**Zakamensk**	**47.32**	**347**	*e*P	**P**	**06 35 12.2**	**-2.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
WMQ	**Urumqi**	**47.41**	**330**	*e*P	**P**	**06 35 18.1**	**+2.2**
WMQ				S	**S**	**06 42 11.0**	**+4.1**
WMQ				sS	sS	06 42 22.3	-5.7
WMQ				ScS	ScS	06 45 09.9	+4.0
WMQ				SS	SS	06 45 30.9	-4.2
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,120nm,4.5s						
WMQ				LR	LR		
	comp=N,450nm,31.0s,MS4.3						
WMQ				LR	LR		
	comp=E,190nm,31.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,410nm,31.0s,MS4.2						
TLY	**Talaya**	**48.46**	**348**	*e*P	**P**	**06 35 24.4**	**+0.5**
TLY				*e*		06 37 17.1	
TLY				*e*S	**S**	**06 42 41.5**	**+20**
TLY				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,234nm,17.0s,MS4.2						
TLY	**Talaya**	**48.46**	**348**	*e*P	**P**	**06 35 24.7**	**+0.8**
	comp=Z,25nm,1.7s,mb5.0						
MOY	**Mondy**	**49.05**	**346**	*e*P	**P**	**06 35 29.7**	**+1.3**
KSH	**Kashi**	**51.56**	**318**	*e*P	**P**	**06 35 46.5**	**-1.1**
KSH				pmax	pmax		
	comp=Z,67nm,4.6s						
MK31	**Makanchi Array**	**52.21**	**329**	*e*P	**P**	**06 35 52.1**	**-0.2**
MKAR	**Makanchi Array**	**52.21**	**329**	P	**P**	**06 35 52.5**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=117,slow=6.9,SNR=13						
MKAR				LR	LR	06 59 59.7	
	comp=Z,285nm,19.3s,MS4.3,baz=129,slow=38						
MKAR	**Makanchi Array**	**52.21**	**329**	*ce*P	**P**	**06 35 50.7**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOD	**Bodaibo**	**53.18**	**357**	*e*P	**P**	**06 35 59.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
UCH	**Uchtor**	**53.91**	**321**	*e*P	**P**	**06 36 06.2**	**+1.2**
UCH				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
UCH	**Uchtor**	**53.91**	**321**	*e*P	**P**	**06 36 06.2**	**+1.2**
	comp=Z,9.9nm,0.9s,mb4.7						
AAK	**Ala-Archa**	**54.14**	**321**	P	**P**	**06 36 07.6**	**+1.0**
	comp=Z,3.6nm,0.7s,mb4.4,baz=168,slow=3.4,SNR=12						
AAK	**Ala-Archa**	**54.14**	**321**	*ce*P	**P**	**06 36 05.4**	**-1.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
AAK	**Ala-Archa**	**54.14**	**321**	*e*P	**P**	**06 36 07.2**	**+0.6**
	comp=Z,17nm,1.0s,mb4.9						
AAK	**Ala-Archa**	**54.14**	**321**	P	**P**	**06 36 09.1**	**+2.4**
	comp=Z,4.4nm,1.1s,mb4.3						
DZM	**Mont Dzumac**	**54.15**	**121**	*e*LR	LR	06 51 58.0	
	comp=Z,217nm,31.2s						
FRU	**Bishkek**	**54.17**	**321**	*e*P	Px	06 36 18.0	
KBL	**Kabul**	**54.31**	**310**	*e*P	**P**	**06 36 07.6**	**-0.4**
KBL				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
KBL	**Kabul**	**54.31**	**310**	*e*P	**P**	**06 36 07.6**	**-0.5**
	comp=Z,30nm,1.3s,mb5.1						
AML	**Almayashu**	**54.38**	**320**	*e*P	**P**	**06 36 09.4**	**+0.9**
AML				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
AML	**Almayashu**	**54.38**	**320**	*e*P	**P**	**06 36 09.4**	**+0.9**
	comp=Z,12nm,1.0s,mb4.8						
EKS2	**Erkin-Say**	**54.60**	**321**	P	**P**	**06 36 12.5**	**+2.5**
EKS2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
EKS2	**Erkin-Say**	**54.60**	**321**	P	**P**	**06 36 12.5**	**+2.5**
	comp=Z,10nm,1.1s,mb4.8						
ZALV	**Zalesovo Beam**	**56.19**	**337**	P	**P**	**06 36 20.2**	**-1.0**
	comp=Z,2.0nm,0.5s,mb4.4,baz=108,slow=7.7,SNR=6.1						
ZALV				LR	LR	07 02 35.9	
	comp=Z,273nm,18.3s,MS4.4,baz=270,slow=38						
ZALV	**Zalesovo Beam**	**56.19**	**337**	P	**P**	**06 36 20.2**	**-1.0**
ZALV				LR	LR	07 02 35.9	
KURK	**Kurchatov**	**56.62**	**331**	P	**P**	**06 36 23.6**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.3,baz=137,slow=6.8,SNR=12	

comp=N,1.1nm,0.5s,mb4.3,baz=116,slow=8.6,SNR=6.8
BVAR LR LR 07 06 07.5
comp=N,276nm,19.2s,MS4.4,baz=121,slow=38
BRVK Borovoye 62.16 330 *c*eP **P 06 37 00.9 -1.6**
BRVK pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
BRVK Borovoye 62.16 330 *e*P **P 06 37 02.2 -0.3**
comp=Z,13nm,1.3s,mb4.9
SEY Seymchan 63.39 17 *e*P **P 06 37 07.7 -2.8**
ABKAR Akbulak array 66.17 322 *e*P **P 06 37 28.3 -0.6**
comp=Z,10nm,1.3s,mb4.7
TIXI Tiksi 67.31 4 *e*P **P 06 37 34.2 -1.5**
TIXI pmax pmax
comp=Z,19nm,1.0s,mb5.1
TIXI MLR MLR
comp=Z,209nm,17.0s,MS4.4
TIXI Tiksi 67.31 4 *e*P **P 06 37 34.5 -1.2**
comp=Z,29nm,1.3s,mb5.2
RPZ Rata Peaks 67.59 141 LR LR 07 08 55.5
comp=Z,295nm,19.6s,MS4.5,baz=293,slow=38
AKTK Aktyubinsk 67.76 323 P **P 06 37 38.6 -0.4**
AKTO Aktyubinsk 67.76 323 P **P 06 37 38.6 -0.4**
comp=Z,2.2nm,0.7s,mb4.3,baz=74,slow=4.0,SNR=8.7
ARU Arti 69.73 329 *c i*P **P 06 37 49.6 -1.6**
ARU S S 06 47 00.4 +3.8
ARU SS SS 06 51 23.2 -2.4
ARU pmax pmax
comp=Z,16nm,2.5s,mb4.5
ARU Arti 69.73 329 *e*P **P 06 37 50.6 -0.6**
comp=Z,13nm,1.1s,mb4.8
RDF Al-Radifah 70.83 299 *e*P **P 06 37 56.6 -1.9**
RDF AMb AMB 06 38 01.2
comp=Z,57nm,1.2s,mb5.4
BILL Bilibino 71.08 17⇑ *e*P **P 06 37 56.8 -2.4**
BILL *e* 06 40 34.9
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.5
BILL MLR MLR
comp=Z,200nm,23.0s,MS4.3
BILL Bilibino 71.08 17 *e*P **P 06 37 59.0 -0.2**
comp=Z,9.4nm,1.3s,mb4.6
MIB Mutribah 71.10 300 *e*P **P 06 37 58.6 -1.5**
MIB AMb AMB 06 38 03.2
comp=Z,35nm,0.9s,mb5.3
NAY Al-Naaiem 71.13 299 *e*P **P 06 37 58.3 -1.9**
NAY AMb AMB 06 38 02.8
comp=Z,12nm,1.2s,mb4.7
MAK Makhachkala 72.76 314 P **P 06 38 07.9 -1.8**
MAK *i* S S 06 47 33.0 +0.8
MAK pmax pmax
comp=Z,31nm,0.4s,mb5.6
GNI Garni 74.39 310 *c*eP **P 06 38 20.0 +0.6**
GNI pmax pmax
comp=Z,6.0nm,1.1s
ZEI Tsey 75.35 313 *e*P **P 06 38 24.6 -0.3**
ZEI pmax pmax
comp=Z,16nm,1.4s,mb4.8
KIV Kislovodsk 76.38 314 *e*P **P 06 38 32.7 +2.0**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KIV MLR MLR
comp=Z,114nm,20.0s,MS4.2
ASF Jabal al Asfar 80.18 302 P **P 06 38 53.1 +1.1**
comp=Z,2.5nm,0.8s,mb4.2,baz=169,slow=2.6,SNR=6.3
KLMR Klimovskoe 80.47 331 *e*P **P 06 38 51.3 -1.7**
KLMR pmax pmax
comp=Z,17nm,1.3s,mb4.8
KMBO Kilima Mbogo 81.04 268 P **P 06 38 59.3 +2.3**
comp=Z,4.7nm,1.2s,mb4.3,baz=3.8,slow=21,SNR=3.3
KMBO LR LR 07 12 01.6
comp=Z,244nm,21.1s,MS4.5,baz=274,slow=34
OBN Obninsk 81.44 325⇑ *e*P **P 06 38 57.2 -1.0**
OBN *e*S S 06 49 01.7 -4.4
OBN pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
OBN MLR MLR
comp=Z,200nm,22.0s,MS4.4
MMAI Mount Meron Ar 81.45 303 LR LR 07 21 17.7
comp=Z,104nm,20.2s,MS4.2,baz=85,slow=40
MAW Mawson 81.72 199 LR LR 07 07 37.0
comp=Z,221nm,20.7s,MS4.5,baz=208,slow=30
EIL Elat 81.85 299 P **P 06 39 02.4 +1.4**
comp=Z,5.7nm,0.8s,mb4.6,baz=109,slow=7.3,SNR=6.0
EIL Elat 81.85 299 P **P 06 39 02.4 +1.4**
BR131 Keskin Array S 82.88 309 *e*P **P 06 39 05.7 -0.4**
BRTR Keskin Array B 82.88 309 P **P 06 39 06.7 +0.5**
comp=Z,2.0nm,1.0s,mb4.1,baz=109,slow=5.7,SNR=11
BRTR LR LR 07 23 39.8
comp=Z,60nm,20.5s,MS4.0,baz=272,slow=41
BRTR Keskin Array B 82.88 309 *i*P **P 06 39 08.0 +1.9**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
CSS Prodhromos 83.16 305 *e*P **P 06 39 07.1 -0.6**
comp=Z,19nm,1.2s,mb5.0
APA Apatity 83.77 337⇑ *e*P **P 06 39 15.4 +5.3**
APA pmax pmax
comp=Z,43nm,1.4s,mb5.4
TTA Tatalina 84.03 27 *e*P **P 06 39 12.8 +1.3**
SVW2 Sparrevohn 84.19 29 *e*P **P 06 39 15.2 +2.9**
AKASG Malin Array Be 85.81 320 P **P 06 39 21.0 +0.3**
comp=Z,0.3nm,0.3s,mb4.0,baz=87,slow=3.5,SNR=6.8
AKASG LR LR 07 21 43.9
comp=Z,197nm,19.8s,MS4.5,baz=125,slow=38
COLD Coldfoot 86.43 23 P **P 06 39 24.0 +0.6**
comp=Z,5.6nm,1.2s,mb4.7
ARCES ARCESS Array B 86.66 339 P **P 06 39 23.6 -0.9**
comp=Z,2.1nm,0.7s,mb4.5,baz=86,slow=6.2,SNR=6.1
ARCES LR LR 07 22 08.6
comp=Z,296nm,18.5s,MS4.7,baz=83,slow=38
FINES FINESS Array B 87.00 331 P **P 06 39 25.8 -0.5**
comp=Z,2.9nm,0.8s,mb4.6,baz=85,slow=4.4,SNR=5.9
MCK McKinley 87.20 26 *e*P **P 06 39 27.7 +0.5**
MCK pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
MCK McKinley 87.20 26 *e*P **P 06 39 27.7 +0.5**
comp=Z,3.9nm,0.7s,mb4.8
SPITS Spitsbergen Ar 87.94 348 P **P 06 39 29.7 -0.9**
comp=Z,11nm,0.9s,mb5.1,baz=148,slow=22,SNR=4.7
BUR08 Bucovina Ar. S 88.64 318 *e*P **P 06 39 35.8 +1.3**
PPT Papeete 93.52 107 *e*LR LR 07 10 06.7
comp=Z,110nm,26.2s
NOA NORSAR Array B 94.12 332 LR LR 07 27 54.7
comp=Z,159nm,19.3s,MS4.5,baz=60,slow=39
BOSA Boshof 94.73 242 LR LR 07 19 34.3
comp=Z,193nm,19.3s,MS4.6,baz=101,slow=34
GERES GERESS Array B 96.01 320 LR LR 07 27 48.3
comp=Z,201nm,19.4s,MS4.6,baz=334,slow=38
YKA Yellowknife Ar 102.09 22 P Pdif 06 40 37.4 +1.8
comp=Z,0.4nm,0.7s,baz=306,slow=4.4,SNR=7.4
PDAR Pinedale Array 116.10 37 PKP PKPdf 06 45 27.8 +3.3
comp=Z,0.4nm,0.8s,baz=258,slow=1.4,SNR=3.8
TXAR Lajitas Array 127.57 47 PKP PKPdf 06 45 50.1 +3.2
comp=Z,0.2nm,0.6s,baz=239,slow=1.0,SNR=4.6

*ISCJB **18** 06:52:04.6±1.2, 2°.99N±0°.07×128°.51E±0°.10, h33km, mb4.1/2, Error ellipse: s-maj=14.1km s-min=9.4km az=0.7*
*DJA **18** 06:52:11, 2°.77N×128°.02E, h11km, mb4.7/7*
*IDC **18** 06:53:04.2±16.0, 10°.29N×123°.54E, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.6/21, mbtmp4.0/3, Error ellipse: s-maj=324.1km s-min=53.4km az=164.0*
ISC 18 06:52:06.8±1.2, **2°.97N**±0°.07×**128°.5E**±0°.1, **h35**km, **n21, σ0°92/22, mb4.1/2, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.46**	**207**	P	**Pn**	**06 52 44.0**	**-0.4**
TNTI				S	**Sn**	**06 53 13.7**	**+0.5**
TNTI	**Ternate**	**2.46**	**207**	P	**Pn**	**06 52 43.9**	**-0.5**
SGSI	**Sangihe**	**3.05**	**284**	P	**Pn**	**06 52 52.8**	**+0.2**
SGSI				S	**Sn**	**06 53 27.2**	**-0.7**
SGSI	**Sangihe**	**3.05**	**284**	P	**Pn**	**06 52 52.6**	**0.0**
LBMI	**Labuha**	**3.72**	**196**	P	**Pn**	**06 53 07.0**	**+5.2**
LBMI	**Labuha**	**3.72**	**196**	P	**Pn**	**06 53 06.7**	**+4.9**
229nm,0.9s,4μm1.1nm							
MRSI	**Marisa**	**7.00**	**249**	P	**Pn**	**06 53 47.6**	**+0.6**
90nm,0.6s,1μm0.3nm							
MRSI	**Marisa**	**7.00**	**249**	P	**Pn**	**06 53 47.6**	**+0.6**
59nm,0.8s,999nm							
APSI	**Ampana**	**7.86**	**241**	P	**Pn**	**06 53 59.8**	**+1.1**
59nm,0.8s,0.2nm							
APSI	**Ampana**	**7.86**	**241**	P	**Pn**	**06 53 59.4**	**+0.7**
59nm,0.8s							
KDI	**Kendari**	**9.04**	**221**	P	**Pn**	**06 54 14.4**	**-0.6**
30nm,1.4s							
KDI	**Kendari**	**9.04**	**221**	P	**Pn**	**06 54 14.1**	**-0.9**
30nm,1.4s							
TTSI	**Tana Toraja**	**10.53**	**236**	P	**Pn**	**06 54 33.9**	**-1.5**
21nm,0.8s							
TTSI	**Tana Toraja**	**10.53**	**236**	P	**Pn**	**06 54 33.8**	**-1.6**
SBUM	**Sibu**	**16.27**	**269**	P	**Pn**	**06 55 55.7**	**+2.9**
43nm,1.4s,514nm							
KHKI	**Kahang-Kahang**	**17.09**	**229**	P	**Pn**	**06 56 08.7**	**+5.6**
KSM	**Kuching**	**18.24**	**266**	P	**Pn**	**06 56 17.5**	**+0.1**
25nm,1.2s							
SJI	**Sawahan**	**19.79**	**237**	P	**Pn**	**06 56 36.3**	**+0.2**
KSRS	**Korea Array**	**34.33**	**359**	P	**P**	**06 58 50.7**	**+0.6**
2.3nm,0.8s,mb4.2,baz=179,slow=11,SNR=6.6							
MJAR	**Matsushiro Arr**	**34.59**	**14**	P	pP	06 59 08.7	+6.1
2.1nm,0.7s,baz=183,slow=9.7,SNR=11							
MKAR	**Makanchi Array**	**59.19**	**325**	P	**P**	**07 02 03.3**	**-1.0**
1.0nm,0.5s,mb4.1,baz=114,slow=8.5,SNR=12							

*NEIC **18** 06:54:31.9±0.7, 17°.58S×178°.64W, h589km±9km, mb4.1/4, Error ellipse: s-maj=26.1km s-min=12.1km az=144.0*
*IDC **18** 06:54:31.1±1.9, 17°.58S×178°.69W, h578km±24km, mb3.5/10, mb1 3.7/11, mb1mx3.5/19, mbtmp3.5/11, Error ellipse: s-maj=29.6km s-min=12.6km az=151.0*
*ISCJB **18** 06:54:32.2±1.0, 17°.6S±0°.1×178°.8W±0°.1, h607km±13km, mb4.1/15, Error ellipse: s-maj=24.7km s-min=10.5km az=152.6*
ISC 18 06:54:32.9±0.9, **17°.6S**±0°.1×**178°.7W**±0°.1, **h599**km±12km, **n150, σ0°54/122, mb4.1/15, 54C-43D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.07**	**267**	*e*P	**P**	**06 55 52.5**	**+0.2**
AFI	**Afiamalu**	**7.64**	**62**	P	**P**	**06 56 25.0**	**-3.8**
3.6nm,0.3s,baz=226,slow=22,SNR=4.8							
URZ	**Urewera**	**20.91**	**189**	P	**P**	**06 58 35.1**	**+0.4**
3.3nm,0.6s,baz=70,slow=9.7,SNR=3.3							
CTA	**Charters Tower**	**33.19**	**260**	*e*P	**P**	**07 00 22.1**	**+0.3**
4.7nm,0.4s,mb4.5							
CTA	**Charters Tower**	**33.19**	**260**	P	**P**	**07 00 22.0**	**+0.1**
4.6nm,0.4s,mb4.5,baz=89,slow=11,SNR=18							
CMSA	**Cobar Meteorol**	**35.03**	**240**	*e*P	**P**	**07 00 36.6**	**-0.5**
MTSU	**Mount Surprise**	**35.13**	**263**	*e*P	**P**	**07 00 38.0**	**0.0**
8.7nm,0.5s,mb4.6							
COEN	**Coen**	**36.79**	**270**	*e*P	**P**	**07 00 53.3**	**+1.6**
STKA	**Stephens Creek**	**38.51**	**241**	*e*P	**P**	**07 01 05.3**	**-0.1**
5.5nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**07 01 05.0**	**-0.4**
5.3nm,0.6s,mb4.2,baz=74,slow=7.8,SNR=7.0							
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**07 01 53.2**	**0.0**
24nm,0.6s,mb5.0,baz=87,slow=8.7,SNR=297							
KAKA	**Kakadu**	**47.28**	**269**	*e*P	**P**	**07 02 13.1**	**-0.7**
6.9nm,0.4s,mb4.5							
FITZ	**Fitzroy Crossi**	**52.77**	**260**	P	**P**	**07 02 52.8**	**-1.0**
1.6nm,0.6s,mb3.5,baz=59,slow=16,SNR=6.2							
PETK	**Petropavlovsk-**	**73.30**	**345**	P	**P**	**07 05 05.4**	**+1.2**
2.1nm,0.6s,mb3.8,baz=137,slow=9.1,SNR=5.6							
EDW2	**Edwards Air Fo**	**77.75**	**47**	⇑P	**P**	**07 05 28.7**	**-0.6**
baz=80							
ISA	**Isabella**	**77.83**	**46**	⇑P	**P**	**07 05 29.9**	**+0.3**
baz=80							
MONP	**Monument Peak**	**77.85**	**50**	⇓P	**P**	**07 05 29.1**	**-0.7**
baz=80							
BEKR	**Beckwourth**	**78.87**	**42**	⇓P	**P**	**07 05 34.6**	**-0.5**
baz=81							
WCN	**Washoe City**	**78.94**	**43**	⇓P	**P**	**07 05 35.2**	**-0.2**
baz=81							
GRAC	**Grapevine Rang**	**79.29**	**46**	⇑P	**P**	**07 05 37.7**	**+0.3**
baz=81							
FURC	**Furnace Creek,**	**79.36**	**46**	⇑P	**P**	**07 05 36.7**	**-1.1**
baz=81							
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**07 05 38.2**	**+0.2**
2.2nm,0.7s,mb3.6,baz=224,slow=8.6,SNR=18							
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**07 05 38.2**	**+0.2**
Z13A	**Yuma Proving G**	**80.02**	**51**	⇓P	**P**	**07 05 41.3**	**-0.1**
baz=82							
MOD	**Modoc**	**80.05**	**40**	P	**P**	**07 05 41.2**	**0.0**
2.8nm,0.6s,mb3.8							
214A	**Organ Pipe Nat**	**80.07**	**52**	⇓P	**P**	**07 05 42.6**	**+1.0**
baz=82							
K05A	**Summer Lake**	**80.16**	**39**	⇓P	**P**	**07 05 42.7**	**+0.9**
baz=82							
Y13A	**Salome**	**80.19**	**50**	⇓P	**P**	**07 05 41.3**	**-0.9**
baz=82							
S10A	**Tonopah Range,**	**80.29**	**45**	⇑P	**P**	**07 05 42.2**	**-0.4**
baz=82							
R10A	**Warm Springs**	**80.68**	**45**	⇑P	**P**	**07 05 44.2**	**-0.4**
baz=83,SNR=6.5							
S11A	**Rachel**	**80.73**	**46**	⇑P	**P**	**07 05 44.9**	**+0.1**
baz=83							
T11A	**Corn Creek, Al**	**80.89**	**46**	P	**P**	**07 05 46.2**	**+0.5**
baz=83,SNR=6.0							
X14A	**Yava**	**81.19**	**50**	⇑P	**P**	**07 05 47.3**	**0.0**
baz=83							
S12A	**Delamar Landin**	**81.33**	**46**	⇑P	**P**	**07 05 48.4**	**+0.5**
baz=83							
U13A	**Pakoon Wash**	**81.35**	**48**	⇑P	**P**	**07 05 48.6**	**+0.5**
baz=83,SNR=6.0							
Y15A	**Casa Rosa Ranc**	**81.35**	**50**	⇑P	**P**	**07 05 48.1**	**-0.1**
baz=83,SNR=5.1							
Q11A	**Duckwater**	**81.40**	**45**	⇓P	**P**	**07 05 48.4**	**+0.1**
baz=83,SNR=5.2							
W14A	**Seligman**	**81.40**	**49**	⇑P	**P**	**07 05 48.2**	**-0.2**
baz=83,SNR=5.7							
217A	**Green Valley**	**81.49**	**53**	⇑P	**P**	**07 05 49.1**	**+0.2**
baz=84							
V14A	**Boquillas Ranc**	**81.58**	**49**	⇓P	**P**	**07 05 48.8**	**-0.5**
baz=84,SNR=5.7							
X15A	**Humboldt**	**81.67**	**50**	⇓P	**P**	**07 05 49.8**	**0.0**
baz=84,SNR=5.1							
T13A	**Saint George**	**81.69**	**47**	⇓P	**P**	**07 05 50.4**	**+0.6**
baz=84							
I07A	**Izee**	**81.76**	**39**	⇑P	**P**	**07 05 50.4**	**+0.5**
baz=84,SNR=6.3							
R12A	**Pony Springs,**	**81.85**	**46**	⇑P	**P**	**07 05 50.7**	**+0.1**
baz=84							
U14A	**Mt Trumbull**	**81.91**	**48**	P	**P**	**07 05 51.6**	**+0.7**
baz=84,SNR=11							
J08A	**Circle Bar Ran**	**81.98**	**40**	⇓P	**P**	**07 05 51.1**	**0.0**
baz=84							
Q12A	**Willow Creek R**	**82.05**	**45**	⇑P	**P**	**07 05 51.4**	**-0.3**
baz=84							
O11A	**Cowboy Ranch,**	**82.06**	**44**	⇓P	**P**	**07 05 51.6**	**0.0**
baz=84							
M10A	**I.L. Ranch, Tu**	**82.20**	**42**	⇓P	**P**	**07 05 52.9**	**+0.6**
baz=84							
P12A	**McGill**	**82.22**	**45**	⇓P	**P**	**07 05 52.9**	**+0.4**
baz=84							
X16A	**Lo Mia Camp, P**	**82.22**	**50**	⇑P	**P**	**07 05 52.4**	**-0.2**
baz=84							
V15A	**Kaibab Nationa**	**82.34**	**49**	⇑P	**P**	**07 05 54.0**	**+0.9**
baz=84							
J09A	**Fry Pan Ranch,**	**82.41**	**40**	⇓P	**P**	**07 05 53.6**	**+0.3**
baz=84,SNR=6.6							
319A	**Douglas**	**82.49**	**54**	⇑P	**P**	**07 05 54.0**	**0.0**
baz=84							
L10A	**Juniper Basin**	**82.54**	**42**	⇓P	**P**	**07 05 54.0**	**0.0**
baz=84,SNR=5.9							
U15A	**North Rim**	**82.54**	**48**	⇑P	**P**	**07 05 54.5**	**+0.3**
baz=85,SNR=7.8							
Q13A	**Wheeler Ranch,**	**82.56**	**45**	⇓P	**P**	**07 05 54.1**	**0.0**
baz=85,SNR=7.7							
X17A	**Forest Lakes**	**82.65**	**51**	⇑P	**P**	**07 05 54.8**	**+0.1**
baz=85							
K10A	**MacKenzie Ranc**	**82.66**	**41**	⇓P	**P**	**07 05 54.8**	**+0.3**
baz=85							
O12A	**Currie**	**82.73**	**44**	⇓P	**P**	**07 05 54.9**	**-0.1**
baz=85							
T15A	**Red Dirt Ranch**	**82.76**	**48**	⇓P	**P**	**07 05 55.7**	**+0.5**
baz=85							
P13A	**Bates Ranch, G**	**82.81**	**45**	P	**P**	**07 05 55.6**	**+0.2**
baz=85,SNR=5.1							
L11A	**Cat Creek Ranc**	**83.04**	**42**	⇑P	**P**	**07 05 57.1**	**+0.6**
baz=85							
320A	**Kipp Ranch, An**	**83.06**	**54**	⇓P	**P**	**07 05 57.8**	**+0.9**
baz=85							
Q14A	**Sevier Lake (B**	**83.08**	**46**	⇑P	**P**	**07 05 57.3**	**+0.6**
baz=85							
K11A	**Parker Ranch,**	**83.18**	**41**	⇓P	**P**	**07 05 57.6**	**+0.5**
baz=85							
H09A	**Durkee**	**83.18**	**39**	⇑P	**P**	**07 05 56.6**	**-0.5**
baz=85							
U16A	**Tuba City**	**83.24**	**49**	⇓P	**P**	**07 05 57.4**	**-0.2**
baz=85							
V17A	**Tonalea, Kykot**	**83.25**	**49**	⇑P	**P**	**07 05 56.5**	**-1.1**
baz=85							
220A	**Playas Peak, P**	**83.30**	**54**	⇓P	**P**	**07 05 58.6**	**+0.6**
baz=85							
L12A	**House Creek Ra**	**83.50**	**42**	⇑P	**P**	**07 05 58.7**	**0.0**
baz=86							
M13A	**Montello**	**83.65**	**43**	⇑P	**P**	**07 05 59.4**	**-0.1**
baz=86							
H10A	**Noah's Angus R**	**83.69**	**39**	⇑P	**P**	**07 05 59.3**	**-0.4**
baz=86							
TRF	**Thorofare Moun**	**83.77**	**12**	*e*P	**P**	**07 05 58.7**	**-0.9**
6.6nm,0.7s,mb4.3							
T17A	**Navajo Res., N**	**83.86**	**48**	⇓P	**P**	**07 06 00.9**	**+0.2**
baz=86							
J12A	**Stokes Ranch,**	**84.01**	**41**	⇑P	**P**	**07 06 01.6**	**+0.4**
baz=86							
F10A	**Beach Ranch, E**	**84.14**	**38**	⇑P	**P**	**07 06 01.7**	**-0.1**
baz=86							
H11A	**Donnelly**	**84.20**	**40**	⇑P	**P**	**07 06 01.6**	**-0.6**
baz=86							
M14A	**Sheep Mountain**	**84.26**	**43**	⇑P	**P**	**07 06 02.4**	**-0.1**
baz=86							
G11A	**Walters Elk Ra**	**84.41**	**39**	⇓P	**P**	**07 06 01.8**	**-1.3**
baz=86							
T18A	**Mexican Hat**	**84.59**	**48**	⇑P	**P**	**07 06 04.1**	**-0.1**
baz=87							
HLID	**Hailey**	**84.60**	**41**	⇑P	**P**	**07 06 03.5**	**-0.6**
baz=87,SNR=5.8							
J13A	**Cove Ranch, Pi**	**84.67**	**41**	⇑P	**P**	**07 06 04.3**	**-0.2**
baz=87							
H12A	**Diamond D Ranc**	**84.83**	**40**	⇑P	**P**	**07 06 04.5**	**-0.7**
baz=87							
G12A	**Big Creek, Yel**	**84.83**	**39**	⇓P	**P**	**07 06 05.0**	**-0.3**
baz=87							
SRU	**San Rafael**	**85.03**	**46**	⇓P	**P**	**07 06 06.0**	**-0.3**
baz=87							
F12A	**Elk City**	**85.20**	**39**	⇑P	**P**	**07 06 07.0**	**0.0**
baz=87							
O17A	**Robinson Place**	**85.38**	**45**	⇓P	**P**	**07 06 08.1**	**+0.1**
baz=87							
I14A	**Mackay**	**85.39**	**41**	⇑P	**P**	**07 06 09.3**	**+1.4**
baz=87							
324A	**Moseley Ranch,**	**85.47**	**55**	⇑P	**P**	**07 06 08.3**	**-0.3**
baz=88							
224A	**Corundas Mount**	**85.69**	**55**	⇑P	**P**	**07 06 09.0**	**-0.7**
baz=88							
J15A	**Blackfoot**	**85.77**	**42**	⇑P	**P**	**07 06 10.3**	**+0.5**
baz=88							
H14A	**Leadore**	**85.78**	**41**	⇓P	**P**	**07 06 09.2**	**-0.6**
baz=88							
626A	**Big Bend Ranch**	**85.80**	**57**	⇑P	**P**	**07 06 10.8**	**+0.6**
baz=88							
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**07 06 12.0**	**+0.4**
2.4nm,0.7s,mb3.9,baz=220,slow=6.1,SNR=40							
J16A	**Bone**	**86.24**	**42**	⇓P	**P**	**07 06 12.0**	**0.0**
baz=88							
426A	**McDonald Obser**	**86.31**	**56**	⇑P	**P**	**07 06 13.1**	**+0.4**
baz=88							
627A	**Terlingua Ranc**	**86.36**	**58**	⇓P	**P**	**07 06 12.8**	**-0.1**
baz=88							
527A	**Woodward Ranch**	**86.45**	**57**	⇓P	**P**	**07 06 13.2**	**-0.1**
baz=88							
RRI2	**Red Ridge**	**86.46**	**42**	*e*P	**P**	**07 06 13.4**	**+0.4**
2.9nm,0.7s,mb4.0							
Y24A	**Capitan**	**86.50**	**53**	⇑P	**P**	**07 06 13.3**	**-0.1**
baz=88							
G15A	**Dillon**	**86.59**	**40**	⇑P	**P**	**07 06 13.5**	**0.0**
baz=88							
E14A	**Clinton**	**86.59**	**39**	⇑P	**P**	**07 06 13.3**	**-0.2**
baz=88							
J17A	**Brown Place, J**	**86.86**	**43**	⇑P	**P**	**07 06 14.1**	**-0.8**
baz=89							
427A	**Hayter Ranch,**	**86.88**	**56**	⇓P	**P**	**07 06 15.1**	**-0.3**
baz=89							
F15A	**Butte**	**86.92**	**40**	⇓P	**P**	**07 06 14.9**	**-0.2**
baz=89							
IMW	**Indian Meadow**	**86.96**	**42**	*e*P	**P**	**07 06 15.4**	**0.0**
3.7nm,1.0s,mb4.1							
K18A	**Toltan Ranch,**	**86.96**	**44**	⇓P	**P**	**07 06 14.8**	**-0.6**
baz=89							
G16A	**Moss Hill, Enn**	**87.05**	**41**	⇓P	**P**	**07 06 14.9**	**-0.8**
baz=89							
H16A	**Russell Place,**	**87.14**	**41**	⇑P	**P**	**07 06 16.4**	**+0.2**
baz=89							
L19A	**Farson**	**87.17**	**44**	⇓P	**P**	**07 06 16.2**	**-0.2**
baz=89							
J18A	**Kendall Valley**	**87.24**	**43**	⇑P	**P**	**07 06 16.7**	**0.0**
baz=89							
BW06	**Boulder Array**	**87.34**	**44**	⇑P	**P**	**07 06 17.1**	**0.0**
baz=89							
PDAR	**Pinedale Array**	**87.34**	**44**	P	**P**	**07 06 17.1**	**-0.1**
1.5nm,0.6s,mb3.9,baz=236,slow=2.5,SNR=16							
BOZ	**Bozeman (W)**	**87.35**	**40**	⇑P	**P**	**07 06 17.4**	**+0.2**
baz=89							
H17A	**Grant Village**	**87.43**	**42**	⇓P	**P**	**07 06 19.2**	**+1.7**
baz=89							
L20A	**Wamsutter**	**87.81**	**45**	⇓P	**P**	**07 06 19.8**	**+0.4**
baz=90							
A14A	**Double T Ranch**	**87.91**	**37**	⇑P	**P**	**07 06 19.2**	**-0.5**
baz=90							
K20A	**Yellowstone Ra**	**88.09**	**44**	⇓P	**P**	**07 06 20.1**	**-0.6**
baz=90							
C17A	**Wharram Farm,**	**88.82**	**39**	⇓P	**P**	**07 06 23.4**	**-0.5**
baz=91							
YKA	**Yellowknife Ar**	**94.18**	**25**	P	**P**	**07 06 47.7**	**-0.5**
0.3nm,0.5s,mb3.7,baz=247,slow=4.5,SNR=7.4							
YKA	**Yellowknife Ar**	**94.18**	**25**	P	**P**	**07 06 47.7**	**-0.5**
ARCES	**ARCESS Array B**	**125.95**	**350**	PKP	PKPdf	07 12 25.7	-1.3
6.3nm,1.1s,baz=90,slow=1.8,SNR=3.7							
ARCES	**ARCESS Array B**	**125.95**	**350**	PKP	PKPdf	07 12 25.7	-1.3
FINES	**FINESS Array B**	**132.80**	**344**	PKP	PKPdf	07 12 37.8	-2.4
4.7nm,1.1s,baz=95,slow=6.3,SNR=4.7							
BRTR	**Keskin Array B**	**144.34**	**315**	PKP	PKPdf	07 13 02.2	+0.3
0.9nm,0.7s,baz=124,slow=4.0,SNR=5.4							
STHS	**Stebnicka huta**	**144.38**	**337**	*e*PKP	PKPdf	07 13 02.9	+1.3
KOLS	**Kolonicke sedl**	**144.39**	**336**	*e*PKP	PKPdf	07 13 02.9	+1.2
CLL	**Collm**	**145.09**	**347**⇑ *i*PKP	PKPdf		07 13 03.7	+0.9
CLL	**Collm**	**145.09**	**347**⇑ *i*PKPbc	PKPbc		07 13 03.7	-0.1
comp=Z,6.0nm,0.7s							
DPC	**Dobruska-Polom**	**145.16**	**343**	*e*PKP	PKPdf	07 13 04.7	+1.8
BRG	**Berggiesshubel**	**145.29**	**346**	*e*PKP	PKPdf	07 13 04.5	+1.4
comp=Z,2.0nm,0.6s							
KECS	**Kecovo**	**145.44**	**337**	*e*PKP	PKPdf	07 13 02.9	-0.6
PRU	**Pruhonice**	**145.96**	**345**	*e*PKP	PKPbc	07 13 07.1	+0.8
VYHS	**Vyhne**	**146.01**	**339**	*e*PKP	PKPbc	07 13 06.9	+0.4
GRA1	**Grafenberg Arr**	**146.99**	**348**	*e*

comp=E,390nm,7.6s
LZH LR LR
comp=Z,540nm,8.0s
ENH Enshi 4.90 102 *e*Pn **Pn 07 15 45.8 +0.9**
comp=Z,29nm,0.5s
ENH *e*Sn **Sn 07 16 43.1 +2.0**
XAN Xi'an 4.93 57 Pn **Pn 07 15 43.6 -1.6**
XAN Sn **Sn 07 16 40.8 -1.0**
XAN Sg **Sg 07 17 00.4 -10**
XAN smax
comp=N,110nm,0.7s
XAN smax
comp=E,72nm,0.9s
GYA Guiyang 5.50 154 Pg **Pn 07 15 54.6 +1.5**
GYA Sg **Sn 07 16 55.0 -1.0**
GYA smax
comp=N,80nm,0.8s
GYA smax
comp=E,70nm,0.8s
SONM Songino Array 16.48 6 Pn **Pn 07 18 26.4 +4.1**
comp=E,0.2nm,0.3s,baz=172,slow=5.4,SNR=3.9
ULN Ulaanbaatar 16.58 7 *e*Pn **Pn 07 18 26.9 +3.4**
KSRS Korea Array 20.63 67 P **P 07 19 08.6 -1.9**
comp=E,1.1nm,0.7s,baz=249,slow=10,SNR=3.4
CN2 Changchun 20.96 48 *e*P **P 07 19 14.3 +0.2**
CN2 *e*S **S 07 23 01.0 -6.0**
MK31 Makanchi Array 22.64 319 *e*P **P 07 19 32.6 +0.6**
MKAR Makanchi Array 22.64 319 P **P 07 19 32.7 +0.6**
comp=E,0.7nm,0.5s,mb3.4,baz=117,slow=12,SNR=11
MKAR Makanchi Array 22.64 319 P **P 07 19 32.7 +0.6**
AML Almayashu 26.36 302 *e*P **P 07 20 09.2 +2.1**
comp=E,0.6nm,0.5s,mb3.4
ZALV Zalesovo Beam 26.37 334 P **P 07 20 07.1 0.0**
comp=E,3.9nm,0.7s,mb4.0,baz=128,slow=9.3,SNR=13
ZALV Zalesovo Beam 26.37 334 P **P 07 20 07.1 0.0**
KURK Kurchatov 26.90 323 P **P 07 20 12.2 +0.3**
comp=E,1.5nm,0.8s,mb3.6,baz=126,slow=9.1,SNR=15
MJAR Matsushiro Arr 28.76 70 P **P 07 20 30.6 +1.9**
comp=E,0.6nm,0.6s,mb3.5,baz=259,slow=11,SNR=3.7
ARCES ARCESS Array B 56.91 336 P **P 07 24 15.1 -0.5**
comp=E,5.7nm,1.0s,mb4.5,baz=72,slow=7.8,SNR=4.8
FINES FINESS Array B 57.22 326 P **P 07 24 17.0 -0.9**
comp=E,1.4nm,0.6s,mb4.2,baz=72,slow=6.6,SNR=6.6
NOA NORSAR Array B 64.31 327 P **P 07 25 04.8 -1.5**
comp=E,1.1nm,0.8s,mb4.0,baz=74,slow=6.9,SNR=3.5
PPLA Purkeypile 68.44 29 *e*P **P 07 25 32.4 -0.2**
comp=E,1.1nm,0.6s,mb4.1
YKA Yellowknife Ar 81.41 17 P **P 07 26 46.4 -1.2**
comp=E,0.2nm,0.5s,mb3.3,baz=329,slow=5.0,SNR=5.4
YKA Yellowknife Ar 81.41 17 P **P 07 26 46.4 -1.2**

IDC 18 07:25:22.6±2.1, 18°.09N×147°.54E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=58.4km s-min=29.4km az=112.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.16**	**210**	Pn	Pn	07 26 41.6	+0.5
	7.4nm,0.3s,SNR=4.5						
GUMO				Sn	Sn	07 27 41.3	0.0
	6.2nm,0.3s,baz=116,slow=0.0,SNR=2.9						
MKAR	**Makanchi Array**	**60.14**	**314**	P	P	07 35 32.4	+0.5
	0.1nm,0.5s,baz=92,slow=8.7,SNR=2.8						
KURK	**Kurchatov**	**62.89**	**318**	P	P	07 35 50.3	-0.2
	0.5nm,0.6s,baz=92,slow=7.3,SNR=3.2						
BVAR	**Borovoye Array**	**68.06**	**321**	P	P	07 36 23.9	0.0
	0.5nm,0.4s,baz=83,slow=7.5,SNR=5.0						
YKA	**Yellowknife Ar**	**77.70**	**28**	P	P	07 37 21.0	+0.1
	0.3nm,0.6s,baz=288,slow=4.9,SNR=3.7						

*ISCJB **18** 08:04:59.7±0.5, 36°.96N±0°.03×29°.21E±0°.03, h6km±5km, Error ellipse: s-maj=4.9km s-min=4.1km az=151.8*
*CSEM **18** 08:04:59.9±0.1, 36°.97N×29°.20E, h10km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.7km az=6.0*
*DDA **18** 08:04:59.6, 36°.95N×29°.19E, h7km±5km, Md3.1*
*ISK **18** 08:04:59.1, 36°.98N×29°.19E, h8km, MD2.9*
ISC 18 08:05:00.1±0.5, 36°.96N±0°.03×29°.21E±0°.03, h8km±4km, n51, σ0°.86/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**50**	*e*PG	**Pg**	**08 05 05.7**	**-0.6**
GLHS				*e*SG	**Sg**	**08 05 10.3**	**0.0**
GLHS	**Glhisar (BURDU**	**0.31**	**50**	*e*Pg	**Pg**	**08 05 05.7**	**-0.5**
GLHS				*e*Sg	**Sg**	**08 05 10.3**	**0.0**
FETY	**Fethiye**	**0.34**	**197**	*e*PG	**Pg**	**08 05 06.4**	**-0.3**
FETY				*e*SG	**Sg**	**08 05 12.0**	**+0.9**
FETY	**Fethiye**	**0.34**	**197**	*e*Pg	**Pg**	**08 05 06.4**	**-0.3**
FETY				*e*Sg	**Sg**	**08 05 12.0**	**+0.8**
GOLH	**Golhisar**	**0.40**	**45**	*i* P	**Pg**	**08 05 07.2**	**-0.8**
GOLH				*i* S	**Sg**	**08 05 14.3**	**+1.1**
GOLH	**Golhisar**	**0.40**	**45**	*i* P	**Pg**	**08 05 07.2**	**-0.7**
GOLH				*i* S	**Sg**	**08 05 14.3**	**+1.1**
TURN	**Turunc**	**0.49**	**260**	*i* P	**Pg**	**08 05 14.8**	**+5.2**
TURN				*i* S	**Sg**	**08 05 28.3**	**+12**
ELL	**Elmali**	**0.60**	**110**	*e*PG	**Pg**	**08 05 11.6**	**-0.2**
ELL				*e*SG	**Sg**	**08 05 20.8**	**+1.2**
ELL	**Elmali**	**0.60**	**110**	*e*Pg	**Pg**	**08 05 11.6**	**-0.2**
ELL				*e*Sg	**Sg**	**08 05 20.8**	**+1.2**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**08 05 13.2**	**-1.3**
DNZL				*i* S	**Sg**	**08 05 26.3**	**+2.1**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**08 05 13.2**	**-1.3**
DNZL				*i* S	**Sg**	**08 05 26.3**	**+2.2**
YER	**Yerkesik**	**0.76**	**284**	*e*PG	**Pg**	**08 05 14.4**	**-0.4**
YER	**Yerkesik**	**0.76**	**284**	*e*Pg	**Pg**	**08 05 14.4**	**-0.4**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**08 05 15.6**	**+0.3**
AKAS				*i* S	**Sg**	**08 05 31.0**	**+5.4**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**08 05 15.6**	**+0.3**
DENT	**Denizli**	**0.81**	**350**	*e*PG	**Pg**	**08 05 14.3**	**-1.4**
DENT	**Denizli**	**0.81**	**350**	*e*Pg	**Pg**	**08 05 14.3**	**-1.4**
KORT	**Korkueli**	**0.92**	**87**	*i* P	**Pg**	**08 05 18.2**	**+0.4**
KORT				*i* S	**Sg**	**08 05 34.6**	**+4.9**
KORT	**Korkueli**	**0.92**	**87**	*i* P	**Pg**	**08 05 18.2**	**+0.4**
ANTB	**Antalya**	**1.16**	**92**	*e*PN	**Pn**	**08 05 21.9**	**-0.7**
ANTB	**Antalya**	**1.16**	**92**	*e*Pn	**Pn**	**08 05 21.9**	**-0.7**
MLSB	**Milas**	**1.19**	**287**	*e*PN	**Pn**	**08 05 22.2**	**-0.8**
MLSB	**Milas**	**1.19**	**287**	*e*Pn	**Pn**	**08 05 22.3**	**-0.7**
BCK	**Bucak**	**1.21**	**65**	*e*PN	**Pn**	**08 05 22.5**	**-0.9**
BCK	**Bucak**	**1.21**	**65**	*e*Pn	**Pn**	**08 05 22.5**	**-0.9**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**08 05 23.4**	**-0.7**
AYDN				*i* S	**Sb**	**08 05 42.5**	**+1.8**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**08 05 23.4**	**-0.7**
AYDN				*i* S	**Sb**	**08 05 42.5**	**+1.8**
DAT	**Datca**	**1.32**	**261**	*e*PN	**Pn**	**08 05 24.5**	**-0.4**
DAT	**Datca**	**1.32**	**261**	*e*Pn	**Pn**	**08 05 24.5**	**-0.4**
ISP	**Isparta**	**1.36**	**49**	*e*PN	**Pn**	**08 05 25.2**	**-0.2**
ISP	**Isparta**	**1.36**	**49**	*e*Pn	**Pn**	**08 05 25.2**	**-0.2**
KHL	**Karahalli**	**1.39**	**10**	*e*PN	**Pn**	**08 05 24.7**	**-1.0**
KHL	**Karahalli**	**1.39**	**10**	*e*Pn	**Pn**	**08 05 24.7**	**-1.0**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**08 05 26.2**	**+0.1**
BDRM				*i* S	**Sn**	**08 05 46.1**	**+1.3**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**08 05 26.2**	**+0.1**
BDRM				*i* S	**Sn**	**08 05 46.1**	**+1.2**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**08 05 26.6**	**+0.3**
KHAL				*i* S	**Sn**	**08 05 46.9**	**+1.6**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**08 05 26.6**	**+0.3**
KHAL				*i* S	**Sn**	**08 05 46.9**	**+1.6**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**08 05 27.2**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**08 05 27.2**	**-0.4**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN	**Pn**	**08 05 27.9**	**-0.9**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn	**Pn**	**08 05 28.0**	**-0.9**
MANT	**Manisa**	**1.61**	**342**	*i* P	**Pn**	**08 05 28.9**	**0.0**
MANT	**Manisa**	**1.61**	**342**	*i* P	**Pn**	**08 05 28.9**	**0.0**
BLCB	**Balcova**	**2.23**	**310**	*e*PN	**Pn**	**08 05 36.8**	**-0.5**
BLCB	**Balcova**	**2.23**	**310**	*e*Pn	**Pn**	**08 05 36.8**	**-0.5**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**08 05 43.2**	**+0.4**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**08 05 43.2**	**+0.4**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*PN	**Pn**	**08 05 44.3**	**+0.5**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*Pn	**Pn**	**08 05 44.3**	**+0.5**
KIZT	**Kizilcal**	**2.86**	**47**	*e*PN	**Pn**	**08 05 46.1**	**+0.1**
KIZT	**Kizilcal**	**2.86**	**47**	*e*Pn	**Pn**	**08 05 46.1**	**+0.2**

*ISCJB **18** 08:08:21.9±0.5, 31°.50N±0°.04×103°.53E±0°.07, h10km, mb3.9/8, Error ellipse: s-maj=9.1km s-min=4.9km az=158.0*
*IDC **18** 08:08:21.5±1.3, 31°.28N×103°.33E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=42.4km s-min=21.9km az=47.0*
*NEIC **18** 08:08:23.8±0.7, 31°.40N×103°.41E, h10km, mb4.3/2, Error ellipse: s-maj=20.0km s-min=11.2km az=213.0*
*BJI **18** 08:08:23.6, 31°.43N×103°.41E, h10km, ML3.7/13, Ms3.4/1, Ms7 3.4/1*
ISC 18 08:08:23.7±0.5, 31°.41N±0°.04×103°.43E±0°.06, h10km, n18, σ1°.20/25, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.57**	**150**	Pg	**Pg**	**08 08 33.3**	**-1.4**
CD2				Sg	**Sg**	**08 08 42.1**	**-0.1**
CD2				smax			
	comp=N,5μm,0.8s						
LZH	**Lanzhou**	**4.68**	**4**	Pg	**Pg**	**08 09 51.3**	**-2.1**
LZH				Sn	**Sn**	**08 10 32.4**	**+3.6**
LZH				Sg	**Sg**	**08 10 52.9**	**-1.1**
LZH				smax			
	comp=N,93nm,1.1s						
LZH				smax			
	comp=E,75nm,0.8s						
LZH				LR	LR		
	comp=E,990nm,6.6s						
LZH				LR	LR		
	comp=Z,1μm,7.6s						
XAN	**Xi'an**	**5.32**	**59**	Pn	**Pn**	**08 09 46.3**	**+3.1**
XAN				Pg	**Pg**	**08 10 00.3**	**-5.3**
XAN				Sn	**Sn**	**08 10 46.8**	**+2.3**
XAN				Sg	**Sg**	**08 11 07.3**	**-7.2**
XAN				smax			
	comp=N,78nm,0.8s						
XAN				smax			
	comp=E,41nm,0.8s						
ENH	**Enshi**	**5.33**	**101**	*e*Pn	**Pn**	**08 09 44.8**	**+1.4**
	comp=E,23nm,0.4s						
ENH				*e*Sn	**Sn**	**08 10 43.9**	**-0.9**
GYA	**Guiyang**	**5.69**	**149**	Pg	**Pg**	**08 10 06.8**	**-5.8**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
SONM	**Songino Array**	**16.56**	**7**	Pn	**Pn**	**08 12 16.5**	**+0.5**
	comp=E,0.2nm,0.3s,baz=184,slow=20,SNR=2.7						
KSRS	**Korea Array**	**21.06**	**67**	P	**P**	**08 13 08.6**	**+0.7**
	comp=E,1.4nm,0.7s,mb3.4,baz=249,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**22.38**	**319**	P	**P**	**08 13 22.6**	**+0.7**
	comp=E,0.9nm,0.7s,mb3.3,baz=120,slow=13,SNR=8.9						
NIL	**Nilore**	**25.50**	**283**	*e*P	**P**	**08 13 53.7**	**+1.4**
	comp=E,16nm,0.5s,mb4.8						
AML	**Almayashu**	**25.99**	**303**	*e*P	**P**	**08 13 57.3**	**+0.7**
	comp=E,1.2nm,0.8s,mb3.5						
ZALV	**Zalesovo Beam**	**26.20**	**335**	P	**P**	**08 13 58.4**	**+0.1**
	comp=E,0.8nm,0.4s,mb3.6,baz=120,slow=8.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**26.20**	**335**	P	**P**	**08 13 58.4**	**+0.1**
KURK	**Kurchatov**	**26.66**	**324**	P	**P**	**08 14 02.7**	**+0.1**
	comp=E,1.0nm,0.7s,mb3.5,baz=126,slow=9.9,SNR=8.4						
KURK	**Kurchatov**	**26.66**	**324**	P	**P**	**08 14 02.7**	**+0.1**
ARCES	**ARCESS Array B**	**56.75**	**336**	P	**P**	**08 18 06.7**	**-0.6**
	comp=E,4.5nm,1.0s,mb4.5,baz=50,slow=7.2,SNR=3.1						
ARCES	**ARCESS Array B**	**56.75**	**336**	P	**P**	**08 18 06.7**	**-0.6**
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**08 18 08.2**	**-0.9**
	comp=E,1.6nm,0.9s,mb4.1,baz=70,slow=2.2,SNR=4.5						
ASAR	**Alice Springs**	**62.05**	**148**	P	**P**	**08 18 43.6**	**-0.9**
	comp=E,0.4nm,0.6s,mb3.7,baz=334,slow=6.8,SNR=5.5						

*NEIC **18** 08:09:51.8, 35°.74N×26°.48E, h23km, MD3.5(ATH), After ATH.*
*ATH **18** 08:09:51.8, 35°.74N×26°.48E, h23km±2km, MD3.5/5*
*ISCJB **18** 08:09:52.9±0.8, 35°.67N±0°.04×26°.53E±0°.04, h28km±7km, Error ellipse: s-maj=6.1km s-min=5.5km az=156.2*
*CSEM **18** 08:09:53.5±0.3, 35°.62N×26°.52E, h40km, MD3.5, Error ellipse: s-maj=7.8km s-min=5.8km az=161.0*
*THE **18** 08:09:53.3, 35°.68N×26°.49E, h13km±4km, Error ellipse: s-maj=4.4km s-min=1.1km az=170.0*
ISC 18 08:09:53.3±0.8, 35°.66N±0°.04×26°.51E±0°.04, h27km±7km, n24, σ0°.93/45, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.54**	**101**	*e*PN	**Pn**	**08 10 03.7**	**-1.6**
KARP				*e*SN	**Sb**	**08 10 12.5**	**+0.7**
KARP	**Karpathos**	**0.54**	**101**	*e*Pn	**Pn**	**08 10 03.7**	**-1.6**
KARP				*e*Sn	**Sb**	**08 10 12.5**	**+0.7**
ZKR	**Zakros**	**0.59**	**204**	*e*PN	**Pn**	**08 10 04.8**	**-1.1**
ZKR				*e*SN	**Sn**	**08 10 14.3**	**-0.4**
ZKR	**Zakros**	**0.59**	**204**	P	**Pb**	**08 10 04.7**	**-0.4**
ZKR				S	**Sb**	**08 10 14.0**	**+0.8**
ZKR	**Zakros**	**0.59**	**204**	*e*Pn	**Pn**	**08 10 04.8**	**-1.1**
ZKR				S	**Sb**	**08 10 14.0**	**+0.8**
ZKR				*e*Sn	**Sn**	**08 10 14.3**	**-0.4**
NPS	**Neapolis**	**0.83**	**242**	*e*PN	**Pn**	**08 10 08.9**	**-0.3**
NPS				*e*SN	**Sn**	**08 10 20.3**	**-0.3**
NPS	**Neapolis**	**0.83**	**242**	*e*Pn	**Pn**	**08 10 08.9**	**-0.3**
NPS				*e*Sn	**Sn**	**08 10 20.3**	**-0.3**
LAST	**Lasithi**	**0.98**	**240**	*e*PN	**Pn**	**08 10 11.7**	**+0.5**
LAST				*e*SN	**Sn**	**08 10 25.0**	**+0.8**
LAST	**Lasithi**	**0.98**	**240**	P	**Pn**	**08 10 11.5**	**+0.3**
LAST				S	**Sb**	**08 10 24.8**	**+0.7**
LAST	**Lasithi**	**0.98**	**240**	P	**Pn**	**08 10 11.5**	**+0.3**
LAST				S	**Sb**	**08 10 24.8**	**+0.7**
THR1	**Thera Island**	**1.11**	**310**	P	**Pn**	**08 10 13.0**	**-0.1**
THR1				S	**Sn**	**08 10 28.6**	**+1.1**
THR1	**Thera Island**	**1.11**	**310**	P	**Pn**	**08 10 13.0**	**-0.1**
THR1				S	**Sn**	**08 10 28.6**	**+1.1**
IDI	**Anoyia**	**1.37**	**255**	*e*PB	**Pb**	**08 10 16.7**	**-1.6**
IDI				*e*SN	**Sn**	**08 10 37.2**	**+3.3**
IDI	**Anoyia**	**1.37**	**255**	*e*Pb	**Pb**	**08 10 16.7**	**-1.6**
IDI				*e*Sn	**Sn**	**08 10 37.2**	**+3.3**
ARG	**Arkhangelos**	**1.43**	**67**	*e*PN	**Pn**	**08 10 17.8**	**+0.4**
ARG				*e*SN	**Sn**	**08 10 38.5**	**+3.2**
ARG	**Arkhangelos**	**1.43**	**67**	P	**Pn**	**08 10 17.6**	**+0.2**
ARG				S	**Sn**	**08 10 36.6**	**+1.3**
ARG	**Arkhangelos**	**1.43**	**67**	P	**Pn**	**08 10 17.6**	**+0.2**
ARG				S	**Sn**	**08 10 36.6**	**+1.3**
ARG				*e*Sn	**Sn**	**08 10 38.5**	**+3.2**
APE	**Apeiranthos**	**1.61**	**331**	*e*PN	**Pn**	**08 10 19.8**	**-0.2**
APE	**Apeiranthos**	**1.61**	**331**	P	**Pn**	**08 10 19.7**	**-0.3**
APE				S	**Sn**	**08 10 39.0**	**-0.9**
APE	**Apeiranthos**	**1.61**	**331**	*e*Pn	**Pn**	**08 10 19.8**	**-0.2**
APE				S	**Sn**	**08 10 39.0**	**-0.9**
KARN	**Karanos**	**2.13**	**264**	P	**Pn**	**08 10 26.6**	**-0.5**
KARN	**Karanos**	**2.13**	**264**	P	**Pn**	**08 10 26.6**	**-0.5**
KYTH	**Kithira**	**2.88**	**283**	*e*PN	**Pn**	**08 10 37.9**	**+0.4**
KYTH	**Kithira**	**2.88**	**283**	*e*Pn	**Pn**	**08 10 37.9**	**+0.4**

*ISCJB **18** 08:25:36.7±0.6, 17°.69N±0°.03×99°.88W±0°.03, h66km±11km, Error ellipse: s-maj=5.4km s-min=4.7km az=10.6*
*MEX **18** 08:25:39.1±0.6, 17°.69N×99°.87W, h59km±8km, MD4.2*
*NEIC **18** 08:25:40.9, 17°.66N×99°.82W, h32km, MD4.2(MEX), After MEX.*
ISC 18 08:25:37.9±0.6, 17°.69N±0°.03×99°.88W±0°.03, h52km±17km, n19, σ0°.53/37, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.74**	**210**	*e*P	**Pn**	**08 25 52.3**	**0.0**
CAIG				*i* S	**Sn**	**08 26 02.9**	**+0.2**
PLIG	**Platanillo**	**0.78**	**27**	*i* P	**Pn**	**08 25 53.0**	**+0.2**
PLIG				*i* S	**Sn**	**08 26 04.1**	**+0.8**
PLIG	**Platanillo**	**0.78**	**27**	*i* P	**Pn**	**08 25 53.0**	**+0.2**
PLIG				*i* S	**Sn**	**08 26 04.1**	**+0.4**
ACX	**Acapulco**	**0.82**	**183**	*e*P	**Pn**	**08 25 53.9**	**+0.6**
ACX				*i* S	**Sn**	**08 26 03.9**	**-0.7**
ACX	**Acapulco**	**0.82**	**183**	*e*P	**Pn**	**08 25 53.9**	**+0.6**
ACX				*i* S	**Sn**	**08 26 03.9**	**-0.7**
YAIG	**Yautepec**	**1.40**	**33**	*i* P	**Pn**	**08 26 00.5**	**-0.6**
YAIG				*i* S	**Sn**	**08 26 18.3**	**-0.1**
ZIIG	**Zihuatanejo**	**1.52**	**267**	*i* S	**Sn**	**08 26 21.2**	**-0.1**
PPM	**Popocatepetl**	**1.81**	**41**	*e*P	**Pn**	**08 26 06.9**	**+0.2**
PPM				*i* S	**Sn**	**08 26 28.2**	**-0.3**
UTMO	**Huajuapan**	**1.98**	**86**	*i* P	**Pn**	**08 26 08.9**	**-0.1**
UTMO				*i* S	**Sn**	**08 26 32.4**	**-0.2**
PNIG	**Pinotepa**	**2.11**	**127**	*i* P	**Pn**	**08 26 12.0**	**+1.2**
PNIG				*i* S	**Sn**	**08 26 34.0**	**-1.9**
PNIG	**Pinotepa**	**2.11**	**127**	*i* P	**Pn**	**08 26 11.3**	**+0.5**
PNIG				*i* S	**Sn**	**08 26 35.5**	**-0.4**
MOIG	**Morelia**	**2.34**	**328**	*e*P	**Pn**	**08 26 14.8**	**+0.9**
MOIG				*i* S	**Sn**	**08 26 41.1**	**-0.2**
TPIG	**Tehuac#an**	**2.50**	**73**	*i* P	**Pn**	**08 26 16.3**	**+0.2**
TPIG				*i* S	**Sn**	**08 26 45.2**	**-0.2**
DEIG	**Demacu**	**2.72**	**17**	*i* P	**Pn**	**08 26 18.3**	**-0.8**
DEIG				*i* S	**Sn**	**08 26 50.6**	**-0.1**
VHO	**Vista Hermosa**	**3.06**	**101**	*e*P	**Pn**	**08 26 23.6**	**-0.2**
VHO				*i* S	**Sn**	**08 26 59.8**	**+0.5**
VHO	**Vista Hermosa**	**3.06**	**101**	*e*P	**Pn**	**08 26 23.6**	**-0.2**
VHO				*i* S	**Sn**	**08 26 59.8**	**+0.5**
MMIG	**Aquila**	**3.35**	**281**	*i* P	**Pn**	**08 26 27.5**	**-0.3**
MMIG				*i* S	**Sn**	**08 27 06.1**	**-0.3**
CMIG	**Matias Romero**	**4.80**	**96**	*e*P	**Pn**	**08 26 48.9**	**+1.2**
CMIG				*i* S	**Sn**	**08 27 41.8**	**-0.3**
CMIG	**Matias Romero**	**4.80**	**96**	*e*P	**Pn**	**08 26 48.9**	**+1.2**
CMIG				*i* S	**Sn**	**08 27 41.8**	**-0.3**

*JMA **18** 08:42:44.7±0.2, 32°.23N×138°.13E, h406km, M3.7*
*IDC **18** 08:42:45.9±0.9, 31°.93N×137°.85E, h362km±6km, mb3.4/16, mb1 3.5/20, mb1mx3.3/33, mbtmp3.4/20, Error ellipse: s-maj=19.0km s-min=11.9km az=22.0*
*ISCJB **18** 08:42:47.5±0.5, 32°.31N±0°.07×137°.93E±0°.06, h379km±3km, mb3.9/27, Error ellipse: s-maj=11.4km s-min=7.3km az=155.2*
*NEIC **18** 08:42:48.0±2.0, 32°.27N×137°.85E, h367km±10km, mb4.0/2, Error ellipse: s-maj=33.0km s-min=8.3km az=179.0*
ISC 18 08:42:48.6±0.6, 32°.33N±0°.08×137°.93E±0°.06, h373km±3km, n54, σ0°.80/66, mb3.9/27, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.75**	**63**	P	**Pn**	**08 43 39.8**	**-0.6**
	84nm,0.3s,baz=75,slow=3.7,SNR=27						
JHJ				S	**S**	**08 44 21.1**	**-1.0**
	53nm,0.3s,baz=256,slow=23,SNR=7.4						
JHJ2	**Mitsune**	**1.77**	**64**	P	**Pn**	**08 43 39.7**	**-0.8**
JHJ2				*e*S	**S**	**08 44 22.7**	**+0.4**
TK03	**Tokai 3**	**1.83**	**1**	*e*S	**S**	**08 44 25.5**	**+2.6**
JWZ	**Kozaga**	**2.21**	**303**	P	**Pn**	**08 43 43.4**	**0.0**
JIE	**Ise**	**2.29**	**334**	P	**Pn**	**08 43 44.7**	**+0.8**
JIE				*e*S	**S**	**08 44 29.7**	**+1.1**
JWY	**Kouya**	**2.71**	**315**	P	**Pn**	**08 43 48.0**	**+0.8**
JOD2	**Odawara 2**	**3.08**	**18**	P	**Pn**	**08 43 49.9**	**-0.3**
JOD2				S	**S**	**08 44 40.5**	**+0.4**
JYN	**Shimob**	**3.20**	**9**	P	**Pn**	**08 43 52.2**	**+0.9**
JAI	**Aioi**	**3.26**	**297**	P	**Pn**	**08 43 52.1**	**+0.2**
BSO1	**Boso 1**	**3.44**	**47**	P	**Pn**	**08 43 51.1**	**-2.4**
BSO1				*e*S	**S**	**08 44 40.8**	**-5.2**
JWT	**Wachi**	**3.62**	**325**	P	**Pn**	**08 43 55.9**	**+0.8**
JMN	**Monobe**	**3.67**	**293**	P	**Pn**	**08 43 56.2**	**+0.5**
JRY	**Ryogami san**	**3.76**	**12**	P	**Pn**	**08 43 56.6**	**+0.1**
JRY				S	**S**	**08 44 50.5**	**-1.0**
MJAR	**Matsushiro Arr**	**4.20**	**3**	P	**Pn**	**08 44 00.7**	**-0.2**
	2.0nm,0.3s,baz=187,slow=10,SNR=22						
MAJO	**Matsushiro**	**4.21**	**3**	*e*Pn	**Pn**	**08 44 00.7**	**-0.2**
MAJO				*e*Sn	**S**	**08 44 59.4**	**0.0**
MAT	**Matsushiro**	**4.21**	**3**	P	**Pn**	**08 44 00.8**	**-0.1**
MAT				*e*S	**S**	**08 44 57.8**	**-1.6**
JTO	**Tosashimizu**	**4.36**	**278**	P	**Pn**	**08 44 02.5**	**0.0**
JHS	**Saijyo**	**4.81**	**305**	P	**Pn**	**08 44 07.9**	**+0.7**
CBIJ	**Chichi jima**	**6.40**	**144**	P	**Pn**	**08 44 19.8**	**-5.0**
CBIJ				*e*S	**S**	**08 45 31.5**	**-11**
CBIJ	**Chichi jima**	**6.40**	**144**	P	**Pn**	**08 44 19.6**	**-5.2**
	9.6nm,0.3s,baz=300,slow=19,SNR=10						
CBIJ				S	**S**	**08 45 31.9**	**-11**
	44nm,0.3s,baz=302,slow=21,SNR=13						
JMK	**Ichinoseki**	**7.13**	**21**	P	**Pn**	**08 44 31.4**	**-1.4**
JMK				*e*S	**S**	**08 45 53.0**	**-4.8**
KSRS	**Korea Array**	**9.67**	**305**	P	**Pn**	**08 45 02.8**	**+0.2**
	0.5nm,0.3s,baz=121,slow=11,SNR=11						
ERM	**Erimo**	**10.52**	**22**	*e*Pn	**Pn**	**08 45 12.5**	**0.0**
ERM				*e*S	**S**	**08 47 07.2**	**-3.7**
SONM	**Songino Array**	**28.42**	**312**	P	**P**	**08 48 11.1**	**+0.9**
	0.6nm,0.4s,mb3.1,baz=111,slow=8.1,SNR=6.8						
GTA	**Gaotai**	**31.50**	**294**	*e*P	**P**	**08 48 37.1**	**-0.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.8						
GTA				smax			
	comp=N,7.0nm,0.5s						
GTA				smax			
	comp=E,8.0nm,0.6s						
BILL	**Bilibino**	**39.34**	**16**	*e*P	**P**	**08 49 44.3**	**+1.5**
	comp=E,8.2nm,1.2s,mb3.8						
ZALV	**Zalesovo Beam**	**43.14**	**316**	P	**P**	**08 50 13.8**	**+0.2**
	comp=E,1.4nm,0

LZH				Sg	Sg	08 58 30.0	+6.5
LZH				smax			
	comp=N,44nm,1.0s						
LZH				smax			
	comp=E,45nm,0.5s						
LZH				LR	LR		
	comp=E,320nm,5.6s						
LZH				LR	LR		
	comp=Z,590nm,6.2s						
SONM	**Songino Array**	**16.53**	**5**	Pn	**Pn**	**08 59 41.2**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=136,slow=40,SNR=2.2						
MKAR	**Makanchi Array**	**22.89**	**319**	P	**P**	**09 00 56.2**	**+0.8**
	comp=Z,0.2nm,0.3s,mb3.0,baz=125,slow=10,SNR=4.4						
NIL	**Nilore**	**26.23**	**283**	P	**P**	**09 01 27.3**	**+0.3**
	comp=Z,18nm,1.2s,mb4.5						
ZALV	**Zalesovo Beam**	**26.56**	**334**	P	**P**	**09 01 29.2**	**-0.5**
	comp=Z,0.6nm,0.3s,mb3.5,baz=136,slow=37,SNR=3.4						
KURK	**Kurchatov**	**27.14**	**323**	P	**P**	**09 01 34.4**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.3,baz=127,slow=9.4,SNR=3.1						
PETK	**Petropavlovsk-**	**43.89**	**44**	P	**P**	**09 03 56.6**	**-1.7**
	comp=Z,0.8nm,0.6s,mb3.7,baz=303,slow=12,SNR=4.2						
ARCES	**ARCESS Array B**	**57.09**	**336**	P	**P**	**09 05 38.0**	**+0.2**
	comp=Z,5.8nm,1.1s,mb4.5,baz=317,slow=30,SNR=2.6						
ASAR	**Alice Springs**	**61.63**	**149**	P	**P**	**09 06 13.8**	**+4.1**
	comp=Z,0.3nm,0.6s,mb3.6,baz=340,slow=6.7,SNR=5.0						
EGAK	**Eagle**	**71.60**	**24**	*e*P	**P**	**09 07 13.6**	**+0.7**
	comp=Z,178nm,1.2s						

*ISCJB **18** 09:09:31.2±0.8, 17°.11N±0°.05×95°.30W±0°.03, h109km±9km, Error ellipse: s-maj=8.6km s-min=4.7km az=13.3*
*MEX **18** 09:09:33.3±1.1, 17°.08N×95°.28W, h107km±7km, MD4.3*
*NEIC **18** 09:09:33.0, 17°.08N×95°.29W, h109km, MD4.3(MEX), After MEX.*

ISC 18 09:09:32.0±0.8, 17°.11N±0°.05×95°.30W±0°.03, h105km±10km, n16, σ0°.86/32, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.39**	**93**	*e*P	**Pn**	**09 09 48.0**	**+0.3**
CMIG				*i* S	**Sn**	**09 09 59.3**	**-0.1**
CMIG	**Matias Romero**	**0.39**	**93**	*e*P	**Pn**	**09 09 48.0**	**+0.3**
CMIG				*i* S	**Sn**	**09 09 59.3**	**-0.1**
TUIG	**Tuzandepetl**	**1.24**	**42**	*e*P	**Pn**	**09 09 55.6**	**+0.1**
TUIG				*i* S	**Sn**	**09 10 12.8**	**-0.4**
TUIG	**Tuzandepetl**	**1.24**	**42**	*e*P	**Pn**	**09 09 55.6**	**+0.1**
TUIG				*i* S	**Sn**	**09 10 12.8**	**-0.4**
VHO	**Vista Hermosa**	**1.38**	**269**	*e*P	**Pn**	**09 09 57.8**	**+0.7**
VHO				*i* S	**Sn**	**09 10 17.1**	**+1.0**
VHO	**Vista Hermosa**	**1.38**	**269**	*e*P	**Pn**	**09 09 57.8**	**+0.7**
VHO				*i* S	**Sn**	**09 10 17.1**	**+1.0**
HUIG	**Huatulco**	**1.55**	**210**	*e*P	**Pn**	**09 09 58.1**	**-1.1**
HUIG				*i* S	**Sn**	**09 10 19.1**	**-0.7**
HUIG	**Huatulco**	**1.55**	**210**	*e*P	**Pn**	**09 09 58.1**	**-1.1**
HUIG				*i* S	**Sn**	**09 10 19.1**	**-0.7**
TGIG		**2.11**	**99**	*e*P	**Pn**	**09 10 06.3**	**+0.1**
TGIG				*i* S	**Sn**	**09 10 31.8**	**-0.5**
TPIG	**Tehuac#an**	**2.36**	**304**	*e*P	**Pn**	**09 10 10.3**	**+0.8**
TPIG				*i* S	**Sn**	**09 10 39.3**	**+1.1**
PCIG		**2.44**	**125**	*e*P	**Pn**	**09 10 11.0**	**+0.5**
PCIG				*i* S	**Sn**	**09 10 39.9**	**0.0**
UTMO	**Huajuapan**	**2.50**	**287**	*i* P	**Pn**	**09 10 12.0**	**+0.8**
UTMO				*i* S	**Sn**	**09 10 40.6**	**-0.8**
PNIG	**Pinotepa**	**2.81**	**256**	*i* P	**Pn**	**09 10 13.6**	**-1.7**
PNIG				*i* S	**Sn**	**09 10 48.9**	**+0.2**
PNIG	**Pinotepa**	**2.81**	**256**	*i* P	**Pn**	**09 10 13.6**	**-1.7**
PNIG				*i* S	**Sn**	**09 10 48.9**	**+0.2**
LVIG	**Laguna Verde**	**2.81**	**338**	*i* P	**Pn**	**09 10 12.8**	**-2.6**
LVIG				*i* S	**Sn**	**09 10 43.3**	**-5.4**
THIG		**3.65**	**127**	*i* P	**Pn**	**09 10 27.3**	**+0.7**
THIG				*i* S	**Sn**	**09 11 09.5**	**+0.7**

*ISCJB **18** 09:25:10.6±1.1, 31°.25N±0°.03×103°.58E±0°.04, h11km±7km, mb4.3/32, MS3.6/10, Error ellipse: s-maj=5.4km s-min=4.2km az=148.3*
*IDC **18** 09:25:10.3±0.8, 31°.21N×103°.62E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/27, mbtmp4.1/15, ML3.9/2, MS3.6/7, Ms1 3.6/7, ms1mx3.2/32, Error ellipse: s-maj=25.1km s-min=14.9km az=45.0*
*BJI **18** 09:25:10.9, 31°.21N×103°.63E, h17km, mB4.6/16, mb4.5/25, ML4.0/17, Ms4.2/34, Ms7 4.0/29*
*NEIC **18** 09:25:12.2±0.4, 31°.22N×103°.60E, h10km, mb4.5/16, Error ellipse: s-maj=11.1km s-min=7.2km az=218.0*
*MOS **18** 09:25:12.9±1.4, 31°.17N×103°.82E, h33km, mb4.5/19, Error ellipse: s-maj=13.2km s-min=7.5km az=100.2*

ISC 18 09:25:12.6±0.8, 31°.26N±0°.03×103°.61E±0°.04, h10km±5km, n98, σ1°.42/108, mb4.3/31, MS3.6/10, 4C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**161**	Pg	**Pg**	**09 25 19.1**	**-0.8**
CD2				Sg	**Sg**	**09 25 26.4**	**+1.5**
CD2				smax			
	comp=N,63μm,0.5s						
LZH	**Lanzhou**	**4.81**	**2**	Pg	**Pg**	**09 26 41.9**	**-2.9**
LZH				smax			
	comp=N,220nm,0.9s						
LZH				smax			
	comp=E,160nm,1.0s						
LZH				LR	LR		
	comp=E,5μm,5.8s						
LZH				LR	LR		
	comp=Z,5μm,7.5s						
ENH	**Enshi**	**5.15**	**100**	*e*Pn	**Pn**	**09 26 28.9**	**-1.0**
	comp=Z,180nm,0.8s						
XAN	**Xi'an**	**5.26**	**57**	Pn	**Pn**	**09 26 32.1**	**+0.8**
XAN				Pg	**Pg**	**09 26 45.8**	**-7.6**
XAN				Sn	**Sn**	**09 27 34.3**	**+2.2**
XAN				Sg	Sg	09 27 54.8	-6.8
XAN				smax			
	comp=N,410nm,0.8s						
XAN				smax			
	comp=E,160nm,1.0s						
XAN				LR	LR		
	comp=N,710nm,9.1s						
XAN				LR	LR		
	comp=E,350nm,10.5s						
XAN				LR	LR		
	comp=Z,360nm,10.1s						
GYA	**Guiyang**	**5.48**	**150**	Pn	**Pn**	**09 26 33.6**	**-0.8**
GYA				Sn	**Sn**	**09 27 38.8**	**+1.2**
GYA				smax			
	comp=N,450nm,0.9s						
GYA				smax			
	comp=E,340nm,0.9s						
KMI	**Kunming**	**6.17**	**187**	Pn	**Pn**	**09 26 43.0**	**-0.8**
KMI				Sn	**Sn**	**09 27 56.1**	**+1.7**
KMI				smax			
	comp=N,55nm,1.1s						
KMI				smax			
	comp=E,46nm,0.9s						
KMI				LR	LR		
	comp=N,1μm,9.6s						
KMI				LR	LR		
	comp=E,3μm,11.4s						
KMI				LR	LR		
	comp=Z,1μm,11.8s						
GTA	**Gaotai**	**8.70**	**340**	||P	**Pn**	**09 27 21.3**	**+2.8**
GTA				pP		09 27 24.1	
GTA				sP		09 27 27.0	
GTA				S	**Sn**	**09 28 57.1**	**+0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,78nm,5.4s						
GTA				LR	LR		
	comp=N,550nm,13.4s						
GTA				LR	LR		
	comp=E,910nm,12.2s						
GTA				LR	LR		
	comp=Z,650nm,9.5s						
WHN	**Wuhan**	**9.25**	**92**	P	**Pn**	**09 27 21.8**	**-4.3**
WHN				S	**Sn**	**09 29 05.0**	**-5.3**
WHN				LR	LR		
	comp=N,3μm,6.6s						
WHN				LR	LR		
	comp=E,1μm,8.0s						
WHN				LR	LR		
	comp=Z,2μm,5.2s						
LSA	**Lhasa**	**10.87**	**265**	P	**Pn**	**09 27 46.3**	**-1.9**
LSA				LR	LR		
	comp=N,540nm,12.6s						
HHC	**Hu-ho-hao-te**	**11.52**	**32**	*e*P	**Pn**	**09 27 58.8**	**+1.6**
HHC				PP		09 28 08.3	
HHC				S	**Sn**	**09 30 12.3**	**+6.4**
HHC				SS		09 30 25.9	
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,84nm,5.4s						
HHC				LR	LR		
	comp=N,290nm,4.3s						
HHC				LR	LR		
	comp=E,500nm,5.1s						
HHC				LR	LR		
	comp=Z,350nm,6.1s						
NJ2	**Nanjing**	**13.01**	**83**	*e*P	**Pn**	**09 28 17.8**	**+0.2**
NJ2				pP		09 28 21.0	
NJ2				sP		09 28 24.3	
NJ2				PP		09 28 28.1	
NJ2				S	**Sn**	**09 30 40.0**	**-2.4**
NJ2				sS		09 30 49.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,40nm,4.0s						
NJ2				LR	LR		
	comp=N,770nm,7.8s						
NJ2				LR	LR		
	comp=E,1μm,10.4s						
NJ2				LR	LR		
	comp=Z,770nm,10.6s						
QIZ	**Qiongzhong**	**13.42**	**154**	P	**Pn**	**09 28 25.3**	**+2.1**
QIZ				S	**Sn**	**09 30 53.8**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,14nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,41nm,3.0s						
QIZ				LR	LR		
	comp=N,520nm,7.5s						
QIZ				LR	LR		
	comp=E,180nm,7.1s						
QIZ				LR	LR		
	comp=Z,490nm,7.5s						
CMAR	**Chiang Mai Arr**	**13.43**	**199**	Pn	**Pn**	**09 28 20.1**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=9.8,slow=12,SNR=4.6						
BJI	**Beijing**	**13.44**	**46**	P	**Pn**	**09 28 22.1**	**-1.3**
BJI				S	**Sn**	**09 30 48.8**	**-4.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,50nm,3.6s						
BJI				LR	LR		
	comp=N,420nm,18.1s						
BJI				LR	LR		
	comp=E,220nm,16.1s						
BJI				LR	LR		
	comp=Z,140nm,19.0s						
QZH	**Quanzhou**	**14.63**	**112**	*e*P	**Pn**	**09 28 38.8**	**-1.0**
QZH				S	**Sn**	**09 31 25.9**	**+3.8**
QZH				LR	LR		
	comp=N,690nm,8.2s						
QZH				LR	LR		
	comp=E,690nm,10.7s						
QZH				LR	LR		
	comp=Z,1μm,8.6s						
ODAN	**Odare**	**14.85**	**257**	*e*P	**Pn**	**09 28 40.6**	**-2.1**
	comp=Z,17nm,0.7s						
RAMN	**Ramite**	**15.48**	**258**	*e*P	**Pn**	**09 28 48.9**	**-2.1**
GUN	**Gumba**	**15.79**	**262**	*e*P	**Pn**	**09 28 52.1**	**-3.0**
	comp=Z,68nm,1.0s						
PKI	**Pulchoki**	**16.28**	**262**	*e*P	**Pn**	**09 28 57.4**	**-4.1**
KKN	**Kakani**	**16.33**	**262**	*e*P	**Pn**	**09 28 58.2**	**-3.9**
	comp=Z,95nm,1.1s						
DMN	**Daman**	**16.53**	**262**	*e*P	**Pn**	**09 29 00.1**	**-4.5**
	comp=Z,83nm,1.0s						
SONM	**Songino Array**	**16.69**	**7**	Pn	**Pn**	**09 29 06.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=13						
SONM				LR	LR	09 36 10.9	
	comp=Z,331nm,18.9s,baz=106,slow=40						
ULN	**Ulaanbaatar**	**16.79**	**8**	*e*P	**Pn**	**09 29 07.2**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.79**	**8**	*e*P	**Pn**	**09 29 07.2**	**-0.5**
	comp=Z,3.9nm,0.8s						
YHNB	**Yeheng**	**17.00**	**108**	*e*P	**Pn**	**09 29 12.7**	**+2.0**
	comp=Z,19nm,0.9s						
SSLB	**Suanglung**	**17.08**	**112**	*e*P	**Pn**	**09 29 13.3**	**+1.7**
	comp=Z,37nm,1.0s						
WMQ	**Urumqi**	**17.75**	**319**	*e*P	**Pn**	**09 29 21.3**	**+1.5**
WMQ				LR	LR		
	comp=N,160nm,21.0s						
WMQ				LR	LR		
	comp=E,150nm,20.0s						
WMQ				LR	LR		
	comp=Z,130nm,23.0s						
ZAK	**Zakamensk**	**19.10**	**359**	*e*P	**Pn**	**09 29 34.3**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY	**Talaya**	**20.40**	**0**	*e*P	**P**	**09 29 58.2**	**+8.6**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,241nm,17.0s,MS3.6						
MOY	**Mondy**	**20.48**	**355**	*e*P	**P**	**09 29 52.3**	**+1.9**
IRK	**Irkutsk**	**20.97**	**1**	*e*P	**P**	**09 29 56.6**	**+0.9**
IRK				pmax	pmax		
	comp=Z,39nm,1.6s						
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**09 29 55.5**	**-0.3**
	comp=Z,8.5nm,0.7s,baz=260,slow=10.0,SNR=40						
KSRS				LR	LR	09 37 21.8	
	comp=Z,84nm,21.2s,MS3.1,baz=346,slow=35						
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**09 29 55.6**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,84nm,21.2s,MS3.1						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**09 30 00.4**	**+1.1**
CN2				*es*P	sP	09 30 05.8	+2.5
CN2				*e*S	**S**	**09 33 50.8**	**-4.9**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,12.0s,MS3.7						
DDI	**Dehra Dun**	**21.96**	**274**	*ex*	x	09 30 10.0	
MK31	**Makanchi Array**	**22.58**	**319**	*e*P	**P**	**09 30 13.0**	**-0.1**
MKAR	**Makanchi Array**	**22.58**	**319**	P	**P**	**09 30 11.5**	**-1.6**
	comp=Z,13nm,1.0s,mb4.3,baz=132,slow=10,SNR=38						
MKAR				LR	LR	09 39 44.7	
	comp=Z,184nm,18.7s,MS3.5,baz=165,slow=39						
MKAR	**Makanchi Array**	**22.58**	**319**	P	**P**	**09 30 11.5**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,13nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,184nm,18.7s						
MKAR	**Makanchi Array**	**22.58**	**319**	P	**P**	**09 30 11.5**	**-1.6**
MKAR				LR	LR	09 39 44.7	
KSH	**Kashi**	**23.92**	**298**	*e*P	**P**	**09 30 30.6**	**+3.8**
KSH				*e*pP		09 30 34.6	
KSH				*es*P	sP	09 30 37.6	+6.7
KSH				*e*PP		09 31 04.6	
KSH				*e*PcP	PcP	09 34 11.5	+2.3
KSH				*e*S	**S**	**09 34 45.3**	**+2.2**
KSH				*es*S	sS	09 34 51.6	+3.7
KSH				*e*SS		09 35 37.5	
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
KSH				pmax	pmax		
	comp=Z,58nm,2.6s,mb4.5						
KSH				LR	LR		
	comp=N,220nm,7.4s						
KSH				LR	LR		
	comp=E,170nm,6.9s						
KSH				LR	LR		
	comp=Z,160nm,5.1s						
MDJ	**Mudanjiang**	**24.32**	**49**	*e*P	**P**	**09 30 31.4**	**+1.0**
	comp=Z,32nm,1.3s,mb4.6						
KZA	**Kyzart**	**25.07**	**303**	P	**P**	**09 30 39.5**	**+2.3**
	SNR=35						
TKM2	**Tokmak 2**	**25.08**	**306**	P	**P**	**09 30 38.5**	**+1.3**
	SNR=6.6						
TKM2	**Tokmak 2**	**25.08**	**306**	*e*P	**P**	**09 30 38.3**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.3						
TKM2	**Tokmak 2**	**25.08**	**306**	*e*P	**P**	**09 30 38.3**	**+1.0**
	comp=Z,13nm,1.3s,mb4.3						
UCH	**Uchtor**	**25.64**	**303**	P	**P**	**09 30 44.9**	**+2.5**
	SNR=20						
UCH	**Uchtor**	**25.64**	**303**	*e*P	**P**	**09 30 44.2**	**+1.8**
	comp=Z,17nm,1.0s,mb4.5						
FRU	**Bishkek**	**25.74**	**305**	*e*P	**P**	**09 30 43.0**	**-0.3**
AAK	**Ala-Archa**	**25.77**	**304**	P	**P**	**09 30 47.3**	**+3.8**
	SNR=6.0						
AAK	**Ala-Archa**	**25.77**	**304**	P	**P**	**09 30 44.7**	**+1.2**
	comp=Z,6.3nm,0.8s,mb4.2,baz=111,slow=5.9,SNR=21						
AAK	**Ala-Archa**	**25.77**	**304**	*ce*P	**P**	**09 30 46.3**	**+2.8**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**25.77**	**304**	*e*P	**P**	**09 30 45.6**	**+2.1**
	comp=Z,9.9nm,0.9s,mb4.3						
USP	**Ospenovka**	**25.95**	**306**	P	**P**	**09 30 46.4**	**+1.2**
	SNR=5.5						
AML	**Almayashu**	**26.20**	**303**	P	**P**	**09 30 49.5**	**+2.0**
	SNR=13						
AML	**Almayashu**	**26.20**	**303**	*e*P	**P**	**09 30 49.3**	**+1.8**
	comp=Z,9.4nm,0.9s,mb4.3						
ZAA0	**Zalesovo Array**	**26.40**	**335**	*e*P	**P**	**09 30 49.0**	**0.0**
ZALV	**Zalesovo Beam**	**26.40**	**335**	P	**P**	**09 30 48.2**	**-0.8**
	comp=Z,4.6nm,0.7s,mb4.1,baz=133,slow=9.5,SNR=17						
ZALV	**Zalesovo Beam**	**26.40**	**335**	P	**P**	**09 30 48.3**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
KURK	**Kurchatov**	**26.87**	**324**	P	**P**	**09 30 52.4**	**-1.0**
	comp=Z,11nm,0.7s,mb4.5,baz=129,slow=9.5,SNR=26						
KURK				LR	LR	09 42 50.3	
	comp=Z,91nm,18.0s,MS3.4,baz=125,slow=39						
KURK	**Kurchatov**	**26.87**	**324**	*ce*P	**P**	**09 30 53.8**	**+0.4**
KURK				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
KURK	**Kurchatov**	**26.87**	**324**	*e*P	**P**	**09 30 53.3**	**-0.1**
	comp=Z,26nm,1.4s,mb4.6						
MJAR	**Matsushiro Arr**	**29.09**	**70**	P	**P**	**09 31 13.2**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.4,baz=269,slow=9.9,SNR=4.1						
MJAR	**Matsushiro Arr**	**29.09**	**70**	P	**P**	**09 31 13.2**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**09 31 42.0**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.1,baz=120,slow=8.8,SNR=12						
BVAR				LR	LR	09 45 47.0	
	comp=Z,155nm,20.2s,MS3.7,baz=340,slow=38						
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**09 31 42.0**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,155nm,20.2s						
BRVK	**Borovoye**	**32.48**	**322**	*ce*P	**P**	**09 31 44.1**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.1						
BRVK	**Borovoye**	**32.48**	**322**	*e*P	**P**	**09 31 43.5**	**+0.4**
	comp=Z,3.2nm,0.7s,mb4.3						
ABKAR	**Akbulak array**	**37.25**	**312**	*e*P	**P**	**09 32 24.1**	**-0.3**
	comp=Z,2.0nm,0.9s,mb4.0						
TIXI	**Tiksi**	**42.68**	**11**	*e*P	**P**	**09 33 07.0**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
SKR	**Severo-Kuril's**	**43.11**	**48**	*e*P	**P**	**09 33 07.7**	**-5.2**
SEY	**Seymchan**	**44.16**	**30**	*e*P	**P**	**09 33 20.2**	**-1.0**
PETK	**Petropavlovsk-**	**44.37**	**44**	LR	LR	09 53 47.0	
	comp=Z,58nm,18.4s,MS3.5,baz=134,slow=39						
RDF	**Al-Radifah**	**48.12**	**282**	*e*P	**P**	**09 33 52.4**	**-0.5**
RDF				AMb	AMB	09 33 53.9	
	comp=Z,14nm,1.2s,mb4.9						
ZEI	**Tsey**	**48.13**	**301**	*e*P	**P**	**09 33 53.9**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
NAY	**Al-Naaiem**	**48.28**	**283**	*e*P	**P**	**09 33 52.2**	**-1.9**
NAY				AMb	AMB	09 33 56.7	
	comp=Z,8.6nm,0.8s,mb4.8						
KIV	**Kislovodsk**	**48.87**	**303**	*e*P	**P**	**09 34 00.1**	**+1.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,25nm,17.0s,MS3.3						
BILL	**Bilibino**	**51.21**	**25**	*e*P	**P**	**09 34 14.7**	**-1.2**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BILL	**Bilibino**	**51.21**	**25**	*e*P	**P**	**09 34 14.7**	**-1.1**
	comp=Z,2.8nm,0.7s,mb4.3						
OBN	**Obninsk**	**52.08**	**318**	||*e*P	**P**	**09 34 23.8**	**+1.3**
OBN				*e*		09 36 21.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.8						
BRTR	**Keskin Array B**	**56.30**	**299**	P	**P**	**09 34 54.2**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=90,slow=7.4,SNR=3.7						
BRTR	**Keskin Array B**	**56.30**	**299**	*ce*P	**P**	**09 34 57.0**	**+3.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**09 34 59.0**	**-0.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=3.1						
FINES	**FINESS Array B**	**57.20**	**326**	P	**P**	**09 34 59.0**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**09 35 10.1**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**58.84**	**146**	*e*P	**P**	**09 35 10.1**	**-1.4**
	comp=Z,4.2nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**09 35 31.1**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.2,baz=340,slow=7.0,SNR=14						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**09 35 31.2**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**66.65**	**317**	*e*P	sP	09 36 14.0	+6.4
GERES	**GERESS Array B**	**67.14**	**314**	P	**P**	**09 36 06.1**	**-0.4**
	comp=Z,0.3nm,0.8s,mb3.4,baz=98,slow=6.9,SNR=4.2						
COLD	**Coldfoot**	**67.50**	**24**	*e*P	**P**	**09 36 08.5**	**+0.1**
	comp=Z,4.2nm,1.0s,mb4.4						
COLA	**College**	**69.47**	**26**	*e*P	**P**	**09 36 19.1**	**-1.7**
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
COLA	**College**	**69.47**	**26**	*e*P	**P**	**09 36 19.1**	**-1.7**
	comp=Z,6.6nm,1.0s,mb4.5						
INK	**Inuvik**	**72.14**	**19**	*e*P	**P**	**09 36 35.3**	**-1.7**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**72.14**	**19**	*e*P	**P**	**09 36 35.3**	**-1.7**
	comp=Z,3.3nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**72.37**	**147**	P	**P**	**09 36 37.4**	**-1.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=304,slow=15,SNR=4.8						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**09 37 29.9**	**-0.9**
	comp=Z,0.9nm,0.8s,mb3.7,baz=327,slow=4.9,SNR=8.5						
YKA				LR	LR	10 17 07.1	
	comp=Z,46nm,19.3s,MS3.9,baz=45,slow=38						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**09 37 29.9**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,46nm,19.3s						
OTAV	**Otavalo**	**148.61**	**4**	*e*PKPbc	PKPbc	09 45 01.7	+1.0

**IDC 18 10:05:49.0±15.0, 16°.50S×178°.93W, h399km±167km, mb3.2/5, mb1 3.6/5, mb1mx3.2/15, mbtmp3.2/5, Error ellipse: s-maj=157.2km s-min=39.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**60.53**	**103**	*i* P	P	10 26 21.9	+0.1
	0.7nm,0.7s,baz=250,slow=6.4,SNR=9.7						
MKAR	**Makanchi Array**	**74.17**	**11**	P	P	10 27 47.6	+0.1
	0.9nm,0.8s,baz=190,slow=6.0,SNR=7.2						
SONM	**Songino Array**	**82.08**	**26**	P	P	10 28 31.7	+0.3
	0.2nm,0.4s,baz=220,slow=5.6,SNR=4.1						

IDC 18 10:18:19.7±7.4, 27°98S×69°92E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.7/6, MS3.9/7, Ms1 3.9/7, ms1mx3.4/26, Error ellipse: s-maj=255.3km s-min=39.7km az=45.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.16**	**258**	LR	LR	10 40 17.9	
	comp=Z,225nm,18.8s,baz=169,slow=34						
LBTB	**Lobatse**	**39.62**	**264**	LR	LR	10 40 36.4	
	comp=Z,144nm,20.2s,baz=94,slow=34						
LSZ	**Lusaka**	**40.61**	**279**	LR	LR	10 40 32.6	
	comp=Z,122nm,21.4s,baz=146,slow=33						
SUR	**Sutherland**	**42.39**	**252**	LR	LR	10 41 30.0	
	comp=Z,246nm,19.2s,baz=123,slow=33						
TSUM	**Tsumeb**	**48.45**	**268**	LR	LR	10 45 44.7	
	comp=Z,125nm,18.4s,baz=138,slow=34						
FITZ	**Fitzroy Crossi**	**51.84**	**92**	LR	LR	10 46 57.4	
	comp=Z,97nm,21.1s,baz=71,slow=33						
ASAR	**Alice Springs**	**57.18**	**101**	P	P	10 28 08.7	-0.1
	0.2nm,0.6s,baz=244,slow=6.1,SNR=4.8						
MKAR	**Makanchi Array**	**75.25**	**9**	P	P	10 30 02.9	-1.2
	1.0nm,0.7s,baz=188,slow=5.5,SNR=9.2						
AKTO	**Aktyubinsk**	**78.77**	**352**	P	P	10 30 23.9	+0.1
	0.7nm,0.8s,baz=175,slow=6.4,SNR=3.5						
DBIC	**Dimbokro**	**79.81**	**283**	LR	LR	11 03 38.5	
	comp=Z,74nm,18.1s,baz=115,slow=34						
BVAR	**Borovoye Array**	**80.66**	**0**	P	P	10 30 34.8	+0.8
	0.4nm,0.4s,baz=152,slow=9.7,SNR=3.6						
SONM	**Songino Array**	**82.28**	**24**	P	P	10 30 44.1	+1.4
	0.3nm,0.3s,baz=188,slow=9.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**82.60**	**9**	P	P	10 30 44.5	+0.3
	0.8nm,0.6s,baz=185,slow=5.5,SNR=4.2						

IDC 18 10:25:13.6±5.5, 22°49N×143°07E, h275km±52km, mb3.3/10, mb1 3.3/11, mb1mx3.2/25, mbtmp3.2/11, Error ellipse: s-maj=30.4km s-min=19.7km az=70.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.83**	**322**	P	P	10 29 24.7	+0.6
	0.5nm,0.3s,baz=147,slow=8.7,SNR=11						
SONM	**Songino Array**	**38.67**	**320**	P	P	10 32 10.8	-0.1
	0.4nm,0.4s,baz=134,slow=6.2,SNR=2.8						
ASAR	**Alice Springs**	**46.73**	**192**	P	P	10 33 14.9	-0.7
	0.1nm,0.3s,baz=16,slow=7.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**53.53**	**321**	P	P	10 34 05.5	-0.5
	0.6nm,0.4s,baz=81,slow=8.9,SNR=2.9						
MKAR	**Makanchi Array**	**54.09**	**312**	P	P	10 34 10.4	+0.2
	0.3nm,0.3s,baz=86,slow=9.8,SNR=4.6						
KURK	**Kurchatov**	**56.83**	**317**	P	P	10 34 30.0	+0.4
	2.5nm,0.6s,baz=92,slow=7.8,SNR=12						
BVAR	**Borovoye Array**	**62.01**	**319**	P	P	10 35 05.3	+0.5
	1.9nm,0.4s,baz=91,slow=7.7,SNR=13						
YKA	**Yellowknife Ar**	**75.81**	**28**	P	P	10 36 28.4	-0.8
	0.4nm,0.4s,baz=293,slow=5.9,SNR=9.5						
FINES	**FINESS Array B**	**82.43**	**334**	P	P	10 37 04.5	-0.5
	0.8nm,0.3s,baz=61,slow=4.7,SNR=16						
NVAR	**Mina Array Bea**	**82.74**	**52**	P	P	10 37 07.7	+0.6
	0.4nm,0.7s,baz=264,slow=1.8,SNR=3.5						
HFS	**Hagfors**	**87.96**	**337**	P	P	10 37 31.3	-0.9
	0.7nm,0.4s,baz=54,slow=7.5,SNR=5.0						
LPAZ	**La Paz**	**149.97**	**84**	PKPbc	PKPbc	10 44 34.5	+2.2
	0.8nm,0.5s,baz=20,slow=2.9,SNR=6.9						

*CASC **18** 10:27:41.6±2.9, 14°61N×92°32W, h76km±34km, MD4.1, ML3.7*
*ISCJB **18** 10:27:43.8±0.4, 14°46N±0°06×92°14W±0°03, h84km±5km, mb3.3/3, Error ellipse: s-maj=11.3km s-min=3.1km az=25.6*
*NEIC **18** 10:27:44.0, 14°45N×91°99W, h80km, MD4.4(MEX), After MEX.*
*MEX **18** 10:27:44.0±0.8, 14°45N×91°99W, h80km±8km, MD4.4*
*IDC **18** 10:27:46.4±1.9, 14°64N×92°06W, h83km±16km, mb3.1/3, mb1 3.7/7, mb1mx3.4/24, mbtmp3.5/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/15, Error ellipse: s-maj=27.0km s-min=10.7km az=17.0*

ISC 18 10:27:45.3±0.4, 14°52N±0°05×92°09W±0°03, h78km±6km, n46, σ1§02/73, mb3.3/3, 1C-4D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.42**	**336**	*i* P	**Pn**	**10 27 56.8**	**-1.5**
THIG				*i* S	**Sn**	**10 28 06.6**	**-1.2**
JAT	**Jato**	**0.48**	**115**	‖ *i* P	**Pn**	**10 27 58.1**	**-0.6**
TP2	**Tecpan 2**	**1.06**	**76**	‖ *e* P	**Pn**	**10 28 06.2**	**+1.1**
TP2				*e* S	**Sn**	**10 28 22.2**	**+2.4**
FG6		**1.17**	**88**	*e* P	**Pn**	**10 28 06.6**	**+0.3**
FG6				*e* S	**Sn**	**10 28 23.1**	**+1.0**
FUG	**Fuego 3**	**1.21**	**93**	‖ *e* P	**Pn**	**10 28 06.7**	**-0.2**
PCG	**Pacaya**	**1.44**	**95**	‖ *e* P	**Pn**	**10 28 10.1**	**+0.3**
PCG				*e* S	**Sn**	**10 28 29.6**	**+1.3**
PCIG		**1.61**	**317**	*e* P	**Pn**	**10 28 10.8**	**-1.2**
PCIG				*i* S	**Sn**	**10 28 31.6**	**-0.6**
APG	**El Apazote**	**1.64**	**73**	P	**Pn**	**10 28 12.2**	**-0.2**
APG				S	**Sn**	**10 28 33.9**	**+0.9**
	68nm,0.3s,baz=14,slow=17,SNR=20						
NBG	**Las Nubes**	**1.69**	**87**	*e* P	**Pn**	**10 28 14.4**	**+1.4**
SCX	**San Cristobal**	**2.27**	**347**	*i* P	**Pn**	**10 28 28.2**	**+7.5**
SCX				*i* S	**Sn**	**10 28 53.7**	**+5.8**
SCX	**San Cristobal**	**2.27**	**347**	*i* P	**Pn**	**10 28 28.2**	**+7.5**
SCX				*i* S	**Sn**	**10 28 53.7**	**+5.8**
MRL	**Marmol**	**2.38**	**77**	‖ *e* P	**Pn**	**10 28 23.0**	**+0.7**
RTR	**El Retiro**	**2.45**	**104**	*e* P	**Pn**	**10 28 23.0**	**-0.2**
TGIG		**2.46**	**336**	*i* P	**Pn**	**10 28 22.7**	**-0.6**
TGIG				*i* S	**Sn**	**10 28 51.6**	**-0.8**
SBLS	**San Blas**	**2.48**	**105**	*e* P	**Pn**	**10 28 23.6**	**-0.1**
SBLS				AML	AML	10 29 03.1	
	comp=Z,369nm,0.5s						
SNJE	**San Jose**	**2.49**	**105**	*e* P	**Pn**	**10 28 23.2**	**-0.6**
SNJE				*e* S	**Sn**	**10 28 58.7**	**+5.4**
MTO2	**Montecristo 2**	**2.64**	**92**	*e* P	**Pn**	**10 28 24.3**	**-1.5**
BOQS	**Boqueron**	**2.83**	**106**	*e* P	**Pn**	**10 28 28.4**	**0.0**
BOQS				AML	AML	10 29 18.1	
	comp=Z,382nm,0.5s						
SNET	**Serv Nac Est T**	**2.89**	**106**	*e* P	**Pn**	**10 28 28.1**	**-1.2**
SNET				*e* S	**Sn**	**10 29 03.9**	**+0.9**
LBRS	**Las Brisas**	**3.05**	**104**	*e* P	**Pn**	**10 28 30.0**	**-1.4**
LBRS				*e* S	**Sn**	**10 29 11.2**	**+4.3**
LFRS	**El Faro**	**3.07**	**107**	*e* P	**Pn**	**10 28 31.5**	**-0.1**
LFRS				*e* S	**Sn**	**10 29 11.3**	**+4.1**
SNVI	**San Vicente**	**3.28**	**106**	*e* P	**Pn**	**10 28 34.6**	**+0.2**
SNVI				*e* S	**Sn**	**10 29 17.6**	**+5.3**
CMIG	**Matias Romero**	**3.71**	**314**	P	**Pn**	**10 28 40.4**	**0.0**
CMIG				S	**Sn**	**10 29 22.9**	**-0.1**
	comp=Z,21nm,0.3s,baz=78,slow=8.8,SNR=3.8						
CMIG	**Matias Romero**	**3.71**	**314**	*e* P	**Pn**	**10 28 40.1**	**-0.2**
CMIG				*i* S	**Sn**	**10 29 23.7**	**+0.7**
CAHU	**Cacacuatique**	**3.83**	**101**	*e* P	**Pn**	**10 28 42.5**	**+0.5**
BLLM	**Bellamira**	**3.89**	**106**	*e* P	**Pn**	**10 28 42.9**	**+0.2**
HUIG	**Huatulco**	**4.08**	**288**	*i* P	**Pn**	**10 28 42.9**	**-2.4**
HUIG				*i* S	**Sn**	**10 29 33.1**	**+1.2**
HUIG	**Huatulco**	**4.08**	**288**	*i* P	**Pn**	**10 28 42.9**	**-2.4**
HUIG				*i* S	**Sn**	**10 29 33.1**	**+1.2**
CNCH	**Conchagua**	**4.31**	**106**	*e* P	**Pn**	**10 28 48.0**	**-0.5**
CNCH				*e* S	**Sn**	**10 29 42.9**	**+5.3**
VHO	**Vista Hermosa**	**5.14**	**300**	*e* P	**Pn**	**10 28 59.9**	**0.0**
VHO				*i* S	**Sn**	**10 29 59.8**	**+1.9**
VHO	**Vista Hermosa**	**5.14**	**300**	*e* P	**Pn**	**10 28 59.9**	**0.0**
VHO				*i* S	**Sn**	**10 29 59.8**	**+1.9**
CRIN	**San Cristobal**	**5.22**	**110**	*e* P	**Pn**	**10 29 01.3**	**+0.4**
CRIN				AML	AML	10 30 13.7	
	comp=N,225nm,0.5s						
MIRN	**Miramar**	**5.62**	**111**	*e* P	**Pn**	**10 29 06.3**	**-0.1**
PNIG	**Pinotepa**	**6.11**	**289**	*i* P	**Pn**	**10 29 12.3**	**-0.8**
PNIG				*i* S	**Sn**	**10 30 21.7**	**0.0**
PNIG	**Pinotepa**	**6.11**	**289**	*i* P	**Pn**	**10 29 12.3**	**-0.8**
PNIG				*i* S	**Sn**	**10 30 21.7**	**0.0**
TPIG	**Tehuac#an**	**6.38**	**308**	*i* P	**Pn**	**10 29 17.4**	**+0.7**
TPIG				*i* S	**Sn**	**10 30 28.9**	**+0.9**
UTMO	**Huajuapan**	**6.40**	**302**	*i* P	**Pn**	**10 29 18.5**	**+1.4**
UTMO				*i* S	**Sn**	**10 30 30.0**	**+1.2**
TEIG	**Tepich**	**6.74**	**32**	P	**Pn**	**10 29 21.0**	**-0.7**
TEIG				S	**Sn**	**10 30 34.8**	**-2.2**
	comp=N,3.7nm,0.3s,SNR=6.1						
JTS	**JuntasAbangare**	**8.14**	**120**	P	**Pn**	**10 29 41.2**	**+0.4**
	comp=N,3.5nm,0.3s,baz=296,slow=18,SNR=26						
JTS				S	**Sn**	**10 31 09.3**	**-1.9**
	comp=N,0.3nm,0.3s,baz=158,slow=23,SNR=1.8						
JTS	**JuntasAbangare**	**8.14**	**120**	P	**Pn**	**10 29 41.2**	**+0.4**
JTS				S	**Sn**	**10 31 09.3**	**-1.9**
TXAR	**Lajitas Array**	**18.22**	**326**	P	**Pn**	**10 31 53.5**	**+0.5**
	comp=N,0.0nm,0.3s,baz=151,slow=12,SNR=6.8						
TKL	**Tuckaleechee C**	**22.33**	**18**	LR	LR	10 41 49.4	
	comp=N,33nm,21.4s,baz=287,slow=38						
ANMO	**Albuquerque**	**24.11**	**330**	P	**P**	**10 32 53.4**	**-0.4**
	comp=N,0.3nm,0.6s,mb2.8,baz=141,slow=11,SNR=4.1						
NVAR	**Mina Array Bea**	**33.22**	**321**	P	**P**	**10 34 16.5**	**+1.6**
	comp=N,1.0nm,0.8s,mb3.7,baz=131,slow=9.0,SNR=7.0						
YKA	**Yellowknife Ar**	**50.50**	**347**	P	**P**	**10 36 33.8**	**-1.4**
	comp=N,0.2nm,0.5s,mb3.4,baz=148,slow=6.9,SNR=5.4						
YKA	**Yellowknife Ar**	**50.50**	**347**	P	**P**	**10 36 33.8**	**-1.4**

*ISCJB **18** 10:28:13.9±0.7, 35°83N±0°03×23°14E±0°04, h2km±4km, mb3.7/10, Error ellipse: s-maj=6.3km s-min=2.7km az=137.9*
*NEIC **18** 10:28:15.3, 35°88N×23°26E, h16km, MD3.8(ATH), After ATH.*
*CSEM **18** 10:28:15.2±0.2, 35°80N×23°20E, h5km, MD3.8, Error ellipse: s-maj=6.5km s-min=2.8km az=49.0*
*ATH **18** 10:28:15.3, 35°88N×23°26E, h16km±1km, MD3.8/9*
*HLW **18** 10:28:16.0, 35°97N×23°36E, h33km±37km, Ml3.0*
*THE **18** 10:28:15.5, 35°84N×23°19E, h0km±1km, ML3.8/6, Error ellipse: s-maj=2.8km s-min=0.9km az=232.0*
*IDC **18** 10:28:20.1±2.0, 35°92N×23°22E, h48km±24km, mb3.6/9, mb1 3.6/13, mb1mx3.5/31, mbtmp3.5/13, ML3.7/4, Error ellipse: s-maj=22.5km s-min=16.3km az=35.0*

ISC 18 10:28:15.0±0.6, 35°81N±0°03×23°16E±0°04, h1km±4km, n127, σ1§14/159, mb3.8/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.48**	**348**	*e* PB	**Pg**	**10 28 24.1**	**0.0**
KYTH	**Kithira**	**0.48**	**348**	*e* Pb	**Pg**	**10 28 24.1**	**0.0**
KARN	**Karanos**	**0.74**	**124**	*e* PN	**Pg**	**10 28 29.1**	**0.0**
KARN				*e* SN	**Sg**	**10 28 40.1**	**+1.4**
KARN	**Karanos**	**0.74**	**124**	P	**Pg**	**10 28 29.1**	**0.0**
KARN				S	**Sg**	**10 28 40.0**	**+1.3**
KARN	**Karanos**	**0.74**	**124**	P	**Pg**	**10 28 29.1**	**0.0**
KARN				S	**Sg**	**10 28 40.0**	**+1.3**
VLI	**Veliai**	**0.92**	**349**	*e* PN	**Pg**	**10 28 32.2**	**-0.4**
VLI				*e* SN	**Sg**	**10 28 44.0**	**-0.6**
VAM	**Vamos**	**0.94**	**115**	*e* PN	**Pg**	**10 28 32.9**	**0.0**
VAM				*e* SN	**Sg**	**10 28 45.5**	**+0.4**
VAM	**Vamos**	**0.94**	**115**	*e* Pn	**Pg**	**10 28 32.9**	**0.0**
GVD	**Gavdhos**	**1.23**	**142**	*e* PN	**Pn**	**10 28 38.5**	**-0.8**
GVD	**Gavdhos**	**1.23**	**142**	P	**Pg**	**10 28 38.1**	**-0.5**
GVD				S	**Sg**	**10 28 57.0**	**+2.5**
GVD	**Gavdhos**	**1.23**	**142**	P	**Pg**	**10 28 38.1**	**-0.5**
GVD	**Gavdhos**	**1.23**	**142**	*e* Pn	**Pn**	**10 28 38.5**	**-0.8**
GVD				S	**Sg**	**10 28 57.0**	**+2.5**
IDI	**Anoyia**	**1.50**	**110**	P	**Pn**	**10 28 43.1**	**+0.1**
	36nm,0.3s,baz=298,slow=14,SNR=74						
IDI				S	**Sb**	**10 29 03.2**	**+0.1**
	93nm,0.3s,baz=248,slow=23,SNR=7.0						
IDI	**Anoyia**	**1.50**	**110**	*e* PN	**Pn**	**10 28 43.5**	**+0.5**
IDI	**Anoyia**	**1.50**	**110**	*e* Pn	**Pn**	**10 28 43.5**	**+0.5**
SIVA	**Sivas**	**1.56**	**120**	P	**Pn**	**10 28 43.6**	**-0.2**
SIVA				S	**Sn**	**10 29 06.2**	**+1.5**
SIVA	**Sivas**	**1.56**	**120**	P	**Pn**	**10 28 43.6**	**-0.2**
SIVA				S	**Sn**	**10 29 06.2**	**+1.5**
PYL	**PYLOS**	**1.57**	**314**	*e* PN	**Pn**	**10 28 44.8**	**+0.8**
PYL				*e* SN	**Sn**	**10 29 06.4**	**+1.4**
PYL	**PYLOS**	**1.57**	**314**	*e* Pn	**Pn**	**10 28 44.8**	**+0.8**
PYL				*e* Sn	**Sn**	**10 29 06.4**	**+1.4**
VLX	**Vlachokerasia**	**1.68**	**338**	*e* PN	**Pn**	**10 28 46.4**	**+1.0**
VLX	**Vlachokerasia**	**1.68**	**338**	*e* Pn	**Pn**	**10 28 46.4**	**+1.0**
ITM	**Ithomi**	**1.69**	**324**	*e* PN	**Pn**	**10 28 46.3**	**+0.7**
ITM	**Ithomi**	**1.69**	**324**	P	**Pn**	**10 28 46.7**	**+1.1**
ITM	**Ithomi**	**1.69**	**324**	*e* Pn	**Pn**	**10 28 46.3**	**+0.7**
ITM	**Ithomi**	**1.69**	**324**	P	**Pn**	**10 28 46.7**	**+1.1**
THR5	**Thira Island,**	**1.87**	**71**	P	**Pn**	**10 28 47.2**	**-0.8**
THR5	**Thira Island,**	**1.87**	**71**	P	**Pn**	**10 28 47.2**	**-0.8**
THR6	**Thira Island,**	**1.89**	**73**	P	**Pn**	**10 28 47.6**	**-0.7**
THR6	**Thira Island,**	**1.89**	**73**	P	**Pn**	**10 28 47.6**	**-0.7**
THR3	**Thira Island,**	**1.91**	**71**	P	**Pn**	**10 28 48.0**	**-0.6**
THR3	**Thira Island,**	**1.91**	**71**	P	**Pn**	**10 28 48.0**	**-0.6**
THR1	**Thera Island**	**1.94**	**73**	P	**Pn**	**10 28 48.7**	**-0.3**
THR1	**Thera Island**	**1.94**	**73**	P	**Pn**	**10 28 48.7**	**-0.3**
NAIG	**Nisos Aigina**	**1.96**	**8**	*e* PN	**Pn**	**10 28 49.3**	**0.0**
NAIG	**Nisos Aigina**	**1.96**	**8**	*e* Pn	**Pn**	**10 28 49.3**	**0.0**
LAST	**Lasithi**	**2.00**	**108**	P	**Pn**	**10 28 49.9**	**+0.1**
LAST				S	**Sn**	**10 29 17.4**	**+1.9**
LAST	**Lasithi**	**2.00**	**108**	P	**Pn**	**10 28 49.9**	**+0.1**
LAST				S	**Sn**	**10 29 17.4**	**+1.9**
NPS	**Neapolis**	**2.07**	**105**	*e* PN	**Pn**	**10 28 50.6**	**-0.2**
NPS	**Neapolis**	**2.07**	**105**	*e* Pn	**Pn**	**10 28 50.6**	**-0.2**
VLY	**Voula,Athens**	**2.10**	**14**	*e* PB	**Pb**	**10 28 50.3**	**-3.5**
LTK	**Loutraki**	**2.21**	**356**	*e* PN	**Pn**	**10 28 52.7**	**-0.1**
LTK	**Loutraki**	**2.21**	**356**	*e* Pn	**Pn**	**10 28 52.7**	**-0.1**
GUR	**Goura**	**2.22**	**343**	*e* PN	**Pn**	**10 28 53.6**	**+0.7**
GUR	**Goura**	**2.22**	**343**	*e* Pn	**Pn**	**10 28 53.6**	**+0.7**
APE	**Apeiranthos**	**2.28**	**56**	*e* PN	**Pn**	**10 28 53.0**	**-0.7**
APE	**Apeiranthos**	**2.28**	**56**	P	**Pn**	**10 28 52.1**	**-1.6**
APE				S	**Sn**	**10 29 24.8**	**+2.3**
APE	**Apeiranthos**	**2.28**	**56**	P	**Pn**	**10 28 52.1**	**-1.6**
APE	**Apeiranthos**	**2.28**	**56**	*e* Pn	**Pn**	**10 28 53.0**	**-0.7**
APE				S	**Sn**	**10 29 24.8**	**+2.3**
PTL	**Penteli**	**2.30**	**14**	*e* PB	**Pb**	**10 28 52.8**	**-4.4**
ZKR	**Zakros**	**2.59**	**105**	P	**Pn**	**10 28 58.7**	**+0.8**
ZKR	**Zakros**	**2.59**	**105**	P	**Pn**	**10 28 58.7**	**+0.8**
LKR	**Lokris**	**2.83**	**357**	*e* PN	**Pn**	**10 29 01.0**	**-0.3**
LKR	**Lokris**	**2.83**	**357**	P	**Pn**	**10 29 00.9**	**-0.4**
LKR				S	**Sn**	**10 29 36.0**	**-0.1**
LKR	**Lokris**	**2.83**	**357**	*e* Pn	**Pn**	**10 29 01.0**	**-0.3**
LKR				S	**Sn**	**10 29 36.0**	**-0.1**
VLS	**Valsamata**	**3.13**	**320**	P	**Pn**	**10 29 05.7**	**+0.3**
VLS				S	**Sn**	**10 29 43.5**	**+0.1**
VLS	**Valsamata**	**3.13**	**320**	P	**Pn**	**10 29 05.7**	**+0.3**
VLS				S	**Sn**	**10 29 43.5**	**+0.1**
KARP	**Karpathos**	**3.27**	**94**	*e* PN	**Pn**	**10 29 07.2**	**0.0**
KARP	**Karpathos**	**3.27**	**94**	*e* Pn	**Pn**	**10 29 07.2**	**0.0**
AGG	**Agios Georgios**	**3.27**	**349**	P	**Pn**	**10 29 07.9**	**+0.6**
AGG				S	**Sn**	**10 29 49.0**	**+2.2**
AGG	**Agios Georgios**	**3.27**	**349**	P	**Pn**	**10 29 07.9**	**+0.6**
AGG				S	**Sn**	**10 29 49.0**	**+2.2**
AOS	**Alonnisos**	**3.40**	**9**	P	**Pn**	**10 29 08.2**	**-0.9**
AOS	**Alonnisos**	**3.40**	**9**	P	**Pn**	**10 29 08.2**	**-0.9**
CHOS	**Chios island**	**3.46**	**41**	P	**Pn**	**10 29 08.7**	**-1.2**
CHOS				S	**Sn**	**10 29 50.5**	**-0.9**
CHOS	**Chios island**	**3.46**	**41**	P	**Pn**	**10 29 08.7**	**-1.2**
CHOS				S	**Sn**	**10 29 50.5**	**-0.9**
NEO	**Neokhori**	**3.49**	**1**	*e* PN	**Pn**	**10 29 10.1**	**-0.2**
NEO	**Neokhori**	**3.49**	**1**	*e* Pn	**Pn**	**10 29 10.1**	**-0.2**
XOR	**Xorichti**	**3.55**	**0**	P	**Pn**	**10 29 10.7**	**-0.4**
XOR				S	**Sn**	**10 29 54.6**	**+1.0**
XOR	**Xorichti**	**3.55**	**0**	P	**Pn**	**10 29 10.7**	**-0.4**
XOR				S	**Sn**	**10 29 54.6**	**+1.0**
THL	**Klokotos Trika**	**3.85**	**347**	*e* PN	**Pn**	**10 29 16.2**	**+0.9**
THL	**Klokotos Trika**	**3.85**	**347**	P	**Pn**	**10 29 16.0**	**+0.7**
THL				S	**Sn**	**10 30 02.6**	**+1.4**
THL	**Klokotos Trika**	**3.85**	**347**	P	**Pn**	**10 29 16.0**	**+0.7**
THL				S	**Sn**	**10 30 02.6**	**+1.4**
PAIG	**Paliouri**	**4.13**	**6**	P	**Pn**	**10 29 18.6**	**-0.5**
PAIG	**Paliouri**	**4.13**	**6**	P	**Pn**	**10 29 18.6**	**-0.5**
PRK	**Paraskevi**	**4.22**	**35**	P	**Pn**	**10 29 19.4**	**-1.0**
PRK	**Paraskevi**	**4.22**	**35**	P	**Pn**	**10 29 19.4**	**-1.0**
JAN	**Janina**	**4.25**	**335**	P	**Pn**	**10 29 23.8**	**+3.0**
JAN	**Janina**	**4.25**	**335**	P	**Pn**	**10 29 23.8**	**+3.0**
LIT	**Litokhoron**	**4.31**	**353**	P	**Pn**	**10 29 21.9**	**+0.3**
LIT	**Litokhoron**	**4.31**	**353**	P	**Pn**	**10 29 21.9**	**+0.3**
IGT	**Igoumenitsa**	**4.34**	**330**	P	**Pn**	**10 29 22.1**	**+0.1**
IGT				S	**Sn**	**10 30 13.5**	**+0.3**
IGT	**Igoumenitsa**	**4.34**	**330**	P	**Pn**	**10 29 22.1**	**+0.1**
IGT				S	**Sn**	**10 30 13.5**	**+0.3**
LIA	**Limnos Island**	**4.38**	**21**	P	**Pn**	**10 29 21.9**	**-0.7**
LIA	**Limnos Island**	**4.38**	**21**	P	**Pn**	**10 29 21.9**	**-0.7**
PLG	**Polygyros**	**4.56**	**3**	P	**Pn**	**10 29 25.0**	**0.0**
PLG	**Polygyros**	**4.56**	**3**	P	**Pn**	**10 29 25.0**	**0.0**
OUR	**Ouranopolis**	**4.56**	**8**	P	**Pn**	**10 29 24.3**	**-0.7**
OUR	**Ouranopolis**	**4.56**	**8**	P	**Pn**	**10 29 24.3**	**-0.7**
KZN	**Kozani**	**4.62**	**347**	P	**Pn**	**10 29 28.1**	**+2.3**
KZN	**Kozani**	**4.62**	**347**	P	**Pn**	**10 29 28.1**	**+2.3**
KEK	**Kerkira**	**4.72**	**327**	P	**Pn**	**10 29 27.5**	**+0.3**
KEK	**Kerkira**	**4.72**	**327**	P	**Pn**	**10 29 27.5**	**+0.3**
HORT	**Hortiatis**	**4.78**	**359**	P	**Pn**	**10 29 28.4**	**+0.4**
HORT	**Hortiatis**	**4.78**	**359**	P	**Pn**	**10 29 28.4**	**+0.4**
FNA	**Florina**	**5.16**	**345**	P	**Pn**	**10 29 34.7**	**+1.5**
FNA	**Florina**	**5.16**	**345**	P	**Pn**	**10 29 34.7**	**+1.5**
KAVA	**Kavala**	**5.28**	**11**	P	**Pn**	**10 29 36.4**	**+1.4**
KAVA	**Kavala**	**5.28**	**11**	P	**Pn**	**10 29 36.4**	**+1.4**
HMAT	**Matruh**	**5.74**	**144**	P	**Pn**	**10 29 40.4**	**-0.8**
	baz=146						
HMAT				AMP		10 30 00.0	
	comp=N,10μm,0.5s,logA/T=4.3,baz=146						
HMAT				S	**Sn**	**10 30 39.7**	**-8.1**
	baz=146						
HMAT	**Matruh**	**5.74**	**144**	P	**Pn**	**10 29 40.4**	**-0.9**
HMAT				S	**Sn**	**10 30 39.7**	**-8.1**
CEL	**Celeste**	**6.31**	**295**	P	**Pn**	**10 29 49.2**	**+0.2**
CEL	**Celeste**	**6.31**	**295**	P	**Pn**	**10 29 49.2**	**+0.2**
BARS	**Barje**	**7.07**	**352**	*e* Pn	**Pn**	**10 30 00.2**	**+0.7**
BBLS	**Lazići**	**8.54**	**341**	*i* Pn	**Pn**	**10 30 18.6**	**-1.1**
DIVS	**Divibare**	**8.62**	**345**	*i* Pn	**Pn**	**10 30 19.1**	**-1.7**
BRTR	**Keskin Array B**	**9.17**	**62**	P	**Pn**	**10 30 30.2**	**+2.0**
	comp=N,0.2nm,0.3s,baz=239,slow=14,SNR=8.3						
BRTR	**Keskin Array B**	**9.17**	**62**	P	**Pn**	**10 30 30.2**	**+1.9**
GLL	**Jalalah**	**9.51**	**128**	P	**Pn**	**10 30 31.6**	**-1.4**
	baz=129						
GLL	**Jalalah**	**9.51**	**128**	P	**Pn**	**10 30 31.6**	**-1.4**
HFRF	**Wahat Farafira**	**9.69**	**152**	P	**Pn**	**10 30 34.5**	**-1.0**
	baz=153						
HFRF	**Wahat Farafira**	**9.69**	**152**	P	**Pn**	**10 30 34.5**	**-1.0**
MLR	**Muntele Rosu**	**9.89**	**11**	P	**Pn**	**10 30 41.9**	**+3.6**
	comp=N,0.8nm,0.3s,baz=190,slow=12,SNR=5.9						
MMAI	**Mount Meron Ar**	**10.49**	**102**	P	**Pn**	**10 30 48.8**	**+2.4**
	comp=N,1.9nm,0.3s,baz=287,slow=11,SNR=4.3						
GERES	**GERESS Array B**	**14.77**	**335**	P	**Pn**	**10 31 46.1**	**+1.3**
	comp=N,0.1nm,0.3s,baz=146,slow=39,SNR=3.5						
AKASG	**Malin Array Be**	**15.51**	**15**	P	**Pn**	**10 31 53.1**	**-1.6**
	comp=N,0.9nm,0.3s,baz=203,slow=11,SNR=4.1						
MDT	**Midelt**	**23.11**	**271**	P	**P**	**10 33 17.5**	**-4.9**
	comp=N,3.4nm,0.8s,mb3.9,baz=234,slow=9.9,SNR=6.1						
HFS	**Hagfors**	**25.09**	**349**	P	**P**	**10 33 38.6**	**-2.2**
	comp=N,3.3nm,0.4s,mb4.4,baz=149,slow=12,SNR=25						
FINES	**FINESS Array B**	**25.72**	**3**	P	**P**

comp=Z,2.4nm,0.8s,mb3.8,baz=134,slow=8.7,SNR=14
KURK Kurchatov 26.77 321 *e*P **P 10 37 10.0 -0.6**
comp=Z,2.7nm,0.7s,mb3.9
ABKAR Abkulak array 37.48 310 *e*P **P 10 38 44.3 0.0**
comp=Z,3.8nm,0.8s,mb4.3
AKTK Aktyubinsk 38.90 312 P **P 10 38 56.8 +0.5**
AKTO Aktyubinsk 38.90 312 P **P 10 38 56.8 +0.5**
comp=Z,1.6nm,0.6s,mb3.9,baz=92,slow=12,SNR=6.0
ARU Arti 39.97 321 *e*P **P 10 39 05.0 -0.2**
comp=Z,2.6nm,0.6s,mb4.1
ARCES ARCESS Array B 56.47 335 P **P 10 41 12.3 -0.1**
comp=Z,3.7nm,0.9s,mb4.4,baz=67,slow=9.3,SNR=6.7
ARCES ARCESS Array B 56.47 335 P **P 10 41 12.3 -0.1**
BRTR Keskin Array B 56.84 299 P **P 10 41 14.4 -1.1**
comp=Z,0.8nm,0.5s,mb4.0,baz=111,slow=6.6,SNR=6.0
FINES FINESS Array B 57.00 326 P **P 10 41 15.7 -0.6**
comp=Z,1.7nm,0.5s,mb4.4,baz=88,slow=6.4,SNR=14
AKASG Malin Array Be 57.14 313 P **P 10 41 16.1 -1.3**
comp=Z,1.2nm,0.5s,mb4.2,baz=67,slow=7.3,SNR=3.7
WRAB Tennant Creek 59.06 148 *e*P **P 10 41 33.0 +1.8**
comp=Z,3.0nm,0.8s,mb4.4
ASAR Alice Springs 62.14 150 P **P 10 41 52.2 +0.1**
comp=Z,0.6nm,0.5s,mb4.0,baz=332,slow=6.0,SNR=10
HFS Hagfors 63.20 326 P **P 10 41 57.5 -1.3**
comp=Z,1.1nm,0.4s,mb4.3,baz=69,slow=8.3,SNR=5.9
NB2 NORSAR Subarra 64.06 327 P **P 10 42 02.8 -1.7**
comp=Z,1.1nm,0.5s,mb4.1,baz=72,slow=6.9
NOA NORSAR Array B 64.06 327 P **P 10 42 03.0 -1.5**
comp=Z,1.9nm,0.7s,mb4.2,baz=72,slow=6.9,SNR=7.5
INK Inuvik 70.73 20 P **P 10 42 48.4 +1.7**
comp=Z,1.0nm,0.8s,mb3.8,baz=342,slow=7.8,SNR=3.1
LPG La Plagne 72.99 313 *e*P **P 10 43 00.7 +0.1**
comp=Z,2.8nm,0.5s,mb4.2
LPL La Plagne 73.00 313 *e*P **P 10 43 00.6 0.0**
comp=Z,2.9nm,0.4s,mb4.3
YKA Yellowknife Ar 80.28 17 P **P 10 43 41.0 -0.5**
comp=Z,0.2nm,0.5s,mb3.3,baz=330,slow=5.1,SNR=4.5
YKA Yellowknife Ar 80.28 17 P **P 10 43 41.0 -0.5**

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*IDC **18** 10:38:25.1±0.9,26°.28S×176°.48W,h0km,mb4.0/7, mb1 4.2/7,mb1mx4.0/15,mbtmp4.0/7,ML5.1/1,MS3.8/5, Ms1 3.7/5,ms1mx3.1/25,Error ellipse: s-maj=29.2km s-min=16.4km az=119.0*
*ISCJB **18** 10:38:28.9±0.7,26°.24S±0°.08×176°.6W±0°.2,h33km, mb4.0/8,MS4.0/4,Error ellipse: s-maj=23.2km s-min=9.3km az=19.9*
*NEIC **18** 10:38:30.4±0.7,26°.36S×176°.53W,h35km,mb4.6/1,Error ellipse: s-maj=25.1km s-min=15.6km az=126.0*
ISC 18 10:38:30.7±0.7,26°.26S±0°.08×176°.6W±0°.2,h35km,n20, σ1°01/15,mb4.0/8,MS4.0/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.21**	**202**		**Pn**		**Pn**	**10 39 17.2**	**-1.4**
	206nm,0.3s,baz=258,slow=21,SNR=21								
RAO					Sn		**Sn**	**10 39 56.5**	**+0.9**
	78nm,0.3s,baz=263,slow=23,SNR=4.4								
RAO					Lg			10 40 08.5	
	82nm,0.3s,baz=99,slow=22,SNR=3.6								
RAO					LR		LR	10 40 28.7	
	comp=Z,216nm,22.0s,baz=311,slow=38								
RAO	**Raoul Island**	**3.21**	**202**	*e*Pn			**Pn**	**10 39 17.1**	**-1.6**
RAO					Sn		**Sn**	**10 39 56.5**	**+0.9**
RAO					Lg			10 40 08.6	
RAO					LR		LR	10 40 28.7	
AFI	**Afiamalu**	**13.08**	**21**	Pn			**Pn**	**10 41 27.0**	**-7.1**
	2.4nm,0.3s,baz=106,slow=19,SNR=4.2								
AFI	**Afiamalu**	**13.08**	**21**	*e*Pn			**Pn**	**10 41 26.8**	**-7.3**
PPT	**Papeete**	**26.45**	**76**	LR			LR	10 52 00.8	
	comp=Z,213nm,19.7s,MS3.7,baz=243,slow=31								
CTA	**Charters Tower**	**34.65**	**272**	P			**P**	**10 45 18.2**	**+1.3**
	4.6nm,0.6s,mb4.6,baz=108,slow=11,SNR=9.2								
CTA	**Charters Tower**	**34.65**	**272**	P			**P**	**10 45 18.2**	**+1.2**
STKA	**Stephens Creek**	**36.83**	**251**	LR			LR	11 00 03.8	
	comp=Z,242nm,19.3s,MS4.0,baz=24,slow=35								
ASAR	**Alice Springs**	**44.77**	**262**	P			**P**	**10 46 40.3**	**-0.8**
	0.7nm,0.4s,mb3.9,baz=96,slow=7.2,SNR=20								
QSPA	**South Pole Qui**	**63.83**	**180**	LR			LR	11 13 13.6	
	comp=Z,102nm,18.3s,MS4.0,baz=203,slow=33								
MJAR	**Matsushiro Arr**	**75.62**	**324**	P			**P**	**10 50 10.8**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=139,slow=5.8,SNR=3.9								
MAJO	**Matsushiro**	**75.62**	**324**	*e*P			**P**	**10 50 11.4**	**-0.6**
	2.6nm,0.4s,mb4.5								
PETK	**Petropavlovsk-**	**82.15**	**345**	P			**P**	**10 50 49.2**	**+1.8**
	2.1nm,0.7s,mb4.2,baz=177,slow=4.7,SNR=7.4								
NVAR	**Mina Array Bea**	**84.34**	**42**	P			**P**	**10 50 59.0**	**-0.1**
	0.4nm,0.7s,mb3.7,baz=232,slow=9.1,SNR=4.1								
TXAR	**Lajitas Array**	**89.08**	**57**	P			**P**	**10 51 22.4**	**-0.1**
	0.2nm,0.7s,mb3.6,baz=198,slow=7.9,SNR=3.8								
ANMO	**Albuquerque**	**90.00**	**51**	P			**P**	**10 51 27.1**	**+0.5**
	0.3nm,0.4s,mb4.0,baz=288,slow=8.4,SNR=3.6								
ATAH	**Atahualpa**	**94.21**	**100**	LR			LR	11 23 14.4	
	comp=Z,72nm,21.5s,MS4.1,baz=124,slow=29								
NOA	**NORSAR Array B**	**144.83**	**353**	PKP			PKPdf	10 58 01.9	-1.4
	1.9nm,0.9s,baz=10,slow=2.3,SNR=4.2								
BRTR	**Keskin Array B**	**151.48**	**306**	PKPbc			PKPbc	10 58 22.8	+1.8
	0.9nm,0.9s,baz=108,slow=3.2,SNR=4.2								
BRTR				PKPab			PKPab	10 58 29.0	-0.5
	0.8nm,0.8s,baz=38,slow=6.3,SNR=4.2								
TORD	**Torodi Ar. Bea**	**166.85**	**173**	PKPab			PKPab	10 59 34.9	-1.5
	1.0nm,0.9s,baz=178,slow=2.7,SNR=4.4								

JMA 18 10:50:31.1±0.2,43°.31N×146°.73E,h38km±2km,M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.72**	**275**		P		Pn	10 50 44.9	+0.1
NEM2					*e*S		Sn	10 50 54.8	+0.2
JRA	**Rausu**	**1.33**	**299**		P		Pn	10 50 53.5	+0.4
JRA					*e*S		Sn	10 51 09.7	+0.2
JNK	**Nakash**	**1.49**	**281**		P		Pn	10 50 55.9	+0.6
JNK					*e*S		Sn	10 51 14.0	+0.5
JAK	**Akkeshi**	**1.52**	**259**		P		Pn	10 50 56.4	+0.6
JAK					*e*S		Sn	10 51 15.3	+1.0
JTKR	**Abashiri--Toko**	**2.15**	**289**		P		Pn	10 51 05.9	+1.5
JTKR					*e*S		Sn	10 51 31.1	+1.2
JOB	**Onbets**	**2.16**	**260**		P		Pn	10 51 05.9	+1.4
JOB					*e*S		Sn	10 51 31.7	+1.7
JAR	**Ashorobuto**	**2.16**	**271**		P		Pn	10 51 06.1	+1.5
JAR					*e*S		Sn	10 51 31.7	+1.6
JMP	**Maruseppu**	**2.54**	**287**		P		Pn	10 51 11.5	+1.7
JCH	**Churui**	**2.57**	**255**		P		Pn	10 51 11.5	+1.4
JCH					*e*S		Sn	10 51 41.8	+1.7

IDC 18 10:58:29.1±2.3,3°.14S×100°.06E,h0km,mb3.9/4, mb1 3.9/4,mb1mx3.5/22,mbtmp3.9/4,Error ellipse: s-maj=103.7km s-min=26.6km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.55**	**125**		P		P	11 05 53.5	-0.3
	0.3nm,0.5s,baz=301,slow=8.0,SNR=10.0								
SONM	**Songino Array**	**51.06**	**5**		P		P	11 07 33.1	+0.1
	1.6nm,0.6s,baz=185,slow=9.5,SNR=11								
MKAR	**Makanchi Array**	**52.13**	**345**		P		P	11 07 41.0	-0.2
	1.8nm,0.7s,baz=144,slow=8.5,SNR=14								
FINES	**FINESS Array B**	**85.14**	**332**		P		P	11 11 06.8	-0.1
	1.2nm,0.9s,baz=70,slow=4.6,SNR=3.4								
TXAR	**Lajitas Array**	**145.56**	**38**	PKPbc			PKPbc	11 18 10.2	0.0
	0.5nm,0.6s,baz=212,slow=1.0,SNR=11								

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*ISCJB **18** 10:59:51.1±0.6,24°.14S±0°.05×66°.66W±0°.07,h201km±6km, mb4.1/10,Error ellipse: s-maj=11.2km s-min=7.1km az=162.9*
*NEIC **18** 10:59:51.5±0.7,24°.13S×66°.68W,h192km±7km,mb4.3/10, Error ellipse: s-maj=11.5km s-min=6.7km az=84.0*
*IDC **18** 10:59:51.0±1.4,24°.14S×66°.64W,h184km±13km,mb3.8/9, mb1 3.8/15,mb1mx3.7/21,mbtmp3.7/15,MS3.6/3, Ms1 3.6/3,ms1mx2.8/19,Error ellipse: s-maj=19.4km s-min=9.8km az=85.0*
*BJI **18** 10:59:52.0,24°.10S×66°.70W,h191km*
*GUC **18** 10:59:54.5±0.5,23°.43S×67°.03W,h250km,ML5.2*
ISC 18 10:59:51.9±0.6,24°.13S±0°.05×66°.63W±0°.07,h192km±6km, n42,σ0°96/41,mb4.1/10,2C-1D,Salta Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**3.18**	**298**	⇑*i*P			**Pn**	**11 00 44.9**	**+1.6**
PECH				*i*S			**Sn**	**11 01 23.0**	**-0.3**
PECH					AML		AML	11 01 24.4	
	comp=N,5μm,0.3s								
CEN1	**Los Morros**	**3.35**	**282**	⇓*i*P			**Pn**	**11 00 49.6**	**+4.3**
CEN1				*i*S			**Sn**	**11 01 31.5**	**+4.5**
CEN1					AML		AML	11 01 34.6	
	comp=E,2μm,0.4s								
MECH	**Mejillones**	**3.65**	**285**	⇑*i*P			**Pn**	**11 00 50.0**	**+1.1**
MECH				*i*S			**Sn**	**11 01 33.1**	**-0.4**
LCO	**Las Campanas**	**6.08**	**216**	*e*Pn			**Pn**	**11 01 19.1**	**-0.9**
	comp=E,11nm,0.6s								
LCO				*e*Sn			**Sn**	**11 02 18.0**	**-12**
CFAA	**Coronel Fontan**	**7.58**	**190**	P			**Pn**	**11 01 38.9**	**-0.7**
	comp=E,0.7nm,0.3s,baz=3.9,slow=14,SNR=195								
CFAA				S			**Sn**	**11 02 59.4**	**-5.7**
	comp=E,1.4nm,0.3s,baz=98,slow=23,SNR=17								
CFAA	**Coronel Fontan**	**7.58**	**190**	P			**Pn**	**11 01 38.9**	**-0.7**
CFAA				S			**Sn**	**11 02 59.4**	**-5.7**
LPAZ	**La Paz**	**7.92**	**350**	P			**Pn**	**11 01 46.0**	**+1.8**
	comp=E,2.6nm,0.3s,baz=149,slow=4.9,SNR=87								
LPAZ				S			**Sn**	**11 03 11.3**	**-2.1**
	comp=E,0.6nm,0.3s,baz=299,slow=19,SNR=3.9								
LPAZ				LR			LR	11 04 27.8	
	comp=E,44nm,19.5s,baz=220,slow=35								
LPAZ	**La Paz**	**7.92**	**350**	P			**Pn**	**11 01 46.0**	**+1.8**
LPAZ				S			**Sn**	**11 03 11.3**	**-2.1**
LPAZ				LR			LR	11 04 27.8	
CPUP	**Villa Florida**	**8.71**	**107**	P			**Pn**	**11 01 55.2**	**+0.9**
	comp=E,1.2nm,0.3s,baz=275,slow=12,SNR=18								
CPUP	**Villa Florida**	**8.71**	**107**	*e*Pn			**Pn**	**11 01 54.9**	**+0.5**
SIV	**San Ignacio**	**9.63**	**34**	P			**Pn**	**11 02 06.4**	**-0.1**
	comp=E,1.3nm,0.3s,baz=220,slow=14,SNR=68								
TRQA	**Tornquist**	**14.44**	**165**	*e*Pn			**Pn**	**11 03 06.8**	**-0.7**
	comp=E,5.8nm,0.6s								
NNA	**Nana**	**15.48**	**319**	P			**Pn**	**11 03 20.8**	**+0.4**
	comp=E,1.1nm,0.3s,baz=170,slow=14,SNR=4.4								
NNA	**Nana**	**15.48**	**319**	*e*P			**Pn**	**11 03 18.1**	**-2.3**
	comp=E,12nm,0.8s								
PLCA	**Paso Flores**	**16.88**	**190**	P			**Pn**	**11 03 36.8**	**-0.2**
	comp=E,0.6nm,0.3s,baz=6.3,slow=12,SNR=17								
PLCA	**Paso Flores**	**16.88**	**190**	*e*P			**Pn**	**11 03 36.0**	**-1.0**
	comp=E,11nm,0.6s								
OTAV	**Otavalo**	**26.80**	**333**	*e*P			**P**	**11 05 13.5**	**-0.9**
	comp=E,26nm,0.8s,mb4.9								
ROSC	**El Rosal**	**29.77**	**344**	P			**P**	**11 05 40.9**	**+0.3**
	comp=E,4.9nm,0.4s,mb4.5,baz=90,slow=18,SNR=3.2								
USHA	**Ushuaia**	**30.70**	**182**	P			**P**	**11 05 48.7**	**+0.3**
	comp=E,5.0nm,0.7s,mb4.3,baz=2.0,slow=8.4,SNR=4.3								
RPN	**Rapa Nui**	**38.48**	**256**	LR			LR	11 17 58.6	
	comp=E,384nm,21.6s,baz=222,slow=28								
WVT	**Waverly**	**63.19**	**341**	*e*P			**P**	**11 09 57.6**	**-1.9**
	comp=E,2.7nm,0.5s,mb4.1								
TXAR	**Lajitas Array**	**63.98**	**324**	P			**P**	**11 10 04.7**	**-0.1**
	comp=E,0.3nm,0.7s,baz=155,slow=8.6,SNR=6.8								
TXAR	**Lajitas Array**	**63.98**	**324**	P			**P**	**11 10 04.7**	**-0.1**
QSPA	**South Pole Qui**	**66.08**	**180**	P			**P**	**11 10 18.6**	**+1.0**
	comp=E,11nm,0.5s,mb4.7,baz=181,slow=1.0,SNR=189								
QSPA	**South Pole Qui**	**66.08**	**180**	*e*P			**P**	**11 10 18.2**	**+0.6**
	comp=E,8.3nm,0.6s,mb4.5								
ANMO	**Albuquerque**	**69.84**	**326**	*e*P			**P**	**11 10 41.9**	**+0.3**
	comp=E,0.6nm,0.7s,mb3.3								
SDCO	**Great Sand Dun**	**71.57**	**328**	*e*P			**P**	**11 10 52.5**	**+0.5**
	comp=E,0.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**76.30**	**69**	P			**P**	**11 11 19.0**	**-1.0**
	comp=E,1.1nm,0.6s,mb3.7,baz=256,slow=5.6,SNR=27								
PDAR	**Pinedale Array**	**77.43**	**329**	P			**P**	**11 11 26.3**	**+0.6**
	comp=E,0.3nm,0.4s,baz=139,slow=8.7,SNR=3.3								
ULM	**Lac du Bonnet**	**78.45**	**341**	P			**P**	**11 11 30.6**	**-0.5**
	comp=E,0.7nm,0.5s,mb3.5,baz=168,slow=6.3,SNR=3.6								
NVAR	**Mina Array Bea**	**78.85**	**321**	P			**P**	**11 11 34.6**	**+1.0**
	comp=E,0.3nm,0.6s,baz=128,slow=5.8,SNR=3.7								
HLID	**Hailey**	**80.38**	**327**	*e*P			**P**	**11 11 42.9**	**+1.2**
	comp=E,1.8nm,0.6s,mb3.9								
MAW	**Mawson**	**81.22**	**163**	P			**P**	**11 11 46.3**	**+0.4**
	comp=E,6.0nm,0.9s,mb4.2,baz=193,slow=8.2,SNR=4.6								
FCC	**Fort Churchill**	**85.66**	**346**	*e*P			**P**	**11 12 08.0**	**-0.4**
	comp=E,0.1nm,0.7s								
YKA	**Yellowknife Ar**	**94.36**	**340**	LR			LR	11 56 32.5	
	comp=E,67nm,19.8s,baz=265,slow=36								
ASAR	**Alice Springs**	**128.48**	**204**	PKP			PKPdf	11 18 35.7	-0.8
	comp=E,1.2nm,0.7s,baz=141,slow=1.7,SNR=19								
ZALV	**Zalesovo Beam**	**143.35**	**28**	PKP			PKPdf	11 19 00.6	-2.3
	comp=E,2.1nm,0.5s,baz=298,slow=3.2,SNR=5.2								
KSH	**Kashi**	**145.00**	**55**	PKP			PKPdf	11 19 05.8	-0.5
MKAR	**Makanchi Array**	**146.41**	**40**	PKPbc			PKPbc	11 19 10.2	+0.1
	comp=E,3.4nm,0.7s,baz=316,slow=3.3,SNR=5.6								
WMQ	**Urumqi**	**151.22**	**41**	*e*PKPbc			PKPdf	11 19 16.1	-0.2
BJI	**Beijing**	**163.96**	**352**	PKP			PKPdf	11 19 32.9	+0.8
NJ2	**Nanjing**	**170.74**	**330**	*e*PKP			PKPdf	11 19 39.3	+2.0

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*IDC **18** 11:03:45.5±0.6,22°.88S×171°.59E,h0km,mb4.6/16, mb1 4.7/17,mb1mx4.7/19,mbtmp4.6/17,ML4.2/1,MS4.0/14, Ms1 3.9/14,ms1mx3.8/23,Error ellipse: s-maj=20.2km s-min=16.6km az=105.0*
*DJA **18** 11:03:47,22°.76S×171°.93E,h10km,mb5.2/9*
*LDG **18** 11:03:48.1±0.2,21°.95S×171°.71E,h10km,Mb5.2/3,Error ellipse: s-maj=24.9km s-min=4.1km az=168.0*
*NOU **18** 11:03:48.9±1.9,19°.68S×170°.93E,h30km,MD3.2,ML3.6*
*SZGRF **18** 11:03:48.8,23°.54S×171°.34E,h33km,Southeast of Loyalty Islands*
*BJI **18** 11:03:49.9,22°.56S×172°.11E,h48km,mB4.9/18,mb5.0/27, Ms5.0/13,Ms7 4.7/14*
*ISCJB **18** 11:03:50.6±0.2,22°.92S±0°.05×171°.39E±0°.03,h47km, mb4.8/54,MS4.3/18,Error ellipse: s-maj=7.1km s-min=3.6km az=169.9*
*NEIC **18** 11:03:52.1±0.2,22°.90S×171°.50E,mb4.8/35,Error ellipse: s-maj=8.5km s-min=6.4km az=137.0*
*MOS **18** 11:03:52.3±1.8,22°.26S×171°.12E,h33km,mb5.1/11,Error ellipse: s-maj=15.4km s-min=13.8km az=13.4*
ISC 18 11:03:52.5±0.2,22°.89S±0°.05×171°.43E±0°.03,h49km, h49km±2.5km:pP-P,n362,σ0°79/227,mb4.8/54,MS4.3/18, 84C-72D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.26**	**279**	*e*S			**Sn**	**11 05 43.0**	**-0.3**
NORM	**Noumea**	**4.62**	**277**	*e*P			**Pn**	**11 04 58.2**	**-1.5**
NORM				*e*S			**Sn**	**11 05 49.3**	**-2.7**
NORM					AMP			11 05 53.3	
	comp=Z,230nm,2.2s								
DZM	**Mont Dzumac**	**4.68**	**279**	*e*Pn			**Pn**	**11 04 59.9**	**-0.7**
	comp=Z,29nm,0.2s								
DZM				*e*Sn			**Sn**	**11 05 47.5**	**-6.1**
	comp=Z,122nm,0.2s								
DZM				*e*LR			LR	11 05 56.5	
	comp=Z,321nm,26.6s								
DZM	**Mont Dzumac**	**4.68**	**279**	*e*P			**Pn**	**11 04 59.0**	**-1.5**
DZM				*e*S			**Sn**	**11 05 50.6**	**-3.0**
DZM					AMP			11 06 07.6	
	comp=Z,883nm,1.0s								
NOUC	**Port Laguerre**	**4.80**	**278**	*e*P			**Pn**	**11 05 01.3**	**-1.0**
NOUC				*e*S			**Sn**	**11 05 54.4**	**-2.3**
NOUC					AMP			11 06 01.6	
	comp=Z,54nm,1.2s								
MSVF	**Nonsavu**	**8.06**	**52**	*e*Pn			**Pn**	**11 05 48.0**	**+1.0**
	comp=Z,90nm,1.0s								
RAO	**Raoul Island**	**11.48**	**126**	LR			LR	11 09 53.1	
	comp=Z,499nm,21.9s,baz=157,slow=32								
URZ	**Urewera**	**16.08**	**164**	Pn			**Pn**	**11 07 34.7**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=349,slow=7.2,SNR=15								
URZ					LR		LR	11 12 09.9	
	comp=Z,863nm,20.8s,baz=344,slow=31								
URZ	**Urewera**	**16.08**	**164**	*e*P			**Pn**	**11 07 36.6**	**+1.5**
	comp=Z,30nm,0.8s								
AFI	**Afiamalu**	**18.26**	**64**	LR			LR	11 13 47.0	
	comp=Z,270nm,18.8s,baz=242,slow=33								
EIDS	**Eidsvold**	**18.73**	**258**	*e*P			**Pn**	**11 08 09.3**	**+1.3**
	comp=Z,31nm,1.2s								
ARMA	**Armidale**	**19.20**	**243**	*e*P			**Pn**	**11 08 14.2**	**+0.6**
ARMA	**Armidale**	**19.20**	**243**	*e*P			**Pn**	**11 08 14.1**	**+0.5**
	comp=Z,19nm,1.0s								
KHZ	**Kahutara**	**19.55**	**175**	*e*P			**Pn**	**11 08 14.4**	**-3.3**
	comp=Z,20nm,0.8s								
RPZ	**Rata Peaks**	**20.77**	**181**	P			**P**	**11 08 28.4**	**-0.8**
	comp=Z,23nm,0.7s,baz=15,slow=9.2,SNR=10.0								
RPZ					LR		LR	11 14 56.4	
	comp=Z,511nm,21.5s,MS3.9,baz=332,slow=32								
RPZ	**Rata Peaks**	**20.77**	**181**	*e*P			**P**	**11 08 28.1**	**-1.1**
	comp=Z,24nm,0.8s								
ODZ	**Otahua Downs**	**22.11**	**181**	*e*P			**P**	**11 08 41.8**	**-1.7**
	comp=Z,12nm,0.8s,mb4.4								
CNB	**Canberra Magne**	**22.85**	**232**	*e*P			**P**	**11 08 53.3**	**+1.8**
CTA	**Charters Tower**	**23.58**	**272**	*e*P			**P**	**11 09 01.3**	**+2.4**
	comp=Z,6.0nm,0.7s,mb4.1								
CTA	**Charters Tower**	**23.58**	**272**	LR			LR	11 17 38.8	
	comp=Z,269nm,18.7s,MS3.7,baz=253,slow=35								
CTAO	**Charters Tower**	**23.58**	**272**	*e*P			**P**	**11 08 59.8**	**+0.9**
CTAO				pmax			pmax		
	comp=Z,8.0nm,0.8s,mb4.2								
CTAO	**Charters Tower**	**23.58**	**272**	*e*P			**P**	**11 08 59.8**	**+0.9**
	comp=Z,8.2nm,0.8s,mb4.2								
TARA	**Tarawa**	**24.14**	**4**	*e*P			**P**	**11 09 03.5**	**-0.5**
TOO	**Toolangi**	**26.65**	**231**	*e*P			**P**	**11 09 27.7**	**+1.1**
STKA	**Stephens Creek**	**27.89**	**245**	*e*P			**P**	**11 09 38.4**	**+0.6**
	comp=Z,6.9nm,1.2s,mb4.2								
STKA	**Stephens Creek**	**27.89**	**245**	P			**P**	**11 09 38.2**	**+0.4**
	comp=Z,3.0nm,0.6s,mb4.1,baz=93,slow=11,SNR=8.8								
STKA				LR			LR	11 19 08.3	
	comp=Z,215nm,20.1s,MS3.7,baz=31,slow=33								
STKA	**Stephens Creek**	**27.89**	**245**	*e*P			**P**	**11 09 38.3**	**+0.5**
STKA				pmax			pmax		
	comp=Z,4.0nm,1.3s								
STKA	**Stephens Creek**	**27.89**	**245**	*e*P			**P**	**11 09 38.3**	**+0.5**
	comp=Z,4.0nm,1.3s,mb3.9								
COEN	**Coen**	**28.19**	**283**	*e*P			**P**	**11 09 42.2**	**+1.6**
	comp=Z,166nm,1.0s,mb5.6								
ASAR	**Alice Springs**	**34.41**	**261**	P			**P**	**11 10 35.5**	**+0.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=78,slow=8.9,SNR=34								
WRAB	**Tennant Creek**	**34.59**	**268**	*e*P			**P**	**11 10 35.9**	**-0.9**
WRAB				pmax			pmax		
	comp=Z,3.0nm,0.7s,mb4.3								
WRAB	**Tennant Creek**	**34.59**	**268**	*e*P			**P**	**11 10 35.9**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.4								
PPT	**Papeete**	**36.90**	**89**	*e*LR			LR	11 21 11.1	
	comp=Z,96nm,22.8s								
PPT	**Papeete**	**36.90**	**89**	LR			LR	11 21 58.0	
	comp=Z,217nm,21.5s,MS3.9,baz=255,slow=30								
KAKA	**Kakadu**	**38.37**	**278**	*e*P			**P**	**11 11 08.5**	**-0.6**
	comp=Z,13nm,0.6s,mb4.8								
KAKA	**Kakadu**	**38.37**	**278**	*e*P			**P**	**11 11 07.6**	**-1.5**
	comp=Z,38nm,0.7s,mb5.2								
FORT	**Forrest**	**39.29**	**249**	*e*P			**P**	**11 11 16.7**	**0.0**
	comp=Z,20nm,0.7s,mb5.0								
FORT	**Forrest**	**39.29**	**249**	*e*P			**P**	**11 11 16.1**	**-0.6**
	comp=Z,30nm,0.8s,mb5.1								
FORT				*e*pP			pP	11 11 32.0	+2.3
FITZ	**Fitzroy Crossi**	**43.02**	**268**	*e*P			**P**	**11 11 48.8**	**+1.3**
	comp=Z,21nm,0.7s,mb5.0								
FITZ	**Fitzroy Crossi**	**43.02**	**268**	P			**P**	**11 11 48.6**	**+1.1**
	comp=Z,5.6nm,0.9s,mb4.3,baz=135,slow=8.3,SNR=11								
FITZ				LR			LR	11 28 11.5	
	comp=Z,117nm,19.4s,MS3.8,baz=102,slow=34								
FITZ	**Fitzroy Crossi**	**43.02**	**268**	*e*P			**P**	**11 11 48.3**	**+0.9**
	comp=Z,10nm,0.7s,mb4.7								
MBWA	**Marble Bar**	**47.75**	**262**	*e*P			**P**	**11 12 25.0**	**+0.1**
	comp=Z,27nm,0.9s,mb5.3								
MBWA				*e*pP			pP	11 12 37.6	-0.7
KLBR	**Kellerberrin**	**48.10**	**247**	*e*P			**P**	**11 12 27.0**	**-0.5**
	comp=Z,16nm,1.0s,mb5.0								
NWAO	**Narrogin (SRO)**	**48.47**	**246**	P			**P**	**11 12 31.1**	**+0.7**
	comp=Z,9.0nm,0.8s,mb4.8,baz=60,slow=12,SNR=4.1								
KAPI	**Kappang**	**52.89**	**281**	P			**P**	**11 13 04.7**	**+0.8**
	comp=Z,11nm,0.9s,mb4.8,baz=121,slow=4.7,SNR=3.2								
SBA	**Scott Base**	**55.06**	**181**	*e*P			**P**	**11 13 18.6**	**-0.2**
SBA				pmax			pmax		
	comp=Z,20nm,1.1s,mb5.1								
SBA	**Scott Base**	**55.06**	**181**	*e*P			**P

BJI LR LR
comp=E,290nm,19.5s,MS4.7
BJI LR LR
comp=Z,110nm,38.4s
CMAR Chiang Mai Arr 81.85 294 P **P** **11 16 09.2 +2.4**
comp=Z,10nm,0.8s,mb4.8,baz=133,slow=4.2,SNR=37
KMI Kunming 81.92 301 P **P** **11 16 07.9 +0.8**
KMI pP pP 11 16 22.4 +1.0
KMI sP sP 11 16 29.8 +2.9
KMI pmax pmax
comp=Z,12nm,0.8s,mb4.9
KMI pmax pmax
comp=Z,64nm,3.2s
XAN Xi'an 82.06 312 P **P** **11 16 08.3 +0.6**
XAN pP pP 11 16 20.8 -1.2
XAN pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
XAN pmax pmax
comp=Z,19nm,5.6s
CD2 Chengdu 84.06 307 P **P** **11 16 20.4 +2.4**
CD2 pP pP 11 16 33.8 +1.4
CD2 sP sP 11 16 38.9 +1.0
CD2 PP PP 11 19 37.5 +4.6
CD2 SKS 11 26 36.4
CD2 S S 11 26 41.1 +2.2
CD2 sS sS 11 27 03.8 +0.7
CD2 SS SS 11 32 14.4 +5.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,100nm,5.5s
CD2 LR LR
comp=N,410nm,14.9s
CD2 LR LR
comp=Z,460nm,17.8s,MS4.9
VNA2 Neumayer--Watz 86.44 180 *e*P **P** **11 16 25.8 -3.5**
LZH Lanzhou 86.67 311 *e*P **P** **11 16 33.1 +2.2**
LZH pP pP 11 16 44.1 -1.3
LZH sP sP 11 16 50.0 -0.8
LZH pmax pmax
comp=Z,25nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,180nm,4.7s
SEY Seymchan 86.85 351 c *i*P **P** **11 16 30.1 -1.1**
VES Vestal, Richgr 87.87 50 ⇓P **P** **11 16 36.8 0.0**
baz=88
CMB Columbia Colle 88.09 47 *e*P **P** **11 16 37.5 -0.2**
CMB pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
CMB Columbia Colle 88.09 47 *e*P **P** **11 16 37.5 -0.2**
comp=Z,4.9nm,1.1s,mb4.7
EDW2 Edwards Air Fo 88.17 51 ⇓P **P** **11 16 38.1 -0.1**
baz=88
ISA Isabella 88.22 50 ⇑P **P** **11 16 38.6 +0.3**
baz=88
ISA Isabella 88.22 50 *e*P **P** **11 16 38.3 -0.1**
ISA *e**PP pP 11 16 54.8 +1.9
ISA pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ISA Isabella 88.22 50 *e*P **P** **11 16 38.3 0.0**
comp=Z,9.0nm,0.8s,mb5.0
ISA *e*pP pP 11 16 54.8 +1.9
MONP Monument Peak 88.35 53 ⇓P **P** **11 16 39.5 +0.4**
baz=88
YBH Yreka Blue Hor 88.52 43 *e*P **P** **11 16 40.4 +0.7**
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH Yreka Blue Hor 88.52 43 *e*P **P** **11 16 40.4 +0.7**
comp=Z,7.5nm,0.8s,mb5.1
LRMC Laurel Mountai 88.68 50 ⇑P **P** **11 16 40.4 -0.1**
baz=89
HUMO Hull Mountain 88.84 42 *e*P **P** **11 16 41.9 +0.7**
comp=Z,13nm,1.0s,mb5.2
MLAC Mammoth Lakes 88.94 48 ⇑P **P** **11 16 42.0 +0.2**
baz=89
BEKR Beckwourth 89.05 46 ⇓P **P** **11 16 42.3 0.0**
baz=89
MPMC Manual Prospec 89.11 50 ⇑P **P** **11 16 42.6 +0.1**
baz=89
WCN Washoe City 89.16 46 ⇓P **P** **11 16 43.2 +0.4**
baz=89
BELC Belle Mtn. 89.19 52 ⇓P **P** **11 16 43.2 +0.1**
baz=89
HEC Hector,Ludlow 89.34 52 ⇑P **P** **11 16 43.5 -0.2**
baz=90
112A Yuma 89.55 54 ⇓P **P** **11 16 44.8 0.0**
baz=90
GRAC Grapevine Rang 89.65 49 ⇓P **P** **11 16 44.7 -0.3**
baz=90
NVAR Mina Array Bea 89.71 48 P **P** **11 16 46.0 +0.7**
comp=Z,6.8nm,0.7s,mb5.1,baz=225,slow=8.3,SNR=57
NVAR Mina Array Bea 89.71 48 P **P** **11 16 46.0 +0.6**
FURC Furnace Creek, 89.75 50 ⇑P **P** **11 16 44.9 -0.7**
baz=90
IRM Iron Mountain 89.88 53 ⇑P **P** **11 16 45.2 -1.1**
baz=90
SHOC Shoshone 89.89 51 ⇑P **P** **11 16 45.3 -1.0**
baz=90
TUQ Turquoise Moun 89.92 51 ⇓P **P** **11 16 45.7 -0.7**
baz=90
U10A Ash Meadows, A 90.10 50 ⇑P **P** **11 16 47.4 +0.2**
baz=90
MOD Modoc 90.14 44 *e*P **P** **11 16 47.6 +0.3**
comp=Z,11nm,0.9s,mb5.2
Y12C Blythe 90.16 53 ⇓P **P** **11 16 47.2 -0.4**
baz=90
K05A Summer Lake 90.19 43 ⇑P **P** **11 16 48.2 +0.8**
baz=90,SNR=8.0
LDFC Landfair 90.34 52 *e*P **P** **11 16 49.0 +0.6**
comp=Z,13nm,0.9s,mb5.2
H04A Detroit Lake 90.43 41 ⇑P **P** **11 16 48.5 0.0**
baz=91
V11A Goodsprings 90.47 51 ⇓P **P** **11 16 49.2 +0.2**
baz=91,SNR=6.7
Z13A Yuma Proving G 90.55 54 ⇓P **P** **11 16 49.6 +0.2**
baz=91,SNR=5.7
S10A Tonopah Range, 90.63 49 ⇓P **P** **11 16 49.9 +0.2**
baz=91,SNR=20
PDMCI Parker Dam,Lak 90.69 53 ⇓P **P** **11 16 50.1 +0.1**
baz=91
Y13A Salome 90.70 53 ⇓P **P** **11 16 49.9 -0.1**
baz=91,SNR=7.8
BILL Bilibino 90.74 358 ⇑*e*P **P** **11 16 48.3 -1.1**
BILL *e**PP pP 11 17 06.4 +2.5
BILL *e* 11 20 24.9
BILL *e*SS SS 11 33 39.2 -5.8
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.3
BILL Bilibino 90.74 358 *e*P **P** **11 16 48.2 -1.2**
comp=Z,2.8nm,0.8s,mb4.6
V12A Nelson 90.83 51 ⇓P **P** **11 16 49.0 -1.7**
baz=91
NLWA Neilton Lookou 90.92 38 ⇑P **P** **11 16 51.1 +0.3**
baz=91
F04A Amboy 90.96 40 ⇓P **P** **11 16 50.8 -0.1**
baz=91
ULN Ulaanbaatar 90.99 323 *e*P **P** **11 16 50.8 -0.3**
ULN pmax pmax
comp=Z,14nm,1.1s,mb5.2
ULN Ulaanbaatar 90.99 323 *e*P **P** **11 16 50.8 -0.3**
comp=Z,14nm,1.1s,mb5.2
R10A Warm Springs 91.01 49 ⇓P **P** **11 16 51.4 -0.1**
baz=91,SNR=11
X13A Yucca 91.05 53 ⇓P **P** **11 16 51.8 +0.1**
baz=91
S11A Rachel 91.09 49 ⇑P **P** **11 16 52.0 +0.2**
baz=91
GTA Gaotai 91.10 313 *e*P **P** **11 16 53.5 +1.7**
GTA pP pP 11 17 08.1 +1.8
GTA sP sP 11 17 13.5 +1.8
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
Q10A Clear Creek Ra 91.20 48 P **P** **11 16 52.7 +0.4**
baz=91,SNR=7.2
W13A Hualapai Mount 91.24 52 ⇓P **P** **11 16 52.7 +0.1**
baz=91
T11A Corn Creek, Al 91.27 50 ⇓P **P** **11 16 52.8 +0.2**
baz=91,SNR=9.0
SONM Songino Array 91.35 322 P **P** **11 16 53.6 +0.9**
comp=Z,11nm,1.0s,mb5.1,baz=138,slow=4.6,SNR=39
Y14A Wickenburg 91.37 54 ⇑P **P** **11 16 53.0 -0.2**
baz=92
U12A Valley of Fire 91.38 51 ⇓P **P** **11 16 53.7 +0.5**
baz=92,SNR=7.0
115A Sonoran Desert 91.40 55 ⇑P **P** **11 16 52.8 -0.5**
baz=92
V13A Grand Canyon W 91.51 52 ⇓P **P** **11 16 53.7 -0.1**
baz=92,SNR=6.1
R11A Troy Canyon, C 91.54 49 ⇑P **P** **11 16 53.1 -0.8**
baz=92,SNR=5.9
P10A Eureka 91.54 47 ⇓P **P** **11 16 53.1 -0.7**
baz=92
G06A Carlson Farm, 91.66 41 ⇑P **P** **11 16 54.0 -0.3**
baz=92
X14A Yava 91.69 53 ⇑P **P** **11 16 54.9 +0.3**
baz=92
S12A Delamar Landin 91.70 50 ⇑P **P** **11 16 55.3 +0.7**
baz=92,SNR=11
Q11A Duckwater 91.72 48 ⇑P **P** **11 16 55.0 +0.3**
baz=92,SNR=7.5
I07A Izee 91.76 42 ⇑P **P** **11 16 54.8 +0.1**
baz=92,SNR=11
U13A Pakoon Wash 91.78 51 ⇑P **P** **11 16 54.9 -0.1**
baz=92,SNR=6.6
Y15A Casa Rosa Ranc 91.87 54 ⇑P **P** **11 16 55.6 +0.1**
baz=92,SNR=5.0
W14A Seligman 91.88 52 ⇓P **P** **11 16 55.3 -0.2**
baz=92,SNR=6.8
J08A Circle Bar Ran 92.04 43 ⇓P **P** **11 16 56.2 +0.2**
baz=92,SNR=8.6
V14A Boquillas Ranc 92.05 52 ⇑P **P** **11 16 56.4 +0.1**
baz=92,SNR=8.8
T13A Saint George 92.10 51 ⇑P **P** **11 16 57.1 +0.6**
baz=92
X15A Humboldt 92.18 53 ⇑P **P** **11 16 57.1 +0.2**
baz=92,SNR=6.4
R12A Pony Springs, 92.21 49 ⇓P **P** **11 16 57.3 +0.4**
baz=92,SNR=8.8
Z16A Peralta Trail, 92.28 55 ⇑P **P** **11 16 57.4 0.0**
baz=92
O11A Cowboy Ranch, 92.33 47 ⇓P **P** **11 16 57.8 +0.4**
baz=92
U14A Mt Trumbull 92.35 51 ⇓P **P** **11 16 57.9 +0.2**
baz=92,SNR=14
Q12A Willow Creek R 92.38 48 ⇓P **P** **11 16 57.6 -0.2**
baz=92
S13A Holt Ranch, En 92.39 50 ⇓P **P** **11 16 58.1 +0.3**
baz=92,SNR=6.4
M10A I.L. Ranch, Tu 92.40 46 ⇑P **P** **11 16 58.4 +0.7**
baz=93,SNR=8.0
117A Oracle 92.47 56 ⇑P **P** **11 16 58.5 +0.2**
baz=93
Y16A Circle Bar Ran 92.48 54 ⇑P **P** **11 16 58.5 +0.2**
baz=93,SNR=5.9
J09A Fry Pan Ranch, 92.49 44 ⇓P **P** **11 16 58.2 +0.1**
baz=93,SNR=11
H08A Prairie City 92.50 42 ⇓P **P** **11 16 58.2 +0.1**
baz=93
318A Bisbee 92.56 57 ⇑P **P** **11 16 58.6 -0.1**
baz=93
R13A O'Grain Ranch, 92.59 50 ⇓P **P** **11 16 58.9 +0.2**
baz=93
G08A Pilot Rock 92.70 41 ⇑P **P** **11 16 58.9 -0.1**
baz=93,SNR=7.7
L10A Juniper Basin 92.71 45 ⇓P **P** **11 16 59.5 +0.3**
baz=93,SNR=11
T14A Hurricane 92.71 51 ⇓P **P** **11 16 59.2 -0.1**
baz=93,SNR=5.7
CCUT Cedar City 92.73 50 *e*P **P** **11 16 59.8 +0.4**
comp=Z,3.1nm,1.0s,mb4.7
X16A Lo Mia Camp, P 92.74 54 ⇓P **P** **11 16 59.8 +0.3**
baz=93,SNR=9.1
218A Dragoon 92.75 56 ⇓P **P** **11 16 59.3 -0.3**
baz=93
K10A MacKenzie Ranc 92.78 44 ⇑P **P** **11 16 59.1 -0.4**
baz=93,SNR=5.4
E07A Sunnyside 92.81 40 ⇓P **P** **11 17 00.3 +0.8**
baz=93
V15A Kaibab Nationa 92.81 52 ⇓P **P** **11 16 60.0 +0.2**
baz=93,SNR=7.5
M11A Holland Ranch, 92.85 46 ⇑P **P** **11 17 00.1 +0.3**
baz=93
Y17A Roosevelt 92.87 55 ⇑P **P** **11 16 59.9 -0.2**
baz=93
Q13A Wheeler Ranch, 92.90 49 ⇑P **P** **11 17 00.1 0.0**
baz=93
COLA College 92.94 16 *e*P **P** **11 16 57.1 -2.6**
COLA pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
COLA College 92.94 16 *e*P **P** **11 16 57.1 -2.5**
comp=Z,4.8nm,1.0s,mb4.9
U15A North Rim 93.00 52 P **P** **11 17 01.5 +0.9**
baz=93,SNR=23
O12A Currie 93.01 47 ⇑P **P** **11 17 00.3 -0.3**
baz=93
N12A Clover Valley, 93.08 47 P **P** **11 17 01.3 +0.4**
baz=93,SNR=7.3
N12A Clover Valley, 93.08 47 *e*P **P** **11 17 00.5 -0.4**
comp=Z,4.0nm,0.6s,mb5.0
118A Homack Ranch, 93.09 56 ⇓P **P** **11 17 01.1 -0.1**
baz=93
P13A Bates Ranch, G 93.13 48 ⇓P **P** **11 17 01.1 -0.1**
baz=93
X17A Forest Lakes 93.18 54 ⇑P **P** **11 17 01.6 +0.1**
baz=93,SNR=5.3
T15A Red Dirt Ranch 93.19 51 ⇑P **P** **11 17 01.4 -0.2**
baz=93
L11A Cat Creek Ranc 93.22 45 ⇓P **P** **11 17 01.3 -0.2**
baz=93
WUAZ Wupatki 93.27 53 ⇑P **P** **11 17 02.2 +0.3**
baz=93
K11A Parker Ranch, 93.32 45 ⇓P **P** **11 17 00.9 -1.1**
baz=94
M12A Wells 93.42 46 ⇑P **P** **11 17 02.5 0.0**
baz=94
Q14A Sevier Lake (B 93.43 49 ⇓P **P** **11 17 02.7 +0.1**
baz=94
Y18A Canyon Day Jun 93.52 55 ⇑P **P** **11 17 03.2 +0.1**
baz=94,SNR=6.7
320A Kipp Ranch, An 93.65 58 ⇑P **P** **11 17 04.4 +0.6**
baz=94
L12A House Creek Ra 93.69 46 ⇑P **P** **11 17 03.5 -0.2**
baz=94
U16A Tuba City 93.72 52 ⇑P **P** **11 17 04.0 +0.1**
baz=94,SNR=6.2
H10A Noah's Angus R 93.73 43 ⇑P **P** **11 17 03.3 -0.6**
baz=94
V17A Tonalea, Kykot 93.74 53 ⇓P **P** **11 17 03.0 -1.1**
baz=94
G10A Bishop Farm, J 93.83 42 ⇓P **P** **11 17 03.0 -1.3**
baz=94
M13A Montello 93.90 47 ⇓P **P** **11 17 04.3 -0.4**
baz=94,SNR=7.5
M13A Montello 93.90 47 *e*P **P** **11 17 03.8 -0.8**
comp=Z,3.9nm,0.7s,mb5.0
D09A Jones Farm, Ri 93.98 40 ⇓P **P** **11 17 04.2 -0.7**
baz=94
F10A Beach Ranch, E 94.10 41 ⇓P **P** **11 17 04.7 -0.7**
baz=94
J12A Stokes Ranch, 94.15 45 ⇑P **P** **11 17 05.7 -0.1**
baz=94
H11A Donnelly 94.25 43 ⇓P **P** **11 17 05.2 -1.0**
baz=94
T17A Navajo Res., N 94.32 52 ⇓P **P** **11 17 06.8 +0.1**
baz=94,SNR=5.1
Z20A Nine Sixteen R 94.34 56 ⇓P **P** **11 17 07.8 +0.9**
baz=94
X19A St. Johns 94.35 55 ⇑P **P** **11 17 07.6 +0.7**
baz=94
ZAK Zakamensk 94.43 323 *e*P **P** **11 17 07.0 +0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
M14A Sheep Mountain 94.51 47 ⇓P **P** **11 17 06.7 -0.8**
baz=95
K13A Stover Farm, H 94.54 45 ⇓P **P** **11 17 07.5 -0.1**
baz=95
S17A Black Ridge (B 94.59 51 ⇓P **P** **11 17 07.4 -0.6**
baz=95
EGAK Eagle 94.71 18 *e*P **P** **11 17 06.8 -1.0**
comp=Z,1.8nm,0.8s,mb4.5
HLID Hailey 94.74 45 ⇑P **P** **11 17 08.7 +0.2**
baz=95
HLID Hailey 94.74 45 *e*P **P** **11 17 08.2 -0.3**
comp=Z,1.7nm,0.8s,mb4.5
G12A Big Creek, Yel 94.88 43 ⇓P **P** **11 17 08.6 -0.5**
baz=95
H12A Diamond D Ranc 94.91 44 ⇑P **P** **11 17 08.4 -0.8**
baz=95
TLY Talaya 94.91 325 *e*P **P** **11 17 09.1 +0.1**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
R17A Hanksville Air 94.99 50 ⇑P **P** **11 17 09.9 +0.1**
baz=95
T18A Mexican Hat 95.05 52 ⇑P **P** **11 17 09.8 -0.3**
baz=95
Z21A St. Cloud Mine 95.12 56 ⇓P **P** **11 17 10.0 -0.5**
baz=95
F12A Elk City 95.21 42 ⇑P **P** **11 17 09.1 -1.5**
baz=95
Y21A Point of Rocks 95.40 55 ⇓P **P** **11 17 11.6 -0.1**
baz=96
SRU San Rafael 95.42 50 ⇑P **P** **11 17 11.6 -0.1**
baz=96
SRU San Rafael 95.42 50 *e*P **P** **11 17 11.4 -0.3**
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
SRU San Rafael 95.42 50 *e*P **P** **11 17 11.4 -0.3**
comp=Z,2.3nm,0.8s,mb4.7
I14A Mackay 95.53 45 ⇑P **P** **11 17 11.9 -0.2**
baz=96
O17A Robinson Place 95.72 49 ⇓P **P** **11 17 12.3 -0.8**
baz=96
H14A Leadore 95.88 44 ⇑P **P** **11 17 13.9 +0.2**
baz=96
J15A Blackfoot 95.95 45 ⇑P **P** **11 17 14.1 +0.1**
baz=96
H15A Lima 96.35 44 ⇓P **P** **11 17 16.1 +0.3**
baz=96
J16A Bone 96.44 46 ⇓P **P** **11 17 16.2 -0.1**
baz=97
TXAR Lajitas Array 96.72 61 P **P** **11 17 18.2 +0.4**
comp=Z,0.4nm,0.9s,mb3.8,baz=212,slow=4.4,SNR=5.3
TXAR LR LR 11 53 56.5
comp=Z,62nm,18.0s,MS4.1,baz=5.0,slow=31
J18A Kendall Valley 97.47 46 ⇓P **P** **11 17 20.6 -0.3**
baz=98
PDAR Pinedale Array 97.60 47 P **P** **11 17 20.7 -0.8**
comp=Z,0.2nm,0.3s,mb4.1,baz=262,slow=6.3,SNR=3.1
PDAR LR LR 11 57 57.1
comp=Z,72nm,18.8s,MS4.2,baz=175,slow=33
WMQ Urumqi 101.18 313 *e*P Pdif 11 17 39.6 +2.1
BVAR Borovoye Array 114.51 319 PKP PKiKP 11 22 26.4 -0.3
comp=Z,2.5nm,0.8s,baz=96,slow=1.5,SNR=10
ABKAR Akbulak array 120.89 315 *e*PKPdf PKPdf 11 22 39.0 -0.1
ARU Arti 121.37 323 *i* PKIKP PKPdf 11 22 39.3 -0.5
ARU LR 11 24 13.2
ARU 11 29 29.9
ARU SS SS 11 40 40.2 -2.2
ARU Arti 121.37 323 *e*PKPdf PKPdf 11 22 38.9 -0.8
ARCES ARCESS Array B 129.10 345 PKhKP 11 22 51.3
comp=Z,5.6nm,0.9s,baz=52,slow=4.8,SNR=5.9
ZEI Tsey 132.48 308 *e*PKIKP PKPdf 11 23 03.4 +2.0
ZEI pmax pmax
comp=Z,7.0nm,0.5s
FINES FINESS Array B 134.72 337 PKhKP 11 22 59.7
comp=Z,2.0nm,1.0s,baz=28,slow=4.5,SNR=4.3
FINES FINESS Array B 134.72 337 PKP 11 22 59.7
AKASG Malin Array Be 139.63 323 PKP PKPdf 11 23 15.8 +1.4
comp=Z,1.2nm,0.5s,baz=57,slow=2.7,SNR=2.8
BRTR Keskin Array B 140.62 305 PKP PKPdf 11 23 15.7 -1.0
comp=Z,1.6nm,1.0s,baz=22,slow=6.9,SNR=4.1
MLR Muntele Rosu 144.03 317 PKIKP PKPdf 11 23 21.8 -0.7
KOLS Kolonicke sedl 144.38 325 *e*PKIKP PKPdf 11 23 22.5 -0.5
KOLS Kolonicke sedl 144.38 325 *e*PKP PKPdf 11 23 22.5 -0.5
BMR Baia Mare 144.41 322 ⇑PKIKP PKPdf 11 23 22.9 -0.2
BMR Baia Mare 144.41 322 ⇑*i*P PKPdf 11 23 22.9 -0.2
UZH Uzhgorod 144.54 324 ⇑*i*PKIKP PKPdf 11 23 23.1 -0.2
UZH *e* 11 23 31.7
VOIR 144.62 318 ⇑PKIKP PKPdf 11 23 23.2 -0.3
VOIR 144.62 318 ⇑*i*P PKPdf 11 23 23.2 -0.3
STHS Stebnicka Huta 144.63 326 *e*PKIKP PKPdf 11 23 23.7 +0.3
STHS Stebnicka Huta 144.63 326 *e*PKP PKPdf 11 23 23.7 +0.3
MDB Medias 144.69 319 ⇑PKIKP PKPdf 11 23 24.9 +1.3
MDB Medias 144.69 319 ⇑*i*P PKPdf 11 23 24.9 +1.3
MDB Medias 144.69 319 ⇓*i*P PKPdf 11 23 25.2 +1.6
TRPA Tarpa 144.69 323 ⇑*i*P PKPdf 11 23 23.1 -0.4
OJC Ojcow 144.85 328 *e*PKP PKPdf 11 23 22.8 -0.9
JMB Yambol 144.89 312 P PKPdf 11 23 24.6 +0.5
NIE Niedzica 145.10 327 *e*PKIKP PKPdf 11 23 24.9 +0.7
DRGR 145.34 321 ⇑PKIKP PKPbc 11 23 25.8 +1.2
DRGR 145.34 321 ⇑*i*P PKPbc 11 23 25.8 +1.2
KECS Kecovo 145.59 325 *e*PKIKP PKPbc 11 23 26.6 +1.2
KECS Kecovo 145.59 325 *e*PKP PKPbc 11 23 26.6 +1.2
ARG Arkhangelos 145.63 301 P PKPbc 11 23 26.6 +0.7
ALN Alexandroupoli 145.85 310 P PKPdf 11 23 26.1 +0.3
BSEG Bad Segeberg 145.87 340 *e*PKPbc PKPbc 11 23 26.1 +0.1
LIKS Likavka 145.95 327 *e*PKIKP PKPbc 11 23 28.3 +1.9
LIKS Likavka 145.95 327 *e*PKP PKPbc 11 23 28.2 +1.8
GZR Gura Zlata 146.03 319 ⇓PKIKP PKPbc 11 23 27.5 +0.7
GZR Gura Zlata 146.03 319 ⇓*i*P PKPbc 11 23 27.5 +0.7
KSP Ksiaz 146.05 331 *e*PKP PKPbc 11 23 27.2 +0.5
KSP Ksiaz 146.05 331 *e*PKP2 PKPdf 11 23 25.2 -0.6
MORC Moravsky Berou 146.23 329 *e*PKPdf PKPbc 11 23 27.2 -0.1
MORC Moravsky Berou 146.23 329 ⇑*i*P PKPbc 11 23 27.6 +0.3
PSZ Piszkesteto 146.25 325 *e*PKP PKPab 11 23 27.9 -0.3
VYHS Vyhne 146.44 326 *e*PKP2 PKPab 11 23 28.6 -0.3
VYHS Vyhne 146.44 326 *e*PKP PKPab 11 23 28.6 -0.3
VYHS *e* 11 23 47.2
SIGR SIGRI 146.56 307 P PKPab 11 23 28.7 -1.0
BZS Buzias 146.61 320 ⇑PKIKP PKPdf 11 23 27.5 +0.6
BZS Buzias 146.61 320 ⇑*i*P PKPdf 11 23 27.5 +0.6
KOLL Kolacno 146.61 327 *e*PKP2 PKPab 11 23 29.3 -0.2
KOLL Kolacno 146.61 327 *e*PKP PKPbc 11 23 29.3 +0.9
CHOS Chios island 146.67 306 P PKPbc 11 23 28.7 -0.2
LIA Limnos Island 146.82 309 P PKPbc 11 23 28.8 -0.5
LOS Limnos 146.88 309 P PKPbc 11 23 29.5 0.0
KAVA Kavala 146.88 311 P PKPbc 11 23 28.7 -0.8
VRAC Vranov 147.00 329 ⇑PKP2 PKPab 11 23 30.0 -1.0
VRAC Vranov 147.00 329 ⇑*i*P PKPbc 11 23 30.0 +0.5
BRG Berggiesshubel 147.03 334 *e*PKPbc PKPbc 11 23 29.3 -0.2
BRG Berggiesshubel 147.03 334 *i* PKP PKPbc 11 23 29.7 +0.1
comp=Z,16nm,0.9s
BRG *i* 11 23 31.9
comp=Z,12nm,0.9s
BRG *i* 11 23 36.6
comp=Z,9.7nm,0.9s
BRG *e* 11 23 43.2
comp=Z,7.0nm,0.9s
BRG
comp=N,120nm,20.2s
BRG
comp=E,89nm,29.7s
BRG
comp=Z,112nm,12.2s
BRG Berggiesshubel 147.03 334 *i* PKP2 PKPab 11 23 29.7 -1.4
BRG *i* 11 23 31.9
BRG *i* 11 23 36.6
BRG *e* 11 23 43.2
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,0.9s
BRG pmax pmax
comp=Z,6.0nm,0.9s
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG MLR MLR
comp=N,72nm,20.2s
BRG MLR MLR
comp=E,53nm,29.7s
BRG MLR MLR
comp=Z,67nm,12.2s
CLL Collm 147.07 335 *e*PKPbc PKPbc 11 23 29.4 -0.2
CLL *e*PKPab PKPab 11 23 31.8 +0.6
CLL Collm 147.07 335 ⇑*i*PKP2 PKPab 11 23 29.4 -1.8
CLL *i* 11 23 31.6
CLL *i* 11 23 36.7
CLL *i* 11 23 43.8
CLL pmax pmax
comp=Z,16nm,0.8s
CLL pmax pmax
comp=Z,13nm,0.6s
CLL Collm 147.07 335 ⇑*i*PKPbc PKPbc 11 23 29.4 -0.2
comp=Z,16nm,0.8s
CLL *i* PKPab PKPab 11 23 31.6 +0.4
comp=Z,13nm,0.6s
CLL ⇓*i* 11 23 36.7
comp=Z,9.0nm,1.0s
CLL *i* pPKPbc pPKPbc 11 23 43.8 -0.7
CLL *e*sPKiKP 11 23 54.0
NRDL Niedersach Rie 147.16 339 *e*PKPbc PKPbc 11 23 28.9 -0.9
ZKR Zakros 147.39 300 P PKPbc 11 23 30.3 -0.8
APE Apeiranthos 147.45 304 ⇓PKIKP PKPbc 11 23 30.2 -1.0
APE Apeiranthos 147.45 304 ⇓*i*P PKPbc 11 23 30.2 -1.0
APE Apeiranthos 147.45 304 P PKPbc 11 23 30.4 -0.8
SRS Serrai 147.48 312 P PKPbc 11 23 30.8 -0.3
OUR Ouranopolis 147.51 310 P PKPbc 11 23 30.6 -0.6

ZST	**Bratislava**	**147.51 327**	*e*PKIKP	PKPbc	11 23 29.9	-1.1
ZST	**Bratislava**	**147.51 327**	*e*PKP	PKPbc	11 23 29.9	-1.1
CLZ	**Clausthal**	**147.61 338**	*e*PKPbc	PKPbc	11 23 31.0	-0.1
CLZ			*e*PKPab	PKPab	11 23 34.3	+0.9
CLZ	**Clausthal**	**147.61 338**	*e*PKP2	PKPab	11 23 34.3	+0.9
THR1	**Thera Island**	**147.69 302**	P	PKPbc	11 23 31.4	-0.4
SOH	**Sokhos**	**147.76 311**	P	PKPbc	11 23 31.1	-0.8
LAST	**Lasithi**	**147.97 300**	P	PKPbc	11 23 33.4	+0.8
PKSM	**Moragy**	**147.97 323**	⇑PKP2	PKPbc	11 23 32.4	+0.1
PKSM	**Moragy**	**147.97 323**	⇑*i*P	PKPbc	11 23 32.4	+0.1
TANN	**Tannenbergstha**	**147.99 334**	*e*PKPbc	PKPbc	11 23 32.1	-0.1
AOS	**Alonnisos**	**148.02 308**	P	PKPbc	11 23 31.9	-0.7
IBBN	**Ibbenburen**	**148.06 341**	*e*PKPbc	PKPbc	11 23 32.0	-0.3
IBBN			*e*PKPab	PKPab	11 23 37.0	+1.9
MOX	**Moxa**	**148.13 335**	*e*PKP	PKPbc	11 23 32.4	-0.1
	comp=Z,12nn,1.0s					
MOX	**Moxa**	**148.13 335**	*e*PKPbc	PKPbc	11 23 32.5	0.0
MOX			*e*PKPab	PKPab	11 23 36.3	+0.8
MOX	**Moxa**	**148.13 335**	*e*PKP2	PKPbc	11 23 32.4	-0.1
MOX			pmax	pmax		
	comp=Z,12nn,1.0s					
CONA	**Conrad Observa**	**148.31 328**	⇑*i*PKiKP	PKiKP	11 23 33.6	-1.1
	comp=Z,14nn,0.7s,SNR=7.9					
DIVS	**Divibare**	**148.40 319**	P	PKPbc	11 23 33.9	+0.4
XOR	**Xorichti**	**148.44 309**	P	PKPbc	11 23 32.9	-0.8
KHC	**Kasperske Hory**	**148.50 332**	*e*PKPbc	PKPbc	11 23 33.7	+0.1
SIVA	**Sivas**	**148.53 300**	P	PKPbc	11 23 34.8	+0.7
SKO	**Skopje**	**148.56 314**	*e*PKP	PKPbc	11 23 33.6	-0.3
SKO	**Skopje**	**148.56 314**	P	PKPbc	11 23 35.1	+1.2
UBBA	**Unterbreizbach**	**148.59 337**	*e*PKPbc	PKPbc	11 23 33.4	-0.3
ROTZ	**Rotzenmuhle**	**148.59 334**	*e*PKPbc	PKPbc	11 23 33.8	0.0
ROTZ			*e*PKPab	PKPab	11 23 38.2	+0.8
LIT	**Litokhoron**	**148.66 310**	P	PKPbc	11 23 33.8	-0.5
GEC2	**GERESS Array S**	**148.66 331**	*e*PKPbc	PKPbc	11 23 34.1	+0.1
GERES	**GERESS Array B**	**148.66 331**	PKP	PKPdf	11 23 30.4	+0.2
	comp=Z,9.1nn,0.8s,baz=353,slow=3.2,SNR=12					
GERES			PKPbc	PKPbc	11 23 34.7	+0.7
	comp=Z,9.2nn,0.8s,baz=42,slow=3.1,SNR=77					
WET	**Wettzell**	**148.79 332**	*e*PKPbc	PKPbc	11 23 34.6	+0.3
WET			*e*PKPab	PKPab	11 23 38.5	+0.3
LKR	**Lokris**	**148.84 308**	P	PKPbc	11 23 34.0	-0.8
GRF	**Grafenberg Arr**	**149.05 335**	*e*PKPbc	PKPbc	11 23 34.9	0.0
GRF			*e*PKPab	PKPab	11 23 40.0	+0.8
MOA	**Molln**	**149.13 329**	⇑*i*PKPbc	PKPbc	11 23 35.0	-0.2
	comp=Z,7.7nn,0.6s,SNR=9.8					
KARN	**Karanos**	**149.15 301**	P	PKPbc	11 23 35.2	-0.5
SOKA	**Soboth**	**149.57 327**	⇓*i*PKPbc	PKPbc	11 23 36.1	-0.3
	comp=Z,24nn,1.2s					
TNS	**Taunus Mts**	**149.63 338**	*e*PKPbc	PKPbc	11 23 36.5	+0.1
RJOB	**Jochberg**	**149.89 331**	*e*PKPbc	PKPbc	11 23 36.4	-0.7
KBA	**Koelnbreinsper**	**150.12 329**	⇑*i*PKPbc	PKPbc	11 23 37.1	-0.6
	comp=Z,21nn,1.1s					
FUR	**Furstenfeldbru**	**150.22 333**	*e*PKPbc	PKPbc	11 23 37.6	-0.3
FUR			*e*PKPab	PKPab	11 23 44.7	+0.6
IGT	**Igoumenitsa**	**150.40 311**	P	PKPbc	11 23 39.0	+0.4
STU	**Stuttgart**	**150.57 336**	*e*PKPbc	PKPbc	11 23 39.2	+0.5
STU			*e*PKPab	PKPab	11 23 46.5	+1.0
VOY	**Vojsko**	**150.59 327**	*e*(P)	PKPdf	11 23 33.2	-0.2
VOY			*e*		11 23 38.5	
VOY			*e*		11 23 45.5	
KEK	**Kerkira**	**150.69 312**	P	PKPbc	11 23 38.9	-0.4
WATA	**Walderalm**	**150.73 331**	⇓*i*PKPbc	PKPbc	11 23 38.7	-0.4
	comp=Z,9.6nn,0.6s,SNR=8.9					
ABTA	**Abfaltersbach**	**150.75 330**	⇑*i*PKPbc	PKPbc	11 23 38.5	-0.7
	comp=Z,17nn,0.7s					
WTTA	**Wattenberg**	**150.76 331**	⇓*i*PKPbc	PKPbc	11 23 39.1	-0.1
	comp=Z,19nn,0.7s					
WLF	**Walferdange**	**150.87 340**	PKPbc	PKPbc	11 23 39.8	+0.5
WLF	**Walferdange**	**150.87 340**	*e*PKPbc	PKPbc	11 23 39.0	-0.3
GIVF	**Givet**	**150.88 342**	*e*PKP1	PKPbc	11 23 39.0	-0.3
	comp=Z,14nn,0.7s					
MOTA	**Moosalm**	**150.93 332**	⇑*i*PKPbc	PKPbc	11 23 39.3	-0.3
	comp=Z,13nn,0.6s					
DOU	**Dourbes**	**150.95 342**	PKPbc	PKPbc	11 23 39.3	-0.2
BAIF	**Baives**	**151.09 343**	*e*PKP1	PKPbc	11 23 39.4	-0.4
BFO	**Black Forest**	**151.26 336**	*e*PKPbc	PKPbc	11 23 39.9	-0.4
BFO			*e*PKPab	PKPab	11 23 48.6	+0.2
FETA	**Feichten**	**151.35 332**	⇑*i*PKPbc	PKPbc	11 23 40.5	-0.1
	comp=Z,20nn,1.0s					
CDF	**Champ du Feu**	**151.58 338**	*e*PKP1	PKPbc	11 23 40.6	-0.4
	comp=Z,20nn,1.1s					
HINF	**Hinteralfeld**	**152.23 337**	*e*PKP1	PKPbc	11 23 41.9	-0.6
MEZF	**Maizieres J'vi**	**152.24 340**	*e*PKP1	PKPbc	11 23 42.5	0.0
	comp=Z,22nn,1.1s					
HAU	**Haudompre**	**152.25 338**	*e*PKP1	PKPbc	11 23 42.1	-0.5
	comp=Z,8.7nn,0.7s					
CABF	**La Chapelle**	**153.53 337**	*e*PKP1	PKPbc	11 23 45.5	+0.1
LOR	**Lormes**	**153.70 341**	*e*PKP1	PKPbc	11 23 45.2	-0.6
SSF	**Saint Saulge**	**154.00 341**	*e*PKP1	PKPbc	11 23 45.8	-0.6
LPL	**La Plagne**	**154.21 335**	*e*PKP1	PKPbc	11 23 47.0	+0.1
LPG	**La Plagne**	**154.22 335**	*e*PKP1	PKPbc	11 23 47.2	+0.2
PGF	**Pioggiola**	**155.54 327**	*e*PKP1	PKPdf	11 23 49.5	+8.8
TORD	**Torodi Ar. Bea**	**166.25 227**	PKP	PKPdf	11 23 53.1	+0.1
	comp=Z,0.9nn,0.8s,baz=287,slow=1.3,SNR=5.7					
TORD			PKPab	PKPab	11 24 54.7	+0.7
	comp=Z,0.4nn,0.9s,baz=126,slow=3.0,SNR=4.2					

*TRN **18** 11:23:46.0, 19.°47N×64.°20W, h40km*
*ISCJB **18** 11:23:46.1±1.3, 19.°55N±0.°08×64.°20W±0.°06, h33km, Error ellipse: s-maj=13.7km s-min=5.7km az=29.6*
*NEIC **18** 11:23:47.6, 19.°56N×64.°16W, h27km, MD3.7(RSPR), After RSPR.*
*RSPR **18** 11:23:47.6, 19.°56N×64.°16W, h27km±18km, MD3.6/12, MD3.6/12*
ISC 18 11:23:47.5±1.3, 19.°50N±0.°08×64.°20W±0.°06, h35km, n37, σ0.53/44, 12C-20D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.78**	**190**	⇓*e*P	**Pn**	**11 24 01.3**	**-0.7**
ABV				*e*S	**Sn**	**11 24 12.7**	**+0.2**
ABV	**Anegada**	**0.78**	**190**	⇓*e*P	**Pn**	**11 24 01.3**	**-0.7**
ABV				*e*S	**Sn**	**11 24 12.7**	**+0.2**
TBVI	**Tortola**	**1.15**	**200**	⇓*e*P	**Pn**	**11 24 06.3**	**-0.8**
TBVI	**Tortola**	**1.15**	**200**	⇓*e*P	**Pn**	**11 24 06.3**	**-0.8**
STVI	**Saint Thomas**	**1.35**	**212**	⇓*e*P	**Pn**	**11 24 09.4**	**-0.5**
STVI				*e*S	**Sn**	**11 24 27.2**	**+0.6**
STVI	**Saint Thomas**	**1.35**	**212**	⇓*e*P	**Pn**	**11 24 09.4**	**-0.5**
STVI				*e*S	**Sn**	**11 24 27.2**	**+0.6**
SMRT	**St. Maarten**	**1.79**	**143**	⇓*e*P	**Pn**	**11 24 15.8**	**-0.2**
SMRT	**St. Maarten**	**1.79**	**143**	⇓*e*P	**Pn**	**11 24 15.8**	**-0.2**
SMRT				*e*S	**Sn**	**11 24 36.9**	**-0.6**
MTP	**Monte Pirata**	**1.90**	**223**	⇑*e*P	**Pn**	**11 24 17.4**	**0.0**
MTP	**Monte Pirata**	**1.90**	**223**	⇑*e*P	**Pn**	**11 24 17.4**	**0.0**
CBYP	**Canovanas**	**1.99**	**232**	⇓*e*P	**Pn**	**11 24 18.5**	**-0.3**
CBYP	**Canovanas**	**1.99**	**232**	⇓*e*P	**Pn**	**11 24 18.5**	**-0.3**
HUMP	**Col San Antoni**	**2.07**	**229**	⇓*e*P	**Pn**	**11 24 19.6**	**-0.2**
HUMP	**Col San Antoni**	**2.07**	**229**	⇓*e*P	**Pn**	**11 24 19.6**	**-0.2**
SABA	**Saba**	**2.08**	**154**	⇓*e*P	**Pn**	**11 24 21.0**	**+1.1**
SABA	**Saba**	**2.08**	**154**	⇓*e*P	**Pn**	**11 24 21.0**	**+1.1**
SABA				*e*S	**Sn**	**11 24 44.6**	**+0.1**
SJG	**San Juan**	**2.31**	**234**	⇑*i*P	**Pn**	**11 24 23.0**	**-0.1**
SJG	**San Juan**	**2.31**	**234**	⇑*i*P	**Pn**	**11 24 23.0**	**-0.1**
CELP	**Cerrillos**	**2.67**	**238**	⇑*i*P	**Pn**	**11 24 27.9**	**-0.1**
CELP	**Cerrillos**	**2.67**	**238**	⇑*i*P	**Pn**	**11 24 27.9**	**-0.1**
AOPR	**Arecibo Observ**	**2.68**	**245**	⇓*e*P	**Pn**	**11 24 28.9**	**+0.7**
AOPR	**Arecibo Observ**	**2.68**	**245**	⇓*e*P	**Pn**	**11 24 28.9**	**+0.7**
OBIP	**Obispado Ponce**	**2.71**	**238**	⇑*i*P	**Pn**	**11 24 28.9**	**+0.3**
OBIP	**Obispado Ponce**	**2.71**	**238**	⇑*i*P	**Pn**	**11 24 28.9**	**+0.3**
ICM	**Isla Caja Muer**	**2.72**	**234**	⇓*i*P	**Pn**	**11 24 29.2**	**+0.5**
ICM	**Isla Caja Muer**	**2.72**	**234**	⇓*i*P	**Pn**	**11 24 29.2**	**+0.5**
AGPR	**Aguadilla, PR**	**2.94**	**250**	⇓*e*P	**Pn**	**11 24 31.9**	**+0.1**
AGPR	**Aguadilla, PR**	**2.94**	**250**	⇓*e*P	**Pn**	**11 24 31.9**	**+0.1**
GBPR	**Guanica, Bosqu**	**2.96**	**240**	⇑*i*P	**Pn**	**11 24 32.6**	**+0.5**
GBPR	**Guanica, Bosqu**	**2.96**	**240**	⇑*i*P	**Pn**	**11 24 32.6**	**+0.5**
LSP	**Las Mesas**	**3.04**	**245**	⇑*i*P	**Pn**	**11 24 33.4**	**+0.3**
LSP	**Las Mesas**	**3.04**	**245**	⇑*i*P	**Pn**	**11 24 33.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**3.14**	**242**	⇑*e*P	**Pn**	**11 24 35.2**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.14**	**242**	⇑*e*P	**Pn**	**11 24 35.2**	**+0.8**
PCDR	**Punta Cana, DR**	**4.08**	**257**	⇑*e*P	**Pn**	**11 24 47.6**	**+0.1**
PCDR	**Punta Cana, DR**	**4.08**	**257**	⇑*e*P	**Pn**	**11 24 47.6**	**+0.1**
PCDR				*e*S	**Sn**	**11 25 32.8**	**-1.2**
SMN1	**Samana, DR**	**4.80**	**267**	⇑*e*P	**Pn**	**11 24 57.0**	**-0.5**

*MAN **18** 11:24:10, 13.°11N×120.°82E, h13km, mb5.3, ML4.3, MS4.6*
MAN INTENSITY IV - SAN JOSE OCC. MINDORO; INTENSITY III - PUERTO GALERA; CALAPAN CITY.
*MOS **18** 11:24:11.2±1.4, 13.°21N×121.°15E, h33km, mb4.8/12, Error ellipse: s-maj=17.9km s-min=8.1km az=117.3*
*ISCJB **18** 11:24:11.9±0.2, 13.°07N±0.°02×120.°89E±0.°03, h33km, mb4.6/53, MS3.9/15, Error ellipse: s-maj=4.5km s-min=3.1km az=158.7*
*IDC **18** 11:24:12.3±2.2, 13.°16N×120.°98E, h28km±14km, mb4.0/16, mb1 4.1/16, mb1mx4.0/23, mbtmp4.0/16, MS3.8/7, Ms1 3.8/7, ms1mx3.5/29, Error ellipse: s-maj=26.7km s-min=13.7km az=66.0*
*NEIC **18** 11:24:17.6±0.8, 13.°15N×121.°02E, h75km±7km, mb4.6/18, Error ellipse: s-maj=9.7km s-min=5.7km az=78.0*
NEIC Felt [IV PIVS] at San Jose and [III PIVS] at Abra de Ilog, Calapan and Puerto Galera.
*BJI **18** 11:24:20.0, 13.°56N×120.°81E, h74km, mB4.7/16, mb4.4/25, Ms4.2/15, Ms7 3.9/14*
ISC 18 11:24:10.6±0.6, 13.°10N±0.°02×120.°88E±0.°03, h10km±3km, h64km±4.4km: pP-P, n115, σ1.38/128, mb4.6/53, MS3.9/15, 9C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.41**	**10**	⇑*i*P	**Pg**	**11 24 17.4**	**-1.2**
PGP				*i*S	**Sg**	**11 24 22.7**	**-1.3**
SJMP	**San Jose**	**0.68**	**160**	*e*P	**Pg**	**11 24 24.3**	**+0.5**
SJMP				*e*S	**Sg**	**11 24 33.6**	**+1.0**
LUBP	**Lubang**	**0.88**	**316**	*e*P	**Pg**	**11 24 26.4**	**-1.2**
LUBP				*e*S	**Sg**	**11 24 33.3**	**-5.8**
TGY	**Tagaytay City**	**1.00**	**3**	Pg	**Pg**	**11 24 29.3**	**-0.5**
	6μm,0.3s,baz=200,slow=3.1,SNR=327						
TGY				Lg		11 24 43.1	
	14μm,0.3s,baz=92,slow=23,SNR=24						
TGY	**Tagaytay City**	**1.00**	**3**	⇑*e*P	**Pg**	**11 24 29.1**	**-0.8**
TGY				*i*S	**Sg**	**11 24 43.6**	**+0.8**
BOAC	**Boac**	**1.00**	**69**	*e*P	**Pg**	**11 24 28.2**	**-1.8**
BUSP	**Coron**	**1.28**	**211**	*e*P	**Pn**	**11 24 34.0**	**-0.5**
OTRP	**Odiongan**	**1.33**	**123**	*e*P	**Pn**	**11 24 34.5**	**-0.7**
GQP	**Guinayangan**	**1.72**	**62**	⇑*e*P	**Pn**	**11 24 40.4**	**-0.2**
GQP				*e*S	**Sn**	**11 25 06.2**	**+3.6**
AUQP	**San Andres**	**1.76**	**83**	*e*P	**Pn**	**11 24 42.2**	**+1.1**
POLP	**Polillo Island**	**1.92**	**32**	*e*P	**Pn**	**11 24 44.1**	**+0.8**
KALP	**Kalibo**	**2.01**	**135**	⇑*e*P	**Pn**	**11 24 44.3**	**-0.2**
CUYO	**Cuyo Island**	**2.24**	**177**	*e*P	**Pn**	**11 24 46.4**	**-1.3**
ENPP	**El Nido**	**2.36**	**217**	*e*P	**Pn**	**11 24 48.6**	**-0.8**
RCP	**Roxas**	**2.38**	**130**	⇓*e*P	**Pn**	**11 24 49.9**	**+0.3**
RCP				*e*S	**Sn**	**11 25 20.6**	**+1.7**
PCPH	**Palayan**	**2.46**	**5**	⇓*e*P	**Pn**	**11 24 49.4**	**-1.3**
PCPH				*i*S	**Sn**	**11 25 22.4**	**+1.6**
BALP	**Baler**	**2.71**	**14**	*e*P	**Pn**	**11 24 56.3**	**+2.1**
GUIM	**Jordan**	**2.97**	**146**	*e*P	**Pn**	**11 24 58.4**	**+0.6**
PVCP	**Virac**	**3.22**	**81**	*e*P	**Pn**	**11 25 01.8**	**+0.6**
BOLP	**Bolinao**	**3.39**	**344**	*e*P	**Pn**	**11 25 04.1**	**+0.5**
CNP	**Catarman**	**3.74**	**99**	*e*P	**Pn**	**11 25 10.0**	**+1.7**
PPR	**Puerto Princes**	**3.92**	**213**	*e*P	**Pn**	**11 25 10.8**	**0.0**
CAUP	**Cauayan**	**3.93**	**13**	*e*P	**Pn**	**11 25 12.9**	**+2.0**
PALP	**Palanan**	**4.21**	**21**	*e*P	**Pn**	**11 25 23.0**	**+8.1**
ABRA	**Dolores**	**4.53**	**358**	*e*P	**Pn**	**11 25 20.3**	**+1.2**
APYP	**Conner**	**4.75**	**4**	*e*P	**Pn**	**11 25 27.4**	**+5.1**
BATP	**Bataraza**	**5.24**	**216**	*e*P	**Pn**	**11 25 28.6**	**-0.4**
PAGZ	**Pagadian**	**5.77**	**155**	*e*P	**Pn**	**11 25 37.9**	**+1.6**
DAV	**Davao City (W)**	**7.57**	**142**	LR	LR	11 29 20.4	
	comp=Z,980nn,18.8s,baz=325,slow=41						
KKM	**Kota Kinabalu**	**8.38**	**214**	*e*Pn	**Pn**	**11 26 17.5**	**+5.3**
TPUB	**Ta-pu**	**10.15**	**359**	*e*Pn	**Pn**	**11 26 41.1**	**+4.7**
YULB	**Yu-li**	**10.24**	**2**	*e*Pn	**Pn**	**11 26 40.4**	**+2.7**
SSLB	**Suanglung**	**10.63**	**0**	*e*Pn	**Pn**	**11 26 46.4**	**+3.4**
YHNB	**Yeheng**	**11.52**	**2**	*e*Pn	**Pn**	**11 26 57.9**	**+2.8**
QIZ	**Qiongzhong**	**12.13**	**300**	P	**Pn**	**11 27 07.8**	**+4.2**
QIZ				S	**Sn**	**11 29 22.4**	**+3.4**
QIZ				pmax	pmax		
	comp=Z,11nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,45nm,3.0s						
QIZ				LR	LR		
	comp=N,510nm,17.7s						
QIZ				LR	LR		
	comp=E,310nm,18.7s						
QIZ				LR	LR		
	comp=Z,980nm,19.8s						
KAPI	**Kappang**	**18.03**	**184**	LR	LR	11 35 03.5	
	comp=Z,335nm,21.3s,baz=224,slow=36						
GYA	**Guiyang**	**18.83**	**317**	P	**Pn**	**11 28 27.8**	**-3.3**
GYA				pP	pP	11 28 47.6	+14
GYA				S	**Sn**	**11 32 01.3**	**-0.7**
GYA				sS	sS	11 32 22.0	+12
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	**Nanjing**	**18.95**	**355**	*e*P	**Pn**	**11 28 33.8**	**+1.2**
NJ2				pP	pP	11 28 47.5	+13
NJ2				PP		11 28 52.8	
NJ2				sP	sP	11 28 57.9	+22
NJ2				S	**Sn**	**11 31 53.0**	**-12**
NJ2				sS	sS	11 32 13.0	+1.1
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,60nm,6.3s						
NJ2				LR	LR		
	comp=N,300nm,14.0s						
NJ2				LR	LR		
	comp=E,2μm,19.2s						
NJ2				LR	LR		
	comp=Z,310nm,14.6s						
KMI	**Kunming**	**20.87**	**308**	P	**P**	**11 28 53.8**	**+0.9**
KMI				S	**S**	**11 32 40.0**	**-5.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				LR	LR		
	comp=N,370nm,16.2s,MS4.0						
KMI				LR	LR		
	comp=E,320nm,17.0s,MS4.0						
KMI				LR	LR		
	comp=Z,400nm,16.2s,MS3.9						
CMAR	**Chiang Mai Arr**	**21.76**	**287**	P	**P**	**11 29 04.5**	**+1.9**
	comp=Z,9.6nm,0.9s,mb4.2,baz=94,slow=8.2,SNR=21						
CMAR				LR	LR	11 38 37.9	
	comp=Z,202nm,18.4s,MS3.6,baz=100,slow=40						
CD2	**Chengdu**	**23.73**	**321**	P	**P**	**11 29 24.6**	**+1.5**
CD2				pP		11 29 41.8	
CD2				sP	sP	11 29 51.0	+23
CD2				PP		11 30 01.9	
CD2				S	**S**	**11 33 32.5**	**-5.7**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.0						
CD2				pmax	pmax		
	comp=Z,130nm,5.7s						
CD2				LR	LR		
	comp=N,450nm,13.8s						
CD2				LR	LR		
	comp=Z,400nm,16.2s,MS4.0						
KSRS	**Korea Array**	**25.05**	**13**	P	**P**	**11 29 34.5**	**-0.6**
	comp=Z,2.6nm,0.9s,mb3.8,baz=193,slow=10,SNR=6.1						
KSRS				LR	LR	11 40 10.2	
	comp=Z,118nm,19.2s,MS3.4,baz=191,slow=38						
BJI	**Beijing**	**27.15**	**352**	P	**P**	**11 29 54.3**	**+0.3**
BJI				pP	pP	11 30 10.8	+14
BJI				sP	sP	11 30 19.4	+21
BJI				S	**S**	**11 34 28.8**	**-3.7**
BJI				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
BJI				pmax	pmax		
	comp=Z,99nm,5.7s						
BJI				LR	LR		
	comp=N,200nm,15.4s,MS4.0						
BJI				LR	LR		
	comp=E,260nm,17.5s,MS4.0						
BJI				LR	LR		
	comp=Z,110nm,22.3s,MS3.4						
LZH	**Lanzhou**	**27.55**	**329**	*e*P	**P**	**11 29 59.3**	**+1.7**
LZH				pP	pP	11 30 18.5	+18
LZH				sP	sP	11 30 27.1	+25
LZH				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.9						
LZH				pmax	pmax		
	comp=Z,90nm,4.0s						
HHC	**Hu-ho-hao-te**	**28.82**	**345**	*e*P	**P**	**11 30 11.4**	**+2.5**
HHC				pP	pP	11 30 29.3	+17
HHC				sP	sP	11 30 38.3	+25
HHC				PP	PP	11 31 07.9	-6.2
HHC				S	**S**	**11 34 55.3**	**-3.5**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
HHC				pmax	pmax		
	comp=Z,93nm,4.8s						
HHC				LR	LR		
	comp=N,230nm,13.7s,MS4.2						
HHC				LR	LR		
	comp=E,320nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=Z,230nm,14.7s,MS3.9						
SHL	**Shillong**	**29.96**	**299**	*e*P	**P**	**11 30 20.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**31.36**	**171**	*e*P	**P**	**11 30 32.0**	**+0.5**
	comp=Z,5.3nm,1.0s,mb4.3						
LSA	**Lhasa**	**32.10**	**306**	P	**P**	**11 30 42.0**	**+4.0**
LSA	**Lhasa**	**32.10**	**306**	*e*P	**P**	**11 30 42.0**	**+4.0**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**32.10**	**306**	*e*P	**P**	**11 30 42.0**	**+3.9**
	comp=Z,8.0nm,0.6s,mb4.7						
GTA	**Gaotai**	**32.14**	**328**	*e*P	**P**	**11 30 38.9**	**+0.6**
GTA				pP	pP	11 30 56.6	+15
GTA				sP	sP	11 31 05.5	+23
GTA				PP	PP	11 31 49.4	-1.5
GTA				S	**S**	**11 35 47.6**	**-3.2**
GTA				sS	sS	11 36 17.8	+22
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.4						
GTA				pmax	pmax		
	comp=Z,82nm,5.1s						
GTA				LR	LR		
	comp=N,150nm,24.4s,MS3.9						
GTA				LR	LR		
	comp=E,270nm,21.7s,MS3.9						
GTA				LR	LR		
	comp=Z,340nm,19.0s,MS4.0						
MBWA	**Marble Bar**	**34.06**	**182**	*e*P	**P**	**11 30 55.2**	**0.0**
	comp=Z,4.6nm,0.7s,mb4.5						
TAPN	**Taplejung**	**34.07**	**300**	*e*P	**P**	**11 30 57.3**	**+2.0**
	comp=Z,25nm,0.6s,mb5.3						
ODAN	**Odare**	**34.20**	**299**	*e*P	**P**	**11 30 58.9**	**+2.5**
	comp=Z,53nm,0.6s,mb5.6						
RAMN	**Ramite**	**34.90**	**299**	*e*P	**P**	**11 31 03.5**	**+1.0**
	comp=Z,37nm,0.6s,mb5.5						
GUN	**Gumba**	**35.79**	**300**	*e*P	**P**	**11 31 11.9**	**+1.7**
	comp=Z,56nm,0.7s,mb5.6						
PKI	**Pulchoki**	**36.09**	**299**	*e*P	**P**	**11 31 14.5**	**+1.7**
	comp=Z,22nm,0.6s,mb5.2						
PKIN	**Phulchoki**	**36.10**	**299**	*e*P	**P**	**11 31 14.4**	**+1.5**
	comp=Z,20nm,0.6s,mb5.2						
KKN	**Kakani**	**36.26**	**299**	*e*P	**P**	**11 31 15.4**	**+1.2**
	comp=Z,31nm,0.9s,mb5.3						
DMN	**Daman**	**36.36**	**299**	*e*P	**P**	**11 31 16.1**	**+1.0**
	comp=Z,9.6nm,0.4s,mb5.1						
SONM	**Songino Array**	**36.68**	**344**	P	**P**	**11 31 16.5**	**-1.0**
	comp=Z,2.4nm,0.7s,mb4.1,baz=167,slow=8.4,SNR=12						
SONM				LR	LR	11 48 14.7	
	comp=Z,132nm,18.5s,MS3.8,baz=152,slow=39						
YSS	**Yuzh-Sakhalins**	**38.42**	**24**	*e*P	**P**	**11 31 31.0**	**-1.2**
ASAR	**Alice Springs**	**38.70**	**161**	P	**P**	**11 31 33.9**	**-0.9**
	comp=Z,4.8nm,0.6s,mb4.4,baz=340,slow=6.8,SNR=84						
TLY	**Talaya**	**40.92**	**344**	*e*P	**P**	**11 31 50.3**	**-2.7**
TLY				*e*		11 37 57.1	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
TLY				MLR	MLR		
	comp=Z,116nm,19.0s,MS3.8						
CTA	**Charters Tower**	**41.36**	**142**	P	**P**	**11 31 56.8**	**-0.3**
	comp=Z,3.3nm,0.8s,mb4.0,baz=312,slow=10,SNR=4.2						
WMQ	**Urumqi**	**41.79**	**324**	*e*P	**P**	**11 32 01.8**	**+1.5**
WMQ				LR	LR		
	comp=N,190nm,17.0s						
WMQ				LR	LR		
	comp=E,170nm,24.0s						
WMQ				LR	LR		
	comp=Z,170nm,19.0s,MS3.9						
MK31	**Makanchi Array**	**46.62**	**324**	*e*P	**P**	**11 32 38.6**	**-0.3**
MKAR	**Makanchi Array**	**46.62**	**324**	P	**P**	**11 32 38.6**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=128,slow=8.8,SNR=31						
MKAR				LR	LR	11 53 35.3	
	comp=Z,162nm,18.8s,MS4.0,baz=114,slow=38						
**KS

KBD					AMb	AMB	11 35 20.7		
	comp=Z,10nm,1.1s,mb4.7								
RDF	**Al-Radifah**	**69.31**	**296**	*e*P		**P**	**11 35 17.0**	**-1.5**	
RDF					AMb	AMB	11 35 18.5		
	comp=Z,24nm,0.9s,mb5.1								
NAY	**Al-Naaiem**	**69.55**	**297**	*e*P		**P**	**11 35 18.1**	**-2.0**	
NAY					AMb	AMB	11 35 19.7		
	comp=Z,10.0nm,0.9s,mb4.8								
ZEI	**Tsey**	**71.70**	**311**	*e*P		**P**	**11 35 31.2**	**-1.7**	
ZEI					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4								
OBN	**Obninsk**	**76.12**	**324**	⇓*e*P		**P**	**11 35 55.2**	**-3.3**	
OBN				*e*			11 38 53.9		
OBN				*e*S		S	11 45 58.0	+16	
OBN					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7								
OBN					MLR	MLR			
	comp=Z,100nm,19.0s,MS4.1								
BPAW	**Bear Paw Mtn.**	**77.51**	**27**	*e*P		**P**	**11 36 05.6**	**-0.6**	
	comp=Z,3.0nm,0.8s,mb4.3								
MCK	**McKinley**	**78.45**	**27**	*e*P		**P**	**11 36 06.4**	**-5.0**	
MCK					pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.5								
MCK	**McKinley**	**78.45**	**27**	*e*P		**P**	**11 36 06.4**	**-5.0**	
	comp=Z,8.2nm,1.2s,mb4.5								
BRTR	**Keskin Array B**	**79.66**	**308**	P		**P**	**11 36 17.2**	**-1.3**	
	comp=Z,0.5nm,0.5s,mb3.7,baz=118,slow=4.3,SNR=4.2								
BRTR	**Keskin Array B**	**79.66**	**308**	*c*eP		**P**	**11 36 20.3**	**+1.8**	
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.5s								
ARCES	**ARCESS Array B**	**79.70**	**339**	P		**P**	**11 36 15.9**	**-2.3**	
	comp=Z,3.3nm,0.8s,mb4.3,baz=352,slow=7.4,SNR=3.3								
FINES	**FINESS Array B**	**80.89**	**331**	P		**P**	**11 36 23.0**	**-1.7**	
	comp=Z,1.7nm,0.8s,mb4.0,baz=129,slow=5.2,SNR=3.0								
AKASG	**Malin Array Be**	**81.03**	**320**	P		**P**	**11 36 24.4**	**-1.3**	
	comp=Z,0.2nm,0.2s,mb3.6,baz=57,slow=35,SNR=3.7								
OJC	**Ojcow**	**87.00**	**321**	*e*P		**P**	**11 36 54.7**	**-1.5**	
NOA	**NORSAR Array B**	**87.87**	**333**	P		**P**	**11 36 57.0**	**-3.1**	
	comp=Z,0.7nm,0.7s,mb4.0,baz=108,slow=4.2,SNR=3.4								
YKA	**Yellowknife Ar**	**93.26**	**23**	P		**P**	**11 37 23.7**	**-1.5**	
	comp=Z,4.9nm,1.4s,mb4.8,baz=305,slow=4.3,SNR=7.3								
YKA	**Yellowknife Ar**	**93.26**	**23**	P		**P**	**11 37 23.7**	**-1.5**	
TXAR	**Lajitas Array**	**119.77**	**45**	PKP		PKPdf	11 43 00.5	-1.2	
	comp=Z,0.1nm,0.7s,baz=330,slow=5.3,SNR=2.4								
TXAR	**Lajitas Array**	**119.77**	**45**	PKP		PKPdf	11 43 00.5	-1.2	

ISCJB ***18*** *11:45:40.7±0.5, 38°.25N±0°.03×20°.64E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=3.4km az=135.8*
CSEM ***18*** *11:45:40.0±0.3, 38°.26N×20°.63E, h2km, MD3.6, Error ellipse: s-maj=7.2km s-min=4.0km az=44.0*
ATH ***18*** *11:45:40.2, 38°.24N×20°.62E, h14km±1km, MD3.6/5*
NEIC ***18*** *11:45:40.2, 38°.24N×20°.62E, h14km, MD3.6(ATH), After ATH.*
THE ***18*** *11:45:41.0, 38°.31N×20°.54E, h0km±3km, ML3.6/6, Error ellipse: s-maj=4.2km s-min=1.4km az=244.0*

ISC 18 11:45:40.7±0.6, 38°.27N±0°.04×20°.62E±0°.04, h7km±5km, n43, σ1°.02/71, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.09**	**193**	*e*PG	**Pg**	**11 45 43.2**	**+0.4**
VLS				*e*SG	**Sg**	**11 45 45.8**	**+1.6**
VLS	**Valsamata**	**0.09**	**193**	P	**Pg**	**11 45 43.1**	**+0.3**
VLS				S	**Sg**	**11 45 45.6**	**+1.4**
VLS	**Valsamata**	**0.09**	**193**	P	**Pg**	**11 45 43.1**	**+0.3**
VLS				S	**Sg**	**11 45 45.6**	**+1.4**
RLS	**Riolos of Patr**	**0.70**	**107**	*e*PG	**Pg**	**11 45 53.2**	**-1.0**
RLS				*e*SB	**Sg**	**11 46 03.9**	**+0.6**
RLS	**Riolos of Patr**	**0.70**	**107**	*e*Pg	**Pg**	**11 45 53.2**	**-1.0**
RLS				*e*Sb	**Sg**	**11 46 03.9**	**+0.6**
UPR	**University Cam**	**0.92**	**89**	*e*PG	**Pg**	**11 45 57.2**	**-1.2**
UPR				*e*SB	**Sg**	**11 46 10.9**	**+0.6**
UPR	**University Cam**	**0.92**	**89**	*e*Pg	**Pg**	**11 45 57.2**	**-1.2**
UPR				*e*Sb	**Sg**	**11 46 10.9**	**+0.6**
EFP	**Efpalio**	**1.03**	**81**	*e*PG	**Pg**	**11 45 59.4**	**-1.0**
EFP				*e*SB	**Sg**	**11 46 13.4**	**-0.3**
EFP	**Efpalio**	**1.03**	**81**	*e*Pg	**Pg**	**11 45 59.4**	**-1.0**
EFP				*e*Sb	**Sg**	**11 46 13.4**	**-0.3**
EVR	**Evrytania**	**1.14**	**55**	*e*PB	**Pb**	**11 46 02.1**	**-0.6**
EVR				*e*SB	**Sb**	**11 46 17.4**	**-0.3**
EVR	**Evrytania**	**1.14**	**55**	*e*Pb	**Pb**	**11 46 02.1**	**-0.6**
EVR				*e*Sb	**Sb**	**11 46 17.4**	**-0.3**
IGT	**Igoumenitsa**	**1.28**	**350**	P	**Pn**	**11 46 03.5**	**-1.6**
IGT				S	**Sb**	**11 46 21.4**	**-0.5**
IGT	**Igoumenitsa**	**1.28**	**350**	P	**Pn**	**11 46 03.5**	**-1.6**
IGT				S	**Sb**	**11 46 21.4**	**-0.5**
JAN	**Janina**	**1.40**	**7**	*e*PB	**Pb**	**11 46 07.4**	**+0.2**
JAN				*e*SB	**Sb**	**11 46 26.2**	**+1.0**
JAN	**Janina**	**1.40**	**7**	*e*Pb	**Pb**	**11 46 07.4**	**+0.2**
JAN				*e*Sb	**Sb**	**11 46 26.2**	**+1.0**
GUR	**Goura**	**1.40**	**103**	*e*PN	**Pn**	**11 46 05.3**	**-1.4**
GUR				*e*SB	**Sb**	**11 46 25.2**	**-0.1**
GUR	**Goura**	**1.40**	**103**	*e*Pn	**Pn**	**11 46 05.3**	**-1.4**
GUR				*e*Sb	**Sb**	**11 46 25.2**	**-0.1**
ITM	**Ithomi**	**1.50**	**136**	*e*PB	**Pb**	**11 46 08.4**	**-0.5**
ITM	**Ithomi**	**1.50**	**136**	P	**Pg**	**11 46 10.3**	**+0.8**
ITM	**Ithomi**	**1.50**	**136**	*e*Pb	**Pb**	**11 46 08.4**	**-0.5**
ITM	**Ithomi**	**1.50**	**136**	P	**Pg**	**11 46 10.3**	**+0.8**
AGG	**Agios Georgios**	**1.54**	**60**	P	**Pn**	**11 46 09.1**	**+0.5**
AGG				S	**Sg**	**11 46 31.6**	**+1.4**
AGG	**Agios Georgios**	**1.54**	**60**	P	**Pn**	**11 46 09.1**	**+0.5**
AGG				S	**Sg**	**11 46 31.6**	**+1.4**
KEK	**Kerkira**	**1.58**	**336**	*e*PB	**Pb**	**11 46 10.1**	**-0.1**
KEK	**Kerkira**	**1.58**	**336**	P	**Pn**	**11 46 08.7**	**-0.4**
KEK				S	**Sn**	**11 46 31.2**	**+1.4**
KEK	**Kerkira**	**1.58**	**336**	P	**Pn**	**11 46 08.7**	**-0.4**
KEK	**Kerkira**	**1.58**	**336**	*e*Pb	**Pb**	**11 46 10.1**	**-0.1**
KEK				S	**Sn**	**11 46 31.2**	**+1.4**
THL	**Klokotos Trika**	**1.69**	**40**	P	**Pn**	**11 46 10.1**	**-0.6**
THL				S	**Sn**	**11 46 34.0**	**+1.3**
THL	**Klokotos Trika**	**1.69**	**40**	P	**Pn**	**11 46 10.1**	**-0.6**
THL				S	**Sn**	**11 46 34.0**	**+1.3**
LKR	**Lokris**	**1.91**	**78**	P	**Pn**	**11 46 14.0**	**+0.3**
LKR	**Lokris**	**1.91**	**78**	P	**Pn**	**11 46 14.0**	**+0.3**
KZN	**Kozani**	**2.23**	**23**	P	**Pn**	**11 46 19.1**	**+1.1**
KZN	**Kozani**	**2.23**	**23**	P	**Pn**	**11 46 19.1**	**+1.1**
XOR	**Xorichti**	**2.29**	**61**	P	**Pg**	**11 46 21.7**	**-2.9**
XOR				S	**Sg**	**11 46 50.7**	**-3.6**
XOR	**Xorichti**	**2.29**	**61**	P	**Pg**	**11 46 21.7**	**-2.9**
XOR				S	**Sg**	**11 46 50.7**	**-3.6**
LIT	**Litokhoron**	**2.34**	**38**	P	**Pn**	**11 46 20.7**	**+1.1**
LIT				S	**Sn**	**11 46 50.3**	**+1.7**
LIT	**Litokhoron**	**2.34**	**38**	P	**Pn**	**11 46 20.7**	**+1.1**
LIT				S	**Sn**	**11 46 50.3**	**+1.7**
AOS	**Alonnisos**	**2.71**	**70**	P	**Pn**	**11 46 25.5**	**+0.9**
AOS	**Alonnisos**	**2.71**	**70**	P	**Pn**	**11 46 25.5**	**+0.9**
OHR	**Ohrid**	**2.84**	**3**	*e*Pn	**Pn**	**11 46 25.7**	**-0.8**
OHR	**Ohrid**	**2.84**	**3**	*e*Pn	**Pn**	**11 46 25.7**	**-0.8**
KRUS	**Krusevo**	**3.14**	**9**	*e*Pn	**Pn**	**11 46 29.0**	**-1.5**
KRUS				*e*Sg	**Sn**	**11 47 07.4**	**-0.9**
KRUS	**Krusevo**	**3.14**	**9**	*e*Pn	**Pn**	**11 46 29.0**	**-1.5**

IDC 18 12:14:29.7±2.8, 24°.00S×69°.87E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=103.6km s-min=31.9km az=39.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**58.09**	**104**	P	P	12 24 25.3	0.0
	0.5nm,0.7s,baz=257,slow=6.1,SNR=8.1						
MKAR	**Makanchi Array**	**71.35**	**9**	P	P	12 25 51.5	+0.3
	1.0nm,0.8s,baz=191,slow=5.6,SNR=6.8						
BRTR	**Keskin Array B**	**71.85**	**331**	P	P	12 25 54.5	+0.2
	0.1nm,0.3s,baz=134,slow=8.3,SNR=2.5						
BVAR	**Borovoye Array**	**76.70**	**0**	P	P	12 26 21.8	-0.4
	0.7nm,0.7s,baz=168,slow=9.1,SNR=3.5						
ZALV	**Zalesovo Beam**	**78.69**	**9**	P	P	12 26 33.8	+0.4
	1.5nm,0.9s,baz=193,slow=4.4,SNR=3.2						
AKASG	**Malin Array Be**	**82.58**	**335**	P	P	12 26 54.6	+0.3
	0.1nm,0.3s,baz=127,slow=4.0,SNR=3.9						

BJI ***18*** *12:17:18.9, 3°.64S×101°.26E, h39km, mB5.6/46, mb5.4/56, Ms5.5/71, Ms7 5.4/57*
MOS ***18*** *12:17:22.8±0.8, 3°.00S×101°.48E, h33km, mb5.7/96, MS5.1/77, Error ellipse: s-maj=8.7km s-min=4.4km az=115.2*
NEIC ***18*** *12:17:23.3±0.1, 3°.20S×101°.41E, h32km, mb5.6/99, ME5.4, MS5.4/175, MW5.6, MW5.6, Error ellipse: s-maj=5.2km s-min=4.1km az=46.0, Moment Tensor Solution. s53 Moment tensor: Scale 10^17^Nm; Mrr2.13; Mθθ-1.03; Mφφ-1.10; Mrθ1.60; Mrφ1.06; Mθφ-0.40; Best double couple: M0=2.70000×10^17^ NP1:φs118.00000°, δ64.00000°, λ74.00000°. NP2:φs331.00000°, δ30.00000°, λ119.00000°. Principal axes: T 2.8000, Plg67.0000°, Azm358.0000°; N -0.2300, Plg14.0000°, Azm125.0000°; P -2.5700, Plg17.0000°, Azm219.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [III] at Padang and [II] at Bengkulu and Sungaipenuh.
GCMT ***18*** *12:17:23.8±0.1, 3°.52S×101°.11E, h50km, MW5.7/92, Moment Tensor Solution. s91,c184; s92,c237; Duration: 1s7 Moment tensor: Scale 10^17^Nm; Mrr3.40±.06; Mθθ-1.95±.04; Mφφ-1.45±.05; Mrθ2.15±.04; Mθφ2.27±.04; Mφr-1.19±.05; Best double couple: M0=4.44200×10^17^ NP1:φs321.00000°, δ29.00000°, λ105.00000°. NP2:φs124.00000°, δ62.00000°, λ82.00000°. Principal axes: T 4.1860, Plg72.0000°, Azm14.0000°; N 0.5120, Plg7.0000°, Azm128.0000°; P -4.6970, Plg17.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISCJB ***18*** *12:17:24.3±0.1, 3°.20S±0°.02×101°.33E±0°.02, h50km, mb5.6/226, MS5.3/233 Error ellipse: s-maj=3.3km s-min=2.1km az=25.8*
IDC ***18*** *12:17:26.3±0.7, 3°.12S×101°.47E, h55km±5km, mb5.0/33, mb1 5.0/34, mb1mx5.0/34, mbtmp5.0/34, MS5.0/31, Ms1 5.0/31, ms1mx5.0/33, Error ellipse: s-maj=10.6km s-min=9.8km az=81.0*
SZGRF ***18*** *12:17:26.3, 4°.17S×100°.23E, h55km, mb5.1, Southwest of Sumatera, Indonesia*
DJA ***18*** *12:17:27, 3°.32S×101°.29E, h49km, Mw5.8/41*

ISC 18 12:17:26.2±0.1, 3°.21S±0°.02×101°.32E±0°.02, h52km, h52km±1.0km: pP-P, n1070, σ0°.98/832, mb5.6/226, MS5.3/233, 79C-26D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.35**	**109**	P	**Pn**	**12 17 47.1**	**-1.5**
PPSI	**Pulau Pagai**	**1.38**	**289**	S	**Sn**	**12 18 15.5**	**+9.3**
MNAI	**Manna**	**1.99**	**125**	P	**Pn**	**12 17 56.0**	**-1.5**
PDSI	**Padang**	**2.44**	**339**	P	**Pn**	**12 18 04.0**	**+0.4**
PDSI				S	**Sn**	**12 18 39.3**	**+7.1**
PPI	**Padang Panjang**	**2.89**	**341**	P	**Pn**	**12 18 10.7**	**+1.0**
SISI	**Saibi**	**2.91**	**310**	P	**Pn**	**12 18 10.7**	**+0.7**
SISI				S	**Sn**	**12 18 46.0**	**+2.2**
RGRI	**Rengat**	**3.02**	**20**	P	**Pn**	**12 18 13.3**	**+1.8**
MDSI	**Maura Dua**	**3.12**	**114**	P	**Pn**	**12 18 12.3**	**-0.6**
PMBI	**Palembang**	**3.46**	**85**	P	**Pn**	**12 18 16.2**	**-1.4**
KLI	**Kotabumi**	**3.89**	**115**	P	**Pn**	**12 18 24.7**	**+1.2**
MNSI	**Mandailing Nat**	**4.34**	**336**	P	**Pn**	**12 18 30.2**	**+0.5**
BLSI	**Bandar Lampung**	**4.46**	**119**	P	**Pn**	**12 18 33.4**	**+2.1**
PPBI	**Pangkal Pinang**	**4.93**	**78**	P	**Pn**	**12 18 38.2**	**+0.5**
RBSI	**Rajabasa**	**5.13**	**121**	P	**Pn**	**12 18 41.4**	**+0.9**
	2μm,1.2s,9.9nm						
TPRI	**Tanjung Pinang**	**5.21**	**38**	P	**Pn**	**12 18 43.1**	**+1.5**
	6μm,1.0s,15nm						
CGJI	**Cibinong**	**5.52**	**128**	P	**Pn**	**12 18 45.2**	**-0.6**
KGM	**Kluang**	**5.56**	**21**	P	**Pn**	**12 18 48.6**	**+2.1**
MYKOM	**Kota Tinggi**	**5.58**	**27**	P	**Pn**	**12 18 48.5**	**+1.9**
MYKOM	**Kota Tinggi**	**5.58**	**27**	P	**Pn**	**12 18 48.3**	**+1.7**
	1μm,1.1s,7.5nm						
TRSI	**Tarutung**	**5.71**	**336**	P	**Pn**	**12 18 49.9**	**+1.4**
TNG	**Tangerang**	**6.07**	**119**	P	**Pn**	**12 18 55.7**	**+2.3**
	3μm,0.9s,15nm						
TPI	**Tanjungpandan**	**6.34**	**86**	P	**Pn**	**12 18 57.4**	**+0.2**
	224nm,1.2s,7μm2.3nm						
DBJI	**Dramaga**	**6.35**	**122**	P	**Pn**	**12 18 57.5**	**+0.3**
	2μm,1.1s,6.2nm						
CBJI	**Citeko**	**6.37**	**120**	P	**Pn**	**12 19 00.7**	**+3.2**
	6μm,0.8s,16nm						
FRIM	**Kepong**	**6.41**	**3**	P	**Pn**	**12 19 00.5**	**+2.4**
TSI	**Tuntungan**	**7.21**	**338**	P	**Pn**	**12 19 13.3**	**+4.2**
	1μm,1.0s,4.8nm						
LEM	**Lembang**	**7.23**	**120**	P	**Pn**	**12 19 10.4**	**+1.1**
	2μm,1.0s,5.8nm						
IPM	**Ipoh**	**7.65**	**358**	P	**Pn**	**12 19 18.3**	**+3.3**
IPM	**Ipoh**	**7.65**	**358**	P	**Pn**	**12 19 18.1**	**+3.1**
	780nm,1.1s,7μm2.1nm						
JCJI	**Jatiwangi**	**7.66**	**115**	P	**Pn**	**12 19 21.1**	**+6.0**
	745nm,1.0s,3.7nm						
XMIS	**Christmas Isla**	**8.40**	**149**	*e*P	**Pn**	**12 19 17.3**	**-8.1**
XMIS				*e*S	**Sn**	**12 20 43.4**	**-16**
XMIS	**Christmas Isla**	**8.40**	**149**	*e*Pn	**Pn**	**12 19 17.1**	**-8.3**
XMIS				*e*Sn	**Sn**	**12 20 45.7**	**-13**
XMIS	**Christmas Isla**	**8.40**	**149**	P	**Pn**	**12 19 25.9**	**+0.5**
	360nm,1.0s						
KULM	**Kulim**	**8.47**	**355**	P	**Pn**	**12 19 28.9**	**+2.6**
KULM	**Kulim**	**8.47**	**355**	*e*Pn	**Pn**	**12 19 27.4**	**+1.0**
	594nm,0.9s						
KULM	**Kulim**	**8.47**	**355**	P	**Pn**	**12 19 28.3**	**+2.0**
	788nm,1.0s,7μm1.9nm						
KTGM	**Kuala Trengganu**	**8.68**	**12**	P	**Pn**	**12 19 31.6**	**+2.5**
LHMI	**Lhok Sumawe**	**9.45**	**332**	P	**Pn**	**12 19 41.0**	**+1.2**
	244nm,0.9s,4μm						
SMRI	**Semarang**	**9.85**	**113**	P	**Pn**	**12 19 47.4**	**+2.1**
	1μm,1.0s,9μm						
COCO	**West Island**	**9.96**	**206**	Pn	**Pn**	**12 19 42.5**	**-4.2**
	18μm,0.4s,SNR=59						
COCO	**West Island**	**9.96**	**206**	*i* P	**Pn**	**12 19 42.8**	**-3.9**
COCO	**West Island**	**9.96**	**206**	*e*Pn	**Pn**	**12 19 42.4**	**-4.3**
COCO	**West Island**	**9.96**	**206**	Pn	**Pn**	**12 19 43.1**	**-3.7**
	SNR=17						
COCO				Pn	**Pn**	**12 19 43.1**	**-3.7**
	SNR=17						
COCO	**West Island**	**9.96**	**206**	P	**Pn**	**12 19 42.5**	**-4.2**
	3μm,0.9s						
KSM	**Kuching**	**10.12**	**63**	P	**Pn**	**12 19 49.9**	**+1.0**
KSM	**Kuching**	**10.12**	**63**	*e*Pn	**Pn**	**12 19 49.3**	**+0.4**
KSM	**Kuching**	**10.12**	**63**	P	**Pn**	**12 19 49.7**	**+0.8**
	117nm,0.8s,2μm						
UGM	**Wanagama**	**10.28**	**117**	P	**Pn**	**12 19 51.1**	**0.0**
	753nm,0.9s,7μm						
BSI	**Banda Aceh**	**10.54**	**325**	P	**Pn**	**12 19 54.2**	**-0.4**
	451nm,1.0s,3μm						
STKI	**Sintang**	**10.66**	**72**	P	**Pn**	**12 19 59.4**	**+3.0**
	238nm,1.0s						
PCJI	**Pacitan**	**10.99**	**117**	P	**Pn**	**12 19 59.8**	**-1.0**
SJI	**Sawahan**	**11.33**	**114**	P	**Pn**	**12 20 04.8**	**-0.6**
	558nm,0.8s						
PWJI	**Pagerwojo**	**11.48**	**115**	P	**Pn**	**12 20 06.7**	**-0.8**
	389nm,1.0s,4μm						
GRJI	**Cesik**	**11.71**	**109**	P	**Pn**	**12 20 13.1**	**+2.4**
	949nm,1.0s,9μm						
KRKI	**Karangkates**	**12.12**	**114**	P	**Pn**	**12 20 17.5**	**+1.3**
SBUM	**Sibu**	**12.26**	**63**	P	**Pn**	**12 20 22.1**	**+3.9**
SBUM	**Sibu**	**12.26**	**63**	P	**Pn**	**12 20 21.7**	**+3.5**
	228nm,1.1s,4μm						
GMJI	**Gumukmas**	**13.07**	**113**	P	**Pn**	**12 20 30.5**	**+1.3**
	172nm,1.0s,3μm						
KMMI	**Kalianget**	**13.16**	**107**	P	**Pn**	**12 20 30.0**	**-0.5**
	320nm,1.6s,6μm						
BTM	**Bintulu**	**13.37**	**62**	P	**Pn**	**12 20 38.0**	**+4.6**
BBKI	**Banjar Baru**	**13.50**	**91**	P	**Pn**	**12 20 38.6**	**+3.4**
	1μm,0.8s						
ABJI	**Asem Bagus**	**13.64**	**110**	P	**Pn**	**12 20 38.3**	**+1.3**
	1μm,0.7s						
SRBI	**Singaraja**	**14.65**	**110**	P	**Pn**	**12 20 50.2**	**-0.3**
	374nm,0.7s,4μm						
KBKI	**Kotabaru**	**14.83**	**91**	P	**Pn**	**12 20 57.4**	**+4.6**
	352nm,1.1s,4μm						
KHKI	**Kahang-Kahang**	**15.11**	**110**	P	**Pn**	**12 20 54.8**	**-1.7**
	192nm,0.8s,3μm						
NNT	**Nongplab**	**15.78**	**354**	P	**Pn**	**12 21 06.9**	**+1.8**
KKM	**Kota Kinabalu**	**17.49**	**58**	P	**Pn**	**12 21 28.1**	**+1.6**
KKM	**Kota Kinabalu**	**17.49**	**58**	*e*Pn	**Pn**	**12 21 26.9**	**+0.4**
	694nm,1.7s						
KKM	**Kota Kinabalu**	**17.49**	**58**	P	**Pn**	**12 21 28.5**	**+1.9**
	261nm,1.8s,6μm						
SDKM	**Sandakan**	**18.13**	**61**	P	**Pn**	**12 21 36.7**	**+2.3**
KDM	**Kudat**	**18.47**	**57**	P	**Pn**	**12 21 40.1**	**+1.6**
KAPI	**Kappang**	**18.47**	**96**	Pn	**Pn**	**12 21 36.1**	**-2.5**
	2μm,1.2s,SNR=45						
KAPI	**Kappang**	**18.47**	**96**	P	**Pn**	**12 21 36.3**	**-2.3**
	5.7nm,0.3s,baz=276,slow=11,SNR=39						
KAPI				LR	LR	12 30 35.1	
	comp=Z,7μm,18.0s,baz=284,slow=43						
TTSI	**Tana Toraja**	**18.48**	**90**	P	**Pn**	**12 21 38.9**	**+0.3**
	439nm,1.0s,5μm						
UBT	**Ubonrachathani**	**18.70**	**11**	⇓P	**Pn**	**12 21 41.5**	**+0.2**
NST	**Nakhon Sawan**	**18.80**	**356**	P	**Pn**	**12 21 39.0**	**-3.4**
	67nm,0.9s						
MYLDM	**Lahad Datu**	**19.08**	**64**	P	**Pn**	**12 21 47.4**	**+1.5**
MYLDM	**Lahad Datu**	**19.08**	**64**	P	**Pn**	**12 21 46.7**	**+0.8**
	657nm,1.2s,7μm						
KKTK	**Khon Kaen**	**19.48**	**4**	⇑P	**Pn**	**12 21 48.4**	**-2.2**
	1μm,0.9s						
WSI	**Waingapu**	**19.91**	**110**	P	**Pn**	**12 21 53.1**	**-2.6**
	1μm,0.5s						
BATP	**Bataraza**	**20.31**	**54**	*e*P	**P**	**12 21 59.4**	**+1.4**
APSI	**Ampana**	**20.45**	**84**	P	**P**	**12 22 00.0**	**+0.5**
	2μm,1.1s						
KDI	**Kendari**	**21.27**	**93**	P	**P**	**12 22 09.1**	**+0.6**
	422nm,1.1s,4μm,mb5.7						
LUWI	**Luwuk**	**21.55**	**85**	P	**P**	**12 22 12.6**	**+1.2**
	964nm,1.3s,7μm,mb6.1						
PPR	**Puerto Princes**	**21.62**	**53**	*e*P	**P**	**12 22 11.8**	**-0.3**
CM31	**Chiang Mai Arr**	**21.66**	**354**	*e*P	**P**	**12 22 10.1**	**-2.4**
	100nm,1.0s,mb5.2						
CM31				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
CMAR	**Chiang Mai Arr**	**21.66**	**354**	P	**P**	**12 22 09.8**	**-2.6**
	comp=Z,68nm,1.1s,mb5.0,baz=184,slow=9.7,SNR=44						
CMAR				PcP	PcP	12 26 13.1	+0.6
	comp=Z,9.6nm,0.9s,baz=206,slow=2.9,SNR=6.2						
CMAR				pPcP		12 26 30.8	
	comp=Z,10nm,1.0s,baz=209,slow=3.0,SNR=5.1						
CMAR				ScP	ScP	12 29 44.7	-0.8
	comp=Z,2.7nm,0.7s,baz=231,slow=3.6,SNR=7.0						
CMAR				LR	LR	12 31 36.5	
	comp=Z,7μm,18.1s,MS5.1,baz=177,slow=39						
CMAR	**Chiang Mai Arr**	**21.66**	**354**	P	**P**	**12 22 09.9**	**-2.6**
CMAR						12 26 13.1	
CMAR						12 26 30.8	
CMAR				pmax	pmax		
	comp=Z,68nm,1.1s						
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR				pmax	pmax		
	comp=N,3.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,7μm,18.1s						
CHG	**Chiang Mai**	**22.01**	**354**	⇑P	**P**	**12 22 14.0**	**-2.2**
	comp=Z,64nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**22.01**	**354**	PFAKE		12 22 30.0	+14
CHTO				LR	LR		
	comp=Z,5μm,20.0s,MS5.0						
CHRT	**Chiangrai**	**22.99**	**356**	⇓P	**P**	**12 22 25.0**	**-1.6**
	comp=Z,421nm,1.2s,mb5.8						
ENPP	**El Nido**	**23.02**	**51**	*e*P	**P**	**12 22 27.2**	**+0.2**
PALK	**Pallekele**	**23.06**	**297**	P	**P**	**12 22 31.6**	**+4.2**
	comp=Z,14nm,0.9s,mb4.4,baz=108,slow=8.3,SNR=2.9						
PALK				LR	LR	12 30 20.1	
	comp=Z,5μm,20.6s,MS4.9,baz=223,slow=33						
PALK	**Pallekele**	**23.06**	**297**	P	**P**	**12 22 31.6**	**+4.2**
PALK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
PALK				MLR	MLR		
	comp=Z,5μm,20.6s,MS4.9						
PALK	**Pallekele**	**23.06**	**297**	*e*P	**P**	**12 22 30.5**	**+3.0**
	comp=Z,114nm,1.1s,mb5.2						
PALK	**Pallekele**	**23.06**	**297**	P	**P**	**12 22 27.8**	**+0.4**
	comp=Z,61nm,1.4s,comp=Z,925nm,mb4.8						
QIZ	**Qiongzhong**	**23.64**	**20**	P	**P**	**12 22 29.9**	**-3.0**
QIZ				pP		12 22 43.3	
QIZ				S	**S**	**12 26 40.3**	**-3.6**
QIZ				sS	sS	12 27 01.4	-4.6
QIZ				pmax	pmax		
	comp=Z,57nm,1.4s,mb4.8						
QIZ				pmax	pmax		
	comp=Z,1μm,10.1s						
QIZ				LR	LR		
	comp=N,5μm,22.6s						
QIZ				LR	LR		
	comp=Z,7μm,24.2s,MS5.0						
QIZ	**Qiongzhong**	**23.64**	**20**	*e*P	**P**	**12 22 32.8**	**-0.1**
	comp=Z,57nm,0.8s,mb5.0						
QIZ				LR	LR		
	comp=Z,7μm,21.0s,MS5.1						
CUYO	**Cuyo Island**	**24

APYP	**Conner**	**28.71**	**42**	*eP*	**P**	**12 23 20.0**	**+1.3**
IMP	**Imphal**	**28.74**	**346**	*eP*	**P**	**12 23 18.0**	**-0.8**
IMP				*ex*	x	12 26 25.0	
DGAR	**Diego Garcia**	**29.03**	**261**	PFAKE		12 23 30.0	+8.3
DGAR				LR	LR		
comp=Z,5μm,21.0s,MS5.1							
GYA	**Guiyang**	**29.95**	**10⇑**	*iP*	**P**	**12 23 29.1**	**-0.4**
GYA				pP	pP	12 23 41.8	-1.0
GYA				sP	sP	12 23 47.6	-1.4
GYA				PP	PP	12 24 32.1	-5.9
GYA				PcP	PcP	12 26 33.9	+2.6
GYA				S	**S**	**12 28 27.0**	**+3.4**
GYA				sS	sS	12 28 44.3	-1.8
GYA				SS	SS	12 30 05.8	-27
GYA				ScP	ScP	12 30 12.0	+2.7
GYA				ScS	ScS	12 34 04.6	-0.1
GYA				pmax	pmax		
comp=Z,90nm,0.9s,mb5.5							
GYA				pmax	pmax		
comp=Z,280nm,5.2s							
GYA				LR	LR		
comp=N,6μm,17.8s,MS5.4							
GYA				LR	LR		
comp=E,4μm,15.1s,MS5.4							
GYA				LR	LR		
comp=Z,6μm,15.0s,MS5.4							
SHL	**Shillong**	**30.03**	**343⇑**	*iP*	**P**	**12 23 29.0**	**-1.3**
SHL				*ex*	x	12 28 39.0	
HYB	**Hyderabad**	**30.41**	**313⇑**	*iP*	**P**	**12 23 34.5**	**+0.7**
HYB				*eS*	**S**	**12 28 32.0**	**+0.9**
BOK	**Bokaro**	**30.77**	**332**	*ex*	**P**	**12 23 38.6**	**+1.7**
KLBR	**Kellerberrin**	**32.20**	**153**	*eP*	**P**	**12 23 50.1**	**+0.8**
comp=Z,42nm,0.9s,mb5.3							
TWG	**Pinlang**	**32.27**	**36**	*eP*	**P**	**12 23 50.4**	**+0.3**
comp=Z,63nm,1.0s,mb5.4							
TPUB	**Ta-pu**	**32.39**	**35**	*eP*	**P**	**12 23 51.3**	**+0.2**
comp=Z,129nm,1.2s,mb5.6							
NGP	**Nagpur**	**32.59**	**319⇑**	*iP*	**P**	**12 23 49.9**	**-3.0**
NGP				*eS*	**S**	**12 29 05.0**	**-0.2**
QZH	**Quanzhou**	**32.63**	**30**	P	**P**	**12 23 54.0**	**+0.8**
QZH				S	**S**	**12 29 04.1**	**-1.6**
QZH				pmax	pmax		
comp=Z,130nm,1.0s,mb5.8							
QZH				pmax	pmax		
comp=Z,1μm,6.7s							
QZH				LR	LR		
comp=N,4μm,16.4s,MS5.4							
QZH				LR	LR		
comp=E,5μm,15.5s,MS5.4							
QZH				LR	LR		
comp=Z,11μm,30.6s							
ODAN	**Odare**	**32.78**	**337**	*eP*	**P**	**12 23 55.2**	**+0.7**
comp=Z,507nm,0.9s,mb6.5							
YULB	**Yu-li**	**32.84**	**35**	*eP*	**P**	**12 23 54.1**	**-1.0**
comp=Z,34nm,0.8s,mb5.3							
TAPN	**Taplejung**	**33.10**	**337**	*eP*	**P**	**12 23 58.4**	**+1.1**
comp=Z,1μm,0.9s,mb6.8							
NWAO	**Narrogin (SRO)**	**33.11**	**155**	P	**P**	**12 23 57.5**	**+0.1**
comp=Z,14nm,0.7s,mb5.0,baz=333,slow=12,SNR=11							
NWAO	**Narrogin (SRO)**	**33.11**	**155**	*eP*	**P**	**12 23 57.8**	**+0.5**
NWAO				*e*PP*	pP	12 24 10.9	+0.2
NWAO				pmax	pmax		
comp=Z,52nm,0.9s							
NWAO				MLR	MLR		
comp=Z,5μm,21.0s							
NWAO	**Narrogin (SRO)**	**33.11**	**155**	*eP*	**P**	**12 23 57.8**	**+0.4**
comp=Z,52nm,0.9s,mb5.5							
NWAO				*ep*P	pP	12 24 10.9	+0.2
NWAO				LR	LR		
comp=Z,5μm,21.0s,MS5.2							
RAMN	**Ramite**	**33.18**	**336**	*eP*	**P**	**12 23 59.0**	**+1.0**
comp=Z,416nm,0.9s,mb6.4							
RAMN	**Ramite**	**33.18**	**336**	*eP*	**P**	**12 23 59.0**	**+1.0**
comp=Z,416nm,0.9s,mb6.4							
JBP	**Jabalpur**	**33.47**	**323⇑**	*eP*	**P**	**12 24 01.4**	**+0.9**
JBP				*ex*	x	12 24 21.9	
comp=Z,123nm,1.4s							
JBP				*eS*	**S**	**12 29 19.3**	**+0.5**
NACB	**Ninganchiao**	**33.62**	**35**	*eP*	**P**	**12 24 01.6**	**-0.3**
comp=Z,71nm,0.9s,mb5.6							
KAD	**Karad**	**33.66**	**308**	*eP*	**P**	**12 24 02.5**	**+0.2**
KAD				*ex*	x	12 24 03.0	
KAD				AMb	AMB	12 24 04.1	
comp=Z,38nm,0.8s,mb5.4							
JIRN	**Jiri**	**33.98**	**336**	*eP*	**P**	**12 24 05.8**	**+0.9**
comp=Z,580nm,0.9s,mb6.5							
JIRN	**Jiri**	**33.98**	**336**	*eP*	**P**	**12 24 05.8**	**+0.9**
comp=Z,580nm,0.9s,mb6.5							
CD2	**Chengdu**	**34.01**	**4**	P	**P**	**12 24 03.5**	**-1.7**
CD2				pP	pP	12 24 13.3	-5.2
CD2				sP	sP	12 24 17.1	-7.6
CD2				PP	PP	12 25 17.8	-5.2
CD2				S	**S**	**12 29 25.5**	**-1.4**
CD2				pmax	pmax		
comp=Z,90nm,0.9s,mb5.7							
CD2				pmax	pmax		
comp=Z,620nm,6.7s							
CD2				LR	LR		
comp=N,9μm,21.4s							
CD2				LR	LR		
comp=Z,11μm,20.2s,MS5.6							
LSA	**Lhasa**	**34.14**	**344**	P	**P**	**12 24 06.6**	**+0.3**
LSA				sP	sP	12 24 25.0	-0.8
LSA				LR	LR		
comp=N,2μm,32.8s							
LSA				LR	LR		
comp=E,3μm,40.0s							
LSA				LR	LR		
comp=Z,4μm,27.2s							
LSA	**Lhasa**	**34.14**	**344**	*eP*	**P**	**12 24 06.7**	**+0.4**
LSA				pmax	pmax		
comp=Z,91nm,0.8s,mb5.8							
LSA				MLR	MLR		
comp=Z,3μm,22.0s,MS5.0							
LSA	**Lhasa**	**34.14**	**344**	*eP*	**P**	**12 24 06.7**	**+0.4**
comp=Z,91nm,0.8s,mb5.8							
LSA				LR	LR		
comp=Z,3μm,22.0s,MS5.0							
TATO	**Taipei**	**34.19**	**34**	PFAKE		12 24 20.0	+13
TATO				LR	LR		
comp=Z,3μm,22.0s,MS4.9							
ENH	**Enshi**	**34.20**	**13**	*eP*	**P**	**12 24 05.3**	**-1.5**
comp=Z,109nm,0.9s,mb5.8							
ENH				LR	LR		
comp=Z,6μm,20.0s,MS5.3							
PKI	**Pulchoki**	**34.23**	**334**	*eP*	**P**	**12 24 07.8**	**+0.7**
comp=Z,170nm,1.0s,mb6.0							
PKI	**Pulchoki**	**34.23**	**334**	*eP*	**P**	**12 24 08.0**	**+0.9**
comp=Z,290nm,0.9s,mb6.2							
PKIN	**Phulchoki**	**34.24**	**334**	*eP*	**P**	**12 24 08.0**	**+0.8**
comp=Z,290nm,0.9s,mb6.2							
GUN	**Gumba**	**34.33**	**335**	*eP*	**P**	**12 24 09.2**	**+1.2**
comp=Z,910nm,0.7s,mb6.8							
GUN	**Gumba**	**34.33**	**335**	*eP*	**P**	**12 24 09.2**	**+1.2**
comp=Z,910nm,0.7s,mb6.8							
DMN	**Daman**	**34.40**	**334**	*eP*	**P**	**12 24 09.5**	**+0.9**
comp=Z,296nm,0.8s,mb6.2							
DMN	**Daman**	**34.40**	**334**	*eP*	**P**	**12 24 09.5**	**+0.9**
comp=Z,296nm,0.8s,mb6.3							
KKN	**Kakani**	**34.48**	**334**	*eP*	**P**	**12 24 10.1**	**+0.8**
comp=Z,429nm,0.9s,mb6.4							
KKN	**Kakani**	**34.48**	**334**	*eP*	**P**	**12 24 10.1**	**+0.8**
comp=Z,429nm,0.9s,mb6.4							
BHPL	**Bhopal**	**35.13**	**320**	*eP*	**P**	**12 24 15.8**	**+0.8**
BHPL				*ex*	x	12 29 18.8	
WHN	**Wuhan**	**35.80**	**19⇑⇑**	P	**P**	**12 24 20.6**	**0.0**
WHN				sP	sP	12 24 33.6	-6.6
WHN				S	**S**	**12 29 51.1**	**-3.4**
WHN				pmax	pmax		
comp=Z,1μm,9.3s							
WHN				LR	LR		
comp=N,4μm,11.1s,MS5.5							
WHN				LR	LR		
comp=E,2μm,12.8s,MS5.5							
WHN				LR	LR		
comp=Z,7μm,14.8s,MS5.5							
WRAB	**Tennant Creek**	**36.26**	**120**	P	**P**	**12 24 23.0**	**-1.7**
comp=Z,1μm,0.7s,mb6.9							
WRAB	**Tennant Creek**	**36.26**	**120**	*eP*	**P**	**12 24 22.9**	**-1.8**
WRAB				pmax	pmax		
comp=Z,179nm,0.8s,mb6.0							
WRAB				MLR	MLR		
comp=Z,3μm,21.0s,MS5.0							
WRAB	**Tennant Creek**	**36.26**	**120**	*eP*	**P**	**12 24 22.9**	**-1.8**
comp=Z,110nm,0.8s,mb5.8							
WRAB				LR	LR		
comp=Z,6μm,21.0s,MS5.4							
FORT	**Forrest**	**37.27**	**140**	*eP*	**P**	**12 24 32.7**	**-0.5**
comp=Z,110nm,0.9s,mb5.7							
FORT	**Forrest**	**37.27**	**140**	*eP*	**P**	**12 24 33.0**	**-0.2**
comp=Z,162nm,1.0s,mb5.8							
FORT				*ep*P	pP	12 24 42.9	-3.8
ASAR	**Alice Springs**	**37.48**	**126**	P	**P**	**12 24 33.9**	**-1.1**
comp=Z,76nm,0.6s,mb5.7,baz=298,slow=8.2,SNR=962							
ASAR				pPcP		12 27 11.9	
comp=Z,13nm,0.7s,baz=311,slow=1.8,SNR=4.5							
ASAR				S	**S**	**12 30 17.1**	**-3.3**
comp=Z,9.5nm,0.7s,baz=296,slow=15,SNR=8.9							
ASAR				P3KPbc		12 54 55.4	
comp=Z,0.5nm,0.7s,baz=111,slow=4.2,SNR=7.3							
ASAR	**Alice Springs**	**37.48**	**126**	P	**P**	**12 24 33.9**	**-1.1**
ASAR				S	**S**	**12 30 17.1**	**-3.3**
ASAR				pmax	pmax		
comp=Z,76nm,0.6s							
ASAR				pmax	pmax		
comp=Z,13nm,0.7s							
ASAR				smax			
comp=N,10.0nm,0.7s							
ASAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**37.48**	**126**	P	**P**	**12 24 33.9**	**-1.1**
ASAR				pPcP		12 27 11.9	
ASAR				S	**S**	**12 30 17.1**	**-3.3**
ASAR				*e*		12 54 55.4	
XAN	**Xi'an**	**37.74**	**10**	P	**P**	**12 24 36.0**	**-1.0**
XAN				pP	pP	12 24 44.8	-5.8
XAN				sP	sP	12 24 48.4	-8.3
XAN				PP	PP	12 26 03.8	-0.3
XAN				sS	sS	12 30 41.8	-4.9
XAN				pmax	pmax		
comp=Z,26nm,0.9s,mb5.0							
XAN				pmax	pmax		
comp=Z,150nm,8.0s							
XAN				LR	LR		
comp=N,4μm,18.4s,MS5.3							
XAN				LR	LR		
comp=E,2μm,21.7s,MS5.3							
XAN				LR	LR		
comp=E,2μm,17.9s							
AGRA	**Agra**	**37.74**	**325**	*eP*	**P**	**12 24 36.6**	**-0.6**
AGRA				AMb	AMB	12 24 37.6	
comp=Z,54nm,0.3s,mb5.8							
PTH	**Pithoragarh**	**38.34**	**330**	*eP*	**P**	**12 24 43.0**	**+0.8**
PTH				*ex*	x	12 27 14.4	
NJ2	**Nanjing**	**38.83**	**24**	*eP*	**P**	**12 24 45.8**	**-0.4**
NJ2				pP	pP	12 24 55.6	-4.2
NJ2				sP	sP	12 24 59.8	-6.1
NJ2				PP	PP	12 26 19.1	+3.1
NJ2				S	**S**	**12 30 39.0**	**-1.4**
NJ2				pmax	pmax		
comp=Z,50nm,0.9s,mb5.2							
NJ2				pmax	pmax		
comp=Z,590nm,4.2s							
NJ2				LR	LR		
comp=N,4μm,18.0s,MS5.4							
NJ2				LR	LR		
comp=E,3μm,17.4s,MS5.4							
NJ2				LR	LR		
comp=Z,5μm,24.5s							
SSE	**Sheshan**	**39.02**	**28⇑**	P	**P**	**12 24 48.1**	**+0.2**
SSE				pP	pP	12 24 58.5	-2.9
SSE				sP	sP	12 25 04.4	-3.1
SSE				S	**S**	**12 30 44.5**	**+1.1**
SSE				sS	sS	12 31 02.3	-3.9
SSE				pmax	pmax		
comp=Z,43nm,1.3s,mb5.0							
SSE				pmax	pmax		
comp=Z,550nm,7.8s							
SSE				LR	LR		
comp=N,3μm,22.1s,MS5.1							
SSE				LR	LR		
comp=E,930nm,22.1s,MS5.1							
SSE				LR	LR		
comp=Z,3μm,27.7s							
BISR	**Bishrakh**	**39.05**	**326**	*eP*	**P**	**12 24 47.9**	**-0.2**
AYAN	**Aya Nagar**	**39.16**	**325**	*eP*	**P**	**12 24 48.8**	**-0.3**
AYAN				AMb	AMB	12 24 50.7	
comp=Z,66nm,0.9s,mb5.4							
LZH	**Lanzhou**	**39.16**	**3⇑⇑**	P	**P**	**12 24 48.8**	**-0.2**
LZH				pP	pP	12 24 58.8	-3.8
LZH				sP	sP	12 25 03.9	-4.7
LZH				PP	PP	12 26 24.0	+4.3
LZH				S	**S**	**12 30 44.0**	**-1.4**
LZH				sS	sS	12 31 03.0	-5.2
LZH				SS	SS	12 33 34.3	-5.8
LZH				pmax	pmax		
comp=Z,110nm,1.0s,mb5.5							
LZH				pmax	pmax		
comp=Z,630nm,5.8s							
LZH				LR	LR		
comp=N,7μm,14.8s							
LZH				LR	LR		
comp=Z,12μm,17.0s,MS5.8							
AJM	**Ajmer**	**39.20**	**320**	*i* P	**P**	**12 24 49.0**	**-0.4**
NDI	**New Delhi**	**39.26**	**325**	*eP*	**P**	**12 24 49.0**	**-0.9**
NDI				*ex*	x	12 29 46.0	
JOSI	**Joshimath**	**39.49**	**330**	*eP*	**P**	**12 24 51.6**	**-0.1**
JOW	**Kunigami**	**39.62**	**39**	P	**P**	**12 24 52.7**	**-0.3**
comp=Z,41nm,0.9s,mb5.2,baz=223,slow=4.1,SNR=5.1							
JOW				LR	LR	12 40 26.0	
comp=Z,2μm,21.8s,MS4.8,baz=220,slow=35							
KHET	**Khetri**	**39.63**	**323**	*eP*	**P**	**12 24 53.1**	**+0.1**
DDI	**Dehra Dun**	**40.08**	**328⇑**	*iP*	**P**	**12 24 56.0**	**-0.7**
DDI				*ex*	x	12 27 30.0	
SMLA	**Simla**	**41.18**	**328**	*eP*	**P**	**12 25 06.2**	**+0.4**
SMLA				*ex*	x	12 25 09.3	
comp=Z,438nm,0.7s							
SMLA				*i* x	x	12 31 11.7	
BHK	**Bhakra**	**41.81**	**327**	*ex*	**P**	**12 25 06.2**	**-4.7**
JASL	**Jaisalmer**	**41.95**	**317**	*eP*	**P**	**12 25 13.1**	**+0.9**
JASL				AMb	AMB	12 25 14.9	
comp=Z,56nm,0.9s,mb5.2							
TIY	**Taiyuan**	**42.01**	**13**	*eP*	**P**	**12 25 11.9**	**-0.5**
TIY				sP	sP	12 25 25.3	-6.8
TIY				S	**S**	**12 31 25.6**	**-2.1**
TIY				sS	sS	12 31 45.5	-5.2
TIY				pmax	pmax		
comp=Z,570nm,5.8s							
TIY				LR	LR		
comp=N,6μm,16.5s,MS5.6							
TIY				LR	LR		
comp=E,1μm,13.7s,MS5.6							
TIY				LR	LR		
comp=Z,6μm,18.4s,MS5.5							
GTA	**Gaotai**	**42.43**	**358⇑⇑**	P	**P**	**12 25 15.5**	**-0.4**
GTA				pP	pP	12 25 25.3	-4.3
GTA				sP	sP	12 25 29.8	-5.8
GTA				PP	PP	12 26 54.8	-0.3
GTA				PcP	PcP	12 27 09.4	+1.2
GTA				ScP	ScP	12 30 54.6	-0.2
GTA				S	**S**	**12 31 28.8**	**-5.1**
GTA				ScS	ScS	12 35 09.9	-3.1
GTA				pmax	pmax		
comp=Z,30nm,1.1s,mb4.8							
GTA				pmax	pmax		
comp=Z,620nm,5.1s							
GTA				LR	LR		
comp=N,6μm,17.8s,MS5.6							
GTA				LR	LR		
comp=E,3μm,17.5s,MS5.6							
GTA				LR	LR		
comp=Z,8μm,18.7s,MS5.7							
COEN	**Coen**	**42.67**	**107**	*eP*	**P**	**12 25 15.1**	**-3.1**
comp=Z,358nm,1.3s,mb5.9							
COEN				*ep*P	pP	12 25 28.5	-3.3
BTO	**Baotou**	**44.33**	**9**	*eP*	**P**	**12 25 29.9**	**-1.2**
HHC	**Hu-ho-hao-te**	**44.84**	**11⇑⇑**	P	**P**	**12 25 35.8**	**+0.6**
HHC				pP	pP	12 25 45.8	-3.2
HHC				sP	sP	12 25 49.5	-5.5
HHC				PcP	PcP	12 27 17.8	+1.5
HHC				PP	PP	12 27 22.8	+2.0
HHC				ScP	ScP	12 31 05.5	+1.0
HHC				S	**S**	**12 32 11.3**	**+2.3**
HHC				sS	sS	12 32 26.9	-5.3
HHC				SS	SS	12 35 25.8	-6.0
HHC				pmax	pmax		
comp=Z,64nm,1.1s,mb5.4							
HHC				pmax	pmax		
comp=Z,690nm,4.9s							
HHC				LR	LR		
comp=N,3μm,16.7s,MS5.4							
HHC				LR	LR		
comp=E,1μm,17.6s,MS5.4							
HHC				LR	LR		
comp=Z,4μm,15.9s,MS5.4							
BJT	**Baijiatuau**	**45.13**	**16**	*eP*	**P**	**12 25 37.4**	**-0.1**
BJT				*e*PP*	pP	12 25 50.4	-0.9
BJT				pmax	pmax		
comp=Z,97nm,1.0s							
BJT				MLR	MLR		
comp=Z,5μm,19.0s							
BJT	**Baijiatuau**	**45.13**	**16**	*eP*	**P**	**12 25 37.4**	**-0.1**
comp=Z,97nm,1.0s,mb5.6							
BJT				*ep*P	pP	12 25 50.4	-0.9
BJT				LR	LR		
comp=Z,5μm,19.0s,MS5.4							
BJI	**Beijing**	**45.15**	**16**	P	**P**	**12 25 37.5**	**-0.2**
BJI				S	**S**	**12 32 13.4**	**-0.2**
BJI				pmax	pmax		
comp=Z,68nm,1.1s,mb5.4							
BJI				pmax	pmax		
comp=Z,760nm,4.2s							
BJI				LR	LR		
comp=N,5μm,19.4s,MS5.5							
BJI				LR	LR		
comp=E,3μm,21.9s,MS5.5							
BJI				LR	LR		
comp=Z,3μm,26.9s,MS5.1							
MSEY	**Mahe Island**	**45.75**	**267**	PFAKE		12 25 50.0	+7.1
MSEY				LR	LR		
comp=Z,3μm,21.0s,MS5.2							
DL2	**Dalian**	**45.91**	**22**	P	**P**	**12 25 43.6**	**-0.1**
DL2				S	**S**	**12 32 23.4**	**-1.2**
DL2				pmax	pmax		
comp=Z,30nm,1.2s,mb5.1							
DL2				pmax	pmax		
comp=Z,310nm,5.7s							
DL2				LR	LR		
comp=N,1μm,16.9s,MS5.0							
DL2				LR	LR		
comp=E,520nm,18.0s,MS5.0							
DL2				LR	LR		
comp=Z,2μm,18.2s,MS5.0							
GUMO	**Guam**	**46.32**	**68**	*eP*	**P**	**12 25 43.3**	**-4.0**
GUMO				*e*PP*	pP	12 25 56.8	-4.4
GUMO				pmax	pmax		
comp=Z,66nm,0.6s,mb5.7							
GUMO				MLR	MLR		
comp=Z,1μm,22.0s,MS4.8							
GUMO	**Guam**	**46.32**	**68**	*eP*	**P**	**12 25 43.3**	**-4.0**
comp=Z,66nm,0.6s,mb5.7							
GUMO				*ep*P	pP	12 25 56.8	-4.4
GUMO				LR	LR		
comp=Z,1μm,22.0s,MS4.8							
INCN	**Inchon**	**46.82**	**28**	PFAKE		12 26 00.0	+9.1
INCN				LR	LR		
comp=Z,1μm,20.0s,MS4.9							
CTA	**Charters Tower**	**46.90**	**115**	*eP*	**P**	**12 25 50.4**	**-1.4**
comp=Z,130nm,0.8s,mb5.9							
CTA				*eS*	**S**	**12 32 33.9**	**-5.4**
CTAO	**Charters Tower**	**46.90**	**115**	*eP*	**P**	**12 25 50.6**	**-1.2**
CTAO				pmax	pmax		
comp=Z,167nm,0.8s,mb6.0							
CTAO				MLR	MLR		
comp=Z,2μm,20.0s,MS5.1							
CTAO	**Charters Tower**	**46.90**	**115**	*eP*	**P**	**12 25 50.6**	**-1.2**
comp=Z,167nm,0.8s,mb6.0							
CTAO				LR	LR		
comp=Z,2μm,20.0s,MS5.1							
STKA	**Stephens Creek**	**47.37**	**132**	*eP*	**P**	**12 25 54.4**	**-0.9**
comp=Z,114nm,1.2s,mb5.7							
STKA				*eS*	**S**	**12 32 43.9**	**-1.8**
STKA	**Stephens Creek**	**47.37**	**132**	P	**P**	**12 25 54.6**	**-0.6**
comp=Z,24nm,0.5s,mb5.4,baz=304,slow=7.4,SNR=28							
STKA				LR	LR	12 46 07.2	
comp=Z,4μm,21.6s,MS5.3,baz=292,slow=36							
STKA	**Stephens Creek**	**47.37**	**132**	*eP*	**P**	**12 25 54.8**	**-0.5**
comp=Z,18nm,0.8s,mb5.0							
KSRS	**Korea Array**	**47.41**	**29**	P	**P**	**12 25 55.0**	**-0.5**
comp=Z,22nm,1.0s,mb5.0,baz=220,slow=8.0,SNR=35							
KSRS				LR	LR	12 50 42.4	
comp=Z,1μm,18.4s,MS4.8,baz=226,slow=42							
KSRS	**Korea Array**	**47.41**	**29**	P	**P**	**12 25 55.0**	**-0.5**
KSRS				pmax	pmax		
comp=Z,22nm,1.0s,mb5.0							
KSRS				MLR	MLR		
comp=Z,1μm,18.4s,MS4.8							
KBL	**Kabul**	**48.28**	**324**	*eP*	**P**	**12 26 01.9**	**-0.4**
KBL				pmax	pmax		
comp=Z,39nm,0.7s,mb5.5							
KBL	**Kabul**	**48.28**	**324**	*eP*	**P**	**12 26 01.9**	**-0.3**
comp=Z,39nm,0.7s,mb5.5							
WMQ	**Urumqi**	**48.40**	**347**	P	**P**	**12 26 03.5**	**+0.5**
WMQ				pP	pP	12 26 15.3	-1.6
WMQ				PcP	PcP	12 27 27.3	-1.5
WMQ				PP	PP	12 27 56.0	-0.1
WMQ				ScP	ScP	12 31 21.0	+1.7
WMQ				PcS	PcS	12 31 25.1	+0.5
WMQ				S	**S**	**12 32 59.0**	**-0.8**
WMQ				sS	sS	12 33 18.8	-4.4
WMQ				ScS	ScS	12 35 50.3	-0.9
WMQ				SS	SS	12 36 26.3	-4.0
WMQ				pmax	pmax		
comp=Z,560nm,1.0s,mb6.5							
WMQ				pmax	pmax		
comp=Z,730nm,3.0s							
WMQ				LR	LR		
comp=N,1μm,22.0s,MS5.2							
WMQ				LR	LR		
comp=E,2μm,23.0s,MS5.2							
WMQ				LR	LR		
comp=Z,2μm,21.0s,MS5.1							
KSH	**Kashi**	**48.49**	**334**	P	**P**	**12 26 02.5**	**-1.3**
KSH				*ep*P	pP	12 26 11.6	-6.1
KSH				*es*P	sP	12 26 15.6	-8.1
KSH				*e*PcP	PcP	12 27 30.5	+1.3
KSH				*e*PP	PP	12 27 53.5	-3.6
KSH				*e*ScP	ScP	12 31 20.6	+0.7
KSH				*e*PcS	PcS	12 31 24.5	-0.7
KSH				*e*S	**S**	**12 32 56.9**	**-4.4**
KSH				*e*ScS	ScS	12 35 49.5	-2.6
KSH				pmax	pmax		
comp=Z,50nm,0.9s,mb5.5							
KSH				LR	LR		
comp=N,500nm,14.5s,MS4.9							
KSH				LR	LR		
comp=E,690nm,13.1s,MS4.9							
KSH				LR	LR		
comp=Z,220nm,6.5s							
SNY	**Shenyang**	**49.18**	**22⇑⇑**	P	**P**	**12 26 07.6**	**-1.5**
SNY				PP	PP	12 28 03.3	0.0
SNY				S	**S**	**12 33 08.5**	**-2.5**
SNY				pmax	pmax		
comp=Z,35nm,1.0s,mb5.3							
SNY				LR	LR		
comp=N,2μm,15.6s,MS5.4							
SNY				LR	LR		
comp=E,2μm,14.7s,MS5.4							
SNY				LR	LR		
comp=Z,4μm,14.5s,MS5.5							
SMDO	**Samad**	**49.61**	**304**	P	**P**	**12 26 14.3**	**+1.7**
SNR=6.4							
CBIJ	**Chichi jima**	**49.62**	**50**	P	**P**	**12 26 11.0**	**-1.7**
comp=Z,92nm,0.7s,mb6.0,baz=288,slow=20,SNR=4.7							
CBIJ				LR	LR	12 48 12.4	
comp=Z,798nm,18.1s,MS4.8,baz=272,slow=37							
BIDO	**Bidbid**	**49.75**	**305**	P	**P**	**12 26 15.1**	**+1.4**
SNR=8.3							
BSY	**Bisya**	**50.18**	**303**	P	**P**	**12 26 18.9**	**+1.9**
SNR=7.2							
HOQ	**Hoqain**	**50.45**	**304**	P	**P**	**12 26 20.9**	**+1.8**
SNR=6.7							
ULHL	**Ulahol**	**50.64**	**336**	P	**P**	**12 26 20.6**	**+0.5**
SNR=31							
KZA	**Kyzart**	**50.91**	**335**	P	**P**	**12 26 23.8**	**+1.7**
SNR=7.5							
ARQ	**Araqi**	**51.00**	**304**	P	**P**	**12 26 24.5**	**+1.3**
SNR=7.1							
SONM	**Songino Array**	**51.03**	**4**	P	**P**	**12 26 23.4**	**+0.4**
comp=Z,91nm,0.8s,mb5.8,baz=184,slow=8.3,SNR=258							
SONM				pP	pP	12 26 36.1	-0.9

SONM *PP pP 12 26 36.1 -0.8
SONM pmax pmax
comp=Z,91nm,0.8s
SONM pmax pmax
comp=Z,81nm,0.8s
SONM pmax pmax
comp=N,6.0nm,1.1s
SONM MLR MLR
comp=Z,5μm,18.8s
ULN Ulaanbaatar 51.11 5 *eP* **P 12 26 23.9 +0.4**
ULN *e**PP pP 12 26 36.2 -1.4
ULN pmax pmax
comp=Z,50nm,0.8s,mb5.5
ULN MLR MLR
comp=Z,3μm,20.0s,MS5.4
ULN Ulaanbaatar 51.11 5 *eP* **P 12 26 23.9 +0.4**
comp=Z,50nm,0.8s,mb5.5
ULN *e*pP pP 12 26 36.2 -1.3
ULN LR LR
comp=Z,3μm,20.0s,MS5.4
ULN Ulaanbaatar 51.11 5 P **P 12 26 24.2 +0.7**
SNR=34
ULN P 12 26 24.2
SNR=34
JHJ Hachijo jima 2 51.26 42 LR LR 12 46 10.7
comp=Z,868nm,21.4s,MS4.8,baz=56,slow=34
UCH Uchtor 51.34 335 P **P 12 26 26.3 +0.9**
SNR=70
TKM2 Tokmak 2 51.46 336 P **P 12 26 26.4 +0.1**
SNR=200
KBK Karagaybulak 51.51 335 P **P 12 26 27.7 +1.1**
SNR=19
CN2 Changchun 51.58 22⇑ *i P* **P 12 26 26.0 -1.2**
CN2 *e*pP pP 12 26 37.5 -3.7
CN2 PP PP 12 28 23.9 -1.2
CN2 *e*S **S 12 33 43.3 -0.9**
CN2 *e*SS SS 12 37 19.0 -2.2
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3μm,17.0s,MS5.5
CN2 LR LR
comp=E,2μm,17.0s,MS5.5
CN2 LR LR
comp=Z,3μm,18.0s,MS5.3
AML Almayashu 51.62 334 P **P 12 26 28.2 +0.8**
SNR=17
AAK Ala-Archa 51.68 335 P **P 12 26 28.8 +0.9**
comp=Z,343nm,0.9s,mb6.3,SNR=35
AAK Ala-Archa 51.68 335 P **P 12 26 28.7 +0.8**
SNR=35
AAK Ala-Archa 51.68 335 LR LR 12 52 49.5
comp=Z,638nm,21.1s,MS4.6,baz=143,slow=41
AAK Ala-Archa 51.68 335 *eP* **P 12 26 28.4 +0.5**
AAK pmax pmax
comp=Z,106nm,1.1s,mb5.7
AAK MLR MLR
comp=Z,1μm,22.0s,MS4.9
AAK Ala-Archa 51.68 335 *eP* **P 12 26 28.4 +0.4**
comp=Z,106nm,1.1s,mb5.7
AAK LR LR
comp=Z,1μm,22.0s,MS4.9
AAK Ala-Archa 51.68 335 P **P 12 26 28.9 +0.9**
SNR=40
AAK P 12 26 28.9
SNR=40
FRU Bishkek 51.80 335⇑ *i P* **P 12 26 28.5 -0.3**
FRU *i* pP 12 26 42.0 -0.8
FRU *e* 12 33 47.0
FRU pmax pmax
comp=Z,189nm,1.2s,mb5.9
CHMS Chumysh 51.88 335 P **P 12 26 29.4 0.0**
SNR=38
EKS2 Erkin-Say 52.01 334 P **P 12 26 31.2 +0.8**
SNR=220
USP Ospenovka 52.20 335 P **P 12 26 31.8 0.0**
SNR=70
FAQ Al Faqa, Dubai 52.37 305 P **P 12 26 34.6 +1.2**
SNR=6.4
MAJO Matsushiro 52.40 38 *eP* **P 12 26 31.3 -2.1**
MAJO pmax pmax
comp=Z,36nm,0.9s,mb5.3
MAJO MLR MLR
comp=Z,1μm,22.0s,MS5.0
MAJO Matsushiro 52.40 38 *eP* **P 12 26 31.3 -2.2**
comp=Z,36nm,0.9s,mb5.3
MAJO LR LR
comp=Z,1μm,22.0s,MS5.0
MAT Matsushiro 52.40 38 P **P 12 26 31.4 -2.0**
MAT S **S 12 33 46.0 -10**
MJAR Matsushiro Arr 52.40 38 P **P 12 26 31.8 -1.7**
comp=Z,41nm,1.0s,mb5.3,baz=217,slow=7.2,SNR=107
MJAR ScP ScP 12 31 35.5 -1.2
comp=Z,6.0nm,1.1s,baz=223,slow=4.9,SNR=9.2
MJAR LR LR 12 48 11.1
comp=Z,1μm,21.7s,MS4.9,baz=260,slow=35
MJAR Matsushiro Arr 52.40 38 P **P 12 26 31.8 -1.6**
MJAR pmax pmax
comp=Z,41nm,1.0s
MJAR pmax pmax
comp=N,6.0nm,1.1s
MJAR MLR MLR
comp=Z,1μm,21.7s
MK31 Makanchi Array 52.55 344 *eP* **P 12 26 33.8 -0.5**
MKAR Makanchi Array 52.55 344 P **P 12 26 34.0 -0.3**
comp=Z,114nm,0.8s,mb5.9,baz=149,slow=7.8,SNR=381
MKAR LR LR 12 53 51.0
comp=Z,1μm,21.1s,MS5.0,baz=154,slow=42
MKAR PKPPKP 12 57 01.5
comp=Z,0.3nm,0.7s,baz=336,slow=2.7,SNR=3.5
MKAR PKP2bc 12 57 19.9
comp=Z,0.7nm,0.9s,baz=7.8,slow=3.2,SNR=5.0
MKAR Makanchi Array 52.55 344 P **P 12 26 34.0 -0.3**
MKAR LR LR 12 53 51.0
MKAR P'P' 12 57 01.5
MKAR ⇑*e* 12 57 19.9
EIDS Eidsvold 52.62 120 *eP* **P 12 26 33.9 -1.3**
comp=Z,54nm,0.6s,mb5.7
TOO Toolangi 52.93 136 *eP* **P 12 26 38.2 +0.9**
ZAK Zakamensk 53.41 2⇓ *i P* **P 12 26 40.2 -0.3**
ZAK pmax pmax
comp=Z,33nm,1.0s,mb5.2
VLA Vladivostok 53.73 28 *eP* **P 12 26 42.2 -0.9**
VLA *e*S **S 12 34 15.2 +1.6**
VLA pmax pmax
comp=Z,88nm,0.8s,mb5.7
VLA MLR MLR
comp=Z,1μm,15.0s,MS5.1
MDJ Mudanjiang 53.91 25 P **P 12 26 43.8 -0.5**
MDJ pP pP 12 26 52.6 -5.9
MDJ sP sP 12 26 56.5 -7.9
MDJ PP PP 12 28 44.9 -1.2
MDJ ScP ScP 12 31 44.6 +1.5
MDJ PcS PcS 12 31 48.3 -0.1
MDJ S **S 12 34 16.6 +0.6**
MDJ sS sS 12 34 32.6 -7.0
MDJ ScS ScS 12 36 30.8 +1.6
MDJ pmax pmax
comp=Z,70nm,1.0s,mb5.5
MDJ pmax pmax
comp=Z,600nm,8.1s
MDJ LR LR
comp=N,970nm,22.4s,MS5.3
MDJ LR LR
comp=E,3μm,21.1s,MS5.3
MDJ LR LR
comp=Z,3μm,22.4s,MS5.3
MDJ Mudanjiang 53.91 25 *eP* **P 12 26 43.9 -0.4**
comp=Z,66nm,1.0s,mb5.5
MDJ LR LR
comp=Z,3μm,22.0s,MS5.3
ARMA Armidale 54.63 125 *eP* **P 12 26 50.2 +0.3**
ARMA Armidale 54.63 125 *eP* **P 12 26 51.3 +1.4**
comp=Z,92nm,1.0s,mb5.8
HIA Hailar 54.66 15 *eP* **P 12 26 48.8 -0.9**
HIA *e**PP pP 12 27 02.0 -1.8
HIA pmax pmax
comp=Z,40nm,1.0s
HIA MLR MLR
comp=Z,3μm,19.0s
HIA Hailar 54.66 15 *eP* **P 12 26 48.8 -0.9**
comp=Z,40nm,1.0s,mb5.4
HIA *e*pP pP 12 27 02.0 -1.8
HIA LR LR
comp=Z,3μm,19.0s,MS5.3
MOY Mondy 54.67 360 *eP* **P 12 26 49.9 +0.2**
MOY pmax pmax
comp=Z,121nm,2.9s,mb5.4
CNB Canberra Magne 54.70 132 *eP* **P 12 26 43.0 -7.3**
TLY Talaya 54.72 2 P **P 12 26 50.6 +0.5**
comp=Z,533nm,0.6s,mb6.8,SNR=23
TLY Talaya 54.72 2*c i P* **P 12 26 50.4 +0.3**
TLY *e* pP 12 27 06.3 +2.1
TLY *e* 12 28 47.6
TLY *e*S **S 12 34 27.7 +1.1**
TLY *e*PS 12 34 46.4
TLY *e*SSS 12 40 12.2
TLY pmax pmax
comp=Z,72nm,0.8s,mb5.8
TLY MLR MLR
comp=Z,5μm,18.0s,MS5.6
TLY Talaya 54.72 2 *eP* **P 12 26 50.7 +0.6**
comp=Z,65nm,0.8s,mb5.7
TLY LR LR
comp=Z,5μm,19.0s,MS5.6
TLY Talaya 54.72 2 P **P 12 26 50.9 +0.9**
SNR=31
TLY P 12 26 50.9
SNR=31
OPO Ambohidratompo 55.07 250 P **P 12 26 55.9 +2.6**
comp=Z,6.3nm,0.7s,mb4.7,baz=69,slow=7.4,SNR=9.5
ABPO Ambohimpanom 55.10 249 PFAKE 12 27 00.0 +6.5
ABPO LR LR
comp=Z,3μm,21.0s,MS5.4
IRK Irkutsk 55.30 2⇑ *i P* **P 12 26 54.2 -0.1**
IRK *e* pP 12 27 12.2 +3.8
IRK pmax pmax
comp=Z,115nm,1.8s,mb5.6
CIT Chita 56.00 9 *eP* **P 12 26 58.4 -0.9**
CIT *e* 12 27 07.1
CIT *e* pP 12 27 13.1 -0.4
TAU Tasmania Unive 56.82 141 PFAKE 12 27 10.0 +4.7
TAU LR LR
comp=Z,5μm,20.0s,MS5.6
KURK Kurchatov 57.14 343 P **P 12 27 06.5 -0.9**
comp=Z,2μm,0.9s,mb7.0,SNR=65
KURK Kurchatov 57.14 343 S **S 12 35 02.2 +3.4**
comp=Z,0.9nm,0.3s,baz=158,slow=13,SNR=3.5
KURK LR LR 12 54 46.6
comp=Z,2μm,21.0s,MS5.1,baz=170,slow=39
KURK PKP2bc 12 57 08.4
comp=Z,1.0nm,0.9s,baz=316,slow=3.1,SNR=4.5
KURK Kurchatov 57.14 343 *eP* **P 12 27 06.7 -0.7**
KURK *e**PP pP 12 27 19.6 -2.0
KURK pmax pmax
comp=Z,234nm,0.9s,mb6.2
KURK MLR MLR
comp=Z,2μm,22.0s,MS5.1
KURK Kurchatov 57.14 343 *eP* **P 12 27 06.7 -0.7**
comp=Z,234nm,0.9s,mb6.2
KURK *e*pP pP 12 27 19.6 -2.0
KURK LR LR
comp=Z,2μm,22.0s,MS5.1
KURK Kurchatov 57.14 343 P **P 12 27 07.2 -0.2**
SNR=62
KURK P 12 27 07.2
SNR=62
ABKT Ailbek 57.21 320 P **P 12 27 08.3 +0.1**
comp=Z,391nm,0.9s,mb6.4,SNR=22
LBOS 58.13 288 *eP* **P 12 27 16.9 +1.9**
ZAA0 Zalesovo Array 58.60 349 *eP* **P 12 27 16.8 -0.8**
ZALV Zalesovo Beam 58.60 349 P **P 12 27 16.9 -0.6**
comp=Z,463nm,0.9s,mb6.5,baz=160,slow=4.7,SNR=534
ZALV S **S 12 35 16.6 -1.2**
comp=Z,1.4nm,0.6s,baz=148,slow=14,SNR=5.0
ZALV LR LR 12 55 53.4
comp=Z,2μm,20.5s,MS5.2,baz=155,slow=39
ZALV PKP2bc 12 57 06.5
comp=Z,2.7nm,0.9s,baz=299,slow=3.1,SNR=6.0
ZALV Zalesovo Beam 58.60 349 P **P 12 27 17.0 -0.6**
ZALV S **S 12 35 16.6 -1.2**
ZALV pmax pmax
comp=Z,463nm,0.9s,mb6.5
ZALV smax
comp=N,1.0nm,0.6s
ZALV MLR MLR
comp=Z,2μm,20.5s,MS5.2
ZALV Zalesovo Beam 58.60 349 P **P 12 27 16.9 -0.6**
ZALV S **S 12 35 16.6 -1.2**
ZALV LR LR 12 55 53.4
ZALV ⇑*e* 12 57 06.5
ERM Erimo 58.85 36 *eP* **P 12 27 18.9 -0.7**
ERM pmax pmax
comp=Z,40nm,0.8s,mb5.5
ERM MLR MLR
comp=Z,536nm,19.0s,MS4.7
ERM Erimo 58.85 36 *eP* **P 12 27 18.9 -0.7**
comp=Z,40nm,0.8s,mb5.5
ERM LR LR
comp=Z,536nm,19.0s,MS4.7
DHBB Dhamar BB 59.09 289 *eP* **P 12 27 24.7 +3.0**
NVS Novosibirsk 59.76 348⇑ *i P* **P 12 27 24.2 -1.4**
NVS *e* pP 12 27 36.8 -3.1
NVS *i* S **S 12 35 30.1 -2.6**
NVS *e*PS 12 35 48.1
NVS pmax pmax
comp=Z,100nm,1.0s,mb5.8
NVS pmax pmax
comp=N,79nm,1.2s
NVS pmax pmax
comp=E,48nm,1.1s
NVS smax
comp=N,60nm,1.5s
NVS smax
comp=E,52nm,1.4s
ASAJ Asahikawa 59.88 33 P **P 12 27 26.0 -0.6**
comp=E,42nm,0.6s,mb5.6,baz=247,slow=9.9,SNR=49
ASAJ LR LR 12 55 17.4
comp=E,671nm,20.9s,MS4.8,baz=73,slow=38
ASAJ Asahikawa 59.88 33 P **P 12 27 26.0 -0.6**
ASAJ pmax pmax
comp=Z,42nm,0.6s
ASAJ MLR MLR
comp=Z,671nm,20.9s
ATD Arta Tunnel 59.95 285 P **P 12 27 28.2 +0.5**
comp=Z,2.8nm,0.3s,mb4.8,baz=115,slow=11,SNR=2.8
ATD LR LR 12 48 54.0
comp=Z,882nm,20.8s,MS4.9,baz=83,slow=31
ATD Arta Tunnel 59.95 285 P **P 12 27 28.2 +0.5**
ATD LR LR 12 48 54.0
QRN Al-Qurain 60.26 306 *eP* **P 12 27 28.9 -0.6**
QRN AMb AMB 12 27 30.4
comp=Z,89nm,0.8s,mb5.8
KBD Kabd 60.60 306 *eP* **P 12 27 32.1 +0.2**
KBD AMb AMB 12 27 49.7
comp=Z,89nm,1.6s,mb5.7
RDF Al-Radifah 60.62 306 *eP* **P 12 27 31.6 -0.5**
RDF AMb AMB 12 27 33.5
comp=Z,117nm,0.9s,mb6.0
UMR Umm Al-Rimmam 60.73 306 *eP* **P 12 27 32.7 -0.1**
UMR AMb AMB 12 27 48.8
comp=Z,147nm,0.8s,mb6.1
NAY Al-Naaiem 60.99 306 *eP* **P 12 27 33.8 -0.8**
NAY AMb AMB 12 27 35.4
comp=Z,48nm,0.8s,mb5.7
MIB Mutribah 61.13 307 *eP* **P 12 27 35.3 -0.1**
MIB AMb AMB 12 27 53.5
comp=Z,195nm,1.0s,mb6.2
BOD Bodaibo 61.69 8⇓ *i P* **P 12 27 37.5 -1.1**
BOD pmax pmax
comp=Z,107nm,0.9s,mb6.0
BVAR Borovoye Array 61.77 339 P **P 12 27 38.1 -1.2**
comp=Z,53nm,0.7s,mb5.8,baz=142,slow=7.5,SNR=165
BVAR PKP2bc 12 56 57.6
comp=Z,1.1nm,0.8s,baz=243,slow=1.7,SNR=5.6
BVAR LR LR 13 00 12.3
comp=Z,937nm,20.4s,MS4.9,baz=143,slow=42
BVAR Borovoye Array 61.77 339 P **P 12 27 38.1 -1.2**
BVAR ⇑*e* 12 56 57.6
BVAR LR LR 13 00 12.3
YSS Yuzh-Sakhalins 61.82 31α *i P* **P 12 27 39.0 -0.8**
YSS *e* pP 12 27 50.0 -4.2
YSS *e* pP 12 27 52.0 -2.1
YSS *e*S **S 12 35 59.0 -0.4**
YSS *e*PPS 12 36 30.0
YSS pmax pmax
comp=Z,220nm,0.9s,mb6.3
YSS MLR MLR
comp=N,600nm,16.0s,MS5.0
YSS MLR MLR
comp=Z,1μm,16.0s,MS5.1
YSS MLR MLR
comp=E,500nm,15.0s,MS5.0
YSS Yuzh-Sakhalins 61.82 31 *eP* **P 12 27 38.9 -0.9**
comp=E,214nm,0.8s,mb6.3
YSS *e*pP pP 12 27 51.9 -2.3
YSS LR LR
comp=Z,283nm,19.0s,MS4.5
BRVK Borovoye 61.84 339 P **P 12 27 38.0 -1.7**
comp=Z,421nm,0.7s,mb6.7,SNR=29
BRVK Borovoye 61.84 339*ce*P **P 12 27 38.6 -1.1**
BRVK pmax pmax
comp=Z,61nm,0.8s,mb5.8
BRVK Borovoye 61.84 339 *eP* **P 12 27 38.4 -1.3**
comp=Z,74nm,0.8s,mb5.9
BRVK *e*pP pP 12 27 50.3 -3.8
BRVK LR LR
comp=Z,1μm,20.0s,MS5.0
BRVK Borovoye 61.84 339 P **P 12 27 38.9 -0.8**
SNR=29
BRVK P 12 27 38.9
SNR=29
NRGR Nerungri 62.64 14 *i* P **P 12 27 44.8 -0.2**
NRGR S **S 12 36 12.9 +3.6**
NRGR smax
comp=N,40nm,0.7s
CLNS Chul'man 62.84 14 *eP* **P 12 27 45.6 -0.8**
CLNS *e**PP pP 12 27 53.5 -7.3
CLNS *e* 12 30 03.2
CLNS *e*PPP 12 31 29.6
CLNS *e*S **S 12 36 16.8 +5.0**
CLNS *e* 12 37 32.1
CLNS pmax pmax
comp=Z,107nm,1.0s,mb5.9
CLNS pmax pmax
comp=E,48nm,1.0s
CLNS pmax pmax
comp=N,62nm,1.0s
CLNS pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS smax
comp=E,118nm,18.0s
CLNS smax
comp=N,116nm,12.3s
CLNS MLR MLR
comp=N,2μm,19.0s,MS5.4
CLNS MLR MLR
comp=E,1μm,16.0s,MS5.4
CLNS MLR MLR
comp=Z,2μm,19.0s,MS5.3
MIR Mirnyy 63.49 184 *eP* **P 12 27 56.0 +5.5**
MIR pmax pmax
comp=Z,21nm,1.0s,mb5.2
KMBO Kilima Mbogo 64.04 270 P **P 12 27 56.9 +1.6**
comp=Z,5.5nm,1.0s,mb4.5,baz=49,slow=9.6,SNR=4.5
KMBO LR LR 12 50 23.0
comp=Z,2μm,21.7s,MS5.2,baz=91,slow=31
KMBO Kilima Mbogo 64.04 270 *eP* **P 12 27 57.2 +2.0**
KMBO *e**PP pP 12 28 11.5 +1.8
KMBO pmax pmax
comp=Z,22nm,1.0s
KMBO MLR MLR
comp=Z,2μm,22.0s
KMBO Kilima Mbogo 64.04 270 *eP* **P 12 27 57.2 +2.0**
comp=Z,22nm,1.0s,mb5.1
KMBO *e*pP pP 12 28 11.5 +1.9
KMBO LR LR
comp=Z,2μm,22.0s,MS5.1
BHD Baghdad 64.79 309 *eP* **P 12 27 56.0 -3.7**
BHD *e*S **S 12 36 33.0 -3.9**
AKTO Aktyubinsk 65.05 331 LR LR 13 00 01.6
comp=Z,1μm,21.1s,MS5.0,baz=134,slow=39
DZM Mont Dzumac 65.77 113 *eP* **P 12 28 07.4 +1.1**
comp=Z,159nm,1.4s,mb5.9
DZM *e*S S 12 36 51.7 +2.3
comp=Z,943nm,27.6s
DZM *e*LR LR 12 47 53.4
comp=Z,2μm,23.1s
MAK Makhachkala 66.73 320 *eP* **P 12 28 06.7 -5.3**
MAK *e* 12 30 39.3
MAK *e*S S 12 36 54.9 -5.4
MAK pmax pmax
comp=Z,46nm,0.4s,mb5.9
MAK MLR MLR
comp=Z,876nm,21.0s,MS5.0
MSL Mosul 66.95 312 *eP* **P 12 28 17.0 +3.4**
HAKT HAKKARI 66.97 313 *i P* **P 12 28 13.7 +0.1**
GNI Garni 67.31 316*ce*P **P 12 28 16.3 +0.6**
GNI pmax pmax
comp=Z,51nm,1.7s
GNI Garni 67.31 316 *eP* **P 12 28 16.7 +1.0**
comp=Z,45nm,0.8s,mb5.5
GNI LR LR
comp=Z,440nm,21.0s,MS4.7
GNI Garni 67.31 316 P **P 12 28 17.2 +1.5**
SNR=11
GNI P 12 28 17.2
SNR=11
GNI Garni 67.31 316 *eP* **P 12 28 16.3 +0.6**
CLDR Caldiran 67.46 315 *eP* **P 12 28 17.0 +0.3**
DYDN Diyadin 67.79 315 *i P* **P 12 28 20.0 +1.2**
MTA Mtatsminda 67.94 318 P **P 12 28 20.6 +0.9**
TBLG Delisi 67.99 318 *eP* **P 12 28 20.1 +0.1**
TBLG Delisi 67.99 318 P **P 12 28 20.1 +0.1**
AGRB Hanur-Agry 68.29 315 *eP* **P 12 28 22.5 +0.6**
SVE Sverdlovsk 68.30 337⇓ *eP* **P 12 28 21.3 -0.3**
SVE *e* 12 28 48.0
SVE *e* 12 30 55.3
SVE *e*S S 12 37 20.7 +2.2
SVE pmax pmax
comp=Z,159nm,1.0s,mb6.0
SVE MLR MLR
comp=Z,2μm,22.0s,MS5.2
YAK Yakutsk 68.58 14*c i P* **P 12 28 21.5 -1.8**
YAK *e**PP pP 12 28 29.8 -8.1
YAK *e* pP 12 28 39.8 +1.9
YAK *e* 12 30 58.8
YAK pmax pmax
comp=Z,348nm,0.9s,mb6.3
YAK pmax pmax
comp=N,83nm,1.0s
YAK pmax pmax
comp=E,57nm,1.0s
YAK pmax pmax
comp=Z,31nm,1.4s,mb5.0
YAK pmax pmax
comp=N,14nm,1.4s
YAK pmax pmax
comp=E,13nm,1.2s
YAK MLR MLR
comp=Z,3μm,18.0s,MS5.5
YAK MLR MLR
comp=E,1μm,16.0s,MS5.4
YAK MLR MLR
comp=N,1μm,16.0s,MS5.4
YAK Yakutsk 68.58 14 *eP* **P 12 28 21.4 -1.9**
YAK LR LR
comp=Z,3μm,19.0s,MS5.5
DRV Dumont d'Urvil 68.81 165 P pP 12 28 38.0 -1.2
DRV SS S 12 37 25.0 +0.7
ARU Arti 68.84 336 P **P 12 28 24.2 -0.8**
comp=Z,454nm,0.8s,mb6.5,SNR=26
ARU Arti 68.84 336 *eP* **P 12 28 24.0 -1.0**
ARU *e**PP pP 12 28 37.2 -2.4
ARU pmax pmax
comp=Z,68nm,0.9s,mb5.6
ARU MLR MLR
comp=Z,2μm,22.0s,MS5.2
ARU Arti 68.84 336 *eP* **P 12 28 24.0 -0.9**
comp=Z,68nm,0.9s,mb5.6
ARU *e*pP pP 12 28 37.1 -2.4
ARU LR LR
comp=Z,2μm,22.0s,MS5.2
BEST Besiri 68.88 313 *i* P **P 12 28 26.0 +0.4**
ZEI Tsey 69.01 318 *eP* **P 12 28 26.4 +0.1**
ZEI *e* 12 30 59.4
ZEI *e*S S 12 37 29.4 +2.0
ZEI pmax pmax
comp=Z,59nm,0.7s,mb5.6
ONI Oni 69.23 318 P **P 12 28 28.5 +0.8**
HOMI Horasan 69.25 315 *i* P **P 12 28 28.8 +0.9**

MAW Mawson 69.45 195 *e*P **P 12 28 30.4 +1.8**
comp=Z,26nm,0.7s,mb5.3
MAW Mawson 69.45 195 P **P 12 28 30.4 +1.8**
comp=Z,7.6nm,0.9s,mb4.6,baz=20,slow=7.7,SNR=6.0
MAW LR LR 12 52 15.2
comp=Z,4µm,22.0s,MS5.6,baz=31,slow=30
MAW Mawson 69.45 195 *e*P **P 12 28 30.6 +2.0**
MAW pmax pmax
comp=Z,39nm,1.5s
MAW MLR MLR
comp=Z,7µm,21.0s
MAW Mawson 69.45 195 *e*P **P 12 28 30.6 +2.0**
comp=Z,39nm,1.5s,mb5.1
MAW LR LR
comp=Z,7µm,21.0s,MS5.9
EZM Erzurum 69.58 315 *e*P **P 12 28 30.7 +0.7**
ARTV Artvin 69.68 316 *i* P **P 12 28 30.8 +0.3**
DDEM Demirkent 69.69 316 *i* P **P 12 28 30.9 +0.3**
DBAD Bademkaya 69.78 316 *i* P **P 12 28 31.6 +0.5**
DBOC Borcka 69.93 316 *i* P **P 12 28 32.3 +0.2**
KIV Kislovodsk 70.31 319 P **P 12 28 34.7 +0.3**
comp=Z,458nm,1.2s,mb6.3,SNR=14
KIV Kislovodsk 70.31 319*c i*P **P 12 28 34.5 +0.1**
KIV *e* pP 12 28 52.9 +3.9
KIV *e* 12 31 08.8
KIV *e*S S 12 37 42.6 -0.2
KIV *e*SS SS 12 42 17.7 +3.4
KIV pmax pmax
comp=Z,98nm,1.1s,mb5.7
KIV pmax pmax
comp=Z,249nm,4.4s
KIV MLR MLR
comp=Z,457nm,19.0s,MS4.8
KIV Kislovodsk 70.31 319 *e*P **P 12 28 34.2 -0.2**
comp=Z,161nm,1.2s,mb5.8
KIV LR LR
comp=Z,599nm,21.0s,MS4.8
KIV Kislovodsk 70.31 319 P **P 12 28 34.9 +0.5**
SNR=30
KIV P 12 28 34.9
SNR=30
URFA Urfa 70.53 312 *e*P **P 12 28 36.4 +0.6**
GOF Gofitskoye 70.56 320 *e*P **P 12 28 41.4 +5.6**
GOF pmax pmax
comp=Z,130nm,1.0s,mb5.8
PTK Pertek 70.62 313 *e*P **P 12 28 36.5 +0.2**
ELZG Elazig 70.78 313 *i* P **P 12 28 38.3 +1.0**
ATAB Bozova 70.93 311 *i* P **P 12 28 39.2 +0.9**
GUMT Gumushane 71.12 315 *e*P **P 12 28 39.6 +0.3**
SKR Severo-Kuril's 71.14 33 *e*P **P 12 28 38.7 -0.5**
SKR *e* 12 38 14.0
SKR pmax pmax
comp=N,90nm,1.0s
SKR pmax pmax
comp=E,130nm,1.0s
SKR pmax pmax
comp=Z,310nm,1.0s,mb6.2
KELT Kelkit 71.17 314 *i* P **P 12 28 40.2 +0.6**
KEMA Kemaliye 71.40 313 *i* P **P 12 28 41.8 +0.7**
GZT Gaziantep 71.44 311 *i* P **P 12 28 42.3 +0.9**
KUZU Kuzuini 71.63 310 *i* P **P 12 28 43.4 +0.9**
SOKR Solikamsk 71.67 338*c i*P **P 12 28 41.0 -1.2**
SOKR pP 12 28 55.9 -1.0
SOKR S S 12 37 55.8 -2.1
SOKR pmax pmax
comp=Z,110nm,1.1s,mb5.7
SOKR MLR MLR
comp=Z,2µm,26.0s,MS5.2
TARA Tarawa 71.72 88 PFAKE 12 28 50.0 +6.5
TARA LR LR
comp=Z,611nm,22.0s,MS4.8
HWQ Hawqa 71.74 308 *e*P **P 12 28 44.1 +0.9**
MMAI Mount Meron Ar 71.81 306 P **P 12 28 44.8 +1.1**
comp=Z,22nm,0.8s,mb5.2,baz=101,slow=8.1,SNR=17
MMAI pP pP 12 28 59.6 +1.3
comp=Z,42nm,0.9s,baz=90,slow=10.0,SNR=7.5
MMAI LR LR 13 02 05.7
comp=Z,1µm,18.2s,MS5.2,baz=120,slow=37
BHL Bhannes 71.86 307 *e*P **P 12 28 45.0 +1.0**
KMRS Kahramanmaras 71.99 311 *e*P **P 12 28 44.8 +0.1**
SOC Sochi 72.13 318*c i*P **P 12 28 44.1 -1.2**
SOC *e**PP pP 12 28 53.3 -6.7
SOC *e* pP 12 28 59.8 -0.2
SOC *e*PPP 12 33 07.6
SOC *e*S S 12 38 01.2 -2.6
SOC pmax pmax
comp=Z,70nm,0.8s,mb5.6
SOC MLR MLR
comp=Z,494nm,20.0s,MS4.8
YAYL Yayladag 72.14 309 *i* P **P 12 28 46.0 +0.5**
GRSN GIRESUNGRSN 72.15 315 *i* P **P 12 28 45.0 -0.5**
ANDN Andirin 72.43 311 *i* P **P 12 28 47.9 +0.6**
SARI SarD1z-Kayseri 72.52 312 *e*P **P 12 28 48.7 +0.9**
SVSK Karacayir 72.71 313 *e*P **P 12 28 49.3 +0.4**
YURE YUREGIR 72.74 310 *i* P **P 12 28 49.9 +0.8**
KOZT Kozan 72.80 311 *e*P **P 12 28 48.2 -1.3**
LSZ Lusaka 72.89 255 P **P 12 28 51.2 +0.8**
comp=Z,4.1nm,0.6s,mb4.5,baz=74,slow=5.0,SNR=6.9
LSZ Lusaka 72.89 255 P **P 12 28 51.2 +0.8**
LSZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LSZ Lusaka 72.89 255 *e*P **P 12 28 50.2 -0.2**
comp=Z,7.0nm,1.0s,mb4.5
LSZ LR LR
comp=Z,2µm,21.0s,MS5.4
ERBA Erbaa 73.14 314 *i* P **P 12 28 51.5 +0.1**
RPZ Rata Peaks 73.20 135 *e*P **P 12 28 51.3 -0.4**
comp=Z,45nm,0.9s,mb5.4
PETK Petropavlovsk- 73.21 32 P **P 12 28 50.4 -1.1**
comp=Z,57nm,1.0s,mb5.5,baz=205,slow=3.9,SNR=78
PETK LR LR 13 06 34.3
comp=Z,719nm,18.8s,MS5.0,baz=256,slow=40
KARA Karaisali 73.31 310 *e*P **P 12 28 52.6 +0.1**
EREN Erenkoy 73.50 308 *e*P **P 12 28 52.9 -0.7**
GULE Gulek 73.53 310 *i* P **P 12 28 54.2 +0.4**
MERS Mersin 73.61 310 *e*P **P 12 28 54.2 0.0**
PET Petropavlovsk 73.67 32⇑*i*P **P 12 28 53.0 -1.3**
PET *e* pP 12 29 08.9 -0.1
PET *e* 12 31 39.5
PET *e*S S 12 38 20.5 -0.4
PET *e* 12 38 52.6
PET pmax pmax
comp=Z,155nm,0.9s,mb5.9
PET pmax pmax
comp=Z,600nm,5.5s
PET pmax pmax
comp=Z,500nm,15.2s
PET pmax pmax
comp=Z,300nm,13.1s
PET pmax pmax
comp=Z,300nm,5.9s
PET pmax pmax
comp=Z,500nm,5.0s
PET MLR MLR
comp=Z,1µm,21.0s,MS5.1
PET MLR MLR
comp=Z,800nm,20.0s
PET Petropavlovsk 73.67 32 *e*P **P 12 28 52.9 -1.3**
comp=Z,110nm,0.8s,mb5.8
PET LR LR
comp=Z,845nm,19.0s,MS5.0
KVT Kavak 73.78 314 *e*P **P 12 28 55.1 -0.1**
LFK Lefkose 73.93 308 *e*P **P 12 28 55.9 -0.2**
CSS Prodhromos 74.00 308 PFAKE 12 29 10.0 +13
CSS LR LR
comp=Z,1µm,22.0s,MS5.2
CSS Prodhromos 74.00 308 P **P 12 28 55.6 -1.0**
VRHR Novokhopersk 74.07 326 *e*P **P 12 28 55.7 -0.9**
VRHR pmax pmax
comp=Z,240nm,0.7s,mb6.2
VRHR pmax pmax
comp=N,50nm,0.6s
VRHR pmax pmax
comp=E,50nm,0.9s
IKL Isikli 74.07 309 *e*P **P 12 28 55.9 -1.1**
ANN Anapa 74.11 318*c i*P **P 12 28 55.5 -1.5**
ANN *e**PP pP 12 29 06.4 -5.3
ANN *e*S S 12 38 25.0 -1.2
ANN pmax pmax
comp=Z,435nm,8.4s
CORM Corum 74.52 313 *e*P **P 12 28 59.4 -0.1**
DIKM Dikmen 74.53 315 *e*P **P 12 28 59.1 -0.4**
CDAG Cicekdag 74.53 312 *i* P **P 12 28 59.3 -0.3**
CTKT Corum 74.54 314 *i* P **P 12 28 59.8 +0.2**
KHZ Kahutara 74.74 133 *e*P **P 12 28 59.1 -1.6**
comp=Z,34nm,0.8s,mb5.3
SULT Sultanhani-AKS 74.75 311 *e*P **P 12 29 01.1 +0.2**
BRTR Keskin Array B 75.11 312 P **P 12 29 02.2 -0.7**
comp=Z,39nm,0.9s,mb5.3,baz=132,slow=6.6,SNR=183
BRTR LR LR 13 03 37.8
comp=Z,321nm,21.7s,MS4.6,baz=224,slow=37
BRTR Keskin Array B 75.11 312 P **P 12 29 02.2 -0.7**
BRTR pmax pmax
comp=Z,39nm,0.9s
BRTR MLR MLR
comp=Z,321nm,21.7s
GAZI Gazipasa 75.14 309 *i* P **P 12 29 01.2 -2.0**
HDMB Hadim 75.20 309 *e*P **P 12 29 03.4 -0.1**
TOS Tosya 75.22 314 *e*P **P 12 29 03.4 -0.1**
VORD Divnogorie 75.34 325 *e*P **P 12 29 02.9 -1.1**
VORD pmax pmax
comp=Z,80nm,0.8s,mb5.7
VORD pmax pmax
comp=N,50nm,1.3s
VORD pmax pmax
comp=E,40nm,0.8s
CANT Cankiri 75.38 313 *e*P **P 12 29 04.4 0.0**
SNZO South Karori 75.42 132 PFAKE 12 29 10.0 +5.3
SNZO LR LR
comp=Z,3µm,22.0s,MS5.5
BBAL Bala 75.43 312 *i* P **P 12 29 04.0 -0.8**
ILGA Ilgaz 75.44 314 *i* P **P 12 29 05.0 +0.2**
ELDT Eldivan 75.49 313 *i* P **P 12 29 04.7 -0.4**
BZK Bozkurt 75.51 315 *e*P **P 12 29 05.3 +0.1**
VSR Storozhevoye 75.52 325 *e*P **P 12 29 03.9 -1.1**
VSR pmax pmax
comp=Z,190nm,0.8s,mb6.1
VSR pmax pmax
comp=N,30nm,0.6s
VSR pmax pmax
comp=E,110nm,0.8s
LBTB Lobatse 75.71 245 P **P 12 29 07.1 +0.4**
comp=E,7.8nm,0.8s,mb4.7,baz=120,slow=4.4,SNR=10
LBTB LR LR 12 56 13.2
comp=E,2µm,21.5s,MS5.4,baz=97,slow=31
LBTB Lobatse 75.71 245 *e*P **P 12 29 07.6 +0.9**
LBTB *e**PP pP 12 29 23.2 +1.7
LBTB pmax pmax
comp=Z,35nm,1.0s,mb5.2
LBTB MLR MLR
comp=Z,791nm,20.0s,MS5.0
LBTB Lobatse 75.71 245 *e*P **P 12 29 07.6 +0.9**
comp=Z,35nm,1.0s,mb5.2
LBTB *e*pP pP 12 29 23.2 +1.7
LBTB LR LR
comp=Z,791nm,20.0s,MS5.0
VOR Voronezh 75.71 325 *e*P **P 12 29 06.0 -0.1**
VOR pmax pmax
comp=Z,200nm,1.4s,mb5.8
BALT Daday 75.83 314 *i* P **P 12 29 06.9 -0.1**
KIZT Kizilcal 76.18 311 *e*P **P 12 29 08.0 -1.1**
BOSA Boshof 76.23 241 P **P 12 29 10.4 +0.8**
comp=Z,7.3nm,0.7s,mb4.7,baz=99,slow=7.7,SNR=18
BOSA LR LR 12 56 26.5
comp=Z,2µm,21.0s,MS5.3,baz=79,slow=31
SEY Seymchan 76.26 21*c e*P **P 12 29 08.2 -0.8**
MSVF Nonsavu 76.39 107 *e*P **P 12 29 10.5 -0.2**
comp=Z,89nm,1.4s,mb5.5
MSVF LR LR
comp=Z,1µm,22.0s,MS5.1
SUTC Sutluce-Ispart 76.48 310 *e*P **P 12 29 08.8 -2.0**
SVRH Sivrihisar-ESK 76.60 312 *e*P **P 12 29 10.8 -0.6**
BOLV Bolvadin 76.83 311 *i* P **P 12 29 12.6 -0.2**
TIXI Tiksi 76.84 9*c i*P **P 12 29 10.0 -2.1**
TIXI *e* pP 12 29 24.3 -2.6
TIXI *e* 12 32 06.7
TIXI *e*S S 12 38 57.8 +2.3
TIXI *e* 12 39 22.3
TIXI *e*SS SS 12 43 53.5 +0.8
TIXI pmax pmax
comp=Z,54nm,1.0s,mb5.4
TIXI MLR MLR
comp=Z,4µm,18.0s,MS5.8
TIXI Tiksi 76.84 9 *e*P **P 12 29 10.1 -2.1**
comp=Z,36nm,0.6s,mb5.5
TIXI LR LR
comp=Z,4µm,20.0s,MS5.8
KORT Korkueli 76.86 309 *i* P **P 12 29 12.4 -0.6**
URZ Urewera 76.87 128 *e*P **P 12 29 14.7 +1.7**
comp=Z,66nm,1.3s,mb5.4
ISP Isparta 76.93 310 *e*P **P 12 29 12.1 -1.2**
ISP Isparta 76.93 310 *e*P **P 12 29 14.0 +0.7**
ISP pmax pmax
comp=Z,66nm,1.3s,mb5.4
ISP MLR MLR
comp=Z,852nm,19.0s,MS5.1
ISP Isparta 76.93 310 P **P 12 29 11.8 -1.5**
SHUT Suhut-Afyon 77.09 311 *e*P **P 12 29 13.5 -0.7**
ESKT Eskisehir 77.12 312 *i* P **P 12 29 13.8 -0.5**
SYO Syowa Base 77.15 199‖*e*pP pP 12 29 27.4 -1.4
BORA Eskisehir 77.51 312 *i* P **P 12 29 16.1 -0.4**
GOLH Golhisar 77.53 309 *i* P **P 12 29 16.1 -0.6**
FUNA Funafuti 77.55 98 *e*P **P 12 29 16.7 -0.6**
comp=Z,73nm,1.1s,mb5.5
FUNA *e*pP pP 12 29 32.5 +0.4
FUNA LR LR
comp=Z,5µm,20.0s,MS5.9
ALT Altintas 77.55 311 *e*P **P 12 29 16.2 -0.6**
GULT Gulveren 77.60 312 *e*P **P 12 29 16.4 -0.7**
KHAL Karahalli 77.86 310 *i* P **P 12 29 17.8 -0.7**
GDZ Gediz 78.04 311 *i* P **P 12 29 19.0 -0.5**
CAVI Cavuskoy 78.04 312 *e*P **P 12 29 18.8 -0.7**
TURN Turunc 78.19 309 *i* P **P 12 29 21.9 +1.5**
MOS Moscow 78.21 329 *e*P **P 12 29 15.6 -4.4**
MOS *i* 12 29 36.4
MOS *e* 12 32 13.5
MOS *e*S S 12 39 05.1 -5.7
MOS *e* 12 39 28.2
MOS pmax pmax
comp=Z,157nm,0.8s,mb6.0
MOS pmax pmax
comp=Z,200nm,0.9s,mb6.0
YLV Yalova 78.48 312 *e*P **P 12 29 21.5 -0.4**
YER Yerkesik 78.50 309 *e*P **P 12 29 21.5 -0.6**
OBN Obninsk 78.51 328 P **P 12 29 21.0 -0.7**
comp=Z,958nm,0.5s,mb7.0,SNR=9.5
OBN Obninsk 78.51 328⇑*i*P **P 12 29 21.4 -0.3**
OBN *e* 12 32 19.0
OBN *i* S S 12 39 11.6 -2.5
OBN *e*SS SS 12 44 17.9 -0.5
OBN pmax pmax
comp=Z,127nm,0.8s,mb5.9
OBN MLR MLR
comp=Z,1µm,24.0s,MS5.1
OBN Obninsk 78.51 328 *e*P **P 12 29 21.5 -0.3**
comp=Z,100nm,0.6s,mb5.9
OBN LR LR
comp=Z,1µm,22.0s,MS5.2
KULA Kula-Manisa 78.52 310 *e*P **P 12 29 20.7 -1.5**
GEMT Gemlik 78.58 312 *e*P **P 12 29 21.9 -0.6**
MANT Manisa 78.60 310 *i* P **P 12 29 22.3 -0.3**
DEMI Demirci 78.60 311 *i* P **P 12 29 22.4 -0.2**
ISK Istanbul-Kandi 78.83 313 *e*P **P 12 29 23.6 -0.2**
KLYT Kilyos 78.89 313 *e*P **P 12 29 23.4 -0.8**
DURS Dursunbey 78.92 311 *i* P **P 12 29 23.8 -0.5**
AYDN Tasoluk 78.93 309 *i* P **P 12 29 24.7 +0.2**
DAT Datca 78.96 308 *e*P **P 12 29 24.2 -0.4**
KARP Karpathos 79.04 307 *e*P **P 12 29 25.7 +0.6**
BGKT Bogazkoy 79.07 313 *e*P **P 12 29 23.8 -1.3**
BDRM Kayabasi 79.14 309 *i* P **P 12 29 24.9 -0.8**
ELBA Catalca 79.31 313 *i* P **P 12 29 25.8 -0.7**
BALB Balikesir 79.37 311 *e*P **P 12 29 26.2 -0.6**
GCAM G?zelcaml? 79.44 309 *i* P **P 12 29 27.6 +0.4**
KLMR Klimovskoe 79.49 334*c i*P **P 12 29 26.5 -0.5**
KLMR pmax pmax
comp=Z,236nm,1.4s,mb5.9
BALY Balya 79.59 311 *i* P **P 12 29 27.9 -0.2**
ZKR Zakros 79.71 306 P **P 12 29 28.8 0.0**
BLCB Balcova 79.73 310 *e*P **P 12 29 28.9 +0.1**
BLCB Balcova 79.73 310 P **P 12 29 28.8 0.0**
SMG Samos 79.75 309 *e*P **P 12 29 29.2 +0.3**
TLCR 80.04 317⇑P **P 12 29 30.9 +0.6**
TLCR 80.04 317⇑*i*P **P 12 29 30.9 +0.6**
URLA Izmir 80.07 310 *i* P **P 12 29 30.9 +0.2**
XRY Khrisi 80.09 306 *e*P **P 12 29 31.5 +0.7**
PSN Preselentsi 80.10 315 *e*P **P 12 29 30.5 -0.2**
SART Tekirdag 80.13 312 *i* P **P 12 29 30.5 -0.4**
AYVA Ayvalik 80.20 311 *i* P **P 12 29 30.7 -0.6**
SUR Sutherland 80.27 238 P **P 12 29 34.5 +2.6**
comp=Z,556nm,0.8s,mb6.5,SNR=5.3
SUR Sutherland 80.27 238 *e*P **P 12 29 34.1 +2.2**
comp=Z,74nm,0.8s,mb5.7
SUR *e*pP pP 12 29 47.7 +0.9
SUR LR LR
comp=Z,3µm,20.0s,MS5.6
LAST Lasithi 80.31 306 P **P 12 29 32.1 +0.1**
LPK Lapseki 80.37 312 *e*P **P 12 29 32.3 +0.1**
RAO Raoul Island 80.38 119 PFAKE 12 29 40.0 +7.5
RAO LR LR
comp=Z,2µm,19.0s,MS5.5
CHOS Chios island 80.49 310 P **P 12 29 33.1 +0.2**
PRK Paraskevi 80.50 310 P **P 12 29 32.5 -0.4**
CFR Carcaliu 80.50 317‖P **P 12 29 33.1 +0.3**
CFR Carcaliu 80.50 317‖*i*P **P 12 29 33.1 +0.3**
KIS Kishinev 80.51 319 *e*PP PP 12 32 25.0 -12
KIS *e*S S 12 39 30.0 -5.5
KIS Kishinev 80.51 319 *e*P **P 12 29 30.0 -2.8**
KIS *e* pP 12 29 45.0 -2.7
KIS *e*S S 12 39 30.0 -5.5
KIS *e*SS SS 12 44 50.0 +1.3
HARR Harsova 80.53 316‖P **P 12 29 33.3 +0.4**
HARR Harsova 80.53 316‖*i*P **P 12 29 33.3 +0.4**
PRD Provadia 80.54 315 *e*P **P 12 29 32.2 -0.9**
APE Apeiranthos 80.64 308 *e*P **P 12 29 33.1 -0.6**
APE Apeiranthos 80.64 308 P **P 12 29 33.2 -0.5**
APE Apeiranthos 80.64 308‖*i*P **P 12 29 32.5 -1.2**
APE Apeiranthos 80.64 308 P **P 12 29 31.6 -2.1**
EDRB Edirne 80.71 313 *e*P **P 12 29 33.8 -0.2**
BOZC Bozcaada 80.79 311 *i* P **P 12 29 34.0 -0.4**
IDI Anoyia 80.81 306 P **P 12 29 35.1 +0.4**
baz=87,slow=7.1
SIGR SIGRI 80.81 310 P **P 12 29 32.9 -1.7**
SIVA Sivas 80.83 306 P **P 12 29 34.8 0.0**
ENEZ Enez 80.90 312 *e*P **P 12 29 34.1 -0.9**
JMB Yambol 80.96 314 P **P 12 29 36.0 +0.7**
JMB Yambol 80.96 314 *e*P **P 12 29 35.4 +0.1**
GADA Gvkgeada 80.98 311 *e*P **P 12 29 35.0 -0.4**
ALN Alexandroupoli 81.02 312 P **P 12 29 33.3 -2.4**
AKASG Malin Array Be 81.24 322 P **P 12 29 35.5 -1.1**
comp=Z,38nm,0.8s,mb5.3,baz=86,slow=5.2,SNR=95
AKASG PP PP 12 32 43.2 +0.5
comp=Z,4.0nm,0.8s,baz=92,slow=6.0,SNR=5.1
AKASG LR LR 13 11 08.5
comp=Z,620nm,21.5s,MS4.9,baz=90,slow=40
AKASG Malin Array Be 81.24 322 P **P 12 29 35.5 -1.1**
AKASG 12 32 43.2
AKASG pmax pmax
comp=Z,38nm,0.9s
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 81.24 322 P **P 12 29 35.5 -1.1**
AKASG PP PP 12 32 43.2 +0.5
AKASG LR LR 13 11 08.5
AKBB Malin Array Si 81.24 322 *e*P **P 12 29 35.5 -1.1**
KIEV Kiev 81.25 322 *e*P **P 12 29 35.6 -1.1**
KIEV pmax pmax
comp=Z,39nm,0.9s,mb5.3
KIEV MLR MLR
comp=Z,631nm,21.0s,MS5.0
KIEV Kiev 81.25 322 *e*P **P 12 29 35.6 -1.1**
comp=Z,39nm,0.9s,mb5.3
KIEV LR LR
comp=Z,631nm,21.0s,MS5.0
GVD Gavdhos 81.38 306 P **P 12 29 37.5 -0.2**
VAM Vamos 81.39 306 *e*P **P 12 29 39.1 +1.4**
RDO Rodhopi 81.44 312 P **P 12 29 37.4 -0.5**
LIA Limnos Island 81.46 311 P **P 12 29 37.6 -0.4**
LOS Limnos 81.54 311 P **P 12 29 37.2 -1.3**
SZH Strazhica 81.60 314 *e*P **P 12 29 38.3 -0.4**
VRI Vrincioaia 81.63 317‖P **P 12 29 39.6 +0.8**
VRI Vrincioaia 81.63 317‖*i*P **P 12 29 39.6 +0.8**
DIM Dimitrovgrad 81.63 313 *e*P **P 12 29 38.3 -0.6**
PLOR Plostina 81.68 317 P **P 12 29 40.2 +1.2**
SBA Scott Base 81.82 169 *e*P **P 12 29 40.4 +1.2**
SBA pmax pmax
comp=Z,46nm,0.9s,mb5.4
SBA MLR MLR
comp=Z,1µm,21.0s,MS5.3
SBA Scott Base 81.82 169 *e*P **P 12 29 40.4 +1.2**
comp=Z,46nm,0.9s,mb5.4
SBA LR LR
comp=Z,1µm,21.0s,MS5.3
MLR Muntele Rosu 82.08 317‖P **P 12 29 42.0 +0.8**
MLR Muntele Rosu 82.08 317‖*i*P **P 12 29 42.0 +0.8**
PTL Penteli 82.12 309 *e*P **P 12 29 40.9 -0.6**
RZN Rozhen 82.16 313 *e*P **P 12 29 40.9 -0.8**
KAVA Kavala 82.17 312 P **P 12 29 41.4 -0.4**
PLD Plovdiv 82.25 313 P **P 12 29 41.6 -0.5**
OUR Ouranopolis 82.45 311 P **P 12 29 42.4 -0.8**
PAIG Paliouri 82.60 311 P **P 12 29 43.6 -0.4**
VLI Veliai 82.62 307 *e*P **P 12 29 45.1 +0.9**
VOIR 82.68 316‖P **P 12 29 44.1 -0.2**
VOIR 82.68 316‖*i*P **P 12 29 44.1 -0.2**
PGB Panagyurishte 82.73 313 *e*P **P 12 29 44.0 -0.6**
PLG Polygyros 82.86 311 P **P 12 29 43.8 -1.5**
MMB Musomiste 82.87 312 *e*P **P 12 29 44.4 -1.0**
XOR Xorichti 82.87 310 P **P 12 29 43.6 -1.8**
SRS Serrai 82.88 312 P **P 12 29 44.0 -1.4**
LKR Lokris 82.89 309 P **P 12 29 43.8 -1.8**
SOH Sokhos 83.00 312 P **P 12 29 45.2 -0.9**
BURAR Bucovina Array 83.03 319⇑P **P 12 29 47.1 +1.0**
BURAR Bucovina Array 83.03 319⇑*i*P **P 12 29 47.1 +1.0**
TSUM Tsumeb 83.04 251 P **P 12 29 47.7 +1.0**
comp=Z,4.6nm,0.8s,mb4.6,baz=69,slow=5.3,SNR=10
TSUM Tsumeb 83.04 251 *e*P **P 12 29 47.3 +0.6**
comp=Z,7.9nm,1.1s,mb4.7
TSUM *e*pP pP 12 30 01.9 +0.2
TSUM LR LR
comp=Z,2µm,21.0s,MS5.4
MICGM Minsk 83.06 326⇑*i*P **P 12 29 43.0 -3.0**
MNK Minsk 83.09 326⇑*i*P **P 12 29 43.0 -3.2**
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.4
HORT Hortiatis 83.16 311 P **P 12 29 45.9 -1.0**
PUL Pulkovo 83.31 331*c e*P **P 12 29 47.7 +0.5**
PUL pmax pmax
comp=Z,122nm,0.5s,mb6.2
KKB Krupnik 83.39 313 *e*P **P 12 29 47.1 -1.0**
VTS Vitosha 83.43 313 P **P 12 29 48.1 -0.1**
VTS Vitosha 83.43 313 *e*P **P 12 29 48.6 +0.4**
AGG Agios Georgios 83.47 310 P **P 12 29 47.1 -1.4**
ITM Ithomi 83.49 308 *e*P **P 12 29 48.9 +0.2**
ITM Ithomi 83.49 308 P **P 12 29 48.4 -0.3**
LIT Litokhoron 83.53 311 P **P 12 29 47.3 -1.5**
VAY Valandovo 83.68 312 *i* P **P 12 29 48.3 -1.3**
VAY Valandovo 83.68 312 P **P 12 29 47.3 -2.2**
NACGM Naroch 83.78 326 *e*P **P 12 29 46.0 -3.7**
THL Klokotos Trika 83.80 310 P **P 12 29 44.6 -5.6**
BILL Bilibino 83.83 20⇑*i*P **P 12 29 48.4 -1.3**
BILL *e* 12 33 01.7
BILL *i* S S 12 40 05.1 -3.7
BILL *e*SS SS 12 45 36.8 -0.4
BILL pmax pmax
comp=Z,15nm,1.0s,mb5.1
BILL MLR MLR
comp=Z,1µm,21.0s,MS5.3
BILL Bilibino 83.83 20 *e*P **P 12 29 48.2 -1.5**
comp=Z,14nm,0.7s,mb5.2
BILL *e*pP pP 12 30 03.1 -1.6
BILL LR LR
comp=Z,2µm,19.0s,MS5.4
MIDW Midway 83.86 61 PFAKE 12 30 00.0 +9.2
MIDW LR LR
comp=Z,2µm,22.0s,MS5.4
JOF Joensuu 83.87 334 *e*P **P 12 29 49.9 -0.1**
JOF pmax pmax
comp=Z,39nm,0.9s,mb5.5
JOF Joensuu 83.87 334 *e*p **P 12 29 49.9 -0.1**
comp=Z,39nm,0.9s,mb5.5
IDID Didziasalis 83.91 326 *e*P **P 12 29 50.8 +0.4**
KZN Kozani 84.11 311 P **P 12 29 50.2 -1.6**
BMR Baia Mare 84.18 318‖P **P 12 29 53.2 +1.2**
BMR Baia Mare 84.18 318‖*i*P **P 12 29 53.2 +1.2**
IIGN Ignalina 84.20 326 *e*P **P 12 29 52.3 +0.4**
GZR Gura Zlata 84.24 316 P **P 12 29 52.1 -0.2**
DEV Deva 84.25 317⇑P **P 12 29 53.8 +1.5**
DEV Deva 84.25 317⇑*i*P **P 12 29 53.8 +1.5**
LVV L'vov 84.27 321 *e*P **P 12 29 52.5 +0.2**
LVV *i* pP 12 30 11.5 +4.2
LVV *e* 12 33 15.3
LVV *e*S S 12 40 11.3 -2.5

ISAL	**Salakas**	**84.31 327**	*e*P	**P**	**12 29 52.5**	**+0.1**
LVZ	**Lovozero**	**84.37 340**	P	**P**	**12 29 52.9**	**+0.4**
	comp=Z,324nm,0.7s,mb6.6,SNR=11					
LVZ	**Lovozero**	**84.37 340**	*de*P	**P**	**12 29 52.0**	**-0.5**
LVZ			pmax	pmax		
	comp=Z,37nm,0.7s,mb5.6					
LVZ	**Lovozero**	**84.37 340**	PFAKE		12 30 00.0	+7.5
LVZ			LR	LR		
	comp=Z,1μm,22.0s,MS5.3					
FNA	**Florina**	**84.48 311**	P	**P**	**12 29 52.1**	**-1.5**
DRGR		**84.54 317**	⇑P	**P**	**12 29 54.4**	**+0.6**
DRGR		**84.54 317**	⇑*i*P	**P**	**12 29 54.4**	**+0.6**
KRUS	**Krusevo**	**84.67 312**	*i* P	**P**	**12 29 52.9**	**-1.6**
APA	**Apatity**	**84.68 339**	⇓*e*P	**P**	**12 29 53.0**	**-1.0**
APA			*i*	pP	12 30 09.6	+0.6
APA			*e*S	S	12 40 15.0	-2.3
APA			pmax	pmax		
	comp=Z,31nm,1.0s,mb5.4					
APA			pmax	pmax		
	comp=Z,800nm,4.7s					
APA			MLR	MLR		
	comp=Z,2μm,21.0s,MS5.5					
VSU	**Vasula**	**84.71 329***c*	*i*P	**P**	**12 29 54.0**	**-0.4**
VSU			pmax	pmax		
	comp=Z,86nm,1.0s,mb5.8					
TRPA	**Tarpa**	**84.90 319**	⇑*i*P	**P**	**12 29 55.9**	**+0.3**
OHR	**Ohrid**	**84.96 312**	*i* P	**P**	**12 29 54.3**	**-1.8**
KWP	**Kalwaria Pacla**	**85.07 320**	*e*P	**P**	**12 29 56.8**	**+0.4**
KWP			*e*PcP	PcP	12 29 58.2	-1.3
KWP			*e*PP	PP	12 33 13.5	-0.6
KWP			LMZ		13 09 29.4	
	comp=Z,700nm,26.5s					
KWP	**Kalwaria Pacla**	**85.07 320**	*e*P	**P**	**12 29 56.5**	**+0.1**
	comp=Z,42nm,0.8s,mb5.6					
KWP			LR	LR		
	comp=Z,684nm,20.0s,MS5.0					
KWP	**Kalwaria Pacla**	**85.07 320**	⇑*i*P	**P**	**12 29 56.7**	**+0.3**
IGT	**Igoumenitsa**	**85.08 310**	P	**P**	**12 29 54.3**	**-2.4**
BZS	**Buzias**	**85.09 316**	⇑P	**P**	**12 29 56.8**	**+0.2**
BZS	**Buzias**	**85.09 316**	⇑*i*P	**P**	**12 29 56.8**	**+0.2**
UZH	**Uzhgorod**	**85.15 319**	*i* P	**P**	**12 29 57.3**	**+0.5**
UZH			*e*	pP	12 30 11.3	-0.5
UZH			*e*		12 33 17.5	
UZH			*e*PPP		12 35 14.5	
UZH			*e*S	S	12 40 20.3	-2.4
UZH			*e*PS		12 41 25.0	
UZH			*e*SS	SS	12 45 59.3	+1.8
UZH			*e*SSS		12 49 27.5	
KOLS	**Kolonicke sedl**	**85.22 319**	*e*P	**P**	**12 29 58.0**	**+0.8**
KOLS			pmax	pmax		
	comp=Z,120nm,1.0s,mb6.0					
KOLS	**Kolonicke sedl**	**85.22 319**	*e*P	**P**	**12 29 58.0**	**+0.8**
KOLS			*es*P	sP	12 30 13.8	-4.1
KOLS	**Kolonicke sedl**	**85.22 319**	*e*S	S	12 40 24.8	+1.4
KEK	**Kerkira**	**85.52 310**	*e*P	**P**	**12 29 58.9**	**0.0**
SUW	**Suwalki**	**85.63 325**	*i* P	**P**	**12 29 58.8**	**-0.3**
SUW			*e*PcP	PcP	12 30 00.2	-1.7
SUW			LMZ		13 07 21.0	
	comp=Z,800nm,28.7s					
SUW	**Suwalki**	**85.63 325**	*e*P	**P**	**12 29 58.7**	**-0.4**
	comp=Z,322nm,0.9s,mb6.5					
TIR	**Tirane**	**85.69 312**	PFAKE		12 30 10.0	+10
TIR			LR	LR		
	comp=Z,577nm,22.0s,MS4.9					
FINES	**FINESS Array B**	**85.79 332**	P	**P**	**12 29 59.4**	**-0.3**
	comp=Z,27nm,0.9s,mb5.5,baz=102,slow=4.3,SNR=39					
FINES			PP	PP	12 33 16.2	-3.3
	comp=Z,9.0nm,0.9s,baz=126,slow=9.8,SNR=3.9					
FINES			LR	LR	13 13 06.8	
	comp=Z,399nm,20.1s,MS4.8,baz=107,slow=39					
FINES	**FINESS Array B**	**85.79 332**	P	**P**	**12 29 59.4**	**-0.3**
FINES					12 33 16.3	
FINES			pmax	pmax		
	comp=Z,27nm,0.9s					
FINES			pmax	pmax		
	comp=Z,9.0nm,0.9s					
FINES	**FINESS Array B**	**85.79 332**	P	**P**	**12 29 59.4**	**-0.3**
FINES			PP	PP	12 33 16.2	-3.3
FINES			LR	LR	13 13 06.8	
KAF	**Kangasniemi**	**85.85 333**	*e*P	**P**	**12 29 59.5**	**-0.5**
KAF			pmax	pmax		
	comp=Z,37nm,0.7s,mb5.7					
KAF	**Kangasniemi**	**85.85 333**	*ep*	**P**	**12 29 59.5**	**-0.5**
	comp=Z,37nm,0.7s,mb5.7,baz=99,slow=4.5					
STHS	**Stebnicka Huta**	**85.97 320**	*e*P	**P**	**12 30 01.6**	**+0.7**
STHS			pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5					
STHS	**Stebnicka Huta**	**85.97 320**	*e*P	**P**	**12 30 01.6**	**+0.7**
STHS			*es*P	sP	12 30 19.7	-1.9
DIVS	**Divibare**	**85.99 314**	P	**P**	**12 30 01.0**	**-0.1**
AFI	**Afiamalu**	**86.24 104**	*e*P	**P**	**12 30 03.5**	**+0.6**
AFI			pmax	pmax		
	comp=Z,55nm,0.9s,mb5.8					
AFI	**Afiamalu**	**86.24 104**	*e*P	**P**	**12 30 03.5**	**+0.6**
	comp=Z,55nm,0.9s,mb5.8					
KECS	**Kecovo**	**86.31 319**	*e*P	**P**	**12 30 02.7**	**+0.1**
KECS			pmax	pmax		
	comp=Z,11nm,0.8s,mb5.1					
KECS	**Kecovo**	**86.31 319**	*e*P	**P**	**12 30 02.7**	**+0.1**
KECS			*es*P	sP	12 30 18.3	-5.1
NIE	**Niedzica**	**86.57 320**	⇑*e*P	**P**	**12 30 04.4**	**+0.6**
NIE			*e**SP	sP	12 30 19.8	-4.8
WAR	**Warsaw**	**86.58 323**	*e*P	**P**	**12 30 04.3**	**+0.4**
WAR			LMZ		13 06 44.8	
	comp=Z,1μm,33.5s					
PSZ	**Piszkesteto**	**86.62 318**	⇑*e*P	**P**	**12 30 04.2**	**+0.1**
PSZ	**Piszkesteto**	**86.62 318**	⇑*i*P	**P**	**12 30 04.3**	**+0.2**
QSPA	**South Pole Qui**	**86.76 180**	*e*P	**P**	**12 30 04.8**	**+0.6**
	comp=Z,19nm,0.8s,mb5.4					
NVL	**N'lazarevskaya**	**86.82 199**	*e*P	pP	12 30 17.7	-2.0
NVL			*e**SP	sP	12 30 26.0	+0.6
NVL			*e*		12 30 32.5	
NVL			*e*		12 33 26.6	
NVL			pmax	pmax		
	comp=Z,34nm,1.2s,mb5.5					
MAIT	**Maitri**	**86.85 199**	*e*P		12 30 21.4	
OJC	**Ojcow**	**87.02 320**	*i* P	**P**	**12 30 06.0**	**0.0**
OJC			*ep*P	pP	12 30 17.6	-3.5
OJC			*es*P	sP	12 30 21.3	-5.5
OJC			*e*PP	PP	12 33 30.0	+0.1
OJC			*e*S	S	12 40 42.1	+1.2
OJC			L		13 18 15.5	
	comp=Z,0.9nm,22.0s					
OJC	**Ojcow**	**87.02 320**	⇑*i*P	**P**	**12 30 06.0**	**0.0**
OJC			*e**PP	pP	12 30 17.6	-3.5
OJC			*e**SP	sP	12 30 21.3	-5.5
OJC			*e*		12 33 30.0	
OJC			*e*S	S	12 40 42.1	+1.2
PKSM	**Moragy**	**87.23 316**	P	**P**	**12 30 07.4**	**+0.3**
PKSM	**Moragy**	**87.23 316**	⇑*i*P	**P**	**12 30 06.9**	**-0.2**
LIKS	**Likavka**	**87.30 319**	*e*P	**P**	**12 30 08.1**	**+0.7**
LIKS			pmax	pmax		
	comp=Z,39nm,1.1s,mb5.5					
LIKS	**Likavka**	**87.30 319**	*e*P	**P**	**12 30 08.1**	**+0.7**
VYHS	**Vyhne**	**87.40 319**	*e*P	**P**	**12 30 08.1**	**+0.2**
VYHS			pmax	pmax		
	comp=Z,16nm,1.3s,mb5.1					
VYHS	**Vyhne**	**87.40 319**	*e*P	**P**	**12 30 08.1**	**+0.2**
VYHS			*es*P	sP	12 30 23.7	-5.0
VYHS	**Vyhne**	**87.40 319**	*e*S	S	12 40 46.3	+1.7
VYHS			*e*SS	SS	12 46 44.8	+14
KEV	**Kevo**	**87.60 340**	*e*P	**P**	**12 30 08.0**	**-0.4**
KEV			pmax	pmax		
	comp=Z,52nm,0.9s,mb5.8					
KEV	**Kevo**	**87.60 340**	*e*P	**P**	**12 30 07.6**	**-0.8**
	comp=Z,14nm,0.9s,mb5.2					
KEV			LR	LR		
	comp=Z,1μm,21.0s,MS5.3					
KEV	**Kevo**	**87.60 340**	*ep*	**P**	**12 30 08.0**	**-0.4**
	comp=Z,52nm,0.9s,mb5.8					
KOLL	**Kolacno**	**87.70 319**	*e*P	**P**	**12 30 09.8**	**+0.5**
KOLL	**Kolacno**	**87.70 319**	*e*P	**P**	**12 30 09.8**	**+0.5**
TIP	**Timpagrande**	**87.79 309**	*e*P	**P**	**12 30 10.6**	**+0.6**
	comp=Z,74nm,1.3s,mb5.8					
TIP			LR	LR		
	comp=Z,393nm,22.0s,MS4.8					
OKC	**Ostrava-Krasne**	**88.03 320**	*e*P	**P**	**12 30 11.4**	**+0.6**
OKC			*e**PP	pP	12 30 26.9	+1.0
OKC			*e*S	S	12 40 50.8	+0.3
OKC			MLR	MLR		
	comp=Z,600nm,20.6s,MS5.0					
OKC	**Ostrava-Krasne**	**88.03 320**	*e*P	**P**	**12 30 11.4**	**+0.6**
OKC			*ep*P	pP	12 30 26.9	+1.0
OKC			*e*PP	PP	12 33 31.9	-6.0
OKC			*e*S	S	12 40 50.8	+0.3
OKC			*ex*	x	12 53 28.5	
OKC			AMS	AMS	13 18 50.0	
	comp=Z,600nm,20.6s					
RAC	**Raciborz**	**88.03 320**	*e*P	**P**	**12 30 12.0**	**+1.2**
ARCES	**ARCESS Array B**	**88.05 340**	P	**P**	**12 30 10.2**	**-0.4**
	comp=Z,54nm,0.9s,mb5.8,baz=106,slow=3.9,SNR=46					
ARCES			PP	PP	12 33 38.5	+0.9
	comp=Z,20nm,1.0s,baz=86,slow=6.2,SNR=5.9					
ARCES	**ARCESS Array B**	**88.05 340**	P	**P**	**12 30 10.2**	**-0.3**
ARCES					12 33 38.5	
ARCES			pmax	pmax		
	comp=Z,54nm,0.9s					
ARCES			pmax	pmax		
	comp=Z,20nm,1.0s					
ORI	**Oriolo Calabro**	**88.12 310**	P	**P**	**12 30 13.1**	**+1.6**
CEL	**Celeste**	**88.37 308**	*e*P	**P**	**12 30 13.1**	**+0.3**
	comp=Z,231nm,1.3s,mb6.2					
CEL			LR	LR		
	comp=Z,333nm,20.0s,MS4.8					
MORC	**Moravsky Berou**	**88.41 320**	*e*P	**P**	**12 30 13.1**	**+0.5**
MORC			*e**PP	pP	12 30 28.5	+0.8
MORC			pmax	pmax		
	comp=Z,26nm,0.8s,mb5.5					
MORC	**Moravsky Berou**	**88.41 320**	*e*P	**P**	**12 30 13.1**	**+0.5**
	comp=Z,26nm,0.8s,mb5.5					
MORC			*ep*P	pP	12 30 28.5	+0.7
PTRP	**Pietrapertosa**	**88.46 311**	P	**P**	**12 30 14.5**	**+1.4**
MTTG	**Motta San Giov**	**88.51 308**	P	**P**	**12 30 14.5**	**+1.1**
ZST	**Bratislava**	**88.51 318**	*e*P	**P**	**12 30 13.9**	**+0.7**
ZST			pmax	pmax		
	comp=Z,34nm,0.9s,mb5.7					
ZST	**Bratislava**	**88.51 318**	*e*P	**P**	**12 30 13.9**	**+0.7**
ZST			*es*P	sP	12 30 29.6	-4.4
ZST	**Bratislava**	**88.51 318**	*e*S		12 41 18.7	
KOGS	**Kog**	**88.90 316**	*i* P	**P**	**12 30 15.6**	**+0.5**
VRAC	**Vranov**	**88.97 319**	P	**P**	**12 30 15.4**	**+0.1**
	comp=Z,8.4nm,0.9s,mb5.1,baz=134,slow=5.2,SNR=8.3					
VRAC			PP	PP	12 33 45.8	+0.3
	comp=Z,3.2nm,0.9s,baz=112,slow=5.4,SNR=3.3					
VRAC	**Vranov**	**88.97 319**	P	**P**	**12 30 15.4**	**+0.1**
VRAC					12 33 45.8	
VRAC			pmax	pmax		
	comp=Z,8.0nm,0.9s					
VRAC			pmax	pmax		
	comp=Z,3.0nm,1.0s					
VRAC	**Vranov**	**88.97 319**	⇑*i*P	**P**	**12 30 15.5**	**+0.2**
GKP	**Gorka Klasztor**	**89.01 323**	*e*P	**P**	**12 30 15.5**	**+0.1**
GKP			*e*PcP	PcP	12 30 17.0	+0.1
GKP			*e*S	S	12 41 27.1	+27
GKP			LMZ		13 07 26.6	
	comp=Z,800nm,32.5s					
FG2	**Serracapriola**	**89.25 312**	P	**P**	**12 30 17.8**	**+1.0**
	comp=Z,593nm,1.1s,mb6.8					
DPC	**Dobruska-Polom**	**89.25 320**	*e*P	**P**	**12 30 17.6**	**+1.0**
DPC			*e**PP	pP	12 30 33.2	+1.5
DPC			*e*S	S	12 41 02.5	+0.4
DPC			MLR	MLR		
	comp=Z,700nm,22.8s,MS5.0					
DPC	**Dobruska-Polom**	**89.25 320**	*e*P	**P**	**12 30 17.6**	**+1.0**
DPC			*ep*P	pP	12 30 33.2	+1.5
DPC			*e*PP	PP	12 33 36.9	-11
DPC			*e*S	S	12 41 02.5	+0.4
DPC			*ex*	x	12 46 33.9	
DPC			*ex*	x	12 53 29.1	
DPC			AMS	AMS	13 19 20.0	
	comp=Z,700nm,22.8s					
WDD	**Wield Dalam**	**89.26 306**	PFAKE		12 30 30.0	+13
WDD			LR	LR		
	comp=Z,744nm,22.0s,MS5.1					
CSSN	**Cassano Irpino**	**89.27 311**	P	**P**	**12 30 17.2**	**+0.3**
	comp=Z,74nm,1.0s,mb6.0					
CONA	**Conrad Observa**	**89.31 318**	⇑*i*P	**P**	**12 30 16.8**	**-0.1**
	comp=Z,15nm,0.9s,mb5.3,SNR=14					
KSP	**Ksiaz**	**89.32 321**	*e*P	**P**	**12 30 17.8**	**+0.9**
KSP			*e*PcP	PcP	12 30 19.2	+0.9
KSP			*e*S	S	12 41 02.7	0.0
KSP			LMZ		13 15 48.1	
	comp=Z,2μm,24.0s					
KSP	**Ksiaz**	**89.32 321**	⇑*e*P	**P**	**12 30 17.5**	**+0.6**
KSP			*e**PP	pP	12 30 32.8	+0.8
KSP			*e*		12 33 47.0	
KSP			*e*S	S	12 41 02.7	0.0
VAE	**Valguarnera**	**89.47 307**	P	**P**	**12 30 19.8**	**+1.9**
	comp=Z,44nm,1.0s,mb5.7,baz=56,slow=9.8,SNR=4.9					
VAE	**Valguarnera**	**89.47 307**	P	**P**	**12 30 19.8**	**+1.9**
ARSA	**Arzberg**	**89.48 317**	⇑*i*P	**P**	**12 30 18.2**	**+0.4**
	comp=Z,30nm,0.9s,mb5.6,SNR=15					
BOJS	**Bojanci**	**89.51 315**	*e*P	**P**	**12 30 18.2**	**+0.3**
BOJS			*i*	pP	12 30 33.5	+0.5
BOJS			*e*S	S	12 41 02.9	-1.7
TREC	**Trest**	**89.69 319**	*e*P	**P**	**12 30 19.2**	**+0.5**
TREC			*e**PP	pP	12 30 34.9	+1.1
TREC			*e*		12 33 50.6	
TREC			*e*S	S	12 41 05.9	-0.3
TREC			MLR	MLR		
	comp=Z,700nm,20.8s,MS5.1					
TREC	**Trest**	**89.69 319**	*e*P	**P**	**12 30 19.2**	**+0.5**
TREC			*ep*P	pP	12 30 34.9	+1.1
TREC			*e*PP	PP	12 33 50.6	-0.6
TREC			*e*S	S	12 41 05.9	-0.3
TREC			AMS	AMS	13 19 50.0	
	comp=Z,700nm,20.8s					
PERS	**Pernice**	**89.70 317**	*i* P	**P**	**12 30 19.3**	**+0.5**
PERS			*e*	pP	12 30 34.8	+0.9
PERS			*e*S	S	12 41 06.6	+0.1
SOKA	**Soboth**	**89.76 317**	⇑*i*P	**P**	**12 30 19.6**	**+0.5**
	comp=Z,47nm,0.9s,mb5.8					
SGG	**Gregorio Mates**	**89.80 311**	P	**P**	**12 30 19.2**	**-0.2**
LJU	**Ljubljana**	**90.06 316**	*i* P	**P**	**12 30 21.1**	**+0.6**
LJU			*i*	pP	12 30 36.4	+0.8
LJU			*e*S	S	12 41 08.4	-1.4
LJU	**Ljubljana**	**90.06 316**	*i* P	**P**	**12 30 21.1**	**+0.6**
LJU			*i*	pP	12 30 36.4	+0.9
LJU			*e*S	S	12 41 08.3	-1.4
LJU			*e*		12 41 44.4	
LJU			*e*		12 42 36.6	
OBKA	**Obir**	**90.08 316**	⇑*i*P	**P**	**12 30 21.1**	**+0.5**
	comp=Z,22nm,0.9s,mb5.5,SNR=6.9					
SDI	**San Donato**	**90.25 312**	P	**P**	**12 30 21.2**	**-0.3**
	comp=Z,15nm,0.7s,mb5.4					
PRU	**Pruhonice**	**90.36 320**	*e*P	**P**	**12 30 23.0**	**+1.2**
PRU			*e**PP	pP	12 30 38.5	+1.6
PRU			*e*		12 33 55.8	
PRU			*e*S	S	12 41 14.0	+1.6
PRU			*e*SS	SS	12 47 15.0	+1.7
PRU			MLR	MLR		
	comp=Z,600nm,15.4s,MS5.1					
PRU	**Pruhonice**	**90.36 320**	*e*P	**P**	**12 30 23.0**	**+1.2**
PRU			*ep*P	pP	12 30 38.5	+1.6
PRU			*e*PP	PP	12 33 55.8	-0.7
PRU			*e*S	S	12 41 14.0	+1.6
PRU			*e*SS	SS	12 47 15.0	+1.7
PRU			*ex*	x	12 54 20.8	
PRU			AMS	AMS	13 20 00.0	
	comp=Z,600nm,15.4s					
JAVS	**Javornik**	**90.37 316**	*i* P	**P**	**12 30 22.1**	**+0.2**
JAVS			*i*	pP	12 30 37.2	+0.2
MOA	**Molln**	**90.38 318**	⇑*i*P	**P**	**12 30 21.8**	**-0.1**
	comp=Z,14nm,0.9s,mb5.3,SNR=6.7					
PVCC	**Panska Ves**	**90.38 320**	*e*P	**P**	**12 30 22.7**	**+0.8**
PVCC			*e**PP	pP	12 30 38.5	+1.5
PVCC			*e*		12 33 52.4	
PVCC			*e*S	S	12 41 12.2	-0.4
PVCC			MLR	MLR		
	comp=Z,1μm,22.9s,MS5.2					
PVCC	**Panska Ves**	**90.38 320**	*e*P	**P**	**12 30 22.7**	**+0.8**
PVCC			*ep*P	pP	12 30 38.5	+1.5
PVCC			*e*PP	PP	12 33 52.4	-4.3
PVCC			*e*S	S	12 41 12.2	-0.4
PVCC			AMS	AMS	13 17 40.0	
	comp=Z,1μm,22.9s					
PRA	**Prague**	**90.44 320**	P	**P**	**12 30 23.0**	**+0.9**
PRA			pP	pP	12 30 38.0	+0.8
VOY	**Vojsko**	**90.50 316**	*e*P	**P**	**12 30 22.7**	**+0.2**
VOY			*e*	pP	12 30 38.0	+0.4
VOY			*e*		12 30 47.9	
BSD	**Bornholm Skovb**	**90.55 325**	*i* P	**P**	**12 30 18.8**	**-3.7**
BSD						
	comp=Z,650nm,21.0s					
TRI	**Trieste**	**90.56 316**	PFAKE		12 30 30.0	+7.2
TRI			LR	LR		
	comp=Z,584nm,20.0s,MS5.0					
AQU	**L'Aquila**	**90.60 312**	*e*P	**P**	**12 30 23.4**	**+0.3**
AQU			*e**PP	pP	12 30 38.8	+0.6
AQU			pmax	pmax		
	comp=Z,106nm,1.1s,mb6.1					
AQU			MLR	MLR		
	comp=Z,462nm,20.0s,MS4.9					
AQU	**L'Aquila**	**90.60 312**	*e*P	**P**	**12 30 23.4**	**+0.3**
	comp=Z,106nm,1.1s,mb6.1					
AQU			*ep*P	pP	12 30 38.8	+0.6
AQU			LR	LR		
	comp=Z,462nm,20.0s,MS4.9					
AQU	**L'Aquila**	**90.60 312**	⇓*i*P	**P**	**12 30 23.7**	**+0.6**
BRG	**Berggiesshubel**	**90.81 321**	*e*P	**P**	**12 30 23.9**	**+0.1**
	comp=Z,26nm,1.0s,mb5.5					
BRG			*e*PP	PP	12 34 00.4	+0.3
BRG			*e*S	S	12 41 16.0	-0.4
BRG	**Berggiesshubel**	**90.81 321**	⇑*i*P	**P**	**12 30 24.3**	**+0.5**
	comp=Z,26nm,1.0s,mb5.5					
BRG			*i* pP	pP	12 30 39.5	+0.6
	comp=Z,80nm,1.8s					
BRG			PP	PP	12 33 51.0	-9.1
BRG			SS	SS	12 46 59.0	-21
BRG			*e*		12 48 00.3	
	comp=Z,9.9nm,1.7s					
BRG			S		12 51 12.0	
BRG			S		12 55 16.8	
	comp=Z,6.5nm,1.6s					
BRG						
	comp=N,389nm,22.1s					
BRG						
	comp=E,725nm,24.0s					
BRG						
	comp=Z,725nm,21.1s					
BRG	**Berggiesshubel**	**90.81 321**	⇑*i*P	**P**	**12 30 24.3**	**+0.5**
BRG			*i* *PP	pP	12 30 39.5	+0.5
BRG			pmax	pmax		
	comp=Z,16nm,1.0s,mb5.3					
BRG			pmax	pmax		
	comp=Z,48nm,1.8s,mb5.5					
BRG			pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.7					
BRG			MLR	MLR		
	comp=N,233nm,22.1s,MS4.9					
BRG			MLR	MLR		
	comp=E,434nm,24.0s,MS4.9					
BRG			MLR	MLR		
	comp=Z,434nm,21.1s,MS4.9					
GEC2	**GERESS Array S**	**90.82 319**	*e*P	**P**	**12 30 24.1**	**+0.1**
	comp=Z,32nm,1.1s,mb5.6					
GEC2			*ep*P	pP	12 30 39.9	+0.8
GEC2			*e*PP	PP	12 34 01.2	+1.0
GEC2			*e*S	S	12 41 16.0	-0.7
GEC2	**GERESS Array S**	**90.82 319**	*e*P	**P**	**12 30 24.1**	**+0.1**
GEC2			*e**PP	pP	12 30 39.9	+0.8
GEC2			*e*		12 34 01.2	
GEC2			*e*S	S	12 41 16.0	-0.7
GEC2			pmax	pmax		
	comp=Z,32nm,1.1s,mb5.6					
GERES	**GERESS Array B**	**90.82 319**	P	**P**	**12 30 24.4**	**+0.4**
	comp=Z,16nm,0.9s,mb5.3,baz=90,slow=4.4,SNR=102					
GERES			pP	pP	12 30 39.8	+0.7
	comp=Z,14nm,1.0s,baz=97,slow=5.5,SNR=7.8					
GERES	**GERESS Array B**	**90.82 319**	P	**P**	**12 30 24.4**	**+0.4**
GERES			*PP	pP	12 30 39.8	+0.7
GERES			pmax	pmax		
	comp=Z,16nm,0.9s					
GERES			pmax	pmax		
	comp=Z,14nm,1.0s					
NRCA	**Norcia**	**90.84 313**	P	**P**	**12 30 24.7**	**+0.5**
	comp=Z,41nm,1.0s,mb5.7					
PTCC	**Patocco-Chiusa**	**90.90 316**	P	**P**	**12 30 24.6**	**+0.2**
	comp=Z,33nm,0.8s,mb5.7					
KHC	**Kasperske Hory**	**90.92 319**	*e*P	**P**	**12 30 24.5**	**+0.1**
KHC			*e**PP	pP	12 30 39.9	+0.4
KHC			*e*S	S	12 41 17.8	+0.2
KHC			*e*SS	SS	12 47 20.3	-1.2
KHC			MLR	MLR		
	comp=Z,900nm,18.9s,MS5.2					
KHC	**Kasperske Hory**	**90.92 319**	*e*P	**P**	**12 30 24.4**	**0.0**
	comp=Z,13nm,0.9s,mb5.3					
KHC	**Kasperske Hory**	**90.92 319**	*e*P	**P**	**12 30 24.5**	**+0.1**
KHC			*ep*P	pP	12 30 39.9	+0.4
KHC			*ex*	x	12 30 57.5	
KHC			*ex*	x	12 33 46.3	
KHC			*e*S	S	12 41 17.8	+0.2
KHC			*e*SS	SS	12 47 20.3	-1.2
KHC			*ex*	x	12 54 18.8	
KHC			AMS	AMS	13 20 20.0	
	comp=Z,900nm,18.9s					
RUE	**Ruedersdorf**	**91.02 322**	*e*P	**P**	**12 30 24.7**	**-0.1**
	comp=Z,65nm,1.2s,mb5.8					
RUE			*ep*P	pP	12 30 40.9	+1.0
RUE	**Ruedersdorf**	**91.02 322**	*e*P	**P**	**12 30 24.8**	**0.0**
	comp=Z,51nm,1.0s,mb5.8					
RUE			*ep*P	pP	12 30 40.7	+0.8
FSSB	**Fossombrone**	**91.14 314**	P	**P**	**12 30 26.6**	**+1.0**
	comp=Z,106nm,1.4s,mb6.0					
RJOB	**Jochberg**	**91.36 318**	*e*P	**P**	**12 30 25.6**	**-0.9**
	comp=Z,25nm,0.9s,mb5.5					
RJOB			*e*PP	PP	12 34 05.2	+0.7
RJOB			*e*S	S	12 41 19.4	-2.2
WET	**Wettzell**	**91.38 319**	*e*P	**P**	**12 30 26.6**	**0.0**
	comp=Z,29nm,1.1s,mb5.5					
WET			*ep*P	pP	12 30 42.6	+0.9
WET			*e*PP	PP	12 34 05.5	+0.8
WET			*e*S	S	12 41 22.0	+0.3
WET	**Wettzell**	**91.38 319**	*e*P	**P**	**12 30 26.6**	**0.0**
WET			*e**PP	pP	12 30 42.6	+0.9
WET			*e*		12 34 05.5	
WET			*e*S	S	12 41 22.0	+0.3
WET			pmax	pmax		
	comp=Z,29nm,1.1s,mb5.5					
CLL	**Collm**	**91.43 321**	*e*P	**P**	**12 30 26.3**	**-0.4**
	comp=Z,19nm,1.2s,mb5.3					
CLL			*e*PP	PP	12 34 05.7	+0.8
CLL			*e*S	S	12 41 20.8	-1.3
CLL	**Collm**	**91.43 321**	⇑*i*P	**P**	**12 30 26.7**	**0.0**
CLL			*i* *PP	pP	12 30 41.8	0.0
CLL			*e*S	S	12 41 18.0	-4.1
CLL			pmax	pmax		
	comp=Z,23nm,1.1s,mb5.4					
CLL			MLR	MLR		
	comp=Z,800nm,23.6s,MS5.1					
CLL	**Collm**	**91.43 321**	⇑*i*P	**P**	**12 30 26.7**	**0.0**
	comp=Z,23nm,1.1s,mb5.4					
CLL			*i* pP	pP	12 30 41.8	0.0
CLL			*e*S	S	12 41 18.0	-4.1
CLL			LR	LR		
	comp=Z,800nm,23.6s,MS5.1					
CLL	**Collm**	**91.43 321**	⇑*i*P	**P**	**12 30 26.7**	**0.0**
	comp=Z,23nm,1.1s,mb5.4					

ROTZ **Rotzenmuhle 91.85 320** *e*P **P 12 30 29.2 +0.5**
comp=Z,20nm,1.1s,mb5.4
ROTZ *e*PP PP 12 34 08.5 +0.2
ROTZ *e*S S 12 41 27.6 +1.6
COP Copenhagen 92.00 325 *i* P **P 12 30 24.8 -4.5**
COP
comp=Z,210nm,20.0s
WTTA Wattenberg 92.12 317⇑ *i*P **P 12 30 29.7 -0.3**
comp=Z,34nm,1.1s,mb5.6,SNR=13
WATA Walderalm 92.16 317⇑ *i*P **P 12 30 29.8 -0.4**
comp=Z,24nm,1.1s,mb5.4
MOX Moxa 92.27 320 *e*P **P 12 30 30.8 +0.2**
comp=Z,28nm,1.5s,mb5.4
MOX *e* pP 12 30 46.6 +0.9
MOX *e*S S 12 41 31.0 +1.3
MOX
comp=Z,400nm,22.0s
MOX Moxa 92.27 320 *e*P **P 12 30 30.5 -0.1**
comp=Z,13nm,1.1s,mb5.2
MOX *e*pP pP 12 30 46.3 +0.6
MOX *e*PP PP 12 34 11.7 +0.1
MOX *e*S S 12 41 29.7 0.0
MOX Moxa 92.27 320 *e*P **P 12 30 30.8 +0.2**
MOX *e* pP 12 30 46.6 +0.9
MOX *e*S S 12 41 31.0 +1.3
MOX pmax pmax
comp=Z,28nm,1.5s,mb5.4
MOX MLR MLR
comp=Z,400nm,22.0s,MS4.8
FUR Furstenfeldbru 92.40 318 *e*P **P 12 30 30.6 -0.7**
comp=Z,20nm,0.9s,mb5.5
FUR Furstenfeldbru 92.40 318 *e*P **P 12 30 30.6 -0.7**
FUR pmax pmax
comp=Z,20nm,0.9s,mb5.5
MOTA Moosalm 92.48 317⇑ *i*P **P 12 30 31.3 -0.4**
comp=Z,27nm,0.8s,mb5.6,SNR=16
GRA1 Grafenberg Arr 92.49 319 *e*P **P 12 30 31.8 +0.1**
comp=Z,26nm,1.0s,mb5.5
GRA1 *e*pP pP 12 30 47.3 +0.5
GRA1 *e*S S 12 41 34.5 +2.8
GRA1 LR LR
comp=Z,600nm,19.7s,MS5.0
GRF Grafenberg Arr 92.49 319 *e*P **P 12 30 31.8 +0.1**
comp=Z,26nm,1.0s,mb5.5
GRF *e*pP pP 12 30 47.3 +0.5
GRF *e*S S 12 41 34.5 +2.8
GRF *e*L 13 21 37.7
comp=Z,634nm,19.7s
GRF Grafenberg Arr 92.49 319 *e*P **P 12 30 31.8 +0.1**
GRF *e**PP pP 12 30 47.3 +0.5
GRF *e*S S 12 41 34.5 +2.8
GRF pmax pmax
comp=Z,26nm,1.0s,mb5.5
GRF MLR MLR
comp=Z,600nm,19.7s,MS5.0
GRF Grafenberg Arr 92.49 319 *e*P **P 12 30 31.8 +0.1**
GRF *e**PP pP 12 30 47.3 +0.5
GRF *e*S S 12 41 34.5 +2.8
GRF pmax pmax
comp=Z,26nm,1.0s,mb5.5
GRF MLR MLR
comp=Z,600nm,19.7s,MS5.0
RETA Reutte 92.72 317⇓ *i*P **P 12 30 32.6 -0.2**
comp=Z,18nm,0.8s,mb5.6,SNR=6.7
FETA Feichten 92.73 317⇓ *i*P **P 12 30 33.0 +0.1**
comp=Z,19nm,1.1s,mb5.5,SNR=12
NB2 NORSAR Subarra 92.84 331 P **P 12 30 32.0 -1.0**
comp=Z,15nm,0.8s,mb5.5,baz=93,slow=4.8
NOA NORSAR Array B 92.84 331 P **P 12 30 32.2 -0.8**
comp=Z,12nm,0.9s,mb5.3,baz=92,slow=4.7,SNR=23
NOA PP PP 12 34 15.3 -0.5
comp=Z,4.3nm,0.8s,baz=96,slow=7.5,SNR=5.6
NOA LR LR 13 18 50.1
comp=Z,745nm,21.6s,MS5.1,baz=105,slow=40
NOA NORSAR Array B 92.84 331 P **P 12 30 32.2 -0.8**
NOA 12 34 15.3
NOA pmax pmax
comp=Z,12nm,0.9s
NOA pmax pmax
comp=Z,4.0nm,0.9s
VLC Villacollemand 92.88 314 PFAKE 12 30 40.0 +6.4
VLC LR LR
comp=Z,434nm,21.0s,MS4.9
BRMO Bormio 92.96 316 P **P 12 30 34.4 +0.5**
VNA2 Neumayer--Watz 93.02 198 *e*P **P 12 30 32.5 -1.2**
CLZ Clausthal 93.09 322 *e*P **P 12 30 34.3 -0.1**
comp=Z,13nm,1.0s,mb5.3
CLZ *e*S S 12 41 34.6 -2.3
CLZ Clausthal 93.09 322 *e*P **P 12 30 34.3 -0.1**
CLZ *e*S S 12 41 34.6 -2.3
CLZ pmax pmax
comp=Z,13nm,1.0s,mb5.3
BSEG Bad Segeberg 93.16 324 *e*P **P 12 30 34.5 -0.2**
comp=Z,18nm,1.0s,mb5.5
BSEG *e*S S 12 41 39.5 +2.0
NRDL Niedersach Rie 93.26 322 *e*P **P 12 30 35.1 -0.1**
comp=Z,15nm,1.0s,mb5.4
NRDL *e*S S 12 41 37.3 -1.1
UBBA Unterbreizbach 93.30 321 *e*P **P 12 30 35.1 -0.3**
comp=Z,28nm,1.7s,mb5.4
UBBA *e*pP pP 12 30 50.7 +0.2
UBBA *e*S S 12 41 36.8 -2.0
DAVOX Davos/Dischmat 93.31 317 P **P 12 30 36.0 +0.5**
comp=Z,13nm,0.6s,mb5.5,baz=140,slow=5.6,SNR=18
DAVA Damuels 93.31 317⇑ *i*P **P 12 30 35.6 +0.1**
comp=Z,30nm,0.9s,mb5.7,SNR=13
KEST Kesra 93.46 305 P **P 12 30 37.8 +1.3**
comp=Z,7.5nm,0.9s,mb5.1,baz=282,slow=2.3,SNR=20
KEST LR LR 13 15 23.4
comp=Z,290nm,19.3s,MS4.8,baz=12,slow=37
VSL Villasalto 93.52 309 PFAKE 12 30 50.0 +13
VSL LR LR
comp=Z,286nm,22.0s,MS4.7
KONO Kongsberg 93.62 329 *e*P **P 12 30 36.3 -0.4**
KONO pmax pmax
comp=Z,12nm,0.8s,mb5.4
KONO MLR MLR
comp=Z,966nm,22.0s,MS5.2
KONO Kongsberg 93.62 329 *e*P **P 12 30 36.3 -0.4**
comp=Z,12nm,0.8s,mb5.4
KONO LR LR
comp=Z,966nm,22.0s,MS5.2
STU Stuttgart 93.80 319 *e*P **P 12 30 37.2 -0.5**
comp=Z,18nm,1.1s,mb5.4
STU *e*S S 12 41 41.7 -1.5
STU Stuttgart 93.80 319 *e*P **P 12 30 37.4 -0.3**
STU *e**PP pP 12 30 53.1 +0.3
STU pmax pmax
comp=Z,7.0nm,0.4s,mb5.4
STU Stuttgart 93.80 319 *e*P **P 12 30 37.4 -0.3**
comp=Z,7.2nm,0.4s,mb5.5
STU *e*pP pP 12 30 53.1 +0.3
MUD Monsted U'grnd 93.84 326 *i* P **P 12 30 38.8 +1.1**
MUD
comp=Z,620nm,20.0s
PGF Pioggiola 93.86 312 *e*P **P 12 30 38.4 +0.2**
comp=Z,18nm,0.8s,mb5.2
PGF Pioggiola 93.86 312 *e*P **P 12 30 38.4 +0.2**
PGF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
PGF Pioggiola 93.86 312 *e*P **P 12 30 38.4 +0.2**
comp=Z,8.9nm,0.8s,mb5.2
TOD Tromm 94.06 319 *e*P **P 12 30 38.7 -0.2**
SPAK Spaichingen-Ko 94.06 318 *e*P **P 12 30 38.9 -0.1**
TNS Taunus Mts 94.29 320 *e*P **P 12 30 39.8 -0.1**
comp=Z,45nm,0.9s,mb5.9
TNS *e*S S 12 41 50.1 +2.6
TNS Taunus Mts 94.29 320 *e*P **P 12 30 39.8 -0.1**
TNS *e*S S 12 41 50.1 +2.6
TNS pmax pmax
comp=Z,45nm,0.9s,mb5.9
BFO Black Forest 94.37 318 *e*P **P 12 30 39.5 -0.9**
comp=Z,10.0nm,1.0s,mb5.2
BFO *e*S S 12 41 45.7 -2.6
BFO Black Forest 94.37 318 *e*P **P 12 30 39.5 -0.9**
BFO *e*S S 12 41 45.7 -2.6
BFO pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
HLG Helgoland 94.60 324 *e*P **P 12 30 41.7 +0.4**
comp=Z,254nm,1.3s,mb6.5
IBBN Ibbenburen 94.70 322 *e*P **P 12 30 41.3 -0.5**
comp=Z,16nm,0.9s,mb5.5
LANF Langenberg 94.71 319 *e*P **P 12 30 41.9 0.0**
ABH Alteburg 94.87 320 *e*P **P 12 30 42.5 -0.1**
SBF Sospel 95.01 314 *e*P **P 12 30 43.2 -0.2**
comp=Z,28nm,0.8s,mb5.4
SBF Sospel 95.01 314 *e*P **P 12 30 43.2 -0.2**
SBF pmax pmax
comp=Z,14nm,0.8s,mb5.4
SBF Sospel 95.01 314 *e*P **P 12 30 43.2 -0.2**
comp=Z,14nm,0.8s,mb5.4
BUG Bochum--Univer 95.02 321 *e*P **P 12 30 42.7 -0.6**
comp=Z,7.0nm,0.8s,mb5.1
CDF Champ du Feu 95.07 318 *e*P **P 12 30 43.1 -0.5**
comp=Z,11nm,1.0s,mb5.0
CDF Champ du Feu 95.07 318 *e*P **P 12 30 43.1 -0.5**
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
CDF Champ du Feu 95.07 318 *e*P **P 12 30 43.1 -0.5**
comp=Z,5.5nm,1.0s,mb4.9
ECH Echery 95.15 318 *e*P **P 12 30 43.9 -0.1**
ECH MLR MLR
comp=Z,625nm,21.0s,MS5.1
MBDF Montbardon 95.48 314 *e*P **P 12 30 44.7 -0.8**
LPG La Plagne 95.48 315 *e*P **P 12 30 45.5 0.0**
comp=Z,14nm,0.8s,mb5.1
LPG La Plagne 95.48 315 *e*P **P 12 30 45.5 0.0**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
LPG La Plagne 95.48 315 *e*P **P 12 30 45.5 0.0**
comp=Z,6.8nm,0.8s,mb5.1
LPL La Plagne 95.49 315 *e*P **P 12 30 45.6 0.0**
comp=Z,14nm,1.0s,mb5.1
LPL La Plagne 95.49 315 *e*P **P 12 30 45.6 0.0**
LPL pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
LPL La Plagne 95.49 315 *e*P **P 12 30 45.6 0.0**
comp=Z,7.1nm,1.0s,mb5.0
BNI Bardonecchia 95.54 315 PFAKE 12 31 00.0 +14
BNI LR LR
comp=Z,518nm,20.0s,MS5.0
HAU Haudompre 95.70 318 *e*P **P 12 30 45.9 -0.6**
comp=Z,22nm,1.0s,mb5.3
HAU *e*MLR MLR
comp=Z,762nm,21.5s,MS4.8
HAU Haudompre 95.70 318 *e*P **P 12 30 45.9 -0.6**
HAU pmax pmax
comp=Z,11nm,1.0s,mb5.2
HAU MLR MLR
comp=Z,760nm,21.5s,MS5.1
HAU Haudompre 95.70 318 *e*P **P 12 30 45.9 -0.6**
comp=Z,11nm,1.0s,mb5.2
HAU LR LR
comp=Z,760nm,21.5s,MS5.1
WLF Walferdange 95.78 319 P **P 12 30 47.4 +0.6**
comp=Z,8.9nm,1.7s,mb4.9
WLF Walferdange 95.78 319 *e*P **P 12 30 46.5 -0.3**
comp=Z,8.0nm,0.9s,mb5.2
WLF Walferdange 95.78 319 PFAKE 12 31 00.0 +13
WLF LR LR
comp=Z,666nm,20.0s,MS5.1
MEM Membach 95.84 320 P **P 12 30 47.4 +0.4**
comp=Z,4.2nm,1.0s,mb4.8
CABF La Chapelle 95.92 316 *e*P **P 12 30 47.6 +0.1**
comp=Z,33nm,1.1s,mb5.4
CABF La Chapelle 95.92 316 *e*P **P 12 30 47.6 +0.1**
CABF pmax pmax
comp=Z,16nm,1.1s,mb5.4
CABF La Chapelle 95.92 316 *e*P **P 12 30 47.6 +0.1**
comp=Z,16nm,1.1s,mb5.4
BCLA Clavier 96.30 320 P **P 12 30 48.8 -0.3**
comp=Z,5.8nm,1.4s,mb4.8
MEZF Maizieres J'vi 96.55 318 *e*P **P 12 30 50.1 -0.2**
comp=Z,14nm,0.9s,mb5.1
MEZF Maizieres J'vi 96.55 318 *e*P **P 12 30 50.1 -0.2**
comp=Z,14nm,0.9s,mb5.4
DOU Dourbes 96.77 320 P **P 12 30 50.7 -0.5**
BAIF Baives 97.02 320 *e*P **P 12 30 52.3 -0.1**
comp=Z,22nm,1.0s,mb5.3
BAIF Baives 97.02 320 *e*P **P 12 30 52.3 -0.1**
BAIF pmax pmax
comp=Z,11nm,1.0s,mb5.2
BAIF Baives 97.02 320 *e*P **P 12 30 52.3 -0.1**
comp=Z,11nm,1.0s,mb5.2
SSB Saint Sauveur 97.04 315 PFAKE 12 31 00.0 +7.4
SSB LR LR
comp=Z,405nm,22.0s,MS4.9
LOR Lormes 97.41 317 *e*P **P 12 30 52.9 -1.3**
comp=Z,15nm,1.0s,mb5.1
LOR *e*MLR MLR
comp=Z,368nm,21.0s,MS4.5
LOR Lormes 97.41 317 *e*P **P 12 30 52.9 -1.3**
LOR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,370nm,21.0s,MS4.8
LOR Lormes 97.41 317 *e*P **P 12 30 52.9 -1.3**
comp=Z,7.4nm,1.0s,mb5.1
LOR LR LR
comp=Z,370nm,21.0s,MS4.8
SMF Signal de Mont 97.46 316 *e*P **P 12 30 54.1 -0.4**
comp=Z,24nm,1.1s,mb5.2
SMF Signal de Mont 97.46 316 *e*P **P 12 30 54.1 -0.4**
SMF pmax pmax
comp=Z,12nm,1.1s,mb5.2
SMF Signal de Mont 97.46 316 *e*P **P 12 30 54.1 -0.4**
comp=Z,12nm,1.1s,mb5.2
PLDF La Plantade 97.65 316 *e*P **P 12 30 57.6 +2.3**
AVF Avril sur Loir 97.79 317 *e*P **P 12 30 55.6 -0.3**
comp=Z,18nm,1.1s,mb5.2
AVF Avril sur Loir 97.79 317 *e*P **P 12 30 55.6 -0.3**
AVF pmax pmax
comp=Z,9.0nm,1.1s,mb5.2
AVF Avril sur Loir 97.79 317 *e*P **P 12 30 55.6 -0.3**
comp=Z,8.8nm,1.1s,mb5.2
LBL Lubilhac 97.96 315 *e*P **P 12 30 58.5 +1.8**
AGO Saint Agoulin 97.99 316 *e*P **P 12 30 58.7 +1.8**
DAG Danmarks Havn 99.73 348⇑ *i*P Pdif 12 31 02.3 -2.2
DAG pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
DAG Danmarks Havn 99.73 348⇑ *i*P Pdif 12 31 02.3 -2.2
comp=Z,2.7nm,0.7s
TORD Torodi Ar. Bea 100.09 283 P Pdif 12 31 06.7 +0.6
comp=Z,0.8nm,0.8s,baz=100,slow=3.5,SNR=4.6
TORD PKiKP PKiKP 12 35 33.6 -1.0
comp=Z,1.4nm,0.6s,baz=102,slow=1.9,SNR=8.4
TORD PKKPbc PKKPbc 12 47 24.4 -0.7
comp=Z,0.5nm,0.6s,baz=288,slow=2.3,SNR=4.5
EKA Eskdalemuir Ar 100.85 326 P Pdif 12 31 09.5 +0.1
comp=Z,2.5nm,1.0s,baz=106,slow=5.3,SNR=4.0
EKA PP PP 12 35 10.1 -7.5
comp=Z,4.7nm,1.0s,baz=84,slow=7.6,SNR=4.7
EKA Eskdalemuir Ar 100.85 326 P Pdif 12 31 09.5 +0.1
EKA pmax pmax
comp=Z,3.0nm,1.0s
EKA pmax pmax
comp=Z,5.0nm,1.0s
ESK Eskdalemuir 100.88 326 PFAKE 12 31 20.0 +10
ESK LR LR
comp=Z,454nm,20.0s,MS5.0
COLA College 101.65 24 PFAKE 12 31 20.0 +7.0
COLA LR LR
comp=Z,917nm,20.0s,MS5.3
SCO Scoresbysund 103.68 343 *i* P Pdif 12 31 26.6 +4.6
SCO
comp=Z,900nm,24.0s
ESDC Sonseca Array 103.80 310 Pdiff Pdif 12 31 23.9 +1.3
comp=Z,0.2nm,0.5s,baz=40,slow=4.2,SNR=3.5
ESDC PKiKP PKiKP 12 35 40.7 0.0
comp=Z,2.1nm,0.9s,baz=58,slow=2.2,SNR=6.9
ESDC PKKPbc PKKPbc 12 47 13.7 -1.3
comp=Z,0.4nm,0.6s,baz=288,slow=3.4,SNR=4.5
ESLA Sonseca Array 103.80 310 PFAKE 12 31 30.0 +7.5
ESLA LR LR
comp=Z,2μm,20.0s,MS5.7
MENT Mentasta 104.02 25 *e*Pdif Pdif 12 31 21.8 -1.7
PAB San Pablo 104.11 310 PFAKE 12 31 30.0 +6.1
PAB LR LR
comp=Z,448nm,21.0s,MS5.0
EGAK Eagle 104.36 23 PFAKE 12 31 30.0 +5.0
EGAK LR LR
comp=Z,2μm,21.0s,MS5.6
INK Inuvik 105.39 18 Pdiff Pdif 12 31 27.8 -1.8
baz=315,slow=5.9
INK PKiKP PKiKP 12 35 41.4 -1.4
comp=Z,1.1nm,0.6s,baz=335,slow=4.3,SNR=4.3
INK PKKPab PKKPab 12 47 24.8 -1.6
comp=Z,1.2nm,0.8s,baz=114,slow=5.5,SNR=3.2
SHEL Horse Pasture 105.46 253 PFAKE 12 35 50.0 +5.6
SHEL LR LR
comp=Z,2μm,20.0s,MS5.6
SFS San Fernando 105.98 307 PFAKE 12 35 50.0 +5.2
SFS LR LR
comp=Z,858nm,19.0s,MS5.3
BORG Borgarnes 106.34 338 PFAKE 12 35 50.0 +5.4
BORG LR LR
comp=Z,731nm,22.0s,MS5.2
MTE Manteigas 106.41 311 PFAKE 12 36 00.0 +14
MTE LR LR
comp=Z,359nm,19.0s,MS4.9
DBIC Dimbokro 106.42 276 PKiKP PKiKP 12 35 45.8 -0.5
comp=Z,2.5nm,0.9s,baz=124,slow=3.6,SNR=3.5
DBIC Dimbokro 106.42 276 PKPdf PKiKP 12 35 45.8 -0.5
DBIC LR LR
comp=Z,737nm,20.0s,MS5.2
RTC Rabat Centre 106.84 304 PFAKE 12 36 00.0 +13
RTC LR LR
comp=Z,599nm,19.0s,MS5.2
PPT Papeete 107.16 109 *e*Pdif Pdif 12 31 39.7 +2.2
comp=Z,65nm,23.8s
PPT Papeete 107.16 109 *e*PP PP 12 35 56.4 -9.3
comp=Z,152nm,26.8s
PPT *e*Sdif Sdif 12 43 35.4 -0.5
comp=Z,584nm,28.8s
PPT Papeete 107.16 109 *e*PS PS 12 45 26.8 -0.9
comp=Z,577nm,26.2s
PPT *e*LR LR 13 07 05.4
comp=Z,805nm,24.0s
PPT Papeete 107.16 109 *e*Pdif Pdif 12 31 39.7 +2.2
PPT *e*PP PP 12 35 56.4 -9.3
PPT *e*PS PS 12 45 26.8 -0.9
RES Resolute Bay 107.97 4 PKiKP PKiKP 12 35 46.7 -0.8
baz=56,slow=1.6
PMSA Palmer Station 111.33 187 PFAKE 12 36 00.0 +6.0
PMSA LR LR
comp=Z,3μm,22.0s,MS5.8
DLBC Dease Lake 112.05 26 PKiKP PKiKP 12 35 55.2 -0.3
comp=Z,2.1nm,0.8s,baz=327,slow=3.4,SNR=5.3
DLBC PP PP 12 36 40.9 +1.3
comp=Z,2.8nm,0.9s,baz=330,slow=8.6,SNR=3.0
DLBC Dease Lake 112.05 26 PKPdf PKiKP 12 35 55.2 -0.3
DLBC PP PP 12 36 40.9 +1.3
SFJD Kangerlussuaq 113.42 348 PFAKE 12 36 10.0 +12
SFJD LR LR
comp=Z,1μm,19.0s,MS5.5
YKA Yellowknife Ar 115.13 18 PKP PKiKP 12 35 59.6 -1.7
comp=Z,2.7nm,0.9s,baz=311,slow=2.1,SNR=21
YKA PP PP 12 36 60.0 -1.2
comp=Z,2.6nm,0.8s,baz=328,slow=7.5,SNR=8.1
YKA PKKPbc PKKPbc 12 46 38.4 -0.9
comp=Z,0.2nm,0.5s,baz=132,slow=3.2,SNR=6.8
YKA Yellowknife Ar 115.13 18 PKIKP PKiKP 12 35 59.6 -1.7
YKA 12 37 00.0
YKA 12 46 38.4
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA pmax pmax
comp=Z,3.0nm,0.8s
TAOE Nuku Hiva Isla 117.57 102 *e*PP PP 12 37 09.3 -11
comp=Z,122nm,24.9s
TAOE Nuku Hiva Isla 117.57 102 *e*PS PS 12 47 04.5 -1.5
comp=Z,625nm,28.2s
TAOE *e*SS SS 12 53 24.7 -4.3
comp=Z,471nm,32.5s
TAOE *e*LR LR 13 11 53.6
comp=Z,764nm,23.3s
FRB Frobisher Bay 119.14 355 PKP PKPdf 12 36 07.1 -1.9
comp=Z,3.6nm,0.9s,baz=20,slow=4.1,SNR=3.2
FRB PP PP 12 37 25.8 -3.2
comp=Z,7.1nm,0.9s,baz=16,slow=4.9,SNR=4.8
FRB Frobisher Bay 119.14 355 PKIKP PKPdf 12 36 07.1 -1.9
FRB 12 37 25.8
FRB pmax pmax
comp=Z,4.0nm,0.9s
FRB pmax pmax
comp=Z,7.0nm,0.9s
RKT Rikitea 119.24 119 *e*SP SP 12 47 13.6 -0.5
comp=Z,416nm,27.5s
RKT *e*SS SS 12 53 53.5 +3.8
comp=Z,592nm,34.0s
RKT *e*LR LR 13 12 43.1
comp=Z,772nm,28.8s
CMLA Cha da Macela 120.56 313 PFAKE 12 36 20.0 +7.5
CMLA LR LR
comp=Z,406nm,19.0s,MS5.1
NLWA Neilton Lookou 121.26 34 PFAKE 12 36 20.0 +6.4
NLWA LR LR
comp=Z,505nm,19.0s,MS5.2
USHA Ushuaia 121.54 187 PKP PKPdf 12 36 13.7 -0.2
comp=Z,7.3nm,0.8s,baz=166,slow=3.6,SNR=5.2
CMW Cultus Mountai 121.63 33 P PKPdf 12 36 14.0 -0.3
JCW Jim Creek 121.87 33 P PKPdf 12 36 14.4 -0.3
HEBO Mount Hebo 122.53 36 *e*PKPdf PKPdf 12 36 15.8 -0.2
EDM Edmonton 122.57 24 *e*PKIKP PKPdf 12 36 14.6 -1.3
LON Longmire 122.78 34 *e*PKIKP PKPdf 12 36 15.7 -0.8
TDL Tradedollar La 122.79 35 P PKPdf 12 36 16.5 -0.1
ETW Entiat 123.08 32 P PKPdf 12 36 16.2 -0.8
COR Corvallis 123.14 37 *e*PKIKP PKPdf 12 36 18.9 +1.6
COR MLR MLR
comp=Z,759nm,22.0s,MS5.3
RNO Roman Nose 123.24 38 P PKPdf 12 36 17.5 0.0
FCC Fort Churchill 123.31 10 *e*PKPdf PKPdf 12 36 15.1 -2.0
FCC *e*PP PP 12 37 52.4 -5.0
NAC Naches 123.34 34 P PKPdf 12 36 17.4 -0.1
OD2 Odessa Site #2 124.08 32 *e*PKPdf PKPdf 12 36 18.1 -0.9
WRD Warden 124.22 33 P PKPdf 12 36 18.8 -0.5
RSW Rattlesnake Hi 124.22 33 *e*PKPdf PKPdf 12 36 19.3 0.0
HAWA Hanford 124.26 33 *e*PKPdf PKPdf 12 36 18.9 -0.5
HAWA LR LR
comp=Z,774nm,20.0s,MS5.4
NEW Newport 124.33 30 *e*PKIKP PKPdf 12 36 18.6 -0.9
NEW MLR MLR
comp=Z,1μm,21.0s
HUMO Hull Mountain 124.43 39 *e*PKPdf PKPdf 12 36 19.5 -0.4
HUMO LR LR
comp=Z,640nm,22.0s,MS5.2
VIPM Ingram Point 124.77 36 PKIKP PKPdf 12 36 20.7 +0.3
YBH Yreka Blue Hor 125.05 39 PKP PKPdf 12 36 20.3 -0.7
comp=Z,4.3nm,0.9s,baz=336,slow=4.0,SNR=12
YBH Yreka Blue Hor 125.05 39 *e*PKPdf PKPdf 12 36 20.4 -0.6
YBH LR LR
comp=Z,984nm,21.0s,MS5.5
FFC Flin Flon 125.26 16 *c i*PKIKP PKPdf 12 36 19.9 -1.1
FFC Flin Flon 125.26 16 *e*PKPdf PKPdf 12 36 19.1 -2.0
FFC LR LR
comp=Z,1μm,20.0s,MS5.7
LNOR Lincton Mounta 125.26 33 *e*PKIKP PKPdf 12 36 20.2 -1.1
HOG Hogback Mounta 125.40 38 P PKPdf 12 36 21.7 0.0
WDC Whiskeytown Da 125.76 41 *e*PKIKP PKPdf 12 36 21.8 -0.6
WDC MLR MLR
comp=Z,951nm,22.0s,MS5.4
BSMT Bassoo Peak 125.77 29 *e*PKPdf PKPdf 12 36 21.3 -0.9
LASM Arnica Sink 125.83 39 P PKPdf 12 36 22.7 +0.1
HOPS Hopland 126.22 43 PFAKE 12 36 30.0 +6.6
HOPS LR LR
comp=Z,852nm,22.0s,MS5.4
SWMT Swartz Lake 126.39 29 *e*PKPdf PKPdf 12 36 22.3 -1.1
MOD Modoc 126.46 38 *e*PKPdf PKPdf 12 36 23.6 -0.1
MOD LR LR
comp=Z,378nm,21.0s,MS5.0
MCCM Marconi Confer 126.77 43 PFAKE 12 36 30.0 +5.5
MCCM LR LR
comp=Z,513nm,20.0s,MS5.2
SLMT Seeley Lake 126.82 29 *e*PKPdf PKPdf 12 36 22.9 -1.4
MSO Missoula 126.89 30 *e*PKPdf PKPdf 12 36 23.2 -1.2
MSO LR LR
comp=Z,685nm,20.0s,MS5.3
WVOR Wild Horse Val 127.16 37 PFAKE 12 36 30.0 +4.9
WVOR LR LR
comp=Z,543nm,19.0s,MS5.2
CHMT Chamberlain Mo 127.17 29 *e*PKPdf PKPdf 12 36 23.8 -1.1
SCHQ Schefferville 127.64 351 PKP PKPdf 12 36 24.7 -0.9
comp=Z,7.0nm,0.8s,baz=46,slow=6.3,SNR=10
SCHQ PP PP 12 38 28.7 +2.5
comp=Z,11nm,0.9s,baz=44,slow=4.7,SNR=4.5
SCHQ Schefferville 127.64 351 PKP PKPdf 12 36 24.7 -0.9
SCHQ PP PP 12 38 28.7 +2.5
SCHQ LR LR
comp=Z,1μm,22.0s,MS5.6
EGMT Eagleton 127.98 26 *e*PKPdf PKPdf 12 36 25.8 -0.6
EGMT LR LR
comp=Z,721nm,19.0s,MS5.4
HRY Holter Researc 128.00 29 *e*PKPdf PKPdf 12 36 26.2 -0.3
HRY *e*PP PP 12 38 28.2 -0.9
LRM Limekiln Ridge 128.33 30 *e*PKPdf PKPdf 12 36 27.0 -0.2
CMB Columbia Colle 128.52 42 *e*PKIKP PKPdf 12 36 27.5 -0.3
CMB MLR MLR

comp=Z,481nm,19.0s,MS5.2
DLMT Dillon 128.58 30 *e*PKPdf PKPdf 12 36 27.7 +0.1
MCMT McKenzie Canyo 128.83 31 *e*PKPdf PKPdf 12 36 28.3 +0.1
BOZ Bozeman (W) 128.86 29 *e*PKIKP PKPdf 12 36 28.0 -0.2
BOZ MLR MLR
comp=Z,716nm,19.0s,MS5.4
HLID Hailey 128.86 33 *e*PKPdf PKPdf 12 36 27.7 -0.6
HLID LR LR
comp=Z,751nm,22.0s,MS5.3
BMN Battle Mountai 129.21 38 PFAKE 12 36 40.0 +11
BMN LR LR
comp=Z,456nm,19.0s,MS5.2
QLMT Earthquake Lak 129.54 30 *e*PKPdf PKPdf 12 36 30.1 +0.6
NVAR Mina Array Bea 129.68 41 PKP PKPdf 12 36 30.1 +0.1
comp=Z,6.3nm,0.6s,baz=293,slow=2.1,SNR=33
NVAR PP PP 12 38 40.1 -0.4
comp=Z,0.6nm,0.3s,baz=289,slow=8.3,SNR=3.6
NVAR SKIKP 12 40 06.2
comp=Z,2.1nm,0.7s,baz=282,slow=4.5,SNR=4.2
NVAR SKKPbc 12 49 27.3
comp=Z,0.3nm,0.7s,baz=128,slow=5.8,SNR=4.0
NVAR Mina Array Bea 129.68 41 PKP PKPdf 12 36 30.1 +0.1
NVAR PP PP 12 38 40.1 -0.4
NVAR SKKPbc 12 49 27.3
DGMT Dagmar 129.88 22 PFAKE 12 36 40.0 +10
DGMT LR LR
comp=Z,851nm,19.0s,MS5.5
YMR Madison River 129.89 30 *e*PKPdf PKPdf 12 36 30.7 +0.5
YNR Norris Junctio 130.00 30 *e*PKPdf PKPdf 12 36 32.0 +1.6
YFT Old Faithful 130.11 30 *e*PKPdf PKPdf 12 36 32.9 +2.3
YFT *e*PP PP 12 38 40.9 -2.0
YFT *e*SKPdf SKPdf 12 40 09.9 +8.1
ELK Elko 130.21 36 PKP PKPdf 12 36 30.8 -0.2
comp=Z,6.0nm,0.7s,baz=293,slow=4.1,SNR=36
ELK SKPbc SKPbc 12 39 48.1 -1.5
comp=Z,4.6nm,1.1s,baz=292,slow=2.6,SNR=5.1
ELK Elko 130.21 36 PKIKP PKPdf 12 36 30.8 -0.1
ELK pmax pmax
comp=Z,6.0nm,0.7s
ELK pmax pmax
comp=N,5.0nm,1.1s
ELK Elko 130.21 36 PKP PKPdf 12 36 30.8 -0.2
ELK SKPbc SKPbc 12 39 48.1 -1.5
ELK LR LR
comp=Z,808nm,21.0s,MS5.4
LKWY Lake 130.24 29 *e*PKIKP PKPdf 12 36 33.4 +2.5
LKWY MLR MLR
comp=Z,1μm,20.0s,MS5.6
M13A Montello 130.44 35 *e*PKPdf PKPdf 12 36 31.6 +0.3
IMW Indian Meadow 130.46 30 *e*PKPdf PKPdf 12 36 32.3 +1.1
IMW *e*SKPab 12 39 50.2
LAO LASA Array 130.53 25 *e*PKPdf PKPdf 12 36 32.2 +0.9
LAO *e*SKPbc SKPbc 12 39 49.7 -0.9
LAO LR LR
comp=Z,939nm,20.0s,MS5.5
TPH Tonopah 130.58 40 PFAKE 12 36 40.0 +8.3
TPH LR LR
comp=Z,511nm,21.0s,MS5.2
RRI2 Red Ridge 130.65 31 *e*PKPdf PKPdf 12 36 31.6 -0.1
TPAW Teton Pass 130.74 31 *e*PKPdf PKPdf 12 36 32.1 +0.2
TPAW *e*SKPbc SKPbc 12 39 51.1 -0.5
N13A Wendover, West 130.74 36 *e*PKPdf PKPdf 12 36 32.6 +0.7
LOHW Long Hollow 130.83 31 *e*PKPdf PKPdf 12 36 32.5 +0.5
LOHW *e*SKPdf SKPdf 12 40 11.8 +8.6
SNOW Snow King Moun 130.86 31 *e*PKPdf PKPdf 12 36 32.1 +0.1
SNOW *e*SKPbc SKPbc 12 39 51.4 -0.6
REDW Red Top Meadow 130.88 31 *e*PKPdf PKPdf 12 36 31.9 -0.2
REDW *e*SKPbc SKPbc 12 39 54.6 +2.5
REDW *e*SKPdf SKPdf 12 40 04.1 +0.9
ULM Lac du Bonnet 130.92 15 PKP PKPdf 12 36 30.6 -1.3
comp=Z,11nm,0.6s,baz=342,slow=2.3,SNR=18
ULM SKPbc SKPbc 12 39 50.0 -2.1
comp=Z,4.3nm,0.8s,baz=316,slow=5.2,SNR=4.3
ULM Lac du Bonnet 130.92 15 PKP PKPdf 12 36 30.6 -1.3
ULM SKPbc SKPbc 12 39 50.0 -2.1
ULM LR LR
comp=Z,1μm,22.0s,MS5.5
HVU Hansel Valley 130.95 34 *e*PKPdf PKPdf 12 36 31.4 -0.9
HVU *e*SKPbc SKPbc 12 39 51.5 -1.0
AHID Auburn Hatcher 131.17 32 PFAKE 12 36 40.0 +7.3
AHID LR LR
comp=Z,1μm,21.0s,MS5.6
DAC Darwin (Calif) 131.34 43 PFAKE 12 36 40.0 +6.8
DAC LR LR
comp=Z,707nm,22.0s,MS5.3
BGU Big Grassy Mou 131.37 35 *e*PKPdf PKPdf 12 36 32.9 -0.2
BGU *e*SKPbc SKPbc 12 39 53.1 -0.9
BGU SKPdf SKPdf 12 40 13.1 +8.8
HWUT Hardware Ranch 131.73 33 *e*PKPdf PKPdf 12 36 32.9 -0.9
HWUT *e*SKPbc SKPbc 12 39 54.8 -0.5
HWUT LR LR
comp=Z,741nm,22.0s,MS5.3
BW06 Boulder Array 131.97 31 PFAKE 12 36 40.0 +5.8
BW06 LR LR
comp=Z,781nm,22.0s,MS5.4
PDAR Pinedale Array 131.97 31 PKhKP 12 36 27.8
comp=Z,1.7nm,0.7s,baz=54,slow=2.8,SNR=5.1
PDAR PKP PKPdf 12 36 33.9 -0.3
comp=Z,2.8nm,0.7s,baz=263,slow=0.7,SNR=13
PDAR SKPab 12 39 55.1
comp=Z,4.7nm,0.9s,baz=29,slow=1.2,SNR=7.3
PDAR SKKPbc 12 49 18.4
comp=Z,0.9nm,1.1s,baz=102,slow=3.1,SNR=4.0
DUG Dugway 131.98 35 *e*PKPdf PKPdf 12 36 33.8 -0.5
DUG *e*SKPbc SKPbc 12 39 55.6 -0.6
DUG LR LR
comp=Z,804nm,20.0s,MS5.4
NOQ North Oquirrh 132.07 34 *e*PKPdf PKPdf 12 36 35.2 +0.7
NOQ *e*SKPbc SKPbc 12 39 57.9 +1.4
GSC Goldstone 132.41 43 *e*PKPdf PKPdf 12 36 35.4 +0.2
GSC *e*SKPbc SKPbc 12 39 57.4 -0.5
JLU Jordanelle 132.48 34 *e*PKPdf PKPdf 12 36 35.1 -0.2
NLU North Lily Min 132.56 35 *e*PKPdf PKPdf 12 36 35.7 +0.3
NLU *e*SKPbc SKPbc 12 39 59.6 +1.3
DAU Daniels Canyon 132.72 34 *e*PKPdf PKPdf 12 36 35.4 -0.3
DAU *e*SKPbc SKPbc 12 39 60.0 +1.2
AGMN Agassiz Refuge 132.72 16 PFAKE 12 36 50.0 +15
AGMN LR LR
comp=Z,879nm,22.0s,MS5.4
MPU Maple Canyon 132.77 35 *e*PKPdf PKPdf 12 36 35.9 +0.1
MPU *e*SKPbc SKPbc 12 39 60.0 +0.9
MPU *e*SKPdf SKPdf 12 40 09.2 +2.3
ARUT Antelope Range 133.15 38 *e*PKIKP PKPdf 12 36 37.8 +1.2
CCUT Cedar City 133.34 38 *e*PKPdf PKPdf 12 36 37.7 +0.8
MVU Marysvale 133.44 37 PFAKE 12 36 50.0 +13
MVU LR LR
comp=Z,591nm,21.0s,MS5.3
MSU Marysvale 133.45 37 *e*PKPdf PKPdf 12 36 37.9 +0.7
MSU *e*SKPbc SKPbc 12 40 01.7 +0.3
TMUT Trail Mountain 133.50 35 *e*PKPdf PKPdf 12 36 38.9 +1.7
RSSD Black Hills 133.51 25 *e*PKPdf PKPdf 12 36 36.1 -0.9
RSSD *e*SKPbc SKPbc 12 40 00.2 -1.2
RSSD LR LR
comp=Z,832nm,21.0s,MS5.4
PFO Pinyon Flat Ob 133.58 45 *e*PKPdf PKPdf 12 36 37.9 +0.4
PFO *e*SKPbc SKPbc 12 40 01.6 -0.4
RWWY Rawlins 133.94 30 *e*PKPdf PKPdf 12 36 36.9 -1.1
SRU San Rafael 134.02 35 *e*PKPdf PKPdf 12 36 37.6 -0.6
SRU *e*SKPbc SKPbc 12 40 04.6 +1.4
EYMN Ely 134.09 12 *e*PKPdf PKPdf 12 36 37.7 -0.3
EYMN *e*PP PP 12 39 04.3 -3.6
EYMN LR LR
comp=Z,1μm,22.0s,MS5.5
PHWY Pilot Hill 135.09 29 *e*PKPdf PKPdf 12 36 38.9 -1.2
PHWY *e*SKPbc SKPbc 12 40 08.0 +1.3
PV04 Paradox Valley 135.43 34 *e*PKPdf PKPdf 12 36 42.5 +1.7
PV04 *e*SKPbc SKPbc 12 40 09.2 +1.4
PLCA Paso Flores 135.64 189 PKP PKPdf 12 36 42.2 +1.0
comp=Z,3.6nm,1.0s,baz=270,slow=5.2,SNR=4.2
PLCA Paso Flores 135.64 189 PKP PKPdf 12 36 42.2 +1.0
PLCA LR LR
comp=Z,1μm,20.0s,MS5.6
PV01 Paradox Valley 135.80 34 *e*PKPdf PKPdf 12 36 41.4 -0.1
PV01 *e*SKPbc SKPbc 12 40 09.9 +1.0
WUAZ Wupatki 135.86 39 *e*PKPdf PKPdf 12 36 42.0 +0.2
WUAZ *e*SKPbc SKPbc 12 40 11.8 +2.5
WUAZ LR LR
comp=Z,692nm,19.0s,MS5.4
SMCO Snowmass 135.92 32 *e*PKPdf PKPdf 12 36 42.5 +0.7
SMCO *e*PP PP 12 39 22.1 +2.0
SMCO *e*SKPbc SKPbc 12 40 11.8 +2.5
TRQA Tornquist 136.12 199 PFAKE 12 36 50.0 +7.9
TRQA LR LR
comp=Z,1μm,22.0s,MS5.7
ISCO Idaho Springs 136.16 30 *e*PKIKP PKPdf 12 36 41.5 -0.6
ISCO MLR MLR
comp=Z,786nm,21.0s,MS5.4
COWI Conover 136.32 11 PFAKE 12 36 50.0 +7.8
COWI LR LR
comp=Z,1μm,22.0s,MS5.5
RCBR Riachuelo 136.34 258 PFAKE 12 36 50.0 +6.8
RCBR LR LR
comp=Z,1μm,19.0s,MS5.7
MVCO Mesa Verde 136.48 35 *e*PKPdf PKPdf 12 36 42.9 +0.1
MVCO *e*SKPbc SKPbc 12 40 13.1 +2.0
MVCO LR LR
comp=Z,784nm,20.0s,MS5.4
ECSD EROS Data Cent 136.63 19 *e*PKP PKPdf 12 36 39.0 -3.8
ECSD LR LR
comp=Z,1μm,22.0s,MS5.7
OGNE Ogallala 136.95 26 PFAKE 12 36 50.0 +6.4
OGNE LR LR
comp=Z,1μm,19.0s,MS5.6
PKME Peaks-Kenny Pk 137.31 350 PFAKE 12 36 50.0 +5.9
PKME LR LR
comp=Z,1μm,20.0s,MS5.6
SDCO Great Sand Dun 137.76 32 *e*PKPdf PKPdf 12 36 44.7 -0.4
SDCO LR LR
comp=Z,687nm,22.0s,MS5.3
TUC Tucson 138.23 42 *e*PKHKP 12 36 38.5
TUC *e* 12 36 46.9
TUC MLR MLR
comp=Z,757nm,19.0s,MS5.5
TUC Tucson 138.23 42 *e*PKPpre 12 36 38.5
TUC *e*PKPdf PKPdf 12 36 46.9 +0.6
TUC *e*SKPbc SKPbc 12 40 15.9 -0.5
TUC LR LR
comp=Z,757nm,19.0s,MS5.5
GLMI Grayling 138.23 6 PFAKE 12 37 00.0 +14
GLMI LR LR
comp=Z,1μm,21.0s,MS5.7
LONY Lake Ozonia 138.61 356 PFAKE 12 37 00.0 +13
LONY LR LR
comp=Z,1μm,21.0s,MS5.6
SADO Sadowa 138.61 0 PKP PKPdf 12 36 44.5 -2.0
comp=Z,11nm,0.8s,baz=8.3,slow=4.5,SNR=9.2
SADO PP PP 12 39 34.1 -2.1
comp=Z,17nm,1.1s,baz=3.5,slow=7.2,SNR=4.3
LBNH Lisbon 138.71 353 PFAKE 12 37 00.0 +13
LBNH LR LR
comp=Z,1μm,20.0s,MS5.6
JFWS Jewell Farm 139.15 13 *e*PKIKP PKPdf 12 36 46.4 -1.2
JFWS *e* 12 39 36.9
JFWS MLR MLR
comp=Z,1μm,20.0s,MS5.6
LAZ Ladron 139.21 37 *e*PKPdf PKPdf 12 36 47.3 -0.7
LAZ *e*SKPdf SKPdf 12 40 18.7 0.0
NCB Newcomb 139.22 355 PFAKE 12 37 00.0 +12
NCB LR LR
comp=Z,1μm,22.0s,MS5.6
ANMO Albuquerque 139.24 36 PKhKP 12 36 40.0
comp=Z,3.9nm,0.9s,baz=274,slow=2.2,SNR=12
ANMO PKP PKPdf 12 36 47.1 -0.9
comp=Z,5.4nm,0.8s,baz=196,slow=2.7,SNR=11
ANMO PP PP 12 39 44.8 +3.9
comp=Z,1.3nm,0.8s,baz=331,slow=10,SNR=2.3
ANMO Albuquerque 139.24 36 *e*PKHKP 12 36 39.8
ANMO 12 36 47.1
ANMO 12 39 44.8
ANMO MLR MLR
comp=Z,782nm,21.0s
ANMO Albuquerque 139.24 36 *e*PKPpre 12 36 39.8
ANMO PKP PKPdf 12 36 47.1 -0.9
ANMO *e*PKPdf PKPdf 12 36 48.1 +0.2
ANMO PP PP 12 39 44.8 +3.9
ANMO LR LR
comp=Z,782nm,21.0s,MS5.4
SCIA State Center 139.33 17 PFAKE 12 37 00.0 +12
SCIA LR LR
comp=Z,865nm,19.0s,MS5.5
BNM Barren Site 139.69 37 *e*PKP PKPdf 12 36 45.5 -3.4
CBKS Cedar Bluff 139.70 26 PFAKE 12 37 00.0 +11
CBKS LR LR
comp=Z,1μm,22.0s,MS5.7
KSU1 Kansas State U 140.73 22 *e*PKPdf PKPdf 12 36 49.1 -1.5
KSU1 LR LR
comp=Z,1μm,21.0s,MS5.6
AAM Ann Arbor 140.83 6 PFAKE 12 37 00.0 +9.4
AAM LR LR
comp=Z,1μm,20.0s,MS5.7
BINY Binghamton 141.11 357 *e*PKPdf PKPdf 12 36 50.6 -0.5
BINY LR LR
comp=Z,1μm,21.0s,MS5.7
ERPA Erie 141.25 2 PFAKE 12 37 00.0 +8.6
ERPA LR LR
comp=Z,785nm,20.0s,MS5.5
HDIL Hopedale 141.61 13 PFAKE 12 37 00.0 +7.9
HDIL LR LR
comp=Z,678nm,20.0s,MS5.4
AMTX Amarillo 141.93 31 *e*PKPdf PKPdf 12 36 53.6 +0.8
AMTX LR LR
comp=Z,935nm,21.0s,MS5.5
CPRX Cap Rock 142.11 36 *e*PKPpre 12 36 48.0
CPRX *e*PKPdf PKPdf 12 36 55.8 +2.5
MNTX Cornudas Mount 142.13 39 *e*PKPpre 12 36 47.9
MNTX *e*PKPdf PKPdf 12 36 52.8 -0.5
MNTX LR LR
comp=Z,651nm,19.0s,MS5.4
GDL2 Guadalupe Moun 142.41 37 *e*PKP PKPdf 12 36 50.0 -3.8
CLNB Carlsbad 142.65 36 *e*PKPpre 12 36 49.1
SSPA Standing Stone 142.74 359 *e*PKPpre 12 36 48.8
SSPA LR LR
comp=Z,995nm,21.0s,MS5.5
ACSO Alum Creek Sta 142.94 5 *e*PKP PKPdf 12 36 50.3 -4.1
ACSO LR LR
comp=Z,1μm,21.0s,MS5.6
CCM Cathedral Cave 143.47 17 *e*PKHKP 12 36 50.8
CCM MLR MLR
comp=Z,1μm,20.0s,MS5.7
WMOK Wichita Mounta 143.49 28 *e*PKHKP 12 36 50.8
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.7
BLO Bloomington 143.50 10 *e*PKIKP PKPdf 12 36 52.3 -3.2
OLIL Olney 143.62 12 *e*PKPdf PKPdf 12 36 52.5 -3.2
MCWV Mont Chateau 143.71 2 *e*PKP PKPdf 12 36 52.0 -3.8
MCWV LR LR
comp=Z,2μm,21.0s,MS5.8
FVM French Village 143.76 16 *e*PKIKP PKPdf 12 36 52.0 -4.0
CFAA Coronel Fontan 143.98 195 PKP PKPdf 12 36 54.7 -1.9
comp=Z,2.7nm,0.6s,baz=177,slow=3.4,SNR=37
CFAA Coronel Fontan 143.98 195 PKP PKPdf 12 36 54.7 -1.9
CPUP Villa Florida 144.09 214 PKP PKPdf 12 36 55.1 -1.8
comp=Z,9.5nm,0.8s,baz=111,slow=2.5,SNR=24
CPUP Villa Florida 144.09 214 PKIKP PKPdf 12 36 55.1 -1.8
CPUP pmax pmax
comp=Z,10.0nm,0.8s
SIUC Southern Illin 144.33 14 *e*PKPdf PKPdf 12 36 53.0 -4.0
USIN University of 144.45 12 *e*PKPdf PKPdf 12 36 54.8 -2.4
WCI Wyandotte Cave 144.46 10 *e*PKIKP PKPdf 12 36 53.8 -3.4
WCI MLR MLR
comp=Z,938nm,20.0s,MS5.6
TXAR Lajitas Array 144.82 40 PKP PKPdf 12 36 56.8 -1.3
comp=Z,43nm,0.8s,baz=289,slow=1.5,SNR=460
TXAR SKPbc SKPbc 12 40 31.8 -1.5
comp=Z,4.0nm,0.9s,baz=350,slow=3.7,SNR=3.5
TXAR Lajitas Array 144.82 40 PKIKP PKPdf 12 36 56.8 -1.3
TXAR pmax pmax
comp=Z,43nm,0.8s
TXAR pmax pmax
comp=N,4.0nm,0.9s
CBN Corbin 145.15 358 *e*PKPab PKPab 12 36 57.1 -0.9
CBN LR LR
comp=Z,1μm,21.0s,MS5.6
PARMO Parma 145.18 16 *e*PKPdf PKPdf 12 36 56.4 -2.1
GLAT Glass 145.68 15 *e*PKPdf PKPdf 12 36 58.9 -0.4
UTMT University of 145.72 15 *e*PKPdf PKPdf 12 36 58.7 -0.7
GNAR Gosnell 145.76 16 *e*PKPdf PKPdf 12 36 58.7 -0.8
MIAR Mount Ida 145.88 22 *e*PKP2 PKPab 12 36 59.1 -1.8
MIAR MLR MLR
comp=Z,875nm,20.0s,MS5.5
HBAR Harrisburg 145.96 18 *e*PKPdf PKPdf 12 36 59.9 0.0
HALT Halls 146.00 16 *e*PKPdf PKPdf 12 36 59.5 -0.4
ELN Prospectdale 146.09 3 *e*PKPdf PKPdf 12 36 58.8 -1.3
BLA Blacksburg 146.13 2 *e*PKP2 PKPdf 12 36 59.5 -0.6
BLA *e* 12 40 17.1
BLA MLR MLR
comp=Z,1μm,21.0s,MS5.6
WVT Waverly 146.17 13 *e*PKIKP PKPdf 12 36 58.5 -1.7
WVT MLR MLR
comp=Z,921nm,20.0s,MS5.6
JCT Junction City 146.32 34 *e*PKP2 PKPdf 12 37 00.0 -0.6
JCT MLR MLR
comp=Z,1μm,22.0s,MS5.7
TZTN Tazewell 146.53 7 *e*PKPdf PKPdf 12 37 00.1 -0.7
LCO Las Campanas 147.06 193 *e*PKPdf PKPdf 12 37 03.3 +1.3
LCO LR LR
comp=Z,1μm,21.0s,MS5.7
PLAL Pickwick Lake 147.21 14 *e*PKPdf PKPdf 12 37 00.6 -1.4
PLAL *e*PKPbc PKPbc 12 37 02.3 -2.0
PLAL LR LR
comp=Z,978nm,21.0s,MS5.6
OXF Oxford 147.30 17 *e*PKIKP PKPdf 12 37 01.9 -0.2
OXF MLR MLR
comp=Z,772nm,20.0s,MS5.5
TKL Tuckaleechee C 147.37 8 PKPbc PKPbc 12 37 03.2 -1.5
comp=Z,20nm,0.5s,baz=112,slow=1.4,SNR=36
TKL Tuckaleechee C 147.37 8 PKP2 PKPbc 12 37 03.2 -1.5
TKL pmax pmax
comp=Z,20nm,0.5s
TKL Tuckaleechee C 147.37 8 *e*PKPdf PKPdf 12 37 01.3 -0.9
SWET Sewanee 147.45 11 *e*PKPdf PKPdf 12 37 00.7 -1.7
SWET *e*PKPbc PKPbc 12 37 03.4 -1.5
CPCT Cooper Cave 147.47 9 *e*PKPdf PKPdf 12 37 01.4 -1.0
NATX Nacogdoches 147.87 26 *e*PKPdf PKPdf 12 37 03.4 +0.2
NATX *e*PKPbc PKPbc 12 37 05.4 -0.7
NATX LR LR
comp=Z,1μm,21.0s,MS5.6
CNNC Cliffs of the 148.12 359 *e*PKPbc PKPbc 12 37 05.5 -1.3
CNNC LR LR
comp=Z,1μm,21.0s,MS5.7
BBSR BB Station 148.16 337 *e*PKPbc PKPbc 12 37 05.8 -1.1
BBSR LR LR
comp=Z,1μm,22.0s,MS5.7
HKT Hockley 148.84 30 *e*PKIKP PKPdf 12 37 04.9 +0.1
HKT *e* 12 37 08.6
HKT MLR MLR
comp=Z,1μm,22.0s,MS5.7
JSC Jenkinsville 149.00 4 *e*PKPdf PKPdf 12 37 04.3 -0.7
JSC *e*PKPbc PKPbc 12 37 08.0 -1.0
VBMS Vicksburg 149.08 20 *e*PKPbc PKPbc 12 37 08.2 -1.1
VBMS LR LR
comp=Z,926nm,19.0s,MS5.6
LRAL Lakeview Retre 149.33 14 *e*PKPdf PKPdf 12 37 03.7 -1.8
LRAL LR LR
comp=Z,868nm,20.0s,MS5.5
CJM Chamela 149.59 56 *i* P PKPbc 12 37 10.1 -0.8
GOGA Godfrey 149.63 8 *e*PKP2 PKPbc 12 37 09.1 -1.5
GOGA MLR MLR
comp=Z,1μm,20.0s,MS5.7
KVTX Kingsville 149.63 35 *e*PKPbc PKPbc 12 37 11.4 +0.6
KVTX LR LR
comp=Z,956nm,19.0s,MS5.6
COW Cow Castle Cre 149.93 3 *e*PKPbc PKPbc 12 37 10.4 -0.9
NHSC New Hope 150.23 3 *e*PKPbc PKPbc 12 37 11.2 -0.9
NHSC LR LR
comp=Z,1μm,20.0s,MS5.8
BRAL Brewton 151.24 15 *e*PKPdf PKPdf 12 37 08.7 +0.1
BRAL *e*PKPbc PKPbc 12 37 14.2 -0.4
BRAL LR LR
comp=Z,976nm,19.0s,MS5.6
CEN1 Los Morros 152.30 197 *e*P PKPbc 12 37 18.5 +1.3
SIV San Ignacio 154.17 222 PKP PKPdf 12 37 12.8 -0.4
comp=Z,2.2nm,0.8s,baz=132,slow=3.3,SNR=8.2
SIV PKPbc PKPbc 12 37 20.7 -0.7
comp=Z,5.3nm,0.8s,baz=114,slow=5.6,SNR=16
DWPF Disney 155.10 6 PFAKE 12 37 20.0 +5.8
DWPF LR LR
comp=Z,1μm,21.0s,MS5.7
LPAZ La Paz 158.00 208 PKP PKPdf 12 37 18.7 +0.5
comp=Z,2.4nm,0.7s,baz=108,slow=2.7,SNR=7.3
LPAZ PKPab PKPab 12 37 53.3 +1.8
comp=Z,7.9nm,1.0s,baz=96,slow=4.9,SNR=4.9
LPAZ La Paz 158.00 208 PKIKP PKPdf 12 37 18.7 +0.4
LPAZ 12 37 53.3
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ pmax pmax
comp=Z,8.0nm,1.0s
ANWB Willy Bob 158.07 312 PFAKE 12 37 30.0 +12
ANWB LR LR
comp=Z,721nm,22.0s,MS5.5
BBGH Gun Hill 158.67 299 PFAKE 12 37 30.0 +11
BBGH LR LR
comp=Z,2μm,19.0s,MS6.0
FDF Fort de France 159.26 305 PFAKE 12 37 30.0 +10
FDF LR LR
comp=Z,405nm,20.0s,MS5.3
GRTK Grand Turk 160.38 339 PFAKE 12 37 30.0 +9.1
GRTK LR LR
comp=Z,743nm,22.0s
GRGR Grenville 160.95 299 PFAKE 12 37 30.0 +8.3
GRGR LR LR
comp=Z,518nm,21.0s
SDDR Presa de Saban 162.74 336 *e*PKPab PKPab 12 38 12.0 0.0
SDDR LR LR
comp=Z,942nm,21.0s
GTBY Guantanamo Bay 163.03 348 PFAKE 12 37 30.0 +6.3
GTBY LR LR
comp=Z,682nm,20.0s
NNA Nana 164.79 187 PKP PKPdf 12 37 25.7 +0.2
comp=Z,3.2nm,0.3s,baz=259,slow=5.2,SNR=2.8
NNA Nana 164.79 187 *e*PKPdf PKPdf 12 37 25.9 +0.5
NNA LR LR
comp=Z,878nm,19.0s
MTDJ Mount Denham 165.04 356 PFAKE 12 37 40.0 +14
MTDJ LR LR
comp=Z,989nm,22.0s
TGUH Tegucigalpa,Un 166.29 38 PFAKE 12 37 40.0 +13
TGUH LR LR
comp=Z,865nm,21.0s
PAYG Puerto Ayora 167.78 108 PFAKE 12 37 40.0 +12
PAYG LR LR
comp=Z,808nm,19.0s
SDV Santo Domingo 170.21 306 *e*PKPdf PKPdf 12 37 30.3 +1.0
SDV LR LR
comp=Z,450nm,22.0s
JTS JuntasAbangare 170.61 41 PFAKE 12 37 40.0 +10
JTS LR LR
comp=Z,837nm,20.0s
BCIP Isla Barro Col 173.97 11 PFAKE 12 37 40.0 +8.9
BCIP LR LR
comp=Z,1μm,20.0s
ROSC El Rosal 175.36 291 PKP PKPdf 12 37 31.7 +0.2
comp=Z,7.3nm,0.7s,baz=87,slow=21,SNR=5.8
OTAV Otavalo 177.04 184 *e*PKPdf PKPdf 12 37 31.5 -0.4
OTAV LR LR
comp=Z,1μm,21.0s

IDC ***18*** *12:37:01.2±0.7, 31°.20N×103°.11E, h0km, mb4.0/19, mb1 4.1/21, mb1mx4.0/30, mbtmp4.0/21, ML3.4/1, MS5.1/3, Ms1 5.0/3, ms1mx3.9/40, Error ellipse: s-maj=23.4km s-min=14.1km az=51.0*

ISCJB ***18*** *12:37:02.3±1.0, 31°.26N±0°.03×103°.08E±0°.03, h12km±6km, mb4.2/37, MS5.0/6, Error ellipse: s-maj=5.9km s-min=4.7km az=168.4*

NEIC ***18*** *12:37:03.2±0.4, 31°.19N×103°.09E, h10km, mb4.5/11, Error ellipse: s-maj=10.5km s-min=7.5km az=56.0*

BJI ***18*** *12:37:03.7, 31°.31N×103°.32E, h17km, mB4.6/6, mb4.4/12, ML4.1/18, Ms4.5/12, Ms7 4.4/11*

MOS ***18*** *12:37:04.7±1.1, 31°.14N×103°.12E, h33km, mb4.5/27, Error ellipse: s-maj=13.5km s-min=7.3km az=103.6*

ISC 18 12:37:03.0±0.9, 31°.27N±0°.03×103°.11E±0°.03, h5km±6km, n104, σ1§21/117, mb4.2/37, MS5.0/6, 2C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.66**	**122**	Pg	**Pg**	**12 37 15.0**	**-0.7**
CD2				Sg	**Sg**	**12 37 24.6**	**+0.4**
CD2				smax			
comp=N,22μm,0.8s							
LZH	**Lanzhou**	**4.85**	**7**	*e*Pg	**Pb**	**12 38 26.4**	**-2.0**
LZH				Sn	**Sb**	**12 39 21.0**	**-6.0**
LZH				Sg	**Sg**	**12 39 37.0**	**-1.7**
LZH				smax			
comp=N,170nm,1.1s							
LZH				smax			
comp=E,480nm,1.0s							
LZH				LR	LR		
comp=E,5μm,7.4s							

LZH				LR	LR			
	comp=Z,5μm,8.0s							
ENH	**Enshi**	**5.58**	**99**	*e*Pn	**Pn**	**12 38 26.1**	**-0.5**	
	comp=Z,202nm,0.9s							
XAN	**Xi'an**	**5.63**	**59**	Pn	**Pn**	**12 38 28.8**	**+1.5**	
XAN				Pg	**Pb**	**12 38 42.6**	**+0.9**	
XAN				Sn	**Sn**	**12 39 30.0**	**-2.3**	
XAN				Sg	**Sb**	**12 39 50.3**	**+0.9**	
XAN				smax				
	comp=N,240nm,1.1s							
XAN				smax				
	comp=E,120nm,0.8s							
GYA	**Guiyang**	**5.71**	**146**	Pn	**Pn**	**12 38 31.9**	**+3.4**	
GYA				Sn	**Sn**	**12 39 38.8**	**+4.3**	
GYA				smax				
	comp=N,430nm,0.7s							
GYA				smax				
	comp=E,310nm,0.8s							
KMI	**Kunming**	**6.13**	**183**	Pn	**Pn**	**12 38 35.5**	**+1.3**	
KMI				Sn	**Sn**	**12 39 50.4**	**+5.7**	
KMI				smax				
	comp=N,70nm,0.9s							
KMI				smax				
	comp=E,45nm,0.8s							
GTA	**Gaotai**	**8.56**	**343**	*e*P	Px	12 39 18.3		
GTA				pP		12 39 21.5		
GTA				sP		12 39 24.8		
GTA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
WHN	**Wuhan**	**9.68**	**91**	P	**Pn**	**12 39 21.3**	**-1.7**	
WHN				S	**Sn**	**12 41 06.9**	**-5.3**	
HHC	**Hu-ho-hao-te**	**11.75**	**33**	*e*P	**Pn**	**12 39 50.5**	**-0.7**	
HHC				pP		12 39 54.9		
HHC				PP		12 40 00.1		
HHC				S	**Sn**	**12 42 01.8**	**-0.9**	
HHC				sS		12 42 07.4		
HHC				SS		12 42 15.6		
HHC				pmax	pmax			
	comp=Z,19nm,1.1s							
HHC				pmax	pmax			
	comp=Z,290nm,4.9s							
HHC				LR	LR			
	comp=N,1μm,5.9s							
HHC				LR	LR			
	comp=E,700nm,5.4s							
HHC				LR	LR			
	comp=Z,2μm,5.9s							
CMAR	**Chiang Mai Arr**	**13.30**	**197**	Pn	**Pn**	**12 40 12.6**	**0.0**	
	comp=Z,0.2nm,0.3s,baz=7.0,slow=9.0,SNR=6.0							
NJ2	**Nanjing**	**13.44**	**83**	*e*P	**Pn**	**12 40 16.3**	**+2.0**	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
QIZ	**Qiongzhong**	**13.62**	**152**	P	**Pn**	**12 40 24.8**	**+7.9**	
QIZ				S	**Sn**	**12 42 57.8**	**+9.2**	
QIZ				pmax	pmax			
	comp=Z,10.0nm,1.9s							
QIZ				pmax	pmax			
	comp=Z,1μm,13.8s							
TAPN	**Taplejung**	**13.99**	**258**	*e*P	**Pn**	**12 40 22.3**	**+0.4**	
	comp=Z,17nm,0.8s							
ODAN	**Odare**	**14.43**	**256**	*e*P	**Pn**	**12 40 28.6**	**+0.7**	
	comp=Z,20nm,0.6s							
RAMN	**Ramite**	**15.06**	**258**	*e*P	**Pn**	**12 40 35.7**	**-0.7**	
	comp=Z,14nm,0.7s							
GUN	**Gumba**	**15.36**	**262**	*e*P	**Pn**	**12 40 40.1**	**-0.3**	
	comp=Z,24nm,0.6s							
PKI	**Pulchoki**	**15.86**	**261**	*e*P	**Pn**	**12 40 45.8**	**-1.1**	
PKIN	**Phulchoki**	**15.87**	**261**	*e*P	**Pn**	**12 40 45.8**	**-1.3**	
KKN	**Kakani**	**15.90**	**262**	*e*P	**Pn**	**12 40 47.3**	**-0.2**	
	comp=Z,101nm,0.9s							
DMN	**Daman**	**16.10**	**261**	*e*P	**Pn**	**12 40 50.3**	**+0.2**	
	comp=Z,72nm,0.9s							
SONM	**Songino Array**	**16.74**	**8**	Pn	**Pn**	**12 40 59.5**	**+1.4**	
	comp=Z,0.1nm,0.3s,baz=180,slow=12,SNR=13							
ULN	**Ulaanbaatar**	**16.85**	**9**	*e*P	**Pn**	**12 41 00.5**	**+1.0**	
ULN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ULN	**Ulaanbaatar**	**16.85**	**9**	*e*P	**Pn**	**12 41 00.5**	**+1.0**	
	comp=Z,7.2nm,1.1s							
WMQ	**Urumqi**	**17.47**	**320**	*e*P	**Pn**	**12 41 09.4**	**+2.1**	
WMQ				LR	LR			
	comp=N,1μm,21.0s							
WMQ				LR	LR			
	comp=E,2μm,23.0s							
WMQ				LR	LR			
	comp=Z,2μm,23.0s							
ZAK	**Zakamensk**	**19.10**	**0**	*e*P	**Pn**	**12 41 29.2**	**+2.0**	
ZAK				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MOY	**Mondy**	**20.44**	**356**	*e*P	**P**	**12 41 46.4**	**+5.3**	
IRK	**Irkutsk**	**20.98**	**2**	*e*P	**P**	**12 41 49.2**	**+2.3**	
IRK				pmax	pmax			
	comp=Z,27nm,1.9s							
KSRS	**Korea Array**	**21.36**	**66**	P	**P**	**12 41 49.6**	**-1.5**	
	comp=Z,5.8nm,0.7s,mb4.0,baz=260,slow=9.7,SNR=14							
KSRS	**Korea Array**	**21.36**	**66**	P	**P**	**12 41 49.7**	**-1.5**	
KSRS				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.0							
CN2	**Changchun**	**21.61**	**48**	*e*P	**P**	**12 41 56.5**	**+2.7**	
CN2				*es*P	sP	12 42 03.6	+7.8	
CN2				*e*S	**S**	**12 45 46.0**	**-7.4**	
CN2				pmax	pmax			
	comp=Z,20nm,0.8s,mb4.6							
MK31	**Makanchi Array**	**22.30**	**320**	*e*P	**P**	**12 42 01.4**	**+0.3**	
MKAR	**Makanchi Array**	**22.30**	**320**	P	**P**	**12 42 01.6**	**+0.4**	
	comp=Z,2.9nm,0.8s,mb3.7,baz=126,slow=12,SNR=14							
MKAR	**Makanchi Array**	**22.30**	**320**	P	**P**	**12 42 01.6**	**+0.5**	
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KSH	**Kashi**	**23.54**	**298**	*e*P	**P**	**12 42 18.1**	**+3.8**	
KSH				*ep*P		12 42 22.1		
KSH				*es*P	sP	12 42 25.3	+8.9	
KSH				*e*PP		12 42 51.3		
KSH				*e*S	**S**	**12 46 29.9**	**+1.5**	
KSH				*e*SS		12 47 19.1		
KSH				pmax	pmax			
	comp=Z,110nm,4.7s							
KSH				LR	LR			
	comp=N,320nm,10.9s,MS4.4							
KSH				LR	LR			
	comp=E,740nm,13.5s,MS4.4							
KSH				LR	LR			
	comp=Z,430nm,9.7s							
AAK	**Ala-Archa**	**25.41**	**305**	P	**P**	**12 42 30.2**	**-1.1**	
	comp=Z,2.8nm,0.6s,mb3.9,baz=123,slow=8.0,SNR=10.0							
AAK	**Ala-Archa**	**25.41**	**305**	*ce*P	**P**	**12 42 34.2**	**+2.8**	
AAK				pmax	pmax			
	comp=Z,5.0nm,1.2s,mb3.9							
AAK	**Ala-Archa**	**25.41**	**305**	*e*P	**P**	**12 42 32.9**	**+1.6**	
	comp=Z,5.7nm,0.8s,mb4.2							
ZAA0	**Zalesovo Array**	**26.21**	**335**	*e*P	**P**	**12 42 37.7**	**-0.8**	
ZALV	**Zalesovo Beam**	**26.21**	**335**	P	**P**	**12 42 37.2**	**-1.3**	
	comp=Z,2.7nm,0.8s,mb3.8,baz=148,slow=12,SNR=7.4							
ZALV	**Zalesovo Beam**	**26.21**	**335**	P	**P**	**12 42 37.2**	**-1.3**	
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.9							
ZALV	**Zalesovo Beam**	**26.21**	**335**	P	**P**	**12 42 37.2**	**-1.3**	
KURK	**Kurchatov**	**26.61**	**324**	P	**P**	**12 42 41.8**	**-0.3**	
	comp=Z,2.8nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=7.7							
KURK	**Kurchatov**	**26.61**	**324**	*e*P	**P**	**12 42 45.9**	**+3.8**	
KURK				pmax	pmax			
	comp=Z,5.0nm,1.2s,mb3.9							
BOD	**Bodaibo**	**27.59**	**13**	*e*P	**P**	**12 42 51.6**	**+0.8**	
BOD				pmax	pmax			
	comp=Z,2.0nm,1.1s,mb3.7							
MAJO	**Matsushiro**	**29.50**	**70**	*e*P	**P**	**12 43 09.6**	**+1.5**	
MAJO				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.2							
MAJO	**Matsushiro**	**29.50**	**70**	*e*P	**P**	**12 43 09.6**	**+1.5**	
	comp=Z,5.3nm,0.9s,mb4.3							
BVAR	**Borovoye Array**	**32.14**	**322**	P	**P**	**12 43 31.3**	**+0.1**	
	comp=Z,0.7nm,0.6s,mb3.7,baz=119,slow=12,SNR=2.9							
BVAR				PcP	PcP	12 46 19.1	-1.1	
	comp=Z,1.4nm,0.7s,baz=151,slow=3.3,SNR=7.0							
BVAR	**Borovoye Array**	**32.14**	**322**	P	**P**	**12 43 31.3**	**+0.1**	
BVAR						12 46 19.1		
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BRVK	**Borovoye**	**32.21**	**322**	*e*P	**P**	**12 43 34.2**	**+2.4**	
BRVK				pmax	pmax			
	comp=Z,2.0nm,1.2s,mb3.8							
ARU	**Arti**	**39.78**	**322**	*d*P	**P**	**12 44 36.5**	**-0.1**	
ARU				*e*		12 46 08.5		
ARU				S	**S**	**12 50 39.0**	**-2.0**	
ARU				SS	SS	12 53 31.7	-4.8	
ARU				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.4							
TIXI	**Tiksi**	**42.76**	**12**	*e*P	**P**	**12 45 02.6**	**+1.7**	
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.3							
TIXI	**Tiksi**	**42.76**	**12**	*e*P	**P**	**12 45 00.9**	**0.0**	
	comp=Z,5.7nm,0.9s,mb4.3							
MIB	**Mutribah**	**47.62**	**283**	*e*P	**P**	**12 45 39.8**	**-0.3**	
RDF	**Al-Radifah**	**47.70**	**282**	*e*P	**P**	**12 45 40.2**	**-0.6**	
ZEI	**Tsey**	**47.76**	**301**	*e*P	**P**	**12 45 40.7**	**-0.3**	
ZEI				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.4							
NAY	**Al-Naaiem**	**47.86**	**283**	*e*P	**P**	**12 45 41.9**	**-0.1**	
NAY				AMb	AMB	12 45 48.1		
	comp=Z,15nm,0.6s,mb5.2							
KIV	**Kislovodsk**	**48.51**	**303**	*e*P	**P**	**12 45 47.8**	**+1.0**	
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.5							
BILL	**Bilibino**	**51.40**	**25⇓**	*e*P	**P**	**12 46 09.5**	**+1.2**	
BILL				*e*		12 48 05.3		
BILL				*e*S	**S**	**12 53 20.4**	**-7.7**	
BILL				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.5							
BILL				MLR	MLR			
	comp=Z,2μm,17.0s,MS5.3							
OBN	**Obninsk**	**51.79**	**318⇑**	*e*P	**P**	**12 46 15.8**	**+4.3**	
OBN				*e*		12 48 11.9		
OBN				*e*S	**S**	**12 53 34.5**	**+0.7**	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.6							
OBN				MLR	MLR			
	comp=Z,1μm,21.0s,MS4.8							
ANN	**Anapa**	**52.14**	**305**	*e*P	**P**	**12 46 15.8**	**+1.6**	
ANN				*e*S	**S**	**12 53 34.8**	**-4.1**	
ANN				pmax	pmax			
	comp=Z,24nm,1.1s,mb5.0							
FITZ	**Fitzroy Crossi**	**53.64**	**153**	P	**P**	**12 46 23.8**	**-1.8**	
	comp=Z,1.6nm,0.8s,mb4.0,baz=350,slow=11,SNR=2.6							
BRTR	**Keskin Array B**	**55.92**	**299**	P	**P**	**12 46 41.5**	**-0.5**	
	comp=Z,0.6nm,0.7s,mb3.7,baz=101,slow=6.4,SNR=4.5							
BRTR	**Keskin Array B**	**55.92**	**299**	P	**P**	**12 46 41.5**	**-0.5**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
AKASG	**Malin Array Be**	**56.65**	**313**	P	**P**	**12 46 46.0**	**-1.0**	
	comp=Z,1.1nm,0.5s,mb4.2,baz=67,slow=7.1,SNR=4.6							
AKASG	**Malin Array Be**	**56.65**	**313**	P	**P**	**12 46 46.0**	**-1.0**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ARCES	**ARCESS Array B**	**56.76**	**336**	P	**P**	**12 46 46.7**	**-0.8**	
	comp=Z,4.3nm,1.0s,mb4.4,baz=90,slow=7.2,SNR=2.8							
ARCES	**ARCESS Array B**	**56.76**	**336**	P	**P**	**12 46 46.7**	**-0.8**	
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.0s							
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**12 46 47.5**	**-1.5**	
	comp=Z,2.6nm,0.8s,mb4.3,baz=86,slow=2.7,SNR=7.8							
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**12 46 47.5**	**-1.5**	
FINES				pmax	pmax			
	comp=Z,3.0nm,0.8s							
WRAB	**Tennant Creek**	**59.08**	**145**	*e*P	**P**	**12 47 02.6**	**-1.8**	
WRAB				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.7							
WRAB	**Tennant Creek**	**59.08**	**145**	*e*P	**P**	**12 47 02.5**	**-1.8**	
	comp=Z,5.3nm,0.7s,mb4.7							
ASAR	**Alice Springs**	**62.08**	**148**	P	**P**	**12 47 23.4**	**-1.4**	
	comp=Z,1.5nm,0.8s,mb4.2,baz=343,slow=6.9,SNR=18							
ASAR	**Alice Springs**	**62.08**	**148**	P	**P**	**12 47 23.4**	**-1.3**	
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**12 47 35.8**	**-1.7**	
	comp=Z,0.9nm,0.8s,mb3.9,baz=68,slow=7.2,SNR=3.3							
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**12 47 35.8**	**-1.7**	
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**66.82**	**314**	P	**P**	**12 47 56.0**	**+0.4**	
	comp=Z,0.3nm,0.5s,mb3.6,baz=82,slow=9.6,SNR=4.7							
PPLA	**Purkeypile**	**68.93**	**28**	*e*P	**P**	**12 48 07.0**	**-1.7**	
	comp=Z,105nm,1.4s							
PMR	**Palmer**	**70.81**	**29**	*e*P	**P**	**12 48 20.9**	**+0.7**	
PMR				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
PMR	**Palmer**	**70.81**	**29**	*e*P	**P**	**12 48 20.9**	**+0.7**	
	comp=Z,6.9nm,1.0s,mb4.5							
CDF	**Champ du Feu**	**70.90**	**315**	*e*P	**P**	**12 48 20.5**	**-0.5**	
WLF	**Walferdange**	**71.02**	**317**	*e*P	**P**	**12 48 23.5**	**+1.8**	
WLF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
WLF	**Walferdange**	**71.02**	**317**	*e*P	**P**	**12 48 23.5**	**+1.7**	
	comp=Z,5.5nm,0.8s,mb4.5							
KDAK	**Kodiak Island**	**71.17**	**33**	P	**P**	**12 48 23.0**	**+0.6**	
	comp=Z,4.7nm,0.6s,mb4.6							
KDAK	**Kodiak Island**	**71.17**	**33**	P	**P**	**12 48 23.0**	**+0.5**	
KDAK				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
KDAK	**Kodiak Island**	**71.17**	**33**	P	**P**	**12 48 23.0**	**+0.6**	
INK	**Inuvik**	**72.28**	**19**	P	**P**	**12 48 28.7**	**-0.3**	
	comp=Z,1.4nm,0.7s,mb4.0,baz=321,slow=7.4,SNR=5.0							
INK	**Inuvik**	**72.28**	**19**	P	**P**	**12 48 28.7**	**-0.3**	
INK				pmax	pmax			
	comp=Z,1.0nm,0.7s							
INK	**Inuvik**	**72.28**	**19**	*e*P	**P**	**12 48 29.4**	**+0.5**	
	comp=Z,3.8nm,1.0s,mb4.3							
LPG	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.1**	**+0.3**	
	comp=Z,4.6nm,0.6s,mb4.3							
LPG	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.1**	**+0.3**	
LPG				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
LPG	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.1**	**+0.3**	
	comp=Z,2.3nm,0.6s,mb4.3							
LPL	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.0**	**+0.2**	
	comp=Z,5.8nm,0.6s,mb4.4							
LPL	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.0**	**+0.2**	
LPL				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
LPL	**La Plagne**	**72.52**	**313**	*e*P	**P**	**12 48 31.0**	**+0.2**	
	comp=Z,2.9nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**72.61**	**146**	P	**P**	**12 48 29.6**	**-1.8**	
	comp=Z,2.5nm,0.9s,mb4.2,baz=343,slow=8.6,SNR=3.9							
SMF	**Signal de Mont**	**73.78**	**315**	*e*P	**P**	**12 48 37.6**	**-0.6**	
	comp=Z,7.5nm,0.9s,mb4.3							
SMF	**Signal de Mont**	**73.78**	**315**	*e*P	**P**	**12 48 37.6**	**-0.6**	
SMF				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
SMF	**Signal de Mont**	**73.78**	**315**	*e*P	**P**	**12 48 37.6**	**-0.6**	
	comp=Z,3.8nm,0.9s,mb4.3							
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**12 49 21.5**	**-1.0**	
	comp=Z,0.3nm,0.5s,mb3.5,baz=329,slow=4.8,SNR=3.3							
YKA				LR	LR	13 29 46.2		
	comp=Z,965nm,21.8s,MS5.1,baz=25,slow=39							
YKA	**Yellowknife Ar**	**81.78**	**17**	P	**P**	**12 49 21.5**	**-1.0**	
YKA				MLR	MLR			
	comp=Z,965nm,21.8s							
TORD	**Torodi Ar. Bea**	**92.77**	**287**	P	**P**	**12 50 17.5**	**+0.5**	
	comp=Z,0.8nm,1.0s,mb4.1,baz=57,slow=5.3,SNR=3.1							
SCHQ	**Schefferville**	**93.82**	**354**	LR	LR	13 37 51.8		
	comp=Z,944nm,22.0s,MS5.2,baz=186,slow=39							
ULM	**Lac du Bonnet**	**97.11**	**12**	LR	LR	13 40 34.1		
	comp=Z,788nm,21.0s,MS5.2,baz=351,slow=39							
OTAV	**Otavalo**	**148.63**	**3**	*e*PKPbc	PKPbc	12 56 54.3	+2.4	

*IDC **18** 12:41:29.8±1.5, 31°.13N×103°.59E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=42.8km s-min=23.8km az=46.0*
*NEIC **18** 12:41:31.6±1.0, 31°.13N×103°.49E, h10km, Error ellipse: s-maj=24.7km s-min=11.6km az=220.0*
*BJI **18** 12:41:31.6, 31°.23N×103°.50E, h11km, ML3.9/10*
ISC 18 12:41:32.1±1.0, 31°.33N±0°.04×103°.67E±0°.06, h6km±7km, n13, σ0.99/16, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**169**	Pg	**Pg**	**12 41 39.1**	**-1.3**
CD2				Sg	**Sg**	**12 41 46.3**	**+0.4**
CD2				smax			
	comp=N,22μm,0.8s						
LZH	**Lanzhou**	**4.75**	**2**	*e*Pg	**Pg**	**12 43 07.4**	**+4.3**
LZH				Sg	**Sg**	**12 44 04.8**	**+0.2**
LZH				smax			
	comp=N,58nm,0.9s						
LZH				smax			
	comp=E,71nm,0.7s						
ENH	**Enshi**	**5.12**	**100**	Pn	**Pn**	**12 42 50.4**	**+1.2**
ENH				*e*Sn	**Sn**	**12 43 48.4**	**-0.2**
XAN	**Xi'an**	**5.19**	**57**	Pg	Px	12 43 26.3	
XAN				Sg	**Sg**	**12 44 18.1**	**-0.7**
XAN				smax			
	comp=N,91nm,0.7s						
XAN				smax			
	comp=E,66nm,0.6s						
GYA	**Guiyang**	**5.52**	**151**	Pg	**Pb**	**12 43 10.8**	**+1.9**
GYA				smax			
	comp=N,90nm,1.0s						
GYA				smax			
	comp=E,10.0nm,1.0s						
SONM	**Songino Array**	**16.62**	**6**	Pn	**Pn**	**12 45 26.7**	**+1.2**
	comp=E,0.2nm,0.3s,baz=187,slow=12,SNR=7.6						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**12 46 14.8**	**-0.3**
	comp=E,3.6nm,0.7s,baz=259,slow=10,SNR=13						
MK31	**Makanchi Array**	**22.56**	**319**	*e*P	**P**	**12 46 32.4**	**-0.4**
MKAR	**Makanchi Array**	**22.56**	**319**	P	**P**	**12 46 32.5**	**-0.4**
	comp=E,1.8nm,0.9s,mb3.5,baz=126,slow=12,SNR=7.1						
MKAR	**Makanchi Array**	**22.56**	**319**	P	**P**	**12 46 32.5**	**-0.4**
ZALV	**Zalesovo Beam**	**26.36**	**335**	P	**P**	**12 47 09.5**	**+0.7**
	comp=E,0.5nm,0.4s,mb3.4,baz=132,slow=9.9,SNR=2.7						
KURK	**Kurchatov**	**26.84**	**323**	P	**P**	**12 47 12.8**	**-0.3**
	comp=E,0.9nm,0.5s,mb3.5,baz=125,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**61.88**	**148**	P	**P**	**12 51 50.2**	**-2.1**
	comp=E,0.3nm,0.7s,mb3.6,baz=335,slow=5.9,SNR=4.1						

*ISCJB **18** 12:52:40.4±0.9, 31°.41N±0°.03×103°.95E±0°.08, h8km±7km, mb3.7/6, Error ellipse: s-maj=11.1km s-min=5.3km az=9.0*
*IDC **18** 12:52:40.6±1.0, 31°.34N×104°.02E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML2.9/1, Error ellipse: s-maj=33.5km s-min=19.5km az=58.0*
*NEIC **18** 12:52:42.5±0.5, 31°.35N×103°.93E, h10km, Error ellipse: s-maj=14.2km s-min=9.5km az=70.0*
*BJI **18** 12:52:42.0, 31°.37N×104°.13E, h9km, ML3.9/15, Ms3.5/2*
ISC 18 12:52:41.1±0.8, 31°.32N±0°.04×104°.16E±0°.05, h2km±6km, n21, σ1.06/29, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**221**	Pg	**Pg**	**12 52 51.3**	**0.0**
CD2				Sg	**Sg**	**12 52 58.3**	**+0.1**
CD2				smax			
	comp=N,8μm,0.7s						
ENH	**Enshi**	**4.70**	**101**	*e*Pn	**Pn**	**12 53 57.2**	**+4.2**
LZH	**Lanzhou**	**4.76**	**357**	*e*Pn	**Pn**	**12 53 59.6**	**+5.7**
LZH				Pg	**Pg**	**12 54 13.3**	**+0.9**
LZH				Sg	**Sg**	**12 55 14.9**	**+0.7**
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,160nm,1.0s						
LZH				LR	LR		
	comp=E,1μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,7.8s						
XAN	**Xi'an**	**4.84**	**55**	Pn	**Pn**	**12 53 56.6**	**+1.6**
XAN				Pg	**Pg**	**12 54 11.8**	**-2.1**
XAN				Sn	**Sn**	**12 54 54.9**	**+3.2**
XAN				Sg	**Sg**	**12 55 15.9**	**-0.8**
XAN				smax			
	comp=N,220nm,0.9s						
XAN				smax			
	comp=E,110nm,0.9s						
XAN				LR	LR		
	comp=N,310nm,7.1s						
XAN				LR	LR		
	comp=E,130nm,12.4s						
GYA	**Guiyang**	**5.31**	**155**	Pg	**Pn**	**12 54 06.6**	**+5.1**
GYA				Sg	**Sn**	**12 55 11.5**	**+8.2**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,90nm,0.7s						
KMI	**Kunming**	**6.30**	**192**	Pn	**Pn**	**12 54 15.3**	**+0.3**
KMI				Sn	**Sn**	**12 55 21.0**	**-6.6**
KMI				smax			
	comp=N,30nm,0.8s						
KMI				smax			
	comp=E,47nm,0.7s						
WHN	**Wuhan**	**8.79**	**92**	P	Px	12 55 02.1	
WHN				S	**Sn**	**12 56 27.8**	**-1.0**
WHN				LR	LR		
	comp=N,1μm,13.3s						
WHN				LR	LR		
	comp=E,490nm,7.2s						
GTA	**Gaotai**	**8.82**	**337**	*e*P	**Pg**	**12 55 25.5**	**-4.5**
GTA				pP		12 55 31.3	
GTA				sP		12 55 35.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.65**	**201**	Pn	**Pn**	**12 55 56.4**	**+0.6**
	baz=12,slow=9.7,SNR=3.9						
SONM	**Songino Array**	**16.59**	**5**	Pn	**Pn**	**12 56 35.3**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=186,slow=13,SNR=6.1						
KSRS	**Korea Array**	**20.52**	**66**	P	**P**	**12 57 21.8**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=263,slow=12,SNR=7.4						
CN2	**Changchun**	**20.91**	**47**	*e*P	**P**	**12 57 21.3**	**-3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MKAR	**Makanchi Array**	**22.85**	**319**	P	**P**	**12 57 44.8**	**-0.8**
	comp=Z,2.0nm,0.9s,mb3.5,baz=119,slow=13,SNR=11						
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	**P**	**12 58 19.2**	**-1.0**
	comp=Z,1.3nm,0.6s,mb3.7,baz=132,slow=9.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**26.55**	**334**	P	**P**	**12 58 19.2**	**-1.0**
KURK	**Kurchatov**	**27.11**	**323**	P	**P**	**12 58 23.9**	**-1.3**
	comp=Z,1.8nm,0.9s,mb3.6,baz=125,slow=10.0,SNR=8.7						
FINES	**FINESS Array B**	**57.42**	**326**	P	**P**	**13 02 30.1**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=96,slow=8.5,SNR=4.4				

comp=E,1.1nm,0.6s,baz=258,slow=10.0,SNR=6.7
MK31 Makanchi Array 22.70 318 *e*P **P 13 27 60.0 -1.0**
MKAR Makanchi Array 22.70 318 P **P 13 28 01.8 +0.8**
comp=E,0.3nm,0.3s,mb3.1,baz=113,slow=12,SNR=4.5
MKAR Makanchi Array 22.70 318 P **P 13 28 01.8 +0.8**
KURK Kurchatov 26.92 322 P **P 13 28 40.7 +0.3**
comp=E,0.3nm,0.3s,mb3.4,baz=145,slow=9.4,SNR=3.3
BRTR Keskin Array B 56.69 299 P **P 13 32 41.2 -1.8**
comp=E,0.3nm,0.8s,mb3.4,baz=98,slow=8.9,SNR=2.4
FINES FINESS Array B 57.21 326 P **P 13 32 44.6 -1.6**
comp=E,2.6nm,0.9s,mb4.2,baz=103,slow=6.7,SNR=3.4
WRAB Tennant Creek 58.84 147 *e*P **P 13 32 58.5 +0.4**
comp=E,1.0nm,0.6s,mb4.0
ASAR Alice Springs 61.88 149 P **P 13 33 19.5 +0.6**
comp=E,0.3nm,0.5s,mb3.7,baz=333,slow=6.7,SNR=9.6
YKA Yellowknife Ar 80.98 17 P **P 13 35 14.0 +0.2**
comp=E,0.5nm,0.7s,mb3.6,baz=327,slow=5.0,SNR=5.5

*TRN **18** 13:24:44.4, 19°.45N×64°.22W, h18km*
*NEIC **18** 13:24:46.1, 19°.61N×64°.09W, h31km, MD3.5(RSPR), After RSPR.*
*RSPR **18** 13:24:46.1, 19°.61N×64°.09W, h31km±12km, MD3.5/8, MD3.5/8*
ISC 18 13:24:44.9±3.2, 19°.6N±0°.1×64°.0W±0°.2, h29km±17km, n25, σ0°42/29, 8C-17D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.86**	**199**	⇓*i*P	**Pn**	**13 25 01.0**	**0.0**
ABV				*e*S	**Sb**	**13 25 12.4**	**0.0**
ABV	**Anegada**	**0.86**	**199**	⇓*i*P	**Pn**	**13 25 01.0**	**0.0**
ABV				*e*S	**Sb**	**13 25 12.4**	**0.0**
TBVI	**Tortola**	**1.25**	**206**	⇑*e*P	**Pn**	**13 25 06.1**	**-0.2**
TBVI	**Tortola**	**1.25**	**206**	⇑*e*P	**Pn**	**13 25 06.1**	**-0.2**
STVI	**Saint Thomas**	**1.47**	**216**	⇓*e*P	**Pn**	**13 25 09.2**	**-0.2**
STVI				*e*S	**Sn**	**13 25 27.5**	**-0.1**
STVI	**Saint Thomas**	**1.47**	**216**	⇓*e*P	**Pn**	**13 25 09.2**	**-0.2**
STVI				*e*S	**Sn**	**13 25 27.5**	**-0.1**
MTP	**Monte Pirata**	**2.03**	**225**	⇓*e*P	**Pn**	**13 25 17.3**	**+0.2**
MTP	**Monte Pirata**	**2.03**	**225**	⇓*e*P	**Pn**	**13 25 17.3**	**+0.2**
CBYP	**Canovanas**	**2.14**	**234**	⇑*e*P	**Pn**	**13 25 18.2**	**-0.3**
CBYP	**Canovanas**	**2.14**	**234**	⇑*e*P	**Pn**	**13 25 18.2**	**-0.3**
HUMP	**Col San Antoni**	**2.21**	**231**	⇑*e*P	**Pn**	**13 25 19.5**	**-0.1**
HUMP	**Col San Antoni**	**2.21**	**231**	⇑*e*P	**Pn**	**13 25 19.5**	**-0.1**
CPD	**Cerro la Pandu**	**2.33**	**230**	⇓*e*P	**Pn**	**13 25 21.2**	**+0.1**
CPD	**Cerro la Pandu**	**2.33**	**230**	⇓*e*P	**Pn**	**13 25 21.2**	**+0.1**
SJG	**San Juan**	**2.46**	**235**	⇑*e*P	**Pn**	**13 25 23.0**	**0.0**
SJG	**San Juan**	**2.46**	**235**	⇑*e*P	**Pn**	**13 25 23.0**	**0.0**
CELP	**Cerrillos**	**2.82**	**239**	⇓*e*P	**Pn**	**13 25 27.6**	**-0.3**
CELP	**Cerrillos**	**2.82**	**239**	⇓*e*P	**Pn**	**13 25 27.6**	**-0.3**
ICM	**Isla Caja Muer**	**2.87**	**235**	⇓*e*P	**Pn**	**13 25 29.7**	**+1.1**
ICM	**Isla Caja Muer**	**2.87**	**235**	⇓*e*P	**Pn**	**13 25 29.7**	**+1.1**
LRS	**Lares**	**2.93**	**245**	⇓*e*P	**Pn**	**13 25 29.3**	**-0.2**
LRS	**Lares**	**2.93**	**245**	⇓*e*P	**Pn**	**13 25 29.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**3.29**	**243**	⇓*e*P	**Pn**	**13 25 35.2**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.29**	**243**	⇓*e*P	**Pn**	**13 25 35.2**	**+0.8**
SMN1	**Samana, DR**	**4.95**	**267**	⇓*e*P	**Pn**	**13 25 56.6**	**-0.6**

MAN 18 13:25:04, 13°.10N×120°.86E, h20km, mb4.5, ML3.3, MS3.2, 3C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.41**	**13**	⇑*i*P	Pb	13 25 11.5	-1.2
PGP				*i*S	Sb	13 25 16.7	-1.8
SJMP	**San Jose**	**0.68**	**158**	*e*P	Pb	13 25 18.0	+0.8
LUBP	**Lubang**	**0.87**	**317**	*e*P	Pb	13 25 20.5	+0.1
TGY	**Tagaytay City**	**1.00**	**4**	⇑*e*P	Pb	13 25 23.0	+0.4
TGY				*i*S	Sb	13 25 37.5	+2.1
BOAC	**Boac**	**1.02**	**69**	*e*P	Pb	13 25 22.3	-0.7
BUSP	**Coron**	**1.26**	**211**	*e*P	Pn	13 25 27.3	+0.8
OTRP	**Odiongan**	**1.35**	**123**	*e*P	Pn	13 25 28.6	+0.9
GQP	**Guinayangan**	**1.74**	**62**	⇑*e*P	Pn	13 25 35.4	+2.3
GQP				*e*S	Sn	13 25 58.5	+3.8
POLP	**Polilio Island**	**1.93**	**33**	*e*P	Pn	13 25 38.6	+2.9
CUYO	**Cuyo Island**	**2.24**	**176**	*e*P	Pn	13 25 40.8	+0.8
ENPP	**El Nido**	**2.34**	**217**	*e*P	Pn	13 25 42.7	+1.3

*ISCJB **18** 13:34:08.1±0.9, 32°.19N±0°.03×105°.13E±0°.04, h13km±6km, mb4.0/22, Error ellipse: s-maj=5.8km s-min=5.0km az=29.6*
*IDC **18** 13:34:08.0±0.7, 32°.23N×105°.01E, h0km, mb4.0/14, mb1 4.1/17, mb1mx4.0/28, mbtmp3.9/17, ML3.6/3, Error ellipse: s-maj=22.8km s-min=14.7km az=45.0*
*NEIC **18** 13:34:09.5±3.5, 32°.22N×105°.09E, h10km±23km, mb4.1/7, Error ellipse: s-maj=9.2km s-min=6.3km az=49.0*
*BJI **18** 13:34:09.7, 32°.24N×104°.93E, h10km, mB4.6/5, mb4.2/8, ML3.8/18, Ms3.8/11, Ms7 3.7/7*
ISC 18 13:34:10.4±0.9, 32°.18N±0°.03×105°.11E±0°.04, h15km±6km, n41, σ0°99/53, mb4.0/22, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**223**	Pn	**Pn**	**13 34 40.3**	**+0.6**
CD2				Pg	**Pg**	**13 34 44.1**	**+0.8**
CD2				Sg	**Sg**	**13 35 04.8**	**-0.7**
CD2				smax			
	comp=N,5μm,0.7s						
XAN	**Xi'an**	**3.70**	**59**	Pn	**Pn**	**13 35 11.3**	**+4.3**
XAN				Pg	**Pg**	**13 35 19.0**	**-2.3**
XAN				Sn	**Sn**	**13 35 57.1**	**+6.7**
XAN				Sg	**Sg**	**13 36 10.9**	**+1.7**
XAN				smax			
	comp=N,430nm,0.7s						
XAN				smax			
	comp=E,260nm,0.9s						
XAN				LR	LR		
	comp=N,250nm,7.6s						
XAN				LR	LR		
	comp=E,170nm,9.6s						
XAN				LR	LR		
	comp=Z,190nm,8.1s						
LZH	**Lanzhou**	**4.04**	**345**	*e*Pn	**Pn**	**13 35 13.8**	**+2.2**
LZH				Pg	**Pg**	**13 35 23.6**	**-4.1**
LZH				Sn	**Sn**	**13 35 58.9**	**+0.3**
LZH				Sg	**Sg**	**13 36 13.5**	**-6.4**
LZH				smax			
	comp=N,550nm,1.1s						
LZH				smax			
	comp=E,870nm,0.9s						
LZH				LR	LR		
	comp=N,1μm,8.0s						
LZH				LR	LR		
	comp=Z,2μm,9.3s						
ENH	**Enshi**	**4.21**	**116**	*e*P	**Pn**	**13 35 12.4**	**-1.6**
GYA	**Guiyang**	**5.86**	**166**	Pg	**Pb**	**13 35 43.9**	**-8.4**
GYA				Sg	**Sn**	**13 36 44.3**	**+0.6**
GYA				smax			
	comp=N,170nm,0.7s						
GYA				smax			
	comp=E,160nm,0.8s						
KMI	**Kunming**	**7.33**	**197**	Pn	**Pn**	**13 35 56.6**	**-0.4**
KMI				Sn	**Sn**	**13 37 13.8**	**-6.1**
KMI				smax			
	comp=N,26nm,0.8s						
KMI				smax			
	comp=E,27nm,0.9s						
WHN	**Wuhan**	**8.07**	**99**	⇑P	**Pn**	**13 36 08.8**	**+1.7**
WHN				S	**Sn**	**13 37 36.8**	**-1.3**
WHN				LR	LR		
	comp=N,1μm,6.1s						
WHN				LR	LR		
	comp=E,630nm,6.5s						
WHN				LR	LR		
	comp=Z,680nm,8.5s						
GTA	**Gaotai**	**8.40**	**331**	*e*P	**Pn**	**13 36 11.4**	**-0.1**
GTA				pP		13 36 14.9	
GTA				sP		13 36 17.6	
GTA				S	**Sn**	**13 37 47.1**	**+1.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,95nm,4.2s						
GTA				LR	LR		
	comp=N,340nm,10.4s						
GTA				LR	LR		
	comp=E,180nm,7.7s						
GTA				LR	LR		
	comp=Z,290nm,12.2s						
CMAR	**Chiang Mai Arr**	**14.75**	**204**	Pn	**Pn**	**13 37 39.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=10,slow=8.3,SNR=3.8						
SONM	**Songino Array**	**15.67**	**3**	Pn	**Pn**	**13 37 51.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=10						
ULN	**Ulaanbaatar**	**15.74**	**5**	*e*P	**Pn**	**13 37 55.6**	**+4.2**
	comp=Z,5.1nm,0.9s						
KSRS	**Korea Array**	**19.44**	**68**	P	**Pn**	**13 38 36.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=254,slow=9.9,SNR=11						
CN2	**Changchun**	**19.73**	**48**	*e*P	**Pn**	**13 38 42.4**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	**Makanchi Array**	**22.76**	**316**	*e*P	**P**	**13 39 11.5**	**-0.5**
MKAR	**Makanchi Array**	**22.76**	**316**	P	**P**	**13 39 11.5**	**-0.5**
	comp=Z,3.3nm,0.9s,mb3.8,baz=110,slow=11,SNR=21						
KSH	**Kashi**	**24.65**	**295**	*e*P	**P**	**13 39 33.5**	**+3.1**
KSH				pmax	pmax		
	comp=Z,70nm,4.4s						
TKM2	**Tokmak 2**	**25.61**	**303**	*e*P	**P**	**13 39 38.9**	**-0.2**
	comp=Z,3.7nm,0.7s,mb4.0						
ZAA0	**Zalesovo Array**	**26.15**	**332**	*e*P	**P**	**13 39 43.2**	**-0.7**
ZALV	**Zalesovo Beam**	**26.15**	**332**	P	**P**	**13 39 42.8**	**-1.1**
	comp=Z,1.7nm,0.5s,mb3.8,baz=133,slow=11,SNR=5.6						
UCH	**Uchtor**	**26.23**	**301**	*e*P	**P**	**13 39 45.8**	**+1.1**
	comp=Z,7.0nm,1.1s,mb4.1						
KURK	**Kurchatov**	**26.92**	**321**	P	**P**	**13 39 50.5**	**-0.3**
	comp=Z,2.5nm,0.9s,mb3.8,baz=133,slow=8.1,SNR=16						
KURK				PcP	PcP	13 43 11.8	-0.8
	comp=Z,1.0nm,0.6s,baz=115,slow=2.1,SNR=5.9						
KURK	**Kurchatov**	**26.92**	**321**	P	**P**	**13 39 50.5**	**-0.3**
KURK				PcP	PcP	13 43 11.8	-0.8
MJAR	**Matsushiro Arr**	**27.59**	**72**	P	**P**	**13 39 57.3**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.6,baz=276,slow=9.8,SNR=5.6						
BVAR	**Borovoye Array**	**32.50**	**320**	P	**P**	**13 40 40.1**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=119,slow=9.0,SNR=5.4						
BVAR				PcP	PcP	13 43 26.5	-0.3
	comp=Z,0.9nm,0.6s,baz=151,slow=3.4,SNR=5.0						
ABKAR	**Akbulak array**	**37.61**	**310**	*e*P	**P**	**13 41 24.3**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.7						
TIXI	**Tiksi**	**41.53**	**11**	*e*P	**P**	**13 41 55.8**	**-0.9**
	comp=Z,2.9nm,1.1s,mb3.8						
PETK	**Petropavlovsk-**	**42.83**	**45**	P	**P**	**13 42 08.3**	**+0.8**
	comp=Z,2.1nm,0.6s,mb4.0,baz=326,slow=3.9,SNR=8.7						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**13 43 51.9**	**-0.5**
	comp=Z,3.5nm,0.9s,mb4.4,baz=69,slow=6.6,SNR=6.3						
BRTR	**Keskin Array B**	**56.96**	**299**	P	**P**	**13 43 54.4**	**-0.8**
	comp=Z,0.7nm,0.8s,mb3.8,baz=108,slow=7.9,SNR=4.6						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**13 43 55.4**	**-0.8**
	comp=Z,2.2nm,0.7s,mb4.3,baz=92,slow=7.4,SNR=7.5						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**13 43 55.4**	**-0.8**
WRAB	**Tennant Creek**	**58.90**	**148**	*e*P	**P**	**13 44 09.7**	**+0.8**
	comp=Z,3.2nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**13 44 30.9**	**+1.0**
	comp=Z,1.5nm,0.6s,mb4.3,baz=331,slow=6.5,SNR=42						
ASAR				PcP	PcP	13 45 11.0	+0.6
	comp=Z,0.6nm,0.6s,baz=329,slow=4.4,SNR=4.8						
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**13 44 42.7**	**-1.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=71,slow=7.1,SNR=3.3						
BPAW	**Bear Paw Mtn.**	**67.25**	**28**	*e*P	**P**	**13 45 04.1**	**+0.2**
	comp=Z,1.9nm,0.7s,mb4.2						
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**13 45 04.5**	**-0.7**
	comp=Z,0.1nm,0.3s,mb3.3,baz=96,slow=4.0,SNR=3.5						
STKA	**Stephens Creek**	**72.45**	**148**	P	**P**	**13 45 36.4**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=303,slow=6.5,SNR=3.2						
STKA	**Stephens Creek**	**72.45**	**148**	*e*P	**P**	**13 45 36.7**	**+0.5**
LPG	**La Plagne**	**73.14**	**313**	*e*P	**P**	**13 45 40.2**	**-0.1**
	comp=Z,6.3nm,0.8s,mb4.3						
LPL	**La Plagne**	**73.14**	**313**	*e*P	**P**	**13 45 40.0**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.1						
YKA	**Yellowknife Ar**	**80.41**	**18**	P	**P**	**13 46 21.0**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=328,slow=5.1,SNR=24						

*DJA **18** 13:42:16, 0°.99N×96°.97E, h10km, MLv4.7/3*
*IDC **18** 13:42:16.6±0.8, 0°.86N×97°.33E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.2/26, mbtmp4.2/18, ML4.4/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/31, Error ellipse: s-maj=31.8km s-min=15.1km az=52.0*
*BJI **18** 13:42:16.5, 0°.34N×97°.29E, h40km, mB4.8/15, mb4.7/23, Ms4.3/12, Ms7 4.1/12*
*MOS **18** 13:42:19.9±0.9, 0°.97N×97°.44E, h33km, mb4.6/12, Error ellipse: s-maj=19.7km s-min=8.3km az=105.7*
*ISCJB **18** 13:42:20.5±1.0, 0°.87N±0°.06×97°.27E±0°.06, h39km±8km, mb4.3/43, MS3.8/6, Error ellipse: s-maj=11.0km s-min=8.2km az=144.9*
*NEIC **18** 13:42:20.0±6.7, 0°.86N×97°.32E, h23km±45km, mb4.3/9, Error ellipse: s-maj=25.2km s-min=7.7km az=52.0*
ISC 18 13:42:21.8±1.6, 0°.87N±0°.05×97°.25E±0°.05, h33km±11km, h42km±1.5km: pP-P, n87, σ1°.13/90, mb4.3/43, MS3.8/6, 4C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**2.06**	**56**	P	**Pn**	**13 42 53.0**	**-1.1**
TRSI				S	**Sn**	**13 43 23.7**	**+5.0**
MNSI	**Mandailing Nat**	**2.33**	**92**	P	**Pn**	**13 42 56.4**	**-1.5**
SISI	**Saibi**	**2.85**	**140**	P	**Pn**	**13 43 07.4**	**+2.3**
TSI	**Tuntungan**	**2.92**	**27**	P	**Pn**	**13 43 05.7**	**-0.4**
PPI	**Padang Panjang**	**3.41**	**113**	P	**Pn**	**13 43 12.1**	**-0.6**
PDSI	**Padang**	**3.66**	**119**	P	**Pn**	**13 43 18.5**	**+2.2**
SDSI	**Sungai Dareh**	**4.54**	**113**	P	**Pn**	**13 43 29.9**	**+1.6**
FRIM	**Kepong**	**4.96**	**62**	P	**Pn**	**13 43 33.9**	**-0.2**
BSI	**Banda Aceh**	**5.00**	**337**	P	**Sn**	**13 44 26.8**	**-4.4**
IPM	**Ipoh**	**5.20**	**46**	P	**Pn**	**13 43 37.9**	**+0.5**
IPM	**Ipoh**	**5.20**	**46**	P	**Pn**	**13 43 37.6**	**+0.2**
KULM	**Kulim**	**5.55**	**38**	P	**Pn**	**13 43 42.2**	**0.0**
KULM	**Kulim**	**5.55**	**38**	*e*P	**Pn**	**13 43 41.0**	**-1.2**
	48nm,0.6s						
KSI	**Kapahiang**	**6.97**	**130**	P	Px	13 44 12.4	
KTGM	**Kuala Trenggan**	**7.35**	**53**	P	**Pn**	**13 44 06.4**	**-0.6**
KSM	**Kuching**	**13.06**	**87**	P	Px	13 45 36.7	
SBUM	**Sibu**	**15.04**	**84**	P	**Pn**	**13 45 53.0**	**+0.8**
BTM	**Bintulu**	**15.99**	**81**	P	**Pn**	**13 46 07.7**	**+3.2**
CMAR	**Chiang Mai Arr**	**17.56**	**5**	P	**Pn**	**13 46 22.2**	**-2.0**
	0.5nm,0.3s,baz=193,slow=12,SNR=18						
KKM	**Kota Kinabalu**	**19.61**	**74**	P	**Pn**	**13 46 49.1**	**0.0**
KKM	**Kota Kinabalu**	**19.61**	**74**	*e*P	**Pn**	**13 46 46.8**	**-2.4**
	9.6nm,0.6s						
KDM	**Kudat**	**20.43**	**72**	P	**P**	**13 46 56.6**	**0.0**
SDKM	**Sandakan**	**20.46**	**76**	P	**P**	**13 46 56.5**	**-0.4**
MYLDM	**Lahad Datu**	**21.64**	**78**	P	**P**	**13 47 09.7**	**0.0**
QIZ	**Qiongzhong**	**21.87**	**34**	P	**P**	**13 47 08.9**	**-3.1**
QIZ				S	**S**	**13 51 05.0**	**-7.0**
QIZ				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.2						
QIZ				LR	LR		
	comp=N,290nm,9.8s						
QIZ				LR	LR		
	comp=E,86nm,6.1s						
QIZ				LR	LR		
	comp=Z,360nm,11.4s,MS4.0						
KMI	**Kunming**	**24.69**	**12**	P	**P**	**13 47 42.0**	**+2.0**
KMI				pP		13 47 53.4	
KMI				sP	sP	13 47 59.4	+6.1
KMI				PP		13 48 20.3	
KMI				S	**S**	**13 52 01.3**	**+1.5**
KMI				sS	sS	13 52 19.5	+4.3
KMI				SS		13 52 58.9	
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
KMI				pmax	pmax		
	comp=Z,110nm,4.9s						
KMI				LR	LR		
	comp=N,190nm,12.9s,MS3.9						
KMI				LR	LR		
	comp=E,180nm,13.6s,MS3.9						
KMI				LR	LR		
	comp=Z,270nm,17.0s,MS3.8						
GYA	**Guiyang**	**27.01**	**19**	*e*P	**P**	**13 48 02.8**	**+1.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
DAV	**Davao City (W)**	**28.91**	**77**	LR	LR	14 00 55.2	
	comp=Z,137nm,18.3s,MS3.6,baz=85,slow=39						
LSA	**Lhasa**	**29.25**	**349**	P	**P**	**13 48 22.3**	**+1.3**
CD2	**Chengdu**	**30.51**	**11**	P	**P**	**13 48 33.9**	**+1.8**
CD2				pP	pP	13 48 45.9	+4.4
CD2				sP	sP	13 48 51.3	+5.8
CD2				PP	PP	13 49 35.3	-6.1
CD2				S	**S**	**13 53 31.5**	**0.0**
CD2				sS	sS	13 53 51.8	+4.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,150nm,3.6s						
CD2				LR	LR		
	comp=N,510nm,3.5s						
CD2				LR	LR		
	comp=Z,260nm,8.3s						
FITZ	**Fitzroy Crossi**	**33.69**	**125**	P	**P**	**13 48 58.3**	**-1.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=328,slow=9.5,SNR=3.8						
LZH	**Lanzhou**	**35.57**	**9**	*e*P	**P**	**13 49 23.3**	**+7.1**
LZH				pP	pP	13 49 34.0	+8.3
LZH				sP	sP	13 49 39.1	+9.4
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
NJ2	**Nanjing**	**37.12**	**31**	*e*P	**P**	**13 49 30.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GTA	**Gaotai**	**38.43**	**3**	*e*P	**P**	**13 49 40.6**	**+0.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
WRAB	**Tennant Creek**	**41.82**	**122**	*e*P	**P**	**13 50 07.6**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
WRAB	**Tennant Creek**	**41.82**	**122**	*e*P	**P**	**13 50 07.6**	**-1.2**
	comp=Z,1.5nm,0.6s,mb3.8						
HHC	**Hu-ho-hao-te**	**41.86**	**16**	*e*P	**P**	**13 50 11.1**	**+2.2**
HHC				pP	pP	13 50 23.3	+4.8
HHC				sP	sP	13 50 28.8	+6.4
HHC				PP	PP	13 51 52.1	+6.0
HHC				PcP	PcP	13 52 06.5	+2.1
HHC				ScP	ScP	13 55 51.8	-0.7
HHC				S	**S**	**13 56 27.1**	**+2.4**
HHC				sS	sS	13 56 48.4	+7.8
HHC				SS	SS	13 59 29.0	-2.9
HHC				ScS	ScS	14 00 07.4	-2.0
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,81nm,5.4s						
HHC				LR	LR		
	comp=N,170nm,14.4s,MS4.2						
HHC				LR	LR		
	comp=E,160nm,15.8s,MS4.2						
HHC				LR	LR		
	comp=Z,140nm,15.4s,MS4.0						
BJI	**Beijing**	**42.62**	**22**	P	**P**	**13 50 15.3**	**+0.2**
BJI				S	**S**	**13 56 36.3**	**+0.3**
BJI				SS	SS	13 59 48.8	+1.8
BJI				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.1						
BJI				pmax	pmax		
	comp=Z,130nm,8.2s						
BJI				LR	LR		
	comp=N,84nm,22.6s,MS3.8						
BJI				LR	LR		
	comp=E,110nm,22.6s,MS3.8						
BJI				LR	LR		
	comp=Z,49nm,28.2s						
KSH	**Kashi**	**43.09**	**336**	*e*P	**P**	**13 50 17.8**	**-1.1**
KSH				*e*pP	pP	13 50 29.8	+1.2
KSH				*e*sP	sP	13 50 34.8	+2.3
KSH				*e*PP	PP	13 51 59.8	+0.4
KSH				*e*PcP	PcP	13 52 08.8	+0.3
KSH				*e*ScP	ScP	13 55 54.8	-2.7
KSH				*e*PcS	PcS	13 55 59.8	-1.0
KSH				*e*S	**S**	**13 56 37.3**	**-5.6**
KSH				*e*sS	sS	13 56 58.8	0.0
KSH				*e*ScS	ScS	14 00 12.0	-5.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
KSH				pmax	pmax		
	comp=Z,66nm,4.4s						
KSH				LR	LR		
	comp=N,100nm,6.7s						
KSH				LR	LR		
	comp=E,100nm,6.8s						
KSH				LR	LR		
	comp=Z,120nm,5.0s						
ASAR	**Alice Springs**	**43.15**	**127**	P	**P**	**13 50 18.9**	**-0.8**
	comp=Z,1.5nm,0.7s,mb3.9,baz=298,slow=7.9,SNR=36						
WMQ	**Urumqi**	**43.61**	**350**	P	**P**	**13 50 24.1**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
UCH	**Uchtor**	**45.97**	**336**	*e*P	**P**	**13 50 43.2**	**+1.3**
UCH				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
UCH	**Uchtor**	**45.97**	**336**	*e*P	**P**	**13 50 43.2**	**+1.3**
	comp=Z,3.2nm,0.7s,mb4.4						
KSRS	**Korea Array**	**46.09**	**34**	P	**P**	**13 50 41.8**	**-1.1**
	comp=Z,2.1nm,0.7s,mb4.2,baz=217,slow=8.6,SNR=9.9						
TKM2	**Tokmak 2**	**46.14**	**338**	*e*P	**P**	**13 50 44.3**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**46.14**	**338**	*e*P	**P**	**13 50 44.3**	**+1.1**
	comp=Z,2.7nm,0.8s,mb4.2						
AML	**Almayashu**	**46.22**	**336**	*e*P	**P**	**13 50 44.8**	**+0.9**
AML				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AML	**Almayashu**	**46.22**	**336**	*e*P	**P**	**13 50 44.8**	**+0.9**
	comp=Z,3.7nm,0.7s,mb4.4						
AAK	**Ala-Archa**	**46.32**	**337**	P	**P**	**13 50 46.0**	**+1.3**
	comp=Z,0.8nm,0.3s,mb4.1,baz=336,slow=5.6,SNR=5.1						
SONM	**Songino Array**	**47.45**	**8**	P	**P**	**13 50 53.2**	**-0.1**
	comp=Z,3.2nm,0.8s,mb4.3,baz=189,slow=9.8,SNR=18						
SONM				PcP	PcP	13 52 24.1	+0.7
	comp=Z,1.0nm,0.7s,baz=194,slow=3.8,SNR=3.7						
MK31	**Makanchi Array**	**47.57**	**346**	*e*P	**P**	**13 50 54.3**	**0.0**
MKAR	**Makanchi Array**	**47.57**	**346**	P	**P**	**13 50 54.9**	**+0.6**
	comp=Z,7.8nm,0.5s,mb5.0,baz=158,slow=7.9,SNR=80						
CN2	**Changchun**	**49.57**	**27**	*e*P	**P**	**13 51 11.8**	**+2.0**
MJAR	**Matsushiro Arr**	**51.90**	**42**	P	**P**	**13 51 26.6**	**-0.9**
	comp=Z,1.2nm,0.7s,mb3.9,baz=222,slow=6.0,SNR=7.6	

TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TIXI	**Tiksi**	**73.50**	**10**	*e*P	**P**	**13 53 49.4**	**-1.4**
	comp=Z,2.6nm,0.6s,mb4.3						
SEY	**Seymchan**	**74.04**	**23**	*c*eP	**P**	**13 53 53.1**	**-1.1**
AKASG	**Malin Array Be**	**75.55**	**322**	P	**P**	**13 54 00.1**	**-3.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=84,slow=5.9,SNR=6.9						
BUR08	**Bucovina Ar. S**	**77.33**	**319**	*e*P	**P**	**13 54 13.6**	**+0.3**
FINES	**FINESS Array B**	**80.31**	**333**	P	**P**	**13 54 29.4**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.2,baz=94,slow=5.4,SNR=8.9						
BILL	**Bilibino**	**81.45**	**21**	⇓*e*P	**P**	**13 54 36.8**	**+1.4**
BILL				*e*		13 57 39.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
ARCES	**ARCESS Array B**	**82.86**	**340**	P	**P**	**13 54 42.1**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.4,baz=100,slow=4.1,SNR=5.0						
GERES	**GERESS Array B**	**85.10**	**319**	P	**P**	**13 54 55.4**	**+0.8**
	comp=Z,1.0nm,0.8s,mb4.0,baz=123,slow=4.9,SNR=8.1						
NOA	**NORSAR Array B**	**87.32**	**331**	P	**P**	**13 55 04.8**	**-0.4**
	comp=Z,0.8nm,0.8s,mb4.0,baz=96,slow=5.2,SNR=3.6						
TXAR	**Lajitas Array**	**143.92**	**32**	PKhKP		14 01 50.6	
	comp=Z,0.3nm,0.7s,baz=20,slow=2.9,SNR=3.7						
TXAR				PKP	PKPdf	14 01 55.1	+0.5
	comp=Z,0.3nm,0.7s,baz=38,slow=1.6,SNR=4.1						
CPUP	**Villa Florida**	**144.80**	**222**	PKP	PKPdf	14 01 56.2	-0.1
	comp=Z,0.7nm,0.6s,baz=90,slow=3.0,SNR=2.9						

*ISCJB **18** 13:50:01.4±0.4, 32°.27N±0°.03×105°.17E±0°.05, h10km, mb3.9/15, Error ellipse: s-maj=5.8km s-min=4.4km az=7.2*
*IDC **18** 13:50:01.7±0.9, 32°.32N×105°.15E, h0km, mb3.9/12, mb1 3.9/15, mb1mx3.8/29, mbtmp3.8/15, ML3.4/3, Error ellipse: s-maj=26.2km s-min=17.6km az=42.0*
*BJI **18** 13:50:02.8, 32°.34N×105°.29E, h9km, mb3.9/5, ML3.7/16, Ms3.7/9, Ms7 3.6/6*
*NEIC **18** 13:50:03.0±0.4, 32°.34N×105°.27E, h10km, mb4.0/5, Error ellipse: s-maj=10.0km s-min=6.7km az=61.0*
ISC 18 13:50:03.1±0.4, 32°.27N±0°.03×105°.25E±0°.04, h10km, n31, σ1.9±15/40, mb3.9/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.86**	**224**	Pg	**Pg**	**13 50 36.9**	**-1.8**
CD2				Sg	**Sg**	**13 51 02.3**	**-0.5**
CD2				smax			
	comp=N,5μm,0.6s						
XAN	**Xi'an**	**3.55**	**59**	Pn	**Pn**	**13 51 00.3**	**+2.0**
XAN				Sn	**Sn**	**13 51 42.9**	**+2.6**
XAN				Sg	**Sg**	**13 51 54.6**	**-2.6**
XAN				smax			
	comp=N,300nm,0.4s						
XAN				smax			
	comp=E,210nm,0.7s						
XAN				LR	LR		
	comp=N,470nm,5.3s						
XAN				LR	LR		
	comp=E,180nm,4.6s						
XAN				LR	LR		
	comp=Z,190nm,7.0s						
LZH	**Lanzhou**	**3.98**	**343**	*e*Pn	**Pn**	**13 51 05.4**	**+1.2**
LZH				Pg	**Pg**	**13 51 15.5**	**-3.9**
LZH				Sn	**Sn**	**13 51 51.8**	**+0.9**
LZH				Sg	**Sg**	**13 52 04.8**	**-6.2**
LZH				smax			
	comp=N,720nm,1.0s						
LZH				smax			
	comp=E,780nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,6.6s						
LZH				LR	LR		
	comp=Z,2μm,7.5s						
ENH	**Enshi**	**4.14**	**118**	*e*Pn	**Pn**	**13 51 05.8**	**-0.6**
GYA	**Guiyang**	**5.92**	**168**	Pn	**Pn**	**13 51 34.8**	**+3.9**
GYA				Sn	**Sn**	**13 52 40.5**	**+1.7**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,60nm,0.8s						
WHN	**Wuhan**	**7.97**	**100**	P	**Pn**	**13 51 49.8**	**-9.2**
WHN				S	**Sn**	**13 53 27.8**	**-1.4**
WHN				LR	LR		
	comp=N,650nm,7.0s						
WHN				LR	LR		
	comp=E,420nm,4.5s						
GTA	**Gaotai**	**8.38**	**330**	*e*P	**Pn**	**13 52 04.1**	**-0.5**
GTA				pP		13 52 07.6	
GTA				sP		13 52 09.8	
GTA				S	**Sn**	**13 53 41.1**	**+1.9**
GTA				sS		13 53 46.5	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				LR	LR		
	comp=N,410nm,9.5s						
GTA				LR	LR		
	comp=E,310nm,8.6s						
GTA				LR	LR		
	comp=Z,340nm,10.7s						
BTO	**Baotou**	**9.16**	**23**	*e*P	**Pn**	**13 52 22.3**	**+7.0**
BTO				LR	LR		
	comp=N,100nm,9.6s						
BTO				LR	LR		
	comp=E,66nm,8.4s						
CMAR	**Chiang Mai Arr**	**14.88**	**204**	Pn	**Pn**	**13 53 34.0**	**+0.4**
	comp=E,0.1nm,0.3s,baz=16,slow=11,SNR=4.2						
SONM	**Songino Array**	**15.57**	**3**	Pn	**Pn**	**13 53 41.5**	**-1.0**
	comp=E,0.1nm,0.3s,baz=183,slow=13,SNR=6.7						
SONM				Lg		13 58 16.8	
	comp=E,0.1nm,0.3s,baz=176,slow=26,SNR=3.6						
ULN	**Ulaanbaatar**	**15.64**	**5**	*e*Pn	**Pn**	**13 53 42.0**	**-1.5**
	comp=E,7.1nm,1.3s						
KSRS	**Korea Array**	**19.30**	**68**	P	**Pn**	**13 54 29.4**	**+0.2**
	comp=E,0.1nm,0.3s,baz=255,slow=11,SNR=4.5						
MK31	**Makanchi Array**	**22.78**	**316**	*e*P	**P**	**13 55 05.0**	**-0.5**
MKAR	**Makanchi Array**	**22.78**	**316**	P	**P**	**13 55 05.1**	**-0.5**
	comp=E,2.6nm,0.5s,mb3.9,baz=113,slow=11,SNR=18						
ZALV	**Zalesovo Beam**	**26.12**	**332**	P	**P**	**13 55 36.5**	**-0.6**
	comp=E,1.6nm,0.4s,mb3.9,baz=132,slow=8.8,SNR=6.5						
UCH	**Uchtor**	**26.28**	**301**	*e*P	**P**	**13 55 39.8**	**+1.2**
	comp=E,4.2nm,1.0s,mb3.9						
KURK	**Kurchatov**	**26.93**	**321**	P	**P**	**13 55 44.0**	**-0.3**
	comp=E,2.4nm,0.8s,mb3.8,baz=122,slow=11,SNR=10						
KURK	**Kurchatov**	**26.93**	**321**	*e*P	**P**	**13 55 44.5**	**+0.2**
	comp=E,2.5nm,0.5s,mb4.0						
BVAR	**Borovoye Array**	**32.51**	**320**	P	**P**	**13 56 33.5**	**-0.2**
	comp=E,0.6nm,0.6s,mb3.7,baz=111,slow=11,SNR=2.9						
ABKAR	**Akbulak array**	**37.65**	**310**	*e*P	**P**	**13 57 17.6**	**-0.5**
	comp=E,0.6nm,0.4s,mb3.7						
AKTK	**Aktyubinsk**	**39.07**	**312**	P	**P**	**13 57 31.1**	**+1.0**
AKTO	**Aktyubinsk**	**39.07**	**312**	P	**P**	**13 57 31.1**	**+1.0**
	comp=E,0.8nm,0.5s,mb3.7,baz=101,slow=16,SNR=3.8						
PETK	**Petropavlovsk-**	**42.68**	**45**	P	**P**	**13 58 00.4**	**+0.6**
	comp=E,1.3nm,0.9s,mb3.7,baz=266,slow=7.5,SNR=3.4						
ARCES	**ARCESS Array B**	**56.60**	**336**	P	**P**	**13 59 45.1**	**-0.6**
	comp=E,3.7nm,0.8s,mb4.5,baz=78,slow=11,SNR=3.6						
BRTR	**Keskin Array B**	**57.02**	**299**	P	**P**	**13 59 48.3**	**-0.8**
	comp=E,0.5nm,0.7s,mb3.7,baz=99,slow=7.6,SNR=4.5						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**13 59 48.7**	**-0.9**
	comp=E,1.3nm,0.7s,mb4.1,baz=107,slow=6.6,SNR=5.5						
WRAB	**Tennant Creek**	**58.91**	**148**	*e*P	**P**	**14 00 03.6**	**+1.1**
	comp=E,1.4nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	**14 00 24.4**	**+0.9**
	comp=E,0.5nm,0.4s,mb4.0,baz=330,slow=6.6,SNR=17						
NOA	**NORSAR Array B**	**64.20**	**327**	P	**P**	**14 00 36.3**	**-1.4**
	comp=E,0.7nm,0.7s,mb3.8,baz=72,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**80.29**	**18**	P	**P**	**14 02 13.7**	**-0.2**
	comp=E,0.7nm,0.5s,mb3.9,baz=328,slow=5.1,SNR=17						
YKA	**Yellowknife Ar**	**80.29**	**18**	P	**P**	**14 02 13.7**	**-0.2**

*ISCJB **18** 13:51:12.4±1.0, 19°.56N±0°.06×64°.20W±0°.05, h33km, Error ellipse: s-maj=8.8km s-min=6.7km az=23.0*
*TRN **18** 13:51:12.4, 19°.31N×64°.45W, h3km*
*NEIC **18** 13:51:14.5, 19°.50N×64°.16W, h34km, MD3.6(RSPR), After RSPR.*
*RSPR **18** 13:51:14.5, 19°.50N×64°.16W, h34km±10km, MD3.6/11, MD3.6/11*
ISC 18 13:51:13.6±1.0, 19°.51N±0°.06×64°.17W±0°.05, h35km, n38, σ0.9±56/59, 16C-16D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.79**	**191**	⇓*i*P	**Pn**	**13 51 27.6**	**-0.6**
ABV				*e*S	**Sn**	**13 51 38.7**	**-0.1**
ABV	**Anegada**	**0.79**	**191**	⇓*i*P	**Pn**	**13 51 27.6**	**-0.6**
ABV				*e*S	**Sn**	**13 51 38.7**	**-0.1**
TBVI	**Tortola**	**1.16**	**201**	⇑*i*P	**Pn**	**13 51 32.7**	**-0.7**
TBVI	**Tortola**	**1.16**	**201**	⇑*i*P	**Pn**	**13 51 32.7**	**-0.7**
STVI	**Saint Thomas**	**1.37**	**213**	⇑*e*P	**Pn**	**13 51 36.0**	**-0.2**
STVI				*e*S	**Sn**	**13 51 53.1**	**0.0**
STVI	**Saint Thomas**	**1.37**	**213**	⇑*e*P	**Pn**	**13 51 36.3**	**+0.1**
STVI				*e*S	**Sn**	**13 51 53.1**	**0.0**
SMRT	**St. Maarten**	**1.78**	**144**	*e*S	**Sn**	**13 52 03.0**	**-0.3**
SMRT	**St. Maarten**	**1.78**	**144**	*e*S	**Sn**	**13 52 03.1**	**-0.2**
MTP	**Monte Pirata**	**1.92**	**223**	⇑*e*P	**Pn**	**13 51 44.4**	**+0.6**
MTP				*e*S	**Sn**	**13 52 07.8**	**+1.0**
MTP	**Monte Pirata**	**1.92**	**223**	⇑*e*P	**Pn**	**13 51 44.4**	**+0.6**
MTP				*e*S	**Sn**	**13 52 07.8**	**+1.0**
CBYP	**Canovanas**	**2.02**	**233**	⇓*e*P	**Pn**	**13 51 45.1**	**0.0**
CBYP				*e*S	**Sn**	**13 52 09.1**	**0.0**
CBYP	**Canovanas**	**2.02**	**233**	⇓*e*P	**Pn**	**13 51 45.1**	**0.0**
CBYP				*e*S	**Sn**	**13 52 09.9**	**+0.8**
HUMP	**Col San Antoni**	**2.09**	**230**	⇓*e*P	**Pn**	**13 51 46.2**	**0.0**
HUMP				*e*S	**Sn**	**13 52 10.7**	**-0.3**
HUMP	**Col San Antoni**	**2.09**	**230**	⇓*e*P	**Pn**	**13 51 46.2**	**0.0**
HUMP				*e*S	**Sn**	**13 52 10.7**	**-0.3**
CPD	**Cerro la Pandu**	**2.21**	**229**	⇓*e*P	**Pn**	**13 51 48.0**	**+0.2**
CPD				*e*S	**Sn**	**13 52 13.8**	**-0.1**
CPD	**Cerro la Pandu**	**2.21**	**229**	⇓*e*P	**Pn**	**13 51 48.0**	**+0.2**
CPD				*e*S	**Sn**	**13 52 13.8**	**-0.1**
SJG	**San Juan**	**2.33**	**234**	⇑*i*P	**Pn**	**13 51 49.6**	**+0.1**
SJG				*e*S	**Sn**	**13 52 16.3**	**-0.7**
SJG	**San Juan**	**2.33**	**234**	⇑*i*P	**Pn**	**13 51 49.6**	**+0.1**
SJG				*e*S	**Sn**	**13 52 16.3**	**-0.7**
CELP	**Cerrillos**	**2.69**	**238**	⇑*e*P	**Pn**	**13 51 54.1**	**-0.3**
CELP				*e*S	**Sn**	**13 52 26.0**	**+0.2**
CELP	**Cerrillos**	**2.69**	**238**	⇑*e*P	**Pn**	**13 51 54.1**	**-0.3**
CELP				*e*S	**Sn**	**13 52 26.0**	**+0.2**
AOPR	**Arecibo Observ**	**2.71**	**245**	⇓*e*P	**Pn**	**13 51 55.0**	**+0.3**
AOPR				*e*S	**Sn**	**13 52 26.1**	**0.0**
AOPR	**Arecibo Observ**	**2.71**	**245**	⇓*e*P	**Pn**	**13 51 55.0**	**+0.3**
AOPR				*e*S	**Sn**	**13 52 26.1**	**0.0**
OBIP	**Obispado Ponce**	**2.73**	**238**	⇑*e*P	**Pn**	**13 51 55.3**	**+0.4**
OBIP	**Obispado Ponce**	**2.73**	**238**	⇑*e*P	**Pn**	**13 51 55.3**	**+0.4**
ICM	**Isla Caja Muer**	**2.75**	**235**	⇓*e*P	**Pn**	**13 51 55.6**	**+0.5**
ICM				*e*S	**Sn**	**13 52 26.9**	**-0.3**
ICM	**Isla Caja Muer**	**2.75**	**235**	⇓*e*P	**Pn**	**13 51 55.6**	**+0.5**
ICM				*e*S	**Sn**	**13 52 26.9**	**-0.3**
LRS	**Lares**	**2.81**	**245**	⇑*e*P	**Pn**	**13 51 55.8**	**-0.2**
LRS	**Lares**	**2.81**	**245**	⇑*e*P	**Pn**	**13 51 55.8**	**-0.2**
AGPR	**Aguadilla, PR**	**2.97**	**250**	⇑*e*P	**Pn**	**13 51 59.0**	**+0.7**
AGPR	**Aguadilla, PR**	**2.97**	**250**	⇑*e*P	**Pn**	**13 51 59.0**	**+0.7**
LSP	**Las Mesas**	**3.06**	**245**	⇑*i*P	**Pn**	**13 52 00.3**	**+0.8**
LSP	**Las Mesas**	**3.06**	**245**	⇑*i*P	**Pn**	**13 52 00.3**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.16**	**242**	⇓*e*P	**Pn**	**13 52 01.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.16**	**242**	⇓*e*P	**Pn**	**13 52 01.5**	**+0.6**
PCDR	**Punta Cana, DR**	**4.11**	**257**	⇓*e*P	**Pn**	**13 52 12.4**	**-1.5**
PCDR	**Punta Cana, DR**	**4.11**	**257**	⇓*e*P	**Pn**	**13 52 12.4**	**-1.5**
SMN1	**Samana, DR**	**4.83**	**267**	⇑*e*P	**Pn**	**13 52 23.6**	**-0.2**
SDDR	**Presa de Saban**	**6.75**	**267**	*e*Pn	**Pn**	**13 52 51.0**	**+0.8**
	24nm,0.6s						
SDDR				*e*Sn	**Sn**	**13 54 04.5**	**-1.3**

*TIR **18** 13:57:02.0±0.3, 40°.33N×21°.56E, h59km±7km*
*NEIC **18** 13:57:06.1, 40°.92N×20°.18E, h11km, MD3.3(ATH), After ATH.*
*ATH **18** 13:57:06.1, 40°.92N×20°.18E, h11km±4km, MD3.3/4*
*ISCJB **18** 13:57:08.6±0.6, 40°.80N±0°.03×20°.21E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=2.9km az=30.2*
*CSEM **18** 13:57:09.1±0.2, 40°.72N×20°.32E, h2km, ML2.3, Error ellipse: s-maj=4.4km s-min=3.0km az=112.0*
*THE **18** 13:57:09.8, 40°.70N×20°.32E, h0km±4km, ML3.0/6, Error ellipse: s-maj=4.1km s-min=1.5km az=297.0*
*SKO **18** 13:57:10.4, 40°.75N×20°.32E, h14km, M1.8, ML2.3*
ISC 18 13:57:09.1±0.6, 40.76N±0°.03×20.24E±0°.04, h3km±5km, n42, σ1.9±27/76, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.44**	**108**	*e*Pg	**Pg**	**13 57 16.4**	**-1.1**
KBN				*i* SG	**Sg**	**13 57 26.9**	**+3.7**
KBN	**Korca**	**0.44**	**108**	*e*Pg	**Pg**	**13 57 16.4**	**-1.1**
	SNR=115						
OHR	**Ohrid**	**0.55**	**50**	*i* Pg	**Pg**	**13 57 19.1**	**-0.5**
OHR				*e*Sg	**Sg**	**13 57 28.9**	**+2.3**
OHR				*e*Lg		13 57 29.1	
	comp=N,111nm,0.5s						
OHR				*e*Lg		13 57 29.2	
	comp=E,135nm,0.4s						
OHR	**Ohrid**	**0.55**	**50**	*i* Pg	**Pg**	**13 57 19.1**	**-0.5**
TIR	**Tirane**	**0.65**	**334**	*e*Pg	**Pg**	**13 57 17.6**	**-3.9**
TIR	**Tirane**	**0.65**	**334**	P	**Pg**	**13 57 23.1**	**+1.6**
TIR				S	**Sg**	**13 57 35.7**	**+5.7**
TIR	**Tirane**	**0.65**	**334**	P	**Pg**	**13 57 23.1**	**+1.6**
TIR				S	**Sg**	**13 57 35.7**	**+5.7**
BIA	**Bitola**	**0.86**	**72**	*i* Pg	**Pg**	**13 57 24.2**	**-1.3**
BIA				*e*Sg	**Sg**	**13 57 37.2**	**+0.5**
BIA				*e*Lg		13 57 37.6	
	comp=N,80nm,0.3s						
BIA				*e*Lg		13 57 38.3	
	comp=E,80nm,0.4s						
BIA	**Bitola**	**0.86**	**72**	P	**Pg**	**13 57 23.7**	**-1.9**
BIA				S	**Sg**	**13 57 38.4**	**+1.7**
BIA	**Bitola**	**0.86**	**72**	P	**Pg**	**13 57 23.7**	**-1.9**
BIA	**Bitola**	**0.86**	**72**	*i* Pg	**Pg**	**13 57 24.2**	**-1.4**
BIA				*e*Sg	**Sg**	**13 57 37.2**	**+0.5**
BIA				S	**Sg**	**13 57 38.4**	**+1.7**
FNA	**Florina**	**0.86**	**88**	P	**Pg**	**13 57 24.3**	**-1.3**
FNA				S	**Sg**	**13 57 37.0**	**+0.2**
FNA	**Florina**	**0.86**	**88**	P	**Pg**	**13 57 24.3**	**-1.3**
FNA				S	**Sg**	**13 57 37.0**	**+0.2**
SRN	**Sarande**	**0.90**	**192**	*e*PG	**Pg**	**13 57 24.5**	**-1.8**
SRN				*i* SG	**Sg**	**13 57 41.0**	**+3.0**
SRN	**Sarande**	**0.90**	**192**	*e*Pg	**Pg**	**13 57 24.5**	**-1.8**
	SNR=94						
SRN				*i* Sg	**Sg**	**13 57 41.0**	**+3.0**
	SNR=94						
KRUS	**Krusevo**	**0.97**	**51**	*i* Pg	**Pg**	**13 57 27.7**	**-0.1**
KRUS				*e*Sg	**Sg**	**13 57 40.7**	**+0.4**
KRUS				*e*Lg		13 57 42.9	
	comp=N,37nm,0.3s						
KRUS				*e*Lg		13 57 43.3	
	comp=E,33nm,0.3s						
KRUS	**Krusevo**	**0.97**	**51**	*i* Pg	**Pg**	**13 57 27.6**	**-0.1**
KRUS				*e*Sg	**Sg**	**13 57 40.7**	**+0.4**
KEK	**Kerkira**	**1.10**	**198**	*e*PB	**Pg**	**13 57 30.4**	**+0.2**
KEK				*e*SB	**Sb**	**13 57 46.2**	**+0.7**
KEK	**Kerkira**	**1.10**	**198**	P	**Pg**	**13 57 30.2**	**0.0**
KEK				S	**Sg**	**13 57 44.9**	**+0.4**
KEK	**Kerkira**	**1.10**	**198**	*e*Pb	**Pg**	**13 57 30.4**	**+0.2**
KEK				S	**Sg**	**13 57 44.9**	**+0.4**
KEK				*e*Sb	**Sb**	**13 57 46.2**	**+0.7**
JAN	**Janina**	**1.20**	**157**	*e*PB	**Pn**	**13 57 31.6**	**-1.1**
JAN	**Janina**	**1.20**	**157**	*e*Pb	**Pn**	**13 57 31.6**	**-1.1**
IGT	**Igoumenitsa**	**1.23**	**177**	P	**Pn**	**13 57 31.2**	**-2.0**
IGT				S	**Sg**	**13 57 49.4**	**+0.8**
IGT	**Igoumenitsa**	**1.23**	**177**	P	**Pn**	**13 57 31.2**	**-2.0**
IGT				S	**Sg**	**13 57 49.4**	**+0.8**
MEV	**Metsovon**	**1.23**	**142**	P	**Pn**	**13 57 31.5**	**-1.7**
MEV	**Metsovon**	**1.23**	**142**	P	**Pn**	**13 57 31.5**	**-1.7**
KZN	**Kozani**	**1.25**	**111**	*e*PG	**Pn**	**13 57 31.4**	**-2.0**
KZN				*e*SB	**Sb**	**13 57 50.9**	**+1.1**
KZN	**Kozani**	**1.25**	**111**	P	**Pn**	**13 57 31.4**	**-2.0**
KZN				S	**Sg**	**13 57 49.2**	**-0.1**
KZN	**Kozani**	**1.25**	**111**	P	**Pn**	**13 57 31.4**	**-2.0**
KZN				S	**Sg**	**13 57 49.2**	**-0.1**
KZN				*e*Sb	**Sb**	**13 57 50.9**	**+1.1**
PUK	**Puka**	**1.30**	**349**	*e*PG	**Pg**	**13 57 36.4**	**+2.3**
PUK	**Puka**	**1.30**	**349**	*e*Pg	**Pg**	**13 57 36.4**	**+2.3**
	SNR=92						
SKO	**Skopje**	**1.51**	**36**	*e*Pn	**Pn**	**13 57 36.8**	**-0.2**
SKO				*e*Sg	**Sg**	**13 57 57.5**	**0.0**
SKO				*e*Lg		13 57 59.4	
	comp=N,31nm,0.5s						
SKO				*e*Lg		13 57 59.5	
	comp=E,49nm,0.6s						
SKO	**Skopje**	**1.51**	**36**	*e*Pn	**Pn**	**13 57 36.7**	**-0.3**
SKO				*e*Sg	**Sg**	**13 57 57.5**	**0.0**
THL	**Klokotos Trika**	**1.81**	**131**	*e*PN	**Pn**	**13 57 40.5**	**-0.6**
THL				*e*SN	**Sn**	**13 58 07.5**	**+2.9**
THL	**Klokotos Trika**	**1.81**	**131**	P	**Pn**	**13 57 40.6**	**-0.5**
THL	**Klokotos Trika**	**1.81**	**131**	*e*Pn	**Pn**	**13 57 40.5**	**-0.6**
THL				*e*Sn	**Sn**	**13 58 07.5**	**+2.9**
LIT	**Litokhoron**	**1.84**	**110**	P	**Pn**	**13 57 40.7**	**-0.8**
LIT				S	**Sn**	**13 58 06.4**	**+1.1**
LIT	**Litokhoron**	**1.84**	**110**	P	**Pn**	**13 57 40.7**	**-0.8**
LIT				S	**Sn**	**13 58 06.4**	**+1.1**
VAY	**Valandovo**	**1.85**	**72**	*e*Pn	**Pn**	**13 57 41.3**	**-0.3**
VAY				*e*Sg	**Sg**	**13 58 07.2**	**-1.2**
VAY				*e*Lg		13 58 08.8	
	comp=E,16nm,0.5s						
VAY				*e*Lg		13 58 09.4	
	comp=N,28nm,0.8s						
VAY	**Valandovo**	**1.85**	**72**	*e*Pn	**Pn**	**13 57 41.3**	**-0.3**
VAY				*e*Sg	**Sg**	**13 58 07.2**	**-1.2**
AGG	**Agios Georgios**	**2.37**	**137**	P	**Pn**	**13 57 49.0**	**+0.2**
AGG				S	**Sn**	**13 58 20.2**	**+1.9**
AGG	**Agios Georgios**	**2.37**	**137**	P	**Pn**	**13 57 49.0**	**+0.2**
AGG				S	**Sn**	**13 58 20.2**	**+1.9**

IDC 18 13:59:45.7±1.2, 31°.00N×103°.00E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/24, mbtmp3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.45**	**320**	P	P	14 04 47.8	+1.7
	0.3nm,0.6s,baz=136,slow=8.2,SNR=3.7						
KURK	**Kurchatov**	**26.77**	**324**	P	P	14 05 27.8	+0.8
	0.6nm,0.7s,baz=128,slow=9.1,SNR=5.3						
BVAR	**Borovoye Array**	**32.29**	**322**	P	P	14 06 16.1	+0.1
	0.2nm,0.4s,baz=131,slow=9.3,SNR=2.3						
ASAR	**Alice Springs**	**61.90**	**148**	P	P	14 10 05.9	-1.2
	0.4nm,1.0s,baz=338,slow=6.6,SNR=3.8						

DJA 18 14:03:45.3±67S×101°.46E, h17km, MLv3.4/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.13**	**89**	P	Pn	14 04 05.8	-0.3
MNAI	**Manna**	**1.64**	**115**	P	Pn	14 04 10.9	-2.2
PPSI	**Pulau Pagai**	**1.71**	**302**	P	Pn	14 04 13.7	-0.3
SDSI	**Sungai Dareh**	**2.72**	**359**	P	Pn	14 04 28.3	+0.4
PDSI	**Padang**	**2.92**	**340**	P	Pn	14 04 32.8	+2.2
PDSI				S	Sn	14 05 07.0	+1.7
SISI	**Saibi**	**3.32**	**314**	P	Pn	14 04 37.2	+1.0
KASI	**Kota Agung**	**3.54**	**121**	P	Pn	14 04 41.7	+2.4

*CSEM **18** 14:08:31.7±0.2, 43°.87N×12°.53E, h51km±3km, ML2.6/8, Error ellipse: s-maj=3.7km s-min=3.3km az=11.0*
*ISCJB **18** 14:08:32.4±0.5, 43°.96N±0°.04×12°.56E±0°.05, h42km±10km, Error ellipse: s-maj=6.5km s-min=5.3km az=152.6*
*ROM **18** 14:08:33.1±0.2, 43°.89N×12°.51E, h36km±1km, Md2.4/13, Ml2.0/13, Error ellipse: s-maj=3.2km s-min=2.4km az=49.0*
ISC 18 14:08:32.9±0.5, 43°.95N±0°.04×12°.54E±0°.05, h40km±10km, n40, σ0.9±65/59, 6C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSM	**Repubblica di**	**0.07**	**257**	⇑*i*Pg	**Pn**	**14 08 39.4**	**0.0**
	19nm,0.5s						
RSM	**Repubblica di**	**0.07**	**257**	⇑*i*Pg	**Pn**	**14 08 39.4**	**0.0**
	19nm,0.5s						
FSSB	**Fossombrone**	**0.30**	**146**	Pg	**Pn**	**14 08 41.0**	**-0.2**
FSSB				Sg	**Sn**	**14 08 47.9**	**+1.0**
	287nm,0.4s						
FSSB	**Fossombrone**	**0.30**	**146**	Pg	**Pn**	**14 08 41.0**	**-0.2**
FSSB				Sg	**Sn**	**14 08 47.9**	**+1.0**
	287nm,0.4s						
PARC	**Parchiule**	**0.37**	**217**	⇓*i*Pg	**Pn**	**14 08 40.9**	**-1.0**
PARC				Sg	**Sn**	**14 08 47.6**	**-0.6**
	112nm,0.4s						
PARC	**Parchiule**	**0.37**	**217**	⇓*i*Pg	**Pn**	**14 08 40.9**	**-1.0**
PARC				Sg	**Sn**	**14 08 47.6**	**-0.6**
	112nm,0.4s						
PIEI	**Pieia**	**0.41**	**181**	⇓*i*Pg	**Pn**	**14 08 41.6**	**-0.8**
PIEI				Sg	**Sn**	**14 08 48.9**	**-0.2**
	204nm,0.3s						
PIEI	**Pieia**	**0.41**	**181**	⇓*i*Pg	**Pn**	**14 08 41.6**	**-0.8**
PIEI				Sg	**Sn**	**14 08 48.9**	**-0.2**
	204nm,0.3s						
BADI	**Badiali**	**0.49**	**207**	Pg	**Pn**	**14 08 42.6**	**-0.8**
BADI				Sg	**Sn**	**14 08 50.8**	**0.0**
	176nm,0.2s						
BADI	**Badiali**	**0.49**	**207**	Pg	**Pn**	**14 08 42.6**	**-0.8**
BADI				Sg	**Sn**	**14 08 50.8**	**0

*LDG **18** 14:49:22.2±0.0, 42.69N×0.67E, h3km, Md3.2/3, Ml3.3/36, Error ellipse: s-maj=0.9km s-min=0.7km az=1.0*
*MDD **18** 14:49:22.2±0.2, 42.67N×0.66E, h7km±2km, mbLg2.8/56, Error ellipse: s-maj=1.9km s-min=1.3km az=11.0, PRIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*INMG **18** 14:49:24.2±1.5, 42.58N×0.60E, h15km±4km, ML2.4, Error ellipse: s-maj=4.0km s-min=2.2km az=53.0*
ISC 18 14:49:21.3±0.2, 42.752N±0.010×0.68E±0.01, h14km±1km, n400, σ1.23/647, 8C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MELF	Melles	0.14	27	Pg	Pg	14 49 26.8	+1.9
MELF				Sg	Sg	14 49 29.7	+2.2
MELF	Melles	0.14	27	Pg	Pg	14 49 26.8	+1.9
MELF				Lg		14 49 30.1	
MELF	Melles	0.14	27	Pg	Pg	14 49 26.8	+1.9
MELF				Lg		14 49 30.1	
MELF	Melles	0.14	27	Pg	Pg	14 49 26.8	+1.9
RESF	Ens	0.26	283	Pg	Pg	14 49 27.2	+0.4
RESF	Ens	0.26	283	Pg	Pg	14 49 27.3	+0.5
RESF				Lg		14 49 31.1	
RESF	Ens	0.26	283	Pg	Pg	14 49 27.3	+0.5
RESF				Lg		14 49 31.1	
RESF	Ens	0.26	283	Pg	Pg	14 49 27.2	+0.4
MLS	Moulis	0.37	56	Pg	Pg	14 49 28.6	-0.2
MLS				Sg	Sg	14 49 34.7	+0.8
MLS	Moulis	0.37	56	Pg	Pg	14 49 28.7	-0.2
MLS				Lg		14 49 34.9	
MLS	Moulis	0.37	56	Pg	Pg	14 49 28.7	-0.2
MLS				Lg		14 49 34.9	
MLS	Moulis	0.37	56	Pg	Pg	14 49 28.6	-0.2
MLS				Sg	Sg	14 49 34.7	+0.8
EPF	Esparros	0.37	318	ePg	Pg	14 49 30.3	+1.4
EPF				eSg	Sg	14 49 36.1	+2.1
	258nm,0.2s						
EPF	Esparros	0.37	318	Pg	Pg	14 49 30.3	+1.4
EPF				Lg		14 49 36.1	
	129nm,0.2s						
EPF	Esparros	0.37	318	Pg	Pg	14 49 30.3	+1.4
EPF				Lg		14 49 36.1	
	129nm,0.2s						
EPF	Esparros	0.37	318	ePg	Pg	14 49 30.3	+1.4
EPF				eSg	Sg	14 49 36.1	+2.1
	129nm,0.2s						
SALF	Salau	0.38	89	Pg	Pg	14 49 29.5	+0.5
SALF				Sg	Sg	14 49 35.0	+0.9
SALF	Salau	0.38	89	Pg	Pg	14 49 29.5	+0.5
SALF				Lg		14 49 35.0	
SALF	Salau	0.38	89	Pg	Pg	14 49 29.5	+0.5
SALF				Lg		14 49 35.0	
SALF	Salau	0.38	89	Pg	Pg	14 49 29.5	+0.5
SALF				Sg	Sg	14 49 35.0	+0.9
EBIE	Bielsa	0.40	261	⇑Pg	Pg	14 49 28.9	-0.5
EBIE				Lg		14 49 33.9	
EBIE	Bielsa	0.40	261	⇑Pg	Pg	14 49 28.8	-0.5
	22nm,0.1s,SNR=18						
EBIE				Lg		14 49 33.9	
	467nm,0.3s,SNR=7.9						
EBIE	Bielsa	0.40	261	⇑Pg	Pg	14 49 28.8	-0.5
	22nm,0.1s,SNR=18						
EBIE				Lg		14 49 33.9	
	467nm,0.3s,SNR=7.9						
EBIE	Bielsa	0.40	261	P	Pg	14 49 28.9	-0.5
EBIE				Lg		14 49 33.9	
	467nm,0.3s,SNR=7.9						
EBIE				S	Sg	14 49 34.1	-0.6
CTRE	Tremp	0.43	170	Pg	Pg	14 49 28.4	-1.6
CTRE				Lg		14 49 33.6	
	302nm,0.3s						
CTRE	Tremp	0.43	170	Pg	Pg	14 49 28.4	-1.6
CTRE				Lg		14 49 33.6	
	302nm,0.3s						
CTRE	Tremp	0.43	170	P	Pg	14 49 28.4	-1.6
CTRE				S	Sg	14 49 33.6	-2.2
	302nm,0.3s						
CEST	Esterri de Car	0.45	109	Pg	Pg	14 49 30.4	+0.1
CEST				Lg		14 49 37.2	
	387nm,0.2s						
CEST	Esterri de Car	0.45	109	Pg	Pg	14 49 30.4	+0.1
CEST				Lg		14 49 37.2	
	387nm,0.2s						
CEST	Esterri de Car	0.45	109	P	Pg	14 49 30.4	+0.1
CEST				S	Sg	14 49 37.3	+0.9
	387nm,0.2s						
VIEF	Viey	0.50	286	Pg	Pg	14 49 31.4	+0.2
VIEF				Sg	Sg	14 49 38.6	+0.7
VIEF	Viey	0.50	286	Pg	Pg	14 49 31.3	+0.1
VIEF				Lg		14 49 38.3	
VIEF	Viey	0.50	286	Pg	Pg	14 49 31.3	+0.1
VIEF				Lg		14 49 38.3	
VIEF	Viey	0.50	286	Pg	Pg	14 49 31.4	+0.2
VIEF				Sg	Sg	14 49 38.6	+0.7
CSOR	Sort	0.51	138	P	Pg	14 49 30.5	-0.8
CSOR				S	Sg	14 49 37.3	-0.7
	361nm,0.2s						
LABF	Labassere	0.53	304	Pg	Pg	14 49 32.9	+1.1
LABF				Lg		14 49 40.7	
LABF	Labassere	0.53	304	Pg	Pg	14 49 32.9	+1.1
LABF				Lg		14 49 40.7	
GRBF	Gourbit	0.64	82	Pg	Pg	14 49 34.8	+0.9
GRBF				Lg		14 49 43.9	
GRBF	Gourbit	0.64	82	Pg	Pg	14 49 34.8	+0.9
GRBF				Lg		14 49 43.9	
CORG	Organya	0.70	138	Pg	Pg	14 49 34.1	-0.9
CORG				Lg		14 49 43.4	
	43nm,0.2s						
CORG	Organya	0.70	138	Pg	Pg	14 49 34.1	-0.9
CORG				Lg		14 49 43.4	
	43nm,0.2s						
CORG	Organya	0.70	138	P	Pg	14 49 34.2	-0.8
CORG				S	Sg	14 49 43.5	-0.8
	86nm,0.2s						
REYF	Montagne du Re	0.85	292	Pg	Pg	14 49 37.9	+0.1
REYF				Sg	Sg	14 49 49.9	+1.0
REYF	Montagne du Re	0.85	292	Pg	Pg	14 49 38.2	+0.5
REYF				Lg		14 49 49.2	
REYF	Montagne du Re	0.85	292	Pg	Pg	14 49 38.2	+0.5
REYF				Lg		14 49 49.2	
REYF	Montagne du Re	0.85	292	Pg	Pg	14 49 37.9	+0.1
REYF				Sg	Sg	14 49 49.9	+1.0
CAVN	Les Avellanes	0.87	176	Pg	Pg	14 49 36.3	-1.9
CAVN				Lg		14 49 47.7	
	420nm,0.1s						
CAVN	Les Avellanes	0.87	176	Pg	Pg	14 49 36.3	-1.9
CAVN				Lg		14 49 47.7	
	420nm,0.1s						
CAVN	Les Avellanes	0.87	176	P	Pg	14 49 36.3	-1.9
CAVN				S	Sg	14 49 47.8	-1.8
	840nm,0.1s						
FDAF	Les Forges d'A	0.92	275	Pg	Pg	14 49 38.8	-0.3
FDAF				Lg		14 49 49.7	
FDAF	Les Forges d'A	0.92	275	Pg	Pg	14 49 38.8	-0.3
FDAF				Lg		14 49 49.7	
ETSF	Etsaut	0.92	280	ePg	Pg	14 49 38.8	-0.3
ETSF				eSg	Sg	14 49 51.5	+0.3
	320nm,0.2s						
ETSF	Etsaut	0.92	280	Pg	Pg	14 49 38.8	-0.3
ETSF				Lg		14 49 51.5	
	160nm,0.2s						
ETSF	Etsaut	0.92	280	Pg	Pg	14 49 38.8	-0.3
ETSF				Lg		14 49 51.5	
	160nm,0.2s						
ETSF	Etsaut	0.92	280	ePg	Pg	14 49 38.8	-0.3
ETSF				eSg	Sg	14 49 51.5	+0.3
	160nm,0.2s						
LPEF	Le Peyrat	0.93	77	Pg	Pg	14 49 40.5	+1.3
LPEF				Lg		14 49 53.9	
LPEF	Le Peyrat	0.93	77	Pg	Pg	14 49 40.5	+1.3
LPEF				Lg		14 49 53.9	
CLLI	Llivia	0.99	105	P	Pb	14 49 40.3	0.0
CLLI				S	Sb	14 49 54.7	+1.5
	70nm,0.1s						
EMIR	Miracle	1.05	143	Pg	Pg	14 49 41.3	-0.2
EMIR				Lg		14 49 54.4	
EMIR	Miracle	1.05	143	Pg	Pg	14 49 41.3	-0.2
	9.5nm,0.1s,SNR=7.9						
EMIR				Lg		14 49 54.4	
	195nm,0.2s,SNR=7.9						
EMIR	Miracle	1.05	143	Pg	Pg	14 49 41.3	-0.2
	9.5nm,0.1s,SNR=7.9						
EMIR				Lg		14 49 54.4	
	195nm,0.2s,SNR=7.9						
EMIR	Miracle	1.05	143	Pg	Pg	14 49 41.3	-0.2
	9.5nm,0.1s,SNR=7.9						
EMIR				Lg		14 49 54.4	
	195nm,0.2s,SNR=7.9						
VALF	Valcebollere	1.05	109	Pg	Pg	14 49 41.2	-0.4
VALF				Sg	Sg	14 49 55.5	+0.2
VALF	Valcebollere	1.05	109	Pg	Pg	14 49 40.9	-0.7
VALF				Lg		14 49 54.8	
VALF	Valcebollere	1.05	109	Pg	Pg	14 49 40.9	-0.7
VALF				Lg		14 49 54.8	
VALF	Valcebollere	1.05	109	Pg	Pg	14 49 41.2	-0.4
VALF				Sg	Sg	14 49 55.5	+0.2
CARF	Carcanieres	1.05	91	Pg	Pg	14 49 41.9	+0.3
CARF				Sg	Sg	14 49 56.5	+1.1
CARF	Carcanieres	1.05	91	Pg	Pg	14 49 42.0	+0.4
CARF				Lg		14 49 55.3	
CARF	Carcanieres	1.05	91	Pg	Pg	14 49 42.0	+0.4
CARF				Lg		14 49 55.3	
CARF	Carcanieres	1.05	91	Pg	Pg	14 49 41.9	+0.3
CARF				Sg	Sg	14 49 56.5	+1.1
FNEB	N˜bias	1.06	81	Pg	Pg	14 49 42.7	+0.9
FNEB				Lg		14 49 57.7	
FNEB	N˜bias	1.06	81	Pg	Pg	14 49 42.7	+0.9
FNEB				Lg		14 49 57.7	
FNEB	N˜bias	1.06	81	P	Pb	14 49 42.8	+1.3
FNEB				S	Sb	14 49 57.8	+2.6
CBRU	Bruguera	1.21	112	Pg	Pg	14 49 44.4	-0.1
CBRU				Lg		14 50 00.9	
	57nm,0.2s						
CBRU	Bruguera	1.21	112	Pg	Pg	14 49 44.4	-0.1
CBRU				Lg		14 50 00.9	
	57nm,0.2s						
CBRU	Bruguera	1.21	112	P	Pn	14 49 44.5	+0.8
CBRU				S	Sb	14 50 00.9	+1.6
	114nm,0.2s						
ORDF	Ordiarp	1.27	292	Pg	Pg	14 49 46.1	+0.3
ORDF				Sg	Sg	14 50 03.3	+1.0
ORDF	Ordiarp	1.27	292	Pg	Pg	14 49 46.4	+0.6
ORDF				Lg		14 50 02.2	
ORDF	Ordiarp	1.27	292	Pg	Pg	14 49 46.4	+0.6
ORDF				Lg		14 50 02.2	
ORDF	Ordiarp	1.27	292	Pg	Pg	14 49 46.1	+0.3
ORDF				Sg	Sg	14 50 03.3	+1.0
MTLF	Montolieu	1.27	62	ePg	Pg	14 49 46.6	+0.8
MTLF				eSg	Sg	14 50 03.7	+1.3
	283nm,0.3s						
MTLF	Montolieu	1.27	62	Pg	Pg	14 49 46.6	+0.8
MTLF				Lg		14 50 03.7	
	141nm,0.3s						
MTLF	Montolieu	1.27	62	Pg	Pg	14 49 46.6	+0.8
MTLF				Lg		14 50 03.7	
	141nm,0.3s						
MTLF	Montolieu	1.27	62	ePg	Pg	14 49 46.6	+0.8
MTLF				eSg	Sg	14 50 03.7	+1.3
	141nm,0.3s						
CORI	Orista	1.28	127	Pg	Pn	14 49 45.2	+0.5
CORI				Lg		14 50 02.6	
	377nm,0.2s						
CORI	Orista	1.28	127	Pg	Pn	14 49 45.2	+0.5
CORI				Lg		14 50 02.6	
	377nm,0.2s						
CORI	Orista	1.28	127	P	Pn	14 49 45.2	+0.5
CORI				S	Sb	14 50 02.7	+1.2
	377nm,0.2s						
ESAC	San Caprasio	1.34	220	Pg	Pg	14 49 45.9	-1.1
ESAC				Lg		14 50 03.1	
ESAC	San Caprasio	1.34	220	⇑Pg	Pg	14 49 45.7	-1.4
	46nm,0.1s,SNR=18						
ESAC				Lg		14 50 03.1	
	510nm,0.2s,SNR=7.9						
ESAC	San Caprasio	1.34	220	⇑Pg	Pg	14 49 45.7	-1.4
	46nm,0.1s,SNR=18						
ESAC				Lg		14 50 03.1	
	510nm,0.2s,SNR=7.9						
ESAC	San Caprasio	1.34	220	Pg	Pg	14 49 45.9	-1.1
ESAC				Lg		14 50 03.1	
	510nm,0.2s,SNR=7.9						
LRDF	Laroque-de-Fa	1.38	82	Pg	Pg	14 49 48.4	+0.5
LRDF				Sg	Sg	14 50 07.5	+1.6
LRDF	Laroque-de-Fa	1.38	82	Pg	Pg	14 49 48.4	+0.5
LRDF				Lg		14 50 06.8	
LRDF	Laroque-de-Fa	1.38	82	Pg	Pg	14 49 48.4	+0.5
LRDF				Lg		14 50 06.8	
LRDF	Laroque-de-Fa	1.38	82	Pg	Pg	14 49 48.4	+0.5
LRDF				Sg	Sg	14 50 07.5	+1.6
FILF	Fillols	1.40	97	Pg	Pg	14 49 46.7	-1.6
FILF				Sg	Sg	14 50 04.2	-2.3
FILF	Fillols	1.40	97	Pg	Pg	14 49 46.5	-1.8
FILF				Lg		14 50 01.7	
FILF	Fillols	1.40	97	Pg	Pg	14 49 46.5	-1.8
FILF				Lg		14 50 01.7	
FILF	Fillols	1.40	97	Pg	Pg	14 49 46.7	-1.6
FILF				Sg	Sg	14 50 04.2	-2.3
EPOB	Poblet	1.43	168	Pg	Pg	14 49 46.7	-2.1
EPOB				Lg		14 50 04.7	
EPOB	Poblet	1.43	168	Pg	Pg	14 49 46.7	-2.1
	53nm,0.1s,SNR=282						
EPOB				Lg		14 50 04.7	
	384nm,0.1s,SNR=7.9						
EPOB	Poblet	1.43	168	Pg	Pg	14 49 46.7	-2.1
	53nm,0.1s,SNR=282						
EPOB				Lg		14 50 04.7	
	384nm,0.1s,SNR=7.9						
EPOB	Poblet	1.43	168	Pg	Pg	14 49 46.7	-2.1
	53nm,0.1s,SNR=282						
EPOB				Lg		14 50 04.7	
	384nm,0.1s,SNR=7.9						
SJPF	Ste Jean	1.44	285	ePn	Pn	14 49 47.8	+0.8
SJPF				eSg	Sg	14 50 08.4	+0.6
	138nm,0.3s						
SJPF	Ste Jean	1.44	285	Pn	Pn	14 49 47.8	+0.8
SJPF				Lg		14 50 08.4	
	69nm,0.3s						
SJPF	Ste Jean	1.44	285	Pn	Pn	14 49 47.8	+0.8
SJPF				Lg		14 50 08.4	
	69nm,0.3s						
SJPF	Ste Jean	1.44	285	ePn	Pn	14 49 47.8	+0.8
SJPF				eSg	Sg	14 50 08.4	+0.6
	69nm,0.3s						
CGAR	Garraf	1.50	167	Pg	Pg	14 49 51.9	+1.8
CGAR				Lg		14 50 14.0	
	38nm,0.2s						
CGAR	Garraf	1.50	167	Pg	Pg	14 49 51.9	+1.8
CGAR				Lg		14 50 14.0	
	38nm,0.2s						
CGAR	Garraf	1.50	167	P	Pg	14 49 51.9	+1.8
IPRE	Itoiz	1.50	273	Pg	Pg	14 49 50.2	+0.1
	5.6nm,0.3s,SNR=6.2						
IPRE				Lg		14 50 10.7	
	35nm,0.4s,SNR=9.0						
IPRE	Itoiz	1.50	273	Pg	Pg	14 49 50.2	+0.1
	5.6nm,0.3s,SNR=6.2						
IPRE				Lg		14 50 10.7	
	35nm,0.4s,SNR=9.0						
IPRE	Itoiz	1.50	273	Pg	Pg	14 49 50.2	+0.1
	5.6nm,0.3s,SNR=6.2						
IPRE				Lg		14 50 10.7	
	35nm,0.4s,SNR=9.0						
OSSF	Osses	1.51	290	Pg	Pg	14 49 50.8	+0.5
OSSF				Sg	Sg	14 50 11.1	+1.2
OSSF	Osses	1.51	290	Pg	Pg	14 49 49.7	-0.7
OSSF				Lg		14 50 09.9	
OSSF	Osses	1.51	290	Pg	Pg	14 49 49.7	-0.7
OSSF				Lg		14 50 09.9	
OSSF	Osses	1.51	290	Pg	Pg	14 49 50.8	+0.5
OSSF				Sg	Sg	14 50 11.1	+1.2
CBEU	Beuda	1.56	108	Pg	Pg	14 49 50.8	-0.5
CBEU				Lg		14 50 12.1	
	200nm,0.3s						
CBEU	Beuda	1.56	108	Pg	Pg	14 49 50.8	-0.5
CBEU				Lg		14 50 12.1	
	200nm,0.3s						
CBEU	Beuda	1.56	108	P	Pg	14 49 50.8	-0.5
CBEU				S	Sn	14 50 12.1	+3.6
	200nm,0.3s						
IZUN	Zunzarren	1.57	275	Pg	Pg	14 49 51.5	-0.1
	6.3nm,0.3s,SNR=7.9						
IZUN				Lg		14 50 13.7	
	19nm,0.2s,SNR=7.9						
IZUN	Zunzarren	1.57	275	Pg	Pg	14 49 51.5	-0.1
	6.3nm,0.3s,SNR=7.9						
IZUN				Lg		14 50 13.7	
	19nm,0.2s,SNR=7.9						
IZUN	Zunzarren	1.57	275	Pg	Pg	14 49 51.5	-0.1
	6.3nm,0.3s,SNR=7.9						
IZUN				Lg		14 50 14.5	
	19nm,0.2s,SNR=7.9						
IUNC	Unciti	1.60	271	Pg	Pg	14 49 52.4	+0.3
	14nm,0.2s,SNR=35						
IUNC				Lg		14 50 15.5	
	68nm,0.2s,SNR=8.6						
IUNC	Unciti	1.60	271	Pg	Pg	14 49 52.4	+0.3
	14nm,0.2s,SNR=35						
IUNC				Lg		14 50 15.5	
	68nm,0.2s,SNR=8.6						
IUNC	Unciti	1.60	271	Pg	Pg	14 49 52.4	+0.3
	14nm,0.2s,SNR=35						
IUNC				Lg		14 50 15.5	
	68nm,0.2s,SNR=8.6						
CFON	Fontmartina	1.64	127	S	Sn	14 50 12.8	+2.3
	551nm,0.2s						
IUSE	Utxeti	1.65	278	Pg	Pg	14 49 53.1	+0.1
	7.3nm,0.2s,SNR=12						
IUSE				Lg		14 50 15.2	
	16nm,0.1s,SNR=10						
IUSE	Utxeti	1.65	278	Pg	Pg	14 49 53.1	+0.1
	7.3nm,0.2s,SNR=12						
IUSE				Lg		14 50 15.2	
	16nm,0.1s,SNR=10						
IUSE	Utxeti	1.65	278	Pg	Pg	14 49 53.1	+0.1
	7.3nm,0.2s,SNR=12						
IUSE				Lg		14 50 15.2	
	16nm,0.1s,SNR=10						
SJAF	Saint Jean de	1.65	99	Pg	Pg	14 49 53.5	+0.5
SJAF				Sg	Sg	14 50 15.7	+1.3
SJAF	Saint Jean de	1.65	99	Pg	Pg	14 49 53.1	+0.1
SJAF				Lg		14 50 14.2	
SJAF	Saint Jean de	1.65	99	Pg	Pg	14 49 53.1	+0.1
SJAF				Lg		14 50 14.2	
SJAF	Saint Jean de	1.65	99	Pg	Pg	14 49 53.5	+0.5
SJAF				Sg	Sg	14 50 15.7	+1.3
EJON	La Jonquera	1.66	100	Pg	Pg	14 49 53.4	+0.2
EJON				Lg		14 50 15.6	
EJON	La Jonquera	1.66	100	Pg	Pg	14 49 53.4	+0.2
	5.7nm,0.2s,SNR=38						
EJON				Lg		14 50 15.5	
	121nm,0.2s,SNR=23						
EJON	La Jonquera	1.66	100	Pg	Pg	14 49 53.4	+0.2
	5.7nm,0.2s,SNR=38						
EJON				Lg		14 50 15.5	
	121nm,0.2s,SNR=23						
EJON	La Jonquera	1.66	100	Pg	Pg	14 49 53.4	+0.2
	5.7nm,0.2s,SNR=38						
EJON				Lg		14 50 15.5	
	121nm,0.2s,SNR=23						
EARA	Aranguren	1.66	271	Pg	Pg	14 49 53.6	+0.3
	5.4nm,0.2s,SNR=11						
EARA				Lg		14 50 17.3	
	73nm,0.3s,SNR=9.5						
EARA	Aranguren	1.66	271	Pg	Pg	14 49 53.6	+0.3
	5.4nm,0.2s,SNR=11						
EARA				Lg		14 50 17.3	
	73nm,0.3s,SNR=9.5						
EARA	Aranguren	1.66	271	Pg	Pg	14 49 53.6	+0.4
	5.4nm,0.2s,SNR=11						
EARA				Lg		14 50 17.3	
	73nm,0.3s,SNR=9.5						
EALK	Alkurruntz	1.67	287	Pg	Pg	14 49 53.4	+0.1
EALK				Lg		14 50 17.2	
EALK	Alkurruntz	1.67	287	Pg	Pg	14 49 53.4	+0.1
	12nm,0.2s,SNR=37						
EALK				Lg		14 50 17.2	
	74nm,0.3s,SNR=7.0						
EALK	Alkurruntz	1.67	287	Pg	Pg	14 49 53.4	+0.1
	12nm,0.2s,SNR=37						
EALK				Lg		14 50 17.2	
	74nm,0.3s,SNR=7.0						
EALK	Alkurruntz	1.67	287	Pg	Pg	14 49 53.4	0.0
	12nm,0.2s,SNR=37						
EALK				Lg		14 50 17.2	
	74nm,0.3s,SNR=7.0						
ELIZ	Elizondo	1.67	285	Pg	Pg	14 49 53.9	+0.5
ELIZ				Lg		14 50 16.3	
ELIZ	Elizondo	1.67	285	Pg	Pg	14 49 53.2	-0.2
	21nm,0.2s,SNR=36						
ELIZ				Lg		14 50 16.3	
	28nm,0.2s,SNR=11						
ELIZ	Elizondo	1.67	285	Pg	Pg	14 49 53.2	-0.2
	21nm,0.2s,SNR=36						
ELIZ				Lg		14 50 16.3	
	28nm,0.2s,SNR=11						
ELIZ	Elizondo	1.67	285	Pg	Pg	14 49 53.2	-0.2
	21nm,0.2s,SNR=36						
ELIZ				Lg		14 50 16.3	
	28nm,0.2s,SNR=11						
ERTA	Horta de San J	1.81	188	⇑Pg	Pg	14 49 53.5	-2.6
ERTA				Lg		14 50 16.1	
ERTA	Horta de San J	1.81	188	⇑Pg	Pg	14 49 53.5	-2.6
	73nm,0.2s,SNR=18						
ERTA				Lg		14 50 16.1	
	79nm,0.1s,SNR=29						
ERTA	Horta de San J	1.81	188	⇑Pg	Pg	14 49 53.5	-2.6
	73nm,0.2s,SNR=18						
ERTA				Lg		14 50 16.1	
	79nm,0.1s,SNR=29						
ERTA	Horta de San J	1.81	188	Pg	Pg	14 49 53.5	-2.6
	73nm,0.2s,SNR=18						
ERTA				Lg		14 50 16.1	
	79nm,0.1s,SNR=29						
CCAS	Cassa de la Se	1.87	117	Pg	Pn	14 49 54.8	+2.0
CCAS	Cassa de la Se	1.87	117	Pg	Pn	14 49 54.8	+2.0
CCAS	Cassa de la Se	1.87	117	P	Pn	14 49 54.8	+2.0
CPAL	Palau Saverder	1.89	103	Pg	Pg	14 49 55.5	-2.1
CPAL				Lg		14 50 20.2	
	52nm,0.2s						
CPAL	Palau Saverder	1.89	103	Pg	Pg	14 49 55.5	-2.1
CPAL				Lg		14 50 20.2	
	52nm,0.2s						
CPAL	Palau Saverder	1.89	103	P	Pg	14 49 55.5	-2.1
CMAS	Mas de Barbera	2.04	188	Pg	Pn	14 49 55.3	+0.1
CMAS				Lg		14 50 20.6	
	110nm,0.2s						
CMAS	Mas de Barbera	2.04	188	Pg	Pn	14 49 55.3	+0.1
CMAS				Lg		14 50 20.6	
	110nm,0.2s						
CMAS	Mas de Barbera	2.04	188	P	Pn	14 49 55.3	+0.1
CMAS				S	Sn	14 50 20.6	+0.2
	110nm,0.2s						
LFF	La Frestale	2.19	1	ePg	Pg	14 50 03.2	-0.1
LFF				eSg	Sg	14 50 32.7	+1.1
	69nm,0.3s						
LFF	La Frestale	2.19	1	ePn	Pn	14 49 58.3	+1.1
LFF				ePg	Pg	14 50 03.2	-0.1
LFF				eSg	Sg	14 50 32.7	+1.1
LFF	La Frestale	2.19	1	Pn	Pn	14 49 58.3	+1.1
LFF				Pg	Pg	14 50 03.2	-0.1
LFF				Lg		14 50 32.7	
	35nm,0.3s						
LFF	La Frestale	2.19	1	Pn	Pn	14 49 58.3	+1.1
LFF				Pg	Pg	14 50 03.2	-0.1
LFF				Lg		14 50 32.7	
	35nm,0.3s						
LFF	La Frestale	2.19	1	ePn	Pn	14 49 58.3	+1.1
LFF				eSg	Sg	14 50 32.7	+1.1
	35nm,0.3s						
ECRI	Cripan	2.35	268	Pn	Pn	14 50 02.9	+3.4
ECRI				Pg	Pg	14 50 06.0	-0.5
ECRI				Lg		14 50 36.3	
ECRI	Cripan	2.35	268	Pn	Pn	14 50 02.9	+3.4
	0.9nm,0.2s,SNR=7.9						
ECRI				Pg	Pg	14 50 06.0	-0.5
	3.1nm,0.1s,SNR=7.9						
ECRI				Lg		14 50 36.3	
	12nm,0.2s,SNR=7.9						
ECRI	Cripan	2.35	268	Pn	Pn	14 50 02.9	+3.4
	0.9nm,0.2s,SNR=7.9						
ECRI				Pg	Pg	14 50 06.0	-0.5
	3.1nm,0.1s,SNR=7.9						
ECRI				Lg		14 50 36.3	
	12nm,0.2s,SNR=7.9						
ECRI	Cripan	2.35	268	Pn	Pn	14 50 02.9	+3.4
	0.9nm,0.2s,SNR=7.9						
ECRI	Cripan	2.35	268	Pg	Pg	14 50 06.0	-0.5
	3.1nm,0.1s,SNR=7.9						
ECRI				Lg		14 50 36.3	
	12nm,0.2s,SNR=7.9						
CAF	Calviac	2.39	24	ePn	Pn	14 50 01.3	+1.2
CAF				eSg	Sg	14 50 39.4	+1.1
	55nm,0.2s						
CAF	Calviac	2.39	24	Pn	Pn	14 50 01.3	+1.2

CAF Lg 14 50 39.4
28nm,0.2s
CAF Calviac 2.39 24 Pn Pn 14 50 01.3 +1.2
CAF Lg 14 50 39.4
28nm,0.2s
EMOS Mosqueruela 2.54 200 Pn Pn 14 50 03.0 +1.0
EMOS Pg Pg 14 50 05.8 -4.2
EMOS Lg 14 50 38.6
EMOS Mosqueruela 2.54 200 Pn Pn 14 50 03.0 +1.0
0.5nm,0.2s,SNR=7.9
EMOS Pg Pg 14 50 05.8 -4.2
11nm,0.2s,SNR=7.9
EMOS Lg 14 50 38.6
21nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.54 200 Pn Pn 14 50 03.0 +1.0
0.5nm,0.2s,SNR=7.9
EMOS Pg Pg 14 50 05.8 -4.2
11nm,0.2s,SNR=7.9
EMOS Lg 14 50 38.6
21nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.54 200 Pn Pn 14 50 03.0 +1.0
0.5nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.54 200 Pg Pg 14 50 05.8 -4.2
11nm,0.2s,SNR=7.9
EMOS Lg 14 50 38.6
21nm,0.2s,SNR=7.9
RJF Les Rejaudoux 2.62 13 ePg Pg 14 50 12.5 +0.9
RJF eSg Sg 14 50 46.5 +0.9
38nm,0.2s
RJF Les Rejaudoux 2.62 13 ePn Pn 14 50 04.8 +1.6
RJF ePg Pg 14 50 12.5 +0.9
RJF eSg Sg 14 50 46.5 +0.9
RJF Les Rejaudoux 2.62 13 Pn Pn 14 50 04.8 +1.6
RJF Pg Pg 14 50 12.5 +0.9
RJF Lg 14 50 46.5
19nm,0.2s
RJF Les Rejaudoux 2.62 13 Pn Pn 14 50 04.8 +1.6
RJF Pg Pg 14 50 12.5 +0.9
RJF Lg 14 50 46.5
19nm,0.2s
RJF Les Rejaudoux 2.62 13 ePn Pn 14 50 04.8 +1.6
RJF Les Rejaudoux 2.62 13 ePg Pg 14 50 12.5 +0.9
RJF eSg Sg 14 50 46.5 +0.9
19nm,0.2s
LASF Ste Croix 2.67 59 ePg Pg 14 50 12.9 +0.4
LASF eSg Sg 14 50 47.2 +0.2
64nm,0.4s
LASF Ste Croix 2.67 59 ePn Pn 14 50 05.3 +1.5
LASF ePg Pg 14 50 12.9 +0.4
LASF eSg Sg 14 50 47.2 +0.2
LASF Ste Croix 2.67 59 Pn Pn 14 50 05.3 +1.5
LASF Pg Pg 14 50 12.9 +0.4
LASF Lg 14 50 47.2
32nm,0.4s
LASF Ste Croix 2.67 59 Pn Pn 14 50 05.3 +1.5
LASF Pg Pg 14 50 12.9 +0.4
LASF Lg 14 50 47.2
32nm,0.4s
LASF Ste Croix 2.67 59 ePg Pg 14 50 12.9 +0.4
LASF eSg Sg 14 50 47.2 +0.2
32nm,0.4s
ETOR Torete 2.81 228 Pn Pn 14 50 06.9 +1.1
ETOR Pg Pg 14 50 14.6 -0.6
ETOR Sn Sn 14 50 39.3 -0.1
ETOR Lg 14 50 48.6
ETOR Torete 2.81 228 Pn Pn 14 50 06.9 +1.1
12nm,0.2s,SNR=16
ETOR Pg Pg 14 50 14.6 -0.6
43nm,0.2s,SNR=7.9
ETOR Sn Sn 14 50 39.3 -0.1
43nm,0.2s,SNR=7.9
ETOR Lg 14 50 48.6
54nm,0.2s,SNR=5.0
ETOR Torete 2.81 228 Pn Pn 14 50 06.9 +1.1
12nm,0.2s,SNR=16
ETOR Pg Pg 14 50 14.6 -0.6
43nm,0.2s,SNR=7.9
ETOR Sn Sn 14 50 39.3 -0.1
43nm,0.2s,SNR=7.9
ETOR Lg 14 50 48.6
54nm,0.2s,SNR=5.0
ETOR Torete 2.81 228 Pn Pn 14 50 06.9 +1.1
12nm,0.2s,SNR=16
ETOR Torete 2.81 228 Pg Pg 14 50 14.6 -0.6
43nm,0.2s,SNR=7.9
ETOR Sn Sn 14 50 39.3 -0.1
43nm,0.2s,SNR=7.9
ETOR Lg 14 50 48.6
54nm,0.2s,SNR=5.0
ELAN Lanestosa 3.05 280 Pn Pn 14 50 12.2 +3.1
ELAN Pg Pg 14 50 18.4 -1.4
ELAN Sn Sn 14 50 45.8 +0.4
ELAN Lanestosa 3.05 280 Pn Pn 14 50 12.2 +3.1
2.3nm,0.4s,SNR=9.2
ELAN Pg Pg 14 50 18.4 -1.4
1.6nm,0.2s,SNR=7.9
ELAN Sn Sn 14 50 45.8 +0.4
2.1nm,0.2s,SNR=5.0
ELAN Lanestosa 3.05 280 Pn Pn 14 50 12.2 +3.1
2.3nm,0.4s,SNR=9.2
ELAN Pg Pg 14 50 18.4 -1.4
1.6nm,0.2s,SNR=7.9
ELAN Sn Sn 14 50 45.8 +0.4
2.1nm,0.2s,SNR=5.0
ELAN Lanestosa 3.05 280 Pn Pn 14 50 12.2 +3.1
2.3nm,0.4s,SNR=9.2
LBL Lubilhac 3.10 36 Pn Pn 14 50 10.0 +0.3
LBL Lubilhac 3.10 36 Pn Pn 14 50 10.0 +0.3
ETOS Mallorca 3.39 151 Pn Pn 14 50 13.8 0.0
ETOS Sn Sn 14 50 51.4 -2.3
ETOS Mallorca 3.39 151 Pn Pn 14 50 13.8 0.0
0.9nm,0.3s,SNR=7.9
ETOS Sn Sn 14 50 51.4 -2.3
1.1nm,0.1s,SNR=7.9
ETOS Mallorca 3.39 151 Pn Pn 14 50 13.8 0.0
0.9nm,0.3s,SNR=7.9
ETOS Sn Sn 14 50 51.4 -2.3
1.1nm,0.1s,SNR=7.9
ETOS Mallorca 3.39 151 Pn Pn 14 50 13.8 +0.1
0.9nm,0.3s,SNR=7.9
ETOS Sn Sn 14 50 51.4 -2.3
1.1nm,0.1s,SNR=7.9
ECHE Chera 3.39 202 Pn Pn 14 50 14.6 +0.8
ECHE Pg Pg 14 50 21.5 -4.8
ECHE Sn Sn 14 50 51.2 -2.6
ECHE Lg 14 51 04.1
ECHE Chera 3.39 202 Pn Pn 14 50 14.6 +0.8
0.5nm,0.2s,SNR=7.9
ECHE Pg Pg 14 50 21.5 -4.8
2.2nm,0.2s,SNR=7.9
ECHE Sn Sn 14 50 51.2 -2.6
2.0nm,0.2s,SNR=7.9
ECHE Lg 14 51 04.1
6.2nm,0.3s,SNR=7.9
ECHE Chera 3.39 202 Pn Pn 14 50 14.6 +0.8
0.5nm,0.2s,SNR=7.9
ECHE Pg Pg 14 50 21.5 -4.8
2.2nm,0.2s,SNR=7.9
ECHE Sn Sn 14 50 51.2 -2.6
2.0nm,0.2s,SNR=7.9
ECHE Lg 14 51 04.1
6.2nm,0.3s,SNR=7.9
ECHE Chera 3.39 202 Pn Pn 14 50 14.6 +0.8
0.5nm,0.2s,SNR=7.9
PYM Petit Puy Mans 3.43 28 Pn Pn 14 50 15.6 +1.3
PYM Petit Puy Mans 3.43 28 Pn Pn 14 50 15.6 +1.3
VIVF Saint-Julien-l 3.58 53 ePg Pg 14 50 29.6 -0.2
VIVF eSg Sg 14 51 15.6 -0.5
18nm,0.3s
VIVF Saint-Julien-l 3.58 53 ePn Pn 14 50 17.1 +0.8
VIVF ePg Pg 14 50 29.6 -0.2
VIVF eSg Sg 14 51 15.6 -0.5
VIVF Saint-Julien-l 3.58 53 Pn Pn 14 50 17.1 +0.8
VIVF Pg Pg 14 50 29.6 -0.2
VIVF Lg 14 51 15.6
8.8nm,0.3s
VIVF Saint-Julien-l 3.58 53 Pn Pn 14 50 17.1 +0.8
VIVF Pg Pg 14 50 29.6 -0.2
VIVF Lg 14 51 15.6
8.8nm,0.3s
VIVF Saint-Julien-l 3.58 53 ePn Pn 14 50 17.1 +0.8
VIVF Saint-Julien-l 3.58 53 ePg Pg 14 50 29.6 -0.2
VIVF eSg Sg 14 51 15.6 -0.5
8.8nm,0.3s
TCF Toulx Ste Croi 3.70 17 ePn Pn 14 50 19.2 +1.2
TCF eSn Sn 14 51 01.5 +0.1
TCF eSg Sg 14 51 20.2 0.0
28nm,0.5s
TCF Toulx Ste Croi 3.70 17 Pn Pn 14 50 19.2 +1.2
TCF Sn Sn 14 51 01.5 +0.1
TCF Lg 14 51 20.2
14nm,0.5s
TCF Toulx Ste Croi 3.70 17 Pn Pn 14 50 19.2 +1.2
TCF Sn Sn 14 51 01.5 +0.1
TCF Lg 14 51 20.2
14nm,0.5s
TCF Toulx Ste Croi 3.70 17 ePn Pn 14 50 19.2 +1.2
TCF eSn Sn 14 51 01.5 +0.1
TCF eSg Sg 14 51 20.2 0.0
14nm,0.5s
AGO Saint Agoulin 3.74 27 Pn Pn 14 50 19.5 +1.0
AGO Saint Agoulin 3.74 27 Pn Pn 14 50 19.5 +1.0
EIBI Ibiza 3.75 172 Pn Pn 14 50 18.5 -0.3
EIBI Sn Sn 14 50 58.5 -4.2
EIBI Ibiza 3.75 172 Pn Pn 14 50 18.5 -0.3
1.2nm,0.2s,SNR=7.9
EIBI Sn Sn 14 50 58.5 -4.2
3.6nm,0.2s,SNR=7.9
EIBI Ibiza 3.75 172 Pn Pn 14 50 18.5 -0.3
1.2nm,0.2s,SNR=7.9
EIBI Sn Sn 14 50 58.5 -4.2
3.6nm,0.2s,SNR=7.9
EIBI Ibiza 3.75 172 Pn Pn 14 50 18.5 -0.3
1.2nm,0.2s,SNR=7.9
EIBI Sn Sn 14 50 58.5 -4.2
3.6nm,0.2s,SNR=7.9
SMRF Simiane la Rot 3.77 69 ePg Pg 14 50 32.9 -0.7
SMRF eSn Sn 14 51 01.9 -1.3
SMRF eSg Sg 14 51 21.2 -1.3
10nm,0.4s
SMRF Simiane la Rot 3.77 69 ePn Pn 14 50 19.8 +0.8
SMRF ePg Pg 14 50 32.9 -0.7
SMRF eSn Sn 14 51 01.9 -1.3
SMRF eSg Sg 14 51 21.2 -1.3
SMRF Simiane la Rot 3.77 69 Pn Pn 14 50 19.8 +0.8
SMRF Pg Pg 14 50 32.9 -0.7
SMRF Sn Sn 14 51 01.9 -1.3
SMRF Lg 14 51 21.2
10nm,0.4s
SMRF Simiane la Rot 3.77 69 Pn Pn 14 50 19.8 +0.8
SMRF Pg Pg 14 50 32.9 -0.7
SMRF Sn Sn 14 51 01.9 -1.3
SMRF Lg 14 51 21.2
10nm,0.4s
SMRF Simiane la Rot 3.77 69 ePn Pn 14 50 19.8 +0.8
SMRF Simiane la Rot 3.77 69 ePg Pg 14 50 32.9 -0.7
SMRF eSn Sn 14 51 01.9 -1.3
SMRF eSg Sg 14 51 21.2 -1.3
5.1nm,0.4s
MFF Saint Martin d 3.89 352 ePg Pg 14 50 35.3 -0.6
MFF eSn Sn 14 51 05.4 -0.7
MFF eSg Sg 14 51 25.7 -0.6
11nm,0.3s
MFF Saint Martin d 3.89 352 ePn Pn 14 50 21.9 +1.2
MFF ePg Pg 14 50 35.3 -0.6
MFF eSn Sn 14 51 05.4 -0.7
MFF eSg Sg 14 51 25.7 -0.6
MFF Saint Martin d 3.89 352 Pn Pn 14 50 21.9 +1.2
MFF Pg Pg 14 50 35.3 -0.6
MFF Sn Sn 14 51 05.4 -0.7
MFF Lg 14 51 25.7
5.6nm,0.3s
MFF Saint Martin d 3.89 352 Pn Pn 14 50 21.9 +1.2
MFF Pg Pg 14 50 35.3 -0.6
MFF Sn Sn 14 51 05.4 -0.7
MFF Lg 14 51 25.7
5.6nm,0.3s
MFF Saint Martin d 3.89 352 ePn Pn 14 50 21.9 +1.2
MFF Saint Martin d 3.89 352 ePg Pg 14 50 35.3 -0.6
MFF eSn Sn 14 51 05.4 -0.7
MFF eSg Sg 14 51 25.7 -0.6
5.6nm,0.3s
EBEN Beniarda 4.10 190 Pn Pn 14 50 23.2 -0.3
EBEN Beniarda 4.10 190 Pn Pn 14 50 23.2 -0.3
0.2nm,0.1s,SNR=7.9
EBEN Beniarda 4.10 190 Pn Pn 14 50 23.2 -0.3
0.2nm,0.1s,SNR=7.9
EBEN Beniarda 4.10 190 Pn Pn 14 50 23.2 -0.3
0.2nm,0.1s,SNR=7.9
BGF Bois d'Agland 4.11 21 ePg Pg 14 50 39.9 -0.1
BGF eSg Sg 14 51 32.8 -0.4
59nm,0.4s
BGF Bois d'Agland 4.11 21 ePn Pn 14 50 24.5 +0.9
BGF ePg Pg 14 50 39.9 -0.1
BGF eSg Sg 14 51 32.8 -0.4
BGF Bois d'Agland 4.11 21 Pn Pn 14 50 24.5 +0.9
BGF Pg Pg 14 50 39.9 -0.1
BGF Lg 14 51 32.8
30nm,0.4s
BGF Bois d'Agland 4.11 21 Pn Pn 14 50 24.5 +0.9
BGF Pg Pg 14 50 39.9 -0.1
BGF Lg 14 51 32.8
30nm,0.4s
BGF Bois d'Agland 4.11 21 ePn Pn 14 50 24.5 +0.9
BGF Bois d'Agland 4.11 21 ePg Pg 14 50 39.9 -0.1
BGF eSg Sg 14 51 32.8 -0.4
30nm,0.4s
GUD Guadarrama 4.19 241 Pn Pn 14 50 25.8 +1.1
GUD Sn Sn 14 51 10.4 -3.0
GUD Guadarrama 4.19 241 Pn Pn 14 50 25.8 +1.1
1.1nm,0.2s,SNR=7.9
GUD Sn Sn 14 51 10.4 -3.0
2.2nm,0.2s,SNR=7.9
GUD Guadarrama 4.19 241 Pn Pn 14 50 25.8 +1.1
1.1nm,0.2s,SNR=7.9
GUD Sn Sn 14 51 10.4 -3.0
2.2nm,0.2s,SNR=7.9
GUD Guadarrama 4.19 241 Pn Pn 14 50 25.8 +1.1
1.1nm,0.2s,SNR=7.9
GUD Sn Sn 14 51 10.4 -2.9
2.2nm,0.2s,SNR=7.9
LMR La Mourre 4.31 80 ePn Pn 14 50 29.2 +2.8
LMR eSn Sn 14 51 15.0 -1.5
LMR eSg Sg 14 51 38.2 -1.6
3.2nm,0.3s
LMR La Mourre 4.31 80 Pn Pn 14 50 29.2 +2.8
LMR Sn Sn 14 51 15.0 -1.5
LMR Lg 14 51 38.2
1.6nm,0.3s
LMR La Mourre 4.31 80 Pn Pn 14 50 29.2 +2.8
LMR Sn Sn 14 51 15.0 -1.5
LMR Lg 14 51 38.2
1.6nm,0.3s
LMR La Mourre 4.31 80 ePn Pn 14 50 29.2 +2.8
LMR eSn Sn 14 51 15.0 -1.5
LMR eSg Sg 14 51 38.2 -1.6
1.6nm,0.3s
ORIF Oris-en-Rattie 4.34 58 ePn Pn 14 50 27.8 +1.0
ORIF eSg Sg 14 51 39.7 -1.0
13nm,0.7s
ORIF Oris-en-Rattie 4.34 58 Pn Pn 14 50 27.8 +1.0
ORIF Lg 14 51 39.7
6.6nm,0.7s
ORIF Oris-en-Rattie 4.34 58 Pn Pn 14 50 27.8 +1.0
ORIF Lg 14 51 39.7
6.6nm,0.7s
ORIF Oris-en-Rattie 4.34 58 ePn Pn 14 50 27.8 +1.0
ORIF eSg Sg 14 51 39.7 -1.0
6.6nm,0.7s
EARI Arriondas 4.35 279 Pn Pn 14 50 29.4 +2.5
EARI Sn Sn 14 51 17.2 -0.2
EARI Arriondas 4.35 279 Pn Pn 14 50 29.4 +2.5
1.3nm,0.3s,SNR=11
EARI Sn Sn 14 51 17.2 -0.2
0.9nm,0.2s,SNR=5.0
EARI Arriondas 4.35 279 Pn Pn 14 50 29.4 +2.5
1.3nm,0.3s,SNR=11
EARI Sn Sn 14 51 17.2 -0.2
0.9nm,0.2s,SNR=5.0
ETOB Tobarra 4.44 203 Pn Pn 14 50 28.4 +0.2
ETOB Sn Sn 14 51 14.4 -5.2
ETOB Tobarra 4.44 203 Pn Pn 14 50 28.4 +0.2
0.7nm,0.3s,SNR=7.9
ETOB Sn Sn 14 51 14.4 -5.2
2.0nm,0.3s,SNR=7.9
ETOB Tobarra 4.44 203 Pn Pn 14 50 28.4 +0.2
0.7nm,0.3s,SNR=7.9
ETOB Sn Sn 14 51 14.4 -5.2
2.0nm,0.3s,SNR=7.9
ETOB Tobarra 4.44 203 Pn Pn 14 50 28.4 +0.3
0.7nm,0.3s,SNR=7.9
FRF La Foret Royal 4.44 77 ePn Pn 14 50 30.9 +2.7
FRF eSn Sn 14 51 17.7 -1.9
FRF eSg Sg 14 51 42.3 -1.6
18nm,0.7s
FRF La Foret Royal 4.44 77 Pn Pn 14 50 30.9 +2.7
FRF Sn Sn 14 51 17.7 -1.9
FRF Lg 14 51 42.3
8.9nm,0.7s
FRF La Foret Royal 4.44 77 Pn Pn 14 50 30.9 +2.7
FRF Sn Sn 14 51 17.7 -1.9
FRF Lg 14 51 42.3
8.9nm,0.7s
FRF La Foret Royal 4.44 77 ePn Pn 14 50 30.9 +2.7
FRF eSn Sn 14 51 17.7 -1.9
FRF eSg Sg 14 51 42.3 -1.6
8.9nm,0.7s
AVF Avril sur Loir 4.46 24 ePn Pn 14 50 29.3 +0.8
AVF eSg Sg 14 51 43.9 -0.7
11nm,0.4s
AVF Avril sur Loir 4.46 24 Pn Pn 14 50 29.3 +0.8
AVF Lg 14 51 43.9
5.6nm,0.4s
AVF Avril sur Loir 4.46 24 Pn Pn 14 50 29.3 +0.8
AVF Lg 14 51 43.9
5.6nm,0.4s
AVF Avril sur Loir 4.46 24 ePn Pn 14 50 29.3 +0.8
AVF eSg Sg 14 51 43.9 -0.7
5.6nm,0.4s
SMF Signal de Mont 4.50 29 ePn Pn 14 50 29.8 +0.8
SMF eSg Sg 14 51 44.9 -0.8
10nm,0.3s
SMF Signal de Mont 4.50 29 Pn Pn 14 50 29.8 +0.8
SMF Lg 14 51 44.9
5.2nm,0.3s
SMF Signal de Mont 4.50 29 Pn Pn 14 50 29.8 +0.8
SMF Lg 14 51 44.9
5.2nm,0.3s
SMF Signal de Mont 4.50 29 ePn Pn 14 50 29.8 +0.8
SMF eSg Sg 14 51 44.9 -0.8
5.2nm,0.3s
ESDC Sonseca Array 4.66 230 Pn Pn 14 50 31.0 -0.2
ESDC Sn Sn 14 51 21.7 -3.3
ESDC Lg 14 51 44.5
ESDC Sonseca Array 4.66 230 Pn Pn 14 50 31.0 -0.2
7.2nm,0.2s,baz=47,slow=14,SNR=22
ESDC Sn Sn 14 51 21.7 -3.3
4.1nm,0.2s,baz=50,slow=24,SNR=7.9
ESDC Lg 14 51 44.5
1.5nm,0.3s,SNR=7.9
ESDC Sonseca Array 4.66 230 Pn Pn 14 50 31.0 -0.2
7.2nm,0.2s,baz=47,slow=14,SNR=22
ESDC Sn Sn 14 51 21.7 -3.3
4.1nm,0.2s,baz=50,slow=24,SNR=7.9
ESDC Lg 14 51 44.5
1.5nm,0.3s,SNR=7.9
ESDC Sonseca Array 4.66 230 Pn Pn 14 50 31.0 -0.2
7.2nm,0.2s,baz=47,slow=14,SNR=22
ESDC Sn Sn 14 51 21.7 -3.3
4.1nm,0.2s,slow=24,SNR=7.9
ESLA Sonseca Array 4.66 230 ePn Pn 14 50 30.7 -0.5
ESLA Sonseca Array 4.66 230 ePn Pn 14 50 30.7 -0.5
HYF Humbligny 4.73 16 ePn Pn 14 50 32.9 +0.8
HYF eSg Sg 14 51 51.9 -1.1
HYF Humbligny 4.73 16 Pn Pn 14 50 32.9 +0.8
HYF Lg 14 51 51.9
HYF Humbligny 4.73 16 Pn Pn 14 50 32.9 +0.8
HYF Lg 14 51 51.9
HYF Humbligny 4.73 16 ePn Pn 14 50 32.9 +0.8
HYF eSg Sg 14 51 51.9 -1.1
SSF Saint Saulge 4.75 24 ePg Pg 14 50 51.7 -0.6
SSF eSg Sg 14 51 53.1 -0.8
16nm,0.7s
SSF Saint Saulge 4.75 24 ePn Pn 14 50 33.5 +1.0
SSF ePg Pg 14 50 51.7 -0.6
SSF eSg Sg 14 51 53.1 -0.8
SSF Saint Saulge 4.75 24 Pn Pn 14 50 33.5 +1.0
SSF Pg Pg 14 50 51.7 -0.6
SSF Lg 14 51 53.1
8.2nm,0.7s
SSF Saint Saulge 4.75 24 Pn Pn 14 50 33.5 +1.0
SSF Pg Pg 14 50 51.7 -0.6
SSF Lg 14 51 53.1
8.2nm,0.7s
SSF Saint Saulge 4.75 24 ePn Pn 14 50 33.5 +1.0
SSF Saint Saulge 4.75 24 ePg Pg 14 50 51.7 -0.6
SSF eSg Sg 14 51 53.1 -0.8
8.2nm,0.7s
EVIA Vianos 4.77 212 Pn Pn 14 50 30.2 -2.5
EVIA Sn Sn 14 51 22.1 -5.6
EVIA Vianos 4.77 212 Pn Pn 14 50 30.2 -2.5
MBDF Montbardon 4.84 64 ePn Pn 14 50 34.3 +0.7
MBDF eSg Sg 14 51 54.9 -1.6
1.8nm,0.4s
MBDF Montbardon 4.84 64 Pn Pn 14 50 34.3 +0.7
MBDF Lg 14 51 54.9
0.9nm,0.4s
MBDF Montbardon 4.84 64 Pn Pn 14 50 34.3 +0.7
MBDF Lg 14 51 54.9
0.9nm,0.4s
MBDF Montbardon 4.84 64 ePn Pn 14 50 34.3 +0.7
MBDF eSg Sg 14 51 54.9 -1.6
0.9nm,0.4s
PAB San Pablo 4.96 232 ePn Pn 14 50 35.4 0.0
PAB San Pablo 4.96 232 ePn Pn 14 50 35.4 0.0
LOR Lormes 5.05 25 ePg Pg 14 50 57.6 -0.4
LOR eSg Sg 14 52 01.9 -1.4
5.8nm,0.3s
LOR Lormes 5.05 25 ePn Pn 14 50 37.4 +0.9
LOR ePg Pg 14 50 57.6 -0.4
LOR eSg Sg 14 52 01.9 -1.4
LOR Lormes 5.05 25 Pn Pn 14 50 37.4 +0.9
LOR Pg Pg 14 50 57.6 -0.4
LOR Lg 14 52 01.9
2.9nm,0.3s
LOR Lormes 5.05 25 Pn Pn 14 50 37.4 +0.9
LOR Pg Pg 14 50 57.6 -0.4
LOR Lg 14 52 01.9
2.9nm,0.3s
LOR Lormes 5.05 25 ePn Pn 14 50 37.4 +0.9
LOR Lormes 5.05 25 ePg Pg 14 50 57.6 -0.4
LOR eSg Sg 14 52 01.9 -1.4
2.9nm,0.3s
SBF Sospel 5.05 75 ePn Pn 14 50 37.1 +0.5
SBF eSn Sn 14 51 32.3 -2.5
12nm,0.6s
SBF Sospel 5.05 75 Pn Pn 14 50 37.1 +0.5
SBF Sn Sn 14 51 32.3 -2.5
5.9nm,0.6s
SBF Sospel 5.05 75 Pn Pn 14 50 37.1 +0.5
SBF Sn Sn 14 51 32.3 -2.5
5.9nm,0.6s
SBF Sospel 5.05 75 ePn Pn 14 50 37.1 +0.5
SBF eSn Sn 14 51 32.3 -2.5
5.9nm,0.6s
LPL La Plagne 5.16 56 ePn Pn 14 50 39.1 +1.0
LPL eSg Sg 14 52 05.3 -1.6
8.5nm,0.8s
LPL La Plagne 5.16 56 Pn Pn 14 50 39.1 +1.0
LPL Lg 14 52 05.3
4.2nm,0.8s
LPL La Plagne 5.16 56 Pn Pn 14 50 39.1 +1.0
LPL Lg 14 52 05.3
4.2nm,0.8s
LPL La Plagne 5.16 56 ePn Pn 14 50 39.1 +1.0
LPL eSg Sg 14 52 05.3 -1.6
4.2nm,0.8s
LPG La Plagne 5.16 56 ePn Pn 14 50 39.1 +1.0
LPG eSg Sg 14 52 05.2 -1.8
4.2nm,0.5s
LPG La Plagne 5.16 56 Pn Pn 14 50 39.1 +1.0
LPG Lg 14 52 05.2
2.1nm,0.5s
LPG La Plagne 5.16 56 Pn Pn 14 50 39.1 +1.0
LPG Lg 14 52 05.2
2.1nm,0.5s
LPG La Plagne 5.16 56 ePn Pn 14 50 39.1 +1.0
LPG eSg Sg 14 52 05.2 -1.8
2.1nm,0.5s
CABF La Chapelle 5.46 43 ePg Pg 14 51 04.6 -1.1
CABF eSg Sg 14 52 14.5 -1.9
12nm,0.6s
CABF La Chapelle 5.46 43 ePn Pn 14 50 42.9 +0.8

CABF			*e*Pg	**Pg**	**14 51 04.6**	**-1.1**
CABF			*e*Sg	**Sg**	**14 52 14.5**	**-1.9**
CABF	**La Chapelle**	**5.46 43**	Pn	**Pn**	**14 50 42.9**	**+0.8**
CABF			Pg	**Pg**	**14 51 04.6**	**-1.1**
CABF			Lg		14 52 14.5	
	6.2nm,0.6s					
CABF	**La Chapelle**	**5.46 43**	Pn	**Pn**	**14 50 42.9**	**+0.8**
CABF			Pg	**Pg**	**14 51 04.6**	**-1.1**
CABF			Lg		14 52 14.5	
	6.2nm,0.6s					
CABF	**La Chapelle**	**5.46 43**	*e*Pn	**Pn**	**14 50 42.9**	**+0.8**
CABF	**La Chapelle**	**5.46 43**	*e*Pg	**Pg**	**14 51 04.6**	**-1.1**
CABF			*e*Sg	**Sg**	**14 52 14.5**	**-1.9**
	6.2nm,0.6s					
EHUE	**Huescar**	**5.53 208**	Pn	**Pn**	**14 50 44.1**	**+0.9**
EHUE	**Huescar**	**5.53 208**	Pn	**Pn**	**14 50 44.1**	**+0.9**
	0.4nm,0.2s,SNR=7.9					
EHUE	**Huescar**	**5.53 208**	Pn	**Pn**	**14 50 44.1**	**+0.9**
	0.4nm,0.2s,SNR=7.9					
EHUE	**Huescar**	**5.53 208**	Pn	**Pn**	**14 50 44.1**	**+1.0**
	0.4nm,0.2s,SNR=7.9					
ECAL	**Calabor**	**5.55 264**	Pn	**Pn**	**14 50 44.3**	**+0.8**
ECAL			Sn	**Sn**	**14 51 44.1**	**-3.0**
ECAL	**Calabor**	**5.55 264**	Pn	**Pn**	**14 50 44.3**	**+0.8**
	0.5nm,0.2s,SNR=7.9					
ECAL			Sn	**Sn**	**14 51 44.1**	**-3.0**
	3.7nm,0.3s,SNR=7.9					
ECAL	**Calabor**	**5.55 264**	Pn	**Pn**	**14 50 44.3**	**+0.8**
	0.5nm,0.2s,SNR=7.9					
ECAL			Sn	**Sn**	**14 51 44.1**	**-3.0**
	3.7nm,0.3s,SNR=7.9					
EQES	**Quesada**	**5.71 211**	Pn	**Pn**	**14 50 46.5**	**+0.9**
EQES			Sn	**Sn**	**14 51 47.5**	**-3.5**
EQES	**Quesada**	**5.71 211**	Pn	**Pn**	**14 50 46.5**	**+0.8**
GRR	**Gorron**	**5.74 350**	*e*Pn	**Pn**	**14 50 46.9**	**+0.9**
GRR			*e*Sn	**Sn**	**14 51 49.3**	**-2.3**
GRR			*e*Sg	**Sg**	**14 52 23.2**	**-2.2**
	8.2nm,0.5s					
GRR	**Gorron**	**5.74 350**	Pn	**Pn**	**14 50 46.9**	**+0.9**
GRR			Sn	**Sn**	**14 51 49.3**	**-2.3**
GRR			Lg		14 52 23.2	
	4.1nm,0.5s					
GRR	**Gorron**	**5.74 350**	Pn	**Pn**	**14 50 46.9**	**+0.9**
GRR			Sn	**Sn**	**14 51 49.3**	**-2.3**
GRR			Lg		14 52 23.2	
	4.1nm,0.5s					
GRR	**Gorron**	**5.74 350**	*e*Pn	**Pn**	**14 50 46.9**	**+0.9**
EPON	**Pontenova**	**5.76 278**	Pn	**Pn**	**14 50 48.0**	**+1.7**
EPON			Sn	**Sn**	**14 51 51.5**	**-0.8**
EPON	**Pontenova**	**5.76 278**	Pn	**Pn**	**14 50 48.0**	**+1.7**
	1.0nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**14 51 51.5**	**-0.8**
	2.5nm,0.3s,SNR=7.9					
EPON	**Pontenova**	**5.76 278**	Pn	**Pn**	**14 50 48.0**	**+1.7**
	1.0nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**14 51 51.5**	**-0.7**
	2.5nm,0.3s,SNR=7.9					
EPON	**Pontenova**	**5.76 278**	Pn	**Pn**	**14 50 48.0**	**+1.6**
	1.0nm,0.3s,SNR=7.9					
EPON			Sn	**Sn**	**14 51 51.5**	**-0.7**
	2.5nm,0.3s,SNR=7.9					
QUIF	**Quistinic**	**5.83 334**	*e*Pn	**Pn**	**14 50 47.9**	**+0.6**
QUIF			*e*Sn	**Sn**	**14 51 51.7**	**-2.2**
QUIF			*e*Sg	**Sg**	**14 52 26.2**	**-2.2**
	2.5nm,0.3s					
QUIF	**Quistinic**	**5.83 334**	Pn	**Pn**	**14 50 47.9**	**+0.6**
QUIF			Sn	**Sn**	**14 51 51.7**	**-2.2**
QUIF			Lg		14 52 26.2	
	1.2nm,0.3s					
QUIF	**Quistinic**	**5.83 334**	Pn	**Pn**	**14 50 47.9**	**+0.6**
QUIF			Sn	**Sn**	**14 51 51.7**	**-2.2**
QUIF			Lg		14 52 26.2	
	1.2nm,0.3s					
QUIF	**Quistinic**	**5.83 334**	*e*Pn	**Pn**	**14 50 47.9**	**+0.6**
LDF	**La Druitiere**	**5.87 355**	*e*Pn	**Pn**	**14 50 48.6**	**+0.8**
LDF			*e*Sn	**Sn**	**14 51 52.7**	**-2.1**
LDF			*e*Sg	**Sg**	**14 52 27.8**	**-1.8**
	13nm,0.7s					
LDF	**La Druitiere**	**5.87 355**	*e*Pn	**Pn**	**14 50 48.6**	**+0.8**
LDF			*e*Sg	**Sg**	**14 52 27.8**	**-1.8**
	6.4nm,0.7s					
SGMF	**Saint Gilles**	**5.95 339**	*e*Pn	**Pn**	**14 50 49.4**	**+0.5**
SGMF			*e*Sn	**Sn**	**14 51 54.8**	**-2.0**
SGMF			*e*Sg	**Sg**	**14 52 30.3**	**-2.0**
	5.6nm,0.5s					
SGMF	**Saint Gilles**	**5.95 339**	Pn	**Pn**	**14 50 49.4**	**+0.5**
SGMF			Sn	**Sn**	**14 51 54.8**	**-2.0**
SGMF			Lg		14 52 30.3	
	2.8nm,0.5s					
SGMF	**Saint Gilles**	**5.95 339**	Pn	**Pn**	**14 50 49.4**	**+0.5**
SGMF			Sn	**Sn**	**14 51 54.8**	**-2.0**
SGMF			Lg		14 52 30.3	
	2.8nm,0.5s					
SGMF	**Saint Gilles**	**5.95 339**	*e*Pn	**Pn**	**14 50 49.4**	**+0.5**
MVO	**Moncorvo**	**5.96 257**	*e*Pn	**Pn**	**14 50 50.1**	**+1.0**
MVO			*e*Sn	**Sn**	**14 54.3**	**-2.8**
MVO			A		14 52 33.6	
	4.1nm,0.6s					
FLN	**La Foliniere**	**6.07 353**	*e*Pn	**Pn**	**14 50 51.1**	**+0.6**
FLN			*e*Sn	**Sn**	**14 51 57.5**	**-2.1**
FLN			*e*Sg	**Sg**	**14 52 34.2**	**-1.7**
	5.7nm,0.4s					
FLN	**La Foliniere**	**6.07 353**	Pn	**Pn**	**14 50 51.1**	**+0.6**
FLN			Sn	**Sn**	**14 51 57.5**	**-2.1**
FLN			Lg		14 52 34.2	
	2.8nm,0.4s					
FLN	**La Foliniere**	**6.07 353**	Pn	**Pn**	**14 50 51.1**	**+0.6**
FLN			Sn	**Sn**	**14 51 57.5**	**-2.1**
FLN			Lg		14 52 34.2	
	2.8nm,0.4s					
FLN	**La Foliniere**	**6.07 353**	*e*Pn	**Pn**	**14 50 51.1**	**+0.6**
FLN			*e*Sg	**Sg**	**14 52 34.2**	**-1.7**
	2.8nm,0.4s					
PGF	**Pioggiola**	**6.14 89**	*e*Pn	**Pn**	**14 50 51.6**	**+0.1**
PGF			*e*Sn	**Sn**	**14 51 58.3**	**-3.2**
	4.7nm,0.3s					
PGF	**Pioggiola**	**6.14 89**	Pn	**Pn**	**14 50 51.6**	**+0.1**
PGF			Sn	**Sn**	**14 51 58.3**	**-3.2**
	2.3nm,0.3s					
PGF	**Pioggiola**	**6.14 89**	Pn	**Pn**	**14 50 51.6**	**+0.1**
PGF			Sn	**Sn**	**14 51 58.3**	**-3.2**
	2.3nm,0.3s					
PGF	**Pioggiola**	**6.14 89**	*e*Pn	**Pn**	**14 50 51.6**	**+0.1**
ROSF	**Rostrenen**	**6.24 335**	*e*Pn	**Pn**	**14 50 53.5**	**+0.7**
ROSF			*e*Sn	**Sn**	**14 52 01.3**	**-2.5**
	4.3nm,0.4s					
ROSF	**Rostrenen**	**6.24 335**	Pn	**Pn**	**14 50 53.5**	**+0.7**
ROSF			Sn	**Sn**	**14 52 01.3**	**-2.5**
	2.2nm,0.4s					
ROSF	**Rostrenen**	**6.24 335**	Pn	**Pn**	**14 50 53.5**	**+0.7**
ROSF			Sn	**Sn**	**14 52 01.3**	**-2.5**
	2.2nm,0.4s					
ROSF	**Rostrenen**	**6.24 335**	*e*Pn	**Pn**	**14 50 53.5**	**+0.7**
MEZF	**Maizieres J'vi**	**6.52 27**	*e*Pn	**Pn**	**14 50 57.2**	**+0.5**
MEZF			*e*Sg	**Sg**	**14 52 47.9**	**-2.4**
	14nm,0.6s					
MEZF	**Maizieres J'vi**	**6.52 27**	Pn	**Pn**	**14 50 57.2**	**+0.5**
MEZF			Lg		14 52 47.9	
	14nm,0.6s					
MEZF	**Maizieres J'vi**	**6.52 27**	Pn	**Pn**	**14 50 57.2**	**+0.5**
MEZF			Lg		14 52 47.9	
	14nm,0.6s					
MEZF	**Maizieres J'vi**	**6.52 27**	*e*Pn	**Pn**	**14 50 57.2**	**+0.5**
ELOB	**Lobios**	**6.54 265**	Pn	**Pn**	**14 50 57.8**	**+0.8**
ELOB			Sn	**Sn**	**14 52 07.1**	**-4.2**
ELOB	**Lobios**	**6.54 265**	Pn	**Pn**	**14 50 57.8**	**+0.8**
	1.3nm,0.3s,SNR=7.9					
ELOB			Sn	**Sn**	**14 52 07.1**	**-4.2**
	1.5nm,0.3s,SNR=7.9					
ELOB	**Lobios**	**6.54 265**	Pn	**Pn**	**14 50 57.8**	**+0.8**
	1.3nm,0.3s,SNR=7.9					
ELOB			Sn	**Sn**	**14 52 07.1**	**-4.2**
	1.5nm,0.3s,SNR=7.9					
ELOB	**Lobios**	**6.54 265**	Pn	**Pn**	**14 50 57.8**	**+0.8**
	1.3nm,0.3s,SNR=7.9					
HINF	**Hinteralfeld**	**6.68 39**	*e*Sg	**Sg**	**14 52 53.0**	**-2.5**
	4.7nm,0.5s					
HINF	**Hinteralfeld**	**6.68 39**	Lg		14 52 53.0	
	2.3nm,0.5s					
HINF	**Hinteralfeld**	**6.68 39**	Lg		14 52 53.0	
	2.3nm,0.5s					
PMRV	**Marv??o**	**6.94 244**	*e*Pn	**Pn**	**14 51 02.9**	**+0.4**
PMRV			*e*Sn	**Sn**	**14 52 17.3**	**-3.9**
PMRV			A		14 52 19.0	
	2.6nm,0.4s					
PMRV	**Marv??o**	**6.94 244**	Pn	**Pn**	**14 51 02.9**	**+0.4**
PMRV			Sn	**Sn**	**14 52 17.3**	**-3.9**
	1.3nm,0.4s					
PMRV	**Marv??o**	**6.94 244**	Pn	**Pn**	**14 51 02.9**	**+0.4**
PMRV			Sn	**Sn**	**14 52 17.3**	**-3.9**
	1.3nm,0.4s					
PMRV	**Marv??o**	**6.94 244**	*e*Pn	**Pn**	**14 51 02.9**	**+0.4**
EBAD	**Badajoz**	**7.07 238**	Pn	**Pn**	**14 51 03.9**	**-0.4**
EBAD			Sn	**Sn**	**14 52 19.8**	**-4.7**
EBAD	**Badajoz**	**7.07 238**	Pn	**Pn**	**14 51 03.9**	**-0.4**
	0.3nm,0.1s,SNR=7.9					
EBAD			Sn	**Sn**	**14 52 19.8**	**-4.7**
	2.1nm,0.2s,SNR=7.9					
EBAD	**Badajoz**	**7.07 238**	Pn	**Pn**	**14 51 03.9**	**-0.4**
	0.3nm,0.1s,SNR=7.9					
EBAD			Sn	**Sn**	**14 52 19.8**	**-4.7**
	2.1nm,0.2s,SNR=7.9					
EBAD	**Badajoz**	**7.07 238**	Pn	**Pn**	**14 51 03.9**	**-0.4**
	0.3nm,0.1s,SNR=7.9					
CDF	**Champ du Feu**	**7.31 37**	*e*Pn	**Pn**	**14 51 08.4**	**+0.8**
CDF			*e*Sg	Sn	14 53 12.6	+42
	6.5nm,0.8s					
CDF	**Champ du Feu**	**7.31 37**	Pn	**Pn**	**14 51 08.4**	**+0.8**
CDF			Lg		14 53 12.6	
	3.2nm,0.8s					
CDF	**Champ du Feu**	**7.31 37**	Pn	**Pn**	**14 51 08.4**	**+0.8**
CDF			Lg		14 53 12.6	
	3.2nm,0.8s					
CDF	**Champ du Feu**	**7.31 37**	*e*Pn	**Pn**	**14 51 08.4**	**+0.8**
PESTR	**Estremoz**	**7.37 241**	*e*Pn	**Pn**	**14 51 08.4**	**-0.1**
PESTR			*e*Sn	**Sn**	**14 52 27.9**	**-4.0**
PESTR	**Estremoz**	**7.37 241**	Pn	**Pn**	**14 51 08.4**	**-0.1**
PESTR			Sn	**Sn**	**14 52 27.9**	**-4.0**
PESTR	**Estremoz**	**7.37 241**	Pn	**Pn**	**14 51 08.4**	**-0.1**
PESTR			Sn	**Sn**	**14 52 27.9**	**-4.0**
PESTR	**Estremoz**	**7.37 241**	*e*Pn	**Pn**	**14 51 08.4**	**-0.1**
BAIF	**Baives**	**7.71 17**	*e*Pn	**Pn**	**14 51 13.7**	**+0.7**
BAIF			*e*Sn	**Sn**	**14 52 36.6**	**-3.3**
	1.1nm,0.3s					
BAIF	**Baives**	**7.71 17**	Pn	**Pn**	**14 51 13.7**	**+0.7**
BAIF			Sn	**Sn**	**14 52 36.6**	**-3.3**
	0.6nm,0.3s					
BAIF	**Baives**	**7.71 17**	Pn	**Pn**	**14 51 13.7**	**+0.7**
BAIF			Sn	**Sn**	**14 52 36.6**	**-3.3**
	0.6nm,0.3s					
BAIF	**Baives**	**7.71 17**	*e*Pn	**Pn**	**14 51 13.7**	**+0.7**

*NEIC **18** 14:54:40.2, 32°.42S×71°.68W, h28km, ML3.1(GUC), After GUC.*

GUC 18 14:54:40.2±0.7, 32°.42S×71°.68W, h28km±5km, MD3.7, ML3.1, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.61**	**177**	*e*P	Pb	14 54 51.8	-0.5
IHA				*i* S	Sb	14 55 00.2	-0.3
JACH	**Jahuel**	**0.96**	**106**	*e*P	Pn	14 54 57.7	-0.1
JACH				*i* S	Sb	14 55 10.9	+0.4
PEL	**Peldehue**	**1.11**	**131⇑**	*i*P	Pn	14 55 00.1	+0.2
PEL				*e*S	Sn	14 55 14.8	+0.5
PEL				AML	AML	14 55 16.6	
	comp=E,2μm,0.3s						
CLCH	**Cerro Calan**	**1.37**	**136**	*e*P	Pn	14 55 04.8	+1.2
CLCH				*i* S	Sn	14 55 22.9	+2.1
CLCH	**Cerro Calan**	**1.37**	**136**	*e*P	Pn	14 55 04.8	+1.2
CLCH				*i* S	Sn	14 55 22.9	+2.1
CLCH				AML	AML	14 55 25.7	
	comp=E,412nm,0.7s						
TACH	**Talagante**	**1.38**	**153**	*e*P	Pn	14 55 04.4	+0.8
TACH				*i* S	Sn	14 55 22.2	+1.2
ANTU	**Antumapu**	**1.45**	**143**	*i* S	Sn	14 55 24.5	+1.8
ANTU				AML	AML	14 55 36.7	
	comp=N,184nm,0.6s						
FCH	**Farellones**	**1.48**	**128⇑**	*i*P	Pn	14 55 06.0	+1.0
FCH				*i* S	Sn	14 55 25.7	+2.2
LNV	**Longovilo**	**1.55**	**172**	*e*P	Pn	14 55 05.6	-0.4
LNV				*e*S	Sn	14 55 26.2	+1.1
PCH	**Pirque**	**1.55**	**141**	*e*P	Pn	14 55 07.2	+1.2
PCH				*i* S	Sn	14 55 27.1	+1.9
CHCH	**Chadas Angostu**	**1.74**	**150**	*e*P	Pn	14 55 10.0	+1.4
CHCH				*i* S	Sn	14 55 32.4	+2.5
LMEL	**Las Melosas**	**1.89**	**139**	*e*P	Pn	14 55 11.8	+1.2
LMEL				*i* S	Sn	14 55 36.4	+2.8
LMEL	**Las Melosas**	**1.89**	**139**	*e*P	Pn	14 55 11.8	+1.2
LMEL				*i* S	Sn	14 55 36.4	+2.8
LMEL				AML	AML	14 55 41.4	
	comp=N,236nm,0.1s						
CACH	**El Canelo**	**1.92**	**152**	*e*S	Sn	14 55 38.4	+4.1

*ISCJB **18** 15:26:52.8±0.5, 38°.81N±0°.02×36°.49E±0°.03, h4km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=26.1*
*DDA **18** 15:26:53.4, 38°.78N×36°.54E, h12km±2km, Md3.4*
*ISK **18** 15:26:53.0, 38°.71N×36°.64E, h5km, MD3.5*
*CSEM **18** 15:26:54.6±0.1, 38°.72N×36°.66E, h2km, MD3.5, Error ellipse: s-maj=4.3km s-min=4.0km az=42.0*

ISC 18 15:26:53.9±0.4, 38°.78N±0°.02×36°.45E±0°.03, h12km±3km, n75, σ1°25/99, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.11**	**200**	*i* P	**Pg**	**15 26 56.9**	**0.0**
PINB				*i* S	**Sg**	**15 27 00.1**	**+1.1**
PINB	**Pinarbasi**	**0.11**	**200**	*i* P	**Pg**	**15 26 56.9**	**+0.1**
PINB				*i* S	**Sg**	**15 27 00.1**	**+1.1**
SARI	**SarD1z-Kayseri**	**0.22**	**119**	*e*PG	**Pg**	**15 27 00.4**	**+1.9**
SARI				*e*SG	**Sg**	**15 27 06.7**	**+5.0**
SARI	**SarD1z-Kayseri**	**0.22**	**119**	*e*Pg	**Pg**	**15 27 00.4**	**+1.9**
SARI				*e*Sg	**Sg**	**15 27 06.7**	**+5.0**
DARE	**Darende-Malaty**	**1.07**	**81**	*e*PG	**Pg**	**15 27 07.1**	**-7.3**
DARE	**Darende-Malaty**	**1.07**	**81**	*e*Pg	**Pg**	**15 27 07.1**	**-7.3**
ANDN	**Andirin**	**1.21**	**184**	*i* P	**Pg**	**15 27 16.2**	**-0.8**
ANDN				*i* S	**Sg**	**15 27 36.9**	**+4.2**
ANDN	**Andirin**	**1.21**	**184**	*i* P	**Pg**	**15 27 16.2**	**-0.8**
ANDN				*i* S	**Sg**	**15 27 36.9**	**+4.2**
SVSK	**Karacayir**	**1.21**	**20**	*e*PN	**Pn**	**15 27 16.3**	**-0.3**
SVSK				*e*SN	**Sn**	**15 27 35.9**	**+3.0**
SVSK	**Karacayir**	**1.21**	**20**	*e*Pn	**Pn**	**15 27 16.3**	**-0.3**
SVSK				*e*Sn	**Sn**	**15 27 35.9**	**+3.0**
YOZ	**Yozgat**	**1.23**	**315**	*e*PN	**Pg**	**15 27 19.5**	**+2.0**
YOZ	**Yozgat**	**1.23**	**315**	*e*Pn	**Pg**	**15 27 19.5**	**+2.0**
AKCD	**Akcadag**	**1.25**	**112**	*i* P	**Pg**	**15 27 15.6**	**-2.3**
AKCD				*i* S	**Sg**	**15 27 35.0**	**+0.8**
AKCD	**Akcadag**	**1.25**	**112**	*i* P	**Pg**	**15 27 15.6**	**-2.3**
AKCD				*i* S	**Sg**	**15 27 35.0**	**+0.8**
KMRS	**Kahramanmaras**	**1.32**	**164**	*e*PN	**Pn**	**15 27 17.7**	**-0.4**
KMRS				*e*SN	**Sn**	**15 27 35.4**	**-0.3**
KMRS	**Kahramanmaras**	**1.32**	**164**	*e*Pn	**Pn**	**15 27 17.7**	**-0.4**
KMRS				*e*Sn	**Sn**	**15 27 35.4**	**-0.3**
KOZT	**Kozan**	**1.39**	**201**	*e*PN	**Pn**	**15 27 20.0**	**+0.9**
TOKT	**Tokat**	**1.54**	**3**	*e*PN	**Pg**	**15 27 23.7**	**+0.3**
TOKT	**Tokat**	**1.54**	**3**	*e*Pn	**Pg**	**15 27 23.7**	**+0.3**
MYA	**Malataya**	**1.61**	**106**	*e*PN	**Pn**	**15 27 21.6**	**-0.5**
MYA				*e*SN	**Sg**	**15 27 42.8**	**-3.0**
MYA	**Malataya**	**1.61**	**106**	*e*Pn	**Pn**	**15 27 21.6**	**-0.5**
MYA				*e*Sn	**Sg**	**15 27 42.8**	**-2.9**
KEMA	**Kemaliye**	**1.66**	**72**	*i* P	**Pn**	**15 27 23.2**	**+0.4**
KEMA				*i* S	**Sg**	**15 27 47.6**	**+0.3**
KEMA	**Kemaliye**	**1.66**	**72**	*i* P	**Pn**	**15 27 23.2**	**+0.4**
KEMA				*i* S	**Sg**	**15 27 47.6**	**+0.3**
GZT	**Gaziantep**	**1.67**	**148**	*i* P	**Pb**	**15 27 23.9**	**-0.7**
GAZ	**Gaziantep**	**1.72**	**159**	*e*PN	**Pn**	**15 27 23.7**	**+0.2**
GAZ	**Gaziantep**	**1.72**	**159**	*e*Pn	**Pn**	**15 27 23.7**	**+0.2**
CDAG	**Cicekdag**	**1.82**	**298**	*i* P	**Pg**	**15 27 29.3**	**+0.5**
CDAG				*i* S	**Sg**	**15 27 54.7**	**+2.3**
CDAG	**Cicekdag**	**1.82**	**298**	*i* P	**Pg**	**15 27 29.3**	**+0.5**
CDAG				*i* S	**Sg**	**15 27 54.7**	**+2.3**
CEYT	**Ceyhan**	**1.86**	**198**	*e*PN	**Pn**	**15 27 27.0**	**+1.6**
CEYT	**Ceyhan**	**1.86**	**198**	*e*Pn	**Pn**	**15 27 27.0**	**+1.5**
KARA	**Karaisali**	**1.88**	**216**	*e*PN	**Pn**	**15 27 28.1**	**+2.3**
KARA	**Karaisali**	**1.88**	**216**	*e*Pn	**Pn**	**15 27 28.1**	**+2.3**
ATAB	**Bozova**	**1.96**	**132**	*i* P	**Pb**	**15 27 28.6**	**-0.8**
ATAB				*i* S	**Sg**	**15 27 56.1**	**-0.7**
ATAB	**Bozova**	**1.96**	**132**	*i* P	**Pb**	**15 27 28.6**	**-0.8**
ATAB				*i* S	**Sg**	**15 27 56.1**	**-0.7**
CORM	**Corum**	**1.98**	**315**	*e*PN	**Pg**	**15 27 31.6**	**-0.2**
CORM	**Corum**	**1.98**	**315**	*e*Pn	**Pg**	**15 27 31.6**	**-0.3**
GULE	**Gulek**	**2.00**	**222**	*i* P	**Pg**	**15 27 30.6**	**-1.6**
GULE	**Gulek**	**2.00**	**222**	*i* P	**Pg**	**15 27 30.6**	**-1.6**
ELZG	**Elazig**	**2.00**	**97**	*i* P	**Pn**	**15 27 28.5**	**+1.0**
ELZG				*i* S	**Sg**	**15 27 59.0**	**+0.7**
ELZG	**Elazig**	**2.00**	**97**	*i* P	**Pn**	**15 27 28.5**	**+1.0**
ELZG				*i* S	**Sg**	**15 27 59.0**	**+0.8**
KUZU	**Kuzuini**	**2.07**	**166**	*i* P	**Pn**	**15 27 29.7**	**+1.3**
KUZU				*i* S	**Sb**	**15 27 56.8**	**-0.1**
KUZU	**Kuzuini**	**2.07**	**166**	*i* P	**Pn**	**15 27 29.7**	**+1.4**
KUZU				*i* S	**Sb**	**15 27 56.8**	**-0.1**
CTKT	**Corum**	**2.24**	**326**	*i* P	**Pg**	**15 27 36.1**	**-0.7**
CTKT	**Corum**	**2.24**	**326**	*i* P	**Pg**	**15 27 36.1**	**-0.7**
SVRC	**Sivrice-ELAZID**	**2.27**	**99**	*e*PN	**Pn**	**15 27 30.9**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.27**	**99**	*e*Pn	**Pn**	**15 27 30.9**	**-0.3**
PTK	**Pertek**	**2.30**	**86**	*e*PN	**Pn**	**15 27 31.1**	**-0.4**
PTK	**Pertek**	**2.30**	**86**	*e*Pn	**Pn**	**15 27 31.2**	**-0.3**
URFA	**Urfa**	**2.30**	**125**	*e*PN	**Pn**	**15 27 31.0**	**-0.5**
URFA	**Urfa**	**2.30**	**125**	*e*Pn	**Pn**	**15 27 31.0**	**-0.6**
KVT	**Kavak**	**2.31**	**352**	*e*PN	**Pg**	**15 27 35.2**	**-3.1**
KVT	**Kavak**	**2.31**	**352**	*e*Pn	**Pg**	**15 27 35.2**	**-3.0**
SULT	**Sultanhani-AKS**	**2.38**	**257**	*e*PN	**Pb**	**15 27 36.9**	**+0.3**
SULT	**Sultanhani-AKS**	**2.38**	**257**	*e*Pn	**Pb**	**15 27 36.9**	**+0.3**
MERS	**Mersin**	**2.45**	**219**	*e*PN	**Pb**	**15 27 36.7**	**-1.1**
MERS	**Mersin**	**2.45**	**219**	*e*Pn	**Pb**	**15 27 36.7**	**-1.1**
EZC	**Erzincan**	**2.45**	**66**	*e*PN	**Pn**	**15 27 34.0**	**+0.3**
HTY	**Hatay**	**2.67**	**185**	*e*PN	**Pn**	**15 27 38.4**	**+1.7**
HTY	**Hatay**	**2.67**	**185**	*e*Pn	**Pn**	**15 27 38.4**	**+1.8**
GUMT	**Gumushane**	**2.88**	**53**	*e*PN	**Pn**	**15 27 40.5**	**+1.0**
GUMT	**Gumushane**	**2.88**	**53**	*e*Pn	**Pn**	**15 27 40.5**	**+1.0**
TOS	**Tosya**	**2.92**	**321**	*e*PN	**Pb**	**15 27 45.0**	**-1.0**
TOS	**Tosya**	**2.92**	**321**	*e*Pn	**Pb**	**15 27 45.0**	**-0.9**
DIKM	**Dikmen**	**3.00**	**343**	*e*PN	**Pb**	**15 27 45.4**	**-1.9**
DIKM	**Dikmen**	**3.00**	**343**	*e*Pn	**Pb**	**15 27 45.4**	**-1.9**
LOD	**Lodumlu**	**3.07**	**292**	*e*PN	**Pb**	**15 27 47.3**	**-1.0**
LOD	**Lodumlu**	**3.07**	**292**	*e*Pn	**Pb**	**15 27 47.3**	**-1.0**
LADK	**Ladik-KONYA**	**3.26**	**261**	*e*PN	**Pb**	**15 27 49.7**	**-1.9**
LADK	**Ladik-KONYA**	**3.26**	**261**	*e*Pn	**Pb**	**15 27 49.7**	**-1.9**
IKL	**Isikli**	**3.36**	**222**	*e*PN	**Pn**	**15 27 49.8**	**+3.6**
IKL	**Isikli**	**3.36**	**222**	*e*Pn	**Pn**	**15 27 49.8**	**+3.6**
KIZT	**Kizilcal**	**3.57**	**273**	*e*PN	**Pb**	**15 27 54.4**	**-2.5**
KIZT	**Kizilcal**	**3.57**	**273**	*e*Pn	**Pb**	**15 27 54.4**	**-2.6**
HDMB	**Hadim**	**3.63**	**241**	*e*PN	**Pb**	**15 27 54.4**	**-3.5**
HDMB	**Hadim**	**3.63**	**241**	*e*Pn	**Pb**	**15 27 54.4**	**-3.5**

*NEIC **18** 15:32:05.6, 16°.95N×100°.23W, h2km, MD3.7(MEX), After MEX.*

MEX 18 15:32:05.6±0.7, 16°.95N×100°.23W, h2km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.11**	**338**	*i* P	Pg	15 32 07.4	-0.3
CAIG				*i* S	Sg	15 32 09.5	+0.4
CAIG	**El Cayaco**	**0.11**	**338**	*i* P	Pg	15 32 07.4	-0.3
CAIG				*i* S	Sg	15 32 09.5	+0.4
ACX	**Acapulco**	**0.31**	**105**	*e*P	Pg	15 32 11.1	-0.4
ACX				*i* S	Sg	15 32 16.1	+0.6
ACX	**Acapulco**	**0.31**	**105**	*e*P	Pg	15 32 11.1	-0.4
ACX				*i* S	Sg	15 32 16.1	+0.6
ZIIG	**Zihuatanejo**	**1.35**	**299**	*e*P	Pn	15 32 28.0	-3.6
ZIIG				*i* S	Sg	15 32 45.1	-4.1
ZIIG	**Zihuatanejo**	**1.35**	**299**	*e*P	Pn	15 32 28.0	-3.6
ZIIG				*i* S	Sg	15 32 45.1	-4.1
PLIG	**Platanillo**	**1.59**	**26**	*i* P	Pn	15 32 31.1	-3.8
PLIG				*i* S	Sn	15 32 51.0	-5.0
PLIG	**Platanillo**	**1.59**	**26**	*i* P	Pn	15 32 31.1	-3.8
PLIG				*i* S	Sn	15 32 51.0	-5.0
PNIG	**Pinotepa**	**2.09**	**105**	*e*P	Pn	15 32 37.6	-4.0
PNIG				*i* S	Sn	15 33 04.6	-3.6
PNIG	**Pinotepa**	**2.09**	**105**	*e*P	Pn	15 32 37.6

XAN				Pg	Pg	15 36 27.6	+0.5
XAN				Sn	Sn	15 36 55.3	-0.9
XAN				Sg	Sg	15 37 10.0	+0.6
XAN				smax			
	comp=N,610nm,0.9s						
XAN				smax			
	comp=E,410nm,0.8s						
XAN				LR	LR		
	comp=N,300nm,5.2s						
XAN				LR	LR		
	comp=E,300nm,7.0s						
XAN				LR	LR		
	comp=Z,250nm,8.0s						
LZH	**Lanzhou**	**3.73**	**340**	*e*Pn	**Pn**	**15 36 25.6**	**+2.4**
LZH				Sn	**Sn**	**15 37 03.1**	**-4.6**
LZH				Sg	**Sg**	**15 37 21.6**	**-2.8**
LZH				smax			
	comp=N,950nm,0.7s						
LZH				smax			
	comp=E,710nm,0.6s						
LZH				LR	LR		
	comp=N,2μm,7.7s						
LZH				LR	LR		
	comp=Z,2μm,8.2s						
ENH	**Enshi**	**4.17**	**123**	*e*Pn	**Pn**	**15 36 32.8**	**+3.7**
GYA	**Guiyang**	**6.20**	**170**	Pn	**Pn**	**15 37 01.8**	**+4.7**
GYA				Sn	**Sn**	**15 38 08.6**	**0.0**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,140nm,1.0s						
KMI	**Kunming**	**7.80**	**198**	Pn	**Pn**	**15 37 27.3**	**+8.2**
KMI				Sn	**Sn**	**15 38 43.0**	**-5.0**
KMI				smax			
	comp=N,32nm,2.0s						
KMI				smax			
	comp=E,41nm,1.6s						
WHN	**Wuhan**	**7.88**	**103**	S	**Sn**	**15 38 49.4**	**-0.6**
WHN				LR	LR		
	comp=N,2μm,3.9s						
WHN				LR	LR		
	comp=E,2μm,3.3s						
WHN				LR	LR		
	comp=Z,2μm,4.1s						
GTA	**Gaotai**	**8.19**	**328**	⦚P	**Pn**	**15 37 24.8**	**+0.4**
GTA				pP		15 37 30.8	
GTA				sP		15 37 34.8	
GTA				S	**Sn**	**15 39 00.1**	**+2.6**
GTA				sS		15 39 03.8	
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,68nm,4.2s						
GTA				LR	LR		
	comp=N,600nm,8.9s						
GTA				LR	LR		
	comp=E,340nm,10.1s						
GTA				LR	LR		
	comp=Z,620nm,10.7s						
BTO	**Baotou**	**8.81**	**23**	*e*P	Px	15 38 10.3	
BTO				S	Sx	15 39 52.1	
BTO				LR	LR		
	comp=N,180nm,8.9s						
BTO				LR	LR		
	comp=E,170nm,9.3s						
LSA	**Lhasa**	**12.56**	**261**	P	**Pn**	**15 38 25.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**15.23**	**204**	Pn	**Pn**	**15 39 00.2**	**-0.6**
	comp=E,0.1nm,0.3s,baz=52,slow=26,SNR=2.3						
CMAR				LR	LR	15 45 35.5	
	comp=E,82nm,19.2s,baz=0.0,slow=40						
SONM	**Songino Array**	**15.25**	**2**	Pn	**Pn**	**15 39 00.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=188,slow=14,SNR=12						
SONM				Lg		15 43 28.2	
	comp=E,0.1nm,0.3s,baz=183,slow=24,SNR=3.6						
KSRS	**Korea Array**	**19.04**	**69**	P	**Pn**	**15 39 46.9**	**-1.7**
	comp=E,0.1nm,0.3s,baz=253,slow=10,SNR=3.1						
MK31	**Makanchi Array**	**22.66**	**316**	*e*P	**P**	**15 40 26.3**	**-0.7**
MKAR	**Makanchi Array**	**22.66**	**316**	P	**P**	**15 40 26.8**	**-0.1**
	comp=E,2.9nm,0.8s,mb3.8,baz=119,slow=9.1,SNR=23						
MKAR				LR	LR	15 49 37.1	
	comp=E,69nm,19.1s,baz=125,slow=38						
ZAA0	**Zalesovo Array**	**25.92**	**332**	*e*P	**P**	**15 40 58.0**	**+0.1**
ZALV	**Zalesovo Beam**	**25.92**	**332**	P	**P**	**15 40 57.4**	**-0.5**
	comp=E,0.8nm,0.4s,mb3.6,baz=127,slow=9.4,SNR=6.8						
UCH	**Uchtor**	**26.25**	**300**	P	**P**	**15 41 01.5**	**+0.4**
	comp=E,5.7nm,1.2s,mb4.0						
KURK	**Kurchatov**	**26.78**	**320**	P	**P**	**15 41 05.3**	**-0.4**
	comp=E,0.7nm,0.4s,mb3.5,baz=125,slow=9.9,SNR=14						
KURK				PcP	PcP	15 44 27.8	-0.9
	comp=E,0.5nm,0.6s,baz=116,slow=1.9,SNR=4.2						
BVAR	**Borovoye Array**	**32.36**	**320**	P	**P**	**15 41 55.3**	**+0.1**
	comp=E,0.2nm,0.3s,mb3.4,baz=99,slow=9.6,SNR=3.6						
TIXI	**Tiksi**	**41.09**	**11**	*e*P	**P**	**15 43 09.1**	**-0.2**
	comp=E,2.0nm,0.8s,mb3.8						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**15 45 07.0**	**+0.1**
	comp=E,4.5nm,1.0s,mb4.5,baz=23,slow=4.0,SNR=4.2						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**15 45 10.8**	**-0.4**
	comp=E,0.8nm,0.4s,mb4.1,baz=89,slow=6.9,SNR=9.2						
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**15 45 11.5**	**-0.2**
	comp=E,0.7nm,0.9s,mb3.7,baz=88,slow=7.5,SNR=3.4						
AKASG	**Malin Array Be**	**57.20**	**313**	P	**P**	**15 45 11.9**	**-1.1**
	comp=E,0.7nm,0.3s,mb4.2,baz=65,slow=7.3,SNR=5.6						
WRAB	**Tennant Creek**	**59.10**	**148**	*e*P	**P**	**15 45 31.2**	**+4.7**
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**15 45 48.1**	**+0.6**
NOA	**NORSAR Array B**	**64.02**	**327**	P	**P**	**15 45 59.0**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.8,baz=65,slow=6.4,SNR=2.8						
GERES	**GERESS Array B**	**67.32**	**314**	P	**P**	**15 46 21.3**	**+0.5**
	comp=E,0.3nm,0.6s,mb3.5,baz=72,slow=4.3,SNR=4.7						
LPG	**La Plagne**	**73.06**	**313**	*e*P	**P**	**15 46 56.4**	**+0.3**
	comp=E,8.0nm,0.8s,mb4.4						
LPL	**La Plagne**	**73.06**	**313**	*e*P	**P**	**15 46 56.4**	**+0.3**
MBDF	**Montbardon**	**73.42**	**313**	*e*P	**P**	**15 46 58.2**	**-0.1**
ORIF	**Oris-en-Rattie**	**73.88**	**313**	*e*P	**P**	**15 47 00.6**	**-0.3**
SMF	**Signal de Mont**	**74.24**	**315**	*e*P	**P**	**15 47 02.3**	**-0.7**
YKA	**Yellowknife Ar**	**79.95**	**18**	P	**P**	**15 47 39.7**	**+4.9**
	comp=E,0.1nm,0.5s,mb3.0,baz=328,slow=5.0,SNR=3.9						

*ISCJB **18** 15:50:28.0±0.9, 30°.92N±0°.05×104°.35E±0°.09, h10km, mb3.1/4, Error ellipse: s-maj=10.7km s-min=6.5km az=3.1*
*IDC **18** 15:50:30.2±1.4, 31°.35N×104°.47E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/25, mbtmp3.4/5, Error ellipse: s-maj=46.0km s-min=25.1km az=49.0*
ISC 18 15:50:30.4±0.9, 31°.02N±0°.04×104°.29E±0°.08, h10km, n7, σ1°29/11, mb3.1/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**4.94**	**51**	Pn	**Pn**	**15 51 43.8**	**-0.9**
XAN				Pg	**Pb**	**15 51 59.3**	**+2.3**
XAN				Sn	**Sn**	**15 52 41.6**	**-0.3**
XAN				Sg	**Sb**	**15 52 56.6**	**+0.2**
XAN				smax			
	comp=N,69nm,0.9s						
XAN				smax			
	comp=E,37nm,0.9s						
GYA	**Guiyang**	**5.00**	**155**	Pg	**Pg**	**15 52 07.3**	**+1.1**
GYA				Sg	**Sg**	**15 53 09.8**	**-1.1**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,70nm,0.9s						
KSRS	**Korea Array**	**20.54**	**65**	P	**P**	**15 55 08.0**	**-1.0**
	comp=E,1.7nm,0.7s,baz=252,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**23.15**	**319**	P	**P**	**15 55 37.9**	**+1.1**
	comp=E,0.1nm,0.3s,mb2.7,baz=111,slow=12,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.87**	**334**	P	**P**	**15 56 09.6**	**-1.5**
	comp=E,0.3nm,0.4s,mb3.2,baz=129,slow=11,SNR=2.3						
ASAR	**Alice Springs**	**61.33**	**149**	P	**P**	**16 00 49.2**	**+2.8**
	comp=E,0.4nm,0.8s,mb3.6,baz=342,slow=6.7,SNR=5.4						
YKA	**Yellowknife Ar**	**81.73**	**17**	P	**P**	**16 02 47.9**	**-1.0**
	comp=E,0.1nm,0.5s,mb3.0,baz=334,slow=5.2,SNR=2.6						

*ISCJB **18** 15:52:05.5±2.0, 4°.63N±0°.10×118°.21E±0°.09, h24km±26km, Error ellipse: s-maj=20.0km s-min=7.7km az=40.8*
*DJA **18** 15:52:06, 4°.66N×118°.13E, h30km, MLv4.0/7*
ISC 18 15:52:06.7±2.2, 4°.71N±0°.10×118°.22E±0°.09, h20km±27km, n14, σ0°.77/17, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**0.55**	**31**	P	**Pb**	**15 52 19.0**	**+1.4**
MYLDM	**Lahad Datu**	**0.55**	**31**	P	**Pb**	**15 52 17.9**	**+0.3**
SDKM	**Sandakan**	**1.37**	**312**	P	**Pn**	**15 52 31.5**	**+0.7**
KKM	**Kota Kinabalu**	**2.39**	**304**	P	**Pn**	**15 52 45.2**	**+0.5**
KKM	**Kota Kinabalu**	**2.39**	**304**	P	**Pn**	**15 52 45.0**	**+0.2**
KDM	**Kudat**	**2.59**	**328**	P	**Pn**	**15 52 46.3**	**-1.1**
BTM	**Bintulu**	**5.34**	**254**	P	**Pn**	**15 53 25.6**	**+0.3**
MRSI	**Marisa**	**5.62**	**138**	P	**Pn**	**15 53 28.2**	**-0.9**
	78nm,0.6s,1μm						
PCI	**Palu**	**5.81**	**164**	P	**Pn**	**15 53 30.6**	**-1.2**
	2.1nm,1.1s,0.0nm						
PCI				S	**Sn**	**15 54 38.7**	**+0.8**
	2.1nm,1.1s,0.0nm						
SBUM	**Sibu**	**6.39**	**250**	P	**Pn**	**15 53 40.0**	**+0.1**
SBUM	**Sibu**	**6.39**	**250**	P	**Pn**	**15 53 34.5**	**-5.3**
	7.4nm,0.7s,0.0nm						
APSI	**Ampana**	**6.55**	**148**	P	**Pn**	**15 53 42.1**	**+0.1**
	54nm,0.9s,722nm0.2nm						
APSI				S	**Sn**	**15 54 56.8**	**+0.6**
	54nm,0.9s,722nm0.2nm						
LUWI	**Luwuk**	**7.30**	**141**	P	**Pn**	**15 53 51.2**	**-1.2**
	95nm,0.9s,950nm0.3nm						
LUWI				S	**Sn**	**15 55 15.4**	**+0.6**
	95nm,0.9s,950nm0.3nm						
TTSI	**Tana Toraja**	**7.87**	**168**	P	**Pn**	**15 54 00.1**	**0.0**

MAN 18 16:08:43, 13°.54N×121°.30E, h1km, mb4.5, ML3.4, MS3.3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**264**	*e*P	Pg	16 08 51.1	+1.6
BOAC	**Boac**	**0.53**	**98**	*e*P	Pg	16 08 54.0	+0.7
BOAC				*e*S	Sg	16 09 00.6	+0.5
LUBP	**Lubang**	**1.04**	**281**	*e*P	Pg	16 09 03.5	+0.4
LUBP				*e*S	Sg	16 09 21.7	+5.1
SJMP	**San Jose**	**1.08**	**189**	*e*P	Pg	16 09 04.8	+1.0
SJMP				*e*S	Sg	16 09 18.9	+1.0
GQP	**Guinayangan**	**1.17**	**72**	⦚*e*P	Pg	16 09 05.7	+0.2
GQP				*e*S	Sg	16 09 20.9	+0.2
POLP	**Polilio Island**	**1.34**	**27**	*e*P	Pg	16 09 09.2	+0.6
AUQP	**San Andres**	**1.35**	**99**	*e*P	Pg	16 09 12.4	+3.4
OTRP	**Odiongan**	**1.36**	**149**	*e*P	Pg	16 09 05.7	-3.4

*ISCJB **18** 16:21:20.5±0.7, 39°.59N±0°.03×39°.86E±0°.05, h6km±8km, Error ellipse: s-maj=7.3km s-min=4.8km az=37.2*
*CSEM **18** 16:21:20.6±0.2, 39°.59N×39°.87E, h2km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.4km az=130.0*
*DDA **18** 16:21:20.8, 39°.59N×39°.85E, h7km±1km, Md2.9*
*ISK **18** 16:21:20.1, 39°.60N×39°.86E, h6km, MD2.8*
ISC 18 16:21:21.2±0.7, 39°.59N±0°.04×39°.88E±0°.05, h10km±8km, n14, σ0°.69/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.65**	**48**	*i* P	**Pg**	**16 21 33.1**	**-0.6**
KOPT				*i* S	**Sg**	**16 21 43.3**	**+1.2**
KOPT	**Kop Dagi**	**0.65**	**48**	*i* P	**Pg**	**16 21 33.1**	**-0.6**
KOPT				*i* S	**Sg**	**16 21 43.3**	**+1.2**
KELT	**Kelkit**	**0.74**	**320**	*i* P	**Pg**	**16 21 35.1**	**-0.3**
KELT				*i* S	**Sg**	**16 21 45.5**	**+0.4**
KELT	**Kelkit**	**0.74**	**320**	*i* P	**Pg**	**16 21 35.1**	**-0.3**
KELT				*i* S	**Sg**	**16 21 45.5**	**+0.5**
PTK	**Pertek**	**0.79**	**209**	*e*PG	**Pg**	**16 21 36.3**	**-0.1**
PTK				*e*SG	**Sg**	**16 21 46.9**	**+0.2**
PTK	**Pertek**	**0.79**	**209**	*e*Pg	**Pg**	**16 21 36.3**	**-0.1**
PTK				*e*Sg	**Sg**	**16 21 46.9**	**+0.2**
GUMT	**Gumushane**	**0.92**	**341**	*e*PG	**Pg**	**16 21 38.0**	**-1.0**
GUMT				*e*SG	**Sg**	**16 21 51.4**	**+0.3**
KEMA	**Kemaliye**	**1.12**	**254**	*i* P	**Pg**	**16 21 41.7**	**-0.9**
KEMA				*i* S	**Sg**	**16 21 57.6**	**+0.5**
KEMA	**Kemaliye**	**1.12**	**254**	*i* P	**Pg**	**16 21 41.7**	**-0.9**
KEMA				*i* S	**Sg**	**16 21 57.6**	**+0.5**
EZM	**Erzurum**	**1.19**	**74**	*e*PN	**Pn**	**16 21 42.6**	**-1.3**
EZM				*e*SN	**Sn**	**16 22 00.5**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.28**	**200**	*e*PN	**Pn**	**16 21 46.0**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.28**	**200**	*e*Pn	**Pn**	**16 21 46.0**	**+0.8**
SVSK	**Karacayir**	**2.24**	**279**	*e*PN	**Pn**	**16 21 58.6**	**+0.2**
SVSK	**Karacayir**	**2.24**	**279**	*e*Pn	**Pn**	**16 21 58.6**	**+0.2**

*ISCJB **18** 16:32:23.8±0.5, 40°.84N×31°.02×31°.00E±0°.02, h3km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=166.3*
*ISK **18** 16:32:23.8, 40°.84N×31°.02E, h7km, MD3.4, ML3.5*
*CSEM **18** 16:32:24.2±0.1, 40°.84N×31°.01E, h2km, MD3.4, Error ellipse: s-maj=2.8km s-min=1.9km az=178.0*
*DDA **18** 16:32:24.2, 40°.84N×31°.02E, h28km±1km, Md3.3*
*THE **18** 16:32:38.3, 40°.82N×29°.71E, h1km±9km, ML3.4/3, Error ellipse: s-maj=19.9km s-min=1.8km az=88.0*
ISC 18 16:32:24.7±0.5, 40°.84N±0°.02×31°.02E±0°.02, h4km±3km, n132, σ0°.75/162, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDU	**Mudurnu**	**0.41**	**158**	PG	**Pg**	**16 32 32.0**	**-0.5**
MDU				SG	**Sg**	**16 32 37.4**	**-0.3**
MDU	**Mudurnu**	**0.41**	**158**	*i* Pg	**Pg**	**16 32 32.0**	**-0.5**
MDU				*i* Sg	**Sg**	**16 32 37.4**	**-0.4**
GULT	**Gulveren**	**0.56**	**223**	PG	**Pg**	**16 32 35.4**	**0.0**
GULT				*e*SG	**Sg**	**16 32 43.7**	**+1.0**
GULT	**Gulveren**	**0.56**	**223**	*i* Pg	**Pg**	**16 32 35.4**	**0.0**
GULT				*e*Sg	**Sg**	**16 32 43.7**	**+1.0**
KDZE	**Karadeniz Ereo**	**0.57**	**34**	PG	**Pg**	**16 32 35.3**	**-0.3**
KDZE				*e*SG	**Sg**	**16 32 43.6**	**+0.6**
KDZE	**Karadeniz Ereo**	**0.57**	**34**	*i* Pg	**Pg**	**16 32 35.3**	**-0.3**
KDZE				*e*Sg	**Sg**	**16 32 43.6**	**+0.6**
GPA	**Golpazari**	**0.77**	**224**	PG	**Pg**	**16 32 39.1**	**-0.4**
GPA				*e*SG	**Sg**	**16 32 50.7**	**+1.2**
GPA	**Golpazari**	**0.77**	**224**	*i* Pg	**Pg**	**16 32 39.1**	**-0.4**
GPA				*e*Sg	**Sg**	**16 32 50.7**	**+1.2**
SGKT	**Sivrigoynuk**	**0.83**	**109**	*i* P	**Pg**	**16 32 40.3**	**-0.4**
SGKT				*i* S	**Sg**	**16 32 52.8**	**+1.3**
SGKT	**Sivrigoynuk**	**0.83**	**109**	*i* P	**Pg**	**16 32 40.3**	**-0.4**
SGKT				*i* S	**Sg**	**16 32 52.8**	**+1.3**
BORA	**Eskisehir**	**1.05**	**204**	⦚*i* P	**Pg**	**16 32 43.9**	**-0.9**
BORA				*i* S	**Sg**	**16 33 00.9**	**+2.4**
BORA	**Eskisehir**	**1.05**	**204**	*i* P	**Pg**	**16 32 43.9**	**-1.0**
BORA				*i* S	**Sg**	**16 33 00.9**	**+2.4**
ADVT	**Abdulvahap**	**1.06**	**248**	*e*PG	**Pg**	**16 32 44.1**	**-0.8**
ADVT	**Abdulvahap**	**1.06**	**248**	*e*Pg	**Pg**	**16 32 44.1**	**-0.8**
CAVI	**Cavuskoy**	**1.10**	**235**	*e*PN	**Pg**	**16 32 44.9**	**-0.9**
CAVI	**Cavuskoy**	**1.10**	**235**	*e*Pn	**Pg**	**16 32 44.9**	**-0.9**
YLV	**Yalova**	**1.28**	**258**	*e*PN	**Pn**	**16 32 48.0**	**-1.2**
YLV	**Yalova**	**1.28**	**258**	*e*Pn	**Pn**	**16 32 48.0**	**-1.2**
SAFT	**Safranbolu**	**1.32**	**72**	*e*PN	**Pn**	**16 32 48.0**	**-1.9**
SAFT	**Safranbolu**	**1.32**	**72**	*e*Pn	**Pn**	**16 32 48.0**	**-1.8**
ESKT	**Eskisehir**	**1.33**	**186**	*e*PN	**Pn**	**16 32 49.0**	**-0.9**
ESKT	**Eskisehir**	**1.33**	**186**	*i* P	**Pn**	**16 32 49.1**	**-0.8**
ESKT	**Eskisehir**	**1.33**	**186**	*e*Pn	**Pn**	**16 32 49.0**	**-0.9**
SEYT	**Eskypehyr**	**1.33**	**186**	*i* P	**Pn**	**16 32 49.1**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.45**	**164**	*e*PN	**Pn**	**16 32 50.8**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.45**	**164**	*e*Pn	**Pn**	**16 32 50.8**	**-0.8**
GEMT	**Gemlik**	**1.45**	**254**	*e*PN	**Pn**	**16 32 51.1**	**-0.5**
GEMT	**Gemlik**	**1.45**	**254**	*e*Pn	**Pn**	**16 32 51.1**	**-0.5**
ISK	**Istanbul-Kandi**	**1.50**	**279**	*e*PN	**Pn**	**16 32 51.4**	**-0.8**
ISK	**Istanbul-Kandi**	**1.50**	**279**	*e*Pn	**Pn**	**16 32 51.4**	**-0.8**
KLYT	**Kilyos**	**1.55**	**286**	*e*PN	**Pn**	**16 32 52.4**	**-0.6**
KLYT	**Kilyos**	**1.55**	**286**	*e*Pn	**Pn**	**16 32 52.4**	**-0.5**
ULDT	**Uludag**	**1.60**	**245**	*i* P	**Pn**	**16 32 53.2**	**-0.3**
ULDT	**Uludag**	**1.60**	**245**	*i* P	**Pn**	**16 32 53.2**	**-0.4**
LOD	**Lodumlu**	**1.64**	**125**	*e*PN	**Pn**	**16 32 53.8**	**-0.4**
LOD	**Lodumlu**	**1.64**	**125**	*e*Pn	**Pn**	**16 32 53.8**	**-0.4**
BGKT	**Bogazkoy**	**1.73**	**282**	*e*PN	**Pn**	**16 32 55.3**	**-0.1**
BGKT	**Bogazkoy**	**1.73**	**282**	*e*Pn	**Pn**	**16 32 55.3**	**-0.1**
ELDT	**Eldivan**	**1.87**	**100**	*i* P	**Pn**	**16 32 57.1**	**-0.2**
ELDT				*i* S	**Sn**	**16 33 26.2**	**+4.9**
ELDT	**Eldivan**	**1.87**	**100**	*i* P	**Pn**	**16 32 57.1**	**-0.2**
ELDT				*i* S	**Sn**	**16 33 26.2**	**+4.9**
BALT	**Daday**	**1.92**	**68**	*i* P	**Pn**	**16 32 58.1**	**+0.1**
BALT				*i* S	**Sn**	**16 33 23.4**	**+0.9**
BALT	**Daday**	**1.92**	**68**	*i* P	**Pn**	**16 32 58.1**	**+0.1**
BALT				*i* S	**Sn**	**16 33 23.4**	**+0.9**
ALT	**Altintas**	**1.92**	**202**	*e*PN	**Pn**	**16 32 57.4**	**-0.6**
ALT	**Altintas**	**1.92**	**202**	*i* P	**Pn**	**16 32 55.6**	**-2.4**
ALT				*i* S	**Sn**	**16 33 19.1**	**-3.4**
ALT	**Altintas**	**1.92**	**202**	*e*Pn	**Pn**	**16 32 57.4**	**-0.6**
CTKS	**Kestanelik-??a**	**1.94**	**282**	*e*PN	**Pn**	**16 32 58.0**	**-0.3**
CTKS	**Kestanelik-??a**	**1.94**	**282**	*e*Pn	**Pn**	**16 32 58.0**	**-0.3**
ELBA	**Catalca**	**1.98**	**280**	*i* P	**Pn**	**16 32 58.8**	**-0.1**
ELBA				*i* S	**Sn**	**16 33 26.1**	**+2.0**
ELBA	**Catalca**	**1.98**	**280**	*i* P	**Pn**	**16 32 58.8**	**-0.1**
ELBA				*i* S	**Sn**	**16 33 26.1**	**+2.0**
CANT	**Cankiri**	**1.99**	**96**	*e*PN	**Pn**	**16 32 59.2**	**+0.2**
KIZT	**Kizilcal**	**2.07**	**161**	*e*PN	**Pn**	**16 32 59.4**	**-0.7**
KIZT	**Kizilcal**	**2.07**	**161**	*e*Pn	**Pn**	**16 32 59.4**	**-0.7**
KCT	**Karacabey**	**2.11**	**255**	*e*PN	**Pn**	**16 33 00.3**	**-0.3**
KCT	**Karacabey**	**2.11**	**255**	*e*Pn	**Pn**	**16 33 00.3**	**-0.3**
GDZ	**Gediz**	**2.11**	**214**	*i* P	**Pn**	**16 32 59.9**	**-0.8**
GDZ				*i* S	**Sg**	**16 33 33.1**	**+0.6**
GDZ	**Gediz**	**2.11**	**214**	*i* P	**Pn**	**16 32 59.9**	**-0.8**
BOLV	**Bolvadin**	**2.12**	**181**	*i* P	**Pn**	**16 33 00.6**	**-0.2**
BOLV				*i* S	**Sn**	**16 33 28.2**	**+0.5**
BOLV	**Bolvadin**	**2.12**	**181**	*i* P	**Pn**	**16 33 00.6**	**-0.2**
BOLV				*i* S	**Sn**	**16 33 28.2**	**+0.6**
CTYL	**Yal??k??y-??at**	**2.15**	**288**	*e*PN	**Pn**	**16 33 01.0**	**-0.2**
CTYL	**Yal??k??y-??at**	**2.15**	**288**	*e*Pn	**Pn**	**16 33 01.0**	**-0.3**
SLVT	**Silivri**	**2.16**	**281**	*e*PN	**Pn**	**16 33 01.4**	**+0.1**
SLVT	**Silivri**	**2.16**	**281**	*e*Pn	**Pn**	**16 33 01.4**	**+0.1**
DST	**Dursunbey**	**2.21**	**237**	*e*PN	**Pn**	**16 33 02.0**	**0.0**
DST	**Dursunbey**	**2.21**	**237**	*e*Pn	**Pn**	**16 33 02.0**	**0.0**
TOS	**Tosya**	**2.29**	**84**	*e*PN	**Pn**	**16 33 03.1**	**0.0**
TOS	**Tosya**	**2.29**	**84**	*e*Pn	**Pn**	**16 33 03.1**	**0.0**
DURS	**Dursunbey**	**2.31**	**238**	*i* P	**Pn**	**16 33 02.4**	**-1.0**
DURS				*i* S	**Sn**	**16 33 31.8**	**-0.4**
DURS	**Dursunbey**	**2.31**	**238**	*i* P	**Pn**	**16 33 02.4**	**-1.0**
DURS				*i* S	**Sn**	**16 33 31.8**	**-0.4**
SHUT	**Suhut-Afyon**	**2.32**	**189**	*e*PN	**Pn**	**16 33 03.7**	**+0.2**
SHUT	**Suhut-Afyon**	**2.32**	**189**	*e*Pn	**Pn**	**16 33 03.7**	**+0.2**
BNT	**Bandirma**	**2.41**	**259**	*e*PN	**Pn**	**16 33 05.1**	**+0.4**
EDC	**Edincik**	**2.45**	**259**	*e*PN	**Pn**	**16 33 05.2**	**-0.1**
EDC	**Edincik**	**2.45**	**259**	*e*Pn	**Pn**	**16 33 05.2**	**-0.1**
KDHN	**Kadinhani**	**2.47**	**160**	*i* P	**Pn**	**16 33 04.7**	**-0.9**
KDHN	**Kadinhani**	**2.47**	**160**	*i* P	**Pn**	**16 33 04.7**	**-0.9**
CRLT	**Corlu**	**2.50**	**278**	*e*PN	**Pn**	**16 33 05.9**	**-0.1**
CRLT	**Corlu**	**2.50**	**278**	*e*Pn	**Pn**	**16 33 05.9**	**-0.1**
BZK	**Bozkurt**	**2.51**	**63**	*e*PN	**Pn**	**16 33 06.3**	**+0.2**
BZK	**Bozkurt**	**2.51**	**63**	*e*Pn	**Pn**	**16 33 06.3**	**+0.2**
BALB	**Balikesir**	**2.69**	**244**	*e*PN	**Pn**	**16 33 08.8**	**+0.3**
BALB	**Balikesir**	**2.69**	**244**	*e*Pn	**Pn**	**16 33 08.8**	**+0.2**
KHAL	**Karahalli**	**2.74**	**206**	*i* P	**Pn**	**16 33 09.1**	**-0.2**
KHAL	**Karahalli**	**2.74**	**206**	*i* P	**Pn**	**16 33 09.1**	**-0.2**
BALY	**Balya**	**2.82**	**248**	*i* P	**Pn**	**16 33 10.0**	**-0.5**
BALY				*i* S	**Sg**	**16 33 55.4**	**+0.1**
BALY	**Balya**	**2.82**	**248**	*i* P	**Pn**	**16 33 10.0**	**-0.4**
CORM	**Corum**	**2.83**	**102**	*e*PN	**Pn**	**16 33 10.8**	**+0.2**
CORM	**Corum**	**2.83**	**102**	*e*Pn	**Pn**	**16 33 10.8**	**+0.2**
MFT	**Murefte**	**2.83**	**270**	*e*PN	**Pn**	**16 33 11.7**	**+1.1**
MFT	**Murefte**	**2.83**	**270**	*e*Pn	**Pn**	**16 33 11.7**	**+1.1**
LADK	**Ladik-KONYA**	**2.84**	**158**	*e*PN	**Pn**	**16 33 11.3**	**+0.7**
LADK	**Ladik-KONYA**	**2.84**	**158**	*e*Pn	**Pn**	**16 33 11.3**	**+0.6**
CDAG	**Cicekdag**	**2.84**	**114**	*i* P	**Pn**	**16 33 10.5**	**-0.2**
CDAG				*i* S	**Sg**	**16 33 54.8**	**-1.2**
CDAG	**Cicekdag**	**2.84**	**114**	*i* P	**Pn**	**16 33 10.5**	**-0.2**
CTKT	**Corum**	**2.88**	**93**	*i* P	**Pn**	**16 33 11.6**	**+0.5**
CTKT	**Corum**	**2.88**	**93**	*i* P	**Pn**	**16 33 11.6**	**+0.4**
BYBT	**Boyabat**	**2.90**	**76**	*e*PN	**Pn**	**16 33 12.2**	**+0.7**
BYBT	**Boyabat**	**2.90**	**76**	*e*Pn	**Pn**	**16 33 12.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.92**	**268**	*e*PN	**Pn**	**16 33 11.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.92**	**268**	*e*Pn	**Pn**	**16 33 11.8**	**0.0**
KULA	**Kula-Manisa**	**2.95**	**219**	*e*PN	**Pn**	**16 33 12.8**	**+0.

*NEIC **18** 16:56:04.8±0.5, 31°.38N×103°.98E, h10km, Error ellipse: s-maj=13.0km s-min=8.8km az=62.0*
*BJI **18** 16:56:05.3, 31°.30N×104°.10E, h22km, mB4.5/1, mb4.4/1, ML3.6/14, Ms3.5/2, Ms7 3.6/2*
ISC 18 16:56:04.0±0.9, 31°.38N±0°.03×103°.99E±0°.08, h7km±7km, n18, σ1°02/22, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**203**	Pg	**Pg**	**16 56 13.4**	**-0.4**
CD2				Sg	**Sg**	**16 56 20.8**	**+0.4**
CD2				smax			
	comp=N,7μm,0.6s						
LZH	**Lanzhou**	**4.70**	**359**	Pg	**Pg**	**16 57 30.6**	**-3.4**
LZH				Sg	**Sg**	**16 58 33.0**	**-1.8**
LZH				smax			
	comp=N,64nm,1.0s						
LZH				smax			
	comp=E,81nm,1.0s						
LZH				LR	LR		
	comp=E,520nm,5.9s						
LZH				LR	LR		
	comp=Z,870nm,7.8s						
ENH	**Enshi**	**4.86**	**102**	*e*Pn	**Pn**	**16 57 18.9**	**+1.4**
XAN	**Xi'an**	**4.93**	**56**	Pg	Px	16 57 55.8	
XAN				Sg	**Sb**	**16 58 38.3**	**+8.0**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,65nm,1.0s						
GYA	**Guiyang**	**5.44**	**154**	Pg	**Pg**	**16 57 49.8**	**+1.6**
GYA				Sg	**Sb**	**16 58 42.8**	**-2.0**
GYA				smax			
	comp=N,220nm,0.9s						
GYA				smax			
	comp=E,210nm,0.9s						
KMI	**Kunming**	**6.33**	**190**	Pn	**Pn**	**16 57 37.3**	**-0.4**
KMI				Sn	**Sn**	**16 58 49.0**	**-1.3**
KMI				smax			
	comp=N,23nm,0.7s						
KMI				smax			
	comp=E,25nm,0.7s						
GTA	**Gaotai**	**8.70**	**338**	*e*P	Px	16 58 49.8	
GTA				pP		16 58 54.1	
GTA				sP		16 58 57.6	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WHN	**Wuhan**	**8.94**	**93**	P	**Pn**	**16 58 18.3**	**+4.7**
WHN				S	**Sn**	**16 59 49.3**	**-5.2**
WHN				LR	LR		
	comp=N,490nm,3.1s						
WHN				LR	LR		
	comp=E,520nm,4.2s						
WHN				LR	LR		
	comp=Z,510nm,3.6s						
CMAR	**Chiang Mai Arr**	**13.65**	**201**	Pn	**Pn**	**16 59 18.9**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=9.7,slow=11,SNR=6.4						
SONM	**Songino Array**	**16.54**	**6**	Pn	**Pn**	**16 59 57.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=197,slow=9.3,SNR=4.4						
KSRS	**Korea Array**	**20.63**	**66**	P	**P**	**17 00 44.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=252,slow=9.9,SNR=7.5						
MK31	**Makanchi Array**	**22.70**	**319**	*e*P	**P**	**17 01 06.8**	**+0.6**
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**17 01 06.9**	**+0.7**
	comp=Z,4.0nm,1.1s,mb3.7,baz=110,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**	**17 01 41.4**	**+0.2**
	comp=Z,1.7nm,0.7s,mb3.7,baz=136,slow=9.5,SNR=7.9						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**17 01 46.4**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.6,baz=128,slow=9.0,SNR=8.9						
BVAR	**Borovoye Array**	**32.51**	**322**	P	**P**	**17 02 35.5**	**+0.3**
	comp=Z,0.4nm,0.7s,mb3.5,baz=152,slow=6.5,SNR=3.4						
BVAR				PcP	PcP	17 05 20.8	-1.1
	comp=Z,0.2nm,0.4s,baz=198,slow=4.4,SNR=3.8						
ASAR	**Alice Sprngs**	**61.78**	**149**	P	**P**	**17 06 22.8**	**-0.7**
	comp=Z,1.4nm,0.9s,mb4.1,baz=338,slow=6.7,SNR=8.5						
YKA	**Yellowknife Ar**	**81.46**	**17**	P	**P**	**17 08 20.9**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=328,slow=5.1,SNR=7.4						

*ISCJB **18** 16:57:36.9±5.1, 26°.3S±0°.2×175°.9W±0°.4, h28km±48km, mb4.2/4, Error ellipse: s-maj=63.1km s-min=11.4km az=24.3*
*IDC **18** 16:57:37.3±2.3, 26°.09S×176°.27W, h0km, mb4.1/3, mb1 4.3/5, mb1mx4.0/16, mbtmp4.3/5, Error ellipse: s-maj=63.7km s-min=27.9km az=124.0*
*NEIC **18** 16:57:38.5±1.4, 26°.21S×176°.03W, h15km, mb4.6/1, Error ellipse: s-maj=38.1km s-min=14.5km az=122.0*
ISC 18 16:57:39.5±5.0, 26°.3S±0°.2×175°.8W±0°.4, h33km±48km, n13, σ0°62/13, mb4.2/4, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.48**	**212**	Pn	**Pn**	**16 58 31.4**	**0.0**
	78nm,0.3s,baz=93,slow=16,SNR=6.9						
RAO				Sn	**Sn**	**16 59 11.6**	**+0.1**
	84nm,0.3s,baz=84,slow=22,SNR=4.5						
RAO	**Raoul Island**	**3.48**	**212**	*e*P	**Pn**	**16 58 31.4**	**0.0**
RAO				Sn	**Sn**	**16 59 11.6**	**+0.1**
AFI	**Afiamalu**	**12.89**	**18**	Pn	**Pn**	**17 00 40.3**	**-0.2**
	1.3nm,0.3s,baz=86,slow=16,SNR=3.9						
AFI	**Afiamalu**	**12.89**	**18**	*e*P	**Pn**	**17 00 40.5**	**+0.1**
DZM	**Mont Dzumac**	**16.71**	**281**	*e*LR	LR	17 05 16.0	
	166nm,24.2s						
EIDS	**Eidsvold**	**29.75**	**264**	P	**P**	**17 03 44.1**	**+1.0**
CTA	**Charters Tower**	**35.30**	**272**	P	**P**	**17 04 31.8**	**+0.1**
	3.0nm,0.5s,mb4.5,baz=88,slow=13,SNR=8.9						
CTA	**Charters Tower**	**35.30**	**272**	P	**P**	**17 04 31.8**	**+0.1**
CTAO	**Charters Tower**	**35.30**	**272**	*e*P	**P**	**17 04 32.5**	**+0.9**
ASAR	**Alice Springs**	**45.41**	**262**	P	**P**	**17 05 54.2**	**-1.0**
	0.8nm,0.5s,mb3.8,baz=91,slow=6.7,SNR=36						
WRAB	**Tennant Creek**	**46.03**	**267**	*e*P	**P**	**17 05 59.5**	**-0.7**
	4.2nm,0.5s,mb4.6						
PETK	**Petropavlovsk-**	**82.35**	**344**	P	**P**	**17 09 58.0**	**+0.4**
	1.1nm,0.6s,mb4.0,baz=125,slow=7.5,SNR=5.7						
AKASG	**Malin Array Be**	**149.00**	**328**	PKPbc	PKPbc	17 17 27.6	+3.9
	0.9nm,0.6s,baz=43,slow=4.7,SNR=5.1						

IDC 18 17:01:35.9±5.7, 20°.90S×173°.56W, h0km, mb3.7/2, mb1 4.1/2, mb1mx3.6/16, mbtmp3.7/2, Error ellipse: s-maj=348.3km s-min=37.5km az=51.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.47**	**256**	P	P	17 10 20.6	0.0
	0.8nm,0.8s,baz=98,slow=8.1,SNR=8.3						
NVAR	**Mina Array Bea**	**78.52**	**41**	P	P	17 13 39.5	+0.4
	0.7nm,0.8s,baz=218,slow=5.7,SNR=4.0						
AKASG	**Malin Array Be**	**145.27**	**334**	PKPbc	PKPbc	17 21 14.3	-0.8
	0.2nm,0.3s,baz=38,slow=4.0,SNR=4.4						

*ISCJB **18** 17:08:20.2±0.6, 56°.0S±0°.1×27°.7W±0°.2, h100km, mb4.4/13, Error ellipse: s-maj=16.6km s-min=12.5km az=141.5*
*NEIC **18** 17:08:22.9±2.8, 55°.99S×27°.81W, h112km±24km, mb4.4/5, Error ellipse: s-maj=12.8km s-min=8.2km az=54.0*
*IDC **18** 17:08:23.4±6.2, 56°.05S×27°.88W, h114km±55km, mb4.1/10, mb1 4.2/10, mb1mx4.1/17, mbtmp4.1/10, Error ellipse: s-maj=27.4km s-min=14.0km az=53.0*
ISC 18 17:08:21.9±0.6, 56°.0S±0°.1×27°.8W±0°.2, h100km, n39, σ0°63/18, mb4.4/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**22.87**	**256**	P	**P**	**17 13 16.5**	**-0.1**
	10nm,0.8s,mb4.2,baz=348,slow=1.5,SNR=4.5						
TRQA	**Tornquist**	**28.99**	**294**	*e*P	**P**	**17 14 11.4**	**-0.4**
	4.7nm,0.7s,mb4.2						
PLCA	**Paso Flores**	**31.66**	**281**	P	**P**	**17 14 35.2**	**-0.1**
	2.4nm,0.8s,mb4.0,baz=322,slow=5.1,SNR=3.2						
PLCA				PcP	PcP	17 17 23.6	-1.2
	8.9nm,0.4s,baz=331,slow=10,SNR=13						
PLCA	**Paso Flores**	**31.66**	**281**	P	**P**	**17 14 35.2**	**-0.1**
	4.1nm,0.8s,mb4.2						
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**17 14 58.1**	**+0.6**
	18nm,0.6s,mb5.0,baz=203,slow=3.5,SNR=161						
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**17 14 58.1**	**+0.6**
CPUP	**Villa Florida**	**36.52**	**312**	P	**P**	**17 15 17.4**	**0.0**
	3.6nm,0.6s,mb4.5,baz=135,slow=8.6,SNR=14						
CFAA	**Coronel Fontan**	**37.23**	**294**	P	**P**	**17 15 22.5**	**-0.9**
	0.8nm,0.7s,mb3.8,baz=148,slow=8.2,SNR=14						
CFAA	**Coronel Fontan**	**37.23**	**294**	P	**P**	**17 15 22.5**	**-0.9**
MAW	**Mawson**	**40.40**	**144**	P	**P**	**17 15 49.0**	**-0.4**
	6.7nm,0.7s,mb4.6,baz=249,slow=9.5,SNR=9.7						
SBA	**Scott Base**	**46.11**	**184**	*e*P	**P**	**17 16 35.7**	**+0.5**
	16nm,1.2s,mb4.6						
SIV	**San Ignacio**	**47.29**	**314**	P	**P**	**17 16 45.0**	**-0.1**
	1.9nm,0.7s,mb4.0,baz=160,slow=5.8,SNR=11						
LPAZ	**La Paz**	**50.07**	**306**	P	**P**	**17 17 08.1**	**+1.7**
	7.5nm,0.6s,mb4.8,baz=147,slow=5.8,SNR=46						
LPAZ	**La Paz**	**50.07**	**306**	*e*P	**P**	**17 17 08.0**	**+1.6**
	4.5nm,0.5s,mb4.7						
DBIC	**Dimbokro**	**65.26**	**25**	*e*P	**P**	**17 18 52.2**	**-0.5**
	1.6nm,0.3s,mb4.3						
TOA0	**Torodi Ar. Sit**	**73.17**	**30**	*e*P	**P**	**17 19 41.5**	**0.0**
TORD	**Torodi Ar. Bea**	**73.17**	**30**	P	**P**	**17 19 42.1**	**+0.7**
	3.2nm,0.4s,mb4.5,baz=200,slow=6.3,SNR=66						
ASAR	**Alice Springs**	**99.15**	**163**	P	**P**	**17 21 51.0**	**-0.8**
	0.8nm,0.8s,mb4.3,baz=182,slow=3.6,SNR=8.1						
NVAR	**Mina Array Bea**	**121.06**	**294**	PKP	PKPdf	17 27 03.0	+1.1
	1.2nm,0.8s,baz=152,slow=6.1,SNR=6.8						
BOZ	**Bozeman (W)**	**123.18**	**304**	*e*PKPdf	PKPdf	17 27 06.4	+0.7
FINES	**FINESS Array B**	**124.49**	**28**	PKP	PKPdf	17 27 07.3	-0.4
	0.9nm,0.4s,baz=266,slow=2.4,SNR=11						
FINES				pPKP	pPKPdf	17 27 29.9	-5.2
	0.8nm,0.7s,baz=134,slow=5.5,SNR=2.0						
CMAR	**Chiang Mai Arr**	**125.40**	**111**	PKP	PKPdf	17 27 10.3	-0.5
	0.4nm,0.6s,baz=230,slow=4.1,SNR=3.7						
ARCES	**ARCESS Array B**	**131.01**	**22**	PKP	PKPdf	17 27 19.5	-0.4
	6.5nm,1.1s,baz=238,slow=2.3,SNR=9.1						
ARCES	**ARCESS Array B**	**131.01**	**22**	PKP	PKPdf	17 27 19.5	-0.4
BVAR	**Borovoye Array**	**135.04**	**58**	PKP	PKPdf	17 27 28.0	0.0
	0.4nm,0.5s,baz=219,slow=2.4,SNR=4.6						
YKA	**Yellowknife Ar**	**135.90**	**318**	PKP	PKPdf	17 27 27.9	-1.4
	0.7nm,0.5s,baz=125,slow=2.3,SNR=15						
YKA				PP	PP	17 30 08.3	-2.0
	0.4nm,0.8s,baz=119,slow=6.3,SNR=4.9						
YKA	**Yellowknife Ar**	**135.90**	**318**	PKP	PKPdf	17 27 27.9	-1.4
YKA				PP	PP	17 30 08.3	-2.0
MKAR	**Makanchi Array**	**137.19**	**72**	PKP	PKPdf	17 27 31.2	-1.0
	0.2nm,0.6s,baz=259,slow=0.9,SNR=3.9						
MKAR	**Makanchi Array**	**137.19**	**72**	PKP	PKPdf	17 27 31.2	-1.0
ZALV	**Zalesovo Beam**	**142.65**	**64**	PKhKP		17 27 37.6	
	0.7nm,0.3s,baz=230,slow=5.3,SNR=4.9						
INK	**Inuvik**	**145.54**	**321**	*e*PKPdf	PKPdf	17 27 46.7	+0.2
DAWY	**Dawson**	**146.50**	**312**	*e*PKPbc	PKPbc	17 27 49.3	-0.6
EGAK	**Eagle**	**147.45**	**313**	*e*PKPbc	PKPbc	17 27 51.2	-1.3
MENT	**Mentasta**	**147.99**	**309**	*e*PKPbc	PKPbc	17 27 52.5	-1.5
MCK	**McKinley**	**150.47**	**309**	*e*PKPbc	PKPbc	17 28 00.3	+0.2
SONM	**Songino Array**	**151.06**	**87**	PKPbc	PKPbc	17 28 02.2	+0.1
	3.2nm,0.5s,baz=220,slow=3.6,SNR=34						
SONM				pPKPbc	pPKPbc	17 28 22.7	-6.6
	1.4nm,0.5s,baz=226,slow=3.5,SNR=3.7						
BPAW	**Bear Paw Mtn.**	**151.43**	**310**	*e*PKPbc	PKPbc	17 28 01.5	-0.9
COLD	**Coldfoot**	**151.54**	**316**	*e*PKPbc	PKPbc	17 28 02.8	+0.3
MJAR	**Matsushiro Arr**	**158.35**	**148**	PKPab	PKPab	17 28 40.2	-1.2
	0.3nm,0.4s,baz=171,slow=5.8,SNR=4.2						

*ISCJB **18** 17:14:44.3±0.2, 30°.91S±0°.03×71°.81W±0°.05, h10km, mb4.6/20, MS4.1/8, Error ellipse: s-maj=7.1km s-min=2.7km az=157.0*
*IDC **18** 17:14:48.3±3.8, 30°.98S×72°.07W, h35km±28km, mb4.2/7, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, ML5.1/4, MS4.0/10, Ms1 4.0/10, ms1mx3.7/22, Error ellipse: s-maj=24.2km s-min=16.2km az=101.0*
*BJI **18** 17:14:49.7, 31°.20S×72°.00W, h33km, mB5.0/6, Ms5.2/10, Ms7 5.0/10*
*NEIC **18** 17:14:50.7, 31°.23S×71°.97W, h25km, mb4.7/14, ML4.9(GUC), After GUC.*
NEIC Felt [III] at Illapel and Ovalle; [II] at La Serena.
*GUC **18** 17:14:50.7±0.6, 31°.23S×71°.97W, h25km±5km, ML4.9*
ISC 18 17:14:46.1±0.2, 30°.96S±0°.02×71°.87W±0°.05, h10km, n182, σ0°92/171, mb4.6/20, MS4.1/8, 50C-48D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**2.03**	**148**	*e*P	**Pn**	**17 15 22.2**	**+1.8**
IHA	**Instituto Hidr**	**2.07**	**175**	⇑*i*P	**Pn**	**17 15 21.2**	**+0.3**
IHA				*i*S	**Sn**	**17 15 42.6**	**-4.2**
LCO	**Las Campanas**	**2.19**	**28**	*e*Pn	**Pn**	**17 15 24.9**	**+2.4**
LCO				*e*Sn	**Sn**	**17 15 50.7**	**+1.1**
PEL	**Peldehue**	**2.40**	**156**	*e*P	**Pn**	**17 15 26.7**	**+1.3**
PEL				*e*S	**Sn**	**17 15 54.6**	**-0.3**
PEL				AML	AML	17 16 10.1	
	comp=E,10μm,0.6s						
PEL				AML	AML	17 16 11.4	
	comp=N,10μm,0.5s						
SAN	**Santiago**	**2.69**	**158**	*e*P	**Pn**	**17 15 30.5**	**+1.1**
SAN				*i*S	**Sn**	**17 16 00.8**	**-1.3**
FCH	**Farellones**	**2.71**	**151**	*e*P	**Pn**	**17 15 27.7**	**-2.1**
FCH				*i*S	**Sn**	**17 15 59.2**	**-3.5**
TACH	**Talagante**	**2.80**	**164**	*e*P	**Pn**	**17 15 32.1**	**+1.1**
ANTU	**Antumapu**	**2.81**	**158**	*e*P	**Pn**	**17 15 32.5**	**+1.5**
ANTU				*i*S	**Sn**	**17 16 04.1**	**-0.8**
ANTU	**Antumapu**	**2.81**	**158**	*e*P	**Pn**	**17 15 32.5**	**+1.5**
ANTU				*i*S	**Sn**	**17 16 04.1**	**-0.8**
ANTU				AML	AML	17 16 16.8	
	comp=E,4μm,0.5s						
PCH	**Pirque**	**2.89**	**157**	*e*P	**Pn**	**17 15 33.5**	**+1.3**
PCH				*i*S	**Sn**	**17 16 06.5**	**-0.5**
LNV	**Longovilo**	**3.02**	**173**	*e*P	**Pn**	**17 15 33.9**	**0.0**
CHCH	**Chadas Angostu**	**3.14**	**161**	*e*P	**Pn**	**17 15 36.9**	**+1.3**
CFAA	**Coronel Fontan**	**3.17**	**103**	Pn	**Pn**	**17 15 39.7**	**+3.7**
	comp=E,9.4nm,0.3s,baz=299,slow=11,SNR=453						
CFAA				Pg	**Pg**	**17 15 50.2**	**+3.3**
	comp=E,53nm,0.3s,baz=289,slow=12,SNR=66						
CFAA				Sn	**Sn**	**17 16 18.2**	**+4.2**
	comp=E,58nm,0.3s,baz=184,slow=20,SNR=16						
CFAA				Lg		17 16 36.2	
	comp=E,105nm,0.3s,baz=235,slow=12,SNR=8.6						
CFAA				LR	LR	17 17 01.4	
	comp=E,266nm,20.5s,baz=289,slow=40						
CFAA	**Coronel Fontan**	**3.17**	**103**	Pn	**Pn**	**17 15 39.7**	**+3.6**
CFAA				Pg	**Pg**	**17 15 50.2**	**+3.3**
CFAA				Sn	**Sn**	**17 16 18.2**	**+4.2**
CFAA				Lg		17 16 36.2	
CFAA				LR	LR	17 17 01.4	
LMEL	**Las Melosas**	**3.21**	**154**	*e*P	**Pn**	**17 15 38.4**	**+1.9**
LMEL				*i*S	**Sn**	**17 16 14.6**	**-0.2**
LMEL	**Las Melosas**	**3.21**	**154**	*e*P	**Pn**	**17 15 38.4**	**+1.9**
LMEL				*i*S	**Sn**	**17 16 14.6**	**-0.2**
LMEL				AML	AML	17 16 18.1	
	comp=N,4μm,0.3s						
CACH	**El Canelo**	**3.33**	**162**	*e*P	**Pn**	**17 15 40.1**	**+1.9**
CACH				*i*S	**Sn**	**17 16 17.4**	**-0.4**
PLCA	**Paso Flores**	**9.81**	**174**	Pn	**Pn**	**17 17 08.2**	**+1.0**
	comp=N,1.6nm,0.3s,baz=334,slow=14,SNR=29						
PLCA				LR	LR	17 21 29.3	
	comp=N,462nm,19.4s,baz=24,slow=41						
PLCA	**Paso Flores**	**9.81**	**174**	*e*Pn	**Pn**	**17 17 07.2**	**0.0**
TRQA	**Tornquist**	**10.80**	**134**	*e*Pn	**Pn**	**17 17 20.9**	**+0.1**
CPUP	**Villa Florida**	**13.57**	**74**	Pn	**Pn**	**17 18 01.4**	**+2.7**
	comp=N,1.3nm,0.3s,baz=230,slow=10,SNR=7.5						
CPUP				Sn	**Sn**	**17 20 29.5**	**0.0**
	comp=N,1.4nm,0.3s,baz=312,slow=20,SNR=1.6						
CPUP				Lg		17 22 05.7	
	baz=318,slow=19,SNR=1.7						
CPUP				LR	LR	17 23 43.9	
	comp=N,769nm,20.3s,baz=228,slow=39						
CPUP	**Villa Florida**	**13.57**	**74**	*e*Pn	**Pn**	**17 17 53.3**	**-5.4**
LPAZ	**La Paz**	**14.99**	**14**	Pn	**Pn**	**17 18 21.0**	**+2.9**
	comp=N,7.8nm,0.3s,baz=192,slow=7.2,SNR=92						
LPAZ	**La Paz**	**14.99**	**14**	*e*Pn	**Pn**	**17 18 20.7**	**+2.5**
SIV	**San Ignacio**	**17.87**	**36**	P	**Pn**	**17 18 55.9**	**+1.1**
	comp=N,11nm,0.3s,baz=223,slow=9.9,SNR=131						
NNA	**Nana**	**19.43**	**345**	P	**Pn**	**17 19 11.2**	**-2.7**
	comp=N,5.4nm,0.6s						
USHA	**Ushuaia**	**23.99**	**175**	P	**P**	**17 20 00.5**	**-0.1**
	comp=N,14nm,0.6s,mb4.6,baz=342,slow=7.7,SNR=19						
USHA				LR	LR	17 29 49.4	
	comp=N,426nm,18.5s,MS4.0,baz=360,slow=38						
ATAH	**Atahualpa**	**24.48**	**344**	LR	LR	17 27 18.6	
	comp=N,118nm,20.7s,MS3.4,baz=4.6,slow=31						
OTAV	**Otavalo**	**31.65**	**347**	*e*P	**P**	**17 21 09.6**	**0.0**
	comp=N,2.7nm,1.0s,mb4.0						
PAYG	**Puerto Ayora**	**34.82**	**326**	P	**P**	**17 21 39.0**	**+1.7**
	comp=N,8.1nm,0.6s,mb4.8						
SDV	**Santo Domingo**	**39.63**	**2**	*e*P	**P**	**17 22 16.8**	**-1.3**
	comp=N,9.2nm,0.9s,mb4.5						
RCBR	**Riachuelo**	**41.98**	**61**	*e*P	**P**	**17 22 36.2**	**-1.4**
	comp=N,58nm,1.4s,mb5.0						
CRPR	**Cabo Rojo, PR**	**48.89**	**6**	*e*P	**P**	**17 23 31.1**	**-1.2**
	comp=N,24nm,0.8s,mb5.3						
OBIP	**Obispado Ponce**	**48.98**	**7**	*e*P	**P**	**17 23 32.1**	**-0.8**
	comp=N,55nm,1.0s,mb5.5						
CELP	**Cerrillos**	**49.01**	**7**	*e*P	**P**	**17 23 32.3**	**-0.8**
MTP	**Monte Pirata**	**49.15**	**8**	*e*P	**P**	**17 23 31.8**	**-2.3**
	comp=N,43nm,1.1s,mb5.4						
LRS	**Lares**	**49.20**	**6**	*e*P	**P**	**17 23 33.2**	**-1.3**
SDDR	**Presa de Saban**	**49.65**	**1**	*e*P	**P**	**17 23 36.9**	**-1.1**
	comp=N,9.6nm,1.2s,mb4.7						
VNA2	**Neumayer--Watz**	**52.76**	**158**	*e*P	**P**	**17 23 58.6**	**-2.2**
TEIG	**Tepich**	**53.27**	**341**	*e*P	**P**	**17 24 04.5**	**-0.6**
	comp=N,7.8nm,0.6s,mb4.8						
RKT	**Rikitea**	**56.11**	**262**	*e*LR	LR	17 40 41.4	
	comp=N,539nm,34.2s						
QSPA	**South Pole Qui**	**59.27**	**180**	P	**P**	**17 24 45.7**	**-1.6**
	comp=N,8.3nm,0.7s,mb4.9,baz=155,slow=2.6,SNR=76						
TAOE	**Nuku Hiva Isla**	**66.89**	**273**	*e*LR	LR	17 45 50.6	
	comp=N,146nm,32.5s						
628A	**Black Gap, Mar**	**66.97**	**331**	⇓P	**P**	**17 25 38.8**	**-0.2**
	baz=67						
627A	**Terlingua Ranc**	**67.15**	**330**	⇓P	**P**	**17 25 39.0**	**-1.1**
	baz=68						
TXAR	**Lajitas Array**	**67.17**	**330**	P	**P**	**17 25 39.9**	**-0.3**
	comp=N,0.4nm,0.5s,mb3.7,baz=155,slow=8.3,SNR=7.6						
TKL	**Tuckaleechee C**	**67.20**	**349**	*e*P	**P**	**17 25 38.5**	**-1.7**
528A	**Cox Ranch, San**	**67.52**	**331**	⇑P	**P**	**17 25 42.4**	**0.0**
	baz=68						
626A	**Big Bend Ranch**	**67.56**	**330**	⇓P	**P**	**17 25 41.7**	**-1.0**
	baz=68						
527A	**Woodward Ranch**	**67.85**	**331**	⇑P	**P**	**17 25 43.3**	**-1.2**
	baz=68						
526A	**Mary Lane Ranc**	**67.98**	**330**	⇓P	**P**	**17 25 45.5**	**+0.1**
	baz=68						
WVT	**Waverly**	**68.39**	**346**	*e*P	**P**	**17 25 46.1**	**-1.6**
	comp=N,7.9nm,0.9s,mb4.7						
426A	**McDonald Obser**	**68.48**	**330**	⇑P	**P**	**17 25 47.6**	**-0.9**
	baz=69						
425A	**Indio Mountain**	**68.99**	**330**	⇓P	**P**	**17 25 51.0**	**-0.7**
	baz=69						
325A	**Bean Ranch, Si**	**69.49**	**330**	⇓P	**P**	**17 25 54.5**	**-0.3**
	baz=70						
226A	**Malaga, Loving**	**69.72**	**331**	⇓P	**P**	**17 25 56.7**	**+0.6**
	baz=70						
224A	**Corundas Mount**	**70.33**	**330**	⇑P	**P**	**17 25 58.4**	**-1.5**
	baz=71						
CPRX	**Cap Rock**	**70.47**	**332**	*e*P	**P**	**17 25 59.1**	**-1.6**
	comp=N,3.2nm,0.9s,mb4.2						
Z26A	**Caprock**	**70.72**	**332**	⇑P	**P**	**17 26 00.8**	**-1.4**
	baz=71,SNR=8.7						
PPT	**Papeete**	**70.85**	**261**	*e*LR	LR	17 47 33.1	
	comp=N,147nm,24.0s						
PPT	**Papeete**	**70.85**	**261**	LR	LR	17 48 37.6	
	comp=N,225nm,20.9s,MS4.4,baz=126,slow=29						
CCM	**Cathedral Cave**	**71.00**	**344**	*e*P	**P**	**17 26 03.3**	**-0.5**
Z24A	**Sheeppen Canyo**	**71.35**	**331**	⇑P	**P**	**17 26 06.3**	**+0.3**
	baz=72						
220A	**Playas Peak, P**	**71.52**	**328**	⇑P	**P**	**17 26 07.7**	**+0.6**
	baz=72						
Z23A	**Rita Site, Whi**	**71.66**	**330**	⇓P	**P**	**17 26 08.7**	**+0.8**
	baz=72						
318A	**Bisbee**	**71.82**	**326**	⇓P	**P**	**17 26 09.1**	**+0.1**
	baz=72						
W27A	**Bowe Ranch, En**	**71.93**	**333**	⇑P	**P**	**17 26 09.4**	**-0.2**
	baz=72						
219A	**White Tail Can**	**71.94**	**327**	⇑P	**P**	**17 26 09.4**	**-0.3**
	baz=72						
Z22A	**Elephant Butte**	**71.97**	**330**	⇓P	**P**	**17 26 10.2**	**+0.4**
	baz=72						
120A	**U Bar Ranch, L**	**72.11**	**328**	⇑P	**P**	**17 26 11.1**	**+0.5**
	baz=72						
Y23A	**Lovelace Mesa,**	**72.15**	**331**	⇓P	**P**	**17 26 11.1**	**+0.3**
	baz=72						
W26A	**Owens Ranch, T**	**72.23**	**333**	⇓P	**P**	**17 26 11.3**	**0.0**
	baz=73						
Z21A	**St. Cloud Mine**	**72.32**	**329**	⇑P	**P**	**17 26 12.6**	**+0.7**
	baz=73						
217A	**Green Valley**	**72.49**	**326**	⇓P	**P**	**17 26 13.5**	**+0.5**
	baz=73						
Z20A	**Nine Sixteen R**	**72.57**	**328**	⇑P	**P**	**17 26 14.1**	**+0.7**
	baz=73						
Y21A	**Point of Rocks**	**72.92**	**329**	⇑P	**P**	**17 26 15.7**	**+0.3**
	baz=73						
W24A	**Lazy 6 Ranch,**	**72.99**	**332**	⇑P	**P**	**17 26 15.1**	**-0.7**
	baz=73						
216A	**Three Points,**	**72.99**	**326**	⇓P	**P**	**17 26 16

comp=N,4.0nm,1.3s,mb4.2
S13A Holt Ranch, En 78.67 327 ⇑P **P 17 26 49.2 +0.9**
baz=79
P18A Preston Nutter 78.76 331 ⇓P **P 17 26 49.4 +0.7**
baz=79
P17A Butcher Ranch, 78.84 330 ⇑P **P 17 26 49.8 +0.7**
baz=79
LRMC Laurel Mountai 78.88 323 ⇓P **P 17 26 49.5 0.0**
baz=79
T11A Corn Creek, Al 79.04 326 ⇓P **P 17 26 50.8 +0.5**
baz=79,SNR=5.5
R13A O'Grain Ranch, 79.21 327 ⇑P **P 17 26 51.6 +0.4**
baz=80
FURC Furnace Creek, 79.23 325 ⇑P **P 17 26 52.1 +0.7**
baz=80
M21A Separation Pea 79.28 334 ⇑P **P 17 26 51.6 +0.1**
baz=80
N19A John Jarvie Ra 79.39 332 ⇓P **P 17 26 52.0 -0.1**
baz=80
ISA Isabella 79.43 323 *e*P **P 17 26 52.7 +0.2**
O17A Robinson Place 79.44 331 ⇓P **P 17 26 53.0 +0.6**
baz=80
Q14A Sevier Lake (B 79.55 328 ⇓P **P 17 26 53.2 +0.2**
baz=80
TSUM Tsumeb 79.91 106 *e*P **P 17 26 54.5 -1.1**
P14A Drum Mountains 79.95 329 ⇓P **P 17 26 56.0 +0.8**
baz=80
SMMC Simmler 79.96 322 ⇑P **P 17 26 55.7 +0.4**
baz=80
R11A Troy Canyon, C 80.10 327 ⇑P **P 17 26 56.6 +0.6**
baz=80
P13A Bates Ranch, G 80.26 328 ⇑P **P 17 26 57.5 +0.6**
baz=81
DUG Dugway 80.33 329 ⇑P **P 17 26 57.1 -0.2**
baz=81
L19A Farson 80.48 333 ⇓P **P 17 26 57.8 -0.2**
baz=81
Q11A Duckwater 80.53 327 ⇑P **P 17 26 58.2 -0.1**
baz=81
Q10A Clear Creek Ra 80.86 326 ⇓P **P 17 26 59.8 -0.4**
baz=81
PDAR Pinedale Array 81.12 333 P **P 17 27 00.1 -1.3**
comp=N,0.4nm,0.5s,mb3.6,baz=150,slow=6.1,SNR=4.2
PDAR Pinedale Array 81.12 333 P **P 17 27 00.1 -1.3**
K18A Toltan Ranch, 81.20 333 ⇓P **P 17 27 02.2 +0.3**
baz=82
M15A Larsen Ranch, 81.21 330 ⇑P **P 17 27 01.4 -0.5**
baz=82
L16A Fish Haven 81.25 331 ⇑P **P 17 27 02.0 -0.1**
baz=82
O11A Cowboy Ranch, 81.56 328 ⇓P **P 17 27 03.2 -0.6**
baz=82
M14A Sheep Mountain 81.63 330 ⇓P **P 17 27 03.5 -0.7**
baz=82
M12A Wells 82.25 329 ⇓P **P 17 27 07.4 0.0**
baz=83
M11A Holland Ranch, 82.65 328 ⇑P **P 17 27 09.8 +0.3**
baz=83
TOA0 Torodi Ar. Sit 83.04 70 *e*P **P 17 27 09.9 -2.2**
TORD Torodi Ar. Bea 83.04 70 P **P 17 27 09.9 -2.2**
comp=N,5.3nm,0.6s,mb4.8,baz=283,slow=6.0,SNR=67
TORD LR LR 18 00 49.9
comp=N,172nm,21.9s,MS4.4,baz=235,slow=33
L10A Juniper Basin 83.48 328 ⇑P **P 17 27 13.5 -0.3**
baz=84
J13A Cove Ranch, Pi 83.53 330 ⇑P **P 17 27 13.6 -0.4**
baz=84
BEKR Beckwourth 83.60 325 ⇑P **P 17 27 14.5 0.0**
baz=84
HLID Hailey 83.77 330 ⇓P **P 17 27 15.3 +0.1**
baz=84
DGMT Dagmar 84.20 339 ⇓P **P 17 27 15.8 -1.4**
baz=85
H13A Challis 84.51 331 ⇓P **P 17 27 18.8 -0.2**
baz=85
YBMT Yellow Bay 87.10 333 *e*P **P 17 27 25.9 -5.8**
ESDC Sonseca Array 94.36 46 LR LR 18 09 19.2
comp=N,68nm,18.9s,MS4.1,baz=255,slow=35
DZM Mont Dzumac 103.14 234 *e*LR LR 18 02 29.9
comp=N,211nm,27.9s
ASAR Alice Springs 120.33 208 PKP PKPdf 17 33 35.0 -3.2
comp=N,0.5nm,0.4s,baz=130,slow=1.7,SNR=22
BRVK Borovoye 144.84 40 *e*P PKPdf 17 34 19.9 -2.9
BVAR Borovoye Array 144.91 40 PKPbc PKPdf 17 34 20.8 -2.2
comp=N,3.2nm,0.5s,baz=288,slow=2.3,SNR=40
YAK Yakutsk 145.90 342 *e*PKPdf PKPdf 17 34 22.4 -1.9
AAK Ala-Archa 150.83 57 *e*PKPbc PKPbc 17 34 37.3 -1.4
UCH Uchtor 150.93 58 *e*PKPbc PKPbc 17 34 37.7 -1.2
ZAA0 Zalesovo Array 151.54 29 *e*PKPbc PKPbc 17 34 37.6 -2.3
ZALV Zalesovo Beam 151.54 29 PKPbc PKPbc 17 34 37.8 -2.1
comp=N,5.8nm,0.5s,baz=302,slow=3.2,SNR=35
ZALV PKPab PKPab 17 34 44.4 -4.0
comp=N,2.1nm,0.5s,baz=305,slow=2.8,SNR=5.9
KSH Kashi 152.49 63 *e*PKPbc PKPbc 17 34 41.0 -1.6
KSH *e*pPKP pPKPdf 17 34 51.0 +12
KSH *es*PKP 17 34 55.1
KSH *e*PKS 17 38 13.3
KSH *e*SKS SKSdf 17 41 41.6 -1.3
KSH AMB AMB
comp=Z,60nm,3.8s
KSH LR LR
comp=N,360nm,10.4s
KSH LR LR
comp=E,120nm,6.0s
KSH LR LR
comp=Z,100nm,4.4s
MKAR Makanchi Array 154.57 44 PKPbc PKPbc 17 34 44.9 -2.0
comp=Z,0.4nm,0.6s,baz=310,slow=2.5,SNR=6.4
MKAR PKPab PKPab 17 35 00.7 -0.7
comp=Z,0.4nm,0.5s,baz=328,slow=1.5,SNR=5.5
WMQ Urumqi 159.36 46 *e*PKP PKPdf 17 34 44.3 -0.3
WMQ AMB AMB
comp=Z,18nm,14.0s
WMQ LR LR
comp=N,34nm,30.0s,MS4.2
WMQ LR LR
comp=E,38nm,30.0s,MS4.2
WMQ LR LR
comp=Z,41nm,26.0s,MS4.2
CN2 Changchun 161.24 318 *e*PKP PKPdf 17 34 45.8 -0.9
SONM Songino Array 163.09 4 pPKPab pPKPab 17 35 50.2 +8.6
comp=Z,1.2nm,1.0s,baz=341,slow=3.1,SNR=4.7
BJI Beijing 168.82 326 PKP PKPdf 17 34 52.4 -0.9
BJI SS SS 18 00 45.6 -0.4
BJI LR LR
comp=N,140nm,24.8s
BJI LR LR
comp=E,120nm,25.7s
BJI LR LR
comp=Z,34nm,25.2s
HHC Hu-ho-hao-te 169.75 345 *e*PKP PKPdf 17 34 52.8 -1.0
HHC pPKP pPKPdf 17 35 03.6 +6.3
HHC sPKP 17 35 07.3
HHC PKS 17 38 23.9
HHC PP PP 17 40 00.5 +3.5
HHC SKS SKSdf 17 41 52.6 -4.8
HHC SKKS SKKSac 17 46 41.9 -2.7
HHC SS SS 18 00 57.3 +3.0
HHC AMB AMB
comp=Z,64nm,6.2s
HHC LR LR
comp=N,150nm,23.1s
HHC LR LR
comp=E,95nm,19.6s
HHC LR LR
comp=Z,120nm,24.5s
NJ2 Nanjing 170.78 280 *e*PKP PKPdf 17 34 53.3 -1.4
KMI Kunming 172.49 139 PKP PKPdf 17 34 54.3 -1.4
LZH Lanzhou 173.75 34 *e*PKP PKPdf 17 34 54.8 -1.1
LZH pPKP pPKPdf 17 35 05.4 +6.1
LZH sPKP 17 35 09.0
GYA Guiyang 175.34 164 PKP PKPdf 17 34 55.3 -1.4
GYA pPKP pPKPdf 17 35 06.5 +6.4
GYA sPKP 17 35 11.8
GYA PKPab PKPab 17 36 32.5 -0.4
GYA PKS 17 38 24.8
GYA PP PP 17 40 25.4 +0.9
GYA SKKS SKKSac 17 47 08.4 -3.5
GYA SS SS 18 01 44.5 -4.4
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,240nm,25.4s
GYA LR LR
comp=E,210nm,23.1s
GYA LR LR
comp=Z,180nm,21.0s
CD2 Chengdu 176.24 90 PKP PKPdf 17 34 55.4 -1.4
CD2 pPKP pPKPdf 17 35 06.3 +6.1
CD2 sPKP 17 35 09.8
CD2 PKS 17 38 26.1
CD2 PP PP 17 40 31.9 +1.2
CD2 SKKS SKKSac 17 47 12.4 -4.4
CD2 SS SS 18 01 53.8 -7.1
CD2 AMB AMB
comp=Z,80nm,5.1s
CD2 LR LR
comp=N,190nm,5.2s
CD2 LR LR
comp=Z,160nm,5.8s

*ISK **18** 17:21:23.9, 36.°41N×29.°11E, h16km, MD3.1*
*ISCJB **18** 17:21:25.0±0.8, 36.°39N±0.°05×29.°08E±0.°05, h23km±5km, Error ellipse: s-maj=8.7km s-min=5.6km az=24.1*
*CSEM **18** 17:21:24.5±0.3, 36.°42N×29.°08E, h15km, MD3.1, Error ellipse: s-maj=6.8km s-min=4.3km az=18.0*
ISC 18 17:21:25.2±0.8, **36.°43N**±0.°04×**29.°09E**±0.°04, **h19**km±4km, **n34**, σ0°**82**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.20**	**359**	*e*PG	**Pg**	**17 21 30.1**	**-0.3**
FETY				*e*SG	**Sg**	**17 21 34.3**	**+0.4**
FETY	**Fethiye**	**0.20**	**359**	*e*Pg	**Pg**	**17 21 30.1**	**-0.3**
FETY				*e*Sg	**Sg**	**17 21 34.3**	**+0.4**
AKAS	**Kas**	**0.46**	**115**	*i* P	**Pg**	**17 21 34.1**	**-0.5**
AKAS	**Kas**	**0.46**	**115**	*i* P	**Pg**	**17 21 34.1**	**-0.5**
AKAS				*i* S	**Sg**	**17 21 42.1**	**+1.1**
TURN	**Turunc**	**0.59**	**319**	*i* P	**Pb**	**17 21 40.1**	**+3.1**
TURN	**Turunc**	**0.59**	**319**	*i* P	**Pb**	**17 21 40.1**	**+3.2**
ELL	**Elmali**	**0.73**	**64**	*e*PG	**Pg**	**17 21 38.4**	**-1.3**
ELL				*e*SG	**Sg**	**17 21 49.7**	**+0.3**
ELL	**Elmali**	**0.73**	**64**	*e*Pg	**Pg**	**17 21 38.4**	**-1.2**
ELL				*e*Sg	**Sg**	**17 21 49.7**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.80**	**24**	*e*PG	**Pg**	**17 21 39.2**	**-1.7**
GLHS				*e*SG	**Sg**	**17 21 51.3**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.80**	**24**	*e*Pg	**Pg**	**17 21 39.2**	**-1.6**
GLHS				*e*Sg	**Sg**	**17 21 51.3**	**-0.1**
GOLH	**Golhisar**	**0.89**	**25**	*i* P	**Pg**	**17 21 40.8**	**-1.8**
GOLH	**Golhisar**	**0.89**	**25**	*i* P	**Pg**	**17 21 40.8**	**-1.8**
GOLH				*i* S	**Sg**	**17 21 55.1**	**+0.7**
YER	**Yerkesik**	**0.96**	**318**	*e*PG	**Pg**	**17 21 43.3**	**-0.6**
YER				*e*SG	**Sg**	**17 21 57.3**	**+0.8**
YER	**Yerkesik**	**0.96**	**318**	*e*Pg	**Pg**	**17 21 43.3**	**-0.5**
YER				*e*Sg	**Sg**	**17 21 57.3**	**+0.8**
KORT	**Korkueli**	**1.16**	**60**	*i* P	**Pn**	**17 21 45.9**	**-0.6**
KORT	**Korkueli**	**1.16**	**60**	*i* P	**Pn**	**17 21 45.9**	**-0.5**
KORT				*i* S	**Sg**	**17 22 04.1**	**+1.1**
DAT	**Datca**	**1.25**	**284**	*e*PN	**Pn**	**17 21 47.7**	**+0.1**
DAT	**Datca**	**1.25**	**284**	*e*Pn	**Pn**	**17 21 47.7**	**0.0**
DNZL	**Cakiroluk**	**1.26**	**358**	*i* P	**Pn**	**17 21 47.8**	**0.0**
DNZL	**Cakiroluk**	**1.26**	**358**	*i* P	**Pn**	**17 21 47.8**	**0.0**
DNZL				*i* S	**Sg**	**17 22 06.2**	**+0.2**
DENT	**Denizli**	**1.32**	**358**	*e*PN	**Pn**	**17 21 48.6**	**-0.1**
DENT	**Denizli**	**1.32**	**358**	*e*Pn	**Pn**	**17 21 48.6**	**0.0**
MLSB	**Milas**	**1.36**	**310**	*e*PN	**Pn**	**17 21 49.4**	**+0.2**
MLSB	**Milas**	**1.36**	**310**	*e*Pn	**Pn**	**17 21 49.4**	**+0.2**
BCK	**Bucak**	**1.58**	**49**	*e*PN	**Pn**	**17 21 52.1**	**-0.1**
BCK	**Bucak**	**1.58**	**49**	*e*Pn	**Pn**	**17 21 52.1**	**-0.1**
ISP	**Isparta**	**1.81**	**38**	*e*PN	**Pn**	**17 21 55.5**	**+0.1**
ISP	**Isparta**	**1.81**	**38**	*e*Pn	**Pn**	**17 21 55.5**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.85**	**55**	*e*PN	**Pn**	**17 21 56.8**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.85**	**55**	*e*Pn	**Pn**	**17 21 56.8**	**+0.9**
KHL	**Karahalli**	**1.92**	**10**	*e*PN	**Pn**	**17 21 57.1**	**+0.2**
KHL	**Karahalli**	**1.92**	**10**	*e*Pn	**Pn**	**17 21 57.1**	**+0.2**
KULA	**Kula-Manisa**	**2.11**	**351**	*e*PN	**Pn**	**17 21 59.0**	**-0.5**
KULA	**Kula-Manisa**	**2.11**	**351**	*e*Pn	**Pn**	**17 21 59.0**	**-0.4**

*NEIC **18** 17:23:36.4, 17.°17N×101.°36W, h6km, MD3.7(MEX), After MEX.*
MEX 18 17:23:36.4±0.8, **17.°17N**×**101.°36W, h6**km±148km, **MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.44**	**346**	*e*P	Pg	17 23 44.9	-0.1
ZIIG				*i* S	Sg	17 23 50.6	-0.2
ZIIG	**Zihuatanejo**	**0.44**	**346**	*e*P	Pg	17 23 44.9	-0.1
ZIIG				*i* S	Sg	17 23 50.6	-0.2
CAIG	**El Cayaco**	**1.05**	**97**	*e*P	Pg	17 23 53.9	-2.7
CAIG				*i* S	Sg	17 24 06.6	-3.6
CAIG	**El Cayaco**	**1.05**	**97**	*e*P	Pg	17 23 53.9	-2.7
CAIG				*i* S	Sg	17 24 06.6	-3.6
ACX	**Acapulco**	**1.41**	**102**	*i* P	Pn	17 24 03.0	+0.4
ACX				*i* S	Sb	17 24 17.5	-3.9
ACX	**Acapulco**	**1.41**	**102**	*i* P	Pn	17 24 03.0	+0.4
ACX				*i* S	Sb	17 24 17.5	-3.9
PNIG	**Pinotepa**	**3.19**	**104**	*i* P	Pn	17 24 26.1	-1.1
PNIG				*i* S	Sn	17 25 03.0	-2.5
PNIG	**Pinotepa**	**3.19**	**104**	*i* P	Pn	17 24 26.1	-1.1
PNIG				*i* S	Sn	17 25 03.0	-2.5
PPM	**Popocatepetl**	**3.21**	**54**	*i* P	Pn	17 24 25.5	-1.9
PPM				*i* S	Sn	17 25 03.3	-2.6
PPM	**Popocatepetl**	**3.21**	**54**	*i* P	Pn	17 24 25.5	-1.9
PPM				*i* S	Sn	17 25 03.3	-2.6
UTMO	**Huajuapan**	**3.45**	**79**	*e*P	Pn	17 24 29.6	-1.2
UTMO				*i* S	Sn	17 25 09.9	-2.1

KRSC 18 17:56:31.5±0.9, **49.°87N**×**156.°89E, h10**km±10km, **ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.32**	**320**	*i* P	Pn	17 56 55.8	-0.1
ALID				*e*S	Sb	17 57 13.0	-0.2
MIPR	**Malaya Ipel'ka**	**2.41**	**358**	P	Pn	17 57 12.6	+1.7
RUS	**Russkaya**	**2.76**	**21**	*e*P	Pn	17 57 17.4	+1.6
RUS				*e*S	Sn	17 57 50.7	+1.6
PET	**Petropavlovsk**	**3.34**	**19**	P	Pn	17 57 26.3	+2.5
PET				S	Sn	17 58 06.0	+2.5
AVH	**Avacha**	**3.59**	**18**	*e*P	Pn	17 57 30.6	+3.5
NLC	**Nalytchevo**	**3.64**	**24**	S	Sn	17 58 12.2	+1.3
SPN	**Mys Shipunski**	**3.78**	**30**	P	Pn	17 57 32.5	+2.8
SPN				S	Sn	17 58 16.6	+2.4
GNL	**Ganaly**	**3.89**	**9**	*e*P	Pn	17 57 34.7	+3.5
MKZ	**Mys Kozlova**	**5.56**	**31**	P	Pn	17 57 55.0	+0.9
MKZ				S	Sn	17 58 57.7	-0.3

*IDC **18** 17:57:54.3±0.8, 6.°44S×131.°04E, h0km, mb4.3/5, mb1 4.7/7, mb1mx4.2/17, mbtmp4.6/7, ML5.2/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/25, Error ellipse: s-maj=50.8km s-min=17.2km az=60.0*
*ISCJB **18** 17:57:59.4±1.0, 6.°63S±0.°05×131.°13E±0.°07, h63km±12km, mb4.5/15, Error ellipse: s-maj=11.9km s-min=7.5km az=168.4*
*NEIC **18** 17:57:59.0±0.5, 6.°54S×131.°06E, h35km, mb4.3/8, Error ellipse: s-maj=17.9km s-min=7.8km az=58.0*
*DJA **18** 17:58:02, 6.°71S×131.°26E, h84km, mb5.2/6*
ISC 18 17:58:00.5±0.8, **6.°60S**±0.°05×**131.°11E**±0.°07, **h50**km±10km, **n50**, σ1°**20**/54, **mb4.5**/15, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.88**	**60**	P	**Pn**	**17 58 31.3**	**+1.0**
NLAI	**Namlea**	**5.20**	**310**	P	**Pn**	**17 59 20.3**	**+4.4**
	146nm,0.7s,2μm0.6nm						
KAKA	**Kakadu**	**6.21**	**168**	*e*P	**Pn**	**17 59 30.6**	**+0.8**
	396nm,0.8s						
KAKA				*e*S	**Sn**	**18 00 37.8**	**-1.7**
KAKA	**Kakadu**	**6.21**	**168**	*e*Pn	**Pn**	**17 59 30.5**	**+0.7**
	530nm,0.4s						
KAKA				*e*Sn	**Sn**	**18 00 37.4**	**-2.2**
KAKA	**Kakadu**	**6.21**	**168**	P	**Pn**	**17 59 30.9**	**+1.1**
	372nm,0.5s,4.6nm						
KAKA				S	**Sn**	**18 00 38.4**	**-1.1**
	372nm,0.5s,4.6nm						
SMPI	**Sarmi**	**8.86**	**59**	P	**Pn**	**18 00 06.3**	**+0.3**
	34nm,0.6s						
KNA	**Kununurra**	**9.38**	**194**	*e*P	**Pn**	**18 00 15.2**	**+2.1**
	264nm,0.3s						
KAPI	**Kappang**	**11.41**	**277**	Pn	**Pn**	**18 00 46.2**	**+5.3**
	2.0nm,0.3s,baz=132,slow=15,SNR=8.2						
KAPI				LR	LR	18 04 43.2	
	comp=Z,70nm,21.9s,baz=302,slow=36						
MRSI	**Marisa**	**11.54**	**307**	P	**Pn**	**18 00 44.1**	**+1.4**
	38nm,0.7s						
TTSI	**Tana Toraja**	**11.79**	**287**	P	Px	18 00 58.7	
FITZ	**Fitzroy Crossi**	**12.62**	**205**	*e*P	**Pn**	**18 00 56.3**	**-1.1**
	64nm,0.3s						
FITZ				*e*S	**Sn**	**18 03 07.2**	**-9.3**
FITZ	**Fitzroy Crossi**	**12.62**	**205**	Pn	**Pn**	**18 00 56.7**	**-0.7**
	13nm,0.3s,baz=35,slow=9.8,SNR=128						
FITZ				Sn	**Sn**	**18 03 10.4**	**-6.1**
	16nm,0.3s,baz=144,slow=16,SNR=13						
FITZ				LR	LR	18 05 55.2	
	comp=Z,103nm,19.0s,baz=22,slow=38						
FITZ	**Fitzroy Crossi**	**12.62**	**205**	P	**Pn**	**18 00 57.2**	**-0.2**
	93nm,0.5s						
WRAB	**Tennant Creek**	**13.62**	**167**	*e*Pn	**Pn**	**18 01 08.5**	**-2.6**
	41nm,0.5s						
WRAB				*e*Sn	**Sn**	**18 03 32.5**	**-8.6**
WRAB	**Tennant Creek**	**13.62**	**167**	P	**Pn**	**18 01 09.0**	**-2.1**
WRAB				S	**Sn**	**18 03 33.3**	**-7.8**
COEN	**Coen**	**13.94**	**123**	*e*Pn	**Pn**	**18 01 12.8**	**-2.7**
	108nm,0.8s						
QIS	**Mount Isa**	**16.14**	**150**	*e*P	**Pn**	**18 01 42.8**	**-1.3**
	4.2nm,0.2s						
ASAR	**Alice Springs**	**17.18**	**171**	P	**Pn**	**18 01 56.6**	**-0.5**
	5.6nm,0.3s,baz=356,slow=14,SNR=128						
ASAR				S	**S**	**18 05 21.2**	**+6.7**
	2.2nm,0.3s,baz=335,slow=20,SNR=4.8						
MBWA	**Marble Bar**	**18.19**	**216**	*e*P	**Pn**	**18 02 10.4**	**+0.9**
MBWA				*e*S	**S**	**18 05 18.1**	**-17**
MBWA	**Marble Bar**	**18.19**	**216**	*e*Pn	**Pn**	**18 02 07.9**	**-1.7**
KKM	**Kota Kinabalu**	**19.46**	**310**	*e*P	**Pn**	**18 02 21.1**	**-3.7**
	16nm,0.6s						
CTA	**Charters Tower**	**19.90**	**134**	P	**Pn**	**18 02 31.1**	**+1.1**
	7.8nm,0.7s,baz=314,slow=13,SNR=8.4						
KSM	**Kuching**	**22.25**	**290**	*e*P	**P**	**18 02 52.2**	**-1.2**
	4.0nm,0.7s,mb4.0						
MEEK	**Meekatharra**	**23.21**	**209**	*e*P	**P**	**18 03 05.8**	**+2.4**
FORT	**Forrest**	**24.23**	**186**	*e*P	**P**	**18 03 14.5**	**+1.8**
	53nm,0.6s,mb5.2						
FORT	**Forrest**	**24.23**	**186**	*e*P	**P**	**18 03 14.2**	**+1.5**
	56nm,0.6s,mb5.2						
FORT				*e*		18 03 25.4	
KMBL	**Kambalda**	**26.11**	**198**	*e*P	**P**	**18 03 31.8**	**+2.0**
	58nm,0.4s						
BBOO	**Buckleboo**	**26.48**	**171**	*e*P	**P**	**18 03 34.3**	**+1.1**
	3.1nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**26.99**	**160**	*e*P	**P**	**18 03 39.2**	**+1.4**
	2.3nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**26.99**	**160**	P	**P**	**18 03 39.4**	**+1.6**
	2.6nm,0.3s,mb4.2,baz=344,slow=7.0,SNR=31						
STKA	**Stephens Creek**	**26.99**	**160**	*e*P	**P**	**18 03 37.8**	**+0.1**
	0.6nm,0.4s,mb3.5						
KULM	**Kulim**	**32.61**	**291**	*e*P	**P**	**18 04 26.2**	**-1.6**
	9.7nm,1.0s,mb4.7						
CM31	**Chiang Mai Arr**	**40.33**	**309**	*e*P	**P**	**18 05 32.7**	**-0.7**
	1.8nm,0.5s,mb4.1						
CMAR	**Chiang Mai Arr**	**40.33**	**309**	P	**P**	**18 05 33.5**	**0.0**
	2.4nm,0.6s,mb4.1,baz=135,slow=6.7,SNR=17						
LSA	**Lhasa**	**52.68**	**315**	P	**P**	**18 07 10.6**	**+0.5**
LSA	**Lhasa**	**52.68**	**315**	*e*P	**P**	**18 07 10.4**	**+0.2**
	2.0nm,0.5s,mb4.3						
ODAN	**Odare**	**53.83**	**310**	*e*P	**P**	**18 07 18.4**	**-0.3**
	14nm,0.6s,mb5.0						
TAPN	**Taplejung**	**53.85**	**311**	*e*P	**P**	**18 07 18.6**	**-0.2**
	15nm,0.6s,mb5.1						
RAMN	**Ramite**	**54.48**	**310**	*e*P	**P**	**18 07 23.6**	**+0.2**
	39nm,0.6s						
GUN	**Gumba**	**55.52**	**310**	*e*P	**P**	**18 07 30.8**	**-0.1**
	26nm,0.7s						
KKN	**Kakani**	**55.92**	**310**	*e*P	**P**	**18 07 33.4**	**-0.3**
	9.7nm,0.6s,mb5.0						
DMN	**Daman**	**55.96**	**310**	*e*P	**P**	**18 07 33.8**	**-0.2**
	17nm,0.9s,mb5.1						
MK31	**Makanchi Array**	**68.50**	**326**	*e*P	**P**	**18 08 57.5**	**-0.1**
MK31				*e*PcP	PcP	18 09 21.9	-0.6
MKAR	**Makanchi Array**	**68.50**	**326**	P	**P**	**18 08 57.8**	**+0.1**
	2.4nm,0.4s,mb4.5,baz=113,slow=8.7,SNR=54						
TKM2	**Tokmak 2**	**70.38**	**320**	*e*P	**P**	**18 09 09.6**	**+0.2**
	1.9nm,0.6s,mb4.2						
TKM2				*e*PcP	PcP	18 09 33.6	+3.1
ZALV	**Zalesovo Beam**	**71.72**	**333**	P	**P**	**18 09 15.8**	**-1.4**
	0.9nm,0.6s,mb3.9,baz=85,slow=4.8,SNR=6.7						
AHID	**Auburn Hatcher**	**114.73**	**46**	*e*PKPdf	PKiKP	18 16 36.8	+1.0
CPUP	**Villa Florida**	**146.26**	**166**	PKPbc	PKPbc	18 17 37.7	+1.4
	0.5nm,0.4s,baz=207,slow=2.9,SNR=4.6						
CPUP	**Villa Florida**	**146.26**	**166**	PKPbc	PKPbc	18 17 37.7	+1.4
LPAZ	**La Paz**	**150.34**	**140**	PKPbc	PKPbc	18 17 50.0	+2.6
	0.5nm,0.3s,baz=41,slow=2.5,SNR=5.2						
LPAZ				PKPab	PKPab	18 17 54.8	+1.1
	0.6nm,0.3s,baz=186,slow=1.7,SNR=5.6						

*IDC **18** 18:10:23.6±0.8, 17.°86S×173.°15W, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.3/20, mbtmp4.2/10, ML2.3/1, MS3.8/3, Ms1 3.8/3, ms1mx3.2/17, Error ellipse: s-maj=30.6km s-min=19.8km az=131.0*
*ISCJB **18** 18:10:27.3±0.6, 17.°6S±0.°1×173.°3W±0.°2, h33km, mb4.2/13, MS3.9/3, Error ellipse: s-maj=24.8km s-min=10.8km az=37.9*
*NEIC **18** 18:10:29.4±0.6, 17.°64S×173.°28W, h35km, mb4.7/5, Error ellipse: s-maj=27.4km s-min=12.1km az=130.0*
*SZGRF **18** 18:10:30.8, 17.°34S×170.°12W, h33km, Tonga Islands region*
ISC 18 18:10:29.9±0.6, **17.°5S**±0.°1×**173.°3W**±0.°2, **h35**km, **n53**, σ1°**26**/26, **mb4.2**/13, **MS3.9**/3, **2C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.80**	**22**	Pn	**Pn**	**18 11 26.6**	**+0.6**
	9.9nm,0.3s,baz=79,slow=16,SNR=14						
AFI				Sn	**Sn**	**18 12 08.5**	**-1.0**
	30nm,0.3s,baz=36,slow=23,SNR=6.1						
AFI	**Afiamalu**	**3.80**	**22**	Pn	**Pn**	**18 11 26.6**	**+0.6**
AFI				Sn	**Sn**	**18 12 08.5**	**-1.0**
MSVF	**Nonsavu**	**8.30**	**267**	*e*Pn	**Pn**	**18 12 34.0**	**+6.1**
	46nm,0.8s						
URZ	**Urewera**	**22.38**	**200**	P	**P**	**18 15 20.1**	**-5.0**
	18nm,0.6s,mb4.7,baz=339,slow=5.1,SNR=15						
URZ	**Urewera**	**22.38**	**200**	*e*P	**P**	**18 15 20.1**	**-5.0**
	21nm,0.6s,mb4.8						
RPZ	**Rata Peaks**	**29.35**	**204**	P	**P**	**18 16 29.0**	**-0.5**
	7.0nm,0.8s,mb4.5,baz=95,slow=10,SNR=3.5						
RPZ	**Rata Peaks**	**29.35**	**204**	*e*P	**P**	**18 16 29.5**	**+0.1**
	12nm,0.6s,mb4.8						
CTA	**Charters Tower**	**38.37**	**260**	P	**P**	**18 17 45.8**	**-2.2**
	3.9nm,0.7s,mb4.2,baz=6.5,slow=21,SNR=3.6						
CTAO	**Charters Tower**	**38.37**	**260**	*e*P	**P**	**18 17 45.5**	**-2.5**
	4.3nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**43.17**	**242**	*e*P	**P**	**18 18 28.5**	**+1.1**
	1.1nm,1.1s,mb3.5						
WRAB	**Tennant Creek**	**49.54**	**258**	*e*P	**P**	**18 19 14.5**	**-3.1**
	2.0nm,0.3s,mb4.6						
ASAR	**Alice Springs**	**49.64**	**254**	P	**P**	**18 19 15.3**	**-3.0**
	5.4nm,0.7s,mb4.7,baz=89,slow=8.5,SNR=74						
ASAR				PcP	PcP	18 20 39.4	-0.2
	1.2nm,0.5s,baz=99,slow=3.9,SNR=4.3						
MJAR	**Matsushiro Arr**	**70.60**	**320**	P	**P**	**18 21 42.6**	**+0.9**
	2.2nm,0.9s,mb4.1,baz=159,slow=5.1,SNR=7.4						
MJAR				LR	LR	18 48 04.2	
	comp=Z,57nm,18.9s,MS3.9,baz=90,slow=32						
PETK	**Petropavlovsk-**	**74.62**	**342**	P	**P**	**18 22 06.7**	**+1.4**
	4.1nm,0.8s,mb4.4,baz=100,slow=8.8,SNR=9.9						
PETK				PP	PP	18 24 54.4	+1.7
	3.0nm,1.1s,baz=238,slow=6.8,SNR=6.4						
**KS

CNNC	Cliffs of the 870nm,1.7s	104.13	57	eP		Pdif		18 24 29.7	-0.1
BVAR	Borovoye Array 0.8nm,0.5s,baz=158,slow=1.6,SNR=5.2	119.58	322	PKP		PKPdf		18 29 15.9	+0.1
IBBN	Ibbenburen	145.22	359	ePKPbc		PKPbc		18 30 04.4	+1.1
CLZ	Clausthal	145.57	356	ePKPbc		PKPbc		18 30 05.5	+1.0
CLZ	Clausthal	145.57	356	ePKPbc		PKPbc		18 30 05.5	+1.0
CLL	Collm	145.86	353	ePKPbc		PKPbc		18 30 06.0	+0.6
CLL	Collm	145.86	353	⇑iPKP		PKPdf		18 30 06.1	+1.3
CLL				e				18 30 23.0	
CLL				i				18 32 14.8	
CLL	Collm comp=Z,11nm,1.0s	145.86	353	⇑iPKPbc		PKPbc		18 30 06.1	+0.7
CLL				es	PKiKP			18 30 23.0	
NEUB	Neuenburg	146.09	354	ePKPbc		PKPbc		18 30 10.9	+4.8
BRG	Berggiesshubel	146.17	352	ePKPbc		PKPbc		18 30 07.6	+1.3
BRG	Berggiesshubel comp=Z,6.7nm,1.2s	146.17	352	ePKP		PKPab		18 30 07.5	+0.4
DPC	Dobruska-Polom	146.30	349	ePKP		PKPab		18 30 08.3	+0.8
PVCC	Panska Ves	146.42	351	ePKP		PKPab		18 30 08.8	+0.8
GUNZ	Gunzen	146.87	353	ePKPbc		PKPab		18 30 12.1	+2.4
WERN	Wernitzgruen	146.94	353	ePKPbc		PKPab		18 30 10.9	+0.9
ROTZ	Rotzenmuhle	147.47	353	ePKPbc		PKPbc		18 30 11.1	+1.0
MLR	Muntele Rosu comp=Z,2.5nm,1.1s,baz=116,slow=2.3,SNR=3.9	147.78	334	PKPbc		PKPbc		18 30 12.0	+0.9
BR131	Keskin Array S	147.82	319	ePKPbc		PKPbc		18 30 12.3	+0.9
BRTR	Keskin Array B comp=Z,1.7nm,0.8s,baz=130,slow=1.9,SNR=10	147.82	319	PKPbc		PKPbc		18 30 12.4	+1.0
KHC	Kasperske Hory	147.92	352	ePKP		PKPbc		18 30 12.7	+1.3
GEC2	GERESS Array S	148.19	351	ePKPbc		PKPbc		18 30 13.3	+1.2
GEC2	GERESS Array S	148.19	351	ePKPbc		PKPbc		18 30 13.3	+1.2
GERES	GERESS Array B comp=Z,1.1nm,0.7s,baz=0.0,slow=1.3,SNR=6.6	148.19	351	PKPbc		PKPbc		18 30 12.9	+0.8
BFO	Black Forest	149.18	358	ePKPbc		PKPbc		18 30 15.4	+0.8
BFO	Black Forest	149.18	358	ePKPbc		PKPbc		18 30 15.4	+0.8
DAVOX	Davos/Dischmat comp=Z,1.9nm,0.5s,baz=313,slow=12,SNR=4.6	150.64	356	PKPbc		PKPbc		18 30 19.3	+1.0
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.6s,baz=271,slow=5.9,SNR=4.6	173.51	131	PKPab		PKPab		18 32 02.5	-2.9

TIR **18** *18:19:43.1±3.4, 42°.46N×19°.73E, h4km±999km, ML3.4*
ISCJB **18** *18:19:44.7±0.2, 42°.413N±0°.010×19°.78E±0°.01, h3km±2km, Error ellipse: s-maj=1.7km s-min=1.5km az=145.4*
SKO **18** *18:19:46.0, 42°.43N×19°.78E, h4km, M2.8, ML3.2*
CSEM **18** *18:19:45.4±0.1, 42°.41N×19°.72E, h5km, ML3.4, Error ellipse: s-maj=3.2km s-min=2.8km az=55.0*
BEO **18** *18:19:45.9±0.3, 42°.41N×19°.73E, h8km±2km, ML3.2/15*
PDG **18** *18:19:45.0±0.3, 42°.38N×19°.77E, h0km±11km, MD3.2/9, ML3.2/10, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*
LDG **18** *18:19:45.0±0.2, 42°.42N×19°.78E, h10km, Ml3.5/11, Error ellipse: s-maj=6.3km s-min=4.4km az=174.0*
NEIC **18** *18:19:45.0, 42°.38N×19°.77E, h0km, ML3.2(PDG), After PDG.*
ROM **18** *18:19:46.0±0.9, 42°.26N×19°.85E, h10km, Md3.4/13, Ml3.5/30, Error ellipse: s-maj=13.5km s-min=4.9km az=96.0*
THE **18** *18:19:47.2, 42°.36N×19°.91E, h0km±5km, ML3.9/5, Error ellipse: s-maj=7.9km s-min=2.3km az=323.0*
ISC 18 18:19:45.6±0.3, 42°.396N±0°.010×19°.79E±0°.01, h0km±2km, n270,σ1$21/419, 43C-32D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.21	98	ePG	Pg	18 19 49.2	-0.4
BCI				i SG	Sg	18 19 52.6	+0.3
PVY	Plav	0.24	34	ePN	Pg	18 19 49.7	-0.6
PVY				i SN	Sg	18 19 53.7	+0.3
PVY	Plav	0.24	34	⇑iPg	Pg	18 19 49.7	-0.6
PVY				eSg	Sg	18 19 53.7	+0.3
PVY	Plav	0.24	34	⇑iPg	Pg	18 19 49.7	-0.6
PVY				eSg	Sg	18 19 53.7	+0.3
PUK	Puka	0.36	168	ePG	Pg	18 19 51.5	-1.0
PUK				i SG	Sg	18 19 57.6	+0.4
PDG	Podgorica	0.39	275	ePN	Pg	18 19 51.9	-1.3
PDG				i SN	Sg	18 19 58.6	+0.3
PDG	Podgorica	0.39	275	⇑iPg	Pg	18 19 51.9	-1.3
PDG				eSg	Sg	18 19 58.6	+0.3
TTG	Podgorica	0.39	275	⇑iPg	Pg	18 19 51.9	-1.3
TTG				eSg	Sg	18 19 58.6	+0.3
TTG	Podgorica	0.39	275	⇑iPg	Pg	18 19 51.9	-1.3
TTG				eSg	Sg	18 19 58.6	+0.3
BEY	Berane	0.48	9	ePN	Pg	18 19 54.7	-0.2
BEY				i SN	Sg	18 20 02.4	+1.2
BEY	Berane	0.48	9	⇓iPg	Pg	18 19 54.7	-0.2
BEY				eSg	Sg	18 20 02.4	+1.2
IVA	Berane	0.48	9	⇓iPg	Pg	18 19 54.7	-0.2
IVA				eSg	Sg	18 20 02.4	+1.2
IVA	Berane	0.48	9	⇓iPg	Pg	18 19 54.7	-0.2
IVA				eSg	Sg	18 20 02.4	+1.2
ULC	Ulcinj	0.59	223	ePN	Pg	18 19 55.8	-1.1
ULC				i SN	Sg	18 20 04.7	+0.1
ULC	Ulcinj	0.59	223	⇑iPg	Pg	18 19 55.8	-1.1
ULC				eSg	Sg	18 20 04.7	+0.1
ULC	Ulcinj	0.59	223	⇑iPg	Pg	18 19 55.8	-1.1
ULC				eSg	Sg	18 20 04.7	+0.1
BUM	Brajici-Budva	0.67	262	ePN	Pg	18 19 56.6	-1.8
BUM				i SN	Sg	18 20 07.5	+0.4
BUM	Brajici-Budva	0.67	262	⇓iPg	Pg	18 19 56.6	-1.8
BUM				eSg	Sg	18 20 07.5	+0.4
BUM	Brajici-Budva	0.67	262	⇓iPg	Pg	18 19 56.6	-1.8
BUM				eSg	Sg	18 20 07.5	+0.4
NKY	Niksic	0.72	306	ePN	Pg	18 19 57.8	-1.6
NKY				i SN	Sg	18 20 09.6	+0.9
NKY	Niksic	0.72	306	⇓iPg	Pg	18 19 57.8	-1.6
NKY				eSg	Sg	18 20 09.6	+0.9
NKY	Niksic	0.72	306	⇓iPg	Pg	18 19 57.8	-1.6
NKY				eSg	Sg	18 20 09.6	+0.9
SJES	Sjenica	0.88	9	⇑iPg	Pg	18 20 01.2	-1.2
SJES				i Sg	Sg	18 20 14.2	+0.4
SJES	Sjenica	0.88	9	⇑iPg	Pg	18 20 01.2	-1.2
SJES				i Sg	Sg	18 20 14.2	+0.4
HCY	Herceg Novi	0.96	274	ePN	Pg	18 20 02.3	-1.7
HCY				i SN	Sg	18 20 17.3	+0.9
HCY	Herceg Novi	0.96	274	⇓iPg	Pg	18 20 02.3	-1.7
HCY				eSg	Sg	18 20 17.3	+0.9
HCY	Herceg Novi	0.96	274	⇓iPg	Pg	18 20 02.3	-1.7
HCY				eSg	Sg	18 20 17.3	+0.9
PLE	Pljevlja	0.98	343	⇑iPg	Pg	18 20 04.0	-0.4
PLE				eSg	Sg	18 20 19.3	+2.2
PLE	Pljevlja	0.98	343	⇑iPg	Pg	18 20 04.0	-0.4
PLE				eSg	Sg	18 20 19.3	+2.2
UPM	Unac-Piva	1.03	322	⇑iPg	Pg	18 20 04.8	-0.7
UPM				eSg	Sg	18 20 20.6	+1.7
UPM	Unac-Piva	1.03	322	⇑iPg	Pg	18 20 04.8	-0.7
UPM				eSg	Sg	18 20 20.6	+1.7
BRY	Bratogost	1.05	299	ePN	Pg	18 20 03.5	-2.2
BRY				i SN	Sg	18 20 20.9	+1.6
BRY	Bratogost	1.05	299	⇑iPg	Pg	18 20 03.5	-2.2
BRY				eSg	Sg	18 20 20.9	+1.6
BRY	Bratogost	1.05	299	⇑iPg	Pg	18 20 03.5	-2.2
BRY				eSg	Sg	18 20 20.9	+1.6
TIR	Tirane	1.05	177	⇑iPg	Pg	18 20 05.2	-0.5
TIR				i Sg	Sg	18 20 21.5	+2.2
TIR	Tirane	1.05	177	eP	Pg	18 20 05.0	-0.7
TIR				eS	Sg	18 20 21.4	+2.1
TIR	Tirane	1.05	177	P	Pg	18 20 05.3	-0.4
TIR				S	Sg	18 20 21.0	+1.7
TIR	Tirane	1.05	177	P	Pg	18 20 05.3	-0.4
TIR				eS	Sg	18 20 21.4	+2.1
TREB	Trebinje	1.11	287	⇑iPg	Pg	18 20 03.8	-3.1
TREB				i Sg	Sg	18 20 19.8	-1.5
TREB	Trebinje	1.11	287	⇑iPg	Pg	18 20 03.8	-3.1
TREB				i Sg	Sg	18 20 19.8	-1.5
SELS	Selova	1.28	49	i Pg	Pn	18 20 08.1	-2.6
SELS				i Sg	Sg	18 20 28.9	+2.2
SELS	Selova	1.28	49	i Pg	Pn	18 20 08.1	-2.6
SKO	Skopje	1.30	109	i Pg	Pg	18 20 09.2	-1.3
SKO				i Sg	Sg	18 20 29.2	+1.9
SKO	Skopje	1.30	109	i Pg	Pn	18 20 09.1	-1.9
SKO				i Sg	Sg	18 20 27.6	+0.3
SKO				eLg		18 20 30.4	
SKO	comp=N,321nm,0.5s			eLg		18 20 30.7	
SKO	comp=E,431nm,0.7s						
SKO	Skopje	1.30	109	P	Pg	18 20 09.2	-1.3
SKO				S	Sg	18 20 28.9	+1.6
SKO	Skopje	1.30	109	P	Pg	18 20 09.2	-1.3
SKO				S	Sg	18 20 28.9	+1.6
SKO				i Sg	Sg	18 20 29.2	+1.9
SKO				eLg		18 20 30.4	
SKO	comp=E,321nm,0.5s						
OHR	Ohrid	1.49	149	i Pg	Pn	18 20 13.7	+0.1
OHR				i Sg	Sg	18 20 34.8	+1.3
OHR				eLg		18 20 35.6	
OHR	comp=N,304nm,0.6s			eLg		18 20 36.6	
OHR	comp=E,280nm,0.6s						
OHR	Ohrid	1.49	149	i Pg	Pn	18 20 13.6	0.0
OHR				i Sg	Sg	18 20 34.7	+1.2
OHR				eLg		18 20 35.6	
OHR	comp=E,304nm,0.6s						
BBLS	Lazići	1.50	349	i Pg	Pn	18 20 12.4	-1.3
BBLS				i Sg	Sg	18 20 34.5	+0.8
BBLS	Lazići	1.50	349	i Pg	Pn	18 20 12.4	-1.3
BBLS				i Sg	Sg	18 20 34.5	+0.8
KRUS	Krusevo	1.50	133	ePn	Pn	18 20 13.2	-0.5
KRUS				i Sg	Sg	18 20 33.9	+0.2
KRUS				eLg		18 20 35.4	
KRUS	comp=N,170nm,0.6s			eLg		18 20 35.5	
KRUS	comp=E,266nm,0.9s						
KRUS	Krusevo	1.50	133	ePn	Pn	18 20 13.1	-0.6
KRUS				i Sg	Sg	18 20 33.8	+0.1
KRUS				eLg		18 20 35.4	
KRUS	comp=E,266nm,0.9s						
BARS	Barje	1.55	74	⇑iPg	Pn	18 20 13.3	-1.2
BARS				i Sg	Sg	18 20 36.1	+0.6
STON	Ston	1.61	288	i Pn	Pn	18 20 14.2	-1.1
STON				Sn	Sn	18 20 39.9	+3.1
STON	Ston	1.61	288	i Pn	Pn	18 20 14.2	-1.1
STON				Sn	Sn	18 20 39.9	+3.1
GRUS	Gruza	1.64	24	⇑iPn	Pn	18 20 14.8	-0.9
GRUS				i Sg	Sg	18 20 37.4	-0.9
GRUS	Gruza	1.64	24	⇑iPn	Pn	18 20 14.8	-0.9
GRUS				i Sg	Sg	18 20 37.4	-0.9
DIVS	Divibare	1.71	5	⇓iPn	Pn	18 20 15.4	-1.2
DIVS				i Sg	Sg	18 20 39.8	-0.7
DIVS	Divibare	1.71	5	P	Pn	18 20 15.7	-0.9
DIVS				S	Sn	18 20 40.7	+1.6
DIVS	Divibare	1.71	5	P	Pn	18 20 15.7	-0.9
DIVS				i Sg	Sg	18 20 39.8	-0.7
DIVS				S	Sn	18 20 40.7	+1.6
BIA	Bitola	1.79	140	ePn	Pn	18 20 18.2	+0.5
BIA				i Sg	Sg	18 20 44.3	+1.1
BIA				eLg		18 20 45.3	
BIA	comp=E,126nm,0.4s			eLg		18 20 46.9	
BIA	comp=N,50nm,0.3s						
BIA	Bitola	1.79	140	ePn	Pn	18 20 18.2	+0.4
BIA				i Sg	Sg	18 20 44.3	+1.1
BIA				eLg		18 20 45.3	
BIA	comp=N,126nm,0.4s						
NISS		1.88	57	⇓iPn	Pn	18 20 17.9	-1.0
NISS		1.88	57	⇓iPn	Pn	18 20 17.9	-1.0
TRUS	Trudelj	1.88	14	ePn	Pn	18 20 16.5	-2.5
TRUS	Trudelj	1.88	14	ePn	Pn	18 20 16.5	-2.5
KBN	Korca	1.92	157	ePG	Pg	18 20 22.4	-0.1
KBN				i SG	Sg	18 20 51.6	+4.2
KBN	Korca SNR=90	1.92	157	ePg	Pg	18 20 22.4	-0.1
KBN				i Sg	Sg	18 20 51.6	+4.2
FNA	Florina	2.00	143	P	Pn	18 20 21.2	+0.5
FNA				S	Sn	18 20 46.5	+0.1
FNA	Florina	2.00	143	P	Pn	18 20 21.2	+0.5
FNA				S	Sn	18 20 46.5	+0.1
SVIS	Svilajnac	2.14	29	ePn	Pn	18 20 24.8	+2.3
SVIS				i Sg	Sg	18 20 55.5	+1.2
ZAPS	Zavoj	2.27	66	i Pn	Pn	18 20 24.0	-0.3
ZAPS				eSn	Sn	18 20 53.8	+0.9
ZAPS	Zavoj	2.27	66	i Pn	Pn	18 20 24.0	-0.3
ZAPS				eSn	Sn	18 20 53.8	+0.9
VAY	Valandovo	2.34	116	ePn	Pn	18 20 25.9	+0.7
VAY				eSg	Sg	18 21 01.0	+0.3
VAY				eLg		18 21 01.5	
VAY	comp=N,112nm,0.7s			eLg		18 21 01.8	
VAY	comp=E,67nm,0.6s						
VAY	Valandovo	2.34	116	P	Pn	18 20 27.0	+1.7
VAY				S	Sn	18 20 55.3	+0.7
VAY	Valandovo	2.34	116	ePn	Pn	18 20 25.9	+0.6
VAY	Valandovo	2.34	116	P	Pn	18 20 27.0	+1.7
VAY				S	Sn	18 20 55.3	+0.7
VAY				eSg	Sg	18 21 01.0	+0.3
VAY				eLg		18 21 01.5	
VAY	comp=E,112nm,0.7s						
BEO	Beograd	2.46	11	ePn	Pn	18 20 27.7	+0.7
BEO				eSg	Sg	18 21 04.9	+0.1
BAI	Bari	2.53	240	i Pn	Pn	18 20 26.4	-1.5
BAI				eSn	Sn	18 20 57.5	-1.9
VTS	Vitosha	2.54	84	i Pn	Pn	18 20 27.5	-0.5
VTS				eSn	Sn	18 20 58.6	-0.9
VTS				i Sg	Sg	18 21 08.2	+1.1
VTS	Vitosha	2.54	84	P	Pn	18 20 27.5	-0.5
VTS	Vitosha	2.54	84	P	Pn	18 20 27.5	-0.5
VTS				eSn	Sn	18 20 58.6	-0.9
VTS				i Sg	Sg	18 21 08.2	+1.1
KZN	Kozani	2.56	144	P	Pn	18 20 30.1	+1.7
KZN				S	Sn	18 21 01.4	+1.1
KZN	Kozani	2.56	144	P	Pn	18 20 30.1	+1.7
KZN				S	Sn	18 21 01.4	+1.1
NOCI	Noci comp=E,123nm,0.4s	2.60	233	Pg	Pg	18 20 27.6	-7.8
TAR1	Taranto	2.65	226	i Pn	Pn	18 20 34.3	+4.7
KEK	Kerkira	2.68	180	P	Pn	18 20 29.7	-0.3
KEK				S	Sn	18 21 03.6	+0.5
KEK	Kerkira	2.68	180	P	Pn	18 20 29.7	-0.3
KEK				S	Sn	18 21 03.6	+0.5
FGSL	Fruska Gora	2.76	0	eSn	Sn	18 21 04.2	-0.9
FRGS	Fruska Gora	2.76	0	eSn	Sn	18 21 04.2	-0.9
SG1	Sgolgore (BA)	2.80	237	ePn	Pn	18 20 30.2	-1.5
SG1				eSn	Sn	18 21 05.1	-1.0
AMUR	Altamura	2.81	239	⇑iPg	Pn	18 20 30.7	-1.1
AMUR				Sg	Sn	18 21 03.9	-2.5
AMUR	comp=E,132nm,0.4s						
LTRZ	Laterza	2.86	232	Pg	Pn	18 20 31.1	-1.4
LTRZ	Laterza comp=E,97nm,0.6s	2.86	232	Pg	Pn	18 20 31.1	-1.4
IGT	Igoumenitsa	2.89	172	P	Pn	18 20 33.5	+0.6
IGT				S	Sn	18 21 09.2	+0.9
IGT	Igoumenitsa	2.89	172	P	Pn	18 20 33.5	+0.6
IGT				S	Sn	18 21 09.2	+0.9
MATE	Matera comp=E,105nm,0.6s	2.90	234	Pg	Pn	18 20 33.9	+0.9
MS1	Monte Sant'Ang	2.95	258	ePn	Pn	18 20 32.8	-0.8
MSAG	Monte S. Angel comp=E,245nm,0.8s	2.97	258	Pg	Pn	18 20 33.3	-0.6
DJES	Djerdap	3.02	40	i Pn	Pn	18 20 32.7	-1.9
DJES				eSg	Sg	18 21 19.9	-2.6
LIT	Litokhoron	3.07	138	P	Pn	18 20 35.6	+0.3
LIT				S	Sn	18 21 12.6	0.0
LIT	Litokhoron	3.07	138	P	Pn	18 20 35.6	+0.3
LIT				S	Sn	18 21 12.6	0.0
MIGL	Miglionico	3.09	236	Pg	Pn	18 20 34.4	-1.2
SRS	Serrai	3.12	113	P	Pn	18 20 35.7	-0.3
SRS				S	Sn	18 21 12.9	-1.0
SRS	Serrai	3.12	113	P	Pn	18 20 35.7	-0.3
SRS				S	Sn	18 21 12.9	-1.0
RGNG	Rignano Grg	3.21	258	Pg	Pn	18 20 36.4	-0.9
RGNG	Rignano Grg	3.21	258	Pg	Pn	18 20 36.4	-0.9
THL	Klokotos Trika	3.29	148	P	Pn	18 20 39.8	+1.4
THL				S	Sn	18 21 19.6	+1.4
THL	Klokotos Trika	3.29	148	P	Pn	18 20 39.8	+1.4
THL				S	Sn	18 21 19.6	+1.4
BZS	Buzias	3.48	22	ePn	Pn	18 20 40.1	-0.8
BZS				eSn	Sn	18 21 20.7	-2.1
BZS	Buzias	3.48	22	⇑iP	Pn	18 20 40.1	-0.8
BZS	Buzias	3.48	22	⇑iP	Pn	18 20 40.1	-0.8
BZS				S	Sn	18 21 19.5	-3.3
BZS				eSn	Sn	18 21 20.7	-2.1
FG2	Serracapriola	3.50	262	Pg	Pn	18 20 40.8	-0.4
FG2	Serracapriola comp=E,70nm,0.3s	3.50	262	Pg	Pn	18 20 40.8	-0.4
MELA	Melanico ??? S	3.54	260	Pg	Pn	18 20 41.4	-0.4
SGTA	Sant Agata di comp=E,98nm,0.9s	3.54	251	Pg	Pn	18 20 42.3	+0.5
SCHR	S. Chirico Rap comp=E,41nm,0.9s	3.56	233	Pg	Pn	18 20 42.3	+0.3
FG5	Orsara di Pugl	3.56	253	Pg	Pn	18 20 42.5	+0.5
FG5	Orsara di Pugl comp=E,40nm,0.4s	3.56	253	Pg	Pn	18 20 42.5	+0.5
MRLC	Muro Lucano	3.62	245	Pg	Pn	18 20 43.5	+0.6
MRLC	Muro Lucano comp=E,40nm,1.0s	3.62	245	Pg	Pn	18 20 43.5	+0.6
MCEL	Monticello comp=E,52nm,0.5s	3.65	237	Pg	Pn	18 20 42.0	-1.2
RHK3	Tenkes	3.66	343	⇑ePn	Pn	18 20 42.6	-0.9
SIRI	Monte Sirino - comp=E,81nm,0.4s	3.69	234	Pg	Pn	18 20 42.0	-1.9
GZR	Gura Zlata	3.69	35	⇑iP	Pn	18 20 44.5	+0.6
GZR	Gura Zlata	3.69	35	⇑iP	Pn	18 20 44.5	+0.6
CIGN	Sant'Elia a Pi	3.71	260	Pg	Pn	18 20 44.1	-0.1
CIGN	Sant'Elia a Pi comp=E,126nm,1.3s	3.71	260	Pg	Pn	18 20 44.1	-0.1
MCRV	Calabrutti - M comp=E,258nm,1.1s	3.82	247	Pg	Pn	18 20 44.9	-0.8
CDRU	Civita di Ruta comp=E,35nm,0.4s	3.87	242	Pg	Pn	18 20 45.4	-1.0
CSSN	Cassano Irpino	3.89	248	Pg	Pn	18 20 46.6	0.0
CSSN	Cassano Irpino comp=E,26nm,0.4s	3.89	248	Pg	Pn	18 20 46.6	0.0
PKSM	Moragy	3.90	348	⇑iP	Pn	18 20 45.5	-1.3
PKSM	Moragy	3.90	348	⇑iP	Pn	18 20 45.5	-1.3
PKSM				eSn	Sn	18 21 30.6	-2.7
MGR	Morigerati	3.91	236	Pg	Pn	18 20 46.3	-0.6
MGR	Morigerati comp=E,61nm,0.5s	3.91	236	Pg	Pn	18 20 46.3	-0.6
TRIV	Trivento	3.95	263	Pg	Pn	18 20 48.1	+0.7
TIP	Timpagrande	3.95	217	ePn	Pn	18 20 45.7	-1.8
TIP				eSn	Sn	18 21 33.1	-1.4
TIP	Timpagrande	3.95	217	ePn	Pn	18 20 45.7	-1.8
TIP				eSn	Sn	18 21 33.1	-1.4
BSSO	Busso comp=E,84nm,1.1s	3.97	259	Pg	Pn	18 20 47.3	-0.3
BULG	Bulgheria - Ca comp=E,85nm,0.5s	4.05	237	Pg	Pn	18 20 48.7	-0.1
PKS2	Kecel	4.12	354	⇓ePn	Pn	18 20 48.7	-1.0
PKS2				eSn	Sn	18 21 41.2	+2.7
SGG	Gregorio Mates	4.16	258	Pg	Pn	18 20 51.0	+0.6
SGG	Gregorio Mates comp=E,77nm,0.5s	4.16	258	Pg	Pn	18 20 51.0	+0.6
LPEL	Lama dei Pelig comp=E,56nm,0.3s	4.18	267	Pg	Pn	18 20 51.2	+0.6
NVLJ	Novalja	4.18	303	ePn	Pn	18 20 51.7	+1.1
NVLJ				Sn	Sn	18 21 43.0	+2.8
NVLJ	Novalja	4.18	303	ePn	Pn	18 20 51.7	+1.1
NVLJ				Sn	Sn	18 21 43.0	+2.8
MIDA	Miranda	4.19	262	Pg	Pn	18 20 51.2	+0.4
MIDA	Miranda comp=E,54nm,0.6s	4.19	262	Pg	Pn	18 20 51.2	+0.4
RNI2	Rionero Sannit	4.25	263	Pg	Pn	18 20 52.2	+0.6
RNI2	Rionero Sannit	4.25	263	Pg	Pn	18 20 52.2	+0.6
VAGA	Valle Agricola comp=E,93nm,0.4s	4.26	259	Pg	Pn	18 20 51.8	+0.1
PKS9	Tamasi	4.33	346	⇓ePn	Pn	18 20 51.5	-1.1
PKS9				eSn	Sn	18 21 40.9	-2.8
CERA	Filignano comp=E,140nm,0.8s	4.38	261	Pg	Pn	18 20 54.2	+0.9
INTR	Introdacqua	4.39	267	Pg	Pn	18 20 53.7	+0.2
INTR	Introdacqua comp=E,93nm,0.8s	4.39	267	Pg	Pn	18 20 53.7	+0.2
RFI	Roccamonfina	4.47	258	Pg	Pn	18 20 55.4	+0.8
RFI	Roccamonfina comp=E,3.0nm,0.3s	4.47	258	Pg	Pn	18 20 55.4	+0.8
SDI	San Donato	4.50	263	Pg	Pn	18 20 55.3	+0.2
SDI	San Donato comp=E,14nm,0.2s	4.50	263	Pg	Pn	18 20 55.3	+0.2
BOJS	Bojanci	4.51	315	i Pn	Pn	18 20 57.0	+1.8
BOJS	Bojanci	4.51	315	i Pn	Pn	18 20 57.0	+1.8
POFI	Posta Fibreno comp=E,90nm,1.5s	4.58	264	Pg	Pn	18 20 56.2	+0.2
MODR	Mondragone comp=E,25nm,1.1s	4.59	256	Pg	Pn	18 20 56.0	-0.3
FAGN	Fagnano comp=E,81nm,0.5s	4.60	270	Pg	Pn	18 20 57.0	+0.6
BEHE	Becsehely	4.61	333	ePn	Pn	18 20 56.5	0.0
VVLD	Villa Vallelon	4.62	266	Pg	Pn	18 20 56.9	+0.3
VVLD	Villa Vallelon comp=E,86nm,0.8s	4.62	266	Pg	Pn	18 20 56.9	+0.3
PKS7	Kunszentmiklos	4.67	355	ePn	Pn	18 20 56.1	-1.2
AQU	L'Aquila	4.73	272	⇓iP	Pn	18 20 59.7	+1.5
AQU	L'Aquila	4.73	272	⇓iP	Pn	18 20 59.7	+1.5
PTQR	Pietraquaria	4.76	268	Pg	Pn	18 20 59.9	+1.3
PTQR	Pietraquaria comp=E,37nm,0.3s	4.76	268	Pg	Pn	18 20 59.9	+1.3
DRGR		4.87	24	⇓iP	Pn	18 20 59.8	-0.2
DRGR		4.87	24	⇓iP	Pn	18 20 59.8	-0.2
DRGR				S	Sn	18 21 54.3	-2.6
VOIR		4.87	50	⇓iP	Pn	18 21 00.4	+0.4
VOIR		4.87	50	⇓iP	Pn	18 21 00.4	+0.4
NRCA	Norcia	4.95	277	Pg	Pn	18 21 01.3	+0.2
NRCA	Norcia comp=E,23nm,0.7s	4.95	277	Pg	Pn	18 21 01.3	+0.2
FIAM	Fiamignano	4.95	271	Pg	Pn	18 21 02.1	+1.0
FIAM	Fiamignano comp=E,55nm,0.8s	4.95	271	Pg	Pn	18 21 02

PTCC	**Patocco-Chiusa**	**6.11 313**	Pg		**Pn**	**18 21 20.6**	**+3.5**
PTCC	**Patocco-Chiusa**	**6.11 313**	Pg		**Pn**	**18 21 20.6**	**+3.5**
VYHS	**Vyhne**	**6.13 354**	*e*PN		**Pn**	**18 21 17.1**	**-0.3**
VYHS			*e*SN		**Sn**	**18 22 29.3**	**+1.1**
VYHS	**Vyhne**	**6.13 354**	*e*Pn		**Pn**	**18 21 17.1**	**-0.3**
KBA	**Koelnbreinsper**	**6.55 318**	⇓*i*Pn		**Pn**	**18 21 23.6**	**+0.4**
KBA			⇓*i*Sn		**Sn**	**18 22 41.2**	**+2.6**
KBA	**Koelnbreinsper**	**6.55 318**	Pn		**Pn**	**18 21 23.6**	**+0.4**
MOA	**Molln**	**6.71 326**	⇑*i*Pn		**Pn**	**18 21 26.6**	**+1.4**
MOA	**Molln**	**6.71 326**	Pn		**Pn**	**18 21 26.6**	**+1.3**
KOLS	**Kolonicke sedl**	**6.76 14**	*e*PN		**Pn**	**18 21 26.3**	**+0.2**
KOLS	**Kolonicke sedl**	**6.76 14**	*e*Pn		**Pn**	**18 21 26.3**	**+0.2**
ABTA	**Abfaltersbach**	**6.78 312**	⇑*i*Pn		**Pn**	**18 21 27.5**	**+1.3**
ABTA			⇑*i*Sn		**Sn**	**18 22 46.2**	**+2.2**
ABTA	**Abfaltersbach**	**6.78 312**	Pn		**Pn**	**18 21 27.5**	**+1.3**
STHS	**Stebnicka Huta**	**7.09 8**	*e*PN		**Pn**	**18 21 28.1**	**-2.5**
STHS	**Stebnicka Huta**	**7.09 8**	*e*Pn		**Pn**	**18 21 28.1**	**-2.5**
APPI	**Appiano**	**7.36 307**	Pg		**Pn**	**18 21 34.9**	**+0.6**
APPI	**Appiano**	**7.36 307**	Pg		**Pn**	**18 21 34.9**	**+0.6**
	comp=Z,154nm,3.3s						
APPI	**Appiano**	**7.36 307**	Pg		**Pn**	**18 21 34.9**	**+0.6**
	comp=Z,154nm,3.3s						
MAGA	**Magasa**	**7.41 300**	Pg		**Pn**	**18 21 35.1**	**+0.2**
	comp=Z,46nm,1.1s						
MAGA	**Magasa**	**7.41 300**	Pg		**Pn**	**18 21 35.1**	**+0.2**
	comp=Z,46nm,1.1s						
WTTA	**Wattenberg**	**7.57 313**	⇑*i*Pn		**Pn**	**18 21 37.6**	**+0.5**
WTTA			⇓*i*Sn		**Sn**	**18 23 06.0**	**+2.5**
WTTA	**Wattenberg**	**7.57 313**	Pn		**Pn**	**18 21 37.6**	**+0.5**
WATA	**Walderalm**	**7.64 313**	⇓*i*Pn		**Pn**	**18 21 38.7**	**+0.6**
WATA			⇓*i*Sn		**Sn**	**18 23 08.7**	**+3.3**
WATA	**Walderalm**	**7.64 313**	Pn		**Pn**	**18 21 38.7**	**+0.6**
MOTA	**Moosalm**	**7.91 312**	⇓*i*Pn		**Pn**	**18 21 44.0**	**+2.2**
MOTA			⇑*i*Sn		**Sn**	**18 23 14.6**	**+2.8**
PGF	**Pioggiola**	**7.98 275**	*e*Pn		**Pn**	**18 21 38.9**	**-3.9**
PGF			*e*Sn		**Sn**	**18 23 04.1**	**-10**
	comp=Z,1.7nm,0.3s						
PGF	**Pioggiola**	**7.98 275**	*e*Pn		**Pn**	**18 21 38.9**	**-3.9**
PGF			*e*Sn		**Sn**	**18 23 04.1**	**-10**
	comp=Z,0.9nm,0.3s						
KHC	**Kasperske Hory**	**8.01 329**	*e*PN		**Pn**	**18 21 45.3**	**+2.1**
KHC			*e*SN		**Sn**	**18 23 12.7**	**-1.7**
KHC			*ex*		x	18 23 24.5	
SBF	**Sospel**	**9.15 283**	*e*Pn		**Pn**	**18 21 54.7**	**-4.2**
SBF			*e*Sn		**Sn**	**18 23 31.9**	**-11**
	comp=Z,1.8nm,0.2s						
SBF	**Sospel**	**9.15 283**	*e*Pn		**Pn**	**18 21 54.7**	**-4.2**
SBF			*e*Sn		**Sn**	**18 23 31.9**	**-11**
	comp=Z,0.9nm,0.2s						
FRF	**La Foret Royal**	**9.71 281**	*e*Pn		**Pn**	**18 22 02.2**	**-4.2**
FRF			*e*Sn		**Sn**	**18 23 45.1**	**-11**
	comp=Z,1.8nm,0.4s						
FRF	**La Foret Royal**	**9.71 281**	*e*Pn		**Pn**	**18 22 02.2**	**-4.2**
FRF			*e*Sn		**Sn**	**18 23 45.1**	**-11**
	comp=Z,0.9nm,0.4s						
MBDF	**Montbardon**	**9.73 288**	*e*Pn		**Pn**	**18 22 03.0**	**-3.8**
MBDF			*e*Sn		**Sn**	**18 23 45.9**	**-11**
	comp=Z,1.5nm,0.4s						
MBDF	**Montbardon**	**9.73 288**	*e*Pn		**Pn**	**18 22 03.0**	**-3.8**
MBDF			*e*Sn		**Sn**	**18 23 45.9**	**-11**
	comp=Z,0.8nm,0.4s						
LMR	**La Mourre**	**9.80 280**	*e*Pn		**Pn**	**18 22 03.6**	**-4.1**
LMR			*e*Sn		**Sn**	**18 23 47.3**	**-11**
	comp=Z,0.8nm,0.4s						
LMR	**La Mourre**	**9.80 280**	*e*Pn		**Pn**	**18 22 03.6**	**-4.1**
LMR			*e*Sn		**Sn**	**18 23 47.3**	**-11**
	comp=Z,0.4nm,0.4s						
LPG	**La Plagne**	**9.90 293**	*e*Pn		**Pn**	**18 22 05.5**	**-3.6**
LPG			*e*Sn		**Sn**	**18 23 49.8**	**-11**
	comp=Z,8.1nm,0.8s						
LPG	**La Plagne**	**9.90 293**	*e*Pn		**Pn**	**18 22 05.5**	**-3.6**
LPG			*e*Sn		**Sn**	**18 23 49.8**	**-11**
	comp=Z,4.1nm,0.8s						
LPL	**La Plagne**	**9.92 293**	*e*Pn		**Pn**	**18 22 05.6**	**-3.7**
LPL			*e*Sn		**Sn**	**18 23 50.1**	**-11**
	comp=Z,2.8nm,0.4s						
LPL	**La Plagne**	**9.92 293**	*e*Pn		**Pn**	**18 22 05.6**	**-3.7**
LPL			*e*Sn		**Sn**	**18 23 50.1**	**-11**
	comp=Z,1.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**10.39 289**	*e*Pn		**Pn**	**18 22 11.6**	**-4.2**
ORIF			*e*Sn		**Sn**	**18 24 01.2**	**-12**
	comp=Z,5.4nm,0.6s						
ORIF	**Oris-en-Rattie**	**10.39 289**	*e*Pn		**Pn**	**18 22 11.6**	**-4.2**
ORIF			*e*Sn		**Sn**	**18 24 01.2**	**-12**
	comp=Z,2.7nm,0.6s						
HINF	**Hinteralfeld**	**10.62 305**	*e*Pn		**Pn**	**18 22 14.8**	**-4.2**
HINF			*e*Sn		**Sn**	**18 24 06.2**	**-12**
	comp=Z,4.3nm,0.6s						
HINF	**Hinteralfeld**	**10.62 305**	*e*Pn		**Pn**	**18 22 14.8**	**-4.2**
HINF			*e*Sn		**Sn**	**18 24 06.2**	**-12**
	comp=Z,2.2nm,0.6s						
CDF	**Champ du Feu**	**10.65 309**	*e*Pn		**Pn**	**18 22 15.4**	**-4.0**
CDF	**Champ du Feu**	**10.65 309**	*e*Pn		**Pn**	**18 22 15.4**	**-4.0**
CABF	**La Chapelle**	**10.65 298**	*e*Pn		**Pn**	**18 22 15.2**	**-4.2**
CABF			*e*Sn		**Sn**	**18 24 07.3**	**-12**
	comp=Z,8.6nm,1.0s						
CABF	**La Chapelle**	**10.65 298**	*e*Pn		**Pn**	**18 22 15.2**	**-4.2**
CABF			*e*Sn		**Sn**	**18 24 07.3**	**-12**
	comp=Z,4.3nm,1.0s						
LOR	**Lormes**	**12.31 299**	*e*Pn		**Pn**	**18 22 37.7**	**-4.3**
LOR			*e*Sn		**Sn**	**18 24 46.8**	**-13**
	comp=Z,2.8nm,0.5s						
LOR	**Lormes**	**12.31 299**	*e*Pn		**Pn**	**18 22 37.7**	**-4.3**
LOR			*e*Sn		**Sn**	**18 24 46.8**	**-13**
	comp=Z,1.4nm,0.5s						

*ISCJB **18** 18:32:11.7±0.9, 10°.90N±0°.06×62°.37W±0°.03, h67km±11km, Error ellipse: s-maj=9.4km s-min=5.4km az=1.2*
*NEIC **18** 18:32:12.6, 10°.96N×62°.35W, h60km, MD2.7(TRN), After TRN.*
*FUNV **18** 18:32:12.8, 10°.83N×62°.39W, h66km, MW2.4*
*TRN **18** 18:32:12.5, 10°.96N×62°.36W, h58km, MD2.7*
ISC 18 18:32:12.1±0.9,**10°.90N**±0°.06×**62°.38W**±0°.03,**h65**km±11km,
n19,σ0**s75**/32,**1C-3D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.29**	**149**	⇓*e*P	**Pn**	**18 32 23.5**	**+0.7**
GUIV				*e*S	**Sn**	**18 32 30.6**	**+0.1**
TCE	**Chacachacare**	**0.65**	**108**	*e*P	**Pn**	**18 32 25.4**	**-0.7**
TCE				*e*S	**Sn**	**18 32 37.2**	**+0.9**
TCE	**Chacachacare**	**0.65**	**108**	*e*P	**Pn**	**18 32 25.4**	**-0.7**
TCE				*e*S	**Sn**	**18 32 37.2**	**+0.9**
ITEV	**Isla Los Testi**	**0.87**	**301**	⇓*i*P	**Pn**	**18 32 29.1**	**+0.4**
ITEV				*e*S	**Sn**	**18 32 42.1**	**+1.0**
CRUV	**Carupano**	**0.88**	**255**	⇓*e*P	**Pn**	**18 32 28.6**	**-0.3**
CRUV				*e*S	**Sn**	**18 32 40.6**	**-0.6**
GUNV	**Guanoco**	**0.92**	**217**	⇑*e*P	**Pn**	**18 32 29.5**	**0.0**
GUNV				*e*S	**Sn**	**18 32 41.1**	**-1.2**
TRN	**Trinidad (W)**	**0.99**	**105**	*e*P	**Pn**	**18 32 30.4**	**+0.1**
TRN				*e*S	**Sn**	**18 32 43.3**	**-0.4**
TRN	**Trinidad (W)**	**0.99**	**105**	*e*P	**Pn**	**18 32 30.4**	**+0.1**
TRN				*e*S	**Sn**	**18 32 43.3**	**-0.4**
TPP	**Pointe-a-Pierr**	**1.08**	**122**	*e*P	**Pn**	**18 32 32.3**	**+0.9**
TPP	**Pointe-a-Pierr**	**1.08**	**122**	*e*P	**Pn**	**18 32 32.3**	**+0.9**
TBH	**Brigand Hill**	**1.35**	**108**	*e*P	**Pn**	**18 32 35.1**	**+0.1**
TBH				*e*S	**Sn**	**18 32 50.8**	**-1.3**
TBH	**Brigand Hill**	**1.35**	**108**	*e*P	**Pn**	**18 32 35.1**	**+0.1**
TBH				*e*S	**Sn**	**18 32 52.8**	**+0.6**
GRW	**Mount Saint Ca**	**1.43**	**29**	*e*P	**Pn**	**18 32 36.5**	**+0.4**
GRW				*e*S	**Sn**	**18 32 52.2**	**-1.9**
GRW	**Mount Saint Ca**	**1.43**	**29**	*e*P	**Pn**	**18 32 36.5**	**+0.4**
GRW				*e*S	**Sn**	**18 32 52.2**	**-1.9**
TPR	**Prospect**	**1.59**	**80**	*e*P	**Pn**	**18 32 38.6**	**+0.4**
TPR	**Prospect**	**1.59**	**80**	*e*P	**Pn**	**18 32 38.6**	**+0.4**
BOT	**Bacolet**	**1.65**	**81**	*e*P	**Pn**	**18 32 38.9**	**-0.1**
BOT	**Bacolet**	**1.65**	**81**	*e*P	**Pn**	**18 32 38.9**	**-0.1**
TOSP	**Speyside**	**1.85**	**78**	*e*P	**Pn**	**18 32 42.7**	**+1.0**
TOSP				*e*S	**Sn**	**18 33 03.4**	**-0.7**

*NEIC **18** 18:59:24.6±0.5, 26°.43S×176°.37W, h35km, mb4.7/8, Error ellipse: s-maj=15.5km s-min=11.7km az=113.0*
*GCMT **18** 18:59:24.6±0.4, 26°.27S×176°.04W, h27km±1km, MW5.0/57, Moment Tensor Solution. s36,c44; s57,c82; Duration: 0 Moment tensor: Scale 10^16Nm; M_0=2.87±.18; M_θθ=-0.18±.14; M_φφ=-2.69±.13; M_rr=1.14±.24; M_θφ=-1.55±.09; M_θr=2.17±.20; Best double couple: M_0=3.99100×10^16 NP1:φ_s=203.00000°, δ26.00000°, λ87.00000°. NP2: φ_s=27.00000°, δ64.00000°, λ92.00000°. Principal axes: T 3.7130, Plg71.0000°, Azm301.0000°; N 0.5570, Plg1.0000°, Azm206.0000°; P -4.2700, Plg19.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **18** 18:59:25.3±1.6, 26°.41S±0°.07×176°.52W±0°.07, h49km±15km, mb4.5/20, MS4.4/12 Error ellipse: s-maj=12.5km s-min=10.1km az=154.5*
*IDC **18** 18:59:26.4±3.6, 26°.48S×176°.46W, h49km±34km, mb4.1/11, mb1 4.3/12, mb1mx4.3/15, mbtmp4.1/12, ML4.7/2, MS4.2/13, Ms1 4.2/13, ms1mx4.1/23, Error ellipse: s-maj=29.8km s-min=20.4km az=180.0*
ISC 18 18:59:26.9±1.3,**26°.44S**±0°.07×**176°.45W**±0°.07,
h50km±12km,**n134**,σ0**s81**/109,**mb4.5**/20,**MS4.4**/12,
36C-35D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.09**	**205**	P	**Pn**	**19 00 12.7**	**-0.4**
	630nm,0.3s,baz=74,slow=12,SNR=46						
RAO				S	**Sn**	**19 00 50.4**	**+1.5**
	147nm,0.3s,baz=266,slow=23,SNR=3.7						
RAO				LR	LR	19 01 23.4	
	comp=Z,912nm,21.1s,baz=356,slow=38						
MSVF	**Nonsavu**	**10.05**	**328**	*e*Pn	**Pn**	**19 01 49.0**	**+0.4**
	59nm,1.1s						
URZ	**Urewera**	**12.98**	**203**	P	**Pn**	**19 02 26.6**	**-1.9**
	0.6nm,0.3s,baz=313,slow=18,SNR=3.9						
URZ				S	**Sn**	**19 04 40.4**	**-11**
	1.0nm,0.3s,baz=284,slow=18,SNR=4.2						
AFI	**Afiamalu**	**13.21**	**20**	P	**Pn**	**19 02 21.8**	**-10**
	6.4nm,0.3s,baz=7.7,slow=9.4,SNR=9.9						
AFI				S	**Sn**	**19 04 36.5**	**-21**
	5.5nm,0.3s,baz=42,slow=22,SNR=5.5						
AFI				LR	LR	19 06 34.4	
	comp=Z,328nm,19.2s,baz=193,slow=32						
AFI	**Afiamalu**	**13.21**	**20**	P	**Pn**	**19 02 21.8**	**-10**
AFI				S	**Sn**	**19 04 36.5**	**-21**
AFI				LR	LR	19 06 34.4	
RAR	**Rarotonga**	**16.12**	**75**	*e*Pn	**Pn**	**19 02 57.0**	**-13**
DZM	**Mont Dzumac**	**16.19**	**282**	*e*LR	LR	19 06 46.6	
	3μm,24.8s						
RPZ	**Rata Peaks**	**20.00**	**207**	P	**P**	**19 03 50.9**	**-4.3**
	0.3nm,0.3s,baz=52,slow=12,SNR=2.5						
PPT	**Papeete**	**26.39**	**76**	*e*LQ		19 09 59.9	
	1μm,24.8s						
PPT				*e*LR	LR	19 11 23.5	
	1μm,25.8s,baz=248						
PPT	**Papeete**	**26.39**	**76**	LR	LR	19 13 42.1	
	comp=Z,454nm,18.4s,MS4.0,baz=235,slow=32						
EIDS	**Eidsvold**	**29.19**	**265**	*e*P	**P**	**19 05 24.7**	**+1.0**
RMQ	**Roma**	**31.09**	**262**	*e*P	**P**	**19 05 42.7**	**+2.2**
	8.5nm,0.7s,mb4.7						
CTA	**Charters Tower**	**34.75**	**273**	*e*P	**P**	**19 06 12.8**	**+0.2**
	8.0nm,0.4s,mb5.0						
CTA	**Charters Tower**	**34.75**	**273**	P	**P**	**19 06 13.3**	**+0.8**
	14nm,0.6s,mb5.1,baz=97,slow=10,SNR=22						
CTA				LR	LR	19 18 36.2	
	comp=Z,718nm,19.1s,MS4.4,baz=105,slow=33						
CTAO	**Charters Tower**	**34.75**	**273**	*e*P	**P**	**19 06 12.9**	**+0.3**
	15nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**36.87**	**251**	P	**P**	**19 06 29.4**	**-1.2**
	0.8nm,0.6s,mb3.7,baz=157,slow=21,SNR=3.4						
STKA				LR	LR	19 20 50.3	
	comp=Z,827nm,18.0s,MS4.6,baz=55,slow=35						
STKA	**Stephens Creek**	**36.87**	**251**	*e*P	**P**	**19 06 29.1**	**-1.5**
	1.8nm,1.3s,mb3.7						
MTSU	**Mount Surprise**	**37.12**	**275**	*e*P	**P**	**19 06 33.4**	**+0.6**
	26nm,0.8s,mb5.1						
RKT	**Rikitea**	**37.69**	**94**	*e*LR	LR	19 16 41.9	
	659nm,26.5s,baz=263						
TAOE	**Nuku Hiva Isla**	**38.57**	**70**	*e*LR	LR	19 16 55.4	
	476nm,26.3s						
ASAR	**Alice Springs**	**44.84**	**262**	P	**P**	**19 07 34.5**	**-1.8**
	3.7nm,0.5s,mb4.5,baz=93,slow=6.6,SNR=85						
WRAB	**Tennant Creek**	**45.47**	**267**	*e*P	**P**	**19 07 39.9**	**-1.4**
	3.9nm,0.7s,mb4.3						
SBA	**Scott Base**	**52.08**	**184**	*e*P	**P**	**19 08 31.9**	**+0.7**
	7.2nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.86**	**266**	*e*P	**P**	**19 08 43.7**	**-1.5**
	9.9nm,1.2s,mb4.6						
MBWA	**Marble Bar**	**58.12**	**261**	*e*P	**P**	**19 09 15.5**	**-0.1**
	27nm,1.4s,mb5.1						
MJAR	**Matsushiro Arr**	**75.81**	**324**	P	**P**	**19 11 06.8**	**-0.9**
	1.1nm,0.6s,mb4.0,baz=160,slow=5.2,SNR=6.0						
MJAR				LR	LR	19 38 54.6	
	comp=Z,119nm,20.8s,MS4.2,baz=90,slow=31						
MAW	**Mawson**	**76.49**	**200**	LR	LR	19 43 36.4	
	comp=Z,196nm,19.3s,MS4.4,baz=302,slow=35						
KSRS	**Korea Array**	**82.26**	**318**	P	**P**	**19 11 43.5**	**+0.7**
	1.5nm,0.6s,mb4.1,baz=126,slow=6.0,SNR=11						
KSRS				LR	LR	19 46 47.3	
	comp=Z,130nm,18.3s,MS4.3,baz=280,slow=34						
EDW2	**Edwards Air Fo**	**82.33**	**45**	⇑P	**P**	**19 11 42.3**	**-1.0**
	baz=82						
PETK	**Petropavlovsk-**	**82.34**	**345**	P	**P**	**19 11 43.9**	**+1.0**
	4.0nm,0.6s,mb4.5,baz=123,slow=5.3,SNR=16						
ISA	**Isabella**	**82.52**	**44**	⇑P	**P**	**19 11 43.6**	**-0.7**
	baz=83						
LRMC	**Laurel Mountai**	**82.89**	**45**	⇑P	**P**	**19 11 45.9**	**-0.3**
	baz=83						
BELC	**Belle Mtn.**	**83.06**	**47**	⇓P	**P**	**19 11 46.7**	**-0.4**
	baz=83						
BC3	**Big Chuckw Mtn**	**83.20**	**47**	⇓P	**P**	**19 11 47.4**	**-0.5**
	baz=83						
GSC	**Goldstone**	**83.34**	**45**	⇑P	**P**	**19 11 47.7**	**-0.9**
	baz=84						
HEC	**Hector,Ludlow**	**83.36**	**46**	⇓P	**P**	**19 11 48.2**	**-0.4**
	baz=84						
MPMC	**Manual Prospec**	**83.39**	**44**	⇓P	**P**	**19 11 48.2**	**-0.5**
	baz=84						
IRM	**Iron Mountain**	**83.71**	**47**	⇓P	**P**	**19 11 50.1**	**-0.4**
	baz=84						
TUQ	**Turquoise Moun**	**83.99**	**46**	⇓P	**P**	**19 11 50.8**	**-1.1**
	baz=84						
GRAC	**Grapevine Rang**	**84.06**	**44**	⇑P	**P**	**19 11 52.5**	**+0.3**
	baz=84						
Z13A	**Yuma Proving G**	**84.12**	**49**	⇓P	**P**	**19 11 52.6**	**+0.1**
	baz=84						
PLCA	**Paso Flores**	**84.19**	**133**	P	**P**	**19 11 53.5**	**+0.4**
	1.9nm,0.9s,mb4.2,baz=315,slow=11,SNR=3.0						
PLCA				LR	LR	19 40 52.3	
	comp=Z,190nm,18.6s,MS4.5,baz=211,slow=30						
U10A	**Ash Meadows, A**	**84.34**	**45**	⇑P	**P**	**19 11 53.0**	**-0.6**
	baz=84						
Y13A	**Salome**	**84.37**	**48**	⇓P	**P**	**19 11 54.4**	**+0.5**
	baz=84						
NVAR	**Mina Array Bea**	**84.40**	**42**	P	**P**	**19 11 53.7**	**-0.1**
	3.3nm,1.0s,mb4.4,baz=221,slow=8.4,SNR=14						
Z14A	**Wintersburg**	**84.70**	**49**	⇓P	**P**	**19 11 56.0**	**+0.6**
	baz=85						
X13A	**Yucca**	**84.84**	**47**	⇑P	**P**	**19 11 56.0**	**-0.2**
	baz=85						
S10A	**Tonopah Range,**	**85.12**	**43**	P	**P**	**19 11 58.0**	**+0.6**
	baz=85,SNR=7.4						
217A	**Green Valley**	**85.24**	**51**	⇑P	**P**	**19 11 57.6**	**-0.6**
	baz=85						
X14A	**Yava**	**85.39**	**48**	⇑P	**P**	**19 12 00.0**	**+1.1**
	baz=86						
U12A	**Valley of Fire**	**85.49**	**46**	⇓P	**P**	**19 11 59.4**	**0.0**
	baz=86						
V13A	**Grand Canyon W**	**85.50**	**46**	⇑P	**P**	**19 11 58.8**	**-0.6**
	baz=86						
R10A	**Warm Springs**	**85.53**	**43**	⇓P	**P**	**19 12 00.1**	**+0.6**
	baz=86						
T11A	**Corn Creek, Al**	**85.55**	**45**	⇑P	**P**	**19 11 59.6**	**-0.1**
	baz=86,SNR=9.8						
318A	**Bisbee**	**85.63**	**52**	⇑P	**P**	**19 12 00.8**	**+0.7**
	baz=86						
W14A	**Seligman**	**85.70**	**47**	⇑P	**P**	**19 12 00.9**	**+0.5**
	baz=86						
117A	**Oracle**	**85.75**	**51**	⇑P	**P**	**19 12 01.0**	**+0.2**
	baz=86						
Q10A	**Clear Creek Ra**	**85.80**	**43**	⇑P	**P**	**19 12 02.1**	**+1.2**
	baz=86						
X15A	**Humboldt**	**85.83**	**48**	⇑P	**P**	**19 12 01.7**	**+0.6**
	baz=86,SNR=5.1						
U13A	**Pakoon Wash**	**85.85**	**46**	⇓P	**P**	**19 12 00.8**	**-0.3**
	baz=86,SNR=6.1						
218A	**Dragoon**	**85.89**	**51**	⇓P	**P**	**19 12 01.5**	**+0.1**
	baz=86						
V14A	**Boquillas Ranc**	**85.94**	**47**	⇑P	**P**	**19 12 01.7**	**+0.1**
	baz=86,SNR=5.1						
Y16A	**Circle Bar Ran**	**85.99**	**49**	⇓P	**P**	**19 12 01.0**	**-0.9**
	baz=86						
319A	**Douglas**	**86.09**	**52**	⇓P	**P**	**19 12 03.3**	**+0.8**
	baz=86						
Y17A	**Roosevelt**	**86.32**	**50**	⇑P	**P**	**19 12 04.5**	**+1.0**
	baz=86						
118A	**Homack Ranch,**	**86.32**	**51**	⇑P	**P**	**19 12 04.4**	**+0.8**
	baz=86						
X16A	**Lo Mia Camp, P**	**86.33**	**49**	⇓P	**P**	**19 12 04.2**	**+0.6**
	baz=86,SNR=5.9						
U14A	**Mt Trumbull**	**86.36**	**46**	⇓P	**P**	**19 12 04.5**	**+0.9**
	baz=86,SNR=5.5						
219A	**White Tail Can**	**86.45**	**52**	⇓P	**P**	**19 12 04.1**	**-0.1**
	baz=87						
S13A	**Holt Ranch, En**	**86.62**	**45**	⇑P	**P**	**19 12 05.5**	**+0.6**
	baz=87,SNR=6.0						
V15A	**Kaibab Nationa**	**86.66**	**47**	⇓P	**P**	**19 12 05.8**	**+0.6**
	baz=87						
119A	**Ashpeak Ranch,**	**86.85**	**51**	⇑P	**P**	**19 12 05.6**	**-0.6**
	baz=87						
Y18A	**Canyon Day Jun**	**86.92**	**50**	⇑P	**P**	**19 12 07.3**	**+0.9**
	baz=87,SNR=6.1						
220A	**Playas Peak, P**	**86.92**	**52**	⇑P	**P**	**19 12 07.7**	**+1.1**
	baz=87,SNR=5.3						
U15A	**North Rim**	**86.94**	**47**	⇑P	**P**	**19 12 07.6**	**+1.1**
	baz=87,SNR=7.0						
WUAZ	**Wupatki**	**87.01**	**48**	⇓P	**P**	**19 12 07.3**	**+0.4**
	baz=87						
O11A	**Cowboy Ranch,**	**87.07**	**42**	⇑P	**P**	**19 12 07.6**	**+0.5**
	baz=87						
P12A	**McGill**	**87.11**	**43**	⇓P	**P**	**19 12 07.6**	**+0.3**
	baz=87						
T15A	**Red Dirt Ranch**	**87.23**	**46**	⇑P	**P**	**19 12 08.7**	**+0.9**
	baz=87						
V17A	**Tonalea, Kykot**	**87.46**	**48**	⇑P	**P**	**19 12 09.3**	**+0.2**
	baz=88,SNR=7.2						
Y19A	**Nutrioso**	**87.56**	**50**	⇓P	**P**	**19 12 09.6**	**0.0**
	baz=88						
P13A	**Bates Ranch, G**	**87.65**	**43**	⇓P	**P**	**19 12 09.2**	**-0.7**
	baz=88						
L10A	**Juniper Basin**	**87.80**	**40**	⇓P	**P**	**19 12 10.7**	**+0.2**
	baz=88						
Q14A	**Sevier Lake (B**	**87.83**	**44**	⇑P	**P**	**19 12 10.1**	**-0.6**
	baz=88,SNR=5.7						
J09A	**Fry Pan Ranch,**	**87.88**	**39**	⇓P	**P**	**19 12 11.0**	**+0.1**
	baz=88						
K10A	**MacKenzie Ranc**	**88.02**	**39**	⇓P	**P**	**19 12 12.0**	**+0.5**
	baz=88						
Y20A	**Horse Springs,**	**88.13**	**51**	⇓P	**P**	**19 12 12.7**	**+0.4**
	baz=88						
MSU	**Marysvale**	**88.24**	**45**	*e*P	**P**	**19 12 10.3**	**-2.4**
	1.7nm,0.9s,mb4.3						
L11A	**Cat Creek Ranc**	**88.27**	**40**	⇑P	**P**	**19 12 13.0**	**+0.2**
	baz=88						
Y21A	**Point of Rocks**	**88.67**	**51**	⇑P	**P**	**19 12 15.5**	**+0.6**
	baz=89						
M13A	**Montello**	**88.72**	**42**	⇓P	**P**	**19 12 14.4**	**-0.5**
	baz=89						
P15A	**Leamington**	**88.80**	**44**	⇓P	**P**	**19 12 15.8**	**+0.5**
	baz=89						
X21A	**Alamocita Cree**	**88.84**	**50**	⇓P	**P**	**19 12 16.4**	**+0.8**
	baz=89,SNR=5.8						
626A	**Big Bend Ranch**	**88.85**	**56**	⇑P	**P**	**19 12 14.2**	**-1.6**
	baz=89						
U19A	**Dine' College,**	**88.90**	**48**	⇓P	**P**	**19 12 15.1**	**-0.7**
	baz=89						
T18A	**Mexican Hat**	**88.93**	**47**	⇓P	**P**	**19 12 16.1**	**+0.1**
	baz=89,SNR=5.4						
TXAR	**Lajitas Array**	**89.09**	**57**	P	**P**	**19 12 16.7**	**-0.2**
	1.0nm,0.8s,mb4.2,baz=225,slow=9.9,SNR=12						
TXAR	**Lajitas Array**	**89.09**	**57**	P	**P**	**19 12 16.7**	**-0.2**
628A	**Black Gap, Mar**	**89.75**	**57**	⇑P	**P**	**19 12 18.6**	**-1.4**
	baz=90						
M15A	**Larsen Ranch,**	**89.81**	**42**	⇑P	**P**	**19 12 19.7**	**-0.3**
	baz=90						
G11A	**Walters Elk Ra**	**90.01**	**38**	⇑P	**P**	**19 12 19.5**	**-1.3**
	baz=90						
ENH	**Enshi**	**90.52**	**304**	*e*P	**P**	**19 12 23.6**	**0.0**
	16nm,1.3s,mb5.2						
Y25A	**Mesa, Roswell**	**90.72**	**52**	⇑P	**P**	**19 12 23.4**	**-1.0**
	baz=91						
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CTAO	Charters Tower	33.76	260	*e*P	P	19 12 57.4 +0.1
	3.2nm,0.7s,mb4.1					
CMSA	Cobar Meteorol	35.46	240	*e*P	P	19 13 11.3 0.0
COEN	Coen	37.40	270	⇓*i*P	P	19 13 28.9 +1.5
STKA	Stephens Creek	38.94	241	P	P	19 13 40.1 +0.5
	4.7nm,0.7s,mb4.1,baz=73,slow=9.5,SNR=7.7					
STKA	Stephens Creek	38.94	241	*e*P	P	19 13 38.9 -0.8
	1.9nm,1.0s,mb3.6					
WRAB	Tennant Creek	44.93	259	*e*P	P	19 14 26.0 -0.7
	4.5nm,0.6s,mb4.2					
ASAR	Alice Springs	45.10	254	P	P	19 14 28.0 0.0
	8.4nm,0.5s,mb4.5,baz=91,slow=8.0,SNR=183					
ASAR				PcP	PcP	19 15 54.3 -1.3
	1.0nm,0.4s,baz=105,slow=3.9,SNR=6.8					
ASAR				S	S	19 20 22.9 -2.0
	0.3nm,0.7s,baz=88,slow=16,SNR=4.3					
KAKA	Kakadu	47.88	269	*e*P	P	19 14 47.7 -1.3
	7.6nm,0.4s,mb4.6					
KAKA	Kakadu	47.88	269	*e*P	P	19 14 47.2 -1.8
FITZ	Fitzroy Crossi	53.34	260	*e*P	P	19 15 28.1 -0.4
	2.4nm,0.3s,mb4.0					
PETK	Petropavlovsk-	73.65	345	P	P	19 17 37.0 +0.1
	1.3nm,0.7s,mb3.6,baz=186,slow=12,SNR=4.2					
NVAR	Mina Array Bea	79.14	44	P	P	19 18 07.3 0.0
	0.5nm,0.7s,mb3.0,baz=229,slow=7.7,SNR=4.7					
TXAR	Lajitas Array	85.69	58	P	P	19 18 40.5 0.0
	0.5nm,0.7s,mb3.3,baz=217,slow=6.1,SNR=5.1					
TXAR	Lajitas Array	85.69	58	P	P	19 18 40.5 0.0
CMAR	Chiang Mai Arr	89.13	290	P	P	19 18 57.6 +0.9
	0.8nm,0.9s,mb3.5,baz=106,slow=3.2,SNR=5.0					
MK31	Makanchi Array	109.27	314	*e*PKPdf	PKiKP	19 24 23.3 -3.1
BVAR	Borovoye Array	116.95	321	PKP	PKPdf	19 24 38.7 -2.3
	0.4nm,0.6s,baz=101,slow=4.6,SNR=2.4					
ARCES	ARCESS Array B	126.26	350	PKP	PKPdf	19 24 56.7 -1.6
	1.7nm,0.8s,baz=6.9,slow=0.6,SNR=7.1					
BUR08	Bucovina Ar. S	144.64	332	*e*PKPdf	PKPdf	19 25 33.1 +0.2
BRTR	Keskin Array B	144.91	315	PKPbc	PKPdf	19 25 33.6 +0.1
	1.3nm,0.7s,baz=136,slow=4.2,SNR=9.0					
CLL	Collm	145.42	346	⇓*i*PKPbc	PKPbc	19 25 34.4 -1.1
	comp=Z,5.0nm,0.7s					
MMAI	Mount Meron Ar	146.33	303	PKPbc	PKPbc	19 25 38.4 -0.2
	comp=Z,3.0nm,0.5s,baz=69,slow=7.6,SNR=9.8					
GERES	GERESS Array B	147.58	345	PKPbc	PKPbc	19 25 40.6 -0.8
	comp=Z,1.2nm,0.6s,baz=32,slow=6.5,SNR=10					

IDC ***18*** *19:34:07.3±1.3, 32°.79N×105°.47E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=52.4km s-min=28.2km az=68.0*

ISCJB ***18*** *19:34:12.6±0.7, 32°.76N±0°.04×105°.22E±0°.07, h33km, mb3.3/3, Error ellipse: s-maj=8.5km s-min=6.2km az=166.1*

ISC 18 19:34:11.9±1.2, 32°.79N±0°.04×105°.24E±0°.05, h14km±8km, n8, σ1.9±1.31/16, mb3.3/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.32	67	Pn	Pn	19 35 05.3	+1.8
XAN				Pg	Pg	19 35 11.1	-4.5
XAN				Sn	Sn	19 35 43.8	+1.0
XAN				Sg	Sg	19 35 57.9	-0.8
XAN				smax			
	comp=N,270nm,0.7s						
XAN				smax			
	comp=E,130nm,0.7s						
LZH	Lanzhou	3.48	341	*e*Pn	Pn	19 35 07.8	+2.1
LZH				Pg	Pg	19 35 17.1	-1.5
LZH				Sn	Sn	19 35 46.9	+0.2
LZH				Sg	Sg	19 36 04.8	+1.1
LZH				smax			
	comp=N,200nm,0.6s						
LZH				smax			
	comp=E,230nm,0.5s						
LZH				LR	LR		
	comp=N,520nm,6.3s						
LZH				LR	LR		
	comp=Z,770nm,7.9s						
GYA	Guiyang	6.43	169	Pg	Pb	19 36 05.1	+1.4
GYA				Sg	Sn	19 37 00.1	+0.5
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,50nm,0.7s						
WHN	Wuhan	8.09	104	P	Pn	19 36 08.9	-0.1
WHN				S	Sn	19 37 39.3	-0.9
CMAR	Chiang Mai Arr	15.36	203	Pn	Pn	19 37 48.0	-0.3
	comp=E,0.1nm,0.3s,baz=10,slow=8.7,SNR=11						
MKAR	Makanchi Array	22.39	315	P	P	19 39 08.2	-1.6
	comp=E,0.6nm,0.6s,mb3.2,baz=113,slow=11,SNR=6.9						
ASAR	Alice Springs	62.45	150	P	P	19 44 31.4	-3.4
	comp=E,0.3nm,0.7s,mb3.5,baz=330,slow=6.8,SNR=5.7						
YKA	Yellowknife Ar	79.80	18	P	P	19 46 17.2	-2.1
	comp=E,0.1nm,0.4s,mb3.1,baz=328,slow=5.5,SNR=2.6						

ISCJB ***18*** *19:44:14.4±0.4, 13°.76N±0°.04×90°.69W±0°.04, h82km±3km, mb4.0/23, Error ellipse: s-maj=8.7km s-min=3.1km az=38.9*

IDC ***18*** *19:44:14.4±0.9, 13°.93N×90°.49W, h70km±7km, mb3.7/12, mb1 3.9/15, mb1mx3.8/28, mbtmp3.8/15, MS3.2/4, Ms1 3.3/4, ms1mx2.9/36, Error ellipse: s-maj=27.6km s-min=10.1km az=47.0*

CASC ***18*** *19:44:14.9±1.9, 13°.70N×90°.72W, h31km±6km, MD4.0, ML3.3, mb4.2(NEIC)*

NEIC ***18*** *19:44:15.7±0.8, 13°.82N×90°.64W, h84km±7km, mb4.2/15, Error ellipse: s-maj=11.1km s-min=7.0km az=212.0*

BJI ***18*** *19:44:16.0, 13°.80N×90°.60W, h95km, mB5.0/2*

ISC 18 19:44:15.6±0.4, 13°.82N±0°.04×90°.68W±0°.04, h74km±3km, h71km±2.7km: pP-P, n183, σ0.98/189, mb4.0/23, 49C-47D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.41	31	⇑*i*P	Pn	19 44 26.7	-1.4
PCG	Pacaya	0.58	6	⇓*e*P	Pn	19 44 28.8	-0.8
FUG	Fuego 3	0.65	345	⇓*i*P	Pn	19 44 28.9	-1.4
FG6		0.77	345	⇓*e*P	Pn	19 44 30.6	-1.0
GCG	Guatemala City	0.78	10	*e*P	Pn	19 44 32.4	+0.7
GCG				*e*S	Sn	19 44 48.9	+5.3
NBG	Las Nubes	0.83	23	⇓*e*P	Pn	19 44 33.4	+1.0
NBG				*e*S	Sn	19 44 47.7	+3.0
RBDL	Robledal	1.00	73	⇓*i*P	Pn	19 44 34.0	-0.3
RTR	El Retiro	1.00	85	*e*P	Pn	19 44 33.8	-0.5
TP2	Tecpan 2	1.02	341	⇓*e*P	Pn	19 44 34.6	0.0
SBLS	San Blas	1.02	89	⇓*i*P	Pn	19 44 33.8	-0.8
SNJE	San Jose	1.04	87	*i*P	Pn	19 44 34.3	-0.5
JAT	Jato	1.06	298	⇑*e*P	Pn	19 44 32.9	-2.2
APG	El Apazote	1.20	10	P	Pn	19 44 36.9	+0.1
	372nm,0.3s,baz=161,slow=5.7,SNR=2324						
APG				S	Sn	19 44 55.6	+2.9
	366nm,0.3s,baz=199,slow=21,SNR=16						
BOQS	Boqueron	1.36	93	⇑*e*P	Pn	19 44 38.3	-0.6
BOQS				*e*S	Sn	19 44 57.1	+0.7
SNET	Serv Nac Est T	1.41	95	*i*P	Pn	19 44 38.9	-0.6
SNET				*e*S	Sn	19 44 57.9	+0.3
MRL	Marmol	1.56	37	⇓*e*P	Pn	19 44 43.1	+1.6
LFRS	El Faro	1.58	97	*e*P	Pn	19 44 41.0	-0.7
LBRS	Las Brisas	1.59	93	*e*P	Pn	19 44 41.4	-0.4
SNVI	San Vicente	1.80	96	*e*P	Pn	19 44 44.3	-0.4
VSM	San Miguel	2.37	99	*e*P	Pn	19 44 53.0	+0.7
CAHU	Cacacuatique	2.39	91	*e*P	Pn	19 44 52.2	-0.5
BLLM	Bellamira	2.40	99	*e*P	Pn	19 44 53.1	+0.4
CNCH	Conchagua	2.81	101	*i*P	Pn	19 44 58.1	-0.3
CNCH				*e*S	Sn	19 45 32.6	+1.3
TGUH	Tegucigalpa,Un	3.31	85	*e*Pn	Pn	19 45 04.9	-0.2
TGUH	Tegucigalpa,Un	3.31	85	*i*P	Pn	19 45 03.5	-1.6
SCX	San Cristobal	3.46	327	*i*P	Pn	19 45 04.6	-2.6
SCX				*i*S	Sn	19 45 49.8	+2.8
CRIN	San Cristobal	3.70	107	*i*P	Pn	19 45 11.2	+0.8
TELN	Telica	3.93	107	*i*P	Pn	19 45 13.7	+0.1
CNGN	Cerro Negro	4.09	108	*e*P	Pn	19 45 15.3	-0.4
CNGN				*e*S	Sn	19 46 03.9	+1.5
MIRN	Miramar	4.10	109	*e*P	Pn	19 45 15.7	-0.1
MOMN	Momotombo	4.26	109	*e*P	Pn	19 45 17.7	-0.4
CSAN		4.45	111	*e*P	Pn	19 45 20.5	-0.2
CSAN				*e*S	Sn	19 46 08.7	-2.5
APYN	Apoyeque	4.50	110	*e*P	Pn	19 45 21.3	0.0
MGAN	Managua	4.62	111	*e*P	Pn	19 45 23.0	0.0
MGAN				*e*S	Sn	19 46 12.1	-3.4
MGAN				AML	AML	19 46 27.5	
	comp=N,63nm,0.5s						
CRUN	El Crucero	4.64	113	*e*P	Pn	19 45 23.5	+0.3
BOAB	BOACO BROADBAN	5.07	105	*i*P	Pn	19 45 28.3	-0.7
CMIG	Matias Romero	5.20	309	P	Pn	19 45 29.6	-1.3
	comp=N,8.7nm,0.3s,baz=104,slow=10,SNR=45						
CMIG				S	Sn	19 46 27.9	-1.7
	comp=N,17nm,0.3s,baz=1.0,slow=19,SNR=6.0						
CMIG				LR	LR	19 47 14.0	
	comp=N,89nm,18.8s,baz=141,slow=34						
CMIG	Matias Romero	5.20	309	*e*P	Pn	19 45 30.6	-0.4
CMIG				*i*S	Sn	19 46 28.2	-1.4
CONN	Concepcion	5.41	114	*i*P	Pn	19 45 36.1	+2.3
HUIG	Huatulco	5.60	291	*i*P	Pn	19 45 37.7	+1.3
HUIG				*i*S	Sn	19 46 35.8	-3.7
VCR	Vista de Mar	6.15	126	*e*P	Pn	19 45 44.2	+0.3
JTS	JuntasAbangare	6.60	121	P	Pn	19 45 49.3	-0.8
	comp=N,2.1nm,0.3s,baz=304,slow=21,SNR=16						
JTS				S	Sn	19 47 01.4	-2.5
	comp=N,1.6nm,0.3s,baz=282,slow=19,SNR=1.7						
JTS				LR	LR	19 48 37.3	
	comp=N,157nm,20.1s,baz=250,slow=40						
JTS	JuntasAbangare	6.60	121	*e*Pn	Pn	19 45 51.6	+1.5
JCR	Jicaral	6.72	125	*e*P	Pn	19 45 53.4	+1.7
TEIG	Tepich	6.77	19	P	Pn	19 45 53.9	+1.5
	comp=N,36nm,0.3s,baz=84,slow=0.0,SNR=181						
PRS1	Puriscal	7.30	121	*e*P	Pn	19 46 02.6	+3.0
LAJ	Bijagual	7.52	121	*e*P	Pn	19 45 59.7	-3.0
PNIG	Pinotepa	7.64	291	*i*P	Pn	19 46 03.6	-0.6
PNIG				*i*S	Sn	19 47 24.7	-4.6
QCR	Quepos	7.73	124	*e*P	Pn	19 46 07.0	+1.5
URSC	Urasca	7.83	120	*e*P	Pn	19 46 08.0	+1.2
BUS	Buena Vista	7.99	121	*e*P	Pn	19 46 11.7	+2.7
BAR1		8.53	121	*e*P	Pn	19 46 18.1	+1.7
628A	Black Gap, Mar	19.26	326	⇓P	Pn	19 48 36.1	+0.2
	baz=19,SNR=7.4						
LRAL	Lakeview Retre	19.42	9	*e*Pn	Pn	19 48 35.9	-1.9
	comp=N,58nm,2.4s						
627A	Terlingua Ranc	19.51	325	⇑P	Pn	19 48 38.3	-0.6
	baz=20						
TXAR	Lajitas Array	19.58	324	P	Pn	19 48 38.6	-1.0
	comp=N,0.4nm,0.3s,baz=146,slow=12,SNR=33						
626A	Big Bend Ranch	20.01	324	⇓P	P	19 48 43.9	+1.6
	baz=20,SNR=19						
527A	Woodward Ranch	20.17	326	⇓P	P	19 48 44.5	+0.4
	baz=20,SNR=5.5						
SDV	Santo Domingo	20.25	102	P	P	19 48 42.8	-2.3
	comp=N,4.5nm,0.6s,baz=296,slow=8.5,SNR=7.5						
SDV	Santo Domingo	20.25	102	P	P	19 48 42.8	-2.3
526A	Mary Lane Ranc	20.37	325	⇑P	P	19 48 46.0	-0.3
	baz=20,SNR=7.8						
GOGA	Godfrey	20.58	17	*e*Pn	P	19 48 48.9	+0.4
	comp=N,32nm,1.4s						
427A	Hayter Ranch,	20.61	327	⇓P	P	19 48 47.6	-1.2
	baz=21,SNR=6.0						
426A	McDonald Obser	20.80	326	⇓P	P	19 48 51.3	+0.4
	baz=21,SNR=6.5						
MIAR	Mount Ida	20.80	353	*e*P	P	19 48 49.9	-1.0
	comp=N,7.7nm,0.8s						
PLAL	Pickwick Lake	21.20	6	*e*Pn	P	19 48 55.2	0.0
	comp=N,6.0nm,0.7s,mb4.0						
326A	Caldwell Ranch	21.28	327	⇓P	P	19 48 56.0	0.0
	baz=21,SNR=13						
425A	Indio Mountain	21.42	324	⇓P	P	19 48 57.7	+0.1
	baz=22,SNR=30						
SWET	Sewanee	21.73	11	*e*P	P	19 49 00.8	-0.1
GDL2	Guadalupe Moun	22.18	328	*e*P	P	19 49 06.0	+0.4
324A	Moseley Ranch,	22.19	325	⇑P	P	19 49 05.5	-0.3
	baz=22,SNR=14						
CPCT	Cooper Cave	22.24	13	*e*P	P	19 49 06.2	0.0
MNTX	Cornudas Mount	22.33	325	*e*P	P	19 49 06.0	-1.2
	comp=N,9.5nm,0.7s,mb4.2						
WVT	Waverly	22.36	6	*e*P	P	19 49 06.1	-1.4
	comp=N,15nm,1.3s,mb4.2						
Z27A	Tatum	22.52	332	⇓P	P	19 49 09.3	+0.1
	baz=23						
TKL	Tuckaleechee C	22.62	15	P	P	19 49 09.4	-0.8
	comp=N,3.2nm,0.5s,mb3.9,baz=189,slow=12,SNR=11						
TKL	Tuckaleechee C	22.62	15	*e*P	P	19 49 09.8	-0.4
125A	Gardner Draw,	22.69	328	⇑P	P	19 49 11.0	0.0
	baz=23						
224A	Corundas Mount	22.70	326	⇓P	P	19 49 10.9	-0.2
	baz=23,SNR=24						
Z26A	Caprock	22.84	330	⇓P	P	19 49 11.4	-1.2
	baz=23,SNR=7.9						
124A	Stringfield Ra	23.14	327	⇓P	P	19 49 15.4	-0.1
	baz=23,SNR=20						
AMTX	Amarillo	23.21	337	*e*P	P	19 49 15.8	-0.4
	comp=N,6.8nm,0.7s,mb4.1						
TZTN	Tazewell	23.52	14	*e*P	P	19 49 17.6	-1.4
	comp=N,9.2nm,0.8s,mb4.2						
Z24A	Sheeppen Canyo	23.58	328	⇓P	P	19 49 20.2	+0.6
	baz=24						
Y25A	Mesa, Roswell	23.72	330	⇑P	P	19 49 20.3	-0.5
	baz=24						
Z23A	Rita Site, Whi	23.98	326	⇑P	P	19 49 23.1	-0.2
	baz=24						
122A	Conniff Cattle	23.99	324	⇓P	P	19 49 24.8	+1.4
	baz=24						
121A	Cookes Peak, D	24.32	323	⇑P	P	19 49 26.3	0.0
	baz=24,SNR=12						
220A	Playas Peak, P	24.32	321	⇓P	P	19 49 26.3	0.0
	baz=24,SNR=11						
Z22A	Elephant Butte	24.38	325	⇓P	P	19 49 27.4	+0.5
	baz=24,SNR=5.4						
WCI	Wyandotte Cave	24.62	8	*e*P	P	19 49 28.2	-0.8
	comp=N,16nm,0.7s,mb4.5						
Z21A	St. Cloud Mine	24.82	324	⇓P	P	19 49 31.0	+0.2
	baz=25						
120A	U Bar Ranch, L	24.83	322	⇓P	P	19 49 30.8	-0.2
	baz=25						
219A	White Tail Can	24.84	320	⇑P	P	19 49 31.7	+0.6
	baz=25,SNR=14						
Y22A	Socorro	24.89	326	⇑P	P	19 49 31.5	-0.1
	baz=25						
Z20A	Nine Sixteen R	25.21	323	⇓P	P	19 49 34.4	0.0
	baz=25,SNR=5.2						
218A	Dragoon	25.32	319	⇓P	P	19 49 35.4	-0.1
	baz=25						
Y21A	Point of Rocks	25.34	325	⇑P	P	19 49 36.3	+0.7
	baz=25,SNR=5.1						
U26A	Atchley Ranch,	25.35	335	⇓P	P	19 49 35.2	-0.5
	baz=25						
119A	Ashpeak Ranch,	25.39	321	⇑P	P	19 49 36.0	-0.1
	baz=26						
ANMO	Albuquerque	25.41	329	P	P	19 49 36.0	-0.3
	comp=N,0.8nm,0.5s,mb3.4,baz=125,slow=12,SNR=4.0						
Y20A	Horse Springs,	25.65	324	⇑P	P	19 49 39.1	+0.7
	baz=26,SNR=9.1						
217A	Green Valley	25.69	317	⇓P	P	19 49 39.3	+0.4
	baz=26						
118A	Homack Ranch,	25.71	320	⇑P	P	19 49 40.0	+0.9
	baz=26,SNR=6.0						
X21A	Alamocita Cree	25.72	326	⇑P	P	19 49 40.6	+1.5
	baz=26,SNR=9.2						
TUC	Tucson	26.02	318	*e*P	P	19 49 41.8	0.0
	comp=N,2.3nm,0.7s,mb3.7						
X20A	Quemado	26.19	325	⇑P	P	19 49 43.3	0.0
	baz=26						
Y19A	Nutrioso	26.19	323	⇑P	P	19 49 43.0	-0.3
	baz=26						
X19A	St. Johns	26.55	324	⇑P	P	19 49 46.6	0.0
	baz=27						
116A	Eloy	26.77	318	⇓P	P	19 49 49.0	+0.4
	baz=27						
214A	Organ Pipe Nat	27.14	315	⇑P	P	19 49 51.6	-0.3
	baz=27						
V17A	Tonalea, Kykot	28.27	324	⇓P	P	19 50 02.2	+0.4
	baz=28						
S19A	Harvey Farm, M	28.94	329	⇓P	P	19 50 08.7	+0.9
	baz=29						
V15A	Kaibab Nationa	29.21	322	⇑P	P	19 50 10.7	+0.5
	baz=29,SNR=7.3						
T17A	Navajo Res., N	29.26	326	⇑P	P	19 50 10.8	+0.1
	baz=29						
S18A	Hurst Farm, Bl	29.34	328	⇓P	P	19 50 11.1	-0.3
	baz=29						
W14A	Seligman	29.35	320	⇑P	P	19 50 11.5	-0.1
	baz=29						
V14A	Boquillas Ranc	29.64	321	⇓P	P	19 50 13.8	-0.4
	baz=30						
U15A	North Rim	29.70	323	⇓P	P	19 50 14.2	-0.4
	baz=30						
BC3	Big Chuckw Mtn	29.94	316	⇑P	P	19 50 17.0	+0.3
	baz=30						
T15A	Red Dirt Ranch	30.16	324	⇓P	P	19 50 18.3	-0.3
	baz=30						
R17A	Hanksville Air	30.26	328	⇓P	P	19 50 19.9	+0.4
	baz=30						
V13A	Grand Canyon W	30.33	320	⇑P	P	19 50 20.5	+0.3
	baz=30						
R16A	Teasdale	30.57	327	⇑P	P	19 50 23.6	+1.4
	baz=31,SNR=5.3						
T14A	Hurricane	30.59	323	⇑P	P	19 50 23.6	+1.1
	baz=31						
U13A	Pakoon Wash	30.68	321	⇓P	P	19 50 24.1	+0.8
	baz=31,SNR=5.7						
GMRC	Granite Mounta	30.73	317	⇓P	P	19 50 24.8	+1.0
	baz=31						
V12A	Nelson	30.79	319	⇑P	P	19 50 25.2	+0.9
	baz=31						
CCUT	Cedar City	31.09	324	*e*P	P	19 50 28.2	+1.4
	comp=N,38nm,2.9s,mb4.6						
MSU	Marysvale	31.11	326	*e*P	P	19 50 28.2	+1.2
S13A	Holt Ranch, En	31.40	323	⇑P	P	19 50 31.1	+1.5
	baz=32,SNR=5.2						
Q14A	Sevier Lake (B	32.05	326	⇑P	P	19 50 36.4	+1.1
	baz=32						
MPMC	Manual Prospec	32.69	317	⇓P	P	19 50 41.0	0.0
	baz=33						
P13A	Bates Ranch, G	32.78	325	⇓P	P	19 50 43.0	+1.3
	baz=33,SNR=7.5						
R11A	Troy Canyon, C	32.92	322	⇑P	P	19 50 44.0	+1.1
	baz=33						
PDAR	Pinedale Array	33.13	334	P	P	19 50 44.5	-0.1
	comp=N,0.4nm,0.5s,mb3.5,baz=133,slow=6.0,SNR=4.4						
PDAR				PcP	PcP	19 53 25.4	-0.9
	comp=N,0.3nm,0.5s,baz=165,slow=7.5,SNR=3.2						
S10A	Tonopah Range,	33.26	321	⇑P	P	19 50 46.4	+0.6
	baz=33,SNR=5.3						
P12A	McGill	33.29	325	⇑P	P	19 50 46.5	+0.4
	baz=33,SNR=5.9						
Q11A	Duckwater	33.29	323	⇓P	P	19 50 46.7	+0.5
	baz=33						
N14A	Grayback Hills	33.34	328	⇑P	P	19 50 46.9	+0.3
	baz=33						
MIV	Mineville/With	33.53	23	*e*P	P	19 50 47.0	-1.1
MIV				*e*ScP	ScP	19 57 11.6	+6.1
Q10A	Clear Creek Ra	33.72	322	⇑P	P	19 50 50.8	+1.0
	baz=34						
M13A	Montello	34.22	328	*e*P	P	19 50 55.0	+0.8
	comp=N,2.3nm,0.5s,mb4.3						
NVAR	Mina Array Bea	34.63	320	P	P	19 50 59.0	+1.3
	comp=N,6.2nm,0.6s,mb4.6,baz=131,slow=8.6,SNR=60						
NVAR				PcP	PcP	19 53 31.1	+0.5
	comp=N,1.4nm,0.6s,baz=143,slow=4.3,SNR=7.5						
M12A	Wells	34.65	327	⇑P	P	19 50 58.4	+0.5
	baz=35,SNR=6.3						
I14A	Mackay	35.78	331	⇑P	P	19 51 08.7	+1.1
	baz=36						
L10A	Juniper Basin	35.95	327	⇑P	P	19 51 09.1	+0.1
	baz=36						
H14A	Leadore	36.27	332	⇓P	P	19 51 12.0	+0.2
	baz=36						
I12A	Atlanta	36.49	330	⇑P	P	19 51 13.8	+0.2
	baz=37,SNR=6.4						
H13A	Challis	36.64	331	⇑P	P	19 51 15.2	+0.3
	baz=37						
I11A	Placerville	36.98	329	⇑P	P	19 51 18.2	+0.4
	baz=37						
OHCM	Honcut	37.17	319	*e*ScP	ScP	19 57 13.0	-5.8
D17A	Six Diamond Ra	37.21	337	⇑P	P	19 51 19.6	-0.1
	baz=37						
LPAZ	La Paz	37.30	143	P	P	19 51 20.6	-0.2
	comp=N,0.6nm,0.5s,mb3.8,baz=2.4,slow=8.4,SNR=3.5						
G12A	Big Creek, Yel	37.57	331	⇓P	P	19 51 22.6	-0.1
	baz=38						
H11A	Donnelly	37.58	330	⇓P	P	19 51 22.5	-0.3
	baz=38						
EGMT	Eagleton	37.61	339	*e*ScP	ScP	19 57 22.9	+2.6
F13A	Darby	37.61	333	⇑P	P	19 51 22.8	-0.3
	baz=38						
I09A	Lost Marbles R	37.93	328	⇑P	P	19 51 25.7	-0.1
	baz=38						
F12A	Elk City	38.01	332	⇓P	P	19 51 26.1	-0.3
	baz=38,SNR=10						
E13A	Victor	38.06	333	⇑P	P	19 51 26.0	-0.8
	baz=38,SNR=5.4						
D13A	Huson	38.68	334	⇑P	P	19 51 31.7	-0.4
	baz=39						
D12A	Red Ives Fores	39.04	333	⇓P	P	19 51 34.3	-0.7
	baz=39						
YBH	Yreka Blue Hor	39.31	321	P	P	19 51 36.3	-1.1
	comp=N,1.9nm,0.6s,mb4.1,baz=65,slow=3.9,SNR=8.3						
YBH				LR	LR	20 09 00.2	
	comp=N,62nm,19.9s,baz=63,slow=38						
YBH	Yreka Blue Hor	39.31	321	P	P	19 51 36.3	-1.1
YBH				LR	LR	20 09 00.2	
H04A	Detroit Lake	40.79	325	⇑P	P	19 51 49.1	-0.5
	baz=41						
C09A	Chrisman Ranch	40.92	332	⇑P	P	19 51 50.3	-0.3
	baz=41						
SIV	San Ignacio	41.63	134	P	P	19 51 56.1	-0.8
	comp=N,2.6nm,0.6s,mb4.1,baz=317,slow=8.4,SNR=18						
SIV				pP	pP	19 52 12.8	-2.2
	comp=N,3.2nm,0.8s,baz=300,slow=9.5,SNR=7.1						
FFC	Flin Flon	41.76	350	*e*P	P	19 51 56.1	-1.3
	comp=N,2.8nm,0.7s,mb4.1						
SCHQ	Schefferville	44.96	19	P	P	19 52 20.7	-2.4
	comp=N,2.8nm,0.5s,mb4.2,baz=261,slow=17,SNR=7.6						
SCHQ				pP	pP	19 52 39.1	-2.3
	comp=N,3.6nm

TAUL				*e*S	Sg	19 52 00.1	+0.9
TAUL				AML	AML	19 52 07.2	
	comp=Z,540nm,0.4s						
SLR	**Silverton**	**1.11**	**49**	*e*P	Pg	19 51 53.0	-0.2
SLR				*e*S	Sg	19 52 08.6	+1.1
SLR				AML	AML	19 52 12.3	
	comp=Z,1μm,0.4s						
SEK	**Senekal**	**1.87**	**173**	*e*P	Pn	19 52 05.3	+0.4
SEK				*e*S	Sn	19 52 30.0	+1.0
SEK				AML	AML	19 52 32.3	
	comp=Z,1μm,0.3s						
SWZ	**Schweizer**	**1.94**	**248**	*e*P	Pn	19 52 05.9	0.0
SWZ				*e*S	Sn	19 52 31.4	+0.6
SWZ				AML	AML	19 52 33.8	
	comp=Z,832nm,0.6s						
LBTB	**Lobatse**	**2.14**	**312**	*e*P	Pn	19 52 09.4	+0.8
LBTB				*e*S	Sn	19 52 36.7	+0.9
LBTB				AML	AML	19 52 51.8	
	comp=Z,171nm,0.5s						
POGA	**Pongola**	**3.91**	**104**	*e*P	Pn	19 52 34.5	+1.5
POGA				*e*S	Sn	19 53 20.4	+0.9
POGA				AML	AML	19 53 37.2	
	comp=Z,132nm,0.4s						
MSNA	**Messina**	**4.77**	**31**	*e*P	Pn	19 52 44.5	-0.3
MSNA				*e*S	Sn	19 53 37.5	-3.2
MSNA				AML	AML	19 54 11.8	
	comp=Z,42nm,0.6s						
UPI	**Upington**	**5.74**	**249**	*e*P	Pn	19 52 59.3	+1.2
UPI				*e*S	Sn	19 54 03.0	-1.6
UPI				AML	AML	19 54 32.7	
	comp=Z,84nm,0.7s						
GRM	**Grahamstown**	**6.86**	**186**	*e*P	Pn	19 53 14.7	+1.2
GRM				*e*S	Sn	19 54 29.5	-2.8
GRM				AML	AML	19 55 17.7	
	comp=Z,29nm,0.5s						
SUR	**Sutherland**	**8.20**	**223**	*e*P	Pn	19 53 33.5	+1.6
SUR				*e*S	Sn	19 55 01.9	-3.2
SUR				AML	AML	19 55 50.7	
	comp=Z,22nm,0.6s						

NIED ***18*** *19:52:00,46°.10N×153°.10E,h5km,Mw4.2 Best double couple: M₀2.45000×10¹⁵ NP1:φs.338.00000°,δ77.00000°, λ.61.00000°. NP2:φs.226.00000°,δ32.00000°,λ.155.00000°.*
ISCJB ***18*** *19:52:23.5±1.0,46°.20N±0°.05×152°.85E±0°.06,h1km±6km, mb4.7/104,MS3.7/13,Error ellipse: s-maj=10.6km s-min=3.7km az=147.1*
SKHL ***18*** *19:52:26.2±1.3,45°.93N×153°.28E,h83km±8km,mb6.1/3, mbh5.4/1,Ms3.9/2,msh5.8/4*
JMA ***18*** *19:52:27.1±0.8,46°.07N×153°.09E,h30km,M4.9*
BJI ***18*** *19:52:28.9,46°.31N×152°.72E,h36km,mB4.8/26,mb4.7/32, Ms4.1/21,Ms7 4.0/21*
SZGRF ***18*** *19:52:30.7,46°.39N×152°.71E,h33km,mb4.7,Kuril Islands, Russia*
NEIC ***18*** *19:52:30.7±0.4,46°.29N×152°.74E,h35km,mb4.6/49,Error ellipse: s-maj=10.0km s-min=5.5km az=152.0*
IDC ***18*** *19:52:31.4±3.0,46°.32N×152°.79E,h41km±25km,mb4.0/20, mb1 4.2/22,mb1mx4.1/27,mbtmp4.1/22,ML4.4/2,MS3.5/7, Ms1 3.5/7,ms1mx3.2/38,Error ellipse: s-maj=19.3km s-min=12.9km az=158.0*
MOS ***18*** *19:52:35.3±0.8,46°.79N×151°.96E,h51km,mb4.8/60,Error ellipse: s-maj=12.3km s-min=5.6km az=109.9*
ISC 18 19:52:27.8±1.1,46°.25N±0°.05×152°.85E±0°.06,h16km±7km, h32km±2.5km:pP-P,n307,σ0°99/326,mb4.5/104,MS3.7/13, 17C-21D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.64**	**256**	*e*PN	**Pn**	**19 53 23.2**	**-0.2**
KUR				*i* S	**Sn**	**19 54 07.0**	**+1.0**
KUR				pmax	pmax		
	comp=N,440nm,0.5s						
KUR				pmax	pmax		
	comp=E,170nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1μm,0.5s						
KUR				smax			
	comp=N,4μm,1.2s						
KUR				smax			
	comp=E,2μm,1.2s						
KUR				smax			
	comp=N,1μm,0.7s						
KUR				smax			
	comp=E,770nm,0.7s						
KUR	**Kuril'sk**	**3.64**	**256**	*e*P	**Pn**	**19 53 23.2**	**-0.2**
KUR				AMB	AMB	19 53 25.0	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	19 53 25.0	
	comp=E,440nm,0.4s						
KUR				AMB	AMB	19 53 25.0	
	comp=E,170nm,0.4s						
KUR				AMB	AMB	19 53 25.0	
	comp=E,1μm,0.4s						
KUR				*i* S	**Sn**	**19 54 07.0**	**+1.0**
KUR				A		19 54 18.4	
	comp=E,4μm,1.2s						
KUR				A		19 54 18.4	
	comp=E,2μm,1.2s						
KUR				A		19 54 21.2	
	comp=E,1μm,0.5s						
KUR				A		19 54 21.2	
	comp=E,680nm,0.5s						
KUR				AMS	AMS	19 54 50.0	
	comp=E,2μm,13.0s						
KUR				AMS	AMS	19 54 50.0	
	comp=E,3μm,13.0s						
KUR				AMS	AMS	19 54 50.0	
	comp=E,2μm,13.0s						
SKR	**Severo-Kuril's**	**4.94**	**25**	*e*PN	**Pn**	**19 53 41.0**	**-0.3**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	**Severo-Kuril's**	**4.94**	**25**	*e*P	**Pn**	**19 53 41.0**	**-0.3**
SKR				AMB	AMB	19 53 44.4	
	comp=Z,30nm,0.5s						
SKR				AMB	AMB	19 53 44.4	
	comp=Z,80nm,0.5s						
SKR				*e*S	**Sn**	**19 54 36.0**	**-2.0**
SKR				A		19 54 46.0	
	comp=Z,120nm,0.5s						
SKR				A		19 54 46.0	
	comp=Z,230nm,0.5s						
SKR				A		19 54 46.0	
	comp=Z,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.42**	**248**	*e*PN	**Pn**	**19 53 47.8**	**-0.1**
YUK				*i* S	**Sn**	**19 54 49.5**	**-0.4**
YUK				pmax	pmax		
	comp=N,200nm,0.4s						
YUK				pmax	pmax		
	comp=Z,700nm,0.4s						
YUK				pmax	pmax		
	comp=E,320nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1μm,0.6s						
YUK				pmax	pmax		
	comp=E,1μm,0.7s						
YUK				smax			
	comp=N,2μm,0.7s						
YUK				smax			
	comp=N,1μm,0.7s						
YUK				smax			
	comp=E,350nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.42**	**248**	*e*P	**Pn**	**19 53 47.8**	**-0.1**
YUK				AMB	AMB	19 53 51.6	
	comp=E,200nm,0.4s						
YUK				AMB	AMB	19 53 51.6	
	comp=E,320nm,0.4s						
YUK				AMB	AMB	19 53 51.6	
	comp=E,700nm,0.4s						
YUK				AMB	AMB	19 53 56.0	
	comp=E,1μm,0.7s						
YUK				AMB	AMB	19 53 56.0	
	comp=E,1μm,0.6s						
YUK				A		19 54 08.3	
	comp=E,2μm,0.7s						
YUK				A		19 54 08.6	
	comp=E,1μm,0.6s						
YUK				A		19 54 08.6	
	comp=E,350nm,0.6s						
YUK				*i* S	**Sn**	**19 54 49.5**	**-0.4**
NEM2	**Nemuro 2**	**5.82**	**243**	P	**Pn**	**19 53 51.0**	**-2.4**
NEM2				*e*S	**Sn**	**19 54 53.5**	**-6.3**
JRA	**Rausu**	**5.94**	**250**	P	**Pn**	**19 53 56.1**	**+1.0**
JNK	**Nakash**	**6.36**	**248**	P	**Pn**	**19 54 00.8**	**0.0**
JAK	**Akkeshi**	**6.67**	**244**	P	**Pn**	**19 54 03.3**	**-1.7**
JAK				*e*S	**Sn**	**19 55 14.6**	**-6.0**
JTKR	**Abashiri--Toko**	**6.73**	**253**	P	**Pn**	**19 54 07.1**	**+1.3**
YSS	**Yuzh-Sakhalins**	**6.99**	**279**	*e*PN	**Pn**	**19 54 12.0**	**+2.5**
YSS				*e*S	**Sn**	**19 55 31.0**	**+2.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax			
	comp=N,20nm,0.8s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.99**	**279**	*e*Pn	**Pn**	**19 54 13.7**	**+4.2**
YSS	**Yuzh-Sakhalins**	**6.99**	**279**	*e*P	**Pn**	**19 54 12.0**	**+2.5**
YSS				AMB	AMB	19 54 15.0	
	comp=Z,30nm,0.8s						
YSS				*e*S	**Sn**	**19 55 31.0**	**+2.3**
YSS				A		19 55 34.0	
	comp=Z,20nm,0.8s						
YSS				*e*LQ		19 55 42.0	
YSS				AMS	AMS	19 56 46.0	
	comp=Z,300nm,15.0s						
YSS				AMS	AMS	19 56 46.0	
	comp=Z,400nm,15.0s						
JMP	**Maruseppu**	**7.08**	**255**	P	**Pn**	**19 54 12.4**	**+1.7**
JAR	**Ashorobuto**	**7.11**	**249**	P	**Pn**	**19 54 11.4**	**+0.3**
JOB	**Onbets**	**7.26**	**246**	P	**Pn**	**19 54 12.3**	**-0.8**
JOB				*e*S	**Sn**	**19 55 29.4**	**-5.7**
JSE	**Soyaes**	**7.32**	**264**	P	**Pn**	**19 54 17.6**	**+3.6**
JKK2	**Kamakawa 2**	**7.54**	**255**	P	**Pn**	**19 54 18.8**	**+1.8**
PEA0B	**Petropavlovsk-**	**7.55**	**23**	*e*Pn	**Pn**	**19 54 16.4**	**-0.7**
PEA0B				*e*Sn	**Sn**	**19 55 54.8**	**+13**
PETK	**Petropavlovsk-**	**7.55**	**23**	P	**Pn**	**19 54 18.1**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=172,slow=11,SNR=44						
PETK				LR	LR	19 57 18.3	
	comp=Z,88nm,19.4s,baz=205,slow=38						
PETK	**Petropavlovsk-**	**7.55**	**23**	PN	**Pn**	**19 54 18.2**	**+1.1**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,89nm,19.4s						
ASAJ	**Asahikawa**	**7.55**	**257**	P	**Pn**	**19 54 19.5**	**+2.3**
ASAJ	**Asahikawa**	**7.55**	**257**	P	**Pn**	**19 54 19.6**	**+2.4**
	comp=Z,11nm,0.3s,baz=85,slow=13,SNR=76						
ASAJ				LR	LR	19 57 05.7	
	comp=Z,403nm,19.2s,baz=184,slow=36						
ASAJ	**Asahikawa**	**7.55**	**257**	PN	**Pn**	**19 54 19.6**	**+2.4**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,403nm,19.2s						
JCH	**Churui**	**7.70**	**245**	P	**Pn**	**19 54 17.6**	**-1.6**
JCH				*e*S	**Sn**	**19 55 39.4**	**-6.7**
JWK2	**Keihoku**	**7.72**	**267**	P	**Pn**	**19 54 24.6**	**+5.2**
PET	**Petropavlovsk**	**7.75**	**27**	*e*PN	**Pn**	**19 54 19.1**	**-0.8**
PET				pmax	pmax		
	comp=Z,14nm,0.4s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PET				MLR	MLR		
	comp=E,300nm,19.0s						
PET				MLR	MLR		
	comp=N,200nm,20.0s						
PET	**Petropavlovsk**	**7.75**	**27**	*e*Pn	**Pn**	**19 54 28.9**	**+9.1**
UGL	**Uglegorsk**	**7.81**	**295**	*e*P	**Pn**	**19 54 24.0**	**+3.3**
UGL				AMB	AMB	19 54 25.0	
	comp=N,59nm,0.6s						
JFR	**Furan**	**7.93**	**251**	P	**Pn**	**19 54 24.1**	**+1.7**
JAB	**Ashibetsu**	**8.03**	**254**	P	**Pn**	**19 54 26.0**	**+2.2**
JEM	**Erimo**	**8.16**	**242**	P	**Pn**	**19 54 24.9**	**-0.6**
ERM	**Erimo**	**8.16**	**242**	*d i* PN	**Pn**	**19 54 25.4**	**-0.1**
ERM	**Erimo**	**8.16**	**242**	*e*Pn	**Pn**	**19 54 25.0**	**-0.4**
TYV	**Tymovskoe**	**8.19**	**308**	*e*P	**Pn**	**19 54 27.8**	**+2.0**
TYV				AMB	AMB	19 54 36.0	
	comp=N,500nm,3.0s						
TYV				AMB	AMB	19 54 36.0	
	comp=N,500nm,3.0s						
TYV				AMB	AMB	19 54 36.8	
	comp=N,20nm,0.8s						
TYV				AMB	AMB	19 54 36.8	
	comp=N,22nm,0.8s						
TYV				AMB	AMB	19 54 36.8	
	comp=N,24nm,0.8s						
TYV				AMS	AMS	19 57 36.0	
	comp=N,900nm,15.0s						
TYV				AMS	AMS	19 57 36.0	
	comp=N,800nm,18.0s						
JBT2	**Biratori 2**	**8.26**	**249**	P	**Pn**	**19 54 26.7**	**-0.2**
JNBK	**Urakawa-nobuka**	**8.26**	**245**	P	**Pn**	**19 54 25.2**	**-1.7**
JEW	**Eniwo**	**8.83**	**251**	P	**Pn**	**19 54 36.4**	**+1.7**
JNB	**Noboribetsu**	**9.27**	**250**	P	**Pn**	**19 54 39.8**	**-0.9**
JKB	**Kayabe**	**9.56**	**247**	P	**Pn**	**19 54 42.9**	**-1.8**
JSH	**Shimam**	**9.84**	**253**	P	**Pn**	**19 54 49.7**	**+1.1**
JYM2	**Yakumo 2**	**9.87**	**250**	P	**Pn**	**19 54 48.0**	**-1.0**
JANG	**Nango**	**10.13**	**239**	P	**Pn**	**19 54 48.1**	**-4.4**
JANG				*e*S	**Sn**	**19 56 32.5**	**-13**
JTM	**Tenmabayashi**	**10.15**	**242**	P	**Pn**	**19 54 49.6**	**-3.2**
JTH	**Tanohata**	**10.21**	**236**	*e*S	**Sn**	**19 56 34.1**	**-14**
JOSM	**Okushiri--Mats**	**10.47**	**251**	P	**Pn**	**19 54 56.6**	**-0.6**
OFUJ	**Ofunato**	**10.91**	**233**	*e*S	**Sn**	**19 56 51.7**	**-13**
JIO	**Ouri**	**11.53**	**232**	P	**Pn**	**19 55 07.3**	**-4.4**
JIO				*e*S	**Sn**	**19 57 04.4**	**-16**
JFK	**Kawauchi**	**12.58**	**229**	P	**Pn**	**19 55 22.3**	**-3.8**
JFK				*e*S	**Sn**	**19 57 31.2**	**-15**
MJAR	**Matsushiro Arr**	**14.64**	**234**	P	**Pn**	**19 55 50.7**	**-3.4**
	comp=N,0.2nm,0.3s,baz=28,slow=13,SNR=9.7						
MJAR				LR	LR	20 01 34.2	
	comp=N,84nm,19.8s,baz=50,slow=37						
MAJO	**Matsushiro**	**14.64**	**234**	*e*P	**Pn**	**19 55 59.8**	**+5.7**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	**Matsushiro**	**14.64**	**234**	*e*P	**Pn**	**19 55 59.8**	**+5.7**
	comp=Z,10.0nm,0.6s						
MAT	**Matsushiro**	**14.64**	**234**	P	**Pn**	**19 55 50.1**	**-4.0**
MAT				*e*S	Sx	19 59 31.2	
MDJ	**Mudanjiang**	**16.40**	**273**	P	**Pn**	**19 56 17.8**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,14nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,83nm,4.8s						
MDJ	**Mudanjiang**	**16.40**	**273**	*e*Pn	**Pn**	**19 56 16.5**	**-0.7**
	comp=Z,14nm,1.0s						
SEY	**Seymchan**	**16.72**	**359**	*c e*P	**Pn**	**19 56 20.9**	**-0.2**
ZEA	**Zeya**	**18.02**	**304**	*e*P	**Pn**	**19 56 36.5**	**-0.8**
CN2	**Changchun**	**19.49**	**273**	*e*P	**Pn**	**19 56 54.4**	**-0.8**
CN2				*e*S	**Sn**	**20 00 31.5**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
KSRS	**Korea Array**	**20.48**	**253**	P	**P**	**19 57 05.2**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=59,slow=11,SNR=14						
KSRS				LR	LR	20 04 05.9	
	comp=Z,88nm,19.6s,MS3.1,baz=264,slow=34						
KSRS	**Korea Array**	**20.48**	**253**	P	**P**	**19 57 05.3**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSRS				MLR	MLR		
	comp=Z,88nm,19.6s,MS3.1						
YAK	**Yakutsk**	**20.65**	**328**	*e*P	**P**	**19 57 05.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				MLR	MLR		
	comp=Z,121nm,14.0s,MS3.4						
YAK				MLR	MLR		
	comp=E,63nm,14.0s,MS3.4						
YAK				MLR	MLR		
	comp=N,92nm,16.0s,MS3.4						
YAK	**Yakutsk**	**20.65**	**328**	*e*P	**P**	**19 57 05.9**	**-0.5**
	comp=N,31nm,0.6s						
BILL	**Bilibino**	**22.92**	**13**	*e*P	**P**	**19 57 29.6**	**-1.1**
BILL				*e*		19 57 56.2	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.2						
BILL	**Bilibino**	**22.92**	**13**	*e*P	**P**	**19 57 31.6**	**+1.0**
	comp=Z,5.1nm,0.7s,mb4.1						
BOD	**Bodaibo**	**26.17**	**310**	*e*P	**P**	**19 57 58.9**	**-2.3**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.7						
BJI	**Beijing**	**27.30**	**270**	P	**P**	**19 58 10.3**	**-1.2**
BJI				S	**S**	**20 02 48.6**	**-1.6**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.6						
BJI				pmax	pmax		
	comp=Z,88nm,7.5s						
BJI				LR	LR		
	comp=N,110nm,15.4s,MS3.9						
BJI				LR	LR		
	comp=E,210nm,15.8s,MS3.9						
BJI				LR	LR		
	comp=Z,120nm,18.1s,MS3.5						
TIXI	**Tiksi**	**27.90**	**344**	*e*P	**P**	**19 58 13.9**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.9s,mb3.7						
TIXI				MLR	MLR		
	comp=Z,171nm,18.0s,MS3.7						
NJ2	**Nanjing**	**29.68**	**254**	*e*P	**P**	**19 58 33.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
HHC	**Hu-ho-hao-te**	**30.15**	**275**	*e*P	**P**	**19 58 37.9**	**+1.0**
HHC				pP	pP	19 58 47.6	+6.0
HHC				sP	sP	19 58 51.6	+8.0
HHC				PP	PP	19 59 37.1	-7.8
HHC				S	**S**	**20 03 33.8**	**-1.3**
HHC				sS	sS	20 03 49.5	+6.5
HHC				SS	SS	20 05 12.9	-30
HHC				ScP	ScP	20 05 17.4	-1.9
HHC				ScS	ScS	20 09 11.0	-3.8
HHC				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,100nm,6.3s						
HHC				LR	LR		
	comp=N,130nm,11.4s,MS4.0						
HHC				LR	LR		
	comp=E,150nm,11.4s,MS4.0						
HHC				LR	LR		
	comp=Z,170nm,11.2s,MS3.9						
ULN	**Ulaanbaatar**	**30.90**	**290**	*e*P	**P**	**19 58 42.4**	**-1.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
ULN	**Ulaanbaatar**	**30.90**	**290**	*e*P	**P**	**19 58 42.4**	**-1.0**
	comp=Z,2.8nm,0.9s,mb4.1						
SONM	**Songino Array**	**31.33**	**290**	P	**P**	**19 58 48.5**	**+1.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=90,slow=7.6,SNR=4.0						
SONM	**Songino Array**	**31.33**	**290**	P	**P**	**19 58 48.5**	**+1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NACB	**Ninganchiao**	**33.38**	**239**	*e*P	**P**	**19 59 00.6**	**-4.9**
	comp=Z,23nm,1.1s,mb5.0						
LZH	**Lanzhou**	**37.73**	**272**	*e*P	**P**	**19 59 43.5**	**+0.9**
LZH				pP	pP	19 59 52.8	+5.4
LZH				sP	sP	19 59 56.5	+7.1
LZH				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,160nm,5.4s						
LZH	**Lanzhou**	**37.73**	**272**	*e*P	**P**	**19 59 43.0**	**+0.4**
LZH				pP	pP	19 59 49.1	+1.7
LZH				sP	sP	19 59 52.5	+3.1
LZH				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,130nm,4.0s						
GTA	**Gaotai**	**38.87**	**279**	*e*P	**P**	**19 59 53.3**	**+1.1**
GTA				pP	pP	20 00 03.0	+5.9
GTA				sP	sP	20 00 07.3	+8.3
GTA				PP	PP	20 01 28.3	+7.1
GTA				S	**S**	**20 05 50.1**	**+0.5**
GTA				sS	sS	20 06 07.3	+10
GTA				SS	SS	20 08 34.6	-6.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
GTA				pmax	pmax		
	comp=Z,80nm,4.2s						
GTA				LR	LR		
	comp=N,71nm,19.9s,MS3.7						
GTA				LR	LR		
	comp=E,84nm,15.2s,MS3.7						
GTA				LR	LR		
	comp=Z,74nm,17.8s,MS3.6						
EGAK	**Eagle**	**39.51**	**38**	*e*P	**P**	**19 59 57.4**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.1						
CD2	**Chengdu**	**40.66**	**266**	P	**P**	**20 00 08.0**	**+0.8**
CD2				pP	pP	20 00 17.8	+5.8
CD2				sP	sP	20 00 21.8	+7.8
CD2				PP	PP	20 01 46.0	+5.2
CD2				S	**S**	**20 06 15.8**	**-0.7**
CD2				sS	sS	20 06 32.0	+7.5
CD2				SS	SS	20 09 12.1	-4.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.7						
CD2				LR	LR		
	comp=N,190nm,7.1s						
CD2				LR	LR		
	comp=Z,140nm,5.3s						
GYA	**Guiyang**	**41.43**	**258**	P	**P**	**20 00 13.3**	**-0.3**
GYA				pP	pP	20 00 22.8	+4.4
GYA				PP	PP	20 01 51.4	+2.1
GYA				PcP	PcP	20 02 10.8	-0.5
GYA				ScP	ScP	20 05 56.4	-4.2
GYA				sS	sS	20 06 41.9	+5.9
GYA				SS	SS	20 09 23.0	-9.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				pmax	pmax		
	comp=Z,80nm,4.8s						
GYA				LR	LR		
	comp=N,410nm,15.9s,MS4.6						
GYA				LR	LR		
	comp=E,430nm,15.4s,MS4.6						
GYA				LR	LR		
	comp=Z,440nm,15.0s,MS4.5						
INK	**Inuvik**	**42.17**	**32**	P	**P**	**20 00 18.4**	**-0.7**
	comp=Z,3.3nm,0.5s,mb4.2,baz=310,slow=7.3,SNR=8.1						
INK	**Inuvik**	**42.17**	**32**	*e*P	**P**	**20 00 18.9**	**-0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	**42.17**	**32**	*e*P	**P**	**20 00 18.9**	**-0.2**
	comp=Z,4.1nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**42.76**	**306**	P	**P**	**20 00 21.8**	**-2.3**
	comp=Z,1.3nm,0.4s,mb4.1,baz=62,slow=6.8,SNR=9.4						
ZALV				PcP	PcP	20 02 14.2	-1.1
	comp=Z,1.0nm,0.5s,baz=70,slow=4.9,SNR=4.5						
ZALV				LR	LR	20 19 20.2	
	comp=Z,130nm,18.6s,MS3.9,baz=46,slow=38						
ZALV	**Zalesovo Beam**	**42.76**	**306**	P	**P**	**20 00 21.8**	**-2.3**
ZALV						20 02 14.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,130nm,18.6s,MS3.9						
KMI	**Kunming**	**44.98**	**260**	P	**P**	**20 00 42.3**	**+0.1**
KMI				pP	pP	20 00 52.0	+4.9
KMI				sP	sP	20 00 55.8	+6.8
KMI				PP	PP	20 02 28.0	+0.7
KMI				S	**S**	**20 07 14.5**	**-5.5**
KMI				sS	sS	20 07 33.5	+5.5
KMI				SS	SS	20 10 29.9	-12
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
KMI				pmax	pmax		
	comp=Z,78nm,6.4s						
KMI				LR	LR		
	comp=N,100nm,15.8s,MS3.9						
KMI				LR	LR		
	comp=E,60nm,16.9s,MS3.9						
KMI				LR	LR		
	comp=Z,78nm,16.9s,MS3.7						
MKAR	**Makanchi Array**	**47.02**	**298**	P	**P**	**20 00 57.0**	**-1.1**
	comp=Z,1.5nm,0.4s,mb4.3,baz=64,slow=6.8,SNR=34						

MKAR PcP PcP 20 02 29.3 -0.8
comp=Z,0.7nm,0.6s,baz=65,slow=2.7,SNR=3.8
MKAR LR LR 20 21 42.1
comp=Z,163nm,18.9s,MS4.0,baz=107,slow=37
MKAR Makanchi Array 47.02 298 P **P** **20 00 57.0 -1.1**
MKAR 20 02 29.3
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,163nm,18.9s
MKAR Makanchi Array 47.02 298 P **P** **20 00 57.0 -1.1**
MKAR PcP PcP 20 02 29.3 -0.8
MKAR LR LR 20 21 42.1
KURK Kurchatov 47.49 304 *ce*P **P** **20 01 00.4 -1.3**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KURK Kurchatov 47.49 304 *e*P **P** **20 00 59.8 -2.0**
comp=Z,4.4nm,0.7s,mb4.5
LSA Lhasa 50.12 273 P **P** **20 01 23.6 +1.4**
LSA Lhasa 50.12 273 *e*P **P** **20 01 23.6 +1.4**
LSA pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
LSA Lhasa 50.12 273 *e*P **P** **20 01 23.6 +1.4**
comp=Z,8.1nm,0.5s,mb5.0
BVAR Borovoye Array 51.04 310 P **P** **20 01 27.6 -1.2**
comp=Z,3.0nm,0.3s,mb4.6,baz=35,slow=7.8,SNR=31
BVAR LR LR 20 24 16.4
comp=Z,114nm,20.6s,MS3.9,baz=139,slow=37
BVAR Borovoye Array 51.04 310 P **P** **20 01 27.6 -1.2**
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR MLR MLR
comp=Z,114nm,20.6s
BRVK Borovoye 51.08 310 *ce*P **P** **20 01 27.1 -2.0**
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BRVK Borovoye 51.08 310 *e*P **P** **20 01 28.0 -1.1**
comp=Z,6.2nm,0.6s,mb4.7
YKA Yellowknife Ar 51.43 36 P **P** **20 01 32.0 +0.4**
comp=Z,0.9nm,0.6s,mb3.9,baz=298,slow=7.1,SNR=12
YKA Yellowknife Ar 51.43 36 P **P** **20 01 32.0 +0.4**
YKA pmax pmax
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 52.08 256 P **P** **20 01 37.5 +0.6**
comp=Z,3.2nm,0.7s,mb4.3,baz=36,slow=7.4,SNR=26
CMAR Chiang Mai Arr 52.08 256 P **P** **20 01 37.6 +0.6**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
ULHL Ulahol 53.02 295 P **P** **20 01 43.2 -0.5**
SNR=11
TKM2 Tokmak 2 53.06 296 *e*P **P** **20 01 43.8 -0.2**
TKM2 pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
TKM2 Tokmak 2 53.06 296 *e*P **P** **20 01 43.8 -0.2**
comp=Z,1.3nm,0.5s,mb4.1
USP Ospenovka 53.55 297 P **P** **20 01 46.9 -0.7**
SNR=7.8
KBK Karagaybulak 53.60 296 P **P** **20 01 48.6 +0.6**
SNR=5.9
KZA Kyzart 53.73 296 P **P** **20 01 49.9 +1.0**
SNR=9.4
AAK Ala-Archa 53.90 297 *ce*P **P** **20 01 50.0 -0.1**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
AAK Ala-Archa 53.90 297 *e*P **P** **20 01 49.8 -0.4**
comp=Z,4.9nm,0.8s,mb4.5
EKS2 Erkin-Say 54.33 297 P **P** **20 01 52.6 -0.6**
SNR=8.5
EKS2 Erkin-Say 54.33 297 *e*P **P** **20 01 52.4 -0.9**
comp=Z,5.5nm,0.8s,mb4.5
AML Almayashu 54.67 296 P **P** **20 01 56.5 +0.7**
SNR=5.1
AML Almayashu 54.67 296 *e*P **P** **20 01 56.1 +0.4**
comp=Z,3.6nm,0.9s,mb4.4
KSH Kashi 54.68 293 *e*P **P** **20 01 59.6 +3.7**
KSH *ep*P pP 20 02 09.8 +9.0
KSH *es*P sP 20 02 13.6 +11
KSH PcP PcP 20 03 00.6 +2.1
KSH *e*PP PP 20 04 04.8 +6.6
KSH ScP ScP 20 06 54.1 -2.1
KSH *e*PcS PcS 20 06 58.1 -0.1
KSH *e*S **S** **20 09 37.8 +2.5**
KSH *es*S sS 20 09 55.4 +12
KSH *e*ScS ScS 20 11 42.6 -1.8
KSH *e*SS SS 20 13 23.1 +5.4
KSH pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KSH pmax pmax
comp=Z,100nm,4.5s
KSH LR LR
comp=N,89nm,4.6s
KSH LR LR
comp=E,67nm,5.9s
KSH LR LR
comp=Z,150nm,5.1s
ARU Arti 55.26 318 *c i*P **P** **20 01 58.2 -1.6**
ARU *e* 20 04 00.4
ARU PPP 20 05 09.9
ARU S **S** **20 09 41.4 -1.2**
ARU SS SS 20 13 21.8 -4.3
ARU pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
ARU Arti 55.26 318 *e*P **P** **20 01 58.2 -1.6**
comp=Z,9.4nm,0.5s,mb5.1
ARCES ARCESS Array B 58.27 341 P **P** **20 02 20.5 -0.5**
comp=Z,2.6nm,0.5s,mb4.5,baz=41,slow=7.5,SNR=28
ARCES ARCESS Array B 58.27 341 P **P** **20 02 20.5 -0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 58.27 341 P **P** **20 02 20.5 -0.5**
ABKAR Akbulak array 58.61 310 *e*P **P** **20 02 22.2 -1.5**
comp=Z,7.0nm,0.4s,mb5.0
KLMR Klimovskoe 60.44 329 *e*P **P** **20 02 34.3 -1.8**
KLMR pmax pmax
comp=Z,29nm,2.0s,mb5.0
SUMG Summit 61.21 4 *e*P **P** **20 02 40.2 -1.0**
comp=Z,20nm,0.9s,mb5.3
FFC Flin Flon 61.24 40 *i* P **P** **20 02 42.9 +1.3**
JOF Joensuu 61.70 334 *e*P **P** **20 02 43.7 -0.9**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
JOF Joensuu 61.70 334 *ep* **P** **20 02 43.7 -0.9**
comp=Z,2.0nm,0.3s,mb4.7
KBL Kabul 62.09 292 *e*P **P** **20 02 46.8 -0.9**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KBL Kabul 62.09 292 *e*P **P** **20 02 46.8 -0.9**
comp=Z,10nm,0.8s,mb5.0
NVAR Mina Array Bea 62.83 62 P **P** **20 02 53.9 +1.3**
comp=Z,0.3nm,0.3s,mb3.9,baz=284,slow=7.3,SNR=3.4
SCO Scoresbysund 63.52 358 *i* P **P** **20 02 57.8 +1.1**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SCO Scoresbysund 63.52 358 *i* P **P** **20 02 57.8 +1.1**
comp=Z,7.5nm,0.9s,mb4.7
KAF Kangasniemi 63.82 335 *e*P **P** **20 02 57.5 -1.3**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 63.82 335 *ep* **P** **20 02 57.5 -1.3**
comp=Z,1.5nm,0.4s,mb4.4
FINES FINESS Array B 64.42 335 P **P** **20 03 01.6 -1.1**
comp=Z,3.7nm,0.4s,mb4.7,baz=32,slow=7.9,SNR=60
FINES FINESS Array B 64.42 335 P **P** **20 03 01.6 -1.1**
FINES pmax pmax
comp=Z,4.0nm,0.4s
PDAR Pinedale Array 65.19 54 P **P** **20 03 07.8 -0.3**
comp=Z,0.4nm,0.7s,mb3.6,baz=320,slow=3.9,SNR=4.3
OBN Obninsk 65.62 326⇑ *e*P **P** **20 03 08.7 -1.9**
OBN *e* 20 05 37.6
OBN *e*S S 20 11 53.3 -1.9
OBN pmax pmax
comp=Z,18nm,1.2s,mb5.0
VSR Storozhevoye 67.39 321 *e*P **P** **20 03 21.2 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,5.0nm,0.8s
NB2 NORSAR Subarra 68.64 341 P **P** **20 03 29.3 -0.4**
comp=Z,5.2nm,0.5s,mb4.7,baz=28,slow=6.5
NOA NORSAR Array B 68.64 341 P **P** **20 03 29.4 -0.3**
comp=Z,5.5nm,0.5s,mb4.7,baz=28,slow=6.5,SNR=36
NOA NORSAR Array B 68.64 341 P **P** **20 03 29.4 -0.3**
NOA pmax pmax
comp=Z,6.0nm,0.5s
NOA NORSAR Array B 68.64 341 P **P** **20 03 29.4 -0.3**
NAO01 NORSAR Array S 68.89 341 *e*P **P** **20 03 30.3 -0.9**
comp=Z,1.6nm,0.3s,mb4.4
IDID Didziasalis 69.09 330 *e*P **P** **20 03 31.8 -0.7**
ISAL Salakas 69.09 331 *e*P **P** **20 03 32.8 +0.2**
IIGN Ignalina 69.23 331 *e*P **P** **20 03 33.0 -0.5**
KIV Kislovodsk 71.02 314 *e*P **P** **20 03 45.2 +0.6**
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,50nm,18.0s,MS3.8
KIV Kislovodsk 71.02 314 *e*P **P** **20 03 45.0 +0.4**
comp=Z,12nm,0.7s,mb4.9
ZEI Tsey 71.27 313 *e*P **P** **20 03 45.6 -0.5**
ZEI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ASAR Alice Springs 71.67 198 P **P** **20 03 48.2 -0.4**
comp=Z,0.6nm,0.5s,mb3.8,baz=11,slow=6.1,SNR=12
ASAR Alice Springs 71.67 198 P **P** **20 03 48.3 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.86 326 P **P** **20 03 48.7 -0.9**
comp=Z,3.1nm,0.3s,mb4.7,baz=35,slow=6.1,SNR=24
AKASG Malin Array Be 71.86 326 P **P** **20 03 48.7 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 71.86 326 *e*P **P** **20 03 47.7 -1.9**
KIEV Kiev 71.88 326 *e*P **P** **20 03 48.3 -1.4**
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KIEV Kiev 71.88 326 *e*P **P** **20 03 48.3 -1.3**
comp=Z,7.3nm,0.6s,mb4.8
GNI Garni 72.72 310 *e*P **P** **20 03 55.3 +0.4**
GNI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 72.72 310 *e*P **P** **20 03 55.9 +1.0**
comp=Z,6.3nm,0.8s,mb4.6
ANN Anapa 72.93 318 *e*P **P** **20 03 55.8 -0.3**
ANN *e**PP pP 20 04 05.4 +4.2
ANN pmax pmax
comp=Z,12nm,0.7s,mb4.9
SCHQ Schefferville 73.84 23 P **P** **20 04 00.8 -0.4**
comp=Z,4.7nm,1.0s,mb4.4,baz=342,slow=6.4,SNR=2.5
SCHQ Schefferville 73.84 23 P **P** **20 04 00.8 -0.4**
OJC Ojcow 75.67 331 *e*P **P** **20 04 11.8 -0.1**
STHS Stebnicka Huta 75.86 330 *e*P **P** **20 04 14.3 +1.3**
STHS pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
STHS Stebnicka Huta 75.86 330 *e*P **P** **20 04 14.3 +1.3**
KOLS Kolonicke sedl 75.90 329 *e*P **P** **20 04 13.6 +0.3**
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS Kolonicke sedl 75.90 329 *e*P **P** **20 04 13.6 +0.3**
BURAR Bucovina Array 75.91 326 ⇓P **P** **20 04 13.7 +0.4**
BURAR Bucovina Array 75.91 326 ⇓*i*P **P** **20 04 13.7 +0.4**
NIE Niedzica 76.18 330 *e*P **P** **20 04 15.6 +0.8**
KSP Ksiaz 76.27 333 *e*P **P** **20 04 15.7 +0.4**
TLCR 76.45 323 ⇓P **P** **20 04 16.6 +0.2**
TLCR 76.45 323 ⇓*i*P **P** **20 04 16.6 +0.2**
TRPA Tarpa 76.48 328⇑*i*P **P** **20 04 17.0 +0.4**
DPC Dobruska-Polom 76.69 333 *e*P **P** **20 04 18.3 +0.6**
DPC AMS AMS 20 30 30.0
comp=Z,100nm,24.5s
CFR Carcaliu 76.74 323 ⇓P **P** **20 04 18.4 +0.3**
CFR Carcaliu 76.74 323 ⇓*i*P **P** **20 04 18.4 +0.3**
VRI Vrincioaia 76.75 325 ⇓P **P** **20 04 18.6 +0.5**
VRI Vrincioaia 76.75 325 ⇓*i*P **P** **20 04 18.6 +0.5**
MORC Moravsky Berou 76.80 332 ⇓P **P** **20 04 18.7 +0.4**
MORC Moravsky Berou 76.80 332 ⇓*i*P **P** **20 04 18.7 +0.4**
CLL Collm 76.85 335 *e*P **P** **20 04 17.9 -0.7**
comp=Z,8.0nm,0.5s,mb4.9
CLL Collm 76.85 335⇑*i*P **P** **20 04 17.9 -0.7**
CLL *e* 20 04 31.0
CLL pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
CLL Collm 76.85 335⇑*i*P **P** **20 04 17.9 -0.7**
comp=Z,8.0nm,0.5s,mb4.9
CLL *i* pP 20 04 23.5 -0.2
CLL *e* 20 04 31.0
CLL Collm 76.85 335⇑*i*P **P** **20 04 17.9 -0.7**
comp=Z,8.0nm,0.5s,mb4.9
CLL *i* (pP) pP 20 04 23.5 -0.2
CLL *i* PcP PcP 20 04 30.9 +1.2
CLL *e*PP PP 20 07 09.0 -1.7
KECS Kecovo 76.92 330 *e*P **P** **20 04 19.8 +0.8**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 76.92 330 *e*P **P** **20 04 19.8 +0.8**
BRG Berggiesshubel 76.96 335 *e*(P) **P** **20 04 20.1 +0.9**
comp=Z,2.5nm,0.7s,mb4.2
BRG Berggiesshubel 76.96 335 *e*P **P** **20 04 20.1 +0.9**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CLZ Clausthal 77.10 337 *e*P **P** **20 04 21.0 +1.0**
comp=Z,4.0nm,0.7s,mb4.5
CLZ Clausthal 77.10 337 *e*P **P** **20 04 21.0 +1.0**
CLZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HARR Harsova 77.22 323 ⇓P **P** **20 04 21.1 +0.3**
HARR Harsova 77.22 323 ⇓*i*P **P** **20 04 21.1 +0.3**
MLR Muntele Rosu 77.37 325 ⇑P **P** **20 04 22.1 +0.5**
MLR Muntele Rosu 77.37 325 ⇑*i*P **P** **20 04 22.1 +0.5**
VYHS Vyhne 77.48 331 *e*P **P** **20 04 22.3 +0.1**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 77.48 331 *e*P **P** **20 04 22.3 +0.1**
VRAC Vranov 77.51 332 ⇑P **P** **20 04 22.3 -0.1**
VRAC Vranov 77.51 332 ⇑*i*P **P** **20 04 22.3 -0.1**
KOLL Kolacno 77.55 331 *e*P **P** **20 04 23.5 +0.9**
KOLL Kolacno 77.55 331 *e*P **P** **20 04 23.5 +0.9**
PRU Pruhonice 77.56 334 *e*P **P** **20 04 23.2 +0.6**
PRU AMS AMS 20 28 20.0
comp=Z,100nm,16.9s
VOIR 77.77 325 ⇓P **P** **20 04 24.7 +0.8**
VOIR 77.77 325 ⇓*i*P **P** **20 04 24.7 +0.8**
MOX Moxa 77.84 336 *e*P **P** **20 04 24.0 -0.1**
comp=Z,7.0nm,1.3s,mb4.4
TXAR Lajitas Array 77.90 60 P **P** **20 04 24.9 0.0**
comp=Z,0.8nm,0.5s,mb3.9,baz=297,slow=3.9,SNR=16
TXAR Lajitas Array 77.90 60 P **P** **20 04 24.9 +0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
ZST Bratislava 78.32 332 *e*P **P** **20 04 27.9 +1.1**
ZST pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ZST Bratislava 78.32 332 *e*P **P** **20 04 27.8 +1.0**
ROTZ Rotzenmuhle 78.45 335 *e*P **P** **20 04 27.9 +0.3**
comp=Z,4.0nm,1.2s,mb4.2
KHC Kasperske Hory 78.61 334 *e*P **P** **20 04 28.5 0.0**
KHC pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KHC Kasperske Hory 78.61 334 *e*P **P** **20 04 28.5 +0.1**
comp=Z,2.4nm,0.5s,mb4.4
KHC Kasperske Hory 78.61 334 *e*P **P** **20 04 28.9 +0.4**
KHC AMS AMS 20 29 30.0
comp=Z,100nm,20.2s
BR131 Keskin Array S 78.63 317 *e*P **P** **20 04 28.9 +0.2**
BRTR Keskin Array B 78.63 317 P **P** **20 04 29.6 +0.8**
comp=Z,4.8nm,0.9s,mb4.4,baz=58,slow=3.5,SNR=27
BRTR Keskin Array B 78.63 317 P **P** **20 04 29.6 +0.9**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
UMR Umm Al-Rimmam 78.73 301 *e*P **P** **20 04 29.5 0.0**
UMR AMb AMB 20 04 30.8
comp=Z,29nm,0.7s,mb5.3
MIB Mutribah 78.77 301 *e*P **P** **20 04 29.9 +0.2**
MIB AMb AMB 20 04 31.1
comp=Z,34nm,0.6s,mb5.5
GRA1 Grafenberg Arr 78.80 336 *e*P **P** **20 04 29.7 +0.2**
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 78.80 336 *e*P **P** **20 04 29.7 +0.2**
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 78.80 336 *e*P **P** **20 04 29.7 +0.2**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 78.80 336 *e*P **P** **20 04 29.7 +0.2**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
WET Wettzell 78.81 335 *e*P **P** **20 04 29.8 +0.3**
comp=Z,3.0nm,0.9s,mb4.2
WET Wettzell 78.81 335 *e*P **P** **20 04 29.8 +0.3**
WET pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
GERES GERESS Array B 78.83 334 P **P** **20 04 29.7 +0.1**
comp=Z,1.6nm,0.5s,mb4.2,baz=34,slow=6.3,SNR=21
GERES GERESS Array B 78.83 334 P **P** **20 04 29.7 +0.1**
GERES pmax pmax
comp=Z,2.0nm,0.5s
BZS Buzias 78.94 327 ⇓P **P** **20 04 30.2 -0.1**
BZS Buzias 78.94 327 ⇓*i*P **P** **20 04 30.2 -0.1**
CSNA Conrad Observa 78.96 332 ⇓*i*P **P** **20 04 31.3 +0.9**
comp=Z,4.1nm,0.6s,mb4.5
KBD Kabd 79.02 301 *e*P **P** **20 04 31.4 +0.4**
KBD AMb AMB 20 04 32.3
comp=Z,14nm,0.6s,mb5.1
TNS Taunus Mts 79.09 338 *e*P **P** **20 04 31.6 +0.6**
comp=Z,9.0nm,0.9s,mb4.7
TNS Taunus Mts 79.09 338 *e*P **P** **20 04 31.6 +0.6**
TNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
QRN Al-Qurain 79.20 300 *e*P **P** **20 04 32.5 +0.4**
QRN AMb AMB 20 04 33.5
comp=Z,20nm,0.5s,mb5.3
NAY Al-Naaiem 79.23 301 *e*P **P** **20 04 32.0 -0.2**
NAY AMb AMB 20 04 34.4
comp=Z,12nm,1.1s,mb4.7
MEM Membach 79.35 339 P **P** **20 04 32.3 -0.2**
comp=Z,4.4nm,0.8s,mb4.4
PKSM Moragy 79.51 330 ⇓P **P** **20 04 33.0 -0.4**
PKSM Moragy 79.51 330 ⇓*i*P **P** **20 04 33.0 -0.4**
BCLA Clavier 79.70 340 P **P** **20 04 34.1 -0.2**
comp=Z,4.7nm,1.2s,mb4.3
RJOB Jochberg 80.09 334 *e*P **P** **20 04 37.0 +0.5**
comp=Z,6.0nm,1.0s,mb4.5
WLF Walferdange 80.19 339 *e*P **P** **20 04 36.9 -0.1**
comp=Z,16nm,1.4s,mb4.8
KBA Koelnbreinsper 80.51 333⇑*i*P **P** **20 04 40.1 +1.3**
comp=Z,12nm,0.9s,mb4.8
BFO Black Forest 80.84 337 *e*P **P** **20 04 40.5 -0.1**
comp=Z,6.0nm,1.0s,mb4.5
BFO Black Forest 80.84 337 *e*P **P** **20 04 40.5 -0.1**
BFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WTTA Wattenberg 80.87 334⇑*i*P **P** **20 04 41.6 +0.9**
comp=Z,6.6nm,0.6s,mb4.8
MOTA Moosalm 80.95 335 ⇓*i*P **P** **20 04 41.7 +0.5**
comp=Z,12nm,1.1s,mb4.8
CDF Champ du Feu 81.05 338 *e*P **P** **20 04 41.7 0.0**
comp=Z,9.8nm,0.9s,mb4.5
CDF Champ du Feu 81.05 338 *e*P **P** **20 04 41.7 0.0**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CDF Champ du Feu 81.05 338 *e*P **P** **20 04 41.7 0.0**
comp=Z,4.9nm,0.9s,mb4.4
ECH Echery 81.26 338 *e*P **P** **20 04 42.5 -0.3**
ECH *e* 20 07 47.3
ECH pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ECH Echery 81.26 338 *e*P **P** **20 04 42.5 -0.3**
comp=Z,7.5nm,0.9s,mb4.6
ECH *e*PP PP 20 07 47.3 -0.2
MEZF Maizieres J'vi 81.54 339 *e*P **P** **20 04 44.5 +0.2**
comp=Z,18nm,0.8s,mb4.8
MEZF Maizieres J'vi 81.54 339 *e*P **P** **20 04 44.5 +0.2**
comp=Z,18nm,0.8s,mb5.1
HAU Haudompre 81.67 338 *e*P **P** **20 04 44.7 -0.3**
comp=Z,6.6nm,0.7s,mb4.4
HAU Haudompre 81.67 338 *e*P **P** **20 04 44.7 -0.3**
HAU pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
HAU Haudompre 81.67 338 *e*P **P** **20 04 44.7 -0.3**
comp=Z,3.3nm,0.7s,mb4.4
HINF Hinteralfeld 81.71 338 *e*P **P** **20 04 45.5 +0.3**
LOR Lormes 82.98 339 *e*P **P** **20 04 51.8 -0.1**
comp=Z,31nm,1.2s,mb4.9
LOR Lormes 82.98 339 *e*P **P** **20 04 51.8 -0.1**
LOR pmax pmax
comp=Z,16nm,1.2s,mb4.9
LOR Lormes 82.98 339 *e*P **P** **20 04 51.8 -0.1**
comp=Z,16nm,1.2s,mb4.9
MMAI Mount Meron Ar 83.01 311 P **P** **20 04 53.2 +1.0**
comp=Z,4.1nm,0.5s,mb4.8,baz=49,slow=7.8,SNR=19
CABF La Chapelle 83.03 338 *e*P **P** **20 04 53.0 +0.9**
comp=Z,11nm,1.0s,mb4.5
CABF La Chapelle 83.03 338 *e*P **P** **20 04 53.0 +0.9**
CABF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
CABF La Chapelle 83.03 338 *e*P **P** **20 04 53.0 +0.9**
comp=Z,5.6nm,1.0s,mb4.5
SSF Saint Saulge 83.26 339 *e*P **P** **20 04 53.2 -0.1**
comp=Z,11nm,1.0s,mb4.5
SSF Saint Saulge 83.26 339 *e*P **P** **20 04 53.2 -0.1**
SSF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
SSF Saint Saulge 83.26 339 *e*P **P** **20 04 53.2 -0.1**
comp=Z,5.4nm,1.0s,mb4.5
AVF Avril sur Loir 83.55 339 *e*P **P** **20 04 54.9 +0.1**
comp=Z,14nm,1.0s,mb4.7
AVF Avril sur Loir 83.55 339 *e*P **P** **20 04 54.9 +0.1**
AVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
AVF Avril sur Loir 83.55 339 *e*P **P** **20 04 54.9 +0.1**
comp=Z,7.1nm,1.0s,mb4.8
SMF Signal de Mont 83.57 339 *e*P **P** **20 04 55.0 +0.1**
comp=Z,34nm,1.1s,mb5.1
SMF Signal de Mont 83.57 339 *e*P **P** **20 04 55.0 +0.1**
SMF pmax pmax
comp=Z,17nm,1.1s,mb5.1
SMF Signal de Mont 83.57 339 *e*P **P** **20 04 55.0 +0.1**
comp=Z,17nm,1.1s,mb5.1
LPL La Plagne 83.86 337 *e*P **P** **20 04 57.2 +0.8**
comp=Z,7.3nm,0.8s,mb4.6
LPL La Plagne 83.86 337 *e*P **P** **20 04 57.2 +0.8**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
LPL La Plagne 83.86 337 *e*P **P** **20 04 57.2 +0.8**
comp=Z,3.7nm,0.8s,mb4.6
LPG La Plagne 83.88 337 *e*P **P** **20 04 56.4 -0.1**
comp=Z,14nm,1.0s,mb4.8
LPG La Plagne 83.88 337 *e*P **P** **20 04 56.4 -0.1**
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LPG La Plagne 83.88 337 *e*P **P** **20 04 56.4 -0.1**
comp=Z,6.8nm,1.0s,mb4.7
BGF Bois d'Agland 83.89 340 *e*P **P** **20 04 56.7 +0.1**
TCF Toulx Ste Croi 84.30 340 *e*P **P** **20 04 58.9 +0.3**
comp=Z,8.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 84.30 340 *e*P **P** **20 04 58.9 +0.3**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 84.30 340 *e*P **P** **20 04 58.9 +0.3**
comp=Z,4.0nm,0.9s,mb4.5
MFF Saint Martin d 84.54 342 *e*P **P** **20 05 00.5 +0.7**
comp=Z,4.1nm,0.6s,mb4.5
MFF Saint Martin d 84.54 342 *e*P **P** **20 05 00.5 +0.7**
MFF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
MFF Saint Martin d 84.54 342 *e*P **P** **20 05 00.5 +0.7**
comp=Z,2.0nm,0.6s,mb4.4
MBDF Montbardon 84.58 336 *e*P **P** **20 04 59.5 -0.6**
ORIF Oris-en-Rattie 84.65 337 *e*P **P** **20 05 01.1 +0.7**
comp=Z,4.5nm,0.5s,mb4.5
ORIF Oris-en-Rattie 84.65 337 *e*P **P** **20 05 01.1 +0.7**
ORIF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
ORIF Oris-en-Rattie 84.65 337 *e*P **P** **20 05 01.1 +0.7**
comp=Z,2.3nm,0.5s,mb4.6
SSB Saint Sauveur 84.67 338 *e*P **P** **20 05 00.7 +0.2**
SSB pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
SSB Saint Sauveur 84.67 338 *e*P **P** **20 05 00.7 +0.2**
comp=Z,5.4nm,1.0s,mb4.6
VIVF Saint-Julien-l 85.03 338 *e*P **P** **20 05 02.9 +0.6**
comp=Z,8.3nm,0.9s,mb4.6
VIVF Saint-Julien-l 85.03 338 *e*P **P** **20 05 02.9 +0.6**
VIVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 85.03 338 *e*P **P** **20 05 02.9 +0.6**
comp=Z,4.2nm,0.9s,mb4.6
CAF Calviac 85.61 340 *e*P **P** **20 05 06.1 +0.8**
comp=Z,4.1nm,0.6s,mb4.5
CAF Calviac 85.61 340 *e*P **P** **20 05 06.1 +0.8**
CAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
CAF Calviac 85.61 340 *e*P **P** **20 05 06.1 +0.8**
comp=Z,2.0nm,0.6s,mb4.5
LFF La Frestale 85.92 341 *e*P **P** **20 05 06.6 -0.2**
comp=Z,3.2nm,0.6s,mb4.5
LFF La Frestale 85.92 341 *e*P **P** **20 05 06.6 -0.2**

LFF				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.5							
LFF	**La Frestale**	**85.92**	**341**	*eP*	**P**		**20 05 06.6**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.4							
EPF	**Esparros**	**87.81**	**340**	*eP*	**P**		**20 05 17.0**	**+1.0**
	comp=Z,1.7nm,0.4s,mb4.3							
EPF	**Esparros**	**87.81**	**340**	*eP*	**P**		**20 05 17.0**	**+1.0**
EPF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.4							
EPF	**Esparros**	**87.81**	**340**	*eP*	**P**		**20 05 17.0**	**+1.0**
	comp=Z,0.9nm,0.4s,mb4.3							
TORD	**Torodi Ar. Bea**	**115.43**	**329**	PKP	PKPdf		20 11 07.7	-1.4
	comp=Z,0.1nm,0.4s,baz=90,slow=0.6,SNR=5.4							
PLCA	**Paso Flores**	**148.34**	**96**	PKPbc	PKPbc		20 12 12.6	-0.2
	comp=Z,5.5nm,1.1s,baz=208,slow=6.6,SNR=4.2							
CPUP	**Villa Florida**	**148.87**	**61**	PKPbc	PKPbc		20 12 13.8	-0.8
	comp=Z,1.0nm,0.8s,baz=250,slow=18,SNR=5.0							
CPUP	**Villa Florida**	**148.87**	**61**	PKPbc	PKPbc		20 12 13.8	-0.8

JSN 18 20:04:39.1±0.8, 19°.53N×76°.19W, h2km±118km, MD4.2, 3C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**1.40**	**187**	⇑*iP*	Pn	20 05 04.2	-1.4
BNJ	**Bonny Gate**	**1.40**	**211**	⇑*iP*	Pn	20 05 04.0	-1.7
GWJ	**Greenwich**	**1.54**	**200**	⇓*iP*	Pn	20 05 05.7	-1.7
STH	**Stony Hill**	**1.56**	**202**	⇓*eP*	Pn	20 05 06.0	-1.8
STH				*eS*	Sn	20 05 25.8	-2.8
HOJ	**Hope**	**1.61**	**199**	⇓*iP*	Pn	20 05 06.1	-2.4
PCJ	**Portland Cotta**	**2.00**	**208**	⇓*iP*	Pn	20 05 12.7	-1.2
PCJ				*eS*	Sn	20 05 37.7	-1.8
MCJ	**Malvern**	**2.14**	**222**	⇑*iP*	Pn	20 05 14.2	-1.6

*ISK **18** 20:05:51.4, 37°.02N×29°.16E, h10km, MD3.0*
*ISCJB **18** 20:05:52.3±0.5, 37°.00N±0°.02×29°.18E±0°.03, h6km±5km, Error ellipse: s-maj=4.1km s-min=3.8km az=12.0*
*CSEM **18** 20:05:52.3±0.2, 37°.00N×29°.18E, h8km, MD3.0, Error ellipse: s-maj=3.4km s-min=3.0km az=16.0*
*DDA **18** 20:05:52.9, 37°.01N×29°.20E, h7km±5km, Md2.9*
ISC 18 20:05:52.8±0.4, 37°.00N±0°.03×29°.18E±0°.03, h11km±4km, n37, σ0°.94/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**59**	*e*PG	**Pg**	**20 05 57.8**	**-1.0**
GLHS				*e*SG	**Sg**	**20 06 02.8**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**59**	*e*Pg	**Pg**	**20 05 57.8**	**-1.0**
GLHS				*e*Sg	**Sg**	**20 06 02.8**	**0.0**
FETY	**Fethiye**	**0.38**	**192**	*e*PG	**Pg**	**20 05 59.3**	**-0.9**
FETY				*e*SG	**Sg**	**20 06 05.4**	**+0.2**
FETY	**Fethiye**	**0.38**	**192**	*e*Pg	**Pg**	**20 05 59.3**	**-0.9**
FETY				*e*Sg	**Sg**	**20 06 05.4**	**+0.2**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**20 05 59.6**	**-0.7**
GOLH				*i* S	**Sg**	**20 06 06.3**	**+0.7**
GOLH	**Golhisar**	**0.39**	**52**	*i* P	**Pg**	**20 05 59.7**	**-0.7**
GOLH				*i* S	**Sg**	**20 06 06.3**	**+0.8**
TURN	**Turunc**	**0.48**	**254**	*e*P	**Pg**	**20 06 07.2**	**+5.1**
TURN				*i* S	**Sg**	**20 06 19.1**	**+11**
ELL	**Elmali**	**0.64**	**113**	*e*PG	**Pg**	**20 06 04.6**	**-0.5**
ELL				*e*SG	**Sg**	**20 06 14.1**	**+0.6**
ELL	**Elmali**	**0.64**	**113**	*e*Pg	**Pg**	**20 06 04.6**	**-0.5**
ELL				*e*Sg	**Sg**	**20 06 14.1**	**+0.6**
DNZL	**Cakiroluk**	**0.69**	**351**	*e*P	**Pg**	**20 06 06.7**	**+0.5**
DNZL				*i* S	**Sg**	**20 06 16.3**	**+1.0**
DNZL	**Cakiroluk**	**0.69**	**351**	*e*P	**Pg**	**20 06 06.7**	**+0.5**
DNZL				*i* S	**Sg**	**20 06 16.3**	**+1.0**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**20 06 06.5**	**-0.4**
YER				*e*SG	**Sg**	**20 06 16.5**	**+0.1**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**20 06 06.5**	**-0.4**
YER				*e*Sg	**Sg**	**20 06 16.5**	**+0.1**
DENT	**Denizli**	**0.76**	**351**	*e*PG	**Pg**	**20 06 05.5**	**-2.0**
DENT	**Denizli**	**0.76**	**351**	*e*Pg	**Pg**	**20 06 05.5**	**-2.0**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**20 06 08.9**	**-0.1**
AKAS				*i* S	**Sg**	**20 06 21.5**	**+1.6**
AKAS	**Kas**	**0.84**	**156**	*i* P	**Pg**	**20 06 08.9**	**-0.1**
AKAS				*i* S	**Sg**	**20 06 21.5**	**+1.6**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pn**	**20 06 14.3**	**-0.7**
MLSB				*e*SN	**Sn**	**20 06 29.1**	**-1.7**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pn**	**20 06 14.3**	**-0.7**
MLSB				*e*Sn	**Sn**	**20 06 29.1**	**-1.7**
BCK	**Bucak**	**1.22**	**67**	*e*PN	**Pn**	**20 06 15.1**	**-0.6**
BCK	**Bucak**	**1.22**	**67**	*e*Pn	**Pn**	**20 06 15.1**	**-0.6**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pn**	**20 06 17.0**	**+1.1**
AYDN				*i* S	**Sb**	**20 06 33.1**	**+1.2**
AYDN	**Tasoluk**	**1.23**	**303**	*i* P	**Pn**	**20 06 17.0**	**+1.1**
AYDN				*i* S	**Sb**	**20 06 33.1**	**+1.2**
KHL	**Karahalli**	**1.35**	**12**	*e*PN	**Pn**	**20 06 16.2**	**-1.4**
KHL	**Karahalli**	**1.35**	**12**	*e*Pn	**Pn**	**20 06 16.2**	**-1.4**
ISP	**Isparta**	**1.35**	**51**	*e*PN	**Pn**	**20 06 16.9**	**-0.7**
ISP	**Isparta**	**1.35**	**51**	*e*Pn	**Pn**	**20 06 16.9**	**-0.7**
KHAL	**Karahalli**	**1.39**	**10**	*e*P	**Pn**	**20 06 19.3**	**+1.2**
KHAL				*i* S	**Sb**	**20 06 37.9**	**+1.4**
KHAL	**Karahalli**	**1.39**	**10**	*e*P	**Pn**	**20 06 19.3**	**+1.2**
KHAL				*i* S	**Sb**	**20 06 37.9**	**+1.4**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**20 06 19.5**	**+1.3**
BDRM				*i* S	**Sn**	**20 06 36.6**	**+0.1**
BDRM	**Kayabasi**	**1.39**	**273**	*i* P	**Pn**	**20 06 19.5**	**+1.4**
BDRM				*i* S	**Sn**	**20 06 36.6**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN	**Pn**	**20 06 19.4**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn	**Pn**	**20 06 19.4**	**-0.7**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*PN	**Pn**	**20 06 20.0**	**-0.6**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*Pn	**Pn**	**20 06 20.0**	**-0.6**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**20 06 36.0**	**+0.6**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**20 06 36.1**	**+0.6**

*IDC **18** 20:11:36.2±3.5, 25°.04S×68°.87W, h0km, mb4.1/1, mb1 3.9/2, mb1mx3.6/14, mbtmp3.8/2, ML3.8/1, Error ellipse: s-maj=113.0km s-min=57.5km az=71.0*
*ISCJB **18** 20:11:50.3±3.0, 24°.3S±0°.3×69°.1W±0°.4, h117km±40km, Error ellipse: s-maj=69.2km s-min=21.2km az=33.4*
*GUC **18** 20:11:51.3±0.7, 24°.22S×68°.93W, h36km±5km, ML3.6*
ISC 18 20:11:50.9±2.3, 24°.3S±0°.2×69°.0W±0°.3, h108km±32km, n9, σ0°.47/11, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**1.40**	**296**	⇑*iP*	**Pn**	**20 12 16.7**	**+0.4**
ANCH				*i* S	**Sn**	**20 12 35.5**	**-0.2**
ANCH				AML	AML	20 12 38.1	
	comp=E,5μm,0.1s						
CEN1	**Los Morros**	**1.40**	**310**	⇓*iP*	**Pn**	**20 12 15.7**	**-0.7**
CEN1				*i* S	**Sn**	**20 12 34.9**	**-0.8**
CEN1				AML	AML	20 12 40.2	
	comp=E,988nm,0.6s						
MECH	**Mejillones**	**1.76**	**312**	*e*P	**Pn**	**20 12 21.2**	**+0.4**
MECH				⇓*iP*		20 12 21.2	
MECH				*i* S	**Sn**	**20 12 44.1**	**+0.6**
MECH				AML	AML	20 12 49.0	
	comp=N,877nm,0.3s						
PECH	**Pedro de Valdi**	**1.80**	**341**	⇑*iP*	**Pn**	**20 12 21.6**	**+0.4**
PECH				*i* S	**Sn**	**20 12 44.1**	**-0.2**
PECH				AML	AML	20 12 46.1	
	comp=E,985nm,0.4s						
MACH	**Maria Elena**	**2.20**	**342**	*e*P	**Pn**	**20 12 26.9**	**+0.5**
LPAZ	**La Paz**	**8.02**	**6**	Pn	**Pn**	**20 13 44.5**	**-0.3**
	comp=E,0.4nm,0.3s,baz=181,slow=6.9,SNR=7.7						
TORD	**Torodi Ar. Bea**	**78.42**	**70**	P	**P**	**20 23 39.9**	**-0.2**
	comp=E,0.9nm,0.5s,baz=254,slow=5.1,SNR=15						
ZALV	**Zalesovo Beam**	**144.52**	**27**	PKPbc	PKPdf	20 31 13.7	-0.5
	comp=E,0.8nm,0.5s,baz=321,slow=4.7,SNR=4.3						
MKAR	**Makanchi Array**	**147.93**	**38**	PKPbc	PKPbc	20 31 24.1	+0.7
	comp=E,0.3nm,0.5s,baz=285,slow=2.3,SNR=5.4						

*BJI **18** 20:17:46.5, 67°.37N×163°.58W, h5km, mB4.9/3, mb4.7/9, Ms4.2/4, Ms7 4.0/4*
*NEIC **18** 20:17:48.6, 66°.46N×163°.78W, h1km, ML4.1(AEIC), After AEIC.*
*ISCJB **18** 20:17:49.3±0.3, 66°.34N±0°.05×163°.57W±0°.07, h10km, mb3.9/16, Error ellipse: s-maj=7.6km s-min=4.0km az=0.1*
*IDC **18** 20:17:52.0±0.7, 66°.57N×163°.82W, h0km, mb3.6/12, mb1 3.9/15, mb1mx3.7/30, mbtmp3.7/15, ML4.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/34, Error ellipse: s-maj=22.0km s-min=12.6km az=32.0*
ISC 18 20:17:51.4±0.3, 66°.37N±0°.05×163°.68W±0°.07, h10km, n44, σ1°.26/48, mb3.9/16, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNA	**Tin City**	**1.92**	**247**	P	**Pn**	**20 18 22.2**	**-1.8**
TNA				S	**Sn**	**20 18 48.1**	**0.0**
GCSA	**Galena City Sc**	**3.26**	**117**	P	**Pn**	**20 18 42.1**	**-0.4**
GCSA				S	**Sn**	**20 19 24.1**	**+2.8**
IM3	**Indian Mountai**	**4.05**	**91**	P	**Pn**	**20 18 52.5**	**-0.8**
GAMB	**Gambell**	**4.27**	**236**	P	**Pn**	**20 18 55.0**	**-1.4**
GAMB				S	**Sn**	**20 19 48.1**	**+1.9**
TTA	**Tatalina**	**4.77**	**133**	*e*P	**Pn**	**20 19 02.8**	**-0.4**
COLD	**Coldfoot**	**5.40**	**75**	P	**Pn**	**20 19 10.5**	**-1.3**
CHUM	**Lake Minchumin**	**5.41**	**112**	P	**Pn**	**20 19 12.1**	**+0.2**
PPLA	**Purkeypile**	**6.04**	**120**	P	**Pn**	**20 19 20.7**	**+0.1**
KTH	**Kantishna Hill**	**6.11**	**112**	*e*Pn	**Pn**	**20 19 21.2**	**-0.3**
SVW2	**Sparrevohn**	**6.32**	**142**	*e*P	**Pn**	**20 19 25.2**	**-0.2**
TRF	**Thorofare Moun**	**6.40**	**111**	P	**Pn**	**20 19 25.6**	**+0.1**
COLA	**College**	**6.72**	**96**	P	**Pn**	**20 19 29.3**	**-0.7**
MCK	**McKinley**	**6.77**	**106**	P	**Pn**	**20 19 30.5**	**-0.1**
SKT	**Skwentna**	**6.89**	**124**	P	**Pn**	**20 19 32.7**	**+0.5**
IL1	**Eielson Array**	**7.14**	**95**	P	**Pn**	**20 19 35.5**	**-0.3**
BM3	**Burnt Mountain**	**7.57**	**73**	P	**Pn**	**20 19 39.9**	**-1.7**
RSO	**Redoubt South**	**7.68**	**135**	*e*Pn	**Pn**	**20 19 42.1**	**-1.0**
PMR	**Palmer**	**7.98**	**120**	*e*Pn	**Pn**	**20 19 46.2**	**-1.0**
	12nm,0.7s						
SML	**Sawmill**	**8.12**	**117**	P	**Pn**	**20 19 47.9**	**-1.2**
MENT	**Mentasta**	**9.21**	**103**	*e*P	**Pn**	**20 20 04.9**	**+0.9**
EGAK	**Eagle**	**9.45**	**89**	*e*Pn	**Pn**	**20 20 07.6**	**+0.3**
	8.4nm,1.0s						
EGAK				*e*Sn	**Sn**	**20 22 11.5**	**+18**
BCA3	**Beaver Creek A**	**9.91**	**99**	P	**Pn**	**20 20 11.8**	**-1.8**
KDAK	**Kodiak Island**	**10.04**	**144**	Pn	**Pn**	**20 20 17.6**	**+2.1**
DAWY	**Dawson**	**10.43**	**91**	*e*Pn	**Pn**	**20 20 20.6**	**-0.1**
DAWY				*e*S	Sx	20 23 16.4	
INK	**Inuvik**	**11.73**	**67**	Pn	**Pn**	**20 20 38.8**	**+0.4**
	baz=328,slow=9.5,SNR=2.2						
INK				LR	LR	20 25 08.6	
	comp=Z,45nm,20.6s,baz=285,slow=37						
INK	**Inuvik**	**11.73**	**67**	*e*Pn	**Pn**	**20 20 41.7**	**+3.3**
	3.7nm,0.8s						
DLBC	**Dease Lake**	**17.29**	**101**	P	**Pn**	**20 21 57.5**	**+5.0**
	0.5nm,0.3s,baz=306,slow=11,SNR=9.8						
DLBC				LR	LR	20 28 23.6	
	comp=Z,55nm,18.9s,baz=318,slow=36						
YKA	**Yellowknife Ar**	**21.07**	**77**	P	**P**	**20 22 36.3**	**+1.1**
	1.0nm,0.7s,mb3.2,baz=301,slow=11,SNR=8.8						
RES	**Resolute Bay**	**22.93**	**39**	P	**P**	**20 22 55.3**	**+0.3**
	0.8nm,0.8s,mb3.2,baz=90,slow=20						
PDAR	**Pinedale Array**	**37.52**	**102**	P	**P**	**20 25 08.7**	**+3.6**
	0.5nm,0.7s,mb3.4,baz=339,slow=7.9,SNR=4.5						
NVAR	**Mina Array Bea**	**37.92**	**114**	P	**P**	**20 25 11.5**	**+3.0**
	0.7nm,0.9s,mb3.4,baz=304,slow=12,SNR=3.0						
CN2	**Changchun**	**43.38**	**275**	*e*P	**P**	**20 25 52.3**	**-1.1**
MJAR	**Matsushiro Arr**	**44.44**	**258**	P	**P**	**20 26 03.7**	**+1.7**
	0.5nm,0.5s,mb3.5,baz=20,slow=6.9,SNR=3.8						
SONM	**Songino Array**	**47.42**	**294**	P	**P**	**20 26 26.5**	**+1.1**
	1.2nm,0.6s,mb4.0,baz=54,slow=3.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**49.40**	**314**	P	**P**	**20 26 39.6**	**-1.0**
	0.5nm,0.4s,mb3.9,baz=28,slow=6.7,SNR=2.8						
TXAR	**Lajitas Array**	**51.54**	**105**	P	**P**	**20 26 58.5**	**+1.4**
	0.7nm,0.8s,mb3.6,baz=316,slow=6.2,SNR=5.3						
FINES	**FINESS Array B**	**52.29**	**354**	P	**P**	**20 27 03.0**	**+0.8**
	1.2nm,0.5s,mb4.0,baz=23,slow=10,SNR=11						
BVAR	**Borovoye Array**	**54.10**	**323**	P	**P**	**20 27 18.0**	**+2.3**
	0.2nm,0.4s,mb3.4,baz=18,slow=6.1,SNR=2.4						
NJ2	**Nanjing**	**56.11**	**273**	*e*P	**P**	**20 27 29.0**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**56.49**	**311**	P	**P**	**20 27 34.0**	**+1.0**
	comp=Z,0.3nm,0.7s,mb3.4,baz=60,slow=8.5,SNR=2.9						
GTA	**Gaotai**	**57.09**	**294**	*e*P	**P**	**20 27 33.4**	**-4.0**
GTA				pP	pP	20 27 36.6	-4.0
GTA				sP	sP	20 27 39.3	-2.5
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
LZH	**Lanzhou**	**58.50**	**288**	*e*P	**P**	**20 27 44.8**	**-2.5**
LZH				pP	pP	20 27 48.0	-2.5
LZH				sP	sP	20 27 49.4	-2.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
AKASG	**Malin Array Be**	**62.85**	**351**	P	**P**	**20 28 18.8**	**+2.0**
	comp=Z,1.4nm,0.7s,mb4.2,baz=3.9,slow=6.0,SNR=6.2						
GYA	**Guiyang**	**65.94**	**281**	P	**P**	**20 28 35.8**	**-1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						

*ISCJB **18** 20:23:58.9±0.6, 10°.95N±0°.06×126°.13E±0°.05, h10km, mb4.3/15, Error ellipse: s-maj=9.5km s-min=7.3km az=158.0*
*IDC **18** 20:23:59.6±1.2, 10°.92N×125°.96E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.0/21, mbtmp4.2/9, MS3.5/1, Ms1 3.5/1, ms1mx2.3/26, Error ellipse: s-maj=61.7km s-min=23.2km az=66.0*
*NEIC **18** 20:24:04.7±0.6, 10°.89N×125°.94E, h35km, mb4.4/4, Error ellipse: s-maj=34.9km s-min=10.5km az=64.0*
ISC 18 20:24:00.8±0.6, 11°.00N±0°.06×126°.13E±0°.05, h10km, n32, σ1°.02/35, mb4.3/15, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.91**	**311**	*e*P	**Pg**	**20 24 16.6**	**-1.7**
OCLP	**Ormoc**	**1.49**	**272**	*e*P	**Pg**	**20 24 31.3**	**+1.8**
MSLP	**Maasin**	**1.52**	**236**	*e*P	**Sn**	**20 24 40.1**	**-7.7**
BUTP	**Butuan**	**2.08**	**194**	*e*P	**Sn**	**20 24 53.3**	**-8.4**
CNP	**Catarman**	**2.08**	**316**	*e*P	**Pn**	**20 24 31.4**	**-4.3**
CNP				*e*S	**Pg**	**20 24 46.1**	**+5.4**
LLP	**Lapu-Lapu**	**2.23**	**253**	⇓*eP*	**Pg**	**20 24 44.8**	**+1.2**
LLP				*e*S	**Sg**	**20 25 12.1**	**-0.5**
MMPH	**Masbate**	**2.80**	**299**	⇑*iP*	**Pn**	**20 24 47.1**	**+1.5**
MMPH				*e*S	**Sg**	**20 25 25.3**	**-5.6**
PVCP	**Virac**	**3.22**	**323**	*e*P	**Pn**	**20 24 49.1**	**-2.4**
RCP	**Roxas**	**3.37**	**280**	⇑*eP*	**Pn**	**20 24 54.7**	**+1.2**
RCP				*i* S	**Sn**	**20 25 28.4**	**-5.1**
AUQP	**San Andres**	**4.09**	**305**	*e*P	**Pn**	**20 25 03.4**	**-0.1**
PAGZ	**Pagadian**	**4.14**	**221**	*e*P	**Pg**	**20 25 18.1**	**-2.1**
OTRP	**Odiongan**	**4.25**	**289**	*e*P	**Pn**	**20 25 05.0**	**-0.5**
BOAC	**Boac**	**4.85**	**301**	*e*P	**Pn**	**20 25 13.6**	**-0.3**
CUYO	**Cuyo Island**	**5.02**	**269**	*e*P	**Pn**	**20 25 19.3**	**+3.0**
CMAR	**Chiang Mai Arr**	**27.29**	**289**	P	**P**	**20 29 45.3**	**-0.5**
	0.8nm,0.9s,mb3.3,baz=103,slow=8.0,SNR=4.2						
ASAR	**Alice Springs**	**35.28**	**168**	P	**P**	**20 30 55.9**	**-0.1**
	3.7nm,0.5s,mb4.5,baz=343,slow=11,SNR=89						
STKA	**Stephens Creek**	**45.13**	**161**	P	**P**	**20 32 17.3**	**-0.3**
	1.3nm,1.2s,mb3.6						
MKAR	**Makanchi Array**	**51.37**	**322**	P	**P**	**20 33 05.6**	**0.0**
	4.2nm,0.7s,mb4.5,baz=120,slow=8.4,SNR=50						
MKAR	**Makanchi Array**	**51.37**	**322**	P	**P**	**20 33 05.6**	**0.0**
ZALV	**Zalesovo Beam**	**53.92**	**331**	P	**P**	**20 33 24.2**	**-0.2**
	0.5nm,0.4s,mb3.8,baz=140,slow=5.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**53.92**	**331**	P	**P**	**20 33 24.2**	**-0.2**
AAK	**Ala-Archa**	**54.72**	**315**	LR	LR	20 56 33.6	
	comp=Z,44nm,21.4s,baz=117,slow=36						
KURK	**Kurchatov**	**55.39**	**325**	*e*P	**P**	**20 33 34.7**	**-0.4**
	15nm,0.8s,mb5.1						
BVAR	**Borovoye Array**	**60.99**	**325**	P	**P**	**20 34 14.3**	**+0.1**
	2.2nm,0.7s,mb4.4,baz=119,slow=9.2,SNR=24						
BRVK	**Borovoye**	**61.06**	**325**	*e*P	**P**	**20 34 14.7**	**-0.1**
	4.5nm,0.8s,mb4.7						
ABKAR	**Akbulak array**	**66.24**	**319**	*e*P	**P**	**20 34 48.5**	**-0.5**
	1.8nm,0.8s,mb4.2						
JOF	**Joensuu**	**82.48**	**333**	*ep*	**P**	**20 36 23.7**	**+0.3**
	1.7nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**83.47**	**340**	P	**P**	**20 36 29.6**	**+1.3**
	2.4nm,0.7s,mb4.4,baz=87,slow=5.4,SNR=12						
KAF	**Kangasniemi**	**84.92**	**332**	*ep*	**P**	**20 36 36.5**	**+0.6**
	3.9nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**84.97**	**309**	P	**P**	**20 36 37.0**	**+0.4**
	0.8nm,0.7s,mb4.0,baz=122,slow=4.5,SNR=6.0						
FINES	**FINESS Array B**	**85.19**	**332**	P	**P**	**20 36 38.0**	**+0.8**
	1.3nm,0.5s,mb4.3,baz=73,slow=4.1,SNR=15						
AKASG	**Malin Array Be**	**85.92**	**321**	P	**P**	**20 36 40.6**	**-0.4**
	2.0nm,0.7s,mb4.4,baz=70,slow=4.5,SNR=6.6						

*ATH **18** 20:27:00.6, 36°.59N×20°.89E, h5km, MD3.8/5*
*NEIC **18** 20:27:03.0, 36°.27N×21°.22E, h10km, ML3.1(ATH), After ATH.*
*ISCJB **18** 20:27:04.6±1.1, 36°.61N±0°.04×21°.09E±0°.05, h9km±6km, Error ellipse: s-maj=7.9km s-min=5.6km az=33.2*
*CSEM **18** 20:27:04.9±0.4, 36°.65N×21°.17E, h2km, MD3.8, Error ellipse: s-maj=8.5km s-min=5.2km az=21.0*
*THE **18** 20:27:06.6, 36°.66N×21°.21E, h7km±2km, ML3.3/2, Error ellipse: s-maj=4.1km s-min=1.8km az=67.0*
ISC 18 20:27:05.6±1.2, 36°.62N±0°.05×21°.14E±0°.05, h7km±7km, n57, σ1°.07/73, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.55**	**60**	*e*PG	**Pg**	**20 27 14.7**	**-1.5**
PYL				*e*SB	**Sg**	**20 27 26.5**	**+3.0**
PYL	**PYLOS**	**0.55**	**60**	*e*Pg	**Pg**	**20 27 14.7**	**-1.5**
ITM	**Ithomi**	**0.84**	**48**	*e*PN	**Pg**	**20 27 20.3**	**-1.4**
ITM				*e*SN	**Sg**	**20 27 33.7**	**+1.1**
ITM	**Ithomi**	**0.84**	**48**	P	**Pg**	**20 27 20.7**	**-1.0**
ITM	**Ithomi**	**0.84**	**48**	P	**Pg**	**20 27 20.6**	**-1.1**
ITM				S	**Sg**	**20 27 33.1**	**+0.5**
ITM	**Ithomi**	**0.84**	**48**	P	**Pg**	**20 27 20.6**	**-1.1**
ITM				S	**Sg**	**20 27 33.1**	**+0.5**
VLX	**Vlachokerasia**	**1.24**	**53**	*e*PB	**Pn**	**20 27 28.0**	**-1.3**
VLX	**Vlachokerasia**	**1.24**	**53**	*e*Pb	**Pn**	**20 27 28.0**	**-1.3**
VLI	**Veliai**	**1.45**	**86**	*e*PB	**Pn**	**20 27 32.2**	**+0.1**
VLI	**Veliai**	**1.45**	**86**	*e*Pb	**Pn**	**20 27 32.2**	**+0.1**
RLS	**Riolos of Patr**	**1.46**	**10**	P	**Pg**	**20 27 35.7**	**+2.2**
RLS	**Riolos of Patr**	**1.46**	**10**	P	**Pg**	**20 27 35.7**	**+2.2**
KYTH	**Kithira**	**1.56**	**102**	*e*PN	**Pn**	**20 27 33.7**	**-0.1**
KYTH	**Kithira**	**1.56**	**102**	*e*Pn	**Pn**	**20 27 33.7**	**-0.1**
VLS	**Valsamata**	**1.61**	**344**	P	**Pn**	**20 27 35.7**	**+1.3**
VLS	**Valsamata**	**1.61**	**344**	P	**Pn**	**20 27 34.3**	**-0.1**
VLS				S	**Sn**	**20 27 56.7**	**+1.2**
VLS	**Valsamata**	**1.61**	**344**	P	**Pn**	**20 27 34.3**	**-0.1**
VLS				S	**Sn**	**20 27 56.7**	**+1.2**
GUR	**Goura**	**1.62**	**36**	*e*PN	**Pn**	**20 27 34.1**	**-0.5**
GUR	**Goura**	**1.62**	**36**	*e*Pn	**Pn**	**20 27 34.1**	**-0.5**
EFP	**Efpalio**	**1.90**	**18**	*e*PN	**Pn**	**20 27 37.9**	**-0.5**
EFP	**Efpalio**	**1.90**	**18**	*e*Pn	**Pn**	**20 27 37.9**	**-0.5**
LTK	**Loutraki**	**2.02**	**46**	*e*PG	**Pb**	**20 27 41.3**	**-1.2**
LTK	**Loutraki**	**2.02**	**46**	*e*Pg	**Pb**	**20 27 41.3**	**-1.2**
EVR	**Evrytania**	**2.35**	**13**	P	**Pb**	**20 27 48.9**	**+0.7**
EVR	**Evrytania**	**2.35**	**13**	P	**Pb**	**20 27 48.9**	**+0.7**
LKR	**Lokris**	**2.50**	**35**	P	**Pn**	**20 27 47.7**	**+1.0**
LKR	**Lokris**	**2.50**	**35**	P	**Pn**	**20 27 47.7**	**+1.0**
KARN	**Karanos**	**2.56**	**118**	P	**Pn**	**20 27 46.9**	**-0.5**
KARN				S	**Sn**	**20 28 20.4**	**+1.6**
KARN	**Karanos**	**2.56**	**118**	P	**Pn**	**20 27 46.9**	**-0.5**
KARN				S	**Sn**	**20 28 20.4**	**+1.6**
AGG	**Agios Georgios**	**2.57**	**21**	P	**Pn**	**20 27 48.6**	**+1.0**
AGG				S	**Sn**	**20 28 18.6**	**-0.6**
AGG	**Agios Georgios**	**2.57**	**21**	P	**Pn**	**20 27 48.6**	**+1.0**
AGG				S	**Sn**	**20 28 18.6**	**-0.6**
THL	**Klokotos Trika**	**3.02**	**13**	P	**Pn**	**20 27 54.2**	**+0.5**
THL				S	**Sn**	**20 28 29.8**	**-0.3**
THL	**Klokotos Trika**	**3.02**	**13**	P	**Pn**	**20 27 54.2**	**+0.5**
THL				S	**Sn**	**20 28 29.8**	**-0.3**
NEO	**Neokhori**	**3.14**	**31**	P	**Pn**	**20 27 56.3**	**+0.8**
NEO	**

HOJ	**Hope**	**1.68 196**	⇓*i*P	Pn	20 31 57.2	-2.4
MBJ	**Montego Bay**	**1.94 231**	*i* S	Sn	20 32 25.8	-2.4
PCJ	**Portland Cotta**	**2.06 204**	*i* P	Pn	20 32 03.9	-1.0
MCJ	**Malvern**	**2.17 218**	⇑*i*P	Pn	20 32 05.4	-0.9
MCJ			*e*S	Sn	20 32 32.1	-1.6

CSEM ***18*** *20:34:36.7±0.5,29°.33N×34°.71E,h10km,ML2.6,Error ellipse: s-maj=12.2km s-min=4.6km az=96.0*
SGS ***18*** *20:34:39.0,29°.30N×34°.88E,h14km*
ISC 18 20:34:36.8±2.7,**29°.3N**±0°.1×**34°.7E**±0°.1,**h8**km±10km,**n15,** σ0º**94**/19,**Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	**Haql**	**0.33 148**		P	**Pg**	**20 34 44.6**	**+1.3**
HAQS	**Haql**	**0.33 148**		P	**Pg**	**20 34 44.6**	**+1.3**
HAQS				S	**Sg**	**20 34 48.8**	**+1.1**
JLOS		**0.90 131**		P	**Pg**	**20 34 53.7**	**-0.4**
JLOS		**0.90 131**		P	**Pg**	**20 34 53.7**	**-0.4**
JLOS				S	**Sg**	**20 35 04.2**	**-1.7**
BDAS	**Al Bad'**	**0.96 159**		P	**Pg**	**20 34 55.3**	**0.0**
BDAS	**Al Bad'**	**0.96 159**		P	**Pg**	**20 34 55.3**	**+0.1**
BDAS				S	**Sg**	**20 35 07.4**	**-0.3**
TBKS	**Tabuk**	**1.95 124**		P	**Pn**	**20 35 11.2**	**+1.1**
TBKS	**Tabuk**	**1.95 124**		P	**Pn**	**20 35 11.2**	**+1.1**
TBKS				S	**Sn**	**20 35 35.7**	**+1.0**
DBAS	**Duba**	**2.38 152**		S	**Sn**	**20 35 50.4**	**+4.9**
DBAS	**Duba**	**2.38 152**		P	**Pn**	**20 35 15.6**	**-0.5**
DBAS	**Duba**	**2.38 152**		P	**Pn**	**20 35 15.6**	**-0.5**
WJHS		**2.98 150**		P	**Pn**	**20 35 23.6**	**-0.8**
WJHS		**2.98 150**		P	**Pn**	**20 35 23.5**	**-0.9**
BIDS	**Bi'r al Bayda'**	**3.15 141**		P	**Pn**	**20 35 25.9**	**-0.8**
BIDS	**Bi'r al Bayda'**	**3.15 141**		P	**Pn**	**20 35 25.9**	**-0.8**

CASC 18 20:42:32.1±1.5,**7°.33N×82°.18W,h16**km±10km,**MD4.0, 1C-3D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**1.54 341**	⇓*i*P		Pn	20 42 58.3	-0.6
BRU2				*e*S	Sn	20 43 19.4	+0.7
CNI	**Changuinola**	**2.10 351**	⇓*i*P		Pn	20 43 07.5	+0.8
CNI				*e*S	Sn	20 43 33.7	+1.2
BAR1		**2.21 329**	⇓*e*P		Pn	20 43 07.9	-0.2
BAR1				*e*S	Sn	20 43 35.7	+0.6
QCR	**Quepos**	**2.86 317**	*e*P		Pn	20 43 16.5	-0.6
BCIP	**Isla Barro Col**	**2.94 52**	*e*P		Pn	20 43 17.7	-0.6
URSC	**Urasca**	**2.95 328**	⇑*e*P		Pn	20 43 19.2	+0.8
URSC				*e*S	Sn	20 43 53.9	+0.4
UPIG		**3.09 58**	*e*P		Pn	20 43 20.0	-0.3
UPIG				*e*S	Sn	20 43 57.0	0.0
LAJ	**Bijagual**	**3.17 323**	*e*P		Pn	20 43 23.0	+1.6
PRS1	**Puriscal**	**3.38 321**	*e*P		Pn	20 43 23.5	-0.7
CGA2	**Cerro Gallo 2**	**3.50 320**	*e*P		Pn	20 43 26.0	+0.1

IDC ***18*** *20:48:14.9±1.1,31°.51N×104°.23E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.5/26,mbtmp3.7/8,ML3.3/1,Error ellipse: s-maj=53.1km s-min=21.4km az=63.0*
ISCJB ***18*** *20:48:15.3±0.4,31°.37N×0°.03×104°.03E±0°.05,h10km, mb3.6/7,Error ellipse: s-maj=5.7km s-min=4.2km az=8.8*
NEIC ***18*** *20:48:17.4±0.6,31°.56N×104°.07E,h10km,Error ellipse: s-maj=14.9km s-min=9.8km az=71.0*
BJI ***18*** *20:48:18.2,31°.23N×104°.03E,h13km,ML3.5/16*
ISC 18 20:48:16.5±0.5,**31°.36N**±0°.04×**104°.03E**±0°.05,**h10**km,**n19,** σ1º**13**/26,**mb3.6/7,1C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.50 207**		Pg	**Pg**	**20 48 26.1**	**-0.2**
CD2				Sg	**Sg**	**20 48 32.8**	**-0.1**
CD2				smax			
	comp=N,3μm,0.8s						
LZH	**Lanzhou**	**4.72 358**		Pg	**Pg**	**20 49 51.4**	**+4.5**
LZH				Sg	**Sg**	**20 50 51.8**	**+3.8**
LZH				smax			
	comp=N,41nm,0.8s						
LZH				smax			
	comp=E,53nm,1.0s						
LZH				LR	LR		
	comp=E,190nm,7.5s						
LZH				LR	LR		
	comp=Z,190nm,7.9s						
ENH	**Enshi**	**4.82 102**		*e*Pn	**Pn**	**20 49 31.3**	**+2.1**
ENH				*e*Sn	**Sn**	**20 50 24.1**	**-1.0**
XAN	**Xi'an**	**4.92 56**		Pn	**Pn**	**20 49 31.8**	**+1.3**
XAN				Sn	**Sn**	**20 50 28.8**	**+1.4**
XAN				Sg	**Sg**	**20 50 51.8**	**-2.6**
XAN				smax			
	comp=N,110nm,0.9s						
XAN				smax			
	comp=E,56nm,1.0s						
GYA	**Guiyang**	**5.40 154**		Pg	**Pb**	**20 49 49.3**	**-1.7**
GYA				Sn	**Sn**	**20 50 39.8**	**+0.4**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,80nm,0.8s						
KMI	**Kunming**	**6.31 191**		Pn	**Pn**	**20 49 50.5**	**+0.8**
KMI				Sn	**Sn**	**20 50 57.0**	**-4.9**
KMI				smax			
	comp=N,9.0nm,0.8s						
KMI				smax			
	comp=E,16nm,0.7s						
WHN	**Wuhan**	**8.90 93**		⇑P	**Pn**	**20 50 33.0**	**+7.8**
WHN				S	**Sn**	**20 52 09.8**	**+4.2**
CM31	**Chiang Mai Arr**	**13.64 201**		P	**Pn**	**20 51 34.4**	**+4.2**
	comp=E,2.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.64 201**		Pn	**Pn**	**20 51 34.1**	**+4.0**
	comp=E,0.1nm,0.3s,baz=13,slow=13,SNR=3.4						
MK31	**Makanchi Array**	**22.74 319**		*e*P	**P**	**20 53 18.2**	**-0.4**
MKAR	**Makanchi Array**	**22.74 319**		P	**P**	**20 53 19.2**	**+0.6**
	comp=E,0.4nm,0.4s,mb3.2,baz=128,slow=7.9,SNR=8.3						
ZALV	**Zalesovo Beam**	**26.46 334**		P	**P**	**20 53 53.9**	**+0.3**
	comp=E,1.1nm,0.7s,mb3.5,baz=132,slow=8.8,SNR=5.5						
KURK	**Kurchatov**	**27.00 323**		P	**P**	**20 53 58.0**	**-0.4**
	comp=E,0.8nm,0.7s,mb3.4,baz=126,slow=9.4,SNR=5.9						
ARCES	**ARCESS Array B**	**57.00 336**		P	**P**	**20 58 01.6**	**-0.3**
	comp=E,4.1nm,1.0s,mb4.4,baz=68,slow=9.8,SNR=2.7						
ASAR	**Alice Springs**	**61.74 149**		P	**P**	**20 58 35.3**	**+0.1**
	comp=E,0.3nm,0.7s,mb3.5,baz=335,slow=6.5,SNR=6.8						
NOA	**NORSAR Array B**	**64.41 327**		P	**P**	**20 58 51.0**	**-1.5**
	comp=E,0.7nm,0.8s,mb3.7,baz=72,slow=5.6,SNR=2.6						
YKA	**Yellowknife Ar**	**81.47 17**		P	**P**	**21 00 33.2**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.5,baz=329,slow=5.3,SNR=5.5						
YKA	**Yellowknife Ar**	**81.47 17**		P	**P**	**21 00 33.2**	**-0.3**
PPT	**Papeete**	**112.69 97**		*e*LR	LR	21 02 59.8	
	comp=E,155nm,25.8s,baz=255						

ISCJB ***18*** *20:56:10.5±1.0,24°.81N±0°.05×122°.91E±0°.03,h12km±7km, Error ellipse: s-maj=9.2km s-min=3.3km az=13.8*
JMA ***18*** *20:56:10.9±0.2,24°.66N×122°.81E,h32km,M2.1*
TAP ***18*** *20:56:12.6,24°.87N×122°.66E,h4km±1km,ML2.8,D*
ISC 18 20:56:10.1±0.7,**24°.83N**±0°.05×**122°.91E**±0°.03,**h10**km±5km, **n23,** σ1º**26**/34,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37 166**		P	**Pg**	**20 56 17.9**	**+0.4**
YOJ				S	**Sg**	**20 56 22.8**	**+0.4**
TWB1	**Santiao Chiao**	**0.86 282**		*e*P	**Pg**	**20 56 26.4**	**-0.2**
	baz=283						
TWB1				*e*S	**Sg**	**20 56 38.1**	**+0.2**
	baz=283						
IRIF	**Iriomote-Funau**	**0.89 123**		P	**Pg**	**20 56 27.5**	**+0.2**
IRIF				*e*S	**Sg**	**20 56 39.4**	**+0.5**
TWC	**Suao**	**0.99 258**		P	**Pg**	**20 56 28.7**	**-0.5**
	baz=251						
TWC				*e*S	**Sg**	**20 56 40.5**	**-1.6**
	baz=251						
NWF	**Wu-fen Shan**	**1.05 284**		*e*P	**Pb**	**20 56 30.4**	**0.0**
	baz=284						
PCYT	**Pengchaiyu**	**1.10 317**		*e*P	**Pb**	**20 56 31.4**	**+0.1**
	baz=338						
HATJ	**Hateruma jima**	**1.12 133**		*e*S	**Sb**	**20 56 43.7**	**-2.4**
ENA	**Nanau**	**1.14 250**		P	**Pb**	**20 56 31.2**	**-0.7**
	baz=259						
ENA				*e*S	**Sb**	**20 56 44.7**	**-2.0**
	baz=259						
TWE	**Neicheng**	**1.14 265**		P	**Pb**	**20 56 31.2**	**-0.7**
	baz=261						
TWE				*e*S	**Sb**	**20 56 44.8**	**-1.9**
	baz=261						
JKRS	**Kuro-shima**	**1.16 120**		P	**Pb**	**20 56 31.2**	**-1.0**
JKRS				*e*S	**Sb**	**20 56 47.3**	**0.0**
JIJ	**Ishigaki jima**	**1.21 112**		P	**Pn**	**20 56 31.8**	**-1.3**
JIJ				S	**Sb**	**20 56 48.2**	**-0.6**
TWS1	**Kuangyinshan**	**1.38 282**		*e*P	**Pn**	**20 56 35.1**	**-0.4**
	baz=282						
TWD	**Chiawan**	**1.41 239**		*e*P	**Pn**	**20 56 37.0**	**+1.2**
	baz=232						
NSK	**Sanguang**	**1.42 264**		*e*P	**Pn**	**20 56 36.0**	**0.0**
	baz=261						
NSK				*e*S	**Sn**	**20 56 51.5**	**-3.2**
	baz=261						
NNS	**Nan Shan**	**1.45 255**		*e*P	**Pn**	**20 56 36.8**	**+0.3**
	baz=250						
NNS				*e*S	**Sn**	**20 56 53.6**	**-1.9**
	baz=250						
JTJ	**Tarama**	**1.64 96**		P	**Pn**	**20 56 38.9**	**-0.1**
WHF	**Hehuan Shan**	**1.65 246**		*e*P	**Pn**	**20 56 40.2**	**+1.1**
	baz=253						
WHF				*e*S	**Sn**	**20 57 02.3**	**+1.9**
	baz=253						
ESL	**Shilin**	**1.68 234**		*e*P	**Pn**	**20 56 41.1**	**+1.5**
	baz=227						
NSTT	**Nanjuang**	**1.75 264**		*e*P	**Pn**	**20 56 42.1**	**+1.6**
	baz=261						
TWQ1	**Liyutan**	**2.00 257**		*e*P	**Pn**	**20 56 46.3**	**+2.3**
	baz=272						
SMLT	**Sun Moon Lake**	**2.06 243**		*e*P	**Pn**	**20 56 46.5**	**+1.7**
	baz=222						
TYC	**Yuchr**	**2.09 244**		*e*P	**Pn**	**20 56 48.0**	**+2.9**
	baz=223						
CHN5	**Tsauling**	**2.38 240**		*e*P	**Pn**	**20 56 51.6**	**+2.4**
	baz=217						

IDC 18 21:12:19.9±1.6,**32°.82N×105°.82E,h0**km,**mb3.5**/3, **mb1 3.6/4,mb1mx3.3**/24,**mbtmp3.5**/4,**ML3.7**/1,**Error ellipse: s-maj=76.1km s-min=24.7km az=61.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.58 205**		Pn	Pn	21 16 02.5	+1.5
	0.1nm,0.3s,baz=7.0,slow=8.3,SNR=4.9						
MKAR	**Makanchi Array**	**22.72 315**		P	P	21 17 22.6	-0.6
	0.9nm,0.7s,baz=112,slow=9.6,SNR=13						
ZALV	**Zalesovo Beam**	**25.87 331**		P	P	21 17 53.9	+0.8
	0.4nm,0.3s,baz=128,slow=9.3,SNR=2.5						
ASAR	**Alice Springs**	**62.24 151**		P	P	21 22 43.3	-0.3
	0.6nm,0.8s,baz=316,slow=7.0,SNR=5.2						

IDC ***18*** *21:30:41.4±2.5,50°.97N×176°.70W,h0km,mb3.4/3, mb1 4.1/4,mb1mx3.5/26,mbtmp3.7/4,Error ellipse: s-maj=97.1km s-min=49.0km az=166.0*
NEIC ***18*** *21:30:50.7,51°.55N×176°.39W,h40km,mb3.5/1, ML3.4(AEIC),After AEIC.*
ISC 18 21:30:50.5±3.6,**51°.5N**±0°.3×**176°.4W**±0°.2,**h46**km±26km,**n10,** σ1º**26**/10,**mb3.4/3,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.60 20**		*e*P	**Pn**	**21 31 02.9**	**+0.2**
GSTR				*e*S	**Sn**	**21 31 10.9**	**-0.6**
ATKA	**Atka Island**	**1.52 63**		P	**Pn**	**21 31 15.0**	**-0.1**
ATKA				S	**Sn**	**21 31 33.3**	**-0.3**
KDAK	**Kodiak Island**	**15.08 56**		Pn	**Pn**	**21 34 22.3**	**+2.1**
PPLA	**Purkeypile**	**17.23 39**		*e*Pn	**Pn**	**21 34 50.0**	**+2.6**
KTH	**Kantishna Hill**	**18.05 38**		*e*Pn	**Pn**	**21 34 55.9**	**-1.7**
	2.6nm,0.7s						
YKA	**Yellowknife Ar**	**34.03 47**		PcP	PcP	21 40 06.6	+0.4
	0.5nm,0.6s,baz=291,slow=3.3,SNR=7.4						
NVAR	**Mina Array Bea**	**42.03 85**		P	**P**	**21 38 35.2**	**-2.1**
	0.3nm,0.7s,mb3.1,baz=270,slow=7.2,SNR=3.3						
PDAR	**Pinedale Array**	**44.82 74**		P	**P**	**21 38 60.0**	**+0.3**
	0.7nm,0.7s,mb3.6,baz=302,slow=4.9,SNR=6.1						
TXAR	**Lajitas Array**	**57.14 83**		P	**P**	**21 40 32.6**	**+0.3**
	0.4nm,0.7s,mb3.5,baz=309,slow=5.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**115.57 2**		PKP	PKPdf	21 49 26.3	-1.3
	0.2nm,0.5s,baz=351,slow=3.0,SNR=7.3						

ISK ***18*** *21:35:09.5,36°.96N×29°.25E,h10km,MD2.9*
ISCJB ***18*** *21:35:10.2±0.5,36°.98N±0°.03×29°.23E±0°.03,h4km±6km, Error ellipse: s-maj=4.4km s-min=3.9km az=152.5*
CSEM ***18*** *21:35:10.2±0.1,36°.99N×29°.27E,h8km,MD2.9,Error ellipse: s-maj=2.4km s-min=1.7km az=13.0*
DDA ***18*** *21:35:10.8,37°.01N×29°.18E,h7km±3km,Md3.0*
ISC 18 21:35:10.6±0.4,**36°.98N**±0°.03×**29°.24E**±0°.03,**h9**km±4km, **n33,** σ0º**86**/55,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Gihisar (BURDU**	**0.27 49**		*e*PG	**Pg**	**21 35 15.3**	**-0.8**
GLHS				*e*SG	**Sg**	**21 35 20.1**	**+0.4**
GLHS	**Gihisar (BURDU**	**0.27 49**		*e*Pg	**Pg**	**21 35 15.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**21 35 20.1**	**+0.4**
FETY	**Fethiye**	**0.36 200**		*e*PG	**Pg**	**21 35 16.3**	**-1.4**
FETY				*e*SG	**Sg**	**21 35 22.5**	**-0.1**
FETY	**Fethiye**	**0.36 200**		*e*Pg	**Pg**	**21 35 16.3**	**-1.4**
FETY				*e*Sg	**Sg**	**21 35 22.5**	**0.0**
GOLH	**Golhisar**	**0.36 45**		*i* P	**Pg**	**21 35 17.1**	**-0.6**
GOLH				*i* S	**Sg**	**21 35 23.6**	**+1.0**
GOLH	**Golhisar**	**0.36 45**		*i* P	**Pg**	**21 35 17.1**	**-0.7**
GOLH				*i* S	**Sg**	**21 35 23.6**	**+1.0**
TURN	**Turunc**	**0.52 259**		*e*P	**Pg**	**21 35 27.4**	**+6.7**
TURN				*i* S	**Sg**	**21 35 36.0**	**+8.5**
ELL	**Elmali**	**0.58 113**		*e*PG	**Pg**	**21 35 21.0**	**-0.8**
ELL				*e*SG	**Sg**	**21 35 29.7**	**+0.2**
ELL	**Elmali**	**0.58 113**		*e*Pg	**Pg**	**21 35 21.0**	**-0.9**
ELL				*e*Sg	**Sg**	**21 35 29.7**	**+0.2**
DNZL	**Cakiroluk**	**0.73 348**		*i* P	**Pg**	**21 35 23.1**	**-1.6**
DNZL				*i* S	**Sg**	**21 35 34.4**	**+0.3**
DNZL	**Cakiroluk**	**0.73 348**		*i* P	**Pg**	**21 35 23.0**	**-1.6**
DNZL				*i* S	**Sg**	**21 35 34.4**	**+0.3**
YER	**Yerkesik**	**0.78 282**		*e*PG	**Pg**	**21 35 25.5**	**-0.1**
YER				*e*SG	**Sg**	**21 35 36.8**	**+0.9**
YER	**Yerkesik**	**0.78 282**		*e*Pg	**Pg**	**21 35 25.5**	**-0.1**
YER				*e*Sg	**Sg**	**21 35 36.8**	**+1.0**
AKAS	**Kas**	**0.80 158**		*i* P	**Pg**	**21 35 26.4**	**+0.4**
AKAS				*i* S	**Sg**	**21 35 39.6**	**+3.3**
AKAS	**Kas**	**0.80 158**		*i* P	**Pg**	**21 35 26.4**	**+0.5**
AKAS				*i* S	**Sg**	**21 35 39.6**	**+3.3**
KORT	**Korkueli**	**0.89 88**		*i* P	**Pg**	**21 35 29.0**	**+1.3**
KORT				*i* S	**Sg**	**21 35 43.2**	**+3.9**
KORT	**Korkueli**	**0.89 88**		*i* P	**Pg**	**21 35 29.0**	**+1.3**
BCK	**Bucak**	**1.18 65**		*e*PN	**Pn**	**21 35 31.9**	**-1.3**
BCK	**Bucak**	**1.18 65**		*e*Pn	**Pn**	**21 35 31.9**	**-1.4**
AYDN	**Tasoluk**	**1.28 303**		*i* P	**Pn**	**21 35 34.4**	**-0.3**
AYDN				*i* S	**Sb**	**21 35 51.8**	**+0.3**
AYDN	**Tasoluk**	**1.28 303**		*i* P	**Pn**	**21 35 34.4**	**-0.2**
AYDN				*i* S	**Sb**	**21 35 51.8**	**+0.4**
DAT	**Datca**	**1.36 260**		*e*PN	**Pn**	**21 35 35.7**	**0.0**
DAT	**Datca**	**1.36 260**		*e*Pn	**Pn**	**21 35 35.7**	**0.0**
KHL	**Karahalli**	**1.36 9**		*e*PN	**Pn**	**21 35 34.6**	**-1.1**
KHL	**Karahalli**	**1.36 9**		*e*Pn	**Pn**	**21 35 34.6**	**-1.2**
KHAL	**Karahalli**	**1.41 8**		*i* P	**Pn**	**21 35 37.1**	**+0.7**
KHAL				*i* S	**Sn**	**21 35 56.0**	**+1.0**
KHAL	**Karahalli**	**1.41 8**		*i* P	**Pn**	**21 35 37.1**	**+0.7**
KHAL				*i* S	**Sn**	**21 35 56.0**	**+1.0**
BDRM	**Kayabasi**	**1.44 274**		*i* P	**Pn**	**21 35 37.2**	**+0.4**
BDRM				*i* S	**Sn**	**21 35 56.2**	**+0.3**
BDRM	**Kayabasi**	**1.44 274**		*i* P	**Pn**	**21 35 37.2**	**+0.4**
BDRM				*i* S	**Sn**	**21 35 56.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.49 70**		*e*PN	**Pn**	**21 35 37.3**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.49 70**		*e*Pn	**Pn**	**21 35 37.3**	**-0.2**
KULA	**Kula-Manisa**	**1.60 344**		*e*PN	**Pn**	**21 35 38.7**	**-0.4**
KULA	**Kula-Manisa**	**1.60 344**		*e*Pn	**Pn**	**21 35 38.7**	**-0.4**

ROM ***18*** *21:49:45.9±0.3,40°.01N×15°.27E,h317km±4km,Ml3.2/25, Error ellipse: s-maj=7.9km s-min=3.1km az=73.0*
ISCJB ***18*** *21:49:48.0±0.3,40°.03N±0°.04×15°.24E±0°.06,h306km±3km, mb3.3/6,Error ellipse: s-maj=7.8km s-min=5.0km az=143.8*
IDC ***18*** *21:49:48.9±1.3,40°.13N×15°.04E,h300km±18km,mb3.0/7, mb1 3.0/14,mb1mx2.9/31,mbtmp2.9/14,Error ellipse: s-maj=16.2km s-min=12.5km az=77.0*
LDG ***18*** *21:49:49.3±0.4,40°.12N×15°.12E,h320km,Mb3.6/21,Error ellipse: s-maj=20.3km s-min=11.1km az=28.0*
CSEM ***18*** *21:49:52.4±0.3,39°.72N×14°.28E,h354km±8km,mb3.6/21, Error ellipse: s-maj=10.8km s-min=5.7km az=56.0*
ISC 18 21:49:48.8±0.3,**40°.02N**±0°.04×**15°.25E**±0°.06,**h302**km±3km, **n152,** σ0º**97**/170,**mb3.3**/6,**32C-18D,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BULG	**Bulgheria - Ca**	**0.11 59**		⇑*i*Pg	**Pn**	**21 50 27.3**	**+0.3**
	47nm,0.8s						
BULG	**Bulgheria - Ca**	**0.11 59**		⇑*i*Pg	**Pn**	**21 50 27.3**	**+0.3**
	47nm,0.8s						
MGR	**Morigerati**	**0.26 63**		⇑*i*Pg	**Pn**	**21 50 27.2**	**+0.1**
MGR				Sg	**S**	**21 50 57.0**	**-0.5**
MGR	**Morigerati**	**0.26 63**		⇑*i*Pg	**Pn**	**21 50 27.2**	**+0.1**
MGR				Sg	**S**	**21 50 57.0**	**-0.5**
CDRU	**Civita di Ruta**	**0.47 5**		⇑*i*Pg	**Pn**	**21 50 27.6**	**+0.2**
CDRU				Sg	**S**	**21 50 57.2**	**-1.0**
CDRU	**Civita di Ruta**	**0.47 5**		⇑*i*Pg	**Pn**	**21 50 27.6**	**+0.2**
CDRU				Sg	**S**	**21 50 57.2**	**-1.0**
SIRI	**Monte Sirino -**	**0.50 71**		Pg	**Pn**	**21 50 28.1**	**+0.6**
SIRI				Sg	**S**	**21 50 58.6**	**+0.3**
SIRI	**Monte Sirino -**	**0.50 71**		Pg	**Pn**	**21 50 28.1**	**+0.6**
SIRI				Sg	**S**	**21 50 58.6**	**+0.3**
MCEL	**Monticello**	**0.52 54**		Pg	**Pn**	**21 50 28.4**	**+0.8**
MCEL				Sg	**S**	**21 50 58.9**	**+0.5**
MCEL	**Monticello**	**0.52 54**		Pg	**Pn**	**21 50 28.4**	**+0.8**
MCEL				Sg	**S**	**21 50 58.9**	**+0.5**
SGO	**Sicignano**	**0.54 4**		⇑*i*Pg	**Pn**	**21 50 28.5**	**+0.9**
SGO	**Sicignano**	**0.54 4**		⇑*i*Pg	**Pn**	**21 50 28.5**	**+0.9**
SCHR	**S. Chirico Rap**	**0.66 74**		⇓*i*Pg	**Pn**	**21 50 28.4**	**+0.4**
SCHR	**S. Chirico Rap**	**0.66 74**		⇓*i*Pg	**Pn**	**21 50 28.4**	**+0.4**
MRLC	**Muro Lucano**	**0.76 14**		Pg	**Pn**	**21 50 28.8**	**+0.5**
MRLC	**Muro Lucano**	**0.76 14**		Pg	**Pn**	**21 50 28.8**	**+0.5**
MCRV	**Calabrutti - M**	**0.76 355**		⇑*i*Pg	**Pn**	**21 50 28.5**	**+0.2**
MCRV	**Calabrutti - M**	**0.76 355**		⇑*i*Pg	**Pn**	**21 50 28.5**	**+0.2**
CSSN	**Cassano Irpino**	**0.86 348**		⇑*i*Pg	**Pn**	**21 50 29.3**	**+0.7**
CSSN	**Cassano Irpino**	**0.86 348**		⇑*i*Pg	**Pn**	**21 50 29.3**	**+0.7**
ORI	**Oriolo Calabro**	**0.92 87**		Pg	**Pn**	**21 50 29.7**	**+0.7**
ORI	**Oriolo Calabro**	**0.92 87**		Pg	**Pn**	**21 50 29.7**	**+0.7**
CARO	**Carolei**	**1.07 135**		Pg	**Pn**	**21 50 29.2**	**-0.5**
CARO				Sg	**S**	**21 51 00.8**	**-1.5**
	58nm,0.4s						
CARO	**Carolei**	**1.07 135**		Pg	**Pn**	**21 50 29.2**	**-0.5**
CARO				Sg	**S**	**21 51 00.8**	**-1.5**
	58nm,0.4s						
MRB1	**Monte Rocchett**	**1.12 349**		⇑*i*Pg	**Pn**	**21 50 30.0**	**+0.1**
MRB1	**Monte Rocchett**	**1.12 349**		⇑*i*Pg	**Pn**	**21 50 30.0**	**+0.1**
PSB1	**Pescosannita**	**1.25 345**		⇑*i*Pg	**Pn**	**21 50 30.6**	**+0.1**
	288nm,2.9s						
PSB1	**Pescosannita**	**1.25 345**		⇑*i*Pg	**Pn**	**21 50 30.6**	**+0.1**
	288nm,2.9s						
FG5	**Orsara di Pugl**	**1.26 1**		Pg	**Pn**	**21 50 31.3**	**+0.7**
	21nm,0.4s						
FG5	**Orsara di Pugl**	**1.26 1**		Pg	**Pn**	**21 50 31.3**	**+0.7**
	21nm,0.4s						
MATE	**Matera**	**1.28 60**		Pg	**Pn**	**21 50 30.5**	**-0.2**
	71nm,0.8s						
MATE	**Matera**	**1.28 60**		Pg	**Pn**	**21 50 30.5**	**-0.2**
	71nm,0.8s						
LTRZ	**Laterza**	**1.33 64**		Pg	**Pn**	**21 50 30.7**	**-0.3**
LTRZ				Sg	**S**	**21 51 03.2**	**-1.4**
	57nm,0.5s						
LTRZ	**Laterza**	**1.33 64**		Pg	**Pn**	**21 50 30.7**	**-0.3**
LTRZ				Sg	**S**	**21 51 03.2**	**-1.4**
	57nm,0.5s						
TIP	**Timpagrande**	**1.44 125**		⇓*i*Pg	**Pn**	**21 50 32.1**	**+0.4**
	43nm,0.3s						
TIP	**Timpagrande**	**1.44 125**		⇓*i*Pg	**Pn**	**21 50 32.1**	**+0.4**
	43nm,0.3s						
SERS	**Sersale**	**1.48 131**		⇓*i*Pg	**Pn**	**21 50 32.3**	**+0.2**
SERS				Sg	**S**	**21 51 05.8**	**-0.7**
	78nm,0.4s						
SERS	**Sersale**	**1.48 131**		⇓*i*Pg	**Pn**	**21 50 32.3**	**+0.2**
SERS				Sg	**S**	**21 51 05.8**	**-0.7**
	78nm,0.4s						
JOPP	**Joppolo**	**1.50 161**		⇓*i*Pg	**Pn**	**21 50 31.5**	**-0.7**
JOPP				Sg	**S**	**21 51 05.4**	**-1.3**
	54nm,0.2s						
JOPP	**Joppolo**	**1.50 161**		⇓*i*Pg	**Pn**	**21 50 31.5**	**-0.7**
JOPP				Sg	**S**	**21 51 05.4**	**-1.3**
	54nm,0.2s						
GRI	**Girifalco**	**1.50 143**		Pg	**Pn**	**21 50 32.6**	**+0.4**
	94nm,0.4s						
GRI	**Girifalco**	**1.50 143**		Pg	**Pn**	**21 50 32.6**	**+0.4**
	94nm,0.4s						
SGG	**Greg

VVLD	Villa Vallelon 118nm,1.5s	2.22 327	⇑*i*Pg	Pn	21 50 37.5 +0.1
GIB	Gibilmanna 73nm,0.8s	2.24 206	Pg	Pn	21 50 38.5 +0.7
GIB	Gibilmanna 73nm,0.8s	2.24 206	Pg	Pn	21 50 38.5 +0.7
PTQR	Pietraquaria 45nm,0.6s	2.44 326	Pg	Pn	21 50 39.8 +0.5
PTQR	Pietraquaria 45nm,0.6s	2.44 326	Pg	Pn	21 50 39.8 +0.5
FAGN	Fagnano	2.57 331	⇑*i*Pg	Pn	21 50 41.0 +0.5
FAGN	Fagnano	2.57 331	⇑*i*Pg	Pn	21 50 41.0 +0.5
VAE	Valguarnera 1.2nm,0.3s,baz=56,slow=3.6,SNR=3.4	2.62 195	P	Pn	21 50 43.0 +1.9
AQU	L'Aquila	2.72 330	Pg	Pn	21 50 42.9 +1.1
AQU	L'Aquila	2.72 330	Pg	Pn	21 50 42.9 +1.1
STON	Ston	3.39 32	*e*Pn	Pn	21 50 49.0 +0.6
NVLJ	Novalja	4.55 357	*i* Pn	Pn	21 51 01.2 +0.1
PGF	Pioggiola	5.34 300	*e*P	Pn	21 51 09.5 -0.8
PGF	Pioggiola	5.34 300	*e*P	Pn	21 51 09.5 -0.8
FRF	La Foret Royal 16nm,1.1s	7.34 302	*e*P	Pn	21 51 33.2 -1.0
FRF	La Foret Royal 8.1nm,1.1s	7.34 302	*e*P	Pn	21 51 33.2 -1.0
DAVOX	Davos/Dischmat 0.6nm,0.3s,baz=155,slow=14,SNR=4.6	7.80 332	P	Pn	21 51 40.8 +1.0
MBDF	Montbardon 26nm,0.8s	7.84 310	*e*P	Pn	21 51 42.1 +1.8
MBDF	Montbardon 13nm,0.8s	7.84 310	*e*P	Pn	21 51 42.1 +1.8
LPG	La Plagne 23nm,0.8s	8.31 314	*e*P	Pn	21 51 47.3 +1.3
LPG	La Plagne 12nm,0.8s	8.31 314	*e*P	Pn	21 51 47.3 +1.3
LPL	La Plagne 18nm,0.8s	8.33 314	*e*P	Pn	21 51 47.5 +1.2
LPL	La Plagne 9.0nm,0.8s	8.33 314	*e*P	Pn	21 51 47.5 +1.2
ORIF	Oris-en-Rattie 6.9nm,0.7s	8.48 308	*e*P	Pn	21 51 49.4 +1.3
ORIF	Oris-en-Rattie 3.5nm,0.7s	8.48 308	*e*P	Pn	21 51 49.4 +1.3
GERES	GERESS Array B 0.1nm,0.3s,baz=178,slow=13,SNR=3.4	8.89 353	P	Pn	21 51 51.6 -1.5
IDI	Anoyia 0.7nm,0.3s,baz=319,slow=15,SNR=8.7	8.98 119	P	Pn	21 51 55.0 +0.5
VIVF	Saint-Julien-l 5.6nm,0.8s	9.19 305	*e*P	Pn	21 51 58.3 +1.5
VIVF	Saint-Julien-l 2.8nm,0.8s	9.19 305	*e*P	Pn	21 51 58.3 +1.5
CABF	La Chapelle 14nm,0.6s	9.38 318	*e*P	Pn	21 51 56.9 -2.2
HINF	Hinteralfeld 4.0nm,0.5s	9.87 325	*e*P	Pn	21 52 03.4 -1.7
CDF	Champ du Feu 3.6nm,0.4s	10.15 328	*e*P	Pn	21 52 07.7 -0.8
SMF	Signal de Mont 7.7nm,0.6s	10.62 312	*e*P	Pn	21 52 11.2 -3.1
BRG	Berggiesshubel 3.2nm,0.8s	10.89 356	*e*P	Pn	21 52 21.8 +4.2
CAF	Calviac 3.9nm,0.8s	10.90 301	*e*P	Pn	21 52 17.2 -0.6
CAF	Calviac 2.0nm,0.8s	10.90 301	*e*P	Pn	21 52 17.2 -0.6
LOR	Lormes 3.2nm,0.5s	10.97 315	*e*P	Pn	21 52 20.5 +1.9
LOR	Lormes 1.6nm,0.5s	10.97 315	*e*P	Pn	21 52 20.5 +1.9
AVF	Avril sur Loir 6.9nm,0.4s	10.98 312	*e*P	Pn	21 52 20.0 +1.3
AVF	Avril sur Loir 3.5nm,0.4s	10.98 312	*e*P	Pn	21 52 20.0 +1.3
SSF	Saint Saulge 2.2nm,0.4s	11.05 313	*e*P	Pn	21 52 20.6 +1.1
SSF	Saint Saulge 1.1nm,0.4s	11.05 313	*e*P	Pn	21 52 20.6 +1.1
BGF	Bois d'Agland 3.7nm,0.4s	11.15 310	*e*P	Pn	21 52 19.2 -1.6
TCF	Toulx Ste Croi 10nm,1.1s	11.39 308	*e*P	Pn	21 52 23.3 -0.5
TCF	Toulx Ste Croi 5.1nm,1.1s	11.39 308	*e*P	Pn	21 52 23.3 -0.5
LFF	La Frestale	11.79 299	*e*P	Pn	21 52 29.1 +0.6
LFF	La Frestale	11.79 299	*e*P	Pn	21 52 29.1 +0.6
ETSF	Etsaut 2.2nm,0.4s	12.21 289	*e*P	Pn	21 52 34.2 +0.5
SJPF	Ste Jean	12.72 289	*e*P	Pn	21 52 40.5 +0.6
MFF	Saint Martin d 8.7nm,0.9s	12.99 305	*e*P	Pn	21 52 43.2 +0.1
LDF	La Druitiere	13.93 313	*e*P	Pn	21 52 51.9 -2.4
LDF	La Druitiere	13.93 313	*e*P	Pn	21 52 51.9 -2.4
BRTR	Keskin Array B 0.1nm,0.3s,baz=263,slow=9.7,SNR=4.5	14.13 85	P	P	21 52 58.1 +2.1
GRR	Gorron	14.24 311	*e*P	P	21 52 55.4 -1.8
GRR	Gorron	14.24 311	*e*P	P	21 52 55.4 -1.8
ESDC	Sonseca Array 0.6nm,0.3s,baz=76,slow=11,SNR=17	14.77 275	P	P	21 53 02.7 -0.5
ROSF	Rostrenen	15.65 308	*e*P	P	21 53 10.9 -1.7
ROSF	Rostrenen	15.65 308	*e*P	P	21 53 10.9 -1.7
MMAI	Mount Meron Ar 0.8nm,0.3s,baz=313,slow=8.8,SNR=6.6	17.62 107	P	P	21 53 37.6 +3.4
EKA	Eskdalemuir Ar baz=147,slow=11,SNR=19	19.61 327	P	P	21 53 53.1 -2.1
HFS	Hagfors 2.4nm,0.3s,baz=176,slow=11,SNR=24	20.16 358	P	P	21 53 59.7 -1.2
NB2	NORSAR Subarra comp=Z,0.6nm,0.6s,mb3.1,baz=172,slow=12	21.19 355	P	P	21 54 09.9 -1.0
NB2	NORSAR Subarra comp=Z,0.6nm,0.6s,mb3.1,SNR=3.2	21.19 355	P	P	21 54 09.9 -1.0
NOA	NORSAR Array B comp=Z,0.7nm,0.7s,mb3.1,baz=173,slow=10,SNR=3.6	21.19 355	P	P	21 54 10.3 -0.6
FINES	FINESS Array B comp=Z,2.2nm,0.4s,mb3.9,baz=188,slow=8.1,SNR=37	22.46 14	P	P	21 54 22.6 +0.3
TORD	Torodi Ar. Bea comp=Z,0.2nm,0.4s,mb2.9,baz=18,slow=9.4,SNR=14	29.31 208	P	P	21 55 24.1 -0.1
ARCES	ARCESS Array B comp=Z,2.6nm,1.0s,mb3.7,baz=204,slow=11,SNR=6.6	30.07 7	P	P	21 55 28.9 -1.3
MKAR	Makanchi Array comp=Z,0.7nm,0.4s,mb3.4,baz=282,slow=6.8,SNR=8.8	47.84 59	P	P	21 57 57.2 +0.7
YKA	Yellowknife Ar comp=Z,0.1nm,0.4s,mb2.9,baz=36,slow=6.1,SNR=2.8	70.20 338	P	P	22 00 29.0 +0.2

*ISCJB **18** 22:13:40.2±1.8, 26°.29S±0°.09×176°.6W±0°.2, h39km±17km, mb4.0/8, Error ellipse: s-maj=25.1km s-min=12.1km az=25.2*
*NEIC **18** 22:13:42.0±1.2, 26°.36S×176°.56W, h41km±12km, mb4.2/4, Error ellipse: s-maj=17.0km s-min=10.0km az=122.0*
*IDC **18** 22:13:42.5±4.6, 26°.37S×176°.50W, h42km±40km, mb3.9/6, mb1 4.1/6, mb1mx3.9/14, mbtmp3.9/6, ML4.9/1, MS3.9/1, Ms1 3.8/1, ms1mx2.9/14, Error ellipse: s-maj=29.0km s-min=27.6km az=131.0*

ISC 18 22:13:42.2±1.4, 26°.31S±0°.09×176°.6W±0°.2, h41km±14km, n21, σ0°78/15, mb4.0/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island 144nm,0.3s,baz=85,slow=9.6,SNR=16	3.15	201	P	Pn	22 14 28.9	-0.4
RAO	86nm,0.3s,baz=84,slow=23,SNR=5.6			S	Sn	22 15 06.2	+0.6
AFI	Afiamalu	13.15	21	Pn	Pn	22 16 46.3	-0.1
CTA	Charters Tower 4.1nm,0.4s,mb4.7,baz=94,slow=11,SNR=7.8	34.61	272	P	P	22 20 29.6	+2.1
CTAO	Charters Tower 6.8nm,0.7s,mb4.7	34.61	272	*e*P	P	22 20 28.1	+0.6
STKA	Stephens Creek comp=Z,164nm,19.0s,baz=116,slow=35	36.77	251	LR	LR	22 35 15.1	
ASAR	Alice Springs 1.3nm,0.5s,mb4.0,baz=93,slow=6.9,SNR=17	44.72	262	P	P	22 21 51.2	-0.4
WRAB	Tennant Creek 2.4nm,0.7s,mb4.1	45.33	267	*e*P	P	22 21 55.9	-0.6
SBA	Scott Base	52.19	184	P	P	22 22 47.9	-0.5
FITZ	Fitzroy Crossi 1.9nm,0.7s,mb4.1	53.72	266	*e*P	P	22 22 59.5	-1.0
MAW	Mawson 2.6nm,0.8s,mb4.2,baz=156,slow=10.0,SNR=4.5	76.55	200	P	P	22 25 28.6	+0.8
MAW	Mawson 0.3nm,0.5s,mb3.5	76.55	200	*e*P	P	22 25 27.6	-0.2
YULB	Yu-li	77.77	304	P	P	22 25 34.8	-0.5
PETK	Petropavlovsk- 1.7nm,0.6s,mb4.2,baz=141,slow=5.7,SNR=3.8	82.19	345	P	P	22 26 00.2	+1.7
NVAR	Mina Array Bea 0.6nm,0.8s,mb3.8,baz=228,slow=8.9,SNR=2.6	84.41	42	P	P	22 26 10.4	+0.1
TXAR	Lajitas Array 0.1nm,0.5s,mb3.4,baz=224,slow=5.2,SNR=3.9	89.14	57	P	P	22 26 33.3	-0.3
BVAR	Borovoye Array 0.3nm,0.5s,baz=90,slow=4.3,SNR=3.2	124.28	318	PKP	PKPdf	22 32 39.9	+3.8
NOA	NORSAR Array B 1.0nm,0.7s,baz=4.9,slow=3.7,SNR=3.2	144.88	353	PKP	PKPdf	22 33 14.0	-0.1
AKASG	Malin Array Be 0.9nm,0.5s,baz=38,slow=4.6,SNR=4.4	148.65	328	PKPbc	PKPbc	22 33 24.2	-0.4
AKASG	Malin Array Be	148.65	328	PKPbc	PKPbc	22 33 24.2	-0.4
BRTR	Keskin Array B 0.6nm,0.6s,baz=102,slow=4.6,SNR=4.1	151.48	306	PKPab	PKPab	22 33 39.9	-0.4
TORD	Torodi Ar. Bea 0.8nm,0.9s,baz=196,slow=4.0,SNR=4.3	166.81	173	PKPab	PKPab	22 34 45.9	-1.1

*ISCJB **18** 22:19:54.7±0.2, 46°.16N±0°.01×119°.51W±0°.02, h28km±2km, Error ellipse: s-maj=2.3km s-min=1.9km az=2.9*
*NEIC **18** 22:19:55.0, 46°.17N×119°.55W, h20km, MD3.7(SEA), MW3.3(SLM), After SEA.*
NEIC Felt [III] at Benton City and Richland; [II] at West Richland. Felt at East Wenatchee and Kennewick. Also felt at Lincoln City, Oregon.
*PNSN **18** 22:19:55.0, 46°.17N×119°.55W, h20km, MD3.7, Fault plane solution: NP1:φs60.00000°, δ45.00000°, NP2: φs254.00000°, δ46.00000°, Principal axes: T Plg83.0000°, Azm244.0000°; P Plg0.0000°, Azm337.0000°;*
*IDC **18** 22:19:57.9±1.2, 46°.01N×119°.60W, h0km, mb3.4/2, mb1 3.4/7, mb1mx3.3/29, mbtmp3.1/7, ML3.1/5 Error ellipse: s-maj=14.6km s-min=12.7km az=88.0*

ISC 18 22:19:54.7±0.2, 46°.16N±0°.01×119°.53W±0°.02, h18km±1km, n140, σ0°86/186, 45C-64D, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRW	Prosser	0.12	297	⇑P	Pg	22 19 59.1	+0.5
REDWA	Red Mountain	0.15	23	⇑P	Pg	22 19 59.7	+0.7
HAWA	Hanford	0.24	359	*e*Pg	Pg	22 20 00.5	+0.3
HAWA				*e*Sg	Sg	22 20 04.5	+0.6
RSW	Rattlesnake Hi	0.24	350	⇓P	Pg	22 20 00.8	+0.6
H2OWA	Water	0.25	17	⇓P	Pg	22 20 00.9	+0.5
WIW	Wooded Island	0.32	31	P	Pg	22 20 02.2	+0.7
SNIWA	Snively Ranch	0.32	343	⇓P	Pg	22 20 01.9	+0.3
F07A	Phinny Hill Vi baz=0.4,SNR=301	0.38	227	⇑P	Pg	22 20 03.0	+0.4
F07A				⇑S	Sg	22 20 08.2	+0.2
BENWA	Benson Ranch	0.39	340	⇓P	Pg	22 20 02.9	+0.2
YPT	Yellepit	0.41	105	⇓P	Pg	22 20 03.9	+0.8
GBB	Gable Butte	0.46	351	⇓P	Pg	22 20 04.2	+0.2
BRVW	Black Rock Val	0.46	316	⇓P	Pg	22 20 04.0	0.0
E07A	Sunnyside baz=0.4,SNR=617	0.46	331	⇑P	Pg	22 20 03.9	-0.2
E07A				⇓S	Sg	22 20 10.6	+0.3
E08A	Dider Farm, El baz=0.5,SNR=275	0.47	44	⇓P	Pg	22 20 04.4	+0.2
MDW	Midway	0.48	341	⇓P	Pg	22 20 04.6	+0.1
OT3	Othello 3	0.55	22	⇓P	Pg	22 20 06.0	+0.3
LOCW	Locke Island	0.56	7	⇓P	Pg	22 20 06.2	+0.2
ET3	Eltopia	0.59	44	⇓P	Pg	22 20 06.5	+0.1
F08A	Pendleton baz=0.7,SNR=217	0.64	124	⇑P	Pg	22 20 07.4	+0.2
CRF	Corfu	0.68	8	⇓P	Pb	22 20 07.9	-0.1
MXC	Moxie City	0.68	309	⇓P	Pb	22 20 07.8	-0.2
BVW	Beverly	0.70	340	⇓P	Pb	22 20 08.0	-0.4
WRD	Warden	0.70	22	⇓P	Pb	22 20 10.6	+2.3
JBO	Jordan Butte	0.73	197	⇓P	Pb	22 20 08.6	-0.2
FHE	Frenchman Hill	0.80	2	⇓P	Pb	22 20 09.8	-0.2
LNOR	Lincton Mounta	0.91	108	P	Pb	22 20 12.2	+0.3
GL2	New Goldendale	0.92	258	⇑P	Pb	22 20 11.3	-0.8
G08A	Pilot Rock baz=1.0	0.95	155	⇑P	Pb	22 20 12.3	-0.4
G08A				⇓S	Sb	22 20 25.1	+0.2
D08A	Wollman Farm, baz=1.0,SNR=823	0.99	25	⇑Pb	Pb	22 20 13.0	-0.3
D08A				⇑S	Sb	22 20 26.3	+0.2
E09A	Wood Farm, Sta baz=1.0,SNR=92	1.02	69	⇓Pn	Pn	22 20 13.0	-1.1
E09A				⇑Pb	Pb	22 20 13.6	-0.2
E09A				⇑S	Sb	22 20 27.3	+0.4
EBG	Ellensburg	1.04	317	⇓P	Pb	22 20 14.0	-0.2
NAC	Naches	1.07	303	P	Pb	22 20 13.9	-0.7
VGB	Gordon Butte	1.08	234	P	Pb	22 20 14.8	-0.1
EPH	Ephrata	1.20	358	P	Pn	22 20 15.4	-1.1
G06A	Carlson Farm, baz=1.2,SNR=415	1.20	221	⇓Pb	Pb	22 20 16.5	-0.4
G06A				⇓S	Sb	22 20 31.5	-0.6
F09A	S2 Ranch, Elgi baz=1.2	1.22	111	⇓Pb	Pb	22 20 17.1	-0.1
VTHM	Trough	1.22	217	⇑P	Pn	22 20 16.5	-0.2
D09A	Jones Farm, Ri baz=1.2,SNR=118	1.23	42	⇑Pn	Pn	22 20 16.1	-0.9
D09A				⇓S	Sb	22 20 31.9	-1.1
TBM	Table Mountain	1.25	324	⇓P	Pn	22 20 17.1	-0.2
TWW	Teanaway	1.35	317	P	Pn	22 20 18.8	+0.2
OD2	Odessa Site #2	1.36	24	⇓P	Pn	22 20 17.7	-1.0
ASR	Mount Adams--S	1.44	271	P	Pn	22 20 20.1	+0.3
GULW	Guler Mountain	1.46	262	P	Pn	22 20 20.1	0.0
WPW	White Pass	1.50	292	P	Pn	22 20 20.5	-0.1
G09A	Cove baz=1.5,SNR=48	1.51	125	⇓Pn	Pn	22 20 19.9	-0.9
G09A				⇓Sb	Sb	22 20 41.7	+0.8
SAW	Saint Andrews	1.55	3	⇑P	Pn	22 20 20.3	-1.0
APM	Augspurger Mou	1.56	255	P	Pn	22 20 21.9	+0.4
VFP	Flag Point	1.59	239	⇑P	Pn	22 20 22.1	+0.1
F10A	Beach Ranch, E baz=1.6	1.61	96	⇓Pb	Pb	22 20 23.6	-0.3
VLL	Laurance Lake	1.66	246	P	Pn	22 20 23.4	+0.6
RCM	Mount Rainier-	1.67	295	P	Pn	22 20 23.2	+0.2
RCS	Mount Rainier-	1.68	296	⇑P	Pn	22 20 23.2	+0.1
CBSW	Chelan Butte S	1.69	348	P	Pn	22 20 24.2	+1.0
LON	Longmire	1.69	291	⇑P	Pn	22 20 23.0	-0.2
HOOD	Mount Hood Mea	1.71	241	⇑P	Pn	22 20 23.8	+0.3
E10A	Myers Farm, Un baz=1.7	1.71	78	⇑Sn	Sn	22 20 44.1	-0.7
REMR	Mount Rainier-	1.73	293	⇑P	Pn	22 20 23.9	+0.1
H08A	Prairie City baz=1.8,SNR=38	1.75	159	⇑Pb	Pb	22 20 26.0	-0.2
CDFW	Cedar Flats	1.75	270	P	Pn	22 20 24.2	+0.1
D10A	Wagner Farm, O baz=1.8	1.79	59	⇓Pn	Pn	22 20 23.7	-1.0
SOSW	Source of Smit	1.81	274	⇓P	Pn	22 20 24.9	-0.1
VIPM	Ingram Point	1.82	205	⇓P	Pn	22 20 25.2	+0.1
ESD	East Dome	1.82	272	P	Pn	22 20 25.3	+0.2
JLK	June Lake	1.82	271	⇑P	Pn	22 20 25.1	0.0
DHW2	Dyer Hill 2	1.84	355	P	Pn	22 20 24.1	-1.2
C09A	Chrisman Ranch baz=1.9,SNR=68	1.85	27	⇓Pn	Pn	22 20 24.3	-1.3
C09A				⇓Sn	Sn	22 20 47.6	-0.9
C09A				⇑Sb	Sb	22 20 51.8	+0.9
MTMW	Mount Mitchell	1.87	267	⇑P	Pn	22 20 25.7	-0.1
TDL	Tradedollar La	1.88	277	P	Pn	22 20 25.7	-0.1
GSM	Grass Mountain	1.88	305	P	Pn	22 20 26.3	+0.5
SHW	Mount Saint He	1.88	272	⇑P	Pn	22 20 26.1	+0.1
G10A	Bishop Farm, J baz=1.9,SNR=30	1.90	116	⇓Pb	Pb	22 20 28.5	-0.2
DPW	Davenport	1.94	27	⇓P	Pn	22 20 25.8	-0.9
ERK	Elk Rock	1.96	275	P	Pn	22 20 27.0	0.0
FL2	Flat Top 2	1.96	272	⇓P	Pn	22 20 27.1	+0.1
D05A	Enumclaw baz=2.0	1.98	302	⇓Pn	Pn	22 20 26.3	-1.0
D05A				⇑Sb	Sb	22 20 55.1	+0.5
H09A	Durkee baz=2.0	1.99	138	⇓Pb	Pb	22 20 29.9	-0.4
LVP	Lakeview Peak	2.01	269	⇑P	Pn	22 20 27.5	-0.1
RMW	Rattlesnake Mo	2.04	311	⇓P	Pn	22 20 28.3	+0.2
I07A	Izee baz=2.1	2.07	180	⇑Pb	Pb	22 20 31.5	-0.2
B08A	Colville Reser baz=2.2,SNR=31	2.21	3	⇓Pn	Pn	22 20 28.7	-1.7
B08A				⇓Pb	Pb	22 20 32.9	-1.1
HTW	Haystack Looko	2.25	318	⇑P	Pn	22 20 31.4	+0.5
C10A	Spilker Farm, baz=2.2,SNR=7.1	2.25	42	⇑Pn	Pn	22 20 29.8	-1.2
LCW	Lucas Creek	2.25	284	P	Pn	22 20 31.2	+0.1
G04A	Mulino baz=2.3	2.28	246	⇑Pb	Pb	22 20 34.5	-0.7
E11A	Bogner Ranch, baz=2.3,SNR=83	2.31	84	⇓Pn	Pn	22 20 31.5	-0.3
F11A	Grangeville baz=2.4,SNR=20	2.37	95	⇑P	Pn	22 20 33.6	+1.1
F11A	baz=2.4			⇓Pb	Pb	22 20 36.6	-0.2
D11A	Klaveano Farm, baz=2.4,SNR=17	2.38	67	⇑Pn	Pn	22 20 32.3	-0.4
H04A	Detroit Lake baz=2.4,SNR=28	2.38	233	⇓Pn	Pn	22 20 32.3	-0.4
G11A	Walters Elk Ra baz=2.4,SNR=11	2.40	107	⇓Pn	Pn	22 20 32.9	-0.2
B09A	Rice baz=2.4,SNR=9.6	2.45	22	⇓Pn	Pn	22 20 32.6	-1.2
B09A baz=2.4				⇓Pb	Pb	22 20 37.5	-0.7
B09A baz=2.4				⇓Sb	Sb	22 21 09.4	+1.3
H10A	Noah's Angus R baz=2.5,SNR=11	2.51	128	⇓Pn	Pn	22 20 34.5	-0.1
H10A baz=2.5				⇓Pb	Pb	22 20 38.6	-0.5
H10A baz=2.5				⇓Sb	Sb	22 21 11.9	+2.2
I09A	Lost Marbles R baz=2.5	2.52	149	⇑Pb	Pb	22 20 39.4	0.0
I09A baz=2.5				⇑Sb	Sb	22 21 12.1	+2.0
JCW	Jim Creek	2.62	322	*e*Pn	Pn	22 20 36.5	+0.5
JCW				*e*Sn	Sn	22 21 09.0	+1.7
RPW	Rockport	2.66	330	*e*Pn	Pn	22 20 40.1	+3.5
RPW				*e*Sn	Sn	22 21 14.0	+5.6
GNW	Green Mountain	2.67	303	*e*Pn	Pn	22 20 37.1	+0.4
GNW				*e*Pg	Pg	22 20 45.0	-0.8
GNW				*e*Sn	Sn	22 21 10.5	+2.0
NEW	Newport	2.67	37	*e*Pn	Pn	22 20 35.9	-0.9
NEW				*e*Pg	Pg	22 20 44.5	-1.4
NEW				*e*Sn	Sn	22 21 16.2	+7.5
B06A	Marblemount baz=2.7	2.71	331	⇑Sb	Sb	22 21 16.4	+0.9
F03A	Seaside baz=2.8	2.82	267	⇑Sb	Sb	22 21 19.5	+0.9
E03A	Lebam baz=2.8	2.82	279	⇓Sb	Sb	22 21 19.9	+1.2
H11A	Donnelly baz=2.9	2.87	119	⇑Pn	Pn	22 20 39.7	+0.2
J08A	Circle Bar Ran baz=2.9	2.90	165	⇑Pb	Pb	22 20 45.4	-0.4
A07A	Ashnola River, baz=2.9	2.95	349	⇑Pn	Pn	22 20 39.7	-0.9
A07A baz=2.9				⇓Sn	Sn	22 21 13.9	-1.6
HEBO	Mount Hebo	3.11	254	*e*Pn	Pn	22 20 42.7	-0.1
HEBO				*e*Sn	Sn	22 21 27.0	+7.6
A10A	Northport baz=3.1	3.12	25	⇓Sn	Sn	22 21 17.6	-2.3
B11A	Sandpoint baz=3.1,SNR=6.8	3.13	42	⇓Pn	Pn	22 20 42.0	-1.1
NLWA	Neilton Lookou baz=3.2	3.23	294	⇓Pb	Pb	22 20 50.8	-0.7
NLWA	Neilton Lookou	3.23	294	*e*Pn	Pn	22 20 46.2	+1.8
A11A	Hall Mountain, baz=3.5	3.53	36	⇑Pn	Pn	22 20 47.6	-0.9
D13A	Huson baz=3.6,SNR=12	3.62	73	⇑Pn	Pn	22 20 49.3	-0.4
F13A	Darby baz=3.6,SNR=9.6	3.64	94	⇑Pn	Pn	22 20 49.4	-0.7
BSMT	Bassoo Peak	3.66	61	*e*Pn	Pn	22 20 51.7	+1.4
BSMT				*e*Sn	Sn	22 21 32.9	-0.1
E13A	Victor baz=3.7,SNR=28	3.71	84	⇑Pn	Pn	22 20 51.0	-0.1
C13A	Hot Springs baz=3.7,SNR=10	3.72	64	⇓Pn	Pn	22 20 50.7	-0.5
WVOR	Wild Horse Val	3.78	170	*e*Pn	Pn	22 20 51.8	-0.1
WVOR				*e*Pg	Pg	22 21 05.8	-1.2
MSO	Missoula	3.92	78	*e*Pn	Pn	22 20 54.4	+0.5
MSO				*e*Sn	Sn	22 21 40.2	+0.9
JTMT	Jette	3.93	64	*e*Pn	Pn	22 20 55.6	+1.6
JTMT				*e*Sn	Sn	22 21 40.8	+1.1
SWMT	Swartz Lake	4.03	68	*e*Pn	Pn	22 20 58.6	+3.2
SWMT				*e*Sn	Sn	22 21 44.1	+2.0
YBMT	Yellow Bay	4.14	64	*e*Pn	Pn	22 20 58.4	+1.4
YBMT				*e*Sn	Sn	22 21 45.0	+0.2
D14A	Greenough baz=4.2,SNR=7.4	4.25	75	⇓Pn	Pn	22 20 58.0	-0.5
MOD	Modoc	4.29	188	Pn	Pn	22 20 58.0	-1.0
MOD				*e*Pg	Pg	22 21 15.9	-0.9
SLMT	Seeley Lake	4.29	73	*e*Pn	Pn	22 21 00.2	+1.2
HUMO	Hull Mountain	4.32	216	*e*Pn	Pn	22 20 58.9	-0.5
HUMO				*e*Sn	Sn	22 21 49.0	-0.2
CHMT	Chamberlain Mo	4.40	78	*e*Pn	Pn	22 21 01.4	+0.9
CHMT				S	Sn	22 22 03.3	+12
HLID	Hailey	4.47	124	*e*Pn	Pn	22 21 01.6	+0.1
HLID				Pg	Pg	22 21 17.4	-2.8
HLID				*e*Sn	Sn	22 21 54.1	+1.3
E15A	Deer Lodge baz=4.8,SNR=13	4.78	84	⇓Pn	Pn	22 21 04.7	-1.1
I14A	Mackay baz=4.9	4.85	115	⇓Pn	Pn	22 21 06.1	-0.6
MCMT	McKenzie Canyo	4.88	103	*e*Pn	Pn	22 21 07.6	+0.5
MCMT				*e*Sn	Sn	22 22 04.0	+0.9
F15A	Butte baz=4.9,SNR=7.0	4.91	91	⇓Pn	Pn	22 21 06.7	-0.9
DLMT	Dillon	4.92	97	*e*Pn	Pn	22 21 07.2	-0.4
DLMT				*e*S	Sg	22 22 33.4	+1.0
YBH	Yreka Blue Hor 0.2nm,0.3s,baz=30,slow=7.2,SNR=5.6	4.98	209	Pn	Pn	22 21 13.7	+5.1
YBH				Lg		22 22 31.7	
YBH	Yreka Blue Hor 0.2nm,0.3s,baz=67,slow=15,SNR=2.6	4.98	209	Pn	Pn	22 21 08.4	-0.2
YBH				Lg		22 22 31.7	
HRY	Holter Researc	5.35	81	*e*Pn	Pn	22 21 14.2	+0.6
HRY				*e*Sg	Sg	22 22 46.1	-0.2
BOZ	Bozeman (W)	5.54	92	*e*Pn	Pn	22 21 17.5	+1.3
BOZ				*e*Sn	Sn	22 22 22.5	+3.2
BOZ				*e*Sg	Sg	22 22 49.4	-2.9
ELK	Elko 0.1nm,0.3s,baz=338,slow=19,SNR=2.5	6.24	149	Pn

BLCB	**Balcova**	**0.82**	**251**	*e*PG	**Pg**	**22 28 21.7**	**-0.4**
BLCB				*e*SG	**Sg**	**22 28 33.2**	**+0.6**
BLCB	**Balcova**	**0.82**	**251**	*e*Pg	**Pg**	**22 28 21.7**	**-0.3**
BLCB				*e*Sg	**Sg**	**22 28 33.2**	**+0.5**
BALB	**Balikesir**	**0.98**	**354**	*e*PN	**Pn**	**22 28 26.2**	**-0.7**
BALB	**Balikesir**	**0.98**	**354**	*e*Pn	**Pn**	**22 28 26.2**	**-0.7**
DURS	**Dursunbey**	**1.00**	**20**	*e*P	**Pg**	**22 28 26.1**	**+0.5**
DURS				*e*S	**Sg**	**22 28 40.0**	**+1.5**
DURS	**Dursunbey**	**1.00**	**20**	*e*P	**Pg**	**22 28 26.1**	**+0.5**
DURS				*e*S	**Sg**	**22 28 40.0**	**+1.4**
DST	**Dursunbey**	**1.05**	**26**	*e*PN	**Pn**	**22 28 27.9**	**0.0**
DST				*e*SN	**Sn**	**22 28 43.5**	**+0.5**
DST	**Dursunbey**	**1.05**	**26**	*e*Pn	**Pn**	**22 28 27.9**	**0.0**
DST				*e*Sn	**Sn**	**22 28 43.5**	**+0.5**
BALY	**Balya**	**1.12**	**344**	*e*P	**Pg**	**22 28 27.6**	**-0.3**
BALY				*e*S	**Sg**	**22 28 41.8**	**-0.7**
BALY	**Balya**	**1.12**	**344**	*e*P	**Pg**	**22 28 27.6**	**-0.3**
BALY				*e*S	**Sg**	**22 28 41.8**	**-0.6**

*IDC **18** 22:46:17.5±2.0,21°.63S×178°.85W,h506km±24km,mb3.5/9, mb1 3.8/11,mb1mx3.6/17,mbtmp3.6/11,Error ellipse: s-maj=22.2km s-min=12.5km az=132.0*
*NEIC **18** 22:46:19.9±1.1,21°.60S×178°.92W,h538km±12km,mb3.9/5, Error ellipse: s-maj=18.3km s-min=12.7km az=126.0*
*ISCJB **18** 22:46:21.3±0.9,21°.64S±0°.07×179°.1W±0°.1,h560km±11km, mb4.0/16,Error ellipse: s-maj=15.0km s-min=10.1km az=3.8*
ISC 18 22:46:21.6±0.9,**21°.65S**±0°.08×**179°.0W**±0°.1,**h551**km±11km, **n38**,σ0**°94**/33,**mb4.0**/16,**2C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.77**	**324**	*e*P	**P**	**22 47 49.9**	**+0.3**
RAO	**Raoul Island**	**7.63**	**173**	S	**S**	**22 49 49.0**	**-0.1**
32nm,0.3s,baz=300,slow=20,SNR=3.6							
AFI	**Afiamalu**	**10.35**	**43**	P	**P**	**22 48 38.0**	**-5.1**
7.3nm,0.3s,baz=328,slow=0.8,SNR=8.4							
AFI				S	**S**	**22 50 28.5**	**-11**
7.0nm,0.3s,baz=204,slow=19,SNR=7.5							
AFI	**Afiamalu**	**10.35**	**43**	*e*P	**P**	**22 48 37.5**	**-5.7**
AFI				*e*S	**S**	**22 50 30.5**	**-9.1**
URZ	**Urewera**	**16.88**	**190**	P	**P**	**22 49 47.8**	**-1.2**
4.9nm,0.3s,baz=321,slow=3.7,SNR=21							
URZ				S	**S**	**22 52 34.1**	**-4.0**
0.3nm,0.3s,baz=37,slow=20,SNR=2.8							
RPZ	**Rata Peaks**	**23.49**	**198**	P	**P**	**22 50 47.3**	**-1.3**
7.9nm,0.6s,mb4.5,baz=8.9,slow=11,SNR=6.0							
CNB	**Canberra Magne**	**30.78**	**237**	⇑*i*P	**P**	**22 51 54.1**	**+1.5**
CMSA	**Cobar Meteorol**	**32.92**	**245**	*e*P	**P**	**22 52 11.4**	**+0.5**
TOO	**Toolangi**	**34.44**	**235**	*e*P	**P**	**22 52 24.7**	**+1.1**
TAU	**Tasmania Unive**	**35.13**	**225**	P	**P**	**22 52 29.0**	**-0.2**
STKA	**Stephens Creek**	**36.42**	**245**	*e*P	**P**	**22 52 40.9**	**+0.8**
4.3nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**36.42**	**245**	P	**P**	**22 52 41.1**	**+1.0**
5.0nm,0.6s,mb4.2,baz=85,slow=10,SNR=12							
BBOO	**Buckleboo**	**41.17**	**245**	⇑*i*P	**P**	**22 53 18.4**	**-0.1**
4.4nm,0.3s,mb4.5							
ASAR	**Alice Springs**	**43.32**	**258**	P	**P**	**22 53 35.5**	**0.0**
7.2nm,0.8s,mb4.3,baz=96,slow=8.2,SNR=59							
WRAB	**Tennant Creek**	**43.48**	**263**	*e*P	**P**	**22 53 35.9**	**-0.9**
1.5nm,0.4s,mb3.9							
FORT	**Forrest**	**47.95**	**248**	*e*P	**P**	**22 54 10.4**	**-0.3**
10nm,0.5s,mb4.6							
GUMO	**Guam**	**49.81**	**311**	P	**P**	**22 54 24.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**51.92**	**264**	*e*P	**P**	**22 54 38.5**	**-1.4**
1.7nm,0.3s,mb3.9							
MBWA	**Marble Bar**	**56.66**	**258**	*e*P	**P**	**22 55 12.5**	**-0.6**
5.7nm,0.7s,mb3.9							
SBA	**Scott Base**	**56.66**	**184**	*e*P	**P**	**22 55 14.9**	**+2.7**
2.5nm,0.5s,mb3.7							
MJAR	**Matsushiro Arr**	**70.57**	**325**	P	**P**	**22 56 40.1**	**-1.4**
1.2nm,0.6s,mb3.6,baz=181,slow=6.0,SNR=4.1							
MAJO	**Matsushiro**	**70.57**	**325**	P	**P**	**22 56 42.2**	**+0.7**
NACB	**Ninganchiao**	**73.53**	**305**	P	**P**	**22 56 59.0**	**+0.1**
PETK	**Petropavlovsk-**	**77.14**	**346**	P	**P**	**22 57 18.0**	**-0.3**
1.7nm,0.8s,mb3.5,baz=131,slow=5.9,SNR=3.2							
NVAR	**Mina Array Bea**	**82.52**	**44**	P	**P**	**22 57 47.1**	**+0.2**
2.1nm,0.7s,mb3.8,baz=223,slow=8.3,SNR=10							
ENH	**Enshi**	**85.89**	**305**	P	**P**	**22 58 03.0**	**-0.6**
TXAR	**Lajitas Array**	**88.49**	**58**	P	**P**	**22 58 16.6**	**+0.7**
1.2nm,0.9s,mb3.6,baz=213,slow=6.1,SNR=16							
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**22 58 23.4**	**+2.2**
0.4nm,0.3s,mb3.7,baz=106,slow=4.8,SNR=3.1							
PDAR	**Pinedale Array**	**90.46**	**44**	P	**P**	**22 58 24.3**	**-0.4**
1.4nm,0.8s,mb3.9,baz=215,slow=2.5,SNR=11							
SMCO	**Snowmass**	**90.47**	**48**	P	**P**	**22 58 24.6**	**-0.2**
2.8nm,0.7s,mb4.2							
ARCES	**ARCESS Array B**	**129.87**	**349**	PKP	PKPdf	23 04 27.3	-0.6
3.0nm,0.9s,baz=66,slow=1.5,SNR=6.3							
ARCES	**ARCESS Array B**	**129.87**	**349**	PKP	PKPdf	23 04 27.3	-0.6
FINES	**FINESS Array B**	**136.59**	**343**	PKP	PKPdf	23 04 41.3	+0.6
1.8nm,0.9s,baz=5.7,slow=1.4,SNR=3.6							
KIV	**Kislovodsk**	**139.04**	**313**	PKPdf	PKPdf	23 04 45.2	-0.5
AKASG	**Malin Array Be**	**143.53**	**330**	PKhKP		23 04 50.4	
1.3nm,0.5s,baz=44,slow=4.9,SNR=6.2							
BRTR	**Keskin Array B**	**146.87**	**310**	PKPbc	PKPbc	23 05 02.0	-0.4
0.5nm,0.8s,baz=148,slow=3.2,SNR=4.8							
GERES	**GERESS Array B**	**151.02**	**342**	PKPbc	PKPbc	23 05 11.7	-0.6
1.1nm,0.8s,baz=356,slow=2.0,SNR=5.3							
TORD	**Torodi Ar. Bea**	**171.51**	**185**	PKPab	PKPab	23 06 52.0	-0.6
0.7nm,0.9s,baz=171,slow=3.1,SNR=5.6							

*TIR **18** 22:49:04.2±3.6,41°.83N×19°.40E,h6km±999km,ML3.1*
*CSEM **18** 22:49:07.8±0.2,41°.86N×19°.61E,h10km,ML2.7/10,Error ellipse: s-maj=3.7km s-min=2.5km az=45.0*
*SKO **18** 22:49:07.6,41°.88N×19°.53E,h9km*
*BEO **18** 22:49:08.2±0.3,41°.92N×19°.63E,h2km±2km,ML2.9/10*
*ISCJB **18** 22:49:08.3±0.4,41°.84N±0°.02×19°.55E±0°.02,h20km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=9.9*
*PDG **18** 22:49:08.5±0.1,41°.90N×19°.64E,h11km,MD2.8/2, ML2.7/10,Error ellipse: s-maj=0.6km s-min=0.5km az=90.0*
*NEIC **18** 22:49:08.5,41°.90N×19°.64E,h11km,ML2.7(PDG),After PDG.*
*ROM **18** 22:49:09.1±0.5,41°.67N×19°.39E,h10km,Ml2.9/3,Error ellipse: s-maj=10.9km s-min=4.7km az=131.0*
ISC 18 22:49:08.2±0.3,**41°.84N**±0°.02×**19°.58E**±0°.02,**h15**km±2km, **n96**,σ1**°09**/160,**16C-9D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.27**	**297**	⇓⇓*i*Pg	**Pg**	**22 49 14.1**	**+0.1**
ULC				*e*Sg	**Sg**	**22 49 19.2**	**+1.2**
ULC	**Ulcinj**	**0.27**	**297**	⇓⇓*i*Pg	**Pg**	**22 49 14.1**	**+0.1**
ULC				*e*Sg	**Sg**	**22 49 19.2**	**+1.2**
PUK	**Puka**	**0.31**	**49**	*e*PG	**Pg**	**22 49 13.4**	**-1.3**
PUK				*i* SG	**Sg**	**22 49 19.1**	**0.0**
PUK	**Puka**	**0.31**	**49**	*e*Pg	**Pg**	**22 49 13.4**	**-1.3**
SNR=90							
PUK				*i* Sg	**Sg**	**22 49 19.1**	**0.0**
SNR=90							
TIR	**Tirane**	**0.54**	**156**	*i* Pg	**Pg**	**22 49 18.2**	**-0.6**
TIR				*e*Sg	**Sg**	**22 49 27.4**	**+1.5**
TIR	**Tirane**	**0.54**	**156**	*i* Pg	**Pg**	**22 49 18.2**	**-0.6**
TIR				*e*Sg	**Sg**	**22 49 27.4**	**+1.5**
PDG	**Podgorica**	**0.64**	**338**	⇑*i*Pg	**Pg**	**22 49 19.3**	**-1.3**
PDG				*e*Sg	**Sg**	**22 49 29.4**	**+0.3**
TTG	**Podgorica**	**0.64**	**338**	⇑*i*Pg	**Pg**	**22 49 19.3**	**-1.3**
TTG				*e*Sg	**Sg**	**22 49 29.4**	**+0.3**
TTG	**Podgorica**	**0.64**	**338**	⇑*i*Pg	**Pg**	**22 49 19.3**	**-1.3**
TTG				*e*Sg	**Sg**	**22 49 29.4**	**+0.3**
BCI	**Bajram Curri**	**0.64**	**35**	*e*PG	**Pg**	**22 49 19.2**	**-1.6**
BCI				*i* SG	**Sg**	**22 49 28.7**	**-0.6**
BCI	**Bajram Curri**	**0.64**	**35**	*e*Pg	**Pg**	**22 49 19.2**	**-1.6**
SNR=90							
BCI				*i* Sg	**Sg**	**22 49 28.7**	**-0.6**
SNR=90							
BUM	**Brajici-Budva**	**0.68**	**313**	⇑*i*Pg	**Pg**	**22 49 21.2**	**-0.3**
BUM				*e*Sg	**Sg**	**22 49 32.1**	**+1.5**
BUM	**Brajici-Budva**	**0.68**	**313**	⇑*i*Pg	**Pg**	**22 49 21.2**	**-0.3**
BUM				*e*Sg	**Sg**	**22 49 32.1**	**+1.5**
PVY	**Plav**	**0.81**	**21**	⇑*i*Pg	**Pg**	**22 49 22.1**	**-1.9**
PVY				*e*Sg	**Sg**	**22 49 34.0**	**-0.6**
PVY	**Plav**	**0.81**	**21**	⇑*i*Pg	**Pg**	**22 49 22.1**	**-1.9**
PVY				*e*Sg	**Sg**	**22 49 34.0**	**-0.6**
HCY	**Herceg Novi**	**1.00**	**308**	⇑*i*Pg	**Pg**	**22 49 27.4**	**-0.2**
HCY				*e*Sg	**Sg**	**22 49 42.9**	**+2.1**
HCY	**Herceg Novi**	**1.00**	**308**	⇑*i*Pg	**Pg**	**22 49 27.4**	**-0.2**
HCY				*e*Sg	**Sg**	**22 49 42.9**	**+2.1**
BEY	**Berane**	**1.06**	**13**	⇑*i*Pg	**Pg**	**22 49 26.7**	**-2.0**
BEY				*e*Sg	**Sg**	**22 49 42.1**	**-0.4**
IVA	**Berane**	**1.06**	**13**	⇑*i*Pg	**Pg**	**22 49 26.7**	**-2.0**
IVA				*e*Sg	**Sg**	**22 49 42.1**	**-0.4**
IVA	**Berane**	**1.06**	**13**	⇑*i*Pg	**Pg**	**22 49 26.7**	**-2.0**
IVA				*e*Sg	**Sg**	**22 49 42.1**	**-0.4**
NKY	**Niksic**	**1.06**	**336**	⇓⇓*i*Pg	**Pg**	**22 49 27.6**	**-1.1**
NKY				*e*Sg	**Sg**	**22 49 43.8**	**+1.2**
NKY	**Niksic**	**1.06**	**336**	⇓⇓*i*Pg	**Pg**	**22 49 27.6**	**-1.1**
NKY				*e*Sg	**Sg**	**22 49 43.8**	**+1.2**
OHR	**Ohrid**	**1.17**	**128**	*e*Pn	**Pn**	**22 49 29.1**	**-0.9**
OHR				*e*Sg	**Sg**	**22 49 47.0**	**+1.0**
OHR	**Ohrid**	**1.17**	**128**	*e*Pn	**Pn**	**22 49 29.1**	**-1.0**
OHR				*e*Sg	**Sg**	**22 49 47.0**	**+0.9**
TREB	**Trebinje**	**1.26**	**314**	*e*Pn	**Pn**	**22 49 30.7**	**-0.6**
TREB				*i* Sg	**Sg**	**22 49 48.4**	**-0.6**
BRY	**Bratogost**	**1.31**	**325**	⇓⇓*i*Pg	**Pg**	**22 49 32.7**	**-0.7**
BRY				*e*Sg	**Sg**	**22 49 52.4**	**+2.0**
BRY	**Bratogost**	**1.31**	**325**	⇓⇓*i*Pg	**Pg**	**22 49 32.7**	**-0.7**
BRY				*e*Sg	**Sg**	**22 49 52.4**	**+2.0**
KRUS	**Krusevo**	**1.34**	**110**	*e*Pn	**Pn**	**22 49 31.6**	**-0.8**
KRUS				*e*Sg	**Sg**	**22 49 51.4**	**0.0**
KRUS	**Krusevo**	**1.34**	**110**	*e*Pn	**Pn**	**22 49 31.5**	**-0.9**
KRUS				*e*Sg	**Sg**	**22 49 51.3**	**-0.1**
SKO	**Skopje**	**1.40**	**84**	*e*Pg	**Pn**	**22 49 33.9**	**+0.7**
SKO				*e*Sg	**Sg**	**22 49 52.3**	**-1.0**
SKO	**Skopje**	**1.40**	**84**	*e*Pn	**Pn**	**22 49 34.2**	**+1.1**
SKO				*e*Sg	**Sg**	**22 49 53.1**	**-0.2**
SKO	**Skopje**	**1.40**	**84**	*e*Pg	**Pn**	**22 49 33.9**	**+0.7**
SKO	**Skopje**	**1.40**	**84**	*e*Pn	**Pn**	**22 49 34.2**	**+1.0**
SKO				*e*Sg	**Sg**	**22 49 52.3**	**-1.0**
UPM	**Unac-Piva**	**1.45**	**340**	⇑*i*Pg	**Pn**	**22 49 34.3**	**+0.4**
UPM				*e*Sg	**Sg**	**22 49 56.4**	**+1.5**
UPM	**Unac-Piva**	**1.45**	**340**	⇑*i*Pg	**Pn**	**22 49 34.3**	**+0.4**
UPM				*e*Sg	**Sg**	**22 49 56.4**	**+1.5**
SJES	**Sjenica**	**1.45**	**12**	*i* Pg	**Pn**	**22 49 33.4**	**-0.5**
SJES				*i* Sg	**Sg**	**22 49 54.1**	**-0.9**
SJES	**Sjenica**	**1.45**	**12**	*i* Pg	**Pn**	**22 49 33.4**	**-0.5**
SJES				*i* Sg	**Sg**	**22 49 54.1**	**-0.9**
PLE	**Pljevlja**	**1.50**	**355**	⇑*i*Pg	**Pn**	**22 49 35.3**	**+0.8**
PLE				*e*Sg	**Sg**	**22 49 57.1**	**+0.7**
PLE	**Pljevlja**	**1.50**	**355**	⇑*i*Pg	**Pn**	**22 49 35.3**	**+0.8**
PLE				*e*Sg	**Sg**	**22 49 57.1**	**+0.7**
KBN	**Korca**	**1.52**	**143**	*e*PG	**Pg**	**22 49 36.7**	**-0.7**
KBN				*i* SG	**Sg**	**22 49 57.9**	**+0.7**
KBN	**Korca**	**1.52**	**143**	*e*Pg	**Pg**	**22 49 36.7**	**-0.7**
SNR=90							
KBN				*i* Sg	**Sg**	**22 49 57.9**	**+0.7**
SNR=90							
BIA	**Bitola**	**1.55**	**121**	*e*Pn	**Pn**	**22 49 35.3**	**+0.1**
BIA				*e*Sg	**Sg**	**22 49 58.3**	**+0.2**
BIA	**Bitola**	**1.55**	**121**	*e*Pn	**Pn**	**22 49 35.3**	**+0.1**
BIA				*e*Sg	**Sg**	**22 49 58.3**	**+0.2**
STON	**Ston**	**1.73**	**307**	*e*Pn	**Pn**	**22 49 37.7**	**0.0**
STON				Sn	**Sn**	**22 50 01.1**	**+1.5**
STON	**Ston**	**1.73**	**307**	*e*Pn	**Pn**	**22 49 37.7**	**0.0**
STON				Sn	**Sn**	**22 50 01.0**	**+1.4**
BARS	**Barje**	**1.93**	**59**	*i* Pg	**Pn**	**22 49 40.2**	**-0.2**
BARS				*i* Sg	**Sn**	**22 50 05.8**	**+1.4**
BARS	**Barje**	**1.93**	**59**	*i* Pg	**Pn**	**22 49 40.2**	**-0.2**
BARS				*i* Sg	**Sn**	**22 50 05.8**	**+1.4**
SRN	**Sarande**	**1.98**	**171**	*e*PG	**Pn**	**22 49 41.7**	**+0.5**
SRN	**Sarande**	**1.98**	**171**	*e*Pg	**Pn**	**22 49 41.7**	**+0.5**
SNR=90							
BBLS	**Lazići**	**2.03**	**357**	*i* Pn	**Pn**	**22 49 43.2**	**+1.4**
BBLS				*i* Sg	**Sg**	**22 50 09.7**	**-3.8**
BBLS	**Lazići**	**2.03**	**357**	*i* Pn	**Pn**	**22 49 43.2**	**+1.4**
NOCI	**Noci**	**2.16**	**242**	Pg	**Pn**	**22 49 42.7**	**-1.0**
NOCI				Sg	**Sn**	**22 50 07.8**	**-2.4**
55nm,0.7s							
NOCI	**Noci**	**2.16**	**242**	Pg	**Pn**	**22 49 42.7**	**-1.0**
NOCI				Sg	**Sn**	**22 50 07.8**	**-2.4**
55nm,0.7s							
TAR1	**Taranto**	**2.17**	**234**	*e*Pn	**Pn**	**22 49 47.2**	**+3.4**
GRUS	**Gruza**	**2.21**	**22**	*i* Pn	**Pn**	**22 49 44.1**	**-0.3**
GRUS				*e*Sg	**Sg**	**22 50 14.2**	**-5.1**
GRUS	**Gruza**	**2.21**	**22**	*i* Pn	**Pn**	**22 49 44.1**	**-0.3**
GRUS				*e*Sg	**Sg**	**22 50 14.2**	**-5.1**
VAY	**Valandovo**	**2.31**	**102**	*e*Pn	**Pn**	**22 49 45.7**	**+0.1**
VAY	**Valandovo**	**2.31**	**102**	*e*Pn	**Pn**	**22 49 45.7**	**+0.1**
NISS		**2.35**	**47**	*e*Pn	**Pn**	**22 49 46.9**	**+0.7**
NISS				*e*Sn	**Sn**	**22 50 14.2**	**-0.6**
NISS		**2.35**	**47**	*e*Pn	**Pn**	**22 49 46.9**	**+0.7**
NISS				*e*Sn	**Sn**	**22 50 14.2**	**-0.6**
SG1	**Sgolgore (BA)**	**2.40**	**246**	*e*Pn	**Pn**	**22 49 47.2**	**+0.3**
SG1				*e*Sn	**Sn**	**22 50 13.6**	**-2.4**
LTRZ	**Laterza**	**2.42**	**240**	Pg	**Pn**	**22 49 46.9**	**-0.3**
LTRZ				Sg	**Sn**	**22 50 13.7**	**-2.8**
LTRZ	**Laterza**	**2.42**	**240**	Pg	**Pn**	**22 49 46.9**	**-0.3**
LTRZ				Sg	**Sn**	**22 50 13.7**	**-2.8**
LTRZ	**Laterza**	**2.42**	**240**	Pg	**Pn**	**22 49 46.9**	**-0.3**
LTRZ				Sg	**Sn**	**22 50 13.7**	**-2.8**
AMUR	**Altamura**	**2.42**	**248**	Pg	**Pn**	**22 49 46.6**	**-0.6**
AMUR	**Altamura**	**2.42**	**248**	Pg	**Pn**	**22 49 46.6**	**-0.6**
ZAPS	**Zavoj**	**2.68**	**57**	*i* Pn	**Pn**	**22 49 51.9**	**+1.2**
ZAPS				*e*Sn	**Sn**	**22 50 23.4**	**+0.5**
ZAPS	**Zavoj**	**2.68**	**57**	*i* Pn	**Pn**	**22 49 51.9**	**+1.2**
ZAPS				*e*Sn	**Sn**	**22 50 23.4**	**+0.5**
SVIS	**Svilajnac**	**2.71**	**26**	*e*Pn	**Pn**	**22 49 51.5**	**+0.3**
VTS	**Vitosha**	**2.80**	**73**	*e*Pn	**Pn**	**22 49 54.0**	**+1.5**
VTS				*e*Sn	**Sn**	**22 50 27.6**	**+1.6**
FGSL	**Fruska Gora**	**3.32**	**3**	*e*Pn	**Pn**	**22 49 59.7**	**+0.1**
FRGS	**Fruska Gora**	**3.32**	**3**	*e*Pn	**Pn**	**22 49 59.7**	**+0.1**
CDRU	**Civita di Ruta**	**3.50**	**249**	Pg	**Pn**	**22 50 01.7**	**-0.3**
17nm,1.0s							
CDRU	**Civita di Ruta**	**3.50**	**249**	Pg	**Pn**	**22 50 01.7**	**-0.3**
17nm,1.0s							
BZS	**Buzias**	**4.05**	**21**	S	**Sn**	**22 50 55.9**	**-1.0**
BZS	**Buzias**	**4.05**	**21**	S	**Sn**	**22 50 55.9**	**-1.0**
NVLJ	**Novalja**	**4.39**	**310**	*i* Pn	**Pn**	**22 50 14.1**	**-0.1**
NVLJ				Sn	**Sn**	**22 51 04.2**	**-0.8**
NVLJ	**Novalja**	**4.39**	**310**	*i* Pn	**Pn**	**22 50 14.1**	**-0.1**
NVLJ				Sn	**Sn**	**22 51 04.2**	**-0.8**
DEV	**Deva**	**4.70**	**30**	⇓⇓*i*P	**Pg**	**22 50 42.6**	**+4.4**
NRCA	**Norcia**	**4.89**	**284**	Pg	**Pn**	**22 50 21.8**	**+0.6**
NRCA	**Norcia**	**4.89**	**284**	Pg	**Pn**	**22 50 21.8**	**+0.6**
5.0nm,0.4s							
NRCA	**Norcia**	**4.89**	**284**	Pg	**Pn**	**22 50 21.8**	**+0.6**
5.0nm,0.4s							
LNSS	**Leonessa**	**4.91**	**281**	Pg	**Pn**	**22 50 22.5**	**+1.0**
146nm,1.5s							
LNSS	**Leonessa**	**4.91**	**281**	Pg	**Pn**	**22 50 22.5**	**+1.0**
146nm,1.5s							
DRGR		**5.44**	**23**	⇓*i*P	**Pb**	**22 50 41.0**	**-1.8**
DRGR		**5.44**	**23**	S	**Sn**	**22 51 29.7**	**-1.2**
DRGR		**5.44**	**23**	S	**Sn**	**22 51 29.7**	**-1.2**
MLR	**Muntele Rosu**	**5.89**	**50**	⇓⇓*i*P	**Pn**	**22 50 38.2**	**+3.4**
MLR	**Muntele Rosu**	**5.89**	**50**	S	**Sn**	**22 51 43.9**	**+1.9**
MLR	**Muntele Rosu**	**5.89**	**50**	S	**Sn**	**22 51 43.9**	**+1.9**
ZST	**Bratislava**	**6.59**	**345**	*e*PN	**Pn**	**22 50 44.8**	**+0.3**
ZST	**Bratislava**	**6.59**	**345**	*e*Pn	**Pn**	**22 50 44.8**	**+0.3**
VYHS	**Vyhne**	**6.67**	**356**	*e*PN	**Pn**	**22 50 47.3**	**+1.7**
VYHS				*e*SN	**Sn**	**22 52 00.4**	**-1.0**
VYHS	**Vyhne**	**6.67**	**356**	*e*Pn	**Pn**	**22 50 47.3**	**+1.7**
VYHS				*e*Sn	**Sn**	**22 52 00.4**	**-1.0**
KOLS	**Kolonicke sedl**	**7.34**	**14**	*e*PN	**Pn**	**22 50 53.5**	**-1.3**
KOLS	**Kolonicke sedl**	**7.34**	**14**	*e*Pn	**Pn**	**22 50 53.5**	**-1.3**

*IDC **18** 22:50:00.5±1.3,30°.62N×103°.21E,h0km,mb3.7/9, mb1 3.8/10,mb1mx3.6/22,mbtmp3.6/10,ML3.2/1,Error ellipse: s-maj=38.6km s-min=23.1km az=40.0*
*ISCJB **18** 22:50:02.4±1.2,30°.70N±0°.06×103°.28E±0°.06,h24km±9km, mb3.7/12,Error ellipse: s-maj=10.3km s-min=8.0km az=15.8*
*NEIC **18** 22:50:02.0±0.6,30°.66N×103°.29E,h10km,mb3.7/3,Error ellipse: s-maj=13.3km s-min=10.1km az=186.0*
*BJI **18** 22:50:04.0,30°.41N×103°.31E,h13km,mb3.7/1,ML3.7/15, Ms3.6/3,Ms7 3.5/3*
ISC 18 22:50:03.1±1.3,**30°.69N**±0°.05×**103°.28E**±0°.05,**h14**km±8km, **n31**,σ0**°96**/36,**mb3.7**/12,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**62**	Pg	**Pg**	**22 50 11.3**	**-1.1**
CD2				Sg	**Sg**	**22 50 17.8**	**-0.9**
CD2				smax			
comp=N,14μm,0.8s							
GYA	**Guiyang**	**5.16**	**144**	Pn	**Pn**	**22 51 21.1**	**+1.1**
GYA				Sn	**Sn**	**22 52 24.4**	**+4.9**
GYA				smax			
comp=N,140nm,0.9s							
GYA				smax			
comp=E,140nm,0.8s							
ENH	**Enshi**	**5.38**	**93**	*e*Pn	**Pn**	**22 51 22.4**	**-0.5**
comp=E,104nm,0.8s							
ENH				*e*Sn	**Sn**	**22 52 25.3**	**+0.6**
LZH	**Lanzhou**	**5.40**	**5**	*e*Pg	**Pg**	**22 51 47.0**	**+0.5**
LZH				Sg	**Sg**	**22 52 57.8**	**+1.3**
LZH				smax			
comp=N,42nm,0.8s							
LZH				smax			
comp=E,64nm,1.2s							
LZH				LR	LR		
comp=E,640nm,5.5s							
LZH				LR	LR		
comp=Z,880nm,6.0s							
KMI	**Kunming**	**5.57**	**185**	Pn	**Pn**	**22 51 26.9**	**+1.3**
KMI				Sn	**Sn**	**22 52 35.3**	**+5.9**
KMI				smax			
comp=N,26nm,1.0s							
KMI				smax			
comp=E,27nm,1.0s							
KMI				LR	LR		
comp=N,240nm,6.8s							
KMI				LR	LR		
comp=E,290nm,5.4s							
KMI				LR	LR		
comp=Z,160nm,5.8s							
XAN	**Xi'an**	**5.83**	**54**	Pn	**Pn**	**22 51 31.6**	**+2.5**
XAN				Pg	**Pg**	**22 51 54.1**	**-0.6**
XAN				smax			
comp=N,93nm,1.3s							
XAN				smax			
comp=E,42nm,1.0s							
WHN	**Wuhan**	**9.54**	**88**	*e*P	Px	22 52 34.5	
WHN				S	**Sn**	**22 54 00.0**	**-7.3**
LSA	**Lhasa**	**10.54**	**268**	P	**Pn**	**22 52 36.4**	**+2.6**
LSA				LR	LR		
comp=E,140nm,8.1s							
LSA				LR	LR		
comp=Z,200nm,9.4s							
LSA	**Lhasa**	**10.54**	**268**	*e*Pn	**Pn**	**22 52 36.5**	**+2.7**
comp=Z,3.1nm,0.6s							
SONM	**Songino Array**	**17.29**	**7**	Pn	**Pn**	**22 54 04.9**	**+0.9**
comp=Z,0.1nm,0.3s,baz=206,slow=16,SNR=3.1							
ULN	**Ulaanbaatar**	**17.39**	**9**	Pn	**Pn**	**22 54 05.5**	**+0.2**
comp=Z,0.8nm,0.6s							
KSRS	**Korea Array**	**21.47**	**65**	P	**P**	**22 54 51.3**	**+0.1**
comp=Z,1.6nm,0.8s,mb3.4,baz=246,slow=9.3,SNR=4.4							
MKAR	**Makanchi Array**	**22.83**	**321**	P	**P**	**22 55 07.0**	**+1.4**
comp=Z,0.6nm,0.7s,mb3.1,baz=125,slow=11,SNR=7.2							
UCH	**Uchtor**	**25.72**	**305**	P	**P**	**22 55 32.8**	**-0.2**
AML	**Almayashu**	**26.27**	**304**	*e*P	**P**	**22 55 37.8**	**-0.2**
comp=Z,1.7nm,0.8s,mb3.6							
EKS2	**Erkin-Say**	**26.37**	**305**	P	**P**	**22 55 37.8**	**-1.1**
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**22 55 42.7**	**+0.2**
comp=Z,0.5nm,0.4s,mb3.4,baz=133,slow=8.3,SNR=4.1							
KURK	**Kurchatov**	**27.16**	**

WHN					LR	LR		
	comp=Z,1μm,6.5s							
BTO	**Baotou**	**10.18**	**26**	*e*P	Px		23 09 30.3	
BTO					S	Sx	23 11 36.1	
BTO					LR	LR		
	comp=N,190nm,10.2s							
BTO					LR	LR		
	comp=E,88nm,9.8s							
LSA	**Lhasa**	**11.43**	**264**		P	**Pn**	**23 09 04.9**	**+0.8**
LSA					LR	LR		
	comp=N,180nm,17.4s							
LSA					LR	LR		
	comp=E,150nm,8.9s							
LSA					LR	LR		
	comp=Z,180nm,8.4s							
CMAR	**Chiang Mai Arr**	**13.88**	**201**		Pn	**Pn**	**23 09 39.6**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=9.8,slow=12,SNR=5.8							
SONM	**Songino Array**	**16.35**	**5**		Pn	**Pn**	**23 10 11.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=188,slow=14,SNR=13							
SONM					LR	LR	23 17 04.2	
	comp=Z,196nm,18.7s,baz=107,slow=40							
ULN	**Ulaanbaatar**	**16.44**	**7**	*e*Pn		**Pn**	**23 10 11.2**	**-0.3**
	comp=Z,5.8nm,1.0s							
KSRS	**Korea Array**	**20.36**	**67**		P	**P**	**23 10 58.6**	**+1.0**
	comp=Z,6.1nm,0.8s,baz=257,slow=10,SNR=18							
KSRS					LR	LR	23 18 45.6	
	comp=Z,39nm,18.0s,MS2.8,baz=235,slow=37							
HIA	**Hailar**	**21.20**	**29**		P	**P**	**23 11 05.9**	**-0.6**
MK31	**Makanchi Array**	**22.73**	**318**	*e*P		**P**	**23 11 22.1**	**-0.8**
MKAR	**Makanchi Array**	**22.73**	**318**		P	**P**	**23 11 22.1**	**-0.8**
	comp=Z,2.4nm,0.8s,mb3.8,baz=120,slow=12,SNR=18							
TKM2	**Tokmak 2**	**25.36**	**305**	*e*P		**P**	**23 11 48.8**	**+0.5**
	comp=Z,2.2nm,0.7s,mb4.0							
UCH	**Uchtor**	**25.94**	**303**	*e*P		**P**	**23 11 53.1**	**-0.4**
	comp=Z,5.5nm,1.1s,mb4.1							
AAK	**Ala-Archa**	**26.06**	**304**	*e*P		**P**	**23 11 53.9**	**-0.7**
ZALV	**Zalesovo Beam**	**26.38**	**334**		P	**P**	**23 11 57.9**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.0,baz=130,slow=9.5,SNR=12							
ZALV	**Zalesovo Beam**	**26.38**	**334**		P	**P**	**23 11 57.9**	**+0.6**
AML	**Almayashu**	**26.51**	**302**	*e*P		**P**	**23 11 57.8**	**-0.8**
	comp=Z,1.7nm,0.7s,mb3.9							
KURK	**Kurchatov**	**26.97**	**323**		P	**P**	**23 12 02.0**	**-0.7**
	comp=Z,1.6nm,0.8s,mb3.8,baz=130,slow=8.8,SNR=11							
KURK					LR	LR	23 23 28.8	
	comp=Z,23nm,19.4s,MS2.8,baz=60,slow=38							
KURK	**Kurchatov**	**26.97**	**323**		P	**P**	**23 12 01.7**	**-0.9**
KURK					LR	LR	23 23 28.8	
BVAR	**Borovoye Array**	**32.52**	**321**		P	**P**	**23 12 53.3**	**+1.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=146,slow=8.7,SNR=4.0							
ABKAR	**Akbulak array**	**37.47**	**311**	*e*P		**P**	**23 13 34.1**	**-0.6**
	comp=Z,1.4nm,0.7s,mb3.8							
AKTK	**Aktyubinsk**	**38.93**	**313**		P	**P**	**23 13 48.0**	**+1.1**
AKTO	**Aktyubinsk**	**38.93**	**313**		P	**P**	**23 13 48.0**	**+1.1**
	comp=Z,0.8nm,0.4s,mb3.7,baz=90,slow=6.2,SNR=6.4							
ARU	**Arti**	**40.16**	**322**	*e*P		**P**	**23 13 57.0**	**-0.1**
	comp=Z,2.9nm,0.6s,mb4.1							
PETK	**Petropavlovsk-**	**43.79**	**44**		LR	LR	23 34 37.8	
	comp=Z,26nm,18.2s,MS3.2,baz=63,slow=39							
BRTR	**Keskin Array B**	**56.63**	**299**		P	**P**	**23 16 05.9**	**+1.5**
	comp=Z,0.4nm,0.8s,mb3.5,baz=87,slow=6.6,SNR=3.8							
ARCES	**ARCESS Array B**	**56.91**	**336**		P	**P**	**23 16 05.9**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.3,baz=76,slow=5.6,SNR=6.1							
ARCES	**ARCESS Array B**	**56.91**	**336**		P	**P**	**23 16 05.9**	**0.0**
AKASG	**Malin Array Be**	**57.17**	**313**		P	**P**	**23 16 07.9**	**-0.2**
	comp=Z,0.4nm,0.3s,mb4.0,baz=67,slow=8.8,SNR=3.6							
FINES	**FINESS Array B**	**57.27**	**326**		P	**P**	**23 16 08.7**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=90,slow=7.9,SNR=13							
KWP	**Kalwaria Pacla**	**61.50**	**313**	*e*P		**P**	**23 16 36.9**	**-1.0**
	comp=Z,4.1nm,0.7s,mb4.7							
ASAR	**Alice Springs**	**61.80**	**149**		P	**P**	**23 16 40.4**	**+0.1**
	comp=Z,0.6nm,0.5s,mb4.1,baz=339,slow=7.0,SNR=9.0							
NB2	**NORSAR Subarra**	**64.35**	**327**		P	**P**	**23 16 55.9**	**-0.9**
	comp=Z,0.5nm,0.5s,mb4.0,baz=73,slow=6.9							
NOA	**NORSAR Array B**	**64.35**	**327**		P	**P**	**23 16 55.2**	**-1.6**
	comp=Z,1.6nm,1.0s,mb4.2,baz=68,slow=7.2,SNR=4.3							
NOA	**NORSAR Array B**	**64.35**	**327**		P	**P**	**23 16 55.2**	**-1.6**
MORC	**Moravsky Berou**	**64.65**	**314**	*e*P		**P**	**23 16 58.5**	**-0.5**
CLL	**Collm**	**66.82**	**317**	*e*P		**P**	**23 17 11.0**	**-1.9**
GERES	**GERESS Array B**	**67.33**	**314**		P	**P**	**23 17 16.1**	**-0.1**
	comp=Z,0.8nm,0.6s,mb4.1,baz=64,slow=6.1,SNR=7.0							
DAVOX	**Davos/Dischmat**	**70.52**	**313**		P	**P**	**23 17 35.9**	**-0.1**
	comp=Z,2.5nm,0.6s,mb4.5,baz=76,slow=4.2,SNR=7.0							
CDF	**Champ du Feu**	**71.39**	**316**	*e*P		**P**	**23 17 39.9**	**-1.4**
	comp=Z,3.5nm,0.7s,mb4.3							
INK	**Inuvik**	**71.70**	**19**	*e*P		**P**	**23 17 41.8**	**-1.0**
	comp=Z,2.0nm,0.8s,mb4.3							
LPG	**La Plagne**	**73.04**	**313**	*e*P		**P**	**23 17 50.1**	**-1.2**
	comp=Z,12nm,1.0s,mb4.7							
LPL	**La Plagne**	**73.04**	**313**	*e*P		**P**	**23 17 50.0**	**-1.3**
	comp=Z,4.8nm,0.6s,mb4.5							
SMF	**Signal de Mont**	**74.27**	**315**	*e*P		**P**	**23 17 56.6**	**-1.9**
SFJD	**Kangerlussuaq**	**79.93**	**350**		LR	LR	23 55 45.5	
	comp=Z,23nm,18.2s,MS3.5,baz=116,slow=37							
YKA	**Yellowknife Ar**	**81.24**	**17**		P	**P**	**23 18 36.5**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=331,slow=5.3,SNR=16							
YKA	**Yellowknife Ar**	**81.24**	**17**		P	**P**	**23 18 36.5**	**-0.5**

*BJI **18** 23:24:55.0, 0.°54N×97.°42E, h20km, mB4.6/1, mb4.4/2*
*IDC **18** 23:24:59.0±1.3, 1.°29N×97.°19E, h0km, mb4.1/8, mb1 4.1/9, mb1mx3.8/23, mbtmp4.0/9, MS3.6/2, Ms1 3.6/2, ms1mx2.8/21, Error ellipse: s-maj=44.4km s-min=23.9km az=65.0*
*ISCJB **18** 23:25:00.2±1.6, 1.°16N±0.°06×96.°93E±0.°07, h26km±10km, mb4.1/14, MS3.6/2, Error ellipse: s-maj=13.1km s-min=7.7km az=149.2*
*NEIC **18** 23:25:03.8±0.5, 1.°32N×97.°24E, h35km, mb4.1/4, Error ellipse: s-maj=16.9km s-min=9.9km az=64.0*
*DJA **18** 23:25:04, 1.°02N×97.°18E, h16km, MLv4.1/5*
ISC 18 23:25:00.2±1.7, 1.°16N±0.°06×96.°94E±0.°06, h13km±9km, n38, σ0.°85/36, mb4.1/14, MS3.6/2, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.66**	**77**	P	**Pg**	**23 25 12.7**	**-0.3**
GSI				S	**Sg**	**23 25 21.9**	**+0.3**
TRSI	**Tarutung**	**2.20**	**67**	P	**Pn**	**23 25 37.1**	**+0.6**
TRSI	**Tarutung**	**2.20**	**67**	P	**Pn**	**23 25 40.5**	**+4.0**
TRSI				S	**Sn**	**23 26 04.8**	**+1.2**
MNSI	**Mandailing Nat**	**2.67**	**98**	P	**Pn**	**23 25 42.2**	**-0.7**
MNSI	**Mandailing Nat**	**2.67**	**98**	P	**Pn**	**23 25 42.0**	**-0.9**
SISI	**Saibi**	**3.27**	**139**	P	**Sn**	**23 26 29.4**	**-0.8**
SISI	**Saibi**	**3.27**	**139**	P	**Pn**	**23 25 51.6**	**+0.3**
PPI	**Padang Panjang**	**3.81**	**115**	P	**Pn**	**23 25 59.3**	**+0.6**
PPI	**Padang Panjang**	**3.81**	**115**	P	**Pn**	**23 25 59.1**	**+0.4**
PDSI	**Padang**	**4.08**	**120**	P	**Pb**	**23 26 13.7**	**+1.7**
PDSI	**Padang**	**4.08**	**120**	P	**Pb**	**23 26 13.7**	**+1.7**
IPM	**Ipoh**	**5.25**	**51**	P	**Pn**	**23 26 17.8**	**-0.7**
KULM	**Kulim**	**5.53**	**42**	*e*Pn	**Pn**	**23 26 19.4**	**-3.0**
	38nm,1.1s						
KULM	**Kulim**	**5.53**	**42**	P	**Pn**	**23 26 21.3**	**-1.1**
MDSI	**Maura Dua**	**9.15**	**128**	P	Px	23 27 25.2	
CMAR	**Chiang Mai Arr**	**17.30**	**6**	P	**Pn**	**23 28 59.8**	**-2.0**
	baz=190,slow=14,SNR=3.7						
KMI	**Kunming**	**24.48**	**13**	P	**P**	**23 30 20.0**	**+0.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
SHL	**Shillong**	**24.75**	**349**	*e*P	**P**	**23 30 22.0**	**+0.3**
GTA	**Gaotai**	**38.16**	**4**	*e*P	**P**	**23 32 19.5**	**+0.1**
GTA				pP	pP	23 32 23.4	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**42.24**	**122**	*e*P	**P**	**23 32 52.7**	**-0.9**
	comp=Z,5.7nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**43.58**	**127**	P	**P**	**23 33 04.0**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.4,baz=312,slow=7.7,SNR=5.8						
UCH	**Uchtor**	**45.58**	**337**	*e*P	**P**	**23 33 20.0**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.0						
AML	**Almayashu**	**45.83**	**336**	*e*P	**P**	**23 33 22.7**	**+0.7**
	comp=Z,1.2nm,0.6s,mb4.0						
KSRS	**Korea Array**	**46.03**	**35**	P	**P**	**23 33 22.5**	**-1.2**
	comp=Z,2.5nm,0.8s,mb4.2,baz=216,slow=9.4,SNR=8.4						
KSRS					LR	LR	23 52 10.3
	comp=Z,22nm,19.9s,MS3.1,baz=240,slow=36						
SONM	**Songino Array**	**47.21**	**9**	P	**P**	**23 33 32.6**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.1,baz=189,slow=8.0,SNR=11						
MK31	**Makanchi Array**	**47.22**	**346**	*e*P	**P**	**23 33 33.7**	**+0.8**
MKAR	**Makanchi Array**	**47.22**	**346**	P	**P**	**23 33 33.3**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=160,slow=8.6,SNR=22						
KURK	**Kurchatov**	**51.77**	**345**	P	**P**	**23 34 07.3**	**-0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=165,slow=6.5,SNR=11						
KURK	**Kurchatov**	**51.77**	**345**	P	**P**	**23 34 07.4**	**-0.1**
STKA	**Stephens Creek**	**53.52**	**132**	LR	LR	23 57 33.5	
	comp=Z,133nm,18.4s,MS4.0,baz=25,slow=37						
STKA	**Stephens Creek**	**53.52**	**132**	P	**P**	**23 34 20.3**	**-0.5**
ZALV	**Zalesovo Beam**	**53.56**	**351**	P	**P**	**23 34 20.6**	**0.0**
	comp=Z,3.1nm,0.5s,mb4.5,baz=183,slow=6.0,SNR=21						
BVAR	**Borovoye Array**	**56.20**	**341**	P	**P**	**23 34 39.6**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.1,baz=134,slow=8.5,SNR=9.8						
ABKAR	**Akbulak array**	**57.43**	**332**	*e*P	**P**	**23 34 47.9**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**82.49**	**340**	P	**P**	**23 37 23.6**	**+1.4**
	comp=Z,3.2nm,0.8s,mb4.3,baz=100,slow=5.0,SNR=3.4						
CLL	**Collm**	**85.30**	**321**	*e*P	**P**	**23 37 38.0**	**+1.0**
TXAR	**Lajitas Array**	**143.84**	**31**	PKP	PKPdf	23 44 33.9	-2.2
	comp=Z,0.4nm,0.9s,baz=239,slow=1.7,SNR=3.9						
CPUP	**Villa Florida**	**144.80**	**223**	PKPbc	PKPdf	23 44 38.2	+0.4
	comp=Z,0.7nm,0.6s,baz=94,slow=18,SNR=2.8						

IDC 19 00:20:31.0±1.5, 30.°94N×103.°67E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.4/24, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=42.8km s-min=23.5km az=47.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**17.00**	**6**	Pn	Pn	00 24 32.0	+2.0
	0.1nm,0.3s,baz=183,slow=10,SNR=4.3						
KSRS	**Korea Array**	**21.05**	**65**	P	P	00 25 15.8	-0.8
	3.4nm,0.7s,baz=263,slow=11,SNR=10						
MKAR	**Makanchi Array**	**22.86**	**320**	P	P	00 25 36.8	+1.0
	0.3nm,0.5s,baz=117,slow=12,SNR=3.3						
ZALV	**Zalesovo Beam**	**26.71**	**335**	P	P	00 26 12.8	+1.0
	0.3nm,0.4s,baz=139,slow=12,SNR=3.8						
KURK	**Kurchatov**	**27.16**	**324**	P	P	00 26 13.8	-2.0
	0.7nm,0.6s,baz=128,slow=9.8,SNR=5.7						
ASAR	**Alice Springs**	**61.55**	**148**	P	P	00 30 50.4	+0.3
	0.6nm,1.0s,baz=348,slow=6.5,SNR=4.4						

MAN 19 00:32:17, 14.°25N×123.°46E, h29km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.94**	**134**	*e*P	Pn	00 32 34.7	+0.5
PVCP				*e*S	Sn	00 32 47.4	+0.7
GQP	**Guinayangan**	**1.04**	**251⇓**	*e*P	Pn	00 32 35.3	-0.3
GQP				*e*S	Sn	00 32 50.0	+0.9
POLP	**Polilio Island**	**1.55**	**288**	*e*P	Pn	00 32 43.3	+0.7
POLP				*e*S	Sn	00 32 58.0	-3.7

*ISCJB **19** 00:34:48.9±0.5, 40.°59N±0.°02×34.°79E±0.°03, h1km±4km, Error ellipse: s-maj=3.7km s-min=3.6km az=164.5*
*DDA **19** 00:34:48.6, 40.°55N×34.°80E, h16km, Md3.4*
*ISK **19** 00:34:48.6, 40.°59N×34.°79E, h5km, MD3.4*
*CSEM **19** 00:34:49.3±0.1, 40.°60N×34.°78E, h2km, MD3.4, Error ellipse: s-maj=3.3km s-min=2.9km az=22.0*
ISC 19 00:34:49.5±0.5, 40.°58N±0.°02×34.°80E±0.°03, h0km±4km, n67, σ0.°76/86, 2C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.04**	**352⇓**	*i*P	**Pg**	**00 34 51.2**	**+0.9**
CTKT				*i*S	**Sg**	**00 34 54.4**	**+3.6**
CTKT	**Corum**	**0.04**	**352**	*i*P	**Pg**	**00 34 51.2**	**+0.9**
CORM	**Corum**	**0.42**	**198**	PG	**Pg**	**00 34 57.4**	**-0.2**
CORM				*e*SG	**Sg**	**00 35 04.4**	**+1.4**
CORM	**Corum**	**0.42**	**198**	*i* Pg	**Pg**	**00 34 57.4**	**-0.2**
CORM				*e*Sg	**Sg**	**00 35 04.4**	**+1.4**
TOS	**Tosya**	**0.74**	**308**	PG	**Pg**	**00 35 03.4**	**-0.3**
TOS	**Tosya**	**0.74**	**308**	*i* Pg	**Pg**	**00 35 03.4**	**-0.3**
BYBT	**Boyabat**	**0.89**	**359**	*e*PG	**Pg**	**00 35 06.4**	**-0.1**
BYBT				*e*SG	**Sg**	**00 35 18.5**	**+0.6**
BYBT	**Boyabat**	**0.89**	**359**	*e*Pg	**Pg**	**00 35 06.4**	**-0.1**
BYBT				*e*Sg	**Sg**	**00 35 18.5**	**+0.5**
CANT	**Cankiri**	**0.90**	**272**	*e*PG	**Pg**	**00 35 06.0**	**-0.7**
CANT				*e*SG	**Sg**	**00 35 18.8**	**+0.5**
ILGA	**Ilgaz**	**0.94**	**300**	*i* P	**Pg**	**00 35 07.3**	**-0.3**
ILGA				*i* S	**Sg**	**00 35 20.6**	**+0.8**
ILGA	**Ilgaz**	**0.94**	**300**	*i* P	**Pg**	**00 35 07.3**	**-0.3**
ILGA				*i* S	**Sg**	**00 35 20.6**	**+0.8**
CDAG	**Cicekdag**	**1.01**	**199⇑**	*i*P	**Pg**	**00 35 07.8**	**-1.1**
CDAG				*i* S	**Sg**	**00 35 21.5**	**-0.5**
CDAG	**Cicekdag**	**1.01**	**199**	*i* P	**Pg**	**00 35 07.8**	**-1.1**
CDAG				*i* S	**Sg**	**00 35 21.5**	**-0.5**
YOZ	**Yozgat**	**1.02**	**157**	*e*PG	**Pg**	**00 35 08.4**	**-0.7**
YOZ	**Yozgat**	**1.02**	**157**	*e*Pg	**Pg**	**00 35 08.4**	**-0.7**
ELDT	**Eldivan**	**1.05**	**265**	*i* P	**Pg**	**00 35 08.5**	**-1.0**
ELDT				*i* S	**Sg**	**00 35 23.5**	**+0.3**
ELDT	**Eldivan**	**1.05**	**265**	*i* P	**Pg**	**00 35 08.5**	**-1.1**
ELDT				*i* S	**Sg**	**00 35 23.5**	**+0.3**
KVT	**Kavak**	**1.07**	**62**	*e*PG	**Pg**	**00 35 08.9**	**-1.1**
KVT	**Kavak**	**1.07**	**62**	*e*Pg	**Pg**	**00 35 08.9**	**-1.1**
DIKM	**Dikmen**	**1.12**	**18**	*e*PN	**Pg**	**00 35 10.6**	**-0.4**
DIKM				*e*SN	**Sg**	**00 35 25.3**	**-0.3**
DIKM	**Dikmen**	**1.12**	**18**	*e*Pn	**Pg**	**00 35 10.6**	**-0.4**
DIKM				*e*Sn	**Sg**	**00 35 25.3**	**-0.2**
TOKT	**Tokat**	**1.36**	**101**	*e*PN	**Pn**	**00 35 14.5**	**-1.2**
TOKT	**Tokat**	**1.36**	**101**	*e*Pn	**Pn**	**00 35 14.5**	**-1.2**
BALT	**Daday**	**1.43**	**312⇓**	*i*P	**Pn**	**00 35 15.8**	**-0.9**
BALT				*i* S	**Sg**	**00 35 36.5**	**+1.1**
BALT	**Daday**	**1.43**	**312**	*i* P	**Pn**	**00 35 15.8**	**-0.9**
BALT				*i* S	**Sg**	**00 35 36.5**	**+1.1**
ERBA	**Erbaa**	**1.49**	**86**	*i* P	**Pn**	**00 35 16.1**	**-1.5**
ERBA				*i* S	**Sg**	**00 35 37.6**	**+0.2**
ERBA	**Erbaa**	**1.49**	**86**	*i* P	**Pn**	**00 35 16.0**	**-1.5**
ERBA				*i* S	**Sg**	**00 35 37.6**	**+0.1**
BZK	**Bozkurt**	**1.50**	**337**	*e*PN	**Pn**	**00 35 17.4**	**-0.3**
BZK	**Bozkurt**	**1.50**	**337**	*e*Pn	**Pn**	**00 35 17.4**	**-0.2**
BBAL	**Bala**	**1.65**	**232**	*i* P	**Pn**	**00 35 19.1**	**-0.6**
BBAL				*i* S	**Sn**	**00 35 41.8**	**+0.2**
BBAL	**Bala**	**1.65**	**232**	*i* P	**Pn**	**00 35 19.1**	**-0.6**
BBAL				*i* S	**Sn**	**00 35 41.8**	**+0.2**
LOD	**Lodumlu**	**1.70**	**247**	*e*PN	**Pn**	**00 35 19.8**	**-0.6**
LOD	**Lodumlu**	**1.70**	**247**	*e*Pn	**Pn**	**00 35 19.8**	**-0.6**
SAFT	**Safranbolu**	**1.73**	**293**	*e*PN	**Pn**	**00 35 20.2**	**-0.5**
SAFT	**Safranbolu**	**1.73**	**293**	*e*Pn	**Pn**	**00 35 20.2**	**-0.6**
AVNT	**Avonos**	**1.80**	**179⇑**	*i*P	Px	00 35 08.1	
AVNT				*i* S	Sx	00 35 34.0	
SVSK	**Karacayir**	**1.81**	**111**	*e*PN	**Pn**	**00 35 21.6**	**-0.3**
SVSK	**Karacayir**	**1.81**	**111**	*e*Pn	**Pn**	**00 35 21.6**	**-0.3**
SARI	**SarD1z-Kayseri**	**2.40**	**142**	*e*PN	**Pn**	**00 35 31.4**	**+1.4**
SARI	**SarD1z-Kayseri**	**2.40**	**142**	*e*Pn	**Pn**	**00 35 31.4**	**+1.4**
SULT	**Sultanhani-AKS**	**2.58**	**203**	*e*PN	**Pn**	**00 35 32.2**	**-0.3**
SULT	**Sultanhani-AKS**	**2.58**	**203**	*e*Pn	**Pn**	**00 35 32.2**	**-0.3**
MDU	**Mudurnu**	**2.73**	**269**	*e*PN	**Pn**	**00 35 34.3**	**-0.3**
MDU	**Mudurnu**	**2.73**	**269**	*e*Pn	**Pn**	**00 35 34.3**	**-0.3**
SVRH	**Sivrihisar-ESK**	**2.76**	**247**	*e*PN	**Pn**	**00 35 35.0**	**+0.1**
SVRH	**Sivrihisar-ESK**	**2.76**	**247**	*e*Pn	**Pn**	**00 35 35.0**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**234**	*e*PN	**Pn**	**00 35 35.5**	**-0.2**
KIZT	**Kizilcal**	**2.82**	**234**	*e*Pn	**Pn**	**00 35 35.5**	**-0.3**
DARE	**Darende-Malaty**	**2.83**	**124**	*e*PN	**Pn**	**00 35 37.5**	**+1.5**
DARE	**Darende-Malaty**	**2.83**	**124**	*e*Pn	**Pn**	**00 35 37.5**	**+1.6**
ESPY	**Espiye-Giresun**	**3.00**	**82**	*e*PN	**Pn**	**00 35 39.2**	**+0.9**
ESPY	**Espiye-Giresun**	**3.00**	**82**	*e*Pn	**Pn**	**00 35 39.2**	**+0.9**
LADK	**Ladik-KONYA**	**3.04**	**219**	*e*PN	**Pn**	**00 35 38.8**	**+0.1**
LADK	**Ladik-KONYA**	**3.04**	**219**	*e*Pn	**Pn**	**00 35 38.8**	**+0.1**
KOZT	**Kozan**	**3.20**	**165**	*e*PN	**Pn**	**00 35 41.7**	**+0.7**
KONT	**Konya--Tatoy**	**3.24**	**216**	*e*PN	**Pn**	**00 35 41.8**	**+0.3**
KONT	**Konya--Tatoy**	**3.24**	**216**	*e*Pn	**Pn**	**00 35 41.8**	**+0.2**
GULT	**Gulveren**	**3.27**	**269**	*e*PN	**Pn**	**00 35 41.5**	**-0.4**
GULT	**Gulveren**	**3.27**	**269**	*e*Pn	**Pn**	**00 35 41.5**	**-0.4**
KARA	**Karaisali**	**3.32**	**176**	*e*PN	**Pn**	**00 35 43.4**	**+0.7**
KARA	**Karaisali**	**3.32**	**176**	*e*Pn	**Pn**	**00 35 43.4**	**+0.7**
KMRS	**Kahramanmaras**	**3.48**	**151**	*e*PN	**Pn**	**00 35 45.8**	**+1.0**
KMRS	**Kahramanmaras**	**3.48**	**151**	*e*Pn	**Pn**	**00 35 45.8**	**+0.9**
MYA	**Malataya**	**3.60**	**128**	*e*PN	**Pn**	**00 35 47.2**	**+0.8**
MYA	**Malataya**	**3.60**	**128**	*e*Pn	**Pn**	**00 35 47.3**	**+0.8**
SHUT	**Suhut-Afyon**	**3.86**	**240**	*e*PN	**Pn**	**00 35 49.9**	**-0.1**
SHUT	**Suhut-Afyon**	**3.86**	**240**	*e*Pn	**Pn**	**00 35 49.9**	**-0.1**

MAN 19 00:35:32, 12.°71N×123.°64E, h32km, mb4.4, ML3.2, MS3.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.01**	**30**	*e*P	Pn	00 35 49.4	-0.6
PVCP				*e*S	Sn	00 35 56.7	-6.5
CNP	**Catarman**	**1.02**	**101**	*e*P	Pn	00 35 51.7	+1.6
CNP				*e*S	Sn	00 35 59.1	-4.3
AUQP	**San Andres**	**1.12**	**303**	*e*P	Pn	00 35 52.5	+1.0
RCP	**Roxas**	**1.44**	**217⇑**	*e*P	Pn	00 35 56.6	+0.8
RCP				*e*S	Sn	00 36 14.2	+0.6
OTRP	**Odiongan**	**1.61**	**258**	*e*P	Pn	00 35 60.0	+1.7
GQP	**Guinayangan**	**1.66**	**316⇓**	*e*P	Pn	00 35 58.9	0.0
GQP				*e*S	Sn	00 36 20.9	+1.8
BOAC	**Boac**	**1.90**	**293**	*e*P	Pn	00 36 04.0	+1.9

*TRN **19** 00:54:39.8, 19.°44N×64.°12W, h23km*
*ISCJB **19** 00:54:40.6±1.0, 19.°60N±0.°06×64.°15W±0.°05, h33km, Error ellipse: s-maj=9.3km s-min=7.1km az=3.2*
*RSPR **19** 00:54:42.2, 19.°43N×64.°04W, h67km±5km, MD3.6/16, MD3.6/16*
*NEIC **19** 00:54:42.2, 19.°43N×64.°04W, h67km, MD3.6(RSPR), After RSPR.*
ISC 19 00:54:41.8±1.0, 19.°56N±0.°06×64.°13W±0.°05, h35km, n36, σ0.°73/59, 12C-20D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.85**	**193⇓**	*e*P	**Pn**	**00 54 56.6**	**-0.7**
ABV				*e*S	**Sn**	**00 55 08.4**	**-0.1**
ABV	**Anegada**	**0.85**	**193⇓**	*e*P	**Pn**	**00 54 56.6**	**-0.7**
ABV				*e*S	**Sn**	**00 55 08.4**	**-0.1**
TBVI	**Tortola**	**1.23**	**202⇓**	*e*P	**Pn**	**00 55 01.6**	**-0.9**
TBVI	**Tortola**	**1.23**	**202⇓**	*e*P	**Pn**	**00 55 01.6**	**-0.9**
STVI	**Saint Thomas**	**1.43**	**213⇓**	*e*P	**Pn**	**00 55 04.7**	**-0.7**
STVI				*e*S	**Sn**	**00 55 22.3**	**-0.6**
STVI	**Saint Thomas**	**1.43**	**213⇓**	*e*P	**Pn**	**00 55 04.7**	**-0.7**
STVI				*e*S	**Sn**	**00 55 22.3**	**-0.6**
CDVI	**St. Croix**	**1.90**	**199**	*e*Pn	**Pn**	**00 55 12.3**	**+0.6**
MTP	**Monte Pirata**	**1.98**	**223**	*e*Pn	**Pn**	**00 55 13.4**	**+0.5**
MTP				*e*Sn	**Sn**	**00 55 37.2**	**+0.7**
CBYP	**Canovanas**	**2.08**	**232⇓**	*e*P	**Pn**	**00 55 13.7**	**-0.5**
CBYP				*e*S	**Sn**	**00 55 38.8**	**-0.1**
CBYP	**Canovanas**	**2.08**	**232⇓**	*e*P	**Pn**	**00 55 13.7**	**-0.5**
CBYP				*e*S	**Sn**	**00 55 38.8**	**-0.1**
HUMP	**Col San Antoni**	**2.16**	**230⇑**	*e*P	**Pn**	**00 55 15.4**	**+0.1**
HUMP				*e*S	**Sn**	**00 55 40.0**	**-0.8**
HUMP	**Col San Antoni**	**2.16**	**230⇑**	*e*P	**Pn**	**00 55 15.4**	**+0.1**
HUMP				*e*S	**Sn**	**00 55 40.0**	**-0.8**
CPD	**Cerro la Pandu**	**2.27**	**229⇑**	*e*P	**P

baz=332
TWK Hsinying 0.89 277⇑*i*P Pb 01 15 48.2 +0.1
baz=275
TWK *e*S Sb 01 16 00.1 +0.4
baz=275
TYC Yuchr 0.93 324 ⇑P Pb 01 15 48.4 -0.3
baz=336
TYC S Sb 01 16 01.1 +0.5
baz=336
TWD Chiawan 0.93 8 *e*P Pb 01 15 48.5 -0.3
baz=359
TWD *e*S Sb 01 16 02.5 +1.6
baz=359
EAST Anshuo 0.95 216 *e*P Pb 01 15 47.6 -1.4
baz=215
CHN2 Minshiung 0.97 293 *e*P Pb 01 15 49.9 +0.4
baz=292
CHN2 *e*S Sb 01 16 02.7 +0.7
baz=292
WGK Gukeng 0.97 303 *e*P Pb 01 15 49.5 0.0
baz=303
WHF Hehuan Shan 1.00 350 *e*P Pb 01 15 48.9 -1.1
baz=1.0
TWM1 Shoushan 1.00 251 *e*P Pb 01 15 51.8 +1.8
baz=250
CHY Chiayi 1.01 290 *e*P Pb 01 15 49.9 -0.1
baz=289
CHY *e*S Sb 01 16 03.4 +0.5
baz=289
WNT Mingjian 1.01 316 *e*P Pb 01 15 50.7 +0.6
baz=316
WNT *e*S Sb 01 16 03.8 +0.8
baz=316
NACB Ninganchiao 1.02 7 *e*Pg Pg 01 15 49.4 -1.6
NACB *e*S Sb 01 16 02.9 -0.6
SCZT Fangliau 1.09 225 *e*P Pb 01 15 51.0 -0.6
baz=219
LAY Lan-yu 1.11 175 *e*P Pn 01 15 50.3 -1.6
baz=160
TWT Tachien 1.12 347 *e*P Pn 01 15 49.0 -3.1
baz=346
TAI1 Yung-k'ang 1.13 265 *e*P Pn 01 15 52.8 +0.7
baz=272
TAI1 *e*S Sb 01 16 07.3 +0.7
baz=272
CHN8 Yiju 1.16 280 *e*S Sb 01 16 09.2 +1.8
baz=279
TCU Taichung 1.22 324 P Pn 01 15 52.9 -0.4
baz=324
TCU *e*S Sb 01 16 09.6 +0.4
baz=324
NNS Nan Shan 1.28 357 *e*P Pn 01 15 55.8 +1.6
baz=9.0
ENA Nanau 1.30 12 *e*P Pn 01 15 54.7 +0.3
baz=360
TWQ1 Liyutan 1.34 333 *e*P Pn 01 15 56.2 +1.1
baz=331
TWK1 Hengchun 1.34 207 *e*P Pn 01 15 55.2 +0.1
baz=198
NSY Sanyi 1.41 333 *e*P Pn 01 15 56.5 +0.6
baz=335
TWC Suao 1.49 14 *e*P Pn 01 15 58.5 +1.4
baz=360
YHNB Yeheng 1.51 357 *e*Pn Pn 01 15 57.2 -0.1
NSK Sanguang 1.52 357 *e*P Pn 01 15 56.5 -1.0
baz=8.0
PNG Penghu 1.79 284 *e*P Pn 01 16 01.4 +0.2
baz=282
PNG *e*S Sn 01 16 22.4 -1.1
baz=282
NWF Wu-fen Shan 1.93 9 *e*P Pn 01 16 04.0 +0.9
baz=5.0

*NEIC **19** 01:23:29.9±0.9, 25°.47S×69°.76W, h35km, Error ellipse: s-maj=41.7km s-min=11.7km az=109.0*
*ISCJB **19** 01:23:32.2±2.3, 25°.25S±0°.07×69°.5W±0°.4, h52km±28km, mb3.3/1, Error ellipse: s-maj=66.6km s-min=11.3km az=2.2*
*IDC **19** 01:23:33.8±3.6, 25°.24S×69°.73W, h62km±25km, mb3.2/1, mb1 3.2/4, mb1mx3.1/16, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=79.1km s-min=19.7km az=92.0*
ISC 19 01:23:34.8±2.1, 25°.24S±0°.07×69°.5W±0°.4, h60km±22km, n8, σ0§70/7, mb3.3/1, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.90**	**195**	*e*Pn	**Pn**	**01 24 24.4**	**-7.9**
CFAA	**Coronel Fontan**	**6.44**	**170**	P	**Pn**	**01 25 06.3**	**-0.8**
	0.2nm,0.3s,baz=342,slow=12,SNR=23						
CFAA				S	**Sn**	**01 26 19.8**	**+0.6**
	0.1nm,0.3s,baz=315,slow=13,SNR=2.2						
LPAZ	**La Paz**	**9.00**	**9**	P	**Pn**	**01 25 42.8**	**+0.7**
	0.1nm,0.3s,baz=199,slow=3.1,SNR=3.1						
LPAZ	**La Paz**	**9.00**	**9**	*e*Pn	**Pn**	**01 25 42.2**	**+0.1**
	1.6nm,0.6s						
SIV	**San Ignacio**	**12.13**	**42**	P	**Pn**	**01 26 24.8**	**-0.1**
	0.2nm,0.3s,baz=240,slow=14,SNR=4.7						
TORD	**Torodi Ar. Bea**	**79.15**	**70**	P	**P**	**01 35 33.5**	**0.0**
	0.2nm,0.6s,mb3.3,baz=254,slow=4.8,SNR=6.9						
TORD				pP	pP	01 35 46.6	-3.7
	0.6nm,0.7s,baz=268,slow=5.2,SNR=3.5						
TORD				sP	sP	01 35 54.1	-2.8
	0.3nm,0.6s,baz=252,slow=5.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**145.55**	**27**	PKPbc	PKPbc	01 43 04.5	-1.5
	0.3nm,0.3s,baz=326,slow=0.5,SNR=3.6						
MKAR	**Makanchi Array**	**148.93**	**39**	PKPbc	PKPbc	01 43 13.7	-2.0
	0.1nm,0.4s,baz=354,slow=1.8,SNR=2.9						

*IDC **19** 01:25:57.7±9.5, 30°.71N×103°.60E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.7/6, MS3.2/1, Ms1 3.2/1, ms1mx2.2/34, Error ellipse: s-maj=226.5km s-min=30.8km az=14.0*
*BJI **19** 01:26:05.5, 31°.26N×103°.87E, h15km, ML3.6/9, Ms3.3/2, Ms7 3.1/2*
ISC 19 01:26:03.8±1.3, 31°.33N±0°.04×103°.98E±0°.08, h13km±9km, n11, σ1§26/16, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.74**	**359**	Pg	**Pg**	**01 27 36.1**	**+1.5**
LZH				Sg	**Sg**	**01 28 36.1**	**+0.1**
LZH				smax			
	comp=N,80nm,1.0s						
LZH				smax			
	comp=E,80nm,1.1s						
LZH				LR	LR		
	comp=N,280nm,6.4s						
LZH				LR	LR		
	comp=Z,370nm,7.2s						
XAN	**Xi'an**	**4.97**	**56**	Pn	**Pn**	**01 27 20.4**	**+2.4**
XAN				Pg	**Pg**	**01 27 37.3**	**-1.6**
XAN				Sn	**Sn**	**01 28 23.3**	**+8.0**
XAN				Sg	**Sg**	**01 28 42.4**	**-0.8**
XAN				smax			
	comp=N,89nm,0.6s						
XAN				smax			
	comp=E,44nm,1.0s						
GYA	**Guiyang**	**5.40**	**153**	Pg	**Pg**	**01 27 48.1**	**+0.9**
GYA				Sg	**Sg**	**01 28 53.8**	**-3.4**
GYA				smax			
	comp=N,110nm,0.7s						
GYA				smax			
	comp=E,80nm,0.7s						
KMI	**Kunming**	**6.28**	**190**	Pn	**Pn**	**01 27 36.5**	**+0.4**
KMI				Sn	**Sn**	**01 28 52.8**	**+5.0**
KMI				LR	LR		
	comp=N,170nm,9.9s						
KMI				LR	LR		
	comp=E,180nm,13.1s						
KMI				LR	LR		
	comp=Z,160nm,9.9s						
KSRS	**Korea Array**	**20.66**	**66**	P	**P**	**01 30 44.9**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=249,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**01 31 05.0**	**-0.3**
	comp=Z,1.2nm,0.9s,mb3.3,baz=122,slow=12,SNR=9.2						
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**01 31 40.0**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.5,baz=120,slow=8.8,SNR=5.3						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**01 31 43.0**	**-2.2**
	comp=Z,0.6nm,0.6s,mb3.3,baz=130,slow=9.4,SNR=4.8						
PALK	**Pallekele**	**32.34**	**227**	LR	LR	01 45 48.5	
	comp=Z,41nm,19.3s,baz=359,slow=38						
ARCES	**ARCESS Array B**	**57.00**	**336**	P	**P**	**01 35 48.2**	**-0.4**
	comp=Z,2.2nm,0.9s,mb4.2,baz=82,slow=8.3,SNR=3.3						
YKA	**Yellowknife Ar**	**81.50**	**17**	P	**P**	**01 38 20.1**	**-0.4**

comp=Z,0.3nm,0.5s,mb3.4,baz=330,slow=5.2,SNR=6.5

*ROM **19** 01:53:38.8±0.2, 44°.30N×7°.30E, h20km±2km, Md3.1/15, Ml3.0/13, Error ellipse: s-maj=5.1km s-min=2.1km az=52.0*
*CSEM **19** 01:53:39.6±0.1, 44°.32N×7°.35E, h15km, ML3.4/39, Error ellipse: s-maj=2.0km s-min=1.8km az=60.0*
*ISCJB **19** 01:53:39.2±0.2, 44°.31N±0°.01×7°.35E±0°.02, h25km±2km, Error ellipse: s-maj=2.2km s-min=1.9km az=16.6*
*SZGRF **19** 01:53:39.9, 44°.06N×7°.57E, h10km, mb3.1, Northern Italy*
*LDG **19** 01:53:39.9±0.1, 44°.31N×7°.43E, h5km, Md3.4/3, Ml3.3/34, Error ellipse: s-maj=2.3km s-min=1.6km az=75.0*
*IDC **19** 01:53:39.3±2.1, 44°.54N×7°.24E, h0km, mb1 3.4/4, mb1mx3.1/28, mbtmp3.2/4, ML3.6/3, Error ellipse: s-maj=52.9km s-min=16.3km az=126.0*
*GEN **19** 01:53:40.1, 44°.31N×7°.35E, h11km, ML2.9*
*ZUR **19** 01:53:40.9, 44°.45N×7°.43E, h19km±1km, ML2.4/1*
*STR **19** 01:53:41.3±0.3, 44°.26N×7°.32E, h5km, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **19** 01:53:41.3, 44°.26N×7°.32E, h5km, ML2.9(STR), ML3.3(LDG), After STR.*
ISC 19 01:53:39.7±0.2, 44°.31N±0°.01×7°.36E±0°.01, h18km±1km, n215, σ1§15/359, 5C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STV	**Sant Anna di V**	**0.07**	**198**	Pg	**Pg**	**01 53 42.8**	**-0.3**
STV				Sg	**Sg**	**01 53 44.4**	**-0.9**
STV	**Sant Anna di V**	**0.07**	**198**	Pg	**Pg**	**01 53 42.8**	**-0.3**
STV				Sg	**Sg**	**01 53 44.4**	**-0.9**
	24μm,0.2s						
STV	**Sant Anna di V**	**0.07**	**198**	Pg	**Pg**	**01 53 42.8**	**-0.3**
STV				Sg	**Sg**	**01 53 44.4**	**-0.9**
	24μm,0.2s						
ENR	**Entracque**	**0.10**	**151**	P	**Pg**	**01 53 43.0**	**-0.3**
ENR				S	**Sg**	**01 53 44.8**	**-0.9**
DOI	**San Damiano**	**0.21**	**338**	Pg	**Pg**	**01 53 44.8**	**+0.1**
DOI				Sg	**Sg**	**01 53 47.9**	**-0.3**
DOI	**San Damiano**	**0.21**	**338**	Pg	**Pg**	**01 53 44.8**	**+0.1**
DOI				Sg	**Sg**	**01 53 47.9**	**-0.3**
	6μm,0.2s						
DOI	**San Damiano**	**0.21**	**338**	Pg	**Pg**	**01 53 44.8**	**+0.1**
DOI				Sg	**Sg**	**01 53 47.9**	**-0.3**
	6μm,0.2s						
PZZ	**Stroppo**	**0.26**	**319**	Pg	**Pg**	**01 53 45.5**	**-0.1**
PZZ				Sg	**Sg**	**01 53 49.1**	**-0.5**
PZZ	**Stroppo**	**0.26**	**319**	Pg	**Pg**	**01 53 45.5**	**-0.1**
PZZ				Sg	**Sg**	**01 53 49.1**	**-0.5**
	3μm,0.3s						
PZZ	**Stroppo**	**0.26**	**319**	P	**Pg**	**01 53 45.5**	**-0.1**
PZZ				S	**Sg**	**01 53 49.2**	**-0.4**
TOUF	**Mont Tournerai**	**0.31**	**195**	Pg	**Pg**	**01 53 46.4**	**+0.1**
TOUF				Sg	**Sg**	**01 53 49.9**	**-0.9**
TOUF	**Mont Tournerai**	**0.31**	**195**	Pg	**Pg**	**01 53 46.4**	**+0.1**
TOUF				Sg	**Sg**	**01 53 49.9**	**-0.9**
AUTN	**L'Aution**	**0.32**	**171**	Pg	**Pg**	**01 53 46.8**	**+0.3**
AUTN				Sg	**Sg**	**01 53 50.6**	**-0.6**
AUTN	**L'Aution**	**0.32**	**171**	Pg	**Pg**	**01 53 46.8**	**+0.3**
AUTN				Sg	**Sg**	**01 53 50.6**	**-0.6**
SAOF	**Saorge**	**0.35**	**156**	Pg	**Pg**	**01 53 47.3**	**+0.2**
SAOF				Sg	**Sg**	**01 53 52.1**	**-0.1**
SAOF	**Saorge**	**0.35**	**156**	Pg	**Pg**	**01 53 47.3**	**+0.2**
SAOF				Sg	**Sg**	**01 53 52.1**	**-0.1**
MONE	**Monesi**	**0.37**	**129**	P	**Pg**	**01 53 47.5**	**+0.1**
MONE				S	**Sg**	**01 53 52.4**	**-0.2**
LUCF	**Luceram**	**0.42**	**181**	Pg	**Pg**	**01 53 48.5**	**+0.2**
LUCF				Sg	**Sg**	**01 53 54.2**	**+0.2**
LUCF	**Luceram**	**0.42**	**181**	Pg	**Pg**	**01 53 48.5**	**+0.2**
LUCF				Sg	**Sg**	**01 53 54.2**	**+0.2**
SURF	**Saint Ours**	**0.42**	**294**	Pg	**Pg**	**01 53 48.2**	**-0.2**
SURF				Sg	**Sg**	**01 53 54.3**	**+0.1**
SURF	**Saint Ours**	**0.42**	**294**	Pg	**Pg**	**01 53 48.2**	**-0.2**
SURF				Sg	**Sg**	**01 53 54.3**	**+0.1**
MVIF	**Mont Vial**	**0.44**	**200**	Pg	**Pg**	**01 53 48.8**	**+0.2**
MVIF				Sg	**Sg**	**01 53 54.7**	**0.0**
MVIF	**Mont Vial**	**0.44**	**200**	Pg	**Pg**	**01 53 48.8**	**+0.2**
MVIF				Sg	**Sg**	**01 53 54.7**	**0.0**
SBF	**Sospel**	**0.45**	**173**	*e*Pg	**Pg**	**01 53 49.0**	**+0.2**
SBF				*e*Sg	**Sg**	**01 53 54.5**	**-0.5**
	2μm,0.2s						
SBF	**Sospel**	**0.45**	**173**	*e*Pg	**Pg**	**01 53 49.0**	**+0.2**
SBF				*e*Sg	**Sg**	**01 53 54.5**	**-0.5**
	806nm,0.2s						
RONM	**Roccetta Nervi**	**0.47**	**158**	P	**Pg**	**01 53 49.2**	**+0.1**
RONM				S	**Sg**	**01 53 55.2**	**-0.3**
NEGI	**Seborga**	**0.53**	**151**	P	**Pg**	**01 53 50.5**	**+0.3**
NEGI				S	**Sg**	**01 53 57.0**	**-0.3**
RORO	**Rocca Rossa**	**0.55**	**111**	P	**Pg**	**01 53 50.5**	**-0.1**
RORO				S	**Sg**	**01 53 57.7**	**-0.3**
IMI	**Imperia**	**0.56**	**136**	Pg	**Pg**	**01 53 50.9**	**+0.2**
IMI				Sg	**Sg**	**01 53 58.6**	**+0.4**
IMI	**Imperia**	**0.56**	**136**	Pg	**Pg**	**01 53 50.9**	**+0.2**
IMI				Sg	**Sg**	**01 53 58.6**	**+0.4**
	864nm,0.1s						
IMI	**Imperia**	**0.56**	**136**	P	**Pg**	**01 53 51.0**	**+0.3**
IMI				S	**Sg**	**01 53 58.2**	**0.0**
IMI				Sg	**Sg**	**01 53 58.6**	**+0.4**
	864nm,0.1s						
REVF	**Revere**	**0.57**	**179**	Pg	**Pg**	**01 53 51.3**	**+0.3**
REVF				Sg	**Sg**	**01 53 59.0**	**+0.3**
REVF	**Revere**	**0.57**	**179**	Pg	**Pg**	**01 53 51.3**	**+0.3**
REVF				Sg	**Sg**	**01 53 59.0**	**+0.3**
MBDF	**Montbardon**	**0.59**	**315**	*e*Pn	**Pn**	**01 53 53.4**	**+0.3**
MBDF				*e*Sg	**Sg**	**01 53 59.0**	**-0.3**
	453nm,0.3s						
MBDF	**Montbardon**	**0.59**	**315**	*e*Pg	**Pg**	**01 53 51.0**	**-0.4**
MBDF				*e*Pn	**Pn**	**01 53 53.4**	**+0.3**
MBDF				*e*Sg	**Sg**	**01 53 59.0**	**-0.3**
MBDF	**Montbardon**	**0.59**	**315**	*e*Pg	**Pg**	**01 53 51.0**	**-0.4**
MBDF	**Montbardon**	**0.59**	**315**	*e*Pn	**Pn**	**01 53 53.4**	**+0.3**
MBDF				*e*Sg	**Sg**	**01 53 59.0**	**-0.3**
	226nm,0.3s						
CALN	**Calern**	**0.65**	**211**	Pg	**Pg**	**01 53 52.7**	**+0.2**
CALN				Sg	**Sg**	**01 54 01.1**	**-0.1**
CALN	**Calern**	**0.65**	**211**	Pg	**Pg**	**01 53 52.7**	**+0.2**
CALN				Sg	**Sg**	**01 54 01.1**	**-0.1**
QLNO	**Quiliano**	**0.71**	**89**	Pg	**Pg**	**01 53 53.8**	**+0.2**
QLNO				Sg	**Sg**	**01 54 03.8**	**+0.7**
QLNO	**Quiliano**	**0.71**	**89**	Pg	**Pg**	**01 53 53.8**	**+0.2**
QLNO				Sg	**Sg**	**01 54 03.8**	**+0.7**
	794nm,0.4s						
QLNO	**Quiliano**	**0.71**	**89**	Pg	**Pg**	**01 53 53.8**	**+0.2**
QLNO				Sg	**Sg**	**01 54 03.8**	**+0.7**
	794nm,0.4s						
RSP	**Reno Superiore**	**0.84**	**356**	Pg	**Pg**	**01 53 54.0**	**-2.0**
RSP	**Reno Superiore**	**0.84**	**356**	Pg	**Pg**	**01 53 54.0**	**-2.0**
	96nm,0.2s						
RSP	**Reno Superiore**	**0.84**	**356**	Pg	**Pg**	**01 53 54.0**	**-2.0**
	96nm,0.2s						
MONC	**Moncucco Torin**	**0.86**	**28**	Pg	**Pg**	**01 53 56.3**	**-0.2**
	717nm,0.4s						
MONC	**Moncucco Torin**	**0.86**	**28**	Pg	**Pg**	**01 53 56.3**	**-0.2**
	717nm,0.4s						
BNI	**Bardonecchia**	**0.89**	**327**	*e*Pn	**Pn**	**01 53 55.9**	**-1.2**
BNI				*e*S	**Sb**	**01 54 07.3**	**-0.6**
BNI	**Bardonecchia**	**0.89**	**327**	Pg	**Pg**	**01 53 56.0**	**-0.9**
BNI				Sg	**Sg**	**01 54 07.4**	**-1.2**
	67nm,0.7s						
BNI	**Bardonecchia**	**0.89**	**327**	Pg	**Pg**	**01 53 56.0**	**-0.9**
BNI				Sg	**Sg**	**01 54 07.4**	**-1.2**
	67nm,0.7s						
ROTM	**Rocchetta Tana**	**0.89**	**53**	P	**Pb**	**01 53 57.7**	**+1.1**
FRF	**La Foret Royal**	**0.91**	**215**	*e*Pg	**Pg**	**01 53 56.8**	**-0.5**
FRF				*e*Sg	**Sg**	**01 54 08.3**	**-1.0**
	556nm,0.2s						
FRF	**La Foret Royal**	**0.91**	**215**	*e*Pg	**Pg**	**01 53 56.8**	**-0.5**
FRF				*e*Sg	**Sg**	**01 54 08.3**	**-1.0**
	278nm,0.2s						
LMR	**La Mourre**	**1.15**	**212**	*e*Pg	**Pn**	**01 54 01.2**	**+0.4**
LMR				*e*Sg	**Sg**	**01 54 15.9**	**-1.2**
	495nm,0.2s						
LMR	**La Mourre**	**1.15**	**212**	*e*Pg	**Pn**	**01 54 01.2**	**+0.4**
LMR				*e*Sg	**Sg**	**01 54 15.9**	**-1.2**
	247nm,0.2s						
LSD	**Lago del Serru**	**1.16**	**352**	Pg	**Pn**	**01 53 59.3**	**-1.6**
LSD	**Lago del Serru**	**1.16**	**352**	Pg	**Pn**	**01 53 59.3**	**-1.6**
	102nm,0.2s						
LSD	**Lago del Serru**	**1.16**	**352**	Pg	**Pn**	**01 53 59.3**	**-1.6**
	102nm,0.2s						
GENL	**Genova Univers**	**1.16**	**85**	P	**Pn**	**01 53 59.9**	**-1.0**
ORIF	**Oris-en-Rattie**	**1.22**	**300**	*e*Pg	**Pg**	**01 54 02.6**	**-0.6**
ORIF				*e*Sg	**Sg**	**01 54 18.9**	**-0.2**
	324nm,0.5s						
ORIF	**Oris-en-Rattie**	**1.22**	**300**	*e*Pg	**Pg**	**01 54 02.6**	**-0.6**
ORIF				*e*Sg	**Sg**	**01 54 18.9**	**-0.2**
	162nm,0.5s						
TRAV	**Traversella**	**1.23**	**13**	P	**Pn**	**01 54 00.2**	**-1.7**
TRAV				S	**Sb**	**01 54 14.9**	**-3.0**
GDM	**Grand'Maison**	**1.26**	**316**	Pg	**Pg**	**01 54 05.8**	**+1.9**
GDM				Sg	**Sg**	**01 54 23.4**	**+3.1**
GDM	**Grand'Maison**	**1.26**	**316**	Pg	**Pg**	**01 54 05.8**	**+1.9**
GDM				Sg	**Sg**	**01 54 23.4**	**+3.1**
LPG	**La Plagne**	**1.26**	**340**	*e*Pn	**Pn**	**01 54 02.2**	**-0.1**
LPG				*e*Sg	**Sg**	**01 54 19.2**	**-1.3**
	99nm,0.5s						
LPG	**La Plagne**	**1.26**	**340**	*e*Pn	**Pn**	**01 54 02.2**	**-0.1**
LPG				*e*Sg	**Sg**	**01 54 19.2**	**-1.3**
	50nm,0.5s						
LPL	**La Plagne**	**1.28**	**340**	*e*Pn	**Pn**	**01 54 02.6**	**0.0**
LPL				*e*Sg	**Sg**	**01 54 19.0**	**-2.2**
	75nm,0.3s						
LPL	**La Plagne**	**1.28**	**340**	*e*Pn	**Pn**	**01 54 02.6**	**0.0**
LPL				*e*Sg	**Sg**	**01 54 19.0**	**-2.2**
	38nm,0.3s						
SMRF	**Simiane la Rot**	**1.32**	**256**	*e*Pg	**Pg**	**01 54 04.7**	**-0.5**
SMRF				*e*Sg	**Sg**	**01 54 23.5**	**+1.0**
	277nm,0.4s						
SMRF	**Simiane la Rot**	**1.32**	**256**	*e*Pg	**Pg**	**01 54 04.7**	**-0.5**
SMRF				*e*Sg	**Sg**	**01 54 23.5**	**+1.0**
	139nm,0.4s						
MRGE	**Morge**	**1.47**	**352**	Pg	**Pn**	**01 54 05.1**	**-0.1**
	65nm,0.5s						
GRN	**Grenoble**	**1.48**	**310**	Pg	**Pg**	**01 54 07.9**	**-0.2**
GRN	**Grenoble**	**1.48**	**310**	Pg	**Pg**	**01 54 07.9**	**-0.2**
SC2M	**Scurtabo**	**1.56**	**86**	Pg	**Pn**	**01 54 06.3**	**-0.2**
SC2M	**Scurtabo**	**1.56**	**86**	Pg	**Pn**	**01 54 06.3**	**-0.2**
	282nm,1.0s						
DIX	**Grande Dixence**	**1.77**	**1**	*e*P	**Pn**	**01 54 08.8**	**-0.5**
	94nm,0.5s						
DIX	**Grande Dixence**	**1.77**	**1**	Pg	**Pn**	**01 54 09.0**	**-0.3**
DIX	**Grande Dixence**	**1.77**	**1**	*e*P	**Pn**	**01 54 08.8**	**-0.5**
	94nm,0.5s						
EMV	**Vieux Emosson**	**1.78**	**350**	*e*P	**Pn**	**01 54 09.0**	**-0.5**
	98nm,0.7s						
EMV	**Vieux Emosson**	**1.78**	**350**	*e*P	**Pn**	**01 54 09.0**	**-0.5**
	98nm,0.7s						
CODM	**Codolo**	**1.79**	**87**	P	**Pn**	**01 54 09.7**	**+0.1**
CODM				S	**Sn**	**01 54 29.9**	**-1.9**
MMK	**Mattmark**	**1.79**	**14**	*e*P	**Pn**	**01 54 10.9**	**+1.3**
	67nm,0.3s						
MMK	**Mattmark**	**1.79**	**14**	Pg	**Pn**	**01 54 08.9**	**-0.7**
MMK	**Mattmark**	**1.79**	**14**	*e*P	**Pn**	**01 54 10.9**	**+1.3**
	67nm,0.3s						
VAI	**Varese**	**1.85**	**32**	Pg	**Pn**	**01 54 10.4**	**0.0**
VAI	**Varese**	**1.85**	**32**	Pg	**Pn**	**01 54 10.4**	**0.0**
	18nm,0.3s						
GRAM	**Graiana**	**1.95**	**84**	P	**Pn**	**01 54 12.2**	**+0.4**
GRAM				S	**Sn**	**01 54 33.8**	**-2.0**
VIVF	**Saint-Julien-l**	**1.99**	**287**	*e*Pn	**Pn**	**01 54 13.8**	**+1.4**
VIVF				*e*Sn	**Sn**	**01 54 37.6**	**+0.8**
	70nm,0.4s						
VIVF	**Saint-Julien-l**	**1.99**	**287**	*e*Pn	**Pn**	**01 54 13.8**	**+1.4**
VIVF				*e*Sn	**Sn**	**01 54 37.6**	**+0.8**
	35nm,0.4s						
MUGIO	**Muggio**	**2.00**	**36**	*e*P	**Pn**	**01 54 12.3**	**-0.2**
	134nm,0.6s						
MUGIO	**Muggio**	**2.00**	**36**	*e*P	**Pn**	**01 54 12.3**	**-0.2**
	134nm,0.6s						
AIGLE	**Aigle**	**2.05**	**352**	*e*P	**Pn**	**01 54 15.2**	**+2.0**
	71nm,0.5s						
AIGLE	**Aigle**	**2.05**	**352**	*e*P	**Pn**	**01 54 15.2**	**+2.0**
	71nm,0.5s						
SENIN	**Lac Senin/Sane**	**2.05**	**359**	*e*P	**Pn**	**01 54 15.3**	**+2.1**
	45nm,0.5s						
SENIN	**Lac Senin/Sane**	**2.05**	**359**	*e*P	**Pn**	**01 54 15.3**	**+2.1**
	45nm,0.5s						
VALM	**Valbona**	**2.08**	**88**	P	**Pn**	**01 54 14.1**	**+0.6**
VALM				S	**Sn**	**01 54 37.1**	**-1.7**
PGF	**Pioggiola**	**2.13**	**145**	*e*Pn	**Pn**	**01 54 13.8**	**-0.5**
PGF				*e*Sn	**Sn**	**01 54 38.4**	**-1.8**
	33nm,0.2s						
PGF	**Pioggiola**	**2.13**	**145**	*e*Pn	**Pn**	**01 54 13.8**	**-0.5**
PGF				*e*Sn	**Sn**	**01 54 38.4**	**-1.8**
	17nm,0.2s						
VLC	**Villacollemand**	**2.18**	**93**	*e*Pn	**Pn**	**01 54 15.6**	**+0.6**
VLC	**Villacollemand**	**2.18**	**93**	*e*Pn	**Pn**	**01 54 15.6**	**+0.6**
SARO	**Sassorosso**	**2.19**	**92**	P	**Pn**	**01 54 15.2**	**+0.1**
SARO				S	**Sn**	**01 54 39.6**	**-2.1**
SSB	**Saint Sauveur**	**2.23**	**297**	*e*Pn	**Pn**	**01 54 17.1**	**+1.6**
SSB				*e*S	**Sn**	**01 54 43.1**	**+0.6**
SSB	**Saint Sauveur**	**2.23**	**297**	*e*Pn	**Pn**	**01 54 17.1**	**+1.5**
SSB				*e*S	**Sn**	**01 54 43.2**	**+0.7**
MAIM	**Mastiano**	**2.29**	**99**	P	**Pn**	**01 54 16.6**	**+0.1**
MAIM				S	**Sn**	**01 54 41.5**	**-2.7**
PII	**Pisa**	**2.36**	**103**	Pg	**Pn**	**01 54 18.3**	**+0.9**
PII	**Pisa**	**2.36**	**103**	Pg	**Pn**	**01 54 18.3**	**+0.9**
	9.0nm,0.2s						
CABF	**La Chapelle**	**2.47**	**339**	*e*Pn	**Pn**	**01 54 20.0**	**+1.1**
CABF				*e*Sn	**Sn**	**01 54 48.5**	**0.0**
	20nm,0.5s						
CABF	**La Chapelle**	**2.47**	**339**	*e*Pn	**Pn**	**01 54 20.0**	**+1.1**
CABF				*e*Sn	**Sn**	**01 54 48.5**	**0.0**
	10nm,0.5s						
LASF	**Ste Croix**	**2.53**	**266**	*e*Pn	**Pn**	**01 54 20.5**	**+0.8**
LASF				*e*Sn	**Sn**	**01 54 50.0**	**0.0**
	56nm,0.5s						
LASF	**Ste Croix**	**2.53**	**266**	*e*Pn	**Pn**	**01 54 20.5**	**+0.8**
LASF				*e*Sn	**Sn**	**01 54 50.0**	**0.0**
	28nm,0.5s						
MAGA	**Magasa**	**2.74**	**57**	Pg	**Pn**	**01 54 22.7**	**0.0**
	67nm,0.4s						
DAVOX	**Davos/Dischmat**	**3.04**	**35**	Pn	**Pn**	**01 54 28.3**	**+1.6**
	2.8nm,0.3s,baz=249,slow=6.2,SNR=12						
DAVOX				Pg	**Pg**	**01 54 33.9**	**-4.0**
	1.6nm,0.3s,baz=201,slow=14,SNR=9.1						
DAVOX				Sn	**Sn**	**01 55 03.8**	**+1.2**
	1.7nm,0.3s,baz=260,slow=12,SNR=2.4						
DAVOX				Lg		01 55 12.7	
	1.6nm,0.3s,baz=315,slow=20,SNR=4.5						
DAVOX	**Davos/Dischmat**	**3.04**	**35**	Pn	**Pn**	**01 54 28.3**	**+1.5**
DAVOX	**Davos

2.8nm,0.2s,SNR=7.9
HAU Haudompre 3.76 350 *e*Pn **Pn 01 54 37.1 +0.4**
HAU *e*Sn **Sn 01 55 19.3 -1.1**
21nm,0.3s
HAU Haudompre 3.76 350 *e*Pn **Pn 01 54 37.1 +0.4**
HAU *e*Sn **Sn 01 55 19.3 -1.1**
11nm,0.3s
CAF Calviac 3.83 281 *e*Pn **Pn 01 54 39.0 +1.4**
CAF *e*Sn **Sn 01 55 21.9 -0.2**
19nm,0.5s
CAF Calviac 3.83 281 *e*Pn **Pn 01 54 39.0 +1.4**
CAF *e*Sn **Sn 01 55 21.9 -0.2**
9.6nm,0.5s
LOR Lormes 3.84 322 *e*Pn **Pn 01 54 39.5 +1.8**
LOR *e*Sn **Sn 01 55 21.9 -0.4**
13nm,0.3s
LOR Lormes 3.84 322 *e*Pn **Pn 01 54 39.5 +1.8**
LOR *e*Sn **Sn 01 55 21.9 -0.4**
6.3nm,0.3s
MTLF Montolieu 3.84 257 *e*Pn **Pn 01 54 38.7 +0.9**
MTLF *e*Sn **Sn 01 55 22.1 -0.3**
16nm,0.4s
MTLF Montolieu 3.84 257 *e*Pn **Pn 01 54 38.7 +0.9**
MTLF *e*Sn **Sn 01 55 22.1 -0.3**
8.2nm,0.4s
SSF Saint Saulge 3.85 317 *e*Pn **Pn 01 54 39.7 +1.8**
SSF *e*Sn **Sn 01 55 22.1 -0.6**
17nm,0.5s
SSF Saint Saulge 3.85 317 *e*Pn **Pn 01 54 39.7 +1.8**
SSF *e*Sn **Sn 01 55 22.1 -0.6**
8.4nm,0.5s
BGF Bois d'Agland 3.89 307 *e*Pn **Pn 01 54 39.4 +1.0**
BGF *e*Sn **Sn 01 55 23.1 -0.5**
25nm,0.4s
BGF Bois d'Agland 3.89 307 *e*Pn **Pn 01 54 39.4 +1.0**
BGF *e*Sn **Sn 01 55 23.1 -0.5**
13nm,0.4s
MOTA Moosalm 4.01 39 ||*i*Pn **Pn 01 54 41.6 +1.6**
MOTA Moosalm 4.01 39 Pn **Pn 01 54 41.6 +1.5**
CDF Champ du Feu 4.10 359 *e*Pn **Pn 01 54 40.9 -0.5**
CDF *e*Sn **Sn 01 55 27.3 -1.5**
4.1nm,0.2s
CDF Champ du Feu 4.10 359 *e*Pn **Pn 01 54 40.9 -0.5**
CDF *e*Sn **Sn 01 55 27.3 -1.5**
2.0nm,0.2s
TCF Toulx Ste Croi 4.13 300 *e*Pn **Pn 01 54 43.5 +1.7**
TCF *e*Sn **Sn 01 55 29.5 -0.1**
14nm,0.4s
TCF Toulx Ste Croi 4.13 300 *e*Pn **Pn 01 54 43.5 +1.7**
TCF *e*Sn **Sn 01 55 29.5 -0.1**
7.1nm,0.4s
WTTA Wattenberg 4.21 44 *e*Pn **Pn 01 54 45.2 +2.4**
WTTA Wattenberg 4.21 44 ||*i*Pn **Pn 01 54 44.7 +2.0**
WTTA ||*i*Sn **Sn 01 55 32.3 +0.9**
WTTA Wattenberg 4.21 44 Pn **Pn 01 54 44.7 +1.9**
WTTA Sn **Sn 01 55 32.3 +1.0**
RJF Les Rejaudoux 4.27 285 *e*Pn **Pn 01 54 43.7 0.0**
RJF *e*Sn **Sn 01 55 32.5 -0.5**
17nm,0.7s
RJF Les Rejaudoux 4.27 285 *e*Pn **Pn 01 54 43.7 0.0**
RJF *e*Sn **Sn 01 55 32.5 -0.5**
8.4nm,0.7s
HYF Humbligny 4.43 314 *e*Pn **Pn 01 54 48.0 +2.1**
HYF *e*Sn **Sn 01 55 36.1 -0.8**
HYF Humbligny 4.43 314 *e*Pn **Pn 01 54 48.0 +2.1**
HYF *e*Sn **Sn 01 55 36.1 -0.8**
MEZF Maizieres J'vi 4.48 340 *e*Pn **Pn 01 54 46.6 0.0**
MEZF *e*Sn **Sn 01 55 36.8 -1.4**
9.1nm,0.3s
MEZF Maizieres J'vi 4.48 340 *e*Pn **Pn 01 54 46.6 0.0**
MEZF *e*Sn **Sn 01 55 36.8 -1.4**
4.6nm,0.3s
RFYF Reffroy 4.51 344 *e*Pn **Pn 01 54 46.9 -0.1**
RFYF *e*Sn **Sn 01 55 37.0 -1.9**
40nm,0.2s
RFYF Reffroy 4.51 344 *e*Pn **Pn 01 54 46.9 -0.1**
RFYF *e*Sn **Sn 01 55 37.0 -1.9**
20nm,0.2s
LFF La Frestale 4.76 280 *e*Pn **Pn 01 54 50.6 +0.1**
LFF *e*Sn **Sn 01 55 44.2 -1.0**
21nm,0.6s
LFF La Frestale 4.76 280 *e*Pn **Pn 01 54 50.6 +0.1**
LFF *e*Sn **Sn 01 55 44.2 -1.0**
10nm,0.6s
EMIR Miracle 4.89 243 Pn **Pn 01 54 54.3 +2.0**
EMIR Sn **Sn 01 55 48.2 -0.2**
EMIR Miracle 4.89 243 Pn **Pn 01 54 54.3 +2.1**
0.9nm,0.3s,SNR=7.9
EMIR Sn **Sn 01 55 48.2 -0.2**
6.8nm,0.4s,SNR=7.9
EPF Esparros 5.25 258 *e*Pn **Pn 01 54 57.6 +0.5**
EPF *e*Sn **Sn 01 55 55.5 -1.6**
5.0nm,0.5s
EPF Esparros 5.25 258 *e*Pn **Pn 01 54 57.6 +0.5**
EPF *e*Sn **Sn 01 55 55.5 -1.6**
2.5nm,0.5s
NVLJ Novalja 5.39 85 *e*Pn **Pn 01 54 59.7 +0.7**
NVLJ Sn **Sn 01 55 58.0 -2.5**
NVLJ Novalja 5.39 85 *e*Pn **Pn 01 54 59.7 +0.7**
EPOB Poblet 5.48 240 Pn **Pn 01 54 59.9 -0.5**
EPOB Sn **Sn 01 56 00.9 -1.9**
EPOB Poblet 5.48 240 Pn **Pn 01 54 59.8 -0.5**
2.4nm,0.5s,SNR=7.9
EPOB Sn **Sn 01 56 00.9 -1.9**
1.9nm,0.5s,SNR=7.9
EBIE Bielsa 5.49 255 Pn **Pn 01 55 04.5 +4.1**
EBIE Sn **Sn 01 56 05.5 +2.4**
EBIE Bielsa 5.49 255 Sn **Sn 01 56 05.5 +2.4**
2.1nm,0.3s,SNR=7.9
VISS Visnje 5.51 72 *i*Pn **Pn 01 55 01.8 +1.2**
VISS *i*Sn **Sn 01 56 01.2 -2.2**
VISS Visnje 5.51 72 *i*Pn **Pn 01 55 01.8 +1.2**
ETOS Mallorca 5.66 218 Pn **Pn 01 55 03.2 +0.4**
ETOS Sn **Sn 01 56 04.5 -2.7**
ETOS Mallorca 5.66 218 Pn **Pn 01 55 03.2 +0.4**
0.9nm,0.2s,SNR=7.3
BOJS Bojanci 5.73 75 *i*Pn **Pn 01 55 05.8 +2.0**
BOJS *i*Sn **Sn 01 56 05.8 -3.2**
BOJS Bojanci 5.73 75 *i*Pn **Pn 01 55 05.8 +2.0**
MFF Saint Martin d 5.75 296 *e*Pn **Pn 01 55 03.9 -0.1**
MFF *e*Sn **Sn 01 56 07.7 -1.8**
5.1nm,0.5s
MFF Saint Martin d 5.75 296 *e*Pn **Pn 01 55 03.9 -0.1**
MFF *e*Sn **Sn 01 56 07.7 -1.8**
2.5nm,0.5s
ETSF Etsaut 5.92 259 *e*Pn **Pn 01 55 06.6 +0.3**
ETSF *e*Sn **Sn 01 56 11.9 -1.7**
9.6nm,0.6s
ETSF Etsaut 5.92 259 *e*Pn **Pn 01 55 06.6 +0.3**
ETSF *e*Sn **Sn 01 56 11.9 -1.7**
4.8nm,0.6s
MOA Molln 5.97 51 *e*Pn **Pn 01 55 08.3 +1.3**
BAIF Baives 6.14 341 *e*Pn **Pn 01 55 10.0 +0.7**
BAIF *e*Sn **Sn 01 56 16.3 -2.6**
1.7nm,0.4s
BAIF Baives 6.14 341 *e*Pn **Pn 01 55 10.0 +0.7**
WET Wettzell 6.14 36 *e*Pn **Pn 01 55 09.7 +0.3**
WET Wettzell 6.14 36 *e*Pn **Pn 01 55 09.7 +0.3**
GEC2 GERESS Array S 6.30 42 *e*Pn **Pn 01 55 11.6 +0.1**
GEC2 *e*Sn **Sn 01 56 20.3 -2.6**
GEC2 GERESS Array S 6.30 42 *e*Pn **Pn 01 55 11.6 +0.1**
GERES GERESS Array B 6.30 42 Pn **Pn 01 55 11.5 0.0**
1.4nm,0.3s,baz=228,slow=13,SNR=49
GERES Sn **Sn 01 56 19.5 -3.5**
0.7nm,0.3s,baz=231,slow=25,SNR=8.4
GERES GERESS Array B 6.30 42 Pn **Pn 01 55 11.5 0.0**
SJPF Ste Jean 6.33 262 *e*Pn **Pn 01 55 12.2 +0.2**
SJPF *e*Sn **Sn 01 56 21.6 -2.2**
4.1nm,0.5s
SJPF Ste Jean 6.33 262 *e*Pn **Pn 01 55 12.2 +0.2**
SJPF *e*Sn **Sn 01 56 21.6 -2.2**
2.0nm,0.5s
ARSA Arzberg 6.42 60 *e*Pn **Pn 01 55 13.8 +0.6**
KHC Kasperske Hory 6.44 39 *e*PN **Pn 01 55 14.1 +0.6**
KHC *e*SN **Sn 01 56 25.2 -1.3**
KHC Kasperske Hory 6.44 39 Pn **Pn 01 55 14.1 +0.6**
KHC Sn **Sn 01 56 25.2 -1.3**
LDF La Druitiere 6.71 312 *e*Pn **Pn 01 55 18.2 +1.1**
LDF *e*Sn **Sn 01 56 30.4 -2.6**
6.8nm,0.6s
LDF La Druitiere 6.71 312 *e*Pn **Pn 01 55 18.2 +1.1**
GRR Gorron 7.00 309 *e*Pn **Pn 01 55 22.7 +1.6**
GRR *e*Sn **Sn 01 56 37.2 -2.8**
2.4nm,0.3s
GRR Gorron 7.00 309 *e*Pn **Pn 01 55 22.7 +1.6**
FLN La Foliniere 7.00 312 *e*Pn **Pn 01 55 21.3 +0.2**
FLN *e*Sn **Sn 01 56 37.2 -3.0**
3.3nm,0.3s
FLN La Foliniere 7.00 312 *e*Pn **Pn 01 55 21.3 +0.2**
SGMF Saint Gilles 7.92 303 *e*Pn **Pn 01 55 34.0 +0.3**
SGMF Saint Gilles 7.92 303 *e*Pn **Pn 01 55 34.0 +0.3**
QUIF Quistinic 8.15 300 *e*Pn **Pn 01 55 37.7 +0.8**
QUIF Quistinic 8.15 300 *e*Pn **Pn 01 55 37.7 +0.8**
ROSF Rostrenen 8.38 302 *e*Pn **Pn 01 55 41.2 +1.1**
ROSF Rostrenen 8.38 302 *e*Pn **Pn 01 55 41.2 +1.1**
KEST Kesra 8.70 169 Pn **Pn 01 55 49.8 +5.3**
0.0nm,0.3s,baz=333,slow=16,SNR=3.3
ESDC Sonseca Array 9.61 245 Pn **Pn 01 55 58.2 +1.2**
0.2nm,0.3s,baz=59,slow=14,SNR=2.9
ESDC Sonseca Array 9.61 245 Pn **Pn 01 55 58.2 +1.2**

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*ISK **19** 02:42:29.4,38°.33N×40°.61E,h5km,MD3.3*
*ISCJB **19** 02:42:30.7±0.7,38°.50N±0°.04×40°.55E±0°.03,h1km±7km, Error ellipse: s-maj=7.2km s-min=4.0km az=18.3*
*DDA **19** 02:42:30.3,38°.55N×40°.61E,h8km±3km,Md3.1*
*CSEM **19** 02:42:31.2±0.3,38°.42N×40°.59E,h2km,MD3.1,Error ellipse: s-maj=10.1km s-min=6.1km az=175.0*
ISC 19 02:42:31.7±0.7,38°.50N±0°.04×40°.58E±0°.04,h7km±7km, n30,σ1§06/44,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**0.68**	**212**	*i* P	**Pg**	**02 42 44.4**	**-0.4**
DIYA				*i* S	**Sg**	**02 42 55.9**	**+2.3**
DIYA	**Diyarbakir**	**0.68**	**212**	*i* P	**Pg**	**02 42 44.4**	**-0.3**
BEST	**Besiri**	**0.82**	**138**	*i* P	**Pg**	**02 42 46.0**	**-1.4**
BEST				*i* S	**Sg**	**02 42 59.2**	**+1.2**
SVRC	**Sivrice-ELAZID**	**1.00**	**263**	*e*PG	**Pg**	**02 42 50.0**	**-1.0**
SVRC				*e*SG	**Sg**	**02 43 05.0**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.00**	**263**	*e*Pg	**Pg**	**02 42 50.0**	**-1.0**
SVRC				*e*Sg	**Sg**	**02 43 05.0**	**+1.0**
PTK	**Pertek**	**1.01**	**293**	*e*PN	**Pg**	**02 42 51.1**	**+0.1**
PTK				*e*SN	**Sg**	**02 43 08.9**	**+4.9**
PTK	**Pertek**	**1.01**	**293**	*e*Pn	**Pg**	**02 42 51.1**	**+0.1**
PTK				*e*Sn	**Sg**	**02 43 08.9**	**+4.9**
TATV	**Tatvan**	**1.33**	**89**	*i* P	**Pn**	**02 42 55.1**	**-1.6**
TATV				*i* S	**Sb**	**02 43 14.6**	**+0.5**
TATV	**Tatvan**	**1.33**	**89**	*i* P	**Pn**	**02 42 55.1**	**-1.5**
TATV				*i* S	**Sb**	**02 43 14.6**	**+0.5**
EZM	**Erzurum**	**1.53**	**23**	*e*PN	**Pn**	**02 43 00.6**	**+1.2**
ERZM	**Erzurum**	**1.53**	**23**	*i* P	**Pn**	**02 42 58.5**	**-1.0**
MYA	**Malataya**	**1.70**	**265**	*e*PN	**Pn**	**02 43 01.7**	**0.0**
MYA	**Malataya**	**1.70**	**265**	*e*Pn	**Pn**	**02 43 01.7**	**-0.1**
URFA	**Urfa**	**1.75**	**233**	*e*PN	**Pn**	**02 43 01.1**	**-1.3**
URFA	**Urfa**	**1.75**	**233**	*e*Pn	**Pn**	**02 43 01.1**	**-1.3**
KEMA	**Kemaliye**	**1.80**	**296**	*e*P	**Pn**	**02 43 02.8**	**-0.3**
KEMA				*e*S	**Sg**	**02 43 29.6**	**+0.2**
KEMA	**Kemaliye**	**1.80**	**296**	*e*P	**Pn**	**02 43 02.8**	**-0.3**
KEMA				*e*S	**Sg**	**02 43 29.6**	**+0.2**
KELT	**Kelkit**	**1.94**	**329**	*i* P	**Pg**	**02 43 08.8**	**0.0**
KELT				*i* S	**Sn**	**02 43 32.9**	**+3.2**
KELT	**Kelkit**	**1.94**	**329**	*i* P	**Pg**	**02 43 08.8**	**0.0**
KELT				*i* S	**Sn**	**02 43 32.9**	**+3.2**
AGRB	**Hanur-Agry**	**2.17**	**60**	*e*PN	**Pn**	**02 43 09.0**	**+0.8**
AGRB	**Hanur-Agry**	**2.17**	**60**	*e*Pn	**Pn**	**02 43 09.0**	**+0.8**
GZT	**Gaziantep**	**2.64**	**245**	*i* P	**Pg**	**02 43 20.8**	**-1.5**
GZT				*i* S	**Sg**	**02 44 03.1**	**+6.6**
HAKT	**HAKKARI**	**2.65**	**110**	*e*P	**Pn**	**02 43 16.0**	**+1.2**
HAKT				*i* S	**Sg**	**02 44 01.8**	**+5.2**
HAKT	**HAKKARI**	**2.65**	**110**	*e*P	**Pn**	**02 43 16.0**	**+1.2**
CUKT	**Cukurca**	**2.71**	**117**	*e*PN	**Pn**	**02 43 14.7**	**-0.9**
CUKT	**Cukurca**	**2.71**	**117**	*e*Pn	**Pn**	**02 43 14.7**	**-0.9**
GAZ	**Gaziantep**	**2.98**	**245**	*e*PN	**Pn**	**02 43 19.7**	**+0.4**
GAZ	**Gaziantep**	**2.98**	**245**	*e*Pn	**Pn**	**02 43 19.7**	**+0.4**
KMRS	**Kahramanmaras**	**3.07**	**252**	*e*PN	**Pn**	**02 43 20.2**	**-0.4**
KMRS	**Kahramanmaras**	**3.07**	**252**	*e*Pn	**Pn**	**02 43 20.2**	**-0.4**

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*IDC **19** 02:49:04.1±2.5,1°.78N×125°.41E,h0km,mb3.9/4, mb1 3.9/4,mb1mx3.6/20,mbtmp3.9/4,Error ellipse: s-maj=376.3km s-min=22.6km az=64.0*
*ISCJB **19** 02:49:27.1±0.8,1°.0N±0°.1×124°.44E±0°.05,h216km±8km, mb3.6/4,Error ellipse: s-maj=19.4km s-min=8.1km az=172.7*
*DJA **19** 02:49:33,0°.77N×124°.47E,h20km,MLv4.0/4*
ISC 19 02:49:28.1±0.8,1°.0N±0°.1×124°.44E±0°.05,h207km±8km,n9, σ1§06/13,mb3.6/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**2.55**	**259**	P	**Pn**	**02 50 14.4**	**+1.4**
LUWI	**Luwuk**	**2.61**	**220**	P	**Pn**	**02 50 14.4**	**+0.6**
LUWI				S	**Sn**	**02 50 47.6**	**-1.9**
TNTI	**Ternate**	**2.94**	**94**	P	**Pn**	**02 50 18.7**	**+1.2**
TNTI				S	**Sn**	**02 50 55.3**	**-0.7**
APSI	**Ampana**	**3.36**	**236**	P	**Pn**	**02 50 23.5**	**+1.0**
APSI				S	**Sn**	**02 51 04.7**	**-0.4**
LBMI	**Labuha**	**3.46**	**118**	P	**Pn**	**02 50 24.4**	**+0.7**
LBMI				S	**Sn**	**02 51 06.3**	**-0.9**
ASAR	**Alice Springs**	**26.18**	**160**	P	**P**	**02 54 44.1**	**+0.5**
0.5nm,0.3s,mb3.6,baz=340,slow=7.4,SNR=12							
STKA	**Stephens Creek**	**36.51**	**155**	P	**P**	**02 56 14.2**	**+0.5**
0.8nm,0.4s,mb3.6,baz=329,slow=7.8,SNR=3.9							
MKAR	**Makanchi Array**	**58.55**	**327**	P	**P**	**02 59 00.9**	**-2.0**
0.6nm,0.5s,mb3.5,baz=116,slow=8.8,SNR=5.6							
KURK	**Kurchatov**	**62.86**	**329**	P	**P**	**02 59 31.4**	**-0.5**
0.6nm,0.3s,mb3.7,baz=135,slow=5.9,SNR=4.0							

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*ISCJB **19** 02:51:25.5±1.7,26°.7N±0°.3×140°.2E±0°.3,h437km±12km, mb3.6/9,Error ellipse: s-maj=54.2km s-min=35.7km az=34.4*
*IDC **19** 02:51:28.0±1.9,26°.89N×140°.23E,h437km±14km,mb3.3/7, mb1 3.4/8,mb1mx3.1/24,mbtmp3.3/8,Error ellipse: s-maj=49.3km s-min=28.6km az=13.0*
ISC 19 02:51:26.4±1.7,26°.7N±0°.3×140°.3E±0°.3,h436km±12km, n13,σ0§78/13,mb3.6/9,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.73**	**76**	P	**P**	**02 52 25.8**	**+1.6**
37nm,0.3s,baz=278,slow=20,SNR=28							
CBIJ				S	**S**	**02 53 09.7**	**-1.2**
30nm,0.3s,baz=290,slow=23,SNR=9.5							
JHJ	**Hachijo jima 2**	**6.43**	**356**	P	**P**	**02 53 04.8**	**+0.3**
14nm,0.3s,baz=257,slow=22,SNR=6.2							
MKAR	**Makanchi Array**	**49.44**	**310**	P	**P**	**02 59 34.5**	**-0.3**
0.1nm,0.3s,mb2.6,baz=91,slow=11,SNR=3.6							
KURK	**Kurchatov**	**52.07**	**315**	P	**P**	**02 59 54.7**	**+0.7**
2.5nm,0.5s,mb3.7,baz=92,slow=7.9,SNR=9.5							
BVAR	**Borovoye Array**	**57.20**	**318**	P	**P**	**03 00 30.3**	**+0.1**
1.3nm,0.4s,mb3.6,baz=86,slow=7.8,SNR=8.5							
YKA	**Yellowknife Ar**	**73.30**	**28**	P	**P**	**03 02 12.4**	**+0.6**
0.3nm,0.6s,mb3.0,baz=297,slow=6.2,SNR=3.3							
ARCES	**ARCESS Array B**	**73.37**	**341**	P	**P**	**03 02 12.5**	**+0.4**
0.9nm,0.5s,mb3.6,baz=74,slow=9.1,SNR=10.0							
JOF	**Joensuu**	**74.69**	**333**	*ep*	**P**	**03 02 18.4**	**-1.4**
1.1nm,0.4s,mb3.8							
KAF	**Kangasniemi**	**77.10**	**334**	*ep*	**P**	**03 02 32.8**	**-0.4**
1.4nm,0.4s,mb3.9							
FINES	**FINESS Array B**	**77.56**	**333**	P	**P**	**03 02 35.9**	**+0.2**
2.5nm,0.4s,mb4.2,baz=67,slow=5.0,SNR=38							
NB2	**NORSAR Subarra**	**83.36**	**338**	P	**P**	**03 03 05.5**	**-0.6**
comp=Z,0.6nm,0.5s,mb3.6,baz=45,slow=5.3							
NOA	**NORSAR Array B**	**83.36**	**338**	P	**P**	**03 03 05.7**	**-0.3**
comp=Z,1.0nm,0.6s,mb3.8,baz=46,slow=4.9,SNR=4.3							
TORD	**Torodi Ar. Bea**	**123.56**	**309**	PKP	PKPdf	03 09 35.8	+1.7
comp=Z,0.5nm,0.9s,baz=127,slow=1.4,SNR=4.9							

MAN 19 03:02:09,14°.48N×123°.25E,h1km,mb4.7,ML3.6,MS3.5, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.97**	**234**	||*i*P	Pg	03 02 28.4	+0.8
GQP				*i* S	Sg	03 02 41.1	+0.9
PVCP	**Virac**	**1.24**	**135**	*e*P	Pg	03 02 33.0	+0.1
PVCP				*e*S	Sg	03 02 45.3	-3.7
AUQP	**San Andres**	**1.28**	**206**	*e*P	Pg	03 02 35.8	+2.2
POLP	**Polilio Island**	**1.29**	**281**	*e*P	Pg	03 02 35.0	+1.2
POLP				*e*S	Sg	03 02 46.9	-3.7
BOAC	**Boac**	**1.70**	**233**	*e*P	Pn	03 02 42.1	+2.2
BOAC				*e*S	Sn	03 03 03.4	+1.0
BALP	**Baler**	**2.04**	**308**	*e*P	Pn	03 02 44.8	+0.3
CNP	**Cataman**	**2.40**	**145**	*e*P	Pn	03 02 51.5	+2.1
CAUP	**Cauayan**	**2.81**	**331**	*e*P	Pn	03 02 56.4	+1.4
SJMP	**San Jose**	**2.89**	**226**	*e*P	Pn	03 02 58.1	+1.9
LUBP	**Lubang**	**3.01**	**256**	*e*P	Pn	03 03 00.3	+2.5
APYP	**Conner**	**3.87**	**330**	*e*P	Pn	03 03 12.5	+2.8

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*IDC **19** 03:02:22.0±1.3,20°.77S×174°.82W,h0km,mb3.9/6, mb1 4.1/8,mb1mx4.0/19,mbtmp4.0/8,ML3.4/2,MS2.9/1, Ms1 2.9/1,ms1mx2.7/17,Error ellipse: s-maj=50.7km s-min=20.7km az=140.0*
*ISCJB **19** 03:02:26.2±1.0,20°.4S±0°.2×175°.0W±0°.2,h33km,mb4.0/7, Error ellipse: s-maj=36.4km s-min=13.5km az=40.0*
*NEIC **19** 03:02:26.9±0.8,20°.88S×174°.79W,h35km,Error ellipse: s-maj=31.7km s-min=16.9km az=127.0*
ISC 19 03:02:28.3±1.0,20°.5S±0°.2×175°.0W±0°.2,h35km,n13, σ0§87/12,mb4.0/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.21**	**26**	Pn	**Pn**	**03 04 10.6**	**-0.7**
5.9nm,0.3s,baz=304,slow=21,SNR=4.5							
AFI				Sn	**Sn**	**03 05 22.1**	**-10**
2.7nm,0.3s,baz=68,slow=19,SNR=2.0							
AFI				LR	LR	03 06 31.1	
comp=Z,86nm,19.3s,baz=143,slow=34							
AFI	**Afiamalu**	**7.21**	**26**	*e*Pn	**Pn**	**03 04 10.1**	**-1.2**
AFI				*e*S	**Sn**	**03 05 19.7**	**-12**
URZ	**Urewera**	**19.00**	**199**	Pn	**Pn**	**03 06 42.4**	**-5.4**
0.8nm,0.3s,baz=304,slow=7.7,SNR=6.1							
RPZ	**Rata Peaks**	**25.94**	**204**	P	**P**	**03 07 57.2**	**-0.1**
11nm,0.9s,mb4.4,baz=346,slow=8.3,SNR=3.6							
CTA	**Charters Tower**	**36.27**	**264**	P	**P**	**03 09 27.4**	**-1.1**
2.1nm,0.6s,mb4.3,baz=99,slow=13,SNR=2.2							
STKA	**Stephens Creek**	**40.32**	**245**	P	**P**	**03 10 02.6**	**+0.1**
1.5nm,0.7s,mb3.8,baz=121,slow=5.9,SNR=2.8							
ASAR	**Alice Springs**	**47.24**	**256**	P	**P**	**03 10 58.2**	**0.0**
1.0nm,0.7s,mb3.8,baz=97,slow=7.8,SNR=7.7							
MJAR	**Matsushiro Arr**	**71.87**	**322**	P	**P**	**03 13 49.6**	**+1.9**
0.9nm,0.5s,mb4.0,baz=186,slow=6.1,SNR=3.0							
NVAR	**Mina Array Bea**	**79.10**	**42**	P	**P**	**03 14 29.9**	**+0.7**
0.3nm,0.3s,mb3.8,baz=226,slow=4.8,SNR=3.1							
YKA	**Yellowknife Ar**	**95.33**	**24**	P	**P**	**03 15 48.1**	**-0.2**
0.3nm,0.9s,mb3.7,baz=244,slow=3.6,SNR=4.1							
AKASG	**Malin Array Be**	**144.28**	**333**	PKP	PKPdf	03 21 57.5	-2.9
0.5nm,0.5s,baz=46,slow=4.0,SNR=4.9							
BRTR	**Keskin Array B**	**148.84**	**314**	PKPbc	PKPbc	03 22 12.6	+0.2
0.5nm,0.6s,baz=119,slow=5.0,SNR=4.8							
GERES	**GERESS Array B**	**150.83**	**348**	PKPbc	PKPbc	03 22 17.1	+0.2
0.3nm,0.4s,baz=46,slow=2.8,SNR=3.2							

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*IDC **19** 03:12:42.0±1.1,4°.55N×95°.20E,h0km,mb4.1/8,mb1 4.2/8, mb1mx3.8/21,mbtmp4.1/8,Error ellipse: s-maj=55.7km s-min=20.6km az=52.0*
*ISCJB **19** 03:12:47.6±0.6,5°.01N±0°.08×95°.92E±0°.06,h51km±7km, mb4.0/11,Error ellipse: s-maj=14.8km s-min=6.6km az=34.8*
*NEIC **19** 03:12:47.9±0.6,5°.02N×95°.83E,h35km,mb4.0/3,Error ellipse: s-maj=27.0km s-min=10.5km az=219.0*
NEIC Felt [II] at Banda Aceh.
*DJA **19** 03:12:48,4°.99N×95°.88E,h20km,MLv4.4/5*
ISC 19 03:12:48.9±0.6,5°.03N±0°.07×95°.88E±0°.06,h44km±7km, n27,σ1§06/30,mb4.0/11,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.75**	**308**	P	**Pn**	**03 13 02.1**	**-0.9**
BSI				S	**Sn**	**03 13 14.3**	**+1.0**
LHMI	**Lhok Sumawe**	**1.08**	**79**	P	**Pn**	**03 13 06.5**	**-1.0**
LHMI				S	**Sn**	**03 13 22.8**	**+1.5**
TSI	**Tuntungan**	**3.07**	**119**	P	**Pn**	**03 13 42.4**	**+7.5**
GSI	**Gunungsitoli**	**4.07**	**155**	P	**Pn**	**03 13 47.8**	**-0.8**
KULM	**Kulim**	**4.75**	**87**	P	**Pn**	**03 13 57.8**	**-0.2**
KULM	**Kulim**	**4.75**	**87**	*e*Pn	**Pn**	**03 13 57.5**	**-0.5**
KULM				*e*S	**Sn**	**03 14 46.0**	**-5.9**
IPM	**Ipoh**	**5.15**	**96**	P	**Pn**	**03 14 03.3**	**-0.2**
IPM	**Ipoh**	**5.15**	**96**	P	**Pn**	**03 14 03.8**	**+0.3**
IPM	**Ipoh**	**5.15**	**96**	P	**Pn**	**03 14 02.5**	**-1.0**
79nm,0.4s,1μm0.4nm							
MNSI	**Mandailing Nat**	**5.59**	**139**	P	**Pn**	**03 14 11.5**	**+1.9**
61nm,0.6s,2μm0.4nm							
FRIM	**Kepong**	**6.00**	**107**	P	**Pn**	**03 14 14.2**	**-0.9**
PPI	**Padang Panjang**	**7.07**	**140**	P	**Pn**	**03 14 31.7**	**+1.8**
19nm,0.7s,2μm							
KTGM	**Kuala Trengganu**	**7.23**	**87**	P	**Pn**	**03 14 31.7**	**-0.3**
SDSI	**Sungai Dareh**	**8.11**	**137**	P	**Pn**	**03 14 44.9**	**+0.8**
MYKOM	**Kota Tinggi**	**8.58**	**112**	P	**Pn**	**03 14 49.5**	**-1.1**
MDSI	**Maura Dua**	**12.57**	**139**	P	**Pn**	**03 15 42.9**	**-2.3**
FITZ	**Fitzroy Crossi**	**37.28**	**129**	*e*P	**P**	**03 19 56.4**	**-0.5**
1.2nm,0.5s,mb4.0							
MKAR	**Makanchi Array**	**43.23**	**346**	P	**P**	**03 20 47.2**	**+1.4**
0.3nm,0.4s,mb3.4,baz=148,slow=7.3,SNR=3.6							
SONM	**Songino Array**	**43.59**	**10**	P	**P**	**03 20 53.8**	**+5.2**
1.9nm,0.7s,mb4.0,baz=206,slow=6.3,SNR=3.1							
WRAB	**Tennant Creek**	**45.22**	**124**	*e*P	**P**	**03 21 02.2**	**+0.1**
2.6nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**46.78**	**129**	P	**P**	**03 21 15.1**	**+0.7**
4.1nm,0.4s,mb4.7,baz=301,slow=7.9,SNR=74							
ABKAR	**Akbulak array**	**53.54**	**331**	P	**P**	**03 22 05.2**	**0.0**
0.2nm,0.2s,mb3.7							
STKA	**Stephens Creek**	**56.90**	**133**	P	**P**	**03 22 30.9**	**+1.2**
1.9nm,0.7s,mb4.3,baz=306,slow=14,SNR=3.3							
BRTR	**Keskin Array B**	**65.59**	**311**	P	**P**	**03 23 28.3**	**-0.1**
0.8nm,0.5s,mb4.0,baz=133,slow=6.4,SNR=6.5							
FINES	**FINESS Array B**	**76.02**	**332**	P	**P**	**03 24 29.6**	**-1.7**
0.5nm,0.4s,mb3.8,baz=105,slow=6.7,SNR=4.6							
ARCES	**ARCESS Array B**	**78.51**	**340**	P	**P**	**03 24 45.1**	**0.0**
4.2nm,1.0s,mb4.3,baz=101,slow=7.0,SNR=5.5							
**G

comp=Z,444nm,2.2s
SOE Somerset East 15.76 340 *e*P **Pn 03 19 50.8 -4.7**
SUR Sutherland 17.50 327 P **Pn 03 20 15.9 -1.6**
comp=Z,3.7nm,0.3s,baz=146,slow=9.1,SNR=47
SUR LR LR 03 25 40.9
comp=Z,32μm,19.7s,baz=161,slow=32
SUR Sutherland 17.50 327 *e*Pn **Pn 03 20 15.9 -1.7**
comp=Z,302nm,1.3s
SUR Sutherland 17.50 327 Pn **Pn 03 20 21.8 +4.2**
SNR=6.6
SUR Pn **Pn 03 20 21.8 +4.2**
SNR=6.6
SUR Sutherland 17.50 327 *e*P **Pn 03 20 15.6 -1.9**
SUR AMb AMB 03 20 26.9
comp=Z,350nm,1.9s
CVNA Calvinia 18.69 326 *e*P **Pn 03 20 32.3 0.0**
CVNA AMb AMB 03 20 41.7
comp=Z,415nm,1.5s
SEK Senekal 19.67 349 ⇓*i*P **Pn 03 20 42.6 -1.4**
POGA Pongola 20.34 359 *e*P **P 03 20 47.9 -2.0**
POGA AMb AMB 03 21 03.1
comp=Z,200nm,0.8s
UPI Upington 21.04 333 *e*P **P 03 20 56.1 -1.4**
UPI AMb AMB 03 21 05.4
comp=Z,590nm,1.5s,mb5.7
PRYS Parys 21.08 349 *e*P **P 03 20 56.4 -1.5**
PRYS AMb AMB 03 21 04.8
comp=Z,273nm,1.7s,mb5.3
SWZ Schweizer 21.15 344 ⇓*i*P **P 03 20 57.8 -1.0**
SWZ AMb AMB 03 21 08.2
comp=Z,778nm,1.7s,mb5.8
SLR Silverton 22.15 351 *e*P **P 03 21 06.7 -2.7**
SLR AMb AMB 03 21 35.1
comp=Z,514nm,1.7s,mb5.7
KSR Koster 22.20 348 ⇓*i*P **P 03 21 08.0 -2.0**
KSR AMb AMB 03 21 16.6
comp=Z,322nm,1.3s,mb5.6
LBTB Lobatse 23.22 345 P **P 03 21 19.6 -1.2**
comp=Z,15nm,0.6s,mb4.6,baz=184,slow=11,SNR=16
LBTB LR LR 03 29 10.8
comp=Z,15μm,18.6s,MS5.5,baz=181,slow=33
LBTB Lobatse 23.22 345 P **P 03 21 19.6 -1.2**
LBTB pmax pmax
comp=Z,15nm,0.6s,mb4.6
LBTB MLR MLR
comp=Z,15μm,18.6s,MS5.5
LBTB Lobatse 23.22 345 *e*P **P 03 21 18.6 -2.2**
comp=Z,3.1nm,0.4s,mb4.1
LBTB Lobatse 23.22 345 ⇓*i*P **P 03 21 18.5 -2.3**
LBTB AMb AMB 03 21 33.4
comp=Z,224nm,2.1s,mb5.2
MAIT Maitri 25.03 196 *e*P **P 03 21 36.2 -1.1**
MAIT *e*S **S 03 26 07.9 +6.9**
MSNA Messina 25.38 356 *e*P **P 03 21 39.0 -1.9**
MSNA AMb AMB 03 22 10.1
comp=Z,196nm,1.5s,mb5.4
MAW Mawson 25.41 153 P **P 03 21 38.7 -2.2**
comp=Z,146nm,0.9s,mb5.5,baz=300,slow=7.7,SNR=61
MAW LR LR 03 29 06.2
comp=Z,8μm,21.0s,MS5.2,baz=318,slow=31
VNA2 Neumayer--Watz 29.70 205 *e*P **P 03 22 18.9 -0.3**
VNA2 *e* pP 03 22 21.9 -0.4
VNA2 *e* 03 22 24.8
VNA2 *e* 04 28 05.7
VNA1 Neumayer--Stat 29.81 206 *e*P **P 03 22 20.6 +0.4**
VNA1 *e* pP 03 22 23.2 -0.1
VNA1 *e* 04 28 06.6
TSUM Tsumeb 30.76 333 P **P 03 22 28.6 -0.4**
comp=Z,24nm,0.8s,mb5.1,baz=154,slow=9.7,SNR=32
TSUM Tsumeb 30.76 333 *e*P **P 03 22 28.0 -1.0**
comp=Z,62nm,0.9s,mb5.4
TSUM LR LR
comp=Z,26μm,20.0s,MS5.9
TSUM Tsumeb 30.76 333 *i*P **P 03 22 28.2 -0.8**
ABPO Ambohimpanom 31.26 29 *e*P **P 03 22 33.8 +0.3**
ABPO pmax pmax
comp=Z,43nm,1.2s,mb5.2
ABPO MLR MLR
comp=Z,7μm,19.0s,MS5.3
ABPO Ambohimpanom 31.26 29 *e*P **P 03 22 33.8 +0.3**
comp=Z,43nm,1.2s,mb5.2
ABPO LR LR
comp=Z,7μm,19.0s,MS5.3
OPO Ambohidratompo 31.67 28 P **P 03 22 37.4 +0.3**
comp=Z,7.1nm,0.9s,mb4.5,baz=203,slow=6.1,SNR=7.2
LSZ Lusaka 32.51 353 P **P 03 22 43.8 -0.7**
comp=Z,23nm,0.7s,mb5.2,baz=178,slow=9.7,SNR=24
LSZ LR LR 03 33 58.4
comp=Z,12μm,19.6s,MS5.6,baz=176,slow=33
LSZ Lusaka 32.51 353 *e*P **P 03 22 42.8 -1.6**
comp=Z,62nm,1.2s,mb5.4
LSZ LR LR
comp=Z,11μm,20.0s,MS5.5
LSZ Lusaka 32.51 353 P **P 03 22 43.5 -1.0**
SNR=10.0
LSZ P 03 22 43.5
SNR=10.0
LSZ Lusaka 32.51 353 ⇓*i*P **P 03 22 42.7 -1.8**
RER Riviere de l'E 32.76 44 PFAKE 03 23 00.0 +13
RER LR LR
comp=Z,7μm,22.0s,MS5.3
MIR Mirnyy 36.24 144 ⇓*i*P **P 03 23 14.0 -2.3**
MIR *e*S **S 03 29 03.0 +6.8**
MIR pmax pmax
comp=Z,90nm,1.2s,mb5.6
MIR pmax pmax
comp=Z,500nm,6.0s
MIR smax
comp=E,3μm,18.0s
MIR MLR MLR
comp=N,3μm,16.0s,MS5.4
MIR MLR MLR
comp=E,4μm,16.0s,MS5.4
MIR MLR MLR
comp=Z,5μm,16.0s,MS5.4
QSPA South Pole Qui 42.48 180 P **P 03 24 06.4 -1.8**
comp=Z,58nm,0.8s,mb5.2,baz=254,slow=3.6,SNR=138
QSPA South Pole Qui 42.48 180 *e*P **P 03 24 06.4 -1.9**
comp=Z,79nm,0.9s,mb5.3
QSPA LR LR
comp=Z,3μm,21.0s,MS5.2
SHEL Horse Pasture 44.29 303 PFAKE 03 24 40.0 +17
SHEL LR LR
comp=Z,4μm,22.0s,MS5.3
KMBO Kilima Mbogo 46.66 7 P **P 03 24 44.1 +1.8**
comp=Z,17nm,1.1s,mb4.9,baz=178,slow=15,SNR=14
KMBO LR LR 03 43 06.1
comp=Z,10μm,18.6s,MS5.8,baz=164,slow=34
KMBO Kilima Mbogo 46.66 7 *e*P **P 03 24 44.3 +2.0**
KMBO Kilima Mbogo 46.66 7 *e*P **P 03 24 44.0 +1.7**
comp=Z,33nm,1.3s,mb5.1
KMBO LR LR
comp=Z,9μm,19.0s,MS5.8
KMBO Kilima Mbogo 46.66 7 P **P 03 24 45.0 +2.7**
SNR=6.1
KMBO P 03 24 45.0
SNR=6.1
KMBO Kilima Mbogo 46.66 7 *e*P **P 03 24 43.1 +0.9**
MSEY Mahe Island 47.45 33 PFAKE 03 25 00.0 +12
MSEY LR LR
comp=Z,3μm,21.0s,MS5.2
PMSA Palmer Station 50.45 214 P **P 03 25 10.2 -0.6**
comp=Z,50nm,0.9s,mb5.5,baz=179,slow=12,SNR=2.3
PMSA Palmer Station 50.45 214 P **P 03 25 10.2 -0.6**
PMSA LR LR
comp=Z,4μm,20.0s,MS5.4
SBA Scott Base 51.67 169 *e*P **P 03 25 19.5 -0.4**
SBA pmax pmax
comp=Z,104nm,0.9s,mb5.8
SBA MLR MLR
comp=Z,6μm,22.0s,MS5.6
SBA Scott Base 51.67 169 *e*P **P 03 25 19.4 -0.5**
comp=Z,104nm,0.9s,mb5.8
SBA LR LR
comp=Z,6μm,22.0s,MS5.6
DGAR Diego Garcia 52.91 54 PFAKE 03 25 40.0 +10
DGAR LR LR
comp=Z,2μm,20.0s,MS5.2
DRV Dumont d'Urvil 53.62 152 P **P 03 25 26.0 -8.5**
DRV S **S 03 33 10.0 +2.5**
DRV R 03 40 00.0
EFI East Falkland 54.71 230 *e*P **P 03 25 43.7 +1.1**
EFI East Falkland 54.71 230 PFAKE 03 25 50.0 +7.4
EFI LR LR
comp=Z,6μm,22.0s,MS5.6
ATD Arta Tunnel 59.81 12 P **P 03 26 21.2 +2.3**
comp=Z,21nm,0.8s,mb5.2,baz=160,slow=19,SNR=15
KIC Kosan Boka 62.79 318 *e*P **P 03 26 40.3 +1.1**
comp=Z,207nm,1.4s,mb6.1
KIC Kosan Boka 62.79 318 *e*P **P 03 26 40.3 +1.1**
comp=Z,207nm,1.4s,mb6.1
LIC Lamto 62.80 318 *e*P **P 03 26 39.6 +0.3**
comp=Z,214nm,1.4s,mb6.1
LIC Lamto 62.80 318 *e*P **P 03 26 39.6 +0.3**
comp=Z,214nm,1.4s,mb6.1
TIC Toumodi 63.17 318 *e*P **P 03 26 41.7 0.0**
comp=Z,262nm,1.1s,mb6.3
TIC Toumodi 63.17 318 *e*P **P 03 26 41.7 0.0**
TIC pmax pmax
comp=Z,262nm,1.1s,mb6.3
TIC Toumodi 63.17 318 *e*P **P 03 26 41.7 0.0**
comp=Z,262nm,1.1s,mb6.3
CAM4 Nova Friburgo 63.47 265 ⇑*i*P **P 03 26 43.3 -0.5**
CAM4 *i* pP 03 26 44.7 -2.3
CAM4 *i* pP 03 26 46.3 -0.7
CAM4 *i* 03 26 51.0
CAM4 *i* 03 26 55.6
CAM4 *i* 03 27 08.3
CAM4 *i* 03 27 14.0
CAM4 *i* 03 27 25.4
CAM4 *i* 03 27 39.6
CAM4 *i* 03 27 54.2
CAM4 *i* 03 28 04.3
CAM4 Nova Friburgo 63.47 265 ⇑*i*P **P 03 26 44.5 +0.8**
CAM4 *i* pP 03 26 46.8 -0.2
CAM4 *i* 03 26 50.9
CAM4 *i* 03 26 55.3
CAM4 *i* 03 27 00.9
CAM4 *i* 03 27 08.2
CAM4 *i* 03 27 11.1
CAM4 *i* 03 27 14.1
CAM4 *i* 03 27 21.0
CAM4 *i* 03 27 31.1
CAM4 *i* 03 27 39.6
NWAO Narrogin (SRO) 63.57 111 P **P 03 26 42.8 -1.5**
comp=Z,22nm,0.8s,mb5.2,baz=218,slow=6.1,SNR=8.6
NWAO Narrogin (SRO) 63.57 111 *e*P **P 03 26 43.3 -1.0**
NWAO pmax pmax
comp=Z,13nm,0.7s
NWAO MLR MLR
comp=Z,3μm,22.0s
NWAO Narrogin (SRO) 63.57 111 *e*P **P 03 26 43.2 -1.0**
comp=Z,13nm,0.7s,mb5.1
NWAO LR LR
comp=Z,3μm,22.0s,MS5.5
COCO West Island 64.27 80 PFAKE 03 27 00.0 +11
COCO LR LR
comp=Z,3μm,21.0s,MS5.4
KLBR Kellerberrin 64.78 110 *e*P **P 03 26 52.2 -0.1**
comp=Z,619nm,3.4s
TRQA Tornquist 65.35 240 *e*P **P 03 26 55.5 -0.3**
comp=Z,78nm,1.1s,mb5.7
TRQA LR LR
comp=Z,3μm,22.0s,MS5.5
TORD Torodi Ar. Bea 66.32 328 P **P 03 27 02.4 +0.1**
comp=Z,9.4nm,0.8s,mb4.9,baz=164,slow=6.7,SNR=62
PLCA Paso Flores 68.33 233 P **P 03 27 14.8 0.0**
comp=Z,9.7nm,1.0s,mb4.8,baz=128,slow=5.7,SNR=8.4
PLCA LR LR 03 51 31.5
comp=Z,2μm,20.7s,MS5.3,baz=199,slow=31
PLCA Paso Flores 68.33 233 *e*P **P 03 27 14.1 -0.7**
comp=Z,42nm,1.3s,mb5.3
PALK Pallekele 69.63 53 *i*P **P 03 27 24.9 +1.8**
CPUP Villa Florida 70.50 252 P **P 03 27 28.4 0.0**
comp=Z,24nm,0.9s,mb5.1,baz=114,slow=5.5,SNR=48
CPUP LR LR 03 52 30.0
comp=Z,985nm,21.6s,MS5.0,baz=128,slow=31
RCBR Riachuelo 70.83 283 PFAKE
RCBR LR LR 03 27 40.0 +9.4
comp=Z,2μm,19.0s,MS5.4
FORT Forrest 71.75 116 *e*P **P 03 27 34.8 -1.2**
comp=Z,26nm,0.7s,mb5.3
FORT Forrest 71.75 116 *e*P **P 03 27 35.4 -0.6**
comp=Z,35nm,0.8s,mb5.3
MBWA Marble Bar 73.24 103 PFAKE 03 28 00.0 +15
MBWA LR LR
comp=Z,2μm,20.0s,MS5.4
TAU Tasmania Unive 73.29 136 PFAKE 03 28 00.0 +15
TAU LR LR
comp=Z,5μm,22.0s,MS5.8
BSY Bisya 73.76 24 P **P 03 27 49.0 +1.3**
SNR=8.5
TAM Tamanrasset 74.10 335 *e*P **P 03 27 52.9 +3.2**
TAM pmax pmax
comp=Z,17nm,1.2s,mb4.8
TAM MLR MLR
comp=Z,6μm,20.0s,MS5.9
TAM Tamanrasset 74.10 335 *e*P **P 03 27 52.9 +3.1**
comp=Z,17nm,1.2s,mb4.8
TAM LR LR
comp=Z,6μm,20.0s,MS5.9
SMDO Samad 74.30 25 P **P 03 27 50.3 -0.6**
SNR=7.6
HOQ Hoqain 74.59 24 P **P 03 27 51.9 -0.7**
SNR=20
KAD Karad 75.01 42 *e*P **P 03 27 54.2 -0.9**
KAD *i*P 03 27 54.4
ASHO Ashiyiah 75.30 23 P **P 03 27 56.2 -0.5**
SNR=9.3
HATD Hatta, Dubai 75.46 23 P **P 03 27 57.7 +0.1**
SNR=8.1
POO Poona 75.93 41 *ex* x 03 27 53.8
TOO Toolangi 76.52 132 *e*P **P 03 28 03.7 0.0**
LCO Las Campanas 76.86 241 *e*P **P 03 28 07.4 +1.6**
comp=Z,63nm,1.0s,mb5.5
LCO LR LR
comp=Z,5μm,22.0s,MS5.7
HYB Hyderabad 77.14 45 *i*P **P 03 28 07.0 -0.2**
HYB *e*S S 03 37 56.0 -0.3
RDF Al-Radifah 77.61 14 *e*P **P 03 28 09.9 +0.3**
RDF AMb AMB 03 28 22.9
comp=Z,171nm,1.1s,mb5.9
NAY Al-Naaiem 77.87 14 *e*P **P 03 28 10.8 -0.3**
NAY AMb AMB 03 28 16.7
comp=Z,59nm,1.9s,mb5.2
KBD Kabd 77.87 14 *e*P **P 03 28 10.8 -0.3**
KBD AMb AMB 03 28 18.0
comp=Z,72nm,1.4s,mb5.4
MIB Mutribah 78.43 14 *e*P **P 03 28 13.9 -0.3**
MIB AMb AMB 03 28 19.7
comp=Z,70nm,1.8s,mb5.3
STKA Stephens Creek 78.81 125 *e*P **P 03 28 13.9 -2.7**
comp=Z,29nm,0.8s,mb5.3
STKA Stephens Creek 78.81 125 P **P 03 28 14.6 -2.0**
comp=Z,42nm,1.0s,mb5.3,baz=182,slow=3.0,SNR=13
STKA LR LR 03 55 28.2
comp=Z,4μm,21.8s,MS5.7,baz=211,slow=30
STKA Stephens Creek 78.81 125 *e*P **P 03 28 14.1 -2.6**
comp=Z,7.1nm,0.8s,mb4.7
FITZ Fitzroy Crossi 79.30 105 *e*P **P 03 28 21.2 +1.8**
comp=Z,25nm,0.8s,mb5.2
FITZ Fitzroy Crossi 79.30 105 *e*P **P 03 28 20.1 +0.7**
comp=Z,25nm,1.1s,mb5.0
KULM Kulim 79.88 71 *e*P **P 03 28 22.3 -0.2**
comp=Z,44nm,1.3s,mb5.2
KULM LR LR
comp=Z,1μm,22.0s,MS5.3
CAN Canberra 80.03 132 PFAKE 03 28 30.0 +6.8
CAN LR LR
comp=Z,3μm,19.0s,MS5.6
CNB Canberra Magne 80.22 133 *e*P **P 03 28 21.2 -3.0**
MMAI Mount Meron Ar 80.45 3 P **P 03 28 26.4 +1.3**
comp=Z,0.7nm,0.3s,baz=111,slow=4.6,SNR=5.0
MMAI LR LR 04 03 07.7
comp=Z,3μm,18.4s,baz=205,slow=35
ASAR Alice Springs 80.47 115 P **P 03 28 23.0 -2.7**
comp=Z,10nm,0.8s,mb4.8,baz=216,slow=5.1,SNR=24
ASAR PKPPKP 03 55 21.9
comp=Z,0.9nm,1.0s,baz=50,slow=2.0,SNR=5.1
ASAR Alice Springs 80.47 115 P **P 03 28 23.0 -2.7**
ASAR pmax pmax
comp=Z,10.0nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,1.0s
BHL Bhannes 81.34 3 *e*P **P 03 28 28.9 -1.0**
BHPL Bhopal 81.65 42 *e*P **P 03 28 31.8 +0.1**
BHPL AMb AMB 03 28 33.6
comp=Z,39nm,1.3s,mb5.2
HWQ Hawqa 81.73 3 *e*P **P 03 28 32.3 +0.4**
JASL Jaisalmer 82.19 35 *e*P **P 03 28 34.2 -0.3**
JASL AMb AMB 03 28 38.8
comp=Z,53nm,1.1s,mb5.4
AJM Ajmer 83.29 38 *e*P **P 03 28 39.3 -0.9**
AJM AMb AMB 03 28 44.4
comp=Z,45nm,1.8s,mb5.2
KSM Kuching 83.31 80 *e*P **P 03 28 42.7 +1.9**
comp=Z,42nm,2.0s,mb5.1
KSM LR LR
comp=Z,2μm,22.0s,MS5.5
WRAB Tennant Creek 83.52 112 *e*P **P 03 28 42.8 +1.0**
WRAB pmax pmax
comp=Z,87nm,1.6s,mb5.6
WRAB MLR MLR
comp=Z,3μm,19.0s,MS5.7
WRAB Tennant Creek 83.52 112 *e*P **P 03 28 42.8 +1.0**
comp=Z,87nm,1.6s,mb5.6
WRAB LR LR
comp=Z,3μm,19.0s,MS5.7
LPAZ La Paz 84.66 252 P **P 03 28 48.2 +0.6**
comp=Z,4.8nm,0.6s,mb4.8,baz=120,slow=4.0,SNR=20
LPAZ LR LR 04 02 52.4
comp=Z,2μm,19.6s,MS5.4,baz=250,slow=33
WDD Wield Dalam 84.67 346 PFAKE 03 29 00.0 +13
WDD LR LR
comp=Z,8μm,20.0s,MS6.1
KHET Khetri 85.17 38 *e*P **P 03 28 49.0 -0.8**
ISP Isparta 85.21 359 *e*P **P 03 28 49.4 -0.3**
ISP pmax pmax
comp=Z,33nm,1.0s,mb5.4
ISP MLR MLR
comp=Z,2μm,19.0s,MS5.6
ISP Isparta 85.21 359 *e*P **P 03 28 49.4 -0.4**
comp=Z,33nm,1.0s,mb5.4
ISP LR LR
comp=Z,2μm,19.0s,MS5.6
ARMA Armidale 85.28 131 *e*P **P 03 28 52.4 +1.8**
AGRA Agra 85.34 40 *e*P **P 03 28 51.0 +0.3**
SNZO South Karori 85.41 153 PFAKE 03 29 00.0 +9.0
SNZO LR LR
comp=Z,4μm,19.0s,MS5.8
KEST Kesra 85.51 342 LR LR 04 04 55.4
comp=Z,3μm,21.8s,MS5.6,baz=114,slow=34
AYAN Aya Nagar 86.08 39 *e*P **P 03 28 52.2 -2.1**
RTK Rohtak 86.27 38 *ex* x 03 28 43.3
NDI New Delhi 86.30 39 *e*P **P 03 28 55.0 -0.4**
ABSA Djebel Ababsia 86.44 340 P **P 03 29 00.3 +4.4**
CMAH Djebel Manchou 86.79 341 P **P 03 29 03.8 +6.2**
CEL Celeste 86.80 347 *e*P **P 03 29 00.2 +2.6**
comp=Z,72nm,1.4s,mb5.7
CEL LR LR
comp=Z,4μm,19.0s,MS5.9
SET Setif 86.86 339 P **P 03 29 04.0 +6.1**
BR131 Keskin Array S 87.10 1 *e*P **P 03 28 59.4 +0.4**
comp=Z,5.2nm,0.8s,mb4.8
BRTR Keskin Array B 87.10 1 P **P 03 28 59.6 +0.7**
comp=Z,4.1nm,0.8s,mb4.7,baz=176,slow=7.5,SNR=28
BRTR LR LR 04 11 13.8
comp=Z,924nm,18.6s,MS5.2,baz=38,slow=38
BRTR Keskin Array B 87.10 1 P **P 03 28 59.7 +0.7**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR MLR MLR
comp=Z,924nm,18.6s
KKR Kurukshetra 87.25 38 *ex* x 03 28 48.4
TIP Timpagrande 87.58 348 PFAKE 03 29 10.0 +8.7
TIP LR LR
comp=Z,5μm,22.0s,MS5.9
GNI Garni 88.25 10 LR LR 04 08 00.2
comp=Z,2μm,21.2s,MS5.5,baz=91,slow=35
GNI Garni 88.25 10 *e*P **P 03 29 07.6 +3.1**
GNI pmax pmax
comp=Z,17nm,1.2s
GNI Garni 88.25 10 *e*P **P 03 29 06.5 +2.0**
comp=Z,34nm,1.1s,mb5.5
GNI LR LR
comp=Z,2μm,21.0s,MS5.5
ABKT Ailbek 88.45 20 P **P 03 29 05.3 -0.2**
comp=Z,165nm,0.9s,mb6.3,SNR=9.1
RTC Rabat Centre 88.46 329 PFAKE 03 29 20.0 +14
RTC LR LR
comp=Z,2μm,19.0s,MS5.6
JOSI Joshimath 88.92 40 *e*P **P 03 29 08.3 +0.4**
JOSI AMb AMB 03 29 11.6
comp=Z,68nm,0.9s,mb6.0
URZ Urewera 88.94 153 *e*P **P 03 29 08.8 +0.6**
comp=Z,20nm,0.9s,mb5.4
DMN Daman 88.94 45 *e*P **P 03 29 08.5 +0.4**
comp=Z,39nm,0.9s,mb5.7
CMAR Chiang Mai Arr 89.00 61 P **P 03 29 07.2 -1.4**
comp=Z,3.8nm,0.9s,mb4.7,baz=230,slow=5.2,SNR=14
CMAR LR LR 04 04 41.1
comp=Z,2μm,18.3s,MS5.5,baz=219,slow=33
PKIN Phulchoki 89.06 46 *e*P **P 03 29 09.2 +0.6**
PKI Pulchoki 89.06 46 *e*P **P 03 29 09.5 +0.9**
NIL Nilore 89.11 33 PFAKE 03 29 20.0 +11
NIL LR LR
comp=Z,62nm,19.0s,MS4.0
VSL Villasalto 89.13 343 PFAKE 03 29 20.0 +11
VSL LR LR
comp=Z,3μm,20.0s,MS5.7
KKN Kakani 89.18 45 *e*P **P 03 29 07.8 -1.4**
comp=Z,25nm,0.8s,mb5.6
CHTO Chiang Mai 89.28 61 PFAKE 03 29 20.0 +10
CHTO LR LR
comp=Z,1μm,20.0s,MS5.4
TIR Tirane 89.34 351 PFAKE 03 29 20.0 +10
TIR LR LR
comp=Z,2μm,21.0s,MS5.5
GUN Gumba 89.57 46 *e*P **P 03 29 09.9 -1.1**
comp=Z,75nm,0.9s,mb6.0
MTA Mtatsminda 89.78 10 P **P 03 29 13.9 +2.2**
TBLG Delisi 89.81 10 P **P 03 29 13.3 +1.5**
TBLG Delisi 89.81 10 P **P 03 29 13.3 +1.5**
GOR Gori 90.00 9 P **P 03 29 17.2 +4.6**
KEH Kehvi 90.30 9 P **P 03 29 14.6 +0.6**
SFS San Fernando 90.48 330 PFAKE 03 29 30.0 +15
SFS LR LR
comp=Z,7μm,19.0s,MS6.1
ONI Oni 90.53 9 P **P 03 29 17.0 +1.9**
CTA Charters Tower 90.57 121 *e*P **P 03 29 20.8 +4.7**
comp=Z,6.4nm,2.0s,mb4.6
CTAO Charters Tower 90.57 121 PFAKE 03 29 30.0 +14
CTAO LR LR
comp=Z,2μm,19.0s,MS5.6
KKM Kota Kinabalu 90.63 82 PFAKE 03 29 30.0 +14
KKM LR LR
comp=Z,607nm,22.0s,MS5.0
SHL Shillong 90.68 51 *ex* x 03 29 12.0
ZEI Tsey 90.75 9 *e*P **P 03 29 17.6 +1.5**
ZEI pmax pmax
comp=Z,27nm,1.4s,mb5.4
AQU L'Aquila 91.19 346 PFAKE 03 29 30.0 +12
AQU LR LR
comp=Z,7μm,22.0s,MS6.0
SOC Sochi 91.20 6 *e*P **P 03 29 19.2 +1.0**
SOC *e**PP pP 03 29 22.6 +1.0
SOC pmax pmax
comp=Z,20nm,1.6s,mb5.2
MAK Makhachkala 91.37 11 *e*P **P 03 29 20.4 +1.4**
MAK *e* 03 33 06.0
MAK *e*PPP 03 34 57.9
MAK *e*S SKSac 03 39 53.9 +3.1
MAK *e* 03 40 22.8
MAK pmax pmax
comp=Z,159nm,2.3s,mb5.9
PBDV Barranco-do-Ve 91.77 329 *e*P **P 03 29 28.4 +7.4**
PBDV Barranco-do-Ve 91.77 329 *i*PP PP 03 33 03.1 +2.7
PBDV *e*SKS 03 40 35.3
PBDV *e*LQ 03 52 48.3
PBDV *e*LR LR 03 59 13.8
comp=Z,2μm,20.0s
KIV Kislovodsk 91.81 8 P **P 03 29 23.8 +2.8**
comp=Z,167nm,1.1s,mb6.3,SNR=5.5
KIV Kislovodsk 91.81 8 *e*P **P 03 29 22.8 +1.8**
KIV *e* 03 32 59.8
KIV *e* 03 39 55.3
KIV *e*SS SS 03 46 34.4 +4.0
KIV *e*SSS 03 50 10.0
KIV pmax pmax
comp=Z,28nm,1.2s,mb5.5
KIV pmax pmax
comp=Z,135nm,8.6s
KIV MLR MLR
comp=Z,1μm,19.0s,MS5.4
KIV Kislovodsk 91.81 8 *e*P **P 03 29 22.5 +1.5**
comp=Z,36nm,1.0s,mb5.7
KIV LR LR

comp=Z,1µm,19.0s,MS5.4
KIV Kislovodsk 91.81 8 P **P 03 29 23.7 +2.7**
SNR=12
KIV P 03 29 23.7
SNR=12
PVAQ Vaqueiros 91.84 329 *e*P **P 03 29 27.2 +5.9**
PVAQ Vaqueiros 91.84 329 *e*PP PP 03 33 00.7 -0.3
PVAQ *e*SKS 03 40 11.5
PVAQ *i* P 03 40 34.1
PVAQ *e*LQ 03 55 21.8
PVAQ *e*LR LR 03 59 13.9
comp=Z,2µm,16.7s
PFVI Vila Bisbo 91.98 329 *e*P **P 03 29 19.6 -2.4**
PFVI *e*SKS 03 40 19.6
PFVI *e*LQ 03 52 18.5
PFVI *e*LR LR 03 59 36.0
comp=Z,2µm,20.0s
MORF Marmelete 92.08 329 *e*P **P 03 29 18.2 -4.2**
MORF Marmelete 92.08 329 *e*PP PP 03 33 08.6 +5.7
MORF *e*SKS 03 40 44.6
MORF *e*LQ 03 57 45.2
MORF *e*LR LR 03 59 46.7
comp=Z,2µm,18.7s
MORF Marmelete 92.08 329 *e*P **P 03 29 23.0 +0.6**
MORF *e* 03 33 02.6
MORF *e*S SKSac 03 39 56.3 +1.2
PCVE Castro Verde 92.16 329 *e*P **P 03 29 31.1 +8.3**
PCVE Castro Verde 92.16 329 *e*PP PP 03 33 11.8 +8.3
PCVE *e*SKS 03 40 26.3
PCVE *e*LQ 03 53 19.6
PCVE *e*LR LR 03 59 45.4
comp=Z,2µm,22.0s
ANN Anapa 92.28 4 *e*P **P 03 29 22.0 -1.2**
ANN *e**PP pP 03 29 26.7 +0.2
ANN *e* 03 33 03.5
ANN *e*PPP 03 35 03.7
ANN *e* 03 39 56.0
ANN *e*PS PS 03 41 42.0 +4.1
ANN *e*SS SS 03 46 39.2 +1.9
ANN pmax pmax
comp=Z,14nm,1.2s,mb5.2
PBAR Barrancos 92.31 330 *e*P Px 03 29 33.8
PBAR Barrancos 92.31 330 *e*PP PP 03 33 15.1 +10
PBAR *e*SKS 03 40 12.8
PBAR *e*LQ 03 56 02.2
PBAR *e*LR LR 04 00 06.1
comp=Z,2µm,23.2s
ESDC Sonseca Array 92.69 333 P **P 03 29 25.5 +0.3**
comp=Z,0.2nm,0.5s,baz=35,slow=38,SNR=3.0
ESDC LR LR 04 12 15.4
comp=Z,3µm,18.5s,baz=145,slow=36
PAB San Pablo 92.69 333 PFAKE 03 29 40.0 +15
PAB LR LR
comp=Z,3µm,19.0s,MS5.8
VOIR 92.99 355⇑ *i*P **P 03 29 27.6 +1.2**
EVOP Sao Brissos 92.99 330 *e*P **P 03 29 27.4 +0.8**
EVOP *e*PP PP 03 33 10.2 +0.2
EVOP *e*S SKSac 03 40 01.7 +1.6
EVOP *e*S SKSac 03 40 02.4 +2.2
EVOP AMS AMS 04 08 33.0
comp=Z,2µm,27.8s,MS5.3
EVOP Sao Brissos 92.99 330 *e*P **P 03 29 27.4 +0.8**
EVOP *e* 03 33 10.3
EVOP *e*S SKSac 03 40 02.4 +2.2
MLR Muntele Rosu 92.99 356⇓ *i*P **P 03 29 27.9 +1.4**
PESTR Estremoz 93.11 330 *e*P **P 03 29 36.6 +9.4**
PESTR Estremoz 93.11 330 *i* PP PP 03 33 18.7 +7.7
PESTR *e*SKS 03 40 23.6
PESTR *e*LQ 03 55 53.0
PESTR *e*LR LR 04 00 03.7
comp=Z,2µm,23.9s
PLOR Plostina 93.32 356⇑ *i*P **P 03 29 29.8 +1.9**
VRI Vrincioaia 93.33 356⇓ *i*P **P 03 29 29.7 +1.7**
NNA Nana 93.42 248 PFAKE 03 29 40.0 +11
NNA LR LR
comp=Z,1µm,22.0s,MS5.3
VLC Villacollemand 93.45 345 PFAKE 03 29 40.0 +11
VLC LR LR
comp=Z,4µm,20.0s,MS5.9
PMRV Marv??o 93.56 331 *e*P **P 03 29 33.8 +4.6**
PMRV Marv??o 93.56 331 *e*PP PP 03 33 21.3 +6.8
PMRV *e*SKS 03 40 20.4
PMRV *e*LR LR 04 00 41.3
comp=Z,2µm,20.0s
LSA Lhasa 93.65 49 P **P 03 29 29.6 -0.3**
LSA pP pP 03 29 38.9 +5.6
LSA sP sP 03 29 44.5 +10
LSA LR LR
comp=E,2µm,55.2s
LSA Lhasa 93.65 49 *e*P **P 03 29 29.1 -0.8**
LSA pmax pmax
comp=Z,18nm,0.9s,mb5.5
LSA MLR MLR
comp=Z,2µm,20.0s,MS5.6
LSA Lhasa 93.65 49 *e*P **P 03 29 29.1 -0.8**
comp=Z,18nm,0.9s,mb5.5
LSA LR LR
comp=Z,2µm,20.0s,MS5.6
PMAFR Mafra 93.77 329 *e*P **P 03 29 33.8 +3.6**
PMAFR Mafra 93.77 329 *e*PP PP 03 33 20.3 +4.1
PMAFR *e*SKS 03 40 20.7
PMAFR *i* P 03 41 02.6
PMAFR *e*LQ 03 55 44.8
PMAFR *e*LR LR 04 00 25.4
comp=Z,1µm,18.0s
VISS Visnje 94.35 348 *i* P **P 03 29 37.4 +4.8**
VISS Visnje 94.35 348 *i* P **P 03 29 37.4 +4.8**
KIS Kishinev 94.39 358 *e*P **P 03 29 38.0 +5.1**
KIS Kishinev 94.39 358 *e*PP PP 03 33 26.0 +5.1
KIS Kishinev 94.39 358 *e*PS PS 03 42 10.0 +8.8
KIS *e*SS SS 03 47 18.0 +11
KIS LRM 04 12 25.0
comp=Z,700nm,20.0s
KIS Kishinev 94.39 358 *e*P **P 03 29 38.0 +5.1**
KIS *e* 03 33 26.0
KIS *e*PPP 03 35 30.0
KIS *e*S S 03 40 48.0 +3.7
KIS *e*PS PS 03 42 10.0 +8.8
KIS *e*SS SS 03 47 18.0 +11
KIS MLR MLR
comp=Z,700nm,20.0s,MS5.1
TRI Trieste 94.41 347 PFAKE 03 29 40.0 +7.0
TRI LR LR
comp=Z,3µm,22.0s,MS5.7
MTE Manteigas 94.48 331 *e*P **P 03 29 41.8 +8.3**
MTE Manteigas 94.48 331 *i* PP PP 03 33 30.3 +8.6
MTE *e*SKS 03 40 30.6
MTE *e*LQ 03 54 51.0
MTE *e*LR LR 04 01 05.8
comp=Z,3µm,16.0s
MTE Manteigas 94.48 331 PFAKE 03 29 50.0 +17
MTE LR LR
comp=Z,2µm,19.0s,MS5.6
DRGR 94.49 354⇓ *i*P **P 03 29 37.7 +4.4**
JAVS Javornik 94.55 348 *i* P **P 03 29 37.3 +3.7**
JAVS Javornik 94.55 348 *i* P **P 03 29 37.3 +3.7**
MVO Moncorvo 95.00 332 *e*P **P 03 29 32.8 -3.0**
MVO Moncorvo 95.00 332 *e*PP PP 03 33 36.2 +10
MVO *e*SKS 03 41 06.3
MVO *e*LQ 03 56 16.4
MVO *e*LR LR 04 01 21.1
comp=Z,3µm,20.5s
BNI Bardonecchia 95.02 342 PFAKE 03 29 50.0 +14
BNI LR LR
comp=Z,7µm,22.0s,MS6.1
SOKA Soboth 95.18 348⇓ *i*P **P 03 29 42.6 +6.1**
comp=Z,7.6nm,1.1s,mb5.0
LPL La Plagne 95.45 343 *e*P **P 03 29 36.3 -1.5**
comp=Z,34nm,1.5s,mb5.3
LPL La Plagne 95.45 343 *e*P **P 03 29 36.3 -1.5**
LPL pmax pmax
comp=Z,17nm,1.5s,mb5.2
LPL La Plagne 95.45 343 *e*P **P 03 29 36.3 -1.5**
comp=Z,17nm,1.5s,mb5.2
SSB Saint Sauveur 95.69 341 PFAKE 03 29 50.0 +11
SSB LR LR
comp=Z,5µm,20.0s,MS6.0
PSZ Piszkesteto 95.84 352 PFAKE 03 29 50.0 +11
PSZ LR LR
comp=Z,2µm,21.0s,MS5.6
QIZ Qiongzhong 96.08 69 P **P 03 29 40.6 -0.7**
QIZ S S 03 40 50.8 -9.5
QIZ pmax pmax
comp=Z,48nm,2.2s,mb5.5
QIZ LR LR
comp=N,550nm,19.6s,MS5.1
QIZ LR LR
comp=E,400nm,20.9s,MS5.1
QIZ LR LR
comp=Z,600nm,20.1s,MS5.1
QIZ Qiongzhong 96.08 69 PFAKE 03 29 50.0 +8.7
QIZ LR LR
comp=Z,1µm,20.0s,MS5.4
FETA Feichten 96.17 346⇑ *i*P **P 03 29 47.5 +6.6**
comp=Z,7.4nm,1.3s,mb5.0
UZH Uzhgorod 96.35 354 *e*P **P 03 29 49.7 +8.0**
UZH *i* 03 33 37.0
UZH *e*PPP 03 35 46.0
UZH *i* PS PS 03 42 21.0 -1.6
UZH MLR MLR
comp=N,1µm,19.0s,MS5.5
UZH MLR MLR
comp=E,700nm,19.0s,MS5.5
UZH MLR MLR
comp=Z,1µm,19.0s,MS5.3
KMI Kunming 96.37 60 P **P 03 29 45.9 +3.4**
KMI pP pP 03 29 48.9 +3.1
KMI sP sP 03 29 50.3 +3.3
KMI PP PP 03 33 41.9 +5.3
KMI S S 03 41 03.3 +0.8
KMI SS SS 03 47 37.8 +1.7
KMI pmax pmax
comp=Z,9.0nm,0.6s,mb5.4
KMI pmax pmax
comp=Z,84nm,3.3s
KMI LR LR
comp=N,870nm,19.9s,MS5.3
KMI LR LR
comp=E,700nm,21.9s,MS5.3
KMI LR LR
comp=Z,2µm,29.8s
RJOB Jochberg 96.53 347 *e*PP PP 03 33 42.0 +4.5
AML Almayashu 96.83 30 *e*P **P 03 29 44.2 +0.1**
comp=Z,31nm,1.7s,mb5.5
AML LR LR
comp=Z,1µm,21.0s,MS5.3
SMF Signal de Mont 97.14 341 *e*P **P 03 29 42.5 -2.9**
SMF Signal de Mont 97.14 341 *e*P **P 03 29 42.5 -2.9**
SMF Signal de Mont 97.14 341 *e*P **P 03 29 42.5 -2.9**
FUR Furstenfeldbru 97.19 346 *e*PP PP 03 33 46.3 +3.8
UCH Uchtor 97.19 30 *e*P **P 03 29 47.2 +1.5**
comp=Z,8.0nm,1.1s,mb5.1
UCH LR LR
comp=Z,992nm,19.0s,MS5.3
KWP Kalwaria Pacla 97.31 354 PFAKE 03 30 00.0 +14
KWP LR LR
comp=Z,2µm,21.0s,MS5.7
EKS2 Erkin-Say 97.33 30 PFAKE 03 30 00.0 +14
EKS2 LR LR
comp=Z,1µm,21.0s,MS5.3
GEC2 GERESS Array S 97.49 348 *e*PP PP 03 33 48.6 +3.8
GERES GERESS Array B 97.49 348 P **P 03 29 49.1 +2.2**
comp=Z,0.1nm,0.4s,baz=72,slow=3.2,SNR=2.1
GERES LR LR 04 19 39.2
comp=Z,2µm,18.5s,baz=158,slow=39
AAK Ala-Archa 97.55 30 P **P 03 29 47.1 -0.2**
comp=Z,0.6nm,0.2s,mb4.7,baz=191,slow=10,SNR=3.0
AAK LR LR 04 09 38.8
comp=Z,818nm,19.3s,MS5.2,baz=113,slow=33
DAV Davao City (W) 97.67 88 PFAKE 03 30 00.0 +11
DAV LR LR
comp=Z,857nm,19.0s,MS5.3
TREC Trest 97.69 349 *e*PP PP 03 33 52.2 +5.8
TREC *e*SKS 03 40 33.9
TREC *e*PS PS 03 42 44.1 +6.9
TREC *e*SS SS 03 48 02.5 +8.4
TREC AMS AMS 04 13 40.0
comp=Z,2µm,23.9s
KHC Kasperske Hory 97.78 348 *e*PP PP 03 33 45.1 -2.0
KHC *e*x x 03 37 41.6
KHC *e*SKS 03 40 29.6
KHC *e*PS PS 03 42 39.9 +1.7
KHC *e*SS SS 03 47 51.6 -3.8
KHC AMS AMS 04 13 30.0
comp=Z,2µm,20.2s
BFO Black Forest 97.85 344 *e*PP PP 03 33 51.0 +3.4
BFO Black Forest 97.85 344 PFAKE 03 30 00.0 +11
BFO LR LR
comp=Z,2µm,19.0s,MS5.6
WET Wettzell 97.90 348 *e*PP PP 03 33 52.2 +4.2
OKC Ostrava-Krasne 97.92 351 *e*PP PP 03 33 56.5 +8.4
OKC *e*x x 03 40 38.1
OKC *e*PS PS 03 42 42.3 +2.6
OKC *e*SS SS 03 48 03.9 +6.6
OKC AMS AMS 04 19 20.0
comp=Z,2µm,17.8s
ECH Echery 97.96 344 PFAKE 03 30 00.0 +11
ECH LR LR
comp=Z,4µm,19.0s,MS5.9
KIEV Kiev 98.08 358 PFAKE 03 30 00.0 +10
KIEV LR LR
comp=Z,1µm,21.0s,MS5.4
AKASG Malin Array Be 98.09 358 LR LR 04 17 50.9
comp=Z,1µm,21.1s,MS5.4,baz=195,slow=38
STU Stuttgart 98.12 345 *e*PP PP 03 33 53.3 +3.6
TKM2 Tokmak 2 98.18 31 PFAKE 03 30 00.0 +10
TKM2 LR LR
comp=Z,1µm,21.0s,MS5.3
PRU Pruhonice 98.49 349 *e*PP PP 03 33 51.2 -1.3
PRU *e*x x 03 37 48.1
PRU *e*x x 03 40 42.8
PRU *e*PS PS 03 42 49.2 +3.3
PRU *e*SS SS 03 48 00.5 -4.8
PRU AMS AMS 04 09 10.0
comp=Z,2µm,30.0s
ROTZ Rotzenmuhle 98.60 347 *e*PP PP 03 33 57.9 +4.5
DPC Dobruska-Polom 98.62 350 *e*PP PP 03 33 58.3 +4.8
DPC *e*SKS 03 40 36.3
DPC *e*PS PS 03 42 50.9 +3.5
DPC *e*SS SS 03 48 05.6 -1.6
DPC AMS AMS 04 15 30.0
comp=Z,2µm,18.4s
GRA1 Grafenberg Arr 98.68 347 *e*Pdif **P 03 29 57.9 +5.7**
GRA1 *e*PP PP 03 33 57.6 +3.7
GRA1 *e*SKSac SKSac 03 40 34.8 +5.2
GRA1 *e*SP SP 03 42 58.2 +12
GRA1 LR LR
comp=Z,3µm,21.7s,MS5.8
GRF Grafenberg Arr 98.68 347 *e*Pdiff **P 03 29 57.9 +5.7**
GRF *e*PP PP 03 33 57.6 +3.7
GRF *e*SKSac SKSac 03 40 34.8 +5.2
GRF *e*SP SP 03 42 58.2 +12
GRF *e*L 04 15 07.7
comp=Z,3µm,21.7s
RAO Raoul Island 98.81 154 PFAKE 03 30 00.0 +6.3
RAO LR LR
comp=Z,2µm,19.0s,MS5.6
PVCC Panska Ves 99.02 349 *e*PP PP 03 34 02.1 +5.6
PVCC *e*x x 03 37 53.5
PVCC *e*x x 03 40 46.5
PVCC *e*PS PS 03 42 55.9 +4.3
PVCC *e*SS SS 03 48 19.9 +7.2
PVCC AMS AMS 04 20 10.0
NKC Novy Kostel 99.02 348 *e*PP PP 03 34 00.5 +4.0
NKC *e*x x 03 37 54.9
NKC *e*x x 03 40 44.8
NKC *e*PS PS 03 42 55.8 +4.2
NKC *e*SS SS 03 48 19.4 +6.6
NKC AMS AMS 04 14 10.0
comp=Z,3µm,20.6s
KSP Ksiaz 99.11 350 *e*P **P 03 29 59.0 +4.8**
KSP *e* 03 33 59.0
KSP *e*SP SP 03 42 55.2 +3.9
KSP *e*SS SS 03 48 08.5 -5.5
KSP MLR MLR
comp=Z,6µm,21.7s,MS6.0
TANN Tannenbergstha 99.20 348 *e*PP PP 03 34 01.9 +4.0
CMLA Cha da Macela 99.31 317 PFAKE 03 30 10.0 +15
CMLA LR LR
comp=Z,2µm,22.0s,MS5.5
DZM Mont Dzumac 99.42 138 *e*PP PP 03 33 51.6 -7.4
comp=Z,180nm,25.8s
DZM Mont Dzumac 99.42 138 *e*PS PS 03 42 55.7 -0.3
comp=Z,911nm,26.9s
DZM *e*SS SS 03 48 19.3 +2.1
comp=Z,2µm,27.6s
DZM *e*LR LR 04 02 15.8
comp=Z,4µm,31.4s
BRG Berggiesshubel 99.44 349 *e*PP PP 03 34 04.0 +4.3
BRG Berggiesshubel 99.44 349 P **P 03 30 00.0 +4.4**
BRG PP PP 03 33 57.0 -2.7
BRG SKS 03 40 39.0
BRG S S 03 41 32.0 +4.6
BRG SP SP 03 42 59.0 +4.2
BRG SS SS 03 48 07.0 -12
comp=N,2µm,18.4s
BRG
comp=E,2µm,18.0s
BRG
comp=Z,3µm,20.6s
BRG Berggiesshubel 99.44 349 P **P 03 30 00.0 +4.4**
BRG 03 33 57.0
BRG 03 40 39.0
BRG S S 03 41 32.0 +4.6
BRG SP SP 03 42 59.0 +4.2
BRG MLR MLR
comp=N,1µm,18.4s,MS5.6
BRG MLR MLR
comp=E,1µm,18.0s,MS5.6
BRG MLR MLR
comp=Z,2µm,20.6s,MS5.5
WLF Walferdange 99.54 343 *e*PP PP 03 34 05.0 +4.5
WLF Walferdange 99.54 343 PFAKE 03 30 10.0 +14
WLF LR LR
comp=Z,4µm,19.0s,MS5.9
MOX Moxa 99.55 347 *e*PDIFF **P 03 29 55.9 -0.2**
MOX *e*PP PP 03 34 03.0 +2.5
MOX
comp=Z,2µm,21.0s
MOX Moxa 99.55 347 *e*PP PP 03 34 04.3 +3.8
MOX Moxa 99.55 347 *e*P **P 03 29 55.9 -0.2**
MOX *e* 03 34 03.0
MOX MLR MLR
comp=Z,2µm,21.0s,MS5.5
MOX Moxa 99.55 347 *e*Pdif **P 03 29 55.9 -0.2**
MOX *e*PP PP 03 34 03.0 +2.5
MOX LR LR
comp=Z,2µm,21.0s,MS5.5
TNS Taunus Mts 99.65 345 *e*PP PP 03 34 05.8 +4.4
TGY Tagaytay City 99.67 80 LR LR 04 08 03.4
comp=Z,5.2nm,19.1s,baz=59,slow=31
GYA Guiyang 99.68 61 P Pdif 03 30 01.0 +3.4
GYA PP PP 03 34 07.8 +5.8
GYA SKS 03 40 37.6
GYA S S 03 41 30.3 -0.4
GYA SS SS 03 48 26.9 +4.2
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.8
GYA pmax pmax
comp=Z,160nm,5.6s
GYA LR LR
comp=N,3µm,22.9s,MS5.9
GYA LR LR
comp=E,3µm,21.7s,MS5.9
GYA LR LR
comp=Z,4µm,23.7s,MS5.9
UBBA Unterbreizbach 99.97 346 *e*PP PP 03 34 07.7 +4.0
CLL Collm 99.99 348 *e*PP PP 03 34 07.9 +4.0
CLL Collm 99.99 348 *e*P Pdif 03 30 08.0 +9.1
CLL *e* 03 40 42.0
CLL *e*S S 03 41 38.0 +6.0
CLL MLR MLR
comp=Z,3µm,23.5s,MS5.7
CLL Collm 99.99 348 *e*(sPdif) 03 30 08.0
CLL *e*PP PP 03 34 08.0 +4.1
CLL *e*PPPP 03 38 03.0
CLL *e*SKSac SKSac 03 40 42.0 +5.9
CLL *e*Sdif S 03 41 38.0 +6.0
CLL *e*PS PS 03 43 10.0 +8.0
CLL *e*SS SS 03 48 22.0 -4.3
CLL *e* 03 50 14.0
CLL *e* 03 53 17.0
CLL *e*SSSS 03 56 18.0
CLZ Clausthal 100.90 347 *e*PP PP 03 34 15.1 +4.3
BUG Bochum--Univer 101.03 345 *e*PP PP 03 34 16.3 +4.5
GRGR Grenville 101.23 276 PFAKE 03 30 20.0 +16
GRGR LR LR
comp=Z,725nm,22.0s,MS5.2
CD2 Chengdu 101.34 56 P Pdif 03 30 07.3 +2.3
CD2 pP 03 30 12.0
CD2 PP PP 03 34 19.9 +5.4
CD2 sS 03 41 51.9
CD2 SS SS 03 48 49.8 +4.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,150nm,5.9s
CD2 LR LR
comp=N,1µm,20.2s
CD2 LR LR
comp=Z,1µm,11.9s
NRDL Niedersach Rie 101.57 347 *e*PP PP 03 34 19.7 +3.8
IBBN Ibbenburen 101.78 345 *e*PP PP 03 34 22.0 +4.6
OBN Obninsk 102.56 3 PFAKE 03 30 20.0 +10
OBN LR LR
comp=Z,1µm,20.0s,MS5.5
FDF Fort de France 102.77 278 PFAKE 03 30 20.0 +8.7
FDF LR LR
comp=Z,520nm,20.0s,MS5.0
BSEG Bad Segeberg 102.94 347 *e*PP PP 03 34 29.6 +3.5
BSD Bornholm Skovb 103.47 350 *i* P PKiKP 03 34 30.1 -1.9
BSD *i* S PS 03 43 45.6 +6.6
BSD
comp=Z,1µm,22.0s
OTAV Otavalo 103.74 255 PFAKE 03 30 30.0 +14
OTAV LR LR
comp=Z,1µm,19.0s,MS5.5
MKAR Makanchi Array 103.92 33 Pdiff Pdif 03 30 13.1 -3.3
comp=Z,0.7nm,0.9s,baz=220,slow=5.6,SNR=7.0
MKAR PP PP 03 34 23.1 -10
comp=Z,0.2nm,0.6s,baz=224,slow=5.1,SNR=3.7
MKAR Makanchi Array 103.92 33 Pdif Pdif 03 30 13.1 -3.3
MKAR PP PP 03 34 23.1 -10
ENH Enshi 104.17 61 PFAKE 03 30 30.0 +12
ENH LR LR
comp=Z,2µm,20.0s,MS5.7
COP Copenhagen 104.34 349 *i* P PKiKP 03 34 40.7 +7.1
COP *i* S PS 03 43 56.2 +8.1
COP
comp=Z,1µm,19.0s
SDV Santo Domingo 104.93 267 PFAKE 03 30 30.0 +9.1
SDV LR LR
comp=Z,683nm,20.0s,MS5.2
LZH Lanzhou 105.27 53 Pdif Pdif 03 30 20.0 -2.4
LZH PP PP 03 34 42.1 -1.7
LZH AMB AMB
comp=Z,210nm,4.3s
ANWB Willy Bob 105.29 279 PFAKE 03 34 50.0 +13
ANWB LR LR
comp=Z,879nm,22.0s,MS5.3
MUD Monsted U'grnd 105.55 347 *i* P PP 03 34 47.3 +1.8
MUD
comp=Z,3µm,22.0s
BVAR Borovoye Array 105.60 23 Pdiff Pdif 03 30 20.1 -3.8
comp=Z,1.0nm,0.8s,baz=204,slow=6.2,SNR=4.7
BVAR PKKP PKKPab 03 46 24.0 +10
comp=Z,0.9nm,0.6s,baz=4.2,slow=6.1,SNR=3.9
BVAR Borovoye Array 105.60 23 P Pdif 03 30 20.1 -3.8
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 105.61 23 PFAKE 03 34 50.0 +14
BRVK LR LR
comp=Z,1µm,20.0s,MS5.5
KURK Kurchatov 105.99 29 Pdiff Pdif 03 30 24.6 -1.0
comp=Z,0.6nm,0.7s,baz=224,slow=5.3,SNR=3.8
KURK PKKP PKKPab 03 46 25.6 +13
comp=Z,1.0nm,0.9s,baz=22,slow=4.0,SNR=4.5
KURK Kurchatov 105.99 29 P Pdif 03 30 24.6 -1.0
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK pmax pmax
comp=Z,1.0nm,0.9s
ARU Arti 106.17 15 PFAKE 03 34 50.0 +13
ARU LR LR
comp=Z,2µm,21.0s,MS5.6
ESK Eskdalemuir 106.84 340 PFAKE 03 34 50.0 +12
ESK LR LR
comp=Z,4µm,20.0s,MS6.0

YHNB Yeheng 107.51 73 PFAKE 03 34 50.0 +10
YHNB LR LR
comp=Z,1μm,21.0s,MS5.4
TATO Taipei 107.80 72 PFAKE 03 34 50.0 +9.0
TATO LR LR
comp=Z,1μm,20.0s,MS5.4
MSVF Nonsavu 108.12 146 PFAKE 03 34 50.0 +8.1
MSVF LR LR
comp=Z,1μm,20.0s,MS5.4
KONO Kongsberg 108.57 348 PFAKE 03 34 50.0 +8.7
KONO LR LR
comp=Z,2μm,19.0s,MS5.7
FINES FINESS Array B 108.93 357 PKKPbc PKKPab 03 46 07.0 +8.4
comp=Z,2.4nm,0.8s,baz=86,slow=2.7,SNR=3.8
NOA NORSAR Array B 109.70 349 PKKP PKKPdf 03 46 24.1 +19
comp=Z,0.6nm,0.8s,baz=139,slow=6.7,SNR=3.3
PAYG Puerto Ayora 110.53 245 PFAKE 03 35 00.0 +13
PAYG LR LR
comp=Z,3μm,22.0s,MS5.8
RAR Rarotonga 110.57 168 PFAKE 03 35 00.0 +14
RAR LR LR
comp=Z,2μm,19.0s,MS5.8
ZALV Zalesovo Beam 110.78 30 PP PP 03 35 25.2 +1.5
comp=Z,1.2nm,0.5s,baz=235,slow=5.2,SNR=4.2
ZALV PKKP PKKPab 03 45 55.2 +4.1
comp=Z,1.9nm,0.7s,baz=4.6,slow=3.6,SNR=5.5
NJ2 Nanjing 111.06 65 *e*PKP PKiKP 03 34 41.8 -5.1
NJ2 PP PP 03 35 27.3 +1.1
NJ2 AMB AMB
comp=Z,150nm,5.2s
NJ2 LR LR
comp=N,190nm,23.7s,MS4.7
NJ2 LR LR
comp=E,140nm,23.6s,MS4.7
NJ2 LR LR
comp=Z,210nm,23.0s,MS4.7
BCIP Isla Barro Col 111.31 260 PFAKE 03 35 00.0 +12
BCIP LR LR
comp=Z,2μm,20.0s,MS5.7
SSE Sheshan 111.85 68 *e*Pdif Pdif 03 30 56.3 +4.6
SSE S Sdif 03 43 14.1 +1.6
SSE LR LR
comp=N,1μm,20.0s,MS5.5
SSE LR LR
comp=E,300nm,20.0s,MS5.5
SSE LR LR
comp=Z,1μm,25.3s
SDDR Presa de Saban 112.58 274 PFAKE 03 35 00.0 +10
SDDR LR LR
comp=Z,710nm,20.0s,MS5.3
GRTK Grand Turk 114.23 276 PFAKE 03 35 10.0 +17
GRTK LR LR
comp=Z,710nm,22.0s,MS5.2
BJT Baijiatuau 114.90 57 PFAKE 03 35 10.0 +16
BJT LR LR
comp=Z,1μm,21.0s,MS5.4
BJI Beijing 114.92 57 PKP PKiKP 03 34 55.4 +1.4
BJI PP PP 03 35 55.4 +1.9
BJI SS SS 03 51 46.8 -2.3
BJI LR LR
comp=N,1μm,26.9s,MS5.5
BJI LR LR
comp=E,1μm,26.9s,MS5.5
BJI LR LR
comp=Z,640nm,31.4s,MS5.0
PPT Papeete 114.98 178 *e*SP SP 03 45 28.6 -2.6
comp=Z,513nm,26.2s
PPT *e*SS SS 03 51 40.8 -6.7
comp=Z,1μm,29.2s
PPT *e*SS SS 03 51 47.7 +0.2
comp=Z,1μm,27.0s
PPT *e*LR LR 04 09 25.8
comp=Z,5μm,25.5s
APA Apatity 114.99 1 ⇑*i*PKIKP PKiKP 03 34 47.0 -6.3
APA *i* 03 36 00.0
APA *i* PS PS 03 45 38.0 +6.3
APA *i* PPS 03 46 51.0
APA *i* SS SS 03 51 59.0 +10
APA MLR MLR
comp=Z,2μm,20.0s,MS5.7
AFI Afiamalu 115.09 155 PFAKE 03 35 10.0 +15
AFI LR LR
comp=Z,1μm,20.0s,MS5.6
LVZ Lovozero 115.33 1 PFAKE 03 35 10.0 +16
LVZ LR LR
comp=Z,2μm,21.0s,MS5.7
GUMO Guam 115.38 98 PFAKE 03 35 10.0 +14
GUMO LR LR
comp=Z,435nm,20.0s,MS5.1
ULN Ulaanbaatar 115.42 46 PFAKE 03 35 10.0 +15
ULN LR LR
comp=Z,2μm,20.0s,MS5.6
JTS JuntasAbangare 115.52 257 PFAKE 03 35 10.0 +14
JTS LR LR
comp=Z,2μm,21.0s,MS5.8
GTBY Guantanamo Bay 115.82 272 PFAKE 03 35 10.0 +14
GTBY LR LR
comp=Z,702nm,19.0s,MS5.3
MTDJ Mount Denham 116.27 269 PFAKE 03 35 10.0 +13
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.5
TLY Talaya 116.48 41 PFAKE 03 35 10.0 +13
TLY LR LR
comp=Z,739nm,19.0s,MS5.3
FUNA Funafuti 116.95 143 PFAKE 03 35 10.0 +11
FUNA LR LR
comp=Z,16μm,19.0s,MS6.7
ARCES ARCESS Array B 117.05 357 PKP PKPdf 03 34 59.7 +2.5
comp=Z,6.7nm,1.1s,baz=222,slow=1.6,SNR=5.7
ARCES ARCESS Array B 117.05 357 PKIKP PKPdf 03 34 59.7 +2.5
ARCES pmax pmax
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 117.05 357 PKP PKPdf 03 34 59.7 +2.5
KEV Kevo 117.23 358 PFAKE 03 35 10.0 +12
KEV LR LR
comp=Z,1μm,20.0s,MS5.6
BBSR BB Station 117.29 289 PFAKE 03 35 10.0 +11
BBSR LR LR
comp=Z,582nm,20.0s,MS5.2
INCN Inchon 119.45 66 PFAKE 03 35 10.0 +7.2
INCN LR LR
comp=Z,1μm,21.0s,MS5.6
BORG Borgarnes 119.54 337 PFAKE 03 35 10.0 +7.9
BORG LR LR
comp=Z,3μm,20.0s,MS5.9
TGUH Tegucigalpa,Un 119.81 258 PFAKE 03 35 20.0 +16
TGUH LR LR
comp=Z,1μm,19.0s,MS5.5
CN2 Changchun 122.64 59 *e*Pdif Pdif 03 31 33.9 -5.7
CN2 *e*PP PP 03 36 45.3 -1.6
CN2 SKS SKSdf 03 42 13.9 -6.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,22.0s,MS5.2
CN2 LR LR
comp=E,500nm,22.0s,MS5.2
CN2 LR LR
comp=Z,200nm,23.0s,MS4.7
HIA Hailar 122.75 51 PFAKE 03 35 20.0 +11
HIA LR LR
comp=Z,1μm,21.0s,MS5.5
TARA Tarawa 122.83 132 PFAKE 03 35 20.0 +10
TARA LR LR
comp=Z,1μm,21.0s,MS5.5
TAOE Nuku Hiva Isla 123.21 189 *e*LR LR 04 13 15.9
comp=Z,1μm,23.8s
BOD Bodaibo 125.02 40 *e*PKIKP PKPdf 03 35 11.2 -1.6
BOD pmax pmax
comp=Z,9.0nm,1.5s
MDJ Mudanjiang 125.53 60 PKP PKPdf 03 35 15.5 +1.3
MDJ sPKP 03 35 20.4
MDJ PP PP 03 37 06.3 0.0
MDJ PKS 03 38 49.4
MDJ SKS SKSdf 03 42 25.6 -0.1
MDJ SS SS 03 54 05.5 +0.1
MDJ AMB AMB
comp=Z,120nm,4.7s
MDJ LR LR
comp=N,270nm,34.5s,MS5.1
MDJ LR LR
comp=E,700nm,38.5s,MS5.1
MDJ LR LR
comp=Z,1μm,32.4s
MDJ Mudanjiang 125.53 60 PFAKE 03 35 30.0 +16
MDJ LR LR
comp=Z,802nm,19.0s,MS5.4
DWPF Disney 125.58 274 PFAKE 03 35 30.0 +15
DWPF LR LR
comp=Z,776nm,20.0s,MS5.4
MAJO Matsushiro 126.17 73 PFAKE 03 35 30.0 +14
MAJO LR LR
comp=Z,828nm,21.0s,MS5.4
MJAR Matsushiro Arr 126.17 73 PKP PKPdf 03 35 14.5 -1.2
comp=Z,0.7nm,0.6s,baz=251,slow=3.7,SNR=3.1
MJAR Matsushiro Arr 126.17 73 PKIKP PKPdf 03 35 14.5 -1.3
MJAR pmax pmax
comp=Z,1.0nm,0.6s
CNNC Cliffs of the 127.64 283 PFAKE 03 35 30.0 +11
CNNC LR LR
comp=Z,818nm,21.0s,MS5.4
NHSC New Hope 127.87 280 PFAKE 03 35 30.0 +11
NHSC LR LR
comp=Z,874nm,20.0s,MS5.4
PKME Peaks-Kenny Pk 127.93 299 PFAKE 03 35 30.0 +11
PKME LR LR
comp=Z,1μm,20.0s,MS5.6
LBNH Lisbon 128.96 296 PFAKE 03 35 30.0 +9.2
LBNH LR LR
comp=Z,1μm,21.0s,MS5.5
CBN Corbin 129.03 287 PFAKE 03 35 30.0 +8.8
CBN LR LR
comp=Z,824nm,21.0s,MS5.4
SUMG Summit 129.43 338 *e*PKPdf PKPdf 03 35 21.4 +0.5
SFJD Kangerlussuaq 130.08 329 PFAKE 03 35 30.0 +7.8
SFJD LR LR
comp=Z,1μm,20.0s,MS5.6
NCB Newcomb 130.21 295 PFAKE 03 35 40.0 +17
NCB LR LR
comp=Z,971nm,20.0s,MS5.5
GOGA Godfrey 130.24 278 PFAKE 03 35 40.0 +16
GOGA LR LR
comp=Z,1μm,22.0s,MS5.5
BINY Binghamton 130.36 292 PFAKE 03 35 40.0 +16
BINY LR LR
comp=Z,1μm,19.0s,MS5.5
BLA Blacksburg 130.45 284 PFAKE 03 35 40.0 +16
BLA LR LR
comp=Z,893nm,21.0s,MS5.4
SSPA Standing Stone 130.72 289 PFAKE 03 35 40.0 +16
SSPA LR LR
comp=Z,682nm,21.0s,MS5.3
LONY Lake Ozonia 130.77 295 PFAKE 03 35 40.0 +16
LONY LR LR
comp=Z,1μm,19.0s,MS5.6
BRAL Brewton 131.20 273 PFAKE 03 35 40.0 +14
BRAL LR LR
comp=Z,827nm,19.0s,MS5.5
SCHQ Schefferville 131.37 310 PKP PKPdf 03 35 26.7 +1.7
comp=Z,4.7nm,0.9s,baz=103,slow=3.0,SNR=4.0
MCWV Mont Chateau 131.44 287 PFAKE 03 35 40.0 +14
MCWV LR LR
comp=Z,871nm,19.0s,MS5.5
LRAL Lakeview Retre 132.39 275 PFAKE 03 35 40.0 +12
LRAL LR LR
comp=Z,755nm,20.0s,MS5.4
ERM Erimo 132.42 70 PFAKE 03 35 40.0 +13
ERM LR LR
comp=Z,558nm,20.0s,MS5.3
ERPA Erie 132.85 290 PFAKE 03 35 40.0 +12
ERPA LR LR
comp=Z,499nm,21.0s,MS5.2
WAKE Wake Island 133.73 112 PFAKE 03 35 40.0 +9.4
WAKE LR LR
comp=Z,1μm,20.0s,MS5.6
ACSO Alum Creek Sta 133.78 286 PFAKE 03 35 40.0 +10
ACSO LR LR
comp=Z,718nm,20.0s,MS5.4
PLAL Pickwick Lake 134.25 277 PFAKE 03 35 40.0 +8.9
PLAL LR LR
comp=Z,860nm,19.0s,MS5.5
VBMS Vicksburg 134.27 272 PFAKE 03 35 40.0 +8.7
VBMS LR LR
comp=Z,857nm,20.0s,MS5.5
WVT Waverly 134.74 278 *e*PKIKP PKPdf 03 35 32.7 +0.7
OXF Oxford 134.88 275 *e*PKIKP PKPdf 03 35 31.4 -0.9
OXF MLR MLR
comp=Z,1μm,20.0s,MS5.5
WCI Wyandotte Cave 134.88 282 *e*PKIKP PKPdf 03 35 32.1 -0.1
AAM Ann Arbor 135.28 288 PFAKE 03 35 40.0 +7.2
AAM LR LR
comp=Z,936nm,20.0s,MS5.5
KVTX Kingsville 136.29 261 PFAKE 03 35 50.0 +15
KVTX LR LR
comp=Z,1μm,22.0s,MS5.5
OLIL Olney 136.35 281 PKPdf PKPdf 03 35 37.4 +2.4
HKT Hockley 136.46 265 PFAKE 03 35 50.0 +15
HKT LR LR
comp=Z,1μm,20.0s,MS5.5
TIXI Tiksi 136.54 27 *i* PKHKP 03 35 24.3
TIXI *e* 03 56 16.9
TIXI pmax pmax
comp=Z,5.0nm,0.9s
TIXI Tiksi 136.54 27 PFAKE 03 35 50.0 +16
TIXI LR LR
comp=Z,1μm,22.0s,MS5.5
NATX Nacogdoches 136.78 268 PFAKE 03 35 50.0 +14
NATX LR LR
comp=Z,689nm,21.0s,MS5.4
GLMI Grayling 137.11 291 PFAKE 03 35 50.0 +14
GLMI LR LR
comp=Z,1μm,20.0s,MS5.6
MIAR Mount Ida 137.70 272 PFAKE 03 35 50.0 +12
MIAR LR LR
comp=Z,1μm,19.0s,MS5.7
HDIL Hopedale 138.08 283 PFAKE 03 35 50.0 +12
HDIL LR LR
comp=Z,783nm,19.0s,MS5.5
CCM Cathedral Cave 138.08 278 PFAKE 03 35 50.0 +12
CCM LR LR
comp=Z,914nm,19.0s,MS5.5
JCT Junction City 139.45 263 PFAKE 03 35 50.0 +9.1
JCT LR LR
comp=Z,1μm,19.0s,MS5.6
JFWS Jewell Farm 139.84 285 PFAKE 03 35 50.0 +8.8
JFWS LR LR
comp=Z,1μm,20.0s,MS5.6
COWI Conover 140.53 290 PFAKE 03 35 50.0 +7.7
COWI LR LR
comp=Z,1μm,20.0s,MS5.6
TXAR Lajitas Array 141.29 258 PKhKP 03 35 38.9
comp=Z,1.6nm,0.8s,baz=144,slow=4.7,SNR=12
SCIA State Center 141.32 282 PFAKE 03 36 00.0 +16
SCIA LR LR
comp=Z,980nm,19.0s,MS5.6
WMOK Wichita Mounta 141.33 269 *e*PKIKP PKPdf 03 35 42.7 -1.5
KSU1 Kansas State U 142.22 276 *e*PKPdf PKPdf 03 35 45.9 +0.2
KSU1 LR LR
comp=Z,940nm,19.0s,MS5.6
426A McDonald Obser 142.39 259 ⇓P PKPdf 03 35 49.8 +3.6
baz=142
EYMN Ely 142.73 292 *e*PKPdf PKPdf 03 35 47.0 +0.8
EYMN LR LR
comp=Z,1μm,21.0s,MS5.6
CLNB Carlsbad 143.29 261 *e*PKPdf PKPdf 03 35 46.2 -1.5
226A Malaga, Loving 143.31 261 ⇓P PKPdf 03 35 51.1 +3.3
baz=143,SNR=12
AMTX Amarillo 143.37 267 *e*PKPdf PKPdf 03 35 51.4 +3.6
AMTX LR LR
comp=Z,1μm,21.0s,MS5.6
325A Bean Ranch, Si 143.46 259 ⇓P PKPdf 03 35 51.8 +3.7
baz=144,SNR=5.4
Z27A Tatum 143.48 263 ⇓P PKPdf 03 35 52.1 +4.0
baz=144
MSTX Muleshoe 143.57 265 ⇓P PKPdf 03 35 51.9 +3.7
baz=144
GDL2 Guadalupe Moun 143.57 261 *e*PKPdf PKPdf 03 35 46.3 -1.9
126A Clayton Basin, 143.62 262 ⇓P PKPdf 03 35 52.1 +3.8
baz=144
CPRX Cap Rock 143.75 262 *e*PKPdf PKPdf 03 35 46.4 -2.2
Y27A Causey 143.78 264 ⇑P PKPdf 03 35 52.7 +4.1
baz=144
324A Moseley Ranch, 143.84 259 ⇑P PKPdf 03 35 52.8 +4.1
baz=144,SNR=11
MNTX Cornudas Mount 143.94 259 *e*PKPdf PKPdf 03 35 45.9 -3.0
MNTX LR LR
comp=Z,601nm,19.0s,MS5.4
Z26A Caprock 143.97 263 ⇓P PKPdf 03 35 53.1 +4.2
baz=144
125A Gardner Draw, 144.05 261 ⇑P PKPdf 03 35 53.3 +4.3
baz=144
CBKS Cedar Bluff 144.17 274 *e*PKIKP PKPdf 03 35 48.1 -1.0
CBKS MLR MLR
comp=Z,1μm,19.0s,MS5.7
X27A F and S Farms, 144.18 265 ⇓P PKPdf 03 35 53.1 +3.8
baz=144
SKR Severo-Kuril's 144.18 64 *e*PKIKP PKPdf 03 35 46.0 -2.7
Y26A Elida 144.25 264 ⇓P PKPdf 03 35 53.4 +4.0
baz=144
224A Corundas Mount 144.26 260 ⇓P PKPdf 03 35 53.4 +3.9
baz=144,SNR=6.1
ECSD EROS Data Cent 144.37 283 *e*PKPdf PKPdf 03 35 46.1 -3.1
ECSD LR LR
comp=Z,948nm,20.0s,MS5.6
W27A Bowe Ranch, En 144.40 266 ⇓P PKPdf 03 35 53.7 +4.1
baz=144
Z25A Roswell 144.46 262 ⇓P PKPdf 03 35 54.0 +4.3
baz=144
124A Stringfield Ra 144.60 261 ⇑P PKPdf 03 35 53.7 +3.7
baz=145,SNR=42
X26A CR and CF Fran 144.61 265 ⇓P PKPdf 03 35 53.5 +3.5
baz=145
223A Chaparral, Ant 144.82 259 ⇓P PKPdf 03 35 54.4 +4.0
baz=145
Y25A Mesa, Roswell 144.83 263 ⇑P PKPdf 03 35 54.5 +4.1
baz=145,SNR=15
W26A Owens Ranch, T 144.89 265 ⇓P PKPdf 03 35 54.7 +4.2
baz=145
X25A Clemmons Ranch 145.16 264 ⇑P PKPdf 03 35 55.4 +4.5
baz=145
V26A Tequesquite Ra 145.30 266 ⇑P PKPdf 03 35 56.0 +4.9
baz=145
Y24A Capitan 145.33 262 ⇑P PKPdf 03 35 55.8 +4.5
baz=145,SNR=23
W25A X Bar L Ranch, 145.43 265 ⇑P PKPdf 03 35 56.3 +4.9
baz=146
AGMN Agassiz Refuge 145.60 291 *e*PKPdf PKPdf 03 35 51.9 +0.6
AGMN LR LR
comp=Z,1μm,19.0s,MS5.7
U26A Atchley Ranch, 145.60 267 ⇑P PKPab 03 35 56.7 +4.5
baz=146
122A Conniff Cattle 145.63 259 ⇓P PKPab 03 35 57.4 +5.0
baz=146,SNR=10
221A Mesquite Ranch 145.72 258 ⇓P PKPab 03 35 57.2 +4.5
baz=146,SNR=16
Y23A Lovelace Mesa, 145.75 262 ⇑P PKPab 03 35 57.3 +4.6
baz=146,SNR=16
PETK Petropavlovsk- 145.78 60 PKPbc PKPbc 03 35 49.9 -2.0
comp=Z,2.9nm,0.7s,baz=248,slow=2.4,SNR=8.1
PETK Petropavlovsk- 145.78 60 PKP2 PKPab 03 35 49.9 -2.4
PETK pmax pmax
comp=Z,3.0nm,0.7s
320A Kipp Ranch, An 145.78 256 ⇓P PKPab 03 35 57.1 +4.2
baz=146
Z22A Elephant Butte 145.95 260 ⇑P PKPab 03 35 57.3 +3.7
baz=146,SNR=9.4
121A Cookes Peak, D 146.05 258 ⇓P PKPab 03 35 57.9 +3.9
baz=146,SNR=9.2
W24A Lazy 6 Ranch, 146.06 264 ⇑P PKPab 03 35 57.8 +3.9
baz=146,SNR=24
220A Playas Peak, P 146.14 257 ⇑P PKPab 03 35 57.9 +3.6
baz=146
ULM Lac du Bonnet 146.20 294 PKPbc PKPbc 03 35 52.5 -0.7
comp=Z,10nm,0.8s,baz=77,slow=4.3,SNR=5.5
BNM Barren Site 146.26 262 *e*PKPbc PKPbc 03 35 55.3 +1.3
319A Douglas 146.30 255 ⇓P PKPab 03 35 58.1 +3.1
baz=146
PET Petropavlovsk 146.32 61 *i* PKP2 PKPab 03 35 57.8 +3.4
PET pmax pmax
comp=Z,49nm,0.8s
PET Petropavlovsk 146.32 61 *e*PKPbc PKPbc 03 35 55.2 +1.7
PET LR LR
comp=Z,724nm,20.0s,MS5.5
Y22A Socorro 146.36 261 ⇓P PKPab 03 35 58.7 +3.6
baz=146,SNR=8.2
Z21A St. Cloud Mine 146.45 259 ⇑P PKPdf 03 35 58.7 +5.6
baz=146,SNR=11
LENM Lemitar 146.50 261 *e*PKPbc PKPbc 03 35 56.5 +1.9
W23A Werner Place, 146.53 263 ⇑P PKPab 03 35 58.7 +2.9
baz=147,SNR=11
ANMO Albuquerque 146.62 263 *e*PKP2 PKPab 03 35 55.6 -0.5
ANMO MLR MLR
comp=Z,924nm,20.0s
120A U Bar Ranch, L 146.62 257 ⇑P PKPab 03 35 58.9 +2.8
baz=147,SNR=13
219A White Tail Can 146.68 256 ⇑P PKPab 03 35 58.8 +2.4
baz=147
X22A Bernardo 146.72 262 ⇓P PKPab 03 35 58.8 +2.2
baz=147
LAZ Ladron 146.75 262 *e*PKPbc PKPbc 03 35 56.5 +1.1
OGNE Ogallala 146.75 276 *e*PKPbc PKPbc 03 35 56.9 +1.7
OGNE LR LR
comp=Z,1μm,21.0s,MS5.6
FCC Fort Churchill 146.75 310 *e*PKP2 PKPab 03 35 55.9 0.0
318A Bisbee 146.80 255 ⇑P PKPab 03 35 59.1 +2.2
baz=147
Y21A Point of Rocks 146.87 260 ⇑P PKPab 03 35 59.2 +2.1
baz=147,SNR=7.1
V23A Ortiz Mt. (NFS 146.88 264 ⇑P PKPab 03 35 59.0 +1.8
baz=147,SNR=8.0
Z20A Nine Sixteen R 146.94 258 ⇓P PKPab 03 35 59.4 +2.0
baz=147,SNR=11
W22A Albuquerque 146.96 263 ⇑P PKPab 03 35 59.2 +1.8
baz=147
218A Dragoon 147.18 255 ⇑P PKPab 03 35 59.6 +1.2
baz=147
X21A Alamocita Cree 147.21 261 ⇓P PKPab 03 35 59.8 +1.4
baz=147,SNR=13
Y20A Horse Springs, 147.28 260 ⇓P PKPab 03 36 00.1 +1.4
baz=147,SNR=15
V22A San Miguel Ran 147.47 264 ⇑P PKPab 03 35 59.9 +0.5
baz=148,SNR=14
Z19A T-Link Ranch, 147.49 258 ⇑P PKPab 03 35 59.8 +0.2
baz=148
W21A San Fidel 147.51 262 ⇓P PKPab 03 35 59.8 +0.2
baz=148
SDCO Great Sand Dun 147.51 268 *e*PKPbc PKPbc 03 35 58.5 +1.1
SDCO LR LR
comp=Z,1μm,20.0s,MS5.7
118A Homack Ranch, 147.55 256 ⇑P PKPab 03 36 00.6 +0.8
baz=148
217A Green Valley 147.56 254 ⇑P PKPab 03 36 00.5 +0.7
baz=148
X20A Quemado 147.74 260 ⇑P PKPab 03 36 00.6 0.0
baz=148
TUC Tucson 147.88 255 *e*PKP2 PKPbc 03 35 58.2 -0.4
TUC MLR MLR
comp=Z,1μm,21.0s,MS5.6
Y19A Nutrioso 147.89 259 ⇑P PKPab 03 36 01.0 -0.2
baz=148
V21A Milan 147.89 263 ⇑P PKPab 03 36 01.1 -0.1
baz=148
117A Oracle 148.01 255 ⇓P PKPab 03 36 01.0 -0.7
baz=148
T22A Edith 148.07 266 ⇓P PKPab 03 36 01.8 0.0
baz=148,SNR=17
W20A Ramah 148.08 261 ⇓P PKPab 03 36 02.0 +0.1
baz=148
216A Three Points, 148.12 254 ⇑P PKPab 03 36 02.2 +0.1
baz=148
X19A St. Johns 148.20 260 ⇑P PKPbc 03 35 59.9 +0.5
baz=148,SNR=6.6
Z17A San Carlos Hig 148.29 257 ⇑P PKPbc 03 36 00.2 +0.5
baz=148
Y18A Canyon Day Jun 148.30 258 ⇓P PKPbc 03 36 00.5 +0.8
baz=148,SNR=5.8
V20A Brimhall 148.44 262 ⇓P PKPbc 03 36 00.6 +0.6
baz=148
R22A Saguache, Gunn 148.61 268 ⇑P PKPbc 03 36 01.3 +1.0
baz=149,SNR=20
ISCO Idaho Springs 148.62 271 *e*PKP2 PKPab 03 36 02.0 -1.9
ISCO MLR MLR
comp=Z,1μm,21.0s,MS5.7
116A Eloy 148.64 254 ⇓P PKPbc 03 36 00.8 +0.2
baz=149
W19A Sanders 148.66 261 ⇑P PKPbc 03 36 01.0 +0.5
baz=149,SNR=16
X18A Snowflake 148.69 259 ⇑P PKPbc 03 36 01.5 +0.9
baz=149,SNR=5.5
Y17A Roosevelt 148.78 257 ⇓P PKPbc 03 36 01.6 +0.7
baz=149
V19A Window Rock 148.78 262 ⇓P PKPbc 03 36 01.7 +0.9
baz=149
U20A Newcomb 148.80 263 ⇑P PKPbc 03 36 01.6 +0.7
baz=149
W18A Petrified Fore 148.90 260 ⇑P PKPbc 03 36 01.9 +0.8
baz=149
Z16A Peralta Trail, 148.95 256 ⇑P PKPbc 03 36 01.9 +0.6

baz=149
214A Organ Pipe Nat 148.96 252 ⇑P PKPbc 03 36 01.9 +0.5
baz=149
S21A Coal Bank Pass 149.01 266 ⇑P PKPbc 03 36 02.3 +0.9
baz=149
Q22A Crested Butte, 149.03 269 ⇓P PKPbc 03 36 02.2 +0.8
baz=149,SNR=6.1
115A Sonoran Desert 149.06 254 ⇓P PKPbc 03 36 02.1 +0.4
baz=149
X17A Forest Lakes 149.15 258 ⇑P PKPbc 03 36 02.6 +0.8
baz=149
PHWY Pilot Hill 149.22 274 *e*PKPbc PKPbc 03 36 03.3 +1.6
R21A Cimarron 149.22 267 ⇑P PKPbc 03 36 02.9 +1.1
baz=149,SNR=5.2
U19A Dine' College, 149.22 263 ⇑P PKPbc 03 36 02.6 +0.7
baz=149
MVCO Mesa Verde 149.25 265 ⇓P PKPbc 03 36 02.9 +1.0
baz=149
MVCO Mesa Verde 149.25 265 *e*PKPbc PKPbc 03 36 02.0 +0.1
MVCO LR LR
comp=Z,1μm,20.0s,MS5.7
Y16A Circle Bar Ran 149.31 257 ⇓P PKPbc 03 36 02.9 +0.6
baz=149
V18A Ganado 149.37 261 ⇓P PKPbc 03 36 03.0 +0.7
baz=149
T19A Beclabito 149.39 264 ⇓P PKPbc 03 36 03.2 +0.8
baz=149,SNR=13
RSSD Black Hills 149.44 280 *e*PKP2 PKPbc 03 36 02.7 +0.5
RSSD MLR MLR
comp=Z,1μm,20.0s,MS5.7
BILL Bilibino 149.46 32 *e*PKP2 PKPbc 03 36 01.2 -0.3
BILL MLR MLR
comp=Z,1μm,22.0s,MS5.7
BILL Bilibino 149.46 32 *e*PKPbc PKPbc 03 36 01.2 -0.3
BILL LR LR
comp=Z,1μm,22.0s,MS5.7
Q21A Lamborn Mesa, 149.47 268 ⇓P PKPbc 03 36 03.5 +1.0
baz=150,SNR=11
114A Black Gap (USA 149.52 253 ⇓P PKPbc 03 36 03.6 +0.8
baz=150
W17A Winslow 149.53 259 ⇓P PKPbc 03 36 03.7 +0.9
baz=150
X16A Lo Mia Camp, P 149.61 258 ⇓P PKPbc 03 36 03.9 +0.9
baz=150
N22A Wattenberg Ran 149.66 272 ⇑P PKPbc 03 36 04.2 +1.4
baz=150
R20A Redvale 149.68 266 ⇑P PKPbc 03 36 04.5 +1.5
baz=150,SNR=40
P21A Newcastle 149.73 269 ⇓P PKPbc 03 36 04.4 +1.3
baz=150
U18A Rough Rock, Ch 149.73 262 ⇓P PKPbc 03 36 04.4 +1.2
baz=150,SNR=11
PV01 Paradox Valley 149.78 266 *e*PKPbc PKPbc 03 36 05.6 +2.3
V17A Tonalea, Kykot 149.90 260 ⇑P PKPbc 03 36 04.8 +1.2
baz=150
Y15A Casa Rosa Ranc 149.92 256 ⇓P PKPbc 03 36 04.9 +1.1
baz=150
Z14A Wintersburg 149.95 254 ⇑P PKPbc 03 36 04.5 +0.7
baz=150
S19A Harvey Farm, M 149.96 265 ⇑P PKPbc 03 36 04.5 +0.8
baz=150,SNR=13
Q20A Ridgley Place, 150.02 268 ⇑P PKPbc 03 36 05.1 +1.3
baz=150,SNR=21
O21A Pagoda 150.07 271 ⇓P PKPbc 03 36 05.3 +1.4
baz=150
W16A Flagstaff 150.08 258 ⇑P PKPbc 03 36 04.9 +0.8
baz=150
MIDW Midway 150.08 120 PFAKE 03 36 10.0 +11
MIDW LR LR
comp=Z,976nm,19.0s,MS5.6
113A Mohawk Valley, 150.10 253 ⇑P PKPbc 03 36 05.1 +0.9
baz=150
T18A Mexican Hat 150.13 263 ⇓P PKPbc 03 36 05.1 +0.9
baz=150
PV04 Paradox Valley 150.14 266 *e*PKPbc PKPbc 03 36 05.8 +1.6
PV04 *e*PKPab PKPab 03 36 12.6 +2.4
X15A Humboldt 150.18 257 ⇓P PKPbc 03 36 05.3 +1.0
baz=150
L22A Ellis Ranch, M 150.19 275 ⇑P PKPbc 03 36 05.3 +1.2
baz=150
WUAZ Wupatki 150.22 259 ⇑P PKPbc 03 36 05.1 +0.7
baz=150
WUAZ Wupatki 150.22 259 *e*PKPbc PKPbc 03 36 05.9 +1.5
Z13A Yuma Proving G 150.31 253 ⇓P PKPbc 03 36 05.4 +0.7
baz=150
R19A Curley Farm, L 150.33 266 ⇑P PKPbc 03 36 05.5 +0.9
baz=150
Y14A Wickenburg 150.35 255 ⇑P PKPbc 03 36 05.3 +0.5
baz=150
P20A De Beque 150.35 269 ⇑P PKPbc 03 36 05.5 +0.9
baz=150
N21A Black Mountain 150.36 272 ⇓P PKPbc 03 36 05.5 +0.9
baz=150
U17A Shonto 150.36 262 ⇑P PKPbc 03 36 05.4 +0.7
baz=150
U16A Tuba City 150.42 261 ⇓P PKPbc 03 36 05.7 +0.9
baz=150
S18A Hurst Farm, Bl 150.51 264 ⇓P PKPbc 03 36 05.9 +0.9
baz=151
O20A White River Ci 150.56 270 ⇓P PKPbc 03 36 06.4 +1.4
baz=151,SNR=6.1
RWWY Rawlins 150.57 273 *e*PKPbc PKPbc 03 36 05.1 +0.1
X14A Yava 150.60 256 ⇑P PKPbc 03 36 06.1 +0.7
baz=151
W15A Williams 150.61 258 ⇓P PKPbc 03 36 06.0 +0.7
baz=151
M21A Separation Pea 150.63 273 ⇑P PKPbc 03 36 06.3 +1.1
baz=151
Q19A Hogan Spring (150.67 267 ⇑P PKPbc 03 36 06.4 +1.1
baz=151,SNR=12
T17A Navajo Res., N 150.68 262 ⇑P PKPbc 03 36 06.4 +0.9
baz=151
FFC Flin Flon 150.73 301 *e*PKIKP PKPbc 03 36 04.1 -0.8
FFC *e* 03 36 11.8
FFC MLR MLR
comp=Z,2μm,20.0s,MS5.8
L21A Rawlins 150.79 274 ⇑P PKPbc 03 36 06.9 +1.3
baz=151,SNR=8.8
R18A Canyonlands Na 150.81 266 ⇑P PKPbc 03 36 06.8 +1.1
baz=151,SNR=7.6
Y13A Salome 150.81 254 ⇑P PKPbc 03 36 06.4 +0.6
baz=151
P19A Cripple Cowboy 150.81 268 ⇑P PKPbc 03 36 06.8 +1.1
baz=151,SNR=19
N20A Spence Gulch, 150.90 271 ⇓P PKPbc 03 36 06.9 +1.1
baz=151
V15A Kaibab Nationa 150.93 259 ⇓P PKPbc 03 36 07.0 +1.0
baz=151
DGMT Dagmar 150.96 288 ⇓P PKPbc 03 36 06.8 +1.1
baz=151
DGMT Dagmar 150.96 288 *e*PKPbc PKPbc 03 36 06.7 +1.0
DGMT LR LR
comp=Z,1μm,21.0s,MS5.8
GLA Glamis 150.97 252 ⇓P PKPbc 03 36 06.8 +0.6
baz=151
GLA Glamis 150.97 252 *e*PKPbc PKPbc 03 36 06.2 -0.1
S17A Black Ridge (B 151.02 263 ⇑P PKPbc 03 36 07.2 +1.0
baz=151,SNR=6.6
M20A Sweetwater, Wa 151.14 272 ⇑P PKPbc 03 36 07.2 +0.9
baz=151,SNR=5.3
T16A Glen Canyon Da 151.14 262 ⇑P PKPbc 03 36 07.5 +1.0
baz=151,SNR=6.9
Y12C Blythe 151.22 253 ⇓P PKPbc 03 36 07.2 +0.4
baz=151
O19A Miners Draw (B 151.23 270 ⇓P PKPbc 03 36 07.3 +0.7
baz=151,SNR=11
X13A Yucca 151.29 255 ⇓P PKPbc 03 36 07.4 +0.5
baz=151
PDMCI Parker Dam,Lak 151.31 255 ⇑P PKPbc 03 36 07.6 +0.6
baz=151
Q18A Rafter H Ranch 151.33 267 ⇓P PKPbc 03 36 07.7 +0.9
baz=151,SNR=17
U15A North Rim 151.35 260 ⇓P PKPbc 03 36 07.8 +0.8
baz=151,SNR=7.1
R17A Hanksville Air 151.37 265 ⇓P PKPbc 03 36 07.9 +0.9
baz=151,SNR=13
V14A Boquillas Ranc 151.43 258 ⇓P PKPbc 03 36 08.5 +1.2
baz=152
L20A Wamsutter 151.47 273 ⇑P PKPbc 03 36 07.7 +0.6
baz=152,SNR=14
SWSC Sam W. Stewart 151.51 251 ⇓P PKPbc 03 36 08.4 +0.9
baz=152
DVTC Desert V Tower 151.52 250 ⇑P PKPbc 03 36 08.1 +0.6
baz=152
N19A John Jarvie Ra 151.54 271 ⇑P PKPbc 03 36 07.9 +0.6
baz=152
SRU San Rafael 151.60 266 ⇑P PKPbc 03 36 07.9 +0.4
baz=152,SNR=15
SRU San Rafael 151.60 266 *e*PKPbc PKPbc 03 36 04.5 -3.0
SRU *e*PKPab PKPab 03 36 15.2 -1.0
W13A Hualapai Mount 151.63 256 ⇓P PKPbc 03 36 08.6 +0.9
baz=152
P18A Preston Nutter 151.66 267 ⇑P PKPbc 03 36 08.6 +1.0
baz=152,SNR=11
K20A Yellowstone Ra 151.74 275 ⇓P PKPbc 03 36 08.8 +1.1
baz=152
BC3 Big Chuckw Mtn 151.75 252 ⇑P PKPbc 03 36 08.8 +0.7
baz=152
LAO LASA Array 151.77 284 PFAKE 03 36 10.0 +8.7
LAO LR LR
comp=Z,1μm,20.0s,MS5.8
M19A Rock Springs 151.80 272 ⇓P PKPbc 03 36 08.5 +0.7
baz=152
O18A Roosevelt 151.81 269 ⇑P PKPbc 03 36 08.8 +0.8
baz=152,SNR=14
R16A Teasdale 151.82 264 ⇓P PKPbc 03 36 08.9 +0.9
baz=152
MONP Monument Peak 151.88 250 ⇑P PKPbc 03 36 09.0 +0.7
baz=152
IRM Iron Mountain 151.88 253 ⇓P PKPbc 03 36 09.1 +0.8
baz=152
BAR Barrett 151.90 249 *e*PKPbc PKPbc 03 36 08.7 +0.3
N18A Larsen Ranch, 151.91 270 ⇓P PKPbc 03 36 08.9 +0.8
baz=152
P17A Butcher Ranch, 151.92 267 ⇑P PKPbc 03 36 08.8 +0.5
baz=152
Q16A Castle Valley 151.94 265 ⇓P PKPbc 03 36 08.9 +0.7
baz=152
U14A Mt Trumbull 151.94 259 ⇑P PKPbc 03 36 09.1 +0.8
baz=152
S15A Panguitch 152.09 262 ⇑P PKPbc 03 36 09.1 +0.4
baz=152
V13A Grand Canyon W 152.14 257 ⇓P PKPbc 03 36 09.4 +0.5
baz=152
K19A Absolon Red Bu 152.15 275 ⇑P PKPbc 03 36 09.5 +0.9
baz=152,SNR=7.1
TMUT Trail Mountain 152.15 266 *e*PKPbc PKPbc 03 36 10.7 +1.9
L19A Farson 152.19 273 ⇓P PKPbc 03 36 10.2 +1.5
baz=152
T14A Hurricane 152.23 260 ⇓P PKPbc 03 36 09.9 +0.9
baz=152
O17A Robinson Place 152.27 268 ⇑P PKPbc 03 36 10.3 +1.4
baz=152
109C Camp Elliot, M 152.31 249 ⇑P PKPbc 03 36 10.3 +1.0
baz=152
R15A Junction 152.31 263 ⇓P PKPbc 03 36 10.4 +1.2
baz=152
BELC Belle Mtn. 152.32 252 ⇑P PKPbc 03 36 10.3 +1.0
baz=152
PFO Pinyon Flat Ob 152.37 251 ⇑P PKPbc 03 36 10.4 +0.9
baz=152
PFO Pinyon Flat Ob 152.37 251 *e*PKIKP PKPbc 03 36 09.6 +0.2
PFO MLR MLR
comp=Z,367nm,20.0s,MS5.2
PFO Pinyon Flat Ob 152.37 251 *e*PKPbc PKPbc 03 36 09.6 +0.2
PFO LR LR
comp=Z,367nm,20.0s,MS5.2
M18A Lyman 152.38 271 ⇓P PKPbc 03 36 10.3 +1.1
baz=152
W12A Cal Nev Ari 152.40 255 ⇑P PKPbc 03 36 10.3 +0.8
baz=152
LDFC Landfair 152.42 255 *e*PKPbc PKPbc 03 36 09.7 +0.2
U13A Pakoon Wash 152.45 258 ⇑P PKPbc 03 36 10.7 +1.1
baz=152
L18A Fontenelle, Gr 152.57 272 ⇑P PKPbc 03 36 11.3 +1.6
baz=153
GMRC Granite Mounta 152.59 254 ⇑P PKPbc 03 36 10.8 +1.0
baz=153
BW06 Boulder Array 152.60 274 PFAKE 03 36 10.0 +7.4
BW06 LR LR
comp=Z,1μm,19.0s,MS5.7
PDAR Pinedale Array 152.60 274 PKP PKPdf 03 36 02.0 -0.7
comp=Z,0.5nm,0.7s,baz=85,slow=2.2,SNR=2.9
PDAR PKPbc PKPbc 03 36 10.0 +0.3
comp=Z,4.9nm,1.0s,baz=114,slow=3.7,SNR=16
PDAR PP PP 03 40 00.2 +6.6
comp=Z,0.5nm,0.6s,baz=111,slow=8.1,SNR=4.5
P16A Fountain Green 152.61 266 ⇓P PKPbc 03 36 10.5 +0.7
baz=153
V12A Nelson 152.64 256 ⇓P PKPbc 03 36 10.5 +0.6
baz=153
S14A Cedar City 152.67 262 ⇓P PKPbc 03 36 10.8 +0.8
baz=153
N17A Moffit Pass 152.68 269 ⇑P PKPbc 03 36 10.6 +0.7
baz=153
CCUT Cedar City 152.69 261 *e*PKPdf PKPdf 03 36 05.5 +2.6
CCUT *e*PKPbc PKPbc 03 36 12.0 +2.0
DAU Daniels Canyon 152.72 268 *e*PKIKP PKPbc 03 36 10.9 +0.9
T13A Saint George 152.76 259 ⇑P PKPbc 03 36 11.4 +1.2
baz=153
MPU Maple Canyon 152.79 267 *e*PKPbc PKPbc 03 36 11.3 +1.2
Q15A Fillmore 152.79 265 ⇑P PKPbc 03 36 11.2 +1.1
baz=153
M17A Scullys Gap (B 152.80 271 ⇓P PKPbc 03 36 11.7 +1.6
baz=153
R14A James Farms, M 152.86 263 ⇓P PKPbc 03 36 11.6 +1.2
baz=153
K18A Toltan Ranch, 152.88 273 ⇓P PKPbc 03 36 11.1 +0.8
baz=153
JLU Jordanelle 152.94 268 *e*PKPbc PKPbc 03 36 10.8 +0.3
NLU North Lily Min 153.06 267 *e*PKPbc PKPbc 03 36 11.6 +0.9
HEC Hector,Ludlow 153.06 253 ⇑P PKPbc 03 36 11.5 +0.6
baz=153
N16A Rees Ranch, Co 153.06 269 ⇑P PKPbc 03 36 11.7 +1.0
baz=153
V11A Goodsprings 153.08 256 ⇑P PKPbc 03 36 11.6 +0.6
baz=153
J18A Kendall Valley 153.09 275 ⇓P PKPbc 03 36 11.4 +0.7
baz=153,SNR=6.2
I18A Diamond G Ranc 153.14 276 ⇑P PKPbc 03 36 11.8 +1.0
baz=153
TUQ Turquoise Moun 153.16 255 ⇓P PKPbc 03 36 11.8 +0.6
baz=153
L17A Cokeville 153.21 272 ⇓P PKPbc 03 36 12.3 +1.2
baz=153,SNR=5.5
M16A Huntsville 153.38 270 ⇑P PKPbc 03 36 12.7 +1.3
baz=153
Q14A Sevier Lake (B 153.39 264 ⇑P PKPbc 03 36 12.7 +1.2
baz=153
R13A O'Grain Ranch, 153.43 262 ⇑P PKPbc 03 36 12.8 +1.1
baz=154
CIS Catalina Islan 153.47 248 ⇑P PKPbc 03 36 12.8 +1.0
baz=154
HWUT Hardware Ranch 153.47 270 *e*PKPbc PKPbc 03 36 13.4 +1.8
HWUT LR LR
comp=Z,1μm,19.0s,MS5.7
K17A Gardner Place, 153.51 273 ⇑P PKPbc 03 36 13.0 +1.3
baz=154
BFSC Mount Baldy St 153.54 250 ⇑P PKPbc 03 36 13.1 +1.1
baz=154
G18A Lazy EL Ranch, 153.54 279 ⇓P PKPbc 03 36 13.0 +1.3
baz=154
P14A Drum Mountains 153.55 265 ⇓P PKPbc 03 36 12.8 +1.0
baz=154
L16A Fish Haven 153.55 271 ⇓P PKPbc 03 36 13.0 +1.2
baz=154,SNR=8.9
J17A Brown Place, J 153.61 274 ⇓P PKPbc 03 36 12.9 +1.1
baz=154,SNR=7.6
AHID Auburn Hatcher 153.64 273 PFAKE 03 36 20.0 +16
AHID LR LR
comp=Z,1μm,20.0s,MS5.8
GSC Goldstone 153.65 253 ⇑P PKPbc 03 36 13.1 +0.9
baz=154
DUG Dugway 153.67 266 ⇓P PKPbc 03 36 13.3 +1.3
baz=154
DUG Dugway 153.67 266 *e*PKIKP PKPbc 03 36 12.2 +0.1
DUG MLR MLR
comp=Z,2μm,21.0s,MS5.8
DUG Dugway 153.67 266 *e*PKPbc PKPbc 03 36 12.2 +0.1
DUG LR LR
comp=Z,2μm,21.0s,MS5.8
SHOC Shoshone 153.67 255 ⇑P PKPbc 03 36 13.2 +1.0
baz=154
T11A Corn Creek, Al 153.75 259 ⇓P PKPbc 03 36 13.4 +1.1
baz=154
GCMT Greycliff 153.76 280 *e*PKPbc PKPbc 03 36 13.2 +1.1
N15A Stansbury Isla 153.79 268 ⇓P PKPbc 03 36 13.5 +1.2
baz=154
TPAW Teton Pass 153.82 275 *e*PKPbc PKPbc 03 36 14.3 +2.0
F18A Big Timber 153.83 280 ⇓P PKPbc 03 36 13.6 +1.4
baz=154
LKWY Lake 153.85 277 PFAKE 03 36 20.0 +16
LKWY LR LR
comp=Z,2μm,20.0s,MS5.9
Q13A Wheeler Ranch, 153.87 263 ⇑P PKPbc 03 36 13.9 +1.4
baz=154
H17A Grant Village 153.91 277 ⇓P PKPbc 03 36 13.9 +1.4
baz=154
R12A Pony Springs, 153.93 261 ⇑P PKPbc 03 36 14.0 +1.3
baz=154
IMW Indian Meadow 153.97 275 *e*PKPbc PKPbc 03 36 11.5 -1.1
K16A Soda Springs 154.00 273 ⇓P PKPbc 03 36 14.1 +1.4
baz=154,SNR=6.7
U10A Ash Meadows, A 154.01 256 ⇓P PKPbc 03 36 13.9 +1.0
baz=154
DCID1 Drake Creek 154.02 275 *e*PKPbc PKPbc 03 36 13.7 +1.0
SNCC San Nicolas Is 154.06 246 ⇓P PKPbc 03 36 14.1 +1.0
baz=154
YFT Old Faithful 154.10 277 *e*PKPbc PKPbc 03 36 15.6 +2.7
P13A Bates Ranch, G 154.12 264 ⇓P PKPbc 03 36 14.3 +1.3
baz=154
BGU Big Grassy Mou 154.15 268 *e*PKPbc PKPbc 03 36 12.4 -0.6
EDW2 Edwards Air Fo 154.15 251 ⇑P PKPbc 03 36 14.4 +1.1
baz=154
E18A Harlowton 154.16 282 ⇑P PKPbc 03 36 14.5 +1.6
baz=154
J16A Bone 154.19 274 ⇑P PKPbc 03 36 14.7 +1.6
baz=154,SNR=6.5
L15A Malad City 154.19 270 ⇓P PKPbc 03 36 14.6 +1.5
baz=154
N14A Grayback Hills 154.23 267 ⇑P PKPbc 03 36 14.4 +1.1
baz=154
S11A Rachel 154.32 259 ⇑P PKPbc 03 36 15.0 +1.4
baz=154
G17A Pierce Place, 154.33 279 ⇑P PKPbc 03 36 15.0 +1.7
baz=154
I16A Newdale 154.33 275 ⇓P PKPbc 03 36 14.4 +1.0
baz=154,SNR=7.0
FURC Furnace Creek, 154.39 255 ⇑P PKPbc 03 36 15.1 +1.4
baz=154
EGMT Eagleton 154.44 285 ⇓P PKPbc 03 36 15.5 +2.1
baz=154
EGMT Eagleton 154.44 285 PFAKE 03 36 20.0 +15
EGMT LR LR
comp=Z,1μm,20.0s,MS5.7
F17A Fitzpatrick Pl 154.46 280 ⇓P PKPbc 03 36 15.3 +1.7
baz=154
H16A Russell Place, 154.46 277 ⇓P PKPbc 03 36 15.5 +1.8
baz=154
R11A Troy Canyon, C 154.60 260 ⇑P PKPbc 03 36 15.1 +0.9
baz=155
M14A Sheep Mountain 154.63 269 ⇓P PKPbc 03 36 15.2 +1.1
baz=155
QLMT Earthquake Lak 154.63 277 *e*PKPbc PKPbc 03 36 13.8 -0.1
A18A Metzger Ranch, 154.70 287 ⇓P PKPbc 03 36 15.4 +1.5
baz=155
P12A McGill 154.72 263 ⇓P PKPbc 03 36 15.3 +1.0
baz=155
DAC Darwin (Calif) 154.75 254 PFAKE 03 36 20.0 +14
DAC LR LR
comp=Z,1μm,21.0s,MS5.7
E17A Martinsdale 154.75 281 ⇓P PKPbc 03 36 15.6 +1.5
baz=155
L14A Malta 154.78 270 ⇑P PKPbc 03 36 15.5 +1.1
baz=155
J15A Blackfoot 154.79 273 ⇑P PKPbc 03 36 15.7 +1.3
baz=155
D17A Six Diamond Ra 154.83 283 ⇑P PKPbc 03 36 15.5 +1.1
baz=155,SNR=5.6
Q11A Duckwater 154.90 261 ⇓P PKPbc 03 36 15.7 +1.0
baz=155
N13A Wendover, West 154.91 267 ⇓P PKPbc 03 36 15.8 +1.1
baz=155
N13A Wendover, West 154.91 267 *e*PKPbc PKPbc 03 36 15.3 +0.5
ISA Isabella 154.95 252 ⇑P PKPbc 03 36 15.8 +0.9
baz=155
ISA Isabella 154.95 252 *e*PKPbc PKPbc 03 36 14.1 -0.9
K14A Jones Ranch, D 154.95 271 ⇑P PKPbc 03 36 15.9 +1.2
baz=155
O12A Currie 155.00 265 ⇑P PKPdf 03 36 16.2 +10
baz=155
C17A Wharram Farm, 155.00 284 ⇓P PKPdf 03 36 15.9 +10
baz=155
G16A Moss Hill, Enn 155.01 278 ⇑P PKPdf 03 36 16.1 +10
baz=155
BOZ Bozeman (W) 155.03 279 ⇓P PKPdf 03 36 16.0 +10
baz=155
BOZ Bozeman (W) 155.03 279 PFAKE 03 36 20.0 +14
BOZ LR LR
comp=Z,1μm,19.0s,MS5.7
S10A Tonopah Range, 155.04 258 ⇓P PKPdf 03 36 15.8 +10
baz=155
R10A Warm Springs 155.04 260 ⇓P PKPdf 03 36 16.0 +10
baz=155
F16A Kennard Place, 155.07 279 ⇓P PKPdf 03 36 16.1 +10
baz=155
M13A Montello 155.12 268 ⇑P PKPdf 03 36 16.1 +10
baz=155
M13A Montello 155.12 268 *e*PKPbc PKPdf 03 36 13.9 +7.6
B17A L&G Farms, Che 155.18 285 ⇓P PKPdf 03 36 16.6 +11
baz=155
L13A Double Diamond 155.28 270 ⇓P PKPdf 03 36 16.9 +10
baz=155
H15A Lima 155.37 276 ⇑P PKPdf 03 36 16.9 +10
baz=155
N12A Clover Valley, 155.47 266 *e*PKPbc PKPdf 03 36 14.9 +8.2
TPH Tonopah 155.53 258 PFAKE 03 36 20.0 +13
TPH LR LR
comp=Z,1μm,22.0s,MS5.7
ELK Elko 155.56 266 PFAKE 03 36 20.0 +13
ELK LR LR
comp=Z,2μm,19.0s,MS5.9
DLMT Dillon 155.58 278 *e*PKPdf PKPdf 03 36 09.6 +2.8
YKA Yellowknife Ar 156.17 321 PKP PKPdf 03 36 04.8 -2.2
comp=Z,0.7nm,0.9s,baz=63,slow=1.2,SNR=7.6
YKA Yellowknife Ar 156.17 321 PKIKP PKPdf 03 36 04.8 -2.2
YKA pmax pmax
comp=Z,1.0nm,0.9s
HLID Hailey 156.18 272 PFAKE 03 36 20.0 +12
HLID LR LR
comp=Z,1μm,20.0s,MS5.8
NVAR Mina Array Bea 156.44 258 PKP PKPdf 03 36 08.1 -0.1
comp=Z,0.5nm,0.3s,baz=48,slow=1.3,SNR=1.9
BMN Battle Mountai 156.74 263 PFAKE 03 36 20.0 +12
BMN LR LR
comp=Z,1μm,20.0s,MS5.7
MSO Missoula 156.90 281 PFAKE 03 36 20.0 +12
MSO LR LR
comp=Z,1μm,22.0s,MS5.7
SWMT Swartz Lake 157.10 282 *e*PKPdf PKPdf 03 36 14.8 +6.1
JTMT Jette 157.34 283 *e*PKPdf PKPdf 03 36 10.9 +2.0
SAO San Andreas Ge 157.52 251 PFAKE 03 36 20.0 +10
SAO LR LR
comp=Z,1μm,20.0s,MS5.8
CMB Columbia Colle 157.59 255 PFAKE 03 36 20.0 +10
CMB LR LR
comp=Z,1μm,21.0s,MS5.7
WVOR Wild Horse Val 158.59 267 *e*PKIKP PKPdf 03 36 12.9 +2.2
WVOR MLR MLR
comp=Z,2μm,19.0s,MS5.8
MCCM Marconi Confer 159.26 252 PFAKE 03 36 20.0 +8.4
MCCM LR LR
comp=Z,1μm,21.0s,MS5.8
NEW Newport 159.32 283 PFAKE 03 36 20.0 +8.7
NEW LR LR
comp=Z,2μm,19.0s,MS5.9
MOD Modoc 159.48 264 PFAKE 03 36 20.0 +8.3
MOD LR LR
comp=Z,1μm,21.0s,MS5.8
HOPS Hopland 159.87 253 PFAKE 03 36 20.0 +7.7
HOPS LR LR
comp=Z,1μm,19.0s,MS5.8
WDC Whiskeytown Da 160.36 258 PFAKE 03 36 20.0 +7.2
WDC LR LR
comp=Z,1μm,20.0s
HAWA Hanford 160.52 277 PFAKE 03 36 20.0 +7.3
HAWA LR LR
comp=Z,1μm,21.0s
YBH Yreka Blue Hor 161.02 261 PFAKE 03 36 20.0 +6.5
YBH LR LR
comp=Z,1μm,19.0s
ADK Adak 161.17 67 PFAKE 03 36 20.0 +6.7
ADK LR LR
comp=Z,946nm,22.0s
HUMO Hull Mountain 161.57 263 PFAKE 03 36 20.0 +6.0
HUMO LR LR
comp=Z,1μm,19.0s
EGAK Eagle 162.51 350 PFAKE 03 36 30.0 +16
EGAK LR LR
comp=Z,1μm,20.0s
COR Corvallis 162.54 269 PFAKE 03 36 30.0 +15

COR				LR	LR			
	comp=Z,1μm,21.0s							
COLA	**College**	**162.82**	**360**	PFAKE			03 36 30.0	+15
COLA				LR	LR			
	comp=Z,1μm,22.0s							
DAWY	**Dawson**	**162.95**	**347**	*e*PKPdf	PKPdf		03 36 11.6	-3.1
NLWA	**Neilton Lookou**	**163.64**	**278**	PFAKE			03 36 30.0	+14
NLWA				LR	LR			
	comp=Z,2μm,21.0s							
TTA	**Tatalina**	**164.15**	**13**	*e*PKIKP	PKPdf		03 36 20.2	+4.4

IDC ***19*** *03:59:26.2±0.9, 32°.27N×105°.05E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.8/25, mbtmp3.9/12, ML3.7/1, Error ellipse: s-maj=31.6km s-min=17.2km az=48.0*
BJI ***19*** *03:59:27.3, 32°.26N×104°.98E, h7km, mB4.2/1, mb4.1/3, ML3.7/9, Ms3.8/2, Ms7 3.8/1*
NEIC ***19*** *03:59:29.2±0.6, 32°.54N×105°.12E, h10km, mb4.0/2, Error ellipse: s-maj=19.1km s-min=11.0km az=52.0*
ISC 19 03:59:27.0±1.2, 32°.31N±0°.05×105°.01E±0°.05, h2km±7km, n25, σ0§96/34, mb3.9/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.71**	**61**	Pn	**Pn**	**04 00 26.3**	**+0.9**
XAN				Pg	**Pg**	**04 00 35.8**	**-2.4**
XAN				Sn	**Sn**	**04 01 12.1**	**+2.4**
XAN				Sg	**Sg**	**04 01 26.8**	**+0.5**
XAN				smax			
	comp=N,260nm,0.5s						
XAN				smax			
	comp=E,150nm,0.7s						
LZH	**Lanzhou**	**3.89**	**346**	Pn	**Pn**	**04 00 31.5**	**+3.6**
LZH				Pg	**Pg**	**04 00 41.9**	**+0.3**
LZH				Sg	**Sg**	**04 01 31.6**	**-0.5**
LZH				smax			
	comp=N,500nm,1.0s						
LZH				smax			
	comp=E,460nm,0.7s						
LZH				LR	LR		
	comp=N,740nm,5.0s						
LZH				LR	LR		
	comp=Z,910nm,7.2s						
ENH	**Enshi**	**4.34**	**117**	*e*Pn	**Pn**	**04 00 37.9**	**+3.9**
ENH				*e*S	**Sn**	**04 01 24.4**	**-0.8**
GYA	**Guiyang**	**6.00**	**166**	Pn	**Pn**	**04 01 03.6**	**+6.7**
GYA				Pg	**Pg**	**04 01 23.4**	**+1.3**
GYA				Sn	**Sn**	**04 02 11.0**	**+4.8**
GYA				Sg	**Sg**	**04 02 31.4**	**-8.5**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,190nm,0.7s						
GTA	**Gaotai**	**8.25**	**331**	*e*P	**Pn**	**04 01 27.0**	**-0.6**
GTA				pP		04 01 30.8	
GTA				sP		04 01 32.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.83**	**203**	Pn	**Pn**	**04 03 04.0**	**+6.2**
	comp=Z,0.3nm,0.3s,baz=12,slow=8.7,SNR=7.5						
KSRS	**Korea Array**	**19.48**	**68**	Pn	**Pn**	**04 03 55.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=256,slow=11,SNR=5.8						
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	**P**	**04 04 29.8**	**+0.9**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**04 04 29.1**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.3,baz=113,slow=9.3,SNR=9.3						
ZALV	**Zalesovo Beam**	**26.00**	**332**	P	**P**	**04 05 01.8**	**+0.8**
	comp=Z,0.6nm,0.4s,mb3.5,baz=108,slow=9.3,SNR=3.3						
KURK	**Kurchatov**	**26.77**	**321**	P	**P**	**04 05 08.4**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.4,baz=130,slow=8.6,SNR=7.9						
ABKAR	**Akbulak array**	**37.47**	**310**	*e*P	**P**	**04 06 42.2**	**+0.5**
	comp=Z,0.5nm,0.8s,mb3.4						
PETK	**Petropavlovsk-**	**42.80**	**45**	P	**P**	**04 07 25.4**	**-0.6**
	comp=Z,1.5nm,0.6s,mb3.9,baz=286,slow=1.6,SNR=6.0						
ARCES	**ARCESS Array B**	**56.48**	**335**	P	**P**	**04 09 10.0**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=94,slow=7.7,SNR=8.4						
BRTR	**Keskin Array B**	**56.82**	**299**	P	**P**	**04 09 13.2**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=107,slow=4.8,SNR=2.7						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**04 09 13.6**	**-0.2**
	comp=Z,1.4nm,0.5s,mb4.3,baz=93,slow=7.2,SNR=2.6						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**04 09 49.1**	**-0.5**
	comp=Z,1.0nm,0.6s,mb4.2,baz=334,slow=6.7,SNR=15						
NB2	**NORSAR Subarra**	**64.06**	**327**	P	**P**	**04 10 00.6**	**-1.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**04 10 00.8**	**-1.3**
	comp=Z,1.0nm,0.6s,mb4.1,baz=73,slow=6.6,SNR=2.6						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**04 10 00.8**	**-1.3**
CTAO	**Charters Tower**	**65.36**	**137**	*e*P	**P**	**04 10 10.7**	**-0.3**
	comp=Z,3.0nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**72.60**	**148**	P	**P**	**04 10 54.9**	**-0.9**
	comp=Z,2.4nm,0.9s,mb4.1,baz=286,slow=8.1,SNR=3.0						
LPG	**La Plagne**	**72.99**	**313**	*e*P	**P**	**04 11 02.6**	**+4.5**
	comp=Z,3.2nm,0.6s,mb4.1						
LPL	**La Plagne**	**72.99**	**313**	*e*P	**P**	**04 11 02.3**	**+4.2**
	comp=Z,2.4nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	**80.32**	**17**	P	**P**	**04 11 38.9**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=327,slow=5.1,SNR=18						

ISK ***19*** *04:00:24.6, 38°.46N×26°.93E, h8km, MD2.6*
ISCJB ***19*** *04:00:25.2±0.6, 38°.42N±0°.04×26°.97E±0°.05, h13km±4km, Error ellipse: s-maj=7.4km s-min=5.6km az=146.0*
CSEM ***19*** *04:00:25.0±0.2, 38°.42N×26°.95E, h15km, MD2.6, Error ellipse: s-maj=4.2km s-min=3.3km az=126.0*
DDA ***19*** *04:00:25.3, 38°.40N×27°.00E, h7km±4km, Md2.8*
ISC 19 04:00:25.4±0.7, 38°.41N±0°.05×26°.97E±0°.05, h15km±5km, n13, σ0§69/24, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.06**	**109**	PG	**Pg**	**04 00 27.5**	**-0.6**
BLCB				*e*SG	**Sg**	**04 00 29.1**	**-1.1**
BLCB	**Balcova**	**0.06**	**109**	*i* Pg	**Pg**	**04 00 27.5**	**-0.7**
BLCB				*e*Sg	**Sg**	**04 00 29.1**	**-1.1**
IZM	**Izmir**	**0.23**	**92**	*e*PG	**Pg**	**04 00 31.6**	**+1.2**
IZM				*e*SG	**Sg**	**04 00 35.2**	**+1.2**
URLA	**Izmir**	**0.30**	**262**	*i* P	**Pg**	**04 00 31.5**	**-0.1**
URLA				*i* S	**Sg**	**04 00 36.5**	**+0.7**
URLA	**Izmir**	**0.30**	**262**	*i* P	**Pg**	**04 00 31.5**	**-0.1**
URLA				*i* S	**Sg**	**04 00 36.5**	**+0.7**
GCAM	**G?zelcaml?**	**0.73**	**163**	*i* P	**Pg**	**04 00 39.7**	**+0.1**
GCAM				*i* S	**Sg**	**04 00 48.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.73**	**163**	*i* P	**Pg**	**04 00 39.7**	**0.0**
GCAM				*i* S	**Sg**	**04 00 48.9**	**-0.4**
AKS	**Akhisar**	**0.81**	**54**	*e*PG	**Pg**	**04 00 40.7**	**-0.4**
AKS				*e*SG	**Sg**	**04 00 51.7**	**-0.1**
AKS	**Akhisar**	**0.81**	**54**	*e*Pg	**Pg**	**04 00 40.7**	**-0.5**
AKS				*e*Sg	**Sg**	**04 00 51.7**	**-0.2**
KULA	**Kula-Manisa**	**1.33**	**85**	*e*PN	**Pn**	**04 00 49.8**	**+0.3**
KULA	**Kula-Manisa**	**1.33**	**85**	*e*Pn	**Pn**	**04 00 49.8**	**+0.3**
BALY	**Balya**	**1.43**	**21**	*i* P	**Pn**	**04 00 50.0**	**-0.8**
BALY				*i* S	**Sn**	**04 01 09.4**	**+0.1**
BALY	**Balya**	**1.43**	**21**	*i* P	**Pn**	**04 00 50.0**	**-0.8**
BALY				*i* S	**Sn**	**04 01 09.4**	**+0.1**

IDC ***19*** *04:08:55.4±0.5, 32°.15N×105°.11E, h0km, mb4.4/22, mb1 4.5/25, mb1mx4.5/28, mbtmp4.4/25, ML4.3/3, MS4.0/1, Ms1 4.2/1, ms1mx3.2/29, Error ellipse: s-maj=18.0km s-min=12.0km az=45.0*
ISCJB ***19*** *04:08:56.0±0.8, 32°.16N±0°.03×105°.15E±0°.02, h14km±5km, mb4.8/106, MS5.0/12, Error ellipse: s-maj=4.5km s-min=3.2km az=171.0*
BJI ***19*** *04:08:56.5, 32°.18N×105°.20E, h10km, mB5.0/19, mb4.7/31, ML4.9/22, Ms4.6/41, Ms7 4.5/33*
MOS ***19*** *04:08:58.7±0.9, 32°.16N×105°.11E, h33km, mb5.1/47, MS4.5/5, Error ellipse: s-maj=9.3km s-min=4.8km az=116.8*
NEIC ***19*** *04:08:58.7±0.3, 32°.40N×105°.04E, h10km, mb5.0/56, Error ellipse: s-maj=9.3km s-min=4.9km az=205.0*
NEIC Felt at Chengdu.
SZGRF ***19*** *04:09:01.0, 32°.26N×105°.41E, h33km, mb4.9, Sichuan, China*
DJA ***19*** *04:09:03, 32°.16N×104°.81E, h10km, mb5.1/13*
ISC 19 04:08:58.0±0.7, 32°.16N±0°.02×105°.09E±0°.02, h13km±4km, h19km±2.0km: pP-P, n286, σ1§03/307, mb4.8/106, MS5.0/12, 25C-12D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.68**	**223**	Pn	**Pn**	**04 09 27.8**	**+0.8**
CD2				Pg	**Pg**	**04 09 31.8**	**+1.5**
CD2				Sg	**Sg**	**04 09 52.0**	**-0.1**
CD2				smax			
	comp=N,49μm,0.5s						
XAN	**Xi'an**	**3.73**	**59**	Pn	**Pn**	**04 09 55.8**	**+0.6**
XAN				Pg	**Pg**	**04 10 05.5**	**-3.9**
XAN				Sn	**Sn**	**04 10 43.1**	**+4.2**
XAN				Sg	**Sg**	**04 10 55.8**	**-1.8**
XAN				smax			
	comp=N,4μm,1.1s						
XAN				smax			
	comp=E,1μm,0.8s						
XAN				LR	LR		
	comp=N,3μm,6.3s						
XAN				LR	LR		
	comp=E,2μm,8.9s						
XAN				LR	LR		
	comp=Z,3μm,8.4s						
LZH	**Lanzhou**	**4.05**	**346**	Pn	**Pn**	**04 10 02.5**	**+2.9**
LZH				Sn	**Sn**	**04 10 50.4**	**+3.4**
LZH				Sg	**Sg**	**04 11 05.8**	**-2.3**
LZH				smax			
	comp=N,3μm,0.8s						
LZH				smax			
	comp=E,3μm,0.6s						
LZH				LR	LR		
	comp=N,3μm,5.0s						
LZH				LR	LR		
	comp=Z,3μm,6.2s						
ENH	**Enshi**	**4.21**	**115**	*e*Pn	**Pn**	**04 10 05.5**	**+3.7**
ENH				*e*Sn	**Sn**	**04 10 48.3**	**-2.6**
ENH				*e*Sg	**Sg**	**04 11 14.5**	**+1.3**
GYA	**Guiyang**	**5.84**	**166**	Pn	**Pn**	**04 10 25.5**	**+1.3**
GYA				smax			
	comp=N,1μm,0.9s						
GYA				smax			
	comp=E,1μm,1.0s						
GYA				LR	LR		
	comp=Z,6μm,4.2s						
KMI	**Kunming**	**7.30**	**197**	Pn	**Pn**	**04 10 46.1**	**+1.8**
KMI				Sn	**Sn**	**04 12 13.8**	**+6.7**
KMI				smax			
	comp=N,220nm,1.7s						
KMI				smax			
	comp=E,220nm,1.3s						
KMI				LR	LR		
	comp=N,4μm,8.3s						
KMI				LR	LR		
	comp=E,4μm,9.7s						
WHN	**Wuhan**	**8.08**	**99**	⇑P	**Pn**	**04 10 55.8**	**+0.8**
WHN				S	**Sn**	**04 12 21.3**	**-5.0**
WHN				LR	LR		
	comp=E,5μm,4.7s						
WHN				LR	LR		
	comp=Z,10μm,4.0s						
TIY	**Taiyuan**	**8.19**	**45**	*e*P	Px	04 11 09.9	
TIY				S	**Sb**	**04 12 52.3**	**-4.7**
TIY				LR	LR		
	comp=N,1μm,3.7s						
TIY				LR	LR		
	comp=E,1μm,6.7s						
TIY				LR	LR		
	comp=Z,480nm,3.1s						
GTA	**Gaotai**	**8.41**	**331**	⇓P	**Pn**	**04 11 00.3**	**+0.9**
GTA				pP		04 11 04.1	
GTA				sP		04 11 06.8	
GTA				S	**Sn**	**04 12 35.8**	**+1.6**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				LR	LR		
	comp=N,5μm,8.6s						
GTA				LR	LR		
	comp=E,2μm,9.2s						
GTA				LR	LR		
	comp=Z,5μm,11.0s						
BTO	**Baotou**	**9.32**	**24**	*e*P	**Pn**	**04 11 11.3**	**-0.6**
BTO				LR	LR		
	comp=N,890nm,10.3s						
BTO				LR	LR		
	comp=E,860nm,10.0s						
HHC	**Hu-ho-hao-te**	**10.12**	**29**	*e*P	**Pn**	**04 11 23.6**	**+0.7**
HHC				pP		04 11 30.8	
HHC				sP		04 11 35.3	
HHC				S	**Sn**	**04 13 17.9**	**+1.7**
HHC				sS		04 13 28.3	
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,6.8s						
HHC				LR	LR		
	comp=N,3μm,5.5s						
HHC				LR	LR		
	comp=E,2μm,5.8s						
HHC				LR	LR		
	comp=Z,3μm,6.7s						
TIA	**Tai'an**	**10.76**	**65**	*e*P	**Pn**	**04 11 31.8**	**+0.1**
GZH	**Guangzhou**	**11.62**	**139**	P	**Pn**	**04 11 39.4**	**-4.1**
GZH				S	**Sn**	**04 13 47.8**	**-5.4**
GZH				LR	LR		
	comp=N,3μm,10.1s						
GZH				LR	LR		
	comp=E,2μm,10.6s						
NJ2	**Nanjing**	**11.68**	**87**	*e*P	**Pn**	**04 11 44.5**	**+0.2**
NJ2				pP		04 11 51.6	
NJ2				PP		04 11 54.1	
NJ2				sP		04 11 56.1	
NJ2				S	**Sn**	**04 13 55.4**	**+0.9**
NJ2				sS		04 14 05.3	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.9s						
NJ2				LR	LR		
	comp=N,750nm,9.5s						
NJ2				LR	LR		
	comp=E,1μm,9.4s						
NJ2				LR	LR		
	comp=Z,2μm,8.2s						
BJI	**Beijing**	**11.92**	**46**	P	**Pn**	**04 11 46.0**	**-1.6**
BJI				S	**Sn**	**04 13 56.3**	**-4.1**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BJI				pmax	pmax		
	comp=Z,230nm,8.5s						
BJI				LR	LR		
	comp=N,2μm,19.5s						
BJI				LR	LR		
	comp=E,1μm,19.6s						
BJI				LR	LR		
	comp=Z,690nm,21.0s						
LSA	**Lhasa**	**12.21**	**262**	P	**Pn**	**04 11 53.6**	**+2.0**
SHL	**Shillong**	**13.30**	**244**	*ex*	**Pn**	**04 12 04.0**	**-2.4**
SHL				*ex*	x	04 16 08.0	
QZH	**Quanzhou**	**13.87**	**118**	P	**Pn**	**04 12 21.9**	**+7.7**
QZH				S	**Sn**	**04 15 00.3**	**+12**
QZH				LR	LR		
	comp=N,6μm,8.9s						
QZH				LR	LR		
	comp=E,5μm,10.2s						
QZH				LR	LR		
	comp=Z,9μm,9.5s						
CM31	**Chiang Mai Arr**	**14.72**	**204**	*e*Pn	**Pn**	**04 12 33.1**	**+7.2**
	comp=Z,24nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.72**	**204**	Pn	**Pn**	**04 12 26.4**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=14,slow=11,SNR=9.3						
CMAR				LR	LR	04 18 49.8	
	comp=Z,570nm,19.7s,baz=40,slow=40						
CMAR	**Chiang Mai Arr**	**14.72**	**204**	P	**Pn**	**04 12 26.4**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,570nm,19.7s						
DL2	**Dalian**	**15.05**	**59**	*e*P	**Pn**	**04 12 36.8**	**+6.6**
DL2				*e*S	**Sn**	**04 15 29.1**	**+12**
DL2				pmax	pmax		
	comp=Z,30nm,1.1s						
DL2				LR	LR		
	comp=N,670nm,16.7s						
DL2				LR	LR		
	comp=E,550nm,14.4s						
DL2				LR	LR		
	comp=Z,990nm,14.8s						
SONM	**Songino Array**	**15.69**	**3**	Pn	**Pn**	**04 12 38.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=189,slow=16,SNR=2.4						
SONM				Sn	**Sn**	**04 15 46.6**	**+14**
	comp=Z,0.4nm,0.3s,baz=171,slow=19,SNR=2.0						
SONM				Lg		04 17 10.1	
	baz=171,slow=28,SNR=3.6						
ULN	**Ulaanbaatar**	**15.76**	**5**	P	**Pn**	**04 12 36.1**	**-3.4**
ULN				pmax	pmax		
	comp=Z,18nm,0.9s						
ULN	**Ulaanbaatar**	**15.76**	**5**	Pn	**Pn**	**04 12 36.1**	**-3.4**
	comp=Z,18nm,0.9s						
YHNB	**Yeheng**	**16.14**	**113**	*e*Pn	**Pn**	**04 12 50.0**	**+5.3**
	comp=Z,60nm,0.8s						
SSLB	**Suanglung**	**16.30**	**117**	*e*Pn	**Pn**	**04 12 53.7**	**+7.2**
	comp=Z,218nm,1.0s						
TPUB	**Ta-pu**	**16.33**	**119**	Pn	**Pn**	**04 12 53.3**	**+6.3**
	comp=Z,97nm,1.1s						
NACB	**Ninganchiao**	**16.57**	**115**	*e*Pn	**Pn**	**04 12 55.7**	**+5.6**
	comp=Z,171nm,1.4s						
YULB	**Yu-li**	**16.78**	**117**	*e*Pn	**Pn**	**04 12 55.9**	**+3.2**
	comp=Z,23nm,0.4s						
TWG	**Pinlang**	**16.94**	**119**	*e*Pn	**Pn**	**04 13 00.1**	**+5.3**
	comp=Z,88nm,0.9s						
GUN	**Gumba**	**17.16**	**261**	*e*P	**Pn**	**04 12 55.5**	**-1.9**
	comp=Z,50nm,0.5s						
SNY	**Shenyang**	**17.61**	**52**	⇓P	**Pn**	**04 13 03.8**	**+0.8**
SNY				S	**Sn**	**04 16 20.9**	**+1.9**
SNY				pmax	pmax		
	comp=Z,26nm,0.9s						
SNY				pmax	pmax		
	comp=Z,320nm,8.6s						
SNY				LR	LR		
	comp=N,920nm,18.2s						
SNY				LR	LR		
	comp=E,880nm,16.9s						
SNY				LR	LR		
	comp=Z,1μm,17.4s						
PKI	**Pulchoki**	**17.66**	**260**	*e*P	**Pn**	**04 13 01.4**	**-2.3**
	comp=Z,74nm,0.6s						
PKIN	**Phulchoki**	**17.67**	**260**	*e*P	**Pn**	**04 13 01.4**	**-2.4**
	comp=Z,61nm,0.5s						
KKN	**Kakani**	**17.70**	**261**	*e*P	**Pn**	**04 13 01.8**	**-2.4**
	comp=Z,61nm,0.7s						
DMN	**Daman**	**17.91**	**261**	*e*P	**Pn**	**04 13 03.9**	**-2.8**
	comp=Z,28nm,0.4s						
WMQ	**Urumqi**	**17.95**	**315**	*e*P	**Pn**	**04 13 07.3**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,32nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.0s						
WMQ				LR	LR		
	comp=N,2μm,9.0s						
WMQ				LR	LR		
	comp=E,2μm,12.0s						
WMQ				LR	LR		
	comp=Z,620nm,13.0s						
ZAK	**Zakamensk**	**18.26**	**356**	*e*P	**Pn**	**04 13 12.0**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,25nm,1.5s						
KSRS	**Korea Array**	**19.47**	**68**	P	**Pn**	**04 13 25.1**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=251,slow=9.9,SNR=32						
KSRS	**Korea Array**	**19.47**	**68**	P	**Pn**	**04 13 25.1**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	**Talaya**	**19.54**	**357**	*e*P	**Pn**	**04 13 33.3**	**+7.0**
TLY				pmax	pmax		
	comp=Z,22nm,1.5s						
TLY				MLR	MLR		
	comp=Z,863nm,12.0s						
TLY	**Talaya**	**19.54**	**357**	*e*P	**Pn**	**04 13 25.7**	**-0.6**
	comp=Z,10nm,1.1s						
MOY	**Mondy**	**19.73**	**352**	*e*P	**Pn**	**04 13 29.5**	**+0.9**
MOY				pmax	pmax		
	comp=Z,1μm,2.6s						
CN2	**Changchun**	**19.76**	**48**	*e*P	**Pn**	**04 13 29.3**	**+0.2**
CN2				*es*P	sP	04 13 36.3	+3.3
CN2				*e*S	**Sn**	**04 17 02.4**	**-8.4**
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,900nm,17.0s						
CN2				LR	LR		
	comp=E,800nm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
IRK	**Irkutsk**	**20.08**	**359**	*e*P	**P**	**04 13 40.0**	**+9.0**
IRK				pmax	pmax		
	comp=Z,151nm,1.2s						
CIT	**Chita**	**20.79**	**15**	*e*P	**P**	**04 13 40.3**	**+1.6**
JOW	**Kunigami**	**20.85**	**99**	P	**P**	**04 13 41.7**	**+2.1**
	comp=Z,40nm,0.9s,baz=246,slow=22,SNR=8.5						
JOSI	**Joshimath**	**21.85**	**273**	*e*P	**P**	**04 13 51.3**	**+1.1**
MK31	**Makanchi Array**	**22.76**	**317**	*e*P	**P**	**04 13 59.9**	**+0.1**
MKAR	**Makanchi Array**	**22.76**	**317**	P	**P**	**04 14 00.1**	**+0.2**
	comp=Z,9.7nm,0.9s,mb4.2,baz=110,slow=10,SNR=43						
MKAR				PcP	PcP	04 17 51.2	-0.1
	comp=Z,4.8nm,0.9s,baz=111,slow=3.1,SNR=4.3						
MKAR	**Makanchi Array**	**22.76**	**317**	P	**P**	**04 14 00.1**	**+0.3**
MKAR						04 17 51.2	
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDJ	**Mudanjiang**	**22.79**	**50**	P	**P**	**04 14 00.0**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,45nm,1.4s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,120nm,2.9s,mb4.8						
KLP	**Kalpa**	**22.79**	**276**	*e*P	**P**	**04 14 01.2**	**+0.9**
KLP				AMb	AMB	04 14 05.1	
	comp=Z,56nm,1.1s,mb4.9						
DDI	**Dehra Dun**	**23.17**	**273**	*ex*	**P**	**04 14 05.0**	**+0.8**
SMLA	**Simla**	**23.77**	**275**	*e*P	**P**	**04 14 12.4**	**+2.1**
AGRA	**Agra**	**24.05**	**265**	*e*P	**P**	**04 14 12.8**	**-0.1**
NDI	**New Delhi**	**24.25**	**269**	*e*P	**P**	**04 14 15.0**	**+0.3**
KKR	**Kurukshetra**	**24.29**	**272**	*e*P	**P**	**04 14 14.6**	**-0.4**
KKR				AMb	AMB	04 14 16.2	
	comp=Z,102nm,0.6s,mb5.5						
AYAN	**Aya Nagar**	**24.38**	**269**	*e*P	**P**	**04 14 15.4**	**-0.5**
AYAN				AMb	AMB	04 14 20.9	
	comp=Z,27nm,1.7s,mb4.4						
KSH	**Kashi**	**24.65**	**296**	*e*P	**P**	**04 14 21.9**	**+3.7**
KSH				*ep*P		04 14 25.8	
KSH				*es*P	sP	04 14 28.9	+5.1
KSH				*e*PcP	PcP	04 17 59.8	+4.3
KSH				*e*S	**S**	**04 18 40.0**	**+0.7**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
KSH				LR	LR		
	comp=N,540nm,11.5s,MS4.5						
KSH				LR	LR		
	comp=E,590nm,11.4s,MS4.5						
KSH				LR	LR		
	comp=Z,450nm,10.2s,MS4.2						
RTK	**Rohtak**	**24.85**	**270**	*ex*	x	04 14 14.3	
ULHL	**Ulahol**	**24.98**	**302**	P	**P**	**04 14 22.2**	**+1.0**
	SNR=13						
TKM2	**Tokmak 2**	**25.61**	**303**	P	**P**	**04 14 28.4**	**+1.5**
	SNR=7.1						
TKM2	**Tokmak 2**	**25.61**	**303**	*e*P	**P**	**04 14 28.2**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.7						
TKM2	**Tokmak 2**	**25.61**	**303**	*e*P	**P**	**04 14 28.2**	**+1.2**
	comp=Z,25nm,1.1s,mb4.7						
KHET	**Khetri**	**25.61**	**269**	*e*P	**P**	**04 14 27.0**	**-0.1**
KHET				AMb	AMB	04 14 32.0	
	comp=Z,29nm,1.4s,mb4.6						
KZA	**Kyzart**	**25.66**	**301**	P	**P**	**04 14 29.2**	**+1.8**
	SNR=8.7						
BHPL	**Bhopal**	**26.00**	**257**	*e*P	**P**	**04 14 30.4**	**-0.2**
BHPL				AMb	AMB	04 14 34.9	
	comp=Z,34nm,1.4s,mb4.7						
ZALV	**Zalesovo Beam**	**26.16**	**332**	P	**P**	**04 14 31.6**	**-0.1**
	comp=Z,2.5nm,0.6s,mb3.9,baz=132,slow=9.2,SNR=12						
ZALV	**Zalesovo Beam**	**26.16**	**332**	P	**P**	**04 14 31.6**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
UCH	**Uchtor**	**26.23**	**301**	P	**P**	**04 14 34.5**	**+2.0**
	SNR=16						
UCH	**Uchtor**

comp=Z,5.0nm,1.2s,mb3.9
AAK Ala-Archa 26.33 302 *e*P **P 04 14 34.2 +0.8**
comp=Z,21nm,1.2s,mb4.5
BOD Bodaibo 26.38 11 *e*P **P 04 14 34.2 +0.5**
BOD pmax pmax
comp=Z,10.0nm,1.5s,mb4.1
USP Ospenovka 26.48 304 P **P 04 14 35.8 +1.0**
SNR=7.6
AML Almayashu 26.80 301 P **P 04 14 39.4 +1.7**
SNR=6.6
AML Almayashu 26.80 301 *e*P **P 04 14 39.2 +1.5**
comp=Z,20nm,1.1s,mb4.5
AML *e*PcP PcP 04 18 00.7 +0.4
EKS2 Erkin-Say 26.85 302 *e*P **P 04 14 39.3 +1.1**
comp=Z,16nm,1.3s,mb4.4
KURK Kurchatov 26.93 321 P **P 04 14 38.8 +0.1**
comp=Z,3.7nm,0.6s,mb4.1,baz=118,slow=12,SNR=33
KURK PcP PcP 04 17 59.7 -0.7
comp=Z,2.4nm,0.5s,baz=111,slow=2.1,SNR=5.5
KURK Kurchatov 26.93 321 *c e*P **P 04 14 36.6 -2.1**
KURK pmax pmax
comp=Z,22nm,1.2s,mb4.6
KURK Kurchatov 26.93 321 *e*P **P 04 14 38.7 -0.1**
comp=Z,24nm,0.9s,mb4.7
AJM Ajmer 27.09 266 *e*P **P 04 14 39.8 -0.6**
AJM AMb AMB 04 14 49.4
comp=Z,39nm,1.1s,mb4.9
NVS Novosibirsk 27.45 332 *e*P **P 04 14 42.8 -0.5**
NVS pmax pmax
comp=Z,25nm,2.0s,mb4.4
NVS pmax pmax
comp=N,21nm,1.8s
NVS pmax pmax
comp=E,28nm,2.0s
MAT Matsushiro 27.61 72 P **P 04 14 43.7 -1.3**
MJAR Matsushiro Arr 27.61 72 P **P 04 14 44.4 -0.7**
comp=E,9.7nm,1.0s,mb4.4,baz=274,slow=10,SNR=14
MJAR Matsushiro Arr 27.61 72 P **P 04 14 44.4 -0.7**
MJAR pmax pmax
comp=Z,10.0nm,1.0s
KKM Kota Kinabalu 27.98 156 *e*P **P 04 14 48.5 0.0**
comp=Z,63nm,1.4s,mb5.1
JASL Jaisalmer 30.11 269 *e*P **P 04 15 08.3 +0.9**
KSM Kuching 30.91 170 *e*P **P 04 15 21.5 +7.0**
comp=Z,11nm,1.1s,mb4.6
YSS Yuzh-Sakhalins 32.24 52 *e*P **P 04 15 24.0 -1.9**
BVAR Borovoye Array 32.50 320 P **P 04 15 28.4 +0.3**
comp=Z,2.7nm,0.6s,mb4.4,baz=115,slow=11,SNR=11
BVAR PcP PcP 04 18 13.9 -0.8
comp=Z,3.0nm,0.6s,baz=120,slow=3.7,SNR=6.5
BVAR Borovoye Array 32.50 320 P **P 04 15 28.4 +0.3**
BVAR 04 18 13.9
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 32.58 320 *c e*P **P 04 15 27.4 -1.3**
BRVK pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRVK Borovoye 32.58 320 *e*P **P 04 15 29.2 +0.4**
comp=Z,9.4nm,1.0s,mb4.7
YAK Yakutsk 33.83 21 *e*P **P 04 15 38.9 -0.7**
YAK pmax pmax
comp=Z,28nm,0.9s,mb5.2
YAK pmax pmax
comp=E,10.0nm,1.3s
IMYA Miami 37.17 289 *e*P **P 04 16 09.1 +0.5**
ABKAR Akbulak array 37.62 310 *e*P **P 04 16 12.6 +0.4**
comp=E,3.1nm,0.6s,mb4.2
ABKAR *e*PcP PcP 04 18 29.2 -0.5
AKTK Aktyubinsk 39.05 312 P **P 04 16 24.5 +0.3**
AKTO Aktyubinsk 39.05 312 P **P 04 16 24.5 +0.3**
comp=E,3.2nm,0.6s,mb4.3,baz=97,slow=10,SNR=10
AKTO Aktyubinsk 39.05 312 P **P 04 16 24.5 +0.3**
AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
SVE Sverdlovsk 39.17 322⇓ *e*P **P 04 16 25.9 +0.7**
SVE *e*S **S 04 22 18.1 -6.5**
SVE pmax pmax
comp=Z,40nm,1.4s,mb5.0
KAPI Kappang 39.51 157 P **P 04 16 27.1 -1.4**
comp=Z,19nm,1.0s,mb4.8,baz=358,slow=6.9,SNR=4.7
ARU Arti 40.13 321 *d i*P **P 04 16 33.3 +0.1**
ARU S **S 04 22 37.7 -1.3**
ARU SS SS 04 25 31.8 -4.7
ARU pmax pmax
comp=Z,28nm,1.2s,mb4.9
ARU Arti 40.13 321 *e*P **P 04 16 33.4 +0.2**
comp=Z,47nm,1.2s,mb5.1
TIXI Tiksi 41.56 11 *i*P **P 04 16 44.1 -0.7**
TIXI pmax pmax
comp=Z,39nm,1.3s,mb4.9
TIXI Tiksi 41.56 11 *e*P **P 04 16 44.0 -0.8**
comp=Z,17nm,0.6s,mb4.9
SOKR Solikamsk 42.00 325⇑ *i*P **P 04 16 49.7 +1.2**
SOKR pmax pmax
comp=Z,30nm,1.3s,mb4.8
IMEH Mehriz 42.59 283 *e*P **P 04 16 53.3 -0.5**
SEY Seymchan 42.76 30 *c e*P **P 04 16 53.9 -0.8**
PETK Petropavlovsk- 42.85 45 P **P 04 16 55.6 0.0**
comp=Z,8.0nm,0.7s,mb4.6,baz=234,slow=5.0,SNR=22
PETK Petropavlovsk- 42.85 45 P **P 04 16 55.6 0.0**
PETK pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
IPAR Pars 44.31 281 *e*P **P 04 17 07.0 -0.7**
ISRV Sarvestan 44.39 281 *e*P **P 04 17 07.1 -1.2**
ZEI Tsey 48.75 301 *e*P **P 04 17 41.2 -1.1**
ZEI pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MIB Mutribah 49.05 283 *e*P **P 04 17 44.3 -0.5**
MIB AMb AMB 04 17 50.2
comp=Z,39nm,1.0s,mb5.4
RDF Al-Radifah 49.16 282 *e*P **P 04 17 44.5 -1.2**
NAY Al-Naaiem 49.31 283 *e*P **P 04 17 46.1 -0.7**
KIV Kislovodsk 49.45 303 *e*P **P 04 17 48.4 +0.8**
KIV pmax pmax
comp=Z,18nm,1.0s,mb5.1
KIV Kislovodsk 49.45 303 *e*P **P 04 17 48.7 +1.0**
comp=Z,26nm,1.5s,mb5.0
BILL Bilibino 49.87 26⇑ *e*P **P 04 17 50.3 -0.2**
BILL *e* 04 19 45.5
BILL *e*S **S 04 24 54.3 -5.4**
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.1
BILL MLR MLR
comp=Z,900nm,17.0s,MS4.8
BILL Bilibino 49.87 26 *e*P **P 04 17 50.1 -0.4**
comp=Z,12nm,0.8s,mb5.0
KLMR Klimovskoe 50.68 325 *e*P **P 04 17 55.2 -1.6**
KLMR pmax pmax
comp=Z,49nm,1.3s,mb5.3
SOC Sochi 51.63 303 *e*P **P 04 18 03.9 -0.2**
SOC *e**PP pP 04 18 13.2 +4.9
SOC *e*S **S 04 25 13.6 -11**
SOC pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
SOC MLR MLR
comp=Z,362nm,18.0s,MS4.5
MOS Moscow 51.63 318 *e*P **P 04 18 02.6 -1.4**
MOS *e* 04 19 19.1
MOS *e* 04 20 01.9
MOS pmax pmax
comp=Z,34nm,0.8s,mb5.3
KAKA Kakadu 51.73 145 *e*P **P 04 18 03.2 -1.9**
comp=Z,28nm,1.4s,mb5.0
OBN Obninsk 52.27 317⇓ *e*P **P 04 18 06.3 -2.4**
OBN *e*S **S 04 25 22.9 -10**
OBN pmax pmax
comp=Z,34nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.2
OBN Obninsk 52.27 317 *e*P **P 04 18 08.4 -0.3**
comp=Z,24nm,1.4s,mb4.9
ANN Anapa 53.02 304 *e*P **P 04 18 07.1 -7.3**
ANN *e**PP pP 04 18 16.9 -1.7
ANN *e* 04 19 21.9
ANN pmax pmax
comp=Z,18nm,0.9s,mb5.0
FITZ Fitzroy Crossi 53.71 156 *e*P **P 04 18 19.1 -0.6**
comp=Z,24nm,1.0s,mb5.1
APA Apatity 53.74 333⇑ *e*P **P 04 18 23.2 +3.8**
APA MLR MLR
comp=Z,600nm,12.0s,MS4.9
JOF Joensuu 54.59 327 *e*P **P 04 18 24.0 -1.6**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JOF Joensuu 54.59 327 *e p* **P 04 18 24.0 -1.6**
comp=Z,6.7nm,0.6s,mb4.8
SIM Simferopol' 55.30 305 *e*P **P 04 18 31.9 +0.8**
SIM pmax pmax
comp=Z,15nm,0.8s,mb5.1
KEV Kevo 56.12 336 *e*P **P 04 18 35.1 -1.4**
KEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KEV Kevo 56.12 336 *e p* **P 04 18 35.1 -1.4**
comp=Z,7.5nm,0.6s,mb4.9
ARCES ARCESS Array B 56.65 336 P **P 04 18 39.9 -0.4**
comp=Z,4.7nm,0.7s,mb4.7,baz=89,slow=7.7,SNR=19
ARCES ARCESS Array B 56.65 336 P **P 04 18 39.9 -0.4**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 56.65 336 P **P 04 18 39.9 -0.4**
BRTR Keskin Array B 56.95 299 P **P 04 18 42.6 -0.3**
comp=Z,1.9nm,0.7s,mb4.3,baz=111,slow=6.3,SNR=14
BRTR Keskin Array B 56.95 299 P **P 04 18 42.7 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 56.97 327 *e*P **P 04 18 41.2 -1.5**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KAF Kangasniemi 56.97 327 *e p* **P 04 18 41.2 -1.5**
comp=Z,3.6nm,0.5s,mb4.7
FINES FINESS Array B 57.17 326 P **P 04 18 43.8 -0.3**
comp=Z,6.8nm,0.7s,mb4.8,baz=80,slow=7.7,SNR=15
FINES FINESS Array B 57.17 326 P **P 04 18 43.8 -0.3**
FINES pmax pmax
comp=Z,7.0nm,0.7s
AKASG Malin Array Be 57.28 313 P **P 04 18 44.6 -0.5**
comp=Z,1.6nm,0.6s,mb4.3,baz=70,slow=5.8,SNR=10
AKASG Malin Array Be 57.28 313 *c e*P **P 04 18 44.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
KIEV Kiev 57.29 313 *e*P **P 04 18 43.8 -1.4**
KIEV pmax pmax
comp=Z,25nm,1.6s,mb5.0
KIEV Kiev 57.29 313 *e*P **P 04 18 43.8 -1.4**
comp=Z,25nm,1.6s,mb5.0
IDID Didziasalis 57.83 319 *e*P **P 04 18 49.0 +0.1**
IIGN Ignalina 58.11 319 *e*P **P 04 18 49.8 -1.1**
ISAL Salakas 58.12 319 *e*P **P 04 18 49.5 -1.4**
COEN Coen 58.59 135 *e*P **P 04 18 54.5 -0.2**
comp=Z,287nm,1.3s,mb6.1
WRAB Tennant Creek 58.89 148 *e*P **P 04 18 56.5 -0.2**
WRAB pmax pmax
comp=Z,40nm,0.8s,mb5.5
WRAB Tennant Creek 58.89 148 *e*P **P 04 18 56.5 -0.2**
comp=Z,40nm,0.8s,mb5.5
ISP Isparta 59.85 298 *e*P **P 04 19 02.3 -1.0**
ISP pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
ISP Isparta 59.85 298 *e*P **P 04 19 02.3 -1.0**
comp=Z,5.1nm,0.4s,mb4.9
TNA Tin City 59.99 29 *e*P **P 04 19 03.2 -0.5**
comp=Z,10nm,1.0s,mb4.8
VRI Vrincioaia 60.10 308⇑ P **P 04 19 05.8 +1.0**
VRI Vrincioaia 60.10 308⇑ *i*P **P 04 19 05.8 +1.0**
BURAR Bucovina Array 60.60 310⇑ P **P 04 19 09.7 +1.5**
BURAR Bucovina Array 60.60 310⇑ *i*P **P 04 19 09.7 +1.5**
LVV L'vov 60.73 313 *e*P **P 04 19 08.8 -0.2**
MLR Muntele Rosu 60.73 308⇓ P **P 04 19 10.6 +1.4**
MLR Muntele Rosu 60.73 308⇓ *i*P **P 04 19 10.6 +1.4**
VOIR 61.35 308⇓ P **P 04 19 13.9 +0.6**
VOIR 61.35 308⇓ *i*P **P 04 19 13.9 +0.6**
KWP Kalwaria Pacla 61.61 313 *e*P **P 04 19 15.5 +0.5**
KWP Kalwaria Pacla 61.61 313 *e*P **P 04 19 14.9 0.0**
comp=Z,60nm,1.4s,mb5.5
KWP Kalwaria Pacla 61.61 313⇓ *i*P **P 04 19 15.4 +0.4**
ASAR Alice Springs 61.97 150 P **P 04 19 17.6 0.0**
comp=Z,5.2nm,0.6s,mb4.9,baz=334,slow=6.7,SNR=88
ASAR Alice Springs 61.97 150 P **P 04 19 17.6 0.0**
ASAR pmax pmax
comp=Z,5.0nm,0.6s
KOLS Kolonicke sedl 62.09 312 *e*P **P 04 19 19.8 +1.6**
KOLS *e* 04 19 33.1
KOLS pmax pmax
comp=Z,11nm,1.8s,mb4.7
KOLS Kolonicke sedl 62.09 312 *e*P **P 04 19 19.8 +1.6**
KOLS *e* 04 19 33.1
UZH Uzhgorod 62.17 312 *e*P **P 04 19 19.0 +0.2**
UZH *i* 04 19 35.0
UZH *e* 04 19 59.7
STHS Stebnicka Huta 62.58 313 *e*P **P 04 19 21.9 +0.4**
STHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
STHS Stebnicka Huta 62.58 313 *e*P **P 04 19 21.9 +0.4**
STHS *e p*P pP 04 19 27.4 +1.6
OJC Ojcow 63.21 314 *e*P **P 04 19 25.4 -0.3**
KECS Kecovo 63.35 312 *e*P **P 04 19 25.9 -0.8**
KECS pmax pmax
comp=Z,4.0nm,1.5s,mb4.3
KECS Kecovo 63.35 312 *e*P **P 04 19 25.9 -0.8**
KECS *e p*P pP 04 19 34.3 +3.3
NB2 NORSAR Subarra 64.23 327 P **P 04 19 30.9 -1.3**
comp=Z,5.7nm,0.7s,mb4.7,baz=73,slow=6.9
NOA NORSAR Array B 64.23 327 P **P 04 19 31.0 -1.2**
comp=Z,3.6nm,0.6s,mb4.6,baz=73,slow=6.9,SNR=15
NOA NORSAR Array B 64.23 327 P **P 04 19 31.0 -1.2**
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA NORSAR Array B 64.23 327 P **P 04 19 31.0 -1.2**
OKC Ostrava-Krasne 64.34 314 *e*P **P 04 19 33.3 +0.1**
OKC *e p*P pP 04 19 38.1 +0.6
VYHS Vyhne 64.38 313 *e*P **P 04 19 33.7 +0.2**
VYHS pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
VYHS Vyhne 64.38 313 *e*P **P 04 19 33.6 +0.1**
VYHS *e p*P pP 04 19 38.9 +1.2
MORC Moravsky Berou 64.73 314 *e*P **P 04 19 36.3 +0.5**
comp=Z,12nm,1.3s,mb4.8
MORC Moravsky Berou 64.73 314⇑ *i*P **P 04 19 35.7 0.0**
KSP Ksiaz 65.11 316 *e*P **P 04 19 38.8 +0.6**
CTA Charters Tower 65.21 137 *e*P **P 04 19 39.0 -0.1**
comp=Z,2.2nm,0.4s,mb4.5
DPC Dobruska-Polom 65.27 315 *e*P **P 04 19 39.5 +0.3**
DPC *e**PP pP 04 19 44.6 +1.1
DPC MLR MLR
comp=Z,1μm,19.3s,MS5.1
PKSM Moragy 65.31 310⇑ P **P 04 19 39.7 +0.1**
PKSM Moragy 65.31 310⇑ *i*P **P 04 19 39.7 +0.1**
TTA Tatalina 65.74 30 *e*P **P 04 19 42.1 +0.1**
COLD Coldfoot 66.17 24 *e*P **P 04 19 43.7 -1.1**
comp=Z,16nm,1.2s,mb4.9
FORT Forest 66.27 158 *e*P **P 04 19 45.0 -0.8**
comp=Z,13nm,0.7s,mb5.1
PRU Pruhonice 66.46 315 *e*P **P 04 19 48.2 +1.3**
PRU *e p*P pP 04 19 52.4 +1.2
BRG Berggiesshubel 66.48 316 *e*P **P 04 19 46.7 -0.3**
comp=Z,5.0nm,0.9s,mb4.5
BRG *e* pP 04 19 51.9 +0.6
comp=Z,10nm,1.5s
BRG Berggiesshubel 66.48 316 *e*P **P 04 19 46.7 -0.3**
BRG *e* pP 04 19 51.9 +0.6
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BRG pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
SVW2 Sparrevohn 66.66 31 *e*P **P 04 19 48.6 +0.6**
CHUM Lake Minchumin 66.86 28 *e*P **P 04 19 48.3 -0.9**
comp=Z,27μm,1.2s
CLL Collm 66.86 317⇓ *i*P **P 04 19 49.6 +0.2**
CLL *i* pP 04 19 53.3 -0.4
CLL Collm 66.86 317⇓ *i*P **P 04 19 49.6 +0.2**
CLL *i p*P pP 04 19 53.3 -0.4
comp=Z,18nm,1.5s
CLL LmV 04 39 00.0
comp=Z,300nm,19.7s
CHGN Chignik 67.28 37 *e*P **P 04 19 51.6 -0.4**
PPLA Purkeypile 67.34 29 *e*P **P 04 19 52.4 +0.2**
comp=Z,40nm,1.0s,mb5.4
KHC Kasperske Hory 67.38 315 *e*P **P 04 19 52.5 -0.2**
KHC MLR MLR
comp=Z,1μm,18.6s,MS5.2
GEC2 GERESS Array S 67.41 314 *e*P **P 04 19 52.8 -0.2**
comp=Z,6.0nm,1.3s,mb4.5
GEC2 GERESS Array S 67.41 314 *e*P **P 04 19 52.8 -0.2**
GEC2 pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
GERES GERESS Array B 67.41 314 P **P 04 19 52.6 -0.4**
comp=Z,1.9nm,0.9s,mb4.1,baz=71,slow=5.8,SNR=11
GERES GERESS Array B 67.41 314 P **P 04 19 52.6 -0.4**
GERES pmax pmax
comp=Z,2.0nm,0.9s
TANN Tannenbergstha 67.53 316 *e*P **P 04 19 53.6 -0.1**
comp=Z,3.0nm,0.9s,mb4.3
KTH Kantishna Hill 67.56 28 *e*P **P 04 19 53.0 -0.6**
comp=Z,30nm,1.3s,mb5.2
WET Wettzell 67.79 315 *e*P **P 04 19 55.6 +0.2**
comp=Z,5.0nm,1.2s,mb4.4
WET Wettzell 67.79 315 *e*P **P 04 19 55.6 +0.2**
WET pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
TRF Thorofare Moun 67.86 28 *e*P **P 04 19 55.2 -0.3**
comp=Z,7.2nm,0.9s,mb4.7
ROTZ Rotzenmuhle 67.94 316 *e*P **P 04 19 56.4 +0.1**
comp=Z,8.0nm,1.2s,mb4.6
NRDL Niedersach Rie 68.03 319 *e*P **P 04 19 58.1 +1.3**
comp=Z,8.0nm,1.1s,mb4.7
COLA College 68.12 26 *e*P **P 04 19 53.7 -3.4**
COLA pmax pmax
comp=Z,27nm,0.9s,mb5.3
COLA College 68.12 26 *e*P **P 04 19 53.6 -3.5**
comp=Z,27nm,0.9s,mb5.3
CLZ Clausthal 68.15 318 *e*P **P 04 19 57.8 +0.2**
comp=Z,15nm,1.5s,mb4.8
CLZ Clausthal 68.15 318 *e*P **P 04 19 57.8 +0.2**
CLZ pmax pmax
comp=Z,15nm,1.5s,mb4.8
RSO Redoubt South 68.19 31 *e*P **P 04 19 58.9 +1.3**
MCK McKinley 68.26 27 *e*P **P 04 19 56.7 -1.3**
MCK pmax pmax
comp=Z,10μm,0.6s
MCK McKinley 68.26 27 *e*P **P 04 19 56.7 -1.3**
comp=Z,10μm,0.6s
GRA1 Grafenberg Arr 68.55 316 *e*P **P 04 20 00.3 +0.2**
comp=Z,32nm,1.3s,mb5.1
GRA1 *e p*P pP 04 20 05.3 +0.9
GRF Grafenberg Arr 68.55 316 *e*P **P 04 20 00.3 +0.2**
comp=Z,32nm,1.3s,mb5.1
GRF *e p*P pP 04 20 05.3 +0.9
GRF Grafenberg Arr 68.55 316 *e*P **P 04 20 00.3 +0.2**
GRF *e**PP pP 04 20 05.3 +0.9
GRF pmax pmax
comp=Z,32nm,1.3s,mb5.1
GRF Grafenberg Arr 68.55 316 *e*P **P 04 20 00.3 +0.2**
GRF *e**PP pP 04 20 05.3 +0.9
GRF pmax pmax
comp=Z,32nm,1.3s,mb5.1
FUR Furstenfeldbru 69.16 314 *e*P **P 04 20 04.1 +0.1**
comp=Z,16nm,0.6s,mb5.1
FUR Furstenfeldbru 69.16 314 *e*P **P 04 20 04.1 +0.1**
FUR pmax pmax
comp=Z,16nm,0.6s,mb5.1
PMR Palmer 69.22 29 *e*P **P 04 20 03.1 -0.9**
PMR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
PMR Palmer 69.22 29 *e*P **P 04 20 03.1 -0.9**
comp=Z,10nm,0.7s,mb4.9
IBBN Ibbenburen 69.41 319 *e*P **P 04 20 06.6 +1.2**
comp=Z,10.0nm,0.6s,mb4.9
OHAK Old Harbor 69.42 35 *e*P **P 04 20 05.4 0.0**
comp=Z,22nm,0.8s,mb5.1
OHAK LR LR
comp=Z,2μm,20.0s,MS5.4
KDAK Kodiak Island 69.50 34 *i*P **P 04 20 05.3 -0.6**
EGAK Eagle 70.60 25 *e*P **P 04 20 11.7 -0.8**
comp=Z,7.3nm,0.9s,mb4.6
DIV Divide 70.85 29 *e*P **P 04 20 14.6 +0.6**
comp=Z,19nm,1.0s,mb5.0
INK Inuvik 70.89 20 *e*P **P 04 20 13.6 -0.6**
INK pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 70.89 20 *e*P **P 04 20 13.6 -0.6**
comp=Z,5.7nm,0.6s,mb4.7
CDF Champ du Feu 71.45 316⇑ *i*P **P 04 20 17.5 -0.4**
WLF Walferdange 71.52 317 P **P 04 20 19.0 +0.6**
comp=Z,15nm,1.4s,mb4.7
DAWY Dawson 71.64 25 *e*P **P 04 20 18.1 -0.7**
KMBO Kilima Mbogo 71.96 257 P **P 04 20 21.4 -0.2**
comp=Z,1.8nm,0.7s,mb4.1,baz=4.3,slow=24,SNR=5.0
KMBO Kilima Mbogo 71.96 257 *e*P **P 04 20 22.0 +0.4**
KMBO pmax pmax
comp=Z,12nm,1.0s
KMBO Kilima Mbogo 71.96 257 *e*P **P 04 20 21.9 +0.4**
comp=Z,12nm,1.0s,mb4.8
STKA Stephens Creek 72.44 148 *e*P **P 04 20 23.3 -0.7**
comp=Z,7.6nm,0.8s,mb4.7
STKA Stephens Creek 72.44 148 P **P 04 20 23.4 -0.5**
comp=Z,4.9nm,0.6s,mb4.6,baz=334,slow=8.2,SNR=13
STKA Stephens Creek 72.44 148 P **P 04 20 23.4 -0.5**
SUMG Summit 72.57 349 *e*P **P 04 20 24.1 -0.2**
comp=Z,11nm,1.0s,mb4.7
LPG La Plagne 73.14 313⇑ *i*P **P 04 20 28.6 +0.5**
comp=Z,21nm,0.6s,mb4.9
LPG La Plagne 73.14 313⇑ *i*P **P 04 20 28.6 +0.5**
LPG pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPG La Plagne 73.14 313⇑ *i*P **P 04 20 28.6 +0.5**
comp=Z,10nm,0.6s,mb4.9
LPL La Plagne 73.14 313⇑ *i*P **P 04 20 28.5 +0.4**
comp=Z,25nm,0.6s,mb5.0
LPL La Plagne 73.14 313⇑ *i*P **P 04 20 28.5 +0.4**
LPL pmax pmax
comp=Z,12nm,0.6s,mb5.0
LPL La Plagne 73.14 313⇑ *i*P **P 04 20 28.5 +0.4**
comp=Z,12nm,0.6s,mb5.0
SMF Signal de Mont 74.34 315 *e*P **P 04 20 34.6 -0.5**
TCF Toulx Ste Croi 75.49 316⇑ *i*P **P 04 20 41.5 -0.3**
SKAG Skagway 76.02 27 *e*P **P 04 20 45.2 +0.6**
comp=Z,36nm,1.2s,mb5.2
SKAG LR LR
comp=Z,2μm,22.0s,MS5.4
KEST Kesra 76.18 304 P **P 04 20 45.9 -0.1**
comp=Z,1.0nm,0.5s,mb4.0,baz=43,slow=6.7,SNR=6.5
CAF Calviac 76.29 315⇑ *i*P **P 04 20 46.7 +0.3**
SFJD Kangerlussuaq 79.45 351 *i*P **P 04 21 02.4 -1.1**
SFJD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SFJD MLR MLR
comp=Z,1μm,21.0s,MS5.2
SFJD Kangerlussuaq 79.45 351 *i*P **P 04 21 02.4 -1.1**
comp=Z,10nm,0.9s,mb4.8
SFJD
comp=Z,1μm,21.0s
CRAG Craig 79.58 29 *e*P **P 04 21 05.6 +1.2**
comp=Z,123nm,1.9s,mb5.5
CRAG LR LR
comp=Z,2μm,18.0s,MS5.4
YKA Yellowknife Ar 80.44 18 P **P 04 21 08.5 -0.4**
comp=Z,4.7nm,0.6s,mb4.6,baz=327,slow=5.1,SNR=58
YKA Yellowknife Ar 80.44 18 P **P 04 21 08.5 -0.5**
YKA pmax pmax
comp=Z,5.0nm,0.6s
ESDC Sonseca Array 82.93 313 P **P 04 21 22.4 -0.2**
comp=Z,1.3nm,0.5s,mb4.2,baz=38,slow=5.0,SNR=12
FCC Fort Churchill 88.02 10 *e*P **P 04 21 47.2 -0.4**
comp=Z,0.4nm,1.2s
EDM Edmonton 88.64 22 *e*P **P 04 21 51.2 +0.6**
JCW Jim Creek 89.62 29 *e*P **P 04 21 55.9 +0.6**
FFC Flin Flon 90.39 15 *e*P **P 04 21 58.3 -0.4**
FFC pmax pmax
comp=Z,14nm,0.9s,mb5.3
FFC Flin Flon 90.39 15 *e*P **P 04 21 58.3 -0.5**
comp=Z,14nm,0.9s,mb5.3
ETW Entiat 90.74 29 *e*P **P 04 22 01.5 +0.9**
comp=Z,9.3nm,1.1s,mb5.0
BSMT Bassoo Peak 92.69 26 *e*P **P 04 22 10.3 +0.7**
comp=Z,4.0nm,0.8s,mb4.9
JTMT Jette 92.96 25 *e*P **P 04 22 11.7 +0.9**
comp=Z,2.2nm,1.0s,mb4.5
SCHQ Schefferville 93.09 355 P **P 04 22 09.7 -1.6**
comp=Z,14nm,1.1s,mb5.3,baz=32,slow=9.5,SNR=5.1
SLMT Seeley Lake 93.68 25 *e*P **P 04 22 14.3 +0.1**
comp=Z,5.5nm,0.8s,mb5.0
ULM Lac du Bonnet 95.88 13 P **P 04 22 26.6 +2.5**
comp=Z,1.8nm,0.8s,mb4.5,baz=351,slow=4.7,SNR=3.3
WMOK Wichita Mounta 109.78 21 PFAKE 04 27 40.0 +11
WMOK LR LR
comp=Z,951nm,21.0s,MS5.3
NVL N'lazarevskaya 121.04 203 *e*PKIKP PKPdf 04 27 51.7 +2.5
NVL *e**PP 04 28 01.7
NVL *e**SP 04 28 06.2
NVL pmax pmax
comp=Z,16nm,1.0s
QSPA South Pole Qui 121.93 180 *e*PKPdf PKPdf 04 27 50.2 -0.5
APG El Apazote 130.80 20 PKP PKPdf 04 28 09.2 -0.4
comp=Z,1.4nm,0.5s,baz=234,slow=23,SNR=4.1
OTAV Otavalo 147.61 7 *e*PKPbc PKPbc 04 28 43.5 +0.8

ISCJB **19** *04:20:58.5±0.7, 6°.61S±0°.09×106°.97W±0°.09, h10km, mb4.7/78, MS4.6/12, Error ellipse: s-maj=14.8km s-min=10.6km az=41.8*
IDC **19** *04:20:59.8±1.3, 6°.37S×107°.00W, h0km, mb4.2/10, mb1 4.5/10, mb1mx4.4/15, mbtmp4.2/10, MS4.5/8, Ms1 4.5/8, ms1mx4.4/16, Error ellipse: s-maj=41.5km s-min=18.2km az=61.0*
NEIC **19** *04:21:01.7±0.4, 6°.41S×106°.90W, h10km, mb4.8/66, Error ellipse: s-maj=13.8km s-min=7.8km az=66.0*
GCMT **19** *04:21:01.7±0.3, 6°.11S×106°.98W, h22km±2km, MW5.2/73, Moment Tensor Solution. s19,c20; s73,c100; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.42±.48; $M_{\theta\theta}$3.77±.38; $M_{\phi\phi}$-2.36±.35; $M_{r\theta}$2.72±.63; $M_{\theta\phi}$7.21±.26; $M_{\phi r}$-0.09±.55; Best double couple: $M_0$8.28700×10^{16} NP1:ϕ_s11.00000°, δ71.00000°, λ-178.00000°. NP2: ϕ_s281.00000°, δ88.00000°, λ-19.00000°. Principal axes: T 9.0180, Plg12.0000°, Azm328.0000°; N -1.4730, Plg70.0000°, Azm95.0000°; P -7.5550, Plg15.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 04:21:01.4±0.6, 6°.49S±0°.08×106°.92W±0°.09, h10km, n443, σ0°59/425, mb4.7/78, MS4.6/12, 172C-145D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**20.65**	**186**	LR	LR	04 31 34.7	
	comp=Z,2μm,19.0s,MS4.5,baz=237,slow=31						
CMIG	**Matias Romero**	**26.28**	**27**	P	**P**	**04 26 37.1**	**0.0**
	3.7nm,1.0s,mb3.9,baz=201,slow=5.6,SNR=5.4						
CMIG				LR	LR	04 34 32.0	
	comp=Z,535nm,18.3s,MS4.1,baz=232,slow=31						
APG	**El Apazote**	**26.87**	**37**	P	**P**	**04 26 42.6**	**+0.1**
	5.3nm,0.9s,mb4.1,baz=174,slow=10,SNR=6.8						
APG				LR	LR	04 35 01.2	
	comp=Z,1μm,18.7s,MS4.5,baz=172,slow=31						
JTS	**JuntasAbangare**	**27.51**	**53**	LR	LR	04 34 48.1	
	comp=Z,2μm,21.2s,MS4.7,baz=181,slow=30						
ATAH	**Atahualpa**	**28.33**	**93**	LR	LR	04 35 45.1	
	comp=Z,512nm,18.4s,MS4.2,baz=66,slow=31						
OTAV	**Otavalo**	**29.19**	**78**	*e*P	**P**	**04 27 07.1**	**+3.8**
	0.9nm,0.7s,mb3.6						
TAOE	**Nuku Hiva Isla**	**33.01**	**264**	*e*LR	LR	04 35 57.9	
	1μm,25.3s,baz=87						
TXAR	**Lajitas Array**	**35.75**	**5**	P	**P**	**04 28 00.6**	**0.0**
	4.1nm,1.1s,mb4.3,baz=185,slow=10.0,SNR=15						
627A	**Terlingua Ranc**	**35.90**	**5**	⇑P	**P**	**04 28 02.4**	**+0.6**
	baz=36,SNR=6.6						
626A	**Big Bend Ranch**	**35.94**	**4**	⇓P	**P**	**04 28 02.3**	**+0.1**
	baz=36,SNR=12						
628A	**Black Gap, Mar**	**35.98**	**6**	⇑P	**P**	**04 28 02.9**	**+0.3**
	baz=36						
526A	**Mary Lane Ranc**	**36.44**	**4**	⇓P	**P**	**04 28 07.5**	**+1.0**
	baz=37,SNR=9.0						
527A	**Woodward Ranch**	**36.56**	**5**	⇓P	**P**	**04 28 07.6**	**+0.1**
	baz=37,SNR=7.0						
426A	**McDonald Obser**	**37.05**	**4**	⇓P	**P**	**04 28 12.1**	**+0.4**
	baz=37,SNR=12						
425A	**Indio Mountain**	**37.11**	**3**	⇓P	**P**	**04 28 12.0**	**-0.2**
	baz=37,SNR=14						
428A	**Kincaid Ranch,**	**37.23**	**6**	⇑P	**P**	**04 28 13.3**	**+0.1**
	baz=37						
427A	**Hayter Ranch,**	**37.28**	**5**	⇑P	**P**	**04 28 13.4**	**-0.2**
	baz=38,SNR=8.2						
JCT	**Junction City**	**37.39**	**10**	*e*P	**P**	**04 28 14.9**	**+0.4**
	38nm,1.7s,mb5.0						
320A	**Kipp Ranch, An**	**37.64**	**358**	⇓P	**P**	**04 28 16.4**	**-0.2**
	baz=38						
325A	**Bean Ranch, Si**	**37.69**	**3**	⇑P	**P**	**04 28 17.8**	**+0.7**
	baz=38,SNR=14						
319A	**Douglas**	**37.72**	**357**	⇑P	**P**	**04 28 17.3**	**0.0**
	baz=38						
324A	**Moseley Ranch,**	**37.74**	**2**	⇓P	**P**	**04 28 17.7**	**+0.2**
	baz=38,SNR=9.1						
HKT	**Hockley**	**37.76**	**16**	*e*P	**P**	**04 28 16.9**	**-0.8**
	24nm,1.6s,mb4.7						
318A	**Bisbee**	**37.83**	**356**	⇑P	**P**	**04 28 18.0**	**-0.2**
	baz=38,SNR=5.5						
328A	**Wristen Ranch,**	**37.86**	**6**	⇑P	**P**	**04 28 17.8**	**-0.7**
	baz=38						
MNTX	**Cornudas Mount**	**38.00**	**2**	*e*P	**P**	**04 28 18.8**	**-0.9**
	13nm,1.1s,mb4.6						
220A	**Playas Peak, P**	**38.21**	**358**	⇓P	**P**	**04 28 21.3**	**-0.1**
	baz=38,SNR=18						
217A	**Green Valley**	**38.23**	**355**	⇑P	**P**	**04 28 21.4**	**-0.2**
	baz=38,SNR=14						
219A	**White Tail Can**	**38.34**	**357**	⇓P	**P**	**04 28 22.6**	**0.0**
	baz=39,SNR=14						
224A	**Corundas Mount**	**38.37**	**2**	⇑P	**P**	**04 28 22.8**	**0.0**
	baz=39,SNR=14						
226A	**Malaga, Loving**	**38.43**	**4**	⇑P	**P**	**04 28 23.4**	**+0.1**
	baz=39,SNR=18						
216A	**Three Points,**	**38.52**	**354**	⇓P	**P**	**04 28 24.0**	**-0.1**
	baz=39						
GDL2	**Guadalupe Moun**	**38.55**	**3**	*e*P	**P**	**04 28 23.9**	**-0.4**
	0.7nm,0.4s,mb3.7						
214A	**Organ Pipe Nat**	**38.64**	**352**	⇓P	**P**	**04 28 25.1**	**+0.1**
	baz=39						
121A	**Cookes Peak, D**	**38.81**	**359**	⇑P	**P**	**04 28 26.5**	**0.0**
	baz=39						
120A	**U Bar Ranch, L**	**38.85**	**358**	⇑P	**P**	**04 28 27.0**	**+0.2**
	baz=39,SNR=8.4						
122A	**Conniff Cattle**	**38.97**	**360**	⇓P	**P**	**04 28 27.5**	**-0.4**
	baz=39						
125A	**Gardner Draw,**	**38.99**	**3**	⇑P	**P**	**04 28 28.1**	**+0.1**
	baz=39,SNR=9.3						
124A	**Stringfield Ra**	**39.00**	**2**	⇓P	**P**	**04 28 28.3**	**+0.2**
	baz=39,SNR=23						
117A	**Oracle**	**39.01**	**355**	⇑P	**P**	**04 28 28.4**	**+0.2**
	baz=39						
126A	**Clayton Basin,**	**39.02**	**4**	⇑P	**P**	**04 28 27.8**	**-0.4**
	baz=39						
118A	**Homack Ranch,**	**39.02**	**356**	⇓P	**P**	**04 28 27.9**	**-0.3**
	baz=39						
127A	**Arkansas Junct**	**39.09**	**5**	⇑P	**P**	**04 28 28.9**	**+0.1**
	baz=39						
116A	**Eloy**	**39.10**	**354**	⇓P	**P**	**04 28 29.2**	**+0.3**
	baz=39,SNR=5.1						
119A	**Ashpeak Ranch,**	**39.10**	**357**	⇓P	**P**	**04 28 28.7**	**-0.2**
	baz=39						
LPAZ	**La Paz**	**39.19**	**108**	P	**P**	**04 28 30.6**	**+0.7**
	1.5nm,1.0s,mb3.7,baz=269,slow=7.5,SNR=4.2						
SDV	**Santo Domingo**	**39.27**	**68**	*e*P	**P**	**04 28 27.1**	**-3.6**
	9.6nm,0.8s,mb4.6						
115A	**Sonoran Desert**	**39.30**	**353**	⇑P	**P**	**04 28 31.2**	**+0.6**
	baz=40						
CPRX	**Cap Rock**	**39.41**	**4**	*e*P	**P**	**04 28 31.2**	**-0.3**
	6.2nm,1.1s,mb4.2						
Z20A	**Nine Sixteen R**	**39.41**	**358**	⇑P	**P**	**04 28 31.7**	**+0.2**
	baz=40						
114A	**Black Gap (USA**	**39.43**	**352**	⇓P	**P**	**04 28 31.8**	**+0.1**
	baz=40						
112A	**Yuma**	**39.49**	**350**	⇓P	**P**	**04 28 32.5**	**+0.3**
	baz=40						
Z22A	**Elephant Butte**	**39.52**	**360**	⇓P	**P**	**04 28 32.6**	**+0.1**
	baz=40,SNR=9.1						
113A	**Mohawk Valley,**	**39.58**	**351**	⇑P	**P**	**04 28 33.1**	**+0.2**
	baz=40,SNR=9.5						
Z21A	**St. Cloud Mine**	**39.58**	**359**	⇓P	**P**	**04 28 33.4**	**+0.4**
	baz=40						
Z25A	**Roswell**	**39.60**	**3**	⇓P	**P**	**04 28 33.4**	**+0.2**
	baz=40,SNR=20						
Z26A	**Caprock**	**39.64**	**4**	⇑P	**P**	**04 28 33.3**	**-0.2**
	baz=40,SNR=6.5						
Z17A	**San Carlos Hig**	**39.71**	**355**	⇓P	**P**	**04 28 34.3**	**+0.3**
	baz=40						
Z27A	**Tatum**	**39.74**	**5**	⇑P	**P**	**04 28 34.3**	**+0.1**
	baz=40,SNR=17						
Z13A	**Yuma Proving G**	**39.98**	**351**	⇑P	**P**	**04 28 36.5**	**+0.2**
	baz=40,SNR=5.1						
SWSC	**Sam W. Stewart**	**40.11**	**348**	⇓P	**P**	**04 28 37.6**	**+0.2**
	baz=40,SNR=8.8						
Y17A	**Roosevelt**	**40.14**	**355**	⇑P	**P**	**04 28 38.0**	**+0.5**
	baz=40,SNR=10						
Y18A	**Canyon Day Jun**	**40.15**	**356**	⇓P	**P**	**04 28 38.3**	**+0.6**
	baz=40,SNR=8.9						
Y20A	**Horse Springs,**	**40.20**	**358**	⇑P	**P**	**04 28 38.5**	**+0.4**
	baz=40,SNR=10						
Y22A	**Socorro**	**40.20**	**360**	⇑P	**P**	**04 28 38.1**	**0.0**
	baz=40,SNR=15						
Y23A	**Lovelace Mesa,**	**40.21**	**1**	⇓P	**P**	**04 28 39.5**	**+1.4**
	baz=40						
Y24A	**Capitan**	**40.22**	**2**	⇑P	**P**	**04 28 38.4**	**+0.1**
	baz=40,SNR=6.5						
Y25A	**Mesa, Roswell**	**40.25**	**3**	⇓P	**P**	**04 28 38.3**	**-0.1**
	baz=40,SNR=19						
Y21A	**Point of Rocks**	**40.28**	**359**	⇑P	**P**	**04 28 38.6**	**-0.2**
	baz=40,SNR=11						
Y19A	**Nutrioso**	**40.28**	**357**	⇓P	**P**	**04 28 38.8**	**+0.1**
	baz=40,SNR=11						
Y27A	**Causey**	**40.31**	**5**	⇑P	**P**	**04 28 38.2**	**-0.8**
	baz=40,SNR=6.7						
Y16A	**Circle Bar Ran**	**40.38**	**354**	⇑P	**P**	**04 28 39.3**	**-0.3**
	baz=41,SNR=17						
BNM	**Barren Site**	**40.42**	**0**	*e*P	**P**	**04 28 39.1**	**-0.8**
	7.7nm,1.2s,mb4.3						
MSTX	**Muleshoe**	**40.43**	**5**	⇑P	**P**	**04 28 39.6**	**-0.4**
	baz=41,SNR=12						
LENM	**Lemitar**	**40.43**	**360**	*e*P	**P**	**04 28 39.8**	**-0.2**
Y15A	**Casa Rosa Ranc**	**40.55**	**353**	⇑P	**P**	**04 28 40.9**	**0.0**
	baz=41,SNR=17						
Y13A	**Salome**	**40.61**	**351**	⇓P	**P**	**04 28 41.5**	**0.0**
	baz=41						
Y14A	**Wickenburg**	**40.62**	**352**	⇓P	**P**	**04 28 41.0**	**-0.5**
	baz=41,SNR=7.3						
LAZ	**Ladron**	**40.67**	**360**	*e*P	**P**	**04 28 41.8**	**-0.2**
	5.8nm,1.2s,mb4.1						
X21A	**Alamocita Cree**	**40.72**	**359**	⇑P	**P**	**04 28 42.7**	**+0.3**
	baz=41,SNR=13						
BC3	**Big Chuckw Mtn**	**40.73**	**349**	⇑P	**P**	**04 28 42.8**	**+0.2**
	baz=41,SNR=12						
X19A	**St. Johns**	**40.76**	**357**	⇑P	**P**	**04 28 43.0**	**+0.3**
	baz=41,SNR=5.4						
X17A	**Forest Lakes**	**40.77**	**355**	⇑P	**P**	**04 28 43.1**	**+0.3**
	baz=41,SNR=16						
X20A	**Quemado**	**40.84**	**358**	⇑P	**P**	**04 28 43.8**	**+0.4**
	baz=41,SNR=6.0						
PFO	**Pinyon Flat Ob**	**40.89**	**348**	⇑P	**P**	**04 28 43.9**	**+0.2**
	baz=41						
PFO	**Pinyon Flat Ob**	**40.89**	**348**	*e*P	**P**	**04 28 44.0**	**+0.2**
	16nm,1.2s,mb4.5						
X18A	**Snowflake**	**40.90**	**356**	⇑P	**P**	**04 28 44.2**	**+0.3**
	baz=41						
X16A	**Lo Mia Camp, P**	**40.91**	**354**	⇓P	**P**	**04 28 44.5**	**+0.6**
	baz=41,SNR=14						
X26A	**CR and CF Fran**	**40.92**	**4**	⇓P	**P**	**04 28 43.8**	**-0.3**
	baz=41						
MURC	**Murrieta**	**41.04**	**347**	⇓P	**P**	**04 28 44.9**	**-0.1**
	baz=41						
X15A	**Humboldt**	**41.06**	**353**	⇓P	**P**	**04 28 45.5**	**+0.4**
	baz=41,SNR=8.1						
X14A	**Yava**	**41.12**	**352**	⇓P	**P**	**04 28 46.4**	**+0.7**
	baz=41,SNR=8.0						
IRM	**Iron Mountain**	**41.17**	**350**	⇓P	**P**	**04 28 46.3**	**+0.2**
	baz=41,SNR=9.0						
BELC	**Belle Mtn.**	**41.18**	**349**	⇓P	**P**	**04 28 46.4**	**+0.3**
	baz=41,SNR=6.3						
ANMO	**Albuquerque**	**41.22**	**1**	*e*P	**P**	**04 28 47.0**	**+0.5**
	11nm,1.5s,mb4.3						
X13A	**Yucca**	**41.38**	**351**	⇑P	**P**	**04 28 47.9**	**+0.1**
	baz=42						
W21A	**San Fidel**	**41.39**	**359**	⇓P	**P**	**04 28 48.4**	**+0.6**
	baz=42,SNR=7.5						
W20A	**Ramah**	**41.42**	**358**	⇓P	**P**	**04 28 48.7**	**+0.6**
	baz=42,SNR=7.1						
W23A	**Werner Place,**	**41.43**	**1**	⇑P	**P**	**04 28 48.4**	**+0.2**
	baz=42						
W26A	**Owens Ranch, T**	**41.46**	**4**	⇑P	**P**	**04 28 48.5**	**0.0**
	baz=42						
W18A	**Petrified Fore**	**41.47**	**357**	⇑P	**P**	**04 28 49.2**	**+0.7**
	baz=42						
W27A	**Bowe Ranch, En**	**41.49**	**5**	⇑P	**P**	**04 28 49.2**	**+0.5**
	baz=42						
W24A	**Lazy 6 Ranch,**	**41.50**	**2**	⇓P	**P**	**04 28 49.1**	**+0.3**
	baz=42,SNR=20						
W25A	**X Bar L Ranch,**	**41.55**	**3**	⇓P	**P**	**04 28 48.9**	**-0.2**
	baz=42						
W16A	**Flagstaff**	**41.59**	**354**	⇓P	**P**	**04 28 49.7**	**+0.2**
	baz=42						
W15A	**Williams**	**41.75**	**353**	⇑P	**P**	**04 28 51.2**	**+0.4**
	baz=42						
BFSC	**Mount Baldy St**	**41.76**	**347**	⇓P	**P**	**04 28 51.8**	**+0.9**
	baz=42						
GMRC	**Granite Mounta**	**41.87**	**349**	⇓P	**P**	**04 28 52.2**	**+0.4**
	baz=42,SNR=7.4						
W13A	**Hualapai Mount**	**41.88**	**351**	⇑P	**P**	**04 28 52.5**	**+0.6**
	baz=42,SNR=10						
W14A	**Seligman**	**41.88**	**352**	⇑P	**P**	**04 28 52.3**	**+0.4**
	baz=42,SNR=6.0						
WUAZ	**Wupatki**	**41.99**	**355**	⇓P	**P**	**04 28 53.5**	**+0.7**
	baz=42,SNR=8.9						
WUAZ	**Wupatki**	**41.99**	**355**	*e*P	**P**	**04 28 53.6**	**+0.8**
	14nm,1.2s,mb4.5						
V19A	**Window Rock**	**42.03**	**357**	⇓P	**P**	**04 28 53.4**	**+0.3**
	baz=42						
V17A	**Tonalea, Kykot**	**42.04**	**355**	⇓P	**P**	**04 28 53.7**	**+0.5**
	baz=42,SNR=15						
HEC	**Hector,Ludlow**	**42.05**	**348**	⇑P	**P**	**04 28 53.5**	**+0.3**
	baz=42						
LDFC	**Landfair**	**42.06**	**350**	*e*P	**P**	**04 28 55.1**	**+1.8**
	26nm,1.2s,mb4.7						
V18A	**Ganado**	**42.07**	**356**	⇓P	**P**	**04 28 53.5**	**+0.1**
	baz=42,SNR=11						
V26A	**Tequesquite Ra**	**42.16**	**4**	⇓P	**P**	**04 28 53.7**	**-0.5**
	baz=42						
V22A	**San Miguel Ran**	**42.18**	**0**	⇓P	**P**	**04 28 55.1**	**+0.8**
	baz=42,SNR=7.3						
V14A	**Boquillas Ranc**	**42.30**	**353**	⇑P	**P**	**04 28 56.2**	**+0.9**
	baz=42,SNR=17						
V15A	**Kaibab Nationa**	**42.37**	**354**	⇑P	**P**	**04 28 56.9**	**+1.0**
	baz=43,SNR=23						
EDW2	**Edwards Air Fo**	**42.45**	**346**	⇑P	**P**	**04 28 57.1**	**+0.5**
	baz=43,SNR=6.0						
TUQ	**Turquoise Moun**	**42.55**	**349**	⇑P	**P**	**04 28 57.7**	**+0.3**
	baz=43						
U16A	**Tuba City**	**42.59**	**355**	⇑P	**P**	**04 28 58.0**	**+0.4**
	baz=43,SNR=5.4						
GSC	**Goldstone**	**42.60**	**348**	⇑P	**P**	**04 28 58.0**	**+0.3**
	baz=43,SNR=12						
GSC	**Goldstone**	**42.60**	**348**	*e*P	**P**	**04 28 58.1**	**+0.4**
	13nm,1.0s,mb4.6						
U19A	**Dine' College,**	**42.61**	**357**	⇑P	**P**	**04 28 58.4**	**+0.6**
	baz=43,SNR=6.5						
V13A	**Grand Canyon W**	**42.64**	**352**	⇑P	**P**	**04 28 58.1**	**0.0**
	baz=43,SNR=9.8						
V12A	**Nelson**	**42.65**	**350**	⇑P	**P**	**04 28 58.1**	**-0.1**
	baz=43,SNR=7.4						
MIAR	**Mount Ida**	**42.72**	**16**	*e*P	**P**	**04 28 58.4**	**-0.4**
	12nm,1.0s,mb4.6						
U26A	**Atchley Ranch,**	**42.76**	**4**	⇑P	**P**	**04 28 58.7**	**-0.3**
	baz=43						
U18A	**Rough Rock, Ch**	**42.77**	**356**	⇓P	**P**	**04 28 59.5**	**+0.4**
	baz=43,SNR=16						
LRMC	**Laurel Mountai**	**42.96**	**347**	⇓P	**P**	**04 29 01.2**	**+0.5**
	baz=43,SNR=5.8						
U15A	**North Rim**	**42.99**	**354**	⇑P	**P**	**04 29 01.5**	**+0.6**
	baz=43,SNR=7.0						
U17A	**Shonto**	**43.01**	**356**	⇑P	**P**	**04 29 01.8**	**+0.8**
	baz=43,SNR=5.2						
PPT	**Papeete**	**43.04**	**251**	*e*S	**S**	**04 35 17.4**	**-10**
	302nm,26.2s						
PPT				*e*LQ		04 38 52.4	
	1μm,29.8s						
PPT				*e*LR	LR	04 40 39.7	
	2μm,26.5s,baz=82						
PPT	**Papeete**	**43.04**	**251**	LR	LR	04 42 28.4	
	comp=Z,743nm,20.1s,MS4.6,baz=110,slow=30						
U14A	**Mt Trumbull**	**43.08**	**353**	⇓P	**P**	**04 29 02.4**	**+0.8**
	baz=43,SNR=15						
T19A	**Beclabito**	**43.14**	**358**	⇑P	**P**	**04 29 02.6**	**+0.5**
	baz=43,SNR=7.3						
U13A	**Pakoon Wash**	**43.19**	**352**	⇑P	**P**	**04 29 02.9**	**+0.4**
	baz=43,SNR=6.9						
T22A	**Edith**	**43.27**	**0**	⇑P	**P**	**04 29 03.4**	**+0.2**
	baz=44,SNR=18						
T17A	**Navajo Res., N**	**43.41**	**355**	⇓P	**P**	**04 29 04.8**	**+0.5**
	baz=44,SNR=9.1						
SHPR	**Sheep Range**	**43.46**	**350**	*e*P	**P**	**04 29 05.0**	**+0.2**
MPMC	**Manual Prospec**	**43.47**	**348**	⇑P	**P**	**04 29 05.5**	**+0.6**
	baz=44,SNR=7.8						
T18A	**Mexican Hat**	**43.48**	**357**	⇑P	**P**	**04 29 05.2**	**+0.3**
	baz=44,SNR=14						
MVCO	**Mesa Verde**	**43.50**	**358**	⇓P	**P**	**04 29 05.2**	**+0.2**
	baz=44,SNR=12						
MVCO	**Mesa Verde**	**43.50**	**358**	*e*P	**P**	**04 29 04.8**	**-0.1**
	19nm,1.1s,mb4.7						
T15A	**Red Dirt Ranch**	**43.58**	**354**	⇓P	**P**	**04 29 06.3**	**+0.7**
	baz=44,SNR=9.8						
U10A	**Ash Meadows, A**	**43.59**	**349**	⇑P	**P**	**04 29 06.6**	**+0.9**
	baz=44,SNR=7.4						
VES	**Vestal, Richgr**	**43.63**	**346**	⇓P	**P**	**04 29 06.5**	**+0.4**
	baz=44,SNR=6.2						
T14A	**Hurricane**	**43.70**	**353**	⇓P	**P**	**04 29 07.0**	**+0.3**
	baz=44						
FURC	**Furnace Creek,**	**43.74**	**348**	⇓P	**P**	**04 29 07.5**	**+0.5**
	baz=44,SNR=6.6						
T13A	**Saint George**	**43.77**	**352**	⇑P	**P**	**04 29 07.4**	**+0.2**
	baz=44,SNR=11						
CFAA	**Coronel Fontan**	**43.91**	**130**	P	**P**	**04 29 09.7**	**+1.2**
	1.0nm,1.0s,mb3.5,baz=293,slow=7.3,SNR=11						
SDCO	**Great Sand Dun**	**44.02**	**2**	*e*P	**P**	**04 29 09.4**	**+0.2**
	24nm,1.7s,mb4.6						
S18A	**Hurst Farm, Bl**	**44.04**	**356**	⇓P	**P**	**04 29 09.7**	**+0.3**
	baz=44,SNR=12						
S17A	**Black Ridge (B**	**44.04**	**356**	⇑P	**P**	**04 29 09.2**	**-0.2**
	baz=44,SNR=10.0						
S19A	**Harvey Farm, M**	**44.05**	**357**	⇑P	**P**	**04 29 09.4**	**-0.1**
	baz=44,SNR=5.8						
T11A	**Corn Creek, Al**	**44.19**	**350**	⇓P	**P**	**04 29 11.2**	**+0.7**
	baz=44,SNR=19						
S15A	**Panguitch**	**44.23**	**354**	⇑P	**P**	**04 29 11.7**	**+0.8**
	baz=44,SNR=14						
S13A	**Holt Ranch, En**	**44.32**	**352**	⇑P	**P**	**04 29 12.3**	**+0.7**
	baz=45,SNR=20						
S14A	**Cedar City**	**44.40**	**353**	⇑P	**P**	**04 29 12.7**	**+0.4**
	baz=45,SNR=7.2						
PV01	**Paradox Valley**	**44.42**	**358**	*e*P	**P**	**04 29 12.4**	**0.0**
	916nm,1.2s						
R20A	**Redvale**	**44.47**	**358**	⇑P	**P**	**04 29 12.9**	**+0.1**
	baz=45,SNR=6.2						
R22A	**Saguache, Gunn**	**44.49**	**0**	⇑P	**P**	**04 29 13.1**	**+0.1**
	baz=45,SNR=11						
S12A	**Delamar Landin**	**44.49**	**351**	⇑P	**P**	**04 29 13.4**	**+0.4**
	baz=45						
R19A	**Curley Farm, L**	**44.60**	**357**	⇓P	**P**	**04 29 14.1**	**+0.3**
	baz=45,SNR=6.0						
R21A	**Cimarron**	**44.63**	**359**	⇓P	**P**	**04 29 14.3**	**+0.2**
	baz=45						
S11A	**Rachel**	**44.67**	**350**	⇑P	**P**	**04 29 14.8**	**+0.4**
	baz=45						
R18A	**Canyonlands Na**	**44.73**	**357**	⇑P	**P**	**04 29 15.0**	**+0.1**
	baz=45,SNR=9.0						
R16A	**Teasdale**	**44.74**	**355**	⇑P	**P**	**04 29 15.5**	**+0.5**
	baz=45,SNR=7.6						
R15A	**Junction**	**44.75**	**354**	⇑P	**P**	**04 29 15.6**	**+0.5**
	baz=45,SNR=6.0						
R17A	**Hanksville Air**	**44.82**	**356**	⇓P	**P**	**04 29 15.6**	**0.0**
	baz=45,SNR=24						
PLAL	**Pickwick Lake**	**44.92**	**22**	*e*P	**P**	**04 29 15.1**	**-1.4**
	31nm,1.4s,mb4.9						
R13A	**O'Grain Ranch,**	**44.92**	**352**	⇑P	**P**	**04 29 17.0**	**+0.6**
	baz=45						
MSU	**Marysvale**	**45.04**	**354**	*e*P	**P**	**04 29 18.2**	**+0.9**
S10A	**Tonopah Range,**	**45.09**	**349**	⇓P	**P**	**04 29 18.2**	**+0.4**
	baz=45,SNR=14						
Q21A	**Lamborn Mesa,**	**45.10**	**359**	⇑P	**P**	**04 29 18.0**	**+0.3**
	baz=45,SNR=11						
Q22A	**Crested Butte,**	**45.12**	**0**	⇑P	**P**	**04 29 18.4**	**+0.4**
	baz=45,SNR=9.3						
R12A	**Pony Springs,**	**45.16**	**351**	⇓P	**P**	**04 29 18.6**	**+0.3**
	baz=45,SNR=15						
Q20A	**Ridgley Place,**	**45.23**	**358**	⇓P	**P**	**04 29 19.0**	**+0.1**
	baz=46						
Q19A	**Hogan Spring (**	**45.27**	**357**	⇑P	**P**	**04 29 19.4**	**+0.3**
	baz=46,SNR=8.6						
MLAC	**Mammoth Lakes**	**45.28**	**347**	⇑P	**P**	**04 29 19.4**	**+0.2**
	baz=46						
R11A	**Troy Canyon, C**	**45.33**	**350**	⇑P	**P**	**04 29 19.8**	**+0.2**
	baz=46,SNR=14						
Q16A	**Castle Valley**	**45.35**	**355**	⇓P	**P**	**04 29 20.4**	**+0.7**
	baz=46,SNR=5.6						
R10A	**Warm Springs**	**45.40**	**350**	⇑P	**P**	**04 29 20.4**	**+0.2**
	baz=46						
SMCO	**Snowmass**	**45.44**	**360**	*e*P	**P**	**04 29 22.1**	**+1.6**
	9.5nm,1.1s,mb4.5						
Q18A	**Rafter H Ranch**	**45.46**	**356**	⇑P	**P**	**04 29 20.9**	**+0.3**
	baz=46,SNR=5.5						
SRU	**San Rafael**	**45.49**	**356**	⇓P	**P**	**04 29 21.2**	**+0.3**
	baz=46,SNR=7.0						
SRU	**San Rafael**	**45.49**	**356**	*e*P	**P**	**04 29 22.1**	**+1.2**
	114nm,2.6s,mb5.2						
Q15A	**Fillmore**	**45.54**	**354**	⇑P	**P**	**04 29 21.5**	**+0.2**
	baz=46						
CBKS	**Cedar Bluff**	**45.56**	**8**	*e*P	**P**	**04 29 21.4**	**-0.1**
	42nm,1.3s,mb5.2						
Q14A	**Sevier Lake (B**	**45.63**	**353**	⇑P	**P**	**04 29 22.4**	**+0.4**
	baz=46,SNR=13						
P21A	**Newcastle**	**45.78**	**359**	⇑P	**P**	**04 29 23.5**	**+0.3**
	baz=46						
Q11A	**Duckwater**	**45.83**	**350**	⇑P	**P**	**04 29 24.0**	**+0.4**
	baz=

PHWY	Pilot Hill	47.58	1	eP	P	04 29 37.6	+0.3
	17nm,1.3s,mb4.9						
N13A	Wendover, West	47.59	353	⇓P	P	04 29 37.3	0.0
	baz=48,SNR=6.2						
N13A	Wendover, West	47.59	353	eP	P	04 29 38.5	+1.2
	11nm,0.8s,mb4.9						
M22A	Cedar Creek Ra	47.66	0	⇓P	P	04 29 37.9	0.0
	baz=48						
N12A	Clover Valley,	47.70	352	⇓P	P	04 29 38.3	+0.1
	baz=48,SNR=5.3						
N12A	Clover Valley,	47.70	352	eP	P	04 29 39.1	+0.9
	8.9nm,1.1s,mb4.7						
M20A	Sweetwater, Wa	47.76	359	⇓P	P	04 29 38.6	-0.1
	baz=48						
BEKR	Beckwourth	47.77	346	⇑P	P	04 29 38.8	+0.1
	baz=48,SNR=7.9						
M16A	Huntsville	47.77	355	⇑P	P	04 29 38.7	0.0
	baz=48						
N11A	Elko Archery C	47.77	351	⇑P	P	04 29 38.8	+0.1
	baz=48						
M18A	Lyman	47.77	357	⇓P	P	04 29 38.7	-0.1
	baz=48						
M21A	Separation Pea	47.86	360	⇑P	P	04 29 38.9	-0.6
	baz=48						
M15A	Larsen Ranch,	47.99	354	⇑P	P	04 29 40.3	-0.2
	baz=48						
HWUT	Hardware Ranch	48.05	355	eP	P	04 29 41.3	+0.4
	6.8nm,0.9s,mb4.7						
M13A	Montello	48.08	353	⇓P	P	04 29 41.1	0.0
	baz=48,SNR=8.7						
M13A	Montello	48.08	353	eP	P	04 29 41.0	-0.1
	15nm,1.3s,mb4.9						
M14A	Sheep Mountain	48.12	354	⇓P	P	04 29 41.2	-0.3
	baz=48,SNR=9.4						
L21A	Rawlins	48.22	360	⇑P	P	04 29 41.5	-0.7
	baz=48						
M12A	Wells	48.23	352	⇓P	P	04 29 41.8	-0.5
	baz=48,SNR=8.0						
L18A	Fontenelle, Gr	48.26	357	⇑P	P	04 29 41.8	-0.8
	baz=48,SNR=7.1						
L20A	Wamsutter	48.28	359	⇓P	P	04 29 42.2	-0.4
	baz=48,SNR=7.9						
L22A	Ellis Ranch, M	48.29	0	⇑P	P	04 29 42.4	-0.3
	baz=48,SNR=11						
M11A	Holland Ranch,	48.37	351	⇓P	P	04 29 42.9	-0.5
	baz=49						
L19A	Farson	48.41	358	⇑P	P	04 29 43.6	0.0
	baz=49,SNR=15						
L16A	Fish Haven	48.45	356	⇑P	P	04 29 43.7	-0.3
	baz=49,SNR=8.1						
L17A	Cokeville	48.49	356	⇑P	P	04 29 43.5	-0.8
	baz=49						
L15A	Malad City	48.52	355	⇓P	P	04 29 43.9	-0.6
	baz=49,SNR=11						
M10A	I.L. Ranch, Tu	48.58	350	⇓P	P	04 29 45.0	0.0
	baz=49						
L14A	Malta	48.63	354	⇓P	P	04 29 44.9	-0.5
	baz=49,SNR=15						
L13A	Double Diamond	48.77	353	⇑P	P	04 29 46.3	-0.1
	baz=49,SNR=6.5						
K20A	Yellowstone Ra	48.93	359	⇑P	P	04 29 47.1	-0.5
	baz=49						
L12A	House Creek Ra	48.96	352	⇑P	P	04 29 47.7	-0.3
	baz=49,SNR=11						
WDC	Whiskeytown Da	48.99	344	eP	P	04 29 47.3	-0.9
	9.3nm,1.0s,mb4.8						
BW06	Boulder Array	49.08	357	⇑P	P	04 29 48.3	-0.5
	baz=49,SNR=8.7						
BW06	Boulder Array	49.08	357	eP	P	04 29 48.6	-0.2
	28nm,1.8s,mb5.0						
PDAR	Pinedale Array	49.08	357	P	P	04 29 47.2	-1.6
	3.3nm,1.0s,mb4.3,baz=174,slow=6.0,SNR=18						
L11A	Cat Creek Ranc	49.09	351	⇓P	P	04 29 49.0	+0.1
	baz=49,SNR=8.2						
K19A	Absolon Red Bu	49.11	358	⇓P	P	04 29 47.9	-1.2
	baz=49,SNR=11						
L10A	Juniper Basin	49.11	351	⇓P	P	04 29 48.7	-0.4
	baz=49						
K14A	Jones Ranch, D	49.13	354	⇑P	P	04 29 48.7	-0.5
	baz=49						
K13A	Stover Farm, H	49.34	353	⇑P	P	04 29 50.5	-0.3
	baz=50						
K12A	Draper Farm, C	49.43	352	⇑P	P	04 29 51.4	-0.1
	baz=50						
J18A	Kendall Valley	49.55	357	⇑P	P	04 29 51.7	-0.7
	baz=50						
KHMM	Horse Mountain	49.60	343	eP	P	04 29 55.6	+2.8
	20nm,1.1s,mb5.1						
MOD	Modoc	49.69	347	eP	P	04 29 53.9	+0.4
	21nm,1.4s,mb5.0						
J16A	Bone	49.71	356	⇓P	P	04 29 53.3	-0.4
	baz=50						
K11A	Parker Ranch,	49.72	351	⇑P	P	04 29 53.1	-0.6
	baz=50,SNR=9.8						
J17A	Brown Place, J	49.74	356	⇑P	P	04 29 53.6	-0.3
	baz=50						
RRI2	Red Ridge	49.76	356	eP	P	04 29 54.3	+0.3
	7.2nm,0.9s,mb4.7						
K10A	MacKenzie Ranc	49.86	350	⇓P	P	04 29 54.4	-0.4
	baz=50,SNR=5.9						
TPAW	Teton Pass	49.88	356	eP	P	04 29 54.8	-0.1
	8.2nm,0.9s,mb4.8						
J15A	Blackfoot	49.91	355	⇑P	P	04 29 55.0	-0.1
	baz=50						
LOHW	Long Hollow	49.98	357	eP	P	04 29 55.5	-0.1
	87nm,2.7s,mb5.3						
I18A	Diamond G Ranc	50.02	357	⇑P	P	04 29 55.6	-0.4
	baz=50,SNR=12						
J12A	Stokes Ranch,	50.06	352	⇓P	P	04 29 55.9	-0.4
	baz=50						
J13A	Cove Ranch, Pi	50.09	353	⇓P	P	04 29 56.4	-0.1
	baz=50,SNR=8.4						
YBH	Yreka Blue Hor	50.12	345	eP	P	04 29 57.6	+0.8
	8.0nm,1.1s,mb4.7						
HLID	Hailey	50.28	353	⇓P	P	04 29 57.9	0.0
	baz=50,SNR=7.6						
HLID	Hailey	50.28	353	eP	P	04 29 58.0	+0.1
	9.5nm,1.3s,mb4.7						
I17A	Pilgrim Ck.	50.28	357	⇑P	P	04 29 57.7	-0.3
	baz=50						
IMW	Indian Meadow	50.28	356	eP	P	04 29 57.2	-0.8
	118nm,2.4s,mb5.5						
I16A	Newdale	50.30	356	⇓P	P	04 29 58.0	-0.1
	baz=50,SNR=8.9						
MFID	Camas Ranch	50.32	352	⇓P	P	04 29 58.2	-0.1
	baz=51,SNR=16						
RSSD	Black Hills	50.44	3	eP	P	04 29 59.3	+0.1
	8.8nm,1.0s,mb4.7						
I15A	Monteview	50.50	355	⇑P	P	04 29 59.8	+0.1
	baz=51,SNR=7.9						
I14A	Mackay	50.53	354	⇓P	P	04 29 60.0	+0.1
	baz=51,SNR=7.9						
J09A	Fry Pan Ranch,	50.57	350	⇑P	P	04 30 00.5	+0.4
	baz=51,SNR=15						
I13A	Wildhorse Cree	50.59	353	⇑P	P	04 30 00.4	+0.1
	baz=51,SNR=8.7						
I12A	Atlanta	50.60	352	⇑P	P	04 30 00.4	0.0
	baz=51						
K05A	Summer Lake	50.60	347	⇓P	P	04 30 00.6	+0.1
	baz=51,SNR=8.2						
J08A	Circle Bar Ran	50.71	349	⇓P	P	04 30 01.3	+0.1
	baz=51,SNR=8.9						
H17A	Grant Village	50.76	357	⇓P	P	04 30 02.7	+1.1
	baz=51						
I11A	Placerville	50.83	352	⇑P	P	04 30 01.9	-0.2
	baz=51,SNR=7.0						
YMR	Madison River	51.05	356	eP	P	04 30 04.1	+0.3
	25nm,1.4s,mb5.0						
H16A	Russell Place,	51.11	356	⇑P	P	04 30 04.4	+0.2
	baz=51,SNR=21						
CPUP	Villa Florida	51.13	119	P	P	04 30 06.0	+1.3
	2.9nm,0.9s,mb4.2,baz=275,slow=11,SNR=4.1						
CPUP				LR	LR	04 47 58.0	
	comp=Z,281nm,20.7s,MS4.3,baz=184,slow=32						
H15A	Lima	51.13	355	⇓P	P	04 30 04.4	0.0
	baz=51,SNR=6.8						
H14A	Leadore	51.20	354	⇓P	P	04 30 05.3	+0.4
	baz=51,SNR=11						
QLMT	Earthquake Lak	51.24	356	eP	P	04 30 05.7	+0.4
H13A	Challis	51.25	353	⇑P	P	04 30 05.1	-0.1
	baz=52,SNR=7.4						
H12A	Diamond D Ranc	51.30	353	⇑P	P	04 30 05.8	+0.1
	baz=52,SNR=6.0						
MCMT	McKenzie Canyo	51.36	355	eP	P	04 30 05.9	-0.2
	6.9nm,1.2s,mb4.5						
I07A	Izee	51.60	348	⇓P	P	04 30 07.9	0.0
	baz=52,SNR=13						
H10A	Noah's Angus R	51.61	351	⇓P	P	04 30 06.8	-1.1
	baz=52						
H11A	Donnelly	51.61	352	⇑P	P	04 30 06.6	-1.3
	baz=52						
G18A	Lazy EL Ranch,	51.62	358	⇑P	P	04 30 07.2	-0.9
	baz=52,SNR=8.0						
G15A	Dillon	51.66	355	⇑P	P	04 30 08.1	-0.2
	baz=52						
G16A	Moss Hill, Enn	51.67	356	⇑P	P	04 30 08.1	-0.2
	baz=52,SNR=6.3						
G13A	Cobalt	51.77	353	⇓P	P	04 30 09.1	0.0
	baz=52						
H08A	Prairie City	51.87	349	⇓P	P	04 30 09.8	-0.1
	baz=52,SNR=20						
DLMT	Dillon	51.87	355	eP	P	04 30 10.1	+0.2
	13nm,1.3s,mb4.7						
BOZ	Bozeman (W)	52.07	356	⇑P	P	04 30 10.8	-0.6
	baz=52						
BOZ	Bozeman (W)	52.07	356	eP	P	04 30 10.8	-0.6
	23nm,2.2s,mb4.7						
F16A	Kennard Place,	52.21	356	⇓P	P	04 30 11.7	-0.7
	baz=52,SNR=5.4						
F18A	Big Timber	52.22	358	⇑P	P	04 30 11.1	-1.4
	baz=52,SNR=8.6						
VIPM	Ingram Point	52.24	348	P	P	04 30 12.8	+0.2
F17A	Fitzpatrick Pl	52.27	357	⇑P	P	04 30 12.2	-0.6
	baz=52						
G11A	Walters Elk Ra	52.33	352	⇑P	P	04 30 12.7	-0.6
	baz=53						
F15A	Butte	52.33	355	⇑P	P	04 30 12.6	-0.7
	baz=53						
G10A	Bishop Farm, J	52.35	351	⇑P	P	04 30 13.1	-0.3
	baz=53						
G09A	Cove	52.45	350	⇑P	P	04 30 13.7	-0.5
	baz=53,SNR=18						
F12A	Elk City	52.54	353	⇓P	P	04 30 14.0	-0.8
	baz=53						
G08A	Pilot Rock	52.66	349	⇓P	P	04 30 15.6	-0.2
	baz=53,SNR=5.2						
H04A	Detroit Lake	52.76	346	⇓P	P	04 30 16.3	-0.2
	baz=53						
F11A	Grangeville	52.79	352	⇑P	P	04 30 16.1	-0.6
	baz=53						
E17A	Martinsdale	52.83	357	⇑P	P	04 30 16.3	-0.7
	baz=53						
E18A	Harlowton	52.89	357	⇑P	P	04 30 16.8	-0.6
	baz=53,SNR=9.0						
E15A	Deer Lodge	52.92	355	⇓P	P	04 30 16.8	-0.8
	baz=53						
G06A	Carlson Farm,	52.94	348	⇓P	P	04 30 17.6	-0.2
	baz=53						
E16A	East Helena	52.96	356	⇑P	P	04 30 17.9	0.0
	baz=53						
E14A	Clinton	52.99	354	⇓P	P	04 30 17.7	-0.5
	baz=53						
F10A	Beach Ranch, E	53.03	351	⇑P	P	04 30 17.9	-0.6
	baz=53						
HRY	Holter Researc	53.15	356	eP	P	04 30 18.9	-0.4
E12A	Beaver Dam Sad	53.23	353	⇑P	P	04 30 19.6	-0.3
	baz=54						
E11A	Bogner Ranch,	53.26	352	⇑P	P	04 30 19.4	-0.7
	baz=54						
G04A	Mulino	53.32	346	⇓P	P	04 30 20.8	+0.2
	baz=54						
D16A	Dana Ranch, Ca	53.44	356	⇓P	P	04 30 21.3	-0.2
	baz=54,SNR=6.4						
CHMT	Chamberlain Mo	53.47	355	eP	P	04 30 21.0	-0.7
D17A	Six Diamond Ra	53.51	357	⇑P	P	04 30 21.4	-0.6
	baz=54,SNR=14						
D18A	Linhart Farms,	53.51	358	⇑P	P	04 30 21.6	-0.4
	baz=54,SNR=12						
E10A	Myers Farm, Un	53.51	351	⇑P	P	04 30 21.6	-0.5
	baz=54						
D15A	Lincoln	53.53	355	⇓P	P	04 30 22.1	0.0
	baz=54						
D14A	Greenough	53.66	354	⇓P	P	04 30 22.6	-0.5
	baz=54						
D13A	Huson	53.77	354	⇑P	P	04 30 23.5	-0.3
	baz=54						
SLMT	Seeley Lake	53.81	354	eP	P	04 30 23.1	-1.1
D12A	Red Ives Fores	53.83	353	⇑P	P	04 30 23.5	-0.8
	baz=54						
D11A	Klaveano Farm,	53.95	352	⇓P	P	04 30 24.4	-0.8
	baz=54						
F04A	Amboy	53.99	347	⇑P	P	04 30 25.0	-0.6
	baz=54						
C17A	Wharram Farm,	53.99	357	⇓P	P	04 30 24.6	-1.0
	baz=54,SNR=20						
D10A	Wagner Farm, O	54.09	351	⇑P	P	04 30 25.7	-0.6
	baz=54						
MVL	Millersville	54.17	29	eP	P	04 30 28.2	+1.2
	26nm,1.4s,mb5.0						
C16A	Fuhringer Ranc	54.22	356	⇓P	P	04 30 26.4	-0.8
	baz=54,SNR=8.3						
C15A	Salmond Ranch,	54.26	355	⇓P	P	04 30 26.8	-0.7
	baz=54,SNR=8.5						
D09A	Jones Farm, Ri	54.27	350	⇓P	P	04 30 27.6	0.0
	baz=54						
EGMT	Eagleton	54.34	358	⇑P	P	04 30 26.9	-1.1
	baz=55,SNR=5.1						
EGMT	Eagleton	54.34	358	eP	P	04 30 27.7	-0.3
	29nm,1.5s,mb5.0						
C13A	Hot Springs	54.36	354	⇑P	P	04 30 27.3	-0.8
	baz=55						
C14A	Swan Lake	54.36	354	⇑P	P	04 30 27.6	-0.6
	baz=55						
JTMT	Jette	54.39	354	eP	P	04 30 27.6	-0.9
YBMT	Yellow Bay	54.48	354	eP	P	04 30 27.6	-1.5
BSMT	Bassoo Peak	54.55	354	eP	P	04 30 28.4	-1.2
LON	Longmire	54.63	347	eP	P	04 30 31.2	+1.0
	7.0nm,1.0s,mb4.7						
OD2	Odessa Site #2	54.65	350	eP	P	04 30 29.6	-0.7
B17A	L&G Farms, Che	54.65	357	⇑P	P	04 30 29.5	-0.8
	baz=55						
B18A	Beardsley Farm	54.71	358	⇓P	P	04 30 29.4	-1.3
	baz=55,SNR=6.2						
DGMT	Dagmar	54.78	2	⇓P	P	04 30 30.7	-0.5
	baz=55						
DGMT	Dagmar	54.78	2	eP	P	04 30 29.1	-2.1
	128nm,2.0s,mb5.6						
B15A	Bradely Ranch,	54.79	355	⇓P	P	04 30 30.5	-0.8
	baz=55,SNR=7.2						
B16A	M & M Farms, S	54.83	356	⇑P	P	04 30 31.1	-0.5
	baz=55,SNR=9.5						
E03A	Lebam	54.84	346	⇑P	P	04 30 31.4	-0.3
	baz=55						
C09A	Chrisman Ranch	54.98	351	⇓P	P	04 30 32.5	-0.2
	baz=55						
B13A	Whitefish	55.03	354	⇓P	P	04 30 33.1	0.0
	baz=55						
D05A	Enumclaw	55.09	348	⇓P	P	04 30 33.0	-0.5
	baz=55						
ETW	Entiat	55.15	349	P	P	04 30 34.9	+1.0
A18A	Metzger Ranch,	55.23	358	⇓P	P	04 30 33.8	-0.7
	baz=56,SNR=10						
NEW	Newport	55.25	352	eP	P	04 30 34.2	-0.5
	24nm,1.5s,mb5.0						
A17A	Triple J Farms	55.30	357	⇓P	P	04 30 34.5	-0.5
	baz=56,SNR=24						
B11A	Sandpoint	55.32	352	⇑P	P	04 30 35.1	-0.1
	baz=56						
A16A	West Butte Ran	55.35	356	⇑P	P	04 30 34.8	-0.6
	baz=56,SNR=32						
AGMN	Agassiz Refuge	55.41	9	eP	P	04 30 35.0	-0.9
	8.6nm,1.0s,mb4.7						
A15A	Johnson Ranch,	55.47	355	⇑P	P	04 30 35.6	-0.6
	baz=56,SNR=19						
A14A	Double T Ranch	55.52	355	⇓P	P	04 30 36.7	+0.2
	baz=56						
B09A	Rice	55.56	351	⇑P	P	04 30 37.1	+0.2
	baz=56						
A13A	Flathead Natio	55.58	354	⇓P	P	04 30 37.8	+0.8
	baz=56						
WALA	Waterton Lakes	55.65	354	eP	P	04 30 37.7	+0.2
	0.4nm,1.1s						
B08A	Colville Reser	55.69	350	⇓P	P	04 30 37.5	-0.3
	baz=56						
NLWA	Neilton Lookou	55.70	346	⇑P	P	04 30 38.6	+0.7
	baz=56						
NLWA	Neilton Lookou	55.70	346	eP	P	04 30 39.0	+1.1
	20nm,1.0s,mb5.1						
EYMN	Ely	55.88	12	eP	P	04 30 39.4	+0.2
	21nm,1.2s,mb5.0						
JCW	Jim Creek	56.03	348	eP	P	04 30 40.2	0.0
RPW	Rockport	56.19	348	eP	P	04 30 40.9	-0.5
A07A	Ashnola River,	56.55	349	⇓P	P	04 30 43.8	-0.1
	baz=57						
A05A	Maple Falls	56.83	348	⇑P	P	04 30 46.1	+0.2
	baz=57						
ULM	Lac du Bonnet	57.31	8	P	P	04 30 47.5	-1.9
	17nm,1.1s,mb5.0,baz=206,slow=7.6,SNR=9.1						
EDM	Edmonton	59.73	356	eP	P	04 31 05.7	-0.5
FFC	Flin Flon	61.13	3	eP	P	04 31 14.0	-1.6
	6.9nm,1.0s,mb4.7						
FCC	Fort Churchill	65.85	7	eP	P	04 31 45.6	-1.3
	0.5nm,1.0s						
DLBC	Dease Lake	67.34	347	eP	P	04 31 56.1	-0.2
YKA	Yellowknife Ar	69.03	356	P	P	04 32 05.2	-1.7
	7.5nm,0.9s,mb4.6,baz=165,slow=6.1,SNR=70						
YKA	Yellowknife Ar	69.03	356	P	P	04 32 05.2	-1.7
BMRM	Bremner River	73.41	342	eP	P	04 32 33.4	0.0
	434nm,0.6s						
OHAK	Old Harbor	73.81	336	eP	P	04 32 36.1	+0.2
DAWY	Dawson	74.47	346	eP	P	04 32 39.0	-0.6
PMR	Palmer	75.32	341	eP	P	04 32 44.5	-0.1
	18nm,0.8s,mb5.0						
PMR				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
EGAK	Eagle	75.49	346	eP	P	04 32 44.8	-0.6
	comp=Z,17nm,1.0s,mb4.9						
RSO	Redoubt South	75.78	338	eP	P	04 32 46.0	-1.2
MCK	McKinley	76.82	342	eP	P	04 32 52.2	-0.8
	comp=Z,14nm,1.0s,mb4.9						
INK	Inuvik	76.93	350	eP	P	04 32 52.8	-0.8
	comp=Z,9.6nm,1.1s,mb4.6						
SVW2	Sparrevohn	77.25	338	eP	P	04 32 55.2	-0.3
PPLA	Purkeypile	77.26	341	eP	P	04 32 55.0	-0.6
	comp=Z,41nm,1.5s,mb5.1						
KTH	Kantishna Hill	77.31	341	eP	P	04 32 54.8	-1.1
	comp=Z,24nm,1.0s,mb5.1						
COLA	College	77.35	343	eP	P	04 32 55.5	-0.6
	comp=Z,14nm,1.4s,mb4.7						
BPAW	Bear Paw Mtn.	77.72	342	eP	P	04 32 56.8	-1.3
	comp=Z,8.2nm,1.0s,mb4.6						
COLD	Coldfoot	79.73	344	eP	P	04 33 08.8	-0.3
	comp=Z,14nm,1.3s,mb4.7						
QSPA	South Pole Qui	83.58	180	eP	P	04 33 32.0	+2.7
	comp=Z,9.2nm,1.0s,mb4.9						
DZM	Mont Dzumac	84.49	248	eLR	LR	04 59 51.0	
	comp=Z,279nm,29.0s						
CN2	Changchun	121.11	318	ePdif	Pdif	04 36 17.8	-2.8
CN2				PP	PP	04 41 25.0	+0.7
CN2				SS	SS	04 57 54.8	-2.3
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,400nm,19.0s,MS5.1						
BJI	Beijing	128.98	318	PKP	PKPdf	04 40 08.6	-1.3
BJI				LR	LR		
	comp=N,260nm,18.8s,MS5.0						
BJI				LR	LR		
	comp=E,210nm,21.1s,MS5.0						
BJI				LR	LR		
	comp=Z,160nm,25.3s,MS4.6						
NJ2	Nanjing	130.38	307	ePKP	PKPdf	04 40 08.3	-4.5
BRTR	Keskin Array B	131.55	41	PKP	PKPdf	04 40 15.6	+0.8
	comp=Z,0.7nm,0.9s,baz=190,slow=3.6,SNR=3.6						
MKAR	Makanchi Array	139.07	350	PKP	PKPdf	04 40 30.2	+1.6
	comp=Z,0.6nm,0.9s,baz=25,slow=3.2,SNR=3.8						
WMQ	Urumqi	140.66	343	ePKP	PKPdf	04 40 32.8	+1.2
GYA	Guiyang	142.36	306	PKP	PKPdf	04 40 32.8	-2.3
GYA				PP	PP	04 43 43.3	+1.6
GYA				PKS		04 44 07.6	
GYA				SKKS	SKKSac	04 50 32.8	-2.9
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,120nm,20.9s,MS4.8						
GYA				LR	LR		
	comp=E,110nm,21.5s,MS4.8						
GYA				LR	LR		
	comp=Z,120nm,21.6s,MS4.6						
CD2	Chengdu	142.36	314	PKP	PKPdf	04 40 36.5	+1.5
AML	Almayashu	144.50	359	ePKPdf	PKPdf	04 40 37.0	-1.4
KMI	Kunming	146.11	306	PKPbc	PKPbc	04 40 42.0	-0.6
CMAR	Chiang Mai Arr	152.13	298	PKPbc	PKPbc	04 40 57.9	-0.3
	comp=Z,1.2nm,0.4s,baz=63,slow=0.8,SNR=4.5						

IDC 19 04:42:12.4±13.0, 30°51N×103°50E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.7/3, Error ellipse: s-maj=324.7km s-min=35.8km az=12.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.37	65	P	P	04 47 01.4	+0.1
	2.9nm,0.7s,baz=257,slow=9.4,SNR=8.5						
MKAR	Makanchi Array	23.09	321	P	P	04 47 20.0	+0.3
	2.5nm,1.0s,baz=122,slow=12,SNR=13						
YKA	Yellowknife Ar	82.41	17	P	P	04 54 35.6	-0.4
	0.3nm,0.8s,baz=328,slow=5.5,SNR=4.4						

*ISCJB **19** 04:49:36.3±1.2, 32°4N±0°3×105°5E±0°5, h10km, mb3.4/4, Error ellipse: s-maj=67.4km s-min=22.5km az=145.3*
*IDC **19** 04:49:36.7±1.3, 32°49N×105°57E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=73.1km s-min=25.0km az=58.0*

ISC 19 04:49:38.3±1.3, 32°5N±0°3×105°4E±0°4, h10km, n5, σ1§67/5, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	8.23	328	eP	Pn	04 51 35.4	-2.3
GTA				pP		04 51 39.3	
GTA				sP		04 51 40.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR	Makanchi Array	22.69	316	P	P	04 54 40.5	+0.7
	comp=Z,0.6nm,0.8s,mb3.1,baz=117,slow=12,SNR=5.3						
ZALV	Zalesovo Beam	25.96	332	P	P	04 55 12.2	+1.4
	comp=Z,0.5nm,0.4s,mb3.4,baz=146,slow=10,SNR=2.6						
ASAR	Alice Springs	62.15	150	P	P	04 59 59.2	-0.5
	comp=Z,0.7nm,0.8s,mb3.9,baz=338,slow=7.2,SNR=4.9						
YKA	Yellowknife Ar	79.99	18	P	P	05 01 47.5	+0.1
	comp=Z,0.1nm,0.3s,mb3.2,baz=328,slow=5.6,SNR=2.9						

IDC 19 05:04:10.3±9.2, 5°82S×104°34W, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.7/12, mbtmp3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.7/25, Error ellipse: s-maj=200.2km s-min=169.6km az=115.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	34.95	1	P	P	05 11 05.5	+1.3
	0

NOA	NORSAR Array B	63.99	327	P	P	05 23 16.0	-0.7
	comp=E,0.7nm,0.6s,mb3.9,baz=72,slow=6.8,SNR=3.0						
YKA	Yellowknife Ar	80.33	17	P	P	05 24 55.0	+0.6
	comp=E,0.3nm,0.6s,mb3.4,baz=328,slow=5.2,SNR=5.5						

*ISCJB **19** 05:14:37.2±0.4, 32°.51N±0°.04×105°.46E±0°.05, h10km, mb3.9/11, Error ellipse: s-maj=6.6km s-min=5.4km az=156.0*
*IDC **19** 05:14:37.4±0.8, 32°.41N×105°.18E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.8/26, mbtmp3.8/11, ML3.8/2, Error ellipse: s-maj=37.4km s-min=16.7km az=53.0*
*NEIC **19** 05:14:39.2±0.5, 32°.49N×105°.35E, h10km, mb4.3/2, Error ellipse: s-maj=21.5km s-min=9.5km az=58.0*
*BJI **19** 05:14:39.7, 32°.56N×105°.49E, h12km, mb4.1/2, ML3.9/9, Ms3.9/4, Ms7 3.6/5*

ISC 19 05:14:39.4±0.4, 32°.51N±0°.04×105°.41E±0°.05, h10km, n23, σ1§31/29, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.12	222	Pg	Pg	05 15 21.3	+1.2
CD2				Sg	Sg	05 15 45.8	-1.9
CD2				smax			
	comp=N,3μm,0.6s						
XAN	Xi'an	3.32	62	Pg	Pg	05 15 40.0	-3.0
XAN				Sn	Sn	05 16 14.6	+3.8
XAN				Sg	Sg	05 16 23.4	-2.5
XAN				smax			
	comp=N,290nm,0.7s						
XAN				smax			
	comp=E,110nm,0.6s						
LZH	Lanzhou	3.80	341	Pn	Pn	05 15 40.4	+2.5
LZH				Pg	Pg	05 15 50.1	-2.1
LZH				Sg	Sg	05 16 37.3	-4.0
LZH				smax			
	comp=N,530nm,0.6s						
LZH				smax			
	comp=E,880nm,0.8s						
LZH				LR	LR		
	comp=N,790nm,6.2s						
LZH				LR	LR		
	comp=Z,900nm,6.9s						
GYA	Guiyang	6.13	169	Pg	Pn	05 16 18.6	+8.6
GYA				Sg	Sn	05 17 21.1	+0.9
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,110nm,0.7s						
WHN	Wuhan	7.88	102	Pn	Pn	05 16 35.4	+1.3
WHN				Sn	Sn	05 18 01.6	-1.7
WHN				LR	LR		
	comp=N,720nm,4.9s						
WHN				LR	LR		
	comp=E,670nm,3.6s						
WHN				LR	LR		
	comp=Z,520nm,4.2s						
GTA	Gaotai	8.24	328	eP	Pn	05 16 39.0	0.0
GTA				pP		05 16 42.3	
GTA				S	Sn	05 18 14.5	+2.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GTA				LR	LR		
	comp=N,340nm,9.8s						
GTA				LR	LR		
	comp=E,190nm,10.7s						
GTA				LR	LR		
	comp=Z,260nm,11.3s						
BTO	Baotou	8.89	23	eP	Px	05 17 15.9	
LSA	Lhasa	12.54	261	P	Px	05 18 03.9	
LSA				S	Sx	05 20 16.4	
LSA				LR	LR		
	comp=E,500nm,11.5s						
LSA				LR	LR		
	comp=Z,320nm,10.7s						
SONM	Songino Array	15.33	3	Pn	Pn	05 18 16.4	+0.7
	comp=Z,0.7nm,0.3s,baz=174,slow=14,SNR=2.5						
KSRS	Korea Array	19.09	69	P	Pn	05 19 03.9	+1.0
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=7.2						
MK31	Makanchi Array	22.70	316	eP	P	05 19 41.5	+0.4
MKAR	Makanchi Array	22.70	316	P	P	05 19 39.8	-1.3
	comp=Z,1.1nm,0.6s,mb3.5,baz=110,slow=14,SNR=13						
ZALV	Zalesovo Beam	25.98	332	P	P	05 20 12.1	+0.1
	comp=Z,0.7nm,0.4s,mb3.6,baz=129,slow=11,SNR=2.9						
KURK	Kurchatov	26.83	321	P	P	05 20 18.9	-0.8
	comp=Z,0.8nm,0.5s,mb3.5,baz=130,slow=9.2,SNR=5.6						
AML	Almayashu	26.86	300	eP	P	05 20 21.6	+1.5
	comp=Z,1.5nm,0.4s,mb3.9						
ARCES	ARCESS Array B	56.44	335	P	P	05 24 20.6	-0.2
	comp=Z,2.4nm,0.8s,mb4.3,baz=89,slow=7.6,SNR=4.0						
AKASG	Malin Array Be	57.24	313	P	P	05 24 25.9	-0.9
	comp=Z,1.2nm,0.5s,mb4.2,baz=67,slow=7.6,SNR=3.3						
WRAB	Tennant Creek	59.04	148	eP	P	05 24 40.0	+0.3
	comp=Z,2.4nm,0.6s,mb4.4						
ASAR	Alice Springs	62.14	150	P	P	05 25 00.9	+0.2
	comp=Z,0.9nm,0.6s,mb4.1,baz=331,slow=6.5,SNR=11						
NOA	NORSAR Array B	64.08	327	P	P	05 25 12.2	-1.0
	comp=Z,0.5nm,0.6s,mb3.7,baz=41,slow=20,SNR=2.6						
STKA	Stephens Creek	72.60	148	P	P	05 26 06.3	-0.5
	comp=Z,0.9nm,0.5s,mb4.0,baz=328,slow=19,SNR=2.9						
YKA	Yellowknife Ar	80.03	18	P	P	05 26 48.9	+0.2
	comp=Z,0.3nm,0.7s,mb3.4,baz=327,slow=4.8,SNR=6.2						
YKA	Yellowknife Ar	80.03	18	P	P	05 26 48.9	+0.2

IDC 19 05:17:16.9±1.4, 35°.98N×92°.89E, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.5/24, mbtmp3.5/6, ML3.3/3, Error ellipse: s-maj=86.7km s-min=21.0km az=54.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.40	327	Pn	Pn	05 20 27.4	-0.9
	0.5nm,0.3s,baz=136,slow=13,SNR=8.5						
KURK	Kurchatov	17.97	329	P	Pn	05 21 26.3	-1.6
	0.0nm,0.3s,baz=137,slow=12,SNR=3.4						
CMAR	Chiang Mai Arr	18.26	161	P	Pn	05 21 32.6	+0.9
	0.0nm,0.3s,baz=337,slow=12,SNR=4.3						
BVAR	Borovoye Array	23.25	324	P	P	05 22 26.1	+0.3
	0.7nm,0.7s,baz=153,slow=11,SNR=4.2						
BRTR	Keskin Array B	46.20	293	P	P	05 25 43.2	-0.3
	1.2nm,1.0s,baz=114,slow=8.2,SNR=4.5						
ASAR	Alice Springs	70.87	140	P	P	05 28 35.7	-0.1
	0.6nm,0.8s,baz=323,slow=5.8,SNR=2.8						

DJA 19 05:20:18, 0°.21N×98°.63E, h25km, MLv4.0/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	1.11	59	P	Pn	05 20 37.9	-0.1
GSI	Gunungsitoli	1.51	316	P	Pn	05 20 43.6	+0.1
SISI	Saibi	1.59	163	P	Pn	05 20 44.9	+0.3
SISI				S	Sn	05 21 05.9	+1.5
TRSI	Tarutung	1.83	10	P	Pn	05 20 48.6	+0.7
PPI	Padang Panjang	1.89	111	P	Pn	05 20 49.2	+0.5
PDSI	Padang	2.14	121	P	Pn	05 20 52.9	+0.7
BKNI	Bangkinang	2.41	87	P	Pn	05 21 00.6	+4.7
SDSI	Sungai Dareh	3.02	112	P	Pn	05 21 04.4	+0.1
IPM	Ipoh	4.87	29	P	Pn	05 21 30.7	+1.0
MNAI	Manna	6.27	136	P	Pn	05 21 49.5	+0.6

*ISCJB **19** 05:21:37.2±0.8, 6°.7N±0°.2×33°.7W±0°.2, h10km, mb3.6/8, MS4.0/7, Error ellipse: s-maj=31.8km s-min=13.9km az=145.0*
*IDC **19** 05:21:37.3±1.0, 6°.75N×33°.73W, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/26, mbtmp3.8/9, ML4.0/1, MS3.9/8, Ms1 4.0/8, ms1mx3.6/37, Error ellipse: s-maj=40.7km s-min=18.3km az=139.0*
*NEIC **19** 05:21:39.0±0.7, 6°.73N×33°.77W, h10km, Error ellipse: s-maj=29.4km s-min=13.1km az=143.0*

ISC 19 05:21:39.1±0.8, 6°.7N±0°.2×33°.8W±0°.1, h10km, n18, σ0§88/12, mb3.6/8, MS4.0/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	Babate	18.65	64	P	Pn	05 25 58.5	+0.9
	0.5nm,0.3s,baz=270,slow=7.1,SNR=5.0						
BBTS				LR	LR	05 31 55.0	
	comp=Z,223nm,18.5s,baz=199,slow=33						
BBTS	Babate	18.65	64	P	Pn	05 25 58.5	+0.8
BBTS				LR	LR	05 31 55.0	
SIV	San Ignacio	35.23	230	P	P	05 28 34.2	+0.2
	2.8nm,0.8s,mb4.2,baz=79,slow=10,SNR=16						
CPUP	Villa Florida	40.04	214	LR	LR	05 45 30.2	
	comp=Z,205nm,18.6s,MS4.0,baz=350,slow=36						
ROSC	El Rosal	40.41	270	LR	LR	05 47 45.8	
	comp=Z,96nm,18.3s,MS3.7,baz=203,slow=39						
LPAZ	La Paz	41.00	236	P	P	05 29 24.5	+1.8
	4.4nm,0.8s,mb4.1,baz=75,slow=6.7,SNR=25						
LPAZ				LR	LR	05 46 28.3	
	comp=Z,120nm,18.6s,MS3.8,baz=25,slow=36						
ATAH	Atahualpa	46.58	254	LR	LR	05 51 02.8	
	comp=Z,152nm,19.3s,MS4.0,baz=207,slow=38						
NNA	Nana	46.71	247	LR	LR	05 49 09.3	
	comp=Z,189nm,19.1s,MS4.1,baz=336,slow=35						
CFAA	Coronel Fontan	50.37	219	P	P	05 30 35.0	-1.6
	0.1nm,0.5s,mb3.1,baz=325,slow=7.2,SNR=4.0						
GERES	GERESS Array B	57.92	35	P	P	05 31 31.3	-0.2
	0.2nm,0.2s,mb3.7,baz=249,slow=7.0,SNR=4.0						
PLCA	Paso Flores	58.08	212	LR	LR	05 56 29.6	
	comp=Z,230nm,18.6s,MS4.3,baz=44,slow=36						
NOA	NORSAR Array B	63.66	23	LR	LR	05 56 05.5	
	comp=Z,60nm,18.9s,MS3.8,baz=220,slow=32						
BRTR	Keskin Array B	68.37	50	P	P	05 32 40.4	-0.7
	0.3nm,0.4s,mb3.7,baz=249,slow=4.0,SNR=3.3						
TXAR	Lajitas Array	69.24	299	P	P	05 32 46.7	0.0
	0.2nm,0.6s,mb3.2,baz=102,slow=5.8,SNR=4.5						
TXAR	Lajitas Array	69.24	299	P	P	05 32 46.7	0.0
PDAR	Pinedale Array	75.05	319	P	P	05 33 21.6	+0.3
	0.6nm,0.8s,mb3.5,baz=95,slow=7.9,SNR=4.7						
YKA	Yellowknife Ar	79.84	332	P	P	05 33 47.2	-0.4
	0.2nm,0.7s,mb3.2,baz=100,slow=5.3,SNR=4.1						
YKA	Yellowknife Ar	79.84	332	P	P	05 33 47.2	-0.4

IDC 19 05:29:21.7±1.4, 31°.46N×103°.89E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=84.6km s-min=25.2km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.59	319	P	P	05 34 23.3	-0.3
	0.3nm,0.7s,baz=108,slow=14,SNR=3.0						
ZALV	Zalesovo Beam	26.32	334	P	P	05 34 59.6	+0.7
	1.1nm,0.8s,baz=135,slow=13,SNR=4.0						
ASAR	Alice Springs	61.89	149	P	P	05 39 43.0	+0.1
	0.2nm,0.3s,baz=338,slow=7.1,SNR=4.3						
YKA	Yellowknife Ar	81.41	17	P	P	05 41 39.9	-0.1
	0.2nm,0.5s,baz=331,slow=5.3,SNR=5.7						

IDC 19 05:32:31.4±2.8, 4°.65S×129°.74E, h0km, mb3.9/2, mb1 3.6/3, mb1mx3.5/16, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=275.3km s-min=31.9km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	19.32	168	P	Pn	05 36 58.5	-0.9
	0.1nm,0.3s,baz=351,slow=10,SNR=3.3						
SONM	Songino Array	56.15	341	P	P	05 42 13.0	+0.3
	3.6nm,0.8s,baz=168,slow=7.6,SNR=3.6						
MKAR	Makanchi Array	66.13	326	P	P	05 43 20.6	0.0
	0.2nm,0.4s,baz=119,slow=5.1,SNR=2.1						

*BJI **19** 05:40:33.5, 7°.55S×131°.05E, h40km, mB5.4/25, mb5.3/44, Ms5.0/22, MS7 4.6/24*
*MOS **19** 05:40:38.6±1.1, 6°.95S×130°.49E, h33km, mb5.5/51, Error ellipse: s-maj=11.9km s-min=6.3km az=106.3*
*NEIC **19** 05:40:39.6±0.1, 7°.14S×130°.58E, h35km, mb5.3/49, Error ellipse: s-maj=6.2km s-min=4.0km az=71.0*
*GCMT **19** 05:40:39.6±0.3, 7°.22S×130°.74E, h72km±2km, MW5.1/60, Moment Tensor Solution. s48,c59; s60,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.36±.21; $M_{\theta\theta}$-2.02±.18; $M_{\phi\phi}$-2.34±.21; $M_{r\theta}$0.68±.15; $M_{r\phi}$-3.80±.18; $M_{\theta\phi}$1.71±.17; Best double couple: $M_0$5.52000×10^{16} NP1:ϕ_s237.00000°, δ37.00000°, λ110.00000°. NP2: ϕ_s33.00000°, δ55.00000°, λ75.00000°. Principal axes: T 4.7820, Plg75.0000°, Azm260.0000°; N 1.4760, Plg12.0000°, Azm41.0000°; P -6.2580, Plg9.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **19** 05:40:40.6±0.5, 7°.23S±0°.03×130°.68E±0°.03, h65km±4km, mb5.2/121 Error ellipse: s-maj=5.5km s-min=4.3km az=148.6*
*IDC **19** 05:40:42.4±2.3, 7°.06S×130°.60E, h56km±20km, mb5.0/24, mb1 4.9/26, mb1mx4.9/27, mbtmp5.0/26, ML5.1/1, MS4.0/7, Ms1 4.0/7, ms1mx3.6/23, Error ellipse: s-maj=16.3km s-min=10.4km az=77.0*
*DJA **19** 05:40:44, 7°.28S×130°.84E, h65km, Mw5.5/20*

ISC 19 05:40:43.2±0.5, 7°.19S±0°.03×130°.67E±0°.03, h70km±4km, h36km±2.0km: pP-P, n647, σ1§10/321, mb5.2/120, 135C-122D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	2.57	53	P	Pn	05 41 23.5	+1.0
MSAI	Masohi	4.20	335	P	Pn	05 41 46.0	+1.2
AAI	Ambon	4.27	325	P	Pn	05 41 45.8	+0.1
NLAI	Namlea	5.30	318	P	Pn	05 42 01.0	+1.2
	2μm,0.7s,4.1nm						
KAKA	Kakadu	5.75	163	eP	Pn	05 42 04.0	-2.1
	717nm,0.3s						
KAKA				eS	Sn	05 43 07.1	-3.7
KAKA	Kakadu	5.75	163	ePn	Pn	05 42 04.0	-2.1
	355nm,0.8s						
KAKA				eSn	Sn	05 43 08.6	-2.2
KAKA	Kakadu	5.75	163	P	Pn	05 42 04.2	-1.9
	2μm,0.5s,15nm						
SWI	Sorong	6.31	5	P	Pn	05 42 12.2	-1.5
	360nm,0.8s,7.3nm						
LBMI	Labuha	7.24	334	P	Pn	05 42 29.7	+3.3
	723nm,0.9s,8μm2.6nm						
TNTI	Ternate	8.57	337	P	Pn	05 42 45.1	+0.5
	284nm,1.1s,4μm						
KDI	Kendari	8.64	291	P	Pn	05 42 49.0	+3.5
	124nm,1.3s,1μm						
SMPI	Sarmi	9.53	58	P	Pn	05 42 58.7	+1.0
	104nm,1.0s,1μm						
MMPI	Merauke	9.70	98	P	Pn	05 42 59.8	-0.3
	2μm,0.7s						
LUWI	Luwuk	9.97	307	P	Pn	05 43 09.3	+5.6
	357nm,1.1s,3μm						
APSI	Ampana	10.95	304	P	Pn	05 43 21.1	+4.0
	473nm,1.2s,4μm						
JAY	Jayapura	11.02	66	P	Pn	05 43 17.8	-0.3
KAPI	Kappang	11.07	281	Pn	Pn	05 43 22.9	+4.1
	527nm,0.8s,SNR=6.7						
KAPI	Kappang	11.07	281	P	Pn	05 43 18.4	-0.4
	2.0nm,0.3s,baz=170,slow=5.1,SNR=16						
KAPI				S	Sn	05 45 24.3	+3.3
	0.6nm,0.3s,baz=177,slow=19,SNR=2.2						
KAPI				LR	LR	05 48 36.0	
	comp=Z,336nm,19.1s,baz=114,slow=43						
TTSI	Tana Toraja	11.57	290	P	Pn	05 43 30.4	+4.8
	127nm,0.9s,1μm						
MRSI	Marisa	11.57	311	P	Pn	05 43 28.1	+2.5
	256nm,1.1s						
FITZ	Fitzroy Crossi	11.90	204	↓iP	Pn	05 43 25.6	-4.5
	152nm,0.5s						
FITZ				eS	Sn	05 45 28.3	-13
FITZ	Fitzroy Crossi	11.90	204	P	Pn	05 43 25.6	-4.5
	18nm,0.3s,baz=35,slow=9.2,SNR=131						
FITZ				S	Sn	05 45 30.0	-11
	43nm,0.3s,baz=124,slow=15,SNR=16						
FITZ				LR	LR	05 49 04.3	
	comp=Z,700nm,20.0s,baz=27,slow=42						
FITZ	Fitzroy Crossi	11.90	204	ePn	Pn	05 43 25.6	-4.5
	32nm,0.8s						
FITZ				eSn	Sn	05 45 30.2	-11
FITZ	Fitzroy Crossi	11.90	204	P	Pn	05 43 27.3	-2.8
	169nm,0.8s,3μm						
SGSI	Sangihe	11.96	334	P	Pn	05 43 32.2	+1.3
	271nm,1.2s						
WRAB	Tennant Creek	13.16	165	Pn	Pn	05 43 42.0	-5.2
	1μm,0.5s						
WRAB	Tennant Creek	13.16	165	ePn	Pn	05 43 41.7	-5.5
WRAB				eSn	Sn	05 46 01.1	-11
WRAB	Tennant Creek	13.16	165	P	Pn	05 43 42.0	-5.2
	150nm,1.0s,3μm						
COEN	Coen	14.00	120	ePn	Pn	05 43 54.6	-3.7
	1μm,0.8s						
COEN				eSn	Sn	05 46 21.6	-11
COEN	Coen	14.00	120	P	Pn	05 43 54.7	-3.7
	788nm,1.0s,8μm						
KBKI	Kotabaru	14.95	284	P	Pn	05 44 15.1	+4.4
	99nm,1.0s						
KHKI	Kahang-Kahang	14.97	265	P	Pn	05 44 15.9	+4.9
	65nm,1.1s						
SMKI	Samarinda	15.01	296	P	Pn	05 44 15.9	+4.5
	190nm,1.0s						
DAV	Davao City (W)	15.05	340	P	Pn	05 44 16.9	+4.9
	58nm,0.3s,baz=60,slow=11,SNR=8.7						
DAV				S	S	05 47 09.9	-1.4
	50nm,0.3s,baz=85,slow=14,SNR=3.2						
DAV	Davao City (W)	15.05	340	P	Pn	05 44 19.4	+7.4
	SNR=7.7						
DAV				P		05 44 19.4	
	SNR=7.7						
DAV	Davao City (W)	15.05	340	P	Pn	05 44 20.4	+8.4
SRBI	Singaraja	15.35	266	P	Px	05 44 26.6	
BBKI	Banjar Baru	16.19	282	P	Pn	05 44 30.0	+3.5
	736nm,1.1s,7μm						
KMMI	Kalianget	16.58	269	P	Pn	05 44 37.8	+6.5
	172nm,0.9s						
ASAR	Alice Springs	16.67	170	P	Pn	05 44 28.9	-3.5
	27nm,0.3s,baz=2.1,slow=14,SNR=437						
ASAR				S	S	05 47 29.8	-14
	12nm,0.3s,baz=357,slow=27,SNR=9.3						
TSM	Tawau	17.13	311	P	Pn	05 44 38.3	+0.1
MYLDM	Lahad Datu	17.28	315	P	Pn	05 44 41.6	+1.6
MYLDM	Lahad Datu	17.28	315	P	Pn	05 44 42.2	+2.2
	259nm,1.3s,3μm						
MBWA	Marble Bar	17.46	216	ePn	Pn	05 44 39.3	-2.9
	38nm,0.8s						
MBWA				eSn	Sn	05 47 41.8	-14
MBWA	Marble Bar	17.46	216	P	Pn	05 44 39.9	-2.2
	70nm,1.1s						
SDKM	Sandakan	18.53	313	P	Pn	05 44 55.5	+0.3
SJI	Sawahan	18.76	267	P	Pn	05 44 56.3	-1.6
	96nm,0.8s						
KKM	Kota Kinabalu	19.52	312	P	Pn	05 45 04.6	-2.4
KKM	Kota Kinabalu	19.52	312	ePn	Pn	05 45 04.5	-2.4
	121nm,1.1s						
KKM				eSn	Sn	05 48 41.7	-4.0
KKM	Kota Kinabalu	19.52	312	P	Pn	05 45 04.4	-2.5
	125nm,1.2s,1μm						
KDM	Kudat	19.67	315	P	Pn	05 45 06.5	-2.2
CTA	Charters Tower	19.81	132	eP	Pn	05 45 10.8	+0.4
	91nm,1.8s						
CTA				eS	S	05 48 59.0	+11
CTA	Charters Tower	19.81	132	P	Pn	05 45 10.7	+0.3
	3.7nm,0.3s,baz=309,slow=12,SNR=66						
CTA				LR	LR	05 53 31.2	
	comp=Z,1μm,18.8s,baz=323,slow=38						
CTA	Charters Tower	19.81	132	P	Pn	05 45 10.7	+0.3
CTA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,1μm,18.8s						
CTAO	Charters Tower	19.81	132	eP	Pn	05 45 10.7	+0.3
CTAO				eS	S	05 48 54.6	+6.9
CTAO				pmax	pmax		
	comp=Z,859nm,1.9s						
CTAO	Charters Tower	19.81	132	eP	Pn	05 45 10.7	+0.3
	comp=Z,859nm,1.9s						
CTAO				eS	S	05 48 54.6	+6.9
CTAO	Charters Tower	19.81	132	P	Pn	05 45 10.8	+0.4
	comp=Z,212nm,1.9s,comp=Z,3μm						
BTM	Bintulu	20.36	300	P	P	05 45 14.7	+0.4
STKI	Sintang	20.46	290	P	P	05 45 15.9	+0.6
	comp=Z,78nm,1.3s						
PPR	Puerto Princes	20.63	325	eP	P	05 45 16.8	-0.3
SBUM	Sibu	20.76	297	P	P	05 45 19.2	+0.7
SBUM	Sibu	20.76	297	P	P	05 45 18.8	+0.3
KSM	Kuching	22.07	292	P	P	05 45 31.0	-1.5
KSM	Kuching	22.07	292	eP	P	05 45 30.4	-2.1
	comp=Z,196nm,1.6s,mb5.2						
TGY	Tagaytay City	23.26	335	P	P	05 45 44.6	-0.1
	comp=Z,338nm,0.4s,mb6.0,baz=107,slow=6.9,SNR=6.0						
TGY	Tagaytay City	23.26	335	P	P	05 45 44.6	-0.1
TGY				pmax	pmax		
	comp=Z,338nm,0.4s						
FORT	Forrest	23.59	186	eP	P	05 45 48.2	+0.5
	comp=Z,78nm,0.6s,mb5.2						
FORT				eS	S	05 49 55.8	-1.1
FORT	Forrest	23.59	186	eP	P	05 45 48.6	+0.9
	comp=Z,132nm,0.8s,mb5.3						
FORT				eS	S	05 49 59.1	+2.2
GUMO	Guam	25.00	34	P	P	05 45 60.0	-0.6
	comp=Z,52nm,0.7s,mb5.1,baz=16,slow=21,SNR=4.5						
GUMO	Guam	25.00	34	P	P	05 46 00.0	-0.6
GUMO				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.1						
EIDS	Eidsvold	26.58	135	eP	P	05 46 16.4	+1.6
	comp=Z,28nm,1.0s,mb4.8						
STKA	Stephens Creek	26.59	159	eP	P	05 46 16.1	+1.2
	comp=Z,52nm,1.0s,mb5.0						
STKA				eS	S	05 51 14.6	+30
STKA	Stephens Creek	26.59	159	P	P	05 46 16.1	+1.2
	comp=Z,7.2nm,0.4s,mb4.5,baz=336,slow=8.5,SNR=13						
STKA				LR	LR	05 56 32.0	
	comp=Z,530nm,21.1s,baz=125,slow=36						
STKA	Stephens Creek	26.59	159	P	P	05 46 16.1	+1.2
STKA				eP		05 46 16.2	
STKA				LR	LR	05 56 32.0	
KLBR	Kellerberrin	27.11	205	eP	P	05 46 20.6	+1.0
	comp=Z,54nm,1.1s,mb5.0						
KLBR				eS	S	05 51 26.6	+34
MYKOM	Kota Tinggi	28.21	287	P	P	05 46 30.3	+0.6
NWAO	Narrogin (SRO)	28.49	204	P	P	05 46 32.4	+0.6
	comp=Z,18nm,1.0s,mb4.6,baz=36,slow=7.8,SNR=6.0						
NWAO				PcP	PcP	05 49 43.4	+1.1
	comp=Z,21nm,0.8s,baz=74,slow=12,SNR=3.8						
NWAO	Narrogin (SRO)	28.49	204	P	P	05 46 32.4	+0.6
NWAO						05 49 43.4	
NWAO				pmax	pmax		
	comp=Z,18nm,1.0s						
NWAO				pmax	pmax		
	comp=Z,21nm,0.8s						
NWAO	Narrogin (SRO)	28.49	204	P	P	05 46 32.4	+0.6
NWAO				eP		05 46 32.9	
NWAO				PcP	PcP	05 49 43.4	+1.1
KGM	Kluang	28.79	288	P	P	05 46 35.6	+0.8
KTGM	Kuala Trenggan	30.16	294	P	P	05 46 48.1	+1.1
FRIM	Kepong	30.79	289	P	P	05 46 52.4	0.0
IPM	Ipoh	31.78	291	P	P	05 47 02.1	+0.9
KULM	Kulim	32.42	292	P	P	05 47 07.8	+1.0
KULM	Kulim	32.42	292	eP	P	05 47 07.5	+0.7
	comp=Z,58nm,1.0s,mb5.3						
CAN	Canberra	32.67	152	eP	P	05 47 11.0	+2.3
CAN				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.1						
CAN	Canberra	32.67	152	eP	P	05 47 11.0	+2.3
	comp=Z,23nm,0.8s,mb5.0						
CNB	Canberra Magne	32.84	151	eP	P	05 47 13.3	+3.2
TOO	Toolangi	33.10	158	eP	P	05 47 15.2	+2.7
QIZ	Qiongzhong	33.17	322	P	P	05 47 13.8	+0.5
Q

NJ2			pP	pP	05 48 26.9	-6.7
NJ2			sP	sP	05 48 31.6	-10
NJ2			PP	PP	05 49 54.0	+2.8
NJ2			S	**S**	**05 54 23.5**	**+2.5**
NJ2			sS	sS	05 54 41.5	-9.0
NJ2			pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3					
NJ2			pmax	pmax		
	comp=Z,500nm,4.2s					
NJ2			LR	LR		
	comp=N,330nm,13.3s					
NJ2			LR	LR		
	comp=E,160nm,13.8s					
NJ2			LR	LR		
	comp=Z,230nm,15.0s					
WHN	**Wuhan**	**40.65 338**	P	**P**	**05 48 16.3**	**-0.3**
WHN			pmax	pmax		
	comp=Z,55nm,0.7s,mb5.5					
GYA	**Guiyang**	**40.76 326**	⇑*i*P	**P**	**05 48 18.9**	**+1.3**
GYA			pP	pP	05 48 30.3	-4.6
GYA			sP	sP	05 48 35.4	-7.6
GYA			PP	PP	05 49 56.3	+3.5
GYA			ScP	ScP	05 54 05.4	+4.1
GYA			sS	sS	05 54 43.3	-10
GYA			SS	SS	05 57 22.8	-4.0
GYA			pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1					
GYA			pmax	pmax		
	comp=Z,170nm,5.3s					
GYA			LR	LR		
	comp=N,630nm,16.8s					
GYA			LR	LR		
	comp=E,580nm,17.0s					
GYA			LR	LR		
	comp=Z,720nm,17.9s					
KMI	**Kunming**	**42.08 321**	P	**P**	**05 48 28.1**	**-0.3**
KMI			pP	pP	05 48 40.6	-5.2
KMI			S	**S**	**05 54 47.3**	**+4.4**
KMI			SS	SS	05 57 49.5	-3.5
KMI			pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9					
KMI			LR	LR		
	comp=N,190nm,13.7s					
KMI			LR	LR		
	comp=E,160nm,10.5s					
KMI			LR	LR		
	comp=Z,180nm,24.5s					
ENH	**Enshi**	**42.44 332**	*e*P	**P**	**05 48 29.8**	**-1.4**
	comp=Z,27nm,0.8s,mb5.0					
MAJO	**Matsushiro**	**44.07 9**	*e*P	**P**	**05 48 43.2**	**-1.1**
MAJO			pmax	pmax		
	comp=Z,83nm,0.9s,mb5.5					
MAJO	**Matsushiro**	**44.07 9**	*e*P	**P**	**05 48 43.2**	**-1.1**
	comp=Z,83nm,0.9s,mb5.5					
MAT	**Matsushiro**	**44.07 9**	P	**P**	**05 48 42.6**	**-1.7**
MAT			S	**S**	**05 55 18.2**	**+6.6**
MJAR	**Matsushiro Arr**	**44.07 9**	P	**P**	**05 48 43.0**	**-1.2**
	comp=Z,42nm,0.9s,mb5.2,baz=190,slow=9.9,SNR=48					
MJAR	**Matsushiro Arr**	**44.07 9**	P	**P**	**05 48 43.0**	**-1.2**
MJAR			pmax	pmax		
	comp=Z,42nm,0.9s					
KS15	**Wonju Array Si**	**44.48 357**	*e*P	**P**	**05 48 48.3**	**+0.8**
KSRS	**Korea Array**	**44.48 357**	P	**P**	**05 48 47.7**	**+0.2**
	comp=Z,6.9nm,0.6s,mb4.6,baz=174,slow=8.9,SNR=19					
KSRS			PcP	PcP	05 50 30.7	+0.8
	comp=Z,2.5nm,0.6s,baz=182,slow=3.3,SNR=5.6					
KSRS	**Korea Array**	**44.48 357**	P	**P**	**05 48 47.7**	**+0.2**
KSRS					05 50 30.7	
KSRS			pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6					
KSRS			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2					
CD2	**Chengdu**	**45.82 327**	P	**P**	**05 49 01.0**	**+2.7**
CD2			pP	pP	05 49 11.0	-4.9
CD2			sP	sP	05 49 14.8	-9.2
CD2			PP	PP	05 50 49.0	+2.0
CD2			S	**S**	**05 55 43.0**	**+5.8**
CD2			sS	sS	05 55 59.4	-7.7
CD2			SS	SS	05 59 01.3	-1.5
CD2			pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1					
CD2			pmax	pmax		
	comp=Z,160nm,5.1s					
XAN	**Xi'an**	**45.89 335**	P	**P**	**05 48 56.8**	**-2.0**
XAN			pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4					
DL2	**Dalian**	**46.62 350**	P	**P**	**05 49 04.5**	**+0.1**
DL2			pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0					
IMP	**Imphal**	**47.86 313**	*ex*	**P**	**05 49 13.0**	**-1.3**
BJT	**Baijiatuau**	**48.85 345**	*e*P	**P**	**05 49 21.1**	**-0.5**
BJT			pmax	pmax		
	comp=Z,44nm,0.6s					
BJT	**Baijiatuau**	**48.85 345**	*e*P	**P**	**05 49 21.1**	**-0.5**
	comp=Z,44nm,0.6s,mb5.6					
BJI	**Beijing**	**48.87 345**	P	**P**	**05 49 20.5**	**-1.2**
BJI			S	**S**	**05 56 26.3**	**+6.2**
BJI			pmax	pmax		
	comp=Z,80nm,0.6s,mb5.8					
BJI			pmax	pmax		
	comp=Z,89nm,3.5s					
BJI			LR	LR		
	comp=N,120nm,19.8s					
BJI			LR	LR		
	comp=E,120nm,19.9s					
BJI			LR	LR		
	comp=Z,110nm,22.2s					
SNY	**Shenyang**	**49.21 353**	⇓P	**P**	**05 49 23.3**	**-1.0**
SNY			S	**S**	**05 56 26.5**	**+1.6**
SNY			pmax	pmax		
	comp=Z,26nm,0.6s,mb5.3					
SNY			pmax	pmax		
	comp=Z,220nm,3.5s					
SNY			LR	LR		
	comp=Z,220nm,24.1s					
SHL	**Shillong**	**49.82 312**	*e*P	**P**	**05 49 27.0**	**-2.3**
SHL			*ex*	x	05 50 58.0	
LZH	**Lanzhou**	**49.89 331**	*e*P	**P**	**05 49 29.5**	**-0.1**
LZH			pP	pP	05 49 38.1	-9.4
LZH			sP	sP	05 49 43.0	-12
LZH			PP	PP	05 51 22.0	-3.2
LZH			S	**S**	**05 56 34.3**	**-0.3**
LZH			sS	sS	05 56 52.5	-12
LZH			SS	SS	06 00 06.1	-2.3
LZH			pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0					
LZH			pmax	pmax		
	comp=Z,120nm,4.0s					
VLA	**Vladivostok**	**50.08 1**	*e*P	**P**	**05 49 30.5**	**-0.4**
VLA			pmax	pmax		
	comp=Z,69nm,1.2s,mb5.5					
HHC	**Hu-ho-hao-te**	**50.93 341**	⇑P	**P**	**05 49 37.4**	**0.0**
HHC			pP	pP	05 49 47.4	-7.9
HHC			sP	sP	05 49 51.5	-12
HHC			PcP	PcP	05 50 53.4	+0.5
HHC			PP	PP	05 51 35.0	+0.4
HHC			ScP	ScP	05 54 46.1	+2.9
HHC			S	**S**	**05 56 51.3**	**+2.4**
HHC			sS	sS	05 57 07.5	-12
HHC			ScS	ScS	05 59 22.3	+0.8
HHC			SS	SS	06 00 23.4	-1.4
HHC			pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1					
HHC			pmax	pmax		
	comp=Z,87nm,5.8s					
HHC			LR	LR		
	comp=N,920nm,14.8s					
HHC			LR	LR		
	comp=E,610nm,15.1s					
HHC			LR	LR		
	comp=Z,880nm,14.7s					
CN2	**Changchun**	**50.97 355**	*e*P	**P**	**05 49 36.6**	**-1.0**
CN2			*es*P	sP	05 49 50.6	-13
CN2			*e*PP	PP	05 51 34.1	-0.7
CN2			*e*S	**S**	**05 56 50.6**	**+1.3**
CN2			pmax	pmax		
	comp=Z,40nm,0.6s,mb5.6					
CN2			pmax	pmax		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,200nm,16.0s					
CN2			LR	LR		
	comp=E,200nm,16.0s					
CN2			LR	LR		
	comp=Z,200nm,17.0s					
MDJ	**Mudanjiang**	**51.58 359**	P	**P**	**05 49 42.0**	**-0.1**
MDJ			pP	pP	05 49 50.8	-9.3
MDJ			sP	sP	05 49 55.0	-13
MDJ			PcP	PcP	05 50 52.9	-2.3
MDJ			PP	PP	05 51 37.5	-2.8
MDJ			ScP	ScP	05 54 46.0	+0.2
MDJ			PcS	PcS	05 54 54.1	+1.1
MDJ			S	**S**	**05 57 05.8**	**+8.2**
MDJ			ScS	ScS	05 59 27.8	+2.0
MDJ			SS	SS	06 00 34.6	-0.3
MDJ			pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4					
MDJ			pmax	pmax		
	comp=Z,120nm,4.2s					
MDJ			LR	LR		
	comp=Z,160nm,18.2s					
MDJ	**Mudanjiang**	**51.58 359**	*e*P	**P**	**05 49 42.4**	**+0.3**
	comp=Z,37nm,0.9s,mb5.4					
URZ	**Urewera**	**52.05 134**	P	**P**	**05 49 46.7**	**+0.8**
	comp=Z,3.4nm,0.4s,mb4.7,baz=253,slow=10,SNR=8.6					
ASAJ	**Asahikawa**	**52.19 11**	P	**P**	**05 49 46.9**	**+0.1**
	comp=Z,37nm,0.7s,mb5.5,baz=235,slow=11,SNR=15					
ASAJ	**Asahikawa**	**52.19 11**	P	**P**	**05 49 46.9**	**+0.2**
ASAJ			pmax	pmax		
	comp=Z,37nm,0.7s					
LSA	**Lhasa**	**52.80 316**	P	**P**	**05 49 53.0**	**+1.5**
LSA			pmax	pmax		
	comp=Z,50nm,0.9s,mb5.5					
LSA	**Lhasa**	**52.80 316**	*e*P	**P**	**05 49 51.6**	**+0.1**
LSA			pmax	pmax		
	comp=Z,23nm,0.6s,mb5.4					
LSA	**Lhasa**	**52.80 316**	*e*P	**P**	**05 49 51.6**	**+0.1**
	comp=Z,23nm,0.6s,mb5.4					
ODAN	**Odare**	**53.89 311**	*e*P	**P**	**05 49 58.7**	**-0.9**
	comp=Z,55nm,0.5s,mb5.9					
TAPN	**Taplejung**	**53.91 311**	*e*P	**P**	**05 49 58.9**	**-0.8**
	comp=Z,53nm,0.4s,mb5.9					
GTA	**Gaotai**	**54.46 331**	⇑P	**P**	**05 50 03.3**	**-0.2**
GTA			pP	pP	05 50 13.8	-7.8
GTA			sP	sP	05 50 17.8	-12
GTA			PcP	PcP	05 51 07.9	+1.6
GTA			PP	PP	05 52 08.0	+1.5
GTA			S	**S**	**05 57 38.8**	**+1.7**
GTA			sS	sS	05 57 55.4	-12
GTA			SS	SS	06 01 21.5	+0.8
GTA			pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0					
GTA			pmax	pmax		
	comp=Z,150nm,4.8s					
RAMN	**Ramite**	**54.53 310**	*e*P	**P**	**05 50 03.7**	**-0.5**
	comp=Z,99nm,0.6s,mb6.0					
YSS	**Yuzh-Sakhalins**	**54.96 10**	⇑*i*P	**P**	**05 50 06.3**	**-0.7**
YSS			pmax	pmax		
	comp=Z,60nm,0.8s,mb5.7					
YSS	**Yuzh-Sakhalins**	**54.96 10**	*e*P	**P**	**05 50 07.1**	**+0.1**
	comp=Z,36nm,0.4s,mb5.8					
JIRN	**Jiri**	**55.22 311**	*e*P	**P**	**05 50 08.7**	**-0.5**
	comp=Z,12nm,0.2s,mb5.5					
GUN	**Gumba**	**55.58 311**	*e*P	**P**	**05 50 11.1**	**-0.7**
	comp=Z,71nm,0.5s,mb5.9					
PKI	**Pulchoki**	**55.76 310**	*e*P	**P**	**05 50 12.0**	**-1.1**
	comp=Z,34nm,0.5s,mb5.6					
PKIN	**Phulchoki**	**55.77 310**	*e*P	**P**	**05 50 11.7**	**-1.5**
	comp=Z,24nm,0.5s,mb5.5					
KKN	**Kakani**	**55.97 310**	*e*P	**P**	**05 50 13.6**	**-1.0**
DMN	**Daman**	**56.01 310**	*e*P	**P**	**05 50 14.0**	**-0.9**
	comp=Z,79nm,0.9s,mb5.7					
HIA	**Hailar**	**57.03 351**	*e*P	**P**	**05 50 22.6**	**+1.0**
HIA			pmax	pmax		
	comp=Z,16nm,1.1s					
HIA	**Hailar**	**57.03 351**	*e*P	**P**	**05 50 22.6**	**+0.9**
	comp=Z,16nm,1.1s,mb5.0					
DGAR	**Diego Garcia**	**57.71 266**	*e*P	**P**	**05 50 28.3**	**+1.1**
DGAR			pmax	pmax		
	comp=Z,54nm,0.6s,mb5.8					
DGAR	**Diego Garcia**	**57.71 266**	*e*P	**P**	**05 50 28.3**	**+1.1**
	comp=Z,54nm,0.6s,mb5.8					
ULN	**Ulaanbaatar**	**58.65 342**	*e*P	**P**	**05 50 33.6**	**+0.5**
ULN			*e*		05 51 23.4	
ULN			pmax	pmax		
	comp=Z,39nm,0.8s,mb5.5					
ULN	**Ulaanbaatar**	**58.65 342**	*e*P	**P**	**05 50 33.6**	**+0.5**
	comp=Z,39nm,0.8s,mb5.5					
ULN			*e*PcP	PcP	05 51 23.4	+1.0
ULN	**Ulaanbaatar**	**58.65 342**	P	**P**	**05 50 33.8**	**+0.8**
	SNR=18					
ULN			P		05 50 33.8	
	SNR=18					
SONM	**Songino Array**	**58.83 341**	P	**P**	**05 50 34.1**	**-0.2**
	comp=Z,16nm,0.8s,mb5.1,baz=158,slow=7.0,SNR=10					
SONM			PcP	PcP	05 51 23.3	+0.1
	comp=Z,12nm,0.8s,baz=162,slow=5.2,SNR=4.0					
SONM	**Songino Array**	**58.83 341**	P	**P**	**05 50 34.1**	**-0.2**
SONM					05 51 23.3	
SONM			pmax	pmax		
	comp=Z,16nm,0.8s					
SONM			pmax	pmax		
	comp=Z,12nm,0.9s					
BHPL	**Bhopal**	**60.18 302**	*e*P	**P**	**05 50 41.7**	**-2.4**
BHPL			AMb	AMB	05 50 43.8	
	comp=Z,42nm,1.0s,mb5.4					
AGRA	**Agra**	**61.42 306**	*e*P	**P**	**05 50 49.8**	**-2.7**
AGRA			AMb	AMB	05 50 56.9	
	comp=Z,43nm,0.3s,mb6.0					
POO	**Poona**	**61.58 295**	*e*P	**P**	**05 50 51.7**	**-2.0**
POO			AMb	AMB	05 50 52.8	
	comp=Z,24nm,0.8s,mb5.3					
JOSI	**Joshimath**	**61.68 310**	*e*P	**P**	**05 50 53.7**	**-0.5**
ZAK	**Zakamensk**	**62.06 341**	⇓*i*P	**P**	**05 50 55.8**	**-0.5**
ZAK			*e*		05 51 36.6	
ZAK			pmax	pmax		
	comp=Z,14nm,1.6s,mb4.7					
AYAN	**Aya Nagar**	**62.61 307**	*e*P	**P**	**05 50 57.9**	**-2.6**
AYAN			AMb	AMB	05 50 59.9	
	comp=Z,41nm,0.9s,mb5.4					
NDI	**New Delhi**	**62.63 307**	*ex*	x	05 50 57.0	
BHGR	**Bahadurgarh**	**62.85 307**	AMb	AMB	05 49 59.5	
	comp=Z,182nm,0.2s					
TLY	**Talaya**	**63.06 341**	*e*P	**P**	**05 51 03.0**	**+0.1**
TLY			*e*		05 51 40.7	
TLY			*e*S	**S**	**05 59 29.7**	**+1.5**
TLY			pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9					
TLY	**Talaya**	**63.06 341**	*e*P	**P**	**05 51 03.8**	**+0.8**
	comp=Z,84nm,2.0s,mb5.3					
TLY	**Talaya**	**63.06 341**	P	**P**	**05 51 03.6**	**+0.7**
	SNR=6.3					
TLY			P		05 51 03.6	
	SNR=6.3					
KLP	**Kalpa**	**63.13 311**	*e*P	**P**	**05 51 03.9**	**0.0**
KLP			AMb	AMB	05 51 05.4	
	comp=Z,43nm,1.3s,mb5.2					
RTK	**Rohtak**	**63.41 307**	*ex*	x	05 50 54.0	
RTK			AMb	AMB	05 50 57.2	
	comp=Z,104nm,0.2s,mb6.5					
KHET	**Khetri**	**63.49 306**	*e*P	**P**	**05 51 04.6**	**-1.6**
KHET			AMb	AMB	05 51 05.6	
	comp=Z,40nm,1.2s,mb5.2					
KKR	**Kurukshetra**	**63.50 308**	*e*P	**P**	**05 51 05.8**	**-0.6**
KKR			AMb	AMB	05 51 08.6	
	comp=Z,95nm,0.5s,mb5.9					
WMQ	**Urumqi**	**63.92 327**	P	**P**	**05 51 08.8**	**+0.1**
WMQ			PcP	PcP	05 51 44.1	+0.3
WMQ			PP	PP	05 53 30.1	-0.1
WMQ			S	**S**	**05 59 39.8**	**+0.7**
WMQ			SS	SS	06 03 49.6	+0.6
WMQ			pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0					
WMQ			pmax	pmax		
	comp=Z,200nm,3.8s					
WMQ			LR	LR		
	comp=N,190nm,21.0s					
WMQ			LR	LR		
	comp=E,280nm,26.0s					
WMQ			LR	LR		
	comp=Z,210nm,19.0s					
MOY	**Mondy**	**63.92 340**	*e*P	**P**	**05 51 09.6**	**+1.0**
MOY			pmax	pmax		
	comp=Z,71nm,1.5s,mb5.3					
CLNS	**Chul'man**	**63.98 356**	*e*P	**P**	**05 51 09.1**	**+0.2**
CLNS			pmax	pmax		
	comp=Z,41nm,0.8s,mb5.3					
CLNS			pmax	pmax		
	comp=N,26nm,1.0s					
CLNS			pmax	pmax		
	comp=E,9.0nm,0.8s					
CLNS			MLR	MLR		
	comp=Z,1μm,12.0s					
CLNS			MLR	MLR		
	comp=E,1μm,12.0s					
CLNS			MLR	MLR		
	comp=N,725nm,13.0s					
PETK	**Petropavlovsk-**	**64.30 18**	P	**P**	**05 51 11.6**	**+0.6**
	comp=N,28nm,0.8s,mb5.2,baz=173,slow=3.3,SNR=50					
PETK	**Petropavlovsk-**	**64.30 18**	P	**P**	**05 51 11.6**	**+0.6**
PETK			pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2					
PETK	**Petropavlovsk-**	**64.30 18**	P	**P**	**05 51 11.6**	**+0.6**
PET	**Petropavlovsk**	**64.52 18**	*e*P	**P**	**05 51 12.5**	**0.0**
PET			pmax	pmax		
	comp=Z,66nm,1.1s,mb5.4					
PET	**Petropavlovsk**	**64.52 18**	*e*P	**P**	**05 51 13.2**	**+0.7**
	comp=Z,90nm,1.2s,mb5.5					
MIR	**Mirnyy**	**64.64 196**	⇑*i*P	**P**	**05 51 14.5**	**+1.4**
MIR			pmax	pmax		
	comp=Z,34nm,1.4s,mb5.0					
BOD	**Bodaibo**	**66.19 350**	⇓*i*P	**P**	**05 51 22.7**	**-0.5**
BOD			pmax	pmax		
	comp=Z,40nm,1.2s,mb5.1					
JASL	**Jaisalmer**	**67.05 303**	*e*P	**P**	**05 51 28.1**	**-1.2**
JASL			AMb	AMB	05 51 29.8	
KSH	**Kashi**	**68.61 317**	*e*P	**P**	**05 51 39.5**	**+0.6**
KSH			*e*pP	pP	05 51 49.5	-8.1
KSH			*es*P	sP	05 51 53.4	-12
KSH			*e*PcP	PcP	05 52 04.1	+0.7
KSH			*e*PP	PP	05 54 11.1	-0.2
KSH			*e*ScP		05 56 04.3	
KSH			*e*PcS		05 56 08.0	
KSH			*e*S	S	06 00 34.5	-1.7
KSH			*e*ScS	ScS	06 01 32.1	-0.7
KSH			pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9					
KSH			pmax	pmax		
	comp=Z,59nm,3.4s					
KSH			LR	LR		
	comp=N,750nm,5.1s					
KSH			LR	LR		
	comp=E,1μm,8.8s					
KSH			LR	LR		
	comp=Z,300nm,5.0s					
MK31	**Makanchi Array**	**68.75 327**	*e*P	**P**	**05 51 39.6**	**0.0**
MKAR	**Makanchi Array**	**68.75 327**	P	**P**	**05 51 39.6**	**0.0**
	comp=Z,21nm,0.5s,mb5.2,baz=125,slow=8.0,SNR=131					
MKAR	**Makanchi Array**	**68.75 327**	P	**P**	**05 51 39.6**	**0.0**
MKAR			pmax	pmax		
	comp=Z,21nm,0.5s					
YAK	**Yakutsk**	**69.02 359**	*e*P	**P**	**05 51 40.0**	**-0.9**
YAK			*e**PP	pP	05 52 04.9	+5.3
YAK			*e*		05 54 10.5	
YAK			*e*S	S	06 00 37.7	-2.4
YAK			*e**SS	sS	06 01 16.0	+4.1
YAK			*e*		06 01 31.5	
YAK			*e*SSS		06 08 08.6	
YAK			pmax	pmax		
	comp=Z,284nm,1.0s,mb6.0					
YAK			pmax	pmax		
	comp=E,10.0nm,1.0s					
YAK			pmax	pmax		
	comp=N,57nm,0.9s					
YAK			pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7					
YAK			smax			
	comp=E,35nm,1.4s					
YAK			smax			
	comp=N,88nm,3.5s					
YAK	**Yakutsk**	**69.02 359**	*e*P	**P**	**05 51 41.2**	**+0.3**
	comp=N,336nm,0.8s,mb6.2					
ULHL	**Ulahol**	**69.80 320**	P	**P**	**05 51 46.8**	**+0.6**
	SNR=8.3					
KZA	**Kyzart**	**70.36 319**	P	**P**	**05 51 50.8**	**+1.2**
	SNR=51					
TKM2	**Tokmak 2**	**70.56 320**	P	**P**	**05 51 51.3**	**+0.5**
	SNR=22					
TKM2	**Tokmak 2**	**70.56 320**	*e*P	**P**	**05 51 51.2**	**+0.4**
TKM2			pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1					
TKM2	**Tokmak 2**	**70.56 320**	*e*P	**P**	**05 51 51.2**	**+0.4**
	comp=Z,30nm,0.9s,mb5.1					
KBK	**Karagaybulak**	**70.84 320**	P	**P**	**05 51 53.2**	**+0.7**
	SNR=8.2					
UCH	**Uchtor**	**70.91 319**	P	**P**	**05 51 54.0**	**+1.1**
	SNR=43					
UCH	**Uchtor**	**70.91 319**	*e*P	**P**	**05 51 54.0**	**+1.1**
	comp=Z,38nm,0.9s,mb5.2					
AAK	**Ala-Archa**	**71.12 320**	P	**P**	**05 51 54.0**	**-0.2**
	comp=Z,213nm,0.9s,mb6.0,SNR=14					
AAK	**Ala-Archa**	**71.12 320**	P	**P**	**05 51 54.8**	**+0.6**
	SNR=17					
AAK	**Ala-Archa**	**71.12 320**	P	**P**	**05 51 55.1**	**+1.0**
	comp=Z,16nm,0.7s,mb5.0,baz=124,slow=4.6,SNR=60					
AAK	**Ala-Archa**	**71.12 320**	*ce*P	**P**	**05 51 54.8**	**+0.6**
AAK			pmax	pmax		
	comp=Z,36nm,1.7s,mb4.9					
AAK	**Ala-Archa**	**71.12 320**	*e*P	**P**	**05 51 54.6**	**+0.4**
AAK			P		05 51 55.1	
AAK	**Ala-Archa**	**71.12 320**	P	**P**	**05 51 55.2**	**+1.0**
	SNR=26					
AAK			P		05 51 55.2	
	SNR=26					
CHMS	**Chumysh**	**71.13 320**	P	**P**	**05 51 54.3**	**0.0**
	SNR=5.8					
FRU	**Bishkek**	**71.14 320**	*e*P	**P**	**05 51 52.0**	**-2.3**
FRU			*e*		05 52 16.0	
FRU			pmax	pmax		
	comp=Z,60nm,1.6s,mb5.2					
AML	**Almayashu**	**71.39 319**	P	**P**	**05 51 57.0**	**+1.1**
	SNR=64					
AML	**Almayashu**	**71.39 319**	*e*P	**P**	**05 51 56.9**	**+1.0**
	comp=Z,60nm,0.9s,mb5.4					
KBL	**Kabul**	**71.40 310**	*e*P	**P**	**05 51 56.3**	**+0.2**
KBL			pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2					
KBL	**Kabul**	**71.40 310**	*e*P	**P**	**05 51 56.3**	**+0.3**
	comp=Z,32nm,0.9s,mb5.2					
USP	**Ospenovka**	**71.42 320**	P	**P**	**05 51 56.3**	**+0.3**
	SNR=34					
EKS2	**Erkin-Say**	**71.59 319**	P	**P**	**05 51 58.0**	**+1.0**
	SNR=22					
EKS2	**Erkin-Say**	**71.59 319**	*e*P	**P**	**05 51 57.6**	**+0.5**
	comp=Z,41nm,0.9s,mb5.3					
SEY	**Seymchan**	**71.87 10**	*ce*P	**P**	**05 51 58.9**	**+0.6**
ZALV	**Zalesovo Beam**	**72.05 334**	P	**P**	**05 51 58.4**	**-1.2**
	comp=Z,26nm,1.0s,mb5.0,baz=108,slow=4.8,SNR=64					
ZALV	**Zalesovo Beam**	**72.05 334**	P	**P**	**05 51 58.4**	**-1.1**
ZALV			pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0					
KURK	**Kurchatov**	**73.03 328**	P	**P**	**05 52 05.7**	**+0.3**
	comp=Z,206nm,0.9s,mb6.0,SNR=20					
KURK	**Kurchatov**	**73.03 328**	P	**P**	**05 52 04.9**	**-0.5**
	comp=Z,21nm,0.7s,mb5.1,baz=128,slow=4.9,SNR=83					
KURK	**Kurchatov**	**73.03 328**	*ce*P	**P**	**05 52 05.2**	**-0.2**
KURK			pmax	pmax		
	comp=Z,59nm,1.2s,mb5.3					
KURK	**Kurchatov**	**73.03 328**	*e*P	**P**	**05 52 05.1**	**-0.3**
	comp=Z,26nm,0.8s,mb5.1					
KURK	**Kurchatov**	**73.03 328**	P	**P**	**05 52 05.4**	**0.0**
	SNR=17					
KURK			P		05 52 05.4	
	SNR=17					
SBA	**Scott Base**	**73.06 173**	*e*P	**P**	**05 52 08.1**	**+2.9**
SBA			pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6					
SBA	**Scott Base**	**73.06 173**	*e*P	**P**	**05 52 08.1**	**+2.8**
	comp=Z,6.9nm,0.7s,mb4.6					
NVS	**Novosibirsk**	**73.33 334**	*e*P	**P**	**05 52 06.0**	**-1.1**
NVS			*es*S	S	06 01 26.4	-3.9
NVS			pmax	pmax		
	comp=N,43nm,1.4s					
NVS			pmax	pmax		
	comp=Z,70nm,1.4s,mb5.3					
NVS			smax			
	comp=N,30nm,1.6s					
NVS			smax			
	comp=E,30nm,1.6s					
RER	**Riviere de l'E**	**73.42 250**	*e*P	**P**	**05 52 10.4**	**+2.1**
	comp=E,215nm,0.9s,mb6.0					
MSEY	**Mahe Island**	**74.77 267**	*e*P	**P**	**05 52 17.4**	**+1.0**
MAW	**Mawson**	**75.02 202**	*e*P	**P**	**05 52 18.5**	**+1.7**
	comp=E,18nm,1.1s,mb4.7					
MAW	**Mawson**	**75.02 202**	P	**P**	**05 52 18.0**	**+1.2**
	comp=E,18nm,1.0s,mb4.8,baz=78,slow=8.3,SNR=15					

MAW Mawson 75.02 202 P P 05 52 18.0 +1.2
MAW pmax pmax
comp=Z,18nm,1.0s
MAW Mawson 75.02 202 P P 05 52 18.0 +1.2
MAW *eP* 05 52 18.9
SMDO Samad 77.03 296 P P 05 52 29.7 +0.6
SNR=6.9
BIDO Bidbid 77.07 296 P P 05 52 30.0 +0.7
SNR=15
HOQ Hoqain 77.81 296 P P 05 52 34.1 +0.6
SNR=12
IDAH Dahanechah 77.99 306 *eP* **P 05 52 35.4 +1.1**
PPT Papeete 78.13 106 *e*LR LR 06 16 57.1
comp=Z,220nm,29.8s
PPT Papeete 78.13 106 LR LR 06 24 07.3
comp=Z,121nm,18.6s,baz=248,slow=33
BVAR Borovoye Array 78.58 328 P **P 05 52 37.0 0.0**
comp=Z,23nm,0.9s,mb5.0,baz=131,slow=6.1,SNR=89
BVAR Borovoye Array 78.58 328 P **P 05 52 37.0 0.0**
BVAR pmax pmax
comp=Z,23nm,0.9s
BRVK Borovoye 78.65 328 P **P 05 52 37.6 +0.2**
comp=Z,214nm,0.8s,mb6.0,SNR=15
BRVK Borovoye 78.65 328 *ce*P **P 05 52 37.3 -0.1**
BRVK pmax pmax
comp=Z,45nm,1.0s,mb5.2
BRVK Borovoye 78.65 328 *eP* **P 05 52 37.5 +0.1**
comp=Z,36nm,0.9s,mb5.2
BRVK Borovoye 78.65 328 P **P 05 52 36.7 -0.7**
SNR=19
BRVK P 05 52 36.7
SNR=19
TIXI Tiksi 78.69 359 *c i*P **P 05 52 36.0 -1.2**
TIXI *e*S S 06 02 22.3 -6.2
TIXI pmax pmax
comp=Z,49nm,0.9s,mb5.3
TIXI Tiksi 78.69 359 *eP* **P 05 52 36.2 -1.0**
comp=Z,24nm,0.5s,mb5.3
IMYA Miami 78.87 309 *eP* **P 05 52 39.3 +0.3**
BILL Bilibino 79.15 13⇓ *i P* **P 05 52 40.0 +0.2**
BILL *i* 05 55 38.4
BILL *e*S S 06 02 36.8 +3.2
BILL pmax pmax
comp=Z,16nm,2.5s,mb4.4
BILL Bilibino 79.15 13 *eP* **P 05 52 39.6 -0.2**
comp=Z,3.0nm,0.6s,mb4.3
ASHO Ashiyiah 79.17 297 P **P 05 52 41.8 +0.8**
SNR=5.2
ISRO Mashad 79.34 309 *eP* **P 05 52 40.7 -0.9**
WHFO Wadi Hawf 79.86 290 P **P 05 52 44.7 -0.1**
SNR=8.1
ABTO Aybut 80.20 289 P **P 05 52 47.2 +0.6**
SNR=5.6
UNV Unalaska Valle 80.31 32 *eP* **P 05 52 47.8 +1.4**
comp=Z,30nm,1.1s,mb5.0
IBAF Bafgh 81.21 303 *eP* **P 05 52 51.3 -0.5**
IMEH Mehriz 81.95 303 *eP* **P 05 52 54.4 -1.3**
ISRV Sarvestan 82.77 301 *eP* **P 05 52 59.0 -1.0**
QSPA South Pole Qui 82.79 180 *eP* **P 05 52 59.6 +0.5**
comp=Z,47nm,1.0s,mb5.3
IPAR Pars 82.92 301 *eP* **P 05 53 00.4 -0.4**
IMOK Mouk 83.04 300 *eP* **P 05 53 00.8 -0.6**
ABKAR Akbulak array 83.07 321 *eP* **P 05 53 00.2 -0.8**
comp=Z,38nm,1.2s,mb5.1
SDPT Sand Point 84.12 32 *eP* **P 05 53 06.7 +0.4**
comp=Z,127nm,1.1s,mb5.7
SDPT LR LR
comp=Z,500nm,17.0s
ISFB Sefidab 84.56 305 *eP* **P 05 53 09.1 +0.1**
IKLH Kolahrood 84.88 304 *eP* **P 05 53 11.2 +0.5**
TNA Tin City 85.15 22 *eP* **P 05 53 12.0 +0.8**
comp=Z,6.3nm,0.7s,mb4.7
SVE Sverdlovsk 85.28 329⇓ *eP* **P 05 53 11.4 -0.7**
SVE pmax pmax
comp=Z,74nm,1.2s,mb5.5
IPIR Pirpir 85.32 304 *eP* **P 05 53 24.8 +12**
ARU Arti 86.22 328 *d i*P **P 05 53 16.1 -0.7**
ARU 05 56 35.5
ARU S S 06 03 39.0 -7.0
ARU SS SS 06 09 28.3 +1.7
ARU pmax pmax
comp=Z,64nm,1.2s,mb5.4
ARU Arti 86.22 328 *eP* **P 05 53 15.8 -0.9**
comp=Z,30nm,0.7s,mb5.3
QRN Al-Qurain 87.11 299 *eP* **P 05 53 20.9 -0.9**
QRN AMb AMB 05 53 22.6
comp=Z,113nm,1.4s,mb5.6
KBD Kabd 87.38 300 *eP* **P 05 53 22.0 -1.1**
KBD AMb AMB 05 53 25.4
comp=Z,40nm,1.8s,mb5.0
RDF Al-Radifah 87.46 299 *eP* **P 05 53 22.6 -0.9**
RDF AMb AMB 05 53 24.4
comp=Z,110nm,1.3s,mb5.6
NAY Al-Naaiem 87.78 300 *eP* **P 05 53 24.2 -0.8**
NAY AMb AMB 05 53 25.6
comp=Z,62nm,1.2s,mb5.5
MIB Mutribah 87.79 300 *eP* **P 05 53 23.9 -1.1**
MIB AMb AMB 05 53 27.2
comp=Z,98nm,1.4s,mb5.6
SVW2 Sparrevohn 88.50 28 *eP* **P 05 53 28.8 +1.2**
OHAK Old Harbor 88.52 32 *eP* **P 05 53 28.8 +1.0**
comp=Z,65nm,1.2s,mb5.5
OHAK LR LR
comp=Z,900nm,17.0s
KDAK Kodiak Island 89.03 31 P **P 05 53 31.2 +1.0**
comp=Z,20nm,0.9s,mb5.1
KDAK Kodiak Island 89.03 31 *i P* **P 05 53 31.5 +1.3**
RSO Redoubt South 89.65 29 *eP* **P 05 53 41.2 +8.1**
CHUM Lake Minchumin 90.73 26 *eP* **P 05 53 38.7 +0.7**
comp=Z,9.1nm,0.6s,mb5.1
KTH Kantishna Hill 91.25 26 *eP* **P 05 53 40.0 -0.5**
comp=Z,4.1nm,0.8s,mb4.6
BPAW Bear Paw Mtn. 91.35 25 *eP* **P 05 53 40.6 -0.3**
comp=Z,3.8nm,0.8s,mb4.6
GNI Garni 91.48 310 *ce*P **P 05 53 43.5 +1.4**
GNI pmax pmax
comp=Z,17nm,1.2s
GNI Garni 91.48 310 *eP* **P 05 53 43.2 +1.1**
comp=Z,14nm,1.1s,mb5.0
TRF Thorofare Moun 91.51 26 *eP* **P 05 53 41.2 -0.5**
comp=Z,2.3nm,0.7s,mb4.5
PMR Palmer 91.63 28 *eP* **P 05 53 41.8 -0.4**
PMR pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
PMR Palmer 91.63 28 *eP* **P 05 53 41.8 -0.4**
comp=Z,3.7nm,0.6s,mb4.8
MCK McKinley 92.16 26 *eP* **P 05 53 44.1 -0.5**
MCK pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
MCK McKinley 92.16 26 *eP* **P 05 53 44.1 -0.5**
comp=Z,8.3nm,0.8s,mb5.0
COLD Coldfoot 92.39 22 *eP* **P 05 53 46.0 +0.3**
comp=Z,6.3nm,0.9s,mb4.8
ZEI Tsey 92.47 313 *eP* **P 05 53 44.2 -2.4**
ZEI pmax pmax
comp=Z,18nm,1.4s,mb5.1
DIV Divide 93.13 29 *eP* **P 05 53 49.8 +0.6**
comp=Z,8.9nm,0.6s,mb5.3
KMBO Kilima Mbogo 93.25 268 P **P 05 53 52.0 +1.1**
comp=Z,12nm,1.0s,mb5.2,baz=0.2,slow=23,SNR=20
KMBO Kilima Mbogo 93.25 268 *eP* **P 05 53 51.8 +0.9**
KMBO pmax pmax
comp=Z,19nm,1.0s
KMBO Kilima Mbogo 93.25 268 *eP* **P 05 53 51.8 +0.9**
comp=Z,20nm,1.0s,mb5.4
KMBO P 05 53 52.0
KIV Kislovodsk 93.49 314 *eP* **P 05 53 45.4 -5.8**
KIV pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,1μm,20.0s
BMRM Bremner River 93.67 29 *eP* **P 05 53 52.0 +0.4**
comp=Z,6.4nm,0.9s,mb5.0
MENT Mentasta 94.35 27 *eP* **P 05 53 54.9 +0.2**
EGAK Eagle 95.67 25 *eP* **P 05 54 01.0 +0.2**
comp=Z,11nm,0.9s,mb5.3
DAWY Dawson 96.38 26 *eP* **P 05 54 04.5 +0.5**
KLMR Klimovskoe 96.79 330 *eP* **P 05 54 01.3 -4.6**
KLMR pmax pmax
comp=Z,46nm,1.5s,mb5.7
ANN Anapa 97.31 314 *e**PP **P 05 54 10.8 +2.1**
ANN pmax pmax
comp=Z,26nm,1.4s,mb5.5
OBN Obninsk 98.20 325⇑ *eP* **P 05 54 09.7 -2.7**
OBN pmax pmax
comp=Z,13nm,1.0s,mb5.4

MMAI Mount Meron Ar 98.28 302 P **P 05 54 13.1 -0.2**
comp=Z,2.3nm,0.5s,mb5.0,baz=82,slow=7.7,SNR=7.0
INK Inuvik 98.79 22 P **P 05 54 13.8 -0.9**
comp=Z,6.4nm,1.1s,mb5.1,baz=276,slow=4.9,SNR=11
INK LR LR 06 33 28.6
comp=Z,50nm,21.0s,baz=51,slow=32
APA Apatity 99.38 337⇑ *eP* **P 05 54 16.8 -0.6**
APA MLR MLR
comp=Z,700nm,18.0s
BOSA Boshof 99.94 239 P Pdif 05 54 20.4 +0.1
comp=Z,4.5nm,0.9s,baz=115,slow=7.4,SNR=5.1
BOSA Boshof 99.94 239 P Pdif 05 54 20.4 +0.2
BOSA pmax pmax
comp=Z,5.0nm,0.9s,mb5.1
BRTR Keskin Array B 99.95 309 P Pdif 05 54 19.1 -1.1
comp=Z,2.4nm,0.9s,baz=120,slow=5.0,SNR=12
BRTR PP PP 05 58 27.5 +1.0
comp=Z,1.1nm,1.1s,baz=120,slow=7.3,SNR=4.3
BRTR Keskin Array B 99.95 309 P Pdif 05 54 19.2 -1.1
BRTR 05 58 27.5
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,1.1s
JOF Joensuu 100.63 333 *eP* Pdif 05 54 19.8 -3.5
JOF pmax pmax
comp=Z,8.0nm,0.7s
JOF Joensuu 100.63 333 *ep* Pdif 05 54 19.8 -3.5
comp=Z,8.2nm,0.7s
KEV Kevo 101.43 340 *eP* Pdif 05 54 25.7 -1.1
KEV pmax pmax
comp=Z,5.0nm,0.7s
KEV Kevo 101.43 340 *ep* Pdif 05 54 25.7 -1.1
comp=Z,5.3nm,0.7s
ARCES ARCESS Array B 101.99 340 P Pdif 05 54 27.6 -1.7
comp=Z,6.2nm,0.6s,baz=77,slow=5.2,SNR=19
ARCES ARCESS Array B 101.99 340 P Pdif 05 54 27.6 -1.7
ARCES pmax pmax
comp=Z,6.0nm,0.6s
AKASG Malin Array Be 102.78 320 P Pdif 05 54 30.7 -2.2
comp=Z,0.2nm,0.3s,baz=69,slow=5.2,SNR=5.0
AKASG Malin Array Be 102.78 320 P Pdif 05 54 30.7 -2.2
KAF Kangasniemi 103.03 332 *eP* Pdif 05 54 31.1 -2.9
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 103.03 332 *ep* Pdif 05 54 31.1 -2.9
comp=Z,4.6nm,0.6s
FINES FINESS Array B 103.25 331 Pdiff Pdif 05 54 33.0 -2.0
comp=Z,2.0nm,0.6s,baz=57,slow=7.0,SNR=6.3
FINES PP PP 05 58 54.3 +3.8
comp=Z,3.1nm,0.9s,baz=103,slow=6.1,SNR=4.7
FINES FINESS Array B 103.25 331 P Pdif 05 54 33.0 -1.9
FINES 05 58 54.3
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES pmax pmax
comp=Z,3.0nm,0.9s
BUR08 Bucovina Ar. S 105.70 317 *eP* Pdif 05 54 46.2 +0.4
YKA Yellowknife Ar 107.62 26 Pdiff Pdif 05 54 54.0 -0.3
comp=Z,0.5nm,0.7s,baz=291,slow=4.7,SNR=7.7
YKA PKiKP PKiKP 05 59 01.7 -0.1
comp=Z,0.6nm,0.5s,baz=288,slow=1.7,SNR=15
YKA PKKPbc PKKPbc 06 10 16.8 -2.0
comp=Z,1.4nm,0.8s,baz=101,slow=3.0,SNR=21
YKA Yellowknife Ar 107.62 26 P Pdif 05 54 54.0 -0.4
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 107.62 26 Pdif Pdif 05 54 54.0 -0.3
YKA PKPdf PKiKP 05 59 01.7 -0.1
YKA PKKPbc PKKPbc 06 10 16.8 -2.0
K05A Summer Lake 108.38 47⇑P PKiKP 05 59 05.7 +1.9
baz=108
SBC Santa Barbara 110.20 56⇑P PKiKP 05 59 08.9 +1.4
baz=110
G09A Cove 110.20 44⇑P PKiKP 05 59 08.7 +1.6
baz=110
NOA NORSAR Array B 110.25 333 Pdiff Pdif 05 55 04.4 -1.7
comp=Z,2.7nm,0.8s,baz=69,slow=4.6,SNR=7.4
NOA PKiKP PKiKP 05 59 07.0 +0.3
comp=Z,1.6nm,0.8s,baz=262,slow=3.1,SNR=3.6
NOA PKKPbc PKKPbc 06 10 08.2 -2.2
comp=Z,0.7nm,0.8s,baz=310,slow=5.1,SNR=3.6
NOA NORSAR Array B 110.25 333 *i* PKiKP PKiKP 05 59 07.0 +0.2
NOA 06 10 08.2
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.8s
NVAR Mina Array Bea 110.89 52 Pdiff Pdif 05 55 10.7 +1.8
comp=Z,0.2nm,0.3s,baz=281,slow=5.2,SNR=2.4
NVAR PKiKP PKiKP 05 59 10.5 +1.9
comp=Z,0.6nm,0.6s,baz=270,slow=3.0,SNR=4.2
NVAR PKKPbc PKKPbc 06 10 07.9 +0.3
comp=Z,0.9nm,0.7s,baz=114,slow=4.7,SNR=7.2
DPC Dobruska-Polom 110.95 321 *e*PKP PKiKP 05 59 09.4 +1.0
H10A Noah's Angus R 111.05 45⇑P PKiKP 05 59 10.3 +1.5
baz=111
H11A Donnelly 111.54 45⇑P PKiKP 05 59 10.9 +1.2
baz=112,SNR=5.6
EDW2 Edwards Air Fo 111.57 55⇓P PKiKP 05 59 12.0 +1.9
baz=112
L10A Juniper Basin 111.71 48⇓P PKiKP 05 59 11.7 +1.6
baz=112
TREC Trest 111.74 320 AMS AMS 06 46 40.0
comp=Z,1μm,14.6s
C13A Hot Springs 111.86 41⇓P PKiKP 05 59 11.1 +0.9
baz=112
PVCC Panska Ves 111.99 322 AMS AMS 06 46 40.0
comp=Z,1μm,15.5s
S10A Tonopah Range, 112.29 52⇑P PKiKP 05 59 12.8 +1.5
baz=112
H12A Diamond D Ranc 112.38 45⇑P PKiKP 05 59 13.6 +2.3
baz=112
GSC Goldstone 112.48 55⇑P PKiKP 05 59 13.3 +1.5
baz=112
J12A Stokes Ranch, 112.48 46⇓P PKiKP 05 59 13.4 +1.9
baz=112
O11A Cowboy Ranch, 112.66 50⇓P PKiKP 05 59 13.5 +1.5
baz=113
D14A Greenough 112.71 42⇓P PKiKP 05 59 12.7 +0.8
baz=113
U10A Ash Meadows, A 112.72 54⇓P PKiKP 05 59 13.7 +1.4
baz=113
L12A House Creek Ra 112.76 47⇑P PKiKP 05 59 13.7 +1.6
baz=113
H13A Challis 112.80 45⇓P PKiKP 05 59 13.5 +1.4
baz=113,SNR=8.0
Q11A Duckwater 112.88 51⇓P PKiKP 05 59 13.9 +1.5
baz=113
HLID Hailey 112.91 46⇑P PKiKP 05 59 14.2 +1.9
baz=113
HLID Hailey 112.91 46 *eP* PKiKP 05 59 14.3 +2.0
PFO Pinyon Flat Ob 112.97 57⇓P PKiKP 05 59 14.8 +2.0
baz=113
KHC Kasperske Hory 112.99 321 *e*PKP PKiKP 05 59 12.8 +0.5
GERES GERESS Array B 113.00 320 PKiKP PKiKP 05 59 12.6 +0.3
comp=Z,3.3nm,0.7s,baz=66,slow=1.6,SNR=23
GERES GERESS Array B 113.00 320 *i* PKiKP PKiKP 05 59 12.6 +0.3
GERES pmax pmax
comp=Z,3.0nm,0.7s
B15A Bradely Ranch, 113.01 40⇓P PKiKP 05 59 12.9 +0.5
baz=113
R11A Troy Canyon, C 113.01 51⇑P PKiKP 05 59 14.2 +1.5
baz=113
I13A Wildhorse Cree 113.04 45⇑P PKiKP 05 59 14.1 +1.5
baz=113,SNR=5.6
MONP Monument Peak 113.09 57⇑P PKiKP 05 59 14.8 +1.7
baz=113
J13A Cove Ranch, Pi 113.11 46⇓P PKiKP 05 59 14.4 +1.6
baz=113,SNR=5.9
C15A Salmond Ranch, 113.12 41⇑P PKiKP 05 59 13.5 +0.9
baz=113
BELC Belle Mtn. 113.31 56⇓P PKiKP 05 59 15.2 +1.8
baz=113
O12A Currie 113.32 49⇑P PKiKP 05 59 15.2 +1.9
baz=113
K13A Stover Farm, H 113.33 47⇓P PKiKP 05 59 15.2 +2.0
baz=113
D15A Lincoln 113.37 42⇑P PKiKP 05 59 14.6 +1.5
baz=113
H14A Leadore 113.40 44⇑P PKiKP 05 59 14.7 +1.4
baz=113
E15A Deer Lodge 113.45 42⇓P PKiKP 05 59 14.0 +0.7
baz=113
T11A Corn Creek, Al 113.47 53⇓P PKiKP 05 59 15.3 +1.7
baz=114
GMRC Granite Mounta 113.48 55⇓P PKiKP 05 59 15.6 +1.9
baz=114
I14A Mackay 113.50 45⇑P PKiKP 05 59 15.2 +1.8
baz=114
V11A Goodsprings 113.52 54⇑P PKiKP 05 59 16.1 +2.3
baz=114
L13A Double Diamond 113.55 47⇓P PKiKP 05 59 15.7 +2.1
baz=114
F15A Butte 113.70 43⇓P PKiKP 05 59 15.1 +1.3
baz=114
R12A Pony Springs, 113.77 51⇓P PKiKP 05 59 16.3 +2.1
baz=114
BC3 Big Chuckw Mtn 113.80 56⇑P PKiKP 05 59 16.2 +1.9
baz=114
G15A Dillon 113.88 44⇑P PKiKP 05 59 15.8 +1.7
baz=114
H15A Lima 113.91 44⇓P PKiKP 05 59 16.5 +2.3
baz=114
IRM Iron Mountain 113.98 56⇓P PKiKP 05 59 16.7 +2.0
baz=114
V12A Nelson 114.00 54⇑P PKiKP 05 59 16.9 +2.2
baz=114
A17A Triple J Farms 114.01 39⇓P PKiKP 05 59 15.0 +0.8
baz=114,SNR=8.7
K14A Jones Ranch, D 114.01 47⇓P PKiKP 05 59 16.2 +1.7
baz=114
D16A Dana Ranch, Ca 114.02 41⇓P PKiKP 05 59 15.8 +1.5
baz=114
P13A Bates Ranch, G 114.02 50⇓P PKiKP 05 59 16.4 +1.8
baz=114
L14A Malta 114.08 47⇓P PKiKP 05 59 16.5 +1.8
baz=114
M14A Sheep Mountain 114.11 48⇑P PKiKP 05 59 16.2 +1.4
baz=114
B17A L&G Farms, Che 114.14 40⇓P PKiKP 05 59 15.1 +0.5
baz=114
R13A O'Grain Ranch, 114.29 51⇑P PKiKP 05 59 17.2 +2.0
baz=114
F16A Kennard Place, 114.30 43⇑P PKiKP 05 59 16.6 +1.7
baz=114
G16A Moss Hill, Enn 114.33 43⇑P PKiKP 05 59 16.9 +1.9
baz=114
BOZ Bozeman (W) 114.34 43⇓P PKiKP 05 59 16.2 +1.2
baz=114
J15A Blackfoot 114.35 46⇑P PKiKP 05 59 17.1 +2.0
baz=114
C17A Wharram Farm, 114.36 41⇑P PKiKP 05 59 15.7 +0.7
baz=114,SNR=5.8
K15A Arbon 114.44 46⇓P PKiKP 05 59 17.5 +2.2
baz=114
S13A Holt Ranch, En 114.48 52⇓P PKiKP 05 59 17.4 +1.8
baz=114
T13A Saint George 114.55 53⇑P PKiKP 05 59 17.5 +1.8
baz=114
A18A Metzger Ranch, 114.55 39⇑P PKiKP 05 59 16.2 +0.9
baz=114
Y12C Blythe 114.55 56⇑P PKiKP 05 59 17.1 +1.2
baz=115
E17A Martinsdale 114.63 42⇓P PKiKP 05 59 17.0 +1.4
baz=115
Q14A Sevier Lake (B 114.68 50⇑P PKiKP 05 59 17.4 +1.5
baz=115
V13A Grand Canyon W 114.68 54⇑P PKiKP 05 59 17.9 +1.9
baz=115
L15A Malad City 114.70 47⇑P PKiKP 05 59 17.3 +1.4
baz=115
P14A Drum Mountains 114.72 50⇓P PKiKP 05 59 17.6 +1.6
baz=115
DUG Dugway 114.78 49⇓P PKiKP 05 59 17.7 +1.6
baz=115
H16A Russell Place, 114.85 44⇑P PKiKP 05 59 18.0 +2.0
baz=115
N15A Stansbury Isla 114.86 48⇑P PKiKP 05 59 17.6 +1.4
baz=115
W13A Hualapai Mount 114.88 55⇓P PKiKP 05 59 18.5 +2.1
baz=115
EGMT Eagleton 114.89 40⇑P PKiKP 05 59 17.2 +1.2
baz=115,SNR=6.4
EGMT Eagleton 114.89 40 *eP* PKiKP 05 59 17.0 +1.0
I16A Newdale 114.90 45⇓P PKiKP 05 59 18.0 +1.9
baz=115
F17A Fitzpatrick Pl 114.92 42⇓P PKiKP 05 59 17.3 +1.2
baz=115,SNR=5.6
J16A Bone 114.96 45⇑P PKiKP 05 59 18.1 +1.8
baz=115
S14A Cedar City 114.99 52⇑P PKiKP 05 59 18.6 +2.1
baz=115
X13A Yucca 115.00 55⇑P PKiKP 05 59 18.3 +1.6
baz=115
K16A Soda Springs 115.08 46⇑P PKiKP 05 59 18.4 +1.8
baz=115
D18A Linhart Farms, 115.11 41⇓P PKiKP 05 59 17.4 +1.0
baz=115
Y13A Salome 115.12 56⇑P PKiKP 05 59 18.4 +1.5
baz=115
T14A Hurricane 115.19 52⇑P PKiKP 05 59 18.9 +1.9
baz=115
U14A Mt Trumbull 115.22 53⇓P PKiKP 05 59 18.9 +1.9
baz=115
E18A Harlowton 115.23 42⇓P PKiKP 05 59 17.9 +1.2
baz=115
Z13A Yuma Proving G 115.35 57⇑P PKPdf 05 59 18.7 +1.3
baz=115,SNR=8.0
Q15A Fillmore 115.36 50⇑P PKiKP 05 59 19.2 +2.0
baz=115
H17A Grant Village 115.39 44⇓P PKiKP 05 59 19.2 +2.1
baz=115
L16A Fish Haven 115.39 47⇓P PKiKP 05 59 18.9 +1.7
baz=115
V14A Boquillas Ranc 115.42 54⇓P PKiKP 05 59 19.6 +2.1
baz=115
REDW Red Top Meadow 115.47 45 *e*PKPdf PKPdf 05 59 19.0 +1.7
W14A Seligman 115.51 54⇑P PKPdf 05 59 19.7 +2.1
baz=116
SNOW Snow King Moun 115.52 45 *eP* PKiKP 05 59 19.3 +2.0
F18A Big Timber 115.55 42⇓P PKiKP 05 59 18.5 +1.2
baz=116,SNR=7.6
J17A Brown Place, J 115.57 45⇑P PKiKP 05 59 19.3 +1.8
baz=116,SNR=6.7
K17A Gardner Place, 115.58 46⇓P PKiKP 05 59 19.6 +2.1
baz=116
LOHW Long Hollow 115.58 45 *e*PKPdf PKPdf 05 59 19.6 +2.1
MSU Marysvale 115.61 51 *e*PKIKP PKPdf 05 59 20.5 +2.8
S15A Panguitch 115.64 52⇓P PKPdf 05 59 20.0 +2.2
baz=116
T15A Red Dirt Ranch 115.75 52⇑P PKPdf 05 59 20.1 +2.1
baz=116
Y14A Wickenburg 115.78 56⇓P PKPdf 05 59 19.5 +1.4
baz=116
U15A North Rim 115.93 53⇑P PKPdf 05 59 20.4 +2.0
baz=116,SNR=8.1
114A Black Gap (USA 116.06 57⇑P PKPdf 05 59 20.3 +1.6
baz=116,SNR=6.6
M17A Scullys Gap (B 116.08 47⇓P PKPdf 05 59 19.9 +1.4
baz=116
J18A Kendall Valley 116.10 45⇓P PKPdf 05 59 19.9 +1.5
baz=116
V15A Kaibab Nationa 116.13 54⇑P PKPdf 05 59 21.1 +2.3
baz=116,SNR=13
R16A Teasdale 116.19 51⇑P PKPdf 05 59 20.5 +1.7
baz=116
214A Organ Pipe Nat 116.23 58⇑P PKPdf 05 59 19.9 +0.8
baz=116
K18A Toltan Ranch, 116.23 46⇑P PKPdf 05 59 20.7 +1.9
baz=116,SNR=11
Q16A Castle Valley 116.30 50⇓P PKPdf 05 59 20.8 +1.8
baz=116
X15A Humboldt 116.31 55⇓P PKPdf 05 59 20.8 +1.6
baz=116,SNR=5.6
Y15A Casa Rosa Ranc 116.33 56⇑P PKPdf 05 59 20.9 +1.7
baz=116,SNR=6.7
O17A Robinson Place 116.33 49⇓P PKPdf 05 59 20.5 +1.5
baz=116
L18A Fontenelle, Gr 116.42 47⇑P PKPdf 05 59 20.6 +1.4
baz=116,SNR=6.1
T16A Glen Canyon Da 116.44 52⇑P PKPdf 05 59 20.8 +1.4
baz=116
P17A Butcher Ranch, 116.50 49⇓P PKPdf 05 59 21.4 +2.0
baz=116
BW06 Boulder Array 116.54 46⇓P PKPdf 05 59 20.7 +1.3
baz=116
PDAR Pinedale Array 116.55 46 PKP PKPdf 05 59 20.3 +0.9
comp=Z,1.6nm,0.8s,baz=267,slow=0.9,SNR=14
PDAR PKKPbc PKKPbc 06 09 48.2 -0.3
comp=Z,1.2nm,0.8s,baz=108,slow=4.8,SNR=9.0
115A Sonoran Desert 116.61 57⇑P PKPdf 05 59 21.4 +1.6
baz=117,SNR=5.8
SRU San Rafael 116.75 50⇓P PKPdf 05 59 20.8 +1.0
baz=117,SNR=7.0

R17A	Hanksville Air	116.76	51	⇓P	PKPdf	05 59 21.1 +1.2
	baz=117,SNR=9.3					
FFC	Flin Flon	116.77	31	*i* PKIKP	PKPdf	05 59 21.0 +1.6
WUAZ	Wupatki	116.83	54	⇓P	PKPdf	05 59 21.9 +1.8
	baz=117,SNR=5.3					
S17A	Black Ridge (B	116.86	51	⇑P	PKPdf	05 59 21.4 +1.3
	baz=117,SNR=5.3					
O18A	Roosevelt	116.86	48	⇓P	PKPdf	05 59 21.8 +1.7
	baz=117					
L19A	Farson	116.87	46	⇓P	PKPdf	05 59 21.3 +1.3
	baz=117,SNR=5.8					
U16A	Tuba City	116.90	53	⇑P	PKPdf	05 59 22.1 +1.9
	baz=117,SNR=9.7					
N18A	Larsen Ranch,	116.93	48	⇓P	PKPdf	05 59 21.3 +1.1
	baz=117					
X16A	Lo Mia Camp, P	116.97	55	⇓P	PKPdf	05 59 22.2 +1.7
	baz=117,SNR=8.3					
T17A	Navajo Res., N	116.99	52	⇑P	PKPdf	05 59 22.1 +1.7
	baz=117,SNR=13					
K19A	Absolon Red Bu	117.03	45	⇓P	PKPdf	05 59 21.5 +1.2
	baz=117,SNR=6.9					
Q18A	Rafter H Ranch	117.04	50	⇓P	PKPdf	05 59 22.0 +1.6
	baz=117					
116A	Eloy	117.07	57	⇓P	PKPdf	05 59 22.1 +1.4
	baz=117,SNR=5.6					
MEM	Membach	117.09	324	PKP	PKPdf	05 59 20.6 +0.5
CDF	Champ du Feu	117.17	321	*e*PKIKP	PKPdf	05 59 20.0 -0.4
	comp=Z,4.7nm,0.6s					
M19A	Rock Springs	117.17	47	⇓P	PKPdf	05 59 22.5 +1.9
	baz=117					
U17A	Shonto	117.18	53	⇑P	PKPdf	05 59 22.6 +1.8
	baz=117					
V17A	Tonalea, Kykot	117.27	54	⇑P	PKPdf	05 59 22.9 +1.9
	baz=117					
N19A	John Jarvie Ra	117.31	48	⇑P	PKPdf	05 59 21.8 +0.9
	baz=117					
216A	Three Points,	117.36	58	⇑P	PKPdf	05 59 22.9 +1.7
	baz=117					
R18A	Canyonlands Na	117.39	50	⇑P	PKPdf	05 59 22.7 +1.6
	baz=117,SNR=6.8					
K20A	Yellowstone Ra	117.44	45	⇓P	PKPdf	05 59 22.2 +1.2
	baz=117					
S18A	Hurst Farm, Bl	117.47	51	⇓P	PKPdf	05 59 22.8 +1.5
	baz=118,SNR=8.7					
X17A	Forest Lakes	117.51	55	⇑P	PKPdf	05 59 23.1 +1.6
	baz=118					
O19A	Miners Draw (B	117.51	48	⇑P	PKPdf	05 59 22.6 +1.4
	baz=118					
Y17A	Roosevelt	117.59	56	⇑P	PKPdf	05 59 23.0 +1.3
	baz=118,SNR=5.6					
L20A	Wamsutter	117.62	46	⇑P	PKPdf	05 59 23.0 +1.5
	baz=118,SNR=5.1					
HINF	Hinteralfeld	117.65	321	*e*PKIKP	PKPdf	05 59 21.1 -0.2
	comp=Z,15nm,0.7s					
T18A	Mexican Hat	117.69	52	⇓P	PKPdf	05 59 23.4 +1.6
	baz=118,SNR=10					
Q19A	Hogan Spring (	117.74	50	⇑P	PKPdf	05 59 23.6 +1.8
	baz=118					
P19A	Cripple Cowboy	117.78	49	⇓P	PKPdf	05 59 23.9 +2.1
	baz=118					
U18A	Rough Rock, Ch	117.84	53	⇑P	PKPdf	05 59 23.8 +1.8
	baz=118,SNR=7.8					
117A	Oracle	117.87	57	⇑P	PKPdf	05 59 23.9 +1.7
	baz=118,SNR=6.1					
M20A	Sweetwater, Wa	117.88	47	⇓P	PKPdf	05 59 24.0 +2.0
	baz=118					
TUC	Tucson	117.88	57	*e*PKIKP	PKPdf	05 59 24.1 +1.8
HAU	Haudompre	117.90	321	*e*PKIKP	PKPdf	05 59 21.9 +0.1
	comp=Z,12nm,0.9s					
217A	Green Valley	117.94	58	⇑P	PKPdf	05 59 24.3 +1.9
	baz=118					
V18A	Ganado	117.94	53	⇑P	PKPdf	05 59 24.1 +1.9
	baz=118					
PGF	Pioggiola	117.96	315	*e*PKIKP	PKPdf	05 59 22.2 +0.1
Z17A	San Carlos Hig	117.97	56	⇓P	PKPdf	05 59 23.8 +1.4
	baz=118,SNR=5.6					
GIVF	Givet	117.99	324	*e*PKIKP	PKPdf	05 59 22.5 +0.6
N20A	Spence Gulch,	118.00	47	⇓P	PKPdf	05 59 23.8 +1.6
	baz=118,SNR=9.4					
S19A	Harvey Farm, M	118.12	51	⇑P	PKPdf	05 59 24.3 +1.8
	baz=118					
DOU	Dourbes	118.13	324	PKP	PKPdf	05 59 22.5 +0.3
X18A	Snowflake	118.16	55	⇓P	PKPdf	05 59 24.6 +1.8
	baz=118					
O20A	White River Ci	118.20	48	⇑P	PKPdf	05 59 24.3 +1.7
	baz=118,SNR=6.3					
DGMT	Dagmar	118.22	38	⇓P	PKPdf	05 59 24.2 +1.8
	baz=118					
W18A	Petrified Fore	118.22	54	⇓P	PKPdf	05 59 24.5 +1.7
	baz=118					
Y18A	Canyon Day Jun	118.24	56	⇑P	PKPdf	05 59 25.0 +2.1
	baz=118					
L21A	Rawlins	118.33	46	⇑P	PKPdf	05 59 24.6 +1.8
	baz=118					
BAIF	Baives	118.37	324	*e*PKIKP	PKPdf	05 59 23.2 +0.6
	comp=Z,14nm,0.9s					
U19A	Dine' College,	118.39	53	⇑P	PKPdf	05 59 24.7 +1.6
	baz=118					
T19A	Beclabito	118.42	52	⇑P	PKPdf	05 59 24.7 +1.5
	baz=118					
M21A	Separation Pea	118.44	46	⇓P	PKPdf	05 59 24.3 +1.2
	baz=118					
PV01	Paradox Valley	118.46	50	*e*PKPdf	PKPdf	05 59 25.2 +2.0
Q20A	Ridgley Place,	118.47	49	⇓P	PKPdf	05 59 24.7 +1.6
	baz=118,SNR=12					
118A	Homack Ranch,	118.50	57	⇓P	PKPdf	05 59 25.3 +1.9
	baz=118					
LPG	La Plagne	118.55	318	*e*PKIKP	PKPdf	05 59 23.7 +0.6
	comp=Z,14nm,0.7s					
218A	Dragoon	118.55	58	⇓P	PKPdf	05 59 25.3 +1.8
	baz=119					
LPL	La Plagne	118.55	318	*e*PKIKP	PKPdf	05 59 23.6 +0.5
	comp=Z,12nm,0.6s					
N21A	Black Mountain	118.56	47	⇑P	PKPdf	05 59 25.2 +1.8
	baz=118					
CABF	La Chapelle	118.58	320	*e*PKIKP	PKPdf	05 59 23.7 +0.6
	comp=Z,25nm,0.7s					
R20A	Redvale	118.60	50	⇑P	PKPdf	05 59 25.2 +1.8
	baz=119,SNR=6.5					
V19A	Window Rock	118.65	53	⇑P	PKPdf	05 59 25.7 +2.1
	baz=119					
318A	Bisbee	118.69	58	⇑P	PKPdf	05 59 25.5 +1.6
	baz=119					
X19A	St. Johns	118.72	55	⇓P	PKPdf	05 59 26.0 +2.2
	baz=119					
MVCO	Mesa Verde	118.74	51	⇑P	PKPdf	05 59 25.5 +1.8
	baz=119,SNR=8.4					
MVCO	Mesa Verde	118.74	51	*e*PKPdf	PKPdf	05 59 25.8 +2.0
O21A	Pagoda	118.75	48	⇑P	PKPdf	05 59 25.6 +2.0
	baz=119					
MBDF	Montbardon	118.80	318	*e*PKIKP	PKPdf	05 59 23.6 0.0
	comp=Z,12nm,0.8s					
Y19A	Nutrioso	118.84	55	⇑P	PKPdf	05 59 25.7 +1.7
	baz=119					
P21A	Newcastle	118.95	49	⇑P	PKPdf	05 59 26.0 +1.9
	baz=119					
119A	Ashpeak Ranch,	119.03	57	⇑P	PKPdf	05 59 26.4 +1.9
	baz=119					
Q21A	Lamborn Mesa,	119.04	49	⇑P	PKPdf	05 59 26.2 +1.9
	baz=119,SNR=5.4					
M22A	Cedar Creek Ra	119.05	46	⇑P	PKPdf	05 59 26.2 +2.0
	baz=119					
V20A	Brimhall	119.09	53	⇑P	PKPdf	05 59 26.3 +1.8
	baz=119					
S21A	Coal Bank Pass	119.18	51	⇑P	PKPdf	05 59 26.6 +2.0
	baz=119,SNR=7.0					
219A	White Tail Can	119.21	57	⇓P	PKPdf	05 59 26.2 +1.4
	baz=119					
W20A	Ramah	119.21	54	⇓P	PKPdf	05 59 26.7 +1.9
	baz=119					
319A	Douglas	119.30	58	⇓P	PKPdf	05 59 26.9 +1.9
	baz=119					
N22A	Wattenberg Ran	119.33	47	⇓P	PKPdf	05 59 26.6 +1.8
	baz=119					
ORIF	Oris-en-Rattie	119.33	318	*e*PKIKP	PKPdf	05 59 24.8 +0.2
	comp=Z,17nm,0.9s					
X20A	Quemado	119.34	54	⇑P	PKPdf	05 59 27.2 +2.2
	baz=119					
KEST	Kesra	119.47	307	PKP	PKPdf	05 59 25.9 +0.7
	comp=Z,2.6nm,0.9s,baz=152,slow=3.0,SNR=5.5					
Q22A	Crested Butte,	119.53	49	⇑P	PKPdf	05 59 27.4 +2.2
	baz=120,SNR=7.8					
Z20A	Nine Sixteen R	119.55	56	⇑P	PKPdf	05 59 27.5 +2.0
	baz=120					
Y20A	Horse Springs,	119.57	55	⇑P	PKPdf	05 59 27.6 +2.2
	baz=120					
120A	U Bar Ranch, L	119.63	57	⇓P	PKPdf	05 59 27.2 +1.6
	baz=120					
LOR	Lormes	119.73	321	*e*PKIKP	PKPdf	05 59 25.5 +0.1
	comp=Z,11nm,0.8s					
V21A	Milan	119.74	53	⇓P	PKPdf	05 59 27.7 +2.0
	baz=120					
R22A	Saguache, Gunn	119.82	50	⇓P	PKPdf	05 59 27.6 +1.8
	baz=120,SNR=7.2					
220A	Playas Peak, P	119.83	57	⇑P	PKPdf	05 59 27.9 +1.9
	baz=120					
SMRF	Simiane la Rot	119.86	317	*e*PKIKP	PKPdf	05 59 26.4 +0.7
	comp=Z,49nm,1.3s					
W21A	San Fidel	119.89	54	⇓P	PKPdf	05 59 28.2 +2.2
	baz=120					
X21A	Alamocita Cree	119.93	54	⇑P	PKPdf	05 59 28.2 +2.0
	baz=120					
320A	Kipp Ranch, An	119.94	58	⇑P	PKPdf	05 59 28.5 +2.2
	baz=120					
RSSD	Black Hills	119.94	43	*e*PKIKP	PKPdf	05 59 26.6 +0.8
SMF	Signal de Mont	120.00	320	*e*PKIKP	PKPdf	05 59 25.9 0.0
T22A	Edith	120.02	51	⇓P	PKPdf	05 59 28.3 +2.1
	baz=120,SNR=5.9					
SSF	Saint Saulge	120.04	321	*e*PKIKP	PKPdf	05 59 26.3 +0.4
	comp=Z,20nm,0.8s					
VIVF	Saint-Julien-l	120.15	318	*e*PKIKP	PKPdf	05 59 26.4 +0.2
	comp=Z,12nm,0.8s					
AVF	Avril sur Loir	120.25	321	*e*PKIKP	PKPdf	05 59 26.3 0.0
	comp=Z,5.3nm,0.6s					
Z21A	St. Cloud Mine	120.27	56	⇑P	PKPdf	05 59 28.7 +1.9
	baz=120					
V22A	San Miguel Ran	120.29	53	⇓P	PKPdf	05 59 29.0 +2.2
	baz=120,SNR=10					
121A	Cookes Peak, D	120.33	57	⇓P	PKPdf	05 59 29.1 +2.1
	baz=120					
221A	Mesquite Ranch	120.44	57	⇓P	PKPdf	05 59 29.3 +2.1
	baz=120					
LAZ	Ladron	120.46	54	*e*PKPdf	PKPdf	05 59 29.6 +2.4
X22A	Bernardo	120.54	54	⇑P	PKPdf	05 59 29.3 +2.0
	baz=120					
BGF	Bois d'Agland	120.66	321	*e*PKIKP	PKPdf	05 59 27.6 +0.4
	comp=Z,26nm,0.7s					
Y22A	Socorro	120.71	55	⇑P	PKPdf	05 59 29.5 +1.9
	baz=121,SNR=9.2					
Z22A	Elephant Butte	120.86	56	⇓P	PKPdf	05 59 30.0 +2.0
	baz=121					
ANMO	Albuquerque	120.88	54	*e*PKIKP	PKPdf	05 59 30.1 +2.2
V23A	Ortiz Mt. (NFS	120.91	53	⇑P	PKPdf	05 59 30.3 +2.3
	baz=121,SNR=5.7					
BNM	Barren Site	120.93	54	*e*PKPdf	PKPdf	05 59 30.4 +2.3
122A	Cerniff Cattle	120.94	56	⇓P	PKPdf	05 59 29.9 +1.7
	baz=121					
LASF	Ste Croix	120.98	318	*e*PKIKP	PKPdf	05 59 28.3 +0.4
	comp=Z,13nm,0.9s					
222A	Williams Famil	120.98	57	⇓P	PKPdf	05 59 30.0 +1.7
	baz=121					
W23A	Werner Place,	121.08	53	⇓P	PKPdf	05 59 30.0 +1.7
	baz=121,SNR=8.0					
TCF	Toulx Ste Croi	121.17	321	*e*PKIKP	PKPdf	05 59 28.6 +0.5
	comp=Z,20nm,0.8s					
Y23A	Lovelace Mesa,	121.44	55	⇑P	PKPdf	05 59 30.6 +1.5
	baz=121,SNR=9.6					
W24A	Lazy 6 Ranch,	121.65	53	⇑P	PKPdf	05 59 31.6 +2.2
	baz=122,SNR=14					
X24A	Lazy VL Ranch,	121.79	54	⇑P	PKPdf	05 59 31.1 +1.4
	baz=122					
CAF	Calviac	121.83	319	*e*PKIKP	PKPdf	05 59 30.2 +0.7
	comp=Z,37nm,1.3s					
FRB	Frobisher Bay	121.87	10	PKP	PKPdf	05 59 28.9 -0.1
	comp=Z,3.7nm,0.7s,baz=324,slow=5.5,SNR=5.6					
FRB	Frobisher Bay	121.87	10	PKIKP	PKPdf	05 59 28.9 -0.1
FRB				pmax	pmax	
	comp=Z,4.0nm,0.7s					
Y24A	Capitan	121.95	54	⇑P	PKPdf	05 59 32.0 +2.0
	baz=122,SNR=24					
RJF	Les Rejaudoux	122.02	320	*e*PKIKP	PKPdf	05 59 30.5 +0.7
124A	Stringfield Ra	122.22	56	⇑P	PKPdf	05 59 32.4 +1.8
	baz=122,SNR=16					
ULM	Lac du Bonnet	122.24	33	PKP	PKPdf	05 59 29.8 -0.3
	comp=Z,4.1nm,0.8s,baz=308,slow=4.1,SNR=5.3					
ULM				PKKPbc	PKKPbc	06 09 25.9 -2.0
	comp=Z,0.8nm,0.4s,baz=107,slow=3.1,SNR=3.9					
224A	Corundas Mount	122.30	57	⇑P	PKPdf	05 59 32.3 +1.6
	baz=122,SNR=8.4					
MTLF	Montolieu	122.36	317	*e*PKIKP	PKPdf	05 59 30.8 +0.3
	comp=Z,7.4nm,0.7s					
W25A	X Bar L Ranch,	122.40	53	⇓P	PKPdf	05 59 32.5 +1.6
	baz=122,SNR=8.9					
324A	Moseley Ranch,	122.47	57	⇓P	PKPdf	05 59 32.7 +1.6
	baz=122,SNR=14					
MFF	Saint Martin d	122.50	322	*e*PKIKP	PKPdf	05 59 31.0 +0.3
	comp=Z,19nm,0.6s					
MNTX	Cornudas Mount	122.50	57	*e*PKPdf	PKPdf	05 59 32.5 +1.3
Y25A	Mesa, Roswell	122.55	54	⇑P	PKPdf	05 59 32.5 +1.4
	baz=122,SNR=19					
U26A	Atchley Ranch,	122.64	51	⇓P	PKPdf	05 59 32.8 +1.5
	baz=123					
LFF	La Freistale	122.68	320	*e*PKIKP	PKPdf	05 59 31.8 +0.7
Z25A	Roswell	122.68	55	⇑P	PKPdf	05 59 32.9 +1.5
	baz=123,SNR=8.4					
V26A	Tequesquite Ra	122.77	52	⇓P	PKPdf	05 59 32.8 +1.3
	baz=123					
125A	Gardner Draw,	122.88	56	⇓P	PKPdf	05 59 33.2 +1.3
	baz=123,SNR=7.4					
325A	Bean Ranch, Si	122.91	57	⇑P	PKPdf	05 59 32.9 +0.9
	baz=123,SNR=9.6					
W26A	Owens Ranch, T	122.98	53	⇑P	PKPdf	05 59 33.4 +1.4
	baz=123					
425A	Indio Mountain	123.03	58	⇑P	PKPdf	05 59 33.5 +1.3
	baz=123,SNR=14					
X26A	CR and CF Fran	123.09	53	⇑P	PKPdf	05 59 33.5 +1.2
	baz=123					
SGMF	Saint Gilles	123.14	324	*e*PKIKP	PKPdf	05 59 32.0 +0.1
Z26A	Caprock	123.28	55	⇓P	PKPdf	05 59 33.5 +0.8
	baz=123					
126A	Clayton Basin,	123.41	56	⇓P	PKPdf	05 59 34.1 +1.2
	baz=123					
226A	Malaga, Loving	123.48	56	⇓P	PKPdf	05 59 34.1 +1.1
	baz=124,SNR=12					
W27A	Bowe Ranch, En	123.54	53	⇓P	PKPdf	05 59 34.4 +1.4
	baz=124					
CLNB	Carlsbad	123.61	56	*e*PKPdf	PKPdf	05 59 34.9 +1.6
EPF	Esparros	123.74	318	*e*PKIKP	PKPdf	05 59 33.6 +0.4
326A	Caldwell Ranch	123.75	57	⇓P	PKPdf	05 59 34.2 +0.7
	baz=124,SNR=5.4					
Y27A	Causey	123.78	54	⇑P	PKPdf	05 59 34.9 +1.3
	baz=124					
426A	McDonald Obser	123.86	58	⇑P	PKPdf	05 59 34.8 +1.0
	baz=124					
Z27A	Tatum	123.89	55	⇓P	PKPdf	05 59 34.7 +1.0
	baz=124					
526A	Mary Lane Ranc	123.94	59	⇑P	PKPdf	05 59 34.9 +0.9
	baz=124,SNR=15					
626A	Big Bend Ranch	124.01	59	⇓P	PKPdf	05 59 35.2 +1.1
	baz=124,SNR=5.1					
MSTX	Muleshoe	124.08	54	⇓P	PKPdf	05 59 35.2 +1.1
	baz=124					
527A	Woodward Ranch	124.32	58	⇓P	PKPdf	05 59 35.7 +1.0
	baz=124,SNR=17					
427A	Hayter Ranch,	124.34	58	⇓P	PKPdf	05 59 35.7 +1.0
	baz=124,SNR=17					
ETSF	Etsaut	124.40	318	*e*PKIKP	PKPdf	05 59 35.6 +1.1
	comp=Z,18nm,0.9s					
TXAR	Lajitas Array	124.45	59	PKP	PKPdf	05 59 36.5 +1.5
	comp=Z,4.0nm,0.9s,baz=259,slow=1.3,SNR=39					
TXAR				PKKPbc		06 09 19.5
	comp=Z,1.2nm,0.9s,baz=111,slow=5.9,SNR=8.8					
TXAR	Lajitas Array	124.45	59	PKIKP	PKPdf	05 59 36.5 +1.5
TXAR				pmax	pmax	
	comp=Z,4.0nm,0.9s					
TXAR				pmax	pmax	
	comp=Z,1.0nm,0.9s					
627A	Terlingua Ranc	124.66	59	⇓P	PKPdf	05 59 36.4 +1.0
	baz=125,SNR=16					
328A	Wristen Ranch,	124.71	57	⇑P	PKPdf	05 59 36.4 +1.0
	baz=125					
428A	Kincaid Ranch,	124.97	57	⇓P	PKPdf	05 59 37.9 +2.0
	baz=125					
ECSD	EROS Data Cent	125.00	41	*e*PKPdf	PKPdf	05 59 36.0 +0.4
528A	Cox Ranch, San	125.01	58	⇓P	PKPdf	05 59 37.6 +1.6
	baz=125					
628A	Black Gap, Mar	125.08	59	⇓P	PKPdf	05 59 37.3 +1.1
	baz=125,SNR=6.8					
TAM	Tamanrasset	125.11	293	*e*PKIKP	PKPdf	05 59 38.2 +1.8
EYMN	Ely	125.91	34	*e*PKPdf	PKPdf	05 59 37.6 +0.4
WMOK	Wichita Mounta	126.99	52	*e*PKIKP	PKPdf	05 59 40.9 +1.2
JCT	Junction City	127.44	57	*e*PKIKP	PKPdf	05 59 42.0 +1.3
ESDC	Sonseca Array	128.11	316	PKP	PKPdf	05 59 42.3 +0.6
	comp=Z,1.3nm,0.7s,baz=28,slow=2.3,SNR=5.3					
ESDC				PP	PP	06 01 46.1 +0.7
	comp=Z,0.4nm,0.3s,baz=60,slow=9.2,SNR=5.6					
PLCA	Paso Flores	128.47	159	PKP	PKPdf	05 59 44.2 +1.9
	comp=Z,4.3nm,0.7s,baz=209,slow=3.0,SNR=9.3					
PLCA	Paso Flores	128.47	159	PKIKP	PKPdf	05 59 44.2 +1.8
PLCA				pmax	pmax	
	comp=Z,4.0nm,0.7s					
PLCA	Paso Flores	128.47	159	PKP	PKPdf	05 59 44.2 +1.9
SCHQ	Schefferville	130.46	13	PKP	PKPdf	05 59 44.7 -0.9
	comp=Z,5.2nm,1.0s,baz=267,slow=3.9,SNR=4.0					
SCHQ	Schefferville	130.46	13	PKP	PKPdf	05 59 44.7 -0.9
MIAR	Mount Ida	131.06	50	*e*PKIKP	PKPdf	05 59 49.4 +2.0
CCM	Cathedral Cave	131.24	45	*e*PKIKP	PKPdf	05 59 49.3 +1.6
EVO	Evora	131.43	316	*e*PKIKP	PKPdf	05 59 48.8 +0.8
	comp=Z,81nm,1.7s					
OLIL	Olney	133.04	42	*e*PKPdf	PKPdf	05 59 51.9 +0.8
CMIG	Matias Romero	134.49	73	PKP	PKPdf	05 59 55.4 +1.1
	comp=Z,3.0nm,0.8s,baz=329,slow=4.4,SNR=5.6					
KIC	Kosan Boka	135.73	272	*e*P	PKPdf	05 59 57.1 +0.3
	comp=Z,101nm,1.3s					
LIC	Lamto	136.01	272	*e*P	PKPdf	05 59 59.0 +1.7
	comp=Z,163nm,1.8s					
TIC	Toumodi	136.03	272	*e*P	PKPdf	05 59 57.6 +0.3
	comp=Z,64nm,1.1s					
LRAL	Lakeview Retre	136.65	48	*e*PKPdf	PKPdf	05 59 58.0 +0.1
APG	El Apazote	138.95	75	PKhKP		05 59 53.8
	comp=Z,6.1nm,1.1s,baz=299,slow=7.7,SNR=4.8					
JTS	JuntasAbangare	144.66	82	*e*PKIKP	PKPdf	06 00 13.4 +0.5
CPUP	Villa Florida	145.79	167	PKPbc	PKPbc	06 00 16.4 +1.3
	comp=Z,16nm,0.8s,baz=190,slow=2.3,SNR=65					
NNA	Nana	146.66	125	*e*PKPdf	PKPdf	06 00 16.8 +0.5
NNA				*e*PKPbc	PKPbc	06 00 18.6 +0.6
NNA				*e*PKPab	PKPab	06 00 20.3 +1.1
BCIP	Isla Barro Col	149.74	84	*e*PKPdf	PKPdf	06 00 22.7 +1.3
BCIP				*e*PKPbc	PKPbc	06 00 27.5 +1.4
BCIP				*e*PKPab	PKPab	06 00 32.9 +1.3
CAM4	Nova Friburgo	149.90	193	⇑*i*P	PKPbc	06 00 28.0 +1.7
CAM4				*i*		06 00 31.5
CAM4				*i*		06 00 42.6
CAM4				*i*		06 00 51.8
CAM4				*i*		06 00 59.9
CAM4				*i*		06 01 17.0
OTAV	Otavalo	150.15	102	*e*PKPdf	PKPdf	06 00 24.2 +2.1
OTAV				*e*PKPbc	PKPbc	06 00 30.3 +3.1
LPAZ	La Paz	150.16	142	PKP	PKPdf	06 00 24.5 +2.5
	comp=Z,20nm,1.3s,baz=33,slow=1.1,SNR=16					
LPAZ				PKPbc	PKPbc	06 00 30.0 +2.9
	comp=Z,64nm,0.9s,baz=258,slow=2.7,SNR=104					
LPAZ	La Paz	150.16	142	PKIKP	PKPdf	06 00 24.5 +2.5
LPAZ						06 00 30.0
LPAZ				pmax	pmax	
	comp=Z,20nm,1.3s					
LPAZ				pmax	pmax	
	comp=Z,64nm,0.9s					
GTBY	Guantanamo Bay	151.97	61	*e*PKPbc	PKPbc	06 00 32.1 +0.9
ROSC	El Rosal	155.03	94	PKP	PKPdf	06 00 31.2 +2.0
	comp=Z,1.5nm,0.3s,baz=154,slow=4.5,SNR=4.5					
SDV	Santo Domingo	158.84	84	*e*PKPdf	PKPdf	06 00 35.3 +1.3

CSEM ***19*** *05:41:38.5±0.3, 33°.36N×35°.36E, h2km, ML3.3, Error ellipse: s-maj=8.7km s-min=3.9km az=100.0*
GRAL ***19*** *05:41:39.2±0.5, 33°.34N×35°.43E, h6km±3km, MD3.3*
GII 19 05:41:38.2±0.5, 33°.29N×35°.42E, h1km±1km, Md2.6/6, Mm2.2/4, Jordan - Syria region
ISC 19 05:41:39.4±2.1, 33°.38N±0°.09×35°.41E±0°.09, h10km±15km, n8, σ0°.24/13, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.13	326	*e*P	Pg	05 41 42.5	+0.1
MATL	Matirih	0.13	326	*e*P	Pg	05 41 42.5	+0.1
RCY	Rachaya	0.35	73	*e*P	Pg	05 41 46.1	-0.3
RCY				*e*S	Sg	05 41 51.4	+0.2
RCY	Rachaya	0.35	73	*e*P	Pg	05 41 46.1	-0.3
RCY				*e*S	Sg	05 41 51.4	+0.3
BHL	Bhannes	0.56	21	*e*P	Pg	05 41 50.0	-0.3
BHL				*e*S	Sg	05 41 57.8	+0.2
BHL	Bhannes	0.56	21	*e*P	Pg	05 41 50.0	-0.2
BHL				*e*S	Sg	05 41 57.8	+0.2
HWQ	Hawqa	1.00	26	*e*P	Pg	05 41 58.8	+0.2
HWQ				*e*S	Sg	05 42 11.3	-0.3
FKH	Fakeheh	1.18	44	*e*P	Pb	05 42 02.0	+0.1

ISCJB ***19*** *06:03:31.4±1.2, 35°.7S±0°.2×54°.0E±0°.2, h10km, mb3.9/4, Error ellipse: s-maj=33.0km s-min=20.9km az=138.5*
IDC ***19*** *06:03:31.6±1.3, 35°.63S×53°.96E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.8/21, mbtmp4.0/5, ML3.9/1, Error ellipse: s-maj=54.1km s-min=28.1km az=24.0*
NEIC ***19*** *06:03:33.1±0.8, 35°.66S×53°.95E, h10km, mb4.0/1, Error ellipse: s-maj=25.6km s-min=15.2km az=49.0*
ISC 19 06:03:33.1±1.2, 35°.7S±0°.2×54°.0E±0°.2, h10km, n10, σ0°.20/7, mb3.9/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	Ambohimpanom	17.61	338	*e*P	Pn	06 07 38.9	+0.2
	8.7nm,0.6s	

XAN	**Xi'an**	**3.43 61**	Pn	**Pn**	**06 07 49.6 +1.4**
XAN			Sn	**Sn**	**06 08 28.3 -0.6**
XAN			Sg	**Sg**	**06 08 37.8 -7.1**
XAN			smax		
	comp=N,8μm,1.1s				
XAN			smax		
	comp=E,3μm,1.1s				
XAN			LR	LR	
	comp=N,67μm,8.6s				
XAN			LR	LR	
	comp=E,9μm,6.2s				
LZH	**Lanzhou**	**3.84 342**	Pn	**Pn**	**06 07 54.4 +0.6**
LZH			Pg	**Pg**	**06 08 05.4 -2.9**
LZH			Sg	**Sg**	**06 08 52.8 -5.2**
LZH			smax		
	comp=N,11μm,0.8s				
LZH			smax		
	comp=E,27μm,1.2s				
LZH			LR	LR	
	comp=N,54μm,5.0s				
LZH			LR	LR	
	comp=Z,58μm,8.5s				
ENH	**Enshi**	**4.18 120**	*e*Pn	**Pn**	**06 07 58.7 +0.2**
ENH			*e*Sn	**Sn**	**06 08 44.9 -2.5**
GYA	**Guiyang**	**6.07 168**	Pn	**Pn**	**06 08 24.8 +0.3**
GYA			Sn	**Sn**	**06 09 33.9 -0.2**
GYA			smax		
	comp=N,4μm,0.9s				
GYA			smax		
	comp=E,4μm,0.8s				
GYA			LR	LR	
	comp=N,23μm,5.0s				
GYA			LR	LR	
	comp=E,30μm,4.0s				
GYA			LR	LR	
	comp=Z,38μm,5.5s				
KMI	**Kunming**	**7.62 198**	Pn	**Pn**	**06 08 47.1 +1.2**
KMI			Sn	**Sn**	**06 10 11.0 -1.3**
KMI			Sg	**Sg**	**06 10 57.0 -2.4**
KMI			smax		
	comp=N,1μm,1.5s				
KMI			smax		
	comp=E,1μm,1.3s				
KMI			LR	LR	
	comp=N,22μm,5.0s				
KMI			LR	LR	
	comp=E,30μm,7.3s				
TIY	**Taiyuan**	**7.87 46**	*e*Pn	**Pn**	**06 08 48.4 -0.8**
TIY			Sn	**Sn**	**06 10 22.3 +4.1**
TIY			LR	LR	
	comp=N,8μm,5.5s				
TIY			LR	LR	
	comp=E,3μm,4.3s				
TIY			LR	LR	
	comp=Z,3μm,7.2s				
WHN	**Wuhan**	**7.95 101**	⇑P	**Pn**	**06 08 49.0 -1.4**
WHN			S	**Sn**	**06 10 19.4 -1.0**
WHN			LR	LR	
	comp=N,22μm,3.0s				
WHN			LR	LR	
	comp=E,51μm,4.6s				
WHN			LR	LR	
	comp=Z,34μm,8.0s				
GTA	**Gaotai**	**8.26 329**	⇑P	**Pn**	**06 08 53.1 -1.5**
GTA			pP		06 08 57.0
GTA			sP		06 08 58.8
GTA			S	**Sn**	**06 10 27.1 -0.8**
GTA			pmax	pmax	
	comp=Z,47nm,0.7s				
GTA			pmax	pmax	
	comp=Z,180nm,4.5s				
GTA			LR	LR	
	comp=N,24μm,12.5s				
GTA			LR	LR	
	comp=E,29μm,10.4s				
GTA			LR	LR	
	comp=Z,32μm,9.5s				
BTO	**Baotou**	**8.99 24**	*e*P	**Pn**	**06 09 02.3 -2.3**
BTO			S	**Sn**	**06 10 48.5 +2.6**
BTO			LR	LR	
	comp=N,7μm,9.6s				
BTO			LR	LR	
	comp=E,5μm,8.1s				
HHC	**Hu-ho-hao-te**	**9.79 29**	*e*P	**Pn**	**06 09 15.3 -0.2**
HHC			pP		06 09 22.4
HHC			sP		06 09 27.3
HHC			S	**Sn**	**06 11 04.5 -0.9**
HHC			sS		06 11 13.6
HHC			pmax	pmax	
	comp=Z,41nm,1.3s				
HHC			pmax	pmax	
	comp=Z,280nm,5.5s				
HHC			LR	LR	
	comp=N,12μm,7.6s				
HHC			LR	LR	
	comp=E,18μm,7.3s				
HHC			LR	LR	
	comp=Z,10μm,6.0s				
TIA	**Tai'an**	**10.48 66**	*e*P	**Pn**	**06 09 25.1 +0.2**
TIA			LR	LR	
	comp=N,6μm,8.0s				
TIA			LR	LR	
	comp=E,3μm,9.0s				
NJ2	**Nanjing**	**11.48 88**	*e*P	**Pn**	**06 09 38.1 -0.6**
NJ2			pP		06 09 45.4
NJ2			PP		06 09 48.8
NJ2			sP		06 09 50.8
NJ2			S	**Sn**	**06 11 44.8 -2.3**
NJ2			sS		06 11 55.9
NJ2			pmax	pmax	
	comp=Z,130nm,1.1s				
NJ2			pmax	pmax	
	comp=Z,590nm,3.6s				
NJ2			LR	LR	
	comp=N,6μm,7.9s				
NJ2			LR	LR	
	comp=E,13μm,8.2s				
NJ2			LR	LR	
	comp=Z,12μm,8.0s				
BJT	**Baijiatuau**	**11.58 46**	*e*P	**Pn**	**06 09 41.5 +1.5**
BJT			pmax	pmax	
	comp=Z,35nm,0.6s				
BJT	**Baijiatuau**	**11.58 46**	*e*Pn	**Pn**	**06 09 41.5 +1.5**
	comp=Z,35nm,0.6s				
BJI	**Beijing**	**11.60 46**	P	**Pn**	**06 09 40.3 0.0**
BJI			S	**Sn**	**06 11 49.9 +0.1**
BJI			pmax	pmax	
	comp=Z,37nm,0.9s				
BJI			pmax	pmax	
	comp=Z,180nm,3.6s				
BJI			LR	LR	
	comp=N,23μm,18.6s				
BJI			LR	LR	
	comp=E,20μm,21.1s				
BJI			LR	LR	
	comp=Z,22μm,26.2s				
GZH	**Guangzhou**	**11.72 141**	P	**Pn**	**06 09 37.0 -5.0**
GZH			S	**Sn**	**06 11 39.8 -13**
GZH			LR	LR	
	comp=N,26μm,11.1s				
GZH			LR	LR	
	comp=E,29μm,10.4s				
LSA	**Lhasa**	**12.44 261**	P	**Pn**	**06 09 52.8 +1.0**
LSA			LR	LR	
	comp=E,6μm,9.7s				
LSA			LR	LR	
	comp=Z,9μm,10.9s				
LSA	**Lhasa**	**12.44 261**	*e*P	**Pn**	**06 09 52.9 +1.1**
LSA			pmax	pmax	
	comp=Z,85nm,1.1s				
LSA	**Lhasa**	**12.44 261**	*e*Pn	**Pn**	**06 09 52.9 +1.1**
	comp=Z,84nm,1.1s				
IMP	**Imphal**	**12.56 236**	*e*P	**Pn**	**06 09 58.0 +4.5**
IMP			*e*S	**Sn**	**06 12 11.0 -2.4**
CHRT	**Chiangrai**	**13.45 203**	P	**Pn**	**06 10 06.5 +0.8**
	comp=Z,316nm,1.0s				
SSE	**Sheshan**	**13.58 91**	*e*P	**Pn**	**06 10 06.0 -1.5**
SSE			pP		06 10 09.3
SSE			S	**Sn**	**06 12 37.1 -1.3**
SSE			sS		06 12 42.1
SSE			pmax	pmax	
	comp=Z,22nm,0.7s				
SSE			pmax	pmax	
	comp=Z,120nm,3.5s				
SSE			LR	LR	
	comp=N,4μm,17.8s				
SSE			LR	LR	
	comp=E,7μm,17.8s				
SSE			LR	LR	
	comp=Z,11μm,14.8s				
SHL	**Shillong**	**13.58 243**	*e*P	**Pn**	**06 10 07.0 -0.5**
SHL			*ex*	x	06 14 12.0
QZH	**Quanzhou**	**13.84 119**	P	**Pn**	**06 10 11.8 +0.8**
QZH			S	**Sn**	**06 12 46.0 +1.2**
QZH			LR	LR	
	comp=N,38μm,10.6s				
QZH			LR	LR	
	comp=E,28μm,11.6s				
QZH			LR	LR	
	comp=Z,42μm,12.2s				
QIZ	**Qiongzhong**	**13.96 162**	P	**Pn**	**06 10 12.8 +0.2**
QIZ			S	**Sn**	**06 12 48.4 +0.7**
QIZ			pmax	pmax	
	comp=Z,35nm,1.1s				
QIZ			LR	LR	
	comp=N,13μm,11.1s				
QIZ			LR	LR	
	comp=E,3μm,10.4s				
QIZ			LR	LR	
	comp=Z,18μm,10.9s				
QIZ	**Qiongzhong**	**13.96 162**	*e*Pn	**Pn**	**06 10 12.3 -0.3**
	comp=Z,100nm,1.1s				
QIZ			*e*Sn	**Sn**	**06 12 43.9 -3.8**
CHG	**Chiang Mai**	**14.72 204**	⇓P	**Pn**	**06 10 23.9 +0.9**
	comp=Z,49nm,0.9s				
DL2	**Dalian**	**14.75 59**	⇓*i*P	**Pn**	**06 10 25.4 +2.1**
DL2			*e*S	**Sn**	**06 13 11.5 +4.7**
DL2			pmax	pmax	
	comp=Z,30nm,1.3s				
DL2			pmax	pmax	
	comp=Z,420nm,4.7s				
DL2			LR	LR	
	comp=N,4μm,16.9s				
DL2			LR	LR	
	comp=E,3μm,16.4s				
DL2			LR	LR	
	comp=Z,4μm,15.3s				
TURI	**Tura**	**14.78 246**	*e*P	**Pn**	**06 10 25.0 +1.2**
TURI			*ex*	x	06 11 36.0
CMAR	**Chiang Mai Arr**	**15.05 204**	Pn	**Pn**	**06 10 26.2 -1.3**
	comp=Z,1.2nm,0.3s,baz=16,slow=10,SNR=6.7				
CMAR			LR	LR	06 15 47.8
	comp=Z,884nm,18.3s,baz=198,slow=36				
CMAR	**Chiang Mai Arr**	**15.05 204**	P	**Pn**	**06 10 26.2 -1.3**
CMAR			pmax	pmax	
	comp=Z,1.0nm,0.3s				
CMAR			MLR	MLR	
	comp=Z,884nm,18.3s				
SONM	**Songino Array**	**15.41 3**	Pn	**Pn**	**06 10 29.0 -3.0**
	comp=Z,1.1nm,0.3s,baz=187,slow=13,SNR=12				
SONM	**Songino Array**	**15.41 3**	P	**Pn**	**06 10 29.0 -3.0**
SONM			pmax	pmax	
	comp=Z,1.0nm,0.3s				
ULN	**Ulaanbaatar**	**15.47 4**	*e*P	**Pn**	**06 10 32.7 -0.2**
ULN			*e*		06 13 23.3
ULN			pmax	pmax	
	comp=Z,98nm,1.1s				
ULN	**Ulaanbaatar**	**15.47 4**	*e*Pn	**Pn**	**06 10 32.7 -0.1**
	comp=Z,98nm,1.1s				
ULN			*e*Sn	**Sn**	**06 13 23.3 -0.9**
ULN	**Ulaanbaatar**	**15.47 4**	P	**Pn**	**06 10 32.9 +0.1**
	SNR=52				
ULN			P		06 10 32.9
	SNR=52				
TATO	**Taipei**	**16.02 114**	Pn	**Pn**	**06 10 41.2 +1.1**
	comp=Z,572nm,1.6s				
TAPN	**Taplejung**	**16.07 256**	*e*P	**Pn**	**06 10 40.4 -0.4**
	comp=Z,462nm,1.2s				
YHNB	**Yeheng**	**16.09 115**	*e*P	**Pn**	**06 10 46.1 +5.1**
	comp=Z,246nm,1.1s				
BDT	**Bhumibol Dam**	**16.16 202**	P	**Pn**	**06 10 45.0 +3.0**
	comp=Z,36nm,0.8s				
KKTK	**Khon Kaen**	**16.18 189**	P	**Pn**	**06 10 42.0 -0.3**
	comp=Z,309nm,0.5s				
SSLB	**Suanglung**	**16.26 118**	*e*Pn	**Pn**	**06 10 44.7 +1.5**
	comp=Z,130nm,0.9s				
TPUB	**Ta-pu**	**16.31 120**	*e*Pn	**Pn**	**06 10 44.8 +0.9**
	comp=Z,64nm,0.8s				
NACB	**Ninganchiao**	**16.53 116**	*e*P	**Pn**	**06 10 49.9 +3.2**
	comp=Z,144nm,1.1s				
ODAN	**Odare**	**16.53 255**	*e*P	**Pn**	**06 10 45.4 -1.2**
	comp=Z,329nm,1.0s				
YULB	**Yu-li**	**16.75 119**	*e*P	**Pn**	**06 10 52.5 +3.1**
	comp=Z,130nm,1.3s				
TWG	**Pinlang**	**16.92 121**	*e*P	**Pn**	**06 10 53.6 +2.0**
	comp=Z,41nm,0.5s				
UBT	**Ubonrachathani**	**17.11 181**	P	**Pn**	**06 10 54.4 +0.3**
RAMN	**Ramite**	**17.14 256**	*e*P	**Pn**	**06 10 51.9 -2.5**
	comp=Z,520nm,1.2s				
JIRN	**Jiri**	**17.21 259**	*e*P	**Pn**	**06 10 55.2 -0.1**
SNY	**Shenyang**	**17.30 52**	⇑P	**Pn**	**06 10 57.8 +1.5**
SNY			S	**Sn**	**06 14 13.8 +5.1**
SNY			pmax	pmax	
	comp=Z,51nm,2.5s				
SNY			pmax	pmax	
	comp=Z,910nm,5.9s				
SNY			LR	LR	
	comp=N,6μm,17.6s				
SNY			LR	LR	
	comp=E,3μm,15.2s				
SNY			LR	LR	
	comp=Z,4μm,15.2s				
NST	**Nakhon Sawan**	**17.34 197**	P	**Pn**	**06 10 56.0 -0.9**
	comp=Z,45nm,0.8s				
GUN	**Gumba**	**17.39 260**	*e*P	**Pn**	**06 10 55.8 -1.6**
	comp=Z,636nm,1.1s				
WMQ	**Urumqi**	**17.88 315**	*e*P	**Pn**	**06 11 03.0 -0.5**
WMQ			S	**Sn**	**06 14 20.1 -2.7**
WMQ			SS		06 14 41.0
WMQ			PcP	PcP	06 15 40.3 +0.7
WMQ			pmax	pmax	
	comp=Z,57nm,1.4s				
WMQ			pmax	pmax	
	comp=Z,660nm,4.4s				
WMQ			LR	LR	
	comp=N,17μm,14.0s				
WMQ			LR	LR	
	comp=E,9μm,14.0s				
WMQ			LR	LR	
	comp=Z,4μm,18.0s				
PKI	**Pulchoki**	**17.89 259**	*e*P	**Pn**	**06 11 01.5 -2.2**
	comp=Z,450nm,1.2s				
PKIN	**Phulchoki**	**17.90 259**	*e*P	**Pn**	**06 11 01.5 -2.3**
	comp=Z,183nm,0.9s				
KKN	**Kakani**	**17.93 260**	*e*P	**Pn**	**06 11 03.2 -0.9**
	comp=Z,384nm,1.0s				
CAL	**Calcutta**	**17.98 241**	*e*P	Px	06 11 16.2
CAL			*e*S	**Sn**	**06 14 31.5 +6.2**
ZAK	**Zakamensk**	**18.00 356**	*e*P	**Pn**	**06 11 05.3 +0.5**
ZAK			pmax	pmax	
	comp=Z,24nm,1.4s				
DMN	**Daman**	**18.13 260**	*e*P	**Pn**	**06 11 05.1 -1.6**
	comp=Z,312nm,0.9s				
INCN	**Inchon**	**18.18 68**	*e*P	**Pn**	**06 11 09.7 +2.5**
	comp=Z,78nm,1.0s				
KSRS	**Korea Array**	**19.19 69**	P	**Pn**	**06 11 17.8 -1.7**
	comp=Z,3.4nm,0.3s,baz=257,slow=10,SNR=53				
KSRS			LR	LR	06 19 10.7
	comp=Z,3μm,19.2s,baz=264,slow=39				
KSRS	**Korea Array**	**19.19 69**	P	**Pn**	**06 11 17.8 -1.7**
KSRS			pmax	pmax	
	comp=Z,3.0nm,0.3s				
KSRS			MLR	MLR	
	comp=Z,3μm,19.2s				
TLY	**Talaya**	**19.27 357**	Pn	**Pn**	**06 11 21.7 +1.4**
	comp=Z,125nm,1.1s,SNR=7.0				
TLY	**Talaya**	**19.27 357**	*e*P	**Pn**	**06 11 20.9 +0.6**
TLY			pmax	pmax	
	comp=Z,49nm,1.4s				
TLY	**Talaya**	**19.27 357**	*e*P	**Pn**	**06 11 20.9 +0.5**
	comp=Z,49nm,1.4s				
TLY	**Talaya**	**19.27 357**	P	**Pn**	**06 11 21.5 +1.2**
	SNR=8.5				
TLY			P		06 11 21.5
	SNR=8.5				
CN2	**Changchun**	**19.44 49**	*e*P	**Pn**	**06 11 22.5 +0.1**
CN2			*e*PP		06 11 40.3
CN2			*e*S	**Sn**	**06 14 55.4 -5.1**
CN2			pmax	pmax	
	comp=Z,80nm,1.0s				
CN2			pmax	pmax	
	comp=Z,200nm,5.0s				
CN2			LR	LR	
	comp=N,6μm,15.0s				
CN2			LR	LR	
	comp=E,3μm,15.0s				
CN2			LR	LR	
	comp=Z,4μm,16.0s				
MOY	**Mondy**	**19.48 352**	*e*P	**Pn**	**06 11 25.2 +2.4**
MOY			pmax	pmax	
	comp=Z,192nm,2.8s				
PIP	**Pasuquin**	**19.68 132**	⇓*e*P	**Pn**	**06 11 26.5 +1.0**
IRK	**Irkutsk**	**19.81 358**	*e*P	**Pn**	**06 11 27.1 +0.3**
IRK			pmax	pmax	
	comp=Z,243nm,2.5s				
HIA	**Hailar**	**19.99 29**	*e*P	**Pn**	**06 11 27.3 -1.6**
HIA			pmax	pmax	
	comp=Z,83nm,1.0s				
HIA	**Hailar**	**19.99 29**	*e*P	**Pn**	**06 11 27.3 -1.6**
	comp=Z,83nm,1.0s				
CIT	**Chita**	**20.48 15**	*e*P	**P**	**06 11 33.4 +0.9**
CIT			*e*		06 11 42.6
CIT			*e*		06 12 04.0
JOW	**Kunigami**	**20.72 100**	P	**P**	**06 11 34.4 -0.9**
	comp=Z,89nm,0.6s,baz=283,slow=9.3,SNR=9.3				
JOW			LR	LR	06 20 13.0
	comp=Z,3μm,20.4s,MS4.6,baz=126,slow=39				
BWNR	**Bhubaneshwar**	**21.20 240**	*ex*	x	06 11 32.0
PTH	**Pithoragarh**	**21.68 269**	*e*P	**P**	**06 11 45.0 -0.7**
PTH			*ex*	x	06 13 47.0
JOSI	**Joshimath**	**22.02 272**	*e*P	**P**	**06 11 50.5 +1.3**
MDJ	**Mudanjiang**	**22.47 50**	P	**P**	**06 11 53.5 -0.4**
MDJ			pP		06 11 56.0
MDJ			sP	sP	06 11 57.8 -0.3
MDJ			PcP	PcP	06 15 47.8 -0.3
MDJ			S	**S**	**06 16 00.1 -0.6**
MDJ			ScP	ScP	06 19 25.5 -0.2
MDJ			PcS	PcS	06 19 28.0 +1.3
MDJ			ScS	ScS	06 23 09.4 -1.3
MDJ			pmax	pmax	
	comp=Z,46nm,1.2s,mb4.8				
MDJ			pmax	pmax	
	comp=Z,550nm,4.8s				
MDJ			LR	LR	
	comp=N,3μm,14.4s,MS4.9				
MDJ			LR	LR	
	comp=E,2μm,15.7s,MS4.9				
MDJ			LR	LR	
	comp=Z,2μm,14.4s,MS4.8				
MDJ	**Mudanjiang**	**22.47 50**	*e*P	**P**	**06 11 55.6 +1.6**
	comp=Z,62nm,1.1s,mb5.0				
MKAR	**Makanchi Array**	**22.69 316**	P	**P**	**06 11 55.4 -0.9**
	comp=Z,66nm,0.8s,mb5.1,baz=116,slow=11,SNR=40				
MKAR			LR	LR	06 20 26.3
	comp=Z,3μm,18.6s,MS4.8,baz=116,slow=36				
MKAR	**Makanchi Array**	**22.69 316**	P	**P**	**06 11 55.4 -0.9**
MKAR			pmax	pmax	
	comp=Z,66nm,0.9s				
MKAR			MLR	MLR	
	comp=Z,3μm,18.6s				
MKAR	**Makanchi Array**	**22.69 316**	P	**P**	**06 11 55.4 -0.9**
MKAR			LR	LR	06 20 26.3
KLP	**Kalpa**	**22.95 275**	*e*P	**P**	**06 11 59.5 +0.3**
TGY	**Tagaytay City**	**23.17 138**	P	**P**	**06 12 01.9 +0.4**
	comp=Z,125nm,0.4s,mb5.7,baz=242,slow=3.8,SNR=4.2				
TGY			LR	LR	06 21 05.4
	comp=Z,11nm,18.8s,baz=134,slow=37				
TGY	**Tagaytay City**	**23.17 138**	P	**P**	**06 12 01.9 +0.3**
TGY			pmax	pmax	
	comp=Z,125nm,0.4s				
TGY			MLR	MLR	
	comp=Z,11nm,18.8s				
DDI	**Dehra Dun**	**23.34 272**	*e*P	**P**	**06 12 01.0 -2.3**
DDI			*e*S	**S**	**06 16 14.2 -1.6**
VLA	**Vladivostok**	**23.48 55**	P	**P**	**06 12 00.0 -4.6**
VLA			*e*S	**S**	**06 16 13.0 -4.8**
VLA			MLR	MLR	
	comp=Z,3μm,16.3s,MS4.8				
SMLA	**Simla**	**23.93 274**	*i* x	**P**	**06 12 05.2 -3.8**
SMLA			*i* x		06 16 15.7
JBP	**Jabalpur**	**24.18 254**	*i* x	**P**	**06 12 13.7 +2.4**
JBP			*i* x		06 16 26.5
AGRA	**Agra**	**24.26 265**	*e*P	**P**	**06 12 12.8 +0.8**
NDI	**New Delhi**	**24.44 269**	*e*P	**P**	**06 12 15.0 +1.3**
NDI			*ex*	x	06 16 50.0
KKR	**Kurukshetra**	**24.46 272**	*e*P	**P**	**06 12 13.7 -0.1**
BHK	**Bhakra**	**24.51 275**	*e*P	**P**	**06 12 12.2 -2.0**
AYAN	**Aya Nagar**	**24.57 268**	*e*P	**P**	**06 12 14.8 -0.1**
AYAN			AMb	AMB	06 12 18.7
	comp=Z,31nm,1.0s,mb4.8				
KSH	**Kashi**	**24.69 295**	P	**P**	**06 12 21.5 +5.6**
KSH			*e*pP		06 12 25.0
KSH			*e*sP	sP	06 12 28.1 +7.9
KSH			*e*PP		06 12 59.1
KSH			*e*PcP	PcP	06 15 55.1 +2.2
KSH			*e*S	**S**	**06 16 43.3 +5.7**
KSH			*e*sS	sS	06 16 50.1 +7.5
KSH			pmax	pmax	
	comp=Z,74nm,0.9s,mb5.2				
KSH			LR	LR	
	comp=N,3μm,10.4s,MS5.1				
KSH			LR	LR	
	comp=E,3μm,12.3s,MS5.1				
KSH			LR	LR	
	comp=Z,4μm,10.9s,MS5.1				
AAA	**Alma-Ata**	**24.75 304**	*i* P	**P**	**06 12 19.9 +3.5**
AAA			pmax	pmax	
	comp=Z,900nm,3.9s				
AAA			MLR	MLR	
	comp=Z,4μm,16.0s,MS5.0				
RTK	**Rohtak**	**25.03 270**	*ex*	x	06 12 11.1
KHET	**Khetri**	**25.81 268**	*e*P	**P**	**06 12 25.7 -0.4**
NGP	**Nagpur**	**25.92 251**	*i* P	**P**	**06 12 23.2 -3.9**
NGP			*ex*	x	06 12 29.3
	comp=Z,67nm,1.2s				
NGP			*e*S	**S**	**06 16 54.8 -2.6**
ZAA0	**Zalesovo Array**	**26.00 332**	*e*P	**P**	**06 12 27.3 -0.2**
ZALV	**Zalesovo Beam**	**26.00 332**	P	**P**	**06 12 27.1 -0.4**
	comp=Z,39nm,0.8s,mb5.0,baz=133,slow=8.9,SNR=67				
ZALV			LR	LR	06 22 55.1
	comp=Z,1μm,18.9s,MS4.4,baz=331,slow=37				
ZALV	**Zalesovo Beam**	**26.00 332**	P	**P**	**06 12 27.1 -0.5**
ZALV			pmax	pmax	
	comp=Z,39nm,0.8s,mb5.0				
ZALV			MLR	MLR	
	comp=Z,1μm,18.9s,MS4.4				
ZALV	**Zalesovo Beam**	**26.00 332**	P	**P**	**06 12 27.1 -0.5**
ZALV			pmax	pmax	
	comp=Z,39nm,0.8s,mb5.0				
ZALV			MLR	MLR	
	comp=Z,1μm,18.9s,MS4.4				
BOD	**Bodaibo**	**26.07 11**	*e*P	**P**	**06 12 27.5 -0.7**
BOD			pmax	pmax	
	comp=Z,35nm,1.1s,mb4.8				
BHPL	**Bhopal**	**26.24 257**	*e*P	**P**	**06 12 30.5 +0.5**
BHPL			AMb	AMB	06 12 36.0
	comp=Z,59nm,1.2s,mb5.0				
AAK	**Ala-Archa**	**26.34 302**	*ce*P	**P**	**06 12 32.4 +1.7**
AAK			pmax	pmax	
	comp=Z,20nm,1.2s,mb4.5				
AML	**Almayashu**	**26.82 300**	*e*P	**P**	**06 12 38.3 +3.2**
	comp=Z,30nm,0.7s,mb4.9				
KURK	**Kurchatov**	**26.83 321**	P	**P**	**06 12 34.1 -1.0**
	comp=Z,342nm,1.3s,mb5.7,SNR=14				
KURK	**Kurchatov**	**26.83 321**	P	**P**	**06 12 33.2 -1.9**
	comp=Z,44nm,1.0s,mb4.9,baz=127,slow=10,SNR=71				
KURK			LR	LR	06 25 00.2
	comp=Z,438nm,20.1s,MS4.0,baz=120,slow=40				
KURK	**Kurchatov**	**26.83 321**	*ce*P	**P**	**06 12 34.7 -0.4**
KURK			pmax	pmax	
	comp=Z,89nm,1.2s,mb5.2				
KURK	**Kurchatov**	**26.83 321**	*e*P	**P**	**06 12 34.3 -0.8**
	comp=Z,108nm,1.3s,mb5.2				
KURK	**Kurchatov**	**26.83 321**	P	**P**	**06 12 36.2 +1.2**
	SNR=37				
KURK			P		06 12 36.2
	SNR=37				
KURK			P		06 12 36.2
	SNR=37				
KURK			P		06 12 36.2
	SNR=37				
KURK			P		06 12 36.2
	SNR=37				
KURK			P		06 12 36.2
	SNR=37				
KURK			P		06 12 36.2

SNR=37
KURK P 06 12 36.2
SNR=37
KURK P 06 12 36.2
SNR=37
NVS Novosibirsk 27.29 332 *i* P **P 06 12 37.4 -1.7**
NVS pmax pmax
comp=Z,33nm,1.2s,mb4.7
NVS pmax pmax
comp=N,23nm,1.1s
NVS pmax pmax
comp=E,19nm,1.4s
NVS Novosibirsk 27.29 332 *i* P **P 06 12 37.4 -1.7**
NVS pmax pmax
comp=Z,33nm,1.2s,mb4.7
NVS pmax pmax
comp=N,23nm,1.1s
NVS pmax pmax
comp=E,19nm,1.4s
AJM Ajmer 27.29 265 *e*P **P 06 12 39.9 +0.4**
KULM Kulim 27.35 190 P **P 06 12 39.9 -0.2**
KULM Kulim 27.35 190 *e*P **P 06 12 40.5 +0.5**
comp=E,58nm,1.5s,mb4.9
MAT Matsushiro 27.35 72 P **P 06 12 38.3 -1.7**
MAT S **S 06 17 13.0 -6.8**
MJAR Matsushiro Arr 27.36 72 P **P 06 12 37.2 -2.8**
comp=E,7.8nm,1.1s,mb4.2,baz=271,slow=6.5,SNR=5.8
MJAR LR LR 06 23 43.4
comp=E,902nm,19.0s,MS4.4,baz=275,slow=37
MJAR Matsushiro Arr 27.36 72 P **P 06 12 37.2 -2.8**
MJAR pmax pmax
comp=Z,8.0nm,1.1s
MJAR MLR MLR
comp=Z,902nm,19.0s
KDM Kudat 27.57 155 P **P 06 12 42.1 +0.1**
IPM Ipoh 28.10 189 P **P 06 12 47.2 +0.5**
KKM Kota Kinabalu 28.16 156 P **P 06 12 47.2 -0.1**
KKM Kota Kinabalu 28.16 156 *e*P **P 06 12 46.9 -0.4**
comp=Z,78nm,1.2s,mb5.2
HYB Hyderabad 28.39 245 *i* P **P 06 12 56.5 +7.2**
SDKM Sandakan 28.88 155 P **P 06 12 53.2 -0.5**
JHJ Hachijo jima 2 28.93 79 LR LR 06 25 27.0
comp=Z,1μm,18.6s,MS4.6,baz=288,slow=39
JASL Jaisalmer 30.30 269 *e*P **P 06 13 06.3 +0.1**
JASL AMb AMB 06 13 09.1
comp=Z,58nm,1.0s,mb5.2
MYKOM Kota Tinggi 30.51 183 P **P 06 13 08.1 -0.1**
SBUM Sibu 30.53 166 P **P 06 13 08.3 0.0**
KSM Kuching 31.16 170 P **P 06 13 15.0 +1.2**
KSM Kuching 31.16 170 *e*P **P 06 13 15.2 +1.3**
comp=Z,25nm,1.1s,mb5.0
ASAJ Asahikawa 31.26 57 P **P 06 13 13.7 -0.9**
comp=Z,5.8nm,0.4s,mb4.7,baz=243,slow=11,SNR=4.6
ASAJ Asahikawa 31.26 57 P **P 06 13 13.7 -0.9**
ASAJ pmax pmax
comp=Z,6.0nm,0.4s
DAV Davao City (W) 31.51 139 LR LR 06 25 47.3
comp=Z,1μm,18.3s,MS4.6,baz=360,slow=36
YSS Yuzh-Sakhalins 31.93 52 *e*P **P 06 13 21.8 +1.4**
YSS *e*S **S 06 18 30.0 -1.4**
YSS MLR MLR
comp=Z,2μm,17.0s,MS5.0
YSS MLR MLR
comp=N,2μm,15.0s,MS5.1
YSS MLR MLR
comp=E,2μm,15.0s,MS5.1
CBIJ Chichi jima 32.35 90 LR LR 06 28 23.9
comp=E,570nm,18.2s,MS4.3,baz=316,slow=40
BVAR Borovoye Array 32.41 320 P **P 06 13 23.8 -0.7**
comp=E,11nm,0.8s,mb4.7,baz=108,slow=9.5,SNR=22
BVAR Borovoye Array 32.41 320 P **P 06 13 23.8 -0.7**
BVAR pmax pmax
comp=Z,11nm,0.8s
BRVK Borovoye 32.48 320 P **P 06 13 26.0 +0.8**
comp=Z,108nm,1.1s,mb5.6,SNR=7.0
BRVK Borovoye 32.48 320 *de*P **P 06 13 26.1 +0.9**
BRVK pmax pmax
comp=Z,25nm,1.2s,mb4.9
BRVK Borovoye 32.48 320 *e*P **P 06 13 26.6 +1.4**
comp=Z,16nm,0.9s,mb4.8
BRVK Borovoye 32.48 320 P **P 06 13 26.8 +1.7**
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
BRVK P 06 13 26.8
SNR=7.9
YAK Yakutsk 33.50 21 *e*P **P 06 13 34.5 +0.5**
YAK *e**PP pP 06 13 41.8 +4.7
YAK *e* 06 14 44.2
YAK *e*PPP 06 14 58.8
YAK *e* 06 16 10.5
YAK *e*S **S 06 18 55.9 +0.4**
YAK *e**SS sS 06 19 14.5 +14
YAK *e*SS SS 06 20 57.7 -22
YAK *e*SSS 06 21 18.9
YAK *e* 06 23 55.4
YAK pmax pmax
comp=E,25nm,1.5s
YAK pmax pmax
comp=Z,49nm,0.9s,mb5.4
YAK pmax pmax
comp=N,26nm,1.4s
YAK pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
YAK smax
comp=N,172nm,4.6s
YAK smax
comp=E,122nm,3.3s
YAK MLR MLR
comp=N,1μm,14.0s
YAK MLR MLR
comp=Z,2μm,10.0s,MS5.0
YAK MLR MLR
comp=E,2μm,16.0s
YAK Yakutsk 33.50 21 *e*P **P 06 13 36.1 +2.1**
comp=E,53nm,0.8s,mb5.5
PALK Pallekele 33.91 228 P **P 06 13 40.8 +2.8**
comp=E,9.3nm,0.8s,mb4.8,baz=24,slow=9.2,SNR=4.2
PALK Pallekele 33.91 228 P **P 06 13 40.8 +2.8**
PALK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
AKTK Aktyubinsk 39.00 312 P **P 06 14 20.5 -0.6**
AKTO Aktyubinsk 39.00 312 P **P 06 14 20.5 -0.6**
comp=Z,13nm,0.8s,mb4.7,baz=106,slow=8.8,SNR=13
AKTO Aktyubinsk 39.00 312 P **P 06 14 20.5 -0.6**
AKTO pmax pmax
comp=Z,13nm,0.8s,mb4.7
SVE Sverdlovsk 39.06 322⇓ *e*P **P 06 14 23.2 +1.7**
SVE *e*S **S 06 20 15.0 -5.6**
SVE pmax pmax
comp=Z,50nm,0.9s,mb5.2
SVE MLR MLR
comp=Z,961nm,14.0s,MS4.8
KAPI Kappang 39.69 157 P **P 06 14 26.2 -1.0**
comp=Z,739nm,0.9s,SNR=8.9
KAPI Kappang 39.69 157 P **P 06 14 24.6 -2.7**
comp=Z,70nm,0.7s,mb5.5,baz=315,slow=5.4,SNR=30
KAPI Kappang 39.69 157 P **P 06 14 24.6 -2.7**
ARU Arti 40.03 321 P **P 06 14 30.8 +1.2**
comp=Z,377nm,1.0s,mb6.1,SNR=5.6
ARU Arti 40.03 321 *e*P **P 06 14 30.2 +0.6**
ARU pmax pmax
comp=Z,84nm,1.1s,mb5.4
ARU Arti 40.03 321 *e*P **P 06 14 30.2 +0.6**
comp=Z,84nm,1.1s,mb5.4
GUMO Guam 40.67 108 LR LR 06 31 39.4
comp=Z,1μm,18.6s,MS4.7,baz=90,slow=37
TIXI Tiksi 41.25 11 *e*P **P 06 14 40.0 +0.5**
TIXI *e*S **S 06 20 50.1 -3.0**
TIXI *e*SS SS 06 23 56.1 +0.1
TIXI *e* 06 24 39.7
TIXI pmax pmax
comp=Z,28nm,1.0s,mb4.8
TIXI MLR MLR
comp=Z,2μm,19.0s,MS5.1
TIXI Tiksi 41.25 11 *e*P **P 06 14 39.5 -0.1**
comp=Z,30nm,1.0s,mb4.9
SOKR Solikamsk 41.88 325 *c i*P **P 06 14 46.2 +1.4**
SOKR pmax pmax
comp=Z,70nm,1.0s,mb5.2
SOKR MLR MLR
comp=Z,730nm,18.0s,MS4.6
SEY Seymchan 42.43 30 *c i*P **P 06 14 49.5 +0.2**
PETK Petropavlovsk- 42.53 45 P **P 06 14 49.0 -1.2**
comp=Z,5.5nm,0.9s,mb4.3,baz=340,slow=2.2,SNR=6.5
PETK LR LR 06 34 07.1
comp=Z,2μm,19.1s,MS4.9,baz=91,slow=38
PETK Petropavlovsk- 42.53 45 P **P 06 14 49.1 -1.1**
PETK pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
PETK MLR MLR
comp=Z,2μm,19.1s,MS4.9
PETK Petropavlovsk- 42.53 45 P **P 06 14 49.0 -1.2**
PETK LR LR 06 34 07.1
BSY Bisya 43.41 270 P **P 06 15 01.1 +3.4**
SNR=6.1
COCO West Island 45.10 192 *i* P **P 06 15 14.0 +2.8**
SHAO Shalim 46.78 265 P **P 06 15 34.2 +10**
SNR=5.0
SHAO P 06 15 34.2
SNR=5.0
SHAO P 06 15 34.2
SNR=5.0
SHAO P 06 15 34.2
SNR=5.0
SHAO P 06 15 34.2
SNR=5.0
GNI Garni 48.59 297 P **P 06 15 37.4 -1.0**
comp=Z,6.5nm,0.3s,mb5.1,baz=145,slow=16,SNR=3.3
GNI Garni 48.59 297 *de*P **P 06 15 40.6 +2.2**
GNI pmax pmax
comp=Z,36nm,1.7s
ZEI Tsey 48.76 301 *e*P **P 06 15 35.0 -4.7**
ZEI pmax pmax
comp=Z,14nm,1.0s,mb5.0
MIB Mutribah 49.17 283 *e*P **P 06 15 42.2 -0.8**
MIB AMb AMB 06 15 47.7
comp=Z,66nm,0.9s,mb5.7
RDF Al-Radifah 49.28 282 *e*P **P 06 15 42.9 -0.9**
RDF AMb AMB 06 15 46.1
comp=Z,75nm,0.7s,mb5.8
VRHR Novokhopersk 49.41 312 *e*P **P 06 15 44.6 +0.1**
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=E,10.0nm,0.7s
NAY Al-Naaiem 49.43 282 *e*P **P 06 15 43.7 -1.3**
NAY AMb AMB 06 15 47.1
comp=Z,72nm,0.7s,mb5.8
KIV Kislovodsk 49.45 302 *e*P **P 06 15 44.2 -0.7**
KIV *e* 06 17 38.6
KIV *e*S **S 06 22 49.2 -2.9**
KIV *e*SS SS 06 26 24.1 +0.4
KIV pmax pmax
comp=Z,25nm,1.0s,mb5.2
KIV Kislovodsk 49.45 302 P **P 06 15 48.5 +3.5**
SNR=10
KIV P 06 15 48.5
SNR=10
KIV P 06 15 48.5
SNR=10
KIV P 06 15 48.5
SNR=10
KIV P 06 15 48.5
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SNR=10
KIV P 06 15 48.5
SNR=10
KIV P 06 15 48.5
SNR=10
BILL Bilibino 49.54 26⇓ *i*P **P 06 15 43.5 -1.7**
BILL *e* 06 17 37.5
BILL *e*S **S 06 22 51.4 -1.3**
BILL pmax pmax
comp=Z,17nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,2μm,16.0s,MS5.2
KLMR Klimovskoe 50.56 325 *e*P **P 06 15 50.9 -2.2**
KLMR pmax pmax
comp=Z,86nm,1.1s,mb5.6
KLMR MLR MLR
comp=Z,703nm,12.0s,MS4.9
VORD Divnogorie 50.88 312 *e*P **P 06 15 55.7 0.0**
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VORD pmax pmax
comp=N,60nm,0.7s
VORD pmax pmax
comp=E,40nm,0.9s
VSR Storozhevoye 50.94 312 *e*P **P 06 15 56.6 +0.5**
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VSR pmax pmax
comp=E,40nm,1.0s
MOS Moscow 51.55 318 *e*P **P 06 15 59.9 -0.7**
MOS *e* 06 17 10.2
MOS *e* 06 17 58.9
MOS *e*PPP 06 18 56.6
MOS *e*S **S 06 23 19.0 -1.9**
MOS pmax pmax
comp=Z,101nm,1.3s,mb5.6
MOS pmax pmax
comp=Z,100nm,1.3s,mb5.6
MOS MLR MLR
comp=Z,1μm,13.0s,MS5.1
KAKA Kakadu 51.85 146 *e*P **P 06 16 02.0 -1.3**
comp=Z,16nm,0.6s,mb5.1
KAKA Kakadu 51.85 146 *e*P **P 06 16 02.6 -0.7**
comp=Z,57nm,0.8s,mb5.5
OBN Obninsk 52.19 317⇓ *i*P **P 06 16 05.4 0.0**
OBN *e* 06 18 03.1
OBN *i* S **S 06 23 31.8 +2.1**
OBN pmax pmax
comp=Z,80nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,900nm,18.0s,MS4.8
ANN Anapa 53.01 304 *e*P **P 06 16 10.8 -0.9**
ANN *e**PP pP 06 16 22.0 +7.1
ANN *e* 06 18 09.6
ANN *e*S **S 06 23 39.2 -2.1**
ANN *e*SS SS 06 27 22.3 +2.1
ANN pmax pmax
comp=Z,40nm,1.0s,mb5.3
ANN MLR MLR
comp=N,1μm,20.0s,MS5.1
ANN MLR MLR
comp=E,969nm,20.0s,MS5.1
ANN MLR MLR
comp=Z,1μm,20.0s,MS5.0
LVZ Lovozero 53.12 333 *ce*P **P 06 16 13.0 +0.9**
LVZ pmax pmax
comp=Z,38nm,0.8s,mb5.4
APA Apatity 53.58 333⇑ *i*P **P 06 16 15.8 +0.3**
APA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
APA MLR MLR
comp=Z,2μm,17.0s,MS5.2
FITZ Fitzroy Crossi 53.89 156 *e*P **P 06 16 17.2 -1.1**
comp=Z,40nm,1.0s,mb5.3
FITZ Fitzroy Crossi 53.89 156 LR LR 06 40 12.3
comp=Z,195nm,19.5s,MS4.2,baz=350,slow=37
FITZ Fitzroy Crossi 53.89 156 *e*P **P 06 16 17.3 -0.9**
comp=Z,35nm,1.0s,mb5.2
JOF Joensuu 54.46 327 *e*P **P 06 16 20.7 -1.2**
JOF pmax pmax
comp=Z,21nm,0.9s,mb5.1
JOF Joensuu 54.46 327 *e*p **P 06 16 20.7 -1.2**
comp=Z,21nm,0.9s,mb5.1
MBWA Marble Bar 55.05 164 *e*P **P 06 16 26.0 -0.6**
comp=Z,47nm,1.1s,mb5.4
SIM Simferopol' 55.29 305 *e*P **P 06 16 30.5 +2.3**
SIM pmax pmax
comp=Z,20nm,0.6s,mb5.3
SIM MLR MLR
comp=Z,500nm,16.9s,MS4.7
KEV Kevo 55.94 336 *e*P **P 06 16 33.1 +0.6**
KEV pmax pmax
comp=Z,31nm,0.8s,mb5.4
KEV Kevo 55.94 336 *e*P **P 06 16 33.1 +0.6**
comp=Z,31nm,0.8s,mb5.4
KEV Kevo 55.94 336 *e*p **P 06 16 31.0 -1.5**
comp=Z,21nm,0.7s,mb5.3
ARCES ARCESS Array B 56.47 335 P **P 06 16 35.3 -1.0**
comp=Z,38nm,1.0s,mb5.4,baz=85,slow=7.0,SNR=27
ARCES LR LR 06 41 59.8
comp=Z,656nm,19.2s,MS4.7,baz=97,slow=37
ARCES ARCESS Array B 56.47 335 P **P 06 16 35.3 -1.0**
ARCES pmax pmax
comp=Z,38nm,1.0s
ARCES MLR MLR
comp=Z,656nm,19.3s
KAF Kangasniemi 56.84 327 *e*P **P 06 16 37.2 -1.9**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KAF Kangasniemi 56.84 327 *e*p **P 06 16 37.2 -1.9**
comp=Z,6.8nm,0.6s,mb4.8
BRTR Keskin Array B 56.98 299 P **P 06 16 39.5 -0.9**
comp=Z,8.5nm,0.9s,mb4.8,baz=100,slow=6.1,SNR=30
BRTR Keskin Array B 56.98 299 *ce*P **P 06 16 40.7 +0.3**
BRTR pmax pmax
comp=Z,9.0nm,0.9s
FINES FINESS Array B 57.04 326 P **P 06 16 40.0 -0.5**
comp=Z,31nm,0.9s,mb5.3,baz=92,slow=6.3,SNR=28
FINES FINESS Array B 57.04 326 P **P 06 16 40.0 -0.5**
FINES pmax pmax
comp=Z,31nm,0.9s
VSU Vasula 57.17 322 *d i*P **P 06 16 41.8 +0.4**
AKASG Malin Array Be 57.23 313 P **P 06 16 40.4 -1.6**
comp=Z,15nm,0.6s,mb5.2,baz=69,slow=6.7,SNR=28
AKASG LR LR 06 41 05.6
comp=Z,860nm,18.5s,MS4.9,baz=85,slow=36
AKASG Malin Array Be 57.23 313 P **P 06 16 40.4 -1.6**
AKASG pmax pmax
comp=Z,15nm,0.6s
AKASG MLR MLR
comp=Z,860nm,18.5s
AKBB Malin Array Si 57.23 313 *e*P **P 06 16 41.1 -0.9**
KIEV Kiev 57.24 313 *e*P **P 06 16 40.5 -1.6**
KIEV pmax pmax
comp=Z,14nm,0.6s,mb5.2
KIEV Kiev 57.24 313 *e*P **P 06 16 40.5 -1.6**
comp=Z,14nm,0.6s,mb5.2
MICGM Minsk 57.25 317 *e*P **P 06 16 40.0 -2.1**
MNK Minsk 57.28 317 *e*P **P 06 16 40.0 -2.3**
IDID Didziasalis 57.74 319 *e*P **P 06 16 45.1 -0.4**
MMAI Mount Meron Ar 57.75 291 P **P 06 16 45.8 -0.2**
comp=Z,0.8nm,0.3s,mb4.2,baz=68,slow=12,SNR=5.0
MMAI LR LR 06 46 36.8
comp=Z,542nm,18.8s,MS4.7,baz=20,slow=41
NACGM Naroch 57.80 318 *e* **P 06 16 43.0 -2.9**
IZAR Zarasai 57.93 319 *e*P **P 06 16 46.8 0.0**
IIGN Ignalina 58.02 319 *e*P **P 06 16 47.7 +0.2**
ISAL Salakas 58.03 319 *e*P **P 06 16 47.6 +0.1**
COEN Coen 58.66 136 *e*P **P 06 16 51.8 -0.6**
comp=Z,450nm,1.1s
WRAB Tennant Creek 59.03 148 P **P 06 16 54.6 -0.3**
comp=Z,655nm,0.7s,SNR=36
WRAB Tennant Creek 59.03 148 *e*P **P 06 16 53.9 -1.0**
EIL Elat 59.31 288 P **P 06 16 57.5 +0.5**
comp=Z,12nm,0.9s,mb4.9,baz=336,slow=14,SNR=4.3
HARR Harsova 59.60 306⇓ *i*P **P 06 16 58.8 +0.1**
HARR Harsova 59.60 306⇓ *i*P **P 06 16 58.8 +0.1**
TNA Tin City 59.66 29 *e*P **P 06 16 58.0 -0.7**
comp=Z,16nm,1.0s,mb5.0
SUW Suwalki 60.05 318 *e*P **P 06 17 02.0 +0.4**
SUW LMZ 06 43 51.0
comp=Z,1μm,19.0s
VRI Vrincioaia 60.07 308⇓ *i*P **P 06 17 03.6 +1.7**
VRI Vrincioaia 60.07 308⇓ *i*P **P 06 17 03.6 +1.7**
PLOR Plostina 60.13 308 P **P 06 17 04.0 +1.7**
PLOR Plostina 60.13 308⇓ *i*P **P 06 17 04.0 +1.7**
BURAR Bucovina Array 60.56 310 P **P 06 17 06.7 +1.5**
BURAR Bucovina Array 60.56 310⇓ *i*P **P 06 17 06.3 +1.1**
LVV L'vov 60.67 313 *e*P **P 06 17 06.4 +0.5**
LVV *e*S **S 06 25 19.8 -2.6**
ATD Arta Tunnel 60.71 265 P **P 06 17 07.4 +0.7**
comp=Z,21nm,0.9s,mb5.3,baz=224,slow=21,SNR=10
MLR Muntele Rosu 60.71 308⇓ *i*P **P 06 17 07.8 +1.5**
MLR Muntele Rosu 60.71 308⇓ *i*P **P 06 17 07.8 +1.5**
VOIR 61.33 308⇑ *i*P **P 06 17 10.7 +0.2**
VOIR 61.33 308⇑ *i*P **P 06 17 10.7 +0.2**
KWP Kalwaria Pacla 61.55 313 *e*P **P 06 17 12.0 +0.1**
KWP *e* pP 06 17 14.8 -0.4
KWP LMZ 06 43 12.7
comp=Z,900nm,20.9s
KWP Kalwaria Pacla 61.55 313 *e*P **P 06 17 11.6 -0.3**
comp=Z,127nm,1.0s,mb6.0
KWP Kalwaria Pacla 61.55 313⇑ *i*P **P 06 17 12.4 +0.5**
KOLS Kolonicke sedl 62.04 312 *e*P **P 06 17 16.0 +0.8**
KOLS pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
KOLS Kolonicke sedl 62.04 312 *e*P **P 06 17 16.0 +0.8**
KOLS *e*pP pP 06 17 20.6 +2.2
ASAR Alice Springs 62.12 150 P **P 06 17 15.1 -0.8**
comp=Z,22nm,0.9s,mb5.3,baz=331,slow=6.1,SNR=70
ASAR Alice Springs 62.12 150 P **P 06 17 15.1 -0.8**
ASAR pmax pmax
comp=Z,22nm,0.9s
UZH Uzhgorod 62.12 312 *e*P **P 06 17 16.0 +0.3**
UZH *e* 06 18 00.0
UZH MLR MLR
comp=N,750nm,15.0s,MS5.1
UZH MLR MLR
comp=E,560nm,15.0s,MS5.1
UZH MLR MLR
comp=Z,500nm,15.0s,MS4.8
TRPA Tarpa 62.12 311⇑ *i*P **P 06 17 17.2 +1.5**
DRGR 62.44 310⇓ *i*P **P 06 17 19.7 +1.8**
DRGR 62.44 310⇓ *i*P **P 06 17 19.7 +1.8**
STHS Stebnicka Huta 62.52 313 *e*P **P 06 17 19.9 +1.5**
STHS pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
STHS Stebnicka Huta 62.52 313 *e*P **P 06 17 19.9 +1.5**
NIE Niedzica 63.10 313 *e*P **P 06 17 23.8 +1.5**
OJC Ojcow 63.15 314 *e*P **P 06 17 22.7 +0.1**
OJC *e*sP sP 06 17 30.1 +3.0
OJC *e*S **S 06 25 51.6 -2.1**
OJC L 06 45 47.1
comp=Z,1.2nm,21.4s
KECS Kecovo 63.30 312 *e*P **P 06 17 22.1 -1.5**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KECS Kecovo 63.30 312 *e*P **P 06 17 22.1 -1.5**
KECS *e*pP pP 06 17 25.5 -1.4
PSZ Piszkesteto 63.87 312 *e*P **P 06 17 27.9 +0.5**
PSZ pmax pmax
comp=Z,23nm,1.5s,mb5.0
PSZ Piszkesteto 63.87 312 *e*P **P 06 17 27.9 +0.6**
comp=Z,23nm,1.5s,mb5.0
PSZ Piszkesteto 63.87 312⇑ *e*P **P 06 17 27.5 +0.1**
NB2 NORSAR Subarra 64.09 327 P **P 06 17 26.2 -2.4**
comp=Z,7.3nm,0.7s,mb4.8,baz=73,slow=6.9
NOA NORSAR Array B 64.09 327 P **P 06 17 26.8 -1.8**
comp=Z,16nm,1.1s,mb5.0,baz=71,slow=6.6,SNR=17
NOA LR LR 06 46 14.1
comp=Z,461nm,19.4s,MS4.7,baz=70,slow=37
NOA NORSAR Array B 64.09 327 P **P 06 17 26.8 -1.8**
NOA pmax pmax
comp=Z,16nm,1.1s
NOA MLR MLR
comp=Z,461nm,19.4s
OKC Ostrava-Krasne 64.28 314 *e*P **P 06 17 30.9 +0.8**
OKC *e*S **S 06 26 07.3 -0.5**
OKC MLR MLR
comp=Z,1μm,17.4s,MS5.1
OKC Ostrava-Krasne 64.28 314 AMS AMS 06 46 20.0
comp=Z,1μm,17.4s
OKC Ostrava-Krasne 64.28 314 *e*P **P 06 17 30.9 +0.8**
OKC *e*S **S 06 26 07.3 -0.5**
OKC AMS AMS 06 46 20.0
comp=Z,1μm,17.4s
BSD Bornholm Skovb 64.31 320 *i* P **P 06 17 29.9 -0.2**
BSD pmax pmax
comp=Z,15nm,0.9s,mb5.0

BSD Bornholm Skovb 64.31 320 *i* P **P 06 17 29.9 -0.2**
comp=Z,15nm,0.9s,mb5.0
NAO01 NORSAR Array S 64.31 327 *e*P **P 06 17 30.0 -0.1**
VYHS Vyhne 64.33 313 *e*P **P 06 17 30.7 +0.3**
VYHS pmax pmax
comp=Z,17nm,1.5s,mb4.8
VYHS Vyhne 64.33 313 *e*P **P 06 17 30.7 +0.3**
BUD Budapest 64.57 311 *e*P **P 06 17 32.4 +0.4**
KOLL Kolacno 64.57 313 *e*P **P 06 17 32.8 +0.8**
KOLL Kolacno 64.57 313 *e*P **P 06 17 32.8 +0.8**
MORC Moravsky Berou 64.67 314 *e*P **P 06 17 32.1 -0.5**
MORC Moravsky Berou 64.67 314⇑*i*P **P 06 17 33.2 +0.6**
IDI Anoyia 65.03 297 P **P 06 17 33.3 -1.9**
comp=Z,14nm,0.7s,mb5.1,baz=8.6,slow=7.4,SNR=5.7
KSP Ksiaz 65.04 316 *e*P **P 06 17 35.7 +0.8**
KSP LMZ 06 47 10.7
comp=Z,2μm,19.0s
KSP Ksiaz 65.04 316 *e*P **P 06 17 35.0 0.0**
KSP *e*S S 06 26 16.5 -0.5
KSP MLR MLR
comp=Z,3μm,19.0s,MS5.5
DPC Dobruska-Polom 65.20 315 *e*P **P 06 17 36.6 +0.6**
DPC *e*S S 06 26 21.9 +2.9
DPC MLR MLR
comp=Z,1μm,19.3s,MS5.1
DPC Dobruska-Polom 65.20 315 *e*P **P 06 17 36.6 +0.6**
DPC *e*S S 06 26 21.9 +2.9
DPC AMS AMS 06 46 50.0
comp=Z,1μm,19.3s
DPC Dobruska-Polom 65.20 315 AMS AMS 06 46 50.0
comp=Z,1μm,19.3s
PKSM Moragy 65.28 310 P **P 06 17 37.8 +1.2**
PKSM Moragy 65.28 310⇓*i*P **P 06 17 37.8 +1.2**
CTA Charters Tower 65.29 137 *e*P **P 06 17 36.4 -0.5**
comp=Z,7.9nm,0.9s,mb4.7
CTA Charters Tower 65.29 137 LR LR 06 44 43.6
comp=Z,303nm,21.2s,MS4.5,baz=156,slow=35
CTAO Charters Tower 65.29 137 *e*P **P 06 17 36.5 -0.4**
TTA Tatalina 65.41 30 *e*P **P 06 17 36.6 -0.6**
VRAC Vranov 65.42 314 P **P 06 17 38.6 +1.1**
VRAC Vranov 65.42 314⇓*i*P **P 06 17 38.5 +1.0**
COP Copenhagen 65.42 322 *i* P **P 06 17 37.7 +0.3**
COP pmax pmax
comp=Z,15nm,0.9s,mb5.0
COP Copenhagen 65.42 322 *i* P **P 06 17 37.7 +0.3**
comp=Z,15nm,0.9s,mb5.0
DAG Danmarks Havn 65.76 348 *e*P **P 06 17 34.0 -5.2**
DAG Danmarks Havn 65.76 348 *i* P **P 06 17 34.0 -5.2**
COLD Coldfoot 65.84 24 *e*P **P 06 17 38.8 -1.2**
comp=Z,11nm,1.0s,mb4.8
NWAO Narrogin (SRO) 65.98 169 P **P 06 17 40.5 -0.6**
comp=Z,20nm,0.8s,mb5.2,baz=343,slow=9.0,SNR=7.5
NWAO Narrogin (SRO) 65.98 169 *e*P **P 06 17 42.0 +0.9**
TREC Trest 66.09 314 AMS AMS 06 46 30.0
comp=Z,1μm,14.6s
SVW2 Sparrevohn 66.33 32 *e*P **P 06 17 43.5 +0.3**
CONA Conrad Observa 66.39 313⇑*i*P **P 06 17 43.8 +0.1**
comp=Z,14nm,1.5s,mb4.8
PRU Pruhonice 66.40 315 *e*P **P 06 17 45.3 +1.5**
PRU *e*S S 06 26 33.0 -0.7
PRU MLR MLR
comp=Z,2μm,18.7s,MS5.2
PRU Pruhonice 66.40 315 *ex* S 06 26 33.7 0.0
PRU AMS AMS 06 47 40.0
comp=Z,2μm,18.7s
PRU Pruhonice 66.40 315 *e*P **P 06 17 45.3 +1.5**
PRU *e*S S 06 26 33.0 -0.7
PRU AMS AMS 06 47 40.0
comp=Z,2μm,18.7s
BRG Berggiesshubel 66.41 316 *e*P **P 06 17 44.4 +0.6**
comp=Z,15nm,1.1s,mb4.9
BRG Berggiesshubel 66.41 316 *e*P **P 06 17 44.3 +0.5**
comp=Z,15nm,1.1s,mb4.9
BRG
comp=N,755nm,16.6s
BRG
comp=E,783nm,13.6s
BRG
comp=Z,912nm,22.8s
BRG Berggiesshubel 66.41 316 *e*P **P 06 17 44.3 +0.5**
BRG pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
BRG MLR MLR
comp=N,452nm,16.6s,MS5.0
BRG MLR MLR
comp=E,469nm,13.6s,MS5.0
BRG MLR MLR
comp=Z,546nm,22.8s
FORT Forrest 66.46 159 *e*P **P 06 17 45.0 +0.7**
comp=Z,50nm,1.1s,mb5.5
CHUM Lake Minchumin 66.53 28 *e*P **P 06 17 43.9 -0.4**
comp=Z,7.4nm,0.7s,mb4.8
CLL Collm 66.78 317 *e*P **P 06 17 46.7 +0.5**
comp=Z,11nm,1.0s,mb4.8
CLL Collm 66.78 317⇓*i*P **P 06 17 46.4 +0.2**
CLL *i* 06 17 57.4
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,500nm,18.4s,MS4.8
CLL Collm 66.78 317⇓*i*P **P 06 17 46.4 +0.2**
comp=Z,11nm,1.0s,mb4.8
CLL *i* pP pP 06 17 48.2 -1.3
comp=Z,21nm,1.3s
CLL *i* 06 17 57.4
CLL *e*PP PP 06 20 11.0 -1.9
CLL LmV 06 53 00.0
comp=Z,500nm,18.4s
MUD Monsted U'grnd 66.81 323 *i* P **P 06 17 46.8 +0.5**
MUD pmax pmax
comp=Z,19nm,1.0s,mb5.1
MUD Monsted U'grnd 66.81 323 *i* P **P 06 17 46.8 +0.5**
comp=Z,19nm,1.0s,mb5.1
BPAW Bear Paw Mtn. 66.95 28 *e*P **P 06 17 46.2 -0.9**
comp=Z,12nm,0.8s,mb5.0
PPLA Purkeypile 67.01 29 *e*P **P 06 17 46.5 -1.0**
comp=Z,13nm,0.6s,mb5.1
KTH Kantishna Hill 67.23 28 *e*P **P 06 17 48.1 -0.7**
comp=Z,14nm,1.1s,mb4.9
BSEG Bad Segeberg 67.23 320 *e*P **P 06 17 50.4 +1.4**
comp=Z,20nm,0.9s,mb5.2
KHC Kasperske Hory 67.31 315 *e*P **P 06 17 49.6 0.0**
KHC *e*S S 06 26 39.9 -4.8
KHC MLR MLR
comp=Z,1μm,18.6s,MS5.2
KHC Kasperske Hory 67.31 315 *e*P **P 06 17 49.7 +0.1**
comp=Z,6.9nm,1.2s,mb4.6
KHC Kasperske Hory 67.31 315 *e*P **P 06 17 49.6 0.0**
KHC *e*S S 06 26 39.9 -4.8
KHC AMS AMS 06 48 10.0
comp=Z,1μm,18.6s
KHC Kasperske Hory 67.31 315 *ex* S 06 26 39.8 -4.9
KHC AMS AMS 06 48 10.0
comp=Z,1μm,18.6s
GEC2 GERESS Array S 67.35 314 *e*P **P 06 17 49.8 -0.1**
comp=Z,9.0nm,0.9s,mb4.8
GEC2 GERESS Array S 67.35 314 *e*P **P 06 17 49.8 -0.1**
GEC2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
GERES GERESS Array B 67.35 314 P **P 06 17 48.8 -1.1**
comp=Z,8.8nm,1.0s,mb4.8,baz=71,slow=4.8,SNR=32
GERES LR LR 06 48 57.7
comp=Z,835nm,18.3s,MS5.0,baz=62,slow=38
GERES GERESS Array B 67.35 314 P **P 06 17 48.8 -1.1**
GERES pmax pmax
comp=Z,9.0nm,1.0s
GERES MLR MLR
comp=Z,835nm,18.3s
SOKA Soboth 67.40 312⇑*i*P **P 06 17 50.2 0.0**
comp=Z,13nm,1.0s,mb4.9
MOA Molln 67.41 313⇑*i*P **P 06 17 51.5 +1.2**
comp=Z,9.2nm,0.8s,mb4.8
TANN Tannenbergstha 67.45 316 *e*P **P 06 17 50.9 +0.4**
comp=Z,8.0nm,1.1s,mb4.7
TRF Thorofare Moun 67.53 28 *e*P **P 06 17 53.5 +2.8**
comp=Z,9.0nm,0.9s,mb4.8
NKC Novy Kostel 67.54 316 *e*P **P 06 17 51.7 +0.7**
NKC MLR MLR
comp=Z,900nm,15.1s,MS5.1
NKC Novy Kostel 67.54 316 AMS AMS 06 47 30.0
comp=Z,900nm,15.1s
NKC Novy Kostel 67.54 316 *e*P **P 06 17 51.7 +0.7**
NKC AMS AMS 06 47 30.0
comp=Z,900nm,15.1s
WET Wettzell 67.72 315 *e*P **P 06 17 53.5 +1.3**
comp=Z,12nm,1.0s,mb4.9
WET Wettzell 67.72 315 *e*P **P 06 17 53.5 +1.3**
WET pmax pmax
comp=Z,12nm,1.0s,mb4.9
BOJS Bojanci 67.73 311 *i* P **P 06 17 54.1 +1.7**
BOJS *i* 06 18 06.7
COLA College 67.79 26 *e*P **P 06 17 51.2 -1.1**
COLA pmax pmax
comp=Z,15nm,0.8s,mb5.1
COLA College 67.79 26 *e*P **P 06 17 51.2 -1.2**
comp=Z,15nm,0.8s,mb5.1
MOX Moxa 67.85 317 *e*P **P 06 17 53.8 +0.8**
MOX
comp=Z,400nm,22.0s
MOX Moxa 67.85 317 *e*P **P 06 17 53.6 +0.6**
comp=Z,15nm,1.3s,mb4.9
RSO Redoubt South 67.86 32 *e*P **P 06 17 54.8 +1.9**
ROTZ Rotzenmuhle 67.87 316 *e*P **P 06 17 53.6 +0.5**
comp=Z,17nm,1.2s,mb5.0
MCK McKinley 67.93 28 *e*P **P 06 17 53.4 +0.2**
MCK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MCK McKinley 67.93 28 *e*P **P 06 17 53.4 +0.2**
comp=Z,7.4nm,0.7s,mb4.8
NRDL Niedersach Rie 67.94 319 *e*P **P 06 17 54.5 +1.0**
comp=Z,24nm,1.4s,mb5.0
CLZ Clausthal 68.07 318 *e*P **P 06 17 54.3 0.0**
comp=Z,26nm,1.2s,mb5.1
CLZ Clausthal 68.07 318 *e*P **P 06 17 54.3 0.0**
CLZ pmax pmax
comp=Z,26nm,1.2s,mb5.1
KBA Koelnbreinsper 68.29 313⇓*i*P **P 06 17 56.6 +0.8**
comp=Z,7.8nm,0.7s,mb4.8
JAVS Javornik 68.33 311 *i* P **P 06 17 56.5 +0.4**
GRA1 Grafenberg Arr 68.48 316 *e*P **P 06 17 58.2 +1.2**
comp=Z,23nm,0.8s,mb5.3
GRA1 LR LR
comp=Z,1μm,19.9s,MS5.2
GRF Grafenberg Arr 68.48 316 *e*P **P 06 17 58.2 +1.2**
comp=Z,23nm,0.8s,mb5.3
GRF *e*L 06 49 15.5
comp=Z,1μm,19.9s
GRF Grafenberg Arr 68.48 316 *e*P **P 06 17 58.2 +1.2**
GRF pmax pmax
comp=Z,23nm,0.8s,mb5.3
GRF MLR MLR
comp=Z,1μm,19.9s,MS5.2
GRF Grafenberg Arr 68.48 316 *e*P **P 06 17 58.2 +1.2**
GRF pmax pmax
comp=Z,23nm,0.8s,mb5.3
GRF MLR MLR
comp=Z,1μm,19.9s,MS5.2
UBBA Unterbreizbach 68.71 317 *e*P **P 06 17 58.3 -0.1**
comp=Z,6.0nm,0.8s,mb4.6
PMR Palmer 68.89 30 *e*P **P 06 17 57.2 -2.1**
PMR pmax pmax
comp=Z,13nm,0.8s,mb4.9
PMR MLR MLR
comp=Z,700nm,17.0s,MS5.0
PMR Palmer 68.89 30 *e*P **P 06 17 57.2 -2.1**
comp=Z,13nm,0.8s,mb4.9
PMR LR LR
comp=Z,700nm,17.0s,MS5.0
OHAK Old Harbor 69.09 35 *e*P **P 06 18 02.0 +1.4**
comp=Z,40nm,1.2s,mb5.2
OHAK LR LR
comp=Z,900nm,17.0s,MS5.1
FUR Furstenfeldbru 69.10 314 *e*P **P 06 18 02.2 +1.4**
comp=Z,50nm,1.4s,mb5.2
FUR Furstenfeldbru 69.10 314 *e*P **P 06 18 02.2 +1.4**
FUR pmax pmax
comp=Z,50nm,1.4s,mb5.2
KDAK Kodiak Island 69.17 34 *ce*P **P 06 18 00.1 -1.0**
WTTA Wattenberg 69.27 313⇑*i*P **P 06 18 02.0 +0.1**
comp=Z,20nm,1.2s,mb4.9
TIP Timpagrande 69.36 304 *e*P **P 06 18 02.6 0.0**
MOTA Moosalm 69.56 314⇑*i*P **P 06 18 04.2 +0.5**
comp=Z,9.6nm,0.7s,mb4.8
FETA Feichten 69.93 313 *i* P **P 06 18 06.7 +0.7**
comp=Z,16nm,1.0s,mb4.9,SNR=7.9
TOD Tromm 69.94 317 *e*P **P 06 18 06.8 +0.8**
EGAK Eagle 70.27 25 *e*P **P 06 18 07.4 -0.4**
INK Inuvik 70.57 20 P **P 06 18 08.0 -1.6**
comp=Z,3.8nm,0.7s,mb4.4,baz=333,slow=6.2,SNR=4.2
INK Inuvik 70.57 20 P **P 06 18 08.0 -1.5**
INK pmax pmax
comp=Z,4.0nm,0.7s
SPAK Spaichingen-Ko 70.62 315 *e*P **P 06 18 11.1 +0.9**
SCO Scoresbysund 70.69 344 *i* P **P 06 18 15.2 +5.0**
SCO pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SCO Scoresbysund 70.69 344 *i* P **P 06 18 15.2 +5.0**
comp=Z,6.2nm,1.0s,mb4.5
VMG Vicchio 70.78 310 P **P 06 18 13.6 +2.3**
BFO Black Forest 70.79 315 *e*P **P 06 18 11.4 +0.2**
comp=Z,22nm,1.4s,mb4.9
BFO Black Forest 70.79 315 *e*P **P 06 18 11.4 +0.2**
BFO pmax pmax
comp=Z,22nm,1.4s,mb4.9
RUP Ruppelstein 70.90 317 *e*P **P 06 18 13.0 +1.1**
MEM Membach 71.07 318 P **P 06 18 12.4 -0.5**
BBOO Buckleboo 71.09 153 *e*P **P 06 18 12.5 -0.5**
comp=Z,4.9nm,0.6s,mb4.6
FELD Feldberg im Sc 71.19 315 *e*P **P 06 18 14.4 +0.7**
DAWY Dawson 71.31 25 *e*P **P 06 18 12.8 -1.3**
CDF Champ du Feu 71.38 316 *e*P **P 06 18 13.1 -1.7**
comp=Z,23nm,1.0s,mb4.8
CDF Champ du Feu 71.38 316 *e*P **P 06 18 13.1 -1.7**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 71.38 316 *e*P **P 06 18 13.1 -1.7**
comp=Z,11nm,1.0s,mb4.8
WLF Walferdange 71.44 317 P **P 06 18 16.4 +1.3**
comp=Z,24nm,1.3s,mb5.0
WLF Walferdange 71.44 317 *e*P **P 06 18 15.5 +0.4**
comp=Z,23nm,0.9s,mb5.1
WLF Walferdange 71.44 317 *e*P **P 06 18 16.6 +1.5**
WLF pmax pmax
comp=Z,29nm,0.9s,mb5.2
WLF Walferdange 71.44 317 *e*P **P 06 18 16.6 +1.5**
comp=Z,29nm,0.9s,mb5.2
ECH Echery 71.54 316 *e*P **P 06 18 16.2 +0.4**
VAI Varese 71.66 313 P **P 06 18 16.3 -0.3**
BBS Basel-Blauen 71.68 315 *e*P **P 06 18 17.3 +0.6**
MOF Molkenrain 71.72 315 *e*P **P 06 18 17.7 +0.8**
DOU Dourbes 72.11 318 P **P 06 18 19.7 +0.5**
comp=Z,9.6nm,1.9s,mb4.4
LOMF Lomont 72.14 315 *e*P **P 06 18 20.7 +1.3**
EIDS Eidsvold 72.17 137 *e*P **P 06 18 19.9 +0.1**
EIDS Eidsvold 72.17 137 *e*P **P 06 18 20.0 +0.2**
KMBO Kilima Mbogo 72.20 257 P **P 06 18 20.3 0.0**
comp=Z,3.0nm,0.7s,mb4.3,baz=31,slow=10,SNR=7.1
KMBO Kilima Mbogo 72.20 257 P **P 06 18 20.3 0.0**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 72.20 257 P **P 06 18 20.3 0.0**
KMBO *e*P pP 06 18 23.4 -0.2
THEF They Montfort 72.22 316 *e*P **P 06 18 20.7 +0.8**
SUMG Summit 72.33 349 *e*P **P 06 18 19.9 -0.3**
comp=Z,18nm,1.1s,mb4.9
SUMG *e*P pP 06 18 21.1 -2.3
STKA Stephens Creek 72.58 148 *e*P **P 06 18 21.0 -1.0**
comp=Z,11nm,0.6s,mb5.0
STKA Stephens Creek 72.58 148 P **P 06 18 20.7 -1.3**
comp=Z,10nm,0.6s,mb4.9,baz=341,slow=8.3,SNR=17
STKA Stephens Creek 72.58 148 P **P 06 18 20.7 -1.3**
STKA *e*P pP 06 18 22.4 -3.0
LSD Lago del Serru 72.87 313 P **P 06 18 24.9 +1.1**
LPG La Plagne 73.08 313 *e*P **P 06 18 24.3 -0.8**
comp=Z,51nm,0.6s,mb5.3
LPG La Plagne 73.08 313 *e*P **P 06 18 24.3 -0.8**
LPG pmax pmax
comp=Z,26nm,0.6s,mb5.3
LPG La Plagne 73.08 313 *e*P **P 06 18 24.3 -0.8**
comp=Z,26nm,0.6s,mb5.3
LPL La Plagne 73.09 313 *e*P **P 06 18 24.2 -0.9**
comp=Z,47nm,0.6s,mb5.3
LPL La Plagne 73.09 313 *e*P **P 06 18 24.2 -0.9**
LPL pmax pmax
comp=Z,24nm,0.6s,mb5.3
LPL La Plagne 73.09 313 *e*P **P 06 18 24.2 -0.9**
comp=Z,24nm,0.6s,mb5.3
SAOF Saorge 73.32 312 *e*P **P 06 18 26.7 +0.2**
BNI Bardonecchia 73.34 313 *e*P **P 06 18 25.8 -0.8**
BNI pmax pmax
comp=Z,33nm,1.3s,mb5.1
BNI Bardonecchia 73.34 313 *e*P **P 06 18 25.8 -0.8**
comp=Z,33nm,1.3s,mb5.1
BNI *e*P 06 18 26.6
TOUF Mont Tournerai 73.50 312 *e*P **P 06 18 28.7 +1.2**
MVIF Mont Vial 73.51 312 *e*P **P 06 18 27.6 -0.6**
HYT Haines Junctio 73.98 27 *e*P **P 06 18 30.7 +0.7**
SMF Signal de Mont 74.27 315 *e*P **P 06 18 30.2 -1.8**
comp=Z,34nm,1.0s,mb4.9
SMF Signal de Mont 74.27 315 *e*P **P 06 18 30.2 -1.8**
SMF pmax pmax
comp=Z,17nm,1.0s,mb4.9
SMF Signal de Mont 74.27 315 *e*P **P 06 18 30.2 -1.8**
comp=Z,17nm,1.0s,mb4.9
PLDF La Plantade 74.75 315 *e*P **P 06 18 36.5 +1.7**
AGO Saint Agoulin 75.00 315 *e*P **P 06 18 37.6 +1.4**
PYM Petit Puy Mans 75.23 315 *e*P **P 06 18 39.4 +1.8**
TCF Toulx Ste Croi 75.42 316 *e*P **P 06 18 37.2 -1.5**
KEST Kesra 76.18 304 P **P 06 18 43.1 -0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=238,slow=2.1,SNR=6.2
CAF Calviac 76.23 315 *e*P **P 06 18 42.2 -1.1**
comp=Z,14nm,1.0s,mb4.6
CAF Calviac 76.23 315 *e*P **P 06 18 42.2 -1.1**
CAF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CAF Calviac 76.23 315 *e*P **P 06 18 42.2 -1.1**
comp=Z,7.2nm,1.0s,mb4.6
DLBC Dease Lake 78.41 26 *e*P **P 06 18 55.6 +0.4**
SFJD Kangerlussuaq 79.20 351 *i* P sP 06 19 13.1 +9.1
SFJD pmax pmax
comp=Z,13nm,0.8s,mb4.9
SFJD Kangerlussuaq 79.20 351 *i* P sP 06 19 13.1 +9.1
comp=Z,13nm,0.8s
DZM Mont Dzumac 79.68 124 *e*P **P 06 19 04.1 +1.4**
comp=Z,64nm,1.1s,mb5.4
DZM *e*LR LR 06 43 47.4
comp=Z,712nm,23.1s
YKA Yellowknife Ar 80.12 18 P **P 06 19 02.8 -1.8**
comp=Z,2.3nm,0.7s,mb4.2,baz=329,slow=5.2,SNR=32
YKA LR LR 06 55 32.0
comp=Z,42nm,18.3s,MS3.8,baz=115,slow=36
YKA Yellowknife Ar 80.12 18 P **P 06 19 02.8 -1.8**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA MLR MLR
comp=Z,42nm,18.3s
ESDC Sonseca Array 82.87 313 P **P 06 19 18.7 -0.8**
comp=Z,1.6nm,0.6s,mb4.2,baz=31,slow=5.1,SNR=6.2
TAM Tamanrasset 85.81 294 *e*P **P 06 19 36.4 +1.6**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
TAM Tamanrasset 85.81 294 *e*P **P 06 19 36.4 +1.6**
comp=Z,4.4nm,0.8s,mb4.7
LSZ Lusaka 87.58 250 *e*P **P 06 19 42.9 -0.5**
LSZ pmax pmax
comp=Z,13nm,1.0s,mb5.1
LSZ Lusaka 87.58 250 *e*P **P 06 19 42.9 -0.5**
comp=Z,13nm,1.0s,mb5.1
FCC Fort Churchill 87.72 10 *e*P **P 06 19 42.2 -1.2**
comp=Z,0.3nm,1.0s
EDM Edmonton 88.32 22 *e*P **P 06 19 46.3 -0.1**
JCW Jim Creek 89.29 29 *e*P **P 06 19 51.1 0.0**
FFC Flin Flon 90.07 15 P **P 06 19 53.1 -1.5**
comp=Z,72nm,0.8s,mb6.0,SNR=7.2
FFC Flin Flon 90.07 15 *ce*P **P 06 19 53.5 -1.1**
FFC Flin Flon 90.07 15 *e*P **P 06 19 53.4 -1.2**
comp=Z,16nm,1.1s,mb5.3
ETW Entiat 90.41 29 *e*P **P 06 19 56.1 -0.2**
comp=Z,5.9nm,0.7s,mb5.0
NEW Newport 91.15 27 *e*P **P 06 19 59.8 +0.1**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 91.15 27 *e*P **P 06 19 59.8 +0.1**
comp=Z,11nm,1.1s,mb5.1
WALA Waterton Lakes 91.66 25 *e*P **P 06 20 02.6 +0.5**
comp=Z,0.2nm,1.0s
BSMT Bassoo Peak 92.36 26 *e*P **P 06 20 06.7 +1.4**
comp=Z,6.7nm,1.0s,mb4.9
YBMT Yellow Bay 92.64 25 *e*P **P 06 20 07.6 +1.0**
comp=Z,4.7nm,0.9s,mb4.9
JTMT Jette 92.64 26 *e*P **P 06 20 08.1 +1.5**
comp=Z,4.8nm,1.0s,mb4.9
SCHQ Schefferville 92.83 355 P **P 06 20 07.4 +0.1**
comp=Z,3.0nm,0.8s,mb4.8,baz=251,slow=18,SNR=2.8
SCHQ LR LR 07 08 40.1
comp=Z,269nm,18.5s,MS4.7,baz=348,slow=40
SWMT Swartz Lake 92.94 25 *e*P **P 06 20 08.8 +0.8**
comp=Z,3.0nm,0.9s,mb4.7
HUMO Hull Mountain 93.19 33 *e*P **P 06 20 09.7 +0.4**
comp=Z,8.4nm,1.2s,mb5.0
SLMT Seeley Lake 93.35 25 *e*P **P 06 20 09.6 -0.3**
comp=Z,10nm,0.9s,mb5.3
MSO Missoula 93.53 26 *e*P **P 06 20 10.7 -0.1**
comp=Z,3.3nm,1.0s,mb4.7
EGMT Eagleton 93.96 23 *e*P **P 06 20 13.6 +0.9**
comp=Z,4.1nm,0.8s,mb4.9
HRY Holter Researc 94.39 25 *e*P **P 06 20 15.5 +0.8**
comp=Z,3.5nm,0.7s,mb4.9
MOD Modoc 94.96 32 *e*P **P 06 20 17.6 +0.1**
comp=Z,14nm,1.6s,mb5.2
LBTB Lobatse 95.01 244 P **P 06 20 16.1 -1.7**
comp=Z,1.5nm,0.5s,mb4.7,baz=28,slow=16,SNR=3.0
LBTB Lobatse 95.01 244 P **P 06 20 16.1 -1.7**
LBTB pmax pmax
comp=Z,2.0nm,0.5s,mb4.8
DLMT Dillon 95.27 26 *e*P **P 06 20 18.2 -0.6**
comp=Z,6.2nm,1.1s,mb5.0
ULM Lac du Bonnet 95.57 13 LR LR 07 03 29.6
comp=Z,309nm,19.0s,MS4.8,baz=345,slow=36
MCMT McKenzie Canyo 95.64 26 *e*P **P 06 20 20.8 +0.4**
comp=Z,1.4nm,0.9s,mb4.4
BOSA Boshof 97.22 241 LR LR 07 00 18.4
comp=Z,327nm,20.8s,MS4.8,baz=55,slow=33
M13A Montello 98.05 29 *e*P **P 06 20 33.8 +2.3**
comp=Z,2.9nm,0.9s,mb4.8
NVAR Mina Array Bea 98.66 33 P **P 06 20 32.8 -1.4**
comp=Z,0.2nm,0.7s,mb3.8,baz=297,slow=5.0,SNR=2.4
RSSD Black Hills 99.24 21 *e*P **P 06 20 36.5 -0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.8
RSSD Black Hills 99.24 21 *e*P **P 06 20 36.5 -0.2**
comp=Z,3.3nm,0.9s,mb4.9
PPT Papeete 111.75 97 *e*PS PS 06 35 44.6 -0.7
comp=Z,115nm,25.8s
PPT *e*SS SS 06 41 53.8 +4.4
comp=Z,100nm,28.0s
PPT *e*LR LR 06 58 38.6
comp=Z,603nm,23.5s,baz=298
TAOE Nuku Hiva Isla 115.39 84 *e*LR LR 07 00 17.3
comp=Z,418nm,25.4s
SDV Santo Domingo 138.73 354 *e*PKPdf PKPdf 06 26 23.5 +1.7
ROSC El Rosal 142.92 359 PKhKP 06 26 25.0
comp=Z,2.3nm,0.5s,baz=271,slow=13,SNR=3.0
OTAV Otavalo 147.31 7 *e*PKPdf PKPdf 06 26 36.7 -0.2
OTAV *e*PKPbc PKPbc 06 26 39.9 +0.7
OTAV *e*PKPab PKPab 06 26 42.0 +1.1
SIV San Ignacio 159.48 320 PKP PKPdf 06 26 52.7 -1.4
comp=Z,0.8nm,0.8s,baz=95,slow=11,SNR=3.9
SIV PKPab PKPab 06 27 32.4 +0.5
comp=Z,3.5nm,0.8s,baz=69,slow=6.2,SNR=10
LPAZ La Paz 162.86 338 PKP PKPdf 06 26 57.0 -0.8
comp=Z,1.9nm,1.1s,baz=1.3,slow=3.7,SNR=4.4
LPAZ La Paz 162.86 338 PKIKP PKPdf 06 26 57.0 -0.7
LPAZ pmax pmax
comp=Z,2.0nm,1.1s

IDC ***19*** *06:08:18.6±2.9, 38°.57N×70°.77E, h0km, mb3.7/4, mb1 3.9/9, mb1mx3.8/27, mbtmp3.9/9, ML3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/31, Error ellipse: s-maj=47.2km s-min=15.8km az=160.0*

NEIC ***19*** *06:08:23.4±1.6, 38°.93N×70°.40E, h10km, mb4.4/1, Error ellipse: s-maj=24.8km s-min=11.3km az=162.0*

ISCJB ***19*** *06:08:24.0±1.4, 38°.86N±0°.07×70°.45E±0°.08, h40km±17km, mb3.7/5, Error ellipse: s-maj=12.3km s-min=8.9km az=33.0*

NNC ***19*** *06:08:25.4±9.7, 38°.74N×70°.58E, h173km±112km, mb3.1, mpv4.4, Error ellipse: s-maj=94.9km s-min=38.2km az=14.0*

MOS ***19*** *06:08:26.4±1.4, 39°.17N×70°.29E, h28km, mb3.9/4, Error*

ellipse: s-maj=19.5km s-min=12.1km az=79.8

ISC 19 06:08:25.6±2.0, 38°82′N±0°06×70°43′E±0°05, h34km±18km, n37, σ1§03/45, mb3.7/5, 7C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.14**	**36**	P	**Pn**	**06 09 26.6**	**+0.3**
	SNR=150						
KK31	**Karatay Array**	**4.28**	**1**	⇓P	**Pn**	**06 09 31.0**	**+2.7**
	14nm,0.3s,baz=183,slow=14						
KK31				⇑S	**Sn**	**06 10 24.1**	**+7.1**
	72nm,0.7s,baz=184,slow=23						
KSH	**Kashi**	**4.36**	**79**	⇑Pn	**Pn**	**06 09 23.1**	**-6.3**
KSH				Sn	**Sn**	**06 10 17.9**	**-1.1**
KSH				smax			
	comp=N,600nm,0.9s						
KSH				smax			
	comp=E,460nm,0.9s						
EKS2	**Erkin-Say**	**4.60**	**32**	P	**Pn**	**06 09 34.2**	**+1.5**
	SNR=135						
UCH	**Uchtor**	**4.61**	**41**	P	**Pn**	**06 09 33.0**	**+0.2**
	SNR=130						
AAK	**Ala-Archa**	**4.90**	**38**	Pn	**Pn**	**06 09 37.3**	**+0.4**
	comp=E,0.3nm,0.3s,baz=202,slow=6.9,SNR=131						
AAK				Sn	**Sn**	**06 10 32.3**	**0.0**
	baz=198,slow=15,SNR=1.5						
AAK	**Ala-Archa**	**4.90**	**38**	PN	**Pn**	**06 09 37.3**	**+0.5**
AAK						06 10 32.3	
AAK				pmax	pmax		
	comp=Z,15nm,0.3s						
KZA	**Kyzart**	**4.91**	**47**	P	**Pn**	**06 09 37.2**	**+0.2**
	SNR=52						
FRU	**Bishkek**	**5.11**	**37**	*e*PN	**Pn**	**06 09 41.0**	**+1.3**
FRU				*e*		06 09 59.0	
FRU				*e*S	**Sn**	**06 10 44.0**	**+6.5**
FRU				*i*		06 11 08.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.0s						
FRU				pmax	pmax		
	comp=E,570nm,1.2s						
KBK	**Karagaybulak**	**5.14**	**40**	P	**Pn**	**06 09 41.1**	**+0.9**
	SNR=102						
CHMS	**Chumysh**	**5.30**	**37**	P	**Pn**	**06 09 42.5**	**+0.1**
	SNR=78						
USP	**Ospenovka**	**5.40**	**33**	P	**Pn**	**06 09 45.2**	**+1.5**
	SNR=74						
ULHL	**Ulahol**	**5.59**	**50**	P	**Pn**	**06 09 45.0**	**-1.3**
	SNR=10						
TKM2	**Tokmak 2**	**5.67**	**42**	⇑P	**Pn**	**06 09 47.1**	**-0.3**
	comp=E,44nm,0.6s						
TKM2				⇓S	**Sn**	**06 10 50.5**	**-0.7**
	comp=E,43nm,1.1s						
TKM2	**Tokmak 2**	**5.67**	**42**	P	**Pn**	**06 09 46.9**	**-0.4**
	SNR=88						
SDNR	**Sundarnagar**	**9.05**	**142**	*ex*	**Pn**	**06 10 33.1**	**-0.7**
MKAR	**Makanchi Array**	**11.79**	**44**	Pn	**Pn**	**06 11 10.2**	**-1.1**
	comp=E,0.2nm,0.3s,baz=232,slow=14,SNR=45						
AB31	**Akbulak array**	**12.86**	**328**	⇑P	**Pn**	**06 11 24.9**	**-0.9**
	comp=E,3.1nm,0.5s,baz=236,slow=4.5,SNR=100						
AB31				⇓S	**Sn**	**06 13 46.7**	**-0.9**
	comp=E,25nm,0.9s,baz=136,slow=24,SNR=9.0						
ABKAR	**Akbulak array**	**12.86**	**328**	*e*Pn	**Pn**	**06 11 25.1**	**-0.8**
	comp=E,3.9nm,0.4s						
ABKAR				*e*Sn	**Sn**	**06 13 48.0**	**+0.3**
KURK	**Kurchatov**	**13.23**	**23**	Pn	**Pn**	**06 11 23.9**	**-6.9**
	comp=E,0.2nm,0.3s,baz=213,slow=12,SNR=11						
BVA0	**Borovoye Array**	**14.21**	**360**	⇑P	**Pn**	**06 11 45.2**	**+1.0**
	comp=E,0.5nm,0.7s,baz=162,slow=12,SNR=5.7						
BVAR	**Borovoye Array**	**14.21**	**360**	Pn	**Pn**	**06 11 42.5**	**-1.7**
	comp=E,0.3nm,0.3s,baz=177,slow=10,SNR=6.8						
AKTK	**Aktyubinsk**	**14.57**	**327**	Pn	**Pn**	**06 11 48.0**	**-1.1**
AKTK				LR	LR	06 18 20.9	
AKTO	**Aktyubinsk**	**14.57**	**327**	⇑P	**Pn**	**06 11 47.5**	**-1.7**
	comp=E,0.9nm,0.6s						
AKTO				⇑S	**Sn**	**06 14 22.1**	**-7.2**
	comp=E,3.9nm,0.9s						
AKTO	**Aktyubinsk**	**14.57**	**327**	Pn	**Pn**	**06 11 48.0**	**-1.1**
	comp=E,0.3nm,0.3s,baz=139,slow=14,SNR=6.5						
AKTO				LR	LR	06 18 20.9	
	comp=E,66nm,21.6s,baz=339,slow=40						
ZEI	**Tsey**	**20.44**	**290**	*e*P	**P**	**06 13 04.2**	**+4.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	**Keskin Array B**	**28.38**	**284**	P	**P**	**06 14 18.4**	**+1.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=90,slow=7.4,SNR=4.0						
BRTR	**Keskin Array B**	**28.38**	**284**	P	**P**	**06 14 18.4**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**31.18**	**306**	P	**P**	**06 14 41.4**	**+0.1**
	comp=Z,0.2nm,0.3s,mb3.4,baz=103,slow=9.7,SNR=3.1						
AKASG	**Malin Array Be**	**31.18**	**306**	P	**P**	**06 14 41.4**	**+0.1**
ARCES	**ARCESS Array B**	**38.84**	**337**	P	**P**	**06 15 48.0**	**+1.1**
	comp=Z,1.1nm,0.6s,mb3.8,baz=92,slow=6.3,SNR=4.2						
ARCES	**ARCESS Array B**	**38.84**	**337**	P	**P**	**06 15 48.0**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**42.27**	**322**	P	**P**	**06 16 15.9**	**+0.5**
	comp=Z,1.1nm,0.6s,mb3.7,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**42.27**	**322**	P	**P**	**06 16 15.5**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.6,baz=96,slow=8.3,SNR=4.7						
NOA	**NORSAR Array B**	**42.27**	**322**	P	**P**	**06 16 15.5**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**42.27**	**322**	P	**P**	**06 16 15.5**	**+0.1**
ECH	**Echery**	**45.65**	**303**	*e*P	**P**	**06 16 42.2**	**-0.5**
	comp=Z,5.1nm,1.1s,mb4.4						

*ISCJB **19** 06:09:35.4±0.3, 44°.46N±0°.02×7°.22E±0°.03, h14km±2km, Error ellipse: s-maj=3.7km s-min=2.0km az=150.0*
*CSEM **19** 06:09:35.8±0.1, 44°.47N×7°.23E, h12km, ML2.5/12, Error ellipse: s-maj=1.6km s-min=0.9km az=62.0*
*ROM **19** 06:09:35.5±0.1, 44°.45N×7°.23E, h8km±1km, Md2.2/9, Ml1.8/4, Error ellipse: s-maj=3.4km s-min=1.5km az=60.0*
*STR **19** 06:09:36.3±0.1, 44°.46N×7°.24E, h5km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **19** 06:09:36.3, 44°.47N×7°.24E, h5km, ML2.5(LDG), After LDG.*
*GEN **19** 06:09:36.2, 44°.45N×7°.23E, h4km, ML1.8*
*LDG **19** 06:09:36.3±0.0, 44°.47N×7°.24E, h5km, Md2.5/3, Ml2.5/8, Error ellipse: s-maj=0.9km s-min=0.4km az=65.0*

ISC 19 06:09:35.9±0.3, 44°46N±0°.02×7°24E±0°.03, h13km±3km, n65, σ0§45/122, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.04**	**11**	Pg	**Pg**	**06 09 37.8**	**-0.5**
DOI				Sg	**Sg**	**06 09 38.8**	**-1.3**
DOI	**San Damiano**	**0.04**	**11**	Pg	**Pg**	**06 09 37.8**	**-0.5**
DOI				Sg	**Sg**	**06 09 38.8**	**-1.3**
DOI	**San Damiano**	**0.04**	**11**	Pg	**Pg**	**06 09 37.8**	**-0.5**
DOI				Sg	**Sg**	**06 09 38.8**	**-1.3**
PZZ	**Stroppo**	**0.10**	**296**	Pg	**Pg**	**06 09 38.7**	**-0.1**
PZZ				Sg	**Sg**	**06 09 40.3**	**-0.7**
PZZ	**Stroppo**	**0.10**	**296**	Pg	**Pg**	**06 09 38.7**	**-0.1**
PZZ				Sg	**Sg**	**06 09 40.3**	**-0.7**
PZZ	**Stroppo**	**0.10**	**296**	Pg	**Pg**	**06 09 38.7**	**-0.1**
PZZ				Sg	**Sg**	**06 09 40.3**	**-0.7**
STV	**Sant Anna di V**	**0.23**	**164**	Pg	**Pg**	**06 09 40.6**	**-0.2**
STV				Sg	**Sg**	**06 09 43.4**	**-0.8**
STV	**Sant Anna di V**	**0.23**	**164**	Pg	**Pg**	**06 09 40.6**	**-0.2**
STV				Sg	**Sg**	**06 09 43.4**	**-0.8**
STV	**Sant Anna di V**	**0.23**	**164**	Pg	**Pg**	**06 09 40.6**	**-0.2**
STV				Sg	**Sg**	**06 09 43.4**	**-0.8**
ENR	**Entracque**	**0.27**	**151**	P	**Pg**	**06 09 41.4**	**-0.2**
ENR				S	**Sg**	**06 09 45.0**	**-0.4**
SURF	**Saint Ours**	**0.30**	**273**	Pg	**Pg**	**06 09 42.3**	**+0.2**
SURF				Sg	**Sg**	**06 09 46.9**	**+0.6**
SURF	**Saint Ours**	**0.30**	**273**	Pg	**Pg**	**06 09 42.3**	**+0.2**
SURF				Sg	**Sg**	**06 09 46.9**	**+0.6**
OG22	**Abries**	**0.41**	**330**	Pg	**Pg**	**06 09 44.4**	**+0.3**
OG22				Sg	**Sg**	**06 09 50.2**	**+0.5**
OG22	**Abries**	**0.41**	**330**	Pg	**Pg**	**06 09 44.4**	**+0.3**
OG22				Sg	**Sg**	**06 09 50.2**	**+0.5**
MBDF	**Montbardon**	**0.42**	**308**	*e*Pg	**Pg**	**06 09 44.6**	**+0.3**
MBDF				*e*Sg	**Sg**	**06 09 50.3**	**+0.3**
	50nm,0.3s						
MBDF	**Montbardon**	**0.42**	**308**	*e*Pg	**Pg**	**06 09 44.6**	**+0.3**
MBDF				*e*Sg	**Sg**	**06 09 50.3**	**+0.3**
	25nm,0.3s						
TOUF	**Mont Tournerai**	**0.45**	**179**	Pg	**Pg**	**06 09 45.0**	**+0.2**
TOUF	**Mont Tournerai**	**0.45**	**179**	Pg	**Pg**	**06 09 45.0**	**+0.2**
AUTN	**L'Aution**	**0.49**	**164**	Pg	**Pg**	**06 09 45.9**	**+0.4**
AUTN				Sg	**Sg**	**06 09 52.1**	**+0.1**
AUTN	**L'Aution**	**0.49**	**164**	Pg	**Pg**	**06 09 45.9**	**+0.4**
AUTN				Sg	**Sg**	**06 09 52.1**	**+0.1**
SAOF	**Saorge**	**0.53**	**154**	Pg	**Pg**	**06 09 46.8**	**+0.5**
SAOF				Sg	**Sg**	**06 09 53.5**	**+0.2**
SAOF	**Saorge**	**0.53**	**154**	Pg	**Pg**	**06 09 46.8**	**+0.5**
SAOF				Sg	**Sg**	**06 09 53.5**	**+0.2**
MONE	**Monesi**	**0.54**	**136**	P	**Pg**	**06 09 46.5**	**+0.1**
MONE				S	**Sg**	**06 09 53.3**	**-0.2**
MVIF	**Mont Vial**	**0.57**	**186**	Pg	**Pg**	**06 09 47.4**	**+0.3**
MVIF				Sg	**Sg**	**06 09 55.3**	**+0.7**
MVIF	**Mont Vial**	**0.57**	**186**	Pg	**Pg**	**06 09 47.4**	**+0.3**
MVIF				Sg	**Sg**	**06 09 55.3**	**+0.7**
LUCF	**Luceram**	**0.58**	**172**	Pg	**Pg**	**06 09 47.5**	**+0.3**
LUCF				Sg	**Sg**	**06 09 54.9**	**+0.1**
LUCF	**Luceram**	**0.58**	**172**	Pg	**Pg**	**06 09 47.5**	**+0.3**
LUCF				Sg	**Sg**	**06 09 54.9**	**+0.1**
SBF	**Sospel**	**0.62**	**167**	*e*Pg	**Pg**	**06 09 48.2**	**+0.3**
SBF				*e*Sg	**Sg**	**06 09 56.5**	**+0.4**
	23nm,0.2s						
SBF	**Sospel**	**0.62**	**167**	*e*Pg	**Pg**	**06 09 48.2**	**+0.3**
SBF				*e*Sg	**Sg**	**06 09 56.5**	**+0.4**
	11nm,0.2s						
RONM	**Roccetta Nervi**	**0.64**	**156**	P	**Pg**	**06 09 48.3**	**-0.1**
RONM				S	**Sg**	**06 09 56.2**	**-0.7**
RSP	**Reno Superiore**	**0.68**	**2**	Pg	**Pg**	**06 09 48.8**	**-0.4**
RSP	**Reno Superiore**	**0.68**	**2**	Pg	**Pg**	**06 09 48.8**	**-0.4**
	20nm,0.2s						
RSP	**Reno Superiore**	**0.68**	**2**	P	**Pg**	**06 09 48.8**	**-0.4**
RSP				S	**Sg**	**06 09 58.1**	**-0.1**
RORO	**Rocca Rossa**	**0.69**	**120**	P	**Pg**	**06 09 50.7**	**+1.4**
RORO				S	**Sg**	**06 09 58.3**	**-0.1**
NEGI	**Seborga**	**0.70**	**151**	P	**Pg**	**06 09 49.6**	**+0.1**
NEGI				S	**Sg**	**06 09 58.5**	**-0.3**
BNI	**Bardonecchia**	**0.71**	**326**	Pg	**Pg**	**06 09 50.0**	**+0.3**
BNI				Sg	**Sg**	**06 09 59.6**	**+0.6**
BNI	**Bardonecchia**	**0.71**	**326**	Pg	**Pg**	**06 09 50.0**	**+0.3**
BNI				Sg	**Sg**	**06 09 59.6**	**+0.6**
BNI	**Bardonecchia**	**0.71**	**326**	Pg	**Pg**	**06 09 50.0**	**+0.3**
BNI				Sg	**Sg**	**06 09 59.6**	**+0.6**
IMI	**Imperia**	**0.73**	**139**	Pg	**Pg**	**06 09 50.1**	**+0.1**
IMI				Sg	**Sg**	**06 09 59.9**	**+0.3**
IMI	**Imperia**	**0.73**	**139**	Pg	**Pg**	**06 09 50.1**	**+0.1**
IMI				Sg	**Sg**	**06 09 59.9**	**+0.3**
	50nm,0.3s						
IMI	**Imperia**	**0.73**	**139**	P	**Pg**	**06 09 50.1**	**+0.1**
IMI				S	**Sg**	**06 09 59.3**	**-0.3**
IMI				Sg	**Sg**	**06 09 59.9**	**+0.3**
	50nm,0.3s						
CALN	**Calern**	**0.76**	**199**	Pg	**Pg**	**06 09 51.0**	**+0.5**
CALN	**Calern**	**0.76**	**199**	Pg	**Pg**	**06 09 51.0**	**+0.5**
QLNO	**Quiliano**	**0.81**	**100**	Pg	**Pg**	**06 09 51.7**	**+0.2**
QLNO				Sg	**Sg**	**06 10 02.7**	**+0.6**
QLNO	**Quiliano**	**0.81**	**100**	Pg	**Pg**	**06 09 51.7**	**+0.2**
QLNO				Sg	**Sg**	**06 10 02.7**	**+0.6**
	48nm,0.4s						
QLNO	**Quiliano**	**0.81**	**100**	Pg	**Pg**	**06 09 51.7**	**+0.2**
QLNO				Sg	**Sg**	**06 10 02.7**	**+0.6**
	48nm,0.4s						
LSD	**Lago del Serru**	**1.00**	**356**	Pg	**Pg**	**06 09 55.3**	**+0.2**
LSD	**Lago del Serru**	**1.00**	**356**	Pg	**Pg**	**06 09 55.3**	**+0.2**
	13nm,0.3s						
LSD	**Lago del Serru**	**1.00**	**356**	Pg	**Pg**	**06 09 55.3**	**+0.2**
	13nm,0.3s						
FRF	**La Foret Royal**	**1.00**	**205**	*e*Pg	**Pg**	**06 09 55.0**	**-0.1**
FRF				*e*Sg	**Sg**	**06 10 08.3**	**+0.1**
	31nm,0.2s						
FRF	**La Foret Royal**	**1.00**	**205**	*e*Pg	**Pg**	**06 09 55.0**	**-0.1**
FRF				*e*Sg	**Sg**	**06 10 08.3**	**+0.1**
	15nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.07**	**296**	*e*Pg	**Pg**	**06 09 56.4**	**-0.1**
ORIF				*e*Sg	**Sg**	**06 10 10.3**	**-0.1**
	8.9nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.07**	**296**	*e*Pg	**Pg**	**06 09 56.4**	**-0.1**
ORIF				*e*Sg	**Sg**	**06 10 10.3**	**-0.1**
	4.4nm,0.4s						
LPG	**La Plagne**	**1.09**	**342**	*e*Pg	**Pg**	**06 09 57.0**	**+0.1**
LPG				*e*Sg	**Sg**	**06 10 11.1**	**0.0**
	6.4nm,0.3s						
LPG	**La Plagne**	**1.09**	**342**	*e*Pg	**Pg**	**06 09 57.0**	**+0.1**
LPG				*e*Sg	**Sg**	**06 10 11.1**	**0.0**
	3.2nm,0.3s						
LPL	**La Plagne**	**1.11**	**341**	*e*Pg	**Pg**	**06 09 57.2**	**-0.1**
LPL				*e*Sg	**Sg**	**06 10 11.7**	**-0.1**
	10nm,0.3s						
LPL	**La Plagne**	**1.11**	**341**	*e*Pg	**Pg**	**06 09 57.2**	**-0.1**
LPL				*e*Sg	**Sg**	**06 10 11.7**	**-0.1**
	5.2nm,0.3s						
LMR	**La Mourre**	**1.25**	**205**	*e*Pg	**Pg**	**06 09 59.5**	**-0.4**
LMR				*e*Sg	**Sg**	**06 10 15.9**	**-0.2**
	22nm,0.2s						
LMR	**La Mourre**	**1.25**	**205**	*e*Pg	**Pg**	**06 09 59.5**	**-0.4**
LMR				*e*Sg	**Sg**	**06 10 15.9**	**-0.2**
	11nm,0.2s						
SMRF	**Simiane la Rot**	**1.29**	**248**	*e*Pg	**Pg**	**06 10 00.6**	**-0.1**
SMRF				*e*Sg	**Sg**	**06 10 17.3**	**-0.2**
	21nm,0.4s						
SMRF	**Simiane la Rot**	**1.29**	**248**	*e*Pg	**Pg**	**06 10 00.6**	**-0.1**
SMRF				*e*Sg	**Sg**	**06 10 17.3**	**-0.2**
	10nm,0.4s						
VIVF	**Saint-Julien-l**	**1.87**	**283**	*e*Pn	**Pn**	**06 10 07.3**	**-0.2**
VIVF				*e*Sn	**Sn**	**06 10 30.0**	**-0.9**
	2.3nm,0.2s						
VIVF	**Saint-Julien-l**	**1.87**	**283**	*e*Pn	**Pn**	**06 10 07.3**	**-0.2**
VIVF				*e*Sn	**Sn**	**06 10 30.0**	**-0.9**
	1.1nm,0.2s						
PGF	**Pioggiola**	**2.31**	**146**	*e*Pn	**Pn**	**06 10 13.2**	**-0.3**
PGF				*e*Sn	**Sn**	**06 10 40.4**	**-1.3**
	2.0nm,0.2s						
PGF	**Pioggiola**	**2.31**	**146**	*e*Pn	**Pn**	**06 10 13.2**	**-0.3**
PGF				*e*Sn	**Sn**	**06 10 40.4**	**-1.3**
	1.0nm,0.2s						

*IDC **19** 06:22:34.7±0.9, 2°.32N×126°.71E, h0km, mb4.4/10, mb1 4.5/10, mb1mx4.3/20, mbtmp4.4/10, MS4.1/2, Ms1 4.1/2, ms1mx3.2/32, Error ellipse: s-maj=54.6km s-min=15.0km az=70.0*
*NEIC **19** 06:22:36.8±0.5, 2°.30N×126°.45E, h10km, mb4.8/5, Error ellipse: s-maj=34.2km s-min=9.2km az=66.0*
*ISCJB **19** 06:22:45.0±0.8, 2°.50N±0°.06×127°.06E±0°.07, h102km±7km, mb4.5/20, Error ellipse: s-maj=12.9km s-min=7.0km az=140.8*
*DJA **19** 06:22:45, 2°.60N×127°.12E, h77km, MLv4.7/7*

ISC 19 06:22:46.3±0.8, 2°47N±0°.06×127°08E±0°.07, h97km±8km, n56, σ1§01/52, mb4.5/20, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.71**	**170**	P	**Pn**	**06 23 15.6**	**+0.5**
TNTI				S	**Sn**	**06 23 36.9**	**-0.1**
SGSI	**Sangihe**	**1.96**	**308**	P	**Pn**	**06 23 15.4**	**-2.9**
LBMI	**Labuha**	**3.12**	**172**	P	**Pn**	**06 23 40.5**	**+6.9**
LBMI	**Labuha**	**3.12**	**172**	P	**Pn**	**06 23 34.5**	**+0.9**
SWI	**Sorong**	**5.33**	**128**	P	Px	06 24 21.3	
	0.1nm34nm,0.9s						
SWI	**Sorong**	**5.33**	**128**	P	**Pn**	**06 24 04.1**	**+0.5**
	28nm,0.9s,0.1nm						
MRSI	**Marisa**	**5.51**	**249**	P	**Pn**	**06 24 05.8**	**-0.1**
MRSI	**Marisa**	**5.51**	**249**	P	**Pn**	**06 24 05.6**	**-0.3**
	116nm,0.7s,2μm0.5nm						
LUWI	**Luwuk**	**5.54**	**231**	P	**Pn**	**06 24 05.1**	**-1.3**
NLAI	**Namlea**	**5.67**	**180**	P	**Pn**	**06 24 08.4**	**+0.2**
NLAI	**Namlea**	**5.67**	**180**	P	**Pn**	**06 24 07.7**	**-0.5**
	81nm,0.4s,5μm0.7nm						
APSI	**Ampana**	**6.39**	**238**	P	**Pn**	**06 24 18.6**	**+0.7**
	71nm,1.1s,1μm0.3nm						
APSI	**Ampana**	**6.39**	**238**	P	**Pn**	**06 24 18.6**	**+0.7**
	71nm,1.1s,1μm0.3nm						
MYLDM	**Lahad Datu**	**8.97**	**288**	P	Px	06 25 05.5	
	0.1nm31nm,1.1s						
MYLDM	**Lahad Datu**	**8.97**	**288**	P	**Pn**	**06 24 52.9**	**-0.2**
	26nm,1.1s						
TTSI	**Tana Toraja**	**9.10**	**233**	P	**Pn**	**06 24 56.2**	**+1.4**
SBUM	**Sibu**	**14.85**	**270**	P	**Pn**	**06 26 15.1**	**+3.7**
	29nm,1.1s						
SBUM	**Sibu**	**14.85**	**270**	P	**Pn**	**06 26 15.2**	**+3.8**
KAKA	**Kakadu**	**16.00**	**161**	*e*P	**Pn**	**06 26 23.7**	**-2.1**
	13nm,0.5s						
KAKA	**Kakadu**	**16.00**	**161**	P	**Pn**	**06 26 29.4**	**+3.6**
	52nm,0.6s						
KSM	**Kuching**	**16.79**	**267**	P	**Pn**	**06 26 37.0**	**+1.3**
	20nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.49**	**184**	*e*P	**P**	**06 27 15.4**	**-1.2**
	10.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.49**	**184**	P	**P**	**06 27 11.9**	**-4.7**
	4.9nm,0.4s,baz=9.6,slow=8.3,SNR=25						
FITZ	**Fitzroy Crossi**	**20.49**	**184**	P	**P**	**06 27 11.9**	**-4.7**
FITZ				*e*P		06 27 15.8	
COEN	**Coen**	**22.83**	**136**	*e*P	**P**	**06 27 40.2**	**-1.3**
WRAB	**Tennant Creek**	**23.38**	**163**	*e*P	**P**	**06 27 46.1**	**-0.4**
	9.9nm,0.3s,mb4.6						
WRAB	**Tennant Creek**	**23.38**	**163**	P	**P**	**06 27 46.6**	**+0.1**
	60nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**23.38**	**163**	P	**P**	**06 27 46.4**	**-0.1**
	50nm,0.8s,mb4.9						
MDSI	**Maura Dua**	**23.91**	**253**	P	**P**	**06 27 52.7**	**+1.3**
	8.9nm,0.9s,mb4.1						
MDSI	**Maura Dua**	**23.91**	**253**	P	**P**	**06 27 53.1**	**+1.7**
MTSU	**Mount Surprise**	**26.60**	**141**	*e*P	**P**	**06 28 18.5**	**+2.8**
	23nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**26.82**	**166**	P	**P**	**06 28 17.0**	**-0.6**
	2.1nm,0.5s,mb3.9,baz=349,slow=7.3,SNR=34						
CTA	**Charters Tower**	**29.27**	**141**	P	**P**	**06 28 44.6**	**+5.1**
	2.3nm,0.4s,mb4.1,baz=327,slow=7.0,SNR=6.6						
GSI	**Gunungsitoli**	**29.51**	**268**	P	**P**	**06 28 41.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**31.82**	**302**	P	**P**	**06 29 00.0**	**-2.0**
	1.8nm,0.4s,mb4.2,baz=125,slow=7.3,SNR=7.3						
KMI	**Kunming**	**32.52**	**316**	P	**P**	**06 29 03.3**	**-4.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
JHJ	**Hachijo jima 2**	**32.73**	**20**	LR	LR	06 42 42.5	
	comp=Z,190nm,18.0s,baz=229,slow=37						
FORT	**Forrest**	**33.08**	**178**	*e*P	**P**	**06 29 12.2**	**-0.6**
	comp=Z,16nm,0.6s,mb5.0						
KMBL	**Kambalda**	**34.01**	**188**	*e*P	**P**	**06 29 20.4**	**-0.5**
	comp=Z,37nm,0.7s,mb5.3						
KSRS	**Korea Array**	**34.82**	**1**	P	**P**	**06 29 29.4**	**+1.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=179,slow=10,SNR=3.4						
BBOO	**Buckleboo**	**36.11**	**167**	*e*P	**P**	**06 29 38.8**	**-0.1**
	comp=Z,4.3nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**36.84**	**159**	*e*P	**P**	**06 29 45.4**	**+0.3**
	comp=Z,9.5nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**36.84**	**159**	P	**P**	**06 29 44.4**	**-0.8**
	comp=Z,13nm,0.7s,mb5.0,baz=342,slow=8.1,SNR=50						
CMSA	**Cobar Meteorol**	**38.17**	**154**	*e*P	**P**	**06 29 56.8**	**+0.4**
BTO	**Baotou**	**40.98**	**340**	*e*P	**P**	**06 30 18.4**	**-1.2**
ULN	**Ulaanbaatar**	**48.41**	**342**	*e*P	**P**	**06 31 19.9**	**+1.3**
	comp=Z,5.6nm,1.1s,mb4.3						
SONM	**Songino Array**	**48.59**	**341**	P	**P**	**06 31 20.2**	**+0.3**
	comp=Z,1.1nm,0.4s,mb4.1,baz=129,slow=11,SNR=3.5						
MK31	**Makanchi Array**	**58.78**	**326**	*e*P	**P**	**06 32 34.2**	**-0.1**
MKAR	**Makanchi Array**	**58.78**	**326**	P	**P**	**06 32 34.2**	**0.0**
	comp=Z,2.2nm,0.4s,mb4.5,baz=117,slow=7.9,SNR=30						
ZALV	**Zalesovo Beam**	**61.86**	**333**	P	**P**	**06 32 54.3**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.6,baz=111,slow=6.5,SNR=8.2						
AFI	**Afiamalu**	**62.74**	**107**	LR	LR	06 56 22.0	
	comp=Z,187nm,21.0s,baz=278,slow=32						
KURK	**Kurchatov**	**62.98**	**328**	P	**P**	**06 33 02.8**	**+0.1**
	comp=Z,5.3nm,0.5s,mb4.7,baz=126,slow=6.7,SNR=28						
BVAR	**Borovoye Array**	**68.56**	**327**	P	**P**	**06 33 38.8**	**+0.3**
	comp=Z,5.0nm,0.6s,mb4.5,baz=134,slow=8.5,SNR=24						
BRVK	**Borovoye**	**68.63**	**327**	*e*P	**P**	**06 33 39.1**	**+0.2**
	comp=Z,11nm,0.9s,mb4.7						
ABKAR	**Akbulak array**	**73.34**	**321**	*e*P	**P**	**06 34 07.5**	**+0.1**
	comp=Z,5.5nm,0.7s,mb4.5						
CPRX	**Cap Rock**	**120.37**	**49**	*e*Pdif	Pdif	06 37 54.8	+3.8

*ISCJB **19** 06:25:49.9±0.4, 32°.55N±0°.05×105°.46E±0°.05, h10km, mb4.0/16, Error ellipse: s-maj=7.0km s-min=5.8km az=8.8*
*IDC **19** 06:25:50.2±0.9, 32°.52N×105°.32E, h0km, mb3.9/10, mb1 4.0/13, mb1mx3.9/27, mbtmp3.9/13, ML4.2/3, Error ellipse: s-maj=31.0km s-min=18.1km az=49.0*
*BJI **19** 06:25:51.6, 32°.48N×105°.39E, h15km, mB4.5/1, mb4.1/5, ML4.1/15, Ms4.0/7, Ms7 3.8/5*
*NEIC **19** 06:25:52.2±0.5, 32°.54N×105°.31E

LPG	La Plagne	73.07	313	eP	P	06 37 21.7	-0.5
	comp=Z,5.2nm,0.6s,mb4.3						
LPG	La Plagne	73.07	313	eP	P	06 37 21.7	-0.5
	comp=Z,2.6nm,0.6s,mb4.3						
LPL	La Plagne	73.08	313	eP	P	06 37 21.6	-0.6
	comp=Z,6.4nm,0.7s,mb4.4						
LPL	La Plagne	73.08	313	eP	P	06 37 21.6	-0.6
	comp=Z,3.2nm,0.7s,mb4.4						
AVF	Avril sur Loir	74.47	316	eP	P	06 37 31.0	+0.6
YKA	Yellowknife Ar	79.97	18	P	P	06 38 00.6	-0.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=330,slow=5.0,SNR=5.2						
YKA	Yellowknife Ar	79.97	18	P	P	06 38 00.6	-0.3

*ISCJB **19** 06:39:12.0±0.5, 39°.53N±0°.02×25°.88E±0°.04, h4km±6km, Error ellipse: s-maj=5.1km s-min=3.9km az=163.9*
*CSEM **19** 06:39:12.1±0.1, 39°.53N×25°.88E, h8km, ML2.4/4, Error ellipse: s-maj=2.6km s-min=2.0km az=54.0*
*THE **19** 06:39:12.2, 39°.52N×25°.86E, h7km±1km, ML2.4/4, Error ellipse: s-maj=1.8km s-min=0.3km az=227.0*
*DDA **19** 06:39:12.4, 39°.54N×25°.99E, h6km±1km, Md2.9*

ISC 19 06:39:12.3±0.5, 39°.53N±0°.02×25°.88E±0°.04, h10km±6km, n17, σ0°.39/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.32	184	P	Pg	06 39 18.1	-0.5
SIGR				S	Sg	06 39 22.7	-0.2
SIGR	SIGRI	0.32	184	P	Pg	06 39 18.1	-0.5
SIGR				S	Sg	06 39 22.7	-0.2
BOZC	Bozcaada	0.34	23	i P	Pg	06 39 18.6	-0.4
BOZC				i S	Sg	06 39 23.8	+0.3
PRK	Paraskevi	0.41	133	P	Pg	06 39 20.3	-0.1
PRK				S	Sg	06 39 26.4	+0.5
PRK	Paraskevi	0.41	133	P	Pg	06 39 20.3	-0.1
PRK				S	Sg	06 39 26.4	+0.5
EZN	Ezine	0.45	49	ePG	Pg	06 39 20.9	-0.2
EZN				eSG	Sg	06 39 27.0	-0.1
EZN	Ezine	0.45	49	ePg	Pg	06 39 20.9	-0.2
EZN				eSg	Sg	06 39 27.0	-0.1
LIA	Limnos Island	0.65	304	P	Pg	06 39 24.6	-0.4
LIA				S	Sg	06 39 33.8	+0.3
LIA	Limnos Island	0.65	304	P	Pg	06 39 24.6	-0.4
LIA				S	Sg	06 39 33.8	+0.3
LOS	Limnos	0.74	303	P	Pg	06 39 26.3	-0.3
LOS				S	Sg	06 39 36.9	+0.7
LOS	Limnos	0.74	303	P	Pg	06 39 26.3	-0.3
LOS				S	Sg	06 39 36.9	+0.7
CHOS	Chios island	1.15	173	P	Pb	06 39 33.8	-0.4
CHOS				S	Sg	06 39 49.8	+0.5
CHOS	Chios island	1.15	173	P	Pb	06 39 33.8	-0.4
CHOS				S	Sg	06 39 49.8	+0.5
BALY	Balya	1.36	81	i P	Pn	06 39 37.9	+0.7
BALY				i S	Sb	06 39 55.0	-0.1
BALY	Balya	1.36	81	i P	Pn	06 39 37.9	+0.7
BALY				i S	Sb	06 39 55.0	-0.1
ALN	Alexandroupoli	1.37	5	P	Pn	06 39 37.0	-0.5
ALN				S	Sb	06 39 55.8	+0.2
ALN	Alexandroupoli	1.37	5	P	Pn	06 39 37.0	-0.5
ALN				S	Sb	06 39 55.8	+0.2

JSN 19 07:22:21.5±1.5, 19°.63N×76°.22W, h1km±52km, MD3.8, 5C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNJ	Bonny Gate	1.48	208	↑iP	Pn	07 22 47.8	-1.4
BNJ				i S	Sg	07 23 06.9	-2.0
CMJ	Castle Mountai	1.50	186	↑eP	Pn	07 22 48.0	-1.5
CMJ				eS	Sb	07 23 08.2	-1.3
STH	Stony Hill	1.65	200	↓iP	Pn	07 22 49.9	-1.6
STH				eS	Sn	07 23 10.0	-3.3
STH				eS	Sn	07 23 10.7	-2.7
HOJ	Hope	1.69	197	↓iP	Pn	07 22 49.9	-2.3
MBJ	Montego Bay	1.98	232	eS	Sn	07 23 18.6	-3.0
PCJ	Portland Cotta	2.08	205	↑iP	Pn	07 22 56.6	-0.9
PCJ				eS	Sn	07 23 21.9	-2.2
MCJ	Malvern	2.19	220	↑iP	Pn	07 22 58.1	-1.1
MCJ				eS	Sn	07 23 26.3	-0.6
NEJ	Negril	2.42	236	↑iP	Pn	07 23 00.7	-1.6
NEJ				i S	Sn	07 23 31.2	-1.4

*DDA **19** 07:27:43.6, 40°.56N×34°.80E, h11km, Md3.1*
*ISK **19** 07:27:43.7, 40°.62N×34°.79E, h8km, MD3.1*
*ISCJB **19** 07:27:44.2±0.4, 40°.61N±0°.03×34°.79E±0°.03, h8km±3km, Error ellipse: s-maj=4.5km s-min=4.3km az=6.6*
*CSEM **19** 07:27:44.2±0.1, 40°.61N×34°.79E, h8km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.8km az=6.0*

ISC 19 07:27:44.5±0.4, 40°.62N±0°.03×34°.79E±0°.04, h9km±3km, n33, σ0°.73/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	Corum	0.01	4	i P	Pg	07 27 45.9	-0.1
CTKT				i S	Sg	07 27 47.9	+0.8
CTKT	Corum	0.01	4	i P	Pg	07 27 45.9	-0.2
CTKT				i S	Sg	07 27 47.9	+0.8
CORM	Corum	0.46	196	PG	Pg	07 27 52.9	-0.5
CORM				SG	Sg	07 28 00.4	+1.0
CORM	Corum	0.46	196	i Pg	Pg	07 27 52.9	-0.5
CORM				i Sg	Sg	07 28 00.4	+1.0
TOS	Tosya	0.72	306	ePG	Pg	07 27 58.0	-0.4
TOS	Tosya	0.72	306	ePg	Pg	07 27 58.0	-0.3
BYBT	Boyabat	0.85	359	ePG	Pg	07 28 00.2	-0.7
BYBT	Boyabat	0.85	359	ePg	Pg	07 28 00.2	-0.7
CANT	Cankiri	0.89	270	ePG	Pg	07 28 01.5	-0.2
CANT				eSG	Sg	07 28 13.7	+0.5
ILGA	Ilgaz	0.92	298	i P	Pg	07 28 02.2	0.0
ILGA				i S	Sg	07 28 15.6	+1.3
ILGA	Ilgaz	0.92	298	i P	Pg	07 28 02.2	-0.1
ILGA				i S	Sg	07 28 15.6	+1.3
CDAG	Cicekdag	1.04	198	i P	Pg	07 28 03.1	-1.5
CDAG				i S	Sg	07 28 16.9	-1.2
CDAG	Cicekdag	1.04	198	i P	Pg	07 28 03.1	-1.5
CDAG				i S	Sg	07 28 16.9	-1.2
ELDT	Eldivan	1.05	263	i P	Pg	07 28 04.4	-0.2
ELDT				i S	Sg	07 28 18.5	+0.3
ELDT	Eldivan	1.05	263	i P	Pg	07 28 04.4	-0.2
ELDT				i S	Sg	07 28 18.5	+0.3
YOZ	Yozgat	1.06	157	ePG	Pg	07 28 03.9	-1.0
YOZ				eSG	Sg	07 28 19.4	+0.9
YOZ	Yozgat	1.06	157	ePg	Pg	07 28 03.9	-0.9
YOZ				eSg	Sg	07 28 19.5	+0.9
KVT	Kavak	1.06	64	ePG	Pg	07 28 04.5	-0.4
KVT	Kavak	1.06	64	ePg	Pg	07 28 04.5	-0.4
DIKM	Dikmen	1.09	19	ePN	Pn	07 28 05.2	-0.8
DIKM				eSN	Sn	07 28 20.9	-0.4
DIKM	Dikmen	1.09	19	ePn	Pn	07 28 05.3	-0.7
DIKM				eSn	Sn	07 28 20.9	-0.3
TOKT	Tokat	1.37	102	ePN	Pn	07 28 09.9	0.0
TOKT	Tokat	1.37	102	ePn	Pn	07 28 09.9	0.0
BZK	Bozkurt	1.47	336	ePN	Pn	07 28 10.8	-0.4
BZK	Bozkurt	1.47	336	ePn	Pn	07 28 10.8	-0.4
ERBA	Erbaa	1.50	87	eP	Pn	07 28 11.8	+0.2
ERBA				eS	Sn	07 28 32.8	+1.5
ERBA	Erbaa	1.50	87	eP	Pn	07 28 11.8	+0.2
ERBA				eS	Sn	07 28 32.8	+1.5
LOD	Lodumlu	1.71	246	ePN	Pn	07 28 14.3	-0.2
LOD	Lodumlu	1.71	246	ePn	Pn	07 28 14.4	-0.2
SVSK	Karacayir	1.83	112	ePN	Pn	07 28 16.7	+0.6
SVSK	Karacayir	1.83	112	ePn	Pn	07 28 16.7	+0.5
KIZT	Kizilcal	2.84	233	ePN	Pn	07 28 30.8	+0.8
KIZT	Kizilcal	2.84	233	ePn	Pn	07 28 30.8	+0.8

*JMA **19** 07:31:52.6±0.2, 23°.66N×122°.92E, h46km, M3.1*
*ISCJB **19** 07:31:53.3±0.3, 23°.63N±0°.03×122°.98E±0°.02, h33km, Error ellipse: s-maj=4.3km s-min=2.2km az=152.4*
*TAP **19** 07:31:54.1, 23°.75N×122°.83E, h22km±2km, MLS.7, D*

ISC 19 07:31:53.9±0.3, 23°.64N±0°.03×123°.00E±0°.02, h35km, n49, σ1°.03/89, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.81	1	P	Pn	07 32 07.7	-1.2
YOJ				S	Sn	07 32 18.9	-0.9
HATJ	Hateruma jima	0.84	61	P	Pn	07 32 09.0	-0.3
HATJ				S	Sn	07 32 20.9	+0.4
IRIF	Iriomote-Funau	0.96	44	P	Pn	07 32 10.4	-0.5
IRIF				S	Sn	07 32 23.7	+0.4
JKRS	Kuro-shima	1.10	57	P	Pn	07 32 13.0	+0.2
JKRS				S	Sn	07 32 27.6	+0.9
JIJ	Ishigaki jima	1.27	55	P	Pn	07 32 14.8	-0.3
JIJ				S	Sn	07 32 30.3	-0.7
TWD	Chiawan	1.35	289	i P	Pn	07 32 14.9	-1.5
TWD	baz=272			S	Sn	07 32 29.9	-3.2
ENA	Nanau	1.39	304	P	Pn	07 32 16.4	-0.4
TWC	baz=305 Suao	1.42	313	P	Pn	07 32 16.4	-0.9
TWC	baz=314			eS	Sn	07 32 35.1	+0.3
ESL	Shilin	1.45	277	P	Pn	07 32 16.0	-1.5
ESL	baz=273			eS	Sn	07 32 31.9	-3.4
EHY	Hungye	1.54	265	P	Pn	07 32 18.3	-0.7
EHY	baz=260			eS	Sn	07 32 35.1	-2.6
TWF1	Yuli	1.59	260	eP	Pn	07 32 18.7	-0.8
CHKT	baz=254 Chengkung	1.60	250	eP	Pn	07 32 18.7	-0.9
CHKT	baz=244			eS	Sn	07 32 35.6	-3.5
TWE	Neicheng	1.62	312	eP	Pn	07 32 19.9	-0.1
TWE	baz=313			eS	Sn	07 32 39.6	0.0
TWB1	Santiao Chiao	1.64	326	eP	Pn	07 32 20.7	+0.4
WHF	baz=329 Hehuan Shan	1.66	288	↑iP	Pn	07 32 19.9	-0.7
WHF	baz=273			eS	Sn	07 32 39.1	-1.6
NNS	Nan Shan	1.68	298	P	Pn	07 32 20.6	-0.3
NNS	baz=298			eS	Sn	07 32 39.9	-1.3
NSK	Sanguang	1.82	305	P	Pn	07 32 22.6	-0.1
JTJ	baz=305 Tarama	1.84	57	eS	Sn	07 32 45.3	+0.1
TWA	Mucha	1.85	316	eP	Pn	07 32 24.2	+1.0
ELDTW	baz=318 Lidau	1.88	256	eP	Pn	07 32 22.7	-0.8
ELDTW	baz=251			S	Sn	07 32 43.6	-2.3
YUS	Yu-Shan	1.88	266	eP	Pn	07 32 24.0	+0.4
YUS	baz=261			eS	Sn	07 32 45.5	-0.7
TTN	Taitung	1.92	243	eP	Pn	07 32 23.6	-0.6
TTN	baz=237			eS	Sn	07 32 47.8	+0.7
SMLT	Sun Moon Lake	1.94	277	P	Pn	07 32 24.2	-0.1
SMLT	baz=274			eS	Sn	07 32 46.4	-1.1
TWG	Pinlang	1.95	246	P	Pn	07 32 24.0	-0.5
TWG	baz=229			eS	Sn	07 32 46.1	-1.8
TYC	Yuchr	1.98	278	eP	Pn	07 32 24.7	-0.2
TYC	baz=275			eS	Sn	07 32 47.9	-0.7
ALS	Alishan	2.02	267	eP	Pn	07 32 26.4	+1.0
ALS	baz=263			eS	Sn	07 32 49.2	-0.3
TWS1	Kuangyinshan	2.04	315	eP	Pn	07 32 26.3	+0.5
NSTT	baz=333 Nanjuang	2.07	299	eP	Pn	07 32 27.1	+0.9
NSTT	baz=299			eS	Sn	07 32 50.3	-0.6
LAY	Lan-yu	2.08	220	eP	Pn	07 32 25.2	-1.2
LAY	baz=225			eS	Sn	07 32 47.8	-3.3
STYT	Tauyuan	2.11	257	eP	Pn	07 32 27.1	+0.3
STYT	baz=253			eS	Sn	07 32 50.9	-0.9
CHN5	Tsauling	2.13	269	P	Pn	07 32 28.0	+1.0
CHN5	baz=265			eS	Sn	07 32 52.7	+0.5
WNT	Mingjian	2.13	277	eP	Pn	07 32 28.4	+1.3
WNT	baz=273			eS	Sn	07 32 53.3	+1.0
ECL	Taimali	2.15	241	eP	Pn	07 32 26.6	-0.7
ECL	baz=236			eS	Sn	07 32 51.6	-1.2
TWQ1	Liyutan	2.15	289	eP	Pn	07 32 28.4	+1.1
TWQ1	baz=275			eS	Sn	07 32 53.8	+1.0
TCU	Taichung	2.18	284	eP	Pn	07 32 27.9	+0.2
TCU	baz=280			eS	Sn	07 32 55.0	+1.4
WTP	Ta-pu	2.23	260	eP	Pn	07 32 29.2	+0.9
WTP	baz=256			eS	Sn	07 32 55.7	+1.1
CHN4	Tsaushan	2.23	263	eP	Pn	07 32 29.9	+1.6
CHN4	baz=259			eS	Sn	07 32 55.4	+0.8
WGK	Gukeng	2.23	272	eP	Pn	07 32 28.2	-0.3
WGK	baz=268			eS	Sn	07 32 56.2	+1.4
SGST	Jiashian	2.29	256	eP	Pn	07 32 29.8	+0.6
SGST	baz=252			eS	Sn	07 32 57.0	+0.8
CHN1	Nanshi	2.31	259	eP	Pn	07 32 31.6	+2.1
CHN1	baz=255			eS	Sn	07 32 58.3	+1.5
CHN2	Minshiung	2.32	268	eP	Pn	07 32 33.1	+3.5
CHN2	baz=264			eS	Sn	07 32 59.2	+2.3
TWK	Hsinying	2.34	261	eP	Pn	07 32 31.5	+1.7
TWK	baz=257			eS	Sn	07 32 59.0	+1.6
EAST	Anshuo	2.35	238	P	Pn	07 32 29.7	-0.3
EAST	baz=243			eS	Sn	07 32 57.0	-0.6
SSD	Sandimen	2.35	248	eP	Pn	07 32 30.6	+0.5
SSD	baz=244			eS	Sn	07 32 57.0	-0.8
CHY	Chiayi	2.37	267	eP	Pn	07 32 30.0	-0.2
CHY	baz=263			eS	Sn	07 32 59.1	+1.0
TWM1	Shoushan	2.51	251	eP	Pn	07 32 33.1	+0.9
SCZT	baz=247 Fangliau	2.53	240	eP	Pn	07 32 34.1	+1.6
TSEB	baz=235 Hengchuen, Pin	2.60	229	eP	Pn	07 32 33.7	+0.2
TSEB	baz=234			eS	Sn	07 33 04.0	+0.1
TWK1	Hengchun	2.64	231	eP	Pn	07 32 34.5	+0.5
TWK1	baz=225			eS	Sn	07 33 04.5	-0.3

GUC 19 07:47:09.3±0.8, 21°.89S×68°.59W, h132km±12km, ML4.0, 3C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	Pedro de Valdi	1.23	235	↑iP	Pn	07 47 35.9	+1.2
PECH				i S	Sn	07 47 55.3	+1.3
PECH				AML	AML	07 47 56.5	
	comp=E,6μm,0.2s						
HMBC	Humberston	2.01	323	↓iP	Pn	07 47 44.6	+1.0
HMBC				i S	Sn	07 48 11.4	+1.6
HMBC				AML	AML	07 48 15.0	
	comp=N,712nm,0.3s						
MECH	Mejillones	2.11	235	↑iP	Pn	07 47 45.7	+1.1
MECH				i S	Sn	07 48 13.1	+1.2
MECH				AML	AML	07 48 30.2	
	comp=N,685nm,0.6s						
CEN1	Los Morros	2.11	225	↓iP	Pn	07 47 47.2	+2.5
CEN1				eS	Sn	07 48 17.4	+5.4
CEN1				AML	AML	07 48 25.4	
	comp=E,259nm,0.5s						
ANCH	Antofagasta	2.45	223	↑iP	Pn	07 47 49.5	+0.5
ANCH				i S	Sn	07 48 19.0	-0.6
PSGC	Pisagua	2.70	327	eP	Pn	07 47 52.2	+0.1
PSGC				eS	Sn	07 48 25.5	+0.5
PSGC				AML	AML	07 48 27.0	
	comp=N,208nm,0.4s						
MNMC	Miæe Miæ	2.90	341	eP	Pn	07 47 56.3	+1.5
MNMC				eS	Sn	07 48 32.2	+2.4
MNMC				AML	AML	07 48 35.5	
	comp=E,1μm,0.3s						

*TRN **19** 07:58:39.1, 19°.36N×64°.46W, h3km*
*NEIC **19** 07:58:41.0, 19°.48N×64°.12W, h65km, MD3.6(RSPR), After RSPR.*
*RSPR **19** 07:58:41.0, 19°.48N×64°.12W, h65km±7km, MD3.6/5, MD3.6/5*

ISC 19 07:58:40.1±1.9, 19°.6N±0°.1×64°.2W±0°.1, h35km, n14, σ0°.27/26, 12C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.85	191	↑eP	Pn	07 58 55.5	-0.1
ABV				eS	Sn	07 59 07.2	+0.4
ABV	Anegada	0.85	191	↑eP	Pn	07 58 55.5	-0.1
ABV				eS	Sn	07 59 07.2	+0.4
TBVI	Tortola	1.23	200	↑eP	Pn	07 59 00.1	-0.7
TBVI	Tortola	1.23	200	↑eP	Pn	07 59 00.5	-0.3
STVI	Saint Thomas	1.43	212	↓eP	Pn	07 59 03.4	-0.1
STVI				eS	Sn	07 59 20.9	-0.1
STVI	Saint Thomas	1.43	212	↓eP	Pn	07 59 03.4	-0.1
STVI				eS	Sn	07 59 20.9	-0.1
MTP	Monte Pirata	1.97	222	↑eP	Pn	07 59 11.3	+0.3
MTP				eS	Sn	07 59 34.0	-0.4
MTP	Monte Pirata	1.97	222	↑eP	Pn	07 59 11.3	+0.3
MTP				eS	Sn	07 59 34.4	-0.1
CBYP	Canovanas	2.06	231	↑eP	Pn	07 59 12.0	-0.2
CBYP				eS	Sn	07 59 36.7	0.0
CBYP	Canovanas	2.06	231	↑eP	Pn	07 59 12.0	-0.2
CBYP				eS	Sn	07 59 36.7	0.0
HUMP	Col San Antoni	2.14	229	↑eP	Pn	07 59 13.5	+0.2
HUMP				eS	Sn	07 59 38.5	-0.1
HUMP	Col San Antoni	2.14	229	↑eP	Pn	07 59 13.5	+0.2
HUMP				eS	Sn	07 59 38.5	-0.1
CPD	Cerro la Pandu	2.25	228	↑eP	Pn	07 59 15.4	+0.5
CPD				eS	Sn	07 59 41.6	+0.1
CPD	Cerro la Pandu	2.25	228	↑eP	Pn	07 59 15.4	+0.5
CPD				eS	Sn	07 59 41.6	+0.1

*IDC **19** 07:59:29.4±1.3, 31°.36N×103°.99E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, Error ellipse: s-maj=44.5km s-min=22.7km az=48.0*
*NEIC **19** 07:59:31.3±0.7, 31°.54N×104°.32E, h10km, mb4.2/1, Error ellipse: s-maj=29.7km s-min=9.5km az=42.0*
*BJI **19** 07:59:33.5, 31°.33N×104°.13E, h16km, mb4.5/2, ML3.7/9, Ms7 3.2/1*

ISC 19 07:59:31.9±1.3, 31°.41N±0°.05×104°.11E±0°.07, h12km±8km, n17, σ1°.21/22, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.67	357	Pg	Pg	08 01 00.9	-0.5
LZH				Sg	Sg	08 02 02.8	+0.9
LZH				smax			
	comp=N,57nm,0.8s						
LZH				smax			
	comp=E,43nm,0.8s						
LZH				LR	LR		
	comp=Z,190nm,7.2s						
ENH	Enshi	4.76	102	Pn	Pn	08 00 41.0	-2.6
ENH				eSn	Sn	08 01 43.1	+4.4
XAN	Xi'an	4.83	56	Pg	Pn	08 00 46.0	+1.5
XAN				Sn	Sn	08 01 41.0	+0.6
XAN				Sg	Sg	08 02 04.1	-2.9
XAN				smax			
	comp=N,140nm,1.0s						
XAN				smax			
	comp=E,67nm,0.7s						
GYA	Guiyang	5.42	155	Pg	Pg	08 01 16.9	+1.2
GYA				Sg	Sg	08 02 17.5	-8.4
GYA				smax			
	comp=N,90nm,0.7s						
GYA				smax			
	comp=E,90nm,0.7s						
KSRS	Korea Array	20.52	66	P	P	08 04 11.1	+1.0
	comp=E,2.2nm,0.6s,baz=255,slow=10,SNR=8.2						
CN2	Changchun	20.88	48	eP	P	08 04 16.0	+2.1
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MK31	Makanchi Array	22.75	319	eP	P	08 04 34.6	+0.7
MKAR	Makanchi Array	22.75	319	P	P	08 04 33.7	-0.2
	comp=Z,0.4nm,0.5s,mb3.1,baz=121,slow=9.1,SNR=6.5						
MKAR	Makanchi Array	22.75	319	P	P	08 04 33.7	-0.2
ZALV	Zalesovo Beam	26.45	334	P	P	08 05 07.8	-0.8
	comp=Z,1.9nm,0.8s,mb3.6,baz=125,slow=9.3,SNR=5.3						
ZALV	Zalesovo Beam	26.45	334	P	P	08 05 07.8	-0.8
KURK	Kurchatov	27.01	323	P	P	08 05 12.3	-1.4
	comp=Z,0.4nm,0.7s,mb3.0,baz=131,slow=8.8,SNR=4.6						
KURK	Kurchatov	27.01	323	P	P	08 05 12.3	-1.4
WRAB	Tennant Creek	58.72	146	eP	P	08 09 29.8	+0.1
	comp=Z,2.0nm,0.9s,mb4.2						
ASAR	Alice Springs	61.75	149	P	P	08 09 50.0	-0.4
	comp=Z,0.3nm,0.5s,mb3.7,baz=336,slow=6.9,SNR=7.5						
YKA	Yellowknife Ar	81.40	17	P	P	08 11 47.5	-0.9
	comp=Z,0.2nm,0.5s,mb3.3,baz=329,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	81.40	17	P	P	08 11 47.5	-0.9

*ISCJB **19** 08:23:45.9±0.4, 6°.84N±0°.04×72°.99W±0°.04, h168km±5km, mb3.5/7, Error ellipse: s-maj=8.4km s-min=4.8km az=140.1*
*IDC **19** 08:23:46.2±0.6, 6°.79N×72°.99W, h159km±7km, mb3.3/7, mb1 3.6/12, mb1mx3.5/26, mbtmp3.4/12, Error ellipse: s-maj=13.3km s-min=7.2km az=132.0*
*FUNV **19** 08:23:47.7, 6°.88N×73°.10W, h164km, MW3.8*
*NEIC **19** 08:23:47.2±0.6, 6°.70N×73°.01W, h171km±7km, mb3.8/1, Error ellipse: s-maj=9.4km s-min=7.7km az=104.0*

ISC 19 08:23:46.7±0.4, 6°.83N±0°.04×73°.01W±0°.04, h161km±5km, n36, σ0°.82/43, mb3.5/7, 10C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.24	34	↑eP	Pn	08 24 15.4	+0.8
CAPV				eS	Sn	08 24 36.2	+0.1
ROSC	El Rosal	2.36	214	P	Pn	08 24 27.5	+0.8
	63nm,0.3s,baz=90,slow=22,SNR=300						
ROSC				S	Sn	08 24 57.6	0.0
	78nm,0.3s,baz=80,slow=22,SNR=11						
SOCV	Socops	2.58	56	↑iP	Pn	08 24 30.2	+0.9
SOCV				eS	Sn	08 25 00.7	-1.5
VIGV	El Vigia	2.58	39	↑iP	Pn	08 24 29.9	+0.6
VIGV				eS	Sn	08 25 01.3	-1.0
SDV	Santo Domingo	3.12	49	P	Pn	08 24 36.9	+0.9
	49nm,0.3s,baz=237,slow=6.2,SNR=353						
SDV				S	Sn	08 25 13.9	-0.3
	80nm,0.3s,baz=289,slow=23,SNR=18						
ELOV	Elorza	3.50	87	eP	Pn	08 24 41.9	+1.0
VIRV	Villa del Rosa	3.70	9	↑iP	Pn	08 24 42.2	-1.2
VIRV				eS	Sn	08 25 22.8	-4.8
QARV	Quebrada Arrib	4.16	36	↑eP	Pn	08 24 49.9	+0.5
SANV	Sanarito	4.34	52	↑eP	Pn	08 24 51.7	0.0
CURV	Curarigua	4.37	43	↑eP	Pn	08 24 52.1	0.0

DABV	Dabajuro	4.70	30	eP		Pn	08 24 56.1	-0.2
TEPV	Terepaima	4.89	50⇑	eP		Pn	08 24 59.2	+0.3
SIQV	Siquisique	4.94	40⇑	iP		Pn	08 24 59.4	-0.2
BAUV	El Baul	5.35	67	eP		Pn	08 25 04.7	-0.2
MONV	Montecano	5.91	30⇑	eP		Pn	08 25 11.2	-1.1
TURV	Turiamo	6.25	54	eP		Pn	08 25 16.8	0.0
CAOV	Caicara del Or	6.65	85	eP		Pn	08 25 21.2	-0.9
BIRV	Birongo	7.58	61	eP		Pn	08 25 34.2	-0.4
CUPV	Cœpira	7.83	65	eP		Pn	08 25 37.2	-0.6
OTAV	Otavalo	8.51	220	ePn		Pn	08 25 45.8	-1.0
	2.1nm,0.6s							
OTAV				eSn		Sn	08 27 21.8	+0.1
PCRV	Puerto La Cruz	8.92	68	P		Pn	08 25 53.6	+1.3
	1.1nm,0.3s,baz=275,slow=3.4,SNR=6.0							
PCRV				S		Sn	08 27 32.0	+0.3
	2.2nm,0.3s,baz=180,slow=18,SNR=5.8							
MTDJ	Mount Denham	12.16	339	ePn		Pn	08 26 37.7	+3.0
JTS	JuntasAbangare	12.30	287	P		Pn	08 26 36.8	+0.1
	0.2nm,0.3s,baz=170,slow=17,SNR=2.3							
JTS				S		Sn	08 28 52.1	-0.9
	0.3nm,0.3s,baz=302,slow=16,SNR=3.1							
GTBY	Guantanamo Bay	13.18	351	ePn		Pn	08 26 50.8	+3.0
ATAH	Atahualpa	14.75	201	P		Pn	08 27 11.8	+4.2
	0.8nm,0.3s,baz=84,slow=17,SNR=4.9							
APG	El Apazote	18.96	297	P		P	08 27 55.2	-0.5
	0.1nm,0.3s,baz=28,slow=7.1,SNR=2.9							
LPAZ	La Paz	23.47	168	P		P	08 28 41.6	-0.2
	1.0nm,0.6s,mb3.4,baz=341,slow=12,SNR=8.0							
SIV	San Ignacio	25.57	153	P		P	08 28 59.9	-0.9
	1.0nm,0.7s,mb3.5,baz=339,slow=7.0,SNR=5.7							
TXAR	Lajitas Array	36.54	312	P		P	08 30 37.1	+0.1
	0.7nm,0.6s,mb3.4,baz=130,slow=12,SNR=8.7							
TXAR				pP		pP	08 31 11.9	+0.4
	0.2nm,0.6s,baz=134,slow=6.4,SNR=2.6							
ULM	Lac du Bonnet	47.32	340	P		P	08 32 03.4	-0.5
	1.9nm,0.5s,mb4.0,baz=149,slow=6.2,SNR=3.7							
PDAR	Pinedale Array	48.14	324	P		P	08 32 10.3	-0.1
	0.4nm,0.4s,mb3.4,baz=125,slow=11,SNR=4.0							
NVAR	Mina Array Bea	51.56	315	P		P	08 32 37.1	+0.8
	0.3nm,0.6s,mb3.1,baz=134,slow=7.7,SNR=2.9							
YKA	Yellowknife Ar	63.30	340	P		P	08 33 58.2	+0.2
	1.3nm,0.5s,mb4.0,baz=132,slow=6.7,SNR=46							
YKA				pP		pP	08 34 35.6	-0.5
	0.4nm,0.5s,baz=129,slow=7.1,SNR=6.3							
YKA	Yellowknife Ar	63.30	340	P		P	08 33 58.2	+0.2
YKA				pP		pP	08 34 35.6	-0.5
ASAR	Alice Springs	149.21	234	PKPbc		PKPbc	08 43 16.6	-0.4
	1.3nm,0.7s,baz=120,slow=3.6,SNR=18							
CMAR	Chiang Mai Arr	153.65	17	PKPbc		PKPbc	08 43 26.7	-0.6
	4.2nm,0.7s,baz=10.0,slow=9.2,SNR=12							

*ISK **19** 08:25:08.1, 36.°97N×29.°19E, h5km, MD2.9*
*ISCJB **19** 08:25:09.5±0.5, 36.°97N±0.°03×29.°17E±0.°03, h2km±6km, Error ellipse: s-maj=4.9km s-min=4.3km az=169.3*
*CSEM **19** 08:25:09.9±0.1, 36.°97N×29.°18E, h5km, MD2.9, Error ellipse: s-maj=2.3km s-min=2.1km az=39.0*
*DDA **19** 08:25:11.1, 37.°01N×29.°08E, h7km±3km, Md2.9*
ISC 19 08:25:09.9±0.5, 36.°97N±0.°03×29.°17E±0.°03, h5km±5km, n30, σ0°65/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.32	55	ePG	Pg	08 25 15.3	-0.9
GLHS				eSG	Sg	08 25 20.5	+0.1
GLHS	Glhisar (BURDU	0.32	55	ePg	Pg	08 25 15.3	-0.9
GLHS				eSg	Sg	08 25 20.5	+0.1
FETY	Fethiye	0.34	192	ePG	Pg	08 25 16.0	-0.5
FETY				eSG	Sg	08 25 22.0	+1.1
FETY	Fethiye	0.34	192	ePg	Pg	08 25 16.0	-0.5
FETY				eSg	Sg	08 25 22.0	+1.1
ELL	Elmali	0.63	110	ePG	Pg	08 25 20.7	-1.4
ELL				eSG	Sg	08 25 31.0	+0.7
ELL	Elmali	0.63	110	ePg	Pg	08 25 20.7	-1.4
ELL				eSg	Sg	08 25 31.0	+0.7
DNZL	Cakiroluk	0.73	352	iP	Pg	08 25 24.2	+0.4
DNZL				iS	Sg	08 25 33.7	+0.4
DNZL	Cakiroluk	0.73	352	iP	Pg	08 25 24.2	+0.3
DNZL				iS	Sg	08 25 33.7	+0.4
YER	Yerkesik	0.73	283	ePG	Pg	08 25 23.9	0.0
YER				eSG	Sg	08 25 34.0	+0.6
YER	Yerkesik	0.73	283	ePg	Pg	08 25 23.9	0.0
YER				eSg	Sg	08 25 34.0	+0.7
AKAS	Kas	0.81	154	iP	Pg	08 25 25.7	+0.1
AKAS				iS	Sg	08 25 40.9	+4.9
AKAS	Kas	0.81	154	iP	Pg	08 25 25.7	+0.2
AKAS				iS	Sg	08 25 40.9	+4.8
MLSB	Milas	1.16	287	ePN	Pn	08 25 31.8	-1.0
MLSB	Milas	1.16	287	ePn	Pn	08 25 31.8	-1.0
AYDN	Tasoluk	1.24	304	iP	Pg	08 25 33.7	0.0
AYDN				iS	Sg	08 25 48.8	-0.9
AYDN	Tasoluk	1.24	304	iP	Pg	08 25 33.7	0.0
AYDN				iS	Sg	08 25 48.8	-0.9
DAT	Datca	1.30	260	ePN	Pn	08 25 34.0	-0.7
DAT	Datca	1.30	260	ePn	Pn	08 25 34.0	-0.7
KHL	Karahalli	1.38	12	ePN	Pn	08 25 35.5	-0.3
KHL	Karahalli	1.38	12	ePn	Pn	08 25 35.5	-0.4
BDRM	Kayabasi	1.38	275	iP	Pn	08 25 36.0	+0.2
BDRM				iS	Sb	08 25 54.4	+0.2
BDRM	Kayabasi	1.38	275	iP	Pn	08 25 36.0	+0.1
BDRM				iS	Sb	08 25 54.4	+0.2
KHAL	Karahalli	1.42	10	iP	Pn	08 25 37.7	+1.3
KHAL				iS	Sb	08 25 55.8	+0.4
KHAL	Karahalli	1.42	10	iP	Pn	08 25 37.7	+1.3
KHAL				iS	Sb	08 25 55.8	+0.4
SUTC	Sutluce-Ispart	1.55	70	ePN	Pn	08 25 38.2	0.0
SUTC	Sutluce-Ispart	1.55	70	ePn	Pn	08 25 38.2	+0.1
ALT	Altintas	2.21	19	ePN	Pn	08 25 47.8	+0.5
ALT	Altintas	2.21	19	ePn	Pn	08 25 47.8	+0.5
HDMB	Hadim	2.66	89	ePN	Pn	08 25 53.1	-0.3
HDMB	Hadim	2.66	89	ePn	Pn	08 25 53.1	-0.3

KRSC 19 08:28:55.7±0.3, 53.°49N×160.°44E, h42km±22km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.47	213	iP	Pn	08 29 05.6	-0.4
SPN				iS	Sn	08 29 13.1	-0.2
NLC	Nalytchevo	0.73	244	iP	Pn	08 29 09.4	-0.1
NLC				iS	Sn	08 29 19.2	-0.3
KII	Karymskiy	0.80	313	iP	Pn	08 29 10.8	+0.3
KII				eS	Sn	08 29 21.8	+0.5
AVH	Avacha	1.04	258	iP	Pn	08 29 14.4	+0.6
AVH				eS	Sn	08 29 28.6	+1.4
PET	Petropavlovsk	1.17	247	eP	Pn	08 29 15.6	+0.1
PET				eS	Sn	08 29 29.7	-0.6
MKZ	Mys Kozlova	1.31	35	eP	Pn	08 29 16.4	-1.1
MKZ				eS	Sn	08 29 31.9	-1.9
GNL	Ganaly	1.50	279	iP	Pn	08 29 21.0	+0.9
GNL				eS	Sn	08 29 39.6	+1.1
RUS	Russkaya	1.57	229	iP	Pn	08 29 20.8	-0.3
RUS				eS	Sn	08 29 38.8	-1.4
GRL	Gorelyy	1.71	238	P	Pn	08 29 23.4	+0.4
KMNR	Kamenistaya	2.27	357	eP	Pn	08 29 32.3	+1.6
KMNR				S	Sn	08 29 58.9	+1.5
KPT	Kopyto	2.48	357	P	Pn	08 29 35.8	+2.2
MIPR	Malaya Ipel'ka	2.54	243	P	Pn	08 29 35.8	+1.5
ZLN	Zelenaya	2.54	5	eP	Pn	08 29 36.4	+2.0
ZLN				eS	Sn	08 30 06.4	+2.4
KOZ	Kozyrevsk	2.59	353	P	Pn	08 29 36.6	+1.5
KLY	Klyuchi	2.83	2	S	Sn	08 30 12.9	+1.7
SRDR	Sredinnyy	2.86	352	P	Pn	08 29 39.6	+0.8
KBTR	Krutoberegovo	3.05	26	P	Pn	08 29 42.3	+1.0
KBTR				S	Sn	08 30 17.1	+0.5
BKI	Bering	3.67	60	eP	Pn	08 29 49.5	-0.3
BKI				eS	Sn	08 30 27.4	-4.3

*ISCJB **19** 08:31:00.1±1.3, 36.°07N±0.°06×31.°38E±0.°04, h5km±7km, Error ellipse: s-maj=11.1km s-min=4.1km az=18.1*
*DDA **19** 08:31:02.8, 36.°34N×31.°43E, h6km±4km, Md3.2*
*CSEM **19** 08:31:06.5, 36.°03N×32.°16E, h5km, MD3.2, After ISK*
*ISK **19** 08:31:06.5, 36.°03N×32.°16E, h5km, MD3.2*
ISC 19 08:31:01.2±1.2, 36.°05N±0.°06×31.°38E±0.°04, h15km±6km, n34, σ0°87/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.78	76	iP	Pg	08 31 16.9	+0.6
GAZI				iS	Sg	08 31 27.0	+0.4
GAZI	Gazipasa	0.78	76	iP	Pg	08 31 16.9	+0.5
GAZI				iS	Sg	08 31 27.0	+0.3
ANTB	Antalya	1.03	326	ePN	Sb	08 31 35.5	+1.4
ANTB	Antalya	1.03	326	ePn	Sb	08 31 35.5	+1.4
KORT	Korkueli	1.26	319	iP	Pn	08 31 23.6	-0.7
KORT				iS	Sg	08 31 47.2	+5.2
KORT	Korkueli	1.26	319	iP	Pn	08 31 23.5	-0.8
KORT				iS	Sg	08 31 47.2	+5.3
HDMB	Hadim	1.28	44	ePg	Pg	08 31 25.5	-0.3
HDMB				eSg	Sg	08 31 40.4	-2.1
HDMB	Hadim	1.28	44	ePG	Pg	08 31 25.4	-0.3
HDMB				eSG	Sg	08 31 40.4	-2.0
ERMK	Ermenek	1.37	64	iP	Pn	08 31 27.5	+1.7
ERMK				iS	Sn	08 31 43.5	-0.2
ERMK	Ermenek	1.37	64	iP	Pn	08 31 27.5	+1.7
ERMK				iS	Sn	08 31 43.5	-0.2
ELL	Elmali	1.38	301	ePN	Sn	08 31 42.8	-1.0
ELL	Elmali	1.38	301	ePn	Sn	08 31 42.8	-1.0
LEF	Lefka	1.54	126	ePG	Pn	08 31 27.5	-0.6
LEF				eSG	Sn	08 31 44.1	-3.8
LEF	Lefka	1.54	126	ePg	Pn	08 31 27.5	-0.6
LEF				eSg	Sn	08 31 44.1	-3.8
IKL	Isikli	1.88	83	ePN	Pn	08 31 32.4	-0.4
IKL	Isikli	1.88	83	ePn	Pn	08 31 32.4	-0.3
GOLH	Golhisar	1.88	310	iP	Pb	08 31 35.5	+0.3
GOLH				iS	Sg	08 32 01.6	-0.2
GOLH	Golhisar	1.88	310	iP	Pb	08 31 35.5	+0.2
GOLH				iS	Sg	08 32 01.6	-0.2
FETY	Fethiye	1.94	288	ePN	Sn	08 31 50.5	-7.3
FETY	Fethiye	1.94	288	ePn	Sn	08 31 50.5	-7.3
LADK	Ladik-KONYA	2.29	20	ePN	Pg	08 31 45.6	+0.5
LADK	Ladik-KONYA	2.29	20	ePn	Pg	08 31 45.6	+0.5
EREN	Erenkoy	2.33	102	ePN	Pn	08 31 38.9	-0.1
EREN	Erenkoy	2.33	102	ePn	Pn	08 31 38.9	0.0
DNZL	Cakiroluk	2.49	312	iP	Pb	08 31 45.6	0.0
DNZL				iS	Sb	08 32 15.6	-0.4
DNZL	Cakiroluk	2.49	312	iP	Pb	08 31 45.6	0.0
DNZL				iS	Sb	08 32 15.6	-0.4
MERS	Mersin	2.66	71	ePN	Pn	08 31 44.1	+0.5
MERS	Mersin	2.66	71	ePn	Pn	08 31 44.1	+0.6
SULT	Sultanhani-AKS	2.74	38	ePN	Pb	08 31 49.0	-0.9
SULT	Sultanhani-AKS	2.74	38	ePn	Pb	08 31 49.0	-0.9
KHAL	Karahalli	2.77	328	iP	Pn	08 31 45.8	+0.8
KHAL				iS	Sn	08 32 17.9	-0.2
KHAL	Karahalli	2.77	328	iP	Pn	08 31 45.8	+0.8
KHAL				iS	Sn	08 32 17.9	-0.2
KARA	Karaisali	3.19	67	ePN	Pn	08 31 52.3	+1.5
KARA	Karaisali	3.19	67	ePn	Pn	08 31 52.3	+1.4

*IDC **19** 08:35:49.0±1.4, 31.°23N×103.°79E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=43.2km s-min=24.4km az=46.0*
*NEIC **19** 08:35:50.7±0.7, 31.°31N×103.°83E, h10km, mb4.2/1, Error ellipse: s-maj=28.9km s-min=10.5km az=40.0*
*BJI **19** 08:35:55.0, 31.°25N×103.°81E, h17km, ML3.6/12, Ms3.5/1, Ms7 3.5/1*
ISC 19 08:35:50.0±0.9, 31.°32N±0.°04×103.°93E±0.°06, h2km±6km, n13, σ1°13/18, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.44	199	Pg	Pg	08 35 59.5	+1.1
CD2				Sg	Sg	08 36 04.5	+0.4
CD2				smax			
	comp=N,5μm,0.6s						
LZH	Lanzhou	4.75	359	Pg	Pg	08 37 23.3	+2.2
LZH				smax			
	comp=N,82nm,0.8s						
LZH				smax			
	comp=E,50nm,0.6s						
LZH				LR	LR		
	comp=E,410nm,6.9s						
LZH				LR	LR		
	comp=Z,430nm,7.7s						
ENH	Enshi	4.90	101	ePn	Pn	08 37 05.5	+0.8
ENH				eSn	Sn	08 38 04.8	+2.8
XAN	Xi'an	5.01	56	Pg	Pg	08 37 25.0	-1.0
XAN				Sn	Sn	08 38 05.3	+0.6
XAN				Sg	Sg	08 38 29.5	-1.4
XAN				smax			
	comp=N,88nm,0.8s						
XAN				smax			
	comp=E,71nm,0.9s						
GYA	Guiyang	5.41	153	Pg	Pg	08 37 33.8	+0.1
GYA				Sg	Sg	08 38 42.1	-1.7
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,110nm,0.8s						
KSRS	Korea Array	20.70	66	P	P	08 40 32.4	+0.9
	comp=E,3.7nm,0.6s,baz=262,slow=10,SNR=12						
MKAR	Makanchi Array	22.71	319	P	P	08 40 52.8	-0.2
	comp=E,0.5nm,0.5s,mb3.2,baz=121,slow=11,SNR=3.7						
KURK	Kurchatov	26.98	323	P	P	08 41 31.8	-1.2
	comp=E,0.3nm,0.6s,mb3.0,baz=127,slow=9.1,SNR=5.0						
ARU	Arti	40.16	322	P	P	08 43 25.9	-1.4
	comp=E,1.7nm,0.1s,mb4.7						
WRAB	Tennant Creek	58.74	146	eP	P	08 45 49.6	+0.1
	comp=E,1.9nm,0.9s,mb4.1						
ASAR	Alice Springs	61.76	149	P	P	08 46 09.4	-0.7
	comp=E,0.2nm,0.3s,mb3.7,baz=332,slow=7.0,SNR=7.4						
YKA	Yellowknife Ar	81.53	17	P	P	08 48 08.5	-0.3
	comp=E,0.4nm,0.5s,mb3.6,baz=329,slow=5.2,SNR=9.0						
YKA	Yellowknife Ar	81.53	17	P	P	08 48 08.5	-0.3

*ISCJB **19** 08:39:54.0±0.5, 31.°95N±0.°04×104.°76E±0.°05, h10km, mb3.8/9, Error ellipse: s-maj=6.4km s-min=5.9km az=33.1*
*IDC **19** 08:39:54.9±1.2, 31.°93N×104.°60E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/26, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=44.1km s-min=21.1km az=48.0*
*NEIC **19** 08:39:56.7±0.6, 32.°06N×104.°85E, h10km, mb4.4/1, Error ellipse: s-maj=28.4km s-min=7.7km az=39.0*
*BJI **19** 08:39:58.8, 31.°82N×104.°64E, h17km, ML3.6/13, Ms3.4/1*
ISC 19 08:39:55.9±0.5, 32.°00N±0.°03×104.°72E±0.°04, h10km, n21, σ1°27/24, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.36	217	Pg	Pg	08 40 20.1	-1.9
CD2				Sg	Sg	08 40 37.6	-2.1
CD2				smax			
	comp=N,8μm,0.7s						
XAN	Xi'an	4.08	59	Pg	Pg	08 41 11.4	-2.6
XAN				Sg	Sg	08 42 05.3	-1.5
XAN				smax			
	comp=N,150nm,0.8s						
XAN				smax			
	comp=E,92nm,0.9s						
LZH	Lanzhou	4.14	350	Pg	Pg	08 41 14.8	-0.5
LZH				Sg	Sg	08 42 06.8	-2.2
LZH				smax			
	comp=N,210nm,0.9s						
LZH				smax			
	comp=E,240nm,0.6s						
LZH				LR	LR		
	comp=N,550nm,9.7s						
ENH	Enshi	4.43	112	ePg	Pg	08 41 19.9	-0.9
GYA	Guiyang	5.77	162	Pg	Px	08 41 28.6	
GYA				Sg	Sn	08 42 28.1	+0.2
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,180nm,1.0s						
WHN	Wuhan	8.37	97	P	Px	08 42 11.5	
WHN				S	Sn	08 43 33.3	+1.5
WHN				LR	LR		
	comp=N,460nm,8.0s						
WHN				LR	LR		
	comp=E,380nm,9.0s						
WHN				LR	LR		
	comp=Z,630nm,5.2s						
KSRS	Korea Array	19.81	68	P	Pn	08 44 28.3	+0.1
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=5.6						
MK31	Makanchi Array	22.67	317	eP	P	08 44 59.6	+2.4
MKAR	Makanchi Array	22.67	317	P	P	08 44 58.2	+0.9
	comp=Z,0.6nm,0.6s,mb3.2,baz=110,slow=11,SNR=6.5						
MKAR	Makanchi Array	22.67	317	P	P	08 44 58.2	+0.9
ZALV	Zalesovo Beam	26.16	333	P	P	08 45 30.6	+0.4
	comp=Z,1.7nm,0.6s,mb3.8,baz=126,slow=11,SNR=4.6						
KURK	Kurchatov	26.86	322	P	P	08 45 37.5	+0.9
	comp=Z,0.5nm,0.7s,mb3.1,baz=127,slow=8.4,SNR=5.3						
KURK	Kurchatov	26.86	322	P	P	08 45 37.5	+0.9
KURK				eP		08 45 38.0	
ABKAR	Akbulak array	37.48	311	eP	P	08 47 10.3	+0.7
	comp=Z,0.3nm,0.3s,mb3.6						
ARCES	ARCESS Array B	56.67	336	P	P	08 49 39.0	+0.1
	comp=Z,3.6nm,0.9s,mb4.4,baz=30,slow=9.4,SNR=3.8						
ARCES	ARCESS Array B	56.67	336	P	P	08 49 39.0	0.0
FINES	FINESS Array B	57.12	326	P	P	08 49 42.3	0.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=95,slow=10,SNR=1.8						
WRAB	Tennant Creek	58.92	147	eP	P	08 49 56.6	+1.3
	comp=Z,4.0nm,1.1s,mb4.4						
ASAR	Alice Springs	61.98	150	P	P	08 50 16.9	+0.6
	comp=Z,0.9nm,0.8s,mb4.0,baz=331,slow=6.6,SNR=9.9						
YKA	Yellowknife Ar	80.69	17	P	P	08 52 10.0	+1.2
	comp=Z,0.5nm,0.7s,mb3.6,baz=330,slow=5.1,SNR=8.0						
YKA	Yellowknife Ar	80.69	17	P	P	08 52 10.0	+1.2

*IDC **19** 08:50:55.2±1.4, 30.°38S×177.°46W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/16, mbtmp4.1/4, MS3.4/2, Ms1 3.4/2, ms1mx3.2/14, Error ellipse: s-maj=37.0km s-min=19.6km az=81.0*
*NEIC **19** 08:50:56.2±1.1, 30.°29S×177.°37W, h10km, Error ellipse: s-maj=28.8km s-min=13.7km az=76.0*
ISC 19 08:50:56.4±2.6, 30.°37S±0.°08×177.°6W±0.°3, h1km±14km, n9, σ0°70/9, mb4.3/4, MS3.5/2, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.15	345	Pn	Pn	08 51 20.2	+0.6
	755nm,0.3s,baz=65,slow=23,SNR=36						
RAO				Sn	Sn	08 51 35.7	-0.3
	692nm,0.3s,baz=52,slow=19,SNR=10						
RAO	Raoul Island	1.15	345	ePg	Pg	08 51 18.2	-0.2
RAO				Pn	Pn	08 51 20.2	+0.6
RAO				Sn	Sn	08 51 35.7	-0.3
CTA	Charters Tower	34.16	279	P	P	08 57 44.4	+1.2
	2.5nm,0.2s,mb4.8,baz=138,slow=11,SNR=4.3						
STKA	Stephens Creek	34.84	257	P	P	08 57 49.0	0.0
	3.8nm,0.7s,mb4.4,baz=97,slow=12,SNR=9.9						
STKA				LR	LR	09 09 16.0	
	comp=Z,137nm,20.5s,MS3.7,baz=177,slow=32						
ASAR	Alice Springs	43.48	267	P	P	08 59 00.1	-1.2
	1.0nm,0.7s,mb3.6,baz=106,slow=7.2,SNR=19						
QSPA	South Pole Qui	59.74	180	P	P	09 01 02.1	-0.1
	2.4nm,1.0s,mb4.2,baz=63,slow=7.9,SNR=4.6						
TGY	Tagaytay City	73.83	297	LR	LR	09 30 02.6	
	comp=Z,14nm,21.7s,MS3.2,baz=237,slow=32						
FINES	FINESS Array B	145.24	340	PKPbc	PKPbc	09 10 32.8	-2.0
	2.5nm,0.5s,baz=43,slow=3.1,SNR=10						
AKASG	Malin Array Be	151.50	323	PKPbc	PKPbc	09 10 50.1	-1.6
	0.3nm,0.3s,baz=43,slow=3.2,SNR=4.2						

*GII **19** 08:56:16.8±0.0, 28.°15N×33.°18E, h1km±1km, Mb4.3/6, Md4.1/7, Mm3.4/3*
*IDC **19** 08:56:18.9±3.7, 28.°37N×33.°16E, h0km, mb3.1/1, mb1 3.3/5, mb1mx3.1/27, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=44.9km s-min=22.4km az=155.0*
*ISCJB **19** 08:56:22.3±0.4, 28.°63N±0.°03×33.°20E±0.°03, h10km, Error ellipse: s-maj=4.9km s-min=3.3km az=13.5*
*SGS **19** 08:56:23.0, 28.°63N×32.°87E, h20km*
*CSEM **19** 08:56:22.3±0.2, 28.°58N×33.°17E, h5km, ML3.8, Error ellipse: s-maj=4.8km s-min=3.6km az=12.0*
*NEIC **19** 08:56:23.5, 28.°53N×33.°21E, h15km, ML3.7(HLW), MW3.4(GII), After HLW.*
ISC 19 08:56:22.2±0.6, 28.°60N±0.°03×33.°19E±0.°03, h4km±4km, n65, σ0°85/77, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRDS	Abu Rudays	0.14	41	P	Pg	08 56 26.4	+1.3
GRB	Gharib	0.48	227	P	Pg	08 56 31.6	+0.1
GRB	Gharib	0.48	227	P	Pg	08 56 31.6	0.0
TR2		0.52	115	P	Pg	08 56 32.7	+0.5
TR2		0.52	115	P	Pg	08 56 32.7	+0.5
HKAT	Jabal Katrina	0.71	96	P	Pg	08 56 36.0	+0.1
HKAT	Jabal Katrina	0.71	96	P	Pg	08 56 36.0	+0.1
ZAF		0.88	321	P	Pg	08 56 39.7	+0.6
ZAF		0.88	321	P	Pg	08 56 39.7	+0.6
HDHB	Dhahab	1.26	84	P	Pg	08 56 46.2	-0.2
HDHB	Dhahab	1.26	84	P	Pg	08 56 46.2	-0.3
SUZ		1.27	346	P	Pg	08 56 46.7	+0.1
SUZ		1.27	346	P	Pg	08 56 46.7	0.0
HBST	Basata	1.49	65	P	Pn	08 56 50.0	+0.2
HBST				S	Sg	08 57 11.6	+1.5
HBST	Basata	1.49	65	P	Pn	08 56 50.0	+0.2
HBST				S	Sg	08 57 11.6	+1.6
HAQS	Haql	1.58	73	P	Pn	08 56 51.8	+0.6
HAQS	Haql	1.58	73	P	Pn	08 56 51.8	+0.7
HHAG	Hagoal	1.65	325	P	Pn	08 56 52.0	0.0
HHAG				S	Sg	08 57 16.7	+1.5
HHAG	Hagoal	1.65	325	P	Pn	08 56 52.0	0.0
BDAS	Al Bad'	1.69	95	P	Pn	08 56 53.6	+1.0
BDAS	Al Bad'	1.69	95	P	Pn	08 56 53.6	+1.0
BDAS				S	Sg	08 57 16.5	-0.1
HBNS	Bani Suwayf	1.77	282	P	Pn	08 56 53.7	0.0
HBNS	Bani Suwayf	1.77	282	P	Pn	08 56 53.7	0.0
KOT	Kottamia	1.78	318	P	Pn	08 56 53.9	+0.2
KOT				S	Sg	08 57 19.2	-0.1
KOT	Kottamia	1.78	318	P	Pn	08 56 53.9	+0.1
KOT				S	Sg	08 57 19.2	-0.1
EIL	Elat	1.87	55	Pn	Pn	08 56 55.1	0.0
	22nm,0.3s,baz=223,slow=8.6,SNR=43						
EIL			

AKASG	Malin Array Be	22.27	353	P	P	09 01 19.5	-0.8
	0.4nm,0.4s,baz=160,slow=10.0,SNR=4.2						
AKASG	Malin Array Be	22.27	353	P	P	09 01 19.5	-0.8

*ISCJB **19** 08:57:48.0±0.6, 39°.11N±0°.04×28°.16E±0°.04, h3km±12km, Error ellipse: s-maj=7.3km s-min=4.3km az=141.4*
*CSEM **19** 08:57:47.8±0.1, 39°.12N×28°.13E, h10km, MD2.7, Error ellipse: s-maj=2.1km s-min=1.3km az=148.0*
*DDA **19** 08:57:47.2, 39°.17N×28°.12E, h7km±5km, Md2.8*
*ISK **19** 08:57:48.3, 39°.05N×28°.16E, h13km, MD2.7*
ISC 19 08:57:48.3±0.7, 39°.12N±0°.04×28°.15E±0°.05, h10km±10km, n15, σ0s57/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.35	228	*i* P	Pg	08 57 54.6	-0.7
AKHS				*i* S	Sg	08 58 00.1	+0.1
AKHS	Akhisar	0.35	228	*i* P	Pg	08 57 54.6	-0.7
AKHS				*i* S	Sg	08 58 00.1	+0.1
AKS	Akhisar	0.35	228	*e*PG	Pg	08 57 54.6	-0.7
AKS				*e*SG	Sg	08 58 00.6	+0.5
AKS	Akhisar	0.35	228	*e*Pg	Pg	08 57 54.6	-0.7
AKS				*e*Sg	Sg	08 58 00.5	+0.5
DEMI	Demirci	0.45	99	*i* P	Pg	08 57 57.0	0.0
DEMI				*i* S	Sg	08 58 03.3	+0.4
DEMI	Demirci	0.45	99	*i* P	Pg	08 57 57.0	0.0
DEMI				*i* S	Sg	08 58 03.3	+0.4
DURS	Dursunbey	0.55	27	*i* P	Pg	08 57 58.5	-0.4
DURS				*i* S	Sg	08 58 05.6	-0.5
DURS	Dursunbey	0.55	27	*i* P	Pg	08 57 58.5	-0.4
DURS				*i* S	Sg	08 58 05.6	-0.5
DST	Dursunbey	0.61	37	*e*PG	Pg	08 58 01.6	+1.4
DST	Dursunbey	0.61	37	*e*Pg	Pg	08 58 01.6	+1.4
KULA	Kula-Manisa	0.72	146	*e*PG	Pg	08 58 01.9	-0.3
KULA				*e*SG	Sg	08 58 11.2	-0.3
KULA	Kula-Manisa	0.72	146	*e*Pg	Pg	08 58 01.9	-0.3
KULA				*e*Sg	Sg	08 58 11.2	-0.4
IZM	Izmir	1.00	224	*e*PG	Pg	08 58 07.0	-0.5
IZM				*e*SG	Sg	08 58 21.4	+0.9
GDZ	Gediz	1.03	91	*i* P	Pb	08 58 08.2	-0.1
GDZ				*i* S	Sb	08 58 22.0	+0.1
GDZ	Gediz	1.03	91	*i* P	Pb	08 58 08.2	-0.1
GDZ				*i* S	Sb	08 58 22.0	+0.1

*ISK **19** 09:07:32.8, 37°.26N×28°.21E, h7km, MD2.9*
*ISCJB **19** 09:07:33.4±0.5, 37°.25N±0°.03×28°.22E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=4.1km az=35.5*
*CSEM **19** 09:07:33.2±0.2, 37°.24N×28°.21E, h10km, MD2.9, Error ellipse: s-maj=4.4km s-min=3.4km az=18.0*
*DDA **19** 09:07:33.3, 37°.23N×28°.21E, h7km±7km, Md2.9*
ISC 19 09:07:33.7±0.6, 37°.27N±0°.03×28°.24E±0°.04, h2km±10km, n22, σ0s84/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	164	PG	Pg	09 07 36.2	-0.2
YER				*e*SG	Sg	09 07 38.2	+0.1
YER	Yerkesik	0.14	164	*i* Pg	Pg	09 07 36.2	-0.1
YER				*e*Sg	Sg	09 07 38.2	+0.1
MLSB	Milas	0.37	274	*e*PG	Pg	09 07 39.8	-0.9
MLSB	Milas	0.37	274	*e*Pg	Pg	09 07 39.8	-0.9
AYDN	Tasoluk	0.48	324	*i* P	Pg	09 07 42.9	-0.1
AYDN				*i* S	Sg	09 07 50.5	+1.3
AYDN	Tasoluk	0.48	324	*i* P	Pg	09 07 42.9	-0.1
AYDN				*i* S	Sg	09 07 50.5	+1.2
TURN	Turunc	0.49	143	*i* P	Pg	09 07 41.9	-1.2
TURN				*i* S	Sg	09 07 50.0	+0.5
TURN	Turunc	0.49	143	*i* P	Pg	09 07 41.9	-1.2
TURN				*i* S	Sg	09 07 50.0	+0.5
BDRM	Kayabasi	0.66	253	*i* P	Pg	09 07 45.2	-1.2
BDRM				*i* S	Sg	09 07 55.9	+0.8
BDRM	Kayabasi	0.66	253	*i* P	Pg	09 07 45.2	-1.2
BDRM				*i* S	Sg	09 07 55.9	+0.9
DAT	Datca	0.75	225	*e*PG	Pg	09 07 47.2	-0.9
DAT				*e*SG	Sg	09 07 58.9	+1.0
DAT	Datca	0.75	225	*e*Pg	Pg	09 07 47.2	-0.9
DNZL	Cakiroluk	0.77	57	*i* P	Pg	09 07 48.6	+0.1
DNZL				*i* S	Sg	09 08 03.4	+5.0
DNZL	Cakiroluk	0.77	57	*i* P	Pg	09 07 48.6	+0.1
DNZL				*i* S	Sg	09 08 03.4	+5.0
GLHS	Glhisar (BURDU	1.01	96	*e*PG	Pg	09 07 53.8	+0.7
GLHS	Glhisar (BURDU	1.01	96	*e*Pg	Pg	09 07 53.8	+0.7
KULA	Kula-Manisa	1.29	15	*e*PN	Pn	09 07 57.8	-1.0
KULA	Kula-Manisa	1.29	15	*e*Pn	Pn	09 07 57.8	-0.9
ELL	Elmali	1.44	111	*e*PN	Pn	09 08 00.4	-0.3
ELL	Elmali	1.44	111	*e*Pn	Pn	09 08 00.4	-0.3
AKAS	Kas	1.51	133	*i* P	Pn	09 08 03.0	+1.3
AKAS				*i* S	Sn	09 08 30.0	+8.1
AKAS	Kas	1.51	133	*i* P	Pn	09 08 03.0	+1.3

*HLW **19** 09:08:12.7, 33°.57N×35°.59E, h15km±27km, Ml3.3*
*ISCJB **19** 09:08:14.8±0.4, 33°.34N±0°.02×35°.37E±0°.04, h10km±3km, Error ellipse: s-maj=6.4km s-min=2.6km az=18.4*
*CSEM **19** 09:08:15.2±0.1, 33°.34N×35°.39E, h2km, ML4.0, Error ellipse: s-maj=3.4km s-min=2.0km az=114.0*
*GII **19** 09:08:15.4±0.6, 33°.27N×35°.44E, h1km±2km, Mb4.0/4, Md3.7/16, Mm3.2/7*
*NEIC **19** 09:08:15.4, 33°.27N×35°.43E, h1km, MD3.7(GII), MD3.9(GRAL), After GII.*
*GRAL **19** 09:08:16.4±0.8, 33°.33N×35°.44E, h0km±4km, MD4.0*
ISC 19 09:08:15.6±0.4, 33°.34N±0°.02×35°.41E±0°.04, h8km±3km, n88, σ0s66/120, 8C-4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.16	336	*e*P	Pg	09 08 19.7	+0.7
MATL	Matirih	0.16	336	*e*P	Pg	09 08 19.7	+0.7
MATL	Matirih	0.16	336	*e*P	Pg	09 08 19.7	+0.7
KSDI	Kefar Szold	0.26	125	Pg	Pg	09 08 20.4	-0.2
KSDI	Kefar Szold	0.26	125	Pg	Pg	09 08 20.4	-0.2
HRI	Mount Hermon	0.28	105	⇓Pg	Pg	09 08 20.8	-0.3
HRI	Mount Hermon	0.28	105	⇓Pg	Pg	09 08 20.8	-0.3
HNTI	Hanita	0.32	218	Pg	Pg	09 08 21.9	0.0
HNTI				Sg	Sg	09 08 27.1	+0.9
HNTI	Hanita	0.32	218	Pg	Pg	09 08 21.9	0.0
HNTI				Sg	Sg	09 08 27.1	+0.9
RCY	Rachaya	0.37	67	*e*P	Pg	09 08 23.0	+0.2
RCY				*e*S	Sg	09 08 28.0	+0.2
RCY	Rachaya	0.37	67	*e*P	Pg	09 08 23.0	+0.2
RCY				*e*S	Sg	09 08 28.0	+0.3
KSHT	Keshet	0.49	137	⇓Pg	Pg	09 08 24.9	-0.2
KSHT	Keshet	0.49	137	⇓Pg	Pg	09 08 24.9	-0.2
BEYL	Beyrouth	0.54	7	*e*S	Sg	09 08 33.2	+0.3
BEYL	Beyrouth	0.54	7	*e*S	Sg	09 08 33.2	+0.2
BHL	Bhannes	0.60	20	*e*P	Pg	09 08 27.1	-0.1
BHL				*e*S	Sg	09 08 35.0	0.0
BHL	Bhannes	0.60	20	*e*P	Pg	09 08 27.0	-0.1
BHL				*e*S	Sg	09 08 35.0	0.0
BHL	Bhannes	0.60	20	*e*P	Pg	09 08 27.1	-0.1
BHL				*e*S	Sg	09 08 35.0	0.0
OFRI	'Ofer	0.80	207	⇑Pg	Pg	09 08 30.8	-0.2
OFRI	'Ofer	0.80	207	⇑Pg	Pg	09 08 30.8	-0.2
MMLI	Mount Malkishu	0.90	179	⇑Pg	Pg	09 08 32.1	-0.8
MMLI				Sg	Sg	09 08 44.3	-0.2
MMLI	Mount Malkishu	0.90	179	⇑Pg	Pg	09 08 32.1	-0.8
MMLI				Sg	Sg	09 08 44.3	-0.2
HWQ	Hawqa	1.04	25	*e*P	Pg	09 08 35.2	-0.4
HWQ				*e*S	Sg	09 08 48.6	-0.4
HWQ	Hawqa	1.04	25	*e*P	Pg	09 08 35.5	-0.1
HWQ				*e*S	Sg	09 08 48.5	-0.5
HWQ	Hawqa	1.04	25	*e*P	Pg	09 08 35.5	0.0
HWQ				*e*S	Sg	09 08 48.6	-0.4
HMDT	Nahal Hemdat	1.09	175	⇑Pg	Pg	09 08 35.4	-1.1
HMDT				Sg	Sg	09 08 50.9	+0.3
HMDT	Nahal Hemdat	1.09	175	⇑Pg	Pg	09 08 35.4	-1.1
HMDT				Sg	Sg	09 08 50.9	+0.3
SLTI	Sal'it	1.14	196	Pg	Pg	09 08 36.6	-0.9
SLTI				Sg	Sg	09 08 52.4	+0.2
SLTI	Sal'it	1.14	196	Pg	Pg	09 08 36.6	-0.9
SLTI				Sg	Sg	09 08 52.4	+0.2
FKH	Fakeheh	1.22	42	*e*P	Pb	09 08 38.5	-0.4
FKH	Fakeheh	1.22	42	*e*P	Pb	09 08 38.5	-0.4
DSI	Dead Sea	1.77	181	Pn	Pn	09 08 46.3	-0.2
DSI				S	Sn	09 09 09.4	+0.3
DSI	Dead Sea	1.77	181	Pn	Pn	09 08 46.3	-0.2
DSI				S	Sn	09 09 09.4	+0.3
YTIR	Yattir	1.99	187	Pn	Pn	09 08 50.3	+0.8
YTIR	Yattir	1.99	187	Pn	Pn	09 08 50.3	+0.8
MZDA	Masada	2.02	181	Pn	Pn	09 08 50.7	+0.7
MZDA				S	Sn	09 09 16.1	+0.6
MZDA	Masada	2.02	181	Pn	Pn	09 08 50.7	+0.7
MZDA				S	Sn	09 09 16.1	+0.6
RTMI	Retamim	2.36	195	⇑Pn	Pn	09 08 55.5	+0.9
RTMI	Retamim	2.36	195	⇑Pn	Pn	09 08 55.5	+0.9
KZIT	Kziot	2.57	200	Pn	Pn	09 08 58.9	+1.3
KZIT	Kziot	2.57	200	Pn	Pn	09 08 58.9	+1.3
YAYL	Yayladag	2.75	12	*i* P	Pn	09 09 00.1	+0.1
YAYL	Yayladag	2.75	12	*i* P	Pn	09 09 00.1	+0.1
YAYL				*i* S	Sn	09 09 32.8	-0.6
RSH		2.77	212	P	Pn	09 09 00.1	-0.2
ZFRI	Zfri	2.78	184	Pn	Pn	09 09 00.9	+0.4
ZFRI				S	Sn	09 09 35.0	+0.7
ZFRI	Zfri	2.78	184	Pn	Pn	09 09 00.9	+0.4
ZFRI				S	Sn	09 09 35.0	+0.7
PRNI	Paran	3.00	187	Pn	Pn	09 09 03.8	+0.4
PRNI				S	Sn	09 09 40.7	+1.1
PRNI	Paran	3.00	187	Pn	Pn	09 09 03.8	+0.4
PRNI				S	Sn	09 09 40.7	+1.1
AMAG	Maghara	3.27	215	P	Pn	09 09 07.2	0.0
	baz=216						
AMAG	Maghara	3.27	215	P	Pn	09 09 07.2	0.0
HRFI	Mount Harif	3.31	186	Pn	Pn	09 09 07.8	+0.1
HRFI	Mount Harif	3.31	186	Pn	Pn	09 09 07.8	+0.1
HNKL	Nakhl	3.61	200	P	Pn	09 09 11.5	-0.4
	baz=202						
HNKL				S	Sn	09 09 53.7	-1.0
	baz=202						
HNKL				AMP		09 10 00.0	
	comp=E,150μm,0.5s,logA/T=5.5,baz=202						
HNKL	Nakhl	3.61	200	P	Pn	09 09 11.5	-0.4
HNKL				S	Sn	09 09 53.7	-1.0
EIL	Elat	3.68	186	Pn	Pn	09 09 13.4	+0.6
EIL	Elat	3.68	186	Pn	Pn	09 09 13.4	+0.6
GULE	Gulek	3.97	353	*i* P	Pn	09 09 18.0	+1.2
GULE	Gulek	3.97	353	*i* P	Pn	09 09 18.0	+1.2
GULE				*i* S	Sn	09 09 59.9	-3.6
SUZ		4.12	213	P	Pn	09 09 18.7	-0.2
	baz=213						
SUZ		4.12	213	P	Pn	09 09 18.7	-0.2
HHAG	Hagoal	4.40	221	P	Pn	09 09 23.2	+0.4
	baz=221						
HHAG	Hagoal	4.40	221	P	Pn	09 09 23.2	+0.5
ZNM		4.51	209	P	Pn	09 09 24.7	+0.5
	baz=210						
ZNM				S	Sn	09 10 15.1	-1.7
	baz=210						
ZNM		4.51	209	P	Pn	09 09 24.7	+0.5
ZNM				S	Sn	09 10 15.1	-1.7
KOT	Kottamia	4.57	223	P	Pn	09 09 25.3	+0.2
	baz=223						
KOT				AMP		09 10 00.0	
	comp=E,20μm,0.2s,logA/T=5.0,baz=223						
KOT				S	Sn	09 10 15.5	-2.9
	baz=223						
KOT	Kottamia	4.57	223	P	Pn	09 09 25.3	+0.2
KOT				S	Sn	09 10 15.5	-2.9
HDHB	Dhahab	4.65	189	P	Pn	09 09 25.7	-0.5
	baz=190						
HDHB	Dhahab	4.65	189	P	Pn	09 09 25.7	-0.5
ZAF		4.73	212	P	Pn	09 09 27.3	0.0
	baz=213						
ZAF		4.73	212	P	Pn	09 09 27.3	+0.1
GLL	Jalalah	4.91	221	P	Pn	09 09 29.1	-0.5
	baz=221						
GLL	Jalalah	4.91	221	P	Pn	09 09 29.1	-0.6
HKAT	Jabal Katrina	4.95	195	P	Pn	09 09 30.3	0.0
	baz=196						
HKAT	Jabal Katrina	4.95	195	P	Pn	09 09 30.3	0.0
HSAF	As Saff	4.96	223	P	Pn	09 09 30.9	+0.5
	baz=223						
HSAF	As Saff	4.96	223	P	Pn	09 09 30.9	+0.5
TR2		5.15	197	P	Pn	09 09 32.8	-0.1
	baz=198						
TR2		5.15	197	P	Pn	09 09 32.8	-0.2
TR1		5.46	194	P	Pn	09 09 36.9	-0.4
	baz=195						
TR1		5.46	194	P	Pn	09 09 36.9	-0.4
HNAT	Natroun	5.51	229	P	Pn	09 09 38.3	+0.3
	baz=229						
HNAT	Natroun	5.51	229	P	Pn	09 09 38.3	+0.3
GRB	Gharib	5.53	205	P	Pn	09 09 38.2	-0.1
	baz=206						
GRB	Gharib	5.53	205	P	Pn	09 09 38.2	-0.1
HHRG	Al Ghardaqah	6.30	195	P	Pn	09 09 48.0	-0.9
	baz=196						
HHRG	Al Ghardaqah	6.30	195	P	Pn	09 09 48.0	-0.9
HFRF	Wahat Farafira	8.70	227	P	Pn	09 10 21.6	-0.3
	baz=227						
HFRF	Wahat Farafira	8.70	227	P	Pn	09 10 21.6	-0.2

*NEIC **19** 09:21:46.5, 17°.24N×101°.33W, h5km, MD4.1(MEX), After MEX.*
MEX 19 09:21:46.8±1.2, 17°.26N×101°.33W, h5km±14km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.37	339	*e*P	Pg	09 21 53.5	-0.5
ZIIG				*i* S	Sg	09 21 58.4	-0.4
ZIIG	Zihuatanejo	0.37	339	*e*P	Pg	09 21 53.5	-0.5
ZIIG				*i* S	Sg	09 21 58.4	-0.4
CAIG	El Cayaco	1.04	101	*i* P	Pg	09 22 03.5	-3.2
CAIG				*i* S	Sg	09 22 17.0	-3.2
CAIG	El Cayaco	1.04	101	*i* P	Pg	09 22 03.5	-3.2
CAIG				*i* S	Sg	09 22 17.0	-3.2
ACX	Acapulco	1.41	106	*i* P	Pn	09 22 10.2	-2.9
ACX				*i* S	Sb	09 22 26.3	-5.5
PLIG	Platanillo	2.07	57	*e*P	Pn	09 22 19.0	-3.3
PLIG				*i* S	Sn	09 22 43.4	-5.1
PLIG	Platanillo	2.07	57	*e*P	Pn	09 22 19.0	-3.3
PLIG				*i* S	Sn	09 22 43.4	-5.1
MMIG	Aquila	2.18	298	*i* P	Pn	09 22 20.4	-3.3
MMIG				*i* S	Sn	09 22 44.8	-6.2
MOIG	Morelia	2.41	3	*e*P	Pn	09 22 25.0	-1.9
MOIG				*i* S	Sn	09 22 53.5	-3.3
MOIG	Morelia	2.41	3	*e*P	Pn	09 22 25.0	-1.9
MOIG				*i* S	Sn	09 22 53.5	-3.3
PPM	Popocatepetl	3.14	55	*e*P	Pn	09 22 33.1	-3.8
PPM				*i* S	Sn	09 23 12.1	-2.6
PPM	Popocatepetl	3.14	55	*e*P	Pn	09 22 33.1	-3.8
PPM				*i* S	Sn	09 23 12.1	-2.6
PNIG	Pinotepa	3.19	105	*i* P	Pn	09 22 34.2	-3.4
PNIG				*i* S	Sn	09 23 12.5	-3.5
PNIG	Pinotepa	3.19	105	*i* P	Pn	09 22 34.2	-3.4
PNIG				*i* S	Sn	09 23 12.5	-3.5

*ISK **19** 09:49:34.7, 34°.61N×33°.53E, h19km, ML3.1*
*ISCJB **19** 09:49:35.3±0.6, 34°.58N±0°.03×33°.52E±0°.04, h28km±5km, Error ellipse: s-maj=5.4km s-min=4.6km az=6.5*
*CSEM **19** 09:49:35.3±0.2, 34°.62N×33°.52E, h15km, Mw3.3, Error ellipse: s-maj=4.7km s-min=3.6km az=82.0*
*DDA **19** 09:49:36.0, 35°.06N×33°.67E, h7km±3km, Md3.3*
*NEIC **19** 09:49:36.8, 34°.71N×33°.46E, h5km, MD3.3(DDA), MD3.3(ISK), ML3.3(NIC), After NIC.*
*NIC **19** 09:49:36.8±0.2, 34°.71N×33°.46E, h5km, ML3.3, MW3.3*
*HLW **19** 09:49:38.0, 34°.53N×33°.30E, h33km±36km, Ml3.0*
*GII **19** 09:49:39.9±1.1, 34°.45N×33°.68E, h15km±3km, Md2.5/2*
ISC 19 09:49:35.6±0.6, 34°.62N±0°.03×33°.50E±0°.04, h17km±4km, n54, σ0s97/74, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	Prodhromos	0.37	338	*e*Pg	Pg	09 49 41.8	-1.5
CSS				S	Sg	09 49 47.2	-1.3
	38nm,0.5s						
PHNC	Paralimni	0.58	48	P	Pg	09 49 47.9	+0.8
	30nm,0.4s						
PHNC				S	Sg	09 49 56.3	+1.4
PHNC	Paralimni	0.58	48	P	Pg	09 49 47.9	+0.8
	30nm,0.4s						
LFK	Lefkose	0.66	2	*e*PG	Pg	09 49 47.7	-0.9
LFK				*e*SG	Sg	09 49 58.6	+1.2
LFK	Lefkose	0.66	2	*e*Pg	Pg	09 49 47.7	-0.9
LFK				*e*Sg	Sg	09 49 58.6	+1.2
LEF	Lefka	0.71	315	*e*PG	Pg	09 49 49.1	-0.4
LEF				*e*SG	Sg	09 50 01.6	+2.6
LEF	Lefka	0.71	315	*e*Pg	Pg	09 49 49.1	-0.4
ALFC	Alevga	0.92	306	P	Pg	09 49 52.8	-0.6
	22nm,0.2s						
ALFC				S	Sg	09 50 05.4	-0.1
ALFC	Alevga	0.92	306	P	Pg	09 49 52.8	-0.6
	22nm,0.2s						
ALFC				S	Sg	09 50 05.4	-0.1
PPCY	Paphos	0.99	286	P	Pg	09 49 54.4	-0.4
PPCY	Paphos	0.99	286	P	Pg	09 49 54.4	-0.4
EREN	Erenkoy	1.06	31	*e*PG	Pg	09 49 54.9	-1.3
EREN				*e*SG	Sg	09 50 09.9	-0.1
EREN	Erenkoy	1.06	31	*e*Pg	Pg	09 49 54.9	-1.2
EREN				*e*Sg	Sg	09 50 09.9	-0.2
IKL	Isikli	1.62	5	*e*PN	Pn	09 50 02.4	-1.1
IKL				*e*SN	Sn	09 50 23.5	-0.4
IKL	Isikli	1.62	5	Pn	Pn	09 50 03.3	-0.1
IKL	Isikli	1.62	5	Pn	Pn	09 50 03.3	-0.1
IKL				*e*Sn	Sn	09 50 23.5	-0.5
GAZI	Gazipasa	1.88	329	*i* P	Pn	09 50 06.3	-0.7
GAZI				*i* S	Sn	09 50 29.0	-1.4
GAZI	Gazipasa	1.88	329	*i* P	Pn	09 50 06.3	-0.7
GAZI				*i* S	Sn	09 50 29.0	-1.4
HWQ	Hawqa	2.05	99	*e*P	Pn	09 50 09.0	-0.3
HWQ	Hawqa	2.05	99	*e*P	Pn	09 50 09.0	-0.2
RCY	Rachaya	2.23	120	*e*P	Pn	09 50 12.3	+0.6
RCY	Rachaya	2.23	120	*e*P	Pn	09 50 12.3	+0.6
MERS	Mersin	2.39	20	*e*PN	Pn	09 50 14.1	+0.1
MERS	Mersin	2.39	20	*e*Pn	Pn	09 50 14.1	+0.1
HDMB	Hadim	2.48	341	*e*PN	Pn	09 50 15.8	+0.5
HDMB	Hadim	2.48	341	*e*Pn	Pn	09 50 15.8	+0.6
YAYL	Yayladag	2.56	56	*i* P	Pn	09 50 15.2	-1.0
YAYL				*i* S	Sn	09 50 44.6	-2.3
YAYL	Yayladag	2.56	56	*i* P	Pn	09 50 15.2	-1.0
YAYL				*i* S	Sn	09 50 44.6	-2.3
HTY	Hatay	2.62	54	*e*PN	Pn	09 50 17.4	+0.3
HTY	Hatay	2.62	54	Pn	Pn	09 50 18.8	+1.7
HTY	Hatay	2.62	54	*e*Pn	Pn	09 50 17.4	+0.2
YURE	YUREGIR	2.80	38	*i* P	Pn	09 50 18.6	-1.1
YURE	YUREGIR	2.80	38	*i* P	Pn	09 50 18.6	-1.0
GULE	Gulek	2.85	21	*i* P	Pn	09 50 21.3	+1.0
GULE				*i* S	Sn	09 50 54.3	0.0
KARA	Karaisali	2.92	25	*e*PN	Pn	09 50 21.8	+0.5
KOZT	Kozan	3.42	33	*e*PN	Pn	09 50 29.3	+1.2
SUTC	Sutluce-Ispart	3.50	325	*e*PN	Pn	09 50 30.9	+1.7
SUTC	Sutluce-Ispart	3.50	325	*e*Pn	Pn	09 50 30.9	+1.7
ELL	Elmali	3.62	307	*e*PN	Pn	09 50 32.1	+1.3
ELL	Elmali	3.62	307	*e*Pn	Pn	09 50 32.1	+1.3
LADK	Ladik-KONYA	3.69	346	*e*PN	Pn	09 50 33.5	+1.6
LADK	Ladik-KONYA	3.69	346	*e*Pn	Pn	09 50 33.5	+1.7
AMAG	Maghara	3.97	184	P	Pn	09 50 35.8	+0.1
	baz=182						
AMAG	Maghara	3.97	184	P	Pn	09 50 35.8	+0.1
HNKL	Nakhl	4.69	175	P	Pn	09 50 45.5	-0.1
	baz=172						
HNKL				S	Sn	09 51 34.3	-5.4
	baz=172						
HNKL	Nakhl	4.69	175	P	Pn	09 50 45.5	-0.1
HNKL				S	Sn	09 51 34.3	-5.4
SUZ		4.80	187	P	Pn	09 50 47.0	-0.1
	baz=185						
SUZ		4.80	187	P	Pn	09 50 47.0	0.0
KOT	Kottamia	4.89	197	P	Pn	09 50 48.2	-0.1
	baz=196						
KOT				S	Sn	09 51 36.6	-7.8
	baz=196						
KOT				AMP		09 52 00.0	
	comp=N,20μm,0.5s,logA/T=4.6,baz=196						
KOT	Kottamia	4.89	197	P	Pn	09 50 48.2	-0.1
KOT				S	Sn	09 51 36.6	-7.8
HKAT	Jabal Katrina	6.09	176	P	Pn	09 51 04.8	0.0
	baz=174						
HKAT	Jabal Katrina	6.09	176	P	Pn	09 51 04.8	0.0
TR2		6.21	178	P	Pn	09 51 06.2	-0.3
	baz=176						
TR2		6.21	178	P	Pn	09 51 06.2	-0.4

*ISCJB **19** 09:52:12.1±0.4, 31°.80N±0°.03×104°.57E±0°.04, h10km, mb3.8/7, MS3.7/2, Error ellipse: s-maj=5.2km s-min=4.2km az=12.2*
*IDC **19** 09:52:12.9±1.0, 31°.90N×104°.60E, h0km, mb3.9/7, mb1 4.1/10, mb1mx3.9/27, mbtmp4.0/10, ML4.0/2, MS3.8/2, Ms1 3.8/2, ms1mx2.8/37, Error ellipse: s-maj=31.0km s-min=19.5km az=54.0*
*NEIC **19** 09:52:15.3±0.6, 31°.93N×104°.43E, h10km, mb3.7/1, Error ellipse: s-maj=16.5km s-min=10.5km az=67.0*
*BJI **19** 09:52:15.3, 31°.86N×104°.44E, h18km, mb4.0/2, ML4.0/17, Ms3.8/6, Ms7 3.6/5*
ISC 19 09:52:14.3±0.4, 31°.84N±0°.03×104°.54E±0°.04, h10km, n24, σ1s37/33, mb3.8/7, MS3.7/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.14	216	Pg	Pg	09 52 33.9	-2.4
CD2				Sg	Sg	09 52 48.8	-2.3
CD2				smax			
	comp=N,4μm,0.7s						
LZH	Lanzhou	4.28	352	Pn	Pn	09 53 23.3	+3.9
LZH				Pg	Pg	09 53 34.8	-1.4
LZH				Sg	Sg	09 54 29.9	-1.7
LZH				smax			
	comp=N,340nm,0.6s						
LZH				smax			
	comp=E,380nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,7.1s						
LZH				LR	LR		
	comp=Z,2

KSRS	**Korea Array**	**20.02**	**67**	P	**P**	**09 56 47.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=256,slow=10,SNR=27						
CN2	**Changchun**	**20.32**	**48**	*e*P	**P**	**09 56 52.9**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK31	**Makanchi Array**	**22.68**	**318**	*e*P	**P**	**09 57 15.8**	**0.0**
MKAR	**Makanchi Array**	**22.68**	**318**	P	**P**	**09 57 14.8**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.4,baz=108,slow=12,SNR=8.5						
MKAR				LR	LR	10 07 04.1	
	comp=Z,38nm,19.4s,MS2.9,baz=347,slow=39						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**09 57 49.2**	**0.0**
	comp=Z,1.5nm,0.5s,mb3.8,baz=133,slow=9.4,SNR=6.9						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**09 57 49.2**	**0.0**
KURK	**Kurchatov**	**26.89**	**322**	P	**P**	**09 57 55.1**	**-0.1**
	comp=Z,1.0nm,0.2s,mb4.0,baz=131,slow=9.8,SNR=4.1						
BRTR	**Keskin Array B**	**56.70**	**299**	P	**P**	**10 02 00.2**	**+2.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=97,slow=8.8,SNR=4.1						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**10 02 00.7**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0,baz=78,slow=9.1,SNR=3.0						
WRAB	**Tennant Creek**	**58.88**	**147**	*e*P	**P**	**10 02 14.0**	**+0.6**
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**10 02 34.2**	**-0.1**
	comp=Z,0.9nm,0.5s,mb4.2,baz=334,slow=6.6,SNR=22						
YKA	**Yellowknife Ar**	**80.88**	**17**	P	**P**	**10 04 27.5**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=328,slow=5.1,SNR=10						
SCHQ	**Schefferville**	**93.36**	**355**	LR	LR	10 54 34.5	
	comp=Z,209nm,18.4s,MS4.6,baz=235,slow=40						

ISCJB ***19*** *09:54:40.5±0.8, 33°.17N±0°.06×35°.4E±0°.1, h10km, Error ellipse: s-maj=15.9km s-min=5.2km az=25.0*
GRAL ***19*** *09:54:42.4±0.3, 33°.22N×35°.44E, h7km±3km, MD2.7*
HLW ***19*** *09:55:23.6, 31°.59N×35°.33E, h20km±19km, Ml1.9*
ISC 19 09:54:41.7±0.7, 33°.24N±0°.05×35°.4E±0°.1, h10km, n10, σ1§16/12, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.25**	**346**	*e*P	**Pg**	**09 54 47.6**	**+0.8**
RCY	**Rachaya**	**0.42**	**55**	*e*P	**Pg**	**09 54 50.3**	**+0.3**
RCY				*e*S	**Sg**	**09 54 56.1**	**+0.5**
HWQ	**Hawqa**	**1.13**	**24**	*e*P	**Pb**	**09 55 02.5**	**-0.7**
HWQ				*e*S	**Sb**	**09 55 17.3**	**-0.7**
AMAG	**Maghara**	**3.19**	**216**	P	Px	09 55 56.5	
	baz=244						
HNKL	**Nakhl**	**3.52**	**201**	P	**Pg**	**09 55 56.6**	**+7.5**
	baz=216						
HNKL				AMP		09 56 00.0	
	comp=E,10μm,0.3s,logA/T=4.5,baz=216						
HNKL				S	**Sn**	**09 56 19.3**	**+1.2**
	baz=216						
HDHB	**Dhahab**	**4.56**	**189**	P	**Pg**	**09 56 08.9**	**0.0**
	baz=193						
HKAT	**Jabal Katrina**	**4.86**	**195**	P	**Pg**	**09 56 13.6**	**-1.2**
	baz=202						
TR2		**5.05**	**197**	P	**Pg**	**09 56 16.2**	**-2.3**
	baz=205						
TR1		**5.37**	**194**	P	**Pg**	**09 56 20.6**	**-3.9**
	baz=199						
HHRG	**Al Ghardaqah**	**6.21**	**195**	P	**Pb**	**09 56 31.8**	**+1.9**
	baz=200						

ISCJB ***19*** *10:07:21.7±0.5, 36°.95N±0°.03×29°.22E±0°.03, h9km±6km, Error ellipse: s-maj=5.4km s-min=4.2km az=170.0*
CSEM ***19*** *10:07:21.7±0.2, 36°.96N×29°.23E, h8km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.5km az=10.0*
DDA ***19*** *10:07:21.7, 36°.98N×29°.22E, h10km±5km, Md2.9*
ISK ***19*** *10:07:21.3, 36°.94N×29°.23E, h10km, MD2.9*
ISC 19 10:07:22.0±0.5, 36°.96N±0°.03×29°.21E±0°.03, h10km±5km, n30, σ0§80/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**49**	*e*PG	**Pg**	**10 07 27.2**	**-0.8**
GLHS				*e*SG	**Sg**	**10 07 32.6**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.30**	**49**	*e*Pg	**Pg**	**10 07 27.2**	**-0.8**
GLHS				*e*Sg	**Sg**	**10 07 32.6**	**+0.5**
FETY	**Fethiye**	**0.34**	**198**	*e*PG	**Pg**	**10 07 27.7**	**-1.0**
FETY				*e*SG	**Sg**	**10 07 33.4**	**+0.1**
FETY	**Fethiye**	**0.34**	**198**	*e*Pg	**Pg**	**10 07 27.7**	**-1.0**
FETY				*e*Sg	**Sg**	**10 07 33.4**	**+0.2**
ELL	**Elmali**	**0.60**	**110**	*e*PG	**Pg**	**10 07 32.9**	**-0.7**
ELL				*e*SG	**Sg**	**10 07 42.1**	**+0.7**
ELL	**Elmali**	**0.60**	**110**	*e*Pg	**Pg**	**10 07 32.9**	**-0.6**
ELL				*e*Sg	**Sg**	**10 07 42.1**	**+0.8**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**10 07 34.5**	**-1.8**
DNZL				*i* S	**Sg**	**10 07 46.4**	**+0.4**
DNZL	**Cakiroluk**	**0.74**	**350**	*i* P	**Pg**	**10 07 34.5**	**-1.8**
DNZL				*i* S	**Sg**	**10 07 46.4**	**+0.4**
YER	**Yerkesik**	**0.77**	**284**	*e*PG	**Pg**	**10 07 37.6**	**+0.8**
YER				*e*SG	**Sg**	**10 07 48.3**	**+1.6**
YER	**Yerkesik**	**0.77**	**284**	*e*Pg	**Pg**	**10 07 37.6**	**+0.8**
YER				*e*Sg	**Sg**	**10 07 48.3**	**+1.6**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**10 07 36.8**	**-0.4**
AKAS				*i* S	**Sg**	**10 07 52.2**	**+4.7**
AKAS	**Kas**	**0.79**	**156**	*i* P	**Pg**	**10 07 36.8**	**-0.4**
KORT	**Korkueli**	**0.91**	**87**	*i* P	**Pg**	**10 07 39.6**	**+0.1**
KORT	**Korkueli**	**0.91**	**87**	*i* P	**Pg**	**10 07 39.6**	**+0.1**
MLSB	**Milas**	**1.20**	**287**	*e*PN	**Pn**	**10 07 45.1**	**+0.3**
MLSB	**Milas**	**1.20**	**287**	*e*Pn	**Pn**	**10 07 45.1**	**+0.3**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**10 07 45.6**	**-0.3**
AYDN				*i* S	**Sb**	**10 08 01.0**	**-1.5**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**10 07 45.6**	**-0.3**
AYDN				*i* S	**Sb**	**10 08 01.0**	**-1.6**
DAT	**Datca**	**1.33**	**261**	*e*PN	**Pn**	**10 07 46.7**	**0.0**
DAT	**Datca**	**1.33**	**261**	*e*Pn	**Pn**	**10 07 46.7**	**0.0**
KHL	**Karahalli**	**1.38**	**10**	*e*PN	**Pn**	**10 07 46.7**	**-0.7**
KHL	**Karahalli**	**1.38**	**10**	*e*Pn	**Pn**	**10 07 46.7**	**-0.7**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**10 07 49.0**	**+1.1**
BDRM				*i* S	**Sn**	**10 08 06.2**	**-0.5**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**10 07 49.0**	**+1.1**
BDRM				*i* S	**Sn**	**10 08 06.2**	**-0.5**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**10 07 48.5**	**+0.5**
KHAL				*i* S	**Sn**	**10 08 07.4**	**+0.5**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**	**10 07 48.5**	**+0.5**
KHAL				*i* S	**Sn**	**10 08 07.4**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**10 07 49.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**10 07 49.4**	**+0.2**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**10 08 05.0**	**+0.6**
HDMB	**Hadim**	**2.62**	**89**	*e*Pn	**Pn**	**10 08 05.1**	**+0.7**

NIED ***19*** *10:08:00, 42°.50N×132°.60E, h540km, Mw5.6 Best double couple: M0:2.56000×10^17 NP1:φs290.00000°, δ63.00000°, λ-35.00000°. NP2:φs37.00000°, δ59.00000°, λ-149.00000°.*
ISCJB ***19*** *10:08:35.7±0.1, 42°.49N±0°.01×131°.88E±0°.01, h514km, mb5.3/392, Error ellipse: s-maj=1.5km s-min=1.4km az=40.0*
SKHL ***19*** *10:08:35.7±2.5, 42°.55N×132°.09E, h518km, mb6.6/7, mbh6.9/3, mbv6.9/6, msh6.4/9*
JMA ***19*** *10:08:35.6±0.3, 42°.47N×132°.48E, h569km, M5.9*
JMA Felt I J1.
MOS ***19*** *10:08:35.1±0.8, 42°.55N×131°.96E, h512km, mb5.4/126, MS4.4/6, Error ellipse: s-maj=6.4km s-min=3.7km az=113.5*
BJI ***19*** *10:08:36.3, 42°.56N×131°.87E, h528km, mB5.9/21, mb6.0/53*
GCMT ***19*** *10:08:36.3±0.2, 42°.51N×131°.96E, h530km±1km, MW5.7/85, Moment Tensor Solution. s85,c163; s32,c33; Duration: 1§6 Moment tensor: Scale 10^17Nm; Mrr0.06±.04; Mθθ1.41±.07; Mφφ-1.46±.07; Mrθ1.29±.07; Mθφ2.41±.06; Mφr-2.58±.07; Best double couple: M0:3.70400×10^17 NP1:φs279.00000°, δ63.00000°, λ-19.00000°. NP2:φs18.00000°, δ73.00000°, λ-152.00000°. Principal axes: T 2.7980, Plg7.0000°, Azm147.0000°; N 1.8160, Plg57.0000°, Azm46.0000°; P -4.6100, Plg32.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
BGS ***19*** *10:08:36.2±1.2, 41°.99N×130°.26E, h513km, mb5.1*
NEIC ***19*** *10:08:36.3±0.1, 42°.50N×131°.87E, mb5.4/264, MW5.6, MW5.7, Error ellipse: s-maj=2.4km s-min=1.9km az=176.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^17Nm; Mrr0.29; Mθθ1.74; Mφφ-2.03; Mrθ1.84; Mθφ2.75; Mφr-3.39; Best double couple: M0:5.10000×10^17 NP1: φs284.00000°, δ71.00000°, λ-27.00000°. NP2:φs23.00000°, δ65.00000°, λ-159.00000°. Principal axes: T 3.1900, Plg4.0000°, Azm334.0000°; N 2.6900, Plg57.0000°, Azm70.0000°; P -5.8900, Plg31.0000°, Azm242.0000°;*
NEIC Recorded [1 JMA] in Aomori, Iwate and Miyagi, Japan. Also recorded [1 JMA] in the Kushiro area.
IDC ***19*** *10:08:37.3±0.3, 42°.54N×131°.88E, h526km±3km, mb5.0/31, mb1 5.1/33, mb1mx5.1/34, mbtmp5.0/33 Error ellipse: s-maj=6.2km s-min=5.4km az=70.0*
SZGRF ***19*** *10:08:38.7, 42°.89N×132°.68E, h520km, mb5.8, Primorye, Russia*
DJA ***19*** *10:08:40, 42°.49N×131°.85E, h574km, Mw5.7/51*
ISC 19 10:08:36.7±0.1, 42°.49N±0°.01×131°.88E±0°.01, h516km, h516km±.5km: pP-P, n1619, σ0§89/1713, mb5.3/392, 428C-267D, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLA	**Vladivostok**	**0.64**	**1**	*i* P	**P**	**10 09 39.8**	**+1.3**
VLA				*e*S	**S**	**10 10 28.3**	**-0.9**
VLA				pmax	pmax		
	comp=Z,4μm,1.0s						
VLA	**Vladivostok**	**0.64**	**1**	*i* P	**P**	**10 09 39.8**	**+1.3**
VLA				AMB	AMB	10 09 40.8	
	comp=Z,4μm,1.0s						
VLA				*e*S	**S**	**10 10 28.3**	**-0.9**
GRTR	**Gornotajezhnoj**	**1.24**	**9**	⇓*i* P	**P**	**10 09 41.0**	**+1.0**
GRTR				*i* S	**S**	**10 10 29.8**	**-2.0**
MDJ	**Mudanjiang**	**2.70**	**323**	P	**P**	**10 09 46.5**	**-0.3**
MDJ				S	**S**	**10 10 42.6**	**-1.6**
MDJ				PcS	PcS	10 19 43.4	+4.4
MDJ				ScS	ScS	10 22 22.1	+1.0
MDJ				pmax	pmax		
	comp=Z,10μm,0.9s						
MDJ				pmax	pmax		
	comp=Z,7μm,3.8s						
MDJ	**Mudanjiang**	**2.70**	**323**	⇑*i* P	**P**	**10 09 48.1**	**+1.3**
TEY	**Ternei**	**4.26**	**52**	⇓*i* P	**P**	**10 09 58.1**	**0.0**
TEY				AMB	AMB	10 10 58.0	
	comp=Z,25μm,2.0s						
TEY				AMB	AMB	10 10 58.6	
	comp=Z,17μm,2.0s						
TEY				AMB	AMB	10 10 58.6	
	comp=Z,10μm,2.0s						
TEY				*i* S	**S**	**10 11 03.5**	**-1.2**
TEY				A		10 11 05.0	
	comp=Z,14μm,2.0s						
TEY				A		10 11 05.0	
	comp=Z,9μm,2.0s						
CN2	**Changchun**	**4.89**	**288**	⇑P	**P**	**10 10 04.4**	**+1.0**
CN2				*e*S	**S**	**10 11 14.3**	**0.0**
CN2				ScS	ScS	10 22 18.8	-3.9
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
JOSM	**Okushiri--Mats**	**5.65**	**92**	P	**P**	**10 10 07.9**	**-2.4**
JOSM				*e*S	**S**	**10 11 22.8**	**-4.0**
KSRS	**Korea Array**	**5.87**	**212**	P	**P**	**10 10 14.8**	**+2.3**
	comp=Z,38nm,0.3s,baz=25,slow=8.9,SNR=560						
KSRS				S	**S**	**10 11 34.0**	**+3.1**
	baz=26,slow=17,SNR=14						
KSRS	**Korea Array**	**5.87**	**212**	P	**P**	**10 10 14.9**	**+2.4**
KSRS				S	**S**	**10 11 34.0**	**+3.2**
KSRS				pmax	pmax		
	comp=Z,38nm,0.3s						
JHG	**Hegura jima**	**6.03**	**139**	P	**P**	**10 10 14.2**	**+0.2**
JHG				S	**S**	**10 11 33.3**	**-0.2**
JSH	**Shimam**	**6.03**	**86**	P	**P**	**10 10 11.8**	**-2.0**
JSH				S	**S**	**10 11 29.5**	**-3.9**
SNY	**Shenyang**	**6.21**	**267**	⇓P	**P**	**10 10 17.9**	**+2.3**
SNY				S	**S**	**10 11 35.1**	**-1.4**
SNY				sP		10 11 39.6	
SNY				ScS	ScS	10 22 23.4	-0.7
SNY				pmax	pmax		
	comp=Z,660nm,1.0s						
SNY				pmax	pmax		
	comp=Z,3μm,3.5s						
SAI	**Saigo**	**6.38**	**169**	P	**P**	**10 10 18.6**	**+1.3**
INCN	**Inchon**	**6.42**	**221**	*e*P	**P**	**10 10 19.2**	**+1.5**
INCN				*e*S	**S**	**10 11 39.1**	**-1.2**
JSZ	**Suzu**	**6.56**	**138**	P	**P**	**10 10 18.8**	**-0.3**
JSZ				S	**S**	**10 11 47.3**	**+4.5**
JSD	**Sado**	**6.60**	**130**	P	**P**	**10 10 17.9**	**-1.5**
JSD				S	**S**	**10 11 41.8**	**-1.7**
JJH	**Hakui**	**6.71**	**144**	P	**P**	**10 10 20.5**	**-0.1**
JJH				S	**S**	**10 11 48.9**	**+3.3**
JKB	**Kayabe**	**6.82**	**92**	P	**P**	**10 10 19.1**	**-2.4**
JKB				S	**S**	**10 11 41.2**	**-6.3**
JAW	**Awa shima**	**6.91**	**123**	P	**P**	**10 10 20.4**	**-2.1**
JAW				S	**S**	**10 11 46.1**	**-3.0**
JOT	**Ohata**	**6.92**	**96**	P	**P**	**10 10 19.8**	**-2.7**
JOT				*e*S	**S**	**10 11 43.0**	**-6.3**
JNM	**Ikuma**	**7.04**	**172**	P	**P**	**10 10 24.9**	**+1.1**
JTM	**Tenmabayashi**	**7.09**	**101**	P	**P**	**10 10 21.4**	**-2.8**
JKG	**Kaga**	**7.09**	**149**	P	**P**	**10 10 23.9**	**-0.4**
JKG				S	**S**	**10 11 53.9**	**+1.4**
JIZZ	**Izumozaki**	**7.21**	**131**	P	**P**	**10 10 24.8**	**-0.6**
JIZZ				S	**S**	**10 11 53.1**	**-1.4**
JKSM	**Kasumi**	**7.22**	**162**	P	**P**	**10 10 25.9**	**+0.3**
JTT	**Ttatey**	**7.22**	**143**	P	**P**	**10 10 24.9**	**-0.8**
JTT				S	**S**	**10 11 55.1**	**+0.2**
JJN	**Nakama**	**7.23**	**136**	P	**P**	**10 10 24.4**	**-1.3**
JJN				S	**S**	**10 11 53.8**	**-1.2**
JKY	**Yasaka**	**7.29**	**159**	P	**P**	**10 10 26.6**	**+0.3**
JHR	**Hokuryu**	**7.31**	**77**	P	**P**	**10 10 24.6**	**-1.7**
JNS	**Sasagawa**	**7.36**	**127**	P	**P**	**10 10 24.7**	**-2.3**
JNS				S	**S**	**10 11 52.8**	**-4.5**
JGT	**Gotsu**	**7.45**	**177**	P	**P**	**10 10 28.9**	**+0.9**
JGN	**Niukaw**	**7.54**	**144**	P	**P**	**10 10 27.8**	**-1.0**
JGN				S	**S**	**10 12 00.4**	**-0.2**
JHS	**Saijyo**	**7.54**	**172**	P	**P**	**10 10 30.5**	**+1.7**
JHS				*e*S	**S**	**10 12 02.6**	**+1.9**
JKZ	**Kuzumaki**	**7.55**	**106**	P	**P**	**10 10 25.9**	**-2.9**
JHK	**Hiroka**	**7.58**	**131**	P	**P**	**10 10 27.0**	**-2.2**
JHK				S	**S**	**10 11 57.5**	**-3.9**
JFM	**Mihama**	**7.64**	**154**	P	**P**	**10 10 29.9**	**0.0**
MAJO	**Matsushiro**	**7.69**	**138**	⇑*i* P	**P**	**10 10 28.5**	**-1.8**
MAT	**Matsushiro**	**7.69**	**138**	P	**P**	**10 10 28.5**	**-1.8**
MAT				S	**S**	**10 12 00.6**	**-2.8**
MAT	**Matsushiro**	**7.69**	**138**	P	**P**	**10 10 29.2**	**-1.1**
MAT				S	**S**	**10 12 00.5**	**-2.9**
MJAR	**Matsushiro Arr**	**7.69**	**138**	P	**P**	**10 10 28.8**	**-1.5**
	comp=Z,52nm,0.3s,baz=318,slow=9.4,SNR=830						
MJAR				S	**S**	**10 12 00.2**	**-3.2**
	comp=Z,4.3nm,0.3s,baz=311,slow=20,SNR=2.5						
MJAR	**Matsushiro Arr**	**7.69**	**138**	P	**P**	**10 10 28.8**	**-1.5**
MJAR				S	**S**	**10 12 00.2**	**-3.2**
MJAR				pmax	pmax		
	comp=Z,52nm,0.3s						
MJAR				smax			
	comp=N,4.0nm,0.3s						
JWT	**Wachi**	**7.70**	**158**	P	**P**	**10 10 30.8**	**+0.4**
JAD	**Aida**	**7.74**	**166**	P	**P**	**10 10 31.6**	**+0.7**
JNG	**Nsakai**	**7.74**	**140**	P	**P**	**10 10 29.3**	**-1.6**
JNG				S	**S**	**10 12 02.2**	**-2.3**
JGM	**Miyama**	**7.75**	**149**	P	**P**	**10 10 31.2**	**+0.3**
JWK2	**Keihoku**	**7.77**	**65**	P	**P**	**10 10 30.0**	**-0.9**
JWK2				*e*S	**S**	**10 11 57.9**	**-6.8**
JHT	**Toyohira**	**7.82**	**177**	P	**P**	**10 10 32.5**	**+0.8**
JKS	**Kasai**	**7.84**	**162**	P	**P**	**10 10 32.6**	**+0.7**
JGK	**Kuni**	**7.89**	**136**	P	**P**	**10 10 30.6**	**-1.7**
JJG	**Jouge**	**7.89**	**172**	P	**P**	**10 10 33.1**	**+0.6**
JFR	**Furan**	**7.90**	**81**	P	**P**	**10 10 29.7**	**-2.6**
JMK	**Ichinoseki**	**7.92**	**113**	P	**P**	**10 10 29.6**	**-3.0**
JMK				S	**S**	**10 12 01.2**	**-6.5**
ASAJ	**Asahikawa**	**7.99**	**75**	P	**P**	**10 10 30.8**	**-2.3**
ASAJ	**Asahikawa**	**7.99**	**75**	P	**P**	**10 10 30.9**	**-2.2**
	comp=N,493nm,0.3s,baz=266,slow=13,SNR=1850						
ASAJ				S	**S**	**10 12 01.6**	**-7.2**
	baz=144,slow=30,SNR=3.7						
ASAJ	**Asahikawa**	**7.99**	**75**	P	**P**	**10 10 30.9**	**-2.2**
ASAJ				S	**S**	**10 12 01.6**	**-7.2**
ASAJ				pmax	pmax		
	comp=Z,493nm,0.3s						
JKT	**Katashina**	**8.05**	**133**	P	**P**	**10 10 31.8**	**-2.2**
JKK2	**Kamakawa 2**	**8.06**	**76**	P	**P**	**10 10 31.9**	**-2.0**
JGF	**Kuroka**	**8.09**	**146**	P	**P**	**10 10 33.0**	**-1.4**
JSE	**Soyaes**	**8.14**	**69**	P	**P**	**10 10 33.1**	**-1.6**
JTU	**Tsushima**	**8.18**	**195**	P	**P**	**10 10 36.8**	**+1.4**
JTU				S	**S**	**10 12 15.4**	**+2.7**
JNT	**Takato**	**8.19**	**142**	P	**P**	**10 10 33.8**	**-1.7**
JNT				S	**S**	**10 12 10.4**	**-2.5**
JMM	**Marumori**	**8.23**	**121**	P	**P**	**10 10 32.8**	**-3.0**
JJS	**Sakaide**	**8.26**	**168**	P	**P**	**10 10 36.6**	**+0.5**
JSB	**Shiboa**	**8.29**	**129**	P	**P**	**10 10 34.1**	**-2.3**
JSB				S	**S**	**10 12 10.8**	**-3.8**
JAO	**Obara**	**8.34**	**148**	P	**P**	**10 10 35.1**	**-1.8**
JHE	**Heguri**	**8.37**	**158**	P	**P**	**10 10 36.8**	**-0.5**
ERM	**Erimo**	**8.38**	**89**	P	**P**	**10 10 34.2**	**-3.0**
	comp=Z,29μm,0.5s						
ERM	**Erimo**	**8.38**	**89**	⇑*i* P	**P**	**10 10 34.2**	**-3.0**
ERM				*e*S	**S**	**10 12 07.7**	**-8.5**
JKD	**Kudamatsu**	**8.42**	**180**	P	**P**	**10 10 38.3**	**+0.5**
JAG	**Ashikaga**	**8.42**	**133**	P	**P**	**10 10 34.8**	**-3.0**
JAG				S	**S**	**10 12 13.6**	**-3.5**
JRY	**Ryogami san**	**8.45**	**138**	P	**P**	**10 10 35.0**	**-3.0**
JRY				*e*S	**S**	**10 12 11.4**	**-6.2**
JCH	**Churui**	**8.48**	**85**	P	**P**	**10 10 34.6**	**-3.6**
JCH				S	**S**	**10 12 08.3**	**-10**
JNY	**Yasuok**	**8.50**	**145**	P	**P**	**10 10 36.4**	**-2.3**
TSUJ	**Tsu 2**	**8.54**	**154**	P	**P**	**10 10 38.2**	**-0.8**
DL2	**Dalian**	**8.57**	**249**	⇓*i* P	**P**	**10 10 41.3**	**+2.0**
DL2				sP		10 12 15.3	
DL2				S	**S**	**10 12 21.5**	**+1.6**
DL2				ScP	ScP	10 18 51.9	-1.4
DL2				ScS	ScS	10 22 24.4	-3.0
DL2				pmax	pmax		
	comp=Z,440nm,0.7s						
DL2				pmax	pmax		
	comp=Z,2μm,4.5s						
JYN	**Shimob**	**8.69**	**141**	P	**P**	**10 10 38.0**	**-2.6**
JYZW	**Yoshizawa**	**8.76**	**147**	P	**P**	**10 10 39.4**	**-1.9**
JFA	**Akaike**	**8.80**	**186**	P	**P**	**10 10 42.5**	**+0.7**
JII	**Iki**	**8.84**	**192**	P	**P**	**10 10 43.5**	**+1.4**
JKI	**Kunimi**	**8.84**	**182**	P	**P**	**10 10 43.0**	**+0.8**
GRNR	**Gornyy**	**8.85**	**19**	⇓*i* P	**P**	**10 10 41.7**	**-0.2**
GRNR				AMB	AMB	10 10 43.2	
	comp=Z,1μm,1.0s						
GRNR				AMB	AMB	10 10 43.2	
	comp=Z,660nm,1.0s						
GRNR				AMB	AMB	10 10 43.2	
	comp=Z,2μm,1.0s						
GRNR				*e*S	**S**	**10 12 21.6**	**-3.3**
GRNR				A		10 12 23.6	
	comp=Z,1μm,1.2s						
JAA	**Atsumi**	**8.86**	**151**	P	**P**	**10 10 40.9**	**-1.4**
HMMJ	**Hamamatsu 2**	**8.88**	**147**	P	**P**	**10 10 40.2**	**-2.3**
JMN	**Monobe**	**8.88**	**169**	P	**P**	**10 10 43.0**	**+0.4**
SHZ3	**Shizuoka 3**	**8.90**	**144**	P	**P**	**10 10 40.1**	**-2.7**
JTKR	**Abashiri--Toko**	**8.91**	**76**	P	**P**	**10 10 40.3**	**-2.3**
JTKR				S	**S**	**10 12 18.4**	**-7.7**
JHO	**Hitachi**	**8.91**	**128**	P	**P**	**10 10 38.7**	**-4.1**
JHO				S	**S**	**10 12 16.9**	**-9.5**
JIE	**Ise**	**8.92**	**153**	P	**P**	**10 10 42.2**	**-0.8**
JIE				*e*S	**S**	**10 12 25.3**	**-1.4**
JKN2	**Miekihoku**	**8.92**	**156**	P	**P**	**10 10 41.7**	**-1.3**
JNA	**Nagahama**	**8.93**	**177**	P	**P**	**10 10 43.5**	**+0.5**
YSS	**Yuzh-Sakhalins**	**8.94**	**56**	*i* P	**P**	**10 10 41.0**	**-1.8**
YSS				*e*S	**S**	**10 12 19.0**	**-7.6**
YSS				pmax	pmax		
	comp=Z,2μm,0.5s						
YSS				pmax	pmax		
	comp=Z,7μm,4.0s						
YSS				smax			
	comp=N,7μm,10.0s						
YSS				smax			
	comp=N,2μm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,11.0s						
YSS	**Yuzh-Sakhalins**	**8.94**	**56**	*e*P	**P**	**10 10 41.3**	**-1.6**
YSS	**Yuzh-Sakhalins**	**8.94**	**56**	⇓*i* P	**P**	**10 10 41.0**	**-1.8**
YSS				AMB	AMB	10 10 42.3	
	comp=Z,2μm,0.5s						
YSS				AMB	AMB	10 10 43.0	
	comp=Z,7μm,4.0s						
YSS				*e*S	**S**	**10 12 19.0**	**-7.6**
YSS				A		10 12 26.0	
	comp=Z,4μm,7.0s						
YSS				A		10 12 26.0	
	comp=Z,7μm,7.0s						
YSS				A		10 12 28.2	
	comp=Z,2μm,1.0s						
JFI	**Itaya**	**9.12**	**188**	P	**P**	**10 10 46.0**	**+0.9**
JOD2	**Odawara 2**	**9.14**	**140**	P	**P**	**10 10 42.1**	**-3.1**
JOD2				S	**S**	**10 12 23.4**	**-7.4**
JKU	**Kubokawa**	**9.21**	**174**	P	**P**	**10 10 46.1**	**+0.1**
JSG	**Sagara**	**9.23**	**146**	P	**P**	**10 10 44.0**	**-2.1**
AJI	**Ajiro2**	**9.32**	**141**	P	**P**	**10 10 43.8**	**-3.3**
AJI				S	**S**	**10 12 28.0**	**-6.2**
TK04	**Tokai 4**	**9.35**	**148**	P	**P**	**10 10 45.9**	**-1.5**
JUS	**Usuki**	**9.40**	**181**	P	**P**	**10 10 48.3**	**+0.3**
JWZ	**Kozaga**	**9.44**	**160**	P	**P**	**10 10 47.1**	**-1.2**
JWZ				*e*S	**S**	**10 12 32.7**	**-3.8**
JIZS	**Izushimoda**	**9.49**	**143**	P	**P**	**10 10 46.1**	**-2.8**
JUR	**Ureshino**	**9.50**	**190**	P	**P**	**10 10 50.6**	**+1.6**
TK03	**Tokai 3**	**9.58**	**148**	P	**P**	**10 10 48.4**	**-1.4**
JTO	**Tosashimizu**	**9.64**	**175**	P	**P**	**10 10 51.0**	**+0.6**
JTO				S	**S**	**10 12 40.4**	**+0.1**
TK02	**Tokai 2**	**

YUK				smax			
	comp=N,26μm,1.0s						
YUK				smax			
	comp=E,12μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**10.32**	**77**⇓	*i*P	**P**	**10 10 55.5**	**-1.8**
YUK				AMB	AMB	10 10 56.5	
	comp=E,45μm,2.0s						
YUK				AMB	AMB	10 10 56.5	
	comp=E,19μm,3.0s						
YUK				AMB	AMB	10 10 56.5	
	comp=E,21μm,3.0s						
YUK				AMB	AMB	10 10 57.0	
	comp=E,7μm,0.5s						
YUK				AMB	AMB	10 10 57.0	
	comp=E,3μm,0.5s						
YUK				AMB	AMB	10 10 57.0	
	comp=E,10μm,0.5s						
YUK				*i*S	**S**	**10 12 48.5**	**-4.6**
YUK				A		10 12 53.0	
	comp=E,58μm,3.5s						
YUK				A		10 12 53.0	
	comp=E,68μm,3.5s						
YUK				A		10 12 55.3	
	comp=E,7μm,0.7s						
YUK				A		10 12 55.3	
	comp=E,6μm,0.7s						
JZO	**Okuchi**	**10.38 186**		P	**P**	**10 10 59.3**	**+1.1**
BSO1	**Boso 1**	**10.57 135**		P	**P**	**10 10 56.7**	**-3.5**
BSO1				*e*S	**S**	**10 12 49.2**	**-9.0**
EKMR	**Ekimchan**	**10.62**	**4**⇑	*i*P	**P**	**10 10 55.7**	**-4.6**
EKMR				AMB	AMB	10 10 58.0	
	comp=E,320nm,0.5s						
EKMR				AMB	AMB	10 10 58.0	
	comp=E,200nm,0.5s						
EKMR				AMB	AMB	10 10 58.0	
	comp=E,450nm,0.5s						
EKMR				*i*S	**S**	**10 12 52.5**	**-6.1**
EKMR				A		10 12 53.6	
	comp=E,3μm,1.6s						
EKMR				A		10 12 53.6	
	comp=E,3μm,1.6s						
HIA	**Hailar**	**10.84 313**⇑		*i*P	**P**	**10 11 02.7**	**0.0**
HIA				pmax	pmax		
	comp=Z,2μm,1.3s						
HIA	**Hailar**	**10.84 313**⇑		*i*P	**P**	**10 11 02.7**	**0.0**
	comp=Z,2μm,1.3s						
JSJ	**Shimokoshiki**	**10.92 190**		P	**P**	**10 11 04.9**	**+1.0**
TYV	**Tymovskoe**	**11.17**	**38**⇓	*i*P	**P**	**10 11 04.4**	**-1.7**
TYV				AMB	AMB	10 11 06.5	
	comp=Z,524nm,1.0s						
TYV				AMB	AMB	10 11 06.5	
	comp=Z,2μm,1.0s						
TYV				AMB	AMB	10 11 07.9	
	comp=Z,3μm,2.0s						
TYV				AMB	AMB	10 11 07.9	
	comp=Z,5μm,2.0s						
TYV				AMB	AMB	10 11 07.9	
	comp=Z,7μm,2.0s						
TYV				*e*S	**S**	**10 13 04.5**	**-4.8**
TYV				A		10 13 08.0	
	comp=Z,2μm,1.2s						
TYV				A		10 13 08.0	
	comp=Z,1μm,1.2s						
TYV				A		10 13 09.0	
	comp=Z,14μm,6.0s						
JHJ	**Hachijo jima 2**	**11.24 144**		P	**P**	**10 11 04.8**	**-2.5**
	comp=Z,218nm,0.3s,baz=298,slow=2.1,SNR=42						
JHJ				S	**S**	**10 13 07.0**	**-4.2**
	comp=Z,132nm,0.3s,baz=90,slow=20,SNR=5.9						
JHJ2	**Mitsune**	**11.26 144**		P	**P**	**10 11 04.8**	**-2.7**
ZEA	**Zeya**	**11.67 346**⇑		*i*P	**P**	**10 11 07.9**	**-3.5**
ZEA				AMB	AMB	10 11 09.2	
	comp=Z,3μm,1.0s						
ZEA				AMB	AMB	10 11 09.2	
	comp=Z,1μm,1.0s						
ZEA				AMB	AMB	10 11 09.2	
	comp=Z,4μm,1.0s						
ZEA				AMB	AMB	10 11 10.0	
	comp=Z,3μm,2.0s						
ZEA				AMB	AMB	10 11 10.0	
	comp=Z,2μm,2.0s						
ZEA				AMB	AMB	10 11 10.0	
	comp=Z,6μm,2.0s						
ZEA				*i*S	**S**	**10 13 13.6**	**-5.3**
ZEA				A		10 13 15.2	
	comp=Z,3μm,1.6s						
ZEA				A		10 13 15.2	
	comp=Z,3μm,1.6s						
ZEA				A		10 13 17.0	
	comp=Z,7μm,6.0s						
ZEA				A		10 13 17.0	
	comp=Z,11μm,6.0s						
KUR	**Kuril'sk**	**11.86**	**71**⇓	*i*P	**P**	**10 11 11.7**	**-1.9**
KUR				*i*S	**S**	**10 13 19.5**	**-3.3**
KUR				pmax	pmax		
	comp=N,670nm,0.6s						
KUR				pmax	pmax		
	comp=E,950nm,0.6s						
KUR				pmax	pmax		
	comp=Z,4μm,0.6s						
KUR				pmax	pmax		
	comp=N,4μm,1.0s						
KUR				pmax	pmax		
	comp=E,4μm,1.0s						
KUR				pmax	pmax		
	comp=Z,15μm,1.0s						
KUR				smax			
	comp=N,11μm,2.6s						
KUR				smax			
	comp=E,20μm,2.6s						
KUR				smax			
	comp=N,3μm,1.0s						
KUR				smax			
	comp=E,1μm,1.0s						
KUR	**Kuril'sk**	**11.86**	**71**⇓	*i*P	**P**	**10 11 11.9**	**-1.7**
KUR				AMB	AMB	10 11 12.3	
	comp=E,670nm,0.6s						
KUR				AMB	AMB	10 11 12.3	
	comp=E,840nm,0.6s						
KUR				AMB	AMB	10 11 12.3	
	comp=E,4μm,0.6s						
KUR				AMB	AMB	10 11 12.6	
	comp=E,4μm,4.0s						
KUR				AMB	AMB	10 11 12.6	
	comp=E,7μm,4.0s						
KUR				AMB	AMB	10 11 12.6	
	comp=E,12μm,4.0s						
KUR				*i*S	**S**	**10 13 19.5**	**-3.3**
KUR				A		10 13 21.2	
	comp=E,11μm,4.0s						
KUR				A		10 13 21.2	
	comp=E,20μm,4.0s						
KUR				A		10 13 22.0	
	comp=E,3μm,1.0s						
KUR				A		10 13 22.0	
	comp=E,1μm,1.0s						
BJI	**Beijing**	**12.07 264**		P	**P**	**10 11 16.9**	**+1.0**
BJI				S	**S**	**10 13 20.8**	**-6.2**
BJI				pmax	pmax		
	comp=Z,890nm,1.2s						
BJI				pmax	pmax		
	comp=Z,5μm,5.9s						
BJT	**Baijiatuau**	**12.08 264**		*e*P	**P**	**10 11 16.7**	**+0.7**
BJT				*e*S	**S**	**10 13 26.7**	**-0.5**
BJT				pmax	pmax		
	comp=Z,432nm,0.6s						
BJT	**Baijiatuau**	**12.08 264**		*e*P	**P**	**10 11 16.7**	**+0.7**
	comp=Z,432nm,0.6s						
BJT				*e*S	**S**	**10 13 26.7**	**-0.5**
NKL	**Nikolayevsk**	**12.19**	**26**⇑	*i*P	**P**	**10 11 11.0**	**-5.8**
NKL				AMB	AMB	10 11 12.2	
	comp=Z,650nm,0.8s						
NKL				AMB	AMB	10 11 12.2	
	comp=Z,550nm,0.8s						
NKL				AMB	AMB	10 11 12.2	
	comp=Z,1μm,0.8s						
NKL				AMB	AMB	10 11 12.5	
	comp=Z,2μm,2.0s						
NKL				AMB	AMB	10 11 12.5	
	comp=Z,1μm,2.0s						
NKL				AMB	AMB	10 11 12.5	
	comp=Z,3μm,2.0s						
NKL				*i*S	**S**	**10 13 20.0**	**-8.8**
NKL				A		10 13 23.5	
	comp=Z,18μm,7.0s						
NKL				A		10 13 23.5	
	comp=Z,10μm,7.0s						
KROS	**Kirovskiy**	**12.39 347**⇑		*i*P	**P**	**10 11 14.2**	**-4.7**
KROS				AMB	AMB	10 11 17.5	
	comp=Z,332nm,0.5s						
BMKR	**Bomnak**	**12.40 352**⇑		*i*P	**P**	**10 11 13.4**	**-5.6**
BMKR				AMB	AMB	10 11 15.1	
	comp=Z,1μm,0.5s						
BMKR				*i*S	**S**	**10 13 25.2**	**-7.6**
TIA	**Tai'an**	**13.02 246**		P	**P**	**10 11 26.9**	**+1.0**
TIA				sP		10 13 20.0	
TIA				S	**S**	**10 13 48.1**	**+2.8**
TIA				ScP	ScP	10 18 58.1	-1.3
TIA				pmax	pmax		
	comp=Z,790nm,1.2s						
TIA				pmax	pmax		
	comp=Z,3μm,5.0s						
OKH	**Okha**	**13.29**	**30**⇓	*i*P	**P**	**10 11 28.9**	**+0.5**
OKH				AMB	AMB	10 11 29.0	
	comp=Z,2μm,0.9s						
OKH				AMB	AMB	10 11 29.8	
	comp=Z,3μm,5.0s						
OKH				*e*S	**S**	**10 13 48.8**	**-1.3**
OKH				A		10 13 49.8	
	comp=Z,4μm,1.2s						
OKH				A		10 13 49.8	
	comp=Z,3μm,1.2s						
OKH				A		10 13 50.2	
	comp=Z,18μm,8.0s						
OKH				A		10 13 50.2	
	comp=Z,15μm,8.0s						
SSE	**Sheshan**	**14.22 220**	⇓	P	**P**	**10 11 38.9**	**+0.4**
SSE				S	**S**	**10 14 07.3**	**-1.1**
SSE				PcP	PcP	10 16 16.9	+0.1
SSE				pmax	pmax		
	comp=Z,610nm,1.0s						
SSE				pmax	pmax		
	comp=Z,2μm,5.2s						
NJ2	**Nanjing**	**14.68 229**		*e*P	**P**	**10 11 43.6**	**+0.3**
NJ2				sP		10 13 42.9	
NJ2				S	**S**	**10 14 16.1**	**-1.0**
NJ2				PcP	PcP	10 16 17.6	+0.2
NJ2				ScP	ScP	10 19 01.3	-1.0
NJ2				ScS	ScS	10 22 37.5	-2.9
NJ2				pmax	pmax		
	comp=Z,4μm,3.6s						
CLNS	**Chul'man**	**15.05 345**		*e*P	**P**	**10 11 44.2**	**-2.5**
CLNS				*e*S	**S**	**10 14 25.6**	**+2.2**
CLNS				pmax	pmax		
	comp=E,52nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,393nm,1.1s						
CLNS				pmax	pmax		
	comp=N,363nm,1.2s						
CLNS				smax			
	comp=E,303nm,1.3s						
CLNS				smax			
	comp=N,492nm,1.4s						
CLNS	**Chul'man**	**15.05 345**		*e*P	**P**	**10 11 44.2**	**-2.5**
HHC	**Hu-ho-hao-te**	**15.27 271**	⇓	*i*P	**P**	**10 11 49.8**	**+0.5**
HHC				sP		10 13 44.3	
HHC				S	**S**	**10 14 23.3**	**-4.8**
HHC				PcP	PcP	10 16 22.5	+4.4
HHC				pmax	pmax		
	comp=Z,420nm,1.4s						
HHC				pmax	pmax		
	comp=Z,2μm,6.1s						
TIY	**Taiyuan**	**15.62 259**		*e*P	**P**	**10 11 53.6**	**+0.6**
TIY				sP		10 13 56.4	
TIY				S	**S**	**10 14 35.3**	**+0.5**
TIY				pmax	pmax		
	comp=Z,4μm,3.5s						
CIT	**Chita**	**15.64 314**		*e*P	**P**	**10 11 52.6**	**-0.3**
CIT				*e*S	**S**	**10 14 35.0**	**+0.3**
CIT				pmax	pmax		
	comp=Z,2μm,1.9s						
JOW	**Kunigami**	**15.89 192**		P	**P**	**10 11 52.9**	**-3.0**
	comp=Z,20nm,0.3s,baz=62,slow=6.7,SNR=25						
JOW				S	**S**	**10 14 31.6**	**-8.6**
	comp=Z,14nm,0.3s,baz=104,slow=29,SNR=16						
BTO	**Baotou**	**16.47 271**		*e*P	**P**	**10 12 01.1**	**-0.6**
BTO				pmax	pmax		
	comp=Z,170nm,1.2s						
CBIJ	**Chichi jima**	**17.51 148**		P	**P**	**10 12 08.4**	**-3.3**
	comp=Z,172nm,0.3s,baz=352,slow=1.7,SNR=52						
CBIJ				S	**S**	**10 15 02.7**	**-4.6**
	comp=Z,55nm,0.3s,baz=288,slow=19,SNR=11						
ULN	**Ulaanbaatar**	**18.28 296**		*e*P	**P**	**10 12 19.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,231nm,0.8s						
ULN	**Ulaanbaatar**	**18.28 296**		*e*P	**P**	**10 12 19.5**	**+1.0**
	comp=Z,231nm,0.8s						
ULN	**Ulaanbaatar**	**18.28 296**		P	**P**	**10 12 19.7**	**+1.2**
	SNR=134						
ULN				P		10 12 19.7	
	SNR=134						
OKHT	**Okhotsk**	**18.30**	**19**⇑	*i*P	**P**	**10 12 17.6**	**-0.9**
WHN	**Wuhan**	**18.41 235**	⇓	*i*P	**P**	**10 12 19.4**	**-0.6**
WHN				S	**S**	**10 15 20.0**	**-2.0**
WHN				ScP	ScP	10 19 09.3	-0.6
SKR	**Severo-Kuril's**	**18.50**	**55**	*e*P	**P**	**10 12 18.5**	**-2.0**
SKR				*e*S	**S**	**10 15 18.0**	**-4.9**
SKR				pmax	pmax		
	comp=N,130nm,1.0s						
SKR				pmax	pmax		
	comp=E,360nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1μm,1.0s						
SKR				pmax	pmax		
	comp=N,2μm,2.0s						
SKR				pmax	pmax		
	comp=E,2μm,2.0s						
SKR				pmax	pmax		
	comp=Z,4μm,2.0s						
SKR				smax			
	comp=N,290nm,2.0s						
SKR				smax			
	comp=E,980nm,2.0s						
SKR				smax			
	comp=N,5μm,14.0s						
SKR				smax			
	comp=E,10μm,14.0s						
SKR				MLR	MLR		
	comp=N,3μm,14.0s						
SKR				MLR	MLR		
	comp=E,2μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
SKR	**Severo-Kuril's**	**18.50**	**55**⇓	*e*P	**P**	**10 12 18.5**	**-2.0**
SKR				AMB	AMB	10 12 20.0	
	comp=Z,130nm,1.0s						
SKR				AMB	AMB	10 12 20.0	
	comp=Z,360nm,1.0s						
SKR				AMB	AMB	10 12 20.0	
	comp=Z,1μm,1.0s						
SKR				AMB	AMB	10 12 20.0	
	comp=Z,2μm,2.0s						
SKR				AMB	AMB	10 12 20.0	
	comp=Z,4μm,2.0s						
SKR				*e*S	**S**	**10 15 18.0**	**-4.9**
SKR				A		10 15 26.5	
	comp=Z,3μm,2.0s						
SKR				A		10 15 26.5	
	comp=Z,980nm,2.0s						
SKR				A		10 15 58.0	
	comp=Z,5μm,14.0s						
SKR				A		10 15 58.0	
	comp=Z,10μm,14.0s						
SKR				A		10 15 58.0	
	comp=Z,8μm,14.0s						
SKR				A		10 15 58.0	
	comp=Z,6μm,14.0s						
SKR				A		10 15 58.0	
	comp=Z,10μm,14.0s						
SKR				A		10 15 58.0	
	comp=Z,8μm,14.0s						
SONM	**Songino Array**	**18.71 295**		P	**P**	**10 12 23.8**	**+1.3**
	comp=Z,12nm,0.3s,baz=105,slow=9.6,SNR=159						
SONM				S	**S**	**10 15 28.0**	**+1.6**
	baz=64,slow=13,SNR=2.0						
SONM	**Songino Array**	**18.71 295**		P	**P**	**10 12 23.8**	**+1.3**
SONM				S	**S**	**10 15 28.0**	**+1.6**
SONM				pmax	pmax		
	comp=Z,12nm,0.3s						
BOD	**Bodaibo**	**19.05 330**	⇓	*i*P	**P**	**10 12 24.2**	**-1.3**
BOD				*e*		10 15 30.0	
BOD				pmax	pmax		
	comp=Z,535nm,1.2s						
BOD	**Bodaibo**	**19.05 330**		*e*P	**P**	**10 12 24.2**	**-1.3**
PAU	**Pauzhetka**	**19.16**	**53**⇓	*e*P	**P**	**10 12 25.4**	**-1.1**
TATO	**Taipei**	**19.46 209**		*e*P	**P**	**10 12 30.7**	**+1.1**
	comp=Z,1μm,1.1s						
TATO	**Taipei**	**19.46 209**		P	**P**	**10 12 32.2**	**+2.6**
	SNR=7.4						
TATO				P		10 12 32.2	
	SNR=7.4						
YAK	**Yakutsk**	**19.62 357**	*c*	*i*P	**P**	**10 12 28.6**	**-2.0**
YAK				*e*S	**S**	**10 15 36.9**	**-3.8**
YAK				pmax	pmax		
	comp=Z,2μm,0.9s						
YAK				pmax	pmax		
	comp=N,799nm,1.3s						
YAK				pmax	pmax		
	comp=E,87nm,0.8s						
YAK				smax			
	comp=N,2μm,2.1s						
YAK				smax			
	comp=E,3μm,1.9s						
YAK	**Yakutsk**	**19.62 357**		*e*P	**P**	**10 12 28.8**	**-1.7**
	comp=E,2μm,0.8s						
YHNB	**Yeheng**	**19.78 209**		*e*P	**P**	**10 12 32.8**	**+0.3**
	comp=E,893nm,1.0s						
XAN	**Xi'an**	**19.86 252**		P	**P**	**10 12 33.5**	**+0.3**
XAN				sP	sP	10 14 49.9	+3.0
XAN				pmax	pmax		
	comp=Z,210nm,1.4s						
XAN				pmax	pmax		
	comp=Z,620nm,9.1s						
NACB	**Ninganchiao**	**20.15 208**		*e*P	**P**	**10 12 33.7**	**-2.3**
	comp=Z,219nm,1.0s						
PETK	**Petropavlovsk-**	**20.23 49**		P	**P**	**10 12 34.5**	**-1.7**
	comp=Z,28nm,0.8s,baz=227,slow=4.6,SNR=52						
PETK				PcP	PcP	10 16 26.0	-0.3
	comp=Z,8.8nm,0.6s,baz=102,slow=2.2,SNR=5.5						
PETK				ScP	ScP	10 19 11.5	-2.1
	comp=Z,32nm,0.9s,baz=169,slow=1.5,SNR=12						
PETK	**Petropavlovsk-**	**20.23 49**		P	**P**	**10 12 34.5**	**-1.7**
PETK				PcP	PcP	10 16 26.0	-0.3
PETK				ScP	ScP	10 19 11.5	-2.1
QZH	**Quanzhou**	**20.65 216**	⇓	*i*P	**P**	**10 12 41.3**	**+0.9**
QZH				sP	sP	10 15 03.0	+7.4
QZH				S	**S**	**10 15 56.8**	**-1.3**
QZH				pmax	pmax		
	comp=Z,680nm,0.9s						
PET	**Petropavlovsk**	**20.74**	**50**	*e*P	**P**	**10 12 40.6**	**-0.2**
PET				*e**SP	sP	10 14 56.1	-0.5
PET				*e*S	**S**	**10 15 54.5**	**-4.2**
PET				*e*		10 16 26.2	
PET				*e*		10 22 57.0	
PET				pmax	pmax		
	comp=Z,300nm,1.3s						
PET				pmax	pmax		
	comp=Z,195nm,1.0s						
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
PET				MLR	MLR		
	comp=Z,700nm,14.0s						
PET	**Petropavlovsk**	**20.74**	**50**	*e*P	**P**	**10 12 39.1**	**-1.7**
	comp=Z,143nm,0.9s						
PET	**Petropavlovsk**	**20.74**	**50**	*e*P	**P**	**10 12 40.6**	**-0.2**
PET				sP	sP	10 14 56.1	-0.5
PET				*e*S	**S**	**10 15 54.5**	**-4.2**
SSLB	**Suanglung**	**20.74 209**		*e*P	**P**	**10 12 40.7**	**-0.5**
	comp=Z,255nm,0.9s						
YULB	**Yu-li**	**20.98 208**		*e*P	**P**	**10 12 42.8**	**-0.6**
	comp=Z,145nm,1.0s						
IRK	**Irkutsk**	**20.98 307**		*e*P	**P**	**10 12 42.9**	**-0.1**
IRK				pmax	pmax		
	comp=Z,151nm,2.0s						
ZAK	**Zakamensk**	**21.14 302**⇑		*i*P	**P**	**10 12 45.3**	**+0.8**
ZAK				*e*		10 16 02.7	
ZAK				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.1						
TLY	**Talaya**	**21.20 305**		P	**P**	**10 12 45.9**	**+0.9**
	comp=Z,860nm,0.9s,mb6.4,SNR=18						
TLY	**Talaya**	**21.20 305**	*c*	*i*P	**P**	**10 12 45.5**	**+0.5**
TLY				*e*		10 15 04.0	
TLY				*e*S	**S**	**10 16 06.8**	**+0.7**
TLY				*e*SS		10 16 25.8	
TLY				pmax	pmax		
	comp=Z,152nm,0.9s,mb5.6						
TLY				MLR	MLR		
	comp=Z,176nm,10.0s						
TLY	**Talaya**	**21.20 305**		*e*P	**P**	**10 12 45.9**	**+0.8**
	comp=Z,121nm,0.8s,mb5.6						
TLY	**Talaya**	**21.20 305**		P	**P**	**10 12 46.0**	**+1.0**
	SNR=36						
TLY				P		10 12 46.0	
	SNR=36						
TPUB	**Ta-pu**	**21.30 210**		*e*P	**P**	**10 12 46.4**	**+0.1**
	comp=Z,591nm,1.0s,mb6.2						
TWG	**Pinlang**	**21.58 208**		*e*P	**P**	**10 12 48.1**	**-0.8**
	comp=Z,267nm,1.3s,mb5.7						
ENH	**Enshi**	**21.69 243**		*e*P	**P**	**10 12 49.4**	**-0.4**
	comp=Z,925nm,1.0s,mb6.4						
LZH	**Lanzhou**	**22.56 263**	⇓	P	**P**	**10 12 59.1**	**+1.6**
LZH				sP	sP	10 15 21.0	+4.4
LZH				S	**S**	**10 16 27.3**	**-0.7**
LZH				PcP	PcP	10 16 33.0	+1.7
LZH				PcS	PcS	10 20 09.0	-1.6
LZH				ScS	ScS	10 23 05.3	-0.7
LZH				pmax	pmax		
	comp=Z,4μm,4.0s						
MOY	**Mondy**	**22.80 304**		*e*P	**P**	**10 12 59.7**	**+0.3**
MOY				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.1						
BBP	**Basco**	**23.51 204**		*e*P	**P**	**10 13 06.5**	**+0.3**
SEY	**Seymchan**	**23.75**	**23**	*c* *i*P	**P**	**10 13 07.2**	**-0.4**
GTA	**Gaotai**	**24.34 274**	⇓	P	**P**	**10 13 14.8**	**+1.5**
GTA				sP	sP	10 15 43.9	+8.1
GTA				S	**S**	**10 16 56.1**	**+0.2**
GTA				ScP	ScP	10 19 24.1	-0.6
GTA				ScS	ScS	10 23 11.8	-1.2
GTA				pmax	pmax		
	comp=Z,430nm,1.2s,mb6.0						
GTA				pmax	pmax		
	comp=Z,2μm,2.6s,mb6.2						
CD2	**Chengdu**	**25.22 252**		P	**P**	**10 13 21.1**	**-0.1**
CD2				sP	sP	10 15 43.1	-2.2
CD2				PcP	PcP	10 16 38.3	+1.1
CD2				S	**S**	**10 17 10.5**	**+0.5**
CD2				pmax	pmax		
	comp=Z,710nm,1.2s,mb6.2						
CD2				pmax	pmax		
	comp=Z,1μm,5.3s						
GYA	**Guiyang**	**26.09 240**	⇓	*i*P	**P**	**10 13 28.6**	**-0.3**
GYA				sP	sP	10 15 58.3	+4.1
GYA				PcP	PcP	10 16 36.4	-2.9
GYA				S	**S**	**10 17 24.3**	**+0.6**
GYA				ScP	ScP	10 19 31.1	+1.1
GYA				PcS	PcS	10 20 20.9	-0.1
GYA				ScS	ScS	10 23 22.1	+1.2
GYA				pmax	pmax		
	comp=Z,340nm,0.9s,mb6.0						
APYP	**Conner**	**26.16 204**		*e*P	**P**	**10 13 28.9**	**-0.7**
PALP	**Palanan**	**26.60 201**		*e*P	**P**	**10 13 33.2**	**-0.2**
CAUP	**Cauayan**	**26.87 202**		*e*P	**P**	**10 13 36.9**	**+1.1**
BOLP	**Bolinao**	**27.96 205**		*e*P	**P**	**10 13 45.4**	**-0.1**
BALP	**Baler**	**28.09 201**		*e*P	**P**	**10 13 46.6**	**+0.1**
POLP	**Polilio Island**	**28.96 200**		*e*P	**P**	**10 13 56.0**	**+1.8**
TIXI	**Tiksi**	**29.28 358**	*c*	*i*P	**P**	**10 13 54.5**	**-1.7**
TIXI				*e*S	**S**	**10 18 07.9**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,195nm,1.2s,mb5.6						
TIXI	**Tiksi**	**29.28 358**		*e*P	**P**	**10 13 54.6**	**-1.6**
	comp=Z,514nm,1.7s,mb5.9						
PVCP	**Virac**	**29.55 195**		*e*P	**P**	**10 14 00.7**	**+1.4**
KMI	**Kunming**	**29.57 243**	⇓	P	**P**	**10 13 59.8**	**+0.4**
KMI				PP		10 15 24.9	
KMI				sP	sP	10 16 24.6	-1.2
KMI				PcP	PcP	10 16 46.3	-1.8
KMI				S	**S**	**10 18 16.1**	**-1.7**
KMI				ScP	ScP	10 19 39.5	-1.3
KMI				PcS	PcS	10 20 30.8	-1.3
KMI				SS	SS	10 20 51.4	-32
KMI				pmax	pmax		
	comp=Z,620nm,1.1s,mb6.0						
KMI				pmax	pmax		
	comp=Z,2μm,3.1s						
GQP	**Guinayangan**	**29.62 199**	⇓	*e*P	**P**	**10 14 00.5**	**+0.6**
TGY	**Tagaytay City**	**29.82 202**		P	**P**	**10 14 02.7**	**+1.0**
	comp=Z,889nm,0.8s,mb6.3,baz=6.1,slow=1.5,SNR=26						

TGY ScP ScP 10 19 41.0 -0.8
comp=Z,153nm,0.4s,baz=186,slow=5.0,SNR=5.8
SMY Shemya 29.85 55 *e*P **P 10 14 00.4 -1.0**
SMY pmax pmax
comp=Z,524nm,0.9s,mb6.1
SMY Shemya 29.85 55 *e*P **P 10 14 00.4 -1.0**
comp=Z,524nm,0.9s,mb6.1
QIZ Qiongzhong 29.92 225 P **P 10 14 03.3 +0.9**
QIZ S **S 10 18 25.6 +2.2**
QIZ pmax pmax
comp=Z,130nm,1.1s,mb5.4
QIZ Qiongzhong 29.92 225 *e*P **P 10 14 02.8 +0.3**
comp=Z,119nm,1.0s,mb5.4
AUQP San Andres 30.13 198 *e*P **P 10 14 06.3 +2.0**
BOAC Boac 30.20 200 *e*P **P 10 14 06.1 +1.2**
LUBP Lubang 30.37 203 *e*P **P 10 14 05.7 -0.6**
CNP Cataram 30.52 194 *e*P **P 10 14 08.9 +1.3**
GUMO Guam 30.91 155 P **P 10 14 10.7 -0.3**
comp=Z,136nm,0.5s,mb5.7,baz=210,slow=5.4,SNR=19
GUMO Guam 30.91 155 *e*P **P 10 14 10.5 -0.5**
GUMO pmax pmax
comp=Z,264nm,0.9s,mb5.8
GUMO Guam 30.91 155 *e*P **P 10 14 10.5 -0.5**
comp=Z,264nm,0.9s,mb5.8
OTRP Odiongan 31.21 199 *e*P **P 10 14 14.9 +1.3**
SJMP San Jose 31.34 201 *e*P **P 10 14 15.3 +0.6**
BILL Bilibino 31.45 24⇑*i*P **P 10 14 14.4 -0.6**
BILL *i* *PP 10 15 42.5
BILL *i* S **S 10 18 43.9 -1.8**
BILL pmax pmax
comp=Z,397nm,1.2s,mb5.8
BILL Bilibino 31.45 24 *e*P **P 10 14 14.6 -0.4**
comp=Z,451nm,1.3s,mb5.8
KALP Kalibo 31.80 198⇓*e*P **P 10 14 20.6 +2.0**
RCP Roxas 31.82 197⇓*e*P **P 10 14 19.6 +0.8**
WMQ Urumqi 31.98 288 P **P 10 14 20.5 +0.6**
WMQ PP PP 10 15 52.3 -7.7
WMQ PcP PcP 10 16 54.8 +0.5
WMQ S **S 10 18 55.3 +0.8**
WMQ ScP ScP 10 19 51.9 +3.3
WMQ PcS PcS 10 20 41.4 +1.7
WMQ SS SS 10 21 40.3 -23
WMQ ScS ScS 10 23 47.9 -0.6
WMQ pmax pmax
comp=Z,120nm,1.1s,mb5.3
WMQ pmax pmax
comp=Z,770nm,3.0s
GUIM Jordan 32.76 197 *e*P **P 10 14 27.9 +1.1**
ZALV Zalesovo Beam 32.79 307 P **P 10 14 26.1 -0.5**
comp=Z,68nm,0.9s,mb5.2,baz=86,slow=7.6,SNR=154
ZALV PcP PcP 10 16 55.5 -0.9
comp=Z,8.7nm,0.4s,baz=125,slow=3.3,SNR=8.6
ZALV ScP ScP 10 19 49.0 -2.2
comp=Z,116nm,0.8s,baz=101,slow=3.0,SNR=35
MSLP Maasin 32.81 193 *e*P **P 10 14 27.5 +0.2**
CUYO Cuyo Island 32.91 200 *e*P **P 10 14 29.0 +0.9**
ENPP El Nido 33.00 203 *e*P **P 10 14 29.7 +0.8**
NVS Novosibirsk 33.73 309⇑*i*P **P 10 14 33.8 -0.8**
NVS *i* S **S 10 19 19.1 -1.8**
NVS pmax pmax
comp=N,27nm,1.2s
NVS pmax pmax
comp=E,114nm,1.2s
NVS pmax pmax
comp=Z,139nm,1.2s,mb5.4
NVS smax
comp=N,324nm,1.7s
NVS smax
comp=E,268nm,2.2s
PPR Puerto Princes 34.56 203 *i* P **P 10 14 43.7 +1.6**
LSA Lhasa 34.97 262 P **P 10 14 47.0 +1.7**
LSA S **S 10 19 32.8 -7.5**
LSA Lhasa 34.97 262 *e*P **P 10 14 46.9 +1.6**
LSA *e**PP 10 16 14.2
LSA pmax pmax
comp=Z,655nm,1.3s,mb6.0
LSA Lhasa 34.97 262 *e*P **P 10 14 46.9 +1.6**
comp=Z,655nm,1.3s,mb6.0
LSA *e*pP 10 16 14.2
LSA *e*ScP ScP 10 19 59.6 +0.1
BUKP Musuan 34.99 192 *e*P **P 10 14 46.1 +0.5**
MK31 Makanchi Array 35.08 294 *e*P **P 10 14 46.2 +0.3**
MKAR Makanchi Array 35.08 294 P **P 10 14 46.1 +0.2**
comp=Z,61nm,0.7s,mb5.3,baz=83,slow=9.9,SNR=354
MKAR S **S 10 19 39.6 -1.7**
comp=Z,18nm,1.0s,baz=82,slow=18,SNR=10.0
MKAR ScP ScP 10 19 57.3 -2.3
comp=Z,43nm,1.1s,baz=76,slow=5.1,SNR=11
MKAR Makanchi Array 35.08 294 P **P 10 14 46.2 +0.3**
MKAR S **S 10 19 39.6 -1.7**
MKAR pmax pmax
comp=Z,61nm,0.7s
MKAR smax
comp=N,18nm,1.0s
ADK Adak 35.52 57 *e*P **P 10 14 47.5 -2.0**
ADK *e*S **S 10 19 47.7 -0.2**
ADK pmax pmax
comp=Z,318nm,1.3s,mb5.7
ADK Adak 35.52 57 *e*P **P 10 14 47.5 -2.0**
comp=Z,318nm,1.3s,mb5.7
ADK *e*S **S 10 19 47.7 -0.2**
UBT Ubonrachathani 35.63 228 P **P 10 14 51.2 +0.3**
comp=Z,396nm,1.0s,mb5.9
BATP Bataraza 35.77 204 *e*P **P 10 14 53.8 +1.7**
IMP Imphal 35.83 253 *e*P **P 10 14 52.0 -0.5**
IMP *e*x x 10 19 56.0
KKTK Khon Kaen 36.01 232 P **P 10 15 03.0 +9.0**
comp=Z,617nm,0.5s,mb6.4
CMAR Chiang Mai Arr 36.77 240 P **P 10 15 01.1 +0.8**
comp=Z,338nm,1.0s,mb5.8,baz=35,slow=7.3,SNR=482
CMAR PcP PcP 10 17 09.2 +0.4
comp=Z,3.8nm,0.3s,baz=5.7,slow=2.5,SNR=6.8
CMAR ScP ScP 10 20 05.7 -0.7
comp=Z,18nm,0.9s,baz=7.5,slow=3.1,SNR=12
CMAR Chiang Mai Arr 36.77 240 P **P 10 15 01.1 +0.8**
CMAR 10 17 09.2
CMAR 10 20 05.7
CMAR pmax pmax
comp=Z,338nm,1.0s
KURK Kurchatov 36.80 302 P **P 10 14 59.2 -0.9**
comp=Z,3μm,0.6s
KURK Kurchatov 36.80 302 P **P 10 15 00.4 +0.3**
comp=Z,303nm,0.7s,mb5.9,baz=81,slow=8.6,SNR=319
KURK pP pP 10 16 32.5 +2.2
comp=Z,56nm,0.9s,baz=83,slow=8.6,SNR=4.9
KURK PcP PcP 10 17 08.1 -0.2
comp=Z,7.5nm,0.4s,baz=103,slow=2.9,SNR=6.7
KURK ScP ScP 10 20 03.6 -2.3
comp=Z,27nm,0.7s,baz=88,slow=3.4,SNR=11
KURK Kurchatov 36.80 302 P **P 10 15 00.4 +0.3**
KURK *PP pP 10 16 32.5 +2.2
KURK 10 17 08.1
KURK 10 20 03.6
KURK pmax pmax
comp=Z,303nm,0.7s,mb5.9
KURK Kurchatov 36.80 302 *e*P **P 10 14 60.0 -0.2**
comp=Z,367nm,0.7s,mb6.0
KURK Kurchatov 36.80 302 P **P 10 15 00.3 +0.1**
SNR=125
KURK P 10 15 00.3
SNR=125
SHL Shillong 36.81 256 *e*P **P 10 15 01.0 +0.4**
SHL *e*x x 10 19 06.5
WAKE Wake Island 37.36 117 *e*P **P 10 15 04.8 -0.3**
comp=Z,953nm,1.7s,mb6.0
AGT Agartala 38.30 254 *e*x x 10 15 08.0
AGT *e*x x 10 15 54.0
TAPN Taplejung 38.79 262⇓*i*P **P 10 15 18.2 +1.5**
KKM Kota Kinabalu 38.86 205 *e*P **P 10 15 18.3 +0.9**
comp=Z,600nm,1.1s,mb6.0
JIRN Jiri 39.73 263⇓*i*P **P 10 15 25.7 +1.4**
GUN Gumba 39.82 264⇓*i*P **P 10 15 26.0 +1.0**
comp=Z,2μm,0.9s,mb6.6
TNA Tin City 40.10 34 *e*P **P 10 15 26.4 -0.4**
comp=Z,236nm,0.9s,mb5.7
TNA *e*pP pP 10 16 59.0 +0.3
NIKO Nikolski 40.13 54 *e*P **P 10 15 24.0 -3.1**
comp=Z,112nm,1.0s,mb5.3
NIKO *e*PcP PcP 10 17 17.8 -1.1
NIKO *e*ScP ScP 10 20 16.5 -2.3
KKN Kakani 40.33 264⇓*i*P **P 10 15 29.9 +0.8**
comp=Z,2μm,1.2s,mb6.5
PKI Pulchoki 40.35 264⇓*i*P **P 10 15 30.1 +0.8**
comp=Z,2μm,1.2s,mb6.6
PKIN Phulchoki 40.36 264⇓*i*P **P 10 15 29.9 +0.5**
comp=Z,1μm,1.2s,mb6.4
ULHL Ulahol 40.47 289 P **P 10 15 32.1 +2.0**
SNR=7.1
DMN Daman 40.56 264⇓*i*P **P 10 15 31.8 +0.9**
comp=Z,2μm,1.2s,mb6.4
TKM2 Tokmak 2 40.70 290 P **P 10 15 33.0 +1.2**
SNR=198
TKM2 Tokmak 2 40.70 290 *e*P **P 10 15 32.9 +1.1**
TKM2 pmax pmax
comp=Z,354nm,0.9s,mb5.9
TKM2 Tokmak 2 40.70 290 *e*P **P 10 15 32.9 +1.0**
comp=Z,354nm,0.9s,mb5.9
USP Ospenovka 41.34 291 P **P 10 15 37.3 +0.4**
SNR=72
UNV Unalaska Valle 41.37 52 *e*P **P 10 15 34.6 -2.4**
comp=Z,48nm,1.0s,mb5.0
FRU Bishkek 41.40 291⇑*i*P **P 10 15 37.0 -0.5**
FRU *e* pP 10 17 12.0 +1.7
FRU *e* 10 21 14.0
FRU *e* 10 24 40.0
FRU pmax pmax
comp=Z,320nm,20.0s
BVAR Borovoye Array 41.45 307 P **P 10 15 37.4 -0.2**
comp=Z,71nm,0.6s,mb5.3,baz=82,slow=8.0,SNR=257
BVAR pP pP 10 17 11.3 +0.8
comp=Z,6.7nm,0.6s,baz=54,slow=13,SNR=2.1
BVAR PcP PcP 10 17 22.5 -0.7
comp=Z,9.6nm,0.4s,baz=105,slow=4.5,SNR=7.2
BVAR ScP ScP 10 20 21.9 -2.1
comp=Z,37nm,0.8s,baz=90,slow=3.3,SNR=14
BVAR S **S 10 21 12.5 -2.6**
comp=Z,20nm,1.0s,baz=91,slow=13,SNR=4.2
BVAR Borovoye Array 41.45 307 P **P 10 15 37.4 -0.3**
BVAR *PP pP 10 17 11.3 +0.8
BVAR 10 17 22.5
BVAR S **S 10 21 12.5 -2.6**
BVAR pmax pmax
comp=Z,71nm,0.6s
BVAR smax
comp=N,20nm,1.0s
BRVK Borovoye 41.51 307 P **P 10 15 38.8 +0.7**
comp=N,549nm,0.9s,mb6.1,SNR=29
BRVK Borovoye 41.51 307 *e*P **P 10 15 37.9 -0.2**
BRVK pmax pmax
comp=Z,88nm,0.9s,mb5.3
BRVK Borovoye 41.51 307 *e*P **P 10 15 37.9 -0.2**
comp=Z,88nm,0.9s,mb5.3
BRVK Borovoye 41.51 307 P **P 10 15 38.3 +0.2**
SNR=39
BRVK P 10 15 38.3
SNR=39
AAK Ala-Archa 41.55 290 P **P 10 15 39.5 +0.9**
SNR=11
AAK Ala-Archa 41.55 290 P **P 10 15 39.2 +0.6**
comp=Z,40nm,0.4s,mb5.3,baz=107,slow=4.5,SNR=166
AAK pP pP 10 17 13.1 +1.6
comp=Z,16nm,0.8s,baz=57,slow=5.3,SNR=2.6
AAK ScP ScP 10 20 22.5 -2.1
comp=Z,26nm,1.1s,baz=106,slow=3.0,SNR=8.5
AAK S **S 10 21 15.6 -1.3**
comp=Z,6.5nm,0.9s,baz=239,slow=23,SNR=9.4
AAK Ala-Archa 41.55 290 P **P 10 15 39.2 +0.5**
AAK *PP pP 10 17 13.1 +1.5
AAK S **S 10 21 15.6 -1.3**
AAK pmax pmax
comp=Z,40nm,0.4s,mb5.3
AAK smax
comp=N,7.0nm,0.9s
AAK Ala-Archa 41.55 290 *e*P **P 10 15 39.2 +0.5**
comp=N,136nm,0.9s,mb5.5
AAK Ala-Archa 41.55 290 P **P 10 15 39.4 +0.8**
SNR=62
AAK P 10 15 39.4
SNR=62
KSH Kashi 41.65 285⇓*i*P **P 10 15 43.8 +4.3**
KSH pP pP 10 17 16.3 +3.8
KSH PcP PcP 10 17 27.8 +3.6
KSH PP PP 10 17 33.1 +4.0
KSH sP sP 10 18 12.1 +1.5
KSH ScP ScP 10 20 28.1 +3.1
KSH PcS PcS 10 21 18.3 +1.7
KSH S **S 10 21 25.3 +6.9**
KSH sS sS 10 24 12.9 +5.0
KSH SS SS 10 24 45.5 +2.3
KSH ScS ScS 10 24 46.8 +2.9
KSH pmax pmax
comp=Z,100nm,1.3s,mb5.2
UCH Uchtor 41.68 290 P **P 10 15 40.9 +1.2**
SNR=79
UCH Uchtor 41.68 290 *e*P **P 10 15 40.6 +1.0**
comp=Z,2μm,0.8s,mb6.6
AKUT Akutan 41.75 52 *e*P **P 10 15 37.3 -2.7**
comp=Z,106nm,0.8s,mb5.4
EKS2 Erkin-Say 42.04 291 P **P 10 15 43.0 +0.5**
SNR=68
EKS2 Erkin-Say 42.04 291 *e*P **P 10 15 42.6 +0.1**
comp=Z,95nm,0.9s,mb5.3
AML Almayashu 42.29 290 P **P 10 15 45.6 +1.1**
SNR=173
AML Almayashu 42.29 290 *e*P **P 10 15 45.5 +1.1**
comp=Z,973nm,0.8s,mb6.4
FALS False Pass 42.96 50 *e*P **P 10 15 47.8 -1.7**
comp=Z,104nm,0.7s,mb5.5
PTH Pithoragarh 43.12 270 *e*P **P 10 15 51.0 -0.1**
MIDW Midway 43.15 92 *e*P **P 10 15 51.1 -0.3**
comp=Z,359nm,1.0s,mb5.9
DDI Dehra Dun 44.31 272 *e*P **P 10 15 59.8 -0.6**
DDI *e*x x 10 22 03.2
SDNR Sundarnagar 44.51 274 *e*P **P 10 16 03.1 +1.1**
SDNR *e*S **S 10 21 59.9 +0.5**
SDPT Sand Point 44.51 49 *e*P **P 10 15 59.6 -2.0**
comp=Z,99nm,0.7s,mb5.5
SMLA Simla 44.55 274⇓*i*P **P 10 15 59.6 -2.7**
SMLA ⇓*i*S **S 10 21 57.5 -2.6**
THN Thein Dam 44.97 276 *e*P **P 10 16 04.9 -0.6**
THN *e*x x 10 16 07.4
KSM Kuching 45.18 211 *e*P **P 10 16 07.9 +0.6**
comp=Z,594nm,1.0s,mb6.1
TTA Tatalina 45.38 38 *e*P **P 10 16 08.1 0.0**
CHGN Chignik 45.44 47 *e*P **P 10 16 07.4 -1.2**
NDI New Delhi 45.80 271 *e*P **P 10 16 11.0 -0.8**
NDI *e*x x 10 22 15.0
SVW2 Sparrevohn 45.89 40 *e*P **P 10 16 12.6 +0.6**
KWAJ Kwajalein Atol 45.91 127 *e*P **P 10 16 13.0 +0.1**
comp=Z,294nm,1.3s,mb5.7
SVE Sverdlovsk 46.14 314⇓*e*P **P 10 16 14.1 +0.1**
SVE pmax pmax
comp=Z,310nm,0.9s,mb5.8
KULM Kulim 46.25 226 *e*P **P 10 16 16.3 +0.9**
comp=Z,686nm,0.9s,mb6.2
CHUM Lake Minchumin 46.87 36 *e*P **P 10 16 19.8 +0.4**
comp=Z,110nm,1.1s,mb5.3
PPLA Purkeypile 47.11 37 *e*P **P 10 16 21.9 +0.6**
comp=Z,468nm,1.2s,mb5.9
ARU Arti 47.35 314 P **P 10 16 22.9 -0.3**
comp=Z,2μm,0.8s,mb6.7,SNR=15
ARU Arti 47.35 314*d*i*P **P 10 16 22.6 -0.6**
ARU *e* 10 17 43.3
ARU *e* 10 18 17.9
ARU *e*PPP 10 18 54.3
ARU *e*S **S 10 22 38.2 -0.2**
ARU *e* 10 25 16.2
ARU SS SS 10 26 12.1 -1.8
ARU pmax pmax
comp=Z,323nm,1.0s,mb5.8
ARU Arti 47.35 314 *e*P **P 10 16 22.8 -0.3**
comp=Z,222nm,0.7s,mb5.8
RSO Redoubt South 47.38 41 *e*P **P 10 16 23.3 0.0**
SOKR Solikamsk 47.46 318*c*i*P **P 10 16 23.6 -0.3**
SOKR pmax pmax
comp=Z,180nm,1.2s,mb5.5
VIS Vishakhapatnam 47.91 254 *i* x **P 10 16 25.2 -2.7**
OHAK Old Harbor 47.94 45 *e*P **P 10 16 26.6 -0.9**
comp=Z,226nm,0.8s,mb5.8
KDAK Kodiak Island 48.15 44 P **P 10 16 28.0 -1.1**
comp=Z,2μm,0.6s,SNR=75
KDAK Kodiak Island 48.15 44 P **P 10 16 28.5 -0.6**
comp=Z,254nm,0.7s,mb5.8
KDAK PcP PcP 10 17 46.9 +0.2
KDAK ScP ScP 10 20 50.9 -0.8
KDAK Kodiak Island 48.15 44 P **P 10 16 28.5 -0.6**
KDAK 10 17 46.9
KDAK pmax pmax
comp=Z,254nm,0.7s,mb5.9
MCK McKinley 48.36 36 *e*P **P 10 16 30.2 -0.4**
FIB Fire Island 48.44 39 *e*P **P 10 16 32.1 +0.9**
FIB pmax pmax
comp=Z,321nm,0.8s,mb5.9
FIB Fire Island 48.44 39 *e*P **P 10 16 32.0 +0.9**
comp=Z,321nm,0.8s,mb5.9
KAPI Kappang 48.54 196 P **P 10 16 31.2 -1.4**
comp=Z,107nm,0.7s,mb5.5,baz=15,slow=4.7,SNR=55
KAPI ScP ScP 10 20 51.6 -2.3
comp=Z,40nm,1.1s,baz=69,slow=6.5,SNR=6.2
KAPI S **S 10 22 53.3 -2.5**
comp=Z,7.6nm,0.8s,baz=234,slow=19,SNR=4.6
COLA College 48.56 34 *e*P **P 10 16 32.2 +0.2**
COLA pmax pmax
comp=Z,414nm,0.8s,mb6.0
COLA College 48.56 34 *e*P **P 10 16 32.2 +0.1**
comp=Z,414nm,0.8s,mb6.0
BHPL Bhopal 48.73 265 *e*P **P 10 16 33.5 -0.6**
BHPL AMb AMB 10 16 35.1
comp=Z,666nm,1.1s,mb6.1
ABKAR Akbulak array 48.81 304 *e*P **P 10 16 33.7 -0.4**
comp=Z,18nm,0.8s,mb4.7
PMR Palmer 48.81 39 *e*P **P 10 16 33.3 -0.7**
PMR pmax pmax
comp=Z,458nm,1.1s,mb5.9
PMR Palmer 48.81 39 *e*P **P 10 16 33.3 -0.7**
comp=Z,458nm,1.1s,mb5.9
NGP Nagpur 48.81 261⇓*i*x x 10 16 28.8
NGP *e*x x 10 16 32.4
comp=Z,434nm,1.4s
NGP *e*x x 10 18 30.3
AJM Ajmer 48.91 270 *e*P **P 10 16 35.6 +0.3**
AJM AMb AMB 10 16 37.3
comp=Z,420nm,1.1s,mb5.9
AKTK Aktyubinsk 49.55 306 P **P 10 16 39.0 -0.6**
AKTK ScP ScP 10 20 55.0 -2.7
AKTK S **S 10 23 06.5 -2.2**
AKTO Aktyubinsk 49.55 306 P **P 10 16 39.0 -0.6**
comp=Z,105nm,0.8s,mb5.3,baz=80,slow=7.9,SNR=143
AKTO ScP ScP 10 20 55.0 -2.8
comp=Z,11nm,0.8s,baz=82,slow=6.2,SNR=4.5
AKTO S **S 10 23 06.5 -2.2**
comp=Z,26nm,1.2s,baz=260,slow=20,SNR=25
AKTO Aktyubinsk 49.55 306 P **P 10 16 39.0 -0.6**
AKTO S **S 10 23 06.5 -2.2**
AKTO pmax pmax
comp=Z,105nm,0.8s,mb5.3
AKTO smax
comp=N,26nm,1.2s
DIV Divide 50.49 39 *e*P **P 10 16 46.4 0.0**
comp=N,233nm,1.0s,mb5.6
DIV *e*pP pP 10 18 23.6 -0.8
MID Middleton Isla 50.77 41 *e*P **P 10 16 47.8 -0.6**
MENT Mentasta 50.84 36 *e*P **P 10 16 48.9 0.0**
EGAK Eagle 51.33 33 *e*P **P 10 16 51.9 -0.6**
comp=N,594nm,1.2s,mb5.8
EGAK *e*pP pP 10 18 30.8 -0.1
HYB Hyderabad 51.54 258 *i* P **P 10 16 53.5 -1.1**
HYB *e* 10 17 37.0
HYB *e* 10 17 48.0
HYB *e*pP pP 10 18 35.0 +1.7
HYB *e*PP PP 10 18 58.0 -0.9
HYB *e*ScP ScP 10 21 06.0 -0.9
HYB *e*S **S 10 23 35.0 -1.5**
HYB *e* 10 23 44.0
HYB *e*ScS ScS 10 25 45.0 -5.2
DAWY Dawson 52.30 34 *e*P **P 10 16 59.0 -0.4**
LATR Latur 52.35 260 *e*P **P 10 17 02.0 +1.5**
QUE Quetta 52.55 279 *e*P **P 10 16 52.0 -10**
QUE *e*S **S 10 23 38.0 -12**
HOPEN Hopen 52.86 344⇑*i*P **P 10 17 02.2 -1.1**
INK Inuvik 52.94 28 P **P 10 17 03.7 -0.2**
comp=N,221nm,0.6s,mb5.6,baz=310,slow=7.4,SNR=1276
INK PcP PcP 10 18 04.2 -0.2
comp=N,49nm,0.9s,baz=306,slow=1.1,SNR=4.6
INK pP pP 10 18 42.6 -0.7
comp=N,32nm,0.9s,baz=288,slow=7.7,SNR=3.1
INK ScP ScP 10 21 11.2 -0.9
comp=N,20nm,1.0s,baz=290,slow=2.3,SNR=3.3
INK S **S 10 23 53.7 -0.1**
comp=N,6.2nm,0.9s,baz=47,slow=31,SNR=10
INK Inuvik 52.94 28 P **P 10 17 03.7 -0.2**
INK 10 18 04.2
INK *PP pP 10 18 42.6 -0.7
INK S **S 10 23 53.7 -0.1**
INK pmax pmax
comp=Z,221nm,0.6s
INK smax
comp=N,6.0nm,0.9s
INK Inuvik 52.94 28 *e*P **P 10 17 03.8 -0.2**
comp=N,246nm,0.7s,mb5.7
INK *e*PcP PcP 10 18 04.2 -0.2
INK *e*pP pP 10 18 41.3 -1.9
BHV Bhavnagar 53.53 267 *e*x x 10 17 05.3
PNL Peninsula 53.97 39 *e*P **P 10 17 11.7 +0.3**
comp=N,383nm,0.9s,mb5.7
LVZ Lovozero 54.01 332 P **P 10 17 10.6 -0.9**
comp=N,553nm,0.7s,mb6.0,SNR=7.2
POO Poona 54.26 263 *e*P **P 10 17 13.7 -0.3**
POO AMb AMB 10 17 16.1
comp=Z,584nm,1.3s,mb5.8
HYT Haines Junctio 54.36 37 *e*P **P 10 17 16.2 +2.1**
HSP Hornsund 54.46 346 *e*P **P 10 17 14.6 0.0**
BHJ Bhuj 54.47 270 *e*P **P 10 17 15.3 -0.1**
BHJ AMb AMB 10 17 17.9
comp=Z,413nm,0.9s,mb5.8
APA Apatity 54.58 332*b*i*P **P 10 17 15.0 -0.6**
APA *i* 10 18 10.4
APA *i* *PP pP 10 18 57.0 +1.3
APA *i* S **S 10 24 13.0 -2.4**
APA pmax pmax
comp=Z,140nm,0.7s,mb5.3
KAD Karad 54.79 261 *e*P **P 10 17 17.5 -0.3**
KAD AMb AMB 10 17 19.3
comp=Z,524nm,0.9s,mb5.8
ABKT Ailbek 54.87 292 P **P 10 17 18.4 +0.3**
comp=Z,1μm,1.0s,mb6.2,SNR=28
KAKA Kakadu 54.92 179⇓*i*P **P 10 17 17.4 -1.2**
comp=Z,124nm,0.5s,mb5.4
KAKA Kakadu 54.92 179 *e*P **P 10 17 17.4 -1.2**
comp=Z,389nm,0.6s,mb5.8
TARA Tarawa 55.00 127 *e*P **P 10 17 19.4 +0.1**
comp=Z,606nm,1.2s,mb5.7
ALE Alert 55.05 2 P **P 10 17 18.0 -0.7**
comp=Z,2μm,1.0s,mb6.3
KLMR Klimovskoe 55.12 323*c*i*P **P 10 17 18.4 -1.0**
KLMR *e**PP pP 10 18 56.3 -3.6
KLMR *e* 10 19 27.5
KLMR *e**SP sP 10 19 49.0 -6.9
KLMR *i* S **S 10 24 19.8 -2.8**
KLMR pmax pmax
comp=Z,208nm,1.1s,mb5.3
KEV Kevo 55.62 336 *e*P **P 10 17 22.2 -0.6**
KEV pmax pmax
comp=Z,141nm,0.7s,mb5.3
KEV Kevo 55.62 336 *e*P **P 10 17 22.2 -0.5**
comp=Z,308nm,0.8s,mb5.6
KEV Kevo 55.62 336 *e*p **P 10 17 22.2 -0.6**
comp=Z,141nm,0.7s,mb5.3
JOHN Johnston Islan 55.81 99 *e*P **P 10 17 24.7 -0.2**
comp=Z,334nm,1.0s,mb5.5
SKAG Skagway 55.93 38 *e*P **P 10 17 25.1 0.0**
comp=Z,343nm,1.4s,mb5.4
ARCES ARCESS Array B 56.18 336 P **P 10 17 26.2 -0.5**
comp=Z,148nm,0.7s,mb5.3,baz=63,slow=8.4,SNR=565
ARCES PP PP 10 19 35.9 -2.9
comp=Z,33nm,0.9s,baz=47,slow=7.1,SNR=7.2
ARCES S **S 10 24 33.2 -2.9**
comp=Z,10nm,0.9s,baz=80,slow=14,SNR=5.7
ARCES ARCESS Array B 56.18 336 P **P 10 17 26.2 -0.5**
ARCES 10 19 35.9
ARCES S **S 10 24 33.2 -2.9**
ARCES pmax pmax
comp=Z,148nm,0.7s
ARCES pmax pmax
comp=Z,33nm,0.9s
ARCES smax
comp=N,10.0nm,0.9s
ARCES ARCESS Array B 56.18 336 P **P 10 17 26.2 -0.5**
ARCES PP PP 10 19 35.9 -2.9
ARCES S **S 10 24 33.2 -2.9**
GOA Goa 56.23 260⇑*i*P **P 10 17 27.6 -0.2**
GOA *e*x x 10 24 36.3
PALK Pallekele 57.00 247 *i* P **P 10 17 33.7 +0.6**
PALK Pallekele 57.00 247 *e*P **P 10 17 33.2 +0.1**
comp=N,496nm,1.2s,mb5.6

PALK	**Pallekele**	**57.00**	**247**	P	**P**	**10 17 33.8**	**+0.6**
	SNR=15						
PALK				P		10 17 33.8	
	SNR=15						
SIT	**Sitka**	**57.05**	**41**	*e*P	**P**	**10 17 33.4**	**+0.6**
SIT				pmax	pmax		
	comp=Z,562nm,1.2s,mb5.7						
SIT	**Sitka**	**57.05**	**41**	*e*P	**P**	**10 17 33.4**	**+0.6**
	comp=Z,562nm,1.2s,mb5.7						
COEN	**Coen**	**57.11**	**167**	*e*P	**P**	**10 17 34.1**	**+0.3**
	comp=Z,227nm,0.6s,mb5.6						
COEN				*e*pP	pP	10 19 17.0	+1.6
KTK1	**Kautokeino**	**57.14**	**336**	*e*P	**P**	**10 17 33.1**	**-0.2**
JOF	**Joensuu**	**57.58**	**328**	*e*P	**P**	**10 17 35.4**	**-0.9**
JOF				pmax	pmax		
	comp=Z,82nm,0.8s,mb5.0						
JOF	**Joensuu**	**57.58**	**328**	*e*p	**P**	**10 17 35.4**	**-0.9**
	comp=Z,82nm,0.8s,mb5.0						
XMIS	**Christmas Isla**	**57.93**	**211**	⇓*i*P	**P**	**10 17 38.0**	**-1.4**
XMIS	**Christmas Isla**	**57.93**	**211**	*e*P	**P**	**10 17 38.0**	**-1.3**
TRO	**Tromso**	**58.04**	**338**	⇑*i*P	**P**	**10 17 38.5**	**-0.9**
TRO				*e*S	**S**	**10 24 59.5**	**-0.5**
MOS	**Moscow**	**58.41**	**319**	*e*P	**P**	**10 17 40.1**	**-2.0**
MOS				*e*		10 18 23.3	
MOS				*e**PP	pP	10 19 23.8	-0.4
MOS				*e*		10 19 55.3	
MOS				*i* S	**S**	**10 25 02.4**	**-2.6**
MOS				*i*		10 26 33.4	
MOS				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.3						
MOS				pmax	pmax		
	comp=Z,176nm,0.8s,mb5.3						
MOS				smax			
	comp=E,300nm,1.6s						
MOS				smax			
	comp=Z,400nm,2.0s						
MOS				smax			
	comp=N,2μm,2.0s						
VRHR	**Novokhopersk**	**58.66**	**312**	*e*P	**P**	**10 17 42.7**	**-1.2**
VRHR				*e**PP	pP	10 19 27.1	+1.0
VRHR				*e*S	**S**	**10 25 04.2**	**-4.1**
VRHR				pmax	pmax		
	comp=N,20nm,0.5s						
VRHR				pmax	pmax		
	comp=E,30nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,70nm,0.5s,mb5.2						
VRHR				smax			
	comp=N,400nm,1.4s						
VRHR				smax			
	comp=Z,220nm,2.3s						
VRHR				smax			
	comp=E,370nm,1.3s						
DLBC	**Dease Lake**	**58.83**	**37**	*e*P	**P**	**10 17 46.0**	**+1.1**
CRAG	**Craig**	**58.90**	**41**	*e*P	**P**	**10 17 46.2**	**+0.8**
	comp=E,287nm,0.8s,mb5.5						
OBN	**Obninsk**	**59.24**	**318**	⇑*i*P	**P**	**10 17 46.8**	**-0.9**
OBN				*i* *PP	pP	10 19 30.2	0.0
OBN				*i*		10 20 03.2	
OBN				*i* S	**S**	**10 25 12.4**	**-3.2**
OBN				pmax	pmax		
	comp=Z,158nm,1.2s,mb5.1						
OBN	**Obninsk**	**59.24**	**318**	*e*P	**P**	**10 17 47.0**	**-0.7**
MAK	**Makhachkala**	**59.33**	**302**	P	**P**	**10 17 42.7**	**-5.8**
MAK				*e*		10 18 31.6	
MAK				*e**PP	pP	10 19 26.2	-4.9
MAK				*e*		10 20 09.2	
MAK				*e*S	**S**	**10 25 10.0**	**-7.0**
MAK				*e*		10 26 38.9	
MAK				pmax	pmax		
	comp=Z,450nm,1.7s,mb5.4						
DAG	**Danmarks Havn**	**59.57**	**352**	⇓*i*P	**P**	**10 17 48.8**	**-0.8**
DAG				pmax	pmax		
	comp=Z,120nm,0.6s,mb5.4						
DAG	**Danmarks Havn**	**59.57**	**352**	⇓*i*P	**P**	**10 17 48.8**	**-0.8**
	comp=Z,120nm,0.6s,mb5.4						
VSR	**Storozhevoye**	**59.93**	**313***c*	*i*P	**P**	**10 17 51.3**	**-1.1**
VSR				*e**PP	pP	10 19 35.4	+0.2
VSR				*e*S	**S**	**10 25 19.8**	**-4.5**
VSR				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.0						
VSR				pmax	pmax		
	comp=N,90nm,0.9s						
VSR				pmax	pmax		
	comp=E,100nm,0.9s						
VSR				smax			
	comp=E,160nm,0.9s						
VSR				smax			
	comp=Z,40nm,1.3s						
VSR				smax			
	comp=N,40nm,0.8s						
KAF	**Kangasniemi**	**59.97**	**328**	*e*P	**P**	**10 17 51.4**	**-1.0**
KAF				pmax	pmax		
	comp=Z,101nm,0.7s,mb5.3						
KAF	**Kangasniemi**	**59.97**	**328**	*e*p	**P**	**10 17 51.4**	**-1.0**
	comp=Z,101nm,0.7s,mb5.3						
VORD	**Divnogorie**	**59.99**	**313***c*	*i*P	**P**	**10 17 51.7**	**-1.1**
VORD				*e**PP	pP	10 19 36.1	+0.5
VORD				*e*S	**S**	**10 25 20.6**	**-4.5**
VORD				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.0						
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,30nm,0.8s						
VORD				smax			
	comp=E,120nm,1.1s						
VORD				smax			
	comp=Z,80nm,2.0s						
VORD				smax			
	comp=N,90nm,0.9s						
STEI	**Steigen**	**60.15**	**337**	⇑*i*P	**P**	**10 17 52.9**	**-0.7**
STEI				AMB	AMB	10 17 53.8	
	comp=Z,216nm,0.9s,mb5.5						
FINES	**FINESS Array B**	**60.44**	**328**	P	**P**	**10 17 54.8**	**-0.8**
	comp=Z,189nm,0.7s,mb5.5,baz=71,slow=6.9,SNR=375						
FINES				pP	pP	10 19 39.6	+1.0
	comp=Z,34nm,0.8s,baz=74,slow=6.9,SNR=5.6						
FINES				S	**S**	**10 25 26.9**	**-3.5**
	comp=Z,11nm,0.9s,baz=52,slow=16,SNR=6.1						
FINES	**FINESS Array B**	**60.44**	**328**	P	**P**	**10 17 54.8**	**-0.8**
FINES				*PP	pP	10 19 39.6	+1.0
FINES				S	**S**	**10 25 26.9**	**-3.5**
FINES				pmax	pmax		
	comp=Z,189nm,0.7s						
FINES				smax			
	comp=N,11nm,0.9s						
LOF	**Lofoten**	**60.51**	**338**	⇑*i*P	**P**	**10 17 56.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**60.56**	**187**	⇓*i*P	**P**	**10 17 56.8**	**-0.1**
	comp=N,248nm,0.7s,mb5.7						
FITZ	**Fitzroy Crossi**	**60.56**	**187**	P	**P**	**10 17 56.9**	**0.0**
	comp=N,106nm,0.6s,mb5.3,baz=8.0,slow=5.6,SNR=212						
FITZ				pP	pP	10 19 43.3	+3.1
	comp=N,20nm,1.0s,baz=25,slow=7.4,SNR=2.7						
FITZ				S	**S**	**10 25 31.4**	**-1.4**
	comp=N,19nm,1.0s,baz=201,slow=14,SNR=8.9						
FITZ	**Fitzroy Crossi**	**60.56**	**187**	*e*P	**P**	**10 17 56.6**	**-0.2**
	comp=N,175nm,0.9s,mb5.4						
KIP	**Kipapa**	**61.39**	**86**	*e*P	**P**	**10 18 02.2**	**-0.3**
KIP				*e**PP	pP	10 19 47.4	+1.4
MOR8	**Moi Rana**	**61.55**	**336**	⇑*i*P	**P**	**10 18 00.8**	**-2.0**
MOR8				AMB	AMB	10 18 01.8	
	comp=Z,336nm,0.8s,mb5.8						
ZEI	**Tsey**	**61.68**	**303**	*e*P	**P**	**10 18 02.4**	**-1.6**
ZEI				*e*		10 20 29.4	
ZEI				*e*S	**S**	**10 25 41.6**	**-4.7**
ZEI				*e*		10 27 03.8	
ZEI				*e*SSS		10 33 06.2	
ZEI				pmax	pmax		
	comp=Z,34nm,0.8s,mb4.8						
MTA	**Mtatsminda**	**61.70**	**302**	P	pP	10 19 52.3	+4.4
TBLG	**Delisi**	**61.72**	**302**	*i* P	**P**	**10 18 04.5**	**+0.2**
TBLG	**Delisi**	**61.72**	**302**	P	**P**	**10 18 04.5**	**+0.2**
TBLG	**Delisi**	**61.72**	**302**	P	pP	10 19 50.3	+2.3
KONS	**Konsvik**	**61.73**	**336**	*e*P	**P**	**10 18 03.7**	**-0.2**
FLOS	**Flostrand**	**61.76**	**336**	⇑*i*P	**P**	**10 18 03.1**	**-1.1**
KIV	**Kislovodsk**	**61.77**	**305**	P	**P**	**10 18 05.3**	**+0.6**
	comp=Z,2μm,0.9s,mb6.5,SNR=20						
KIV	**Kislovodsk**	**61.77**	**305***d*	*i*P	**P**	**10 18 04.9**	**+0.2**
KIV				*e*		10 18 37.9	
KIV				*e**PP	pP	10 19 48.8	+0.5
KIV				*e*		10 20 28.1	
KIV				*e*S	**S**	**10 25 46.2**	**-1.3**
KIV				*e*SS	SS	10 30 01.9	+1.4
KIV				pmax	pmax		
	comp=Z,300nm,1.0s,mb5.7						
KIV				MLR	MLR		
	comp=Z,195nm,19.0s						
KIV	**Kislovodsk**	**61.77**	**305**	*e*P	**P**	**10 18 05.0**	**+0.3**
KIV	**Kislovodsk**	**61.77**	**305**	P	**P**	**10 18 05.2**	**+0.5**
	SNR=75						
KIV				P		10 18 05.2	
	SNR=75						
STOK	**Stokkvaagen**	**61.87**	**336**	*e*P	**P**	**10 18 03.5**	**-1.3**
VSU	**Vasula**	**61.91**	**325***c*	*i*P	**P**	**10 18 04.8**	**-0.5**
VSU				pmax	pmax		
	comp=Z,297nm,0.9s,mb5.7						
ONI	**Oni**	**62.05**	**303**	P	pP	10 19 52.4	+2.1
WRAB	**Tennant Creek**	**62.14**	**177**	*e*P	**P**	**10 18 06.6**	**-0.7**
GNI	**Garni**	**62.58**	**300**	*e*P	**P**	**10 18 10.7**	**+0.7**
GNI				pmax	pmax		
	comp=Z,64nm,0.9s						
GNI	**Garni**	**62.58**	**300**	*e*P	**P**	**10 18 10.7**	**+0.7**
	comp=Z,64nm,0.9s,mb5.0						
GNI	**Garni**	**62.58**	**300**	P	**P**	**10 18 11.1**	**+1.1**
	SNR=24						
GNI				P		10 18 11.1	
	SNR=24						
YKA	**Yellowknife Ar**	**62.68**	**29**	P	**P**	**10 18 09.6**	**-0.6**
	comp=Z,150nm,0.8s,mb5.5,baz=310,slow=7.1,SNR=1674						
YKA				pP	pP	10 19 54.8	+0.5
	comp=Z,53nm,1.2s,baz=306,slow=7.7,SNR=10						
YKA	**Yellowknife Ar**	**62.68**	**29**	P	**P**	**10 18 09.6**	**-0.6**
YKA				*PP	pP	10 19 54.8	+0.5
YKA				pmax	pmax		
	comp=Z,150nm,0.8s						
BANOM	**Banah**	**62.71**	**281**	P	**P**	**10 18 11.7**	**+0.6**
	SNR=14						
WBK	**Wadi Bani Khal**	**62.74**	**276**	P	**P**	**10 18 12.1**	**+0.9**
	SNR=36						
BIDO	**Bidbid**	**62.81**	**278**	P	**P**	**10 18 12.6**	**+0.9**
	SNR=25						
SMDO	**Samad**	**63.14**	**277**	P	**P**	**10 18 14.8**	**+0.9**
	SNR=47						
COCO	**West Island**	**63.20**	**219**	*i* P	**P**	**10 18 15.8**	**+1.6**
COCO	**West Island**	**63.20**	**219**	*e*P	**P**	**10 18 14.6**	**+0.4**
JMIC	**Jan Mayen**	**63.32**	**346**	*e*P	**P**	**10 18 14.5**	**+0.2**
HOQ	**Hoqain**	**63.37**	**278**	P	**P**	**10 18 15.8**	**+0.5**
	SNR=46						
NSS	**Namsos**	**63.43**	**335**	*e*P	**P**	**10 18 12.8**	**-2.2**
HATD	**Hatta, Dubai**	**63.49**	**280**	P	**P**	**10 18 16.7**	**+0.7**
	SNR=49						
JMDO	**Jabal Madar**	**63.52**	**277**	P	**P**	**10 18 16.9**	**+0.6**
	SNR=31						
ASHO	**Ashiyiah**	**63.62**	**280**	P	**P**	**10 18 17.6**	**+0.6**
	SNR=54						
CTA	**Charters Tower**	**63.66**	**165**	⇓*i*P	**P**	**10 18 16.9**	**-0.1**
	comp=Z,29nm,0.6s,mb4.9						
CTA	**Charters Tower**	**63.66**	**165**	P	**P**	**10 18 16.9**	**-0.1**
	comp=Z,71nm,0.9s,mb5.1,baz=346,slow=7.1,SNR=54						
CTA				pP	pP	10 20 02.9	+1.2
	comp=Z,17nm,1.1s,baz=345,slow=9.3,SNR=3.5						
CTA				S	**S**	**10 26 09.6**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=30,slow=23,SNR=6.3						
CTA	**Charters Tower**	**63.66**	**165**	P	**P**	**10 18 16.9**	**-0.1**
CTA				*PP	pP	10 20 02.9	+1.2
CTA				S	**S**	**10 26 09.6**	**-1.2**
CTA				pmax	pmax		
	comp=Z,71nm,0.9s						
CTA				smax			
	comp=N,2.0nm,0.9s						
CTAO	**Charters Tower**	**63.66**	**165**	*e*P	**P**	**10 18 17.0**	**0.0**
CTAO				*e**PP	pP	10 20 03.0	+1.3
NAZ	**Nazwa, Dubai**	**63.73**	**281**	P	**P**	**10 18 18.0**	**+0.4**
	SNR=15						
SOC	**Sochi**	**63.77**	**306**	*e*P	**P**	**10 18 16.8**	**-0.8**
SOC				*e**PP	pP	10 20 02.7	+0.6
SOC				*e*		10 20 45.5	
SOC				pmax	pmax		
	comp=Z,96nm,0.9s,mb5.2						
MNK	**Minsk**	**63.78**	**321**	*e*P	**P**	**10 18 14.0**	**-3.4**
MNK				*e*	pP	10 20 00.0	-2.0
MNK				pmax	pmax		
	comp=Z,560nm,1.0s,mb6.0						
FAQ	**Al Faqa, Dubai**	**63.93**	**280**	P	**P**	**10 18 18.9**	**0.0**
	SNR=13						
BSY	**Bisya**	**63.95**	**278**	P	**P**	**10 18 19.8**	**+0.8**
	SNR=63						
ARQ	**Araqi**	**64.09**	**279**	P	**P**	**10 18 20.4**	**+0.5**
	SNR=52						
ASUD	**Al Ashush, Dub**	**64.19**	**281**	P	**P**	**10 18 21.3**	**+0.8**
	SNR=14						
POHA	**Pohakuloa**	**64.24**	**86**	*e*P	**P**	**10 18 21.3**	**+0.4**
	comp=Z,509nm,0.9s,mb6.0						
POHA				*e*pP	pP	10 20 05.3	-0.4
MBWA	**Marble Bar**	**64.31**	**193**	*e*P	**P**	**10 18 20.8**	**-0.4**
	comp=Z,176nm,0.9s,mb5.5						
MBWA	**Marble Bar**	**64.31**	**193**	P	**P**	**10 18 21.3**	**+0.2**
	SNR=11						
MBWA				P		10 18 21.3	
	SNR=11						
ANN	**Anapa**	**64.42**	**308***c*	*i*P	**P**	**10 18 19.6**	**-2.1**
ANN				*i* *PP	pP	10 20 07.0	+0.5
ANN				*e*		10 20 46.8	
ANN				*i* S	**S**	**10 26 17.0**	**-2.7**
ANN				pmax	pmax		
	comp=E,73nm,1.6s						
ANN				pmax	pmax		
	comp=Z,220nm,1.6s,mb5.3						
ANN				pmax	pmax		
	comp=N,32nm,0.8s						
KHU	**Kahuku**	**64.49**	**87**	*e*P	**P**	**10 18 22.7**	**+0.2**
SUMG	**Summit**	**65.04**	**357**	*e*P	**P**	**10 18 25.4**	**+0.3**
AKASG	**Malin Array Be**	**65.40**	**317**	P	**P**	**10 18 25.4**	**-2.3**
	comp=N,57nm,0.6s,mb5.2,baz=50,slow=6.4,SNR=181						
AKASG				pP	pP	10 20 13.5	+0.5
	comp=N,17nm,0.8s,baz=47,slow=6.9,SNR=4.6						
AKASG	**Malin Array Be**	**65.40**	**317**	P	**P**	**10 18 25.4**	**-2.3**
AKASG				*PP	pP	10 20 13.5	+0.5
AKASG				pmax	pmax		
	comp=Z,57nm,0.6s						
AKASG	**Malin Array Be**	**65.40**	**317**	P	**P**	**10 18 25.4**	**-2.3**
AKASG				pP	pP	10 20 13.5	+0.5
KIEV	**Kiev**	**65.41**	**317**	*e*P	**P**	**10 18 26.6**	**-1.2**
KIEV				pmax	pmax		
	comp=Z,83nm,0.8s,mb5.2						
KIEV	**Kiev**	**65.41**	**317**	*e*P	**P**	**10 18 26.6**	**-1.2**
	comp=Z,83nm,0.8s,mb5.2						
SCO	**Scoresbysund**	**65.75**	**351**	⇑*i*P	**P**	**10 18 29.3**	**-0.3**
SCO				pmax	pmax		
	comp=Z,71nm,0.8s,mb5.2						
SCO	**Scoresbysund**	**65.75**	**351**	⇑*i*P	**P**	**10 18 29.3**	**-0.3**
	comp=Z,71nm,0.8s,mb5.2						
MSL	**Mosul**	**65.77**	**298**	*e*P	**P**	**10 18 34.0**	**+3.7**
MSL				*e*S	S	10 26 36.0	-0.1
ASAR	**Alice Springs**	**65.84**	**178**	P	**P**	**10 18 30.6**	**-0.2**
	comp=Z,26nm,0.4s,mb5.1,baz=357,slow=6.9,SNR=906						
ASAR				pP	pP	10 20 19.2	+2.8
	comp=Z,17nm,0.9s,baz=3.0,slow=6.0,SNR=5.0						
ASAR				PKPPKP		10 46 56.1	
	comp=Z,1.7nm,0.8s,baz=163,slow=3.0,SNR=10						
HFS	**Hagfors**	**65.94**	**331**	P	**P**	**10 18 29.9**	**-1.1**
	comp=Z,80nm,0.4s,mb5.6,baz=76,slow=6.3,SNR=360						
HFS	**Hagfors**	**65.94**	**331**	P	**P**	**10 18 29.9**	**-1.0**
HFS				pmax	pmax		
	comp=Z,80nm,0.4s						
DOMB	**Dombas**	**66.14**	**334**	⇑*i*P	**P**	**10 18 31.4**	**-0.7**
DOMB				AMB	AMB	10 18 32.5	
	comp=Z,99nm,1.1s,mb5.3						
NB2	**NORSAR Subarra**	**66.16**	**333**	P	**P**	**10 18 31.4**	**-0.9**
	comp=Z,100nm,0.7s,mb5.5,baz=44,slow=6.5						
NB2	**NORSAR Subarra**	**66.16**	**333**	P	**P**	**10 18 31.0**	**-1.3**
NOA	**NORSAR Array B**	**66.16**	**333**	P	**P**	**10 18 31.4**	**-0.9**
	comp=Z,87nm,0.7s,mb5.4,baz=42,slow=6.1,SNR=317						
NOA				pP	pP	10 20 18.4	+0.5
	comp=Z,15nm,1.0s,baz=46,slow=6.4,SNR=4.9						
NOA				PP	PP	10 21 01.5	-4.4
	comp=Z,12nm,0.8s,baz=43,slow=8.4,SNR=5.8						
NOA	**NORSAR Array B**	**66.16**	**333**	P	**P**	**10 18 31.4**	**-0.9**
NOA				pP	pP	10 20 18.4	+0.5
NOA				PP	PP	10 21 01.5	-4.4
SUW	**Suwalki**	**66.22**	**322**	*e*P	**P**	**10 18 31.8**	**-1.0**
SUW				*e*PcP	PcP	10 18 58.2	+0.1
SUW				*e*PP	PP	10 21 06.5	-0.2
SUW				*e*S	S	10 26 37.7	-3.0
MOL	**Molde**	**66.22**	**335**	*e*P	**P**	**10 18 32.4**	**-0.3**
SIM	**Simferopol'**	**66.25**	**310***d*	*i*P	**P**	**10 18 33.6**	**+0.5**
SIM				*e**PP	pP	10 20 23.0	+4.2
SIM				*i* S	S	10 26 40.0	-1.4
SIM				pmax	pmax		
	comp=Z,78nm,0.7s,mb5.3						
FUNA	**Funafuti**	**66.61**	**128**	*e*P	**P**	**10 18 36.0**	**+0.2**
	comp=Z,64nm,0.9s,mb5.2						
BHD	**Baghdad**	**66.77**	**294**	*i* P	**P**	**10 18 32.0**	**-4.6**
BHD				*e*S	S	10 26 35.0	-13
OSL	**Oslo**	**67.13**	**332**	*e*P	**P**	**10 18 37.4**	**-0.8**
OSL				AMB	AMB	10 18 38.3	
	comp=Z,154nm,0.8s,mb5.6						
PGC	**Sidney**	**67.70**	**44**	*e*P	**P**	**10 18 41.9**	**-0.1**
HYA	**Hoyanger**	**67.71**	**335**	⇑*i*P	**P**	**10 18 42.3**	**+0.5**
HYA				AMB	AMB	10 18 43.3	
	comp=Z,139nm,0.9s,mb5.5						
KONO	**Kongsberg**	**67.72**	**332**	*e*P	**P**	**10 18 41.4**	**-0.6**
KONO				*e*S	S	10 26 56.4	-1.9
KONO	**Kongsberg**	**67.72**	**332**	*e*P	**P**	**10 18 40.9**	**-1.1**
KONO				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.1						
KONO	**Kongsberg**	**67.72**	**332**	*e*P	**P**	**10 18 40.9**	**-1.0**
	comp=Z,53nm,0.8s,mb5.1						
FOO	**Floro**	**67.73**	**336**	*e*P	**P**	**10 18 40.5**	**-1.4**
KIS	**Kishinev**	**67.91**	**314**	*e*P	**P**	**10 18 40.0**	**-3.3**
KIS				*e*	pP	10 20 28.0	-1.6
KIS				*e**PP	PP	10 21 30.0	+8.7
KIS				*i* S	S	10 26 54.0	-6.8
KIS				MLR	MLR		
	comp=Z,300nm,15.0s						
A05A	**Maple Falls**	**68.17**	**43**	⇑P	**P**	**10 18 44.5**	**-0.3**
	baz=68,SNR=43						
SUE	**Sulen**	**68.24**	**335**	⇑*i*P	**P**	**10 18 44.8**	**-0.3**
NLWA	**Neilton Lookou**	**68.28**	**45**	⇑P	**P**	**10 18 46.3**	**+0.7**
	baz=68,SNR=66						
NLWA	**Neilton Lookou**	**68.28**	**45**	*e*P	**P**	**10 18 46.2**	**+0.7**
MBW	**Mount Baker**	**68.40**	**43**	P	**P**	**10 18 46.4**	**+0.1**
A06A	**Chilliwack**	**68.41**	**43**	⇓P	**P**	**10 18 45.9**	**-0.4**
	baz=68,SNR=6.9						
LVV	**L'vov**	**68.54**	**319***d*	*i*P	**P**	**10 18 46.4**	**-0.7**
LVV				*e*	pP	10 20 34.6	+0.9
LVV				*i* S	S	10 27 06.0	-2.1
BER	**Bergen**	**68.58**	**335**	*e*P	**P**	**10 18 46.9**	**-0.3**
BER				*e*S	S	10 27 08.4	+0.3
GNW	**Green Mountain**	**68.72**	**45**	*e*P	**P**	**10 18 48.5**	**+0.3**
	comp=Z,54nm,1.2s,mb5.0						
JCW	**Jim Creek**	**68.77**	**44**	*e*P	**P**	**10 18 48.8**	**+0.3**
B06A	**Marblemount**	**68.79**	**43**	⇑P	**P**	**10 18 48.6**	**0.0**
	baz=68,SNR=29						
RPW	**Rockport**	**68.82**	**43**	P	**P**	**10 18 48.8**	**0.0**
E03A	**Lebam**	**68.98**	**46**	⇓P	**P**	**10 18 50.4**	**+0.5**
	baz=69,SNR=62						
A07A	**Ashnola River,**	**68.99**	**42**	⇓P	**P**	**10 18 49.8**	**0.0**
	baz=69,SNR=64						
A07A				⇑S	S	10 27 13.0	-0.2
	baz=69						
BSD	**Bornholm Skovb**	**69.02**	**327**	⇑*i*P	**P**	**10 18 48.9**	**-1.0**
BSD				pmax	pmax		
	comp=Z,190nm,0.8s,mb5.7						
BSD	**Bornholm Skovb**	**69.02**	**327**	⇑*i*P	**P**	**10 18 48.9**	**-1.0**
	comp=Z,194nm,0.8s,mb5.7						
KWP	**Kalwaria Pacla**	**69.31**	**319**	*e*P	**P**	**10 18 51.9**	**+0.1**
	comp=Z,200nm,1.0s,mb5.6						
KWP				*e*S	S	10 27 14.9	-2.1
KWP	**Kalwaria Pacla**	**69.31**	**319**	*e*P	**P**	**10 18 51.9**	**+0.1**
KWP				*e*S	S	10 27 14.9	-2.0
KWP				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.6						
KWP	**Kalwaria Pacla**	**69.31**	**319**	*e*P	**P**	**10 18 50.2**	**-1.6**
	comp=Z,135nm,1.1s,mb5.4						
GKP	**Gorka Klasztor**	**69.34**	**324**	*e*P	**P**	**10 18 51.5**	**-0.3**
	comp=Z,300nm,0.9s,mb5.8						
GKP				*e*S	S	10 27 15.0	-2.1
GKP				*e*SKSac	SKSac	10 27 59.0	-2.6
GKP	**Gorka Klasztor**	**69.34**	**324**	*e*P	**P**	**10 18 51.5**	**-0.4**
GKP				*e*S	S	10 27 15.0	-2.2
GKP				*e*		10 27 59.0	
GKP				pmax	pmax		
	comp=Z,300nm,0.9s,mb5.8						
BUR08	**Bucovina Ar. S**	**69.38**	**316**	*e*P	**P**	**10 18 52.0**	**-0.2**
F03A	**Seaside**	**69.38**	**46**	⇑P	**P**	**10 18 52.9**	**+0.7**
	baz=69,SNR=37						
BURAR	**Bucovina Array**	**69.39**	**316**	P	**P**	**10 18 52.5**	**+0.2**
D05A	**Enumclaw**	**69.39**	**44**	⇑P	**P**	**10 18 53.1**	**+0.8**
	baz=69,SNR=41						
RBK	**Rabkut**	**69.40**	**275**	P	**P**	**10 18 52.7**	**-0.2**
	SNR=12						
CFR	**Carcaliu**	**69.43**	**313**	⇑P	**P**	**10 18 51.6**	**-0.9**
EDM	**Edmonton**	**69.43**	**36**	*e*P	**P**	**10 18 52.1**	**-0.3**
WHFO	**Wadi Hawf**	**69.46**	**276**	P	**P**	**10 18 52.5**	**-0.7**
	SNR=17						
WRW	**Wenatchee Ridg**	**69.52**	**43**	P	**P**	**10 18 53.2**	**+0.2**
COP	**Copenhagen**	**69.60**	**328**	⇑*i*P	**P**	**10 18 53.0**	**-0.3**
COP				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.4						
COP	**Copenhagen**	**69.60**	**328**	⇑*i*P	**P**	**10 18 53.0**	**-0.3**
	comp=Z,112nm,0.8s,mb5.5						
BRTR	**Keskin Array B**	**69.72**	**306**	P	**P**	**10 18 54.0**	**-0.5**
	comp=Z,26nm,0.9s,mb4.7,baz=64,slow=5.6,SNR=110						
BRTR				pP	pP	10 20 43.3	+1.8
	comp=Z,4.0nm,0.7s,baz=54,slow=4.5,SNR=3.8						
BRTR	**Keskin Array B**	**69.72**	**306**	P	**P**	**10 18 54.0**	**-0.4**
BRTR				*PP	pP	10 20 43.3	+1.8
BRTR				pmax	pmax		
	comp=Z,26nm,1.0s						
HEBO	**Mount Hebo**	**69.74**	**47**	*e*P	**P**	**10 18 55.0**	**+0.6**
HEBO				*e*pP	pP	10 20 43.1	+1.7
LON	**Longmire**	**69.77**	**45**	P	**P**	**10 18 54.6**	**+0.1**
PLOR	**Plostina**	**69.79**	**314**	⇑P	**P**	**10 18 54.7**	**0.0**
EIDS	**Eidsvold**	**69.80**	**162**	*e*P	**P**	**10 18 55.0**	**+0.1**
B08A	**Colville Reser**	**69.97**	**42**	⇑P	**P**	**10 18 55.6**	**-0.1**
	baz=70,SNR=116						
ETW	**Entiat**	**69.97**	**43**	*e*P	**P**	**10 18 55.8**	**0.0**
ETW				*e*pP	pP	10 20 43.9	+1.0
F04A	**Amboy**	**69.99**

SFJD pmax pmax
comp=Z,183nm,1.0s,mb5.6
SFJD Kangerlussuaq 70.83 1 *eP* **P 10 18 59.8 -0.7**
comp=Z,184nm,1.0s,mb5.6
SFJD Kangerlussuaq 70.83 1⇑*iP* **P 10 18 59.8 -0.7**
comp=Z,109nm,0.9s,mb5.4
C09A Chrisman Ranch 70.87 42 ⇑P **P 10 19 01.3 +0.2**
baz=71,SNR=97
E07A Sunnyside 70.91 44 ⇓P **P 10 19 01.6 +0.3**
baz=71,SNR=21
VOIR 70.91 315 P **P 10 19 01.3 0.0**
H04A Detroit Lake 70.93 47 ⇑P **P 10 19 01.5 +0.1**
baz=71,SNR=44
OD2 Odessa Site #2 70.93 43 P **P 10 19 01.3 -0.1**
KEBM Edson Butte 70.94 49 *eP* **P 10 19 02.8 +1.2**
A11A Hall Mountain, 71.01 40 ⇓P **P 10 19 02.8 +0.9**
baz=71,SNR=58
B10A Chitwood Farm, 71.05 41 ⇓P **P 10 19 02.3 +0.2**
baz=71,SNR=16
D08A Wollman Farm, 71.05 43 ⇓P **P 10 19 02.1 -0.1**
baz=71,SNR=32
BORG Borgarnes 71.06 348 *eP* **P 10 19 02.1 +0.3**
BORG pmax pmax
comp=Z,60nm,0.9s
BORG Borgarnes 71.06 348 *eP* **P 10 19 02.1 +0.3**
comp=Z,60nm,0.9s,mb5.1
WRD Warden 71.11 43 P **P 10 19 02.0 -0.5**
NEW Newport 71.12 41 *eP* **P 10 19 02.7 +0.2**
NEW pmax pmax
comp=Z,88nm,0.7s
NEW Newport 71.12 41 *eP* **P 10 19 02.7 +0.1**
comp=Z,88nm,0.7s,mb5.4
RAC Raciborz 71.14 321 *eP* **P 10 19 03.1 +0.5**
RSW Rattlesnake Hi 71.15 44 *eP* **P 10 19 03.2 +0.5**
RSW *epP* pP 10 20 51.3 +0.9
KECS Kecovo 71.17 319 *eP* **P 10 19 02.7 -0.1**
KECS *e* 10 21 50.6
KECS pmax pmax
comp=Z,16nm,1.5s,mb4.3
KECS Kecovo 71.17 319 P **P 10 19 03.3 +0.5**
HAWA Hanford 71.19 44 *eP* **P 10 19 03.3 +0.3**
comp=Z,151nm,0.8s,mb5.6
HAWA *epP* pP 10 20 51.6 +1.0
DRGR 71.22 317 P **P 10 19 03.1 0.0**
WIW Wooded Island 71.29 44 P **P 10 19 03.9 +0.3**
F07A Phinny Hill Vi 71.32 44 ⇑P **P 10 19 04.1 +0.4**
baz=71
C10A Spilker Farm, 71.34 42 ⇑P **P 10 19 03.7 -0.1**
baz=71,SNR=7.3
OKC Ostrava-Krasne 71.34 321 P **P 10 19 03.9 +0.1**
D09A Jones Farm, Ri 71.36 43 ⇓P **P 10 19 03.9 0.0**
baz=71,SNR=33
E08A Dider Farm, El 71.36 44 ⇓P **P 10 19 04.2 +0.2**
baz=71,SNR=19
A12A Yaak River Ran 71.37 40 ⇓P **P 10 19 04.4 +0.4**
baz=71,SNR=11
B11A Sandpoint 71.37 41 ⇓P **P 10 19 04.8 +0.8**
baz=71,SNR=87
RUE Ruedersdorf 71.38 325 *eP* **P 10 19 03.5 -0.5**
comp=Z,38nm,0.3s,mb5.4
G06A Carlson Farm, 71.39 45 ⇑P **P 10 19 04.5 +0.3**
baz=71,SNR=52
LIKS Likavka 71.44 320 *eP* **P 10 19 04.9 +0.5**
LIKS pmax pmax
comp=Z,63nm,0.8s,mb5.2
KSP Ksiaz 71.47 323 *eP* **P 10 19 04.7 +0.1**
comp=Z,200nm,1.0s,mb5.6
KSP *epP* pP 10 20 53.9 +1.7
KSP *ePP* PP 10 21 50.3 -1.1
KSP *eS* S 10 27 39.3 -2.1
KSP Ksiaz 71.47 323⇑*iP* **P 10 19 04.5 0.0**
KSP *e**PP pP 10 20 53.4 +1.1
KSP *e* 10 21 47.2
KSP *eS* S 10 27 39.0 -2.4
KSP *e* 10 28 15.5
KSP Ksiaz 71.47 323 P **P 10 19 04.6 +0.1**
MORC Moravsky Berou 71.66 322 *eP* **P 10 19 05.6 -0.1**
comp=Z,86nm,0.8s,mb5.2
NOUC Port Laguerre 71.69 146 *eP* **P 10 19 06.7 +0.6**
HWQ Hawqa 71.70 300 *eP* **P 10 19 05.5 -0.7**
BSEG Bad Segeberg 71.72 328 *eP* **P 10 19 05.7 -0.2**
comp=Z,181nm,0.9s,mb5.5
BSEG *eS* S 10 27 42.7 -1.3
DZM Mont Dzumac 71.72 146 *eP* **P 10 19 08.1 +1.8**
comp=Z,348nm,1.0s,mb5.8
DZM Mont Dzumac 71.72 146 *eP* **P 10 19 06.3 0.0**
DZM Mont Dzumac 71.72 146 *eP* **P 10 19 07.3 +1.1**
comp=Z,146nm,0.8s,mb5.5
B12A Libby 71.72 40 ⇑P **P 10 19 06.4 +0.4**
baz=71,SNR=23
DPC Dobruska-Polom 71.81 323 *epP* pP 10 20 56.6 +2.2
DPC *ePP* PP 10 21 54.0 -0.2
E09A Wood Farm, Sta 71.81 43 ⇑P **P 10 19 06.9 +0.3**
baz=72
UPC Upice 71.83 323 P **P 10 19 06.8 +0.2**
PSZ Piszkesteto 71.84 319 *eP* **P 10 19 06.8 +0.1**
PSZ Piszkesteto 71.84 319⇑*eP* **P 10 19 06.8 0.0**
SZH Strazhica 71.88 312 *i P* **P 10 19 06.3 -0.7**
D10A Wagner Farm, O 71.88 42 ⇑P **P 10 19 06.7 -0.2**
baz=72,SNR=34
HUMO Hull Mountain 71.88 49 *eP* **P 10 19 07.5 +0.5**
comp=Z,100nm,1.6s,mb5.0
HUMO *epP* pP 10 20 56.1 +1.1
VIPM Ingram Point 71.88 46 P **P 10 19 07.5 +0.4**
A13A Flathead Natio 71.96 39 ⇑P **P 10 19 07.7 +0.3**
baz=72
F08A Pendleton 71.98 44 ⇑P **P 10 19 08.2 +0.6**
baz=72,SNR=25
KOLL Kolacno 72.10 320 *eP* **P 10 19 08.6 +0.4**
KOLL *e* 10 19 20.4
KOLL *e* 10 21 57.8
KOLL Kolacno 72.10 320 P **P 10 19 08.7 +0.5**
WALA Waterton Lakes 72.10 39 *epP* pP 10 20 56.5 +0.3
BHL Bhannes 72.13 300 *eP* **P 10 19 07.9 -0.8**
FCC Fort Churchill 72.16 23 *eP* **P 10 19 07.7 -0.7**
FCC pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
FCC Fort Churchill 72.16 23 *eP* **P 10 19 07.7 -0.7**
comp=Z,8.1nm,0.8s,mb4.2
LNOR Lincton Mounta 72.18 44 *eP* **P 10 19 09.2 +0.5**
LNOR *e**PP pP 10 20 57.5 +0.7
G08A Pilot Rock 72.23 44 ⇓P **P 10 19 09.3 +0.3**
baz=72,SNR=39
RCY Rachaya 72.29 299 *eP* **P 10 19 09.4 -0.2**
C12B Naegeli Ranch, 72.31 41 ⇓P **P 10 19 09.9 +0.5**
baz=72,SNR=26
B13A Whitefish 72.32 40 ⇑P **P 10 19 10.2 +0.6**
baz=72,SNR=190
D11A Klaveano Farm, 72.35 42 ⇑P **P 10 19 09.5 -0.2**
baz=72,SNR=91
E10A Myers Farm, Un 72.35 43 ⇓P **P 10 19 09.9 +0.1**
baz=72,SNR=48
A14A Double T Ranch 72.39 39 ⇑P **P 10 19 10.2 +0.3**
baz=72,SNR=385
PVCC Panska Ves 72.46 324 *eP* **P 10 19 10.6 +0.3**
PVCC *e**PP pP 10 21 00.9 +2.5
PVCC *e* 10 22 01.5
PVCC *eS* S 10 27 52.7 +0.3
PVCC Panska Ves 72.46 324 P **P 10 19 10.5 +0.2**
PVCC Panska Ves 72.46 324 *eP* **P 10 19 10.6 +0.3**
PVCC *epP* pP 10 21 00.9 +2.5
PVCC *ePP* PP 10 22 01.5 +1.8
PVCC *eS* S 10 27 52.7 +0.3
PVCC *ex* x 10 50 09.7
F09A S2 Ranch, Elgi 72.48 44 ⇓P **P 10 19 10.7 +0.3**
baz=72,SNR=6.1
BRG Berggiesshubel 72.48 324 *eP* **P 10 19 10.1 -0.3**
comp=Z,59nm,0.8s,mb5.1
BRG *epP* pP 10 20 59.9 +1.4
BRG *eS* S 10 27 49.6 -3.1
BRG Berggiesshubel 72.48 324⇑*iP* **P 10 19 10.2 -0.2**
comp=Z,59nm,0.8s,mb5.1
BRG *i* 10 19 25.1
comp=Z,16nm,0.9s
BRG pP pP 10 20 53.0 -5.5
BRG sP sP 10 21 44.0 -8.4
BRG *i* PP PP 10 21 55.2 -4.7
comp=Z,14nm,1.2s
BRG S S 10 27 49.0 -3.7
BRG *i* 10 30 59.0
BRG
comp=N,177nm,12.7s
BRG
comp=E,174nm,16.8s
BRG
comp=Z,316nm,13.4s
BRG Berggiesshubel 72.48 324⇑*iP* **P 10 19 10.2 -0.2**
BRG *i* 10 19 25.1
BRG *i* 10 21 55.2
BRG S S 10 27 49.0 -3.7
BRG pmax pmax
comp=Z,35nm,0.8s,mb4.8
BRG pmax pmax
comp=Z,8.0nm,1.2s,mb4.0
BRG MLR MLR
comp=N,106nm,12.7s
BRG MLR MLR
comp=E,104nm,16.8s
BRG MLR MLR
comp=Z,189nm,13.4s
BSMT Bassoo Peak 72.54 40 *eP* **P 10 19 11.5 +0.7**
BSMT *epP* pP 10 21 00.4 +1.4
CLL Collm 72.57 325 *eP* **P 10 19 10.3 -0.6**
comp=Z,128nm,0.9s,mb5.3
CLL *eS* S 10 27 50.4 -3.2
CLL Collm 72.57 325⇑*iP* **P 10 19 10.5 -0.4**
CLL *i* *PP pP 10 20 59.4 +0.3
CLL *e**SP sP 10 21 50.0 -2.9
CLL *eS* S 10 27 52.0 -1.6
CLL pmax pmax
comp=Z,128nm,0.8s,mb5.4
CLL Collm 72.57 325⇑*iP* **P 10 19 10.5 -0.4**
comp=Z,128nm,0.8s,mb5.4
CLL *i* pP pP 10 20 59.4 +0.3
CLL *es*P sP 10 21 50.0 -2.9
CLL *eS* S 10 27 52.0 -1.6
CLL *es*S sS 10 31 00.0 -6.5
BZS Buzias 72.57 316 P **P 10 19 10.7 -0.3**
KHMM Horse Mountain 72.58 50 *eP* **P 10 19 12.1 +0.9**
YBH Yreka Blue Hor 72.59 49 *eP* **P 10 19 11.7 +0.5**
YBH *e**PP pP 10 21 00.7 +1.3
YBH pmax pmax
comp=Z,67nm,1.0s
YBH Yreka Blue Hor 72.59 49 *eP* **P 10 19 11.7 +0.4**
comp=Z,67nm,1.0s,mb5.0
YBH *epP* pP 10 21 00.7 +1.3
F10A Beach Ranch, E 72.64 43 ⇓P **P 10 19 11.6 +0.1**
baz=72,SNR=71
A15A Johnson Ranch, 72.71 39 ⇓P **P 10 19 11.5 -0.2**
baz=72,SNR=245
C13A Hot Springs 72.76 40 ⇓P **P 10 19 12.7 +0.6**
baz=72,SNR=253
I07A Izee 72.76 46 ⇓P **P 10 19 12.7 +0.6**
baz=72,SNR=195
ORE Reay 72.80 337⇑*iP* **P 10 19 11.9 -0.2**
D12A Red Ives Fores 72.83 41 ⇓P **P 10 19 12.4 -0.1**
baz=72
FFC Flin Flon 72.84 29 P **P 10 19 11.7 -0.7**
comp=Z,2µm,0.9s,mb6.5
FFC Flin Flon 72.84 29 *eP* **P 10 19 11.4 -1.0**
FFC *e**PP pP 10 21 00.8 +0.1
FFC pmax pmax
comp=Z,324nm,0.9s,mb5.8
FFC Flin Flon 72.84 29 *eP* **P 10 19 11.3 -1.0**
comp=Z,324nm,0.9s,mb5.8
FFC *epP* pP 10 21 00.8 +0.2
G09A Cove 72.84 44 ⇑P **P 10 19 13.0 +0.5**
baz=72,SNR=122
PRA Prague 72.85 323 ⇑P **P 10 19 12.0 -0.5**
PRA pP pP 10 21 02.0 +1.2
PRA S S 10 27 56.0 -0.8
JTMT Jette 72.85 40 *eP* **P 10 19 13.3 +0.7**
JTMT *epP* pP 10 21 02.2 +1.3
MMAI Mount Meron Ar 72.86 299 P **P 10 19 12.8 -0.1**
comp=Z,24nm,0.7s,mb4.8,baz=48,slow=9.2,SNR=35
MMAI pP pP 10 21 02.6 +1.4
comp=Z,1.7nm,0.4s,baz=71,slow=3.9,SNR=3.0
PRU Pruhonice 72.86 323 *eP* **P 10 19 13.2 +0.6**
PRU *e**PP pP 10 21 03.6 +2.7
PRU *e* 10 22 11.7
PRU *eS* S 10 27 57.5 +0.6
PRU Pruhonice 72.86 323 P **P 10 19 13.0 +0.4**
PRU Pruhonice 72.86 323 *eP* **P 10 19 13.2 +0.6**
PRU *epP* pP 10 21 03.6 +2.7
PRU *ePP* PP 10 22 11.7 +8.6
PRU *eS* S 10 27 57.5 +0.6
PRU *eXS* sS 10 31 13.8 +3.8
PRU *ex* x 10 37 04.0
PRU *ex* x 10 50 11.4
NRDL Niedersach Rie 72.88 327 *eP* **P 10 19 12.3 -0.4**
comp=Z,48nm,0.9s,mb4.9
NRDL *epP* pP 10 21 02.3 +1.3
NRDL *eS* S 10 27 54.1 -3.0
E11A Bogner Ranch, 72.89 42 ⇓P **P 10 19 12.8 0.0**
baz=73,SNR=58
YBMT Yellow Bay 72.90 40 *eP* **P 10 19 13.6 +0.7**
H08A Prairie City 72.90 45 ⇓P **P 10 19 13.5 +0.5**
baz=73,SNR=90
CSS Prodhromos 72.93 302 *eP* **P 10 19 12.1 -1.2**
comp=Z,52nm,0.8s,mb5.0
K05A Summer Lake 72.93 47 ⇓P **P 10 19 14.0 +0.9**
baz=73,SNR=104
TREC Trest 72.94 322 *eP* **P 10 19 13.4 +0.3**
TREC *e**PP pP 10 21 03.3 +1.9
TREC Trest 72.94 322 *eP* **P 10 19 13.4 +0.3**
TREC *epP* pP 10 21 03.3 +1.9
TREC *ex* x 10 50 14.6
FORT Forrest 72.99 183⇓*iP* **P 10 19 13.5 +0.1**
comp=Z,187nm,0.6s,mb5.7
FORT Forrest 72.99 183 *eP* **P 10 19 13.5 +0.1**
C14A Swan Lake 73.09 40 ⇑P **P 10 19 14.7 +0.7**
baz=73
SWMT Swartz Lake 73.16 40 *eP* **P 10 19 14.8 +0.5**
SWMT *epP* pP 10 21 03.7 +1.0
G10A Bishop Farm, J 73.17 44 ⇓P **P 10 19 14.7 +0.2**
baz=73,SNR=125
D13A Huson 73.23 41 ⇓P **P 10 19 14.8 0.0**
baz=73,SNR=85
F11A Grangeville 73.24 43 ⇓P **P 10 19 14.9 0.0**
baz=73,SNR=86
A16A West Butte Ran 73.25 38 ⇓P **P 10 19 14.8 -0.1**
baz=73,SNR=162
B15A Bradely Ranch, 73.26 39 ⇑P **P 10 19 15.2 +0.3**
baz=73,SNR=630
CLZ Clausthal 73.27 326 *eP* **P 10 19 15.0 +0.1**
comp=Z,120nm,1.1s,mb5.2
CLZ *eS* S 10 27 59.6 -1.8
CLZ Clausthal 73.27 326 *eP* **P 10 19 15.0 +0.1**
CLZ *eS* S 10 27 59.6 -1.8
CLZ pmax pmax
comp=Z,120nm,1.1s,mb5.2
DGAR Diego Garcia 73.33 243 *eP* **P 10 19 14.5 -1.3**
DGAR pmax pmax
comp=Z,428nm,0.9s,mb5.9
DGAR Diego Garcia 73.33 243 *eP* **P 10 19 14.5 -1.4**
comp=Z,428nm,0.9s,mb5.9
RSC Scourie 73.37 338⇑*iP* **P 10 19 15.2 -0.2**
MVH1 Achvaich 73.45 337⇑*iP* **P 10 19 15.3 -0.5**
KCPM Cahto Peak 73.46 51 *eP* **P 10 19 16.8 +0.6**
WDC Whiskeytown Da 73.46 50 *eP* **P 10 19 16.3 +0.1**
WDC *e**PP pP 10 21 05.5 +0.8
WDC pmax pmax
comp=Z,80nm,0.8s,mb5.2
WDC Whiskeytown Da 73.46 50 *eP* **P 10 19 16.3 +0.1**
comp=Z,80nm,0.8s,mb5.2
WDC *epP* pP 10 21 05.5 +0.7
TANN Tannenbergstha 73.46 324 *eP* **P 10 19 15.9 -0.1**
comp=Z,46nm,1.0s,mb4.9
TANN *eS* S 10 28 00.9 -2.6
MCD Coleburn Disti 73.47 337⇑*iP* **P 10 19 15.6 -0.4**
MSVF Nonsavu 73.47 134 P **P 10 19 19.0 +2.5**
comp=Z,1µm,0.9s,mb6.3,SNR=16
MSVF Nonsavu 73.47 134 *eP* **P 10 19 16.9 +0.5**
comp=Z,208nm,0.9s,mb5.6
G11A Walters Elk Ra 73.53 43 ⇑P **P 10 19 16.4 -0.1**
baz=73,SNR=187
GUNZ Gunzen 73.55 324 P **P 10 19 16.7 +0.2**
B16A M & M Farms, S 73.58 38 ⇓P **P 10 19 16.7 -0.1**
baz=73,SNR=226
SLMT Seeley Lake 73.59 40 *eP* **P 10 19 17.1 +0.3**
SLMT *epP* pP 10 21 06.0 +0.6
WERN Wernitzgruen 73.59 324 P **P 10 19 16.9 +0.1**
NKC Novy Kostel 73.60 324 *eP* **P 10 19 17.2 +0.4**
NKC *e**PP pP 10 21 07.8 +2.4
NKC *e* 10 22 11.3
NKC *eS* S 10 28 02.7 -2.4
NKC Novy Kostel 73.60 324 P **P 10 19 17.0 +0.2**
NKC Novy Kostel 73.60 324 *eP* **P 10 19 17.2 +0.4**
NKC *epP* pP 10 21 07.8 +2.4
NKC *ePP* PP 10 22 11.3 +2.0
NKC *eS* S 10 28 02.7 -2.4
NKC *eS* S 10 31 22.3 +3.7
NKC *ex* x 10 37 32.9
NKC *ex* x 10 51 02.6
MME1 Meikle Cairn 73.61 336⇑*iP* **P 10 19 16.1 -0.6**
C15A Salmond Ranch, 73.63 39 ⇓P **P 10 19 18.0 +0.9**
baz=73,SNR=599
MOX Moxa 73.65 325⇑*iP* **P 10 19 16.9 -0.2**
comp=Z,75nm,1.1s,mb5.0
MOX *eS* S 10 28 03.0 -2.6
MOX Moxa 73.65 325 *eP* **P 10 19 16.9 -0.2**
comp=Z,59nm,1.0s,mb5.0
MOX *epP* pP 10 21 07.1 +1.4
MOX *eS* S 10 28 02.6 -3.0
MOX Moxa 73.65 325⇑*iP* **P 10 19 16.9 -0.2**
MOX *eS* S 10 28 03.0 -2.6
MOX pmax pmax
comp=Z,75nm,1.1s,mb5.0
A17A Triple J Farms 73.66 38 ⇑P **P 10 19 17.0 -0.1**
baz=73,SNR=310
MSO Missoula 73.67 41 *eP* **P 10 19 17.3 +0.1**
comp=Z,65nm,0.9s,mb5.1
D14A Greenough 73.70 40 ⇓P **P 10 19 17.5 0.0**
baz=73,SNR=260
CONA Conrad Observa 73.75 321⇑*iP* **P 10 19 18.4 +0.6**
comp=Z,65nm,0.8s,mb5.1,SNR=46
CONA ⇓*iP*pP pP 10 21 08.5 +2.1
comp=Z,48nm,1.3s,SNR=10.0
I09A Lost Marbles R 73.76 45 ⇓P **P 10 19 18.5 +0.6**
baz=74,SNR=186
F12A Elk City 73.78 42 ⇓P **P 10 19 18.2 +0.2**
baz=74,SNR=268
J08A Circle Bar Ran 73.80 46 ⇓P **P 10 19 18.8 +0.7**
baz=74,SNR=302
VTS Vitosha 73.81 313 *i P* **P 10 19 18.3 +0.1**
E13A Victor 73.82 41 ⇑P **P 10 19 17.7 -0.5**
baz=74,SNR=38
H10A Noah's Angus R 73.85 44 ⇑P **P 10 19 18.2 -0.1**
baz=74,SNR=235
MDO Dochfour 73.91 337⇑*iP* **P 10 19 17.7 -0.8**
KHC Kasperske Hory 73.92 323 *eP* **P 10 19 18.9 +0.2**
KHC *e**PP pP 10 21 09.8 +2.4
KHC *e* 10 22 12.0
KHC *eS* S 10 28 08.3 -0.3
KHC Kasperske Hory 73.92 323 *eP* **P 10 19 18.6 -0.1**
comp=Z,84nm,0.8s,mb5.2
KHC Kasperske Hory 73.92 323 *eP* **P 10 19 18.9 +0.2**
KHC *epP* pP 10 21 09.8 +2.4
KHC *ePP* PP 10 22 12.0 0.0
KHC *eS* S 10 28 08.3 -0.3
KHC *ex* x 10 31 26.4
KHC *ex* x 10 37 05.5
KHC *ex* x 10 50 58.7
KHC *ex* x 10 50 59.5
CHMT Chamberlain Mo 73.94 40 *eP* **P 10 19 18.9 +0.1**
CHMT *epP* pP 10 21 07.8 +0.3
IBBN Ibbenburen 73.96 328 *eP* **P 10 19 18.3 -0.5**
comp=Z,97nm,1.0s,mb5.2
IBBN *eS* S 10 28 06.3 -2.6
RRR Rubha Reidh 73.96 338⇑*iP* **P 10 19 18.3 -0.5**
WIT Witteveen 73.99 329 *eP* **P 10 19 19.4 +0.4**
comp=Z,539nm,1.0s,mb6.0
WIT Witteveen 73.99 329 *epP* pP 10 21 09.2 +1.5
C16A Fuhringer Ranc 74.01 39 ⇑P **P 10 19 19.3 +0.1**
baz=74,SNR=358
ROTZ Rotzenmuhle 74.05 324 *eP* **P 10 19 19.7 +0.3**
comp=Z,85nm,0.9s,mb5.2
ROTZ *eS* S 10 28 09.7 -0.3
ROTZ Rotzenmuhle 74.05 324 P **P 10 19 19.8 +0.4**
A18A Metzger Ranch, 74.06 37 ⇓P **P 10 19 19.3 -0.2**
baz=74,SNR=234
GEC2 GERESS Array S 74.07 323 *eP* **P 10 19 19.3 -0.2**
comp=Z,56nm,1.0s,mb5.0
GEC2 *epP* pP 10 21 09.7 +1.4
GEC2 *eS* S 10 28 09.1 -1.2
GEC2 GERESS Array S 74.07 323 *eP* **P 10 19 19.3 -0.2**
GEC2 *e**PP pP 10 21 09.7 +1.4
GEC2 *eS* S 10 28 09.1 -1.2
GEC2 pmax pmax
comp=Z,56nm,1.0s,mb5.0
GERES GERESS Array B 74.07 323 P **P 10 19 19.0 -0.6**
comp=Z,30nm,0.8s,mb4.8,baz=39,slow=5.1,SNR=191
GERES pP pP 10 21 09.0 +0.7
comp=Z,9.0nm,1.1s,baz=68,slow=7.4,SNR=3.8
GERES PP PP 10 22 13.1 -0.2
comp=Z,7.2nm,0.9s,baz=37,slow=9.0,SNR=5.4
GERES S S 10 28 09.9 -0.4
comp=Z,0.3nm,0.2s,baz=62,slow=9.2,SNR=3.6
GERES GERESS Array B 74.07 323 P **P 10 19 19.0 -0.5**
GERES *PP pP 10 21 09.0 +0.7
GERES 10 22 13.1
GERES S S 10 28 09.9 -0.4
GERES pmax pmax
comp=Z,30nm,0.8s
GERES pmax pmax
comp=Z,7.0nm,0.9s
B17A L&G Farms, Che 74.09 38 ⇓P **P 10 19 19.8 +0.1**
baz=74,SNR=274
KAC Achnashellach 74.13 338⇑*iP* **P 10 19 19.3 -0.3**
H11A Donnelly 74.14 43 ⇓P **P 10 19 19.6 -0.4**
baz=74,SNR=61
RRH Rhenigidale 74.15 338⇑*iP* **P 10 19 19.4 -0.4**
I10A Payette 74.17 44 ⇓P **P 10 19 20.7 +0.5**
baz=74,SNR=38
E14A Clinton 74.18 41 ⇓P **P 10 19 20.3 +0.1**
baz=74,SNR=196
J09A Fry Pan Ranch, 74.19 45 ⇑P **P 10 19 20.9 +0.6**
baz=74,SNR=333
UBBA Unterbreizbach 74.19 326 *eP* **P 10 19 19.9 -0.3**
comp=Z,25nm,0.9s,mb4.6
UBBA *eS* S 10 28 08.7 -2.9
D15A Lincoln 74.20 40 ⇑P **P 10 19 20.3 0.0**
baz=74,SNR=104
HOPS Hopland 74.21 51 *eP* **P 10 19 20.0 -0.6**
comp=Z,190nm,1.3s,mb5.4
HOPS *epP* pP 10 21 09.9 +0.5
F13A Darby 74.22 42 ⇑P **P 10 19 19.6 -0.8**
baz=74,SNR=31
WET Wettzell 74.22 323 *eP* **P 10 19 20.5 +0.1**
comp=Z,73nm,0.9s,mb5.1
WET *epP* pP 10 21 11.1 +1.9
WET *eS* S 10 28 11.0 -0.9
WET Wettzell 74.22 323 *eP* **P 10 19 20.5 +0.1**
WET *e**PP pP 10 21 11.1 +1.9
WET *eS* S 10 28 11.0 -0.9
WET pmax pmax
comp=Z,73nm,0.9s,mb5.1
GRUS Gruza 74.23 316 P **P 10 19 19.7 -0.8**
WVOR Wild Horse Val 74.35 46 *eP* **P 10 19 21.4 +0.2**
WVOR pmax pmax
comp=Z,128nm,1.0s,mb5.3
WVOR Wild Horse Val 74.35 46 *eP* **P 10 19 21.4 +0.2**
comp=Z,128nm,1.0s,mb5.3
KPL Plockton 74.36 338⇑*iP* **P 10 19 20.6 -0.4**
KPL AMb AMB 10 19 21.4
comp=Z,175nm,1.0s,mb5.5
BARS Barje 74.40 314 P **P 10 19 21.2 -0.3**
ARSA Arzberg 74.40 321 P **P 10 19 21.6 +0.2**
ARSA Arzberg 74.40 321 *i P* **P 10 19 21.6 +0.2**
comp=Z,52nm,0.9s,mb5.0,SNR=23
ARSA ⇓*iP*pP pP 10 21 12.0 +1.6
comp=Z,47nm,1.4s
KSB Sheil Bridge 74.41 337⇑*iP* **P 10 19 20.6 -0.7**
XMAS Kiritimati 74.42 102 *eP* **P 10 19 21.9 -0.2**
comp=Z,132nm,0.7s,mb5.5
B18A Beardsley Farm 74.48 38 ⇓P **P 10 19 21.9 +0.1**
baz=74,SNR=159
GRA1 Grafenberg Arr 74.53 325 *eP* **P 10 19 22.4 +0.3**
comp=Z,207nm,0.8s,mb5.6
GRA1 *ePP* PP 10 22 15.4 -1.6
GRA1 *eS* S 10 28 14.7 -0.6
GRF Grafenberg Arr 74.53 325 *eP* **P 10 19 22.4 +0.3**
comp=Z,207nm,0.8s,mb5.6
GRF *ePP* PP 10 22 15.4 -1.6
GRF *eS* S 10 28 14.7 -0.6
GRF Grafenberg Arr 74.53 325 *eP* **P 10 19 22.4 +0.3**
GRF *e* 10 22 15.4
GRF *eS* S 10 28 14.7 -0.6
GRF pmax pmax
comp=Z,207nm,0.8s,mb5.6
GRF Grafenberg Arr 74.53 325 *eP* **P 10 19 22.4 +0.3**
GRF *e* 10 22 15.4
GRF *eS* S 10 28 14.7 -0.6
GRF pmax pmax

comp=Z,207nm,0.8s,mb5.6
STKA **Stephens Creek** 74.53 171 ⇓*i*P P 10 19 23.0 +0.8
comp=Z,156nm,0.4s,mb5.8
STKA **Stephens Creek** 74.53 171 P P 10 19 23.3 +1.1
comp=Z,182nm,0.5s,mb5.7,baz=351,slow=6.1,SNR=640
KSK **Scoval** 74.55 338⇑*i*P P 10 19 21.9 -0.1
MOA **Molln** 74.55 322 P P 10 19 22.2 0.0
MOA **Molln** 74.55 322 *i*P P 10 19 22.3 +0.1
comp=Z,32nm,0.8s,mb4.8,SNR=26
MOA ⇓*i*pP pP 10 21 12.4 +1.2
comp=Z,29nm,1.6s
E15A **Deer Lodge** 74.58 40 ⇑P P 10 19 22.9 +0.4
baz=74,SNR=284
C17A **Wharram Farm,** 74.59 39 ⇑P P 10 19 22.1 -0.4
baz=74,SNR=230
WTSB **Winterswijk** 74.60 328 *e*pP pP 10 21 11.4 0.0
KOGS **Kog** 74.64 320 P P 10 19 22.6 -0.2
J10A **Berg Farm, Mel** 74.65 45 ⇑P P 10 19 22.8 -0.1
baz=74,SNR=26
D16A **Dana Ranch, Ca** 74.66 39 ⇓P P 10 19 23.2 +0.3
baz=74,SNR=254
EBH **Black Hill** 74.67 336⇑*i*P P 10 19 22.2 -0.6
F14A **Wisdom** 74.67 41 ⇑P P 10 19 23.3 +0.4
baz=74,SNR=54
ESY **Stoneypath** 74.68 335⇑*e*P P 10 19 22.1 -0.7
I11A **Placerville** 74.73 44 ⇓P P 10 19 23.3 0.0
baz=74,SNR=44
EGMT **Eagleton** 74.76 38 ⇓P P 10 19 23.6 +0.2
baz=74,SNR=169
EGMT **Eagleton** 74.76 38 *e*P P 10 19 23.7 +0.2
comp=Z,222nm,0.7s,mb5.7
HRY **Holter Researc** 74.76 40 *e*P P 10 19 23.6 +0.1
comp=Z,155nm,0.7s,mb5.5
G13A **Cobalt** 74.76 42 ⇑P P 10 19 22.7 -0.8
baz=74,SNR=55
KAR1 **Arisaig** 74.78 338⇑*i*P P 10 19 23.1 -0.3
ARMA **Armidale** 74.79 162 *e*P P 10 19 25.1 +1.4
ARMA **Armidale** 74.79 162 *e*P P 10 19 25.3 +1.7
comp=Z,56nm,0.6s,mb5.2
BUG **Bochum-Univer** 74.82 328 *e*P P 10 19 23.2 -0.5
comp=Z,86nm,1.0s,mb5.1
BUG *e*S S 10 28 16.6 -1.8
H12A **Diamond D Ranc** 74.84 43 ⇑P P 10 19 24.1 +0.2
baz=74,SNR=312
EDI **Edinburgh** 74.85 336⇑*e*P P 10 19 22.5 -1.3
EDI AMb AMB 10 19 23.8
comp=Z,152nm,1.2s,mb5.3
KLBR **Kellerberrin** 74.85 192⇓*i*P P 10 19 23.6 -0.4
comp=Z,51nm,0.6s,mb5.1
MCCM **Marconi Confer** 74.89 52 *e*P P 10 19 24.0 -0.4
comp=Z,110nm,0.8s,mb5.3
OHCM **Honcut** 74.89 50 *e*P P 10 19 23.9 -0.4
BBLS **Lazići** 74.92 316 P P 10 19 24.7 +0.3
E16A **East Helena** 74.96 40 ⇑P P 10 19 25.0 +0.4
baz=75,SNR=187
EAB **Aberfoyle** 74.97 336⇑*i*P P 10 19 24.1 -0.3
D17A **Six Diamond Ra** 74.97 39 ⇑P P 10 19 24.5 -0.1
baz=75,SNR=136
EAU **Auchinoon** 74.99 336⇑*e*P P 10 19 23.9 -0.6
VAY **Valandovo** 75.03 313 *e*P P 10 19 23.2 -1.9
G14A **Jackson** 75.04 42 ⇑P P 10 19 24.6 -0.4
baz=75,SNR=11
PERS **Pernice** 75.04 320 *i*pP pP 10 21 15.4 +1.2
K10A **MacKenzie Ranc** 75.05 45 ⇑P P 10 19 25.8 +0.6
baz=75,SNR=201
SOKA **Soboth** 75.05 321⇑*i*P P 10 19 25.2 +0.1
comp=Z,146nm,0.7s,mb5.5
SOKA ⇓*i*pP pP 10 21 15.5 +1.3
comp=Z,83nm,1.4s
CHOS **Chios Island** 75.07 309 *e*P P 10 19 24.5 -0.9
F15A **Butte** 75.08 41 ⇓P P 10 19 25.8 +0.6
baz=75,SNR=178
LRM **Limekiln Ridge** 75.11 41 *e*P P 10 19 26.0 +0.6
LRM *e*pP pP 10 21 14.8 +0.2
H13A **Challis** 75.13 43 ⇑P P 10 19 25.2 -0.4
baz=75,SNR=76
MFID **Camas Ranch** 75.14 44 ⇑P P 10 19 26.1 +0.4
baz=75,SNR=251
BEKR **Beckwourth** 75.17 49 ⇑P P 10 19 26.0 +0.1
baz=75,SNR=231
I12A **Atlanta** 75.23 44 ⇑P P 10 19 26.7 +0.5
baz=75,SNR=89
TNS **Taunus Mts** 75.29 326 *e*P P 10 19 26.1 -0.2
comp=Z,96nm,1.0s,mb5.2
TNS *e*S S 10 28 20.6 -2.9
TNS **Taunus Mts** 75.29 326 *e*P P 10 19 26.1 -0.2
TNS *e*S S 10 28 20.6 -2.9
TNS pmax pmax
comp=Z,96nm,1.0s,mb5.2
PGBU **Glenifferbraes** 75.33 336⇑*i*P P 10 19 26.1 -0.4
PGBU AMb AMB 10 19 27.4
comp=Z,167nm,1.3s,mb5.3
D18A **Linhart Farms,** 75.35 38 ⇑P P 10 19 27.2 +0.5
baz=75,SNR=168
ESK **Eskdalemuir** 75.36 335 P P 10 19 26.2 -0.5
comp=Z,360nm,0.5s,mb6.1,SNR=17
ESK **Eskdalemuir** 75.36 335⇑*e*P P 10 19 26.2 -0.4
ESK AMb AMB 10 19 26.8
comp=Z,168nm,1.1s,mb5.4
ESK **Eskdalemuir** 75.36 335 *e*P P 10 19 25.4 -1.3
ESK *e**PP pP 10 21 16.3 +0.4
ESK pmax pmax
comp=Z,83nm,1.0s,mb5.1
ESK **Eskdalemuir** 75.36 335 *e*P P 10 19 25.4 -1.2
comp=Z,83nm,1.0s,mb5.1
ESK *e*pP pP 10 21 16.3 +0.4
IVA **Berane** 75.37 315 P P 10 19 27.0 +0.1
DLMT **Dillon** 75.37 41 *e*P P 10 19 27.7 +0.8
E17A **Martinsdale** 75.40 39 ⇓P P 10 19 27.8 +0.7
baz=75,SNR=363
OBKA **Obir** 75.40 321 P P 10 19 26.9 -0.1
OBKA **Obir** 75.40 321 *i*P P 10 19 27.0 -0.1
comp=Z,57nm,0.8s,mb5.0,SNR=20
OBKA ⇓*i*pP pP 10 21 17.7 +1.4
comp=Z,52nm,1.4s
BLY **Banja Luka** 75.41 318 P P 10 19 31.0 +3.9
XAL **Allendale** 75.44 335⇑*i*P P 10 19 26.4 -0.7
ECK **Cauldkaine Mil** 75.45 335⇑*i*P P 10 19 26.6 -0.6
CRES **Cresnjev** 75.47 320 P P 10 19 27.1 -0.4
K11A **Parker Ranch,** 75.49 45 ⇑P P 10 19 27.9 +0.3
baz=75,SNR=64
H14A **Leadore** 75.53 42 ⇓P P 10 19 27.5 -0.3
baz=75,SNR=62
F16A **Kennard Place,** 75.53 40 ⇑P P 10 19 28.1 +0.3
baz=75,SNR=145
KBA **Koelnbreinspr** 75.54 322 *i*P P 10 19 27.9 +0.1
comp=Z,72nm,0.6s,mb5.3,SNR=73
KBA ⇓*i*pP pP 10 21 18.2 +1.1
comp=Z,93nm,1.1s,SNR=12
SAC **San Andreas** 75.54 52 *e*P P 10 19 27.8 -0.2
G15A **Dillon** 75.57 41 ⇓P P 10 19 28.6 +0.6
baz=75,SNR=597
TOD **Tromm** 75.62 326 *e*P P 10 19 28.0 -0.2
BOZ **Bozeman (W)** 75.63 40 ⇑P P 10 19 29.0 +0.6
baz=75,SNR=281
BOZ **Bozeman (W)** 75.63 40 *e*P P 10 19 28.8 +0.5
BOZ *e**PP pP 10 21 19.4 +1.7
BOZ pmax pmax
comp=Z,149nm,1.0s,mb5.4
BOZ **Bozeman (W)** 75.63 40 *e*P P 10 19 28.8 +0.5
comp=Z,149nm,1.0s,mb5.4
BOZ *e*pP pP 10 21 19.4 +1.7
MCMT **McKenzie Canyo** 75.64 42 *e*P P 10 19 28.6 +0.2
comp=Z,76nm,1.2s,mb5.0
J12A **Stokes Ranch,** 75.64 44 ⇓P P 10 19 28.9 +0.5
baz=75,SNR=70
UPM **Unac-Piva** 75.65 316 P P 10 19 29.0 +0.5
FUR **Furstenfeldbru** 75.66 324 *e*P P 10 19 28.5 +0.1
comp=Z,148nm,0.9s,mb5.4
FUR *e*S S 10 28 26.1 -1.4
FUR **Furstenfeldbru** 75.66 324 *e*P P 10 19 28.5 +0.1
FUR *e*S S 10 28 26.1 -1.4
FUR pmax pmax
comp=Z,148nm,0.9s,mb5.4
I13A **Wildhorse Cree** 75.66 43 ⇑P P 10 19 29.4 +0.9
baz=75,SNR=489
MYKA **Terra Mystica** 75.74 321⇑*i*P P 10 19 28.4 -0.5
comp=Z,46nm,0.7s,mb5.0
MYKA ⇑*i*pP pP 10 21 19.4 +1.1
comp=Z,71nm,1.6s
L10A **Juniper Basin** 75.75 46 ⇓P P 10 19 29.8 +0.8
baz=76,SNR=207
SWS **Schriesheim-Wi** 75.75 326 P P 10 19 28.7 -0.2
HLID **Hailey** 75.76 43 ⇑P P 10 19 30.0 +0.9
baz=76,SNR=169
HLID **Hailey** 75.76 43 *e*P P 10 19 29.6 +0.5
comp=Z,74nm,0.8s,mb5.2
E18A **Harlowton** 75.77 39 ⇓P P 10 19 29.6 +0.5
baz=75,SNR=59
VISS **Visnje** 75.78 320 *i*pP pP 10 21 19.2 +0.6
BOJS **Bojanci** 75.81 320 *e*pP pP 10 21 20.3 +1.6
BOJS **Bojanci** 75.81 320 P P 10 19 28.0 -1.3
HDH **Heidenheim-Cha** 75.81 324 P P 10 19 29.2 0.0
PAHR **Pah Rah Range** 75.82 49 *e*P P 10 19 29.9 +0.3
G16A **Moss Hill, Enn** 75.85 41 ⇑P P 10 19 29.9 +0.4
baz=76,SNR=214
HGN **Heimansgroeve** 75.88 328 *e*pP pP 10 21 18.9 -0.1
comp=Z,48nm,2.2s
HGN **Heimansgroeve** 75.88 328 *e*S S 10 28 23.5 -6.3
H15A **Lima** 75.89 42 ⇑P P 10 19 29.9 +0.1
baz=76,SNR=147
WCN **Washoe City** 75.89 49 ⇓P P 10 19 30.4 +0.4
baz=76,SNR=70
F17A **Fitzpatrick Pl** 75.91 40 ⇓P P 10 19 30.5 +0.6
baz=76,SNR=149
BIA **Bitola** 75.91 313 *e*P P 10 19 27.9 -2.1
ABH **Alteburg** 75.92 327 *e*P P 10 19 29.7 -0.2
I14A **Mackay** 75.99 43 ⇑P P 10 19 30.7 +0.4
baz=76,SNR=80
J13A **Cove Ranch, Pi** 76.00 43 ⇓P P 10 19 31.6 +1.2
baz=76,SNR=349
TTG **Podgorica** 76.01 315 P P 10 19 30.0 -0.5
VOY **Vojsko** 76.06 321 *e*P P 10 19 29.6 -1.1
VOY *e*pP pP 10 21 20.6 +0.4
L11A **Cat Creek Ranc** 76.07 45 ⇓P P 10 19 31.6 +0.8
baz=76,SNR=186
JAVS **Javornik** 76.08 320 *e*pP pP 10 21 20.7 +0.4
STU **Stuttgart** 76.09 325 *e*P P 10 19 30.5 -0.3
comp=Z,91nm,0.9s,mb5.2
STU *e*pP pP 10 21 22.1 +1.7
STU *e*S S 10 28 30.0 -2.2
STU **Stuttgart** 76.09 325 *e*P P 10 19 30.7 -0.1
STU pmax pmax
comp=Z,60nm,0.8s,mb5.1
STU **Stuttgart** 76.09 325 *e*P P 10 19 30.7 -0.1
comp=Z,60nm,0.8s,mb5.1
M10A **I.L. Ranch, Tu** 76.11 46 ⇑P P 10 19 32.1 +1.1
baz=76,SNR=171
OHR **Ohrid** 76.13 313 *e*P P 10 19 29.5 -1.7
XDE **Dent Fell** 76.14 335 *e*P P 10 19 30.6 -0.4
WATA **Walderalm** 76.15 323⇑*i*P P 10 19 31.1 -0.1
comp=Z,41nm,0.9s,mb4.9
WATA ⇓*i*pP pP 10 21 22.1 +1.4
comp=Z,58nm,1.3s
ABTA **Abfaltersbach** 76.17 322⇑*i*P P 10 19 30.3 -1.0
comp=Z,22nm,0.8s,mb4.6,SNR=12
ABTA ⇓*i*pP pP 10 21 21.6 +0.8
comp=Z,30nm,1.3s
K12A **Draper Farm, C** 76.17 44 ⇓P P 10 19 32.1 +0.6
baz=76,SNR=141
WTTA **Wattenberg** 76.18 323 *i*P P 10 19 31.3 0.0
comp=Z,28nm,0.5s,mb5.0,SNR=20
WTTA ⇓*i*pP pP 10 21 22.2 +1.3
comp=Z,88nm,1.3s,SNR=13
GAL1 **Galloway** 76.21 336⇑*i*P P 10 19 30.7 -0.7
GAL1 AMb AMB 10 19 31.4
comp=Z,138nm,0.9s,mb5.4
NWAO **Narrogin (SRO)** 76.24 193 *e*P P 10 19 31.8 +0.1
NWAO pmax pmax
comp=Z,102nm,0.9s
NWAO **Narrogin (SRO)** 76.24 193 *e*P P 10 19 31.8 +0.1
comp=Z,102nm,0.9s,mb5.2
NWAO **Narrogin (SRO)** 76.24 193 P P 10 19 32.3 +0.6
SNR=5.4
NWAO P 10 19 32.3
SNR=5.4
RUP **Ruppelstein** 76.26 327 *e*P P 10 19 31.2 -0.5
APE **Apeiranthos** 76.27 308 ⇑P P 10 19 28.9 -3.2
BUCH **Bad Urach** 76.27 325 P P 10 19 31.9 +0.1
G17A **Pierce Place,** 76.30 40 ⇓P P 10 19 32.8 +0.8
baz=76,SNR=42
QLMT **Earthquake Lak** 76.33 41 *e*P P 10 19 32.9 +0.7
comp=Z,65nm,0.8s,mb5.1
QLMT *e*pP pP 10 21 23.0 +1.2
KARP **Karpathos** 76.34 306 *e*P P 10 19 31.5 -1.0
KARP **Karpathos** 76.34 306 P P 10 19 32.3 -0.2
LBG **Lerchenberg** 76.35 325 P P 10 19 32.2 0.0
F18A **Big Timber** 76.35 39 ⇓P P 10 19 32.8 +0.4
baz=76,SNR=188
MOTA **Moosalm** 76.35 323 *i*P P 10 19 32.2 -0.1
comp=Z,19nm,0.5s,mb4.8,SNR=15
MOTA ⇓*i*pP pP 10 21 23.7 +1.8
comp=Z,112nm,1.4s
RETA **Reutte** 76.40 323 *i*P P 10 19 32.7 +0.2
comp=Z,119nm,1.0s,mb5.3,SNR=44
RETA ⇓*i*pP pP 10 21 23.4 +1.2
comp=Z,74nm,1.4s,SNR=12
CMB **Columbia Colle** 76.41 51 *e*P P 10 19 32.9 +0.1
CMB *e**PP pP 10 21 23.1 +0.7
CMB pmax pmax
comp=Z,120nm,0.8s,mb5.4
CMB **Columbia Colle** 76.41 51 *e*P P 10 19 32.9 +0.1
comp=Z,120nm,0.8s,mb5.4
CMB *e*pP pP 10 21 23.1 +0.7
I15A **Monteview** 76.42 42 ⇑P P 10 19 33.3 +0.6
baz=76,SNR=37
LHO **Holmfirth** 76.42 334⇑*i*P P 10 19 32.1 -0.4
GCMT **Greycliff** 76.46 39 *e*P P 10 19 33.3 +0.4
comp=Z,137nm,0.9s,mb5.4
GCMT *e*pP pP 10 21 23.4 +0.9
L12A **House Creek Ra** 76.47 45 ⇓P P 10 19 33.9 +0.9
baz=76,SNR=143
STON **Ston** 76.50 316 P P 10 19 31.8 -1.4
STON **Ston** 76.50 316 *i*P P 10 19 31.8 -1.4
H16A **Russell Place,** 76.51 41 ⇑P P 10 19 34.0 +0.8
baz=76,SNR=249
BMN **Battle Mountai** 76.51 47⇑*i*P P 10 19 34.1 +0.8
BMN *e**PP pP 10 21 24.4 +1.4
BMN pmax pmax
comp=Z,54nm,0.6s,mb5.2
BMN **Battle Mountai** 76.51 47⇑*i*P P 10 19 34.0 +0.8
comp=Z,54nm,0.6s,mb5.2
BMN *e*pP pP 10 21 24.4 +1.4
LANF **Langenberg** 76.52 326 *e*P P 10 19 33.0 -0.2
UBR **Ueberruh** 76.54 324 P P 10 19 33.3 0.0
M11A **Holland Ranch,** 76.57 46 ⇑P P 10 19 35.0 +1.4
baz=76,SNR=141
K13A **Stover Farm, H** 76.59 44 ⇓P P 10 19 34.6 +0.9
baz=76,SNR=69
WAKR **Walker** 76.62 50 *e*P P 10 19 34.7 +0.7
WLF **Walferdange** 76.66 327 P P 10 19 33.7 -0.3
comp=Z,19nm,1.1s,mb4.4
WLF AP pP 10 21 23.1 -0.5
WLF **Walferdange** 76.66 327 *e*P P 10 19 33.6 -0.3
comp=Z,30nm,0.9s,mb4.7
WLF *e*S S 10 28 37.0 -1.1
WLF **Walferdange** 76.66 327 *e*P P 10 19 33.1 -0.8
WLF pmax pmax
comp=Z,22nm,0.9s,mb4.6
WLF **Walferdange** 76.66 327 *e*P P 10 19 33.1 -0.8
comp=Z,22nm,0.9s,mb4.6
GUT **Gutenstein** 76.67 325 P P 10 19 33.8 -0.2
SAO **San Andreas Ge** 76.67 52 *e*P P 10 19 33.5 -0.7
SAO pmax pmax
comp=Z,36nm,0.9s,mb4.8
SAO **San Andreas Ge** 76.67 52 *e*P P 10 19 33.5 -0.8
comp=Z,36nm,0.9s,mb4.8
YMR **Madison River** 76.67 41 *e*P P 10 19 34.6 +0.6
comp=Z,148nm,1.1s,mb5.3
NVLJ **Novalja** 76.68 319 P P 10 19 32.8 -1.3
NVLJ **Novalja** 76.68 319 *i*P P 10 19 32.8 -1.3
N10A **Dunphy** 76.69 47 ⇓P P 10 19 35.1 +0.8
baz=76,SNR=7.1
FETA **Feichten** 76.77 323 *i*P P 10 19 34.4 -0.1
comp=Z,40nm,1.0s,mb4.8,SNR=19
FETA ⇓*i*pP pP 10 21 25.6 +1.3
comp=Z,40nm,1.4s,SNR=7.1
YNR **Norris Junctio** 76.77 41 *e*P P 10 19 35.6 +1.0
comp=Z,156nm,1.5s,mb5.2
YNR *e*pP pP 10 21 26.9 +2.5
SPAK **Spaichingen-Ko** 76.78 325 *e*P P 10 19 34.5 -0.1
BFO **Black Forest** 76.80 325 P P 10 19 34.7 0.0
comp=Z,776nm,0.9s,mb6.1,SNR=33
BFO **Black Forest** 76.80 325 *e*P P 10 19 34.4 -0.3
comp=Z,119nm,0.9s,mb5.3
BFO *e*pP pP 10 21 26.1 +1.6
BFO *e*S S 10 28 37.4 -2.3
BFO **Black Forest** 76.80 325⇑*e*P P 10 19 34.2 -0.5
BFO *e**PP pP 10 21 25.8 +1.3
BFO *e*S S 10 28 37.4 -2.3
BFO pmax pmax
comp=Z,99nm,0.8s,mb5.3
BFO **Black Forest** 76.80 325⇑*e*P P 10 19 34.2 -0.6
comp=Z,99nm,0.8s,mb5.3
BFO *e*pP pP 10 21 25.8 +1.3
BFO *e*pP pP 10 21 26.1 +1.6
BFO *e*S S 10 28 37.4 -2.3
GIVF **Givet** 76.83 328⇑*i*P P 10 19 34.1 -0.8
comp=Z,119nm,1.0s,mb5.0
GIVF *e*pP pP 10 21 25.6 +0.9
GIVF **Givet** 76.83 328⇑*i*P P 10 19 34.1 -0.8
GIVF *e**PP pP 10 21 25.6 +0.9
GIVF pmax pmax
comp=Z,59nm,1.0s,mb5.0
GIVF **Givet** 76.83 328⇑*i*P P 10 19 34.1 -0.8
comp=Z,60nm,1.0s,mb5.0
GIVF *e*pP pP 10 21 25.6 +0.9
DGMT **Dagmar** 76.85 35 ⇑P P 10 19 34.8 -0.2
baz=76,SNR=50
DGMT **Dagmar** 76.85 35 *e*P P 10 19 34.8 -0.2
comp=Z,173nm,0.7s,mb5.6
DGMT *e*pP pP 10 21 24.0 -0.8
G18A **Lazy EL Ranch,** 76.86 40 ⇑P P 10 19 34.9 -0.2
baz=76,SNR=23
J15A **Blackfoot** 76.88 42 ⇑P P 10 19 36.2 +1.0
baz=77,SNR=117
YFT **Old Faithful** 76.89 41 *e*P P 10 19 37.5 +2.2
comp=Z,89nm,0.8s,mb5.2
YFT *e*pP pP 10 21 27.2 +2.1
CWF **Charnwood Fore** 76.92 333⇑*e*P P 10 19 33.5 -1.8
CWF AMb AMB 10 19 35.0
comp=Z,174nm,0.9s,mb5.5
DAVA **Damuels** 76.94 324 P P 10 19 35.6 +0.1
DAVA **Damuels** 76.94 324 *i*P P 10 19 35.6 +0.1
comp=Z,131nm,0.9s,mb5.4,SNR=54
DAVA ⇓*i*pP pP 10 21 26.3 +1.0
comp=Z,113nm,1.5s
O10A **Cortez Mining,** 77.00 47 ⇑P P 10 19 37.1 +1.1
baz=77,SNR=35
I16A **Newdale** 77.00 42 ⇑P P 10 19 37.3 +1.4
baz=77,SNR=288
LKWY **Lake** 77.02 40 *e*P P 10 19 38.0 +2.0
LKWY *e**PP pP 10 21 25.9 0.0
LKWY pmax pmax
comp=Z,76nm,0.9s,mb5.1
LKWY **Lake** 77.02 40 *e*P P 10 19 38.0 +2.0
comp=Z,76nm,0.9s,mb5.1
LKWY *e*pP pP 10 21 25.9 0.0
N11A **Elko Archery C** 77.03 46 ⇓P P 10 19 37.1 +1.0
baz=77,SNR=60
M12A **Wells** 77.04 45 ⇑P P 10 19 37.2 +1.0
baz=77,SNR=124
H17A **Grant Village** 77.06 41 ⇑P P 10 19 38.6 +2.4
baz=77,SNR=177
L13A **Double Diamond** 77.06 44 ⇑P P 10 19 37.4 +1.1
baz=77,SNR=88
BAIF **Baives** 77.11 328⇑*i*P P 10 19 35.6 -0.8
comp=Z,49nm,0.9s,mb4.6
BAIF **Baives** 77.11 328⇑*i*P P 10 19 35.6 -0.8
BAIF pmax pmax
comp=Z,25nm,0.9s,mb4.6
BAIF **Baives** 77.11 328⇑*i*P P 10 19 35.6 -0.8
comp=Z,24nm,0.9s,mb4.6
K14A **Jones Ranch, D** 77.13 43 ⇑P P 10 19 37.7 +1.0
baz=77,SNR=160
CDF **Champ du Feu** 77.18 326⇑*i*P P 10 19 36.5 -0.3
comp=Z,48nm,0.6s,mb4.8
CDF *e*pP pP 10 21 28.4 +1.7
CDF **Champ du Feu** 77.18 326⇑*i*P P 10 19 36.5 -0.3
CDF *e**PP pP 10 21 28.4 +1.7
CDF pmax pmax
comp=Z,24nm,0.6s,mb4.8
CDF **Champ du Feu** 77.18 326⇑*i*P P 10 19 36.5 -0.3
comp=Z,24nm,0.6s,mb4.8
CDF *e*pP pP 10 21 28.4 +1.7
LIBD **Limburg** 77.25 325 *e*P P 10 19 37.1 -0.1
IMW **Indian Meadow** 77.25 41 *e*P P 10 19 38.7 +1.4
comp=Z,90nm,0.8s,mb5.2
FELD **Feldberg im Sc** 77.29 325 *e*P P 10 19 37.1 -0.3
NVAR **Mina Array Bea** 77.31 49 P P 10 19 38.4 +0.7
comp=Z,146nm,0.7s,mb5.5,baz=291,slow=5.0,SNR=948
NVAR pP pP 10 21 30.1 +2.4
comp=Z,37nm,0.8s,baz=290,slow=5.2,SNR=14
NVAR **Mina Array Bea** 77.31 49 P P 10 19 38.4 +0.7
NVAR pP pP 10 21 30.1 +2.4
LAO **LASA Array** 77.35 37 *e*P P 10 19 37.8 0.0
comp=Z,592nm,1.8s,mb5.7
LAO *e*pP pP 10 21 28.2 +0.5
ELK **Elko** 77.35 46 *e*P P 10 19 38.5 +0.6
ELK *e**PP pP 10 21 29.9 +2.0
ELK pmax pmax
comp=Z,109nm,1.0s
ELK **Elko** 77.35 46 *e*P P 10 19 38.5 +0.6
comp=Z,109nm,1.0s,mb5.2
ELK *e*pP pP 10 21 29.9 +2.0
K15A **Arbon** 77.35 43 ⇓P P 10 19 38.9 +1.0
baz=77,SNR=54
DCID1 **Drake Creek** 77.35 42 *e*P P 10 19 39.1 +1.3
comp=Z,79nm,0.8s,mb5.2
DCID1 *e*pP pP 10 21 29.9 +2.1
J16A **Bone** 77.38 42 ⇓P P 10 19 39.1 +1.1
baz=77,SNR=179
N12A **Clover Valley,** 77.38 46 ⇓P P 10 19 39.2 +1.1
baz=77,SNR=210
N12A **Clover Valley,** 77.38 46 *e*P P 10 19 39.0 +1.0
comp=Z,230nm,0.8s,mb5.7
ECH **Echery** 77.38 326 *e*P P 10 19 37.6 -0.3
ECH **Echery** 77.38 326 *e*P P 10 19 37.2 -0.7
ECH pmax pmax
comp=Z,76nm,1.0s,mb5.1
ECH **Echery** 77.38 326 *e*P P 10 19 37.2 -0.7
comp=Z,76nm,1.0s,mb5.1
I17A **Pilgrim Ck.** 77.41 41 ⇓P P 10 19 39.8 +1.7
baz=77,SNR=49
NPS **Neapolis** 77.46 306 *e*P P 10 19 37.2 -1.4
NPS **Neapolis** 77.46 306 P P 10 19 37.6 -1.0
L14A **Malta** 77.46 44 ⇓P P 10 19 39.2 +0.7
baz=77,SNR=96
RRI2 **Red Ridge** 77.47 42 *e*P P 10 19 39.6 +1.1
M13A **Montello** 77.47 45 ⇑P P 10 19 39.1 +0.6
baz=77,SNR=22
M13A **Montello** 77.47 45 *e*P P 10 19 39.0 +0.5
comp=Z,136nm,1.2s,mb5.2
M13A *e*pP pP 10 21 29.7 +1.1
P10A **Eureka** 77.49 47 ⇑P P 10 19 39.5 +0.8
baz=77,SNR=88
GUR **Gura** 77.51 310 *e*P P 10 19 37.3 -1.5
TPAW **Teton Pass** 77.55 42 *e*P P 10 19 40.1 +1.2
comp=Z,38nm,0.8s,mb4.8
O11A **Cowboy Ranch,** 77.56 47 ⇓P P 10 19 39.8 +0.7
baz=77,SNR=150
MLAC **Mammoth Lakes** 77.57 50 ⇓P P 10 19 40.2 +1.1
baz=77,SNR=8.0
MABI **Malga Bissina** 77.60 322 P P 10 19 39.3 +0.2
HLM1 **Long Mynd** 77.62 334 *e*P P 10 19 38.4 -0.7
LOHW **Long Hollow** 77.62 41 *e*P P 10 19 40.1 +0.8
comp=Z,40nm,0.7s,mb4.9
MOF **Molkenrain** 77.68 325 *e*P P 10 19 39.1 -0.4
REDW **Red Top Meadow** 77.69 42 *e*P P 10 19 40.0 +0.4
comp=Z,73nm,0.9s,mb5.0
DMUB **Kingscourt** 77.70 336⇑*i*P P 10 19 39.2 -0.3
K16A **Soda Springs** 77.72 42 ⇑P P 10 19 41.0 +1.1
baz=77,SNR=157
J17A **Brown Place, J** 77.76 41 ⇓P P 10 19 40.9 +0.9
baz=77,SNR=44
MAGA **Magasa** 77.76 322 P P 10 19 38.9 -1.1
M14A **Sheep Mountain** 77.79 44 ⇓P P 10 19 41.3 +1.0
baz=78,SNR=214
N13A **Wendover, West** 77.82 45 ⇓P P 10 19 41.2 +0.8
baz=78,SNR=127
N13A **Wendover, West** 77.82 45 *e*P P 10 19 41.3 +0.9
BBS **Basel-Blauen** 77.82 325 *e*P P 10 19 40.0 -0.3
HINF **Hinteralfeld** 77.82 326⇑*i*P P 10 19 39.6 -0.7
comp=Z,45nm,0.8s,mb4.5
HINF *e*pP pP 10 21 31.4 +1.0
HINF **Hinteralfeld** 77.82 326⇑*i*P P 10 19 39.6 -0.7
HINF *e**PP pP 10 21 31.4 +1.0
HINF pmax pmax
comp=Z,23nm,0.8s,mb4.6
HINF **Hinteralfeld** 77.82 326⇑*i*P P 10 19 39.6 -0.7
comp=Z,23nm,0.8s,mb4.5
HINF *e*pP pP 10 21 31.4 +1.0
THEF **They Montfort** 77.86 326 *e*P P 10 19 39.9 -0.6
IDI **Anoyia** 77.87 307 P P 10 19 39.6 -1.2
HAU **Haudompre** 77.88 326⇑*i*P P 10 19 39.9 -0.7
comp=Z,81nm,0.9s,mb4.8
HAU *e*MLR MLR

comp=Z,158nm,18.2s
HAU Haudompre 77.88 326⇑iP P 10 19 39.9 -0.7
HAU pmax pmax
comp=Z,40nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,160nm,18.3s
HAU Haudompre 77.88 326⇑iP P 10 19 39.9 -0.7
comp=Z,40nm,0.9s,mb4.8
HAU LR LR
comp=Z,160nm,18.3s
HVU Hansel Valley 77.89 44 eP P 10 19 41.5 +0.7
comp=Z,31nm,0.6s,mb4.8
RLS Riolos of Patr 77.91 311 P P 10 19 40.9 -0.1
L15A Malad City 77.92 43 ⇓P P 10 19 41.5 +0.5
baz=78,SNR=120
MTUM Tungsten Hills 77.92 50 eP P 10 19 41.5 +0.5
P11A Circle Ranch, 77.93 47 ⇑P P 10 19 41.9 +0.8
baz=78,SNR=39
I18A Diamond G Ranc 77.94 41 ⇓P P 10 19 41.8 +0.8
baz=78,SNR=38
O12A Currie 77.95 46 ⇓P P 10 19 41.9 +0.8
baz=78,SNR=62
AHID Auburn Hatcher 78.01 42 eP P 10 19 42.0 +0.6
comp=Z,37nm,0.7s,mb4.8
MEZF Maizieres J'vi 78.02 327⇑iP P 10 19 41.1 -0.2
comp=Z,117nm,0.8s,mb5.0
MEZF epP pP 10 21 33.3 +1.8
MEZF Maizieres J'vi 78.02 327⇑iP P 10 19 41.1 -0.2
comp=Z,117nm,0.8s,mb5.3
MEZF epP pP 10 21 33.3 +1.8
WOL Wolverton 78.08 332 eP P 10 19 40.2 -1.4
WOL AMb AMB 10 19 41.6
comp=Z,179nm,1.9s,mb5.1
Q10A Clear Creek Ra 78.09 48 ⇓P P 10 19 42.4 +0.4
baz=78,SNR=145
DSB Dublin 78.10 336 eP P 10 19 40.7 -1.0
comp=Z,44nm,0.8s,mb4.8
K17A Gardner Place, 78.11 42 ⇑P P 10 19 42.2 +0.3
baz=78,SNR=28
SWN1 Swindon 78.11 332⇑eP P 10 19 41.4 -0.4
SWN1 AMb AMB 10 19 42.3
comp=Z,129nm,1.7s,mb5.0
HTR Trewern Hill 78.12 334⇑iP P 10 19 41.1 -0.7
LOMF Lomont 78.20 325 eP P 10 19 41.9 -0.4
J18A Kendall Valley 78.21 41 ⇑P P 10 19 43.2 +0.7
baz=78,SNR=101
RCTC Rector, Farmer 78.26 51 ⇓P P 10 19 42.3 -0.6
baz=78,SNR=22
KYTH Kithira 78.27 309 eP P 10 19 41.4 -1.5
ITM Ithomi 78.27 310 eP P 10 19 41.3 -1.6
ITM Ithomi 78.27 310 P P 10 19 41.7 -1.2
M15A Larsen Ranch, 78.28 44 ⇓P P 10 19 43.3 +0.3
baz=78,SNR=125
DCN Croghan 78.29 336⇑iP P 10 19 42.5 -0.2
VLS Valsamata 78.32 311 P P 10 19 42.9 -0.3
VLS Valsamata 78.32 311 P P 10 19 42.9 -0.3
TIN Tinemaha 78.32 50 ⇑P P 10 19 43.8 +0.6
baz=78,SNR=18
FSSB Fossombrone 78.33 320 P P 10 19 43.1 0.0
HGH Gray Hill 78.34 333⇑iP P 10 19 42.2 -0.8
N14A Grayback Hills 78.35 45 ⇑P P 10 19 43.9 +0.6
baz=78,SNR=178
BGU Big Grassy Mou 78.38 44 eP P 10 19 43.8 +0.4
comp=Z,43nm,0.9s,mb4.8
L16A Fish Haven 78.39 43 ⇓P P 10 19 44.1 +0.6
baz=78,SNR=82
SPUT South Promonto 78.40 44 eP P 10 19 44.1 +0.6
comp=Z,30nm,0.7s,mb4.7
P12A McGill 78.44 47 ⇑P P 10 19 44.6 +0.8
baz=78,SNR=272
RGNG Rignano Grg 78.45 317 P P 10 19 43.3 -0.5
O13A Hicks Ranch, I 78.46 46 ⇑P P 10 19 44.8 +1.0
baz=78,SNR=35
Q11A Duckwater 78.48 47 ⇑P P 10 19 44.4 +0.4
baz=78,SNR=61
SMMC Simmler 78.52 52 ⇓P P 10 19 44.6 +0.4
baz=78,SNR=28
R10A Warm Springs 78.53 48 ⇑P P 10 19 44.9 +0.7
baz=78,SNR=166
PIEI Piela 78.57 320 P P 10 19 44.4 0.0
PYL PYLOS 78.58 310 eP P 10 19 42.7 -1.9
SNTG Esanatoglia 78.58 319 P P 10 19 44.5 0.0
L17A Cokeville 78.61 42 ⇓P P 10 19 45.1 +0.4
baz=78,SNR=47
K18A Toltan Ranch, 78.62 42 ⇑P P 10 19 45.4 +0.7
baz=78,SNR=54
S10A Tonopah Range, 78.63 49 ⇓P P 10 19 45.2 +0.4
baz=78,SNR=294
HWUT Hardware Ranch 78.63 43 eP P 10 19 45.5 +0.7
comp=Z,131nm,0.6s,mb5.4
ULM Lac du Bonnet 78.66 29 P P 10 19 43.6 -1.1
comp=Z,169nm,0.8s,mb5.4,baz=328,slow=6.2,SNR=226
ULM pP pP 10 21 36.9 +1.7
comp=Z,22nm,1.1s,baz=322,slow=5.7,SNR=5.5
N15A Stansbury Isla 78.67 44 ⇑P P 10 19 45.4 +0.5
baz=78,SNR=100
VES Vestal, Richgr 78.68 52 ⇑P P 10 19 44.3 -0.8
baz=78,SNR=76
VMG Vicchio 78.72 321 P P 10 19 46.6 +1.4
BADI Badiali 78.73 320 P P 10 19 45.4 +0.2
SEI Scarperia 78.73 321 P P 10 19 46.2 +0.9
TERO Teramo 78.73 318 P P 10 19 45.4 +0.1
FNVD Fontana Vidola 78.76 321 P P 10 19 46.2 +0.8
BW06 Boulder Array 78.77 41 ⇑P P 10 19 45.3 -0.2
baz=78,SNR=172
BW06 Boulder Array 78.77 41 eP P 10 19 44.7 -0.8
comp=Z,115nm,1.0s,mb5.2
PDAR Pinedale Array 78.77 41 P P 10 19 45.4 -0.1
comp=Z,90nm,0.9s,mb5.1,baz=321,slow=1.9,SNR=480
PDAR pP pP 10 21 37.5 +1.6
comp=Z,62nm,1.1s,baz=318,slow=2.0,SNR=21
PDAR PKKPbc PKKPbc 10 38 32.7 -0.9
comp=Z,0.3nm,0.5s,baz=149,slow=3.5,SNR=3.4
CDCA Citt' di Caste 78.77 320 P P 10 19 46.2 +0.7
MURB Monte Urbino 78.78 320 P P 10 19 46.2 +0.7
CRE Caprese Michel 78.78 320 P P 10 19 45.8 +0.3
Q12A Willow Creek R 78.79 47 ⇓P P 10 19 46.4 +0.7
baz=78,SNR=209
M16A Huntsville 78.81 43 ⇑P P 10 19 45.9 +0.2
baz=78,SNR=79
NRCA Norcia 78.82 319 P P 10 19 46.2 +0.5
CWC Cottonwood Cre 78.84 51 ⇓P P 10 19 46.1 +0.1
baz=79,SNR=11
GRAC Grapevine Rang 78.85 50 ⇓P P 10 19 46.7 +0.7
baz=79,SNR=122
R11A Troy Canyon, C 78.88 48 ⇑P P 10 19 46.5 +0.4
baz=79,SNR=138
ERBM Eremo 78.89 321 P P 10 19 47.5 +1.4
FG5 Orsara di Pugl 78.90 317 P P 10 19 47.0 +0.8
PKM Peak Mountain 78.91 53 ⇓P P 10 19 46.8 +0.4
baz=79,SNR=33
P13A Bates Ranch, G 78.93 46 ⇓P P 10 19 46.9 +0.5
baz=79,SNR=207
CAN Canberra 79.00 166 eP P 10 19 47.7 +1.1
CAN pmax pmax
comp=Z,85nm,1.1s,mb5.0
CAN Canberra 79.00 166 eP P 10 19 47.7 +1.1
comp=Z,85nm,1.1s,mb5.0
DUG Dugway 79.02 45 ⇑P P 10 19 47.5 +0.6
baz=79,SNR=175
DUG Dugway 79.02 45 eP P 10 19 47.5 +0.6
DUG pmax pmax
comp=Z,78nm,0.8s,mb5.1
DUG Dugway 79.02 45 eP P 10 19 47.5 +0.6
comp=Z,78nm,0.8s,mb5.1
NOQ North Oquirrh 79.05 44 eP P 10 19 47.7 +0.7
comp=Z,116nm,0.6s,mb5.4
NOQ epP pP 10 21 39.4 +1.8
CNB Canberra Magne 79.06 166 eP P 10 19 48.1 +1.2
OG01 Vacheresse 79.06 325 eP P 10 19 46.4 -0.6
K19A Absolon Red Bu 79.07 41 ⇑P P 10 19 46.4 -0.7
baz=79,SNR=19
CABF La Chapelle 79.09 325⇑iP P 10 19 46.7 -0.4
comp=Z,73nm,0.9s,mb4.7
CABF La Chapelle 79.09 325⇑iP P 10 19 46.7 -0.4
CABF pmax pmax
comp=Z,37nm,0.9s,mb4.7
CABF La Chapelle 79.09 325⇑iP P 10 19 46.7 -0.4
comp=Z,37nm,0.9s,mb4.7
VLC Villacollemand 79.11 321 eP P 10 19 46.9 -0.4
comp=Z,60nm,0.9s,mb4.9
VLC epP pP 10 21 39.4 +1.5
MIDA Miranda 79.14 317 P P 10 19 47.8 +0.3
RNI2 Rionero Sannit 79.15 318 P P 10 19 48.5 +1.0
ISA Isabella 79.16 51 ⇓P P 10 19 46.8 -0.9
baz=79,SNR=34
ISA Isabella 79.16 51 eP P 10 19 46.9 -0.8
ISA e*PP pP 10 21 38.3 0.0
ISA pmax pmax
comp=Z,17nm,0.7s,mb4.5
ISA Isabella 79.16 51 eP P 10 19 46.9 -0.8
comp=Z,17nm,0.7s,mb4.5
ISA epP pP 10 21 38.3 -0.1
L18A Fontenelle, Gr 79.16 42 ⇑P P 10 19 48.0 +0.4
baz=79,SNR=81
M17A Scullys Gap (B 79.18 43 ⇑P P 10 19 47.8 +0.1
baz=79,SNR=47
CTU Camp Tracy 79.21 44 eP P 10 19 48.7 +0.9
N16A Rees Ranch, Co 79.23 44 ⇓P P 10 19 48.5 +0.6
baz=79,SNR=38
PTQR Pietraquaria 79.28 318 P P 10 19 48.8 +0.6
VVLD Villa Vallelon 79.29 318 P P 10 19 48.0 -0.3
SBC Santa Barbara 79.29 53 ⇓P P 10 19 48.7 +0.3
baz=79
S11A Rachel 79.29 48 ⇑P P 10 19 49.0 +0.7
baz=79,SNR=166
ARVC Arvin 79.33 52 ⇑P P 10 19 48.0 -0.6
baz=79,SNR=17
P14A Drum Mountains 79.33 45 ⇑P P 10 19 49.1 +0.5
baz=79,SNR=148
CSSN Cassano Irpino 79.33 316 P P 10 19 48.2 -0.3
L19A Farson 79.36 42 ⇑P P 10 19 48.8 +0.1
baz=79,SNR=123
R12A Pony Springs, 79.43 47 ⇑P P 10 19 49.5 +0.4
baz=79,SNR=227
JLU Jordanelle 79.43 44 eP P 10 19 49.5 +0.5
comp=Z,49nm,0.6s,mb5.0
K20A Yellowstone Ra 79.44 41 ⇓P P 10 19 48.2 -0.8
baz=79,SNR=22
MPMC Manual Prospec 79.44 50 ⇑P P 10 19 49.5 +0.3
baz=79,SNR=124
HTL Hartland 79.44 334⇑iP P 10 19 48.3 -0.6
HTL AMb AMB 10 19 48.9
comp=Z,140nm,0.8s,mb5.3
LOR Lormes 79.49 327⇑iP P 10 19 48.4 -0.8
comp=Z,236nm,0.7s,mb5.3
LOR epP pP 10 21 41.0 +1.1
LOR eMLR MLR
comp=Z,117nm,18.0s
LOR Lormes 79.49 327⇑iP P 10 19 48.4 -0.8
LOR e*PP pP 10 21 41.0 +1.1
LOR pmax pmax
comp=Z,118nm,0.7s,mb5.3
LOR MLR MLR
comp=Z,120nm,18.0s
LOR Lormes 79.49 327⇑iP P 10 19 48.4 -0.8
comp=Z,118nm,0.7s,mb5.3
LOR epP pP 10 21 41.0 +1.1
LOR LR LR
comp=Z,120nm,18.0s
N17A Moffit Pass 79.49 43 ⇑P P 10 19 49.6 +0.3
baz=79,SNR=25
GUAR Guarcino 79.50 318 P P 10 19 49.3 -0.1
FURC Furnace Creek, 79.51 50 ⇑P P 10 19 49.9 +0.4
baz=79,SNR=305
M18A Lyman 79.52 42 ⇑P P 10 19 49.7 +0.2
baz=79,SNR=81
NLU North Lily Min 79.58 45 eP P 10 19 50.5 +0.7
comp=Z,71nm,0.8s,mb5.0
NLU epP pP 10 21 42.4 +1.7
RSL Roselend 79.59 324 eP P 10 19 49.3 -0.5
LATE Laterza 79.61 320 P P 10 19 49.7 -0.3
Q14A Sevier Lake (B 79.66 46 ⇓P P 10 19 50.8 +0.5
baz=79,SNR=167
DAU Daniels Canyon 79.67 44 eP P 10 19 51.1 +0.8
TIP Timpagrande 79.67 314 eP P 10 19 49.7 -0.7
comp=Z,29nm,1.0s,mb4.6
LPL La Plagne 79.68 324⇑iP P 10 19 50.3 0.0
comp=Z,153nm,0.6s,mb5.2
LPL epP pP 10 21 42.9 +1.8
LPL La Plagne 79.68 324⇑iP P 10 19 50.3 0.0
LPL e*PP pP 10 21 42.9 +1.8
LPL pmax pmax
comp=Z,77nm,0.6s,mb5.2
LPL La Plagne 79.68 324⇑iP P 10 19 50.3 0.0
comp=Z,76nm,0.6s,mb5.2
LPL epP pP 10 21 42.9 +1.8
LPG La Plagne 79.69 324⇑iP P 10 19 50.5 +0.2
comp=Z,170nm,0.6s,mb5.3
LPG La Plagne 79.69 324⇑iP P 10 19 50.5 +0.2
LPG pmax pmax
comp=Z,85nm,0.6s,mb5.2
LPG La Plagne 79.69 324⇑iP P 10 19 50.5 +0.2
comp=Z,85nm,0.6s,mb5.2
O16A Springville 79.69 44 ⇓P P 10 19 50.9 +0.5
baz=79,SNR=27
DYA Yadsworthy 79.74 333⇑eP P 10 19 49.3 -1.2
DYA AMb AMB 10 19 50.0
comp=Z,149nm,0.9s,mb5.3
LRMC Laurel Mountai 79.74 51 ⇑P P 10 19 50.8 +0.1
baz=80,SNR=21
OSI Osito Adit 79.75 52 ⇑P P 10 19 50.9 +0.1
baz=80,SNR=14
OSI Osito Adit 79.75 52 eP P 10 19 51.1 +0.3
comp=Z,88nm,0.8s,mb5.1
P15A Leamington 79.76 45 ⇓P P 10 19 51.4 +0.6
baz=80,SNR=96
MPU Maple Canyon 79.77 44 eP P 10 19 51.4 +0.6
comp=Z,75nm,0.7s,mb5.1
SSF Saint Saulge 79.80 327⇑iP P 10 19 50.1 -0.7
comp=Z,133nm,0.7s,mb5.1
SSF epP pP 10 21 42.2 +0.5
SSF Saint Saulge 79.80 327⇑iP P 10 19 50.1 -0.7
SSF e*PP pP 10 21 42.2 +0.5
SSF pmax pmax
comp=Z,67nm,0.7s,mb5.1
SSF Saint Saulge 79.80 327⇑iP P 10 19 50.1 -0.7
comp=Z,67nm,0.7s,mb5.1
SSF epP pP 10 21 42.2 +0.5
S12A Delamar Landin 79.81 48 ⇑P P 10 19 52.0 +0.9
baz=80,SNR=106
U10A Ash Meadows, A 79.85 50 ⇓P P 10 19 52.0 +0.7
baz=80,SNR=109
T11A Corn Creek, Al 79.88 48 ⇑P P 10 19 51.9 +0.4
baz=80,SNR=192
R13A O'Grain Ranch, 79.88 47 ⇓P P 10 19 52.0 +0.5
baz=80,SNR=92
BLG Laguna Peak 79.91 53 ⇑P P 10 19 51.2 -0.5
baz=80,SNR=11
M19A Rock Springs 79.91 42 ⇓P P 10 19 51.7 +0.1
baz=80,SNR=22
L20A Wamsutter 79.93 41 ⇑P P 10 19 51.8 +0.1
baz=80,SNR=54
TOLF Tolfa 79.94 319 P P 10 19 51.1 -0.6
FLN La Foliniere 79.94 330⇑iP P 10 19 50.4 -1.1
comp=Z,23nm,0.4s,mb4.6
FLN epP pP 10 21 43.5 +1.1
FLN eMLR MLR
comp=Z,178nm,22.2s
FLN La Foliniere 79.94 330⇑iP P 10 19 50.4 -1.1
FLN e*PP pP 10 21 43.5 +1.1
FLN pmax pmax
comp=Z,12nm,0.4s,mb4.6
FLN MLR MLR
comp=Z,180nm,22.3s
FLN La Foliniere 79.94 330⇑iP P 10 19 50.4 -1.1
comp=Z,12nm,0.4s,mb4.6
FLN epP pP 10 21 43.5 +1.1
FLN LR LR
comp=Z,180nm,22.3s
LDF La Druitiere 79.95 330⇑iP P 10 19 50.4 -1.2
comp=Z,16nm,0.3s,mb4.5
LDF epP pP 10 21 43.4 +0.9
LDF La Druitiere 79.95 330⇑iP P 10 19 50.4 -1.2
LDF e*PP pP 10 21 43.4 +0.9
LDF pmax pmax
comp=Z,8.0nm,0.3s,mb4.5
LDF La Druitiere 79.95 330⇑iP P 10 19 50.4 -1.2
comp=Z,8.0nm,0.3s,mb4.5
LDF epP pP 10 21 43.4 +0.9
HYF Humbligny 79.98 328⇑iP P 10 19 51.6 -0.2
EDW2 Edwards Air Fo 79.99 52 ⇓P P 10 19 52.1 0.0
baz=80,SNR=64
SMF Signal de Mont 80.00 327⇑iP P 10 19 51.1 -0.8
comp=Z,58nm,0.6s,mb4.8
SMF epP pP 10 21 43.9 +1.1
SMF Signal de Mont 80.00 327⇑iP P 10 19 51.1 -0.8
SMF e*PP pP 10 21 43.9 +1.1
SMF pmax pmax
comp=Z,29nm,0.6s,mb4.8
SMF Signal de Mont 80.00 327⇑iP P 10 19 51.1 -0.8
comp=Z,29nm,0.6s,mb4.8
SMF epP pP 10 21 43.9 +1.1
N18A Larsen Ranch, 80.05 43 ⇓P P 10 19 52.1 -0.2
baz=80,SNR=24
P16A Fountain Green 80.06 45 ⇑P P 10 19 53.2 +0.8
baz=80,SNR=75
BNI Bardonecchia 80.07 324 eP P 10 19 52.0 -0.3
BNI pmax pmax
comp=Z,30nm,0.6s,mb4.8
BNI Bardonecchia 80.07 324 eP P 10 19 52.0 -0.4
comp=Z,30nm,0.6s,mb4.8
AVF Avril sur Loir 80.08 327⇑iP P 10 19 51.8 -0.5
comp=Z,294nm,0.8s,mb5.3
AVF epP pP 10 21 43.8 +0.6
AVF Avril sur Loir 80.08 327⇑iP P 10 19 51.8 -0.5
AVF e*PP pP 10 21 43.8 +0.6
AVF pmax pmax
comp=Z,147nm,0.8s,mb5.4
AVF Avril sur Loir 80.08 327⇑iP P 10 19 51.8 -0.5
comp=Z,147nm,0.8s,mb5.4
AVF epP pP 10 21 43.8 +0.6
MAON Monte Argentar 80.08 320 P P 10 19 52.0 -0.4
O17A Robinson Place 80.10 44 ⇓P P 10 19 53.2 +0.7
baz=80,SNR=129
Q15A Fillmore 80.13 45 ⇑P P 10 19 53.4 +0.6
baz=80,SNR=148
JSA Saint Aubin 80.19 331⇑iP P 10 19 51.8 -1.0
JSA AMb AMB 10 19 53.0
comp=Z,116nm,0.9s,mb5.2
DECC Green Verdugo 80.24 52 ⇑P P 10 19 53.0 -0.4
baz=80,SNR=16
SNCC San Nicolas Is 80.24 54 ⇑P P 10 19 53.5 +0.1
baz=80
SHOC Shoshone 80.25 50 ⇑P P 10 19 53.7 +0.3
baz=80,SNR=77
AGMN Agassiz Refuge 80.28 30 eP P 10 19 52.1 -1.2
comp=Z,102nm,0.7s,mb5.3
MBDF Montbardon 80.29 324⇑iP P 10 19 52.7 -0.8
comp=Z,116nm,0.6s,mb5.1
MBDF Montbardon 80.29 324⇑iP P 10 19 52.7 -0.8
MBDF pmax pmax
comp=Z,58nm,0.6s,mb5.1
MBDF Montbardon 80.29 324⇑iP P 10 19 52.7 -0.8
comp=Z,58nm,0.6s,mb5.1
R14A James Farms, M 80.30 46 ⇓P P 10 19 54.1 +0.5
baz=80,SNR=26
RSSD Black Hills 80.31 37 eP P 10 19 53.6 0.0
RSSD pmax pmax
comp=Z,251nm,1.2s,mb5.4
RSSD Black Hills 80.31 37 eP P 10 19 53.6 0.0
comp=Z,251nm,1.2s,mb5.4
N19A John Jarvie Ra 80.36 42 ⇓P P 10 19 53.8 -0.1
baz=80,SNR=76
GSC Goldstone 80.37 51 ⇑P P 10 19 54.2 +0.1
baz=80,SNR=108
GSC Goldstone 80.37 51 eP P 10 19 54.4 +0.3
GSC pmax pmax
comp=Z,111nm,0.9s,mb5.2
GSC Goldstone 80.37 51 eP P 10 19 54.4 +0.3
comp=Z,111nm,0.9s,mb5.2
S13A Holt Ranch, En 80.37 47 ⇑P P 10 19 54.5 +0.5
baz=80,SNR=121
U11A Corn Creek 80.37 49 ⇑P P 10 19 54.9 +0.9
baz=80,SNR=83
PASC Pasadena Art C 80.38 52 eP P 10 19 53.7 -0.4
comp=Z,267nm,0.8s,mb5.6
PASC epP pP 10 21 45.4 +0.2
CCA1 Carnmenellis 80.38 334⇑eP P 10 19 52.8 -1.0
CCA1 AMb AMB 10 19 53.6
comp=Z,159nm,1.2s,mb5.2
GRR Gorron 80.39 330⇑iP P 10 19 53.0 -0.9
comp=Z,36nm,0.4s,mb4.7
GRR epP pP 10 21 45.9 +1.0
GRR Gorron 80.39 330⇑iP P 10 19 53.0 -0.9
GRR e*PP pP 10 21 45.9 +1.0
GRR pmax pmax
comp=Z,18nm,0.4s,mb4.8
GRR Gorron 80.39 330⇑iP P 10 19 53.0 -0.9
comp=Z,18nm,0.4s,mb4.8
GRR epP pP 10 21 45.9 +1.0
M20A Sweetwater, Wa 80.40 41 ⇑P P 10 19 54.7 +0.6
baz=80,SNR=32
O18A Roosevelt 80.41 43 ⇑P P 10 19 54.9 +0.7
baz=80,SNR=65
MWC Mount Wilson 80.42 52 eP P 10 19 54.3 0.0
MWC e*PP pP 10 21 46.8 +1.4
L21A Rawlins 80.43 41 ⇓P P 10 19 54.0 -0.2
baz=80,SNR=56
IMI Imperia 80.43 323 P P 10 19 53.6 -0.6
SHPR Sheep Range 80.44 49 eP P 10 19 55.2 +0.8
BGF Bois d'Agland 80.47 327⇑iP P 10 19 53.8 -0.6
comp=Z,67nm,0.8s,mb4.7
BGF Bois d'Agland 80.47 327⇑iP P 10 19 53.8 -0.6
BGF pmax pmax
comp=Z,33nm,0.8s,mb4.7
BGF Bois d'Agland 80.47 327⇑iP P 10 19 53.8 -0.6
comp=Z,33nm,0.8s,mb4.7
TMUT Trail Mountain 80.52 45 eP P 10 19 55.6 +0.8
comp=Z,87nm,0.7s,mb5.3
TMUT epP pP 10 21 47.4 +1.5
ORIF Oris-en-Rattie 80.53 324⇑iP P 10 19 54.3 -0.4
comp=Z,73nm,0.8s,mb4.9
ORIF eMLR MLR
comp=Z,202nm,20.5s
ORIF Oris-en-Rattie 80.53 324⇑iP P 10 19 54.3 -0.4
ORIF pmax pmax
comp=Z,36nm,0.8s,mb4.8
ORIF Oris-en-Rattie 80.53 324⇑iP P 10 19 54.3 -0.4
comp=Z,36nm,0.8s,mb4.9
SAOF Saorge 80.53 323 eP P 10 19 53.8 -0.9
T12A Moapa 80.53 48 ⇑P P 10 19 55.5 +0.6
baz=80,SNR=57
RRX Edison Barstow 80.56 51 ⇓P P 10 19 55.5 +0.4
baz=80,SNR=8.1
AUTN L'Aution 80.58 323 eP P 10 19 54.4 -0.6
MSU Marysvale 80.59 46 eP P 10 19 56.4 +1.2
MSU e*PP pP 10 21 48.5 +2.2
S14A Cedar City 80.62 47 ⇑P P 10 19 55.8 +0.5
baz=80,SNR=80
PLDF La Plantade 80.63 326 eP P 10 19 55.1 -0.1
TOO Toolangi 80.64 169 eP P 10 19 56.8 +1.7
BFSC Mount Baldy St 80.64 52 ⇓P P 10 19 55.3 -0.2
baz=80,SNR=49
FMP Fort Macarthur 80.64 53 ⇓P P 10 19 55.3 -0.2
baz=80,SNR=7.3
TOUF Mont Tournerai 80.64 323 eP P 10 19 54.7 -0.6
CCUT Cedar City 80.67 47 eP P 10 19 56.3 +0.7
comp=Z,26nm,0.6s,mb4.8
CCUT epP pP 10 21 48.0 +1.3
SBF Sospel 80.68 323⇑iP P 10 19 54.5 -1.0
comp=Z,179nm,1.0s,mb5.2
SBF Sospel 80.68 323⇑iP P 10 19 54.5 -1.0
SBF pmax pmax
comp=Z,90nm,1.0s,mb5.2
SBF Sospel 80.68 323⇑iP P 10 19 54.5 -1.0
comp=Z,90nm,1.0s,mb5.2
M21A Separation Pea 80.71 41 ⇓P P 10 19 55.7 0.0
baz=80,SNR=75
RWWY Rawlins 80.72 41 eP P 10 19 55.6 -0.1
T13A Saint George 80.76 48 ⇑P P 10 19 57.1 +1.0
baz=80,SNR=228
R15A Junction 80.76 46 ⇓P P 10 19 57.3 +1.2
baz=80,SNR=127
AGO Saint Agoulin 80.77 327 eP P 10 19 55.8 -0.1
V11A Goodsprings 80.77 49 ⇑P P 10 19 56.6 +0.5
baz=80,SNR=81
P18A Preston Nutter 80.77 44 ⇓P P 10 19 56.9 +0.8
baz=80,SNR=249
MVIF Mont Vial 80.78 323 eP P 10 19 55.1 -0.9
TUQ Turquoise Moun 80.78 50 ⇑P P 10 19 56.7 +0.5
baz=80,SNR=70
CIS Catalina Islan 80.79 53 ⇓P P 10 19 55.9 -0.4
baz=80,SNR=15
REVF Revere 80.80 323 eP P 10 19 55.3 -0.9
CEL Celeste 80.81 314 eP P 10 19 55.4 -0.9
comp=Z,126nm,0.8s,mb5.4
SSB Saint Sauveur 80.81 325 eP P 10 19 55.5 -0.6
SSB Saint Sauveur 80.81 325 eP P 10 19 55.3 -0.8
SSB e*PP pP 10 21 48.3 +1.0
SSB pmax pmax
comp=Z,69nm,0.9s,mb5.1
SSB Saint Sauveur 80.81 325 eP P 10 19 55.3 -0.8
comp=Z,69nm,0.9s,mb5.1
SSB epP pP 10 21 48.3 +1.0
Q16A Castle Valley 80.82 45 ⇓P P 10 19 57.0 +0.6
baz=80,SNR=43
L22A Ellis Ranch, M 80.83 40 ⇑P P 10 19 56.5 +0.2

baz=80,SNR=22
O19A Miners Draw (B 80.83 43 ⇊P **P 10 19 56.1 -0.3**
baz=80,SNR=68
U12A Valley of Fire 80.84 48 ⇊P **P 10 19 57.1 +0.7**
baz=81,SNR=70
N20A Spence Gulch, 80.86 42 ⇑P **P 10 19 57.2 +0.7**
baz=80,SNR=212
TCF Toulx Ste Croi 80.95 327 ⇑*iP* **P 10 19 56.4 -0.4**
comp=Z,171nnm,1.1s,mb5.1
TCF *epP* pP 10 21 49.7 +1.6
TCF Toulx Ste Croi 80.95 327 ⇑*iP* **P 10 19 56.4 -0.4**
TCF *e*PP* pP 10 21 49.7 +1.6
TCF pmax pmax
comp=Z,86nm,1.1s,mb5.1
TCF Toulx Ste Croi 80.95 327 ⇑*iP* **P 10 19 56.4 -0.4**
comp=Z,86nm,1.1s,mb5.1
TCF *epP* pP 10 21 49.7 +1.6
COLF Collangettes 80.97 326 *eP* **P 10 19 56.9 -0.1**
HEC Hector,Ludlow 80.98 51 ⇊P **P 10 19 57.7 +0.4**
baz=81,SNR=37
PGF Pioggiola 80.99 321 ⇑*iP* **P 10 19 56.6 -0.5**
comp=Z,104nnm,1.2s,mb4.8
PGF Pioggiola 80.99 321 ⇑*iP* **P 10 19 56.6 -0.5**
PGF pmax pmax
comp=Z,52nm,1.2s,mb4.8
PGF Pioggiola 80.99 321 ⇑*iP* **P 10 19 56.6 -0.5**
comp=Z,52nm,1.2s,mb4.8
CALN Calern 81.01 323 *eP* **P 10 19 56.6 -0.6**
SCI San Clemente I 81.01 53 ⇊P **P 10 19 57.1 -0.4**
baz=81
SRU San Rafael 81.01 44 ⇑P **P 10 19 57.5 +0.2**
baz=81,SNR=84
SRU San Rafael 81.01 44 *eP* **P 10 19 57.5 +0.2**
SRU pmax pmax
comp=Z,46nm,0.7s,mb5.0
SRU San Rafael 81.01 44 *eP* **P 10 19 57.5 +0.1**
comp=Z,46nm,0.7s,mb5.0
OCF Saint Nazaire 81.05 324 *eP* **P 10 19 57.3 -0.1**
OG26 St.-Nazaire-De 81.05 324 *eP* **P 10 19 57.3 -0.1**
BBRC Big Bear Sol-O 81.05 51 ⇑P **P 10 19 57.8 +0.2**
baz=81,SNR=78
PYM Petit Puy Mans 81.06 327 *eP* **P 10 19 57.4 -0.1**
VIVF Saint-Julien-I 81.09 325 ⇑*iP* **P 10 19 57.3 -0.3**
comp=Z,193nnm,0.9s,mb5.2
VIVF Saint-Julien-I 81.09 325 ⇑*iP* **P 10 19 57.3 -0.3**
VIVF pmax pmax
comp=Z,96nm,0.9s,mb5.2
VIVF Saint-Julien-I 81.09 325 ⇑*iP* **P 10 19 57.3 -0.3**
comp=Z,96nm,0.9s,mb5.2
S15A Panguitch 81.11 46 ⇊P **P 10 19 59.4 +1.5**
baz=81,SNR=220
SGMF Saint Gilles 81.12 331 ⇑*iP* **P 10 19 57.1 -0.6**
comp=Z,74nm,0.6s,mb5.0
SGMF *epP* pP 10 21 50.4 +1.4
SGMF Saint Gilles 81.12 331 ⇑*iP* **P 10 19 57.1 -0.6**
SGMF *e*PP* pP 10 21 50.4 +1.4
SGMF pmax pmax
comp=Z,37nm,0.6s,mb5.0
SGMF Saint Gilles 81.12 331 ⇑*iP* **P 10 19 57.1 -0.6**
comp=Z,37nm,0.6s,mb5.0
SGMF *epP* pP 10 21 50.4 +1.4
R16A Teasdale 81.13 45 ⇊P **P 10 19 59.2 +1.3**
baz=81,SNR=176
U13A Pakoon Wash 81.17 48 ⇑P **P 10 19 59.0 +0.9**
baz=81,SNR=73
V12A Nelson 81.17 49 ⇊P **P 10 19 58.8 +0.6**
baz=81,SNR=163
T14A Hurricane 81.17 47 ⇑P **P 10 19 58.8 +0.6**
baz=81,SNR=41
Q18A Rafter H Ranch 81.22 44 ⇑P **P 10 19 58.3 -0.1**
baz=81,SNR=28
M22A Cedar Creek Ra 81.23 40 ⇊P **P 10 19 58.3 -0.1**
baz=81,SNR=51
FRF La Foret Royal 81.27 323 ⇑*iP* **P 10 19 57.4 -1.2**
comp=Z,44nm,0.8s,mb4.6
FRF La Foret Royal 81.27 323 ⇑*iP* **P 10 19 57.4 -1.2**
FRF pmax pmax
comp=Z,22nm,0.8s,mb4.6
FRF La Foret Royal 81.27 323 ⇑*iP* **P 10 19 57.4 -1.2**
comp=Z,22nm,0.8s,mb4.6
N21A Black Mountain 81.28 41 ⇊P **P 10 19 58.9 +0.2**
baz=81,SNR=61
ROSF Rostrenen 81.30 332 ⇑*iP* **P 10 19 58.2 -0.4**
comp=Z,215nm,0.8s,mb5.3
ROSF Rostrenen 81.30 332 ⇑*iP* **P 10 19 58.2 -0.4**
ROSF pmax pmax
comp=Z,107nm,0.8s,mb5.3
ROSF Rostrenen 81.30 332 ⇑*iP* **P 10 19 58.2 -0.4**
comp=Z,107nm,0.8s,mb5.3
MURC Murrieta 81.36 52 ⇊P **P 10 19 59.0 -0.3**
baz=81,SNR=42
LBL Lubilhac 81.39 326 *eP* **P 10 19 59.2 +0.1**
O20A White River Ci 81.40 42 ⇑P **P 10 19 59.2 -0.1**
baz=81,SNR=79
GMRC Granite Mounta 81.40 50 ⇑P **P 10 19 59.8 +0.4**
baz=81,SNR=118
SMRF Simiane la Rot 81.41 324 ⇑*iP* **P 10 19 58.6 -0.7**
comp=Z,62nm,1.1s,mb4.7
SMRF Simiane la Rot 81.41 324 ⇑*iP* **P 10 19 58.6 -0.7**
comp=Z,62nm,1.1s,mb5.0
P19A Cripple Cowboy 81.41 43 ⇊P **P 10 19 59.6 +0.2**
baz=81,SNR=241
R17A Hanksville Air 81.43 45 ⇊P **P 10 19 59.6 +0.1**
baz=81,SNR=119
W12A Cal Nev Ari 81.47 49 ⇊P **P 10 20 00.2 +0.4**
baz=81,SNR=7.8
LDFC Landfair 81.50 50 *eP* **P 10 20 00.4 +0.5**
comp=Z,146nm,0.8s,mb5.5
LDFC *epP* pP 10 21 52.6 +1.2
LMR La Mourre 81.51 323 ⇑*iP* **P 10 19 58.9 -0.9**
comp=Z,227nm,1.2s,mb5.2
LMR *epP* pP 10 21 52.2 +1.0
LMR La Mourre 81.51 323 ⇑*iP* **P 10 19 58.9 -0.9**
LMR *e*PP* pP 10 21 52.2 +1.0
LMR pmax pmax
comp=Z,113nm,1.2s,mb5.2
LMR La Mourre 81.51 323 ⇑*iP* **P 10 19 58.9 -0.9**
comp=Z,113nm,1.2s,mb5.2
LMR *epP* pP 10 21 52.2 +1.0
FRNF Fournols 81.54 327 *eP* **P 10 20 00.1 +0.2**
V13A Grand Canyon W 81.57 49 ⇊P **P 10 20 00.8 +0.6**
baz=81,SNR=91
T15A Red Dirt Ranch 81.59 47 ⇑P **P 10 20 00.9 +0.6**
baz=81,SNR=87
U14A Mt Trumbull 81.59 48 ⇊P **P 10 20 01.3 +1.0**
baz=81,SNR=200
BST Brest 81.61 332 *eP* **P 10 19 59.8 -0.4**
MFF Saint Martin d 81.61 329 ⇑*iP* **P 10 19 59.9 -0.3**
MFF *epP* pP 10 21 53.4 +1.7
QUIF Quistinic 81.62 331 ⇑*iP* **P 10 19 59.6 -0.7**
comp=Z,70nm,0.8s,mb4.8
QUIF Quistinic 81.62 331 ⇑*iP* **P 10 19 59.6 -0.7**
QUIF pmax pmax
comp=Z,35nm,0.8s,mb4.8
QUIF Quistinic 81.62 331 ⇑*iP* **P 10 19 59.6 -0.7**
comp=Z,35nm,0.8s,mb4.8
O21A Pagoda 81.72 42 ⇊P **P 10 20 01.2 +0.3**
baz=81,SNR=31
SCHQ Schefferville 81.75 11 P **P 10 20 00.3 -0.5**
comp=Z,105nm,0.8s,mb5.3,baz=0.6,slow=5.6,SNR=90
SCHQ PKKPbc PKKPbc 10 38 25.8 -1.8
comp=Z,6.0nm,0.7s,baz=270,slow=1.4,SNR=11
SCHQ Schefferville 81.75 11 *eP* **P 10 20 00.0 -0.8**
comp=Z,23nm,0.9s,mb4.6
N22A Wattenberg Ran 81.76 41 ⇑P **P 10 20 02.0 +0.8**
baz=81,SNR=69
BELC Belle Mtn. 81.77 51 ⇑P **P 10 20 01.1 -0.2**
baz=82,SNR=82
Q19A Hogan Spring (81.78 44 ⇑P **P 10 20 01.2 -0.1**
baz=82,SNR=198
PFO Pinyon Flat Ob 81.79 52 P **P 10 20 01.0 -0.4**
comp=Z,978nm,1.0s,mb6.2,SNR=64
PFO Pinyon Flat Ob 81.79 52 ⇑P **P 10 20 01.3 -0.1**
baz=82,SNR=93
PFO Pinyon Flat Ob 81.79 52 *eP* **P 10 20 01.2 -0.2**
PFO *e*PP* pP 10 21 53.7 +0.7
PFO pmax pmax
comp=Z,258nm,1.0s,mb5.6
PFO Pinyon Flat Ob 81.79 52 *eP* **P 10 20 01.1 -0.3**
comp=Z,258nm,1.0s,mb5.6
PFO *epP* pP 10 21 53.7 +0.8
P20A De Beque 81.81 43 ⇑P **P 10 20 01.3 -0.2**
baz=82,SNR=33
R18A Canyonlands Na 81.88 44 ⇑P **P 10 20 01.6 -0.2**
baz=82,SNR=105
109C Camp Elliot, M 81.92 52 ⇑P **P 10 20 01.9 -0.3**
baz=82,SNR=33

S17A Black Ridge (B 81.97 45 ⇊P **P 10 20 02.6 +0.3**
baz=82,SNR=194
NEE2 Needles Airpor 82.00 50 ⇊P **P 10 20 02.4 -0.1**
baz=82
RJF Les Rejaudoux 82.03 327 ⇑*iP* **P 10 20 02.2 -0.2**
comp=Z,145nm,1.0s,mb5.0
RJF *e*MLR MLR
comp=Z,143nm,21.8s
RJF Les Rejaudoux 82.03 327 ⇑*iP* **P 10 20 02.2 -0.2**
RJF pmax pmax
comp=Z,73nm,1.0s,mb5.1
RJF MLR MLR
comp=Z,140nm,21.8s
RJF Les Rejaudoux 82.03 327 ⇑*iP* **P 10 20 02.2 -0.2**
comp=Z,72nm,1.0s,mb5.1
RJF LR LR
comp=Z,140nm,21.8s
LASF Ste Croix 82.07 325 ⇑*iP* **P 10 20 02.5 -0.1**
comp=Z,162nm,1.2s,mb5.0
LASF *epP* pP 10 21 55.9 +1.7
U15A North Rim 82.07 47 ⇊P **P 10 20 04.0 +1.2**
baz=82,SNR=480
T16A Glen Canyon Da 82.08 46 ⇑P **P 10 20 02.5 -0.4**
baz=82,SNR=38
CAF Calviac 82.12 327 ⇑*iP* **P 10 20 03.0 +0.1**
comp=Z,166nm,1.0s,mb5.1
CAF *epP* pP 10 21 56.4 +1.9
CAF Calviac 82.12 327 ⇑*iP* **P 10 20 03.0 +0.1**
CAF *e*PP* pP 10 21 56.4 +1.9
CAF pmax pmax
comp=Z,83nm,1.0s,mb5.1
CAF Calviac 82.12 327 ⇑*iP* **P 10 20 03.0 +0.1**
comp=Z,83nm,1.0s,mb5.1
CAF *epP* pP 10 21 56.4 +1.9
IRM Iron Mountain 82.14 50 ⇊P **P 10 20 03.7 +0.5**
baz=82,SNR=162
EYMN Ely 82.15 28 *eP* **P 10 20 01.8 -1.1**
comp=Z,150nm,0.9s,mb5.4
W13A Hualapai Mount 82.17 49 ⇑P **P 10 20 03.8 +0.5**
baz=82,SNR=107
V14A Boquillas Ranc 82.21 48 ⇊P **P 10 20 04.5 +0.9**
baz=82,SNR=174
P21A Newcastle 82.26 42 ⇑P **P 10 20 04.2 +0.4**
baz=82
Q20A Ridgley Place, 82.27 43 ⇊P **P 10 20 03.8 0.0**
baz=82,SNR=63
R19A Curley Farm, L 82.28 44 ⇊P **P 10 20 04.4 +0.5**
baz=82,SNR=122
MONP Monument Peak 82.32 52 ⇊P **P 10 20 04.2 +0.1**
baz=82,SNR=75
BAR Barrett 82.33 52 *eP* **P 10 20 03.7 -0.5**
comp=Z,90nm,0.8s,mb5.2
BAR *epP* pP 10 21 56.1 +0.2
BC3 Big Chuckw Mtn 82.33 51 ⇑P **P 10 20 04.4 +0.3**
baz=82,SNR=99
S18A Hurst Farm, Bl 82.35 45 ⇊P **P 10 20 04.3 +0.1**
baz=82,SNR=130
PV04 Paradox Valley 82.39 44 *eP* **P 10 20 04.8 +0.4**
PV04 *epP* pP 10 21 57.8 +1.7
T17A Navajo Res., N 82.45 46 ⇊P **P 10 20 04.7 0.0**
baz=82,SNR=59
W14A Seligman 82.53 48 ⇊P **P 10 20 06.2 +1.0**
baz=82,SNR=168
X13A Yucca 82.57 49 ⇑P **P 10 20 05.8 +0.4**
baz=82,SNR=234
V15A Kaibab Nationa 82.59 47 ⇊P **P 10 20 06.5 +1.1**
baz=82,SNR=161
PDMCI Parker Dam,Lak 82.61 50 ⇑P **P 10 20 05.8 +0.2**
baz=82,SNR=53
LFF La Frestale 82.64 327 ⇑*iP* **P 10 20 05.6 +0.1**
comp=Z,239nm,0.8s,mb5.5
LFF *epP* pP 10 21 59.4 +2.1
LFF La Frestale 82.64 327 ⇑*iP* **P 10 20 05.6 +0.1**
LFF *e*PP* pP 10 21 59.4 +2.1
LFF pmax pmax
comp=Z,120nm,0.8s,mb5.5
LFF La Frestale 82.64 327 ⇑*iP* **P 10 20 05.6 +0.1**
comp=Z,120nm,0.8s,mb5.5
LFF *epP* pP 10 21 59.4 +2.1
SWSC Sam W. Stewart 82.65 52 ⇑P **P 10 20 05.6 -0.2**
baz=82,SNR=35
DVTC Desert V Tower 82.68 52 ⇑P **P 10 20 06.0 +0.1**
baz=82,SNR=12
Q21A Lamborn Mesa, 82.72 43 ⇑P **P 10 20 06.5 +0.5**
baz=82,SNR=73
PV01 Paradox Valley 82.75 44 *eP* **P 10 20 06.6 +0.3**
comp=Z,6um,0.8s
S19A Harvey Farm, M 82.76 44 ⇑P **P 10 20 06.3 +0.1**
baz=82,SNR=89
SMCO Snowmass 82.76 42 *eP* **P 10 20 07.1 +0.9**
Y12C Blythe 82.80 50 ⇑P **P 10 20 06.9 +0.4**
baz=82,SNR=99
R20A Redvale 82.81 44 ⇊P **P 10 20 07.1 +0.6**
baz=82,SNR=163
U17A Shonto 82.82 46 ⇑P **P 10 20 07.4 +0.8**
baz=82,SNR=28
T18A Mexican Hat 82.83 45 ⇊P **P 10 20 06.7 0.0**
baz=82,SNR=182
U16A Tuba City 82.91 47 ⇑P **P 10 20 08.0 +1.0**
baz=83,SNR=210
ISCO Idaho Springs 82.95 41 *eP* **P 10 20 07.9 +0.7**
W15A Williams 83.01 48 ⇑P **P 10 20 08.8 +1.2**
baz=83,SNR=62
Q22A Crested Butte, 83.03 42 ⇊P **P 10 20 08.4 +0.8**
baz=83,SNR=102
R21A Cimarron 83.09 43 ⇊P **P 10 20 08.7 +0.8**
baz=83,SNR=61
GLA Glamis 83.13 51 ⇑P **P 10 20 08.6 +0.4**
baz=83,SNR=43
GLA Glamis 83.13 51 *eP* **P 10 20 08.7 +0.5**
Y13A Salome 83.14 50 ⇊P **P 10 20 08.7 +0.5**
baz=83,SNR=124
VSL Villasalto 83.18 319 *eP* **P 10 20 07.4 -0.9**
comp=Z,56nm,0.9s,mb5.1
VSL *epP* pP 10 22 00.1 -0.2
X14A Yava 83.19 49 ⇑P **P 10 20 09.5 +1.0**
baz=83,SNR=131
WUAZ Wupatki 83.25 47 ⇑P **P 10 20 09.7 +1.0**
baz=83,SNR=186
WUAZ Wupatki 83.25 47 *eP* **P 10 20 09.7 +1.0**
comp=Z,121nm,0.8s,mb5.5
WUAZ *epP* pP 10 22 02.9 +2.1
MTLF Montolieu 83.36 326 ⇑*iP* **P 10 20 08.8 -0.3**
comp=Z,31nm,1.0s,mb4.5
MTLF *epP* pP 10 22 02.1 +0.9
MTLF Montolieu 83.36 326 ⇑*iP* **P 10 20 08.8 -0.3**
MTLF *e*PP* pP 10 22 02.1 +0.9
MTLF pmax pmax
comp=Z,15nm,1.0s,mb4.5
MTLF Montolieu 83.36 326 ⇑*iP* **P 10 20 08.8 -0.3**
comp=Z,15nm,1.0s,mb4.5
MTLF *epP* pP 10 22 02.1 +0.9
U18A Rough Rock, Ch 83.38 46 ⇑P **P 10 20 10.1 +0.7**
baz=83,SNR=132
W16A Flagstaff 83.47 48 ⇑P **P 10 20 10.8 +0.9**
baz=83,SNR=55
V17A Tonalea, Kykot 83.48 47 ⇑P **P 10 20 11.0 +1.1**
baz=83,SNR=364
MVCO Mesa Verde 83.49 44 ⇊P **P 10 20 10.5 +0.5**
baz=83,SNR=94
MVCO Mesa Verde 83.49 44 *eP* **P 10 20 10.4 +0.4**
comp=Z,121nm,0.9s,mb5.4
MVCO *epP* pP 10 22 04.1 +2.0
T19A Beclabito 83.51 45 ⇑P **P 10 20 10.5 +0.5**
baz=83,SNR=267
S21A Coal Bank Pass 83.51 44 ⇑P **P 10 20 11.3 +1.3**
baz=83,SNR=116
X15A Humboldt 83.54 48 ⇊P **P 10 20 11.2 +1.0**
baz=83,SNR=310
R22A Saguache, Gunn 83.60 43 ⇑P **P 10 20 11.6 +1.2**
baz=83,SNR=84
Z13A Yuma Proving G 83.69 50 ⇑P **P 10 20 11.4 +0.4**
baz=83,SNR=142
OGNE Ogallala 83.73 38 *eP* **P 10 20 11.0 0.0**
comp=Z,297nm,0.9s,mb5.8
OGNE *epP* pP 10 22 02.7 -0.6
ECSD EROS Data Cent 83.79 33 *eP* **P 10 20 10.6 -0.7**
comp=Z,166nm,0.8s,mb5.6
EJON La Jonquera 83.80 325 P **P 10 20 11.9 +0.5**
comp=Z,1.2nm,1.8s
U19A Dine' College, 83.82 45 ⇑P **P 10 20 12.2 +0.6**
baz=84,SNR=49
V18A Ganado 83.88 46 ⇑P **P 10 20 12.9 +1.0**
baz=84,SNR=88
Y15A Casa Rosa Ranc 83.88 49 ⇑P **P 10 20 12.6 +0.6**
baz=84,SNR=186
W17A Winslow 83.93 47 ⇊P **P 10 20 12.9 +0.7**

baz=84,SNR=17
113A Mohawk Valley, 83.94 51 ⇊P **P 10 20 12.3 +0.1**
baz=84,SNR=25
Z14A Wintersburg 83.97 50 ⇊P **P 10 20 12.8 +0.4**
baz=84,SNR=36
X16A Lo Mia Camp, P 84.03 48 ⇊P **P 10 20 13.7 +1.1**
baz=84,SNR=247
U20A Newcomb 84.12 45 ⇑P **P 10 20 13.6 +0.5**
baz=84,SNR=39
MLS Moulis 84.14 326 *eP* **P 10 20 10.6 -2.4**
VALF Valcebollere 84.21 325 *eP* **P 10 20 13.3 -0.1**
V19A Window Rock 84.34 46 ⇑P **P 10 20 15.1 +1.0**
baz=84,SNR=26
EPF Esparros 84.39 327 ⇑*iP* **P 10 20 13.5 -0.7**
comp=Z,22nm,0.8s,mb4.4
EPF *epP* pP 10 22 07.7 +1.0
EPF Esparros 84.39 327 ⇑*iP* **P 10 20 13.5 -0.7**
EPF *e*PP* pP 10 22 07.7 +1.0
EPF pmax pmax
comp=Z,11nm,0.8s,mb4.4
EPF Esparros 84.39 327 ⇑*iP* **P 10 20 13.5 -0.7**
comp=Z,11nm,0.8s,mb4.4
EPF *epP* pP 10 22 07.7 +1.0
Y16A Circle Bar Ran 84.41 48 ⇊P **P 10 20 15.5 +1.0**
baz=84,SNR=112
X17A Forest Lakes 84.44 48 ⇊P **P 10 20 16.0 +1.3**
baz=84,SNR=172
114A Black Gap (USA 84.46 50 ⇑P **P 10 20 15.4 +0.6**
baz=84,SNR=70
T22A Edith 84.46 43 ⇊P **P 10 20 15.6 +0.9**
baz=84,SNR=168
Z15A Gila River Ind 84.47 49 ⇑P **P 10 20 15.0 +0.2**
baz=84,SNR=21
RESF Ens 84.57 326 *eP* **P 10 20 15.8 +0.6**
V20A Brimhall 84.58 45 ⇊P **P 10 20 15.8 +0.4**
baz=84,SNR=27
SDCO Great Sand Dun 84.60 42 *eP* **P 10 20 15.4 0.0**
comp=Z,44nm,0.9s,mb5.0
SDCO *epP* pP 10 22 09.5 +1.6
W19A Sanders 84.62 46 ⇑P **P 10 20 16.7 +1.1**
baz=84,SNR=258
VIEF Viey 84.64 327 *eP* **P 10 20 15.8 +0.3**
EBIE Bielsa 84.75 326 P **P 10 20 16.8 +0.8**
comp=Z,12nm,0.8s,mb4.5
EBIE P pP 10 22 11.1 +2.5
X18A Snowflake 84.76 47 ⇑P **P 10 20 17.0 +0.8**
baz=84,SNR=82
Z16A Peralta Trail, 84.84 49 ⇊P **P 10 20 17.1 +0.4**
baz=85,SNR=40
ETSF Etsaut 84.86 327 ⇑*iP* **P 10 20 16.8 +0.2**
comp=Z,45nm,0.7s,mb4.8
ETSF *epP* pP 10 22 11.3 +2.2
ETSF Etsaut 84.86 327 ⇑*iP* **P 10 20 16.8 +0.2**
ETSF *e*PP* pP 10 22 11.3 +2.2
ETSF pmax pmax
comp=Z,22nm,0.7s,mb4.8
ETSF Etsaut 84.86 327 ⇑*iP* **P 10 20 16.8 +0.2**
comp=Z,22nm,0.7s,mb4.8
ETSF *epP* pP 10 22 11.3 +2.2
115A Sonoran Desert 84.87 50 ⇑P **P 10 20 17.3 +0.5**
baz=85,SNR=25
Y17A Roosevelt 84.90 48 ⇑P **P 10 20 17.6 +0.7**
baz=85,SNR=97
SJPF Ste Jean 84.95 328 ⇑*iP* **P 10 20 17.2 +0.2**
comp=Z,15nm,0.8s,mb4.2
SJPF Ste Jean 84.95 328 ⇑*iP* **P 10 20 17.2 +0.2**
SJPF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
SJPF Ste Jean 84.95 328 ⇑*iP* **P 10 20 17.2 +0.2**
comp=Z,7.3nm,0.8s,mb4.3
EALK Alkurruntz 84.97 328 P **P 10 20 18.2 +1.1**
comp=Z,3.8nm,0.4s,mb4.3
EALK P pP 10 22 10.9 +1.2
V21A Milan 85.01 45 ⇊P **P 10 20 18.0 +0.5**
baz=85,SNR=12
ELIZ Elizondo 85.03 328 P **P 10 20 17.5 +0.1**
ELIZ pmax pmax
comp=Z,72nm,3.4s
ELIZ Elizondo 85.03 328 P **P 10 20 17.5 +0.1**
comp=Z,72nm,3.4s
W20A Ramah 85.08 46 ⇊P **P 10 20 18.4 +0.6**
baz=85,SNR=149
214A Organ Pipe Nat 85.09 50 ⇑P **P 10 20 18.0 +0.1**
baz=85,SNR=31
X19A St. Johns 85.19 47 ⇊P **P 10 20 19.4 +1.1**
baz=85,SNR=188
116A Eloy 85.26 49 ⇑P **P 10 20 19.3 +0.5**
baz=85,SNR=54
Y18A Canyon Day Jun 85.28 48 ⇊P **P 10 20 19.7 +0.9**
baz=85,SNR=46
V22A San Miguel Ran 85.31 44 ⇑P **P 10 20 19.6 +0.7**
baz=85,SNR=54
Z17A San Carlos Hig 85.40 48 ⇊P **P 10 20 20.3 +0.9**
baz=85,SNR=54
EPOB Poblet 85.47 325 P **P 10 20 19.1 -0.4**
comp=Z,15nm,0.7s,mb4.6
X20A Quemado 85.53 46 ⇊P **P 10 20 21.4 +1.4**
baz=85,SNR=156
W21A San Fidel 85.54 45 ⇑P **P 10 20 20.7 +0.7**
baz=85,SNR=16
Y19A Nutrioso 85.56 47 ⇊P **P 10 20 21.5 +1.3**
baz=85,SNR=58
MOO Moorlands 85.66 169 *eP* **P 10 20 21.2 +1.1**
ELAN Lanestosa 85.71 329 P **P 10 20 20.2 -0.4**
comp=Z,18nm,0.8s,mb4.8
ELAN P pP 10 22 15.5 +2.0
117A Oracle 85.80 49 ⇊P **P 10 20 21.9 +0.6**
baz=86,SNR=47
ESAC San Caprasio 85.81 326 P **P 10 20 21.6 +0.5**
comp=Z,18nm,0.4s,mb5.0
V23A Ortiz Mt. (NFS 85.81 44 ⇊P **P 10 20 22.8 +1.5**
baz=86,SNR=37
216A Three Points, 85.82 50 ⇑P **P 10 20 21.6 +0.2**
baz=86,SNR=23
TUC Tucson 85.97 49 *eP* **P 10 20 22.3 +0.2**
TUC *e*PP* pP 10 22 15.7 +0.6
TUC pmax pmax
comp=Z,43nm,1.1s,mb5.0
TUC Tucson 85.97 49 *eP* **P 10 20 22.3 +0.2**
comp=Z,43nm,1.1s,mb5.0
TUC *epP* pP 10 22 15.7 +0.6
W22A Albuquerque 85.98 45 ⇑P **P 10 20 23.3 +1.2**
baz=86,SNR=18
X21A Alamocita Cree 85.98 46 ⇑P **P 10 20 23.5 +1.3**
baz=86,SNR=152
ETOS Mallorca 86.02 323 P **P 10 20 21.9 -0.3**
comp=Z,18nm,0.7s,mb4.8
Z19A T-Link Ranch, 86.06 47 ⇊P **P 10 20 23.4 +0.8**
baz=86,SNR=8.2
Y20A Horse Springs, 86.07 46 ⇑P **P 10 20 23.9 +1.3**
baz=86,SNR=108
ERTA Horta de San J 86.11 325 P **P 10 20 21.8 -0.8**
comp=Z,25nm,0.9s,mb4.8
KEST Kesra 86.13 317 P **P 10 20 22.4 -0.4**
comp=Z,3.6nm,0.8s,mb4.0,baz=156,slow=2.2,SNR=8.8
KEST pP pP 10 22 17.1 +1.3
comp=Z,7.3nm,1.1s,baz=78,slow=2.1,SNR=6.0
OUZ Omahuta 86.23 147 *eP* **P 10 20 25.0 +2.0**
comp=Z,279nm,1.6s,mb5.6
W23A Werner Place, 86.28 44 ⇑P **P 10 20 24.6 +1.1**
baz=86,SNR=53
ANMO Albuquerque 86.28 44 *eP* **P 10 20 24.4 +0.8**
ANMO pmax pmax
comp=Z,91nm,1.3s
ANMO Albuquerque 86.28 44 *eP* **P 10 20 24.4 +0.9**
comp=Z,90nm,1.3s,mb5.2
EARI Arriondas 86.31 330 P **P 10 20 23.3 -0.2**
comp=Z,18nm,0.7s,mb4.8
EARI P pP 10 22 18.2 +1.6
X22A Bernardo 86.34 45 ⇊P **P 10 20 25.5 +1.6**
baz=86,SNR=20
217A Green Valley 86.35 49 ⇑P **P 10 20 24.5 +0.5**
baz=86,SNR=69
LAZ Ladron 86.35 45 *eP* **P 10 20 24.0 +0.1**
comp=Z,29nm,1.0s,mb4.9
LAZ *epP* pP 10 22 17.7 +0.7
Y21A Point of Rocks 86.37 46 ⇑P **P 10 20 25.4 +1.4**
baz=86,SNR=121
119A Ashpeak Ranch, 86.44 48 ⇊P **P 10 20 25.0 +0.6**
baz=86,SNR=43
CBKS Cedar Bluff 86.49 38 *eP* **P 10 20 23.6 -0.9**
CBKS *e*PP* pP 10 22 16.6 -1.0
CBKS pmax pmax
comp=Z,149nm,0.8s,mb5.7
CBKS Cedar Bluff 86.49 38 *eP* **P 10 20 23.6 -0.8**
comp=Z,148nm,0.8s,mb5.7
CBKS *epP* pP 10 22 16.6 -1.0

U26A Atchley Ranch, 86.53 42 ⇑P P 10 20 24.9 +0.2
baz=86
Z20A Nine Sixteen R 86.56 47 ⇓P P 10 20 25.9 +0.9
baz=86,SNR=130
LENM Lemitar 86.62 45 *e*P **P 10 20 26.1 +0.9**
LENM *e*pP pP 10 22 18.2 -0.1
W24A Lazy 6 Ranch, 86.62 44 ⇓P P 10 20 26.3 +1.1
baz=86,SNR=54
218A Dragoon 86.63 49 ⇑P P 10 20 26.1 +0.8
baz=86,SNR=72
SCIA State Center 86.67 32 *e*P **P 10 20 25.0 -0.2**
comp=Z,341nm,1.0s,mb5.9
SCIA *e*pP pP 10 22 18.7 +0.2
LPM Los Pinos Moun 86.69 45 *e*P **P 10 20 26.4 +0.9**
Y22D IRIS PASSCAL I 86.72 45 ⇓P P 10 20 26.8 +1.1
baz=86,SNR=7.6
Y22A Socorro 86.80 45 ⇓P P 10 20 26.9 +0.9
baz=86,SNR=45
BNM Barren Site 86.81 45 *e*P **P 10 20 26.8 +0.7**
comp=Z,70nm,1.2s,mb5.2
BNM *e*pP pP 10 22 20.0 +0.7
Z21A St. Cloud Mine 86.91 46 ⇓P P 10 20 27.7 +1.1
baz=87,SNR=81
JFWS Jewell Farm 86.93 30 *e*P **P 10 20 25.5 -1.0**
JFWS pmax pmax
comp=Z,115nm,0.8s,mb5.6
JFWS Jewell Farm 86.93 30 *e*P **P 10 20 25.5 -0.9**
comp=Z,115nm,0.8s,mb5.6
EMOS Mosqueruela 86.94 326 P **P 10 20 25.8 -0.8**
comp=Z,42nm,0.8s,mb5.1
EMOS P pP 10 22 22.0 +2.1
120A U Bar Ranch, L 86.97 47 ⇓P P 10 20 27.7 +0.8
baz=87,SNR=30
V26A Tequesquite Ra 86.98 42 ⇓P P 10 20 26.9 +0.1
baz=87
EPON Pontenova 86.99 331 P **P 10 20 26.1 -0.7**
comp=Z,13nm,0.6s,mb4.8
EPON P pP 10 22 21.5 +1.5
219A White Tail Can 87.05 48 ⇓P P 10 20 27.9 +0.7
baz=87,SNR=70
318A Bisbee 87.07 49 ⇓P P 10 20 27.7 +0.4
baz=87,SNR=50
W25A X Bar L Ranch, 87.10 43 ⇓P P 10 20 28.0 +0.6
baz=87,SNR=39
X24A Lazy VL Ranch, 87.11 44 ⇓P P 10 20 28.5 +1.1
baz=87,SNR=18
GLMI Grayling 87.16 25 *e*P **P 10 20 27.6 +0.1**
comp=Z,267nm,0.9s,mb5.9
ETOR Torete 87.21 327 P **P 10 20 27.7 -0.1**
ETOR pP 10 22 23.4 +2.2
ETOR pmax pmax
comp=Z,26nm,0.8s,mb4.9
ETOR Torete 87.21 327 P **P 10 20 27.7 -0.1**
comp=Z,26nm,0.8s,mb4.9
ETOR P pP 10 22 23.4 +2.2
Y23A Lovelace Mesa, 87.28 45 ⇓P P 10 20 29.1 +0.8
baz=87,SNR=84
Z22A Elephant Butte 87.33 46 ⇑P P 10 20 29.3 +0.8
baz=87,SNR=90
121A Cookes Peak, D 87.44 47 ⇑P P 10 20 30.1 +1.0
baz=87,SNR=27
319A Douglas 87.51 49 ⇑P P 10 20 29.8 +0.4
baz=87,SNR=47
220A Playas Peak, P 87.52 48 ⇑P P 10 20 30.0 +0.6
baz=87,SNR=39
X25A Clemmons Ranch 87.54 44 ⇑P P 10 20 30.3 +0.8
baz=87
W26A Owens Ranch, T 87.55 43 ⇑P P 10 20 30.2 +0.6
baz=87
Y24A Capitan 87.61 44 ⇑P P 10 20 30.4 +0.6
baz=87,SNR=15
KSU1 Kansas State U 87.64 36 *e*P **P 10 20 29.3 -0.6**
comp=Z,162nm,0.8s,mb5.8
122A Conniff Cattle 87.74 46 ⇓P P 10 20 31.6 +1.1
baz=87,SNR=19
ECHE Chera 87.80 325 P **P 10 20 30.3 -0.3**
ECHE pmax pmax
comp=Z,12nm,1.2s,mb4.5
ECHE Chera 87.80 325 P **P 10 20 30.3 -0.3**
comp=Z,12nm,1.2s,mb4.5
221A Mesquite Ranch 87.85 47 ⇓P P 10 20 31.6 +0.6
baz=88
STS Santiago 87.87 332 P **P 10 20 30.3 -0.6**
STS pmax pmax
comp=Z,17nm,0.8s,mb4.8
STS Santiago 87.87 332 P **P 10 20 30.3 -0.6**
comp=Z,17nm,0.8s,mb4.8
W27A Bowe Ranch, En 87.92 42 ⇓P P 10 20 31.6 +0.4
baz=88
X26A CR and CF Fran 87.95 43 ⇑P P 10 20 31.8 +0.3
baz=88,SNR=21
320A Kipp Ranch, An 87.95 48 ⇑P P 10 20 32.4 +0.9
baz=88,SNR=30
Y25A Mesa, Roswell 88.00 44 ⇓P P 10 20 31.9 +0.2
baz=88,SNR=61
ECAL Calabor 88.05 330 P **P 10 20 29.6 -2.2**
comp=Z,2.8nm,1.6s
222A Williams Famil 88.14 47 ⇑P P 10 20 32.9 +0.6
baz=88,SNR=66
PBRG Braganca 88.17 330 *e*P **P 10 20 31.6 -0.7**
comp=Z,18nm,1.1s,mb4.7
GUD Guadarrama 88.20 328 P **P 10 20 31.3 -1.1**
GUD pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
GUD Guadarrama 88.20 328 P **P 10 20 31.3 -1.1**
comp=Z,6.4nm,0.4s,mb4.7
X27A F and S Farms, 88.23 42 ⇑P P 10 20 33.2 +0.5
baz=88,SNR=11
Y26A Elida 88.44 43 ⇓P P 10 20 33.8 +0.1
baz=88
Z25A Roswell 88.49 44 ⇓P P 10 20 34.8 +0.9
baz=88,SNR=104
124A Stringfield Ra 88.56 45 ⇓P P 10 20 35.1 +0.8
baz=88,SNR=88
223A Chaparral, Ant 88.58 46 ⇑P P 10 20 34.9 +0.5
baz=88
PCAB Cabril 88.72 331 *e*P **P 10 20 34.2 -0.7**
comp=Z,40nm,1.3s,mb5.1
AMTX Amarillo 88.75 41 *e*P **P 10 20 35.4 +0.3**
comp=Z,131nm,1.4s,mb5.6
AMTX *e*pP pP 10 22 29.6 +0.7
Y27A Causey 88.81 43 ⇑P P 10 20 35.4 0.0
baz=88,SNR=21
MVO Moncorvo 88.84 330 *e*P **P 10 20 34.9 -0.5**
comp=Z,18nm,0.9s,mb4.9
ETOB Tobarra 88.84 325 P **P 10 20 34.5 -1.0**
comp=Z,17nm,1.4s,mb4.7
ETOB P pP 10 22 31.6 +2.3
Z26A Caprock 88.87 44 ⇑P P 10 20 35.9 +0.2
baz=89,SNR=38
MSTX Muleshoe 88.93 43 ⇓P P 10 20 35.5 -0.5
baz=89,SNR=19
ESDC Sonseca Array 88.95 327 P **P 10 20 34.4 -1.6**
comp=Z,1.8nm,0.4s,mb4.3,baz=22,slow=4.4,SNR=20
ESDC Sonseca Array 88.95 327 P **P 10 20 35.2 -0.8**
comp=Z,2.7nm,0.4s,mb4.4
PVRL Vila Real 88.99 331 *e*P **P 10 20 36.0 -0.1**
comp=Z,20nm,1.3s,mb4.8
125A Gardner Draw, 89.01 45 ⇑P P 10 20 37.0 +0.6
baz=89,SNR=51
224A Corundas Mount 89.01 46 ⇑P P 10 20 37.2 +0.8
baz=89,SNR=63
CPRX Cap Rock 89.12 44 *e*P **P 10 20 36.7 -0.2**
CPRX *e*pP pP 10 22 31.4 +0.6
PAB San Pablo 89.22 328 *e*P **P 10 20 35.9 -1.3**
PAB pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
PAB San Pablo 89.22 328 *e*P **P 10 20 35.9 -1.3**
comp=Z,6.6nm,0.8s,mb4.5
Z27A Tatum 89.23 43 ⇑P P 10 20 37.4 0.0
baz=89,SNR=66
EVIA Vianos 89.24 326 P **P 10 20 37.2 -0.1**
EVIA pmax pmax
comp=Z,20nm,0.8s,mb5.0
EVIA Vianos 89.24 326 P **P 10 20 37.2 -0.1**
comp=Z,20nm,0.8s,mb5.0
HDIL Hopedale 89.34 30 *e*P **P 10 20 37.2 -0.5**
comp=Z,176nm,1.0s,mb5.8
126A Clayton Basin, 89.35 44 ⇑P P 10 20 37.8 -0.1
baz=89,SNR=14
MNTX Cornudas Mount 89.38 46 *e*P **P 10 20 38.5 +0.3**
comp=Z,33nm,1.0s,mb5.1
GDL2 Guadalupe Moun 89.52 45 *e*P **P 10 20 39.0 +0.2**
comp=Z,93nm,1.2s,mb5.5
GDL2 *e*pP pP 10 22 34.2 +1.4
324A Moseley Ranch, 89.52 46 ⇓P P 10 20 39.1 +0.4
baz=89,SNR=36

PVIS Viseu 89.55 331 *e*P **P 10 20 38.5 -0.2**
comp=Z,17nm,1.1s,mb4.8
127A Arkansas Junct 89.66 44 ⇓P P 10 20 39.3 -0.1
baz=89,SNR=13
MTE Manteigas 89.69 330 *e*P **P 10 20 39.0 -0.4**
comp=Z,26nm,1.0s,mb5.0
AAM Ann Arbor 89.73 26 *e*P **P 10 20 39.5 0.0**
AAM pmax pmax
comp=Z,122nm,1.3s,mb5.6
AAM Ann Arbor 89.73 26 *e*P **P 10 20 39.5 0.0**
comp=Z,122nm,1.3s,mb5.6
226A Malaga, Loving 89.77 45 ⇑P P 10 20 40.4 +0.5
baz=90,SNR=61
325A Bean Ranch, Si 89.85 46 ⇑P P 10 20 40.9 +0.6
baz=90,SNR=72
LONY Lake Ozonia 90.11 19 *e*P **P 10 20 40.1 -1.2**
comp=Z,12nm,0.8s,mb4.8
PCBR Castelo Branco 90.16 330 *e*P **P 10 20 41.1 -0.5**
comp=Z,13nm,1.3s,mb4.6
EQES Quesada 90.19 326 P **P 10 20 40.2 -1.5**
comp=Z,15nm,1.0s,mb4.8
EQES P pP 10 22 38.9 +3.0
WMOK Wichita Mounta 90.26 40 *e*P **P 10 20 42.0 -0.1**
WMOK pmax pmax
comp=Z,128nm,1.2s,mb5.6
WMOK Wichita Mounta 90.26 40 *e*P **P 10 20 42.0 -0.1**
comp=Z,128nm,1.2s,mb5.6
URZ Urewera 90.28 146 *e*P **P 10 20 40.8 -1.0**
comp=Z,13nm,0.6s,mb4.9
425A Indio Mountain 90.30 46 ⇓P P 10 20 43.1 +0.7
baz=90,SNR=107
326A Caldwell Ranch 90.42 45 ⇑P P 10 20 43.3 +0.4
baz=90,SNR=103
PMRV Marv??o 90.49 330 *e*P **P 10 20 42.5 -0.6**
comp=Z,25nm,1.9s,mb4.7
EADA Adamuz 90.49 327 P **P 10 20 42.8 -0.4**
comp=Z,8.2nm,0.9s,mb4.6
PKME Peaks-Kenny Pk 90.61 15 *e*P **P 10 20 43.2 -0.4**
comp=Z,86nm,1.3s,mb5.5
327A Balmorhea Ranc 90.63 45 ⇓P P 10 20 44.7 +0.8
baz=90,SNR=10.0
SLM Saint Louis 90.65 32 *e*P **P 10 20 43.2 -0.7**
SLM pmax pmax
comp=Z,162nm,1.4s,mb5.8
SLM Saint Louis 90.65 32 *e*P **P 10 20 43.2 -0.7**
comp=Z,162nm,1.4s,mb5.8
CCM Cathedral Cave 90.75 33 *e*P **P 10 20 43.9 -0.4**
CCM pmax pmax
comp=Z,92nm,0.9s,mb5.7
CCM Cathedral Cave 90.75 33 *e*P **P 10 20 43.9 -0.5**
comp=Z,92nm,0.9s,mb5.7
NCB Newcomb 90.81 19 *e*P **P 10 20 43.6 -0.9**
comp=Z,43nm,1.1s,mb5.3
426A McDonald Obser 90.90 46 ⇓P P 10 20 45.5 +0.3
baz=91,SNR=90
328A Wristen Ranch, 90.97 44 ⇓P P 10 20 45.8 +0.3
baz=91,SNR=62
LBNH Lisbon 91.07 17 *e*P **P 10 20 45.3 -0.4**
LBNH pmax pmax
comp=Z,69nm,1.4s,mb5.4
LBNH Lisbon 91.07 17 *e*P **P 10 20 45.3 -0.4**
comp=Z,68nm,1.4s,mb5.4
427A Hayter Ranch, 91.09 45 ⇓P P 10 20 46.5 +0.4
baz=91,SNR=72
FVM French Village 91.14 32 *e*P **P 10 20 45.2 -0.9**
FVM *e**PP pP 10 22 39.8 -0.5
FVM pmax pmax
comp=Z,126nm,1.5s,mb5.6
FVM French Village 91.14 32 *e*P **P 10 20 45.2 -0.9**
comp=Z,126nm,1.5s,mb5.6
FVM *e*pP pP 10 22 39.8 -0.5
526A Mary Lane Ranc 91.35 46 ⇓P P 10 20 48.1 +0.9
baz=91,SNR=114
OLIL Olney 91.38 30 *e*P **P 10 20 46.9 -0.3**
comp=Z,162nm,1.4s,mb5.8
OLIL *e*pP pP 10 22 41.6 +0.2
EVO Evora 91.51 330 *e*P **P 10 20 46.6 -1.2**
comp=Z,42nm,1.3s,mb5.0
EVO *e*MLR MLR
comp=Z,156nm,20.2s
527A Woodward Ranch 91.53 46 ⇑P P 10 20 48.5 +0.4
baz=91,SNR=73
428A Kincaid Ranch, 91.56 45 ⇓P P 10 20 49.2 +1.0
baz=91,SNR=186
BLO Bloomington 91.56 29 *e*P **P 10 20 47.7 -0.4**
BLO pmax pmax
comp=Z,32nm,0.8s,mb5.4
BLO Bloomington 91.56 29 *e*P **P 10 20 47.7 -0.4**
comp=Z,32nm,0.8s,mb5.4
EMIN Mina Concepcio 91.66 328 P **P 10 20 47.1 -1.4**
comp=Z,4.8nm,1.0s,mb4.5
626A Big Bend Ranch 91.72 46 ⇓P P 10 20 49.5 +0.5
baz=91,SNR=104
ACSO Alum Creek Sta 91.82 26 *e*P **P 10 20 48.8 -0.4**
comp=Z,95nm,1.1s,mb5.7
ACSO *e*pP pP 10 22 42.3 -1.1
SIUC Southern Illin 91.84 31 *e*P **P 10 20 49.2 -0.1**
comp=Z,103nm,0.8s,mb5.9
SIUC *e*pP pP 10 22 43.6 0.0
528A Cox Ranch, San 91.95 45 ⇑P P 10 20 50.8 +0.8
baz=92,SNR=78
BINY Binghamton 92.04 20 *e*P **P 10 20 49.5 -0.7**
comp=Z,42nm,0.9s,mb5.5
ESPR Espera 92.12 327 P **P 10 20 51.1 +0.4**
comp=Z,9.2nm,0.5s,mb5.1
ESPR P pP 10 22 46.7 +1.8
TXAR Lajitas Array 92.14 46 P **P 10 20 51.2 +0.3**
comp=Z,41nm,0.9s,mb5.4,baz=276,slow=2.4,SNR=239
TXAR pP pP 10 22 46.8 +1.6
comp=Z,5.2nm,0.9s,baz=319,slow=3.6,SNR=6.0
TXAR PP PP 10 24 41.9 +2.7
comp=Z,7.4nm,1.0s,baz=297,slow=5.5,SNR=5.1
TXAR PKKPbc PKKPbc 10 38 03.5 +1.2
comp=Z,0.9nm,0.6s,baz=160,slow=7.8,SNR=9.7
TXAR Lajitas Array 92.14 46 P **P 10 20 51.3 +0.4**
TXAR *PP pP 10 22 46.8 +1.6
TXAR 10 24 41.9
TXAR pmax pmax
comp=Z,41nm,0.9s
TXAR pmax pmax
comp=Z,7.0nm,1.0s
TXAR Lajitas Array 92.14 46 P **P 10 20 51.2 +0.3**
TXAR pP pP 10 22 46.8 +1.6
TXAR PP PP 10 24 41.9 +2.7
TXAR PKKPbc PKKPbc 10 38 03.5 +1.2
627A Terlingua Ranc 92.20 46 ⇑P P 10 20 51.4 +0.3
baz=92,SNR=73
USIN University of 92.21 30 *e*P **P 10 20 50.6 -0.4**
comp=Z,21nm,0.6s,mb5.3
WCI Wyandotte Cave 92.48 29 *e*P **P 10 20 51.4 -0.9**
WCI pmax pmax
comp=Z,23nm,0.6s,mb5.4
WCI Wyandotte Cave 92.48 29 *e*P **P 10 20 51.4 -0.9**
comp=Z,24nm,0.6s,mb5.4
PARMO Parma 92.55 32 *e*P **P 10 20 52.6 0.0**
PARMO *e*pP pP 10 22 46.3 -0.6
MIAR Mount Ida 92.78 36 *e*P **P 10 20 53.8 +0.1**
MIAR *e**PP pP 10 22 48.3 +0.3
MIAR pmax pmax
comp=Z,57nm,0.9s,mb5.6
MIAR Mount Ida 92.78 36 *e*P **P 10 20 53.8 +0.1**
comp=Z,57nm,0.9s,mb5.6
MIAR *e*pP pP 10 22 48.3 +0.2
SSPA Standing Stone 92.99 22 *e*P **P 10 20 53.6 -1.0**
comp=Z,43nm,1.0s,mb5.4
SSPA *e*pP pP 10 22 48.9 +0.1
GNAR Gosnell 93.05 33 *e*P **P 10 20 55.3 +0.4**
comp=Z,1μm,1.3s,mb6.8
GLAT Glass 93.08 32 *e*P **P 10 20 55.3 +0.3**
GLAT *e*pP pP 10 22 49.1 -0.3
HBAR Harrisburg 93.15 34 *e*P **P 10 20 56.1 +0.7**
JCT Junction City 93.23 43 *e*P **P 10 20 55.6 -0.3**
JCT *e**PP pP 10 22 50.8 +0.6
JCT pmax pmax
comp=Z,58nm,0.8s,mb5.7
JCT Junction City 93.23 43 *e*P **P 10 20 55.6 -0.3**
comp=Z,58nm,0.8s,mb5.7
JCT *e*pP pP 10 22 50.8 +0.6
MCWV Mont Chateau 93.32 24 *e*P **P 10 20 56.1 0.0**
comp=Z,59nm,1.1s,mb5.5
MCWV *e*pP pP 10 22 50.2 -0.2
WVT Waverly 93.77 31 *e*P **P 10 20 57.7 -0.5**
WVT *e**PP pP 10 22 52.4 -0.2
WVT pmax pmax
comp=Z,38nm,0.9s,mb5.5
WVT Waverly 93.77 31 *e*P **P 10 20 57.7 -0.5**
comp=Z,38nm,0.9s,mb5.5
WVT *e*pP pP 10 22 52.4 -0.2
KMBO Kilima Mbogo 94.18 272 P **P 10 21 00.4 0.0**
comp=Z,19nm,1.0s,mb5.2,baz=4.6,slow=24,SNR=24
KMBO pP pP 10 22 57.7 +2.8
comp=Z,2.3nm,0.3s,baz=178,slow=24,SNR=6.6
KMBO PP PP 10 24 57.8 +2.0
comp=Z,5.5nm,1.0s,baz=14,slow=20,SNR=5.6
KMBO Kilima Mbogo 94.18 272 P **P 10 21 00.4 0.0**
KMBO *PP pP 10 22 57.7 +2.8
KMBO 10 24 57.8
KMBO pmax pmax
comp=Z,19nm,1.0s
KMBO pmax pmax
comp=Z,6.0nm,1.0s
KMBO Kilima Mbogo 94.18 272 P **P 10 21 01.0 +0.5**
SNR=5.8
KMBO P 10 21 01.0
SNR=5.8
OXF Oxford 94.56 33 *e*P **P 10 21 01.7 -0.1**
OXF *e**PP pP 10 22 57.0 +0.7
OXF pmax pmax
comp=Z,94nm,1.1s,mb5.8
OXF Oxford 94.56 33 *e*P **P 10 21 01.7 -0.2**
comp=Z,94nm,1.1s,mb5.8
OXF *e*pP pP 10 22 57.0 +0.7
NATX Nacogdoches 94.64 38 *e*P **P 10 21 02.7 +0.4**
comp=Z,132nm,1.3s,mb5.9
NATX *e*pP pP 10 22 56.4 -0.4
PLAL Pickwick Lake 94.68 32 *e*P **P 10 21 01.5 -0.8**
comp=Z,33nm,0.9s,mb5.5
PLAL *e*pP pP 10 22 56.8 0.0
TZTN Tazewell 94.96 28 *e*P **P 10 21 03.1 -0.6**
comp=Z,30nm,1.0s,mb5.4
ELN Prospectdale 95.27 26 *e*P **P 10 21 03.8 -1.3**
SWET Sewanee 95.29 30 *e*P **P 10 21 04.0 -1.1**
BLA Blacksburg 95.39 25 *e*P **P 10 21 04.9 -0.7**
CPCT Cooper Cave 95.60 29 *e*P **P 10 21 05.8 -0.7**
CPCT *e*pP pP 10 23 00.6 -0.5
VBMS Vicksburg 96.08 35 *e*P **P 10 21 09.4 +0.7**
comp=Z,164nm,1.3s,mb6.1
VBMS *e*pP pP 10 23 01.8 -1.6
KVTX Kingsville 96.58 43 *e*P **P 10 21 12.4 +1.3**
comp=Z,35nm,0.6s,mb5.8
LRAL Lakeview Retre 96.81 32 *e*P **P 10 21 11.5 -0.6**
GOGA Godfrey 97.81 29 *e*P Pdif 10 21 16.3 -0.1
GOGA pmax pmax
comp=Z,13nm,0.8s,mb5.3
GOGA Godfrey 97.81 29 *e*P Pdif 10 21 16.3 -0.2
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 108.23 308 PKKPab PKKPab 10 37 34.4 -1.1
comp=Z,7.8nm,0.9s,baz=231,slow=4.8,SNR=8.6
DBIC Dimbokro 117.22 310 PKP PKPdf 10 26 22.3 -1.3
comp=Z,6.2nm,0.4s,baz=3.1,slow=2.4,SNR=29
DBIC SKP 10 29 06.5
comp=Z,6.3nm,0.7s,baz=348,slow=4.3,SNR=5.0
DBIC PKKPbc PKKPbc 10 36 48.0 +0.3
comp=Z,4.2nm,0.7s,baz=153,slow=13,SNR=5.4
DBIC Dimbokro 117.22 310 PKP PKPdf 10 26 22.3 -1.3
DBIC SKP 10 29 06.5
DBIC PKKPbc PKKPbc 10 36 48.0 +0.3
TIC Toumodi 117.34 310 *e*PKIKP PKPdf 10 26 22.4 -1.4
comp=Z,12nm,0.3s
KIC Kosan Boka 117.41 310 *e*PKIKP PKPdf 10 26 22.7 -1.2
comp=Z,8.4nm,0.4s
LIC Lamto 117.68 310 *e*PKIKP PKPdf 10 26 22.9 -1.6
comp=Z,20nm,0.4s
LIC Lamto 117.68 310 *e*PKIKP PKPdf 10 26 22.9 -1.6
comp=Z,11nm,0.4s
LIC *e*MLR MLR
comp=Z,112nm,22.8s
LIC Lamto 117.68 310 *e*PKPdf PKPdf 10 26 22.9 -1.6
LIC LR LR
comp=Z,60nm,22.8s
BOSA Boshof 120.44 258 PKP PKPdf 10 26 28.8 -0.4
comp=Z,5.2nm,1.0s,baz=302,slow=6.4,SNR=4.2
BOSA PP PP 10 28 01.4 -3.8
comp=Z,13nm,1.0s,baz=52,slow=8.1,SNR=6.8
BOSA SKP 10 29 13.5
comp=Z,10nm,1.0s,baz=99,slow=3.1,SNR=4.2
BOSA PKKPbc PKKPbc 10 36 36.3 +0.3
comp=Z,11nm,0.8s,baz=198,slow=1.2,SNR=10
BOSA Boshof 120.44 258 PKIKP PKPdf 10 26 28.8 -0.4
BOSA 10 28 01.4
BOSA 10 29 13.5
BOSA pmax pmax
comp=Z,5.0nm,1.0s
BOSA pmax pmax
comp=Z,13nm,1.0s
BOSA Boshof 120.44 258 PKP PKPdf 10 26 28.8 -0.4
BOSA PP PP 10 28 01.4 -3.8
BOSA SKP 10 29 13.5
BOSA PKKPbc PKKPbc 10 36 36.3 +0.3
TSUM Tsumeb 120.51 271 PKKPbc PKKPbc 10 36 36.8 +1.1
comp=Z,3.1nm,1.0s,baz=242,slow=4.7,SNR=4.5
MAW Mawson 121.33 205 PKP PKPdf 10 26 29.6 -0.1
comp=Z,17nm,0.7s,baz=356,slow=1.8,SNR=10
MAW SKP 10 29 14.8
comp=Z,15nm,0.9s,baz=14,slow=2.4,SNR=7.8
MAW PKKPbc PKKPbc 10 36 32.0 -1.3
comp=Z,6.8nm,0.8s,baz=242,slow=10.0,SNR=6.7
SBA Scott Base 121.94 172 *e*PKIKP PKPdf 10 26 30.5 -0.2
SDV Santo Domingo 124.89 27 *e*PKPdf PKPdf 10 26 37.4 -0.9
ROSC El Rosal 127.21 34 PKP PKPdf 10 26 42.5 -0.2
comp=Z,24nm,0.8s,baz=267,slow=24,SNR=15
ROSC El Rosal 127.21 34 *e*PKPdf PKPdf 10 26 43.0 +0.3
OTAV Otavalo 129.47 41 *e*PKPdf PKPdf 10 26 47.5 +0.4
ATAH Atahualpa 135.81 46 PKP PKPdf 10 26 59.0 +0.1
comp=Z,29nm,0.9s,baz=21,slow=2.7,SNR=5.9
ATAH SKPbc SKPbc 10 29 41.9 0.0
comp=Z,31nm,0.8s,baz=250,slow=0.1,SNR=18
NVL N'lazarevskaya 139.26 206 *e*PKHKP 10 26 53.8
MAIT Maitri 139.29 206 *e*PKPdif 10 26 55.9
NNA Nana 140.68 48 PKhKP 10 27 00.7
comp=Z,28nm,0.6s,baz=305,slow=4.7,SNR=20
NNA SKPbc SKPbc 10 29 53.7 -1.8
comp=Z,41nm,0.8s,baz=307,slow=5.5,SNR=15
NNA Nana 140.68 48 PKP 10 27 00.7
NNA SKPbc SKPbc 10 29 53.7 -1.8
LPAZ La Paz 148.77 39 PKP PKPdf 10 27 21.8 +0.3
comp=Z,60nm,0.9s,baz=21,slow=3.6,SNR=30
LPAZ PKPbc PKPbc 10 27 26.2 +0.2
comp=Z,60nm,0.9s,baz=25,slow=7.9,SNR=73
LPAZ La Paz 148.77 39 PKP PKPdf 10 27 21.8 +0.3
LPAZ PKPbc PKPbc 10 27 26.2 +0.2
SIV San Ignacio 151.35 27 PKP PKPdf 10 27 25.0 -0.5
comp=Z,4.3nm,0.8s,baz=148,slow=1.0,SNR=24
SIV PKPbc PKPbc 10 27 31.3 -0.8
comp=Z,63nm,0.8s,baz=45,slow=1.0,SNR=148
SIV PKPab PKPab 10 27 39.5 -3.0
comp=Z,46nm,0.7s,baz=317,slow=0.6,SNR=16
CFAA Coronel Fontan 160.66 62 PKP PKPdf 10 27 35.3 -1.8
comp=Z,0.6nm,0.9s,baz=299,slow=1.6,SNR=10
CFAA PKPab PKPab 10 28 21.2 -1.3
comp=Z,3.1nm,0.9s,baz=288,slow=3.5,SNR=17
CFAA PP PP 10 32 05.9 -1.3
comp=Z,0.3nm,0.7s,baz=316,slow=6.8,SNR=4.0
CFAA Coronel Fontan 160.66 62 PKP PKPdf 10 27 35.3 -1.8
CFAA PKPab PKPab 10 28 21.2 -1.3
CFAA PP PP 10 32 05.9 -1.3
CPUP Villa Florida 162.20 28 PKP PKPdf 10 27 38.0 -0.9
comp=Z,5.6nm,1.0s,baz=33,slow=3.5,SNR=9.0
CPUP PKPab PKPab 10 28 28.3 -1.0
comp=Z,13nm,0.8s,baz=330,slow=4.8,SNR=17
CPUP PP PP 10 32 11.4 -3.0
comp=Z,9.4nm,0.9s,baz=329,slow=5.7,SNR=7.7
CPUP Villa Florida 162.20 28 PKIKP PKPdf 10 27 38.0 -0.9
CPUP 10 28 28.3
CPUP 10 32 11.5
CPUP pmax pmax
comp=Z,6.0nm,1.0s
CPUP pmax pmax
comp=Z,13nm,0.8s
CPUP pmax pmax
comp=Z,9.0nm,0.9s
PLCA Paso Flores 163.14 92 PKP PKPdf 10 27 40.1 +0.8
comp=Z,3.3nm,0.9s,baz=267,slow=6.1,SNR=4.1
PLCA PKPab PKPab 10 28 32.4 -0.8
comp=Z,14nm,0.9s,baz=275,slow=5.8,SNR=13
PLCA Paso Flores 163.14 92 PKIKP PKPdf 10 27 40.2 +0.9
PLCA 10 28 32.4
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA pmax pmax
comp=Z,14nm,0.9s

*ISCJB **19** 10:31:32.6±0.7, 33°.70N±0°.03×36°.72E±0°.05, h10km, Error ellipse: s-maj=5.7km s-min=4.4km az=28.3*
*CSEM **19** 10:31:33.0±0.3, 33°.69N×36°.74E, h33km±5km, Mc1.6, Error ellipse: s-maj=8.0km s-min=6.4km az=129.0*
*NSSC **19** 10:31:33, 33°.65N×36°.81E, h10km*
*GRAL **19** 10:31:33.9±0.3, 33°.65N×36°.73E, h31km±6km, MD3.1*

ISC 19 10:31:33.3±0.7, 33°.70N±0°.03×36°.73E±0°.05, h10km, n14, σ1§16/26, 8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.41**	**247**	⇓P	**Pg**	**10 31 43.0**	**+1.6**
QASN				⇓S	**Sg**	**10 31 50.0**	**+3.1**
QASN	**Qassioun**	**0.41**	**247**	⇓*i*P	**Pg**	**10 31 43.1**	**+1.7**
QASN				⇓*i*S	**Sg**	**10 31 50.1**	**+3.2**
TOTH	**TOTAH**	**0.42**	**217**	⇓P	**Pg**	**10 31 41.0**	**-0.5**
TOTH				⇓S	**Sg**	**10 31 48.0**	**+0.9**
TOTH	**TOTAH**	**0.42**	**217**	⇓*i*P	**Pg**	**10 31 41.6**	**+0.1**
TOTH				⇓*i*S	**Sg**	**10 31 48.9**	**+1.8**
ROOS	**tl_alroos**	**0.66**	**45**	⇑P	**Pg**	**10 31 45.0**	**-1.1**
ROOS				⇑S	**Sg**	**10 31 56.0**	**+1.3**
ROOS	**tl_alroos**	**0.66**	**45**	⇑*i*P	**Pg**	**10 31 45.3**	**-0.8**
ROOS				⇑*i*S	**Sg**	**10 31 56.6**	**+1.9**
RCY	**Rachaya**	**0.79**	**255**	*e*P	**Pg**	**10 31 47.7**	**-0.8**
RCY				*e*S	**Sg**	**10 31 57.9**	**-1.0**
RCY	**Rachaya**	**0.79**	**255**	*e*P	**Pg**	**10 31 47.7**	**-0.8**
RCY				*e*S	**Sg**	**10 31 57.9**	**-0.9**
HWQ	**Hawqa**	**0.87**	**312**	*e*P	**Pg**	**10 31 49.8**	**-0.3**
HWQ				*e*S	**Sg**	**10 32 01.5**	**+0.1**
HWQ	**Hawqa**	**0.87**	**312**	*e*P	**Pg**	**10 31 49.8**	**-0.3**
HWQ				*e*S	**Sg**	**10 32 01.5**	**+0.1**
BHL	**Bhannes**	**0.92**	**283**	*e*P	**Pg**	**10 31 50.1**	**-0.9**
BHL	**Bhannes**	**0.92**	**283**	*e*P	**Pg**	**10 31 50.1**	**-0.9**
SALA	**Sala**	**0.98**	**180**	⇑P	**Pg**	**10 31 50.0**	**-2.2**
SALA				⇑S	**Sg**	**10 32 05.0**	**0.0**
SALA	**Sala**	**0.98**	**180**	⇑*i*P	**Pg**	**10 31 51.0**	**-1.2**
SALA				⇑*i*S	**Sg**	**10 32 05.1**	**+0.1**

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*NEIC **19** 10:58:55.4, 15°.49N×93°.27W, h100km, MD4.1(MEX), After MEX.*

MEX 19 10:58:55.4±0.7, 15°.49N×93°.27W, h100km±6km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.23**	**14**	*i*P	Pn	10 59 08.5	-1.2
PCIG				*i*S	Sn	10 59 18.8	-1.5
THIG		**1.13**	**120**	*i*P	Pn	10 59 16.2	-1.0
THIG				*i*S	Sn	10 59 31.8	-2.0
TGIG		**1.29**	**6**	*e*P	Pn	10 59 18.3	-0.9
TGIG				*i*S	Sn	10 59 35.0	-2.1
SCX	**San Cristobal**	**1.39**	**26**	*i*P	Pn	10 59 20.8	+0.5
SCX				*i*S	Sn	10 59 38.8	-0.3
SCX	**San Cristobal**	**1.39**	**26**	*i*P	Pn	10 59 20.8	+0.5
SCX				*i*S	Sn	10 59 38.8	-0.3
HUIG	**Huatulco**	**2.75**	**276**	*i*P	Pn	10 59 36.1	-1.7
HUIG				*i*S	Sn	11 00 08.2	-2.1
HUIG	**Huatulco**	**2.75**	**276**	*i*P	Pn	10 59 36.1	-1.7
HUIG				*i*S	Sn	11 00 08.2	-2.1
PNIG	**Pinotepa**	**4.75**	**282**	*i*P	Pn	11 00 05.4	+0.6
PNIG				*i*S	Sn	11 00 57.4	-1.4
PNIG	**Pinotepa**	**4.75**	**282**	*i*P	Pn	11 00 05.4	+0.6
PNIG				*i*S	Sn	11 00 57.4	-1.4
UTMO	**Huajuapan**	**4.93**	**299**	*i*P	Pn	11 00 05.4	-1.7
UTMO				*i*S	Sn	11 01 04.9	+1.9
TEIG	**Tepich**	**6.70**	**45**	*e*Pn	Pn	11 00 29.2	-2.0

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*IDC **19** 11:08:38.1±3.9, 7°.42S×106°.81E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/21, mbtmp4.0/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/27, Error ellipse: s-maj=195.9km s-min=25.3km az=54.0*
*NEIC **19** 11:08:43.9±1.0, 7°.14S×107°.14E, h35km, mb4.0/3, Error ellipse: s-maj=30.7km s-min=11.8km az=62.0*
NEIC Felt [II] at Garut and Pangalengan.
*ISCJB **19** 11:08:48.8±0.6, 7°.75S±0°.07×106°.98E±0°.05, h79km±11km, mb3.9/5, Error ellipse: s-maj=12.4km s-min=6.5km az=20.0*
*DJA **19** 11:08:49, 7°.78S×106°.95E, h27km, MLv4.3/17*

ISC 19 11:08:50.1±0.5, 7°.67S±0°.08×106°.97E±0°.05, h86km±9km, n41, σ1§32/42, mb3.9/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.06**	**38**	P	**Pn**	**11 09 08.4**	**-1.8**
LEM	**Lembang**	**1.06**	**38**	P	**Pn**	**11 09 08.7**	**-1.5**
LEM				S	**Sn**	**11 09 25.2**	**-0.2**
DBJI	**Dramaga**	**1.13**	**349**	P	**Pn**	**11 09 09.9**	**-1.2**
DBJI	**Dramaga**	**1.13**	**349**	P	**Pn**	**11 09 10.4**	**-0.7**
DBJI				S	**Sn**	**11 09 26.2**	**-0.7**
CBJI	**Citeko**	**1.25**	**355**	P	**Pn**	**11 09 07.8**	**-4.7**
CGJI	**Cibinong**	**1.64**	**310**	P	**Sn**	**11 09 39.9**	**+1.6**
CGJI	**Cibinong**	**1.64**	**310**	P	**Pn**	**11 09 17.2**	**-0.3**
CGJI				S	**Sn**	**11 09 38.1**	**-0.2**
JCJI	**Jatiwangi**	**1.75**	**48**	P	**Pn**	**11 09 15.8**	**-3.1**
JCJI	**Jatiwangi**	**1.75**	**48**	P	**Pn**	**11 09 15.4**	**-3.5**
RBSI	**Rajabasa**	**2.19**	**326**	P	**Pn**	**11 09 24.7**	**+0.1**
RBSI	**Rajabasa**	**2.19**	**326**	P	**Pn**	**11 09 24.5**	**-0.1**
BLSI	**Bandar Lampung**	**2.86**	**323**	P	**Pn**	**11 09 38.1**	**+4.5**
XMIS	**Christmas Isla**	**3.08**	**205**	P	**Pn**	**11 09 35.2**	**-1.4**
KASI	**Kota Agung**	**3.25**	**311**	P	**Pn**	**11 09 43.5**	**+4.6**
KASI	**Kota Agung**	**3.25**	**311**	P	**Pn**	**11 09 38.9**	**0.0**
SMRI	**Semarang**	**3.50**	**80**	P	**Pn**	**11 09 43.8**	**+1.5**
SMRI	**Semarang**	**3.50**	**80**	P	**Pn**	**11 09 41.8**	**-0.5**
UGM	**Wanagama**	**3.53**	**94**	P	**Pn**	**11 09 41.1**	**-1.6**
PCJI	**Pacitan**	**4.21**	**97**	P	**Pn**	**11 09 50.8**	**-1.0**
MDSI	**Maura Dua**	**4.21**	**319**	P	**Pn**	**11 09 53.9**	**+2.0**
MDSI	**Maura Dua**	**4.21**	**319**	P	**Pn**	**11 09 52.2**	**+0.3**
SJI	**Sawahan**	**4.76**	**91**	P	**Pn**	**11 10 00.4**	**+1.0**
SJI	**Sawahan**	**4.76**	**91**	P	**Pn**	**11 09 59.8**	**+0.4**
PWJI	**Pagerwojo**	**4.81**	**94**	P	**Pn**	**11 10 00.0**	**0.0**
TPI	**Tanjungpandan** 29nm,1.3s,0.1nm	**4.93**	**8**	P	**Pn**	**11 10 04.3**	**+2.5**
MNAI	**Manna** 180nm,1.2s,0.6nm	**5.17**	**309**	P	**Pn**	**11 10 06.0**	**+1.0**
PPBI	**Pangkal Pinang** 31nm,0.9s,0.1nm	**5.54**	**351**	P	**Pn**	**11 10 12.1**	**+2.1**
GMJI	**Gumukmas** 43nm,1.6s,0.2nm	**6.45**	**96**	P	**Pn**	**11 10 24.2**	**+1.8**
ABJI	**Asem Bagus**	**7.21**	**91**	P	**Pn**	**11 10 35.4**	**+2.6**
SRBI	**Singaraja** 52nm,0.7s	**8.18**	**93**	P	**Pn**	**11 10 47.0**	**+0.9**
KHKI	**Kahang-Kahang**	**8.59**	**95**	P	**Pn**	**11 10 51.4**	**-0.2**
KAPI	**Kappang** comp=Z,58nm,20.1s,baz=150,slow=41	**12.98**	**79**	LR	LR	11 17 34.4	
MBWA	**Marble Bar** 15nm,1.3s	**18.22**	**139**	*e*P	**Pn**	**11 12 58.8**	**+1.5**
FITZ	**Fitzroy Crossi** 2.9nm,0.8s,baz=299,slow=6.3,SNR=6.7	**20.93**	**121**	P	**P**	**11 13 25.8**	**-0.1**
KAKA	**Kakadu**	**25.56**	**103**	P	**P**	**11 14 08.0**	**-3.1**
CMAR	**Chiang Mai Arr** 0.6nm,0.6s,mb3.3,baz=180,slow=9.4,SNR=4.5	**27.14**	**343**	P	**P**	**11 14 21.1**	**-4.1**
WRAB	**Tennant Creek** 2.0nm,0.6s,mb3.9	**29.20**	**117**	*e*P	**P**	**11 14 43.2**	**-0.4**
ASAR	**Alice Springs** 1.3nm,0.8s,mb3.6,baz=303,slow=8.3,SNR=19	**30.33**	**125**	P	**P**	**11 14 53.6**	**0.0**
STKA	**Stephens Creek** 5.2nm,0.4s,mb4.7,baz=294,slow=7.2,SNR=13	**40.22**	**132**	P	**P**	**11 16 19.4**	**+1.0**
ABKAR	**Akbulak array** 0.8nm,0.4s,mb3.9	**69.97**	**329**	*e*P	**P**	**11 19 49.2**	**-2.9**
TXAR	**Lajitas Array** 0.2nm,0.4s,baz=260,slow=3.6,SNR=4.1	**144.03**	**49**	PKP	PKPdf	11 28 13.8	-2.4

IDC 19 11:32:49.4±1.5, 31°.12N×103°.82E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=42.8km s-min=27.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array** 0.1nm,0.3s,baz=203,slow=14,SNR=2.8	**16.81**	**6**	Pn	Pn	11 36 45.0	-1.1
KSRS	**Korea Array** 2.5nm,0.7s,baz=262,slow=10,SNR=9.3	**20.86**	**66**	P	P	11 37 33.9	+1.0
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=123,slow=12,SNR=2.2	**22.81**	**319**	P	P	11 37 54.5	+0.8
ASAR	**Alice Springs** 0.6nm,0.8s,baz=345,slow=6.7,SNR=6.8	**61.62**	**149**	P	P	11 43 08.9	0.0
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=329,slow=4.7,SNR=4.0	**81.75**	**17**	P	P	11 45 08.8	-0.8

IDC 19 11:48:31.0±3.8, 3°.96S×143°.15E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/15, mbtmp3.6/5, Error ellipse: s-maj=122.5km s-min=24.9km az=102.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 1.0nm,0.7s,baz=33,slow=9.8,SNR=12	**21.53**	**204**	P	P	11 53 22.0	+0.1
FITZ	**Fitzroy Crossi** 1.0nm,0.5s,baz=48,slow=14,SNR=2.8	**22.17**	**229**	P	P	11 53 29.0	+0.2
KSRS	**Korea Array** 0.8nm,0.5s,baz=166,slow=9.0,SNR=4.8	**43.57**	**342**	P	P	11 56 37.6	+0.9
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=122,slow=7.1,SNR=2.7	**73.50**	**321**	P	P	12 00 05.9	+0.3
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=126,slow=7.5,SNR=4.0	**75.27**	**329**	P	P	12 00 14.6	-1.1

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*IDC **19** 12:49:52.2±0.7, 2°.77N×95°.38E, h0km, mb4.4/15, mb1 4.5/15, mb1mx4.3/26, mbtmp4.4/15, MS4.0/13, Ms1 4.0/13, ms1mx3.7/35, Error ellipse: s-maj=25.2km s-min=15.0km az=50.0*
*ISCJB **19** 12:49:53.5±1.1, 2°.68N±0°.04×95°.28E±0°.04, h22km±8km, mb4.7/58, MS4.3/26, Error ellipse: s-maj=7.5km s-min=5.7km az=41.4*
*DJA **19** 12:49:53, 2°.73N×95°.13E, h24km, Mw5.2/4*
*MOS **19** 12:49:55.4±1.1, 2°.78N×95°.38E, h33km, mb5.0/18, Error ellipse: s-maj=17.1km s-min=7.6km az=101.5*
*BJI **19** 12:49:55.0, 2°.61N×95°.37E, h42km, mB5.0/24, mb4.9/40, Ms4.6/29, Ms7 4.5/26*
*NEIC **19** 12:49:57.5±0.4, 2°.74N×95°.41E, h35km, mb4.8/15, Error ellipse: s-maj=10.2km s-min=6.8km az=43.0*

ISC 19 12:49:57.0±1.1, 2°.73N±0°.04×95°.31E±0°.04, h32km±8km, h35km±1.0km: pP-P, n121, σ1§09/125, mb4.7/58, MS4.2/26, 4C-4D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.75**	**360**	P	**Pn**	**12 50 36.8**	**-2.2**
BSI				S	**Sn**	**12 51 10.3**	**-0.9**
LHMI	**Lhok Sumawe**	**2.97**	**33**	P	**Pn**	**12 50 41.8**	**-0.2**
LHMI				S	**Sn**	**12 51 19.3**	**+2.7**
TSI	**Tuntungan**	**3.34**	**77**	P	**Pn**	**12 50 47.2**	**+0.1**
MNSI	**Mandailing Nat**	**4.68**	**114**	P	**Pn**	**12 51 05.1**	**-0.4**
KULM	**Kulim**	**5.90**	**64**	P	**Pn**	**12 51 21.7**	**-0.6**
KULM	**Kulim** 120nm,0.8s	**5.90**	**64**	*e*Pn	**Pn**	**12 51 20.9**	**-1.5**
IPM	**Ipoh**	**5.96**	**73**	P	**Pn**	**12 51 23.1**	**-0.1**
IPM	**Ipoh** 64nm,0.9s,937nm0.2nm	**5.96**	**73**	P	**Pn**	**12 51 22.5**	**-0.7**
PPI	**Padang Panjang** 76nm,1.4s,0.3nm	**5.99**	**122**	P	**Pn**	**12 51 23.7**	**+0.2**
BKNI	**Bangkinang** 101nm,1.0s,1μm0.4nm	**6.20**	**113**	P	**Pn**	**12 51 26.0**	**-0.5**
PDSI	**Padang** 71nm,0.8s,2μm0.4nm	**6.29**	**125**	P	**Pn**	**12 51 27.1**	**-0.6**
FRIM	**Kepong**	**6.33**	**85**	P	**Pn**	**12 51 28.2**	**0.0**
KGM	**Kluang**	**8.03**	**95**	P	**Pn**	**12 51 52.5**	**+0.9**
KTGM	**Kuala Trenggan**	**8.22**	**71**	P	**Pn**	**12 51 54.0**	**-0.1**
MYKOM	**Kota Tinggi**	**8.58**	**96**	P	**Pn**	**12 51 59.9**	**+0.7**
MYKOM	**Kota Tinggi** 28nm,0.9s	**8.58**	**96**	P	**Pn**	**12 51 58.9**	**-0.3**
KSI	**Kapahiang**	**9.65**	**131**	P	**Pn**	**12 52 13.7**	**-0.1**
KSM	**Kuching**	**15.04**	**94**	*e*P	**Pn**	**12 53 30.7**	**+3.3**
PALK	**Pallekele** comp=Z,684nm,19.1s,baz=105,slow=35	**15.23**	**288**	LR	LR	12 58 52.3	
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=202,slow=11,SNR=126	**16.03**	**13**	Pn	**Pn**	**12 53 41.5**	**+1.1**
CMAR				LR	LR	13 00 07.0	
SBUM	**Sibu** comp=Z,453nm,18.8s,baz=195,slow=38	**16.89**	**91**	P	**Pn**	**12 53 51.4**	**+0.1**
BTM	**Bintulu**	**17.75**	**88**	P	**Pn**	**12 54 04.7**	**+2.7**
KKM	**Kota Kinabalu**	**21.10**	**80**	P	**P**	**12 54 39.6**	**+0.5**
KKM	**Kota Kinabalu** 82nm,1.2s,mb4.9	**21.10**	**80**	*e*P	**P**	**12 54 38.7**	**-0.5**
QIZ	**Qiongzhong**	**21.56**	**40**	P	**P**	**12 54 42.3**	**-1.7**
QIZ				sP	sP	12 54 57.3	+0.8
QIZ				S	**S**	**12 58 38.8**	**-2.5**
QIZ	comp=Z,20nm,1.2s,mb4.4			pmax	pmax		
QIZ	comp=N,710nm,16.8s			LR	LR		
QIZ	comp=Z,730nm,17.2s,MS4.1			LR	LR		
KDM	**Kudat**	**21.84**	**78**	P	**P**	**12 54 47.4**	**+0.3**
HYB	**Hyderabad**	**22.00**	**313**	*i*P	**P**	**12 54 47.0**	**-1.7**
SDKM	**Sandakan**	**22.01**	**82**	P	**P**	**12 54 49.1**	**+0.1**
TSM	**Tawau**	**22.57**	**85**	P	**P**	**12 54 55.8**	**+0.9**
SHL	**Shillong**	**22.95**	**352**	*e*P	**P**	**12 54 57.0**	**-1.7**
MYLDM	**Lahad Datu**	**23.26**	**83**	P	**P**	**12 55 03.3**	**+1.1**
KMI	**Kunming**	**23.39**	**17**	P	**P**	**12 55 02.4**	**-1.0**
KMI				pP		12 55 11.5	
KMI				sP	sP	12 55 16.3	+0.4
KMI				PP		12 55 34.3	
KMI				S	**S**	**12 59 15.8**	**+1.6**
KMI				sS	sS	12 59 25.0	-4.1
KMI				SS		12 59 57.8	
KMI	comp=Z,14nm,1.1s,mb4.3			pmax	pmax		
KMI	comp=Z,150nm,3.9s			pmax	pmax		
KMI	comp=N,1μm,12.2s			LR	LR		
KMI	comp=E,600nm,18.1s			LR	LR		
KMI	comp=Z,1μm,11.7s,MS4.6			LR	LR		
ODAN	**Odare** comp=Z,241nm,1.5s,mb5.5	**25.17**	**343**	*e*P	**P**	**12 55 20.7**	**+1.0**
RAMN	**Ramite**	**25.49**	**342**	*e*P	**P**	**12 55 24.1**	**+1.5**
TAPN	**Taplejung** comp=Z,54nm,0.9s,mb5.1	**25.54**	**344**	*e*P	**P**	**12 55 24.4**	**+1.4**
KAPI	**Kappang** comp=Z,24nm,1.1s,mb4.7,baz=294,slow=9.3,SNR=5.3	**25.60**	**107**	P	**P**	**12 55 23.0**	**-0.8**
GYA	**Guiyang**	**25.99**	**24**	P	**P**	**12 55 28.9**	**+1.8**
GYA				pP	pP	12 55 38.0	+1.8
GYA				sP	sP	12 55 44.8	+4.7
GYA				PP		12 56 11.4	
GYA				PcP	PcP	12 58 56.3	+1.2
GYA				S	**S**	**12 59 55.8**	**-0.1**
GYA				sS	sS	13 00 11.9	+0.9
GYA	comp=Z,20nm,1.0s,mb4.6			pmax	pmax		
GYA	comp=Z,120nm,4.3s			pmax	pmax		
GYA	comp=N,5μm,13.2s,MS5.3			LR	LR		
GYA	comp=E,3μm,11.6s,MS5.3			LR	LR		
GYA	comp=Z,4μm,14.2s,MS5.1			LR	LR		
JIRN	**Jiri**	**26.28**	**341**	*e*P	**P**	**12 55 30.9**	**+1.2**
DMN	**Daman** comp=Z,31nm,0.8s,mb4.9	**26.60**	**339**	*e*P	**P**	**12 55 33.7**	**+1.1**
GUN	**Gumba** comp=Z,85nm,1.1s,mb5.2	**26.61**	**341**	*e*P	**P**	**12 55 33.7**	**+1.0**
KKN	**Kakani** comp=Z,53nm,0.9s,mb5.1	**26.70**	**340**	*e*P	**P**	**12 55 34.1**	**+0.6**
CD2	**Chengdu**	**29.14**	**15**	P	**P**	**12 55 57.6**	**+2.3**
CD2				pP	pP	12 56 07.1	+2.6
CD2				sP	sP	12 56 11.1	+2.8
CD2				S	**S**	**13 00 46.5**	**+1.0**
CD2				sS	sS	13 01 02.4	+1.7
CD2				SS	SS	13 02 17.8	-32
CD2	comp=Z,20nm,0.8s,mb4.9			pmax	pmax		
CD2	comp=Z,130nm,4.9s			pmax	pmax		
CD2	comp=N,840nm,14.3s			LR	LR		
CD2	comp=Z,910nm,13.7s,MS4.5			LR	LR		
ENH	**Enshi** comp=Z,6.7nm,0.5s,mb4.7	**30.51**	**25**	*e*P	**P**	**12 56 05.7**	**-1.7**
XAN	**Xi'an**	**33.64**	**21**	P	**P**	**12 56 33.3**	**-1.6**
XAN				pP	pP	12 56 45.1	+1.0
XAN	comp=Z,6.0nm,1.1s,mb4.4			pmax	pmax		
XAN	comp=Z,32nm,5.7s			pmax	pmax		
LZH	**Lanzhou**	**34.12**	**12**	P	**P**	**12 56 38.3**	**-0.7**
LZH				pP	pP	12 56 48.3	+0.1
LZH				sP	sP	12 56 54.0	+1.9
LZH				PP	PP	12 57 53.1	-3.6
LZH				*e*S	**S**	**13 01 58.3**	**-4.8**
LZH				SS	SS	13 04 11.0	-21
LZH	comp=Z,28nm,1.0s,mb5.2			pmax	pmax		
LZH	comp=Z,150nm,4.0s			pmax	pmax		
LZH	comp=E,1μm,12.6s			LR	LR		
LZH	comp=Z,2μm,17.2s,MS4.8			LR	LR		
FITZ	**Fitzroy Crossi** comp=Z,5.9nm,0.8s,mb4.6,baz=316,slow=5.7,SNR=10.0	**36.35**	**126**	P	**P**	**12 56 57.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**36.35**	**126**	*e*P	**P**	**12 56 57.5**	**-0.9**
NJ2	**Nanjing**	**36.62**	**35**	*e*P	**P**	**12 57 00.0**	**-0.6**
NJ2				pP	pP	12 57 10.1	+0.2
NJ2				sP	sP	12 57 15.8	+2.1
NJ2				PP	PP	12 58 26.3	+1.9
NJ2				S	**S**	**13 02 40.0**	**-1.7**
NJ2				sS	sS	13 02 57.0	+0.1
NJ2	comp=Z,30nm,0.8s,mb5.2			pmax	pmax		
NJ2	comp=Z,410nm,3.9s			pmax	pmax		
NJ2	comp=N,270nm,13.6s,MS4.3			LR	LR		
NJ2	comp=E,320nm,16.7s,MS4.3			LR	LR		
GTA	**Gaotai**	**36.74**	**6**	*e*P	**P**	**12 57 00.8**	**-0.7**
GTA				pP	pP	12 57 11.0	+0.2
GTA				sP	sP	12 57 15.0	+0.4
GTA				PP	PP	12 58 26.0	+0.4
GTA				S	**S**	**13 02 41.9**	**-1.3**
GTA				sS	sS	13 02 58.0	-0.5
GTA				SS	SS	13 05 11.6	-13
GTA	comp=Z,11nm,1.1s,mb4.6			pmax	pmax		
GTA	comp=Z,61nm,4.8s			pmax	pmax		
GTA	comp=N,220nm,12.5s,MS4.2			LR	LR		
GTA	comp=E,170nm,15.2s,MS4.2			LR	LR		
GTA	comp=Z,260nm,13.4s,MS4.2			LR	LR		
KSH	**Kashi**	**40.62**	**337**	*e*P	**P**	**12 57 33.1**	**-1.0**
KSH				*e*pP	pP	12 57 42.1	-1.3
KSH				*e*sP	sP	12 57 46.0	-1.2
KSH				*e*PP	PP	12 59 10.0	+2.0
KSH				*e*PcP	PcP	12 59 37.3	+1.6
KSH				*e*ScP	ScP	13 03 22.1	-1.0
KSH				*e*PcS	PcS	13 03 26.3	0.0
KSH				*e*S	**S**	**13 03 36.6**	**-5.2**
KSH				*e*SS	SS	13 06 30.4	-12
KSH				*e*ScS	ScS	13 07 34.1	-3.4
KSH	comp=Z,4.0nm,0.7s,mb4.2			pmax	pmax		
KSH	comp=Z,100nm,4.0s			pmax	pmax		
KSH	comp=N,170nm,6.6s			LR	LR		
KSH	comp=E,110nm,7.6s			LR	LR		
KSH	comp=Z,140nm,5.1s			LR	LR		
HHC	**Hu-ho-hao-te**	**40.69**	**19**	*e*P	**P**	**12 57 34.9**	**+0.3**
HHC				pP	pP	12 57 44.8	+0.9
HHC				sP	sP	12 57 48.8	+1.1
HHC				PP	PP	12 59 13.1	+4.4
HHC				PcP	PcP	12 59 36.9	+1.0
HHC				ScP	ScP	13 03 22.1	-1.2
HHC				S	**S**	**13 03 43.8**	**+1.1**
HHC				sS	sS	13 03 59.3	+1.2
HHC				SS	SS	13 06 40.5	-3.5
HHC	comp=Z,21nm,1.1s,mb4.7			pmax	pmax		
HHC	comp=Z,140nm,5.2s			pmax	pmax		
HHC	comp=N,630nm,14.1s,MS4.7			LR	LR		
HHC	comp=E,340nm,14.3s,MS4.7			LR	LR		
HHC	comp=Z,570nm,15.7s,MS4.5			LR	LR		
WMQ	**Urumqi**	**41.47**	**352**	*e*P	**P**	**12 57 42.3**	**+1.3**
WMQ				LR	LR		
WMQ	comp=N,110nm,23.0s,MS3.8			LR	LR		
WMQ	comp=E,110nm,24.0s,MS3.8			LR	LR		
WMQ	comp=Z,93nm,22.0s,MS3.6			LR	LR		
BJT	**Baijiatuau**	**41.66**	**24**	*e*P	**P**	**12 57 43.1**	**+0.5**
BJI	**Beijing**	**41.68**	**24**	P	**P**	**12 57 43.4**	**+0.6**
BJI				S	**S**	**13 03 55.1**	**-2.4**
BJI	comp=Z,35nm,1.0s,mb4.9			pmax	pmax		
BJI	comp=Z,180nm,4.7s			pmax	pmax		
BJI	comp=N,230nm,17.5s,MS4.3			LR	LR		
BJI	comp=E,250nm,17.9s,MS4.3			LR	LR		
BJI	comp=Z,160nm,15.8s,MS4.0			LR	LR		
UCH	**Uchtor**	**43.51**	**337**	*e*P	**P**	**12 57 59.0**	**+1.4**
UCH	comp=Z,9.0nm,0.8s,mb4.5			pmax	pmax		
UCH	**Uchtor** comp=Z,9.4nm,0.8s,mb4.6	**43.51**	**337**	*e*P	**P**	**12 57 59.0**	**+1.4**
AML	**Almayashu**	**43.75**	**337**	*e*P	**P**	**12 58 01.1**	**+1.6**
AML	comp=Z,32nm,1.4s,mb4.9			pmax	pmax		
AML	**Almayashu** comp=Z,32nm,1.4s,mb4.8	**43.75**	**337**	*e*P	**P**	**12 58 01.1**	**+1.5**
AAK	**Ala-Archa**	**43.87**	**338**	*d i*P	**P**	**12 58 00.5**	**0.0**
AAK	comp=Z,4.0nm,1.7s,mb3.9			pmax	pmax		
AAK	**Ala-Archa** comp=Z,13nm,0.3s,mb5.1	**43.87**	**338**	*e*P	**P**	**12 58 02.1**	**+1.6**
EKS2	**Erkin-Say**	**44.17**	**337**	*e*P	**P**	**12 58 04.3**	**+1.4**
EKS2	comp=Z,6.0nm,0.6s,mb4.5			pmax	pmax		
EKS2	**Erkin-Say** comp=Z,6.2nm,0.6s,mb4.5	**44.17**	**337**	*e*P	**P**	**12 58 04.3**	**+1.4**
WRAB	**Tennant Creek**	**44.45**	**122**	*e*P	**P**	**12 58 05.5**	**0.0**
WRAB	comp=Z,27nm,1.2s,mb4.8			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,27nm,1.2s,mb4.8	**44.45**	**122**	*e*P	**P**	**12 58 05.5**	**+0.1**
MKAR	**Makanchi Array** comp=Z,11nm,0.7s,mb4.8,baz=164,slow=7.9,SNR=94	**45.33**	**347**	P	**P**	**12 58 12.0**	**-0.1**
KSRS	**Korea Array** comp=Z,3.0nm,0.7s,mb4.3,baz=220,slow=9.3,SNR=10	**45.72**	**37**	P	**P**	**12 58 14.7**	**-0.6**
KSRS	comp=Z,124nm,18.5s,MS3.9,baz=307,slow=40			LR	LR	13 19 56.4	
ASAR	**Alice Springs** comp=Z,3.2nm,0.8s,mb4.3,baz=296,slow=7.9,SNR=35	**45.81**	**127**	P	**P**	**12 58 15.8**	**-0.5**
ASAR	comp=Z,1.2nm,0.8s,baz=286,slow=3.7,SNR=6.5			PcP	PcP	12 59 53.8	+0.3
SONM	**Songino Array** comp=Z,12nm,0.8s,mb4.9,baz=189,slow=8.9,SNR=54	**45.94**	**10**	P	**P**	**12 58 16.6**	**-0.3**
SONM	comp=Z,2.6nm,0.7s,baz=191,slow=3.9,SNR=4.7			PcP	PcP	12 59 54.0	+0.6
SONM	comp=Z,254nm,21.4s,MS4.1,baz=86,slow=38			LR	LR	13 19 13.5	
SONM	**Songino Array**	**45.94

comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,19.0s,MS4.3
CN2 LR LR
comp=E,200nm,19.0s,MS4.3
CN2 LR LR
comp=Z,200nm,21.0s,MS4.1
TLY Talaya 49.28 7 *eP* **P 12 58 43.1 +0.4**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TLY Talaya 49.28 7 *eP* **P 12 58 43.1 +0.4**
comp=Z,6.4nm,0.8s,mb4.7
KURK Kurchatov 49.85 346 *c iP* **P 12 58 47.2 +0.1**
KURK pmax pmax
comp=Z,20nm,1.5s,mb4.9
KURK Kurchatov 49.85 346 *eP* **P 12 58 47.8 +0.7**
comp=Z,18nm,1.1s,mb5.0
MDJ Mudanjiang 51.50 31 P **P 12 59 00.8 +1.2**
MDJ pP pP 12 59 10.0 +0.8
MDJ sP sP 12 59 13.8 +0.8
MDJ PcP PcP 13 00 13.6 0.0
MDJ PP PP 13 00 58.3 +1.1
MDJ ScP ScP 13 04 09.1 +0.9
MDJ PcS PcS 13 04 12.3 +1.0
MDJ S **S 13 06 19.5 +1.6**
MDJ pmax pmax
comp=Z,16nm,1.6s,mb4.7
MDJ pmax pmax
comp=Z,92nm,3.2s
MDJ LR LR
comp=N,140nm,16.9s,MS4.1
MDJ LR LR
comp=E,95nm,19.4s,MS4.1
MDJ LR LR
comp=Z,100nm,16.9s,MS3.9
VLA Vladivostok 51.72 34 *eP* pP 12 59 10.4 -0.5
VLA pmax pmax
comp=Z,45nm,1.4s,mb5.2
VLA MLR MLR
comp=Z,400nm,16.0s,MS4.5
ZALV Zalesovo Beam 51.78 352 P **P 12 59 01.4 -0.2**
comp=Z,28nm,0.7s,mb5.3,baz=180,slow=6.6,SNR=100
MJAR Matsushiro Arr 51.88 44 LR LR 13 22 47.3
comp=Z,124nm,19.8s,MS3.9,baz=245,slow=38
NVS Novosibirsk 52.87 351⇑ *iP* **P 12 59 08.7 -1.0**
NVS pmax pmax
comp=Z,25nm,1.2s,mb5.0
NVS pmax pmax
comp=N,23nm,1.5s
NVS pmax pmax
comp=E,5.0nm,0.9s
BVAR Borovoye Array 54.21 342 P **P 12 59 18.9 -0.6**
comp=E,5.6nm,0.8s,mb4.5,baz=147,slow=8.3,SNR=24
BVAR LR LR 13 27 21.3
comp=E,121nm,18.4s,MS4.0,baz=250,slow=42
BVAR Borovoye Array 54.21 342 P **P 12 59 18.9 -0.6**
BVAR LR LR 13 27 21.3
BRVK Borovoye 54.27 342 *deP* **P 12 59 20.2 +0.3**
BRVK pmax pmax
comp=Z,13nm,1.5s,mb4.6
BRVK Borovoye 54.27 342 *eP* **P 12 59 19.8 -0.2**
comp=Z,21nm,1.1s,mb5.0
CTAO Charters Tower 54.87 117 *eP* **P 12 59 25.4 +0.5**
CTAO pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CTAO Charters Tower 54.87 117 *eP* **P 12 59 25.4 +0.5**
comp=Z,7.3nm,0.9s,mb4.7
ABKAR Akbulak array 55.29 333 *eP* **P 12 59 27.6 +0.2**
comp=Z,5.3nm,0.8s,mb4.6
STKA Stephens Creek 55.77 132 LR LR 13 26 18.6
comp=Z,183nm,20.7s,MS4.2,baz=208,slow=39
BOD Bodaibo 56.89 12 *eP* **P 12 59 37.8 -0.9**
BOD pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
GNI Garni 58.89 316 LR LR 13 27 05.8
comp=Z,50nm,20.6s,MS3.6,baz=24,slow=38
SVE Sverdlovsk 60.59 339 *eP* **P 13 00 04.7 +0.3**
SVE pmax pmax
comp=Z,32nm,1.4s,mb5.3
YAK Yakutsk 64.51 17 *eP* **P 13 00 29.3 -1.2**
YAK pmax pmax
comp=Z,18nm,0.8s,mb5.2
YAK Yakutsk 64.51 17 *eP* **P 13 00 29.8 -0.7**
comp=Z,23nm,0.7s,mb5.3
BRTR Keskin Array B 66.69 312 P **P 13 00 44.6 -0.5**
comp=Z,0.6nm,0.7s,mb3.8,baz=153,slow=8.3,SNR=4.1
BRTR Keskin Array B 66.69 312 *ceP* **P 13 00 43.7 -1.4**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
OBN Obninsk 70.34 329⇓ *iP* **P 13 01 06.5 -1.0**
OBN *e*PP pP 13 01 27.3 +10
OBN *e* 13 03 43.0
OBN *e*S S 13 10 15.1 -2.6
OBN *e*SS SS 13 14 43.2 -5.4
OBN pmax pmax
comp=Z,12nm,0.5s,mb5.1
PETK Petropavlovsk- 71.53 34 LR LR 13 36 14.6
comp=Z,122nm,18.2s,MS4.2,baz=235,slow=39
KLMR Klimovskoe 71.57 335 *eP* **P 13 01 12.4 -2.5**
KLMR pmax pmax
comp=Z,14nm,1.5s,mb4.7
TIXI Tiksi 72.03 11 *eP* **P 13 01 16.3 -1.2**
TIXI pmax pmax
comp=Z,16nm,1.5s,mb4.7
TIXI MLR MLR
comp=Z,191nm,17.0s,MS4.4
TIXI Tiksi 72.03 11 *eP* **P 13 01 16.0 -1.5**
comp=Z,10nm,1.1s,mb4.7
AKASG Malin Array Be 72.91 323 P **P 13 01 22.6 -0.5**
comp=Z,0.6nm,0.4s,mb3.8,baz=110,slow=3.7,SNR=5.2
SEY Seymchan 73.12 24 *ceP* **P 13 01 24.1 0.0**
MLR Muntele Rosu 73.67 317 P **P 13 01 28.2 +0.5**
comp=Z,2.8nm,0.8s,mb4.3,baz=181,slow=5.9,SNR=3.9
BOSA Boshof 73.92 239 P **P 13 01 31.0 +1.5**
comp=Z,7.4nm,1.4s,mb4.4,baz=225,slow=10.0,SNR=2.8
BOSA LR LR 13 31 56.3
comp=Z,159nm,18.9s,MS4.3,baz=266,slow=34
JOF Joensuu 75.97 335 *eP* **P 13 01 40.5 -0.1**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
JOF Joensuu 75.97 335 *ep* **P 13 01 40.5 -0.1**
comp=Z,2.1nm,0.6s,mb4.2
FINES FINESS Array B 77.78 333 P **P 13 01 50.5 -0.4**
comp=Z,2.2nm,0.5s,mb4.4,baz=92,slow=5.6,SNR=10
FINES LR LR 13 41 27.0
comp=Z,100nm,20.0s,MS4.1,baz=332,slow=40
FINES FINESS Array B 77.78 333 P **P 13 01 50.5 -0.4**
FINES LR LR 13 41 27.0
KAF Kangasniemi 77.88 333 *eP* **P 13 01 51.5 +0.1**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KAF Kangasniemi 77.88 333 *ep* **P 13 01 51.5 +0.1**
comp=Z,2.9nm,0.5s,mb4.5
BILL Bilibino 80.42 21⇓ *eP* **P 13 02 02.6 -2.6**
BILL *e*S S 13 12 06.8 -2.2
BILL pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
BILL MLR MLR
comp=Z,200nm,15.0s,MS4.6
ARCES ARCESS Array B 80.47 340 P **P 13 02 05.6 +0.1**
comp=Z,2.9nm,0.8s,mb4.3,baz=90,slow=7.3,SNR=9.9
ARCES LR LR 13 43 25.2
comp=Z,131nm,20.1s,MS4.3,baz=107,slow=40
ARCES ARCESS Array B 80.47 340 P **P 13 02 05.6 +0.1**
ARCES LR LR 13 43 25.2
GERES GERESS Array B 82.43 319 P **P 13 02 17.5 +1.2**
comp=Z,0.6nm,0.7s,mb3.7,baz=185,slow=12,SNR=4.7
NOA NORSAR Array B 84.76 331 LR LR 13 43 53.3
comp=Z,53nm,18.6s,MS4.0,baz=275,slow=38
BPAW Bear Paw Mtn. 97.69 24 P **P 13 03 27.3 -1.2**
NVAR Mina Array Bea 128.61 34 PKP PKPdf 13 09 02.9 +1.4
comp=Z,0.2nm,0.4s,baz=220,slow=0.8,SNR=3.8
JCT Junction City 143.96 22 *e*PKIKP PKPdf 13 09 28.4 -1.7
CPUP Villa Florida 144.79 226 PKP PKPdf 13 09 31.1 -0.5
comp=Z,1.0nm,0.5s,baz=65,slow=1.6,SNR=4.6

*GII **19** 12:56:42.1±0.3, 33°.30N×35°.43E, h1km±1km, Md2.2/9*
*CSEM **19** 12:56:42.9±0.2, 33°.32N×35°.43E, h0km±2km, MD2.8, Error ellipse: s-maj=6.1km s-min=3.6km az=104.0*
GRAL 19 12:56:43.3±0.3, 33°.32N×35°.44E, h7km±2km, MD2.9, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.19**	**332**	*eP*	Pg	12 56 46.9	-0.2
MATL	**Matirih**	**0.19**	**332**	*eP*	Pg	12 56 46.9	-0.2
RCY	**Rachaya**	**0.36**	**63**	*eP*	Pg	12 56 50.2	-0.1
RCY				*eS*	Sg	12 56 55.3	+0.3
RCY	**Rachaya**	**0.36**	**63**	*eP*	Pg	12 56 50.2	-0.1
RCY				*eS*	Sg	12 56 55.3	+0.3
BHL	**Bhannes**	**0.61**	**17**	*eP*	Pg	12 56 54.3	-0.7
BHL	**Bhannes**	**0.61**	**17**	*eP*	Pg	12 56 54.3	-0.7
HWQ	**Hawqa**	**1.04**	**24**	*eP*	Pg	12 57 02.0	-1.3
HWQ				*eS*	Sg	12 57 15.6	-1.3

CASC 19 13:02:00.8±1.5, 12°.39N×87°.87W, h49km±66km, MD4.0, ML3.5, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.86**	**69**	*eP*	Pn	13 02 16.8	+0.1
CRIN				*eS*	Sn	13 02 29.8	+1.6
CRIN				AML	AML	13 02 31.2	
	comp=N,1μm,0.2s						
CNCH	**Conchagua**	**0.88**	**3**	*eP*	Pn	13 02 17.0	+0.1
CNCH				*eS*	Sn	13 02 29.8	+1.1
VSM	**San Miguel**	**1.10**	**339**	*eP*	Pn	13 02 21.0	+1.1
VSM				*eP*		13 02 21.1	
VSM				*eS*	Sn	13 02 35.1	+1.0
BLLM	**Bellamira**	**1.11**	**341**	*eP*	Pn	13 02 20.0	+0.1
BLLM				*eS*	Sn	13 02 35.0	+0.9
MIRN	**Miramar**	**1.14**	**87**	*eP*	Pn	13 02 19.7	-0.7
CNGN	**Cerro Negro**	**1.15**	**84**	*eP*	Pn	13 02 20.5	-0.1
CNGN				*eS*	Sn	13 02 36.2	+1.0
COPN	**Copaltepe**	**1.27**	**99**	*eP*	Pn	13 02 21.7	-0.5
COPN				*eS*	Sn	13 02 37.5	-0.6
MOMN	**Momotombo**	**1.30**	**89**	*eP*	Pn	13 02 22.6	0.0
CAHU	**Cacacuatique**	**1.41**	**347**	*eP*	Pn	13 02 25.1	+0.9
CSAN		**1.43**	**98**	*eP*	Pn	13 02 24.7	+0.3
APYN	**Apoyeque**	**1.50**	**96**	*eP*	Pn	13 02 25.4	+0.2
LFRS	**El Faro**	**1.69**	**317**	*eP*	Pn	13 02 28.4	+0.5
LFRS				*eS*	Sn	13 02 48.6	+0.3
BOAB	**BOACO BROADBAN**	**2.16**	**88**	*eP*	Pn	13 02 33.7	-0.6

*ISCJB **19** 13:05:39.8±0.7, 10°.39N±0°.04×62°.26W±0°.02, h8km±5km, Error ellipse: s-maj=6.8km s-min=3.1km az=161.6*
*NEIC **19** 13:05:39.5, 10°.39N×62°.22W, h3km, MD3.2(TRN), After TRN.*
*TRN **19** 13:05:39.4, 10°.46N×62°.25W, h2km, MD3.2*
*FUNV **19** 13:05:41.3, 10°.41N×62°.26W, h5km, MW3.2*
ISC 19 13:05:40.5±0.5, 10°.41N±0°.04×62°.24W±0°.02, h9km±4km, n27, σ0°85/46, 3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.24**	**5**	*eP*	**Pg**	**13 05 45.8**	**+0.4**
GUIV				*eS*	**Sg**	**13 05 49.6**	**+1.0**
TCE	**Chacachacare**	**0.56**	**59⇓**	*iP*	**Pg**	**13 05 50.4**	**-1.0**
TCE				*eS*	**Sg**	**13 05 58.2**	**-0.5**
TCE	**Chacachacare**	**0.56**	**59⇓**	*iP*	**Pg**	**13 05 50.4**	**-1.0**
TCE				*eS*	**Sg**	**13 05 58.2**	**-0.5**
GUNV	**Guanoco**	**0.73**	**251⇓⇓**	*eP*	**Pg**	**13 05 54.2**	**-0.4**
GUNV				*eS*	**Sg**	**13 06 05.2**	**+1.1**
TPP	**Pointe-a-Pierr**	**0.78**	**96**	*eP*	**Pg**	**13 05 55.1**	**-0.5**
TPP				*eS*	**Sg**	**13 06 08.1**	**+2.3**
TPP	**Pointe-a-Pierr**	**0.78**	**96**	*eP*	**Pg**	**13 05 55.1**	**-0.5**
TPP				*eS*	**Sg**	**13 06 08.1**	**+2.3**
TRN	**Trinidad (W)**	**0.86**	**74**	*eP*	**Pg**	**13 05 55.0**	**-2.1**
TRN				*eS*	**Sg**	**13 06 07.7**	**-0.6**
TRN	**Trinidad (W)**	**0.86**	**74**	*eP*	**Pg**	**13 05 55.0**	**-2.1**
TRN				*eS*	**Sg**	**13 06 07.7**	**-0.6**
TBH	**Brigand Hill**	**1.16**	**86**	*eP*	**Pb**	**13 06 01.8**	**-0.9**
TBH				*eS*	**Sg**	**13 06 18.4**	**+0.6**
TBH	**Brigand Hill**	**1.16**	**86**	*eP*	**Pb**	**13 06 01.8**	**-0.9**
TBH				*eS*	**Sg**	**13 06 18.4**	**+0.6**
ITEV	**Isla Los Testi**	**1.29**	**317**	*eP*	**Pn**	**13 06 04.2**	**-0.4**
ITEV				*eS*	**Sb**	**13 06 22.1**	**+0.6**
TPR	**Prospect**	**1.64**	**62**	*eP*	**Pn**	**13 06 08.8**	**-0.7**
TPR				*eS*	**Sn**	**13 06 31.6**	**+1.0**
TPR	**Prospect**	**1.64**	**62**	*eP*	**Pn**	**13 06 08.8**	**-0.7**
TPR				*eS*	**Sn**	**13 06 31.6**	**+1.0**
BOT	**Bacolet**	**1.68**	**63**	*eP*	**Pn**	**13 06 09.8**	**-0.3**
BOT				*eS*	**Sn**	**13 06 32.4**	**+0.6**
BOT	**Bacolet**	**1.68**	**63**	*eP*	**Pn**	**13 06 09.8**	**-0.3**
BOT				*eS*	**Sn**	**13 06 32.4**	**+0.6**
ORIV	**Oritupano**	**1.75**	**221**	*eP*	**Pn**	**13 06 11.8**	**+0.7**
ORIV				*eS*	**Sn**	**13 06 34.6**	**+1.0**
GRW	**Mount Saint Ca**	**1.83**	**18**	*eP*	**Pn**	**13 06 13.2**	**+1.0**
GRW	**Mount Saint Ca**	**1.83**	**18**	*eP*	**Pn**	**13 06 13.2**	**+1.0**
TOSP	**Speyside**	**1.90**	**62**	*eP*	**Pn**	**13 06 12.4**	**-0.6**
TOSP				*eS*	**Sn**	**13 06 37.4**	**+0.3**
PCRV	**Puerto La Cruz**	**2.37**	**265**	*eP*	**Pn**	**13 06 20.0**	**+0.5**
PCRV				*eS*	**Sn**	**13 06 48.1**	**-0.6**
GURV	**El Guri**	**2.76**	**198**	*eP*	**Pn**	**13 06 25.8**	**+0.9**
PRGV	**PARIAGUAN**	**2.88**	**236**	*eP*	**Pn**	**13 06 26.5**	**-0.1**
CUPV	**Cœpira**	**3.51**	**265**	*eP*	**Pn**	**13 06 35.4**	**+0.2**
CUPV				*eS*	**Sn**	**13 07 15.5**	**-1.3**
BIRV	**Birongo**	**3.96**	**271**	*eP*	**Pn**	**13 06 41.8**	**+0.4**
CAOV	**Caicara del Or**	**5.06**	**233**	*eP*	**Pn**	**13 06 55.8**	**-0.8**
TURV	**Turiamo**	**5.51**	**271**	*eP*	**Pn**	**13 07 02.1**	**-0.6**
BAUV	**El Baul**	**5.90**	**256**	*eP*	**Pn**	**13 07 07.2**	**-1.0**

*ISCJB **19** 13:06:28.0±0.5, 43°.60N±0°.06×145°.04E±0°.08, h153km±3km, mb3.7/8, Error ellipse: s-maj=10.1km s-min=8.3km az=140.3*
*NEIC **19** 13:06:29.7±1.0, 43°.71N×145°.03E, h150km±8km, MG3.2(JMA), Error ellipse: s-maj=18.3km s-min=13.6km az=120.0*
*JMA **19** 13:06:29.7±0.1, 43°.62N×145°.01E, h147km±1km, M3.2*
*IDC **19** 13:06:31.2±4.7, 43°.91N×144°.95E, h154km±12km, mb3.5/8, mb1 3.6/8, mb1mx3.3/25, mbtmp3.5/8, Error ellipse: s-maj=114.3km s-min=20.9km az=170.0*
ISC 19 13:06:29.2±0.5, 43°.59N±0°.06×145°.02E±0°.07, h149km±3km, n28, σ0°72/41, mb3.7/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNK	**Nakash**	**0.21**	**270**	P	**Pn**	**13 06 49.8**	**+0.4**
JNK				*eS*	**Sn**	**13 07 04.7**	**0.0**
JRA	**Rausu**	**0.36**	**12**	P	**Pn**	**13 06 49.9**	**+0.1**
JRA				*eS*	**Sn**	**13 07 05.4**	**-0.2**
NEM2	**Nemuro 2**	**0.57**	**112**	P	**Pn**	**13 06 50.8**	**0.0**
NEM2				*eS*	**Sn**	**13 07 06.4**	**-0.8**
JAK	**Akkeshi**	**0.63**	**202**	P	**Pn**	**13 06 51.7**	**+0.5**
JAK				*eS*	**Sn**	**13 07 08.1**	**+0.2**
JTKR	**Abashiri--Toko**	**0.89**	**296**	P	**Pn**	**13 06 53.2**	**+0.3**
JTKR				*eS*	**Sn**	**13 07 10.5**	**-0.6**
JAR	**Ashorobuto**	**0.95**	**253**	P	**Pn**	**13 06 54.3**	**+0.8**
JAR				*eS*	**Sn**	**13 07 12.5**	**+0.6**
JOB	**Onbets**	**1.10**	**232**	P	**Pn**	**13 06 55.6**	**+0.9**
JOB				*eS*	**Sn**	**13 07 14.7**	**+0.5**
JMP	**Maruseppu**	**1.27**	**290**	P	**Pn**	**13 06 56.4**	**+0.1**
JMP				*eS*	**Sn**	**13 07 16.3**	**-0.8**
JCH	**Churui**	**1.55**	**232**	P	**Pn**	**13 06 59.7**	**+0.5**
JCH				*eS*	**Sn**	**13 07 21.4**	**-0.8**
JKK2	**Kamakawa 2**	**1.67**	**281**	P	**Pn**	**13 07 00.9**	**+0.4**
JFR	**Furan**	**1.81**	**257**	P	**Pn**	**13 07 03.0**	**+0.9**
ASAJ	**Asahikawa**	**1.83**	**288**	P	**Pn**	**13 07 02.9**	**+0.7**
ASAJ				*eS*	**Sn**	**13 07 28.0**	**+0.4**
ASAJ	**Asahikawa**	**1.83**	**288**	P	**Pn**	**13 07 03.0**	**+0.7**
	20nm,0.3s,baz=119,slow=6.2,SNR=171						
ASAJ				S	**Sn**	**13 07 28.1**	**+0.5**
	3.2nm,0.3s,baz=232,slow=33,SNR=7.7						
ERM	**Erimo**	**2.08**	**222**	*e*Pn	**Pn**	**13 07 06.8**	**+1.6**
ERM				*e*Sn	**Sn**	**13 07 30.8**	**-2.1**
JNBK	**Urakawa-nobuka**	**2.11**	**233**	P	**Pn**	**13 07 05.5**	**-0.1**
JNBK				*eS*	**Sn**	**13 07 31.6**	**-1.9**
JSE	**Soyaes**	**2.22**	**309**	P	**Pn**	**13 07 06.5**	**-0.3**
YSS	**Yuzh-Sakhalins**	**3.73**	**335**	P	**Pn**	**13 07 24.9**	**-0.9**
SONM	**Songino Array**	**27.11**	**293**	P	**P**	**13 11 58.4**	**+0.6**
	1.9nm,0.8s,mb3.8,baz=80,slow=7.5,SNR=8.6						
MKAR	**Makanchi Array**	**43.28**	**297**	P	**P**	**13 14 15.7**	**-0.1**
	0.6nm,0.5s,mb3.5,baz=81,slow=9.4,SNR=6.8						
KURK	**Kurchatov**	**44.33**	**304**	P	**P**	**13 14 24.6**	**+0.5**
	1.3nm,0.5s,mb3.9,baz=72,slow=8.9,SNR=6.3						
INK	**Inuvik**	**47.33**	**30**	P	**P**	**13 14 47.1**	**-0.1**
	0.7nm,0.4s,mb3.6,baz=297,slow=6.7,SNR=4.0						
BVAR	**Borovoye Array**	**48.41**	**309**	P	**P**	**13 14 55.5**	**-0.3**
	0.5nm,0.3s,mb3.6,baz=66,slow=9.0,SNR=4.6						
YKA	**Yellowknife Ar**	**56.79**	**33**	P	**P**	**13 15 56.9**	**-0.3**
	0.4nm,0.6s,mb3.5,baz=303,slow=7.2,SNR=11						
FINES	**FINESS Array B**	**64.31**	**332**	P	**P**	**13 16 47.4**	**-0.7**
	0.9nm,0.4s,mb3.9,baz=44,slow=7.9,SNR=6.3						
FINES	**FINESS Array B**	**64.31**	**332**	P	**P**	**13 16 47.4**	**-0.7**
NB2	**NORSAR Subarra**	**69.19**	**338**	P	**P**	**13 17 18.3**	**-0.7**
	comp=Z,0.8nm,0.4s,mb3.8,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.19**	**338**	P	**P**	**13 17 18.4**	**-0.6**
	comp=Z,0.8nm,0.4s,mb3.8,baz=34,slow=6.3,SNR=6.4						
NOA	**NORSAR Array B**	**69.19**	**338**	P	**P**	**13 17 18.4**	**-0.6**

IDC 19 13:19:47.9±2.5, 54°.20N×86°.44E, h0km, mb1 3.3/3, mb1mx3.1/28, mbtmp3.3/3, ML3.4/3, Error ellipse: s-maj=23.6km s-min=14.9km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.99**	**256**	Pg	Pg	13 20 05.7	-1.1
	3.7nm,0.3s,baz=76,slow=16,SNR=49						
ZALV				Lg		13 20 20.9	
	5.0nm,0.3s,baz=77,slow=28,SNR=18						
KURK	**Kurchatov**	**5.92**	**237**	Pn	Pn	13 21 19.6	+2.9
	0.5nm,0.3s,baz=54,slow=13,SNR=38						
MKAR	**Makanchi Array**	**7.87**	**201**	Pn	Pn	13 21 44.3	+0.9
	0.4nm,0.3s,baz=25,slow=13,SNR=15						
BVAR	**Borovoye Array**	**9.62**	**270**	Pn	Pn	13 22 05.7	-1.7
	0.2nm,0.3s,baz=38,slow=17,SNR=2.6						

TAP 19 13:27:32.6, 23°.09N×120°.67E, h13km, ML2.0, 1C-3D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGST	**Jiashian**	**0.08**	**268⇓**	*iP*	Pg	13 27 35.7	+0.4
	baz=265						
SGST				*i* S	Sg	13 27 38.0	+0.7
	baz=265						
STYT	**Tauyuan**	**0.11**	**47⇑**	*iP*	Pg	13 27 36.5	+0.7
	baz=50						
STYT				S	Sg	13 27 39.3	+1.2
	baz=50						
CHN1	**Nanshi**	**0.16**	**308⇓**	*iP*	Pg	13 27 37.2	+0.7
	baz=307						
CHN1				S	Sg	13 27 40.5	+1.3
	baz=307						
WTP	**Ta-pu**	**0.17**	**343⇓**	*iP*	Pg	13 27 37.2	+0.6
	baz=345						
WTP				S	Sg	13 27 40.6	+1.3
	baz=345						
TWK	**Hsinying**	**0.24**	**318**	P	Pg	13 27 38.4	+0.6
	baz=319						
TWK				S	Sg	13 27 42.7	+1.3
	baz=319						
CHN4	**Tsaushan**	**0.27**	**346**	P	Pg	13 27 39.1	+0.7
	baz=345						
CHN4				*e*S	Sg	13 27 43.9	+1.7
	baz=345						
CHN3	**Shinhua**	**0.28**	**268**	*eP*	Pg	13 27 39.9	+1.5
	baz=267						
ELDTW	**Lidau**	**0.34**	**72**	P	Pg	13 27 40.3	+0.8
	baz=72						
ELDTW				*e*S	Sg	13 27 45.9	+1.7
	baz=72						
SSD	**Sandimen**	**0.34**	**185**	*eP*	Pg	13 27 40.3	+0.8
	baz=184						
SSD				*e*S	Sg	13 27 45.6	+1.5
	baz=184						
TWG	**Pinlang**	**0.46**	**125**	P	Pg	13 27 42.8	+1.1
	baz=124						
TWG				*e*S	Sg	13 27 50.3	+2.5
	baz=124						
ECL	**Taimali**	**0.55**	**151**	*eP*	Pg	13 27 44.4	+0.9
	baz=150						

*ISCJB **19** 13:27:39.9±0.5, 22°.98N±0°.01×121°.71E±0°.02, h9km±3km, mb4.0/3, Error ellipse: s-maj=2.8km s-min=2.1km az=37.7*
*TAP **19** 13:27:40.0, 22°.98N×121°.64E, h8km, ML3.5, C*
*JMA **19** 13:27:43.2±0.1, 22°.82N×121°.85E, h78km, M2.9*
*IDC **19** 13:27:49.0±1.9, 23°.61N×120°.38E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.6/4, Error ellipse: s-maj=62.8km s-min=28.3km az=53.0*
ISC 19 13:27:40.3±0.4, 22°.98N±0°.01×121°.68E±0°.02, h10km±2km, n60, σ0°70/117, mb4.0/3, 1C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.31**	**292⇑**	*iP*	**Pg**	**13 27 46.6**	**0.0**
	baz=294						
CHKT				*i* S	**Sg**	**13 27 50.6**	**-0.3**
	baz=294						
TWF1	**Yuli**	**0.51**	**316⇓**	*iP*	**Pg**	**13 27 50.4**	**+0.1**
	baz=319						
TWF1				*i* S	**Sg**	**13 27 58.2**	**+1.2**
	baz=319						
TTN	**Taitung**	**0.54**	**245**	*i* P	**Pg**	**13 27 51.2**	**+0.3**
	baz=242						
TTN				*i* S	**Sg**	**13 27 58.9**	**+0.9**
	baz=242						
TWG	**Pinlang**	**0.58**	**254**	*i* P	**Pg**	**13 27 51.6**	**0.0**
	baz=252						
TWG				*i* S	**Sg**	**13 28 00.3**	**+0.9**
	baz=252						
EHY	**Hungye**	**0.62**	**328⇓**	*iP*	**Pg**	**13 27 52.4**	**+0.1**
	baz=330						
EHY				S	**Sg**	**13 28 02.3**	**+1.8**
	baz=330						
ELDTW	**Lidau**	**0.65**	**289⇓**	*iP*	**Pg**	**13 27 52.2**	**-0.7**
	baz=289						
ELDTW				S	**Sg**	**13 28 01.9**	**+0.6**
	baz=289						
ECL	**Taimali**	**0.77**	**240**	P	**Pg**	**13 27 54.4**	**-0.8**
	baz=238						
ECL				S	**Sg**	**13 28 05.6**	**+0.3**
	baz=238						
YUS	**Yu-Shan**	**0.84**	**307**	P	**Pg**	**13 27 56.5**	**-0.1**
	baz=308						
YUS				S	**Sg**	**13 28 07.7**	**+0.1**
	baz=308						
ESL	**Shilin**	**0.86**	**345**	P	**Pg**	**13 27 56.6**	**-0.4**
	baz=347						
ESL				*e*S	**Sg**	**13 28 07.3**	**-0.9**
	baz=347						
STYT	**Tauyuan**	**0.87**	**282**	P	**Pg**	**13 27 56.2**	**-0.9**
	baz=282						
STYT				*e*S	**Sg**	**13 28 07.1**	**-1.4**
	baz=282						
LAY	**Lan-yu**	**0.95**	**187**	*eP*	**Pg**	**13 27 57.5**	**-1.0**
	baz=184						
LAY				*e*S	**Sg**	**13 28 10.5**	**-0.4**
	baz=184						
TAW	**Tawu**	**0.95**	**230**	P	**Pg**	**13 27 58.1**	**-0.6**
	baz=227						
TAW				S	**Sg**	**13 28 11.8**	**+0.7**
	baz=227						
ALS	**Alishan**	**0.96**	**303**	*i* P	**Pg**	**13 27 58.5**	**-0.4**
	baz=304						
ALS				S	**Sg**	**13 28 11.8**	**+0.4**
	baz=304						
EAST	**Anshuo**	**0.97**	**232**	*eP*	**Pg**	**13 27 57.6**	**-1.5**
	baz=230						
EAST				*e*S	**Sg**	**13 28 12.4**	**+0.6**
	baz=230						
HWA	**Hwalien**	**0.99**	**356**	*eP*	**Pg**	**13 27 59.7**	**+0.2**
	baz=358						
HWA				*e*S	**Sg**	**13 28 13.9**	**+1.5**
	baz=358						
SSD	**Sandimen**	**1.00**	**257**	P	**Pg**	**13 27 58.2**	**-1.3**
	baz=255						
SSD				S	**Sg**	**13 28 12.3**	**-0.2**
	baz=255						
SGST	**Jiashian**	**1.02**	**276**	P	**Pg**	**13 27 59.4**	**-0.5**
	baz=275						
SGST				S	**Sg**	**13 28 13.5**	**+0.3**
	baz=275						
WTP	**Ta-pu**	**1.02**	**285**	P	**Pg**	**13 27 59.3**	**-0.7**
	baz=285						
WTP				*e*S	**Sg**	**13 28 13.7**	**+0.5**
	baz=285						
CHN4	**Tsaushan**	**1.07**	**290**	*eP*	**Pb**	**13 28 00.4**	**-0.4**
	baz=290						
CHN4				*e*S	**Sg**	**13 28 15.0**	**+0.2**
	baz=290						
CHN1	**N

TWD	**Chiawan**	**1.10**	**356**	*e*P	**Pb**	**13 28 00.2**	**-1.1**
	baz=358						
TWD				*e*S	**Sb**	**13 28 16.9**	**+1.2**
	baz=358						
CHN5	**Tsauling**	**1.11**	**304**	*e*P	**Pb**	**13 28 01.4**	**-0.2**
	baz=304						
CHN5				*e*S	**Sb**	**13 28 16.1**	**+0.1**
	baz=304						
SGLT	**Jiouru**	**1.13**	**257**	*e*P	**Pb**	**13 28 01.5**	**-0.4**
	baz=256						
SGLT				*e*S	**Sb**	**13 28 16.4**	**-0.2**
	baz=256						
TWK	**Hsinying**	**1.14**	**285**	*e*P	**Pb**	**13 28 01.5**	**-0.6**
	baz=284						
TWK				*e*S	**Sb**	**13 28 16.9**	**+0.1**
	baz=284						
SMLT	**Sun Moon Lake**	**1.15**	**321**	P	**Pb**	**13 28 01.4**	**-0.9**
	baz=322						
SMLT				*e*S	**Sb**	**13 28 18.7**	**+1.4**
	baz=322						
SCZT	**Fangliau**	**1.15**	**238**	*e*P	**Pb**	**13 28 02.8**	**+0.4**
	baz=236						
SCZT				*e*S	**Sb**	**13 28 17.3**	**0.0**
	baz=236						
TWM1	**Shoushan**	**1.17**	**263**	*e*P	**Pb**	**13 28 02.6**	**0.0**
	baz=261						
TWM1				*e*S	**Sb**	**13 28 17.7**	**-0.1**
	baz=261						
TYC	**Yuchr**	**1.19**	**321**	*e*P	**Pb**	**13 28 02.1**	**-0.9**
	baz=322						
TYC				*e*S	**Sb**	**13 28 17.5**	**-0.9**
	baz=322						
CHN3	**Shinhua**	**1.22**	**275**	*e*P	**Pn**	**13 28 03.8**	**+0.4**
	baz=274						
CHN3				*e*S	**Sb**	**13 28 19.8**	**+0.6**
	baz=274						
WHF	**Hehuan Shan**	**1.22**	**342**	⇓*i*P	**Pn**	**13 28 02.3**	**-1.1**
	baz=343						
WHF				*e*S	**Sb**	**13 28 17.9**	**-1.4**
	baz=343						
CHN2	**Minshiung**	**1.24**	**297**	*e*P	**Pn**	**13 28 04.0**	**+0.4**
	baz=296						
CHN2				*e*S	**Sb**	**13 28 19.3**	**-0.5**
	baz=296						
WGK	**Gukeng**	**1.25**	**304**	*e*P	**Pn**	**13 28 04.0**	**+0.3**
	baz=305						
WGK				*e*S	**Sb**	**13 28 20.3**	**+0.3**
	baz=305						
CHY	**Chiayi**	**1.27**	**294**	*e*P	**Pn**	**13 28 04.5**	**+0.4**
	baz=294						
CHY				*e*S	**Sb**	**13 28 20.3**	**-0.3**
	baz=294						
WNT	**Mingjian**	**1.28**	**314**	*e*P	**Pn**	**13 28 04.0**	**-0.3**
	baz=315						
WNT				*e*S	**Sb**	**13 28 21.3**	**+0.3**
	baz=315						
TSEB	**Hengchuen, Pin**	**1.30**	**214**	*e*P	**Pn**	**13 28 04.7**	**+0.2**
	baz=214						
TSEB				*e*S	**Sb**	**13 28 22.6**	**+1.1**
	baz=214						
HEN	**Hengchun**	**1.31**	**222**	*e*P	**Pn**	**13 28 04.7**	**+0.1**
	baz=220						
HEN				*e*S	**Sb**	**13 28 22.4**	**+0.6**
	baz=220						
TWK1	**Hengchun**	**1.31**	**218**	*e*P	**Pn**	**13 28 04.7**	**-0.1**
	baz=216						
TWK1				*e*S	**Sb**	**13 28 22.7**	**+0.7**
	baz=216						
TWT	**Tachien**	**1.35**	**340**	*e*P	**Pn**	**13 28 04.9**	**-0.3**
	baz=340						
TWT				*e*S	**Sb**	**13 28 23.0**	**0.0**
	baz=340						
TWP	**Hsiaoliuchiu**	**1.37**	**243**	*e*P	**Pn**	**13 28 05.0**	**-0.5**
	baz=241						
TWP				*e*S	**Sb**	**13 28 23.4**	**-0.3**
	baz=241						
SCLT	**Jiali**	**1.38**	**278**	*e*P	**Pn**	**13 28 05.2**	**-0.5**
	baz=278						
SCLT				*e*S	**Sb**	**13 28 23.8**	**-0.2**
	baz=278						
CHN8	**Yiju**	**1.40**	**285**	*e*P	**Pn**	**13 28 05.9**	**0.0**
	baz=285						
CHN8				*e*S	**Sn**	**13 28 23.8**	**-0.6**
	baz=285						
ENA	**Nanau**	**1.44**	**2**	*e*P	**Pn**	**13 28 05.4**	**-1.0**
	baz=3.0						
ENA				*e*S	**Sn**	**13 28 25.1**	**-0.4**
	baz=3.0						
NNS	**Nan Shan**	**1.48**	**349**	P	**Pn**	**13 28 06.4**	**-0.6**
	baz=350						
NNS				*e*S	**Sn**	**13 28 23.8**	**-2.5**
	baz=350						
TCU	**Taichung**	**1.48**	**322**	*e*P	**Pn**	**13 28 07.1**	**+0.1**
	baz=322						
TCU				*e*S	**Sn**	**13 28 27.1**	**+0.6**
	baz=322						
WSF	**Szhu**	**1.49**	**296**	*e*P	**Pn**	**13 28 07.3**	**+0.2**
	baz=296						
WSF				*e*S	**Sn**	**13 28 26.8**	**+0.1**
	baz=296						
TWQ1	**Liyutan**	**1.59**	**329**	*e*P	**Pn**	**13 28 08.9**	**+0.4**
	baz=329						
TWQ1				*e*S	**Sn**	**13 28 29.3**	**+0.1**
	baz=329						
TWC	**Suao**	**1.63**	**5**	*e*P	**Pn**	**13 28 09.3**	**+0.3**
	baz=7.0						
TWC				*e*S	**Sn**	**13 28 29.0**	**-1.0**
	baz=7.0						
NSY	**Sanyi**	**1.66**	**330**	*e*P	**Pn**	**13 28 10.6**	**+1.1**
	baz=330						
NSY				*e*S	**Sn**	**13 28 31.0**	**+0.2**
	baz=330						
NSK	**Sanguang**	**1.71**	**350**	*e*P	**Pn**	**13 28 10.3**	**+0.1**
	baz=351						
NSK				*e*S	**Sn**	**13 28 31.7**	**-0.5**
	baz=351						
TWE	**Neicheng**	**1.73**	**360**	*e*P	**Pn**	**13 28 10.6**	**+0.1**
	baz=1.0						
TWE				*e*S	**Sn**	**13 28 32.9**	**+0.2**
	baz=1.0						
NSTT	**Nanjuang**	**1.76**	**339**	*e*P	**Pn**	**13 28 10.8**	**0.0**
	baz=340						
NSTT				*e*S	**Sn**	**13 28 33.4**	**+0.1**
	baz=340						
TWA	**Mucha**	**1.99**	**357**	*e*P	**Pn**	**13 28 15.0**	**+1.0**
	baz=358						
TWA				*e*S	**Sn**	**13 28 39.6**	**+0.6**
	baz=358						
HATJ	**Hateruma jima**	**2.22**	**61**	P	**Pn**	**13 28 18.0**	**+0.8**
HATJ				*e*S	**Sn**	**13 28 44.2**	**-0.6**
IRIF	**Iriomote-Funau**	**2.31**	**54**	P	**Pn**	**13 28 19.6**	**+1.2**
IRIF				*e*S	**Sn**	**13 28 47.1**	**+0.2**
JKRS	**Kuro-shima**	**2.47**	**59**	P	**Pn**	**13 28 21.7**	**+1.0**
JKRS				*e*S	**Sn**	**13 28 50.8**	**-0.1**
JIJ	**Ishigaki jima**	**2.64**	**58**	P	**Pn**	**13 28 24.0**	**+1.0**
JIJ				S	**Sn**	**13 28 54.4**	**-0.7**
JTJ	**Tarama**	**3.22**	**59**	P	**Pn**	**13 28 31.9**	**+0.9**
JTJ				*e*S	**Sn**	**13 29 09.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**21.73**	**262**	P	**P**	**13 32 30.8**	**-1.1**
	2.7nm,0.6s,mb3.9,baz=6.7,slow=8.8,SNR=19						
MKAR	**Makanchi Array**	**39.52**	**317**	P	**P**	**13 35 11.1**	**0.0**
	0.7nm,0.7s,mb3.5,baz=110,slow=10,SNR=5.1						
MMAI	**Mount Meron Ar**	**74.88**	**300**	P	**P**	**13 39 23.6**	**+2.0**
	3.1nm,0.5s,mb4.5,baz=45,slow=8.4,SNR=4.2						

ISCJB ***19*** *14:01:33.0±0.7,51°.50N±0°.04×16°.18E±0°.03,h0km, Error ellipse: s-maj=5.6km s-min=2.6km az=16.4*
CSEM ***19*** *14:01:34.3±0.5,51°.53N×16°.18E,h2km,ML3.2/7, Error ellipse: s-maj=7.8km s-min=4.1km az=8.0*
PRU ***19*** *14:01:35.3,51°.53N×16°.20E,h0km*
WAR ***19*** *14:01:36.1,51°.51N×16°.12E,ML2.6, Mining Induced*
VIE ***19*** *14:01:37.9±0.4,51°.26N×16°.20E,h0km,mb2.0/4,ML2.6/4, Error ellipse: s-maj=2.8km s-min=2.6km az=173.0 59 km WNW of Wroclaw Suspected Mining induced.*

ISC 19 14:01:34.6±0.7,51°.53N±0°.04×16°.17E±0°.03,h0km,n36, σ0990/65,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**173**	*e*Pg	**Pg**	**14 01 48.6**	**+0.7**
KSP				*e*Sg	**Sg**	**14 01 57.8**	**+1.0**
KSP	**Ksiaz**	**0.69**	**173**	*e*Pg	**Pg**	**14 01 48.5**	**+0.7**
KSP				*e*Sg	**Sg**	**14 01 57.7**	**+0.9**
UPC	**Upice**	**1.03**	**186**	*e*PG	**Pg**	**14 01 54.5**	**+0.2**
UPC	**Upice**	**1.03**	**186**	Pg	**Pg**	**14 01 54.5**	**+0.2**
DPC	**Dobruska-Polom**	**1.19**	**175**	*e*PG	**Pg**	**14 01 57.4**	**+0.1**
DPC				*e*SG	**Sg**	**14 02 13.0**	**+0.4**
	comp=Z,40nm,0.8s						
DPC	**Dobruska-Polom**	**1.19**	**175**	Pg	**Pg**	**14 01 57.4**	**+0.1**
DPC				Sg	**Sg**	**14 02 13.0**	**+0.4**
	comp=Z,40nm,0.8s						
PVCC	**Panska Ves**	**1.43**	**226**	*e*PG	**Pg**	**14 02 01.9**	**+0.1**
PVCC	**Panska Ves**	**1.43**	**226**	Pg	**Pg**	**14 02 01.9**	**+0.1**
BRG	**Berggiesshubel**	**1.55**	**246**	PG	**Pg**	**14 02 04.0**	**-0.2**
BRG				SG	**Sg**	**14 02 24.5**	**+0.3**
	comp=Z,36nm,0.5s						
PRU	**Pruhonice**	**1.86**	**214**	*e*PG	**Pg**	**14 02 09.7**	**-0.5**
PRU				*e*SG	**Sg**	**14 02 36.3**	**+2.1**
	comp=Z,28nm,0.4s						
PRU	**Pruhonice**	**1.86**	**214**	Pg	**Pg**	**14 02 09.7**	**-0.5**
PRU				Sg	**Sg**	**14 02 36.3**	**+2.1**
	comp=Z,28nm,0.4s						
MORC	**Moravsky Berou**	**1.96**	**153**	*e*Pn	**Pn**	**14 02 09.1**	**+0.1**
MORC				*e*Sg	**Sg**	**14 02 36.1**	**-1.4**
CLL	**Collm**	**2.00**	**265**	*e*Pn	**Pn**	**14 02 09.0**	**-0.5**
CLL				*e*Pg	**Pg**	**14 02 12.0**	**-0.8**
CLL				*i*		14 02 14.7	
CLL				*i* Sg	**Sg**	**14 02 38.5**	**-0.1**
	comp=Z,24nm,0.8s						
OKC	**Ostrava-Krasne**	**2.11**	**143**	*e*PG	**Pg**	**14 02 14.6**	**-0.4**
OKC				*e*SG	**Sg**	**14 02 42.1**	**-0.2**
	comp=Z,33nm,0.9s						
OKC	**Ostrava-Krasne**	**2.11**	**143**	Pg	**Pg**	**14 02 14.6**	**-0.4**
OKC				Sg	**Sg**	**14 02 42.1**	**-0.2**
	comp=Z,33nm,0.9s						
VRAC	**Vranov**	**2.24**	**173**	*e*Sg	**Sg**	**14 02 45.3**	**-1.2**
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**14 02 24.7**	**-0.6**
OJC				*e*Sg	**Sg**	**14 03 00.3**	**+0.7**
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**14 02 24.7**	**-0.6**
OJC				*e*Sg	**Sg**	**14 03 00.3**	**+0.7**
NKC	**Novy Kostel**	**2.69**	**243**	*e*PN	**Pn**	**14 02 19.2**	**+0.2**
NKC				*e*PG	**Pg**	**14 02 25.5**	**-0.6**
NKC				*e*SG	**Sg**	**14 03 02.3**	**+1.3**
	comp=Z,22nm,0.4s						
NKC	**Novy Kostel**	**2.69**	**243**	Pn	**Pn**	**14 02 19.2**	**+0.2**
NKC	**Novy Kostel**	**2.69**	**243**	Pg	**Pg**	**14 02 25.5**	**-0.6**
NKC				Sg	**Sg**	**14 03 02.3**	**+1.3**
	comp=Z,22nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**216**	*e*PN	**Pn**	**14 02 22.5**	**+0.3**
KHC				*e*PG	**Pg**	**14 02 28.5**	**-2.0**
KHC				*e*SN	**Sn**	**14 02 58.9**	**+1.0**
KHC				*e*SG	**Sg**	**14 03 08.9**	**+0.6**
	comp=Z,8.0nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**216**	Pn	**Pn**	**14 02 22.5**	**+0.3**
KHC	**Kasperske Hory**	**2.92**	**216**	Pg	**Pg**	**14 02 28.5**	**-2.0**
KHC				Sn	**Sn**	**14 02 58.9**	**+1.0**
KHC				Sg	**Sg**	**14 03 08.9**	**+0.6**
	comp=Z,8.0nm,0.4s						
MOX	**Moxa**	**3.00**	**255**	*e*PG	**Pg**	**14 02 31.9**	**-0.2**
MOX				*e*SG	**Sg**	**14 03 11.5**	**+0.5**
KOLL	**Kolacno**	**3.29**	**153**	*e*SG	**Sg**	**14 03 19.8**	**-0.3**
KOLL	**Kolacno**	**3.29**	**153**	*e*Sg	**Sg**	**14 03 19.8**	**-0.3**
VYHS	**Vyhne**	**3.49**	**149**	*e*PG	**Pg**	**14 02 39.5**	**-2.0**
VYHS				*e*SG	**Sg**	**14 03 28.1**	**+1.4**
VYHS	**Vyhne**	**3.49**	**149**	*e*Pg	**Pg**	**14 02 39.5**	**-2.0**
VYHS				*e*Sg	**Sg**	**14 03 28.1**	**+1.4**
CONA	**Conrad Observa**	**3.61**	**183**	⇓*i*Pn	**Pn**	**14 02 31.4**	**-0.3**
CONA				⇓*i*Sg	**Sg**	**14 03 29.3**	**-1.2**
	comp=Z,9.8nm,0.4s						
CONA	**Conrad Observa**	**3.61**	**183**	Pn	**Pn**	**14 02 31.4**	**-0.3**
CONA				Sg	**Sg**	**14 03 29.3**	**-1.2**
	comp=Z,9.8nm,0.4s						
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*	**Pg**	**14 02 50.3**	**+1.6**
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*SG	**Sg**	**14 03 40.0**	**+1.2**
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*Sg	**Sg**	**14 03 40.0**	**+1.2**
MOA	**Molln**	**3.89**	**199**	⇑*i*Pn	**Pn**	**14 02 35.7**	**+0.2**
MOA				⇑*i*Sg	**Sg**	**14 03 38.0**	**-1.3**
	comp=Z,8.4nm,0.5s						
MOA	**Molln**	**3.89**	**199**	Pn	**Pn**	**14 02 35.7**	**+0.2**
MOA				Sg	**Sg**	**14 03 38.0**	**-1.4**
	comp=Z,8.4nm,0.5s						

BJI ***19*** *14:26:37.6,1°.02N×98°.73E,h10km,mB5.4/40,mb5.1/39, Ms6.4/73,Ms7 6.1/58*
IDC ***19*** *14:26:43.4±0.4,1°.70N×99°.19E,h0km,mb5.1/29, mb1 5.2/30,mb1mx5.2/31,mbtmp5.1/30,ML4.8/1,MS5.8/31, Ms1 5.8/31,ms1mx5.6/41,Error ellipse: s-maj=14.0km s-min=10.8km az=53.0*
ISCJB ***19*** *14:26:44.1±0.5,1°.68N±0°.02×99°.06E±0°.02,h12km±3km, mb5.6/264,MS5.9/277,Error ellipse: s-maj=3.8km s-min=2.5km az=30.0*
NEIC ***19*** *14:26:45.0±0.1,1°.64N×99°.15E,h10km,mb5.8/126,ME6.6, MS6.0/198,MW5.9,MW6.0,Error ellipse: s-maj=5.6km s-min=4.0km az=211.0,Moment Tensor Solution. s63 Moment tensor: Scale 10^17^Nm; Mrr0.77; Mθθ-7.27; Mφφ6.50; Mrθ-1.99; Mθφ5.07; Mφr0.15; Best double couple: M0 8.80000×10^17^ NP1:φs154.00000°,δ80.00000°, λ-175.00000°. NP2:φs63.00000°,δ85.00000°, λ-10.00000°. Principal axes: T 8.2000, Plg3.0000°, Azm108.0000°; N 1.1100, Plg78.0000°, Azm217.0000°; P -9.3100, Plg10.0000°, Azm17.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [IV] at Airbangis and Sipirok; [III] at Bukittinggi, Padangsidempuan, Payakumbuh and Sibolga. Also felt [III] at Gunungsitoli, Nias. Felt at Kisaran. Felt [IV] at Kajang and Sungai Chua; [III] at Balakuyong, Klang, Kuala Lumpur and Seremban; [II] at Air Keruh, Petaling Jaya and Shah Alam, Malaysia. Felt at Ampang, Ayer Itam, Banting, Batu Gajah, Batu Pahat, Bukit Baru, Butterworth, Gelugor Estate, Kampong Baharu Nilai, Kampung Tanjung, Klebang Besar, Melaka Pindah, Port Dickson and Teluk Intan, Malaysia. Also felt at Kathu, Thailand and in Singapore.
GCMT ***19*** *14:26:45.0±0.1,1°.64N×99°.14E,h16km,MW6.0/101, Moment Tensor Solution. s101,c221; s100,c359; Duration: 2s5 Moment tensor: Scale 10^18^Nm; Mrr-0.09±.01; Mθθ-1.03±.01; Mφφ1.12±.01; Mrθ0.09±.02; Mθφ0.67±.01; Mφr0.27±.02; Best double couple: M0 1.29600×10^18^ NP1:φs331.00000°,δ82.00000°, λ173.00000°. NP2:φs62.00000°,δ83.00000°,λ8.00000°. Principal axes: T 1.3690, Plg11.0000°, Azm286.0000°; N -0.1440, Plg79.0000°, Azm103.0000°; P -1.2240, Plg1.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
DJA ***19*** *14:26:47,1°.67N×99°.09E,h10km,Mw6.1/54*
MOS ***19*** *14:26:48.4±1.0,2°.14N×99°.09E,h27km,mb6.0/97, MS5.8/95,Error ellipse: s-maj=9.1km s-min=4.0km az=121.6*
SZGRF ***19*** *14:26:50.1,1°.09N×98°.20E,h33km,mb5.8,MS5.8, Northern Sumatera, Indonesia*

ISC 19 14:26:46.3±0.6,1°.68N±0°.02×99°.05E±0°.02,h15km±3km, h22km±2.3km:pP-P,n1398,σ1912/954,mb5.6/264, MS5.9/277,159C-159D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.20**	**233**	P	**Pg**	**14 26 50.1**	**-0.9**
TRSI	**Tarutung**	**0.36**	**345**	P	**Pg**	**14 26 53.0**	**-0.7**
MNSI	**Mandailing Nat**	**1.02**	**149**	P	**Pb**	**14 27 00.7**	**-5.0**
TSI	**Tuntungan**	**1.88**	**345**	P	**Pn**	**14 27 19.5**	**+1.6**
BKNI	**Bangkinang**	**2.40**	**124**	P	**Pn**	**14 27 26.0**	**+1.0**
PPI	**Padang Panjang**	**2.51**	**148**	P	**Pn**	**14 27 25.2**	**-1.4**
PDSI	**Padang**	**2.93**	**151**	P	**Pn**	**14 27 31.6**	**-0.8**
SISI	**Saibi**	**2.98**	**179**	P	**Pn**	**14 27 32.7**	**-0.4**
FRIM	**Kepong**	**3.00**	**59**	P	**Pn**	**14 27 33.3**	**0.0**
IPM	**Ipoh**	**3.41**	**35**	P	**Pn**	**14 27 40.9**	**+2.0**
IPM	**Ipoh**	**3.41**	**35**	P	**Pn**	**14 27 39.1**	**+0.1**
SDSI	**Sungai Dareh**	**3.51**	**137**	P	**Pn**	**14 27 39.0**	**-1.4**
RGRI	**Rengat**	**3.85**	**121**	P	**Pn**	**14 27 43.6**	**-1.4**
KULM	**Kulim**	**3.93**	**24**	P	**Pn**	**14 27 48.2**	**+2.1**
KULM	**Kulim**	**3.93**	**24**	⇓*e*P	**Pn**	**14 27 45.3**	**-0.8**
KULM	**Kulim**	**3.93**	**24**	P	**Pn**	**14 27 45.2**	**-0.9**
LHMI	**Lhok Sumawe**	**4.11**	**329**	P	**Pn**	**14 27 52.3**	**+3.7**
MYKOM	**Kota Tinggi**	**4.80**	**89**	P	**Pn**	**14 27 58.5**	**+0.5**
MYKOM	**Kota Tinggi**	**4.80**	**89**	P	**Pn**	**14 27 56.0**	**-2.0**
BSI	**Banda Aceh**	**5.33**	**315**	P	**Pn**	**14 28 07.2**	**+1.7**
	4μm,1.4s,15nm						
KTGM	**Kuala Trenggan**	**5.45**	**48**	P	**Pn**	**14 28 07.4**	**+0.3**
KSI	**Kapahiang**	**6.37**	**146**	P	**Pn**	**14 28 20.1**	**+0.5**
	2μm,1.6s,39nm						
MNAI	**Manna**	**7.15**	**147**	P	**Pn**	**14 28 32.0**	**+1.6**
	1μm,1.5s,34nm						
PMBI	**Palembang**	**7.32**	**129**	P	**Pn**	**14 28 36.8**	**+4.1**
	1μm,1.2s,47nm						
MDSI	**Maura Dua**	**7.98**	**140**	P	**Pn**	**14 28 41.6**	**-0.2**
	658nm,2.3s,11nm						
LWLI	**Liwa**	**8.32**	**143**	P	**Pn**	**14 28 46.4**	**-0.1**
KLI	**Kotabumi**	**8.71**	**138**	P	**Pn**	**14 28 51.7**	**-0.1**
	447nm,2.3s						
KASI	**Kota Agung**	**8.98**	**143**	P	**Pn**	**14 28 56.3**	**+0.7**
	475nm,1.4s,7μm						
TPI	**Tanjungpandan**	**9.66**	**117**	P	**Pn**	**14 29 04.0**	**-0.9**
	223nm,1.6s,6μm						
RBSI	**Rajabasa**	**10.02**	**138**	P	**Pn**	**14 29 09.6**	**-0.2**
	886nm,1.2s						
CGJI	**Cibinong**	**10.57**	**141**	P	**Pn**	**14 29 18.1**	**+0.8**
	260nm,1.5s,7μm						
DBJI	**Dramaga**	**11.22**	**137**	P	**Pn**	**14 29 27.6**	**+1.4**
	516nm,2.3s						
KSM	**Kuching**	**11.25**	**91**	⇑*e*P	**Pn**	**14 29 25.2**	**-1.5**
	205nm,1.4s						
KSM	**Kuching**	**11.25**	**91**	P	**Pn**	**14 29 25.5**	**-1.2**
	160nm,2.4s,6μm						
LEM	**Lembang**	**12.02**	**135**	P	**Pn**	**14 29 36.9**	**-0.3**
	463nm,2.2s						
JCJI	**Jatiwangi**	**12.27**	**131**	P	**Pn**	**14 29 45.9**	**+5.3**
	1μm,0.9s						
STKI	**Sintang**	**12.53**	**97**	P	**Pn**	**14 29 47.5**	**+3.4**
	226nm,1.0s						
SBUM	**Sibu**	**13.18**	**86**	P	**Pn**	**14 29 52.9**	**-0.2**
	398nm,2.0s						
NST	**Nakhon Sawan**	**13.95**	**4**	P	**Pn**	**14 30 03.0**	**-0.6**
	138nm,1.1s						
COCO	**West Island**	**13.95**	**189**	P	**Pn**	**14 30 07.8**	**+4.2**
	173nm,1.7s,5μm						
SMRI	**Semarang**	**14.29**	**127**	P	**Pn**	**14 30 09.4**	**+1.1**
	1μm,2.3s						
UBT	**Ubonrachathani**	**14.71**	**23**	P	**Pn**	**14 30 19.0**	**+5.0**
UGM	**Wanagama**	**14.88**	**130**	P	**Pn**	**14 30 14.0**	**-2.4**
	593nm,2.6s						
NGJI	**Ngawi**	**15.29**	**126**	P	**Pn**	**14 30 23.7**	**+1.9**
	573nm,1.3s						
BDT	**Bhumibol Dam**	**15.47**	**360**	P	**Pn**	**14 30 26.0**	**+1.9**
	104nm,1.0s						
SJI	**Sawahan**	**15.76**	**127**	P	**Pn**	**14 30 27.9**	**+0.1**
	338nm,2.4s,8μm						
GRJI	**Gresik**	**15.89**	**123**	P	**Pn**	**14 30 32.6**	**+3.1**
	822nm,2.0s						
PWJI	**Pagerwojo**	**15.95**	**127**	P	**Pn**	**14 30 29.1**	**-1.3**
	278nm,1.7s,9μm						
BBKI	**Banjar Baru**	**16.59**	**108**	P	**Pn**	**14 30 40.0**	**+1.5**
	710nm,2.5s						
CMAR	**Chiang Mai Arr**	**16.68**	**360**	Pn	**Pn**	**14 30 41.0**	**+1.3**
	2.0nm,0.3s,baz=191,slow=12,SNR=160						
CMAR				LR	LR	14 37 17.1	
	comp=Z,58μm,19.9s,baz=190,slow=38						
CHG	**Chiang Mai**	**17.03**	**360**	P	**Pn**	**14 30 45.7**	**+1.6**
	289nm,1.4s						
KMMI	**Kalianget**	**17.22**	**120**	P	**Pn**	**14 30 47.3**	**+0.8**
	676nm,1.7s						
GMJI	**Gumukmas**	**17.42**	**125**	P	**Pn**	**14 30 48.7**	**-0.3**
	313nm,1.9s						
KKM	**Kota Kinabalu**	**17.66**	**75**	⇑*e*P	**Pn**	**14 30 51.1**	**-0.8**
	483nm,1.3s						
KKM	**Kota Kinabalu**	**17.66**	**75**	P	**Pn**	**14 30 53.8**	**+1.8**
	366nm,1.3s,8μm						
KBKI	**Kotabaru**	**17.81**	**106**	P	**Pn**	**14 30 55.5**	**+1.7**
	347nm,1.3s,6μm						
CHRT	**Chiangrai**	**18.10**	**2**	⇓P	**Pn**	**14 31 00.0**	**+2.7**
	934nm,0.9s						
NBBI	**Negara**	**18.45**	**123**	P	**Pn**	**14 31 04.3**	**+2.6**
	575nm,1.4s						
SRBI	**Singaraja**	**18.81**	**121**	P	**Pn**	**14 31 06.9**	**+0.9**
	1μm,1.9s						
DNP	**Denpasar**	**19.11**	**123**	P	**Pn**	**14 31 10.4**	**+0.7**
	444nm,1.7s						
PALK	**Pallekele**	**19.11**	**287**	Pn	**Pn**	**14 31 12.4**	**+2.6**
	1μm,1.6s,SNR=20						
PALK	**Pallekele**	**19.11**	**287**	P	**Pn**	**14 31 11.3**	**+1.6**
	3.0nm,0.3s,baz=108,slow=11,SNR=17						
PALK				LR	LR	14 38 21.7	
	comp=Z,32μm,19.5s,baz=103,slow=36						
PALK	**Pallekele**	**19.11**	**287**	⇑*e*P	**Pn**	**14 31 11.7**	**+1.9**
PALK				pmax	pmax		
	comp=Z,948nm,1.6s						
PALK	**Pallekele**	**19.11**	**287**	⇑*e*P	**Pn**	**14 31 11.7**	**+1.9**
	comp=Z,948nm,1.6s						
PALK	**Pallekele**	**19.11**	**287**	P	**Pn**	**14 31 13.3**	**+3.6**
	SNR=25						
PALK				P		14 31 13.3	
	SNR=25						
PALK	**Pallekele**	**19.11**	**287**	P	**Pn**	**14 31 13.7**	**+3.9**
	comp=Z,230nm,2.5s,comp=Z,10μm						
KHKI	**Kahang-Kahang**	**19.29**	**121**	P	**Pn**	**14 31 12.3**	**+0.5**
	comp=Z,839nm,2.6s						
MYLDM	**Lahad Datu**	**19.72**	**79**	P	**Pn**	**14 31 16.7**	**-0.3**
	comp=Z,1μm,1.6s						
BATP	**Bataraza**	**19.95**	**69**	*e*P	**Pn**	**14 31 18.9**	**-0.9**
QIZ	**Qiongzhong**	**20.23**	**31**	P	**P**	**14 31 22.5**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,66nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,4μm,11.6s						
QIZ				LR	LR		
	comp=N,39μm,16.9s,MS6.0						
QIZ				LR	LR		
	comp=E,42μm,15.0s,MS6.0						
QIZ				LR	LR		
	comp=Z,56μm,16.4s,MS6.0						
QIZ	**Qiongzhong**	**20.23**	**31**	*e*P	**P**	**14 31 21.5**	**+0.5**
	comp=Z,544nm,1.4s						
QIZ				LR	LR		
	comp=Z,33μm,20.0s,MS5.7						
PPR	**Puerto Princes**	**21.15**	**67**	*e*P	**P**	**14 31 28.9**	**-2.2**
TTSI	**Tana Toraja**	**21.28**	**103**	P	**P**	**14 31 33.6**	**+1.1**
KAPI	**Kappang**	**21.72**	**108**	P	**P**	**14 31 38.8**	**+1.6**
	comp=Z,990nm,1.0s,mb6.2,SNR=23						

GZH	**Guangzhou**	**25.40**	**32**	P	**P**	**14 32 17.5**	**+4.1**
GZH				S	**S**	**14 36 49.8**	**+10**
GZH				LR	LR		
	comp=N,45μm,18.6s,MS6.2						
GZH				LR	LR		
	comp=E,55μm,16.8s,MS6.2						
GZH				LR	LR		
	comp=Z,58μm,17.1s,MS6.2						
RCP	**Roxas**	**25.47**	**66**	⇑*e*P	**P**	**14 32 14.5**	**+0.4**
HYB	**Hyderabad**	**25.51**	**309**	⇑*i*P	**P**	**14 32 15.0**	**+0.6**
	comp=Z,270nm,1.0s,mb5.7						
HYB				*e*S	**S**	**14 36 44.0**	**+2.5**
HYB				LR	LR	14 42 00.0	
	comp=Z,43nm,24.0s						
GYA	**Guiyang**	**25.70**	**16**	P	**P**	**14 32 16.3**	**+0.2**
GYA				PP		14 32 57.8	
GYA				PcP	PcP	14 35 44.3	-2.0
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,2μm,8.7s						
GYA				LR	LR		
	comp=N,31μm,15.2s,MS6.0						
GYA				LR	LR		
	comp=E,23μm,18.6s,MS6.0						
GYA				LR	LR		
	comp=Z,40μm,14.9s,MS6.1						
BALP	**Baler**	**26.24**	**57**	*e*P	**P**	**14 32 23.6**	**+2.6**
SGSI	**Sangihe**	**26.52**	**85**	P	**P**	**14 32 24.7**	**+1.1**
	comp=Z,255nm,1.4s,mb5.6						
BUKP	**Musuan**	**26.63**	**76**	*e*P	**P**	**14 32 26.7**	**+2.1**
PIP	**Pasuquin**	**26.86**	**51**	*e*P	**P**	**14 32 26.9**	**+0.3**
DAV	**Davao City (W)**	**26.98**	**78**	LR	LR	14 43 37.1	
	comp=Z,24μm,21.6s,MS5.7,baz=346,slow=38						
DAV	**Davao City (W)**	**26.98**	**78**	PFAKE		14 32 40.0	+12
DAV				LR	LR		
	comp=Z,30μm,21.0s,MS5.8						
DAV	**Davao City (W)**	**26.98**	**78**	P	**P**	**14 32 30.7**	**+2.9**
	SNR=17						
DAV				P		14 32 30.7	
	SNR=17						
DAV	**Davao City (W)**	**26.98**	**78**	⇑*e*P	**P**	**14 32 27.3**	**-0.5**
MSLP	**Maasin**	**26.99**	**71**	*e*P	**P**	**14 32 31.6**	**+3.8**
CAUP	**Cauayan**	**27.05**	**55**	*e*P	**P**	**14 32 28.2**	**-0.2**
APYP	**Conner**	**27.08**	**52**	*e*P	**P**	**14 32 28.4**	**-0.3**
ODAN	**Odare**	**27.43**	**337**	*e*P	**P**	**14 32 30.7**	**-0.9**
	comp=Z,311nm,1.3s,mb5.7						
NGP	**Nagpur**	**27.48**	**316**	⇑*i*P	**P**	**14 32 28.8**	**-3.4**
NGP				*e*x	x	14 32 31.9	
	comp=Z,315nm,1.4s						
NGP				*e*S	**S**	**14 37 11.8**	**-0.8**
CNP	**Catarman**	**27.56**	**66**	*e*P	**P**	**14 32 34.1**	**+1.1**
LATR	**Latur**	**27.63**	**308**	*e*P	**P**	**14 32 36.0**	**+2.4**
TAPN	**Taplejung**	**27.75**	**338**	*e*P	**P**	**14 32 34.1**	**-0.4**
	comp=Z,248nm,1.0s,mb5.8						
RAMN	**Ramite**	**27.83**	**336**	*e*P	**P**	**14 32 34.7**	**-0.5**
DGAR	**Diego Garcia**	**28.03**	**251**	PFAKE		14 32 50.0	+13
DGAR				LR	LR		
	comp=Z,11μm,20.0s,MS5.4						
TNTI	**Ternate**	**28.32**	**91**	P	**P**	**14 32 40.8**	**+1.0**
	comp=Z,90nm,1.9s,comp=Z,2μm,mb5.1						
GOA	**Goa**	**28.42**	**300**	⇑*i*P	**P**	**14 32 41.9**	**+1.3**
GOA				*e*S	**S**	**14 37 29.9**	**+2.5**
NLAI	**Namlea**	**28.46**	**100**	P	**P**	**14 32 42.1**	**+1.1**
	comp=Z,160nm,0.9s,comp=Z,2μm,mb5.7						
LBMI	**Labuha**	**28.54**	**94**	P	**P**	**14 32 42.8**	**+1.1**
	comp=Z,254nm,1.9s,comp=Z,4μm,mb5.6						
JIRN	**Jiri**	**28.62**	**336**	*e*P	**P**	**14 32 42.1**	**-0.2**
	comp=Z,212nm,1.0s,mb5.8						
PKI	**Pulchoki**	**28.88**	**334**	*e*P	**P**	**14 32 43.8**	**-0.7**
	comp=Z,71nm,0.9s,mb5.4						
PKIN	**Phulchoki**	**28.89**	**334**	*e*P	**P**	**14 32 43.8**	**-0.8**
KAD	**Karad**	**28.96**	**304**	*e*P	**P**	**14 32 46.5**	**+1.0**
GUN	**Gumba**	**28.97**	**335**	*e*P	**P**	**14 32 44.8**	**-0.6**
	comp=Z,142nm,0.8s,mb5.8						
DMN	**Daman**	**29.04**	**334**	*e*P	**P**	**14 32 45.4**	**-0.6**
	comp=Z,90nm,0.9s,mb5.5						
KKN	**Kakani**	**29.12**	**334**	*e*P	**P**	**14 32 45.8**	**-0.9**
	comp=Z,110nm,0.8s,mb5.7						
CD2	**Chengdu**	**29.41**	**8**	P	**P**	**14 32 49.0**	**-0.3**
CD2				pP	pP	14 32 53.3	-0.5
CD2				sP	sP	14 32 56.1	+0.4
CD2				PP	PP	14 33 43.4	-12
CD2				S	**S**	**14 37 42.5**	**-0.3**
CD2				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.3						
CD2				pmax	pmax		
	comp=Z,670nm,7.1s						
CD2				LR	LR		
	comp=N,41μm,11.9s						
CD2				LR	LR		
	comp=Z,41μm,11.3s,MS6.3						
AAI	**Ambon**	**29.61**	**100**	P	**P**	**14 32 52.3**	**+1.0**
	comp=Z,226nm,1.4s,comp=Z,3μm,mb5.7						
QZH	**Quanzhou**	**29.85**	**38**	P	**P**	**14 32 54.5**	**+1.3**
QZH				S	**S**	**14 37 50.6**	**+0.8**
QZH				LR	LR		
	comp=N,111μm,15.6s,MS6.9						
QZH				LR	LR		
	comp=E,163μm,14.7s,MS6.9						
QZH				LR	LR		
	comp=Z,51μm,13.2s,MS6.3						
POO	**Poona**	**29.86**	**306**	*e*P	**P**	**14 32 54.4**	**+1.0**
TWG	**Pinlang**	**29.98**	**44**	P	**P**	**14 32 56.2**	**+1.8**
	comp=Z,182nm,1.4s,mb5.6						
BHPL	**Bhopal**	**29.99**	**317**	*e*P	**P**	**14 32 55.1**	**+0.6**
BHPL				AMb	AMB	14 33 00.4	
	comp=Z,164nm,1.1s,mb5.7						
TPUB	**Ta-pu**	**30.00**	**43**	*e*P	**P**	**14 32 53.9**	**-0.7**
	comp=Z,115nm,1.0s,mb5.6						
ENH	**Enshi**	**30.11**	**18**	*e*P	**P**	**14 32 54.0**	**-1.5**
	comp=Z,95nm,1.1s,mb5.4						
ENH				LR	LR		
	comp=Z,31μm,19.0s,MS6.0						
MBWA	**Marble Bar**	**30.40**	**139**	*e*P	**P**	**14 32 55.4**	**-2.8**
	comp=Z,69nm,1.4s,mb5.2						
MBWA				LR	LR		
	comp=Z,24μm,20.0s,MS5.8						
MBWA	**Marble Bar**	**30.40**	**139**	P	**P**	**14 32 56.8**	**-1.4**
	comp=Z,38nm,1.5s,mb4.9						
YULB	**Yu-li**	**30.51**	**43**	*e*P	**P**	**14 32 59.2**	**+0.1**
	comp=Z,80nm,1.0s,mb5.5						
SSLB	**Suanglung**	**30.55**	**42**	*e*P	**P**	**14 32 59.1**	**-0.2**
	comp=Z,231nm,1.2s,mb5.9						
NACB	**Ninganchiao**	**31.24**	**42**	*e*P	**P**	**14 33 06.2**	**+0.8**
	comp=Z,144nm,1.1s,mb5.7						
YHNB	**Yeheng**	**31.43**	**42**	PFAKE		14 33 20.0	+13
YHNB				LR	LR		
	comp=Z,17μm,20.0s,MS5.7						
TATO	**Taipei**	**31.71**	**41**	PFAKE		14 33 20.0	+10
TATO				LR	LR		
	comp=Z,18μm,19.0s,MS5.8						
WHN	**Wuhan**	**32.17**	**25**	P	**P**	**14 33 16.5**	**+2.9**
WHN				S	**S**	**14 38 30.1**	**+4.1**
WHN				LR	LR		
	comp=N,94μm,14.0s,MS6.7						
WHN				LR	LR		
	comp=E,36μm,11.9s,MS6.7						
WHN				LR	LR		
	comp=Z,106μm,16.4s,MS6.6						
AGRA	**Agra**	**32.48**	**323**	*e*P	**P**	**14 33 16.4**	**0.0**
FITZ	**Fitzroy Crossi**	**32.73**	**128**	*e*P	**P**	**14 33 14.2**	**-4.5**
	comp=Z,25nm,0.9s,mb5.1						
FITZ				*e*		14 36 06.6	
FITZ	**Fitzroy Crossi**	**32.73**	**128**	P	**P**	**14 33 15.5**	**-3.2**
	comp=Z,12nm,0.8s,mb4.8,baz=282,slow=5.3,SNR=11						
FITZ				PcP	PcP	14 36 03.9	-0.4
	comp=Z,12nm,1.0s,baz=326,slow=2.2,SNR=4.2						
FITZ				LR	LR	14 46 10.3	
	comp=Z,13μm,20.2s,MS5.6,baz=303,slow=36						
FITZ	**Fitzroy Crossi**	**32.73**	**128**	P	**P**	**14 33 15.3**	**-3.4**
	comp=Z,194nm,2.1s,mb5.7						
FITZ	**Fitzroy Crossi**	**32.73**	**128**	P	**P**	**14 33 15.8**	**-2.9**
	comp=Z,58nm,2.0s,mb5.2						
BHV	**Bhavnagar**	**32.93**	**309**	*e*P	**P**	**14 33 20.5**	**+0.1**
PTH	**Pithoragarh**	**33.01**	**329**	*e*P	**P**	**14 33 21.0**	**0.0**
PTH				*e*x	x	14 38 44.6	
XAN	**Xi'an**	**33.49**	**15**	P	**P**	**14 33 22.6**	**-2.6**
XAN				pP	pP	14 33 34.1	+4.4
XAN				PP	PP	14 34 42.3	+1.2
XAN				PcP	PcP	14 35 56.8	-9.3
XAN				S	**S**	**14 38 45.4**	**-1.1**
XAN				SS	SS	14 40 54.8	-17
XAN				ScS	ScS	14 43 41.6	-10
XAN				LR	LR		
	comp=N,22μm,14.6s,MS6.0						
XAN				LR	LR		
	comp=E,10μm,17.6s,MS6.0						
XAN				LR	LR		
	comp=Z,12μm,14.8s,MS5.7						
AYAN	**Aya Nagar**	**33.90**	**324**	*e*P	**P**	**14 33 28.4**	**-0.3**
NDI	**New Delhi**	**33.99**	**324**	*e*P	**P**	**14 33 28.0**	**-1.6**
NDI				*e*x	x	14 39 43.0	
AJM	**Ajmer**	**34.03**	**319**	*e*P	**P**	**14 33 30.1**	**+0.1**
AJM				AMb	AMB	14 33 34.4	
	comp=Z,194nm,1.2s,mb5.9						
JOSI	**Joshimath**	**34.16**	**329**	*e*P	**P**	**14 33 31.1**	**+0.1**
KHET	**Khetri**	**34.40**	**322**	*e*P	**P**	**14 33 33.1**	**+0.1**
TLE	**Tual**	**34.42**	**102**	P	**P**	**14 33 34.4**	**+0.9**
	comp=Z,214nm,1.3s,mb5.9						
LZH	**Lanzhou**	**34.53**	**7**	*e*P	**P**	**14 33 34.5**	**+0.4**
LZH				pP	pP	14 33 37.0	-1.6
LZH				sP	sP	14 33 41.0	+0.5
LZH				PP	PP	14 34 54.0	+1.5
LZH				S	**S**	**14 39 04.0**	**+1.6**
LZH				SS	SS	14 41 18.3	-14
LZH				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
LZH				pmax	pmax		
	comp=Z,270nm,4.5s						
LZH				LR	LR		
	comp=E,24μm,14.4s						
LZH				LR	LR		
	comp=Z,30μm,15.3s,MS6.1						
DDI	**Dehra Dun**	**34.76**	**327**	*e*x	**P**	**14 33 33.5**	**-2.8**
DDI				*e*S	**S**	**14 39 08.3**	**+2.0**
NJ2	**Nanjing**	**35.52**	**30**	*e*P	**P**	**14 33 43.8**	**+1.1**
NJ2				pP	pP	14 33 52.8	+5.5
NJ2				PP	PP	14 35 05.0	+1.5
NJ2				S	**S**	**14 39 18.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,260nm,3.6s						
NJ2				LR	LR		
	comp=N,52μm,16.8s						
NJ2				LR	LR		
	comp=E,17μm,10.3s						
NJ2				LR	LR		
	comp=Z,64μm,14.6s,MS6.5						
KLP	**Kalpa**	**35.61**	**329**	*e*P	**P**	**14 33 43.1**	**-0.4**
BHJ	**Bhuj**	**35.67**	**309**	*e*P	**P**	**14 33 44.9**	**+0.7**
BHJ				AMb	AMB	14 33 49.9	
	comp=Z,285nm,1.3s,mb6.0						
SMLA	**Simla**	**35.87**	**327**	*i* x	**P**	**14 33 42.9**	**-2.9**
SMLA				*e*x	x	14 33 46.4	
	comp=Z,150nm,0.9s						
SMLA				*i* x	x	14 39 16.5	
SSE	**Sheshan**	**35.98**	**33**	*e*P	**P**	**14 33 46.4**	**-0.3**
SSE				sP	sP	14 33 51.3	-1.8
SSE				PP	PP	14 35 09.3	+0.7
SSE				PcP	PcP	14 36 11.3	-2.1
SSE				S	**S**	**14 39 26.3**	**+1.3**
SSE				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
SSE				pmax	pmax		
	comp=Z,190nm,8.0s						
SSE				LR	LR		
	comp=N,31μm,19.4s,MS6.4						
SSE				LR	LR		
	comp=E,56μm,19.4s,MS6.4						
SSE				LR	LR		
	comp=Z,22μm,17.3s,MS6.0						
KAKA	**Kakadu**	**36.09**	**114**	*e*P	**P**	**14 33 44.6**	**-3.3**
	comp=Z,95nm,1.0s,mb5.7						
KAKA	**Kakadu**	**36.09**	**114**	*e*P	**P**	**14 33 44.6**	**-3.3**
	comp=Z,333nm,1.0s,mb6.2						
KAKA	**Kakadu**	**36.09**	**114**	P	**P**	**14 33 45.1**	**-2.8**
	comp=Z,165nm,1.0s,comp=Z,1μm,mb5.9						
SDNR	**Sundarnagar**	**36.26**	**327**	*e*P	**P**	**14 33 51.1**	**+2.0**
SDNR				*e*S	**S**	**14 39 31.1**	**+1.8**
BHK	**Bhakra**	**36.50**	**326**	*e*x	**P**	**14 33 47.4**	**-3.8**
JASL	**Jaisalmer**	**36.87**	**315**	*e*P	**P**	**14 33 55.4**	**+1.0**
KLBR	**Kellerberrin**	**37.55**	**153**	*e*P	**P**	**14 33 57.0**	**-3.0**
	comp=Z,159nm,1.1s,mb5.7						
GTA	**Gaotai**	**37.56**	**1**	⇑P	**P**	**14 33 59.6**	**-0.5**
GTA				pP	pP	14 34 03.1	-1.5
GTA				sP	sP	14 34 05.8	-0.7
GTA				PP	PP	14 35 28.6	+2.6
GTA				PcP	PcP	14 36 18.3	+0.4
GTA				S	**S**	**14 39 49.8**	**+0.9**
GTA				ScP	ScP	14 40 02.6	-2.4
GTA				ScS	ScS	14 44 11.0	-2.3
GTA				pmax	pmax		
	comp=Z,47nm,1.3s,mb5.1						
GTA				pmax	pmax		
	comp=Z,410nm,4.5s						
GTA				LR	LR		
	comp=N,21μm,16.9s,MS6.1						
GTA				LR	LR		
	comp=E,17μm,15.8s,MS6.1						
GTA				LR	LR		
	comp=Z,20μm,19.3s,MS5.9						
TIY	**Taiyuan**	**37.92**	**17**	*e*P	**P**	**14 34 09.4**	**+6.3**
TIY				PP	PP	14 35 38.6	+8.7
TIY				S	**S**	**14 39 49.3**	**-5.0**
TIY				SS	SS	14 42 18.9	-22
TIY				LR	LR		
	comp=N,21μm,13.3s,MS6.2						
TIY				LR	LR		
	comp=E,13μm,11.5s,MS6.2						
TIY				LR	LR		
	comp=Z,15μm,14.0s,MS6.0						
TIA	**Tai'an**	**38.22**	**24**	*e*P	**P**	**14 34 04.1**	**-1.6**
TIA				PP	PP	14 35 41.0	+7.7
TIA				S	**S**	**14 40 01.0**	**+2.0**
TIA				LR	LR		
	comp=N,17μm,17.0s						
TIA				LR	LR		
	comp=E,23μm,11.0s						
NWAO	**Narrogin (SRO)**	**38.46**	**155**	P	**P**	**14 34 06.9**	**-0.9**
	comp=E,82nm,0.8s,mb5.5,baz=327,slow=8.9,SNR=14						
NWAO	**Narrogin (SRO)**	**38.46**	**155**	*e*P	**P**	**14 34 06.9**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,138nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,47μm,22.0s						
NWAO	**Narrogin (SRO)**	**38.46**	**155**	*e*P	**P**	**14 34 06.9**	**-0.9**
	comp=Z,138nm,1.2s,mb5.6						
NWAO				LR	LR		
	comp=Z,47μm,22.0s,MS6.3						
NWAO	**Narrogin (SRO)**	**38.46**	**155**	P	**P**	**14 34 08.7**	**+0.9**
	SNR=8.9						
NWAO				P		14 34 08.7	
	SNR=8.9						
SMPI	**Sarmi**	**39.82**	**95**	P	**P**	**14 34 19.8**	**+0.4**
	comp=Z,164nm,2.1s,comp=Z,3μm,mb5.4						
NIL	**Nilore**	**39.94**	**326**	PFAKE		14 34 30.0	+10
NIL				LR	LR		
	comp=Z,72nm,19.0s						
BTO	**Baotou**	**40.01**	**13**	*e*P	**P**	**14 34 17.3**	**-3.2**
BTO				LR	LR		
	comp=N,8μm,14.7s,MS5.8						
BTO				LR	LR		
	comp=E,7μm,14.7s,MS5.8						
HHC	**Hu-ho-hao-te**	**40.61**	**15**	⇓P	**P**	**14 34 27.8**	**+2.3**
HHC				pP	pP	14 34 32.3	+2.2
HHC				sP	sP	14 34 34.8	+2.8
HHC				PP	PP	14 36 05.8	+6.6
HHC				ScP	ScP	14 40 17.0	+0.3
HHC				S	**S**	**14 40 38.3**	**+3.7**
HHC				sS	sS	14 40 53.1	+11
HHC				pmax	pmax		
	comp=Z,34nm,1.2s,mb4.8						
HHC				pmax	pmax		
	comp=Z,550nm,7.5s						
HHC				LR	LR		
	comp=N,26μm,14.1s,MS6.4						
HHC				LR	LR		
	comp=E,24μm,13.5s,MS6.4						
HHC				LR	LR		
	comp=Z,37μm,15.9s,MS6.3						
WRAB	**Tennant Creek**	**40.74**	**124**	P	**P**	**14 34 23.0**	**-3.9**
	comp=Z,646nm,1.0s,mb6.2,SNR=15						
WRAB	**Tennant Creek**	**40.74**	**124**	*e*P	**P**	**14 34 23.1**	**-3.8**
WRAB				pmax	pmax		
	comp=Z,107nm,1.0s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,21μm,22.0s,MS6.0						
WRAB	**Tennant Creek**	**40.74**	**124**	*e*P	**P**	**14 34 23.1**	**-3.9**
	comp=Z,107nm,1.0s,mb5.4						
WRAB				LR	LR		
	comp=Z,21μm,22.0s,MS6.0						
WRAB	**Tennant Creek**	**40.74**	**124**	P	**P**	**14 34 24.0**	**-2.9**
	comp=Z,147nm,1.2s,mb5.5						
BJT	**Baijiatuau**	**41.21**	**20**	*e*P	**P**	**14 34 30.2**	**-0.3**
BJT				pmax	pmax		
	comp=Z,30nm,0.5s						
BJT				MLR	MLR		
	comp=Z,16μm,19.0s						
BJT	**Baijiatuau**	**41.21**	**20**	*e*P	**P**	**14 34 30.2**	**-0.3**
	comp=Z,30nm,0.5s,mb5.2						
BJT				LR	LR		
	comp=Z,16μm,19.0s,MS5.9						
BJI	**Beijing**	**41.24**	**20**	P	**P**	**14 34 29.6**	**-1.1**
BJI				S	**S**	**14 40 45.9**	**+1.8**
BJI				SS	SS	14 43 52.3	+4.7
BJI				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
BJI				pmax	pmax		
	comp=Z,360nm,5.0s						
BJI				LR	LR		
	comp=N,37μm,16.8s,MS6.5						
BJI				LR	LR		
	comp=E,26μm,13.2s,MS6.5						
BJI				LR	LR		
	comp=Z,27μm,16.5s,MS6.2						
ASAR	**Alice Springs**	**42.22**	**129**	P	**P**	**14 34 36.0**	**-3.0**
	comp=Z,15nm,0.9s,mb4.6,baz=300,slow=6.1,SNR=67						
ASAR				PcP	PcP	14 36 32.9	-0.3
	comp=Z,12nm,0.9s,baz=304,slow=2.2,SNR=5.4						
ASAR				ScP	ScP	14 40 21.0	-2.5
	comp=Z,3.7nm,0.9s,baz=302,slow=3.6,SNR=6.4						
ASAR	**Alice Springs**	**42.22**	**129**	P	**P**	**14 34 36.0**	**-3.1**
ASAR						14 36 32.9	
DL2	**Dalian**	**42.41**	**26**	⇓*i*P	**P**	**14 34 41.8**	**+1.4**
DL2				PP	PP	14 36 26.1	+7.3
DL2				S	**S**	**14 41 03.8**	**+2.3**
DL2				SS	SS	14 44 12.5	+1.6
DL2				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.9						
DL2				pmax	pmax		
	comp=Z,210nm,6.8s						
DL2				LR	LR		
	comp=N,6μm,18.0s,MS6.0						
DL2				LR	LR		
	comp=E,17μm,16.8s,MS6.0						
DL2				LR	LR		
	comp=Z,14μm,15.6s,MS6.0						
FORT	**Forrest**	**42.47**	**142**	⇑*i*P	**P**	**14 34 38.4**	**-2.6**
	comp=Z,109nm,0.6s,mb5.7						
FORT	**Forrest**	**42.47**	**142**	*e*P	**P**	**14 34 38.5**	**-2.5**
	comp=Z,113nm,0.6s,mb5.7						
KBL	**Kabul**	**43.04**	**323**	*e*P	**P**	**14 34 45.4**	**-0.1**
KBL				pmax	pmax		
	comp=Z,92nm,1.1s,mb5.4						
KBL	**Kabul**	**43.04**	**323**	*e*P	**P**	**14 34 45.4**	**-0.2**
	comp=Z,92nm,1.1s,mb5.4						
KSH	**Kashi**	**43.14**	**334**	P	**P**	**14 34 44.0**	**-2.2**
KSH				*e*pP	pP	14 34 48.3	-2.6
KSH				*e*sP	sP	14 34 51.1	-1.6
KSH				*e*PP	PP	14 36 26.3	-0.3
KSH				*e*PcP	PcP	14 36 34.1	-1.8
KSH				*e*ScP	ScP	14 40 24.3	-2.5
KSH				*e*PcS	PcS	14 40 25.3	-2.9
KSH				*e*S	**S**	**14 41 07.0**	**-5.2**
KSH				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.2						
KSH				LR	LR		
	comp=N,7μm,15.3s,MS5.8						
KSH				LR	LR		
	comp=E,7μm,15.5s,MS5.8						
KSH				LR	LR		
	comp=Z,8μm,17.7s,MS5.7						
WMQ	**Urumqi**	**43.16**	**348**	P	**P**	**14 34 46.8**	**+0.4**
WMQ				pP	pP	14 34 51.0	0.0
WMQ				PP	PP	14 36 27.8	+1.0
WMQ				PcP	PcP	14 36 36.8	+0.9
WMQ				ScP	ScP	14 40 25.6	-1.2
WMQ				PcS	PcS	14 40 27.3	-0.8
WMQ				S	**S**	**14 41 11.5**	**-0.9**
WMQ				SS	SS	14 44 18.5	-7.0
WMQ				ScS	ScS	14 44 44.5	-2.0
WMQ				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.4						
WMQ				LR	LR		
	comp=N,8μm,14.0s,MS5.9						
WMQ				LR	LR		
	comp=E,9μm,16.0s,MS5.9						
WMQ				LR	LR		
	comp=Z,8μm,26.0s						
INCN	**Inchon**	**43.75**	**32**	PFAKE		14 35 00.0	+8.8
INCN				LR	LR		
	comp=Z,16μm,19.0s,MS6.0						
MSEY	**Mahe Island**	**43.99**	**262**	PFAKE		14 35 10.0	+16
MSEY				LR	LR		
	comp=Z,7μm,21.0s,MS5.6						
WBK	**Wadi Bani Khal**	**44.13**	**301**	P	**P**	**14 34 56.3**	**+1.8**
	SNR=8.4						
KSRS	**Korea Array**	**44.42**	**33**	P	**P**	**14 34 56.3**	**-0.3**
	comp=Z,13nm,0.9s,mb4.7,baz=224,slow=8.2,SNR=25						
KSRS				LR	LR	14 53 45.7	
	comp=Z,12μm,19.7s,MS5.8,baz=217,slow=37						
JMDO	**Jabal Madar**	**44.78**	**301**	P	**P**	**14 35 01.9**	**+2.2**
	SNR=6.7						
SMDO	**Samad**	**45.08**	**301**	P	**P**	**14 35 04.7**	**+2.5**
	SNR=14						
BIDO	**Bidbid**	**45.19**	**302**	P	**P**	**14 35 04.6**	**+1.6**
	SNR=14						
ULHL	**Ulahol**	**45.28**	**336**	P	**P**	**14 35 04.3**	**+0.9**
	SNR=5.4						
KZA	**Kyzart**	**45.55**	**335**	P	**P**	**14 35 06.9**	**+1.3**
	SNR=42						
SHAO	**Shalim**	**45.60**	**294**	P	**P**	**14 35 01.8**	**-4.5**
	SNR=6.1						
SNY	**Shenyang**	**45.66**	**26**	⇓P	**P**	**14 35 06.1**	**-0.3**
SNY				S	**S**	**14 41 50.6**	**+1.9**
SNY				pmax	pmax		
	comp=Z,280nm,3.5s						
SNY				LR	LR		
	comp=N,24μm,16.2s,MS6.4						
SNY				LR	LR		
	comp=E,22μm,15.7s,MS6.4						
SNY				LR	LR		
	comp=Z,17μm,20.4s,MS6.0						
BSY	**Bisya**	**45.69**	**301**	P	**P**	**14 35 09.7**	**+2.7**
	SNR=13						
AAA	**Alma-Ata**	**45.87**	**337**	*i* P	**P**	**14 35 08.3**	**+0.3**
AAA				*e*S	**S**	**14 41 50.2**	**-1.6**
AAA				pmax	pmax		
	comp=Z,2μm,3.3s						
AAA				smax			
	comp=E,5μm,11.3s						
AAA				MLR	MLR		
	comp=Z,9μm,19.0s,MS5.7						
HOQ	**Hoqain**	**45.91**	**302**	P	**P**	**14 35 10.3**	**+1.7**
	SNR=15						
UCH	**Uchtor**	**45.99**	**335**	P	**P**	**14 35 09.3**	**+0.4**
	SNR=281						
UCH	**Uchtor**	**45.99**	**335**	*e*P	**P**	**14 35 09.0**	**0.0**
	comp=Z,175nm,1.0s,mb5.9						
UCH				LR	LR		
	comp=Z,11μm,21.0s,MS5.8						
TKM2	**Tokmak 2**	**46.11**	**336**	P	**P**	**14 35 09.9**	**0.0**
	SNR=173						
TKM2	**Tokmak 2**	**46.11**	**336**	*e*P	**P**	**14 35 09.6**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,216nm,1.1s,mb6.0						
TKM2				MLR	MLR		
	comp=Z,11μ

AAK pmax pmax
comp=Z,120nm,1.7s,mb5.5
AAK MLR MLR
comp=Z,7μm,21.0s,MS5.6
AAK Ala-Archa 46.33 335 *e*P **P** **14 35 11.7 0.0**
comp=Z,201nm,1.3s,mb5.9
AAK LR LR
comp=Z,13μm,21.0s,MS5.9
AAK Ala-Archa 46.33 335 P **P** **14 35 12.3 +0.6**
SNR=117
AAK P 14 35 12.3
SNR=117
AAK Ala-Archa 46.33 335 P **P** **14 35 12.2 +0.5**
comp=Z,31nm,1.3s,comp=Z,470nm,mb5.1
COEN Coen 46.40 111 *e*P **P** **14 35 10.4 -2.2**
comp=Z,1μm,1.6s,mb6.6
COEN Coen 46.40 111 P **P** **14 35 09.5 -3.1**
comp=Z,190nm,2.1s,comp=Z,6μm,mb5.7
SONM Songino Array 46.42 7 P **P** **14 35 12.1 -0.1**
comp=Z,8.3nm,0.8s,mb4.7,baz=192,slow=8.9,SNR=18
SONM PcP PcP 14 36 47.1 +0.1
comp=Z,82nm,1.2s,baz=184,slow=3.9,SNR=9.5
SONM ScP ScP 14 40 40.4 +0.3
comp=Z,3.6nm,0.9s,baz=165,slow=3.8,SNR=3.8
SONM LR LR 14 56 54.3
comp=Z,27μm,18.1s,MS6.2,baz=187,slow=39
SONM Songino Array 46.42 7 P **P** **14 35 12.1 -0.1**
SONM 14 36 47.1
FRU Bishkek 46.44 335 *i* P **P** **14 35 12.0 -0.5**
FRU *e* 14 42 00.0
FRU pmax pmax
comp=Z,460nm,1.6s,mb6.2
ARQ Araqi 46.49 301 P **P** **14 35 15.9 +2.6**
SNR=9.5
CHMS Chumysh 46.52 335 P **P** **14 35 13.9 +0.8**
SNR=66
ULN Ulaanbaatar 46.53 7 *e*P **P** **14 35 12.4 -0.7**
ULN pmax pmax
comp=Z,60nm,1.2s,mb5.4
ULN MLR MLR
comp=Z,20μm,22.0s,MS6.0
ULN Ulaanbaatar 46.53 7 *e*P **P** **14 35 12.4 -0.7**
comp=Z,60nm,1.2s,mb5.4
ULN LR LR
comp=Z,20μm,22.0s,MS6.0
ULN Ulaanbaatar 46.53 7 P **P** **14 35 13.4 +0.3**
SNR=29
ULN P 14 35 13.4
SNR=29
ULN Ulaanbaatar 46.53 7 P **P** **14 35 12.8 -0.3**
comp=Z,58nm,1.4s,comp=Z,528nm,mb5.3
EKS2 Erkin-Say 46.66 334 P **P** **14 35 15.8 +1.5**
SNR=103
EKS2 Erkin-Say 46.66 334 *e*P **P** **14 35 14.2 -0.1**
comp=Z,151nm,1.0s,mb5.9
EKS2 LR LR
comp=Z,8μm,20.0s,MS5.7
RBK Rabkut 46.77 293 P **P** **14 35 17.7 +2.2**
SNR=5.7
GUMO Guam 46.83 73 PFAKE 14 35 30.0 +14
GUMO LR LR
comp=Z,6μm,21.0s,MS5.5
USP Ospenovka 46.84 335 P **P** **14 35 16.7 +1.0**
SNR=216
MKAR Makanchi Array 47.26 344 P **P** **14 35 17.9 -1.0**
comp=Z,60nm,0.8s,mb5.6,baz=148,slow=7.1,SNR=314
MKAR LR LR 15 00 20.0
comp=Z,9μm,19.8s,MS5.7,baz=160,slow=43
WHFO Wadi Hawf 47.27 293 P **P** **14 35 20.4 +0.9**
SNR=6.8
HATD Hatta, Dubai 47.37 303 P **P** **14 35 21.7 +1.6**
SNR=15
ASHO Ashiyiah 47.38 303 P **P** **14 35 21.7 +1.5**
SNR=13
ABTO Aybut 47.57 292 P **P** **14 35 24.8 +3.0**
SNR=6.6
FAQ Al Faqa, Dubai 47.80 302 P **P** **14 35 24.6 +1.1**
SNR=11
NAZ Nazwa, Dubai 47.83 303 P **P** **14 35 25.8 +2.1**
SNR=9.6
ASUD Al Ashush, Dub 47.97 302 P **P** **14 35 26.6 +1.8**
SNR=19
RER Riviere de l'E 48.05 239 PFAKE 14 35 40.0 +15
RER LR LR
comp=Z,3μm,21.0s,MS5.2
CN2 Changchun 48.06 26 *e*P **P** **14 35 23.8 -1.3**
CN2 *es*P sP 14 35 37.0 +5.4
CN2 *e*S **S** **14 42 21.6 -1.5**
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,27μm,15.0s,MS6.6
CN2 LR LR
comp=E,38μm,15.0s,MS6.6
CN2 LR LR
comp=Z,15μm,16.0s,MS6.1
ZAK Zakamensk 48.66 4 *e*P **P** **14 35 29.3 -0.4**
ZAK *e* 14 37 01.2
ZAK pmax pmax
comp=Z,20nm,1.3s,mb5.0
MOY Mondy 49.84 2 *e*P **P** **14 35 38.7 0.0**
MOY pmax pmax
comp=Z,100nm,2.4s,mb5.4
TLY Talaya 49.98 4 P **P** **14 35 40.4 +0.7**
comp=Z,95nm,1.1s,mb5.7,SNR=6.7
TLY Talaya 49.98 4 *e*P **P** **14 35 40.0 +0.3**
TLY *e*S **S** **14 42 50.5 +0.8**
TLY pmax pmax
comp=Z,33nm,1.2s,mb5.2
TLY MLR MLR
comp=Z,20μm,17.0s,MS6.2
TLY Talaya 49.98 4 *e*P **P** **14 35 39.8 +0.1**
comp=Z,29nm,1.1s,mb5.2
TLY LR LR
comp=Z,9μm,19.0s,MS5.8
TLY Talaya 49.98 4 P **P** **14 35 40.4 +0.7**
SNR=13
TLY P 14 35 40.4
SNR=13
MAJO Matsushiro 50.10 42 P **P** **14 35 38.0 -2.9**
MAJO pmax pmax
comp=Z,30nm,1.3s,mb5.2
MAJO MLR MLR
comp=Z,8μm,20.0s,MS5.7
MAJO Matsushiro 50.10 42 P **P** **14 35 38.0 -3.0**
comp=Z,30nm,1.3s,mb5.2
MAJO LR LR
comp=Z,8μm,20.0s,MS5.7
MAT Matsushiro 50.10 42 P **P** **14 35 39.0 -1.9**
MAT S **S** **14 42 48.0 -4.0**
MJAR Matsushiro Arr 50.10 42 P **P** **14 35 39.9 -1.0**
comp=Z,9.2nm,0.9s,mb4.8,baz=227,slow=7.2,SNR=16
MJAR LR LR 15 00 09.8
comp=Z,7μm,19.2s,MS5.7,baz=230,slow=40
MDJ Mudanjiang 50.57 28 P **P** **14 35 44.0 -0.3**
MDJ pP pP 14 35 46.8 -2.2
MDJ sP sP 14 35 49.4 -1.4
MDJ PcP PcP 14 36 59.9 -2.1
MDJ PP PP 14 37 44.0 +3.7
MDJ ScP ScP 14 40 57.5 -0.3
MDJ PcS PcS 14 40 58.6 -0.5
MDJ S **S** **14 43 02.6 +4.4**
MDJ ScS ScS 14 45 35.5 +0.6
MDJ SS SS 14 46 31.3 -1.3
MDJ pmax pmax
comp=Z,290nm,5.7s
MDJ LR LR
comp=N,27μm,17.1s,MS6.6
MDJ LR LR
comp=E,39μm,17.7s,MS6.6
MDJ LR LR
comp=Z,24μm,13.8s,MS6.4
MDJ Mudanjiang 50.57 28 PFAKE 14 36 00.0 +16
MDJ LR LR
comp=Z,16μm,20.0s,MS6.0
IRK Irkutsk 50.58 4 *e*P **P** **14 35 42.8 -1.5**
IRK *e* 14 45 35.1
IRK pmax pmax
comp=Z,70nm,2.0s,mb5.2
VLA Vladivostok 50.60 31 *e*P **P** **14 35 42.5 -2.1**
VLA *e*S **S** **14 42 55.6 -3.1**
VLA pmax pmax
comp=Z,90nm,1.8s,mb5.4
VLA MLR MLR
comp=Z,10μm,14.6s,MS6.0

HIA Hailar 50.62 17 *e*P **P** **14 35 42.0 -2.6**
HIA pmax pmax
comp=Z,19nm,1.0s
HIA MLR MLR
comp=Z,26μm,20.0s
HIA Hailar 50.62 17 *e*P **P** **14 35 42.0 -2.6**
comp=Z,19nm,1.0s,mb5.0
HIA LR LR
comp=Z,26μm,20.0s,MS6.2
IAKL Akhelmad 50.90 318 *e*P **P** **14 35 47.7 +0.8**
MUKL Al Mukalla 51.00 287 *e*P **P** **14 35 49.0 +1.0**
CTA Charters Tower 51.07 118 *e*P **P** **14 35 47.1 -1.4**
comp=Z,60nm,1.2s,mb5.4
CTA *e*S **S** **14 43 04.9 -1.0**
CTAO Charters Tower 51.07 118 *e*P **P** **14 35 45.9 -2.6**
CTAO pmax pmax
comp=Z,545nm,1.8s,mb6.2
CTAO MLR MLR
comp=Z,10μm,19.0s,MS5.8
CTAO Charters Tower 51.07 118 *e*P **P** **14 35 45.9 -2.6**
comp=Z,546nm,1.8s,mb6.2
CTAO LR LR
comp=Z,10μm,19.0s,MS5.8
CTAO Charters Tower 51.07 118 P **P** **14 35 47.6 -0.9**
comp=Z,156nm,1.9s,comp=Z,2μm,mb5.6
CIT Chita 51.62 11 *e*P **P** **14 35 52.6 +0.5**
CIT *e* 14 37 07.2
CIT *e* 14 45 37.9
CIT pmax pmax
comp=Z,113nm,2.2s,mb5.4
KURK Kurchatov 51.84 344 P **P** **14 35 53.0 -0.7**
comp=Z,771nm,1.0s,mb6.6,SNR=48
KURK Kurchatov 51.84 344 LR LR 15 01 02.9
comp=Z,9μm,20.7s,MS5.8,baz=225,slow=40
KURK Kurchatov 51.84 344*c* *i*P **P** **14 35 53.2 -0.5**
KURK pmax pmax
comp=Z,157nm,1.0s,mb5.9
KURK MLR MLR
comp=Z,9μm,16.0s,MS5.9
KURK Kurchatov 51.84 344 *e*P **P** **14 35 52.7 -1.1**
comp=Z,169nm,1.1s,mb5.9
KURK LR LR
comp=Z,12μm,20.0s,MS5.9
KURK Kurchatov 51.84 344 P **P** **14 35 53.1 -0.7**
SNR=70
KURK P 14 35 53.1
SNR=70
ABKT Ailbek 52.05 319 P **P** **14 35 55.1 -0.5**
comp=Z,596nm,0.9s,mb6.5,SNR=22
STKA Stephens Creek 52.32 133⇑ *i*P **P** **14 35 54.6 -3.0**
comp=Z,40nm,0.9s,mb5.3
STKA Stephens Creek 52.32 133 P **P** **14 35 54.7 -2.9**
comp=Z,46nm,0.9s,mb5.4,baz=311,slow=7.7,SNR=35
STKA LR LR 15 00 12.1
comp=Z,15μm,18.4s,MS6.1,baz=294,slow=38
STKA Stephens Creek 52.32 133 *e*P **P** **14 35 54.0 -3.7**
comp=Z,11nm,0.9s,mb4.8
ZAA0 Zalesovo Array 53.41 350 *e*P **P** **14 36 03.9 -1.4**
ZALV Zalesovo Beam 53.41 350 P **P** **14 36 03.3 -2.0**
comp=Z,51nm,0.8s,mb5.5,baz=166,slow=5.7,SNR=175
ZALV LR LR 15 03 27.6
comp=Z,5μm,18.4s,MS5.6,baz=176,slow=41
IANJ Anjilo 53.68 314 *e*P **P** **14 36 06.9 -0.7**
LBOS 54.53 286⇑ *e*P **P** **14 36 15.5 +1.3**
LBOS AMb AMB 14 36 16.5
comp=Z,151nm,1.0s,mb6.0
NVS Novosibirsk 54.55 349 *e*P **P** **14 36 12.6 -1.0**
NVS *e*S **S** **14 43 51.5 -0.8**
NVS pmax pmax
comp=N,108nm,1.6s
NVS pmax pmax
comp=E,57nm,1.6s
NVS pmax pmax
comp=Z,130nm,1.6s,mb5.7
NVS smax
comp=N,80nm,2.1s
NVS smax
comp=E,28nm,1.5s
OPO Ambohidratompo 54.81 246 P **P** **14 36 17.1 +0.9**
comp=E,17nm,1.1s,mb5.0,baz=67,slow=6.4,SNR=6.9
ABPO Ambohimpanom 54.90 245 *e*P **P** **14 36 13.0 -3.8**
ABPO pmax pmax
comp=Z,79nm,1.6s,mb5.5
ABPO MLR MLR
comp=Z,4μm,21.0s,MS5.5
ABPO Ambohimpanom 54.90 245 *e*P **P** **14 36 13.0 -3.7**
comp=Z,79nm,1.6s,mb5.5
ABPO LR LR
comp=Z,4μm,21.0s,MS5.5
DHBB Dhamar BB 55.46 286⇑ *e*P **P** **14 36 22.2 +1.3**
DHBB AMb AMB 14 36 23.4
comp=Z,261nm,1.4s,mb6.1
QRN Al-Qurain 55.62 304 *e*P **P** **14 36 20.8 -1.1**
QRN AMb AMB 14 36 25.0
comp=Z,346nm,1.9s,mb6.1
KBD Kabd 55.95 304 *e*P **P** **14 36 23.7 -0.5**
KBD AMb AMB 14 36 34.5
comp=Z,190nm,1.5s,mb5.9
RDF Al-Radifah 55.98 304 *e*P **P** **14 36 23.9 -0.6**
RDF AMb AMB 14 36 34.8
comp=Z,314nm,1.1s,mb6.2
UMR Umm Al-Rimmam 56.06 305 *e*P **P** **14 36 23.9 -1.1**
UMR AMb AMB 14 36 27.3
comp=Z,320nm,1.1s,mb6.3
ERM Erimo 56.34 39 PFAKE 14 36 40.0 +13
ERM LR LR
comp=Z,9μm,20.0s,MS5.8
NAY Al-Naaiem 56.34 304 *e*P **P** **14 36 26.1 -0.9**
NAY AMb AMB 14 36 37.2
comp=Z,123nm,1.1s,mb5.8
BVAR Borovoye Array 56.43 340 P **P** **14 36 25.6 -1.6**
comp=Z,22nm,0.7s,mb5.3,baz=142,slow=7.4,SNR=122
BVAR LR LR 15 04 48.1
comp=Z,8μm,18.4s,MS5.8,baz=147,slow=40
MIB Mutribah 56.45 305 *e*P **P** **14 36 27.0 -0.8**
MIB AMb AMB 14 36 30.7
comp=Z,499nm,1.2s,mb6.4
BRVK Borovoye 56.49 340 P **P** **14 36 27.6 -0.1**
comp=Z,336nm,0.9s,mb6.4,SNR=21
BRVK Borovoye 56.49 340*c* *i*P **P** **14 36 26.6 -1.1**
BRVK pmax pmax
comp=Z,96nm,1.7s,mb5.5
BRVK MLR MLR
comp=Z,8μm,18.0s,MS5.8
BRVK Borovoye 56.49 340 *e*P **P** **14 36 25.5 -2.1**
comp=Z,47nm,0.8s,mb5.6
BRVK LR LR
comp=Z,8μm,20.0s,MS5.8
BRVK Borovoye 56.49 340 P **P** **14 36 26.5 -1.1**
SNR=32
BRVK P 14 36 26.5
SNR=32
ATD Arta Tunnel 56.59 283 P **P** **14 36 29.7 +0.7**
comp=Z,32nm,1.1s,mb5.3,baz=78,slow=18,SNR=16
EIDS Eidsvold 57.04 122 *e*P **P** **14 36 30.4 -1.7**
comp=Z,36nm,0.9s,mb5.4
ASAJ Asahikawa 57.18 36 LR LR 15 00 33.5
comp=Z,9μm,19.8s,MS5.8,baz=94,slow=36
BOD Bodaibo 57.22 9 *e*P **P** **14 36 32.2 -0.5**
BOD pmax pmax
comp=Z,52nm,1.6s,mb5.3
ABKAR Akbulak array 57.99 331 *e*P **P** **14 36 36.7 -1.6**
comp=Z,90nm,0.9s,mb5.8
TOO Toolangi 58.01 137 *e*P **P** **14 36 35.6 -3.1**
CLNS Chul'man 58.75 16 *e*P **P** **14 36 43.4 -0.1**
CLNS *e**PP pP 14 36 52.3 +4.0
CLNS *e* 14 37 33.0
CLNS *e* 14 38 50.4
CLNS *e*PPP 14 40 11.2
CLNS *e*S **S** **14 44 46.4 -1.5**
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS pmax pmax
comp=Z,14nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS pmax pmax
comp=N,13nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=Z,12nm,1.3s,mb4.8
CLNS smax
comp=N,559nm,10.2s
CLNS smax
comp=E,910nm,14.3s
CLNS MLR MLR

comp=E,7μm,14.0s,MS6.2
CLNS MLR MLR
comp=Z,14μm,15.0s,MS6.2
CLNS MLR MLR
comp=N,12μm,15.0s,MS6.2
YSS Yuzh-Sakhalins 58.92 34⇑ *e*P **P** **14 36 43.0 -1.9**
YSS *e**SP sP 14 36 50.0 -1.4
YSS *e*S **S** **14 44 45.0 -5.5**
YSS *e*SS SS 14 48 44.0 -0.3
YSS *e*SSS 14 51 04.0
YSS pmax pmax
comp=Z,100nm,1.0s,mb5.8
YSS MLR MLR
comp=N,6μm,15.0s,MS6.0
YSS MLR MLR
comp=Z,10μm,15.0s,MS6.0
YSS MLR MLR
comp=E,6μm,14.0s,MS6.0
YSS Yuzh-Sakhalins 58.92 34 *e*P **P** **14 36 43.7 -1.1**
comp=E,106nm,0.9s,mb5.9
YSS LR LR
comp=Z,2μm,19.0s,MS5.3
ARMA Armidale 59.33 127 *e*P **P** **14 36 46.9 -1.1**
ARMA *e*S **S** **14 44 56.0 -0.3**
ARMA Armidale 59.33 127 *e*P **P** **14 36 47.6 -0.4**
comp=Z,92nm,1.3s,mb5.7
CAN Canberra 59.38 133 *e*P **P** **14 36 46.9 -1.4**
CAN pmax pmax
comp=Z,65nm,1.1s,mb5.6
CAN MLR MLR
comp=Z,17μm,22.0s,MS6.1
CAN Canberra 59.38 133 *e*P **P** **14 36 46.9 -1.4**
comp=Z,65nm,1.1s,mb5.6
CAN LR LR
comp=Z,17μm,22.0s,MS6.1
CNB Canberra Magne 59.65 133 *e*P **P** **14 36 48.6 -1.5**
AKTK Aktyubinsk 59.70 331 P **P** **14 36 49.4 -0.8**
AKTK LR LR 15 06 55.5
AKTO Aktyubinsk 59.70 331 P **P** **14 36 49.4 -0.8**
comp=Z,45nm,1.0s,mb5.4,baz=132,slow=6.9,SNR=93
AKTO LR LR 15 06 55.5
comp=Z,7μm,20.9s,MS5.8,baz=338,slow=40
BHD Baghdad 59.99 308 *e*P **P** **14 36 48.0 -4.6**
BHD *e*S **S** **14 45 02.0 -2.8**
WNDE Wendo Genet 60.44 277 *e*P **P** **14 36 58.2 +2.3**
MAK Makhachkala 61.57 319 *e*P **P** **14 37 05.2 +2.1**
MAK *e* 14 37 43.1
MAK *e* 14 39 16.7
MAK *e*PPP 14 40 45.9
MAK *e*S **S** **14 45 21.8 -2.9**
MAK *e* 14 46 55.6
MAK *e*SSS 14 52 04.1
MAK pmax pmax
comp=N,319nm,1.8s
MAK pmax pmax
comp=Z,273nm,1.6s,mb6.1
MAK pmax pmax
comp=E,126nm,0.8s
MAK pmax pmax
comp=Z,1μm,3.4s
MAK smax
comp=Z,588nm,2.0s
MAK smax
comp=E,3μm,7.7s
MAK smax
comp=N,6μm,10.6s
MAK MLR MLR
comp=N,931nm,15.0s,MS5.6
MAK MLR MLR
comp=E,3μm,15.0s,MS5.6
MAK MLR MLR
comp=Z,5μm,19.0s,MS5.7
KMBO Kilima Mbogo 61.86 268 P **P** **14 37 06.8 +1.2**
comp=Z,9.5nm,0.9s,mb4.9,baz=179,slow=22,SNR=16
KMBO LR LR 14 59 16.3
comp=Z,6μm,21.3s,MS5.7,baz=91,slow=32
KMBO Kilima Mbogo 61.86 268 *e*P **P** **14 37 07.4 +1.8**
KMBO pmax pmax
comp=Z,170nm,1.9s
KMBO MLR MLR
comp=Z,6μm,21.0s
KMBO Kilima Mbogo 61.86 268 *e*P **P** **14 37 07.4 +1.8**
comp=Z,170nm,1.9s,mb5.8
KMBO LR LR
comp=Z,6μm,21.0s,MS5.8
KMBO Kilima Mbogo 61.86 268 P **P** **14 37 08.6 +3.0**
SNR=12
KMBO P 14 37 08.6
SNR=12
CUKT Cukurca 61.97 312 *e*P **P** **14 37 04.5 -1.4**
HAKT HAKKARI 62.01 312 *i* P **P** **14 37 05.3 -0.8**
TAU Tasmania Unive 62.02 142 PFAKE 14 37 20.0 +14
TAU LR LR
comp=Z,14μm,20.0s,MS6.1
MSL Mosul 62.05 311 *e*P **P** **14 37 10.0 +3.6**
MSL *e*S **S** **14 45 31.0 +0.1**
GNI Garni 62.25 315 LR LR 15 08 34.0
comp=Z,3μm,20.2s,MS5.5,baz=92,slow=40
GNI Garni 62.25 315*c* *i*P **P** **14 37 07.6 -0.1**
GNI pmax pmax
comp=Z,172nm,1.7s
GNI MLR MLR
comp=Z,7μm,23.0s
GNI Garni 62.25 315 *e*P **P** **14 37 08.4 +0.7**
comp=Z,124nm,1.0s,mb6.0
GNI LR LR
comp=Z,4μm,19.0s,MS5.5
GNI Garni 62.25 315 P **P** **14 37 07.8 +0.1**
SNR=35
GNI P 14 37 07.8
SNR=35
CLDR Caldiran 62.45 314 *e*P **P** **14 37 08.2 -0.9**
DYDN Diyadin 62.76 314 *i* P **P** **14 37 11.3 +0.1**
MTA Mtatsminda 62.84 317 P **P** **14 37 15.7 +4.0**
TBLG Delisi 62.89 317 P **P** **14 37 11.4 -0.5**
SVE Sverdlovsk 62.95 337 *e*P **P** **14 37 11.3 -0.7**
SVE *e* 14 37 55.4
SVE *e* 14 39 26.2
SVE *e*S **S** **14 45 36.1 -5.3**
SVE *e*SS SS 14 49 38.5 -8.5
SVE pmax pmax
comp=Z,168nm,1.1s,mb6.1
SVE MLR MLR
comp=Z,15μm,24.0s,MS6.1
AGRB Hanur-Agry 63.27 314 *e*P **P** **14 37 14.8 +0.2**
DIGO Kars 63.32 315 *i* P **P** **14 37 13.7 -1.1**
GOR Gori 63.42 317 P **P** **14 37 20.8 +5.3**
ARU Arti 63.48 336 P **P** **14 37 14.0 -1.6**
comp=Z,550nm,1.1s,mb6.6,SNR=14
ARU Arti 63.48 336*d* *i*P **P** **14 37 15.2 -0.4**
ARU *e* 14 37 49.1
ARU *e* 14 39 39.9
ARU S **S** **14 45 49.2 +1.0**
ARU 14 47 05.5
ARU SS SS 14 49 52.5 -2.9
ARU pmax pmax
comp=Z,136nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,16μm,23.0s,MS6.1
ARU Arti 63.48 336 *e*P **P** **14 37 14.7 -0.9**
comp=Z,106nm,1.0s,mb5.9
ARU LR LR
comp=Z,14μm,22.0s,MS6.1
KEH Kehvi 63.67 317 P PcP 14 37 52.5 -0.8
ZEI Tsey 63.88 318 *e*P **P** **14 37 18.5 0.0**
ZEI *e* 14 39 39.8
ZEI *e*PPP 14 41 09.8
ZEI *e*S **S** **14 45 51.0 -2.7**
ZEI *e*SS SS 14 49 59.4 -2.8
ZEI pmax pmax
comp=Z,93nm,1.0s,mb5.8
ONI Oni 64.11 317 P **P** **14 37 17.0 -3.0**
HOMI Horasan 64.22 314 *i* P **P** **14 37 20.8 0.0**
YAK Yakutsk 64.46 15 *e*P **P** **14 37 20.5 -1.4**
YAK *e**PP pP 14 37 27.2 +0.5
YAK *e* 14 37 50.8
YAK *e* 14 39 40.1
YAK *e*S **S** **14 45 57.7 -2.4**
YAK *e**SS sS 14 46 09.0 +1.0
YAK *e* 14 47 09.7
YAK *e*SS SS 14 50 11.2 +0.8
YAK pmax pmax
comp=N,21nm,1.2s
YAK pmax pmax
comp=E,24nm,1.2s

YAK				pmax	pmax	
	comp=Z,54nm,1.3s,mb5.4					
YAK				pmax	pmax	
	comp=Z,126nm,4.4s					
YAK				smax		
	comp=E,2μm,10.1s					
YAK				smax		
	comp=N,1μm,7.5s					
YAK				MLR	MLR	
	comp=E,13μm,20.0s					
YAK				MLR	MLR	
	comp=Z,18μm,14.0s					
YAK				MLR	MLR	
	comp=N,10μm,13.0s					
YAK	**Yakutsk**	**64.46**	**15**	*e*P	**P**	**14 37 20.0 -1.9**
	comp=N,54nm,0.8s,mb5.6					
YAK				LR	LR	
	comp=Z,21μm,19.0s,MS6.3					
ERZM	**Erzurum**	**64.56**	**314**	*i* P	**P**	**14 37 25.2 +2.1**
EZM	**Erzurum**	**64.56**	**314**	*e*P	**P**	**14 37 24.6 +1.6**
ARTV	**Artvin**	**64.62**	**315**	*i* P	**P**	**14 37 22.9 -0.6**
DDEM	**Demirkent**	**64.64**	**315**	*i* P	**P**	**14 37 22.9 -0.7**
DIYA	**Diyarbakir**	**64.80**	**312**	*i* P	**P**	**14 37 24.6 -0.1**
DBOC	**Borcka**	**64.86**	**316**	*i* P	**P**	**14 37 24.2 -0.8**
BCA	**Borcka**	**64.93**	**316**	*e*P	**P**	**14 37 24.4 -1.0**
KIV	**Kislovodsk**	**65.17**	**319**	P	**P**	**14 37 27.4 +0.5**
	comp=Z,672nm,1.0s,mb6.6,SNR=22					
KIV	**Kislovodsk**	**65.17**	**319***c*	*i* P	**P**	**14 37 26.3 -0.6**
KIV				*e*		14 37 57.0
KIV				*e*		14 39 50.7
KIV				*e*PPP		14 41 24.0
KIV				*e*S	S	14 46 08.2 -1.3
KIV				pmax	pmax	
	comp=Z,128nm,1.0s,mb5.9					
KIV				pmax	pmax	
	comp=Z,534nm,7.8s					
KIV				MLR	MLR	
	comp=Z,3μm,18.0s,MS5.5					
KIV	**Kislovodsk**	**65.17**	**319**	*e*P	**P**	**14 37 25.2 -1.7**
	comp=Z,129nm,1.0s,mb5.9					
KIV				LR	LR	
	comp=Z,4μm,20.0s,MS5.6					
KIV	**Kislovodsk**	**65.17**	**319**	P	**P**	**14 37 26.4 -0.5**
	SNR=55					
KIV				P		14 37 26.4
	SNR=55					
KOPT	**Kop Dagi**	**65.22**	**314**	*i* P	**P**	**14 37 26.2 -1.2**
URFA	**Urfa**	**65.63**	**311**	*e*P	**P**	**14 37 29.8 -0.3**
PTK	**Pertek**	**65.66**	**312**	*e*P	**P**	**14 37 29.6 -0.6**
ASF	**Jabal al Asfar**	**65.71**	**305**	LR	LR	15 10 42.9
	comp=Z,5μm,18.5s,MS5.8,baz=100,slow=40					
EZC	**Erzincan**	**65.97**	**313**	*e*P	**P**	**14 37 32.2 +0.1**
ATAB	**Bozova**	**66.04**	**311**	*i* P	**P**	**14 37 32.8 +0.1**
GUMT	**Gumushane**	**66.11**	**314**	*e*P	**P**	**14 37 33.4 +0.3**
KELT	**Kelkit**	**66.17**	**314**	*i* P	**P**	**14 37 33.2 -0.2**
SOKR	**Solikamsk**	**66.32**	**338***c*	*i* P	**P**	**14 37 34.2 +0.2**
SOKR						14 40 04.4
SOKR				S	S	14 46 21.4 -1.6
SOKR				SS	SS	14 50 38.6 -0.9
SOKR				pmax	pmax	
	comp=Z,110nm,1.1s,mb5.8					
SOKR				MLR	MLR	
	comp=Z,16μm,26.0s,MS6.1					
KEMA	**Kemaliye**	**66.44**	**312**	*i* P	**P**	**14 37 35.2 0.0**
GZT	**Gaziantep**	**66.56**	**310**	*i* P	**P**	**14 37 36.3 +0.3**
AKCD	**Akcadag**	**66.57**	**311**	*i* P	**P**	**14 37 36.7 +0.6**
KUZU	**Kuzuini**	**66.77**	**310**	*i* P	**P**	**14 37 37.1 -0.3**
EIL	**Elat**	**66.78**	**302**	LR	LR	15 08 15.4
	comp=Z,10μm,18.8s,MS6.1,baz=292,slow=37					
GAZ	**Gaziantep**	**66.78**	**310**	*e*P	**P**	**14 37 37.6 +0.2**
DARE	**Darende-Malaty**	**66.85**	**312**	*e*P	**P**	**14 37 38.5 +0.7**
SOC	**Sochi**	**67.02**	**317***c*	*i* P	**P**	**14 37 37.4 -1.4**
SOC				*e**PP	pP	14 37 45.9 +2.3
SOC				*e*		14 38 01.3
SOC				*e*		14 40 06.9
SOC				pmax	pmax	
	comp=Z,126nm,1.0s,mb5.9					
SOC				pmax	pmax	
	comp=Z,274nm,4.0s					
KMRS	**Kahramanmaras**	**67.11**	**310**	*e*P	**P**	**14 37 39.3 -0.3**
MMAI	**Mount Meron Ar**	**67.14**	**305**	P	**P**	**14 37 39.5 -0.3**
	comp=Z,30nm,0.8s,mb5.3,baz=90,slow=7.5,SNR=23					
MMAI				LR	LR	15 07 54.2
	comp=Z,6μm,21.5s,MS5.8,baz=115,slow=37					
BHL	**Bhannes**	**67.15**	**306**	*e*P	**P**	**14 37 40.4 +0.5**
YAYL	**Yayladag**	**67.33**	**309**	*i* P	**P**	**14 37 41.0 +0.1**
ANDN	**Andirin**	**67.56**	**310**	*i* P	**P**	**14 37 42.4 0.0**
SARI	**SarD1z-Kayseri**	**67.60**	**311**	*e*P	**P**	**14 37 41.5 -1.1**
SVSK	**Karacayir**	**67.74**	**313**	*e*P	**P**	**14 37 43.2 -0.3**
PINB	**Pinarbasi**	**67.82**	**311**	*i* P	**P**	**14 37 45.5 +1.5**
KOZT	**Kozan**	**67.93**	**310**	*e*P	**P**	**14 37 44.7 0.0**
KRTS	**Karatas**	**68.04**	**309**	*e*P	**P**	**14 37 45.1 -0.3**
ERBA	**Erbaa**	**68.15**	**313**	*i* P	**P**	**14 37 45.4 -0.6**
MIR	**Mirnyy**	**68.21**	**183**⇑	*i*P	**P**	**14 37 45.8 0.0**
MIR				*e*S	S	14 46 47.0 +1.5
MIR				pmax	pmax	
	comp=Z,69nm,1.2s,mb5.6					
MIR				pmax	pmax	
	comp=Z,700nm,7.0s					
MIR				smax		
	comp=N,2μm,8.0s					
MIR				smax		
	comp=E,2μm,8.0s					
MIR				MLR	MLR	
	comp=N,4μm,18.0s,MS5.7					
MIR				MLR	MLR	
	comp=E,2μm,18.0s,MS5.7					
MIR				MLR	MLR	
	comp=Z,7μm,18.0s,MS5.9					
CASY	**Casey**	**68.30**	**175**	*e*P	**P**	**14 37 46.2 -0.2**
CASY	**Casey**	**68.30**	**175**	*e*P	**P**	**14 37 45.9 -0.5**
	comp=Z,101nm,1.3s,mb5.7					
CASY				LR	LR	
	comp=Z,7μm,19.0s,MS5.9					
WAKE	**Wake Island**	**68.33**	**70**	PFAKE		14 38 00.0 +12
WAKE				LR	LR	
	comp=Z,4μm,21.0s,MS5.6					
SKR	**Severo-Kuril's**	**68.40**	**35**	*e*P	**P**	**14 37 46.4 -1.0**
SKR				*e*		14 38 09.0
SKR				*e*PPP		14 41 58.0
SKR				*e*S	S	14 46 50.0 +1.7
SKR				*e*PS		14 47 14.0
SKR				*e*		14 47 26.0
SKR				*e*SS	SS	14 51 10.0 -2.0
SKR				pmax	pmax	
	comp=Z,220nm,1.0s,mb6.1					
SKR				pmax	pmax	
	comp=Z,2μm,4.0s					
SKR				smax		
	comp=N,3μm,8.0s					
SKR				smax		
	comp=E,3μm,8.0s					
SKR				MLR	MLR	
	comp=N,6μm,18.0s,MS6.0					
SKR				MLR	MLR	
	comp=E,6μm,18.0s,MS6.0					
SKR				MLR	MLR	
	comp=Z,9μm,18.0s,MS6.0					
KARA	**Karaisali**	**68.46**	**310**	*e*P	**P**	**14 37 47.8 -0.3**
GULE	**Gulek**	**68.68**	**310**	*i* P	**P**	**14 37 47.4 -2.1**
KVT	**Kavak**	**68.78**	**314**	*e*P	**P**	**14 37 49.6 -0.3**
VRHR	**Novokhopersk**	**68.78**	**325**	*e*P	**P**	**14 37 48.5 -1.3**
VRHR				*e**PP	pP	14 38 02.0 +7.4
VRHR				*e*S	S	14 46 47.6 -5.3
VRHR				pmax	pmax	
	comp=Z,250nm,1.2s,mb6.0					
VRHR				pmax	pmax	
	comp=N,60nm,1.0s					
VRHR				pmax	pmax	
	comp=E,150nm,1.0s					
VRHR				smax		
	comp=N,710nm,3.3s					
VRHR				smax		
	comp=Z,440nm,4.4s					
VRHR				smax		
	comp=E,640nm,3.8s					
VRHR				MLR	MLR	
	comp=Z,7μm,20.0s,MS5.9					
VRHR				MLR	MLR	
	comp=N,3μm,15.0s,MS5.8					
VRHR				MLR	MLR	
	comp=E,4μm,20.0s,MS5.8					
ANN	**Anapa**	**68.98**	**318**	*e*P	**P**	**14 37 44.8 -6.3**
ANN				*e**PP	pP	14 37 55.7 -0.3
ANN				*e*		14 38 10.5
ANN				*e*S	S	14 46 45.9 -10
ANN				pmax	pmax	
	comp=Z,836nm,9.7s					
ANN				pmax	pmax	
	comp=N,26nm,1.6s					
ANN				pmax	pmax	
	comp=E,15nm,0.8s					
ANN				pmax	pmax	
	comp=N,236nm,9.1s					
ANN				pmax	pmax	
	comp=E,195nm,9.1s					
ANN				pmax	pmax	
	comp=Z,798nm,9.1s					
DIKM	**Dikmen**	**69.51**	**314**	*e*P	**P**	**14 37 53.6 -0.9**
CTKT	**Corum**	**69.56**	**313**	*i* P	**P**	**14 37 54.1 -0.7**
CDAG	**Cicekdag**	**69.60**	**312**	*i* P	**P**	**14 37 52.2 -2.8**
DZM	**Mont Dzumac**	**69.78**	**114**	*e*P	**P**	**14 37 58.2 +1.7**
	comp=Z,208nm,1.8s,mb5.8					
DZM				*e*S	S	14 47 08.5 +2.8
	comp=Z,3μm,27.8s					
DZM				*e*SS	SS	14 51 36.4 +1.8
	comp=Z,5μm,27.4s					
DZM				*e*LR	LR	14 59 07.1
	comp=Z,22μm,24.2s					
DZM	**Mont Dzumac**	**69.78**	**114**	*e*P	**P**	**14 37 56.5 -0.1**
	comp=Z,313nm,1.9s,mb5.9					
VORD	**Divnogorie**	**70.07**	**324**	*e*P	**P**	**14 37 55.3 -2.4**
VORD				*e**PP	pP	14 38 09.5 +6.9
VORD				*e*S	S	14 47 02.4 -5.7
VORD				*e*SS	SS	14 51 26.7 -11
VORD				pmax	pmax	
	comp=Z,90nm,1.1s,mb5.6					
VORD				pmax	pmax	
	comp=N,40nm,0.7s					
VORD				pmax	pmax	
	comp=E,70nm,1.0s					
VORD				smax		
	comp=N,2μm,11.4s					
VORD				smax		
	comp=Z,400nm,10.8s					
VORD				smax		
	comp=E,500nm,9.8s					
VORD				MLR	MLR	
	comp=Z,4μm,20.0s,MS5.7					
VORD				MLR	MLR	
	comp=N,2μm,26.0s					
VORD				MLR	MLR	
	comp=E,4μm,21.0s					
BR131	**Keskin Array S**	**70.17**	**312**	*e*P	**P**	**14 37 57.0 -1.6**
	comp=E,62nm,1.1s,mb5.5					
BR131				LR	LR	
	comp=Z,5μm,22.0s,MS5.7					
BRTR	**Keskin Array B**	**70.17**	**312**	P	**P**	**14 37 57.2 -1.3**
	comp=Z,28nm,0.9s,mb5.2,baz=129,slow=6.2,SNR=112					
BRTR				LR	LR	15 15 02.6
	comp=Z,2μm,18.7s,MS5.5,baz=98,slow=41					
VSR	**Storozhevoye**	**70.25**	**325**	*e*P	**P**	**14 37 56.4 -2.4**
VSR				*e**PP	pP	14 38 10.2 +6.6
VSR				*e*S	S	14 47 04.4 -5.7
VSR				pmax	pmax	
	comp=Z,110nm,0.8s,mb5.8					
VSR				pmax	pmax	
	comp=N,70nm,1.2s					
VSR				pmax	pmax	
	comp=E,170nm,1.2s					
VSR				smax		
	comp=E,500nm,4.2s					
VSR				smax		
	comp=Z,220nm,3.9s					
VSR				smax		
	comp=N,480nm,4.0s					
VSR				MLR	MLR	
	comp=Z,6μm,19.0s,MS5.9					
VSR				MLR	MLR	
	comp=N,2μm,20.0s,MS5.7					
VSR				MLR	MLR	
	comp=E,4μm,21.0s,MS5.7					
PEA0B	**Petropavlovsk-**	**70.32**	**33**	*e*P	**P**	**14 37 58.7 -0.5**
PETK	**Petropavlovsk-**	**70.32**	**33**	P	**P**	**14 37 59.1 -0.1**
	comp=E,9.5nm,0.9s,mb4.7,baz=174,slow=1.5,SNR=12					
PETK				LR	LR	15 10 01.8
	comp=E,4μm,20.8s,MS5.7,baz=236,slow=37					
GAZI	**Gazipasa**	**70.35**	**308**	*i* P	**P**	**14 37 57.2 -2.6**
VOR	**Voronezh**	**70.43**	**325**⇓	*i*P	**P**	**14 37 59.0 -0.9**
VOR				pmax	pmax	
	comp=Z,380nm,2.0s,mb6.0					
ILGA	**Ilgaz**	**70.46**	**313**	*i* P	**P**	**14 38 00.0 -0.3**
BBAL	**Bala**	**70.51**	**312**	*i* P	**P**	**14 37 59.2 -1.4**
ELDT	**Eldivan**	**70.53**	**313**	*i* P	**P**	**14 38 00.0 -0.7**
PET	**Petropavlovsk**	**70.81**	**33**	*e*P	**P**	**14 38 02.2 0.0**
PET				*e*S	S	14 47 15.1 -1.5
PET				*e*PS		14 47 44.1
PET				pmax	pmax	
	comp=Z,300nm,3.0s					
PET				pmax	pmax	
	comp=Z,95nm,1.1s,mb5.6					
PET				smax		
	comp=E,1μm,15.1s					
PET				smax		
	comp=E,1μm,9.1s					
PET				smax		
	comp=N,1μm,10.2s					
PET				smax		
	comp=N,2μm,9.8s					
PET				MLR	MLR	
	comp=Z,7μm,17.0s,MS6.0					
PET				MLR	MLR	
	comp=Z,7μm,16.0s					
PET	**Petropavlovsk**	**70.81**	**33**	*e*P	**P**	**14 38 02.3 +0.1**
	comp=Z,80nm,1.0s,mb5.6					
PET				LR	LR	
	comp=Z,6μm,20.0s,MS5.8					
BALT	**Daday**	**70.83**	**314**	*i* P	**P**	**14 38 01.8 -0.8**
KDHN	**Kadinhani**	**71.02**	**310**	*i* P	**P**	**14 38 02.1 -1.7**
SIM	**Simferopol'**	**71.27**	**317***d*	*i*P	**P**	**14 38 06.4 +1.2**
SIM				*e*		14 40 41.0
SIM				*i* S	S	14 47 21.2 -1.1
SIM				*e*PS		14 48 03.0
SIM				*e*SS	SS	14 51 57.0 +0.5
SIM				pmax	pmax	
	comp=Z,77nm,0.8s,mb5.7					
SIM				MLR	MLR	
	comp=Z,6μm,24.8s,MS5.8					
BOLV	**Bolvadin**	**71.96**	**310**	*i* P	**P**	**14 38 08.7 -0.8**
LSZ	**Lusaka**	**72.02**	**253**	*e*P	**P**	**14 38 11.3 +1.0**
LSZ				pmax	pmax	
	comp=Z,61nm,1.3s,mb5.4					
LSZ				MLR	MLR	
	comp=Z,6μm,21.0s,MS5.8					
LSZ	**Lusaka**	**72.02**	**253**	*e*P	**P**	**14 38 11.3 +1.0**
	comp=Z,61nm,1.3s,mb5.4					
LSZ				LR	LR	
	comp=Z,6μm,21.0s,MS5.8					
LSZ	**Lusaka**	**72.02**	**253**	P	**P**	**14 38 12.3 +2.0**
	SNR=13					
LSZ				P		14 38 12.3
	SNR=13					
KORT	**Korkueli**	**72.06**	**308**	*i* P	**P**	**14 38 08.7 -1.4**
ISP	**Isparta**	**72.09**	**309**	*e*P	**P**	**14 38 09.9 -0.4**
ISP				pmax	pmax	
	comp=Z,36nm,0.8s,mb5.3					
ISP				MLR	MLR	
	comp=Z,5μm,20.0s,MS5.8					
ISP	**Isparta**	**72.09**	**309**	*e*P	**P**	**14 38 09.9 -0.4**
	comp=Z,36nm,0.8s,mb5.3					
ISP				LR	LR	
	comp=Z,5μm,20.0s,MS5.8					
ISP	**Isparta**	**72.09**	**309**	P	**P**	**14 38 08.7 -1.6**
ESKT	**Eskisehir**	**72.21**	**311**	*i* P	**P**	**14 38 10.4 -0.6**
TIXI	**Tiksi**	**72.41**	**10**	*e*P	**P**	**14 38 10.1 -1.4**
TIXI				*e*S	S	14 47 31.6 -2.8
TIXI				*e*		14 48 14.3
TIXI				*e*SS	SS	14 52 13.1 +0.2
TIXI				pmax	pmax	
	comp=Z,170nm,1.2s,mb5.8					
TIXI				pmax	pmax	
	comp=N,54nm,1.8s					
TIXI				pmax	pmax	
	comp=E,40nm,1.7s					
TIXI				pmax	pmax	
	comp=Z,289nm,8.1s					
TIXI				smax		
	comp=N,3μm,10.9s					
TIXI				smax		
	comp=E,2μm,9.2s					
TIXI				MLR	MLR	
	comp=N,17μm,19.0s,MS6.4					
TIXI				MLR	MLR	
	comp=E,4μm,14.0s,MS6.4					
TIXI	**Tiksi**	**72.41**	**10**	*e*P	**P**	**14 38 10.0 -1.5**
	comp=E,200nm,1.3s,mb5.9					
TIXI				LR	LR	
	comp=Z,8μm,20.0s,MS6.0					
AKAS	**Kas**	**72.49**	**307**	*i* P	**P**	**14 38 10.4 -2.3**
BORA	**Eskisehir**	**72.59**	**311**	*i* P	**P**	**14 38 12.0 -1.2**
SEY	**Seymchan**	**72.61**	**23***c*	*i* P	**P**	**14 38 12.5 -0.3**
GOLH	**Golhisar**	**72.72**	**308**	*i* P	**P**	**14 38 10.0 -4.0**
MOS	**Moscow**	**72.88**	**329**	*e*P	**P**	**14 38 09.0 -5.6**
MOS				*e*		14 38 27.2
MOS				*e*S	S	14 47 32.2 -8.2
MOS				pmax	pmax	
	comp=Z,312nm,1.4s,mb6.0					
MOS				pmax	pmax	
	comp=Z,600nm,1.7s,mb6.2					
MOS				smax		
	comp=E,900nm,3.1s					
MOS				MLR	MLR	
	comp=Z,9μm,21.0s,MS6.0					
KHAL	**Karahalli**	**73.00**	**310**	*i* P	**P**	**14 38 14.2 -1.5**
GDZ	**Gediz**	**73.16**	**310**	*i* P	**P**	**14 38 15.7 -0.9**
OBN	**Obninsk**	**73.20**	**328**	P	**P**	**14 38 16.0 -0.5**
	comp=Z,864nm,1.2s,mb6.6,SNR=12					
OBN	**Obninsk**	**73.20**	**328**⇓	*e*P	**P**	**14 38 15.6 -0.9**
OBN				*e*		14 40 59.3
OBN				*i* S	S	14 47 41.2 -2.8
OBN				pmax	pmax	
	comp=Z,374nm,1.7s,mb6.0					
OBN				MLR	MLR	
	comp=Z,5μm,20.0s,MS5.8					
OBN	**Obninsk**	**73.20**	**328**	*e*P	**P**	**14 38 16.6 +0.2**
	comp=Z,341nm,1.4s,mb6.1					
OBN				LR	LR	
	comp=Z,6μm,22.0s,MS5.8					
DNZL	**Cakiroluk**	**73.21**	**309**	*i* P	**P**	**14 38 15.1 -1.8**
TURN	**Turunc**	**73.41**	**308**	*i* P	**P**	**14 38 17.5 -0.6**
MAW	**Mawson**	**73.60**	**194**	*e*P	**P**	**14 38 18.0 -0.6**
	comp=Z,18nm,1.0s,mb5.0					
MAW	**Mawson**	**73.60**	**194**	P	**P**	**14 38 18.4 -0.2**
	comp=Z,21nm,0.9s,mb5.0,baz=20,slow=8.6,SNR=16					
MAW				LR	LR	15 05 26.1
	comp=Z,5μm,20.0s,MS5.8,baz=31,slow=32					
MAW	**Mawson**	**73.60**	**194**	*e*P	**P**	**14 38 18.8 +0.2**
MAW				pmax	pmax	
	comp=Z,9.0nm,1.1s					
MAW	**Mawson**	**73.60**	**194**	*e*P	**P**	**14 38 18.8 +0.2**
	comp=Z,8.7nm,1.1s,mb4.6					
DEMI	**Demirci**	**73.73**	**310**	*i* P	**P**	**14 38 19.3 -0.7**
TARA	**Tarawa**	**73.84**	**89**	PFAKE		14 38 30.0 +8.9
TARA				LR	LR	
	comp=Z,3μm,21.0s,MS5.6					
DURS	**Dursunbey**	**74.03**	**311**	*i* P	**P**	**14 38 16.2 -5.5**
DRV	**Dumont d'Urvil**	**74.09**	**164**	S	S	14 47 55.0 +1.4
DRV				L		14 57 00.0
AYDN	**Tasoluk**	**74.12**	**309**	*i* P	**P**	**14 38 21.9 -0.4**
KLMR	**Klimovskoe**	**74.13**	**334***d*	*i*P	**P**	**14 38 21.3 -0.5**
KLMR				*e*		14 41 08.1
KLMR				*i* S	S	14 47 50.3 -4.0
KLMR				*e*SS	SS	14 52 42.0 +2.5
KLMR				pmax	pmax	
	comp=Z,190nm,1.5s,mb5.8					
KLMR				pmax	pmax	
	comp=Z,391nm,9.3s					
KLMR				MLR	MLR	
	comp=Z,6μm,20.0s,MS5.9					
AKHS	**Akhisar**	**74.39**	**310**	*i* P	**P**	**14 38 23.2 -0.6**
GCAM	**G?zelcaml?**	**74.63**	**309**	*i* P	**P**	**14 38 24.5 -0.8**
BALY	**Balya**	**74.70**	**311**	*i* P	**P**	**14 38 23.0 -2.6**
BLCB	**Balcova**	**74.90**	**309**	P	**P**	**14 38 28.1 +1.3**
SMG	**Samos**	**74.94**	**309**	*e*P	**P**	**14 38 24.2 -2.9**
TLCR		**74.96**	**316**	⇓P	**P**	**14 38 28.1 +1.1**
TLCR		**74.96**	**316**⇓	*i*P	**P**	**14 38 28.1 +1.1**
ZKR	**Zakros**	**75.02**	**306**	*e*P	**P**	**14 38 28.3 +0.7**
PSN	**Preselentsi**	**75.07**	**315**	*i* P	**P**	**14 38 26.7 -1.0**
AYVA	**Ayvalik**	**75.33**	**310**	*i* P	**P**	**14 38 29.7 +0.4**
KIS	**Kishinev**	**75.37**	**318**⇑	*i*P	**P**	**14 38 26.0 -3.3**
	comp=Z,400nm,2.0s,mb6.0					
KIS	**Kishinev**	**75.37**	**318**	*i* PcP	PcP	14 38 38.0 -4.5
KIS	**Kishinev**	**75.37**	**318**	*e*PP	PP	14 41 10.0 -8.3
KIS	**Kishinev**	**75.37**	**318**	*e*PPP		14 43 12.0
KIS				*i* S	S	14 48 02.0 -6.7
	comp=Z,2μm,12.0s					
KIS	**Kishinev**	**75.37**	**318**⇑	*i*P	**P**	**14 38 26.0 -3.3**
KIS				*i*		14 38 38.0
KIS				*e*PPP		14 43 12.0
KIS				*i* S	S	14 48 02.0 -6.7
KIS				*i* PS		14 48 32.0
KIS				pmax	pmax	
	comp=Z,400nm,2.0s,mb6.0					
KIS				pmax	pmax	
	comp=Z,300nm,2.0s,mb5.9					
KIS				smax		
	comp=N,2μm,12.0s					
KIS				smax		
	comp=E,2μm,12.0s					
KIS				MLR	MLR	
	comp=Z,3μm,20.0s,MS5.7					
KIS				MLR	MLR	
	comp=N,3μm,22.0s,MS5.7					
KIS				MLR	MLR	
	comp=E,3μm,20.0s,MS5.7					
KIS				MLR	MLR	
	comp=Z,4μm,22.0s					
XRY	**Khrisi**	**75.41**	**306**	*e*P	**P**	**14 38 30.4 +0.6**
HARR	**Harsova**	**75.46**	**316**⇑	P	**P**	**14 38 30.7 +0.8**
HARR	**Harsova**	**75.46**	**316**⇑	*i*P	**P**	**14 38 30.7 +0.8**
PRD	**Provadia**	**75.53**	**314**	*i* P	**P**	**14 38 29.3 -1.0**
NPS	**Neapolis**	**75.53**	**306**	*e*P	**P**	**14 38 30.3 -0.2**
LAST	**Lasithi**	**75.63**	**306**	*e*P	**P**	**14 38 31.5 +0.4**
LEOM	**Leova**	**75.63**	**318**⇑	P	**P**	**14 38 32.0 +1.1**
LEOM	**Leova**	**75.63**	**318**⇑	*i*P	**P**	**14 38 32.0 +1.1**
PRK	**Paraskevi**	**75.64**	**310**	*e*P	**P**	**14 38 30.4 -0.6**
PRK	**Paraskevi**	**75.64**	**310**	P	**P**	**14 38 30.2 -0.8**
CHOS	**Chios island**	**75.66**	**309**	*e*P	**P**	**14 38 31.7 +0.5**
CHOS	**Chios island**	**75.66**	**309**	P	**P**	**14 38 29.9 -1.3**
LBTB	**Lobatse**	**75.76**	**244**	*e*P	**P**	**14 38 32.0 0.0**
LBTB				pmax	pmax	
	comp=Z,49nm,1.1s,mb5.3					
LBTB				MLR	MLR	
	comp=Z,2μm,19.0s,MS5.5					
LBTB	**Lobatse**	**75.76**	**244**	*e*P	**P**	**14 38 32.0 0.0**
	comp=Z,49nm,1.1s,mb5.3					
LBTB				LR	LR	
	comp=Z,2μm,19.0s,MS5.5					
BOZC	**Bozcaada**	**75.91**	**311**	*i* P	**P**	**14 38 25.0 -7.5**
JMB	**Yambol**	**75.98**	**313**	P	**P**	**14 38 32.9 0.0**
AKASG	**Malin Array Be**	**76.02**	**322**	P	**P**	**14 38 31.4 -1.6**
	comp=Z,32nm,0.9s,mb5.2,baz=89,slow=4.8,SNR=97					
AKASG				PP	PP	14 41 24.6 +1.0
	comp=Z,7.6nm,0.8s,baz=89,slow=6.3,SNR=7.0					
AKASG				LR	LR	15 16 23.6
	comp=Z,4μm,22.0s,MS5.7,baz=135,slow=39					
AKASG	**Malin Array Be**	**76.02**	**322**	P	**P**	**14 38 31.4 -1.6**
AKASG						14 41 24.6
AKBB	**Malin Array Si**	**76.02**	**322**	*e*P	**P**	**14 38 31.6 -1.4**
KIEV	**Kiev**	**76.03**	**322**	*e*P	**P**	**14 38 31.3 -1.7**
KIEV				pmax	pmax	
	comp=Z,79nm,1.1s,mb5.6					
KIEV				MLR	MLR	
	comp=Z,4μm,22.0s,MS5.7					
KIEV	**Kiev**	**76.03**	**322**	*e*P	**P**	**14 38 31.3 -1.7**
	comp=Z,78nm,1.1s,mb5.5					
KIEV				LR	LR	
	comp=Z,4μm,22.0s,MS5.7					
ALN	**Alexandroupoli**	**76.09**	**312**	*e*P	**P**	**14 38 33.1 -0.5**
ALN	**Alexandroupoli**	**76.09**	**312**	P	**P**	**14 38 32.5 -1.1**
SIVA	**Sivas**	**76.15**	**306**	*e*P	**P**	**14 38 34.5 +0.4**
RDO	**Rodhopi**	**76.51**	**312**	*e*P	**P**	**14 38 35.0 -1.0**
RDO	**Rodhopi**	**76.51**	**312**	P	**P**	**14 38 35.0 -1.0**
VRI	**Vrincioaia**	**76.54**	**317**	⇓P	**P**	**14 38 36.6 +0.6**
VRI	**Vrincioaia**	**76.54**	**317**⇓	*i*P	**P**	**14 38 36.6 +0.6**
LIA	**Limnos Island**	**76.57**	**311**	*e*P	**P**	**14 38 35.9 -0.5**
LIA	**Limnos Island**	**76.57**	**311**	P	**P**	**14 38 34.9 -1.5**
PLOR	**Plostina**	**76.59**	**317**	⇑P	**P**	**14 38 37.8 +1.5**
PLOR	**Plostina**	**76.59**	**317**⇑	*i*P	**P**	**14 38 37.8 +1.5**
SZH	**Strazhica**	**76.59**	**314**	*i* P	**P**	**14 38 35.7 -0.7**
BOSA	**Boshof**	**76.62**	**240**	P	**P**	**14 38 37.9 +1.0**
	comp=Z,12nm,0.7s,mb4.

BOSA pmax pmax
comp=Z,76nm,1.4s,mb5.4
BOSA MLR MLR
comp=Z,4μm,19.0s,MS5.8
BOSA Boshof 76.62 240 *e*P **P 14 38 36.1 -0.7**
comp=Z,76nm,1.4s,mb5.4
BOSA LR LR
comp=Z,4μm,19.0s,MS5.8
KDZ Kurdzhali 76.69 312 *i* P **P 14 38 35.9 -1.1**
VAM Vamos 76.70 306 *e*P **P 14 38 36.7 -0.5**
GVD Gavdhos 76.72 305 *e*P **P 14 38 38.3 +1.0**
GVD Gavdhos 76.72 305 *e*P **P 14 38 37.0 -0.2**
comp=Z,342nm,1.2s,mb6.2
KARN Karanos 76.92 306 *e*P **P 14 38 39.2 +0.8**
KARN Karanos 76.92 306 P **P 14 38 39.3 +0.9**
MLR Muntele Rosu 77.00 316 ⇓P **P 14 38 38.9 +0.3**
MLR Muntele Rosu 77.00 316 ⇓*i*P **P 14 38 38.9 +0.3**
RZN Rozhen 77.21 312 *i* P **P 14 38 39.2 -0.7**
KAVA Kavala 77.25 312 P **P 14 38 39.9 -0.3**
PLD Plovdiv 77.29 313 P **P 14 38 38.9 -1.4**
PTL Penteli 77.32 309 *e*P **P 14 38 38.5 -2.1**
VLY Voula,Athens 77.34 308 *e*P **P 14 38 38.8 -2.0**
OUR Ouranopolis 77.55 311 P **P 14 38 39.9 -1.9**
VOIR 77.61 316 ⇓P **P 14 38 42.5 +0.4**
VOIR 77.61 316 ⇓*i*P **P 14 38 42.5 +0.4**
PAIG Paliouri 77.72 310 P **P 14 38 43.7 +0.9**
KYTH Kithira 77.74 307 *e*P **P 14 38 42.1 -0.9**
PGB Panagyurishte 77.75 313 *i* P **P 14 38 41.6 -1.3**
MICGM Minsk 77.78 326⇓*e*P **P 14 38 39.0 -3.8**
NVR Nevrokopi 77.79 312 *e*P **P 14 38 43.4 +0.2**
MNK Minsk 77.80 326⇓*e*P **P 14 38 39.0 -3.9**
MNK *e* 14 39 00.0
MNK *e* 14 41 32.0
MNK *e*S S 14 48 30.0 -5.0
MNK *e*PS 14 49 22.0
MNK pmax pmax
comp=E,330nm,1.8s
MNK pmax pmax
comp=Z,710nm,2.0s,mb6.2
VLI Veliai 77.88 307 *e*P **P 14 38 42.4 -1.4**
BURAR Bucovina Array 77.90 318 ⇓P **P 14 38 44.1 +0.5**
BURAR Bucovina Array 77.90 318 ⇓*i*P **P 14 38 44.1 +0.5**
BUR08 Bucovina Ar. S 77.92 318 *e*P **P 14 38 43.9 +0.2**
MMB Musomiste 77.93 312 *i* P **P 14 38 42.6 -1.3**
SRS Serrai 77.96 312 P **P 14 38 42.4 -1.7**
PLG Polygyros 77.96 311 *e*P **P 14 38 43.8 -0.3**
PLG Polygyros 77.96 311 P **P 14 38 42.5 -1.6**
PUL Pulkovo 77.97 331*ce*P **P 14 38 44.3 +0.6**
PUL pmax pmax
comp=Z,156nm,0.4s,mb6.3
LTK Loutraki 78.02 308 *e*P **P 14 38 43.1 -1.4**
XOR Xorichti 78.02 310 P **P 14 38 41.8 -2.7**
LKR Lokris 78.07 309 *e*P **P 14 38 43.4 -1.4**
LKR Lokris 78.07 309 P **P 14 38 44.1 -0.7**
SOH Sokhos 78.09 311 *e*P **P 14 38 44.5 -0.4**
SOH Sokhos 78.09 311 P **P 14 38 43.2 -1.7**
VLX Vlachokerasia 78.40 308 *e*P **P 14 38 46.3 -0.3**
DSF Desfina 78.41 309 P **P 14 38 43.6 -3.1**
KKB Krupnik 78.44 312 *i* P **P 14 38 45.1 -1.7**
VTS Vitosha 78.46 313 P **P 14 38 45.8 -1.0**
VTS Vitosha 78.46 313 *i* P **P 14 38 45.9 -0.9**
NACGM Naroch 78.49 326 *e*P **P 14 38 43.0 -3.7**
GUR Goura 78.50 308 *e*P **P 14 38 46.6 -0.5**
GUR Goura 78.50 308 P **P 14 38 45.4 -1.7**
JOF Joensuu 78.51 334 *e*P **P 14 38 45.7 -1.0**
JOF pmax pmax
comp=Z,13nm,0.8s,mb4.9
JOF Joensuu 78.51 334 *e*p **P 14 38 45.7 -1.0**
comp=Z,13nm,0.8s,mb4.9
IDID Didziasalis 78.61 326 *e*P **P 14 38 47.5 +0.1**
AGG Agios Georgios 78.64 309 *e*P **P 14 38 45.1 -2.8**
LIT Litokhoron 78.65 310 *e*P **P 14 38 45.6 -2.4**
LIT Litokhoron 78.65 310 P **P 14 38 45.0 -3.0**
ITM Ithomi 78.73 307 *e*P **P 14 38 48.5 0.0**
VAY Valandovo 78.75 312 *e*P **P 14 38 48.1 -0.4**
VAY Valandovo 78.75 312 P **P 14 38 46.3 -2.2**
TRIZ Trizonia 78.76 309 P **P 14 38 46.4 -2.2**
PYL PYLOS 78.85 307 *e*P **P 14 38 48.6 -0.5**
IIGN Ignalina 78.91 326 *e*P **P 14 38 49.4 +0.3**
IZAR Zarasai 78.99 327 *e*P **P 14 38 49.6 +0.2**
ISAL Salakas 79.01 326 *e*P **P 14 38 49.8 +0.2**
LVZ Lovozero 79.03 340 PFAKE 14 39 00.0 +11
LVZ LR LR
comp=Z,12μm,22.0s,MS6.2
BMR Baia Mare 79.05 318 P **P 14 38 52.1 +2.1**
LVV L'vov 79.08 320 *i* P **P 14 38 50.2 +0.1**
LVV *e*S S 14 48 48.0 -0.9
KZN Kozani 79.22 311 *e*P **P 14 38 50.8 -0.3**
APA Apatity 79.34 339⇓*i*P **P 14 38 51.0 -0.1**
APA *e*S S 14 48 46.0 -5.0
APA *i* 14 49 13.0
APA *e*SSS 14 57 20.0
APA pmax pmax
comp=Z,92nm,1.4s,mb5.5
APA pmax pmax
comp=Z,700nm,8.6s
APA MLR MLR
comp=Z,12μm,23.0s,MS6.2
VSU Vasula 79.38 329*c i*P **P 14 38 50.0 -1.5**
VSU pmax pmax
comp=Z,131nm,2.0s,mb5.5
VSU MLR MLR
comp=Z,8μm,22.0s,MS6.0
DRGR 79.44 317 ⇑P **P 14 38 52.3 +0.2**
DRGR 79.44 317 ⇑*i*P **P 14 38 52.3 +0.2**
BIA Bitola 79.65 311 *e*P **P 14 38 52.9 -0.5**
SKO Skopje 79.67 312 *e*P **P 14 38 53.1 -0.4**
KRUS Krusevo 79.74 312 *e*P **P 14 38 53.1 -0.8**
TRPA Tarpa 79.76 319 ⇑*i*P **P 14 38 54.0 +0.1**
KWP Kalwaria Pacla 79.89 320 *e*P **P 14 38 55.4 +0.9**
comp=Z,300nm,1.5s,mb6.0
KWP *e*PcP PcP 14 38 59.8 -2.3
KWP *e*pP pP 14 39 03.2 +3.8
KWP *e*S S 14 48 56.0 -1.5
KWP *e*SKSac SKSac 14 49 05.8 -5.4
KWP LMZ 15 13 27.0
comp=Z,4μm,28.1s
KWP Kalwaria Pacla 79.89 320⇓*e*P **P 14 38 55.4 +0.9**
KWP *e* pP 14 38 59.8 +0.4
KWP *e**PP pP 14 39 03.2 +3.8
KWP *e*S S 14 48 56.0 -1.6
KWP *e* 14 49 05.8
KWP pmax pmax
comp=Z,300nm,1.5s,mb6.0
KWP MLR MLR
comp=Z,4μm,28.1s,MS5.6
KWP Kalwaria Pacla 79.89 320 *e*P **P 14 38 54.1 -0.4**
comp=Z,125nm,1.3s,mb5.7
KWP LR LR
comp=Z,3μm,19.0s,MS5.7
KWP Kalwaria Pacla 79.89 320⇓*i*P **P 14 38 55.3 +0.8**
UZH Uzhgorod 80.00 319 *e*P **P 14 38 55.0 -0.1**
UZH *i* S S 14 48 54.0 -4.8
BZS Buzias 80.02 316 ⇓P **P 14 38 56.0 +0.7**
BZS Buzias 80.02 316 ⇓*i*P **P 14 38 56.0 +0.7**
MSVF Nonsavu 80.03 108 PFAKE 14 39 10.0 +14
MSVF LR LR
comp=Z,5μm,20.0s,MS5.9
OHR Ohrid 80.05 311 *e*P **P 14 38 54.6 -1.0**
KOLS Kolonicke sedl 80.06 319 *e*P **P 14 38 55.9 +0.4**
KOLS pmax pmax
comp=Z,98nm,1.3s,mb5.6
KOLS Kolonicke sedl 80.06 319 *e*P **P 14 38 55.9 +0.4**
KOLS Kolonicke sedl 80.06 319 *e*S S 14 48 58.5 -0.9
BILL Bilibino 80.07 21⇑*e*P **P 14 38 53.9 -1.2**
BILL *i* S S 14 48 54.4 -4.3
BILL pmax pmax
comp=Z,51nm,2.5s,mb5.0
BILL Bilibino 80.07 21 *e*P **P 14 38 54.2 -0.9**
comp=Z,53nm,1.4s,mb5.3
BILL LR LR
comp=Z,8μm,19.0s,MS6.1
SNZO South Karori 80.36 132 PFAKE 14 39 10.0 +13
SNZO LR LR
comp=Z,14μm,21.0s,MS6.3
SUW Suwalki 80.36 325 *e*P **P 14 38 57.1 +0.1**
comp=Z,500nm,1.2s,mb6.3
SUW *e*PcP PcP 14 39 02.0 -2.0
SUW *e*S S 14 48 59.1 -3.2
SUW *e*SKSac SKSac 14 49 12.3 -2.0
SUW LMZ 15 14 06.9
comp=Z,5μm,27.6s
SUW Suwalki 80.36 325 *e*P **P 14 38 56.3 -0.6**
comp=Z,387nm,1.3s,mb6.2
FINES FINESS Array B 80.44 332 P **P 14 38 56.5 -0.7**
comp=Z,22nm,0.9s,mb5.1,baz=102,slow=6.6,SNR=43
FINES PKKPbc PKKPbc 14 57 42.5 +1.0
comp=Z,1.1nm,0.8s,baz=315,slow=0.3,SNR=6.0
FINES LR LR 15 20 13.4
comp=Z,8μm,20.6s,MS6.1,baz=104,slow=40
FINES FINESS Array B 80.44 332 P **P 14 38 56.5 -0.7**
FINES PKKPbc PKKPbc 14 57 42.5 +1.0
FINES LR LR 15 20 13.4
KAF Kangasniemi 80.50 333 *e*P **P 14 38 57.6 +0.1**
KAF pmax pmax
comp=Z,22nm,0.7s,mb5.2
KAF Kangasniemi 80.50 333 *e*p **P 14 38 57.6 +0.1**
comp=Z,22nm,0.7s,mb5.2
FUNA Funafuti 80.50 99 PFAKE 14 39 10.0 +11
FUNA LR LR
comp=Z,11μm,20.0s,MS6.2
KEK Kerkira 80.66 310 *e*P **P 14 38 58.6 -0.3**
TIR Tirane 80.78 311 PFAKE 14 39 10.0 +11
TIR LR LR
comp=Z,5μm,22.0s,MS5.8
STHS Stebnicka Huta 80.80 320 *e*P **P 14 39 00.3 +0.9**
STHS pmax pmax
comp=Z,31nm,1.1s,mb5.2
STHS Stebnicka Huta 80.80 320 *e*P **P 14 39 00.3 +0.9**
PVY Plav 80.83 313 ⇓*i*P **P 14 38 57.5 -2.2**
PVY Plav 80.83 313 ⇓*i*P **P 14 38 57.6 -2.2**
IVA Berane 80.91 313 ⇓*i*P **P 14 38 58.0 -2.2**
IVA Berane 80.91 313 ⇓*i*P **P 14 38 58.0 -2.1**
SUR Sutherland 80.97 237 PFAKE 14 39 10.0 +9.3
SUR LR LR
comp=Z,3μm,20.0s,MS5.6
DIVS Divibare 80.98 314 P **P 14 39 00.2 -0.3**
SYO Syowa Base 81.03 198⇑*e*pP pP 14 39 05.8 +0.7
KECS Kecovo 81.17 319 *e*P **P 14 39 01.6 +0.2**
KECS pmax pmax
comp=Z,27nm,1.6s,mb4.9
KECS Kecovo 81.17 319 *e*P **P 14 39 01.5 +0.1**
KECS *e* 14 39 29.4
ULC Ulcinj 81.30 312 ⇓*i*P **P 14 39 01.2 -1.0**
ULC Ulcinj 81.30 312 ⇓*i*P **P 14 39 01.2 -1.0**
PLE Pljevlja 81.33 313 ⇓*i*P **P 14 39 01.7 -0.7**
PLE Pljevlja 81.33 313 ⇓*i*P **P 14 39 01.7 -0.6**
TTG Podgorica 81.33 313 ⇓*i*P **P 14 39 01.5 -0.9**
TTG Podgorica 81.33 313 ⇓*i*P **P 14 39 01.6 -0.9**
WAR Warsaw 81.35 323 *e*P **P 14 39 03.6 +1.4**
WAR LMZ 15 13 54.1
comp=Z,3μm,31.1s
PSZ Piszkesteto 81.49 318 P **P 14 39 04.5 +1.4**
PSZ Piszkesteto 81.49 318 *e*P **P 14 39 02.4 -0.8**
comp=Z,95nm,1.5s,mb5.5
PSZ LR LR
comp=Z,2μm,19.0s,MS5.5
PSZ Piszkesteto 81.49 318⇓*e*PcP PcP 14 39 03.8 -5.3
PSZ Piszkesteto 81.49 318 ⇑*i*P **P 14 39 03.3 +0.2**
NKY Niksic 81.56 313 ⇓*i*P **P 14 39 02.5 -1.1**
NKY Niksic 81.56 313 ⇓*i*P **P 14 39 02.6 -1.1**
BUM Brajici-Budva 81.59 312 ⇓*i*P **P 14 39 02.4 -1.4**
URZ Urewera 81.67 129 *e*P **P 14 39 03.5 -0.8**
comp=Z,28nm,0.9s,mb5.2
UPM Unac-Piva 81.67 313 ⇓*i*P **P 14 39 04.0 -0.2**
UPM Unac-Piva 81.67 313 ⇓*i*P **P 14 39 04.0 -0.1**
OJC Ojcow 81.84 320 *e*P **P 14 39 03.8 -1.1**
OJC *e*PP PP 14 42 11.6 -0.6
OJC *e*S S 14 49 15.0 -2.8
OJC L 15 25 20.2
comp=Z,3.5nm,19.3s
OJC Ojcow 81.84 320 *e*P **P 14 39 03.8 -1.1**
OJC *e* 14 42 11.6
OJC *e*S S 14 49 15.0 -2.8
HCY Herceg Novi 81.90 312 ⇓*i*P **P 14 39 03.6 -1.8**
HCY Herceg Novi 81.90 312 ⇓*i*P **P 14 39 03.7 -1.7**
BRY Bratogost 81.91 313 ⇓*i*P **P 14 39 04.7 -0.7**
BRY Bratogost 81.91 313 ⇓*i*P **P 14 39 04.8 -0.7**
BUD Budapest 82.03 318⇓*e*PcP PcP 14 39 06.3 -5.2
LIKS Likavka 82.14 319 *e*P **P 14 39 07.2 +0.7**
LIKS Likavka 82.14 319 *e*P **P 14 39 07.2 +0.7**
PKSM Moragy 82.15 316 P **P 14 39 07.8 +1.1**
VYHS Vyhne 82.26 319 *e*P **P 14 39 06.4 -0.8**
VYHS pmax pmax
comp=Z,40nm,1.6s,mb5.1
VYHS Vyhne 82.26 319 *e*P **P 14 39 06.4 -0.8**
VYHS Vyhne 82.26 319 *e*S S 14 49 19.2 -3.1
KEV Kevo 82.27 340 *e*P **P 14 39 07.0 +0.2**
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KEV Kevo 82.27 340 PFAKE 14 39 20.0 +13
KEV LR LR
comp=Z,8μm,22.0s,MS6.0
KEV Kevo 82.27 340 *e*p **P 14 39 07.0 +0.2**
comp=Z,8.0nm,0.7s,mb4.8
TSUM Tsumeb 82.49 251 *e*P **P 14 39 09.9 +0.9**
comp=Z,40nm,1.1s,mb5.3
TSUM LR LR
comp=Z,2μm,20.0s,MS5.5
KOLL Kolacno 82.56 319 *e*P **P 14 39 08.7 0.0**
KOLL Kolacno 82.56 319 *e*P **P 14 39 08.7 0.0**
ARCES ARCESS Array B 82.72 340 P **P 14 39 09.8 +0.7**
comp=Z,11nm,0.8s,mb4.9,baz=102,slow=4.2,SNR=33
ARCES LR LR 15 18 59.6
comp=Z,11μm,21.3s,MS6.2,baz=114,slow=38
ARE0 ARCESS Array S 82.72 340 *e*P **P 14 39 09.7 +0.6**
OKC Ostrava-Krasne 82.85 320 *e*P **P 14 39 11.3 +1.1**
OKC *e*S S 14 49 28.5 +0.2
OKC MLR MLR
comp=Z,2μm,18.5s,MS5.5
OKC Ostrava-Krasne 82.85 320 *e*P **P 14 39 11.3 +1.1**
OKC *e*S S 14 49 28.5 +0.2
OKC AMS AMS 15 25 40.0
comp=Z,2μm,18.5s
TIP Timpagrande 82.97 309 *e*P **P 14 39 11.6 +0.5**
comp=Z,100nm,1.4s,mb5.7
TIP LR LR
comp=Z,3μm,21.0s,MS5.6
LTRZ Laterza 83.01 311 P **P 14 39 11.6 +0.3**
MORC Moravsky Berou 83.24 320 P **P 14 39 12.7 +0.5**
MORC Moravsky Berou 83.24 320 *e*P **P 14 39 12.1 -0.1**
comp=Z,80nm,1.4s,mb5.6
MORC Moravsky Berou 83.24 320 ⇑*i*P **P 14 39 12.6 +0.4**
KTK1 Kautokeino 83.38 339 *e* S 14 49 32.1 -0.8
ZST Bratislava 83.38 318 *e*P **P 14 39 14.0 +1.0**
ZST pmax pmax
comp=Z,38nm,1.1s,mb5.3
ZST Bratislava 83.38 318 *e*P **P 14 39 14.0 +1.0**
ZST Bratislava 83.38 318 *e*S S 14 49 34.0 +0.3
MIDW Midway 83.55 62 PFAKE 14 39 20.0 +5.7
MIDW LR LR
comp=Z,3μm,22.0s,MS5.6
PTRP Pietrapertosa 83.58 310 P **P 14 39 16.6 +2.4**
CEL Celeste 83.59 308 *e*P **P 14 39 15.1 +0.8**
comp=Z,120nm,1.1s,mb5.9
CEL LR LR
comp=Z,2μm,22.0s,MS5.5
GKP Gorka Klasztor 83.76 323 *e*P **P 14 39 15.4 +0.6**
comp=Z,200nm,1.4s,mb6.0
GKP *e*pP pP 14 39 22.6 +2.9
GKP *e*S S 14 49 35.0 -2.4
GKP LMZ 15 18 15.8
comp=Z,6μm,26.2s
GKP Gorka Klasztor 83.76 323⇓*e*P **P 14 39 15.4 +0.6**
GKP *e**PP pP 14 39 22.6 +2.8
GKP *e*S S 14 49 35.0 -2.3
GKP pmax pmax
comp=Z,200nm,1.4s,mb6.0
GKP MLR MLR
comp=Z,6μm,26.2s,MS5.8
VRAC Vranov 83.81 319 P **P 14 39 15.4 +0.2**
MGR Morigerati 83.95 310 P **P 14 39 16.1 0.0**
DPC Dobruska-Polom 84.07 320 *e*P **P 14 39 17.9 +1.4**
DPC *e*S S 14 49 41.2 +0.7
DPC MLR MLR
comp=Z,4μm,17.2s,MS5.9
DPC Dobruska-Polom 84.07 320 *e*P **P 14 39 17.9 +1.4**
DPC *e*S S 14 49 41.2 +0.7
DPC AMS AMS 15 24 30.0
comp=Z,4μm,17.2s
KSP Ksiaz 84.13 321 *e*P **P 14 39 18.0 +1.2**
comp=Z,300nm,1.6s,mb6.2
KSP *e*pP pP 14 39 25.9 +4.2
KSP *e*SKSac SKSac 14 49 40.3 +0.6
KSP *e*S S 14 49 45.3 +4.2
KSP LMZ 15 20 57.4
comp=Z,7μm,22.8s
KSP Ksiaz 84.13 321⇑*e*P **P 14 39 16.4 -0.4**
KSP *e* 14 49 40.0
KSP MLR MLR
comp=Z,8μm,22.8s,MS6.0
CONA Conrad Observa 84.19 318 ⇑*i*P **P 14 39 16.4 -0.8**
comp=Z,36nm,1.9s,mb5.2,SNR=12
ARSA Arzberg 84.38 317⇑*i*P **P 14 39 17.6 -0.5**
comp=Z,68nm,1.4s,mb5.6,SNR=24
MRB1 Monte Rocchett 84.44 311 P **P 14 39 19.4 +0.8**
BOJS Bojanci 84.46 315 *i* P **P 14 39 19.4 +0.8**
BOJS *e*S S 14 49 41.7 -3.0
TREC Trest 84.53 319 *e*P **P 14 39 20.0 +1.1**
TREC *e*S S 14 49 43.8 -1.4
TREC MLR MLR
comp=Z,3μm,25.3s,MS5.5
TREC Trest 84.53 319 *e*P **P 14 39 20.0 +1.1**
TREC *e*SKS 14 49 43.8
TREC AMS AMS 15 16 20.0
comp=Z,3μm,25.3s
WDD Wield Dalam 84.59 306 PFAKE 14 39 30.0 +11
WDD LR LR
comp=Z,3μm,20.0s,MS5.6
PERS Pernice 84.62 317 *i* P **P 14 39 19.6 +0.2**
PERS *e*S S 14 49 40.8 -5.4
SOKA Soboth 84.68 317⇑*i*P **P 14 39 19.3 -0.3**
comp=Z,94nm,1.6s,mb5.7
RAO Raoul Island 84.73 119 PFAKE 14 39 30.0 +10
RAO LR LR
comp=Z,10μm,19.0s,MS6.2
VISS Visnje 84.77 316 *e*P **P 14 39 19.9 -0.2**
LJU Ljubljana 84.99 316 *e*P **P 14 39 20.5 -0.8**
TRO Tromso 85.00 340 *e*P **P 14 39 20.8 0.0**
TRO AMB AMB 14 39 38.4
comp=Z,49nm,1.6s,mb5.4
TRO AMS AMS 15 19 37.2
comp=Z,11μm,23.8s,MS6.2
MIDA Miranda 85.00 311 P **P 14 39 22.0 +0.6**
OBKA Obir 85.00 316⇑*i*P **P 14 39 21.1 -0.2**
comp=Z,56nm,1.5s,mb5.5,SNR=13
PRU Pruhonice 85.19 320 *e*P **P 14 39 23.9 +1.8**
PRU *e*S S 14 49 51.9 +0.2
PRU MLR MLR
comp=Z,4μm,19.5s,MS5.8
PRU Pruhonice 85.19 320 *e*P **P 14 39 23.9 +1.8**
PRU *e*S S 14 49 51.9 +0.2
PRU AMS AMS 15 24 20.0
comp=Z,4μm,19.5s
PVCC Panska Ves 85.20 320 *e*P **P 14 39 23.7 +1.5**
PVCC *e*S S 14 49 47.4 -4.4
PVCC MLR MLR
comp=Z,3μm,17.7s,MS5.7
PVCC Panska Ves 85.20 320 *e*P **P 14 39 23.7 +1.5**
PVCC *e*SKS 14 49 47.4
PVCC AMS AMS 15 25 20.0
comp=Z,3μm,17.7s
MOA Molln 85.26 318⇑*i*P **P 14 39 21.6 -1.0**
comp=Z,39nm,1.5s,mb5.3,SNR=13
PRA Prague 85.26 320 P **P 14 39 24.0 +1.5**
PRA S S 14 49 51.0 -1.4
BSD Bornholm Skovb 85.27 325 *i* P **P 14 39 20.6 -1.8**
BSD
comp=Z,4μm,21.0s
JAVS Javornik 85.31 316 *i* P **P 14 39 23.1 +0.3**
JAVS *e*S S 14 49 46.2 -6.9
VOY Vojsko 85.44 316 *e*P **P 14 39 23.4 -0.1**
VOY *e* 14 39 43.1
VOY *e* 14 39 56.0
VOY *e* 14 40 02.8
VOY *e* 14 40 12.2
VOY *e* 14 40 29.7
TRI Trieste 85.51 316 P **P 14 39 23.0 -0.9**
TRI pmax pmax
comp=Z,13nm,0.7s,mb5.3
TRI MLR MLR
comp=Z,2μm,20.0s,MS5.5
TRI Trieste 85.51 316 P **P 14 39 23.0 -0.8**
comp=Z,13nm,0.7s,mb5.3
TRI LR LR
comp=Z,2μm,20.0s,MS5.5
BRG Berggiesshubel 85.62 321 *e*P **P 14 39 24.8 +0.6**
comp=Z,126nm,1.7s,mb5.9
BRG *e*S S 14 49 29.1 -27
BRG Berggiesshubel 85.62 321 *i* P **P 14 39 25.2 +0.9**
comp=Z,125nm,1.7s,mb5.9
BRG *e*PP PP 14 42 36.1 -7.0
comp=Z,19nm,1.4s
BRG *e* 14 43 08.1
comp=Z,18nm,1.4s
BRG S S 14 49 51.0 -4.9
BRG
comp=N,4μm,19.4s
BRG
comp=E,3μm,20.3s
BRG
comp=Z,4μm,21.7s
BRG Berggiesshubel 85.62 321 *i* P **P 14 39 25.2 +1.0**
BRG *e* 14 42 36.1
BRG S S 14 49 51.0 -4.9
BRG pmax pmax
comp=Z,75nm,1.7s,mb5.6
BRG pmax pmax
comp=Z,11nm,1.4s,mb4.9
BRG pmax pmax
comp=Z,11nm,1.5s,mb4.9
BRG MLR MLR
comp=N,2μm,19.4s,MS5.7
BRG MLR MLR
comp=E,2μm,20.3s,MS5.7
BRG MLR MLR
comp=Z,2μm,21.7s,MS5.5
MYKA Terra Mystica 85.63 316⇑*i*P **P 14 39 24.2 -0.2**
comp=Z,49nm,1.5s,mb5.5
AQU L'Aquila 85.66 312 *e*P **P 14 39 25.0 +0.3**
comp=Z,164nm,1.3s,mb6.1
AQU LR LR
comp=Z,3μm,21.0s,MS5.7
AQU L'Aquila 85.66 312⇑*i*P **P 14 39 25.6 +0.9**
GEC2 GERESS Array S 85.68 319 *e*P **P 14 39 25.1 +0.5**
comp=Z,122nm,1.4s,mb5.9
GEC2 *e*S S 14 49 29.8 -27
GEC2 GERESS Array S 85.68 319 *e*P **P 14 39 25.1 +0.5**
GEC2 pmax pmax
comp=Z,122nm,1.4s,mb5.9
GERES GERESS Array B 85.68 319 P **P 14 39 24.7 +0.1**
comp=Z,26nm,1.1s,mb5.4,baz=90,slow=5.3,SNR=78
GERES LR LR 15 25 15.5
comp=Z,2μm,18.2s,MS5.5,baz=191,slow=41
KHC Kasperske Hory 85.77 319 *e*P **P 14 39 26.2 +1.1**
KHC *e*S S 14 49 52.3 -5.2
KHC MLR MLR
comp=Z,3μm,24.1s,MS5.6
KHC Kasperske Hory 85.77 319 *e*P **P 14 39 24.9 -0.2**
comp=Z,17nm,1.0s,mb5.2
KHC Kasperske Hory 85.77 319 *e*P **P 14 39 26.2 +1.1**
KHC *e*SKS 14 49 52.3
KHC AMS AMS 15 22 20.0
comp=Z,3μm,24.1s
RUE Ruedersdorf 85.79 322 *e*P **P 14 39 25.6 +0.5**
comp=Z,176nm,1.1s,mb6.2
RUE Ruedersdorf 85.79 322 *e*P **P 14 39 24.8 -0.3**
comp=Z,52nm,0.6s,mb5.9
PTCC Patocco-Chiusa 85.82 316 P **P 14 39 24.8 -0.6**
CING Cingoli 85.84 313 P **P 14 39 26.6 +1.1**
KBA Koelnbreinsper 85.85 317⇑*i*P **P 14 39 24.4 -1.1**
comp=Z,28nm,1.5s,mb5.3,SNR=9.2
CERT Cerreto 85.96 312 P **P 14 39 26.3 +0.1**
RGN Rugen 86.16 324 *e*P **P 14 39 27.7 +0.8**
comp=Z,216nm,1.4s,mb6.2
CLL Collm 86.23 321 *e*P **P 14 39 27.4 +0.1**
comp=Z,132nm,2.0s,mb5.8
CLL *e*S SKSac 14 49 34.0 -19
CLL Collm 86.23 321 *i* P **P 14 39 26.4 -0.9**
CLL *i* pP 14 39 32.8 +0.6
CLL *e*S S 14 49 53.0 -8.9
CLL pmax pmax
comp=Z,129nm,2.0s,mb5.8
CLL MLR MLR
comp=Z,3μm,19.4s,MS5.7
CLL Collm 86.23 321 *i* P **P 14 39 26.4 -0.9**
comp=Z,129nm,2.0s,mb5.8
CLL *i* pP 14 39 32.8 +0.6
CLL *i* 14 40 05.6
CLL *e*S S 14 49 53.0 -8.9
CLL LR LR

comp=Z,3µm,19.4s,MS5.7
CLL Collm 86.23 321 *i* P **P 14 39 26.4 -0.9**
comp=Z,129nm,2.0s,mb5.8
CLL *i* sP sP 14 39 32.8 -1.2
CLL *i* 14 40 05.6
CLL *e*PP PP 14 42 36.0 -12
CLL *e*SKSac SKSac 14 49 53.0 0.0
CLL *e*S S 14 50 03.0 +1.1
comp=N,2µm,29.3s
CLL *e*S S 14 50 03.0 +1.1
comp=E,2µm,21.4s
CLL *e*PS 14 51 04.0
CLL *e* 14 51 52.0
CLL *e*SS SS 14 56 06.0 +25
CLL *e* 14 56 55.0
CLL *e*SSS 14 59 10.0
CLL *e*SSSS 15 02 16.0
CLL L 15 33 00.0
comp=N,1µm,18.1s
CLL L 15 33 00.0
comp=E,3µm,19.2s
CLL L 15 33 00.0
comp=Z,3µm,19.4s
WET Wettzell 86.23 319 *e*P **P 14 39 27.7 +0.3**
comp=Z,120nm,1.8s,mb5.8
WET *e*S SKSac 14 49 36.2 -17
WET Wettzell 86.23 319 *e*P **P 14 39 27.7 +0.3**
WET pmax pmax
comp=Z,120nm,1.8s,mb5.8
HFS Hagfors 86.24 330 P **P 14 39 26.6 -0.5**
comp=Z,47nm,0.9s,mb5.7,baz=83,slow=3.6,SNR=54
RJOB Jochberg 86.25 318 *e*P **P 14 39 27.1 -0.3**
comp=Z,28nm,1.1s,mb5.4
PIEI Pieia 86.33 313 P **P 14 39 29.1 +1.2**
ABTA Abfaltersbach 86.41 317 ⇑ *i*P **P 14 39 27.0 -1.3**
comp=Z,21nm,1.1s,mb5.3
TANN Tannenbergstha 86.54 320 *e*P **P 14 39 29.4 +0.6**
comp=Z,76nm,1.7s,mb5.7
TANN *e*S SKSac 14 49 39.4 -16
NKC Novy Kostel 86.55 320 *e*P **P 14 39 30.0 +1.1**
NKC *e*S S 14 49 56.4 -8.6
NKC MLR MLR
comp=Z,3µm,18.8s,MS5.7
NKC Novy Kostel 86.55 320 *e*P **P 14 39 30.0 +1.1**
NKC *e*SKS 14 49 56.4
NKC AMS AMS 15 25 10.0
comp=Z,3µm,18.8s
WERN Wernitzgruen 86.59 320 *e*P **P 14 39 29.8 +0.7**
comp=Z,29nm,1.2s,mb5.4
GUNZ Gunzen 86.62 320 *e*P **P 14 39 29.8 +0.6**
comp=Z,94nm,1.8s,mb5.7
WERD Werda 86.64 320 *e*P **P 14 39 29.7 +0.4**
comp=Z,100nm,1.9s,mb5.7
ROTZ Rotzenmuhle 86.69 320 *e*P **P 14 39 30.5 +0.9**
comp=Z,52nm,1.3s,mb5.6
ROTZ *e*S SKSac 14 49 42.0 -14
TOLF Tolfa 86.69 312 P **P 14 39 29.9 +0.1**
COP Copenhagen 86.72 326 *i* P **P 14 39 28.5 -1.1**
COP *i* S SKSac 14 49 53.2 -2.7
COP
comp=Z,2µm,21.0s
SPB4 Spitsbergen Ar 86.87 348 *e*P **P 14 39 28.7 -1.2**
SBA Scott Base 87.02 169 *e*P **P 14 39 30.6 -0.1**
SBA pmax pmax
comp=Z,96nm,1.5s,mb5.8
SBA MLR MLR
comp=Z,4µm,21.0s,MS5.8
SBA Scott Base 87.02 169 *e*P **P 14 39 30.6 -0.1**
comp=Z,96nm,1.5s,mb5.8
SBA LR LR
comp=Z,4µm,21.0s,MS5.8
WTTA Wattenberg 87.02 317 ⇓ *i*P **P 14 39 30.0 -1.2**
comp=Z,75nm,1.7s,mb5.6,SNR=12
VMG Vicchio 87.05 314 P **P 14 39 33.5 +2.0**
MOX Moxa 87.09 320 *e*P **P 14 39 32.9 +1.4**
comp=Z,119nm,1.9s,mb5.8
MOX *e*S SKSac 14 49 59.0 +0.6
MOX
comp=Z,2µm,22.0s
MOX Moxa 87.09 320 *e*P **P 14 39 32.0 +0.5**
comp=Z,81nm,1.5s,mb5.7
MOX *e*S SKSac 14 49 43.9 -14
MOX Moxa 87.09 320 *e*P **P 14 39 32.9 +1.4**
MOX *e*S SKSac 14 49 59.0 +0.6
MOX pmax pmax
comp=Z,119nm,1.9s,mb5.8
MOX MLR MLR
comp=Z,2µm,22.0s,MS5.5
MOX Moxa 87.09 320 *e*P **P 14 39 32.9 +1.4**
comp=Z,119nm,1.9s,mb5.8
MOX *e*S SKSac 14 49 59.0 +0.6
MOX LR LR
comp=Z,2µm,22.0s,MS5.5
NSS Namsos 87.24 334 *e*SKS 14 50 00.4
NSS AMS AMS 15 22 08.4
comp=Z,8µm,23.8s,MS6.0
FUR Furstenfeldbru 87.28 318 *e*P **P 14 39 32.3 -0.2**
comp=Z,56nm,1.2s,mb5.7
FUR *e*S SKSac 14 49 44.0 -16
FUR Furstenfeldbru 87.28 318 *e*P **P 14 39 32.3 -0.2**
FUR pmax pmax
comp=Z,56nm,1.2s,mb5.7
GRA1 Grafenberg Arr 87.33 319 *e*P **P 14 39 33.5 +0.8**
comp=Z,94nm,1.3s,mb5.9
GRA1 *e*S SKSac 14 49 47.3 -13
GRA1 LR LR
comp=Z,4µm,18.1s,MS5.8
GRF Grafenberg Arr 87.33 319 *e*P **P 14 39 33.5 +0.8**
comp=Z,94nm,1.3s,mb5.9
GRF *e*S SKSac 14 49 47.3 -13
GRF *e*L 15 26 18.3
comp=Z,4µm,18.1s
GRF Grafenberg Arr 87.33 319 *e*P **P 14 39 33.5 +0.8**
GRF pmax pmax
comp=Z,94nm,1.3s,mb5.9
GRF MLR MLR
comp=Z,4µm,18.1s,MS5.8
GRF Grafenberg Arr 87.33 319 *e*P **P 14 39 33.5 +0.8**
GRF pmax pmax
comp=Z,94nm,1.3s,mb5.9
GRF MLR MLR
comp=Z,4µm,18.1s,MS5.8
MOTA Moosalm 87.39 317 ⇓ *i*P **P 14 39 32.3 -0.7**
comp=Z,31nm,0.9s,mb5.5,SNR=9.6
NB2 NORSAR Subarra 87.49 331 P **P 14 39 32.5 -0.7**
comp=Z,43nm,1.0s,mb5.6,baz=92,slow=4.8
NOA NORSAR Array B 87.49 331 P **P 14 39 33.6 +0.4**
comp=Z,18nm,0.9s,mb5.3,baz=95,slow=4.7,SNR=31
NOA LR LR 15 25 15.0
comp=Z,4µm,19.6s,MS5.8,baz=90,slow=40
RETA Reutte 87.62 317 ⇑ *i*P **P 14 39 33.2 -0.9**
comp=Z,63nm,1.8s,mb5.5,SNR=13
FETA Feichten 87.64 317 ⇑ *i*P **P 14 39 33.6 -0.7**
comp=Z,47nm,1.4s,mb5.5,SNR=14
NAO01 NORSAR Array S 87.65 331 *e*P **P 14 39 34.5 +0.6**
comp=Z,6.6nm,0.7s,mb5.0
NAO01 LR LR
comp=Z,5µm,19.0s,MS6.0
MABI Malga Bissina 87.79 316 P **P 14 39 35.9 +0.9**
CLZ Clausthal 87.88 322 *e*P **P 14 39 35.9 +0.6**
comp=Z,263nm,1.8s,mb6.2
CLZ *e*S SKSac 14 49 49.7 -13
CLZ Clausthal 87.88 322 *e*P **P 14 39 35.9 +0.6**
CLZ pmax pmax
comp=Z,263nm,1.8s,mb6.2
CLZ Clausthal 87.88 322 *e*P **P 14 39 35.9 +0.6**
comp=Z,263nm,1.8s,mb6.2
CLZ *e*S SKSac 14 49 49.6 -14
BRMO Bormio 87.89 316 P **P 14 39 36.6 +1.2**
VLC Villacollemand 87.89 314 *e*P **P 14 39 35.2 -0.3**
comp=Z,65nm,1.5s,mb5.6
VLC LR LR
comp=Z,4µm,22.0s,MS5.8
BSEG Bad Segeberg 87.91 324 *e*P **P 14 39 36.1 +0.7**
comp=Z,165nm,1.4s,mb6.1
BSEG *e*S SKSac 14 49 51.0 -12
NRDL Niedersach Rie 88.04 322 *e*P **P 14 39 36.8 +0.8**
comp=Z,263nm,1.6s,mb6.2
NRDL *e*S SKSac 14 49 51.3 -13
UBBA Unterbreizbach 88.11 321 *e*P **P 14 39 36.9 +0.5**
comp=Z,98nm,1.7s,mb5.8
UBBA *e*S SKSac 14 49 53.0 -12
GAMB Gambell 88.17 26 *e*P **P 14 39 35.7 -0.7**
comp=Z,75nm,1.4s,mb5.7
DAVA Damuels 88.22 317 ⇑ *i*P **P 14 39 36.9 -0.1**
comp=Z,76nm,1.5s,mb5.7,SNR=7.5
KONO Kongsberg 88.29 329 *e*P **P 14 39 37.6 +0.6**
KONO *e*PP PP 14 43 05.6 +1.3
KONO *e*SKS 14 50 02.6
KONO AMS AMS 15 24 07.3
comp=Z,5µm,18.8s,MS6.0
KONO Kongsberg 88.29 329 *e*P **P 14 39 36.4 -0.7**
KONO pmax pmax
comp=Z,52nm,1.2s,mb5.6
KONO MLR MLR
comp=Z,7µm,21.0s,MS6.0
KONO Kongsberg 88.29 329 *e*P **P 14 39 36.4 -0.7**
comp=Z,52nm,1.2s,mb5.6
KONO LR LR
comp=Z,7µm,21.0s,MS6.0
DGI Dorgali Grotta 88.50 310 P **P 14 39 39.0 +0.5**
MUD Monsted U'grnd 88.55 326 *i* P **P 14 39 37.8 -0.6**
MUD
comp=Z,3µm,18.0s
BOB Bobbio (Coli) 88.55 315 P **P 14 39 39.6 +1.0**
STU Stuttgart 88.66 319 *e*P **P 14 39 39.4 +0.4**
comp=Z,68nm,1.4s,mb5.8
STU *e*S SKSac 14 49 58.8 -9.2
VSL Villasalto 88.69 309 *e*P **P 14 39 39.9 +0.5**
comp=Z,34nm,1.0s,mb5.6
VSL LR LR
comp=Z,1µm,22.0s,MS5.3
KEST Kesra 88.79 306 P **P 14 39 41.3 +1.3**
comp=Z,22nm,1.0s,mb5.4,baz=328,slow=0.7,SNR=27
KEST LR LR 15 20 07.9
comp=Z,1µm,21.8s,MS5.3,baz=184,slow=36
TOD Tromm 88.90 319 *e*P **P 14 39 41.1 +0.9**
PGF Pioggiola 88.92 312 *e*P **P 14 39 40.3 -0.1**
SPAK Spaichingen-Ko 88.94 318 *e*P **P 14 39 41.4 +1.0**
TNS Taunus Mts 89.11 320 *e*P **P 14 39 41.9 +0.7**
comp=Z,197nm,1.2s,mb6.3
TNS *e*S SKSac 14 50 03.6 -7.0
TNS Taunus Mts 89.11 320 *e*P **P 14 39 41.9 +0.7**
TNS *e*S SKSac 14 50 03.6 -7.0
TNS pmax pmax
comp=Z,197nm,1.2s,mb6.3
MOL Molde 89.22 332 AMS AMS 15 24 26.3
comp=Z,7µm,22.5s,MS6.0
BFO Black Forest 89.24 318 P **P 14 39 42.8 +1.0**
comp=Z,138nm,1.1s,mb6.2,SNR=8.1
BFO Black Forest 89.24 318 *e*P **P 14 39 41.8 0.0**
BFO *e*S SKSac 14 50 04.2 -7.3
QLNO Quiliano 89.35 314 P **P 14 39 41.4 -1.0**
FELD Feldberg im Sc 89.48 318 *e*P **P 14 39 43.7 +0.8**
IBBN Ibbenburen 89.48 322 *e*P **P 14 39 43.6 +0.8**
comp=Z,266nm,1.6s,mb6.3
IBBN *e*S SKSac 14 50 05.2 -7.5
LANF Langenberg 89.57 319 *e*P **P 14 39 44.6 +1.3**
AFI Afiamalu 89.59 104 PFAKE 14 39 50.0 +5.9
AFI LR LR
comp=Z,3µm,20.0s,MS5.7
ABH Alteburg 89.70 320 *e*P **P 14 39 45.4 +1.5**
LIBD Limburg 89.73 318 *e*P **P 14 39 45.3 +1.2**
TNA Tin City 89.74 25 *e*P **P 14 39 43.5 -0.2**
comp=Z,20nm,1.3s,mb5.3
BUG Bochum--Univer 89.82 321 *e*P **P 14 39 45.0 +0.6**
comp=Z,140nm,1.4s,mb6.1
BUG *e*S SKSac 14 50 09.3 -5.4
BBS Basel-Blauen 89.83 317 *e*P **P 14 39 45.0 +0.4**
SAOF Saorge 89.93 314 *e*P **P 14 39 46.0 +0.9**
CDF Champ du Feu 89.94 318 *e*P **P 14 39 44.7 -0.4**
comp=Z,152nm,1.5s,mb5.8
CDF Champ du Feu 89.94 318 *e*P **P 14 39 44.7 -0.4**
CDF pmax pmax
comp=Z,76nm,1.5s,mb5.8
CDF Champ du Feu 89.94 318 *e*P **P 14 39 44.7 -0.4**
comp=Z,76nm,1.5s,mb5.8
AUTN L'Aution 90.02 314 *e*P **P 14 39 47.0 +1.4**
SBF Sospel 90.02 314 *e*P **P 14 39 45.3 -0.3**
comp=Z,233nm,1.3s,mb6.1
SBF Sospel 90.02 314 *e*P **P 14 39 45.3 -0.3**
SBF pmax pmax
comp=Z,117nm,1.3s,mb6.0
SBF Sospel 90.02 314 *e*P **P 14 39 45.3 -0.3**
comp=Z,117nm,1.3s,mb6.0
RUP Ruppelstein 90.03 320 *e*P **P 14 39 46.7 +1.2**
ECH Echery 90.03 318 *e*P **P 14 39 46.4 +0.9**
ECH Echery 90.03 318 *e*P **P 14 39 45.6 +0.1**
ECH pmax pmax
comp=Z,80nm,1.4s,mb5.9
ECH MLR MLR
comp=Z,2µm,22.0s,MS5.6
ECH Echery 90.03 318 *e*P **P 14 39 45.6 +0.1**
comp=Z,80nm,1.4s,mb5.9
ECH LR LR
comp=Z,2µm,22.0s,MS5.6
MOF Molkenrain 90.06 318 *e*P **P 14 39 46.5 +0.8**
REVF Revere 90.08 314 *e*P **P 14 39 46.8 +1.0**
LUCF Luceram 90.08 314 *e*P **P 14 39 46.1 +0.2**
WTSB Winterswijk 90.09 322 *e*P **P 14 39 47.3 +1.6**
comp=Z,86nm,2.5s,mb5.6
TOUF Mont Tournerai 90.15 314 *e*P **P 14 39 47.5 +1.3**
MVIF Mont Vial 90.22 314 *e*P **P 14 39 48.0 +1.5**
HINF Hinteralfeld 90.25 318 *e*P **P 14 39 45.9 -0.6**
ABSA Djebel Ababsia 90.29 306 P **P 14 39 49.6 +2.6**
LOMF Lomont 90.29 317 *e*P **P 14 39 47.7 +1.0**
CMAH Djebel Manchou 90.33 306 P **P 14 39 48.0 +0.8**
BER Bergen 90.40 330 *e*P **P 14 39 46.0 -0.9**
BER *e*SKS SKSac 14 50 17.3 -0.4
BER AMS AMS 15 26 16.6
comp=Z,5µm,20.2s,MS5.9
CALN Calern 90.42 314 *e*P **P 14 39 48.9 +1.5**
LPG La Plagne 90.44 315 *e*P **P 14 39 47.6 +0.1**
comp=Z,122nm,1.0s,mb5.9
LPG La Plagne 90.44 315 *e*P **P 14 39 47.6 +0.1**
LPG pmax pmax
comp=Z,61nm,1.0s,mb5.9
LPG La Plagne 90.44 315 *e*P **P 14 39 47.6 +0.1**
comp=Z,61nm,1.0s,mb5.9
SURF Saint Ours 90.44 314 *e*P **P 14 39 49.0 +1.5**
OG01 Vacheresse 90.44 316 *e*P **P 14 39 48.6 +1.1**
LPL La Plagne 90.45 315 *e*P **P 14 39 47.6 +0.1**
comp=Z,167nm,1.1s,mb6.0
LPL La Plagne 90.45 315 *e*P **P 14 39 47.6 +0.1**
LPL pmax pmax
comp=Z,83nm,1.1s,mb6.0
LPL La Plagne 90.45 315 *e*P **P 14 39 47.6 +0.1**
comp=Z,83nm,1.1s,mb6.0
FOO Floro 90.45 332 *e*P **P 14 39 50.8 +3.6**
FOO AMS AMS 15 23 41.9
comp=Z,4µm,23.4s,MS5.8
MBDF Montbardon 90.46 315 *e*P **P 14 39 46.8 -0.8**
comp=Z,73nm,1.3s,mb5.6
MBDF Montbardon 90.46 315 *e*P **P 14 39 46.8 -0.8**
MBDF pmax pmax
comp=Z,37nm,1.3s,mb5.5
MBDF Montbardon 90.46 315 *e*P **P 14 39 46.8 -0.8**
comp=Z,36nm,1.3s,mb5.5
BNI Bardonecchia 90.51 315 *e*P **P 14 39 47.4 -0.4**
BNI pmax pmax
comp=Z,42nm,1.1s,mb5.7
BNI MLR MLR
comp=Z,3µm,22.0s,MS5.6
BNI Bardonecchia 90.51 315 *e*P **P 14 39 47.4 -0.4**
comp=Z,42nm,1.1s,mb5.7
BNI LR LR
comp=Z,3µm,22.0s,MS5.6
RSL Roselend 90.51 316 *e*P **P 14 39 47.9 +0.1**
HAU Haudompre 90.58 318 *e*P **P 14 39 47.6 -0.5**
comp=Z,306nm,1.4s,mb6.1
HAU *e*MLR MLR
comp=Z,4µm,23.0s,MS5.5
HAU Haudompre 90.58 318 *e*P **P 14 39 47.6 -0.5**
HAU pmax pmax
comp=Z,153nm,1.4s,mb6.1
HAU MLR MLR
comp=Z,4µm,23.0s,MS5.8
HAU Haudompre 90.58 318 *e*P **P 14 39 47.6 -0.5**
comp=Z,153nm,1.4s,mb6.1
HAU LR LR
comp=Z,4µm,23.0s,MS5.8
FRF La Foret Royal 90.61 313 *e*P **P 14 39 48.2 -0.1**
comp=Z,324nm,1.5s,mb6.1
FRF La Foret Royal 90.61 313 *e*P **P 14 39 48.2 -0.1**
FRF pmax pmax
comp=Z,162nm,1.5s,mb6.1
FRF La Foret Royal 90.61 313 *e*P **P 14 39 48.2 -0.1**
comp=Z,162nm,1.5s,mb6.1
WLF Walferdange 90.62 320 P **P 14 39 49.7 +1.5**
comp=Z,65nm,1.8s,mb5.7
WLF Walferdange 90.62 320 *e*P **P 14 39 49.2 +1.0**
comp=Z,195nm,1.7s,mb6.2
WLF *e*S SKSac 14 50 17.6 -1.8
WLF Walferdange 90.62 320 *e*P **P 14 39 49.6 +1.4**
WLF pmax pmax
comp=Z,196nm,1.7s,mb6.2
WLF MLR MLR
comp=Z,3µm,21.0s,MS5.7
WLF Walferdange 90.62 320 *e*P **P 14 39 49.6 +1.4**
comp=Z,196nm,1.7s,mb6.2
WLF LR LR
comp=Z,3µm,21.0s,MS5.7
MEM Membach 90.66 320 P **P 14 39 49.2 +0.8**
comp=Z,26nm,1.5s,mb5.3
MAIT Maitri 90.68 199 *e*P **P 14 39 48.6 +0.6**
HGN Heimansgroeve 90.69 321 *e*P **P 14 39 48.7 +0.2**
comp=Z,17nm,1.4s,mb5.2
HGN Heimansgroeve 90.69 321 *e*PP PP 14 43 28.5 +4.8
HGN Heimansgroeve 90.69 321 *e*S SKSac 14 50 23.0 +3.2
HGN Heimansgroeve 90.69 321 *e*PS S 14 50 42.3 -1.9
HGN Heimansgroeve 90.69 321 *e*SS SS 14 56 48.4 +2.5
LMR La Mourre 90.72 313 *e*P **P 14 39 48.7 -0.1**
comp=Z,188nm,1.5s,mb5.9
LMR La Mourre 90.72 313 *e*P **P 14 39 48.7 -0.1**
LMR pmax pmax
comp=Z,94nm,1.5s,mb5.9
LMR La Mourre 90.72 313 *e*P **P 14 39 48.7 -0.1**
comp=Z,94nm,1.5s,mb5.9
THEF They Montfort 90.81 318 *e*P **P 14 39 50.0 +0.9**
CABF La Chapelle 90.84 316 *e*P **P 14 39 49.4 +0.1**
comp=Z,204nm,1.3s,mb6.0
CABF La Chapelle 90.84 316 *e*P **P 14 39 49.4 +0.1**
CABF pmax pmax
comp=Z,102nm,1.3s,mb6.0
CABF La Chapelle 90.84 316 *e*P **P 14 39 49.4 +0.1**
comp=Z,102nm,1.3s,mb6.0
BEBN Eben Emael 90.86 321 P **P 14 39 50.6 +1.3**
comp=Z,13nm,1.5s,mb5.0
JOHN Johnston Islan 90.88 73 PFAKE 14 40 00.0 +10
JOHN LR LR
comp=Z,5µm,19.0s,MS6.0
CKFL Kef-Lekhel 90.90 306 P **P 14 39 52.5 +2.7**
GDM Grand'Maison 90.90 315 *e*P **P 14 39 50.8 +1.2**
ORIF Oris-en-Rattie 91.08 315 *e*P **P 14 39 50.5 0.0**
comp=Z,116nm,1.3s,mb5.8
ORIF *e*MLR MLR
comp=Z,3µm,22.8s,MS5.4
ORIF Oris-en-Rattie 91.08 315 *e*P **P 14 39 50.5 0.0**
ORIF pmax pmax
comp=Z,58nm,1.3s,mb5.8
ORIF Oris-en-Rattie 91.08 315 *e*P **P 14 39 50.5 0.0**
comp=Z,58nm,1.3s,mb5.8
CASM Ain Smara 91.09 306 P **P 14 39 53.7 +3.0**
BCLA Clavier 91.12 320 P **P 14 39 52.1 +1.6**
comp=Z,35nm,2.1s,mb5.3
GRN Grenoble 91.16 315 *e*P **P 14 39 52.4 +1.6**
CTEI Djebel Teioual 91.17 306 P **P 14 39 55.9 +4.8**
SMRF Simiane la Rot 91.36 314 *e*P **P 14 39 52.3 +0.5**
comp=Z,165nm,1.4s,mb5.9
SMRF Simiane la Rot 91.36 314 *e*P **P 14 39 52.3 +0.5**
comp=Z,165nm,1.4s,mb6.2
MEZF Maizieres J'vi 91.42 318 *e*P **P 14 39 51.8 -0.1**
comp=Z,234nm,1.5s,mb6.0
MEZF Maizieres J'vi 91.42 318 *e*P **P 14 39 51.8 -0.1**
comp=Z,234nm,1.5s,mb6.3
GIVF Givet 91.45 320 *e*P **P 14 39 52.0 0.0**
OCF Saint Nazaire 91.51 314 *e*P **P 14 39 54.0 +1.5**
OG26 St.-Nazaire-De 91.51 314 *e*P **P 14 39 54.0 +1.5**
DOU Dourbes 91.59 320 P **P 14 39 53.9 +1.2**
comp=Z,29nm,2.0s,mb5.3
UCC Uccle 91.69 321 P **P 14 39 54.5 +1.3**
SNF Seneffe 91.76 320 P **P 14 39 54.7 +1.2**
comp=Z,42nm,2.0s,mb5.4
BAIF Baives 91.85 320 *e*P **P 14 39 54.0 +0.1**
comp=Z,132nm,1.3s,mb5.8
BAIF Baives 91.85 320 *e*P **P 14 39 54.0 +0.1**
BAIF pmax pmax
comp=Z,66nm,1.3s,mb5.8
BAIF Baives 91.85 320 *e*P **P 14 39 54.0 +0.1**
comp=Z,66nm,1.3s,mb5.8
VIVF Saint-Julien-I 91.94 315 *e*P **P 14 39 54.3 -0.2**
comp=Z,114nm,1.2s,mb5.8
VIVF Saint-Julien-I 91.94 315 *e*P **P 14 39 54.3 -0.2**
VIVF pmax pmax
comp=Z,57nm,1.2s,mb5.8
VIVF Saint-Julien-I 91.94 315 *e*P **P 14 39 54.3 -0.2**
comp=Z,57nm,1.2s,mb5.8
SSB Saint Sauveur 92.00 315 *e*P **P 14 39 54.9 +0.2**
SSB Saint Sauveur 92.00 315 *e*P **P 14 39 54.8 +0.1**
SSB pmax pmax
comp=Z,51nm,1.1s,mb5.8
SSB MLR MLR
comp=Z,2µm,21.0s,MS5.5
SSB Saint Sauveur 92.00 315 *e*P **P 14 39 54.8 0.0**
comp=Z,51nm,1.1s,mb5.8
SSB LR LR
comp=Z,2µm,21.0s,MS5.5
LOR Lormes 92.31 317 *e*P **P 14 39 55.9 -0.2**
comp=Z,265nm,1.3s,mb6.1
LOR *e*MLR MLR
comp=Z,4µm,22.8s,MS5.5
LOR Lormes 92.31 317 *e*P **P 14 39 55.9 -0.2**
LOR pmax pmax
comp=Z,133nm,1.3s,mb6.1
LOR MLR MLR
comp=Z,4µm,22.8s,MS5.8
LOR Lormes 92.31 317 *e*P **P 14 39 55.9 -0.2**
comp=Z,133nm,1.3s,mb6.1
LOR LR LR
comp=Z,4µm,22.8s,MS5.8
SMF Signal de Mont 92.38 317 *e*P **P 14 39 56.1 -0.3**
comp=Z,239nm,1.2s,mb6.1
SMF Signal de Mont 92.38 317 *e*P **P 14 39 56.1 -0.3**
SMF pmax pmax
comp=Z,119nm,1.2s,mb6.1
SMF Signal de Mont 92.38 317 *e*P **P 14 39 56.1 -0.3**
comp=Z,119nm,1.2s,mb6.1
SSF Saint Saulge 92.57 317 *e*P **P 14 39 57.2 -0.1**
comp=Z,176nm,1.5s,mb6.0
SSF Saint Saulge 92.57 317 *e*P **P 14 39 57.2 -0.1**
SSF pmax pmax
comp=Z,88nm,1.5s,mb6.0
SSF Saint Saulge 92.57 317 *e*P **P 14 39 57.2 -0.1**
comp=Z,88nm,1.5s,mb6.0
COLF Collangettes 92.58 316 *e*P **P 14 39 57.6 +0.2**
LASF Ste Croix 92.59 314 *e*P **P 14 39 57.6 +0.1**
comp=Z,126nm,1.4s,mb5.9
PLDF La Plantade 92.59 316 *e*P **P 14 39 58.7 +1.3**
TAM Tamanrasset 92.61 293 *e*P **P 14 39 59.5 +1.4**
TAM pmax pmax
comp=Z,32nm,1.3s,mb5.6
TAM MLR MLR
comp=Z,4µm,22.0s,MS5.8
TAM Tamanrasset 92.61 293 *e*P **P 14 39 59.5 +1.4**
comp=Z,32nm,1.3s,mb5.6
TAM LR LR
comp=Z,4µm,22.0s,MS5.8
AVF Avril sur Loir 92.70 317 *e*P **P 14 39 57.7 -0.2**
comp=Z,198nm,1.4s,mb6.1
AVF Avril sur Loir 92.70 317 *e*P **P 14 39 57.7 -0.2**
AVF pmax pmax
comp=Z,99nm,1.4s,mb6.0
AVF Avril sur Loir 92.70 317 *e*P **P 14 39 57.7 -0.2**
comp=Z,99nm,1.4s,mb6.0
LBL Lubilhac 92.92 315 *e*P **P 14 40 00.7 +1.7**
AGO Saint Agoulin 92.92 316 *e*P **P 14 40 00.2 +1.2**
PYM Petit Puy Mans 93.04 316 *e*P **P 14 40 00.7 +1.2**
BGF Bois d'Agland 93.07 317 *e*P **P 14 39 59.8 +0.2**
comp=Z,277nm,1.5s,mb6.2
BGF Bois d'Agland 93.07 317 *e*P **P 14 39 59.8 +0.2**
BGF pmax pmax
comp=Z,138nm,1.5s,mb6.2
BGF Bois d'Agland 93.07 317 *e*P **P 14 39 59.8 +0.2**
comp=Z,138nm,1.5s,mb6.2
TCF Toulx Ste Croi 93.54 316 *e*P **P 14 40 01.9 +0.1**
comp=Z,126nm,1.6s,mb5.8
TCF Toulx Ste Croi 93.54 316 *e*P **P 14 40 01.9 +0.1**
TCF pmax pmax
comp=Z,63nm,1.6s,mb5.8
TCF Toulx Ste Croi 93.54 316 *e*P **P 14 40 01.9 +0.1**
comp=Z,63nm,1.6s,mb5.8
CAF Calviac 93.78 315 *e*P **P 14 40 03.2 +0.2**
comp=Z,106nm,1.3s,mb5.8
CAF Calviac 93.78 315 *e*P **P 14 40 03.2 +0.2**
CAF pmax pmax
comp=Z,53nm,1.3s,mb5.8
CAF Calviac 93.78 315 *e*P **P 14 40 03.2 +0.2**

comp=Z,53nm,1.3s,mb5.8
MTLF Montolieu 93.84 313 *e*P **P 14 40 03.2 -0.1**
comp=Z,141nm,1.6s,mb5.8
MTLF Montolieu 93.84 313 *e*P **P 14 40 03.2 -0.1**
MTLF pmax pmax
comp=Z,71nm,1.6s,mb5.8
MTLF Montolieu 93.84 313 *e*P **P 14 40 03.2 -0.1**
comp=Z,71nm,1.6s,mb5.8
JMIC Jan Mayen 94.10 342 *e*P **P 14 40 09.7 +5.9**
JMIC *e*SKS 14 50 38.8
JMIC AMS AMS 15 25 55.6
comp=Z,4µm,10.1s,MS6.1
RJF Les Rejaudoux 94.13 315 *e*P **P 14 40 04.8 +0.3**
comp=Z,176nm,1.7s,mb5.9
RJF *e*MLR MLR
comp=Z,3µm,19.2s,MS5.4
RJF Les Rejaudoux 94.13 315 *e*P **P 14 40 04.8 +0.3**
RJF pmax pmax
comp=Z,88nm,1.7s,mb5.9
RJF MLR MLR
comp=Z,3µm,19.3s,MS5.7
RJF Les Rejaudoux 94.13 315 *e*P **P 14 40 04.8 +0.3**
comp=Z,88nm,1.7s,mb5.9
RJF LR LR
comp=Z,3µm,19.3s,MS5.7
DAG Danmarks Havn 94.52 348 *e*P **P 14 40 05.0 -0.7**
DAG MLR MLR
comp=Z,10µm,18.0s,MS6.3
DAG MLR MLR
comp=E,4µm,21.0s
DAG Danmarks Havn 94.52 348 *i* P **P 14 40 05.0 -0.7**
DAG
comp=Z,10µm,18.0s
LFF La Frestale 94.72 315 *e*P **P 14 40 07.5 +0.3**
LDF La Druitiere 94.83 319 *e*P **P 14 40 07.0 -0.7**
comp=Z,47nm,1.1s,mb5.5
LDF La Druitiere 94.83 319 *e*P **P 14 40 07.0 -0.7**
LDF pmax pmax
comp=Z,23nm,1.1s,mb5.5
LDF La Druitiere 94.83 319 *e*P **P 14 40 07.0 -0.7**
comp=Z,23nm,1.1s,mb5.5
FLN La Foliniere 95.04 319 *e*P **P 14 40 08.0 -0.6**
FLN *e*MLR MLR
comp=Z,4µm,22.8s,MS5.5
FLN La Foliniere 95.04 319 *e*P **P 14 40 08.0 -0.6**
FLN LR LR
comp=Z,4µm,22.8s,MS5.8
MFF Saint Martin d 95.11 317 *e*P **P 14 40 08.7 -0.3**
comp=Z,91nm,1.5s,mb5.7
MFF Saint Martin d 95.11 317 *e*P **P 14 40 08.7 -0.3**
MFF pmax pmax
comp=Z,46nm,1.5s,mb5.7
MFF Saint Martin d 95.11 317 *e*P **P 14 40 08.7 -0.3**
comp=Z,46nm,1.5s,mb5.7
TTA Tatalina 95.28 26 *e*P **P 14 40 09.3 -0.1**
TTA pmax pmax
comp=Z,60nm,1.5s,mb5.8
TTA Tatalina 95.28 26 *e*P **P 14 40 09.2 -0.2**
comp=Z,60nm,1.5s,mb5.8
GRR Gorron 95.34 319 *e*P **P 14 40 09.6 -0.4**
comp=Z,27nm,1.1s,mb5.3
GRR Gorron 95.34 319 *e*P **P 14 40 09.6 -0.4**
GRR pmax pmax
comp=Z,14nm,1.1s,mb5.3
GRR Gorron 95.34 319 *e*P **P 14 40 09.6 -0.4**
comp=Z,14nm,1.1s,mb5.3
ALE Alert 95.49 358 P **P 14 40 10.0 -0.1**
comp=Z,66nm,1.4s,mb5.9,SNR=5.5
EKA Eskdalemuir Ar 95.57 326 P **P 14 40 11.8 +1.0**
comp=Z,5.0nm,0.9s,mb4.9,baz=96,slow=4.9,SNR=12
ESK Eskdalemuir 95.59 326 *i* P **P 14 40 12.7 +1.7**
ESK Eskdalemuir 95.59 326 PFAKE 14 40 20.0 +9.0
ESK LR LR
comp=Z,2µm,20.0s,MS5.7
ETSF Etsaut 95.91 313 *e*P **P 14 40 13.0 +0.3**
SVW2 Sparrevohn 95.93 28 *e*P **P 14 40 16.1 +3.7**
COLD Coldfoot 96.38 21 *e*P **P 14 40 12.9 -1.4**
comp=Z,37nm,1.6s,mb5.6
SGMF Saint Gilles 96.48 319 *e*P **P 14 40 14.6 -0.6**
comp=Z,60nm,1.3s,mb5.6
SGMF Saint Gilles 96.48 319 *e*P **P 14 40 14.6 -0.6**
SGMF pmax pmax
comp=Z,30nm,1.3s,mb5.6
SGMF Saint Gilles 96.48 319 *e*P **P 14 40 14.6 -0.6**
comp=Z,30nm,1.3s,mb5.6
CHUM Lake Minchumin 96.62 25 *e*P **P 14 40 15.5 0.0**
comp=Z,24nm,1.0s,mb5.6
VNA2 Neumayer--Watz 96.92 199 *e*P **P 14 40 17.4 +0.7**
PPLA Purkeypile 96.97 26 *e*P **P 14 40 18.4 +1.3**
comp=Z,57nm,1.1s,mb5.9
BPAW Bear Paw Mtn. 97.11 25 *e*P **P 14 40 16.4 -1.3**
comp=Z,70nm,1.4s,mb5.9
KTH Kantishna Hill 97.31 25 P **P 14 40 19.1 +0.5**
comp=Z,18nm,1.4s,mb5.3
TRF Thorofare Moun 97.62 25 *e*P **P 14 40 19.2 -0.8**
comp=Z,17nm,0.9s,mb5.6
MCK McKinley 98.09 25 *e*P **P 14 40 21.7 -0.4**
MCK pmax pmax
comp=Z,51nm,1.3s,mb5.9
MCK McKinley 98.09 25 *e*P **P 14 40 21.7 -0.4**
comp=Z,51nm,1.3s,mb5.9
COLA College 98.11 23 PFAKE 14 40 30.0 +7.8
COLA LR LR
comp=Z,5µm,19.0s,MS6.0
SCO Scoresbysund 98.38 343 *e*P **P 14 40 17.5 -5.8**
SCO MLR MLR
comp=Z,4µm,22.0s,MS5.9
SCO Scoresbysund 98.38 343 *i* P **P 14 40 17.5 -5.8**
SCO
comp=Z,4µm,22.0s
PMR Palmer 98.75 27 *e*P **P 14 40 26.7 +1.6**
PMR pmax pmax
comp=Z,5.0nm,0.6s,mb5.2
PMR MLR MLR
comp=Z,6µm,19.0s,MS6.1
PMR Palmer 98.75 27 *e*P **P 14 40 26.7 +1.6**
comp=Z,5.2nm,0.6s,mb5.2
PMR LR LR
comp=Z,6µm,19.0s,MS6.1
ESDC Sonseca Array 98.93 310 P **P 14 40 26.9 +0.4**
comp=Z,0.2nm,0.3s,mb4.2,baz=69,slow=5.3,SNR=4.1
ESLA Sonseca Array 98.93 310 PFAKE 14 40 40.0 +14
ESLA LR LR
comp=Z,9µm,21.0s,MS6.2
PAB San Pablo 99.25 310 PFAKE 14 40 40.0 +12
PAB LR LR
comp=Z,2µm,22.0s,MS5.6
MENT Mentasta 100.56 24 *e*P Pdif 14 40 37.3 +4.0
EGAK Eagle 100.75 22 PFAKE 14 40 40.0 +5.8
EGAK LR LR
comp=Z,6µm,19.0s,MS6.2
MVO Moncorvo 100.95 312 *e*P Pdif 14 40 44.5 +9.4
MVO Moncorvo 100.95 312 *e*PP PP 14 44 47.4 +3.9
MVO *e*SKS 14 51 14.5
MVO *e*LQ 15 10 41.1
MVO *e*LR LR 15 16 42.1
comp=Z,2µm,20.3s
BORG Borgarnes 100.99 338 PFAKE 14 40 50.0 +15
BORG LR LR
comp=Z,4µm,19.0s,MS6.0
BMRM Bremner River 101.01 26 *e*Pdif Pdif 14 40 37.0 +1.7
comp=Z,17nm,1.0s
RAR Rarotonga 101.02 111 PFAKE 14 40 50.0 +15
RAR LR LR
comp=Z,4µm,21.0s,MS6.0
SFS San Fernando 101.24 308 PFAKE 14 40 50.0 +14
SFS LR LR
comp=Z,5µm,22.0s,MS6.0
KIP Kipapa 101.41 68 PFAKE 14 40 50.0 +13
KIP LR LR
comp=Z,4µm,19.0s,MS5.9
INK Inuvik 101.47 18 P Pdif 14 40 36.7 -0.7
INK pmax pmax
comp=Z,18nm,1.3s
INK Inuvik 101.47 18 Pdif Pdif 14 40 36.7 -0.7
comp=Z,18nm,1.3s
MTE Manteigas 101.50 312 *e*P Pdif 14 40 46.2 +8.7
MTE Manteigas 101.50 312 *e*PP PP 14 44 52.1 +4.5
MTE *e*SKS 14 51 17.9
MTE *e*LQ 15 10 59.2
MTE *e*LR LR 15 16 41.0
comp=Z,1µm,17.9s
MTE Manteigas 101.50 312 PFAKE 14 40 50.0 +13
MTE LR LR
comp=Z,2µm,19.0s,MS5.5
PBAR Barrancos 101.57 309 *e*P Pdif 14 40 45.8 +8.0
PBAR Barrancos 101.57 309 *e*PP PP 14 44 51.2 +3.0
PBAR *e*SKS 14 51 18.6
PBAR *e*LQ 15 12 13.4
PBAR *e*LR LR 15 17 33.5
comp=Z,2µm,19.2s
PMRV Marv??o 101.58 311 *e*P Pdif 14 40 41.0 +3.1
PMRV Marv??o 101.58 311 *e*PP PP 14 44 53.5 +5.2
PMRV *e*SKS 14 51 17.8
PMRV *e*LQ 15 11 01.5
PMRV *e*LR LR 15 23 39.4
comp=Z,2µm,21.2s
PESTR Estremoz 101.85 310 *e*P Pdif 14 40 47.9 +8.8
PESTR Estremoz 101.85 310 *e*PP PP 14 44 53.9 +3.6
PESTR *e*SKS 14 51 19.4
PESTR *e*LQ 15 11 00.2
PESTR *e*LR LR 15 23 42.5
comp=Z,2µm,21.7s
RTC Rabat Centre 102.21 305 PFAKE 14 40 50.0 +9.3
RTC LR LR
comp=Z,2µm,21.0s,MS5.7
PVAQ Vaqueiros 102.25 309 *e*P Pdif 14 40 46.0 +5.2
PVAQ Vaqueiros 102.25 309 *e*PP PP 14 44 58.4 +5.0
PVAQ *e*SKS 14 51 21.4
PVAQ *e*LQ 15 12 17.0
PVAQ *e*LR LR 15 17 50.6
comp=Z,3µm,22.5s
EVOP Sao Brissos 102.33 310 *e*P Pdif 14 40 41.2 0.0
EVOP *e*S SKSac 14 51 20.1 -1.0
EVOP AMS AMS 15 30 40.0
comp=Z,2µm,20.1s,MS5.6
PBDV Barranco-do-Ve 102.45 309 *e*P Pdif 14 40 45.5 +3.8
PBDV Barranco-do-Ve 102.45 309 *e*PP PP 14 44 58.7 +3.8
PBDV *e*SKS 14 51 22.9
PBDV *e*LQ 15 12 23.4
PBDV *e*LR LR 15 17 53.3
comp=Z,2µm,20.3s
PCVE Castro Verde 102.45 309 *e*P Pdif 14 40 47.0 +5.3
PCVE Castro Verde 102.45 309 *e*PP PP 14 44 59.6 +4.7
PCVE *e*SKS 14 51 22.1
PCVE *e*LQ 15 12 28.3
PCVE *e*LR LR 15 18 19.9
comp=Z,3µm,21.7s
MORF Marmelete 102.99 309 *e*PP PP 14 45 02.9 +3.9
MORF *e*SKS 14 51 28.4
MORF *e*LQ 15 22 21.0
MORF *e*LR LR 15 27 11.3
comp=Z,3µm,22.2s
MORF Marmelete 102.99 309 *e*P Pdif 14 40 44.0 -0.1
MORF *e*S SKSac 14 51 23.4 -0.9
LIS Lisbon 103.07 310 *e*P Pdif 14 40 44.5 +0.1
LIS *e*S SKSac 14 51 23.5 -1.1
LIS AMS AMS 15 41 30.8
comp=E,3µm,18.8s
LIS Lisbon 103.07 310 *e*P Pdif 14 40 44.6 +0.1
LIS *e*S SKSac 14 51 23.5 -1.1
PMAFR Mafra 103.12 311 *e*P Pdif 14 40 51.7 +7.0
PMAFR Mafra 103.12 311 *e*PP PP 14 45 06.1 +6.2
PMAFR *e*SKS 14 51 29.1
PMAFR *e*LQ 15 11 28.1
PMAFR *e*LR LR 15 20 04.6
comp=E,2µm,22.3s
PFVI Vila Bisbo 103.17 309 *e*P Pdif 14 40 49.8 +4.9
PFVI Vila Bisbo 103.17 309 *e*PP PP 14 45 00.0 -0.3
PFVI *e*SKS 14 51 29.3
PFVI *e*LR LR 15 18 38.6
comp=E,2µm,22.7s
DBIC Dimbokro 103.61 277 PFAKE 14 41 00.0 +13
DBIC LR LR
comp=Z,2µm,20.0s,MS5.7
POHA Pohakuloa 103.92 69 PFAKE 14 41 00.0 +12
POHA LR LR
comp=Z,3µm,21.0s,MS5.8
SHEL Horse Pasture 104.69 254 PFAKE 14 41 00.0 +8.3
SHEL LR LR
comp=Z,3µm,20.0s,MS5.9
SFJD Kangerlussuaq 108.20 348 PFAKE 14 45 20.0 +6.5
SFJD LR LR
comp=Z,6µm,20.0s,MS6.1
PPT Papeete 110.87 108 *e*PP PP 14 45 51.8 -5.7
comp=Z,206nm,24.8s
PPT Papeete 110.87 108 *e*PS PS 14 55 27.6 -1.2
comp=Z,2µm,29.8s
PPT *e*LQ 15 13 29.2
comp=Z,5µm,28.8s
PPT *e*LR LR 15 18 03.6
comp=Z,6µm,23.0s
YKA Yellowknife Ar 111.14 16 Pdiff Pdif 14 41 23.4 +3.1
comp=Z,0.3nm,0.8s,baz=331,slow=4.6,SNR=4.8
YKA PKiKP PKiKP 14 45 19.1 +0.1
comp=Z,1.1nm,0.9s,baz=323,slow=2.2,SNR=7.4
YKA PKKPbc PKKPbc 14 56 16.9 -1.1
comp=Z,0.6nm,0.8s,baz=141,slow=3.1,SNR=9.4
YKA Yellowknife Ar 111.14 16 P Pdif 14 41 23.4 +3.1
YKA 14 45 19.2
YKA Yellowknife Ar 111.14 16 Pdif Pdif 14 41 23.4 +3.1
YKA PKPdf PKiKP 14 45 19.1 +0.1
YKA PKKPbc PKKPbc 14 56 16.9 -1.1
CMLA Cha da Macela 115.59 314 PFAKE 14 45 40.0 +12
CMLA LR LR
comp=Z,2µm,20.0s,MS5.7
PMSA Palmer Station 115.86 188 PFAKE 14 45 40.0 +12
PMSA LR LR
comp=Z,4µm,20.0s,MS6.0
NLWA Neilton Lookou 118.43 32 PFAKE 14 45 40.0 +6.5
NLWA LR LR
comp=Z,3µm,20.0s,MS5.8
FCC Fort Churchill 118.85 8 *e*PKIKP PKPdf 14 45 31.2 -2.8
JCW Jim Creek 118.90 30 *e*PKPdf PKPdf 14 45 34.5 +0.1
EDM Edmonton 118.96 22 *e*PKIKP PKPdf 14 45 34.2 -0.2
A07A Ashnola River, 119.08 29 ⇑P PKPdf 14 45 33.7 -1.0
baz=119
E03A Lebam 119.12 32 ⇑P PKPdf 14 45 34.2 -0.7
baz=119
LON Longmire 119.92 31 PKIKP PKPdf 14 45 36.9 +0.5
B08A Colville Reser 120.06 29 ⇑P PKPdf 14 45 35.9 -0.8
baz=120
ETW Entiat 120.09 30 *e*PKPdf PKPdf 14 45 37.7 +1.0
F04A Amboy 120.13 32 ⇑P PKPdf 14 45 35.9 -1.0
baz=120
COR Corvallis 120.50 34 PFAKE 14 45 50.0 +12
COR LR LR
comp=Z,2µm,22.0s,MS5.8
TAOE Nuku Hiva Isla 120.68 99 *e*PS PS 14 56 54.2 -4.2
comp=Z,937nm,26.0s
TAOE *e*LR LR 15 22 35.9
comp=Z,5µm,25.2s
C09A Chrisman Ranch 120.96 28 ⇑P PKPdf 14 45 37.8 -0.6
baz=121
A11A Hall Mountain, 121.00 26 ⇓P PKPdf 14 45 37.8 -0.7
baz=121
NEW Newport 121.17 27 *e*PKIKP PKPdf 14 45 40.5 +1.7
NEW MLR MLR
comp=Z,3µm,21.0s
FFC Flin Flon 121.17 14 *e*PKIKP PKPdf 14 45 38.0 -0.6
FFC MLR MLR
comp=Z,4µm,21.0s,MS6.1
HAWA Hanford 121.32 30 *e*PKPdf PKPdf 14 45 38.9 -0.2
HAWA LR LR
comp=Z,3µm,19.0s,MS5.9
B11A Sandpoint 121.39 27 ⇑P PKPdf 14 45 38.8 -0.4
baz=121
G06A Carlson Farm, 121.53 32 ⇓P PKPdf 14 45 38.4 -1.2
baz=121
A13A Flathead Natio 121.87 25 ⇓P PKPdf 14 45 39.4 -0.7
baz=122
HUMO Hull Mountain 121.92 36 *e*PKPdf PKPdf 14 45 39.1 -1.3
HUMO LR LR
comp=Z,2µm,20.0s,MS5.8
WALA Waterton Lakes 121.99 25 *e*PKPdf PKPdf 14 45 40.5 +0.1
A14A Double T Ranch 122.26 25 ⇑P PKPdf 14 45 39.7 -1.2
baz=122
B13A Whitefish 122.28 26 ⇑P PKPdf 14 45 39.6 -1.3
baz=122
LNOR Lincton Mounta 122.31 30 PKIKP PKPdf 14 45 41.6 +0.6
G08A Pilot Rock 122.37 31 ⇑P PKPdf 14 45 40.4 -0.8
baz=122
SCHQ Schefferville 122.49 350 PKP PKPdf 14 45 40.8 -0.3
comp=Z,4.9nm,0.6s,baz=21,slow=5.9,SNR=11
SCHQ Schefferville 122.49 350 *e*PKPdf PKPdf 14 45 40.0 -1.1
SCHQ LR LR
comp=Z,7µm,21.0s,MS6.3
BSMT Bassoo Peak 122.53 26 *e*PKPdf PKPdf 14 45 42.5 +1.0
A15A Johnson Ranch, 122.55 24 ⇑P PKPdf 14 45 40.1 -1.3
baz=122,SNR=12
YBH Yreka Blue Hor 122.60 36 PFAKE 14 45 50.0 +8.3
YBH LR LR
comp=Z,2µm,22.0s,MS5.8
C13A Hot Springs 122.75 26 ⇑P PKPdf 14 45 41.2 -0.6
baz=123
F10A Beach Ranch, E 122.76 29 ⇓P PKPdf 14 45 41.2 -0.7
baz=123
JTMT Jette 122.83 26 *e*PKPdf PKPdf 14 45 43.0 +1.0
YBMT Yellow Bay 122.86 26 PKPdf PKPdf 14 45 41.1 -0.9
D12A Red Ives Fores 122.87 27 ⇑P PKPdf 14 45 41.5 -0.6
baz=123
I07A Izee 122.90 32 ⇑P PKPdf 14 45 41.3 -1.0
baz=123
G09A Cove 122.98 30 ⇓P PKPdf 14 45 41.2 -1.2
baz=123
E11A Bogner Ranch, 122.98 28 ⇓P PKPdf 14 45 40.9 -1.4
baz=123
K05A Summer Lake 123.03 34 ⇓P PKPdf 14 45 41.5 -1.0
baz=123
A16A West Butte Ran 123.03 24 ⇓P PKPdf 14 45 41.3 -1.1
baz=123,SNR=12
H08A Prairie City 123.05 31 ⇓P PKPdf 14 45 40.9 -1.6
baz=123
C14A Swan Lake 123.05 26 ⇑P PKPdf 14 45 41.5 -0.9
baz=123
B15A Bradely Ranch, 123.14 25 ⇑P PKPdf 14 45 41.3 -1.2
baz=123,SNR=20
SWMT Swartz Lake 123.14 26 *e*PKPdf PKPdf 14 45 43.0 +0.4
D13A Huson 123.25 27 ⇓P PKPdf 14 45 41.9 -0.9
baz=123
G10A Bishop Farm, J 123.30 30 ⇑P PKPdf 14 45 42.0 -0.9
baz=123
F11A Grangeville 123.34 29 ⇓P PKPdf 14 45 41.6 -1.4
baz=123
A17A Triple J Farms 123.39 23 ⇑P PKPdf 14 45 42.1 -1.0
baz=123,SNR=9.5
WDC Whiskeytown Da 123.41 37 PFAKE 14 45 50.0 +6.7
WDC LR LR
comp=Z,2µm,19.0s,MS5.9
B16A M & M Farms, S 123.41 24 ⇓P PKPdf 14 45 41.7 -1.3
baz=123
C15A Salmond Ranch, 123.54 25 ⇑P PKPdf 14 45 42.1 -1.2
baz=123,SNR=38
SLMT Seeley Lake 123.56 26 *e*PKPdf PKPdf 14 45 41.8 -1.6
G11A Walters Elk Ra 123.64 29 ⇓P PKPdf 14 45 42.1 -1.6
baz=124
MSO Missoula 123.68 27 *e*PKPdf PKPdf 14 45 42.0 -1.7
MSO LR LR
comp=Z,2µm,20.0s,MS5.8
D14A Greenough 123.68 26 ⇑P PKPdf 14 45 42.6 -1.0
baz=124
A18A Metzger Ranch, 123.74 23 ⇓P PKPdf 14 45 42.5 -1.2
baz=124
E13A Victor 123.86 27 ⇓P PKPdf 14 45 42.3 -1.7
baz=124
F12A Elk City 123.87 28 ⇑P PKPdf 14 45 42.4 -1.7
baz=124
B17A L&G Farms, Che 123.87 24 ⇓P PKPdf 14 45 42.7 -1.2
baz=124,SNR=14
C16A Fuhringer Ranc 123.88 25 ⇑P PKPdf 14 45 42.4 -1.6
baz=124,SNR=7.5
MOD Modoc 123.89 35 *e*PKPdf PKPdf 14 45 43.4 -0.8
MOD LR LR
comp=Z,2µm,19.0s,MS5.9
CHMT Chamberlain Mo 123.92 26 *e*PKPdf PKPdf 14 45 42.6 -1.5
H10A Noah's Angus R 123.98 30 ⇑P PKPdf 14 45 42.7 -1.6
baz=124
HOPS Hopland 124.02 39 PFAKE 14 46 00.0 +15
HOPS LR LR
comp=Z,3µm,21.0s,MS5.9
D15A Lincoln 124.14 26 ⇑P PKPdf 14 45 43.4 -1.1
baz=124,SNR=10
E14A Clinton 124.19 27 ⇓P PKPdf 14 45 43.4 -1.3
baz=124
B18A Beardsley Farm 124.19 23 ⇓P PKPdf 14 45 43.5 -1.1
baz=124
H11A Donnelly 124.27 30 ⇑P PKPdf 14 45 43.6 -1.2
baz=124
F13A Darby 124.28 28 ⇓P PKPdf 14 45 43.5 -1.3
baz=124
J09A Fry Pan Ranch, 124.33 32 ⇑P PKPdf 14 45 44.2 -0.8
baz=124
C17A Wharram Farm, 124.42 24 ⇓P PKPdf 14 45 44.0 -1.0
baz=124,SNR=8.9
WVOR Wild Horse Val 124.48 33 *e*PKIKP PKPdf 14 45 45.5 +0.2
WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.8
EGMT Eagleton 124.50 23 ⇓P PKPdf 14 45 43.6 -1.6
baz=124
EGMT Eagleton 124.50 23 *e*PKPdf PKPdf 14 45 45.1 -0.1
EGMT LR LR
comp=Z,5µm,19.0s,MS6.2
D16A Dana Ranch, Ca 124.57 25 ⇑P PKPdf 14 45 44.1 -1.3
baz=124
MCCM Marconi Confer 124.64 40 PFAKE 14 46 00.0 +14
MCCM LR LR
comp=Z,2µm,21.0s,MS5.7
HRY Holter Researc 124.70 25 PKPdf PKPdf 14 45 45.5 0.0
D17A Six Diamond Ra 124.83 24 ⇓P PKPdf 14 45 44.4 -1.4
baz=125,SNR=16
G13A Cobalt 124.85 28 ⇑P PKPdf 14 45 45.3 -0.6
baz=125
E16A East Helena 124.90 25 ⇑P PKPdf 14 45 45.2 -0.8
baz=125,SNR=8.0
H12A Diamond D Ranc 124.95 29 ⇓P PKPdf 14 45 45.5 -0.6
baz=125
F15A Butte 125.08 27 ⇓P PKPdf 14 45 45.8 -0.6
baz=125
LRM Limekiln Ridge 125.11 27 *e*PKPdf PKPdf 14 45 47.6 +1.2
BEKR Beckwourth 125.16 37 ⇓P PKPdf 14 45 45.6 -1.1
baz=125
K10A MacKenzie Ranc 125.19 32 ⇑P PKPdf 14 45 46.0 -0.7
baz=125
H13A Challis 125.23 29 ⇓P PKPdf 14 45 45.8 -0.9
baz=125
MFID Camas Ranch 125.28 31 ⇑P PKPdf 14 45 46.1 -0.8
baz=125
E17A Martinsdale 125.31 25 ⇓P PKPdf 14 45 45.8 -0.9
baz=125
I12A Atlanta 125.36 30 ⇑P PKPdf 14 45 46.4 -0.5
baz=125
DLMT Dillon 125.40 27 *e*PKPdf PKPdf 14 45 46.6 -0.4
F16A Kennard Place, 125.51 26 ⇑P PKPdf 14 45 46.5 -0.7
baz=125
G15A Dillon 125.60 27 ⇓P PKPdf 14 45 46.8 -0.6
baz=125,SNR=7.6
H14A Leadore 125.61 28 ⇓P PKPdf 14 45 46.3 -1.1
baz=125
BOZ Bozeman (W) 125.61 26 ⇓P PKPdf 14 45 46.7 -0.7
baz=125,SNR=14
BOZ Bozeman (W) 125.61 26 PFAKE 14 46 00.0 +13
BOZ LR LR
comp=Z,3µm,20.0s,MS6.0
E18A Harlowton 125.62 24 ⇓P PKPdf 14 45 46.8 -0.6
baz=126
K11A Parker Ranch, 125.64 31 ⇓P PKPdf 14 45 46.8 -0.7
baz=126
MCMT McKenzie Canyo 125.69 28 *e*PKPdf PKPdf 14 45 47.9 +0.3
J12A Stokes Ranch, 125.77 30 ⇑P PKPdf 14 45 47.2 -0.5
baz=126
I13A Wildhorse Cree 125.78 29 ⇑P PKPdf 14 45 47.4 -0.4
baz=126
F17A Fitzpatrick Pl 125.83 25 ⇑P PKPdf 14 45 47.3 -0.5
baz=126,SNR=7.5
G16A Moss Hill, Enn 125.86 27 ⇓P PKPdf 14 45 47.3 -0.6
baz=126,SNR=12
HLID Hailey 125.89 30 ⇑P PKPdf 14 45 47.6 -0.4
baz=126
HLID Hailey 125.89 30 *e*PKPdf PKPdf 14 45 48.1 +0.1
HLID LR LR
comp=Z,3µm,19.0s,MS6.0
L10A Juniper Basin 125.89 32 ⇓P PKPdf 14 45 47.7 -0.3
baz=126
H15A Lima 125.95 28 ⇑P PKPdf 14 45 47.2 -0.9
baz=126,SNR=9.9
I14A Mackay 126.09 29 ⇓P PKPdf 14 45 47.8 -0.5
baz=126
DGMT Dagmar 126.12 19 ⇓P PKPdf 14 45 47.8 -0.5
baz=126
DGMT Dagmar 126.12 19 *e*PKPdf PKPdf 14 45 49.8 +1.6
DGMT LR LR
comp=Z,3µm,19.0s,MS6.0
J13A Cove Ranch, Pi 126.13 30 ⇑P PKPdf 14 45 47.5 -0.9
baz=126
L11A Cat Creek Ranc 126.21 32 ⇑P PKPdf 14 45 47.7 -1.0
baz=126
F18A Big Timber 126.23 25 ⇑P PKPdf 14 45 48.0 -0.6

baz=126
CMB **Columbia Colle 126.28 38** PFAKE 14 46 00.0 +11
CMB LR LR
comp=Z,2μm,19.0s,MS5.8
QLMT **Earthquake Lak 126.34 27** *e*PKPdf PKPdf 14 45 49.8 +1.0
GCMT **Greycliff 126.34 25** *e*PKPdf PKPdf 14 45 49.9 +1.1
SAO **San Andreas Ge 126.38 40** PFAKE 14 46 00.0 +11
SAO LR LR
comp=Z,2μm,20.0s,MS5.8
H16A **Russell Place, 126.52 27** ⇓P PKPdf 14 45 48.4 -0.8
baz=126,SNR=16
EFI **East Falkland 126.60 198** PFAKE 14 46 00.0 +11
EFI LR LR
comp=Z,2μm,21.0s,MS5.9
BMN **Battle Mountai 126.61 34** PFAKE 14 46 00.0 +11
BMN LR LR
comp=Z,2μm,21.0s,MS5.8
L12A **House Creek Ra 126.61 31** ⇓P PKPdf 14 45 48.7 -0.7
baz=126
YMR **Madison River 126.67 26** *e*PKPdf PKPdf 14 45 50.9 +1.4
M11A **Holland Ranch, 126.71 32** ⇑P PKPdf 14 45 48.6 -1.0
baz=126
ULM **Lac du Bonnet 126.71 12** PKP PKPdf 14 45 49.2 -0.1
comp=Z,12nm,0.8s,baz=359,slow=2.5,SNR=12
ULM **Lac du Bonnet 126.71 12** *e*PKPdf PKPdf 14 45 49.3 0.0
ULM LR LR
comp=Z,8μm,21.0s,MS6.4
YFT **Old Faithful 126.90 27** *e*PKPdf PKPdf 14 45 49.5 -0.4
LAO **LASA Array 126.95 22** *e*PKPdf PKPdf 14 45 51.1 +1.2
LAO LR LR
comp=Z,3μm,20.0s,MS6.0
J15A **Blackfoot 126.97 28** ⇓P PKPdf 14 45 49.4 -0.7
baz=127,SNR=9.6
LKWY **Lake 127.00 26** *e*PKIKP PKPdf 14 45 51.7 +1.6
LKWY MLR MLR
comp=Z,7μm,19.0s,MS6.3
H17A **Grant Village 127.06 26** ⇓P PKPdf 14 45 50.0 -0.2
baz=127,SNR=7.3
O10A **Cortez Mining, 127.11 34** ⇓P PKPdf 14 45 49.5 -0.9
baz=127
M12A **Wells 127.18 32** ⇑P PKPdf 14 45 50.3 -0.3
baz=127
K14A **Jones Ranch, D 127.25 30** ⇓P PKPdf 14 45 49.8 -0.8
baz=127
IMW **Indian Meadow 127.28 27** *e*PKPdf PKPdf 14 45 51.6 +1.0
NVAR **Mina Array Bea 127.31 37** PKP PKPdf 14 45 51.9 +1.0
comp=Z,4.0nm,0.9s,baz=258,slow=1.9,SNR=16
J16A **Bone 127.46 28** ⇓P PKPdf 14 45 50.4 -0.6
baz=127,SNR=6.3
ELK **Elko 127.49 33** PFAKE 14 46 00.0 +8.9
ELK LR LR
comp=Z,3μm,20.0s,MS6.0
N12A **Clover Valley, 127.52 32** ⇓P PKPdf 14 45 50.8 -0.4
baz=127
N12A **Clover Valley, 127.52 32** *e*PKPdf PKPdf 14 45 52.2 +1.1
RRI2 **Red Ridge 127.54 28** *e*PKPdf PKPdf 14 45 52.0 +0.9
TPAW **Teton Pass 127.60 27** *e*PKPdf PKPdf 14 45 51.6 +0.4
L14A **Malta 127.60 30** ⇑P PKPdf 14 45 50.7 -0.6
baz=127,SNR=9.7
M13A **Montello 127.62 31** ⇑P PKPdf 14 45 51.1 -0.3
baz=128
M13A **Montello 127.62 31** *e*PKPdf PKPdf 14 45 52.4 +1.1
LOHW **Long Hollow 127.66 27** *e*PKPdf PKPdf 14 45 51.5 +0.1
O11A **Cowboy Ranch, 127.69 33** ⇓P PKPdf 14 45 50.9 -0.7
baz=128
REDW **Red Top Meadow 127.74 27** *e*PKPdf PKPdf 14 45 51.1 -0.4
J17A **Brown Place, J 127.81 27** ⇓P PKPdf 14 45 51.4 -0.2
baz=128
K16A **Soda Springs 127.81 28** ⇓P PKPdf 14 45 51.2 -0.5
baz=128,SNR=6.7
M14A **Sheep Mountain 127.94 31** ⇓P PKPdf 14 45 51.3 -0.6
baz=128,SNR=8.8
I18A **Diamond G Ranc 127.94 26** ⇑P PKPdf 14 45 51.2 -0.7
baz=128
N13A **Wendover, West 127.96 32** *e*PKPdf PKPdf 14 45 52.9 +0.9
HVU **Hansel Valley 128.02 30** *e*PKIKP PKPdf 14 45 51.0 -1.1
L15A **Malad City 128.04 30** ⇑P PKPdf 14 45 51.4 -0.7
baz=128,SNR=7.3
AHID **Auburn Hatcher 128.09 28** PFAKE 14 46 00.0 +7.8
AHID LR LR
comp=Z,4μm,20.0s,MS6.1
O12A **Currie 128.09 33** ⇑P PKPdf 14 45 51.9 -0.4
baz=128
Q10A **Clear Creek Ra 128.16 35** ⇓P PKPdf 14 45 52.1 -0.3
baz=128
TPH **Tonopah 128.18 36** PFAKE 14 46 00.0 +7.5
TPH LR LR
comp=Z,2μm,19.0s,MS5.9
J18A **Kendall Valley 128.24 27** ⇓P PKPdf 14 45 52.0 -0.5
baz=128
M15A **Larsen Ranch, 128.42 30** ⇑P PKPdf 14 45 51.7 -1.1
baz=128,SNR=7.8
N14A **Grayback Hills 128.49 31** ⇑P PKPdf 14 45 52.3 -0.8
baz=128
L16A **Fish Haven 128.50 29** ⇓P PKPdf 14 45 52.5 -0.5
baz=128
BGU **Big Grassy Mou 128.52 31** *e*PKPdf PKPdf 14 45 52.8 -0.3
P12A **McGill 128.56 34** ⇓P PKPdf 14 45 52.3 -1.0
baz=128,SNR=13
AGMN **Agassiz Refuge 128.56 13** *e*PKPdf PKPdf 14 45 52.7 -0.3
AGMN LR LR
comp=Z,8μm,20.0s,MS6.4
Q11A **Duckwater 128.57 35** ⇓P PKPdf 14 45 52.7 -0.6
baz=128
S10A **Tonopah Range, 128.65 36** ⇑P PKPdf 14 45 52.9 -0.5
baz=128
K18A **Toltan Ranch, 128.68 27** ⇑P PKPdf 14 45 52.4 -1.0
baz=128
HWUT **Hardware Ranch 128.75 29** *e*PKPdf PKPdf 14 45 52.7 -0.8
HWUT LR LR
comp=Z,3μm,20.0s,MS6.0
BW06 **Boulder Array 128.80 27** ⇓P PKPdf 14 45 53.4 -0.1
baz=129
BW06 **Boulder Array 128.80 27** PFAKE 14 46 10.0 +16
BW06 LR LR
comp=Z,3μm,22.0s,MS5.9
PDAR **Pinedale Array 128.80 27** PKP PKPdf 14 45 54.5 +0.9
comp=Z,4.0nm,0.8s,baz=270,slow=0.1,SNR=23
N15A **Stansbury Isla 128.81 31** ⇓P PKPdf 14 45 53.1 -0.5
baz=129
Q12A **Willow Creek R 128.91 34** ⇓P PKPdf 14 45 53.0 -0.8
baz=129
R11A **Troy Canyon, C 128.95 35** ⇑P PKPdf 14 45 53.0 -1.0
baz=129,SNR=50
P13A **Bates Ranch, G 129.06 33** ⇓P PKPdf 14 45 53.2 -1.0
baz=129,SNR=9.5
DAC **Darwin (Calif) 129.12 38** PFAKE 14 46 10.0 +16
DAC LR LR
comp=Z,2μm,20.0s,MS5.9
DUG **Dugway 129.17 31** ⇑P PKPdf 14 45 53.0 -1.3
baz=129,SNR=13
DUG **Dugway 129.17 31** *e*PKIKP PKPdf 14 45 55.2 +0.8
DUG MLR MLR
comp=Z,3μm,21.0s,MS5.9
DUG **Dugway 129.17 31** *e*PKPdf PKPdf 14 45 55.2 +0.9
DUG LR LR
comp=Z,3μm,21.0s,MS5.9
MPMC **Manual Prospec 129.32 39** ⇑P PKPdf 14 45 53.8 -0.9
baz=129
L19A **Farson 129.41 27** ⇑P PKPdf 14 45 54.1 -0.6
baz=129
K20A **Yellowstone Ra 129.43 26** ⇑P PKPdf 14 45 54.0 -0.8
baz=129
P14A **Drum Mountains 129.47 32** ⇓P PKPdf 14 45 54.1 -0.8
baz=129,SNR=17
R12A **Pony Springs, 129.53 34** ⇓P PKPdf 14 45 54.2 -0.9
baz=129
JLU **Jordanelle 129.56 30** *e*PKPdf PKPdf 14 45 55.5 +0.4
LRMC **Laurel Mountai 129.57 39** ⇑P PKPdf 14 45 54.2 -1.1
baz=129
NLU **North Lily Min 129.73 31** *e*PKPdf PKPdf 14 45 54.9 -0.5
EYMN **Ely 129.73 9** *e*PKPdf PKPdf 14 45 54.5 -0.7
EYMN LR LR
comp=Z,4μm,20.0s,MS6.1
EDW2 **Edwards Air Fo 129.75 40** ⇓P PKPdf 14 45 54.5 -1.1
baz=130
Q14A **Sevier Lake (B 129.80 33** ⇓P PKPdf 14 45 54.2 -1.4
baz=130,SNR=8.4
DAU **Daniels Canyon 129.80 30** *e*PKIKP PKPdf 14 45 55.3 -0.3
U10A **Ash Meadows, A 129.81 37** ⇑P PKPdf 14 45 55.1 -0.6
baz=130
S12A **Delamar Landin 129.88 35** ⇓P PKPdf 14 45 55.4 -0.4
baz=130
T11A **Corn Creek, Al 129.92 36** ⇓P PKPdf 14 45 54.7 -1.2
baz=130,SNR=11
L20A **Wamsutter 129.95 27** ⇑P PKPdf 14 45 54.7 -1.0
baz=130

RSSD Black Hills 129.95 22 *e*PKIKP PKPdf 14 45 54.9 -0.8
RSSD MLR MLR
comp=Z,3μm,20.0s,MS6.0
R13A **O'Grain Ranch, 129.99 34** ⇓P PKPdf 14 45 55.3 -0.6
baz=130,SNR=5.6
O17A **Robinson Place 130.23 30** ⇑P PKPdf 14 45 55.8 -0.6
baz=130
GSC **Goldstone 130.24 39** ⇑P PKPdf 14 45 55.6 -1.0
baz=130
L21A **Rawlins 130.41 26** ⇓P PKPdf 14 45 55.5 -1.2
baz=130
N19A **John Jarvie Ra 130.44 28** ⇓P PKPdf 14 45 56.4 -0.3
baz=130
S13A **Holt Ranch, En 130.47 35** ⇑P PKPdf 14 45 55.2 -1.7
baz=130,SNR=9.3
O18A **Roosevelt 130.53 29** ⇑P PKPdf 14 45 56.3 -0.6
baz=130
TMUT **Trail Mountain 130.66 31** *e*PKPdf PKPdf 14 45 58.3 +1.1
M21A **Separation Pea 130.70 26** ⇓P PKPdf 14 45 57.2 -0.1
baz=130
RWWY **Rawlins 130.70 26** *e*PKPdf PKPdf 14 45 56.0 -1.3
MVU **Marysvale 130.72 32** PFAKE 14 46 10.0 +13
MVU LR LR
comp=Z,3μm,22.0s,MS5.9
S14A **Cedar City 130.73 34** ⇑P PKPdf 14 45 57.5 +0.1
baz=131
MSU **Marysvale 130.73 32** *e*PKIKP PKPdf 14 45 56.8 -0.6
CCUT **Cedar City 130.77 34** *e*PKPdf PKPdf 14 45 57.7 +0.2
P18A **Preston Nutter 130.90 30** ⇓P PKPdf 14 45 57.7 0.0
baz=131
N20A **Spence Gulch, 130.92 27** ⇑P PKPdf 14 45 57.6 -0.1
baz=131
SRU **San Rafael 131.16 31** ⇓P PKPdf 14 45 57.3 -0.9
baz=131
SRU **San Rafael 131.16 31** *e*PKPdf PKPdf 14 45 58.4 +0.3
V12A **Nelson 131.16 37** ⇑P PKPdf 14 45 57.4 -0.9
baz=131,SNR=7.4
M22A **Cedar Creek Ra 131.20 26** ⇓P PKPdf 14 45 57.7 -0.5
baz=131
T14A **Hurricane 131.27 34** ⇑P PKPdf 14 45 58.2 -0.2
baz=131
N21A **Black Mountain 131.32 27** ⇑P PKPdf 14 45 57.7 -0.7
baz=131
Q18A **Rafter H Ranch 131.36 30** ⇑P PKPdf 14 45 58.8 +0.2
baz=131
LDFC **Landfair 131.43 38** PKPdf PKPdf 14 45 57.7 -1.1
P19A **Cripple Cowboy 131.52 29** ⇑P PKPdf 14 45 58.6 -0.3
baz=131
PFO **Pinyon Flat Ob 131.53 40** PFAKE 14 46 10.0 +11
PFO LR LR
comp=Z,742nm,19.0s,MS5.4
R17A **Hanksville Air 131.58 31** ⇓P PKPdf 14 45 59.2 +0.2
baz=131
BELC **Belle Mtn. 131.58 40** ⇓P PKPdf 14 45 59.1 0.0
baz=131
V13A **Grand Canyon W 131.59 36** ⇓P PKPdf 14 45 58.7 -0.4
baz=131,SNR=5.1
U14A **Mt Trumbull 131.67 35** ⇑P PKPdf 14 45 58.9 -0.3
baz=132,SNR=6.0
N22A **Wattenberg Ran 131.76 26** ⇑P PKPdf 14 45 59.3 0.0
baz=132
PHWY **Pilot Hill 131.77 25** *e*PKPdf PKPdf 14 45 58.6 -0.6
COWI **Conover 131.88 8** *e*PKPdf PKPdf 14 46 01.2 +1.9
COWI LR LR
comp=Z,5μm,22.0s,MS6.2
Q19A **Hogan Spring (131.91 30** ⇑P PKPdf 14 45 59.8 +0.2
baz=132
IRM **Iron Mountain 132.01 39** ⇓P PKPdf 14 45 59.2 -0.8
baz=132,SNR=5.9
R18A **Canyonlands Na 132.02 31** ⇑P PKPdf 14 45 59.0 -0.8
baz=132
S17A **Black Ridge (B 132.11 32** ⇑P PKPdf 14 45 59.6 -0.5
baz=132
PKME **Peaks-Kenny Pk 132.13 349** PFAKE 14 46 10.0 +10
PKME LR LR
comp=Z,6μm,19.0s,MS6.3
BC3 **Big Chuckw Mtn 132.15 40** ⇓P PKPdf 14 45 59.8 -0.4
baz=132,SNR=5.5
W13A **Hualapai Mount 132.16 37** ⇓P PKPdf 14 45 59.9 -0.3
baz=132
U15A **North Rim 132.17 34** ⇑P PKPdf 14 45 59.8 -0.4
baz=132,SNR=9.0
V14A **Boquillas Ranc 132.26 36** ⇑P PKPdf 14 45 59.8 -0.5
baz=132,SNR=7.3
S18A **Hurst Farm, Bl 132.50 31** ⇑P PKPdf 14 46 00.0 -0.7
baz=132
PV04 **Paradox Valley 132.52 30** PKPdf PKPdf 14 46 01.2 +0.5
X13A **Yucca 132.54 37** ⇑P PKPdf 14 46 00.4 -0.5
baz=132,SNR=5.9
W14A **Seligman 132.56 36** ⇑P PKPdf 14 46 00.8 -0.1
baz=132,SNR=7.2
T17A **Navajo Res., N 132.58 33** ⇓P PKPdf 14 46 00.6 -0.4
baz=132
ECSD **EROS Data Cent 132.66 15** *e*PKPdf PKPdf 14 46 01.1 +0.2
ECSD LR LR
comp=Z,5μm,19.0s,MS6.2
V15A **Kaibab Nationa 132.67 35** ⇑P PKPdf 14 46 01.1 0.0
baz=132,SNR=5.2
PV01 **Paradox Valley 132.89 30** *e*PKPdf PKPdf 14 46 02.7 +1.3
S19A **Harvey Farm, M 132.90 31** ⇓P PKPdf 14 46 01.3 -0.2
baz=133
ISCO **Idaho Springs 132.94 26** *e*PKIKP PKPdf 14 46 03.3 +1.8
ISCO MLR MLR
comp=Z,3μm,21.0s,MS6.0
T18A **Mexican Hat 132.98 32** ⇓P PKPdf 14 46 01.7 0.0
baz=133
U16A **Tuba City 133.03 34** ⇓P PKPdf 14 46 01.9 +0.1
baz=133
WUAZ **Wupatki 133.34 35** *e*PKPdf PKPdf 14 46 03.7 +1.3
WUAZ LR LR
comp=Z,3μm,19.0s,MS6.0
OGNE **Ogallala 133.44 22** PFAKE 14 46 10.0 +7.6
OGNE LR LR
comp=Z,4μm,19.0s,MS6.2
U18A **Rough Rock, Ch 133.51 33** ⇑P PKPdf 14 46 02.6 -0.1
baz=133
LONY **Lake Ozonia 133.56 354** PFAKE 14 46 10.0 +7.5
LONY LR LR
comp=Z,6μm,20.0s,MS6.3
Z13A **Yuma Proving G 133.58 39** ⇑P PKPdf 14 46 02.9 0.0
baz=133
LBNH **Lisbon 133.58 351** PFAKE 14 46 10.0 +7.4
LBNH LR LR
comp=Z,4μm,19.0s,MS6.2
GLMI **Grayling 133.59 4** PFAKE 14 46 10.0 +7.4
GLMI LR LR
comp=Z,5μm,21.0s,MS6.2
MVCO **Mesa Verde 133.63 31** ⇓P PKPdf 14 46 03.0 +0.1
baz=134
MVCO **Mesa Verde 133.63 31** *e*PKPdf PKPdf 14 46 03.6 +0.7
MVCO LR LR
comp=Z,4μm,22.0s,MS6.1
S21A **Coal Bank Pass 133.64 30** ⇑P PKPdf 14 46 03.3 +0.4
baz=134
Y15A **Casa Rosa Ranc 133.88 37** ⇑P PKPdf 14 46 03.9 +0.4
baz=134
NCB **Newcomb 134.16 353** PFAKE 14 46 10.0 +6.3
NCB LR LR
comp=Z,4μm,20.0s,MS6.1
T22A **Edith 134.59 29** ⇓P PKPdf 14 46 04.5 -0.1
baz=134
SDCO **Great Sand Dun 134.67 28** PKPpre 14 45 58.0
SDCO LR LR
comp=Z,4μm,20.0s,MS6.2
JFWS **Jewell Farm 134.83 10** PFAKE 14 46 20.0 +15
JFWS LR LR
comp=Z,5μm,21.0s,MS6.2
RCBR **Riachuelo 134.88 263** PFAKE 14 46 20.0 +14
RCBR LR LR
comp=Z,2μm,20.0s,MS5.7
SCIA **State Center 135.22 13** PFAKE 14 46 20.0 +14
SCIA LR LR
comp=Z,6μm,21.0s,MS6.3
Y19A **Nutrioso 135.67 34** ⇓P PKPdf 14 46 07.4 +0.6
baz=136
TUC **Tucson 135.95 37** PFAKE 14 46 20.0 +13
TUC LR LR
comp=Z,2μm,22.0s,MS5.9
BINY **Binghamton 136.10 355** PFAKE 14 46 20.0 +13
BINY LR LR
comp=Z,5μm,21.0s,MS6.2
X21A **Alamocita Cree 136.12 33** ⇓P PKPdf 14 46 08.3 +0.6
baz=136
CBKS **Cedar Bluff 136.15 21** PFAKE 14 46 20.0 +12
CBKS LR LR
comp=Z,5μm,21.0s,MS6.2
AAM **Ann Arbor 136.16 3** PFAKE 14 46 20.0 +13

AAM LR LR
comp=Z,4μm,20.0s,MS6.1
Y20A **Horse Springs, 136.20 34** ⇑P PKPdf 14 46 08.0 +0.2
baz=136
217A **Green Valley 136.31 38** ⇓P PKPdf 14 46 08.0 -0.1
baz=136
ERPA **Erie 136.40 359** PFAKE 14 46 20.0 +12
ERPA LR LR
comp=Z,6μm,21.0s,MS6.3
ANMO **Albuquerque 136.43 31** *e*PKIKP PKPdf 14 46 09.0 +0.8
ANMO MLR MLR
comp=Z,4μm,20.0s
LAZ **Ladron 136.50 32** *e*PKPdf PKPdf 14 46 09.5 +1.2
Y21A **Point of Rocks 136.51 33** ⇓P PKPdf 14 46 08.2 -0.1
baz=136
119A **Ashpeak Ranch, 136.51 36** ⇓P PKPdf 14 46 08.4 0.0
baz=136
U26A **Atchley Ranch, 136.58 27** ⇓P PKPdf 14 46 08.9 +0.4
baz=136
218A **Dragoon 136.63 37** ⇑P PKPdf 14 46 09.3 +0.7
baz=136
Z20A **Nine Sixteen R 136.66 35** ⇓P PKPdf 14 46 09.4 +0.7
baz=136
W24A **Lazy 6 Ranch, 136.75 30** ⇑P PKPdf 14 46 09.4 +0.6
baz=137
KSU1 **Kansas State U 136.94 18** *e*PKPdf PKPdf 14 46 07.4 -1.6
KSU1 LR LR
comp=Z,4μm,21.0s,MS6.2
Y22A **Socorro 136.94 32** ⇓P PKPdf 14 46 09.8 +0.6
baz=137
BNM **Barren Site 136.96 32** *e*PKPdf PKPdf 14 46 10.6 +1.4
Z21A **St. Cloud Mine 137.04 34** ⇑P PKPdf 14 46 09.4 +0.1
baz=137
318A **Bisbee 137.04 38** ⇓P PKPdf 14 46 09.3 -0.1
baz=137
V26A **Tequesquite Ra 137.05 28** ⇓P PKPdf 14 46 10.1 +0.8
baz=137
120A **U Bar Ranch, L 137.06 35** ⇓P PKPdf 14 46 09.9 +0.4
baz=137
219A **White Tail Can 137.09 36** ⇓P PKPdf 14 46 09.7 +0.2
baz=137
W25A **X Bar L Ranch, 137.21 29** ⇓P PKPdf 14 46 10.3 +0.6
baz=137
HDIL **Hopedale 137.28 9** PFAKE 14 46 20.0 +10
HDIL LR LR
comp=Z,5μm,21.0s,MS6.2
Y23A **Lovelace Mesa, 137.43 31** ⇓P PKPdf 14 46 10.7 +0.6
baz=137
Z22A **Elephant Butte 137.46 33** ⇑P PKPdf 14 46 10.4 +0.2
baz=137
319A **Douglas 137.52 37** ⇑P PKPdf 14 46 10.8 +0.5
baz=137
121A **Cookes Peak, D 137.55 34** ⇓P PKPdf 14 46 10.4 +0.1
baz=137
220A **Playas Peak, P 137.59 36** ⇑P PKPdf 14 46 10.8 +0.4
baz=137
Y24A **Capitan 137.75 31** ⇑P PKPdf 14 46 10.9 +0.2
baz=138
SSPA **Standing Stone 137.80 357** PFAKE 14 46 20.0 +9.5
SSPA LR LR
comp=Z,6μm,22.0s,MS6.3
W27A **Bowe Ranch, En 137.99 27** ⇑P PKPdf 14 46 11.3 +0.2
baz=138
X26A **CR and CF Fran 138.06 29** ⇓P PKPdf 14 46 11.6 +0.3
baz=138
Y25A **Mesa, Roswell 138.13 30** ⇓P PKPdf 14 46 11.3 0.0
baz=138
ACSO **Alum Creek Sta 138.25 2** *e*PKPdf PKPdf 14 46 10.6 -0.8
ACSO LR LR
comp=Z,5μm,20.0s,MS6.2
Y26A **Elida 138.56 29** ⇑P PKPdf 14 46 12.6 +0.4
baz=138
124A **Stringfield Ra 138.70 32** ⇓P PKPdf 14 46 12.6 +0.2
baz=138
AMTX **Amarillo 138.76 26** PKPpre 14 46 07.7
AMTX LR LR
comp=Z,4μm,21.0s,MS6.1
MCWV **Mont Chateau 138.85 359** PFAKE 14 46 20.0 +7.5
MCWV LR LR
comp=Z,7μm,20.0s,MS6.4
Y27A **Causey 138.91 29** ⇓P PKPdf 14 46 12.7 -0.1
baz=139
MSTX **Muleshoe 139.03 28** ⇑P PKPdf 14 46 13.4 +0.4
baz=139
125A **Gardner Draw, 139.15 31** ⇑P PKPdf 14 46 13.7 +0.4
baz=139
CPRX **Cap Rock 139.26 30** *e*PKPdf PKPdf 14 46 11.7 -1.8
CCM **Cathedral Cave 139.34 13** PFAKE 14 46 20.0 +6.5
CCM LR LR
comp=Z,5μm,22.0s,MS6.2
Z27A **Tatum 139.35 29** ⇓P PKPdf 14 46 14.4 +0.8
baz=139
MNTX **Cornudas Mount 139.51 33** PKPpre 14 46 09.9
MNTX LR LR
comp=Z,5μm,20.0s,MS6.2
324A **Moseley Ranch, 139.65 33** ⇓P PKPdf 14 46 14.6 +0.4
baz=140
GDL2 **Guadalupe Moun 139.66 31** *e*PKPpre 14 46 07.8
TRQA **Tornquist 139.82 203** PFAKE 14 46 30.0 +16
TRQA LR LR
comp=Z,3μm,21.0s,MS6.0
CLNB **Carlsbad 139.86 31** *e*PKPdf PKPdf 14 46 16.0 +1.4
325A **Bean Ranch, Si 139.99 33** ⇑P PKPdf 14 46 15.3 +0.5
baz=140
WCI **Wyandotte Cave 139.99 7** PKIKP PKPdf 14 46 14.6 0.0
WCI MLR MLR
comp=Z,4μm,21.0s,MS6.2
PLCA **Paso Flores 140.00 192** PKP PKPdf 14 46 11.9 -2.6
comp=Z,3.0nm,0.9s,baz=215,slow=6.5,SNR=7.4
PLCA **Paso Flores 140.00 192** PKP PKPdf 14 46 11.9 -2.6
PLCA LR LR
comp=Z,5μm,21.0s,MS6.2
SIUC **Southern Illin 140.07 10** *e*PKPpre PKPdf 14 46 13.1 -1.7
WMOK **Wichita Mounta 140.10 23** *e*PKHKP 14 46 07.6
WMOK MLR MLR
comp=Z,4μm,19.0s,MS6.2
CBN **Corbin 140.18 356** PFAKE 14 46 30.0 +15
CBN LR LR
comp=Z,6μm,22.0s,MS6.3
425A **Indio Mountain 140.43 33** ⇑P PKPdf 14 46 16.2 +0.6
baz=140
426A **McDonald Obser 141.04 32** ⇑P PKPdf 14 46 17.3 +0.6
baz=141
328A **Wristen Ranch, 141.11 30** ⇑P PKPdf 14 46 17.7 +0.8
baz=141
427A **Hayter Ranch, 141.23 32** ⇓P PKPdf 14 46 18.2 +1.1
baz=141
BLA **Blacksburg 141.31 359** PFAKE 14 46 30.0 +13
BLA LR LR
comp=Z,7μm,22.0s,MS6.4
526A **Mary Lane Ranc 141.48 33** ⇑P PKPdf 14 46 18.9 +1.3
baz=141
527A **Woodward Ranch 141.67 33** ⇑P PKPdf 14 46 18.9 +1.0
baz=142
428A **Kincaid Ranch, 141.70 31** ⇓P PKPdf 14 46 19.2 +1.2
baz=142
626A **Big Bend Ranch 141.84 34** ⇓P PKPdf 14 46 19.4 +1.1
baz=142
WVT **Waverly 141.84 9** *e*PKIKP PKPdf 14 46 13.7 -4.3
WVT MLR MLR
comp=Z,4μm,22.0s,MS6.1
MIAR **Mount Ida 142.07 17** *e*PKHKP 14 46 11.8
MIAR MLR MLR
comp=Z,5μm,21.0s,MS6.2
528A **Cox Ranch, San 142.10 32** ⇑P PKPdf 14 46 19.8 +1.2
baz=142
TXAR **Lajitas Array 142.27 33** PKP PKPdf 14 46 17.4 -1.6
comp=Z,3.3nm,0.8s,baz=132,slow=1.9,SNR=19
627A **Terlingua Ranc 142.33 33** ⇑P PKPdf 14 46 20.4 +1.3
baz=142
TKL **Tuckaleechee C 142.77 4** *e*PKIKP PKPdf 14 46 16.9 -2.8
BBSR **BB Station 142.81 337** PFAKE 14 46 30.0 +10
BBSR LR LR
comp=Z,3μm,21.0s,MS6.1
CPCT **Cooper Cave 142.92 5** *e*PKPpre 14 46 15.1
PLAL **Pickwick Lake 142.93 10** *e*PKPpre 14 46 15.1
PLAL LR LR
comp=Z,5μm,21.0s,MS6.2
SWET **Sewanee 143.01 7** *e*PKPpre 14 46 15.2
OXF **Oxford 143.14 12** PKIKP PKPdf 14 46 19.2 -1.2
OXF MLR MLR
comp=Z,4μm,20.0s,MS6.2
JCT **Junction City 143.32 28** *e*PKIKP PKPdf 14 46 17.5 -3.3
JCT MLR MLR
comp=Z,4μm,20.0s,MS6.2
JSC **Jenkinsville 144.23 0** *e*PKIKP PKPdf 14 46 22.3 0.0
NATX **Nacogdoches 144.29 20** *e*PKPpre PKPdf 14 46 20.9 -1.6

NATX					LR	LR		
	comp=Z,4μm,19.0s,MS6.2							
LRAL	**Lakeview Retre**	**145.01**	**9**	*e*PKP	PKPdf	14 46 21.4	-2.3	
LRAL					LR	LR		
	comp=Z,5μm,20.0s,MS6.3							
GOGA	**Godfrey**	**145.02**	**4**	*e*PKIKP	PKPdf	14 46 21.8	-1.9	
GOGA					MLR	MLR		
	comp=Z,5μm,21.0s,MS6.3							
VBMS	**Vicksburg**	**145.09**	**14**	*e*PKP	PKPdf	14 46 22.8	-1.1	
VBMS					LR	LR		
	comp=Z,5μm,19.0s,MS6.3							
NHSC	**New Hope**	**145.40**	**359**	*e*PKP	PKPdf	14 46 24.3	-0.1	
NHSC					LR	LR		
	comp=Z,6μm,22.0s,MS6.3							
HKT	**Hockley**	**145.49**	**23**	*e*PKIKP	PKPdf	14 46 24.4	-0.2	
HKT					MLR	MLR		
	comp=Z,4μm,20.0s,MS6.2							
LMEL	**Las Melosas**	**146.45**	**196**	*e*P	PKPdf	14 46 28.3	+2.2	
CPUP	**Villa Florida**	**146.59**	**221**	PKPbc	PKPbc	14 46 27.9	-0.2	
	comp=Z,8.7nm,0.8s,baz=94,slow=2.7,SNR=19							
CPUP	**Villa Florida**	**146.59**	**221**	PKPbc	PKPbc	14 46 27.9	-0.2	
CPUP					LR	LR		
	comp=Z,450nm,20.0s,MS5.2							
KVTX	**Kingsville**	**146.68**	**28**	PFAKE		14 46 40.0	+13	
KVTX					LR	LR		
	comp=Z,4μm,19.0s,MS6.2							
BRAL	**Brewton**	**146.98**	**10**	*e*PKPbc	PKPbc	14 46 28.4	-0.6	
BRAL					LR	LR		
	comp=Z,4μm,19.0s,MS6.2							
TLL	**Tololo Astrono**	**150.07**	**198**	*e*P	PKPdf	14 46 36.4	+4.2	
DWPF	**Disney**	**150.38**	**1**	PFAKE		14 46 40.0	+7.3	
DWPF					LR	LR		
	comp=Z,5μm,21.0s,MS6.3							
LCO	**Las Campanas**	**151.12**	**199**	*e*PKPdf	PKPdf	14 46 34.5	+0.7	
LCO					LR	LR		
	comp=Z,3μm,21.0s,MS6.1							
ANWB	**Willy Bob**	**153.06**	**316**	PFAKE		14 46 50.0	+13	
ANWB					LR	LR		
	comp=Z,2μm,21.0s,MS5.9							
BBGH	**Gun Hill**	**154.17**	**305**	PFAKE		14 46 50.0	+11	
BBGH					LR	LR		
	comp=Z,4μm,20.0s,MS6.3							
FDF	**Fort de France**	**154.51**	**310**	PFAKE		14 46 50.0	+11	
FDF					LR	LR		
	comp=Z,2μm,22.0s,MS5.9							
GRTK	**Grand Turk**	**155.04**	**338**	PFAKE		14 46 50.0	+10	
GRTK					LR	LR		
	comp=Z,3μm,21.0s,MS6.1							
GRGR	**Grenville**	**156.43**	**306**	PFAKE		14 46 50.0	+8.3	
GRGR					LR	LR		
	comp=Z,2μm,21.0s,MS6.0							
SDDR	**Presa de Saban**	**157.38**	**336**	PFAKE		14 46 50.0	+7.2	
SDDR					LR	LR		
	comp=Z,3μm,20.0s,MS6.0							
GTBY	**Guantanamo Bay**	**157.78**	**345**	PFAKE		14 46 50.0	+6.7	
GTBY					LR	LR		
	comp=Z,3μm,20.0s,MS6.1							
MTDJ	**Mount Denham**	**159.94**	**351**	PFAKE		14 47 00.0	+14	
MTDJ					LR	LR		
	comp=Z,3μm,22.0s,MS6.1							
LPAZ	**La Paz**	**160.76**	**220**	PKP	PKPdf	14 46 46.9	0.0	
	comp=Z,6.5nm,1.0s,baz=70,slow=2.6,SNR=13							
LPAZ					PKPab	PKPab	14 47 29.9	+1.2
	comp=Z,8.4nm,0.9s,baz=106,slow=7.1,SNR=6.9							
TGUH	**Tegucigalpa,Un**	**163.16**	**22**	PFAKE		14 47 00.0	+11	
TGUH					LR	LR		
	comp=Z,2μm,20.0s							
SDV	**Santo Domingo**	**165.31**	**316**	*e*PKPdf	PKPdf	14 46 49.8	-1.5	
SDV				*e*PP	PP	14 51 33.0	-1.8	
SDV					LR	LR		
	comp=Z,1μm,19.0s							
JTS	**JuntasAbangare**	**167.46**	**18**	PFAKE		14 47 00.0	+7.0	
JTS					LR	LR		
	comp=Z,4μm,22.0s							
NNA	**Nana**	**168.98**	**201**	PFAKE		14 47 00.0	+6.0	
NNA					LR	LR		
	comp=Z,4μm,20.0s							
BCIP	**Isla Barro Col**	**169.17**	**354**	PFAKE		14 47 00.0	+5.8	
BCIP					LR	LR		
	comp=Z,3μm,22.0s							
PAYG	**Puerto Ayora**	**170.61**	**84**	PFAKE		14 47 10.0	+15	
PAYG					LR	LR		
	comp=Z,2μm,19.0s							
ROSC	**El Rosal**	**170.74**	**314**	PKP	PKPdf	14 46 56.2	+1.1	
	comp=Z,12nm,0.6s,baz=244,slow=23,SNR=11							
OTAV	**Otavalo**	**176.86**	**307**	PKPdf	PKPdf	14 46 56.8	-0.5	
OTAV					LR	LR		
	comp=Z,2μm,20.0s							

IGQ 19 14:28:16.1, 2°.79S×79°.92W, h12km±8km, Mb4.1, Ms3.9, 4C-4D, Error ellipse: s-maj=6.8km s-min=4.0km az=82.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.65**	**51**	⇑P	Pn	14 28 46.1	+1.2
RIOE	**Riobamba**	**1.65**	**51**	⇑S	Sn	14 29 09.8	+3.8
MACE	**Macas**	**1.80**	**73**	S	Sn	14 29 16.2	+6.4
MACE	**Macas**	**1.80**	**73**	P	Pn	14 28 50.3	+3.3
IGUA	**Igualata**	**1.82**	**45**	S	Sn	14 29 15.4	+5.2
IGUA	**Igualata**	**1.82**	**45**	P	Pn	14 28 48.6	+1.4
CHIS	**Cerro-Chispas-**	**1.90**	**335**	P	Pn	14 28 50.1	+1.7
ARRY	**Arrayan**	**1.94**	**49**	⇑P	Pn	14 28 50.3	+1.4
PATA	**Patacocha**	**1.96**	**49**	S	Sn	14 29 20.4	+6.6
PATA	**Patacocha**	**1.96**	**49**	P	Pn	14 28 51.3	+2.1
RUN5	**Runtun**	**2.03**	**48**	P	Pn	14 28 53.1	+3.0
PISA	**Pisayambo**	**2.31**	**42**	P	Pn	14 28 56.6	+2.7
CAMI	**Rancho Maria**	**2.53**	**34**	P	Pn	14 29 00.1	+3.0
MOV1	**Cotopaxi Vol s**	**2.54**	**36**	P	Pn	14 29 01.3	+4.2
NAS2	**Nasa**	**2.58**	**34**	P	Pn	14 29 01.1	+3.4
TAMB	**Tambo**	**2.60**	**37**	⇓P	Pn	14 29 01.4	+3.5
VC1	**Cotopaxi 1**	**2.62**	**36**	⇓P	Pn	14 29 01.6	+3.4
COV1	**Cotopaxi Volc**	**2.64**	**37**	P	Pn	14 29 01.6	+3.1
PITA	**Cotopaxi Volc**	**2.67**	**34**	P	Pn	14 29 02.2	+3.3
JUA2	**San Juan 2**	**2.88**	**27**	P	Pn	14 29 04.3	+2.5
TERV	**Terraza Guagua**	**2.91**	**27**	P	Pn	14 29 04.5	+2.2
ANTI	**Antisana**	**2.92**	**37**	P	Pn	14 29 05.8	+3.5
GGP	**Refugio Guagua**	**2.92**	**27**	⇓S	Sn	14 29 44.8	+7.5
GGP	**Refugio Guagua**	**2.92**	**27**	⇓P	Pn	14 29 04.4	+2.1
PINO	**Pino**	**2.92**	**27**	⇑P	Pn	14 29 04.2	+1.8
OTAV	**Otavalo**	**3.35**	**26**	P	Pn	14 29 09.9	+1.7
CAYR	**Refugio Cayamb**	**3.38**	**35**	P	Pn	14 29 16.7	+8.0
CAYA	**Cayambe**	**3.44**	**34**	P	Pn	14 29 15.6	+6.1
COTA	**Cotacachi**	**3.48**	**27**	P	Pn	14 29 12.2	+2.1

*IDC **19** 14:30:50.6±0.9, 1°.37N×99°.02E, h0km, mb4.5/14, mb1 4.6/15, mb1mx4.4/24, mbtmp4.5/15, ML4.5/1, Error ellipse: s-maj=36.4km s-min=16.2km az=55.0*
*NEIC **19** 14:30:52.0±0.5, 1°.34N×98°.96E, h10km, mb4.9/2, Error ellipse: s-maj=14.9km s-min=9.1km az=54.0*
*ISCJB **19** 14:30:55.0±3.5, 1°.4N±0°.1×99°.1E±0°.2, h43km±28km, mb4.5/18, Error ellipse: s-maj=33.9km s-min=12.3km az=144.9*
ISC 19 14:30:56.6±3.2, 1°.4N±0°.1×99°.1E±0°.2, h40km±26km, n28, σ0s87/28, mb4.5/18, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**4.16**	**22**	*e*P	**Pn**	**14 31 56.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**16.93**	**360**	Pn	**Pn**	**14 34 51.0**	**+0.4**
	0.6nm,0.3s,baz=190,slow=11,SNR=7.8						
KKM	**Kota Kinabalu**	**17.71**	**75**	*e*P	**Pn**	**14 35 01.4**	**+1.1**
KAPI	**Kappang**	**21.62**	**107**	P	**P**	**14 35 44.5**	**+1.0**
	8.1nm,0.4s,mb4.5,baz=195,slow=16,SNR=3.3						
NWAO	**Narrogin (SRO)**	**38.22**	**155**	P	**P**	**14 38 13.2**	**+0.5**
	14nm,0.9s,mb4.7,baz=288,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**42.05**	**129**	P	**P**	**14 38 42.6**	**-2.0**
	1.4nm,0.7s,mb3.7,baz=299,slow=7.7,SNR=3.1						
KSRS	**Korea Array**	**44.63**	**33**	P	**P**	**14 39 04.1**	**-1.0**
	2.3nm,0.9s,mb4.0,baz=227,slow=13,SNR=4.0						
SONM	**Songino Array**	**46.67**	**7**	P	**P**	**14 39 20.4**	**-0.8**
	3.2nm,0.7s,mb4.4,baz=182,slow=8.7,SNR=4.7						
ULN	**Ulaanbaatar**	**46.78**	**7**	*e*P	**P**	**14 39 21.9**	**-0.1**
	4.9nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**47.51**	**344**	P	**P**	**14 39 27.4**	**-0.3**
	9.3nm,0.6s,mb5.0,baz=158,slow=7.2,SNR=12						
MKAR	**Makanchi Array**	**47.51**	**344**	P	**P**	**14 39 27.4**	**-0.3**
KURK	**Kurchatov**	**52.09**	**344**	*e*P	**P**	**14 40 02.2**	**-0.3**
	28nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**52.13**	**133**	P	**P**	**14 40 02.6**	**-0.4**
	5.6nm,0.9s,mb4.5,baz=282,slow=8.7,SNR=3.0						
ZAA0	**Zalesovo Array**	**53.66**	**350**	*e*P	**P**	**14 40 14.9**	**+0.9**
ZALV	**Zalesovo Beam**	**53.66**	**350**	P	**P**	**14 40 15.1**	**+1.1**
	8.3nm,0.5s,mb4.9,baz=168,slow=7.1,SNR=8.6						
BVAR	**Borovoye Array**	**56.68**	**340**	P	**P**	**14 40 36.6**	**+0.8**
	7.5nm,0.5s,mb4.9,baz=141,slow=9.5,SNR=12						
BRVK	**Borovoye**	**56.74**	**340**	*e*P	**P**	**14 40 35.5**	**-0.7**
BR131	**Keskin Array S**	**70.36**	**312**	*e*P	**P**	**14 42 06.1**	**-0.3**
BRTR	**Keskin Array B**	**70.36**	**312**	P	**P**	**14 42 05.8**	**-0.6**
	2.9nm,0.5s,mb4.4,baz=131,slow=5.9,SNR=11						
TIXI	**Tiksi**	**72.66**	**9**	*e*P	**P**	**14 42 18.7**	**-0.9**
AKASG	**Malin Array Be**	**76.23**	**322**	P	**P**	**14 42 39.8**	**-1.0**
	2.1nm,0.5s,mb4.3,baz=90,slow=5.1,SNR=4.7						
JOF	**Joensuu**	**78.75**	**334**	*e*p	**P**	**14 42 54.7**	**0.0**
	3.0nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**80.67**	**332**	P	**P**	**14 43 06.7**	**+1.6**
	4.0nm,0.5s,mb4.6,baz=102,slow=6.1,SNR=7.5						
KAF	**Kangasniemi**	**80.74**	**333**	*e*p	**P**	**14 43 04.9**	**-0.5**
	6.8nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**82.97**	**340**	P	**P**	**14 43 18.0**	**+1.0**
	1.8nm,0.7s,mb4.2,baz=148,slow=3.9,SNR=4.2						
ARCES	**ARCESS Array B**	**82.97**	**340**	P	**P**	**14 43 18.0**	**+1.0**
NOA	**NORSAR Array B**	**87.73**	**331**	P	**P**	**14 43 41.5**	**+0.5**
	2.7nm,0.8s,mb4.5,baz=93,slow=5.0,SNR=3.6						
NOA	**NORSAR Array B**	**87.73**	**331**	P	**P**	**14 43 41.5**	**+0.5**

*BJI **19** 14:49:11.8, 1°.18N×99°.22E, h10km, mB5.7/7, mb4.9/32, Ms5.5/17, Ms7 5.3/17*
*IDC **19** 14:49:16.2±0.4, 1°.72N×99°.23E, h0km, mb4.8/28, mb1 4.8/30, mb1mx4.8/31, mbtmp4.8/30, ML4.7/2, MS5.0/4, Ms1 5.0/4, ms1mx4.6/37, Error ellipse: s-maj=15.6km s-min=11.3km az=63.0*
*NEIC **19** 14:49:17.7±0.2, 1°.72N×99°.18E, h10km, mb5.3/68, Error ellipse: s-maj=6.1km s-min=4.5km az=45.0*
NEIC Felt [III] at Sibolga.
*GCMT **19** 14:49:17.7±0.2, 1°.75N×99°.16E, h20km±1km, MW5.3/77, Moment Tensor Solution. s19,c23; s77,c124; Duration: 1s1 Moment tensor: Scale 10^17^Nm; M_{rr}-0.57±.06; $M_{\theta\theta}$-0.67±.03; $M_{\phi\phi}$1.24±.05; $M_{r\theta}$0.02±.07; $M_{\theta\phi}$0.31±.03; $M_{\phi r}$-0.18±.07; Best double couple: $M_0$1.01600×10^17^ NP1:ϕ=233.00000°, δ74.00000°, λ-9.00000°. NP2: ϕ=326.00000°, δ82.00000°, λ-164.00000°. Principal axes: T 1.3050, Plg5.0000°, Azm99.0000°; N -0.5770, Plg72.0000°, Azm353.0000°; P -0.7270, Plg18.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **19** 14:49:19.4±0.8, 1°.78N±0°.03×99°.06E±0°.03, h28km±5km, mb5.2/155, MS5.2/9 Error ellipse: s-maj=5.4km s-min=3.5km az=135.1*
*MOS **19** 14:49:19.7±0.9, 1°.81N×99°.29E, h33km, mb5.5/57, Error ellipse: s-maj=11.2km s-min=4.9km az=121.7*
*DJA **19** 14:49:21, 1°.74N×99°.13E, h10km, mb5.1/48*
*SZGRF **19** 14:49:25.8, 1°.88N×97°.99E, h33km, mb5.3, Northern Sumatera, Indonesia*
ISC 19 14:49:21.3±0.8, 1°.77N±0°.03×99°.04E±0°.03, h29km±6km, h19km±4.0km: pP-P, n437, σ1s06/416, mb5.2/155, MS5.2/9, 23C-13D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.27**	**343**	P	**Pb**	**14 49 25.4**	**-2.8**
MNSI	**Mandailing Nat**	**1.11**	**151**	P	**Pn**	**14 49 37.3**	**-3.6**
GSI	**Gunungsitoli**	**1.53**	**253**	P	**Pn**	**14 49 46.1**	**-0.6**
GSI				S	**Sn**	**14 50 15.0**	**+9.3**
BKNI	**Bangkinang**	**2.46**	**126**	P	**Pn**	**14 49 56.9**	**-2.7**
BKNI				S	**Sn**	**14 50 33.2**	**+4.5**
PPI	**Padang Panjang**	**2.59**	**148**	P	**Pn**	**14 50 00.0**	**-1.4**
FRIM	**Kepong**	**2.97**	**60**	P	**Pn**	**14 50 06.0**	**-0.5**
PDSI	**Padang**	**3.02**	**152**	P	**Pn**	**14 50 06.2**	**-1.0**
SISI	**Saibi**	**3.07**	**179**	P	**Pn**	**14 50 06.3**	**-1.7**
IPM	**Ipoh**	**3.35**	**36**	P	**Pn**	**14 50 14.0**	**+2.2**
IPM	**Ipoh**	**3.35**	**36**	P	**Pn**	**14 50 12.4**	**+0.6**
SDSI	**Sungai Dareh**	**3.59**	**138**	P	**Pn**	**14 50 15.9**	**+0.8**
KULM	**Kulim**	**3.85**	**25**	P	**Pn**	**14 50 20.1**	**+1.4**
KULM	**Kulim**	**3.85**	**25**	*e*Pn	**Pn**	**14 50 18.6**	**-0.1**
KULM				*e*Sn	Sx	14 51 20.4	
KULM	**Kulim**	**3.85**	**25**	P	**Pn**	**14 50 18.5**	**-0.2**
RGRI	**Rengat**	**3.91**	**122**	P	**Pn**	**14 50 17.2**	**-2.3**
RGRI				S	Sx	14 51 17.8	
LHMI	**Lhok Sumawe**	**4.02**	**329**	P	**Pn**	**14 50 24.4**	**+3.4**
LHMI				S	Sx	14 51 23.2	
PPSI	**Pulau Pagai**	**4.60**	**168**	P	**Pn**	**14 50 27.0**	**-2.0**
MYKOM	**Kota Tinggi**	**4.81**	**90**	P	**Pn**	**14 50 29.9**	**-2.0**
BSI	**Banda Aceh**	**5.26**	**315**	P	**Pn**	**14 50 40.0**	**+2.0**
	451nm,1.5s,2.4nm						
KTGM	**Kuala Trenggan**	**5.41**	**49**	P	**Pn**	**14 50 40.0**	**-0.1**
KSI	**Kapahiang**	**6.45**	**147**	P	**Pn**	**14 50 55.8**	**+1.4**
	547nm,1.1s,5.3nm						
MDSI	**Maura Dua**	**8.06**	**140**	P	**Pn**	**14 51 17.6**	**+1.0**
	188nm,1.4s,1.4nm						
LWLI	**Liwa**	**8.40**	**143**	P	**Pn**	**14 51 22.7**	**+1.5**
	286nm,0.8s						
KASI	**Kota Agung**	**9.07**	**143**	P	**Pn**	**14 51 31.3**	**+0.9**
	156nm,1.1s						
TPI	**Tanjungpandan**	**9.72**	**118**	P	**Pn**	**14 51 38.9**	**-0.4**
	57nm,1.0s						
RBSI	**Rajabasa**	**10.10**	**139**	P	Px	14 51 53.1	
	221nm,1.8s						
KSM	**Kuching**	**11.27**	**91**	P	**Pn**	**14 52 03.3**	**+2.7**
KSM	**Kuching**	**11.27**	**91**	*e*Pn	**Pn**	**14 52 02.3**	**+1.7**
KSM	**Kuching**	**11.27**	**91**	P	**Pn**	**14 52 02.7**	**+2.1**
	52nm,1.1s						
DBJI	**Dramaga**	**11.30**	**137**	P	**Pn**	**14 52 01.1**	**+0.2**
	150nm,1.9s						
LEM	**Lembang**	**12.09**	**135**	P	**Pn**	**14 52 12.8**	**+1.0**
	142nm,1.1s						
STKI	**Sintang**	**12.55**	**98**	P	**Pn**	**14 52 18.0**	**-0.1**
	88nm,1.1s						
SBUM	**Sibu**	**13.19**	**87**	P	**Pn**	**14 52 28.6**	**+1.7**
SBUM	**Sibu**	**13.19**	**87**	P	**Pn**	**14 52 26.7**	**-0.2**
	91nm,1.2s						
COCO	**West Island**	**14.04**	**189**	P	Px	14 52 47.7	
	151nm,1.9s						
BTM	**Bintulu**	**14.11**	**84**	P	**Pn**	**14 52 43.0**	**+3.6**
SMRI	**Semarang**	**14.36**	**128**	P	**Pn**	**14 52 45.3**	**+2.5**
	267nm,2.3s						
NGJI	**Ngawi**	**15.36**	**126**	P	**Pn**	**14 52 58.6**	**+2.3**
	178nm,1.3s						
SJI	**Sawahan**	**15.82**	**127**	P	**Pn**	**14 53 03.0**	**+0.8**
	107nm,1.5s						
GRJI	**Gresik**	**15.95**	**123**	P	**Pn**	**14 53 05.3**	**+1.4**
	159nm,1.3s						
PWJI	**Pagerwojo**	**16.02**	**128**	P	**Pn**	**14 53 07.4**	**+2.6**
	142nm,1.8s						
CMAR	**Chiang Mai Arr**	**16.59**	**360**	Pn	**Pn**	**14 53 12.9**	**+0.9**
	1.3nm,0.3s,baz=192,slow=12,SNR=96						
CMAR				LR	LR	14 58 50.2	
	comp=Z,2μm,19.9s,baz=150,slow=34						
BBKI	**Banjar Baru**	**16.63**	**108**	P	**Pn**	**14 53 13.6**	**+1.0**
	195nm,2.3s						
KMMI	**Kalianget**	**17.28**	**121**	P	**Pn**	**14 53 21.9**	**+1.2**
	209nm,2.0s						
GMJI	**Gumukmas**	**17.49**	**125**	P	**Pn**	**14 53 24.8**	**+1.5**
	74nm,1.6s						
KKM	**Kota Kinabalu**	**17.65**	**76**	P	**Pn**	**14 53 27.6**	**+2.3**
KKM	**Kota Kinabalu**	**17.65**	**76**	*e*P	**Pn**	**14 53 24.5**	**-0.8**
	94nm,1.2s						
KKM	**Kota Kinabalu**	**17.65**	**76**	P	**Pn**	**14 53 26.6**	**+1.2**
	82nm,1.4s						
KBKI	**Kotabaru**	**17.85**	**106**	P	**Pn**	**14 53 28.5**	**+0.8**
	88nm,1.9s						
ABJI	**Asem Bagus**	**17.89**	**122**	P	**Pn**	**14 53 29.1**	**+0.9**
KDM	**Kudat**	**18.46**	**73**	P	**Pn**	**14 53 36.6**	**+1.4**
KDM	**Kudat**	**18.46**	**73**	P	**Pn**	**14 53 37.9**	**+2.6**
KDM	**Kudat**	**18.46**	**73**	P	**Pn**	**14 53 38.3**	**+3.0**
SDKM	**Sandakan**	**18.52**	**78**	P	**Pn**	**14 53 39.6**	**+3.6**
SDKM	**Sandakan**	**18.52**	**78**	P	**Pn**	**14 53 39.9**	**+3.9**
SRBI	**Singaraja**	**18.87**	**121**	P	**Pn**	**14 53 39.9**	**-0.3**
	212nm,1.8s						
TSM	**Tawau**	**18.98**	**82**	P	**Pn**	**14 53 42.3**	**+0.8**
PALK	**Pallekele**	**19.07**	**287**	Pn	**Pn**	**14 53 45.3**	**+2.7**
	310nm,1.0s,SNR=5.1						
PALK	**Pallekele**	**19.07**	**287**	P	**Pn**	**14 53 43.8**	**+1.2**
	1.7nm,0.3s,baz=109,slow=9.7,SNR=12						
PALK				LR	LR	15 00 42.1	
	comp=Z,4μm,19.1s,baz=78,slow=36						
PALK	**Pallekele**	**19.07**	**287**	*e*P	**Pn**	**14 53 44.2**	**+1.6**
PALK				pmax	pmax		
	comp=Z,58nm,1.0s						
PALK	**Pallekele**	**19.07**	**287**	*e*P	**Pn**	**14 53 44.1**	**+1.5**
	comp=Z,58nm,1.0s						
PALK	**Pallekele**	**19.07**	**287**	P	**Pn**	**14 53 42.8**	**+0.2**
	comp=Z,33nm,1.4s						
KHKI	**Kahang-Kahang**	**19.35**	**122**	P	**Pn**	**14 53 45.2**	**-0.7**
	comp=Z,235nm,1.3s						
MYLDM	**Lahad Datu**	**19.72**	**80**	P	**Pn**	**14 53 51.1**	**+0.7**
MYLDM	**Lahad Datu**	**19.72**	**80**	P	**Pn**	**14 53 52.2**	**+1.8**
MYLDM	**Lahad Datu**	**19.72**	**80**	P	**Pn**	**14 53 49.2**	**-1.2**
	comp=Z,148nm,1.2s						
QIZ	**Qiongzhong**	**20.16**	**31**	P	**P**	**14 53 51.0**	**-2.5**
QIZ				S	**S**	**14 57 32.3**	**-6.3**
QIZ				pmax	pmax		
	comp=Z,30nm,2.3s						
TTSI	**Tana Toraja**	**21.32**	**103**	P	**P**	**14 54 06.4**	**+0.2**
	comp=Z,107nm,1.6s,mb4.9						
KAPI	**Kappang**	**21.76**	**108**	P	**P**	**14 54 12.9**	**+2.0**
	comp=Z,579nm,1.1s,mb5.9,SNR=6.2						
KAPI	**Kappang**	**21.76**	**108**	P	**P**	**14 54 11.0**	**+0.1**
	comp=Z,95nm,1.0s,mb5.2,baz=285,slow=9.2,SNR=17						
KAPI				LR	LR	15 02 57.0	
	comp=Z,6μm,18.1s,MS5.0,baz=52,slow=38						
APSI	**Ampana**	**22.77**	**97**	P	**P**	**14 54 21.9**	**+0.3**
	comp=Z,213nm,1.3s,mb5.4						
MRSI	**Marisa**	**22.94**	**93**	P	**P**	**14 54 23.7**	**+0.3**
	comp=Z,79nm,1.5s,mb4.9						
KMI	**Kunming**	**23.49**	**8**	P	**P**	**14 54 30.6**	**+1.5**
KMI				S	**S**	**14 58 45.8**	**+5.0**
KMI				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.4						
KMI				LR	LR		
	comp=N,5μm,11.4s,MS5.3						
KMI				LR	LR		
	comp=E,5μm,12.7s,MS5.3						
KMI				LR	LR		
	comp=Z,5μm,10.8s,MS5.2						
LUWI	**Luwuk**	**23.90**	**97**	P	**P**	**14 54 33.4**	**+0.5**
	comp=Z,373nm,1.3s,mb5.7						
KDI	**Kendari**	**24.25**	**104**	P	**P**	**14 54 36.5**	**+0.4**
	comp=Z,55nm,1.2s,mb4.8						
MMRI	**Maumere**	**25.33**	**114**	P	**P**	**14 54 42.9**	**-3.1**
	comp=Z,117nm,1.5s,mb5.2						
HYB	**Hyderabad**	**25.44**	**309**	⇑*i*P	**P**	**14 54 48.0**	**+1.1**
	comp=Z,70nm,1.0s,mb5.2						
GYA	**Guiyang**	**25.62**	**16**	P	**P**	**14 54 49.6**	**+1.2**
GYA				PP		14 55 29.3	
GYA				PcP	PcP	14 58 20.0	+1.0
GYA				S	**S**	**14 59 15.3**	**+0.3**
GYA				SS		15 00 20.1	
GYA				ScP	ScP	15 01 59.3	+2.7
GYA				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.9						
GYA				LR	LR		
	comp=N,3μm,15.0s,MS4.9						
GYA				LR	LR		
	comp=E,2μm,16.6s,MS4.9						
GYA				LR	LR		
	comp=Z,4μm,15.9s,MS5.0						
DAV	**Davao City (W)**	**26.97**	**78**	LR	LR	15 07 38.4	
	comp=Z,4μm,20.4s,MS4.9,baz=52,slow=41						
TAPN	**Taplejung**	**27.66**	**338**	*e*P	**P**	**14 55 07.0**	**+0.2**
	comp=Z,50nm,0.8s,mb5.2						
RAMN	**Ramite**	**27.74**	**336**	*e*P	**P**	**14 55 07.9**	**+0.4**
	comp=Z,17nm,0.7s,mb4.8						
NLAI	**Namlea**	**28.49**	**100**	P	**P**	**14 55 14.8**	**+0.4**
	comp=Z,84nm,0.8s,mb5.4						
JIRN	**Jiri**	**28.53**	**336**	*e*P	**P**	**14 55 14.6**	**0.0**
	comp=Z,54nm,1.0s,mb5.2						
LBMI	**Labuha**	**28.56**	**95**	P	**P**	**14 55 16.8**	**+1.7**
	comp=Z,59nm,1.6s,mb5.1						
GUN	**Gumba**	**28.88**	**335**	*e*P	**P**	**14 55 17.6**	**-0.1**
	comp=Z,53nm,0.7s,mb5.4						
DMN	**Daman**	**28.95**	**334**	*e*P	**P**	**14 55 18.4**	**+0.1**
	comp=Z,26nm,0.8s,mb5.0						
KKN	**Kakani**	**29.03**	**334**	*e*P	**P**	**14 55 18.4**	**-0.7**
	comp=Z,34nm,0.8s,mb5.1						
CD2	**Chengdu**	**29.33**	**8**	P	**P**	**14 55 23.0**	**+1.4**
CD2				pP	pP	14 55 27.3	-2.7
CD2				sP	sP	14 55 30.1	-3.4
CD2				PP	PP	14 56 18.8	-9.4
CD2				S	**S**	**15 00 16.5**	**+3.2**
CD2				sS	sS	15 00 23.3	-3.9
CD2				SS	SS	15 01 49.0	-30
CD2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
CD2				LR	LR		
	comp=N,8μm,14.3s						
CD2				LR	LR		
	comp=Z,9μm,13.1s,MS5.6						
NDI	**New Delhi**	**33.91**	**324**	*e*P	**P**	**14 56

SNR=13
SHAO Shalim 45.55 294 P P 14 57 37.5 -1.4
SNR=13
UCH Uchtor 45.90 335 P P 14 57 42.8 +1.5
SNR=20
TKM2 Tokmak 2 46.02 336 P P 14 57 43.4 +1.1
SNR=18
KBK Karagaybulak 46.07 335 P P 14 57 43.8 +1.1
SNR=22
AML Almayashu 46.18 334 P P 14 57 45.0 +1.5
SNR=9.6
AAK Ala-Archa 46.24 335 P P 14 57 45.1 +1.1
comp=Z,157nm,1.1s,mb5.8,SNR=7.5
AAK Ala-Archa 46.24 335 P P 14 57 45.3 +1.3
comp=Z,13nm,0.7s,mb5.0,baz=184,slow=5.1,SNR=12
AAK Ala-Archa 46.24 335 *ce*P P **14 57 45.1 +1.1**
AAK pmax pmax
comp=Z,21nm,1.2s,mb4.9
AAK Ala-Archa 46.24 335 *e*P P **14 57 45.2 +1.2**
comp=Z,24nm,0.9s,mb5.1
AAK Ala-Archa 46.24 335 P P 14 57 45.7 +1.7
SNR=13
AAK P 14 57 45.7
SNR=13
AAK Ala-Archa 46.24 335 P P 14 57 45.4 +1.4
comp=Z,7.7nm,1.1s,mb4.5
SONM Songino Array 46.33 7 P P 14 57 45.0 +0.4
comp=Z,8.4nm,0.7s,mb4.8,baz=187,slow=9.4,SNR=27
SONM PcP PcP 14 59 19.5 0.0
comp=Z,8.1nm,0.8s,baz=176,slow=4.1,SNR=6.4
CHMS Chumysh 46.43 335 P P 14 57 45.8 +0.3
SNR=14
ULN Ulaanbaatar 46.44 7 *e*P **P 14 57 45.2 -0.3**
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ULN Ulaanbaatar 46.44 7 *e*P **P 14 57 45.2 -0.3**
comp=Z,7.3nm,0.8s,mb4.7
ULN Ulaanbaatar 46.44 7 P P 14 57 45.7 +0.2
comp=Z,16nm,1.4s,mb4.8
EKS2 Erkin-Say 46.57 334 P P 14 57 48.0 +1.4
SNR=22
EKS2 Erkin-Say 46.57 334 *e*P **P 14 57 47.1 +0.5**
comp=Z,42nm,0.8s,mb5.4
USP Ospenovka 46.76 335 P P 14 57 48.8 +0.8
SNR=44
MK31 Makanchi Array 47.17 344 *e*P **P 14 57 50.9 -0.3**
MKAR Makanchi Array 47.17 344 P P 14 57 51.2 0.0
comp=Z,23nm,0.8s,mb5.2,baz=151,slow=7.2,SNR=114
MKAR Makanchi Array 47.17 344 P P 14 57 51.2 0.0
ASUD Al Ashush, Dub 47.91 302 P P 14 57 59.1 +1.7
SNR=5.6
CN2 Changchun 47.99 26 *e*P **P 14 57 57.3 -0.3**
CN2 *e*PP PP 14 59 49.0 -0.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ZAK Zakamensk 48.57 4 *e*P **P 14 58 02.0 0.0**
ZAK *e* 14 59 27.5
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
TLY Talaya 49.89 4 *e*P **P 14 58 13.1 +1.0**
TLY pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TLY Talaya 49.89 4 *e*P **P 14 58 12.6 +0.5**
comp=Z,6.2nm,0.7s,mb4.8
MAT Matsushiro 50.04 42 P P 14 58 12.6 -0.9
MJAR Matsushiro Arr 50.05 42 P P 14 58 12.9 -0.6
comp=Z,0.9nm,0.5s,mb4.0,baz=221,slow=6.1,SNR=5.9
MDJ Mudanjiang 50.49 28 P P 14 58 16.9 +0.1
MDJ pmax pmax
comp=Z,8.0nm,2.9s,mb4.2
MDJ pmax pmax
comp=Z,6μm,14.8s
CTA Charters Tower 51.12 118 *e*P **P 14 58 20.3 -1.7**
comp=Z,12nm,0.9s,mb4.8
CTAO Charters Tower 51.12 118 *e*P **P 14 58 19.0 -3.0**
CTAO pmax pmax
comp=Z,44nm,1.3s,mb5.2
CTAO Charters Tower 51.12 118 *e*P **P 14 58 19.0 -3.0**
comp=Z,44nm,1.3s,mb5.2
CTAO Charters Tower 51.12 118 P P 14 58 20.9 -1.1
comp=Z,35nm,1.9s,mb5.0
KURK Kurchatov 51.75 344 P P 14 58 26.9 +0.8
comp=Z,285nm,0.9s,mb6.2,SNR=14
KURK Kurchatov 51.75 344 P P 14 58 25.3 -0.8
comp=Z,25nm,0.8s,mb5.2,baz=168,slow=7.3,SNR=70
KURK PcP PcP 14 59 38.1 -1.0
comp=Z,2.9nm,1.0s,baz=120,slow=13,SNR=2.0
KURK Kurchatov 51.75 344 *d iP* **P 14 58 25.4 -0.7**
KURK pmax pmax
comp=Z,44nm,0.8s,mb5.4
KURK Kurchatov 51.75 344 *e*P **P 14 58 25.6 -0.5**
comp=Z,44nm,0.9s,mb5.4
KURK Kurchatov 51.75 344 P P 14 58 25.3 -0.7
SNR=27
KURK P 14 58 25.3
SNR=27
ABKT Ailbek 51.98 319 P P 14 58 23.3 -4.7
comp=Z,253nm,0.9s,mb6.2,SNR=6.0
STKA Stephens Creek 52.39 133⇑ *iP* **P 14 58 28.1 -3.1**
comp=Z,12nm,0.7s,mb4.9
STKA Stephens Creek 52.39 133 P P 14 58 28.6 -2.7
comp=Z,10nm,0.6s,mb4.9,baz=308,slow=7.2,SNR=36
ZAA0 Zalesovo Array 53.31 350 *e*P **P 14 58 36.1 -1.5**
ZALV Zalesovo Beam 53.31 350 P P 14 58 37.5 -0.1
comp=Z,18nm,0.5s,mb5.2,baz=172,slow=6.1,SNR=61
NVS Novosibirsk 54.46 349 *i P* **P 14 58 44.4 -1.6**
LBOS *i P* **P 14 58 48.6 +1.7**
KBD Kabd 55.88 304 *e*P **P 14 58 56.7 -0.1**
KBD AMb AMB 14 58 58.8
comp=Z,50nm,1.3s,mb5.4
UMR Umm Al-Rimmam 55.99 305 *e*P **P 14 58 57.6 +0.1**
UMR AMb AMB 14 58 58.8
comp=Z,90nm,0.9s,mb5.8
NAY Al-Naaiem 56.28 304 *e*P **P 14 58 59.2 -0.4**
NAY AMb AMB 14 59 01.6
comp=Z,36nm,0.9s,mb5.4
BVAR Borovoye Array 56.34 340 P P 14 58 59.1 -0.5
comp=Z,9.6nm,0.5s,mb5.1,baz=141,slow=9.0,SNR=37
MIB Mutribah 56.38 305 *e*P **P 14 59 00.4 0.0**
MIB AMb AMB 14 59 02.2
comp=Z,187nm,1.2s,mb6.0
BRVK Borovoye 56.40 340 P P 14 58 59.0 -1.0
comp=Z,110nm,0.5s,mb6.1,SNR=6.6
BRVK Borovoye 56.40 340 *c iP* **P 14 58 59.4 -0.6**
BRVK pmax pmax
comp=Z,19nm,1.2s,mb5.0
BRVK Borovoye 56.40 340 *e*P **P 14 58 59.3 -0.7**
comp=Z,12nm,0.7s,mb5.0
BRVK Borovoye 56.40 340 P P 14 58 59.7 -0.3
SNR=6.4
BRVK P 14 58 59.7
SNR=6.4
ATD Arta Tunnel 56.55 283 P P 14 59 03.9 +2.1
comp=Z,16nm,0.7s,mb5.2,baz=255,slow=4.8,SNR=7.7
EIDS Eidsvold 57.10 122 *e*P **P 14 59 03.5 -2.1**
comp=Z,12nm,0.9s,mb4.9
BOD Bodaibo 57.14 9 *e*P **P 14 59 04.4 -0.7**
BOD pmax pmax
comp=Z,19nm,0.8s,mb5.2
ABKAR Akbulak array 57.90 331 *e*P **P 14 59 09.5 -1.2**
comp=Z,19nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 58.86 34 *e*P **P 14 59 13.6 -3.8**
YSS *e* 14 59 24.0
YSS Yuzh-Sakhalins 58.86 34 *e*P **P 14 59 14.8 -2.6**
comp=Z,54nm,1.3s,mb5.4
AKTK Aktyubinsk 59.62 331 P P 14 59 21.7 -0.9
AKTO Aktyubinsk 59.62 331 P P 14 59 21.7 -0.9
comp=Z,11nm,0.9s,mb4.9,baz=134,slow=6.4,SNR=22
AKTO PKiKP PKiKP 15 06 32.5 +2.8
comp=Z,0.3nm,0.3s,baz=4.3,slow=3.6,SNR=4.6
KMBO Kilima Mbogo 61.84 268 P P 14 59 39.2 +0.7
comp=Z,2.9nm,0.7s,mb4.5,baz=28,slow=23,SNR=6.0
KMBO Kilima Mbogo 61.84 268 *ce*P **P 14 59 40.7 +2.2**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 61.84 268 *e*P **P 14 59 39.9 +1.4**
comp=Z,3.2nm,0.8s,mb4.5
GNI Garni 62.17 315 P P 14 59 40.5 +0.3
comp=Z,10.0nm,0.6s,mb5.1,baz=334,slow=3.1,SNR=10.0
GNI Garni 62.17 315 *d iP* **P 14 59 41.0 +0.8**
GNI pmax pmax
comp=Z,28nm,1.0s
GNI Garni 62.17 315 *e*P **P 14 59 40.7 +0.5**
comp=Z,51nm,1.2s,mb5.5
GNI Garni 62.17 315 P P 14 59 41.3 +1.1
SNR=8.5
GNI P 14 59 41.3
SNR=8.5
SVE Sverdlovsk 62.86 337⇓ *e*P **P 14 59 44.4 0.0**
SVE pmax pmax
comp=Z,44nm,0.9s,mb5.6
ARU Arti 63.39 336 *c iP* **P 14 59 46.9 -1.1**
ARU S **S 15 08 19.2 +0.5**
ARU pmax pmax
comp=Z,27nm,1.0s,mb5.3
ARU Arti 63.39 336 *e*P **P 14 59 46.8 -1.2**
comp=Z,19nm,0.8s,mb5.3
ZEI Tsey 63.80 318 *e*P **P 14 59 50.5 -0.5**
ZEI pmax pmax
comp=Z,36nm,0.7s,mb5.5
YAK Yakutsk 64.38 15 *e*P **P 14 59 53.1 -1.3**
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.1
YAK Yakutsk 64.38 15 *e*P **P 14 59 53.6 -0.8**
comp=Z,22nm,0.7s,mb5.3
KIV Kislovodsk 65.09 318 P P 14 59 59.6 +0.2
comp=Z,184nm,0.9s,mb6.1,SNR=6.0
KIV Kislovodsk 65.09 318 *e*P **P 14 59 59.4 0.0**
KIV pmax pmax
comp=Z,37nm,1.1s,mb5.3
KIV Kislovodsk 65.09 318 *e*P **P 14 59 59.2 -0.1**
comp=Z,26nm,0.8s,mb5.3
KIV Kislovodsk 65.09 318 P P 14 59 59.6 +0.2
SNR=13
KIV P 14 59 59.6
SNR=13
ASF Jabal al Asfar 65.65 305 P P 15 00 04.9 +1.7
comp=Z,6.9nm,0.8s,mb4.8,baz=356,slow=2.8,SNR=12
SOKR Solikamsk 66.23 338 *d iP* **P 15 00 06.4 0.0**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
EIL Elat 66.72 302 P P 15 00 10.8 +0.6
comp=Z,16nm,0.9s,mb5.1,baz=106,slow=3.6,SNR=12
EIL Elat 66.72 302 P P 15 00 10.8 +0.6
SOC Sochi 66.94 317 *i P* **P 15 00 10.1 -1.2**
SOC pmax pmax
comp=Z,37nm,0.7s,mb5.5
MMAI Mount Meron Ar 67.07 305 P P 15 00 14.0 +1.6
comp=Z,13nm,0.8s,mb5.0,baz=102,slow=7.1,SNR=16
CASY Casey 68.39 175 *e*P **P 15 00 19.8 -0.2**
CASY Casey 68.39 175 *e*P **P 15 00 19.6 -0.3**
comp=Z,19nm,0.8s,mb5.2
VRHR Novokhopersk 68.70 325 *e*P **P 15 00 21.4 -0.8**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.5
ANN Anapa 68.90 318 *e*P **P 15 00 17.1 -6.5**
ANN pmax pmax
comp=Z,24nm,1.0s,mb5.1
BR131 Keskin Array S 70.10 312 *e*P **P 15 00 29.8 -1.3**
BRTR Keskin Array B 70.10 312 P P 15 00 30.1 -1.0
comp=Z,11nm,0.9s,mb4.8,baz=125,slow=6.5,SNR=56
VSR Storozhevoye 70.16 325 *e*P **P 15 00 30.2 -1.0**
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VSR pmax pmax
comp=N,20nm,1.4s
VSR pmax pmax
comp=E,20nm,0.7s
PETK Petropavlovsk- 70.25 33 P P 15 00 31.1 -0.7
comp=E,2.5nm,0.8s,mb4.2,baz=204,slow=2.6,SNR=4.4
VOR Voronezh 70.35 325 P P 15 00 32.0 -0.4
VOR pmax pmax
comp=Z,100nm,1.0s,mb5.7
SIM Simferopol' 71.19 317 *e*P **P 15 00 38.5 +0.8**
SIM pmax pmax
comp=Z,34nm,1.0s,mb5.2
LSZ Lusaka 72.03 253 *e*P **P 15 00 43.9 +0.6**
LSZ pmax pmax
comp=Z,15nm,1.3s,mb4.8
LSZ Lusaka 72.03 253 *e*P **P 15 00 43.9 +0.6**
comp=Z,15nm,1.3s,mb4.8
TIXI Tiksi 72.32 10 *e*P **P 15 00 42.7 -1.2**
SEY Seymchan 72.53 23 *c iP* **P 15 00 44.7 -0.6**
MOS Moscow 72.80 329 *e*P **P 15 00 44.2 -2.8**
MOS pmax pmax
comp=Z,65nm,1.5s,mb5.3
OBN Obninsk 73.11 328 *c iP* **P 15 00 48.3 -0.6**
OBN *e**PP pP 15 01 12.5 +15
OBN *e* 15 03 29.7
OBN *e*S S 15 10 15.0 +0.4
OBN pmax pmax
comp=Z,77nm,1.7s,mb5.4
OBN Obninsk 73.11 328 *e*P **P 15 00 48.1 -0.8**
comp=Z,43nm,1.0s,mb5.3
MAW Mawson 73.68 194 *e*P **P 15 00 52.4 +0.4**
comp=Z,4.9nm,0.6s,mb4.6
MAW Mawson 73.68 194 P P 15 00 52.9 +0.8
comp=Z,5.4nm,0.6s,mb4.7,baz=38,slow=5.4,SNR=18
KLMR Klimovskoe 74.04 334 *e*P **P 15 00 52.7 -1.6**
KLMR pmax pmax
comp=Z,39nm,1.5s,mb5.1
LBTB Lobatse 75.78 244 *e*P **P 15 01 05.6 +0.5**
LBTB pmax pmax
comp=Z,16nm,0.9s,mb5.0
LBTB Lobatse 75.78 244 *e*P **P 15 01 05.5 +0.5**
comp=Z,16nm,0.9s,mb5.0
AKASG Malin Array Be 75.94 322 P P 15 01 04.4 -1.1
comp=Z,11nm,0.8s,mb4.8,baz=90,slow=4.8,SNR=44
AKASG PP PP 15 03 56.1 +0.1
comp=Z,0.4nm,0.4s,baz=85,slow=7.3,SNR=5.0
AKBB Malin Array Si 75.94 322 *e*P **P 15 01 03.9 -1.5**
KIEV Kiev 75.94 322 *e*P **P 15 01 04.0 -1.5**
KIEV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIEV Kiev 75.94 322 *e*P **P 15 01 04.0 -1.4**
comp=Z,19nm,1.0s,mb5.0
VRI Vrincioaia 76.46 317 ⇓*P* **P 15 01 09.1 +0.6**
VRI Vrincioaia 76.46 317 ⇓*iP* **P 15 01 09.1 +0.6**
PLOR Plostina 76.51 317 ⇓*P* **P 15 01 09.9 +1.1**
PLOR Plostina 76.51 317 ⇓*iP* **P 15 01 09.9 +1.1**
BOSA Boshof 76.65 240 P P 15 01 08.9 -1.1
comp=Z,6.6nm,0.7s,mb4.7,baz=85,slow=6.1,SNR=12
MLR Muntele Rosu 76.92 316 ⇑*P* **P 15 01 11.3 +0.2**
MLR Muntele Rosu 76.92 316 ⇑*iP* **P 15 01 11.3 +0.2**
BURAR Bucovina Array 77.82 318 ⇓*P* **P 15 01 16.5 +0.4**
BURAR Bucovina Array 77.82 318 ⇓*iP* **P 15 01 16.5 +0.4**
BUR08 Bucovina Ar. S 77.83 318 *e*P **P 15 01 16.0 -0.2**
NACGM Naroch 78.41 326 *e* **P 15 01 17.0 -2.2**
JOF Joensuu 78.42 334 *e*P **P 15 01 17.2 -1.9**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JOF Joensuu 78.42 334 *ep* **P 15 01 17.2 -1.9**
comp=Z,4.9nm,0.7s,mb4.5
IDID Didziasalis 78.53 326 *e*P **P 15 01 20.1 +0.3**
VAY Valandovo 78.68 312 *e*P **P 15 01 19.5 -1.5**
IIGN Ignalina 78.82 326 *e*P **P 15 01 21.7 +0.2**
IZAR Zarasai 78.90 327 *e*P **P 15 01 21.2 -0.7**
ISAL Salakas 78.93 326 *e*P **P 15 01 21.6 -0.5**
APA Apatity 79.25 339⇑*e*P **P 15 01 24.0 +0.4**
APA MLR MLR
comp=Z,2μm,17.0s,MS5.5
DRGR 79.36 317 P P 15 01 25.5 +0.9
KRUS Krusevo 79.67 312 *e*P **P 15 01 24.6 -1.8**
UZH Uzhgorod 79.92 319 *e*P **P 15 01 25.0 -2.6**
BZS Buzias 79.94 316 ⇑*P* **P 15 01 27.8 0.0**
BZS Buzias 79.94 316 ⇑*iP* **P 15 01 27.8 0.0**
OHR Ohrid 79.98 311 *e*P **P 15 01 26.2 -2.0**
KOLS Kolonicke sedl 79.98 319 *e*P **P 15 01 28.3 +0.3**
KOLS pmax pmax
comp=Z,21nm,1.1s,mb5.0
KOLS Kolonicke sedl 79.98 319 *e*P **P 15 01 28.3 +0.3**
BILL Bilibino 79.99 21⇑*e*P **P 15 01 26.0 -1.6**
BILL *e*S S 15 11 26.1 -3.3
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.5
BILL Bilibino 79.99 21 *e*P **P 15 01 24.7 -2.9**
comp=Z,10.0nm,1.4s,mb4.5
SUW Suwalki 80.28 325 *e*P **P 15 01 29.1 -0.3**
SUW Suwalki 80.28 325 *e*P **P 15 01 28.4 -1.1**
FINES FINESS Array B 80.35 332 P P 15 01 29.5 -0.1
comp=Z,8.7nm,0.8s,mb4.7,baz=117,slow=6.6,SNR=18
FINES FINESS Array B 80.35 332 P P 15 01 29.5 -0.2
KAF Kangasniemi 80.41 333 *e*P **P 15 01 27.9 -2.1**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KAF Kangasniemi 80.41 333 *ep* **P 15 01 27.9 -2.1**
comp=Z,9.8nm,0.7s,mb4.8
STHS Stebnicka Huta 80.72 320 *e*P **P 15 01 32.5 +0.6**
STHS pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
STHS Stebnicka Huta 80.72 320 *e*P **P 15 01 32.5 +0.6**
KECS Kecovo 81.09 319 *e*P **P 15 01 27.9 -6.0**
KECS *e* 15 01 44.7
KECS pmax pmax
comp=N,3.0nm,0.8s
KECS Kecovo 81.09 319 *e*P **P 15 01 34.3 +0.4**
SYO Syowa Base 81.11 198⇑*e*P **P 15 01 35.0 +1.4**
PSZ Piszkesteto 81.41 318⇑*e*P **P 15 01 35.6 0.0**
OJC Ojcow 81.76 320 *e*P **P 15 01 37.5 +0.1**
TSUM Tsumeb 82.51 250 *e*P **P 15 01 43.1 +1.1**
comp=N,12nm,0.9s,mb4.9
ARCES ARCESS Array B 82.63 340 P P 15 01 40.5 -1.1
comp=N,2.0nm,0.5s,mb4.4,baz=110,slow=4.3,SNR=17
ARCES ARCESS Array B 82.63 340 P P 15 01 40.5 -1.1
MORC Moravsky Berou 83.16 320 *e*P **P 15 01 44.7 0.0**
comp=N,22nm,1.4s,mb5.0
MORC Moravsky Berou 83.16 320⇑*iP* **P 15 01 45.2 +0.5**
ZST Bratislava 83.30 318 *e*P **P 15 01 46.9 +1.4**
ZST pmax pmax
comp=Z,15nm,0.7s,mb5.1
ZST Bratislava 83.30 318 *e*P **P 15 01 46.8 +1.3**
CEL Celeste 83.52 308 *e*P **P 15 01 47.1 +0.2**
comp=Z,26nm,0.8s,mb5.4
KSP Ksiaz 84.05 321 *e*P **P 15 01 50.2 +0.9**
KSP Ksiaz 84.05 321 *e*P **P 15 01 49.8 +0.5**
ARSA Arzberg 84.30 317⇑*iP* **P 15 01 50.6 0.0**
comp=Z,16nm,1.1s,mb5.1
BOJS Bojanci 84.38 315 *e*P **P 15 01 51.5 +0.4**
PERS Pernice 84.54 317 *e*P **P 15 01 52.4 +0.5**
SOKA Soboth 84.60 317⇑*iP* **P 15 01 52.3 +0.2**
comp=Z,22nm,0.9s,mb5.3
VISS Visnje 84.69 316 *i P* **P 15 01 52.4 -0.2**
OBKA Obir 84.92 316⇓*iP* **P 15 01 54.2 +0.4**
comp=Z,12nm,0.9s,mb5.0
JAVS Javornik 85.23 316 *i P* **P 15 01 55.4 0.0**
VOY Vojsko 85.36 316 *e*P **P 15 01 55.5 -0.5**
VOY *e* pP 15 02 04.7 -0.5
BRG Berggiesshubel 85.53 321 *e*P **P 15 01 57.0 +0.2**
comp=Z,13nm,1.2s,mb5.0
BRG Berggiesshubel 85.53 321 *e*P **P 15 01 57.0 +0.2**
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
AQU L'Aquila 85.59 312 *e*P **P 15 01 57.8 +0.6**
AQU pmax pmax
comp=Z,21nm,0.7s,mb5.5
AQU L'Aquila 85.59 312 *e*P **P 15 01 57.8 +0.5**
comp=Z,21nm,0.7s,mb5.5
GEC2 GERESS Array S 85.60 319 *e*P **P 15 01 57.2 +0.1**
comp=Z,19nm,1.2s,mb5.2
GEC2 GERESS Array S 85.60 319 *e*P **P 15 01 57.2 +0.1**
GEC2 pmax pmax
comp=Z,19nm,1.2s,mb5.2
GERES GERESS Array B 85.60 319 P P 15 01 57.7 +0.5
comp=Z,7.4nm,1.0s,mb4.9,baz=101,slow=6.9,SNR=34
KHC Kasperske Hory 85.69 319 *e*P **P 15 01 57.3 -0.3**
comp=Z,5.0nm,0.8s,mb4.8
WET Wettzell 86.15 319 *e*P **P 15 01 59.9 0.0**
comp=Z,11nm,1.0s,mb5.0
WET Wettzell 86.15 319 *e*P **P 15 01 59.9 0.0**
WET pmax pmax
comp=Z,11nm,1.0s,mb5.0
ROTZ Rotzenmuhle 86.61 320 *e*P **P 15 02 02.7 +0.6**
comp=Z,12nm,1.1s,mb5.0
SPB4 Spitsbergen Ar 86.78 348 *e*P **P 15 02 01.7 -0.7**
WTTA Wattenberg 86.94 317⇑*iP* **P 15 02 03.1 -0.7**
comp=Z,17nm,0.9s,mb5.3
MOX Moxa 87.00 320 *e*P **P 15 02 04.3 +0.3**
comp=Z,14nm,1.5s,mb5.0
MOX Moxa 87.00 320 *e*P **P 15 02 04.5 +0.5**
comp=Z,23nm,1.8s,mb5.1
MOX Moxa 87.00 320 *e*P **P 15 02 04.3 +0.3**
MOX pmax pmax
comp=Z,14nm,1.5s,mb5.0
SBA Scott Base 87.11 169 *e*P **P 15 02 04.1 +0.1**
GRA1 Grafenberg Arr 87.25 319 *e*P **P 15 02 05.6 +0.4**
comp=Z,17nm,1.0s,mb5.2
GRF Grafenberg Arr 87.25 319 *e*P **P 15 02 05.6 +0.4**
comp=Z,17nm,1.0s,mb5.2
GRF Grafenberg Arr 87.25 319 *e*P **P 15 02 05.6 +0.4**
GRF pmax pmax
comp=Z,17nm,1.0s,mb5.2
GRF Grafenberg Arr 87.25 319 *e*P **P 15 02 05.6 +0.4**
GRF pmax pmax
comp=Z,17nm,1.0s,mb5.2
MOTA Moosalm 87.31 317⇓*iP* **P 15 02 04.5 -1.0**
comp=Z,16nm,0.9s,mb5.2
NB2 NORSAR Subarra 87.41 331 P P 15 02 04.7 -1.0
comp=Z,12nm,1.0s,mb5.1,baz=92,slow=5.1
NOA NORSAR Array B 87.41 331 P P 15 02 05.5 -0.2
comp=Z,7.7nm,0.9s,mb4.9,baz=92,slow=4.9,SNR=16
RETA Reutte 87.54 317⇑*iP* **P 15 02 06.1 -0.5**
comp=Z,15nm,0.9s,mb5.2
FETA Feichten 87.56 317⇑*iP* **P 15 02 06.7 -0.1**
comp=Z,7.9nm,0.8s,mb5.0
CLZ Clausthal 87.80 322 *e*P **P 15 02 08.1 +0.3**
comp=Z,33nm,1.0s,mb5.5
CLZ Clausthal 87.80 322 *e*P **P 15 02 08.1 +0.3**
CLZ pmax pmax
comp=Z,33nm,1.0s,mb5.5
BSEG Bad Segeberg 87.83 324 *e*P **P 15 02 08.4 +0.5**
comp=Z,31nm,1.0s,mb5.5
NRDL Niedersach Rie 87.96 322 *e*P **P 15 02 09.0 +0.5**
comp=Z,40nm,1.0s,mb5.6
DAVA Damuels 88.14 317⇓*iP* **P 15 02 09.5 0.0**
comp=Z,21nm,1.0s,mb5.3
VSL Villasalto 88.62 309 *e*P **P 15 02 12.2 +0.2**
KEST Kesra 88.73 306 P P 15 02 14.3 +1.7
comp=Z,10nm,0.9s,mb5.2,baz=326,slow=0.6,SNR=21
TNS Taunus Mts 89.03 320 *e*P **P 15 02 14.1 +0.4**
comp=Z,51nm,1.0s,mb5.8
TNS Taunus Mts 89.03 320 *e*P **P 15 02 14.1 +0.4**
TNS pmax pmax
comp=Z,51nm,1.0s,mb5.8
BFO Black Forest 89.17 318 *e*P **P 15 02 13.9 -0.4**
comp=Z,11nm,1.0s,mb5.1
BFO Black Forest 89.17 318 *e*P **P 15 02 13.9 -0.4**
BFO pmax pmax
comp=Z,11nm,1.0s,mb5.1
IBBN Ibbenburen 89.40 322 *e*P **P 15 02 15.9 +0.5**
comp=Z,28nm,0.8s,mb5.6
BUG Bochum--Univer 89.74 321 *e*P **P 15 02 18.0 +1.1**
comp=Z,33nm,1.1s,mb5.6
CDF Champ du Feu 89.86 318 *e*P **P 15 02 17.3 -0.3**
comp=Z,26nm,1.0s,mb5.2
CDF Champ du Feu 89.86 318 *e*P **P 15 02 17.3 -0.3**
CDF pmax pmax
comp=Z,13nm,1.0s,mb5.2
CDF Champ du Feu 89.86 318 *e*P **P 15 02 17.3 -0.3**
comp=Z,13nm,1.0s,mb5.2
SBF Sospel 89.95 314 *e*P **P 15 02 18.0 -0.1**
comp=Z,60nm,1.0s,mb5.6
SBF Sospel 89.95 314 *e*P **P 15 02 18.0 -0.1**
SBF pmax pmax
comp=Z,30nm,1.0s,mb5.6
SBF Sospel 89.95 314 *e*P **P 15 02 18.0 -0.1**
comp=Z,30nm,1.0s,mb5.6
ECH Echery 89.95 318 *e*P **P 15 02 18.6 +0.6**
ECH pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
ECH Echery 89.95 318 *e*P **P 15 02 18.6 +0.6**
comp=Z,9.7nm,0.8s,mb5.2
HINF Hinteralfeld 90.17 318 *e*P **P 15 02 18.3 -0.8**
LPG La Plagne 90.36 315 *e*P **P 15 02 20.3 +0.3**
comp=Z,51nm,0.8s,mb5.6
LPG La Plagne 90.36 315 *e*P **P 15 02 20.3 +0.3**
LPG pmax pmax
comp=Z,25nm,0.8s,mb5.6
LPG La Plagne 90.36 315 *e*P **P 15 02 20.3 +0.3**
comp=Z,25nm,0.8s,mb5.6
LPL La Plagne 90.37 315 *e*P **P 15 02 20.3 +0.2**
comp=Z,60nm,0.9s,mb5.6
LPL La Plagne 90.37 315 *e*P **P 15 02 20.3 +0.2**
LPL pmax pmax
comp=Z,30nm,0.9s,mb5.6
LPL La Plagne 90.37 315 *e*P **P 15 02 20.3 +0.2**
comp=Z,30nm,0.9s,mb5.6
MBDF Montbardon 90.38 315 *e*P **P 15 02 19.5 -0.6**
comp=Z,16nm,0.9s,mb5.0
MBDF Montbardon 90.38 315 *e*P **P 15 02 19.5 -0.6**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MBDF Montbardon 90.38 315 *e*P **P 15 02 19.5 -0.6**
comp=Z,7.8nm,0.9s,mb5.0
BNI Bardonecchia 90.43 315 *e*P **P 15 02 20.5 +0.1**

BNI pmax pmax
comp=Z,16nm,1.0s,mb5.3
BNI Bardonecchia 90.43 315 eP **P 15 02 20.5 +0.2**
comp=Z,16nm,1.0s,mb5.3
HAU Haudompre 90.50 318 eP **P 15 02 20.3 -0.3**
comp=Z,58nm,1.0s,mb5.6
HAU Haudompre 90.50 318 eP **P 15 02 20.3 -0.3**
HAU pmax pmax
comp=Z,29nm,1.0s,mb5.6
HAU Haudompre 90.50 318 eP **P 15 02 20.3 -0.3**
comp=Z,29nm,1.0s,mb5.6
FRF La Foret Royal 90.53 313 eP **P 15 02 20.9 +0.1**
comp=Z,51nm,1.0s,mb5.5
FRF La Foret Royal 90.53 313 eP **P 15 02 20.9 +0.1**
FRF pmax pmax
comp=Z,26nm,1.0s,mb5.5
FRF La Foret Royal 90.53 313 eP **P 15 02 20.9 +0.1**
comp=Z,26nm,1.0s,mb5.5
WLF Walferdange 90.54 320 P **P 15 02 21.6 +0.9**
comp=Z,17nm,1.5s,mb5.2
WLF Walferdange 90.54 320 eP **P 15 02 21.5 +0.8**
comp=Z,28nm,1.2s,mb5.5
MEM Membach 90.58 320 P **P 15 02 20.1 -0.8**
LMR La Mourre 90.64 313 eP **P 15 02 21.3 -0.1**
comp=Z,32nm,1.1s,mb5.2
LMR La Mourre 90.64 313 eP **P 15 02 21.3 -0.1**
LMR pmax pmax
comp=Z,16nm,1.1s,mb5.3
LMR La Mourre 90.64 313 eP **P 15 02 21.3 -0.1**
comp=Z,16nm,1.1s,mb5.3
CABF La Chapelle 90.76 316 eP **P 15 02 22.0 +0.2**
comp=Z,46nm,0.9s,mb5.5
CABF La Chapelle 90.76 316 eP **P 15 02 22.0 +0.2**
CABF pmax pmax
comp=Z,23nm,0.9s,mb5.5
CABF La Chapelle 90.76 316 eP **P 15 02 22.0 +0.2**
comp=Z,23nm,0.9s,mb5.5
ORIF Oris-en-Rattie 91.01 315 eP **P 15 02 23.3 +0.3**
comp=Z,43nm,1.2s,mb5.4
ORIF Oris-en-Rattie 91.01 315 eP **P 15 02 23.3 +0.3**
ORIF pmax pmax
comp=Z,22nm,1.2s,mb5.4
ORIF Oris-en-Rattie 91.01 315 eP **P 15 02 23.3 +0.3**
comp=Z,22nm,1.2s,mb5.4
BCLA Clavier 91.04 320 P **P 15 02 23.8 +0.8**
SMRF Simiane la Rot 91.28 314 eP **P 15 02 24.9 +0.6**
comp=Z,18nm,0.8s,mb5.2
SMRF Simiane la Rot 91.28 314 eP **P 15 02 24.9 +0.6**
comp=Z,18nm,0.8s,mb5.5
MEZF Maizieres J'vi 91.34 318 eP **P 15 02 24.5 0.0**
comp=Z,36nm,1.0s,mb5.4
MEZF Maizieres J'vi 91.34 318 eP **P 15 02 24.5 0.0**
comp=Z,36nm,1.0s,mb5.7
GIVF Givet 91.37 320 eP **P 15 02 24.7 +0.1**
comp=Z,35nm,1.1s,mb5.3
GIVF Givet 91.37 320 eP **P 15 02 24.7 +0.1**
GIVF pmax pmax
comp=Z,18nm,1.1s,mb5.3
GIVF Givet 91.37 320 eP **P 15 02 24.7 +0.1**
comp=Z,18nm,1.1s,mb5.3
DOU Dourbes 91.51 320 P **P 15 02 26.0 +0.7**
comp=Z,15nm,3.0s
BAIF Baives 91.77 320 eP **P 15 02 26.8 +0.4**
comp=Z,37nm,1.0s,mb5.4
BAIF Baives 91.77 320 eP **P 15 02 26.8 +0.4**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.4
BAIF Baives 91.77 320 eP **P 15 02 26.8 +0.4**
comp=Z,18nm,1.0s,mb5.4
VIVF Saint-Julien-I 91.87 315 eP **P 15 02 27.0 0.0**
comp=Z,29nm,1.0s,mb5.3
VIVF Saint-Julien-I 91.87 315 eP **P 15 02 27.0 0.0**
VIVF pmax pmax
comp=Z,15nm,1.0s,mb5.3
VIVF Saint-Julien-I 91.87 315 eP **P 15 02 27.0 0.0**
comp=Z,15nm,1.0s,mb5.3
SSB Saint Sauveur 91.93 315 eP **P 15 02 27.5 +0.2**
SSB pmax pmax
comp=Z,14nm,0.9s,mb5.3
SSB Saint Sauveur 91.93 315 eP **P 15 02 27.5 +0.2**
comp=Z,14nm,0.9s,mb5.3
LOR Lormes 92.23 317 eP **P 15 02 28.6 -0.1**
comp=Z,54nm,0.9s,mb5.6
LOR Lormes 92.23 317 eP **P 15 02 28.6 -0.1**
LOR pmax pmax
comp=Z,27nm,0.9s,mb5.6
LOR Lormes 92.23 317 eP **P 15 02 28.6 -0.1**
comp=Z,27nm,0.9s,mb5.6
SMF Signal de Mont 92.30 317 eP **P 15 02 28.8 -0.2**
comp=Z,59nm,0.9s,mb5.6
SMF Signal de Mont 92.30 317 eP **P 15 02 28.8 -0.2**
SMF pmax pmax
comp=Z,29nm,0.9s,mb5.6
SMF Signal de Mont 92.30 317 eP **P 15 02 28.8 -0.2**
comp=Z,29nm,0.9s,mb5.6
SSF Saint Saulge 92.49 317 eP **P 15 02 29.9 0.0**
comp=Z,35nm,1.3s,mb5.2
SSF Saint Saulge 92.49 317 eP **P 15 02 29.9 0.0**
SSF pmax pmax
comp=Z,18nm,1.3s,mb5.2
SSF Saint Saulge 92.49 317 eP **P 15 02 29.9 0.0**
comp=Z,18nm,1.3s,mb5.2
LASF Ste Croix 92.51 314 eP **P 15 02 30.2 +0.2**
comp=Z,19nm,0.9s,mb5.2
TAM Tamanrasset 92.56 293 eP **P 15 02 31.9 +1.2**
TAM pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
TAM Tamanrasset 92.56 293 eP **P 15 02 31.9 +1.1**
comp=Z,5.3nm,1.0s,mb4.9
AVF Avril sur Loir 92.62 317 eP **P 15 02 30.3 -0.2**
comp=Z,29nm,0.9s,mb5.4
AVF Avril sur Loir 92.62 317 eP **P 15 02 30.3 -0.2**
AVF pmax pmax
comp=Z,15nm,0.9s,mb5.4
AVF Avril sur Loir 92.62 317 eP **P 15 02 30.3 -0.2**
comp=Z,15nm,0.9s,mb5.4
BGF Bois d'Agland 92.99 317 eP **P 15 02 32.4 +0.2**
comp=Z,44nm,0.9s,mb5.6
BGF Bois d'Agland 92.99 317 eP **P 15 02 32.4 +0.2**
BGF pmax pmax
comp=Z,22nm,0.9s,mb5.6
BGF Bois d'Agland 92.99 317 eP **P 15 02 32.4 +0.2**
comp=Z,22nm,0.9s,mb5.6
TCF Toulx Ste Croi 93.46 316 eP **P 15 02 34.6 +0.3**
comp=Z,13nm,0.9s,mb5.0
TCF Toulx Ste Croi 93.46 316 eP **P 15 02 34.6 +0.3**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
TCF Toulx Ste Croi 93.46 316 eP **P 15 02 34.6 +0.3**
comp=Z,6.3nm,0.9s,mb5.0
CAF Calviac 93.71 315 eP **P 15 02 35.9 +0.4**
comp=Z,24nm,1.0s,mb5.3
CAF Calviac 93.71 315 eP **P 15 02 35.9 +0.4**
CAF pmax pmax
comp=Z,12nm,1.0s,mb5.3
CAF Calviac 93.71 315 eP **P 15 02 35.9 +0.4**
comp=Z,12nm,1.0s,mb5.3
MTLF Montolieu 93.76 313 eP **P 15 02 35.9 +0.1**
comp=Z,34nm,1.2s,mb5.3
MTLF Montolieu 93.76 313 eP **P 15 02 35.9 +0.1**
MTLF pmax pmax
comp=Z,17nm,1.2s,mb5.3
MTLF Montolieu 93.76 313 eP **P 15 02 35.9 +0.1**
comp=Z,17nm,1.2s,mb5.3
RJF Les Rejaudoux 94.05 315 eP **P 15 02 37.5 +0.4**
MFF Saint Martin d 95.04 317 eP **P 15 02 41.3 -0.3**
PPLA Purkeypile 96.90 26 eP **P 15 02 49.9 +0.2**
VNA2 Neumayer–Watz 97.00 199 eP **P 15 02 52.0 +2.0**
BPAW Bear Paw Mtn. 97.04 25 eP **P 15 02 49.5 -0.8**
comp=Z,5.5nm,0.8s,mb5.0
TRF Thorofare Moun 97.54 25 eP **P 15 02 51.7 -0.9**
comp=Z,2.6nm,0.8s,mb4.8
EVO Evora 102.17 310 eP Pdif 15 03 12.3 -1.1
comp=Z,11nm,0.9s
BSMT Bassoo Peak 122.46 26 ePKPdf PKPdf 15 08 13.4 -0.7
DLMT Dillon 125.33 27 ePKPdf PKPdf 15 08 19.1 -0.5
ULM Lac du Bonnet 126.63 12 PKP PKPdf 15 08 21.3 -0.7
comp=Z,5.0nm,0.7s,baz=352,slow=1.8,SNR=8.2
ULM Lac du Bonnet 126.63 12 ePKPdf PKPdf 15 08 21.0 -1.0
NVAR Mina Array Bea 127.24 37 PKP PKPdf 15 08 22.6 -1.0
comp=Z,1.6nm,0.9s,baz=238,slow=1.8,SNR=7.3
M13A Montello 127.55 31 ePKPdf PKPdf 15 08 23.8 -0.2
REDW Red Top Meadow 127.67 27 ePKPdf PKPdf 15 08 24.0 -0.2
BGU Big Grassy Mou 128.45 31 ePKPdf PKPdf 15 08 25.9 +0.1
HWUT Hardware Ranch 128.68 29 ePKPdf PKPdf 15 08 25.3 -0.9
PDAR Pinedale Array 128.72 27 PKP PKPdf 15 08 25.6 -0.7
comp=Z,1.0nm,0.8s,baz=355,slow=1.6,SNR=8.7
RSSD Black Hills 129.87 22 ePKIKP PKPdf 15 08 27.8 -0.6
MSU Marysvale 130.67 32 ePKIKP PKPdf 15 08 31.5 +1.4
ECSD EROS Data Cent 132.58 15 ePKPdf PKPdf 15 08 33.3 -0.2
PLCA Paso Flores 140.08 192 PKP PKPdf 15 08 47.2 -0.3
comp=Z,5.0nm,1.1s,baz=219,slow=3.5,SNR=3.5
PLCA Paso Flores 140.08 192 PKP PKPdf 15 08 47.2 -0.3
WVT Waverly 141.76 9 ePKIKP PKPdf 15 08 51.1 +0.4
MIAR Mount Ida 141.99 17 ePKHKP 15 08 44.0
TXAR Lajitas Array 142.21 33 PKhKP 15 08 46.4
comp=Z,0.2nm,0.4s,baz=310,slow=9.7,SNR=3.8
TXAR PKP PKPdf 15 08 51.2 -0.5
comp=Z,1.7nm,0.7s,baz=207,slow=1.4,SNR=12
TXAR Lajitas Array 142.21 33 PKP 15 08 46.4
TXAR PKP PKPdf 15 08 51.2 -0.5
JCT Junction City 143.25 28 ePKIKP PKPdf 15 08 51.2 -2.3
LRAL Lakeview Retre 144.92 9 ePKPpre PKPdf 15 08 54.6 -1.8
GOGA Godfrey 144.93 4 ePKIKP PKPdf 15 08 54.1 -2.3
CPUP Villa Florida 146.65 221 PKPbc PKPbc 15 09 00.8 -0.2
comp=Z,11nm,0.8s,baz=112,slow=3.6,SNR=22
LCO Las Campanas 151.19 199 ePKPbc PKPbc 15 09 12.8 +0.1
LPAZ La Paz 160.82 220 PKP PKPdf 15 09 19.8 +0.1
comp=Z,3.9nm,1.1s,baz=63,slow=4.2,SNR=7.7
LPAZ PKPab PKPab 15 10 02.3 +0.5
comp=Z,4.4nm,1.0s,baz=96,slow=7.6,SNR=7.0
ROSC El Rosal 170.66 315 PKP PKPdf 15 09 29.4 +1.5
comp=Z,3.5nm,0.3s,baz=256,slow=23,SNR=3.1

*ISCJB **19** 14:54:02.0±1.0, 37°.02N±0°.08×71°.6E±0°.1, h132km±11km, mb3.1/2, Error ellipse: s-maj=17.2km s-min=9.6km az=36.1*
*IDC **19** 14:54:01.7±6.4, 36°.91N×71°.69E, h121km±51km, mb3.1/2, mb1 3.4/6, mb1mx3.1/26, mbtmp3.3/6, Error ellipse: s-maj=56.7km s-min=38.2km az=65.0*
*NEIC **19** 14:54:02.6±0.9, 36°.97N×71°.62E, h125km±9km, mb4.2/6, Error ellipse: s-maj=17.1km s-min=9.6km az=121.0*
*NNC **19** 14:54:04.0±5.4, 37°.50N×71°.29E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=43.7km s-min=33.0km az=174.0*
ISC 19 14:54:03.0±1.0, 37°.01N±0°.08×71°.5E±0°.1, h129km±10km, n30, σ0°73/34, mb3.1/2, 4C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.19**	**220**	eP	**Pn**	**14 54 52.1**	**+0.1**
KSH	**Kashi**	**4.30**	**53**	Pn	**Pn**	**14 55 01.4**	**-5.3**
KSH				Sn	**Sn**	**14 55 45.3**	**-11**
KSH				smax			
	comp=N,320nm,0.8s						
KSH				smax			
	comp=E,240nm,0.6s						
AML	**Almayashu**	**5.38**	**17**	P	**Pn**	**14 55 21.4**	**+0.3**
	SNR=39						
AML	**Almayashu**	**5.38**	**17**	eP	**Pn**	**14 55 21.2**	**+0.2**
	comp=E,24nm,0.4s						
UCH	**Uchtor**	**5.70**	**23**	P	**Pn**	**14 55 25.7**	**+0.4**
	SNR=12						
UCH	**Uchtor**	**5.70**	**23**	eP	**Pn**	**14 55 25.6**	**+0.3**
	comp=E,6.3nm,0.4s						
KZA	**Kyzart**	**5.82**	**28**	P	**Pn**	**14 55 27.4**	**+0.4**
	SNR=6.9						
EKS2	**Erkin-Say**	**5.90**	**16**	P	**Pn**	**14 55 28.6**	**+0.4**
	SNR=8.7						
EKS2	**Erkin-Say**	**5.90**	**16**	eP	**Pn**	**14 55 28.2**	**+0.1**
	comp=E,6.6nm,0.4s						
AAK	**Ala-Archa**	**6.06**	**21**	P	**Pn**	**14 55 30.5**	**+0.2**
	SNR=21						
AAK	**Ala-Archa**	**6.06**	**21**	P	**Pn**	**14 55 30.5**	**+0.2**
	comp=E,0.1nm,0.3s,baz=178,slow=6.1,SNR=45						
AAK				S	**Sn**	**14 56 37.9**	**-0.4**
	comp=E,0.1nm,0.3s,baz=329,slow=21,SNR=12						
AAK	**Ala-Archa**	**6.06**	**21**	eP	**Pn**	**14 55 30.4**	**+0.2**
	comp=E,19nm,0.4s						
KK31	**Karatay Array**	**6.13**	**353**	⇑Pn	**Pn**	**14 55 30.6**	**-0.6**
	comp=E,4.8nm,0.4s,baz=171,slow=13						
KK31				⇑Sn	**Sn**	**14 56 35.6**	**-4.5**
	comp=E,4.7nm,0.4s,baz=174,slow=20						
CHMS	**Chumysh**	**6.47**	**21**	P	**Pn**	**14 55 35.9**	**+0.1**
	SNR=7.8						
USP	**Ospenovka**	**6.65**	**19**	P	**Pn**	**14 55 38.1**	**-0.1**
	SNR=13						
TKM2	**Tokmak 2**	**6.68**	**27**	⇑Pn	**Pn**	**14 55 38.7**	**+0.2**
	comp=E,5.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**14 56 53.2**	**-0.1**
	comp=E,4.8nm,0.7s						
TKM2	**Tokmak 2**	**6.68**	**27**	P	**Pn**	**14 55 39.1**	**+0.6**
	SNR=6.7						
TKM2	**Tokmak 2**	**6.68**	**27**	eP	**Pn**	**14 55 38.5**	**0.0**
	comp=E,1.9nm,0.4s						
KURK	**Kurchatov**	**14.61**	**18**	P	**Pn**	**14 57 23.4**	**+0.2**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=5.0						
AB31	**Akbulak array**	**14.85**	**329**	P	**Pn**	**14 57 25.0**	**-1.3**
	comp=E,0.4nm,0.3s,baz=136,slow=15,SNR=33						
ABKAR	**Akbulak array**	**14.85**	**329**	eP	**Pn**	**14 57 25.2**	**-1.2**
	comp=E,1.2nm,0.3s						
AKTK	**Aktyubinsk**	**16.56**	**328**	P	**Pn**	**14 57 47.8**	**+0.4**
AKTO	**Aktyubinsk**	**16.56**	**328**	P	**Pn**	**14 57 47.8**	**+0.4**
	comp=E,0.3nm,0.3s,baz=118,slow=5.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**19.27**	**24**	P	**P**	**14 58 17.4**	**+0.1**
	comp=E,0.6nm,0.3s,baz=227,slow=11,SNR=8.3						
CLL	**Collm**	**43.20**	**309**	*i* P	**P**	**15 01 53.5**	**+2.6**
CLL				*i*		15 01 59.5	
CLL				MLR	MLR		
	comp=Z,3μm,19.5s						
CLL	**Collm**	**43.20**	**309**	*i* P	**P**	**15 01 53.5**	**+2.6**
CLL				*i*		15 01 59.5	
CLL				LR	LR		
	comp=Z,3μm,19.5s						
CLL	**Collm**	**43.20**	**309**	*i* P	**P**	**15 01 53.5**	**+2.6**
CLL				*i* P(2)		15 01 59.5	
CLL				Lm		15 42 00.0	
	comp=N,2μm,19.8s						
CLL				Lm		15 42 00.0	
	comp=E,2μm,19.1s						
CLL				Lm		15 42 00.0	
	comp=Z,3μm,19.5s						
YKA	**Yellowknife Ar**	**80.72**	**3**	P	**P**	**15 06 01.8**	**+0.4**
	comp=Z,0.1nm,0.4s,mb2.8,baz=352,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**80.72**	**3**	P	**P**	**15 06 01.8**	**+0.4**
ASAR	**Alice Springs**	**84.20**	**125**	P	**P**	**15 06 18.6**	**-1.4**
	comp=Z,1.1nm,1.1s,mb3.5,baz=315,slow=4.1,SNR=7.3						

DJA 19 15:00:36.2±29N×99°.22E, h52km, MLv3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.37**	**225**	P	Pn	15 00 47.9	+1.9
MNSI	**Mandailing Nat**	**1.53**	**166**	P	Pn	15 00 52.5	-8.4
GSI	**Gunungsitoli**	**1.91**	**239**	P	Pn	15 01 06.6	+0.4
GSI				S	Sn	15 01 30.5	+1.4
BKNI	**Bangkinang**	**2.67**	**137**	P	Pn	15 01 16.9	+0.4
IPM	**Ipoh**	**2.83**	**40**	P	Pn	15 01 19.1	+0.4
PPI	**Padang Panjang**	**2.97**	**157**	P	Pn	15 01 20.9	+0.2
RGRI	**Rengat**	**4.07**	**130**	P	Px	15 02 03.3	

*DJA **19** 15:01:48, 14°.56N×124°.15E, h113km, mb4.8/7*
*MAN **19** 15:01:59, 12°.53N×124°.65E, h26km, mb5.0, ML4.0, MS4.1*
MAN INTENSITY IV - CATARMAN N. SAMAR; SORSOGON CITY; INTENSITY II - TACLOBAN.
*ISCJB **19** 15:01:59.5±0.4, 12°.50N±0°.03×124°.71E±0°.04, h52km±4km, mb4.3/29, Error ellipse: s-maj=6.6km s-min=3.7km az=158.4*
*BJI **19** 15:01:59.2, 12°.40N×124°.70E, h61km, mB4.2/1, mb4.5/8*
*NEIC **19** 15:02:02.2±0.9, 12°.42N×124°.69E, h62km±9km, mb4.8/7, Error ellipse: s-maj=10.4km s-min=6.6km az=78.0*
NEIC Felt [IV PIVS] at Catarman. Also felt [IV PIVS] at Sorsogon, Luzon. Felt [II PIVS] at Tacloban, Leyte.
*IDC **19** 15:02:03.9±2.8, 12°.37N×124°.59E, h75km±24km, mb3.9/17, mb1 4.0/18, mb1mx3.9/26, mbtmp3.9/18, Error ellipse: s-maj=20.0km s-min=12.0km az=73.0*
ISC 19 15:02:00.8±0.4, 12°.48N±0°.03×124°.72E±0°.04, h47km±4km, n91, σ1°08/98, mb4.3/29, 4C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.06**	**303**	eP	**Pn**	**15 02 03.6**	**-4.5**
MMPH	**Masbate**	**1.08**	**264**	||*i* P	**Pn**	**15 02 20.4**	**+0.9**
MMPH				eS	**Sn**	**15 02 33.8**	**+0.5**
BESP	**Borongan**	**1.12**	**141**	eP	**Pn**	**15 02 19.5**	**-0.6**
BESP				eS	**Sn**	**15 02 33.2**	**-1.1**
PVCP	**Virac**	**1.24**	**334**	eP	**Pn**	**15 02 19.8**	**-2.0**
PVCP				eS	**Sn**	**15 02 34.9**	**-2.4**
OCLP	**Ormoc**	**1.42**	**184**	eP	**Pn**	**15 02 24.6**	**+0.4**
OCLP				eS	**Sn**	**15 02 43.6**	**+1.9**
RCP	**Roxas**	**2.13**	**245**	⇑eP	**Pn**	**15 02 32.8**	**-1.1**
RCP				eS	**Sn**	**15 02 58.9**	**-0.3**
AUQP	**San Andres**	**2.16**	**293**	eP	**Pn**	**15 02 35.1**	**+0.8**
LLP	**Lapu-Lapu**	**2.27**	**199**	eP	**Pn**	**15 02 34.2**	**-1.6**
LLP				eS	**Sn**	**15 03 05.1**	**+2.5**
MSLP	**Maasin**	**2.33**	**177**	eP	**Pn**	**15 02 40.0**	**+3.3**
KALP	**Kalibo**	**2.46**	**251**	⇑eP	**Pn**	**15 02 38.1**	**-0.3**
GQP	**Guinayangan**	**2.63**	**303**	||eP	**Pn**	**15 02 39.3**	**-1.4**
GQP				eS	**Sn**	**15 03 15.3**	**+3.9**
GQP	**Guinayangan**	**2.63**	**303**	eS	**Sn**	**15 03 15.3**	**+3.9**
OTRP	**Odiongan**	**2.64**	**268**	eP	**Pn**	**15 02 39.7**	**-1.1**
GUIM	**Jordan**	**2.78**	**229**	eP	**Pn**	**15 02 42.0**	**-0.8**
TBP	**Tagbilaran**	**2.89**	**197**	eP	**Pn**	**15 02 43.6**	**-0.7**
BOAC	**Boac**	**2.97**	**290**	eP	**Pn**	**15 02 45.1**	**-0.3**
SNPH	**Sibulan**	**3.44**	**205**	⇑*i* P	**Pn**	**15 02 51.4**	**-0.5**
SNPH				*i* S	**Sn**	**15 03 50.9**	**+20**
POLP	**Polilio Island**	**3.51**	**310**	eP	**Pn**	**15 02 54.2**	**+1.4**
SJMP	**San Jose**	**3.52**	**270**	eP	**Pn**	**15 02 52.6**	**-0.3**
BUTP	**Butuan**	**3.60**	**166**	eP	**Pn**	**15 02 58.4**	**+4.3**
CUYO	**Cuyo Island**	**3.97**	**246**	eP	**Pn**	**15 02 59.3**	**+0.1**
CGP	**Cagayan de Oro**	**4.00**	**180**	||eP	**Pn**	**15 03 04.5**	**+5.0**
CGP				*i* S	**Sn**	**15 03 52.9**	**+7.8**
TGY	**Tagaytay City**	**4.02**	**294**	P	**Pn**	**15 03 03.3**	**+3.5**
	121nm,0.3s,baz=149,slow=20,SNR=2.4						
BUSP	**Coron**	**4.44**	**264**	eP	**Pn**	**15 03 04.9**	**-0.7**
BALP	**Baler**	**4.45**	**317**	eP	**Pn**	**15 03 04.8**	**-1.0**
LUBP	**Lubang**	**4.53**	**287**	eP	**Pn**	**15 03 07.2**	**+0.3**
BUKP	**Musuan**	**4.58**	**176**	eP	**Pn**	**15 03 11.4**	**+3.8**
PCPH	**Palayan**	**4.67**	**312**	||eP	**Pn**	**15 03 07.8**	**-0.9**
PCPH				eS	**Sn**	**15 04 02.0**	**+0.4**
PAGZ	**Pagadian**	**4.78**	**196**	eP	**Pn**	**15 03 11.3**	**+1.0**
PALP	**Palanan**	**5.07**	**334**	eP	**Pn**	**15 03 14.1**	**-0.2**
IPIL	**Ipil**	**5.12**	**205**	eP	**Pn**	**15 03 15.8**	**+0.9**
CAUP	**Cauayan**	**5.25**	**328**	eP	**Pn**	**15 03 16.1**	**-0.6**
ENPP	**El Nido**	**5.33**	**257**	eP	**Pn**	**15 03 17.3**	**-0.6**
DMPH	**Davao City--Mi**	**5.42**	**172**	||eP	**Pn**	**15 03 23.5**	**+4.5**
DAV	**Davao City (W)**	**5.44**	**171**	P	**Pn**	**15 03 27.4**	**+8.1**
	12nm,0.3s,baz=229,slow=14,SNR=3.6						
DAV	**Davao City (W)**	**5.44**	**171**	Pn	**Pn**	**15 03 20.1**	**+0.8**
MATI	**Mati**	**5.70**	**164**	eP	**Pn**	**15 03 24.8**	**+1.9**
BOLP	**Bolinao**	**6.06**	**310**	eP	**Pn**	**15 03 28.9**	**+1.0**
APYP	**Conner**	**6.32**	**328**	eP	**Pn**	**15 03 32.6**	**+1.2**
ABRA	**Dolores**	**6.44**	**324**	eP	**Pn**	**15 03 32.9**	**-0.1**
YULB	**Yu-li**	**11.33**	**344**	eP	**Pn**	**15 04 40.5**	**+0.4**
JOW	**Kunigami**	**14.67**	**13**	P	**Pn**	**15 05 25.6**	**+0.2**
	3.0nm,0.3s,baz=213,slow=10,SNR=15						
KSM	**Kuching**	**17.98**	**234**	eP	**Pn**	**15 06 08.0**	**+0.5**
KAPI	**Kappang**	**18.06**	**196**	P	**Pn**	**15 06 08.7**	**+0.3**
	0.5nm,0.3s,baz=307,slow=22,SNR=2.7						
KAPI	**Kappang**	**18.06**	**196**	eP	**Pn**	**15 06 08.2**	**-0.2**
	150nm,1.3s						
GUMO	**Guam**	**19.66**	**85**	P	**Pn**	**15 06 28.6**	**+0.9**
	1.3nm,0.3s,baz=220,slow=4.2,SNR=3.5						
KSRS	**Korea Array**	**25.04**	**6**	P	**P**	**15 07 22.1**	**+1.6**
	4.2nm,1.0s,mb3.9,baz=186,slow=10.0,SNR=8.4						
CMAR	**Chiang Mai Arr**	**25.53**	**287**	P	**P**	**15 07 25.5**	**+0.3**
	0.5nm,0.3s,mb3.5,baz=112,slow=8.5,SNR=3.7						
CMAR				PcP	PcP	15 10 55.6	-0.3
	0.9nm,0.8s,baz=71,slow=1.3,SNR=5.6						
KAKA	**Kakadu**	**26.17**	**163**	eP	**P**	**15 07 28.2**	**-2.8**
	18nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**30.40**	**178**	eP	**P**	**15 08 06.3**	**-2.3**
	12nm,1.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**30.40**	**178**	eP	**P**	**15 08 06.5**	**-2.1**
COEN	**Coen**	**32.00**	**145**	eP	**P**	**15 08 21.0**	**-1.9**
GTA	**Gaotai**	**34.71**	**325**	eP	**P**	**15 08 47.3**	**+1.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
MTSU	**Mount Surprise**	**36.04**	**147**	eP	**P**	**15 08 56.8**	**-1.1**
	comp=Z,31nm,0.9s,mb5.2						
ASAR	**Alice Springs**	**37.03**	**166**	P	**P**	**15 09 04.7**	**-1.5**
	comp=Z,1.3nm,0.5s,mb4.0,baz=350,slow=7.1,SNR=37						
ASAR				S	**S**	**15 14 46.6**	**-2.1**
	comp=Z,1.7nm,1.1s,baz=326,slow=11,SNR=5.5						
ULN	**Ulaanbaatar**	**38.25**	**341**	eP	**P**	**15 09 17.1**	**+0.8**
	comp=Z,7.2nm,1.1s,mb4.3						
SONM	**Songino Array**	**38.44**	**340**	P	**P**	**15 09 18.7**	**+0.9**
	comp=Z,4.6nm,1.1s,mb4.1,baz=160,slow=9.3,SNR=8.6						
CTA	**Charters Tower**	**38.68**	**146**	eP	**P**	**15 09 19.5**	**-0.7**
	comp=Z,6.5nm,0.9s,mb4.4						
FORT	**Forrest**	**43.12**	**176**	eP	**P**	**15 09 55.5**	**-1.1**
	comp=Z,23nm,0.8s,mb5.0						
BBOO	**Buckleboo**	**46.31**	**167**	eP	**P**	**15 10 22.1**	**+0.1**
	comp=Z,4.7nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**46.97**	**160**	eP	**P**	**15 10 27.6**	**+0.4**
	comp=Z,2.7nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**46.97**	**160**	P	**P**	**15 10 27.1**	**-0.1**
	comp=Z,2.6nm,0.6s,mb4.3,baz=319,slow=8.7,SNR=6.1						
CMSA	**Cobar Meteorol**	**48.16**	**156**	eP	**P**	**15 10 37.1**	**+0.6**
PETK	**Petropavlovsk-**	**48.30**	**26**	P	**P**	**15 10 38.5**	**+1.2**
	comp=Z,5.0nm,1.0s,mb4.5,baz=238,slow=8.5,SNR=4.9						
MKAR	**Makanchi Array**	**49.36**	**322**	P	**P**	**15 10 45.8**	**+0.3**
	comp=Z,2.0nm,0.9s,mb4.1,baz=127,slow=9.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**51.97**	**331**	P	**P**	**15 11 05.7**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=126,slow=9.4,SNR=3.7						
KURK	**Kurchatov**	**53.40**	**325**	P	**P**	**15 11 15.7**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.3,baz=122,slow=7.9,SNR=3.7						
KURK	**Kurchatov**	**53.40**	**325**	eP	**P**	**15 11 16.0**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**59.00**	**325**	P	**P**	**15 11 55.6**	**+0.1**
	comp=Z,2.2nm,1.0s,mb4.1,baz=131,slow=18,SNR=3.1						
BRVK	**Borovoye**	**59.07**	**325**	eP	**P**	**15 11 55.9**	**-0.2**
	comp=Z,6.6nm,1.0s,mb4.6						
ABKAR	**Akbulak array**	**64.22**	**319**	eP	**P**	**15 12 30.0**	**-0.8**
	comp=Z,1.8nm,0.7s,mb4.2						
AKTK	**Aktyubinsk**	**65.67**	**320**	P	**P**	**15 12 40.3**	**+0.1**
AKTO	**Aktyubinsk**	**65.67**	**320**	P	**P**	**15 12 40.3**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=126,slow=14,SNR=2.0						
KDAK	**Kodiak Island**	**75.66**	**33**	P	**P**	**15 13 41.4**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.4						
BPAW	**Bear Paw Mtn.**	**76.38**	**27**	eP	**P**	**15 13 45.4**	**+0.6**
	comp=Z,17nm,1.1s,mb4.9						
BPAW				*e*	pP	15 13 54.4	-4.1
JOF

σ1§20/30,**7C-8D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.10**	**307**	*i* PG	**Pg**	**15 04 08.9**	**-0.7**
UKR	**Ust'-Kan**	**2.01**	**291**	*e*PN	**Pn**	**15 04 42.8**	**+1.8**
UKR				*e*		15 05 09.9	
TASR	**Tashtagol**	**2.50**	**2**	*e*PN	**Pb**	**15 04 51.7**	**-0.4**
TASR				*e*		15 05 26.3	
CERR	**Cheremushki**	**3.46**	**40**	*e*PN	**Pb**	**15 05 09.7**	**+1.3**
CERR				*e*		15 05 52.8	
ZALV	**Zalesovo Beam**	**4.11**	**335**	Pn	**Pn**	**15 05 10.5**	**+0.6**
	4.6nm,0.3s,baz=155,slow=14,SNR=57						
ZALV				Sn	**Sn**	**15 06 00.3**	**+2.4**
	5.7nm,0.3s,baz=165,slow=18,SNR=5.3						
ZALV				Lg		15 06 16.8	
	7.7nm,0.3s,baz=154,slow=24,SNR=14						
ZALV	**Zalesovo Beam**	**4.11**	**335**	PN	**Pn**	**15 05 10.5**	**+0.6**
ZALV						15 06 00.3	
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZALV				smax			
	comp=N,6.0nm,0.3s						
MK31	**Makanchi Array**	**5.01**	**228**	⇑Pn	**Pn**	**15 05 22.4**	**+0.1**
	comp=N,8.3nm,0.3s,baz=57,slow=12,SNR=384						
MK31				⇓Sn	**Sn**	**15 06 20.1**	**-0.1**
	comp=N,3.3nm,0.3s,baz=58,slow=24,SNR=4.5						
MK31				⇑Lg		15 06 46.5	
	comp=N,19nm,0.6s,baz=51,slow=30,SNR=4.8						
MKAR	**Makanchi Array**	**5.01**	**228**	Pn	**Pn**	**15 05 22.4**	**+0.1**
	comp=N,19nm,0.3s,baz=52,slow=13,SNR=341						
MKAR				Sn	**Sn**	**15 06 21.0**	**+0.7**
	comp=N,5.8nm,0.3s,baz=57,slow=24,SNR=5.3						
MKAR				Lg		15 06 40.8	
	comp=N,7.2nm,0.3s,baz=53,slow=26,SNR=6.3						
MKAR	**Makanchi Array**	**5.01**	**228**	PN	**Pn**	**15 05 22.4**	**+0.1**
MKAR						15 06 21.0	
MKAR				pmax	pmax		
	comp=Z,19nm,0.3s						
MKAR				smax			
	comp=N,6.0nm,0.3s						
NVS	**Novosibirsk**	**5.35**	**331**	*e*PN	**Pn**	**15 05 26.4**	**-0.5**
NVS				*e*		15 05 43.5	
NVS				*e*		15 06 28.8	
NVS				*e*		15 06 55.2	
KURK	**Kurchatov**	**5.84**	**278**	⇓Pn	**Pn**	**15 05 33.6**	**0.0**
	comp=N,5.2nm,0.6s						
KURK				⇓Sn	**Sn**	**15 06 43.4**	**+2.8**
	comp=N,15nm,0.5s						
KURK				⇓Lg		15 07 08.6	
	comp=N,38nm,0.5s						
KURK	**Kurchatov**	**5.84**	**278**	Pn	**Pn**	**15 05 34.2**	**+0.6**
	comp=N,1.3nm,0.3s,baz=92,slow=15,SNR=54						
KURK				Sn	**Sn**	**15 06 41.8**	**+1.2**
	comp=N,1.4nm,0.3s,baz=187,slow=8.6,SNR=5.3						
KURK				Lg		15 07 08.9	
	comp=N,1.5nm,0.3s,baz=88,slow=31,SNR=5.8						
KURK	**Kurchatov**	**5.84**	**278**	PN	**Pn**	**15 05 34.2**	**+0.6**
KURK						15 06 41.8	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK				smax			
	comp=N,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**5.90**	**277**	⇓Pn	**Pn**	**15 05 34.1**	**-0.3**
	comp=N,1.4nm,0.3s,baz=91,slow=14						
KURBB				⇓Sn	**Sn**	**15 06 42.4**	**+0.4**
	comp=N,9.0nm,0.5s,baz=85,slow=31						
KURBB				⇓Lg		15 07 09.0	
	comp=N,22nm,0.8s,baz=80,slow=32						
VOSK	**Vostochnaya**	**10.74**	**290**	⇑Pn	**Pn**	**15 06 37.9**	**-2.9**
	comp=N,1.8nm,0.7s						
VOSK				⇓Sn	**Sn**	**15 08 39.9**	**-1.0**
	comp=N,8.3nm,0.8s						
VOSK				⇑Lg		15 09 46.1	
	comp=N,6.8nm,0.9s						
TKM2	**Tokmak 2**	**11.11**	**233**	⇑Pn	**Pn**	**15 06 44.9**	**-1.0**
	comp=N,2.9nm,0.7s						
TKM2				⇑Sn	**Sn**	**15 08 52.6**	**+2.4**
	comp=N,2.5nm,0.8s						
TKM2				⇑Lg		15 09 59.0	
	comp=N,5.9nm,0.8s						
BVAR	**Borovoye Array**	**11.13**	**291**	Pn	**Pn**	**15 06 44.2**	**-2.0**
	comp=N,0.6nm,0.3s,baz=104,slow=14,SNR=8.7						
BVAR				Sn	**Sn**	**15 08 45.0**	**-5.5**
	comp=N,0.9nm,0.3s,baz=101,slow=21,SNR=15						
BVAR	**Borovoye Array**	**11.13**	**291**	P	**Pn**	**15 06 44.2**	**-1.9**
BVAR						15 08 45.0	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
AAK	**Ala-Archa**	**11.89**	**235**	Pn	**Pn**	**15 06 56.3**	**-0.3**
	comp=N,0.0nm,0.3s,baz=88,slow=9.2,SNR=6.4						
AAK				Lg		15 10 19.8	
	comp=N,0.0nm,0.3s,baz=219,slow=18,SNR=3.0						
SONM	**Songino Array**	**12.47**	**94**	Lg		15 10 38.9	
	comp=N,0.1nm,0.3s,baz=276,slow=31,SNR=3.6						
AB31	**Akbulak array**	**17.95**	**278**	P	**Pn**	**15 08 15.9**	**-0.7**
	comp=N,0.7nm,0.6s,baz=78,slow=11,SNR=10						
AKTO	**Aktyubinsk**	**18.92**	**282**	P	**Pn**	**15 08 26.5**	**-1.8**
	comp=N,0.1nm,0.3s,baz=96,slow=15,SNR=4.1						

*NEIC **19** 15:06:21.3, 16°.60N×95°.85W, h85km, MD4.0(MEX), After MEX.*

MEX 19 15:06:21.3±1.6, 16°.60N×95°.85W, h85km±20km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.86**	**197**	*i* P	Pn	15 06 37.5	-1.6
HUIG				*i* S	Sn	15 06 50.2	-2.1
HUIG	**Huatulco**	**0.86**	**197**	*i* P	Pn	15 06 37.5	-1.6
HUIG				*i* S	Sn	15 06 50.2	-2.1
OXX	**Oaxaca**	**0.96**	**300**	*i* P	Pn	15 06 40.3	+0.1
OXX				*i* S	Sn	15 06 54.2	-0.2
OXX	**Oaxaca**	**0.96**	**300**	*i* P	Pn	15 06 40.3	+0.1
OXX				*i* S	Sn	15 06 54.2	-0.2
TUIG	**Tuzandepetl**	**1.98**	**44**	*i* P	Pn	15 06 51.5	-1.5
TUIG				*i* S	Sn	15 07 14.6	-2.6
TUIG	**Tuzandepetl**	**1.98**	**44**	*i* P	Pn	15 06 51.5	-1.5
TUIG				*i* S	Sn	15 07 14.6	-2.6
PNIG	**Pinotepa**	**2.19**	**265**	*e*P	Pn	15 06 54.6	-1.3
PNIG				*i* S	Sn	15 07 20.1	-2.3
PNIG	**Pinotepa**	**2.19**	**265**	*e*P	Pn	15 06 54.6	-1.3
PNIG				*i* S	Sn	15 07 20.1	-2.3
TPIG	**Tehuac#an**	**2.31**	**322**	*i* P	Pn	15 06 56.7	-0.8
TPIG				*i* S	Sn	15 07 24.7	-0.5
TGIG		**2.62**	**86**	*i* P	Pn	15 07 00.7	-0.9
TGIG				*i* S	Sn	15 07 30.7	-1.9
PCIG		**2.68**	**109**	*i* P	Pn	15 07 03.0	+0.6
PCIG				*i* S	Sn	15 07 33.6	-0.5
SCX	**San Cristobal**	**3.09**	**87**	*i* P	Pn	15 07 12.5	+4.6
SCX	**San Cristobal**	**3.09**	**87**	*i* P	Pn	15 07 12.5	+4.6
LVIG	**Laguna Verde**	**3.15**	**350**	*i* P	Pn	15 07 10.6	+1.8
LVIG	**Laguna Verde**	**3.15**	**350**	*i* P	Pn	15 07 10.6	+1.8
THIG		**3.84**	**115**	*i* S	Sn	15 08 01.6	-0.6
ACX	**Acapulco**	**3.90**	**275**	*i* P	Pn	15 07 17.6	-1.4
ACX	**Acapulco**	**3.90**	**275**	*i* P	Pn	15 07 17.6	-1.4

*ISK **19** 15:08:22.8, 37°.29N×28°.27E, h5km, ML1.9*
*ISCJB **19** 15:08:23.4±0.9, 37°.29N±0°.04×28°.28E±0°.05, h10km, Error ellipse: s-maj=7.5km s-min=4.3km az=137.1*
*CSEM **19** 15:08:23.9±0.4, 37°.28N×28°.28E, h2km, ML1.9, Error ellipse: s-maj=8.4km s-min=4.6km az=48.0*
*DDA **19** 15:08:24.1, 37°.21N×28°.21E, h7km±4km, Md2.7*

ISC 19 15:08:23.8±1.0, 37°.29N±0°.04×28°.29E±0°.06, h10km, n12, σ0§76/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**183**	PG	**Pg**	**15 08 26.6**	**-0.6**
YER				*e*SG	**Sg**	**15 08 29.0**	**-0.6**
YER	**Yerkesik**	**0.16**	**183**	*i* Pg	**Pg**	**15 08 26.6**	**-0.6**
YER				*e*Sg	**Sg**	**15 08 29.0**	**-0.6**
MLSB	**Milas**	**0.41**	**270**	*e*PG	**Pg**	**15 08 31.2**	**-0.7**
MLSB				*e*SG	**Sg**	**15 08 37.6**	**+0.3**
MLSB	**Milas**	**0.41**	**270**	*e*Pg	**Pg**	**15 08 31.2**	**-0.6**
MLSB				*e*Sg	**Sg**	**15 08 37.6**	**+0.3**
TURN	**Turunc**	**0.49**	**149**	*i* P	**Pg**	**15 08 33.0**	**-0.2**
TURN				*i* S	**Sg**	**15 08 40.4**	**+0.7**
TURN	**Turunc**	**0.49**	**149**	*i* P	**Pg**	**15 08 33.0**	**-0.2**
TURN				*i* S	**Sg**	**15 08 40.4**	**+0.7**
AYDN	**Tasoluk**	**0.49**	**318**	*i* P	**Pg**	**15 08 34.0**	**+0.6**
AYDN				*i* S	**Sg**	**15 08 40.2**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**318**	*i* P	**Pg**	**15 08 34.0**	**+0.6**
AYDN				*i* S	**Sg**	**15 08 40.2**	**+0.3**
BDRM	**Kayabasi**	**0.71**	**252**	*i* P	**Pg**	**15 08 36.1**	**-1.4**
BDRM				*i* S	**Sg**	**15 08 46.4**	**-0.5**
BDRM	**Kayabasi**	**0.71**	**252**	*i* P	**Pg**	**15 08 36.1**	**-1.5**
BDRM				*i* S	**Sg**	**15 08 46.4**	**-0.5**
DAT	**Datca**	**0.80**	**226**	*e*PG	**Pg**	**15 08 39.9**	**+0.7**
DAT				*e*SG	**Sg**	**15 08 51.1**	**+1.4**
DAT	**Datca**	**0.80**	**226**	*e*Pg	**Pg**	**15 08 39.9**	**+0.7**
DAT				*e*Sg	**Sg**	**15 08 51.1**	**+1.4**

IDC 19 15:13:27.0±1.3, 32°.44N×105°.36E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/26, mbtmp3.5/4, ML3.6/1, MS4.4/1, Ms1 4.4/1, ms1mx3.7/32, Error ellipse: s-maj=49.7km s-min=23.3km az=47.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.15**	**69**	P	Pn	15 17 51.5	-1.0
	0.2nm,0.3s,baz=255,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**22.72**	**316**	P	P	15 18 30.4	+0.1
	0.7nm,0.6s,baz=115,slow=11,SNR=6.1						
KURK	**Kurchatov**	**26.86**	**321**	P	P	15 19 09.1	0.0
	0.2nm,0.4s,baz=122,slow=8.8,SNR=3.6						
KAPI	**Kappang**	**39.68**	**157**	LR	LR	15 38 40.0	
	comp=Z,451nm,18.6s,baz=20,slow=38						
ASAR	**Alice Springs**	**62.09**	**150**	P	P	15 23 49.7	+0.1
	0.5nm,0.5s,baz=333,slow=6.4,SNR=17						

*IDC **19** 15:15:42.9±4.8, 36°.09N×142°.70E, h0km, mb3.8/3, mb1 3.7/6, mb1mx3.4/28, mbtmp3.8/6, ML3.3/3, Error ellipse: s-maj=85.4km s-min=34.0km az=112.0*
*ISCJB **19** 15:15:44.2±1.8, 36°.23N±0°.05×142°.6E±0°.1, h14km±15km, mb3.7/3, Error ellipse: s-maj=15.5km s-min=8.3km az=8.4*
*JMA **19** 15:15:46.3±0.3, 36°.18N×142°.56E, h63km, M3.3*

ISC 19 15:15:44.7±2.3, 36°.22N±0°.05×142°.5E±0°.1, h4km±18km, n17, σ0§79/23, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.44**	**249**	P	**Pn**	**15 16 11.1**	**-0.4**
JHO	**Hitachi**	**1.61**	**285**	P	**Pn**	**15 16 13.5**	**-0.4**
JFK	**Kawauchi**	**1.74**	**312**	P	**Pn**	**15 16 15.3**	**-0.4**
JFK				*e*S	**Sn**	**15 16 37.2**	**-1.1**
JYT	**Yasato**	**1.87**	**271**	P	**Pn**	**15 16 17.0**	**-0.5**
BSO1	**Boso 1**	**2.00**	**219**	P	**Pn**	**15 16 18.6**	**-0.7**
BSO1				*e*S	**Sn**	**15 16 44.8**	**+0.1**
JMM	**Marumori**	**2.14**	**321**	P	**Pn**	**15 16 21.1**	**-0.1**
JMM				*e*S	**Sn**	**15 16 47.2**	**-1.0**
JAG	**Ashikaga**	**2.48**	**276**	P	**Pn**	**15 16 25.9**	**+0.1**
JAG				*e*S	**Sn**	**15 16 56.2**	**-0.3**
JRY	**Ryogami san**	**2.93**	**267**	P	**Pn**	**15 16 32.0**	**0.0**
JYN	**Shimob**	**3.30**	**259**	P	**Pn**	**15 16 38.2**	**+1.1**
MJAR	**Matsushiro Arr**	**3.49**	**277**	Pn	**Pn**	**15 16 39.8**	**+0.2**
	2.3nm,0.3s,baz=116,slow=8.9,SNR=18						
MAT	**Matsushiro**	**3.49**	**277**	P	**Pn**	**15 16 40.8**	**+1.1**
MAT				*e*S	**Sn**	**15 17 22.4**	**+1.0**
JHJ	**Hachijo jima 2**	**3.82**	**217**	Pn	**Pn**	**15 16 42.5**	**-1.8**
	7.3nm,0.3s,baz=103,slow=18,SNR=5.1						
JHJ				Sn	**Sn**	**15 17 25.1**	**-4.7**
	16nm,0.3s,baz=272,slow=23,SNR=4.7						
JSD	**Sado**	**3.85**	**299**	P	**Pn**	**15 16 45.6**	**+0.9**
ASAJ	**Asahikawa**	**7.89**	**0**	Pn	**Pn**	**15 17 39.8**	**-0.3**
	0.5nm,0.3s,baz=267,slow=25,SNR=6.2						
SONM	**Songino Array**	**28.97**	**305**	P	**P**	**15 21 46.3**	**+1.1**
	0.9nm,0.6s,mb3.7,baz=106,slow=9.1,SNR=4.5						
MKAR	**Makanchi Array**	**45.30**	**303**	P	**P**	**15 24 03.6**	**+0.2**
	0.8nm,0.6s,mb3.7,baz=91,slow=9.1,SNR=7.9						
KURK	**Kurchatov**	**47.13**	**309**	P	**P**	**15 24 18.9**	**+1.2**
	0.8nm,0.6s,mb3.8,baz=84,slow=7.7,SNR=4.2						

*ISCJB **19** 15:19:17.3±1.1, 5°.70S±0°.04×147°.19E±0°.03, h100km±10km, mb5.0/88, Error ellipse: s-maj=5.9km s-min=5.6km az=0.4*
*MOS **19** 15:19:20.6±1.0, 5°.63S×147°.14E, h126km, mb5.1/16, Error ellipse: s-maj=13.0km s-min=6.8km az=94.7*
*NEIC **19** 15:19:21.3±0.8, 5°.73S×147°.20E, h128km±7km, mb5.2/49, Error ellipse: s-maj=5.0km s-min=4.4km az=98.0*
*GCMT **19** 15:19:21.3±0.2, 5°.74S×147°.22E, h129km±3km, MW5.2/81, Moment Tensor Solution. s13,c14; s81,c131; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.67±.29; $M_{\theta\theta}$2.09±.27; $M_{\phi\phi}$-5.76±.32; $M_{r\theta}$4.02±.18; $M_{\theta\phi}$-0.96±.31; $M_{\phi r}$-4.88±.22; Best double couple: $M_0$8.13700×10^{16} NP1:ϕ_s153.00000°, δ33.00000°, λ151.00000°. NP2: ϕ_s153.00000°, δ75.00000°, λ61.00000°. Principal axes: T 8.3890, Plg51.0000°, Azm29.0000°; N -0.5040, Plg28.0000°, Azm161.0000°; P -7.8850, Plg24.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **19** 15:19:21.5±1.4, 5°.75S×147°.18E, h129km±11km, mb4.6/21, mb1 4.7/23, mb1mx4.7/24, mbtmp4.6/23, MS4.5/1, Ms1 4.4/1, ms1mx3.4/19 Error ellipse: s-maj=13.2km s-min=8.6km az=97.0*
*BJI **19** 15:19:22.3, 5°.10S×147°.46E, h124km, mB5.5/16, mb5.0/36*
*DJA **19** 15:19:23, 5°.81S×147°.21E, h130km, Mw5.5/11*

ISC 19 15:19:20.8±1.0, 5°.75S±0°.04×147°.23E±0°.04, h119km±9km, h127km±1.8km:pP-P, n418, σ0§80/248, mb5.0/86, 81C-75D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**9.08**	**206**	*e*P	**Pn**	**15 21 28.8**	**-0.2**
COEN				*e*S	**Sn**	**15 23 04.2**	**-5.2**
COEN	**Coen**	**9.08**	**206**	*e*P	**Pn**	**15 21 28.5**	**-0.4**
	2μm,0.5s						
COEN				*e*S	**Sn**	**15 23 04.7**	**-4.7**
CTA	**Charters Tower**	**14.28**	**184**	*e*P	**Pn**	**15 22 38.1**	**+0.5**
	78nm,0.8s						
CTA	**Charters Tower**	**14.28**	**184**	P	**Pn**	**15 22 38.4**	**+0.8**
	4.7nm,0.3s,baz=9.5,slow=12,SNR=48						
CTA				S	**Sn**	**15 25 13.8**	**-1.6**
	2.2nm,0.3s,baz=83,slow=3.7,SNR=5.2						
CTA	**Charters Tower**	**14.28**	**184**	P	**Pn**	**15 22 38.4**	**+0.8**
CTA				S	**Sn**	**15 25 13.8**	**-1.6**
CTAO	**Charters Tower**	**14.28**	**184**	*e*P	**Pn**	**15 22 37.7**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,111nm,0.8s						
CTAO	**Charters Tower**	**14.28**	**184**	*e*P	**Pn**	**15 22 37.7**	**+0.1**
	comp=Z,111nm,0.8s						
KAKA	**Kakadu**	**16.15**	**244**	*e*P	**Pn**	**15 22 59.3**	**-1.7**
	comp=Z,249nm,0.6s						
KAKA				*e*S	**S**	**15 25 52.7**	**-13**
KAKA	**Kakadu**	**16.15**	**244**	*e*P	**Pn**	**15 22 59.2**	**-1.8**
	comp=Z,692nm,0.7s						
QIS	**Mount Isa**	**16.48**	**206**	*e*P	**Pn**	**15 23 06.4**	**+1.4**
	comp=Z,14nm,0.4s						
WRAB	**Tennant Creek**	**18.86**	**220**	P	**P**	**15 23 32.0**	**+0.3**
	comp=Z,5μm,0.6s						
WRAB	**Tennant Creek**	**18.86**	**220**	*e*P	**P**	**15 23 32.1**	**+0.5**
GUMO	**Guam**	**19.36**	**353**	P	**P**	**15 23 38.5**	**+1.3**
	comp=Z,8.3nm,0.3s,baz=186,slow=11,SNR=12						
EIDS	**Eidsvold**	**19.85**	**170**	*e*P	**P**	**15 23 43.9**	**+1.4**
	comp=Z,116nm,0.8s						
KNA	**Kununurra**	**20.66**	**240**	*e*P	**P**	**15 23 51.1**	**-0.2**
	comp=Z,266nm,0.5s						
KNA				*e*S	**S**	**15 27 40.2**	**+4.5**
ASAR	**Alice Springs**	**21.95**	**214**	P	**P**	**15 24 05.7**	**+0.8**
	comp=Z,285nm,0.7s,mb5.7,baz=48,slow=8.6,SNR=3660						
ASAR				S	**S**	**15 27 58.5**	**-1.3**
	comp=Z,24nm,0.8s,baz=31,slow=23,SNR=7.2						
ASAR				ScP	ScP	15 31 25.3	-0.5
	comp=Z,22nm,1.1s,baz=22,slow=33,SNR=7.8						
ASAR	**Alice Springs**	**21.95**	**214**	P	**P**	**15 24 05.7**	**+0.8**
ASAR				S	**S**	**15 27 58.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**24.39**	**238**	*e*P	**P**	**15 24 28.7**	**+0.5**
	comp=Z,750nm,0.8s,mb6.1						
FITZ	**Fitzroy Crossi**	**24.39**	**238**	P	**P**	**15 24 28.8**	**+0.6**
	comp=Z,373nm,0.7s,mb5.8,baz=59,slow=7.8,SNR=613						
FITZ	**Fitzroy Crossi**	**24.39**	**238**	*e*P	**P**	**15 24 28.8**	**+0.6**
	comp=Z,3.2nm,1.1s						
DZM	**Mont Dzumac**	**24.66**	**133**	*e*P	**P**	**15 24 30.0**	**-0.6**
	comp=Z,76nm,0.6s,mb5.3						
ARMA	**Armidale**	**24.88**	**171**	*e*P	**P**	**15 24 33.1**	**+0.6**
ARMA	**Armidale**	**24.88**	**171**	*e*P	**P**	**15 24 33.4**	**+0.9**
	comp=Z,89nm,1.0s,mb5.2						
ARMA				*e*pP		15 24 57.7	
STKA	**Stephens Creek**	**26.52**	**191**	*e*P	**P**	**15 24 47.0**	**-0.2**
	comp=Z,24nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**26.52**	**191**	P	**P**	**15 24 46.8**	**-0.4**
	comp=Z,10nm,0.7s,mb4.5,baz=346,slow=8.7,SNR=27						
STKA				LR	LR	15 35 22.7	
	comp=Z,983nm,20.0s,baz=266,slow=36						
STKA	**Stephens Creek**	**26.52**	**191**	*e*P	**P**	**15 24 47.1**	**-0.2**
	comp=Z,9.1nm,1.1s,mb4.2						
KAPI	**Kappang**	**27.37**	**270**	P	**P**	**15 24 54.4**	**-0.7**
	comp=Z,18nm,0.8s,mb4.6,baz=104,slow=5.2,SNR=7.0						
KAPI	**Kappang**	**27.37**	**270**	P	**P**	**15 24 54.4**	**-0.7**
YNG	**Young**	**28.43**	**178**	*e*P	**P**	**15 25 05.0**	**+0.8**
	comp=Z,21nm,0.6s,mb4.8						
FORT	**Forest**	**30.73**	**214**	⇓*i*P	**P**	**15 25 24.9**	**+0.2**
	comp=Z,134nm,0.7s,mb5.8						
FORT	**Forest**	**30.73**	**214**	*e*P	**P**	**15 25 25.0**	**+0.3**
	comp=Z,102nm,0.5s,mb5.8						
MBWA	**Marble Bar**	**30.73**	**237**	*e*P	**P**	**15 25 25.0**	**+0.2**
	comp=Z,92nm,0.7s,mb5.6						
TOO	**Toolangi**	**31.71**	**183**	*e*P	**P**	**15 25 33.9**	**+0.7**
FUNA	**Funafuti**	**31.83**	**97**	*e*P	**P**	**15 25 34.1**	**-0.5**
	comp=Z,184nm,0.9s,mb5.8						
CBIJ	**Chichi jima**	**33.02**	**352**	P	**P**	**15 25 43.3**	**-1.4**
	comp=Z,161nm,0.5s,mb6.1,baz=291,slow=7.4,SNR=14						
KSM	**Kuching**	**37.56**	**280**	P	**P**	**15 26 23.0**	**-0.9**
	comp=Z,5.8nm,0.9s,mb4.4						
KLBR	**Kellerberrin**	**37.71**	**223**	*e*P	**P**	**15 26 24.8**	**-0.1**
	comp=Z,62nm,0.4s,mb5.8						
NWAO	**Narrogin (SRO)**	**38.87**	**222**	*e*P	**P**	**15 26 34.9**	**+0.3**
	comp=Z,209nm,0.6s,mb6.1						
NWAO				*e*		15 28 01.2	
NWAO	**Narrogin (SRO)**	**38.87**	**222**	*e*P	**P**	**15 26 34.8**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,27nm,0.7s						
NWAO	**Narrogin (SRO)**	**38.87**	**222**	*e*P	**P**	**15 26 34.8**	**+0.2**
	comp=Z,27nm,0.7s,mb5.2						
SSLB	**Suanglung**	**38.98**	**320**	*e*P	**P**	**15 26 35.4**	**-0.2**
AFI	**Afiamalu**	**41.14**	**104**	P	**P**	**15 26 53.6**	**0.0**
	comp=Z,69nm,0.8s,mb5.5,baz=252,slow=5.2,SNR=9.8						
AFI	**Afiamalu**	**41.14**	**104**	*e*P	**P**	**15 26 53.4**	**-0.2**
AFI				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.6						
AFI	**Afiamalu**	**41.14**	**104**	*e*P	**P**	**15 26 53.4**	**-0.2**
	comp=Z,97nm,1.0s,mb5.6						
QZH	**Quanzhou**	**41.32**	**319**	P	**P**	**15 26 54.6**	**-0.3**
QZH				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.6						
URZ	**Urewera**	**42.22**	**144**	P	**P**	**15 27 02.3**	**+0.3**
	comp=Z,20nm,0.9s,mb4.8,baz=238,slow=1.4,SNR=12						
MJAR	**Matsushiro Arr**	**42.91**	**349**	P	**P**	**15 27 07.3**	**-0.2**
	comp=Z,10nm,0.8s,mb4.6,baz=172,slow=9.8,SNR=25						
MJAR				PcP	PcP	15 28 55.8	-0.5
	comp=Z,5.7nm,0.9s,baz=166,slow=2.6,SNR=4.6						
MJAR				ScP	ScP	15 32 34.2	-2.3
	comp=Z,3.7nm,0.9s,baz=178,slow=4.1,SNR=5.7						
MJAR	**Matsushiro Arr**	**42.91**	**349**	P	**P**	**15 27 07.4**	**-0.2**
MJAR						15 28 55.8	
MJAR	**Matsushiro Arr**	**42.91**	**349**	P	**P**	**15 27 07.3**	**-0.2**
MJAR				PcP	PcP	15 28 55.8	-0.5
MJAR				ScP	ScP	15 32 34.2	-2.3
MAJO	**Matsushiro**	**42.91**	**349**	*e*P	**P**	**15 27 07.1**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.2						
MAJO	**Matsushiro**	**42.91**	**349**	*e*P	**P**	**15 27 07.1**	**-0.5**
	comp=Z,28nm,0.6s,mb5.2						
MAT	**Matsushiro**	**42.91**	**349**	P	**P**	**15 27 06.9**	**-0.7**
NJ2	**Nanjing**	**46.30**	**326**	*e*P	**P**	**15 27 35.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
KSRS	**Korea Array**	**46.60**	**339**	P	**P**	**15 27 37.0**	**+0.1**
	comp=Z,11nm,0.9s,mb4.6,baz=155,slow=9.4,SNR=22						
KSRS				PcP	PcP	15 29 08.7	-0.4
	comp=Z,3.1nm,0.9s,baz=151,slow=3.4,SNR=4.5						
ASAJ	**Asahikawa**	**49.81**	**356**	P	**P**	**15 28 02.5**	**+1.1**
	comp=Z,42nm,1.0s,mb5.3,baz=210,slow=12,SNR=13						
GYA	**Guiyang**	**50.69**	**311**	P	**P**	**15 28 09.8**	**+1.4**
GYA				pP	pP	15 28 38.8	+2.4
GYA				sP	sP	15 28 52.6	+2.9
GYA				PcP	PcP	15 29 25.4	+1.3
GYA				PP	PP	15 30 07.0	+1.3
GYA				ScP	ScP	15 33 08.9	-0.5
GYA				PcS	PcS	15 33 20.8	-0.9
GYA				S	**S**	**15 35 14.8**	**+0.1**
GYA				sS	sS	15 36 05.3	+2.3
GYA				SS	SS	15 38 47.8	-3.0
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,150nm,5.2s						
ENH	**Enshi**	**50.

HHC S S 15 36 37.3 +1.5
HHC sS sS 15 37 29.3 +4.3
HHC ScS ScS 15 38 27.8 -2.1
HHC pmax pmax
comp=Z,12nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,200nm,6.9s
HHC LR LR
comp=N,550nm,13.9s
HHC LR LR
comp=E,780nm,14.5s
HHC LR LR
comp=Z,670nm,15.1s
LZH Lanzhou 58.17 319 *e*P **P 15 29 04.8 +2.5**
LZH pP pP 15 29 34.0 +3.0
LZH sP sP 15 29 48.8 +4.6
LZH PP PP 15 31 16.8 +4.2
LZH *e*S **S 15 36 54.0 -0.7**
LZH sS sS 15 37 47.8 +3.7
LZH pmax pmax
comp=Z,26nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,970nm,7.7s
PEA0B Petropavlovsk- 59.30 7 *e*P **P 15 29 10.2 +0.4**
PETK Petropavlovsk- 59.30 7 P **P 15 29 10.2 +0.5**
comp=Z,42nm,0.9s,mb5.5,baz=165,slow=6.2,SNR=36
HIA Hailar 59.80 340 *e*P **P 15 29 13.0 -0.3**
HIA pmax pmax
comp=Z,21nm,0.8s
HIA Hailar 59.80 340 *e*P **P 15 29 13.0 -0.3**
comp=Z,21nm,0.8s,mb5.2
GTA Gaotai 62.70 320 ⇓P **P 15 29 34.8 +1.7**
GTA pP pP 15 30 04.6 +2.5
GTA sP sP 15 30 18.6 +3.4
GTA S **S 15 37 54.8 +2.5**
GTA pmax pmax
comp=Z,13nm,0.7s,mb5.0
GTA LR LR
comp=N,490nm,14.0s
GTA LR LR
comp=E,490nm,19.9s
GTA LR LR
comp=Z,690nm,15.2s
ULN Ulaanbaatar 64.00 331 *e*P **P 15 29 41.7 +0.2**
ULN pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
ULN Ulaanbaatar 64.00 331 *e*P **P 15 29 41.7 +0.3**
comp=Z,6.2nm,0.6s,mb4.6
SONM Songino Array 64.30 331 P **P 15 29 43.9 +0.5**
comp=Z,2.9nm,0.6s,mb4.3,baz=148,slow=6.0,SNR=18
SONM PcP PcP 15 30 16.2 -0.9
comp=Z,5.6nm,1.1s,baz=145,slow=3.5,SNR=4.8
CIT Chita 64.32 338 *e*P **P 15 29 44.0 +0.6**
CIT *e* pP 15 30 15.0 +2.4
CIT *e* 15 30 32.3
CLNS Chul'man 65.00 347 *e*P **P 15 29 48.4 +0.7**
CLNS pmax pmax
comp=Z,26nm,0.9s,mb5.1
CLNS pmax pmax
comp=N,17nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CASY Casey 65.56 195 *e*P **P 15 29 50.9 -0.4**
comp=E,11nm,0.8s,mb4.8
ZAK Zakamensk 67.53 331 *e*P **P 15 30 03.6 -0.5**
ZAK *e* pP 15 30 35.6 +2.1
ZAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
SEY Seymchan 68.60 3 *ce*P **P 15 30 09.7 -0.8**
BOD Bodaibo 68.82 342 ⇓*i*P **P 15 30 10.9 -1.0**
BOD pmax pmax
comp=Z,19nm,0.9s,mb4.9
YAK Yakutsk 68.93 351 *e*P **P 15 30 11.3 -1.2**
YAK *e**PP pP 15 30 37.1 -5.0
YAK *e* 15 32 44.9
YAK *e*S S 15 39 06.5 -0.7
YAK *e**SS sS 15 39 48.0 -10
YAK *e* 15 40 00.2
YAK pmax pmax
comp=E,7.0nm,1.8s
YAK pmax pmax
comp=N,22nm,1.1s
YAK pmax pmax
comp=Z,50nm,1.0s,mb5.3
YAK pmax pmax
comp=Z,27nm,3.0s
YAK smax
comp=E,31nm,1.5s
YAK smax
comp=N,70nm,3.4s
YAK Yakutsk 68.93 351 *e*P **P 15 30 12.2 -0.3**
comp=N,61nm,0.8s,mb5.5
MOY Mondy 69.47 331 *e*P **P 15 30 16.4 +0.3**
MOY pmax pmax
comp=Z,4.0nm,1.5s,mb4.0
UNV Unalaska Valle 70.89 27 *e*P **P 15 30 24.6 -0.1**
comp=Z,35nm,1.0s,mb5.2
MIR Mirnyy 71.09 200 *e*P **P 15 30 25.0 -0.7**
MIR pmax pmax
comp=Z,34nm,1.6s,mb4.9
TAOE Nuku Hiva Isla 72.00 97 *e*P **P 15 30 32.6 +0.4**
comp=Z,128nm,0.7s,mb5.9
WMQ Urumqi 72.75 319 *e*P **P 15 30 36.6 +0.5**
WMQ pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
WMQ LR LR
comp=N,350nm,16.0s
WMQ LR LR
comp=E,530nm,16.0s
WMQ LR LR
comp=Z,730nm,18.0s
BILL Biiibino 74.84 7 ⇑*e*P **P 15 30 47.0 -0.7**
BILL *e**PP pP 15 31 29.5 +12
BILL *e* 15 33 39.5
BILL *e*S S 15 40 09.7 -4.9
BILL pmax pmax
comp=Z,32nm,1.0s,mb5.0
BILL Biiibino 74.84 7 *e*P **P 15 30 47.6 -0.1**
comp=Z,32nm,1.0s,mb5.0
CHGN Chignik 76.08 28 *e*P **P 15 30 54.9 -0.1**
MK31 Makanchi Array 77.45 320 *e*P **P 15 31 01.8 -1.2**
MKAR Makanchi Array 77.45 320 P **P 15 31 01.9 -1.1**
comp=Z,3.0nm,0.7s,mb4.1,baz=96,slow=7.1,SNR=21
MKAR PKKPbc PKKPbc 15 50 06.4 -2.6
comp=Z,0.7nm,0.7s,baz=336,slow=2.7,SNR=5.3
TIXI Tiksi 78.19 354 *e*P **P 15 31 04.9 -1.6**
TIXI pmax pmax
comp=Z,20nm,0.9s,mb4.8
TIXI Tiksi 78.19 354 *e*P **P 15 31 04.6 -1.9**
comp=Z,20nm,0.9s,mb4.8
ZAA0 Zalesovo Array 78.92 328 *e*P **P 15 31 09.0 -1.9**
ZALV Zalesovo Beam 78.92 328 P **P 15 31 09.1 -1.8**
comp=Z,12nm,0.7s,mb4.9,baz=113,slow=5.6,SNR=54
ZALV PKKPbc PKKPbc 15 50 03.1 -3.0
comp=Z,1.3nm,0.5s,baz=291,slow=1.5,SNR=7.5
OHAK Old Harbor 78.97 29 *e*P **P 15 31 11.6 +0.5**
comp=Z,61nm,1.7s,mb5.2
KSH Kashi 79.38 312 *e*P **P 15 31 16.1 +2.3**
KSH *e*PcP PcP 15 31 23.3 +1.8
KSH *e*pP pP 15 31 47.1 +3.1
KSH *e*sP sP 15 32 01.1 +4.3
KSH *e*PP PP 15 34 20.1 +4.5
KSH *e*S S 15 41 03.0 -2.0
KSH *e*SKS 15 41 16.3
KSH ScS ScS 15 41 25.1 -1.3
KSH *e*sS sS 15 42 02.1 +5.0
KSH *e*SS SS 15 46 21.1 +6.1
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
KSH pmax pmax
comp=Z,320nm,7.4s
KSH LR LR
comp=N,280nm,9.2s
KSH LR LR
comp=E,550nm,14.4s
KSH LR LR
comp=Z,460nm,11.0s
KDAK Kodiak Island 79.57 28 P **P 15 31 15.0 +0.6**
comp=Z,190nm,1.2s,mb5.8,SNR=8.0
KDAK Kodiak Island 79.57 28 P **P 15 31 14.4 0.0**
comp=Z,39nm,1.2s,mb5.1
KDAK Kodiak Island 79.57 28 *i*P **P 15 31 15.3 +0.9**
SVW2 Sparrevohn 79.92 25 *e*P **P 15 31 16.9 +0.7**
NVS Novosibirsk 80.14 328 *e*P **P 15 31 15.2 -2.3**
NVS *e*S S 15 41 08.4 -3.9
NVS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
NVS smax
comp=N,5.0nm,1.4s
NVS smax
comp=E,22nm,2.0s
TKM2 Tokmak 2 80.63 315 P **P 15 31 21.2 +0.8**
SNR=8.2
TKM2 Tokmak 2 80.63 315 *e*P **P 15 31 19.7 -0.7**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
TKM2 Tokmak 2 80.63 315 *e*P **P 15 31 19.7 -0.7**
comp=Z,5.1nm,0.6s,mb4.5
KZA Kyzart 80.64 314 P **P 15 31 20.9 +0.5**
SNR=20
TTA Tatalina 80.73 23 *e*P **P 15 31 20.6 +0.1**
TTA pmax pmax
comp=Z,31nm,1.3s,mb5.0
TTA Tatalina 80.73 23 *e*P **P 15 31 20.6 +0.1**
comp=Z,31nm,1.3s,mb5.0
RSO Redoubt South 80.80 26 *e*P **P 15 31 20.3 -0.5**
KURK Kurchatov 81.15 323 P **P 15 31 22.1 -0.9**
comp=Z,1.7nm,0.7s,mb4.0,baz=100,slow=6.5,SNR=10.0
KURK Kurchatov 81.15 323 *d i*P **P 15 31 22.4 -0.6**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KURK Kurchatov 81.15 323 *e*P **P 15 31 22.2 -0.7**
comp=Z,472nm,0.3s
UCH Uchtor 81.20 314 P **P 15 31 25.3 +1.9**
SNR=9.6
AAK Ala-Archa 81.33 315 P **P 15 31 24.0 -0.1**
comp=Z,3.5nm,0.6s,mb4.3,baz=124,slow=6.7,SNR=8.2
AAK Ala-Archa 81.33 315 *e*P **P 15 31 23.9 -0.2**
AAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
AAK Ala-Archa 81.33 315 *e*P **P 15 31 23.9 -0.2**
comp=Z,2.8nm,0.6s,mb4.3
USP Ospenovka 81.50 315 P **P 15 31 24.2 -0.7**
SNR=7.0
AML Almayashu 81.77 314 P **P 15 31 27.4 +1.0**
SNR=12
AML Almayashu 81.77 314 *e*P **P 15 31 27.1 +0.7**
comp=Z,9.4nm,0.8s,mb4.7
EKS2 Erkin-Say 81.85 314 P **P 15 31 26.9 +0.1**
SNR=6.7
EKS2 Erkin-Say 81.85 314 *e*P **P 15 31 26.5 -0.4**
comp=Z,6.0nm,0.8s,mb4.5
RC01 Rabbit Creek A 82.40 26 *e*P **P 15 31 28.3 -1.0**
comp=Z,89nm,1.1s,mb5.5
MAW Mawson 82.56 203 P **P 15 31 30.1 0.0**
comp=Z,4.3nm,0.6s,mb4.5,baz=101,slow=6.0,SNR=15
MAW Mawson 82.56 203 *e*P **P 15 31 30.0 -0.1**
MAW pmax pmax
comp=Z,1.0nm,0.6s
MAW Mawson 82.56 203 *e*P **P 15 31 29.9 -0.1**
comp=Z,0.9nm,0.6s,mb3.8
CHUM Lake Minchumin 82.65 23 *e*P **P 15 31 30.5 0.0**
comp=Z,63nm,1.0s,mb5.4
PMR Palmer 82.88 26 *e*P **P 15 31 30.8 -1.0**
PMR pmax pmax
comp=Z,54nm,1.4s,mb5.2
PMR MLR MLR
comp=Z,600nm,19.0s
PMR Palmer 82.88 26 *e*P **P 15 31 30.8 -1.0**
comp=Z,54nm,1.4s,mb5.2
PMR LR LR
comp=Z,600nm,19.0s
TRF Thorofare Moun 83.24 24 *e*P **P 15 31 32.0 -1.6**
comp=Z,18nm,0.7s,mb5.0
MCK McKinley 83.91 24 *e*P **P 15 31 35.4 -1.6**
MCK pmax pmax
comp=Z,78nm,1.0s,mb5.5
MCK McKinley 83.91 24 *e*P **P 15 31 35.4 -1.6**
comp=Z,78nm,1.0s,mb5.5
DIV Divide 84.16 27 *e*P **P 15 31 38.1 -0.3**
comp=Z,72nm,1.0s,mb5.5
BMRM Brenner River 84.63 27 *e*P **P 15 31 39.8 -0.9**
comp=Z,61nm,1.0s,mb5.5
COLA College 84.83 23 P **P 15 31 39.5 -2.1**
COLA pmax pmax
comp=Z,47nm,1.0s,mb5.4
COLA College 84.83 23 P **P 15 31 39.5 -2.1**
comp=Z,47nm,1.0s,mb5.4
COLD Coldfoot 85.02 20 *e*P **P 15 31 42.6 +0.1**
comp=Z,19nm,0.9s,mb5.0
MENT Mentasta 85.74 25 *e*P **P 15 31 46.0 -0.2**
PNL Peninsula 86.63 29 *e*P **P 15 31 50.9 +0.3**
comp=Z,98nm,0.9s,mb5.7
BVAR Borovoye Array 86.70 324 P **P 15 31 49.4 -1.7**
comp=Z,4.7nm,0.7s,mb4.5,baz=107,slow=6.2,SNR=19
BVAR PKKPbc PKKPbc 15 49 44.9 -3.0
comp=Z,0.4nm,0.6s,baz=215,slow=4.9,SNR=3.6
BRVK Borovoye 86.77 324 *ce*P **P 15 31 50.3 -1.2**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
EGAK Eagle 87.45 24 *e*P **P 15 31 53.9 -0.5**
comp=Z,51nm,1.1s,mb5.4
DAWY Dawson 87.95 25 *e*P **P 15 31 56.4 -0.4**
SKAG Skagway 88.57 30 *e*P **P 15 32 01.0 +1.1**
comp=Z,63nm,1.2s,mb5.5
SKAG LR LR
comp=Z,600nm,18.0s
SYO Syowa Base 90.91 200 ⇑*e*P **P 15 32 10.4 -0.3**
DLBC Dease Lake 91.06 31 P **P 15 32 11.7 +0.1**
comp=Z,6.4nm,0.9s,mb4.8,baz=287,slow=5.5,SNR=13
INK Inuvik 91.34 21 P **P 15 32 11.2 -1.5**
comp=Z,13nm,1.0s,mb5.0,baz=254,slow=6.5,SNR=28
ABKAR Akbulak array 92.54 319 *e*P **P 15 32 16.6 -2.0**
comp=Z,2.9nm,0.8s,mb4.7
NLWA Neilton Lookou 93.44 43 ⇑P **P 15 32 23.6 +0.8**
baz=94
E03A Lebam 93.58 44 ⇑P **P 15 32 23.6 +0.2**
baz=94
YBH Yreka Blue Hor 93.83 49 *e*P **P 15 32 24.7 0.0**
YBH pmax pmax
comp=Z,17nm,1.1s
YBH Yreka Blue Hor 93.83 49 *e*P **P 15 32 24.6 -0.1**
comp=Z,17nm,1.1s,mb5.3
MCW Mount Constitu 94.23 42 P **P 15 32 27.0 +0.6**
H04A Detroit Lake 94.42 46 ⇑P **P 15 32 27.7 +0.3**
baz=94
A05A Maple Falls 94.75 41 ⇑P **P 15 32 29.2 +0.4**
baz=95
JCW Jim Creek 94.80 42 P **P 15 32 29.4 +0.4**
MBW Mount Baker 94.86 42 P **P 15 32 29.6 +0.3**
B06A Marblemount 95.12 42 ⇑P **P 15 32 30.6 +0.1**
baz=95
A06A Chilliwack 95.15 41 ⇑P **P 15 32 31.5 +0.9**
baz=95
K05A Summer Lake 95.24 48 ⇓P **P 15 32 31.2 +0.1**
baz=95
WRW Wenatchee Ridg 95.49 43 P **P 15 32 32.3 +0.1**
BEKR Beckwourth 95.50 51 ⇓P **P 15 32 32.3 -0.1**
baz=96
EBG Ellensburg 95.66 44 P **P 15 32 33.4 +0.4**
PKM Peak Mountain 95.67 56 ⇓P **P 15 32 33.9 +0.6**
baz=96
ETW Entiat 95.85 43 P **P 15 32 33.8 0.0**
A07A Ashnola River, 95.87 41 ⇓P **P 15 32 34.1 +0.3**
baz=96,SNR=12
WCN Washoe City 95.93 51 ⇑P **P 15 32 34.8 +0.4**
baz=96
I07A Izee 96.31 46 ⇑P **P 15 32 36.0 +0.1**
baz=96
B08A Colville Reser 96.54 42 ⇑P **P 15 32 36.6 -0.3**
baz=97,SNR=11
G08A Pilot Rock 96.73 45 ⇑P **P 15 32 37.8 -0.1**
baz=97,SNR=5.3
D08A Wollman Farm, 96.79 43 ⇓P **P 15 32 38.6 +0.5**
baz=97
ISA Isabella 96.80 55 ⇓P **P 15 32 38.1 -0.4**
baz=97
WVOR Wild Horse Val 96.89 48 *e*P **P 15 32 38.2 -0.5**
WVOR pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
WVOR Wild Horse Val 96.89 48 *e*P **P 15 32 38.2 -0.5**
comp=Z,5.8nm,1.0s,mb5.0
H08A Prairie City 96.92 46 ⇑P **P 15 32 38.9 +0.2**
baz=97
OD2 Odessa Site #2 96.94 43 P **P 15 32 38.7 0.0**
NVAR Mina Array Bea 97.03 52 P **P 15 32 39.0 -0.5**
comp=Z,2.9nm,0.9s,mb4.7,baz=257,slow=6.1,SNR=17
NVAR PP PP 15 36 29.2 -7.5
comp=Z,0.8nm,0.8s,baz=241,slow=9.2,SNR=3.7
EDW2 Edwards Air Fo 97.17 56 ⇑P **P 15 32 40.4 +0.2**
baz=97
D09A Jones Farm, Ri 97.21 43 ⇓P **P 15 32 40.2 +0.3**
baz=97
C09A Chrisman Ranch 97.24 43 ⇑P **P 15 32 40.1 0.0**
baz=97
E09A Wood Farm, Sta 97.32 44 ⇑P **P 15 32 40.8 +0.4**
baz=97
B09A Rice 97.33 42 ⇓P **P 15 32 40.5 0.0**
baz=97,SNR=11
BFSC Mount Baldy St 97.42 56 ⇑P **P 15 32 41.5 +0.2**
baz=97
LRMC Laurel Mountai 97.44 55 ⇓P **P 15 32 41.3 0.0**
baz=98,SNR=6.0
J09A Fry Pan Ranch, 97.56 47 ⇓P **P 15 32 41.6 -0.1**
baz=98
G09A Cove 97.56 45 ⇑P **P 15 32 41.5 -0.1**
baz=98,SNR=12
I09A Lost Marbles R 97.58 47 ⇓P **P 15 32 41.5 -0.2**
baz=98
MPMC Manual Prospec 97.61 54 ⇑P **P 15 32 42.0 -0.1**
baz=98,SNR=6.4
A10A Northport 97.72 41 ⇑P **P 15 32 42.9 +0.6**
baz=98
GRAC Grapevine Rang 97.73 54 ⇑P **P 15 32 42.8 +0.2**
baz=98
D10A Wagner Farm, O 97.92 43 ⇓P **P 15 32 42.9 -0.2**
baz=98,SNR=5.8
B10A Chitwood Farm, 97.95 42 ⇓P **P 15 32 43.5 +0.2**
baz=98
F10A Beach Ranch, E 97.95 44 ⇑P **P 15 32 43.2 -0.2**
baz=98,SNR=6.7
NEW Newport 98.02 42 *e*P **P 15 32 43.4 -0.2**
NEW pmax pmax
comp=Z,19nm,0.9s
NEW Newport 98.02 42 *e*P **P 15 32 43.4 -0.2**
comp=Z,19nm,0.9s,mb5.6
G10A Bishop Farm, J 98.03 45 ⇓P **P 15 32 43.3 -0.4**
baz=98,SNR=7.5
GSC Goldstone 98.15 55 ⇓P **P 15 32 44.9 +0.3**
baz=98
K10A MacKenzie Ranc 98.20 48 ⇓P **P 15 32 44.1 -0.5**
baz=98,SNR=5.8
H10A Noah's Angus R 98.29 46 ⇑P **P 15 32 44.3 -0.6**
baz=98,SNR=11
S10A Tonopah Range, 98.37 53 ⇓P **P 15 32 45.8 +0.4**
baz=98
PFO Pinyon Flat Ob 98.41 57 ⇑P **P 15 32 45.8 +0.2**
baz=98
MONP Monument Peak 98.42 58 ⇓P **P 15 32 45.7 -0.1**
baz=98
L10A Juniper Basin 98.50 48 ⇑P **P 15 32 45.7 -0.2**
baz=98,SNR=5.3
A11A Hall Mountain, 98.51 41 ⇓P **P 15 32 46.5 +0.7**
baz=98,SNR=12
B11A Sandpoint 98.52 42 ⇑P **P 15 32 45.8 0.0**
baz=98,SNR=7.0
Q10A Clear Creek Ra 98.53 52 ⇑P **P 15 32 46.5 +0.4**
baz=98
HEC Hector,Ludlow 98.53 56 ⇑P **P 15 32 46.5 +0.3**
baz=98
U10A Ash Meadows, A 98.56 54 ⇓P **P 15 32 46.8 +0.5**
baz=99
D11A Klaveano Farm, 98.56 43 ⇓P **P 15 32 46.4 +0.3**
baz=99
G11A Walters Elk Ra 98.63 45 ⇑P **P 15 32 46.2 -0.2**
baz=99,SNR=6.4
E11A Bogner Ranch, 98.66 44 ⇓P **P 15 32 45.7 -0.8**
baz=99,SNR=8.5
F11A Grangeville 98.70 45 ⇑P **P 15 32 46.1 -0.6**
baz=99
BELC Belle Mtn. 98.79 57 ⇑P **P 15 32 47.8 +0.4**
baz=99
H11A Donnelly 98.82 46 ⇑P **P 15 32 47.2 0.0**
baz=99
K11A Parker Ranch, 98.82 48 ⇓P **P 15 32 47.5 +0.2**
baz=99
YKA Yellowknife Ar 98.84 28 P **P 15 32 45.8 -1.1**
comp=Z,3.3nm,0.9s,mb4.9,baz=274,slow=4.8,SNR=37
YKA PP PP 15 36 41.5 -8.3
comp=Z,0.5nm,0.7s,baz=271,slow=6.2,SNR=3.8
YKA PKKPbc PKKPbc 15 49 12.7 -4.0
comp=Z,0.9nm,0.7s,baz=84,slow=2.8,SNR=13
YKA Yellowknife Ar 98.84 28 P **P 15 32 45.9 -1.1**
YKA PP PP 15 36 41.5 -8.3
YKA PKKPbc PKKPbc 15 49 12.7 -4.0
I11A Placerville 98.86 47 ⇑P **P 15 32 47.1 -0.4**
baz=99,SNR=6.1
TUQ Turquoise Moun 98.88 55 ⇑P **P 15 32 48.2 +0.4**
baz=99
SWSC Sam W. Stewart 98.94 58 ⇑P **P 15 32 48.2 +0.1**
baz=99
MFID Camas Ranch 98.96 47 ⇓P **P 15 32 48.3 +0.3**
baz=99
M11A Holland Ranch, 99.00 49 ⇓P **P 15 32 48.3 +0.2**
baz=99
L11A Cat Creek Ranc 99.03 48 ⇓P **P 15 32 48.6 +0.3**
baz=99
P11A Circle Ranch, 99.04 51 ⇓P **P 15 32 49.0 +0.6**
baz=99
GMRC Granite Mounta 99.08 56 ⇓P **P 15 32 48.9 +0.2**
baz=99
O11A Cowboy Ranch, 99.11 50 ⇓P **P 15 32 48.8 +0.1**
baz=99
Q11A Duckwater 99.11 52 ⇑P **P 15 32 49.0 +0.2**
baz=99
R11A Troy Canyon, C 99.17 52 ⇑P **P 15 32 49.1 +0.1**
baz=99
D12A Red Ives Fores 99.23 43 ⇓P **P 15 32 49.2 +0.2**
baz=99
BC3 Big Chuckw Mtn 99.24 57 ⇓P **P 15 32 49.2 -0.2**
baz=99
F12A Elk City 99.33 45 ⇑P Pdif 15 32 49.5 +0.2
baz=99
T11A Corn Creek, Al 99.46 53 ⇓P Pdif 15 32 50.2 +0.3
baz=100
J12A Stokes Ranch, 99.50 47 ⇓P Pdif 15 32 50.7 +0.6
baz=100,SNR=14
IRM Iron Mountain 99.50 56 ⇑P Pdif 15 32 50.3 +0.3
baz=100
L12A House Creek Ra 99.58 48 ⇑P Pdif 15 32 51.0 +0.6
baz=100
N12A Clover Valley, 99.58 50 ⇑P Pdif 15 32 50.6 +0.2
baz=100
N12A Clover Valley, 99.58 50 *e*P Pdif 15 32 50.5 0.0
comp=Z,10nm,1.1s
BSMT Bassoo Peak 99.59 43 *e*P Pdif 15 32 50.5 0.0
comp=Z,6.1nm,1.1s
K12A Draper Farm, C 99.65 48 ⇓P Pdif 15 32 51.1 +0.3
baz=100
M12A Wells 99.66 49 ⇑P Pdif 15 32 50.9 +0.1
baz=100
P12A McGill 99.69 51 ⇑P Pdif 15 32 51.4 +0.5
baz=100
C13A Hot Springs 99.74 43 ⇓P Pdif 15 32 50.9 -0.2
baz=100
Q12A Willow Creek R 99.76 52 ⇓P Pdif 15 32 51.6 +0.3
baz=100
B13A Whitefish 99.79 42 ⇓P Pdif 15 32 51.5 +0.1
baz=100
O12A Currie 99.81 50 ⇓P Pdif 15 32 51.7 +0.3
baz=100,SNR=7.0
D13A Huson 99.84 43 ⇑P Pdif 15 32 51.6 0.0
baz=100
R12A Pony Springs, 99.94 52 ⇑P Pdif 15 32 52.7 +0.7
baz=100
F13A Darby 99.98 45 ⇑P Pdif 15 32 52.3 +0.1
baz=100,SNR=7.2
HLID Hailey 99.99 47 ⇓P Pdif 15 32 52.8 +0.5
baz=100
G13A Cobalt 100.07 45 ⇓P Pdif 15 32 52.9 +0.3
baz=100
H13A Challis 100.07 46 ⇓P Pdif 15 32 52.5 -0.1
baz=100,SNR=12
J13A Cove Ranch, Pi 100.17 47 ⇑P Pdif 15 32 53.7 +0.7
baz=100
I13A Wildhorse Cree 100.19 47 ⇓P Pdif 15 32 53.4 +0.2
baz=100,SNR=5.4
N13A Wendover, West 100.21 50 ⇑P Pdif 15 32 53.4 +0.2
baz=100
M13A Montello 100.23 49 ⇑P Pdif 15 32 53.6 +0.3
baz=100
C14A Swan Lake 100.30 43 ⇑P Pdif 15 32 53.8 +0.1
baz=100
P13A Bates Ranch, G 100.38 51 ⇑P Pdif 15 32 54.5 +0.4
baz=100
R13A O'Grain Ranch, 100.44 52 ⇓P Pdif 15 32 54.8 +0.5
baz=100
A14A Double T Ranch 100.45 41 ⇑P Pdif 15 32 54.7 +0.4
baz=100
D14A Greenough 100.49 43 ⇓P Pdif 15 32 54.8 +0.3

baz=100
W13A Hualapai Mount 100.54 55 ⇓P Pdif 15 32 55.4 +0.7
baz=101
CHMT Chamberlain Mo 100.68 43 *e*Pdif Pdif 15 32 55.2 -0.1
comp=Z,3.7nm,1.2s
Z13A Yuma Proving G 100.74 57 ⇑P Pdif 15 32 56.8 +1.2
baz=101
M14A Sheep Mountain 100.84 49 ⇑P Pdif 15 32 56.7 +0.7
baz=101
A15A Johnson Ranch, 100.90 41 ⇑P Pdif 15 32 56.7 +0.4
baz=101
K14A Jones Ranch, D 100.93 48 ⇓P Pdif 15 32 57.1 +0.7
baz=101
Q14A Sevier Lake (B 100.97 52 ⇑P Pdif 15 32 56.9 +0.2
baz=101,SNR=5.1
N14A Grayback Hills 100.98 50 ⇑P Pdif 15 32 57.2 +0.5
baz=101
B15A Bradely Ranch, 101.06 42 ⇑P Pdif 15 32 57.3 +0.2
baz=101
C15A Salmond Ranch, 101.06 43 ⇓P Pdif 15 32 57.3 +0.3
baz=101
MCMT McKenzie Canyo 101.06 46 *e*Pdif Pdif 15 32 57.7 +0.6
comp=Z,1.7nm,1.0s
U14A Mt Trumbull 101.10 54 ⇑P Pdif 15 32 57.9 +0.7
baz=101
P14A Drum Mountains 101.11 51 ⇓P Pdif 15 32 57.7 +0.4
baz=101
E15A Deer Lodge 101.12 44 ⇑P Pdif 15 32 57.6 +0.3
baz=101
W14A Seligman 101.20 55 ⇑P Pdif 15 32 58.3 +0.7
baz=101
H15A Lima 101.22 46 ⇓P Pdif 15 32 58.0 +0.3
baz=101
DUG Dugway 101.29 50 ⇓P Pdif 15 32 58.3 +0.3
baz=101
K15A Arbon 101.40 48 ⇓P Pdif 15 32 58.9 +0.3
baz=101
M15A Larsen Ranch, 101.52 49 ⇑P Pdif 15 32 59.5 +0.4
baz=102
L15A Malad City 101.54 48 ⇓P Pdif 15 32 59.6 +0.4
baz=102
VNA2 Neumayer--Watz 101.63 188 *e*Pdiff Pdif 15 32 58.8 -0.8
VNA2 *e* 15 33 31.4
VNA2 *e* 15 37 21.3
A16A West Butte Ran 101.65 41 ⇓P Pdif 15 32 59.4 -0.3
baz=102
E16A East Helena 101.78 44 ⇓P Pdif 15 33 00.1 -0.1
baz=102
G16A Moss Hill, Enn 101.78 45 ⇓P Pdif 15 33 00.3 +0.1
baz=102
BOZ Bozeman (W) 101.88 45 ⇑P Pdif 15 33 00.9 +0.2
baz=102
J16A Bone 102.04 47 ⇑P Pdif 15 33 01.9 +0.5
baz=102
K16A Soda Springs 102.08 48 ⇓P Pdif 15 33 01.8 +0.3
baz=102
H16A Russell Place, 102.21 46 ⇓P Pdif 15 33 02.5 +0.4
baz=102
B17A L&G Farms, Che 102.23 42 ⇑P Pdif 15 33 02.6 +0.3
baz=102
A17A Triple J Farms 102.24 41 ⇓P Pdif 15 33 03.1 +0.8
baz=102
N16A Rees Ranch, Co 102.31 50 ⇓P Pdif 15 33 03.0 +0.4
baz=102
C17A Wharram Farm, 102.32 43 ⇓P Pdif 15 33 03.0 +0.3
baz=102
R16A Teasdale 102.40 52 ⇓P Pdif 15 33 04.0 +1.0
baz=102
D17A Six Diamond Ra 102.41 43 ⇑P Pdif 15 33 03.9 +0.8
baz=102
O17A Robinson Place 102.88 50 ⇑P Pdif 15 33 06.0 +0.9
baz=103
S17A Black Ridge (B 102.96 53 ⇓P Pdif 15 33 05.6 +0.2
baz=103
E18A Harlowton 102.99 44 ⇑P Pdif 15 33 06.6 +0.9
baz=103
K18A Toltan Ranch, 103.23 48 ⇑P Pdif 15 33 07.4 +0.7
baz=103
PDAR Pinedale Array 103.58 48 Pdiff Pdif 15 33 08.1 -0.2
comp=Z,3.0nm,0.9s,baz=266,slow=2.4,SNR=8.8
PDAR PP PP 15 37 22.0 -4.1
comp=Z,1.2nm,1.0s,baz=226,slow=6.0,SNR=4.6
S18A Hurst Farm, Bl 103.60 53 ⇓P Pdif 15 33 09.3 +1.0
baz=104
K19A Absolon Red Bu 104.10 47 ⇑P Pdif 15 33 10.7 +0.2
baz=104
P19A Cripple Cowboy 104.26 51 ⇑P Pdif 15 33 11.3 0.0
baz=104
S19A Harvey Farm, M 104.28 53 ⇓P Pdif 15 33 12.2 +0.9
baz=104
ARCES ARCESS Array B 106.09 342 PKKPbc PKKPbc 15 48 51.0 -4.5
comp=Z,1.7nm,0.7s,baz=287,slow=2.0,SNR=6.2
W24A Lazy 6 Ranch, 107.47 55 ⇑P PKiKP 15 37 34.0 +0.1
baz=108
Y24A Capitan 107.56 56 ⇓P PKiKP 15 37 34.2 +0.1
baz=108
TXAR Lajitas Array 109.44 61 PKiKP PKiKP 15 37 37.2 -0.6
comp=Z,0.5nm,0.8s,baz=305,slow=2.6,SNR=5.0
TXAR PP PP 15 38 07.1 -2.5
comp=Z,1.1nm,1.0s,baz=262,slow=3.8,SNR=6.3
TXAR PKKPbc PKKPbc 15 48 41.1 -2.5
comp=Z,0.3nm,0.6s,baz=104,slow=3.7,SNR=4.2
427A Hayter Ranch, 109.55 59 ⇓P PKiKP 15 37 37.6 -0.3
baz=110
FINES FINESS Array B 109.55 334 Pdiff Pdif 15 33 32.9 -1.9
comp=Z,1.5nm,0.9s,baz=34,slow=7.6,SNR=4.0
FINES PKiKP PKiKP 15 37 35.9 -1.1
comp=Z,1.4nm,0.6s,baz=85,slow=2.1,SNR=6.4
627A Terlingua Ranc 109.67 61 ⇑P PKiKP 15 37 37.7 -0.5
baz=110
528A Cox Ranch, San 110.14 60 ⇓P PKiKP 15 37 39.0 -0.1
baz=110
ULM Lac du Bonnet 111.42 38 PKiKP PKiKP 15 37 39.1 -1.8
comp=Z,1.2nm,0.5s,baz=268,slow=5.1,SNR=3.0
BRTR Keskin Array B 111.75 310 PKiKP PKiKP 15 37 40.8 -1.0
comp=Z,0.5nm,0.6s,baz=131,slow=3.8,SNR=4.3
AKASG Malin Array Be 111.96 323 PKiKP PKiKP 15 37 40.4 -1.5
comp=Z,1.0nm,0.4s,baz=61,slow=2.1,SNR=5.0
AKASG PKKPbc PKKPbc 15 48 33.5 -2.7
comp=Z,0.7nm,0.5s,baz=254,slow=4.6,SNR=4.2
USHA Ushuaia 112.74 159 PKiKP PKiKP 15 37 43.3 +0.1
comp=Z,7.2nm,0.8s,baz=133,slow=2.2,SNR=4.1
NOA NORSAR Array B 115.81 338 PKP PKPdf 15 37 47.3 -1.6
comp=Z,1.9nm,1.1s,baz=33,slow=2.1,SNR=3.1
NOA PKKPbc PKKPbc 15 48 20.6 -2.9
comp=Z,1.2nm,0.8s,baz=233,slow=3.5,SNR=5.5
KOLS Kolonicke sedl 116.80 323 *e*PKIKP PKPdf 15 37 51.3 +0.1
KOLS Kolonicke sedl 116.80 323 *e*PKP PKPdf 15 37 51.3 +0.1
STHS Stebnicka Huta 117.21 324 *e*PKIKP PKPdf 15 37 52.0 0.0
STHS Stebnicka Huta 117.21 324 *e*PKP PKPdf 15 37 52.0 0.0
KECS Kecovo 118.06 323 *e*PKIKP PKPdf 15 37 52.6 -1.0
KECS Kecovo 118.06 323 *e*PKP PKPdf 15 37 52.6 -1.0
VYHS Vyhne 119.04 323 *e*PKIKP PKPdf 15 37 54.9 -0.6
VYHS Vyhne 119.04 323 *e*PKP PKPdf 15 37 54.9 -0.6
KOLL Kolacno 119.26 324 *e*PKIKP PKPdf 15 37 55.4 -0.6
KOLL Kolacno 119.26 324 *e*PKP PKPdf 15 37 55.4 -0.6
DPC Dobruska-Polom 119.60 326 *e*PKIKP PKPdf 15 37 56.1 -0.4
DPC smax
comp=N,5.0nm,0.4s
ZST Bratislava 120.20 324 *e*PKIKP PKPdf 15 37 57.8 0.0
ZST Bratislava 120.20 324 *e*PKP PKPdf 15 37 57.8 0.0
PVCC Panska Ves 120.47 327 *e*PKIKP PKPdf 15 37 57.7 -0.5
BRG Berggiesshubel 120.62 328 *e*PKPdf PKPdf 15 37 58.1 -0.4
BRG Berggiesshubel 120.62 328 *i* P PKPdf 15 37 57.7 -0.8
comp=N,8.9nm,0.7s
BRG Berggiesshubel 120.62 328 *i* PKIKP PKPdf 15 37 57.7 -0.8
BRG pmax pmax
comp=Z,5.0nm,0.7s
BSEG Bad Segeberg 120.66 332 *e*PKPdf PKPdf 15 37 57.9 -0.6
CLL Collm 120.87 328 *e*PKPdf PKPdf 15 37 58.3 -0.7
CLL Collm 120.87 328 ⇓*i*PKIKP PKPdf 15 37 58.0 -1.0
CLL *e* 15 38 27.0
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 120.87 328 ⇓*i*PKP PKPdf 15 37 58.0 -1.0
CLL *e*pPKP pPKPdf 15 38 27.0 -4.2
CLL Collm 120.87 328 ⇓*i*PKPdf PKPdf 15 37 58.0 -1.0
comp=Z,10.0nm,0.7s
CSNA Conrad Observa 121.06 324 ⇑*i*PKPdf PKPdf 15 37 58.1 -1.3
comp=Z,5.3nm,0.6s
NRDL Niedersach Rie 121.64 331 *e*PKPdf PKPdf 15 38 00.1 -0.3
TANN Tannenbergstha 121.66 328 *e*PKPdf PKPdf 15 38 00.0 -0.5
KHC Kasperske Hory 121.75 326 *e*PKPdf PKPdf 15 37 59.7 -1.0
GEC2 GERESS Array S 121.83 326 *e*PKPdf PKPdf 15 38 00.3 -0.6
GERES GERESS Array B 121.83 326 PKP PKPdf 15 38 00.1 -0.8
comp=Z,5.3nm,0.5s,baz=80,slow=1.7,SNR=43
GERES SKP 15 41 23.7
comp=Z,0.3nm,0.3s,baz=28,slow=6.0,SNR=3.7
CLZ Clausthal 121.91 330 *e*PKPdf PKPdf 15 38 00.8 -0.1
MOX Moxa 121.97 328 *e*PKP PKPdf 15 38 00.0 -1.1
comp=Z,12nm,1.4s
MOX Moxa 121.97 328 *e*PKPdf PKPdf 15 38 00.4 -0.7
MOX Moxa 121.97 328 *e*PKIKP PKPdf 15 38 00.0 -1.1
MOX pmax pmax
comp=Z,12nm,1.4s
WET Wettzell 122.13 326 *e*PKPdf PKPdf 15 38 01.1 -0.4
PLCA Paso Flores 122.20 147 PKP PKPdf 15 38 02.1 +0.2
comp=Z,14nm,0.7s,baz=221,slow=2.3,SNR=47
GRA1 Grafenberg Arr 122.72 328 *e*PKPdf PKPdf 15 38 02.1 -0.5
GRF Grafenberg Arr 122.72 328 *e*PKPdf PKPdf 15 38 02.1 -0.5
ABTA Abfaltersbach 123.62 324 ⇑*i*PKPdf PKPdf 15 38 02.6 -1.8
comp=Z,7.2nm,0.6s
WTTA Wattenberg 123.85 325 ⇑*i*PKPdf PKPdf 15 38 03.8 -1.0
comp=Z,12nm,0.6s
SCHQ Schefferville 123.92 23 PKP PKPdf 15 38 03.1 -1.6
comp=Z,5.1nm,1.0s,baz=96,slow=5.0,SNR=3.3
CPCT Cooper Cave 124.08 51 *e*Pdif Pdif 15 34 38.8 -0.6
MOTA Moosalm 124.11 325 ⇑*i*PKPdf PKPdf 15 38 03.9 -1.4
comp=Z,11nm,0.5s
FETA Feichten 124.50 325 ⇓*i*PKPdf PKPdf 15 38 05.4 -0.6
comp=Z,14nm,1.4s
MEM Membach 124.82 331 PKP PKPdf 15 38 06.1 -0.5
DAVA Damuels 124.83 326 ⇑*i*PKPdf PKPdf 15 38 05.4 -1.3
comp=Z,13nm,0.7s
BCLA Clavier 125.28 331 PKP PKPdf 15 38 06.5 -1.0
WLF Walferdange 125.36 330 PKP PKPdf 15 38 08.2 +0.6
WLF Walferdange 125.36 330 *e*PKPdf PKPdf 15 38 07.8 +0.2
UCC Uccle 125.48 332 PKP PKPdf 15 38 07.0 -0.8
CDF Champ du Feu 125.57 328 *e*PKIKP PKPdf 15 38 07.2 -0.9
GIVF Givet 125.72 331 *e*PKIKP PKPdf 15 38 08.1 -0.2
comp=Z,12nm,0.7s
BAIF Baives 126.05 331 *e*PKIKP PKPdf 15 38 08.8 -0.1
comp=Z,16nm,0.8s
HINF Hinteralfeld 126.17 328 *e*PKIKP PKPdf 15 38 08.6 -0.6
comp=Z,20nm,0.8s
HAU Haudompre 126.31 328 *e*PKIKP PKPdf 15 38 09.0 -0.5
comp=Z,22nm,0.7s
MEZF Maizieres J'vi 126.66 329 *e*PKIKP PKPdf 15 38 10.2 0.0
comp=Z,16nm,0.6s
JSC Jenkinsville 127.00 51 *e*PKIKP PKPdf 15 38 11.3 0.0
CABF La Chapelle 127.32 327 *e*PKIKP PKPdf 15 38 11.5 0.0
LPL La Plagne 127.63 326 *e*PKIKP PKPdf 15 38 12.2 +0.1
comp=Z,9.8nm,0.7s
LPG La Plagne 127.64 326 *e*PKIKP PKPdf 15 38 12.3 +0.2
comp=Z,10nm,0.6s
PGF Pioggiola 127.99 321 *e*PKIKP PKPdf 15 38 12.1 -0.8
comp=Z,24nm,1.0s
LOR Lormes 128.08 329 *e*PKIKP PKPdf 15 38 12.6 -0.3
MBDF Montbardon 128.08 325 *e*PKIKP PKPdf 15 38 12.6 -0.4
SSF Saint Saulge 128.40 329 *e*PKIKP PKPdf 15 38 13.4 -0.1
comp=Z,12nm,0.8s
ORIF Oris-en-Rattie 128.47 325 *e*PKIKP PKPdf 15 38 13.6 -0.1
comp=Z,12nm,0.7s
SMF Signal de Mont 128.49 328 *e*PKIKP PKPdf 15 38 13.4 -0.3
AVF Avril sur Loir 128.65 329 *e*PKIKP PKPdf 15 38 13.0 -1.0
comp=Z,6.7nm,0.8s
FRF La Foret Royal 128.84 324 *e*PKIKP PKPdf 15 38 14.1 -0.4
LMR La Mourre 129.06 323 *e*PKIKP PKPdf 15 38 14.6 -0.3
comp=Z,16nm,0.8s
BGF Bois d'Agland 129.07 329 *e*PKIKP PKPdf 15 38 14.9 +0.1
LDF La Druitiere 129.10 333 *e*PKIKP PKPdf 15 38 14.7 -0.1
comp=Z,6.5nm,0.6s
FLN La Foliniere 129.14 333 *e*PKIKP PKPdf 15 38 14.5 -0.4
VIVF Saint-Julien-l 129.19 326 *e*PKIKP PKPdf 15 38 15.1 0.0
SMRF Simiane la Rot 129.22 325 *e*PKIKP PKPdf 15 38 15.6 +0.4
comp=Z,22nm,0.8s
TCF Toulx Ste Croi 129.58 329 *e*PKIKP PKPdf 15 38 15.9 +0.1
comp=Z,16nm,0.7s
GRR Gorron 129.59 333 *e*PKIKP PKPdf 15 38 15.7 0.0
comp=Z,16nm,0.6s
LCO Las Campanas 129.75 136 *e*PKPdf PKPdf 15 38 17.1 +0.4
LASF Ste Croix 130.13 326 *e*PKIKP PKPdf 15 38 17.0 +0.1
comp=Z,9.5nm,0.7s
SGMF Saint Gilles 130.45 334 *e*PKIKP PKPdf 15 38 17.1 -0.3
comp=Z,16nm,0.7s
MFF Saint Martin d 130.54 331 *e*PKIKP PKPdf 15 38 17.5 -0.1
CAF Calviac 130.56 328 *e*PKIKP PKPdf 15 38 18.2 +0.5
ROSF Rostrenen 130.69 334 *e*PKIKP PKPdf 15 38 17.6 -0.3
QUIF Quistinic 130.97 334 *e*PKIKP PKPdf 15 38 18.1 -0.3
KEST Kesra 131.18 314 PKP PKPdf 15 38 16.8 -2.4
comp=Z,3.4nm,1.1s,baz=267,slow=4.5,SNR=4.6
MTLF Montolieu 131.52 326 *e*PKIKP PKPdf 15 38 19.7 +0.1
ETSF Etsaut 133.33 327 *e*PKIKP PKPdf 15 38 24.2 +1.2
comp=Z,14nm,0.7s
SJPF Ste Jean 133.53 328 *e*PKIKP PKPdf 15 38 24.4 +1.0
comp=Z,6.8nm,0.7s
LPAZ La Paz 138.73 123 PKhKP 15 38 23.7
comp=Z,3.0nm,0.6s,baz=247,slow=3.6,SNR=15
LPAZ PKP PKPdf 15 38 34.2 +0.4
comp=Z,6.7nm,0.7s,baz=151,slow=1.8,SNR=11
LPAZ SKPbc SKPbc 15 41 58.5 +0.7
comp=Z,2.7nm,0.8s,baz=196,slow=3.8,SNR=5.5
LPAZ La Paz 138.73 123 PKHKP 15 38 23.7
LPAZ 15 38 34.2
LPAZ La Paz 138.73 123 PKP 15 38 23.7
LPAZ PKP PKPdf 15 38 34.2 +0.4
LPAZ SKPbc SKPbc 15 41 58.5 +0.7
CPUP Villa Florida 140.20 144 PKhKP 15 38 26.5
comp=Z,2.8nm,0.7s,baz=177,slow=1.4,SNR=6.6
CPUP PKP PKPdf 15 38 35.7 -0.6
comp=Z,4.4nm,0.6s,baz=280,slow=2.0,SNR=12
CPUP Villa Florida 140.20 144 PKP 15 38 26.5
CPUP PKP PKPdf 15 38 35.7 -0.6
SDV Santo Domingo 142.33 83 *e*PKPpre 15 38 35.3
CRPR Cabo Rojo, PR 144.34 67 *e*PKPpre 15 38 39.8
ICM Isla Caja Muer 144.91 67 *e*PKP PKPdf 15 38 42.2 -2.5
TORD Torodi Ar. Bea 145.25 285 PKPbc PKPbc 15 38 44.3 -1.1
baz=69,slow=4.0
CBYP Canovanas 145.41 66 *e*PKP PKPdf 15 38 43.5 -2.1
MTP Monte Pirata 145.73 66 *e*PKPdf PKPdf 15 38 45.7 -0.5
KIC Kosan Boka 152.12 273 *e*PKIKP pPKPab 15 39 41.3 -3.3
comp=Z,87nm,1.5s
DBIC Dimbokro 152.24 273 PKPbc PKPbc 15 39 03.8 +0.2
comp=Z,3.7nm,0.9s,baz=95,slow=0.9,SNR=4.9
TIC Toumodi 152.40 273 *e*PKIKP pPKPab 15 39 41.7 -4.0
comp=Z,45nm,0.9s
LIC Lamto 152.41 272 *e*PKIKP pPKPab 15 39 41.7 -4.1
comp=Z,40nm,0.8s

DJA 19 15:19:42, 1°.81N×99°.19E, h8km, MLv3.1/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.32	313	P	Pg	15 19 48.4	+0.2
TRSI				S	Sg	15 19 54.2	+1.8
MNSI	Mandailing Nat	1.08	159	P	Pg	15 20 01.6	-1.2
GSI	Gunungsitoli	1.69	253	P	Pn	15 20 11.6	-0.2
GSI				S	Sn	15 20 33.7	0.0
IPM	Ipoh	3.22	35	P	Pn	15 20 33.2	+0.2

DJA 19 15:35:51, 1°.77N×99°.18E, h10km, MLv3.5/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.34	319	P	Pg	15 35 58.7	+1.0
MNSI	Mandailing Nat	1.05	158	P	Pg	15 36 06.3	-4.9
GSI	Gunungsitoli	1.67	254	P	Pn	15 36 20.2	-0.1
GSI				S	Sn	15 36 42.7	+0.9
BKNI	Bangkinang	2.35	128	P	Pn	15 36 31.0	+1.3
PPI	Padang Panjang	2.52	151	P	Pn	15 36 33.8	+1.7
PDSI	Padang	2.96	154	P	Pn	15 36 37.5	-0.5
SISI	Saibi	3.08	182	P	Pn	15 36 39.1	-0.6
IPM	Ipoh	3.26	34	P	Pn	15 36 42.5	+0.3
SDSI	Sungai Dareh	3.50	140	P	Pn	15 36 45.1	-0.4

CSEM ***19*** *15:37:48.7±0.2, 39°.40N×33°.07E, h5km, MD2.8, Error ellipse: s-maj=7.0km s-min=4.6km az=136.0*
ISK ***19*** *15:37:48.2, 39°.43N×33°.10E, h9km, MD2.8*
ISCJB ***19*** *15:37:49.6±0.5, 39°.42N±0°.03×33°.07E±0°.04, h10km, Error ellipse: s-maj=5.6km s-min=3.3km az=136.9*
DDA ***19*** *15:37:49.0, 39°.42N×33°.12E, h4km±2km, Md2.8*

ISC 19 15:37:49.5±0.6, 39°.41N±0°.03×33°.09E±0°.04, h6km±5km, n28, σ1°.05/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	Bala	0.13	13	*i* P	Pg	15 37 51.7	-0.6
BBAL				*i* S	Sg	15 37 54.0	-0.1
BBAL	Bala	0.13	13	*i* P	Pg	15 37 51.7	-0.6
BBAL				*i* S	Sg	15 37 54.0	-0.2
LOD	Lodumlu	0.54	333	*e*PG	Pg	15 37 58.9	-1.0
LOD				*e*SG	Sg	15 38 06.8	-0.1
LOD	Lodumlu	0.54	333	*e*Pg	Pg	15 37 58.9	-1.0
LOD				*e*Sg	Sg	15 38 06.8	-0.1
CDAG	Cicekdag	1.02	78	*i* P	Pg	15 38 08.0	-1.1
CDAG				*i* S	Sg	15 38 22.9	+0.6
CDAG	Cicekdag	1.02	78	*i* P	Pg	15 38 08.0	-1.1
CDAG				*i* S	Sg	15 38 22.9	+0.6
KIZT	Kizilcal	1.08	241	*e*PN	Pg	15 38 09.7	-0.5
KIZT				*e*SN	Sg	15 38 25.3	+1.1
KIZT	Kizilcal	1.08	241	*e*Pn	Pg	15 38 09.7	-0.5
KIZT				*e*Sn	Sg	15 38 25.3	+1.2
ELDT	Eldivan	1.11	14	*i* P	Pg	15 38 10.9	+0.1
ELDT				*i* S	Sg	15 38 26.4	+1.2
ELDT	Eldivan	1.11	14	*i* P	Pg	15 38 10.9	+0.1
ELDT				*i* S	Sg	15 38 26.4	+1.2
KDHN	Kadinhani	1.17	221	*i* P	Pg	15 38 12.3	+0.4
KDHN				*i* S	Sg	15 38 28.3	+1.3
KDHN	Kadinhani	1.17	221	*i* P	Pg	15 38 12.3	+0.4
SVRH	Sivrihisar-ESK	1.21	272	*e*PN	Pn	15 38 11.6	-1.4
SVRH				*e*SN	Sn	15 38 29.8	+0.2
SVRH	Sivrihisar-ESK	1.21	272	*e*Pn	Pn	15 38 11.6	-1.3
SVRH				*e*Sn	Sn	15 38 29.8	+0.2
LADK	Ladik-KONYA	1.33	205	*e*PN	Pn	15 38 13.2	-1.4
LADK	Ladik-KONYA	1.33	205	*e*Pn	Pn	15 38 13.2	-1.4
CORM	Corum	1.42	57	*e*PN	Pn	15 38 14.8	-1.0
CORM	Corum	1.42	57	*e*Pn	Pn	15 38 14.8	-1.0
AVNT	Avonos	1.52	114	*i* P	Pn	15 38 03.9	-13
AVNT				*i* S	Sn	15 38 25.8	-11
KONT	Konya--Tatoy	1.57	201	*e*PN	Pn	15 38 18.0	+0.1
KONT	Konya--Tatoy	1.57	201	*e*Pn	Pn	15 38 18.0	+0.1
YOZ	Yozgat	1.74	82	*e*PN	Pn	15 38 19.7	-0.5
YOZ	Yozgat	1.74	82	*e*Pn	Pn	15 38 19.7	-0.6
TOS	Tosya	1.77	24	*e*PN	Pn	15 38 19.1	-1.6
TOS	Tosya	1.77	24	*e*Pn	Pn	15 38 19.1	-1.6
CTKT	Corum	1.78	47	*i* P	Pn	15 38 22.3	+1.5
CTKT				*i* S	Sn	15 38 45.4	+1.7
CTKT	Corum	1.78	47	*i* P	Pn	15 38 22.3	+1.5
CTKT				*i* S	Sn	15 38 45.4	+1.6
BALT	Daday	2.13	6	*i* P	Pn	15 38 28.7	+3.1
BALT				*e*S	Sn	15 38 56.9	+4.5

DJA 19 15:42:36, 1°.95N×98°.84E, h10km, MLv3.9/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.14	58	P	Pg	15 42 40.4	+1.2
MNSI	Mandailing Nat	1.36	147	P	Pn	15 42 52.8	-8.3
GSI	Gunungsitoli	1.42	243	P	Pn	15 43 01.4	-0.5
BKNI	Bangkinang	2.73	126	P	Pn	15 43 18.1	-1.8
PPI	Padang Panjang	2.85	147	P	Pn	15 43 20.7	-0.9
SISI	Saibi	3.26	176	P	Pn	15 43 28.2	+0.9
PDSI	Padang	3.27	150	P	Pn	15 43 23.6	-3.8
IPM	Ipoh	3.33	41	P	Pn	15 43 27.7	-0.5
KULM	Kulim	3.78	29	P	Pg	15 43 49.7	+1.3
SDSI	Sungai Dareh	3.86	138	P	Pn	15 43 38.7	+3.2
RGRI	Rengat	4.17	123	P	Pn	15 43 44.0	+4.2
MYKOM	Kota Tinggi	5.01	92	P	Pb	15 44 02.1	-1.8

DJA 19 15:49:16, 1°.92N×99°.15E, h10km, MLv3.8/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	1.20	159	P	Pb	15 49 35.0	-3.8
GSI	Gunungsitoli	1.69	249	P	Pn	15 49 45.9	+0.3
GSI				S	Sn	15 50 08.1	+0.8
BKNI	Bangkinang	2.46	130	P	Pn	15 49 59.5	+3.2
PDSI	Padang	3.10	155	P	Pn	15 50 08.8	+3.7
IPM	Ipoh	3.16	36	P	Pn	15 50 05.5	-0.3
SISI	Saibi	3.23	181	P	Pn	15 50 05.3	-1.4
SDSI	Sungai Dareh	3.63	141	P	Pn	15 50 11.2	-1.2

DJA 19 15:53:46, 1°.94N×98°.81E, h15km, MLv3.9/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.17	60	P	Pg	15 53 49.7	-0.5
MNSI	Mandailing Nat	1.37	146	P	Pn	15 54 03.3	-7.3
GSI	Gunungsitoli	1.39	243	P	Pn	15 54 11.6	+0.8
BKNI	Bangkinang	2.75	126	P	Pn	15 54 28.7	-0.8
PPI	Padang Panjang	2.86	146	P	Pn	15 54 31.0	-0.1
SISI	Saibi	3.26	175	P	Pn	15 54 35.4	-1.2
PDSI	Padang	3.28	150	P	Pn	15 54 33.1	-3.8
IPM	Ipoh	3.35	41	P	Pn	15 54 40.0	+2.1
SDSI	Sungai Dareh	3.87	137	P	Pn	15 54 47.7	+2.7
SDSI				S	Sn	15 55 35.4	+5.1
RGRI	Rengat	4.19	123	P	Pn	15 54 55.4	+5.9
MYKOM	Kota Tinggi	5.04	92	P	Pb	15 55 12.9	-1.1

NEIC ***19*** *16:06:09.1, 58°.94N×136°.66W, h10km, ML3.2(AEIC), ML3.2(PMR), ML3.5(PGC), After PGC.*

PGC 19 16:06:09.1±0.6, 58°.94N×136°.66W, h10km, ML3.5/5, 3D, 84km west of Haines, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.54	16	P	Pg	16 06 18.5	-1.0
PLBC				⇓S	Sg	16 06 26.0	-0.6
SKAG	Skagway	0.86	52	*e*P	Pg	16 06 24.5	-1.1
BESE	Bessie Mountai	1.01	110	P	Pg	16 06 26.9	-1.6
BESE				S	Sg	16 06 40.8	-0.8
PNL	Peninsula	1.58	299	P	Pn	16 06 34.4	-2.6
PNL				S	Sn	16 06 54.7	-2.9
YKU2	Yakutat	1.65	292	*e*P	Pn	16 06 36.7	-1.3
HYT	Haines Junctio	1.94	348	⇑Pn	Pn	16 06 42.1	+0.2
HYT				⇑Pg	Pg	16 06 44.1	-2.1
HYT				⇑Sg	Sg	16 07 08.8	-2.4
WHY	Whitehorse	1.94	27	P	Pn	16 06 41.3	-0.8
WHY				S	Sn	16 07 09.5	+3.0
WHY	Whitehorse	1.94	27	⇑Pn	Pn	16 06 41.7	-0.4
WHY				⇓Pg	Pg	16 06 43.7	-2.6
WHY				⇓Sg	Sg	16 07 09.7	-1.8
SIT	Sitka	2.02	159	*e*P	Pn	16 06 43.6	+0.5
DLBC	Dease Lake	3.50	95	*e*Pn	Pn	16 07 02.2	-1.3
DLBC				*e*Pg	Pg	16 07 11.8	-4.3
DLBC				*e*Sg	Sg	16 07 56.8	-4.5
DLBC	Dease Lake	3.50	95	Pn	Pn	16 07 02.6	-0.8
DLBC				⇑Pg	Pg	16 07 11.6	-4.4
DLBC				⇑Sg	Sg	16 07 57.7	-3.6
RAGM	Ragged Mountai	4.31	293	P	Pn	16 07 12.6	-2.0
BMRM	Bremner River	4.48	300	P	Pn	16 07 15.3	-1.6
BCA3	Beaver Creek A	4.83	331	P	Pn	16 07 21.1	-0.6
DAWY	Dawson	5.30	347	P	Pn	16 07 27.3	-0.8
DAWY	Dawson	5.30	347	Pn	Pn	16 07 27.8	-0.4
DAWY				⇑Sg	Sg	16 08 52.8	-6.3
EGAK	Eagle	6.23	342	P	Pn	16 07 40.0	-0.8
SML	Sawmill	6.46	301	P	Pn	16 07 42.8	-1.2
PMR	Palmer	6.75	298	*e*P	Pn	16 07 48.4	+0.4
TRF	Thorofare Moun	7.98	310	P	Pn	16 08 01.9	-2.9
	4.0nm,0.7s						
KTH	Kantishna Hill	8.28	310	*e*Pn	Pn	16 08 08.5	-0.4
	6.0nm,0.9s						
PPLA	Purkeypile	8.53	304	P	Pn	16 08 06.1	-6.3

IDC 19 16:12:51.6±1.3, 31°.47N×104°.33E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, Error ellipse: s-maj=56.5km s-min=24.3km az=66.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.84	202	Pn	Pn	16 16 10.3	+1.2
	baz=14,slow=11,SNR=3.6						
MKAR	Makanchi Array	22.84	318	P	P	16 17 56.3	+0.1
	0.8nm,0.8s,baz=124,slow=12,SNR=6.1						
ZALV	Zalesovo Beam	26.48	334	P	P	16 18 29.8	-

DJA 19 16:18:46, 1°70′N×99°14′E, h10km, MLv3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.37**	**331**	P	Pg	16 18 52.9	-0.4
GSI	**Gunungsitoli**	**1.61**	**256**	P	Pn	16 19 12.9	-1.6
GSI				S	Sn	16 19 37.7	+2.3
BKNI	**Bangkinang**	**2.34**	**126**	P	Pn	16 19 26.4	+1.9
PPI	**Padang Panjang**	**2.48**	**150**	P	Pn	16 19 29.0	+2.5
PDSI	**Padang**	**2.91**	**153**	P	Pn	16 19 37.6	+5.2
SISI	**Saibi**	**3.01**	**181**	P	Pn	16 19 31.7	-2.0
IPM	**Ipoh**	**3.34**	**34**	P	Pn	16 19 39.5	+1.2
SDSI	**Sungai Dareh**	**3.47**	**139**	P	Pn	16 19 38.3	-1.9

*ISCJB **19** 16:34:37.2±0.4, 31°.69N±0°.03×104°.69E±0°.04, h10km, mb3.9/12, Error ellipse: s-maj=5.1km s-min=3.7km az=28.8*
*IDC **19** 16:34:37.1±0.8, 31°.82N×104°.65E, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.8/27, mbtmp3.8/12, ML3.6/3, Error ellipse: s-maj=32.0km s-min=16.6km az=55.0*
*BJI **19** 16:34:38.6, 31°.83N×104°.50E, h14km, mb3.9/1, ML3.7/16, Ms3.7/3, Ms7 3.8/1*
*NEIC **19** 16:34:39.3±0.6, 31°.79N×104°.49E, h10km, mb3.4/2, Error ellipse: s-maj=16.0km s-min=9.9km az=65.0*

ISC 19 16:34:39.0±0.4, 31°.74N±0°.03×104°.64E±0°.04, h10km, n27, σ1§31/38, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**223**	Pg	**Pg**	**16 34 58.4**	**-2.2**
CD2				Sg	**Sg**	**16 35 13.9**	**-1.2**
CD2				smax			
	comp=N,10μm,0.8s						
XAN	**Xi'an**	**4.27**	**56**	Pn	**Pn**	**16 35 44.8**	**+0.8**
XAN				Pg	**Pg**	**16 35 58.9**	**-1.9**
XAN				Sn	**Sb**	**16 36 44.8**	**-0.9**
XAN				Sg	**Sg**	**16 36 59.3**	**+3.2**
XAN				smax			
	comp=N,230nm,0.9s						
XAN				smax			
	comp=E,130nm,0.8s						
LZH	**Lanzhou**	**4.38**	**352**	*e*Pn	**Pn**	**16 35 47.3**	**+1.7**
LZH				Pg	**Pg**	**16 35 58.5**	**-4.5**
LZH				Sn	**Sn**	**16 36 40.1**	**+3.4**
LZH				Sg	**Sg**	**16 36 52.0**	**-7.8**
LZH				smax			
	comp=N,150nm,0.8s						
LZH				smax			
	comp=E,170nm,0.6s						
LZH				LR	LR		
	comp=E,600nm,5.1s						
LZH				LR	LR		
	comp=Z,720nm,5.8s						
ENH	**Enshi**	**4.41**	**108**	*e*Pn	**Pn**	**16 35 50.0**	**+4.0**
GYA	**Guiyang**	**5.55**	**161**	Pn	**Pn**	**16 36 03.6**	**+1.9**
GYA				Sn	**Sn**	**16 37 04.8**	**-0.8**
GYA				smax			
	comp=N,160nm,1.0s						
GYA				smax			
	comp=E,140nm,0.9s						
KMI	**Kunming**	**6.80**	**195**	Pn	**Pn**	**16 36 20.3**	**+1.4**
KMI				Sn	**Sn**	**16 37 37.8**	**+1.4**
KMI				smax			
	comp=N,15nm,1.4s						
KMI				smax			
	comp=E,19nm,2.0s						
KMI				LR	LR		
	comp=N,220nm,8.1s						
KMI				LR	LR		
	comp=E,360nm,7.4s						
WHN	**Wuhan**	**8.41**	**96**	P	**Pn**	**16 36 36.8**	**-4.1**
WHN				S	**Sn**	**16 38 15.1**	**-0.8**
GTA	**Gaotai**	**8.60**	**334**	*e*P	**Pn**	**16 36 50.6**	**+7.1**
GTA				pP		16 36 54.1	
GTA				sP		16 36 56.4	
GTA				S	**Sn**	**16 38 26.1**	**+5.6**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				LR	LR		
	comp=N,220nm,9.2s						
GTA				LR	LR		
	comp=E,160nm,11.3s						
GTA				LR	LR		
	comp=Z,250nm,9.2s						
CMAR	**Chiang Mai Arr**	**14.19**	**203**	Pn	**Pn**	**16 38 01.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=5.7						
SONM	**Songino Array**	**16.13**	**4**	Pn	**Pn**	**16 38 25.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=168,slow=7.4,SNR=3.1						
ULN	**Ulaanbaatar**	**16.21**	**6**	*e*P	**Pn**	**16 38 27.7**	**+1.0**
	comp=Z,2.4nm,1.0s						
KSRS	**Korea Array**	**19.97**	**67**	P	**Pn**	**16 39 11.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=256,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**22.81**	**318**	P	**P**	**16 39 40.4**	**-1.4**
	comp=Z,1.3nm,0.8s,mb3.4,baz=101,slow=10,SNR=8.1						
MKAR	**Makanchi Array**	**22.81**	**318**	P	**P**	**16 39 40.4**	**-1.4**
ZALV	**Zalesovo Beam**	**26.35**	**333**	P	**P**	**16 40 13.6**	**-1.4**
	comp=Z,1.9nm,0.8s,mb3.7,baz=131,slow=8.9,SNR=6.9						
KURK	**Kurchatov**	**27.02**	**322**	P	**P**	**16 40 19.5**	**-1.6**
	comp=Z,1.4nm,0.8s,mb3.5,baz=130,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**32.58**	**321**	P	**P**	**16 41 11.4**	**+1.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=133,slow=8.3,SNR=3.9						
ABKAR	**Akbulak array**	**37.60**	**311**	*e*P	**P**	**16 41 54.1**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.5						
BRTR	**Keskin Array B**	**56.83**	**299**	P	**P**	**16 44 24.6**	**+0.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=91,slow=6.5,SNR=4.9						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**16 44 24.6**	**-2.0**
	comp=Z,1.1nm,0.7s,mb4.0,baz=86,slow=5.9,SNR=4.1						
WRAB	**Tennant Creek**	**58.75**	**147**	*e*P	**P**	**16 44 37.7**	**+0.5**
	comp=Z,4.1nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**16 44 58.4**	**+0.3**
	comp=Z,0.9nm,0.5s,mb4.2,baz=332,slow=6.5,SNR=38						
STKA	**Stephens Creek**	**72.30**	**148**	P	**P**	**16 46 04.2**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=321,slow=6.5,SNR=4.1						
STKA	**Stephens Creek**	**72.30**	**148**	*e*P	**P**	**16 46 04.3**	**-0.3**
LPG	**La Plagne**	**73.15**	**313**	*e*P	**P**	**16 46 10.4**	**+0.7**
	comp=Z,4.8nm,0.8s,mb4.2						
LPL	**La Plagne**	**73.15**	**313**	*e*P	**P**	**16 46 10.9**	**+1.2**
YKA	**Yellowknife Ar**	**80.95**	**17**	P	**P**	**16 46 52.3**	**-0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=329,slow=5.2,SNR=6.6						

*ISCJB **19** 16:52:41.7±0.2, 32°.17N±0°.02×50°.12E±0°.03, h10km, mb3.9/25, Error ellipse: s-maj=3.8km s-min=3.1km az=43.0*
*MOS **19** 16:52:43.3±1.6, 32°.11N×50°.04E, h33km, mb4.1/13, Error ellipse: s-maj=12.4km s-min=9.2km az=86.5*
*THR **19** 16:52:44.5±1.5, 32°.29N×50°.24E, h17km±12km, ML3.5*
*NEIC **19** 16:52:46.0, 32°.20N×50°.10E, h28km, mb4.0/3, ML3.5(THR), MN4.0(TEH), After TEH.*
*CSEM **19** 16:52:46.2±0.2, 32°.18N×50°.13E, h44km±2km, mb4.0/14, Ms4.1, Error ellipse: s-maj=4.8km s-min=4.0km az=39.0*
*TEH **19** 16:52:46.3, 32°.20N×50°.12E, h28km*
*SGS **19** 16:52:49.9, 31°.85N×49°.92E, h18km*
*IDC **19** 16:52:51.1±4.1, 32°.32N×50°.16E, h87km±38km, mb3.6/17, mb1 3.7/21, mb1mx3.6/30, mbtmp3.6/21, Error ellipse: s-maj=19.3km s-min=13.2km az=151.0*

ISC 19 16:52:43.8±0.2, 32°.22N±0°.02×50°.18E±0°.03, h10km, n183, σ1§38/204, mb3.9/25, 5C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**0.76**	**52**	Pg	**Pg**	**16 53 04.7**	**+6.3**
IPIR	**Pirpir**	**0.76**	**52**	*e*	**Sg**	**16 53 18.9**	**+11**
	comp=Z,49μm,0.3s						
IPIR				‖*e*Pg	**Pg**	**16 53 04.7**	**+6.3**
SHGR	**Shooshtar-Gavs**	**1.18**	**265**	*e*Pg	**Pg**	**16 53 07.0**	**+0.7**
SHGR				*e*Sg	**Sg**	**16 53 24.0**	**+2.4**
SHGR	**Shooshtar-Gavs**	**1.18**	**265**	*e*Pg	**Pg**	**16 53 07.7**	**+1.4**
SHGR	**Shooshtar-Gavs**	**1.18**	**265**	*e*Pg	**Pg**	**16 53 07.7**	**+1.4**
SHGR				*e*Sg	**Sg**	**16 53 24.8**	**+3.2**
IGAR	**Gharneh**	**1.59**	**83**	*e*Pn	**Pn**	**16 53 11.9**	**0.0**
IGAR				*e*		16 53 39.6	
	comp=Z,21μm,0.2s						
IKLH	**Kolahrood**	**1.61**	**47**	Pn	**Pn**	**16 53 10.8**	**-1.4**
IKLH	**Kolahrood**	**1.61**	**47**	*e*Pn	**Pn**	**16 53 10.9**	**-1.3**
IKLH				*e*		16 53 40.0	
	comp=Z,12μm,0.3s						
IKLH	**Kolahrood**	**1.61**	**47**	*e*Pn	**Pn**	**16 53 10.9**	**-1.3**
IZEF	**Zefreh**	**1.94**	**69**	Pn	**Pn**	**16 53 16.9**	**+0.2**
IZEF	**Zefreh**	**1.94**	**69**	*e*Pn	**Pn**	**16 53 16.9**	**+0.2**
IZEF				*e*		16 53 23.0	
	comp=Z,5μm,0.2s						
IZEF	**Zefreh**	**1.94**	**69**	*e*Pn	**Pn**	**16 53 16.9**	**+0.2**
NASN	**Na'in**	**2.29**	**75**	*e*Pn	**Pn**	**16 53 23.0**	**+1.4**
NASN				AML	AML	16 53 59.5	
	comp=E,322nm,0.7s						
NASN				AML	AML	16 54 06.1	
	comp=N,313nm,0.9s						
ASAO	**Ashtian**	**2.32**	**357**	*e*Pn	**Pn**	**16 53 23.8**	**+1.8**
ASAO				AML	AML	16 54 12.4	
	comp=E,232nm,0.8s						
GHVR	**GHOM**	**2.44**	**22**	*e*Pg	**Pn**	**16 53 25.0**	**+1.4**
GHVR				*e*Sg	**Sn**	**16 53 56.0**	**+2.5**
GHVR	**GHOM**	**2.44**	**22**	*e*Pg	**Pn**	**16 53 26.2**	**+2.6**
GHVR				*e*Sg	**Sn**	**16 53 58.3**	**+4.8**
GHVR				AML	AML	16 54 10.2	
	comp=E,248nm,0.6s						
GHVR	**GHOM**	**2.44**	**22**	*e*Pg	**Pn**	**16 53 25.8**	**+2.2**
GHVR				*e*Sg	**Sn**	**16 53 56.9**	**+3.4**
ISFB	**Sefidab**	**2.74**	**39**	Pn	**Pn**	**16 53 28.5**	**+0.8**
ISFB	**Sefidab**	**2.74**	**39**	*e*Pn	**Pn**	**16 53 28.5**	**+0.8**
ISFB				*e*		16 54 13.6	
	comp=Z,2μm,0.3s						
ISFB	**Sefidab**	**2.74**	**39**	*e*Pn	**Pn**	**16 53 28.5**	**+0.8**
IKOM	**Komasi**	**2.97**	**312**	Pn	**Pn**	**16 53 31.7**	**+0.8**
IKOM				Sg	**Sg**	**16 54 18.8**	**-0.3**
IKOM	**Komasi**	**2.97**	**312**	*e*Pn	**Pn**	**16 53 31.7**	**+0.8**
IKOM				*e*Sg	**Sg**	**16 54 18.8**	**-0.3**
IKOM				*e*		16 54 30.3	
	comp=Z,3μm,0.4s						
IKOM	**Komasi**	**2.97**	**312**	*e*Pn	**Pn**	**16 53 31.7**	**+0.8**
ISAD	**Sadrabad**	**2.99**	**95**	Pn	**Pn**	**16 53 32.1**	**+0.9**
ISAD				Sn	**Sn**	**16 54 06.9**	**-0.3**
ISAD	**Sadrabad**	**2.99**	**95**	*e*Pn	**Pn**	**16 53 32.2**	**+1.0**
ISAD				*e*Sn	**Sn**	**16 54 06.9**	**-0.3**
ISAD				*e*		16 54 30.6	
	comp=Z,6μm,0.3s						
ISAD	**Sadrabad**	**2.99**	**95**	*e*Pn	**Pn**	**16 53 32.2**	**+1.0**
ISAD				*e*Sn	**Sn**	**16 54 06.9**	**-0.3**
IVRN	**Varamin**	**3.05**	**25**	Pn	**Pn**	**16 53 33.4**	**+1.3**
IVRN	**Varamin**	**3.05**	**25**	*e*Pn	**Pn**	**16 53 33.4**	**+1.3**
IVRN				*e*		16 54 28.8	
	comp=Z,3μm,0.6s						
IVRN	**Varamin**	**3.05**	**25**	*e*Pn	**Pn**	**16 53 33.4**	**+1.3**
IRAZ	**Razeghan**	**3.18**	**356**	Pn	**Pn**	**16 53 35.5**	**+1.7**
IRAZ				Sn	**Sn**	**16 54 10.8**	**-1.0**
IRAZ	**Razeghan**	**3.18**	**356**	*e*Pn	**Pn**	**16 53 35.6**	**+1.8**
IRAZ				*e*		16 54 00.5	
	comp=Z,2μm,0.4s						
IRAZ				*e*Sn	**Sn**	**16 54 10.9**	**-0.9**
IRAZ	**Razeghan**	**3.18**	**356**	*e*Pn	**Pn**	**16 53 35.6**	**+1.8**
IRAZ				*e*Sn	**Sn**	**16 54 10.9**	**-0.9**
UMR	**Umm Al-Rimmam**	**3.40**	**219**	*e*P	**Pn**	**16 53 38.3**	**+1.4**
UMR				AML	AML	16 54 23.5	
	comp=Z,398nm,0.5s						
IPAR	**Pars**	**3.42**	**133**	Pn	**Pn**	**16 53 38.8**	**+1.7**
IPAR	**Pars**	**3.42**	**133**	*e*Pn	**Pn**	**16 53 38.8**	**+1.7**
IPAR				*e*		16 54 48.5	
	comp=Z,3μm,0.4s						
IPAR	**Pars**	**3.42**	**133**	*e*Pn	**Pn**	**16 53 38.8**	**+1.7**
MIB	**Mutribah**	**3.43**	**226**	*e*P	**Pn**	**16 53 39.1**	**+1.8**
MIB				AML	AML	16 54 22.1	
	comp=Z,275nm,0.6s						
ICHK	**Chekchek**	**3.58**	**89**	Pn	**Pn**	**16 53 41.0**	**+1.6**
ICHK	**Chekchek**	**3.58**	**89**	*e*Pn	**Pn**	**16 53 41.0**	**+1.6**
ICHK				*e*		16 54 50.3	
	comp=Z,3μm,0.4s						
ICHK	**Chekchek**	**3.58**	**89**	*e*Pn	**Pn**	**16 53 41.0**	**+1.6**
IGHG	**Ghaleghazi**	**3.68**	**306**	Pn	**Pn**	**16 53 40.1**	**-0.6**
IGHG	**Ghaleghazi**	**3.68**	**306**	*e*Pn	**Pn**	**16 53 40.2**	**-0.5**
IGHG				*e*		16 55 22.2	
	comp=Z,3μm,0.5s						
IGHG	**Ghaleghazi**	**3.68**	**306**	*e*Pn	**Pn**	**16 53 40.2**	**-0.5**
IDMV	**Damavand**	**3.68**	**24**	Pn	**Pn**	**16 53 41.3**	**+0.6**
IDMV	**Damavand**	**3.68**	**24**	*e*Pn	**Pn**	**16 53 41.3**	**+0.6**
IDMV				*e*		16 55 10.6	
	comp=Z,3μm,0.7s						
IDMV	**Damavand**	**3.68**	**24**	*e*Pn	**Pn**	**16 53 41.3**	**+0.6**
DAMV	**Damavand**	**3.71**	**23**	*e*Pn	**Pn**	**16 53 41.0**	**-0.1**
DAMV	**Damavand**	**3.71**	**23**	*e*Pn	**Pn**	**16 53 42.3**	**+1.2**
DAMV	**Damavand**	**3.71**	**23**	*e*Pn	**Pn**	**16 53 41.8**	**+0.7**
SNGE	**Sanandaj**	**3.71**	**321**	*e*Pn	**Pn**	**16 53 42.0**	**+0.9**
SNGE	**Sanandaj**	**3.71**	**321**	*e*Pn	**Pn**	**16 53 42.3**	**+1.2**
SNGE				AML	AML	16 54 50.2	
	comp=N,108nm,0.7s						
SNGE	**Sanandaj**	**3.71**	**321**	*e*Pn	**Pn**	**16 53 42.3**	**+1.2**
KBD	**Kabd**	**3.72**	**216**	*e*P	**Pn**	**16 53 42.9**	**+1.7**
KBD				AML	AML	16 54 27.9	
	comp=Z,69nm,0.3s						
ISRV	**Sarvestan**	**3.79**	**138**	Pn	**Pn**	**16 53 42.9**	**+0.6**
ISRV	**Sarvestan**	**3.79**	**138**	*e*Pn	**Pn**	**16 53 42.9**	**+0.6**
ISRV	**Sarvestan**	**3.79**	**138**	*e*Pn	**Pn**	**16 53 42.9**	**+0.6**
ILIN	**Lien**	**3.80**	**316**	Pn	**Pn**	**16 53 42.5**	**+0.1**
ILIN	**Lien**	**3.80**	**316**	*e*Pn	**Pn**	**16 53 42.6**	**+0.2**
ILIN				*e*		16 55 09.8	
	comp=Z,2μm,0.6s						
ILIN	**Lien**	**3.80**	**316**	*e*Pn	**Pn**	**16 53 42.6**	**+0.2**
IMOK	**Mouk**	**3.85**	**145**	Pn	**Pn**	**16 53 42.7**	**-0.3**
IMOK	**Mouk**	**3.85**	**145**	*e*Pn	**Pn**	**16 53 42.7**	**-0.3**
IMOK				*e*		16 55 05.4	
	comp=Z,3μm,0.5s						
IMOK	**Mouk**	**3.85**	**145**	*e*Pn	**Pn**	**16 53 42.7**	**-0.3**
IMEH	**Mehriz**	**3.86**	**101**	Pn	**Pn**	**16 53 44.2**	**+1.0**
IMEH	**Mehriz**	**3.86**	**101**	*e*Pn	**Pn**	**16 53 44.3**	**+1.1**
IMEH				*e*		16 55 04.2	
	comp=Z,1μm,0.5s						
IMEH	**Mehriz**	**3.86**	**101**	*e*Pn	**Pn**	**16 53 44.3**	**+1.1**
NAY	**Al-Naaiem**	**3.90**	**221**	*e*P	**Pn**	**16 53 45.3**	**+1.6**
NAY				AML	AML	16 54 34.5	
	comp=Z,184nm,0.6s						
ILAS	**Lasjerd**	**3.91**	**36**	Pn	**Pn**	**16 53 44.5**	**+0.6**
ILAS	**Lasjerd**	**3.91**	**36**	*e*Pn	**Pn**	**16 53 44.6**	**+0.7**
ILAS				*e*		16 55 06.7	
	comp=Z,2μm,0.5s						
ILAS	**Lasjerd**	**3.91**	**36**	*e*Pn	**Pn**	**16 53 44.6**	**+0.7**
QRN	**Al-Qurain**	**3.98**	**210**	*e*P	**Pn**	**16 53 46.0**	**+1.1**
RDF	**Al-Radifah**	**3.99**	**215**	*e*P	**Pn**	**16 53 46.3**	**+1.3**
RDF				AML	AML	16 54 35.3	
	comp=Z,161nm,0.6s						
IDHR	**Dehrash**	**4.02**	**309**	Pn	**Pn**	**16 53 45.5**	**+0.1**
IDHR	**Dehrash**	**4.02**	**309**	*e*Pn	**Pn**	**16 53 45.5**	**+0.1**
IDHR	**Dehrash**	**4.02**	**309**	*e*Pn	**Pn**	**16 53 45.5**	**+0.1**
IANJ	**Anjilo**	**4.49**	**43**	Pn	**Pn**	**16 53 52.6**	**+0.8**
IANJ	**Anjilo**	**4.49**	**43**	*e*Pn	**Pn**	**16 53 52.6**	**+0.8**
IANJ				*e*		16 55 14.8	
	comp=Z,1μm,0.4s						
IANJ	**Anjilo**	**4.49**	**43**	*e*Pn	**Pn**	**16 53 52.6**	**+0.8**
IBAF	**Bafgh**	**4.62**	**96**	Pn	**Pn**	**16 53 55.0**	**+1.3**
IBAF	**Bafgh**	**4.62**	**96**	*e*Pn	**Pn**	**16 53 55.0**	**+1.3**
IBAF				*e*		16 55 17.9	
	comp=Z,813nm,0.4s						
IBAF	**Bafgh**	**4.62**	**96**	*e*Pn	**Pn**	**16 53 55.0**	**+1.3**
BHD	**Baghdad**	**5.00**	**284**	*e*Pn	**Pn**	**16 53 52.0**	**-6.8**
BHD				*e*Sn	**Sn**	**16 54 53.0**	**-3.6**
BHD				*e*Sg	**Sg**	**16 55 31.0**	**+6.8**
IGLO	**Ghaloghah**	**5.23**	**34**	Pn	**Pn**	**16 54 03.8**	**+1.8**
IGLO	**Ghaloghah**	**5.23**	**34**	*e*Pn	**Pn**	**16 54 03.9**	**+1.9**
IGLO				*e*		16 55 46.6	
	comp=Z,1μm,0.5s						
IGLO	**Ghaloghah**	**5.23**	**34**	*e*Pn	**Pn**	**16 54 03.9**	**+1.9**
BOQSS		**6.37**	**187**	P	**Pn**	**16 54 17.6**	**-0.1**
ASYS		**6.91**	**229**	P	**Pn**	**16 54 22.9**	**-2.2**
ASYS		**6.91**	**229**	P	**Pn**	**16 54 22.9**	**-2.3**
MSL	**Mosul**	**7.18**	**307**	*e*Pn	**Pn**	**16 54 30.0**	**+1.2**
MSL				*e*Sn	**Sn**	**16 55 52.0**	**+1.6**
BTHS		**8.17**	**176**	P	**Pn**	**16 54 41.3**	**-1.0**
BTHS		**8.17**	**176**	P	**Pn**	**16 54 41.3**	**-1.1**
BANOM	**Banah**	**8.25**	**138**	P	**Pn**	**16 54 43.9**	**+0.5**
	SNR=10						
BANOM				P		16 54 43.9	
	SNR=10						
BANOM	**Banah**	**8.25**	**138**	Pn	**Pn**	**16 54 41.4**	**-2.1**
	SNR=9.5						
BANOM	**Banah**	**8.25**	**138**	P	**Pn**	**16 54 43.9**	**+0.4**
	SNR=10						
NAZ	**Nazwa, Dubai**	**8.67**	**145**	Pn	**Pn**	**16 54 49.3**	**+0.1**
	SNR=6.8						
ASUD	**Al Ashush, Dub**	**8.82**	**148**	P	**Pn**	**16 54 51.9**	**+0.6**
	SNR=18						
ASUD	**Al Ashush, Dub**	**8.82**	**148**	P	**Pn**	**16 54 51.9**	**+0.6**
	SNR=18						
ASUD	**Al Ashush, Dub**	**8.82**	**148**	Pn	**Pn**	**16 54 52.2**	**+0.9**
	SNR=18						
FAQ	**Al Faqa, Dubai**	**8.84**	**146**	Pn	**Pn**	**16 54 52.3**	**+0.7**
HATD	**Hatta, Dubai**	**9.04**	**143**	Pn	**Pn**	**16 54 53.1**	**-1.2**
ASHO	**Ashiyiah**	**9.12**	**144**	P	**Pn**	**16 54 53.7**	**-1.7**
	SNR=7.4						
ASHO	**Ashiyiah**	**9.12**	**144**	P	**Pn**	**16 54 53.7**	**-1.7**
	SNR=7.4						
LYLS		**10.47**	**195**	P	**Pn**	**16 55 12.3**	**-1.7**
LYLS		**10.47**	**195**	P	**Pn**	**16 55 12.3**	**-1.7**
ASF	**Jabal al Asfar**	**11.26**	**273**	P	**Pn**	**16 55 22.2**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=340,slow=7.1,SNR=3.8						
ASF				S	**Sn**	**16 57 23.5**	**-7.0**
	comp=Z,0.3nm,0.3s,baz=104,slow=21,SNR=3.5						
ASF	**Jabal al Asfar**	**11.26**	**273**	P	**Pn**	**16 55 22.2**	**-2.5**
ASF				S	**Sn**	**16 57 23.5**	**-7.0**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MMAI	**Mount Meron Ar**	**12.48**	**278**	P	**Pn**	**16 55 46.1**	**+4.6**
	comp=Z,0.5nm,0.3s,baz=80,slow=16,SNR=2.8						
KIV	**Kislovodsk**	**13.11**	**335**	*e*P	**Pn**	**16 55 53.3**	**+3.4**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,87nm,9.0s						
EIL	**Elat**	**13.32**	**263**	P	**Pn**	**16 55 55.9**	**+3.0**
	comp=Z,0.4nm,0.3s,baz=79,slow=9.7,SNR=2.6						
EIL	**Elat**	**13.32**	**263**	P	**Pn**	**16 55 55.9**	**+3.0**
BRTR	**Keskin Array B**	**15.33**	**304**	P	**Pn**	**16 56 22.2**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=131,slow=13,SNR=5.1						
BRTR	**Keskin Array B**	**15.33**	**304**	*i* P	**Pn**	**16 56 27.0**	**+6.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**15.33**	**304**	P	**Pn**	**16 56 22.2**	**+2.1**
ABKAR	**Akbulak array**	**18.53**	**20**	*e*P	**Pn**	**16 56 59.6**	**-0.7**
ABKAR	**Akbulak array**	**18.53**	**20**	*e*P	**Pn**	**16 56 59.6**	**-0.8**
AKTK	**Aktyubinsk**	**19.10**	**15**	P	**Pn**	**16 57 06.0**	**-1.4**
AKTO	**Aktyubinsk**	**19.10**	**15**	P	**Pn**	**16 57 06.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=194,slow=13,SNR=4.7						
NIL	**Nilore**	**19.41**	**80**	*e*P	**Pn**	**16 57 12.5**	**+1.3**
AML	**Almayashu**	**21.13**	**55**	*e*P	**P**	**16 57 28.2**	**-0.4**
	comp=Z,4.9nm,1.0s,mb3.8						
AML	**Almayashu**	**21.13**	**55**	*e*P	**P**	**16 57 28.2**	**-0.4**
	comp=Z,4.9nm,1.0s,mb3.8						
IDI	**Anoyia**	**21.23**	**285**	P	**P**	**16 57 29.6**	**-0.2**
	comp=Z,12nm,0.7s,mb4.3,baz=81,slow=11,SNR=5.9						
IDI	**Anoyia**	**21.23**	**285**	P	**P**	**16 57 29.6**	**-0.2**
UCH	**Uchtor**	**21.73**	**56**	*e*P	**P**	**16 57 35.0**	**-0.2**
	comp=Z,8.3nm,1.3s,mb4.0						
UCH	**Uchtor**	**21.73**	**56**	*e*P	**P**	**16 57 35.0**	**-0.2**
	comp=Z,8.3nm,1.3s,mb4.0						
AAK	**Ala-Archa**	**21.86**	**55**	*ce*P	**P**	**16 57 39.6**	**+3.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.5						
MLR	**Muntele Rosu**	**22.95**	**312**	P	**P**	**16 57 48.5**	**+0.4**
	comp=Z,3.8nm,0.8s,mb3.9,baz=122,slow=2.1,SNR=5.7						
MLR	**Muntele Rosu**	**22.95**	**312**	P	**P**	**16 57 48.5**	**+0.4**
MLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	**Muntele Rosu**	**22.95**	**312**	P	**P**	**16 57 48.5**	**+0.4**
	comp=Z,4.0nm,0.9s,mb3.9						
AKASG	**Malin Array Be**	**24.09**	**326**	P	**P**	**16 57 57.4**	**-1.9**
	comp=Z,0.3nm,0.4s,mb3.1,baz=126,slow=9.0,SNR=5.0						
AKASG	**Malin Array Be**	**24.09**	**326**	P	**P**	**16 57 57.4**	**-1.9**
BUR08	**Bucovina Ar. S**	**24.43**	**316**	*e*P	**P**	**16 58 00.6**	**-1.8**
BUR08	**Bucovina Ar. S**	**24.43**	**316**	*e*P	**P**	**16 58 00.6**	**-1.8**
OBN	**Obninsk**	**24.82**	**341**	‖*e*P	**P**	**16 58 05.3**	**-0.6**
OBN				*e*		16 58 38.1	
OBN				*e*S	**S**	**17 02 28.3**	**0.0**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
OBN	**Obninsk**	**24.82**	**341**	*e*P	**P**	**16 58 05.3**	**-0.6**
	comp=Z,10.0nm,0.8s,mb4.4						
ARU	**Arti**	**24.90**	**11**	*d i*P	**P**	**16 58 06.6**	**+0.1**
ARU				*e*		16 58 40.8	
ARU				S	**S**	**17 02 32.7**	**+3.2**
ARU				SS		17 03 23.8	
ARU				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.0						
ARU	**Arti**	**24.90**	**11**	*i* P	**P**	**16 58 06.6**

BOSA	**Boshof**	**64.97**	**204**	P	**P**	**17 03 22.6**	**-1.2**
	comp=Z,3.7nm,0.6s,mb4.6,baz=39,slow=7.7,SNR=8.8						
BOSA	**Boshof**	**64.97**	**204**	P	**P**	**17 03 22.6**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
BOSA	**Boshof**	**64.97**	**204**	P	**P**	**17 03 22.5**	**-1.3**
SEY	**Seymchan**	**67.05**	**29**	*c*eP	**P**	**17 03 34.8**	**-2.0**
SEY	**Seymchan**	**67.05**	**29**	*e*P	**P**	**17 03 34.8**	**-2.0**
BILL	**Bilibino**	**69.42**	**21**	⇑*e*P	**P**	**17 03 50.8**	**-0.8**
BILL				*e**PP	pP	17 04 18.2	+23
BILL				*e*		17 06 21.8	
BILL				*e*S	S	17 12 59.0	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BILL	**Bilibino**	**69.42**	**21**	*e*P	**P**	**17 03 50.8**	**-0.8**
	comp=Z,3.0nm,1.2s,mb4.1						
YKA	**Yellowknife Ar**	**84.82**	**353**	P	**P**	**17 05 15.8**	**-2.3**
	comp=Z,1.4nm,0.8s,mb4.2,baz=12,slow=5.6,SNR=25						
YKA	**Yellowknife Ar**	**84.82**	**353**	P	**P**	**17 05 15.9**	**-2.2**
ASAR	**Alice Springs**	**97.29**	**113**	P	**P**	**17 06 13.8**	**-3.5**
	comp=Z,0.3nm,0.9s,mb3.7,baz=309,slow=4.7,SNR=3.5						
ASAR	**Alice Springs**	**97.29**	**113**	P	**P**	**17 06 13.8**	**-3.4**

DJA 19 17:20:29,1.58N×99.19E,h10km,MLv3.6/7,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.50**	**332**	P	Pg	17 20 38.0	-0.8
MNSI	**Mandailing Nat**	**0.87**	**153**	P	Pg	17 20 42.9	-2.9
GSI	**Gunungsitoli**	**1.64**	**260**	P	Pn	17 20 57.7	-0.2
GSI				S	Sn	17 21 20.9	+1.9
BKNI	**Bangkinang**	**2.23**	**124**	P	Pn	17 21 07.3	+1.3
PPI	**Padang Panjang**	**2.36**	**149**	P	Pn	17 21 08.9	+1.1
PDSI	**Padang**	**2.78**	**153**	P	Pn	17 21 15.0	+1.4
SISI	**Saibi**	**2.89**	**182**	P	Pn	17 21 15.2	+0.1
IPM	**Ipoh**	**3.41**	**32**	P	Pn	17 21 23.8	+1.5
PPSI	**Pulau Pagai**	**4.39**	**169**	P	Pn	17 21 37.0	+1.2
MYKOM	**Kota Tinggi**	**4.66**	**87**	P	Pn	17 21 40.7	+1.2

*ISCJB **19** 17:51:06.9±0.4,36°.97N±0°.03×29°.22E±0°.03,h10km,Error ellipse: s-maj=3.9km s-min=3.5km az=174.2*
*CSEM **19** 17:51:06.7±0.1,36°.97N×29°.23E,h5km,MD2.9,Error ellipse: s-maj=3.2km s-min=2.9km az=2.0*
*ISK **19** 17:51:06.3,36°.98N×29°.21E,h7km,MD2.9*
*DDA **19** 17:51:07.3,37°.02N×29°.19E,h7km±6km,Md3.1*
ISC 19 17:51:07.2±0.5,36°.98N±0°.03×29°.21E±0°.03,h6km±6km, n30,σ0s87/50,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*PG	**Pg**	**17 51 12.0**	**-0.9**
GLHS				*e*SG	**Sg**	**17 51 17.0**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*Pg	**Pg**	**17 51 12.0**	**-0.9**
GLHS				*e*Sg	**Sg**	**17 51 17.0**	**+0.3**
FETY	**Fethiye**	**0.36**	**197**	*e*PG	**Pg**	**17 51 13.0**	**-1.1**
FETY				*e*SG	**Sg**	**17 51 19.5**	**+0.8**
FETY	**Fethiye**	**0.36**	**197**	*e*Pg	**Pg**	**17 51 13.0**	**-1.1**
FETY				*e*Sg	**Sg**	**17 51 19.5**	**+0.8**
GOLH	**Golhisar**	**0.38**	**47**	*i* P	**Pg**	**17 51 13.8**	**-0.8**
GOLH				*i* S	**Sg**	**17 51 20.4**	**+0.8**
GOLH	**Golhisar**	**0.38**	**47**	*i* P	**Pg**	**17 51 13.8**	**-0.8**
GOLH				*i* S	**Sg**	**17 51 20.4**	**+0.8**
TURN	**Turunc**	**0.50**	**258**	*i* P	**Pg**	**17 51 21.4**	**+4.6**
TURN				*i* S	**Sg**	**17 51 34.2**	**+11**
TURN	**Turunc**	**0.50**	**258**	*i* P	**Pg**	**17 51 21.4**	**+4.6**
ELL	**Elmali**	**0.60**	**112**	*e*PG	**Pg**	**17 51 18.8**	**0.0**
ELL				*e*SG	**Sg**	**17 51 27.6**	**+0.9**
ELL	**Elmali**	**0.60**	**112**	*e*Pg	**Pg**	**17 51 18.8**	**0.0**
ELL				*e*Sg	**Sg**	**17 51 27.6**	**+1.0**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**17 51 19.8**	**-1.3**
DNZL				*i* S	**Sg**	**17 51 30.8**	**+0.3**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**	**17 51 19.8**	**-1.3**
DNZL				*i* S	**Sg**	**17 51 30.8**	**+0.3**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**17 51 21.4**	**-0.4**
YER				*e*SG	**Sg**	**17 51 32.7**	**+1.0**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**	**17 51 21.4**	**-0.4**
YER				*e*Sg	**Sg**	**17 51 32.7**	**+1.0**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**	**17 51 21.4**	**-1.0**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**	**17 51 21.4**	**-1.0**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**17 51 22.4**	**-0.2**
AKAS				*i* S	**Sg**	**17 51 37.6**	**+4.5**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**17 51 22.4**	**-0.2**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**17 51 23.7**	**-1.0**
KORT				*i* S	**Sg**	**17 51 39.4**	**+2.8**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**	**17 51 23.7**	**-1.0**
KORT				*i* S	**Sg**	**17 51 39.4**	**+2.9**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**17 51 29.7**	**-0.8**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**	**17 51 29.7**	**-0.8**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**17 51 31.0**	**-0.4**
AYDN				*i* S	**Sg**	**17 51 48.9**	**+1.1**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**17 51 31.0**	**-0.4**
AYDN				*i* S	**Sg**	**17 51 48.9**	**+1.1**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**17 51 32.5**	**+0.1**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**17 51 32.5**	**+0.2**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**17 51 33.8**	**+0.5**
KHAL				*i* S	**Sb**	**17 51 52.9**	**+0.8**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**17 51 33.8**	**+0.5**
KHAL				*i* S	**Sb**	**17 51 52.9**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*PN	**Pn**	**17 51 34.4**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*Pn	**Pn**	**17 51 34.4**	**-0.3**

*ISK **19** 17:52:33.9,39°.01N×29°.47E,h7km,MD3.0*
*ISCJB **19** 17:52:34.4±0.4,39°.01N±0°.03×29°.48E±0°.03,h7km±4km, Error ellipse: s-maj=4.3km s-min=3.7km az=0.3*
*CSEM **19** 17:52:34.4±0.1,39°.03N×29°.50E,h5km,MD3.0,Error ellipse: s-maj=1.8km s-min=1.5km az=163.0*
*DDA **19** 17:52:34.2,39°.05N×29°.46E,h11km±2km,Md3.0*
ISC 19 17:52:34.8±0.4,39°.02N±0°.02×29°.48E±0°.03,h7km±4km, n37,σ0s47/57,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.06**	**360**	*i* P	**Pg**	**17 52 36.2**	**-0.4**
GDZ				*i* S	**Sg**	**17 52 38.3**	**+0.5**
GDZ	**Gediz**	**0.06**	**360**	*i* P	**Pg**	**17 52 36.2**	**-0.4**
GDZ				*i* S	**Sg**	**17 52 38.3**	**+0.4**
ALT	**Altintas**	**0.49**	**86**	*e*PG	**Pg**	**17 52 43.5**	**-0.8**
ALT				*e*SG	**Sg**	**17 52 50.8**	**0.0**
ALT	**Altintas**	**0.49**	**86**	*e*Pg	**Pg**	**17 52 43.5**	**-0.8**
ALT				*e*Sg	**Sg**	**17 52 50.8**	**+0.1**
DEMI	**Demirci**	**0.60**	**272**	*i* P	**Pg**	**17 52 46.5**	**+0.2**
DEMI				*i* S	**Sg**	**17 52 54.5**	**+0.4**
DEMI	**Demirci**	**0.60**	**272**	*i* P	**Pg**	**17 52 46.5**	**+0.2**
DEMI				*i* S	**Sg**	**17 52 54.5**	**+0.4**
KHAL	**Karahalli**	**0.65**	**179**	*i* P	**Pg**	**17 52 47.3**	**-0.1**
KHAL				*i* S	**Sg**	**17 52 56.0**	**+0.1**
KHAL	**Karahalli**	**0.65**	**179**	*i* P	**Pg**	**17 52 47.3**	**-0.1**
KHAL				*i* S	**Sg**	**17 52 56.0**	**+0.1**
KHL	**Karahalli**	**0.70**	**177**	*e*PG	**Pg**	**17 52 47.5**	**-0.8**
KHL				*e*SG	**Sg**	**17 52 57.6**	**+0.2**
KHL	**Karahalli**	**0.70**	**177**	*e*Pg	**Pg**	**17 52 47.5**	**-0.8**
KHL				*e*Sg	**Sg**	**17 52 57.6**	**+0.2**
KULA	**Kula-Manisa**	**0.82**	**232**	*e*PG	**Pg**	**17 52 50.2**	**-0.3**
KULA				*e*SG	**Sg**	**17 53 01.2**	**0.0**
KULA	**Kula-Manisa**	**0.82**	**232**	*e*Pg	**Pg**	**17 52 50.2**	**-0.4**
KULA				*e*Sg	**Sg**	**17 53 01.2**	**0.0**
SHUT	**Suhut-Afyon**	**0.96**	**119**	*e*PG	**Pg**	**17 52 53.7**	**+0.5**
SHUT				*e*SG	**Sg**	**17 53 06.7**	**+1.0**
SHUT	**Suhut-Afyon**	**0.96**	**119**	*e*Pg	**Pg**	**17 52 53.7**	**+0.5**
SHUT				*e*Sg	**Sg**	**17 53 06.7**	**+1.0**
DURS	**Dursunbey**	**0.97**	**307**	*i* P	**Pg**	**17 52 53.2**	**-0.3**
DURS				*i* S	**Sg**	**17 53 06.3**	**+0.2**
DURS	**Dursunbey**	**0.97**	**307**	*i* P	**Pg**	**17 52 53.2**	**-0.3**
DURS				*i* S	**Sg**	**17 53 06.3**	**+0.2**
BORA	**Eskisehir**	**1.14**	**41**	*i* P	**Pg**	**17 52 56.1**	**-0.6**
BORA				*i* S	**Sg**	**17 53 11.7**	**+0.2**
BORA	**Eskisehir**	**1.14**	**41**	*i* P	**Pg**	**17 52 56.1**	**-0.6**
BORA				*i* S	**Sg**	**17 53 11.7**	**+0.2**
ESKT	**Eskisehir**	**1.17**	**65**	*e*PN	**Pn**	**17 52 57.1**	**-0.5**
ESKT	**Eskisehir**	**1.17**	**65**	*e*Pn	**Pn**	**17 52 57.1**	**-0.5**
CAVI	**Cavuskoy**	**1.21**	**13**	*e*PN	**Pn**	**17 52 57.8**	**-0.3**
CAVI	**Cavuskoy**	**1.21**	**13**	*e*Pn	**Pn**	**17 52 57.8**	**-0.3**
AKS	**Akhisar**	**1.31**	**264**	*e*PN	**Pn**	**17 52 58.6**	**-0.9**
AKS	**Akhisar**	**1.31**	**264**	*e*Pn	**Pn**	**17 52 58.6**	**-0.9**
YLV	**Yalova**	**1.54**	**357**	*e*PN	**Pn**	**17 53 02.3**	**-0.4**
YLV	**Yalova**	**1.54**	**357**	*e*Pn	**Pn**	**17 53 02.3**	**-0.4**

BALY	**Balya**	**1.61**	**297**	*i* P	**Pn**	**17 53 04.0**	**+0.3**
BALY				*i* S	**Sn**	**17 53 25.6**	**+1.0**
BALY	**Balya**	**1.61**	**297**	*i* P	**Pn**	**17 53 04.0**	**+0.4**
BALY				*i* S	**Sn**	**17 53 25.6**	**+1.0**
GULT	**Gulveren**	**1.62**	**29**	*e*PN	**Pn**	**17 53 04.0**	**+0.3**
GULT	**Gulveren**	**1.62**	**29**	*e*Pn	**Pn**	**17 53 04.0**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.64**	**74**	*e*PN	**Pn**	**17 53 04.5**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.64**	**74**	*e*Pn	**Pn**	**17 53 04.5**	**+0.5**
BNT	**Bandirma**	**1.79**	**318**	*e*PN	**Pn**	**17 53 06.2**	**0.0**
KIZT	**Kizilcal**	**1.88**	**94**	*e*PN	**Pn**	**17 53 07.5**	**+0.2**
KIZT	**Kizilcal**	**1.88**	**94**	*e*Pn	**Pn**	**17 53 07.5**	**+0.2**
MFT	**Murefte**	**2.44**	**317**	*e*PN	**Pn**	**17 53 14.8**	**-0.2**
MFT	**Murefte**	**2.44**	**317**	*e*Pn	**Pn**	**17 53 14.8**	**-0.3**

*IDC **19** 17:52:32.4±0.4,32°.26N×105°.03E,h0km,mb5.0/28, mb1 5.0/31,mb1mx5.0/32,mbtmp4.9/31,ML4.2/3,MS4.1/20, Ms1 4.1/20,ms1mx3.9/40,Error ellipse: s-maj=16.1km s-min=9.4km az=46.0*
*ISCJB **19** 17:52:33.1±0.1,32°.24N±0°.02×105°.02E±0°.02,h15km, mb5.1/206,MS4.3/47,Error ellipse: s-maj=2.7km s-min=2.4km az=8.5*
*BJI **19** 17:52:33.3,32°.26N×105°.07E,h15km,mB4.9/26,mb4.9/36, ML5.1/22,Ms5.0/56,Ms7 4.8/42*
*MOS **19** 17:52:35.9±0.7,32°.26N×105°.02E,h35km,mb5.3/99, MS4.4/29,Error ellipse: s-maj=7.2km s-min=3.7km az=120.0*
*NEIC **19** 17:52:36.2±1.2,32°.23N×105°.01E,h25km±8km,mb5.2/132, MS4.3/5,Error ellipse: s-maj=3.7km s-min=2.7km az=214.0*
NEIC Felt at Xi'an and Wuwei.
*DJA **19** 17:52:36,32°.19N×104°.96E,h10km,mb5.2/17*
*GCMT **19** 17:52:36.2±0.2,32°.24N×105°.16E,h17km±1km,MW4.9/64, Moment Tensor Solution. s30,c41; s64,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.20±.14; $M_{\theta\theta}$-1.12±.09; $M_{\phi\phi}$-1.07±.10; $M_{r\theta}$-0.74±.22; $M_{\theta\phi}$-1.34±.06; $M_{\phi r}$1.02±.26; Best double couple: $M_0$2.62800×10^{16} NP1:ϕ_s249.00000°,δ48.00000°,λ126.00000°. NP2: ϕ_s22.00000°,δ53.00000°,λ57.00000°. Principal axes: T 2.8120, Plg64.0000°, Azm230.0000°; N -0.3580, Plg26.0000°, Azm43.0000°; P -2.4440, Plg3.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **19** 17:52:39.1,31°.94N×104°.19E,h14km,mb5.3,MS4.3, Sichuan, China*
ISC 19 17:52:35.0±0.1,32°.22N±0°.02×104°.99E±0°.02,h16km, h16km±1.1km:pP-P,n611,σ0s91/626,mb5.1/206,MS4.3/47, 102C-17D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.68**	**219**	Pg	**Pg**	**17 53 04.9**	**-2.4**
CD2				Sg	**Sg**	**17 53 28.9**	**-0.2**
CD2				smax			
	comp=N,46μm,0.5s						
XAN	**Xi'an**	**3.76**	**60**	Pn	**Pn**	**17 53 32.4**	**0.0**
XAN				Sn	**Sn**	**17 54 22.8**	**+6.5**
XAN				Sg	**Sg**	**17 54 37.9**	**+2.1**
XAN				smax			
	comp=N,7μm,0.8s						
XAN				smax			
	comp=E,4μm,0.9s						
XAN				LR	LR		
	comp=N,7μm,7.5s						
XAN				LR	LR		
	comp=E,5μm,9.7s						
XAN				LR	LR		
	comp=Z,5μm,8.3s						
LZH	**Lanzhou**	**3.97**	**346**	*e*Pn	**Pn**	**17 53 37.3**	**+2.0**
LZH				Pg	**Pg**	**17 53 48.3**	**-2.8**
LZH				Sn	**Sn**	**17 54 21.8**	**+0.3**
LZH				Sg	**Sg**	**17 54 36.8**	**-5.8**
LZH				smax			
	comp=N,12μm,1.0s						
LZH				smax			
	comp=E,15μm,1.2s						
LZH				LR	LR		
	comp=E,21μm,7.3s						
LZH				LR	LR		
	comp=Z,23μm,9.4s						
ENH	**Enshi**	**4.31**	**116**	*e*P	**Pn**	**17 53 39.7**	**-0.2**
GYA	**Guiyang**	**5.92**	**165**	Pn	**Pn**	**17 54 03.0**	**+0.9**
GYA				Sn	**Sn**	**17 55 07.4**	**-2.2**
GYA				smax			
	comp=N,2μm,0.7s						
GYA				smax			
	comp=E,2μm,0.8s						
GYA				LR	LR		
	comp=N,10μm,5.4s						
GYA				LR	LR		
	comp=E,5μm,3.2s						
GYA				LR	LR		
	comp=Z,7μm,4.5s						
KMI	**Kunming**	**7.34**	**196**	Pn	**Pn**	**17 54 22.3**	**+0.7**
KMI				Sn	**Sn**	**17 55 48.8**	**+4.2**
KMI				smax			
	comp=N,250nm,2.4s						
KMI				smax			
	comp=E,360nm,1.7s						
KMI				LR	LR		
	comp=N,6μm,6.0s						
KMI				LR	LR		
	comp=E,6μm,8.5s						
WHN	**Wuhan**	**8.17**	**99**	⇓P	**Pn**	**17 54 33.0**	**+0.1**
WHN				pP		17 54 37.3	
WHN				S	**Sn**	**17 56 00.8**	**-4.2**
WHN				LR	LR		
	comp=N,34μm,6.1s						
WHN				LR	LR		
	comp=E,17μm,6.0s						
GTA	**Gaotai**	**8.31**	**331**	⇑P	**Pn**	**17 54 35.0**	**+0.1**
GTA				pP		17 54 38.3	
GTA				sP		17 54 41.4	
GTA				S	**Sn**	**17 56 10.8**	**+2.4**
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,46nm,3.9s						
GTA				LR	LR		
	comp=N,7μm,9.2s						
GTA				LR	LR		
	comp=E,4μm,9.5s						
GTA				LR	LR		
	comp=Z,7μm,10.7s						
BTO	**Baotou**	**9.29**	**24**	*e*P	**Pn**	**17 54 47.1**	**-1.2**
BTO				LR	LR		
	comp=N,3μm,7.6s						
BTO				LR	LR		
	comp=E,1μm,8.6s						
HHC	**Hu-ho-hao-te**	**10.10**	**30**	*e*P	**Pn**	**17 55 01.6**	**+2.3**
HHC				pP		17 55 08.6	
HHC				sP		17 55 13.4	
HHC				S	**Sn**	**17 56 53.1**	**+0.8**
HHC				sS		17 57 04.0	
HHC				pmax	pmax		
	comp=Z,59nm,1.4s						
HHC				pmax	pmax		
	comp=Z,140nm,6.1s						
HHC				LR	LR		
	comp=N,6μm,4.9s						
HHC				LR	LR		
	comp=E,2μm,4.7s						
HHC				LR	LR		
	comp=Z,5μm,5.1s						
TIA	**Tai'an**	**10.80**	**65**	*e*P	**Pn**	**17 55 09.3**	**+0.3**
TIA				LR	LR		
	comp=N,2μm,10.0s						
TIA				LR	LR		
	comp=E,2μm,9.0s						
GZH	**Guangzhou**	**11.72**	**139**	P	**Pn**	**17 55 18.3**	**-3.3**
GZH				S	**Sn**	**17 57 25.8**	**-6.4**
GZH				LR	LR		
	comp=N,5μm,8.8s						
GZH				LR	LR		
	comp=E,6μm,10.0s						
GZH				LR	LR		
	comp=Z,8μm,10.3s						
NJ2	**Nanjing**	**11.75**	**87**	*e*P	**Pn**	**17 55 21.5**	**-0.5**
NJ2				pP		17 55 29.8	
NJ2				PP		17 55 32.5	
NJ2				sP		17 55 34.6	
NJ2				S	**Sn**	**17 57 33.1**	**+0.3**
NJ2				sS		17 57 44.3	
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,240nm,4.3s						
NJ2				LR	LR		
	comp=N,3μm,14.6s						
NJ2				LR	LR		
	comp=E,4μm,17.9s						
BJI	**Beijing**	**11.93**	**46**	P	**Pn**	**17 55 23.6**	**-0.8**
BJI				S	**Sn**	**17 57 37.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				pmax	pmax		
	comp=Z,240nm,10.7s						
BJI				LR	LR		
	comp=N,3μm,19.4s						
BJI				LR	LR		
	comp=E,3μm,19.3s						
BJI				LR	LR		
	comp=Z,1μm,19.3s						
CHRT	**Chiangrai**	**13.16**	**202**	P	**Pn**	**17 55 42.0**	**+0.8**
	comp=Z,158nm,1.2s						
QIZ	**Qiongzhong**	**13.84**	**160**	P	**Pn**	**17 55 54.8**	**+4.2**
QIZ				S	**Sn**	**17 58 30.1**	**+6.1**
QIZ				pmax	pmax		
	comp=Z,39nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,180nm,3.9s						
QIZ				LR	LR		
	comp=N,6μm,11.0s						
QIZ				LR	LR		
	comp=E,1μm,8.4s						
QIZ				LR	LR		
	comp=Z,8μm,11.3s						
SSE	**Sheshan**	**13.84**	**90**	*e*P	**Pn**	**17 55 49.8**	**-0.7**
SSE				S	**Sn**	**17 58 23.3**	**-0.6**
SSE				pmax	pmax		
	comp=Z,22nm,0.7s						
SSE				pmax	pmax		
	comp=Z,48nm,4.0s						
SSE				LR	LR		
	comp=N,3μm,9.2s						
SSE				LR	LR		
	comp=E,1μm,9.2s						
SSE				LR	LR		
	comp=Z,3μm,10.5s						
CHG	**Chiang Mai**	**14.42**	**204**	⇓P	**Pn**	**17 55 59.5**	**+1.0**
	comp=Z,34nm,1.0s						
CMAR	**Chiang Mai Arr**	**14.75**	**203**	Pn	**Pn**	**17 56 03.9**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=13,slow=12,SNR=62						
CMAR				PcP	PcP	18 01 15.0	+0.4
	comp=Z,0.2nm,0.3s,baz=293,slow=1.5,SNR=5.9						
CMAR				LR	LR	18 02 01.7	
	comp=Z,444nm,20.1s,baz=20,slow=38						
DL2	**Dalian**	**15.08**	**59**	⇑P	**Pn**	**17 56 08.3**	**+0.9**
DL2				*e*S	**Sn**	**17 58 57.8**	**+3.7**
DL2				SS		17 59 11.5	
DL2				pmax	pmax		
	comp=Z,40nm,0.9s						
DL2				pmax	pmax		
	comp=Z,120nm,5.5s						
DL2				LR	LR		
	comp=N,770nm,12.8s						
DL2				LR	LR		
	comp=E,640nm,12.6s						
DL2				LR	LR		
	comp=Z,1μm,13.5s						
SONM	**Songino Array**	**15.63**	**4**	Pn	**Pn**	**17 56 14.4**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=185,slow=11,SNR=47						
SONM				Lg		18 00 42.7	
	comp=Z,0.5nm,0.3s,baz=150,slow=9.4,SNR=2.8						
SONM				LR	LR	18 03 09.3	
	comp=Z,859nm,19.2s,baz=181,slow=41						
ULN	**Ulaanbaatar**	**15.71**	**5**	*e*P	**Pn**	**17 56 14.4**	**-1.1**
ULN				pmax	pmax		
	comp=Z,90nm,1.0s						
ULN	**Ulaanbaatar**	**15.71**	**5**	*e*P	**Pn**	**17 56 14.4**	**-1.1**
	comp=Z,90nm,1.0s						
ULN	**Ulaanbaatar**	**15.71**	**5**	Pn	**Pn**	**17 56 15.6**	**+0.1**
	SNR=54						
ULN				Pn	**Pn**	**17 56 15.6**	**+0.1**
	SNR=54						
YHNB	**Yeheng**	**16.24**	**113**	*e*P	**Pn**	**17 56 24.9**	**+2.4**
	comp=Z,93nm,1.1s						
SSLB	**Suanglung**	**16.39**	**117**	*e*P	**Pn**	**17 56 24.6**	**0.0**
	comp=Z,126nm,1.0s						
NACB	**Ninganchiao**	**16.67**	**115**	P	**Pn**	**17 56 27.1**	**-1.0**
	comp=Z,104nm,1.3s						
YULB	**Yu-li**	**16.88**	**117**	P	**Pn**	**17 56 31.1**	**+0.5**
	comp=Z,76nm,1.0s						
TWG	**Pinlang**	**17.04**	**119**	P	**Pn**	**17 56 31.2**	**-1.4**
	comp=Z,70nm,0.9s						
GUN	**Gumba**	**17.09**	**260**	*e*P	**Pn**	**17 56 31.5**	**-1.8**
	comp=Z,448nm,1.1s						
PKI	**Pulchoki**	**17.60**	**260**	*e*P	**Pn**	**17 56 37.9**	**-1.7**
	comp=Z,149nm,0.8s						
PKIN	**Phulchoki**	**17.61**	**260**	*e*P	**Pn**	**17 56 37.7**	**-2.0**
KKN	**Kakani**	**17.63**	**261**	*e*P	**Pn**	**17 56 38.3**	**-1.7**
	comp=Z,203nm,1.1s						
SNY	**Shenyang**	**17.64**	**52**	⇓P	**Pn**	**17 56 40.6**	**+0.6**
SNY				S	**Sn**	**17 59 55.8**	**-0.3**
SNY				pmax	pmax		
	comp=Z,19nm,0.7s						
SNY				pmax	pmax		
	comp=Z,330nm,6.1s						
SNY				LR	LR		
	comp=N,970nm,8.8s						
SNY				LR	LR		
	comp=E,1μm,16.2s						
SNY				LR	LR		
	comp=Z,1μm,17.3s						
DMN	**Daman**	**17.84**	**260**	*e*P	**Pn**	**17 56 40.8**	**-1.8**
	comp=Z,374nm,1.1s						
WMQ	**Urumqi**	**17.85**	**315**	*e*P	**Pn**	**17 56 43.3**	**+0.8**
WMQ				PP		17 56 57.1	
WMQ				S	**Sn**	**17 59 59.5**	**-1.6**
WMQ				sS	sS	18 00 04.9	-10
WMQ				SS		18 00 23.3	
WMQ				PcP	PcP	18 01 23.8	+5.0
WMQ				pmax	pmax		
	comp=Z,33nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,500nm,4.4s						
WMQ				LR	LR		
	comp=N,3μm,13.0s						
WMQ				LR	LR		
	comp=E,3μm,10.0s						
WMQ				LR	LR		
	comp=Z,980nm,12.0s						
ZAK	**Zakamensk**	**18.19**	**356**	*e*P	**Pn**	**17 56 48.5**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,45nm,1.6s						
INCN	**Inchon**	**18.51**	**68**	*e*P	**Pn**	**17 56 48.2**	**-2.5**
	comp=Z,186nm,1.6s						
TLY	**Talaya**	**19.47**	**357**	Pn	**Pn**	**17 57 03.1**	**+0.9**
	comp=Z,161nm,1.1s,SNR=6.2						
TLY	**Talaya**	**19.47**	**357**	*c* iP	**Pn**	**17 57 03.0**	**+0.8**
TLY				pmax	pmax		
	comp=Z,71nm,1.9s						
TLY				MLR	MLR		
	comp=Z,1μm,11.

comp=Z,80nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1µm,16.0s
CN2 LR LR
comp=E,700nm,16.0s
CN2 LR LR
comp=Z,1µm,17.0s
IRK Irkutsk 20.02 359⇓ *i*P P 17 57 08.7 +1.8
IRK pmax pmax
comp=Z,495nm,1.3s
HIA Hailar 20.30 29 *e*P P 17 57 10.8 +0.7
HIA pmax pmax
comp=Z,73nm,1.0s
HIA Hailar 20.30 29 *e*P P 17 57 10.8 +0.7
comp=Z,74nm,1.0s
CIT Chita 20.75 15 *e*P P 17 57 16.0 +1.1
CIT *e* 17 57 39.7
CIT *e* 17 57 49.3
CIT pmax pmax
comp=Z,180nm,1.7s
JOW Kunigami 20.94 99 P **P 17 57 17.4 +0.2**
comp=Z,63nm,0.8s,baz=260,slow=3.3,SNR=13
JOW LR LR 18 05 20.3
comp=Z,458nm,18.9s,MS3.9,baz=320,slow=37
JOSI Joshimath 21.77 272 *e*P P 17 57 27.0 +1.0
MK31 Makanchi Array 22.66 317 *e*P P 17 57 35.6 +0.2
MKAR Makanchi Array 22.66 317 P **P 17 57 35.8 +0.4**
comp=Z,77nm,1.0s,mb5.1,baz=113,slow=11,SNR=169
MKAR PcP PcP 18 01 28.4 +0.7
comp=Z,5.8nm,1.0s,baz=82,slow=2.2,SNR=4.8
MKAR LR LR 18 07 22.3
comp=Z,836nm,18.0s,MS4.2,baz=128,slow=39
MKAR Makanchi Array 22.66 317 P **P 17 57 35.8 +0.4**
MKAR 18 01 28.4
MKAR pmax pmax
comp=Z,77nm,1.0s
MKAR pmax pmax
comp=Z,6.0nm,1.0s
MKAR MLR MLR
comp=Z,836nm,18.0s
KLP Kalpa 22.70 275 *e*P P 17 57 36.8 +0.8
MDJ Mudanjiang 22.81 50 P **P 17 57 35.9 -1.1**
MDJ pP 17 57 38.8
MDJ PcP PcP 18 01 26.9 -1.1
MDJ S **S 18 01 43.3 -2.4**
MDJ ScP ScP 18 05 05.0 -0.1
MDJ PcS PcS 18 05 06.5 -0.3
MDJ ScS ScS 18 08 51.3 +0.7
MDJ pmax pmax
comp=Z,76nm,1.1s,mb5.0
MDJ pmax pmax
comp=Z,250nm,5.3s
MDJ LR LR
comp=N,810nm,13.6s
MDJ LR LR
comp=E,230nm,8.7s
MDJ LR LR
comp=Z,1µm,11.6s,MS4.5
MDJ Mudanjiang 22.81 50 *e*P P 17 57 37.4 +0.4
comp=Z,86nm,1.1s,mb5.1
DDI Dehra Dun 23.08 272 *ex* P 17 57 38.0 -2.0
TGY Tagaytay City 23.18 137 P **P 17 57 47.0 +5.8**
comp=Z,76nm,0.4s,mb5.5,baz=165,slow=14,SNR=3.1
TGY Tagaytay City 23.18 137 P **P 17 57 47.0 +5.8**
TGY pmax pmax
comp=Z,76nm,0.4s
SMLA Simla 23.69 275 *i*P P 17 57 42.7 -3.4
SMLA *i*S **S 18 01 57.9 -2.3**
SMLA *i*S **S 18 02 06.4 +6.1**
SDNR Sundarnagar 23.79 276 *e*P P 17 57 49.1 +2.0
VLA Vladivostok 23.81 55 *e*P P 17 57 46.1 -1.1
VLA S **S 18 02 02.3 +0.2**
VLA pmax pmax
comp=Z,124nm,2.0s,mb5.0
VLA MLR MLR
comp=Z,900nm,16.3s,MS4.3
AGRA Agra 23.98 265 *e*P P 17 57 48.3 -0.6
BISR Bishrakh 24.02 269 *e*P P 17 57 49.4 +0.2
NDI New Delhi 24.18 269 *ex* P 17 57 53.0 +2.4
KKR Kurukshetra 24.21 272 *e*P P 17 57 51.7 +0.8
BHK Bhakra 24.27 276 *ex* P 17 57 47.8 -3.7
AYAN Aya Nagar 24.31 268 *e*P P 17 57 51.9 +0.1
KSH Kashi 24.55 295 P **P 17 57 57.8 +3.9**
KSH *e*pP 17 58 01.9
KSH *e*sP sP 17 58 04.8 +4.0
KSH *e*PP 17 58 31.9
KSH *e*PcP PcP 18 01 34.9 +3.1
KSH *e*S **S 18 02 17.4 +3.4**
KSH *e*sS sS 18 02 23.3 +1.2
KSH *e*SS 18 03 13.8
KSH pmax pmax
comp=Z,43nm,0.7s,mb5.1
KSH LR LR
comp=N,890nm,10.1s,MS4.7
KSH LR LR
comp=E,910nm,10.7s,MS4.7
KSH LR LR
comp=Z,770nm,11.0s,MS4.5
RTK Rohtak 24.77 270 *ex* x 17 57 46.3
ULHL Ulahol 24.88 302 P **P 17 57 58.3 +1.4**
SNR=21
TKM2 Tokmak 2 25.51 303 P **P 17 58 04.0 +1.4**
SNR=37
TKM2 Tokmak 2 25.51 303 *e*P P 17 58 03.7 +1.1
TKM2 pmax pmax
comp=Z,62nm,1.1s,mb5.0
TKM2 Tokmak 2 25.51 303 *e*P P 17 58 03.7 +1.1
comp=Z,62nm,1.1s,mb5.0
KHET Khetri 25.54 268 *e*P P 17 58 03.3 +0.2
KZA Kyzart 25.56 301 P **P 17 58 05.3 +2.2**
SNR=45
KBK Karagaybulak 25.91 302 P **P 17 58 08.0 +1.7**
SNR=36
BHPL Bhopal 25.93 257 *e*P P 17 58 05.5 -1.1
ZAA0 Zalesovo Array 26.07 332 *e*P P 17 58 07.2 -0.3
ZALV Zalesovo Beam 26.07 332 P **P 17 58 07.2 -0.3**
comp=Z,38nm,0.9s,mb4.9,baz=128,slow=9.6,SNR=89
ZALV Zalesovo Beam 26.07 332 P **P 17 58 07.2 -0.3**
ZALV pmax pmax
comp=Z,38nm,0.9s,mb4.9
UCH Uchtor 26.12 301 P **P 17 58 10.3 +2.1**
SNR=105
UCH Uchtor 26.12 301 *e*P P 17 58 10.1 +1.9
comp=Z,109nm,1.1s,mb5.3
CHMS Chumysh 26.13 303 P **P 17 58 08.3 +0.1**
SNR=8.4
FRU Bishkek 26.19 303 *e*P P 17 58 10.0 +1.2
FRU pmax pmax
comp=Z,80nm,1.6s,mb5.0
AAK Ala-Archa 26.23 302 P **P 17 58 10.3 +1.2**
comp=Z,195nm,1.1s,mb5.5,SNR=10.0
AAK Ala-Archa 26.23 302 P **P 17 58 10.6 +1.4**
SNR=8.3
AAK Ala-Archa 26.23 302 P **P 17 58 10.0 +0.9**
comp=Z,13nm,0.8s,mb4.5,baz=113,slow=5.7,SNR=19
AAK LR LR 18 09 33.6
comp=Z,673nm,19.8s,MS4.2,baz=12,slow=39
AAK Ala-Archa 26.23 302*c* *i*P P 17 58 10.6 +1.5
AAK pmax pmax
comp=Z,18nm,1.2s,mb4.5
AAK Ala-Archa 26.23 302 *e*P P 17 58 10.4 +1.2
comp=Z,42nm,1.1s,mb4.9
AAK Ala-Archa 26.23 302 P **P 17 58 10.8 +1.6**
SNR=30
AAK P 17 58 10.8
SNR=30
BOD Bodaibo 26.33 11 *e*P P 17 58 09.9 0.0
BOD pmax pmax
comp=Z,33nm,1.4s,mb4.7
USP Ospenovka 26.38 303 P **P 17 58 11.5 +1.0**
SNR=60
AML Almayashu 26.70 301 P **P 17 58 15.4 +2.0**
SNR=29
AML Almayashu 26.70 301 *e*P P 17 58 15.1 +1.7
comp=Z,14nm,0.6s,mb4.7
AML *e*PcP PcP 18 01 37.2 +0.5
EKS2 Erkin-Say 26.75 302 P **P 17 58 15.1 +1.2**
SNR=11
EKS2 Erkin-Say 26.75 302 *e*P P 17 58 14.7 +0.8
comp=Z,13nm,0.9s,mb4.5
KURK Kurchatov 26.83 321 P **P 17 58 14.9 +0.4**
comp=Z,494nm,1.0s,mb6.0,SNR=61
KURK Kurchatov 26.83 321 P **P 17 58 14.3 -0.2**
comp=Z,61nm,1.0s,mb5.1,baz=129,slow=8.3,SNR=136
KURK PcP PcP 18 01 36.2 -0.6
comp=Z,11nm,0.8s,baz=116,slow=2.1,SNR=7.0
KURK Kurchatov 26.83 321*c* *i*P P 17 58 14.0 -0.5
KURK pmax pmax
comp=Z,96nm,1.2s,mb5.2
KURK Kurchatov 26.83 321 *e*P P 17 58 14.7 +0.2
comp=Z,116nm,1.1s,mb5.3
KURK Kurchatov 26.83 321 P **P 17 58 15.1 +0.6**
SNR=65
KURK P 17 58 15.1
SNR=65
AJM Ajmer 27.01 266 *i*P P 17 58 16.0 -0.4
KULM Kulim 27.10 190 P **P 17 58 17.8 +0.7**
KULM Kulim 27.10 190 *e*P P 17 58 16.4 -0.8
comp=Z,36nm,1.4s,mb4.7
NVS Novosibirsk 27.35 332 *e*P P 17 58 18.2 -0.9
NVS pmax pmax
comp=N,36nm,1.6s
NVS pmax pmax
comp=E,30nm,1.6s
NVS pmax pmax
comp=Z,29nm,1.6s,mb4.6
KDM Kudat 27.49 154 P **P 17 58 21.7 +1.1**
MAJO Matsushiro 27.67 72 *e*P P 17 58 20.4 -1.8
MAJO pmax pmax
comp=Z,14nm,0.8s,mb4.6
MAJO Matsushiro 27.67 72 *e*P P 17 58 20.4 -1.7
comp=Z,14nm,0.8s,mb4.7
MAT Matsushiro 27.67 72 P **P 17 58 20.8 -1.4**
MAT *e*S **S 18 03 08.0 +4.5**
MJAR Matsushiro Arr 27.67 72 P **P 17 58 21.3 -0.8**
comp=Z,7.4nm,0.6s,mb4.5,baz=273,slow=10.0,SNR=24
MJAR Matsushiro Arr 27.67 72 P **P 17 58 21.3 -0.9**
MJAR pmax pmax
comp=Z,7.0nm,0.6s
IPM Ipoh 27.85 188 P **P 17 58 23.7 -0.2**
HYB Hyderabad 28.06 245 *i*P P 17 58 26.5 +0.7
KKM Kota Kinabalu 28.07 156 P **P 17 58 26.9 +1.0**
KKM Kota Kinabalu 28.07 156 *e*P P 17 58 25.7 -0.2
comp=Z,79nm,1.3s,mb5.2
SDKM Sandakan 28.80 154 P **P 17 58 33.5 +1.2**
FRIM Kepong 29.00 187 P **P 17 58 35.1 +0.9**
MYLDM Lahad Datu 29.72 152 P **P 17 58 43.4 +2.8**
BTM Bintulu 29.85 164 P **P 17 58 43.4 +1.6**
KBL Kabul 30.01 284 *e*P P 17 58 43.9 +0.9
KBL pmax pmax
comp=Z,52nm,1.1s,mb5.2
KBL Kabul 30.01 284 *e*P P 17 58 43.9 +0.8
comp=Z,52nm,1.1s,mb5.2
JASL Jaisalmer 30.04 269 *e*P P 17 58 43.7 +0.4
JASL AMb AMB 17 58 44.9
comp=Z,52nm,0.9s,mb5.2
MYKOM Kota Tinggi 30.29 182 P **P 17 58 46.9 +1.4**
SBUM Sibu 30.38 166 P **P 17 58 48.3 +1.9**
KSM Kuching 30.99 170 P **P 17 58 53.0 +1.2**
KSM Kuching 30.99 170 *e*P P 17 58 52.4 +0.6
comp=Z,21nm,1.2s,mb4.8
KSM *e*PcP PcP 18 01 48.4 +0.6
YSS Yuzh-Sakhalins 32.26 52 *e*P P 17 58 58.0 -4.7
YSS MLR MLR
comp=N,600nm,15.0s,MS4.5
YSS MLR MLR
comp=Z,800nm,15.0s,MS4.5
YSS MLR MLR
comp=E,500nm,14.0s,MS4.5
YSS Yuzh-Sakhalins 32.26 52 *e*P P 17 59 03.0 +0.3
comp=E,48nm,1.1s,mb5.2
BVAR Borovoye Array 32.41 320 P **P 17 59 04.3 +0.5**
comp=E,14nm,0.7s,mb4.9,baz=115,slow=10.0,SNR=85
BVAR PcP PcP 18 01 50.4 -0.6
comp=E,6.3nm,0.7s,baz=146,slow=3.3,SNR=8.4
BVAR LR LR 18 13 32.3
comp=E,219nm,21.8s,MS3.8,baz=9.0,slow=39
BVAR Borovoye Array 32.41 320 P **P 17 59 04.3 +0.4**
BVAR 18 01 50.4
BVAR pmax pmax
comp=Z,14nm,0.7s
BVAR pmax pmax
comp=Z,6.0nm,0.7s
BVAR MLR MLR
comp=Z,219nm,21.8s
BRVK Borovoye 32.48 320 P **P 17 59 05.3 +0.8**
comp=Z,215nm,1.2s,mb5.8,SNR=16
BRVK Borovoye 32.48 320*c* *i*P P 17 59 05.2 +0.7
BRVK pmax pmax
comp=Z,46nm,1.2s,mb5.2
BRVK Borovoye 32.48 320 *e*P P 17 59 04.5 0.0
comp=Z,29nm,0.8s,mb5.2
BRVK Borovoye 32.48 320 P **P 17 59 05.2 +0.7**
SNR=22
BRVK P 17 59 05.2
SNR=22
PALK Pallekele 33.57 228 LR LR 18 14 54.6
comp=Z,168nm,18.8s,MS3.8,baz=307,slow=40
PALK Pallekele 33.57 228 *i*P P 17 59 15.7 +1.2
PALK Pallekele 33.57 228 *e*P P 17 59 14.8 +0.3
comp=Z,62nm,1.1s,mb5.5
YAK Yakutsk 33.80 21*c* *i*P P 17 59 15.4 -0.5
YAK *e*PPP 18 00 36.4
YAK *e* 18 01 53.4
YAK *e*S **S 18 04 35.8 -3.0**
YAK *e*SS SS 18 06 38.2 -27
YAK pmax pmax
comp=Z,27nm,1.2s,mb5.0
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=Z,83nm,4.3s
YAK pmax pmax
comp=N,41nm,3.6s
YAK pmax pmax
comp=E,53nm,4.4s
YAK smax
comp=E,44nm,2.1s
YAK smax
comp=N,100nm,4.8s
YAK MLR MLR
comp=E,528nm,13.0s,MS4.7
YAK MLR MLR
comp=Z,778nm,11.0s,MS4.7
YAK MLR MLR
comp=N,613nm,12.0s,MS4.7
YAK Yakutsk 33.80 21 *e*P P 17 59 15.5 -0.4
comp=N,30nm,0.9s,mb5.2
ABKAR Akbulak array 37.52 310 *e*P P 17 59 48.4 +0.4
comp=N,28nm,0.8s,mb5.0
ABKT Ailbek 38.47 292 P **P 17 59 57.6 +1.4**
comp=N,296nm,0.8s,mb6.1,SNR=24
AKTO Aktyubinsk 38.94 312 PcP PcP 18 02 09.9 -0.4
comp=N,3.5nm,0.6s,baz=45,slow=7.1,SNR=3.7
AKTO LR LR 18 15 51.9
comp=N,251nm,21.4s,MS4.0,baz=282,slow=36
SVE Sverdlovsk 39.07 322⇓ *e*P P 18 00 02.0 +1.0
SVE *e*S **S 18 05 51.9 -7.6**
SVE pmax pmax
comp=Z,124nm,1.2s,mb5.5
KAPI Kappang 39.60 157 P **P 18 00 05.3 -0.5**
comp=Z,290nm,1.3s,mb5.8,SNR=5.3
KAPI Kappang 39.60 157 P **P 18 00 05.1 -0.7**
comp=Z,36nm,1.0s,mb5.0,baz=334,slow=8.4,SNR=10
ARU Arti 40.03 321 P **P 18 00 09.6 +0.6**
comp=Z,751nm,1.1s,mb6.3,SNR=53
ARU Arti 40.03 321*c* *i*P P 18 00 08.6 -0.4
ARU *e* 18 01 42.4
ARU *e* 18 02 12.2
ARU S **S 18 06 13.8 -0.1**
ARU SSS 18 09 33.5
ARU pmax pmax
comp=Z,152nm,1.0s,mb5.7
ARU Arti 40.03 321 *e*P P 18 00 09.3 +0.3
comp=Z,136nm,0.9s,mb5.7
GUMO Guam 40.85 108 P **P 18 00 16.2 -0.1**
comp=Z,68nm,0.9s,mb5.3,baz=14,slow=16,SNR=4.1
GUMO Guam 40.85 108 P **P 18 00 16.2 -0.1**
GUMO pmax pmax
comp=Z,68nm,0.9s,mb5.3
TIXI Tiksi 41.51 11*c* *i*P P 18 00 20.0 -1.0
TIXI pmax pmax
comp=Z,49nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,1µm,17.0s,MS4.9
TIXI Tiksi 41.51 11 *e*P P 18 00 19.9 -1.1
comp=Z,42nm,1.2s,mb4.9
SOKR Solikamsk 41.90 325*c* *i*P P 18 00 24.8 +0.4
SOKR pmax pmax
comp=Z,100nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,230nm,16.0s,MS4.2
SEY Seymchan 42.75 30*c*eP P 18 00 30.4 -0.8
PEA0B Petropavlovsk- 42.86 45 *e*P P 18 00 31.7 -0.6
PETK Petropavlovsk- 42.86 45 P **P 18 00 31.8 -0.5**
comp=Z,33nm,0.7s,mb5.1,baz=219,slow=4.4,SNR=48
PETK LR LR 18 19 59.5
comp=Z,268nm,18.8s,MS4.2,baz=344,slow=38
PETK Petropavlovsk- 42.86 45 P **P 18 00 31.8 -0.5**
PETK pmax pmax
comp=Z,33nm,0.7s,mb5.2
PETK MLR MLR
comp=Z,268nm,18.8s,MS4.2
PETK Petropavlovsk- 42.86 45 P **P 18 00 31.8 -0.5**
PETK LR LR 18 19 59.5
ASHO Ashiyiah 43.38 273 P **P 18 00 38.8 +1.9**
SNR=9.7
MTA Mtatsminda 48.16 299 P **P 18 01 18.5 +4.1**
TBLG Delisi 48.19 299 P **P 18 01 14.2 -0.5**
GNI Garni 48.46 297 LR LR 18 26 40.8
comp=Z,80nm,20.7s,MS3.7,baz=348,slow=42
GNI Garni 48.46 297*c* *i*P P 18 01 18.3 +1.6
GNI pmax pmax
comp=Z,36nm,1.2s
GNI Garni 48.46 297 *e*P P 18 01 18.0 +1.3
comp=Z,69nm,1.3s,mb5.5
GNI Garni 48.46 297 P **P 18 01 18.9 +2.2**
SNR=14
GNI P 18 01 18.9
SNR=14
ZEI Tsey 48.65 301 *e*P P 18 01 17.2 -0.9
ZEI pmax pmax
comp=Z,39nm,1.3s,mb5.3
KEH Kehvi 48.69 300 P **P 18 01 22.4 +3.9**
MIB Mutribah 48.96 283 *e*P P 18 01 19.9 -0.9
MIB AMb AMB 18 01 22.2
comp=Z,74nm,1.1s,mb5.6
ONI Oni 49.00 301 P **P 18 01 22.4 +1.6**
RDF Al-Radifah 49.07 282 *e*P P 18 01 20.1 -1.5
RDF AMb AMB 18 01 22.5
comp=Z,89nm,1.1s,mb5.7
NAY Al-Naaiem 49.22 283 *e*P P 18 01 21.2 -1.5
NAY AMb AMB 18 01 23.5
comp=Z,67nm,1.1s,mb5.6
KIV Kislovodsk 49.35 303 P **P 18 01 24.8 +1.3**
comp=Z,440nm,1.2s,mb6.4,SNR=10.0
KIV Kislovodsk 49.35 303 *e*P P 18 01 24.1 +0.6
KIV *e*S **S 18 08 28.0 -1.4**
KIV pmax pmax
comp=Z,103nm,1.1s,mb5.8
KIV pmax pmax
comp=Z,67nm,5.8s
KIV MLR MLR
comp=Z,160nm,16.0s,MS4.1
KIV Kislovodsk 49.35 303 *e*P P 18 01 23.6 +0.1
comp=Z,98nm,1.1s,mb5.8
KIV Kislovodsk 49.35 303 P **P 18 01 24.3 +0.9**
SNR=37
KIV P 18 01 24.3
SNR=37
VRHR Novokhopersk 49.35 312 *e*P P 18 01 23.4 0.0
VRHR pmax pmax
comp=Z,60nm,1.0s,mb5.6
VRHR pmax pmax
comp=N,50nm,0.6s
VRHR pmax pmax
comp=E,60nm,0.7s
BILL Bilibino 49.84 26⇑ *e*P P 18 01 26.6 -0.3
BILL *e* 18 03 23.0
BILL *e*S **S 18 08 36.2 +0.5**
BILL pmax pmax
comp=Z,33nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,900nm,15.0s,MS4.9
BILL Bilibino 49.84 26 *e*P P 18 01 26.3 -0.6
comp=Z,19nm,0.8s,mb5.2
VOR Voronezh 50.83 313 P **P 18 01 34.0 -0.6**
VOR pmax pmax
comp=Z,140nm,1.6s,mb5.6
VORD Divnogorie 50.83 312 *e*P P 18 01 33.7 -0.9
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,40nm,0.6s
VSR Storozhevoye 50.89 312 *e*P P 18 01 34.4 -0.7
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,1.0s
SOC Sochi 51.53 303*c* *i*P P 18 01 39.8 -0.2
SOC *e**SP sP 18 01 51.2 +4.1
SOC *e* 18 03 34.6
SOC *e*S **S 18 08 59.6 -0.2**
SOC *e*SS SS 18 12 31.5 -4.1
SOC *e*SSS 18 14 13.9
SOC pmax pmax
comp=Z,30nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,205nm,15.0s,MS4.3
MOS Moscow 51.53 318 *e*P P 18 01 38.7 -1.1
MOS *e* 18 02 52.8
MOS *e* 18 03 35.2
MOS pmax pmax
comp=Z,125nm,1.5s,mb5.6
MOS pmax pmax
comp=Z,200nm,1.5s,mb5.8
KAKA Kakadu 51.83 145 *e*P P 18 01 41.2 -1.3
comp=Z,19nm,0.9s,mb5.0
KAKA Kakadu 51.83 145 *e*P P 18 01 40.6 -1.8
comp=Z,70nm,1.0s,mb5.5
OBN Obninsk 52.17 317⇑ *e*P P 18 01 44.1 -0.5
OBN *e* 18 03 48.1
OBN *e*S **S 18 09 11.6 +3.4**
OBN pmax pmax
comp=Z,69nm,1.2s,mb5.5
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.4
OBN Obninsk 52.17 317 *e*P P 18 01 44.1 -0.5
comp=Z,75nm,1.1s,mb5.5
ANN Anapa 52.92 304 *e*P P 18 01 44.8 -5.5
ANN *e**PP pP 18 01 55.2 -0.2
ANN *e* 18 02 55.0
ANN *e*S **S 18 09 09.6 -9.2**
ANN pmax pmax
comp=N,22nm,1.4s
ANN pmax pmax
comp=E,28nm,1.4s
ANN pmax pmax
comp=Z,88nm,1.4s,mb5.5
APA Apatity 53.65 333⇑ *i*P P 18 01 55.0 -0.3
APA MLR MLR
comp=Z,500nm,14.0s,MS4.7
FITZ Fitzroy Crossi 53.80 155 *e*P P 18 01 56.7 -0.3
comp=Z,40nm,1.0s,mb5.3
FITZ Fitzroy Crossi 53.80 155 P **P 18 01 56.9 -0.1**
comp=Z,20nm,0.9s,mb5.0,baz=354,slow=6.8,SNR=17
FITZ Fitzroy Crossi 53.80 155 *e*P P 18 01 56.6 -0.3
comp=Z,27nm,1.0s,mb5.1
JOF Joensuu 54.50 327 *e*P P 18 02 01.3 -0.3
JOF pmax pmax
comp=Z,20nm,0.7s,mb5.2
JOF Joensuu 54.50 327 *e*p P 18 02 01.3 -0.3
comp=Z,20nm,0.7s,mb5.2
MBWA Marble Bar 54.92 163 *e*P P 18 02 04.4 -0.7
comp=Z,36nm,1.0s,mb5.3
SIM Simferopol' 55.20 305*d* *i*P P 18 02 08.0 +1.1
SIM 18 04 08.0
SIM pmax pmax
comp=Z,31nm,0.8s,mb5.4
KEV Kevo 56.02 336 *e*P P 18 02 12.1 -0.4
KEV pmax pmax
comp=Z,24nm,0.6s,mb5.4
KEV Kevo 56.02 336 *e*P P 18 02 11.7 -0.8
comp=Z,42nm,0.9s,mb5.5
KEV Kevo 56.02 336 *e*p P 18 02 12.1 -0.4
comp=Z,24nm,0.6s,mb5.4
KEV Kevo 56.02 336 *e*P P 18 02 12.1 -0.4
comp=Z,24nm,0.6s,mb5.4
ARCES ARCESS Array B 56.56 336 P **P 18 02 16.0 -0.3**
comp=Z,23nm,0.8s,mb5.3,baz=81,slow=7.8,SNR=42

ARCES ARCESS Array B 56.56 336 P **P 18 02 16.0 -0.3**
ARCES pmax pmax
comp=Z,23nm,0.8s
ARCES ARCESS Array B 56.56 336 P **P 18 02 16.0 -0.3**
ARE0 ARCESS Array S 56.56 336 *eP* **P 18 02 15.6 -0.7**
BRTR Keskin Array B 56.86 299 P **P 18 02 18.8 -0.1**
comp=Z,9.6nm,0.8s,mb4.9,baz=99,slow=7.1,SNR=78
BRTR Keskin Array B 56.86 299 P **P 18 02 18.8 -0.1**
BRTR pmax pmax
comp=Z,10.0nm,0.8s
KAF Kangasniemi 56.88 327 *eP* **P 18 02 17.9 -0.7**
KAF pmax pmax
comp=Z,14nm,0.7s,mb5.1
KAF Kangasniemi 56.88 327 *ep* **P 18 02 17.9 -0.7**
comp=Z,14nm,0.7s,mb5.1
FINES FINESS Array B 57.07 326 P **P 18 02 19.7 -0.4**
comp=Z,30nm,0.8s,mb5.4,baz=94,slow=8.2,SNR=88
FINES FINESS Array B 57.07 326 P **P 18 02 19.7 -0.3**
FINES pmax pmax
comp=Z,30nm,0.8s
FINES FINESS Array B 57.07 326 P **P 18 02 19.7 -0.4**
AKASG Malin Array Be 57.18 313 P **P 18 02 20.1 -0.9**
comp=Z,4.0nm,0.4s,mb4.8,baz=69,slow=6.6,SNR=38
AKASG LR LR 18 28 15.7
comp=Z,231nm,18.5s,MS4.3,baz=60,slow=38
AKASG Malin Array Be 57.18 313 P **P 18 02 20.1 -0.9**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG MLR MLR
comp=Z,231nm,18.5s
AKBB Malin Array Si 57.18 313 *eP* **P 18 02 20.1 -0.9**
KIEV Kiev 57.19 313 *eP* **P 18 02 20.2 -0.9**
KIEV pmax pmax
comp=Z,44nm,1.4s,mb5.3
KIEV Kiev 57.19 313 *eP* **P 18 02 20.2 -0.9**
comp=Z,44nm,1.4s,mb5.3
MMAI Mount Meron Ar 57.58 291 P **P 18 02 24.1 0.0**
comp=Z,11nm,1.1s,mb4.8,baz=81,slow=10,SNR=7.3
IDID Didziasalis 57.73 319 *eP* **P 18 02 24.9 +0.2**
NACGM Naroch 57.78 318 *eP* **P 18 02 22.0 -3.2**
IZAR Zarasai 57.92 319 *eP* **P 18 02 26.2 +0.1**
IIGN Ignalina 58.01 319 *eP* **P 18 02 27.0 +0.2**
ISAL Salakas 58.02 319 *eP* **P 18 02 26.8 -0.1**
KIS Kishinev 58.30 309 *eP* **P 18 02 25.0 -3.9**
COEN Coen 58.69 135 *eP* **P 18 02 31.9 -0.1**
comp=Z,336nm,1.1s,mb6.3
GAMB Gambell 58.72 31 *eP* **P 18 02 30.7 -0.9**
comp=Z,3μm,0.8s
WRAB Tennant Creek 58.99 147 P **P 18 02 34.0 +0.1**
comp=Z,502nm,0.8s,mb6.6,SNR=23
WRAB Tennant Creek 58.99 147 *eP* **P 18 02 34.0 +0.1**
WRAB pmax pmax
comp=Z,60nm,0.8s,mb5.7
WRAB Tennant Creek 58.99 147 *eP* **P 18 02 34.0 +0.1**
comp=Z,60nm,0.8s,mb5.7
HARR Harsova 59.52 306 ⇑P **P 18 02 37.9 +0.4**
HARR Harsova 59.52 306 ⇑*iP* **P 18 02 37.9 +0.4**
ISP Isparta 59.76 298 ⇑P **P 18 02 38.3 -0.9**
ISP Isparta 59.76 298 ⇑*iP* **P 18 02 38.3 -0.9**
TNA Tin City 59.97 29 *eP* **P 18 02 39.4 -0.8**
comp=Z,21μm,1.2s
VRI Vrincioaia 60.00 308 P **P 18 02 41.4 +0.7**
SUW Suwalki 60.03 318 *eP* **P 18 02 40.0 -0.8**
SUW Suwalki 60.03 318 *eP* **P 18 02 40.4 -0.4**
comp=Z,47nm,0.9s,mb5.5
PLOR Plostina 60.05 308 ⇑P **P 18 02 42.3 +1.2**
PLOR Plostina 60.05 308 ⇑*iP* **P 18 02 42.3 +1.2**
BURAR Bucovina Array 60.49 310 ⇓P **P 18 02 44.4 +0.3**
BURAR Bucovina Array 60.49 310 ⇓*iP* **P 18 02 44.4 +0.3**
BUR08 Bucovina Ar. S 60.50 310 *eP* **P 18 02 43.7 -0.4**
LVV L'vov 60.63 313 ⇓*iP* **P 18 02 44.6 -0.4**
MLR Muntele Rosu 60.63 308 ⇑P **P 18 02 45.8 +0.7**
MLR Muntele Rosu 60.63 308 ⇑*iP* **P 18 02 45.8 +0.7**
VOIR 61.25 308 P **P 18 02 49.6 +0.3**
KWP Kalwaria Pacla 61.51 313 *eP* **P 18 02 51.2 +0.3**
KWP Kalwaria Pacla 61.51 313 *eP* **P 18 02 51.0 +0.1**
comp=Z,66nm,0.9s,mb5.8
KWP Kalwaria Pacla 61.51 313 ⇓*iP* **P 18 02 51.3 +0.4**
BMR Baia Mare 61.59 311 P **P 18 02 52.6 +1.1**
WAR Warsaw 61.76 316 *eP* **P 18 03 01.1 +8.5**
KOLS Kolonicke sedl 61.98 312 *eP* **P 18 02 54.2 0.0**
KOLS *e* pP 18 03 00.5 +1.1
KOLS pmax pmax
comp=Z,12nm,1.1s,mb4.9
KOLS Kolonicke sedl 61.98 312 *eP* **P 18 02 54.2 0.0**
KOLS *ep*P pP 18 03 00.5 +1.1
ASAR Alice Springs 62.06 150 P **P 18 02 55.2 +0.4**
comp=Z,18nm,0.8s,mb5.3,baz=330,slow=6.5,SNR=147
ASAR Alice Springs 62.06 150 P **P 18 02 55.3 +0.4**
ASAR pmax pmax
comp=Z,18nm,0.8s
TRPA Tarpa 62.06 311 ⇑*iP* **P 18 02 56.2 +1.5**
UZH Uzhgorod 62.06 312 *eP* **P 18 02 49.5 -5.2**
UZH *e* pP 18 02 55.0 -4.9
DRGR 62.37 310 P **P 18 02 57.6 +0.8**
STHS Stebnicka Huta 62.48 313 *eP* **P 18 02 57.5 0.0**
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
STHS Stebnicka Huta 62.48 313 *eP* **P 18 02 57.5 0.0**
OJC Ojcow 63.11 314 *eP* **P 18 03 01.4 -0.3**
KECS Kecovo 63.25 312 *eP* **P 18 03 03.0 +0.4**
KECS *e* pP 18 03 09.1 +1.3
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KECS Kecovo 63.25 312 *eP* **P 18 03 03.0 +0.4**
KECS *ep*P pP 18 03 09.1 +1.3
BZS Buzias 63.48 309 ⇓P **P 18 03 03.8 -0.4**
BZS Buzias 63.48 309 ⇓*iP* **P 18 03 03.8 -0.4**
PSZ Piszkesteto 63.81 312 *eP* **P 18 03 07.6 +1.3**
PSZ pmax pmax
comp=Z,23nm,1.3s,mb5.0
PSZ Piszkesteto 63.81 312 *eP* **P 18 03 07.6 +1.2**
comp=Z,23nm,1.3s,mb5.0
PSZ Piszkesteto 63.81 312 ⇑*eP* **P 18 03 06.4 +0.1**
NOA NORSAR Array B 64.13 327 P **P 18 03 07.2 -1.0**
comp=Z,18nm,0.8s,mb5.1,baz=71,slow=6.7,SNR=48
NOA NORSAR Array B 64.13 327 P **P 18 03 07.2 -1.0**
NOA pmax pmax
comp=Z,18nm,0.8s
OKC Ostrava-Krasne 64.24 314 *eP* **P 18 03 09.3 +0.2**
OKC MLR MLR
comp=Z,300nm,17.2s,MS4.5
OKC Ostrava-Krasne 64.24 314 *eP* **P 18 03 09.3 +0.2**
OKC *ep*P pP 18 03 13.1 -1.3
OKC AMS AMS 18 32 20.0
comp=Z,300nm,17.2s
VYHS Vyhne 64.28 313 *eP* **P 18 03 09.9 +0.5**
VYHS pmax pmax
comp=Z,22nm,1.4s,mb5.0
VYHS Vyhne 64.28 313 *eP* **P 18 03 09.9 +0.5**
VAY Valandovo 64.33 304 *eP* **P 18 03 08.6 -1.2**
BUD Budapest 64.51 311 ⇓*eP* **P 18 03 11.6 +0.6**
KOLL Kolacno 64.52 313 *eP* **P 18 03 11.5 +0.5**
KOLL *e* pP 18 03 17.5 +1.3
KOLL Kolacno 64.52 313 *eP* **P 18 03 11.5 +0.5**
KOLL *ep*P pP 18 03 17.5 +1.3
KLBR Kellerberrin 64.60 168 *eP* **P 18 03 12.1 +0.6**
comp=Z,28nm,1.1s,mb5.2
MORC Moravsky Berou 64.63 314 *eP* **P 18 03 11.6 -0.1**
comp=Z,15nm,0.9s,mb5.0
MORC Moravsky Berou 64.63 314 ⇑*iP* **P 18 03 12.1 +0.4**
SKO Skopje 64.88 305 *eP* **P 18 03 12.5 -0.9**
KSP Ksiaz 65.01 316 *eP* **P 18 03 15.0 +0.9**
KSP Ksiaz 65.01 316 *eP* **P 18 03 14.1 0.0**
DPC Dobruska-Polom 65.17 315 *eP* **P 18 03 15.6 +0.5**
DPC MLR MLR
comp=Z,400nm,15.1s,MS4.7
DPC Dobruska-Polom 65.17 315 *eP* **P 18 03 15.6 +0.5**
DPC *ep*P pP 18 03 20.1 -0.3
DPC AMS AMS 18 32 40.0
comp=Z,400nm,15.1s
PKSM Moragy 65.21 310 ⇓P **P 18 03 15.1 -0.4**
PKSM Moragy 65.21 310 ⇓*iP* **P 18 03 15.1 -0.4**
KRUS Krusevo 65.24 305 *eP* **P 18 03 14.4 -1.4**
UPC Upice 65.29 315 *eP* **P 18 03 16.5 +0.5**
UPC *ep*P pP 18 03 20.4 -0.8
CTA Charters Tower 65.31 137 *eP* **P 18 03 16.4 0.0**
comp=Z,12nm,1.1s,mb4.8
CTA Charters Tower 65.31 137 P **P 18 03 16.6 +0.2**
comp=Z,7.7nm,0.8s,mb4.8,baz=318,slow=8.1,SNR=11
CTA Charters Tower 65.31 137 P **P 18 03 16.6 +0.2**
CTA pmax pmax
comp=Z,8.0nm,0.8s
CTAO Charters Tower 65.31 137 *eP* **P 18 03 16.2 -0.2**
CTAO pmax pmax
comp=Z,31nm,1.3s,mb5.2
CTAO Charters Tower 65.31 137 *eP* **P 18 03 16.2 -0.2**
comp=Z,31nm,1.3s,mb5.2
BIA Bitola 65.32 304 *eP* **P 18 03 14.8 -1.5**
ALE Alert 65.33 358 P **P 18 03 16.9 +1.1**
comp=Z,47nm,1.3s,mb5.4,SNR=5.2
ZST Bratislava 65.47 313 *eP* **P 18 03 17.7 +0.6**
ZST pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ZST Bratislava 65.47 313 *eP* **P 18 03 17.7 +0.6**
TTA Tatalina 65.72 30 *eP* **P 18 03 18.7 +0.2**
NWAO Narrogin (SRO) 65.82 169 P **P 18 03 20.1 +0.6**
comp=Z,19nm,0.9s,mb5.1,baz=354,slow=5.7,SNR=9.0
NWAO Narrogin (SRO) 65.82 169 P **P 18 03 20.1 +0.7**
NWAO pmax pmax
comp=Z,19nm,0.9s
DAG Danmarks Havn 65.91 348 *eP* **P 18 03 17.0 -2.6**
DAG Danmarks Havn 65.91 348 *i P* **P 18 03 17.0 -2.6**
TREC Trest 66.06 314 *eP* **P 18 03 21.6 +0.7**
TREC MLR MLR
comp=Z,300nm,18.0s,MS4.5
TREC Trest 66.06 314 *eP* **P 18 03 21.6 +0.7**
TREC *ep*P pP 18 03 25.7 -0.4
TREC AMS AMS 18 33 30.0
comp=Z,300nm,18.0s
PVCC Panska Ves 66.14 316 *eP* **P 18 03 22.0 +0.5**
PVCC MLR MLR
comp=Z,300nm,13.2s,MS4.7
PVCC Panska Ves 66.14 316 *eP* **P 18 03 22.0 +0.5**
PVCC *ep*P pP 18 03 27.3 +0.6
PVCC AMS AMS 18 33 30.0
comp=Z,300nm,13.2s
COLD Coldfoot 66.14 24 *eP* **P 18 03 20.8 -0.4**
comp=Z,26nm,1.1s,mb5.2
CONA Conrad Observa 66.34 313 ⇑*iP* **P 18 03 23.1 +0.4**
comp=Z,21nm,1.3s,mb5.0,SNR=11
FORT Forrest 66.36 158 *eP* **P 18 03 23.4 +0.5**
comp=Z,24nm,0.6s,mb5.4
FORT Forrest 66.36 158 *eP* **P 18 03 22.8 -0.1**
comp=Z,32nm,0.8s,mb5.4
PRU Pruhonice 66.36 315 *eP* **P 18 03 23.8 +0.9**
PRU MLR MLR
comp=Z,400nm,16.7s,MS4.7
PRU Pruhonice 66.36 315 *eP* **P 18 03 23.8 +0.9**
PRU *ep*P pP 18 03 28.1 0.0
PRU AMS AMS 18 33 30.0
comp=Z,400nm,16.7s
BRG Berggiesshubel 66.38 316 *eP* **P 18 03 22.5 -0.5**
comp=Z,31nm,1.7s,mb5.1
BRG Berggiesshubel 66.38 316 *eP* **P 18 03 22.7 -0.2**
comp=Z,12nm,1.0s,mb4.9
BRG
comp=N,244nm,18.4s
BRG
comp=E,254nm,12.3s
BRG
comp=Z,369nm,13.7s
BRG Berggiesshubel 66.38 316 *eP* **P 18 03 22.7 -0.3**
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BRG MLR MLR
comp=N,146nm,18.4s
BRG MLR MLR
comp=E,152nm,12.3s
BRG MLR MLR
comp=Z,221nm,13.7s,MS4.5
SVW2 Sparrevohn 66.65 31 *eP* **P 18 03 25.1 +0.6**
CLL Collm 66.76 317 *eP* **P 18 03 24.7 -0.7**
comp=Z,29nm,1.7s,mb5.0
CLL Collm 66.76 317 ⇑*iP* **P 18 03 24.8 -0.6**
CLL pmax pmax
comp=Z,29nm,1.7s,mb5.0
CLL MLR MLR
comp=Z,100nm,20.8s,MS4.0
CLL Collm 66.76 317 ⇑*iP* **P 18 03 24.8 -0.6**
comp=Z,29nm,1.7s,mb5.0
CLL *i* pP 18 03 28.4 -2.2
CLL LR LR
comp=Z,100nm,20.8s,MS4.0
CLL Collm 66.76 317 ⇑*iP* **P 18 03 24.8 -0.6**
comp=Z,29nm,1.7s,mb5.0
CLL *i* Pmax pP 18 03 28.4 -2.2
comp=Z,26nm,1.3s
CLL *i* 18 03 42.5
CLL *e* 18 05 41.0
CLL *e*PP PP 18 05 50.0 -2.1
CLL *e*(SS) 18 17 12.0
CLL *e*SSS 18 19 42.0
CLL LmV 18 32 00.0
comp=Z,100nm,20.8s
ARSA Arzberg 66.81 312 ⇑*iP* **P 18 03 25.4 -0.4**
comp=Z,15nm,1.4s,mb4.8
BSEG Bad Segeberg 67.23 320 *eP* **P 18 03 28.8 +0.5**
comp=Z,34nm,1.2s,mb5.2
KHC Kasperske Hory 67.27 315 *eP* **P 18 03 28.8 +0.1**
KHC MLR MLR
comp=Z,300nm,14.4s,MS4.7
KHC Kasperske Hory 67.27 315 *eP* **P 18 03 28.7 0.0**
comp=Z,13nm,1.3s,mb4.8
KHC Kasperske Hory 67.27 315 *eP* **P 18 03 28.8 +0.1**
KHC *ep*P pP 18 03 33.4 -0.5
KHC AMS AMS 18 34 00.0
comp=Z,300nm,14.4s
CHGN Chignik 67.28 37 *eP* **P 18 03 28.2 -0.4**
PERS Pernice 67.31 312 *i P* **P 18 03 28.6 -0.4**
GEC2 GERESS Array S 67.31 314 *eP* **P 18 03 28.8 -0.1**
comp=Z,13nm,1.2s,mb4.8
GEC2 GERESS Array S 67.31 314 *eP* **P 18 03 28.8 -0.1**
GEC2 pmax pmax
comp=Z,13nm,1.2s,mb4.8
GERES GERESS Array B 67.31 314 P **P 18 03 28.9 0.0**
comp=Z,5.3nm,1.0s,mb4.5,baz=72,slow=5.7,SNR=20
GERES LR LR 18 34 41.0
comp=Z,225nm,18.1s,MS4.4,baz=203,slow=38
GERES GERESS Array B 67.31 314 P **P 18 03 28.9 0.0**
GERES pmax pmax
comp=Z,5.0nm,1.0s
GERES MLR MLR
comp=Z,225nm,18.1s
PPLA Purkeypile 67.32 29 *eP* **P 18 03 29.0 +0.2**
comp=Z,49nm,0.8s,mb5.6
SOKA Soboth 67.34 312 ⇑*iP* **P 18 03 29.0 -0.2**
comp=Z,25nm,1.3s,mb5.1
MOA Molln 67.36 313 ⇑*iP* **P 18 03 29.5 +0.2**
comp=Z,30nm,1.5s,mb5.1
TANN Tannenbergstha 67.43 316 *eP* **P 18 03 29.4 -0.2**
comp=Z,13nm,1.2s,mb4.8
NKC Novy Kostel 67.51 316 *eP* **P 18 03 30.4 +0.2**
NKC MLR MLR
comp=Z,300nm,15.1s,MS4.6
NKC Novy Kostel 67.51 316 *eP* **P 18 03 30.4 +0.2**
NKC *ep*P pP 18 03 35.3 -0.1
NKC AMS AMS 18 34 10.0
comp=Z,300nm,15.1s
KTH Kantishna Hill 67.54 28 *eP* **P 18 03 29.8 -0.3**
comp=Z,3μm,0.9s
BOJS Bojanci 67.67 311 *i P* **P 18 03 31.5 +0.2**
WET Wettzell 67.69 315 *eP* **P 18 03 31.3 0.0**
comp=Z,21nm,1.7s,mb4.9
WET Wettzell 67.69 315 *eP* **P 18 03 31.3 0.0**
WET pmax pmax
comp=Z,21nm,1.7s,mb4.9
VISS Visnje 67.82 311 *eP* **P 18 03 31.9 -0.3**
MOX Moxa 67.83 317 *eP* **P 18 03 32.0 -0.2**
comp=Z,22nm,1.6s,mb4.9
TRF Thorofare Moun 67.84 28 *eP* **P 18 03 31.0 -1.0**
comp=Z,15nm,0.8s,mb5.1
ROTZ Rotzenmuhle 67.84 316 *eP* **P 18 03 32.4 +0.1**
comp=Z,35nm,1.5s,mb5.2
NRDL Niedersach Rie 67.93 319 *eP* **P 18 03 32.9 +0.1**
comp=Z,61nm,1.7s,mb5.3
CLZ Clausthal 68.05 318 *eP* **P 18 03 33.7 +0.1**
comp=Z,43nm,1.5s,mb5.3
CLZ Clausthal 68.05 318 *eP* **P 18 03 33.7 +0.1**
CLZ pmax pmax
comp=Z,43nm,1.5s,mb5.3
COLA College 68.10 26 *eP* **P 18 03 33.3 -0.3**
COLA pmax pmax
comp=Z,52nm,1.0s,mb5.5
COLA College 68.10 26 *eP* **P 18 03 33.3 -0.3**
comp=Z,52nm,1.0s,mb5.5
RSO Redoubt South 68.18 31 *eP* **P 18 03 34.0 -0.2**
MCK McKinley 68.24 27 *eP* **P 18 03 33.7 -0.8**
MCK pmax pmax
comp=Z,20nm,0.8s,mb5.2
MCK McKinley 68.24 27 *eP* **P 18 03 33.7 -0.8**
comp=Z,20nm,0.8s,mb5.2
KBA Koelnbreinsper 68.24 313 ⇓*iP* **P 18 03 34.5 -0.3**
comp=Z,19nm,1.0s,mb5.1
JAVS Javornik 68.28 311 *i P* **P 18 03 34.1 -1.0**
VOY Vojsko 68.33 311 *eP* **P 18 03 34.5 -0.9**
VOY *e* pP 18 03 38.6 -2.0
GRA1 Grafenberg Arr 68.45 316 *eP* **P 18 03 36.2 +0.1**
comp=Z,79nm,1.7s,mb5.5
GRA1 *ep*P pP 18 03 40.2 -1.2
GRA1 *e*PP PP 18 06 03.7 -3.1
GRA1 LR LR
comp=Z,200nm,19.7s,MS4.3
GRF Grafenberg Arr 68.45 316 *eP* **P 18 03 36.2 +0.1**
comp=Z,79nm,1.7s,mb5.5
GRF *ep*P pP 18 03 40.2 -1.2
GRF *e*PP PP 18 06 03.7 -3.1
GRF *e*L 18 33 33.7
comp=Z,198nm,19.7s
GRF Grafenberg Arr 68.45 316 *eP* **P 18 03 36.2 +0.1**
GRF *e* 18 06 03.7
GRF pmax pmax
comp=Z,79nm,1.7s,mb5.5
GRF MLR MLR
comp=Z,200nm,19.7s,MS4.3
GRF Grafenberg Arr 68.45 316 *eP* **P 18 03 36.2 +0.1**
GRF *e* 18 06 03.7
GRF pmax pmax
comp=Z,79nm,1.7s,mb5.5
GRF MLR MLR
comp=Z,200nm,19.7s,MS4.3
ABTA Abfaltersbach 68.90 313 ⇑*iP* **P 18 03 37.7 -1.3**
comp=Z,6.2nm,0.9s,mb4.5
FUR Furstenfeldbru 69.06 314 *eP* **P 18 03 40.3 +0.4**
comp=Z,56nm,1.2s,mb5.4
FUR Furstenfeldbru 69.06 314 *eP* **P 18 03 40.3 +0.4**
FUR pmax pmax
comp=Z,56nm,1.2s,mb5.4
RC01 Rabbit Creek A 69.19 30 *eP* **P 18 03 39.4 -1.1**
comp=Z,31nm,1.2s,mb5.1
PMR Palmer 69.20 29 *eP* **P 18 03 40.0 -0.5**
PMR pmax pmax
comp=Z,33nm,0.6s,mb5.4
PMR Palmer 69.20 29 *eP* **P 18 03 40.0 -0.5**
comp=Z,33nm,0.6s,mb5.4
WTTA Wattenberg 69.22 313 ⇑*iP* **P 18 03 40.7 -0.3**
comp=Z,28nm,1.1s,mb5.1,SNR=11
IBBN Ibbenburen 69.31 319 *eP* **P 18 03 41.5 +0.1**
comp=Z,43nm,1.6s,mb5.1
OHAK Old Harbor 69.42 35 *eP* **P 18 03 41.7 -0.3**
comp=Z,225nm,2.2s,mb5.7
OHAK LR LR
comp=Z,200nm,17.0s,MS4.4
KDAK Kodiak Island 69.49 34 P **P 18 03 42.0 -0.4**
comp=Z,348nm,0.7s,mb6.4,SNR=14
KDAK Kodiak Island 69.49 34 LR LR 18 36 48.6
comp=Z,218nm,18.8s,MS4.4,slow=38
KDAK Kodiak Island 69.49 34 *i P* **P 18 03 41.8 -0.6**
MOTA Moosalm 69.52 314 ⇓*iP* **P 18 03 42.4 -0.3**
comp=Z,34nm,1.4s,mb5.1,SNR=6.1
TNS Taunus Mts 69.84 317 *eP* **P 18 03 44.4 -0.3**
comp=Z,37nm,1.6s,mb5.1
TNS Taunus Mts 69.84 317 *eP* **P 18 03 44.4 -0.3**
TNS pmax pmax
comp=Z,37nm,1.6s,mb5.1
FETA Feichten 69.89 313 ⇑*iP* **P 18 03 44.7 -0.4**
comp=Z,19nm,1.1s,mb5.0,SNR=9.9
TOD Tromm 69.91 316 *eP* **P 18 03 44.7 -0.4**
BUG Bochum-Univer 69.97 319 *eP* **P 18 03 46.3 +0.8**
comp=Z,40nm,1.6s,mb5.1
STU Stuttgart 70.05 316 *eP* **P 18 03 45.5 -0.5**
comp=Z,16nm,1.0s,mb4.9
NRCA Norcia 70.19 309 P **P 18 03 47.3 +0.3**
AQU L'Aquila 70.20 308 *eP* **P 18 03 46.6 -0.5**
AQU pmax pmax
comp=Z,42nm,1.1s,mb5.3
AQU L'Aquila 70.20 308 *eP* **P 18 03 46.6 -0.4**
comp=Z,42nm,1.1s,mb5.3
CEL Celeste 70.27 303 *eP* **P 18 03 47.2 -0.3**
comp=Z,56nm,1.3s,mb5.3
PTQR Pietraquaria 70.35 308 P **P 18 03 48.0 0.0**
MURB Monte Urbino 70.39 309 P **P 18 03 49.7 +1.5**
SFI Santa Sofia 70.55 310 P **P 18 03 49.9 +0.7**
EGAK Eagle 70.58 25 *eP* **P 18 03 47.8 -1.1**
comp=Z,10nm,0.8s,mb4.8
MENT Mentasta 70.66 27 *eP* **P 18 03 49.0 -0.5**
BFO Black Forest 70.76 315 *eP* **P 18 03 49.7 -0.7**
comp=Z,24nm,1.5s,mb4.9
BFO Black Forest 70.76 315 *eP* **P 18 03 49.7 -0.7**
BFO pmax pmax
comp=Z,24nm,1.5s,mb4.9
DIV Divide 70.83 29 *eP* **P 18 03 50.3 -0.2**
comp=Z,38nm,1.2s,mb5.2
INK Inuvik 70.85 20 LR LR 18 39 14.0
comp=Z,307nm,18.4s,MS4.6,baz=307,slow=40
INK Inuvik 70.85 20 *eP* **P 18 03 49.9 -0.7**
INK pmax pmax
comp=Z,40nm,0.9s
INK Inuvik 70.85 20 *eP* **P 18 03 49.9 -0.7**
comp=Z,40nm,0.9s,mb5.3
RUP Ruppelstein 70.88 317 *eP* **P 18 03 50.6 -0.5**
FELD Feldberg im Sc 71.16 315 *eP* **P 18 03 52.4 -0.4**
ERBM Eremo 71.24 311 P **P 18 03 54.6 +1.2**
CDF Champ du Feu 71.35 316 ⇑*iP* **P 18 03 53.5 -0.4**
comp=Z,60nm,1.3s,mb5.1
CDF Champ du Feu 71.35 316 ⇑*iP* **P 18 03 53.5 -0.4**
CDF pmax pmax
comp=Z,30nm,1.3s,mb5.1
CDF Champ du Feu 71.35 316 ⇑*iP* **P 18 03 53.5 -0.4**
comp=Z,30nm,1.3s,mb5.1
VLC Villacollemand 71.38 311 P **P 18 03 55.9 +1.7**
BMRM Bremner River 71.39 29 *eP* **P 18 03 53.9 -0.1**
comp=Z,440nm,0.6s,mb6.6
WLF Walferdange 71.42 317 P **P 18 03 55.0 +0.6**
comp=Z,34nm,1.8s,mb5.0
WLF Walferdange 71.42 317 *eP* **P 18 03 54.6 +0.3**
comp=Z,56nm,1.4s,mb5.3
ECH Echery 71.51 316 *eP* **P 18 03 53.7 -1.2**
ECH Echery 71.51 316 *eP* **P 18 03 53.1 -1.8**
ECH pmax pmax
comp=Z,16nm,1.2s,mb4.8
ECH Echery 71.51 316 *eP* **P 18 03 53.1 -1.8**
comp=Z,16nm,1.2s,mb4.8
BCLA Clavier 71.55 318 E **P 18 03 56.3 +1.2**
DAWY Dawson 71.61 25 *eP* **P 18 03 54.4 -0.8**
HINF Hinteralfeld 71.88 315 ⇑*iP* **P 18 03 56.4 -0.7**
comp=Z,22nm,1.1s,mb4.7
HINF Hinteralfeld 71.88 315 ⇑*iP* **P 18 03 56.4 -0.7**
HINF pmax pmax
comp=Z,11nm,1.1s,mb4.7
HINF Hinteralfeld 71.88 315 ⇑*iP* **P 18 03 56.4 -0.7**
comp=Z,11nm,1.1s,mb4.7
UCC Uccle 71.89 319 P **P 18 03 57.1 -0.1**
comp=Z,20nm,1.9s,mb4.7
KMBO Kilima Mbogo 71.90 257 P **P 18 03 58.5 +0.7**
comp=Z,10nm,1.0s,mb4.7,baz=5,0,slow=23,SNR=14
KMBO Kilima Mbogo 71.90 257 *eP* **P 18 03 58.2 +0.4**
KMBO pmax pmax
comp=Z,34nm,1.5s
KMBO Kilima Mbogo 71.90 257 *eP* **P 18 03 58.2 +0.4**
comp=Z,34nm,1.5s,mb5.0
GIVF Givet 71.97 318 ⇑*iP* **P 18 03 57.4 -0.2**
comp=Z,43nm,1.0s,mb5.0
GIVF Givet 71.97 318 ⇑*iP* **P 18 03 57.4 -0.2**
GIVF pmax pmax
comp=Z,22nm,1.0s,mb5.0
GIVF Givet 71.97 318 ⇑*iP* **P 18 03 57.4 -0.2**
comp=Z,22nm,1.0s,mb5.0
HAU Haudompre 72.09 316 *eP* **P 18 03 57.8 -0.6**
HAU *e*MLR MLR
comp=Z,269nm,18.0s,MS4.3
HAU Haudompre 72.09 316 *eP* **P 18 03 57.8 -0.6**
HAU LR LR
comp=Z,270nm,18.0s,MS4.6
DOU Dourbes 72.10 318 P **P 18 03 58.5 +0.1**
comp=Z,10nm,1.8s,mb4.5
EIDS Eidsvold 72.20 137 *eP* **P 18 03 57.7 -1.5**
comp=Z,69nm,1.5s,mb5.4
BAIF Baives 72.34 318 ⇑*iP* **P 18 03 59.8 0.0**
comp=Z,23nm,1.0s,mb4.8
BAIF Baives 72.34 318 ⇑*iP* **P 18 03 59.8 0.0**
BAIF pmax pmax
comp=Z,11nm,1.0s,mb4.7
BAIF Baives 72.34 318 ⇑*iP* **P 18 03 59.8 0.0**
comp=Z,11nm,1.0s,mb4.8
SUMG Summit 72.49 349 *eP* **P 18 04 00.4 0.0**

comp=Z,22nm,0.9s,mb5.1
STKA Stephens Creek 72.54 148 *e*P **P 18 04 01.0 -0.1**
comp=Z,17nm,0.9s,mb5.0
STKA Stephens Creek 72.54 148 P **P 18 04 01.1 0.0**
comp=Z,17nm,0.8s,mb5.0,baz=336,slow=6.1,SNR=24
STKA Stephens Creek 72.54 148 *e*P **P 18 04 00.9 -0.3**
comp=Z,9.0nm,1.3s,mb4.5
MEZF Maizieres J'vi 72.61 317⇑*i*P **P 18 04 01.3 -0.2**
comp=Z,27nm,1.0s,mb4.8
MEZF Maizieres J'vi 72.61 317⇑*i*P **P 18 04 01.3 -0.2**
comp=Z,27nm,1.0s,mb5.1
LSD Lago del Serru 72.82 313 P **P 18 04 03.4 +0.6**
CABF La Chapelle 72.91 315⇑*i*P **P 18 04 02.7 -0.6**
comp=Z,86nm,1.5s,mb5.2
CABF La Chapelle 72.91 315⇑*i*P **P 18 04 02.7 -0.6**
CABF pmax pmax
comp=Z,43nm,1.5s,mb5.2
CABF La Chapelle 72.91 315⇑*i*P **P 18 04 02.7 -0.6**
comp=Z,43nm,1.5s,mb5.2
LPG La Plagne 73.04 313⇑*i*P **P 18 04 04.6 +0.5**
comp=Z,64nm,0.9s,mb5.3
LPG La Plagne 73.04 313⇑*i*P **P 18 04 04.6 +0.5**
LPG pmax pmax
comp=Z,32nm,0.9s,mb5.2
LPG La Plagne 73.04 313⇑*i*P **P 18 04 04.6 +0.5**
comp=Z,32nm,0.9s,mb5.2
LPL La Plagne 73.04 313⇑*i*P **P 18 04 04.5 +0.4**
comp=Z,114nm,1.2s,mb5.4
LPL La Plagne 73.04 313⇑*i*P **P 18 04 04.5 +0.4**
LPL pmax pmax
comp=Z,57nm,1.2s,mb5.4
LPL La Plagne 73.04 313⇑*i*P **P 18 04 04.5 +0.4**
comp=Z,57nm,1.2s,mb5.4
SAOF Saorge 73.26 312 *e*P **P 18 04 05.2 -0.3**
AUTN L'Aution 73.34 312 *e*P **P 18 04 06.9 +1.0**
SBF Sospel 73.40 312⇑*i*P **P 18 04 05.9 -0.4**
comp=Z,47nm,0.8s,mb5.2
SBF Sospel 73.40 312⇑*i*P **P 18 04 05.9 -0.4**
SBF pmax pmax
comp=Z,23nm,0.8s,mb5.2
SBF Sospel 73.40 312⇑*i*P **P 18 04 05.9 -0.4**
comp=Z,23nm,0.8s,mb5.2
MBDF Montbardon 73.40 313 *e*P **P 18 04 05.4 -0.8**
comp=Z,24nm,0.8s,mb4.9
MBDF Montbardon 73.40 313 *e*P **P 18 04 05.4 -0.8**
MBDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
MBDF Montbardon 73.40 313 *e*P **P 18 04 05.4 -0.8**
comp=Z,12nm,0.8s,mb4.9
LUCF Luceram 73.44 312 *e*P **P 18 04 06.3 -0.2**
TOUF Mont Tournerai 73.44 312 *e*P **P 18 04 06.5 0.0**
ESK Eskdalemuir 73.50 326 *i* P **P 18 04 13.7 +7.1**
MVIF Mont Vial 73.56 312 *e*P **P 18 04 07.1 -0.1**
ORIF Oris-en-Rattie 73.86 313⇑*i*P **P 18 04 08.9 -0.1**
comp=Z,41nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,299nm,18.8s,MS4.3
ORIF Oris-en-Rattie 73.86 313⇑*i*P **P 18 04 08.9 -0.1**
ORIF pmax pmax
comp=Z,20nm,1.0s,mb5.0
ORIF Oris-en-Rattie 73.86 313⇑*i*P **P 18 04 08.9 -0.1**
comp=Z,20nm,1.0s,mb5.0
LOR Lormes 73.92 316⇑*i*P **P 18 04 08.2 -1.0**
LOR *e*MLR MLR
comp=Z,161nm,17.8s,MS4.1
LOR Lormes 73.92 316⇑*i*P **P 18 04 08.2 -1.0**
LOR LR LR
comp=Z,160nm,17.8s,MS4.4
FRF La Foret Royal 74.04 312 *e*P **P 18 04 09.8 -0.3**
SSF Saint Saulge 74.23 316⇑*i*P **P 18 04 10.3 -0.8**
comp=Z,29nm,1.2s,mb4.8
SSF Saint Saulge 74.23 316⇑*i*P **P 18 04 10.3 -0.8**
SSF pmax pmax
comp=Z,14nm,1.2s,mb4.8
SSF Saint Saulge 74.23 316⇑*i*P **P 18 04 10.3 -0.8**
comp=Z,14nm,1.2s,mb4.8
SMF Signal de Mont 74.24 315⇑*i*P **P 18 04 10.6 -0.5**
comp=Z,89nm,1.3s,mb5.2
SMF Signal de Mont 74.24 315⇑*i*P **P 18 04 10.6 -0.5**
SMF pmax pmax
comp=Z,45nm,1.3s,mb5.2
SMF Signal de Mont 74.24 315⇑*i*P **P 18 04 10.6 -0.5**
comp=Z,45nm,1.3s,mb5.2
LMR La Mourre 74.24 311⇑*i*P **P 18 04 10.8 -0.4**
PNL Peninsula 74.26 28 *e*P **P 18 04 11.3 +0.3**
comp=Z,47nm,0.8s,mb5.5
AVF Avril sur Loir 74.46 316⇑*i*P **P 18 04 11.9 -0.5**
comp=Z,52nm,1.1s,mb5.1
AVF Avril sur Loir 74.46 316⇑*i*P **P 18 04 11.9 -0.5**
AVF pmax pmax
comp=Z,26nm,1.1s,mb5.1
AVF Avril sur Loir 74.46 316⇑*i*P **P 18 04 11.9 -0.5**
comp=Z,26nm,1.1s,mb5.1
SSB Saint Sauveur 74.50 314 *e*P **P 18 04 12.2 -0.5**
SSB pmax pmax
comp=Z,13nm,1.1s,mb4.8
SSB Saint Sauveur 74.50 314 *e*P **P 18 04 12.2 -0.5**
comp=Z,13nm,1.1s,mb4.8
SMRF Simiane la Rot 74.52 312 *e*P **P 18 04 12.7 -0.1**
VIVF Saint-Julien-l 74.64 313⇑*i*P **P 18 04 13.1 -0.4**
comp=Z,26nm,1.0s,mb4.8
VIVF Saint-Julien-l 74.64 313⇑*i*P **P 18 04 13.1 -0.4**
VIVF pmax pmax
comp=Z,13nm,1.0s,mb4.8
VIVF Saint-Julien-l 74.64 313⇑*i*P **P 18 04 13.1 -0.4**
comp=Z,13nm,1.0s,mb4.8
PLDF La Plantade 74.71 315 *e*P **P 18 04 13.4 -0.5**
BGF Bois d'Agland 74.87 316 *e*P **P 18 04 14.4 -0.4**
AGO Saint Agoulin 74.96 315 *e*P **P 18 04 12.0 -3.4**
PYM Petit Puy Mans 75.19 315 *e*P **P 18 04 14.3 -2.4**
TCF Toulx Ste Croi 75.39 316⇑*i*P **P 18 04 17.5 -0.3**
comp=Z,62nm,1.4s,mb5.0
TCF Toulx Ste Croi 75.39 316⇑*i*P **P 18 04 17.5 -0.3**
TCF pmax pmax
comp=Z,31nm,1.4s,mb5.0
TCF Toulx Ste Croi 75.39 316⇑*i*P **P 18 04 17.5 -0.3**
comp=Z,31nm,1.4s,mb5.0
LDF La Druitiere 75.52 319 *e*P **P 18 04 18.7 +0.2**
comp=Z,56nm,1.2s,mb5.1
LDF La Druitiere 75.52 319 *e*P **P 18 04 18.7 +0.2**
LDF pmax pmax
comp=Z,28nm,1.2s,mb5.1
LDF La Druitiere 75.52 319 *e*P **P 18 04 18.7 +0.2**
comp=Z,28nm,1.2s,mb5.1
LASF Ste Croix 75.53 313⇑*i*P **P 18 04 18.7 0.0**
comp=Z,34nm,1.0s,mb5.0
FLN La Foliniere 75.63 319 *e*P **P 18 04 18.8 -0.3**
FLN *e*MLR MLR
comp=Z,116nm,18.0s,MS3.9
FLN La Foliniere 75.63 319 *e*P **P 18 04 18.8 -0.3**
FLN LR LR
comp=Z,120nm,18.0s,MS4.2
SKAG Skagway 76.00 27 *e*P **P 18 04 21.6 +0.5**
comp=Z,76nm,0.8s,mb5.7
SKAG LR LR
comp=Z,200nm,17.0s,MS4.5
GRR Gorron 76.04 319 *e*P **P 18 04 21.1 -0.4**
KEST Kesra 76.08 303 P **P 18 04 21.9 0.0**
comp=Z,2.8nm,0.9s,mb4.2,baz=1.9,slow=1.7,SNR=5.3
CAF Calviac 76.19 315⇑*i*P **P 18 04 22.5 +0.1**
comp=Z,37nm,1.3s,mb4.9
CAF Calviac 76.19 315⇑*i*P **P 18 04 22.5 +0.1**
CAF pmax pmax
comp=Z,19nm,1.3s,mb4.9
CAF Calviac 76.19 315⇑*i*P **P 18 04 22.5 +0.1**
comp=Z,19nm,1.3s,mb4.9
RJF Les Rejaudoux 76.32 315⇑*i*P **P 18 04 23.3 +0.2**
comp=Z,51nm,1.3s,mb5.0
RJF *e*MLR MLR
comp=Z,157nm,17.5s,MS4.1
RJF Les Rejaudoux 76.32 315⇑*i*P **P 18 04 23.3 +0.2**
RJF pmax pmax
comp=Z,26nm,1.3s,mb5.0
RJF MLR MLR
comp=Z,160nm,17.5s,MS4.4
RJF Les Rejaudoux 76.32 315⇑*i*P **P 18 04 23.3 +0.2**
comp=Z,26nm,1.3s,mb5.0
RJF LR LR
comp=Z,160nm,17.5s,MS4.4
ARMA Armidale 76.38 140 *e*P **P 18 04 24.9 +1.4**
MFF Saint Martin d 76.61 317⇑*i*P **P 18 04 24.7 0.0**
comp=Z,140nm,1.4s,mb5.4
MFF Saint Martin d 76.61 317⇑*i*P **P 18 04 24.7 0.0**
MFF pmax pmax
comp=Z,70nm,1.4s,mb5.4
MFF Saint Martin d 76.61 317⇑*i*P **P 18 04 24.7 0.0**
comp=Z,70nm,1.4s,mb5.4
MTLF Montolieu 76.93 313⇑*i*P **P 18 04 26.4 -0.2**
LFF La Frestale 76.98 315 *e*P **P 18 04 27.1 +0.2**
SGMF Saint Gilles 77.06 319⇑*i*P **P 18 04 27.3 0.0**
comp=Z,110nm,1.2s,mb5.3
SGMF Saint Gilles 77.06 319⇑*i*P **P 18 04 27.3 0.0**
SGMF pmax pmax
comp=Z,55nm,1.2s,mb5.4
SGMF Saint Gilles 77.06 319⇑*i*P **P 18 04 27.3 0.0**
comp=Z,55nm,1.2s,mb5.4
ROSF Rostrenen 77.41 320⇑*i*P **P 18 04 29.1 -0.1**
comp=Z,60nm,1.1s,mb5.1
ROSF Rostrenen 77.41 320⇑*i*P **P 18 04 29.1 -0.1**
ROSF pmax pmax
comp=Z,30nm,1.1s,mb5.1
ROSF Rostrenen 77.41 320⇑*i*P **P 18 04 29.1 -0.1**
comp=Z,30nm,1.1s,mb5.1
EPF Esparros 78.26 314 *e*P **P 18 04 33.4 -0.6**
EBIE Bielsa 78.57 313 P **P 18 04 35.9 +0.1**
comp=Z,13nm,0.7s,mb5.0
DLBC Dease Lake 78.72 26 LR LR 18 43 26.1
comp=Z,165nm,18.4s,MS4.4,baz=318,slow=39
DLBC Dease Lake 78.72 26 *e*P **P 18 04 36.6 +0.4**
CAN Canberra 78.86 145 *e*P **P 18 04 37.4 +0.1**
CAN pmax pmax
comp=Z,30nm,1.1s,mb5.1
CAN Canberra 78.86 145 *e*P **P 18 04 37.4 +0.2**
comp=Z,30nm,1.1s,mb5.1
ETSF Etsaut 78.88 314⇑*i*P **P 18 04 37.9 +0.4**
CNB Canberra Magne 79.04 144 *e*P **P 18 04 38.6 +0.4**
TOO Toolangi 79.05 148 *e*P **P 18 04 38.8 +0.6**
SJPF Ste Jean 79.17 314 *e*P **P 18 04 39.6 +0.6**
SFJD Kangerlussuaq 79.37 350 *e*P **P 18 04 38.4 -1.3**
SFJD pmax pmax
comp=Z,21nm,0.8s,mb5.1
SFJD Kangerlussuaq 79.37 350 *e*P **P 18 04 38.4 -1.3**
comp=Z,21nm,0.8s,mb5.1
EMOS Mosqueruela 80.24 312 P **P 18 04 44.0 -0.9**
comp=Z,29nm,0.9s,mb5.2
YKA Yellowknife Ar 80.40 17 P **P 18 04 45.0 -0.3**
comp=Z,14nm,0.7s,mb5.0,baz=329,slow=5.1,SNR=215
YKA PKKPbc PKKPbc 18 23 24.6 -2.9
comp=Z,1.3nm,0.6s,baz=147,slow=2.2,SNR=22
YKA LR LR 18 45 19.9
comp=Z,12nm,19.2s,MS3.2,baz=315,slow=39
YKA Yellowknife Ar 80.40 17 P **P 18 04 45.0 -0.4**
YKA 18 23 24.6
YKA pmax pmax
comp=Z,14nm,0.7s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,12nm,19.2s
YKA Yellowknife Ar 80.40 17 P **P 18 04 45.0 -0.3**
YKA PKKPbc PKKPbc 18 23 24.6 -2.9
YKA LR LR 18 45 19.9
ELAN Lanestosa 80.43 315 P **P 18 04 45.7 -0.2**
comp=Z,49nm,1.4s,mb5.2
EARI Arriondas 81.44 316 P **P 18 04 50.9 -0.4**
comp=Z,13nm,0.9s,mb4.9
ETOB Tobarra 81.89 311 P **P 18 04 51.9 -1.9**
comp=Z,378nm,3.1s
GUD Guadarrama 82.38 314 P **P 18 04 56.0 -0.3**
GUD pmax pmax
comp=Z,25nm,1.4s,mb5.0
GUD Guadarrama 82.38 314 P **P 18 04 56.0 -0.3**
comp=Z,25nm,1.4s,mb5.0
EVIA Vianos 82.51 311 P **P 18 04 57.1 +0.1**
EVIA pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EVIA Vianos 82.51 311 P **P 18 04 57.1 +0.1**
comp=Z,4.9nm,0.6s,mb4.7
EPON Pontenova 82.55 317 P **P 18 04 56.5 -0.6**
comp=Z,22nm,1.0s,mb5.2
ESDC Sonseca Array 82.83 313 P **P 18 04 59.0 +0.4**
comp=Z,0.4nm,0.3s,mb3.9,baz=37,slow=4.9
ESDC Sonseca Array 82.83 313 P **P 18 04 58.2 -0.4**
ECAL Calabor 83.16 316 P **P 18 04 59.9 -0.4**
comp=Z,18nm,0.9s,mb5.1
EQES Quesada 83.36 311 P **P 18 05 00.9 -0.6**
comp=Z,16nm,1.0s,mb5.0
MVO Moncorvo 83.80 315 *e*P **P 18 05 03.9 +0.3**
comp=Z,28nm,1.2s,mb5.3
ELOB Lobios 83.98 316 P **P 18 05 04.8 +0.2**
comp=Z,42nm,1.3s,mb5.4
BBB Bella Bella 83.98 30 LR LR 18 45 44.8
comp=Z,150nm,18.4s,MS4.4,baz=291,slow=38
PCBR Castelo Branco 84.89 314 *e*P **P 18 05 09.9 +0.7**
comp=Z,26nm,1.4s,mb5.2
PMRV Marv??o 85.09 314 *e*P **P 18 05 10.5 +0.3**
comp=Z,26nm,1.7s,mb5.1
EMIJ Mijas 85.19 311 P **P 18 05 08.6 -2.2**
comp=Z,26nm,0.9s,mb5.3
EBAD Badajoz 85.27 313 P **P 18 05 10.1 -1.0**
comp=Z,17nm,0.9s,mb5.2
PBAR Barrancos 85.64 313 *e*P **P 18 05 13.0 0.0**
comp=Z,36nm,1.5s,mb5.4
TAM Tamanrasset 85.66 294 *e*P **P 18 05 13.6 +0.3**
TAM pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
TAM Tamanrasset 85.66 294 *e*P **P 18 05 13.6 +0.3**
comp=Z,8.1nm,1.0s,mb4.9
EMIN Mina Concepcio 85.67 312 P **P 18 05 11.3 -1.8**
comp=Z,16nm,1.0s,mb5.2
EVO Evora 86.02 314 *e*P **P 18 05 14.4 -0.5**
comp=Z,20nm,1.0s,mb5.0
EVO *e*MLR MLR
comp=Z,135nm,22.5s,MS4.0
EVO Evora 86.02 314 *e*P **P 18 05 15.2 +0.3**
comp=Z,25nm,1.6s,mb5.2
PBEJ Beja 86.25 313 *e*P **P 18 05 16.8 +0.8**
comp=Z,38nm,1.6s,mb5.4
PCVE Castro Verde 86.60 313 *e*P **P 18 05 19.2 +1.5**
comp=Z,39nm,1.6s,mb5.4
LSZ Lusaka 87.26 250 *e*P **P 18 05 21.2 0.0**
LSZ pmax pmax
comp=Z,29nm,1.2s,mb5.4
LSZ Lusaka 87.26 250 *e*P **P 18 05 21.2 0.0**
comp=Z,29nm,1.2s,mb5.4
FCC Fort Churchill 87.97 10 *e*P **P 18 05 23.0 -0.9**
FCC pmax pmax
comp=Z,2.0nm,1.4s,mb4.2
FCC Fort Churchill 87.97 10 *e*P **P 18 05 23.0 -0.9**
comp=Z,1.9nm,1.4s,mb4.1
EDM Edmonton 88.61 22 *e*P **P 18 05 27.5 +0.4**
MBW Mount Baker 89.15 29 P **P 18 05 30.3 +0.6**
NLWA Neilton Lookou 89.40 31 *e*P **P 18 05 32.1 +1.2**
comp=Z,47nm,1.4s,mb5.6
RPW Rockport 89.57 29 P **P 18 05 31.8 +0.1**
comp=Z,1.5nm,0.6s,mb4.5
JCW Jim Creek 89.60 29 *e*P **P 18 05 32.4 +0.6**
NLW Nelson Butte 90.34 28 P **P 18 05 36.3 +1.1**
FFC Flin Flon 90.34 15 P **P 18 05 34.8 -0.3**
comp=Z,175nm,0.8s,mb6.4,SNR=14
FFC Flin Flon 90.34 15 *e*P **P 18 05 34.8 -0.3**
FFC pmax pmax
comp=Z,24nm,0.8s,mb5.6
FFC Flin Flon 90.34 15 *e*P **P 18 05 34.8 -0.4**
comp=Z,24nm,0.8s,mb5.6
ETW Entiat 90.72 29 P **P 18 05 38.0 +0.9**
LON Longmire 90.79 30 *e*P **P 18 05 38.0 +0.6**
LON pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
LON Longmire 90.79 30 *e*P **P 18 05 38.0 +0.6**
comp=Z,8.7nm,1.1s,mb5.0
WTV Waterville 90.80 29 P **P 18 05 38.1 +0.7**
TBM Table Mountain 90.96 29 P **P 18 05 39.1 +1.0**
NEW Newport 91.45 27 *e*P **P 18 05 41.0 +0.6**
NEW pmax pmax
comp=Z,15nm,1.0s
NEW Newport 91.45 27 *e*P **P 18 05 41.0 +0.6**
comp=Z,15nm,1.0s,mb5.3
COR Corvallis 91.82 32 *e*P **P 18 05 41.8 -0.4**
COR pmax pmax
comp=Z,46nm,1.2s,mb5.7
COR Corvallis 91.82 32 *e*P **P 18 05 41.8 -0.5**
comp=Z,46nm,1.2s,mb5.7
WALA Waterton Lakes 91.96 24 *e*P **P 18 05 43.2 +0.5**
comp=Z,0.8nm,1.3s,mb3.9
RNO Roman Nose 92.14 33 P **P 18 05 45.6 +1.9**
BSMT Bassoo Peak 92.67 26 *e*P **P 18 05 47.2 +1.2**
comp=Z,11nm,0.9s,mb5.3
JTMT Jette 92.94 25 *e*P **P 18 05 47.7 +0.4**
comp=Z,6.0nm,1.0s,mb5.0
SCHQ Schefferville 93.02 355 P **P 18 05 47.1 -0.4**
comp=Z,13nm,0.8s,mb5.4,baz=30,slow=6.3,SNR=12
SCHQ LR LR 18 51 01.6
comp=Z,83nm,18.0s,MS4.2,baz=6.7,slow=38
SCHQ Schefferville 93.02 355 *e*P **P 18 05 46.0 -1.6**
comp=Z,34nm,1.3s,mb5.6
HUMO Hull Mountain 93.51 33 *e*P **P 18 05 51.4 +1.3**
comp=Z,10nm,1.1s,mb5.2
SLMT Seeley Lake 93.65 25 *e*P **P 18 05 51.1 +0.5**
comp=Z,11nm,0.9s,mb5.3
MSO Missoula 93.84 26 *e*P **P 18 05 51.6 +0.2**
comp=Z,8.7nm,1.2s,mb5.1
EGMT Eagleton 94.26 23 *e*P **P 18 05 52.5 -0.9**
comp=Z,9.6nm,0.9s,mb5.2
HRY Holter Researc 94.70 24 *e*P **P 18 05 55.9 +0.5**
comp=Z,4.8nm,0.9s,mb4.9
DLMT Dillon 95.58 26 *e*P **P 18 05 58.6 -0.8**
comp=Z,6.8nm,1.0s,mb5.0
BOZ Bozeman (W) 95.69 25 *e*P **P 18 06 00.1 +0.2**
BOZ pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
BOZ Bozeman (W) 95.69 25 *e*P **P 18 06 00.1 +0.2**
comp=Z,2.2nm,0.9s,mb4.6
ULM Lac du Bonnet 95.83 13 P **P 18 05 59.4 -1.1**
comp=Z,3.3nm,0.7s,mb4.9,baz=50,slow=6.6,SNR=4.4
MCMT McKenzie Canyo 95.94 26 *e*P **P 18 06 01.3 +0.2**
comp=Z,2.8nm,1.2s,mb4.6
GCMT Greycliff 96.24 24 *e*P **P 18 06 03.4 +0.9**
PDAR Pinedale Array 98.92 25 PP PP 18 10 13.7 -1.7
comp=Z,0.7nm,0.8s,baz=344,slow=4.8,SNR=6.3
PDAR LR LR 18 55 03.1
comp=Z,93nm,19.6s,MS4.3,baz=241,slow=38
NVAR Mina Array Bea 98.98 33 P **P 18 06 17.8 +2.9**
comp=Z,0.2nm,0.5s,mb3.9,baz=291,slow=7.5,SNR=2.7
NVAR PKKPbc PKKPbc 18 22 40.4 -0.5
comp=Z,0.5nm,0.7s,baz=153,slow=5.0,SNR=3.8
NVAR Mina Array Bea 98.98 33 P **P 18 06 17.8 +2.9**
NVAR PKKPbc PKKPbc 18 22 40.4 -0.5
TXAR Lajitas Array 113.01 27 PKIKP PKiKP 18 11 11.0 -0.8
comp=Z,0.4nm,0.6s,baz=203,slow=3.5,SNR=5.1
TXAR PKKPbc PKKPbc 18 21 57.9 -0.1
comp=Z,1.1nm,0.8s,baz=158,slow=6.4,SNR=11
TXAR Lajitas Array 113.01 27 *i* PKIKP PKiKP 18 11 11.0 -0.8
TXAR pmax pmax
comp=Z,1.0nm,0.8s
NVL N'lazarevskaya 121.07 203 *e*PKIKP PKPdf 18 11 24.9 -0.9
SDV Santo Domingo 138.91 353 *e*PKPdf PKPdf 18 12 00.7 -0.7
OTAV Otavalo 147.55 6 *e*PKPdf PKPdf 18 12 18.4 +1.8
LPAZ La Paz 162.95 337 PKP PKPdf 18 12 37.8 +0.7
comp=Z,4.5nm,1.0s,baz=1.9,slow=1.2,SNR=13
LPAZ La Paz 162.95 337 PKIKP PKPdf 18 12 37.8 +0.7
LPAZ pmax pmax
comp=Z,5.0nm,1.0s
CPUP Villa Florida 163.50 286 PKP PKPdf 18 12 36.4 -1.0
comp=Z,0.6nm,0.4s,baz=35,slow=5.0,SNR=4.1
CPUP Villa Florida 163.50 286 PKIKP PKPdf 18 12 36.4 -1.0
CPUP pmax pmax
comp=Z,1.0nm,0.4s
PLCA Paso Flores 170.78 202 PKP PKPdf 18 12 42.0 -0.2
comp=Z,2.5nm,0.9s,baz=52,slow=7.3,SNR=3.4
PLCA Paso Flores 170.78 202 PKIKP PKPdf 18 12 42.0 -0.2
PLCA pmax pmax
comp=Z,3.0nm,0.9s

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*NNC **19** 18:03:21.0±3.1, 48°.99N×84°.40E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=31.5km s-min=10.7km az=67.0*
*ISCJB **19** 18:03:22.8±0.8, 49°.07N±0°.04×82°.9E±0°.1, h10km, Error ellipse: s-maj=12.9km s-min=5.5km az=1.4*
*IDC **19** 18:03:23.5±1.8, 49°.14N×82°.89E, h0km, mb1 3.0/4, mb1mx2.9/27, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=28.0km s-min=8.6km az=71.0*
ISC 19 18:03:24.9±0.8, **49°.06N**±0°.04×**82°.8E**±0°.1, **h10**km, **n7,**
σ0°84/13, **2C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.30**	**189**	Pn	**Pn**	**18 04 03.6**	**+0.8**
	1.5nm,0.5s,baz=27,slow=15,SNR=48						
MK31				⇑Sn	**Sg**	**18 04 38.7**	**0.0**
	6.5nm,0.3s,baz=29,slow=30,SNR=16						
MKAR	**Makanchi Array**	**2.30**	**189**	Pn	**Pn**	**18 04 03.3**	**+0.5**
	0.5nm,0.3s,baz=26,slow=13,SNR=24						
MKAR				Pg	**Pg**	**18 04 08.0**	**-1.0**
	0.9nm,0.3s,baz=22,slow=13,SNR=18						
MKAR				Lg		18 04 38.8	
	3.2nm,0.3s,baz=34,slow=28,SNR=16						
KURK	**Kurchatov**	**3.19**	**303**	⇓Pn	**Pg**	**18 04 24.8**	**-1.1**
	3.4nm,0.6s						
KURK				⇓Sn	**Sg**	**18 05 14.4**	**+7.3**
	11nm,0.4s						
KURK	**Kurchatov**	**3.19**	**303**	Pn	**Pn**	**18 04 14.2**	**-0.7**
	0.1nm,0.3s,baz=102,slow=14,SNR=7.3						
KURK				Pg	**Pg**	**18 04 18.9**	**-7.0**
	0.2nm,0.3s,baz=102,slow=16,SNR=8.9						
KURK				Lg		18 05 14.6	
	1.6nm,0.3s,baz=325,slow=8.3,SNR=9.7						
KURBB	**Kurchatov Arra**	**3.19**	**301**	⇓Pn	**Pg**	**18 04 26.3**	**+0.3**
	0.2nm,0.3s						
KURBB				⇑Sn	**Sg**	**18 05 15.8**	**+8.4**
	14nm,0.8s						
ZALV	**Zalesovo Beam**	**5.05**	**13**	Pn	**Pn**	**18 04 39.2**	**-1.4**
	0.7nm,0.3s,baz=192,slow=18,SNR=7.9						
ZALV				Sn	**Sn**	**18 05 39.7**	**+0.8**
	1.3nm,0.3s,baz=181,slow=28,SNR=8.3						
BVAR	**Borovoye Array**	**8.79**	**302**	Pn	**Pn**	**18 05 32.8**	**+1.0**
	0.1nm,0.3s,baz=128,slow=9.5,SNR=2.8						

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*IDC **19** 18:09:56.1±2.7, 1°.24N×98°.73E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/24, mbtmp3.4/6, ML3.9/1, Error ellipse: s-maj=115.9km s-min=26.6km az=60.0*
*NEIC **19** 18:09:58.5±1.1, 1°.41N×99°.04E, h10km, mb4.4/1, Error ellipse: s-maj=32.5km s-min=16.3km az=72.0*
*ISCJB **19** 18:10:02.2±1.1, 1°.73N±0°.06×99°.05E±0°.08, h28km±9km, mb3.5/6, Error ellipse: s-maj=13.0km s-min=8.8km az=161.4*
*DJA **19** 18:10:02, 1°.75N×99°.12E, h10km, MLv3.9/10*
ISC 19 18:10:02.1±1.3, **1°.70N**±0°.05×**99°.04E**±0°.08, **h14**km±9km,
n19, σ1°.**20**/20, **mb3.5**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.34**	**347**	P	**Pg**	**18 10 08.5**	**-0.5**
MNSI	**Mandailing Nat**	**1.05**	**149**	P	**Pb**	**18 10 19.8**	**-2.2**
GSI	**Gunungsitoli**	**1.51**	**255**	P	**Pn**	**18 10 29.4**	**+0.6**
GSI				S	**Sn**	**18 10 53.6**	**+5.3**
BKNI	**Bangkinang**	**2.42**	**124**	P	**Pn**	**18 10 43.7**	**+2.4**
PPI	**Padang Panjang**	**2.54**	**148**	P	**Pn**	**18 10 46.4**	**+3.5**
PDSI	**Padang**	**2.96**	**151**	P	**Pn**	**18 10 49.2**	**+0.5**
SISI	**Saibi**	**3.00**	**179**	P	**Pn**	**18 10 49.0**	**-0.3**
IPM	**Ipoh**	**3.40**	**36**	P	**Pn**	**18 10 55.7**	**+0.9**
SDSI	**Sungai Dareh**	**3.54**	**138**	P	**Pn**	**18 11 05.0**	**+8.3**
KULM	**Kulim**	**3.92**	**24**	*e*P	**Pn**	**18 11 01.6**	**-0.3**
MYKOM	**Kota Tinggi**	**4.81**	**89**	P	**Pn**	**18 11 13.8**	**-0.4**
BSI	**Banda Aceh**	**5.31**	**315**	P	**Pn**	**18 11 22.3**	**+1.3**
CMAR	**Chiang Mai Arr**	**16.66**	**360**	P	**Pn**	**18 13 57.1**	**+1.9**
	0.2nm,0.3s,baz=187,slow=13,SNR=6.2						
ASAR	**Alice Springs**	**42.25**	**129**	P	**P**	**18 17 51.0**	**-4.2**
	0.3nm,0.9s,mb2.9,baz=298,slow=7.7,SNR=5.2						
SONM	**Songino Array**	**46.40**	**7**	P	**P**	**18 18 28.0**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=177,slow=7.2,SNR=2.6						
MKAR	**Makanchi Array**	**47.23**	**344**	P	**P**	**18 18 33.0**	**-1.6**
	1.2nm,1.2s,mb3.7,baz=166,slow=10,SNR=3.7						
KURK	**Kurchatov**	**51.81**	**344**	P	**P**	**18 19 08.2**	**-1.3**
	0.2nm,0.5s,mb3.3,baz=163,slow=6.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**53.38**	**350**	P	**P**	**18 19 20.4**	**-0.7**
	0.4nm,0.3s,mb3.8,baz=176,slow=8.3,SNR=3.3						
TIXI	**Tiksi**	**72.39**	**10**	*e*P	**P**	**18 21 26.5**	**-0.8**
	3.7nm,1.1s,mb4.2						

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*ISCJB **19** 18:23:54.5±0.6, 32°.34N±0°.05×105°.00E±0°.08, h10km, mb3.4/6, MS3.2/2, Error ellipse: s-maj=10.6km s-min=6.9km az=27.1*
*IDC **19** 18:23:54.1±1.2, 32°.29N×105°.03E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.2/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/29, Error ellipse: s-maj=45.1km s-min=21.9km az=47.0*
*BJI **19** 18:23:55.8, 32°.33N×105°.21E, h8km, ML3.8/9, Ms3.5/2, Ms7 3.4/1*
*NEIC **19** 18:23:57.0±0.8, 32°.60N×105°.25E, h10km, Error ellipse: s-maj=23.7km s-min=13.4km az=58.0*
ISC 19 18:23:55.9±0.6, **32°.35N**±0°.04×**105°.02E**±0°.08, **h10**km, **n14,**

σ1°17/18, mb3.4/6, MS3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.79	217	Pg	Pg	18 24 29.8	-0.5
CD2				Sg	Sg	18 24 53.9	+0.4
CD2				smax			
	comp=N,950nm,0.7s						
LZH	Lanzhou	3.85	346	*e*Pn	Pn	18 25 00.8	+5.6
LZH				Pg	Pg	18 25 07.8	-2.0
LZH				Sn	Sn	18 25 47.1	+6.5
LZH				Sg	Sg	18 25 55.4	-4.3
LZH				smax			
	comp=N,190nm,0.5s						
LZH				smax			
	comp=E,240nm,0.5s						
LZH				LR	LR		
	comp=N,230nm,5.3s						
LZH				LR	LR		
	comp=Z,320nm,5.8s						
ENH	Enshi	4.35	117	*e*P	Pn	18 25 04.1	+2.1
GYA	Guiyang	6.04	166	Pn	Pn	18 25 29.1	+3.8
GYA				Sn	Sn	18 26 32.9	-1.6
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,30nm,0.9s						
CMAR	Chiang Mai Arr	14.87	203	Pn	Pn	18 27 32.2	+6.0
	comp=E,0.1nm,0.3s,baz=9.3,slow=8.7,SNR=6.4						
KSRS	Korea Array	19.45	68	P	Pn	18 28 23.7	-0.1
	comp=E,0.1nm,0.3s,baz=278,slow=11,SNR=4.1						
JOW	Kunigami	20.94	99	LR	LR	18 38 35.2	
	comp=E,135nm,18.5s,MS3.4,baz=299,slow=42						
MKAR	Makanchi Array	22.59	316	P	P	18 28 57.9	+1.5
	comp=E,0.5nm,0.7s,mb3.0,baz=111,slow=10.0,SNR=6.2						
ZALV	Zalesovo Beam	25.96	332	P	P	18 29 29.1	+0.7
	comp=E,0.5nm,0.4s,mb3.4,baz=134,slow=10,SNR=2.7						
KURK	Kurchatov	26.74	321	P	P	18 29 36.3	+0.8
	comp=E,0.6nm,0.8s,mb3.2,baz=133,slow=8.5,SNR=6.0						
ASAR	Alice Springs	62.16	150	P	P	18 34 17.1	-0.3
	comp=E,0.4nm,0.8s,mb3.6,baz=334,slow=6.9,SNR=7.2						
NOA	NORSAR Array B	64.03	327	P	P	18 34 28.8	-0.6
	comp=E,0.7nm,0.8s,mb3.8,baz=70,slow=8.1,SNR=2.7						
YKA	Yellowknife Ar	80.28	17	P	P	18 36 05.7	-0.8
	comp=E,0.1nm,0.5s,mb3.0,baz=329,slow=5.2,SNR=3.8						
YKA				LR	LR	19 16 40.4	
	comp=E,7.2nm,19.2s,MS3.0,baz=185,slow=39						
YKA	Yellowknife Ar	80.28	17	P	P	18 36 05.8	-0.8
YKA				LR	LR	19 16 40.4	

*IDC **19** 18:25:56.7±1.6, 1°.61N×99°.09E, h0km, mb3.6/8, mb1 3.6/8, mb1mx3.5/24, mbtmp3.6/8, Error ellipse: s-maj=70.8km s-min=25.6km az=54.0*
*NEIC **19** 18:25:57.8±0.9, 1°.49N×99°.04E, h10km, mb4.0/2, Error ellipse: s-maj=21.6km s-min=15.9km az=71.0*
*DJA **19** 18:26:02, 1°.80N×99°.08E, h10km, MLv4.0/9*
ISC 19 18:26:03.5±1.6, 1°.79N±0°.06×98°.98E±0°.07, h34km±13km, n26, σ1°.05/27, mb3.7/10, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.24	354	P	Pb	18 26 06.8	-3.8
MNSI	Mandailing Nat	1.15	149	P	Pn	18 26 18.9	-4.4
GSI	Gunungsitoli	1.49	251	P	Pn	18 26 28.8	+0.9
GSI				S	Sn	18 26 52.7	+6.5
BKNI	Bangkinang	2.52	125	P	Pn	18 26 42.8	+0.7
PPI	Padang Panjang	2.64	148	P	Pn	18 26 45.6	+1.8
PDSI	Padang	3.06	151	P	Pn	18 26 49.5	-0.1
SISI	Saibi	3.09	178	P	Pn	18 26 49.0	-1.0
IPM	Ipoh	3.36	37	P	Pn	18 26 54.4	+0.6
SDSI	Sungai Dareh	3.64	138	P	Pn	18 27 02.5	+4.9
KULM	Kulim	3.86	25	*e*P	Pn	18 27 00.3	-0.2
LHMI	Lhok Sumawe	3.98	329	P	Pn	18 27 04.0	+1.8
MYKOM	Kota Tinggi	4.86	90	P	Pn	18 27 14.4	0.0
CMAR	Chiang Mai Arr	16.57	360	Pn	Pn	18 29 56.0	+2.5
	0.1nm,0.3s,baz=192,slow=11,SNR=4.7						
ASAR	Alice Springs	42.35	129	P	P	18 33 51.3	-3.4
	0.3nm,0.8s,mb3.0,baz=296,slow=7.3,SNR=6.1						
SONM	Songino Array	46.32	7	P	P	18 34 24.4	-1.6
	0.7nm,0.9s,mb3.6,baz=165,slow=6.2,SNR=4.0						
EKS2	Erkin-Say	46.53	334	*e*P	P	18 34 28.6	+0.8
MKAR	Makanchi Array	47.13	344	P	P	18 34 32.8	+0.3
	1.1nm,0.8s,mb3.8,baz=152,slow=7.3,SNR=12						
KURK	Kurchatov	51.71	344	P	P	18 35 07.1	-0.3
	0.8nm,0.8s,mb3.7,baz=163,slow=6.9,SNR=6.2						
KURK	Kurchatov	51.71	344	*e*P	P	18 35 07.3	-0.1
ZALV	Zalesovo Beam	53.29	350	P	P	18 35 18.9	0.0
	1.1nm,0.6s,mb4.0,baz=163,slow=6.2,SNR=5.3						
BVAR	Borovoye Array	56.30	340	P	P	18 35 40.5	-0.3
	0.3nm,0.6s,mb3.5,baz=134,slow=10,SNR=3.2						
ABKAR	Abkulak array	57.86	331	*e*P	P	18 35 52.1	+0.2
	0.9nm,0.7s,mb3.9						
AKTK	Aktyubinsk	59.57	331	P	P	18 36 02.9	-1.0
AKTO	Aktyubinsk	59.57	331	P	P	18 36 02.9	-1.0
	0.3nm,0.3s,mb3.8,baz=131,slow=9.3,SNR=3.8						
BRTR	Keskin Array B	70.05	312	P	P	18 37 11.8	-0.5
	0.3nm,0.4s,mb3.6,baz=108,slow=6.8,SNR=4.1						
TIXI	Tiksi	72.31	10	*e*P	P	18 37 24.7	-0.6
	1.2nm,0.6s,mb4.0						

IDC 19 18:33:09.4±2.2, 31°.70N×103°.47E, h0km, mb3.2/3, mb1 3.3/5, mb1mx3.2/27, mbtmp3.2/5, ML3.5/2, Error ellipse: s-maj=39.2km s-min=34.2km az=20.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.81	198	Pn	Pn	18 36 26.9	+0.4
	0.1nm,0.3s,baz=10,slow=8.6,SNR=7.3						
SONM	Songino Array	16.27	7	Pn	Pn	18 37 00.1	+0.9
	0.1nm,0.3s,baz=224,slow=8.0,SNR=3.4						
KSRS	Korea Array	20.91	67	P	P	18 37 53.0	-0.4
	0.9nm,0.7s,baz=258,slow=10,SNR=4.2						
MKAR	Makanchi Array	22.18	319	P	P	18 38 07.2	+0.3
	0.2nm,0.6s,baz=125,slow=12,SNR=3.2						
KURK	Kurchatov	26.45	323	P	P	18 38 47.4	-0.4
	0.4nm,0.6s,baz=127,slow=9.9,SNR=3.9						

*IDC **19** 18:34:47.6±1.8, 43°.78N×105°.29W, h0km, mb3.6/1, mb1 3.6/6, mb1mx3.4/29, mbtmp3.4/6, ML3.8/3, Error ellipse: s-maj=50.3km s-min=9.4km az=150.0*
*ISCJB **19** 18:34:48.7±0.5, 43°.75N±0°.04×105°.27W±0°.07, h0km, Error ellipse: s-maj=6.8km s-min=6.3km az=9.3*
*NEIC **19** 18:34:50.1±0.5, 43°.75N×105°.24W, h0km, ML3.2, Error ellipse: s-maj=6.2km s-min=5.4km az=118.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISC 19 18:34:50.2±0.5, 43°.76N±0°.04×105°.24W±0°.06, h0km, n42, σ0°.94/42, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	67	*e*P	Pg	18 38 08.4	+0.2
PHWY	Pilot Hill	2.46	184	*e*P	Pn	18 35 31.5	0.0
RWWY	Rawlins	2.53	216	*e*P	Pn	18 35 33.8	+1.3
LAO	LASA Array	3.01	347	*e*P	Pn	18 35 38.8	-0.3
BW06	Boulder Array	3.31	254	*e*P	Pn	18 35 44.0	+0.8
PDAR	Pinedale Array	3.31	254	Pn	Pn	18 35 44.5	+1.4
	2.6nm,0.3s,baz=71,slow=17,SNR=35						
PDAR				Lg		18 36 28.9	
	5.3nm,0.3s,baz=79,slow=23,SNR=7.6						
OGNE	Ogallala	3.68	139	*e*Pn	Pn	18 35 48.5	+0.2
GCMT	Greycliff	3.75	304	*e*P	Pn	18 35 49.6	+0.3
LOHW	Long Hollow	3.90	270	*e*Pg	Pg	18 36 00.5	-4.3
ISCO	Idaho Springs	3.96	184	*e*P	Pn	18 35 52.5	+0.3
SNOW	Snow King Moun	4.02	268	Pn	Pn	18 35 53.9	+0.9
YNR	Norris Junctio	4.03	286	*e*Pg	Pg	18 36 02.7	-4.6
YFT	Old Faithful	4.09	282	*e*P	Pn	18 35 55.4	+1.5
REDW	Red Top Meadow	4.10	266	*e*P	Pn	18 35 55.0	+0.9
IMW	Indian Meadow	4.13	274	*e*P	Pn	18 35 55.8	+1.4
TPAW	Teton Pass	4.16	268	*e*P	Pn	18 35 54.8	-0.1
YMR	Madison River	4.22	284	*e*Pg	Pg	18 36 03.0	-8.0
AHID	Auburn Hatcher	4.40	259	*e*Pg	Pg	18 36 09.7	-4.8
RRI2	Red Ridge	4.44	267	*e*P	Pn	18 35 58.9	+0.2
SMCO	Snowmass	4.76	197	*e*Pg	Pg	18 36 17.0	-4.3
DGMT	Dagmar	4.77	8	*e*P	Pn	18 36 04.5	+1.2
BOZ	Bozeman (W)	4.93	295	*e*Pn	Pn	18 36 04.0	-1.5
HWUT	Hardware Ranch	5.14	247	*e*Pn	Pn	18 36 08.3	0.0
	10nm,0.8s						
EGMT	Eagleton	5.30	325	*e*Pn	Pn	18 36 05.8	-4.8
	18nm,0.8s						
DLMT	Dillon	5.50	290	*e*Pg	Pg	18 36 30.6	-4.9
	6.1nm,0.8s						
HRY	Holter Researc	5.51	305	*e*Pn	Pn	18 36 13.3	-0.2
	14nm,0.7s						
LRM	Limekiln Ridge	5.53	294	*e*Pn	Pn	18 36 13.4	-0.3
	9.2nm,0.4s						
MCMT	McKenzie Canyo	5.57	284	*e*Pg	Pg	18 36 30.9	-5.9
	2.2nm,0.7s						
DAU	Daniels Canyon	5.59	235	*e*Pn	Pn	18 36 14.2	-0.3
	9.4nm,0.7s						
JLU	Jordanelle	5.59	238	*e*Pg	Pg	18 36 34.5	-2.8
	5.9nm,0.6s						
PV04	Paradox Valley	6.03	209	*e*Pn	Pn	18 36 20.5	-0.1
SRU	San Rafael	6.11	222	*e*Pn	Pn	18 36 20.4	-1.3
	4.1nm,0.3s						
PV01	Paradox Valley	6.16	205	*e*Pn	Pn	18 36 21.9	-0.5
	147nm,0.3s						
ECSD	EROS Data Cent	6.25	87	*e*Pg	Pg	18 36 44.6	-5.2
	4.8nm,0.3s						
DUG	Dugway	6.67	240	*e*Pn	Pn	18 36 29.2	-0.2
	1.4nm,0.3s						
MSU	Marysvale	7.41	227	*e*Pn	Pn	18 36 39.9	+0.5
	5.4nm,0.7s						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 36 57.2	-5.6
ULM				Lg		18 39 34.3	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	18 36 57.2	-5.5
	0.2nm,0.3s,baz=239,slow=13,SNR=3.2						
ULM				Lg		18 39 34.3	
	0.1nm,0.3s,baz=134,slow=21,SNR=4.1						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	18 37 30.6	-0.9
	0.1nm,0.3s,baz=56,slow=11,SNR=5.6						
YBH	Yreka Blue Hor	13.01	267	Pn	Pn	18 37 55.9	-0.2
	0.1nm,0.3s,baz=94,slow=19,SNR=2.3						
YKA	Yellowknife Ar	19.55	347	P	Pn	18 39 17.0	-3.3
	0.1nm,0.3s,baz=156,slow=13,SNR=4.3						
MKAR	Makanchi Array	89.59	355	P	P	18 47 48.0	-1.4
	0.3nm,0.7s,baz=22,slow=5.3,SNR=2.8						

*IDC **19** 18:36:37.4±1.6, 0°.80N×99°.79E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.6/23, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=68.7km s-min=28.3km az=61.0*
*NEIC **19** 18:36:38.7±0.8, 0°.78N×99°.80E, h10km, mb4.0/1, Error ellipse: s-maj=22.4km s-min=14.0km az=72.0*
NEIC Felt [III] at Padangsidempuan, Sibolga, Sipirok and Tarutung. Also felt [III] at Gunungsitoli, Nias.
*ISCJB **19** 18:36:43.7±0.7, 0°.83N±0°.07×99°.54E±0°.05, h63km±9km, mb3.8/8, Error ellipse: s-maj=12.5km s-min=7.7km az=29.4*
*DJA **19** 18:36:49, 1°.79N×99°.08E, h10km, MLv3.9/6*
ISC 19 18:36:44.6±0.7, 0°.81N±0°.07×99°.52E±0°.05, h51km±9km, n26, σ1°.01/24, mb3.8/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.06	108	P	Sn	18 37 06.1	+8.2
PPI	Padang Panjang	1.54	145	P	Sn	18 37 33.3	+4.9
BKNI	Bangkinang	1.59	108	P	Sn	18 37 30.5	+0.7
PDSI	Padang	1.96	151	P	Sn	18 37 38.6	-0.1
GSI	Gunungsitoli	2.01	284	P	Pn	18 37 16.2	+0.2
GSI				S	Sn	18 37 39.9	-0.1
SISI	Saibi	2.17	192	P	Sn	18 37 35.9	-8.1
SDSI	Sungai Dareh	2.58	132	P	Sn	18 37 49.7	-4.3
FRIM	Kepong	3.19	41	P	Pn	18 37 41.4	+9.1
IPM	Ipoh	3.94	22	P	Pn	18 37 42.4	-0.2
IPM	Ipoh	3.94	22	P	Pn	18 37 41.8	-0.7
KGM	Kluang	3.98	73	P	Px	18 38 06.9	
MYKOM	Kota Tinggi	4.43	77	P	Px	18 38 15.9	
MYKOM	Kota Tinggi	4.43	77	P	Px	18 38 14.3	
KULM	Kulim	4.59	14	P	Pn	18 37 48.5	-2.9
KULM	Kulim	4.59	14	*e*P	Pn	18 37 48.2	-3.3
KTGM	Kuala Trenggan	5.75	39	P	Pn	18 38 08.7	+1.2
CMAR	Chiang Mai Arr	17.54	358	P	Pn	18 40 44.6	-1.0
	0.1nm,0.3s,baz=196,slow=13,SNR=7.1						
SONM	Songino Array	47.21	6	P	P	18 45 12.1	-0.2
	0.4nm,0.4s,mb3.7,baz=191,slow=5.9,SNR=3.6						
MKAR	Makanchi Array	48.21	344	P	P	18 45 20.3	+0.3
	0.8nm,0.8s,mb3.8,baz=149,slow=8.0,SNR=7.5						
STKA	Stephens Creek	51.39	133	P	P	18 45 42.6	-1.9
	3.5nm,1.1s,mb4.2,baz=315,slow=13,SNR=3.4						
KURK	Kurchatov	52.79	343	P	P	18 45 53.4	-1.1
	0.4nm,0.5s,mb3.6,baz=159,slow=7.0,SNR=3.9						
KURK	Kurchatov	52.79	343	P	P	18 45 53.4	-1.1
ZALV	Zalesovo Beam	54.33	349	P	P	18 46 06.2	+0.4
	3.1nm,0.9s,mb4.2,baz=168,slow=6.4,SNR=5.3						
BVAR	Borovoye Array	57.40	340	P	P	18 46 28.1	+0.4
	0.5nm,0.6s,mb3.7,baz=162,slow=11,SNR=3.6						
ABKAR	Abkulak array	58.96	331	*e*P	P	18 46 39.4	+0.6
	0.9nm,0.6s,mb4.0						
BRTR	Keskin Array B	71.09	312	P	P	18 47 59.6	+1.9
	0.4nm,0.7s,mb3.5,baz=142,slow=6.3,SNR=4.1						

*ISCJB **19** 18:41:51.9±1.5, 47°.74N±0°.06×154°.07E±0°.08, h31km±10km, mb4.5/71, MS4.1/31, Error ellipse: s-maj=12.9km s-min=5.2km az=140.6*
*BJI **19** 18:41:53.6, 48°.02N×154°.20E, h50km, mB4.6/4, mb4.2/6, Ms4.1/1, Ms7 4.1/1*
*MOS **19** 18:41:53.2±0.9, 47°.77N×154°.04E, h39km, mb4.7/41, MS4.1/16, Error ellipse: s-maj=10.5km s-min=6.3km az=89.3*
*SKHL **19** 18:41:54.3±1.2, 47°.77N×154°.16E, h89km±7km, mb5.3/1, Ms4.2/4, msh6.0/3*
*IDC **19** 18:41:55.2±2.6, 47°.71N×154°.04E, h48km±24km, mb3.9/19, mb1 4.1/21, mb1mx4.0/29, mbtmp3.9/21, ML3.5/2, MS4.0/23, Ms1 4.0/23, ms1mx3.8/45, Error ellipse: s-maj=21.1km s-min=12.7km az=159.0*
*NEIC **19** 18:41:55.5±0.9, 47°.75N×154°.09E, h49km±6km, mb4.7/36, Error ellipse: s-maj=10.8km s-min=5.0km az=161.0*
*SZGRF **19** 18:42:00.6, 48°.50N×152°.50E, h33km, mb4.9, Kuril Islands, Russia*
ISC 19 18:41:55.0±0.7, 47°.72N±0°.06×154°.07E±0°.08, h43km±5km, h27km±8.0km: pP-P, n221, σ0°.85/215, mb4.5/71, MS4.1/31, 12C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.26	24	*e*PN	Pn	18 42 42.1	-1.4
SKR				*e*S	Sn	18 43 17.0	-3.9
SKR				pmax	pmax		
	comp=N,220nm,1.0s						
SKR				pmax	pmax		
	comp=E,340nm,1.0s						
SKR				pmax	pmax		
	comp=Z,600nm,1.0s						
SKR				smax			
	comp=N,1μm,0.9s						
SKR				smax			
	comp=E,900nm,1.0s						
SKR				smax			
	comp=N,2μm,6.0s						
SKR				smax			
	comp=E,2μm,6.0s						
SKR				MLR	MLR		
	comp=N,4μm,14.0s						
SKR				MLR	MLR		
	comp=E,3μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
SKR	Severo-Kuril's	3.26	24	*e*P	Pn	18 42 42.1	-1.4
SKR				AMB	AMB	18 42 47.5	
	comp=Z,220nm,1.0s						
SKR				AMB	AMB	18 42 47.5	
	comp=Z,340nm,1.0s						
SKR				AMB	AMB	18 42 47.5	
	comp=Z,600nm,1.0s						
SKR				*e*S	Sn	18 43 17.0	-3.9
SKR				A		18 43 42.5	
	comp=Z,2μm,6.0s						
SKR				A		18 43 42.5	
	comp=Z,2μm,4.0s						
SKR				A		18 43 42.5	
	comp=Z,1μm,1.0s						
SKR				A		18 43 42.5	
	comp=Z,900nm,1.0s						
SKR				A		18 43 42.5	
	comp=Z,560nm,1.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,3μm,14.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,2μm,14.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,4μm,14.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,3μm,14.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,4μm,14.0s						
SKR				AMS	AMS	18 44 04.0	
	comp=Z,3μm,14.0s						
KUR	Kuril'sk	4.95	242	⇑*i*PN	Pn	18 43 07.9	+1.2
KUR				*e*S	Sn	18 44 04.0	+1.3
KUR				pmax	pmax		
	comp=E,60nm,1.0s						
KUR				pmax	pmax		
	comp=Z,360nm,1.0s						
KUR				smax			
	comp=N,3μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR				smax			
	comp=N,520nm,0.8s						
KUR				smax			
	comp=E,360nm,0.8s						
KUR	Kuril'sk	4.95	242	⇑*i*P	Pn	18 43 07.9	+1.2
KUR				AMB	AMB	18 43 08.8	
	comp=E,60nm,1.0s						
KUR				AMB	AMB	18 43 08.8	
	comp=E,360nm,1.0s						
KUR				*e*S	Sn	18 44 04.0	+1.3
KUR				A		18 44 10.0	
	comp=E,3μm,2.0s						
KUR				A		18 44 10.0	
	comp=E,2μm,2.0s						
KUR				A		18 44 28.2	
	comp=E,520nm,0.8s						
KUR				A		18 44 28.2	
	comp=E,360nm,0.8s						
PEA0B	Petropavlovsk-	5.87	22	*e*P	Pn	18 43 19.6	+0.3
PETK	Petropavlovsk-	5.87	22	P	Pn	18 43 19.6	+0.3
	comp=E,1.8nm,0.3s,baz=181,slow=10,SNR=63						
PETK				S	Sn	18 44 35.3	+10
	baz=178,slow=21,SNR=2.3						
PETK				LR	LR	18 45 55.0	
	comp=E,921nm,19.0s,baz=346,slow=41						
PETK	Petropavlovsk-	5.87	22	PN	Pn	18 43 19.6	+0.3
PETK				S	Sn	18 44 35.3	+10
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,921nm,19.0s						
PET	Petropavlovsk	6.07	27	*e*PN	Pn	18 43 23.2	+1.2
PET				pmax	pmax		
	comp=Z,33nm,0.5s						
PET	Petropavlovsk	6.07	27	*e*P	Pn	18 43 20.5	-1.5
	comp=Z,52nm,0.9s						
YUK	Yuzh-Kuril'sk	6.81	240	PN	Pn	18 43 33.8	+1.6
YUK	Yuzh-Kuril'sk	6.81	240	*e*P	Pn	18 43 33.8	+1.6
YUK				A		18 45 15.0	
	comp=Z,390nm,0.5s						
YUK				A		18 45 15.0	
	comp=Z,320nm,0.7s						
YSS	Yuzh-Sakhalins	7.72	268	*e*PN	Pn	18 43 45.0	+0.2
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS	Yuzh-Sakhalins	7.72	268	*e*P	Pn	18 43 47.0	+2.2
	comp=E,34nm,0.8s						
YSS	Yuzh-Sakhalins	7.72	268	*e*P	Pn	18 43 45.0	+0.2
YSS				*e*LQ		18 45 44.0	
YSS				AMS	AMS	18 46 35.0	
	comp=E,1μm,16.0s						
YSS				AMS	AMS	18 46 35.0	
	comp=E,1μm,17.0s						
JMP	Maruseppu	8.34	248	P	Pn	18 43 54.8	+1.6
JWK2	Keihoku	8.73	258	P	Pn	18 44 03.9	+5.4
ASAJ	Asahikawa	8.77	250	P	Pn	18 44 01.0	+1.9
ASAJ	Asahikawa	8.77	250	P	Pn	18 43 59.9	+0.8
	comp=E,0.5nm,0.3s,baz=48,slow=8.9,SNR=8.1						
ASAJ				LR	LR	18 47 12.8	
	comp=E,701nm,18.4s,baz=132,slow=36						
ASAJ	Asahikawa	8.77	250	PN	Pn	18 43 59.9	+0.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,701nm,18.5s						
OKH	Okha	9.16	314	*e*L		18 47 04.0	
OKH				AMS	AMS	18 49 22.6	
	comp=Z,1μm,12.0s						
OKH				AMS	AMS	18 49 22.6	
	comp=Z,1μm,10.0s						
OKH				AMS	AMS	18 49 22.6	
	comp=Z,2μm,10.0s						
ERM	Erimo	9.61	238	*i*PN	Pn	18 44 13.6	+2.9
JEM	Erimo	9.61	238	P	Pn	18 44 08.4	-2.3
JEM				*e*S	Sn	18 45 50.8	-6.4
NKL	Nikolayevsk	10.12	307	*e*P	Pn	18 44 17.0	-0.5
NKL				AMB	AMB	18 44 19.0	
	comp=Z,42nm,1.2s						
NKL				AMB	AMB	18 44 19.0	
	comp=Z,70nm,1.2s						
NKL				AMB	AMB	18 44 19.0	
	comp=Z,84nm,1.2s						
NKL				AMB	AMB	18 44 19.0	
	comp=Z,300nm,3.0s						
NKL				*e*L		18 47 12.0	
NKL				AMS	AMS	18 49 45.0	
	comp=Z,500nm,16.0s						
NKL				AMS	AMS	18 49 45.0	
	comp=Z,1μm,16.0s						
JOT	Ohata	11.24	240	P	Pn	18 44 28.2	-4.7
JOT				*e*S	Sn	18 46 26.6	-10
JTM	Tenmabayashi	11.61	238	P	Pn	18 44 31.4	-6.5
JOM	Ohasama	12.38	233	P	Pn	18 44 38.4	-10
JOM				*e*S	Sn	18 46 53.4	-12
JMM	Marumori	13.84	229	P	Pn	18 44 57.1	-11
JMM				*e*S	Sn	18 47 27.6	-13
JSD	Sado	15.07	236	P	Pn	18 45 29.2	+4.4
MAT	Matsushiro	16.19	232	P	Pn	18 45 36.9	-2.3
MAT				S	S	18 48 45.0	-4.1
MAT	Matsushiro	16.19	232	P	Pn	18 45 37.8	-1.4
MJAR	Matsushiro Arr	16.19	232	P	Pn	18 45 34.9	-4.4
	comp=Z,0.2nm,0.3s,baz=24,slow=10.0,SNR=5.3						
MJAR				LR	LR	18 51 27.3	
	comp=Z,205nm,21.9s,baz=10.0,slow=35						
MJAR	Matsushiro Arr	16.19	232	P	Pn	18 45 34.9	-4.4
MJAR				LR	LR	18 51 27.2	
JWT	Wachi	18.64	235	P	Pn	18 46 08.9	-0.7
YAK	Yakutsk	19.88	325	*e*P	Pn	18 46 27.0	+2.9
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=Z,64nm,2.8s						
YAK				pmax	pmax		
	comp=E,49nm,1.8s						
YAK				pmax	pmax		
	comp=N,71nm,2.7s						
YAK				MLR	MLR		
	comp=E,173nm,11.0s						
YAK				MLR	MLR		
	comp=N,266nm,14.0s						
YAK				MLR	MLR		
	comp=Z,390nm,12.0s						
YAK	Yakutsk	19.88	325	*e*P	Pn	18 46 22.7	-1.4
	comp=Z,13nm,0.3s						
BILL	Bilibino	21.30	13	⇓*

comp=Z,274nm,19.8s,MS3.9,baz=76,slow=38
TLY Talaya 32.32 296 *e*P pP 18 48 33.6 +2.3
TLY MLR MLR
comp=Z,426nm,18.0s,MS4.2
KTH Kantishna Hill 33.60 42 *e*P **P 18 48 30.7 0.0**
comp=Z,13nm,1.3s,mb4.7
MCK McKinley 34.49 41 *e*P **P 18 48 37.8 -0.6**
MCK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MCK McKinley 34.49 41 *e*P **P 18 48 37.8 -0.6**
comp=Z,5.5nm,1.2s,mb4.4
EGAK Eagle 37.84 39 *e*P **P 18 49 06.0 -0.9**
comp=Z,6.9nm,0.9s,mb4.4
GTA Gaotai 39.46 278 *e*P **P 18 49 21.0 +0.1**
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
INK Inuvik 40.48 33 P **P 18 49 29.6 +0.6**
comp=Z,2.4nm,0.7s,mb4.0,baz=286,slow=8.1,SNR=9.3
INK Inuvik 40.48 33 P **P 18 49 29.6 +0.6**
INK pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 42.58 305 P **P 18 49 45.4 -0.9**
comp=Z,0.5nm,0.4s,mb3.6,baz=64,slow=6.8,SNR=4.3
ZALV PcP PcP 18 51 37.7 -0.1
comp=Z,1.7nm,0.8s,baz=78,slow=2.1,SNR=4.9
ZALV LR LR 19 08 40.0
comp=Z,210nm,19.1s,MS4.0,baz=85,slow=38
ZALV Zalesovo Beam 42.58 305 P **P 18 49 45.4 -0.9**
ZALV 18 51 37.7
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ZALV pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
ZALV MLR MLR
comp=Z,210nm,19.1s,MS4.0
ZALV Zalesovo Beam 42.58 305 P **P 18 49 45.4 -0.9**
ZALV PcP PcP 18 51 37.7 -0.1
ZALV LR LR 19 08 40.0
MKAR Makanchi Array 47.08 297 P **P 18 50 21.0 -1.2**
comp=Z,3.8nm,1.0s,mb4.3,baz=64,slow=8.2,SNR=22
MKAR LR LR 19 11 43.9
comp=Z,188nm,18.0s,MS4.1,baz=42,slow=38
MKAR Makanchi Array 47.08 297 P **P 18 50 21.0 -1.1**
MKAR pmax pmax
comp=Z,4.0nm,1.0s
MKAR MLR MLR
comp=Z,188nm,18.0s
KURK Kurchatov 47.37 303 P **P 18 50 23.7 -0.7**
comp=Z,6.4nm,0.9s,mb4.5,baz=68,slow=8.5,SNR=33
KURK PcP PcP 18 51 54.8 +0.3
comp=Z,1.5nm,0.9s,baz=55,slow=4.5,SNR=4.1
KURK Kurchatov 47.37 303 *de*P **P 18 50 22.3 -2.1**
KURK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KURK Kurchatov 47.37 303 P **P 18 50 23.7 -0.7**
KURK PcP PcP 18 51 54.8 +0.3
YKA Yellowknife Ar 49.76 37 P **P 18 50 42.2 -0.3**
comp=Z,2.0nm,0.8s,mb4.2,baz=297,slow=7.6,SNR=19
YKA PcP PcP 18 52 02.4 -0.5
comp=Z,1.0nm,0.9s,baz=293,slow=3.9,SNR=5.7
YKA Yellowknife Ar 49.76 37 P **P 18 50 42.2 -0.4**
YKA 18 52 02.4
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 49.76 37 P **P 18 50 42.2 -0.3**
YKA PcP PcP 18 52 02.4 -0.5
BVAR Borovoye Array 50.75 309 P **P 18 50 50.2 0.0**
comp=Z,0.8nm,0.4s,mb4.0,baz=64,slow=6.6,SNR=4.1
BVAR PcP PcP 18 52 06.4 -0.2
comp=Z,0.8nm,0.5s,baz=72,slow=4.8,SNR=4.7
BVAR LR LR 19 14 18.9
comp=Z,383nm,18.1s,MS4.5,baz=52,slow=38
BVAR Borovoye Array 50.75 309 P **P 18 50 50.2 0.0**
BVAR 18 52 06.4
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR MLR MLR
comp=Z,383nm,18.1s
BRVK Borovoye 50.78 309 *ce*P **P 18 50 49.9 -0.6**
BRVK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
CMAR Chiang Mai Arr 53.23 256 P **P 18 51 09.5 +0.4**
comp=Z,3.1nm,1.0s,mb4.2,baz=28,slow=7.7,SNR=14
CMAR LR LR 19 15 57.3
comp=Z,96nm,18.4s,MS3.9,baz=50,slow=38
CMAR Chiang Mai Arr 53.23 256 P **P 18 51 09.5 +0.4**
CMAR pmax pmax
comp=Z,3.0nm,1.0s
CMAR MLR MLR
comp=Z,96nm,18.4s
AAK Ala-Archa 53.99 296 P **P 18 51 14.0 -0.3**
comp=Z,0.6nm,0.2s,mb4.1,baz=38,slow=3.5,SNR=4.4
AAK Ala-Archa 53.99 296 *ce*P **P 18 51 14.2 -0.1**
AAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
YBH Yreka Blue Hor 56.72 63 LR LR 19 11 36.9
comp=Z,61nm,18.9s,MS3.7,baz=345,slow=31
ARCES ARCESS Array B 57.15 341 LR LR 19 19 34.0
comp=Z,180nm,20.9s,MS4.2,baz=26,slow=40
ABKAR Akbulak array 58.30 310 *e*P **P 18 51 43.1 -1.9**
comp=Z,1.7nm,0.8s,mb4.1
FFC Flin Flon 59.58 41 *i* P **P 18 51 54.6 +0.8**
SUMG Summit 59.69 4 *e*P **P 18 51 54.8 +0.5**
comp=Z,17nm,0.9s,mb5.1
NVAR Mina Array Bea 61.41 63 P **P 18 52 06.7 +0.1**
comp=Z,0.4nm,0.5s,mb3.8,baz=296,slow=6.8,SNR=5.0
RRI2 Red Ridge 62.30 55 *e*P **P 18 52 12.8 +0.4**
comp=Z,6.4nm,1.0s,mb4.7
KBL Kabul 62.31 292 *e*P **P 18 52 11.3 -1.4**
KBL pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KBL Kabul 62.31 292 *e*P **P 18 52 11.3 -1.4**
comp=Z,5.1nm,1.0s,mb4.6
FINES FINESS Array B 63.44 335 P **P 18 52 19.1 -0.6**
comp=Z,4.1nm,0.9s,mb4.5,baz=41,slow=7.2,SNR=8.6
FINES LR LR 19 23 58.4
comp=Z,174nm,19.5s,MS4.2,baz=314,slow=40
FINES FINESS Array B 63.44 335 P **P 18 52 19.1 -0.6**
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES MLR MLR
comp=Z,174nm,19.5s
PDAR Pinedale Array 63.65 55 P **P 18 52 21.6 +0.2**
comp=Z,1.4nm,0.9s,mb4.0,baz=332,slow=2.2,SNR=9.7
PDAR LR LR 19 17 03.5
comp=Z,48nm,21.9s,MS3.6,baz=154,slow=33
SRU San Rafael 65.55 58 *e*P **P 18 52 33.6 -0.3**
SRU pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
SRU San Rafael 65.55 58 *e*P **P 18 52 33.6 -0.3**
comp=Z,3.1nm,0.9s,mb4.3
NOA NORSAR Array B 67.52 341 P **P 18 52 45.5 -0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=26,slow=6.3,SNR=3.3
NOA LR LR 19 28 33.1
comp=Z,89nm,18.4s,MS4.0,baz=10.0,slow=41
NOA NORSAR Array B 67.52 341 P **P 18 52 45.6 -0.4**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,89nm,18.4s
BORG Borgarnes 67.82 358 LR LR 19 21 56.2
comp=Z,77nm,19.2s,MS3.9,baz=128,slow=35
ZEI Tsey 70.88 313 *e*P **P 18 53 06.6 -0.6**
ZEI pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
AKASG Malin Array Be 71.10 327 P **P 18 53 07.7 -0.6**
comp=Z,0.3nm,0.3s,mb3.8,baz=32,slow=6.6,SNR=4.9
AKASG Malin Array Be 71.10 327 P **P 18 53 07.7 -0.6**
SCHQ Schefferville 72.16 23 LR LR 19 27 32.1
comp=Z,46nm,18.1s,MS3.8,baz=360,slow=38
GNI Garni 72.39 311 LR LR 19 29 01.1
comp=Z,201nm,19.5s,MS4.4,baz=227,slow=39
ASAR Alice Springs 73.34 199 P **P 18 53 20.9 -0.9**
comp=Z,2.1nm,1.0s,mb4.0,baz=11,slow=5.9,SNR=11
ASAR Alice Springs 73.34 199 P **P 18 53 21.0 -0.9**
ASAR pmax pmax
comp=Z,2.0nm,1.0s
STHS Stebnicka Huta 75.00 330 *e*P **P 18 53 32.5 +1.1**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
STHS Stebnicka Huta 75.00 330 *e*P **P 18 53 32.5 +1.1**
KOLS Kolonicke sedl 75.06 329 *e*P **P 18 53 31.5 -0.3**
KOLS pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
KOLS Kolonicke sedl 75.06 329 *e*P **P 18 53 31.5 -0.3**
KOLS *ep*P pP 18 53 41.7 -2.9
BUR08 Bucovina Ar. S 75.11 327 *e*P **P 18 53 32.3 +0.2**
BURAR Bucovina Array 75.13 327 ⇓P **P 18 53 33.0 +0.8**
BURAR Bucovina Array 75.13 327 ⇓*i*P **P 18 53 33.0 +0.8**
OKC Ostrava-Krasne 75.64 332 AMS AMS 19 32 10.0
comp=Z,200nm,21.3s
DPC Dobruska-Polom 75.75 334 *e*P **P 18 53 36.5 +0.8**
DPC MLR MLR
comp=Z,200nm,17.4s,MS4.5
DPC Dobruska-Polom 75.75 334 *e*P **P 18 53 36.5 +0.8**
DPC AMS AMS 19 32 30.0
comp=Z,200nm,17.4s
CLL Collm 75.85 336 *e*P **P 18 53 35.7 -0.6**
comp=Z,8.0nm,0.9s,mb4.7
CLL Collm 75.85 336 *i* P **P 18 53 35.7 -0.6**
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLL MLR MLR
comp=Z,100nm,20.5s,MS4.1
CLL Collm 75.85 336 *i* P **P 18 53 35.7 -0.6**
comp=Z,8.0nm,0.9s,mb4.7
CLL *i* 18 53 39.3
CLL LR LR 18 53 39.3
comp=Z,100nm,20.5s,MS4.1
CLL Collm 75.85 336 *i* P **P 18 53 35.7 -0.6**
comp=Z,8.0nm,0.9s,mb4.7
CLL *i* 18 53 39.3
CLL *e* 18 53 42.0
MORC Moravsky Berou 75.88 333 ⇓P **P 18 53 36.8 +0.3**
MORC Moravsky Berou 75.88 333 ⇓*i*P **P 18 53 36.8 +0.3**
BRG Berggiesshubel 75.97 335 *e*P **P 18 53 37.4 +0.4**
comp=Z,7.0nm,0.2s,mb5.2
BRG Berggiesshubel 75.97 335 *e*(P) **P 18 53 37.5 +0.5**
comp=Z,3.0nm,0.8s,mb4.3
BRG *e* 18 53 43.4
comp=Z,4.2nm,1.1s
BRG
comp=N,84nm,14.0s
BRG
comp=E,75nm,16.5s
BRG
comp=Z,160nm,24.1s
BRG Berggiesshubel 75.97 335 *e*P **P 18 53 37.5 +0.5**
BRG *e* 18 53 43.4
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BRG MLR MLR
comp=N,50nm,14.0s,MS4.1
BRG MLR MLR
comp=E,45nm,16.5s,MS4.1
BRG MLR MLR
comp=Z,96nm,24.1s
VRI Vrincioaia 76.03 325 ⇓P **P 18 53 39.2 +1.8**
VRI Vrincioaia 76.03 325 ⇓*i*P **P 18 53 39.2 +1.8**
KECS Kecovo 76.06 330 *e*P **P 18 53 37.0 -0.5**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KECS Kecovo 76.06 330 *e*P **P 18 53 37.0 -0.5**
CLZ Clausthal 76.06 338 *e*P **P 18 53 37.9 +0.4**
comp=Z,28nm,1.9s,mb4.9
CLZ Clausthal 76.06 338 *e*P **P 18 53 37.9 +0.4**
CLZ pmax pmax
comp=Z,28nm,1.9s,mb4.9
PVCC Panska Ves 76.11 335 AMS AMS 19 30 30.0
comp=Z,100nm,13.3s
TXAR Lajitas Array 76.45 61 P **P 18 53 39.6 -0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=293,slow=3.6,SNR=22
TXAR Lajitas Array 76.45 61 P **P 18 53 39.6 -0.5**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
VRAC Vranov 76.59 333 ⇑P **P 18 53 41.6 +1.1**
VRAC Vranov 76.59 333 ⇑*i*P **P 18 53 41.6 +1.1**
VYHS Vyhne 76.59 331 *e*P **P 18 53 40.6 +0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
VYHS Vyhne 76.59 331 *e*P **P 18 53 40.6 +0.1**
VYHS *ep*P pP 18 53 49.4 -3.9
PRU Pruhonice 76.60 334 *e*P **P 18 53 41.8 +1.3**
PRU MLR MLR
comp=Z,200nm,11.1s,MS4.7
PRU Pruhonice 76.60 334 *e*P **P 18 53 41.8 +1.3**
PRU AMS AMS 19 30 40.0
comp=Z,200nm,11.1s
MLR Muntele Rosu 76.64 325 ⇓P **P 18 53 42.4 +1.5**
MLR Muntele Rosu 76.64 325 ⇓*i*P **P 18 53 42.4 +1.5**
MOX Moxa 76.82 337 *e*P **P 18 53 42.1 +0.3**
comp=Z,6.0nm,1.0s,mb4.5
MOX Moxa 76.82 337 *e*P **P 18 53 42.2 +0.4**
comp=Z,4.0nm,0.9s,mb4.3
MOX Moxa 76.82 337 *e*P **P 18 53 42.1 +0.3**
MOX pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TREC Trest 76.94 334 AMS AMS 19 33 00.0
comp=Z,300nm,16.3s
NKC Novy Kostel 76.97 336 AMS AMS 19 35 30.0
comp=Z,100nm,12.2s
VOIR 77.03 326 ⇑P **P 18 53 44.1 +1.0**
VOIR 77.03 326 ⇑*i*P **P 18 53 44.1 +1.0**
ROTZ Rotzenmuhle 77.46 336 *e*P **P 18 53 45.4 0.0**
comp=Z,7.0nm,1.0s,mb4.5
KHC Kasperske Hory 77.64 335 *e*P **P 18 53 46.7 +0.3**
KHC *e**PP pP 18 53 50.9 -8.3
KHC MLR MLR
comp=Z,200nm,19.0s,MS4.5
KHC Kasperske Hory 77.64 335 *e*P **P 18 53 46.5 +0.1**
comp=Z,8.6nm,0.9s,mb4.7
KHC Kasperske Hory 77.64 335 *e*P **P 18 53 46.7 +0.3**
KHC *ep*P pP 18 53 50.9 -8.3
KHC AMS AMS 19 31 30.0
comp=Z,200nm,19.0s
GRA1 Grafenberg Arr 77.80 336 *e*P **P 18 53 47.5 +0.2**
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 77.80 336 *e*P **P 18 53 47.5 +0.2**
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 77.80 336 *e*P **P 18 53 47.5 +0.2**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GRF Grafenberg Arr 77.80 336 *e*P **P 18 53 47.5 +0.2**
GRF pmax pmax
comp=Z,18nm,0.9s,mb5.0
WET Wettzell 77.83 335 *e*P **P 18 53 47.8 +0.3**
comp=Z,8.0nm,0.9s,mb4.7
WET Wettzell 77.83 335 *e*P **P 18 53 47.8 +0.3**
WET pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GERES GERESS Array B 77.86 334 P **P 18 53 47.2 -0.4**
comp=Z,2.3nm,0.9s,mb4.1,baz=41,slow=4.3,SNR=13
GERES LR LR 19 32 15.1
comp=Z,192nm,18.2s,MS4.5,baz=286,slow=39
GERES GERESS Array B 77.86 334 P **P 18 53 47.2 -0.5**
GERES pmax pmax
comp=Z,2.0nm,0.9s
GERES MLR MLR
comp=Z,192nm,18.2s
TNS Taunus Mts 78.03 338 *e*P **P 18 53 48.9 +0.3**
comp=Z,20nm,1.4s,mb4.8
TNS Taunus Mts 78.03 338 *e*P **P 18 53 48.9 +0.3**
TNS pmax pmax
comp=Z,20nm,1.4s,mb4.8
CONA Conrad Observa 78.03 333 ⇑*i*P **P 18 53 49.2 +0.6**
comp=Z,7.5nm,1.1s,mb4.5
BRTR Keskin Array B 78.12 317 P **P 18 53 49.8 +0.5**
comp=Z,3.5nm,0.9s,mb4.3,baz=56,slow=3.3,SNR=21
BRTR LR LR 19 37 15.8
comp=Z,50nm,18.5s,MS3.9,baz=229,slow=42
BRTR Keskin Array B 78.12 317 *i* P **P 18 53 49.7 +0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BZS Buzias 78.14 328 ⇓P **P 18 53 49.1 -0.1**
BZS Buzias 78.14 328 ⇓*i*P **P 18 53 49.1 -0.1**
MIB Mutribah 78.71 302 *e*P **P 18 53 51.9 -0.8**
MIB AMb AMB 18 53 53.7
comp=Z,34nm,0.9s,mb5.2
NAY Al-Naaiem 79.18 302 *e*P **P 18 53 54.2 -1.0**
NAY AMb AMB 18 53 56.2
comp=Z,19nm,1.0s,mb5.0
BAIF Baives 79.19 341 *e*P **P 18 53 54.8 -0.1**
comp=Z,22nm,1.2s,mb4.7
BAIF Baives 79.19 341 *e*P **P 18 53 54.8 -0.1**
BAIF pmax pmax
comp=Z,11nm,1.2s,mb4.7
BAIF Baives 79.19 341 *e*P **P 18 53 54.8 -0.1**
comp=Z,11nm,1.2s,mb4.7
RDF Al-Radifah 79.24 301 *e*P **P 18 53 55.4 -0.2**
RDF AMb AMB 18 53 56.9
comp=Z,58nm,1.2s,mb5.4
SOKA Soboth 79.41 333 ⇑*i*P **P 18 53 56.4 +0.2**
comp=Z,8.6nm,1.1s,mb4.6
KBA Koelnbreinsper 79.56 334 ⇓*i*P **P 18 53 57.8 +0.8**
comp=Z,14nm,0.8s,mb5.0
BFO Black Forest 79.81 338 *e*P **P 18 53 58.7 +0.4**
comp=Z,6.0nm,0.9s,mb4.5
BFO Black Forest 79.81 338 *e*P **P 18 53 58.7 +0.4**
BFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
WTTA Wattenberg 79.89 335 ⇑*i*P **P 18 53 59.6 +0.8**
comp=Z,14nm,0.8s,mb4.9
MOTA Moosalm 79.97 335 ⇑*i*P **P 18 53 59.5 +0.3**
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 80.00 338 *e*P **P 18 53 59.3 -0.1**
comp=Z,13nm,1.0s,mb4.5
CDF Champ du Feu 80.00 338 *e*P **P 18 53 59.3 -0.1**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CDF Champ du Feu 80.00 338 *e*P **P 18 53 59.3 -0.1**
comp=Z,6.7nm,1.0s,mb4.5
MEZF Maizieres J'vi 80.46 340 *e*P **P 18 54 02.0 +0.2**
HAU Haudompre 80.61 339 *e*P **P 18 54 02.3 -0.4**
comp=Z,16nm,1.1s,mb4.6
HAU *e*MLR MLR
comp=Z,156nm,22.8s,MS4.0
HAU Haudompre 80.61 339 *e*P **P 18 54 02.3 -0.4**
HAU pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
HAU MLR MLR
comp=Z,160nm,22.8s,MS4.3
HAU Haudompre 80.61 339 *e*P **P 18 54 02.3 -0.4**
comp=Z,8.1nm,1.1s,mb4.6
HAU LR LR
comp=Z,160nm,22.8s,MS4.3
HINF Hinteralfeld 80.66 338 *e*P **P 18 54 02.5 -0.4**
comp=Z,13nm,1.0s,mb4.5
HINF Hinteralfeld 80.66 338 *e*P **P 18 54 02.5 -0.4**
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
HINF Hinteralfeld 80.66 338 *e*P **P 18 54 02.5 -0.4**
comp=Z,6.3nm,1.0s,mb4.5
TAOE Nuku Hiva Isla 80.74 114 *e*LR LR 19 19 25.7
comp=Z,168nm,24.6s
LOR Lormes 81.89 340 *e*P **P 18 54 09.3 -0.2**
comp=Z,17nm,1.0s,mb4.6
LOR *e*MLR MLR
comp=Z,121nm,22.5s,MS3.9
LOR Lormes 81.89 340 *e*P **P 18 54 09.3 -0.2**
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
LOR Lormes 81.89 340 *e*P **P 18 54 09.3 -0.2**
comp=Z,8.4nm,1.0s,mb4.6
CABF La Chapelle 81.97 338 *e*P **P 18 54 10.0 +0.1**
SSF Saint Saulge 82.17 340 *e*P **P 18 54 10.7 -0.2**
PPT Papeete 82.21 127 *e*LR LR 19 19 56.1
comp=Z,132nm,21.5s
ROSF Rostrenen 82.32 345 *e*P **P 18 54 11.8 +0.1**
comp=Z,48nm,1.2s,mb5.0
ROSF Rostrenen 82.32 345 *e*P **P 18 54 11.8 +0.1**
ROSF pmax pmax
comp=Z,24nm,1.2s,mb5.0
ROSF Rostrenen 82.32 345 *e*P **P 18 54 11.8 +0.1**
comp=Z,24nm,1.2s,mb5.0
AVF Avril sur Loir 82.46 340 *e*P **P 18 54 12.4 -0.1**
comp=Z,15nm,1.0s,mb4.6
AVF Avril sur Loir 82.46 340 *e*P **P 18 54 12.4 -0.1**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
AVF Avril sur Loir 82.46 340 *e*P **P 18 54 12.4 -0.1**
comp=Z,7.5nm,1.0s,mb4.6
SMF Signal de Mont 82.48 340 *e*P **P 18 54 12.6 0.0**
comp=Z,30nm,1.2s,mb4.8
SMF Signal de Mont 82.48 340 *e*P **P 18 54 12.6 0.0**
SMF pmax pmax
comp=Z,15nm,1.2s,mb4.8
SMF Signal de Mont 82.48 340 *e*P **P 18 54 12.6 0.0**
comp=Z,15nm,1.2s,mb4.8
ASF Jabal al Asfar 82.57 310 LR LR 19 34 55.8
comp=Z,76nm,20.5s,MS4.0,baz=260,slow=38
MMAI Mount Meron Ar 82.65 312 P **P 18 54 14.6 +0.8**
comp=Z,7.1nm,0.9s,mb4.7,baz=1.4,slow=6.7,SNR=7.2
MMAI LR LR 19 36 17.9
comp=Z,160nm,18.9s,MS4.4,baz=35,slow=40
LPL La Plagne 82.83 338 *e*P **P 18 54 15.2 +0.8**
comp=Z,14nm,1.0s,mb4.7
LPL La Plagne 82.83 338 *e*P **P 18 54 15.2 +0.8**
LPL pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
LPL La Plagne 82.83 338 *e*P **P 18 54 15.2 +0.8**
comp=Z,7.2nm,1.0s,mb4.7
LPG La Plagne 82.84 337 *e*P **P 18 54 15.3 +0.8**
comp=Z,18nm,1.0s,mb4.7
LPG La Plagne 82.84 337 *e*P **P 18 54 15.3 +0.8**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
LPG La Plagne 82.84 337 *e*P **P 18 54 15.3 +0.8**
comp=Z,9.1nm,1.0s,mb4.8
TCF Toulx Ste Croi 83.19 341 *e*P **P 18 54 16.3 0.0**
comp=Z,9.5nm,0.9s,mb4.5
TCF Toulx Ste Croi 83.19 341 *e*P **P 18 54 16.3 0.0**
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
TCF Toulx Ste Croi 83.19 341 *e*P **P 18 54 16.3 0.0**
comp=Z,4.8nm,0.9s,mb4.5
MBDF Montbardon 83.55 337 *e*P **P 18 54 18.3 +0.1**
comp=Z,13nm,1.0s,mb4.7
MBDF Montbardon 83.55 337 *e*P **P 18 54 18.3 +0.1**
MBDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
MBDF Montbardon 83.55 337 *e*P **P 18 54 18.3 +0.1**
comp=Z,6.5nm,1.0s,mb4.7
ORIF Oris-en-Rattie 83.61 338 *e*P **P 18 54 19.1 +0.7**
comp=Z,12nm,0.8s,mb4.7
ORIF *e*MLR MLR
comp=Z,144nm,22.8s,MS4.0
ORIF Oris-en-Rattie 83.61 338 *e*P **P 18 54 19.1 +0.7**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 83.61 338 *e*P **P 18 54 19.1 +0.7**
comp=Z,5.8nm,0.8s,mb4.8
VIVF Saint-Julien-l 83.97 339 *e*P **P 18 54 20.6 +0.3**
SMRF Simiane la Rot 84.56 338 *e*P **P 18 54 22.7 -0.6**
comp=Z,21nm,1.2s,mb4.8
SMRF Simiane la Rot 84.56 338 *e*P **P 18 54 22.7 -0.6**
comp=Z,21nm,1.2s,mb5.1
LMR La Mourre 84.92 337 *e*P **P 18 54 25.0 -0.1**
comp=Z,27nm,1.1s,mb5.0
LMR La Mourre 84.92 337 *e*P **P 18 54 25.0 -0.1**
LMR pmax pmax
comp=Z,13nm,1.1s,mb5.0
LMR La Mourre 84.92 337 *e*P **P 18 54 25.0 -0.1**
comp=Z,13nm,1.1s,mb5.0
PGF Pioggiola 84.96 335 *e*P **P 18 54 24.9 -0.4**
EIL Elat 85.56 310 LR LR 19 35 42.0
comp=Z,101nm,19.7s,MS4.2,baz=220,slow=38
VAE Valguarnera 87.85 329 LR LR 19 38 41.7
comp=Z,103nm,19.7s,MS4.2,baz=314,slow=39
KEST Kesra 91.12 332 LR LR 19 40 03.4
comp=Z,43nm,20.4s,MS3.9,baz=271,slow=38

DJA 19 18:43:44,1.77N×99.09E,h21km,MLv3.2/7,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.28**	**333**	P	Pb	18 43 52.0	+1.5
MNSI	**Mandailing Nat**	**1.08**	**153**	P	Pn	18 43 55.1	-8.9
MNSI				S	Sb	18 44 10.3	-7.5
GSI	**Gunungsitoli**	**1.58**	**253**	P	Pn	18 44 09.7	-1.1
GSI				S	Sn	18 44 31.4	+0.7
BKNI	**Bangkinang**	**2.42**	**126**	P	Pn	18 44 20.0	-2.4
BKNI				S	Sn	18 44 51.9	+0.5
PPI	**Padang Panjang**	**2.57**	**149**	P	Pn	18 44 23.4	-1.0
PDSI	**Padang**	**3.00**	**153**	P	Pn	18 44 33.5	+3.2
SISI	**Saibi**	**3.08**	**180**	P	Pn	18 44 32.8	+1.4
IPM	**Ipoh**	**3.31**	**36**	P	Pn	18 44 35.9	+1.2
SDSI	**Sungai Dareh**	**3.56**	**139**	P	Pn	18 44 39.5	+1.4
SDSI				S	Sn	18 45 23.0	+3.5

ISK **19** *18:56:23.3,36.21N×30.00E,h23km,MD2.9*

*ISCJB **19** 18:56:25.8±1.1, 36°.35N±0°.06×30°.01E±0°.07, h49km±8km, Error ellipse: s-maj=11.9km s-min=7.9km az=143.1*
*CSEM **19** 18:56:26.3±0.4, 36°.37N×29°.94E, h33km±3km, MD3.0, Error ellipse: s-maj=9.6km s-min=6.5km az=151.0*
*DDA **19** 18:56:27.9, 36°.48N×29°.95E, h10km±9km, Md3.0*
ISC 19 18:56:26.5±1.1, 36°.35N±0°.06×30°.01E±0°.07, h42km±11km, n29, σ0.90/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.34**	**251**	*i* P	**Pn**	**18 56 34.8**	**-0.6**
AKAS				*i* S	**Sn**	**18 56 42.2**	**+0.5**
AKAS	**Kas**	**0.34**	**251**	*i* P	**Pn**	**18 56 34.8**	**-0.6**
AKAS				*i* S	**Sn**	**18 56 42.2**	**+0.6**
ELL	**Elmali**	**0.41**	**349**	*e*PG	**Pn**	**18 56 34.7**	**-1.5**
ELL				*e*SG	**Sn**	**18 56 43.2**	**+0.3**
ELL	**Elmali**	**0.41**	**349**	*e*Pg	**Pn**	**18 56 34.7**	**-1.5**
ELL				*e*Sg	**Sn**	**18 56 43.3**	**+0.3**
KORT	**Korkueli**	**0.71**	**23**	*i* P	**Pn**	**18 56 39.9**	**-0.2**
KORT				*i* S	**Sn**	**18 56 49.5**	**-0.3**
KORT	**Korkueli**	**0.71**	**23**	*i* P	**Pn**	**18 56 39.9**	**-0.2**
KORT				*i* S	**Sn**	**18 56 49.5**	**-0.4**
FETY	**Fethiye**	**0.80**	**291**	*e*PG	**Pn**	**18 56 41.0**	**-0.2**
FETY				*e*SG	**Sn**	**18 56 52.8**	**+0.7**
FETY	**Fethiye**	**0.80**	**291**	*e*Pg	**Pn**	**18 56 41.1**	**-0.2**
FETY				*e*Sg	**Sn**	**18 56 52.8**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.91**	**333**	*e*PG	**Pn**	**18 56 42.5**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.91**	**333**	*e*Pg	**Pn**	**18 56 42.5**	**-0.3**
GOLH	**Golhisar**	**0.96**	**338**	*i* P	**Pn**	**18 56 43.1**	**-0.4**
GOLH				*i* S	**Sn**	**18 56 56.2**	**+0.3**
GOLH	**Golhisar**	**0.96**	**338**	*i* P	**Pn**	**18 56 43.1**	**-0.4**
GOLH				*i* S	**Sn**	**18 56 56.2**	**+0.3**
TURN	**Turunc**	**1.25**	**295**	*i* P	**Pn**	**18 56 50.4**	**+3.0**
TURN				*i* S	**Sn**	**18 57 09.9**	**+6.9**
SUTC	**Sutluce-Ispart**	**1.38**	**35**	*e*Pn	**Pn**	**18 56 50.0**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.38**	**35**	*e*Pn	**Pn**	**18 56 50.0**	**+0.8**
DNZL	**Cakiroluk**	**1.55**	**330**	*i* P	**Pn**	**18 56 52.3**	**+0.8**
DNZL				*i* S	**Sn**	**18 57 11.2**	**+0.8**
DNZL	**Cakiroluk**	**1.55**	**330**	*i* P	**Pn**	**18 56 52.3**	**+0.8**
DNZL				*i* S	**Sn**	**18 57 11.1**	**+0.7**
YER	**Yerkesik**	**1.59**	**300**	*e*PN	**Pn**	**18 56 51.1**	**-1.1**
YER	**Yerkesik**	**1.59**	**300**	*e*Pn	**Pn**	**18 56 51.1**	**-1.1**
DENT	**Denizli**	**1.61**	**331**	*e*PN	**Pn**	**18 56 52.5**	**+0.2**
DENT	**Denizli**	**1.61**	**331**	*e*Pn	**Pn**	**18 56 52.5**	**+0.1**
DAT	**Datca**	**1.99**	**282**	*e*PN	**Pn**	**18 56 56.0**	**-1.7**
DAT	**Datca**	**1.99**	**282**	*e*Pn	**Pn**	**18 56 56.0**	**-1.7**
KHL	**Karahalli**	**2.01**	**349**	*e*PN	**Pn**	**18 56 58.4**	**+0.5**
KHL	**Karahalli**	**2.01**	**349**	*e*Pn	**Pn**	**18 56 58.4**	**+0.5**
KHAL	**Karahalli**	**2.06**	**349**	*i* P	**Pn**	**18 56 59.1**	**+0.5**
KHAL				*i* S	**Sn**	**18 57 21.4**	**-1.7**
KHAL	**Karahalli**	**2.06**	**349**	*i* P	**Pn**	**18 56 59.1**	**+0.5**
KHAL				*i* S	**Sn**	**18 57 21.4**	**-1.7**
KDHN	**Kadinhani**	**2.74**	**37**	*i* P	**Pn**	**18 57 08.9**	**+0.9**
KDHN	**Kadinhani**	**2.74**	**37**	*i* P	**Pn**	**18 57 08.9**	**+0.9**

*ISCJB **19** 19:02:55.1±0.8, 31°.66S±0°.05×178°.95W±0°.10, h127km±7km, mb4.9/33, Error ellipse: s-maj=14.3km s-min=7.2km az=24.3*
*BJI **19** 19:02:55.4, 31°.04S×178°.55W, h132km, mB5.1/11, mb5.1/15*
*NEIC **19** 19:02:57.0±1.2, 31°.55S×178°.89W, h136km±10km, mb5.0/15, Error ellipse: s-maj=14.0km s-min=10.4km az=128.0*
*IDC **19** 19:02:59.2±1.2, 31°.40S×178°.93W, h151km±10km, mb4.2/14, mb1 4.4/15, mb1mx4.3/20, mbtmp4.2/15, MS4.5/2, Ms1 4.5/2, ms1mx3.4/20, Error ellipse: s-maj=14.7km s-min=12.2km az=137.0*
ISC 19 19:02:56.2±0.8, 31°.66S±0°.05×178°.89W±0°.10, h126km±6km, h143km±1.8km: pP-P, n122, σ1.9/34/71, mb4.9/33, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.54**	**19**	P	**Pn**	**19 03 38.0**	**+1.2**
	77nm,0.3s,baz=90,slow=20,SNR=4.2						
RAO				LR	LR	19 03 59.6	
	comp=Z,23μm,18.7s,baz=140,slow=26						
RAO				S	**Sn**	**19 04 08.1**	**+1.8**
	642nm,0.3s,baz=126,slow=23,SNR=7.2						
RAO	**Raoul Island**	**2.54**	**19**	*e*P	**Pn**	**19 03 36.9**	**+0.1**
RAO				*e*S	**Sn**	**19 04 07.6**	**+1.3**
URZ	**Urewera**	**7.36**	**205**	P	**Pn**	**19 04 40.6**	**-0.4**
	10.0nm,0.3s,baz=97,slow=16,SNR=26						
URZ				S	**Sn**	**19 06 01.3**	**-1.7**
	47nm,0.3s,baz=140,slow=21,SNR=11						
URZ	**Urewera**	**7.36**	**205**	*e*P	**Pn**	**19 04 40.3**	**-0.7**
	60nm,0.3s						
KHZ	**Kahutara**	**12.32**	**207**	*e*P	**Pn**	**19 05 41.9**	**-5.4**
	38nm,0.4s						
RPZ	**Rata Peaks**	**14.42**	**211**	P	**Pn**	**19 06 07.5**	**-6.8**
	0.7nm,0.3s,baz=168,slow=19,SNR=5.9						
RPZ				S	**Sn**	**19 08 39.8**	**-14**
	2.4nm,0.3s,baz=107,slow=3.8,SNR=9.5						
RPZ	**Rata Peaks**	**14.42**	**211**	*e*P	**Pn**	**19 06 17.2**	**+2.9**
	36nm,0.5s						
RPZ				S	**Sn**	**19 08 39.8**	**-14**
DZM	**Mont Dzumac**	**16.19**	**303**	*e*P	**Pn**	**19 06 40.5**	**+3.9**
	46nm,0.9s						
ARMA	**Armidale**	**25.26**	**265**	*e*P	**P**	**19 08 14.5**	**+3.8**
ARMA	**Armidale**	**25.26**	**265**	*e*P	**P**	**19 08 14.3**	**+3.5**
	12nm,0.6s,mb4.5						
CNB	**Canberra Magne**	**26.67**	**253**	*e*P	**P**	**19 08 26.5**	**+3.1**
EIDS	**Eidsvold**	**27.07**	**276**	*e*P	**P**	**19 08 28.7**	**+1.7**
	29nm,1.2s,mb4.7						
MOO	**Moorlands**	**28.96**	**239**	*e*P	**P**	**19 08 46.1**	**+2.4**
TOO	**Toolangi**	**29.78**	**249**	*e*P	**P**	**19 08 53.8**	**+2.8**
CTA	**Charters Tower**	**33.28**	**282**	*e*P	**P**	**19 09 23.7**	**+1.9**
	70nm,0.8s,mb5.5						
CTA	**Charters Tower**	**33.28**	**282**	P	**P**	**19 09 23.6**	**+1.8**
	60nm,0.4s,mb5.8,baz=109,slow=10,SNR=143						
CTAO	**Charters Tower**	**33.28**	**282**	*e*P	**P**	**19 09 23.6**	**+1.7**
	86nm,0.7s,mb5.7						
STKA	**Stephens Creek**	**33.47**	**259**	*e*P	**P**	**19 09 25.5**	**+2.1**
	44nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**33.47**	**259**	P	**P**	**19 09 25.6**	**+2.2**
	41nm,0.6s,mb5.5,baz=98,slow=9.7,SNR=110						
STKA	**Stephens Creek**	**33.47**	**259**	*e*P	**P**	**19 09 25.3**	**+1.9**
	14nm,0.9s,mb4.8						
COEN	**Coen**	**38.91**	**288**	*e*P	**P**	**19 10 10.8**	**+1.0**
	434nm,0.8s						
ASAR	**Alice Springs**	**42.30**	**269**	P	**P**	**19 10 37.9**	**+0.3**
	66nm,0.7s,mb5.5,baz=108,slow=7.6,SNR=1309						
ASAR				ScP	ScP	19 16 03.4	-4.6
	1.2nm,0.6s,baz=112,slow=3.7,SNR=4.6						
WRAB	**Tennant Creek**	**43.40**	**274**	P	**P**	**19 10 46.0**	**-0.5**
	2μm,0.4s						
WRAB	**Tennant Creek**	**43.40**	**274**	*e*P	**P**	**19 10 46.3**	**-0.2**
	164nm,0.6s,mb5.9						
FORT	**Forrest**	**45.00**	**257**	*e*P	**P**	**19 10 58.8**	**-0.4**
	22nm,0.5s,mb5.1						
FORT	**Forrest**	**45.00**	**257**	*e*P	**P**	**19 10 58.6**	**-0.6**
	18nm,0.6s,mb5.0						
SBA	**Scott Base**	**46.73**	**184**	*e*P	**P**	**19 11 16.6**	**+4.5**
	6.9nm,0.6s,mb4.6						
SBA				*e*PcP	PcP	19 12 45.3	+1.9
KAKA	**Kakadu**	**48.42**	**282**	*e*P	**P**	**19 11 24.1**	**-1.8**
	21nm,0.4s,mb5.3						
KAKA	**Kakadu**	**48.42**	**282**	*e*P	**P**	**19 11 23.9**	**-2.0**
	63nm,0.5s,mb5.7						
FITZ	**Fitzroy Crossi**	**51.61**	**271**	*e*P	**P**	**19 11 49.3**	**-0.7**
	17nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.61**	**271**	P	**P**	**19 11 49.7**	**-0.3**
	4.8nm,0.4s,mb4.9,baz=134,slow=3.5,SNR=51						
FITZ	**Fitzroy Crossi**	**51.61**	**271**	*e*P	**P**	**19 11 49.6**	**-0.4**
	14nm,0.9s,mb5.0						
KLBR	**Kellerberrin**	**53.23**	**252**	*e*P	**P**	**19 12 00.7**	**-1.1**
	38nm,1.1s,mb5.3						
NWAO	**Narrogin (SRO)**	**53.25**	**250**	P	**P**	**19 12 00.7**	**-1.2**
	6.9nm,0.7s,mb4.8,baz=99,slow=8.1,SNR=7.7						
NWAO	**Narrogin (SRO)**	**53.25**	**250**	*e*P	**P**	**19 12 00.2**	**-1.8**
CASY	**Casey**	**53.68**	**208**	*e*P	**P**	**19 12 04.3**	**-0.2**
CASY	**Casey**	**53.68**	**208**	*e*P	**P**	**19 12 03.9**	**-0.6**
	14nm,0.5s,mb5.2						
MBWA	**Marble Bar**	**55.34**	**265**	*e*P	**P**	**19 12 15.8**	**-1.5**
QSPA	**South Pole Qui**	**58.46**	**180**	P	**P**	**19 12 41.6**	**+3.3**
	78nm,0.7s,mb5.9,baz=40,slow=2.0,SNR=95						
QSPA	**South Pole Qui**	**58.46**	**180**	P	**P**	**19 12 41.6**	**+3.3**
KAPI	**Kappang**	**63.09**	**281**	P	**P**	**19 13 09.2**	**-1.5**
	6.8nm,0.5s,mb4.8,baz=146,slow=7.3,SNR=3.7						
MAW	**Mawson**	**70.87**	**201**	*e*P	**P**	**19 13 59.4**	**+0.4**
	4.0nm,0.6s,mb4.4						
MAW	**Mawson**	**70.87**	**201**	P	**P**	**19 13 59.5**	**+0.5**
	6.7nm,0.8s,mb4.5,baz=138,slow=8.8,SNR=11						
SYO	**Syowa Base**	**75.72**	**193**	*e*P	**P**	**19 14 26.0**	**-1.4**
VNA2	**Neumayer--Watz**	**77.53**	**177**	*e*P	**P**	**19 14 38.1**	**+0.5**
VNA2				*e*		19 14 41.6	
VNA2				*e*		19 36 53.0	
VNA1	**Neumayer--Stat**	**77.76**	**177**	*e*P	**P**	**19 14 40.0**	**+1.1**
VNA1				*e*		19 14 43.5	
VNA1				*e*		19 36 55.6	
MJAR	**Matsushiro Arr**	**78.85**	**326**	P	**P**	**19 14 44.2**	**-1.0**
	1.6nm,0.9s,mb3.9,baz=178,slow=3.2,SNR=3.5						
PLCA	**Paso Flores**	**82.21**	**133**	P	**P**	**19 15 05.9**	**+2.5**
	2.3nm,0.9s,mb4.0,baz=270,slow=3.0,SNR=2.7						
KSRS	**Korea Array**	**84.81**	**320**	P	**P**	**19 15 16.7**	**+0.2**
	5.1nm,0.8s,mb4.5,baz=139,slow=5.5,SNR=16						
NJ2	**Nanjing**	**86.49**	**311**	*e*P	**P**	**19 15 24.8**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
PETK	**Petropavlovsk-**	**86.84**	**346**	P	**P**	**19 15 23.9**	**-2.1**
	comp=Z,4.4nm,0.7s,mb4.5,baz=109,slow=6.3,SNR=7.2						
PETK	**Petropavlovsk-**	**86.84**	**346**	P	**P**	**19 15 23.9**	**-2.1**
MDJ	**Mudanjiang**	**89.23**	**326**	P	**P**	**19 15 36.9**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,77nm,4.4s						
CHGN	**Chignik**	**89.33**	**11**	*e*P	**P**	**19 15 35.9**	**-1.8**
YBH	**Yreka Blue Hor**	**89.49**	**38**	P	**P**	**19 15 38.8**	**0.0**
	comp=Z,1.8nm,0.9s,mb4.1,baz=69,slow=3.4,SNR=4.1						
NVAR	**Mina Array Bea**	**89.67**	**43**	P	**P**	**19 15 41.0**	**+1.1**
	comp=Z,2.4nm,0.9s,mb4.3,baz=222,slow=8.3,SNR=13						
NVAR				pP	pP	19 16 18.5	+6.3
	comp=Z,2.2nm,1.0s,baz=221,slow=8.9,SNR=6.2						
CN2	**Changchun**	**90.69**	**323**	*e*P	**P**	**19 15 43.0**	**-1.4**
CN2				*es*P	sP	19 16 33.9	+3.9
CN2				*e*PP	PP	19 19 23.9	+2.0
CN2				*e*S	S	19 26 26.4	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
OHAK	**Old Harbor**	**91.14**	**14**	*e*P	**P**	**19 15 45.9**	**-0.2**
	comp=Z,13nm,1.3s,mb4.9						
GYA	**Guiyang**	**91.52**	**300**	P	**P**	**19 15 48.8**	**+0.1**
GYA				pP	pP	19 16 24.3	+3.2
GYA				sP	sP	19 16 40.8	+6.5
GYA				PP	PP	19 19 31.3	+2.5
GYA				SKS		19 26 06.4	
GYA				S	S	19 26 34.8	-3.1
GYA				sS	sS	19 27 40.0	+6.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
ENH	**Enshi**	**91.69**	**305**	*e*P	**P**	**19 15 48.0**	**-1.4**
KDAK	**Kodiak Island**	**91.80**	**14**	P	**P**	**19 15 48.3**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.7						
CMAR	**Chiang Mai Arr**	**93.10**	**290**	P	**P**	**19 15 56.1**	**-0.1**
	comp=Z,0.7nm,0.9s,mb4.0,baz=168,slow=6.2,SNR=3.9						
CMAR				PP	PP	19 19 41.0	-0.4
	comp=Z,1.0nm,0.7s,baz=140,slow=5.9,SNR=5.1						
CMAR				PKKPbc	PKKPbc	19 33 11.8	+7.9
	comp=Z,0.6nm,0.6s,baz=278,slow=4.3,SNR=5.3						
BJI	**Beijing**	**93.29**	**316**	P	**P**	**19 15 56.8**	**+0.3**
BJI				S	S	19 26 51.3	-1.7
BJI				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.6						
BJI				pmax	pmax		
	comp=Z,78nm,6.2s						
BJI				LR	LR		
	comp=N,130nm,28.2s						
BJI				LR	LR		
	comp=E,110nm,28.4s						
BJI				LR	LR		
	comp=Z,48nm,20.2s						
KMI	**Kunming**	**93.71**	**297**	P	**P**	**19 15 59.8**	**+0.9**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
NNA	**Nana**	**93.80**	**106**	LR	LR	19 50 55.9	
	comp=Z,69nm,18.2s,baz=325,slow=31						
CD2	**Chengdu**	**96.11**	**302**	P	**P**	**19 16 10.5**	**+0.8**
CD2				pP	pP	19 16 46.4	+4.3
CD2				sP	sP	19 17 01.5	+6.2
CD2				PP	PP	19 20 09.3	+4.7
CD2				SKS		19 26 32.6	
CD2				S	S	19 27 15.5	-2.6
CD2				sS	sS	19 28 18.8	+4.3
CD2				SS	SS	19 33 55.4	+2.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.4						
CD2				pmax	pmax		
	comp=Z,150nm,6.1s						
HHC	**Hu-ho-hao-te**	**96.56**	**314**	*e*P	**P**	**19 16 13.3**	**+1.8**
HHC				pP	pP	19 16 49.5	+5.6
HHC				sP	sP	19 17 04.6	+7.5
HHC				PP	PP	19 20 13.4	+5.6
HHC				SKS		19 26 36.3	
HHC				S	S	19 27 20.3	-1.1
HHC				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.3						
HHC				pmax	pmax		
	comp=Z,130nm,6.5s						
HHC				LR	LR		
	comp=N,180nm,17.7s						
HHC				LR	LR		
	comp=E,440nm,18.1s						
HHC				LR	LR		
	comp=Z,160nm,17.4s						
SONM	**Songino Array**	**103.56**	**318**	PKKP	PKKPbc	19 32 42.7	+6.8
	comp=Z,0.6nm,0.6s,baz=304,slow=4.5,SNR=3.7						
YKA	**Yellowknife Ar**	**106.90**	**26**	PKiKP	PKiKP	19 21 05.0	-1.1
	comp=Z,0.4nm,0.5s,baz=248,slow=1.5,SNR=13						
YKA				PKKPbc	PKKPbc	19 32 23.0	-3.2
	comp=Z,0.4nm,0.6s,baz=47,slow=3.4,SNR=9.9						
YKA	**Yellowknife Ar**	**106.90**	**26**	PKPdf	PKiKP	19 21 05.0	-1.1
YKA				PKKPbc	PKKPbc	19 32 23.0	-3.2
WMQ	**Urumqi**	**113.40**	**308**	*e*PKP	PKiKP	19 21 17.9	-1.1
BOSA	**Boshof**	**115.81**	**204**	PKP	PKPdf	19 21 24.2	-0.1
	comp=Z,1.6nm,0.5s,baz=245,slow=10.0,SNR=6.5						
BOSA	**Boshof**	**115.81**	**204**	PKP	PKPdf	19 21 24.2	-0.1
MKAR	**Makanchi Array**	**117.99**	**310**	PKP	PKPdf	19 21 25.9	-1.8
	comp=Z,0.8nm,0.8s,baz=196,slow=1.2,SNR=5.8						
MKAR				PKKPab	PKKPab	19 31 56.1	+6.7
	comp=Z,0.3nm,0.4s,baz=277,slow=3.4,SNR=3.8						
MKAR	**Makanchi Array**	**117.99**	**310**	PKP	PKPdf	19 21 25.9	-1.8
MKAR				PKKPab	PKKPab	19 31 56.1	+6.7
KSH	**Kashi**	**120.22**	**300**	*e*PKP	PKPdf	19 21 33.1	+0.9
KSH				*e*PKS		19 25 08.1	
KSH				*e*SKS	SKSdf	19 28 27.0	-5.5
KSH				AMB	AMB		
	comp=Z,84nm,5.0s						
KSH				LR	LR		
	comp=N,100nm,4.6s						
KSH				LR	LR		
	comp=E,120nm,5.3s						
KSH				LR	LR		
	comp=Z,170nm,4.9s						
KURK	**Kurchatov**	**121.36**	**313**	PKP	PKPdf	19 21 32.2	-1.8
	comp=Z,1.0nm,0.5s,baz=116,slow=2.1,SNR=12						
KURK				pPKP	pPKPdf	19 22 13.7	+5.8
	comp=Z,1.2nm,1.0s,baz=117,slow=1.9,SNR=2.9						
KURK	**Kurchatov**	**121.36**	**313**	*e*PKPdf	PKPdf	19 21 31.8	-2.2
AML	**Almayashu**	**122.61**	**303**	*e*PKPdf	PKPdf	19 21 35.7	-1.0
KBL	**Kabul**	**124.01**	**293**	*e*PKPdf	PKPdf	19 21 38.8	-0.9
BVAR	**Borovoye Array**	**126.76**	**315**	PKP	PKPdf	19 21 42.4	-1.9
	comp=Z,1.1nm,0.4s,baz=189,slow=2.7,SNR=7.7						
BRVK	**Borovoye**	**126.83**	**315**	*e*PKPdf	PKPdf	19 21 42.5	-2.0
TSUM	**Tsumeb**	**127.02**	**200**	PKP	PKPdf	19 21 46.5	+0.6
	comp=Z,2.1nm,0.5s,baz=165,slow=4.9						
SCHQ	**Schefferville**	**127.68**	**43**	*e*PKPdf	PKPdf	19 21 45.3	-0.7
ARCES	**ARCESS Array B**	**139.65**	**347**	PKhKP		19 21 59.3	
	comp=Z,3.0nm,0.9s,baz=80,slow=3.2,SNR=10						
ARCES				PKP	PKPdf	19 22 08.5	+0.5
	comp=Z,2.4nm,0.7s,baz=23,slow=0.3,SNR=7.0						
ARCES	**ARCESS Array B**	**139.65**	**347**	PKP	PKPdf	19 22 08.5	+0.5
JOF	**Joensuu**	**143.29**	**337**	*ep*	PKPdf	19 22 09.9	-4.8
	comp=Z,1.6nm,0.4s						
KAF	**Kangasniemi**	**145.46**	**339**	*ep*	PKPdf	19 22 16.7	-1.8
	comp=Z,6.8nm,0.4s						
FINES	**FINESS Array B**	**146.05**	**339**	PKPbc	PKPbc	19 22 18.9	-1.8
	comp=Z,13nm,0.5s,baz=47,slow=3.8,SNR=146						
ASF	**Jabal al Asfar**	**149.71**	**281**	PKPbc	PKPbc	19 22 31.3	-0.1
	comp=Z,5.3nm,0.8s,baz=336,slow=4.9,SNR=10						
NOA	**NORSAR Array B**	**149.87**	**350**	PKPbc	PKPbc	19 22 29.9	-0.9
	comp=Z,3.0nm,0.7s,baz=16,slow=4.2,SNR=10						
IDID	**Didziasalis**	**150.24**	**330**	*e*P	PKPbc	19 22 30.6	-1.2
ISAL	**Salakas**	**150.32**	**331**	*e*P	PKPbc	19 22 31.1	-0.9
IIGN	**Ignalina**	**150.43**	**331**	*e*P	PKPbc	19 22 31.4	-0.8
EIL	**Elat**	**150.89**	**275**	PKPbc	PKPbc	19 22 33.4	-0.9
	comp=Z,13nm,0.7s,baz=74,slow=1.2,SNR=15						
MMAI	**Mount Meron Ar**	**151.07**	**282**	PKPbc	PKPbc	19 22 34.4	-0.2
	comp=Z,12nm,0.5s,baz=82,slow=7.7,SNR=34						
AKASG	**Malin Array Be**	**151.81**	**321**	PKPbc	PKPbc	19 22 34.2	-1.5
	comp=Z,3.5nm,0.7s,baz=60,slow=2.2,SNR=12						
BR131	**Keskin Array S**	**152.50**	**296**	*e*PKPbc	PKPbc	19 22 35.9	-1.7
BRTR	**Keskin Array B**	**152.50**	**296**	PKPbc	PKPbc	19 22 36.0	-1.6
	comp=Z,4.9nm,0.5s,baz=141,slow=3.9,SNR=35						
BRTR				PKPab	PKPab	19 22 47.5	-1.0
	comp=Z,2.2nm,0.7s,baz=262,slow=0.4,SNR=5.5						
LIC	**Lamto**	**154.05**	**166**	*e*P	PKPbc	19 22 41.5	-0.3
	comp=Z,71nm,1.5s						
KIC	**Kosan Boka**	**154.24**	**167**	*e*P	PKPbc	19 22 42.2	0.0
	comp=Z,92nm,1.7s						
TIC	**Toumodi**	**154.46**	**166**	*e*P	PKPbc	19 22 44.6	+2.0
	comp=Z,102nm,1.6s						
DBIC	**Dimbokro**	**154.52**	**166**	PKPbc	PKPbc	19 22 42.2	-0.5
	comp=Z,4.1nm,0.8s,baz=137,slow=3.1,SNR=5.9						
DBIC	**Dimbokro**	**154.52**	**166**	*e*PKPbc	PKPbc	19 22 42.2	-0.5
BUR08	**Bucovina Ar. S**	**155.67**	**318**	*e*PKPab	PKPab	19 23 01.1	-0.5
CLL	**Collm**	**158.49**	**339**	*e*PKPab	PKPab	19 23 13.0	-0.6
GERES	**GERESS Array B**	**160.37**	**335**	PKPab	PKPab	19 23 22.1	+0.2
	comp=Z,0.6nm,0.6s,baz=57,slow=7.2,SNR=4.0						
BAIF	**Baives**	**161.47**	**354**	*e*PKP2	PKPab	19 23 26.1	-0.5
TORD	**Torodi Ar. Bea**	**161.57**	**182**	PKP	PKPdf	19 22 42.4	-0.3
	comp=Z,2.9nm,0.8s,baz=323,slow=0.7,SNR=11						
TORD				PKPab	PKPdf	19 23 28.1	+0.3
	comp=Z,6.2nm,0.7s,baz=177,slow=4.1,SNR=18						
TORD	**Torodi Ar. Bea**	**161.57**	**182**	PKP	PKPdf	19 22 42.4	-0.3
TORD				PKPab	PKPab	19 23 28.1	+0.3
CDF	**Champ du Feu**	**162.62**	**346**	*e*PKP2	PKPab	19 23 31.0	-0.7
SGMF	**Saint Gilles**	**163.19**	**9**	*e*PKP2	PKPab	19 23 32.6	-1.6
	comp=Z,49nm,1.0s						
GRR	**Gorron**	**163.22**	**5**	*e*PKP2	PKPab	19 23 33.1	-1.2
AVF	**Avril sur Loir**	**164.79**	**354**	*e*PKP2	PKPab	19 23 40.6	-0.7
MFF	**Saint Martin d**	**165.04**	**3**	*e*PKP2	PKPab	19 23 41.4	-1.0
	comp=Z,11nm,0.9s						
TCF	**Toulx Ste Croi**	**165.37**	**357**	*e*PKP2	PKPab	19 23 43.4	-0.4
LPL	**La Plagne**	**165.49**	**344**	*e*PKP2	PKPab	19 23 44.5	+0.1
LPG	**La Plagne**	**165.50**	**344**	*e*PKP2	PKPab	19 23 44.8	+0.3
	comp=Z,4.8nm,0.8s						
ORIF	**Oris-en-Rattie**	**166.25**	**346**	*e*PKP2	PKPab	19 23 47.7	-0.1
LMR	**La Mourre**	**167.59**	**341**	*e*PKP2	PKPab	19 23 53.9	+0.2
	comp=Z,10nm,0.9s						
ESDC	**Sonseca Array**	**171.00**	**26**	PKP	PKPdf	19 22 49.5	+0.1
	comp=Z,1.5nm,0.8s,baz=322,slow=2.0,SNR=7.4						
MDT	**Midelt**	**175.01**	**75**	PKP	PKPdf	19 22 51.2	0.0
	comp=Z,4.4nm,0.9s,baz=270,slow=5.0,SNR=6.0						

*NEIC **19** 19:14:11.5±1.1, 45°.13N×149°.88E, h10km, mb4.2/1, Error ellipse: s-maj=27.9km s-min=12.0km az=166.0*
*JMA **19** 19:14:15.5±0.5, 44°.88N×149°.94E, h30km, M4.2*
*ISCJB **19** 19:14:16.4±1.2, 44°.72N±0°.10×149°.8E±0°.1, h77km±10km, mb3.7/15, Error ellipse: s-maj=18.5km s-min=9.0km az=144.1*
*MOS **19** 19:14:16.8±1.0, 45°.25N×149°.81E, h64km, mb4.3/8, Error ellipse: s-maj=17.6km s-min=16.3km az=126.7*
*IDC **19** 19:14:17.8±4.1, 45°.08N×149°.89E, h61km±38km

FINES	FINESS Array B	64.82 334	P	P	19 24 47.0	-1.6
FINES			pmax	pmax		
	comp=Z,1.0nm,0.5s					
NOA	NORSAR Array B	69.33 340	P	P	19 25 16.5	-0.6
	comp=Z,0.4nm,0.4s,mb3.6,baz=32,slow=7.3,SNR=3.6					
CLL	Collm	77.27 334	*i P*	P	19 26 04.0	0.0
BRTR	Keskin Array B	78.21 315	P	P	19 26 10.9	+1.5
	comp=Z,0.3nm,0.6s,mb3.2,baz=96,slow=3.8,SNR=4.8					
TXAR	Lajitas Array	80.47 58	P	P	19 26 21.8	-0.2
	comp=Z,0.5nm,0.5s,mb3.6,baz=302,slow=4.3,SNR=9.9					
TXAR	Lajitas Array	80.47 58	P	P	19 26 21.8	-0.1
TXAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
MMAI	Mount Meron Ar	82.35 309	P	P	19 26 33.4	+1.6
	comp=Z,0.9nm,0.6s,mb3.8,baz=302,slow=14,SNR=3.3					

*IDC **19** 19:24:50.9±0.6, 30°.41S×177°.57W, h0km, mb4.5/7, mb1 4.6/7, mb1mx4.4/15, mbtmp4.4/7, MS4.2/13, Ms1 4.2/13, ms1mx4.0/19, Error ellipse: s-maj=22.8km s-min=17.4km az=89.0*

*ISCJB **19** 19:24:54.3±5.7, 30°.5S±0°.1×177°.7W±0°.1, h27km±40km, mb4.8/14, MS4.2/12, Error ellipse: s-maj=23.0km s-min=16.8km az=41.5*

*NEIC **19** 19:24:58.9±1.4, 30°.22S×177°.67W, h57km±10km, mb5.1/6, Error ellipse: s-maj=16.6km s-min=11.0km az=121.0*

*GCMT **19** 19:24:58.9±0.3, 30°.56S×177°.21W, h31km, MW5.1/71, Moment Tensor Solution. s50,c61; s71,c100; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.00±.23; Mθθ-0.67±.17; Mφφ-4.33±.15; Mrθ0.46±.23; Mθφ-1.60±.11; Mφr2.71±.17; Best double couple: M=5.67500×10^16 NP1:φs206.00000°, δ31.00000°, λ99.00000°. NP2: φs15.00000°, δ59.00000°, λ85.00000°. Principal axes: T 5.7300, Plg75.0000°, Azm271.0000°; N -0.1110, Plg4.0000°, Azm18.0000°; P -5.6200, Plg14.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 19:24:54.3±8.6, 30°.4S±0°.1×177°.7W±0°.1, h15km±52km, n73, σ1°14/30, mb4.8/14, MS4.2/12, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.14	350	Pn	Pn	19 25 15.6	-0.2
	1μm,0.3s,baz=110,slow=3.6,SNR=96						
RAO				Sn	Sx	19 25 31.5	
	3μm,0.3s,baz=90,slow=20,SNR=32						
RAO				LR	LR	19 25 42.7	
	comp=Z,6μm,20.2s,baz=358,slow=44						
OUZ	Omahuta	8.79	234	*e*P	Pn	19 27 06.0	+5.2
	86nm,1.0s						
URZ	Urewera	8.96	207	Pn	Pn	19 26 53.7	-10
	1.2nm,0.3s,baz=12,slow=17,SNR=12						
URZ				Sn	Sx	19 28 37.6	
	15nm,0.3s,baz=233,slow=22,SNR=14						
URZ	Urewera	8.96	207	*e*P	Pn	19 26 57.7	-5.5
	29nm,0.7s						
URZ				Sn	Sx	19 28 37.6	
RPZ	Rata Peaks	16.04	211	Pn	Pn	19 28 32.7	-6.6
	0.8nm,0.3s,baz=22,slow=5.4,SNR=4.1						
RPZ				Sn	Sx	19 31 16.1	
	0.8nm,0.3s,baz=52,slow=19,SNR=3.0						
DZM	Mont Dzumac	16.46	296	*e*P	Pn	19 28 52.6	+7.8
	218nm,1.5s						
DZM				*e*LR	LR	19 32 47.5	
	3μm,23.4s						
DZM	Mont Dzumac	16.46	296	*e*P	Pn	19 28 53.0	+8.2
	112nm,1.4s						
ARMA	Armidale	26.43	262	*e*P	P	19 30 33.7	+3.1
EIDS	Eidsvold	28.01	273	*e*P	P	19 30 45.2	+0.4
	17nm,0.9s,mb4.7						
PPT	Papeete	28.58	70	LR	LR	19 38 54.0	
	comp=Z,628nm,20.4s,MS4.2,baz=245,slow=30						
CTA	Charters Tower	34.07	279	*e*P	P	19 31 40.1	+1.9
	12nm,0.6s,mb5.0						
CTA	Charters Tower	34.07	279	P	P	19 31 38.5	+0.3
	9.7nm,0.8s,mb4.8,baz=102,slow=11,SNR=16						
CTAO	Charters Tower	34.07	279	*e*P	P	19 31 38.4	+0.2
	34nm,1.0s,mb5.2						
STKA	Stephens Creek	34.75	257	*e*P	P	19 31 45.5	+1.4
	14nm,0.6s,mb5.1						
STKA	Stephens Creek	34.75	257	P	P	19 31 45.5	+1.4
	18nm,0.6s,mb5.2,baz=97,slow=8.7,SNR=36						
STKA				LR	LR	19 44 28.5	
	comp=Z,912nm,19.8s,MS4.5,baz=61,slow=34						
STKA	Stephens Creek	34.75	257	*e*P	P	19 31 45.0	+0.9
STKA				LR	LR	19 44 28.5	
TAOE	Nuku Hiva Isla	41.05	66	*e*S	S	19 38 42.1	-7.5
	141nm,22.9s						
TAOE				*e*LR	LR	19 43 45.2	
	766nm,26.8s						
ASAR	Alice Springs	43.38	267	P	P	19 32 55.4	-1.0
	4.2nm,0.8s,mb4.2,baz=109,slow=7.9,SNR=22						
ASAR				PcP	PcP	19 34 44.5	-0.4
	1.2nm,0.7s,baz=128,slow=3.7,SNR=4.4						
ASAR				ScP	ScP	19 38 35.2	-0.6
	1.1nm,0.8s,baz=117,slow=4.4,SNR=7.3						
WRAB	Tennant Creek	44.37	272	*e*P	P	19 33 03.1	-1.2
	42nm,1.2s,mb5.0						
FORT	Forrest	46.32	255	*e*P	P	19 33 18.4	-1.3
	10.0nm,0.6s,mb4.9						
SBA	Scott Base	48.08	184	*e*P	P	19 33 34.5	+1.7
	179nm,2.5s,mb5.7						
FITZ	Fitzroy Crossi	52.63	270	*e*P	P	19 34 07.6	-0.5
	17nm,1.0s,mb4.9						
CASY	Casey	55.29	208	*e*P	P	19 34 24.8	-1.9
	46nm,1.2s,mb5.4						
QSPA	South Pole Qui	59.73	180	P	P	19 34 57.5	-0.4
	6.9nm,1.0s,mb4.6,baz=44,slow=3.7,SNR=17						
MAW	Mawson	72.42	200	LR	LR	20 06 40.9	
	comp=Z,209nm,20.9s,MS4.4,baz=112,slow=35						
MJAR	Matsushiro Arr	78.38	325	LR	LR	20 06 07.8	
	comp=Z,94nm,20.2s,MS4.1,baz=120,slow=32						
PLCA	Paso Flores	82.32	133	LR	LR	20 04 59.4	
	comp=Z,257nm,19.0s,MS4.6,baz=105,slow=29						
KSRS	Korea Array	84.51	319	LR	LR	20 09 00.1	
	comp=Z,78nm,20.0s,MS4.1,baz=56,slow=31						
PETK	Petropavlovsk-	85.86	345	P	P	19 37 32.7	-0.2
	7.5nm,0.9s,mb4.9,baz=114,slow=9.9,SNR=7.4						
PETK				LR	LR	20 08 42.3	
	comp=Z,92nm,21.1s,MS4.2,baz=168,slow=31						
PETK	Petropavlovsk-	85.86	345	P	P	19 37 32.7	-0.2
PETK				LR	LR	20 08 42.3	
NVAR	Mina Array Bea	88.04	43	P	P	19 37 43.9	0.0
	0.8nm,0.7s,mb4.1,baz=221,slow=7.3,SNR=7.0						
CFAA	Coronel Fontan	89.03	126	LR	LR	20 08 56.9	
	comp=Z,18nm,20.2s,MS3.5,baz=217,slow=30						
CN2	Changchun	90.29	323	*e*P	P	19 37 53.8	-0.5
CN2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.3						
TXAR	Lajitas Array	92.14	57	P	P	19 38 03.4	+0.1
	comp=Z,0.3nm,0.9s,baz=231,slow=12,SNR=3.4						
TXAR				LR	LR	20 15 26.0	
	comp=Z,166nm,18.5s,baz=70,slow=33						
TXAR	Lajitas Array	92.14	57	P	P	19 38 03.4	+0.1
TXAR				LR	LR	20 15 26.0	
CMAR	Chiang Mai Arr	93.65	289	P	P	19 38 12.7	+2.2
	comp=Z,0.4nm,0.9s,mb3.8,baz=64,slow=25,SNR=4.0						
ATAH	Atahualpa	94.38	101	LR	LR	20 09 40.0	
	comp=Z,138nm,21.7s,MS4.4,baz=194,slow=28						
PDAR	Pinedale Array	95.93	43	LR	LR	20 15 01.2	
	comp=Z,120nm,18.3s,MS4.4,baz=251,slow=31						
LPAZ	La Paz	97.90	114	LR	LR	20 13 49.2	
	comp=Z,84nm,18.2s,MS4.3,baz=60,slow=30						
CPUP	Villa Florida	99.78	128	LR	LR	20 17 10.5	
	comp=Z,99nm,19.1s,MS4.3,baz=67,slow=32						
MK31	Makanchi Array	117.97	310	*e*PKPdf	PKPdf	19 43 38.1	-2.0
MKAR	Makanchi Array	117.97	310	PKP	PKPdf	19 43 38.1	-2.0
	comp=Z,0.6nm,0.7s,baz=48,slow=1.8,SNR=6.1						
ZALV	Zalesovo Beam	118.20	318	PKP	PKPdf	19 43 39.2	-1.1
	comp=Z,0.3nm,0.3s,baz=90,slow=5.9,SNR=2.5						
UCH	Uchtor	122.22	303	*e*PKPdf	PKPdf	19 43 48.0	-0.4
AML	Almayashu	122.79	303	*e*PKPdf	PKPdf	19 43 49.1	-0.4
KBL	Kabul	124.47	293	*e*PKPdf	PKPdf	19 43 52.5	-0.5
BVAR	Borovoye Array	126.58	316	PKP	PKPdf	19 43 54.8	-1.6
	comp=Z,1.3nm,0.7s,baz=90,slow=1.5,SNR=6.5						
ARCES	ARCESS Array B	138.63	348	PKhKP		19 44 13.4	
	comp=Z,2.0nm,0.8s,baz=44,slow=2.7,SNR=3.9						
JOF	Joensuu	142.50	339	*ep*	PKPdf	19 44 21.7	-4.1
	comp=Z,2.7nm,0.7s						
GNI	Garni	144.31	298	*e*PKPdf	PKPdf	19 44 27.1	-2.6
KAF	Kangasniemi	144.62	341	*ep*	PKPdf	19 44 26.5	-3.0
	comp=Z,4.4nm,0.6s						
FINES	FINESS Array B	145.22	340	PKPbc	PKPbc	19 44 28.7	-1.6
	comp=Z,16nm,0.6s,baz=54,slow=2.8,SNR=59						
KIV	Kislovodsk	145.44	304	*e*PKPdf	PKPdf	19 44 30.9	-0.7
NOA	NORSAR Array B	148.77	352	PKPbc	PKPbc	19 44 38.6	-1.8
	comp=Z,5.8nm,0.9s,baz=14,slow=4.3,SNR=11						
IDID	Didziasalis	149.62	332	*e*P	PKPbc	19 44 41.2	-1.5
ISAL	Salakas	149.68	333	*e*P	PKPbc	19 44 41.7	-1.1
IIGN	Ignalina	149.80	333	*e*P	PKPbc	19 44 41.2	-1.9
AKASG	Malin Array Be	151.45	323	PKPbc	PKPbc	19 44 45.8	-1.4
	comp=Z,3.7nm,0.5s,baz=47,slow=2.3,SNR=20						
AKBB	Malin Array Si	151.45	323	*e*PKPbc	PKPbc	19 44 45.3	-1.9
KIEV	Kiev	151.46	323	*e*PKPbc	PKPbc	19 44 45.2	-2.0
MMAI	Mount Meron Ar	151.79	284	PKPbc	PKPbc	19 44 48.5	-0.1
	comp=Z,18nm,0.9s,baz=75,slow=7.0,SNR=15						
MMAI				PKPab	PKPab	19 44 56.6	-1.0
	comp=Z,10.0nm,0.7s,baz=85,slow=6.2,SNR=8.7						
BR131	Keskin Array S	152.83	299	*e*PKPbc	PKPbc	19 44 47.8	-2.9
BRTR	Keskin Array B	152.83	299	PKPbc	PKPbc	19 44 49.4	-1.3
	comp=Z,4.9nm,1.1s,baz=131,slow=3.4,SNR=21						
KOLS	Kolonicke sedl	156.06	326	*e*PKP	PKPab	19 45 14.5	-0.6
STHS	Stebnicka Huta	156.20	328	*e*PKP	PKPab	19 45 15.3	-0.4
KECS	Kecovo	157.22	328	*e*PKP	PKPab	19 45 19.6	-0.5
CLL	Collm	157.63	342	*i* PKPab	PKPab	19 45 20.1	-1.7
	comp=Z,8.0nm,1.1s						
CLL				*i*		19 45 28.1	
CLL				*i*		19 45 40.2	
CLL				LmV		21 06 00.0	
	comp=Z,100nm,18.4s						
BRG	Berggiesshubel	157.76	340	*e*P	PKPab	19 45 22.0	-0.3
	comp=Z,13nm,1.4s						
VYHS	Vyhne	157.95	330	*e*PKP	PKPab	19 45 22.0	-1.3
MOX	Moxa	158.59	344	*e*P	PKPab	19 45 19.6	-6.3
GRF	Grafenberg Arr	159.57	343	*e*P	PKPab	19 45 29.6	-0.6
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	159.62	338	PKPab	PKPab	19 45 30.0	-0.4
	comp=Z,0.2nm,0.4s,baz=222,slow=1.8,SNR=5.2						
TORD	Torodi Ar. Bea	162.84	178	PKPab	PKPab	19 45 43.3	-2.0
	comp=Z,1.7nm,1.1s,baz=170,slow=4.4,SNR=6.2						

MAN 19 19:27:04, 15°.12N×120°.09E, h55km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	Palayan	1.07	66	*e*P	Pn	19 27 24.2	+1.4
PCPH				*e*S	Sn	19 27 38.8	+2.1
BOLP	Bolinao	1.26	352	*e*P	Pn	19 27 27.3	+1.9
BOLP				*e*S	Sn	19 27 38.0	-3.3
LUBP	Lubang	1.39	174	*e*P	Pn	19 27 29.4	+2.3
LUBP				*e*S	Sn	19 27 42.9	-1.5
BALP	Baler	1.56	67	*e*P	Pn	19 27 31.8	+2.4
POLP	Polilio Island	1.83	102	*e*P	Sn	19 27 58.3	+3.1
ABRA	Dolores	2.58	13	*e*P	Pn	19 27 45.4	+2.0
SJMP	San Jose	2.83	159	*e*P	Pn	19 27 49.3	+2.6
APYP	Conner	2.94	22	*e*P	Pn	19 27 50.8	+2.6
ENPP	El Nido	3.95	189	*e*P	Pn	19 28 03.7	+1.6

IDC 19 19:48:13.9±1.9, 30°.62S×177°.21W, h0km, mb4.1/3, mb1 4.1/4, mb1mx3.9/16, mbtmp4.1/4, ML3.5/1, Error ellipse: s-maj=44.8km s-min=27.3km az=110.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.49	336	Pn	Pn	19 48 41.1	-0.8
	756nm,0.3s,baz=102,slow=9.4,SNR=69						
RAO				Sn	Sn	19 48 57.2	-5.0
	471nm,0.3s,baz=99,slow=19,SNR=7.1						
URZ	Urewera	8.95	210	Pn	Pn	19 50 22.6	-1.7
	0.5nm,0.3s,baz=100,slow=6.1,SNR=4.2						
URZ				Sn	Sn	19 52 02.5	-3.3
	1.7nm,0.3s,baz=288,slow=24,SNR=9.3						
CTA	Charters Tower	34.50	279	P	P	19 55 05.7	+1.8
	1.9nm,0.5s,baz=94,slow=11,SNR=6.3						
STKA	Stephens Creek	35.09	257	P	P	19 55 09.3	+0.4
	2.0nm,0.5s,baz=113,slow=12,SNR=8.7						
ASAR	Alice Springs	43.77	267	P	P	19 56 20.2	-1.2
	0.6nm,0.5s,baz=105,slow=7.6,SNR=7.4						
FINES	FINESS Array B	145.58	340	PKPbc	PKPbc	20 07 53.9	+0.4
	1.7nm,0.6s,baz=32,slow=3.5,SNR=18						
AKASG	Malin Array Be	151.88	323	PKPbc	PKPbc	20 08 10.3	-0.1
	0.5nm,0.4s,baz=55,slow=3.2,SNR=3.5						
AKASG				PKPab	PKPab	20 08 17.6	-1.9
	0.6nm,0.4s,baz=47,slow=2.8,SNR=6.0						

OTT 19 19:59:10.7±0.9, 59°.17N×54°.48W, h18km, ML4.0/6, Davis Strait. 473km northeast from Nutak, NI, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUQ	Kuujjuuaa	7.35	268	SN	Sn	20 02 30.0	+10
KUQ				Trac		20 02 34.4	
	comp=Z,13nm,0.4s						
SCHQ	Schefferville	8.02	243	PN	Pn	20 01 07.1	+0.9
SCHQ				SN	Sn	20 02 30.4	-5.9
SCHQ				Trac		20 02 36.6	
	comp=Z,3.6nm,0.2s						
SFJD	Kangerlussuaq	8.05	11	*i* P	Pn	20 01 06.5	0.0
SFJD				*i* S	Sn	20 02 27.5	-9.4
SFJD	Kangerlussuaq	8.05	11	PN	Pn	20 01 05.0	-1.5
SFJD				SN	Sn	20 02 26.7	-10
SFJD				Trac		20 02 33.5	
	comp=Z,7.8nm,0.3s						
FRB	Frobisher Bay	8.14	310	PN	Pn	20 01 08.5	+0.7
DRLN	Deer Lake	10.09	191	PN	Pn	20 01 34.2	-0.4
DRLN				SN	Sn	20 03 19.5	-7.6
DRLN				Trac		20 03 22.2	
	comp=Z,6.9nm,0.5s						
NATG	Natashquan Que	10.11	212	PN	Pn	20 01 34.6	-0.2
NATG				SN	Sn	20 03 17.3	-10
NATG				Trac		20 03 24.3	
	comp=Z,4.5nm,0.2s						
SMQ	Clarke City	11.40	223	PN	Pn	20 01 48.2	-4.3
SMQ				SN	Sn	20 03 50.9	-8.2
LG4Q	La Grande 4	12.18	251	PN	Pn	20 02 01.3	-1.8
LG4Q				SN	Sn	20 04 08.9	-9.3
LG4Q				Trac		20 04 13.4	
	comp=Z,10nm,0.4s						

MAN 19 20:02:06, 13°.26N×121°.19E, h33km, mb4.2, ML3.0, MS2.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.34	316	*i* P	Pb	20 02 15.9	+1.7
SJMP	San Jose	0.80	185	*e*P	Pn	20 02 22.3	+1.3
SJMP				*e*S	Sn	20 02 32.7	+1.1
LUBP	Lubang	1.04	297	*e*P	Pn	20 02 24.9	+0.7
LUBP				*e*S	Sn	20 02 33.8	-3.8
BUSP	Coron	1.58	218	*e*P	Pn	20 02 32.8	+1.1

MAN 19 20:05:41, 13°.22N×121°.12E, h35km, mb4.1, ML2.9, MS2.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.32	330	*i* P	Pn	20 05 50.4	+1.1
SJMP	San Jose	0.76	180	*e*P	Pn	20 05 56.7	+1.5
SJMP				*e*S	Sn	20 06 06.9	+1.5
LUBP	Lubang	0.99	301	*e*P	Pn	20 05 59.5	+1.1
LUBP				*e*S	Sn	20 06 07.4	-3.7
BUSP	Coron	1.51	217	*e*P	Pn	20 06 06.1	+0.5

*IDC **19** 20:05:44.2±9.1, 0°.59N×99°.38E, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.7/4, ML3.5/1, MS3.7/2, Ms1 3.7/2, ms1mx2.9/42, Error ellipse: s-maj=279.0km s-min=116.4km az=106.0*

*DJA **19** 20:05:55, 2°.20N×99°.09E, h20km, MLv4.1/6*

*ISCJB **19** 20:05:56.7±1.1, 2°.06N±0°.07×99°.10E±0°.06, h24km±8km, mb3.8/3, MS3.6/2, Error ellipse: s-maj=13.1km s-min=9.0km az=28.8*

ISC 19 20:05:57.7±1.1, 2°.00N±0°.07×99°.07E±0°.06, h17km±7km, n15, σ0°83/15, mb3.8/3, MS3.6/2, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.12	284	P	Pg	20 06 02.0	+0.6
MNSI	Mandailing Nat	1.30	157	P	Pn	20 06 14.3	-6.7
GSI	Gunungsitoli	1.65	245	P	Pn	20 06 24.8	-1.0
GSI				S	Sn	20 06 47.4	+0.9
BKNI	Bangkinang	2.57	130	P	Pn	20 06 38.5	-0.1
BKNI				S	Sn	20 07 10.9	+1.4
PPI	Padang Panjang	2.77	151	P	Pn	20 06 41.0	-0.3
PDSI	Padang	3.21	154	P	Pn	20 06 45.4	-1.9
SISI	Saibi	3.30	180	P	Pn	20 06 48.7	+0.1
SDSI	Sungai Dareh	3.74	141	P	Pn	20 07 02.8	+8.1
LHMI	Lhok Sumawe	3.85	327	P	Pn	20 06 51.4	-4.7
CMAR	Chiang Mai Arr	16.36	360	P	Pn	20 09 51.6	+5.0
	0.1nm,0.3s,baz=192,slow=10,SNR=5.4						
DAV	Davao City (W)	26.89	78	LR	LR	20 22 36.5	
	comp=Z,72nm,19.6s,MS3.2,baz=198,slow=38						
MKAR	Makanchi Array	46.95	344	P	P	20 14 27.8	+0.3
	0.5nm,0.6s,mb3.6,baz=151,slow=7.9,SNR=6.0						
KURK	Kurchatov	51.54	344	P	P	20 15 02.4	-0.1
	0.9nm,0.7s,mb3.8,baz=165,slow=7.1,SNR=6.0						
ZALV	Zalesovo Beam	53.09	350	P	P	20 15 13.8	-0.2
	1.2nm,0.5s,mb4.1,baz=159,slow=7.3,SNR=7.7						
MLR	Muntele Rosu	76.78	316	LR	LR	21 00 31.3	
	comp=Z,73nm,18.8s,MS4.0,baz=46,slow=42						

*IDC **19** 20:09:35.9±1.1, 32°.35N×105°.28E, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/27, mbtmp3.6/8, ML3.0/2, Error ellipse: s-maj=48.3km s-min=21.0km az=63.0*

*NEIC **19** 20:09:37.7±0.7, 32°.42N×105°.16E, h10km, mb4.0/1, Error ellipse: s-maj=19.6km s-min=12.5km az=71.0*

*BJI **19** 20:09:38.0, 32°.22N×105°.19E, h13km, mB4.7/1, mb4.1/1, ML3.5/12, Ms3.5/4, Ms7 3.5/3*

ISC 19 20:09:35.4±0.9, 32°.26N±0°.03×105°.24E±0°.05, h2km±6km, n18, σ1°23/25, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.85	224	Pg	Pg	20 10 10.3	-0.6
CD2				Sg	Sg	20 10 34.4	-0.5
CD2				smax			
	comp=N,4μm,0.7s						
XAN	Xi'an	3.56	59	Pn	Pn	20 10 36.1	+4.5
XAN				Sn	Sn	20 11 11.9	-2.2
XAN				Sg	Sg	20 11 29.8	+0.1
XAN				smax			
	comp=N,110nm,0.5s						
XAN				smax			
	comp=E,98nm,0.9s						
LZH	Lanzhou	3.99	343	*e*Pg	Pg	20 10 50.8	-1.0
LZH				Sg	Sg	20 11 44.3	+0.8
LZH				smax			
	comp=N,130nm,0.6s						
LZH				smax			
	comp=E,200nm,0.6s						
LZH				LR	LR		
	comp=N,340nm,6.6s						
LZH				LR	LR		
	comp=Z,530nm,7.8s						
ENH	Enshi	4.14	118	*e*Pn	Pn	20 10 44.3	+4.7
GYA	Guiyang	5.92	168	*e*Pn	Pn	20 11 04.8	+0.8
GYA				Sn	Sn	20 12 12.3	0.0
GYA				smax			
	comp=N,40nm,0.7s						
GYA				smax			
	comp=E,80nm,0.8s						
KMI	Kunming	7.45	198	Pn	Pn	20 11 28.6	+3.6
KMI				Sn	Sn	20 12 47.4	-2.6
KMI				smax			
	comp=N,11nm,1.2s						
KMI				smax			
	comp=E,13nm,1.4s						
KMI				LR	LR		
	comp=N,160nm,7.2s						
KMI				LR	LR		
	comp=E,140nm,10.7s						
GTA	Gaotai	8.38	330	*e*P	Pn	20 11 37.0	-0.8
GTA				pP		20 11 40.4	
GTA				sP		20 11 43.8	
GTA				S	Sn	20 13 12.8	-0.2
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,45nm,3.0s						
GTA				LR	LR		
	comp=N,98nm,10.7s						
GTA				LR	LR		
	comp=E,98nm,8.0s						
GTA				LR	LR		
	comp=Z,87nm,8.9s						
CMAR	Chiang Mai Arr	14.87	204	Pn	Pn	20 13 09.5	+2.8
	comp=Z,0.0nm,0.3s,baz=15,slow=11,SNR=3.2						
SONM	Songino Array	15.58	3	Pn	Pn	20 13 16.1	+0.2
	comp=Z,0.0nm,0.3s,baz=190,slow=14,SNR=2.9						
MKAR	Makanchi Array	22.78	316	P	P	20 14 40.2	+1.3
	comp=Z,1.1nm,0.7s,mb3.4,baz=124,slow=8.9,SNR=7.0						
ZALV	Zalesovo Beam	26.13	332	P	P	20 15 11.8	+1.3
	comp=Z,1.2nm,0.5s,mb3.7,baz=139,slow=11,SNR=7.9						
KURK	Kurchatov	26.93	321	P	P	20 15 17.6	-0.2
	comp=Z,0.6nm,0.8s,mb3.2,baz=113,slow=8.1,SNR=4.2						
TIXI	Tiksi	41.43	11	*e*P	P	20 17 20.4	-2.4
	comp=Z,2.8nm,0.9s,mb3.9						
FINES	FINESS Array B	57.15	326	P	P	20 19 22.4	-0.8
	comp=Z,0.7nm,0.7s,mb3.8,baz=118,slow=8.6,SNR=2.7						
FINES	FINESS Array B	57.15	326	P	P	20 19 22.4	-0.8
ASAR	Alice Springs	61.99	150	P	P	20 19 58.4	+1.4
	comp=Z,0.6nm,0.8s,mb3.8,baz=330,slow=6.5,SNR=9.0						
YKA	Yellowknife Ar	80.30	18	P	P	20 21 47.9	+0.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=4.9,SNR=5.3						
YKA	Yellowknife Ar	80.30	18	P	P	20 21 47.9	+0.5

IDC 19 20:15:32.9±5.0, 23°.89S×179°.39W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.7/13, mbtmp4.0/2, Error ellipse: s-maj=276.5km s-min=51.8km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.24	248	P	P	20 22 28.2	-1.0
	2.2nm,0.8s,baz=104,slow=8.3,SNR=3.0						
ASAR	Alice Springs	42.59	260	P	P	20 23 31.4	+0.5
	1.1nm,0.5s,baz=90,slow=7.5,SNR=52						
FINES	FINESS Array B	138.61	342	PKhKP		20 34 53.8	
	4.3nm,1.2s,baz=64,slow=4.4,SNR=4.0				

ZALV	Zalesovo Beam	53.19	350	P	P	20 27 04.1	+0.1
	1.0nm,0.5s,mb4.0,baz=164,slow=7.3,SNR=6.9						
ZALV	Zalesovo Beam	53.19	350	P	P	20 27 04.1	+0.1
BVAR	Borovoye Array	56.20	340	P	P	20 27 25.8	0.0
	0.4nm,0.5s,mb3.7,baz=142,slow=9.8,SNR=5.1						
BRTR	Keskin Array B	69.95	312	P	P	20 28 57.4	-0.1
	0.5nm,0.7s,mb3.5,baz=125,slow=7.3,SNR=3.9						
TIXI	Tiksi	72.24	10	eP	P	20 29 09.4	-1.2
	0.9nm,0.5s,mb4.0						

MAN 19 20:31:20, 17°.57N×122°.53E, h24km, mb5.0, ML4.0, MS4.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.51	191	eP	Pb	20 31 31.4	+1.0
PALP				eS	Sb	20 31 41.4	+4.1
SGCP	Mt. Cagua	0.81	326	eP	Pb	20 31 35.8	+0.3
SGCP				eS	Sb	20 31 42.5	-3.6
CAUP	Cauayan	0.91	228	eP	Pb	20 31 38.8	+1.6
APYP	Conner	1.26	284	eP	Pn	20 31 42.7	+0.6
APYP				eS	Sn	20 31 59.0	+0.7
ABRA	Dolores	1.73	273	eP	Pn	20 31 49.9	+1.2
ABRA				eS	Sn	20 32 08.5	-1.5
BALP	Baler	2.03	207	eP	Pn	20 31 55.0	+2.3
BOLP	Bolinao	2.77	245	eP	Pn	20 32 05.4	+2.6

*ISCJB **19** 20:48:09.9±0.5, 37°.00N±0°.02×29°.12E±0°.03, h0km±4km, Error ellipse: s-maj=4.1km s-min=3.5km az=167.6*
*ISK **19** 20:48:09.8, 37°.02N×29°.12E, h6km, MD3.2*
*CSEM **19** 20:48:10.3±0.1, 37°.01N×29°.13E, h5km, MD3.2, Error ellipse: s-maj=3.4km s-min=2.7km az=13.0*
*IDC **19** 20:48:10.5±1.6, 36°.83N×29°.20E, h0km, mb3.6/1, mb1 3.4/5, mb1mx3.2/26, mbtmp3.2/5, ML3.0/3, Error ellipse: s-maj=29.3km s-min=20.3km az=138.0*
*DDA **19** 20:48:11.0, 37°.05N×29°.13E, h7km±7km, Md3.1*

ISC 19 20:48:10.8±0.4, 37°.01N±0°.02×29°.12E±0°.03, h5km±4km, n57, σ0.97/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.33	63	ePG	Pg	20 48 16.3	-1.0
GLHS				eSG	Sg	20 48 22.0	+0.3
GLHS	Glhisar (BURDU	0.33	63	ePg	Pg	20 48 16.3	-1.0
GLHS				eSg	Sg	20 48 22.0	+0.3
FETY	Fethiye	0.37	185	ePG	Pg	20 48 17.2	-0.8
FETY				eSG	Sg	20 48 23.6	+0.8
FETY	Fethiye	0.37	185	ePg	Pg	20 48 17.2	-0.8
FETY				eSg	Sg	20 48 23.6	+0.8
GOLH	Golhisar	0.42	57	i P	Pg	20 48 18.0	-0.9
GOLH				i S	Sg	20 48 25.2	+0.9
GOLH	Golhisar	0.42	57	i P	Pg	20 48 18.0	-0.9
GOLH				i S	Sg	20 48 25.2	+0.9
TURN	Turunc	0.44	252	i P	Pg	20 48 24.3	+5.0
TURN				i S	Sg	20 48 35.5	+11
ELL	Elmali	0.68	112	ePG	Pg	20 48 23.1	-0.8
ELL				eSG	Sg	20 48 33.9	+1.2
ELL	Elmali	0.68	112	ePg	Pg	20 48 23.1	-0.8
ELL				eSg	Sg	20 48 33.9	+1.2
DNZL	Cakiroluk	0.69	355	i P	Pg	20 48 22.8	-1.2
DNZL				i S	Sg	20 48 33.7	+0.8
DNZL	Cakiroluk	0.69	355	i P	Pg	20 48 22.8	-1.2
DNZL				i S	Sg	20 48 33.7	+0.8
YER	Yerkesik	0.69	281	ePG	Pg	20 48 23.8	-0.2
YER	Yerkesik	0.69	281	ePg	Pg	20 48 23.8	-0.2
DENT	Denizli	0.75	354	ePG	Pg	20 48 24.1	-1.1
DENT	Denizli	0.75	354	ePg	Pg	20 48 24.1	-1.1
AKAS	Kas	0.86	153	i P	Pg	20 48 26.2	-1.2
AKAS				i S	Sg	20 48 43.0	+4.5
AKAS	Kas	0.86	153	i P	Pg	20 48 26.2	-1.2
KORT	Korkueli	0.98	90	i P	Pg	20 48 29.8	+0.1
KORT				i S	Sg	20 48 44.9	+2.6
KORT	Korkueli	0.98	90	i P	Pg	20 48 29.8	+0.2
KORT				i S	Sg	20 48 44.9	+2.5
MLSB	Milas	1.11	285	ePN	Pg	20 48 31.4	-0.7
MLSB	Milas	1.11	285	ePn	Pg	20 48 31.5	-0.7
AYDN	Tasoluk	1.19	304	i P	Pg	20 48 33.4	-0.2
AYDN				i S	Sg	20 48 51.4	+2.4
AYDN	Tasoluk	1.19	304	i P	Pg	20 48 33.4	-0.2
AYDN				i S	Sg	20 48 51.4	+2.4
ANTB	Antalya	1.23	95	ePN	Pn	20 48 34.2	-0.5
ANTB	Antalya	1.23	95	ePn	Pn	20 48 34.2	-0.5
BCK	Bucak	1.25	68	ePN	Pn	20 48 34.2	-0.8
BCK	Bucak	1.25	68	ePn	Pn	20 48 34.2	-0.8
DAT	Datca	1.27	258	ePN	Pn	20 48 34.8	-0.4
DAT	Datca	1.27	258	ePn	Pn	20 48 34.8	-0.4
BDRM	Kayabasi	1.35	273	i P	Pn	20 48 36.3	0.0
BDRM				i S	Sg	20 48 55.5	+1.4
BDRM	Kayabasi	1.35	273	i P	Pn	20 48 36.3	0.0
BDRM				i S	Sg	20 48 55.5	+1.4
KHL	Karahalli	1.35	13	ePN	Pn	20 48 35.7	-0.7
KHL	Karahalli	1.35	13	ePn	Pn	20 48 35.7	-0.7
KHAL	Karahalli	1.39	12	i P	Pn	20 48 36.4	-0.6
KHAL				i S	Sb	20 48 56.3	+0.9
KHAL	Karahalli	1.39	12	i P	Pn	20 48 36.3	-0.6
KHAL				i S	Sb	20 48 56.3	+0.9
KULA	Kula-Manisa	1.55	346	ePN	Pn	20 48 38.2	-0.9
KULA	Kula-Manisa	1.55	346	ePn	Pn	20 48 38.2	-0.9
SUTC	Sutluce-Ispart	1.57	72	ePN	Pn	20 48 38.8	-0.5
SUTC	Sutluce-Ispart	1.57	72	ePn	Pn	20 48 38.8	-0.5
SHUT	Suhut-Afyon	1.91	36	ePN	Pn	20 48 43.4	-0.7
SHUT	Suhut-Afyon	1.91	36	ePn	Pn	20 48 43.4	-0.7
IZM	Izmir	2.03	314	ePN	Pn	20 48 45.3	-0.4
AKS	Akhisar	2.14	331	ePN	Pn	20 48 46.8	-0.4
AKS	Akhisar	2.14	331	ePn	Pn	20 48 46.8	-0.4
BLCB	Balcova	2.15	310	ePN	Pn	20 48 46.8	-0.5
BLCB	Balcova	2.15	310	ePn	Pn	20 48 46.8	-0.5
ALT	Altintas	2.19	21	ePN	Pn	20 48 47.4	-0.4
ALT	Altintas	2.19	21	ePn	Pn	20 48 47.4	-0.5
HDMB	Hadim	2.69	90	ePN	Pn	20 48 55.5	+0.7
HDMB	Hadim	2.69	90	ePn	Pn	20 48 55.5	+0.7
LADK	Ladik-KONYA	2.84	64	ePN	Pn	20 48 57.2	+0.5
LADK	Ladik-KONYA	2.84	64	ePn	Pn	20 48 57.2	+0.4
IDI	Anoyia	3.83	245	Pn	Pn	20 49 11.9	+1.5
	0.7nm,0.3s,baz=32,slow=10,SNR=14						
IDI				Sn	Sn	20 49 57.2	+1.3
	1.7nm,0.3s,baz=280,slow=19,SNR=8.2						
BRTR	Keskin Array B	4.47	51	Pn	Pn	20 49 20.1	+0.9
	0.2nm,0.3s,baz=241,slow=17,SNR=9.9						
BRTR				Sn	Sn	20 50 14.4	+2.8
	0.2nm,0.3s,baz=223,slow=24,SNR=7.8						
MMAI	Mount Meron Ar	6.51	126	Pn	Pn	20 49 46.6	-0.6
	1.6nm,0.3s,baz=308,slow=12,SNR=12						
MLR	Muntele Rosu	8.81	345	Pn	Pn	20 50 23.3	+4.6
	baz=175,slow=12						
TORD	Torodi Ar. Bea	34.15	233	P	P	20 54 56.0	-0.9
	0.4nm,0.4s,baz=36,slow=8.8,SNR=6.8						

*IDC **19** 21:28:47.1±0.8, 41°.40N×19°.73E, h0km, mb3.9/12, mb1 3.9/20, mb1mx3.9/33, mbtmp3.9/20, ML3.8/7, MS3.0/3, Ms1 3.0/3, ms1mx2.4/50, Error ellipse: s-maj=15.0km s-min=11.0km az=41.0*
*TIR **19** 21:28:48.2±1.8, 41°.37N×19°.39E, h22km±143km, ML4.0*
*NEIC **19** 21:28:49.9, 41°.38N×19°.66E, h14km, mb4.0/2, ML4.0(PDG), After PDG.*
*CSEM **19** 21:28:49.7±0.1, 41°.37N×19°.61E, h10km, mb4.2/11, MD3.8, Error ellipse: s-maj=3.0km s-min=2.0km az=45.0*
*PDG **19** 21:28:49.9±0.6, 41°.38N×19°.66E, h14km±1km, MD3.9/10, ML4.0/10, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
*LDG **19** 21:28:50.3±0.2, 41°.41N×19°.73E, h20km, Ml4.0/21, Error ellipse: s-maj=6.7km s-min=4.3km az=11.0*
*ROM **19** 21:28:50.0±0.1, 41°.31N×19°.62E, h10km, Ml3.7/16, Error ellipse: s-maj=3.7km s-min=1.0km az=168.0*
*SKO **19** 21:28:50.0, 41°.34N×19°.61E, h10km, M3.3, ML3.7*
*MOS **19** 21:28:50.2±1.2, 41°.40N×19°.50E, h33km, mb4.4/14, Error ellipse: s-maj=4.6km s-min=3.4km az=99.4*
*BEO **19** 21:28:50.2±0.5, 41°.41N×19°.61E, h4km±2km, ML3.8/16*
*THE **19** 21:28:51.9, 41°.39N×19°.72E, h14km, ML4.3/6, Error ellipse: s-maj=1.2km s-min=0.8km az=290.0*
*ATH **19** 21:28:51.5, 41°.23N×19°.85E, h16km±2km, MD3.8/4*

ISC 19 21:28:51.0±0.3, 41°.38N±0°.01×19°.63E±0°.01, h18km±2km, n439, σ1.21/609, mb4.1/19, MS3.3/2, 45C-46D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.18	99	⇑i Pg	Pg	21 28 54.6	-1.0
TIR				i Sg	Sg	21 28 57.7	-1.1
TIR	Tirane	0.18	99	ePB	Pg	21 28 54.7	-0.9
TIR				eSB	Sg	21 28 58.0	-0.8
TIR	Tirane	0.18	99	P	Pg	21 28 54.6	-1.0
TIR				S	Sg	21 28 58.2	-0.6
TIR	Tirane	0.18	99	⇑i Pg	Pg	21 28 54.6	-1.0
TIR				Sg	Sg	21 28 57.9	-0.9
TIR	Tirane	0.18	99	P	Pg	21 28 54.6	-1.0
TIR				i Sg	Sg	21 28 57.7	-1.1
TIR				eSb	Sg	21 28 58.0	-0.8
TIR				S	Sg	21 28 58.2	-0.6
ULC	Ulcinj	0.65	334	ePN	Pb	21 29 02.5	-1.3
ULC				i SN	Sg	21 29 13.4	+0.9
ULC	Ulcinj	0.65	334	⇑i Pg	Pb	21 29 02.5	-1.3
ULC				eSg	Sg	21 29 13.4	+0.9
ULC	Ulcinj	0.65	334	i P	Pb	21 29 02.5	-1.3
ULC				eS	Sg	21 29 13.4	+0.9
PUK	Puka	0.69	17	ePG	Pg	21 29 03.4	-1.2
PUK				i SG	Sg	21 29 15.1	+1.2
PUK	Puka	0.69	17	ePg	Pg	21 29 03.4	-1.2
SNR=95							
PUK				i Sg	Sg	21 29 15.1	+1.2
SNR=95							
OHR	Ohrid	0.92	106	i Pg	Pg	21 29 06.3	-2.6
OHR				eSg	Sg	21 29 20.4	-0.7
OHR				eLg		21 29 20.8	
OHR				eLg		21 29 22.8	
comp=E,2μm,0.7s							
OHR	Ohrid	0.92	106	i Pg	Pg	21 29 06.3	-2.6
OHR				eSg	Sg	21 29 20.4	-0.7
OHR				eLg		21 29 20.8	
BCI	Bajram Curri	1.04	18	ePG	Pg	21 29 08.9	-2.3
BCI				i SG	Sg	21 29 25.7	+0.8
BCI	Bajram Curri	1.04	18	ePg	Pg	21 29 08.9	-2.3
SNR=92							
BCI				i Sg	Sg	21 29 25.7	+0.8
SNR=92							
BUM	Brajici-Budva	1.07	330	ePN	Pn	21 29 10.5	-0.5
BUM				i SN	Sn	21 29 27.8	+2.4
BUM	Brajici-Budva	1.07	330	⇓i Pg	Pg	21 29 10.8	-0.9
BUM				eSg	Sg	21 29 27.4	+1.6
BUM	Brajici-Budva	1.07	330	⇓i Pg	Pg	21 29 10.8	-0.9
BUM				eSg	Sg	21 29 27.4	+1.6
PDG	Podgorica	1.09	346	ePN	Pn	21 29 10.8	-0.5
PDG				i SN	Sn	21 29 27.4	+1.6
PDG	Podgorica	1.09	346	⇓i Pg	Pb	21 29 10.5	-0.7
PDG				eSg	Sg	21 29 27.8	+1.5
TTG	Podgorica	1.09	346	⇓i Pg	Pb	21 29 10.5	-0.7
TTG				eSg	Sg	21 29 27.8	+1.5
TTG	Podgorica	1.09	346	i P	Pb	21 29 10.5	-0.7
TTG				eS	Sg	21 29 27.8	+1.5
KBN	Korca	1.16	130	ePG	Pg	21 29 13.7	+0.4
KBN				i SG	Sg	21 29 30.3	+1.8
KBN	Korca	1.16	130	ePg	Pg	21 29 13.7	+0.4
SNR=92							
KBN				i Sg	Sg	21 29 30.3	+1.8
SNR=92							
KRUS	Krusevo	1.22	90	i Pn	Pn	21 29 10.7	-2.4
KRUS				eSg	Sg	21 29 29.4	-1.1
KRUS				eLg		21 29 30.4	
comp=E,518nm,0.4s							
KRUS	Krusevo	1.22	90	i Pn	Pn	21 29 10.7	-2.4
KRUS				eSg	Sg	21 29 29.3	-1.2
KRUS				eLg		21 29 30.4	
comp=E,518nm,0.4s							
PVY	Plav	1.24	12	⇓i Pg	Pn	21 29 12.3	-1.1
PVY				eSg	Sg	21 29 32.2	+0.9
PVY	Plav	1.24	12	⇓i Pg	Pn	21 29 12.3	-1.1
PVY				eSg	Sg	21 29 32.2	+0.9
BIA	Bitola	1.33	105	i Pn	Pn	21 29 13.0	-1.6
BIA				eSg	Sg	21 29 32.5	-1.5
BIA				eLg		21 29 33.8	
comp=N,535nm,0.5s							
BIA				eLg		21 29 34.5	
comp=E,598nm,0.5s							
BIA	Bitola	1.33	105	i Pn	Pn	21 29 13.0	-1.6
BIA				eSg	Sg	21 29 32.4	-1.6
BIA				eLg		21 29 33.7	
comp=E,535nm,0.5s							
HCY	Herceg Novi	1.36	322	⇑i Pg	Pn	21 29 15.5	+0.5
HCY				eSg	Sg	21 29 36.1	+1.1
HCY	Herceg Novi	1.36	322	⇑i Pg	Pn	21 29 15.5	+0.5
HCY				eSg	Sg	21 29 36.1	+1.1
FNA	Florina	1.45	114	P	Pn	21 29 16.3	+0.1
FNA				S	Sn	21 29 35.4	+0.7
FNA	Florina	1.45	114	P	Pn	21 29 16.3	+0.1
FNA				S	Sn	21 29 35.4	+0.7
SKO	Skopje	1.48	66	⇑i Pg	Pn	21 29 16.3	-0.4
SKO				i Sg	Sg	21 29 36.7	-2.1
SKO	Skopje	1.48	66	ePn	Pn	21 29 17.6	+0.9
SKO				eSg	Sg	21 29 38.1	-0.8
SKO				eLg		21 29 39.4	
comp=N,936nm,0.4s							
SKO				eLg		21 29 39.7	
comp=E,3μm,1.1s							
SKO	Skopje	1.48	66	P	Pn	21 29 17.7	+1.0
SKO				S	Sn	21 29 37.2	+1.6
SKO	Skopje	1.48	66	⇑i Pg	Pn	21 29 16.3	-0.4
SKO	Skopje	1.48	66	ePn	Pn	21 29 17.6	+0.9
SKO				S	Sn	21 29 37.2	+1.6
SKO				eSg	Sg	21 29 38.0	-0.8
SKO				eLg		21 29 39.3	
comp=E,936nm,0.4s							
BEY	Berane	1.51	8	⇓i Pg	Pn	21 29 17.3	+0.3
BEY				eSg	Sg	21 29 39.3	-0.3
IVA	Berane	1.51	8	⇓i Pg	Pn	21 29 17.3	+0.3
IVA				eSg	Sg	21 29 39.3	-0.3
IVA	Berane	1.51	8	⇓i Pg	Pn	21 29 17.3	+0.3
IVA				eSg	Sg	21 29 39.3	-0.3
NKY	Niksic	1.51	342	⇓i Pg	Pn	21 29 17.7	+0.6
NKY				eSg	Sg	21 29 40.0	+0.3
NKY	Niksic	1.51	342	⇓i Pg	Pn	21 29 17.7	+0.6
NKY				eSg	Sg	21 29 40.0	+0.3
SRN	Sarande	1.52	169	ePG	Pn	21 29 17.8	+0.6
SRN				i SG	Sg	21 29 38.4	-1.7
SRN	Sarande	1.52	169	ePg	Pn	21 29 17.8	+0.6
SNR=91							
SRN				i Sg	Sg	21 29 38.4	-1.7
SNR=91							
TREB	Trebinje	1.64	325	⇑i Pn	Pn	21 29 19.5	+0.6
TREB	Trebinje	1.64	325	⇑i Pn	Pn	21 29 19.5	+0.6
KEK	Kerkira	1.67	175	ePN	Pn	21 29 19.5	+0.3
KEK				eSN	Sn	21 29 40.8	+0.7
KEK	Kerkira	1.67	175	P	Pn	21 29 19.5	+0.3
KEK				S	Sn	21 29 42.6	+2.5
KEK	Kerkira	1.67	175	Pg	Pn	21 29 19.6	+0.4
KEK	Kerkira	1.67	175	P	Pn	21 29 19.5	+0.3
KEK				eSn	Sn	21 29 40.8	+0.7
KEK				S	Sn	21 29 42.6	+2.5
BRY	Bratogost	1.72	332	⇓i Pn	Pn	21 29 20.8	+0.8
BRY				eSn	Sn	21 29 45.0	+3.5
BRY	Bratogost	1.72	332	⇓i Pn	Pn	21 29 20.8	+0.8
BRY				eSn	Sn	21 29 45.0	+3.5
SJES	Sjenica	1.90	8	i Pn	Pn	21 29 24.1	+1.7
SJES				i Sg	Sg	21 29 50.5	-1.7
SJES	Sjenica	1.90	8	i Pn	Pn	21 29 24.1	+1.7
SJES				i Sg	Sg	21 29 50.5	-1.7
UPM	Unac-Piva	1.90	344	ePn	Pn	21 29 23.6	+1.2
UPM				eSn	Sn	21 29 48.9	+3.0
UPM	Unac-Piva	1.90	344	ePn	Pn	21 29 23.6	+1.2
UPM				eSn	Sn	21 29 48.9	+3.0
IGT	Igoumenitsa	1.92	163	P	Pn	21 29 23.7	+1.0
IGT	Igoumenitsa	1.92	163	P	Pn	21 29 23.7	+1.0
KZN	Kozani	1.95	123	ePN	Pn	21 29 23.8	+0.7
KZN				eSN	Sn	21 29 46.5	-0.5
KZN	Kozani	1.95	123	ePn	Pn	21 29 23.8	+0.7
KZN				eSn	Sn	21 29 46.5	-0.5
JAN	Janina	1.96	151	ePN	Pn	21 29 23.0	-0.2
JAN				eSN	Sn	21 29 47.2	0.0
JAN	Janina	1.96	151	ePn	Pn	21 29 23.0	-0.2
JAN				eSn	Sn	21 29 47.2	0.0
PLE	Pljevlja	1.96	355	⇑i Pn	Pn	21 29 24.3	+1.1
PLE				eSn	Sn	21 29 50.4	+3.1
PLE	Pljevlja	1.96	355	⇑i Pn	Pn	21 29 24.3	+1.1
PLE				eSn	Sn	21 29 50.4	+3.1
TAR1	Taranto	1.97	245	ePn	Pn	21 29 22.8	-0.6
TAR1				eSn	Sn	21 29 46.6	-0.9
NOCI	Noci	2.02	254	⇓i Pg	Pn	21 29 23.8	-0.3
STON	Ston	2.07	317	ePn	Pn	21 29 25.0	+0.2
STON				Sn	Sn	21 29 50.3	+0.3
STON	Ston	2.07	317	ePn	Pn	21 29 24.9	+0.1
STON				Sn	Sn	21 29 50.3	+0.2
BAI	Bari	2.09	263	ePn	Pn	21 29 25.5	+0.5
BAI				eSn	Sn	21 29 49.6	-1.0
SELS	Selova	2.15	31	⇑i Pn	Pn	21 29 25.8	0.0
SELS				i Sn	Sn	21 29 53.7	+1.7
BARS	Barje	2.17	48	⇓i Pn	Pn	21 29 26.8	+0.6
BARS	Barje	2.17	48	⇓i Pn	Pn	21 29 26.8	+0.6
VAY	Valandovo	2.22	90	ePn	Pn	21 29 26.6	-0.2
VAY				eSg	Sg	21 29 58.0	-4.3
VAY				eLg		21 29 59.6	
comp=E,209nm,0.8s							
VAY				eLg		21 29 60.0	
comp=N,558nm,0.8s							
VAY	Valandovo	2.22	90	ePn	Pn	21 29 26.5	-0.3
VAY				eSg	Sg	21 29 57.9	-4.3
VAY				eLg		21 29 59.6	
comp=N,209nm,0.8s							
LTRZ	Laterza	2.26	251	Pg	Pn	21 29 26.9	-0.5
LTRZ	Laterza	2.26	251	Pg	Pn	21 29 26.9	-0.5
SG1	Sgolgore (BA)	2.29	257	ePn	Pn	21 29 28.3	+0.5
AMUR	Altamura	2.33	259	⇓i Pg	Pn	21 29 28.2	-0.1
comp=N,136nm,0.4s							
BBLS	Lazići	2.49	356	ePn	Pn	21 29 30.9	+0.3
BBLS				i Sg	Sg	21 30 08.0	-3.1
BBLS	Lazići	2.49	356	ePn	Pn	21 29 30.9	+0.3
BBLS				i Sg	Sg	21 30 08.0	-3.1
LIT	Litokhoron	2.52	119	ePN	Pn	21 29 31.5	+0.5
LIT				eSN	Sn	21 30 00.4	-0.8
LIT	Litokhoron	2.52	119	P	Pn	21 29 31.6	+0.6
LIT				S	Sn	21 30 01.7	+0.5
LIT	Litokhoron	2.52	119	ePn	Pn	21 29 31.5	+0.5
LIT				eSn	Sn	21 30 00.4	-0.8
LIT				S	Sn	21 30 01.7	+0.5
MIGL	Miglionico	2.53	253	Pg	Pn	21 29 31.7	+0.6
comp=N,531nm,0.9s							
THL	Klokotos Trika	2.57	134	ePN	Pn	21 29 32.2	+0.6
THL				eSN	Sn	21 30 01.6	-0.8
THL	Klokotos Trika	2.57	134	P	Pn	21 29 32.4	+0.8
THL	Klokotos Trika	2.57	134	ePn	Pn	21 29 32.2	+0.6
THL				eSn	Sn	21 30 01.6	-0.8
MRVN	Minervino Murg	2.61	264	Pg	Pn	21 29 32.3	+0.1
comp=N,66nm,0.5s							
CRAC	Craco	2.62	248	Pg	Pn	21 29 32.6	+0.2
comp=N,217nm,0.4s							
THE	Thessaloniki	2.63	105	P	Pn	21 29 32.6	+0.1
THE				S	Sn	21 30 04.1	+0.1
THE	Thessaloniki	2.63	105	P	Pn	21 29 32.6	+0.1
THE				S	Sn	21 30 04.1	+0.1
GRUS	Gruza	2.63	17	⇓i Pn	Pn	21 29 33.2	+0.7
GRUS				i Sn	Sn	21 30 06.7	+2.7
GRUS	Gruza	2.63	17	⇓i Pn	Pn	21 29 33.2	+0.7
GRUS				i Sn	Sn	21 30 06.7	+2.7
NISS		2.66	40	⇑i Pn	Pn	21 29 33.3	+0.5
NISS				i Sn	Sn	21 30 07.0	+2.5
NISS		2.66	40	⇑i Pn	Pn	21 29 33.3	+0.5
NISS				i Sn	Sn	21 30 07.0	+2.5
DIVS	Divibare	2.73	6	⇑i Pn	Pn	21 29 34.4	+0.5
DIVS				i Sn	Sn	21 30 08.2	+1.8
DIVS	Divibare	2.73	6	P	Pn	21 29 34.3	+0.4
DIVS	Divibare	2.73	6	P	Pn	21 29 34.3	+0.4
DIVS				i Sn	Sn	21 30 08.2	+1.8
HORT	Hortiatis	2.74	105	P	Pn	21 29 34.0	0.0
HORT				S	Sn	21 30 06.9	+0.3
HORT	Hortiatis	2.74	105	P	Pn	21 29 34.0	0.0
HORT				S	Sn	21 30 06.9	+0.3
ORI	Oriolo Calabro	2.75	243	Pg	Pn	21 29 33.8	-0.3
MS1	Monte Sant'Ang	2.79	278	ePn	Pn	21 29 34.9	+0.3
MS1				eSn	Sn	21 30 09.8	+2.1
SOH	Sokhos	2.87	100	ePN	Pn	21 29 36.2	+0.4
SOH				eSN	Sn	21 30 09.1	-0.7
SOH	Sokhos	2.87	100	P	Pn	21 29 36.0	+0.2
SOH				S	Sn	21 30 10.5	+0.7
SOH	Sokhos	2.87	100	ePn	Pn	21 29 36.2	+0.4
SOH				eSn	Sn	21 30 09.1	-0.7
SOH				S	Sn	21 30 10.5	+0.7
ZAPS	Zavoj	2.93	49	⇓i Pn	Pn	21 29 38.0	+1.5
ZAPS				eSn	Sn	21 30 11.3	+0.1
ZAPS	Zavoj	2.93	49	⇓i Pn	Pn	21 29 38.0	+1.5
ZAPS				eSn	Sn	21 30 11.3	+0.1
VTS	Vitosha	2.93	64	⇑i Pn	Pn	21 29 37.4	+0.8
VTS				i Sn	Sn	21 30 12.9	+1.6
VTS	Vitosha	2.93	64	P	Pn	21 29 37.1	+0.5
VTS				S	Sn	21 30 12.1	+0.8
VTS	Vitosha	2.93	64	P	Pn	21 29 37.1	+0.5
VTS	Vitosha	2.93	64	⇑i Pn	Pn	21 29 37.4	+0.8
VTS				S	Sn	21 30 12.1	+0.8
VTS				i Sn	Sn	21 30 12.9	+1.6
SCHR	S. Chirico Rap	2.94	248	Pg	Pn	21 29 37.2	+0.5
SRS	Serrai	3.00	94	P	Pn	21 29 37.5	-0.1
SRS	Serrai	3.00	94	P	Pn	21 29 37.5	-0.1
RGNG	Rignano Grg	3.05	277	Pg	Pn	21 29 37.9	-0.3
RGNG	Rignano Grg	3.05	277	Pg	Pn	21 29 37.9	-0.3
VULT	Monte Vulture	3.06	263	Pg	Pn	21 29 40.3	+2.0
PLG	Polygyros	3.06	108	ePN	Pn	21 29 38.5	+0.1
PLG				eSN	Sn	21 30 14.0	-0.6
PLG	Polygyros	3.06	108	P

SGG Gregorio Mates 3.95 272 Pg Pn 21 29 52.2 +1.6
SGG Gregorio Mates 3.95 272 Pg Pn 21 29 52.2 +1.6
comp=N,179nm,0.5s
GUR Goura 4.03 148 ePN Pn 21 29 52.8 +1.2
GUR Goura 4.03 148 ePn Pn 21 29 52.8 +1.2
CEL Celeste 4.24 224 Pg Pn 21 29 54.0 -0.6
CEL Celeste 4.24 224 Pg Pn 21 29 54.0 -0.6
SOI Samo 4.30 221 Pg Pn 21 29 54.8 -0.6
VCEL Villa Celiera 4.44 285 Pg Pn 21 29 57.9 +0.6
RDO Rodhopi 4.46 91 ePN Pn 21 29 57.9 +0.3
RDO Rodhopi 4.46 91 ePn Pn 21 29 57.9 +0.3
BZS Buzias 4.48 18⇑iPn Pn 21 29 57.6 -0.2
BZS iSn Sn 21 30 49.3 -0.1
BZS Buzias 4.48 18⇑iP Pn 21 29 58.0 +0.2
BZS Buzias 4.48 18⇑iPn Pn 21 29 57.6 -0.2
BZS Buzias 4.48 18 P Pn 21 29 58.0 +0.2
BZS iSn Sn 21 30 49.3 -0.1
LIA Limnos Island 4.48 107 ePN Pn 21 29 58.6 +0.7
LIA Limnos Island 4.48 107 ePn Pn 21 29 58.6 +0.7
VVLD Villa Vallelon 4.53 278 Pg Pn 21 29 59.9 +1.4
VVLD Villa Vallelon 4.53 278 Pg Pn 21 29 59.9 +1.4
ITM Ithomi 4.56 156 ePN Pn 21 29 59.8 +0.9
ITM Ithomi 4.56 156 ePn Pn 21 29 59.8 +0.9
RHK3 Tenkes 4.62 348⇓ePn Pn 21 29 59.8 0.0
RHK3 eSn Sn 21 30 51.3 -1.6
NVLJ Novalja 4.72 314 ePn Pn 21 30 01.6 +0.4
NVLJ Sn Sn 21 30 54.1 -1.4
NVLJ Novalja 4.72 314 ePn Pn 21 30 01.5 +0.3
NVLJ Sn Sn 21 30 54.1 -1.4
AQU L'Aquila 4.75 284 ⇑P Pn 21 30 03.7 +2.1
AQU L'Aquila 4.75 284⇑iP Pn 21 30 03.7 +2.1
AQU L'Aquila 4.75 284 P Pn 21 30 03.7 +2.1
PYL PYLOS 4.77 159 ePN Pn 21 30 01.3 -0.6
PYL PYLOS 4.77 159 ePn Pn 21 30 01.3 -0.6
VLY Voula,Athens 4.77 136 ePN Pn 21 30 02.3 +0.4
VLY Voula,Athens 4.77 136 ePn Pn 21 30 02.3 +0.4
ALN Alexandroupoli 4.87 94 ePN Pn 21 30 04.0 +0.7
ALN Alexandroupoli 4.87 94 ePn Pn 21 30 04.0 +0.7
PKSM Moragy 4.88 352⇑iPn Pn 21 30 03.7 +0.3
PKSM Moragy 4.88 352⇓ePn Pn 21 30 03.5 +0.1
DEV Deva 5.09 27 ⇑P Pn 21 30 06.8 +0.5
DEV Deva 5.09 27⇑iP Pn 21 30 06.8 +0.5
DEV Deva 5.09 27 P Pn 21 30 06.8 +0.5
PKS2 Kecel 5.12 357⇓ePn Pn 21 30 06.6 -0.1
BOJS Bojanci 5.21 324 ePn Pn 21 30 08.3 +0.4
BOJS eSn Sn 21 31 06.2 -1.3
BOJS Bojanci 5.21 324 ePn Pn 21 30 08.3 +0.4
BOJS eSn Sn 21 31 06.2 -1.3
PKS6 Bocsa 5.22 360 eSn Sn 21 31 07.0 -0.8
PKS9 Tamasi 5.30 350⇓ePn Pn 21 30 09.7 +0.6
VLI Veliai 5.32 150 ePN Pn 21 30 11.6 +2.2
VLI Veliai 5.32 150 ePn Pn 21 30 11.6 +2.2
PRK Paraskevi 5.51 111 ePN Pn 21 30 13.1 +1.1
PRK Paraskevi 5.51 111 ePn Pn 21 30 13.1 +1.1
VOIR 5.66 42 ⇑P Pn 21 30 15.6 +1.5
VOIR 5.66 42⇑iP Pn 21 30 15.6 +1.5
VOIR 5.66 42 P Pn 21 30 15.6 +1.5
CEY Cerknica 5.77 321 ePn Pn 21 30 16.1 +0.6
CEY eSn Sn 21 31 20.4 -0.9
CEY Cerknica 5.77 321 ePn Pn 21 30 16.1 +0.5
CEY eSn Sn 21 31 20.4 -0.8
DRGR 5.85 21 ⇓P Pn 21 30 18.7 +2.0
DRGR 5.85 21⇓iP Pn 21 30 18.7 +2.0
DRGR 5.85 21 P Pn 21 30 18.7 +2.0
MDB Medias 5.88 34⇓iP Pn 21 30 20.8 +3.8
LJU Ljubljana 5.95 323 iPn Pn 21 30 18.6 +0.6
LJU iSn Sn 21 31 25.0 -0.7
LJU Ljubljana 5.95 323 iP Pn 21 30 18.6 +0.5
LJU iS Sn 21 31 25.0 -0.7
JAVS Javornik 6.05 320 iPn Pn 21 30 19.4 -0.1
JAVS iSn Sn 21 31 25.9 -2.3
JAVS Javornik 6.05 320 iPn Pn 21 30 19.4 -0.1
PKSG 6.08 352 eSn Sn 21 31 29.9 +1.0
BUD Budapest 6.12 356 ePn Pn 21 30 25.2 +4.8
BUD eSn Sn 21 31 37.1 +7.2
MLR Muntele Rosu 6.17 46 Pn Pn 21 30 19.9 -1.2
comp=N,3.1nm,0.3s,baz=155,slow=11,SNR=65
MLR Sn Sn 21 31 27.1 -4.0
comp=N,0.8nm,0.3s,baz=124,slow=15,SNR=3.2
MLR Muntele Rosu 6.17 46 P Pn 21 30 19.9 -1.2
MLR 21 31 27.1
MLR pmax pmax
comp=Z,3.0nm,0.3s
MLR smax
comp=N,1.0nm,0.3s
MLR Muntele Rosu 6.17 46⇑iP Pn 21 30 22.5 +1.4
MLR Muntele Rosu 6.17 46 P Pn 21 30 19.9 -1.2
comp=N,3.0nm,0.3s
PERS Pernice 6.18 330 iPn Pn 21 30 21.5 +0.2
PERS iSn Sn 21 31 27.6 -3.8
PERS Pernice 6.18 330 iPn Pn 21 30 21.5 +0.3
VOY Vojsko 6.24 320⇓ePn Pn 21 30 22.2 +0.2
VOY eSn Sn 21 31 31.2 -1.6
VOY Vojsko 6.24 320⇓ePn Pn 21 30 22.2 +0.2
VOY eSn Sn 21 31 31.2 -1.6
SOKA Soboth 6.25 330⇓iPn Pn 21 30 22.5 +0.3
SOKA Soboth 6.25 330 Pn Pn 21 30 22.5 +0.4
OBKA Obir 6.30 326⇑iPn Pn 21 30 23.1 +0.2
SNR=12
OBKA ⇓iSn Sn 21 31 34.8 +0.4
OBKA Obir 6.30 326 Pn Pn 21 30 23.1 +0.2
SNR=12
OBKA Sn Sn 21 31 34.8 +0.4
PENC Penc 6.42 358⇓ePn Pn 21 30 25.0 +0.5
PENC eSn Sn 21 31 36.6 -0.6
PSZ Piszkesteto 6.54 2 eP Pn 21 30 26.2 0.0
PSZ e 21 31 39.5
PSZ pmax pmax
comp=Z,12nm,0.6s
PSZ Piszkesteto 6.54 2 ePn Pn 21 30 26.2 0.0
comp=Z,12nm,0.6s
PSZ eSn Sn 21 31 39.5 -0.8
PSZ Piszkesteto 6.54 2⇓ePn Pn 21 30 26.4 +0.2
PSZ eSn Sn 21 31 40.7 +0.4
PSZ Piszkesteto 6.54 2 eP Pn 21 30 26.2 0.0
comp=Z,12nm,0.6s
PSZ eS Sn 21 31 39.5 -0.8
ARSA Arzberg 6.57 335⇓iPn Pn 21 30 26.8 +0.2
ARSA ⇓iSn Sn 21 31 40.5 -0.4
ARSA Arzberg 6.57 335 Pn Pn 21 30 26.8 +0.3
ARSA Sn Sn 21 31 40.5 -0.4
SOP Sopron 6.67 342 eSn Sn 21 31 43.5 0.0
PLOR Plostina 6.78 46 ⇑P Pn 21 30 31.3 +1.9
PLOR Plostina 6.78 46⇑iP Pn 21 30 31.3 +1.9
PLOR Plostina 6.78 46 P Pn 21 30 31.3 +1.9
VRI Vrincioaia 6.83 47 ⇑P Pn 21 30 32.0 +1.8
VRI Vrincioaia 6.83 47⇑iP Pn 21 30 32.0 +1.8
VRI Vrincioaia 6.83 47 P Pn 21 30 32.0 +1.8
HARR Harsova 6.93 59 ⇑P Pn 21 30 32.3 +0.8
HARR Harsova 6.93 59⇑iP Pn 21 30 32.3 +0.8
HARR Harsova 6.93 59 P Pn 21 30 32.3 +0.8
ZST Bratislava 7.05 346 e Px 21 31 07.3
ZST Bratislava 7.05 346 eSN Sn 21 31 47.5 -5.3
ZST Bratislava 7.05 346 ePg Px 21 31 07.3
TRPA Tarpa 7.06 16⇓ePn Pn 21 30 34.0 +0.7
KECS Kecovo 7.13 5 eP Pn 21 30 35.6 +1.3
KECS e 21 31 52.4
KECS Kecovo 7.13 5 ePN Pn 21 30 35.6 +1.3
KECS eSN Sn 21 31 52.4 -2.4
KECS Kecovo 7.13 5 eP Pn 21 30 35.6 +1.3
VYHS Vyhne 7.14 356 eP Pn 21 30 34.3 -0.1
VYHS e 21 31 54.1
VYHS Vyhne 7.14 356 ePN Pn 21 30 34.3 -0.1
VYHS eSN Sn 21 31 54.1 -0.8
VYHS Vyhne 7.14 356 eP Pn 21 30 34.3 -0.1
VYHS eS Sn 21 31 54.1 -0.8
KOLL Kolacno 7.25 354 eP Pn 21 30 37.4 +1.5
KOLL e 21 31 54.4
KOLL Kolacno 7.25 354 ePN Pn 21 30 37.4 +1.5
KOLL eSN Sn 21 31 54.4 -3.4
KOLL Kolacno 7.25 354 eP Pn 21 30 37.4 +1.5
CFR Carcaliu 7.28 56 ⇑P Pn 21 30 38.4 +2.1
CFR Carcaliu 7.28 56⇑iP Pn 21 30 38.4 +2.1
CFR Carcaliu 7.28 56 P Pn 21 30 38.4 +2.1
IDI Anoyia 7.35 144 Pn Pn 21 30 35.7 -1.6
comp=Z,0.6nm,0.3s,baz=304,slow=16,SNR=6.0
IDI Sn Sn 21 31 52.9 -7.4
comp=Z,1.5nm,0.3s,baz=90,slow=18,SNR=3.4
IDI Anoyia 7.35 144 Pn Pn 21 30 35.7 -1.6
BURAR Bucovina Array 7.41 31 ⇑P Pn 21 30 40.3 +2.3
BURAR Bucovina Array 7.41 31⇑iP Pn 21 30 40.3 +2.3
BURAR Bucovina Array 7.41 31⇑iP Pn 21 30 40.3 +2.3
ABTA Abfaltersbach 7.42 319⇓iPn Pn 21 30 37.8 -0.4
ABTA Abfaltersbach 7.42 319 Pn Pn 21 30 37.8 -0.4
BUR08 Bucovina Ar. S 7.42 31 ePn Pn 21 30 40.1 +1.9
BUR08 Sn Sn 21 32 01.3 -0.6
BUR08 Bucovina Ar. S 7.42 31 ePn Pn 21 30 40.1 +1.8
BUR08 Sn Sn 21 32 01.3 -0.6
UZH Uzhgorod 7.50 14⇓iP Pn 21 30 41.4 +2.1
UZH eS Sn 21 32 04.0 +0.3
UZH smax
comp=N,16nm,0.8s
UZH smax
comp=E,26nm,0.8s
UZH Uzhgorod 7.50 14 iP Pn 21 30 41.4 +2.1
UZH eS Sn 21 32 04.0 +0.3
MOA Moln 7.51 331⇑iPn Pn 21 30 40.2 +0.7
MOA ⇑iSn Sn 21 32 05.5 +1.3
MOA Moln 7.51 331 Pn Pn 21 30 40.2 +0.7
MOA Sn Sn 21 32 05.5 +1.3
TLCR 7.71 57 ⇓P Pn 21 30 43.4 +1.2
TLCR 7.71 57⇓iP Pn 21 30 43.3 +1.1
TLCR 7.71 57 P Pn 21 30 43.4 +1.2
KOLS Kolonicke sedl 7.78 13 eP Pn 21 30 46.1 +2.9
KOLS e 21 32 08.2
KOLS Kolonicke sedl 7.78 13 ePN Pn 21 30 46.0 +2.8
KOLS eSN Sn 21 32 08.2 -2.6
PGF Pioggiola 8.01 282 ePn Pn 21 30 47.2 +0.9
PGF eSn Sn 21 32 09.3 -7.0
comp=E,2.9nm,0.5s
PGF Pioggiola 8.01 282 ePn Pn 21 30 47.2 +0.9
NIE Niedzica 8.06 3 eP Pn 21 30 49.7 +2.7
NIE e 21 32 19.9
NIE Niedzica 8.06 3 eS Sn 21 32 19.9 +2.4
STHS Stebnicka Huta 8.12 7 eP Pn 21 30 49.8 +2.0
STHS e 21 32 19.5
STHS Stebnicka Huta 8.12 7 ePN Pn 21 30 49.8 +2.0
STHS eSN Sn 21 32 19.5 +0.4
STHS Stebnicka Huta 8.12 7 eP Pn 21 30 49.8 +2.0
STHS eS Sn 21 32 19.5 +0.4
WTTA Wattenberg 8.21 318⇓iPn Pn 21 30 49.1 +0.1
SNR=8.3
WTTA Wattenberg 8.21 318 Pn Pn 21 30 49.1 0.0
SNR=8.3
VRAC Vranov 8.21 346 Pn Pn 21 30 49.3 +0.2
comp=E,0.3nm,0.3s,baz=184,slow=13,SNR=3.0
VRAC Vranov 8.21 346 P Pn 21 30 49.3 +0.2
WATA Walderalm 8.29 319⇓iPn Pn 21 30 50.4 +0.3
SNR=12
WATA ⇓iSn Sn 21 32 23.2 0.0
WATA Walderalm 8.29 319 Pn Pn 21 30 50.4 +0.3
SNR=12
WATA Sn Sn 21 32 23.2 0.0
MOTA Moosalm 8.53 317⇑iPn Pn 21 30 53.1 -0.4
SNR=10
MOTA ⇓iSn Sn 21 32 29.2 -0.1
MOTA Moosalm 8.53 317 Pn Pn 21 30 53.1 -0.4
SNR=10
MOTA Sn Sn 21 32 29.2 0.0
GERES GERESS Array B 8.56 333 Pn Pn 21 30 53.7 -0.1
comp=E,0.6nm,0.3s,baz=150,slow=14,SNR=16
GERES Sn Sn 21 32 29.0 -0.9
comp=E,0.8nm,0.3s,baz=150,slow=24,SNR=5.2
GERES LR LR 21 34 50.3
comp=E,92nm,19.4s,baz=285,slow=42
GERES GERESS Array B 8.56 333 P Pn 21 30 53.7 -0.2
GERES 21 32 29.0
GERES pmax pmax
comp=Z,1.0nm,0.3s
GERES smax
comp=N,1.0nm,0.3s
GERES MLR MLR
comp=Z,92nm,19.5s
GERES GERESS Array B 8.56 333 P Pn 21 30 53.7 -0.2
comp=Z,1.0nm,0.3s
GERES S Sn 21 32 29.0 -0.9
comp=Z,92nm,19.5s
KHC Kasperske Hory 8.85 333 Pn Pn 21 30 57.9 +0.1
DAVOX Davos/Dischmat 8.85 311 Pn Pn 21 30 58.9 +1.1
comp=Z,1.0nm,0.3s,baz=132,slow=17,SNR=8.9
DAVOX Sn Sn 21 32 32.3 -4.7
comp=Z,0.5nm,0.3s,baz=342,slow=20,SNR=2.8
DAVOX Davos/Dischmat 8.85 311 P Pn 21 30 58.9 +1.0
DPC Dobruska-Polom 9.26 347 ePN Pn 21 31 04.3 +0.8
DPC ex x 21 31 18.0
DPC eSN Sn 21 32 40.6 -6.6
DPC Dobruska-Polom 9.26 347 Pn Pn 21 31 04.3 +0.8
SBF Sospel 9.33 289 ePn Pn 21 31 02.5 -1.9
SBF eSn Sn 21 32 40.8 -7.9
comp=Z,8.0nm,0.3s
SBF Sospel 9.33 289 ePn Pn 21 31 02.5 -1.9
FRF La Foret Royal 9.84 287 ePn Pn 21 31 12.8 +1.4
FRF eSn Sn 21 32 53.2 -8.1
comp=Z,11nm,0.8s
FRF La Foret Royal 9.84 287 ePn Pn 21 31 12.8 +1.4
LMR La Mourre 9.91 286 ePn Pn 21 31 11.3 -1.0
LMR eSn Sn 21 32 55.0 -8.0
comp=Z,2.0nm,0.3s
LMR La Mourre 9.91 286 ePn Pn 21 31 11.3 -1.0
MBDF Montbardon 9.99 294 ePn Pn 21 31 11.3 -2.1
MBDF eSn Sn 21 32 56.7 -8.3
comp=Z,9.3nm,0.6s
LPG La Plagne 10.23 298 ePn Pn 21 31 15.6 -1.1
LPG eSn Sn 21 33 02.1 -8.8
comp=Z,16nm,0.5s
LPG La Plagne 10.23 298 ePn Pn 21 31 15.6 -1.1
LPL La Plagne 10.25 298 ePn Pn 21 31 15.5 -1.5
LPL eSn Sn 21 33 00.0 -11
comp=Z,16nm,0.4s
LPL La Plagne 10.25 298 ePn Pn 21 31 15.5 -1.5
ORIF Oris-en-Rattie 10.65 294 ePn Pn 21 31 20.5 -2.0
ORIF eSn Sn 21 33 12.1 -9.1
comp=Z,17nm,0.8s
ORIF Oris-en-Rattie 10.65 294 ePn Pn 21 31 20.5 -2.0
SMRF Simiane la Rot 10.67 289 ePn Pn 21 31 22.3 -0.5
SMRF eSn Sn 21 33 35.3 +14
comp=Z,1.2nm,0.3s
SMRF Simiane la Rot 10.67 289 ePn Pn 21 31 22.3 -0.5
SMRF eSn Sn 21 33 24.3 +2.6
SMRF Simiane la Rot 10.67 289 ePn Pn 21 31 22.3 -0.5
SMRF eSn Sn 21 33 24.3 +2.6
comp=Z,0.6nm,0.3s
BR131 Keskin Array S 10.79 94 Pn Pn 21 31 22.9 -1.6
BR131 Keskin Array S 10.79 94 Pn Pn 21 31 22.9 -1.6
BRTR Keskin Array B 10.79 94 Pn Pn 21 31 25.8 +1.3
comp=Z,0.1nm,0.3s,baz=262,slow=12,SNR=3.0
BRTR Keskin Array B 10.79 94 P Pn 21 31 25.8 +1.3
CLL Collm 10.93 338 eP Pn 21 31 20.0 -6.3
CLL MLR MLR
comp=Z,100nm,18.7s
CLL Collm 10.93 338 ePn Pn 21 31 20.0 -6.3
CLL eSg Sx 21 34 22.0
CABF La Chapelle 11.06 303 ePn Pn 21 31 26.5 -1.7
CABF eSn Sn 21 33 22.2 -9.1
comp=Z,23nm,0.9s
CABF La Chapelle 11.06 303 ePn Pn 21 31 26.5 -1.7
HINF Hinteralfeld 11.15 310 ePn Pn 21 31 26.9 -2.4
HINF eSn Sn 21 33 23.9 -9.4
comp=Z,4.1nm,0.3s
CDF Champ du Feu 11.23 313 ePn Pn 21 31 28.2 -2.2
CDF eSn Sn 21 33 25.7 -10
comp=Z,5.4nm,0.6s
CDF Champ du Feu 11.23 313 ePn Pn 21 31 28.2 -2.2
AKASG Malin Array Be 11.45 32 Pn Pn 21 31 32.1 -1.4
comp=Z,0.5nm,0.3s,baz=223,slow=15,SNR=3.7
AKASG Malin Array Be 11.45 32 P Pn 21 31 32.1 -1.4
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 11.45 32 P Pn 21 31 32.1 -1.4
comp=Z,1.0nm,0.3s
VIVF Saint-Julien-l 11.47 293 ePn Pn 21 31 31.7 -2.0
VIVF eSn Sn 21 33 32.4 -8.9
comp=Z,2.3nm,0.6s
VIVF Saint-Julien-l 11.47 293 ePn Pn 21 31 31.7 -2.0
HAU Haudompre 11.54 310 ePn Pn 21 31 32.2 -2.4
HAU eSn Sn 21 33 33.3 -10
comp=Z,12nm,0.5s
SMF Signal de Mont 12.52 300 ePn Pn 21 31 45.7 -2.4
SMF eSn Sn 21 33 56.8 -10
comp=Z,15nm,0.7s
LOR Lormes 12.73 303 ePn Pn 21 31 48.2 -2.7
LOR eSn Sn 21 34 01.8 -10
comp=Z,10nm,0.5s
SSF Saint Saulge 12.88 302 ePn Pn 21 31 50.5 -2.4
SSF eSn Sn 21 34 05.4 -10
comp=Z,7.5nm,0.8s
AVF Avril sur Loir 12.88 300 ePn Pn 21 31 49.7 -3.3
AVF eSn Sn 21 34 05.4 -10
comp=Z,1.9nm,0.5s
BGF Bois d'Agland 13.14 299 ePn Pn 21 31 52.5 -4.1
BGF eSn Sn 21 34 11.7 -10
comp=Z,8.3nm,0.6s
ANN Anapa 13.46 69 eP Px 21 32 14.0
ANN pmax pmax
comp=Z,10.0nm,1.0s
IIGN Ignalina 14.64 15 eP Pn 21 32 21.6 +4.7
IIGN Ignalina 14.64 15 eP Pn 21 32 21.6 +4.6
SNR=35
IDID Didziasalis 14.71 16 eP Pn 21 32 22.2 +4.3
IDID Didziasalis 14.71 16 eP Pn 21 32 22.2 +4.3
SNR=35
ISAL Salakas 14.83 15 eP Pn 21 32 23.8 +4.2
ISAL Salakas 14.83 15 eP Pn 21 32 23.8 +4.3
SNR=35
SOC Sochi 14.99 75 eP Pn 21 32 19.3 -2.4
SOC pmax pmax
comp=Z,11nm,0.7s
IZAR Zarasai 15.02 15 eP Pn 21 32 25.9 +3.8
IZAR Zarasai 15.02 15 eP Pn 21 32 26.0 +3.9
SNR=35
MMAI Mount Meron Ar 15.07 119 Pn Pn 21 32 26.6 +3.7
comp=Z,1.6nm,0.3s,baz=323,slow=9.7,SNR=14
MFF Saint Martin d 15.15 297 ePn Pn 21 32 20.7 -3.1
MFF eSn Sn 21 34 59.3 -12
comp=Z,2.1nm,0.5s
KIV Kislovodsk 17.14 74 eP Pn 21 32 49.2 -0.3
KIV pmax pmax
comp=Z,3.0nm,0.9s
KIV MLR MLR
comp=Z,15nm,13.0s
KIV Kislovodsk 17.14 74 ePn Pn 21 32 48.4 -1.1
comp=Z,2.8nm,0.6s
KIV Kislovodsk 17.14 74 ePn Pn 21 32 48.4 -1.1
comp=Z,2.8nm,0.6s
KIV Kislovodsk 17.14 74 eP Pn 21 32 49.2 -0.3
comp=Z,15nm,13.0s
OBN Obninsk 17.71 33⇑eP Pn 21 32 54.2 -2.2
OBN eS Sn 21 36 08.3 -4.9
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,100nm,18.0s
ZEI Tsey 18.06 77 eP Pn 21 33 00.9 +0.1
ZEI pmax pmax
comp=Z,3.0nm,0.8s
ZEI Tsey 18.06 77 eP Pn 21 33 00.9 +0.1
comp=Z,3.0nm,0.8s
GNI Garni 19.05 85 P Pn 21 33 10.0 -2.8
comp=Z,0.3nm,0.3s,baz=310,slow=6.3,SNR=5.4
GNI Garni 19.05 85 iP Pn 21 33 12.1 -0.8
GNI pmax pmax
comp=Z,13nm,1.9s
GNI Garni 19.05 85 P Pn 21 33 10.1 -2.8
GNI Garni 19.05 85 iP Pn 21 33 12.1 -0.8
comp=Z,13nm,1.9s
HFS Hagfors 19.14 351 P Pn 21 33 11.5 -2.2
comp=Z,0.5nm,0.3s,baz=163,slow=12,SNR=17
HFS LR LR 21 41 47.0
comp=Z,38nm,19.5s,baz=281,slow=41
HFS Hagfors 19.14 351 P Pn 21 33 11.5 -2.2
HFS pmax pmax
comp=Z,1.0nm,0.3s
HFS MLR MLR
comp=Z,39nm,19.5s
HFS Hagfors 19.14 351 P Pn 21 33 11.5 -2.2
comp=Z,39nm,19.5s
NAO01 NORSAR Array S 20.22 348 P P 21 33 22.6 -2.0
NB2 NORSAR Subarra 20.35 348 P P 21 33 24.7 -1.3
comp=Z,0.6nm,0.5s,baz=164,slow=12
NB2 NORSAR Subarra 20.35 348 P P 21 33 24.7 -1.3
comp=Z,0.6nm,0.5s,baz=164,slow=11,SNR=4.2
NOA NORSAR Array B 20.35 348 P P 21 33 24.9 -1.2
comp=Z,1.1nm,0.7s,baz=165,slow=11,SNR=4.4
NOA NORSAR Array B 20.35 348 P P 21 33 24.9 -1.1
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 20.35 348 P P 21 33 24.9 -1.1
comp=Z,1.0nm,0.7s
EKA Eskdalemuir Ar 20.47 321 P P 21 33 26.9 -0.5
comp=Z,1.7nm,0.7s,baz=113,slow=9.6,SNR=8.5
EKA Eskdalemuir Ar 20.47 321 P P 21 33 26.9 -0.5
EKA pmax pmax
comp=Z,2.0nm,0.7s
EKA Eskdalemuir Ar 20.47 321 P P 21 33 26.9 -0.5
comp=Z,2.0nm,0.7s
FINES FINESS Array B 20.47 9 P P 21 33 25.3 -2.1
comp=Z,3.6nm,0.3s,baz=189,slow=9.9,SNR=49
FINES PcP PcP 21 37 36.3 -2.2
comp=Z,0.6nm,0.4s,baz=180,slow=2.8,SNR=7.1
FINES LR LR 21 42 34.1
comp=Z,63nm,20.5s,MS3.0,baz=130,slow=40
FINES FINESS Array B 20.47 9 P P 21 33 25.3 -2.1
FINES 21 37 36.3
FINES pmax pmax
comp=Z,4.0nm,0.3s
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES MLR MLR
comp=Z,63nm,20.5s
KAF Kangasniemi 21.15 9 eP P 21 33 32.7 -2.0
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.1
KAF Kangasniemi 21.15 9 ep P 21 33 32.7 -2.0
comp=Z,5.5nm,0.6s,mb4.1
JOF Joensuu 22.66 14 eP P 21 33 47.5 -3.3
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
JOF Joensuu 22.66 14 ep P 21 33 47.5 -3.3
comp=Z,3.0nm,0.5s,mb4.0
KLMR Klimovskoe 22.98 25 eP P 21 33 50.8 -3.4
KLMR pmax pmax
comp=Z,26nm,1.8s,mb4.4
MIB Mutribah 25.21 108 eP P 21 34 14.2 -1.4
MIB AMb AMB 21 34 15.1
comp=Z,23nm,0.5s,mb5.0
MIB Mutribah 25.21 108 eP P 21 34 14.2 -1.4
comp=Z,23nm,0.5s,mb5.0
NAY Al-Naaiem 25.46 110 eP P 21 34 16.3 -1.6
NAY AMb AMB 21 34 20.0
comp=Z,4.6nm,1.1s,mb3.9
NAY Al-Naaiem 25.46 110 eP P 21 34 16.3 -1.6
comp=Z,5.0nm,1.1s,mb4.0
UMR Umm Al-Rimmam 25.63 108 eP P 21 34 17.1 -2.3
UMR AMb AMB 21 34 21.9
comp=Z,11nm,1.0s,mb4.4
AKTK Aktyubinsk 27.93 58 P P 21 34 38.6 -1.3
AKTK Aktyubinsk 27.93 58 P P 21 34 38.6 -1.3
comp=Z,1.0nm,0.4s,mb3.8
AKTO Aktyubinsk 27.93 58 P P 21 34 38.6 -1.3
comp=Z,0.8nm,0.4s,mb3.7,baz=257,slow=11,SNR=4.0
AKTO Aktyubinsk 27.93 58 P P 21 34 38.6 -1.3
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ARCES ARCESS Array B 28.39 4 P P 21 34 40.9 -2.8
comp=Z,1.8nm,0.8s,mb3.8,baz=175,slow=12,SNR=4.1
TORD Torodi Ar. Bea 32.19 214 P P 21 35 18.6 +0.8
comp=Z,0.6nm,0.8s,mb3.5,baz=18,slow=10.0,SNR=3.6
BRVK Borovoye 35.61 53 eP P 21 35 45.9 -1.3
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BRVK Borovoye 35.61 53 eP P 21 35 45.9 -1.3
comp=Z,3.3nm,0.5s,mb4.5
BRVK Borovoye 35.61 53 eP P 21 35 45.9 -1.3
comp=Z,3.3nm,0.5s,mb4.5
BVAR Borovoye Array 35.67 53 P P 21 35 45.9 -1.9
comp=Z,0.8nm,0.5s,mb3.9,baz=268,slow=7.4,SNR=9.5
BVAR Borovoye Array 35.67 53 eP P 21 35 46.7 -1.1
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 35.67 53 eP P 21 35 46.7 -1.1
comp=Z,1.0nm,0.5s,mb4.0
KBL Kabul 39.12 84 P P 21 36 16.3 -0.9
KBL Kabul 39.12 84 P P 21 36 16.3 -0.9
KURK Kurchatov 40.99 56 iP P 21 36 31.0 -1.6
KURK pmax pmax
comp=Z,6.0nm,2.1s,mb3.9
KURK Kurchatov 40.99 56 iP P 21 36 31.0 -1.6
comp=Z,6.0nm,2.1s,mb3.9
NVS Novosibirsk 43.06 49 eP P 21 36 48.5 -0.8
NVS Novosibirsk 43.06 49 eP P 21 36 48.5 -0.8
ZAA0 Zalesovo Array 44.13 50 eP P 21 36 56.2 -1.8

ZALV Zalesovo Beam 44.13 50 P **P 21 36 56.5 -1.5**
comp=Z,2.4nm,0.4s,mb4.3,baz=288,slow=7.6,SNR=13
ZALV Zalesovo Beam 44.13 50 P **P 21 36 56.5 -1.5**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ZALV Zalesovo Beam 44.13 50 P **P 21 36 56.5 -1.5**
comp=Z,2.0nm,0.4s,mb4.2
MK31 Makanchi Array 44.28 61 *eP* **P 21 36 58.0 -1.3**
MK31 Makanchi Array 44.28 61 *eP* **P 21 36 58.0 -1.3**
MKAR Makanchi Array 44.28 61 P **P 21 36 57.8 -1.5**
comp=Z,2.2nm,0.5s,mb4.1,baz=284,slow=7.3,SNR=26
MKAR Makanchi Array 44.28 61 P **P 21 36 57.8 -1.5**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
TLY Talaya 55.66 49 *eP* **P 21 38 25.7 +0.1**
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
TLY MLR MLR
comp=Z,47nm,18.0s,MS3.6
TLY Talaya 55.66 49 *eP* **P 21 38 25.7 +0.1**
comp=Z,47nm,18.0s
SONM Songino Array 58.99 52 P **P 21 38 48.1 -1.1**
comp=Z,2.6nm,0.8s,mb4.3,baz=286,slow=7.7,SNR=12
SONM Songino Array 58.99 52 P **P 21 38 48.1 -1.1**
SONM pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 58.99 52 P **P 21 38 48.1 -1.1**
comp=Z,3.0nm,0.9s,mb4.3
YKA Yellowknife Ar 70.16 339 P **P 21 40 00.7 -1.1**
comp=Z,0.5nm,0.8s,mb3.5,baz=32,slow=5.3,SNR=7.8
YKA Yellowknife Ar 70.16 339 P **P 21 40 00.8 -1.1**
FFC Flin Flon 72.09 329 *i P* **P 21 40 15.7 +2.0**
FFC Flin Flon 72.09 329 *i P* **P 21 40 15.7 +2.0**
KSRS Korea Array 77.83 51 P **P 21 40 45.9 -1.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=298,slow=4.5,SNR=3.3
KSRS Korea Array 77.83 51 P **P 21 40 45.9 -1.3**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KSRS Korea Array 77.83 51 P **P 21 40 45.9 -1.3**
comp=Z,1.0nm,0.5s,mb4.0
ASAR Alice Springs 123.13 94 PKP PKPdf 21 47 44.4 -2.1
comp=Z,0.5nm,0.6s,baz=318,slow=1.7,SNR=9.6
ASAR Alice Springs 123.13 94 PKIKP PKPdf 21 47 44.4 -2.1
ASAR pmax pmax
comp=Z,1.0nm,0.6s

BJI 19 21:50:33.3, 33.′39N×98.°21E, h9km, ML3.8/5, Ms3.3/1, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**5.36**	**58**	*e*Pg	Pb	21 52 09.5	+2.4
LZH				Sg	Sg	21 53 26.1	+0.6
LZH				smax			
	comp=N,25nm,0.7s						
LZH				smax			
	comp=E,23nm,0.5s						
LZH				LR	LR		
	comp=E,250nm,7.5s						

ISK 19 22:19:54.4, 37.°00N×29.°17E, h6km, MD2.8
ISCJB 19 22:19:55.3±0.5, 36.°96N±0.°03×29.°19E±0.°04, h10km, Error ellipse: s-maj=4.9km s-min=4.0km az=21.2
CSEM 19 22:19:55.2±0.2, 36.°97N×29.°17E, h2km, MD2.8, Error ellipse: s-maj=3.5km s-min=3.2km az=85.0
DDA 19 22:19:55.4, 37.°00N×29.°20E, h6km±4km, Md2.5
ISC 19 22:19:55.6±0.6, 36.°98N±0.°03×29.°17E±0.°04, h4km±9km, n21, σ0°64/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**55**	*e*PG	**Pg**	**22 20 00.5**	**-1.2**
GLHS				*e*SG	**Sg**	**22 20 05.8**	**0.0**
GLHS	**Glhisar (BURDU**	**0.32**	**55**	*e*Pg	**Pg**	**22 20 00.5**	**-1.2**
GLHS				*e*Sg	**Sg**	**22 20 05.8**	**-0.1**
FETY	**Fethiye**	**0.35**	**192**	*e*PG	**Pg**	**22 20 01.8**	**-0.4**
FETY				*e*SG	**Sg**	**22 20 07.7**	**+1.0**
FETY	**Fethiye**	**0.35**	**192**	*e*Pg	**Pg**	**22 20 01.8**	**-0.4**
FETY				*e*Sg	**Sg**	**22 20 07.7**	**+1.0**
GOLH	**Golhisar**	**0.41**	**50**	*i P*	**Pg**	**22 20 02.5**	**-0.9**
GOLH				*i* S	**Sg**	**22 20 09.2**	**+0.6**
GOLH	**Golhisar**	**0.41**	**50**	*i P*	**Pg**	**22 20 02.5**	**-0.9**
GOLH				*i* S	**Sg**	**22 20 09.2**	**+0.5**
TURN	**Turunc**	**0.47**	**258**	*i P*	**Pg**	**22 20 10.4**	**+5.9**
TURN				*i* S	**Sg**	**22 20 21.0**	**+10**
ELL	**Elmali**	**0.63**	**111**	*e*PG	**Pg**	**22 20 07.6**	**-0.1**
ELL				*e*SG	**Sg**	**22 20 16.6**	**+0.7**
ELL	**Elmali**	**0.63**	**111**	*e*Pg	**Pg**	**22 20 07.6**	**-0.1**
ELL				*e*Sg	**Sg**	**22 20 16.6**	**+0.7**
DNZL	**Cakiroluk**	**0.72**	**352**	*i P*	**Pg**	**22 20 08.7**	**-0.6**
DNZL				*i* S	**Sg**	**22 20 19.8**	**+1.0**
DNZL	**Cakiroluk**	**0.72**	**352**	*i P*	**Pg**	**22 20 08.7**	**-0.7**
DNZL				*i* S	**Sg**	**22 20 19.8**	**+1.1**
YER	**Yerkesik**	**0.73**	**283**	*e*PG	**Pg**	**22 20 09.2**	**-0.4**
YER	**Yerkesik**	**0.73**	**283**	*e*Pg	**Pg**	**22 20 09.2**	**-0.3**
AKAS	**Kas**	**0.82**	**155**	*i P*	**Pg**	**22 20 11.2**	**-0.1**
AKAS	**Kas**	**0.82**	**155**	*i P*	**Pg**	**22 20 11.1**	**-0.1**
AYDN	**Tasoluk**	**1.24**	**304**	*i P*	**Pg**	**22 20 19.7**	**+0.5**
AYDN	**Tasoluk**	**1.24**	**304**	*i P*	**Pg**	**22 20 19.7**	**+0.4**
DAT	**Datca**	**1.30**	**260**	*e*PN	**Pn**	**22 20 20.0**	**-0.5**
DAT	**Datca**	**1.30**	**260**	*e*Pn	**Pn**	**22 20 20.0**	**-0.5**
KHAL	**Karahalli**	**1.42**	**10**	*e*P	**Pn**	**22 20 22.1**	**0.0**
KHAL				*i* S	**Sb**	**22 20 41.6**	**+0.6**
KHAL	**Karahalli**	**1.42**	**10**	*e*P	**Pn**	**22 20 22.1**	**0.0**
KHAL				*i* S	**Sb**	**22 20 41.6**	**+0.6**

ISCJB 19 22:21:05.7±1.2, 30.°0N±0.°1×104.°1E±0.°2, h10km, mb3.6/6, Error ellipse: s-maj=27.5km s-min=14.7km az=144.6
IDC 19 22:21:06.1±1.2, 30.°06N×104.°07E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, ML3.9/1, Error ellipse: s-maj=39.7km s-min=21.4km az=55.0
ISC 19 22:21:07.7±1.1, 30.°1N±0.°1×104.°1E±0.°2, h10km, n8, σ0°74/9, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.86**	**342**	Pg	**Pg**	**22 21 23.3**	**-1.0**
CD2				Sg	**Sg**	**22 21 28.0**	**-7.4**
CD2				smax			
	comp=N,8μm,0.4s						
SONM	**Songino Array**	**17.81**	**5**	P	**Pn**	**22 25 17.3**	**+1.7**
	comp=N,0.4nm,0.3s,baz=195,slow=10,SNR=6.3						
KSRS	**Korea Array**	**21.11**	**63**	P	**P**	**22 25 52.0**	**-0.5**
	comp=N,0.3nm,0.3s,mb3.1,baz=259,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**23.73**	**321**	P	**P**	**22 26 19.9**	**-0.1**
	comp=N,0.9nm,0.9s,mb3.2,baz=127,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**27.62**	**335**	P	**P**	**22 26 55.0**	**-0.2**
	comp=N,0.4nm,0.5s,mb3.4,baz=133,slow=8.7,SNR=5.0						
KURK	**Kurchatov**	**28.04**	**324**	P	**P**	**22 26 59.5**	**+0.5**
	comp=N,0.6nm,0.3s,mb3.8,baz=130,slow=8.9,SNR=3.9						
ASAR	**Alice Springs**	**60.65**	**148**	P	**P**	**22 31 19.0**	**0.0**
	comp=N,3.3nm,0.5s,mb4.7,baz=343,slow=10.0,SNR=36						
YKA	**Yellowknife Ar**	**82.67**	**17**	P	**P**	**22 33 30.8**	**-0.3**
	comp=N,0.1nm,0.3s,mb3.3,baz=331,slow=5.0,SNR=2.9						

BJI 19 22:22:43.0, 25.°96N×143.°35E, h33km, mB4.7/4, mb4.6/6, Ms4.3/1, MS7 3.8/1
JMA 19 22:22:46.2±0.2, 26.°33N×142.°76E, h97km
MOS 19 22:22:51.6±1.0, 26.°76N×142.°54E, h38km, mb4.6/24, Error ellipse: s-maj=20.2km s-min=7.4km az=115.7
ISCJB 19 22:22:53.0±0.9, 26.°72N±0.°05×142.°51E±0.°09, h50km±6km, mb4.4/40, Error ellipse: s-maj=12.8km s-min=8.9km az=3.3
NEIC 19 22:22:54.0±0.8, 26.°73N×142.°62E, h47km±6km, mb4.6/14, Error ellipse: s-maj=7.7km s-min=5.6km az=89.0
IDC 19 22:22:54.0±1.6, 26.°75N×142.°60E, h43km±11km, mb3.9/17, mb1 4.1/19, mb1mx4.0/27, mbtmp3.9/19, ML3.9/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=21.9km s-min=19.3km az=18.0
ISC 19 22:22:54.1±0.8, 26.°70N±0.°05×142.°53E±0.°08, h44km±6km, n109, σ0°93/110, mb4.4/40, 4C-1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**0.32**	**258**	P	**Pn**	**22 23 02.7**	**-0.3**
JHHJ				*e*S	**Sn**	**22 23 14.7**	**+5.5**
CBIJ	**Chichi jima**	**0.50**	**322**	P	**Pn**	**22 23 05.8**	**+0.7**
CBIJ				*e*S	**Sn**	**22 23 20.1**	**+7.2**
CBIJ	**Chichi jima**	**0.50**	**322**	P	**Pn**	**22 23 05.9**	**+0.8**
	176nm,0.3s,baz=306,slow=18,SNR=50						
CBIJ				S	**Sn**	**22 23 23.3**	**+10**
	1μm,0.3s,baz=180,slow=19,SNR=17						
JRY	**Ryogami san**	**9.79**	**342**	P	**Pn**	**22 25 12.4**	**+0.1**
MJAR	**Matsushiro Arr**	**10.48**	**341**	P	**Pn**	**22 25 21.5**	**-0.2**
	1.2nm,0.3s,baz=153,slow=12,SNR=12						
MJAR	**Matsushiro Arr**	**10.48**	**341**	P	**Pn**	**22 25 21.5**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**10.48**	**341**	*e*P	**Pn**	**22 25 21.6**	**-0.2**
MAT	**Matsushiro**	**10.48**	**341**	P	**Pn**	**22 25 23.4**	**+1.6**
MAT				*e*S	**Sn**	**22 27 24.8**	**+7.0**
JMK	**Ichinoseki**	**12.27**	**355**	P	**Pn**	**22 25 44.2**	**-2.0**
GUMO	**Guam**	**13.22**	**170**	LR	LR	22 29 57.9	
	comp=Z,72nm,20.4s,baz=328,slow=32						
GUMO	**Guam**	**13.22**	**170**	P	**Pn**	**22 25 59.5**	**+0.2**
KSRS	**Korea Array**	**16.36**	**315**	P	**Pn**	**22 26 42.6**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=120,slow=14,SNR=3.6						
KSRS				LR	LR	22 32 06.4	
	comp=Z,53nm,19.9s,baz=347,slow=34						
INCN	**Inchon**	**17.21**	**313**	Pn	**Pn**	**22 26 51.1**	**-0.2**
NACB	**Ninganchiao**	**19.07**	**267**	P	**Pn**	**22 27 13.8**	**-0.2**
YULB	**Yu-li**	**19.52**	**265**	P	**Pn**	**22 27 18.0**	**-1.3**
SSLB	**Suanglung**	**19.73**	**266**	*e*P	**Pn**	**22 27 20.7**	**-1.2**
TPUB	**Ta-pu**	**20.13**	**265**	P	**P**	**22 27 24.4**	**-0.1**
MDJ	**Mudanjiang**	**20.70**	**333**	P	**P**	**22 27 30.2**	**-0.2**
KLR	**Kul'dur**	**24.00**	**342**	*e*P	**P**	**22 28 02.3**	**-2.2**
HIA	**Hailar**	**28.61**	**328**	P	**P**	**22 28 45.6**	**-0.5**
ENH	**Enshi**	**29.20**	**285**	P	**P**	**22 28 51.8**	**+0.2**
ULN	**Ulaanbaatar**	**34.82**	**317**	*e*P	**P**	**22 29 40.0**	**-0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**34.82**	**317**	*e*P	**P**	**22 29 40.0**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.2						
SONM	**Songino Array**	**35.22**	**316**	P	**P**	**22 29 45.4**	**+1.4**
	comp=Z,1.3nm,0.7s,mb3.9,baz=115,slow=7.9,SNR=6.5						
SONM	**Songino Array**	**35.22**	**316**	P	**P**	**22 29 45.4**	**+1.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KMI	**Kunming**	**35.73**	**277**	P	**P**	**22 29 48.1**	**-0.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.9s,mb4.2						
SEY	**Seymchan**	**36.82**	**8**	*i P*	**P**	**22 30 02.5**	**+5.0**
BOD	**Bodaibo**	**37.05**	**335**	*e*P	**P**	**22 29 59.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
CMAR	**Chiang Mai Arr**	**40.92**	**268**	P	**P**	**22 30 32.2**	**-0.1**
	comp=Z,1.9nm,0.6s,mb3.9,baz=57,slow=8.5,SNR=16						
CMAR	**Chiang Mai Arr**	**40.92**	**268**	P	**P**	**22 30 32.3**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BILL	**Bilibino**	**43.77**	**13**	⇓*i P*	**P**	**22 30 58.5**	**+3.5**
BILL				*e*		22 32 43.3	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
KULM	**Kulim**	**45.24**	**249**	*e*P	**P**	**22 31 07.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.4						
TIXI	**Tiksi**	**45.64**	**354**	*e*P	**P**	**22 31 09.2**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI	**Tiksi**	**45.64**	**354**	*e*P	**P**	**22 31 09.2**	**-0.5**
	comp=Z,2.3nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**47.02**	**191**	*e*P	**P**	**22 31 21.9**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
WRAB	**Tennant Creek**	**47.02**	**191**	*e*P	**P**	**22 31 21.9**	**+0.7**
	comp=Z,6.2nm,0.4s,mb4.9						
ZAA0	**Zalesovo Array**	**49.99**	**319**	*e*P	**P**	**22 31 43.5**	**-0.2**
ZALV	**Zalesovo Beam**	**49.99**	**319**	P	**P**	**22 31 43.8**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.5,baz=101,slow=6.7,SNR=15						
ZALV				PcP	PcP	22 33 03.2	0.0
	comp=Z,0.5nm,0.4s,baz=108,slow=4.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**49.99**	**319**	P	**P**	**22 31 43.8**	**+0.1**
ZALV						22 33 03.2	
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
ZALV	**Zalesovo Beam**	**49.99**	**319**	P	**P**	**22 31 43.8**	**0.0**
ZALV				PcP	PcP	22 33 03.2	0.0
MK31	**Makanchi Array**	**50.97**	**310**	*e*P	**P**	**22 31 51.2**	**0.0**
MK31				*e*		22 33 06.7	
MKAR	**Makanchi Array**	**50.97**	**310**	P	**P**	**22 31 51.0**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.1,baz=92,slow=8.5,SNR=15						
MKAR				PcP	PcP	22 33 06.8	-0.2
	comp=Z,1.1nm,0.7s,baz=88,slow=4.1,SNR=6.7						
MKAR				LR	LR	22 55 37.7	
	comp=Z,28nm,18.6s,baz=332,slow=38						
MKAR	**Makanchi Array**	**50.97**	**310**	P	**P**	**22 31 51.0**	**-0.2**
MKAR						22 33 06.8	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,28nm,18.6s						
MKAR	**Makanchi Array**	**50.97**	**310**	P	**P**	**22 31 51.0**	**-0.2**
MKAR				PcP	PcP	22 33 06.8	-0.2
MKAR				LR	LR	22 55 37.6	
KURK	**Kurchatov**	**53.48**	**315**	P	**P**	**22 32 09.9**	**+0.1**
	comp=Z,4.7nm,0.8s,mb4.5,baz=94,slow=8.2,SNR=16						
KURK	**Kurchatov**	**53.48**	**315**	*ce*P	**P**	**22 32 08.3**	**-1.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KURK	**Kurchatov**	**53.48**	**315**	*e*P	**P**	**22 32 08.4**	**-1.4**
	comp=Z,4.6nm,0.8s,mb4.5						
ULHL	**Ulahol**	**55.50**	**304**	P	**P**	**22 32 25.7**	**+1.1**
	SNR=8.4						
TKM2	**Tokmak 2**	**55.90**	**305**	P	**P**	**22 32 28.8**	**+1.3**
	SNR=7.1						
TKM2	**Tokmak 2**	**55.90**	**305**	*e*P	**P**	**22 32 28.2**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**55.90**	**305**	*e*P	**P**	**22 32 28.2**	**+0.8**
	comp=Z,4.5nm,0.7s,mb4.6						
KZA	**Kyzart**	**56.25**	**304**	P	**P**	**22 32 32.1**	**+2.2**
	SNR=15						
KBK	**Karagaybulak**	**56.40**	**305**	P	**P**	**22 32 32.2**	**+1.1**
	SNR=12						
USP	**Ospenovka**	**56.66**	**306**	P	**P**	**22 32 33.5**	**+0.6**
	SNR=5.4						
AAK	**Ala-Archa**	**56.74**	**305**	P	**P**	**22 32 33.6**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.5,baz=127,slow=6.6,SNR=11						
AAK	**Ala-Archa**	**56.74**	**305**	*c i P*	**P**	**22 32 33.8**	**+0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**56.74**	**305**	*e*P	**P**	**22 32 33.0**	**-0.5**
	comp=Z,3.5nm,0.7s,mb4.5						
UCH	**Uchtor**	**56.78**	**305**	P	**P**	**22 32 35.5**	**+1.7**
	SNR=19						
UCH	**Uchtor**	**56.78**	**305**	*e*P	**P**	**22 32 34.9**	**+1.2**
	comp=Z,10nm,0.7s,mb5.0						
EKS2	**Erkin-Say**	**57.26**	**305**	P	**P**	**22 32 37.8**	**+0.6**
	SNR=8.6						
EKS2	**Erkin-Say**	**57.26**	**305**	*e*P	**P**	**22 32 37.7**	**+0.6**
	comp=Z,3.9nm,0.7s,mb4.5						
AML	**Almayashu**	**57.39**	**305**	P	**P**	**22 32 39.9**	**+1.8**
	SNR=21						
AML	**Almayashu**	**57.39**	**305**	*e*P	**P**	**22 32 39.2**	**+1.1**
	comp=Z,10.0nm,0.5s,mb5.1						
STKA	**Stephens Creek**	**58.25**	**181**	P	**P**	**22 32 44.5**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.9,baz=315,slow=7.1,SNR=1.8						
BVAR	**Borovoye Array**	**58.55**	**318**	P	**P**	**22 32 46.3**	**+0.3**
	comp=Z,6.1nm,0.6s,mb4.8,baz=92,slow=8.2,SNR=38						
BVAR	**Borovoye Array**	**58.55**	**318**	P	**P**	**22 32 46.3**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**58.61**	**318**	*e*P	**P**	**22 32 46.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
BRVK	**Borovoye**	**58.61**	**318**	*e*P	**P**	**22 32 46.6**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.8						
KBL	**Kabul**	**62.48**	**297**	*e*P	**P**	**22 33 13.1**	**0.0**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
KBL	**Kabul**	**62.48**	**297**	*e*P	**P**	**22 33 13.1**	**0.0**
	comp=Z,6.1nm,0.8s,mb4.8						
INK	**Inuvik**	**63.27**	**24**	P	**P**	**22 33 16.1**	**-1.6**
	comp=Z,1.8nm,0.7s,mb4.3,baz=318,slow=9.4,SNR=5.9						
INK	**Inuvik**	**63.27**	**24**	P	**P**	**22 33 16.2**	**-1.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	**Arti**	**64.93**	**322**	P	**P**	**22 33 28.8**	**0.0**
ARU	**Arti**	**64.93**	**322**	*e*P	**P**	**22 33 28.7**	**-0.2**
	comp=Z,4.8nm,0.8s,mb4.6						
ABKAR	**Akbulak array**	**65.59**	**314**	*e*P	**P**	**22 33 32.5**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.5						
YKA	**Yellowknife Ar**	**72.34**	**28**	P	**P**	**22 34 13.1**	**-1.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=291,slow=5.9,SNR=11						
KEV	**Kevo**	**73.46**	**341**	*e*P	**P**	**22 34 21.9**	**+0.5**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KEV	**Kevo**	**73.46**	**341**	*e*p	**P**	**22 34 21.9**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**74.02**	**341**	P	**P**	**22 34 25.6**	**+0.8**
	comp=Z,2.2nm,0.7s,mb4.2,baz=72,slow=7.8,SNR=7.5						
ARCES	**ARCESS Array B**	**74.02**	**341**	P	**P**	**22 34 25.6**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JOF	**Joensuu**	**75.58**	**334**	*e*P	**P**	**22 34 34.2**	**+0.4**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
JOF	**Joensuu**	**75.58**	**334**	*e*p	**P**	**22 34 34.2**	**+0.4**
	comp=Z,5.3nm,0.7s,mb4.6						
OBN	**Obninsk**	**77.03**	**325**	⇑*i P*	**P**	**22 34 40.9**	**-1.4**
OBN				*e*		22 37 38.2	
OBN				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
KAF	**Kangasniemi**	**77.97**	**334**	*e*P	**P**	**22 34 47.2**	**-0.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**77.97**	**334**	*e*p	**P**	**22 34 47.2**	**-0.1**
	comp=Z,1.7nm,0.5s,mb4.2						
ZEI	**Tsey**	**78.26**	**312**	*e*P	**P**	**22 34 48.1**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**78.44**	**334**	P	**P**	**22 34 50.0**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.4,baz=53,slow=4.1,SNR=13						
FINES	**FINESS Array B**	**78.44**	**334**	P	**P**	**22 34 50.0**	**0.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	**Kislovodsk**	**78.55**	**313**	P	**P**	**22 34 50.9**	**0.0**
KIV	**Kislovodsk**	**78.55**	**313**	P	**P**	**22 34 50.9**	**0.0**
NVAR	**Mina Array Bea**	**80.52**	**52**	P	**P**	**22 35 02.5**	**+0.7**
	comp=Z,1.0nm,0.7s,mb3.8,baz=280,slow=6.1,SNR=6.0						
MIB	**Mutribah**	**81.34**	**299**	*e*P	**P**	**22 35 05.3**	**-0.9**
MIB				AMb	AMB	22 35 07.2	
	comp=Z,26nm,0.7s,mb5.3						
RDF	**Al-Radifah**	**81.55**	**298**	*e*P	**P**	**22 35 06.1**	**-1.3**
RDF				AMb	AMB	22 35 08.0	
	comp=Z,24nm,0.7s,mb5.2						
NAY	**Al-Naaiem**	**81.66**	**298**	*e*P	**P**	**22 35 07.0**	**-0.9**
NAY				AMb	AMB	22 35 08.9	
	comp=Z,19nm,0.8s,mb5.1						
IDID	**Didziasalis**	**81.72**	**329**	*e*P	**P**	**22 35 08.3**	**+0.6**
ISAL	**Salakas**	**81.85**	**329**	*e*P	**P**	**22 35 08.4**	**-0.1**
IIGN	**Ignalina**	**81.93**	**329**	*e*P	**P**	**22 35 10.3**	**+1.4**
AKASG	**Malin Array Be**	**83.12**	**324**	P	**P**	**22 35 14.3**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.3,baz=52,slow=4.9,SNR=9.7						
AKASG	**Malin Array Be**	**83.12**	**324**	*ce*P	**P**	**22 35 14.6**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**83.12**	**324**	P	**P**	**22 35 14.3**	**-0.9**
NB2	**NORSAR Subarra**	**84.09**	**338**	P	**P**	**22 35 20.4**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.9,baz=47,slow=5.1						
NOA	**NORSAR Array B**	**84.09**	**338**	P	**P**	**22 35 19.7**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.2,baz=44,slow=5.0,SNR=4.7						
NOA	**NORSAR Array B**	**84.09**	**338**	P	**P**	**22 35 19.7**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**86.50**	**313**	P	**P**	**22 35 31.8**	**-0.7**
	comp=Z,1.0nm,0.8s,mb4.1,baz=46,slow=6.2,SNR=4.5						
BRTR	**Keskin Array B**	**86.50**	**313**	*i P*	**P**	**22 35 33.7**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PSZ	**Piszkesteto**	**89.65**	**325**	P	**P**	**22 35 46.3**	**-1.0**
TXAR	**Lajitas Array**	**95.59**	**53**	P	**P**	**22 36 16.4**	**+1.3**
	comp=Z,0.3nm,0.7s,mb3.8,baz=321,slow=1.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**125.08**	**311**	PKhKP		22 41 46.1	
	comp=Z,0.7nm,1.0s,baz=36,slow=3.7,SNR=2.8						
LPAZ	**La Paz**	**149.72**	**76**	PKPbc	PKPbc	22 42 40.1	+0.3
	comp=Z,0.9nm,0.7s,baz=284,slow=3.7,SNR=4.5						

MAN 19 22:23:57, 7.°40N×124.°83E, h26km, mb4.2, ML3.0, MS2.8, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.47**	**146**	⇑*e*P	Pb	22 24 11.4	+4.7
KCP				*i* S	Sb	22 24 18.6	+5.3
BUKP	**Musuan**	**0.53**	**26**	*e*P	Pb	22 24 08.0	+0.2
BUKP				*e*S	Sb	22 24 13.7	-1.4
CTBH	**Cotabato--PC H**	**0.60**	**253**	⇓*i P*	Pb	22 24 10.2	+1.2
CTBH				*i* S	Sb	22 24 19.6	+2.4
DMPH	**Davao City--Mi**	**0.74**	**115**	⇓*i P*	Pb	22 24 12.2	+0.9
DMPH				*e*S	Sb	22 24 23.2	+2.1

XAN			Sn	Sn	22 51 02.3	+6.8
XAN			Sg	Sg	22 51 09.5	-0.1
XAN			smax			
	comp=N,720nm,0.5s					
XAN			smax			
	comp=E,500nm,0.5s					
XAN			LR	LR		
	comp=N,690nm,6.9s					
XAN			LR	LR		
	comp=E,130nm,2.3s					
LZH	**Lanzhou**	**3.76 338**	*e*Pn	**Pn**	**22 50 26.9**	**+1.2**
LZH			Pg	**Pb**	**22 50 32.3**	**-1.8**
LZH			Sn	**Sn**	**22 51 12.4**	**+2.4**
LZH			Sg	**Sb**	**22 51 22.8**	**+3.1**
LZH			smax			
	comp=N,680nm,0.8s					
LZH			smax			
	comp=E,2μm,0.8s					
LZH			LR	LR		
	comp=E,2μm,7.3s					
LZH			LR	LR		
	comp=Z,2μm,9.8s					
ENH	**Enshi**	**4.09 123**	*e*Pn	**Pn**	**22 50 33.2**	**+3.0**
ENH			*e*Pg	**Pg**	**22 50 44.7**	**-1.2**
ENH			*e*S	**Sg**	**22 51 38.8**	**-0.1**
GYA	**Guiyang**	**6.19 171**	Pg	**Pb**	**22 51 06.8**	**-8.7**
GYA			Sg	**Sn**	**22 52 11.6**	**+1.7**
GYA			smax			
	comp=N,80nm,1.0s					
GYA			smax			
	comp=E,140nm,1.0s					
WHN	**Wuhan**	**7.79 103**	S	**Sn**	**22 52 49.8**	**+0.6**
WHN			LR	LR		
	comp=N,630nm,9.2s					
WHN			LR	LR		
	comp=E,420nm,6.2s					
WHN			LR	LR		
	comp=Z,410nm,14.3s					
GTA	**Gaotai**	**8.24 327**	*e*P	**Pn**	**22 51 31.5**	**+4.3**
GTA			pP		22 51 34.8	
GTA			sP		22 51 37.3	
GTA			S	**Sn**	**22 52 57.3**	**-2.9**
GTA			pmax	pmax		
	comp=Z,4.0nm,0.4s					
GTA			LR	LR		
	comp=N,230nm,11.6s					
GTA			LR	LR		
	comp=E,300nm,12.2s					
GTA			LR	LR		
	comp=Z,140nm,10.7s					
BTO	**Baotou**	**8.77 23**	*e*P	Px	22 51 53.8	
SONM	**Songino Array**	**15.24 2**	Pn	**Pn**	**22 53 01.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=192,slow=12,SNR=4.1					
SONM			LR	LR	22 59 27.7	
	comp=Z,78nm,19.6s,baz=257,slow=40					
CMAR	**Chiang Mai Arr**	**15.28 204**	Pn	**Pn**	**22 53 04.0**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=15,slow=12,SNR=5.8					
CMAR	**Chiang Mai Arr**	**15.28 204**	Pn	**Pn**	**22 53 04.0**	**+0.6**
ULN	**Ulaanbaatar**	**15.30 4**	*e*Pn	**Pn**	**22 53 03.3**	**-0.3**
	comp=Z,0.5nm,0.4s					
KSRS	**Korea Array**	**18.95 69**	P	**Pn**	**22 53 48.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=258,slow=12,SNR=2.7					
KSRS			LR	LR	23 01 10.5	
	comp=Z,20nm,21.8s,baz=225,slow=37					
CN2	**Changchun**	**19.18 49**	*e*P	**Pn**	**22 53 54.9**	**+2.6**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.8s					
HIA	**Hailar**	**19.76 28**	*e*P	**Pn**	**22 53 56.5**	**-2.5**
MK31	**Makanchi Array**	**22.72 315**	*e*P	**P**	**22 54 29.1**	**-0.4**
MKAR	**Makanchi Array**	**22.72 315**	P	**P**	**22 54 28.9**	**-0.7**
	comp=Z,1.5nm,0.7s,mb3.6,baz=116,slow=11,SNR=11					
TKM2	**Tokmak 2**	**25.70 302**	P	**P**	**22 54 58.1**	**+0.2**
ZALV	**Zalesovo Beam**	**25.96 331**	P	**P**	**22 55 00.6**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.4,baz=134,slow=9.2,SNR=2.8					
ZALV	**Zalesovo Beam**	**25.96 331**	P	**P**	**22 55 00.6**	**+0.5**
UCH	**Uchtor**	**26.34 300**	P	**P**	**22 55 03.8**	**+0.1**
AAK	**Ala-Archa**	**26.43 301**	P	**P**	**22 55 04.9**	**+0.3**
KURK	**Kurchatov**	**26.84 320**	P	**P**	**22 55 09.2**	**+1.1**
	comp=Z,0.9nm,0.8s,mb3.4,baz=128,slow=8.7,SNR=3.6					
KURK	**Kurchatov**	**26.84 320**	*e*P	**P**	**22 55 08.2**	**+0.2**
	comp=Z,2.6nm,1.0s,mb3.7					
AML	**Almayashu**	**26.92 300**	*e*P	**P**	**22 55 10.4**	**+1.5**
EKS2	**Erkin-Say**	**26.96 301**	P	**P**	**22 55 10.6**	**+1.4**
YAK	**Yakutsk**	**33.28 21**	P	**P**	**22 56 03.9**	**-1.1**
ARU	**Arti**	**40.03 321**	*e*P	**P**	**22 57 01.7**	**-0.8**
ARCES	**ARCESS Array B**	**56.41 335**	P	**P**	**22 59 08.3**	**-0.6**
	comp=Z,3.4nm,1.0s,mb4.3,baz=78,slow=9.3,SNR=3.6					
FINES	**FINESS Array B**	**57.03 326**	P	**P**	**22 59 12.2**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=94,slow=8.2,SNR=5.6					
ASAR	**Alice Springs**	**62.15 150**	P	**P**	**22 59 49.9**	**+0.8**
	comp=Z,0.2nm,0.5s,mb3.5,baz=338,slow=6.4,SNR=4.5					
YKA	**Yellowknife Ar**	**79.91 18**	P	**P**	**23 01 35.4**	**-0.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=325,slow=5.4,SNR=5.2					
YKA	**Yellowknife Ar**	**79.91 18**	P	**P**	**23 01 35.4**	**-0.9**

*ISK **19** 22:49:45.7, 36°.85N×29°.14E, h11km, MD2.8*
*ISCJB **19** 22:49:46.7±0.5, 36°.84N±0°.03×29°.14E±0°.04, h10km, Error ellipse: s-maj=4.3km s-min=3.7km az=178.3*
*CSEM **19** 22:49:46.4±0.3, 36°.86N×29°.14E, h8km, MD2.8, Error ellipse: s-maj=5.1km s-min=4.2km az=82.0*
*DDA **19** 22:49:47.0, 36°.87N×29°.16E, h7km±6km, Md2.9*

ISC 19 22:49:46.8±0.5, 36°.85N±0°.03×29°.11E±0°.04, h6km±7km, n23, σ1§00/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.21**	**185**	PG	**Pg**	**22 49 50.7**	**-0.3**
FETY				*e*SG	**Sg**	**22 49 54.0**	**+0.2**
FETY	**Fethiye**	**0.21**	**185**	*i* Pg	**Pg**	**22 49 50.7**	**-0.3**
FETY				*e*Sg	**Sg**	**22 49 54.0**	**+0.1**
TURN	**Turunc**	**0.41**	**274**	*i* P	**Pg**	**22 50 00.2**	**+5.5**
TURN				*i* S	**Sg**	**22 50 09.8**	**+10**
GLHS	**Glhisar (BURDU**	**0.44**	**45**	*e*PG	**Pg**	**22 49 53.9**	**-1.4**
GLHS				*e*SG	**Sg**	**22 50 00.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.44**	**45**	*e*Pg	**Pg**	**22 49 53.9**	**-1.4**
GLHS				*e*Sg	**Sg**	**22 50 00.9**	**-0.2**
GOLH	**Golhisar**	**0.53**	**43**	*i* P	**Pg**	**22 49 55.8**	**-1.3**
GOLH				*i* S	**Sg**	**22 50 04.8**	**+0.8**
GOLH	**Golhisar**	**0.53**	**43**	*i* P	**Pg**	**22 49 55.8**	**-1.3**
GOLH				*i* S	**Sg**	**22 50 04.8**	**+0.8**
ELL	**Elmali**	**0.65**	**99**	*e*PG	**Pg**	**22 49 58.4**	**-0.9**
ELL				*e*SG	**Sg**	**22 50 07.8**	**0.0**
ELL	**Elmali**	**0.65**	**99**	*e*Pg	**Pg**	**22 49 58.4**	**-0.9**
ELL				*e*Sg	**Sg**	**22 50 07.8**	**0.0**
YER	**Yerkesik**	**0.72**	**294**	*e*PG	**Pg**	**22 50 01.4**	**+0.7**
YER	**Yerkesik**	**0.72**	**294**	*e*Pg	**Pg**	**22 50 01.4**	**+0.8**
AKAS	**Kas**	**0.73**	**147**	*i* P	**Pg**	**22 50 00.2**	**-0.6**
AKAS				*i* S	**Sg**	**22 50 12.3**	**+1.9**
AKAS	**Kas**	**0.73**	**147**	*i* P	**Pg**	**22 50 00.2**	**-0.7**
AKAS				*i* S	**Sg**	**22 50 12.3**	**+1.9**
DNZL	**Cakiroluk**	**0.84**	**357**	*i* P	**Pg**	**22 50 02.0**	**-1.0**
DNZL				*i* S	**Sg**	**22 50 15.3**	**+1.4**
DNZL	**Cakiroluk**	**0.84**	**357**	*i* P	**Pg**	**22 50 02.0**	**-1.0**
DNZL				*i* S	**Sg**	**22 50 15.3**	**+1.4**
KORT	**Korkueli**	**1.01**	**81**	*i* P	**Pg**	**22 50 06.5**	**+0.4**
KORT				*i* S	**Sg**	**22 50 22.8**	**+3.6**
KORT	**Korkueli**	**1.01**	**81**	*i* P	**Pg**	**22 50 06.5**	**+0.3**
KORT				*i* S	**Sg**	**22 50 22.8**	**+3.6**
DAT	**Datca**	**1.23**	**265**	*e*PN	**Pn**	**22 50 08.8**	**-1.7**
DAT	**Datca**	**1.23**	**265**	*e*Pn	**Pn**	**22 50 08.8**	**-1.7**
AYDN	**Tasoluk**	**1.27**	**310**	*e*P	**Pn**	**22 50 12.1**	**+1.0**
AYDN				*i* S	**Sb**	**22 50 27.9**	**+0.1**
AYDN	**Tasoluk**	**1.27**	**310**	*e*P	**Pn**	**22 50 12.1**	**+1.0**
AYDN				*i* S	**Sb**	**22 50 27.9**	**+0.2**
KHAL	**Karahalli**	**1.55**	**11**	*e*P	**Pn**	**22 50 15.8**	**+0.9**
KHAL				*i* S	**Sn**	**22 50 35.0**	**-0.3**
KHAL	**Karahalli**	**1.55**	**11**	*e*P	**Pn**	**22 50 15.8**	**+0.9**
KHAL				*i* S	**Sn**	**22 50 35.0**	**-0.3**

DJA 19 23:48:38, 0°.36S×124°.16E, h126km, MLv3.7/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.54**	**244**	P	Pn	23 49 09.2	+2.9
LUWI				S	Sn	23 49 28.9	+1.0
MRSI	**Marisa**	**2.37**	**291**	P	Pn	23 49 17.1	+0.7
APSI	**Ampana**	**2.57**	**258**	P	Pn	23 49 17.5	-1.4
LBMI	**Labuha**	**3.35**	**95**	S	Sn	23 50 10.2	+1.6
KDI	**Kendari**	**3.89**	**203**	P	Pn	23 49 37.6	+1.3
KDI				S	Sn	23 50 22.6	+1.2

TTSI	**Tana Toraja**	**5.09 238**	P	Pn	23 49 52.9	+0.6

*ISCJB **19** 23:52:15.4±0.8, 16°.27N±0°.05×98°.01W±0°.03, h20km±5km, mb3.8/5, Error ellipse: s-maj=8.6km s-min=4.5km az=20.8*
*MEX **19** 23:52:18.2±1.1, 16°.29N×98°.07W, h10km±9km, MD4.3*
*NEIC **19** 23:52:18.3, 16°.29N×98°.07W, h10km, MD4.3(MEX), After MEX.*
*IDC **19** 23:52:23.3±4.2, 16°.15N×97°.42W, h96km±45km, mb3.3/3, mb1 3.6/7, mb1mx3.4/24, mbtmp3.3/7, MS3.0/2, Ms1 3.0/2, ms1mx2.5/18, Error ellipse: s-maj=56.4km s-min=38.9km az=12.0*

ISC 19 23:52:16.2±0.8, 16°.27N±0°.05×98°.02W±0°.03, h17km±4km, n41, σ1§47/62, mb3.8/5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.16**	**320**	*i* P	**Pg**	**23 52 20.4**	**0.0**
PNIG				*e*S	**Sg**	**23 52 23.4**	**+0.1**
PNIG	**Pinotepa**	**0.16**	**320**	*i* P	**Pg**	**23 52 20.4**	**0.0**
PNIG				*e*S	**Sg**	**23 52 23.4**	**+0.1**
VHO	**Vista Hermosa**	**1.47**	**57**	*e*P	**Pn**	**23 52 40.7**	**-1.3**
VHO				*i* S	**Sn**	**23 53 00.1**	**-0.7**
VHO	**Vista Hermosa**	**1.47**	**57**	*e*P	**Pn**	**23 52 40.7**	**-1.3**
VHO				*i* S	**Sn**	**23 53 00.1**	**-0.7**
UTMO	**Huajuapan**	**1.56**	**8**	*i* P	**Pn**	**23 52 43.1**	**-0.2**
UTMO				*e*S	**Sn**	**23 53 02.1**	**-1.1**
HUIG	**Huatulco**	**1.91**	**105**	*e*P	**Pn**	**23 52 48.2**	**+0.2**
HUIG				*i* S	**Sn**	**23 53 12.8**	**+1.1**
HUIG	**Huatulco**	**1.91**	**105**	*e*P	**Pn**	**23 52 48.2**	**+0.2**
HUIG				*i* S	**Sn**	**23 53 12.8**	**+1.1**
ACX	**Acapulco**	**1.91**	**288**	*i* P	**Pn**	**23 52 47.5**	**-0.5**
ACX				*i* S	**Sn**	**23 53 09.0**	**-2.7**
PPM	**Popocatepetl**	**2.84**	**348**	*e*P	**Pn**	**23 53 01.7**	**+0.8**
PPM				*i* S	**Sn**	**23 53 34.5**	**-0.1**
PPM	**Popocatepetl**	**2.84**	**348**	*e*P	**Pn**	**23 53 01.7**	**+0.8**
PPM				*i* S	**Sn**	**23 53 34.5**	**-0.1**
CMIG	**Matias Romero**	**3.12**	**74**	P	**Pn**	**23 53 02.9**	**-1.7**
	13nm,0.3s,baz=250,slow=12,SNR=140						
CMIG				S	**Sn**	**23 53 39.0**	**-2.5**
	31nm,0.3s,baz=281,slow=10,SNR=6.0						
CMIG	**Matias Romero**	**3.12**	**74**	P	**Pn**	**23 53 02.9**	**-1.7**
CMIG				S	**Sn**	**23 53 39.0**	**-2.5**
UNM	**Universidad Na**	**3.23**	**340**	*i* S	**Sn**	**23 53 47.0**	**+2.6**
UNM	**Universidad Na**	**3.23**	**340**	*i* S	**Sn**	**23 53 47.0**	**+2.6**
ZIIG	**Zihuatanejo**	**3.55**	**292**	*i* P	**Pn**	**23 53 10.5**	**-0.2**
ZIIG				*i* S	**Sn**	**23 53 49.7**	**-2.6**
ZIIG	**Zihuatanejo**	**3.55**	**292**	*i* P	**Pn**	**23 53 10.5**	**-0.2**
ZIIG				*i* S	**Sn**	**23 53 49.7**	**-2.6**
LVIG	**Laguna Verde**	**3.76**	**24**	*e*P	**Pn**	**23 53 12.4**	**-1.0**
LVIG				*i* S	**Sn**	**23 53 56.8**	**-0.6**
LVIG	**Laguna Verde**	**3.76**	**24**	*e*P	**Pn**	**23 53 12.4**	**-1.0**
LVIG				*i* S	**Sn**	**23 53 56.8**	**-0.6**
PCIG		**4.65**	**96**	*i* P	**Pn**	**23 53 28.4**	**-1.4**
TGIG		**4.73**	**83**	*i* P	**Pn**	**23 53 28.7**	**+1.9**
TGIG				*i* S	**Sn**	**23 54 22.9**	**+1.6**
CCIG	**Comitan**	**5.65**	**89**	*i* P	**Pn**	**23 53 39.7**	**+0.2**
CCIG				*i* S	**Sn**	**23 54 46.1**	**+2.0**
CCIG	**Comitan**	**5.65**	**89**	*i* P	**Pn**	**23 53 39.7**	**+0.2**
CCIG				*i* S	**Sn**	**23 54 46.1**	**+2.0**
APG	**El Apazote**	**7.39**	**99**	P	**Pn**	**23 54 02.0**	**-1.4**
	0.2nm,0.3s,baz=234,slow=18,SNR=1.9						
APG				S	**Sn**	**23 55 22.7**	**-4.2**
	0.5nm,0.3s,baz=260,slow=17,SNR=3.9						
APG				LR	LR	23 57 20.4	
	comp=Z,81nm,20.3s,baz=177,slow=44						
TEIG	**Tepich**	**10.06**	**66**	P	**Pn**	**23 54 37.3**	**-2.7**
	1.7nm,0.3s,baz=313,slow=19,SNR=6.3						
TEIG				S	**Sn**	**23 56 26.5**	**-6.0**
	baz=307,slow=20						
TEIG				LR	LR	23 59 06.3	
	comp=Z,126nm,18.9s,baz=313,slow=42						
KVTX	**Kingsville**	**11.22**	**1**	Pn	**Pn**	**23 54 59.4**	**+3.4**
TXAR	**Lajitas Array**	**14.00**	**339**	P	**Pn**	**23 55 42.7**	**+8.8**
	0.1nm,0.3s,baz=159,slow=13,SNR=7.8						
JCT	**Junction City**	**14.24**	**354**	Pn	**Pn**	**23 55 40.1**	**+3.0**
	5.7nm,0.8s						
NATX	**Nacogdoches**	**15.72**	**11**	Pn	**Pn**	**23 55 57.5**	**+0.5**
WMOK	**Wichita Mounta**	**18.40**	**358**	*e*Pn	**Pn**	**23 56 28.4**	**-2.1**
	1.8nm,1.0s						
AMTX	**Amarillo**	**18.82**	**351**	*e*P	**Pn**	**23 56 35.8**	**0.0**
BNM	**Barren Site**	**19.41**	**338**	*e*P	**Pn**	**23 56 44.1**	**+1.3**
	4.3nm,1.0s						
LAZ	**Ladron**	**19.83**	**337**	*e*P	**Pn**	**23 56 48.7**	**+0.9**
	2.5nm,1.0s						
ANMO	**Albuquerque**	**20.08**	**339**	*e*P	**P**	**23 56 50.2**	**+1.3**
	1.4nm,0.6s						
GOGA	**Godfrey**	**21.54**	**35**	P	**P**	**23 57 06.8**	**+2.1**
SWET	**Sewanee**	**21.75**	**28**	*e*P	**P**	**23 57 03.9**	**-3.1**
ISCO	**Idaho Springs**	**24.36**	**346**	*e*P	**P**	**23 57 34.4**	**+1.1**
	4.3nm,0.8s,mb3.9						
PDAR	**Pinedale Array**	**28.19**	**342**	P	**P**	**23 58 10.6**	**+2.7**
	0.8nm,0.9s,mb3.3,baz=150,slow=9.3,SNR=3.5						
NVAR	**Mina Array Bea**	**28.37**	**325**	P	**P**	**23 58 11.9**	**+2.4**
	0.7nm,0.7s,mb3.4,baz=121,slow=10,SNR=4.4						
AGMN	**Agassiz Refuge**	**31.99**	**3**	P	**P**	**23 58 40.5**	**-0.9**
	6.2nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	**47.62**	**350**	P	**P**	**00 00 50.2**	**-0.9**
	0.5nm,0.8s,mb3.6,baz=155,slow=7.4,SNR=6.0						
YKA	**Yellowknife Ar**	**47.62**	**350**	P	**P**	**00 00 50.2**	**-0.9**

*BJI **20** 00:03:02.6, 35°.25N×81°.73E, h13km, ML4.1/6*
*ISCJB **20** 00:03:04.6±0.5, 35°.40N±0°.04×81°.04E±0°.07, h10km, mb3.6/9, Error ellipse: s-maj=8.7km s-min=5.9km az=157.0*
*IDC **20** 00:03:04.9±0.9, 35°.28N×80°.97E, h0km, mb3.8/9, mb1 3.9/14, mb1mx3.7/29, mbtmp3.7/14, ML3.2/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=25.9km s-min=15.0km az=65.0*
*NEIC **20** 00:03:05.9±0.5, 35°.30N×81°.04E, h10km, mb3.6/2, Error ellipse: s-maj=9.5km s-min=8.2km az=73.0*
*NNC **20** 00:03:08.4±3.8, 35°.83N×81°.63E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=39.5km s-min=19.4km az=136.0*

ISC 20 00:03:05.8±0.5, 35°.31N±0°.04×81°.11E±0°.07, h10km, n41, σ1§19/48, mb3.6/9, 6C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.86**	**317**	*e*Pn	**Pn**	**00 04 36.5**	**+3.8**
KSH				Sn	**Sn**	**00 05 42.1**	**+2.1**
KSH				smax			
	comp=N,270nm,0.8s						
KSH				smax			
	comp=E,200nm,0.7s						
UCH	**Uchtor**	**8.62**	**325**	*e*Pn	**Pn**	**00 05 11.9**	**+1.4**
TKM2	**Tokmak 2**	**8.72**	**332**	⇑Pn	**Pn**	**00 05 15.0**	**+3.0**
	comp=E,2.5nm,0.7s						
TKM2				⇓Pg	Pn	00 05 43.5	+31
	comp=E,6.2nm,0.8s						
TKM2				⇑Lg		00 07 34.8	
	comp=E,17nm,0.8s						
TKM2	**Tokmak 2**	**8.72**	**332**	*e*Pn	**Pn**	**00 05 13.8**	**+1.8**
	comp=E,4.7nm,0.5s						
TKM2				Sg	Sn	00 07 37.4	+47
AML	**Almayashu**	**8.94**	**322**	*e*Pn	**Pn**	**00 05 16.0**	**+1.0**
	comp=E,12nm,0.7s						
AML				Sn	**Sn**	**00 06 56.5**	**+0.7**
AAK	**Ala-Archa**	**8.94**	**327**	Pn	**Pn**	**00 05 19.0**	**+4.0**
	comp=E,0.0nm,0.3s,baz=168,slow=9.9,SNR=3.1						
AAK				Pg	Pn	00 05 49.0	+34
	comp=E,0.0nm,0.3s,baz=145,slow=15,SNR=5.0						
AAK				Lg		00 07 45.9	
	comp=E,0.0nm,0.3s,baz=34,slow=18,SNR=3.6						
AAK	**Ala-Archa**	**8.94**	**327**	*e*Pn	**Pn**	**00 05 15.5**	**+0.5**
AAK				Pg	Pn	00 05 49.0	+34
AAK				*e*Sn	**Sn**	**00 06 55.8**	**0.0**
EKS2	**Erkin-Say**	**9.30**	**324**	*e*Pn	**Pn**	**00 05 19.8**	**0.0**
EKS2				*e*Sn	**Sn**	**00 07 03.9**	**-0.6**
KBL	**Kabul**	**9.94**	**269**	Pn	**Pn**	**00 05 26.8**	**-1.9**
KK31	**Karatay Array**	**11.31**	**317**	⇓Pn	**Pn**	**00 05 52.7**	**+5.2**
	comp=E,0.9nm,0.7s,baz=0.0,slow=0.1,SNR=6.9						
KK31				⇑Pg	Pn	00 06 37.7	+50
	comp=E,1.4nm,0.6s,baz=137,slow=16,SNR=4.5						
KK31				⇑Lg		00 09 02.4	
	comp=E,2.4nm,0.8s						
MK31	**Makanchi Array**	**11.51**	**4**	⇑Pn	**Pn**	**00 05 48.6**	**-1.5**
	comp=E,3.3nm,0.7s,baz=186,slow=58,SNR=5.1						
MK31				⇓Sn	**Sn**	**00 07 56.4**	**-2.3**
	comp=E,4.3nm,0.8s,baz=182,slow=22,SNR=4.3						
MK31	**Makanchi Array**	**11.51**	**4**	*e*Pn	**Pn**	**00 05 48.3**	**-1.9**
MK31				*e*Sn	**Sn**	**00 07 58.4**	**-0.3**
MKAR	**Makanchi Array**	**11.51**	**4**	Pn	**Pn**	**00 05 49.5**	**-0.7**
	comp=E,0.4nm,0.3s,baz=179,slow=12,SNR=14						
MKAR				Sn	**Sn**	**00 08 00.1**	**+1.4**
	comp=E,0.1nm,0.3s,baz=201,slow=29,SNR=4.6						
KURBB	**Kurchatov Arra**	**15.42**	**354**	⇑Pn	**Pn**	**00 06 41.5**	**-1.9**
	comp=E,0.7nm,1.4s						
KURK	**Kurchatov**	**15.51**	**354**	Pn	**Pn**	**00 06 39.8**	**-4.6**
	comp=E,0.0nm,0.3s,baz=170,slow=12,SNR=7.8						
KURK				Lg		00 11 17.1	
	comp=E,0.0nm,0.3s,baz=174,slow=17,SNR=3.9						
KURK	**Kurchatov**	**15.51**	**354**	*e*Pn	**Pn**	**00 06 45.2**	**+0.7**
	comp=E,7.5nm,1.4s						
KURK				Lg		00 11 17.1	
ZAA0	**Zalesovo Array**	**18.82**	**7**	*e*P	**Pn**	**00 07 24.3**	**-1.7**
ZALV	**Zalesovo Beam**	**18.82**	**7**	P	**Pn**	**00 07 24.5**	**-1.5**
	comp=E,0.1nm,0.3s,baz=200,slow=12,SNR=8.2						
ZALV				LR	LR	00 15 56.4	
	comp=E,33nm,18.2s,baz=41,slow=41						
BVAR	**Borovoye Array**	**19.27**	**340**	P	**Pn**	**00 07 31.1**	**-0.3**
	comp=E,0.2nm,0.3s,baz=140,slow=12,SNR=7.9						
BRVK	**Borovoye**	**19.33**	**340**	P	**Pn**	**00 07 31.1**	**-1.0**
ABKAR	**Akbulak array**	**20.87**	**318**	*e*P	**P**	**00 07 46.9**	**-0.9**
	comp=E,1.3nm,0.6s						
AKTK	**Aktyubinsk**	**22.56**	**319**	P	**P**	**00 08 07.0**	**+1.0**
AKTO	**Aktyubinsk**	**22.56**	**319**	P	**P**	**00 08 07.0**	**+1.0**
	comp=E,1.0nm,0.6s,mb3.4,baz=93,slow=21,SNR=6.6						
ULN	**Ulaanbaatar**	**22.98**	**49**	P	**P**	**00 08 10.5**	**+0.1**
TLY	**Talaya**	**22.99**	**38**	*e*P	**P**	**00 08 11.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**23.06**	**132**	P	**P**	**00 08 13.3**	**+1.8**
	comp=E,0.9nm,0.6s,mb3.4,baz=311,slow=12,SNR=4.2						
OBN	**Obninsk**	**36.31**	**317**	P	**P**	**00 10 08.7**	**-0.7**
BRTR	**Keskin Array B**	**37.57**	**291**	P	**P**	**00 10 19.1**	**-1.2**
	comp=E,0.4nm,0.9s,mb3.2,baz=61,slow=14,SNR=2.8						
TIRR	**Tirgusor**	**40.84**	**299**	*e*P	**P**	**00 10 46.0**	**-1.6**
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**00 11 07.5**	**+1.5**
	comp=E,1.4nm,0.7s,mb3.8,baz=94,slow=7.8,SNR=4.4						
NB2	**NORSAR Subarra**	**50.25**	**324**	P	**P**	**00 12 00.8**	**-1.0**
	comp=Z,3.3nm,1.1s,mb4.3,baz=88,slow=7.9						
NB2	**NORSAR Subarra**	**50.25**	**324**	P	**P**	**00 12 00.8**	**-1.0**
	comp=Z,3.3nm,1.1s,mb4.3,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**50.25**	**324**	P	**P**	**00 12 02.5**	**+0.7**
	comp=Z,1.0nm,0.7s,mb4.0,baz=88,slow=7.5,SNR=5.4						
NOA	**NORSAR Array B**	**50.25**	**324**	P	**P**	**00 12 02.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**73.95**	**275**	P	**P**	**00 14 41.7**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.4,baz=32,slow=4.8,SNR=4.9						
ASAR	**Alice Springs**	**77.07**	**131**	P	**P**	**00 15 00.5**	**+1.2**
	comp=Z,0.3nm,0.7s,mb3.4,baz=338,slow=7.0,SNR=3.1						
LBTB	**Lobatse**	**79.73**	**229**	*e*P	**P**	**00 15 13.2**	**-0.8**
TSUM	**Tsumeb**	**81.00**	**239**	P	**P**	**00 15 21.0**	**+0.1**
YKA	**Yellowknife Ar**	**81.72**	**7**	P	**P**	**00 15 25.5**	**+1.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=342,slow=5.2,SNR=7.3						
BOSA	**Boshof**	**82.56**	**227**	P	**P**	**00 15 28.8**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.4,baz=12,slow=5.2,SNR=4.4						
BOSA	**Boshof**	**82.56**	**227**	*e*P	**P**	**00 15 28.4**	**-0.5**

*CRAAG **20** 00:05:23.8, 35°.99N×4°.54E, Ml3.0*
*NEIC **20** 00:05:24.4, 35°.75N×4°.78E, h0km, ML2.9(ALG), After MDD.*
*MDD **20** 00:05:26.0±2.0, 35°.68N×4°.49E, h0km, mb3.7/4, Error ellipse: s-maj=31.8km s-min=5.9km az=1.0, PRIMO*
*CSEM **20** 00:05:28.3±0.5, 36°.05N×4°.50E, h2km, ML3.0, Error ellipse: s-maj=19.9km s-min=7.5km az=2.0*

ISC 20 00:05:27.2±1.0, 35°.9N±0°.1×4°.53E±0°.04, h10km±5km, n59, σ1§05/77, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAF	**Djebel Tarf**	**0.21**	**277**	P	**Sg**	**00 05 36.0**	**+1.6**
ATAF	**Djebel Tarf**	**0.21**	**277**	P	**Sg**	**00 05 36.0**	**+1.6**
ATAF	**Djebel Tarf**	**0.21**	**277**	P	**Sg**	**00 05 36.0**	**+1.6**
ATAF	**Djebel Tarf**	**0.21**	**277**	P	**Sg**	**00 05 36.0**	**+1.6**
AKET	**Djebel Ketaf**	**0.56**	**291**	P	**Pg**	**00 05 37.3**	**-0.8**
AKET	**Djebel Ketaf**	**0.56**	**291**	P	**Pg**	**00 05 37.3**	**-0.8**
AKET	**Djebel Ketaf**	**0.56**	**291**	P	**Pg**	**00 05 37.3**	**-0.8**
**

1.7nm,0.3s,SNR=14
EQES S **Sn** **00 08 14.8 +0.1**
0.2nm,0.2s,SNR=7.9
EQUE Quentar 6.56 284 P **Pn** **00 07 02.7 -1.0**
0.4nm,0.4s,SNR=11
EQUE S **Sn** **00 08 18.8 +0.2**
0.1nm,0.1s,SNR=4.0
EQUE Quentar 6.56 284 P **Pn** **00 07 02.7 -1.0**
0.4nm,0.4s,SNR=11
EQUE S **Sn** **00 08 18.8 +0.2**
0.1nm,0.1s,SNR=4.0
EQUE Quentar 6.56 284 P **Pn** **00 07 02.7 -1.0**
0.4nm,0.4s,SNR=11
EQUE S **Sn** **00 08 20.5 +1.9**
0.1nm,0.1s,SNR=4.0

GUC 20 00:11:39.9±0.9, 22°.93S×70°.17W, h57km±7km, ML3.5, 3C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.31**	**236**	⇑*i*P	Pn	00 11 49.8	0.0
MECH				*i*S	Sn	00 11 57.7	+0.8
MECH				AML	AML	00 11 58.4	
	comp=N,4μm,0.3s						
CEN1	**Los Morros**	**0.46**	**184**	⇑*i*P	Pn	00 11 47.8	-3.4
CEN1				*i*S	Sn	00 11 58.0	-1.4
CEN1				AML	AML	00 11 58.7	
	comp=N,1μm,0.2s						
PECH	**Pedro de Valdi**	**0.56**	**54**	*e*P	Pn	00 11 53.1	+0.8
PECH				*i*S	Sn	00 12 02.5	+1.2
PECH				AML	AML	00 12 03.2	
	comp=E,9μm,0.3s						
ANCH	**Antofagasta**	**0.78**	**197**	⇑*i*P	Pn	00 11 55.1	+0.1
ANCH				*i*S	Sn	00 12 06.3	+0.2
MACH	**Maria Elena**	**0.82**	**27**	*e*P	Pn	00 11 56.5	+1.0
MACH				*i*S	Sn	00 12 08.5	+1.6

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*ISCJB **20** 00:20:03.2±0.5, 53°.69N±0°.03×160°.66E±0°.07, h56km±5km, mb3.7/9, Error ellipse: s-maj=7.6km s-min=3.1km az=28.8*
*KRSC **20** 00:20:03.8±0.4, 53°.71N×160°.61E, h41km±30km, ML4.2*
*MOS **20** 00:20:03.1±1.6, 53°.82N×160°.36E, h64km, mb4.3/1, Error ellipse: s-maj=18.6km s-min=8.5km az=74.2*
*NEIC **20** 00:20:04.9±1.3, 54°.04N×160°.20E, h58km±11km, mb4.1/1, Error ellipse: s-maj=14.9km s-min=12.6km az=120.0*
*IDC **20** 00:20:06.4±2.7, 54°.04N×160°.21E, h72km±28km, mb3.3/8, mb1 3.6/8, mb1mx3.3/25, mbtmp3.3/8, Error ellipse: s-maj=38.0km s-min=22.1km az=160.0*
ISC 20 00:20:04.1±0.4, 53°.69N±0°.03×160°.67E±0°.07, h51km±6km, n43, σ1°.05/65, mb3.7/9, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.70**	**213**	*i*P	**Pn**	**00 20 16.6**	**-1.2**
SPN				*i*S	**Sn**	**00 20 26.4**	**-1.4**
KII	**Karymskiy**	**0.80**	**297**	*i*P	**Pn**	**00 20 18.5**	**-0.6**
KII				*i*S	**Sn**	**00 20 29.1**	**-1.0**
NLC	**Nalytchevo**	**0.94**	**237**	*i*P	**Pn**	**00 20 20.3**	**-0.7**
NLC				*i*S	**Sn**	**00 20 32.6**	**-0.8**
MKZ	**Mys Kozlova**	**1.07**	**35**	*i*P	**Pn**	**00 20 21.9**	**-0.9**
MKZ				*i*S	**Sn**	**00 20 35.2**	**-1.4**
AVH	**Avacha**	**1.23**	**251**	*i*P	**Pn**	**00 20 25.0**	**+0.2**
AVH				*i*S	**Sn**	**00 20 40.0**	**-0.3**
PET	**Petropavlovsk**	**1.38**	**242**	⇑*i*PN	**Pn**	**00 20 26.3**	**-0.5**
PET				*e*S	**Sn**	**00 20 43.4**	**-0.5**
PET				pmax	pmax		
	comp=Z,81nm,0.5s						
PET				smax			
	comp=N,700nm,0.5s						
PET				smax			
	comp=N,1μm,0.5s						
PET	**Petropavlovsk**	**1.38**	**242**	*i*P	**Pn**	**00 20 26.7**	**-0.1**
PET				*i*S	**Sn**	**00 20 43.4**	**-0.5**
PET	**Petropavlovsk**	**1.38**	**242**	*e*Pn	**Pn**	**00 20 26.5**	**-0.3**
PET				*e*Sn	**Sn**	**00 20 44.5**	**+0.6**
GNL	**Ganaly**	**1.62**	**271**	*e*P	**Pn**	**00 20 30.5**	**+0.4**
GNL				*i*S	**Sn**	**00 20 49.6**	**-0.2**
RUS	**Russkaya**	**1.81**	**227**	*e*P	**Pn**	**00 20 32.4**	**-0.3**
RUS				*i*S	**Sn**	**00 20 53.5**	**-0.9**
PEA0B	**Petropavlovsk-**	**1.87**	**253**	*e*Pn	**Pn**	**00 20 33.9**	**+0.4**
PEA0B				*e*Sn	**Sn**	**00 20 56.5**	**+0.6**
PETK	**Petropavlovsk-**	**1.87**	**253**	P	**Pn**	**00 20 33.6**	**0.0**
	comp=N,12nm,0.3s,baz=86,slow=18,SNR=187						
PETK				S	**Sn**	**00 20 56.9**	**+1.0**
	comp=N,20nm,0.3s,baz=80,slow=20,SNR=25						
GRL	**Gorelyy**	**1.93**	**235**	P	**Pn**	**00 20 34.7**	**+0.3**
KMNR	**Kamenistaya**	**2.09**	**353**	*e*P	**Pn**	**00 20 37.7**	**+1.1**
KMNR				*i*S	**Sn**	**00 21 01.7**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.26**	**0**	*i*P	**Pn**	**00 20 40.1**	**+1.2**
BZGR				*i*S	**Sn**	**00 21 06.3**	**+0.8**
KPT	**Kopyto**	**2.30**	**354**	*e*P	**Pn**	**00 20 40.1**	**+0.7**
KPT				*e*S	**Sn**	**00 21 06.6**	**+0.1**
ZLN	**Zelenaya**	**2.34**	**2**	*i*P	**Pn**	**00 20 41.3**	**+1.3**
ZLN				*i*S	**Sn**	**00 21 08.8**	**+1.4**
KOZ	**Kozyrevsk**	**2.42**	**349**	*e*P	**Pn**	**00 20 41.6**	**+0.5**
KOZ				*i*S	**Sn**	**00 21 08.8**	**-0.7**
KOZR	**Kozyr**	**2.43**	**350**	PN	**Pn**	**00 20 41.6**	**+0.4**
KOZR				S	**Sn**	**00 21 08.8**	**-0.8**
KRSR	**Krestovskiy**	**2.54**	**359**	P	**Pn**	**00 20 43.6**	**+0.9**
KLY	**Klyuchi**	**2.63**	**360**	P	**Pn**	**00 20 44.4**	**+0.4**
KLY				*i*S	**Sn**	**00 21 13.8**	**-0.9**
SRDR	**Sredinnyy**	**2.69**	**349**	*e*P	**Pn**	**00 20 44.7**	**-0.1**
SRDR				*e*S	**Sn**	**00 21 14.9**	**-1.3**
MIPR	**Malaya Ipel'ka**	**2.75**	**241**	*e*P	**Pn**	**00 20 46.4**	**+0.8**
KBTR	**Krutoberegovo**	**2.82**	**25**	*e*P	**Pn**	**00 20 47.2**	**+0.7**
SRKR	**Sorokina**	**2.99**	**5**	*i*P	**Pn**	**00 20 50.2**	**+1.3**
BKI	**Bering**	**3.45**	**62**	*i*P	**Pn**	**00 20 55.2**	**0.0**
BKI				*i*S	**Sn**	**00 21 31.8**	**-3.0**
SKR	**Severo-Kuril's**	**4.11**	**225**	*e*PN	**Pn**	**00 21 06.5**	**+2.3**
SKR				*e*S	**Sn**	**00 21 51.5**	**+0.6**
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,60nm,0.5s						
SKR				smax			
	comp=E,120nm,0.5s						
ALID	**Alaid**	**4.22**	**230**	P	**Pn**	**00 21 07.9**	**+2.1**
YAK	**Yakutsk**	**18.32**	**309**	P	**Pn**	**00 24 09.1**	**-4.9**
MJAR	**Matsushiro Arr**	**23.18**	**231**	P	**P**	**00 25 05.7**	**-0.5**
	comp=E,0.9nm,0.3s,mb3.7,baz=20,slow=11,SNR=4.0						
SSLB	**Suanglung**	**42.13**	**241**	P	**P**	**00 27 51.7**	**+0.5**
YKA	**Yellowknife Ar**	**42.50**	**43**	P	**P**	**00 27 53.7**	**0.0**
	comp=E,0.2nm,0.7s,mb2.9,baz=302,slow=8.7,SNR=3.0						
KURK	**Kurchatov**	**47.71**	**302**	*e*P	**P**	**00 28 32.1**	**-3.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KURK	**Kurchatov**	**47.71**	**302**	*e*P	**P**	**00 28 32.1**	**-3.1**
	comp=Z,1.0nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**48.21**	**295**	P	**P**	**00 28 35.5**	**-3.6**
	comp=Z,0.2nm,0.5s,mb3.4,baz=51,slow=7.7,SNR=4.1						
MKAR	**Makanchi Array**	**48.21**	**295**	*i*P	**P**	**00 28 36.9**	**-2.2**
BVAR	**Borovoye Array**	**50.29**	**308**	P	**P**	**00 28 51.3**	**-3.6**
	comp=Z,0.3nm,0.5s,mb3.6,baz=1.8,slow=4.6,SNR=2.7						
CMAR	**Chiang Mai Arr**	**58.64**	**258**	P	**P**	**00 29 55.5**	**-0.3**
	comp=Z,0.5nm,0.3s,mb4.0,baz=25,slow=9.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**58.64**	**258**	P	**P**	**00 29 55.5**	**-0.4**
FINES	**FINESS Array B**	**59.71**	**337**	P	**P**	**00 29 59.5**	**-3.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=44,slow=12,SNR=3.1						
NOA	**NORSAR Array B**	**63.07**	**344**	P	**P**	**00 30 23.2**	**-2.1**
	comp=Z,0.4nm,0.5s,mb3.8,baz=20,slow=6.7,SNR=3.1						
TXAR	**Lajitas Array**	**70.09**	**68**	P	**P**	**00 31 11.5**	**+0.8**
	comp=Z,0.4nm,0.7s,mb3.5,baz=287,slow=5.0,SNR=6.2						
TXAR				pP	pP	00 31 27.1	+2.0
	comp=Z,0.2nm,0.5s,baz=307,slow=5.0,SNR=4.0						
CTAO	**Charters Tower**	**74.51**	**194**	P	**P**	**00 31 38.7**	**+1.8**

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*NIED **20** 00:51:00, 21°.50N×121°.20E, h32km, Mw4.3 Best double couple: M0:2.91000×10^15 NP1:φ=29.00000°, δ=72.00000°, λ=138.00000°. NP2:φ=134.00000°, δ=50.00000°, λ=23.00000°.*
*TAP **20** 00:51:23.0, 21°.14N×121°.10E, h36km±1km, ML4.4, C*
*IDC **20** 00:51:23.6±1.0, 21°.43N×121°.31E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/24, mbtmp3.8/11, ML3.7/1, MS3.5/5, Ms1 3.6/5, ms1mx3.1/35, Error ellipse: s-maj=35.8km s-min=19.6km az=67.0*
*NEIC **20** 00:51:24.7±0.7, 21°.47N×121°.38E, h10km, mb4.0/6, Error*

ellipse: s-maj=17.3km s-min=8.9km az=79.0
*ISCJB **20** 00:51:25.7±0.8, 21°.30N±0°.03×121°.21E±0°.04, h30km±4km, mb3.9/15, MS3.5/4, Error ellipse: s-maj=6.0km s-min=5.0km az=136.7*
*JMA **20** 00:51:29.7±0.5, 21°.54N×121°.19E, h118km, M4.1*
ISC 20 00:51:26.0±0.8, 21°.34N±0°.03×121°.18E±0°.04, h17km±4km, n61, σ1°.20/78, mb3.9/15, MS3.5/4, 6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.62**	**336**	*i*P	**Pg**	**00 51 38.2**	**+0.1**
	baz=343						
TSEB				S	**Sg**	**00 51 49.0**	**+2.6**
	baz=343						
TWK1	**Hengchun**	**0.70**	**330**	⇓*i*P	**Pg**	**00 51 39.0**	**-0.6**
	baz=341						
TWK1				S	**Sg**	**00 51 50.9**	**+2.0**
	baz=341						
HEN	**Hengchun**	**0.78**	**329**	⇓*i*P	**Pg**	**00 51 40.8**	**-0.5**
	baz=339						
HEN				S	**Sg**	**00 51 53.9**	**+2.3**
	baz=339						
LAY	**Lan-yu**	**0.78**	**26**	⇓*i*P	**Pg**	**00 51 41.0**	**-0.2**
	baz=25						
LAY				*e*S	**Sg**	**00 51 52.5**	**+0.9**
	baz=25						
TAW	**Tawu**	**1.05**	**346**	*e*P	**Pb**	**00 51 43.3**	**-2.4**
	baz=3.0						
TAW				*e*S	**Sb**	**00 51 57.9**	**-1.2**
	baz=3.0						
EAST	**Anshuo**	**1.09**	**344**	⇓*e*P	**Pb**	**00 51 44.1**	**-2.3**
	baz=1.0						
SCZT	**Fangliau**	**1.15**	**334**	⇓*i*P	**Pn**	**00 51 46.0**	**-1.3**
	baz=340						
TWP	**Hsiaoliuchiu**	**1.26**	**323**	*e*P	**Pn**	**00 51 48.5**	**-0.3**
	baz=331						
ECL	**Taimali**	**1.27**	**351**	*e*P	**Pn**	**00 51 45.8**	**-3.2**
	baz=4.0						
TTN	**Taitung**	**1.41**	**359**	*e*P	**Pn**	**00 51 50.0**	**-0.9**
	baz=350						
TTN				*e*S	**Sn**	**00 52 08.9**	**-0.3**
	baz=350						
TWG	**Pinlang**	**1.48**	**356**	*e*Pn	**Pn**	**00 51 49.7**	**-2.2**
TWG	**Pinlang**	**1.48**	**356**	*e*P	**Pn**	**00 51 49.5**	**-2.3**
	baz=359						
SSD	**Sandimen**	**1.49**	**340**	*e*P	**Pn**	**00 51 51.2**	**-0.8**
	baz=356						
TWM1	**Shoushan**	**1.64**	**335**	*e*P	**Pn**	**00 51 53.8**	**-0.2**
	baz=325						
CHKT	**Chengkung**	**1.77**	**6**	*e*P	**Pn**	**00 51 56.0**	**+0.2**
	baz=358						
SGST	**Jiashian**	**1.82**	**343**	*e*P	**Pn**	**00 51 56.0**	**-0.6**
	baz=333						
ELDTW	**Lidau**	**1.85**	**356**	*e*P	**Pn**	**00 51 54.8**	**-2.2**
	baz=7.0						
STYT	**Tauyuan**	**1.86**	**348**	*e*P	**Pn**	**00 51 56.3**	**-0.7**
	baz=351						
CHN1	**Nanshi**	**1.94**	**342**	*e*P	**Pn**	**00 51 57.3**	**-0.8**
	baz=332						
WTP	**Ta-pu**	**1.97**	**345**	*e*P	**Pn**	**00 51 58.6**	**0.0**
	baz=335						
TWF1	**Yuli**	**2.01**	**3**	*e*P	**Pn**	**00 51 57.1**	**-2.0**
	baz=5.0						
TPUB	**Ta-pu**	**2.02**	**346**	*e*Pn	**Pn**	**00 51 57.3**	**-2.0**
TPUB				*e*Sn	**Sn**	**00 52 25.6**	**+1.4**
TWK	**Hsinying**	**2.02**	**342**	*e*P	**Pn**	**00 51 59.0**	**-0.4**
	baz=332						
YULB	**Yu-li**	**2.05**	**3**	*e*Pn	**Pn**	**00 51 57.1**	**-2.6**
YULB				*e*Sn	**Sn**	**00 52 24.5**	**-0.4**
CHN4	**Tsaushan**	**2.08**	**345**	*e*P	**Pn**	**00 52 00.4**	**+0.3**
	baz=336						
YUS	**Yu-Shan**	**2.15**	**355**	*e*P	**Pn**	**00 52 00.7**	**-0.4**
	baz=346						
ALS	**Alishan**	**2.19**	**351**	⇓*i*P	**Pn**	**00 52 02.0**	**+0.4**
	baz=354						
ALS				*e*S	**Sn**	**00 52 29.9**	**+1.6**
	baz=354						
CHN5	**Tsauling**	**2.30**	**349**	*e*P	**Pn**	**00 52 02.9**	**-0.2**
	baz=351						
CHN5				*e*S	**Sn**	**00 52 33.6**	**+2.6**
	baz=351						
SSLB	**Suanglung**	**2.45**	**355**	*e*Pn	**Pn**	**00 52 03.4**	**-1.8**
SSLB				*e*Sn	**Sn**	**00 52 35.5**	**+0.7**
SMLT	**Sun Moon Lake**	**2.55**	**354**	*e*P	**Pn**	**00 52 06.7**	**+0.1**
	baz=356						
TYC	**Yuchr**	**2.57**	**354**	*e*P	**Pn**	**00 52 07.3**	**+0.4**
	baz=356						
TYC				S	**Sn**	**00 52 39.3**	**+1.5**
	baz=356						
PNG	**Penghu**	**2.68**	**326**	*e*P	**Pn**	**00 52 07.0**	**-1.4**
	baz=330						
PNG				*e*S	**Sn**	**00 52 36.2**	**-4.2**
	baz=330						
NSK	**Sanguang**	**3.33**	**3**	*e*P	**Pn**	**00 52 16.7**	**-0.6**
	baz=352						
YOJ	**Yonaguni jima**	**3.54**	**28**	P	**Pn**	**00 52 21.5**	**+1.3**
YOJ				S	**Sn**	**00 53 00.5**	**-1.2**
HATJ	**Hateruma jima**	**3.64**	**41**	P	**Pn**	**00 52 22.9**	**+1.4**
HATJ				S	**Sn**	**00 53 04.4**	**+0.3**
IRIF	**Iriomote-Funau**	**3.80**	**38**	P	**Pn**	**00 52 25.4**	**+1.6**
IRIF				S	**Sn**	**00 53 08.8**	**+0.6**
JKRS	**Kuro-shima**	**3.90**	**42**	P	**Pn**	**00 52 26.6**	**+1.5**
JKRS				S	**Sn**	**00 53 10.1**	**-0.4**
JIJ	**Ishigaki jima**	**4.07**	**42**	P	**Pn**	**00 52 28.2**	**+0.7**
JIJ				S	**Sn**	**00 53 13.3**	**-1.5**
JTJ	**Tarama**	**4.62**	**44**	P	**Pn**	**00 52 36.8**	**+1.7**
JTJ				S	**Sn**	**00 53 29.4**	**+1.0**
ENH	**Enshi**	**13.78**	**313**	*e*Pn	**Pn**	**00 54 41.6**	**+1.1**
KSRS	**Korea Array**	**17.09**	**19**	Pn	**Pn**	**00 55 22.7**	**-1.5**
	0.3nm,0.3s,baz=204,slow=15,SNR=3.8						
KSRS				LR	LR	01 02 50.6	
	comp=Z,61nm,18.7s,baz=194,slow=40						
CMAR	**Chiang Mai Arr**	**21.10**	**266**	P	**P**	**00 56 11.5**	**+1.7**
	2.7nm,0.9s,mb3.6,baz=72,slow=9.5,SNR=14						
CMAR				LR	LR	01 05 30.8	
	comp=Z,150nm,18.0s,MS3.4,baz=70,slow=40						
KAPI	**Kappang**	**26.22**	**183**	LR	LR	01 10 22.5	
	comp=Z,68nm,18.3s,MS3.2,baz=115,slow=43						
ULN	**Ulaanbaatar**	**28.81**	**340**	*e*P	**P**	**00 57 23.4**	**+0.3**
	2.1nm,0.8s,mb3.9						
SONM	**Songino Array**	**29.00**	**339**	P	**P**	**00 57 25.7**	**+1.0**
	1.9nm,0.6s,mb4.0,baz=164,slow=5.8,SNR=2.7						
MK31	**Makanchi Array**	**40.41**	**318**	*e*P	**P**	**00 59 04.8**	**+1.6**
MKAR	**Makanchi Array**	**40.41**	**318**	P	**P**	**00 59 01.9**	**-1.3**
	0.3nm,0.6s,mb3.2,baz=113,slow=11,SNR=3.0						
PALK	**Pallekele**	**41.49**	**256**	LR	LR	01 18 05.0	
	comp=Z,66nm,19.4s,MS3.5,baz=195,slow=38						
ZALV	**Zalesovo Beam**	**42.65**	**329**	P	**P**	**00 59 21.2**	**-0.1**
	2.1nm,0.6s,mb4.0,baz=141,slow=7.4,SNR=2.3						
WRAB	**Tennant Creek**	**42.99**	**162**	*e*P	**P**	**00 59 24.5**	**0.0**
	2.1nm,0.6s,mb4.0						
UCH	**Uchtor**	**44.16**	**309**	*e*P	**P**	**00 59 34.5**	**+0.8**
KURK	**Kurchatov**	**44.29**	**322**	P	**P**	**00 59 35.4**	**+0.7**
	1.0nm,0.6s,mb3.7,baz=117,slow=7.7,SNR=7.8						
KURK	**Kurchatov**	**44.29**	**322**	*e*P	**P**	**00 59 33.9**	**-0.9**
	1.1nm,0.5s,mb3.8						
AML	**Almayashu**	**44.73**	**309**	P	**P**	**00 59 38.7**	**+0.3**
	0.7nm,0.4s,mb3.8						
ASAR	**Alice Springs**	**46.41**	**164**	P	**P**	**00 59 52.6**	**+0.8**
	0.6nm,0.5s,mb3.8,baz=347,slow=8.4,SNR=8.2						
BRVK	**Borovoye**	**49.96**	**322**	P	**P**	**01 00 18.4**	**-0.5**
	2.2nm,0.5s,mb4.4						
ABKAR	**Akbulak array**	**55.44**	**316**	P	**P**	**01 01 01.1**	**+1.5**
	1.1nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**56.41**	**159**	P	**P**	**01 01 07.1**	**+0.5**
	1.2nm,0.5s,mb4.2,baz=327,slow=17,SNR=2.4						
FINES	**FINESS Array B**	**73.89**	**330**	P	**P**	**01 03 00.1**	**+0.3**
	1.4nm,0.8s,mb3.9,baz=70,slow=4.6,SNR=4.4						
NOA	**NORSAR Array B**	**80.73**	**332**	P	**P**	**01 03 39.1**	**+1.0**
	3.4nm,1.3s,mb4.1,baz=81,slow=5.3,SNR=2.2						
NOA				LR	LR	01 45 15.1	
	comp=Z,56nm,18.6s,MS4.0,baz=0.0,slow=40						
YKA	**Yellowknife Ar**	**85.59**	**23**	P	**P**	**01 04 02.3**	**-0.8**
	0.2nm,0.6s,mb3.5,baz=299,slow=4.2,SNR=3.9						

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*IDC **20** 00:57:34.3±0.6, 31°.58N×104°.16E, h0km, mb4.4/23, mb1 4.5/24, mb1mx4.4/35, mbtmp4.4/24, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx2.9/38, Error ellipse: s-maj=23.8km s-min=12.5km az=51.0*
*NEIC **20** 00:57:35.9±0.2, 31°.59N×104°.15E, h10km, mb4.7/35, Error ellipse: s-maj=5.2km s-min=3.6km az=220.0*
*ISCJB **20** 00:57:36.1±1.0, 31°.60N±0°.03×104°.13E±0°.03, h15km±6km, mb4.5/77, MS3.8/12, Error ellipse: s-maj=5.5km s-min=4.4km az=20.9*

*MOS **20** 00:57:37.9±0.7, 31°.62N×104°.18E, h36km, mb4.7/36, MS4.3/7, Error ellipse: s-maj=11.7km s-min=5.1km az=119.7*
*BJI **20** 00:57:37.6, 31°.62N×104°.15E, h15km, mB4.7/16, mb4.5/24, ML4.4/23, Ms4.1/31, Ms7 4.0/27*
*SZGRF **20** 00:57:40.9, 31°.77N×103°.94E, h33km, mb5.0, Sichuan, China*
ISC 20 00:57:36.6±0.8, 31°.61N±0°.03×104°.13E±0°.03, h12km±5km, n200, σ0°.85/219, mb4.5/77, MS3.8/12, 10C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.77**	**205**	Pg	**Pg**	**00 57 51.6**	**+0.2**
CD2				Sg	**Sg**	**00 58 02.8**	**+1.3**
CD2				smax			
	comp=N,6μm,0.7s						
LZH	**Lanzhou**	**4.47**	**357**	Pn	**Pn**	**00 58 46.5**	**+2.3**
LZH				Pg	**Pg**	**00 58 58.6**	**-3.7**
LZH				Sn	**Sn**	**00 59 39.9**	**+3.7**
LZH				Sg	**Sg**	**00 59 59.6**	**-0.6**
LZH				smax			
	comp=N,470nm,1.2s						
LZH				smax			
	comp=E,560nm,1.2s						
LZH				LR	LR		
	comp=E,2μm,8.7s						
LZH				LR	LR		
	comp=Z,3μm,9.9s						
XAN	**Xi'an**	**4.71**	**58**	Pn	**Pn**	**00 58 47.1**	**-0.3**
XAN				Sn	**Sn**	**00 59 42.3**	**+0.4**
XAN				Sg	**Sg**	**00 59 59.8**	**-7.9**
XAN				smax			
	comp=N,700nm,0.8s						
XAN				smax			
	comp=E,460nm,1.0s						
XAN				LR	LR		
	comp=N,330nm,3.5s						
XAN				LR	LR		
	comp=E,130nm,3.3s						
XAN				LR	LR		
	comp=Z,220nm,7.4s						
ENH	**Enshi**	**4.79**	**105**	*e*Pn	**Pn**	**00 58 48.2**	**-0.4**
ENH				*e*Pg	**Pg**	**00 59 06.7**	**-1.7**
ENH				*e*Sn	**Sn**	**00 59 46.1**	**+2.0**
GYA	**Guiyang**	**5.59**	**156**	Pn	**Pn**	**00 59 00.8**	**+1.2**
GYA				Sn	**Sn**	**01 00 07.9**	**+4.1**
GYA				smax			
	comp=N,460nm,0.8s						
GYA				smax			
	comp=E,560nm,0.9s						
GYA				LR	LR		
	comp=N,1μm,4.3s						
GYA				LR	LR		
	comp=E,1μm,3.2s						
KMI	**Kunming**	**6.58**	**191**	Pn	**Pn**	**00 59 14.9**	**+1.7**
KMI				Sn	**Sn**	**01 00 24.9**	**-3.2**
KMI				smax			
	comp=N,100nm,0.9s						
KMI				smax			
	comp=E,79nm,0.9s						
KMI				LR	LR		
	comp=N,570nm,9.3s						
KMI				LR	LR		
	comp=E,940nm,10.1s						
GTA	**Gaotai**	**8.54**	**337**	*e*P	**Pn**	**00 59 44.4**	**+4.3**
GTA				pP		00 59 47.9	
GTA				sP		00 59 50.3	
GTA				S	**Sn**	**01 01 23.8**	**+7.5**
GTA				sS		01 01 28.3	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				LR	LR		
	comp=N,750nm,11.6s						
GTA				LR	LR		
	comp=E,820nm,7.7s						
GTA				LR	LR		
	comp=Z,960nm,14.6s						
WHN	**Wuhan**	**8.83**	**94**	P	**Pn**	**00 59 46.8**	**+2.7**
WHN				S	**Sn**	**01 01 19.1**	**-4.4**
WHN				LR	LR		
	comp=N,2μm,7.6s						
WHN				LR	LR		
	comp=E,2μm,6.1s						
WHN				LR	LR		
	comp=Z,2μm,11.4s						
HHC	**Hu-ho-hao-te**	**11.00**	**31**	*e*P	**Pn**	**01 00 16.5**	**+2.8**
HHC				PP		01 00 24.9	
HHC				S	**Sn**	**01 02 21.3**	**+4.7**
HHC				SS		01 02 33.6	
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,720nm,7.7s						
HHC				LR	LR		
	comp=E,360nm,5.3s						
HHC				LR	LR		
	comp=Z,410nm,5.9s						
LSA	**Lhasa**	**11.34**	**264**	P	**Pn**	**01 00 21.9**	**+3.5**
LSA				LR	LR		
	comp=Z,450nm,11.9s						
BJI	**Beijing**	**12.89**	**46**	P	**Pn**	**01 00 38.8**	**-0.7**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,56nm,3.8s						
BJI				LR	LR		
	comp=N,390nm,21.6s						
BJI				LR	LR		
	comp=E,340nm,21.1s						
QIZ	**Qiongzhong**	**13.54**	**156**	P	**Pn**	**01 00 48.0**	**-0.7**
QIZ				S	**Sn**	**01 03 16.8**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,13nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,140nm,3.1s						
QIZ				LR	LR		
	comp=Z,460nm,11.6s						
QZH	**Quanzhou**	**14.36**	**114**	*e*P	**Pn**	**01 01 00.3**	**+0.5**
QZH				S	**Sn**	**01 03 40.0**	**+0.9**
QZH				LR	LR		
	comp=N,840nm,10.4s						
QZH				LR	LR		
	comp=E,1μm,8.3s						
QZH				LR	LR		
	comp=Z,2μm,9.9s						
SONM	**Songino Array**	**16.30**	**5**	Pn	**Pn**	**01 01 25.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=193,slow=12,SNR=6.8						
ULN	**Ulaanbaatar**	**16.39**	**7**	*e*P	**Pn**	**01 01 26.8**	**+0.4**
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	**Ulaanba

comp=Z,61nm,19.4s,MS3.0,baz=118,slow=38
MKAR Makanchi Array 22.61 318 P **P** **01 02 38.5 +1.4**
MKAR LR LR 01 12 04.3
MDJ Mudanjiang 23.76 50 P **P** **01 02 50.3 +1.4**
MDJ S **S** **01 07 05.9 +2.1**
MDJ pmax pmax
comp=Z,16nm,1.0s,mb4.4
MDJ pmax pmax
comp=Z,100nm,5.3s
KSH Kashi 24.16 297 *e*P **P** **01 02 56.4 +3.8**
KSH *e*pP 01 03 00.5
KSH *e*sP sP 01 03 03.5 +5.8
KSH *e*PP 01 03 32.8
KSH *e*PcP PcP 01 06 34.6 +1.3
KSH *e*S **S** **01 07 13.1 +2.8**
KSH *e*sS sS 01 07 20.5 +4.2
KSH *e*SS 01 08 09.5
KSH pmax pmax
comp=Z,2.0nm,0.6s,mb3.7
KSH LR LR
comp=N,140nm,8.3s
KSH LR LR
comp=E,110nm,5.9s
KSH LR LR
comp=Z,170nm,4.7s
TKM2 Tokmak 2 25.24 305 *e*P **P** **01 03 01.7 -0.7**
TKM2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
TKM2 Tokmak 2 25.24 305 *e*P **P** **01 03 01.7 -0.7**
comp=Z,4.6nm,0.9s,mb4.0
UCH Uchtor 25.82 303 *e*P **P** **01 03 08.3 +0.6**
comp=Z,9.1nm,0.9s,mb4.3
AAK Ala-Archa 25.94 303 P **P** **01 03 10.4 +1.6**
comp=Z,3.3nm,0.8s,mb3.9,baz=107,slow=4.2,SNR=7.7
AAK Ala-Archa 25.94 303 *ce*P **P** **01 03 10.1 +1.4**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
AAK Ala-Archa 25.94 303 *e*P **P** **01 03 09.3 +0.6**
comp=Z,2.5nm,0.6s,mb3.9
ZAA0 Zalesovo Array 26.28 334 *e*P **P** **01 03 11.5 -0.2**
ZALV Zalesovo Beam 26.28 334 P **P** **01 03 11.9 +0.3**
comp=Z,14nm,0.7s,mb4.6,baz=131,slow=9.4,SNR=47
AML Almayashu 26.39 302 *e*P **P** **01 03 13.4 +0.6**
comp=Z,8.5nm,0.8s,mb4.3
EKS2 Erkin-Say 26.46 303 *e*P **P** **01 03 13.0 -0.4**
comp=Z,2.1nm,0.7s,mb3.8
KURK Kurchatov 26.86 323 P **P** **01 03 17.1 +0.2**
comp=Z,6.1nm,0.8s,mb4.2,baz=131,slow=8.9,SNR=27
KURK PcP PcP 01 06 38.2 -0.9
comp=Z,0.8nm,0.6s,baz=120,slow=2.1,SNR=4.0
KURK LR LR 01 14 41.2
comp=Z,106nm,21.0s,MS3.4,baz=130,slow=38
KURK Kurchatov 26.86 323 *ce*P **P** **01 03 15.7 -1.2**
KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
KURK Kurchatov 26.86 323 *e*P **P** **01 03 16.7 -0.3**
comp=Z,10nm,1.1s,mb4.3
BOD Bodaibo 27.07 12 *e*P **P** **01 03 18.5 -0.3**
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb3.8
KLR Kul'dur 27.20 42 *e*P **P** **01 03 18.2 -1.8**
KBL Kabul 29.46 285 *e*P **P** **01 03 40.2 -0.2**
BVAR Borovoye Array 32.41 321 P **P** **01 04 06.6 +0.5**
comp=Z,2.0nm,0.6s,mb4.1,baz=108,slow=9.5,SNR=7.4
BVAR PcP PcP 01 06 52.1 -1.2
comp=Z,1.1nm,0.8s,baz=134,slow=4.3,SNR=3.8
BVAR LR LR 01 18 20.6
comp=Z,92nm,18.9s,MS3.5,baz=114,slow=38
BVAR Borovoye Array 32.41 321 P **P** **01 04 06.6 +0.4**
BVAR 01 06 52.1
BRVK Borovoye 32.48 321 *ce*P **P** **01 04 07.2 +0.4**
BRVK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BRVK Borovoye 32.48 321 *e*P **P** **01 04 06.6 -0.2**
comp=Z,4.0nm,0.9s,mb4.2
ABKAR Akbulak array 37.36 311 *e*P **P** **01 04 49.0 +0.1**
comp=Z,4.1nm,0.8s,mb4.3
AKTK Aktyubinsk 38.81 313 P **P** **01 05 01.2 0.0**
AKTO Aktyubinsk 38.81 313 P **P** **01 05 01.2 0.0**
comp=Z,3.0nm,0.8s,mb4.1,baz=108,slow=5.5,SNR=5.9
SVE Sverdlovsk 39.11 323⇑ *e*P **P** **01 05 04.7 +1.2**
SVE pmax pmax
comp=Z,18nm,1.0s,mb4.8
KAPI Kappang 39.35 155 P **P** **01 05 04.8 -1.2**
comp=Z,11nm,1.0s,mb4.5,baz=290,slow=10.0,SNR=4.0
ARU Arti 40.05 322 *d* *i*P **P** **01 05 11.9 +0.5**
ARU *e* 01 06 41.2
ARU S **S** **01 11 17.6 +0.8**
ARU pmax pmax
comp=Z,19nm,1.0s,mb4.8
ARU Arti 40.05 322 *e*P **P** **01 05 11.7 +0.3**
comp=Z,22nm,1.2s,mb4.8
TIXI Tiksi 42.25 11 *e*P **P** **01 05 26.8 -2.5**
TIXI pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
TIXI Tiksi 42.25 11 *e*P **P** **01 05 28.3 -1.1**
comp=Z,3.2nm,0.6s,mb4.1
GNI Garni 48.09 298 P **P** **01 06 16.1 0.0**
ZEI Tsey 48.33 301 *e*P **P** **01 06 17.7 -0.3**
ZEI pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
KIV Kislovodsk 49.06 303 *e*P **P** **01 06 24.5 +1.0**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,38nm,16.0s,MS3.5
KIV Kislovodsk 49.06 303 *e*P **P** **01 06 24.0 +0.5**
comp=Z,5.0nm,0.7s,mb4.7
KLMR Klimovskoe 50.66 325 *e*P **P** **01 06 35.2 -0.3**
KLMR pmax pmax
comp=Z,25nm,1.4s,mb5.0
BILL Bilibino 50.71 25⇓ *e*P **P** **01 06 34.6 -1.1**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
OBN Obninsk 52.12 318⇓ *e*P **P** **01 06 44.5 -2.0**
OBN pmax pmax
comp=Z,14nm,1.2s,mb4.8
FITZ Fitzroy Crossi 53.56 154 P **P** **01 06 56.9 -0.6**
comp=Z,4.4nm,0.9s,mb4.4,baz=14,slow=4.2,SNR=3.3
APA Apatity 53.86 333⇑ *i*P **P** **01 06 59.7 +0.6**
APA MLR MLR
comp=Z,400nm,16.0s,MS4.6
JOF Joensuu 54.61 328 *e*P **P** **01 07 04.0 -0.7**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
JOF Joensuu 54.61 328 *ep* **P** **01 07 04.0 -0.7**
comp=Z,3.3nm,0.6s,mb4.5
KEV Kevo 56.28 336 *e*P **P** **01 07 15.8 -0.8**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KEV Kevo 56.28 336 *e*P **P** **01 07 15.8 -0.8**
comp=Z,8.8nm,0.6s,mb5.0
KEV Kevo 56.28 336 *ep* **P** **01 07 15.7 -0.9**
comp=Z,6.3nm,0.6s,mb4.8
BR131 Keskin Array S 56.51 299 *e*P **P** **01 07 18.9 +0.2**
BRTR Keskin Array B 56.51 299 P **P** **01 07 18.2 -0.5**
comp=Z,1.3nm,0.9s,mb3.9,baz=88,slow=5.6,SNR=7.6
BRTR Keskin Array B 56.51 299 *ce*P **P** **01 07 18.2 -0.5**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
ARCES ARCESS Array B 56.81 336 P **P** **01 07 20.1 -0.3**
comp=Z,5.7nm,0.7s,mb4.7,baz=65,slow=8.7,SNR=11
KAF Kangasniemi 56.98 327 *e*P **P** **01 07 21.4 -0.3**
KAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KAF Kangasniemi 56.98 327 *ep* **P** **01 07 21.4 -0.3**
comp=Z,3.1nm,0.8s,mb4.4
AKASG Malin Array Be 57.06 313 P **P** **01 07 21.5 -0.9**
comp=Z,2.7nm,0.5s,mb4.6,baz=69,slow=6.8,SNR=13
AKASG Malin Array Be 57.06 313 P **P** **01 07 21.5 -0.9**
FINES FINESS Array B 57.16 326 P **P** **01 07 22.7 -0.2**
comp=Z,8.6nm,0.9s,mb4.8,baz=86,slow=7.8,SNR=15
IDID Didziasalis 57.70 319 *e*P **P** **01 07 26.9 +0.1**
IZAR Zarasai 57.90 319 *e*P **P** **01 07 28.2 0.0**
IIGN Ignalina 57.98 319 *e*P **P** **01 07 28.8 0.0**
ISAL Salakas 57.99 319 *e*P **P** **01 07 28.8 -0.2**
EIL Elat 58.61 288 P **P** **01 07 33.4 -0.3**
comp=Z,3.8nm,0.8s,mb4.5,baz=97,slow=11
WRAB Tennant Creek 58.88 146 *e*P **P** **01 07 35.4 0.0**
WRAB pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
WRAB Tennant Creek 58.88 146 *e*P **P** **01 07 35.4 -0.1**
comp=Z,4.0nm,0.6s,mb4.6
SUW Suwalki 59.98 318 *e*P **P** **01 07 42.2 -0.5**
BUR08 Bucovina Ar. S 60.33 310 *e*P **P** **01 07 44.9 -0.3**
MLR Muntele Rosu 60.42 308 P **P** **01 07 46.3 +0.4**
comp=Z,2.4nm,0.7s,mb4.3,baz=143,slow=5.1
KWP Kalwaria Pacla 61.38 313 *e*P **P** **01 07 52.5 +0.2**
KWP Kalwaria Pacla 61.38 313 *e*P **P** **01 07 52.5 +0.2**
KOLS Kolonicke sedl 61.85 312 *e*P **P** **01 07 55.8 +0.3**
KOLS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KOLS Kolonicke sedl 61.85 312 *e*P **P** **01 07 55.8 +0.3**
ASAR Alice Springs 61.91 149 P **P** **01 07 56.0 -0.2**
comp=Z,1.8nm,0.7s,mb4.3,baz=339,slow=6.9,SNR=16
STHS Stebnicka Huta 62.35 313 *e*P **P** **01 07 58.4 -0.5**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
STHS Stebnicka Huta 62.35 313 *e*P **P** **01 07 58.4 -0.5**
NIE Niedzica 62.94 313 *e*P **P** **01 08 03.5 +0.7**
OJC Ojcow 63.01 314 *e*P **P** **01 08 02.9 -0.3**
KECS Kecovo 63.11 312 *e*P **P** **01 08 03.6 -0.4**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.11 312 *e*P **P** **01 08 03.6 -0.4**
GKP Gorka Klasztor 63.59 318 *e*P **P** **01 08 06.9 -0.1**
OKC Ostrava-Krasne 64.14 314 *e*P **P** **01 08 11.0 +0.3**
OKC MLR MLR
comp=Z,100nm,6.0s
OKC Ostrava-Krasne 64.14 314 *e*P **P** **01 08 11.0 +0.3**
OKC AMS AMS 01 37 20.0
comp=Z,100nm,6.0s
VYHS Vyhne 64.15 313 *e*P **P** **01 08 11.2 +0.4**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
VYHS Vyhne 64.15 313 *e*P **P** **01 08 11.2 +0.4**
NB2 NORSAR Subarra 64.25 327 P **P** **01 08 10.0 -1.2**
comp=Z,5.6nm,0.9s,mb4.6,baz=72,slow=6.5
NB2 NORSAR Subarra 64.25 327 P **P** **01 08 10.0 -1.2**
comp=Z,5.6nm,0.9s,mb4.6,baz=72,slow=6.5
NOA NORSAR Array B 64.25 327 P **P** **01 08 09.9 -1.3**
comp=Z,3.5nm,0.8s,mb4.5,baz=72,slow=6.4,SNR=12
KOLL Kolacno 64.39 313 *e*P **P** **01 08 12.9 +0.5**
KOLL Kolacno 64.39 313 *e*P **P** **01 08 12.9 +0.5**
IDI Anoyia 64.52 297 P **P** **01 08 13.4 -0.1**
comp=Z,5.0nm,0.9s,mb4.5,baz=56,slow=12,SNR=3.5
DPC Dobruska-Polom 65.08 315 *e*P **P** **01 08 17.5 +0.7**
DPC MLR MLR
comp=Z,100nm,18.2s,MS4.0
DPC Dobruska-Polom 65.08 315 *e*P **P** **01 08 17.5 +0.7**
DPC AMS AMS 01 37 40.0
comp=Z,100nm,18.2s
ZST Bratislava 65.34 313 *e*P **P** **01 08 18.8 +0.2**
ZST pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ZST Bratislava 65.34 313 *e*P **P** **01 08 18.8 +0.2**
TREC Trest 65.95 314 *e*P **P** **01 08 23.0 +0.5**
TREC MLR MLR
comp=Z,100nm,15.2s,MS4.1
TREC Trest 65.95 314 *e*P **P** **01 08 23.0 +0.5**
TREC AMS AMS 01 37 40.0
comp=Z,100nm,15.2s
PVCC Panska Ves 66.06 316 *e*P **P** **01 08 23.6 +0.4**
PVCC MLR MLR
comp=Z,100nm,7.0s
PVCC Panska Ves 66.06 316 *e*P **P** **01 08 23.6 +0.4**
PVCC AMS AMS 01 38 20.0
comp=Z,100nm,7.0s
CSNA Conrad Observa 66.22 313⇑ *i*P **P** **01 08 24.3 0.0**
comp=Z,6.4nm,1.1s,mb4.6
PRU Pruhonice 66.28 315 *e*P **P** **01 08 25.3 +0.7**
PRU MLR MLR
comp=Z,100nm,15.6s,MS4.1
PRU Pruhonice 66.28 315 *e*P **P** **01 08 25.3 +0.7**
PRU AMS AMS 01 38 30.0
comp=Z,100nm,15.6s
BRG Berggiesshubel 66.31 316 *e*P **P** **01 08 24.4 -0.4**
comp=Z,6.0nm,0.8s,mb4.7
BRG Berggiesshubel 66.31 316 *e*P **P** **01 08 24.5 -0.3**
comp=Z,6.2nm,0.8s,mb4.7
BRG Berggiesshubel 66.31 316 *e*P **P** **01 08 24.5 -0.3**
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CLL Collm 66.70 317 *e*P **P** **01 08 26.6 -0.7**
comp=Z,7.0nm,1.2s,mb4.6
CLL Collm 66.70 317 *i*P **P** **01 08 26.6 -0.7**
CLL pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
CLL Collm 66.70 317 *i*P **P** **01 08 26.6 -0.7**
comp=Z,7.0nm,1.2s,mb4.6
CLL Collm 66.70 317 *i*P **P** **01 08 26.6 -0.7**
comp=Z,7.0nm,1.2s,mb4.6
COLD Coldfoot 67.00 24 *e*P **P** **01 08 28.7 -0.2**
comp=Z,5.3nm,0.9s,mb4.6
KHC Kasperske Hory 67.18 315 *e*P **P** **01 08 30.5 +0.1**
KHC MLR MLR
comp=Z,200nm,20.3s,MS4.3
KHC Kasperske Hory 67.18 315 *e*P **P** **01 08 30.5 +0.1**
KHC AMS AMS 01 39 00.0
comp=Z,200nm,20.3s
GEC2 GERESS Array S 67.21 314 *e*P **P** **01 08 30.5 -0.1**
comp=Z,6.0nm,1.1s,mb4.5
GEC2 GERESS Array S 67.21 314 *e*P **P** **01 08 30.5 -0.1**
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
GERES GERESS Array B 67.21 314 P **P** **01 08 30.6 0.0**
comp=Z,4.3nm,0.9s,mb4.5,baz=64,slow=6.1,SNR=17
GERES LR LR 01 39 31.7
comp=Z,63nm,19.8s,MS3.8,baz=79,slow=37
BSEG Bad Segeberg 67.23 320 *e*P **P** **01 08 30.6 0.0**
comp=Z,11nm,0.8s,mb4.9
TANN Tannenbergstha 67.36 316 *e*P **P** **01 08 31.1 -0.4**
comp=Z,6.0nm,0.9s,mb4.6
NKC Novy Kostel 67.44 316 *e*P **P** **01 08 32.5 +0.5**
NKC MLR MLR
comp=Z,200nm,5.1s
NKC Novy Kostel 67.44 316 *e*P **P** **01 08 32.5 +0.5**
NKC AMS AMS 01 39 20.0
comp=Z,200nm,5.1s
WET Wettzell 67.60 315 *e*P **P** **01 08 33.3 +0.3**
comp=Z,7.0nm,1.5s,mb4.5
WET Wettzell 67.60 315 *e*P **P** **01 08 33.3 +0.3**
WET pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
ROTZ Rotzenmuhle 67.76 316 *e*P **P** **01 08 34.2 +0.2**
comp=Z,9.0nm,0.9s,mb4.8
MOX Moxa 67.77 317 *e*P **P** **01 08 33.4 -0.7**
comp=Z,8.0nm,1.2s,mb4.6
MOX Moxa 67.77 317 *e*P **P** **01 08 33.5 -0.6**
comp=Z,7.0nm,1.2s,mb4.6
MOX Moxa 67.77 317 *e*P **P** **01 08 33.4 -0.7**
MOX pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
NRDL Niedersach Rie 67.91 319 *e*P **P** **01 08 35.0 +0.1**
comp=Z,7.0nm,0.9s,mb4.7
CLZ Clausthal 68.02 318 *e*P **P** **01 08 35.7 +0.1**
comp=Z,12nm,0.9s,mb4.9
CLZ Clausthal 68.02 318 *e*P **P** **01 08 35.7 +0.1**
CLZ pmax pmax
comp=Z,12nm,0.9s,mb4.9
PPLA Purkeypile 68.21 29 *e*P **P** **01 08 36.4 -0.3**
comp=Z,1.1nm,1.2s,mb4.8
GRA1 Grafenberg Arr 68.38 316 *e*P **P** **01 08 37.8 -0.1**
comp=Z,14nm,0.8s,mb5.0
GRF Grafenberg Arr 68.38 316 *e*P **P** **01 08 37.8 -0.1**
comp=Z,14nm,0.8s,mb5.0
GRF Grafenberg Arr 68.38 316 *e*P **P** **01 08 37.8 -0.1**
GRF pmax pmax
comp=Z,14nm,0.8s,mb5.0
GRF Grafenberg Arr 68.38 316 *e*P **P** **01 08 37.8 -0.1**
GRF pmax pmax
comp=Z,14nm,0.8s,mb5.0
FUR Furstenfeldbru 68.96 314 *e*P **P** **01 08 41.9 +0.3**
comp=Z,26nm,0.9s,mb5.2
FUR Furstenfeldbru 68.96 314 *e*P **P** **01 08 41.9 +0.3**
FUR pmax pmax
comp=Z,26nm,0.9s,mb5.2
WTTA Wattenberg 69.11 313⇑ *i*P **P** **01 08 41.9 -0.6**
comp=Z,6.9nm,0.7s,mb4.7
IBBN Ibbenburen 69.30 319 *e*P **P** **01 08 43.5 -0.1**
comp=Z,10.0nm,0.8s,mb4.8
FETA Feichten 69.77 313⇑ *i*P **P** **01 08 45.5 -1.1**
comp=Z,11nm,1.1s,mb4.7
STU Stuttgart 69.97 315 *e*P **P** **01 08 47.5 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
OHAK Old Harbor 70.33 34 *e*P **P** **01 08 49.4 -0.5**
KDAK Kodiak Island 70.41 34 *i*P **P** **01 08 49.8 -0.5**
BFO Black Forest 70.68 315 *e*P **P** **01 08 51.5 -0.6**
comp=Z,7.0nm,1.0s,mb4.5
BFO Black Forest 70.68 315 *e*P **P** **01 08 51.5 -0.6**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KMBO Kilima Mbogo 71.05 256 P **P** **01 08 55.2 +0.3**
comp=Z,2.0nm,0.8s,mb4.1,baz=1.6,slow=24,SNR=4.7
KMBO Kilima Mbogo 71.05 256 P **P** **01 08 55.3 +0.4**
KMBO pmax pmax
comp=Z,2.0nm,0.9s
KMBO Kilima Mbogo 71.05 256 *e*P **P** **01 08 55.2 +0.3**
CDF Champ du Feu 71.27 316 *e*P **P** **01 08 55.1 -0.6**
comp=Z,14nm,0.9s,mb4.6
CDF Champ du Feu 71.27 316 *e*P **P** **01 08 55.1 -0.6**
CDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CDF Champ du Feu 71.27 316 *e*P **P** **01 08 55.1 -0.6**
comp=Z,6.8nm,0.9s,mb4.6
WLF Walferdange 71.37 317 P **P** **01 08 56.9 +0.6**
comp=Z,11nm,1.1s,mb4.7
WLF Walferdange 71.37 317 *e*P **P** **01 08 56.4 +0.1**
comp=Z,15nm,0.9s,mb4.9
WLF Walferdange 71.37 317 *e*P **P** **01 08 56.2 -0.1**
WLF pmax pmax
comp=Z,20nm,1.1s,mb5.0
WLF Walferdange 71.37 317 *e*P **P** **01 08 56.1 -0.2**
comp=Z,20nm,1.1s,mb5.0
BCLA Clavier 71.51 318 P **P** **01 08 58.6 +1.4**
INK Inuvik 71.67 19 *e*P **P** **01 08 57.5 -0.3**
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 71.67 19 *e*P **P** **01 08 57.5 -0.4**
comp=Z,9.8nm,1.1s,mb4.7
STKA Stephens Creek 72.42 147 P **P** **01 09 02.2 -0.5**
comp=Z,1.1nm,0.4s,mb4.2,baz=246,slow=9.1,SNR=3.7
LPG La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
comp=Z,30nm,0.8s,mb5.0
LPG La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
LPG pmax pmax
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
comp=Z,25nm,0.8s,mb4.9
LPL La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
LPL pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPL La Plagne 72.92 313 *e*P **P** **01 09 05.9 +0.2**
comp=Z,13nm,0.8s,mb4.9
SMF Signal de Mont 74.16 315 *e*P **P** **01 09 12.1 -0.8**
comp=Z,17nm,1.0s,mb4.6
SMF Signal de Mont 74.16 315 *e*P **P** **01 09 12.1 -0.8**
SMF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SMF Signal de Mont 74.16 315 *e*P **P** **01 09 12.1 -0.8**
comp=Z,8.4nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.31 315 *e*P **P** **01 09 19.1 -0.5**
comp=Z,16nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.31 315 *e*P **P** **01 09 19.1 -0.5**
TCF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 75.31 315 *e*P **P** **01 09 19.1 -0.5**
comp=Z,8.1nm,1.1s,mb4.6
CAF Calviac 76.09 314 *e*P **P** **01 09 24.0 -0.1**
comp=Z,6.7nm,0.8s,mb4.3
CAF Calviac 76.09 314 *e*P **P** **01 09 24.0 -0.1**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CAF Calviac 76.09 314 *e*P **P** **01 09 24.0 -0.1**
comp=Z,3.3nm,0.8s,mb4.3
SKAG Skagway 76.88 27 *e*P **P** **01 09 28.9 +0.6**
comp=Z,12nm,1.0s,mb4.8
SFJD Kangerlussuaq 79.85 350 P **P** **01 09 44.0 -0.6**
comp=Z,7.7nm,0.7s,mb4.3,baz=349,slow=3.1,SNR=4.8
YKA Yellowknife Ar 81.20 17 P **P** **01 09 51.3 -0.6**
comp=Z,1.7nm,0.7s,mb4.1,baz=328,slow=5.0,SNR=25
YKA Yellowknife Ar 81.20 17 P **P** **01 09 51.3 -0.7**
FCC Fort Churchill 88.70 9 *e*P **P** **01 10 28.8 -0.8**
FCC pmax pmax
comp=Z,3.0nm,2.8s,mb4.1
FCC Fort Churchill 88.70 9 *e*P **P** **01 10 28.8 -0.8**
comp=Z,2.7nm,2.8s,mb4.1
FFC Flin Flon 91.12 15 *i*P **P** **01 10 41.5 +0.4**

ISCJB ***20*** *00:57:39.3±1.8, 17°.8N±0°.2×94°.84E±0°.09, h48km±16km, mb4.0/5, Error ellipse: s-maj=29.7km s-min=9.5km az=22.8*
IDC ***20*** *00:57:44.5±7.0, 17°.81N×95°.10E, h74km±62km, mb3.7/5, mb1 3.8/6, mb1mx3.4/26, mbtmp3.7/6, ML4.2/1, Error ellipse: s-maj=52.4km s-min=19.6km az=60.0*
ISC 20 00:57:41.3±1.5, 17°.8N±0°.2×94°.86E±0°.08, h43km±13km, n15, σ0§85/18, mb4.0/5, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**3.94**	**80**	P	**Pn**	**00 58 40.1**	**+0.9**
	5.2nm,0.3s,baz=258,slow=15,SNR=23						
CMAR				S	**Sn**	**00 59 22.4**	**-1.8**
	17nm,0.3s,baz=262,slow=26,SNR=16						
CMAR				Lg		00 59 36.2	
	11nm,0.3s,baz=257,slow=31,SNR=19						
BDT	**Bhumibol Dam**	**3.99**	**97**	PG	**Pn**	**00 58 40.0**	**+0.1**
BDT				SG	Sn	00 59 02.4	-23
CHG	**Chiang Mai**	**4.01**	**75**	PG	**Pn**	**00 58 41.0**	**+0.8**
CHG				SG	**Sn**	**00 59 15.9**	**-10**
CHRT	**Chiangrai**	**5.10**	**65**	⇓PN	**Pn**	**00 58 57.0**	**+1.8**
CHRT	**Chiangrai**	**5.10**	**65**	PG	**Pn**	**00 59 00.0**	**+4.8**
CHRT				SG	**Sn**	**01 00 04.5**	**+12**
GUN	**Gumba**	**13.04**	**322**	*e*P	**Pn**	**01 00 43.3**	**-0.6**
	18nm,0.5s						
PKI	**Pulchoki**	**13.07**	**320**	*e*P	**Pn**	**01 00 43.7**	**-0.6**
	12nm,0.3s						
PKIN	**Phulchoki**	**13.08**	**320**	*e*P	**Pn**	**01 00 43.5**	**-1.0**
DMN	**Daman**	**13.28**	**319**	*e*P	**Pn**	**01 00 48.2**	**+1.0**
	12nm,0.3s						
KKN	**Kakani**	**13.30**	**320**	*e*P	**Pn**	**01 00 47.5**	**0.0**
	5.1nm,0.2s						
MKAR	**Makanchi Array**	**30.74**	**343**	P	**P**	**01 03 53.4**	**+1.2**
	0.8nm,0.6s,mb3.8,baz=143,slow=9.6,SNR=3.0						
SONM	**Songino Array**	**31.43**	**15**	P	**P**	**01 03 58.3**	**0.0**
	0.8nm,0.3s,mb4.0,baz=179,slow=8.4,SNR=3.3						
KURK	**Kurchatov**	**35.33**	**342**	P	**P**	**01 04 31.9**	**-0.2**
	0.8nm,0.4s,mb4.0,baz=161,slow=7.7,SNR=7.1						
ZALV	**Zalesovo Beam**	**36.92**	**350**	P	**P**	**01 04 45.8**	**0.0**
	2.7nm,0.5s,mb4.3,baz=169,slow=8.5,SNR=5.2						
ASAR	**Alice Springs**	**56.13**	**136**	P	**P**	**01 07 15.9**	**-0.6**
	0.5nm,0.6s,mb3.8,baz=318,slow=6.6,SNR=7.2						

IDC ***20*** *00:57:50.9±2.8, 53°.61N×87°.44E, h0km, mb1 3.1/3, mb1mx3.0/28, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=24.6km s-min=14.3km az=61.0*
NNC ***20*** *00:57:55.7±5.6, 53°.07N×87°.25E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=42.3km s-min=32.3km az=44.0*
ISC 20 00:57:54.5±2.1, 53°.66N±0°.08×87°.4E±0°.2, h35km, n7, σ1§13/12, 8C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.58**	**281**	Pg	**Pn**	**00 58 18.0**	**-2.0**
	1.6nm,0.3s,baz=96,slow=17,SNR=17						
ZALV				Lg		00 58 41.2	
	5.5nm,0.3s,baz=98,slow=25,SNR=17						
KURK	**Kurchatov**	**6.17**	**245**	⇑Pn	**Pn**	**00 59 23.8**	**+0.7**
	1.5nm,1.0s						
KURK				⇑Sn	**Sn**	**01 00 33.7**	**+1.4**
	1.5nm,1.0s						
KURK				⇑Lg		01 01 02.9	
	3.0nm,0.6s						
KURK	**Kurchatov**	**6.17**	**245**	Pn	**Pn**	**00 59 24.4**	**+1.3**
	0.1nm,0.3s,baz=60,slow=14,SNR=8.8						
KURK				Sn	**Sn**	**01 00 36.0**	**+3.7**
	0.1nm,0.3s,baz=45,slow=16,SNR=4.1						
KURK				Lg		01 01 08.4	
	0.1nm,0.3s,baz=67,slow=36,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.27**	**245**	⇑Pn	**Pn**	**00 59 24.0**	**-0.4**
	0.2nm,0.9s,baz=59,slow=14						
KURBB				⇓Sn	**Sn**	**01 00 34.3**	**-0.4**
	0.2nm,0.3s,baz=55,slow=24						
KURBB				⇑Lg		01 01 06.6	
	0.9nm,0.7s,baz=52,slow=30						
MK31	**Makanchi Array**	**7.63**	**208**	⇑Pn	**Pn**	**00 59 43.3**	**+0.3**
	0.2nm,0.5s,baz=104,slow=12,SNR=5.8						
MK31				⇑Sn	**Sn**	**01 01 06.0**	**-2.1**
	0.4nm,0.6s						
MK31				⇑Lg		01 01 38.5	
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**7.63**	**208**	Pn	**Pn**	**00 59 43.5**	**+0.5**
	0.2nm,0.3s,baz=32,slow=14,SNR=7.4						
MKAR				Sn	**Sn**	**01 01 08.8**	**+0.8**

0.1nm,0.3s,baz=36,slow=25,SNR=3.5
MKAR Lg 01 01 51.8
0.1nm,0.3s,baz=36,slow=31,SNR=6.0
BVAR Borovoye Array 10.22 273 Pn **Pn 01 00 19.4 +0.9**
baz=78,slow=15,SNR=3.6

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*DDA **20** 01:11:06.2, 36°38N×27°61E, h14km±8km, Md3.2*
*CSEM **20** 01:11:07.8±0.2, 36°39N×27°56E, h10km, MD3.5, Error ellipse: s-maj=4.6km s-min=3.7km az=61.0*
*IDC **20** 01:11:07.7±2.0, 36°14N×27°70E, h0km, mb3.4/1, mb1 3.3/5, mb1mx3.1/26, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=44.7km s-min=21.6km az=174.0*
*ATH **20** 01:11:07.3, 36°47N×27°59E, h17km±1km, MD3.6/8*
*ISCJB **20** 01:11:07.5±0.7, 36°38N±0°03×27°59E±0°03, h13km±4km, Error ellipse: s-maj=4.3km s-min=4.2km az=178.2*
*NEIC **20** 01:11:07.3, 36°47N×27°59E, h17km, MD3.6(ATH), After ATH.*
*ISK **20** 01:11:08.6, 36°46N×27°59E, h22km, MD3.5*
ISC 20 01:11:08.1±0.6,**36°39N**±0°02×**27°55E**±0°03,**h12**km±4km,
n78,σ0**s90**/105,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.34**	**3**	*e*PG	**Pg**	**01 11 15.1**	**+0.1**
DAT				*e*SG	**Sg**	**01 11 20.1**	**+0.5**
DAT	**Datca**	**0.34**	**3**	*e*Pg	**Pg**	**01 11 15.1**	**+0.2**
DAT				*e*Sg	**Sg**	**01 11 20.1**	**+0.6**
ARG	**Arkhangelos**	**0.49**	**111**	*e*PN	**Pg**	**01 11 17.3**	**-0.5**
ARG				*e*SN	**Sg**	**01 11 24.6**	**+0.2**
ARG	**Arkhangelos**	**0.49**	**111**	*e*Pn	**Pg**	**01 11 17.3**	**-0.5**
BDRM	**Kayabasi**	**0.68**	**353**	*i* P	**Pg**	**01 11 21.2**	**-0.1**
BDRM				*i* S	**Sg**	**01 11 31.2**	**+1.0**
BDRM	**Kayabasi**	**0.68**	**353**	*i* P	**Pg**	**01 11 21.2**	**-0.1**
BDRM				*i* S	**Sg**	**01 11 31.2**	**+1.0**
KARP	**Karpathos**	**0.90**	**201**	*e*PN	**Pn**	**01 11 26.5**	**-0.1**
KARP				*e*SN	**Sn**	**01 11 39.2**	**-0.3**
KARP	**Karpathos**	**0.90**	**201**	*e*Pn	**Pn**	**01 11 26.5**	**-0.1**
KARP				*e*Sn	**Sn**	**01 11 39.2**	**-0.3**
MLSB	**Milas**	**0.92**	**11**	*e*PG	**Pg**	**01 11 25.7**	**-0.2**
MLSB				*e*SG	**Sg**	**01 11 38.1**	**+0.2**
MLSB	**Milas**	**0.92**	**11**	*e*Pg	**Pg**	**01 11 25.7**	**-0.2**
MLSB				*e*Sg	**Sg**	**01 11 38.1**	**+0.2**
YER	**Yerkesik**	**0.94**	**38**	*e*PG	**Pg**	**01 11 25.4**	**-1.0**
YER				*e*SG	**Sg**	**01 11 38.5**	**-0.2**
YER	**Yerkesik**	**0.94**	**38**	*e*Pg	**Pg**	**01 11 25.4**	**-1.0**
YER				*e*Sg	**Sg**	**01 11 38.5**	**-0.2**
TURN	**Turunc**	**0.97**	**60**	*i* P	**Pb**	**01 11 20.5**	**-6.4**
TURN				*i* S	**Sg**	**01 11 29.2**	**-10**
FETY	**Fethiye**	**1.26**	**78**	*e*PN	**Pn**	**01 11 30.4**	**-1.0**
FETY	**Fethiye**	**1.26**	**78**	*e*Pn	**Pn**	**01 11 30.4**	**-1.1**
AYDN	**Tasoluk**	**1.29**	**12**	*i* P	**Pn**	**01 11 31.0**	**-1.0**
AYDN				*i* S	**Sb**	**01 11 48.1**	**-0.8**
AYDN	**Tasoluk**	**1.29**	**12**	*i* P	**Pn**	**01 11 31.0**	**-1.0**
AYDN				*i* S	**Sb**	**01 11 48.1**	**-0.8**
GCAM	**G?zelcaml?**	**1.33**	**349**	*i* P	**Pn**	**01 11 31.9**	**-0.6**
GCAM	**G?zelcaml?**	**1.33**	**349**	*i* P	**Pn**	**01 11 31.9**	**-0.6**
SMG	**Samos**	**1.44**	**337**	*e*PN	**Pn**	**01 11 33.3**	**-0.6**
SMG				*e*SN	**Sn**	**01 11 52.1**	**-0.6**
SMG	**Samos**	**1.44**	**337**	*e*Pn	**Pn**	**01 11 33.3**	**-0.6**
SMG				*e*Sn	**Sn**	**01 11 52.1**	**-0.6**
KSL	**Kastellorizon**	**1.66**	**98**	*e*PN	**Pn**	**01 11 37.5**	**+0.5**
KSL	**Kastellorizon**	**1.66**	**98**	*e*Pn	**Pn**	**01 11 37.5**	**+0.5**
AKAS	**Kas**	**1.67**	**95**	*i* P	**Pn**	**01 11 38.0**	**+1.0**
AKAS				*i* S	**Sg**	**01 12 02.0**	**+0.3**
AKAS	**Kas**	**1.67**	**95**	*i* P	**Pn**	**01 11 38.0**	**+0.9**
AKAS				*i* S	**Sg**	**01 12 02.0**	**+0.3**
GLHS	**Gihisar (BURDU**	**1.74**	**63**	*e*PN	**Pn**	**01 11 37.9**	**-0.1**
GLHS	**Gihisar (BURDU**	**1.74**	**63**	*e*Pn	**Pn**	**01 11 37.9**	**-0.2**
APE	**Apeiranthos**	**1.76**	**293**	*e*PN	**Pn**	**01 11 38.9**	**+0.5**
APE	**Apeiranthos**	**1.76**	**293**	*e*Pn	**Pn**	**01 11 38.9**	**+0.5**
DNZL	**Cakiroluk**	**1.76**	**42**	*i* P	**Pn**	**01 11 42.1**	**+3.6**
DNZL	**Cakiroluk**	**1.76**	**42**	*i* P	**Pn**	**01 11 42.1**	**+3.7**
DENT	**Denizli**	**1.80**	**41**	*e*PN	**Pn**	**01 11 38.4**	**-0.6**
DENT	**Denizli**	**1.80**	**41**	*e*Pn	**Pn**	**01 11 38.4**	**-0.6**
GOLH	**Golhisar**	**1.82**	**62**	*i* P	**Pn**	**01 11 41.2**	**+2.0**
GOLH				*i* S	**Sn**	**01 12 03.7**	**+1.5**
GOLH	**Golhisar**	**1.82**	**62**	*i* P	**Pn**	**01 11 41.2**	**+2.0**
GOLH				*i* S	**Sn**	**01 12 03.7**	**+1.5**
ELL	**Elmali**	**1.93**	**79**	*e*PN	**Pn**	**01 11 41.0**	**+0.3**
ELL	**Elmali**	**1.93**	**79**	*e*Pn	**Pn**	**01 11 41.0**	**+0.3**
NPS	**Neapolis**	**1.94**	**235**	*e*PN	**Pn**	**01 11 42.6**	**+1.8**
NPS	**Neapolis**	**1.94**	**235**	*e*Pn	**Pn**	**01 11 42.6**	**+1.8**
IZM	**Izmir**	**2.02**	**353**	*e*PN	**Pn**	**01 11 41.2**	**-0.7**
IZM	**Izmir**	**2.02**	**353**	*e*Pn	**Pn**	**01 11 41.2**	**-0.7**
BLCB	**Balcova**	**2.03**	**349**	*e*PN	**Pn**	**01 11 41.4**	**-0.8**
BLCB	**Balcova**	**2.03**	**349**	*e*Pn	**Pn**	**01 11 41.4**	**-0.7**
KULA	**Kula-Manisa**	**2.29**	**22**	*e*PN	**Pn**	**01 11 45.5**	**-0.2**
KULA	**Kula-Manisa**	**2.29**	**22**	*e*Pn	**Pn**	**01 11 45.5**	**-0.3**
CHOS	**Chios island**	**2.32**	**330**	*e*PB	**Pn**	**01 11 46.0**	**-0.1**
CHOS	**Chios island**	**2.32**	**330**	*e*Pb	**Pn**	**01 11 46.0**	**-0.1**
KORT	**Korkueli**	**2.33**	**74**	*i* P	**Pn**	**01 11 49.5**	**+3.3**
KORT				*i* S	**Sn**	**01 12 21.6**	**+6.9**
KORT	**Korkueli**	**2.33**	**74**	*i* P	**Pn**	**01 11 49.5**	**+3.3**
IDI	**Anoyia**	**2.43**	**244**	Pn	**Pn**	**01 11 49.2**	**+1.6**
IDI	1.3nm,0.3s,baz=57,slow=16,SNR=26			Sn	**Sn**	**01 12 17.7**	**+0.6**
IDI	**Anoyia**	**2.43**	**244**	*e*PB	**Pb**	**01 11 49.5**	**-2.2**
IDI	**Anoyia**	**2.43**	**244**	*e*Pb	**Pb**	**01 11 49.5**	**-2.2**
KHL	**Karahalli**	**2.49**	**39**	*e*PN	**Pn**	**01 11 47.9**	**-0.5**
KHL	**Karahalli**	**2.49**	**39**	*e*Pn	**Pn**	**01 11 47.9**	**-0.5**
AKS	**Akhisar**	**2.49**	**5**	*e*PN	**Pn**	**01 11 48.1**	**-0.4**
AKS	**Akhisar**	**2.49**	**5**	*e*Pn	**Pn**	**01 11 48.1**	**-0.4**
KHAL	**Karahalli**	**2.51**	**37**	*i* P	**Pn**	**01 11 49.1**	**+0.4**
KHAL	**Karahalli**	**2.51**	**37**	*i* P	**Pn**	**01 11 49.1**	**+0.4**
BCK	**Bucak**	**2.66**	**65**	*e*PN	**Pn**	**01 11 50.5**	**-0.2**
BCK	**Bucak**	**2.66**	**65**	*e*Pn	**Pn**	**01 11 50.5**	**-0.2**
SUTC	**Sutluce-Ispart**	**2.97**	**68**	*e*PN	**Pn**	**01 11 55.6**	**+0.6**
SUTC	**Sutluce-Ispart**	**2.97**	**68**	*e*Pn	**Pn**	**01 11 55.6**	**+0.6**
PRK	**Paraskevi**	**3.02**	**341**	*e*PN	**Pn**	**01 11 55.6**	**-0.2**
PRK	**Paraskevi**	**3.02**	**341**	*e*Pn	**Pn**	**01 11 55.6**	**-0.2**
SHUT	**Suhut-Afyon**	**3.22**	**47**	*e*PN	**Pn**	**01 11 58.5**	**0.0**
SHUT	**Suhut-Afyon**	**3.22**	**47**	*e*Pn	**Pn**	**01 11 58.5**	**+0.1**
EZN	**Ezine**	**3.56**	**345**	*e*PN	**Pn**	**01 12 03.5**	**+0.4**
EZN	**Ezine**	**3.56**	**345**	*e*Pn	**Pn**	**01 12 03.6**	**+0.4**
LIA	**Limnos Island**	**3.97**	**333**	*e*PN	**Pn**	**01 12 09.2**	**+0.5**
LIA	**Limnos Island**	**3.97**	**333**	*e*Pn	**Pn**	**01 12 09.2**	**+0.5**
CSS	**Prodhromos**	**4.91**	**105**	*e*PN	**Pn**	**01 12 20.9**	**-0.8**
CSS				*e*SN	**Sn**	**01 13 13.4**	**-5.1**
CSS	**Prodhromos**	**4.91**	**105**	*e*Pn	**Pn**	**01 12 21.0**	**-0.8**
CSS				*e*Sn	**Sn**	**01 13 13.4**	**-5.1**
BRTR	**Keskin Array B**	**5.84**	**53**	Pn	**Pn**	**01 12 36.4**	**+1.9**
BRTR	0.3nm,0.3s,baz=230,slow=14,SNR=8.0			Sn	**Sn**	**01 13 41.0**	**-0.3**
BRTR	**Keskin Array B**	**5.84**	**53**	Pn	**Pn**	**01 12 36.4**	**+1.9**
BRTR	0.3nm,0.3s,baz=244,slow=27,SNR=6.8			Sn	**Sn**	**01 13 41.0**	**-0.4**
MMAI	**Mount Meron Ar**	**7.29**	**115**	Pn	**Pn**	**01 12 53.1**	**-1.3**
MMAI	2.0nm,0.3s,baz=310,slow=13,SNR=16			Sn	**Sn**	**01 14 13.1**	**-3.9**
EIL	**Elat**	**9.13**	**135**	Pn	**Pn**	**01 13 17.7**	**-2.0**
EIL	**Elat**	**9.13**	**135**	Pn	**Pn**	**01 13 17.7**	**-2.0**
TORD	**Torodi Ar. Bea**	**32.77**	**232**	P	**P**	**01 17 41.7**	**+0.6**
	0.2nm,0.4s,baz=36,slow=9.2,SNR=5.9						

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*BJI **20** 01:15:07.2, 6°80N×73°10W, h149km, mB4.7/2*
*ISCJB **20** 01:15:08.7±0.4, 6°82N±0°04×72°91W±0°04, h175km±4km, mb4.0/25, Error ellipse: s-maj=7.5km s-min=5.0km az=43.6*
*FUNV **20** 01:15:08.7, 6°75N×73°16W, h172km, MW4.1*
*NEIC **20** 01:15:09.3±0.6, 6°81N×73°06W, h160km±7km, mb4.3/16, Error ellipse: s-maj=7.8km s-min=7.4km az=102.0*
*IDC **20** 01:15:09.2±0.6, 6°68N×72°90W, h168km±6km, mb3.6/12, mb1 3.8/18, mb1mx3.6/27, mbtmp3.6/18, Error ellipse: s-maj=10.9km s-min=7.1km az=129.0*
ISC 20 01:15:09.8±0.4,**6°82N**±0°04×**72°92W**±0°04,**h167**km±4km,
n76,σ1**s01**/86,**mb4.0**/25,**2C-4D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**30**	⇑*i* P	**Pn**	**01 15 38.5**	**+0.6**
CAPV				*e*S	**Sn**	**01 16 00.2**	**+0.7**
ROSC	**El Rosal**	**2.41**	**216**	P	**Pn**	**01 15 50.2**	**-0.5**
ROSC	262nm,0.3s,baz=294,slow=18,SNR=377			S	**Sn**	**01 16 20.5**	**-1.8**
	348nm,0.3s,baz=109,slow=19,SNR=6.9						
ROSC	**El Rosal**	**2.41**	**216**	*e*Pn	**Pn**	**01 15 50.1**	**-0.6**
ROSC				*e*Sn	**Sn**	**01 16 21.4**	**-1.0**
SOCV	**Socops**	**2.51**	**54**	*e*P	**Pn**	**01 15 53.1**	**+1.2**
SOCV				*e*S	**Sn**	**01 16 24.7**	**+0.3**
VIGV	**El Vigia**	**2.53**	**37**	⇓*i* P	**Pn**	**01 15 52.9**	**+0.8**
VIGV				*e*S	**Sn**	**01 16 24.9**	**-0.1**
SDV	**Santo Domingo**	**3.05**	**48**	P	**Pn**	**01 15 59.9**	**+1.3**
SDV	24nm,0.3s,baz=242,slow=5.6,SNR=105			S	**Sn**	**01 16 37.9**	**+1.5**
SDV	**Santo Domingo**	**3.05**	**48**	*e*Pn	**Pn**	**01 15 59.7**	**+1.1**
SDV				*e*Sn	**Sn**	**01 16 37.8**	**+1.4**
ELOV	**Elorza**	**3.41**	**87**	*i* P	**Pn**	**01 16 04.5**	**+1.4**
ELOV				*e*S	**Sn**	**01 16 45.5**	**+1.1**
VIRV	**Villa del Rosa**	**3.69**	**8**	⇓*e*P	**Pn**	**01 16 05.2**	**-1.4**
QARV	**Quebrada Arrib**	**4.11**	**35**	⇓*i* P	**Pn**	**01 16 12.8**	**+0.8**
QARV				*e*S	**Sn**	**01 16 59.9**	**-0.6**
SANV	**Sanarito**	**4.28**	**51**	*e*P	**Pn**	**01 16 14.6**	**+0.5**
SANV				*e*S	**Sn**	**01 17 04.0**	**-0.3**
CURV	**Curarigua**	**4.31**	**42**	*e*P	**Pn**	**01 16 15.1**	**+0.5**
CURV				*e*S	**Sn**	**01 17 04.2**	**-1.0**
DABV	**Dabajuro**	**4.66**	**29**	*e*P	**Pn**	**01 16 19.1**	**0.0**
DABV				*e*S	**Sn**	**01 17 10.9**	**-2.3**
TEPV	**Terepaima**	**4.83**	**49**	*e*P	**Pn**	**01 16 21.9**	**+0.6**
TEPV				*e*S	**Sn**	**01 17 15.6**	**-1.6**
SIQV	**Siquisique**	**4.89**	**39**	⇓*i* P	**Pn**	**01 16 22.1**	**0.0**
SIQV				*e*S	**Sn**	**01 17 16.6**	**-2.1**
BAUV	**El Baul**	**5.27**	**66**	*e*P	**Pn**	**01 16 26.5**	**-0.6**
BAUV				*e*S	**Sn**	**01 17 25.3**	**-2.3**
MONV	**Montecano**	**5.87**	**29**	⇑*i* P	**Pn**	**01 16 34.4**	**-0.6**
MONV				*e*S	**Sn**	**01 17 37.1**	**-4.7**
CAOV	**Caicara del Or**	**6.56**	**85**	*e*P	**Pn**	**01 16 43.4**	**-0.7**
CAOV				*e*S	**Sn**	**01 17 54.7**	**-3.5**
BCIP	**Isla Barro Col**	**7.24**	**289**	*e*Pn	**Pn**	**01 16 48.0**	**-5.1**
OTAV	**Otavalo**	**8.56**	**220**	*e*Pn	**Pn**	**01 17 10.5**	**-0.1**
PCRV	**Puerto La Cruz**	**8.84**	**67**	P	**Pn**	**01 17 15.6**	**+1.3**
PCRV	0.7nm,0.3s,baz=238,slow=9.5,SNR=2.3			S	**Sn**	**01 18 56.5**	**+3.6**
SDDR	**Presa de Saban**	**12.19**	**7**	*e*Pn	**Pn**	**01 17 58.2**	**+0.1**
	1.0nm,0.3s,baz=122,slow=18,SNR=2.3 8.9nm,0.6s						
JTS	**JuntasAbangare**	**12.39**	**287**	P	**Pn**	**01 18 01.6**	**+0.8**
	0.5nm,0.3s,baz=179,slow=22,SNR=3.6						
JTS	**JuntasAbangare**	**12.39**	**287**	Pn	**Pn**	**01 17 57.7**	**-3.0**
CBYP	**Canovanas**	**13.30**	**31**	Pn	**Pn**	**01 18 12.6**	**+0.3**
MTP	**Monte Pirata**	**13.31**	**32**	Pn	**Pn**	**01 18 13.1**	**+0.7**
ATAH	**Atahualpa**	**14.78**	**202**	P	**Pn**	**01 18 36.6**	**+5.8**
	0.3nm,0.3s,baz=279,slow=14,SNR=4.2						
APG	**El Apazote**	**19.04**	**297**	P	**P**	**01 19 21.3**	**+2.0**
	0.1nm,0.3s,baz=122,slow=17,SNR=2.6						
NNA	**Nana**	**19.09**	**192**	P	**P**	**01 19 19.1**	**-0.7**
	0.9nm,0.3s,baz=282,slow=14,SNR=3.3						
TEIG	**Tepich**	**19.99**	**313**	P	**P**	**01 19 31.4**	**+1.9**
	5.5nm,0.6s						
LPAZ	**La Paz**	**23.44**	**168**	P	**P**	**01 20 04.5**	**+0.4**
	1.1nm,0.3s,mb3.7,baz=343,slow=7.7,SNR=13						
LPAZ	**La Paz**	**23.44**	**168**	*e*P	**P**	**01 20 05.0**	**+0.8**
	13nm,1.7s,mb4.1						
SWET	**Sewanee**	**30.69**	**339**	P	**P**	**01 21 08.4**	**-0.4**
KVTX	**Kingsville**	**31.40**	**314**	*e*P	**P**	**01 21 19.1**	**+3.9**
	78nm,0.4s						
WVT	**Waverly**	**32.21**	**337**	*e*P	**P**	**01 21 22.7**	**+0.5**
	5.8nm,1.0s,mb4.3						
MIAR	**Mount Ida**	**33.53**	**328**	*e*P	**P**	**01 21 33.1**	**-0.6**
	1.8nm,0.7s,mb3.9						
SIUC	**Southern Illin**	**34.13**	**337**	*e*P	**P**	**01 21 39.1**	**+0.3**
	11nm,0.6s,mb4.8						
ACSO	**Alum Creek Sta**	**34.47**	**346**	*e*P	**P**	**01 21 41.7**	**+0.1**
	3.1nm,0.4s,mb4.4						
FVM	**French Village**	**34.85**	**335**	*e*P	**P**	**01 21 45.4**	**+0.4**
	8.1nm,0.6s,mb4.5						
CCM	**Cathedral Cave**	**35.26**	**335**	*e*P	**P**	**01 21 48.1**	**-0.3**
	9.4nm,0.7s,mb4.5						
CPUP	**Villa Florida**	**36.26**	**156**	P	**P**	**01 21 53.5**	**-3.6**
	0.3nm,0.3s,mb3.4,baz=92,slow=8.7,SNR=3.4						
WMOK	**Wichita Mounta**	**36.60**	**323**	*e*P	**P**	**01 21 58.9**	**-1.1**
	1.5nm,0.6s,mb3.8						
TXAR	**Lajitas Array**	**36.61**	**312**	P	**P**	**01 22 00.1**	**0.0**
	0.5nm,0.4s,mb3.5,baz=127,slow=9.3,SNR=15						
TXAR				pP	pP	01 22 36.1	+0.3
	0.3nm,0.5s,baz=125,slow=8.4,SNR=3.0						
TXAR				PcP	PcP	01 24 21.0	+1.3
	0.2nm,0.6s,baz=130,slow=6.7,SNR=3.4						
RCBR	**Riachuelo**	**39.02**	**108**	P	**P**	**01 22 23.9**	**+3.4**
ANMO	**Albuquerque**	**41.66**	**317**	P	**P**	**01 22 41.3**	**-0.6**
SDCO	**Great Sand Dun**	**42.68**	**321**	*e*P	**P**	**01 22 50.0**	**-0.1**
	1.6nm,1.0s,mb3.6						
EYMN	**Ely**	**43.93**	**342**	*e*P	**P**	**01 23 00.1**	**+0.1**
	11nm,0.7s,mb4.6						
PV01	**Paradox Valley**	**44.86**	**319**	P	**P**	**01 23 06.9**	**-0.6**
	36nm,0.4s						
RSSD	**Black Hills**	**46.04**	**329**	*e*P	**P**	**01 23 16.5**	**-0.2**
ULM	**Lac du Bonnet**	**47.35**	**340**	P	**P**	**01 23 26.1**	**-0.7**
	3.8nm,0.4s,mb4.4,baz=139,slow=4.5,SNR=9.5						
PLCA	**Paso Flores**	**47.37**	**178**	P	**P**	**01 23 24.8**	**-2.2**
	3.1nm,1.0s,mb3.9,baz=326,slow=3.2,SNR=3.1						
SCHQ	**Schefferville**	**48.12**	**5**	P	**P**	**01 23 34.1**	**+1.5**
	6.9nm,0.5s,mb4.5,baz=182,slow=7.6,SNR=20						
SCHQ	**Schefferville**	**48.12**	**5**	*e*P	**P**	**01 23 33.4**	**+0.8**
	7.6nm,0.6s,mb4.5						
PDAR	**Pinedale Array**	**48.20**	**324**	P	**P**	**01 23 32.6**	**-0.8**
	0.9nm,0.6s,mb3.6,baz=126,slow=7.5,SNR=7.0						
HWUT	**Hardware Ranch**	**48.73**	**321**	*e*P	**P**	**01 23 37.3**	**-0.2**
	1.0nm,0.5s,mb3.7						
REDW	**Red Top Meadow**	**49.31**	**324**	*e*P	**P**	**01 23 41.8**	**-0.1**
	60nm,2.8s,mb4.7						
MCMT	**McKenzie Canyo**	**51.34**	**324**	P	**P**	**01 23 58.1**	**+1.0**
HLID	**Hailey**	**51.56**	**322**	*e*P	**P**	**01 23 58.1**	**-0.6**
	1.1nm,0.7s,mb3.6						
NVAR	**Mina Array Bea**	**51.63**	**315**	P	**P**	**01 24 00.3**	**+1.0**
	0.7nm,0.7s,mb3.4,baz=118,slow=6.9,SNR=5.1						
NVAR	**Mina Array Bea**	**51.63**	**315**	P	**P**	**01 24 00.3**	**+1.0**
FCC	**Fort Churchill**	**54.32**	**347**	*e*P	**P**	**01 24 18.1**	**-0.5**
NEW	**Newport**	**55.71**	**326**	P	**P**	**01 24 29.5**	**+0.7**
YKA	**Yellowknife Ar**	**63.33**	**340**	P	**P**	**01 25 20.5**	**-0.3**
	3.3nm,0.6s,mb4.4,baz=132,slow=6.7,SNR=81						
YKA				pP	pP	01 25 59.2	-0.9
	0.6nm,0.6s,baz=127,slow=7.0,SNR=2.4						
DBIC	**Dimbokro**	**67.53**	**86**	P	**P**	**01 25 48.4**	**-0.3**
	2.0nm,0.7s,mb4.0,baz=232,slow=6.9,SNR=7.4						
SCO	**Scoresbysund**	**71.26**	**16**	*i* P	**P**	**01 26 02.0**	**-8.5**
	4.6nm,0.9s,mb4.2						
INK	**Inuvik**	**73.10**	**340**	*e*P	**P**	**01 26 21.8**	**+0.4**
	1.2nm,0.4s,mb4.0						
TORD	**Torodi Ar. Bea**	**73.54**	**78**	P	**P**	**01 26 24.3**	**-0.7**
	0.2nm,0.3s,mb3.3,baz=283,slow=5.8,SNR=12						
TSUM	**Tsumeb**	**92.68**	**109**	P	**P**	**01 28 06.8**	**+3.3**
MDJ	**Mudanjiang**	**124.93**	**341**	PKP	PKPdf	01 33 44.8	-5.5
MDJ				LR	LR		
	comp=N,69nm,21.8s						
MDJ				LR	LR		
	comp=E,110nm,19.7s						
MDJ				LR	LR		
	comp=Z,130nm,21.8s						
WMQ	**Urumqi**	**126.63**	**17**	*e*PKP	PKPdf	01 33 56.8	+3.3
CN2	**Changchun**	**126.94**	**343**	*e*PKP	PKPdf	01 33 54.3	+0.2
BJI	**Beijing**	**132.62**	**351**	PKP	PKPdf	01 34 05.1	+0.1
LZH	**Lanzhou**	**137.21**	**4**	*e*PKP	PKPdf	01 34 10.5	-3.2
LZH				sPKP		01 35 05.0	
CD2	**Chengdu**	**142.35**	**5**	PKP	PKPdf	01 34 21.8	-1.4
GYA	**Guiyang**	**146.92**	**1**	*e*PKPbc	PKPbc	01 34 30.3	-3.0
GYA				PKPab	PKPab	01 34 37.6	+2.6
GYA				pPKP	pPKPdf	01 35 12.0	-3.2
GYA				sPKP		01 35 28.5	
GYA				PP	PP	01 38 01.8	+4.7
GYA				AMB	AMB		
	comp=Z,90nm,8.7s						
ASAR	**Alice Springs**	**149.28**	**234**	PKPbc	PKPbc	01 34 36.4	-3.2
	comp=Z,0.5nm,0.5s,baz=119,slow=3.4,SNR=6.9						

DJA 20 01:23:02, 2°55N×99°04E, h10km, MLv4.3/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.53**	**189**	P	Pg	01 23 14.1	+1.8
MNSI	**Mandailing Nat**	**1.82**	**163**	P	Pn	01 23 26.2	-7.3
GSI	**Gunungsitoli**	**1.92**	**230**	P	Pn	01 23 35.6	+0.9
GSI				S	Sn	01 23 59.8	+0.9
BKNI	**Bangkinang**	**2.98**	**138**	P	Pn	01 23 50.3	+0.9
PPI	**Padang Panjang**	**3.28**	**156**	P	Pn	01 23 53.0	-0.5
PDSI	**Padang**	**3.72**	**158**	P	Pn	01 24 00.7	+1.1
SDSI	**Sungai Dareh**	**4.20**	**145**	P	Pn	01 24 06.0	-0.2

DJA 20 01:25:32, 1°79N×99°24E, h10km, MLv3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.36**	**310**	P	Pg	01 25 40.4	+1.2
SBSI	**Sibolga**	**0.42**	**236**	P	Pg	01 25 40.6	+0.3
MNSI	**Mandailing Nat**	**1.04**	**161**	P	Pg	01 25 52.1	0.0
GSI	**Gunungsitoli**	**1.73**	**254**	P	Pn	01 26 03.3	+1.1
GSI				S	Sn	01 26 24.8	+0.4

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*DDA **20** 01:29:55.2, 36°57N×26°92E, h7km±6km, Md3.2*
*ISCJB **20** 01:29:55.2±0.5, 36°62N±0°02×26°83E±0°03, h5km±5km, Error ellipse: s-maj=4.8km s-min=4.0km az=25.1*
*NEIC **20** 01:29:56.1, 36°63N×26°86E, h5km, MD3.2(ATH), After ATH.*
*ISK **20** 01:29:56.1, 36°78N×26°75E, h10km, MD3.3*
*CSEM **20** 01:29:56.0±0.2, 36°64N×26°82E, h10km, MD3.2, Error ellipse: s-maj=4.3km s-min=3.3km az=124.0*
*ATH **20** 01:29:56.1, 36°63N×26°86E, h5km, MD3.2/5*
ISC 20 01:29:56.3±0.5,**36°63N**±0°02×**26°84E**±0°03,**h11**km±5km,
n32,σ0**s77**/52,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.60**	**80**	*e*PG	**Pg**	**01 30 09.2**	**+1.2**
DAT				*e*SG	**Sg**	**01 30 19.5**	**+3.6**
DAT	**Datca**	**0.60**	**80**	*e*Pg	**Pg**	**01 30 09.2**	**+1.2**
DAT				*e*Sg	**Sg**	**01 30 19.5**	**+3.5**
BDRM	**Kayabasi**	**0.65**	**48**	*i* P	**Pg**	**01 30 09.0**	**+0.1**
BDRM				*i* S	**Sg**	**01 30 17.5**	**0.0**
BDRM	**Kayabasi**	**0.65**	**48**	*i* P	**Pg**	**01 30 09.0**	**+0.1**
BDRM				*i* S	**Sg**	**01 30 17.5**	**0.0**
MLSB	**Milas**	**1.00**	**48**	*e*PG	**Pg**	**01 30 15.3**	**-0.3**
MLSB				*e*SG	**Sg**	**01 30 28.8**	**+0.1**
MLSB	**Milas**	**1.00**	**48**	*e*Pg	**Pg**	**01 30 15.3**	**-0.3**
MLSB				*e*Sg	**Sg**	**01 30 28.8**	**+0.1**
SMG	**Samos**	**1.08**	**0**	*e*PG	**Pg**	**01 30 16.1**	**-0.9**
SMG				*e*SB	**Sg**	**01 30 31.2**	**+0.2**
SMG	**Samos**	**1.08**	**0**	*e*Pg	**Pg**	**01 30 16.1**	**-0.9**
SMG				*e*Sb	**Sg**	**01 30 31.2**	**+0.2**
KARP	**Karpathos**	**1.11**	**166**	*e*PB	**Pg**	**01 30 17.0**	**-0.6**
KARP				*e*SB	**Sg**	**01 30 31.8**	**-0.3**
KARP	**Karpathos**	**1.11**	**166**	*e*Pb	**Pg**	**01 30 17.0**	**-0.6**
KARP				*e*Sb	**Sg**	**01 30 31.8**	**-0.3**
GCAM	**G?zelcaml?**	**1.11**	**16**	*i* P	**Pg**	**01 30 16.3**	**-1.4**
GCAM				*i* S	**Sg**	**01 30 33.4**	**+1.2**
GCAM	**G?zelcaml?**	**1.11**	**16**	*i* P	**Pg**	**01 30 16.3**	**-1.4**
GCAM				*i* S	**Sg**	**01 30 33.4**	**+1.2**
ARG	**Arkhangelos**	**1.12**	**111**	*e*PB	**Pg**	**01 30 17.5**	**-0.3**
ARG

RAC eSg **Sg** **01 45 23.6 +2.7**
OKC Ostrava-Krasne 0.59 227 ePG **Pg** **01 45 19.6 +1.2**
OKC eSG **Sg** **01 45 30.0 +4.0**
comp=Z,42nm,1.1s
OKC Ostrava-Krasne 0.59 227 ePg **Pg** **01 45 19.4 +1.0**
baz=46
OKC Sg **Sg** **01 45 30.0 +4.0**
comp=Z,42nm,1.1s
OJC Ojcow 0.63 92 ePg **Pg** **01 45 18.4 -0.7**
OJC eSg **Sg** **01 45 26.8 -0.5**
OJC Ojcow 0.63 92 ePg **Pg** **01 45 18.3 -0.8**
baz=275
OJC eSg **Sg** **01 45 26.7 -0.6**
baz=275
MORC Moravsky Berou 0.94 241 ePg **Pg** **01 45 25.4 +0.3**
baz=59
MORC eSg **Sg** **01 45 38.0 +0.6**
comp=Z,19nm,0.3s,baz=59
NIE Niedzica 1.27 130 ePg **Pg** **01 45 31.1 -0.3**
NIE eSg **Sg** **01 45 48.3 +0.4**
NIE Niedzica 1.27 130 ePg **Pg** **01 45 31.1 -0.3**
NIE eSg **Sg** **01 45 48.3 +0.4**
DPC Dobruska-Polom 1.60 275 ePG **Pg** **01 45 36.3 -1.5**
DPC eSG **Sg** **01 45 58.1 -0.4**
comp=Z,20nm,0.8s
DPC Dobruska-Polom 1.60 275 ePn **Pn** **01 45 36.2 -0.4**
baz=92
DPC eSg **Sg** **01 45 58.3 -0.2**
baz=92
KOLL Kolacno 1.69 189 ePG **Pg** **01 45 40.7 +1.3**
KOLL eSG **Sg** **01 46 01.9 +0.7**
KOLL Kolacno 1.69 189 ePg **Pg** **01 45 40.7 +1.3**
KOLL eSg **Sg** **01 46 01.9 +0.7**
VRAC Vranov 1.72 238 ePn **Pn** **01 45 38.7 +0.5**
baz=56
VRAC eSg **Sg** **01 46 01.6 -0.6**
comp=Z,6.9nm,0.2s,baz=56
KSP Ksiaz 1.72 291 ePn **Pn** **01 45 39.8 +1.6**
KSP eSn **Sn** **01 46 02.9 +2.0**
KSP Ksiaz 1.72 291 ePg **Pg** **01 45 39.8 -0.2**
KSP eSg **Sg** **01 46 02.7 +0.5**
VYHS Vyhne 1.75 180 ePN **Pn** **01 45 38.2 -0.4**
VYHS eSN **Sn** **01 46 01.2 -0.4**
VYHS Vyhne 1.75 180 ePn **Pn** **01 45 38.2 -0.4**
VYHS eSn **Sn** **01 46 01.2 -0.4**
STHS Stebnicka Huta 1.78 117 ePN **Pn** **01 45 40.5 +1.5**
STHS eSN **Sn** **01 46 03.6 +1.4**
STHS Stebnicka Huta 1.78 117 ePn **Pn** **01 45 40.5 +1.5**
STHS eSn **Sn** **01 46 03.6 +1.4**
KRUC Moravsky 1.97 234 ePn **Pn** **01 45 42.1 +0.5**
baz=52
KRUC eSg **Sg** **01 46 09.1 -1.1**
comp=Z,3.3nm,0.2s,baz=52
KECS Kecovo 2.07 148 ePG **Pg** **01 45 45.2 -1.5**
KECS eSN **Sn** **01 46 07.3 -2.2**
KOLS Kolonicke sedl 2.60 119 ePG **Pg** **01 45 57.9 +1.0**
KOLS eSN **Sn** **01 46 21.2 -1.4**
KOLS Kolonicke sedl 2.60 119 ePg **Pg** **01 45 57.9 +1.0**
KOLS eSn **Sn** **01 46 21.2 -1.4**
PRU Pruhonice 2.76 266 ePG **Pg** **01 45 57.1 -2.9**
PRU eSG **Sg** **01 46 34.1 -1.7**
comp=Z,2.9nm,0.4s
PRU Pruhonice 2.76 266 Pg **Pg** **01 45 57.1 -2.9**
PRU Sg **Sg** **01 46 34.1 -1.7**
comp=Z,2.9nm,0.4s
BRG Berggiesshubel 3.17 283 PG **Pg** **01 46 08.2 +0.4**
BRG SG **Sg** **01 46 48.6 -0.3**
comp=Z,3.8nm,0.5s
KHC Kasperske Hory 3.58 254 ePG **Pg** **01 46 11.6 -4.0**
KHC eSG **Sg** **01 47 01.8 -0.2**
comp=Z,4.4nm,0.5s
KHC Kasperske Hory 3.58 254 Pg **Pg** **01 46 11.6 -4.0**
KHC Sg **Sg** **01 47 01.8 -0.2**
comp=Z,4.4nm,0.5s
NKC Novy Kostel 4.09 272 eSG **Sg** **01 47 15.9 -2.4**
comp=Z,6.2nm,0.7s
NKC Novy Kostel 4.09 272 Sg **Sg** **01 47 15.9 -2.4**
comp=Z,6.2nm,0.7s

NIED ***20*** *01:49:00,36°.40N×142°.20E,h11km,Mw3.9 Best double couple: M0=7.67000×10^14 NP1:φ=342.00000°,δ=66.00000°, λ=53.00000°. NP2:φ=225.00000°,δ=43.00000°,λ=144.00000°.*
ISCJB ***20*** *01:49:05.3±0.5,36°.41N±0°.03×142°.31E±0°.05,h33km, mb3.8/11,Error ellipse: s-maj=6.0km s-min=4.8km az=178.6*
JMA ***20*** *01:49:05.9±0.3,36°.45N×142°.22E,h62km,M3.6*
IDC ***20*** *01:49:07.3±0.8,36°.44N×142°.35E,h30km±5km,mb3.7/11, mb1 3.9/15,mb1mx3.8/28,mbtmp3.8/15,ML3.8/4,MS2.6/1, Ms1 2.6/1,ms1mx2.2/32,Error ellipse: s-maj=22.6km s-min=16.0km az=72.0*
NEIC ***20*** *01:49:08.1±0.7,36°.53N×142°.31E,h35km,MG3.6(JMA), Error ellipse: s-maj=15.3km s-min=13.1km az=157.0*
ISC 20 01:49:06.9±0.5,36°.45N±0°.03×142°.27E±0°.05,h35km, (h34km±.9km:pP-P),n34,σ1=25/42,mb3.8/11,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.35**	**299**	eS	**Sn**	**01 49 44.5**	**-1.4**
JHO	**Hitachi**	**1.38**	**277**	P	**Pn**	**01 49 28.8**	**-0.9**
JHO				eS	**Sn**	**01 49 45.5**	**-1.2**
JFK	**Kawauchi**	**1.45**	**310**	P	**Pn**	**01 49 29.4**	**-1.2**
JMM	**Marumori**	**1.84**	**321**	P	**Pn**	**01 49 35.3**	**-0.7**
JFT	**Otama**	**1.88**	**305**	P	**Pn**	**01 49 36.6**	**0.0**
JFT				eS	**Sn**	**01 50 00.0**	**+1.0**
BSO1	**Boso 1**	**2.08**	**211**	P	**Pn**	**01 49 38.2**	**-1.1**
BSO1				eS	**Sn**	**01 50 04.0**	**0.0**
JIO	**Ouri**	**2.13**	**340**	P	**Pn**	**01 49 38.8**	**-1.2**
JIO				eS	**Sn**	**01 50 06.3**	**+1.1**
BSO3	**Boso 3**	**2.18**	**222**	P	**Pn**	**01 49 40.0**	**-0.7**
JAG	**Ashikaga**	**2.27**	**270**	P	**Pn**	**01 49 41.4**	**-0.5**
JAG				eS	**Sn**	**01 50 08.4**	**-0.3**
JRY	**Ryogami san**	**2.76**	**262**	P	**Pn**	**01 49 48.3**	**-0.3**
JYN	**Shimob**	**3.17**	**254**	P	**Pn**	**01 49 54.8**	**+0.5**
MJAR	**Matsushiro Arr**	**3.27**	**273**	Pn	**Pn**	**01 49 56.2**	**+0.4**
	7.3nm,0.3s,baz=90,slow=9.6,SNR=22						
MAJO	**Matsushiro**	**3.28**	**273**	ePn	**Pn**	**01 49 56.8**	**+1.0**
MAT	**Matsushiro**	**3.28**	**273**	P	**Pn**	**01 49 56.5**	**+0.8**
MAT				S	**Sn**	**01 50 36.0**	**+2.5**
JHJ	**Hachijo jima 2**	**3.90**	**212**	Pn	**Pn**	**01 50 02.5**	**-1.8**
	94nm,0.3s,baz=69,slow=9.4,SNR=14						
JHJ				Sn	**Sn**	**01 50 47.2**	**-1.8**
	51nm,0.3s,baz=85,slow=23,SNR=4.1						
ERM	**Erimo**	**5.60**	**7**	ePn	**Pn**	**01 50 25.6**	**-2.0**
ERM				eSn	**Sn**	**01 51 28.5**	**-2.2**
ASAJ	**Asahikawa**	**7.66**	**2**	Pn	**Pn**	**01 50 55.2**	**-0.7**
	2.1nm,0.3s,baz=198,slow=9.6,SNR=3.2						
ASAJ				Sn	**Sn**	**01 52 19.9**	**-1.5**
	0.2nm,0.3s,baz=78,slow=29,SNR=3.1						
CBIJ	**Chichi jima**	**9.33**	**180**	Pn	**Pn**	**01 51 18.0**	**-0.9**
	5.1nm,0.3s,baz=215,slow=18,SNR=3.1						
KSRS	**Korea Array**	**11.53**	**279**	Pn	**Pn**	**01 51 51.9**	**+3.0**
	0.1nm,0.3s,baz=91,slow=13,SNR=4.5						
KSRS				LR	LR	01 55 48.7	
	comp=Z,32nm,19.5s,baz=195,slow=34						
SONM	**Songino Array**	**28.68**	**305**	P	**P**	**01 55 02.2**	**+1.8**
	1.9nm,0.6s,mb4.0,baz=111,slow=8.1,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.82**	**313**	P	**P**	**01 57 02.1**	**+1.0**
	1.3nm,0.6s,mb3.9,baz=99,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**45.01**	**303**	P	**P**	**01 57 22.3**	**+3.5**
	1.3nm,0.6s,mb3.9,baz=86,slow=10,SNR=14						
KURK	**Kurchatov**	**46.83**	**309**	P	**P**	**01 57 34.3**	**+1.1**
	0.8nm,0.5s,mb3.9,baz=83,slow=8.0,SNR=7.5						
ASAR	**Alice Springs**	**60.31**	**189**	P	**P**	**01 59 12.1**	**+0.1**
	0.2nm,0.3s,mb3.6,baz=3.5,slow=6.8,SNR=5.3						
ASAR				pP	pP	01 59 22.5	-0.3
	0.9nm,0.5s,baz=12,slow=14,SNR=4.8						
YKA	**Yellowknife Ar**	**63.97**	**30**	P	**P**	**01 59 37.2**	**+1.1**
	0.1nm,0.4s,mb3.2,baz=302,slow=6.9,SNR=5.4						
STKA	**Stephens Creek**	**67.97**	**181**	P	**P**	**02 00 04.8**	**+2.6**
	2.0nm,0.4s,mb4.5,baz=195,slow=20,SNR=3.4						
FINES	**FINESS Array B**	**69.65**	**333**	P	**P**	**02 00 13.4**	**+1.0**
	1.4nm,0.7s,mb4.0,baz=90,slow=3.8,SNR=4.5						
FINES				pP	pP	02 00 23.6	+0.4
	1.1nm,0.7s,baz=49,slow=8.8,SNR=3.1						
NB2	**NORSAR Subarra**	**74.99**	**338**	P	**P**	**02 00 45.3**	**+1.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=40,slow=5.9						
NB2	**NORSAR Subarra**	**74.99**	**338**	P	**P**	**02 00 45.3**	**+1.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**74.99**	**338**	P	**P**	**02 00 45.5**	**+1.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=39,slow=5.7,SNR=4.3						
NOA				pP	pP	02 00 55.2	0.0
	comp=Z,0.9nm,0.7s,baz=40,slow=5.7,SNR=4.1						
NOA	**NORSAR Array B**	**74.99**	**338**	P	**P**	**02 00 45.5**	**+1.3**
NOA				pP	pP	02 00 55.2	0.0
AKASG	**Malin Array Be**	**75.18**	**323**	P	**P**	**02 00 46.2**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=43,slow=6.5,SNR=5.6						
AKASG				pP	pP	02 00 56.1	-0.3
	comp=Z,0.2nm,0.3s,baz=47,slow=4.5,SNR=2.8						
TXAR	**Lajitas Array**	**89.93**	**53**	P	**P**	**02 02 04.0**	**+1.4**
	comp=Z,0.2nm,0.7s,mb3.6,baz=307,slow=4.1,SNR=4.5						
LPAZ	**La Paz**	**146.38**	**61**	PKPbc	PKPbc	02 08 46.2	+1.6
	comp=Z,1.5nm,1.1s,baz=27,slow=4.5,SNR=3.3						

IDC ***20*** *01:58:04.5±0.7,8°.41N×74°.91W,h56km±6km,mb3.6/9, mb1 3.9/10,mb1mx3.7/22,mbtmp3.7/10,MS2.9/1, Ms1 2.9/1,ms1mx2.3/24,Error ellipse: s-maj=17.8km s-min=11.5km az=14.0*
ISCJB ***20*** *01:58:05.4±0.8,8°.68N±0°.09×74°.85W±0°.04,h70km±11km, mb3.6/9,Error ellipse: s-maj=15.6km s-min=7.1km az=5.6*
NEIC ***20*** *01:58:07.0±0.9,8°.62N×74°.82W,h73km±10km,mb3.5/1, Error ellipse: s-maj=14.1km s-min=10.4km az=201.0*
ISC 20 01:58:07.1±0.7,8°.65N±0°.09×74°.83W±0°.04,h70km±9km, h58km±1.8km:pP-P,n22,σ1=17/29,mb3.6/9,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**3.80**	**173**	P	**Pn**	**01 59 04.2**	**+1.0**
	4.0nm,0.3s,baz=281,slow=10,SNR=12						
ROSC				S	**Sn**	**01 59 54.7**	**+7.9**
	35nm,0.3s,baz=104,slow=22,SNR=11						
ROSC	**El Rosal**	**3.80**	**173**	ePn	**Pn**	**01 59 05.6**	**+2.3**
ROSC				eS	**Sn**	**01 59 56.6**	**+10**
SDV	**Santo Domingo**	**4.15**	**86**	P	**Pn**	**01 59 08.1**	**0.0**
	69nm,0.3s,baz=293,slow=8.3,SNR=671						
SDV				S	**Sn**	**01 59 56.7**	**+1.3**
	190nm,0.3s,baz=82,slow=20,SNR=16						
SDV	**Santo Domingo**	**4.15**	**86**	ePn	**Pn**	**01 59 08.0**	**-0.1**
SDV				eS	**Sn**	**01 59 56.6**	**+1.2**
BCIP	**Isla Barro Col**	**4.98**	**276**	ePn	**Pn**	**01 59 17.2**	**-2.2**
BCIP				eS	**Sn**	**02 00 15.4**	**-0.2**
MTDJ	**Mount Denham**	**9.88**	**345**	ePn	**Pn**	**02 00 26.2**	**-0.2**
JTS	**JuntasAbangare**	**10.12**	**280**	P	**Pn**	**02 00 32.1**	**+2.4**
	1.7nm,0.3s,baz=90,slow=20,SNR=5.5						
JTS				S	**Sn**	**02 02 16.6**	**-5.1**
	0.5nm,0.3s,baz=211,slow=18,SNR=3.2						
JTS	**JuntasAbangare**	**10.12**	**280**	ePn	**Pn**	**02 00 30.9**	**+1.2**
JTS				S	**Sn**	**02 02 16.6**	**-5.1**
PCRV	**Puerto La Cruz**	**10.17**	**81**	P	**Pn**	**02 00 29.3**	**-1.1**
	2.2nm,0.3s,baz=299,slow=7.0,SNR=7.5						
PCRV				S	**Sn**	**02 02 19.7**	**-3.1**
	2.7nm,0.3s,baz=69,slow=22,SNR=6.8						
PCRV				LR	LR	02 05 09.7	
	comp=Z,60nm,18.1s,baz=258,slow=41						
LPAZ	**La Paz**	**25.65**	**165**	P	**P**	**02 03 28.4**	**-2.0**
	1.4nm,0.5s,mb3.6,baz=340,slow=7.1,SNR=9.3						
LPAZ				pP	pP	02 03 41.5	-5.4
	3.7nm,0.5s,baz=22,slow=2.3,SNR=9.0						
LPAZ	**La Paz**	**25.65**	**165**	eP	**P**	**02 03 28.4**	**-2.1**
	0.9nm,0.6s,mb3.4						
LPAZ				pP	pP	02 03 41.5	-5.4
TXAR	**Lajitas Array**	**33.99**	**311**	P	**P**	**02 04 44.4**	**+0.1**
	0.7nm,0.6s,mb3.7,baz=126,slow=8.7,SNR=12						
TXAR				pP	pP	02 04 59.2	-1.9
	1.1nm,0.9s,baz=128,slow=8.1,SNR=6.7						
TXAR	**Lajitas Array**	**33.99**	**311**	P	**P**	**02 04 44.4**	**+0.1**
TXAR				pP	pP	02 04 59.2	-1.9
PDAR	**Pinedale Array**	**45.62**	**324**	P	**P**	**02 06 21.5**	**+1.0**
	0.6nm,0.5s,mb3.6,baz=111,slow=8.1,SNR=4.9						
SCHQ	**Schefferville**	**46.50**	**6**	P	**P**	**02 06 27.8**	**+0.5**
	1.3nm,0.6s,mb3.8,baz=236,slow=12,SNR=5.7						
YKA	**Yellowknife Ar**	**60.98**	**340**	P	**P**	**02 08 12.4**	**-0.4**
	3.3nm,0.5s,mb4.6,baz=133,slow=7.1,SNR=83						
YKA				pP	pP	02 08 27.8	-3.2
	0.8nm,0.5s,baz=130,slow=7.2,SNR=5.5						
YKA	**Yellowknife Ar**	**60.98**	**340**	P	**P**	**02 08 12.4**	**-0.4**
YKA				pP	pP	02 08 27.8	-3.2
ESDC	**Sonseca Array**	**69.81**	**51**	P	**P**	**02 09 11.1**	**+0.7**
	0.1nm,0.3s,mb3.1,baz=258,slow=4.9,SNR=2.7						
INK	**Inuvik**	**70.75**	**340**	P	**P**	**02 09 15.4**	**-0.1**
	1.4nm,0.6s,mb4.0,baz=78,slow=4.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**75.03**	**79**	P	**P**	**02 09 40.9**	**-1.0**
	0.1nm,0.3s,mb3.0,baz=284,slow=6.6,SNR=5.1						
NOA	**NORSAR Array B**	**80.58**	**29**	P	**P**	**02 10 12.7**	**+0.9**
	0.8nm,0.8s,mb3.6,baz=330,slow=7.1,SNR=2.6						
ASAR	**Alice Springs**	**148.72**	**238**	PKPbc	PKPbc	02 17 45.5	-1.8
	0.7nm,0.6s,baz=121,slow=3.3,SNR=7.4						
ASAR				pPKPbc	pPKPbc	02 18 01.4	-5.9
	0.5nm,0.7s,baz=122,slow=3.3,SNR=3.1						

DJA 20 02:11:47,2°.13N×99°.26E,h27km,MLv3.6/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRSI	**Tarutung**	**0.32**	**251**	P	Pb	02 11 56.8	+2.4
MNSI	**Mandailing Nat**	**1.36**	**166**	P	Pn	02 12 08.3	-2.0
TSI	**Tuntungan**	**1.53**	**333**	P	Pn	02 12 11.8	-0.8
GSI	**Gunungsitoli**	**1.87**	**244**	P	Pn	02 12 18.9	+1.6
GSI				S	Sn	02 12 41.6	+1.5
BKNI	**Bangkinang**	**2.52**	**135**	P	Pn	02 12 28.8	+2.5
PPI	**Padang Panjang**	**2.81**	**156**	P	Pn	02 12 39.9	+10
SISI	**Saibi**	**3.44**	**183**	P	Pn	02 12 38.0	-0.8

CASC 20 02:50:39.2±1.9,5°.37N×82°.75W,h0km±29km,MD4.3,1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRU2	**Volcan**	**3.41**	**1**	↓iP	Pn	02 51 33.7	+0.1
BRU2				eS	Sn	02 52 12.9	-1.9
TBS2		**3.41**	**2**	eP	Pn	02 51 35.2	+1.6
TBS2				eS	Sn	02 52 16.3	+1.5
BAR1		**3.89**	**352**	eP	Pn	02 51 40.8	+0.5
BAR1				eS	Sn	02 52 28.9	+2.1
CNI	**Changuinola**	**4.03**	**3**	eP	Pn	02 51 44.0	+1.7
QCR	**Quepos**	**4.27**	**341**	eP	Pn	02 51 45.2	-0.3
QCR				eS	Sn	02 52 35.7	-0.4
BUS	**Buena Vista**	**4.28**	**347**	eP	Pn	02 51 46.8	+1.1
URSC	**Urasca**	**4.55**	**347**	eP	Pn	02 51 50.2	+0.8
LAJ	**Bijagual**	**4.67**	**343**	eP	Pn	02 51 51.0	0.0
BCIP	**Isla Barro Col**	**4.76**	**37**	eP	Pn	02 51 52.5	+0.3
BCIP				eS	Sn	02 52 45.8	-2.3
PRS1	**Puriscal**	**4.84**	**341**	eP	Pn	02 51 52.6	-0.8
CGA2	**Cerro Gallo 2**	**4.92**	**340**	eP	Pn	02 51 55.1	+0.6
JCR	**Jicaral**	**5.03**	**332**	eP	Pn	02 51 56.2	+0.2
FORC	**Fortuna**	**5.41**	**340**	eP	Pn	02 52 01.8	+0.5
VCR	**Vista de Mar**	**5.52**	**329**	eP	Pn	02 52 03.5	+0.7
NY14	**Universidad de**	**5.93**	**332**	*i* S	Sn	02 53 20.1	+3.1
GPS3	**Bodega del ICE**	**5.95**	**334**	*i* P	Pn	02 52 09.6	+1.1
GPS3				*i* S	Sn	02 53 19.9	+2.5

ISCJB ***20*** *02:59:50.7±0.2,35°.27N±0°.01×117°.31W±0°.01,h10km, Error ellipse: s-maj=2.1km s-min=1.7km az=10.5*
NEIC ***20*** *02:59:51.0,35°.27N×117°.35W,h4km,ML3.7(PAS),After PAS.*
NEIC Felt in the Boron area.
ISC 20 02:59:51.1±0.3,35°.27N±0°.01×117°.34W±0°.01,h7km±2km, n96,σ1=08/148,47C-33D,Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LRMC	**Laurel Mountai**	**0.35**	**306**	↑P	**Pg**	**02 59 58.5**	**+0.5**
	baz=0.3						
LRMC				↑S	**Sg**	**03 00 03.0**	**+0.5**
	baz=0.3						
GSC	**Goldstone**	**0.44**	**86**	P	**Pg**	**03 00 00.3**	**+0.7**
	baz=0.4,SNR=333						
GSC				↓S	**Sg**	**03 00 06.0**	**+0.7**
	baz=0.4						
GSC	**Goldstone**	**0.44**	**86**	ePg	**Pg**	**03 00 00.2**	**+0.7**
GSC				eSg	**Sg**	**03 00 05.3**	**0.0**
RRX	**Edison Barstow**	**0.48**	**144**	↑P	**Pg**	**03 00 01.3**	**+1.0**
	baz=0.5,SNR=66						
RRX				↑S	**Sg**	**03 00 07.9**	**+1.3**
	baz=0.5						
EDW2	**Edwards Air Fo**	**0.66**	**234**	↑P	**Pg**	**03 00 03.8**	**+0.1**
	baz=0.7						
EDW2				↓S	**Sg**	**03 00 12.3**	**0.0**
	baz=0.7						
MPMC	**Manual Prospec**	**0.80**	**351**	↓P	**Pg**	**03 00 06.3**	**-0.1**
	baz=0.8						
MPMC				↑S	**Sg**	**03 00 17.1**	**+0.3**
	baz=0.8						
HEC	**Hector,Ludlow**	**0.94**	**118**	↑P	**Pg**	**03 00 09.2**	**+0.2**
	baz=0.9,SNR=86						
HEC				↑S	**Sg**	**03 00 22.6**	**+1.3**
	baz=0.9						
ISA	**Isabella**	**1.00**	**293**	↓P	**Pg**	**03 00 10.2**	**-0.1**
	baz=1.0						
ISA				↑S	**Sg**	**03 00 23.2**	**-0.2**
	baz=1.0						
ISA	**Isabella**	**1.00**	**293**	ePg	**Pg**	**03 00 10.1**	**-0.3**
ISA				eSg	**Sg**	**03 00 23.1**	**-0.3**
BFSC	**Mount Baldy St**	**1.06**	**194**	↑P	**Pg**	**03 00 11.2**	**-0.2**
	baz=1.1						
BFSC				↓S	**Sg**	**03 00 26.1**	**+0.9**
	baz=1.1						
BBRC	**Big Bear Sol-O**	**1.06**	**161**	↑P	**Pg**	**03 00 11.7**	**+0.2**
	baz=1.1,SNR=146						
BBRC				↓S	**Sg**	**03 00 25.9**	**+0.7**
	baz=1.1						
SHOC	**Shoshone**	**1.07**	**54**	↑P	**Pg**	**03 00 11.7**	**+0.1**
	baz=1.1,SNR=54						
SHOC				↑S	**Sg**	**03 00 26.4**	**+0.9**
	baz=1.1						
TUQ	**Turquoise Moun**	**1.17**	**81**	P	**Pg**	**03 00 13.2**	**-0.3**
	baz=1.2,SNR=333						
TUQ				↑S	**Sg**	**03 00 29.1**	**+0.4**
	baz=1.2						
MWC	**Mount Wilson**	**1.20**	**210**	ePg	**Pg**	**03 00 13.6**	**-0.4**
MWC				eSg	**Sg**	**03 00 31.1**	**+1.5**
ARVC	**Arvin**	**1.23**	**264**	↑P	**Pb**	**03 00 14.2**	**-0.4**
	baz=1.2,SNR=60						
ARVC				↑S	**Sg**	**03 00 30.6**	**+0.1**
	baz=1.2						
FURC	**Furnace Creek,**	**1.26**	**18**	↑P	**Pn**	**03 00 14.2**	**-0.9**
	baz=1.3,SNR=271						
PASC	**Pasadena Art C**	**1.30**	**213**	ePn	**Pn**	**03 00 15.3**	**-0.2**
PASC				eSn	**Sn**	**03 00 31.8**	**-1.4**
DECC	**Green Verdugo**	**1.30**	**219**	P	**Pn**	**03 00 15.6**	**0.0**
	baz=1.3,SNR=114						
OSI	**Osito Adit**	**1.31**	**240**	↑P	**Pn**	**03 00 15.4**	**-0.4**
	baz=1.3,SNR=28						
OSI				↓S	**Sb**	**03 00 33.1**	**+0.1**
	baz=1.3						
OSI	**Osito Adit**	**1.31**	**240**	ePn	**Pn**	**03 00 15.9**	**+0.2**
OSI				eSg	**Sg**	**03 00 32.2**	**-1.0**
CWC	**Cottonwood Cre**	**1.31**	**333**	↓S	**Sb**	**03 00 33.3**	**+0.2**
	baz=1.3						
U10A	**Ash Meadows, A**	**1.41**	**35**	P	**Pn**	**03 00 16.8**	**-0.3**
	baz=1.4,SNR=578						
GMRC	**Granite Mounta**	**1.46**	**109**	P	**Pn**	**03 00 16.6**	**-1.2**
	baz=1.5,SNR=949						
GMRC				↓Sb	**Sb**	**03 00 38.0**	**+0.6**
	baz=1.5						
VES	**Vestal, Richgr**	**1.53**	**292**	↑P	**Pn**	**03 00 18.6**	**-0.2**
	baz=1.5						
VES				↑Sb	**Sb**	**03 00 39.7**	**+0.4**
	baz=1.5						
V11A	**Goodsprings**	**1.66**	**69**	↓P	**Pn**	**03 00 20.3**	**-0.2**
	baz=1.7,SNR=65						
V11A				↓Sb	**Sb**	**03 00 44.6**	**+1.6**
	baz=1.7						
MURC	**Murrieta**	**1.67**	**176**	↑P	**Pn**	**03 00 20.6**	**0.0**
	baz=1.7,SNR=90						
BELC	**Belle Mtn.**	**1.68**	**138**	↓P	**Pn**	**03 00 20.4**	**-0.5**
	baz=1.7,SNR=26						
BELC				↓Sb	**Sb**	**03 00 45.2**	**+1.5**
	baz=1.7						
GRAC	**Grapevine Rang**	**1.73**	**359**	↓P	**Pn**	**03 00 21.4**	**-0.1**
	baz=1.7,SNR=56						
PFO	**Pinyon Flat Ob**	**1.81**	**156**	↑P	**Pn**	**03 00 22.4**	**-0.2**
	baz=1.8,SNR=39						
PFO				↑S	**Sn**	**03 00 45.1**	**-0.7**
	baz=1.8						
PFO	**Pinyon Flat Ob**	**1.81**	**156**	ePn	**Pn**	**03 00 22.4**	**-0.2**
PFO				ePg	**Pg**	**03 00 25.6**	**-0.2**
PFO				eSn	**Sn**	**03 00 47.0**	**+1.2**
PFO				eSg	**Sg**	**03 00 50.4**	**+1.1**
BLG	**Laguna Peak**	**1.83**	**231**	↑Sb	**Sb**	**03 00 48.2**	**+0.2**
	baz=1.8						
LDFC	**Landfair**	**1.84**	**95**	ePn	**Pn**	**03 00 21.5**	**-1.5**
LDFC				eSg	**Sg**	**03 00 48.7**	**-1.4**
RCTC	**Rector, Farmer**	**1.86**	**304**	↑Sb	**Sb**	**03 00 49.6**	**+0.8**
	baz=1.9						
U11A	**Corn Creek**	**1.96**	**54**	↑Sb	**Sb**	**03 00 53.8**	**+2.0**
	baz=2.0						
W12A	**Cal Nev Ari**	**2.02**	**88**	P	**Pn**	**03 00 25.0**	**-0.6**
	baz=2.0,SNR=51						
W12A				↑S	**Sn**	**03 00 50.6**	**-0.4**
	baz=2.0						
V12A	**Nelson**	**2.08**	**77**	↑P	**Pn**	**03 00 26.0**	**-0.3**
	baz=2.1,SNR=137						
V12A				↓Sb	**Sb**	**03 00 57.1**	**+1.9**
	baz=2.1						
IRM	**Iron Mountain**	**2.12**	**121**	P	**Pn**	**03 00 25.7**	**-1.1**
	baz=2.1,SNR=27						
IRM				↑Sb	**Sb**	**03 00 58.3**	**+2.1**
	baz=2.1						
SHPR	**Sheep Range**	**2.16**	**55**	ePn	**Pn**	**03 00 25.4**	**-2.0**
SMMC	**Simmler**	**2.18**	**272**	↓P	**Pn**	**03 00 27.1**	**-0.6**
	baz=2.2						
BC3	**Big Chuckw Mtn**	**2.24**	**135**	↑P	**Pn**	**03 00 27.7**	**-0.9**
	baz=2.2,SNR=9.2						
NEE2	**Needles Airpor**	**2.29**	**102**	↑P	**Pn**	**03 00 28.1**	**-1.1**
	baz=2.3,SNR=8.5						
109C	**Camp Elliot, M**	**2.38**	**175**	↑Sb	**Sb**	**03 01 05.2**	**+1.4**
	baz=2.4		

X15A	Humboldt	4.27	99	⇓P	Pn	03 00 56.2	-0.2
	baz=4.3,SNR=16						
Y15A	Casa Rosa Ranc	4.33	106	⇑P	Pn	03 00 56.7	-0.6
	baz=4.3,SNR=13						
T15A	Red Dirt Ranch	4.38	65	⇑P	Pn	03 00 59.1	+1.2
	baz=4.4						
114A	Black Gap (USA	4.47	123	⇓P	Pn	03 00 58.1	-1.2
	baz=4.5,SNR=9.4						
P12A	McGill	4.62	24	⇓P	Pn	03 01 02.7	+1.5
	baz=4.6						
PAHR	Pah Rah Range	4.72	340	*e*Pn	Pn	03 00 59.1	-3.5
WUAZ	Wupatki	4.88	85	⇑P	Pn	03 01 05.8	+1.0
	baz=4.9						
WUAZ	Wupatki	4.88	85	*e*Pn	Pn	03 01 05.7	+0.8
WUAZ				*e*Sg	Sg	03 02 24.6	-3.2
X16A	Lo Mia Camp, P	4.93	98	⇓P	Pn	03 01 05.7	+0.2
	baz=4.9,SNR=7.5						
115A	Sonoran Desert	4.96	120	⇑P	Pn	03 01 05.3	-0.6
	baz=5.0,SNR=17						
214A	Organ Pipe Nat	5.02	130	⇑P	Pn	03 01 05.6	-1.1
	baz=5.0						
O10A	Cortez Mining,	5.06	7	⇓P	Pn	03 01 08.5	+1.3
	baz=5.1						
U16A	Tuba City	5.13	78	⇓P	Pn	03 01 10.0	+1.7
	baz=5.1						
MSU	Marysvale	5.25	50	*e*Pn	Pn	03 01 10.7	+0.8
	12nm,0.5s						
MSU				*e*Pg	Pg	03 01 29.2	-2.4
V17A	Tonalea, Kykot	5.36	84	⇓P	Pn	03 01 13.1	+1.8
	baz=5.4						
116A	Eloy	5.41	118	⇑P	Pn	03 01 11.3	-0.8
	baz=5.4,SNR=5.2						
N12A	Clover Valley,	5.86	17	*e*Pn	Pn	03 01 19.4	+1.1
N12A				*e*Pg	Pg	03 01 42.5	-0.9
N12A				*e*Sg	Sg	03 03 00.4	+1.1
DUG	Dugway	6.09	35	*e*Pn	Pn	03 01 22.0	+0.6
DUG				*e*Pg	Pg	03 01 46.0	-1.6
TUC	Tucson	6.21	117	*e*Pn	Pn	03 01 22.0	-1.0
TUC				*e*Sg	Sg	03 03 08.4	-1.8
NLU	North Lily Min	6.27	40	*e*Pg	Pg	03 01 50.9	-0.3
TMUT	Trail Mountain	6.33	49	*e*Pn	Pn	03 01 23.3	-1.4
TMUT				*e*Pg	Pg	03 01 50.9	-1.4
M13A	Montello	6.57	21	*e*Pn	Pn	03 01 28.6	+0.5
M13A				*e*Pg	Pg	03 01 55.2	-1.7
M13A				*e*Sg	Sg	03 03 22.3	+0.2
BGU	Big Grassy Mou	6.59	30	*e*Pn	Pn	03 01 26.6	-1.7
	5.3nm,0.8s						
BGU				*e*Pg	Pg	03 01 55.2	-2.0
BGU				*e*Sg	Sg	03 03 17.9	-4.7
118A	Homack Ranch,	6.66	111	⇑P	Pn	03 01 29.2	-0.1
	baz=6.7,SNR=5.8						
MVCO	Mesa Verde	7.40	72	*e*Pn	Pn	03 01 38.6	-0.9
MVCO				*e*Pg	Pg	03 02 10.6	-2.3
MVCO				*e*Sg	Sg	03 03 44.3	-4.4
PV01	Paradox Valley	7.60	65	*e*Pn	Pn	03 01 44.6	+2.4
PV01				*e*Pg	Pg	03 02 17.8	+1.2
PV01				*e*Sg	Sg	03 03 57.9	+2.8

*DDA **20** 02:59:56.2, 36°.46N×27°.16E, h7km±7km, Md3.1*
*NEIC **20** 02:59:57.6, 36°.63N×26°.83E, h24km, MD3.2(ATH), After ATH.*
*ATH **20** 02:59:57.6, 36°.63N×26°.83E, h24km, MD3.2/6*
*CSEM **20** 02:59:58.2±0.3, 36°.59N×26°.87E, h15km, MD3.2, Error ellipse: s-maj=6.5km s-min=5.2km az=130.0*
*ISK **20** 02:59:58.5, 36°.43N×26°.97E, h30km, MD3.2*
*ISCJB **20** 02:59:59.2±0.7, 36°.61N±0°.03×26°.84E±0°.04, h25km±7km, Error ellipse: s-maj=5.8km s-min=4.2km az=16.4*

ISC 20 02:59:59.3±0.8, 36°.61N±0°.03×26°.85E±0°.04, h22km±8km, n40, σ1§12/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.59	79	*e*PG	Pb	03 00 10.6	-0.5
DAT				*e*SG	Sb	03 00 20.5	+1.5
DAT	Datca	0.59	79	*e*Pg	Pb	03 00 10.6	-0.5
DAT				*e*Sg	Sb	03 00 20.5	+1.5
BDRM	Kayabasi	0.66	46	*i* P	Pb	03 00 10.3	-1.8
BDRM				*i* S	Sb	03 00 19.5	-1.3
BDRM	Kayabasi	0.66	46	*i* P	Pb	03 00 10.3	-1.8
BDRM				*i* S	Sb	03 00 19.5	-1.3
MLSB	Milas	1.01	47	*e*PG	Pb	03 00 18.1	0.0
MLSB				*e*SG	Sb	03 00 31.3	+0.4
MLSB	Milas	1.01	47	*e*Pg	Pb	03 00 18.1	0.0
MLSB				*e*Sg	Sb	03 00 31.3	+0.4
KARP	Karpathos	1.09	167	*e*PN	Pn	03 00 18.8	-0.5
KARP				*e*SB	Sb	03 00 34.2	+0.9
KARP	Karpathos	1.09	167	*e*Pn	Pn	03 00 18.8	-0.5
KARP				*e*Sb	Sb	03 00 34.2	+0.9
SMG	Samos	1.09	359	*e*PN	Pn	03 00 18.1	-1.2
SMG				*e*SN	Sn	03 00 33.1	-0.7
SMG	Samos	1.09	359	*e*Pn	Pn	03 00 18.1	-1.2
SMG				*e*Sn	Sn	03 00 33.1	-0.7
ARG	Arkhangelos	1.10	111	*e*PN	Pn	03 00 19.3	-0.1
ARG				*e*SN	Sn	03 00 35.0	+1.1
ARG	Arkhangelos	1.10	111	*e*Pn	Pn	03 00 19.3	-0.1
ARG				*e*Sn	Sn	03 00 35.0	+1.1
GCAM	G?zelcaml?	1.13	16	*i* P	Pn	03 00 19.1	-0.7
GCAM				*i* S	Sb	03 00 35.9	+1.5
GCAM	G?zelcaml?	1.13	16	*i* P	Pn	03 00 19.1	-0.7
GCAM				*i* S	Sb	03 00 35.9	+1.5
APE	Apeiranthos	1.15	294	*e*PN	Pn	03 00 19.6	-0.5
APE				*e*SN	Sn	03 00 35.0	-0.2
APE	Apeiranthos	1.15	294	*e*Pn	Pn	03 00 19.6	-0.5
APE				*e*Sn	Sn	03 00 35.0	-0.2
YER	Yerkesik	1.26	65	*e*PN	Pn	03 00 20.5	-1.1
YER	Yerkesik	1.26	65	*e*Pn	Pn	03 00 20.5	-1.1
AYDN	Tasoluk	1.33	38	*i* P	Pn	03 00 21.8	-0.7
AYDN				*i* S	Sn	03 00 40.0	+0.5
AYDN	Tasoluk	1.33	38	*i* P	Pn	03 00 21.8	-0.8
AYDN				*i* S	Sn	03 00 40.0	+0.4
TURN	Turunc	1.43	79	*i* P	Pn	03 00 18.9	-5.0
TURN				*i* S	Sn	03 00 36.9	-5.2
TURN	Turunc	1.43	79	*i* P	Pn	03 00 18.9	-5.0
NPS	Neapolis	1.68	217	*e*PN	Pn	03 00 27.5	+0.1
NPS				*e*SN	Sn	03 00 48.7	+0.4
NPS	Neapolis	1.68	217	*e*Pn	Pn	03 00 27.5	+0.1
NPS				*e*Sn	Sn	03 00 48.7	+0.4
BLCB	Balcova	1.78	5	*e*PN	Pn	03 00 30.4	+1.7
BLCB	Balcova	1.78	5	*e*Pn	Pn	03 00 30.4	+1.7
FETY	Fethiye	1.79	89	*e*PN	Pn	03 00 26.9	-2.1
FETY	Fethiye	1.79	89	*e*Pn	Pn	03 00 26.9	-2.1
IZM	Izmir	1.81	10	*e*PN	Pn	03 00 31.3	+2.1
IZM	Izmir	1.81	10	*e*Pn	Pn	03 00 31.3	+2.1
CHOS	Chios island	1.88	341	*e*PN	Pn	03 00 30.9	+0.8
CHOS				*e*SN	Sn	03 00 53.6	+0.4
CHOS	Chios island	1.88	341	*e*Pn	Pn	03 00 30.9	+0.8
CHOS				*e*Sn	Sn	03 00 53.6	+0.4
IDI	Anoyia	2.07	231	*e*Pn	Pn	03 00 31.9	-0.8
IDI				*e*S	Sn	03 00 58.2	+0.3
IDI	Anoyia	2.07	231	*e*Pn	Pn	03 00 31.9	-0.8
IDI				*e*S	Sn	03 00 58.2	+0.4
AKAS	Kas	2.25	99	*i* P	Pn	03 00 38.6	+3.3
AKAS				*i* S	Sn	03 01 16.5	+14
AKAS	Kas	2.25	99	*i* P	Pn	03 00 38.6	+3.4
KULA	Kula-Manisa	2.38	37	*e*PN	Pn	03 00 38.6	+1.6
KULA	Kula-Manisa	2.38	37	*e*Pn	Pn	03 00 38.7	+1.7
ELL	Elmali	2.46	86	*e*PN	Pn	03 00 36.0	-2.1
ELL	Elmali	2.46	86	*e*Pn	Pn	03 00 36.0	-2.1

KRSC 20 03:02:26.7±0.2, 54°.70N×160°.92E, h67km±57km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.49	107	*i* P	Pn	03 02 40.2	+1.1
MKZ				*i* S	Sn	03 02 50.4	+2.2
KII	Karymskiy	1.09	233	*e*P	Pn	03 02 47.7	+1.6
KII				*e*S	Sn	03 03 03.1	+2.5
KMNR	Kamenistaya	1.13	340	*i* P	Pn	03 02 48.4	+1.8
KMNR				*e*S	Sn	03 03 04.6	+3.1
BZGR	Bezymyannyi-Gr	1.25	354	*e*P	Pn	03 02 49.4	+1.2
BZGR				*e*S	Sn	03 03 06.3	+2.0
ZLN	Zelenaya	1.32	357	*e*P	Pn	03 02 50.6	+1.5
ZLN				*e*S	Sn	03 03 08.2	+2.2
KPT	Kopyto	1.33	343	*e*P	Pn	03 02 50.8	+1.5
KPT				*e*S	Sn	03 03 08.5	+2.3
KOZ	Kozyrevsk	1.49	337	*e*P	Pn	03 02 52.8	+1.5
KOZ				*e*S	Sn	03 03 11.8	+1.9
KRSR	Krestovskiy	1.53	353	S	Sn	03 03 11.3	+0.3
KLY	Klyuchi	1.62	355	*i* P	Pn	03 02 54.2	+1.0
KLY				*e*S	Sn	03 03 14.2	+1.0
SPN	Mys Shipunski	1.69	199	*i* P	Pn	03 02 54.3	+0.2
SPN				*i* S	Sn	03 03 14.8	0.0
SRDR	Sredinnyy	1.76	338	*e*P	Pn	03 02 55.8	+0.8
SRDR				*e*S	Sn	03 03 17.8	+1.4
KBTR	Krutoberegovo	1.86	35	*e*P	Pn	03 02 56.8	+0.5
KBTR				*e*S	Sn	03 03 19.2	+0.4
AVH	Avacha	1.93	223	*i* P	Pn	03 02 59.2	+1.9
AVH				*e*S	Sn	03 03 23.0	+2.5
SRKR	Sorokina	1.96	4	P	Pn	03 02 59.7	+2.0
SRKR				S	Sn	03 03 22.9	+1.6
GNL	Ganaly	2.02	241	*i* P	Pn	03 03 00.2	+1.7
PET	Petropavlovsk	2.15	220	P	Pn	03 03 01.9	+1.7
PET				*e*S	Sn	03 03 27.2	+1.4
RUS	Russkaya	2.69	213	P	Pn	03 03 08.5	+1.0
RUS				*e*S	Sn	03 03 39.2	+0.3
BKI	Bering	2.96	78	P	Pn	03 03 11.1	-0.1
BKI				*e*S	Sn	03 03 42.9	-2.6
MIPR	Malaya Ipel'ka	3.48	227	P	Pn	03 03 21.5	+3.2

*IDC **20** 03:18:49.6±0.8, 10°.25S×166°.06E, h0km, mb4.3/9, mb1 4.4/9, mb1mx4.2/19, mbtmp4.3/9, Error ellipse: s-maj=28.8km s-min=20.4km az=128.0*
*NEIC **20** 03:18:54.9±0.5, 10°.32S×166°.05E, h35km, mb4.0/2, Error ellipse: s-maj=19.1km s-min=14.2km az=121.0*
*NOU **20** 03:19:05.9±1.5, 10°.97S×169°.60E, h30km±999km*
*ISCJB **20** 03:19:11.9±2.8, 10°.75±0°.1×166°.0E±0°.1, h199km±26km, mb4.0/11, Error ellipse: s-maj=20.6km s-min=18.0km az=27.3*

ISC 20 03:19:10.2±3.3, 10°.6S±0°.2×166°.0E±0°.1, h169km±30km, n22, σ0§97/22, mb4.1/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.40	178	*e*P	Pn	03 21 48.7	+0.5
DZM				*e*S	Sn	03 23 49.8	-4.8
NOUC	Port Laguerre	11.43	179	*e*P	Pn	03 21 50.2	+1.7
NOUC				*e*S	Sn	03 23 52.6	-2.7
BAYA	Yate Dam	11.51	176	*e*P	Pn	03 21 49.9	+0.3
EIDS	Eidsvold	20.38	222	*e*P	P	03 23 34.3	+0.4
ARMA	Armidale	23.81	212	*e*P	P	03 24 08.9	+1.2
URZ	Urewera	29.27	162	P	P	03 24 56.2	-0.4
	6.9nm,0.3s,mb4.8,baz=300,slow=3.3,SNR=7.2						
STKA	Stephens Creek	30.92	223	*e*P	P	03 25 12.0	+0.8
	3.7nm,0.6s,mb4.3						
STKA	Stephens Creek	30.92	223	P	P	03 25 12.3	+1.2
	3.8nm,0.6s,mb4.3,baz=39,slow=8.8,SNR=14						
STKA	Stephens Creek	30.92	223	*e*P	P	03 25 11.7	+0.5
	1.0nm,0.7s,mb3.6						
ASAR	Alice Springs	33.21	243	P	P	03 25 29.9	-1.3
	0.9nm,0.7s,mb3.6,baz=62,slow=9.7,SNR=8.6						
ASAR				PcP	PcP	03 28 10.2	+0.2
	0.6nm,0.6s,baz=82,slow=2.3,SNR=6.7						
RPZ	Rata Peaks	33.27	173	P	P	03 25 31.8	+0.3
	15nm,0.9s,mb4.7,baz=58,slow=5.7,SNR=6.9						
BBOO	Buckleboo	35.30	227	*e*P	P	03 25 49.1	0.0
	3.9nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	39.73	254	*e*P	P	03 26 25.6	-1.0
	6.9nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	39.73	254	P	P	03 26 25.9	-0.6
	3.8nm,0.6s,mb4.2,baz=100,slow=7.4,SNR=8.5						
QSPA	South Pole Qui	79.39	180	*e*P	P	03 30 57.7	+0.8
	2.2nm,0.6s,mb4.0						
YBH	Yreka Blue Hor	83.42	46	P	P	03 31 18.3	-0.4
	1.2nm,0.8s,mb3.7,baz=317,slow=1.1,SNR=5.4						
NVAR	Mina Array Bea	85.56	50	P	P	03 31 30.1	+0.6
	1.0nm,0.8s,mb3.6,baz=229,slow=6.8,SNR=6.7						
MKAR	Makanchi Array	93.38	317	P	P	03 32 06.0	-0.2
	0.6nm,0.7s,mb3.9,baz=94,slow=6.2,SNR=6.3						
MKAR	Makanchi Array	93.38	317	P	P	03 32 06.0	-0.2
YKA	Yellowknife Ar	94.48	27	P	P	03 32 09.4	-1.4
	0.4nm,0.7s,mb3.7,baz=260,slow=4.2,SNR=6.0						
ARCES	ARCESS Array B 115.98	346		PKP	PKPdf	03 37 31.8	-0.6
	4.3nm,0.9s,baz=50,slow=3.3,SNR=8.3						
ARCES	ARCESS Array B 115.98	346		PKP	PKPdf	03 37 31.8	-0.6

*ISCJB **20** 03:33:51.1±0.6, 21°.03S±0°.05×68°.70W±0°.10, h119km±8km, mb3.6/6, Error ellipse: s-maj=15.4km s-min=7.5km az=14.2*
*NEIC **20** 03:33:51.8±0.6, 20°.97S×68°.68W, mb3.9/2, MD4.1(GUC), Error ellipse: s-maj=16.5km s-min=10.3km az=88.0*
*GUC **20** 03:33:52.7±0.4, 20°.89S×68°.94W, h78km±13km, MD3.8, ML4.2*
*IDC **20** 03:33:52.2±1.0, 20°.84S×68°.63W, h111km±6km, mb3.3/4, mb1 3.6/7, mb1mx3.5/17, mbtmp3.3/7, MS3.2/1, Ms1 3.2/1, ms1mx2.3/12, Error ellipse: s-maj=31.7km s-min=21.0km az=53.0*

ISC 20 03:33:52.1±0.6, 21°.05S±0°.05×68°.69W±0°.10, h116km±8km, n21, σ0§83/25, mb3.6/6, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	Maria Elena	1.51	221	*e*P	Pn	03 34 18.9	-0.5
MACH				*i* S	Sn	03 34 39.1	-1.2
PECH	Pedro de Valdi	1.79	210	*e*P	Pn	03 34 22.8	0.0
PECH				*i* S	Sn	03 34 46.2	-0.1
PECH				AML	AML	03 34 51.2	
	comp=N,4μm,0.4s						
MECH	Mejillones	2.62	218	*e*P	Pn	03 34 34.1	+0.8
MECH				*i* S	Sn	03 35 04.7	-0.2
MECH				AML	AML	03 35 15.0	
	comp=N,1μm,0.3s						
CEN1	Los Morros	2.72	211	*e*P	Pn	03 34 38.8	+4.2
CEN1				*i* S	Sn	03 35 13.8	+6.5
CEN1				AML	AML	03 35 24.8	
	comp=E,627nm,0.6s						
ANCH	Antofagasta	3.07	211	*i* P	Pn	03 34 40.3	+1.1
ANCH				*i* S	Sn	03 35 16.8	+1.3
LPAZ	La Paz	4.76	7	P	Pn	03 35 00.8	-1.0
	comp=E,2.4nm,0.3s,baz=194,slow=6.9,SNR=62						
LPAZ	La Paz	4.76	7	*e*Pn	Pn	03 35 01.4	-0.5
LPAZ				*e*S	Sn	03 35 57.0	+0.9
CFAA	Coronel Fontan	10.52	178	P	Pn	03 36 18.1	-1.5
	comp=E,0.0nm,0.3s,baz=320,slow=16,SNR=3.7						
CPUP	Villa Florida	11.66	119	P	Pn	03 36 35.0	+0.1
	comp=E,0.5nm,0.3s,baz=300,slow=12,SNR=6.3						
PLCA	Paso Flores	19.69	184	P	P	03 38 15.6	+3.5
	comp=E,0.1nm,0.3s,baz=9.0,slow=8.6,SNR=3.5						
PLCA	Paso Flores	19.69	184	P	P	03 38 15.6	+3.5
OTAV	Otavalo	23.20	335	*e*P	P	03 38 48.8	-0.1
	comp=E,1.4nm,0.8s,mb3.3						
SDV	Santo Domingo	29.80	356	LR	LR	03 53 08.0	
	comp=E,48nm,19.4s,baz=161,slow=39						
RCBR	Riachuelo	35.19	69	*e*P	P	03 40 35.6	+0.3
	comp=E,4.5nm,0.8s,mb4.3						
TXAR	Lajitas Array	60.37	325	P	P	03 43 48.2	-0.9
	comp=E,0.2nm,0.7s,mb3.3,baz=152,slow=5.7,SNR=4.3						
TXAR	Lajitas Array	60.37	325	P	P	03 43 48.2	-0.9
NVAR	Mina Array Bea	75.26	322	P	P	03 45 22.7	+0.5
	comp=E,0.2nm,0.5s,mb3.1,baz=171,slow=10,SNR=4.2						
TORD	Torodi Ar. Bea	77.01	70	P	P	03 45 32.5	-0.2
	comp=E,1.2nm,0.7s,mb3.7,baz=255,slow=5.5,SNR=9.5						
TORD				pP	pP	03 46 01.0	-1.1
	comp=E,0.6nm,0.6s,baz=248,slow=5.5,SNR=2.5						
TORD				sP	sP	03 46 13.4	-1.2
	comp=E,1.2nm,0.8s,baz=261,slow=5.9,SNR=3.9						
YKA	Yellowknife Ar	90.83	341	P	P	03 46 41.5	-0.3
	comp=E,0.4nm,0.6s,mb3.8,baz=133,slow=4.4,SNR=10						
YKA				pP	pP	03 47 10.5	-1.5
	comp=E,0.1nm,0.6s,baz=133,slow=4.4,SNR=5.4						
YKA				sP	sP	03 47 22.5	-1.7
	comp=E,0.6nm,1.0s,baz=140,slow=4.4,SNR=2.9						
YKA	Yellowknife Ar	90.83	341	P	P	03 46 41.5	-0.3
YKA				pP	pP	03 47 10.5	-1.5
YKA				sP	sP	03 47 22.6	-1.7
MKAR	Makanchi Array	145.15	36	PKP	PKPdf	03 53 16.6	+0.8
	comp=E,1.8nm,0.7s,baz=328,slow=4.3,SNR=17						

*IDC **20** 03:42:24.6±0.7, 32°.50N×105°.27E, h0km, mb4.1/14, mb1 4.2/17, mb1mx4.0/30, mbtmp4.1/17, ML4.2/2, MS3.3/3, Ms1 3.3/3, ms1mx2.6/33, Error ellipse: s-maj=27.9km s-min=14.0km az=56.0*
*BJI **20** 03:42:25.5, 32°.57N×105°.39E, h16km, mB4.5/12, mb4.3/14, ML4.2/20, Ms4.1/16, Ms7 3.8/17*
*NEIC **20** 03:42:26.4±0.4, 32°.52N×105°.31E, h10km, mb4.1/3, Error ellipse: s-maj=12.8km s-min=7.4km az=63.0*
*MOS **20** 03:42:26.4±1.7, 32°.50N×105°.40E, h26km, mb4.4/8, Error ellipse: s-maj=15.9km s-min=8.1km az=100.7*

ISC 20 03:42:25.1±0.8, 32°.54N±0°.02×105°.46E±0°.03, h3km±5km, n67, σ1§38/80, mb4.2/25, MS3.2/3, 2C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.17	222	Pn	Pn	03 43 02.9	+0.7
CD2				Pg	Pg	03 43 06.1	-0.7
CD2				Sg	Sg	03 43 35.4	+0.4
CD2				smax			
	comp=N,2μm,0.5s						
XAN	Xi'an	3.26	62	Pn	Pn	03 43 17.8	+0.6
XAN				Pg	Pg	03 43 20.9	-6.7
XAN				Sn	Sn	03 44 02.4	+5.9
XAN				Sg	Sg	03 44 08.9	-1.0
XAN				smax			
	comp=N,670nm,0.9s						
XAN				smax			
	comp=E,340nm,0.8s						
XAN				LR	LR		
	comp=N,1μm,9.1s						
XAN				LR	LR		
	comp=E,330nm,8.5s						
XAN				LR	LR		
	comp=Z,300nm,8.5s						
LZH	Lanzhou	3.79	340	Pn	Pn	03 43 26.3	+1.9
LZH				Pg	Pg	03 43 35.8	-1.9
LZH				Sg	Sg	03 44 21.9	-4.9
LZH				smax			
	comp=N,840nm,0.6s						
LZH				smax			
	comp=E,960nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.6s						
LZH				LR	LR		
	comp=Z,3μm,7.4s						
ENH	Enshi	4.12	122	*e*Pn	Pn	03 43 31.5	+2.6
ENH				*e*S	Sg	03 44 36.7	-0.6
GYA	Guiyang	6.14	170	Pn	Pn	03 43 58.0	+1.2
GYA				Sn	Sn	03 45 06.5	-1.1
GYA				smax			
	comp=N,200nm,0.9s						
GYA				smax			
	comp=E,430nm,0.9s						
KMI	Kunming	7.76	199	Pn	Pn	03 44 15.3	-3.7
KMI				Sn	Sn	03 45 45.6	-1.8
KMI				smax			
	comp=N,30nm,1.0s						
KMI				smax			
	comp=E,38nm,1.0s						
WHN	Wuhan	7.84	102	S	Sn	03 45 46.6	-2.8
WHN				LR	LR		
	comp=N,2μm,4.7s						
WHN				LR	LR		
	comp=E,180nm,1.0s						
WHN				LR	LR		
	comp=Z,830nm,5.9s						
GTA	Gaotai	8.25	328	*e*P	Pn	03 44 23.5	-2.1
GTA				S	Sn	03 45 54.0	-5.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GTA				pmax	pmax		
	comp=Z,45nm,3.5s						
GTA				LR	LR		
	comp=N,420nm,12.5s						
GTA				LR	LR		
	comp=E,630nm,11.0s						
GTA				LR	LR		
	comp=Z,500nm,9.5s						
HHC	Hu-ho-hao-te	9.63	29	*e*P	Pn	03 44 47.5	+2.9
HHC				pP		03 44 54.8	
HHC				sP		03 44 59.4	
HHC				S	Sn	03 46 35.0	+1.6
HHC				sS		03 46 46.3	
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,94nm,4.9s						
HHC				LR	LR		
	comp=N,170nm,5.0s						
HHC				LR	LR		
	comp=E,490nm,4.4s						
HHC				LR	LR		
	comp=Z,190nm,5.4s						
NJ2	Nanjing	11.35	89	*e*P	Pn	03 45 11.1	+3.0
NJ2				pP		03 45 18.0	
NJ2				PP		03 45 20.6	
NJ2				sP		03 45 22.0	
NJ2				S	Sn	03 47 17.5	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,70nm,5.5s						
NJ2				LR	LR		
	comp=N,210nm,9.3s						
NJ2				LR	LR		
	comp=E,230nm,9.7s						
NJ2				LR	LR		
	comp=Z,270nm,6.0s						
QIZ	Qiongzhong	14.01	163	P	Pn	03 45 44.8	+0.2
QIZ				S	Sn	03 48 20.6	-0.2
QIZ				LR	LR		
	comp=N,280nm,3.4s						
QIZ				LR	LR		
	comp=Z,320nm,9.4s						
CMAR	Chiang Mai Arr	15.20	204	Pn	Pn	03 46 01.1	+0.3
	comp=Z,0.4nm,0.3s,baz=8.7,slow=12,SNR=7.1						
SONM	Songino Array	15.30	2	Pn	Pn	03 46 03.1	+1.1
	baz=183,slow=13,SNR=3.0						
ULN	Ulaanbaatar	15.36	4	*e*P	Pn	03 46 05.0	+2.3
SNY	Shenyang	17.13	52	⇓P	Pn	03 46 22.9	-2.6
SNY				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SNY				pmax	pmax		
	comp=Z,96nm,10.0s						
SNY				LR	LR		
	comp=N,100nm,3.9s						
SNY				LR	LR		
	comp=E,210nm,3.9s						
SNY				LR	LR		
	comp=Z,110nm,4.9s						
GUN	Gumba	17.54	260	*e*P	Pn	03 46 32.1	+1.5
	comp=Z,27nm,0.7s						
ZAK	Zakamensk	17.91	355	*e*P	Pn	03 46 40.8	+5.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PKI	Pulchoki	18.04	259	*e*P	Pn	03 46 36.7	-0.2
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	18.05	259	*e*P	Pn	03 46 37.4	+0.4
	comp=Z,32nm,0.7

comp=Z,5.8nm,1.2s,mb4.0
AAK Ala-Archa 26.40 301 LR LR 03 59 19.8
comp=Z,48nm,18.5s,MS3.1,baz=11,slow=39
KURK Kurchatov 26.84 321 P **P** **03 48 06.1 -0.5**
comp=Z,3.2nm,0.9s,mb3.8,baz=125,slow=10,SNR=10
KURK Kurchatov 26.84 321 *de*P **P** **03 48 06.5 -0.1**
KURK pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
ABKAR Akbulak array 37.61 310 *e*P **P** **03 49 41.0 0.0**
comp=Z,0.7nm,0.4s,mb3.7
AKTK Aktyubinsk 39.03 312 P **P** **03 49 52.2 -0.6**
AKTO Aktyubinsk 39.03 312 P **P** **03 49 52.2 -0.6**
comp=Z,1.4nm,0.6s,mb3.9,baz=83,slow=4.7,SNR=5.7
KAPI Kappang 39.73 157 P **P** **03 49 58.5 -0.6**
comp=Z,9.7nm,0.7s,mb4.6,baz=320,slow=5.5,SNR=6.3
TIXI Tiksi 41.13 11 *e*P **P** **03 50 11.7 +1.7**
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
TIXI Tiksi 41.13 11 *e*P **P** **03 50 09.3 -0.7**
comp=Z,6.3nm,1.0s,mb4.2
BILL Bilibino 49.39 26⇑ *e*P **P** **03 51 18.7 +3.1**
BILL pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
KLMR Klimovskoe 50.56 325 *e*P **P** **03 51 23.3 -1.3**
KLMR pmax pmax
comp=Z,15nm,1.3s,mb4.8
JOF Joensuu 54.45 327 *e*P **P** **03 51 53.0 -0.4**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JOF Joensuu 54.45 327 *e*p **P** **03 51 53.0 -0.4**
comp=Z,4.6nm,0.7s,mb4.5
KEV Kevo 55.90 336 *e*P **P** **03 52 04.5 +0.7**
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KEV Kevo 55.90 336 *e*p **P** **03 52 04.5 +0.7**
comp=Z,2.7nm,0.7s,mb4.4
ARCES ARCESS Array B 56.44 335 P **P** **03 52 07.2 -0.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=74,slow=8.9,SNR=12
ARCES ARCESS Array B 56.44 335 P **P** **03 52 07.2 -0.4**
KAF Kangasniemi 56.83 327 *e*P **P** **03 52 08.7 -1.8**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 56.83 327 *e*p **P** **03 52 08.7 -1.8**
comp=Z,1.6nm,0.6s,mb4.2
FINES FINESS Array B 57.03 326 P **P** **03 52 11.4 -0.6**
comp=Z,3.2nm,0.8s,mb4.4,baz=71,slow=6.3,SNR=10
BRTR Keskin Array B 57.05 299 P **P** **03 52 11.4 -1.0**
comp=Z,1.1nm,0.8s,mb3.9,baz=99,slow=7.6,SNR=7.6
AKASG Malin Array Be 57.26 313 P **P** **03 52 12.5 -1.3**
comp=Z,2.7nm,0.6s,mb4.5,baz=66,slow=7.6,SNR=4.0
WRAB Tennant Creek 59.04 148 *e*P **P** **03 52 26.5 0.0**
WRAB pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
WRAB Tennant Creek 59.04 148 *e*P **P** **03 52 26.5 0.0**
comp=Z,9.8nm,0.7s,mb5.0
ASAR Alice Springs 62.14 150 P **P** **03 52 47.5 0.0**
comp=Z,3.6nm,0.5s,mb4.7,baz=332,slow=6.7,SNR=40
NB2 NORSAR Subarra 64.08 327 P **P** **03 52 58.7 -1.4**
comp=Z,1.3nm,0.6s,mb4.1,baz=72,slow=6.9
NB2 NORSAR Subarra 64.08 327 P **P** **03 52 58.7 -1.4**
comp=Z,1.3nm,0.6s,mb4.1,baz=72,slow=6.9
NOA NORSAR Array B 64.08 327 P **P** **03 52 58.1 -2.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=71,slow=6.6,SNR=6.4
INK Inuvik 70.43 20 P **P** **03 53 42.5 +2.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=279,slow=5.4,SNR=4.4
CDF Champ du Feu 71.40 316 *e*P **P** **03 53 47.2 +0.7**
STKA Stephens Creek 72.59 148 P **P** **03 53 55.6 +1.9**
comp=Z,1.0nm,0.4s,mb4.1,baz=309,slow=13,SNR=3.4
LPG La Plagne 73.11 313 *e*P **P** **03 53 55.0 -1.8**
comp=Z,9.4nm,0.7s,mb4.5
LPL La Plagne 73.11 313 *e*P **P** **03 53 56.1 -0.7**
YKA Yellowknife Ar 79.99 18 P **P** **03 54 34.8 -0.6**
comp=Z,0.2nm,0.5s,mb3.3,baz=328,slow=5.1,SNR=3.8
YKA Yellowknife Ar 79.99 18 P **P** **03 54 34.8 -0.6**
TORD Torodi Ar. Bea 94.29 288 LR LR 04 39 56.9
comp=Z,62nm,19.9s,MS4.1,baz=120,slow=37

*IDC **20** 04:17:56.0±0.9, 30°.80N×103°.45E, h0km, mb4.1/12, mb1 4.2/14, mb1mx4.1/24, mbtmp4.1/14, ML4.2/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/27, Error ellipse: s-maj=28.2km s-min=19.3km az=48.0*
*ISCJB **20** 04:17:58.2±0.8, 30°.81N±0°.04×103°.42E±0°.04, h25km±6km, mb4.2/35, MS3.4/12, Error ellipse: s-maj=6.8km s-min=5.7km az=143.7*
*NEIC **20** 04:17:58.0±0.4, 30°.85N×103°.43E, h10km, mb4.3/11, Error ellipse: s-maj=9.4km s-min=8.1km az=50.0*
*MOS **20** 04:17:58.8±0.9, 30°.76N×103°.45E, h33km, mb4.5/16, Error ellipse: s-maj=14.9km s-min=7.2km az=98.0*
*BJI **20** 04:17:58.1, 30°.76N×103°.56E, h16km, mB4.6/9, mb4.5/13, ML4.3/18, Ms4.3/18, Ms7 4.1/15*
ISC 20 04:17:59.2±0.8, 30°.89N±0°.03×103°.42E±0°.04, h16km±5km, n79, σ1°.03/89, mb4.2/35, MS3.4/12, 2C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.29**	**87**	Pg	**Pg**	**04 18 04.4**	**-1.0**
CD2				Sg	**Sg**	**04 18 10.8**	**+1.2**
CD2				smax			
comp=N,80μm,0.9s							
LZH	**Lanzhou**	**5.19**	**4**	Pg	**Pg**	**04 19 37.1**	**-1.5**
LZH				Sg	**Sg**	**04 20 45.0**	**-0.8**
LZH				smax			
comp=N,210nm,1.0s							
LZH				smax			
comp=E,370nm,1.2s							
LZH				LR	LR		
comp=N,2μm,7.2s							
LZH				LR	LR		
comp=Z,3μm,8.9s							
GYA	**Guiyang**	**5.26**	**146**	Pn	**Pn**	**04 19 15.9**	**-1.3**
GYA				Sn	**Sn**	**04 20 18.0**	**+0.5**
GYA				smax			
comp=N,330nm,1.0s							
GYA				smax			
comp=E,580nm,1.0s							
GYA				LR	LR		
comp=N,970nm,4.5s							
GYA				LR	LR		
comp=E,1μm,3.3s							
GYA				LR	LR		
comp=Z,1μm,4.1s							
ENH	**Enshi**	**5.27**	**95**	*e*Pn	**Pn**	**04 19 16.7**	**-0.6**
comp=Z,155nm,0.6s							
ENH				*e*S	**Sg**	**04 20 40.3**	**-8.0**
XAN	**Xi'an**	**5.61**	**55**	Pn	**Pn**	**04 19 22.6**	**+0.6**
XAN				Pg	**Pg**	**04 19 41.8**	**-4.8**
XAN				Sn	**Sn**	**04 20 24.8**	**-1.3**
XAN				Sg	**Sg**	**04 20 47.8**	**-11**
XAN				smax			
comp=N,610nm,0.8s							
XAN				smax			
comp=E,260nm,1.0s							
XAN				LR	LR		
comp=N,2μm,11.4s							
XAN				LR	LR		
comp=E,450nm,11.4s							
XAN				LR	LR		
comp=Z,410nm,10.5s							
KMI	**Kunming**	**5.78**	**186**	Pn	**Pn**	**04 19 23.8**	**-0.5**
KMI				smax			
comp=N,120nm,1.3s							
KMI				smax			
comp=E,91nm,1.6s							
KMI				LR	LR		
comp=N,2μm,6.1s							
KMI				LR	LR		
comp=E,2μm,5.2s							
GTA	**Gaotai**	**8.99**	**342**	‖P	**Pn**	**04 20 11.5**	**+3.1**
GTA				pP		04 20 15.0	
GTA				sP		04 20 17.4	
GTA				S	**Sn**	**04 21 56.8**	**+7.4**
GTA				sS		04 22 01.8	
GTA				pmax	pmax		
comp=Z,2.0nm,0.9s							
GTA				pmax	pmax		
comp=Z,81nm,3.8s							
GTA				LR	LR		
comp=N,590nm,10.4s							
GTA				LR	LR		
comp=E,650nm,11.6s							
GTA				LR	LR		
comp=Z,570nm,10.7s							
WHN	**Wuhan**	**9.42**	**89**	P	**Pn**	**04 20 15.8**	**+1.6**
WHN				S	**Sn**	**04 21 55.8**	**-4.0**
WHN				LR	LR		
comp=N,2μm,7.2s							
WHN				LR	LR		
comp=E,3μm,5.8s							
WHN				LR	LR		
comp=Z,2μm,7.0s							
LSA	**Lhasa**	**10.67**	**267**	P	**Pn**	**04 20 21.6**	**-10**
LSA				S	Sx	04 23 21.8	
LSA				LR	LR		
comp=E,460nm,8.9s							
LSA				LR	LR		
comp=Z,580nm,8.4s							
SHL	**Shillong**	**11.47**	**245**	*e*P	**Pn**	**04 20 45.0**	**+2.6**
HHC	**Hu-ho-hao-te**	**11.92**	**31**	*e*P	**Pn**	**04 20 51.0**	**+2.5**
HHC				pP		04 20 55.5	
HHC				PP		04 21 01.1	
HHC				S	**Sn**	**04 23 06.6**	**+5.4**
HHC				sS		04 23 13.9	
HHC				SS		04 23 21.4	
HHC				pmax	pmax		
comp=Z,13nm,1.1s							
HHC				pmax	pmax		
comp=Z,74nm,6.4s							
HHC				LR	LR		
comp=N,560nm,6.0s							
HHC				LR	LR		
comp=E,450nm,6.0s							
HHC				LR	LR		
comp=Z,560nm,6.5s							
CMAR	**Chiang Mai Arr**	**13.03**	**199**	Pn	**Pn**	**04 21 02.2**	**-1.5**
comp=Z,0.5nm,0.3s,baz=13,slow=12,SNR=9.6							
QZH	**Quanzhou**	**14.66**	**110**	P	**Pn**	**04 21 25.5**	**-0.5**
QZH				S	**Sn**	**04 24 08.9**	**+0.7**
QZH				LR	LR		
comp=N,2μm,12.4s							
QZH				LR	LR		
comp=E,1μm,10.8s							
QZH				LR	LR		
comp=Z,1μm,4.8s							
SONM	**Songino Array**	**17.07**	**7**	P	**Pn**	**04 21 57.8**	**+0.7**
comp=Z,0.6nm,0.3s,baz=188,slow=13,SNR=11							
ULN	**Ulaanbaatar**	**17.18**	**8**	*e*P	**Pn**	**04 21 59.4**	**+1.0**
ULN				pmax	pmax		
comp=Z,9.0nm,0.9s							
ULN	**Ulaanbaatar**	**17.18**	**8**	*e*P	**Pn**	**04 21 59.4**	**+1.0**
comp=Z,8.9nm,0.9s							
ZAK	**Zakamensk**	**19.47**	**360**	*e*P	**Pn**	**04 22 27.2**	**+0.8**
ZAK				pmax	pmax		
comp=Z,7.0nm,1.1s							
TLY	**Talaya**	**20.77**	**0**	*e*P	**P**	**04 22 44.2**	**+4.9**
TLY				*e*		04 26 46.4	
TLY				pmax	pmax		
comp=Z,8.0nm,1.0s							
TLY				MLR	MLR		
comp=Z,244nm,11.0s,MS3.8							
TLY	**Talaya**	**20.77**	**0**	*e*P	**P**	**04 22 38.9**	**-0.4**
comp=Z,6.8nm,1.0s							
MOY	**Mondy**	**20.83**	**356**	*e*P	**P**	**04 22 42.6**	**+2.6**
KS15	**Wonju Array Si**	**21.24**	**65**	*e*P	**P**	**04 22 44.7**	**+0.2**
KSRS	**Korea Array**	**21.27**	**65**	P	**P**	**04 22 44.5**	**-0.3**
comp=Z,10nm,0.8s,mb4.2,baz=250,slow=9.6,SNR=30							
KSRS				LR	LR	04 30 59.3	
comp=Z,87nm,20.1s,MS3.1,baz=86,slow=37							
KSRS	**Korea Array**	**21.27**	**65**	P	**P**	**04 22 44.6**	**-0.3**
KSRS				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.2							
KSRS				MLR	MLR		
comp=Z,87nm,20.1s,MS3.1							
IRK	**Irkutsk**	**21.34**	**1**	*e*P	**P**	**04 22 45.5**	**0.0**
IRK				pmax	pmax		
comp=Z,41nm,1.0s,mb4.7							
CN2	**Changchun**	**21.66**	**47**	*e*P	**P**	**04 22 49.1**	**+0.1**
CN2				*es*P	sP	04 22 56.0	+0.5
CN2				*e*S	**S**	**04 26 34.9**	**-13**
CN2				pmax	pmax		
comp=Z,20nm,0.8s,mb4.6							
CN2				pmax	pmax		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,200nm,10.0s,MS4.0							
CN2				LR	LR		
comp=E,200nm,10.0s,MS4.0							
CN2				LR	LR		
comp=Z,200nm,13.0s,MS3.7							
HIA	**Hailar**	**22.11**	**29**	*e*P	**P**	**04 22 53.4**	**-0.4**
HIA				pmax	pmax		
comp=Z,6.0nm,0.7s							
HIA	**Hailar**	**22.11**	**29**	*e*P	**P**	**04 22 53.4**	**-0.4**
comp=Z,6.5nm,0.7s,mb4.2							
MK31	**Makanchi Array**	**22.76**	**320**	*e*P	**P**	**04 23 01.8**	**+1.1**
MKAR	**Makanchi Array**	**22.76**	**320**	P	**P**	**04 23 01.0**	**+0.3**
comp=Z,1.3nm,0.6s,mb3.5,baz=120,slow=12,SNR=12							
MKAR				LR	LR	04 32 08.8	
comp=Z,56nm,19.8s,MS3.0,baz=127,slow=37							
TKM2	**Tokmak 2**	**25.16**	**306**	*e*P	**P**	**04 23 22.6**	**-1.1**
TKM2				pmax	pmax		
comp=Z,4.0nm,1.0s,mb3.9							
TKM2	**Tokmak 2**	**25.16**	**306**	*e*P	**P**	**04 23 22.6**	**-1.0**
comp=Z,4.0nm,1.0s,mb3.9							
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**04 23 31.8**	**+1.9**
comp=Z,1.1nm,0.5s,mb3.7,baz=46,slow=10,SNR=3.7							
AAK				LR	LR	04 34 23.5	
comp=Z,176nm,19.0s,MS3.6,baz=269,slow=38							
AAK	**Ala-Archa**	**25.84**	**305**	P	**P**	**04 23 31.8**	**+2.0**
AAK				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.6							
AAK				MLR	MLR		
comp=Z,176nm,19.0s,MS3.6							
AAK	**Ala-Archa**	**25.84**	**305**	*e*P	**P**	**04 23 32.6**	**+2.7**
comp=Z,4.5nm,0.8s,mb4.0							
AAK				LR	LR	04 34 23.5	
ZAA0	**Zalesovo Array**	**26.66**	**335**	*e*P	**P**	**04 23 37.1**	**0.0**
ZALV	**Zalesovo Beam**	**26.66**	**335**	P	**P**	**04 23 37.8**	**+0.6**
comp=Z,3.3nm,0.7s,mb4.0,baz=144,slow=9.0,SNR=11							
ZALV				LR	LR	04 34 45.5	
comp=Z,54nm,18.3s,MS3.1,baz=40,slow=38							
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**04 23 41.0**	**+0.1**
comp=Z,3.1nm,0.8s,mb3.9,baz=129,slow=9.6,SNR=18							
KURK				LR	LR	04 35 07.4	
comp=Z,113nm,18.1s,MS3.5,baz=130,slow=38							
KURK	**Kurchatov**	**27.07**	**324**	*ce*P	**P**	**04 23 41.6**	**+0.8**
KURK				pmax	pmax		
comp=Z,5.0nm,1.2s,mb3.9							
BOD	**Bodaibo**	**27.89**	**12**	*e*P	**P**	**04 23 47.5**	**-0.7**
BOD				pmax	pmax		
comp=Z,3.0nm,1.1s,mb3.8							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**04 24 29.7**	**-0.1**
comp=Z,0.5nm,0.4s,mb3.8,baz=144,slow=13,SNR=3.9							
BVAR				PcP	PcP	04 27 14.5	-1.3
comp=Z,1.5nm,0.7s,baz=132,slow=4.2,SNR=5.7							
BVAR				LR	LR	04 38 14.9	
comp=Z,53nm,19.6s,MS3.2,baz=320,slow=37							
BVAR	**Borovoye Array**	**32.59**	**322**	P	**P**	**04 24 29.7**	**-0.1**
BVAR						04 27 14.5	
ABKAR	**Akbulak array**	**37.38**	**312**	*e*P	**P**	**04 25 11.5**	**+0.5**
comp=Z,0.4nm,0.4s,mb3.6							
ARU	**Arti**	**40.24**	**323**	*d i*P	**P**	**04 25 35.5**	**+0.5**
ARU				S	**S**	**04 31 40.3**	**-1.0**
ARU				SS	SS	04 34 34.9	-4.5
ARU				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.3							
TIXI	**Tiksi**	**43.08**	**11**	*e*P	**P**	**04 25 57.0**	**-1.0**
TIXI				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.4							
TIXI				MLR	MLR		
comp=Z,108nm,16.0s,MS3.8							
TIXI	**Tiksi**	**43.08**	**11**	*e*P	**P**	**04 25 57.5**	**-0.5**
comp=Z,4.8nm,0.5s,mb4.5							
PETK	**Petropavlovsk-**	**44.75**	**44**	LR	LR	04 44 30.1	
comp=Z,31nm,18.1s,MS3.3,baz=74,slow=36							
ZEI	**Tsey**	**48.18**	**302**	*e*P	**P**	**04 26 39.6**	**+0.8**
ZEI				pmax	pmax		
comp=Z,4.0nm,1.2s,mb4.3							
KIV	**Kislovodsk**	**48.94**	**303**	*e*P	**P**	**04 26 52.3**	**+7.7**
KIV				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.6							
KLMR	**Klimovskoe**	**50.90**	**325**	*e*P	**P**	**04 26 57.3**	**-2.0**
KLMR				pmax	pmax		
comp=Z,14nm,1.3s,mb4.7							
BILL	**Bilibino**	**51.62**	**25⇑**	*e*P	**P**	**04 27 04.4**	**-0.1**
BILL				pmax	pmax		
comp=Z,8.0nm,1.2s,mb4.5							
JOF	**Joensuu**	**54.89**	**328**	*e*P	**P**	**04 27 28.1**	**-0.6**
JOF				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.3							
JOF	**Joensuu**	**54.89**	**328**	*e*p	**P**	**04 27 28.1**	**-0.6**
comp=Z,2.0nm,0.7s,mb4.3							
BRTR	**Keskin Array B**	**56.33**	**300**	P	**P**	**04 27 39.2**	**-0.2**
comp=Z,0.6nm,0.7s,mb3.7,baz=104,slow=2.5,SNR=4.8							
KEV	**Kevo**	**56.69**	**336**	*e*P	**P**	**04 27 41.4**	**0.0**
KEV				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.6							
KEV	**Kevo**	**56.69**	**336**	*e*p	**P**	**04 27 41.4**	**0.0**
comp=Z,3.5nm,0.7s,mb4.5							
ARCES ARCESS Array B 57.21 336 P **P** **04 27 45.3 +0.1**
comp=Z,3.6nm,0.9s,mb4.4,baz=51,slow=13,SNR=4.2
ARCES PcP PcP 04 28 39.2 -0.2
comp=Z,4.4nm,1.0s,baz=72,slow=4.0,SNR=7.2
KAF Kangasniemi 57.24 327 *e*P **P** **04 27 42.5 -3.0**
KAF pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KAF Kangasniemi 57.24 327 *e*p **P** **04 27 42.5 -3.0**
comp=Z,1.7nm,0.8s,mb4.1
FINES FINESS Array B 57.41 326 P **P** **04 27 46.6 -0.1**
comp=Z,3.2nm,0.8s,mb4.4,baz=77,slow=8.6,SNR=7.0
ASAR Alice Springs 61.62 148 P **P** **04 28 15.1 -1.1**
comp=Z,0.5nm,0.5s,mb3.9,baz=343,slow=7.0,SNR=4.8
NB2 NORSAR Subarra 64.52 327 P **P** **04 28 33.2 -1.8**
comp=Z,1.1nm,0.6s,mb4.1,baz=73,slow=6.5
NB2 NORSAR Subarra 64.52 327 P **P** **04 28 33.2 -1.8**
comp=Z,1.1nm,0.6s,mb4.1,baz=73,slow=6.5
NOA NORSAR Array B 64.52 327 P **P** **04 28 33.8 -1.2**
comp=Z,1.6nm,0.7s,mb4.2,baz=74,slow=6.6,SNR=6.9
NOA LR LR 04 59 13.5
comp=Z,24nm,18.3s,MS3.4,baz=85,slow=38
GERES GERESS Array B 67.27 314 LR LR 05 00 06.6
comp=Z,26nm,18.7s,MS3.5,baz=83,slow=38
COLD Coldfoot 67.90 24 *e*P **P** **04 28 57.1 +0.5**
comp=Z,6.3nm,0.9s,mb4.7
COLA College 69.87 26 *e*P **P** **04 29 08.9 0.0**
COLA pmax pmax
comp=Z,13nm,0.9s,mb4.9
COLA College 69.87 26 *e*P **P** **04 29 08.9 +0.1**
comp=Z,13nm,0.9s,mb4.8
KDAK Kodiak Island 71.34 33 *i*P **P** **04 29 18.1 +0.2**
CDF Champ du Feu 71.36 316 *e*P **P** **04 29 17.6 -0.6**
STKA Stephens Creek 72.16 146 P **P** **04 29 25.5 +2.4**
comp=Z,1.1nm,0.5s,mb4.0,baz=45,slow=8.6,SNR=2.8
STKA Stephens Creek 72.16 146 P **P** **04 29 25.5 +2.4**
INK Inuvik 72.55 19 *e*P **P** **04 29 24.8 -0.2**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 72.55 19 *e*P **P** **04 29 24.8 -0.2**
comp=Z,8.8nm,1.0s,mb4.6
LPG La Plagne 72.96 313 *e*P **P** **04 29 28.0 +0.1**
comp=Z,13nm,1.0s,mb4.5
LPL La Plagne 72.97 313 *e*P **P** **04 29 27.9 0.0**
comp=Z,12nm,0.9s,mb4.5
BMRM Bremner River 73.20 28 *e*P **P** **04 29 28.3 -0.7**
comp=Z,11nm,1.0s,mb4.7
TCF Toulx Ste Croi 75.39 315 *e*P **P** **04 29 41.3 -0.8**
comp=Z,5.0nm,0.8s,mb4.2
YKA Yellowknife Ar 82.06 17 P **P** **04 30 18.2 -0.2**
comp=Z,2.6nm,0.6s,mb4.4,baz=329,slow=5.1,SNR=48
ROSC El Rosal 144.39 356 PKP PKPdf 04 37 34.5 -1.0
comp=Z,5.2nm,0.7s,baz=146,slow=3.6,SNR=5.6

MAN 20 04:43:39, 12°.33N×124°.69E, h33km, mb4.7, ML3.6, MS3.5, 3C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.19**	**351**	*e*P	Pb	04 43 46.5	+1.0
CNP				*e*S	Sb	04 43 51.6	+1.7
BESP	**Borongan**	**1.03**	**135**	*e*P	Pn	04 43 56.8	-0.3
MMPH	**Masbate**	**1.04**	**272**	‖*i*P	Pn	04 43 57.7	+0.3
MMPH				*e*S	Sn	04 44 10.8	+0.1
OCLP	**Ormoc**	**1.27**	**184**	*e*P	Pn	04 44 01.2	+0.7
PVCP	**Virac**	**1.37**	**337**	*e*P	Pn	04 44 02.5	+0.8
RCP	**Roxas**	**2.05**	**248**	‖*e*P	Pn	04 44 11.7	+0.5
RCP				*e*S	Sn	04 44 36.0	+0.3
LLP	**Lapu-Lapu**	**2.12**	**200**	*e*P	Pn	04 44 15.2	+3.1
LLP				*e*S	Sn	04 44 35.1	-2.2
MSLP	**Maasin**	**2.19**	**176**	*e*P	Pn	04 44 13.9	+0.8
AUQP	**San Andres**	**2.20**	**297**	*e*P	Pn	04 44 15.4	+2.2
OTRP	**Odiongan**	**2.61**	**271**	*e*P	Pn	04 44 19.2	+0.3
GUIM	**Jordan**	**2.67**	**231**	*e*P	Pn	04 44 20.1	+0.4
GQP	**Guinayangan**	**2.69**	**306**	‖*e*P	Pn	04 44 20.4	+0.4
TBP	**Tagbilaran**	**2.74**	**197**	*e*P	Pn	04 44 20.4	-0.3
BOAC	**Boac**	**3.00**	**292**	*e*P	Pn	04 44 26.0	+1.8
SNPH	**Sibulan**	**3.29**	**206**	⇑*e*P	Pn	04 44 23.2	-5.1
SNPH				*i* S	Pb	04 44 36.4	-0.3
SJMP	**San Jose**	**3.49**	**273**	*e*P	Pn	04 44 32.4	+1.4
POLP	**Polilio Island**	**3.59**	**312**	*e*P	Pn	04 44 35.8	+3.5
BUSP	**Coron**	**4.41**	**266**	*e*P	Pn	04 44 44.9	+1.3
BUKP	**Musuan**	**4.43**	**175**	*e*P	Pn	04 44 46.1	+2.1
BALP	**Baler**	**4.55**	**319**	*e*P	Pn	04 44 48.2	+2.7
LUBP	**Lubang**	**4.55**	**288**	*e*P	Pn	04 44 47.6	+2.0
PAGZ	**Pagadian**	**4.63**	**196**	*e*P	Pn	04 44 49.2	+2.5
CAUP	**Cauayan**	**5.37**	**329**	*e*P	Pn	04 44 58.0	+1.2
APYP	**Conner**	**6.43**	**329**	*e*P	Pn	04 45 13.8	+2.4

*ISCJB **20** 04:49:20.9±1.0, 40°.47N±0°.05×34°.08E±0°.09, h11km±16km, Error ellipse: s-maj=13.1km s-min=7.5km az=30.0*
*CSEM **20** 04:49:20.9±0.2, 40°.48N×34°.08E, h12km, MD2.9, Error ellipse: s-maj=5.3km s-min=3.7km az=40.0*
*DDA **20** 04:49:20.7, 40°.49N×34°.07E, h7km±3km, Md2.8*
*ISK **20** 04:49:20.6, 40°.49N×34°.10E, h6km, MD2.9*
ISC 20 04:49:21.0±0.7, 40°.46N±0°.04×34°.11E±0°.06, h2km±11km, n13, σ0°.59/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.40**	**292**	*e*PG	**Pg**	**04 49 29.0**	**+0.3**
CANT				*e*SG	**Sg**	**04 49 34.3**	**+0.5**
ELDT	**Eldivan**	**0.52**	**274**	*i* P	**Pg**	**04 49 31.0**	**+0.1**
ELDT				*i* S	**Sg**	**04 49 37.8**	**+0.1**
ELDT	**Eldivan**	**0.52**	**274**	*i* P	**Pg**	**04 49 31.0**	**+0.1**
ELDT				*i* S	**Sg**	**04 49 37.8**	**+0.1**
CTKT	**Corum**	**0.55**	**72**	*i* P	**Pg**	**04 49 32.2**	**+0.8**
CTKT	**Corum**	**0.55**	**72**	*i* P	**Pg**	**04 49 32.2**	**+0.8**
TOS	**Tosya**	**0.58**	**354**	*e*PG	**Pg**	**04 49 31.9**	**-0.2**
TOS				*e*SG	**Sg**	**04 49 39.9**	**+0.3**
TOS	**Tosya**	**0.58**	**354**	*e*Pg	**Pg**	**04 49 31.9**	**-0.2**
TOS				*e*Sg	**Sg**	**04 49 39.9**	**+0.2**
CDAG	**Cicekdag**	**0.86**	**166**	*i* P	**Pg**	**04 49 37.6**	**+0.2**
CDAG				*i* S	**Sg**	**04 49 48.1**	**-0.5**
CDAG	**Cicekdag**	**0.86**	**166**	*i* P	**Pg**	**04 49 37.6**	**+0.2**
CDAG				*i* S	**Sg**	**04 49 48.1**	**-0.4**
BALT	**Daday**	**1.21**	**333**	*i* P	**Pg**	**04 49 42.4**	**-1.7**
BALT	**Daday**	**1.21**	**333**	*i* P	**Pg**	**04 49 42.4**	**-1.7**
YOZ	**Yozgat**	**1.24**	**131**	*e*PN	**Pn**	**04 49 44.9**	**-0.3**
YOZ				*e*SN	**Sn**	**04 50 02.9**	**+0.3**
YOZ	**Yozgat**	**1.24**	**131**	*e*Pn	**Pn**	**04 49 44.9**	**-0.4**
YOZ				*e*Sn	**Sn**	**04 50 02.9**	**+0.3**

DJA 20 04:58:07, 1°.79N×99°.10E, h10km, MLv4.0/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.27**	**329**	P	Pg	04 58 13.6	+1.1
MNSI	**Mandailing Nat**	**1.10**	**154**	P	Pb	04 58 25.1	-3.0
GSI	**Gunungsitoli**	**1.60**	**252**	P	Pn	04 58 34.2	-1.1
GSI				S	Sn	04 58 59.0	+2.9
TSI	**Tuntungan**	**1.78**	**343**	P	Pn	04 58 40.5	+2.6
BKNI	**Bangkinang**	**2.42**	**127**	P	Pn	04 58 49.2	+2.5
BKNI				S	Sn	04

h48km±.7km:pP-P,n37,σ0°79/35,mb4.3/21,MS3.4/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.41**	**88**	*e*Pn	**Pn**	**05 01 50.3**	**0.0**
KULM				*e*Sn	**Sn**	**05 03 01.3**	**-0.9**
PALK	**Pallekele**	**13.61**	**280**	P	**Pn**	**05 03 28.6**	**-0.4**
	1.1nm,0.3s,baz=85,slow=20,SNR=4.9						
PALK				LR	LR	05 08 18.6	
	comp=Z,272nm,19.1s,baz=107,slow=35						
PALK	**Pallekele**	**13.61**	**280**	*e*Pn	**Pn**	**05 03 28.5**	**-0.4**
PALK				*e*Sn	**Sn**	**05 05 47.0**	**-12**
CM31	**Chiang Mai Arr**	**14.07**	**19**	*e*Pn	**Pn**	**05 03 41.4**	**+6.3**
	4.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**14.07**	**19**	P	**Pn**	**05 03 35.4**	**+0.3**
	1.8nm,0.3s,baz=215,slow=12,SNR=19						
CHTO	**Chiang Mai**	**14.40**	**18**	*e*Pn	**Pn**	**05 03 44.7**	**+5.2**
	15nm,0.9s						
KSM	**Kuching**	**16.46**	**102**	*e*P	**Pn**	**05 04 07.3**	**+1.1**
	11nm,0.8s						
KMI	**Kunming**	**21.54**	**21**	P	**P**	**05 05 05.3**	**+1.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
LSA	**Lhasa**	**24.65**	**354**	P	**P**	**05 05 35.4**	**+0.9**
LSA	**Lhasa**	**24.65**	**354**	*e*P	**P**	**05 05 35.1**	**+0.6**
	comp=Z,5.2nm,0.4s,mb4.4						
KAPI	**Kappang**	**27.40**	**111**	P	**P**	**05 05 58.7**	**-1.0**
	comp=Z,6.8nm,0.6s,mb4.3,baz=270,slow=16,SNR=6.3						
KAPI	**Kappang**	**27.40**	**111**	*e*P	**P**	**05 05 58.7**	**-1.0**
ENH	**Enshi**	**28.89**	**28**	*e*P	**P**	**05 06 11.5**	**-1.2**
	comp=Z,8.0nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**38.62**	**127**	P	**P**	**05 07 37.3**	**+0.1**
	comp=Z,4.0nm,0.7s,mb4.3,baz=246,slow=23,SNR=11						
FITZ	**Fitzroy Crossi**	**38.62**	**127**	*e*P	**P**	**05 07 36.8**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.3						
AML	**Almayashu**	**41.17**	**337**	*e*P	**P**	**05 07 58.8**	**+0.8**
	comp=Z,5.1nm,0.6s,mb4.3						
AML				*e*pP	pP	05 08 11.3	0.0
MK31	**Makanchi Array**	**42.81**	**348**	*e*P	**P**	**05 08 11.5**	**+0.2**
MK31				*e*pP	pP	05 08 23.8	-0.9
MKAR	**Makanchi Array**	**42.81**	**348**	P	**P**	**05 08 11.3**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.1,baz=168,slow=8.2,SNR=10						
MKAR				LR	LR	05 28 13.5	
	comp=Z,44nm,20.3s,MS3.3,baz=165,slow=39						
MKAR	**Makanchi Array**	**42.81**	**348**	P	**P**	**05 08 11.3**	**0.0**
SONM	**Songino Array**	**43.85**	**12**	P	**P**	**05 08 19.2**	**-0.5**
	comp=Z,3.1nm,0.8s,mb4.1,baz=194,slow=8.2,SNR=10						
SONM				PcP	PcP	05 10 06.2	+0.8
	comp=Z,0.8nm,0.6s,baz=174,slow=2.6,SNR=2.9						
KSRS	**Korea Array**	**44.54**	**39**	LR	LR	05 28 26.6	
	comp=Z,43nm,18.5s,MS3.4,baz=224,slow=38						
WRAB	**Tennant Creek**	**46.63**	**123**	*e*P	**P**	**05 08 42.9**	**+0.7**
	comp=Z,13nm,0.7s,mb5.0						
WRAB				*e*pP	pP	05 08 55.3	-0.4
KURK	**Kurchatov**	**47.32**	**347**	*e*P	**P**	**05 08 47.0**	**0.0**
	comp=Z,6.4nm,0.6s,mb4.7						
KURK				*e*pP	pP	05 09 00.1	-0.5
ASAR	**Alice Springs**	**48.11**	**128**	P	**P**	**05 08 54.4**	**+0.8**
	comp=Z,2.0nm,0.7s,mb4.3,baz=299,slow=7.6,SNR=22						
ZALV	**Zalesovo Beam**	**49.31**	**353**	P	**P**	**05 09 02.6**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.5,baz=178,slow=7.1,SNR=7.0						
BVAR	**Borovoye Array**	**51.64**	**342**	P	**P**	**05 09 19.4**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.1,baz=148,slow=9.6,SNR=6.4						
ABKAR	**Akbulak array**	**52.71**	**332**	*e*P	**P**	**05 09 27.6**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.3						
BRTR	**Keskin Array B**	**64.31**	**312**	P	**P**	**05 10 48.9**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=130,slow=7.1,SNR=8.3						
PETK	**Petropavlovsk-**	**70.22**	**35**	LR	LR	05 41 38.4	
	comp=Z,30nm,20.3s,MS3.5,baz=47,slow=35						
AKASG	**Malin Array Be**	**70.38**	**322**	P	**P**	**05 11 26.3**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.8,baz=93,slow=5.5,SNR=4.2						
JOF	**Joensuu**	**73.38**	**335**	*e*p	**P**	**05 11 43.2**	**-1.7**
	comp=Z,1.8nm,0.7s,mb4.1						
FINES	**FINESS Array B**	**75.20**	**333**	P	**P**	**05 11 55.5**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.2,baz=94,slow=5.3,SNR=9.6						
KAF	**Kangasniemi**	**75.29**	**333**	*e*p	**P**	**05 11 55.7**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**77.90**	**340**	P	**P**	**05 12 10.8**	**+0.1**
	comp=Z,2.9nm,0.9s,mb4.2,baz=90,slow=6.1,SNR=4.0						
GERES	**GERESS Array B**	**79.95**	**319**	P	**P**	**05 12 23.9**	**+1.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=107,slow=8.5,SNR=2.9						
TXAR	**Lajitas Array**	**141.70**	**26**	PKhKP		05 19 38.9	
	comp=Z,0.2nm,0.7s,baz=305,slow=0.9,SNR=4.0						
CPUP	**Villa Florida**	**145.57**	**229**	PKPbc	PKPbc	05 19 53.4	+1.2
	comp=Z,0.5nm,0.6s,baz=58,slow=4.6,SNR=3.8						

*GUC **20** 05:05:04.3±0.6, 38°.40S×73°.63W, h3km±3km, MD4.1, ML3.7*
*NEIC **20** 05:05:05.4, 38°.42S×73°.57W, h3km, ML3.7(GUC), After GUC.*
*IDC **20** 05:05:06.8±4.0, 38°.32S×73°.09W, h18km±22km, mb4.0/7, mb1 4.0/11, mb1mx3.9/16, mbtmp3.9/11, ML4.0/4, MS3.8/5, Ms1 3.8/5, ms1mx3.3/20, Error ellipse: s-maj=32.2km s-min=13.9km az=89.0*

ISC 20 05:05:04.1±1.9, 38°.33S±0°.03×73°.6W±0°.1, h5km±10km, n33, σ1°20/45, mb4.0/7, MS4.1/3, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**0.90**	**117**	⇑*i*P	**Pg**	**05 05 21.5**	**+0.2**
TMU				*i* S	**Sg**	**05 05 33.7**	**+0.8**
TMU	**Temuco**	**0.90**	**117**	⇑*i*P	**Pg**	**05 05 21.5**	**+0.2**
TMU				*i* S	**Sg**	**05 05 33.7**	**+0.8**
TMU				AML	AML	05 05 34.8	
	comp=N,3μm,0.3s						
VLCH	**Valdivia**	**1.50**	**169**	*e*P	**Pn**	**05 05 31.2**	**-0.4**
VLCH				*i* S	**Sn**	**05 05 49.8**	**-1.7**
VLCH	**Valdivia**	**1.50**	**169**	*e*P	**Pn**	**05 05 29.9**	**-1.7**
VLCH				*e*S	**Sn**	**05 05 49.6**	**-1.9**
OSCH	**Osorno**	**2.27**	**170**	⇑*i*P	**Pn**	**05 05 42.6**	**+0.4**
OSCH				*i* S	**Sn**	**05 06 11.8**	**+1.2**
OSCH	**Osorno**	**2.27**	**170**	*e*P	**Pn**	**05 05 42.4**	**+0.2**
OSCH				*i* S	**Sn**	**05 06 11.4**	**+0.9**
OSCH				AML	AML	05 06 27.0	
	comp=N,572nm,0.6s						
COCH	**Cobquecura**	**2.29**	**17**	*i* P	**Pn**	**05 05 42.0**	**-0.5**
COCH				*i* S	**Sn**	**05 06 12.8**	**+1.8**
COCH	**Cobquecura**	**2.29**	**17**	*i* P	**Pn**	**05 05 42.0**	**-0.5**
COCH				*i* S	**Sn**	**05 06 12.8**	**+1.8**
COCH				AML	AML	05 06 31.1	
	comp=N,1μm,0.6s						
PMCH	**Puerto Montt**	**3.20**	**170**	*i* P	**Pn**	**05 05 55.2**	**+0.2**
PMCH				*i* S	**Sn**	**05 06 33.6**	**+0.1**
PMCH	**Puerto Montt**	**3.20**	**170**	*i* P	**Pn**	**05 05 55.2**	**+0.2**
PMCH				*i* S	**Sn**	**05 06 34.4**	**+1.0**
TALC	**Talca**	**3.33**	**29**	*i* P	**Pn**	**05 05 56.0**	**-0.8**
TALC				*i* S	**Sn**	**05 06 37.5**	**+0.8**
PLCA	**Paso Flores**	**3.38**	**136**	Pn	**Pn**	**05 05 56.0**	**-1.3**
	comp=N,6.7nm,0.3s,baz=306,slow=10.0,SNR=160						
PLCA				Pg	**Pg**	**05 06 03.3**	**-5.5**
	comp=N,28nm,0.3s,baz=309,slow=14,SNR=66						
PLCA				Lg		05 06 44.6	
	comp=N,27nm,0.3s,baz=241,slow=15,SNR=3.0						
PLCA				LR	LR	05 07 27.6	
	comp=N,1μm,19.0s,baz=83,slow=45						
PLCA	**Paso Flores**	**3.38**	**136**	*e*Pn	**Pn**	**05 05 58.0**	**+0.7**
PLCA				*e*S	**Sn**	**05 06 44.5**	**+6.8**
NICH	**Los Niches**	**3.84**	**31**	*i* P	**Pn**	**05 06 02.9**	**-0.8**
NICH				*i* S	**Sn**	**05 06 50.0**	**+0.8**
CFAA	**Coronel Fontan**	**8.03**	**35**	Pn	**Pn**	**05 07 00.3**	**-1.0**
	comp=N,0.2nm,0.3s,baz=194,slow=11,SNR=21						
CFAA				Pg	Pg	05 07 27.9	-10
	comp=N,0.3nm,0.3s,baz=214,slow=12,SNR=10						
CFAA				Sn	**Sn**	**05 08 26.4**	**-6.1**
	comp=N,0.2nm,0.3s,baz=126,slow=21,SNR=3.6						
CFAA				Lg		05 09 15.2	
	comp=N,0.0nm,0.3s,baz=72,slow=17,SNR=2.7						
CFAA	**Coronel Fontan**	**8.03**	**35**	Pn	**Pn**	**05 07 00.3**	**-1.0**
CFAA				Pg	Pg	05 07 27.9	-10
CFAA				Sn	**Sn**	**05 08 26.4**	**-6.1**
CFAA				Lg		05 09 15.2	
TRQA	**Tornquist**	**9.17**	**92**	*e*Pn	**Pn**	**05 07 17.2**	**+0.3**
	comp=N,17nm,0.6s						
LCO	**Las Campanas**	**9.61**	**16**	*e*Pn	**Pn**	**05 07 27.8**	**+4.8**
	comp=N,13nm,0.6s						
USHA	**Ushuaia**	**16.88**	**170**	Pn	**Pn**	**05 09 03.1**	**+2.4**
	comp=N,0.1nm,0.3s,baz=326,slow=11,SNR=2.3						
CPUP	**Villa Florida**	**18.21**	**54**	P	**Pn**	**05 09 14.8**	**-2.8**
	comp=N,0.8nm,0.3s,baz=219,slow=8.5,SNR=9.2						
CPUP				LR	LR	05 17 21.0	
	comp=N,144nm,20.2s,baz=207,slow=41						
LPAZ	**La Paz**	**22.48**	**14**	P	**P**	**05 10 06.2**	**+1.9**
	comp=N,3.1nm,0.9s,mb3.7,baz=173,slow=12,SNR=12						
SIV	**San Ignacio**	**24.85**	**30**	P	**P**	**05 10 26.0**	**-1.4**
	comp=N,1.0nm,0.5s,mb3.6,baz=211,slow=10,SNR=9.3						
VNA1	**Neumayer--Stat**	**46.24**	**155**	*e*	**P**	**05 13 30.0**	**+0.3**
VNA2	**Neumayer--Watz**	**46.57**	**156**	*e*	**P**	**05 13 31.9**	**-0.3**
QSPA	**South Pole Qui**	**51.91**	**180**	P	**P**	**05 14 14.9**	**+1.9**
	comp=N,1.7nm,0.9s,mb4.0,baz=226,slow=7.5,SNR=4.7						
QSPA				pP	pP	05 14 22.1	+7.4
	comp=N,4.9nm,0.9s,baz=139,slow=4.1,SNR=8.3						
MAW	**Mawson**	**69.40**	**164**	pP	pP	05 16 18.5	+4.4
	comp=N,3.2nm,0.7s,baz=326,slow=19,SNR=4.6						
MAW				LR	LR	05 48 48.1	
	comp=N,166nm,21.7s,MS4.2,baz=101,slow=38						
TXAR	**Lajitas Array**	**72.94**	**333**	P	**P**	**05 16 35.3**	**+1.2**
	comp=N,0.8nm,0.9s,mb3.7,baz=158,slow=8.0,SNR=9.6						
TXAR				LR	LR	05 43 45.6	
	comp=N,53nm,19.9s,MS3.8,baz=300,slow=32						
DBIC	**Dimbokro**	**77.78**	**71**	P	**P**	**05 17 01.4**	**-1.0**
	comp=N,5.1nm,0.9s,mb4.5,baz=262,slow=14,SNR=3.4						
DBIC				pP	pP	05 17 07.3	+3.1
	comp=N,6.6nm,0.9s,baz=142,slow=2.9,SNR=2.5						
BOSA	**Boshof**	**79.19**	**118**	P	**P**	**05 17 08.6**	**-1.6**
	comp=N,1.3nm,0.6s,mb4.0,baz=238,slow=8.8,SNR=3.6						
BOSA				LR	LR	05 50 00.3	
	comp=N,92nm,20.2s,MS4.1,baz=12,slow=34						
NVAR	**Mina Array Bea**	**86.74**	**326**	pP	pP	05 17 57.8	+7.2
	comp=N,0.4nm,0.6s,baz=134,slow=6.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**86.87**	**71**	P	**P**	**05 17 48.3**	**-1.6**
	comp=N,2.2nm,0.8s,mb4.5,baz=227,slow=4.5,SNR=17						
AAK	**Ala-Archa**	**155.45**	**70**	PKPab	PKPab	05 25 21.9	-2.1
	comp=N,1.4nm,0.4s,baz=182,slow=9.7,SNR=4.3						
MKAR	**Makanchi Array**	**160.40**	**57**	PKPab	PKPab	05 25 44.0	-1.2
	comp=N,0.3nm,0.5s,baz=225,slow=1.4,SNR=3.8						

*ISCJB **20** 05:11:25.6±0.3, 32°.11N±0°.03×105°.00E±0°.04, h10km, mb3.9/16, Error ellipse: s-maj=5.2km s-min=4.9km az=18.1*
*IDC **20** 05:11:26.0±0.9, 32°.19N×105°.02E, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML3.9/3, Error ellipse: s-maj=23.2km s-min=18.5km az=63.0*
*BJI **20** 05:11:27.1, 32°.23N×105°.08E, h15km, mB4.9/2, mb4.1/4, ML3.9/14, Ms3.8/12, Ms7 3.4/10*
*NEIC **20** 05:11:28.1±0.6, 32°.22N×104°.91E, h10km, mb4.0/5, Error ellipse: s-maj=15.8km s-min=11.1km az=63.0*

ISC 20 05:11:27.5±0.3, 32°.19N±0°.03×105°.02E±0°.04, h10km, n32, σ1°40/42, mb3.9/16, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.67**	**220**	Pg	**Pg**	**05 11 56.8**	**-2.7**
CD2				Sg	**Sg**	**05 12 19.3**	**-1.9**
CD2				smax			
	comp=N,2μm,0.5s						
XAN	**Xi'an**	**3.76**	**60**	Pn	**Pn**	**05 12 26.8**	**+1.4**
XAN				Pg	**Pg**	**05 12 35.4**	**-4.0**
XAN				Sn	**Sn**	**05 13 12.8**	**+3.1**
XAN				Sg	**Sg**	**05 13 25.9**	**-2.2**
XAN				smax			
	comp=N,200nm,0.6s						
XAN				smax			
	comp=E,140nm,0.7s						
XAN				LR	LR		
	comp=N,300nm,8.6s						
XAN				LR	LR		
	comp=E,96nm,7.1s						
XAN				LR	LR		
	comp=Z,80nm,8.6s						
LZH	**Lanzhou**	**4.00**	**346**	Pn	**Pn**	**05 12 30.5**	**+1.7**
LZH				Pg	**Pg**	**05 12 40.9**	**-3.2**
LZH				Sg	**Sg**	**05 13 30.0**	**-6.0**
LZH				smax			
	comp=N,350nm,0.6s						
LZH				smax			
	comp=E,620nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,6.4s						
LZH				LR	LR		
	comp=Z,2μm,7.1s						
ENH	**Enshi**	**4.28**	**115**	*e*Pn	**Pn**	**05 12 36.1**	**+3.5**
ENH				*e*Sg	**Sg**	**05 13 45.0**	**0.0**
GYA	**Guiyang**	**5.89**	**165**	Pn	**Pn**	**05 12 55.6**	**+0.8**
GYA				Sn	**Sn**	**05 14 01.4**	**-1.0**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,160nm,0.9s						
WHN	**Wuhan**	**8.15**	**99**	⇑P	**Pn**	**05 13 26.9**	**+1.1**
WHN				S	**Sn**	**05 14 54.8**	**-3.1**
WHN				LR	LR		
	comp=N,590nm,4.8s						
WHN				LR	LR		
	comp=E,700nm,4.6s						
WHN				LR	LR		
	comp=Z,730nm,5.2s						
GTA	**Gaotai**	**8.35**	**331**	*e*P	**Pn**	**05 13 27.8**	**-0.7**
GTA				pP		05 13 30.8	
GTA				S	**Sn**	**05 15 00.1**	**-2.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,170nm,9.2s						
GTA				LR	LR		
	comp=E,170nm,9.2s						
GTA				LR	LR		
	comp=Z,160nm,10.1s						
CMAR	**Chiang Mai Arr**	**14.73**	**203**	Pn	**Pn**	**05 14 57.2**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=13,slow=12,SNR=3.0						
SONM	**Songino Array**	**15.66**	**3**	Pn	**Pn**	**05 15 09.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=181,slow=20,SNR=2.0						
KSRS	**Korea Array**	**19.51**	**68**	P	**Pn**	**05 15 56.1**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=254,slow=11,SNR=12						
MK31	**Makanchi Array**	**22.70**	**317**	*e*P	**P**	**05 16 28.8**	**-0.3**
MKAR	**Makanchi Array**	**22.70**	**317**	P	**P**	**05 16 29.3**	**+0.2**
	comp=Z,2.1nm,0.8s,mb3.6,baz=126,slow=12,SNR=9.8						
TKM2	**Tokmak 2**	**25.54**	**303**	*e*P	**P**	**05 16 58.2**	**+1.9**
	comp=Z,1.6nm,0.7s,mb3.7						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	**P**	**05 17 03.0**	**+1.8**
	comp=Z,0.9nm,0.4s,mb3.6,baz=113,slow=11,SNR=2.9						
AML	**Almayashu**	**26.73**	**301**	*e*P	**P**	**05 17 05.4**	**-1.6**
	comp=Z,3.7nm,0.5s,mb4.2						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**05 17 09.8**	**+1.6**
	comp=Z,1.3nm,0.7s,mb3.5,baz=131,slow=9.0,SNR=9.1						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**05 17 09.6**	**+1.5**
	comp=Z,2.0nm,0.6s,mb3.8						
BVAR	**Borovoye Array**	**32.44**	**320**	P	**P**	**05 17 59.0**	**+1.5**
	comp=Z,0.9nm,0.7s,mb3.7,baz=116,slow=12,SNR=4.2						
PALK	**Pallekele**	**33.57**	**228**	P	**P**	**05 18 08.2**	**+0.4**
	comp=Z,3.8nm,0.4s,mb4.7,baz=53,slow=5.1,SNR=7.2						
PALK	**Pallekele**	**33.57**	**228**	*e*P	**P**	**05 18 08.2**	**+0.4**
ABKAR	**Akbulak array**	**37.55**	**310**	*e*P	**P**	**05 18 41.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.9						
AKTK	**Aktyubinsk**	**38.98**	**312**	P	**P**	**05 18 54.7**	**+1.1**
AKTO	**Aktyubinsk**	**38.98**	**312**	P	**P**	**05 18 54.7**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=107,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**05 21 08.6**	**-1.3**
	comp=Z,2.5nm,0.8s,mb4.3,baz=91,slow=7.5,SNR=5.4						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**05 21 11.4**	**-1.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=95,slow=7.8,SNR=4.4						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**05 21 12.8**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.3,baz=84,slow=5.9,SNR=5.2						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**05 21 48.4**	**+0.3**
	comp=Z,1.6nm,0.8s,mb4.2,baz=330,slow=6.5,SNR=7.2						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**05 22 00.8**	**-1.1**
	comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=6.9,SNR=4.2						
INK	**Inuvik**	**70.87**	**20**	P	**P**	**05 22 44.0**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=332,slow=2.6,SNR=4.8						
INK	**Inuvik**	**70.87**	**20**	*e*P	**P**	**05 22 43.1**	**-1.0**
	comp=Z,1.8nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**80.42**	**17**	P	**P**	**05 23 38.5**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=5.2,SNR=8.7						
YKA	**Yellowknife Ar**	**80.42**	**17**	P	**P**	**05 23 38.5**	**-0.4**

*DJA **20** 05:11:59, 4°.18N×95°.52E, h15km, MLv4.8/9*
*ISCJB **20** 05:12:00.7±0.7, 4°.36N±0°.05×95°.78E±0°.07, h76km±6km, mb4.0/15, Error ellipse: s-maj=13.6km s-min=6.0km az=147.1*
*NEIC **20** 05:12:07.3±1.9, 4°.45N×95°.92E, h121km±17km, mb4.4/5, Error ellipse: s-maj=19.2km s-min=11.5km az=50.0*
NEIC Felt [II] at Banda Aceh.
*IDC **20** 05:12:08.3±5.2, 4°.53N×95°.92E, h128km±48km, mb3.6/12, mb1 3.7/14, mb1mx3.6/27, mbtmp3.7/14, Error ellipse: s-maj=28.8km s-min=15.9km az=49.0*

ISC 20 05:12:01.6±0.7, 4°.31N±0°.06×95°.67E±0°.09, h67km±7km, n37, σ1°17/38, mb4.0/15, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.23**	**342**	P	**Pn**	**05 12 22.8**	**-0.2**
BSI				S	**Sn**	**05 12 38.4**	**-0.5**
LHMI	**Lhok Sumawe**	**1.57**	**54**	P	**Pn**	**05 12 27.9**	**+0.6**
TSI	**Tuntungan**	**3.00**	**105**	P	**Pn**	**05 12 47.7**	**+1.0**
GSI	**Gunungsitoli**	**3.54**	**147**	P	**Pn**	**05 12 53.6**	**-0.6**
GSI				S	**Sn**	**05 13 33.3**	**-1.6**
TRSI	**Tarutung**	**3.99**	**125**	P	**Pn**	**05 13 04.6**	**+4.3**
KULM	**Kulim**	**5.06**	**79**	*e*Pn	**Pn**	**05 13 15.1**	**+0.2**
KULM				*e*Sn	**Sn**	**05 14 08.0**	**-4.1**
MNSI	**Mandailing Nat**	**5.24**	**132**	P	**Pn**	**05 13 17.8**	**+0.4**
SISI	**Saibi**	**6.56**	**149**	P	**Pn**	**05 13 34.9**	**-0.6**
	53nm,0.7s,0.2nm						
BKNI	**Bangkinang**	**6.67**	**126**	P	**Pn**	**05 13 37.8**	**+0.9**
	82nm,0.5s,0.4nm						
PPI	**Padang Panjang**	**6.69**	**135**	P	**Pn**	**05 13 40.4**	**+3.2**
PDSI	**Padang**	**7.06**	**137**	P	**Pn**	**05 13 42.2**	**-0.1**
	61nm,1.1s,1μm0.3nm						
SDSI	**Sungai Dareh**	**7.76**	**132**	P	Px	05 14 14.1	
MDSI	**Maura Dua**	**12.19**	**136**	P	**Pn**	**05 14 49.2**	**-3.3**
CM31	**Chiang Mai Arr**	**14.42**	**13**	*e*Pn	**Pn**	**05 15 25.6**	**+3.4**
CMAR	**Chiang Mai Arr**	**14.42**	**13**	P	**Pn**	**05 15 25.0**	**+2.8**
	0.8nm,0.3s,baz=200,slow=12,SNR=25						
PALK	**Pallekele**	**15.18**	**282**	P	**Pn**	**05 15 39.1**	**+7.0**
	0.7nm,0.3s,baz=104,slow=14,SNR=4.9						
PALK	**Pallekele**	**15.18**	**282**	P	**Pn**	**05 15 39.1**	**+7.0**
FITZ	**Fitzroy Crossi**	**37.01**	**128**	P	**P**	**05 19 04.1**	**-0.8**
	1.1nm,0.6s,mb4.0,baz=305,slow=12,SNR=2.2						
AML	**Almayashu**	**42.45**	**336**	*e*P	**P**	**05 19 49.8**	**0.0**
	3.9nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**42.55**	**337**	P	**P**	**05 19 52.2**	**+1.6**
	0.9nm,0.4s,mb3.9,baz=184,slow=14,SNR=3.5						
MK31	**Makanchi Array**	**43.88**	**347**	*e*P	**P**	**05 20 02.1**	**+0.8**
MKAR	**Makanchi Array**	**43.88**	**347**	P	**P**	**05 19 59.6**	**-1.6**
	1.4nm,0.5s,mb3.9,baz=161,slow=7.9,SNR=13						
KSRS	**Korea Array**	**44.24**	**37**	P	**P**	**05 20 01.6**	**-2.7**
	1.5nm,0.7s,mb3.9,baz=220,slow=9.4,SNR=7.4						
WRAB	**Tennant Creek**	**45.00**	**124**	*e*P	**P**	**05 20 11.4**	**+0.7**
	9.5nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**46.50**	**129**	P	**P**	**05 20 22.9**	**+0.5**
	0.6nm,0.4s,mb3.7,baz=299,slow=8.1,SNR=12						
KURK	**Kurchatov**	**48.41**	**346**	P	**P**	**05 20 35.8**	**-1.0**
	0.4nm,0.5s,mb3.5,baz=172,slow=6.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**50.27**	**352**	P	**P**	**05 20 49.7**	**-1.3**
	0.8nm,0.3s,mb4.1,baz=160,slow=4.6,SNR=3.1						
ABKAR	**Akbulak array**	**54.07**	**332**	*e*P	**P**	**05 21 18.9**	**-0.3**
	3.1nm,0.8s,mb4.4						
BR131	**Keskin Array S**	**65.91**	**312**	*e*P	**P**	**05 22 39.4**	**-1.1**
	0.9nm,0.6s,mb3.8						
BRTR	**Keskin Array B**	**65.91**	**312**	P	**P**	**05 22 39.8**	**-0.8**
	1.4nm,0.5s,mb4.0,baz=137,slow=7.9,SNR=9.2						
CASY	**Casey**	**71.24**	**174**	*e*P	**P**	**05 23 14.8**	**+1.6**
	30nm,0.6s						
ARCES	**ARCESS Array B**	**79.11**	**340**	P	**P**	**05 23 58.2**	**-0.2**
	0.4nm,0.3s,mb3.7,baz=102,slow=6.6,SNR=6.7						
ARCES	**ARCESS Array B**	**79.11**	**340**	P	**P**	**05 23 58.2**	**-0.2**
SYO	**Syowa Base**	**82.48**	**198**	⇓*e*X	sP	05 24 42.0	-0.2
SPITS	**Spitsbergen Ar**	**83.61**	**348**	P	**P**	**05 24 21.5**	**-0.7**
	2.7nm,0.8s,mb4.2,baz=105,slow=9.8,SNR=5.7						
KEST	**Kesra**	**84.52**	**305**	P	**P**	**05 24 29.0**	**+1.4**
	2.0nm,0.9s,mb4.0,baz=118,slow=16,SNR=3.8						
TORD	**Torodi Ar. Bea**	**92.89**	**283**	P	**P**	**05 25 08.7**	**+0.8**

ISK **20** *06:00:06.8, 36.19N×27.50E, h20km, ML4.3*
ISCJB **20** *06:00:07.4±0.4, 36.11N±0.01×27.64E±0.02, h26km±3km, mb4.2/36, MS3.1/3, Error ellipse: s-maj=2.4km s-min=2.1km az=44.2*
NEIC **20** *06:00:07.1, 36.31N×27.62E, h18km, mb4.2/23, MD4.1(ATH), ML3.8(NIC), After ATH.*
NEIC Felt at Rodos.
ATH **20** *06:00:07.1, 36.31N×27.62E, h18km±3km, MD4.1/11*
CSEM **20** *06:00:08.7±0.1, 36.17N×27.63E, h20km, mb4.5/17, Mw3.9, Error ellipse: s-maj=2.7km s-min=2.1km az=50.0*
MOS **20** *06:00:08.7±0.9, 36.19N×27.70E, h33km, mb4.3/8, Error ellipse: s-maj=8.7km s-min=5.0km az=126.9*
DDA **20** *06:00:08.4, 36.25N×27.53E, h44km, Md3.7*
THE **20** *06:00:08.1, 36.29N×27.70E, h0km, ML4.6/5, Error ellipse: s-maj=1.9km s-min=0.6km az=207.0*
NIC **20** *06:00:09.9±0.2, 36.13N×27.57E, h25km, mb4.3, ML3.8, MW3.9*
HLW **20** *06:00:10.4, 36.12N×27.90E, h33km±41km, Ml3.9*
IDC **20** *06:00:10.7±2.1, 36.26N×27.54E, h35km±17km, mb4.0/19, mb1 4.0/26, mb1mx4.0/33, mbtmp3.9/26, ML3.9/7, MS3.0/8, Ms1 3.0/8, ms1mx2.7/42, Error ellipse: s-maj=15.1km s-min=11.5km az=147.0*

ISC 20 06:00:08.3±0.5, **36.16N**±0.01×**27.63E**±0.02, **h15**km±3km, **n468**, σ1§12/502, **mb4.2**/34, **MS3.1**/3, **2C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.41**	**82**	*e*PB	**Pg**	**06 00 15.9**	**-0.7**
ARG				*e*SB	**Sg**	**06 00 21.7**	**-0.4**
ARG	**Arkhangelos**	**0.41**	**82**	P	**Pg**	**06 00 15.6**	**-1.0**
ARG				S	**Sg**	**06 00 21.6**	**-0.5**
ARG	**Arkhangelos**	**0.41**	**82**	P	**Pg**	**06 00 15.6**	**-1.0**
ARG	**Arkhangelos**	**0.41**	**82**	*e*Pb	**Pg**	**06 00 15.9**	**-0.7**
ARG				*e*Sb	**Sg**	**06 00 21.7**	**-0.4**
DAT	**Datca**	**0.57**	**356**	*e*PG	**Pg**	**06 00 18.3**	**-1.2**
DAT				*e*SG	**Sg**	**06 00 25.6**	**-1.5**
DAT	**Datca**	**0.57**	**356**	*e*Pg	**Pg**	**06 00 18.3**	**-1.2**
DAT				*e*Sg	**Sg**	**06 00 25.6**	**-1.5**
KARP	**Karpathos**	**0.72**	**212**	*e*PB	**Pb**	**06 00 22.8**	**+0.3**
KARP				*e*SN		06 00 35.8	
KARP	**Karpathos**	**0.72**	**212**	*e*Pb	**Pb**	**06 00 22.8**	**+0.3**
KARP				*e*Sn		06 00 35.8	
BDRM	**Kayabasi**	**0.91**	**351**	*i* P	**Pb**	**06 00 24.6**	**-1.2**
BDRM				*i* S	**Sb**	**06 00 37.1**	**-0.6**
BDRM	**Kayabasi**	**0.91**	**351**	*i* P	**Pb**	**06 00 24.6**	**-1.2**
BDRM				*i* S	**Sb**	**06 00 37.1**	**-0.7**
TURN	**Turunc**	**1.06**	**48**	*i* P	**Pb**	**06 00 22.2**	**-6.1**
TURN				*i* S	**Sb**	**06 00 32.3**	**-10**
YER	**Yerkesik**	**1.11**	**28**	*e*PN	**Pn**	**06 00 28.2**	**-0.9**
YER				*e*SN	**Sn**	**06 00 43.1**	**-1.1**
YER	**Yerkesik**	**1.11**	**28**	*e*Pn	**Pn**	**06 00 28.3**	**-0.9**
YER				*e*Sn	**Sn**	**06 00 43.1**	**-1.1**
MLSB	**Milas**	**1.14**	**6**	*e*PN	**Pn**	**06 00 28.6**	**-1.1**
MLSB				*e*SN	**Sn**	**06 00 43.5**	**-1.4**
MLSB	**Milas**	**1.14**	**6**	*e*Pn	**Pn**	**06 00 28.6**	**-1.0**
MLSB				*e*Sn	**Sn**	**06 00 43.5**	**-1.4**
FETY	**Fethiye**	**1.27**	**68**	*e*PN	**Pn**	**06 00 31.1**	**-0.3**
FETY				*e*SN	**Sn**	**06 00 48.8**	**+0.7**
FETY	**Fethiye**	**1.27**	**68**	*e*Pn	**Pn**	**06 00 31.2**	**-0.2**
FETY				*e*Sn	**Sn**	**06 00 48.8**	**+0.7**
AYDN	**Tasoluk**	**1.51**	**8**	*i* P	**Pn**	**06 00 34.1**	**-0.7**
AYDN				*i* S	**Sn**	**06 00 52.8**	**-1.3**
AYDN	**Tasoluk**	**1.51**	**8**	*i* P	**Pn**	**06 00 34.1**	**-0.6**
AYDN				*i* S	**Sn**	**06 00 52.8**	**-1.3**
ZKR	**Zakros**	**1.55**	**228**	*e*PB	**Pb**	**06 00 36.4**	**-0.2**
ZKR	**Zakros**	**1.55**	**228**	*e*Pb	**Pb**	**06 00 36.4**	**-0.2**
GCAM	**G?zelcaml?**	**1.57**	**349**	*i* P	**Pn**	**06 00 34.5**	**-1.0**
GCAM	**G?zelcaml?**	**1.57**	**349**	*i* P	**Pn**	**06 00 34.5**	**-1.0**
KSL	**Kastellorizon**	**1.58**	**90**	*e*PN	**Pn**	**06 00 37.2**	**+1.4**
KSL	**Kastellorizon**	**1.58**	**90**	*e*Pn	**Pn**	**06 00 37.2**	**+1.4**
AKAS	**Kas**	**1.60**	**87**	*i* P	**Pn**	**06 00 37.3**	**+1.3**
AKAS				*i* S	**Sn**	**06 00 59.0**	**+2.5**
AKAS	**Kas**	**1.60**	**87**	*i* P	**Pn**	**06 00 37.3**	**+1.3**
AKAS				*i* S	**Sn**	**06 00 59.0**	**+2.6**
SMG	**Samos**	**1.67**	**338**	*e*PN	**Pn**	**06 00 35.8**	**-1.1**
SMG	**Samos**	**1.67**	**338**	*e*Pn	**Pn**	**06 00 35.8**	**-1.1**
GLHS	**Glhisar (BURDU**	**1.80**	**56**	*e*PN	**Pn**	**06 00 39.0**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.80**	**56**	*e*Pn	**Pn**	**06 00 39.1**	**+0.3**
THRS	**Thira Island,**	**1.86**	**279**	P	**Pn**	**06 00 39.6**	**+0.1**
THRS	**Thira Island,**	**1.86**	**279**	P	**Pn**	**06 00 39.6**	**+0.1**
NPS	**Neapolis**	**1.87**	**242**	*e*PB	**Pb**	**06 00 40.1**	**-1.9**
NPS	**Neapolis**	**1.87**	**242**	*e*Pb	**Pb**	**06 00 40.1**	**-1.9**
GOLH	**Golhisar**	**1.89**	**55**	*i* P	**Pn**	**06 00 42.4**	**+2.4**
GOLH				*i* S	**Sn**	**06 01 06.5**	**+3.0**
GOLH	**Golhisar**	**1.89**	**55**	*i* P	**Pn**	**06 00 42.4**	**+2.4**
GOLH				*i* S	**Sn**	**06 01 06.5**	**+3.0**
DNZL	**Cakiroluk**	**1.90**	**36**	*i* P	**Pn**	**06 00 41.7**	**+1.6**
DNZL				*i* S	**Sn**	**06 01 06.4**	**+2.6**
DNZL	**Cakiroluk**	**1.90**	**36**	*i* P	**Pn**	**06 00 41.7**	**+1.6**
DNZL				*i* S	**Sn**	**06 01 06.4**	**+2.6**
APE	**Apeiranthos**	**1.91**	**299**	*e*PN	**Pn**	**06 00 39.8**	**-0.5**
APE	**Apeiranthos**	**1.91**	**299**	*e*Pn	**Pn**	**06 00 39.8**	**-0.5**
ELL	**Elmali**	**1.93**	**72**	*e*PN	**Pn**	**06 00 40.7**	**+0.1**
ELL	**Elmali**	**1.93**	**72**	*e*Pn	**Pn**	**06 00 40.7**	**+0.2**
DENT	**Denizli**	**1.95**	**35**	*e*PN	**Pn**	**06 00 41.1**	**+0.3**
DENT	**Denizli**	**1.95**	**35**	*e*Pn	**Pn**	**06 00 41.1**	**+0.3**
LAST	**Lasithi**	**2.01**	**241**	*e*PB	**Pb**	**06 00 42.6**	**-1.9**
LAST	**Lasithi**	**2.01**	**241**	*e*Pb	**Pb**	**06 00 42.6**	**-1.9**
XRY	**Khrisi**	**2.03**	**231**	*e*PN	**Pn**	**06 00 44.1**	**+2.2**
XRY	**Khrisi**	**2.03**	**231**	*e*Pn	**Pn**	**06 00 44.1**	**+2.2**
IZM	**Izmir**	**2.25**	**353**	*e*PN	**Pn**	**06 00 43.4**	**-1.5**
IZM	**Izmir**	**2.25**	**353**	*e*Pn	**Pn**	**06 00 43.4**	**-1.5**
BLCB	**Balcova**	**2.27**	**348**	*e*PN	**Pn**	**06 00 43.5**	**-1.7**
BLCB	**Balcova**	**2.27**	**348**	P	**Pn**	**06 00 43.6**	**-1.6**
BLCB	**Balcova**	**2.27**	**348**	P	**Pn**	**06 00 43.6**	**-1.6**
URLA	**Izmir**	**2.34**	**340**	*i* P	**Pn**	**06 00 45.0**	**-1.2**
URLA	**Izmir**	**2.34**	**340**	*i* P	**Pn**	**06 00 45.0**	**-1.2**
KORT	**Korkueli**	**2.35**	**68**	*i* P	**Pn**	**06 00 48.8**	**+2.6**
KORT				*i* S	**Sn**	**06 01 19.4**	**+4.6**
KORT	**Korkueli**	**2.35**	**68**	*i* P	**Pn**	**06 00 48.8**	**+2.5**
IDI	**Anoyia**	**2.39**	**249**	Pn	**Pn**	**06 00 47.0**	**+0.2**
	25nm,0.3s,baz=64,slow=13,SNR=115						
IDI				Sn	**Sn**	**06 01 15.6**	**-0.2**
	50nm,0.3s,baz=354,slow=22,SNR=12						
IDI	**Anoyia**	**2.39**	**249**	*e*PN	**Pn**	**06 00 47.2**	**+0.4**
IDI	**Anoyia**	**2.39**	**249**	*e*Pn	**Pn**	**06 00 47.2**	**+0.4**
KULA	**Kula-Manisa**	**2.49**	**19**	*e*PN	**Pn**	**06 00 48.0**	**-0.2**
KULA	**Kula-Manisa**	**2.49**	**19**	*e*Pn	**Pn**	**06 00 48.0**	**-0.2**
ANTB	**Antalya**	**2.55**	**72**	*e*PN	**Pn**	**06 00 49.9**	**+0.9**
ANTB	**Antalya**	**2.55**	**72**	*e*Pn	**Pn**	**06 00 49.9**	**+0.9**
CHOS	**Chios island**	**2.55**	**331**	P	**Pn**	**06 00 48.2**	**-0.8**
CHOS				S	**Sn**	**06 01 19.8**	**0.0**
CHOS	**Chios island**	**2.55**	**331**	P	**Pn**	**06 00 48.2**	**-0.8**
CHOS				S	**Sn**	**06 01 19.8**	**0.0**
SIVA	**Sivas**	**2.56**	**244**	*e*PN	**Pn**	**06 00 50.6**	**+1.4**
SIVA	**Sivas**	**2.56**	**244**	*e*Pn	**Pn**	**06 00 50.6**	**+1.4**
KHL	**Karahalli**	**2.64**	**35**	*e*PN	**Pn**	**06 00 49.9**	**-0.3**
KHL	**Karahalli**	**2.64**	**35**	*e*Pn	**Pn**	**06 00 49.9**	**-0.3**
KHAL	**Karahalli**	**2.66**	**33**	*i* P	**Pn**	**06 00 51.4**	**+0.8**
KHAL				*i* S	**Sn**	**06 01 22.1**	**-0.4**
KHAL	**Karahalli**	**2.66**	**33**	*i* P	**Pn**	**06 00 51.4**	**+0.8**
KHAL				*i* S	**Sn**	**06 01 22.1**	**-0.4**
BCK	**Bucak**	**2.71**	**61**	*e*PN	**Pn**	**06 00 51.7**	**+0.5**
BCK	**Bucak**	**2.71**	**61**	*e*Pn	**Pn**	**06 00 51.7**	**+0.5**
AKHS	**Akhisar**	**2.72**	**3**	*e*P	**Pn**	**06 00 50.5**	**-0.9**
AKHS	**Akhisar**	**2.72**	**3**	*e*P	**Pn**	**06 00 50.5**	**-0.8**
AKS	**Akhisar**	**2.72**	**3**	*e*PN	**Pn**	**06 00 50.3**	**-1.0**
AKS	**Akhisar**	**2.72**	**3**	*e*Pn	**Pn**	**06 00 50.3**	**-1.0**
ISP	**Isparta**	**2.85**	**53**	*e*P	**Pn**	**06 00 57.2**	**+4.0**
ISP	**Isparta**	**2.85**	**53**	*e*P	**Pn**	**06 00 57.2**	**+4.0**
DEMI	**Demirci**	**3.00**	**16**	*i* P	**Pn**	**06 00 55.0**	**-0.3**
DEMI				*i* S	**Sn**	**06 01 28.6**	**-2.4**
DEMI	**Demirci**	**3.00**	**16**	*i* P	**Pn**	**06 00 55.0**	**-0.3**
DEMI				*i* S	**Sn**	**06 01 28.6**	**-2.4**
SUTC	**Sutluce-Ispart**	**3.01**	**63**	*e*PN	**Pn**	**06 00 55.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**3.01**	**63**	*e*Pn	**Pn**	**06 00 55.9**	**+0.6**
PRK	**Paraskevi**	**3.26**	**341**	*e*PN	**Pn**	**06 00 58.3**	**-0.5**
PRK	**Paraskevi**	**3.26**	**341**	P	**Pn**	**06 00 58.2**	**-0.6**
PRK				S	**Sn**	**06 01 36.7**	**-0.6**
PRK	**Paraskevi**	**3.26**	**341**	P	**Pn**	**06 00 58.2**	**-0.6**
PRK				S	**Sn**	**06 01 36.7**	**-0.6**
SHUT	**Suhut-Afyon**	**3.34**	**43**	*e*PN	**Pn**	**06 01 00.3**	**+0.4**
SHUT	**Suhut-Afyon**	**3.34**	**43**	*e*Pn	**Pn**	**06 01 00.3**	**+0.5**
SIGR	**SIGRI**	**3.35**	**336**	P	**Pn**	**06 00 59.5**	**-0.6**
SIGR				S	**Sn**	**06 01 39.4**	**-0.2**
SIGR	**SIGRI**	**3.35**	**336**	P	**Pn**	**06 00 59.5**	**-0.6**
SIGR				S	**Sn**	**06 01 39.4**	**-0.2**
BALB	**Balikesir**	**3.48**	**3**	*e*PN	**Pn**	**06 01 01.8**	**0.0**
BALB	**Balikesir**	**3.48**	**3**	*e*Pn	**Pn**	**06 01 01.8**	**0.0**
ALT	**Altintas**	**3.50**	**34**	*e*PN	**Pn**	**06 01 02.1**	**0.0**
ALT	**Altintas**	**3.50**	**34**	*e*Pn	**Pn**	**06 01 02.1**	**0.0**
DST	**Dursunbey**	**3.53**	**13**	*e*PN	**Pn**	**06 01 02.3**	**-0.2**
DST	**Dursunbey**	**3.53**	**13**	*e*Pn	**Pn**	**06 01 02.3**	**-0.2**
ATHU	**Athens Univers**	**3.56**	**302**	P	**Pn**	**06 01 03.7**	**+0.8**
ATHU				S	**Sn**	**06 01 46.5**	**+1.8**
ATHU	**Athens Univers**	**3.56**	**302**	P	**Pn**	**06 01 03.7**	**+0.8**
KYTH	**Kithira**	**3.71**	**273**	*e*PN	**Pn**	**06 01 06.4**	**+1.4**
KYTH	**Kithira**	**3.71**	**273**	*e*Pn	**Pn**	**06 01 06.4**	**+1.4**
GAZI	**Gazipasa**	**3.79**	**88**	*i* P	**Pn**	**06 01 06.4**	**+0.2**
GAZI				*i* S	**Sn**	**06 01 48.6**	**-1.8**
GAZI	**Gazipasa**	**3.79**	**88**	*i* P	**Pn**	**06 01 06.4**	**+0.3**
GAZI				*i* S	**Sn**	**06 01 48.6**	**-1.9**
VLI	**Veliai**	**3.82**	**280**	*e*PN	**Pn**	**06 01 07.7**	**+1.2**
VLI	**Veliai**	**3.82**	**280**	*e*Pn	**Pn**	**06 01 07.7**	**+1.2**
HDMB	**Hadim**	**4.00**	**77**	*e*PN	**Pn**	**06 01 10.1**	**+1.2**
HDMB	**Hadim**	**4.00**	**77**	*e*Pn	**Pn**	**06 01 10.1**	**+1.2**
PPCY	**Paphos**	**4.05**	**107**	P	**Pn**	**06 01 10.0**	**+0.3**
PPCY	**Paphos**	**4.05**	**107**	P	**Pn**	**06 01 10.0**	**+0.3**
LTK	**Loutraki**	**4.16**	**298**	P	**Pn**	**06 01 12.1**	**+0.9**
LTK	**Loutraki**	**4.16**	**298**	P	**Pn**	**06 01 12.1**	**+0.9**
ALFC	**Alevga**	**4.17**	**102**	P	**Pn**	**06 01 11.4**	**+0.1**
	12nm,0.2s						
ALFC				S	**Sn**	**06 01 59.7**	**-0.1**
ALFC	**Alevga**	**4.17**	**102**	P	**Pn**	**06 01 11.4**	**+0.1**
	12nm,0.2s						
ALFC				S	**Sn**	**06 01 59.7**	**-0.1**
KONT	**Konya--Tatoy**	**4.19**	**63**	*e*PN	**Pn**	**06 01 12.9**	**+1.4**
KONT	**Konya--Tatoy**	**4.19**	**63**	*e*Pn	**Pn**	**06 01 12.9**	**+1.4**
LIA	**Limnos Island**	**4.20**	**333**	P	**Pn**	**06 01 11.6**	**-0.1**
LIA	**Limnos Island**	**4.20**	**333**	P	**Pn**	**06 01 11.6**	**-0.1**
ESKT	**Eskisehir**	**4.21**	**36**	*e*PN	**Pn**	**06 01 12.9**	**+1.0**
ESKT	**Eskisehir**	**4.21**	**36**	*e*Pn	**Pn**	**06 01 12.9**	**+1.0**
GADA	**Gvkgeada**	**4.25**	**342**	*e*PN	**Pn**	**06 01 11.4**	**-0.9**
GADA	**Gvkgeada**	**4.25**	**342**	*e*Pn	**Pn**	**06 01 11.4**	**-0.9**
LPK	**Lapseki**	**4.26**	**351**	*e*PN	**Pn**	**06 01 11.5**	**-1.0**
LPK	**Lapseki**	**4.26**	**351**	*e*Pn	**Pn**	**06 01 11.5**	**-1.0**
LADK	**Ladik-KONYA**	**4.30**	**60**	*e*PN	**Pn**	**06 01 14.1**	**+1.0**
LADK	**Ladik-KONYA**	**4.30**	**60**	*e*Pn	**Pn**	**06 01 14.1**	**+1.1**
KIZT	**Kizilcal**	**4.34**	**50**	*e*PN	**Pn**	**06 01 16.6**	**+3.0**
KIZT	**Kizilcal**	**4.34**	**50**	*e*Pn	**Pn**	**06 01 16.6**	**+3.0**
VLX	**Vlachokerasia**	**4.38**	**288**	P	**Pn**	**06 01 15.5**	**+1.3**
VLX	**Vlachokerasia**	**4.38**	**288**	P	**Pn**	**06 01 15.5**	**+1.3**
LEF	**Lefka**	**4.41**	**102**	*e*PN	**Pn**	**06 01 13.7**	**-0.9**
LEF	**Lefka**	**4.41**	**102**	*e*Pn	**Pn**	**06 01 13.7**	**-0.9**
SVRH	**Sivrihisar-ESK**	**4.50**	**42**	*e*PN	**Pn**	**06 01 17.0**	**+1.1**
SVRH	**Sivrihisar-ESK**	**4.50**	**42**	*e*Pn	**Pn**	**06 01 17.0**	**+1.1**
SZAC	**Souni-Zanaja**	**4.51**	**107**	P	**Pn**	**06 01 15.8**	**-0.2**
SZAC	**Souni-Zanaja**	**4.51**	**107**	P	**Pn**	**06 01 15.8**	**-0.2**
RKY	**Sarkoy-Tekirda**	**4.53**	**356**	*e*PN	**Pn**	**06 01 15.6**	**-0.7**
RKY	**Sarkoy-Tekirda**	**4.53**	**356**	*e*Pn	**Pn**	**06 01 15.6**	**-0.7**
ADVT	**Abdulvahap**	**4.58**	**21**	*e*PN	**Pn**	**06 01 17.9**	**+1.0**
ADVT	**Abdulvahap**	**4.58**	**21**	*e*Pn	**Pn**	**06 01 17.9**	**+1.0**
GUR	**Goura**	**4.58**	**294**	P	**Pn**	**06 01 18.3**	**+1.3**
GUR	**Goura**	**4.58**	**294**	P	**Pn**	**06 01 18.3**	**+1.3**
ITM	**Ithomi**	**4.69**	**284**	*e*PN	**Pn**	**06 01 21.4**	**+2.9**
ITM	**Ithomi**	**4.69**	**284**	P	**Pn**	**06 01 21.4**	**+2.9**
ITM	**Ithomi**	**4.69**	**284**	*e*Pn	**Pn**	**06 01 21.4**	**+2.9**
ENEZ	**Enez**	**4.71**	**346**	*e*PN	**Pn**	**06 01 18.0**	**-0.7**
ENEZ	**Enez**	**4.71**	**346**	*e*Pn	**Pn**	**06 01 18.0**	**-0.7**
XOR	**Xorichti**	**4.75**	**314**	P	**Pn**	**06 01 19.4**	**+0.1**
XOR	**Xorichti**	**4.75**	**314**	P	**Pn**	**06 01 19.4**	**+0.1**
PYL	**PYLOS**	**4.79**	**281**	P	**Pn**	**06 01 21.6**	**+1.7**
PYL	**PYLOS**	**4.79**	**281**	P	**Pn**	**06 01 21.6**	**+1.7**
CSS	**Prodhromos**	**4.80**	**103**	P	**Pn**	**06 01 20.4**	**+0.4**
	5.5nm,0.5s						
CSS				S	**Sn**	**06 02 15.5**	**+0.2**
CSS	**Prodhromos**	**4.80**	**103**	P	**Pn**	**06 01 20.4**	**+0.4**
	5.5nm,0.5s						
CSS				S	**Sn**	**06 02 15.5**	**+0.2**
GULT	**Gulveren**	**4.83**	**27**	*e*PN	**Pn**	**06 01 21.6**	**+1.2**
GULT	**Gulveren**	**4.83**	**27**	*e*Pn	**Pn**	**06 01 21.6**	**+1.2**
LFK	**Lefkose**	**4.89**	**99**	*e*PN	**Pn**	**06 01 21.8**	**+0.6**
LFK	**Lefkose**	**4.89**	**99**	*e*Pn	**Pn**	**06 01 21.8**	**+0.7**
ALN	**Alexandroupoli**	**4.89**	**346**	P	**Pn**	**06 01 20.6**	**-0.6**
ALN	**Alexandroupoli**	**4.89**	**346**	P	**Pn**	**06 01 20.6**	**-0.6**
IKL	**Isikli**	**4.90**	**87**	*e*PN	**Pn**	**06 01 22.6**	**+1.2**
IKL	**Isikli**	**4.90**	**87**	*e*Pn	**Pn**	**06 01 22.6**	**+1.2**
TRIZ	**Trizonia**	**4.95**	**298**	P	**Pn**	**06 01 23.4**	**+1.5**
TRIZ				S	**Sn**	**06 02 20.4**	**+1.6**
TRIZ	**Trizonia**	**4.95**	**298**	P	**Pn**	**06 01 23.4**	**+1.5**
SLUM		**5.07**	**204**	P	**Pn**	**06 01 25.2**	**+1.5**
	baz=207						
SLUM				S	**Sn**	**06 02 18.6**	**-3.4**
	baz=207						
SLUM		**5.07**	**204**	P	**Pn**	**06 01 25.2**	**+1.5**
SLUM				S	**Sn**	**06 02 18.6**	**-3.4**
HMAT	**Matruh**	**5.07**	**185**	P	**Pn**	**06 01 24.5**	**+0.8**
	baz=188						
HMAT	**Matruh**	**5.07**	**185**	P	**Pn**	**06 01 24.5**	**+0.8**
CTKS	**Kestanelik-??a**	**5.11**	**7**	*e*PN	**Pn**	**06 01 24.3**	**0.0**
CTKS	**Kestanelik-??a**	**5.11**	**7**	*e*Pn	**Pn**	**06 01 24.3**	**0.0**
SULT	**Sultanhani-AKS**	**5.12**	**65**	*e*PN	**Pn**	**06 01 26.7**	**+2.2**
SULT	**Sultanhani-AKS**	**5.12**	**65**	*e*Pn	**Pn**	**06 01 26.7**	**+2.3**
CTYL	**Yal??k??y-??at**	**5.33**	**5**	*e*PN	**Pn**	**06 01 27.5**	**+0.3**
CTYL	**Yal??k??y-??at**	**5.33**	**5**	*e*Pn	**Pn**	**06 01 27.5**	**+0.3**
PHNC	**Paralimni**	**5.35**	**101**	P	**Pn**	**06 01 30.0**	**+2.5**
	8.6nm,0.7s						
PHNC				S	**Sn**	**06 02 29.2**	**+0.4**
PHNC	**Paralimni**	**5.35**	**101**	P	**Pn**	**06 01 30.0**	**+2.5**
	8.6nm,0.7s						
PHNC				S	**Sn**	**06 02 29.2**	**+0.4**
EREN	**Erenkoy**	**5.35**	**95**	*e*PN	**Pn**	**06 01 29.9**	**+2.4**
EREN	**Erenkoy**	**5.35**	**95**	*e*Pn	**Pn**	**06 01 30.0**	**+2.4**
MERS	**Mersin**	**5.60**	**81**	*e*PN	**Pn**	**06 01 33.5**	**+2.5**
EDRB	**Edirne**	**5.72**	**353**	*e*PN	**Pn**	**06 01 32.8**	**+0.2**
EDRB	**Edirne**	**5.72**	**353**	*e*Pn	**Pn**	**06 01 32.8**	**+0.2**
BR131	**Keskin Array S**	**5.94**	**51**	*e*Pn	**Pn**	**06 01 38.1**	**+2.6**
	4.7nm,0.3s						
BR131				*e*Sn	**Sn**	**06 02 46.6**	**+3.4**
BRTR	**Keskin Array B**	**5.94**	**51**	Pn	**Pn**	**06 01 38.1**	**+2.5**
	1.2nm,0.3s,baz=226,slow=13,SNR=33						
BRTR				Sn	**Sn**	**06 02 46.8**	**+3.6**
	2.0nm,0.3s,baz=216,slow=26,SNR=11						
KARA	**Karaisali**	**6.07**	**77**	*e*PN	**Pn**	**06 01 40.0**	**+2.6**
MANS	**Anshas**	**6.12**	**147**	P	**Pn**	**06 01 44.8**	**+6.6**
KRTS	**Karatas**	**6.27**	**84**	*e*PN	**Pn**	**06 01 41.6**	**+1.5**
KRTS	**Karatas**	**6.27**	**84**	*e*Pn	**Pn**	**06 01 41.6**	**+1.5**
SAFT	**Safranbolu**	**6.43**	**36**	*e*PN	**Pn**	**06 01 43.6**	**+1.2**
SAFT	**Safranbolu**	**6.43**	**36**	*e*Pn	**Pn**	**06 01 43.6**	**+1.2**
AANS		**6.65**	**151**	P	**Pn**	**06 01 44.8**	**-0.6**
	baz=152						
KOZT	**Kozan**	**6.71**	**76**	*e*PN	**Pn**	**06 01 48.6**	**+2.4**
CORM	**Corum**	**6.82**	**52**	*e*PN	**Pn**	**06 01 49.5**	**+1.8**
CORM	**Corum**	**6.82**	**52**	*e*Pn	**Pn**	**06 01 49.5**	**+1.8**
HMYD	**Mayadein**	**6.88**	**156**	P	**Pn**	**06 01 47.9**	**-0.8**
	baz=158						
HMYD	**Mayadein**	**6.88**	**156**	P	**Pn**	**06 01 47.8**	**-0.8**
SQR		**6.94**	**153**	P	**Pn**	**06 01 47.9**	**-1.5**
	baz=155						
SQR		**6.94**	**153**	P	**Pn**	**06 01 47.9**	**-1.5**
HNAT	**Natroun**	**6.98**	**158**	P	**Pn**	**06 01 49.8**	**-0.1**
	baz=159						
HNAT	**Natroun**	**6.98**	**158**	P	**Pn**	**06 01 49.8**	**-0.1**
FYM	**Al Fayyum**	**7.06**	**155**	P	**Pn**	**06 01 49.8**	**-1.3**
	baz=156						
FYM	**Al Fayyum**	**7.06**	**155**	P	**Pn**	**06 01 49.8**	**-1.2**
HWQ	**Hawqa**	**7.07**	**103**	*e*Pn	**Pn**	**06 01 51.1**	**0.0**
HWQ	**Hawqa**	**7.07**	**103**	*e*Pn	**Pn**	**06 01 51.1**	**0.0**
AYT	**Al 'Ayyat**	**7.09**	**154**	P	**Pn**	**06 01 51.5**	**+0.1**
	baz=155						
AYT	**Al 'Ayyat**	**7.09**	**154**	P	**Pn**	**06 01 51.5**	**+0.1**
SWA2		**7.14**	**195**	P	**Pn**	**06 01 53.7**	**+1.6**
	baz=198						
SWA2		**7.14**	**195**	P	**Pn**	**06 01 53.7**	**+1.6**
KOT	**Kottamia**	**7.15**	**149**	P	**Pn**	**06 01 51.9**	**-0.3**
	baz=150						
KOT	**Kottamia**	**7.15**	**149**	P	**Pn**	**06 01 51.9**	**-0.3**
HRSH	**Kfar Ka'horesh**	**7.21**	**116**	P	**Pn**	**06 01 53.1**	**+0.1**
	baz=135						
AMAG	**Maghara**	**7.21**	**138**	P	**Pn**	**06 01 51.9**	**-1.3**
	baz=139						
AMAG	**Maghara**	**7.21**	**138**	P	**Pn**	**06 01 51.9**	**-1.3**
HHAG	**Hagoal**	**7.24**	**148**	AMP		06 01 00.0	
	comp=N,100μm,0.2s,logA/T=5.7,baz=149						
RCY	**Rachaya**	**7.25**	**109**	*e*PN	**Pn**	**06 01 52.8**	**-0.8**
RCY	**Rachaya**	**7.25**	**109**	*e*Pn	**Pn**	**06 01 52.8**	**-0.8**
RSH		**7.26**	**134**	P	**Pn**	**06 01 53.1**	**-0.7**
HSAF	**As Saff**	**7.31**	**152**	P	**Pn**	**06 01 54.3**	**-0.2**
	baz=153						
HSAF	**As Saff**	**7.31**	**152**	P	**Pn**	**06 01 54.3**	**-0.2**
GLL	**Jalalah**	**7.41**	**151**	P	**Pn**	**06 01 54.2**	**-1.6**
	baz=152						
GLL	**Jalalah**	**7.41**	**151**	P	**Pn**	**06 01 54.2**	**-1.6**
SARI	**SarD1z-Kayseri**	**7.64**	**68**	*e*PN	**Pn**	**06 01 57.0**	**-2.0**
SARI	**SarD1z-Kayseri**	**7.64**	**68**	*e*Pn	**Pn**	**06 01 57.0**	**-2.0**
SUZ		**7.67**	**144**	P	**Pn**	**06 01 58.4**	**-1.1**
	baz=145						
SUZ		**7.67**	**144**	P	**Pn**	**06 01 58.3**	**-1.1**
HBNS	**Bani Suwayf**	**7.80**	**156**	P	**Pn**	**06 02 01.5**	**+0.3**
	baz=157						
HBNS	**Bani Suwayf**	**7.80**	**156**	P	**Pn**	**06 02 01.5**	**+0.3**
AWBH		**7.89**	**172**	P	**Pn**	**06 02 02.7**	**+0.2**
	baz=173						
AWBH		**7.89**	**172**	P	**Pn**	**06 02 02.7**	**+0.3**
ZAF		**8.02**	**147**	P	**Pn**	**06 02 03.4**	**-0.7**
	baz=148						
ZAF		**8.02**	**147**	P	**Pn**	**06 02 03.4**	**-0.7**
ZNM		**8.08**	**145**	P	**Pn**	**06 02 04.6**	**-0.5**
	baz=146						
ZNM		**8.08**	**145**	P	**Pn**	**06 02 04.6**	**-0.4**
HNKL	**Nakhl**	**8.19**	**138**	P	**

DAVOX LR LR 06 11 47.2
comp=Z,74nm,18.9s,baz=261,slow=41
DAVOX Davos/Dischmat 16.97 314 P **Pn 06 04 08.0 +3.0**
PVCC Panska Ves 17.18 331 *e*P **Pn 06 04 12.0 +4.5**
PVCC MLR MLR
comp=Z,200nm,12.4s
PVCC Panska Ves 17.18 331 *e*P **Pn 06 04 12.0 +4.5**
PVCC AMS AMS 06 12 00.0
comp=Z,200nm,12.4s
FRF La Foret Royal 17.69 301 *e*P **Pn 06 04 14.2 +0.2**
FRF La Foret Royal 17.69 301 *e*P **Pn 06 04 14.2 +0.2**
BRG Berggiesshubel 17.70 330 *e*(P) **Pn 06 04 18.5 +4.5**
comp=Z,5.8nm,1.1s
BRG Berggiesshubel 17.70 330 *e*P **Pn 06 04 18.5 +4.6**
BRG pmax pmax
comp=Z,4.0nm,1.1s
LMR La Mourre 17.72 300 *e*P **Pn 06 04 14.6 +0.3**
LMR La Mourre 17.72 300 *e*P **Pn 06 04 14.6 +0.3**
NKC Novy Kostel 17.84 327 AMS AMS 06 13 10.0
comp=Z,200nm,5.7s
MBDF Montbardon 18.00 305 *e*P **Pn 06 04 19.0 +1.3**
comp=Z,22nm,1.1s
MBDF Montbardon 18.00 305 *e*P **Pn 06 04 19.0 +1.3**
MBDF pmax pmax
comp=Z,11nm,1.1s
MBDF Montbardon 18.00 305 *e*P **Pn 06 04 19.0 +1.3**
comp=Z,11nm,1.1s
MBDF Montbardon 18.00 305 *e*P **Pn 06 04 19.0 +1.3**
comp=Z,11nm,1.1s
LPG La Plagne 18.30 307 *e*P **Pn 06 04 22.0 +0.6**
comp=Z,19nm,0.8s
LPG La Plagne 18.30 307 *e*P **Pn 06 04 22.0 +0.6**
LPG pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 18.30 307 *e*P **Pn 06 04 22.0 +0.6**
comp=Z,9.7nm,0.8s
LPG La Plagne 18.30 307 *e*P **Pn 06 04 22.0 +0.6**
comp=Z,9.7nm,0.8s
LPL La Plagne 18.32 307 *e*P **Pn 06 04 22.3 +0.6**
comp=Z,16nm,0.9s
LPL La Plagne 18.32 307 *e*P **Pn 06 04 22.3 +0.6**
LPL pmax pmax
comp=Z,8.0nm,0.9s
LPL La Plagne 18.32 307 *e*P **Pn 06 04 22.3 +0.6**
comp=Z,8.1nm,0.9s
LPL La Plagne 18.32 307 *e*P **Pn 06 04 22.3 +0.6**
comp=Z,8.1nm,0.9s
CLL Collm 18.41 330 *e*pP pP 06 04 25.0 -2.0
CLL *es*PP 06 04 38.0
MOX Moxa 18.51 326 *e*P **Pn 06 04 26.1 +2.1**
CABF La Chapelle 19.18 310 *e*P **Pn 06 04 32.3 +0.2**
comp=Z,42nm,1.1s
CABF La Chapelle 19.18 310 *e*P **Pn 06 04 32.3 +0.2**
CABF pmax pmax
comp=Z,21nm,1.1s
CABF La Chapelle 19.18 310 *e*P **Pn 06 04 32.3 +0.2**
comp=Z,21nm,1.1s
CABF La Chapelle 19.18 310 *e*P **Pn 06 04 32.3 +0.2**
comp=Z,21nm,1.1s
CDF Champ du Feu 19.33 316 *e*P **Pn 06 04 34.1 +0.2**
comp=Z,8.2nm,0.7s
CDF Champ du Feu 19.33 316 *e*P **Pn 06 04 34.1 +0.2**
CDF pmax pmax
comp=Z,4.0nm,0.7s
CDF Champ du Feu 19.33 316 *e*P **Pn 06 04 34.1 +0.2**
comp=Z,4.1nm,0.7s
CDF Champ du Feu 19.33 316 *e*P **Pn 06 04 34.1 +0.2**
comp=Z,4.1nm,0.7s
VIVF Saint-Julien-l 19.45 304 *e*P **Pn 06 04 34.1 -1.2**
comp=Z,11nm,0.7s
VIVF Saint-Julien-l 19.45 304 *e*P **Pn 06 04 34.1 -1.2**
VIVF pmax pmax
comp=Z,6.0nm,0.7s
VIVF Saint-Julien-l 19.45 304 *e*P **Pn 06 04 34.1 -1.2**
comp=Z,5.5nm,0.7s
VIVF Saint-Julien-l 19.45 304 *e*P **Pn 06 04 34.1 -1.2**
comp=Z,5.5nm,0.7s
OBN Obninsk 19.93 15⇑ *i*P **Pn 06 04 42.7 +1.8**
OBN pmax pmax
comp=Z,11nm,0.5s
SMF Signal de Mont 20.61 308 *e*P **P 06 04 46.5 -0.3**
comp=Z,19nm,0.9s
SMF Signal de Mont 20.61 308 *e*P **P 06 04 46.5 -0.3**
SMF pmax pmax
comp=Z,9.0nm,0.9s
SMF Signal de Mont 20.61 308 *e*P **P 06 04 46.5 -0.3**
comp=Z,9.4nm,0.9s
SMF Signal de Mont 20.61 308 *e*P **P 06 04 46.5 -0.3**
comp=Z,9.4nm,0.9s
MTLF Montolieu 20.76 298 *e*P **P 06 04 49.2 +0.8**
MTLF Montolieu 20.76 298 *e*P **P 06 04 49.2 +0.8**
AVF Avril sur Loir 20.98 308 *e*P **P 06 04 50.2 -0.5**
comp=Z,10nm,0.8s
AVF Avril sur Loir 20.98 308 *e*P **P 06 04 50.2 -0.5**
AVF pmax pmax
comp=Z,5.0nm,0.8s
AVF Avril sur Loir 20.98 308 *e*P **P 06 04 50.2 -0.5**
comp=Z,5.2nm,0.8s
AVF Avril sur Loir 20.98 308 *e*P **P 06 04 50.2 -0.5**
comp=Z,5.2nm,0.8s
SSF Saint Saulge 20.98 309 *e*P **P 06 04 50.2 -0.6**
comp=Z,14nm,0.6s
SSF Saint Saulge 20.98 309 *e*P **P 06 04 50.2 -0.6**
SSF pmax pmax
comp=Z,7.0nm,0.6s
SSF Saint Saulge 20.98 309 *e*P **P 06 04 50.2 -0.6**
comp=Z,7.1nm,0.6s
SSF Saint Saulge 20.98 309 *e*P **P 06 04 50.2 -0.6**
comp=Z,7.1nm,0.6s
CAF Calviac 21.24 302 *e*P **P 06 04 53.5 0.0**
comp=Z,12nm,0.8s,mb4.0
CAF Calviac 21.24 302 *e*P **P 06 04 53.5 0.0**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
CAF Calviac 21.24 302 *e*P **P 06 04 53.5 0.0**
comp=Z,5.9nm,0.8s,mb4.0
CAF Calviac 21.24 302 *e*P **P 06 04 53.5 0.0**
comp=Z,5.9nm,0.8s,mb4.0
TCF Toulx Ste Croi 21.54 306 *e*P **P 06 04 57.6 +0.8**
TCF Toulx Ste Croi 21.54 306 *e*P **P 06 04 57.6 +0.8**
RJF Les Rejaudoux 21.71 303 *e*P **P 06 04 59.4 +0.8**
RJF Les Rejaudoux 21.71 303 *e*P **P 06 04 59.4 +0.8**
MFF Saint Martin d 23.19 305 *e*P **P 06 05 13.7 -0.6**
MFF Saint Martin d 23.19 305 *e*P **P 06 05 13.7 -0.6**
TAM Tamanrasset 23.33 241 *e*P **P 06 05 17.5 +1.5**
TAM pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
TAM Tamanrasset 23.33 241 *e*P **P 06 05 17.4 +1.4**
comp=Z,3.6nm,0.8s,mb3.9
TAM Tamanrasset 23.33 241 *e*P **P 06 05 17.5 +1.5**
comp=Z,3.5nm,0.8s,mb3.8
LDF La Druitiere 23.82 310 *e*P **P 06 05 19.4 -1.1**
LDF La Druitiere 23.82 310 *e*P **P 06 05 19.4 -1.1**
FLN La Foliniere 24.11 310 *e*P **P 06 05 23.0 -0.1**
FLN La Foliniere 24.11 310 *e*P **P 06 05 23.0 -0.1**
GRR Gorron 24.21 309 *e*P **P 06 05 23.2 -0.9**
comp=Z,39nm,1.0s,mb4.5
GRR Gorron 24.21 309 *e*P **P 06 05 23.2 -0.9**
GRR pmax pmax
comp=Z,20nm,1.0s,mb4.5
GRR Gorron 24.21 309 *e*P **P 06 05 23.2 -0.9**
comp=Z,20nm,1.0s,mb4.5
GRR Gorron 24.21 309 *e*P **P 06 05 23.2 -0.9**
comp=Z,20nm,1.0s,mb4.5
ESDC Sonseca Array 25.10 288 P **P 06 05 31.7 -0.6**
comp=Z,0.9nm,0.4s,mb3.6,baz=86,slow=9.9,SNR=8.4
ESDC Sonseca Array 25.10 288 P **P 06 05 31.7 -0.5**
SGMF Saint Gilles 25.24 308 *e*P **P 06 05 33.3 -0.2**
SGMF Saint Gilles 25.24 308 *e*P **P 06 05 33.3 -0.2**
FINES FINESS Array B 25.32 358 P **P 06 05 32.3 -1.7**
comp=Z,1.1nm,0.5s,mb3.6,baz=175,slow=12,SNR=5.9
FINES PcP PcP 06 09 05.3 -1.1
comp=Z,1.1nm,0.4s,baz=196,slow=1.8,SNR=8.3
FINES FINESS Array B 25.32 358 P **P 06 05 32.3 -1.7**
FINES FINESS Array B 25.32 358 PcP PcP 06 09 05.3 -1.1
QUIF Quistinic 25.54 307 *e*P **P 06 05 36.6 +0.5**
comp=Z,53nm,1.2s,mb4.6
QUIF Quistinic 25.54 307 *e*P **P 06 05 36.6 +0.5**
QUIF pmax pmax
comp=Z,27nm,1.2s,mb4.7
QUIF Quistinic 25.54 307 *e*P **P 06 05 36.6 +0.5**
comp=Z,27nm,1.2s,mb4.7
QUIF Quistinic 25.54 307 *e*P **P 06 05 36.6 +0.5**
comp=Z,27nm,1.2s,mb4.6
HFS Hagfors 25.62 344 P **P 06 05 35.6 -1.1**
comp=Z,4.5nm,0.4s,mb4.3,baz=155,slow=11,SNR=31

HFS LR LR 06 15 19.8
comp=Z,35nm,20.4s,MS2.9,baz=21,slow=36
HFS Hagfors 25.62 344 P **P 06 05 35.6 -1.1**
AKTK Aktyubinsk 26.10 47 P **P 06 05 40.8 -0.4**
AKTK Aktyubinsk 26.10 47 P **P 06 05 40.8 -0.4**
AKTO Aktyubinsk 26.10 47 P **P 06 05 40.8 -0.4**
comp=Z,1.9nm,0.6s,mb3.8,baz=230,slow=8.2,SNR=7.3
MDT Midelt 26.71 272 P **P 06 05 46.9 -0.1**
comp=Z,4.4nm,1.1s,mb3.9,baz=68,slow=5.4,SNR=3.2
MDT Midelt 26.71 272 P **P 06 05 46.9 -0.1**
ABKAR Akbulak array 26.89 51 *e*P **P 06 05 48.0 -0.4**
comp=Z,1.9nm,0.8s,mb3.7
ABKAR Akbulak array 26.89 51 *e*P **P 06 05 48.0 -0.3**
comp=Z,1.9nm,0.8s,mb3.7
NB2 NORSAR Subarra 27.00 342 P **P 06 05 48.2 -1.0**
comp=Z,1.4nm,0.5s,mb3.8,baz=141,slow=10
NB2 NORSAR Subarra 27.00 342 P **P 06 05 48.2 -1.0**
comp=Z,1.4nm,0.5s,mb3.8,baz=141,slow=10
NB2 NORSAR Subarra 27.00 342 P **P 06 05 48.2 -1.0**
comp=Z,1.4nm,0.5s,mb3.8,baz=141,slow=9.5,SNR=9.5
NOA NORSAR Array B 27.00 342 P **P 06 05 47.4 -1.8**
comp=Z,1.6nm,0.7s,mb3.7,baz=152,slow=8.1,SNR=9.2
NOA LR LR 06 15 55.0
comp=Z,15nm,19.2s,MS2.6,baz=145,slow=35
NOA NORSAR Array B 27.00 342 P **P 06 05 47.4 -1.8**
EVO Evora 28.32 286 *e*P **P 06 06 02.9 +1.6**
comp=Z,19nm,1.3s,mb4.3
EVOP Sao Brissos 28.41 286 *e*P **P 06 06 02.9 +0.8**
comp=Z,9.6nm,1.3s,mb4.3
EKA Eskdalemuir Ar 28.43 322 P **P 06 06 01.4 -0.7**
comp=Z,0.8nm,0.7s,mb3.5,baz=123,slow=9.9,SNR=4.0
EKA Eskdalemuir Ar 28.43 322 P **P 06 06 01.4 -0.7**
TORD Torodi Ar. Bea 32.68 232 P **P 06 06 40.2 +0.3**
comp=Z,13nm,0.7s,mb5.0,baz=33,slow=8.7,SNR=148
TORD PcP PcP 06 09 25.2 -0.5
comp=Z,0.6nm,0.7s,baz=20,slow=3.8,SNR=4.6
ARCES ARCESS Array B 33.45 359 P **P 06 06 44.8 -1.4**
comp=Z,1.6nm,0.7s,mb4.0,baz=174,slow=8.8,SNR=7.2
ARCES ARCESS Array B 33.45 359 P **P 06 06 44.8 -1.4**
BVAR Borovoye Array 34.20 47 P **P 06 06 53.2 +0.3**
comp=Z,0.5nm,0.5s,mb3.7,baz=254,slow=8.3,SNR=2.5
BVAR Borovoye Array 34.20 47 P **P 06 06 53.2 +0.3**
KURK Kurchatov 38.99 52 *e*P **P 06 07 33.1 -0.6**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KURK Kurchatov 38.99 52 *e*P **P 06 07 33.1 -0.6**
comp=Z,3.1nm,0.8s,mb4.1
KURK Kurchatov 38.99 52 *e*P **P 06 07 33.1 -0.6**
comp=Z,3.1nm,0.8s,mb4.1
MKAR Makanchi Array 41.55 58 P **P 06 07 55.0 0.0**
comp=Z,0.8nm,0.5s,mb3.6,baz=273,slow=7.2,SNR=8.7
MKAR PcP PcP 06 09 52.2 +0.1
comp=Z,0.8nm,0.7s,baz=259,slow=6.1,SNR=4.2
MKAR ScP ScP 06 13 39.6 -2.0
comp=Z,0.2nm,0.5s,baz=266,slow=8.0,SNR=4.4
MKAR Makanchi Array 41.55 58 P **P 06 07 55.0 0.0**
MKAR 06 09 52.2
MKAR Makanchi Array 41.55 58 P **P 06 07 55.0 0.0**
MKAR Makanchi Array 41.55 58 PcP PcP 06 09 52.2 +0.1
DBIC Dimbokro 41.77 233 P **P 06 07 57.0 0.0**
comp=Z,4.5nm,0.5s,mb4.3,baz=16,slow=9.5,SNR=18
DBIC Dimbokro 41.77 233 P **P 06 07 57.0 -0.1**
TIC Toumodi 41.89 233 *e*P **P 06 07 58.2 +0.1**
comp=Z,207nm,2.2s
TIC Toumodi 41.89 233 *e*P **P 06 07 58.2 +0.1**
TIC pmax pmax
comp=Z,207nm,2.2s
TIC Toumodi 41.89 233 *e*P **P 06 07 58.2 +0.1**
comp=Z,207nm,2.2s
KIC Kosan Boka 41.92 233 *e*P **P 06 07 58.5 +0.1**
comp=Z,39nm,1.0s,mb5.0
KIC Kosan Boka 41.92 233 *e*P **P 06 07 58.5 +0.1**
comp=Z,39nm,1.0s,mb5.0
NVS Novosibirsk 41.96 46 *e*P **P 06 07 58.0 -0.2**
NVS Novosibirsk 41.96 46 *e*P **P 06 07 58.0 -0.2**
LIC Lamto 42.21 233 *e*P **P 06 08 00.8 +0.1**
comp=Z,78nm,1.7s,mb5.1
LIC Lamto 42.21 233 *e*P **P 06 08 00.8 +0.1**
comp=Z,78nm,1.7s,mb5.1
ZAA0 Zalesovo Array 42.86 47 *e*P **P 06 08 04.9 -0.7**
ZAA0 Zalesovo Array 42.86 47 *e*P **P 06 08 04.9 -0.7**
ZALV Zalesovo Beam 42.86 47 P **P 06 08 04.9 -0.6**
comp=Z,3.2nm,0.5s,mb4.3,baz=268,slow=8.8,SNR=11
ZALV Zalesovo Beam 42.86 47 P **P 06 08 04.9 -0.7**
ZAK Zakamensk 54.58 50 *e*P **P 06 09 34.7 -0.9**
ZAK pmax pmax
comp=Z,2.0nm,1.6s,mb3.9
ZAK Zakamensk 54.58 50 *e*P **P 06 09 34.7 -0.9**
comp=Z,2.0nm,1.6s,mb3.9
SCHQ Schefferville 63.72 320 P **P 06 10 36.7 -2.2**
comp=Z,2.9nm,0.6s,mb4.5,baz=48,slow=6.4,SNR=8.4
SCHQ Schefferville 63.72 320 P **P 06 10 36.7 -2.2**
SCHQ Schefferville 63.72 320 P **P 06 10 36.7 -2.2**
KSRS Korea Array 76.08 54 P **P 06 11 55.0 -0.2**
comp=Z,1.0nm,0.5s,mb4.0,baz=301,slow=5.3,SNR=4.7
KSRS Korea Array 76.08 54 P **P 06 11 55.0 -0.2**
KSRS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
KSRS Korea Array 76.08 54 P **P 06 11 55.0 -0.2**
comp=Z,1.0nm,0.5s,mb4.0
YKA Yellowknife Ar 77.10 343 P **P 06 11 58.5 -2.0**
comp=Z,0.5nm,0.6s,mb3.6,baz=31,slow=5.4,SNR=10
YKA Yellowknife Ar 77.10 343 P **P 06 11 58.5 -2.0**
DAWY Dawson 79.58 354 *e*P **P 06 12 13.3 -0.9**
DAWY Dawson 79.58 354 *e*P **P 06 12 13.3 -0.9**
FFC Flin Flon 79.67 333 *i*P **P 06 12 14.2 -0.7**
FFC Flin Flon 79.67 333 *i*P **P 06 12 14.2 -0.7**
ULM Lac du Bonnet 80.58 327 P **P 06 12 17.8 -2.1**
comp=Z,2.9nm,0.7s,mb4.3,baz=36,slow=5.5,SNR=3.9
ULM Lac du Bonnet 80.58 327 P **P 06 12 17.8 -2.1**
ULM Lac du Bonnet 80.58 327 P **P 06 12 17.8 -2.1**
PETK Petropavlovsk- 81.11 28 LR LR 06 51 25.9
comp=Z,39nm,18.2s,MS3.8,baz=254,slow=38
PPLA Purkeypile 81.28 360 *e*P **P 06 12 22.5 -0.9**
comp=Z,6.9nm,0.6s,mb4.8
PPLA Purkeypile 81.28 360 *e*P **P 06 12 22.5 -0.9**
comp=Z,6.9nm,0.6s,mb4.8
ECSD EROS Data Cent 85.72 323 *e*P **P 06 12 45.0 -1.6**
comp=Z,2.4nm,0.8s,mb4.5
ECSD EROS Data Cent 85.72 323 *e*P **P 06 12 45.0 -1.6**
comp=Z,2.4nm,0.8s,mb4.5
CCM Cathedral Cave 87.01 316 *e*P **P 06 12 51.7 -1.3**
CCM pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
CCM Cathedral Cave 87.01 316 *e*P **P 06 12 51.7 -1.3**
comp=Z,6.3nm,0.6s,mb5.0
CCM Cathedral Cave 87.01 316 *e*P **P 06 12 51.7 -1.3**
comp=Z,6.3nm,0.6s,mb5.0
EGMT Eagleton 87.96 333 *e*P **P 06 12 55.7 -1.7**
comp=Z,5.2nm,0.9s,mb4.8
EGMT Eagleton 87.96 333 *e*P **P 06 12 55.7 -1.7**
comp=Z,5.2nm,0.9s,mb4.8
PDAR Pinedale Array 92.28 330 P **P 06 13 15.7 -1.9**
comp=Z,0.4nm,0.6s,mb4.0,baz=78,slow=4.9,SNR=2.8
PDAR Pinedale Array 92.28 330 P **P 06 13 15.7 -1.9**
NVAR Mina Array Bea 99.37 334 P **P 06 13 49.3 -0.8**
comp=Z,0.2nm,0.4s,mb4.0,baz=34,slow=6.6,SNR=2.5
NVAR Mina Array Bea 99.37 334 P **P 06 13 49.2 -0.8**
TXAR Lajitas Array 100.37 318 P Pdif 06 13 54.2 -0.2
comp=Z,0.1nm,0.5s,baz=100,slow=8.6,SNR=1.8
TXAR Lajitas Array 100.37 318 P Pdif 06 13 54.2 -0.2
ASAR Alice Springs 116.26 101 PKP PKPdf 06 18 50.9 -0.3
comp=Z,0.3nm,0.3s,baz=314,slow=1.3,SNR=5.7

DJA 20 06:08:10.2˚35N×99˚50E, h227km, MLv3.3/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.63**	**239**	P		Pn		06 08 39.9	-0.8
MNSI	**Mandailing Nat**	**1.55**	**177**	P		Pn		06 08 49.5	+2.9
GSI	**Gunungsitoli**	**2.19**	**242**	P		Pn		06 09 04.2	+12
GSI				S		S		06 09 26.6	+0.9
SISI	**Saibi**	**3.67**	**186**	P		Pn		06 09 10.9	+1.9
SDSI	**Sungai Dareh**	**3.79**	**149**	P		Pn		06 09 10.4	+0.1
PPSI	**Pulau Pagai**	**5.10**	**174**	P		Pn		06 09 24.8	-1.7
BSI	**Banda Aceh**	**5.23**	**307**	P		Pn		06 09 28.7	+0.7

*ISK **20** 06:24:56.1, 39˚69N×38˚61E, h9km, MD2.9*
*CSEM **20** 06:24:57.6±0.2, 39˚70N×38˚68E, h2km, MD2.9, Error ellipse: s-maj=4.9km s-min=3.0km az=106.0*
DDA 20 06:24:57.2, 39˚69N×38˚68E, h7km±3km, Md2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.45**	**199**	*i*P		Pg		06 25 06.0	+0.2
KEMA				*i*S		Sg		06 25 12.5	+0.8
KEMA	**Kemaliye**	**0.45**	**199**	*i*P		Pg		06 25 06.0	+0.2
KEMA				*i*S		Sg		06 25 12.5	+0.8
EZC	**Erzincan**	**0.52**	**83**	*e*PG		Pg		06 25 08.0	+0.7
EZC				*e*SG		Sg		06 25 16.0	+1.9
KELT	**Kelkit**	**0.64**	**44**	*i*P		Pg		06 25 10.0	+0.5
KELT				*i*S		Sg		06 25 18.5	+0.8
KELT	**Kelkit**	**0.64**	**44**	*i*P		Pg		06 25 10.0	+0.6
KELT				*i*S		Sg		06 25 18.5	+0.8
PTK	**Pertek**	**0.97**	**145**	*e*PG		Pg		06 25 16.0	+0.1
PTK				*e*SG		Sg		06 25 29.9	+1.4
PTK	**Pertek**	**0.97**	**145**	*e*Pg		Pg		06 25 16.0	+0.1
PTK				*e*Sg		Sg		06 25 29.9	+1.4
GUMT	**Gumushane**	**0.98**	**39**	*e*PG		Pg		06 25 15.9	-0.2
GUMT	**Gumushane**	**0.98**	**39**	*e*Pg		Pg		06 25 15.9	-0.2
DARE	**Darende-Malaty**	**1.00**	**223**	*e*PN		Pn		06 25 22.3	+4.6
DARE	**Darende-Malaty**	**1.00**	**223**	*e*Pn		Pn		06 25 22.3	+4.6
ELZG	**Elazig**	**1.22**	**169**	*i*P		Pg		06 25 19.9	-0.6
ELZG				*i*S		Sg		06 25 35.6	-0.7
ELZG	**Elazig**	**1.22**	**169**	*i*P		Pg		06 25 19.9	-0.6
ELZG				*i*S		Sg		06 25 35.6	-0.7
ESPY	**Espiye-Giresun**	**1.22**	**2**	*e*PN		Pn		06 25 20.1	-0.6
ESPY				*e*SN		Sn		06 25 37.0	-0.5
ESPY	**Espiye-Giresun**	**1.22**	**2**	*e*Pn		Pn		06 25 20.1	-0.6
ESPY				*e*Sn		Sn		06 25 37.0	-0.5
GRSN	**GIRESUNGRSN**	**1.27**	**346**	*i*P		Pn		06 25 22.1	+0.7
GRSN				*i*S		Sb		06 25 38.7	+0.8
GRSN	**GIRESUNGRSN**	**1.27**	**346**	*i*P		Pn		06 25 22.1	+0.7
GRSN				*i*S		Sb		06 25 38.7	+0.7
SVSK	**Karacayir**	**1.31**	**280**	*e*PN		Pn		06 25 20.7	-1.3
SVSK	**Karacayir**	**1.31**	**280**	*e*Pn		Pn		06 25 20.7	-1.3
MYA	**Malataya**	**1.38**	**188**	*e*PN		Pn		06 25 22.1	-0.8
MYA	**Malataya**	**1.38**	**188**	*e*Pn		Pn		06 25 22.1	-0.8
SVRC	**Sivrice-ELAZID**	**1.40**	**159**	*e*PN		Pn		06 25 22.6	-0.6
SVRC	**Sivrice-ELAZID**	**1.40**	**159**	*e*Pn		Pn		06 25 22.6	-0.6
KOPT	**Kop Dagi**	**1.44**	**76**	*e*P		Pn		06 25 24.8	+1.2
KOPT				*e*S		Sn		06 25 49.3	+6.5
KOPT	**Kop Dagi**	**1.44**	**76**	*e*P		Pn		06 25 24.8	+1.1
AKCD	**Akcadag**	**1.52**	**203**	*i*P		Pn		06 25 26.3	+1.6
AKCD				*i*S		Sn		06 25 47.4	+2.7
AKCD	**Akcadag**	**1.52**	**203**	*i*P		Pn		06 25 26.3	+1.6
AKCD				*i*S		Sn		06 25 47.4	+2.7
SARI	**SarD1z-Kayseri**	**1.84**	**237**	*e*PN		Pn		06 25 32.5	+3.3
SARI	**SarD1z-Kayseri**	**1.84**	**237**	*e*Pn		Pn		06 25 32.6	+3.4

*NIED **20** 06:27:00, 27˚40N×143˚00E, h8km, Mw3.9 Best double couple: M0 8.30000×10^14 NP1:φ1 117.00000°, δ80.00000°, λ-40.00000°. NP2:φ2 215.00000°, δ51.00000°, λ-167.00000°.*
*IDC **20** 06:27:55.5±0.9, 27˚18N×142˚89E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.9/24, mbtmp3.9/13, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/27, Error ellipse: s-maj=23.7km s-min=14.4km az=163.0*
*JMA **20** 06:27:57.8±0.3, 27˚37N×143˚00E, h50km, M3.9*
*ISCJB **20** 06:27:59.0±1.5, 27˚44N±0˚04×142˚89E±0˚09, h30km±9km, mb4.1/16, Error ellipse: s-maj=13.9km s-min=6.3km az=14.4*
*NEIC **20** 06:28:00.8±0.5, 27˚21N×142˚78E, h35km, mb4.4/6, Error ellipse: s-maj=16.4km s-min=9.5km az=71.0*
*BJI **20** 06:28:00.7, 27˚20N×142˚80E, h35km, mB4.6/6, mb4.4/7*
ISC 20 06:28:00.8±1.5, 27˚30N±0˚04×142˚88E±0˚09, h34km±10km, n28, σ0˚95/31, mb4.1/16, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.65**	**252**	P		**Pb**		**06 28 12.8**	**-1.0**
CBIJ				*e*S		**Sb**		**06 28 23.1**	**+0.4**
CBIJ	**Chichi jima**	**0.65**	**252**	Pn		**Pn**		**06 28 12.6**	**-1.0**
CBIJ	838nm,0.3s,baz=108,slow=19,SNR=168			Sn		**Sn**		**06 28 23.1**	**+0.4**
JHHJ	**Haha-jima-NKT**	**0.92**	**223**	P		**Pn**		**06 28 16.0**	**-1.2**
JHHJ	1μm,0.3s,baz=276,slow=24,SNR=14			*e*S		**Sb**		**06 28 31.4**	**+1.3**
BSO4	**Boso 4**	**7.96**	**345**	*e*S		**Sn**		**06 31 23.6**	**+0.6**
JHU	**Hanno**	**9.06**	**341**	P		**Pn**		**06 30 08.4**	**-0.7**
JHU				*e*S		**Sn**		**06 31 47.5**	**-2.3**
JRY	**Ryogami san**	**9.32**	**340**	P		**Pn**		**06 30 12.2**	**-0.5**
JRY				*e*S		**Sn**		**06 31 56.2**	**-0.2**
MJAR	**Matsushiro Arr**	**10.03**	**338**	Pn		**Pn**		**06 30 21.9**	**-0.5**
	0.6nm,0.3s,baz=162,slow=14,SNR=2.1								
MAJO	**Matsushiro**	**10.03**	**338**	*e*Pn		**Pn**		**06 30 22.3**	**-0.1**
GUMO	**Guam**	**13.77**	**172**	LR		LR		06 34 29.3	
	comp=Z,124nm,21.9s,baz=83,slow=29								
KSRS	**Korea Array**	**16.17**	**312**	Pn		**Pn**		**06 31 46.9**	**+1.5**
	0.3nm,0.3s,baz=122,slow=12,SNR=5.3								
SONM	**Songino Array**	**34.99**	**316**	P		**P**		**06 34 52.0**	**+2.2**
	0.8nm,0.7s,mb3.8,baz=126,slow=7.3,SNR=1.6								
TLY	**Talaya**	**38.17**	**320**	*e*P		**P**		**06 35 17.7**	**+0.8**
	5.5nm,1.2s,mb4.2								
WRAB	**Tennant Creek**	**47.68**	**191**	*e*P		**P**		**06 36 32.6**	**-1.4**
	11nm,0.8s,mb5.0								
ZALV	**Zalesovo Beam**	**49.74**	**319**	P		**P**		**06 36 49.5**	**-0.1**
	1.2nm,0.5s,mb4.2,baz=91,slow=7.2,SNR=2.8								
MKAR	**Makanchi Array**	**50.82**	**309**	P		**P**		**06 36 57.3**	**-0.5**
	0.4nm,0.6s,mb3.5,baz=91,slow=9.4,SNR=5.2								
MKAR				PcP		PcP		06 38 14.3	0.0
	0.4nm,0.7s,baz=90,slow=3.6,SNR=4.3								
ASAR	**Alice Springs**	**51.41**	**191**	P		**P**		**06 37 01.0**	**-1.4**
	0.7nm,0.6s,mb3.8,baz=12,slow=6.2,SNR=7.7								
KURK	**Kurchatov**	**53.28**	**314**	*e*P		**P**		**06 37 16.1**	**0.0**
	1.2nm,0.4s,mb4.2								
BVAR	**Borovoye Array**	**58.31**	**317**	P		**P**		**06 37 52.6**	**+0.5**
	6.8nm,0.6s,mb4.9,baz=93,slow=8.2,SNR=40								
BRVK	**Borovoye**	**58.37**	**317**	*e*P		**P**		**06 37 51.9**	**-0.7**
	6.9nm,0.8s,mb4.7								
INK	**Inuvik**	**62.59**	**25**	P		**P**		**06 38 22.3**	**+1.2**
	0.7nm,0.5s,mb4.0,baz=284,slow=4.3,SNR=2.5								
INK	**Inuvik**	**62.59**	**25**	*e*P		**P**		**06 38 21.6**	**+0.5**
	0.6nm,0.6s,mb3.9								
ABKAR	**Akbulak array**	**65.39**	**314**	*e*P		**P**		**06 38 40.1**	**+0.2**
	2.7nm,0.7s,mb4.4								
YKA	**Yellowknife Ar**	**71.67**	**29**	P		**P**		**06 39 19.6**	**+0.8**
	0.5nm,0.8s,mb3.5,baz=294,slow=5.6,SNR=8.2								
FINES	**FINESS Array B**	**78.03**	**334**	P		**P**		**06 39 55.9**	**+0.3**
	0.8nm,0.3s,mb4.1,baz=42,slow=6.3,SNR=7.3								
NVAR	**Mina Array Bea**	**79.91**	**52**	P		**P**		**06 40 07.8**	**+1.5**
	0.3nm,0.6s,mb3.4,baz=320,slow=4.0,SNR=2.6								
AKASG	**Malin Array Be**	**82.81**	**324**	P		**P**		**06 40 21.5**	**0.0**
	0.4nm,0.4s,mb3.8,baz=52,slow=5.2,SNR=2.2								
BRTR	**Keskin Array B**	**86.31**	**313**	P		**P**		**06 40 39.2**	**-0.2**
	0.8nm,0.7s,mb4.1,baz=89,slow=3.5,SNR=3.8								
LPAZ	**La Paz**	**149.28**	**76**	PKPbc		PKPbc		06 47 47.5	+0.8
	1.1nm,0.8s,baz=200,slow=2.5,SNR=5.1								

*NIED **20** 06:32:00, 29˚00N×142˚40E, h5km, Mw4.6 Best double couple: M0 7.97000×10^15 NP1:φ1 351.00000°

MJAR Matsushiro Arr 8.35 337 Pn **Pn** **06 34 45.4 +0.8**
2.3nm,0.3s,baz=198,slow=21,SNR=14
MAJO Matsushiro 8.35 337 *e*P **Pn** **06 34 43.6 -1.0**
KSRS Korea Array 14.67 309 Pn **Pn** **06 36 11.8 +0.7**
baz=111,slow=12,SNR=2.1
KSRS LR LR 06 41 52.3
comp=Z,244nm,18.6s,baz=290,slow=38
MDJ Mudanjiang 18.64 331 P **Pn** **06 36 59.3 -2.1**
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,84nm,5.4s
YULB Yu-li 19.51 259 *e*P **Pn** **06 37 13.1 +1.0**
comp=Z,66nm,1.2s
SSLB Suanglung 19.67 260 *e*P **Pn** **06 37 14.2 +0.2**
comp=Z,44nm,1.1s
NJ2 Nanjing 20.34 285 *e*P **P** **06 37 20.0 +0.2**
NJ2 pP 06 37 30.8
NJ2 sP sP 06 37 33.6 +6.1
NJ2 PP 06 37 41.0
NJ2 S **S** **06 41 00.0 -7.1**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,180nm,4.0s
NJ2 LR LR
comp=N,200nm,16.7s,MS3.8
NJ2 LR LR
comp=E,240nm,15.4s,MS3.8
NJ2 LR LR
comp=Z,230nm,16.6s,MS3.6
KLR Kul'dur 21.84 341 *e*P **P** **06 37 32.2 -3.7**
HIA Hailar 26.62 326 *e*P **P** **06 38 22.5 +0.7**
HIA pmax pmax
comp=Z,27nm,1.3s
HIA Hailar 26.62 326 *e*P **P** **06 38 22.5 +0.8**
comp=Z,27nm,1.3s,mb4.6
DAV Davao City (W) 26.75 219 LR LR 06 48 15.8
comp=Z,69nm,20.6s,MS3.2,baz=196,slow=35
ULN Ulaanbaatar 33.05 315 *e*P **P** **06 39 18.7 -0.1**
ULN pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ULN Ulaanbaatar 33.05 315 *e*P **P** **06 39 18.7 -0.1**
comp=Z,3.1nm,0.9s,mb4.2
SONM Songino Array 33.45 314 P **P** **06 39 22.4 +0.1**
comp=Z,0.7nm,0.4s,mb3.9,baz=111,slow=8.2,SNR=2.9
SONM LR LR 06 53 35.8
comp=Z,82nm,18.4s,MS3.5,baz=284,slow=38
BOD Bodaibo 34.96 334 *e*P **P** **06 39 35.1 -0.1**
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ZAK Zakamensk 36.29 317 *e*P **P** **06 39 47.8 +1.1**
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
TLY Talaya 36.58 319 *e*P **P** **06 39 50.7 +1.5**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
TLY MLR MLR
comp=Z,125nm,18.0s,MS3.7
TLY Talaya 36.58 319 *e*P **P** **06 39 50.6 +1.4**
comp=Z,5.6nm,0.8s,mb4.5
MOY Mondy 38.10 318 *e*P **P** **06 40 02.7 +0.6**
CMAR Chiang Mai Arr 40.73 265 P **P** **06 40 23.7 -0.8**
comp=Z,0.9nm,0.5s,mb3.7,baz=56,slow=7.4,SNR=6.8
CMAR LR LR 06 56 48.3
comp=Z,88nm,21.9s,MS3.6,baz=90,slow=36
CMAR Chiang Mai Arr 40.73 265 P **P** **06 40 23.7 -0.8**
CMAR LR LR 06 56 48.3
BILL Bilibino 41.74 13 *e*P **P** **06 40 31.4 -0.7**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.0
ZALV Zalesovo Beam 48.16 318 P **P** **06 41 22.9 -0.5**
comp=Z,2.9nm,0.5s,mb4.6,baz=98,slow=7.1,SNR=9.5
ZALV PcP PcP 06 42 50.5 -0.1
comp=Z,1.1nm,0.3s,baz=162,slow=1.4,SNR=3.7
WRAB Tennant Creek 49.10 190 *e*P **P** **06 41 31.3 +0.4**
WRAB pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
WRAB Tennant Creek 49.10 190 *e*P **P** **06 41 31.3 +0.4**
comp=Z,5.5nm,0.6s,mb4.8
NVS Novosibirsk 49.19 319 *i*P **P** **06 41 31.3 0.0**
MK31 Makanchi Array 49.35 308 *e*P **P** **06 41 32.1 -0.6**
MKAR Makanchi Array 49.35 308 P **P** **06 41 32.1 -0.6**
comp=Z,2.6nm,0.8s,mb4.3,baz=90,slow=9.9,SNR=14
MKAR PcP PcP 06 42 55.4 +0.3
comp=Z,0.8nm,0.6s,baz=85,slow=6.5,SNR=3.3
MKAR LR LR 07 03 23.7
comp=Z,105nm,18.7s,MS3.9,baz=118,slow=37
MKAR Makanchi Array 49.35 308 P **P** **06 41 32.1 -0.6**
MKAR 06 42 55.4
KURK Kurchatov 51.75 314 LR LR 07 05 38.0
comp=Z,56nm,18.4s,MS3.6,baz=265,slow=38
KURK Kurchatov 51.75 314*c* *i*P **P** **06 41 50.3 -0.4**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.7
KURK Kurchatov 51.75 314 *e*P **P** **06 41 50.2 -0.5**
comp=Z,7.7nm,0.9s,mb4.6
ASAR Alice Springs 52.83 190 P **P** **06 41 59.0 0.0**
comp=Z,0.3nm,0.4s,mb3.6,baz=18,slow=8.9,SNR=7.8
AAK Ala-Archa 55.25 304 LR LR 07 08 14.9
comp=Z,70nm,19.4s,MS3.8,baz=53,slow=39
AAK Ala-Archa 55.25 304*c* *i*P **P** **06 42 16.4 -0.1**
AAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
AML Almayashu 55.92 303 *e*P **P** **06 42 22.2 +0.8**
comp=Z,10nm,1.1s,mb4.8
BVAR Borovoye Array 56.74 317 P **P** **06 42 27.2 +0.2**
comp=Z,6.0nm,0.6s,mb4.8,baz=91,slow=8.9,SNR=30
BVAR LR LR 07 06 41.4
comp=Z,66nm,20.6s,MS3.7,baz=213,slow=36
BRVK Borovoye 56.80 317‖ *e*P **P** **06 42 27.0 -0.5**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb4.9
BRVK Borovoye 56.80 317 *e*P **P** **06 42 28.1 +0.7**
comp=Z,11nm,1.0s,mb4.8
STKA Stephens Creek 60.41 181 P **P** **06 42 52.7 0.0**
comp=Z,1.2nm,0.7s,mb4.0,baz=3.8,slow=15,SNR=1.7
STKA Stephens Creek 60.41 181 P **P** **06 42 52.7 0.0**
INK Inuvik 61.43 25 P **P** **06 42 59.4 +0.1**
comp=Z,1.4nm,0.8s,mb4.1,baz=291,slow=5.9,SNR=5.8
INK Inuvik 61.43 25 P **P** **06 42 59.4 +0.1**
ARU Arti 63.02 322 P **P** **06 43 05.8 -4.4**
ARU Arti 63.02 322 *e*P **P** **06 43 05.5 -4.7**
comp=Z,34nm,1.0s,mb5.4
ABKAR Akbulak array 63.86 314 *e*P **P** **06 43 15.6 -0.2**
comp=Z,4.6nm,0.6s,mb4.7
AKTO Aktyubinsk 64.76 315 LR LR 07 13 34.1
comp=Z,70nm,18.1s,MS3.9,baz=208,slow=38
YKA Yellowknife Ar 70.60 29 P **P** **06 43 57.8 -0.5**
comp=Z,0.5nm,0.6s,mb3.6,baz=295,slow=6.3,SNR=11
FINES FINESS Array B 76.36 334 P **P** **06 44 32.1 -0.2**
comp=Z,0.7nm,0.4s,mb4.0,baz=95,slow=6.1,SNR=4.3
ZEI Tsey 76.58 311 *e*P **P** **06 44 33.7 -0.2**
ZEI pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KIV Kislovodsk 76.83 313 *e*P **P** **06 44 32.1 -3.1**
KIV pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,38nm,19.0s,MS3.7
GNI Garni 77.20 309 LR LR 07 22 32.6
comp=Z,36nm,18.2s,MS3.7,baz=234,slow=39
NVAR Mina Array Bea 79.44 52 P **P** **06 44 50.6 +0.8**
comp=Z,0.2nm,0.4s,mb3.4,baz=310,slow=7.0,SNR=2.8
ANN Anapa 79.72 316 *e*P **P** **06 44 50.6 -0.6**
ANN pmax pmax
comp=Z,16nm,1.0s,mb4.9
AKASG Malin Array Be 81.19 324 P **P** **06 44 58.4 -0.6**
comp=Z,0.3nm,0.3s,mb3.7,baz=49,slow=6.2,SNR=2.7
NOA NORSAR Array B 81.97 338 P **P** **06 45 02.8 -0.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=44,slow=5.0,SNR=2.5
NOA LR LR 07 24 48.8
comp=Z,33nm,19.3s,MS3.7,baz=270,slow=38
PDAR Pinedale Array 82.97 45 P **P** **06 45 08.8 +0.3**
comp=Z,0.2nm,0.5s,mb3.4,baz=25,slow=3.0,SNR=1.3
BR131 Keskin Array S 84.79 313 *e*P **P** **06 45 18.4 +0.6**
comp=Z,5.1nm,1.0s,mb4.6
BRTR Keskin Array B 84.79 313 P **P** **06 45 18.1 +0.2**
comp=Z,3.7nm,0.9s,mb4.5,baz=96,slow=5.0,SNR=17
BRTR LR LR 07 23 55.3
comp=Z,26nm,21.0s,MS3.6,baz=208,slow=36
BRTR Keskin Array B 84.79 313*ce*P **P** **06 45 18.3 +0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
PV10 Paradox Valley 85.71 48 *e*P **P** **06 45 23.5 +1.0**
comp=Z,52nm,0.7s
GERES GERESS Array B 89.99 329 LR LR 07 30 15.3
comp=Z,61nm,18.4s,MS4.1,baz=62,slow=38
TXAR Lajitas Array 94.56 53 P **P** **06 46 05.0 +0.7**
comp=Z,0.3nm,0.8s,mb3.8,baz=319,slow=3.6,SNR=2.8
TORD Torodi Ar. Bea 123.40 312 PKP PKPdf 06 51 40.8 -0.4
comp=Z,0.8nm,0.7s,baz=49,slow=1.1,SNR=8.6
LPAZ La Paz 149.45 72 PKPbc PKPbc 06 52 34.2 +1.0
comp=Z,2.0nm,0.8s,baz=346,slow=5.1,SNR=9.5
LPAZ La Paz 149.45 72 *e*PKPbc PKPbc 06 52 33.7 +0.6
PLCA Paso Flores 150.81 123 PKPbc PKPbc 06 52 35.4 -0.4
comp=Z,1.3nm,0.8s,baz=333,slow=2.3,SNR=2.3

IDC 20 06:32:58.2±2.2, 12°.00N×143°.77E, h0km, mb4.0/6, mb1 4.3/6, mb1mx3.9/23, mbtmp4.0/6, Error ellipse: s-maj=56.7km s-min=30.1km az=156.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.91**	**34**	Pn	Pn	06 33 32.3	+0.3
	34nm,0.3s,baz=178,slow=13,SNR=10						
GUMO				Sn	Sn	06 33 57.5	+0.7
	48nm,0.3s,baz=310,slow=22,SNR=4.5						
SONM	**Songino Array**	**47.42**	**326**	P	P	06 41 35.0	+0.6
	0.8nm,0.6s,baz=126,slow=7.4,SNR=2.9						
BVAR	**Borovoye Array**	**70.50**	**322**	P	P	06 44 14.4	-0.3
	1.2nm,0.5s,baz=120,slow=8.7,SNR=4.1						
INK	**Inuvik**	**76.23**	**22**	P	P	06 44 48.0	-0.2
	2.4nm,1.0s,baz=287,slow=8.1,SNR=5.4						
YKA	**Yellowknife Ar**	**84.75**	**27**	P	P	06 45 33.9	-0.2
	0.3nm,0.6s,baz=285,slow=5.2,SNR=7.0						
ARCES	**ARCESS Array B**	**88.25**	**342**	P	P	06 45 51.1	0.0
	1.9nm,0.8s,baz=66,slow=9.0,SNR=3.6						
NVAR	**Mina Array Bea**	**88.75**	**51**	P	P	06 45 55.1	+0.9
	0.8nm,0.7s,baz=264,slow=5.0,SNR=4.4						

*ISK **20** 06:39:27.6, 37°.02N×29°.13E, h7km, MD2.9*
*ISCJB **20** 06:39:29.5±0.6, 36°.97N±0°.03×29°.21E±0°.04, h6km±7km, Error ellipse: s-maj=5.1km s-min=4.3km az=28.7*
*CSEM **20** 06:39:29.2±0.2, 36°.96N×29°.23E, h8km, MD2.9, Error ellipse: s-maj=3.4km s-min=3.3km az=121.0*
*DDA **20** 06:39:29.7, 37°.01N×29°.27E, h7km±5km, Md2.8*
ISC 20 06:39:29.7±0.5, 36°.97N±0°.03×29°.20E±0°.04, h7km±5km, n32, σ1§10/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**52**	*e*PG	**Pg**	**06 39 34.4**	**-1.2**
GLHS				*e*SG	**Sg**	**06 39 39.5**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**52**	*e*Pg	**Pg**	**06 39 34.4**	**-1.2**
GLHS				*e*Sg	**Sg**	**06 39 39.5**	**-0.1**
FETY	**Fethiye**	**0.35**	**196**	*e*PG	**Pg**	**06 39 35.5**	**-0.9**
FETY				*e*SG	**Sg**	**06 39 41.6**	**+0.6**
FETY	**Fethiye**	**0.35**	**196**	*e*Pg	**Pg**	**06 39 35.5**	**-1.0**
FETY				*e*Sg	**Sg**	**06 39 41.6**	**+0.5**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**06 39 36.3**	**-1.0**
GOLH				*i* S	**Sg**	**06 39 42.7**	**+0.2**
GOLH	**Golhisar**	**0.39**	**47**	*i* P	**Pg**	**06 39 36.3**	**-1.0**
GOLH				*i* S	**Sg**	**06 39 42.7**	**+0.2**
TURN	**Turunc**	**0.49**	**259**	*e*P	**Pg**	**06 39 43.9**	**+4.8**
TURN				*i* S	**Sg**	**06 39 55.2**	**+10**
TURN	**Turunc**	**0.49**	**259**	*e*P	**Pg**	**06 39 43.9**	**+4.8**
ELL	**Elmali**	**0.61**	**111**	*e*PG	**Pg**	**06 39 41.1**	**-0.4**
ELL				*e*SG	**Sg**	**06 39 51.4**	**+2.0**
ELL	**Elmali**	**0.61**	**111**	*e*Pg	**Pg**	**06 39 41.1**	**-0.3**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**06 39 43.4**	**-0.3**
DNZL				*i* S	**Sg**	**06 39 53.6**	**+0.4**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**06 39 43.4**	**-0.3**
DNZL				*i* S	**Sg**	**06 39 53.6**	**+0.4**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**06 39 45.8**	**+0.6**
AKAS				*i* S	**Sg**	**06 39 59.9**	**+4.2**
AKAS	**Kas**	**0.81**	**156**	*i* P	**Pg**	**06 39 45.8**	**+0.6**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**06 39 45.1**	**-2.2**
KORT				*i* S	**Sg**	**06 40 02.1**	**+2.7**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**06 39 45.2**	**-2.2**
KORT				*i* S	**Sg**	**06 40 02.1**	**+2.7**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pn**	**06 39 53.6**	**0.0**
AYDN				*i* S	**Sg**	**06 40 11.0**	**+0.9**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pn**	**06 39 53.6**	**0.0**
AYDN				*i* S	**Sg**	**06 40 11.0**	**+0.8**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**	**06 39 52.7**	**-1.8**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**	**06 39 52.7**	**-1.8**
KHL	**Karahalli**	**1.37**	**11**	*e*PN	**Pn**	**06 39 53.7**	**-1.5**
KHL	**Karahalli**	**1.37**	**11**	*e*Pn	**Pn**	**06 39 53.7**	**-1.5**
BDRM	**Kayabasi**	**1.41**	**274**	*e*P	**Pn**	**06 39 59.0**	**+3.3**
BDRM				*i* S	**Sb**	**06 40 14.2**	**-0.2**
BDRM	**Kayabasi**	**1.41**	**274**	*e*P	**Pn**	**06 39 59.0**	**+3.3**
BDRM				*i* S	**Sb**	**06 40 14.1**	**-0.3**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**06 39 56.5**	**+0.7**
KHAL				*i* S	**Sb**	**06 40 15.2**	**+0.7**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**06 39 56.5**	**+0.7**
KHAL				*i* S	**Sb**	**06 40 15.2**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**06 39 56.2**	**-1.1**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**06 39 56.2**	**-1.0**
MANT	**Manisa**	**1.60**	**342**	*e*P	**Pn**	**06 39 59.4**	**+1.0**
MANT				*i* S	**Sn**	**06 40 19.7**	**+0.5**
MANT	**Manisa**	**1.60**	**342**	*e*P	**Pn**	**06 39 59.3**	**+1.0**
MANT				*i* S	**Sn**	**06 40 19.7**	**+0.5**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**06 40 12.6**	**+0.1**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**06 40 12.6**	**+0.1**

*IDC **20** 06:54:19.5±0.8, 31°.77N×104°.33E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/28, mbtmp4.1/16, ML4.0/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/34, Error ellipse: s-maj=25.9km s-min=15.8km az=50.0*
*NEIC **20** 06:54:21.5±0.4, 31°.80N×104°.35E, h10km, mb4.1/6, Error ellipse: s-maj=10.9km s-min=7.4km az=59.0*
*BJI **20** 06:54:21.4, 31°.81N×104°.43E, h15km, mB4.6/9, mb4.3/12, ML4.3/20, Ms4.1/15, Ms7 3.9/13*
ISC 20 06:54:20.7±0.8, 31°.75N±0°.03×104°.27E±0°.04, h6km±5km, n50, σ1§26/61, mb4.2/23, MS3.0/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.95**	**208**	Pg	**Pg**	**06 54 38.8**	**-0.1**
CD2				Sg	**Sg**	**06 54 52.0**	**+0.9**
CD2				smax			
	comp=N,24μm,0.5s						
LZH	**Lanzhou**	**4.34**	**355**	Pn	**Pn**	**06 55 30.0**	**+2.9**
LZH				Pg	**Pg**	**06 55 41.9**	**-2.0**
LZH				Sg	**Sg**	**06 56 40.8**	**+0.7**
LZH				smax			
	comp=N,260nm,1.0s						
LZH				smax			
	comp=E,400nm,0.8s						
LZH				LR	LR		
	comp=N,2μm,9.1s						
LZH				LR	LR		
	comp=Z,2μm,9.3s						
XAN	**Xi'an**	**4.53**	**59**	Pn	**Pn**	**06 55 29.4**	**-0.4**
XAN				Pg	**Pg**	**06 55 43.0**	**-4.5**
XAN				Sn	**Sn**	**06 56 22.3**	**-0.4**
XAN				Sg	**Sg**	**06 56 43.1**	**-3.1**
XAN				smax			
	comp=N,580nm,0.8s						
XAN				smax			
	comp=E,330nm,0.9s						
XAN				LR	LR		
	comp=N,1μm,7.9s						
XAN				LR	LR		
	comp=E,440nm,8.5s						
XAN				LR	LR		
	comp=Z,490nm,8.5s						
ENH	**Enshi**	**4.71**	**107**	*e*Pn	**Pn**	**06 55 34.2**	**+1.8**
ENH				*e*Sn	**Sn**	**06 56 30.4**	**+3.1**
GYA	**Guiyang**	**5.67**	**158**	Pn	**Pn**	**06 55 48.8**	**+3.3**
GYA				Sn	**Sn**	**06 56 50.3**	**-0.7**
GYA				smax			
	comp=N,290nm,0.7s						
GYA				smax			
	comp=E,360nm,0.8s						
KMI	**Kunming**	**6.74**	**192**	Pn	**Pn**	**06 56 02.5**	**+2.4**
KMI				Sn	**Sn**	**06 57 14.3**	**-2.9**
KMI				Sg	**Sg**	**06 57 49.9**	**-7.2**
KMI				smax			
	comp=N,51nm,1.8s						
KMI				smax			
	comp=E,65nm,1.9s						
KMI				LR	LR		
	comp=N,710nm,6.9s						
KMI				LR	LR		
	comp=E,820nm,6.9s						
GTA	**Gaotai**	**8.46**	**336**	*e*P	**Pn**	**06 56 26.6**	**+2.9**
GTA				pP		06 56 30.0	
GTA				sP		06 56 32.1	
GTA				S	**Sn**	**06 58 03.5**	**+4.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA				pmax	pmax		
	comp=Z,100nm,3.9s						
GTA				LR	LR		
	comp=N,470nm,11.3s						
GTA				LR	LR		
	comp=E,470nm,12.2s						
GTA				LR	LR		
	comp=Z,480nm,13.1s						
WHN	**Wuhan**	**8.72**	**95**	P	**Pn**	**06 56 29.8**	**+2.4**
WHN				LR	LR		
	comp=N,2μm,7.6s						
WHN				LR	LR		
	comp=E,2μm,6.7s						
WHN				LR	LR		
	comp=Z,1μm,8.9s						
BTO	**Baotou**	**9.98**	**26**	*e*P	**Pn**	**06 56 52.3**	**+7.7**
HHC	**Hu-ho-hao-te**	**10.81**	**31**	*e*P	**Pn**	**06 56 59.3**	**+3.3**
HHC				PP		06 57 07.5	
HHC				S	**Sn**	**06 59 01.4**	**+4.1**
HHC				SS		06 59 15.4	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
HHC				LR	LR		
	comp=N,380nm,5.4s						
HHC				LR	LR		
	comp=E,390nm,5.1s						
HHC				LR	LR		
	comp=Z,330nm,5.1s						
LSA	**Lhasa**	**11.47**	**263**	P	**Pn**	**06 57 05.5**	**+0.4**
LSA				S	Sn	06 59 36.8	+23
LSA				LR	LR		
	comp=E,210nm,10.3s						
LSA				LR	LR		
	comp=Z,260nm,11.6s						
SHL	**Shillong**	**12.50**	**244**	*e*P	**Pn**	**06 57 20.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**14.08**	**201**	Pn	**Pn**	**06 57 42.6**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=10						
SONM	**Songino Array**	**16.15**	**5**	Pn	**Pn**	**06 58 08.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=182,slow=14,SNR=5.1						
ULN	**Ulaanbaatar**	**16.23**	**7**	*e*P	**Pn**	**06 58 09.2**	**0.0**
	comp=Z,15nm,1.0s						
GUN	**Gumba**	**16.41**	**261**	*e*P	**Pn**	**06 58 10.0**	**-1.6**
	comp=Z,69nm,0.9s						
PKI	**Pulchoki**	**16.91**	**261**	*e*P	**Pn**	**06 58 16.5**	**-1.5**
	comp=Z,33nm,0.7s						
PKIN	**Phulchoki**	**16.92**	**261**	*e*P	**Pn**	**06 58 16.5**	**-1.6**
	comp=Z,46nm,0.6s						
KKN	**Kakani**	**16.95**	**261**	*e*P	**Pn**	**06 58 16.4**	**-2.1**
	comp=Z,18nm,0.5s						
DMN	**Daman**	**17.16**	**261**	*e*P	**Pn**	**06 58 19.5**	**-1.5**
	comp=Z,49nm,0.8s						
KSRS	**Korea Array**	**20.26**	**67**	P	**P**	**06 58 56.8**	**0.0**
	comp=Z,14nm,0.7s,baz=255,slow=10,SNR=34						
KSRS				LR	LR	07 08 26.2	
	comp=Z,59nm,18.2s,MS3.0,baz=327,slow=42						
CN2	**Changchun**	**20.55**	**48**	*e*P	**P**	**06 59 01.1**	**+1.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
MK31	**Makanchi Array**	**22.59**	**318**	*e*P	**P**	**06 59 22.7**	**+1.0**
MKAR	**Makanchi Array**	**22.59**	**318**	P	**P**	**06 59 22.9**	**+1.1**
	comp=Z,0.9nm,0.5s,mb3.5,baz=117,slow=12,SNR=13						
TKM2	**Tokmak 2**	**25.26**	**304**	*e*P	**P**	**06 59 50.5**	**+2.9**
	comp=Z,1.1nm,0.6s,mb3.6						
ZALV	**Zalesovo Beam**	**26.20**	**334**	P	**P**	**06 59 55.2**	**-0.7**
	comp=Z,4.8nm,0.7s,mb4.2,baz=133,slow=9.8,SNR=10.0						
ZALV				LR	LR	07 09 51.3	
	comp=Z,32nm,18.5s,MS2.9,baz=94,slow=36						
AML	**Almayashu**	**26.42**	**302**	*e*P	**P**	**07 00 04.0**	**+5.9**
	comp=Z,3.6nm,0.8s,mb4.0						
KURK	**Kurchatov**	**26.82**	**322**	P	**P**	**07 00 01.8**	**+0.3**
	comp=Z,2.6nm,0.8s,mb3.8,baz=130,slow=8.7,SNR=11						
MJAR	**Matsushiro Arr**	**28.40**	**71**	LR	LR	07 12 52.2	
	comp=Z,46nm,19.7s,MS3.1,baz=270,slow=39						
BVAR	**Borovoye Array**	**32.38**	**321**	P	**P**	**07 00 51.2**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.6,baz=102,slow=11,SNR=5.6						
ABKAR	**Akbulak array**	**37.35**	**311**	*e*P	**P**	**07 01 34.6**	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.8						
PETK	**Petropavlovsk-**	**43.63**	**45**	P	**P**	**07 02 25.6**	**-0.1**
	comp=Z,8.9nm,1.1s,mb4.4,baz=298,slow=3.1,SNR=3.6						
JOF	**Joensuu**	**54.56**	**328**	*e*p	**P**	**07 03 49.0**	**-0.3**
	comp=Z,3.0nm,0.5s,mb4.6						
KEV	**Kevo**	**56.20**	**336**	*e*p	**P**	**07 04 01.0**	**0.0**
	comp=Z,3.7nm,0.7s,mb4.5						
BRTR	**Keskin Array B**	**56.55**	**299**	P	**P**	**07 04 04.9**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=105,slow=7.8,SNR=6.1						
ARCES	**ARCESS Array B**	**56.73**	**336**	P	**P**	**07 04 04.5**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.4,baz=74,slow=8.9,SNR=12						
KAF	**Kangasniemi**	**56.93**	**327**	*e*p	**P**	**07 04 06.1**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.4						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**07 04 06.8**	**-0.5**
	comp=Z,0.7nm,0.4s,mb4.0,baz=67,slow=6.8,SNR=2.8						
FINES	**FINESS Array B**	**57.11**	**326**	P	**P**	**07 04 07.3**	**-0.3**
	comp=Z,3.2nm,0.4s,mb4.7,baz=82,slow=6.9,SNR=19						
WRAB	**Tennant Creek**	**58.93**	**147**	*e*P	**P**	**07 04 20.5**	**-0.3**
	comp=Z,3.9nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**61.97**	**149**	P	**P**	**07 04 41.2**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.3,baz=336,slow=6.7,SNR=15						
NB2	**NORSAR Subarra**	**64.19**	**327**	P	**P**	**07 04 54.9**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=73,slow=6.9						
NB2	**NORSAR Subarra**	**64.19**	**327**	P	**P**	**07 04 54.9**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.19**	**327**	P	**P**	**07 04 54.9**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.2,baz=73,slow=6.8,SNR=8.8						
INK	**Inuvik**	**71.50**	**19**	*e*P	**P**	**07 05 40.7**	**-1.1**
	comp=Z,3.1nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**72.47**	**147**	P	**P**	**07 05 47.3**	**-0.7**
	comp=Z,2.6nm,0.7s,mb4.2,baz=354,slow=10,SNR=2.9						
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**07 05 50.3**	**-0.3**
	comp=Z,8.5nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.92**	**313**	*e*P	**P**	**07 05 50.4**	**-0.3**
	comp=Z,4.9nm,0.5s,mb4.4						
YKA	**Yellowknife Ar**	**81.03**	**17**	P	**P**	**07 06 35.2**	**-0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=329,slow=5.2,SNR=27						
FCC	**Fort Churchill**	**88.54**	**9**	*e*P	**P**	**07 07 13.3**	**-0.6**

*ISCJB **20** 07:04:12.3±0.4, 32°.13N±0°.04×105°.07E±0°.04, h10km, mb3.8/8, Error ellipse: s-maj=5.9km s-min=4.4km az=41.1*
*IDC **20** 07:04:12.3±1.2, 32°.09N×104°.89E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/28, mbtmp3.8/10, ML3.9/2, Error ellipse: s-maj=39.4km s-min=20.8km az=46.0*
*NEIC **20** 07:04:13.2±0.7, 32°.05N×105°.06E, h10km, mb4.0/1, Error ellipse: s-maj=22.6km s-min=8.4km az=219.0*
*BJI **20** 07:04:13.6, 32°.26N×105°.15E, h7km, mb3.9/2, ML3.6/10, Ms3.7/4, Ms7 3.3/4*
ISC 20 07:04:14.3±0.4, 32°.18N±0°.04×105°.07E±0°.04, h10km, n20, σ1§33/30, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.69**	**222**	Pg	**Pg**	**07 04 51.4**

ENH			*e*Sg	**Sg**	07 06 33.0	+2.9
GYA	**Guiyang**	**5.86 166**	Pg	**Pb**	07 05 51.1	-5.5
GYA			Sg	**Sn**	07 06 49.9	+1.4
GYA			smax			
	comp=N,120nnm,0.7s					
GYA			smax			
	comp=E,90nnm,0.7s					
WHN	**Wuhan**	**8.10 99**	P	Px	07 06 21.3	
WHN			S	**Sn**	**07 07 42.3**	**-1.3**
GTA	**Gaotai**	**8.39 331**	*e*P	**Pn**	**07 06 17.6**	**+1.8**
GTA			pP		07 06 21.4	
GTA			sP		07 06 24.0	
GTA			S	**Sn**	**07 07 53.8**	**+3.2**
GTA			pmax	pmax		
	comp=Z,2.0nm,0.7s					
GTA			LR	LR		
	comp=N,120nnm,7.4s					
GTA			LR	LR		
	comp=E,78nm,6.8s					
GTA			LR	LR		
	comp=Z,130nm,10.4s					
SONM	**Songino Array**	**15.67 3**	Pn	**Pn**	**07 07 57.1**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=206,slow=9.6,SNR=2.3					
KSRS	**Korea Array**	**19.47 68**	P	**Pn**	**07 08 43.8**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=256,slow=12,SNR=6.2					
MK31	**Makanchi Array**	**22.74 317**	*e*P	**P**	**07 09 16.0**	**-0.4**
MKAR	**Makanchi Array**	**22.74 317**	P	**P**	**07 09 16.2**	**-0.2**
	comp=Z,1.2nm,0.7s,mb3.4,baz=127,slow=9.4,SNR=11					
ZALV	**Zalesovo Beam**	**26.14 332**	P	**P**	**07 09 48.0**	**-0.4**
	comp=Z,1.0nm,0.5s,mb3.6,baz=133,slow=10,SNR=2.9					
KURK	**Kurchatov**	**26.91 321**	P	**P**	**07 09 55.0**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.5,baz=127,slow=8.9,SNR=5.3					
KURK	**Kurchatov**	**26.91 321**	*e*P	**P**	**07 09 55.3**	**0.0**
	comp=Z,3.1nm,0.9s,mb3.8					
AKTK	**Aktyubinsk**	**39.02 312**	P	**P**	**07 11 40.6**	**-0.3**
AKTO	**Aktyubinsk**	**39.02 312**	P	**P**	**07 11 40.6**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.4,baz=100,slow=12,SNR=3.5					
ARCES	**ARCESS Array B**	**56.63 336**	P	**P**	**07 13 56.1**	**-0.9**
	comp=Z,2.7nm,1.0s,mb4.2,baz=89,slow=7.3,SNR=3.6					
FINES	**FINESS Array B**	**57.14 326**	P	**P**	**07 13 59.9**	**-0.9**
	comp=Z,0.9nm,0.7s,mb3.9,baz=141,slow=6.8,SNR=2.0					
ASAR	**Alice Springs**	**61.99 150**	P	**P**	**07 14 34.5**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.9,baz=332,slow=6.5,SNR=7.7					
YKA	**Yellowknife Ar**	**80.43 17**	P	**P**	**07 16 25.1**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=328,slow=5.1,SNR=11					

*IDC **20** 07:21:07.8±1.1, 31°.31N×103°.95E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.7/25, mbtmp3.7/11, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/31, Error ellipse: s-maj=37.8km s-min=21.6km az=46.0*
*ISCJB **20** 07:21:09.7±1.0, 31°.24N±0°.05×104°.03E±0°.09, h29km±7km, mb3.7/10, Error ellipse: s-maj=12.9km s-min=8.9km az=14.8*
*NEIC **20** 07:21:09.3±0.7, 31°.25N×103°.82E, h10km, mb3.9/1, Error ellipse: s-maj=22.0km s-min=10.1km az=45.0*
*BJI **20** 07:21:10.9, 31°.30N×104°.13E, h17km, mB4.7/2, mb4.3/3, ML4.0/9, Ms3.7/2, Ms7 3.6/2*

ISC 20 07:21:09.7±0.8, 31°.29N±0°.04×104°.03E±0°.06, h13km±5km, n21, σ0.91/28, mb3.7/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.45**	**211**	Pg	**Pg**	**07 21 17.9**	**-0.6**
CD2				Sg	**Sg**	**07 21 24.9**	**+0.5**
CD2				smax			
	comp=N,17μm,0.4s						
LZH	**Lanzhou**	**4.79**	**358**	Pg	**Pg**	**07 22 41.4**	**+0.1**
LZH				Sg	**Sg**	**07 23 47.3**	**+4.0**
LZH				smax			
	comp=N,46nm,0.5s						
LZH				smax			
	comp=E,80nm,0.9s						
LZH				LR	LR		
	comp=E,580nm,8.6s						
LZH				LR	LR		
	comp=Z,730nm,9.6s						
ENH	**Enshi**	**4.81**	**101**	*e*Pn	**Pn**	**07 22 25.2**	**+3.4**
ENH				*e*Pg	**Pg**	**07 22 41.1**	**-0.7**
XAN	**Xi'an**	**4.95**	**55**	Pn	**Pn**	**07 22 24.5**	**+0.7**
XAN				Pg	**Pg**	**07 22 42.4**	**-2.2**
XAN				Sn	**Sn**	**07 23 20.9**	**0.0**
XAN				Sg	**Sg**	**07 23 43.8**	**-5.0**
XAN				smax			
	comp=N,120nnm,0.9s						
XAN				smax			
	comp=E,74nm,1.0s						
GYA	**Guiyang**	**5.34**	**154**	Pg	**Pg**	**07 22 53.8**	**+1.8**
GYA				Sg	**Sg**	**07 23 54.3**	**-6.9**
GYA				smax			
	comp=N,160nnm,0.7s						
GYA				smax			
	comp=E,170nnm,0.8s						
KMI	**Kunming**	**6.25**	**191**	Pn	**Pn**	**07 22 46.8**	**+5.2**
KMI				Sn	**Sn**	**07 23 51.4**	**-1.5**
KMI				smax			
	comp=N,35nm,1.9s						
KMI				smax			
	comp=E,40nm,1.7s						
SONM	**Songino Array**	**16.62**	**6**	Pn	**Pn**	**07 25 02.7**	**+0.4**
	comp=E,0.1nm,0.3s,baz=191,slow=15,SNR=2.9						
KSRS	**Korea Array**	**20.63**	**66**	P	**P**	**07 25 49.6**	**+0.8**
	comp=E,2.1nm,0.6s,baz=247,slow=9.5,SNR=7.6						
MK31	**Makanchi Array**	**22.79**	**319**	*e*P	**P**	**07 26 12.4**	**+0.5**
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**07 26 12.2**	**+0.3**
	comp=E,1.6nm,0.8s,mb3.5,baz=123,slow=11,SNR=18						
AAK	**Ala-Archa**	**26.04**	**304**	LR	LR	07 38 27.9	
	comp=E,52nm,19.2s,baz=358,slow=40						
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**07 26 47.1**	**+0.3**
	comp=E,1.0nm,0.3s,mb3.8,baz=159,slow=13,SNR=4.4						
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**07 26 51.2**	**-0.4**
	comp=E,1.2nm,0.7s,mb3.5,baz=128,slow=9.0,SNR=8.9						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**07 30 54.4**	**-0.6**
	comp=E,0.9nm,0.6s,mb4.0,baz=61,slow=9.9,SNR=4.6						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**07 30 54.4**	**-0.6**
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**07 30 56.9**	**-0.4**
	comp=E,1.4nm,0.7s,mb4.1,baz=89,slow=13,SNR=2.3						
WRAB	**Tennant Creek**	**58.66**	**146**	*e*P	**P**	**07 31 06.7**	**-0.1**
	comp=E,0.6nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**07 31 28.2**	**+0.7**
	comp=E,0.5nm,0.9s,mb3.6,baz=332,slow=6.7,SNR=5.8						
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**07 31 44.3**	**-1.2**
	comp=E,0.3nm,0.4s,mb3.7,baz=72,slow=8.9,SNR=3.2						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**07 33 26.5**	**-0.1**
	comp=E,0.2nm,0.6s,mb3.2,baz=330,slow=5.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**93.51**	**288**	P	**P**	**07 34 26.5**	**+0.7**
	comp=E,0.4nm,0.7s,mb4.0,baz=36,slow=3.5,SNR=2.2						

*NEIC **20** 07:25:56.3, 16°.97N×91°.19W, h16km, MD4.2(MEX), After MEX.*

MEX 20 07:25:56.3±0.6, 16°.97N×91°.19W, h16km±48km, MD4.2, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.14**	**233**	*e*P	Pn	07 26 13.5	-4.1
CCIG				*i* S	Sb	07 26 27.9	-4.2
CCIG	**Comitan**	**1.14**	**233**	*e*P	Pn	07 26 13.5	-4.1
CCIG				*i* S	Sb	07 26 27.9	-4.2
SCX	**San Cristobal**	**1.40**	**261**	*i* P	Pn	07 26 17.2	-4.0
SCX	**San Cristobal**	**1.40**	**261**	*i* P	Pn	07 26 17.2	-4.0
TGIG		**1.86**	**264**	*e*P	Pn	07 26 24.5	-3.0
TGIG				*i* S	Sn	07 26 45.9	-4.8
THIG		**2.30**	**207**	*i* P	Pn	07 26 30.2	-3.4
THIG				*i* S	Sn	07 26 57.5	-4.0
PCIG		**2.32**	**237**	*i* P	Pn	07 26 31.2	-2.6
PCIG				*i* S	Sn	07 26 57.9	-4.2
CMIG	**Matias Romero**	**3.53**	**272**	*i* P	Pn	07 26 48.3	-2.2
CMIG				*i* S	Sn	07 27 27.6	-4.5
CMIG	**Matias Romero**	**3.53**	**272**	*i* P	Pn	07 26 48.3	-2.2
CMIG				*i* S	Sn	07 27 27.6	-4.5
VHO	**Vista Hermosa**	**5.30**	**272**	*i* P	Pn	07 27 13.1	-1.8
VHO				*i* S	Sn	07 28 13.6	-2.1
VHO	**Vista Hermosa**	**5.30**	**272**	*i* P	Pn	07 27 13.1	-1.8
VHO				*i* S	Sn	07 28 13.6	-2.1

*ISCJB **20** 07:46:47.5±0.6, 60°.0S±0°.1×25°.8W±0°.2, h10km, mb4.2/9, MS3.6/5, Error ellipse: s-maj=22.6km s-min=9.4km az=136.2*
*NEIC **20** 07:46:53.9±0.4, 59°.68S×25°.81W, h35km, mb4.6/5, Error ellipse: s-maj=14.7km s-min=10.4km az=197.0*
*IDC **20** 07:46:53.5±3.2, 59°.70S×25°.89W, h30km±21km, mb4.0/8, mb1 4.1/8, mb1mx3.9/16, mbtmp4.0/8, MS3.6/6, Ms1 3.6/6, ms1mx3.4/15, Error ellipse: s-maj=26.8km s-min=20.8km az=42.0*

ISC 20 07:46:49.6±0.6, 59°.9S±0°.1×25°.7W±0°.2, h10km, n31, σ1.02/20, mb4.2/9, MS3.6/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.95**	**153**	*e*	**Pn**	**07 49 52.4**	**-0.9**
VNA1				*e*S	**Sn**	**07 52 10.4**	**-6.8**
VNA2	**Neumayer--Watz**	**13.35**	**153**	*e*	**Pn**	**07 49 57.6**	**-1.2**
VNA2				*e*S	**Sn**	**07 52 12.6**	**-14**
PMSA	**Palmer Station**	**18.23**	**238**	LR	LR	07 57 20.1	
	comp=Z,160nm,18.9s,baz=88,slow=34						
MAIT	**Maitri**	**18.66**	**141**	*e*P	**Pn**	**07 51 08.0**	**+0.6**
EFI	**East Falkland**	**19.78**	**280**	*e*P	**Pn**	**07 51 20.3**	**-0.8**
	73nm,1.1s						
USHA	**Ushuaia**	**23.26**	**264**	P	**P**	**07 51 58.9**	**+2.1**
	11nm,0.8s,mb4.3,baz=119,slow=8.9,SNR=5.4						
USHA				LR	LR	07 58 36.1	
	comp=Z,181nm,19.0s,MS3.5,baz=70,slow=30						
QSPA	**South Pole Qui**	**30.34**	**180**	P	**P**	**07 53 03.9**	**+3.2**
	1.4nm,0.5s,mb4.0,baz=188,slow=1.3,SNR=17						
QSPA	**South Pole Qui**	**30.34**	**180**	*e*P	**P**	**07 53 03.8**	**+3.2**
	3.2nm,0.8s,mb4.1						
TRQA	**Tornquist**	**31.68**	**297**	*e*P	**P**	**07 53 13.1**	**+0.2**
	4.3nm,0.7s,mb4.4						
PLCA	**Paso Flores**	**33.59**	**284**	P	**P**	**07 53 29.2**	**-0.4**
	1.3nm,0.5s,mb4.1,baz=195,slow=9.3,SNR=8.6						
PLCA				LR	LR	08 05 33.7	
	comp=Z,97nm,20.2s,MS3.5,baz=223,slow=34						
PLCA	**Paso Flores**	**33.59**	**284**	P	**P**	**07 53 29.2**	**-0.4**
PLCA				LR	LR	08 05 33.7	
CFAA	**Coronel Fontan**	**39.88**	**296**	P	**P**	**07 54 22.5**	**-0.7**
	0.6nm,0.5s,mb3.6,baz=143,slow=8.0,SNR=9.1						
CFAA				PcP	PcP	07 56 27.8	-1.0
	0.3nm,0.4s,baz=200,slow=5.9,SNR=4.7						
CPUP	**Villa Florida**	**39.98**	**313**	P	**P**	**07 54 23.1**	**-1.0**
	0.5nm,0.4s,mb3.6,baz=124,slow=8.4,SNR=6.4						
CPUP	**Villa Florida**	**39.98**	**313**	*e*P	**P**	**07 54 22.9**	**-1.2**
	7.0nm,0.6s,mb4.6						
BOSA	**Boshof**	**46.34**	**71**	LR	LR	08 11 11.9	
	comp=Z,100nm,20.5s,MS3.8,baz=343,slow=32						
LPAZ	**La Paz**	**53.26**	**306**	P	**P**	**07 56 08.5**	**+0.2**
	3.6nm,0.4s,mb4.7,baz=87,slow=5.2,SNR=51						
LPAZ				LR	LR	08 17 06.8	
	comp=Z,34nm,19.5s,MS3.4,baz=90,slow=34						
LPAZ	**La Paz**	**53.26**	**306**	*e*P	**P**	**07 56 08.2**	**-0.1**
	4.2nm,0.4s,mb4.7						
LPAZ				LR	LR	08 17 06.8	
ROSC	**El Rosal**	**74.96**	**309**	LR	LR	08 31 22.1	
	comp=Z,40nm,19.2s,MS3.7,baz=18,slow=36						
TOA0	**Torodi Ar. Sit**	**76.08**	**28**	*e*P	**P**	**07 58 37.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.08**	**28**	P	**P**	**07 58 37.5**	**+0.5**
	1.8nm,0.4s,mb4.3,baz=199,slow=6.7,SNR=43						
ASAR	**Alice Springs**	**95.07**	**161**	P	**P**	**08 00 13.9**	**+1.3**
	0.2nm,0.3s,mb4.0,baz=178,slow=4.0,SNR=1.5						
SCHQ	**Schefferville**	**119.00**	**334**	PKP	PKPdf	08 05 36.6	-0.3
	2.1nm,0.6s,baz=233,slow=10,SNR=5.5						
ARCES	**ARCESS Array B**	**134.23**	**23**	PKP	PKPdf	08 06 06.3	+0.8
	1.6nm,0.8s,baz=180,slow=0.9,SNR=5.4						
BVAR	**Borovoye Array**	**136.12**	**60**	PKP	PKPdf	08 06 11.5	+1.9
	0.5nm,0.4s,baz=278,slow=0.3,SNR=3.1						
YKA	**Yellowknife Ar**	**139.50**	**314**	PKP	PKPdf	08 06 15.2	-0.3
	1.6nm,0.6s,baz=128,slow=2.4,SNR=47						
YKA				SKPbc	SKPbc	08 09 47.8	-2.8
	0.9nm,0.9s,baz=130,slow=2.5,SNR=12						
YKA	**Yellowknife Ar**	**139.50**	**314**	PKP	PKPdf	08 06 15.2	-0.3
YKA				SKPbc	SKPbc	08 09 47.8	-2.8
INK	**Inuvik**	**149.21**	**316**	PKPbc	PKPbc	08 06 35.6	-0.8
	3.3nm,0.5s,baz=70,slow=2.4,SNR=47						
DAWY	**Dawson**	**149.85**	**307**	*e*PKPbc	PKPbc	08 06 37.1	-1.0
SONM	**Songino Array**	**150.00**	**92**	PKPbc	PKPbc	08 06 39.2	+0.2
	1.1nm,0.7s,baz=174,slow=4.3,SNR=2.5						
MENT	**Mentasta**	**151.19**	**303**	*e*PKPbc	PKPbc	08 06 41.2	-0.2
BPAW	**Bear Paw Mtn.**	**154.65**	**303**	*e*PKPbc	PKPbc	08 06 48.4	-0.6

NNC 20 08:09:20.2±6.8, 39°.01N×63°.49E, h0km, mb3.2, mpv3.1, 1C-3D, Error ellipse: s-maj=91.3km s-min=34.4km az=165.0, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.69**	**50**	⇑Pn	Pn	08 11 02.4	+2.7
	0.5nm,0.3s,baz=238,slow=18,SNR=5.2						
KK31				⇓Sn	Sn	08 12 23.3	+6.7
	1.0nm,0.3s						
KK31				⇓Lg		08 12 47.4	
	11nm,0.5s,baz=239,slow=30,SNR=8.3						
AB31	**Akbulak array**	**10.55**	**347**	Pn	Pn	08 11 55.9	+3.3
	0.2nm,0.3s,baz=153,slow=15,SNR=2.6						
AKTO	**Aktyubinsk**	**12.06**	**343**	⇓Pn	Pn	08 12 09.6	-3.6
	0.1nm,0.5s						

IDC 20 08:10:17.9±2.3, 12°.01N×143°.75E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/22, mbtmp4.0/3, Error ellipse: s-maj=68.7km s-min=32.8km az=146.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.91**	**35**	Pn	Pn	08 10 52.2	+0.5
	82nm,0.3s,baz=135,slow=5.7,SNR=42						
GUMO				Sn	Sn	08 11 16.9	+0.4
	70nm,0.3s,baz=139,slow=20,SNR=10						
BVAR	**Borovoye Array**	**70.49**	**322**	P	P	08 21 34.3	0.0
	1.1nm,0.5s,baz=96,slow=8.9,SNR=2.9						
YKA	**Yellowknife Ar**	**84.76**	**27**	P	P	08 22 53.4	-0.3
	0.3nm,0.4s,baz=285,slow=5.1,SNR=24						
NVAR	**Mina Array Bea**	**88.76**	**51**	P	P	08 23 14.6	+0.8
	0.7nm,0.7s,baz=271,slow=5.0,SNR=5.3						

*ISCJB **20** 08:14:27.0±0.2, 35°.76N±0°.03×81°.61E±0°.03, h10km, mb4.5/63, MS3.7/19, Error ellipse: s-maj=3.8km s-min=3.4km az=30.2*
*LDG **20** 08:14:26.3±0.1, 35°.61N×81°.39E, h10km, Mb4.7/15, Ms3.5/6, Error ellipse: s-maj=9.2km s-min=4.9km az=64.0*
*IDC **20** 08:14:26.6±0.9, 35°.62N×81°.55E, h0km, mb4.3/13, mb1 4.4/18, mb1mx4.3/28, mbtmp4.3/18, ML3.7/5, MS3.5/12, Ms1 3.5/12, ms1mx3.3/27, Error ellipse: s-maj=20.3km s-min=18.3km az=33.0*
*NEIC **20** 08:14:28.4±0.4, 35°.68N×81°.63E, h10km, mb4.6/32, Error ellipse: s-maj=7.4km s-min=6.1km az=8.0*
*BJI **20** 08:14:29.5, 35°.86N×81°.62E, h26km, mB4.7/16, mb4.3/25, ML4.7/6, Ms4.2/20, Ms7 3.8/18*
*NNC **20** 08:14:29.7±5.4, 36°.06N×81°.51E, h6km±12km, mb4.5, mpv4.4, Error ellipse: s-maj=41.2km s-min=22.5km az=161.0*
*MOS **20** 08:14:30.6±1.1, 35°.79N×81°.59E, h33km, mb4.8/35, Error ellipse: s-maj=10.1km s-min=4.7km az=120.9*
*SZGRF **20** 08:14:39.2, 36°.51N×80°.87E, h33km, mb4.6, Southern Xinjiang, China*

ISC 20 08:14:28.9±0.2, 35°.76N±0°.03×81°.67E±0°.03, h10km, n204, σ0.99/214, mb4.5/62, MS3.7/19, 25C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	**Kalpa**	**5.08**	**215**	*e*P	**Pn**	**08 15 46.1**	**+0.9**
KLP				*e*x	**Pg**	**08 16 09.3**	**+3.0**
JOSI	**Joshimath**	**5.48**	**199**	*e*P	**Pn**	**08 15 51.2**	**+0.7**
JOSI				*e*x	**Sn**	**08 16 46.2**	**-7.4**
KSH	**Kashi**	**5.87**	**311**	*e*Pn	**Pn**	**08 15 57.1**	**+1.2**
KSH				*e*Sn	**Sn**	**08 17 01.1**	**-2.2**
KSH				smax			
	comp=N,1μm,1.7s						
KSH				smax			
	comp=E,2μm,1.4s						
SMLA	**Simla**	**5.95**	**220**	*e*P	**Pn**	**08 15 55.5**	**-1.6**
DDI	**Dehra Dun**	**6.21**	**210**	*e*x	**Pn**	**08 16 02.0**	**+1.4**
CHCP	**Chirah Chowk**	**7.23**	**256**	P	**Pn**	**08 16 15.3**	**+0.7**
NDI	**New Delhi**	**8.00**	**209**	*e*P	**Pn**	**08 16 25.0**	**-0.1**
KZA	**Kyzart**	**8.05**	**324**	P	**Pn**	**08 16 27.6**	**+1.8**
	SNR=7.7						
AYAN	**Aya Nagar**	**8.21**	**209**	*e*P	**Pn**	**08 16 28.0**	**0.0**
AYAN				AMb	AMB	08 16 30.5	
	comp=Z,7.9nm,0.3s						
UCH	**Uchtor**	**8.53**	**321**	P	**Pn**	**08 16 33.9**	**+1.5**
	SNR=28						
UCH	**Uchtor**	**8.53**	**321**	*e*Pn	**Pn**	**08 16 33.7**	**+1.3**
	comp=Z,40nm,0.6s						
TKM2	**Tokmak 2**	**8.56**	**329**	⇑Pn	**Pn**	**08 16 33.8**	**+1.0**
	comp=Z,6.9nm,0.7s						
TKM2				⇑Pg	Pn	08 17 02.4	+30
	comp=Z,27nm,0.8s						
TKM2				⇑Lg		08 18 50.0	
	comp=Z,98nm,1.1s						
TKM2	**Tokmak 2**	**8.56**	**329**	P	**Pn**	**08 16 34.6**	**+1.8**
	SNR=8.6						
TKM2	**Tokmak 2**	**8.56**	**329**	*e*P	**Pn**	**08 16 34.5**	**+1.7**
TKM2				*e*		08 18 18.9	
TKM2				pmax	pmax		
	comp=Z,24nm,0.7s						
TKM2	**Tokmak 2**	**8.56**	**329**	*e*Pn	**Pn**	**08 16 34.5**	**+1.7**
	comp=Z,24nm,0.7s						
TKM2				*e*Sn	**Sn**	**08 18 18.9**	**+10**
AAK	**Ala-Archa**	**8.84**	**323**	Pn	**Pn**	**08 16 40.0**	**+3.4**
	comp=Z,0.0nm,0.3s,baz=178,slow=17,SNR=5.0						
AAK				Pg	Pn	08 17 08.2	+32
	comp=Z,0.0nm,0.3s,baz=162,slow=17,SNR=9.0						
AAK				Sn	**Sn**	**08 18 29.8**	**+14**
	comp=Z,0.0nm,0.3s,baz=133,slow=18,SNR=2.1						
AAK				Lg		08 19 01.4	
	comp=Z,0.1nm,0.3s,baz=192,slow=9.3,SNR=3.2						
AAK	**Ala-Archa**	**8.84**	**323**	*e*P	**Pn**	**08 16 35.7**	**-0.9**
AAK				pmax	pmax		
	comp=Z,45nm,0.8s						
AAK	**Ala-Archa**	**8.84**	**323**	*e*Pn	**Pn**	**08 16 35.7**	**-0.9**
	comp=Z,45nm,0.8s						
AAK				*e*Sn	**Sn**	**08 18 28.2**	**+12**
AML	**Almayashu**	**8.89**	**318**	P	**Pn**	**08 16 39.5**	**+2.2**
	SNR=54						
AML	**Almayashu**	**8.89**	**318**	*e*Pn	**Pn**	**08 16 38.8**	**+1.5**
	comp=Z,58nm,0.7s						
FRU	**Bishkek**	**8.93**	**324**	*e*P	**Pn**	**08 16 40.0**	**+2.1**
FRU				pmax	pmax		
	comp=Z,140nm,2.0s						
AGRA	**Agra**	**9.07**	**202**	*e*P	**Pn**	**08 16 38.9**	**-1.0**
KHET	**Khetri**	**9.13**	**215**	*e*P	**Pn**	**08 16 39.6**	**-1.1**
KHET				AMb	AMB	08 16 40.9	
	comp=Z,15nm,0.6s						
KHET				*e*S	**Sn**	**08 18 15.5**	**-8.1**
EKS2	**Erkin-Say**	**9.22**	**321**	P	**Pn**	**08 16 45.0**	**+3.1**
	SNR=7.7						
EKS2	**Erkin-Say**	**9.22**	**321**	*e*Pn	**Pn**	**08 16 44.0**	**+2.1**
WMQ	**Urumqi**	**9.29**	**28**	P	**Pn**	**08 16 43.5**	**+0.7**
WMQ				smax			
	comp=N,98nm,0.9s						
WMQ				smax			
	comp=E,100nm,1.0s						
WMQ				LR	LR		
	comp=N,470nm,24.0s						
WMQ				LR	LR		
	comp=E,900nm,25.0s						
WMQ				LR	LR		
	comp=Z,210nm,15.0s						
KBL	**Kabul**	**10.41**	**267**	*e*P	**Pn**	**08 16 58.1**	**-0.1**
KBL				pmax	pmax		
	comp=Z,15nm,0.6s						
KBL	**Kabul**	**10.41**	**267**	*e*Pn	**Pn**	**08 16 58.1**	**-0.1**
	comp=Z,15nm,0.6s						
MK31	**Makanchi Array**	**11.04**	**2**	Pn	**Pn**	**08 17 06.2**	**-0.5**
	comp=Z,7.1nm,0.4s,baz=178,slow=12,SNR=100						
MK31				Sn	**Sn**	**08 19 10.7**	**+0.6**
	comp=Z,9.6nm,0.6s,baz=178,slow=23,SNR=3.1						
MK31				⇓Lg		08 20 04.2	
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**11.04**	**2**	*e*Pn	**Pn**	**08 17 06.4**	**-0.3**
MKAR	**Makanchi Array**	**11.04**	**2**	Pn	**Pn**	**08 17 06.9**	**+0.2**
	comp=Z,2.6nm,0.3s,baz=180,slow=12,SNR=72						
MKAR				Sn	**Sn**	**08 19 08.6**	**-1.6**
	comp=Z,1.8nm,0.3s,baz=183,slow=23,SNR=4.0						
MKAR				LR	LR	08 22 19.7	
	comp=Z,206nm,18.2s,baz=277,slow=42						
MKAR	**Makanchi Array**	**11.04**	**2**	P	**Pn**	**08 17 06.9**	**+0.2**
MKAR						08 19 08.6	
MKAR	**Makanchi Array**	**11.04**	**2**	Pn	**Pn**	**08 17 06.9**	**+0.2**
MKAR				Sn	**Sn**	**08 19 08.6**	**-1.6**
MKAR				LR	LR	08 22 19.7	
KK31	**Karatay Array**	**11.32**	**314**	⇑Pn	**Pn**	**08 17 09.3**	**-1.3**
	comp=Z,4.2nm,0.8s,baz=129,slow=11,SNR=4.5						
KK31				⇑Pg	Pn	08 17 53.1	+43
	comp=Z,6.5nm,0.8s,baz=135,slow=14,SNR=3.5						
KK31				⇑Sn	**Sn**	**08 19 17.0**	**0.0**
	comp=Z,5.7nm,0.6s						
KK31				⇑Lg		08 20 14.2	
	comp=Z,37nm,0.9s						
JASL	**Jaisalmer**	**12.72**	**229**	*e*P	**Pn**	**08 17 29.9**	**0.0**
KURBB	**Kurchatov Arra**	**15.03**	**352**	⇑Pn	**Pn**	**08 18 05.1**	**+3.9**
	comp=Z,2.2nm,1.1s,baz=176,slow=11						
KURBB				⇑Lg		08 19 47.4	
	comp=Z,2.3nm,0.5s,baz=176,slow=11						
KURK	**Kurchatov**	**15.11**	**353**	⇑Pn	**Pn**	**08 17 59.1**	**-3.2**
	comp=Z,17nm,1.1s,baz=176,slow=11						
KURK				⇑Lg		08 19 48.8	
	comp=Z,3.7nm,0.5s,baz=176,slow=11						
KURK	**Kurchatov**	**15.11**	**353**	Pn	**Pn**	**08 17 57.6**	**-4.7**
	comp=Z,0.0nm,0.3s,baz=175,slow=12,SNR=10.0						
KURK				Lg		08 22 20.4	
	comp=Z,0.2nm,0.3s,baz=178,slow=32,SNR=4.7						
KURK				LR	LR	08 24 37.9	
	comp=Z,292nm,19.4s,baz=180,slow=40						
KURK	**Kurchatov**	**15.11**	**353**	*c iP*	**Pn**	**08 18

KMI pP 08 19 23.5
KMI sP sP 08 19 28.0 +11
KMI PP 08 19 38.0
KMI S **S** **08 23 01.8 -4.5**
KMI sS sS 08 23 17.0 +6.2
KMI SS 08 23 35.3
KMI pmax pmax
comp=Z,13nm,1.0s
KMI pmax pmax
comp=Z,130nm,4.0s
KMI LR LR
comp=N,280nm,12.4s,MS3.9
KMI LR LR
comp=E,200nm,14.0s,MS3.9
KMI LR LR
comp=Z,220nm,12.2s,MS3.8
ZAK Zakamensk 21.41 40 *eP* **P 08 19 18.3 +1.6**
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.1
SONM Songino Array 21.93 49 P **P 08 19 25.0 +2.7**
comp=Z,6.0nm,0.9s,mb4.0,baz=242,slow=9.8,SNR=18
SONM Lg 08 26 17.4
comp=Z,0.9nm,0.7s,baz=233,slow=32,SNR=4.2
SONM LR LR 08 28 26.6
comp=Z,244nm,19.0s,MS3.6,baz=77,slow=38
ULN Ulaanbaatar 22.35 49 *eP* **P 08 19 28.6 +1.8**
ULN pmax pmax
comp=Z,11nm,1.1s,mb4.2
ULN Ulaanbaatar 22.35 49 *eP* **P 08 19 28.6 +1.9**
comp=Z,11nm,1.1s,mb4.2
AKTK Aktyubinsk 22.52 318 P **P 08 19 28.4 -0.3**
AKTK LR LR 08 28 13.4
AKTO Aktyubinsk 22.52 318 P **P 08 19 28.4 -0.3**
comp=Z,6.5nm,0.6s,mb4.2,baz=114,slow=11,SNR=23
AKTO LR LR 08 28 13.4
comp=Z,98nm,18.3s,MS3.3,baz=299,slow=37
CMAR Chiang Mai Arr 23.03 134 P **P 08 19 33.0 -1.3**
comp=Z,1.0nm,0.4s,mb3.6,baz=335,slow=9.9,SNR=3.6
GYA Guiyang 23.27 107 *eP* **P 08 19 37.4 +0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
HHC Hu-ho-hao-te 23.94 69 *eP* **P 08 19 43.1 0.0**
HHC pP 08 19 52.8
HHC sP sP 08 19 56.4 +9.0
HHC PP 08 20 17.8
HHC PcP PcP 08 23 26.3 +1.0
HHC S **S** **08 23 54.3 -5.3**
HHC sS sS 08 24 10.9 +6.3
HHC SS 08 24 46.5
HHC ScP ScP 08 27 00.3 -3.4
HHC ScS ScS 08 30 46.3 -4.3
HHC pmax pmax
comp=Z,24nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,210nm,4.6s
HHC LR LR
comp=N,320nm,12.5s,MS4.4
HHC LR LR
comp=E,880nm,14.7s,MS4.4
HHC LR LR
comp=Z,160nm,14.7s,MS3.6
ARU Arti 25.93 330 *eP* **P 08 20 00.8 -0.2**
ARU pmax pmax
comp=Z,11nm,0.8s,mb4.4
ARU Arti 25.93 330 *eP* **P 08 20 00.8 -0.2**
comp=Z,11nm,0.8s,mb4.4
BJI Beijing 27.46 71 P **P 08 20 15.1 +0.1**
BJI pmax pmax
comp=Z,11nm,0.5s,mb4.6
BJI pmax pmax
comp=Z,80nm,4.2s
BJI LR LR
comp=N,210nm,22.2s,MS3.7
BJI LR LR
comp=E,130nm,26.4s,MS3.7
BJI LR LR
comp=Z,87nm,29.2s,MS3.2
ZEI Tsey 29.88 295 *eP* **P 08 20 35.1 -1.4**
ZEI pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
QIZ Qiongzhong 29.91 116 P **P 08 20 37.1 +0.1**
QIZ S **S** **08 25 32.5 -1.8**
QIZ pmax pmax
comp=Z,12nm,1.9s,mb4.3
QIZ pmax pmax
comp=Z,75nm,3.4s
BOD Bodaibo 30.77 34 *eP* **P 08 20 43.2 -1.0**
KLMR Klimovskoe 36.63 327 *eP* **P 08 21 33.5 -1.6**
KLMR pmax pmax
comp=Z,17nm,1.7s,mb4.6
KSRS Korea Array 36.89 73 LR LR 08 37 51.3
comp=Z,58nm,19.0s,MS3.4,baz=162,slow=38
MDJ Mudanjiang 37.21 61 P **P 08 21 40.0 -0.2**
MDJ sP sP 08 21 52.5 +7.9
MDJ PP PP 08 23 04.1 -0.8
MDJ S **S** **08 27 25.3 -1.7**
MDJ sS sS 08 27 40.3 +8.2
MDJ pmax pmax
comp=Z,10.0nm,2.2s,mb4.3
MDJ pmax pmax
comp=Z,64nm,5.6s
MDJ LR LR
comp=N,62nm,21.1s
MDJ LR LR
comp=Z,68nm,19.2s,MS3.5
BR131 Keskin Array S 37.83 291 *eP* **P 08 21 45.4 -0.2**
comp=Z,3.2nm,0.7s,mb4.2
BRTR Keskin Array B 37.83 291 P **P 08 21 45.5 -0.1**
comp=Z,5.5nm,0.9s,mb4.3,baz=101,slow=6.4,SNR=22
AKASG Malin Array Be 40.16 309 P **P 08 22 03.7 -1.2**
comp=Z,0.6nm,0.3s,mb3.8,baz=78,slow=7.4,SNR=7.7
AKASG Malin Array Be 40.16 309 P **P 08 22 03.7 -1.2**
JOF Joensuu 40.99 328 *eP* **P 08 22 11.8 +0.2**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
JOF Joensuu 40.99 328 *ep* **P 08 22 11.8 +0.2**
comp=Z,7.3nm,0.6s,mb4.5
LVZ Lovozero 41.55 335⇑ *eP* **P 08 22 15.9 -0.3**
LVZ pmax pmax
comp=Z,32nm,1.7s,mb4.7
APA Apatity 41.84 335⇓ *eP* **P 08 22 21.0 +2.5**
APA MLR MLR
comp=Z,200nm,13.0s,MS4.2
VRI Vrincioaia 42.04 301 ⇑P **P 08 22 22.4 +1.9**
VRI Vrincioaia 42.04 301 ⇑*i*P **P 08 22 22.4 +1.9**
MLR Muntele Rosu 42.63 301 ⇑P **P 08 22 26.7 +1.4**
MLR Muntele Rosu 42.63 301 ⇑*i*P **P 08 22 26.7 +1.4**
BUR08 Bucovina Ar. S 42.91 304 *eP* **P 08 22 27.0 -0.5**
FINES FINESS Array B 43.02 324 P **P 08 22 28.1 -0.1**
comp=Z,5.6nm,0.7s,mb4.4,baz=101,slow=9.9,SNR=22
KAF Kangasniemi 43.04 325 *eP* **P 08 22 27.1 -1.3**
KAF pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KAF Kangasniemi 43.04 325 *ep* **P 08 22 27.1 -1.3**
comp=Z,1.8nm,0.9s,mb3.8
DRGR 44.69 303 ⇑P **P 08 22 42.2 +0.3**
DRGR 44.69 303 ⇑*i*P **P 08 22 42.2 +0.3**
KOLS Kolonicke sedl 44.73 306 *eP* **P 08 22 42.0 -0.1**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
KOLS Kolonicke sedl 44.73 306 *eP* **P 08 22 42.0 -0.1**
comp=Z,3.2nm,0.9s,mb4.2
KOLS Kolonicke sedl 44.73 306 *eP* **P 08 22 42.0 -0.1**
KEV Kevo 44.84 336 *eP* **P 08 22 42.7 0.0**
KEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KEV Kevo 44.84 336 *ep* **P 08 22 42.7 0.0**
comp=Z,5.3nm,0.7s,mb4.5
ARCES ARCESS Array B 45.26 336 P **P 08 22 46.5 +0.4**
comp=Z,9.6nm,0.8s,mb4.7,baz=99,slow=7.6,SNR=25
ARCES LR LR 08 42 12.8
comp=Z,33nm,21.6s,MS3.2,baz=103,slow=37
STHS Stebnicka Huta 45.35 307 *eP* **P 08 22 48.3 +1.2**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
STHS Stebnicka Huta 45.35 307 *eP* **P 08 22 48.3 +1.2**
comp=Z,3.8nm,0.8s,mb4.3
STHS Stebnicka Huta 45.35 307 *eP* **P 08 22 48.3 +1.2**
KECS Kecovo 45.96 306 *eP* **P 08 22 53.1 +1.2**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 45.96 306 *eP* **P 08 22 53.1 +1.2**
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 45.96 306 *eP* **P 08 22 53.0 +1.1**
VYHS Vyhne 47.04 306 *eP* **P 08 23 00.8 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 47.04 306 *eP* **P 08 23 00.8 +0.4**
comp=Z,3.8nm,1.2s,mb4.2
VYHS Vyhne 47.04 306 *eP* **P 08 23 00.8 +0.4**
OKC Ostrava-Krasne 47.30 308 *eP* **P 08 23 03.1 +0.7**
OKC AMS AMS 08 48 30.0
MORC Moravsky Berou 47.70 308 ⇓P **P 08 23 05.4 0.0**
MORC Moravsky Berou 47.70 308 ⇓*i*P **P 08 23 05.4 0.0**
DPC Dobruska-Polom 48.39 309 *eP* **P 08 23 11.3 +0.5**
DPC MLR MLR
comp=Z,100nm,15.2s,MS3.9
DPC Dobruska-Polom 48.39 309 *eP* **P 08 23 11.3 +0.5**
DPC AMS AMS 08 45 30.0
comp=Z,100nm,15.2s
TREC Trest 49.09 308 AMS AMS 08 45 40.0
CONA Conrad Observa 49.10 306⇑*i*P **P 08 23 16.6 +0.3**
comp=Z,11nm,1.1s,mb4.8
PVCC Panska Ves 49.47 309 AMS AMS 08 46 20.0
comp=Z,100nm,10.6s
PRU Pruhonice 49.58 309 *eP* **P 08 23 20.3 +0.4**
PRU MLR MLR
comp=Z,100nm,11.6s,MS4.0
PRU Pruhonice 49.58 309 *eP* **P 08 23 20.3 +0.4**
PRU AMS AMS 08 46 40.0
comp=Z,100nm,11.6s
BRG Berggiesshubel 49.80 310 *eP* **P 08 23 21.9 +0.3**
comp=Z,8.2nm,0.8s,mb4.8
BRG
comp=N,302nm,24.0s
BRG
comp=E,144nm,16.2s
BRG
comp=Z,187nm,20.7s
BRG Berggiesshubel 49.80 310 *eP* **P 08 23 21.9 +0.3**
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BRG MLR MLR
comp=N,181nm,24.0s
BRG MLR MLR
comp=E,86nm,16.2s
BRG MLR MLR
comp=Z,112nm,20.7s,MS3.9
SOKA Soboth 49.91 304⇑*i*P **P 08 23 22.7 +0.2**
comp=Z,12nm,1.0s,mb4.9
NB2 NORSAR Subarra 50.16 323 P **P 08 23 23.7 -0.5**
comp=Z,6.6nm,0.9s,mb4.7,baz=87,slow=7.9
NB2 NORSAR Subarra 50.16 323 P **P 08 23 23.7 -0.5**
comp=Z,6.6nm,0.9s,mb4.7,baz=87,slow=7.9
NOA NORSAR Array B 50.16 323 P **P 08 23 24.0 -0.2**
comp=Z,4.0nm,0.8s,mb4.5,baz=87,slow=7.5,SNR=17
NOA LR LR 08 45 59.1
comp=Z,56nm,19.8s,MS3.6,baz=95,slow=38
CLL Collm 50.31 311 *eP* **P 08 23 24.9 -0.6**
comp=Z,8.0nm,1.0s,mb4.7
CLL Collm 50.31 311⇑*i*P **P 08 23 25.3 -0.2**
CLL Collm 50.31 311⇑*i*P **P 08 23 25.3 -0.2**
CLL LmV 08 47 00.0
comp=Z,100nm,18.2s
NAO01 NORSAR Array S 50.33 323 *eP* **P 08 23 24.6 -0.9**
comp=Z,2.4nm,0.6s,mb4.4
GEC2 GERESS Array S 50.33 307 *eP* **P 08 23 26.1 +0.4**
comp=Z,10.0nm,1.1s,mb4.8
GEC2 GERESS Array S 50.33 307 *eP* **P 08 23 26.1 +0.4**
GEC2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
GERES GERESS Array B 50.33 307 P **P 08 23 25.7 +0.1**
comp=Z,4.4nm,0.9s,mb4.5,baz=76,slow=5.6,SNR=12
GERES LR LR 08 48 12.7
comp=Z,66nm,19.4s,MS3.7,baz=82,slow=40
KHC Kasperske Hory 50.35 308 *eP* **P 08 23 26.2 +0.4**
KHC MLR MLR
comp=Z,100nm,16.0s,MS3.9
KHC Kasperske Hory 50.35 308 *eP* **P 08 23 26.2 +0.4**
KHC AMS AMS 08 46 50.0
comp=Z,100nm,16.0s
WET Wettzell 50.80 308 *eP* **P 08 23 30.0 +0.8**
comp=Z,5.0nm,1.0s,mb4.4
WET Wettzell 50.80 308 *eP* **P 08 23 30.0 +0.8**
WET pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TANN Tannenbergstha 50.81 309 *eP* **P 08 23 28.9 -0.4**
comp=Z,4.0nm,0.9s,mb4.3
NKC Novy Kostel 50.86 309 AMS AMS 08 46 50.0
comp=Z,200nm,7.6s
ROTZ Rotzenmuhle 51.10 309 *eP* **P 08 23 32.1 +0.6**
comp=Z,9.0nm,1.2s,mb4.6
MOX Moxa 51.30 310 *eP* **P 08 23 33.1 +0.2**
comp=Z,4.0nm,0.8s,mb4.4
BSEG Bad Segeberg 51.47 314 *eP* **P 08 23 34.9 +0.8**
comp=Z,20nm,1.0s,mb5.0
GRA1 Grafenberg Arr 51.74 309 *eP* **P 08 23 36.5 +0.2**
comp=Z,15nm,1.1s,mb4.8
GRF Grafenberg Arr 51.74 309 *eP* **P 08 23 36.5 +0.2**
comp=Z,15nm,1.1s,mb4.8
GRF Grafenberg Arr 51.74 309 *eP* **P 08 23 36.5 +0.2**
GRF pmax pmax
comp=Z,15nm,1.1s,mb4.8
GRF Grafenberg Arr 51.74 309 *eP* **P 08 23 36.5 +0.2**
GRF pmax pmax
comp=Z,15nm,1.1s,mb4.8
CLZ Clausthal 51.82 312 *eP* **P 08 23 37.1 +0.3**
comp=Z,16nm,1.2s,mb4.8
CLZ Clausthal 51.82 312 *eP* **P 08 23 37.1 +0.3**
CLZ pmax pmax
comp=Z,16nm,1.2s,mb4.8
NRDL Niedersach Rie 51.85 312 *eP* **P 08 23 37.6 +0.5**
comp=Z,12nm,0.9s,mb4.8
UBBA Unterbreizbach 52.26 310 *eP* **P 08 23 39.6 -0.5**
comp=Z,3.0nm,0.7s,mb4.3
BUG Bochum–Univer 53.80 312 *eP* **P 08 23 51.6 +0.2**
comp=Z,9.0nm,0.5s,mb5.0
BFO Black Forest 53.92 308 *eP* **P 08 23 53.0 +0.6**
comp=Z,7.0nm,1.2s,mb4.5
BFO Black Forest 53.92 308 *eP* **P 08 23 53.0 +0.6**
BFO pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
PETK Petropavlovsk- 54.37 46 P **P 08 23 56.8 +1.2**
comp=Z,4.5nm,0.8s,mb4.4,baz=289,slow=8.7,SNR=3.6
CDF Champ du Feu 54.57 308 *eP* **P 08 23 56.6 -0.5**
HINF Hinteralfeld 55.01 307 *eP* **P 08 23 59.6 -0.7**
LPG La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
comp=Z,16nm,0.8s,mb4.8
LPG La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LPG La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
comp=Z,8.1nm,0.8s,mb4.8
LPL La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
comp=Z,29nm,0.8s,mb5.0
LPL La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
LPL pmax pmax
comp=Z,14nm,0.8s,mb5.0
LPL La Plagne 55.78 305 *eP* **P 08 24 05.7 -0.2**
comp=Z,14nm,0.8s,mb5.1
SBF Sospel 55.83 303 *eP* **P 08 24 06.0 -0.3**
comp=Z,21nm,0.7s,mb5.0
SBF Sospel 55.83 303 *eP* **P 08 24 06.0 -0.3**
SBF pmax pmax
comp=Z,11nm,0.6s,mb5.1
SBF Sospel 55.83 303 *eP* **P 08 24 06.0 -0.3**
comp=Z,11nm,0.6s,mb5.0
MBDF Montbardon 56.01 304 *eP* **P 08 24 07.7 +0.2**
comp=Z,11nm,0.8s,mb4.6
MBDF Montbardon 56.01 304 *eP* **P 08 24 07.7 +0.2**
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MBDF Montbardon 56.01 304 *eP* **P 08 24 07.7 +0.2**
comp=Z,5.3nm,0.8s,mb4.6
ORIF Oris-en-Rattie 56.55 304 *eP* **P 08 24 10.6 -0.8**
comp=Z,12nm,0.7s,mb4.7
ORIF *e*MLR MLR
comp=Z,95nm,20.5s,MS3.6
ORIF Oris-en-Rattie 56.55 304 *eP* **P 08 24 10.6 -0.8**
ORIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 56.55 304 *eP* **P 08 24 10.6 -0.8**
comp=Z,5.8nm,0.7s,mb4.7
LOR Lormes 57.11 308 *eP* **P 08 24 15.1 -0.3**
comp=Z,11nm,0.6s,mb4.8
LOR *e*MLR MLR
comp=Z,78nm,21.2s,MS3.5
LOR Lormes 57.11 308 *eP* **P 08 24 15.1 -0.3**
LOR pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LOR MLR MLR
comp=Z,80nm,21.3s,MS3.8
LOR Lormes 57.11 308 *eP* **P 08 24 15.1 -0.3**
comp=Z,5.7nm,0.6s,mb4.8
LOR LR LR
comp=Z,80nm,21.3s,MS3.8
SMF Signal de Mont 57.33 307 *eP* **P 08 24 15.8 -1.1**
SSF Saint Saulge 57.41 307 *eP* **P 08 24 16.3 -1.2**
AVF Avril sur Loir 57.60 307 *eP* **P 08 24 19.0 +0.2**
comp=Z,15nm,0.9s,mb4.7
AVF Avril sur Loir 57.60 307 *eP* **P 08 24 19.0 +0.2**
AVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AVF Avril sur Loir 57.60 307 *eP* **P 08 24 19.0 +0.2**
comp=Z,7.7nm,0.9s,mb4.7
TCF Toulx Ste Croi 58.51 307 *eP* **P 08 24 24.5 -0.7**
comp=Z,10nm,0.8s,mb4.6
TCF Toulx Ste Croi 58.51 307 *eP* **P 08 24 24.5 -0.7**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 58.51 307 *eP* **P 08 24 24.5 -0.7**
comp=Z,5.1nm,0.8s,mb4.6
LDF La Druitiere 59.19 310 *eP* **P 08 24 29.2 -0.7**
comp=Z,14nm,0.7s,mb4.8
LDF La Druitiere 59.19 310 *eP* **P 08 24 29.2 -0.7**
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
LDF La Druitiere 59.19 310 *eP* **P 08 24 29.2 -0.7**
comp=Z,6.8nm,0.7s,mb4.8
MTLF Montolieu 59.57 304 *eP* **P 08 24 32.0 -0.6**
comp=Z,3.9nm,0.6s,mb4.3
MTLF Montolieu 59.57 304 *eP* **P 08 24 32.0 -0.6**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MTLF Montolieu 59.57 304 *eP* **P 08 24 32.0 -0.6**
comp=Z,2.0nm,0.6s,mb4.3
GRR Gorron 59.72 310 *eP* **P 08 24 32.8 -0.8**
comp=Z,18nm,0.8s,mb4.9
GRR Gorron 59.72 310 *eP* **P 08 24 32.8 -0.8**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRR Gorron 59.72 310 *eP* **P 08 24 32.8 -0.8**
comp=Z,8.9nm,0.8s,mb4.8
SGMF Saint Gilles 60.83 310 *eP* **P 08 24 41.0 -0.1**
ROSF Rostrenen 61.24 311 *eP* **P 08 24 43.0 -0.9**
ETSF Etsaut 61.61 304 *eP* **P 08 24 45.9 -0.7**
comp=Z,5.6nm,0.7s,mb4.5
ETSF Etsaut 61.61 304 *eP* **P 08 24 45.9 -0.7**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
ETSF Etsaut 61.61 304 *eP* **P 08 24 45.9 -0.7**
comp=Z,2.8nm,0.7s,mb4.5
COLA College 72.51 20 *eP* **P 08 25 55.7 +0.3**
COLA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
COLA College 72.51 20 *eP* **P 08 25 55.7 +0.3**
comp=Z,4.7nm,1.0s,mb4.4
INK Inuvik 72.97 13 *eP* **P 08 25 57.7 -0.4**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 72.97 13 *eP* **P 08 25 57.7 -0.4**
comp=Z,3.3nm,1.0s,mb4.2
TORD Torodi Ar. Bea 74.37 275 P **P 08 26 05.3 -1.9**
comp=Z,0.6nm,0.5s,mb3.8,baz=37,slow=4.2,SNR=8.5
TORD LR LR 09 02 29.7
comp=Z,75nm,18.2s,MS4.0,baz=95,slow=39
WRAB Tennant Creek 74.53 129 *eP* **P 08 26 06.9 -1.0**
WRAB pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WRAB Tennant Creek 74.53 129 *eP* **P 08 26 06.9 -1.0**
comp=Z,6.5nm,0.8s,mb4.6
YKA Yellowknife Ar 81.22 8 P **P 08 26 43.6 -0.9**
comp=Z,2.0nm,0.8s,mb4.1,baz=343,slow=5.2,SNR=29
YKA Yellowknife Ar 81.22 8 P **P 08 26 43.6 -0.9**
YKA pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 83.19 228 P **P 08 26 54.6 -0.7**
comp=Z,2.6nm,0.7s,mb4.4,baz=38,slow=5.5,SNR=3.9
BOSA Boshof 83.19 228 P **P 08 26 54.6 -0.7**
BOSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
DBIC Dimbokro 83.33 273 LR LR 09 07 23.5
comp=Z,80nm,19.0s,MS4.1,baz=53,slow=38
FFC Flin Flon 89.83 2 *ceP* **P 08 27 28.0 +0.5**
CPUP Villa Florida 143.85 273 PKhKP 08 33 59.9
comp=Z,2.4nm,0.8s,baz=90,slow=1.0,SNR=6.7
LPAZ La Paz 146.85 298 PKPbc PKPbc 08 34 09.7 -2.1
comp=Z,0.7nm,0.7s,baz=77,slow=3.8,SNR=4.2

AUST 20 08:25:12.4, 23.36S × 129.61E, h0km, ML3.6, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**6.42**	**324**	*e*P	Pn	08 26 45.2	-3.0
FITZ				*e*S	Sn	08 27 54.3	-7.9
6.2nm,0.4s							
FORT	**Forrest**	**7.51**	**190**	*e*P	Pn	08 27 02.8	-0.5
FORT				*e*S	Sn	08 28 24.0	-5.2
4.7nm,0.2s							
MBWA	**Marble Bar**	**9.41**	**282**	*e*P	Pn	08 27 25.9	-3.4
MBWA				*e*S	Sn	08 29 05.0	-11
QIS	**Mount Isa**	**9.69**	**75**	*e*P	Pn	08 27 30.7	-2.4
MEEK	**Meekatharra**	**10.49**	**250**	*e*P	Pn	08 27 41.4	-2.7
MEEK				*e*S	Sn	08 29 31.7	-11
KLBR	**Kellerberrin**	**13.33**	**229**	*e*P	Pn	08 28 17.9	-5.0
KLBR				*e*S	Sn	08 30 37.7	-14
2.3nm,0.3s							
MORW	**Morawa**	**13.44**	**242**	*e*P	Pn	08 28 18.7	-5.7
MORW				*e*S	Sn	08 30 38.5	-16
STKA	**Stephens Creek**	**13.59**	**131**	*e*P	Pn	08 28 21.5	-4.9
STKA				*e*S	Sn	08 30 44.7	-13
1.8nm,0.8s							

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*IDC **20** 08:56:04.1±2.9, 53.72N×88.18E, h0km, mb1 3.7/3, mb1mx3.3/28, mbtmp3.7/3, ML3.6/2, Error ellipse: s-maj=26.7km s-min=14.9km az=52.0*
*NNC **20** 08:56:15.7±3.1, 53.11N×86.93E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=23.1km s-min=17.5km az=49.0*
ISC 20 08:56:09.6±2.7, 53.65N±0.09×87.6E±0.3, h10km, n7, σ1 9 08/13, 7C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.67**	**281**	Pg	**Pg**	**08 56 39.3**	**-2.3**
8.4nm,0.3s,baz=95,slow=18,SNR=50							
ZALV				Lg		08 57 06.0	
7.4nm,0.3s,baz=92,slow=30,SNR=5.9							
KURK	**Kurchatov**	**6.25**	**246**	⇑Pn	**Pn**	**08 57 42.3**	**+0.5**
4.3nm,0.6s							
KURK				⇑Sn	**Sn**	**08 58 48.4**	**-4.8**
3.0nm,0.8s							
KURK				⇑Lg		08 59 15.8	
21nm,1.1s							
KURK	**Kurchatov**	**6.25**	**246**	Pn	**Pn**	**08 57 44.0**	**+2.2**
0.5nm,0.3s,baz=62,slow=14,SNR=40							
KURK				Sn	**Sn**	**08 59 01.6**	**+8.3**
0.1nm,0.3s,baz=64,slow=23,SNR=3.9							
KURK				Lg		08 59 30.8	
0.1nm,0.3s,baz=63,slow=32,SNR=11							
KURBB	**Kurchatov Arra**	**6.35**	**245**	⇓Pn	**Pn**	**08 57 43.7**	**+0.6**
1.8nm,0.7s,baz=63,slow=14							
KURBB				⇓Sn	**Sn**	**08 58 48.0**	**-7.6**
0.8nm,0.6s							
KURBB				⇑Lg		08 59 19.6	
3.3nm,0.8s,baz=66,slow=31							
MK31	**Makanchi Array**	**7.66**	**208**	⇑Pn	**Pn**	**08 58 01.3**	**+0.2**
2.3nm,0.7s,baz=28,slow=13,SNR=30							
MK31				⇑Sn	**Sn**	**08 59 26.8**	**-1.1**
4.0nm,1.0s,baz=31,slow=24,SNR=4.0							
MK31				⇑Lg		08 59 56.0	
4.2nm,0.7s,baz=31,slow=28,SNR=3.6							
MKAR	**Makanchi Array**	**7.66**	**208**	Pn	**Pn**	**08 58 01.4**	**+0.3**
0.5nm,0.3s,baz=25,slow=12,SNR=36							
MKAR				Sn	**Sn**	**08 59 28.0**	**+0.1**
0.1nm,0.3s,baz=31,slow=24,SNR=5.7							
MKAR				Lg		09 00 08.3	
0.3nm,0.3s,baz=29,slow=28,SNR=6.7							
BVAR	**Borovoye Array**	**10.31**	**273**	Pn	**Pn**	**08 58 36.8**	**-0.6**
baz=80,slow=16,SNR=2.6							
BVAR				Sn	**Sn**	**09 00 34.2**	**+1.3**
0.4nm,0.3s,baz=83,slow=25,SNR=3.5							

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*ISCJB **20** 08:57:05.0±1.0, 46.26N±0.08×151.86E±0.09, h88km±8km, mb4.2/39, Error ellipse: s-maj=15.6km s-min=6.4km*

az=147.6
MOS ***20*** *08:57:05.8±1.1, 46°.28N×151°.78E, h95km, mb4.3/10, Error ellipse: s-maj=11.3km s-min=10.0km az=91.8*
IDC ***20*** *08:57:06.4±2.7, 46°.20N×151°.88E, h89km±23km, mb3.9/22, mb1 4.0/25, mb1mx3.9/31, mbtmp3.8/25, MS3.3/3, Ms1 3.3/3, ms1mx2.6/40, Error ellipse: s-maj=21.0km s-min=11.6km az=163.0*
BJI ***20*** *08:57:07.4, 46°.13N×151°.65E, h88km, mB4.7/3, mb4.7/5*
NEIC ***20*** *08:57:09.2±1.0, 46°.36N×151°.88E, h108km±8km, mb4.4/11, Error ellipse: s-maj=12.6km s-min=6.3km az=157.0*
ISC 20 08:57:06.8±0.9, 46°.23N±0°.08×151°.82E±0°.09, h88km±7km, n82, σ0°80/80, mb4.2/39, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.94**	**252**	*e*PN	**Pn**	**08 57 51.0**	**-0.4**
KUR				*e*S	**Sn**	**08 58 26.0**	**+0.2**
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax			
	comp=N,540nm,0.8s						
KUR				smax			
	comp=E,560nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.29**	**280**	⇑*e*PN	**Pn**	**08 58 39.9**	**+3.1**
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				pmax	pmax		
	comp=E,50nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.29**	**280**	*e*Pn	**Pn**	**08 58 40.1**	**+3.2**
	comp=E,27nm,0.4s						
ASAJ	**Asahikawa**	**6.85**	**255**	P	**Pn**	**08 58 44.6**	**+0.1**
	comp=E,0.7nm,0.3s,baz=73,slow=22,SNR=4.6						
ASAJ	**Asahikawa**	**6.85**	**255**	PN	**Pn**	**08 58 44.7**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PEA0B	**Petropavlovsk-**	**7.87**	**27**	*e*Pn	**Pn**	**08 58 57.9**	**-0.4**
PEA0B				*e*Sn	**Sn**	**09 00 26.2**	**+0.6**
PETK	**Petropavlovsk-**	**7.87**	**27**	P	**Pn**	**08 58 58.0**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=187,slow=12,SNR=22						
MJAR	**Matsushiro Arr**	**14.06**	**231**	P	**Pn**	**09 00 26.7**	**+5.0**
	comp=Z,0.3nm,0.3s,baz=33,slow=10.0,SNR=5.3						
KSRS	**Korea Array**	**19.79**	**252**	P	**Pn**	**09 01 30.4**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=56,slow=11,SNR=10						
KSRS	**Korea Array**	**19.79**	**252**	*e*P	**Pn**	**09 01 31.0**	**-1.2**
BOD	**Bodaibo**	**25.64**	**311**	*e*P	**P**	**09 02 26.5**	**-1.3**
SONM	**Songino Array**	**30.66**	**290**	P	**P**	**09 03 13.0**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.5,baz=61,slow=10,SNR=4.1						
GTA	**Gaotai**	**38.17**	**279**	*e*P	**P**	**09 04 19.1**	**+1.7**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
ZALV	**Zalesovo Beam**	**42.19**	**306**	PcP	PcP	09 06 42.5	-0.4
	comp=Z,1.2nm,0.4s,baz=67,slow=4.8,SNR=4.2						
ZALV				LR	LR	09 25 03.5	
	comp=Z,22nm,18.4s,baz=85,slow=40						
INK	**Inuvik**	**42.57**	**32**	P	**P**	**09 04 53.6**	**+0.3**
	comp=Z,2.0nm,0.5s,mb4.1,baz=304,slow=6.3,SNR=23						
MK31	**Makanchi Array**	**46.38**	**297**	*e*P	**P**	**09 05 23.9**	**-0.1**
MKAR	**Makanchi Array**	**46.38**	**297**	P	**P**	**09 05 23.5**	**-0.5**
	comp=Z,1.7nm,0.7s,mb3.9,baz=73,slow=7.6,SNR=14						
MKAR				PcP	PcP	09 06 57.4	-0.1
	comp=Z,1.4nm,0.6s,baz=65,slow=4.0,SNR=11						
MKAR				LR	LR	09 27 53.4	
	comp=Z,60nm,18.5s,baz=174,slow=40						
MKAR	**Makanchi Array**	**46.38**	**297**	*e*P	**P**	**09 05 24.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**46.91**	**304**	P	**P**	**09 05 27.5**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.0,baz=72,slow=8.6,SNR=13						
KURK	**Kurchatov**	**46.91**	**304**	*e*P	**P**	**09 05 26.8**	**-1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KURK	**Kurchatov**	**46.91**	**304**	*e*P	**P**	**09 05 26.8**	**-1.2**
	comp=Z,2.7nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**50.49**	**309**	P	**P**	**09 05 54.9**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=90,slow=6.7,SNR=3.3						
BVAR				PcP	PcP	09 07 12.0	-0.2
	comp=Z,0.8nm,0.5s,baz=66,slow=4.9,SNR=2.8						
CHTO	**Chiang Mai**	**51.13**	**256**	*e*P	**P**	**09 06 01.1**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
CHTO	**Chiang Mai**	**51.13**	**256**	*e*P	**P**	**09 06 01.1**	**+0.4**
	comp=Z,2.7nm,0.7s,mb4.4						
CMAR	**Chiang Mai Arr**	**51.38**	**256**	P	**P**	**09 06 02.8**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.3,baz=40,slow=7.6,SNR=13						
YKA	**Yellowknife Ar**	**51.87**	**36**	P	**P**	**09 06 05.3**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=297,slow=7.0,SNR=25						
YKA	**Yellowknife Ar**	**51.87**	**36**	P	**P**	**09 06 05.3**	**-0.3**
AAK	**Ala-Archa**	**53.26**	**296**	P	**P**	**09 06 16.9**	**+0.7**
	comp=Z,1.3nm,0.4s,mb4.3,baz=117,slow=2.7,SNR=5.7						
AAK	**Ala-Archa**	**53.26**	**296**	P	**P**	**09 06 16.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
AAK	**Ala-Archa**	**53.26**	**296**	*e*P	**P**	**09 06 16.6**	**+0.4**
	comp=Z,2.7nm,0.7s,mb4.4						
EKS2	**Erkin-Say**	**53.69**	**296**	*e*P	**P**	**09 06 19.8**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.4						
KEV	**Kevo**	**57.53**	**340**	*e*P	**P**	**09 06 45.4**	**-0.9**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
KEV	**Kevo**	**57.53**	**340**	*e*p	**P**	**09 06 45.4**	**-0.9**
	comp=Z,2.3nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**58.05**	**340**	P	**P**	**09 06 50.0**	**0.0**
	comp=Z,1.3nm,0.5s,mb4.2,baz=32,slow=7.1,SNR=9.9						
ARCES	**ARCESS Array B**	**58.05**	**340**	P	**P**	**09 06 50.0**	**0.0**
AKTK	**Aktyubinsk**	**58.40**	**311**	P	**P**	**09 06 52.2**	**-0.6**
AKTK				LR	LR	09 36 35.4	
AKTO	**Aktyubinsk**	**58.40**	**311**	P	**P**	**09 06 52.2**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=77,slow=16,SNR=3.8						
AKTO				LR	LR	09 36 35.4	
	comp=Z,23nm,18.3s,baz=76,slow=40						
WVOR	**Wild Horse Val**	**60.79**	**58**	*e*P	**P**	**09 07 09.5**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
WVOR	**Wild Horse Val**	**60.79**	**58**	*e*P	**P**	**09 07 09.5**	**+0.2**
	comp=Z,7.0nm,1.5s,mb4.5						
JOF	**Joensuu**	**61.40**	**333**	*e*P	**P**	**09 07 11.3**	**-1.7**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**61.40**	**333**	*e*p	**P**	**09 07 11.3**	**-1.7**
	comp=Z,3.3nm,0.6s,mb4.5						
LRM	**Limekiln Ridge**	**62.22**	**52**	*e*P	**P**	**09 07 19.0**	**+0.2**
	comp=Z,31nm,1.3s,mb5.2						
BOZ	**Bozeman (W)**	**62.78**	**52**	*e*P	**P**	**09 07 22.8**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BOZ	**Bozeman (W)**	**62.78**	**52**	*e*P	**P**	**09 07 22.8**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.9						
NVAR	**Mina Array Bea**	**63.47**	**61**	P	**P**	**09 07 26.9**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=292,slow=7.1,SNR=12						
KAF	**Kangasniemi**	**63.53**	**335**	*e*P	**P**	**09 07 25.9**	**-1.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
KAF	**Kangasniemi**	**63.53**	**335**	*e*p	**P**	**09 07 25.9**	**-1.3**
	comp=Z,3.7nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**64.12**	**334**	P	**P**	**09 07 30.5**	**-0.7**
	comp=Z,6.7nm,0.5s,mb4.7,baz=30,slow=8.6,SNR=28						
RRI2	**Red Ridge**	**64.42**	**53**	*e*P	**P**	**09 07 34.0**	**+0.6**
	comp=Z,3.0nm,0.7s,mb4.2						
TPAW	**Teton Pass**	**64.53**	**53**	*e*P	**P**	**09 07 35.1**	**+1.0**
	comp=Z,5.0nm,1.1s,mb4.3						
BW06	**Boulder Array**	**65.77**	**53**	*e*P	**P**	**09 07 42.1**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**65.77**	**53**	P	**P**	**09 07 42.0**	**-0.2**
	comp=Z,1.6nm,0.8s,mb3.9,baz=317,slow=1.8,SNR=9.7						
NB2	**NORSAR Subarra**	**68.42**	**341**	P	**P**	**09 07 58.1**	**-0.5**
	comp=Z,7.7nm,0.9s,mb4.5,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**68.42**	**341**	P	**P**	**09 07 58.1**	**-0.5**
	comp=Z,7.7nm,0.9s,mb4.5,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.42**	**341**	P	**P**	**09 07 58.6**	**0.0**
	comp=Z,5.2nm,0.7s,mb4.5,baz=28,slow=6.3,SNR=19						
ZEI	**Tsey**	**70.75**	**312**	*e*P	**P**	**09 08 10.4**	**-2.8**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**71.44**	**197**	P	**P**	**09 08 16.4**	**-1.0**
	comp=Z,0.2nm,0.6s,mb3.1,baz=19,slow=5.9,SNR=3.1						
AKASG	**Malin Array Be**	**71.47**	**326**	P	**P**	**09 08 17.0**	**-0.5**
	comp=Z,3.2nm,0.4s,mb4.5,baz=34,slow=6.2,SNR=10						
SCHQ	**Schefferville**	**74.13**	**22**	P	**P**	**09 08 32.5**	**-0.5**
	comp=Z,1.1nm,0.6s,mb3.8,baz=339,slow=8.6,SNR=3.4						
BUR08	**Bucovina Ar. S**	**75.50**	**326**	*e*P	**P**	**09 08 41.6**	**+0.5**
STHS	**Stebnicka Huta**	**75.51**	**329**	*e*P	**P**	**09 08 42.4**	**+1.3**
STHS	**Stebnicka Huta**	**75.51**	**329**	*e*P	**P**	**09 08 42.4**	**+1.3**
BURAR	**Bucovina Array**	**75.52**	**326**	⇑P	**P**	**09 08 42.0**	**+0.8**
BURAR	**Bucovina Array**	**75.52**	**326**	⇑*i*P	**P**	**09 08 42.0**	**+0.8**
KOLS	**Kolonicke sedl**	**75.54**	**328**	*e*P	**P**	**09 08 42.1**	**+0.8**
KOLS	**Kolonicke sedl**	**75.54**	**328**	*e*P	**P**	**09 08 42.1**	**+0.8**
CLL	**Collm**	**76.56**	**335**	*i*P	**P**	**09 08 46.8**	**-0.3**
	comp=Z,7.0nm,0.9s,mb4.4						
MLR	**Muntele Rosu**	**76.97**	**324**	P	**P**	**09 08 50.0**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.2,baz=24,slow=19,SNR=6.0						
MLR	**Muntele Rosu**	**76.97**	**324**	⇑*i*P	**P**	**09 08 50.4**	**+0.9**
VYHS	**Vyhne**	**77.14**	**330**	*e*P	**P**	**09 08 50.6**	**+0.3**
VYHS	**Vyhne**	**77.14**	**330**	*e*P	**P**	**09 08 50.6**	**+0.3**
BRTR	**Keskin Array B**	**78.15**	**316**	P	**P**	**09 08 57.0**	**+0.9**
	comp=Z,1.7nm,0.7s,mb3.9,baz=90,slow=3.0,SNR=9.8						
BRTR	**Keskin Array B**	**78.15**	**316**	*e*P	**P**	**09 08 57.0**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TXAR	**Lajitas Array**	**78.53**	**60**	P	**P**	**09 08 58.0**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=304,slow=3.8,SNR=17						
QRN	**Al-Qurain**	**78.58**	**300**	*e*P	**P**	**09 08 59.2**	**+0.4**
QRN				AMb	AMB	09 09 01.4	
	comp=Z,44nm,1.4s,mb5.1						
NAY	**Al-Naaiem**	**78.62**	**300**	*e*P	**P**	**09 08 59.2**	**+0.2**
NAY				AMb	AMB	09 09 00.5	
	comp=Z,12nm,0.9s,mb4.7						
RDF	**Al-Radifah**	**78.67**	**300**	*e*P	**P**	**09 08 60.0**	**+0.8**
RDF				AMb	AMB	09 09 00.6	
	comp=Z,29nm,1.2s,mb5.0						
MMAI	**Mount Meron Ar**	**82.48**	**311**	P	**P**	**09 09 19.7**	**+0.2**
	comp=Z,3.2nm,0.5s,mb4.4,baz=24,slow=6.7,SNR=5.5						
EIL	**Elat**	**85.33**	**309**	P	**P**	**09 09 35.3**	**+1.2**
	comp=Z,3.3nm,0.6s,mb4.5,baz=342,slow=5.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**115.06**	**328**	PKP	PKiKP	09 15 35.8	-2.1
	comp=Z,0.4nm,0.9s,baz=43,slow=1.4,SNR=2.9						
LPAZ	**La Paz**	**135.37**	**61**	PKP	PKPdf	09 16 16.1	-0.3
	comp=Z,0.7nm,0.8s,baz=315,slow=1.4,SNR=3.2						
CPUP	**Villa Florida**	**149.50**	**59**	PKPbc	PKPbc	09 16 44.4	-1.3
	comp=Z,0.3nm,0.4s,baz=324,slow=4.0,SNR=3.1						

NIED ***20*** *09:00:00, 36°.10N×141°.20E, h26km, Mw3.9 Best double couple: M0:8.90000×10^14 NP1:φs30.00000°, δ76.00000°, λ-100.00000°. NP2:φs244.00000°, δ17.00000°, λ-57.00000°.*
ISCJB ***20*** *09:00:19.0±0.8, 36°.03N±0°.04×141°.18E±0°.07, h36km±7km, mb4.0/19, MS3.5/2, Error ellipse: s-maj=9.2km s-min=6.4km az=164.0*
JMA ***20*** *09:00:18.7±0.1, 36°.03N×141°.14E, h40km±2km, M3.7*
JMA Felt I J1.
NEIC ***20*** *09:00:20.3±1.4, 35°.93N×141°.13E, h36km±12km, mb4.6/3, MW3.9(NIED), Error ellipse: s-maj=15.5km s-min=10.4km az=196.0*
IDC ***20*** *09:00:21.8±2.5, 35°.93N×141°.12E, h49km±24km, mb3.7/16, mb1 3.8/18, mb1mx3.7/30, mbtmp3.7/18, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/37, Error ellipse: s-maj=24.6km s-min=11.3km az=59.0*
ISC 20 09:00:18.3±0.9, 36°.12N±0°.04×141°.19E±0°.05, h17km±6km, n40, σ0°78/45, mb4.0/19, MS3.5/2, 5C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.50**	**213**	⇑P	**Pg**	**09 00 28.0**	**-0.2**
CHOJ				S	**Sg**	**09 00 34.9**	**0.0**
JHO	**Hitachi**	**0.70**	**315**	⇑P	**Pg**	**09 00 32.6**	**+0.6**
JYT	**Yasato**	**0.81**	**278**	⇑P	**Pb**	**09 00 33.5**	**-0.5**
JFK	**Kawauchi**	**1.27**	**349**	P	**Pn**	**09 00 40.5**	**-0.8**
BSO3	**Boso 3**	**1.43**	**203**	P	**Pn**	**09 00 43.0**	**-0.4**
JAG	**Ashikaga**	**1.43**	**283**	⇑P	**Pn**	**09 00 42.5**	**-1.0**
JAG				*e*S	**Sn**	**09 01 00.0**	**-2.0**
JFT	**Otama**	**1.55**	**334**	⇑P	**Pn**	**09 00 46.1**	**+0.9**
JFT				*e*S	**Sn**	**09 01 06.0**	**+1.1**
MJAR	**Matsushiro Arr**	**2.44**	**281**	P	**Pn**	**09 00 57.3**	**-0.1**
	16nm,0.3s,baz=114,slow=7.7,SNR=125						
MJAR				S	**Sn**	**09 01 27.8**	**+0.9**
	12nm,0.3s,baz=100,slow=26,SNR=5.0						
MAJO	**Matsushiro**	**2.44**	**281**	*e*Pn	**Pn**	**09 00 57.9**	**+0.5**
MAJO				*e*Sn	**Sn**	**09 01 27.1**	**+0.3**
MAT	**Matsushiro**	**2.44**	**281**	P	**Pn**	**09 00 57.8**	**+0.4**
MAT				S	**Sn**	**09 01 26.8**	**-0.1**
JHJ	**Hachijo jima 2**	**3.21**	**202**	P	**Pn**	**09 01 08.7**	**+0.7**
	22nm,0.3s,baz=336,slow=20,SNR=6.5						
JHJ				S	**Sn**	**09 01 41.6**	**-4.2**
	26nm,0.3s,baz=16,slow=19,SNR=3.0						
ASAJ	**Asahikawa**	**8.06**	**7**	P	**Pn**	**09 02 13.0**	**-1.5**
	1.1nm,0.3s,baz=210,slow=15,SNR=4.6						
ASAJ				S	**Sn**	**09 03 43.5**	**-1.8**
	1.0nm,0.3s,baz=236,slow=18,SNR=3.5						
KSRS	**Korea Array**	**10.72**	**281**	P	**Pn**	**09 02 56.3**	**+5.2**
	0.2nm,0.3s,baz=91,slow=13,SNR=4.3						
KSRS				LR	LR	09 07 00.0	
	comp=Z,72nm,18.6s,baz=159,slow=37						
SONM	**Songino Array**	**28.16**	**305**	P	**P**	**09 06 09.8**	**+0.3**
	1.1nm,0.5s,mb3.7,baz=116,slow=9.3,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.40**	**313**	P	**P**	**09 08 12.1**	**+0.4**
	1.9nm,0.4s,mb4.1,baz=100,slow=7.7,SNR=6.1						
MK31	**Makanchi Array**	**44.45**	**303**	*e*P	**P**	**09 08 28.8**	**+0.4**
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**09 08 28.7**	**+0.4**
	3.2nm,0.7s,mb4.2,baz=90,slow=10.0,SNR=29						
KURK	**Kurchatov**	**46.36**	**309**	P	**P**	**09 08 43.8**	**+0.5**
	5.6nm,0.7s,mb4.6,baz=83,slow=7.7,SNR=23						
AAK	**Ala-Archa**	**50.77**	**299**	P	**P**	**09 09 18.2**	**+0.8**
	1.0nm,0.3s,mb4.2,baz=208,slow=6.1,SNR=3.9						
BVAR	**Borovoye Array**	**51.05**	**313**	P	**P**	**09 09 18.8**	**-0.6**
	1.1nm,0.6s,mb4.0,baz=77,slow=9.3,SNR=5.7						
AML	**Almayashu**	**51.48**	**299**	*e*P	**P**	**09 09 22.6**	**-0.2**
	6.8nm,0.7s,mb4.7						
ABKAR	**Akbulak array**	**58.39**	**311**	*e*P	**P**	**09 10 04.5**	**-8.2**
	4.6nm,0.8s,mb4.6						
AKTK	**Aktyubinsk**	**59.15**	**312**	P	**P**	**09 10 18.2**	**+0.3**
AKTO	**Aktyubinsk**	**59.15**	**312**	P	**P**	**09 10 18.2**	**+0.3**
	1.3nm,0.6s,mb4.1,baz=63,slow=9.0,SNR=2.3						
ASAR	**Alice Springs**	**59.86**	**188**	P	**P**	**09 10 20.9**	**-2.1**
	0.6nm,0.8s,mb3.7,baz=21,slow=8.6,SNR=6.8						
YKA	**Yellowknife Ar**	**64.69**	**30**	P	**P**	**09 10 55.3**	**+0.4**
	0.4nm,0.7s,mb3.6,baz=305,slow=7.4,SNR=6.0						
FINES	**FINESS Array B**	**69.54**	**332**	P	**P**	**09 11 25.5**	**-0.2**
	2.4nm,0.8s,mb4.2,baz=46,slow=5.5,SNR=6.1						
YBMT	**Yellow Bay**	**72.87**	**43**	*e*P	**P**	**09 11 46.8**	**+0.6**
	6.3nm,1.0s,mb4.5						
HFS	**Hagfors**	**74.84**	**336**	P	**P**	**09 11 57.1**	**-0.4**
	1.5nm,0.8s,mb4.0,baz=73,slow=11,SNR=3.2						
AKASG	**Malin Array Be**	**74.91**	**322**	P	**P**	**09 11 57.5**	**-0.6**
	0.3nm,0.3s,mb3.8,baz=45,slow=5.1,SNR=4.4						
NB2	**NORSAR Subarra**	**74.96**	**337**	P	**P**	**09 11 57.8**	**-0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=42,slow=5.9						
NB2	**NORSAR Subarra**	**74.96**	**337**	P	**P**	**09 11 57.8**	**-0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**74.96**	**337**	P	**P**	**09 11 58.0**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=39,slow=5.8,SNR=6.7						
NOA				LR	LR	09 48 23.7	
	comp=Z,16nm,18.3s,MS3.4,baz=35,slow=38						
NVAR	**Mina Array Bea**	**75.68**	**53**	P	**P**	**09 12 03.5**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=298,slow=6.0,SNR=3.9						
PDAR	**Pinedale Array**	**78.44**	**45**	P	**P**	**09 12 18.6**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=311,slow=5.9,SNR=2.4						
PDAR	**Pinedale Array**	**78.44**	**45**	P	**P**	**09 12 18.6**	**+0.5**
MLR	**Muntele Rosu**	**79.96**	**320**	LR	LR	09 51 41.2	
	comp=Z,36nm,19.3s,MS3.7,baz=213,slow=38						
TXAR	**Lajitas Array**	**90.82**	**52**	P	**P**	**09 13 21.9**	**+1.0**
	comp=Z,0.2nm,0.7s,mb3.6,baz=324,slow=2.5,SNR=3.1						
LPAZ	**La Paz**	**147.31**	**61**	PKPbc	PKPbc	09 20 00.8	-0.6
	comp=Z,0.5nm,0.6s,baz=270,slow=2.0,SNR=3.7						
LPAZ	**La Paz**	**147.31**	**61**	PKPbc	PKPbc	09 20 00.8	-0.6

DDA ***20*** *09:08:59.6, 38°.05N×38°.27E, h12km±1km, Ml3.6*
ISK ***20*** *09:08:59.4, 38°.07N×38°.27E, h9km, MD3.4*
ISCJB ***20*** *09:09:00.0±0.5, 38°.04N±0°.02×38°.30E±0°.03, h9km±4km, Error ellipse: s-maj=3.7km s-min=3.1km az=40.5*
CSEM ***20*** *09:09:00.3±0.1, 38°.06N×38°.29E, h8km, MD3.4, Error ellipse: s-maj=3.2km s-min=2.6km az=134.0*
NSSC ***20*** *09:09:04, 37°.94N×38°.25E, h38km*
ISC 20 09:09:00.3±0.4, 38°.05N±0°.02×38°.29E±0°.03, h7km±3km, n71, σ0°87/106, 12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.30**	**20**	PG	**Pg**	**09 09 06.5**	**+0.3**
MYA	**Malataya**	**0.30**	**20**	*i*Pg	**Pg**	**09 09 06.6**	**+0.4**
AKCD	**Akcadag**	**0.39**	**311**	*i*P	**Pg**	**09 09 07.8**	**0.0**
AKCD				*i*S	**Sg**	**09 09 13.2**	**+0.3**
AKCD	**Akcadag**	**0.39**	**311**	*i*P	**Pg**	**09 09 07.8**	**0.0**
AKCD				*i*S	**Sg**	**09 09 13.2**	**+0.3**
ATAB	**Bozova**	**0.57**	**180**	*i*P	**Pg**	**09 09 11.6**	**+0.2**
ATAB				*i*S	**Sg**	**09 09 19.0**	**+0.1**
ATAB				*e*S	**Sg**	**09 09 19.4**	**+0.5**
ATAB	**Bozova**	**0.57**	**180**	*i*P	**Pg**	**09 09 11.6**	**+0.2**
ATAB				*i*S	**Sg**	**09 09 19.0**	**+0.1**
ELZG	**Elazig**	**0.71**	**50**	*i*P	**Pg**	**09 09 14.0**	**+0.1**
ELZG				*i*S	**Sg**	**09 09 22.6**	**-0.5**
ELZG	**Elazig**	**0.71**	**50**	*i*P	**Pg**	**09 09 14.0**	**+0.1**
ELZG				*i*S	**Sg**	**09 09 22.6**	**-0.5**
URFA	**Urfa**	**0.73**	**145**	*e*PG	**Pg**	**09 09 14.7**	**+0.3**
URFA				*e*SG	**Sg**	**09 09 25.2**	**+1.3**
URFA	**Urfa**	**0.73**	**145**	*e*Pg	**Pg**	**09 09 14.7**	**+0.3**
URFA				*e*Sg	**Sg**	**09 09 25.2**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.86**	**67**	*e*PG	**Pg**	**09 09 16.4**	**-0.5**
SVRC	**Sivrice-ELAZID**	**0.86**	**67**	*e*Pg	**Pg**	**09 09 16.4**	**-0.5**
GZT	**Gaziantep**	**0.90**	**220**	*i*P	**Pg**	**09 09 17.4**	**-0.2**
GZT				*e*S	**Sg**	**09 09 28.0**	**-1.3**
DARE	**Darende-Malaty**	**0.98**	**337**	*e*PG	**Pg**	**09 09 15.0**	**-4.2**
DARE				*e*SG	**Sg**	**09 09 26.4**	**-5.6**
PTK	**Pertek**	**1.21**	**45**	*e*PN	**Pn**	**09 09 22.7**	**-1.0**
PTK	**Pertek**	**1.21**	**45**	*e*Pn	**Pn**	**09 09 22.7**	**-1.0**
GAZ	**Gaziantep**	**1.22**	**225**	*e*PN	**Pn**	**09 09 24.0**	**+0.1**
GAZ	**Gaziantep**	**1.22**	**225**	*e*Pn	**Pn**	**09 09 24.0**	**+0.1**
KMRS	**Kahramanmaras**	**1.23**	**244**	*e*PN	**Pn**	**09 09 23.4**	**-0.5**
KMRS				*e*SN	**Sn**	**09 09 40.3**	**-0.5**
KMRS	**Kahramanmaras**	**1.23**	**244**	*e*Pn	**Pn**	**09 09 23.4**	**-0.5**
KMRS				*e*Sn	**Sn**	**09 09 40.3**	**-0.5**
KEMA	**Kemaliye**	**1.23**	**7**	*i*P	**Pb**	**09 09 22.4**	**-1.5**
KEMA				*i*S	**Sg**	**09 09 39.9**	**-0.1**
KEMA	**Kemaliye**	**1.23**	**7**	*i*P	**Pb**	**09 09 22.4**	**-1.6**
KEMA				*i*S	**Sg**	**09 09 39.8**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.41**	**297**	*e*PN	**Pn**	**09 09 26.7**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.41**	**297**	*e*Pn	**Pn**	**09 09 26.7**	**+0.3**
DIYA	**Diyarbakir**	**1.45**	**94**	*i*P	**Pn**	**09 09 27.7**	**+0.7**
DIYA				*i*S	**Sn**	**09 09 47.1**	**+0.9**
DIYA	**Diyarbakir**	**1.45**	**94**	*i*P	**Pn**	**09 09 27.7**	**+0.7**
DIYA				*i*S	**Sn**	**09 09 47.1**	**+0.9**
KUZU	**Kuzuini**	**1.60**	**218**	*i*P	**Pn**	**09 09 28.4**	**-0.6**
KUZU				*i*S	**Sn**	**09 09 48.9**	**-1.0**
KUZU	**Kuzuini**	**1.60**	**218**	*i*P	**Pn**	**09 09 28.4**	**-0.6**
KUZU				*i*S	**Sn**	**09 09 48.9**	**-1.0**
ANDN	**Andirin**	**1.61**	**254**	*i*P	**Pn**	**09 09 28.7**	**-0.5**
ANDN				*i*S	**Sn**	**09 09 51.9**	**+1.6**
ANDN	**Andirin**	**1.61**	**254**	*i*P	**Pn**	**09 09 28.7**	**-0.5**
ANDN				*i*S	**Sn**	**09 09 51.9**	**+1.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*Pn	**Pn**	**10 30 14.4**	**+3.0**
STHS				*e*Sg	**Sg**	**10 30 43.2**	**+3.1**
KECS	**Kecovo**	**2.12**	**139**	*e*SN	**Sn**	**10 30 39.3**	**-1.0**
PRU	**Pruhonice**	**2.48**	**269**	*e*SG	**Sg**	**10 30 55.6**	**-0.8**
	comp=Z,3.7nm,0.5s						
PRU	**Pruhonice**	**2.48**	**269**	Sg	**Sg**	**10 30 55.6**	**-0.8**
	comp=Z,3.7nm,0.5s						
KHC	**Kasperske Hory**	**3.27**	**255**	*e*PG	**Pg**	**10 30 38.0**	**-1.4**
KHC				*e*SG	**Sg**	**10 31 22.4**	**+0.6**
	comp=Z,6.1nm,0.5s						
KHC	**Kasperske Hory**	**3.27**	**255**	Pg	**Pg**	**10 30 38.0**	**-1.4**
KHC				Sg	**Sg**	**10 31 22.4**	**+0.6**
	comp=Z,6.1nm,0.5s						

HEL 20 11:03:25.9±0.4, 69°.46N×30°.90E, h0km, ML0.9,
Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.40**	**284**	PG	Pg	11 03 51.2	-1.4
	baz=106						
KEV				SG	Sg	11 04 08.7	-2.0
KEV				MSG		11 04 08.7	
	comp=Z,0.4nm,0.2s						
VRF	**Varrio**	**1.78**	**196**	SG	Sg	11 04 20.4	-2.6
VRF				MSG		11 04 20.4	
	comp=Z,0.8nm,0.1s						
VRF	**Varrio**	**1.78**	**196**	SG	Sg	11 04 20.4	-2.6
VRF				MSG		11 04 20.4	
	comp=Z,0.8nm,0.1s						
VRF	**Varrio**	**1.78**	**196**	Sg	Sg	11 04 20.4	-2.6
ARA0	**ARCESS Array S**	**1.90**	**275**	PN	Pn	11 04 00.2	+0.7
	baz=93						
ARA0				SG	Sg	11 04 24.3	-2.6
ARA0				MSG		11 04 24.3	
	comp=Z,1.2nm,0.2s						

*ISCJB **20** 11:29:27.8±0.2, 52°.91N±0°.04×157°.93E±0°.07, h156km±2km, mb4.0/29, Error ellipse: s-maj=8.5km s-min=3.8km az=35.2*
*MOS **20** 11:29:27.4±1.1, 53°.00N×157°.73E, h152km, mb4.1/6, Error ellipse: s-maj=13.3km s-min=7.7km az=72.8*
*NEIC **20** 11:29:29.2±0.4, 53°.05N×157°.75E, h150km±3km, mb4.3/8, Error ellipse: s-maj=9.1km s-min=5.2km az=151.0*
*KRSC **20** 11:29:29.0±1.1, 52°.86N×158°.31E, h149km±31km, ML4.2*
*IDC **20** 11:29:29.6±0.5, 53°.06N×157°.73E, h152km±2km, mb3.6/18, mb1 3.8/19, mb1mx3.7/28, mbtmp3.7/19, Error ellipse: s-maj=15.1km s-min=9.3km az=151.0*
ISC 20 11:29:29.0±0.2, 52°.91N±0°.03×157°.92E±0°.07, h151km±2km, h151km±2.9km:pP-P,n80,σ1§17/100, mb4.0/29, 3C, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEA0B	**Petropavlovsk-**	**0.24**	**327**	*e*Pn	**Pn**	**11 29 49.9**	**+0.5**
PEA0B				*e*Sn	**Sn**	**11 30 05.6**	**+0.6**
PETK	**Petropavlovsk-**	**0.24**	**327**	P	**Pn**	**11 29 49.8**	**+0.4**
	301nm,0.3s,baz=97,slow=12,SNR=7718						
PETK				S	**Sn**	**11 30 06.0**	**+1.0**
	102nm,0.3s,baz=110,slow=7.8,SNR=9.9						
GRL	**Gorelyy**	**0.37**	**165**	*e*P	**Pn**	**11 29 50.3**	**+0.5**
PET	**Petropavlovsk**	**0.46**	**75**	*i*P	**Pn**	**11 29 49.9**	**-0.3**
PET				*i*S	**Sn**	**11 30 05.3**	**-1.0**
PET	**Petropavlovsk**	**0.46**	**75**	*e*Pn	**Pn**	**11 29 49.5**	**-0.6**
PET				*e*Sn	**Sn**	**11 30 05.9**	**-0.4**
RUS	**Russkaya**	**0.60**	**142**	*i*P	**Pn**	**11 29 50.3**	**-0.6**
RUS				*i*S	**Sn**	**11 30 06.6**	**-0.9**
AVH	**Avacha**	**0.61**	**54**	*i*P	**Pn**	**11 29 51.3**	**+0.4**
GNL	**Ganaly**	**0.79**	**1**	*i*P	**Pn**	**11 29 52.6**	**+0.5**
NLC	**Nalytchevo**	**0.90**	**72**	*i*P	**Pn**	**11 29 51.8**	**-1.1**
NLC				*e*S	**Sn**	**11 30 08.6**	**-2.7**
MIPR	**Malaya Ipel'ka**	**0.95**	**229**	*i*P	**Pn**	**11 29 54.3**	**+0.9**
MIPR				*i*S	**Sn**	**11 30 12.6**	**+0.7**
SPN	**Mys Shipunski**	**1.29**	**81**	*i*P	**Pn**	**11 29 55.0**	**-1.4**
SPN				*i*S	**Sn**	**11 30 14.0**	**-3.3**
KII	**Karymskiy**	**1.46**	**38**	*i*P	**Pn**	**11 29 58.3**	**+0.2**
KII				*e*S	**Sn**	**11 30 19.6**	**-0.8**
SKR	**Severo-Kuril's**	**2.49**	**207**	*e*PN	**Pn**	**11 30 08.5**	**-1.5**
SKR				*e*S	**Sn**	**11 30 41.2**	**-0.4**
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=E,690nm,0.3s						
SKR				smax			
	comp=N,550nm,0.5s						
ALID	**Alaid**	**2.51**	**217**	*i*P	**Pn**	**11 30 11.3**	**+1.1**
MKZ	**Mys Kozlova**	**2.80**	**52**	*i*P	**Pn**	**11 30 12.8**	**-1.0**
MKZ				*i*S	**Sn**	**11 30 44.3**	**-4.2**
KMNR	**Kamenistaya**	**3.16**	**24**	*i*P	**Pn**	**11 30 19.9**	**+1.6**
KMNR				*e*S	**Sn**	**11 30 56.6**	**0.0**
KPT	**Kopyto**	**3.35**	**23**	P	**Pn**	**11 30 20.8**	**+0.1**
KPT				*i*S	**Sn**	**11 30 58.6**	**-2.2**
KOZ	**Kozyrevsk**	**3.36**	**19**	P	**Pn**	**11 30 21.5**	**+0.7**
KOZR	**Kozyr**	**3.37**	**19**	PN	**Pn**	**11 30 21.5**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**3.45**	**27**	P	**Pn**	**11 30 23.7**	**+1.8**
BZGR				*i*S	**Sn**	**11 31 02.9**	**-0.2**
ZLN	**Zelenaya**	**3.54**	**27**	P	**Pn**	**11 30 25.5**	**+2.3**
ZLN				*i*S	**Sn**	**11 31 06.7**	**+1.4**
SRDR	**Sredinnyy**	**3.58**	**16**	*i*P	**Pn**	**11 30 25.3**	**+1.7**
SRDR				*e*S	**Sn**	**11 31 06.7**	**+0.7**
KRSR	**Krestovskiy**	**3.66**	**24**	P	**Pn**	**11 30 26.8**	**+2.1**
KLY	**Klyuchi**	**3.77**	**24**	P	**Pn**	**11 30 28.2**	**+2.1**
KLY				*i*S	**Sn**	**11 31 11.4**	**+0.9**
SRKR	**Sorokina**	**4.20**	**25**	P	**Pn**	**11 30 32.7**	**+1.0**
SRKR				*i*S	**Sn**	**11 31 18.6**	**-2.0**
KBTR	**Krutoberegovo**	**4.37**	**39**	*e*P	**Pn**	**11 30 33.3**	**-0.6**
KBTR				*i*S	**Sn**	**11 31 19.3**	**-5.2**
BKI	**Bering**	**5.27**	**61**	*e*P	**Pn**	**11 30 43.9**	**-2.0**
BKI				*i*S	**Sn**	**11 31 38.8**	**-7.1**
ASAJ	**Asahikawa**	**13.41**	**235**	P	**Pn**	**11 32 35.1**	**+1.9**
	comp=N,1.4nm,0.3s,baz=87,slow=11,SNR=8.2						
ASAJ	**Asahikawa**	**13.41**	**235**	PN	**Pn**	**11 32 35.1**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**14.74**	**228**	*e*P	**Pn**	**11 32 49.9**	**-0.1**
KLR	**Kul'dur**	**16.82**	**268**	*e*P	**Pn**	**11 33 12.8**	**-2.5**
YAK	**Yakutsk**	**17.58**	**312**	*e*P	**Pn**	**11 33 21.8**	**-2.6**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK	**Yakutsk**	**17.58**	**312**	*e*P	**Pn**	**11 33 23.0**	**-1.3**
	comp=E,40nm,0.7s						
MAJO	**Matsushiro**	**21.42**	**228**	*e*P	**P**	**11 34 05.4**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,25nm,0.7s,mb4.7						
MAJO	**Matsushiro**	**21.42**	**228**	*e*P	**P**	**11 34 05.4**	**+0.6**
	comp=Z,25nm,0.7s,mb4.7						
MAT	**Matsushiro**	**21.42**	**228**	P	**P**	**11 34 04.8**	**0.0**
MJAR	**Matsushiro Arr**	**21.42**	**228**	P	**P**	**11 34 05.4**	**+0.6**
	comp=Z,8.4nm,0.8s,mb4.2,baz=14,slow=12,SNR=18						
TIXI	**Tiksi**	**22.72**	**337**	*e*P	**P**	**11 34 16.2**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
TIXI	**Tiksi**	**22.72**	**337**	*e*P	**P**	**11 34 16.4**	**-1.1**
	comp=Z,4.2nm,0.5s,mb4.1						
BOD	**Bodaibo**	**25.09**	**299**	*e*P	**P**	**11 34 35.3**	**-3.9**
TTA	**Tatalina**	**25.87**	**49**	*e*P	**P**	**11 34 44.6**	**-1.6**
KSRS	**Korea Array**	**25.93**	**245**	P	**P**	**11 34 47.7**	**+0.7**
	comp=Z,3.9nm,0.8s,mb4.1,baz=41,slow=9.8,SNR=13						
KSRS	**Korea Array**	**25.93**	**245**	P	**P**	**11 34 47.7**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
KDAK	**Kodiak Island**	**28.04**	**60**	*i*P	**P**	**11 35 05.4**	**-0.2**
TRF	**Thorofare Moun**	**28.46**	**48**	*e*P	**P**	**11 35 09.5**	**+0.3**
	comp=Z,1.9nm,0.3s,mb4.3						
BMRM	**Bremner River**	**31.41**	**52**	*e*P	**P**	**11 35 35.4**	**+0.1**
	comp=Z,5.8nm,0.7s,mb4.4						
MENT	**Mentasta**	**31.47**	**48**	*e*P	**P**	**11 35 36.3**	**+0.5**
EGAK	**Eagle**	**32.32**	**44**	*e*P	**P**	**11 35 42.9**	**-0.3**
	comp=Z,6.7nm,0.6s,mb4.5						
SONM	**Songino Array**	**32.66**	**282**	P	**P**	**11 35 45.4**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=74,slow=6.3,SNR=2.6						
SONM				PcP	PcP	11 38 28.3	-0.1
	comp=Z,0.6nm,0.6s,baz=64,slow=1.7,SNR=3.7						
DAWY	**Dawson**	**33.19**	**46**	*e*P	**P**	**11 35 51.4**	**+0.6**
INK	**Inuvik**	**34.82**	**37**	P	**P**	**11 36 04.9**	**+0.1**
	comp=Z,0.6nm,0.3s,mb3.8,baz=294,slow=8.5,SNR=11						
INK				PcP	PcP	11 38 34.6	+0.4
	comp=Z,0.4nm,0.4s,baz=269,slow=2.8,SNR=3.3						
RES	**Resolute Bay**	**43.99**	**21**	P	**P**	**11 37 20.9**	**+0.3**
	comp=Z,2.0nm,0.3s,mb4.2,baz=295,slow=19						
YKA	**Yellowknife Ar**	**44.19**	**42**	P	**P**	**11 37 22.7**	**+0.5**
	comp=Z,0.3nm,0.3s,mb3.4,baz=301,slow=7.3,SNR=19						
YKA				pP	pP	11 37 55.5	-0.2
	comp=Z,0.3nm,0.7s,baz=297,slow=8.4,SNR=3.3						
YKA	**Yellowknife Ar**	**44.19**	**42**	P	**P**	**11 37 22.7**	**+0.5**
YKA				pP	pP	11 37 55.5	-0.2
KURK	**Kurchatov**	**46.71**	**301**	*c i*P	**P**	**11 37 41.0**	**-1.2**
KURK				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.2						
KURK	**Kurchatov**	**46.71**	**301**	*e*P	**P**	**11 37 40.6**	**-1.6**
	comp=Z,5.3nm,0.9s,mb4.2						
MK31	**Makanchi Array**	**47.04**	**295**	*e*P	**P**	**11 37 43.5**	**-1.4**
MKAR	**Makanchi Array**	**47.04**	**295**	P	**P**	**11 37 43.5**	**-1.4**
	comp=Z,1.0nm,0.4s,mb3.8,baz=56,slow=6.6,SNR=35						
MKAR	**Makanchi Array**	**47.04**	**295**	P	**P**	**11 37 43.5**	**-1.4**
BVAR	**Borovoye Array**	**49.47**	**307**	P	**P**	**11 38 02.0**	**-1.4**
	comp=Z,1.9nm,0.4s,mb4.1,baz=65,slow=8.4,SNR=12						
BVAR				pP	pP	11 38 37.9	+0.4
	comp=Z,0.7nm,0.5s,baz=46,slow=6.4,SNR=2.4						
BVAR				PcP	PcP	11 39 22.3	-0.7
	comp=Z,1.3nm,0.4s,baz=68,slow=1.7,SNR=6.1						
BRVK	**Borovoye**	**49.50**	**308**	*i*P	**P**	**11 38 01.7**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb3.9						
BSMT	**Bassoo Peak**	**52.60**	**58**	*e*P	**P**	**11 38 28.1**	**+1.3**
ARCES	**ARCESS Array B**	**53.05**	**341**	P	**P**	**11 38 29.2**	**-0.6**
	comp=Z,3.3nm,1.0s,mb4.0,baz=35,slow=8.0,SNR=4.3						
ARCES				PcP	PcP	11 39 35.1	-1.0
	comp=Z,1.6nm,0.5s,baz=42,slow=3.8,SNR=13						
MOD	**Modoc**	**53.55**	**67**	*e*P	**P**	**11 38 35.4**	**+1.6**
	comp=Z,2.7nm,0.5s,mb4.2						
AAK	**Ala-Archa**	**53.98**	**295**	*i*P	**P**	**11 38 35.3**	**-1.6**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
CMAR	**Chiang Mai Arr**	**56.86**	**256**	P	**P**	**11 38 59.3**	**+1.5**
	comp=Z,0.9nm,0.3s,mb4.0,baz=27,slow=6.4,SNR=7.3						
NVAR	**Mina Array Bea**	**57.04**	**69**	P	**P**	**11 39 00.5**	**+1.6**
	comp=Z,1.2nm,0.5s,mb4.0,baz=302,slow=7.5,SNR=15						
PDAR	**Pinedale Array**	**58.76**	**59**	P	**P**	**11 39 11.4**	**+0.7**
	comp=Z,2.3nm,0.6s,mb4.2,baz=325,slow=2.2,SNR=15						
FINES	**FINESS Array B**	**59.76**	**336**	P	**P**	**11 39 16.2**	**-1.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=60,slow=3.4,SNR=2.7						
FINES				PcP	PcP	11 40 00.9	-1.5
	comp=Z,1.3nm,0.6s,baz=48,slow=2.1,SNR=4.1						
NB2	**NORSAR Subarra**	**63.34**	**343**	P	**P**	**11 39 40.0**	**-1.3**
	comp=Z,0.1nm,0.5s,mb2.9,baz=24,slow=6.5						
NOA	**NORSAR Array B**	**63.34**	**343**	P	**P**	**11 39 40.5**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.7,baz=20,slow=6.8,SNR=4.8						
NOA	**NORSAR Array B**	**63.34**	**343**	P	**P**	**11 39 40.5**	**-0.9**
SCHQ	**Schefferville**	**66.42**	**26**	P	**P**	**11 40 00.7**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.0,baz=77,slow=18,SNR=5.1						
ZEI	**Tsey**	**69.10**	**314**	*e*P	**P**	**11 40 12.7**	**-5.6**
ZEI				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
TXAR	**Lajitas Array**	**71.92**	**65**	P	**P**	**11 40 36.7**	**+1.1**
	comp=Z,1.7nm,0.5s,mb4.1,baz=300,slow=5.1,SNR=55						
TXAR				pP	pP	11 41 12.4	+0.2
	comp=Z,0.4nm,0.6s,baz=302,slow=4.2,SNR=3.4						
TXAR				sP	sP	11 41 27.9	-0.4
	comp=Z,0.3nm,0.5s,baz=303,slow=5.4,SNR=2.6						
TXAR	**Lajitas Array**	**71.92**	**65**	P	**P**	**11 40 36.7**	**+1.1**
TXAR				pP	pP	11 41 12.4	+0.2
TXAR				sP	sP	11 41 27.9	-0.4
WRAB	**Tennant Creek**	**75.36**	**203**	*e*P	**P**	**11 40 57.0**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
WRAB	**Tennant Creek**	**75.36**	**203**	*e*P	**P**	**11 40 57.0**	**+1.4**
	comp=Z,1.8nm,0.4s,mb4.0						
ASAR	**Alice Springs**	**79.06**	**202**	P	**P**	**11 41 17.1**	**+1.0**
	comp=Z,2.0nm,0.6s,mb4.0,baz=16,slow=5.3,SNR=44						
ASAR				pP	pP	11 41 54.2	+0.8
	comp=Z,0.5nm,0.6s,baz=12,slow=5.2,SNR=3.1						
ESDC	**Sonseca Array**	**86.47**	**346**	P	**P**	**11 41 53.8**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.4,baz=7.5,slow=6.1,SNR=4.1						

*IDC **20** 12:22:28.7±0.6, 2°.21N×96°.75E, h0km, mb4.6/20, mb1 4.7/21, mb1mx4.6/25, mbtmp4.6/21, ML4.9/1, MS3.9/15, Ms1 3.9/15, ms1mx3.6/33, Error ellipse: s-maj=19.7km s-min=13.3km az=45.0*
*BJI **20** 12:22:28.5, 1°.80N×96°.70E, h33km, mB5.0/30, mb5.0/41, Ms4.5/31, Ms7 4.3/30*
*MOS **20** 12:22:32.0±0.9, 2°.25N×96°.78E, h33km, mb5.0/24, MS4.3/4, Error ellipse: s-maj=14.3km s-min=6.8km az=100.1*
*DJA **20** 12:22:33, 2°.16N×96°.53E, h52km, MLv5.1/10*
*NEIC **20** 12:22:34.0±0.3, 2°.18N×96°.75E, h35km, mb4.8/18, Error ellipse: s-maj=9.9km s-min=6.5km az=61.0*
*ISCJB **20** 12:22:34.9±0.7, 2°.21N±0°.04×96°.81E±0°.04, h59km±6km, mb4.8/73, MS4.0/29, Error ellipse: s-maj=8.4km s-min=5.2km az=141.1*
ISC 20 12:22:36.5±0.6, 2°.21N±0°.04×96°.81E±0°.04, h55km±5km, h37km±1.9km:pP-P,n174,σ0§95/167, mb4.8/73, MS4.0/29, 12C-1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**2.16**	**95**	P	**Pn**	**12 23 11.0**	**+0.9**
TSI	**Tuntungan**	**2.18**	**54**	P	**Pn**	**12 23 10.2**	**-0.1**
LHMI	**Lhok Sumawe**	**3.01**	**3**	P	**Pn**	**12 23 20.9**	**-0.8**
MNSI	**Mandailing Nat**	**3.10**	**117**	P	**Pn**	**12 23 22.0**	**-1.1**
BSI	**Banda Aceh**	**3.60**	**335**	P	**Pn**	**12 23 25.9**	**-4.0**
SISI	**Saibi**	**4.18**	**147**	P	**Pn**	**12 23 38.1**	**+0.2**
PPI	**Padang Panjang**	**4.46**	**126**	P	**Pn**	**12 23 42.0**	**+0.4**
BKNI	**Bangkinang**	**4.62**	**114**	P	**Pn**	**12 23 43.4**	**-0.5**
IPM	**Ipoh**	**4.78**	**62**	P	**Pn**	**12 23 46.0**	**0.0**
PDSI	**Padang**	**4.79**	**130**	P	**Pn**	**12 23 47.3**	**+1.1**
KULM	**Kulim**	**4.91**	**51**	P	**Pn**	**12 23 47.3**	**-0.5**
KULM	**Kulim**	**4.91**	**51**	*e*Pn	**Pn**	**12 23 46.9**	**-0.9**
FRIM	**Kepong**	**4.92**	**78**	P	**Pn**	**12 23 48.4**	**+0.5**
SDSI	**Sungai Dareh**	**5.57**	**124**	P	**Pn**	**12 23 57.8**	**+0.9**
KGM	**Kluang**	**6.51**	**92**	P	**Pn**	**12 24 09.7**	**0.0**
MYKOM	**Kota Tinggi**	**7.05**	**93**	P	**Pn**	**12 24 17.5**	**+0.3**
KSI	**Kapahiang**	**8.20**	**135**	P	**Pn**	**12 24 31.8**	**-1.2**
	120nm,0.6s,3μm						
MDSI	**Maura Dua**	**9.92**	**132**	P	**Pn**	**12 24 54.3**	**-2.2**
	56nm,0.8s						
KSM	**Kuching**	**13.51**	**93**	P	**Pn**	**12 25 46.8**	**+1.2**
STKI	**Sintang**	**14.82**	**98**	P	**Pn**	**12 26 04.6**	**+1.7**
	51nm,0.7s						
SBUM	**Sibu**	**15.40**	**89**	P	**Pn**	**12 26 11.0**	**+0.5**
CM31	**Chiang Mai Arr**	**16.29**	**7**	*e*P	**Pn**	**12 26 22.8**	**+1.1**
	31nm,0.7s						
CMAR	**Chiang Mai Arr**	**16.29**	**7**	Pn	**Pn**	**12 26 20.1**	**-1.6**
	1.5nm,0.3s,baz=197,slow=11,SNR=118						
CMAR				PcP	PcP	12 31 11.9	-1.2
	0.3nm,0.3s,baz=254,slow=1.1,SNR=6.6						
CMAR				LR	LR	12 33 11.6	
	comp=Z,292nm,19.5s,baz=47,slow=40						
CMAR				ScP	ScP	12 34 44.9	+1.7
	0.2nm,0.3s,baz=224,slow=2.5,SNR=5.5						
CHTO	**Chiang Mai**	**16.64**	**7**	*e*P	**Pn**	**12 26 24.4**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	**Chiang Mai**	**16.64**	**7**	*e*Pn	**Pn**	**12 26 24.4**	**-1.7**
	comp=Z,13nm,0.9s						
PALK	**Pallekele**	**16.82**	**288**	LR	LR	12 32 25.8	
	comp=Z,334nm,19.8s,baz=106,slow=36						
KKM	**Kota Kinabalu**	**19.73**	**78**	P	**Pn**	**12 27 02.5**	**-1.2**
KBKI	**Kotabaru**	**20.11**	**106**	P	**P**	**12 27 08.5**	**+2.5**
	comp=Z,26nm,1.2s						
KDM	**Kudat**	**20.50**	**76**	P	**P**	**12 27 10.5**	**+0.3**
SDKM	**Sandakan**	**20.62**	**80**	P	**P**	**12 27 12.1**	**+0.6**
QIZ	**Qiongzhong**	**21.04**	**36**	P	**P**	**12 27 16.3**	**+0.4**
QIZ				S	**S**	**12 31 08.5**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,33nm,2.2s,mb4.3						
QIZ				pmax	pmax		
	comp=Z,160nm,3.1s						
QIZ				LR	LR		
	comp=N,590nm,16.2s,MS4.1						
QIZ				LR	LR		
	comp=E,230nm,15.7s,MS4.1						
QIZ				LR	LR		
	comp=Z,500nm,16.8s,MS4.0						
TSM	**Tawau**	**21.13**	**84**	P	**P**	**12 27 17.7**	**+0.7**
HYB	**Hyderabad**	**23.45**	**311**	*i*P	**P**	**12 27 43.0**	**+1.7**
KMI	**Kunming**	**23.49**	**14**	P	**P**	**12 27 42.0**	**+0.5**
KMI				pP		12 27 52.0	
KMI				S	**S**	**12 31 54.1**	**+2.9**
KMI				SS		12 32 42.3	
KMI				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
KMI				LR	LR		
	comp=N,320nm,12.7s,MS4.0						
KMI				LR	LR		
	comp=E,250nm,14.7s,MS4.0						
KMI				LR	LR		
	comp=Z,360nm,15.1s,MS4.0						
SHL	**Shillong**	**23.71**	**349**	⇑*i*P	**P**	**12 27 42.0**	**-1.5**
SHL				*e*S	**S**	**12 31 56.0**	**+1.4**
KAPI	**Kappang**	**24.02**	**107**	P	**P**	**12 27 45.5**	**-1.0**
	comp=Z,10nm,0.7s,mb4.4,baz=267,slow=8.0,SNR=8.3						
APSI	**Ampana**	**25.03**	**97**	P	**P**	**12 27 56.1**	**+0.4**
	comp=Z,67nm,1.0s,comp=Z,584nm,mb5.1						
MRSI	**Marisa**	**25.18**	**94**	P	**P**	**12 27 56.4**	**-0.7**
	comp=Z,19nm,0.8s,mb4.7						
GYA	**Guiyang**	**25.91**	**21**	P	**P**	**12 28 02.5**	**-1.0**
GYA				pP	pP	12 28 11.8	-5.5
GYA				PP		12 28 42.5	
GYA				PcP	PcP	12 31 33.6	+2.2
GYA				S	**S**	**12 32 26.0**	**-3.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
GYA				pmax	pmax		
	comp=Z,60nm,4.6s						
GYA				LR	LR		
	comp=N,270nm,7.6s						
GYA				LR	LR		
	comp=E,210nm,6.4s						
GYA				LR	LR		
	comp=Z,480nm,9.8s						
ODAN	**Odare**	**26.13**	**341**	*e*P	**P**	**12 28 05.5**	**0.0**
	comp=Z,47nm,0.7s,mb5.1						
TAPN	**Taplejung**	**26.48**	**342**	*e*P	**P**	**12 28 08.9**	**+0.2**
	comp=Z,68nm,0.9s,mb5.2						
RAMN	**Ramite**	**26.48**	**339**	*e*P	**P**	**12 28 09.2**	**+0.5**
	comp=Z,101nm,1.1s,mb5.3						
JIRN	**Jiri**	**27.27**	**339**	*e*P	**P**	**12 28 16.7**	**+0.9**
	comp=Z,41nm,0.9s,mb5.0						
PKI	**Pulchoki**	**27.48**	**338**	*e*P	**P**	**12 28 17.9**	**+0.2**
	comp=Z,17nm,0.6s,mb4.7						
PKIN	**Phulchoki**	**27.48**	**338**	*e*P	**P**	**12 28 18.1**	**+0.3**
	comp=Z,22nm,0.7s,mb4.8						
GUN	**Gumba**	**27.61**	**339**	*e*P	**P**	**12 28 19.2**	**+0.3**
	comp=Z,40nm,0.7s,mb5.2						
DMN	**Daman**	**27.63**	**337**	*e*P	**P**	**12 28 19.4**	**+0.4**
	comp=Z,39nm,0.9s,mb5.0						
KKN	**Kakani**	**27.73**	**338**	*e*P	**P**	**12 28 20.1**	**+0.2**
	comp=Z,72nm,1.1s,mb5.2						
LSA	**Lhasa**	**27.87**	**349**	P	**P**	**12 28 21.3**	**+0.2**
LSA	**Lhasa**	**27.87**	**349**	*e*P	**P**	**12 28 21.4**	**+0.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.6						
LSA	**Lhasa**	**27.87**	**349**	*e*P	**P**	**12 28 21.4**	**+0.3**
	comp=Z,8.3nm,0.5s,mb4.6						
CD2	**Chengdu**	**29.30**	**12**	P	**P**	**12 28 37.3**	**+3.5**
CD2				pP	pP	12 28 46.9	-0.8
CD2				sP	sP	12 28 50.9	-3.4
CD2				PP	PP	12 29 34.0	-6.8
CD2				S	**S**	**12 33 28.3**	**+5.2**
CD2				sS	sS	12 33 44.3	-2.5
CD2				SS	SS	12 35 02.3	-27
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,160nm,4.1s						
CD2				LR	LR		
	comp=N,340nm,5.1s						
CD2				LR	LR		
	comp=Z,630nm,6.5s						
ENH	**Enshi**	**30.39**	**22**	*e*P	**P**	**12 28 41.8**	**-1.7**
	comp=Z,14nm,0.7s,mb4.8						
MBWA	**Marble Bar**	**32.29**	**137**	*e*P	**P**	**12 29 00.6**	**+0.3**
	comp=Z,7.2nm,0.7s,mb4.6						
DDI	**Dehra Dun**	**33.14**	**329**	*ex*	x	12 29 08.5	
XAN	**Xi'an**	**33.63**	**18**	P	**P**	**12 29 10.3**	**-1.6**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
XAN				LR	LR		
	comp=N,140nm,18.8s						
XAN				LR	LR		
	comp=E,78nm,13.5s						
XAN				LR	LR		
	comp=Z,89nm

comp=N,150nm,25.6s,MS3.9
BJI LR LR
comp=E,160nm,24.6s,MS3.9
BJI LR LR
comp=Z,49nm,22.4s,MS3.3
KSH Kashi 41.70 336 *eP* **P 12 30 16.0 -3.9**
KSH *ep*P pP 12 30 25.0 -9.3
KSH *es*P sP 12 30 29.1 -12
KSH *e*PcP PcP 12 32 16.3 +0.6
KSH *e*ScP ScP 12 36 02.1 +0.6
KSH *e*PcS PcS 12 36 06.1 -1.1
KSH *e*S **S 12 36 25.3 -7.6**
KSH *e*ScS ScS 12 40 15.3 -2.9
KSH pmax pmax
comp=Z,82nm,4.6s
KSH LR LR
comp=N,140nm,6.7s
KSH LR LR
comp=E,160nm,6.4s
KSH LR LR
comp=Z,160nm,5.5s
WMQ Urumqi 42.22 350 *eP* **P 12 30 24.8 +0.7**
WMQ LR LR
comp=N,49nm,21.0s
WMQ LR LR
comp=E,83nm,27.0s
WMQ LR LR
comp=Z,70nm,20.0s,MS3.5
WRAB Tennant Creek 42.90 123 *eP* **P 12 30 30.8 +0.8**
WRAB pmax pmax
comp=Z,21nm,1.2s,mb4.7
WRAB Tennant Creek 42.90 123 *eP* **P 12 30 30.8 +0.8**
comp=Z,21nm,1.2s,mb4.7
ULHL Ulahol 43.92 338 P **P 12 30 38.8 +0.9**
SNR=15
KZA Kyzart 44.16 337 P **P 12 30 40.8 +1.1**
SNR=11
FORT Forrest 44.29 140 *eP* **P 12 30 42.3 +1.2**
comp=Z,25nm,0.7s,mb5.0
ASAR Alice Springs 44.31 128 P **P 12 30 41.0 -0.3**
comp=Z,8.5nm,0.8s,mb4.5,baz=300,slow=8.1,SNR=93
ASAR PcP PcP 12 32 24.8 0.0
comp=Z,1.3nm,0.7s,baz=309,slow=3.1,SNR=5.3
UCH Uchtor 44.58 336 P **P 12 30 44.3 +1.2**
SNR=30
TKM2 Tokmak 2 44.75 338 P **P 12 30 45.1 +0.6**
SNR=18
KBK Karagaybulak 44.77 337 P **P 12 30 46.0 +1.3**
SNR=15
AML Almayashu 44.83 336 P **P 12 30 46.3 +1.1**
SNR=17
AML Almayashu 44.83 336 *eP* **P 12 30 46.1 +1.0**
AML pmax pmax
comp=Z,10μm,0.6s
AML Almayashu 44.83 336 *eP* **P 12 30 46.1 +1.0**
comp=Z,66μm,0.6s
AAK Ala-Archa 44.93 337 LR LR 12 53 41.6
comp=Z,118nm,18.1s,MS3.9,baz=338,slow=42
AAK Ala-Archa 44.93 337 *c iP* **P 12 30 46.1 +0.2**
AAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
AAK Ala-Archa 44.93 337 *eP* **P 12 30 47.1 +1.3**
comp=Z,8.6nm,0.8s,mb4.6
EKS2 Erkin-Say 45.24 336 P **P 12 30 49.5 +1.1**
SNR=16
KSRS Korea Array 45.25 35 P **P 12 30 47.8 -0.8**
comp=Z,9.1nm,0.8s,mb4.7,baz=224,slow=9.4,SNR=31
KSRS LR LR 12 51 33.4
comp=Z,171nm,18.3s,MS4.0,baz=43,slow=39
USP Ospenovka 45.46 337 P **P 12 30 50.8 +0.7**
SNR=12
MK31 Makanchi Array 46.18 346 *eP* **P 12 30 55.6 -0.1**
MKAR Makanchi Array 46.18 346 P **P 12 30 55.5 -0.2**
comp=Z,26nm,0.7s,mb5.3,baz=161,slow=7.8,SNR=256
MKAR LR LR 12 53 39.6
comp=Z,66nm,18.5s,MS3.6,baz=160,slow=40
SNY Shenyang 46.20 28 ⇑P **P 12 30 55.3 -0.7**
SNY S **S 12 37 36.3 -2.1**
SNY pmax pmax
comp=Z,15nm,0.7s,mb5.0
SNY pmax pmax
comp=Z,160nm,5.9s
SNY LR LR
comp=N,210nm,18.4s,MS4.2
SNY LR LR
comp=E,130nm,13.7s,MS4.2
SNY LR LR
comp=Z,190nm,18.8s
SONM Songino Array 46.20 9 P **P 12 30 56.0 +0.1**
comp=Z,14nm,0.8s,mb4.9,baz=191,slow=8.8,SNR=74
SONM PcP PcP 12 32 31.5 +0.6
comp=Z,2.6nm,0.6s,baz=190,slow=3.4,SNR=6.1
ULN Ulaanbaatar 46.34 10 *eP* **P 12 30 57.2 +0.3**
ULN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ULN Ulaanbaatar 46.34 10 *eP* **P 12 30 57.2 +0.2**
comp=Z,9.4nm,0.8s,mb4.8
ZAK Zakamensk 48.32 6⇑*iP* **P 12 31 12.4 +0.1**
ZAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CN2 Changchun 48.59 28 *eP* **P 12 31 14.0 -0.6**
CN2 *es*P sP 12 31 28.0 -7.6
CN2 *e*S **S 12 38 17.5 +5.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,10.0s,MS4.5
CN2 LR LR
comp=E,200nm,10.0s,MS4.5
CN2 LR LR
comp=Z,200nm,11.0s,MS4.4
COEN Coen 48.68 111 P **P 12 31 11.5 -4.2**
MOY Mondy 49.41 3 *eP* **P 12 31 21.4 +0.7**
TLY Talaya 49.64 6 *eP* **P 12 31 23.0 +0.6**
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TLY MLR MLR
comp=Z,141nm,16.0s,MS4.1
TLY Talaya 49.64 6 *eP* **P 12 31 22.8 +0.4**
comp=Z,9.4nm,0.7s,mb4.9
KURK Kurchatov 50.73 345 LR LR 12 56 06.2
comp=Z,74nm,20.2s,MS3.7,baz=165,slow=40
KURK Kurchatov 50.73 345 *c iP* **P 12 31 30.4 -0.2**
KURK pmax pmax
comp=Z,21nm,1.0s,mb5.0
KURK Kurchatov 50.73 345 *eP* **P 12 31 30.6 0.0**
comp=Z,16nm,0.8s,mb5.0
MDJ Mudanjiang 51.19 30 P **P 12 31 35.5 +1.3**
MDJ sP sP 12 31 48.6 -6.8
MDJ PP PP 12 33 32.9 +1.4
MDJ pmax pmax
comp=Z,15nm,1.1s,mb4.8
MDJ pmax pmax
comp=Z,58nm,4.1s
MDJ LR LR
comp=N,40nm,21.4s,MS3.8
MDJ LR LR
comp=E,76nm,19.8s,MS3.8
MDJ LR LR
comp=Z,100nm,17.4s,MS3.9
MDJ Mudanjiang 51.19 30 *eP* **P 12 31 35.8 +1.6**
comp=Z,7.8nm,0.8s,mb4.7
MAJO Matsushiro 51.22 43 *eP* **P 12 31 34.6 0.0**
MAJO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MAJO Matsushiro 51.22 43 *eP* **P 12 31 34.6 0.0**
comp=Z,7.2nm,0.7s,mb4.7
MAT Matsushiro 51.22 43 P **P 12 31 34.2 -0.4**
MJAR Matsushiro Arr 51.22 43 P **P 12 31 34.5 -0.1**
comp=Z,5.1nm,0.8s,mb4.5,baz=209,slow=6.2,SNR=10
ZAA0 Zalesovo Array 52.51 351 *eP* **P 12 31 43.5 -0.4**
ZALV Zalesovo Beam 52.51 351 P **P 12 31 43.8 -0.1**
comp=Z,34nm,0.6s,mb5.4,baz=179,slow=6.5,SNR=126
ZALV LR LR 12 59 43.4
comp=Z,62nm,18.1s,MS3.7,baz=38,slow=43
ZALV Zalesovo Beam 52.51 351 P **P 12 31 43.8 -0.1**
ZALV LR LR 12 59 43.4
NVS Novosibirsk 53.63 350 *i P* **P 12 31 51.3 -0.8**
NVS pmax pmax
comp=N,15nm,0.9s
NVS pmax pmax
comp=E,11nm,0.9s
NVS pmax pmax
comp=Z,21nm,0.9s,mb5.1
STKA Stephens Creek 54.32 132 *eP* **P 12 31 57.6 0.0**
comp=Z,4.2nm,0.7s,mb4.5
STKA Stephens Creek 54.32 132 P **P 12 31 57.8 +0.3**
comp=Z,6.3nm,1.1s,mb4.5,baz=296,slow=8.6,SNR=6.8
STKA LR LR 12 53 53.3
comp=Z,210nm,20.3s,MS4.2,baz=205,slow=35
STKA Stephens Creek 54.32 132 *eP* **P 12 31 57.9 +0.3**
STKA pmax pmax
comp=Z,1.0nm,0.6s
STKA Stephens Creek 54.32 132 *eP* **P 12 31 57.9 +0.3**
comp=Z,0.7nm,0.6s,mb3.8
STKA LR LR 12 53 53.3
BVAR Borovoye Array 55.18 341 P **P 12 32 02.6 -0.8**
comp=Z,6.0nm,0.6s,mb4.8,baz=150,slow=8.9,SNR=25
BVAR LR LR 12 59 22.7
comp=Z,96nm,19.5s,MS3.9,baz=266,slow=40
BRVK Borovoye 55.24 341⇑*iP* **P 12 32 03.0 -0.8**
BRVK pmax pmax
comp=Z,11nm,0.8s,mb4.9
BRVK Borovoye 55.24 341 *eP* **P 12 32 03.3 -0.5**
comp=Z,10nm,0.8s,mb4.9
KLR Kul'dur 55.54 27 *eP* **P 12 32 02.8 -3.3**
BOD Bodaibo 57.10 11 *eP* **P 12 32 15.8 -1.2**
BOD pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
ASAJ Asahikawa 58.10 37 P **P 12 32 25.1 +0.8**
comp=Z,6.7nm,0.7s,mb4.8,baz=180,slow=17
KMBO Kilima Mbogo 59.64 267 P **P 12 32 35.9 +0.3**
comp=Z,1.4nm,0.2s,mb4.6,baz=72,slow=15,SNR=6.0
GNI Garni 60.30 316⇑*eP* **P 12 32 39.7 +0.1**
GNI pmax pmax
comp=Z,9.0nm,1.2s
ARMA Armidale 61.44 126 *eP* **P 12 32 42.2 -5.3**
SVE Sverdlovsk 61.62 336⇑*eP* **P 12 32 48.3 +0.1**
SVE pmax pmax
comp=Z,15nm,0.9s,mb5.1
ZEI Tsey 61.99 318 *eP* **P 12 32 50.6 -0.4**
ZEI *i* 12 32 58.0
ZEI pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KIV Kislovodsk 63.30 319 *eP* **P 12 33 00.5 +0.8**
KIV pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KIV MLR MLR
comp=Z,40nm,18.0s,MS3.6
YAK Yakutsk 64.57 16 *eP* **P 12 33 05.8 -1.9**
YAK pmax pmax
comp=Z,29nm,0.8s,mb5.4
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK MLR MLR
comp=E,106nm,15.0s,MS4.3
YAK MLR MLR
comp=Z,176nm,14.0s,MS4.4
YAK MLR MLR
comp=N,104nm,15.0s,MS4.3
YAK Yakutsk 64.57 16 *eP* **P 12 33 07.1 -0.6**
comp=N,52nm,1.0s,mb5.5
MMAI Mount Meron Ar 65.00 306 LR LR 13 02 19.0
comp=N,51nm,18.5s,MS3.8,baz=70,slow=37
SOC Sochi 65.12 318 *eP* **P 12 33 14.8 +3.2**
SOC *e* 12 42 25.8
SOC pmax pmax
comp=Z,22nm,1.0s,mb5.1
ANN Anapa 67.09 318 *eP* **P 12 33 22.8 -1.5**
ANN pmax pmax
comp=Z,12nm,0.8s,mb5.0
BR131 Keskin Array S 68.15 312 *eP* **P 12 33 30.5 -0.6**
BRTR Keskin Array B 68.15 312 P **P 12 33 29.8 -1.3**
comp=Z,1.4nm,0.8s,mb4.1,baz=126,slow=6.3,SNR=8.2
BRTR Keskin Array B 68.15 312 *ceP* **P 12 33 30.5 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
PETK Petropavlovsk- 71.12 34 P **P 12 33 49.0 -0.1**
comp=Z,2.2nm,0.8s,mb4.2,baz=186,slow=3.1,SNR=5.6
PETK Petropavlovsk- 71.12 34 P **P 12 33 49.0 -0.1**
OBN Obninsk 71.56 328 *eP* **P 12 33 51.2 -0.5**
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
PET Petropavlovsk 71.62 34 *eP* **P 12 33 52.0 -0.1**
PET pmax pmax
comp=Z,27nm,1.1s,mb5.1
TIXI Tiksi 72.27 10 *eP* **P 12 33 54.3 -1.3**
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TIXI Tiksi 72.27 10 *eP* **P 12 33 54.6 -1.0**
comp=Z,5.5nm,0.6s,mb4.7
KLMR Klimovskoe 72.68 334 *eP* **P 12 33 57.1 -1.2**
KLMR pmax pmax
comp=Z,14nm,1.3s,mb4.7
SEY Seymchan 73.00 23⇑*iP* **P 12 33 59.6 -0.5**
AKASG Malin Array Be 74.23 322 P **P 12 34 06.5 -1.1**
comp=Z,3.0nm,0.7s,mb4.4,baz=95,slow=4.5,SNR=12
AKASG Malin Array Be 74.23 322 P **P 12 34 06.5 -1.1**
BOSA Boshof 74.94 240 LR LR 13 04 22.9
comp=Z,160nm,19.1s,MS4.3,baz=339,slow=34
JOF Joensuu 77.08 335 *eP* **P 12 34 21.7 -1.9**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
JOF Joensuu 77.08 335 *ep* **P 12 34 21.7 -1.9**
comp=Z,2.4nm,0.6s,mb4.3
APA Apatity 78.06 339⇓*iP* **P 12 34 36.5 +7.5**
APA *i* 12 34 46.0
APA MLR MLR
comp=Z,200nm,19.0s,MS4.5
FINES FINESS Array B 78.93 332 P **P 12 34 33.6 -0.3**
comp=Z,4.2nm,0.7s,mb4.5,baz=100,slow=7.9,SNR=13
KAF Kangasniemi 79.02 333 *eP* **P 12 34 34.3 -0.1**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KAF Kangasniemi 79.02 333 *ep* **P 12 34 34.3 -0.1**
comp=Z,4.7nm,0.6s,mb4.6
BILL Bilibino 80.37 21 *eP* **P 12 34 40.2 -1.4**
BILL pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.3
SYO Syowa Base 80.83 198⇑*ep*P pP 12 34 53.4 -6.3
KEV Kevo 81.03 341 *eP* **P 12 34 38.6 -6.5**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KEV Kevo 81.03 341 *ep* **P 12 34 38.6 -6.5**
comp=Z,4.7nm,0.8s,mb4.5
ARCES ARCESS Array B 81.46 340 P **P 12 34 47.5 +0.1**
comp=Z,2.3nm,0.5s,mb4.3,baz=93,slow=5.5,SNR=19
ARCES LR LR 13 16 20.9
comp=Z,71nm,18.6s,MS4.1,baz=68,slow=40
URZ Urewera 83.75 129 LR LR 13 15 18.6
comp=Z,139nm,18.0s,MS4.4,baz=17,slow=38
GERES GERESS Array B 83.81 319 P **P 12 34 60.0 0.0**
comp=Z,2.8nm,0.8s,mb4.5,baz=105,slow=3.0,SNR=10
NB2 NORSAR Subarra 85.94 331 P **P 12 35 10.2 -0.3**
comp=Z,0.2nm,0.7s,baz=96,slow=5.9
NOA NORSAR Array B 85.94 331 P **P 12 35 10.0 -0.4**
comp=Z,1.8nm,0.8s,mb4.4,baz=94,slow=5.0,SNR=5.4
NOA LR LR 13 18 12.7
comp=Z,33nm,20.7s,MS3.7,baz=60,slow=39
NOA NORSAR Array B 85.94 331 P **P 12 35 10.0 -0.4**
NOA LR LR 13 18 12.7
TORD Torodi Ar. Bea 94.48 283 P **P 12 35 51.7 +0.1**
comp=Z,0.6nm,0.9s,mb4.0,baz=74,slow=5.1,SNR=4.7
YKA Yellowknife Ar 111.23 15 PP PP 12 41 37.3 -6.0
comp=Z,0.3nm,0.8s,baz=324,slow=6.9,SNR=4.6
NVAR Mina Array Bea 128.20 35 PKP PKPdf 12 41 38.2 +1.1
comp=Z,0.7nm,0.6s,baz=277,slow=2.8,SNR=7.0
NVAR Mina Array Bea 128.20 35 PKP PKPdf 12 41 38.2 +1.1
PDAR Pinedale Array 129.31 25 PKP PKPdf 12 41 39.5 +0.4
comp=Z,0.8nm,0.6s,baz=186,slow=0.8,SNR=6.5
BLA Blacksburg 140.70 357 *e*PKIKP PKPdf 12 42 00.9 +0.4
TZTN Tazewell 141.45 0 *e*PKPdf PKPdf 12 42 03.7 +1.8
TXAR Lajitas Array 143.02 31 PKhKP 12 42 01.9
comp=Z,0.3nm,0.6s,baz=275,slow=1.3,SNR=8.3
JCT Junction City 143.84 25 *e*PKIKP PKPdf 12 42 05.0 -1.3
CPUP Villa Florida 145.47 224 PKPbc PKPbc 12 42 09.8 +0.6
comp=Z,1.3nm,0.5s,baz=73,slow=4.7,SNR=7.5

*ISCJB **20** 12:39:08.4±0.4,31°.65N±0°.04×104°.58E±0°.05,h10km, mb3.9/9, Error ellipse: s-maj=6.4km s-min=5.6km az=11.5*
*IDC **20** 12:39:08.5±1.1,31°.69N×104°.58E,h0km,mb3.6/6, mb1 3.7/8,mb1mx3.5/27,mbtmp3.5/8,ML3.7/2, Error ellipse: s-maj=35.5km s-min=21.5km az=61.0*
*NEIC **20** 12:39:10.5±0.5,31°.69N×104°.60E,h10km,mb4.3/3, Error ellipse: s-maj=15.2km s-min=9.6km az=61.0*
*BJI **20** 12:39:10.4,31°.75N×104°.44E,h9km,ML3.5/11,Ms3.1/1, Ms7 3.0/1*
ISC 20 12:39:10.2±0.4,31°.66N±0°.04×104°.59E±0°.05,h10km,n18, σ1°16/23,mb3.9/9,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.03**	**224**	Pg	**Pg**	**12 39 28.3**	**-1.8**
CD2				Sg	**Sg**	**12 39 42.4**	**-1.2**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**4.35**	**56**	Pg	**Pg**	**12 40 31.6**	**-1.9**
XAN				Sg	**Sg**	**12 41 27.3**	**-2.5**
XAN				smax			
	comp=N,100nm,0.7s						
XAN				smax			
	comp=E,29nm,0.9s						
ENH	**Enshi**	**4.43**	**107**	*e*Pn	**Pn**	**12 40 17.6**	**+0.1**
ENH				*e*Sn	**Sn**	**12 41 10.1**	**+1.1**
LZH	**Lanzhou**	**4.46**	**352**	Pg	**Pg**	**12 40 36.6**	**+1.0**
LZH				Sg	**Sg**	**12 41 27.3**	**-6.0**
LZH				smax			
	comp=N,96nm,1.2s						
LZH				smax			
	comp=E,88nm,1.0s						
LZH				LR	LR		
	comp=E,310nm,6.4s						
LZH				LR	LR		
	comp=Z,440nm,7.9s						
GYA	**Guiyang**	**5.49**	**160**	Pn	**Pn**	**12 40 36.0**	**+3.9**
GYA				Sn	**Sn**	**12 41 35.6**	**+0.3**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,100nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.10**	**203**	Pn	**Pn**	**12 42 31.3**	**+1.2**
	comp=E,0.2nm,0.3s,baz=8.6,slow=9.1,SNR=3.0						
SONM	**Songino Array**	**16.21**	**4**	Pn	**Pn**	**12 42 58.9**	**+0.9**
	comp=E,0.1nm,0.3s,baz=186,slow=10,SNR=2.4						
KSRS	**Korea Array**	**20.04**	**67**	P	**P**	**12 43 43.5**	**+0.2**
	comp=E,1.4nm,0.7s,baz=253,slow=9.5,SNR=6.6						
MK31	**Makanchi Array**	**22.84**	**318**	*e*P	**P**	**12 44 14.3**	**+0.9**
MKAR	**Makanchi Array**	**22.84**	**318**	P	**P**	**12 44 11.6**	**-1.8**
	comp=E,0.8nm,0.8s,mb3.2,baz=114,slow=12,SNR=7.3						
ZALV	**Zalesovo Beam**	**26.41**	**333**	P	**P**	**12 44 48.1**	**+1.4**
	comp=E,0.6nm,0.5s,mb3.4,baz=134,slow=10,SNR=2.6						
BRVK	**Borovoye**	**32.69**	**321**	*e*P	**P**	**12 45 42.2**	**-0.3**
	comp=E,0.8nm,0.5s,mb3.9						
ARU	**Arti**	**40.25**	**322**	*e*P	**P**	**12 46 47.2**	**+0.3**
	comp=E,5.6nm,0.4s,mb4.7						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**12 48 58.3**	**+0.2**
	comp=E,1.2nm,0.6s,mb4.1,baz=64,slow=9.4,SNR=3.6						
WRAB	**Tennant Creek**	**58.70**	**147**	*e*P	**P**	**12 49 08.8**	**+0.6**
	comp=E,1.6nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**12 49 29.1**	**+0.1**
	comp=E,0.5nm,0.5s,mb3.9,baz=334,slow=6.5,SNR=13						
SKAG	**Skagway**	**76.65**	**27**	*e*P	**P**	**12 51 02.1**	**+1.1**
	comp=E,4.5nm,0.6s,mb4.6						
YKA	**Yellowknife Ar**	**81.04**	**17**	P	**P**	**12 51 23.4**	**-1.6**
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.3,SNR=4.6						

*NEIC **20** 13:15:17.9,19°.06N×69°.46W,h96km, MD3.1(RSPR), After RSPR.*
RSPR 20 13:15:17.9,19°.06N×69°.46W,h96km±1km,10C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.28**	**164**⇑	*e*P	Pn	13 15 31.4	-0.6
DR12				*e*S	Sn	13 15 42.2	-0.2
PCDR	**Punta Cana, DR**	**1.16**	**118**⇑	*e*P	Pn	13 15 38.9	-0.9
PCDR	**Punta Cana, DR**	**1.16**	**118**	*e*S	Sn	13 15 55.2	-1.2
SDDR	**Presa de Saban**	**1.73**	**268**	*e*Pn	Pn	13 15 49.7	+2.8
SDDR				*e*Sn	Sn	13 16 14.6	+5.7
LSP	**Las Mesas**	**2.42**	**111**⇑	*e*P	Pn	13 15 54.7	-1.1
LSP				*e*S	Sn	13 16 24.1	-0.9
CRPR	**Cabo Rojo, PR**	**2.46**	**115**⇑	*e*P	Pn	13 15 56.7	+0.2
CRPR				*e*S	Sn	13 16 25.3	-0.7
CRPR	**Cabo Rojo, PR**	**2.46**	**115**	*e*P	Pn	13 15 56.2	-0.3
CRPR				⇑*e*P		13 15 56.7	
CRPR				*e*S	Sn	13 16 25.3	-0.7
AOPR	**Arecibo Observ**	**2.66**	**105**⇑	*e*P	Pn	13 15 59.4	+0.3
ICM	**Isla Caja Muer**	**3.02**	**112**	*e*S	Sn	13 16 38.3	-1.0
CBYP	**Canovanas**	**3.51**	**102**⇑	*e*P	Pn	13 16 08.5	-1.9
CBYP	**Canovanas**	**3.51**	**102**	*e*P	Pn	13 16 07.6	-2.8
CBYP				⇑*e*P		13 16 08.5	
CPD	**Cerro la Pandu**	**3.51**	**106**⇑	*e*P	Pn	13 16 09.5	-1.0
MTP	**Monte Pirata**	**3.83**	**104**⇑	*e*P	Pn	13 16 13.6	-1.2

IDC 20 13:17:47.7±1.2,60°.05S×26°.96W,h0km,mb3.9/4, mb1 4.0/4,mb1mx3.8/13,mbtmp3.9/4,Error ellipse: s-maj=46.2km s-min=28.3km az=71.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**30.19**	**180**	P	P	13 23 59.6	+0.6
	0.8nm,0.6s,baz=236,slow=6.5,SNR=7.1						
CPUP	**Villa Florida**	**39.63**	**315**	P	P	13 25 21.2	+0.3
	1.3nm,0.5s,baz=123,slow=11,SNR=5.6						
LPAZ	**La Paz**	**52.85**	**308**	P	P	13 27 05.3	+0.4
	1.4nm,0.6s,baz=156,slow=2.3,SNR=7.7						
TORD	**Torodi Ar. Bea**	**76.50**	**29**	P	P	13 29 39.4	+0.2
	0.5nm,0.7s,baz=198,slow=6.8,SNR=5.9						
YKA	**Yellowknife Ar**	**139.16**	**315**	PKP	PKPdf	13 37 12.6	-2.1
	0.1nm,0.4s,baz=124,slow=2.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**143.88**	**69**	PKP	PKPdf	13 37 22.7	-0.8
	0.4nm,0.5s,baz=202,slow=3.1,SNR=2.7						

*BUC **20** 13:30:05.8±1.0,45°.46N×26°.33E,h133km±9km, MD3.8/2, Error ellipse: s-maj=6.0km s-min=5.0km az=85.0*
*ISCJB **20** 13:30:06.2±0.8,45°.45N±0°.05×26°.37E±0°.06,h127km±7km, Error ellipse: s-maj=8.0km s-min=6.9km az=149.3*
*CSEM **20** 13:30:06.5±0.3,45°.46N×26°.33E,h125km±2km, MD3.8/2, Error ellipse: s-maj=3.9km s-min=3.8km az=166.0*
*SOF **20** 13:30:08.8,45°.35N×26°.32E,h100km, MD2.9*
ISC 20 13:30:06.8±0.9,45°.45N±0°.05×26°.36E±0°.06,h126km±7km, n47,σ0°51/62,21C-15D,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.30**	**278**⇑	*i*P	**Pn**	**13 30 24.5**	**+0.1**
MLR				*i* S	**Sn**	**13 30 38.0**	**+0.4**
MLR	**Muntele Rosu**	**0.30**	**278**⇑	*i*P	**Pn**	**13 30 24.5**	**+0.1**
MLR	**Muntele Rosu**	**0.30**	**278**⇑	*i*P	**Pn**	**13 30 24.5**	**+0.1**
MLR				*i* S	**Sn**	**13 30 38.0**	**+0.4**
PLOR	**Plostina**	**0.45**	**27**⇑	*i*P	**Pn**	**13 30 25.0**	**0.0**
PLOR				*i* S	**Sn**	**13 30 38.7**	**-0.2**
PLOR	**Plostina**	**0.45**	**27**⇑	*i*P	**Pn**	**13 30 25.0**	**0.0**
PLOR	**Plostina**	**0.45**	**27**⇑	*i*P	**Pn**	**13 30 25.0**	**0.0**
PLOR				*i* S	**Sn**	**13 30 38.7**	**-0.2**
VRI	**Vrincioaia**	**0.49**	**31**⇑	*i*P	**Pn**	**13 30 25.5**	**+0.2**
VRI				*i* S	**Sn**	**13 30 39.6**	**+0.4**
VRI	**Vrincioaia**	**0.49**	**31**⇑	*i*P	**Pn**	**13 30 25.5**	**+0.2**
VRI	**Vrincioaia**	**0.49**	**31**⇑	*i*P	**Pn**	**13 30 25.5**	**+0.2**
VRI				*i* S	**Sn**	**13 30 39.6**	**+0.4**
ODB	**Odobesti**	**0.58**	**56**⇑	*i*P	**Pn**	**13 30 26.9**	**+1.1**
ODB	**Odobesti**	**0.58**	**56**⇑	*i*P	**Pn**	**13 30 26.9**	**+1.1**
ODB	**Odobesti**	**0.58**	**56**⇑	*i*P	**Pn**	**13 30 26.9**	**+1.1**
VOIR		**0.93**	**270**⇓	*i*P	**Pn**	**13 30 28.4**	**-0.2**
VOIR		**0.93**	**270**⇓	*i*P	**Pn**	**13 30 28.4**	**-0.2**
VOIR		**0.93**	**270**⇓	*i*P	**Pn**	**13 30 28.4**	**-0.2**
BUC1	**Bucharest**	**1.13**	**192**	*i* S	**Sn**	**13 30 48.3**	**-0.3**
BUC1	**Bucharest**	**1.13**	**192**	S	**Sn**	**13 30 48.3**	**-0.3**
BUC1	**Bucharest**	**1.13**	**192**	*i* S	**Sn**	**13 30 48.3**	**-0.3**
CFR	**Carcaliu**	**1.28**	**102**⇓	*i*P	**Pn**	**13 30 32.0**	**-0.1**
CFR				*i* S	**Sn**	**13 30 50.3**	**-1.1**
CFR	**Carcaliu**	**1.28**	**102**⇓	*i*P	**Pn**	**13 30 32.0**	**-0.1**
CFR	**Carcaliu**	**1.28**	**102**⇓	*i*P	**Pn**	**13 30 32.0**	**-0.1**
HARR	**Harsova**	**1.35**	**124**⇑	*i*P	**Pn**	**13 30 33.1**	**+0.2**
HARR				*i* S	**Sn**	**13 30 52.0**	**-0.6**
HARR	**Harsova**	**1.35**	**124**⇑	*i*P	**Pn**	**13 30 33.1**	**+0.2**
HARR	**Harsova**	**1.35**	**124**⇑	*i*P	**Pn**	**13 30 33.1**	**+0.2**
HARR				*i* S	**Sn**	**13 30 52.0**	**-0.6**
CVD	**Cernavoda**	**1.64**	**133**⇓	*i*P	**Pn**	**13 30 36.3**	**+0.1**
CVD	**Cernavoda**	**1.64**	**133**⇓	*i*P	**Pn**	**13 30 36.3**	**+0.1**
CVD	**Cernavoda**	**1.64**	**133**⇓	*i*P	**Pn**	**13 30 36.3**	**+0.1**
LEOM	**Leova**	**1.66**	**51**⇑	*i*P	**Pn**	**13 30 36.6**	**+0.2**
LEOM				*i* S	**Sn**	**13 30 58.6**	**-0.5**
LEOM	**Leova**	**1.66**	**51**⇑	*i*P	**Pn**	**13 30 36.6**	**+0.2**

LEOM	**Leova**	**1.66**	**51⇑**	*i*P	**Pn**	**13 30 36.6**	**+0.2**
LEOM				*i*S	**Sn**	**13 30 58.6**	**-0.5**
TLCR		**1.75**	**98⇓**	*i*P	**Pn**	**13 30 37.9**	**+0.4**
TLCR				*i*S	**Sn**	**13 31 01.2**	**+0.3**
TLCR		**1.75**	**98⇓**	*i*P	**Pn**	**13 30 37.9**	**+0.4**
TLCR		**1.75**	**98⇓**	*i*P	**Pn**	**13 30 37.9**	**+0.4**
TLCR				*i*S	**Sn**	**13 31 01.2**	**+0.3**
PSN	**Preselentsi**	**2.20**	**143**	P	**Pn**	**13 30 43.7**	**+0.7**
PSN	**Preselentsi**	**2.20**	**143**	P	**Pn**	**13 30 43.7**	**+0.7**
SZH	**Strazhica**	**2.21**	**188**	P	**Pn**	**13 30 43.0**	**-0.1**
SZH	**Strazhica**	**2.21**	**188**	P	**Pn**	**13 30 43.0**	**-0.1**
KIS	**Kishinev**	**2.30**	**47**	*e*S	**Sn**	**13 31 10.0**	**-2.9**
	400nm,1.0s						
KIS	**Kishinev**	**2.30**	**47⇑**	*i*P	**Pn**	**13 30 44.4**	**+0.2**
KIS				*i*S	**Sn**	**13 31 12.9**	**0.0**
KIS	**Kishinev**	**2.30**	**47⇑**	*i*P	**Pn**	**13 30 44.4**	**+0.2**
KIS	**Kishinev**	**2.30**	**47⇑**	*i*P	**Pn**	**13 30 44.4**	**+0.2**
KIS				*i*S	**Sn**	**13 31 12.9**	**0.0**
PRD	**Provadia**	**2.37**	**161**	P	**Pn**	**13 30 45.5**	**+0.3**
PRD	**Provadia**	**2.37**	**161**	P	**Pn**	**13 30 45.5**	**+0.3**
MPEP	**Malo Peshtene**	**2.82**	**223**	P	**Pn**	**13 30 50.3**	**-0.5**
DRGR		**2.87**	**299⇓**	*i*P	**Pn**	**13 30 50.8**	**-0.7**
DRGR		**2.87**	**299⇓**	*i*P	**Pn**	**13 30 50.8**	**-0.7**
DRGR		**2.87**	**299⇓**	*i*P	**Pn**	**13 30 50.8**	**-0.7**

*BGS **20** 13:53:31.6±1.7,50°.32N×177°.84E,h33km,mb5.3,MS5.8*
*ISCJB **20** 13:53:32.2±0.7,51°.11N±0°.02×178°.81E±0°.02,h15km±4km, mb5.8/491,MS6.0/325,Error ellipse: s-maj=3.9km s-min=1.7km az=2.6*
*GCMT **20** 13:53:35.6±0.1,51°.11N×178°.53E,h18km,MW6.3/115, Moment Tensor Solution. s114,c270; s115,c456; Duration: 3s4 Moment tensor: Scale 10^{18}Nm; M_{rr}1.97±.01; $M_{\theta\theta}$-2.16±.01; $M_{\phi\phi}$0.18±.01; $M_{r\theta}$2.21±.05; $M_{\theta\phi}$-0.32±.01; $M_{\phi r}$1.14±.04; Best double couple: M_o3.25100×10^{18} NP1:ϕ_s279.00000°,δ22.00000°, λ119.00000°. NP2:ϕ_s67.00000°,δ71.00000°,λ79.00000°. Principal axes: T 3.2170, Plg63.0000°, Azm319.0000°; N 0.0660, Plg11.0000°, Azm71.0000°; P -3.2860, Plg25.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **20** 13:53:35.6±0.1,51°.16N×178°.76E,h27km,mb5.8/292, ME5.9,MS6.0/216,MW6.1,MW6.3,ML5.9(AEIC) Error ellipse: s-maj=4.2km s-min=2.1km az=181.0,Moment Tensor Solution. s140 Moment tensor: Scale 10^{18}Nm; M_{rr}0.92; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$-0.24; $M_{r\theta}$1.06; $M_{\theta\phi}$0.00; $M_{\phi r}$0.63; Best double couple: M_o1.50000×10^{18} NP1:ϕ_s270.00000°, δ18.00000°,λ115.00000°. NP2:ϕ_s65.00000°,δ74.00000°, λ83.00000°. Principal axes: T 1.6200, Plg60.0000°, Azm323.0000°; N -0.3300, Plg7.0000°, Azm66.0000°; P -1.2900, Plg28.0000°, Azm160.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
*MOS **20** 13:53:35.0±1.1,51°.19N×178°.82E,h33km,mb6.0/150, MS6.0/107 Error ellipse: s-maj=6.2km s-min=3.8km az=94.4*
*BJI **20** 13:53:36.5,51°.41N×178°.35E,h40km,mB6.1/46,mb5.9/59, Ms6.1/71,Ms7 5.9/59*
*IDC **20** 13:53:37.1±0.5,51°.36N×178°.70E,h33km±3km,mb5.3/36, mb1 5.3/37,mb1mx5.3/39,mbtmp5.3/37,ML4.7/1,MS5.9/36, Ms1 5.9/36,ms1mx5.7/48,Error ellipse: s-maj=13.4km s-min=8.9km az=166.0*
*SZGRF **20** 13:53:39.3,51°.49N×176°.11E,h33km,mb5.6,MS6.0,Rat Islands, Aleutian Islands, United States*
*DJA **20** 13:54:29,51°.14N×175°.59E,h453km,Mw5.7/42*
ISC 20 13:53:36.2±0.7,51°.19N±0°.02×178°.79E±0°.02,h29km±4km, h40km±1.6km:pP-P,n1742,σ0s90/1659,mb5.8/491, MS6.0/325,386C-213D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.28**	**300**	*e*P	**Pn**	**13 54 24.5**	**-1.1**
GSTR	**Great Sitkin T**	**3.34**	**72**	*e*P	**Pn**	**13 54 28.6**	**+2.2**
FX1	**Attu Island--F**	**3.86**	**298**	P	**Pn**	**13 54 34.2**	**+0.6**
FX1				S	**Sn**	**13 55 21.5**	**+3.6**
ATKA	**Atka Island**	**4.48**	**74**	P	**Pn**	**13 54 43.3**	**+1.2**
ATKA				S	**Sn**	**13 55 38.3**	**+5.1**
NIKO	**Nikolski**	**7.82**	**72**	P	**Pn**	**13 55 31.6**	**+3.7**
UNV	**Unalaska Valle**	**9.36**	**68**	P	**Pn**	**13 55 51.3**	**+2.4**
AKGG	**Akutan Green G**	**9.72**	**66**	P	**Pn**	**13 55 58.0**	**+4.1**
AKLV	**Akutan Long Va**	**9.73**	**66**	P	**Pn**	**13 55 57.5**	**+3.4**
AKUT	**Akutan**	**9.84**	**67**	*e*P	**Pn**	**13 55 56.7**	**+1.2**
	369nm,1.6s						
FALS	**False Pass**	**11.33**	**64**	*e*P	**Pn**	**13 56 19.0**	**+3.2**
	604nm,0.5s						
PET	**Petropavlovsk**	**12.51**	**286**	*e*P	**Pn**	**13 56 29.8**	**-2.2**
PET				*i*S	**Sn**	**13 58 46.1**	**-4.1**
PET				pmax	pmax		
	comp=Z,271nm,1.1s						
PET				pmax	pmax		
	comp=Z,7μm,11.9s						
PET				pmax	pmax		
	comp=Z,8μm,18.0s						
PET				smax			
	comp=N,359nm,0.7s						
PET				MLR	MLR		
	comp=Z,28μm,20.0s						
PET				MLR	MLR		
	comp=Z,24μm,18.0s						
PET	**Petropavlovsk**	**12.51**	**286**	*e*P	**Pn**	**13 56 32.0**	**0.0**
	comp=Z,1μm,1.5s						
SDPT	**Sand Point**	**13.08**	**63**	*e*P	**Pn**	**13 56 39.4**	**-0.3**
	comp=Z,535nm,0.7s						
PEA0B	**Petropavlovsk-**	**13.09**	**287**	*e*P	**Pn**	**13 56 40.5**	**+0.6**
PETK	**Petropavlovsk-**	**13.09**	**287**	Pn	**Pn**	**13 56 40.6**	**+0.7**
	comp=Z,4.2nm,0.3s,baz=85,slow=16,SNR=137						
PETK				Sn	**Sn**	**13 59 01.7**	**-2.5**
	comp=Z,6.7nm,0.3s,baz=95,slow=24,SNR=4.4						
PETK				PcP	PcP	14 02 11.4	+0.9
	comp=Z,0.2nm,0.3s,baz=86,slow=4.1,SNR=4.9						
PETK				pPcP		14 02 22.9	
	comp=Z,0.2nm,0.3s,baz=92,slow=6.0,SNR=5.3						
PETK				ScP	ScP	14 05 42.7	+1.3
	comp=Z,0.1nm,0.3s,baz=63,slow=6.6,SNR=4.0						
PETK	**Petropavlovsk-**	**13.09**	**287**	P	**Pn**	**13 56 40.6**	**+0.7**
PETK						13 59 01.7	
PETK	**Petropavlovsk-**	**13.09**	**287**	Pn	**Pn**	**13 56 40.6**	**+0.7**
PETK				Sn	**Sn**	**13 59 01.7**	**-2.5**
PETK				PcP	PcP	14 02 11.4	+0.9
PETK				pPcP		14 02 22.9	
PETK				ScP	ScP	14 05 42.7	+1.2
GAMB	**Gambell**	**13.60**	**18⇑**	*e*P	**Pn**	**13 56 50.4**	**+3.6**
	comp=Z,283nm,1.2s						
SKR	**Severo-Kuril's**	**14.30**	**277**	*c i*P	**Pn**	**13 56 54.5**	**-1.9**
SKR				pmax	pmax		
	comp=E,14μm,16.0s						
SKR				pmax	pmax		
	comp=Z,12μm,16.0s						
SKR				pmax	pmax		
	comp=N,5μm,14.0s						
SKR				pmax	pmax		
	comp=N,450nm,1.0s						
SKR				pmax	pmax		
	comp=Z,920nm,1.0s						
SKR				pmax	pmax		
	comp=E,130nm,0.8s						
SKR				MLR	MLR		
	comp=N,54μm,24.0s						
SKR				MLR	MLR		
	comp=E,34μm,24.0s						
SKR				MLR	MLR		
	comp=Z,44μm,24.0s						
SKR				MLR	MLR		
	comp=N,31μm,20.0s						
SKR				MLR	MLR		
	comp=E,34μm,20.0s						
SKR				MLR	MLR		
	comp=Z,44μm,20.0s						
CHGN	**Chignik**	**14.40**	**60**	*e*P	**Pn**	**13 56 58.3**	**+0.5**
TNA	**Tin City**	**15.95**	**20⇑**	*e*P	**Pn**	**13 57 21.3**	**+3.1**
	comp=Z,1μm,1.3s						
SVW2	**Sparrevohn**	**17.27**	**45**	*e*P	**Pn**	**13 57 35.6**	**+0.7**
OHAK	**Old Harbor**	**17.34**	**59**	*e*P	**Pn**	**13 57 32.6**	**-3.1**
	comp=Z,88nm,0.8s						
KDAK	**Kodiak Island**	**17.80**	**57**	Pn	**Pn**	**13 57 39.0**	**-2.4**
	comp=Z,2μm,0.5s,SNR=70						
KDAK	**Kodiak Island**	**17.80**	**57**	P	**Pn**	**13 57 39.4**	**-2.1**
KDAK				ScP	ScP	14 05 51.3	+1.2
TTA	**Tatalina**	**17.91**	**39**	*e*P	**Pn**	**13 57 44.6**	**+1.9**
BILL	**Bilibino**	**17.98**	**345**	*c i*P	**Pn**	**13 57 43.8**	**+0.2**
BILL				*i*S	**Sn**	**14 01 06.3**	**+3.4**
BILL				pmax	pmax		
	comp=Z,542nm,1.0s						
BILL	**Bilibino**	**17.98**	**345**	*e*P	**Pn**	**13 57 44.9**	**+1.3**
	comp=Z,447nm,0.9s						
RSO	**Redoubt South**	**18.34**	**49**	*e*P	**Pn**	**13 57 48.9**	**+0.8**
SEY	**Seymchan**	**18.39**	**320**	*c i*P	**Pn**	**13 57 48.6**	**-0.1**
PPLA	**Purkeypile**	**19.46**	**42**	*e*P	**Pn**	**13 58 01.7**	**+0.2**
	comp=Z,1μm,1.4s						
CHUM	**Lake Minchumin**	**19.82**	**39**	*e*P	**Pn**	**13 58 05.7**	**-0.1**
	comp=Z,421nm,0.9s						
KTH	**Kantishna Hill**	**20.25**	**41**	*e*P	**P**	**13 58 09.9**	**+1.1**
	comp=Z,23nm,0.9s						
PMR	**Palmer**	**20.36**	**47**	*e*P	**P**	**13 58 10.4**	**+0.4**
PMR				pmax	pmax		
	comp=Z,195nm,1.5s						
PMR				MLR	MLR		
	comp=Z,72μm,19.0s,MS6.0						
PMR	**Palmer**	**20.36**	**47**	*e*P	**P**	**13 58 10.4**	**+0.4**
	comp=Z,195nm,1.5s						
PMR				LR	LR		
	comp=Z,72μm,19.0s,MS6.0						
TRF	**Thorofare Moun**	**20.47**	**41**	*e*P	**P**	**13 58 11.3**	**+0.1**
	comp=Z,83nm,0.9s						
MCK	**McKinley**	**21.14**	**41**	*e*P	**P**	**13 58 17.1**	**-1.3**
MCK				pmax	pmax		
	comp=Z,406nm,1.2s,mb5.6						
MCK	**McKinley**	**21.14**	**41**	*e*P	**P**	**13 58 17.1**	**-1.3**
	comp=Z,406nm,1.2s,mb5.6						
MID	**Middleton Isla**	**21.27**	**54**	P	**P**	**13 58 19.2**	**-0.7**
MID				pmax	pmax		
	comp=Z,416nm,0.8s,mb5.8						
MID	**Middleton Isla**	**21.27**	**54**	P	**P**	**13 58 19.2**	**-0.7**
	comp=Z,416nm,0.8s,mb5.8						
DIV	**Divide**	**21.83**	**49**	*e*P	**P**	**13 58 23.7**	**-2.1**
	comp=Z,639nm,1.1s,mb6.0						
COLA	**College**	**22.00**	**39**	*e*P	**P**	**13 58 27.1**	**-0.5**
COLA				pmax	pmax		
	comp=Z,382nm,0.9s,mb5.8						
COLA				MLR	MLR		
	comp=Z,30μm,20.0s,MS5.7						
COLA	**College**	**22.00**	**39**	*e*P	**P**	**13 58 27.1**	**-0.5**
	comp=Z,382nm,0.9s,mb5.8						
COLA				LR	LR		
	comp=Z,30μm,20.0s,MS5.7						
COLD	**Coldfoot**	**22.21**	**32**	*e*P	**P**	**13 58 29.8**	**0.0**
	comp=Z,277nm,1.0s,mb5.6						
BMRM	**Bremner River**	**22.36**	**50**	*e*P	**P**	**13 58 30.1**	**-1.4**
MIDW	**Midway**	**23.13**	**171**	PFAKE		13 58 50.0	+10
MIDW				LR	LR		
	comp=Z,25μm,20.0s,MS5.7						
MENT	**Mentasta**	**23.15**	**45**	*e*P	**P**	**13 58 39.7**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**23.18**	**265**	*e*P	**P**	**13 58 39.0**	**-1.2**
YUK				pmax	pmax		
	comp=Z,12μm,0.9s,mb7.3						
YSS	**Yuzh-Sakhalins**	**23.82**	**274**	*αe*P	**P**	**13 58 46.3**	**-0.2**
YSS				*e**PP		13 58 59.0	
YSS				*e*		13 59 20.0	
YSS				*e*PPP		13 59 32.0	
YSS				*e*		14 02 31.0	
YSS				*e*S	**S**	**14 02 58.0**	**-2.1**
YSS				*e*SSS		14 04 08.0	
YSS				pmax	pmax		
	comp=Z,660nm,1.0s,mb6.0						
YSS				pmax	pmax		
	comp=N,640nm,1.5s						
YSS				pmax	pmax		
	comp=E,2μm,1.5s						
YSS	**Yuzh-Sakhalins**	**23.82**	**274⇑**	*i*P	**P**	**13 58 46.2**	**-0.2**
	comp=E,1μm,1.3s,mb6.1						
YSS				LR	LR		
	comp=Z,9μm,20.0s,MS5.2						
EGAK	**Eagle**	**24.69**	**41**	*e*P	**P**	**13 58 53.1**	**-1.1**
	comp=Z,68nm,0.4s,mb5.5						
EGAK				LR	LR		
	comp=Z,23μm,20.0s,MS5.7						
PNL	**Peninsula**	**24.82**	**54**	*e*P	**P**	**13 58 53.5**	**-1.9**
	comp=Z,156nm,0.8s,mb5.6						
ASAJ	**Asahikawa**	**25.19**	**268**	P	**P**	**13 58 58.8**	**-0.1**
	comp=Z,377nm,0.9s,mb5.9,baz=36,slow=5.4,SNR=40						
ASAJ				pPcP		14 02 44.9	
	comp=Z,50nm,0.9s,baz=263,slow=8.4,SNR=4.8						
ASAJ				LR	LR	14 06 52.3	
	comp=Z,19μm,20.9s,MS5.6,baz=79,slow=32						
ASAJ	**Asahikawa**	**25.19**	**268**	P	**P**	**13 58 58.8**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,377nm,0.9s						
ASAJ				pmax	pmax		
	comp=Z,50nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,19μm,20.9s						
DAWY	**Dawson**	**25.29**	**43**	*e*P	**P**	**13 58 58.9**	**-0.7**
ERM	**Erimo**	**25.92**	**263**	P	**P**	**13 59 07.2**	**+1.6**
	comp=Z,1μm,1.1s,mb6.4,SNR=5.0						
ERM	**Erimo**	**25.92**	**263**	*e*P	**P**	**13 59 05.8**	**+0.2**
ERM				pmax	pmax		
	comp=Z,331nm,1.2s,mb5.7						
ERM				MLR	MLR		
	comp=Z,20μm,22.0s,MS5.6						
ERM	**Erimo**	**25.92**	**263**	*e*P	**P**	**13 59 05.8**	**+0.3**
	comp=Z,331nm,1.2s,mb5.7						
ERM				LR	LR		
	comp=Z,20μm,22.0s,MS5.6						
SKAG	**Skagway**	**26.89**	**54**	*e*P	**P**	**13 59 15.0**	**+0.9**
	comp=Z,138nm,2.1s,mb5.1						
SKAG				LR	LR		
	comp=Z,41μm,21.0s,MS6.0						
SIT	**Sitka**	**27.10**	**59**	P	**P**	**13 59 15.1**	**-0.9**
SIT				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.0						
SIT	**Sitka**	**27.10**	**59**	P	**P**	**13 59 15.1**	**-1.0**
	comp=Z,41nm,0.9s,mb5.0						
YAK	**Yakutsk**	**28.41**	**311**	*c i*P	**P**	**13 59 27.1**	**-0.6**
YAK				*e**PP	pP	13 59 38.0	+1.8
YAK				*e*PPP		14 00 23.2	
YAK				*e*S	**S**	**14 04 07.2**	**-5.3**
YAK				*e*SSS		14 05 43.8	
YAK				*e*		14 10 08.4	
YAK				pmax	pmax		
	comp=Z,862nm,1.0s,mb6.3						
YAK				pmax	pmax		
	comp=E,555nm,1.1s						
YAK				pmax	pmax		
	comp=N,90nm,1.0s						
YAK				pmax	pmax		
	comp=Z,286nm,1.2s,mb5.8						
YAK				pmax	pmax		
	comp=N,168nm,1.0s						
YAK				pmax	pmax		
	comp=E,572nm,1.4s						
YAK				smax			
	comp=E,908nm,2.8s						
YAK				smax			
	comp=N,307nm,1.6s						
YAK				MLR	MLR		
	comp=Z,36μm,16.0s,MS6.1						
YAK				MLR	MLR		
	comp=E,31μm,18.0s,MS6.0						
YAK				MLR	MLR		
	comp=N,15μm,16.0s,MS6.0						
YAK	**Yakutsk**	**28.41**	**311⇑**	*i*P	**P**	**13 59 26.0**	**-1.7**
	comp=N,1μm,1.1s,mb6.4						
YAK				LR	LR		
	comp=Z,43μm,19.0s,MS6.1						
INK	**Inuvik**	**28.49**	**35**	P	**P**	**13 59 28.0**	**-0.4**
	comp=Z,37nm,0.6s,mb5.2,baz=252,slow=8.1,SNR=93						
INK				PcP	PcP	14 02 39.1	-0.2
	comp=Z,22nm,0.9s,baz=263,slow=1.2,SNR=4.3						
INK				ScP	ScP	14 06 18.4	+0.3
	comp=Z,21nm,1.1s,baz=98,slow=33,SNR=9.9						
INK				LR	LR	14 12 41.0	
	comp=Z,23μm,19.9s,MS5.8,baz=248,slow=40						
INK				P3KPbc		14 31 50.2	
	comp=Z,1.4nm,1.0s,baz=117,slow=2.3,SNR=3.1						
INK	**Inuvik**	**28.49**	**35**	P	**P**	**13 59 28.0**	**-0.3**
INK						14 02 39.1	
INK				pmax	pmax		
	comp=Z,37nm,0.6s						
INK				pmax	pmax		
	comp=Z,22nm,0.9s						
INK				pmax	pmax		
	comp=N,21nm,1.1s						
INK				MLR	MLR		
	comp=Z,23μm,20.0s						
INK	**Inuvik**	**28.49**	**35**	*e*P	**P**	**13 59 27.7**	**-0.7**
	comp=Z,270nm,0.9s,mb5.9						
DLBC	**Dease Lake**	**29.72**	**56**	P	**P**	**13 59 40.6**	**+1.2**
	comp=Z,7.3nm,0.5s,mb4.7,baz=279,slow=6.9,SNR=15						
DLBC				ScP	ScP	14 06 22.5	+0.3
	comp=Z,2.9nm,0.5s,baz=229,slow=1.7,SNR=4.3						
DLBC	**Dease Lake**	**29.72**	**56**	*e*P	**P**	**13 59 40.4**	**+0.9**
KLR	**Kul'dur**	**29.77**	**285**	*i*P	**P**	**13 59 35.5**	**-4.4**
KLR				*e*S	**S**	**14 04 37.5**	**+3.3**
KLR				pmax	pmax		
	comp=E,700nm,1.6s						
KLR				pmax	pmax		
	comp=Z,780nm,1.6s,mb6.2						
KLR				pmax	pmax		
	comp=Z,3μm,10.0s						
KLR				pmax	pmax		
	comp=E,2.0nm,10.0s						
TIXI	**Tiksi**	**30.06**	**331**	*e*P	**P**	**13 59 40.9**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,40μm,19.0s,MS6.1						
TIXI	**Tiksi**	**30.06**	**331**	*e*P	**P**	**13 59 40.9**	**-1.4**
	comp=Z,43nm,1.0s,mb5.1						
TIXI				LR	LR		
	comp=Z,40μm,19.0s,MS6.1						
CLNS	**Chul'man**	**31.45**	**302**	*c i*P	**P**	**13 59 53.4**	**-1.3**
CLNS				*e**PP	pP	14 00 03.0	-0.2
CLNS				*e*PPP		14 01 02.1	
CLNS				*e*S	**S**	**14 04 53.9**	**-6.5**
CLNS				*e*SSS		14 07 10.4	
CLNS				pmax	pmax		
	comp=N,80nm,1.3s						
CLNS				pmax	pmax		
	comp=Z,244nm,1.4s,mb5.8						
CLNS				pmax	pmax		
	comp=E,183nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,112nm,1.5s,mb5.5						
CLNS				pmax	pmax		
	comp=N,139nm,1.9s						
CLNS				pmax	pmax		
	comp=E,110nm,1.2s						
CLNS				smax			
	comp=N,1μm,18.3s						
CLNS				smax			
	comp=E,4μm,19.1s						
CLNS				MLR	MLR		
	comp=N,12μm,16.0s,MS6.0						
CLNS				MLR	MLR		
	comp=Z,31μm,17.0s,MS6.0						
CLNS				MLR	MLR		
	comp=E,26μm,18.0s,MS6.0						
NRGR	**Nerungri**	**31.59**	**301**	*i*P	**P**	**13 59 55.8**	**0.0**
NRGR				S	**S**	**14 04 58.8**	**-3.7**
NRGR				smax			
	comp=N,218nm,1.0s						
MJAR	**Matsushiro Arr**	**32.26**	**259**	P	**P**	**14 00 01.5**	**-0.4**
	comp=N,36nm,1.0s,mb5.1,baz=51,slow=7.9,SNR=50						
MJAR				PcP	PcP	14 02 49.7	0.0
	comp=N,13nm,1.2s,baz=350,slow=6.3,SNR=4.6						
MJAR				pPcP		14 03 02.0	
	comp=N,36nm,1.1s,baz=39,slow=0.8,SNR=9.4						
MJAR				ScP	ScP	14 06 31.7	+0.7
	comp=N,24nm,1.2s,baz=327,slow=1.2,SNR=12						
MJAR				LR	LR	14 10 56.8	
	comp=N,14μm,21.3s,MS5.6,baz=75,slow=32						
MJAR	**Matsushiro Arr**	**32.26**	**259**	P	**P**	**14 00 01.5**	**-0.5**
MJAR						14 02 49.7	
MJAR	**Matsushiro Arr**	**32.26**	**259**	P	**P**	**14 00 01.5**	**-0.4**
MJAR				PcP	PcP	14 02 49.7	0.0
MJAR				pPcP		14 03 02.0	
MJAR				ScP	ScP	14 06 31.7	+0.7
MJAR				LR	LR	14 10 56.8	
MAJO	**Matsushiro**	**32.26**	**259**	*e*P	**P**	**14 00 01.4**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,294nm,1.2s,mb6.0						
MAJO				MLR	MLR		
	comp=Z,15μm,21.0s,MS5.7						
MAJO	**Matsushiro**	**32.26**	**259**	*e*P	**P**	**14 00 01.4**	**-0.6**
	comp=Z,294nm,1.2s,mb6.0						
MAJO				LR	LR		
	comp=Z,15μm,21.0s,MS5.7						
MAT	**Matsushiro**	**32.26**	**259**	P	**P**	**14 00 01.5**	**-0.5**
MAT				S	**S**	**14 05 15.0**	**+1.6**
BBB	**Bella Bella**	**32.33**	**67**	P	**P**	**14 00 02.5**	**+0.1**
	comp=Z,40nm,1.1s,mb5.2,baz=317,slow=6.9,SNR=5.3						
BBB				LR	LR	14 10 46.7	
	comp=Z,9μm,21.9s,MS5.4,baz=290,slow=32						
BBB	**Bella Bella**	**32.33**	**67**	P	**P**	**14 00 02.5**	**+0.1**
BBB				LR	LR	14 10 46.7	
MDJ	**Mudanjiang**	**33.10**	**278**	P	**P**	**14 00 08.6**	**-0.7**
MDJ				PP	PP	14 01 23.0	-1.2
MDJ				PcP	PcP	14 02 52.9	+1.0
MDJ				ScP	ScP	14 06 35.5	+1.7
MDJ				PcS	PcS	14 06 38.1	+0.9
MDJ				pmax	pmax		
	comp=Z,94nm,1.1s,mb5.6						
MDJ				LR	LR		
	comp=E,16μm,22.3s						
MDJ				LR	LR		
	comp=Z,27μm,22.3s,MS5.9						
MDJ	**Mudanjiang**	**33.10**	**278**	*e*P	**P**	**14 00 07.5**	**-1.7**
	comp=Z,98nm,1.0s,mb5.7						
MDJ				LR	LR		
	comp=Z,29μm,21.0s,MS6.0						
WAKE	**Wake Island**	**33.25**	**201**	PFAKE		14 00 20.0	+9.3
WAKE				LR	LR		
	comp=Z,18μm,19.0s,MS5.8						
KIP	**Kipapa**	**34.80**	**140**	*e*P	**P**	**14 00 26.5**	**+2.3**
KIP	**Kipapa**	**34.80**	**140**	*e*P	**P**	**14 00 26.0**	**+1.8**
	comp=Z,290nm,1.4s,mb6.0						
KIP				LR	LR		
	comp=Z,16μm,20.0s,MS5.8						
JOHN	**Johnston Islan**	**35.62**	**161**	PFAKE		14 00 40.0	+8.7
JOHN				LR	LR		
	comp=Z,26μm,21.0s,MS6.0						
CN2	**Changchun**	**36.09**	**280**	*e*P	**P**	**14 00 34.6**	**-0.5**
CN2				*e*pP	pP	14 00 49.4	+5.7
CN2				*e*S	**S**	**14 06 12.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,15μm,18.0s,MS5.9						
CN2				LR	LR		
	comp=E,14μm,18.0s,MS5.9						
CN2				LR	LR		
	comp=Z,25μm,19.0s,MS6.0						
PGC	**Sidney**	**36.46**	**71**	*e*P	**P**	**14 00 39.0**	**+0.8**
	comp=Z,1.9nm,0.6s						
YKA	**Yellowknife Ar**	**36.46**	**46**	P	**P**	**14 00 37.3**	**-0.7**
	comp=Z,71nm,0.9s,mb5.6,baz=283,slow=8.6,SNR=192						
YKA				PcP	PcP	14 03 01.4	+0.1
	comp=Z,20nm,0.9s,baz=302,slow=2.7,SNR=4.9						
YKA				S	**S**	**14 06 19.9**	**+2.3**
	comp=Z,1.7nm,0.8s,baz=279,slow=16,SNR=3.0						
YKA				ScP	ScP	14 06 46.2	+0.6
	comp=Z,22nm,0.8s,baz=294,slow=3.2,SNR=17						
YKA				LR	LR	14 17 07.1	
	comp=Z,4μm,20.2s,MS5.2,baz=40,slow=39						
YKA				P3KPbc		14 31 21.3	
	comp=Z,0.2nm,0.6s,baz=104,slow=5.2,SNR=3.6						
YKA				PKPPKP		14 33 33.4	
	comp=Z,0.4nm,0.7s,baz=161,slow=2.3,SNR=3.7						
YKA	**Yellowknife Ar**	**36.46**	**46**	P	**P**	**14 00

comp=Z,307nm,1.3s
HIA MLR MLR
comp=Z,16µm,20.0s
HIA Hailar 36.94 291 ⇑*i*P **P 14 00 41.0 -1.3**
comp=Z,307nm,1.3s,mb6.0
HIA LR LR
comp=Z,16µm,20.0s,MS5.8
A05A Maple Falls 37.11 70 ⇓P **P 14 00 43.4 -0.4**
baz=37
A05A ⇓S **S 14 06 28.1 +0.2**
baz=37
POHA Pohakuloa 37.31 138 PFAKE 14 01 00.0 +14
POHA LR LR
comp=Z,24µm,20.0s,MS6.0
GNW Green Mountain 37.33 72 *e*P **P 14 00 46.3 +0.7**
comp=Z,123nm,1.1s,mb5.7
E03A Lebam 37.37 74 ⇓P **P 14 00 46.8 +0.9**
baz=37,SNR=12
E03A ⇑S **S 14 06 32.2 +0.4**
baz=37
JCW Jim Creek 37.57 71 *e*P **P 14 00 47.7 +0.1**
F03A Seaside 37.67 75 ⇑P **P 14 00 48.9 +0.4**
baz=38,SNR=6.8
B06A Marblemount 37.68 70 ⇓P **P 14 00 48.1 -0.5**
baz=38
RPW Rockport 37.70 70 *e*P **P 14 00 50.5 +1.8**
comp=Z,5.4nm,0.5s,mb4.5
HEBO Mount Hebo 37.91 76 *e*P **P 14 00 51.8 +1.3**
comp=Z,238nm,1.1s,mb5.8
D05A Enumclaw 38.01 72 ⇑P **P 14 00 52.5 +1.1**
baz=38,SNR=19
A07A Ashnola River, 38.09 69 ⇓P **P 14 00 52.0 0.0**
baz=38,SNR=42
KSRS Korea Array 38.12 269 P **P 14 00 52.6 +0.2**
comp=Z,104nm,0.9s,mb5.5,baz=59,slow=8.1,SNR=161
KSRS pPcP 14 03 19.4
comp=Z,38nm,0.9s,baz=64,slow=3.5,SNR=14
KSRS ScP ScP 14 06 53.8 +1.6
comp=Z,3.7nm,1.1s,baz=57,slow=4.2,SNR=4.4
KSRS LR LR 14 17 04.7
comp=Z,7µm,19.0s,MS5.5,baz=56,slow=37
KSRS Korea Array 38.12 269 P **P 14 00 52.7 +0.3**
KSRS pmax pmax
comp=Z,104nm,0.9s,mb5.6
KSRS pmax pmax
comp=Z,38nm,0.9s,mb5.1
KSRS pmax pmax
comp=N,4.0nm,1.1s
KSRS MLR MLR
comp=Z,7µm,19.0s,MS5.5
LON Longmire 38.33 73 *e*P **P 14 00 54.1 +0.1**
LON *e* 14 06 50.1
LON pmax pmax
comp=Z,115nm,1.1s,mb5.5
LON Longmire 38.33 73 *e*P **P 14 00 54.1 +0.1**
comp=Z,115nm,1.1s,mb5.5
LON *e* 14 06 50.1
F04A Amboy 38.36 74 ⇓P **P 14 00 55.0 +0.7**
baz=38,SNR=32
MTMW Mount Mitchell 38.44 74 P **P 14 00 56.0 +1.0**
COR Corvallis 38.51 77 *e*P **P 14 00 56.6 +1.1**
COR pmax pmax
comp=Z,425nm,1.2s,mb6.0
COR MLR MLR
comp=Z,17µm,22.0s,MS5.8
COR Corvallis 38.51 77 *e*P **P 14 00 56.5 +1.0**
comp=Z,425nm,1.2s,mb6.0
COR LR LR
comp=Z,17µm,22.0s,MS5.8
G04A Mulino 38.69 75 ⇓P **P 14 00 57.7 +0.6**
baz=39,SNR=12
ETW Entiat 38.80 71 *e*P **P 14 00 57.9 0.0**
comp=Z,134nm,1.2s,mb5.5
ETW *e*S **S 14 06 53.4 +0.1**
INCN Inchon 38.92 270 ⇑*e*P **P 14 00 58.8 -0.3**
comp=Z,451nm,1.1s,mb6.1
INCN LR LR
comp=Z,5µm,20.0s,MS5.3
INCN Inchon 38.92 270 P **P 14 01 00.9 +1.8**
SNR=22
INCN P 14 01 00.9
SNR=22
B08A Colville Reser 39.03 69 ⇓P **P 14 00 59.8 -0.1**
baz=39,SNR=28
HOOD Mount Hood Mea 39.13 75 *e*P **P 14 01 01.6 +0.8**
comp=Z,1µm,1.4s,mb6.4
H04A Detroit Lake 39.14 76 ⇑P **P 14 01 01.6 +0.7**
baz=39,SNR=60
VFP Flag Point 39.25 74 P **P 14 01 02.8 +1.1**
CIT Chita 39.29 298 *e*P **P 14 01 01.9 -0.2**
CIT *e* 14 01 17.4
CIT pmax pmax
comp=Z,1µm,1.6s,mb6.4
E07A Sunnyside 39.59 72 ⇓P **P 14 01 05.0 +0.4**
baz=40,SNR=8.6
B09A Rice 39.69 68 ⇑P **P 14 01 05.5 +0.1**
baz=40,SNR=24
A10A Northport 39.77 67 ⇑P **P 14 01 05.0 -1.0**
baz=40
HUMO Hull Mountain 39.77 79 *e*P **P 14 01 07.2 +1.1**
comp=Z,114nm,1.1s,mb5.5
HUMO LR LR
comp=Z,21µm,22.0s,MS5.9
G06A Carlson Farm, 39.79 74 ⇓P **P 14 01 06.8 +0.5**
baz=40,SNR=22
RSW Rattlesnake Hi 39.83 72 *e*P **P 14 01 07.1 +0.5**
comp=Z,237nm,1.1s,mb5.8
OD2 Odessa Site #2 39.86 70 *e*P **P 14 01 07.3 +0.5**
comp=Z,100nm,1.2s,mb5.4
HAWA Hanford 39.87 72 *e*P **P 14 01 07.1 +0.2**
comp=Z,414nm,1.2s,mb6.0
HAWA LR LR
comp=Z,11µm,20.0s,MS5.7
D08A Wollman Farm, 39.90 71 ⇓P **P 14 01 07.2 0.0**
baz=40,SNR=9.0
C09A Chrisman Ranch 39.92 69 ⇓P **P 14 01 07.0 -0.3**
baz=40,SNR=12
E08A Dider Farm, El 40.10 72 ⇓P **P 14 01 09.0 +0.2**
baz=40,SNR=5.4
EDM Edmonton 40.22 60 *e*P **P 14 01 08.7 -1.1**
D09A Jones Farm, Ri 40.26 70 ⇓P **P 14 01 09.9 -0.2**
baz=40,SNR=5.5
B10A Chitwood Farm, 40.29 68 ⇑P **P 14 01 09.9 -0.4**
baz=40
NEW Newport 40.37 68 *e*P **P 14 01 10.3 -0.7**
NEW pmax pmax
comp=Z,105nm,0.8s
NEW MLR MLR
comp=Z,14µm,19.0s
NEW Newport 40.37 68 *e*P **P 14 01 10.2 -0.8**
comp=Z,105nm,0.8s,mb5.6
NEW LR LR
comp=Z,14µm,19.0s,MS5.8
YBH Yreka Blue Hor 40.41 80 *e*P **P 14 01 12.9 +1.5**
YBH pmax pmax
comp=Z,220nm,1.0s
YBH MLR MLR
comp=Z,21µm,22.0s
YBH Yreka Blue Hor 40.41 80 *e*P **P 14 01 12.9 +1.4**
comp=Z,220nm,1.0s,mb5.8
YBH LR LR
comp=Z,21µm,22.0s,MS5.9
A11A Hall Mountain, 40.47 67 ⇓P **P 14 01 12.1 +0.2**
baz=40,SNR=41
C10A Spilker Farm, 40.48 69 ⇑P **P 14 01 10.9 -1.0**
baz=40
RES Resolute Bay 40.54 24 P **P 14 01 12.1 -0.1**
comp=Z,134nm,1.1s,mb5.5,baz=272,slow=10.0,SNR=114
RES PcP PcP 14 03 14.0 +0.1
comp=Z,64nm,0.9s,baz=243,slow=2.8,SNR=4.0
RES ScP ScP 14 07 01.7 +0.8
comp=Z,44nm,1.1s,baz=283,slow=2.5,SNR=7.0
RES Resolute Bay 40.54 24 P **P 14 01 12.1 -0.1**
RES 14 03 14.0
RES pmax pmax
comp=Z,134nm,1.1s,mb5.5
RES pmax pmax
comp=Z,64nm,0.9s,mb5.2
RES pmax pmax
comp=N,44nm,1.1s
RES Resolute Bay 40.54 24 *e*P **P 14 01 11.9 -0.2**
comp=N,219nm,1.0s,mb5.7
F08A Pendleton 40.62 72 ⇑P **P 14 01 13.6 +0.4**
baz=40,SNR=7.0
E09A Wood Farm, Sta 40.63 71 ⇓P **P 14 01 12.9 -0.4**
baz=40
B11A Sandpoint 40.72 68 ⇑P **P 14 01 13.4 -0.6**
baz=41,SNR=16
G08A Pilot Rock 40.78 73 ⇓P **P 14 01 14.4 -0.1**
baz=41,SNR=35
D10A Wagner Farm, O 40.88 70 ⇑P **P 14 01 14.7 -0.6**
baz=41,SNR=17
LNOR Lincton Mounta 40.88 72 *e*P **P 14 01 16.0 +0.7**
LNOR pmax pmax
comp=Z,55nm,1.1s,mb5.1
LNOR Lincton Mounta 40.88 72 *e*P **P 14 01 16.0 +0.7**
comp=Z,55nm,1.1s,mb5.1
A12A Yaak River Ran 40.90 66 ⇑P **P 14 01 14.8 -0.5**
baz=41
K05A Summer Lake 40.98 78 ⇑P **P 14 01 17.6 +1.5**
baz=41,SNR=51
I07A Izee 41.09 75 ⇓P **P 14 01 17.7 +0.7**
baz=41,SNR=168
B12A Libby 41.16 67 ⇑P **P 14 01 17.1 -0.4**
baz=41,SNR=6.1
WDC Whiskeytown Da 41.17 81 *e*P **P 14 01 18.6 +0.9**
WDC pmax pmax
comp=Z,175nm,1.1s,mb5.6
WDC MLR MLR
comp=Z,10µm,20.0s,MS5.7
WDC Whiskeytown Da 41.17 81 *e*P **P 14 01 18.6 +0.9**
comp=Z,176nm,1.1s,mb5.6
WDC LR LR
comp=Z,10µm,20.0s,MS5.7
F09A S2 Ranch, Elgi 41.19 72 ⇓P **P 14 01 18.1 +0.3**
baz=41,SNR=13
DL2 Dalian 41.20 276 ⇓P **P 14 01 16.9 -1.1**
DL2 PP PP 14 02 55.1 +1.9
DL2 S **S 14 07 25.3 -4.2**
DL2 SS SS 14 10 22.8 -10
DL2 pmax pmax
comp=Z,130nm,1.0s,mb5.5
DL2 pmax pmax
comp=Z,1µm,10.3s
DL2 LR LR
comp=N,5µm,16.7s
DL2 LR LR
comp=Z,7µm,15.7s,MS5.6
E10A Myers Farm, Un 41.26 70 ⇓P **P 14 01 18.1 -0.4**
baz=41,SNR=18
H08A Prairie City 41.36 74 ⇑P **P 14 01 19.5 +0.3**
baz=41,SNR=68
D11A Klaveano Farm, 41.43 69 ⇓P **P 14 01 18.6 -1.2**
baz=41,SNR=17
F10A Beach Ranch, E 41.46 71 ⇑P **P 14 01 20.1 +0.1**
baz=41,SNR=20
G09A Cove 41.49 72 ⇓P **P 14 01 20.4 +0.1**
baz=41,SNR=97
C12B Naegeli Ranch, 41.60 68 ⇑P **P 14 01 20.8 -0.4**
baz=42,SNR=28
HOPS Hopland 41.77 84 *e*P **P 14 01 23.1 +0.4**
comp=Z,264nm,1.3s,mb5.7
HOPS LR LR
comp=Z,22µm,20.0s,MS6.0
MOD Modoc 41.80 78 *e*P **P 14 01 23.3 +0.4**
comp=Z,290nm,1.2s,mb5.8
MOD *e*ScP ScP 14 07 06.6 +0.1
MOD LR LR
comp=Z,21µm,21.0s,MS6.0
WALA Waterton Lakes 41.84 65 *e*P **P 14 01 22.1 -1.0**
comp=Z,9.6nm,1.1s,mb4.3
B13A Whitefish 41.85 67 ⇓P **P 14 01 22.9 -0.4**
baz=42,SNR=25
E11A Bogner Ranch, 41.86 70 ⇓P **P 14 01 22.5 -0.8**
baz=42,SNR=17
G10A Bishop Farm, J 41.88 72 ⇑P **P 14 01 23.4 -0.1**
baz=42,SNR=146
H09A Durkee 41.89 73 ⇑P **P 14 01 24.1 +0.5**
baz=42,SNR=29
BSMT Bassoo Peak 41.93 67 *e*P **P 14 01 23.4 -0.5**
comp=Z,130nm,0.8s,mb5.6
BSMT *e*ScP ScP 14 07 06.8 -0.1
F11A Grangeville 42.14 71 ⇑P **P 14 01 25.0 -0.6**
baz=42,SNR=19
C13A Hot Springs 42.14 68 ⇑P **P 14 01 25.0 -0.6**
baz=42,SNR=31
A14A Double T Ranch 42.16 65 ⇓P **P 14 01 25.1 -0.6**
baz=42,SNR=86
E12A Beaver Dam Sad 42.21 70 ⇓P **P 14 01 25.7 -0.5**
baz=42,SNR=31
I09A Lost Marbles R 42.22 74 ⇓P **P 14 01 26.5 +0.2**
baz=42,SNR=22
JTMT Jette 42.28 67 *e*P **P 14 01 26.1 -0.6**
comp=Z,82nm,1.2s,mb5.2
G11A Walters Elk Ra 42.33 71 ⇑P **P 14 01 26.5 -0.7**
baz=42,SNR=54
YBMT Yellow Bay 42.38 67 *e*P **P 14 01 26.9 -0.6**
comp=Z,63nm,1.0s,mb5.2
MCCM Marconi Confer 42.40 84 *e*P **P 14 01 30.6 +2.9**
comp=Z,125nm,1.2s,mb5.4
MCCM LR LR
comp=Z,19µm,21.0s,MS6.0
H10A Noah's Angus R 42.48 73 ⇑P **P 14 01 28.5 +0.1**
baz=42,SNR=158
D13A Huson 42.51 68 ⇓P **P 14 01 27.7 -0.9**
baz=42,SNR=23
WVOR Wild Horse Val 42.52 76 *e*P **P 14 01 29.4 +0.6**
WVOR pmax pmax
comp=Z,138nm,0.9s,mb5.7
WVOR MLR MLR
comp=Z,19µm,22.0s,MS5.9
WVOR Wild Horse Val 42.52 76 *e*P **P 14 01 29.4 +0.6**
comp=Z,138nm,0.9s,mb5.7
WVOR LR LR
comp=Z,19µm,22.0s,MS5.9
A15A Johnson Ranch, 42.55 65 ⇑P **P 14 01 27.4 -1.5**
baz=42,SNR=50
J09A Fry Pan Ranch, 42.55 75 ⇑P **P 14 01 29.7 +0.7**
baz=42,SNR=148
SWMT Swartz Lake 42.56 68 *e*P **P 14 01 28.9 -0.1**
comp=Z,66nm,1.0s,mb5.3
C14A Swan Lake 42.58 67 ⇑P **P 14 01 28.6 -0.6**
baz=42
I10A Payette 42.72 73 ⇓P **P 14 01 30.9 +0.6**
baz=43,SNR=28
F12A Elk City 42.74 70 ⇓P **P 14 01 30.0 -0.5**
baz=43,SNR=120
H11A Donnelly 42.86 72 ⇓P **P 14 01 31.2 -0.3**
baz=43,SNR=57
BEKR Beckwourth 42.94 81 ⇓P **P 14 01 32.0 -0.2**
baz=43,SNR=36
MSO Missoula 42.95 68 *e*P **P 14 01 31.2 -1.0**
comp=Z,117nm,1.0s,mb5.6
MSO *e*ScP ScP 14 07 10.7 -0.3
MSO LR LR
comp=Z,7µm,20.0s,MS5.5
B15A Bradely Ranch, 42.98 66 ⇓P **P 14 01 31.3 -1.2**
baz=43,SNR=109
SLMT Seeley Lake 43.00 68 *e*P **P 14 01 32.6 0.0**
comp=Z,151nm,1.1s,mb5.6
SLMT *e*ScP ScP 14 07 11.2 +0.1
E13A Victor 43.01 69 ⇓P **P 14 01 31.8 -0.9**
baz=43,SNR=14
ALE Alert 43.07 10 P **P 14 01 33.0 +0.2**
comp=Z,2µm,1.0s,mb6.8,SNR=82
D14A Greenough 43.07 68 ⇓P **P 14 01 32.4 -0.8**
baz=43,SNR=71
J10A Berg Farm, Mel 43.10 74 ⇓P **P 14 01 33.5 0.0**
baz=43,SNR=13
A16A West Butte Ran 43.21 64 ⇓P **P 14 01 32.4 -1.8**
baz=43,SNR=51
C15A Salmond Ranch, 43.23 66 ⇓P **P 14 01 34.0 -0.5**
baz=43,SNR=166
F13A Darby 43.27 70 ⇓P **P 14 01 34.3 -0.4**
baz=43,SNR=38
CHMT Chamberlain Mo 43.31 68 *e*P **P 14 01 34.8 -0.3**
comp=Z,20nm,0.6s,mb5.0
I11A Placerville 43.33 73 ⇓P **P 14 01 35.4 +0.1**
baz=43,SNR=60
K10A MacKenzie Ranc 43.41 75 ⇑P **P 14 01 36.2 +0.3**
baz=43,SNR=177
B16A M & M Farms, S 43.42 65 ⇑P **P 14 01 34.4 -1.6**
baz=43,SNR=46
E14A Clinton 43.43 69 ⇓P **P 14 01 35.4 -0.7**
baz=43,SNR=26
H12A Diamond D Ranc 43.63 72 ⇑P **P 14 01 37.2 -0.5**
baz=44,SNR=48
WCN Washoe City 43.65 81 ⇑P **P 14 01 38.7 +0.8**
baz=44,SNR=20
D15A Lincoln 43.67 67 ⇑P **P 14 01 36.8 -1.2**
baz=44,SNR=55
MFID Camas Ranch 43.68 74 ⇑P **P 14 01 38.1 0.0**
baz=44,SNR=80
G13A Cobalt 43.71 71 ⇓P **P 14 01 38.1 -0.2**
baz=44,SNR=79
C16A Fuhringer Ranc 43.72 66 ⇑P **P 14 01 37.5 -0.9**
baz=44,SNR=57
A17A Triple J Farms 43.72 64 ⇓P **P 14 01 36.9 -1.4**
baz=44,SNR=74
F14A Wisdom 43.83 69 ⇑P **P 14 01 39.0 -0.2**
baz=44,SNR=11
I12A Atlanta 43.89 73 ⇑P **P 14 01 40.0 +0.2**
baz=44,SNR=145
K11A Parker Ranch, 43.92 74 ⇓P **P 14 01 40.5 +0.4**
baz=44,SNR=48
BJI Beijing 43.93 281 P **P 14 01 39.8 -0.3**
BJI S **S 14 08 00.1 -9.5**
BJI pmax pmax
comp=Z,120nm,1.2s,mb5.5
BJI pmax pmax
comp=Z,3µm,7.4s
BJI LR LR
comp=N,15µm,21.1s,MS6.0
BJI LR LR
comp=E,15µm,19.8s,MS6.0
BJI LR LR
comp=Z,14µm,23.3s,MS5.8
E15A Deer Lodge 43.93 68 ⇑P **P 14 01 39.2 -0.9**
baz=44,SNR=45
BJT Baijiatuau 43.94 281 ⇑*e*P **P 14 01 39.6 -0.7**
BJT pmax pmax
comp=Z,120nm,0.9s
BJT MLR MLR
comp=Z,19µm,21.0s
BJT Baijiatuau 43.94 281 ⇑*e*P **P 14 01 39.6 -0.7**
comp=Z,120nm,0.9s,mb5.6
BJT LR LR
comp=Z,19µm,21.0s,MS6.0
H13A Challis 43.98 71 ⇓P **P 14 01 40.3 -0.3**
baz=44,SNR=72
B17A L&G Farms, Che 44.00 65 ⇓P **P 14 01 39.6 -1.0**
baz=44,SNR=52
CMB Columbia Colle 44.02 83 *e*P **P 14 01 41.3 +0.4**
CMB pmax pmax
comp=Z,142nm,1.1s,mb5.6
CMB MLR MLR
comp=Z,20µm,22.0s,MS6.0
CMB Columbia Colle 44.02 83 *e*P **P 14 01 41.3 +0.4**
comp=Z,142nm,1.1s,mb5.6
CMB ScP ScP 14 07 15.3 -0.2
CMB LR LR
comp=Z,20µm,22.0s,MS6.0
L10A Juniper Basin 44.05 76 ⇑P **P 14 01 41.5 +0.4**
baz=44,SNR=125
G14A Jackson 44.08 70 ⇓P **P 14 01 40.3 -1.1**
baz=44
SAO San Andreas Ge 44.15 85 *e*P **P 14 01 41.4 -0.5**
SAO pmax pmax
comp=Z,119nm,1.3s,mb5.5
SAO MLR MLR
comp=Z,13µm,19.0s,MS5.9
SAO San Andreas Ge 44.15 85 *e*P **P 14 01 41.4 -0.6**
comp=Z,119nm,1.3s,mb5.5
SAO LR LR
comp=Z,13µm,19.0s,MS5.9
J12A Stokes Ranch, 44.21 73 ⇓P **P 14 01 42.5 +0.1**
baz=44,SNR=204
A18A Metzger Ranch, 44.22 64 ⇑P **P 14 01 40.6 -1.7**
baz=44,SNR=11
D16A Dana Ranch, Ca 44.24 67 ⇑P **P 14 01 41.5 -1.1**
baz=44,SNR=33
HRY Holter Researc 44.24 67 *e*P **P 14 01 41.8 -0.8**
comp=Z,175nm,0.8s,mb5.8
HRY *e*ScP ScP 14 07 16.5 +0.3
IRK Irkutsk 44.26 302 ⇑*i*P **P 14 01 41.7 -0.9**
IRK *e* 14 03 27.4
IRK pmax pmax
comp=Z,467nm,1.7s,mb5.9
M10A I.L. Ranch, Tu 44.33 76 ⇑P **P 14 01 43.9 +0.5**
baz=44,SNR=95
F15A Butte 44.33 69 ⇑P **P 14 01 42.6 -0.7**
baz=44,SNR=20
LRM Limekiln Ridge 44.36 69 *e*P **P 14 01 43.9 +0.3**
comp=Z,592nm,1.4s,mb6.1
LRM *e*ScP ScP 14 07 17.6 +0.9
C17A Wharram Farm, 44.37 66 ⇑P **P 14 01 42.3 -1.3**
baz=44,SNR=54
I13A Wildhorse Cree 44.43 72 ⇓P **P 14 01 44.0 -0.1**
baz=44,SNR=139
E16A East Helena 44.43 68 ⇓P **P 14 01 43.4 -0.7**
baz=44,SNR=46
L11A Cat Creek Ranc 44.43 75 ⇓P **P 14 01 44.6 +0.4**
baz=44,SNR=216
HLID Hailey 44.45 73 ⇓P **P 14 01 44.1 -0.1**
baz=44,SNR=254
HLID Hailey 44.45 73 *e*P **P 14 01 44.1 -0.1**
comp=Z,239nm,1.1s,mb5.8
HLID *e*ScP ScP 14 07 17.4 +0.3
HLID LR LR
comp=Z,10µm,19.0s,MS5.8
H14A Leadore 44.48 71 ⇑P **P 14 01 44.5 0.0**
baz=44,SNR=50
DLMT Dillon 44.53 69 *e*P **P 14 01 44.6 -0.3**
comp=Z,146nm,1.4s,mb5.6
DLMT *e*ScP ScP 14 07 18.5 +1.0
B18A Beardsley Farm 44.53 64 ⇑P **P 14 01 44.4 -0.4**
baz=44,SNR=20
BMN Battle Mountai 44.55 78 *e*P **P 14 01 45.5 +0.4**
BMN pmax pmax
comp=Z,235nm,1.1s,mb5.9
BMN MLR MLR
comp=Z,17µm,21.0s,MS5.9
BMN Battle Mountai 44.55 78 *e*P **P 14 01 45.5 +0.4**
comp=Z,235nm,1.1s,mb5.9
BMN LR LR
comp=Z,17µm,21.0s,MS5.9
D17A Six Diamond Ra 44.67 66 ⇑P **P 14 01 45.4 -0.6**
baz=44,SNR=29
MCMT McKenzie Canyo 44.67 70 *e*P **P 14 01 46.1 0.0**
comp=Z,32nm,0.6s,mb5.3
MCMT ScP ScP 14 07 18.9 +0.9
K12A Draper Farm, C 44.68 74 ⇑P **P 14 01 46.8 +0.7**
baz=45,SNR=84
J13A Cove Ranch, Pi 44.69 73 ⇑P **P 14 01 46.4 +0.2**
baz=45,SNR=175
G15A Dillon 44.70 70 ⇓P **P 14 01 46.1 -0.2**
baz=45,SNR=29
EGMT Eagleton 44.74 65 ⇓P **P 14 01 45.4 -1.1**
baz=45,SNR=31
EGMT Eagleton 44.74 65 *e*P **P 14 01 45.0 -1.5**
comp=Z,98nm,0.6s,mb5.8
EGMT LR LR
comp=Z,13µm,19.0s,MS5.9
N10A Dunphy 44.82 77 ⇓P **P 14 01 47.2 -0.1**
baz=45
I14A Mackay 44.82 72 ⇑P **P 14 01 47.5 +0.3**
baz=45,SNR=45
M11A Holland Ranch, 44.84 76 ⇓P **P 14 01 48.1 +0.7**
baz=45,SNR=115
F16A Kennard Place, 44.87 68 ⇓P **P 14 01 46.9 -0.6**
baz=45,SNR=23
TLY Talaya 44.88 301 P **P 14 01 47.3 -0.3**
comp=Z,1µm,1.1s,mb6.6,SNR=58
TLY Talaya 44.88 301 *e*P **P 14 01 47.2 -0.4**
TLY pmax pmax
comp=Z,232nm,1.1s,mb5.9
TLY MLR MLR
comp=Z,52µm,19.0s,MS6.5
TLY Talaya 44.88 301 *e*P **P 14 01 47.2 -0.4**
comp=Z,232nm,1.1s,mb5.9
TLY LR LR
comp=Z,52µm,19.0s,MS6.5
TLY Talaya 44.88 301 P **P 14 01 47.8 +0.2**
SNR=140
TLY P 14 01 47.8
SNR=140
L12A House Creek Ra 44.89 75 ⇓P **P 14 01 48.3 +0.5**
baz=45,SNR=270
H15A Lima 44.91 70 ⇑P **P 14 01 47.8 -0.1**
baz=45,SNR=45
BOZ Bozeman (W) 44.94 69 ⇓P **P 14 01 47.7 -0.5**
baz=45,SNR=110
BOZ Bozeman (W) 44.94 69 *e*P **P 14 01 47.7 -0.5**
BOZ pmax pmax
comp=Z,84nm,0.8s,mb5.6
BOZ MLR MLR
comp=Z,7µm,20.0s,MS5.6
BOZ Bozeman (W) 44.94 69 *e*P **P 14 01 47.7 -0.5**
comp=Z,84nm,0.8s,mb5.6
BOZ LR LR
comp=Z,7µm,20.0s,MS5.6
E17A Martinsdale 44.94 67 ⇓P **P 14 01 47.7 -0.4**
baz=45,SNR=50
ULN Ulaanbaatar 44.98 295 ⇑*i*P **P 14 01 48.5 +0.1**

ULN pmax pmax
comp=Z,198nm,1.0s,mb5.9
ULN MLR MLR
comp=Z,26µm,19.0s,MS6.2
ULN Ulaanbaatar 44.98 295 ⇑*i*P **P 14 01 48.5 +0.1**
comp=Z,198nm,1.0s,mb5.9
ULN LR LR
comp=Z,26µm,19.0s,MS6.2
ULN Ulaanbaatar 44.98 295 P **P 14 01 48.8 +0.4**
SNR=102
ULN P 14 01 48.8
SNR=102
G16A Moss Hill, Enn 45.07 69 ⇓P **P 14 01 47.1 -2.0**
baz=45,SNR=61
O10A Cortez Mining, 45.07 78 ⇑P **P 14 01 49.2 -0.1**
baz=45,SNR=44
NVAR Mina Array Bea 45.08 81 P **P 14 01 50.1 +0.7**
comp=Z,30nm,0.8s,mb5.2,baz=294,slow=6.8,SNR=73
NVAR ScP ScP 14 07 21.0 +1.1
comp=Z,12nm,1.3s,baz=266,slow=2.6,SNR=4.6
NVAR PKPPKP 14 33 22.8
comp=Z,1.6nm,0.8s,baz=116,slow=3.5,SNR=4.1
D18A Linhart Farms, 45.15 66 ⇑P **P 14 01 47.9 -2.0**
baz=45,SNR=23
N11A Elko Archery C 45.23 77 ⇑P **P 14 01 51.4 +0.8**
baz=45,SNR=6.9
MLAC Mammoth Lakes 45.24 82 ⇓P **P 14 01 51.5 +0.9**
baz=45
I15A Monteview 45.35 71 ⇑P **P 14 01 51.0 -0.5**
baz=45,SNR=29
F17A Fitzpatrick Pl 45.36 68 ⇑P **P 14 01 50.0 -1.5**
baz=45,SNR=38
SONM Songino Array 45.37 296 P **P 14 01 51.8 +0.3**
comp=Z,118nm,0.9s,mb5.7,baz=60,slow=7.7,SNR=305
SONM PcP PcP 14 03 30.4 -0.1
comp=Z,34nm,1.0s,baz=97,slow=2.5,SNR=4.2
SONM ScP ScP 14 07 21.6 +0.8
comp=Z,20nm,1.2s,baz=99,slow=2.8,SNR=7.4
SONM LR LR 14 23 15.9
comp=Z,23µm,18.0s,MS6.2,baz=54,slow=39
SONM Songino Array 45.37 296 P **P 14 01 51.8 +0.3**
SONM 14 03 30.4
M12A Wells 45.38 75 ⇑P **P 14 01 52.1 +0.4**
baz=45,SNR=144
E18A Harlowton 45.43 67 ⇑P **P 14 01 51.6 -0.4**
baz=45,SNR=60
FFC Flin Flon 45.48 53 P **P 14 01 51.3 -1.0**
comp=Z,218nm,0.5s,mb6.2,SNR=8.1
FFC Flin Flon 45.48 53 *e*P **P 14 01 51.2 -1.1**
FFC *e* 14 03 31.7
FFC pmax pmax
comp=Z,40nm,1.0s,mb5.2
FFC MLR MLR
comp=Z,24µm,20.0s,MS6.1
FFC Flin Flon 45.48 53 *e*P **P 14 01 51.1 -1.1**
comp=Z,40nm,1.0s,mb5.2
FFC *e*PcP PcP 14 03 31.6 +0.9
FFC *e*ScP ScP 14 07 18.9 -2.3
FFC LR LR
comp=Z,24µm,20.0s,MS6.1
P10A Eureka 45.50 78 ⇓P **P 14 01 53.0 +0.3**
baz=45,SNR=17
QLMT Earthquake Lak 45.51 69 *e*P **P 14 01 53.2 +0.6**
comp=Z,46nm,0.9s,mb5.4
L13A Double Diamond 45.58 74 ⇑P **P 14 01 54.2 +0.9**
baz=45,SNR=35
ELK Elko 45.58 76 *e*P **P 14 01 54.0 +0.7**
ELK pmax pmax
comp=Z,258nm,1.0s
ELK MLR MLR
comp=Z,14µm,19.0s
ELK Elko 45.58 76 *e*P **P 14 01 54.0 +0.7**
comp=Z,258nm,1.0s,mb6.1
ELK LR LR
comp=Z,14µm,19.0s,MS5.9
N12A Clover Valley, 45.64 76 ⇑P **P 14 01 54.4 +0.6**
baz=46,SNR=122
N12A Clover Valley, 45.64 76 *e*P **P 14 01 54.3 +0.5**
comp=Z,440nm,1.1s,mb6.3
G17A Pierce Place, 45.64 68 ⇓P **P 14 01 53.0 -0.8**
baz=46,SNR=14
TIA Tai'an 45.68 276 ⇑P **P 14 01 53.6 -0.5**
TIA S **S 14 08 37.9 +2.8**
TIA pmax pmax
comp=Z,270nm,1.0s,mb6.1
TIA pmax pmax
comp=Z,3µm,6.0s
TIA LR LR
comp=N,3µm,16.0s,MS5.5
TIA LR LR
comp=E,3µm,16.0s,MS5.5
O11A Cowboy Ranch, 45.69 77 ⇑P **P 14 01 54.1 -0.1**
baz=46,SNR=58
H16A Russell Place, 45.69 69 ⇑P **P 14 01 53.4 -0.7**
baz=46,SNR=105
J15A Blackfoot 45.73 72 ⇓P **P 14 01 55.5 +1.0**
baz=46,SNR=87
ZAK Zakamensk 45.75 300 *e*P **P 14 01 54.8 +0.3**
ZAK *e* 14 03 33.4
ZAK pmax pmax
comp=Z,294nm,1.4s,mb6.0
K14A Jones Ranch, D 45.77 73 ⇓P **P 14 01 55.1 +0.3**
baz=46,SNR=37
RCTC Rector, Farmer 45.81 84 ⇑P **P 14 01 55.7 +0.6**
baz=46
M13A Montello 45.87 75 ⇓P **P 14 01 56.2 +0.6**
baz=46,SNR=94
M13A Montello 45.87 75 *e*P **P 14 01 56.1 +0.5**
comp=Z,182nm,1.0s,mb6.0
YMR Madison River 45.88 69 *e*P **P 14 01 55.5 -0.1**
comp=Z,262nm,1.5s,mb5.9
F18A Big Timber 45.91 67 ⇑P **P 14 01 55.4 -0.4**
baz=46,SNR=36
TPH Tonopah 45.97 81 PFAKE 14 02 10.0 +14
TPH LR LR
comp=Z,15µm,20.0s,MS5.9
SMMC Simmler 45.97 86 ⇓P **P 14 01 56.5 +0.1**
baz=46
P11A Circle Ranch, 45.98 78 ⇓P **P 14 01 56.6 +0.1**
baz=46,SNR=39
TIN Tinemaha 45.98 82 ⇑P **P 14 01 56.8 +0.3**
baz=46
GCMT Greycliff 46.00 67 *e*P **P 14 01 56.2 -0.4**
comp=Z,75nm,1.3s,mb5.5
YNR Norris Junctio 46.02 69 *e*P **P 14 01 58.3 +1.6**
comp=Z,229nm,1.3s,mb6.0
I16A Newdale 46.02 71 ⇑P **P 14 01 57.1 +0.4**
baz=46,SNR=20
Q10A Clear Creek Ra 46.02 79 ⇓P **P 14 01 56.6 -0.2**
baz=46,SNR=130
L14A Malta 46.03 74 ⇓P **P 14 01 57.6 +0.7**
baz=46,SNR=81
YFT Old Faithful 46.08 69 *e*P **P 14 01 58.2 +1.1**
comp=Z,125nm,0.9s,mb5.8
YFT *e*ScP ScP 14 07 23.4 -0.5
K15A Arbon 46.08 72 ⇑P **P 14 01 57.7 +0.5**
baz=46,SNR=141
N13A Wendover, West 46.14 76 ⇑P **P 14 01 58.2 +0.4**
baz=46,SNR=36
N13A Wendover, West 46.14 76 *e*P **P 14 01 58.3 +0.6**
comp=Z,154nm,0.8s,mb6.0
O12A Currie 46.16 77 ⇓P **P 14 01 58.2 +0.3**
baz=46,SNR=158
VES Vestal, Richgr 46.21 84 ⇓P **P 14 01 58.5 +0.2**
baz=46,SNR=20
H17A Grant Village 46.26 69 ⇓P **P 14 01 59.2 +0.6**
baz=46,SNR=109
LKWY Lake 46.27 69 *e*P **P 14 01 59.5 +0.8**
LKWY pmax pmax
comp=Z,133nm,1.0s,mb5.8
LKWY MLR MLR
comp=Z,13µm,20.0s,MS5.9
LKWY Lake 46.27 69 *e*P **P 14 01 59.5 +0.9**
comp=Z,133nm,1.0s,mb5.8
LKWY *e*ScP ScP 14 07 26.1 +1.5
LKWY LR LR
comp=Z,13µm,20.0s,MS5.9
HHC Hu-ho-hao-te 46.28 285 ⇑P **P 14 01 59.6 +0.8**
HHC pP pP 14 02 07.3 -0.3
HHC sP sP 14 02 10.4 -0.7
HHC PcP PcP 14 03 35.8 +2.0
HHC PP PP 14 03 47.9 +0.5
HHC ScP ScP 14 07 25.8 +1.0
HHC S **S 14 08 47.1 +3.5**
HHC sS sS 14 08 57.0 -1.0
HHC ScS ScS 14 11 51.4 -0.2
HHC pmax pmax
comp=Z,3µm,5.9s
HHC LR LR
comp=N,16µm,16.5s,MS6.1
HHC LR LR
comp=E,10µm,15.0s,MS6.1
HHC LR LR
comp=Z,8µm,16.7s,MS5.8
J16A Bone 46.29 71 ⇑P **P 14 01 59.1 +0.3**
baz=46,SNR=73
MOY Mondy 46.30 303 *e*P **P 14 01 58.6 -0.2**
MOY pmax pmax
comp=Z,499nm,2.1s,mb6.1
IMW Indian Meadow 46.33 70 *e*P **P 14 01 59.4 +0.2**
comp=Z,57nm,0.9s,mb5.5
G18A Lazy EL Ranch, 46.33 68 ⇑P **P 14 01 58.0 -1.2**
baz=46,SNR=14
PKM Peak Mountain 46.35 86 ⇑P **P 14 01 58.8 -0.6**
baz=46,SNR=12
DCID1 Drake Creek 46.36 71 P **P 14 02 00.9 +1.5**
comp=Z,109nm,1.0s,mb5.7
R10A Warm Springs 46.41 80 ⇓P **P 14 01 59.9 0.0**
baz=46,SNR=25
RRI2 Red Ridge 46.42 71 *e*P **P 14 02 00.3 +0.4**
comp=Z,70nm,0.6s,mb5.8
GUMO Guam 46.43 228 LR LR 14 19 28.0
comp=Z,7µm,20.1s,MS5.6,baz=198,slow=33
GUMO Guam 46.43 228 PFAKE 14 02 10.0 +10
GUMO LR LR
comp=Z,8µm,20.0s,MS5.7
S10A Tonopah Range, 46.45 80 ⇑P **P 14 01 59.7 -0.5**
baz=46,SNR=79
HVU Hansel Valley 46.46 74 *e*P **P 14 02 00.7 +0.5**
HVU pmax pmax
comp=Z,336nm,1.3s,mb6.1
HVU Hansel Valley 46.46 74 *e*P **P 14 02 00.7 +0.5**
comp=Z,336nm,1.3s,mb6.1
HVU *e*ScP ScP 14 07 27.1 +1.6
Q11A Duckwater 46.47 79 ⇑P **P 14 01 59.7 -0.6**
baz=46,SNR=61
SSE Sheshan 46.48 267 ⇑P **P 14 02 00.6 +0.1**
SSE pP pP 14 02 13.8 +4.5
SSE sP sP 14 02 20.3 +7.5
SSE PcP PcP 14 03 32.3 -2.4
SSE PP PP 14 03 50.3 +0.6
SSE S **S 14 08 45.8 -0.8**
SSE ScS ScS 14 11 52.3 -0.9
SSE pmax pmax
comp=Z,310nm,1.2s,mb6.1
SSE pmax pmax
comp=Z,2µm,9.4s
SSE LR LR
comp=N,6µm,23.3s,MS5.5
SSE LR LR
comp=E,2µm,23.4s,MS5.5
SSE LR LR
comp=Z,7µm,22.3s,MS5.6
I17A Pilgrim Ck. 46.53 70 ⇓P **P 14 02 00.4 -0.4**
baz=46,SNR=6.0
P12A McGill 46.54 78 ⇓P **P 14 02 00.6 -0.3**
baz=46,SNR=58
GRAC Grapevine Rang 46.55 82 ⇑P **P 14 02 01.6 +0.7**
baz=46,SNR=11
TPAW Teton Pass 46.56 71 *e*P **P 14 02 01.5 +0.6**
comp=Z,67nm,1.0s,mb5.5
K16A Soda Springs 46.56 72 ⇓P **P 14 02 01.8 +0.8**
baz=46,SNR=98
L15A Malad City 46.57 73 ⇓P **P 14 02 01.4 +0.3**
baz=46,SNR=101
REDW Red Top Meadow 46.69 71 *e*P **P 14 02 02.2 +0.2**
comp=Z,79nm,1.1s,mb5.6
SNOW Snow King Moun 46.69 71 *e*P **P 14 02 03.1 +1.1**
comp=Z,191nm,1.3s,mb5.9
LOHW Long Hollow 46.69 70 *e*P **P 14 01 01.7 -0.4**
comp=Z,51nm,1.0s,mb5.4
ISA Isabella 46.70 84 ⇑P **P 14 01 01.8 -0.4**
baz=47,SNR=27
ISA Isabella 46.70 84 *e*P **P 14 02 01.3 -0.9**
ISA pmax pmax
comp=Z,115nm,1.3s,mb5.7
ISA Isabella 46.70 84 *e*P **P 14 02 01.3 -0.9**
comp=Z,115nm,1.3s,mb5.7
O13A Hicks Ranch, I 46.71 76 ⇑P **P 14 02 02.3 +0.1**
baz=47,SNR=13
N14A Grayback Hills 46.77 75 ⇑P **P 14 02 02.1 -0.6**
baz=47,SNR=61
J17A Brown Place, J 46.77 71 ⇓P **P 14 02 03.1 +0.4**
baz=47,SNR=15
R11A Troy Canyon, C 46.81 79 ⇑P **P 14 02 03.2 +0.2**
baz=47,SNR=96
BGU Big Grassy Mou 46.82 75 *e*P **P 14 02 03.4 +0.3**
comp=Z,268nm,1.2s,mb6.0
ARVC Arvin 46.82 85 ⇑P **P 14 02 03.9 +0.8**
baz=47
M15A Larsen Ranch, 46.85 74 ⇑P **P 14 02 03.8 +0.5**
baz=47,SNR=172
Q12A Willow Creek R 46.86 78 ⇓P **P 14 02 03.7 +0.3**
baz=47,SNR=36
DAC Darwin (Calif) 46.86 83 PFAKE 14 02 20.0 +17
DAC LR LR
comp=Z,17µm,21.0s,MS6.0
AHID Auburn Hatcher 46.89 72 *e*P **P 14 02 04.8 +1.3**
comp=Z,140nm,1.1s,mb5.8
AHID LR LR
comp=Z,12µm,21.0s,MS5.8
SPUT South Promonto 46.94 74 *e*P **P 14 02 04.2 +0.3**
comp=Z,221nm,1.2s,mb6.0
SPUT *e* 14 02 19.5
K17A Gardner Place, 47.01 71 ⇑P **P 14 02 04.3 -0.1**
baz=47,SNR=7.8
BSC Santa Cruz Isl 47.05 87 ⇓P **P 14 02 05.8 +0.8**
baz=47
MPMC Manual Prospec 47.06 83 ⇑P **P 14 02 05.5 +0.5**
baz=47,SNR=40
P13A Bates Ranch, G 47.10 77 ⇑P **P 14 02 05.3 +0.1**
baz=47,SNR=126
I18A Diamond G Ranc 47.11 70 ⇑P **P 14 02 04.5 -0.8**
baz=47,SNR=18
L16A Fish Haven 47.13 73 ⇓P **P 14 02 05.8 +0.3**
baz=47,SNR=67
N15A Stansbury Isla 47.15 74 ⇓P **P 14 02 05.6 0.0**
baz=47,SNR=18
S11A Rachel 47.15 80 ⇓P **P 14 02 05.9 +0.2**
baz=47,SNR=28
FCC Fort Churchill 47.18 45 *e*P **P 14 02 04.1 -1.5**
FCC *e* 14 03 36.3
FCC pmax pmax
comp=Z,1.0nm,1.3s
FCC Fort Churchill 47.18 45 *e*P **P 14 02 04.1 -1.5**
comp=Z,1.1nm,1.3s
FCC *e*PcP PcP 14 03 36.3 -0.4
FCC *e*ScP ScP 14 07 26.5 -1.7
FURC Furnace Creek, 47.20 82 ⇑P **P 14 02 05.4 -0.7**
baz=47,SNR=20
OSI Osito Adit 47.22 85 ⇓P **P 14 02 05.9 -0.3**
baz=47
OSI Osito Adit 47.22 85 *e*P **P 14 02 06.8 +0.6**
comp=Z,80nm,0.7s,mb5.8
J18A Kendall Valley 47.27 70 ⇑P **P 14 02 06.2 -0.4**
baz=47,SNR=57
HWUT Hardware Ranch 47.30 73 *e*P **P 14 02 06.9 +0.1**
comp=Z,143nm,1.2s,mb5.8
HWUT *e*ScP ScP 14 07 30.1 +1.1
HWUT LR LR
comp=Z,10µm,19.0s,MS5.8
NJ2 Nanjing 47.30 270 *e*P **P 14 02 07.1 +0.2**
NJ2 pP pP 14 02 14.4 -1.3
NJ2 PP PP 14 03 56.3 -1.6
NJ2 S **S 14 08 56.0 -2.4**
NJ2 pmax pmax
comp=Z,370nm,1.1s,mb6.2
NJ2 pmax pmax
comp=Z,2µm,11.0s
NJ2 LR LR
comp=N,10µm,17.8s
NJ2 LR LR
comp=E,8µm,31.4s
NJ2 LR LR
comp=Z,12µm,21.3s,MS5.8
BLG Laguna Peak 47.33 86 ⇑P **P 14 02 07.2 +0.1**
baz=47
BTO Baotou 47.36 285 *e*P **P 14 02 07.3 0.0**
BTO pmax pmax
comp=Z,130nm,1.4s,mb5.7
DUG Dugway 47.39 75 ⇑P **P 14 02 07.7 +0.2**
baz=47,SNR=128
DUG Dugway 47.39 75 *e*P **P 14 02 07.9 +0.4**
DUG pmax pmax
comp=Z,523nm,1.2s,mb6.3
DUG MLR MLR
comp=Z,9µm,21.0s,MS5.7
DUG Dugway 47.39 75 *e*P **P 14 02 07.9 +0.5**
comp=Z,523nm,1.2s,mb6.3
DUG LR LR
comp=Z,9µm,21.0s,MS5.7
Q13A Wheeler Ranch, 47.41 78 ⇓P **P 14 02 07.2 -0.5**
baz=47,SNR=73
L17A Cokeville 47.42 72 ⇑P **P 14 02 07.4 -0.3**
baz=47,SNR=32
M16A Huntsville 47.43 73 ⇓P **P 14 02 07.2 -0.6**
baz=47,SNR=90
R12A Pony Springs, 47.43 79 ⇑P **P 14 02 07.4 -0.4**
baz=47,SNR=32
LAO LASA Array 47.48 64 *e*P **P 14 02 07.2 -0.9**
comp=Z,111nm,0.9s,mb5.8
LAO LR LR
comp=Z,12µm,20.0s,MS5.9
EDW2 Edwards Air Fo 47.51 85 ⇓P **P 14 02 08.6 +0.2**
baz=47,SNR=12
NOQ North Oquirrh 47.53 74 *e*P **P 14 02 08.7 +0.1**
comp=Z,492nm,1.2s,mb6.4
O15A The Old Anders 47.55 75 ⇑P **P 14 02 08.9 +0.2**
baz=47,SNR=18
U10A Ash Meadows, A 47.56 82 ⇓P **P 14 02 09.9 +1.0**
baz=48
K18A Toltan Ranch, 47.60 71 ⇑P **P 14 02 08.9 -0.1**
baz=48,SNR=53
P14A Drum Mountains 47.60 76 ⇑P **P 14 02 09.4 +0.2**
baz=48,SNR=123
DGMT Dagmar 47.61 61 ⇑P **P 14 02 07.7 -1.4**
baz=47
DGMT Dagmar 47.61 61 *e*P **P 14 02 08.6 -0.6**
comp=Z,93nm,1.1s,mb5.7
DGMT LR LR
comp=Z,21µm,22.0s,MS6.1
TIY Taiyuan 47.66 281 *e*P **P 14 02 10.1 +0.5**
TIY PP PP 14 03 57.6 -3.5
TIY S **S 14 09 03.1 -0.2**
TIY pmax pmax
comp=Z,2µm,8.4s
TIY LR LR
comp=N,9µm,14.1s,MS6.0
TIY LR LR
comp=E,3µm,12.0s,MS6.0
TIY LR LR
comp=Z,8µm,15.0s,MS5.8
DECC Green Verdugo 47.70 85 ⇑P **P 14 02 09.8 -0.2**
baz=48
S12A Delamar Landin 47.73 79 ⇑P **P 14 02 10.5 +0.4**
baz=48,SNR=59
T11A Corn Creek, Al 47.73 80 ⇑P **P 14 02 10.0 -0.2**
baz=48
N16A Rees Ranch, Co 47.80 74 ⇑P **P 14 02 10.7 -0.1**
baz=48,SNR=28
BW06 Boulder Array 47.81 71 ⇑P **P 14 02 10.5 -0.2**
baz=48,SNR=178
BW06 Boulder Array 47.81 71 *e*P **P 14 02 10.3 -0.4**
comp=Z,133nm,1.0s,mb5.9
BW06 LR LR
comp=Z,12µm,19.0s,MS5.9
PDAR Pinedale Array 47.81 71 P **P 14 02 10.5 -0.2**
comp=Z,78nm,0.9s,mb5.7,baz=296,slow=4.1,SNR=150
PDAR ScP ScP 14 07 32.5 +1.3
comp=Z,9.6nm,1.1s,baz=267,slow=3.2,SNR=5.9
PDAR LR LR 14 23 20.8
comp=Z,10µm,18.1s,MS5.8,baz=312,slow=37
Q14A Sevier Lake (B 47.84 77 ⇓P **P 14 02 11.1 +0.1**
baz=48,SNR=146
PASC Pasadena Art C 47.85 85 *e*P **P 14 02 11.5 +0.4**
comp=Z,955nm,1.5s,mb6.6
MWC Mount Wilson 47.89 85 *e*P **P 14 02 11.7 +0.2**
MWC pmax pmax
comp=Z,217nm,1.1s,mb6.1
MWC Mount Wilson 47.89 85 *e*P **P 14 02 11.7 +0.2**
comp=Z,217nm,1.1s,mb6.1
M17A Scullys Gap (B 47.92 73 ⇑P **P 14 02 11.5 -0.1**
baz=48,SNR=69
R13A O'Grain Ranch, 47.92 78 ⇑P **P 14 02 11.9 +0.3**
baz=48,SNR=65
SHOC Shoshone 47.92 82 ⇑P **P 14 02 12.2 +0.5**
baz=48,SNR=10
JLU Jordanelle 47.97 74 *e*P **P 14 02 12.2 +0.2**
comp=Z,281nm,1.3s,mb6.1
GSC Goldstone 47.98 83 ⇓P **P 14 02 12.4 +0.3**
baz=48,SNR=49
GSC Goldstone 47.98 83 *e*P **P 14 02 12.2 +0.1**
GSC pmax pmax
comp=Z,249nm,1.2s,mb6.1
GSC Goldstone 47.98 83 *e*P **P 14 02 12.2 0.0**
comp=Z,249nm,1.2s,mb6.1
NLU North Lily Min 47.98 75 *e*P **P 14 02 12.6 +0.4**
comp=Z,184nm,1.2s,mb6.0
L18A Fontenelle, Gr 48.02 72 ⇑P **P 14 02 11.9 -0.5**
baz=48,SNR=10
P15A Leamington 48.09 76 ⇓P **P 14 02 12.4 -0.5**
baz=48,SNR=46
RRX Edison Barstow 48.13 84 ⇓P **P 14 02 13.8 +0.6**
baz=48
BFSC Mount Baldy St 48.13 85 ⇑P **P 14 02 13.0 -0.4**
baz=48,SNR=15
N17A Moffit Pass 48.13 73 ⇓P **P 14 02 14.1 +0.9**
baz=48,SNR=16
U11A Corn Creek 48.15 81 ⇓P **P 14 02 13.6 +0.2**
baz=48
O16A Springville 48.18 75 ⇓P **P 14 02 13.9 +0.3**
baz=48,SNR=51
K19A Absolon Red Bu 48.20 70 ⇑P **P 14 02 12.6 -1.1**
baz=48,SNR=54
DAU Daniels Canyon 48.20 74 *e*P **P 14 02 14.6 +0.8**
DAU pmax pmax
comp=Z,194nm,1.0s,mb6.1
DAU Daniels Canyon 48.20 74 *e*P **P 14 02 14.6 +0.9**
comp=Z,194nm,1.0s,mb6.1
MPU Maple Canyon 48.22 75 *e*P **P 14 02 14.4 +0.5**
comp=Z,190nm,1.2s,mb6.0
M18A Lyman 48.30 72 ⇓P **P 14 02 14.6 +0.1**
baz=48,SNR=46
L19A Farson 48.32 71 ⇑P **P 14 02 14.7 0.0**
baz=48,SNR=41
S13A Holt Ranch, En 48.36 79 ⇑P **P 14 02 15.4 +0.3**
baz=48,SNR=48
T12A Moapa 48.37 80 ⇑P **P 14 02 15.9 +0.8**
baz=48
Q15A Fillmore 48.38 76 ⇓P **P 14 02 15.6 +0.4**
baz=48,SNR=23
R14A James Farms, M 48.43 78 ⇑P **P 14 02 15.4 -0.1**
baz=48
TUQ Turquoise Moun 48.44 82 ⇓P **P 14 02 15.0 -0.7**
baz=48,SNR=12
P16A Fountain Green 48.45 75 ⇑P **P 14 02 16.6 +0.9**
baz=48
V11A Goodsprings 48.49 82 ⇓P **P 14 02 16.7 +0.6**
baz=48
BBRC Big Bear Sol-O 48.58 84 ⇑P **P 14 02 17.3 +0.5**
baz=48
HEC Hector,Ludlow 48.58 83 ⇑P **P 14 02 16.7 -0.1**
baz=48
K20A Yellowstone Ra 48.59 70 ⇓P **P 14 02 15.4 -1.3**
baz=48,SNR=28
O17A Robinson Place 48.65 74 ⇓P **P 14 02 17.7 +0.5**
baz=48,SNR=46
U12A Valley of Fire 48.66 80 ⇓P **P 14 02 17.4 0.0**
baz=49,SNR=12
S14A Cedar City 48.67 78 ⇑P **P 14 02 18.1 +0.7**
baz=49
T13A Saint George 48.68 79 ⇓P **P 14 02 17.9 +0.3**
baz=49,SNR=39
CCUT Cedar City 48.69 79 *e*P **P 14 02 18.0 +0.5**
comp=Z,94nm,1.1s,mb5.7
MVU Marysvale 48.80 77 PFAKE 14 02 30.0 +12
MVU LR LR
comp=Z,19µm,22.0s,MS6.0
M19A Rock Springs 48.80 72 ⇑P **P 14 02 17.9 -0.5**
baz=49,SNR=12
MSU Marysvale 48.81 77 *e*P **P 14 02 19.3 +0.8**
MSU pmax pmax
comp=Z,111nm,1.2s,mb5.8
MSU Marysvale 48.81 77 *e*P **P 14 02 19.3 +0.8**
comp=Z,111nm,1.2s,mb5.8
MSU *e*ScP ScP 14 07 37.0 +1.6
N18A Larsen Ranch, 48.81 73 ⇓P **P 14 02 18.2 -0.3**
baz=49,SNR=58
MURC Murrieta 48.84 85 ⇓P **P 14 02 19.0 +0.2**
baz=49
TMUT Trail Mountain 48.91 75 *e*P **P 14 02 19.8 +0.5**
comp=Z,240nm,0.9s,mb6.2

V12A **Nelson** 48.92 81 ⇓P P 14 02 19.2 -0.1
baz=49,SNR=24
R15A **Junction** 48.94 77 ⇓P P 14 02 20.1 +0.6
baz=49,SNR=14
L20A **Wamsutter** 48.98 71 ⇓P P 14 02 19.4 -0.4
baz=49,SNR=14
GMRC **Granite Mounta** 49.03 83 ⇑P P 14 02 20.3 +0.1
baz=49,SNR=33
U13A **Pakoon Wash** 49.03 80 ⇑P P 14 02 19.8 -0.4
baz=49,SNR=62
O18A **Roosevelt** 49.05 74 ⇓P P 14 02 20.2 -0.1
baz=49,SNR=38
P17A **Butcher Ranch,** 49.09 75 ⇑P P 14 02 20.6 0.0
baz=49,SNR=37
N19A **John Jarvie Ra** 49.16 72 ⇓P P 14 02 20.5 -0.7
baz=49,SNR=63
T14A **Hurricane** 49.17 79 ⇑P P 14 02 21.4 +0.1
baz=49,SNR=37
Q16A **Castle Valley** 49.17 76 ⇓P P 14 02 21.8 +0.6
baz=49,SNR=67
LDFC **Landfair** 49.18 82 eP P 14 02 21.4 0.0
comp=Z,319nm,1.1s,mb6.3
W12A **Cal Nev Ari** 49.19 82 ⇓P P 14 02 21.7 +0.2
baz=49
S15A **Panguitch** 49.22 78 ⇓P P 14 02 22.5 +0.8
baz=49,SNR=24
P18A **Preston Nutter** 49.30 74 ⇓P P 14 02 22.0 -0.2
baz=49,SNR=157
PFO **Pinyon Flat Ob** 49.30 85 ⇓P P 14 02 23.4 +1.1
baz=49,SNR=11
PFO **Pinyon Flat Ob** 49.30 85 eP P 14 02 23.2 +0.9
PFO pmax pmax
comp=Z,184nm,1.3s,mb6.0
PFO MLR MLR
comp=Z,5μm,22.0s,MS5.5
PFO **Pinyon Flat Ob** 49.30 85 eP P 14 02 23.2 +0.9
comp=Z,184nm,1.3s,mb6.0
PFO LR LR
comp=Z,5μm,22.0s,MS5.5
BELC **Belle Mtn.** 49.33 84 ⇑P P 14 02 22.1 -0.4
baz=49,SNR=25
109C **Camp Elliot, M** 49.37 86 ⇑P P 14 02 23.1 +0.2
baz=49
R16A **Teasdale** 49.38 77 ⇑P P 14 02 22.9 0.0
baz=49,SNR=125
V13A **Grand Canyon W** 49.38 81 ⇓P P 14 02 22.7 -0.2
baz=49
M20A **Sweetwater, Wa** 49.39 71 ⇓P P 14 02 22.0 -0.9
baz=49,SNR=30
SRU **San Rafael** 49.45 75 ⇓P P 14 02 23.3 0.0
baz=49,SNR=159
SRU **San Rafael** 49.45 75 eP P 14 02 23.6 +0.2
SRU pmax pmax
comp=Z,378nm,1.1s,mb6.3
SRU **San Rafael** 49.45 75 eP P 14 02 23.6 +0.2
comp=Z,378nm,1.1s,mb6.3
U14A **Mt Trumbull** 49.52 80 ⇓P P 14 02 24.8 +0.9
baz=49,SNR=31
O19A **Miners Draw (B** 49.56 73 ⇑P P 14 02 24.7 +0.5
baz=49,SNR=96
L21A **Rawlins** 49.59 70 ⇑P P 14 02 23.4 -1.0
baz=49,SNR=90
T15A **Red Dirt Ranch** 49.63 78 ⇓P P 14 02 24.9 +0.1
baz=50,SNR=31
NEE2 **Needles Airpor** 49.69 82 ⇓P P 14 02 25.1 -0.1
baz=50
N20A **Spence Gulch,** 49.75 72 ⇓P P 14 02 25.3 -0.3
baz=50,SNR=62
IRM **Iron Mountain** 49.75 83 ⇓P P 14 02 24.8 -1.0
baz=50,SNR=53
R17A **Hanksville Air** 49.77 76 ⇑P P 14 02 25.4 -0.4
baz=50,SNR=135
BAR **Barrett** 49.78 86 eP P 14 02 25.8 -0.2
comp=Z,82nm,1.0s,mb5.7
MONP **Monument Peak** 49.80 85 ⇑P P 14 02 25.1 -1.0
baz=50,SNR=17
M21A **Separation Pea** 49.81 71 ⇑P P 14 02 24.9 -1.1
baz=50,SNR=48
RWWY **Rawlins** 49.85 70 eP P 14 02 25.6 -0.8
comp=Z,132nm,1.1s,mb5.9
RWWY eScP ScP 14 07 39.0 -0.9
BC3 **Big Chuckw Mtn** 49.90 84 ⇑P P 14 02 26.2 -0.6
baz=50,SNR=17
TARA **Tarawa** 49.90 188 P P 14 02 26.6 -0.4
TARA LR LR
comp=Z,11μm,19.0s,MS5.9
KBS **Kingsbay** 49.91 357 ⇑iP P 14 02 25.8 -0.6
KBS AMB AMB 14 02 32.4
comp=Z,75nm,0.8s,mb5.8
KBS eS S 14 09 34.5 +0.4
KBS AMS AMS 14 22 01.2
comp=Z,16μm,25.6s,MS5.9
KBS **Kingsbay** 49.91 357 c iP P 14 02 26.8 +0.4
KBS pmax pmax
comp=Z,113nm,1.2s,mb5.8
KBS **Kingsbay** 49.91 357 eP P 14 02 26.3 -0.1
comp=Z,66nm,0.8s,mb5.7
KBS LR LR
comp=Z,19μm,22.0s,MS6.0
W13A **Hualapai Mount** 49.93 81 ⇓P P 14 02 26.7 -0.3
baz=50,SNR=18
P19A **Cripple Cowboy** 50.06 74 ⇑P P 14 02 27.7 -0.3
baz=50,SNR=250
U15A **North Rim** 50.06 79 ⇑P P 14 02 27.2 -0.8
baz=50,SNR=115
V14A **Boquillas Ranc** 50.07 80 ⇓P P 14 02 28.3 +0.2
baz=50,SNR=51
DVTC **Desert V Tower** 50.15 85 ⇑P P 14 02 28.2 -0.6
baz=50
SWSC **Sam W. Stewart** 50.15 85 ⇑P P 14 02 28.8 0.0
baz=50
T16A **Glen Canyon Da** 50.19 78 ⇑P P 14 02 28.0 -1.1
baz=50,SNR=6.0
O20A **White River Ci** 50.19 73 ⇑P P 14 02 28.5 -0.5
baz=50,SNR=27
S17A **Black Ridge (B** 50.20 77 ⇑P P 14 02 29.0 -0.2
baz=50,SNR=217
RSSD **Black Hills** 50.23 66 eP P 14 02 27.8 -1.4
RSSD pmax pmax
comp=Z,21nm,0.5s,mb5.4
RSSD MLR MLR
comp=Z,7μm,21.0s,MS5.6
RSSD **Black Hills** 50.23 66 eP P 14 02 27.8 -1.4
comp=Z,21nm,0.5s,mb5.4
RSSD LR LR
comp=Z,7μm,21.0s,MS5.6
N21A **Black Mountain** 50.23 72 ⇑P P 14 02 28.4 -0.9
baz=50,SNR=17
R18A **Canyonlands Na** 50.28 75 ⇓P P 14 02 29.0 -0.8
baz=50,SNR=144
PDMCI **Parker Dam,Lak** 50.29 82 ⇑P P 14 02 29.7 -0.1
baz=50,SNR=12
X13A **Yucca** 50.29 82 ⇑P P 14 02 29.7 -0.1
baz=50,SNR=25
W14A **Seligman** 50.35 81 ⇑P P 14 02 30.5 +0.2
baz=50,SNR=45
M22A **Cedar Creek Ra** 50.39 70 ⇑P P 14 02 29.5 -1.0
baz=50,SNR=42
Y12C **Blythe** 50.41 83 ⇓P P 14 02 30.1 -0.7
baz=50,SNR=15
SPB4 **Spitsbergen Ar** 50.45 355 eP P 14 02 29.3 -1.2
SPITS **Spitsbergen Ar** 50.45 355 P P 14 02 29.6 -0.9
comp=Z,24nm,0.4s,mb5.5,baz=27,slow=5.6,SNR=135
SPITS LR LR 14 22 58.5
comp=Z,9μm,21.7s,MS5.8,baz=5.0,slow=35
P20A **De Beque** 50.50 73 ⇓P P 14 02 31.0 -0.3
baz=50,SNR=13
V15A **Kaibab Nationa** 50.52 79 ⇑P P 14 02 32.3 +0.7
baz=50,SNR=84
TATO **Taipei** 50.59 261 PFAKE 14 02 40.0 +7.8
TATO LR LR
comp=Z,9μm,21.0s,MS5.8
O21A **Pagoda** 50.60 72 ⇑P P 14 02 31.4 -0.7
baz=50,SNR=23
T17A **Navajo Res., N** 50.61 77 ⇑P P 14 02 31.0 -1.3
baz=50,SNR=22
S18A **Hurst Farm, Bl** 50.66 76 ⇓P P 14 02 32.6 0.0
baz=50,SNR=166
GLA **Glamis** 50.69 84 ⇓P P 14 02 33.0 +0.1
baz=51,SNR=24
GLA **Glamis** 50.69 84 eP P 14 02 32.7 -0.1
GLA pmax pmax
comp=Z,189nm,1.1s,mb5.9
GLA **Glamis** 50.69 84 eP P 14 02 32.6 -0.2
comp=Z,189nm,1.1s,mb5.9
R19A **Curley Farm, L** 50.73 75 ⇓P P 14 02 32.7 -0.4
baz=51,SNR=21
Y13A **Salome** 50.81 83 ⇓P P 14 02 33.2 -0.5
baz=51,SNR=8.5
N22A **Wattenberg Ran** 50.84 71 ⇑P P 14 02 33.5 -0.4
baz=51,SNR=56
YHNB **Yeheng** 50.88 261 eP P 14 02 33.6 -0.8
comp=Z,53nm,0.8s,mb5.5
PV04 **Paradox Valley** 50.88 75 eP P 14 02 34.1 -0.1
PV04 eScP ScP 14 07 44.5 +0.1
W15A **Williams** 50.88 80 ⇓P P 14 02 34.5 +0.2
baz=51,SNR=12
Q20A **Ridgley Place,** 50.90 74 ⇓P P 14 02 34.1 -0.3
baz=51,SNR=34
U17A **Shonto** 50.95 78 ⇓P P 14 02 34.1 -0.7
baz=51,SNR=21
U16A **Tuba City** 50.96 78 ⇓P P 14 02 34.9 +0.1
baz=51,SNR=33
X14A **Yava** 50.96 81 ⇑P P 14 02 34.9 0.0
baz=51,SNR=51
ULM **Lac du Bonnet** 51.05 55 P P 14 02 35.1 -0.2
comp=Z,9.4nm,0.5s,mb5.0,baz=313,slow=7.9,SNR=13
ULM PcP PcP 14 03 50.8 -0.1
comp=Z,13nm,0.5s,baz=336,slow=6.7,SNR=4.6
ULM ScP ScP 14 07 45.8 +0.9
comp=Z,13nm,0.8s,baz=320,slow=8.2,SNR=4.2
ULM LR LR 14 24 15.6
comp=Z,27μm,21.7s,MS6.2,baz=312,slow=36
ULM **Lac du Bonnet** 51.05 55 eP P 14 02 34.0 -1.3
comp=Z,26nm,0.6s,mb5.3
ULM LR LR
comp=Z,35μm,22.0s,MS6.3
T18A **Mexican Hat** 51.09 77 ⇓P P 14 02 35.3 -0.5
baz=51,SNR=68
NACB **Ninganchiao** 51.10 261 eP P 14 02 33.5 -2.6
comp=Z,128nm,1.1s,mb5.8
PHWY **Pilot Hill** 51.12 70 P P 14 02 35.6 -0.4
comp=Z,12nm,0.5s,mb5.1
PHWY eScP ScP 14 07 44.3 -1.0
WHN **Wuhan** 51.15 272 P P 14 02 35.3 -1.1
WHN S S 14 09 49.9 -2.5
WHN LR LR
comp=N,10μm,14.1s,MS6.1
WHN LR LR
comp=E,8μm,15.9s,MS6.1
WHN LR LR
comp=Z,13μm,16.6s,MS6.0
S19A **Harvey Farm, M** 51.15 76 ⇓P P 14 02 36.1 -0.2
baz=51
112A **Yuma** 51.19 84 ⇑P P 14 02 37.3 +0.7
baz=51
WUAZ **Wupatki** 51.22 79 ⇑P P 14 02 36.3 -0.4
baz=51,SNR=23
WUAZ **Wupatki** 51.22 79 eP P 14 02 37.2 +0.4
comp=Z,152nm,1.0s,mb5.9
WUAZ LR LR
comp=Z,19μm,22.0s,MS6.1
Y14A **Wickenburg** 51.24 82 ⇑P P 14 02 36.6 -0.3
baz=51,SNR=10
PV01 **Paradox Valley** 51.25 75 eP P 14 02 37.4 +0.4
comp=Z,20μm,1.1s
Z13A **Yuma Proving G** 51.32 83 ⇓P P 14 02 37.3 -0.3
baz=51,SNR=29
R20A **Redvale** 51.33 75 ⇓P P 14 02 37.2 -0.4
baz=51,SNR=27
X15A **Humboldt** 51.35 81 ⇑P P 14 02 37.5 -0.4
baz=51,SNR=19
W16A **Flagstaff** 51.39 80 ⇓P P 14 02 39.0 +0.9
baz=51,SNR=23
Q21A **Lamborn Mesa,** 51.41 73 ⇑P P 14 02 38.3 +0.1
baz=51,SNR=35
V17A **Tonalea, Kykot** 51.51 79 ⇑P P 14 02 38.9 -0.1
baz=51,SNR=86
113A **Mohawk Valley,** 51.54 84 ⇑P P 14 02 38.4 -0.8
baz=51,SNR=11
SMCO **Snowmass** 51.55 73 eP P 14 02 39.1 -0.2
comp=Z,27nm,0.6s,mb5.3
U18A **Rough Rock, Ch** 51.56 77 ⇓P P 14 02 38.8 -0.5
baz=51,SNR=40
HSP **Hornsund** 51.64 355 eP P 14 02 38.5 -0.9
Y15A **Casa Rosa Ranc** 51.65 81 ⇑P P 14 02 39.1 -0.9
baz=52,SNR=22
Z14A **Wintersburg** 51.66 82 ⇑P P 14 02 40.2 +0.1
baz=52
R21A **Cimarron** 51.72 74 ⇑P P 14 02 40.2 -0.3
baz=52,SNR=9.5
SSLB **Suanglung** 51.78 261 eP P 14 02 39.9 -1.3
comp=Z,318nm,1.0s,mb6.2
Q22A **Crested Butte,** 51.79 73 ⇑P P 14 02 40.9 -0.1
baz=52,SNR=40
T19A **Beclabito** 51.81 76 ⇑P P 14 02 41.2 0.0
baz=52,SNR=127
DAG **Danmarks Havn** 51.83 5 ⇓eP P 14 02 40.0 -0.8
DAG pmax pmax
comp=Z,60nm,0.9s,mb5.5
DAG MLR MLR
comp=E,16μm,22.0s
DAG MLR MLR
comp=Z,24μm,22.0s,MS6.2
DAG **Danmarks Havn** 51.83 5 ⇓iP P 14 02 40.0 -0.8
comp=Z,60nm,0.9s,mb5.5
DAG
comp=Z,24μm,22.0s
YULB **Yu-li** 51.86 260 eP P 14 02 40.3 -1.5
comp=Z,688nm,1.6s,mb6.3
MVCO **Mesa Verde** 51.88 76 ⇑P P 14 02 41.2 -0.6
baz=52,SNR=59
MVCO **Mesa Verde** 51.88 76 eP P 14 02 41.7 -0.1
comp=Z,338nm,1.3s,mb6.1
MVCO LR LR
comp=Z,14μm,22.0s,MS5.9
X16A **Lo Mia Camp, P** 51.89 80 ⇓P P 14 02 42.2 +0.4
baz=52,SNR=44
W17A **Winslow** 51.91 79 ⇓P P 14 02 42.5 +0.5
baz=52
ISCO **Idaho Springs** 51.97 71 eP P 14 02 42.8 +0.4
ISCO pmax pmax
comp=Z,94nm,1.1s,mb5.6
ISCO MLR MLR
comp=Z,10μm,19.0s,MS5.9
ISCO **Idaho Springs** 51.97 71 eP P 14 02 42.8 +0.4
comp=Z,94nm,1.1s,mb5.6
ISCO LR LR
comp=Z,10μm,19.0s,MS5.9
V18A **Ganado** 51.98 78 ⇑P P 14 02 42.9 +0.4
baz=52,SNR=38
S21A **Coal Bank Pass** 52.02 75 ⇓P P 14 02 42.7 -0.1
baz=52,SNR=51
U19A **Dine' College,** 52.05 77 ⇓P P 14 02 42.4 -0.5
baz=52,SNR=34
114A **Black Gap (USA** 52.10 83 ⇓P P 14 02 43.0 -0.5
baz=52,SNR=19
XAN **Xi'an** 52.20 279 P P 14 02 43.3 -0.9
XAN pP pP 14 02 55.3 +2.3
XAN PP PP 14 04 42.0 -0.5
XAN S S 14 10 00.4 -6.4
AGMN **Agassiz Refuge** 52.23 57 eP P 14 02 42.2 -1.9
comp=Z,24nm,0.6s,mb5.3
AGMN LR LR
comp=Z,22μm,22.0s,MS6.2
Y16A **Circle Bar Ran** 52.23 81 ⇓P P 14 02 44.9 +0.6
baz=52,SNR=25
R22A **Saguache, Gunn** 52.29 74 ⇑P P 14 02 45.4 +0.6
baz=52,SNR=115
X17A **Forest Lakes** 52.34 80 ⇓P P 14 02 45.7 +0.5
baz=52,SNR=9.2
TPUB **Ta-pu** 52.34 261 eP P 14 02 44.7 -0.6
comp=Z,274nm,1.1s,mb6.1
U20A **Newcomb** 52.41 76 ⇑P P 14 02 46.1 +0.4
baz=52
QZH **Quanzhou** 52.42 264 ⇑iP P 14 02 46.3 +0.4
QZH pP pP 14 02 58.6 +3.8
QZH S S 14 10 14.0 +4.1
QZH pmax pmax
comp=Z,810nm,1.2s,mb6.5
QZH LR LR
comp=N,6μm,15.2s,MS5.9
QZH LR LR
comp=E,6μm,14.4s,MS5.9
QZH LR LR
comp=Z,8μm,18.1s,MS5.8
TWG **Pinlang** 52.42 260 eP P 14 02 48.3 +2.4
comp=Z,268nm,1.5s,mb6.0
W18A **Petrified Fore** 52.49 79 ⇓P P 14 02 46.2 -0.1
baz=52,SNR=14
V19A **Window Rock** 52.52 77 ⇑P P 14 02 46.6 0.0
baz=52,SNR=12
115A **Sonoran Desert** 52.55 83 ⇑P P 14 02 47.0 +0.3
baz=52,SNR=20
Z16A **Peralta Trail,** 52.62 81 ⇑P P 14 02 47.3 0.0
baz=52,SNR=7.8
214A **Organ Pipe Nat** 52.68 84 ⇑P P 14 02 47.9 +0.1
baz=53,SNR=21
W19A **Sanders** 52.71 78 ⇓P P 14 02 49.3 +1.4
baz=53
Y17A **Roosevelt** 52.74 81 ⇓P P 14 02 48.3 +0.2
baz=53,SNR=43
X18A **Snowflake** 52.74 79 ⇑P P 14 02 48.7 +0.5
baz=53,SNR=29
V20A **Brimhall** 52.82 77 ⇑P P 14 02 48.9 +0.2
baz=53,SNR=28
XMAS **Kiritimati** 52.91 150 PFAKE 14 03 00.0 +10
XMAS LR LR
comp=Z,23μm,19.0s,MS6.2
T22A **Edith** 52.98 75 ⇓P P 14 02 50.2 +0.3
baz=53,SNR=92
ZAA0 **Zalesovo Array** 53.05 312 ⇑iP P 14 02 48.9 -1.2
ZALV **Zalesovo Beam** 53.05 312 P P 14 02 49.0 -1.1
comp=Z,53nm,0.9s,mb5.5,baz=58,slow=5.6,SNR=82
ZALV LR LR 14 27 10.0
comp=Z,20μm,18.2s,MS6.2,baz=50,slow=38
Y18A **Canyon Day Jun** 53.19 80 ⇓P P 14 02 52.0 +0.5
baz=53,SNR=14
X19A **St. Johns** 53.22 79 ⇑P P 14 02 52.0 +0.3
baz=53,SNR=21
NVS **Novosibirsk** 53.22 314 ⇑iP P 14 02 50.7 -0.7
NVS i 14 04 00.5
NVS iS S 14 10 17.7 -2.5
NVS i 14 12 39.2
NVS pmax pmax
comp=Z,850nm,1.8s,mb6.4
NVS pmax pmax
comp=N,138nm,1.4s
NVS pmax pmax
comp=E,72nm,1.2s
NVS smax
comp=N,162nm,2.0s
NVS smax
comp=E,343nm,2.2s
Z17A **San Carlos Hig** 53.24 81 ⇑P P 14 02 52.0 +0.2
baz=53,SNR=10
W20A **Ramah** 53.24 78 ⇓P P 14 02 51.9 0.0
baz=53,SNR=19
V21A **Milan** 53.33 76 ⇓P P 14 02 52.8 +0.4
baz=53,SNR=13
SDCO **Great Sand Dun** 53.36 73 eP P 14 02 53.2 +0.6
comp=E,282nm,1.3s,mb6.0
SDCO LR LR
comp=Z,10μm,19.0s,MS5.9
OGNE **Ogallala** 53.36 68 eP P 14 02 52.2 -0.4
comp=Z,257nm,1.3s,mb6.0
OGNE LR LR
comp=Z,8μm,21.0s,MS5.8
216A **Three Points,** 53.50 83 ⇑P P 14 02 53.1 -0.7
baz=53,SNR=10.0
Y19A **Nutrioso** 53.55 79 ⇓P P 14 02 54.8 +0.7
baz=53,SNR=24
117A **Oracle** 53.56 82 ⇑P P 14 02 54.6 +0.4
baz=54,SNR=13
X20A **Quemado** 53.63 78 ⇑P P 14 02 55.1 +0.4
baz=54,SNR=59
BBP **Basco** 53.65 257 eP P 14 02 55.2 +0.2
V22A **San Miguel Ran** 53.70 76 ⇑P P 14 02 55.3 +0.2
baz=54,SNR=43
TUC **Tucson** 53.71 82 eP P 14 02 55.0 -0.3
TUC pmax pmax
comp=Z,118nm,1.3s,mb5.7
TUC MLR MLR
comp=Z,7μm,19.0s,MS5.8
TUC **Tucson** 53.71 82 eP P 14 02 55.0 -0.3
comp=Z,118nm,1.3s,mb5.7
TUC LR LR
comp=Z,7μm,19.0s,MS5.8
W21A **San Fidel** 53.77 77 ⇑P P 14 02 55.4 -0.4
baz=54,SNR=12
SUMG **Summit** 53.84 13 eP P 14 02 55.6 -0.1
comp=Z,236nm,1.0s,mb6.1
BJO **Bjornoya** 53.84 353 eP P 14 02 56.3 +0.6
BJO AMB AMB 14 03 05.7
comp=Z,112nm,0.3s,mb6.3
BJO eS S 14 10 29.6 +1.4
BJO AMS AMS 14 28 52.2
comp=Z,10μm,16.5s,MS6.0
FRB **Frobisher Bay** 53.97 30 P P 14 02 55.6 -1.2
comp=Z,141nm,1.1s,mb5.8,baz=318,slow=8.0,SNR=62
FRB LR LR 14 30 23.3
comp=Z,34μm,18.6s,MS6.4,baz=308,slow=41
FRB PKPPKP 14 33 35.0
comp=Z,5.0nm,0.9s,baz=147,slow=5.8,SNR=4.6
LZH **Lanzhou** 53.97 285 P P 14 02 57.8 +0.6
LZH pP pP 14 03 09.4 +3.3
LZH sP sP 14 03 14.8 +5.2
LZH PP PP 14 04 59.1 +0.7
LZH S S 14 10 29.1 -1.8
LZH sS sS 14 10 50.0 +4.5
LZH pmax pmax
comp=Z,830nm,1.5s,mb6.4
LZH pmax pmax
comp=Z,4μm,4.6s
LZH LR LR
comp=N,15μm,15.4s
LZH LR LR
comp=Z,25μm,16.7s,MS6.3
Z19A **T-Link Ranch,** 53.99 80 ⇑P P 14 02 58.2 +0.9
baz=54
118A **Homack Ranch,** 53.99 81 ⇓P P 14 02 57.9 +0.6
baz=54
217A **Green Valley** 54.05 82 ⇓P P 14 02 58.4 +0.6
baz=54,SNR=15
Y20A **Horse Springs,** 54.13 79 ⇑P P 14 02 59.2 +0.8
baz=54,SNR=43
X21A **Alamocita Cree** 54.13 78 ⇑P P 14 02 59.0 +0.6
baz=54,SNR=139
GTA **Gaotai** 54.22 290 ⇑P P 14 02 58.9 0.0
GTA pP pP 14 03 12.9 +5.0
GTA sP sP 14 03 17.9 +6.6
GTA PP PP 14 05 03.3 +2.8
GTA S S 14 10 34.3 +0.2
GTA pmax pmax
comp=Z,270nm,1.3s,mb6.0
GTA pmax pmax
comp=Z,3μm,8.4s
GTA LR LR
comp=N,18μm,15.9s,MS6.5
GTA LR LR
comp=E,25μm,16.5s,MS6.5
GTA LR LR
comp=Z,32μm,15.9s,MS6.5
V23A **Ortiz Mt. (NFS** 54.25 76 ⇑P P 14 03 00.3 +1.1
baz=54,SNR=26
W22A **Albuquerque** 54.28 77 ⇓P P 14 02 59.8 +0.4
baz=54
119A **Ashpeak Ranch,** 54.32 80 ⇑P P 14 02 59.9 +0.2
baz=54,SNR=23
ENH **Enshi** 54.39 276 eP P 14 02 59.0 -1.3
comp=Z,414nm,1.2s,mb6.2
ENH LR LR
comp=Z,14μm,19.0s,MS6.0
218A **Dragoon** 54.40 82 ⇑P P 14 03 00.7 +0.4
baz=54,SNR=16
Y21A **Point of Rocks** 54.49 78 ⇓P P 14 03 01.8 +0.8
baz=54,SNR=16
Z20A **Nine Sixteen R** 54.53 80 ⇓P P 14 03 01.6 +0.3
baz=54,SNR=30
LAZ **Ladron** 54.56 77 eP P 14 03 02.1 +0.7
comp=Z,96nm,1.1s,mb5.7
X22A **Bernardo** 54.57 77 ⇓P P 14 03 01.9 +0.4
baz=54,SNR=21
ANMO **Albuquerque** 54.61 76 eP P 14 03 02.3 +0.5
ANMO pmax pmax
comp=Z,131nm,1.3s
ANMO MLR MLR
comp=Z,12μm,22.0s
ANMO **Albuquerque** 54.61 76 eP P 14 03 02.3 +0.4
comp=Z,131nm,1.3s,mb5.8
ANMO LR LR
comp=Z,12μm,22.0s,MS5.9
W23A **Werner Place,** 54.66 76 ⇓P P 14 03 02.5 +0.4
baz=54,SNR=25
ECSD **EROS Data Cent** 54.67 62 eP P 14 03 01.0 -1.2
comp=Z,17nm,0.6s,mb5.2
ECSD LR LR
comp=Z,15μm,21.0s,MS6.0
EYMN **Ely** 54.73 55 eP P 14 03 01.8 -0.7
comp=Z,106nm,1.1s,mb5.8
EYMN LR LR
comp=Z,19μm,21.0s,MS6.2
318A **Bisbee** 54.80 82 ⇑P P 14 03 03.1 -0.2

baz=55,SNR=23
LENM Lemitar 54.82 78 *e*P **P 14 03 04.7 +1.3**
comp=Z,126nm,1.2s,mb5.8
219A White Tail Can 54.87 81 ⇑P **P 14 03 03.9 +0.2**
baz=55,SNR=22
120A U Bar Ranch, L 54.89 80 ⇓P **P 14 03 04.0 +0.1**
baz=55,SNR=40
Y22D IRIS PASSCAL I 54.91 78 ⇓P **P 14 03 05.0 +1.0**
baz=55
Y22A Socorro 54.98 78 ⇑P **P 14 03 04.7 +0.2**
baz=55,SNR=41
BNM Barren Site 55.04 77 *e*P **P 14 03 06.0 +1.0**
comp=Z,140nm,1.2s,mb5.9
W24A Lazy 6 Ranch, 55.08 76 ⇑P **P 14 03 05.0 -0.2**
baz=55,SNR=82
319A Douglas 55.28 82 ⇑P **P 14 03 06.5 -0.2**
baz=55,SNR=18
U26A Atchley Ranch, 55.30 73 ⇑P **P 14 03 06.7 -0.1**
baz=55
220A Playas Peak, P 55.39 81 ⇓P **P 14 03 06.9 -0.6**
baz=55,SNR=63
121A Cookes Peak, D 55.42 80 ⇑P **P 14 03 07.3 -0.4**
baz=55,SNR=19
Z22A Elephant Butte 55.44 78 ⇑P **P 14 03 07.7 -0.1**
baz=55,SNR=48
X24A Lazy VL Ranch, 55.50 76 ⇓P **P 14 03 08.6 +0.4**
baz=55,SNR=34
Y23A Lovelace Mesa, 55.54 77 ⇑P **P 14 03 08.6 0.0**
baz=55,SNR=66
W25A X Bar L Ranch, 55.65 75 ⇑P **P 14 03 09.6 +0.3**
baz=56,SNR=149
V26A Tequesquite Ra 55.67 74 ⇑P **P 14 03 09.4 -0.1**
baz=56
320A Kipp Ranch, An 55.77 81 ⇓P **P 14 03 10.1 -0.2**
baz=56,SNR=21
221A Mesquite Ranch 55.78 80 ⇑P **P 14 03 09.7 -0.6**
baz=56
122A Conniff Cattle 55.79 79 ⇑P **P 14 03 10.9 +0.5**
baz=56
Y24A Capitan 55.92 77 ⇑P **P 14 03 11.3 0.0**
baz=56,SNR=80
PALP Palanan 55.94 254 *e*P **P 14 03 12.3 +0.7**
X25A Clemmons Ranch 55.99 76 ⇑P **P 14 03 11.4 -0.4**
baz=56,SNR=58
APYP Conner 56.04 256 *e*P **P 14 03 11.5 -0.8**
CBKS Cedar Bluff 56.08 69 *e*P **P 14 03 11.6 -0.8**
CBKS pmax pmax
comp=Z,151nm,0.9s,mb6.0
CBKS MLR MLR
comp=Z,9μm,20.0s,MS5.8
CBKS Cedar Bluff 56.08 69 *e*P **P 14 03 11.6 -0.7**
comp=Z,151nm,0.9s,mb6.0
CBKS LR LR
comp=Z,9μm,20.0s,MS5.8
222A Williams Famil 56.13 79 ⇓P **P 14 03 12.6 -0.3**
baz=56,SNR=13
W26A Owens Ranch, T 56.16 75 ⇓P **P 14 03 12.9 -0.1**
baz=56
Y25A Mesa, Roswell 56.38 76 ⇓P **P 14 03 14.2 -0.4**
baz=56,SNR=103
SFJD Kangerlussuaq 56.38 21 P **P 14 03 13.1 -1.0**
comp=Z,48nm,0.9s,mb5.5,baz=313,slow=8.8,SNR=25
SFJD ScP ScP 14 08 09.2 +1.4
comp=Z,25nm,1.1s,baz=336,slow=3.4,SNR=6.2
SFJD LR LR 14 32 29.4
comp=Z,8μm,18.4s,MS5.8,baz=301,slow=42
SFJD PKPPKP 14 33 30.0
comp=Z,20nm,1.1s,baz=163,slow=4.6,SNR=8.5
SFJD Kangerlussuaq 56.38 21 *e*P **P 14 03 12.4 -1.7**
comp=Z,171nm,1.1s,mb6.0
SFJD LR LR
comp=Z,11μm,19.0s,MS6.0
SFJD Kangerlussuaq 56.38 21⇑*i*P **P 14 03 12.9 -1.2**
comp=Z,101nm,0.9s,mb5.8
SFJD
comp=Z,10μm,19.0s
CAUP Cauayan 56.39 254 *e*P **P 14 03 16.5 +1.7**
X26A CR and CF Fran 56.49 75 ⇑P **P 14 03 15.9 +0.5**
baz=56,SNR=52
ABRA Dolores 56.53 256 *e*P **P 14 03 16.3 +0.5**
W27A Bowe Ranch, En 56.60 74 ⇓P **P 14 03 16.0 -0.1**
baz=56
223A Chaparral, Ant 56.62 79 ⇓P **P 14 03 16.8 +0.5**
baz=56
124A Stringfield Ra 56.74 78 ⇓P **P 14 03 17.0 -0.1**
baz=57,SNR=43
Z25A Roswell 56.80 77 ⇑P **P 14 03 17.4 -0.2**
baz=57,SNR=35
X27A F and S Farms, 56.86 74 ⇑P **P 14 03 17.9 -0.1**
baz=57,SNR=9.1
Y26A Elida 56.91 76 ⇑P **P 14 03 18.5 +0.1**
baz=57,SNR=43
GZH Guangzhou 57.05 266 P **P 14 03 15.6 -3.9**
GZH S **S 14 11 06.6 -5.6**
GZH LR LR
comp=N,3μm,16.8s,MS5.8
GZH LR LR
comp=E,5μm,15.0s,MS5.8
GZH LR LR
comp=Z,7μm,16.6s,MS5.8
HKC Hong Kong Obse 57.10 265 P **P 14 03 16.0 -3.8**
224A Corundas Mount 57.13 78 ⇑P **P 14 03 19.6 -0.3**
baz=57,SNR=44
COWI Conover 57.16 56 *e*P **P 14 03 18.1 -1.9**
comp=Z,57nm,0.9s,mb5.6
COWI LR LR
comp=Z,18μm,21.0s,MS6.2
Z26A Caprock 57.26 76 ⇑P **P 14 03 20.6 -0.2**
baz=57,SNR=49
125A Gardner Draw, 57.26 77 ⇓P **P 14 03 20.9 0.0**
baz=57,SNR=50
Y27A Causey 57.34 75 ⇑P **P 14 03 20.7 -0.6**
baz=57,SNR=94
BALP Baler 57.47 254 *e*P **P 14 03 23.0 +0.5**
MNTX Cornudas Mount 57.48 79 *e*P **P 14 03 22.3 0.0**
comp=Z,145nm,1.1s,mb5.9
MNTX LR LR
comp=Z,5μm,21.0s,MS5.6
CPRX Cap Rock 57.49 76 *e*P **P 14 03 22.2 -0.3**
comp=Z,96nm,1.1s,mb5.7
MSTX Muleshoe 57.52 75 ⇑P **P 14 03 21.8 -0.8**
baz=57,SNR=70
CD2 Chengdu 57.52 280 P **P 14 03 21.9 -0.8**
CD2 pP pP 14 03 36.3 +4.6
CD2 sP sP 14 03 42.6 +7.5
CD2 PP PP 14 05 31.1 +0.9
CD2 S **S 14 11 12.3 -6.0**
CD2 sS sS 14 11 37.0 +3.9
CD2 SS SS 14 15 02.0 -5.9
CD2 pmax pmax
comp=Z,250nm,1.1s,mb6.2
CD2 pmax pmax
comp=Z,3μm,11.8s
CD2 LR LR
comp=N,10μm,19.0s
CD2 LR LR
comp=Z,10μm,20.2s,MS5.9
AMTX Amarillo 57.56 73 *e*P **P 14 03 22.9 -0.1**
comp=Z,214nm,1.0s,mb6.1
AMTX LR LR
comp=Z,9μm,20.0s,MS5.9
BCPH Baguio City Da 57.58 255⇓*e*P **P 14 03 22.2 -1.0**
324A Moseley Ranch, 57.59 79 ⇑P **P 14 03 23.1 -0.1**
baz=58,SNR=20
PVCP Virac 57.61 250 *e*P **P 14 03 24.6 +1.2**
KEV Kevo 57.62 349 *e*P **P 14 03 22.3 -0.5**
KEV pmax pmax
comp=Z,59nm,1.2s,mb5.5
KEV MLR MLR
comp=Z,13μm,21.0s,MS6.0
KEV Kevo 57.62 349 *e*P **P 14 03 22.3 -0.5**
comp=Z,59nm,1.2s,mb5.5
KEV LR LR
comp=Z,13μm,21.0s,MS6.0
KEV Kevo 57.62 349 *e*p **P 14 03 21.9 -0.9**
comp=Z,16nm,0.7s,mb5.2
126A Clayton Basin, 57.66 77 ⇑P **P 14 03 23.3 -0.4**
baz=58,SNR=9.2
Z27A Tatum 57.70 76 ⇓P **P 14 03 23.5 -0.4**
baz=58,SNR=33
KSU1 Kansas State U 57.71 66 *e*P **P 14 03 22.6 -1.3**
comp=Z,85nm,0.8s,mb5.8
KSU1 LR LR
comp=Z,9μm,22.0s,MS5.8
SCO Scoresbysund 57.72 8⇑*i*P **P 14 03 23.7 +0.2**
SCO pmax pmax
comp=Z,91nm,1.0s,mb5.8
SCO MLR MLR
comp=Z,10μm,21.0s,MS5.9
SCO Scoresbysund 57.72 8⇑*i*P **P 14 03 23.7 +0.2**
comp=Z,91nm,1.0s,mb5.8
SCO
comp=Z,10μm,21.0s
SCIA State Center 57.76 62 *e*P **P 14 03 23.7 -0.5**
comp=Z,305nm,1.2s,mb6.2
SCIA LR LR
comp=Z,11μm,20.0s,MS6.0
GDL2 Guadalupe Moun 57.76 77 *e*P **P 14 03 24.7 +0.4**
comp=Z,107nm,1.2s,mb5.8
325A Bean Ranch, Si 57.95 79 ⇑P **P 14 03 25.8 +0.1**
baz=58,SNR=47
BOLP Bolinao 57.99 256 *e*P **P 14 03 26.4 +0.3**
ARCES ARCESS Array B 58.01 349 P **P 14 03 24.6 -0.9**
comp=Z,10nm,0.8s,mb4.9,baz=28,slow=9.5,SNR=32
ARCES LR LR 14 30 26.2
comp=Z,15μm,19.8s,MS6.1,baz=351,slow=38
ARCES PKP2bc 14 33 20.8
comp=Z,4.8nm,1.0s,baz=219,slow=9.4,SNR=4.2
ARCES ARCESS Array B 58.01 349 P **P 14 03 24.6 -0.9**
ARCES LR LR 14 30 26.2
ARCES ⇑*e* 14 33 20.8
ARE0 ARCESS Array S 58.01 349 *e*P **P 14 03 24.4 -1.1**
CLNB Carlsbad 58.01 77 *e*P **P 14 03 26.4 +0.3**
comp=Z,14nm,1.2s,mb4.9
226A Malaga, Loving 58.01 77 ⇓P **P 14 03 26.0 -0.2**
baz=58
JMIC Jan Mayen 58.02 3 *e*P **P 14 03 27.0 +1.4**
JMIC *e*S **S 14 11 26.4 +2.7**
JMIC AMS AMS 14 29 11.5
comp=Z,6μm,20.8s,MS5.7
POLP Polillo Island 58.04 253 *e*P **P 14 03 27.9 +1.5**
KURK Kurchatov 58.04 312 P **P 14 03 25.9 -0.2**
comp=Z,2μm,1.2s,mb7.1
KURK Kurchatov 58.04 312 P **P 14 03 26.5 +0.4**
comp=Z,184nm,0.8s,mb6.2,baz=42,slow=6.5,SNR=27
KURK S **S 14 11 22.1 -2.4**
comp=Z,11nm,1.1s,baz=52,slow=14,SNR=6.1
KURK PKP2bc 14 33 19.1
comp=Z,1.2nm,0.6s,baz=252,slow=3.1,SNR=4.1
KURK Kurchatov 58.04 312 P **P 14 03 26.5 +0.4**
KURK S **S 14 11 22.1 -2.4**
KURK pmax pmax
comp=Z,184nm,0.8s,mb6.2
KURK smax
comp=N,11nm,1.2s
KURK pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 58.04 312⇑*i*P **P 14 03 25.5 -0.6**
comp=Z,609nm,1.1s,mb6.5
KURK *e*S **S 14 11 23.2 -1.3**
KURK LR LR
comp=Z,42μm,19.0s,MS6.6
KURK Kurchatov 58.04 312 P **P 14 03 25.9 -0.1**
SNR=272
KURK P 14 03 25.9
SNR=272
127A Arkansas Junct 58.05 76 ⇓P **P 14 03 26.7 +0.4**
baz=58
WMQ Urumqi 58.16 302⇑*i*P **P 14 03 27.3 +0.3**
WMQ sP sP 14 03 45.8 +6.3
WMQ PcP PcP 14 04 19.0 +0.7
WMQ PP PP 14 05 38.0 +2.5
WMQ S **S 14 11 22.5 -3.8**
WMQ sS sS 14 11 42.4 +1.3
WMQ ScS ScS 14 13 09.1 -5.1
WMQ SS SS 14 15 15.5 -1.9
WMQ pmax pmax
comp=Z,190nm,1.2s,mb6.0
WMQ pmax pmax
comp=Z,3μm,3.5s
WMQ LR LR
comp=N,28μm,18.0s,MS6.5
WMQ LR LR
comp=E,25μm,19.0s,MS6.5
WMQ LR LR
comp=Z,36μm,21.0s,MS6.5
CNP Catarman 58.17 249 *e*P **P 14 03 28.6 +1.2**
LVZ Lovozero 58.24 345 P **P 14 03 27.0 -0.2**
comp=Z,600nm,1.1s,mb6.5,SNR=8.7
LVZ Lovozero 58.24 345*c i*P **P 14 03 26.1 -1.1**
LVZ pmax pmax
comp=Z,149nm,1.2s,mb5.9
LVZ MLR MLR
comp=Z,15μm,20.0s,MS6.1
LVZ Lovozero 58.24 345 PFAKE 14 03 40.0 +13
LVZ LR LR
comp=Z,15μm,19.0s,MS6.1
425A Indio Mountain 58.35 79 ⇑P **P 14 03 28.2 -0.3**
baz=58,SNR=56
TRO Tromso 58.59 352⇑*i*P **P 14 03 29.0 -0.6**
TRO AMB AMB 14 03 45.2
comp=Z,58nm,2.5s,mb5.2
TRO *e*ScP ScP 14 08 16.6 -1.0
TRO *e*S **S 14 11 32.9 +1.7**
326A Caldwell Ranch 58.60 78 ⇓P **P 14 03 30.3 +0.1**
baz=58,SNR=16
AUQP San Andres 58.70 251 *e*P **P 14 03 33.4 +2.3**
JFWS Jewell Farm 58.70 59 *e*P **P 14 03 28.8 -2.0**
JFWS pmax pmax
comp=Z,177nm,1.0s,mb6.0
JFWS MLR MLR
comp=Z,23μm,20.0s,MS6.3
JFWS Jewell Farm 58.70 59 *e*P **P 14 03 28.8 -2.0**
comp=Z,177nm,1.0s,mb6.0
JFWS LR LR
comp=Z,23μm,20.0s,MS6.3
APA Apatity 58.74 345⇑*i*P **P 14 03 29.0 -1.7**
APA *i* 14 04 22.0
APA *i* 14 05 42.0
APA *i* S **S 14 11 32.0 -1.2**
APA pmax pmax
comp=Z,92nm,1.4s,mb5.6
APA pmax pmax
comp=Z,3μm,20.0s
APA MLR MLR
comp=Z,11μm,19.0s,MS6.0
KTK1 Kautokeino 58.77 350 *e*S **S 14 11 35.8 +2.3**
KTK1 *e*SS SS 14 15 35.5 +10
GYA Guiyang 58.83 274⇓*i*P **P 14 03 32.5 +0.6**
GYA pP pP 14 03 45.3 +4.4
GYA sP sP 14 03 50.5 +6.1
GYA PcP PcP 14 04 22.1 +0.9
GYA PP PP 14 05 44.1 +2.2
GYA ScP ScP 14 08 17.3 -2.1
GYA S **S 14 11 32.0 -3.4**
GYA sS sS 14 11 53.0 +2.8
GYA SS SS 14 15 26.3 -2.3
GYA pmax pmax
comp=Z,120nm,1.0s,mb5.9
GYA pmax pmax
comp=Z,2μm,9.4s
GYA LR LR
comp=N,5μm,18.6s,MS5.8
GYA LR LR
comp=E,6μm,18.0s,MS5.8
GYA LR LR
comp=Z,5μm,20.5s,MS5.6
327A Balmorhea Ranc 58.87 78 ⇓P **P 14 03 32.3 +0.2**
baz=59
MKAR Makanchi Array 58.95 307 P **P 14 03 31.4 -1.1**
comp=Z,62nm,0.9s,mb5.7,baz=52,slow=6.3,SNR=223
MKAR S **S 14 11 42.3 +5.8**
comp=Z,1.9nm,0.9s,baz=55,slow=12,SNR=3.0
MKAR LR LR 14 30 25.3
comp=Z,22μm,19.1s,MS6.3,baz=37,slow=38
MKAR PKPPKP 14 33 06.7
comp=Z,0.5nm,0.5s,baz=245,slow=2.6,SNR=6.0
MKAR Makanchi Array 58.95 307 P **P 14 03 31.4 -1.1**
MKAR S **S 14 11 42.3 +5.8**
426A McDonald Obser 59.02 79 ⇑P **P 14 03 32.5 -0.7**
baz=59,SNR=34
BOAC Boac 59.09 252 *e*P **P 14 03 35.1 +1.3**
328A Wristen Ranch, 59.28 77 ⇓P **P 14 03 34.2 -0.7**
baz=59,SNR=40
427A Hayter Ranch, 59.28 78 ⇓P **P 14 03 34.3 -0.7**
baz=59,SNR=24
WMOK Wichita Mounta 59.40 72 *e*P **P 14 03 35.2 -0.5**
WMOK pmax pmax
comp=Z,164nm,1.1s,mb6.0
WMOK MLR MLR
comp=Z,11μm,19.0s,MS6.0
WMOK Wichita Mounta 59.40 72 *e*P **P 14 03 35.2 -0.5**
comp=Z,164nm,1.1s,mb6.0
WMOK LR LR
comp=Z,11μm,19.0s,MS6.0
526A Mary Lane Ranc 59.41 79 ⇓P **P 14 03 35.4 -0.5**
baz=59,SNR=39
FUNA Funafuti 59.47 180 PFAKE 14 03 50.0 +14
FUNA LR LR
comp=Z,18μm,19.0s,MS6.2
527A Woodward Ranch 59.65 79 ⇑P **P 14 03 36.8 -0.7**
baz=60,SNR=32
626A Big Bend Ranch 59.74 79 ⇓P **P 14 03 36.6 -1.6**
baz=60,SNR=60
428A Kincaid Ranch, 59.81 78 ⇓P **P 14 03 37.9 -0.7**
baz=60,SNR=56
LUBP Lubang 59.83 253 *e*P **P 14 03 38.7 -0.3**
MSLP Maasin 59.95 247 *e*P **P 14 03 39.8 +0.1**
BVAR Borovoye Array 60.04 319 P **P 14 03 39.8 0.0**
comp=Z,166nm,0.7s,mb6.2,baz=47,slow=6.5,SNR=259
BVAR S **S 14 11 52.6 +2.3**
comp=Z,5.3nm,1.1s,baz=38,slow=16,SNR=3.7
BVAR LR LR 14 31 13.1
comp=Z,44μm,20.9s,MS6.6,baz=46,slow=38
BVAR PKPPKP 14 32 58.5
comp=Z,1.1nm,1.0s,baz=244,slow=6.4,SNR=4.0
BVAR P4KPbc 14 40 45.5
comp=Z,0.7nm,0.7s,baz=29,slow=3.4,SNR=4.9
BVAR Borovoye Array 60.04 319 P **P 14 03 39.8 -0.1**
BVAR S **S 14 11 52.6 +2.2**
BVAR Borovoye Array 60.04 319 P **P 14 03 39.8 0.0**
BVAR S **S 14 11 52.6 +2.3**
BVAR LR LR 14 31 13.1
BVAR P'P' 14 32 58.5
RCP Roxas 60.05 250⇑*e*P **P 14 03 40.7 +0.3**
SOKR Solikamsk 60.05 330*c i*P **P 14 03 39.7 -0.1**
SOKR 14 05 50.7
SOKR S **S 14 11 53.2 +2.9**
SOKR SS SS 14 15 51.7 +5.4
SOKR pmax pmax
comp=Z,930nm,1.3s,mb6.7
SOKR MLR MLR
comp=Z,18μm,17.0s,MS6.3
BRVK Borovoye 60.06 319 P **P 14 03 40.2 +0.2**
comp=Z,2μm,0.8s,mb7.2
BRVK Borovoye 60.06 319 *e*P **P 14 03 40.0 0.0**
BRVK pmax pmax
comp=Z,338nm,1.0s,mb6.3
BRVK MLR MLR
comp=Z,45μm,21.0s,MS6.6
BRVK Borovoye 60.06 319 *e*P **P 14 03 40.0 0.0**
comp=Z,338nm,1.0s,mb6.3
BRVK LR LR
comp=Z,45μm,21.0s,MS6.6
BRVK Borovoye 60.06 319 P **P 14 03 40.4 +0.4**
SNR=159
BRVK P 14 03 40.4
SNR=159
528A Cox Ranch, San 60.14 78 ⇑P **P 14 03 40.2 -0.7**
baz=60,SNR=60
TXAR Lajitas Array 60.18 79 P **P 14 03 41.0 -0.2**
comp=Z,5.6nm,0.5s,mb4.9,baz=303,slow=5.6,SNR=75
TXAR LR LR 14 29 46.2
comp=Z,8μm,18.4s,MS5.9,baz=55,slow=36
TXAR PKPPKP 14 33 05.8
comp=Z,0.4nm,0.9s,baz=134,slow=5.4,SNR=4.6
TXAR Lajitas Array 60.18 79 P **P 14 03 41.0 -0.2**
TXAR LR LR 14 29 46.2
TXAR P'P' 14 33 05.8
KALP Kalibo 60.20 250 *e*P **P 14 03 37.5 -3.9**
627A Terlingua Ranc 60.27 79 ⇑P **P 14 03 41.0 -0.8**
baz=60,SNR=50
SJMP San Jose 60.30 252 *e*P **P 14 03 42.9 +0.7**
GLMI Grayling 60.36 54 *e*P **P 14 03 42.0 -0.1**
comp=Z,244nm,0.9s,mb6.2
GLMI LR LR
comp=Z,16μm,21.0s,MS6.2
628A Black Gap, Mar 60.55 79 ⇓P **P 14 03 42.7 -1.0**
baz=60,SNR=51
HDIL Hopedale 60.84 61 *e*P **P 14 03 43.7 -1.9**
comp=Z,191nm,0.8s,mb6.3
HDIL LR LR
comp=Z,12μm,19.0s,MS6.0
GUIM Jordan 60.88 249 *e*P **P 14 03 46.1 0.0**
TBP Tagbilaran 60.89 247 *e*P **P 14 03 45.1 -1.1**
SVE Sverdlovsk 60.93 326⇓*e*P **P 14 03 46.8 +1.0**
SVE *e* 14 06 03.8
SVE *e*PPP 14 07 24.9
SVE *e*S **S 14 12 07.0 +5.5**
SVE *e* 14 13 27.6
SVE pmax pmax
comp=Z,830nm,1.4s,mb6.7
SVE pmax pmax
comp=Z,3μm,16.6s
SVE MLR MLR
comp=Z,22μm,18.0s,MS6.4
SCHQ Schefferville 61.08 37 P **P 14 03 45.9 -1.1**
comp=Z,46nm,0.9s,mb5.6,baz=325,slow=6.4,SNR=49
SCHQ LR LR 14 32 56.8
comp=Z,23μm,18.6s,MS6.3,baz=319,slow=39
SCHQ PKP2ab 14 33 21.0
comp=Z,7.0nm,0.9s,baz=175,slow=7.0,SNR=3.6
SCHQ Schefferville 61.08 37 *e*P **P 14 03 45.8 -1.1**
comp=Z,226nm,1.2s,mb6.2
SCHQ LR LR
comp=Z,29μm,19.0s,MS6.4
BUSP Coron 61.22 252 *e*P **P 14 03 48.1 -0.2**
CGP Cagayan de Oro 61.40 246⇓*e*P **P 14 03 51.7 +2.1**
CCM Cathedral Cave 61.49 64 *e*P **P 14 03 47.8 -2.2**
CCM pmax pmax
comp=Z,109nm,1.1s,mb5.9
CCM MLR MLR
comp=Z,8μm,19.0s,MS5.9
CCM Cathedral Cave 61.49 64 *e*P **P 14 03 47.8 -2.2**
comp=Z,109nm,1.1s,mb5.9
CCM LR LR
comp=Z,8μm,19.0s,MS5.9
CUYO Cuyo Island 61.64 251 *e*P **P 14 03 51.6 +0.4**
SLM Saint Louis 61.65 63 *e*P **P 14 03 50.5 -0.6**
SLM pmax pmax
comp=Z,50nm,0.5s,mb5.9
SLM Saint Louis 61.65 63 *e*P **P 14 03 50.5 -0.6**
comp=Z,50nm,0.5s,mb5.9
BUKP Musuan 61.66 245 *e*P **P 14 03 52.2 +0.8**
JCT Junction City 61.75 76 *e*P **P 14 03 51.0 -0.8**
JCT pmax pmax
comp=Z,248nm,1.1s,mb6.2
JCT MLR MLR
comp=Z,19μm,22.0s,MS6.2
JCT Junction City 61.75 76 *e*P **P 14 03 51.0 -0.9**
comp=Z,248nm,1.1s,mb6.2
JCT LR LR
comp=Z,19μm,22.0s,MS6.2
ARU Arti 61.95 327 P **P 14 03 53.5 +0.7**
comp=Z,4μm,1.3s
ARU Arti 61.95 327*c i*P **P 14 03 53.0 +0.2**
ARU *e* 14 04 32.4
ARU *e* 14 06 07.7
ARU *e*PPP 14 07 39.9
ARU S **S 14 12 16.2 +1.6**
ARU 14 13 41.8
ARU SS SS 14 16 15.8 -0.4
ARU SSS 14 19 03.2
ARU pmax pmax
comp=Z,1μm,1.2s,mb6.9
ARU MLR MLR
comp=Z,28μm,20.0s,MS6.4
ARU Arti 61.95 327 *e*P **P 14 03 53.2 +0.4**
comp=Z,1μm,1.2s,mb6.9
ARU *e* 14 04 07.9
ARU LR LR
comp=Z,27μm,20.0s,MS6.4
FVM French Village 62.00 63 *e*P **P 14 03 52.2 -1.2**
FVM pmax pmax
comp=Z,53nm,0.6s,mb5.8
FVM French Village 62.00 63 *e*P **P 14 03 52.2 -1.2**
comp=Z,53nm,0.6s,mb5.8
DAV Davao City (W) 62.02 244 P **P 14 03 54.2 +0.4**
DAV LR LR
comp=Z,6μm,21.0s,MS5.8
DAV Davao City (W) 62.02 244⇑*e*P **P 14 03 51.6 -2.2**
DMPH Davao City–Mi 62.05 244⇑*e*P **P 14 03 53.6 -0.4**
DCPH Dipolog City 62.07 247 *e*P **P 14 03 60.0 +5.8**
QIZ Qiongzhong 62.24 266 P **P 14 03 54.6 -0.6**
QIZ pP pP 14 04 05.0 +0.7
QIZ S **S 14 12 17.9 -1.3**
QIZ pmax pmax
comp=Z,90nm,2.0s,mb5.5

QIZ pmax pmax
comp=Z,2μm,11.9s
QIZ LR LR
comp=N,3μm,14.7s,MS5.7
QIZ LR LR
comp=E,1μm,15.6s,MS5.7
QIZ LR LR
comp=Z,5μm,14.3s,MS5.8
QIZ Qiongzhong 62.24 266 *e*P **P 14 03 55.8 +0.5**
comp=Z,83nm,1.2s,mb5.7
QIZ LR LR
comp=Z,4μm,20.0s,MS5.6
KMI Kunming 62.24 276 P **P 14 03 54.5 -0.7**
KMI pP pP 14 04 09.4 +5.1
KMI sP sP 14 04 14.8 +7.1
KMI PcP PcP 14 04 35.8 +0.9
KMI PP PP 14 06 15.6 +3.5
KMI ScP ScP 14 08 32.3 -2.2
KMI PcS PcS 14 08 37.4 -0.9
KMI S **S 14 12 15.5 -3.6**
KMI sS sS 14 12 38.3 +4.2
KMI SKS 14 13 39.3
KMI SS SS 14 16 19.0 -3.2
KMI pmax pmax
comp=Z,90nm,1.3s,mb5.7
KMI pmax pmax
comp=Z,2μm,7.8s
KMI LR LR
comp=N,6μm,13.8s,MS6.1
KMI LR LR
comp=E,8μm,15.2s,MS6.1
KMI LR LR
comp=Z,9μm,14.4s,MS6.0
ENPP El Nido 62.31 252 *e*P **P 14 03 55.4 -0.3**
STOK Stokkvaagen 62.31 354 *e*P **P 14 03 52.8 -2.2**
MOR8 Moi Rana 62.36 353 *e*P **P 14 03 53.0 -2.4**
MOR8 AMB AMB 14 04 01.7
comp=Z,44nm,0.8s,mb5.6
MIAR Mount Ida 62.61 68 *e*P **P 14 03 57.0 -0.5**
MIAR pmax pmax
comp=Z,413nm,1.3s,mb6.4
MIAR MLR MLR
comp=Z,7μm,22.0s,MS5.8
MIAR Mount Ida 62.61 68 *e*P **P 14 03 57.0 -0.5**
comp=Z,413nm,1.3s,mb6.4
MIAR LR LR
comp=Z,7μm,22.0s,MS5.8
AAM Ann Arbor 62.63 56 *e*P **P 14 03 57.5 -0.1**
AAM MLR MLR
comp=Z,15μm,22.0s,MS6.1
PAGZ Pagadian 62.65 247 *e*P **P 14 03 57.6 -0.4**
OLIL Olney 62.77 61 *e*P **P 14 03 57.1 -1.4**
comp=Z,125nm,0.8s,mb6.1
SIUC Southern Illin 62.87 63 *e*P **P 14 03 58.3 -0.9**
comp=Z,60nm,0.7s,mb5.8
SADO Sadowa 63.15 51 LR LR 14 31 33.8
comp=Z,17μm,20.9s,MS6.2,baz=338,slow=36
PARMO Parma 63.31 64 *e*P **P 14 04 02.8 +0.6**
BLO Bloomington 63.33 60 *e*P **P 14 04 01.6 -0.6**
BLO pmax pmax
comp=Z,88nm,0.9s,mb5.9
BLO Bloomington 63.33 60 *e*P **P 14 04 01.6 -0.6**
comp=Z,88nm,0.9s,mb5.9
BORG Borgarnes 63.35 9 *e*P **P 14 04 01.0 -1.0**
BORG pmax pmax
comp=Z,105nm,1.0s
BORG MLR MLR
comp=Z,8μm,20.0s
BORG Borgarnes 63.35 9 *e*P **P 14 04 01.0 -0.9**
comp=Z,105nm,1.0s,mb5.9
BORG LR LR
comp=Z,8μm,20.0s,MS5.9
JOF Joensuu 63.38 344 *e*P **P 14 04 00.8 -1.4**
JOF pmax pmax
comp=Z,37nm,0.6s,mb5.7
JOF Joensuu 63.38 344 *e*p **P 14 04 00.8 -1.4**
comp=Z,37nm,0.6s,mb5.7
USIN University of 63.56 62 *e*P **P 14 04 03.7 -0.1**
comp=Z,198nm,0.8s,mb6.2
HBAR Harrisburg 63.58 66 *e*P **P 14 04 05.5 +1.5**
KLMR Klimovskoe 63.63 339*c i*P **P 14 04 02.8 -1.1**
KLMR *e* 14 06 22.6
KLMR *e*PPP 14 07 55.7
KLMR *i* S **S 14 12 38.9 +3.5**
KLMR *e*SS SS 14 16 42.9 +0.8
KLMR pmax pmax
comp=Z,315nm,1.3s,mb6.2
KLMR pmax pmax
comp=Z,2μm,15.4s
KLMR MLR MLR
comp=Z,17μm,18.0s,MS6.3
GNAR Gosnell 63.66 65 *e*P **P 14 04 05.9 +1.4**
PPR Puerto Princes 63.85 252 *e*P **P 14 04 07.0 +1.0**
GLAT Glass 63.86 64 P **P 14 04 06.5 +0.7**
NATX Nacogdoches 63.94 71 *e*P **P 14 04 06.6 +0.2**
comp=Z,542nm,1.4s,mb6.4
NATX LR LR
comp=Z,10μm,20.0s,MS6.0
UTMT University of 64.04 64 *e*P **P 14 04 08.0 +1.0**
comp=Z,649nm,0.9s,mb6.7
HALT Halls 64.08 64 P **P 14 04 08.5 +1.2**
AAA Alma-Ata 64.12 307 *i* P **P 14 04 08.7 +1.3**
AAA *e*S **S 14 12 40.2 -1.9**
AAA pmax pmax
comp=Z,5μm,17.7s
AAA smax
comp=N,3μm,15.4s
AAA MLR MLR
comp=Z,19μm,16.0s,MS6.4
WCI Wyandotte Cave 64.13 61 *e*P **P 14 04 07.4 -0.1**
WCI pmax pmax
comp=Z,56nm,0.8s,mb5.7
WCI MLR MLR
comp=Z,10μm,19.0s,MS6.0
WCI Wyandotte Cave 64.13 61 *e*P **P 14 04 07.4 -0.1**
comp=Z,56nm,0.8s,mb5.7
WCI LR LR
comp=Z,10μm,19.0s,MS6.0
NSS Namsos 64.17 354⇑*i*P **P 14 04 05.6 -1.7**
NSS AMB AMB 14 04 26.6
comp=Z,57nm,1.4s,mb5.4
NSS *e*S **S 14 12 45.0 +3.0**
NSS AMS AMS 14 29 43.2
comp=Z,8μm,24.8s,MS5.8
ACSO Alum Creek Sta 64.47 57 *e*P **P 14 04 09.9 +0.2**
comp=Z,108nm,1.0s,mb5.8
ACSO LR LR
comp=Z,15μm,22.0s,MS6.1
HKT Hockley 64.53 73 *e*P **P 14 04 10.6 +0.3**
HKT *e* 14 04 25.7
HKT *e*S **S 14 12 45.7 -1.9**
HKT pmax pmax
comp=Z,353nm,1.3s,mb6.2
HKT MLR MLR
comp=Z,8μm,20.0s,MS5.9
HKT Hockley 64.53 73 *e*P **P 14 04 10.6 +0.3**
comp=Z,353nm,1.3s,mb6.2
HKT *e* 14 04 25.7
HKT *e*S **S 14 12 45.7 -1.8**
HKT LR LR
comp=Z,8μm,20.0s,MS5.9
ERPA Erie 64.65 54 *e*P **P 14 04 10.7 -0.2**
comp=Z,190nm,1.2s,mb6.0
ERPA LR LR
comp=Z,20μm,19.0s,MS6.3
WVT Waverly 64.78 63 *e*P **P 14 04 10.9 -0.9**
WVT pmax pmax
comp=Z,100nm,1.0s,mb5.8
WVT MLR MLR
comp=Z,8μm,20.0s,MS5.9
WVT Waverly 64.78 63 *e*P **P 14 04 10.9 -0.9**
comp=Z,100nm,1.0s,mb5.8
WVT LR LR
comp=Z,8μm,20.0s,MS5.9
KAF Kangasniemi 64.95 346 *e*P **P 14 04 11.7 -0.8**
KAF pmax pmax
comp=Z,25nm,0.6s,mb5.4
KAF Kangasniemi 64.95 346 *e*p **P 14 04 11.7 -0.8**
comp=Z,25nm,0.6s,mb5.4
KVTX Kingsville 65.01 77 *e*P **P 14 04 11.5 -1.9**
comp=Z,236nm,1.1s,mb6.1
KVTX LR LR
comp=Z,9μm,22.0s,MS5.9
OXF Oxford 65.04 66 *e*P **P 14 04 13.2 -0.4**
OXF pmax pmax
comp=Z,992nm,1.2s,mb6.7
OXF MLR MLR
comp=Z,7μm,21.0s,MS5.8
OXF Oxford 65.04 66 *e*P **P 14 04 13.2 -0.3**
comp=Z,992nm,1.2s,mb6.7
OXF LR LR
comp=Z,7μm,21.0s,MS5.8
TKM2 Tokmak 2 65.05 308 P **P 14 04 13.8 +0.3**
SNR=139
TKM2 Tokmak 2 65.05 308 *e*P **P 14 04 13.5 0.0**
TKM2 pmax pmax
comp=Z,275nm,1.3s,mb6.1
TKM2 MLR MLR
comp=Z,22μm,21.0s,MS6.3
TKM2 Tokmak 2 65.05 308 *e*P **P 14 04 13.5 +0.1**
comp=Z,274nm,1.3s,mb6.1
TKM2 LR LR
comp=Z,22μm,21.0s,MS6.3
BATP Bataraza 65.18 252 *e*P **P 14 04 15.9 +1.3**
ULHL Ulahol 65.22 307 P **P 14 04 15.0 +0.4**
SNR=117
USP Ospenovka 65.34 309 P **P 14 04 15.7 +0.4**
SNR=128
AFI Afiamalu 65.34 170 PFAKE 14 04 30.0 +14
AFI LR LR
comp=Z,9μm,19.0s,MS6.0
CHMS Chumysh 65.41 308 P **P 14 04 16.0 +0.2**
SNR=59
LONY Lake Ozonia 65.46 49 *e*P **P 14 04 13.6 -2.5**
comp=Z,32nm,1.1s,mb5.3
LONY LR LR
comp=Z,11μm,19.0s,MS6.1
PLAL Pickwick Lake 65.47 64 *e*P **P 14 04 15.0 -1.2**
comp=Z,103nm,0.8s,mb5.9
PLAL LR LR
comp=Z,6μm,21.0s,MS5.8
KBK Karagaybulak 65.57 308 P **P 14 04 17.2 +0.4**
SNR=140
FRU Bishkek 65.60 308⇑*i*P **P 14 04 17.0 0.0**
FRU *i* 14 04 32.0
FRU *i* 14 04 55.0
FRU *e* 14 06 40.0
FRU *e*PPP 14 08 27.0
FRU *e* 14 12 58.0
FRU *e* 14 17 20.0
FRU pmax pmax
comp=Z,1μm,2.0s,mb6.5
FRU pmax pmax
comp=Z,4μm,6.4s
FRU MLR MLR
comp=Z,16μm,19.0s,MS6.2
FINES FINESS Array B 65.62 346 P **P 14 04 15.3 -1.6**
comp=Z,39nm,0.8s,mb5.5,baz=16,slow=7.1,SNR=50
FINES PKPPKP 14 32 56.4
comp=Z,2.7nm,0.9s,baz=108,slow=6.2,SNR=5.2
FINES PKP2ab 14 33 08.2
comp=Z,4.7nm,0.9s,baz=225,slow=4.0,SNR=5.7
FINES LR LR 14 33 33.9
comp=Z,11μm,21.9s,MS6.0,baz=23,slow=37
FINES FINESS Array B 65.62 346 P **P 14 04 15.3 -1.6**
FINES P'P' 14 32 56.4
FINES P'P'ab 14 33 08.2
FINES LR LR 14 33 33.9
AAK Ala-Archa 65.81 308 P **P 14 04 18.1 -0.3**
comp=Z,983nm,1.3s,mb6.7,SNR=54
AAK Ala-Archa 65.81 308 P **P 14 04 18.9 +0.5**
SNR=86
AAK Ala-Archa 65.81 308 P **P 14 04 18.8 +0.4**
comp=Z,52nm,0.8s,mb5.6,baz=89,slow=4.2,SNR=28
AAK PKP2ab 14 33 03.6
comp=Z,1.1nm,0.3s,baz=293,slow=4.7,SNR=5.8
AAK LR LR 14 33 42.3
comp=Z,23μm,21.8s,MS6.3,baz=39,slow=37
AAK Ala-Archa 65.81 308*c i*P **P 14 04 18.6 +0.2**
AAK pmax pmax
comp=Z,213nm,1.7s,mb5.9
AAK MLR MLR
comp=Z,12μm,22.0s,MS6.1
AAK Ala-Archa 65.81 308 *e*P **P 14 04 18.5 +0.1**
comp=Z,173nm,1.0s,mb6.0
AAK LR LR
comp=Z,21μm,21.0s,MS6.3
AAK Ala-Archa 65.81 308 P **P 14 04 19.0 +0.6**
SNR=157
AAK P 14 04 19.0
SNR=157
KZA Kyzart 65.85 308 P **P 14 04 19.5 +0.9**
SNR=104
VBMS Vicksburg 66.06 68 *e*P **P 14 04 20.4 +0.3**
comp=Z,495nm,1.3s,mb6.4
VBMS LR LR
comp=Z,11μm,20.0s,MS6.1
LSA Lhasa 66.07 288 P **P 14 04 21.6 +1.4**
LSA PP PP 14 06 46.0 +0.5
LSA S S 14 13 05.3 -1.1
LSA pmax pmax
comp=Z,3μm,11.8s
LSA LR LR
comp=N,5μm,19.3s,MS6.1
LSA LR LR
comp=E,9μm,14.5s,MS6.1
LSA LR LR
comp=Z,14μm,17.7s,MS6.2
LSA Lhasa 66.07 288⇑*i*P **P 14 04 21.3 +1.1**
LSA pmax pmax
comp=Z,295nm,1.2s,mb6.2
LSA MLR MLR
comp=Z,15μm,19.0s,MS6.2
LSA Lhasa 66.07 288⇑*i*P **P 14 04 21.3 +1.0**
comp=Z,295nm,1.2s,mb6.2
LSA LR LR
comp=Z,15μm,19.0s,MS6.2
UCH Uchtor 66.10 308 P **P 14 04 21.0 +0.8**
SNR=116
UCH Uchtor 66.10 308 *e*P **P 14 04 20.7 +0.5**
comp=Z,175nm,1.3s,mb5.9
UCH LR LR
comp=Z,21μm,21.0s,MS6.3
NCB Newcomb 66.12 49 *e*P **P 14 04 18.9 -1.5**
comp=Z,111nm,1.5s,mb5.7
NCB LR LR
comp=Z,14μm,19.0s,MS6.2
EKS2 Erkin-Say 66.14 309 P **P 14 04 21.0 +0.5**
SNR=113
EKS2 Erkin-Say 66.14 309⇑*i*P **P 14 04 20.8 +0.3**
comp=Z,292nm,1.2s,mb6.2
EKS2 LR LR
comp=Z,18μm,19.0s,MS6.3
MOL Molde 66.38 356 *e*P **P 14 04 21.8 +0.1**
MOL AMB AMB 14 04 36.9
comp=Z,94nm,0.3s,mb6.3
MOL *e*S S 14 13 10.7 +1.6
SWET Sewanee 66.50 63 *e*P **P 14 04 21.1 -1.9**
MCWV Mont Chateau 66.53 56 PFAKE 14 04 40.0 +17
MCWV LR LR
comp=Z,10μm,20.0s,MS6.0
AML Almayashu 66.58 308 P **P 14 04 24.3 +1.0**
SNR=128
AML Almayashu 66.58 308 *e*P **P 14 04 24.0 +0.7**
comp=Z,244nm,1.1s,mb6.2
AML LR LR
comp=Z,23μm,22.0s,MS6.3
BINY Binghamton 66.59 51 *e*P **P 14 04 22.5 -0.9**
comp=Z,173nm,1.2s,mb6.0
BINY LR LR
comp=Z,21μm,21.0s,MS6.3
SSPA Standing Stone 66.81 54 *e*P **P 14 04 23.0 -1.8**
comp=Z,34nm,1.3s,mb5.2
SSPA LR LR
comp=Z,16μm,19.0s,MS6.3
TZTN Tazewell 66.85 60 *e*P **P 14 04 24.7 -0.4**
comp=Z,67nm,1.0s,mb5.6
LBNH Lisbon 66.99 47 *e*P **P 14 04 24.7 -1.2**
LBNH pmax pmax
comp=Z,72nm,1.2s,mb5.6
LBNH MLR MLR
comp=Z,20μm,19.0s,MS6.4
LBNH Lisbon 66.99 47 *e*P **P 14 04 24.7 -1.2**
comp=Z,72nm,1.2s,mb5.6
LBNH LR LR
comp=Z,20μm,19.0s,MS6.4
CPCT Cooper Cave 67.12 62 *e*P **P 14 04 25.9 -1.0**
ABKAR Akbulak array 67.16 321 *e*P **P 14 04 27.0 +0.1**
comp=Z,177nm,0.9s,mb6.1
KDM Kudat 67.25 252 P **P 14 04 28.4 +0.5**
TKL Tuckaleechee C 67.38 61 LR LR 14 36 32.0
comp=Z,11μm,18.3s,MS6.1,baz=325,slow=38
TKL Tuckaleechee C 67.38 61 *e*P **P 14 04 27.0 -1.5**
KSH Kashi 67.38 305⇑*i*P **P 14 04 32.1 +3.6**
KSH *e*pP pP 14 04 45.0 +7.4
KSH *e*sP sP 14 04 50.0 +9.0
KSH *e*PcP PcP 14 04 58.1 +2.2
KSH *e*PP PP 14 07 03.1 +6.4
KSH *e*ScP 14 08 57.1
KSH *e*PcS 14 09 02.1
KSH *e*S S 14 13 22.8 +0.8
KSH *e*sS sS 14 13 46.0 +8.9
KSH *e*ScS ScS 14 14 22.0 -2.3
KSH *e*SS SS 14 17 46.3 +4.9
KSH pmax pmax
comp=Z,2μm,2.0s,mb6.8
KSH LR LR
comp=N,10μm,21.6s,MS6.2
KSH LR LR
comp=E,10μm,19.0s,MS6.2
KSH LR LR
comp=Z,290nm,5.7s
PKME Peaks-Kenny Pk 67.40 45 *e*P **P 14 04 27.1 -1.4**
comp=Z,24nm,1.0s,mb5.2
PKME LR LR
comp=Z,12μm,19.0s,MS6.2
FOO Floro 67.45 357 *e*P **P 14 04 28.1 -0.4**
FOO AMB AMB 14 04 42.8
comp=Z,55nm,1.6s,mb5.3
FOO *e*S S 14 13 24.1 +1.9
FOO AMS AMS 14 31 17.9
comp=Z,5μm,21.5s,MS5.7
LRAL Lakeview Retre 67.49 65 *e*P **P 14 04 28.2 -1.1**
comp=Z,47nm,1.0s,mb5.5
LRAL LR LR
comp=Z,4μm,19.0s,MS5.7
MYLDM Lahad Datu 67.64 249 P **P 14 04 31.1 +0.7**
NB2 NORSAR Subarra 67.68 353 P **P 14 04 28.7 -1.3**
comp=Z,100nm,1.0s,mb5.8,baz=10,slow=6.5
NOA NORSAR Array B 67.68 353 P **P 14 04 28.9 -1.1**
comp=Z,23nm,0.7s,mb5.3,baz=10,slow=6.4,SNR=75
NOA PKPPKP 14 32 57.4
comp=Z,5.1nm,1.1s,baz=174,slow=2.9,SNR=4.2
NOA LR LR 14 37 42.4
comp=Z,5μm,19.5s,MS5.8,baz=350,slow=39
ELN Prospectdale 67.86 58 *e*P **P 14 04 31.3 -0.2**
NAO01 NORSAR Array S 67.90 354 P **P 14 04 29.7 -1.6**
comp=Z,22nm,0.8s,mb5.2
NAO01 LR LR
comp=Z,6μm,20.0s,MS5.8
CHRT Chiangrai 67.94 275⇑P **P 14 04 31.5 -0.7**
comp=Z,737nm,1.0s,mb6.7
BLA Blacksburg 68.05 58 *e*P **P 14 04 31.7 -1.0**
BLA pmax pmax
comp=Z,112nm,1.1s,mb5.8
BLA MLR MLR
comp=Z,19μm,21.0s,MS6.3
BLA Blacksburg 68.05 58 *e*P **P 14 04 31.7 -1.0**
comp=Z,112nm,1.1s,mb5.8
BLA LR LR
comp=Z,19μm,21.0s,MS6.3
SDKM Sandakan 68.05 251 P **P 14 04 33.1 +0.2**
KKM Kota Kinabalu 68.31 252 P **P 14 04 34.6 0.0**
KKM Kota Kinabalu 68.31 252 *e*P **P 14 04 33.9 -0.7**
comp=Z,466nm,1.5s,mb6.3
KKM LR LR
comp=Z,4μm,20.0s,MS5.7
MSVF Nonsavu 68.62 181 PFAKE 14 04 50.0 +14
MSVF LR LR
comp=Z,11μm,20.0s,MS6.1
SHL Shillong 68.64 284 *e*x x 14 04 50.0
SHL *e*S S 14 13 38.0 +0.6
BER Bergen 68.66 357 *e*P **P 14 04 36.3 +0.2**
BER *e*S S 14 13 39.9 +3.3
KKTK Khon Kaen 68.67 270⇓P **P 14 04 37.0 +0.2**
comp=Z,1μm,1.0s,mb6.7
MOS Moscow 68.67 338 *e*P **P 14 04 33.0 -3.3**
MOS *e* 14 04 57.4
MOS *e*S S 14 13 33.2 -3.7
MOS *e*SS SS 14 17 55.5 -5.0
MOS *e*SSS 14 21 10.8
MOS pmax pmax
comp=Z,492nm,1.4s,mb6.2
MOS pmax pmax
comp=Z,1μm,2.2s,mb6.4
MOS MLR MLR
comp=N,22μm,17.0s,MS6.6
MOS MLR MLR
comp=Z,27μm,17.0s,MS6.5
MOS MLR MLR
comp=E,18μm,17.0s,MS6.6
TSM Tawau 68.72 249 P **P 14 04 37.2 0.0**
OSL Oslo 68.81 354 *e*P **P 14 04 37.2 +0.1**
CBN Corbin 68.90 55 PFAKE 14 04 50.0 +12
CBN LR LR
comp=Z,18μm,21.0s,MS6.3
BRAL Brewton 68.95 67 *e*P **P 14 04 37.7 -0.7**
comp=Z,143nm,0.6s,mb6.1
BRAL LR LR
comp=Z,6μm,20.0s,MS5.8
LRW Lerwick 69.03 360 *e*P **P 14 04 38.8 +0.4**
LRW AMb AMB 14 04 40.0
comp=Z,95nm,1.5s,mb5.5
LRW AMS AMS 14 34 25.5
comp=Z,6μm,17.1s,MS5.9
KONO Kongsberg 69.17 354⇑*i*P **P 14 04 38.3 -1.1**
KONO AMB AMB 14 04 40.9
comp=Z,74nm,1.2s,mb5.5
KONO *e*S S 14 13 43.2 +0.5
KONO AMS AMS 14 43 48.8
comp=Z,6μm,19.4s,MS5.9
KONO Kongsberg 69.17 354 *e*P **P 14 04 38.5 -0.8**
KONO pmax pmax
comp=Z,93nm,0.9s,mb5.7
KONO MLR MLR
comp=Z,7μm,19.0s,MS5.9
KONO Kongsberg 69.17 354 *e*P **P 14 04 38.5 -0.8**
comp=Z,93nm,0.9s,mb5.7
KONO LR LR
comp=Z,7μm,19.0s,MS5.9
GOGA Godfrey 69.21 62 *e*P **P 14 04 38.5 -1.5**
GOGA pmax pmax
comp=Z,83nm,1.0s,mb5.6
GOGA MLR MLR
comp=Z,12μm,22.0s,MS6.1
GOGA Godfrey 69.21 62 *e*P **P 14 04 38.5 -1.5**
comp=Z,83nm,1.0s,mb5.6
GOGA LR LR
comp=Z,12μm,22.0s,MS6.1
CHG Chiang Mai 69.25 274⇑P **P 14 04 39.2 -1.2**
comp=Z,11nm,0.7s,mb4.9
CHTO Chiang Mai 69.25 274 *e*P **P 14 04 39.2 -1.2**
CHTO pmax pmax
comp=Z,141nm,1.1s,mb5.8
CHTO MLR MLR
comp=Z,6μm,19.0s,MS5.8
CHTO Chiang Mai 69.25 274 *e*P **P 14 04 39.2 -1.2**
comp=Z,141nm,1.1s,mb5.8
CHTO LR LR
comp=Z,6μm,19.0s,MS5.8
CHTO Chiang Mai 69.25 274 P **P 14 04 41.1 +0.7**
SNR=37
CHTO P 14 04 41.1
SNR=37
OBN Obninsk 69.49 338 P **P 14 04 42.1 +0.7**
comp=Z,1μm,1.1s,mb6.8,SNR=16
OBN Obninsk 69.49 338*c i*P **P 14 04 41.2 -0.2**
OBN *i* 14 05 03.6
OBN *i* 14 07 18.7
OBN *i* S S 14 13 47.4 +0.8
OBN *i* PPS 14 14 26.7
OBN *i* SS SS 14 18 12.2 -0.9
OBN pmax pmax
comp=Z,461nm,1.6s,mb6.2
OBN MLR MLR
comp=Z,23μm,17.0s,MS6.5
OBN Obninsk 69.49 338 *e*P **P 14 04 40.4 -1.0**
comp=Z,335nm,1.1s,mb6.2
OBN LR LR
comp=Z,24μm,20.0s,MS6.4
TAOE Nuku Hiva Isla 69.51 136 *e*S S 14 13 44.5 -3.2
comp=Z,19μm,26.2s
TAOE *e*LR LR 14 25 46.9
comp=Z,27μm,21.9s,baz=340
CM31 Chiang Mai Arr 69.52 274 *e*P **P 14 04 41.0 -1.1**
comp=Z,39nm,0.7s,mb5.4
CM31 LR LR
comp=Z,4μm,19.0s,MS5.7
CMAR Chiang Mai Arr 69.52 274 P **P 14 04 41.3 -0.8**

comp=Z,28nm,0.8s,mb5.2,baz=29,slow=6.2,SNR=110
CMAR PKPPKP 14 32 50.7
comp=Z,2.5nm,1.0s,baz=237,slow=3.7,SNR=8.8
CMAR LR LR 14 39 17.3
comp=Z,6μm,18.7s,MS5.8,baz=235,slow=40
JSC Jenkinsville 69.78 60 *e*P **P 14 04 42.2 -1.3**
TAPN Taplejung 69.84 289 *e*P **P 14 04 44.5 +0.5**
comp=Z,2μm,1.2s,mb6.9
AGT Agartala 70.27 284 *e*x x 14 04 41.0
AGT *e*x x 14 05 15.0
BDT Bhumibol Dam 70.39 273 P **P 14 04 47.0 -0.4**
comp=Z,38nm,0.9s,mb5.3
GUN Gumba 70.51 290 *e*P **P 14 04 48.7 +0.6**
comp=Z,2μm,1.0s,mb7.0
COW Cow Castle Cre 70.76 61 *e*P **P 14 04 50.3 +0.8**
RSC Scourie 70.78 2⇑ *e*P **P 14 04 49.5 +0.3**
RAMN Ramite 70.80 289 *e*P **P 14 04 50.1 +0.3**
comp=Z,2μm,1.1s,mb7.0
NST Nakhon Sawan 70.86 271 P **P 14 04 50.5 +0.2**
CNNC Cliffs of the 70.87 57 PFAKE 14 05 00.0 +10
CNNC LR LR
comp=Z,21μm,21.0s,MS6.4
KKN Kakani 70.95 291 *e*P **P 14 04 51.1 +0.3**
comp=Z,1μm,1.2s,mb6.8
PKI Pulchoki 71.04 290 *e*P **P 14 04 51.6 +0.3**
comp=Z,2μm,1.2s,mb6.8
PKIN Phulchoki 71.04 290 *e*P **P 14 04 51.6 +0.3**
comp=Z,975nm,0.9s,mb6.7
RRH Rhenigidale 71.16 3⇑ *e*P **P 14 04 51.9 +0.4**
DMN Daman 71.19 291 *e*P **P 14 04 52.6 +0.4**
comp=Z,1μm,1.2s,mb6.7
ISAL Salakas 71.21 344 *e*P **P 14 04 51.8 -0.1**
RRR Rubha Reidh 71.25 3⇑ *e*P **P 14 04 52.3 +0.2**
NHSC New Hope 71.26 60 *e*P **P 14 04 53.9 +1.3**
comp=Z,312nm,1.3s,mb6.1
NHSC LR LR
comp=Z,16μm,19.0s,MS6.3
IDID Didziasalis 71.35 344 *e*P **P 14 04 52.4 -0.3**
IIGN Ignalina 71.40 344 *e*P **P 14 04 53.0 0.0**
MCD Coleburn Disti 71.58 1 *e*P **P 14 04 53.4 -0.7**
KAC Achnashellach 71.62 2 *e*P **P 14 04 54.9 +0.5**
MDO Dochfour 71.70 2 *e*P **P 14 04 54.3 -0.5**
NACGM Naroch 71.73 343 *e*P **P 14 04 52.0 -3.0**
KPL Plockton 71.78 3 *e*P **P 14 04 55.2 0.0**
KPL AMb AMB 14 04 56.2
comp=Z,112nm,2.1s,mb5.4
KPL AMS AMS 14 39 21.7
comp=Z,7μm,19.9s,MS5.9
VRHR Novokhopersk 71.81 333 *e*P **P 14 04 56.5 +0.9**
VRHR *e**PP pP 14 05 05.1 +0.3
VRHR *i* PPP 14 09 19.7
VRHR *e*S S 14 14 13.8 +0.1
VRHR pmax pmax
comp=Z,260nm,1.1s,mb6.1
VRHR pmax pmax
comp=N,210nm,1.3s
VRHR pmax pmax
comp=E,100nm,1.4s
VRHR smax
comp=N,940nm,7.7s
VRHR smax
comp=Z,100nm,3.1s
VRHR smax
comp=E,820nm,7.0s
VRHR MLR MLR
comp=N,11μm,16.0s,MS6.2
VRHR MLR MLR
comp=Z,15μm,16.0s,MS6.4
VRHR MLR MLR
comp=E,3μm,15.0s,MS6.2
MME1 Meikle Cairn 71.85 1 *e*P **P 14 04 55.6 -0.1**
VOR Voronezh 71.91 335⇓ *i*P **P 14 04 53.5 -2.6**
VOR pmax pmax
comp=Z,400nm,2.0s,mb6.0
KSB Sheil Bridge 71.91 2 *e*P **P 14 04 55.5 -0.6**
COEN Coen 71.91 216 *e*P **P 14 04 56.5 0.0**
comp=Z,1μm,1.3s,mb6.7
MICGM Minsk 71.91 343⇑ *e*P **P 14 04 54.0 -2.1**
MNK Minsk 71.92 343 *ce*P **P 14 04 54.0 -2.2**
MNK *e*PPP 14 09 20.0
MNK *e*S S 14 14 10.0 -4.9
MNK *e*SS SS 14 18 46.0 -4.3
MNK pmax pmax
comp=Z,140nm,1.0s,mb5.8
MNK pmax pmax
comp=N,240nm,1.4s
MNK MLR MLR
comp=E,18μm,16.0s,MS6.5
MNK MLR MLR
comp=N,17μm,18.0s,MS6.5
MNK MLR MLR
comp=Z,31μm,18.0s,MS6.6
PMOR Pomariorio Ree 72.05 146 *e*P **P 14 04 58.6 +1.3**
comp=Z,256nm,1.5s,mb5.9
KAR1 Arisaig 72.19 3 *e*P **P 14 04 57.1 -0.7**
MUD Monsted U'grnd 72.38 354⇑ *i*P **P 14 04 59.4 +0.5**
MUD
comp=Z,7μm,19.0s
VSR Storozhevoye 72.38 335 *e*P **P 14 05 00.2 +1.2**
VSR *e**PP pP 14 05 07.6 -0.6
VSR *i* PPP 14 09 26.9
VSR *e*S S 14 14 20.5 +0.3
VSR pmax pmax
comp=Z,220nm,1.1s,mb6.0
VSR pmax pmax
comp=N,170nm,1.4s
VSR pmax pmax
comp=E,90nm,1.8s
VSR smax
comp=N,860nm,7.6s
VSR smax
comp=Z,140nm,3.2s
VSR smax
comp=E,670nm,6.7s
VSR MLR MLR
comp=N,16μm,16.0s,MS6.4
VSR MLR MLR
comp=Z,22μm,16.0s,MS6.5
VSR MLR MLR
comp=E,7μm,17.0s,MS6.4
BTM Bintulu 72.44 253 P **P 14 05 00.2 +0.3**
PTH Pithoragarh 72.57 295 *e*P **P 14 05 00.8 +0.3**
PTH *e*x x 14 06 40.0
COP Copenhagen 72.89 352⇑ *i*P **P 14 05 01.7 -0.2**
comp=E,25nm,0.9s,mb5.1
COP *i* S S 14 14 26.4 +0.5
COP
comp=Z,3μm,19.0s
SDNR Sundarnagar 72.90 299 *e*P **P 14 05 03.1 +0.7**
EBH Black Hill 72.92 1 *e*P **P 14 05 01.4 -0.7**
EAB Aberfoyle 72.96 2 *e*P **P 14 05 02.1 -0.2**
SMLA Simla 73.08 299 *i*P **P 14 05 00.0 -3.5**
SMLA *i* S S 14 14 25.6 -3.2
SUW Suwalki 73.20 345 *e*P **P 14 05 03.0 -0.8**
SUW *e*PcP PcP 14 05 20.1 -0.1
SUW LMZ 14 35 56.5
comp=Z,13μm,24.8s
SUW Suwalki 73.20 345 *e*P **P 14 05 03.0 -0.8**
SUW *e* 14 05 20.1
SUW Suwalki 73.20 345 *e*P **P 14 05 03.5 -0.3**
comp=Z,114nm,0.9s,mb5.8
DDI Dehra Dun 73.20 297⇑ *i*P **P 14 05 02.5 -1.7**
DDI *e*x x 14 09 05.0
BSD Bornholm Skovb 73.22 350⇑ *i*P **P 14 05 02.7 -1.2**
BSD pmax pmax
comp=Z,28nm,0.8s,mb5.2
BSD MLR MLR
comp=Z,8μm,20.0s,MS6.0
BSD Bornholm Skovb 73.22 350⇑ *i*P **P 14 05 02.7 -1.2**
comp=Z,28nm,0.8s,mb5.2
BSD
comp=Z,8μm,20.0s
EDI Edinburgh 73.24 1 *e*P **P 14 05 04.4 +0.4**
EDI AMb AMB 14 05 12.8
comp=Z,95nm,5.4s
EDI AMS AMS 14 36 14.1
comp=Z,5μm,22.7s,MS5.7
ESY Stoneypath 73.26 1 *e*P **P 14 05 03.0 -1.1**
BHK Bhakra 73.27 299 *e*P **P 14 05 03.4 -1.2**
EAU Auchinoon 73.32 1⇑ *e*P **P 14 05 04.9 +0.4**
PGBU Glenifferbraes 73.33 2 *e*P **P 14 05 04.7 +0.2**
PGBU AMb AMB 14 05 05.7
comp=Z,143nm,1.6s,mb5.7
PGBU AMS AMS 14 37 44.9
comp=Z,5μm,17.8s,MS5.8

EBL Broad Law 73.40 1 *e*P **P 14 05 05.1 +0.2**
NNT Nongplab 73.44 270 P **P 14 05 06.0 +0.2**
VHO Vista Hermosa 73.46 83 *i*P **P 14 05 06.0 +0.1**
SBUM Sibu 73.56 253 P **P 14 05 05.7 -0.8**
DZM Mont Dzumac 73.74 192 *e*P **P 14 05 09.1 +1.9**
comp=Z,273nm,1.4s,mb6.0
DZM *e*S S 14 14 35.4 -0.7
comp=Z,20μm,26.9s
DZM *e*LR LR 14 27 50.4
comp=Z,27μm,23.1s
ESK Eskdalemuir 73.85 1 P **P 14 05 08.4 +0.8**
comp=Z,432nm,0.9s,mb6.4,SNR=7.3
ESK Eskdalemuir 73.85 1 *e*P **P 14 05 07.4 -0.2**
ESK *e* 14 05 22.0
ESK pmax pmax
comp=Z,107nm,1.1s,mb5.7
ESK MLR MLR
comp=Z,8μm,21.0s,MS6.0
ESK Eskdalemuir 73.85 1 *e*P **P 14 05 07.4 -0.2**
comp=Z,107nm,1.1s,mb5.7
ESK *e*PcP PcP 14 05 21.9 -1.1
ESK LR LR
comp=Z,8μm,21.0s,MS6.0
PPT Papeete 73.86 149 *e*S S 14 14 34.7 -2.9
comp=Z,35μm,28.0s
PPT *e*SS SS 14 19 20.4 -2.2
comp=Z,5μm,24.2s
PPT *e*LR LR 14 27 37.7
comp=Z,26μm,24.2s,baz=342
PPT Papeete 73.86 149 LR LR 14 31 54.8
comp=Z,13μm,19.7s,MS6.2,baz=319,slow=31
RGN Rugen 73.94 351 *e*P **P 14 05 08.6 +0.5**
comp=Z,185nm,1.3s,mb5.8
ECK Cauldkaine Hil 73.99 1 *e*P **P 14 05 07.2 -1.2**
GAL1 Galloway 74.28 2 *e*P **P 14 05 09.8 -0.3**
GAL1 AMb AMB 14 05 11.0
comp=Z,111nm,4.5s
GAL1 AMS AMS 14 37 44.7
comp=Z,6μm,20.3s,MS5.8
XAL Allendale 74.32 1 *e*P **P 14 05 10.5 +0.2**
DWPF Disney 74.35 65 *e*P **P 14 05 11.2 +0.2**
comp=Z,84nm,0.9s,mb5.7
DWPF LR LR
comp=Z,7μm,20.0s,MS6.0
RAR Rarotonga 74.51 159 PFAKE 14 05 20.0 +8.3
RAR LR LR
comp=Z,17μm,20.0s,MS6.3
CMIG Matias Romero 74.60 82 *i*P **P 14 05 11.6 -0.9**
KBL Kabul 74.74 306⇑ *i*P **P 14 05 12.2 -1.0**
KBL pmax pmax
comp=Z,445nm,1.1s,mb6.3
KBL Kabul 74.74 306⇑ *i*P **P 14 05 12.2 -1.0**
comp=Z,445nm,1.1s,mb6.3
GKP Gorka Klasztor 74.77 349 *e*P **P 14 05 12.7 -0.3**
GKP LMZ 14 36 33.9
comp=Z,13μm,24.5s
BSEG Bad Segeberg 74.80 353 *e*P **P 14 05 13.7 +0.5**
comp=Z,70nm,1.0s,mb5.5
BSEG *e*S S 14 14 47.4 -0.1
GMM Mts of Mourne 74.87 3 *e*P **P 14 05 13.5 0.0**
NDI New Delhi 74.92 297 *e*P **P 14 05 14.0 -0.3**
NDI *e*x x 14 14 46.0
DMUB Kingscourt 75.18 3 *e*P **P 14 05 15.4 +0.1**
KAPI Kappang 75.22 242 P **P 14 05 15.0 -1.1**
comp=Z,677nm,1.0s,mb6.5,SNR=11
AKASG Malin Array Be 75.24 341 P **P 14 05 14.5 -1.3**
comp=Z,12nm,0.3s,mb5.3,baz=23,slow=5.8,SNR=65
AKASG PP PP 14 08 02.8 -0.8
comp=Z,8.4nm,0.9s,baz=24,slow=9.0,SNR=4.5
AKASG S S 14 14 51.0 -1.5
comp=Z,0.4nm,0.4s,baz=21,slow=12,SNR=4.3
AKASG PKPPKP 14 32 37.9
comp=Z,0.2nm,0.3s,baz=196,slow=1.7,SNR=4.7
AKASG LR LR 14 42 32.5
comp=Z,10μm,19.0s,MS6.1,baz=10.0,slow=39
AKASG Malin Array Be 75.24 341 P **P 14 05 14.5 -1.3**
AKASG 14 08 02.8
AKASG S S 14 14 51.0 -1.5
AKBB Malin Array Si 75.24 341⇑ *e*P **P 14 05 14.6 -1.2**
WAR Warsaw 75.25 346 *e*P **P 14 05 17.2 +1.5**
WAR LMZ 14 36 28.8
comp=Z,11μm,23.9s
KIEV Kiev 75.25 341⇑ *e*P **P 14 05 14.5 -1.3**
KIEV pmax pmax
comp=Z,115nm,0.9s,mb5.8
KIEV MLR MLR
comp=Z,7μm,20.0s,MS6.0
KIEV Kiev 75.25 341⇑ *e*P **P 14 05 14.5 -1.3**
comp=Z,115nm,0.9s,mb5.8
KIEV LR LR
comp=Z,7μm,20.0s,MS6.0
KAKA Kakadu 75.28 227 *e*P **P 14 05 14.3 -2.1**
comp=Z,78nm,0.9s,mb5.6
KAKA *ep*P pP 14 05 27.3 +1.7
KAKA Kakadu 75.28 227 *e*P **P 14 05 14.6 -1.8**
comp=Z,2μm,1.3s,mb6.9
KAKA *e* 14 05 26.9
KSM Kuching 75.48 254 P **P 14 05 17.3 -0.3**
KSM Kuching 75.48 254⇑ *i*P **P 14 05 16.6 -1.0**
comp=Z,394nm,1.6s,mb6.1
KSM *e* 14 05 29.2
KSM LR LR
comp=Z,2μm,19.0s,MS5.5
LHO Holmfirth 75.64 0 *e*P **P 14 05 17.6 -0.4**
DCN Croghan 75.72 4 *e*P **P 14 05 18.4 0.0**
DSB Dublin 75.85 3 *e*P **P 14 05 19.8 +0.6**
comp=Z,172nm,1.4s,mb5.8
WIT Witteveen 76.16 355 *e*P **P 14 05 22.1 +1.2**
comp=Z,382nm,1.6s,mb6.1
NRDL Niedersach Rie 76.25 353 *e*P **P 14 05 21.5 0.0**
comp=Z,41nm,1.1s,mb5.3
NRDL *e*S S 14 15 01.1 -2.5
BWNR Bhubaneshwar 76.28 285 *ex* x 14 05 14.0
TEIG Tepich 76.30 75 LR LR 14 41 31.0
comp=Z,6μm,20.5s,MS5.9,baz=313,slow=38
IBBN Ibbenburen 76.60 354 *e*P **P 14 05 24.5 +1.0**
comp=Z,154nm,1.2s,mb5.8
IBBN *e*S S 14 15 05.2 -2.2
CLZ Clausthal 76.88 353 *e*P **P 14 05 25.6 +0.6**
comp=Z,70nm,1.1s,mb5.5
CLZ *e*S S 14 15 09.8 -0.6
CLZ Clausthal 76.88 353 *e*P **P 14 05 25.6 +0.6**
CLZ *e*S S 14 15 09.8 -0.6
CLZ pmax pmax
comp=Z,70nm,1.1s,mb5.5
KTGM Kuala Trenggan 76.88 262 P **P 14 05 26.0 +0.4**
CCIG Comitan 76.92 80 *e*P **P 14 05 26.5 +0.7**
WTSB Winterswijk 77.00 355 *e*P **P 14 05 25.7 0.0**
comp=Z,73nm,1.1s,mb5.5
LVV L'vov 77.09 344 *e*P **P 14 05 26.2 -0.1**
LVV *e*S S 14 15 15.6 +2.8
HTR Trewern Hill 77.09 1 *e*P **P 14 05 25.5 -0.7**
MAK Makhachkala 77.12 326 *e*P **P 14 05 27.7 +1.1**
MAK *e* 14 05 40.1
MAK *i* 14 08 22.2
MAK *e*PPP 14 10 13.1
MAK *e*S S 14 15 15.2 +1.8
MAK *i* 14 15 40.7
MAK pmax pmax
comp=Z,944nm,1.3s,mb6.6
MAK pmax pmax
comp=E,910nm,1.8s
MAK pmax pmax
comp=N,633nm,1.2s
MAK pmax pmax
comp=Z,2μm,1.6s,mb6.7
MAK smax
comp=N,2μm,6.2s
MAK smax
comp=E,2μm,4.8s
MAK MLR MLR
comp=N,31μm,18.0s
MAK MLR MLR
comp=Z,32μm,17.0s,MS6.7
VAN Vannovskaya 77.17 316 *e*P **P 14 05 27.7 +0.8**
CLL Collm 77.17 351 *e*P **P 14 05 26.5 -0.2**
comp=Z,50nm,1.3s,mb5.3
CLL *e*S S 14 15 09.7 -3.9
CLL Collm 77.17 351⇑ *i*P **P 14 05 25.9 -0.8**
CLL *e* pP 14 05 35.0 -1.0
CLL *e*S S 14 15 16.0 +2.4
CLL pmax pmax
comp=Z,10μm,19.2s,MS6.2

CLL Collm 77.17 351⇑ *i*P **P 14 05 25.9 -0.8**
comp=Z,50nm,1.3s,mb5.3
CLL *e* pP 14 05 35.0 -1.0
CLL *e* 14 05 42.0
CLL *e* 14 05 56.0
CLL *e*PP PP 14 08 24.0 +4.2
CLL *e*PPP 14 10 12.0
CLL *e*S S 14 15 16.0 +2.4
CLL *e*PPS 14 16 07.0
CLL *e*SS SS 14 20 18.0 +7.9
CLL *e*(SSS) 14 24 12.0
CLL *e* 14 26 12.0
CLL Lm 14 42 00.0
comp=N,7μm,18.8s
CLL Lm 14 42 00.0
comp=E,6μm,18.2s
CLL Lm 14 42 00.0
comp=Z,10μm,19.2s
ABKT Ailbek 77.18 316 P **P 14 05 27.9 +0.9**
comp=Z,523nm,1.2s,mb6.3,SNR=48
KSP Ksiaz 77.26 349 *e*P **P 14 05 25.2 -2.0**
KSP *e*S S 14 15 15.2 +0.5
KSP LMZ 14 39 07.8
comp=Z,15μm,22.4s
KSP Ksiaz 77.26 349⇑ *e*P **P 14 05 26.1 -1.1**
KSP *e* 14 08 21.5
KSP *e*PPP 14 10 11.5
KSP *e*S S 14 15 14.5 -0.2
KSP *e*SS SS 14 20 16.0 +4.5
OJC Ojcow 77.40 346 *e*P **P 14 05 27.1 -0.9**
OJC *e*PcP PcP 14 05 39.8 +1.4
OJC *e*PP PP 14 08 24.3 +2.6
OJC *e*S S 14 15 14.3 -1.8
OJC *e*SS SS 14 20 07.1 -6.4
OJC L 14 42 16.4
comp=Z,15nm,19.6s
OJC Ojcow 77.40 346 *e*P **P 14 05 27.1 -0.9**
OJC *e* 14 05 39.8
OJC *e* 14 08 24.3
OJC *e*S S 14 15 14.3 -1.8
OJC MLR MLR
comp=Z,15μm,19.6s,MS6.3
BUG Bochum--Univer 77.50 355 *e*P **P 14 05 28.5 0.0**
comp=Z,50nm,1.1s,mb5.4
BUG *e*S S 14 15 16.4 -0.8
BRG Berggiesshubel 77.50 350 *e*P **P 14 05 28.6 0.0**
comp=Z,52nm,1.4s,mb5.3
BRG *e*S S 14 15 14.8 -2.5
BRG Berggiesshubel 77.50 350 *e*P **P 14 05 28.1 -0.4**
comp=Z,67nm,1.5s,mb5.4
BRG *i* PCP PcP 14 05 39.0 +0.2
comp=Z,34nm,1.2s
BRG PP PP 14 08 20.0 -2.6
BRG *i* 14 10 15.0
BRG S S 14 15 18.0 +0.7
BRG SS SS 14 20 21.0 +5.9
BRG *e* 14 31 31.4
comp=Z,2.2nm,1.1s
BRG *e*PKPPKP 14 32 26.1
comp=Z,2.5nm,0.8s
BRG
comp=N,6μm,19.3s
BRG
comp=E,6μm,17.2s
BRG
comp=Z,7μm,18.2s
BRG Berggiesshubel 77.50 350 *e*P **P 14 05 28.1 -0.5**
BRG *i* 14 05 39.0
BRG 14 08 20.0
BRG *i* 14 10 15.0
BRG S S 14 15 18.0 +0.7
BRG SS SS 14 20 21.0 +5.9
BRG pmax pmax
comp=Z,40nm,1.5s,mb5.1
BRG pmax pmax
comp=Z,21nm,1.2s,mb4.9
BRG pmax pmax
comp=Z,1.0nm,1.1s
BRG pmax pmax
comp=Z,2.0nm,0.8s
BRG MLR MLR
comp=N,4μm,19.3s,MS5.9
BRG MLR MLR
comp=E,3μm,17.2s,MS5.9
BRG MLR MLR
comp=Z,4μm,18.2s,MS5.8
KWP Kalwaria Pacla 77.50 344 *e*P **P 14 05 29.5 +0.9**
KWP LMZ 14 39 47.6
comp=Z,21μm,23.4s
KWP Kalwaria Pacla 77.50 344 *e*P **P 14 05 28.3 -0.3**
comp=Z,521nm,1.0s,mb6.4
KWP LR LR
comp=Z,16μm,22.0s,MS6.3
KWP Kalwaria Pacla 77.50 344⇑ *i*P **P 14 05 29.5 +0.9**
HGH Gray Hill 77.54 1 *e*P **P 14 05 29.0 +0.2**
SWN1 Swindon 77.67 0 AMS AMS 14 38 50.3
comp=Z,5μm,23.8s,MS5.7
DPC Dobruska-Polom 77.74 349 *e*P **P 14 05 30.4 +0.5**
DPC *e* 14 08 27.2
DPC MLR MLR
comp=Z,7μm,16.8s,MS6.1
DPC Dobruska-Polom 77.74 349 *e*P **P 14 05 30.4 +0.5**
DPC *e*PP PP 14 08 27.2 +2.6
DPC *e*x x 14 10 24.8
DPC *e*S S 14 15 50.7 +31
DPC *e*x x 14 20 55.1
DPC AMS AMS 14 45 20.0
comp=Z,7μm,16.8s
RAC Raciborz 77.76 347 *e*P **P 14 05 30.0 0.0**
RAC MLR MLR
comp=Z,10μm,22.0s,MS6.1
RAC MLR MLR
comp=N,14μm,18.0s,MS6.4
RAC MLR MLR
comp=E,8μm,18.0s,MS6.4
PVCC Panska Ves 77.78 350 *e*P **P 14 05 30.9 +0.8**
PVCC *e*S S 14 15 53.3 +33
PVCC MLR MLR
comp=Z,9μm,20.1s,MS6.1
PVCC Panska Ves 77.78 350 *e*P **P 14 05 30.9 +0.8**
PVCC *e*PP PP 14 08 36.0 +11
PVCC *e*x x 14 15 53.3
PVCC *e*x x 14 21 06.3
PVCC AMS AMS 14 43 40.0
comp=Z,9μm,20.1s
KIV Kislovodsk 77.88 329 P **P 14 05 31.7 +0.9**
comp=Z,1μm,1.1s,mb6.8,SNR=46
KIV Kislovodsk 77.88 329 *c i*P **P 14 05 31.5 +0.7**
KIV *e* 14 08 26.3
KIV *e*PPP 14 10 15.3
KIV *e*S S 14 15 22.1 +0.6
KIV *e*SS SS 14 20 21.4 +0.3
KIV *e*SSS 14 23 47.8
KIV pmax pmax
comp=Z,280nm,1.1s,mb6.1
KIV pmax pmax
comp=Z,835nm,6.1s
KIV Kislovodsk 77.88 329⇑ *e*P **P 14 05 31.1 +0.4**
comp=Z,375nm,1.3s,mb6.2
KIV LR LR
comp=Z,10μm,20.0s,MS6.2
KIV Kislovodsk 77.88 329 P **P 14 05 31.6 +0.8**
SNR=101
KIV P 14 05 31.6
SNR=101
UBBA Unterbreizbach 77.92 353 *e*P **P 14 05 31.1 +0.2**
comp=Z,83nm,1.5s,mb5.4
UBBA *e*S S 14 15 20.5 -1.3
STHS Stebnicka Huta 77.95 345 *e*P **P 14 05 32.0 +0.9**
STHS pmax pmax
comp=Z,77nm,1.1s,mb5.5
STHS Stebnicka Huta 77.95 345 *e*P **P 14 05 32.0 +0.9**
comp=Z,77nm,1.1s,mb5.5
STHS Stebnicka Huta 77.95 345 *e*P **P 14 05 32.0 +0.9**
MOX Moxa 77.96 352 *ce*P **P 14 05 31.1 0.0**
comp=Z,66nm,1.5s,mb5.3
MOX *e*S S 14 15 30.0 +7.8
MOX
comp=Z,4μm,18.0s

MOX	**Moxa**	**77.96 352**	*e*P		**P**	**14 05 31.1 0.0**
	comp=Z,48nm,1.3s,mb5.3					
MOX			*e*S		S	14 15 20.1 -2.1
MOX	**Moxa**	**77.96 352**⇑	*e*P		**P**	**14 05 31.1 0.0**
MOX			*e*S		S	14 15 30.0 +7.8
MOX			pmax		pmax	
	comp=Z,66nm,1.5s,mb5.3					
MOX			MLR		MLR	
	comp=Z,4μm,18.0s,MS5.8					
OKC	**Ostrava-Krasne**	**78.01 347**	*e*P		**P**	**14 05 31.9 +0.5**
OKC			*e*			14 08 34.8
OKC			*e*S		S	14 15 43.7 +21
OKC			MLR		MLR	
	comp=Z,9μm,17.8s,MS6.1					
OKC	**Ostrava-Krasne**	**78.01 347**	*e*P		**P**	**14 05 31.9 +0.5**
OKC			*e*PP		PP	14 08 34.8 +8.0
OKC			*e*x		x	14 10 26.9
OKC			*e*SKS			14 15 43.7
OKC			*e*x		x	14 20 45.3
OKC			AMS		AMS	14 43 50.0
	comp=Z,9μm,17.8s					
TFO1	**Folkestone**	**78.06 358**	AMS		AMS	14 43 56.0
	comp=Z,6μm,19.8s,MS5.9					
AJM	**Ajmer**	**78.06 297**	*i* P		**P**	**14 05 32.0 -0.1**
NIE	**Niedzica**	**78.10 346**	*e*P		**P**	**14 05 32.8 +0.9**
TANN	**Tannenbergstha**	**78.11 351**	*e*P		**P**	**14 05 32.1 +0.2**
	comp=Z,125nm,2.0s,mb5.5					
TANN			*e*S		S	14 15 21.5 -2.3
MORC	**Moravsky Berou**	**78.15 348**	*e*P		**P**	**14 05 31.8 -0.4**
	comp=Z,78nm,1.4s,mb5.5					
MORC	**Moravsky Berou**	**78.15 348**⇑	*i*P		**P**	**14 05 32.1 -0.1**
HTL	**Hartland**	**78.16 2**	AMS		AMS	14 43 08.8
	comp=Z,5μm,21.8s,MS5.8					
BEBN	**Eben Emael**	**78.22 356**	P		**P**	**14 05 32.7 +0.1**
	comp=Z,19nm,1.5s,mb4.8					
PRA	**Prague**	**78.24 350** ⇑	P		**P**	**14 05 33.0 +0.3**
PRA			AMS		AMS	14 42 55.0
HGN	**Heimansgroeve**	**78.25 355**	*e*P		**P**	**14 05 31.2 -1.5**
	comp=Z,65nm,1.5s,mb5.3					
HGN	**Heimansgroeve**	**78.25 355**	*e*S		S	14 15 27.3 +2.1
HGN	**Heimansgroeve**	**78.25 355**	*e*SS		SS	14 20 34.8 +8.6
KOLS	**Kolonicke sedl**	**78.25 344**	*e*P		**P**	**14 05 32.7 -0.1**
KOLS			*e*S		S	14 15 25.2 -0.2
KOLS			pmax		pmax	
	comp=Z,95nm,1.1s,mb5.6					
KOLS			MLR		MLR	
	comp=Z,11μm,24.0s,MS6.1					
KOLS	**Kolonicke sedl**	**78.25 344**	*e*P		**P**	**14 05 32.7 -0.1**
	comp=Z,94nm,1.1s,mb5.6					
KOLS			*e*S		S	14 15 25.2 -0.2
KOLS			*e*SS		SS	14 20 41.3 +15
KOLS			LR		LR	
	comp=Z,11μm,24.0s,MS6.1					
KOLS	**Kolonicke sedl**	**78.25 344**	*e*P		**P**	**14 05 32.7 -0.1**
KOLS			*e*S		S	14 15 25.2 -0.2
KOLS			*e*SS		SS	14 20 41.3 +15
UCC	**Uccle**	**78.28 356**	P		**P**	**14 05 32.7 -0.2**
NKC	**Novy Kostel**	**78.29 351**	*e*P		**P**	**14 05 33.2 +0.3**
NKC			*e*S		S	14 15 51.7 +26
NKC			MLR		MLR	
	comp=Z,6μm,18.2s,MS6.0					
NKC	**Novy Kostel**	**78.29 351**	*e*P		**P**	**14 05 33.2 +0.3**
NKC			*e*x		x	14 08 40.6
NKC			*e*x		x	14 10 40.5
NKC			*e*SKS			14 15 51.7
NKC			*e*SS		SS	14 20 45.0 +18
NKC			AMS		AMS	14 43 00.0
	comp=Z,6μm,18.2s					
PRU	**Pruhonice**	**78.31 350**	*e*P		**P**	**14 05 33.7 +0.6**
PRU			*e*			14 08 27.9
PRU			*e*S		S	14 15 39.3 +13
PRU			MLR		MLR	
	comp=Z,10μm,19.9s,MS6.1					
PRU	**Pruhonice**	**78.31 350**	*e*P		**P**	**14 05 33.7 +0.6**
PRU			*e*PP		PP	14 08 27.9 -1.5
PRU			*e*x		x	14 10 34.8
PRU			*e*SKS			14 15 39.3
PRU			*e*x		x	14 20 42.1
PRU			AMS		AMS	14 42 40.0
	comp=Z,10μm,19.9s					
MEM	**Membach**	**78.39 355**	P		**P**	**14 05 34.0 +0.5**
	comp=Z,41nm,1.3s,mb5.2					
KULM	**Kulim**	**78.46 264**	P		**P**	**14 05 34.4 0.0**
KULM	**Kulim**	**78.46 264**	*e*P		**P**	**14 05 33.8 -0.7**
	comp=Z,79nm,1.0s,mb5.6					
KULM			*e*			14 05 45.5
KULM			LR		LR	
	comp=Z,3μm,19.0s,MS5.6					
ZEI	**Tsey**	**78.54 328**	*e*P		**P**	**14 05 34.8 +0.4**
ZEI			pmax		pmax	
	comp=Z,457nm,1.0s,mb6.4					
ZEI			pmax		pmax	
	comp=N,215nm,0.7s					
ZEI			pmax		pmax	
	comp=E,480nm,1.5s					
UZH	**Uzhgorod**	**78.54 344**⇑	*i*P		**P**	**14 05 35.4 +1.0**
UZH			*i*			14 05 39.6
UZH			*i*			14 05 53.8
UZH			*i*			14 08 33.0
UZH			*e*S		S	14 15 25.0 -3.5
UZH			*i* PS			14 16 20.0
UZH			*i* SS		SS	14 20 29.0 -1.8
UZH			MLR		MLR	
	comp=N,7μm,21.5s,MS6.2					
UZH			MLR		MLR	
	comp=E,9μm,21.5s,MS6.2					
UZH			MLR		MLR	
	comp=Z,5μm,21.5s,MS5.8					
SNF	**Seneffe**	**78.57 356**	P		**P**	**14 05 35.4 +0.9**
	comp=Z,28nm,1.7s,mb4.9					
MENF	**Mencas**	**78.59 358**	*e*P		**P**	**14 05 33.8 -0.8**
BCLA	**Clavier**	**78.62 356**	P		**P**	**14 05 35.0 +0.2**
	comp=Z,22nm,1.1s,mb5.0					
TNS	**Taunus Mts**	**78.63 354**	*e*P		**P**	**14 05 35.1 +0.3**
	comp=Z,107nm,1.4s,mb5.6					
TNS			*e*S		S	14 15 26.3 -3.1
TNS	**Taunus Mts**	**78.63 354**	*e*P		**P**	**14 05 35.1 +0.3**
TNS			*e*S		S	14 15 26.3 -3.1
TNS			pmax		pmax	
	comp=Z,107nm,1.4s,mb5.6					
LIKS	**Likavka**	**78.64 347**	*e*P		**P**	**14 05 36.9 +2.0**
LIKS			pmax		pmax	
	comp=Z,58nm,1.1s,mb5.4					
LIKS	**Likavka**	**78.64 347**	*e*P		**P**	**14 05 36.9 +2.0**
	comp=Z,58nm,1.1s,mb5.4					
LIKS	**Likavka**	**78.64 347**	*e*P		**P**	**14 05 36.9 +2.0**
ANN	**Anapa**	**78.71 333**	*i* P		**P**	**14 05 33.2 -2.2**
DYA	**Yadsworthy**	**78.73 2**	*e*P		**P**	**14 05 34.6 -0.7**
DYA			AMb		AMB	14 05 37.5
	comp=Z,109nm,1.3s,mb5.6					
DYA			AMS		AMS	14 44 25.3
	comp=Z,5μm,19.4s,MS5.8					
VRAC	**Vranov**	**78.73 348** ⇑	P		**P**	**14 05 36.2 +0.8**
VRAC	**Vranov**	**78.73 348**⇑	*i*P		**P**	**14 05 36.2 +0.8**
ROTZ	**Rotzenmuhle**	**78.77 351**	*e*P		**P**	**14 05 36.1 +0.5**
	comp=Z,45nm,1.2s,mb5.3					
ROTZ			*e*S		S	14 15 29.2 -1.8
KIS	**Kishinev**	**78.84 340**⇑	*i*P		**P**	**14 05 34.0 -2.0**
	comp=Z,600nm,2.0s,mb6.2					
KIS	**Kishinev**	**78.84 340**	*i* PcP		PcP	14 05 50.0 +5.3
KIS	**Kishinev**	**78.84 340**	*e*PP		PP	14 08 30.0 -3.8
KIS	**Kishinev**	**78.84 340**⇑	*i*P		**P**	**14 05 34.0 -2.0**
KIS			*i*			14 05 50.0
KIS			*e*			14 08 30.0
KIS			*i* S		S	14 15 30.0 -1.7
KIS			pmax		pmax	
	comp=Z,60nm,2.0s,mb5.2					
KIS			pmax		pmax	
	comp=Z,2μm,10.0s					
KIS			pmax		pmax	
	comp=Z,2μm,16.0s					
KIS			smax			
	comp=N,2μm,10.0s					
KIS			smax			
	comp=N,17μm,18.0s					
KIS			smax			
	comp=E,12μm,17.0s					
KIS			smax			
	comp=Z,23μm,20.0s					
ONI	**Oni**	**78.84 328**	P		**P**	**14 05 36.6 +0.5**
ONI			S		S	14 15 36.0 +4.1
TREC	**Trest**	**78.88 349**	*e*P		**P**	**14 05 36.9 +0.7**
TREC			*e*			14 08 36.9
TREC			*e*S		S	14 15 54.9 +23
TREC			MLR		MLR	
	comp=Z,10μm,17.3s,MS6.2					
TREC	**Trest**	**78.88 349**	*e*P		**P**	**14 05 36.9 +0.7**
TREC			*e*PP		PP	14 08 36.9 +2.8
TREC			*e*SKS			14 15 54.9
TREC			*e*SS		SS	14 21 01.2 +25
TREC			AMS		AMS	14 46 10.0
	comp=Z,10μm,17.3s					
KEH	**Kehvi**	**78.94 328**	P		**P**	**14 05 36.7 +0.1**
GRA1	**Grafenberg Arr**	**78.94 352**	*e*P		**P**	**14 05 37.1 +0.6**
	comp=Z,106nm,1.2s,mb5.7					
GRA1			*e*PP		PP	14 08 38.5 +3.9
GRA1			*e*S		S	14 15 31.1 -1.6
GRA1			LR		LR	
	comp=Z,8μm,21.0s,MS6.0					
GRF	**Grafenberg Arr**	**78.94 352**	*e*P		**P**	**14 05 37.1 +0.6**
	comp=Z,106nm,1.2s,mb5.7					
GRF			*e*PP		PP	14 08 38.5 +3.9
GRF			*e*S		S	14 15 31.1 -1.6
GRF			*e*L			14 42 19.2
	comp=Z,8μm,21.0s					
GRF	**Grafenberg Arr**	**78.94 352**	*e*P		**P**	**14 05 37.1 +0.6**
GRF			*e*			14 08 38.5
GRF			*e*S		S	14 15 31.1 -1.6
GRF			pmax		pmax	
	comp=Z,106nm,1.2s,mb5.7					
GRF			MLR		MLR	
	comp=Z,8μm,21.0s,MS6.0					
GRF	**Grafenberg Arr**	**78.94 352**	*e*P		**P**	**14 05 37.1 +0.6**
GRF			*e*			14 08 38.5
GRF			*e*S		S	14 15 31.1 -1.6
GRF			pmax		pmax	
	comp=Z,106nm,1.2s,mb5.7					
GRF			MLR		MLR	
	comp=Z,8μm,21.0s,MS6.0					
GIVF	**Givet**	**78.96 356**	*e*P		**P**	**14 05 36.7 +0.1**
	comp=Z,231nm,1.7s,mb5.5					
GIVF	**Givet**	**78.96 356**	*e*P		**P**	**14 05 36.7 +0.1**
GIVF			pmax		pmax	
	comp=Z,116nm,1.7s,mb5.5					
GIVF	**Givet**	**78.96 356**	*e*P		**P**	**14 05 36.7 +0.1**
	comp=Z,116nm,1.7s,mb5.5					
BUR08	**Bucovina Ar. S**	**78.97 342**	*e*P		**P**	**14 05 36.4 -0.3**
DOU	**Dourbes**	**78.97 356**	P		**P**	**14 05 36.9 +0.2**
	comp=Z,25nm,1.4s,mb5.0					
KECS	**Kecovo**	**78.98 345**	*e*P		**P**	**14 05 37.6 +0.8**
KECS			pmax		pmax	
	comp=Z,40nm,1.0s,mb5.3					
KECS	**Kecovo**	**78.98 345**	*e*P		**P**	**14 05 37.6 +0.8**
	comp=Z,40nm,1.0s,mb5.3					
KECS	**Kecovo**	**78.98 345**	*e*P		**P**	**14 05 37.5 +0.7**
TRPA	**Tarpa**	**78.98 344**⇑	*i*P		**P**	**14 05 37.7 +0.9**
BURAR	**Bucovina Array**	**78.99 342**	P		**P**	**14 05 38.9 +2.0**
BHPL	**Bhopal**	**79.00 293**	*e*P		**P**	**14 05 36.6 -0.6**
BAIF	**Baives**	**79.03 356**	*e*P		**P**	**14 05 37.5 +0.5**
	comp=Z,125nm,1.1s,mb5.4					
BAIF	**Baives**	**79.03 356**	*e*P		**P**	**14 05 37.5 +0.5**
BAIF			pmax		pmax	
	comp=Z,62nm,1.1s,mb5.5					
BAIF	**Baives**	**79.03 356**	*e*P		**P**	**14 05 37.5 +0.5**
	comp=Z,62nm,1.1s,mb5.5					
ABH	**Alteburg**	**79.03 354**	*e*P		**P**	**14 05 37.4 +0.4**
SOC	**Sochi**	**79.14 331***c*	*i*P		**P**	**14 05 37.5 -0.3**
SOC			*e**PP		pP	14 05 46.4 -0.6
SOC			*e*			14 08 36.3
SOC			*e*PPP			14 10 25.0
SOC			*e*S		S	14 15 36.6 +1.5
SOC			*e**SS		sS	14 15 50.9 +0.5
SOC			pmax		pmax	
	comp=Z,322nm,1.9s,mb5.9					
SOC			pmax		pmax	
	comp=Z,1μm,9.1s					
GOR	**Gori**	**79.16 327**	P		**P**	**14 05 39.5 +1.6**
TBLG	**Delisi**	**79.17 327**	*i* P		**P**	**14 05 38.8 +0.8**
TBLG	**Delisi**	**79.17 327**	P		**P**	**14 05 38.8 +0.8**
MTA	**Mtatsminda**	**79.19 327**	P		**P**	**14 05 38.5 +0.4**
MTA			S		S	14 15 38.7 +3.1
MYKOM	**Kota Tinggi**	**79.19 259**	P		**P**	**14 05 39.4 +1.0**
KOLL	**Kolacno**	**79.20 347**	*e*P		**P**	**14 05 39.5 +1.5**
KOLL	**Kolacno**	**79.20 347**	*e*P		**P**	**14 05 39.5 +1.5**
TOD	**Tromm**	**79.22 353**	*e*P		**P**	**14 05 38.4 +0.3**
VYHS	**Vyhne**	**79.22 347**	*e*P		**P**	**14 05 38.8 +0.7**
VYHS			*e*			14 08 37.7
VYHS			*e*S		S	14 15 31.8 -4.0
VYHS			*e*SS		SS	14 20 47.0 +6.0
VYHS			pmax		pmax	
	comp=Z,41nm,1.2s,mb5.2					
VYHS			MLR		MLR	
	comp=Z,7μm,21.9s,MS6.0					
VYHS	**Vyhne**	**79.22 347**	*e*P		**P**	**14 05 38.8 +0.7**
	comp=Z,41nm,1.2s,mb5.2					
VYHS			*e*PP		PP	14 08 37.7 +0.7
VYHS			*e*S		S	14 15 31.8 -4.0
VYHS			*e*SS		SS	14 20 47.0 +6.0
VYHS			LR		LR	
	comp=Z,7μm,21.9s,MS6.0					
VYHS	**Vyhne**	**79.22 347**	*e*P		**P**	**14 05 38.8 +0.7**
VYHS			*e*PP		PP	14 08 37.7 +0.7
VYHS			*e*S		S	14 15 31.8 -4.0
VYHS			*e*SS		SS	14 20 47.0 +6.0
RUP	**Ruppelstein**	**79.24 355**	*e*P		**P**	**14 05 38.5 +0.3**
BMR	**Baia Mare**	**79.26 343**	P		**P**	**14 05 39.9 +1.6**
KHC	**Kasperske Hory**	**79.26 350**	*e*P		**P**	**14 05 38.8 +0.5**
KHC			*e*			14 08 34.8
KHC			*e*S		S	14 15 42.9 +6.7
KHC			MLR		MLR	
	comp=Z,9μm,19.6s,MS6.1					
KHC	**Kasperske Hory**	**79.26 350**	*e*P		**P**	**14 05 38.8 +0.5**
KHC			*e*PP		PP	14 08 34.8 -2.5
KHC			*e*x		x	14 10 38.2
KHC			*e*S		S	14 15 42.9 +6.7
KHC			*e*SS		SS	14 20 58.1 +17
KHC			AMS		AMS	14 43 50.0
	comp=Z,9μm,19.6s					
QUE	**Quetta**	**79.27 305**	*e*P		**P**	**14 05 27.0 -12**
QUE			*e*S		S	14 15 31.0 -5.9
WET	**Wettzell**	**79.32 351**	*e*P		**P**	**14 05 39.0 +0.4**
	comp=Z,87nm,1.6s,mb5.4					
WET	**Wettzell**	**79.32 351**	*e*P		**P**	**14 05 39.0 +0.4**
WET			pmax		pmax	
	comp=Z,87nm,1.6s,mb5.4					
WLF	**Walferdange**	**79.33 355**	P		**P**	**14 05 39.9 +1.2**
	comp=Z,30nm,1.6s,mb5.0					
WLF	**Walferdange**	**79.33 355**	*e*P		**P**	**14 05 39.4 +0.7**
	comp=Z,43nm,1.2s,mb5.2					
WLF			*e*S		S	14 15 37.4 +0.5
WLF	**Walferdange**	**79.33 355**	*e*P		**P**	**14 05 38.8 +0.1**
WLF			pmax		pmax	
	comp=Z,23nm,0.9s,mb5.1					
WLF			MLR		MLR	
	comp=Z,8μm,19.0s,MS6.1					
WLF	**Walferdange**	**79.33 355**	*e*P		**P**	**14 05 38.8 +0.1**
	comp=Z,23nm,0.9s,mb5.1					
WLF			LR		LR	
	comp=Z,8μm,19.0s,MS6.1					
KGM	**Kluang**	**79.34 260**	P		**P**	**14 05 39.9 +0.7**
FRIM	**Kepong**	**79.44 262**	P		**P**	**14 05 40.1 +0.3**
LEOM	**Leova**	**79.46 340** ⇓	P		**P**	**14 05 41.9 +2.5**
LEOM	**Leova**	**79.46 340**⇓	*i*P		**P**	**14 05 41.9 +2.5**
SIM	**Simferopol'**	**79.48 335***ce*P			**P**	**14 05 40.9 +1.3**
SIM			*e*			14 08 38.0
SIM			*e*S		S	14 15 48.0 +9.4
SIM			*e*PS			14 16 32.0
SIM			pmax		pmax	
	comp=Z,3μm,20.3s					
GEC2	**GERESS Array S**	**79.53 350**	*e*P		**P**	**14 05 39.8 0.0**
	comp=Z,93nm,1.5s,mb5.5					
GEC2			*e*S		S	14 15 35.0 -4.0
GEC2	**GERESS Array S**	**79.53 350**	*e*P		**P**	**14 05 39.8 0.0**
GEC2			*e*S		S	14 15 35.0 -4.0
GEC2			pmax		pmax	
	comp=Z,93nm,1.5s,mb5.5					
GERES	**GERESS Array B**	**79.53 350**	P		**P**	**14 05 39.3 -0.5**
	comp=Z,9.2nm,0.8s,mb4.8,baz=29,slow=3.0,SNR=35					
GERES			PKPPKP			14 32 37.2
	comp=Z,0.6nm,0.6s,baz=277,slow=1.1,SNR=5.6					
GERES			LR		LR	14 44 54.3
	comp=Z,9μm,18.8s,MS6.1,baz=17,slow=39					
KTD	**Kalmit**	**79.56 354**	*e*P		**P**	**14 05 40.3 +0.4**
PSZ	**Piszkesteto**	**79.62 346**	*e*P		**P**	**14 05 40.1 -0.2**
	comp=Z,110nm,1.1s,mb5.7					
PSZ			LR		LR	
	comp=Z,12μm,19.0s,MS6.2					
PSZ	**Piszkesteto**	**79.62 346**⇑	*e*P		**P**	**14 05 41.1 +0.8**
PSZ	**Piszkesteto**	**79.62 346**⇑	*i*P		**P**	**14 05 41.5 +1.2**
NGP	**Nagpur**	**79.66 291**	*e*P		**P**	**14 05 36.5 -4.4**
NGP			*e*S		S	14 15 34.8 -6.5
VIS	**Vishakhapatnam**	**79.74 285**	*i* P		**P**	**14 05 41.7 +0.3**
VIS			*e*x		x	14 05 55.2
	comp=Z,255nm,1.5s					
VIS			*i* S		S	14 15 42.6 +0.5
ZST	**Bratislava**	**79.76 348**	*e*P		**P**	**14 05 42.3 +1.3**
ZST			*e*S		S	14 15 39.6 -1.8
ZST			*e*SS		SS	14 20 49.3 +0.3
ZST			pmax		pmax	
	comp=Z,70nm,1.0s,mb5.5					
ZST			MLR		MLR	
	comp=Z,16μm,17.3s,MS6.4					
ZST	**Bratislava**	**79.76 348**	*e*P		**P**	**14 05 42.3 +1.3**
	comp=Z,70nm,1.0s,mb5.5					
ZST			*e*S		S	14 15 39.6 -1.8
ZST			*e*SS		SS	14 20 49.3 +0.3
ZST			LR		LR	
	comp=Z,16μm,17.3s,MS6.4					
ZST	**Bratislava**	**79.76 348**	*e*P		**P**	**14 05 42.3 +1.3**
ZST			*e*S		S	14 15 39.6 -1.8
ZST			*e*SS		SS	14 20 49.3 +0.3
BBSR	**BB Station**	**79.84 50**	P		**P**	**14 05 42.5 +0.8**
BBSR			LR		LR	
	comp=Z,6μm,19.0s,MS6.0					
LANF	**Langenberg**	**79.91 354**	*e*P		**P**	**14 05 42.1 +0.3**
STU	**Stuttgart**	**80.02 353**	*e*P		**P**	**14 05 43.0 +0.6**
	comp=Z,37nm,0.9s,mb5.3					
STU	**Stuttgart**	**80.02 353**	*e*P		**P**	**14 05 42.2 -0.2**
STU			pmax		pmax	
	comp=Z,67nm,0.7s,mb5.7					
STU	**Stuttgart**	**80.02 353**	*e*P		**P**	**14 05 42.1 -0.3**
	comp=Z,68nm,0.7s,mb5.7					
EIDS	**Eidsvold**	**80.04 205**	*e*P		**P**	**14 05 41.9 -0.7**
	comp=Z,188nm,1.4s,mb5.8					
RAO	**Raoul Island**	**80.14 177**	PFAKE			14 05 50.0 +6.9
RAO			LR		LR	
	comp=Z,11μm,21.0s,MS6.2					
BUD	**Budapest**	**80.18 346**	*e*P		**P**	**14 05 44.0 +0.7**
CONA	**Conrad Observa**	**80.18 348**⇑	*i*P		**P**	**14 05 44.1 +0.8**
	comp=Z,106nm,1.8s,mb5.5,SNR=25					
CSNA	**Conrad Observa**	**80.18 348**⇑	*i*P		**P**	**14 05 44.2 +0.9**
	comp=Z,94nm,1.7s,mb5.5					
DRGR		**80.25 344** ⇑	P		**P**	**14 05 45.0 +1.3**
DRGR		**80.25 344**⇑	*i*P		**P**	**14 05 45.0 +1.3**
VRI	**Vrincioaia**	**80.36 341** ⇑	P		**P**	**14 05 46.7 +2.4**
VRI	**Vrincioaia**	**80.36 341**⇑	*i*P		**P**	**14 05 46.7 +2.4**
PLOR	**Plostina**	**80.39 341** ⇑	P		**P**	**14 05 46.1 +1.6**
PLOR	**Plostina**	**80.39 341**⇑	*i*P		**P**	**14 05 46.1 +1.6**
FLN	**La Foliniere**	**80.43 360**	*e*P		**P**	**14 05 44.6 0.0**
	comp=Z,205nm,1.1s,mb5.7,baz=5.8					
FLN			*e*MLR		MLR	
	comp=Z,9μm,20.2s,MS5.8					
FLN	**La Foliniere**	**80.43 360**	*e*P		**P**	**14 05 44.6 0.0**
FLN			pmax		pmax	
	comp=Z,103nm,1.1s,mb5.7					
FLN			MLR		MLR	
	comp=Z,9μm,20.3s,MS6.1					
FLN	**La Foliniere**	**80.43 360**	*e*P		**P**	**14 05 44.6 0.0**
	comp=Z,103nm,1.1s,mb5.7					
FLN			LR		LR	
	comp=Z,9μm,20.3s,MS6.1					
FUR	**Furstenfeldbru**	**80.45 352**	*e*P		**P**	**14 05 45.7 +1.0**
	comp=Z,83nm,1.1s,mb5.6					
FUR	**Furstenfeldbru**	**80.45 352**	*e*P		**P**	**14 05 45.7 +1.0**
FUR			pmax		pmax	
	comp=Z,83nm,1.1s,mb5.6					
MOA	**Molln**	**80.45 349**⇑	*i*P		**P**	**14 05 45.2 +0.4**
	comp=Z,34nm,1.4s,mb5.1					
BCA	**Borcka**	**80.47 329**	*e*P		**P**	**14 05 44.6 -0.4**
CDF	**Champ du Feu**	**80.51 354**	*e*P		**P**	**14 05 45.2 +0.1**
	comp=Z,55nm,1.0s,mb5.2					
CDF	**Champ du Feu**	**80.51 354**	*e*P		**P**	**14 05 45.2 +0.1**
CDF			pmax		pmax	
	comp=Z,28nm,1.0s,mb5.2					
CDF	**Champ du Feu**	**80.51 354**	*e*P		**P**	**14 05 45.2 +0.1**
	comp=Z,28nm,1.0s,mb5.1					
BFO	**Black Forest**	**80.53 354**	P		**P**	**14 05 45.8 +0.6**
	comp=Z,179nm,1.3s,mb5.8,SNR=8.2					
BFO	**Black Forest**	**80.53 354**	*e*P		**P**	**14 05 45.2 0.0**
	comp=Z,56nm,1.4s,mb5.3					
BFO			*e*S		S	14 15 46.3 -3.2
BFO	**Black Forest**	**80.53 354**	*e*P		**P**	**14 05 45.2 0.0**
BFO			*e*S		S	14 15 46.3 -3.2
BFO			pmax		pmax	
	comp=Z,56nm,1.4s,mb5.3					
MEZF	**Maizieres J'vi**	**80.55 356**	*e*P		**P**	**14 05 45.7 +0.4**
	comp=Z,121nm,1.1s,mb5.5					
MEZF	**Maizieres J'vi**	**80.55 356**	*e*P		**P**	**14 05 45.7 +0.4**
	comp=Z,121nm,1.1s,mb5.7					
DBOC	**Borcka**	**80.55 329**⇑	*i*P		**P**	**14 05 45.6 +0.2**
TLCR		**80.55 339** ⇓	*i*P		**P**	**14 05 47.7 +2.3**
TLCR		**80.55 339**⇓	*i*P		**P**	**14 05 47.7 +2.3**
GNI	**Garni**	**80.58 326**	*e*P		**P**	**14 05 47.1 +1.6**
GNI	**Garni**	**80.58 326***c*	*i*P		**P**	**14 05 47.2 +1.6**
GNI			pmax		pmax	
	comp=Z,562nm,1.7s					
GNI			MLR		MLR	
	comp=Z,14μm,21.0s					
GNI	**Garni**	**80.58 326**⇑	*i*P		**P**	**14 05 47.0 +1.4**
	comp=Z,544nm,1.4s,mb6.3					
GNI			LR		LR	
	comp=Z,16μm,20.0s,MS6.4					
LDF	**La Druitiere**	**80.59 359**	*e*P		**P**	**14 05 45.3 -0.2**
	comp=Z,122nm,1.0s,mb5.5					
LDF	**La Druitiere**	**80.59 359**	*e*P		**P**	**14 05 45.3 -0.2**
LDF			pmax		pmax	
	comp=Z,61nm,1.0s,mb5.5					
LDF	**La Druitiere**	**80.59 359**	*e*P		**P**	**14 05 45.3 -0.2**
	comp=Z,61nm,1.0s,mb5.5					
ARTV	**Artvin**	**80.61 328**⇑	*i*P		**P**	**14 05 46.4 +0.7**
CFR	**Carcaliu**	**80.71 339**	P		**P**	**14 05 47.9 +1.7**
ECH	**Echery**	**80.72 354**	*e*P		**P**	**14 05 46.2 0.0**
ECH	**Echery**	**80.72 354**	*e*P		**P**	**14 05 45.1 -1.1**
ECH			pmax		pmax	
	comp=Z,38nm,1.2s,mb5.2					
ECH			MLR		MLR	
	comp=Z,5μm,19.0s,MS5.9					
ECH	**Echery**	**80.72 354**	*e*P		**P**	**14 05 45.1 -1.1**
	comp=Z,38nm,1.2s,mb5.2					
ECH			LR		LR	
	comp=Z,5μm,19.0s,MS5.9					
SPAK	**Spaichingen-Ko**	**80.72 353**	*e*P		**P**	**14 05 46.6 +0.4**
KARS	**Kars**	**80.72 327**	*e*P		**P**	**14 05 47.6 +1.2**
RJOB	**Jochberg**	**80.72 350**	*e*P		**P**	**14 05 46.8 +0.6**
	comp=Z,27nm,1.0s,mb5.1					
RJOB			*e*S		S	14 15 50.2 -1.4
LIBD	**Limburg**	**80.75 354**	*e*P		**P**	**14 05 45.9 -0.5**
THEF	**They Montfort**	**80.77 355**	*e*P		**P**	**14 05 46.8 +0.3**
**GRR

HAU *e*MLR MLR
comp=Z,11µm,20.0s,MS5.9
HAU Haudompre 80.97 355 *e*P **P 14 05 47.6 0.0**
HAU pmax pmax
comp=Z,55nm,1.3s,mb5.3
HAU MLR MLR
comp=Z,11µm,20.0s,MS6.2
HAU Haudompre 80.97 355 *e*P **P 14 05 47.6 0.0**
comp=Z,55nm,1.3s,mb5.3
HAU LR LR
comp=Z,11µm,20.0s,MS6.2
FELD Feldberg im Sc 81.00 354 *e*P **P 14 05 48.0 +0.3**
MOF Molkenrain 81.08 354 *e*P **P 14 05 48.0 -0.1**
VOIR 81.11 342 ⇑P **P 14 05 49.3 +1.0**
VOIR 81.11 342 ⇑*i*P **P 14 05 49.3 +1.0**
HINF Hinteralfeld 81.13 355 *e*P **P 14 05 48.2 -0.2**
comp=Z,116nm,1.4s,mb5.3
HINF Hinteralfeld 81.13 355 *e*P **P 14 05 48.2 -0.2**
HINF pmax pmax
comp=Z,58nm,1.4s,mb5.3
HINF Hinteralfeld 81.13 355 *e*P **P 14 05 48.2 -0.2**
comp=Z,58nm,1.4s,mb5.3
RETA Reutte 81.17 352 ⇑*i*P **P 14 05 48.7 +0.1**
comp=Z,36nm,1.1s,mb5.2,SNR=9.1
HARR Harsova 81.22 339 ⇑P **P 14 05 50.5 +1.6**
HARR Harsova 81.22 339 ⇑*i*P **P 14 05 50.5 +1.6**
WATA Walderalm 81.24 351 ⇑*i*P **P 14 05 49.6 +0.6**
comp=Z,104nm,1.1s,mb5.7,SNR=10
QUIF Quistinic 81.26 1 *e*P **P 14 05 49.4 +0.3**
comp=Z,203nm,1.3s,mb5.6
QUIF Quistinic 81.26 1 *e*P **P 14 05 49.4 +0.3**
QUIF pmax pmax
comp=Z,101nm,1.3s,mb5.6
QUIF Quistinic 81.26 1 *e*P **P 14 05 49.4 +0.3**
comp=Z,101nm,1.3s,mb5.6
MOTA Moosalm 81.28 352 ⇑*i*P **P 14 05 49.5 +0.3**
comp=Z,73nm,1.0s,mb5.5,SNR=23
WTTA Wattenberg 81.31 351 ⇑*i*P **P 14 05 49.9 +0.6**
comp=Z,111nm,1.2s,mb5.7,SNR=23
KBA Koelnbreinsper 81.31 350 ⇑*i*P **P 14 05 49.9 +0.5**
comp=Z,182nm,0.9s,mb6.0,SNR=62
SQTA Sankt Quirin 81.39 351 ⇑*i*P **P 14 05 50.5 +0.7**
comp=Z,65nm,1.0s,mb5.5
BBS Basel-Blauen 81.44 354 *e*P **P 14 05 49.8 -0.3**
DAVA Damuels 81.44 352 ⇑*i*P **P 14 05 50.3 +0.3**
comp=Z,39nm,1.2s,mb5.2
PKSM Moragy 81.48 346 ⇑P **P 14 05 50.4 +0.1**
PKSM Moragy 81.48 346 ⇑*i*P **P 14 05 50.4 +0.1**
DYDN Diyadin 81.48 327 ⇑*i*P **P 14 05 52.4 +1.9**
SOKA Soboth 81.51 349 ⇑*i*P **P 14 05 51.2 +0.7**
comp=Z,130nm,1.1s,mb5.8
PERS Pernice 81.55 349 *e*P **P 14 05 51.0 +0.4**
CVD Cernavoda 81.56 339 ⇓P **P 14 05 52.7 +2.0**
CVD Cernavoda 81.56 339 ⇓*i*P **P 14 05 52.7 +2.0**
GZR Gura Zlata 81.59 343 ⇑P **P 14 05 51.4 +0.5**
GZR Gura Zlata 81.59 343 ⇑*i*P **P 14 05 51.4 +0.5**
LOMF Lomont 81.60 354 *e*P **P 14 05 51.2 +0.3**
TGUH Tegucigalpa,Un 81.63 78 *e*P **P 14 05 52.5 +1.0**
comp=Z,648nm,1.1s,mb6.5
TGUH LR LR
comp=Z,6µm,21.0s,MS5.9
FETA Feichten 81.63 352 ⇑*i*P **P 14 05 51.9 +0.8**
comp=Z,75nm,1.0s,mb5.6,SNR=31
AGRB Hanur-Agry 81.69 327 *e*P **P 14 05 53.1 +1.5**
MYKA Terra Mystica 81.72 350 ⇑*i*P **P 14 05 51.5 -0.1**
comp=Z,28nm,1.0s,mb5.2
ABTA Abfaltersbach 81.73 351 ⇑*i*P **P 14 05 52.0 +0.4**
comp=Z,73nm,1.1s,mb5.5,SNR=17
OBKA Obir 81.74 349 ⇑*i*P **P 14 05 52.2 +0.5**
comp=Z,101nm,1.1s,mb5.7,SNR=17
CLDR Caldiran 81.76 326 *e*P **P 14 05 52.7 +0.8**
LOR Lormes 81.83 357 *e*P **P 14 05 52.2 +0.1**
comp=Z,155nm,1.3s,mb5.5
LOR *e*MLR MLR
comp=Z,7µm,18.5s,MS5.8
LOR Lormes 81.83 357 *e*P **P 14 05 52.2 +0.1**
LOR pmax pmax
comp=Z,78nm,1.3s,mb5.5
LOR MLR MLR
comp=Z,7µm,18.5s,MS6.0
LOR Lormes 81.83 357 *e*P **P 14 05 52.2 +0.1**
comp=Z,78nm,1.3s,mb5.5
LOR LR LR
comp=Z,7µm,18.5s,MS6.0
ESPY Espiye-Giresun 81.87 331 *e*P **P 14 05 50.5 -1.9**
EZM Erzurum 81.95 328 *e*P **P 14 05 54.2 +1.3**
SSF Saint Saulge 82.05 357 *e*P **P 14 05 53.5 +0.2**
comp=Z,100nm,1.1s,mb5.3
SSF Saint Saulge 82.05 357 *e*P **P 14 05 53.5 +0.2**
SSF pmax pmax
comp=Z,50nm,1.1s,mb5.4
SSF Saint Saulge 82.05 357 *e*P **P 14 05 53.5 +0.2**
comp=Z,50nm,1.1s,mb5.4
GUMT Gumushane 82.05 330 *e*P **P 14 05 54.2 +0.8**
APPI Appiano 82.12 351 P **P 14 05 54.1 +0.4**
KOPT Kop Dagi 82.13 329 ⇑*i*P **P 14 05 55.4 +1.6**
LEGS Legarje 82.20 348 *e*P **P 14 05 53.9 -0.2**
DIKM Dikmen 82.23 333 *e*P **P 14 05 53.5 -0.8**
VOY Vojsko 82.29 349 *e*P **P 14 05 54.3 -0.2**
VOY *e* 14 05 56.2
VOY *e* 14 06 19.7
VOY *e* 14 06 36.8
AVF Avril sur Loir 82.32 357 *e*P **P 14 05 54.9 +0.2**
comp=Z,170nm,1.2s,mb5.6
AVF Avril sur Loir 82.32 357 *e*P **P 14 05 54.9 +0.2**
AVF pmax pmax
comp=Z,85nm,1.2s,mb5.5
AVF Avril sur Loir 82.32 357 *e*P **P 14 05 54.9 +0.2**
comp=Z,85nm,1.2s,mb5.5
CABF La Chapelle 82.38 355 *e*P **P 14 05 55.5 +0.5**
comp=Z,117nm,1.1s,mb5.4
CABF La Chapelle 82.38 355 *e*P **P 14 05 55.5 +0.5**
CABF pmax pmax
comp=Z,59nm,1.1s,mb5.4
CABF La Chapelle 82.38 355 *e*P **P 14 05 55.5 +0.5**
comp=Z,58nm,1.1s,mb5.4
KELT Kelkit 82.41 330 ⇑*i*P **P 14 05 56.4 +1.1**
VANB Van 82.43 326 *e*P **P 14 05 56.3 +0.9**
SMF Signal de Mont 82.45 356 *e*P **P 14 05 55.5 +0.1**
comp=Z,172nm,1.1s,mb5.6
SMF Signal de Mont 82.45 356 *e*P **P 14 05 55.5 +0.1**
SMF pmax pmax
comp=Z,86nm,1.1s,mb5.6
SMF Signal de Mont 82.45 356 *e*P **P 14 05 55.5 +0.1**
comp=Z,86nm,1.1s,mb5.6
KVT Kavak 82.53 333 *e*P **P 14 05 55.9 0.0**
BGF Bois d'Agland 82.57 357 *e*P **P 14 05 56.2 +0.2**
comp=Z,146nm,1.3s,mb5.6
BGF Bois d'Agland 82.57 357 *e*P **P 14 05 56.2 +0.2**
BGF pmax pmax
comp=Z,73nm,1.3s,mb5.5
BGF Bois d'Agland 82.57 357 *e*P **P 14 05 56.2 +0.2**
comp=Z,73nm,1.3s,mb5.5
MFF Saint Martin d 82.59 359 *e*P **P 14 05 56.3 +0.2**
comp=Z,116nm,1.0s,mb5.5
MFF Saint Martin d 82.59 359 *e*P **P 14 05 56.3 +0.2**
MFF pmax pmax
comp=Z,58nm,1.0s,mb5.6
MFF Saint Martin d 82.59 359 *e*P **P 14 05 56.3 +0.2**
comp=Z,58nm,1.0s,mb5.6
MABI Malga Bissina 82.61 352 P **P 14 05 56.3 +0.1**
BOJS Bojanci 82.64 348 *e*P **P 14 05 56.5 +0.1**
ERBA Erbaa 82.69 332 ⇑*i*P **P 14 05 57.9 +1.1**
HYB Hyderabad 82.85 289 ⇑*i*P **P 14 05 56.5 -1.4**
comp=Z,360nm,1.0s,mb6.4
HYB *e*S S 14 16 14.0 -0.4
HYB LR LR 14 46 00.0
comp=Z,18nm,20.0s
TCF Toulx Ste Croi 82.86 358 *e*P **P 14 05 57.7 +0.2**
comp=Z,60nm,1.1s,mb5.2
TCF Toulx Ste Croi 82.86 358 *e*P **P 14 05 57.7 +0.2**
TCF pmax pmax
comp=Z,30nm,1.1s,mb5.2
TCF Toulx Ste Croi 82.86 358 *e*P **P 14 05 57.7 +0.2**
comp=Z,30nm,1.1s,mb5.2
AGO Saint Agoulin 83.07 357 *e*P **P 14 05 59.4 +0.8**
TOKA Tokat 83.10 332 ⇑*i*P **P 14 05 59.8 +0.9**
PLDF La Plantade 83.13 357 *e*P **P 14 05 59.7 +0.8**
FITZ Fitzroy Crossi 83.17 230 *e*P **P 14 05 58.3 -1.0**
comp=Z,98nm,1.1s,mb5.8
FITZ *e*pP pP 14 06 11.4 +2.8
FITZ *e*S S 14 16 16.0 -1.3
FITZ Fitzroy Crossi 83.17 230 *e*P **P 14 05 57.9 -1.4**
comp=Z,304nm,1.2s,mb6.2
FITZ *e* 14 06 11.1

ILGA Ilgaz 83.21 334 ⇑*i*P **P 14 06 00.8 +1.3**
ORO Oropa 83.24 354 P **P 14 06 00.4 +0.9**
ORO pmax pmax
comp=Z,52nm,1.0s,mb5.5
ORO Oropa 83.24 354 P **P 14 06 00.4 +0.9**
comp=Z,52nm,1.0s,mb5.5
HAKT HAKKARI 83.25 326 ⇑*i*P **P 14 06 00.7 +1.0**
LATR Latur 83.25 291 *e*P **P 14 06 01.0 +1.0**
RSL Roselend 83.27 354 *e*P **P 14 06 00.5 +0.9**
SAFT Safranbolu 83.31 335 *e*P **P 14 06 01.0 +1.0**
SVSK Karacayir 83.32 331 *e*P **P 14 06 01.1 +1.1**
DIVS Divibare 83.33 345 P **P 14 06 02.1 +2.1**
PYM Petit Puy Mans 83.37 357 *e*P **P 14 05 59.5 -0.7**
BHJ Bhuj 83.38 299 *e*P **P 14 06 00.1 -0.4**
BHJ AMb AMB 14 06 04.4
comp=Z,198nm,1.8s,mb5.8
LPL La Plagne 83.43 354 *e*P **P 14 06 01.8 +1.3**
comp=Z,63nm,1.0s,mb5.3
LPL La Plagne 83.43 354 *e*P **P 14 06 01.8 +1.3**
LPL pmax pmax
comp=Z,32nm,1.0s,mb5.3
LPL La Plagne 83.43 354 *e*P **P 14 06 01.8 +1.3**
comp=Z,32nm,1.0s,mb5.3
BTMT Batman 83.45 327 *e*P **P 14 06 01.8 +1.1**
KEMA Kemaliye 83.45 330 ⇑*i*P **P 14 06 01.4 +0.7**
LPG La Plagne 83.45 354 *e*P **P 14 06 01.0 +0.4**
comp=Z,175nm,1.2s,mb5.7
LPG La Plagne 83.45 354 *e*P **P 14 06 01.0 +0.4**
LPG pmax pmax
comp=Z,88nm,1.2s,mb5.7
LPG La Plagne 83.45 354 *e*P **P 14 06 01.0 +0.4**
comp=Z,88nm,1.2s,mb5.7
PTK Pertek 83.51 329 *e*P **P 14 06 02.4 +1.4**
CUKT Cukurca 83.56 326 *e*P **P 14 06 02.1 +0.8**
JMB Yambol 83.64 340 P **P 14 06 04.4 +2.8**
CANT Cankiri 83.65 334 *e*P **P 14 06 02.1 +0.4**
GRN Grenoble 83.76 355 *e*P **P 14 06 03.4 +1.2**
CORM Corum 83.77 333 *e*P **P 14 06 03.5 +1.2**
GDM Grand'Maison 83.78 355 *e*P **P 14 06 03.6 +1.3**
SSB Saint Sauveur 83.79 356 *e*P **P 14 06 02.9 +0.6**
SSB Saint Sauveur 83.79 356 *e*P **P 14 06 02.3 0.0**
SSB pmax pmax
comp=Z,48nm,1.3s,mb5.5
SSB MLR MLR
comp=Z,5µm,21.0s,MS5.9
SSB Saint Sauveur 83.79 356 *e*P **P 14 06 02.3 0.0**
comp=Z,48nm,1.3s,mb5.5
SSB LR LR
comp=Z,5µm,21.0s,MS5.9
BEST Besiri 83.80 327 ⇑*i*P **P 14 06 03.7 +1.2**
ELDT Eldivan 83.81 334 ⇑*i*P **P 14 06 03.4 +0.9**
RJF Les Rejaudoux 83.86 358 *e*P **P 14 06 02.8 +0.1**
comp=Z,120nm,1.2s,mb5.6
RJF *e*MLR MLR
comp=Z,12µm,21.0s,MS6.0
RJF Les Rejaudoux 83.86 358 *e*P **P 14 06 02.8 +0.1**
RJF pmax pmax
comp=Z,60nm,1.2s,mb5.6
RJF MLR MLR
comp=Z,12µm,21.0s,MS6.2
RJF Les Rejaudoux 83.86 358 *e*P **P 14 06 02.8 +0.1**
comp=Z,60nm,1.2s,mb5.6
RJF LR LR
comp=Z,12µm,21.0s,MS6.2
LBL Lubilhac 83.88 357 *e*P **P 14 06 03.6 +0.8**
BNI Bardonecchia 83.90 354 PFAKE 14 06 10.0 +7.1
BNI LR LR
comp=Z,7µm,20.0s,MS6.0
DARE Darende-Malaty 83.95 330 *e*P **P 14 06 05.6 +2.3**
BOB Bobbio (Coli) 83.98 352 P **P 14 06 04.2 +0.9**
ELZG Elazig 84.00 329 ⇑*i*P **P 14 06 04.9 +1.4**
SVRC Sivrice-ELAZID 84.00 329 *e*P **P 14 06 05.0 +1.5**
ORIF Oris-en-Rattie 84.08 355 *e*P **P 14 06 04.9 +1.1**
comp=Z,91nm,1.0s,mb5.6
ORIF *e*MLR MLR
comp=Z,8µm,22.0s,MS5.8
ORIF Oris-en-Rattie 84.08 355 *e*P **P 14 06 04.9 +1.1**
ORIF pmax pmax
comp=Z,45nm,1.0s,mb5.5
ORIF Oris-en-Rattie 84.08 355 *e*P **P 14 06 04.9 +1.1**
comp=Z,46nm,1.0s,mb5.6
DIYA Diyarbakir 84.15 328 ⇑*i*P **P 14 06 05.0 +0.7**
VIVF Saint-Julien-I 84.20 356 *e*P **P 14 06 05.1 +0.7**
comp=Z,101nm,1.3s,mb5.5
VIVF Saint-Julien-I 84.20 356 *e*P **P 14 06 05.1 +0.7**
VIVF pmax pmax
comp=Z,50nm,1.3s,mb5.5
VIVF Saint-Julien-I 84.20 356 *e*P **P 14 06 05.1 +0.7**
comp=Z,50nm,1.3s,mb5.5
VTS Vitosha 84.21 342 P **P 14 06 03.4 -1.1**
MBDF Montbardon 84.22 354 *e*P **P 14 06 05.5 +1.0**
comp=Z,58nm,0.8s,mb5.5
MBDF Montbardon 84.22 354 *e*P **P 14 06 05.5 +1.0**
MBDF pmax pmax
comp=Z,29nm,0.8s,mb5.5
MBDF Montbardon 84.22 354 *e*P **P 14 06 05.5 +1.0**
comp=Z,29nm,0.8s,mb5.5
CAF Calviac 84.23 358 *e*P **P 14 06 05.2 +0.7**
comp=Z,200nm,1.3s,mb5.8
CAF Calviac 84.23 358 *e*P **P 14 06 05.2 +0.7**
CAF pmax pmax
comp=Z,100nm,1.3s,mb5.8
CAF Calviac 84.23 358 *e*P **P 14 06 05.2 +0.7**
comp=Z,100nm,1.3s,mb5.8
LFF La Frestale 84.24 359 *e*P **P 14 06 05.0 +0.4**
comp=Z,284nm,1.2s,mb6.0
LFF La Frestale 84.24 359 *e*P **P 14 06 05.0 +0.4**
LFF pmax pmax
comp=Z,142nm,1.2s,mb6.0
LFF La Frestale 84.24 359 *e*P **P 14 06 05.0 +0.4**
comp=Z,142nm,1.2s,mb6.0
MTDJ Mount Denham 84.25 68 *e*P **P 14 06 05.3 +0.2**
comp=Z,560nm,1.2s,mb6.6
MTDJ LR LR
comp=Z,5µm,21.0s,MS5.9
ZCCA Zocca 84.26 351 P **P 14 06 06.2 +1.5**
GTBY Guantanamo Bay 84.31 65 *e*P **P 14 06 04.9 -0.5**
comp=Z,58nm,1.0s,mb5.7
GTBY LR LR
comp=Z,8µm,22.0s,MS6.1
ASAR Alice Springs 84.34 221 P **P 14 06 04.3 -0.8**
comp=Z,12nm,0.7s,mb5.1,baz=23,slow=5.0,SNR=84
ASAR pP pP 14 06 17.3 +2.8
comp=Z,100nm,1.1s,baz=27,slow=4.1,SNR=25
ASAR PKKPbc PKKPbc 14 24 16.4 +0.1
comp=Z,0.5nm,0.5s,baz=198,slow=1.7,SNR=6.1
ASAR PKPPKP 14 32 24.8
comp=Z,0.5nm,0.7s,baz=178,slow=3.6,SNR=4.9
ASAR Alice Springs 84.34 221 P **P 14 06 04.4 -0.8**
ASAR *PP pP 14 06 17.3 +2.8
CDAG Cicekdag 84.36 333 ⇑*i*P **P 14 06 06.0 +0.6**
PLD Plovdiv 84.38 341 P **P 14 06 05.5 +0.1**
RKT Rikitea 84.42 138 *e*S S 14 16 25.7 -4.0
comp=Z,3µm,25.0s
RKT *e*SS SS 14 22 01.5 +0.5
comp=Z,3µm,26.0s
RKT *e*LR LR 14 32 32.5
comp=Z,15µm,23.5s,baz=329
FNVD Fontana Vidola 84.42 351 P **P 14 06 06.2 +0.6**
OCF Saint Nazaire 84.45 355 *e*P **P 14 06 07.0 +1.3**
OG26 St.-Nazaire-De 84.45 355 *e*P **P 14 06 07.0 +1.3**
SURF Saint Ours 84.46 354 *e*P **P 14 06 07.6 +1.9**
BR131 Keskin Array S 84.47 334 *e*P **P 14 06 05.3 -0.6**
comp=Z,108nm,1.0s,mb5.9
BR131 LR LR
comp=Z,4µm,20.0s,MS5.8
BRTR Keskin Array B 84.47 334 P **P 14 06 06.0 +0.1**
comp=Z,95nm,0.9s,mb5.9,baz=42,slow=1.9,SNR=210
BRTR PKPPKP 14 32 20.8
comp=Z,0.6nm,0.8s,baz=90,slow=1.2,SNR=3.9
BRTR LR LR 14 47 10.3
comp=Z,5µm,20.3s,MS5.8,baz=189,slow=38
ELBA Catalca 84.47 338 ⇓*i*P **P 14 06 05.8 -0.1**
MSL Mosul 84.50 326 *e*P **P 14 06 11.0 +4.9**
MSL *e*S S 14 16 36.0 +5.5
SEI Scarperia 84.51 351 P **P 14 06 08.1 +2.1**
comp=Z,285nm,0.7s,mb6.5
AKCD Akcadag 84.52 330 ⇑*i*P **P 14 06 07.3 +1.2**
SARI SarD1z-Kayseri 84.55 331 *e*P **P 14 06 08.7 +2.4**
LOD Lodumlu 84.56 334 *e*P **P 14 06 06.8 +0.5**
VMG Vicchio 84.59 351 P **P 14 06 09.4 +3.0**
comp=Z,276nm,1.1s,mb6.3
SFI Santa Sofia 84.61 351 P **P 14 06 08.4 +1.9**
PINB Pinarbasi 84.64 331 ⇑*i*P **P 14 06 07.6 +0.8**
ARMA Armidale 84.71 203 *e*P **P 14 06 07.9 +1.0**

ARMA *e*pP pP 14 06 20.2 +3.9
ARMA *e*S S 14 16 36.7 +4.4
ARMA Armidale 84.71 203 *e*P **P 14 06 07.8 +0.9**
comp=Z,201nm,1.3s,mb6.1
FSSB Fossombrone 84.72 350 P **P 14 06 07.0 -0.1**
POO Poona 84.75 293 *e*P **P 14 06 07.8 +0.3**
BBAL Bala 84.78 334 ⇑*i*P **P 14 06 07.9 +0.4**
TOUF Mont Tournerai 84.90 354 *e*P **P 14 06 08.7 +0.8**
AUTN L'Aution 84.90 354 *e*P **P 14 06 08.9 +0.9**
SAOF Saorge 84.90 354 *e*P **P 14 06 08.5 +0.5**
PIEI Pieia 84.90 350 P **P 14 06 08.9 +0.9**
PII Pisa 84.92 351 P **P 14 06 08.1 0.0**
PII pmax pmax
comp=Z,214nm,1.3s,mb6.1
PII Pisa 84.92 351 P **P 14 06 08.1 0.0**
comp=Z,214nm,1.3s,mb6.1
BADI Badiali 84.96 350 P **P 14 06 10.2 +1.9**
LUCF Luceram 85.01 354 *e*P **P 14 06 09.1 +0.6**
CDCA Citt' di Caste 85.01 350 P **P 14 06 10.8 +2.3**
URFA Urfa 85.01 329 *e*P **P 14 06 09.8 +1.1**
LASF Ste Croix 85.02 356 *e*P **P 14 06 08.9 +0.4**
comp=Z,112nm,1.1s,mb5.6
MVIF Mont Vial 85.02 354 *e*P **P 14 06 09.2 +0.6**
SBF Sospel 85.03 354 *e*P **P 14 06 08.8 +0.2**
comp=Z,281nm,1.0s,mb6.0
SBF Sospel 85.03 354 *e*P **P 14 06 08.8 +0.2**
SBF pmax pmax
comp=Z,140nm,1.0s,mb6.0
SBF Sospel 85.03 354 *e*P **P 14 06 08.8 +0.2**
comp=Z,140nm,1.0s,mb6.0
SMRF Simiane la Rot 85.03 355 *e*P **P 14 06 09.8 +1.2**
comp=Z,224nm,1.1s,mb5.9
SMRF Simiane la Rot 85.03 355 *e*P **P 14 06 09.8 +1.2**
comp=Z,224nm,1.1s,mb6.2
CSNT Castellina Chi 85.10 351 P **P 14 06 08.7 -0.3**
RDO Rodhopi 85.13 340 P **P 14 06 09.0 -0.2**
SNTG Esanatoglia 85.14 350 P **P 14 06 10.4 +1.2**
comp=Z,373nm,1.3s,mb6.4
SKO Skopje 85.14 343 *e*P **P 14 06 07.8 -1.4**
ATAB Bozova 85.16 329 ⇑*i*P **P 14 06 10.6 +1.2**
REVF Revere 85.16 354 *e*P **P 14 06 09.5 +0.2**
BORA Eskisehir 85.17 336 ⇑*i*P **P 14 06 09.4 0.0**
MURB Monte Urbino 85.17 350 P **P 14 06 11.6 +2.2**
CALN Calern 85.18 354 *e*P **P 14 06 09.9 +0.5**
SART Tekirdag 85.20 339 ⇑*i*P **P 14 06 09.2 -0.3**
ALN Alexandroupoli 85.25 340 P **P 14 06 11.3 +1.5**
GRTK Grand Turk 85.29 61 *e*P **P 14 06 10.6 +0.3**
comp=Z,170nm,1.2s,mb6.0
GRTK LR LR
comp=Z,7µm,21.0s,MS6.0
FRF La Foret Royal 85.39 354 *e*P **P 14 06 10.6 +0.2**
comp=Z,313nm,1.5s,mb5.9
FRF La Foret Royal 85.39 354 *e*P **P 14 06 10.6 +0.2**
FRF pmax pmax
comp=Z,156nm,1.5s,mb5.9
FRF La Foret Royal 85.39 354 *e*P **P 14 06 10.6 +0.2**
comp=Z,156nm,1.5s,mb5.9
KAD Karad 85.51 292 *e*P **P 14 06 10.5 -0.9**
SRS Serrai 85.56 341 P **P 14 06 09.6 -1.7**
VAY Valandovo 85.56 342 *e*P **P 14 06 09.7 -1.7**
KMRS Kahramanmaras 85.56 331 *e*P **P 14 06 11.8 +0.4**
MGAB Montegabbione 85.57 350 P **P 14 06 11.2 -0.1**
LMR La Mourre 85.62 354 *e*P **P 14 06 12.0 +0.4**
comp=Z,183nm,1.1s,mb5.9
LMR La Mourre 85.62 354 *e*P **P 14 06 12.0 +0.4**
LMR pmax pmax
comp=Z,92nm,1.1s,mb5.9
LMR La Mourre 85.62 354 *e*P **P 14 06 12.0 +0.4**
comp=Z,92nm,1.1s,mb5.9
ANDN Andirin 85.67 331 ⇑*i*P **P 14 06 12.8 +0.9**
EPON Pontenova 85.72 4 P **P 14 06 09.1 -3.0**
comp=Z,8.3nm,0.5s,mb5.2
KRUS Krusevo 85.76 343 *e*P **P 14 06 10.7 -1.6**
GAZ Gaziantep 85.77 330 *e*P **P 14 06 13.8 +1.3**
MTLF Montolieu 85.81 357 *e*P **P 14 06 13.0 +0.5**
comp=Z,128nm,1.3s,mb5.7
MTLF Montolieu 85.81 357 *e*P **P 14 06 13.0 +0.5**
MTLF pmax pmax
comp=Z,64nm,1.3s,mb5.7
MTLF Montolieu 85.81 357 *e*P **P 14 06 13.0 +0.5**
comp=Z,64nm,1.3s,mb5.7
EARI Arriondas 85.83 3 P **P 14 06 11.0 -1.6**
comp=Z,203nm,1.5s,mb6.1
SOH Sokhos 85.89 342 P **P 14 06 12.1 -0.9**
KOZT Kozan 85.91 331 *e*P **P 14 06 13.0 -0.1**
SULT Sultanhani-AKS 85.92 333 *e*P **P 14 06 12.0 -1.2**
DURS Dursunbey 85.93 337 ⇑*i*P **P 14 06 12.8 -0.4**
ELAN Lanestosa 85.94 2 P **P 14 06 13.4 +0.2**
comp=Z,31nm,0.9s,mb5.5
JTS JuntasAbangare 85.96 79 *e*P **P 14 06 13.7 0.0**
JTS JuntasAbangare 85.96 79 P **P 14 06 09.6 -4.1**
comp=Z,76nm,1.3s,mb5.8
JTS LR LR
comp=Z,3µm,20.0s,MS5.7
AQU L'Aquila 85.97 349 P **P 14 06 15.8 +2.5**
AQU pmax pmax
comp=Z,117nm,0.9s,mb6.1
AQU MLR MLR
comp=Z,9µm,19.0s,MS6.2
AQU L'Aquila 85.97 349 P **P 14 06 15.8 +2.5**
comp=Z,117nm,0.9s,mb6.1
AQU LR LR
comp=Z,9µm,19.0s,MS6.2
EALK Alkurruntz 85.97 0 P **P 14 06 14.8 +1.4**
comp=Z,111nm,1.5s,mb5.9
BALY Balya 86.00 338 ⇑*i*P **P 14 06 13.2 -0.3**
EMAZ Mazaricos 86.00 6 P **P 14 06 10.2 -3.3**
comp=Z,8.5nm,0.7s,mb5.1
KDHN Kadinhani 86.01 334 ⇑*i*P **P 14 06 13.5 -0.1**
TIR Tirane 86.03 344 PFAKE 14 06 20.0 +6.4
TIR LR LR
comp=Z,13µm,21.0s,MS6.3
ELIZ Elizondo 86.03 0 P **P 14 06 14.9 +1.3**
ELIZ pmax pmax
comp=Z,74nm,1.3s,mb5.8
ELIZ Elizondo 86.03 0 P **P 14 06 14.9 +1.3**
comp=Z,74nm,1.3s,mb5.8
SJPF Ste Jean 86.08 0 *e*P **P 14 06 14.5 +0.6**
comp=Z,20nm,0.8s,mb5.1
SJPF Ste Jean 86.08 0 *e*P **P 14 06 14.5 +0.6**
SJPF pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
SJPF Ste Jean 86.08 0 *e*P **P 14 06 14.5 +0.6**
comp=Z,9.9nm,0.8s,mb5.1
BIA Bitola 86.09 343 *e*P **P 14 06 12.2 -1.7**
STS Santiago 86.09 5 P **P 14 06 10.2 -3.7**
STS pmax pmax
comp=Z,11nm,0.6s,mb5.3
STS Santiago 86.09 5 P **P 14 06 10.2 -3.7**
comp=Z,11nm,0.6s,mb5.2
FIAM Fiamignano 86.09 349 P **P 14 06 14.8 +0.9**
OHR Ohrid 86.09 344 *e*P **P 14 06 12.2 -1.7**
BOLV Bolvadin 86.14 335 ⇑*i*P **P 14 06 14.3 +0.1**
EPF Esparros 86.15 359 *e*P **P 14 06 13.9 -0.3**
comp=Z,63nm,1.1s,mb5.5
EPF Esparros 86.15 359 *e*P **P 14 06 13.9 -0.3**
EPF pmax pmax
comp=Z,31nm,1.1s,mb5.5
EPF Esparros 86.15 359 *e*P **P 14 06 13.9 -0.3**
comp=Z,31nm,1.1s,mb5.5
GDZ Gediz 86.17 337 ⇑*i*P **P 14 06 13.9 -0.4**
KUZU Kuzuini 86.18 330 ⇑*i*P **P 14 06 15.1 +0.6**
JCR Jicaral 86.21 79 *e*P **P 14 06 15.8 +0.9**
PGF Pioggiola 86.22 352 *e*P **P 14 06 14.7 +0.1**
comp=Z,269nm,1.1s,mb6.1
PGF Pioggiola 86.22 352 *e*P **P 14 06 14.7 +0.1**
PGF pmax pmax
comp=Z,134nm,1.1s,mb6.1
PGF Pioggiola 86.22 352 *e*P **P 14 06 14.7 +0.1**
comp=Z,134nm,1.1s,mb6.1
OUR Ouranopolis 86.23 341 P **P 14 06 13.3 -1.4**
LADK Ladik-KONYA 86.25 334 *e*P **P 14 06 13.8 -0.9**
BOZC Bozcaada 86.26 339 ⇑*i*P **P 14 06 13.7 -1.1**
ETSF Etsaut 86.29 360 *e*P **P 14 06 15.7 +0.8**
comp=Z,149nm,1.5s,mb5.7
ETSF Etsaut 86.29 360 *e*P **P 14 06 15.7 +0.8**
ETSF pmax pmax
comp=Z,75nm,1.5s,mb5.7
ETSF Etsaut 86.29 360 *e*P **P 14 06 15.7 +0.8**
comp=Z,74nm,1.5s,mb5.7
PTQR Pietraquaria 86.30 349 P **P 14 06 15.3 +0.3**
comp=Z,132nm,0.8s,mb6.2
PLG Polygyros 86.30 341 P **P 14 06 14.3 -0.7**
KARA Karaisali 86.35 332 *e*P **P 14 06 14.8 -0.5**
CEYT Ceyhan 86.37 331 *e*P **P 14 06 15.3 -0.2**

DEMI Demirci 86.40 337⇑ *i*P P 14 06 14.8 -0.7
GULE Gulek 86.41 332⇑ *i*P P 14 06 15.9 +0.3
KONT Konya--Tatoy 86.48 334 *e*P P 14 06 15.1 -0.8
EBIE Bielsa 86.50 359 P **P 14 06 18.4 +2.5**
comp=Z,19nm,1.1s,mb5.2
SDI San Donato 86.56 349 P **P 14 06 16.4 +0.2**
SDI pmax pmax
comp=Z,99nm,1.3s,mb5.9
SDI San Donato 86.56 349 P **P 14 06 16.4 +0.2**
comp=Z,99nm,1.3s,mb5.9
ERUA La Rua 86.66 4 P **P 14 06 13.4 -3.3**
ERUA pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
ERUA La Rua 86.66 4 P **P 14 06 13.4 -3.3**
comp=Z,10nm,1.0s,mb5.0
EJON La Jonquera 86.68 357 P **P 14 06 20.3 +3.5**
comp=Z,48nm,2.8s,mb5.2
PAIG Paliouri 86.69 341 P **P 14 06 15.1 -1.8**
AKHS Akhisar 86.77 338⇑ *i*P P 14 06 15.8 -1.5
PRK Paraskevi 86.78 339 P **P 14 06 15.9 -1.5**
LAJ Bijagual 86.81 78 *e*P P 14 06 17.9 0.0
EZAM Zamans 86.81 6 P **P 14 06 14.0 -3.5**
EZAM pmax pmax
comp=Z,65nm,1.2s,mb5.7
EZAM Zamans 86.81 6 P **P 14 06 14.0 -3.5**
comp=Z,65nm,1.2s,mb5.7
BHD Baghdad 86.83 323 *i* P **P 14 06 15.0 -2.7**
BHD *e*PP PP 14 09 37.0 -2.7
BHD *e*S S 14 16 41.0 -13
KHAL Karahalli 86.84 336⇑ *i*P P 14 06 17.2 -0.5
MERS Mersin 86.87 332 *e*P P 14 06 15.8 -2.1
OSPF L'Ospedale 87.08 352 *e*P P 14 06 20.4 +1.6
ISP Isparta 87.09 335 P **P 14 06 19.9 +1.0**
ISP Isparta 87.09 335 *e*P P 14 06 17.7 -1.2
comp=Z,84nm,1.1s,mb5.9
ISP LR LR
comp=Z,7μm,19.0s,MS6.1
ECAL Calabor 87.13 4 P **P 14 06 16.9 -2.2**
comp=Z,18nm,1.0s,mb5.3
ELOB Lobios 87.13 5 P **P 14 06 15.9 -3.1**
comp=Z,12nm,0.8s,mb5.2
GOA Goa 87.16 291⇑ *e*P P 14 06 18.7 -0.8
YAYL Yayladag 87.16 331⇑ *i*P P 14 06 19.5 +0.2
SDDR Presa de Saban 87.23 63 *e*P P 14 06 19.6 -0.3
comp=Z,131nm,1.1s,mb6.1
SDDR LR LR
comp=Z,7μm,19.0s,MS6.1
EMIR Miracle 87.25 358 P **P 14 06 23.0 +3.4**
comp=Z,152nm,2.7s,mb5.8
PBRG Braganca 87.26 4 *e*P P 14 06 17.4 -2.3
comp=Z,34nm,1.8s,mb5.3
BUS Buena Vista 87.27 78 *e*P P 14 06 23.5 +3.4
MEV Metsovon 87.30 343 P **P 14 06 17.8 -2.1**
XOR Xorichti 87.33 341 P **P 14 06 18.0 -2.0**
HDMB Hadim 87.37 334 *e*P P 14 06 18.6 -1.7
ESAC San Caprasio 87.47 359 P **P 14 06 21.4 +0.7**
comp=Z,107nm,2.5s,mb5.6
URLA Izmir 87.55 338⇑ *i*P P 14 06 17.4 -3.8
DNZL Cakiroluk 87.60 336⇑ *i*P P 14 06 21.0 -0.4
BAR1 87.79 78 *e*P P 14 06 24.5 +1.9
EPOB Poblet 87.82 358 P **P 14 06 24.8 +2.4**
comp=Z,48nm,1.2s,mb5.6
MVO Moncorvo 87.89 4 *e*P P 14 06 23.1 +0.4
comp=Z,53nm,1.4s,mb5.6
MVO *e*SKS 14 17 05.3
MVO *e*LQ 14 31 06.4
MVO *e*LR LR 14 34 43.5
comp=Z,5μm,18.0s
GOLH Golhisar 87.90 336⇑ *i*P P 14 06 20.5 -2.3
KORT Korkueli 87.91 335⇑ *i*P P 14 06 21.8 -1.1
AYDN Tasoluk 87.92 337⇑ *i*P P 14 06 21.3 -1.6
GCAM G?zelcaml? 88.03 338⇑ *i*P P 14 06 22.3 -1.1
BANOM Banah 88.08 311 P **P 14 06 24.6 +0.7**
SNR=14
RIV Riverview 88.08 203 *e*P sP 14 06 36.5 +0.4
GAZI Gazipasa 88.10 333⇑ *i*P P 14 06 20.8 -2.9
EREN Erenkoy 88.22 332 *e*P P 14 06 22.3 -2.1
ERTA Horta de San J 88.22 359 P **P 14 06 25.2 +0.9**
comp=Z,41nm,1.5s,mb5.4
PVIS Viseu 88.29 5 *e*P P 14 06 23.5 -1.1
comp=Z,58nm,1.3s,mb5.7
ETOR Torete 88.37 1 P **P 14 06 25.4 +0.4**
ETOR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ETOR Torete 88.37 1 P **P 14 06 25.4 +0.4**
comp=Z,9.1nm,0.8s,mb5.1
TURN Turunc 88.48 336⇑ *i*P P 14 06 25.3 -0.3
GUD Guadarrama 88.51 2 P **P 14 06 24.8 -0.9**
GUD pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
GUD Guadarrama 88.51 2 P **P 14 06 24.8 -0.9**
comp=Z,8.5nm,0.9s,mb5.1
MTE Manteigas 88.62 5 *e*P P 14 06 26.2 0.0
comp=Z,54nm,1.3s,mb5.7
MTE Manteigas 88.62 5 *e*PP PP 14 09 52.3 -1.5
MTE *e*SKS 14 17 12.0
MTE *e*LQ 14 31 15.8
MTE *e*LR LR 14 35 53.9
comp=Z,8μm,20.0s
MTE Manteigas 88.62 5 *e*P P 14 06 25.4 -0.8
comp=Z,33nm,1.0s,mb5.6
MTE LR LR
comp=Z,9μm,20.0s,MS6.2
LFK Lefkose 88.64 332 *e*P P 14 06 24.5 -1.9
TIP Timpagrande 88.64 346 PFAKE 14 06 40.0 +14
TIP LR LR
comp=Z,8μm,21.0s,MS6.1
MBWA Marble Bar 88.67 233 *e*P P 14 06 24.1 -2.4
comp=Z,140nm,1.2s,mb6.2
MBWA LR LR
comp=Z,3μm,20.0s,MS5.7
MIB Mutribah 88.73 319 *e*P P 14 06 25.5 -1.3
MIB AMb AMB 14 06 38.3
comp=Z,299nm,0.9s,mb6.6
EMOS Mosqueruela 88.83 359 P **P 14 06 27.6 +0.5**
comp=Z,38nm,2.1s,mb5.4
AKAS Kas 88.83 336⇑ *i*P P 14 06 26.0 -1.2
HWQ Hawqa 88.83 330 *e*P P 14 06 25.4 -1.9
CMLA Cha da Macela 88.89 19 PFAKE 14 06 40.0 +13
CMLA LR LR
comp=Z,6μm,21.0s,MS6.0
STKA Stephens Creek 88.96 211 *e*P P 14 06 27.2 -0.4
comp=Z,20nm,1.5s,mb5.2
STKA *e*pP pP 14 06 40.5 +3.5
STKA *e*S S 14 17 12.3 -1.0
STKA Stephens Creek 88.96 211 P **P 14 06 27.4 -0.1**
comp=Z,35nm,1.2s,mb5.6,baz=12,slow=5.0,SNR=16
STKA pP pP 14 06 39.7 +2.7
comp=Z,167nm,1.1s,baz=359,slow=5.5,SNR=41
STKA LR LR 14 46 09.5
comp=Z,9μm,18.9s,MS6.2,baz=16,slow=35
STKA Stephens Creek 88.96 211 *e*P P 14 06 27.3 -0.3
comp=Z,79nm,1.3s,mb5.9
STKA *e* 14 06 40.1
HATD Hatta, Dubai 89.09 310 P **P 14 06 29.0 +0.4**
SNR=10
NAZ Nazwa, Dubai 89.17 311 P **P 14 06 29.3 +0.2**
SNR=7.0
PCBR Castelo Branco 89.19 5 *e*P P 14 06 28.0 -0.8
comp=Z,47nm,1.3s,mb5.7
PCBR Castelo Branco 89.19 5 *e*PP PP 14 10 02.3 +4.0
VSL Villasalto 89.22 352 PFAKE 14 06 40.0 +11
VSL LR LR
comp=Z,5μm,21.0s,MS5.9
ASHO Ashiyiah 89.24 310 P **P 14 06 29.3 -0.1**
SNR=11
NAY Al-Naaiem 89.25 319 *e*P P 14 06 27.7 -1.6
NAY AMb AMB 14 06 40.6
comp=Z,118nm,0.9s,mb6.2
BHL Bhannes 89.27 330 *e*P P 14 06 26.3 -3.0
PTOM Tomar 89.35 6 *e*P P 14 06 29.5 -0.1
comp=Z,60nm,1.7s,mb5.7
ETOS Mallorca 89.35 357 P **P 14 06 31.8 +2.2**
comp=Z,158nm,2.2s,mb6.0
RDF Al-Radifah 89.41 319 *e*P P 14 06 29.3 -0.8
RDF AMb AMB 14 06 41.5
comp=Z,300nm,1.0s,mb6.6
QRN Al-Qurain 89.42 318 *e*P P 14 06 29.1 -1.1
QRN AMb AMB 14 06 44.5
comp=Z,203nm,1.3s,mb6.3
PALK Pallekele 89.43 281 LR LR 14 46 53.1
comp=Z,1μm,21.9s,MS5.3,baz=30,slow=36
PALK Pallekele 89.43 281 *i P* **P 14 06 31.3 +0.9**
PALK Pallekele 89.43 281 *e*P P 14 06 30.6 +0.2
comp=Z,142nm,1.3s,mb6.1

ESDC Sonseca Array 89.48 2 P **P 14 06 29.6 -0.6**
comp=Z,3.9nm,0.8s,mb4.8,baz=358,slow=4.0,SNR=14
ESDC pP pP 14 06 41.1 +1.5
comp=Z,6.4nm,0.8s,baz=348,slow=4.9,SNR=5.7
ESDC PP PP 14 10 08.0 +7.3
comp=Z,0.8nm,0.4s,baz=357,slow=8.2,SNR=4.6
ESDC PKPPKP 14 32 21.2
comp=Z,0.3nm,0.3s,baz=206,slow=2.5,SNR=5.2
ESDC Sonseca Array 89.48 2 P **P 14 06 28.1 -2.1**
comp=Z,5.5nm,0.9s,mb4.9
ESLA Sonseca Array 89.48 2 *e*P P 14 06 30.4 +0.2
comp=Z,10nm,1.3s,mb5.0
ESLA *e* 14 06 43.5
ESLA LR LR
comp=Z,29μm,20.0s,MS6.7
WBK Wadi Bani Khal 89.55 307 P **P 14 06 31.9 +1.1**
SNR=5.4
ECHE Chera 89.60 360 P **P 14 06 30.7 -0.1**
ECHE pmax pmax
comp=Z,18nm,1.2s,mb5.3
ECHE Chera 89.60 360 P **P 14 06 30.7 -0.1**
comp=Z,18nm,1.2s,mb5.3
PMRV Marv??o 89.60 5 *e*P P 14 06 30.1 -0.7
comp=Z,56nm,1.6s,mb5.6
PMRV Marv??o 89.60 5 *e*PP PP 14 09 58.8 -2.8
PMRV *e*SKS 14 17 12.8
PMRV *e*LQ 14 32 52.9
PMRV *e*LR LR 14 36 57.5
comp=Z,5μm,18.0s
PAB San Pablo 89.60 2 PFAKE 14 06 40.0 +9.2
PAB LR LR
comp=Z,4μm,21.0s,MS5.8
RCY Rachaya 89.61 330 *e*P P 14 06 30.6 -0.3
SMDO Samad 89.63 308 P **P 14 06 31.9 +0.7**
SNR=6.1
CEL Celeste 89.67 347 PFAKE 14 06 40.0 +8.9
CEL LR LR
comp=Z,8μm,20.0s,MS6.1
CNB Canberra Magne 89.94 204 *e*P P 14 06 33.0 +0.9
CNB *e*pP pP 14 06 45.6 +4.1
PMAFR Mafra 89.96 6 *e*SKS 14 17 21.6
PMAFR *e*LQ 14 32 35.6
PMAFR *e*LR LR 14 37 06.5
comp=Z,7μm,20.0s
AGPR Aguadilla, PR 89.96 60 *e*P P 14 06 34.0 +1.2
comp=Z,603nm,1.4s,mb6.7
BCIP Isla Barro Col 89.98 75 *e*P P 14 06 34.3 +1.4
comp=Z,163nm,1.6s,mb6.1
BCIP LR LR
comp=Z,5μm,22.0s,MS5.9
CAN Canberra 90.04 204 *e*P P 14 06 32.8 +0.3
CAN *e* 14 06 45.4
CAN pmax pmax
comp=Z,33nm,1.4s,mb5.5
CAN MLR MLR
comp=Z,5μm,21.0s,MS6.0
CAN Canberra 90.04 204 *e*P P 14 06 32.8 +0.3
comp=Z,33nm,1.4s,mb5.5
CAN *e* 14 06 45.4
CAN LR LR
comp=Z,5μm,21.0s,MS6.0
EIBI Ibiza 90.14 358 P **P 14 06 35.5 +2.3**
comp=Z,87nm,1.4s,mb5.9
PESTR Estremoz 90.15 5 *e*P P 14 06 32.6 -0.8
comp=Z,55nm,1.3s,mb5.7
PESTR Estremoz 90.15 5 *e*PP PP 14 10 06.4 +0.5
PESTR *e*SKS 14 17 20.1
PESTR *e*LQ 14 33 08.2
PESTR *e*LR LR 14 36 41.5
comp=Z,5μm,20.0s
ARQ Araqi 90.15 309 ⇓P **P 14 06 34.1 +0.4**
SNR=18
MMAI Mount Meron Ar 90.17 330 P **P 14 06 33.1 -0.4**
comp=Z,6.4nm,0.7s,mb5.1,baz=19,slow=4.9,SNR=4.2
MMAI PP PP 14 10 08.2 +1.8
comp=Z,11nm,0.9s,baz=57,slow=8.0,SNR=5.2
MMAI LR LR 14 52 50.7
comp=Z,10μm,21.1s,MS6.2,baz=45,slow=40
JMDO Jabal Madar 90.18 307 ⇑P **P 14 06 34.1 +0.4**
SNR=9.1
LIS Lisbon 90.20 6 *e*P P 14 06 33.4 -0.3
LIS *e*S SKSac 14 17 01.0 -1.5
LIS *e*S SKSac 14 17 01.1 -1.4
LIS AMS AMS 14 44 46.8
comp=Z,8μm,22.6s,MS6.1
LIS Lisbon 90.20 6 *e*P P 14 06 33.4 -0.2
LIS *e*S SKSac 14 17 01.1 -1.4
EBAD Badajoz 90.29 5 P **P 14 06 29.0 -5.0**
comp=Z,6.2nm,0.8s,mb5.0
BSY Bisya 90.32 308 ⇑P **P 14 06 34.8 +0.3**
SNR=11
CRPR Cabo Rojo, PR 90.33 60 *e*P P 14 06 35.4 +0.9
comp=Z,106nm,1.3s,mb6.0
EVOP Sao Brissos 90.46 5 *e*P P 14 06 34.1 -0.7
EVOP *e*S SKSac 14 17 04.2 +0.2
EVOP *e*S SKSac 14 17 04.2 +0.2
EVOP AMS AMS 14 44 09.9
comp=Z,7μm,18.9s,MS6.1
EVO Evora 90.46 5 *e*P P 14 06 34.3 -0.5
EVO *e*MLR MLR
comp=Z,12μm,22.8s,MS6.0
ASF Jabal al Asfar 90.47 328 P **P 14 06 34.7 -0.3**
comp=Z,49nm,1.1s,mb5.8,baz=283,slow=0.6,SNR=68
ASF PP PP 14 10 10.2 +1.4
comp=Z,18nm,1.1s,baz=326,slow=3.6,SNR=5.2
EBEN Beniarda 90.48 359 P **P 14 06 35.7 +0.8**
comp=Z,7.5nm,0.8s,mb5.1
EVIA Vianos 90.54 1 P **P 14 06 34.4 -0.8**
EVIA pmax pmax
comp=Z,6.0nm,0.6s,mb5.1
EVIA Vianos 90.54 1 P **P 14 06 34.4 -0.8**
comp=Z,6.2nm,0.6s,mb5.1
ETOB Tobarra 90.54 0 P **P 14 06 34.6 -0.6**
comp=Z,53nm,1.7s,mb5.6
ICM Isla Caja Muer 90.75 60 *e*P P 14 06 36.9 +0.4
CBYP Canovanas 90.80 59 *e*P P 14 06 36.0 -0.7
comp=Z,121nm,1.1s,mb6.1
PBAR Barrancos 90.87 5 *e*P P 14 06 35.9 -0.8
comp=Z,47nm,1.3s,mb5.7
PBAR Barrancos 90.87 5 *e*PP PP 14 10 08.8 -2.9
PBAR *e*SKS 14 17 25.0
PBAR *e*LQ 14 33 26.8
PBAR *e*LR LR 14 37 06.4
comp=Z,6μm,16.0s
PBEJ Beja 90.97 5 *e*P P 14 06 37.5 +0.3
comp=Z,28nm,1.1s,mb5.5
EADA Adamuz 90.97 3 P **P 14 06 34.4 -2.8**
comp=Z,5.4nm,0.9s,mb4.9
EBAN Banos Encina 91.00 2 P **P 14 06 35.4 -1.9**
EBAN pmax pmax
comp=Z,40nm,1.4s,mb5.6
EBAN Banos Encina 91.00 2 P **P 14 06 35.4 -1.9**
comp=Z,40nm,1.4s,mb5.5
MTP Monte Pirata 91.11 59 *e*P P 14 06 38.4 +0.3
comp=Z,537nm,1.1s,mb6.8
PAYG Puerto Ayora 91.11 90 *e*P P 14 06 40.1 +2.0
comp=Z,129nm,1.5s,mb6.0
PAYG LR LR
comp=Z,4μm,19.0s,MS5.9
EMIN Mina Concepcio 91.29 4 P **P 14 06 34.6 -4.0**
comp=Z,18nm,1.4s,mb5.2
PCVE Castro Verde 91.35 5 *e*P P 14 06 38.7 -0.3
comp=Z,37nm,1.2s,mb5.6
PCVE Castro Verde 91.35 5 *e*PP PP 14 10 18.8 +3.3
PCVE *e*SKS 14 17 37.3
PCVE *e*LQ 14 33 06.5
PCVE *e*LR LR 14 37 10.7
comp=Z,7μm,20.0s
EHUE Huescar 91.36 1 P **P 14 06 38.1 -0.9**
EHUE pmax pmax
comp=Z,20nm,1.3s,mb5.3
EHUE Huescar 91.36 1 P **P 14 06 38.1 -0.9**
comp=Z,20nm,1.3s,mb5.3
EQES Quesada 91.37 1 P **P 14 06 37.9 -1.2**
comp=Z,16nm,1.5s,mb5.1
EGRO El Granado 91.48 5 P **P 14 06 34.6 -5.0**
comp=Z,17nm,1.0s,mb5.3
GVD Gavdhos 91.49 339 *e*P P 14 06 38.4 -1.3
comp=Z,278nm,1.2s,mb6.5
ELUQ Luque 91.59 2 P **P 14 06 37.9 -2.2**
ELUQ pmax pmax
comp=Z,55nm,1.4s,mb5.7
ELUQ Luque 91.59 2 P **P 14 06 37.9 -2.2**
comp=Z,55nm,1.4s,mb5.7
PVAQ Vaqueiros 91.60 5 *e*P P 14 06 39.1 -1.0
comp=Z,39nm,0.8s,mb5.8

PVAQ *e*SKS 14 17 28.1
PVAQ *e*LQ 14 33 49.9
PVAQ *e*LR LR 14 37 23.1
comp=Z,5μm,22.0s
MORF Marmelete 91.64 6 *e*P P 14 06 40.0 -0.3
comp=Z,68nm,0.9s,mb6.0
MORF *e*SKS 14 17 44.2
MORF *e*LQ 14 37 52.2
MORF *e*LR LR 14 42 30.0
comp=Z,10μm,22.0s
MORF Marmelete 91.64 6 *e*P P 14 06 39.7 -0.6
MORF *e*S SKSac 14 17 10.1 -0.7
PBDV Barranco-do-Ve 91.75 5 *e*P P 14 06 40.5 -0.3
comp=Z,56nm,1.4s,mb5.7
PBDV Barranco-do-Ve 91.75 5 *e*PP PP 14 10 19.1 +0.5
PBDV *e*SKS 14 17 48.3
PBDV *e*LQ 14 33 52.2
PBDV *e*LR LR 14 37 19.1
comp=Z,8μm,22.0s
PFVI Vila Bisbo 91.80 6 *e*P P 14 06 40.0 -1.1
comp=Z,85nm,1.0s,mb6.0
PFVI Vila Bisbo 91.80 6 *e*PP PP 14 10 21.1 +2.1
PFVI *e*SKS 14 17 17.4
PFVI *e*LQ 14 33 17.9
PFVI *e*LR LR 14 37 58.7
comp=Z,8μm,22.0s
ELOJ Sierra Loja 92.00 2 P **P 14 06 39.5 -2.5**
ELOJ pmax pmax
comp=Z,2.0nm,0.3s,mb4.9
ELOJ Sierra Loja 92.00 2 P **P 14 06 39.5 -2.5**
comp=Z.2.4nm,0.3s,mb5.0
SNZO South Karori 92.19 183 PFAKE 14 06 50.0 +7.7
SNZO LR LR
comp=Z,7μm,20.0s,MS6.1
WDD Wield Dalam 92.22 347 PFAKE 14 06 50.0 +7.0
WDD LR LR
comp=Z,4μm,21.0s,MS5.9
ESPR Espera 92.22 4 P **P 14 06 38.3 -4.7**
comp=Z,6.3nm,0.6s,mb5.1
SFS San Fernando 92.61 4 PFAKE 14 07 00.0 +15
SFS LR LR
comp=Z,12μm,20.0s,MS6.3
KEST Kesra 92.95 351 P **P 14 06 46.1 -0.3**
comp=Z,8.7nm,0.9s,mb5.2,baz=288,slow=1.8,SNR=12
KEST LR LR 14 54 32.2
comp=Z,1μm,20.6s,MS5.3,baz=325,slow=39
FORT Forrest 93.03 222 *e*P P 14 06 46.6 +0.1
comp=Z,29nm,0.7s,mb5.8
FORT *e*pP pP 14 06 58.6 +2.7
FORT Forrest 93.03 222 *e*P P 14 06 46.2 -0.3
comp=Z,162nm,1.2s,mb6.3
ANWB Willy Bob 93.46 56 PFAKE 14 07 00.0 +11
ANWB LR LR
comp=Z,7μm,19.0s,MS6.1
COCO West Island 94.41 256 PFAKE 14 07 00.0 +6.7
COCO LR LR
comp=Z,1μm,19.0s,MS5.4
RTC Rabat Centre 95.05 5 PFAKE 14 07 10.0 +14
RTC LR LR
comp=Z,4μm,22.0s,MS5.9
SDV Santo Domingo 95.70 68 P **P 14 06 59.8 +0.5**
comp=Z,12nm,0.6s,mb5.5,baz=344,slow=5.2,SNR=17
SDV Santo Domingo 95.70 68 *e*P P 14 06 60.0 +0.6
comp=Z,68nm,1.2s,mb6.0
SDV LR LR
comp=Z,2μm,20.0s,MS5.5
FDF Fort de France 96.24 57 PFAKE 14 07 10.0 +8.3
FDF LR LR
comp=Z,10μm,22.0s,MS6.2
ROSC El Rosal 96.71 74 LR LR 14 56 44.8
comp=Z,2μm,18.9s,MS5.5,baz=355,slow=39
OTAV Otavalo 97.81 80 *e*P P 14 07 10.8 +1.9
comp=Z,9.0nm,1.0s,mb5.2
OTAV LR LR
comp=Z,2μm,19.0s,MS5.6
PCRV Puerto La Cruz 98.09 63 LR LR 14 50 53.6
comp=Z,8μm,21.9s,MS6.2,baz=169,slow=35
GRGR Grenville 98.13 59 PFAKE 14 07 20.0 +10
GRGR LR LR
comp=Z,9μm,22.0s,MS6.2
BBGH Gun Hill 98.40 57 PFAKE 14 07 20.0 +8.5
BBGH LR LR
comp=Z,8μm,19.0s,MS6.2
NWAO Narrogin (SRO) 99.69 229 PFAKE 14 07 30.0 +13
NWAO LR LR
comp=Z,2μm,20.0s,MS5.7
RPN Rapa Nui 100.25 121 PFAKE 14 07 30.0 +10
RPN LR LR
comp=Z,4μm,20.0s,MS6.0
DGAR Diego Garcia 105.97 278 PFAKE 14 12 10.0 +13
DGAR LR LR
comp=Z,3μm,19.0s,MS5.8
TAM Tamanrasset 106.11 354 PFAKE 14 12 10.0 +13
TAM LR LR
comp=Z,5μm,22.0s,MS6.0
NNA Nana 108.25 86 PFAKE 14 12 10.0 +8.5
NNA LR LR
comp=Z,4μm,19.0s,MS6.0
MSEY Mahe Island 114.04 294 PFAKE 14 12 20.0 +7.4
MSEY LR LR
comp=Z,4μm,19.0s,MS6.0
TORD Torodi Ar. Bea 115.89 357 PKP PKPdf 14 12 14.3 -1.8
comp=Z,3.2nm,0.6s,baz=345,slow=1.2,SNR=24
LPAZ La Paz 116.97 82 PKP PKPdf 14 12 19.4 +1.3
comp=Z,1.0nm,0.6s,baz=24,slow=2.8,SNR=4.3
LPAZ PKKPbc PKKPab 14 22 56.6 +10
comp=Z,0.7nm,0.4s,baz=112,slow=8.9,SNR=4.3
LPAZ La Paz 116.97 82 *e*PKPdf PKPdf 14 12 18.9 +0.9
LPAZ LR LR
comp=Z,3μm,20.0s,MS6.0
KMBO Kilima Mbogo 120.52 314 PKP PKPdf 14 12 25.9 +0.8
comp=Z,14nm,1.0s,baz=358,slow=5.5,SNR=16
KMBO Kilima Mbogo 120.52 314 *e*PKPdf PKPdf 14 12 25.8 +0.7
KMBO LR LR
comp=Z,13μm,21.0s,MS6.5
DRV Dumont d'Urvil 121.16 197 PP PP 14 13 57.0 +1.0
DRV SP SP 14 23 42.0 -1.4
DRV SS SS 14 30 49.0 +22
DRV R 14 51 00.0
DBIC Dimbokro 122.29 4 PKP PKPdf 14 12 27.6 -0.9
comp=Z,8.3nm,0.5s,baz=300,slow=4.5,SNR=27
DBIC pPKP pPKPdf 14 12 38.6 +0.4
comp=Z,17nm,0.8s,baz=1.2,slow=4.0,SNR=6.5
DBIC Dimbokro 122.29 4 *e*PKPdf PKPdf 14 12 27.6 -0.9
DBIC LR LR
comp=Z,5μm,20.0s,MS6.2
DBIC Dimbokro 122.29 4 *e*P PKPdf 14 12 27.5 -0.9
TIC Toumodi 122.31 4 *e*PKP1 PKPdf 14 12 27.5 -1.0
comp=Z,98nm,1.0s
KIC Kosan Boka 122.60 4 *e*PKP1 PKPdf 14 12 28.6 -0.5
comp=Z,108nm,1.4s
LIC Lamto 122.72 5 *e*PKP1 PKPdf 14 12 28.3 -1.0
comp=Z,100nm,1.2s
LIC Lamto 122.72 5 *e*PKIKP PKPdf 14 12 28.0 -1.3
comp=Z,48nm,1.0s
LIC *e*MLR MLR
comp=Z,7μm,20.0s,MS6.0
LIC Lamto 122.72 5 *e*PKPdf PKPdf 14 12 28.0 -1.3
LIC LR LR
comp=Z,4μm,20.0s,MS6.0
LCO Las Campanas 124.62 95 *e*PKPdf PKPdf 14 12 31.2 -1.2
LCO LR LR
comp=Z,6μm,20.0s,MS6.3
RCBR Riachuelo 126.39 45 PFAKE 14 12 50.0 +14
RCBR LR LR
comp=Z,5μm,19.0s,MS6.2
RER Riviere de l'E 126.81 282 PFAKE 14 12 50.0 +13
RER LR LR
comp=Z,4μm,21.0s,MS6.1
CASY Casey 128.05 209 PFAKE 14 12 50.0 +12
CASY LR LR
comp=Z,4μm,21.0s,MS6.1
SBA Scott Base 128.99 183 *e*PKIKP PKPdf 14 12 39.6 +0.3
SBA *e* 14 12 52.4
SBA MLR MLR
comp=Z,3μm,22.0s,MS5.9
ABPO Ambohimpanom 130.29 292 PKIKP PKPdf 14 12 43.4 -0.1
ABPO MLR MLR
comp=Z,3μm,19.0s,MS6.0
CPUP Villa Florida 131.13 82 PKP PKPdf 14 12 44.1 -0.8
comp=Z,5.7nm,0.8s,baz=330,slow=2.8,SNR=3.2
CPUP SKPbc SKPbc 14 16 08.0 +0.8
comp=Z,4.7nm,0.6s,baz=305,slow=3.5,SNR=8.0
CPUP Villa Florida 131.13 82 PKP PKPdf 14 12 44.1 -0.8
CPUP SKPbc SKPbc 14 16 08.0 +0.8
CPUP LR LR

comp=Z,727nm,20.0s,MS5.4
PLCA Paso Flores 132.37 106 PKP PKPdf 14 12 46.5 -0.2
comp=Z,11nm,1.0s,baz=278,slow=2.5,SNR=17
PLCA SKPbc SKPbc 14 16 13.1 +1.9
comp=Z,28nm,1.3s,baz=294,slow=7.0,SNR=4.5
PLCA Paso Flores 132.37 106 *e*PKPdf PKPdf 14 12 46.9 +0.2
PLCA *e* 14 12 60.0
PLCA LR LR
comp=Z,15μm,19.0s,MS6.7
MIR Mirnyy 133.92 214 *i* PKIKP 14 13 02.4
MIR pmax pmax
comp=Z,82nm,1.0s
TRQA Tornquist 136.03 97 *e*PKPdf PKPdf 14 12 53.6 -0.1
TRQA *e* 14 13 07.2
TRQA LR LR
comp=Z,6μm,19.0s,MS6.4
LPA La Plata 136.60 91 *ce*PKP PKPdf 14 12 55.0 +0.1
LPA *e*PKS 14 16 28.0
LPA
comp=Z,7μm,20.0s
LSZ Lusaka 137.11 316 *e*PKIKP PKPdf 14 12 57.0 +0.6
LSZ MLR MLR
comp=Z,7μm,19.0s,MS6.4
LSZ Lusaka 137.11 316 *e*PKPdf PKPdf 14 12 57.0 +0.6
LSZ LR LR
comp=Z,7μm,19.0s,MS6.4
LSZ Lusaka 137.11 316 *e*P PKPdf 14 12 54.8 -1.6
MSNA Messina 142.37 308 *e*P PKPdf 14 13 05.6 -0.2
MSNA AMS AMS 15 22 43.6
comp=Z,4μm,21.1s,MS6.2
MOPA Mopani 142.65 305 *e*P PKPdf 14 13 03.0 -3.3
MOPA AMS AMS 15 42 40.5
comp=Z,4μm,20.3s,MS6.2
SHEL Horse Pasture 144.67 8 *e*PKIKP PKPdf 14 13 09.6 -0.4
SHEL MLR MLR
comp=Z,3μm,20.0s,MS6.1
TSUM Tsumeb 144.79 328 *e*PKPdf PKPdf 14 13 09.0 -1.2
TSUM *e* 14 13 22.5
TSUM LR LR
comp=Z,4μm,19.0s,MS6.2
TSUM Tsumeb 144.79 328⇑ *i*P PKPdf 14 13 09.3 -0.8
EFI East Falkland 145.32 114 *e*PKIKP PKPdf 14 13 09.4 -0.6
EFI MLR MLR
comp=Z,12μm,19.0s,MS6.7
MAW Mawson 145.41 217 *e*P PKPdf 14 13 08.5 -1.2
MAW *e*pP 14 13 21.4
MAW Mawson 145.41 217 PKPbc PKPbc 14 13 08.9 -0.9
comp=Z,24nm,1.0s,baz=72,slow=2.9,SNR=22
MAW pPKPbc pPKPbc 14 13 21.0 +1.7
comp=Z,152nm,1.2s,baz=80,slow=6.0,SNR=24
MAW Mawson 145.41 217 PKIKP PKPdf 14 13 08.9 -0.8
MAW 14 13 21.0
MAW pmax pmax
comp=Z,24nm,1.0s
MAW pmax pmax
comp=Z,152nm,1.2s
MAW Mawson 145.41 217 *e*PKP PKPdf 14 13 08.7 -1.0
MAW *e* 14 13 20.9
PMSA Palmer Station 145.62 138 *e*PKP PKPdf 14 13 10.1 0.0
PMSA LR LR
comp=Z,8μm,20.0s,MS6.5
POGA Pongola 145.66 301⇑ *i*P PKPdf 14 13 11.3 0.0
POGA AMS AMS 15 43 14.8
comp=Z,3μm,19.3s,MS6.1
SLR Silverton 146.06 307 AMS AMS 15 40 30.6
comp=Z,7μm,20.3s,MS6.4
ERPM east rand prop 146.59 307 *e*P PKPdf 14 13 14.0 +1.0
ERPM AMS AMS 15 24 44.8
comp=Z,5μm,19.6s,MS6.3
LBTB Lobatse 146.76 312 *e*PKP2 PKPab 14 13 13.6 -2.7
LBTB MLR MLR
comp=Z,4μm,22.0s,MS6.2
LBTB Lobatse 146.76 312 *e*PKPdf PKPdf 14 13 13.6 +0.3
LBTB LR LR
comp=Z,4μm,22.0s,MS6.2
LBTB Lobatse 146.76 312 *e*P PKPdf 14 13 14.1 +0.8
LBTB AMS AMS 15 27 14.0
comp=Z,4μm,19.2s,MS6.2
KSR Koster 146.84 309 *e*P PKPdf 14 13 14.1 +0.6
KSR AMS AMS 15 29 16.0
comp=Z,3μm,18.9s,MS6.0
KLOF Kloof 146.91 308 *e*P PKPdf 14 13 15.6 +2.1
KLOF AMS AMS 15 26 06.1
comp=Z,4μm,21.1s,MS6.2
PRYS Parys 147.51 307 *e*P PKPdf 14 13 14.0 -0.6
PRYS AMS AMS 15 25 19.1
comp=Z,5μm,20.6s,MS6.3
SEK Senekal 148.52 305 *e*P PKPdf 14 13 18.5 +2.4
SEK AMS AMS 15 39 55.7
comp=Z,6μm,20.0s,MS6.3
SWZ Schweizer 148.72 310 *e*P PKPdf 14 13 16.4 -0.1
SWZ AMS AMS 15 29 01.2
comp=Z,4μm,20.3s,MS6.2
KSD Kokstad 149.33 300 *e*P PKPdf 14 13 17.8 +0.4
KSD AMS AMS 15 39 00.7
comp=Z,16μm,18.9s,MS6.8
BOSA Boshof 149.95 309 PKPbc PKPbc 14 13 23.4 +0.1
comp=Z,110nm,1.1s,baz=43,slow=2.5,SNR=40
BOSA Boshof 149.95 309 *e*PKHKP PKPdf 14 13 18.9 +0.5
BOSA *e* 14 13 23.7
BOSA MLR MLR
comp=Z,8μm,21.0s,MS6.5
BOSA Boshof 149.95 309 *e*PKPdf PKPdf 14 13 18.9 +0.5
BOSA PKPbc PKPbc 14 13 23.4 +0.1
BOSA *e*PKPbc PKPbc 14 13 23.7 +0.3
BOSA LR LR
comp=Z,8μm,21.0s,MS6.5
BOSA Boshof 149.95 309 *e*P PKPdf 14 13 18.7 +0.2
BOSA AMS AMS 15 36 13.4
comp=Z,6μm,20.5s,MS6.4
HVD Gariep Dam 151.45 306 *e*P PKPbc 14 13 26.7 -0.1
HVD AMS AMS 15 35 58.6
comp=Z,9μm,20.4s,MS6.6
UPI Upington 151.62 315 *e*P PKPbc 14 13 27.7 +0.4
UPI AMS AMS 15 26 46.7
comp=Z,8μm,21.8s,MS6.5
PKA Prieska 152.03 311 *e*P PKPdf 14 13 22.7 +1.1
PKA AMS AMS 15 28 42.4
comp=Z,2μm,21.7s,MS5.9
SOE Somerset East 153.08 303⇑ *i*P PKPbc 14 13 31.8 +1.4
SOE AMS AMS 15 36 52.7
comp=Z,6μm,20.0s,MS6.4
SYO Syowa Base 153.71 212‖ *e*PKPbc PKPbc 14 13 30.0 -0.6
SYO Syowa Base 153.71 212‖ *ep*PKPbc pPKPbc 14 13 40.6 +0.3
KOMG Komaggas 154.47 320 *e*P PKPbc 14 13 34.0 +0.5
KOMG AMS AMS 15 31 12.6
comp=Z,5μm,20.5s,MS6.3
CVNA Calvinia 154.94 314 *e*P PKPbc 14 13 33.7 -0.7
CVNA AMS AMS 15 30 11.2
comp=Z,8μm,21.5s,MS6.5
ELIM Elim 157.53 309 *e*P 14 13 45.7
NVL N'lazarevskaya 159.46 192‖ *i*PKP2 pPKPab 14 14 18.5 +0.7
MAIT Maitri 159.46 192 *e*PKPdif PKPdf 14 13 29.2 -1.0
VNA2 Neumayer--Watz 159.99 174 *e*PKPdf PKPdf 14 13 28.5 -2.3
VNA2 *e* 14 14 22.3
VNA1 Neumayer--Stat 160.20 173 *e*PKPdf PKPdf 14 13 29.7 -1.3
VNA1 *e* 14 14 23.4

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*ISCJB **20** 14:17:35.7±0.5, 44°.24N±0°.02×118°.22W±0°.03, h7km±4km,*
Error ellipse: s-maj=3.3km s-min=2.7km az=141.3
*NEIC **20** 14:17:36.6, 44°.24N×118°.25W, h6km, MD2.8(SEA), After SEA.*
ISC 20 14:17:36.1±0.4, **44°.26N**±0°.02×**118°.23W**±0°.03, **h8**km±3km,
n47,σ0°66/71, 26C-27D, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08A	**Prairie City**	**0.41**	**310**	P	**Pg**	**14 17 44.7**	**+0.6**
	baz=0.4,SNR=197						
H08A				⇓S	**Sg**	**14 17 51.1**	**+1.6**
	baz=0.4						
I09A	**Lost Marbles R**	**0.45**	**129**	⇓P	**Pg**	**14 17 45.2**	**+0.3**
	baz=0.5,SNR=11						
I09A				⇑S	**Sg**	**14 17 51.5**	**+0.7**
	baz=0.5						
H09A	**Durkee**	**0.57**	**45**	⇓P	**Pg**	**14 17 47.4**	**+0.1**
	baz=0.6						
H09A				⇑S	**Sg**	**14 17 56.1**	**+1.4**
	baz=0.6						
I07A	**Izee**	**0.93**	**260**	⇑P	**Pg**	**14 17 53.8**	**-0.3**
	baz=0.9,SNR=851						
I07A				⇑S	**Sg**	**14 18 06.5**	**+0.3**
	baz=0.9						
J09A	**Fry Pan Ranch,**	**0.97**	**159**	⇓P	**Pg**	**14 17 54.4**	**-0.3**
	baz=1.0,SNR=65						
J09A				⇑S	**Sg**	**14 18 08.1**	**+0.7**
	baz=1.0						
I10A	**Payette**	**1.04**	**99**	⇑P	**Pg**	**14 17 56.2**	**+0.1**
	baz=1.0						
G09A	**Cove**	**1.07**	**17**	⇑P	**Pg**	**14 17 56.5**	**-0.2**
	baz=1.1						
G09A				⇓S	**Sg**	**14 18 10.9**	**+0.4**
	baz=1.1						
H10A	**Noah's Angus R**	**1.11**	**72**	⇑P	**Pg**	**14 17 56.6**	**-0.8**
	baz=1.1						
H10A				⇓S	**Sg**	**14 18 12.0**	**+0.1**
	baz=1.1						
G08A	**Pilot Rock**	**1.16**	**334**	⇓P	**Pg**	**14 17 57.2**	**-1.1**
	baz=1.2						
G08A				⇓S	**Sg**	**14 18 12.7**	**-0.6**
	baz=1.2						
G10A	**Bishop Farm, J**	**1.30**	**37**	⇓P	**Pn**	**14 18 00.3**	**-0.3**
	baz=1.3,SNR=56						
G10A				⇓S	**Sb**	**14 18 17.6**	**-0.1**
	baz=1.3						
J10A	**Berg Farm, Mel**	**1.34**	**128**	⇑P	**Pn**	**14 17 60.0**	**-1.2**
	baz=1.3						
J10A				⇑S	**Sb**	**14 18 19.1**	**+0.3**
	baz=1.3						
F09A	**S2 Ranch, Elgi**	**1.47**	**9**	⇑Sb	**Sb**	**14 18 22.7**	**+0.2**
	baz=1.5						
LNOR	**Lincton Mounta**	**1.61**	**359**	*e*Pn	**Pn**	**14 18 04.6**	**-0.2**
LNOR				*e*Pg	**Pg**	**14 18 06.3**	**-0.7**
LNOR				*e*Sg	**Sg**	**14 18 28.0**	**0.0**
H11A	**Donnelly**	**1.65**	**74**	⇑P	**Pn**	**14 18 04.7**	**-0.6**
	baz=1.7						
I11A	**Placerville**	**1.67**	**101**	⇑P	**Pn**	**14 18 04.9**	**-0.7**
	baz=1.7						
I11A				⇑Sb	**Sb**	**14 18 29.4**	**+1.1**
	baz=1.7						
K10A	**MacKenzie Ranc**	**1.78**	**146**	⇑P	**Pn**	**14 18 06.6**	**-0.5**
	baz=1.8,SNR=33						
K10A				⇑S	**Sn**	**14 18 29.6**	**-0.2**
	baz=1.8						
G11A	**Walters Elk Ra**	**1.80**	**50**	⇑Pb	**Pb**	**14 18 09.0**	**-0.3**
	baz=1.8,SNR=22						
WVOR	**Wild Horse Val**	**1.85**	**189**	*e*Pn	**Pn**	**14 18 08.6**	**+0.6**
WVOR				*e*Sn	**Sn**	**14 18 31.3**	**-0.3**
F10A	**Beach Ranch, E**	**1.86**	**22**	⇓Pb	**Pb**	**14 18 09.8**	**-0.4**
	baz=1.9,SNR=35						
F10A				⇓Sb	**Sb**	**14 18 34.7**	**+1.1**
	baz=1.9						
MFID	**Camas Ranch**	**1.93**	**115**	P	**Pn**	**14 18 08.9**	**-0.3**
	baz=1.9,SNR=15						
MFID				⇑S	**Sn**	**14 18 33.6**	**0.0**
	baz=1.9						
G06A	**Carlson Farm,**	**1.97**	**301**	⇓P	**Pn**	**14 18 09.4**	**-0.4**
	baz=2.0,SNR=19						
G06A				⇓Sb	**Sb**	**14 18 38.0**	**+1.0**
	baz=2.0						
K11A	**Parker Ranch,**	**2.18**	**132**	⇑P	**Pn**	**14 18 12.3**	**-0.4**
	baz=2.2,SNR=25						
F11A	**Grangeville**	**2.20**	**41**	⇑Pb	**Pb**	**14 18 15.7**	**-0.3**
	baz=2.2						
I12A	**Atlanta**	**2.28**	**101**	⇓P	**Pn**	**14 18 13.6**	**-0.4**
	baz=2.3						
HAWA	**Hanford**	**2.33**	**337**	*e*Pn	**Pn**	**14 18 14.0**	**-0.6**
HAWA				*e*Pg	**Pg**	**14 18 18.9**	**-1.8**
RSW	**Rattlesnake Hi**	**2.34**	**336**	*e*Pn	**Pn**	**14 18 14.6**	**-0.2**
E10A	**Myers Farm, Un**	**2.36**	**19**	⇓Pb	**Pb**	**14 18 18.7**	**-0.2**
	baz=2.4						
H12A	**Diamond D Ranc**	**2.44**	**82**	⇑S	**Sn**	**14 18 46.2**	**+0.1**
	baz=2.4						
K05A	**Summer Lake**	**2.47**	**233**	⇑Pb	**Pb**	**14 18 20.3**	**-0.4**
	baz=2.4						
J12A	**Stokes Ranch,**	**2.48**	**113**	⇓P	**Pn**	**14 18 16.5**	**-0.3**
	baz=2.5,SNR=16						
J12A				⇑S	**Sn**	**14 18 47.6**	**+0.4**
	baz=2.5						
L10A	**Juniper Basin**	**2.53**	**149**	⇓P	**Pn**	**14 18 17.5**	**0.0**
	baz=2.5						
L10A				⇓S	**Sn**	**14 18 48.1**	**-0.3**
	baz=2.5						
E11A	**Bogner Ranch,**	**2.54**	**33**	⇓Pb	**Pb**	**14 18 21.3**	**-0.6**
	baz=2.6						
F12A	**Elk City**	**2.59**	**54**	⇑Pb	**Pb**	**14 18 23.1**	**+0.4**
	baz=2.6						
L11A	**Cat Creek Ranc**	**2.76**	**138**	⇓P	**Pn**	**14 18 20.8**	**+0.1**
	baz=2.8						
MOD	**Modoc**	**2.80**	**214**	*e*Pn	**Pn**	**14 18 21.1**	**-0.1**
HLID	**Hailey**	**2.84**	**103**	⇓P	**Pn**	**14 18 21.6**	**-0.1**
	baz=2.8						
HLID				⇑S	**Sn**	**14 18 56.4**	**+0.2**
	baz=2.8						
HLID	**Hailey**	**2.84**	**103**	*e*Pn	**Pn**	**14 18 21.8**	**+0.1**
HLID				*e*Sn	**Sn**	**14 18 55.7**	**-0.5**
E12A	**Beaver Dam Sad**	**2.86**	**40**	⇑Pb	**Pb**	**14 18 27.3**	**0.0**
	baz=2.9						
H04A	**Detroit Lake**	**2.87**	**280**	⇓Sb	**Sb**	**14 19 03.9**	**+1.3**
	baz=2.8						
D10A	**Wagner Farm, O**	**2.88**	**13**	⇓Pb	**Pb**	**14 18 27.4**	**-0.2**
	baz=2.9						
K12A	**Draper Farm, C**	**2.91**	**123**	⇓P	**Pn**	**14 18 22.8**	**+0.1**
	baz=2.9						
I13A	**Wildhorse Cree**	**2.98**	**95**	⇓P	**Pn**	**14 18 23.5**	**-0.1**
	baz=3.0,SNR=13						
J13A	**Cove Ranch, Pi**	**3.06**	**105**	⇓P	**Pn**	**14 18 24.5**	**-0.2**
	baz=3.1						
OD2	**Odessa Site #2**	**3.15**	**354**	Pn	**Pn**	**14 18 27.8**	**+1.8**
OD2				*e*Pg	**Pg**	**14 18 35.4**	**-1.1**
MCMT	**McKenzie Canyo**	**3.89**	**80**	*e*Pn	**Pn**	**14 18 37.4**	**+1.2**
LRM	**Limekiln Ridge**	**4.38**	**67**	*e*Pn	**Pn**	**14 18 43.8**	**+0.9**
HRY	**Holter Researc**	**5.12**	**59**	*e*Pn	**Pn**	**14 18 53.5**	**+0.4**
	4.0nm,0.7s						

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*ISCJB **20** 14:23:43.9±0.5, 39°.96N±0°.04×32°.37E±0°.03, h10km, Error ellipse: s-maj=5.5km s-min=3.4km az=156.7*
*CSEM **20** 14:23:43.5±0.1, 39°.93N×32°.38E, h2km, MD2.9, Error ellipse: s-maj=3.7km s-min=2.7km az=164.0*
*ISK **20** 14:23:43.4, 39°.94N×32°.37E, h9km, MD2.9*
*DDA **20** 14:23:44.6, 39°.96N×32°.37E, h7km±5km, Md3.1*
ISC 20 14:23:44.5±0.5, **39°.95N**±0°.04×**32°.36E**±0°.04, **h8**km±9km,
n22,σ1°14/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.32**	**100**	*e*PG	**Pg**	**14 23 49.7**	**-1.0**
LOD				*e*SG	**Sg**	**14 23 55.0**	**+0.2**
LOD	**Lodumlu**	**0.32**	**100**	*e*Pg	**Pg**	**14 23 49.7**	**-0.9**
LOD				*e*Sg	**Sg**	**14 23 55.0**	**+0.2**
SGKT	**Sivrigoynuk**	**0.67**	**340**	*e*P	**Pg**	**14 23 56.8**	**-0.5**
SGKT				*e*S	**Sg**	**14 24 03.9**	**-2.2**
SGKT	**Sivrigoynuk**	**0.67**	**340**	*e*P	**Pg**	**14 23 56.8**	**-0.6**
SGKT				*e*S	**Sg**	**14 24 03.9**	**-2.2**
SVRH	**Sivrihisar-ESK**	**0.82**	**233**	*e*PG	**Pg**	**14 23 59.2**	**-1.0**
SVRH	**Sivrihisar-ESK**	**0.82**	**233**	*e*Pg	**Pg**	**14 23 59.2**	**-0.9**
ELDT	**Eldivan**	**0.98**	**56**	*e*P	**Pg**	**14 24 02.5**	**-0.8**
ELDT				*e*S	**Sg**	**14 24 18.1**	**+2.0**
ELDT	**Eldivan**	**0.98**	**56**	*e*P	**Pg**	**14 24 02.5**	**-0.8**
ELDT				*e*S	**Sg**	**14 24 18.0**	**+2.0**
MDU	**Mudurnu**	**1.02**	**301**	*e*PG	**Pg**	**14 24 03.6**	**-0.4**
MDU	**Mudurnu**	**1.02**	**301**	*e*Pg	**Pg**	**14 24 03.7**	**-0.3**
KIZT	**Kizilcal**	**1.13**	**199**	*e*PN	**Pg**	**14 24 05.8**	**-0.3**
KIZT	**Kizilcal**	**1.13**	**199**	*e*Pn	**Pg**	**14 24 05.8**	**-0.3**
ESKT	**Eskisehir**	**1.24**	**250**	*e*PN	**Pn**	**14 24 07.4**	**-0.7**
ESKT	**Eskisehir**	**1.24**	**250**	*e*P	**Pn**	**14 24 07.8**	**-0.3**
ESKT				*e*S	**Sg**	**14 24 26.7**	**+2.3**
ESKT	**Eskisehir**	**1.24**	**250**	*e*Pn	**Pn**	**14 24 07.4**	**-0.7**
SEYT	**Eskypehyr**	**1.24**	**250**	*e*P	**Pg**	**14 24 07.8**	**-0.4**
SEYT				*e*S	**Sg**	**14 24 26.7**	**+2.4**
BORA	**Eskisehir**	**1.47**	**268**	*e*P	**Pb**	**14 24 12.0**	**-0.1**
BORA				*e*S	**Sg**	**14 24 34.3**	**+2.7**
BORA	**Eskisehir**	**1.47**	**268**	*e*P	**Pb**	**14 24 12.0**	**0.0**
BORA				*e*S	**Sg**	**14 24 34.3**	**+2.6**
GULT	**Gulveren**	**1.50**	**290**	*e*PN	**Pn**	**14 24 11.7**	**+0.1**
GULT	**Gulveren**	**1.50**	**290**	*e*Pn	**Pn**	**14 24 11.7**	**+0.1**
BALT	**Daday**	**1.77**	**26**	*e*P	**Pb**	**14 24 17.4**	**+0.3**
BALT				*e*S	**Sg**	**14 24 42.5**	**+1.2**
BALT	**Daday**	**1.77**	**26**	*e*P	**Pb**	**14 24 17.4**	**+0.3**
BALT				*e*S	**Sg**	**14 24 42.5**	**+1.2**

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*ISCJB **20** 14:29:39.6±0.3, 32°.44N±0°.03×105°.19E±0°.04, h10km, mb4.3/35, Error ellipse: s-maj=5.0km s-min=3.9km az=1.3*
*IDC **20** 14:29:39.8±0.6, 32°.50N×105°.17E, h0km, mb4.2/17, mb1 4.2/19, mb1mx4.1/30, mbtmp4.1/19, ML4.0/2, Error ellipse: s-maj=26.1km s-min=14.0km az=55.0*
*BJI **20** 14:29:41.6, 32°.44N×105°.16E, h10km, mb4.2/8, ML4.1/19, Ms4.4/6, Ms7 4.3/5*
*NEIC **20** 14:29:41.8±0.4, 32°.50N×105°.13E, h10km, mb4.1/5, Error ellipse: s-maj=13.0km s-min=7.3km az=60.0*
*MOS **20** 14:29:42.8±0.8, 32°.46N×105°.18E, h33km, mb4.3/10, Error ellipse: s-maj=17.0km s-min=8.7km az=105.5*
ISC 20 14:29:41.9±0.3, **32°.48N**±0°.03×**105°.16E**±0°.04, **h10**km, **n72,**
σ1°00/84, mb4.3/35, 4C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.97**	**218**	Pn	**Pn**	**14 30 12.1**	**-3.3**
CD2				Sn	**Sn**	**14 30 43.1**	**+2.9**
CD2				Sg	**Sg**	**14 30 46.3**	**+0.9**
CD2				smax			
	comp=N,15μm,0.7s						
XAN	**Xi'an**	**3.51**	**63**	Pn	**Pn**	**14 30 37.3**	**+0.8**
XAN				Pg	**Pg**	**14 30 44.3**	**-4.9**
XAN				Sn	**Sn**	**14 31 19.9**	**+1.8**
XAN				Sg	**Sg**	**14 31 29.8**	**-4.9**
XAN				smax			
	comp=N,640nm,0.9s						
XAN				smax			
	comp=E,310nm,1.0s						
LZH	**Lanzhou**	**3.75**	**343**	*e*Pn	**Pn**	**14 30 42.3**	**+2.4**
LZH				Pg	**Pg**	**14 30 52.5**	**-1.4**
LZH				Sn	**Sn**	**14 31 25.9**	**+1.8**
LZH				Sg	**Sg**	**14 31 39.0**	**-3.5**
LZH				smax			
	comp=N,400nm,0.8s						
LZH				smax			
	comp=E,980nm,0.6s						
LZH				LR	LR		
	comp=E,1μm,5.3s						
LZH				LR	LR		
	comp=Z,2μm,6.5s						
ENH	**Enshi**	**4.31**	**120**	*e*Pn	**Pn**	**14 30 50.1**	**+2.6**
GYA	**Guiyang**	**6.15**	**167**	Pn	**Pn**	**14 31 13.3**	**+0.5**
GYA				Sn	**Sn**	**14 32 22.3**	**-0.8**
GYA				smax			
	comp=N,160nm,0.7s						
GYA				smax			
	comp=E,140nm,0.8s						
KMI	**Kunming**	**7.63**	**197**	Pn	**Pn**	**14 31 37.8**	**+4.6**
KMI				Sn	**Sn**	**14 32 59.8**	**0.0**
KMI				Sg	**Sg**	**14 33 43.3**	**-3.7**
KMI				smax			
	comp=N,38nm,1.5s						
KMI				smax			
	comp=E,36nm,1.5s						
WHN	**Wuhan**	**8.08**	**101**	S	**Sn**	**14 33 04.4**	**-6.3**
GTA	**Gaotai**	**8.16**	**329**	*e*P	**Pn**	**14 31 40.8**	**+0.5**
GTA				pP		14 31 44.0	
GTA				sP		14 31 47.0	
GTA				S	**Sn**	**14 33 16.4**	**+3.9**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BTO	**Baotou**	**9.00**	**24**	*e*P	Px	14 32 41.0	
NJ2	**Nanjing**	**11.60**	**88**	*e*P	**Pn**	**14 32 27.1**	**-0.4**
NJ2				pP		14 32 34.4	
NJ2				PP		14 32 36.3	
NJ2				sP		14 32 38.3	
NJ2				S	**Sn**	**14 34 37.5**	**+0.4**
NJ2				sS		14 34 51.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=N,1μm,10.0s						
NJ2				LR	LR		
	comp=E,1μm,12.2s						
NJ2				LR	LR		
	comp=Z,1μm,12.6s						
LSA	**Lhasa**	**12.33**	**261**	P	**Pn**	**14 32 37.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**15.05**	**203**	Pn	**Pn**	**14 33 14.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=20,slow=12,SNR=9.1						
SONM	**Songino Array**	**15.36**	**3**	Pn	**Pn**	**14 33 20.3**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=4.0						
KSRS	**Korea Array**	**19.29**	**69**	P	**Pn**	**14 34 07.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=248,slow=10,SNR=10						
CN2	**Changchun**	**19.50**	**49**	*e*P	**Pn**	**14 34 14.3**	**+4.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**14 34 42.2**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.0,baz=117,slow=11,SNR=14						
KSH	**Kashi**	**24.56**	**295**	*e*P	**P**	**14 35 06.1**	**+4.2**
TKM2	**Tokmak 2**	**25.49**	**303**	*e*P	**P**	**14 35 11.9**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**25.49**	**303**	*e*P	**P**	**14 35 11.9**	**+1.7**
	comp=Z,4.2nm,0.8s,mb4.0						
ZAA0	**Zalesovo Array**	**25.90**	**332**	*e*P	**P**	**14 35 13.8**	**-0.1**
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**14 35 13.8**	**0.0**
	comp=Z,2.2nm,0.6s,mb3.9,baz=136,slow=9.2,SNR=7.5						
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**14 35 13.8**	**0.0**
BOD	**Bodaibo**	**26.05**	**11**	*e*P	**P**	**14 35 14.9**	**-0.2**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**14 35 17.7**	**+1.8**
	comp=Z,9.5nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**26.21**	**302**	P	**P**	**14 35 21.1**	**+4.3**
	comp=Z,1.5nm,0.5s,mb3.8,baz=117,slow=9.0,SNR=3.0						
AAK	**Ala-Archa**	**26.21**	**302**⇑	*e*P	**P**	**14 35 12.9**	**-3.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.5						
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**14 35 21.1**	**-0.1**
	comp=Z,1.2nm,0.4s,mb3.8,baz=128,slow=11,SNR=9.1						
KURK	**Kurchatov**	**26.71**	**321**⇑	*e*P	**P**	**14 35 21.7**	**+0.5**
KURK				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.0						
KURK	**Kurchatov**	**26.71**	**321**	*e*P	**P**	**14 35 20.6**	**-0.6**
	comp=Z,2.6nm,0.7s,mb3.9						
BVAR	**Borovoye Array**	**32.29**	**320**	P	**P**	**14 36 09.9**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.8,baz=113,slow=10,SNR=4.7						
BVAR				PcP	PcP	14 38 57.5	-1.2
	comp=Z,0.9nm,0.7s,baz=108,slow=4.8,SNR=5.4						
BRVK	**Borovoye**	**32.37**	**320**⇑	*e*P	**P**	**14 36 11.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.2						
ABKAR	**Akbulak array**	**37.45**	**310**	*e*P	**P**	**14 36 55.5**	**+0.2**
	comp=Z,2.5nm,0.8s,mb4.1						
KAPI	**Kappang**	**39.79**	**157**	P	**P**	**14 37 16.2**	**+1.0**
	comp=Z,6.7nm,0.8s,mb4.4,baz=40,slow=5.5,SNR=4.6						
KAPI	**Kappang**	**39.79**	**157**	P	**P**	**14 37 16.2**	**+1.0**
TIXI	**Tiksi**	**41.23**	**11**	*e*P	**P**	**14 37 25.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
TIXI	**Tiksi**	**41.23**	**11**	*e*P	**P**	**14 37 25.4**	**-1.1**
	comp=Z,3.7nm,0.9s,mb4.0						
ZEI	**Tsey**	**48.63**	**301**	*e*P	**P**	**14 38 21.5**	**-4.4**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MIB	**Mutribah**	**49.04**	**283**	*e*P	**P**	**14 38 28.9**	**-0.3**
MIB				AMb	AMB	14 38 29.6	
	comp=Z,16nm,0.6s,mb5.2						
RDF	**Al-Radifah**	**49.15**	**282**	*e*P	**P**	**14 38 29.7**	**-0.4**
RDF				AMb	AMB	14 38 30.3	
	comp=Z,22nm,0.8s,mb5.2						
NAY	**Al-Naaiem**	**49.30**	**282**	*e*P	**P**	**14 38 30.7**	**-0.5**
NAY				AMb	AMB	14 38 31.8	
	comp=Z,17nm,0.7s,mb5.2						
BILL	**Biiibino**	**49.55**	**26**⇑	*e*P	**P**

comp=Z,2.7nm,0.8s,baz=76,slow=5.2,SNR=4.7
WRAB Tennant Creek 59.13 148 *eP* **P 14 39 42.4 -0.4**
WRAB pmax pmax
comp=Z,36nm,1.8s,mb5.1
WRAB Tennant Creek 59.13 148 *eP* **P 14 39 42.4 -0.4**
comp=Z,36nm,1.8s,mb5.1
ASAR Alice Springs 62.22 150 P **P 14 40 03.1 -0.7**
comp=Z,1.6nm,0.8s,mb4.2,baz=331,slow=6.7,SNR=15
NB2 NORSAR Subarra 63.98 327 P **P 14 40 13.9 -1.2**
comp=Z,2.2nm,0.6s,mb4.4,baz=72,slow=6.9
NOA NORSAR Array B 63.98 327 P **P 14 40 13.8 -1.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=72,slow=6.8,SNR=11
NOA NORSAR Array B 63.98 327 P **P 14 40 13.8 -1.3**
DPC Dobruska-Polom 65.08 315 *eP* **P 14 40 23.1 +0.6**
DPC Dobruska-Polom 65.08 315 *eP* **P 14 40 23.1 +0.6**
GERES GERESS Array B 67.23 314 P **P 14 40 36.2 -0.1**
comp=Z,1.1nm,0.6s,mb4.0,baz=66,slow=6.6,SNR=7.2
INK Inuvik 70.56 20 P **P 14 40 55.4 -1.3**
comp=Z,0.7nm,0.4s,mb4.0,baz=336,slow=8.9,SNR=8.5
CDF Champ du Feu 71.26 316 *eP* **P 14 41 01.0 -0.3**
STKA Stephens Creek 72.69 148 P **P 14 41 08.5 -1.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=283,slow=16,SNR=3.6
STKA Stephens Creek 72.69 148 *eP* **P 14 41 08.7 -1.2**
LPG La Plagne 72.96 313 *eP* **P 14 41 12.1 +0.6**
comp=Z,18nm,0.7s,mb4.8
LPL La Plagne 72.96 313 *eP* **P 14 41 12.0 +0.4**
comp=Z,12nm,0.6s,mb4.7
SMF Signal de Mont 74.15 315 *eP* **P 14 41 18.1 -0.4**
comp=Z,4.6nm,0.5s,mb4.3
TCF Toulx Ste Croi 75.30 316 *eP* **P 14 41 25.1 -0.1**
CAF Calviac 76.11 315 *eP* **P 14 41 30.0 +0.2**
YKA Yellowknife Ar 80.11 18 P **P 14 41 50.9 -0.7**
comp=Z,1.0nm,0.6s,mb3.9,baz=328,slow=5.0,SNR=17
YKA Yellowknife Ar 80.11 18 P **P 14 41 50.9 -0.7**
TORD Torodi Ar. Bea 94.07 288 P **P 14 43 00.3 -0.7**
comp=Z,0.2nm,0.7s,mb3.7,baz=48,slow=3.9,SNR=4.1
TORD Torodi Ar. Bea 94.07 288 P **P 14 43 00.3 -0.7**

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*ISCJB **20** 14:32:25.8±1.6, 36°.87N±0°.05×28°.29E±0°.07, h21km±22km, Error ellipse: s-maj=9.6km s-min=8.8km az=151.3*
*DDA **20** 14:32:25.5, 36°.89N×28°.26E, h7km±8km, Md2.8*
*CSEM **20** 14:32:27.2±0.2, 36°.92N×28°.19E, h20km, ML1.7, Error ellipse: s-maj=4.2km s-min=2.1km az=133.0*
*ISK **20** 14:32:27.4, 36°.94N×28°.15E, h17km, ML1.7*
ISC 20 14:32:25.6±1.6, 36°.88N±0°.05×28°.30E±0°.08, h24km±19km, n11, σ0s77/22, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.25**	**90**	⇑*i*Pg	**Pb**	**14 32 31.9**	**+0.2**
TURN				*i* Sg	**Sb**	**14 32 34.5**	**-1.3**
YER	**Yerkesik**	**0.26**	**358**	*e*PG	**Pb**	**14 32 32.7**	**+0.8**
YER				*e*SG	**Sb**	**14 32 37.1**	**+0.9**
YER	**Yerkesik**	**0.26**	**358**	*e*Pg	**Pb**	**14 32 32.7**	**+0.8**
YER				*e*Sg	**Sb**	**14 32 37.1**	**+0.9**
MLSB	**Milas**	**0.59**	**316**	*e*PG	**Pb**	**14 32 37.3**	**+0.1**
MLSB				*e*SG	**Sb**	**14 32 44.1**	**-1.0**
MLSB	**Milas**	**0.59**	**316**	*e*Pg	**Pb**	**14 32 37.3**	**+0.1**
MLSB				*e*Sg	**Sb**	**14 32 44.1**	**-1.1**
DAT	**Datca**	**0.59**	**256**	*e*PG	**Pb**	**14 32 37.9**	**+0.6**
DAT				*e*SG	**Sb**	**14 32 45.5**	**+0.2**
DAT	**Datca**	**0.59**	**256**	*e*Pg	**Pb**	**14 32 37.9**	**+0.6**
DAT				*e*Sg	**Sb**	**14 32 45.5**	**+0.2**
BDRM	**Kayabasi**	**0.71**	**286**	*e*P	**Pb**	**14 32 39.6**	**+0.4**
BDRM				*e*S	**Sb**	**14 32 47.4**	**-1.1**
BDRM	**Kayabasi**	**0.71**	**286**	*e*P	**Pb**	**14 32 39.6**	**+0.4**
BDRM				*e*S	**Sb**	**14 32 47.4**	**-1.1**
AYDN	**Tasoluk**	**0.85**	**337**	*e*P	**Pb**	**14 32 42.4**	**+0.8**
AYDN				*e*S	**Sb**	**14 32 52.1**	**-0.6**
AYDN	**Tasoluk**	**0.85**	**337**	*e*P	**Pb**	**14 32 42.4**	**+0.7**
AYDN				*e*S	**Sb**	**14 32 52.1**	**-0.6**

GUC 20 14:32:50.9±0.5, 19°.75S×69°.23W, h103km±6km, ML3.5, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.71**	**330**	⇓*i*P	Pn	14 33 09.4	+0.7
MNMC				*i* S	Sn	14 33 23.3	+1.3
MNMC				AML	AML	14 33 24.0	
	comp=E,10μm,0.2s						
HMBC	**Humberston**	**0.81**	**230**	⇑*i*P	Pn	14 33 09.9	+0.2
HMBC				*i* S	Sn	14 33 24.6	+0.9
HMBC				AML	AML	14 33 26.4	
	comp=E,1μm,0.3s						
PSGC	**Pisagua**	**0.86**	**280**	⇑*i*P	Pn	14 33 10.3	+0.2
PSGC				*i* S	Sn	14 33 25.1	+0.6
PSGC				AML	AML	14 33 25.7	
	comp=E,666nm,0.4s						
PB01	**Plate Boundary**	**1.31**	**191**	⇑*i*P	Pn	14 33 15.6	+0.6
PB01				*i* S	Sn	14 33 34.3	+1.0
PB01				AML	AML	14 33 36.0	
	comp=E,851nm,0.7s						

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*IDC **20** 14:51:58.4±1.3, 23°.44S×115°.16W, h0km, mb3.7/5, mb1 4.1/5, mb1mx4.0/14, mbtmp3.7/5, MS3.9/1, Ms1 3.9/1, ms1mx3.7/17, Error ellipse: s-maj=45.8km s-min=40.2km az=49.0*
*NEIC **20** 14:51:59.6±0.8, 23°.55S×115°.13W, h10km, mb4.4/2, Error ellipse: s-maj=29.6km s-min=24.8km az=47.0*
ISC 20 14:52:00.6±5.3, 23°.4S±0°.8×115°.2W±0°.7, h10km, n17, σ0s92/9, mb3.9/6, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.43**	**126**	LR	LR	14 55 30.7	
	comp=Z,1μm,19.8s,baz=103,slow=33						
LPAZ	**La Paz**	**44.63**	**90**	P	**P**	**15 00 14.1**	**+0.5**
	1.4nm,0.9s,mb3.8,baz=260,slow=5.3,SNR=3.5						
LPAZ	**La Paz**	**44.63**	**90**	*e*P	**P**	**15 00 13.5**	**-0.1**
	6.5nm,1.3s,mb4.3						
TXAR	**Lajitas Array**	**53.60**	**12**	P	**P**	**15 01 21.7**	**-0.3**
	0.1nm,0.7s,mb2.8,baz=203,slow=8.8,SNR=3.5						
TXAR	**Lajitas Array**	**53.60**	**12**	P	**P**	**15 01 21.7**	**-0.3**
NVAR	**Mina Array Bea**	**61.59**	**357**	P	**P**	**15 02 19.1**	**+0.9**
	1.7nm,0.8s,mb4.2,baz=189,slow=9.6,SNR=9.6						
PDAR	**Pinedale Array**	**66.05**	**4**	P	**P**	**15 02 46.1**	**-1.3**
	0.4nm,0.7s,mb3.6,baz=193,slow=3.7,SNR=3.1						
HLID	**Hailey**	**66.65**	**1**	P	**P**	**15 02 52.6**	**+1.3**
	3.9nm,1.2s,mb4.3						
YKA	**Yellowknife Ar**	**85.61**	**0**	P	**P**	**15 04 38.0**	**-0.8**
	1.8nm,1.0s,mb4.2,baz=176,slow=4.7,SNR=15						
YKA	**Yellowknife Ar**	**85.61**	**0**	P	**P**	**15 04 38.0**	**-0.8**
GTA	**Gaotai**	**146.42**	**307**	*e*P	PKPdf	15 11 41.8	+1.1
GTA				pP		15 11 45.6	
GTA				sP		15 11 48.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**147.83**	**268**	PKPbc	PKPbc	15 11 45.6	-1.0
	comp=Z,1.6nm,0.9s,baz=98,slow=0.7,SNR=9.1						
CMAR	**Chiang Mai Arr**	**147.83**	**268**	PKPbc	PKPbc	15 11 45.6	-1.0
BRTR	**Keskin Array B**	**149.03**	**51**	PKPbc	PKPbc	15 11 48.0	-1.1
	comp=Z,1.1nm,0.8s,baz=343,slow=3.9,SNR=6.3						
BVAR	**Borovoye Array**	**150.14**	**353**	PKPbc	PKPbc	15 11 50.8	-0.6
	comp=Z,0.5nm,0.5s,baz=94,slow=1.9,SNR=4.5						
KURK	**Kurchatov**	**150.72**	**342**	PKPbc	PKPbc	15 11 51.9	-1.0
	comp=Z,0.4nm,0.6s,baz=14,slow=2.0,SNR=3.1						
MKAR	**Makanchi Array**	**152.78**	**333**	PKPbc	PKPbc	15 11 57.5	-0.3
	comp=Z,0.2nm,0.5s,baz=45,slow=4.5,SNR=3.0						

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*DDA **20** 15:02:02.6, 37°.23N×28°.21E, h7km±2km, Md3.0*
*ISK **20** 15:02:02.9, 37°.24N×28°.21E, h7km, MD2.9*
*ISCJB **20** 15:02:03.2±0.6, 37°.25N±0°.03×28°.24E±0°.04, h1km±9km, Error ellipse: s-maj=7.0km s-min=4.5km az=137.2*
*CSEM **20** 15:02:03.1±0.1, 37°.22N×28°.20E, h8km, MD2.9, Error ellipse: s-maj=2.9km s-min=1.8km az=52.0*
ISC 20 15:02:03.5±0.6, 37°.22N±0°.04×28°.22E±0°.05, h8km±6km, n18, σ0s51/32, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**148**	*e*PG	**Pg**	**15 02 05.6**	**-0.4**
YER				*e*SG	**Sg**	**15 02 08.6**	**+1.0**
YER	**Yerkesik**	**0.10**	**148**	*e*Pg	**Pg**	**15 02 05.6**	**-0.3**
YER				*e*Sg	**Sg**	**15 02 08.6**	**+1.0**
MLSB	**Milas**	**0.36**	**282**	*e*PG	**Pg**	**15 02 10.0**	**-0.5**
MLSB				*e*SG	**Sg**	**15 02 16.1**	**+0.8**
MLSB	**Milas**	**0.36**	**282**	*e*Pg	**Pg**	**15 02 10.0**	**-0.5**
MLSB				*e*Sg	**Sg**	**15 02 16.1**	**+0.9**
TURN	**Turunc**	**0.47**	**138**	*e*P	**Pg**	**15 02 12.1**	**-0.6**
TURN				*e*S	**Sg**	**15 02 18.7**	**0.0**
TURN	**Turunc**	**0.47**	**138**	*e*P	**Pg**	**15 02 12.1**	**-0.5**
TURN				*e*S	**Sg**	**15 02 18.7**	**0.0**
AYDN	**Tasoluk**	**0.51**	**329**	⇑*i*P	**Pg**	**15 02 12.8**	**-0.6**
AYDN				*i* S	**Sg**	**15 02 19.9**	**-0.2**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**15 02 12.8**	**-0.6**
AYDN				*i* S	**Sg**	**15 02 19.9**	**-0.3**
DNZL	**Cakiroluk**	**0.81**	**55**	*e*P	**Pg**	**15 02 18.9**	**-0.2**
DNZL				*e*S	**Sg**	**15 02 29.6**	**0.0**
DNZL	**Cakiroluk**	**0.81**	**55**	*e*P	**Pg**	**15 02 18.9**	**-0.2**
DNZL				*e*S	**Sg**	**15 02 29.6**	**0.0**
FETY	**Fethiye**	**0.91**	**130**	*e*PG	**Pg**	**15 02 21.1**	**0.0**
FETY	**Fethiye**	**0.91**	**130**	*e*Pg	**Pg**	**15 02 21.1**	**+0.1**
MANT	**Manisa**	**1.29**	**12**	*e*P	**Pn**	**15 02 27.1**	**-0.8**
MANT				*e*S	**Sb**	**15 02 45.5**	**+0.6**
MANT	**Manisa**	**1.29**	**12**	*e*P	**Pn**	**15 02 27.1**	**-0.8**
MANT				*e*S	**Sb**	**15 02 45.5**	**+0.6**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*PN	**Pn**	**15 02 28.8**	**+0.3**
KULA				*e*SN	**Sn**	**15 02 47.0**	**+0.5**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*Pn	**Pn**	**15 02 28.8**	**+0.3**
KULA				*e*Sn	**Sn**	**15 02 47.0**	**+0.6**
ELL	**Elmali**	**1.44**	**109**	*e*PN	**Pn**	**15 02 29.8**	**0.0**
ELL	**Elmali**	**1.44**	**109**	*e*Pn	**Pn**	**15 02 29.8**	**-0.1**

CASC 20 15:07:36.6±1.7, 13°.71N×90°.70W, h66km±15km, MD3.6, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.52**	**27**	*e*P	Pn	15 07 49.6	+0.3
IXG				*e*S	Sn	15 07 59.4	+0.9
PCG	**Pacaya**	**0.69**	**7**	*e*P	Pn	15 07 51.6	+0.5
PCG				*e*S	Sn	15 08 04.2	+2.4
FUG	**Fuego 3**	**0.75**	**349**	⇓*e*P	Pn	15 07 52.1	+0.3
FG6		**0.86**	**348**	*e*P	Pn	15 07 53.5	+0.3
FG6				*e*S	Sn	15 08 06.0	+0.5
NBG	**Las Nubes**	**0.94**	**21**	⇓*e*P	Pn	15 07 54.5	+0.4
NBG				*e*S	Sn	15 08 09.5	+2.4
RTR	**El Retiro**	**1.04**	**79**	*e*P	Pn	15 07 55.8	+0.4
RTR				*e*S	Sn	15 08 11.6	+2.2
SBLS	**San Blas**	**1.05**	**83**	*e*P	Pn	15 07 55.5	-0.1
SBLS				*e*S	Sn	15 08 11.1	+1.3
RBDL	**Robledal**	**1.06**	**68**	*e*P	Pn	15 07 55.3	-0.4
RBDL				*e*S	Sn	15 08 11.4	+1.5
SNJE	**San Jose**	**1.07**	**81**	*e*P	Pn	15 07 56.0	+0.1
SNJE				*e*S	Sn	15 08 11.8	+1.6
JAT	**Jato**	**1.09**	**304**	*e*P	Pn	15 07 57.5	+1.4
TP2	**Tecpan 2**	**1.11**	**344**	⇓*e*P	Pn	15 07 57.1	+0.7
TP2				*e*S	Sn	15 08 12.3	+1.2
BOQS	**Boqueron**	**1.38**	**89**	*e*P	Pn	15 08 00.5	+0.6
BOQS				*e*S	Sn	15 08 19.3	+2.0
LFRS	**El Faro**	**1.59**	**93**	*e*P	Pn	15 08 02.9	+0.2
LFRS				*e*S	Sn	15 08 24.2	+1.7
LBRS	**Las Brisas**	**1.61**	**89**	*e*P	Pn	15 08 03.6	+0.7
LBRS				*e*S	Sn	15 08 23.7	+0.9
MRL	**Marmol**	**1.67**	**36**	*e*P	Pn	15 08 03.7	0.0
SNVI	**San Vicente**	**1.81**	**93**	*e*P	Pn	15 08 05.6	0.0
SNVI				*e*S	Sn	15 08 29.2	+1.6
BLLM	**Bellamira**	**2.41**	**96**	*e*P	Pn	15 08 13.3	-0.4

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*IDC **20** 15:08:13.4±1.3, 31°.02N×103°.54E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/24, mbtmp3.6/7, ML3.3/1, Error ellipse: s-maj=43.0km s-min=21.0km az=49.0*
*NEIC **20** 15:08:15.7±0.7, 31°.12N×103°.65E, h10km, mb4.3/1, Error ellipse: s-maj=18.4km s-min=12.0km az=64.0*
*BJI **20** 15:08:15.8, 31°.15N×103°.59E, h11km, ML3.7/11*
*ISCJB **20** 15:08:16.0±0.8, 31°.10N±0°.08×103°.7E±0°.1, h30km±7km, mb3.6/6, Error ellipse: s-maj=15.8km s-min=13.6km az=150.3*
ISC 20 15:08:16.6±0.7, 31°.12N±0°.04×103°.78E±0°.08, h18km±5km, n14, σ1s24/18, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.21**	**184**	Pg	**Pg**	**15 08 21.3**	**-0.4**
CD2				Sg	**Sg**	**15 08 26.6**	**+1.5**
CD2				smax			
	comp=N,14μm,0.5s						
LZH	**Lanzhou**	**4.96**	**1**	*e*Pg	**Pg**	**15 09 57.8**	**+6.3**
LZH				Sg	**Sg**	**15 10 55.6**	**-0.1**
LZH				smax			
	comp=N,33nm,0.5s						
LZH				smax			
	comp=E,48nm,0.7s						
ENH	**Enshi**	**4.99**	**98**	*e*Pn	**Pn**	**15 09 32.2**	**+1.5**
	comp=E,23nm,0.6s						
XAN	**Xi'an**	**5.23**	**55**	Pn	**Pn**	**15 09 34.3**	**+0.4**
XAN				Pg	**Pg**	**15 09 55.9**	**-0.8**
XAN				smax			
	comp=N,47nm,0.8s						
XAN				smax			
	comp=E,27nm,0.8s						
GYA	**Guiyang**	**5.29**	**151**	Pg	**Pg**	**15 09 54.8**	**-3.1**
GYA				Sg	**Sg**	**15 11 04.0**	**-2.4**
GYA				smax			
	comp=N,70nm,0.8s						
GYA				smax			
	comp=E,70nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.35**	**200**	Pn	**Pn**	**15 11 26.5**	**+1.3**
	baz=14,slow=7.7,SNR=2.8						
SONM	**Songino Array**	**16.81**	**6**	Pn	**Pn**	**15 12 13.7**	**+2.7**
	comp=E,0.1nm,0.3s,baz=189,slow=11,SNR=4.2						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**15 12 59.0**	**+1.0**
	comp=E,1.9nm,0.7s,baz=261,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**15 13 17.9**	**-0.2**
	comp=E,2.2nm,1.0s,mb3.6,baz=125,slow=12,SNR=9.9						
ZALV	**Zalesovo Beam**	**26.59**	**335**	P	**P**	**15 13 52.9**	**-0.7**
	comp=E,0.8nm,0.6s,mb3.4,baz=145,slow=10,SNR=3.0						
KURK	**Kurchatov**	**27.07**	**324**	P	**P**	**15 13 56.4**	**-1.5**
	comp=E,0.8nm,0.7s,mb3.4,baz=127,slow=9.9,SNR=6.2						
BVAR	**Borovoye Array**	**32.61**	**322**	P	**P**	**15 14 45.8**	**-1.2**
	comp=E,0.2nm,0.5s,mb3.4,baz=101,slow=7.5,SNR=2.8						
WRAB	**Tennant Creek**	**58.64**	**146**	*e*P	**P**	**15 18 12.9**	**+0.1**
	comp=E,1.8nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**61.65**	**148**	P	**P**	**15 18 33.5**	**+0.1**
	comp=E,0.3nm,0.7s,mb3.6,baz=343,slow=6.5,SNR=7.7						

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*NEIC **20** 15:16:04.4±0.5, 44°.45S×78°.21W, h10km, mb4.8/6, MS5.0/4, Error ellipse: s-maj=14.7km s-min=9.9km az=102.0*
*GCMT **20** 15:16:04.4±0.2, 44°.57S×78°.90W, h12km±1km, MW5.6/97, Moment Tensor Solution. s59,c83; s97,c205; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.29±.05; $M_{\theta\theta}$1.48±.06; $M_{\phi\phi}$-1.19±.05; $M_{r\theta}$-0.05±.14; $M_{\theta\phi}$-2.12±.04; $M_{\phi r}$-1.32±.22; Best double couple: $M_0$2.84100×10^{17} NP1:ϕ_s76.00000°, δ64.00000°, λ-170.00000°. NP2: ϕ_s342.00000°, δ81.00000°, λ-27.00000°. Principal axes: T 2.7780, Plg12.0000°, Azm32.0000°; N 0.1270, Plg62.0000°, Azm145.0000°; P -2.9040, Plg25.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **20** 15:16:04.9±0.7, 44°.70S×77°.57W, h0km, mb4.1/13, mb1 4.3/14, mb1mx4.2/19, mbtmp4.1/14, ML4.8/1, MS5.0/13, Ms1 5.0/13, ms1mx4.8/28 Error ellipse: s-maj=27.9km s-min=18.2km az=89.0*
ISC 20 15:16:04.0±6.6, 44°.54S±0°.07×78°.0W±0°.2, h2km±40km, n55, σ1s44/33, mb4.2/17, MS5.0/14, 1C, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**6.70**	**58**	Pn	**Pn**	**15 17 43.6**	**+0.2**
	4.4nm,0.3s,baz=230,slow=14,SNR=4.6						
PLCA				LR	LR	15 20 23.9	
	comp=Z,18μm,20.1s,baz=90,slow=40						
PLCA	**Paso Flores**	**6.70**	**58**	*e*Pn	**Pn**	**15 17 43.9**	**+0.5**
	49nm,0.6s						
USHA	**Ushuaia**	**12.02**	**152**	Pn	**Pn**	**15 18 56.5**	**+0.3**
	0.1nm,0.3s,baz=318,slow=12,SNR=1.7						
USHA				LR	LR	15 22 41.7	
	comp=Z,7μm,22.0s,baz=299,slow=34						
TRQA	**Tornquist**	**13.69**	**67**	*e*Pn	**Pn**	**15 19 21.5**	**+2.4**
	30nm,0.9s						
CFAA	**Coronel Fontan**	**15.03**	**34**	Pn	**Pn**	**15 19 34.9**	**-2.4**
	0.3nm,0.3s,baz=206,slow=11,SNR=7.5						
CFAA				LR	LR	15 25 18.6	
	comp=Z,611nm,18.0s,baz=235,slow=37						
LCO	**Las Campanas**	**16.56**	**23**	*e*P	**Pn**	**15 19 55.5**	**-1.8**
	24nm,0.8s						
PMSA	**Palmer Station**	**21.73**	**164**	LR	LR	15 27 13.3	
	comp=Z,3μm,20.3s,MS4.7,baz=326,slow=31						
CPUP	**Villa Florida**	**24.68**	**49**	P	**P**	**15 21 25.2**	**-0.9**
	7.6nm,0.6s,mb4.4,baz=217,slow=8.6,SNR=27						
CPUP				LR	LR	15 31 41.1	
	comp=Z,4μm,18.5s,MS5.0,baz=190,slow=38						
CPUP	**Villa Florida**	**24.68**	**49**	*e*P	**P**	**15 21 25.1**	**-1.1**
LPAZ	**La Paz**	**29.38**	**20**	P	**P**	**15 22 09.2**	**+0.7**
	2.2nm,1.0s,mb3.8,baz=239,slow=5.9,SNR=2.8						
LPAZ	**La Paz**	**29.38**	**20**	*e*P	**P**	**15 22 09.0**	**+0.5**
	6.9nm,1.1s,mb4.3						
LPAZ				LR	LR		
	comp=Z,3μm,22.0s,MS4.9						
RPN	**Rapa Nui**	**30.50**	**294**	LR	LR	15 31 03.7	
	comp=Z,12μm,20.3s,MS5.5,baz=98,slow=29						
ATAH	**Atahualpa**	**37.26**	**359**	P	**P**	**15 23 19.8**	**+2.6**
	comp=Z,3.0nm,0.6s,mb4.3,baz=135,slow=2.9,SNR=2.6						
VNA2	**Neumayer--Watz**	**42.43**	**153**	*e*	**P**	**15 23 59.4**	**-0.2**
QSPA	**South Pole Qui**	**45.70**	**180**	P	**P**	**15 24 24.7**	**-1.0**
	comp=Z,2.7nm,0.9s,mb4.2,baz=102,slow=2.6,SNR=8.7						
QSPA	**South Pole Qui**	**45.70**	**180**	P	**P**	**15 24 24.7**	**-1.1**
ROSC	**El Rosal**	**49.28**	**5**	LR	LR	15 44 06.8	
	comp=Z,3μm,18.4s,MS5.3,baz=187,slow=34						
RKT	**Rikitea**	**50.80**	**275**	*e*LR	LR	15 39 31.2	
	comp=Z,4μm,26.2s,baz=135						
SDV	**Santo Domingo**	**53.59**	**9**	P	**P**	**15 25 26.6**	**+0.1**
	comp=Z,23nm,1.1s,mb5.0						
SDV				LR	LR		
	comp=Z,660nm,20.0s,MS4.7						
JTS	**JuntasAbangare**	**54.93**	**352**	P	**P**	**15 25 41.7**	**+5.5**
	comp=Z,1.7nm,0.3s,mb4.5,baz=163,slow=13,SNR=1.8						
JTS				LR	LR	15 42 57.4	
	comp=Z,977nm,20.9s,MS4.9,baz=170,slow=29						
JTS	**JuntasAbangare**	**54.93**	**352**	P	**P**	**15 25 41.7**	**+5.5**
JTS				LR	LR	15 42 57.4	
SYO	**Syowa Base**	**57.82**	**158**	⇑*e*P	**P**	**15 26 00.8**	**+4.5**
APG	**El Apazote**	**60.33**	**346**	P	**P**	**15 26 17.8**	**+3.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=168,slow=19,SNR=2.0						
APG				LR	LR	15 43 38.9	
	comp=Z,841nm,21.1s,MS4.9,baz=24,slow=27						
TAOE	**Nuku Hiva Isla**	**64.06**	**284**	*e*S	Sx	15 35 12.0	
	comp=Z,2μm,26.4s						
TAOE				*e*LR	LR	15 45 41.6	
	comp=Z,1μm,26.6s,baz=142						
MAW	**Mawson**	**64.34**	**164**	P	**P**	**15 26 40.6**	**+0.1**
	comp=Z,2.0nm,0.9s,mb4.2,baz=207,slow=11,SNR=1.9						
PPT	**Papeete**	**64.81**	**270**	*e*S	Sx	15 35 20.4	
	comp=Z,2μm,26.0s						
PPT				*e*LR	LR	15 45 46.7	
	comp=Z,2μm,25.5s,baz=127						
PPT	**Papeete**	**64.81**	**270**	LR	LR	15 46 37.9	
	comp=Z,806nm,20.4s,MS4.9,baz=247,slow=28						
TEIG	**Tepich**	**65.13**	**349**	LR	LR	15 49 00.5	
	comp=Z,1μm,20.4s,MS5.0,baz=313,slow=30						
TXAR	**Lajitas Array**	**77.16**	**337**	P	**P**	**15 28 01.9**	**+3.0**
	comp=Z,0.3nm,0.8s,mb3.3,baz=150,slow=6.2,SNR=4.6						
JCT	**Junction City**	**77.26**	**341**	*e*P	**P**	**15 27 57.7**	**-1.7**
	comp=Z,7.5nm,0.8s,mb4.7						
BOSA	**Boshof**	**79.14**	**119**	P	**P**	**15 28 10.1**	**-0.1**
	comp=Z,2.8nm,1.0s,mb4.1,baz=227,slow=8.0,SNR=2.7						
BOSA				LR	LR	15 58 58.7	
	comp=Z,2μm,18.3s,MS5.4,baz=215,slow=33						
BOSA	**Boshof**	**79.14**	**119**	P	**P**	**15 28 10.1**	**-0.1**
BOSA				LR	LR	15 58 58.7	
SWET	**Sewanee**	**79.71**	**353**	*e*P	**P**	**15 28 11.4**	**-1.4**
DBIC	**Dimbokro**	**82.83**	**73**	P	**P**	**15 28 30.3**	**+0.3**
	comp=Z,5.8nm,1.0s,mb4.6,baz=180,slow=6.1,SNR=3.0						
CCM	**Cathedral Cave**	**83.08**	**350**	*e*P	**P**	**15 28 27.3**	**-3.3**
	comp=Z,14nm,0.9s,mb5.0						
ANMO	**Albuquerque**	**83.22**	**337**	P	**P**	**15 28 35.5**	**+4.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=161,slow=6.1,SNR=3.7						
ANMO	**Albuquerque**	**83.22**	**337**	P	**P**	**15 28 30.5**	**-0.9**
	comp=Z,9.7nm,1.3s,mb4.7						
ANMO				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
CBKS	**Cedar Bluff**	**85.25**	**343**	*e*P	**P**	**15 28 40.6**	**-1.1**
NVAR	**Mina Array Bea**	**90.24**	**329**	P	**P**	**15 29 09.8**	**+4.1**
	comp=Z,0.2nm,0.6s,mb3.6,baz=163,slow=6.6,SNR=2.7						
CMB	**Columbia Colle**	**90.66**	**328**	PFAKE		15 29 20.0	+12
CMB				LR	LR		
	comp=Z,780nm,19.0s,MS5.2						
PDAR	**Pinedale Array**	**91.38**	**337**	P	**P**	**15 29 13.3**	**+2.5**
	comp=Z,0.5nm,0.9s,mb3.8,baz=129,slow=8.3,SNR=2.8						
PDAR				LR	LR	16 04 20.7	
	comp=Z,687nm,20.9s,MS5.1,baz=263,slow=32						
DZM	**Mont Dzumac**	**91.41**	**237**	*e*LR	LR	15 58 28.5	
	comp=Z,1μm,29.1s						
TORD	**Torodi Ar. Bea**	**91.94

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**3.73**	**37**	*i* P	**Pn**	**15 27 46.6**	**+0.6**
MOIG	**Morelia**	**5.62**	**26**	*i* P	**Pn**	**15 28 09.8**	**-2.1**
CMIG	**Matias Romero**	**8.96**	**73**	LR	LR	15 32 20.8	
	comp=Z,638nm,21.0s,baz=138,slow=37						
TXAR	**Lajitas Array**	**14.63**	**1**	Pn	**Pn**	**15 30 15.6**	**+0.3**
	0.0nm,0.3s,baz=180,slow=12,SNR=9.2						
ANMO	**Albuquerque**	**20.37**	**354**	P	**P**	**15 31 25.2**	**+0.9**
	1.2nm,0.5s,baz=154,slow=11,SNR=2.4						
ANMO	**Albuquerque**	**20.37**	**354**	*e*P	**P**	**15 31 25.3**	**+0.9**
WUAZ	**Wupatki**	**21.87**	**343**	P	**P**	**15 31 41.5**	**+1.0**
	5.7nm,0.8s,mb4.0						
MIAR	**Mount Ida**	**21.89**	**23**	*e*P	**P**	**15 31 42.1**	**+1.4**
	23nm,1.4s,mb4.4						
MVCO	**Mesa Verde**	**22.86**	**350**	*e*P	**P**	**15 31 49.7**	**-1.5**
	9.9nm,0.6s,mb4.4						
NVAR	**Mina Array Bea**	**26.93**	**334**	P	**P**	**15 32 28.7**	**-0.1**
	0.4nm,0.3s,mb3.5,baz=150,slow=9.3,SNR=4.2						
YKA	**Yellowknife Ar**	**48.41**	**353**	P	**P**	**15 35 28.3**	**-0.8**
	0.5nm,0.6s,mb3.7,baz=167,slow=7.5,SNR=8.7						
ASAR	**Alice Springs**	**125.02**	**251**	PKP	PKPdf	15 45 50.0	+1.9
	0.2nm,0.8s,baz=67,slow=2.4,SNR=3.2						

*ISCJB **20** 15:28:29.9±2.7,2.2°N±0.2°×122.9°E±0.4°,h451km±37km, mb3.4/5,Error ellipse: s-maj=71.3km s-min=13.0km az=152.3*
*IDC **20** 15:28:29.9±6.4,2.22°N×122.83°E,h430km±82km,mb3.0/5, mb1 3.1/6,mb1mx2.8/22,mbtmp3.0/6,Error ellipse: s-maj=104.0km s-min=16.0km az=62.0*
*NEIC **20** 15:28:30.2±1.7,2.25°N×122.99°E,h436km±23km,mb4.1/2, Error ellipse: s-maj=40.1km s-min=8.7km az=61.0*
ISC 20 15:28:30.3±2.4,2.2°N±0.2°×123.0°E±0.3,h436km±33km,n12, σ0=50/12,mb3.4/5,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**7.74**	**300**	*e*P	**P**	**15 30 23.3**	**+0.6**
	16nm,0.7s						
KAPI	**Kappang**	**7.88**	**204**	P	**P**	**15 30 23.6**	**-0.7**
	0.6nm,0.3s,baz=30,slow=9.9,SNR=7.2						
KAPI	**Kappang**	**7.88**	**204**	*e*P	**P**	**15 30 24.1**	**-0.2**
KAKA	**Kakadu**	**17.57**	**148**	*e*P	**P**	**15 32 08.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**20.37**	**173**	P	**P**	**15 32 35.2**	**-0.7**
	1.2nm,0.5s,baz=2.8,slow=5.9,SNR=6.6						
FITZ	**Fitzroy Crossi**	**20.37**	**173**	*e*P	**P**	**15 32 36.0**	**+0.1**
WRAB	**Tennant Creek**	**24.69**	**154**	*e*P	**P**	**15 33 14.7**	**-0.2**
	1.2nm,0.4s,mb3.7						
ASAR	**Alice Springs**	**27.85**	**158**	P	**P**	**15 33 43.2**	**+0.4**
	0.3nm,0.4s,mb3.0,baz=338,slow=7.1,SNR=22						
STKA	**Stephens Creek**	**38.25**	**154**	P	**P**	**15 35 12.3**	**+1.0**
	2.1nm,0.6s,mb3.7,baz=346,slow=8.2,SNR=6.9						
SONM	**Songino Array**	**47.64**	**345**	P	**P**	**15 36 24.7**	**-0.5**
	0.5nm,0.5s,mb3.1,baz=161,slow=8.6,SNR=3.5						
MKAR	**Makanchi Array**	**56.73**	**328**	P	**P**	**15 37 30.6**	**-0.3**
	1.0nm,0.5s,mb3.5,baz=126,slow=5.7,SNR=8.3						
KURK	**Kurchatov**	**61.05**	**329**	*e*P	**P**	**15 38 00.3**	**+0.1**

*HLW **20** 16:04:23.5,34.5°N×24.9°E,h33km±42km,Ml4.2*
*IDC **20** 16:04:24.4±0.7,34.32°N×25.04°E,h0km,mb4.3/17, mb1 4.4/24,mb1mx4.3/32,mbtmp4.3/24,ML4.6/7,Error ellipse: s-maj=13.8km s-min=12.7km az=25.0*
*MOS **20** 16:04:25.2±1.2,34.20°N×25.03°E,h19km,mb4.4/29,Error ellipse: s-maj=6.1km s-min=3.4km az=104.4*
*ATH **20** 16:04:27.6,34.29°N×25.05°E,h25km±1km,MD4.1/6*
*THE **20** 16:04:27.9,34.28°N×25.01°E,h2km±1km,ML4.2/1,Error ellipse: s-maj=2.5km s-min=0.9km az=185.0*
*ISCJB **20** 16:04:27.0±0.2,34.20°N±0.02°×25.14°E±0.02,h35km±3km, mb4.3/56,MS4.6/4,Error ellipse: s-maj=3.2km s-min=2.0km az=139.6*
*NEIC **20** 16:04:27.6,34.29°N×25.05°E,h25km,mb4.2/48, MD4.1(ATH),After ATH.*
*BJI **20** 16:04:28.3,34.58°N×24.53°E,h56km,mB5.1/9,mb4.8/15, Ms5.0/9,Ms7 4.7/9*
*CSEM **20** 16:04:29.4±0.1,34.22°N×25.08°E,h40km,mb4.3/31,Error ellipse: s-maj=3.6km s-min=2.2km az=49.0*
ISC 20 16:04:28.5±0.6,34.24°N±0.01°×25.11°E±0.02,h28km±5km, h54km±2.5km:pP-P,n553,σ1=17/590,mb4.3/56,MS4.6/4, 10C-2D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.80**	**37**	*e*PN	**Pn**	**16 04 43.1**	**-0.8**
XRY	**Khrisi**	**0.80**	**37**	*e*Pn	**Pn**	**16 04 43.1**	**-0.8**
SIVA	**Sivas**	**0.82**	**343**	*e*PN	**Pn**	**16 04 42.4**	**-1.8**
SIVA				*e*SN	**Sn**	**16 04 53.3**	**-2.0**
SIVA	**Sivas**	**0.82**	**343**	P	**Pn**	**16 04 42.4**	**-1.8**
SIVA				S	**Sb**	**16 04 54.3**	**-0.6**
SIVA	**Sivas**	**0.82**	**343**	P	**Pn**	**16 04 42.4**	**-1.8**
SIVA				*e*Sn	**Sn**	**16 04 53.3**	**-2.0**
SIVA				S	**Sb**	**16 04 54.3**	**-0.6**
LAST	**Lasithi**	**0.97**	**18**	*e*PN	**Pn**	**16 04 45.6**	**-0.7**
LAST	**Lasithi**	**0.97**	**18**	P	**Pn**	**16 04 45.6**	**-0.7**
LAST	**Lasithi**	**0.97**	**18**	P	**Pn**	**16 04 45.6**	**-0.7**
GVD	**Gavdhos**	**1.03**	**306**	*e*PN	**Pn**	**16 04 46.0**	**-1.1**
GVD				*e*SN	**Sn**	**16 05 00.3**	**-0.4**
GVD	**Gavdhos**	**1.03**	**306**	P	**Pn**	**16 04 46.0**	**-1.1**
GVD				S	**Sn**	**16 05 00.0**	**-0.7**
GVD	**Gavdhos**	**1.03**	**306**	P	**Pn**	**16 04 46.0**	**-1.1**
GVD				S	**Sn**	**16 05 00.0**	**-0.7**
GVD				*e*Sn	**Sn**	**16 05 00.3**	**-0.4**
IDI	**Anoyia**	**1.07**	**350**	Pn	**Pn**	**16 04 46.3**	**-1.3**
	121nm,0.3s,baz=174,slow=18,SNR=83						
IDI				Sn	**Sn**	**16 04 59.9**	**-1.5**
	332nm,0.3s,baz=338,slow=21,SNR=15						
IDI	**Anoyia**	**1.07**	**350**	*e*PN	**Pn**	**16 04 46.4**	**-1.2**
IDI				*e*SN	**Sn**	**16 05 00.9**	**-0.5**
IDI	**Anoyia**	**1.07**	**350**	*e*Pn	**Pn**	**16 04 46.4**	**-1.2**
IDI				*e*Sn	**Sn**	**16 05 00.9**	**-0.5**
NPS	**Neapolis**	**1.11**	**22**	*e*PN	**Pn**	**16 04 48.0**	**-0.1**
NPS	**Neapolis**	**1.11**	**22**	*e*Pn	**Pn**	**16 04 48.0**	**-0.1**
ZKR	**Zakros**	**1.27**	**46**	*e*PN	**Pn**	**16 04 51.4**	**+1.1**
ZKR	**Zakros**	**1.27**	**46**	P	**Pn**	**16 04 51.5**	**+1.2**
ZKR				S	**Sn**	**16 05 10.8**	**+4.4**
ZKR	**Zakros**	**1.27**	**46**	P	**Pn**	**16 04 51.5**	**+1.2**
ZKR				S	**Sn**	**16 05 10.8**	**+4.4**
VAM	**Vamos**	**1.39**	**328**	*e*PN	**Pn**	**16 04 52.0**	**0.0**
VAM				*e*SN	**Sn**	**16 05 10.8**	**+1.4**
VAM	**Vamos**	**1.39**	**328**	*e*Pn	**Pn**	**16 04 52.0**	**0.0**
VAM				*e*Sn	**Sn**	**16 05 10.8**	**+1.4**
KARN	**Karanos**	**1.52**	**320**	*e*PN	**Pn**	**16 04 54.3**	**+0.5**
KARN	**Karanos**	**1.52**	**320**	P	**Pn**	**16 04 54.0**	**+0.2**
KARN				S	**Sn**	**16 05 13.4**	**+0.7**
KARN	**Karanos**	**1.52**	**320**	P	**Pn**	**16 04 54.0**	**+0.2**
KARN	**Karanos**	**1.52**	**320**	*e*Pn	**Pn**	**16 04 54.3**	**+0.5**
KARN				S	**Sn**	**16 05 13.4**	**+0.7**
KARP	**Karpathos**	**2.14**	**52**	*e*PB	**Pb**	**16 05 05.9**	**-0.6**
THR1	**Thera Island**	**2.15**	**8**	P	**Pn**	**16 05 03.7**	**+1.2**
THR1	**Thera Island**	**2.15**	**8**	P	**Pn**	**16 05 03.7**	**+1.2**
THR3	**Thira Island,**	**2.18**	**6**	P	**Pn**	**16 05 03.5**	**+0.6**
THR3	**Thira Island,**	**2.18**	**6**	P	**Pn**	**16 05 03.5**	**+0.6**
LTBQ	**Tobruq**	**2.39**	**205**	*i* P	**Pn**	**16 05 07.7**	**+1.9**
	SNR=91						
LTBQ				*e*S	**Sn**	**16 05 36.4**	**+2.3**
	244nm,0.5s,SNR=91						
KYTH	**Kithira**	**2.65**	**321**	*e*PN	**Pn**	**16 05 10.5**	**+1.1**
KYTH	**Kithira**	**2.65**	**321**	*e*Pn	**Pn**	**16 05 10.5**	**+1.1**
SLUM		**2.74**	**178**	S	**Sn**	**16 05 41.8**	**-0.9**
	baz=175						
SLUM		**2.74**	**178**	S	**Sn**	**16 05 41.8**	**-0.9**
APE	**Apeiranthos**	**2.85**	**7**	*e*PN	**Pn**	**16 05 12.4**	**+0.3**
APE	**Apeiranthos**	**2.85**	**7**	P	**Pn**	**16 05 12.4**	**+0.3**
APE	**Apeiranthos**	**2.85**	**7**	P	**Pn**	**16 05 12.4**	**+0.3**
ARG	**Arkhangelos**	**3.16**	**50**	*e*PN	**Pn**	**16 05 19.1**	**+2.7**
ARG	**Arkhangelos**	**3.16**	**50**	P	**Pn**	**16 05 19.1**	**+2.7**
ARG				S	**Sn**	**16 05 56.4**	**+3.2**
ARG	**Arkhangelos**	**3.16**	**50**	P	**Pn**	**16 05 19.1**	**+2.7**
ARG				S	**Sn**	**16 05 56.4**	**+3.2**
DAT	**Datca**	**3.20**	**38**	*e*PN	**Pn**	**16 05 14.9**	**-2.0**
BDRM	**Kayabasi**	**3.41**	**33**	*i* P	**Pn**	**16 05 21.0**	**+1.3**
BDRM	**Kayabasi**	**3.41**	**33**	*i* P	**Pn**	**16 05 21.0**	**+1.3**
HMAT	**Matruh**	**3.55**	**151**	P	**Pn**	**16 05 21.2**	**-0.6**
	baz=151						
HMAT				S	**Sn**	**16 06 02.3**	**-0.5**
	baz=151						
HMAT	**Matruh**	**3.55**	**151**	P	**Pn**	**16 05 21.2**	**-0.6**
HMAT				S	**Sn**	**16 06 02.3**	**-0.5**
SMG	**Samos**	**3.74**	**22**	P	**Pn**	**16 05 25.8**	**+1.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**3.74**	**22**	P	**Pn**	**16 05 25.8**	**+1.5**
MLSB	**Milas**	**3.75**	**35**	*e*PN	**Pn**	**16 05 21.8**	**-2.6**
VLX	**Vlachokerasia**	**3.83**	**325**	P	**Pn**	**16 05 25.9**	**+0.3**
VLX	**Vlachokerasia**	**3.83**	**325**	P	**Pn**	**16 05 25.9**	**+0.3**
ATHU	**Athens Univers**	**3.88**	**344**	P	**Pn**	**16 05 26.4**	**+0.2**
ATHU	**Athens Univers**	**3.88**	**344**	P	**Pn**	**16 05 26.4**	**+0.2**
TURN	**Turunc**	**3.88**	**46**	*i* P	**Pn**	**16 05 23.8**	**-2.5**
TURN	**Turunc**	**3.88**	**46**	*i* P	**Pn**	**16 05 23.8**	**-2.4**
YER	**Yerkesik**	**3.88**	**41**	*e*PN	**Pn**	**16 05 24.3**	**-1.9**
ATH	**Athens Observa**	**3.90**	**344**	P	**Pn**	**16 05 27.6**	**+1.1**
ATH	**Athens Observa**	**3.90**	**344**	P	**Pn**	**16 05 27.6**	**+1.1**
ITM	**Ithomi**	**3.92**	**320**	*e*PN	**Pn**	**16 05 26.4**	**-0.3**
ITM	**Ithomi**	**3.92**	**320**	*e*Pn	**Pn**	**16 05 26.4**	**-0.3**
FETY	**Fethiye**	**4.03**	**52**	*e*PN	**Pn**	**16 05 27.5**	**-0.9**
AYDN	**Tasoluk**	**4.09**	**33**	*i* P	**Pn**	**16 05 31.7**	**+2.6**
AYDN	**Tasoluk**	**4.09**	**33**	*i* P	**Pn**	**16 05 31.7**	**+2.5**
AYDN				*i* S	**Sn**	**16 06 12.0**	**-4.1**
LTK	**Loutraki**	**4.16**	**336**	P	**Pn**	**16 05 29.6**	**-0.5**
LTK	**Loutraki**	**4.16**	**336**	P	**Pn**	**16 05 29.6**	**-0.5**
AKAS	**Kas**	**4.19**	**60**	*i* P	**Pn**	**16 05 31.6**	**+1.1**
AKAS	**Kas**	**4.19**	**60**	*i* P	**Pn**	**16 05 31.6**	**+1.1**
AKAS				*i* S	**Sn**	**16 06 16.1**	**-2.3**
CHOS	**Chios island**	**4.21**	**10**	P	**Pn**	**16 05 31.8**	**+1.0**
CHOS	**Chios island**	**4.21**	**10**	P	**Pn**	**16 05 31.8**	**+1.0**
URLA	**Izmir**	**4.29**	**16**	*i* P	**Pn**	**16 05 32.6**	**+0.7**
URLA	**Izmir**	**4.29**	**16**	*i* P	**Pn**	**16 05 32.6**	**+0.7**
GUR	**Goura**	**4.32**	**330**	P	**Pn**	**16 05 32.3**	**0.0**
GUR	**Goura**	**4.32**	**330**	P	**Pn**	**16 05 32.3**	**0.0**
BLCB	**Balcova**	**4.43**	**20**	*e*P	**Pn**	**16 05 30.9**	**-2.8**
BLCB	**Balcova**	**4.43**	**20**	P	**Pn**	**16 05 34.8**	**+1.0**
BLCB	**Balcova**	**4.43**	**20**	P	**Pn**	**16 05 34.8**	**+1.0**
IZM	**Izmir**	**4.50**	**22**	*e*P	**Pn**	**16 05 32.2**	**-2.6**
GLHS	**Gilhisar (BURDU**	**4.61**	**50**	*e*P	**Pn**	**16 05 35.7**	**-0.6**
ELL	**Elmali**	**4.65**	**56**	*e*P	**Pn**	**16 05 36.2**	**-0.6**
DSF	**Desfina**	**4.66**	**334**	P	**Pn**	**16 05 37.7**	**+0.7**
DSF	**Desfina**	**4.66**	**334**	P	**Pn**	**16 05 37.7**	**+0.7**
DNZL	**Cakiroluk**	**4.70**	**42**	*i* P	**Pn**	**16 05 39.5**	**+2.0**
DNZL	**Cakiroluk**	**4.70**	**42**	*i* P	**Pn**	**16 05 39.5**	**+2.0**
GOLH	**Golhisar**	**4.70**	**49**	*i* P	**Pn**	**16 05 39.9**	**+2.3**
GOLH	**Golhisar**	**4.70**	**49**	*i* P	**Pn**	**16 05 39.9**	**+2.4**
LKR	**Lokris**	**4.72**	**340**	P	**Pn**	**16 05 37.5**	**-0.3**
LKR	**Lokris**	**4.72**	**340**	P	**Pn**	**16 05 37.5**	**-0.3**
LAKA	**Lakka**	**4.73**	**329**	P	**Pn**	**16 05 38.7**	**+0.8**
LAKA	**Lakka**	**4.73**	**329**	P	**Pn**	**16 05 38.7**	**+0.8**
DENT	**Denizli**	**4.74**	**41**	*e*P	**Pn**	**16 05 36.7**	**-1.3**
KALE	**Kalithea**	**4.79**	**331**	P	**Pn**	**16 05 40.0**	**+1.3**
KALE	**Kalithea**	**4.79**	**331**	P	**Pn**	**16 05 40.0**	**+1.3**
EFP	**Efpalio**	**4.92**	**329**	P	**Pn**	**16 05 41.5**	**+1.0**
EFP	**Efpalio**	**4.92**	**329**	P	**Pn**	**16 05 41.5**	**+1.0**
SWA2		**4.99**	**176**	P	**Pn**	**16 05 41.6**	**+0.2**
	baz=175						
SWA2				AMP		16 06 00.0	
	comp=N,340μm,0.6s,logA/T=5.8,baz=175						
SWA2				S	**Sn**	**16 06 35.6**	**-2.6**
	baz=175						
SWA2		**4.99**	**176**	P	**Pn**	**16 05 41.6**	**+0.1**
SWA2				S	**Sn**	**16 06 35.6**	**-2.6**
MANT	**Manisa**	**5.08**	**32**	*i* P	**Pn**	**16 05 45.0**	**+2.3**
MANT	**Manisa**	**5.08**	**32**	*i* P	**Pn**	**16 05 45.0**	**+2.3**
KORT	**Korkueli**	**5.08**	**56**	*i* P	**Pn**	**16 05 41.5**	**-1.4**
KORT	**Korkueli**	**5.08**	**56**	*i* P	**Pn**	**16 05 41.5**	**-1.3**
PRK	**Paraskevi**	**5.09**	**10**	P	**Pn**	**16 05 44.4**	**+1.6**
PRK	**Paraskevi**	**5.09**	**10**	P	**Pn**	**16 05 44.4**	**+1.6**
AKHS	**Akhisar**	**5.12**	**24**	*i* P	**Pn**	**16 05 45.3**	**+2.0**
AKHS	**Akhisar**	**5.12**	**24**	*i* P	**Pn**	**16 05 45.3**	**+2.0**
KULA	**Kula-Manisa**	**5.14**	**33**	*e*P	**Pn**	**16 05 41.7**	**-1.9**
ANTB	**Antalya**	**5.24**	**58**	*e*P	**Pn**	**16 05 44.6**	**-0.4**
AGG	**Agios Georgios**	**5.27**	**336**	P	**Pn**	**16 05 46.3**	**+0.9**
AGG				S	**Sn**	**16 06 46.9**	**+1.7**
AGG	**Agios Georgios**	**5.27**	**336**	P	**Pn**	**16 05 46.3**	**+0.9**
AGG				S	**Sn**	**16 06 46.9**	**+1.7**
LJBD	**Adjabya**	**5.30**	**233**	*i* P	**Pn**	**16 05 46.4**	**+0.5**
	comp=N,82nm,0.9s,SNR=76						
XOR	**Xorichti**	**5.35**	**344**	P	**Pn**	**16 05 46.6**	**+0.2**
XOR	**Xorichti**	**5.35**	**344**	P	**Pn**	**16 05 46.6**	**+0.2**
VLS	**Valsamata**	**5.37**	**318**	P	**Pn**	**16 05 47.7**	**+1.0**
VLS	**Valsamata**	**5.37**	**318**	P	**Pn**	**16 05 47.7**	**+1.0**
HBRG	**Burj al 'Arab**	**5.42**	**131**	P	**Pn**	**16 05 47.6**	**+0.2**
	baz=132						
KHAL	**Karahalli**	**5.44**	**39**	*i* P	**Pn**	**16 05 49.1**	**+1.5**
KHAL	**Karahalli**	**5.44**	**39**	*i* P	**Pn**	**16 05 49.1**	**+1.5**
BCK	**Bucak**	**5.49**	**53**	*e*P	**Pn**	**16 05 47.6**	**-0.8**
EZN	**Ezine**	**5.67**	**10**	*e*P	**Pn**	**16 05 47.7**	**-3.1**
ISP	**Isparta**	**5.67**	**49**	*e*P	**Pn**	**16 05 50.5**	**-0.3**
SUTC	**Sutluce-Ispart**	**5.78**	**54**	*e*P	**Pn**	**16 05 51.6**	**-0.7**
BALY	**Balya**	**5.85**	**19**	*i* P	**Pn**	**16 05 55.1**	**+1.8**
BALY	**Balya**	**5.85**	**19**	*i* P	**Pn**	**16 05 55.1**	**+1.8**
LUJL	**Ujela**	**6.04**	**213**	*i* P	**Pn**	**16 05 56.3**	**+0.3**
	comp=N,366nm,0.7s,SNR=70						
DST	**Dursunbey**	**6.06**	**27**	*e*P	**Pn**	**16 05 53.8**	**-2.3**
GAZI	**Gazipasa**	**6.23**	**69**	*i* P	**Pn**	**16 05 58.1**	**-0.4**
GAZI	**Gazipasa**	**6.23**	**69**	*i* P	**Pn**	**16 05 58.1**	**-0.4**
ALT	**Altintas**	**6.27**	**38**	*e*P	**Pn**	**16 05 57.9**	**-1.2**
PLG	**Polygyros**	**6.27**	**348**	P	**Pn**	**16 06 00.7**	**+1.6**
PLG	**Polygyros**	**6.27**	**348**	P	**Pn**	**16 06 00.7**	**+1.6**
MANS	**Anshas**	**6.32**	**119**	P	**Pn**	**16 06 02.8**	**+3.0**
LEF	**Lefka**	**6.47**	**80**	*e*P	**Pn**	**16 06 03.2**	**+1.3**
HNAT	**Natroun**	**6.55**	**133**	P	**Pn**	**16 06 03.3**	**+0.3**
	baz=133						
HNAT	**Natroun**	**6.55**	**133**	P	**Pn**	**16 06 03.3**	**+0.3**
HDMB	**Hadim**	**6.60**	**64**	*e*P	**Pn**	**16 06 03.5**	**-0.1**
AANS		**6.62**	**125**	P	**Pn**	**16 06 02.8**	**-1.1**
	baz=126						
RKY	**Sarkoy-Tekirda**	**6.65**	**14**	*e*P	**Pn**	**16 06 01.0**	**-3.3**
AWBH		**6.73**	**150**	P	**Pn**	**16 06 05.1**	**-0.4**
	baz=150						
AWBH		**6.73**	**150**	P	**Pn**	**16 06 05.1**	**-0.4**
FYM	**Al Fayyum**	**6.78**	**130**	P	**Pn**	**16 06 06.4**	**+0.3**
	baz=131						
FYM	**Al Fayyum**	**6.78**	**130**	P	**Pn**	**16 06 06.4**	**+0.3**
AYT	**Al 'Ayyat**	**6.84**	**130**	P	**Pn**	**16 06 06.5**	**-0.5**
	baz=130						
AYT	**Al 'Ayyat**	**6.84**	**130**	P	**Pn**	**16 06 06.5**	**-0.4**
KEK	**Kerkira**	**6.92**	**324**	P	**Pn**	**16 06 09.1**	**+1.1**
KEK	**Kerkira**	**6.92**	**324**	P	**Pn**	**16 06 09.1**	**+1.1**
KONT	**Konya--Tatoy**	**6.94**	**56**	*e*P	**Pn**	**16 06 07.4**	**-0.9**
LFK	**Lefkose**	**7.01**	**79**	*e*P	**Pn**	**16 06 10.9**	**+1.6**
LADK	**Ladik-KONYA**	**7.08**	**54**	*e*P	**Pn**	**16 06 09.4**	**-0.7**
KDHN	**Kadinhani**	**7.09**	**51**	*i* P	**Pn**	**16 06 11.2**	**+0.9**
KDHN	**Kadinhani**	**7.09**	**51**	*i* P	**Pn**	**16 06 11.2**	**+0.9**
KOT	**Kottamia**	**7.14**	**125**	P	**Pn**	**16 06 11.3**	**+0.2**
	baz=126						
KOT				S	**Sn**	**16 07 26.5**	**-4.7**
	baz=126						
KOT	**Kottamia**	**7.14**	**125**	P	**Pn**	**16 06 11.3**	**+0.3**
KOT				S	**Sn**	**16 07 26.5**	**-4.7**
HSAF	**As Saff**	**7.15**	**128**	P	**Pn**	**16 06 11.2**	**-0.1**
	baz=129						
HSAF	**As Saff**	**7.15**	**128**	P	**Pn**	**16 06 11.2**	**-0.1**
KIZT	**Kizilcal**	**7.15**	**48**	*e*P	**Pn**	**16 06 10.9**	**-0.3**
FNA	**Florina**	**7.18**	**337**	P	**Pn**	**16 06 12.1**	**+0.6**
FNA	**Florina**	**7.18**	**337**	P	**Pn**	**16 06 12.1**	**+0.6**
GLL	**Jalalah**	**7.28**	**128**	P	**Pn**	**16 06 13.3**	**+0.3**
	baz=128						
GLL	**Jalalah**	**7.28**	**128**	P	**Pn**	**16 06 13.3**	**+0.3**
IKL	**Isikli**	**7.30**	**72**	*e*P	**Pn**	**16 06 13.9**	**+0.7**
HHAG	**Hagoal**	**7.31**	**124**	P	**Pn**	**16 06 13.1**	**-0.2**
	baz=125						
HHAG				S	**Sn**	**16 07 30.7**	**-4.7**
	baz=125						
HHAG	**Hagoal**	**7.31**	**124**	P	**Pn**	**16 06 13.1**	**-0.3**
HHAG				S	**Sn**	**16 07 30.7**	**-4.7**
HBNS	**Bani Suwayf**	**7.41**	**134**	P	**Pn**	**16 06 15.5**	**+0.8**
	baz=134						
HBNS	**Bani Suwayf**	**7.41**	**134**	P	**Pn**	**16 06 15.5**	**+0.8**
GULT	**Gulveren**	**7.54**	**33**	*e*P	**Pn**	**16 06 14.8**	**-1.7**
EREN	**Erenkoy**	**7.56**	**78**	*e*P	**Pn**	**16 06 18.0**	**+1.2**
HFRF	**Wahat Farafira**	**7.58**	**158**	P	**Pn**	**16 06 17.2**	**+0.1**
	baz=157						
HFRF	**Wahat Farafira**	**7.58**	**158**	P	**Pn**	**16 06 17.2**	**+0.1**
AMAG	**Maghara**	**7.73**	**115**	P	**Pn**	**16 06 18.0**	**-1.1**
	baz=116						
AMAG	**Maghara**	**7.73**	**115**	P	**Pn**	**16 06 18.0**	**-1.1**
SULT	**Sultanhani-AKS**	**7.86**	**57**	*e*P	**Pn**	**16 06 19.9**	**-1.1**
SUZ		**7.88**	**122**	P	**Pn**	**16 06 21.3**	**0.0**
	baz=122						
SUZ		**7.88**	**122**	P	**Pn**	**16 06 21.3**	**0.0**
RSH		**7.97**	**112**	P	**Pn**	**16 06 21.5**	**-0.9**
ZAF		**8.03**	**126**	P	**Pn**	**16 06 22.9**	**-0.4**
	baz=127						
ZAF		**8.03**	**126**	P	**Pn**	**16 06 22.9**	**-0.4**
MERS	**Mersin**	**8.11**	**68**	*e*P	**Pn**	**16 06 24.3**	**0.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNM		**8.19**	**124**	P	**Pn**	**16 06 25.7**	**+0.2**
	baz=125						
ZNM		**8.19**	**124**	P	**Pn**	**16 06 25.7**	**+0.2**
TIP	**Timpagrande**	**8.32**	**309**	*e*Pn	**Pn**	**16 06 26.6**	**-0.6**
	comp=N,17nm,0.9s						
TIP	**Timpagrande**	**8.32**	**309**	*e*Pn	**Pn**	**16 06 26.6**	**-0.6**
	comp=N,17nm,0.9s						
CEL	**Celeste**	**8.46**	**301**	*e*Pn	**Pn**	**16 06 28.3**	**-0.8**
	comp=N,16nm,0.6s						
CEL	**Celeste**	**8.46**	**301**	*e*Pn	**Pn**	**16 06 28.3**	**-0.8**
	comp=N,16nm,0.6s						
KARA	**Karaisali**	**8.63**	**67**	*e*P	**Pn**	**16 06 31.3**	**-0.2**
HNKL	**Nakhl**	**8.66**	**117**	P	**Pn**	**16 06 31.4**	**-0.6**
	baz=118						
HNKL	**Nakhl**	**8.66**	**117**	P	**Pn**	**16 06 31.4**	**-0.6**
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**16 06 31.9**	**-0.2**
	comp=N,8.1nm,0.3s,baz=266,slow=12,SNR=21						
MMAI				Sn	**Sn**	**16 08 02.3**	**-6.6**
	comp=N,3.4nm,0.3s,baz=267,slow=9.9,SNR=3.3						
BRTR	**Keskin Array B**	**8.75**	**49**	Pn	**Pn**	**16 06 33.0**	**-0.1**
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=4.2						
BRTR	**Keskin Array B**	**8.75**	**49**	P	**Pn**	**16 06 33.0**	**-0.1**
GRB	**Gharib**	**8.86**	**130**	P	**Pn**	**16 06 35.0**	**+0.3**
	baz=131						
GRB	**Gharib**	**8.86**	**130**	P	**Pn**	**16 06 35.0**	**+0.3**
HRDS	**Abu Rudays**	**8.90**	**126**	P	**Pn**	**16 06 35.7**	**+0.5**
	baz=127						
BARS	**Barje**	**8.95**	**344**	*e*Pn	**Pn**	**16 06 37.7**	**+1.9**
TR2		**9.39**	**126**	P	**Pn**	**16 06 41.5**	**-0.5**
	baz=127						
TR2		**9.39**	**126**	P	**Pn**	**16 06 41.5**	**-0.5**
HDK1	**Dakhla**	**9.43**	**156**	P	**Pn**	**16 06 42.8**	**+0.3**
	baz=155						
HDK1	**Dakhla**	**9.43**	**156**	P	**Pn**	**16 06 42.8**	**+0.3**
NISS		**9.48**	**346**	*e*Pn	**Pn**	**16 06 44.3**	**+1.2**
HKAT	**Jabal Katrina**	**9.49**	**124**	P	**Pn**	**16 06 43.1**	**-0.2**
	baz=125						
HKAT	**Jabal Katrina**	**9.49**	**124**	P	**Pn**	**16 06 43.1**	**-0.2**
EIL	**Elat**	**9.52**	**116**	Pn	**Pn**	**16 06 43.9**	**+0.2**
	comp=

comp=Z,19nm,0.7s
GEC2 GERESS Array S 16.88 333 *e*P **Pn 16 08 24.5 +1.9**
comp=Z,19nm,0.7s
GERES GERESS Array B 16.88 333 Pn **Pn 16 08 21.1 -1.5**
comp=Z,2.4nm,0.3s,baz=146,slow=12,SNR=69
GERES PcP PcP 16 13 09.4 +0.7
comp=Z,0.3nm,0.3s,baz=236,slow=1.4,SNR=4.2
GERES GERESS Array B 16.88 333 Pn **Pn 16 08 21.1 -1.5**
GERES GERESS Array B 16.88 333 PcP PcP 16 13 09.4 +0.7
ZEI Tsey 16.97 54 *e*P **Pn 16 08 24.8 +1.0**
ZEI pmax pmax
comp=Z,15nm,1.0s
ZEI Tsey 16.97 54 *e*P **Pn 16 08 24.8 +1.0**
comp=Z,15nm,1.0s
DAVOX Davos/Dischmat 17.02 322 Pn **Pn 16 08 24.8 +0.4**
comp=Z,0.5nm,0.3s,baz=162,slow=15,SNR=4.2
DAVOX Davos/Dischmat 17.02 322 P **Pn 16 08 24.8 +0.4**
KHC Kasperske Hory 17.16 334 *e*P **Pn 16 08 27.8 +1.7**
KHC MLR MLR
comp=Z,900nm,24.2s
KHC Kasperske Hory 17.16 334 P **Pn 16 08 25.3 -0.8**
comp=Z,9.5nm,0.8s
KHC Kasperske Hory 17.16 334 *e*P **Pn 16 08 27.8 +1.7**
KHC *ex* x 16 08 35.0
KHC AMS AMS 16 23 30.0
comp=Z,900nm,24.2s
KHC Kasperske Hory 17.16 334 *e*P **Pn 16 08 27.8 +1.7**
comp=Z,900nm,24.2s
DPC Dobruska-Polom 17.34 341 *e*P **Pn 16 08 28.4 0.0**
DPC MLR MLR
comp=Z,400nm,18.1s
DPC Dobruska-Polom 17.34 341 *e*P **Pn 16 08 28.4 0.0**
DPC AMS AMS 16 26 10.0
comp=Z,400nm,18.1s
DPC Dobruska-Polom 17.34 341 *e*P **Pn 16 08 28.4 0.0**
comp=Z,400nm,18.1s
WET Wettzell 17.44 332 *e*P **Pn 16 08 30.2 +0.7**
comp=Z,20nm,0.8s
WET Wettzell 17.44 332 *e*P **Pn 16 08 30.2 +0.7**
WET pmax pmax
comp=Z,20nm,0.8s
WET Wettzell 17.44 332 *e*P **Pn 16 08 30.2 +0.7**
comp=Z,20nm,0.8s
PRU Pruhonice 17.56 337 *e*P **Pn 16 08 31.7 +0.7**
PRU MLR MLR
comp=Z,800nm,17.8s
PRU Pruhonice 17.56 337 *e*P **Pn 16 08 31.7 +0.7**
PRU AMS AMS 16 28 30.0
comp=Z,800nm,17.8s
PRU Pruhonice 17.56 337 *e*P **Pn 16 08 31.7 +0.7**
comp=Z,800nm,17.8s
MBDF Montbardon 17.57 312 *e*P **Pn 16 08 31.1 -0.1**
comp=Z,14nm,0.8s
MBDF Montbardon 17.57 312 *e*P **Pn 16 08 31.1 -0.1**
MBDF pmax pmax
comp=Z,7.0nm,0.8s
MBDF Montbardon 17.57 312 *e*P **Pn 16 08 31.1 -0.1**
comp=Z,7.0nm,0.8s
MBDF Montbardon 17.57 312 *e*P **Pn 16 08 31.1 -0.1**
comp=Z,7.0nm,0.8s
UPC Upice 17.57 340 *e*P **Pn 16 08 33.9 +2.7**
PRA Prague 17.66 337 P **Pn 16 08 33.0 +0.7**
LPG La Plagne 17.98 314 *e*P **Pn 16 08 35.3 -1.0**
comp=Z,5.7nm,0.5s
LPG La Plagne 17.98 314 *e*P **Pn 16 08 35.3 -1.0**
LPG pmax pmax
comp=Z,3.0nm,0.5s
LPG La Plagne 17.98 314 *e*P **Pn 16 08 35.3 -1.0**
comp=Z,2.8nm,0.5s
LPG La Plagne 17.98 314 *e*P **Pn 16 08 35.3 -1.0**
comp=Z,2.8nm,0.5s
LPL La Plagne 18.01 314 *e*P **Pn 16 08 35.6 -1.0**
comp=Z,4.5nm,0.4s
LPL La Plagne 18.01 314 *e*P **Pn 16 08 35.6 -1.0**
LPL pmax pmax
comp=Z,2.0nm,0.4s
LPL La Plagne 18.01 314 *e*P **Pn 16 08 35.6 -1.0**
comp=Z,2.3nm,0.4s
LPL La Plagne 18.01 314 *e*P **Pn 16 08 35.6 -1.0**
comp=Z,2.2nm,0.4s
PVCC Panska Ves 18.02 338 *e*P **Pn 16 08 37.8 +1.1**
PVCC MLR MLR
comp=Z,700nm,17.0s
PVCC Panska Ves 18.02 338 *e*P **Pn 16 08 37.8 +1.1**
PVCC AMS AMS 16 30 00.0
comp=Z,700nm,17.0s
PVCC Panska Ves 18.02 338 *e*P **Pn 16 08 37.8 +1.1**
comp=Z,700nm,17.0s
ROTZ Rotzenmuhle 18.20 332 *e*P **Pn 16 08 38.3 -0.6**
comp=Z,6.0nm,0.9s
ORIF Oris-en-Rattie 18.22 312 *e*P **Pn 16 08 37.9 -1.3**
ORIF Oris-en-Rattie 18.22 312 *e*P **Pn 16 08 37.9 -1.3**
NKC Novy Kostel 18.49 334 *e*P **Pn 16 08 42.5 +0.1**
NKC MLR MLR
comp=Z,500nm,20.8s
NKC Novy Kostel 18.49 334 *e*P **Pn 16 08 42.5 +0.1**
NKC AMS AMS 16 29 20.0
comp=Z,500nm,20.8s
NKC Novy Kostel 18.49 334 *e*P **Pn 16 08 42.5 +0.1**
comp=Z,500nm,20.8s
BRG Berggiesshubel 18.51 337 *e*P **Pn 16 08 41.6 -1.1**
BRG
comp=Z,5.2nm,0.7s
BRG
comp=N,883nm,22.6s
BRG
comp=E,683nm,26.1s
BRG
comp=Z,957nm,24.2s
BRG Berggiesshubel 18.51 337 *e*P **Pn 16 08 41.6 -1.1**
BRG pmax pmax
comp=Z,3.0nm,0.7s
BRG MLR MLR
comp=N,529nm,22.6s
BRG MLR MLR
comp=E,409nm,26.1s
BRG MLR MLR
comp=Z,573nm,24.2s
BRG Berggiesshubel 18.51 337 *e*P **Pn 16 08 41.6 -1.1**
comp=Z,573nm,24.2s
GRA1 Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
comp=Z,17nm,0.8s
GRA1 Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
comp=Z,17nm,0.8s
GRF Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
comp=Z,17nm,0.8s
GRF Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
GRF pmax pmax
comp=Z,17nm,0.8s
GRF Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
GRF pmax pmax
comp=Z,17nm,0.8s
GRF Grafenberg Arr 18.53 331 *e*P **Pn 16 08 42.4 -0.5**
comp=Z,17nm,0.8s
TANN Tannenbergstha 18.63 334 *e*P **Pn 16 08 43.2 -1.0**
comp=Z,11nm,1.0s
BFO Black Forest 18.84 323 *e*P **Pn 16 08 47.7 +1.0**
comp=Z,7.0nm,1.1s
BFO Black Forest 18.84 323 *e*P **Pn 16 08 47.7 +1.0**
CABF La Chapelle 18.98 316 *e*P **Pn 16 08 46.3 -2.1**
comp=Z,17nm,0.8s
CABF La Chapelle 18.98 316 *e*P **Pn 16 08 46.3 -2.1**
CABF pmax pmax
comp=Z,9.0nm,0.8s
CABF La Chapelle 18.98 316 *e*P **Pn 16 08 46.3 -2.1**
comp=Z,8.6nm,0.8s
CABF La Chapelle 18.98 316 *e*P **Pn 16 08 46.3 -2.1**
comp=Z,8.6nm,0.8s
MOX Moxa 19.13 333 *e*P **Pn 16 08 48.9 -1.3**
comp=Z,14nm,0.9s
MOX Moxa 19.13 333 *e*P **Pn 16 08 48.7 -1.5**
comp=Z,8.0nm,0.8s
MOX Moxa 19.13 333 *e*P **Pn 16 08 48.9 -1.3**
MOX pmax pmax
comp=Z,14nm,0.9s
MOX Moxa 19.13 333 *e*P **Pn 16 08 48.9 -1.3**
comp=Z,14nm,0.9s
CLL Collm 19.19 336 *i* P **Pn 16 08 50.2 -0.7**
CLL pmax pmax
comp=Z,7.0nm,1.0s
CLL Collm 19.19 336 *i* P **Pn 16 08 50.2 -0.7**
comp=Z,7.0nm,1.0s
CLL *e* 16 08 53.0
CLL *e* 16 09 04.0
CLL *i* PcP PcP 16 13 06.6 -5.9
CLL Collm 19.19 336 *i* P **Pn 16 08 50.2 -0.7**
comp=Z,7.0nm,1.0s
CLL *e* 16 08 53.0
CLL *i* (sP) sP 16 09 00.4 -0.7
CLL *e*PP 16 09 04.0
CLL Collm 19.19 336 *i* P **Pn 16 08 50.2 -0.7**
comp=Z,7.0nm,1.0s
HINF Hinteralfeld 19.27 320 *e*P **Pn 16 08 52.5 +0.6**
comp=Z,7.4nm,0.7s
HINF Hinteralfeld 19.27 320 *e*P **Pn 16 08 52.5 +0.6**
HINF pmax pmax
comp=Z,4.0nm,0.7s
HINF Hinteralfeld 19.27 320 *e*P **Pn 16 08 52.5 +0.6**
comp=Z,3.7nm,0.7s
HINF Hinteralfeld 19.27 320 *e*P **Pn 16 08 52.5 +0.6**
comp=Z,3.7nm,0.7s
MIB Mutribah 19.35 97 *e*P **Pn 16 08 53.2 +0.2**
MIB AMb AMB 16 08 58.9
comp=Z,32nm,0.5s
MIB Mutribah 19.35 97 *e*P **Pn 16 08 53.2 +0.2**
comp=Z,32nm,0.5s
CDF Champ du Feu 19.43 322 *e*P **Pn 16 08 52.4 -1.3**
comp=Z,16nm,1.0s
CDF Champ du Feu 19.43 322 *e*P **Pn 16 08 52.4 -1.3**
CDF pmax pmax
comp=Z,8.0nm,1.0s
CDF Champ du Feu 19.43 322 *e*P **Pn 16 08 52.4 -1.3**
comp=Z,7.8nm,1.0s
CDF Champ du Feu 19.43 322 *e*P **Pn 16 08 52.4 -1.3**
comp=Z,7.8nm,1.0s
NAY Al-Naaiem 19.46 99 *e*P **Pn 16 08 54.2 -0.1**
NAY AMb AMB 16 09 01.1
comp=Z,13nm,0.6s
NAY Al-Naaiem 19.46 99 *e*P **Pn 16 08 54.2 -0.1**
comp=Z,13nm,0.6s
HAU Haudompre 19.65 320 *e*P **Pn 16 08 56.0 -0.4**
comp=Z,15nm,0.7s
HAU Haudompre 19.65 320 *e*P **Pn 16 08 56.0 -0.4**
HAU pmax pmax
comp=Z,8.0nm,0.7s
HAU Haudompre 19.65 320 *e*P **Pn 16 08 56.0 -0.4**
comp=Z,7.7nm,0.7s
HAU Haudompre 19.65 320 *e*P **Pn 16 08 56.0 -0.4**
comp=Z,7.7nm,0.7s
UMR Umm Al-Rimmam 19.75 97 *e*P **Pn 16 08 56.8 -0.9**
UMR AMb AMB 16 08 58.9
comp=Z,42nm,0.4s
UMR Umm Al-Rimmam 19.75 97 *e*P **Pn 16 08 56.8 -0.9**
comp=Z,42nm,0.4s
VSR Storozhevoye 19.81 27 *e*P **Pn 16 08 55.3 -2.9**
VSR pmax pmax
comp=Z,7.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR Storozhevoye 19.81 27 *e*P **Pn 16 08 55.3 -2.9**
comp=E,3.0nm,0.4s
SUW Suwalki 19.82 357 *e*P **Pn 16 08 55.5 -2.9**
SUW Suwalki 19.82 357 *e*P **Pn 16 08 54.6 -3.8**
SUW pmax pmax
comp=Z,56nm,0.5s
SUW Suwalki 19.82 357 *e*P **Pn 16 08 54.6 -3.8**
comp=Z,56nm,0.5s
SUW Suwalki 19.82 357 *e*P **Pn 16 08 54.6 -3.8**
comp=Z,56nm,0.5s
MTLF Montolieu 19.98 304 *e*P **Pn 16 08 59.1 -1.2**
MTLF Montolieu 19.98 304 *e*P **Pn 16 08 59.1 -1.2**
TNS Taunus Mts 20.11 328 *e*P **P 16 09 01.7 +1.8**
comp=Z,14nm,0.9s
TNS Taunus Mts 20.11 328 *e*P **P 16 09 01.7 +1.8**
TNS pmax pmax
comp=Z,14nm,0.9s
TNS Taunus Mts 20.11 328 *e*P **P 16 09 01.7 +1.8**
comp=Z,14nm,0.9s
SMF Signal de Mont 20.31 314 *e*P **P 16 09 01.1 -1.0**
comp=Z,9.3nm,0.6s
SMF Signal de Mont 20.31 314 *e*P **P 16 09 01.1 -1.0**
SMF pmax pmax
comp=Z,5.0nm,0.6s
SMF Signal de Mont 20.31 314 *e*P **P 16 09 01.1 -1.0**
comp=Z,4.7nm,0.6s
SMF Signal de Mont 20.31 314 *e*P **P 16 09 01.1 -1.0**
comp=Z,4.7nm,0.6s
CLZ Clausthal 20.56 333 *e*P **P 16 09 04.2 -0.6**
comp=Z,12nm,0.8s
CLZ Clausthal 20.56 333 *e*P **P 16 09 04.2 -0.6**
CLZ pmax pmax
comp=Z,12nm,0.8s
CLZ Clausthal 20.56 333 *e*P **P 16 09 04.2 -0.6**
comp=Z,12nm,0.8s
TAM Tamanrasset 20.60 242 *e*P **P 16 09 07.4 +1.9**
TAM pmax pmax
comp=Z,2.0nm,0.7s
TAM Tamanrasset 20.60 242 *e*P **P 16 09 07.4 +2.0**
comp=Z,2.3nm,0.7s
TAM Tamanrasset 20.60 242 *e*P **P 16 09 07.4 +1.9**
comp=Z,2.3nm,0.7s
LOR Lormes 20.62 316 *e*P **P 16 09 05.6 +0.1**
comp=Z,6.7nm,0.5s
LOR Lormes 20.62 316 *e*P **P 16 09 05.6 +0.1**
LOR pmax pmax
comp=Z,3.0nm,0.5s
LOR Lormes 20.62 316 *e*P **P 16 09 05.6 +0.1**
comp=Z,3.3nm,0.5s
LOR Lormes 20.62 316 *e*P **P 16 09 05.6 +0.1**
comp=Z,3.3nm,0.5s
MEZF Maizieres J'vi 20.64 320 *e*P **P 16 09 05.5 -0.2**
comp=Z,22nm,0.7s
MEZF Maizieres J'vi 20.64 320 *e*P **P 16 09 05.5 -0.2**
comp=Z,22nm,0.7s
MEZF Maizieres J'vi 20.64 320 *e*P **P 16 09 05.5 -0.2**
comp=Z,11nm,0.7s
AVF Avril sur Loir 20.68 314 *e*P **P 16 09 06.4 +0.3**
comp=Z,18nm,1.0s
AVF Avril sur Loir 20.68 314 *e*P **P 16 09 06.4 +0.3**
AVF pmax pmax
comp=Z,9.0nm,1.0s
AVF Avril sur Loir 20.68 314 *e*P **P 16 09 06.4 +0.3**
comp=Z,9.2nm,1.0s
AVF Avril sur Loir 20.68 314 *e*P **P 16 09 06.4 +0.3**
comp=Z,9.2nm,1.0s
VRHR Novokhopersk 20.69 30 *e*P **P 16 09 05.9 -0.3**
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR Novokhopersk 20.69 30 *e*P **P 16 09 05.9 -0.3**
comp=E,20nm,0.7s
SSF Saint Saulge 20.72 315 *e*P **P 16 09 07.3 +0.8**
comp=E,4.1nm,0.5s
SSF Saint Saulge 20.72 315 *e*P **P 16 09 07.3 +0.8**
SSF pmax pmax
comp=Z,2.0nm,0.4s
SSF Saint Saulge 20.72 315 *e*P **P 16 09 07.3 +0.8**
comp=Z,2.0nm,0.4s
SSF Saint Saulge 20.72 315 *e*P **P 16 09 07.3 +0.8**
comp=Z,2.0nm,0.5s
WLF Walferdange 20.80 324 P **P 16 09 11.2 +3.8**
comp=Z,8.8nm,1.0s
BGF Bois d'Agland 20.87 313 *e*P **P 16 09 07.8 -0.3**
comp=Z,29nm,0.6s
BGF Bois d'Agland 20.87 313 *e*P **P 16 09 07.8 -0.3**
BGF pmax pmax
comp=Z,14nm,0.6s
BGF Bois d'Agland 20.87 313 *e*P **P 16 09 07.8 -0.3**
comp=Z,14nm,0.6s
BGF Bois d'Agland 20.87 313 *e*P **P 16 09 07.8 -0.3**
comp=Z,14nm,0.6s
TCF Toulx Ste Croi 21.14 312 *e*P **P 16 09 10.9 -0.1**
comp=Z,9.5nm,0.8s,mb3.9
TCF Toulx Ste Croi 21.14 312 *e*P **P 16 09 10.9 -0.1**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
TCF Toulx Ste Croi 21.14 312 *e*P **P 16 09 10.9 -0.1**
comp=Z,4.8nm,0.8s,mb3.9
TCF Toulx Ste Croi 21.14 312 *e*P **P 16 09 10.9 -0.1**
comp=Z,4.8nm,0.8s,mb3.9
RJF Les Rejaudoux 21.16 309 *e*P **P 16 09 10.8 -0.5**
comp=Z,21nm,1.0s,mb4.1
RJF Les Rejaudoux 21.16 309 *e*P **P 16 09 10.8 -0.5**
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
RJF Les Rejaudoux 21.16 309 *e*P **P 16 09 10.8 -0.5**
comp=Z,10nm,1.0s,mb4.1
RJF Les Rejaudoux 21.16 309 *e*P **P 16 09 10.8 -0.5**
comp=Z,10nm,1.0s,mb4.1
NRDL Niedersach Rie 21.18 334 *e*P **P 16 09 10.6 -0.9**
comp=Z,10.0nm,0.8s,mb4.2
MEM Membach 21.50 325 P **P 16 09 15.3 +0.4**
comp=Z,9.7nm,0.8s,mb4.2
MEM Membach 21.50 325 P **P 16 09 15.2 +0.3**
comp=Z,9.7nm,0.8s,mb4.2
GIVF Givet 21.74 323 *e*P **P 16 09 17.2 -0.3**
GIVF Givet 21.74 323 *e*P **P 16 09 17.2 -0.3**
ETSF Etsaut 21.79 301 *e*P **P 16 09 18.0 -0.1**
ETSF Etsaut 21.79 301 *e*P **P 16 09 18.0 -0.1**
DOU Dourbes 21.85 323 P **P 16 09 19.0 +0.3**
DOU Dourbes 21.85 323 P **P 16 09 18.9 +0.2**
BAIF Baives 22.02 322 *e*P **P 16 09 20.4 -0.1**
comp=Z,16nm,0.6s,mb4.3
BAIF Baives 22.02 322 *e*P **P 16 09 20.4 -0.1**
BAIF pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
BAIF Baives 22.02 322 *e*P **P 16 09 20.4 -0.1**
comp=Z,7.8nm,0.6s,mb4.3
BAIF Baives 22.02 322 *e*P **P 16 09 20.4 -0.1**
comp=Z,7.8nm,0.6s,mb4.3
BSEG Bad Segeberg 22.29 337 *e*P **P 16 09 21.1 -2.2**
comp=Z,27nm,1.0s,mb4.6
BSEG Bad Segeberg 22.29 337 *e*P **P 16 09 21.1 -2.2**
OBN Obninsk 22.35 17||*e*P **P 16 09 22.3 -1.7**
OBN pmax pmax
comp=Z,16nm,0.9s,mb4.5
OBN Obninsk 22.35 17 *e*P **P 16 09 22.3 -1.7**
comp=Z,16nm,0.9s,mb4.5
MFF Saint Martin d 22.74 310 *e*P **P 16 09 26.9 -1.3**
comp=Z,21nm,0.9s,mb4.3
MFF Saint Martin d 22.74 310 *e*P **P 16 09 26.9 -1.3**
MFF pmax pmax
comp=Z,11nm,0.9s,mb4.3
MFF Saint Martin d 22.74 310 *e*P **P 16 09 26.9 -1.3**
comp=Z,11nm,0.9s,mb4.3
MFF Saint Martin d 22.74 310 *e*P **P 16 09 26.9 -1.3**
comp=Z,11nm,0.9s,mb4.3
LDF La Druitiere 23.60 315 *e*P **P 16 09 35.6 -1.4**
comp=Z,13nm,0.5s,mb4.4
LDF La Druitiere 23.60 315 *e*P **P 16 09 35.6 -1.4**
LDF pmax pmax
comp=Z,7.0nm,0.5s,mb4.3
LDF La Druitiere 23.60 315 *e*P **P 16 09 35.6 -1.4**
comp=Z,6.7nm,0.5s,mb4.3
LDF La Druitiere 23.60 315 *e*P **P 16 09 35.6 -1.4**
comp=Z,6.7nm,0.5s,mb4.4
ESDC Sonseca Array 23.80 292 P **P 16 09 39.3 +0.4**
comp=Z,1.3nm,0.5s,mb3.6,baz=82,slow=9.4,SNR=3.8
ESDC Sonseca Array 23.80 292 P **P 16 09 39.3 +0.4**
FLN La Foliniere 23.89 315 *e*P **P 16 09 38.6 -1.0**
comp=Z,11nm,0.5s,mb4.2
FLN La Foliniere 23.89 315 *e*P **P 16 09 38.6 -1.0**
FLN pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
FLN La Foliniere 23.89 315 *e*P **P 16 09 38.6 -1.0**
comp=Z,5.4nm,0.5s,mb4.2
FLN La Foliniere 23.89 315 *e*P **P 16 09 38.6 -1.0**
comp=Z,5.4nm,0.5s,mb4.2
GRR Gorron 23.94 314 *e*P **P 16 09 38.8 -1.3**
comp=Z,26nm,0.8s,mb4.4
GRR Gorron 23.94 314 *e*P **P 16 09 38.8 -1.3**
GRR pmax pmax
comp=Z,13nm,0.8s,mb4.4
GRR Gorron 23.94 314 *e*P **P 16 09 38.8 -1.3**
comp=Z,13nm,0.8s,mb4.4
GRR Gorron 23.94 314 *e*P **P 16 09 38.8 -1.3**
comp=Z,13nm,0.8s,mb4.4
SGMF Saint Gilles 24.91 313 *e*P **P 16 09 48.1 -0.8**
comp=Z,16nm,0.6s,mb4.5
SGMF Saint Gilles 24.91 313 *e*P **P 16 09 48.1 -0.8**
SGMF pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
SGMF Saint Gilles 24.91 313 *e*P **P 16 09 48.1 -0.8**
comp=Z,8.2nm,0.6s,mb4.4
SGMF Saint Gilles 24.91 313 *e*P **P 16 09 48.1 -0.8**
comp=Z,8.2nm,0.6s,mb4.5
QUIF Quistinic 25.15 311 *e*P **P 16 09 50.4 -0.7**
comp=Z,29nm,0.4s,mb4.8
QUIF Quistinic 25.15 311 *e*P **P 16 09 50.4 -0.7**
QUIF pmax pmax
comp=Z,15nm,0.4s,mb4.9
QUIF Quistinic 25.15 311 *e*P **P 16 09 50.4 -0.7**
comp=Z,15nm,0.4s,mb4.9
QUIF Quistinic 25.15 311 *e*P **P 16 09 50.4 -0.7**
comp=Z,15nm,0.4s,mb4.8
ROSF Rostrenen 25.38 312 *e*P **P 16 09 52.2 -1.0**
comp=Z,84nm,1.4s,mb4.8
ROSF Rostrenen 25.38 312 *e*P **P 16 09 52.2 -1.0**
ROSF pmax pmax
comp=Z,42nm,1.4s,mb4.8
ROSF Rostrenen 25.38 312 *e*P **P 16 09 52.2 -1.0**
comp=Z,42nm,1.4s,mb4.8
ROSF Rostrenen 25.38 312 *e*P **P 16 09 52.2 -1.0**
comp=Z,42nm,1.4s,mb4.8
EVO Evora 26.92 289 *e*P **P 16 10 08.8 +1.6**
HFS Hagfors 26.97 347 P **P 16 10 05.7 -1.7**
comp=Z,1.6nm,0.4s,mb3.9,baz=142,slow=7.5,SNR=12
HFS Hagfors 26.97 347 P **P 16 10 05.7 -1.7**
EVOP Sao Brissos 27.01 289 *e*P **P 16 10 08.8 +0.8**
FINES FINESS Array B 27.23 1 P **P 16 10 07.8 -2.0**
comp=Z,1.8nm,0.5s,mb3.9,baz=155,slow=11,SNR=12
FINES PcP PcP 16 13 28.4 -0.7
comp=Z,0.8nm,0.4s,baz=108,slow=4.2,SNR=5.8
FINES FINESS Array B 27.23 1 P **P 16 10 07.8 -2.0**
FINES FINESS Array B 27.23 1 PcP PcP 16 13 28.4 -0.7
KAF Kangasniemi 27.91 1 *e*P **P 16 10 12.0 -3.8**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
KAF Kangasniemi 27.91 1 *e*p **P 16 10 12.0 -3.8**
comp=Z,2.3nm,0.6s,mb4.0
NAO01 NORSAR Array S 28.17 345 *e*P **P 16 10 16.7 -1.4**
comp=Z,11nm,0.7s,mb4.6
NAO01 NORSAR Array S 28.17 345 *e*P **P 16 10 16.7 -1.5**
comp=Z,11nm,0.7s,mb4.6
KLMR Klimovskoe 28.22 15 *e*P **P 16 10 15.7 -2.9**
KLMR pmax pmax
comp=Z,12nm,1.4s,mb4.3
NB2 NORSAR Subarra 28.28 346 P **P 16 10 17.4 -1.7**
comp=Z,2.8nm,0.6s,mb4.1,baz=159,slow=10
NB2 NORSAR Subarra 28.28 346 P **P 16 10 17.4 -1.7**
comp=Z,2.8nm,0.6s,mb4.1,baz=159,slow=10,SNR=7.1
NOA NORSAR Array B 28.28 346 P **P 16 10 17.7 -1.4**
comp=Z,2.7nm,0.5s,mb4.1,baz=159,slow=10.0,SNR=18
NOA NORSAR Array B 28.28 346 P **P 16 10 17.7 -1.4**
EKA Eskdalemuir Ar 28.77 326 P **P 16 10 23.1 -0.5**
comp=Z,3.6nm,0.7s,mb4.2,baz=132,slow=9.0,SNR=15
EKA Eskdalemuir Ar 28.77 326 P **P 16 10 23.1 -0.5**
AKTK Aktyubinsk 28.92 46 P **P 16 10 23.9 -1.1**
AKTK Aktyubinsk 28.92 46 P **P 16 10 23.9 -1.0**
AKTO Aktyubinsk 28.92 46 P **P 16 10 23.9 -1.1**
comp=Z,1.3nm,0.4s,mb4.0,baz=275,slow=11,SNR=6.1
JOF Joensuu 28.97 6 *e*P **P 16 10 22.7 -2.5**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
JOF Joensuu 28.97 6 *e*p **P 16 10 22.7 -2.5**
comp=Z,2.7nm,0.5s,mb4.2
ABKAR Akbulak array 29.70 49 P **P 16 10 31.3 -0.6**
comp=Z,0.9nm,0.4s,mb3.9
ABKAR Akbulak array 29.70 49 P **P 16 10 31.3 -0.6**
comp=Z,0.9nm,0.4s,mb3.9
TOA0 Torodi Ar. Sit 29.87 231 *e*P **P 16 10 33.8 +0.1**
TOA0 Torodi Ar. Sit 29.87 231 *e*P **P 16 10 33.8 +0.1**
TORD Torodi Ar. Bea 29.87 231 P **P 16 10 34.5 +0.9**
comp=Z,5.3nm,0.6s,mb4.5,baz=36,slow=9.3,SNR=33
ARU Arti 31.83 36 *c i*P **P 16 10 49.7 -0.9**
ARU *e* 16 11 58.8
ARU S **S 16 15 54.7 -4.3**
ARU SS SS 16 17 46.5 -29
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.5
ARU Arti 31.83 36 *e*P **P 16 10 49.4 -1.1**
comp=Z,3.7nm,0.6s,mb4.4
ARU Arti 31.83 36 *i* P **P 16 10 49.7 -0.9**
comp=Z,13nm,1.7s,mb4.5
ARCES ARCESS Array B 35.35 0 P **P 16 11 19.5 -1.5**
comp=Z,2.3nm,0.7s,mb4.2,baz=173,slow=8.6,SNR=16
ARCES PcP PcP 16 13 50.2 -0.4
comp=Z,0.5nm,0.3s,baz=183,slow=3.5,SNR=5.4
ARCES ARCESS Array B 35.35 0 P **P 16 11 19.5 -1.5**
ARCES PcP PcP 16 13 50.2 -0.4
ARCES ARCESS Array B 35.35 0 P **P 16 11 19.5 -1.6**
ARCES ARCESS Array B 35.35 0 PcP PcP 16 13 50.3 -0.3
KEV Kevo 35.59 1 *e*P **P 16 11 21.6 -1.5**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KEV Kevo 35.59 1 *e*p **P 16 11 21.6 -1.5**

comp=Z,0.5nm,0.4s,mb3.8
KEV Kevo 35.59 1 *e*P P 16 11 21.6 -1.5
comp=Z,1.0nm,0.4s,mb4.1
BRVK Borovoye 36.97 45⇑ *e*P P 16 11 35.8 +0.8
BRVK pmax pmax
comp=Z,2.0nm,1.2s,mb3.8
BRVK Borovoye 36.97 45 *e*P P 16 11 35.8 +0.8
comp=Z,2.0nm,1.2s,mb3.8
BVAR Borovoye Array 37.02 45 P P 16 11 35.7 +0.1
comp=Z,1.4nm,0.8s,mb3.9,baz=240,slow=5.0,SNR=9.6
BVAR Borovoye Array 37.02 45 P P 16 11 35.7 +0.2
EKS2 Erkin-Say 38.58 63 *e*P P 16 11 50.4 +1.5
comp=Z,2.8nm,0.5s,mb4.2
EKS2 Erkin-Say 38.58 63 *e*P P 16 11 50.4 +1.5
comp=Z,2.8nm,0.5s,mb4.2
DBIC Dimbokro 38.96 232 P P 16 11 51.4 -0.9
comp=Z,3.0nm,0.9s,mb4.0,baz=38,slow=12,SNR=2.7
DBIC Dimbokro 38.96 232 P P 16 11 51.4 -0.9
AAK Ala-Archa 39.11 63⇑ *e*P P 16 11 54.8 +1.5
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
AAK Ala-Archa 39.11 63 *e*P P 16 11 55.1 +1.7
comp=Z,3.3nm,0.8s,mb4.1
AAK Ala-Archa 39.11 63 *e*P P 16 11 54.8 +1.5
comp=Z,2.0nm,0.8s,mb3.9
UCH Uchtor 39.16 63 *e*P P 16 11 55.5 +1.7
comp=Z,1.4nm,0.6s,mb3.9
UCH Uchtor 39.16 63 *e*P P 16 11 55.5 +1.8
comp=Z,1.4nm,0.6s,mb3.9
LIC Lamto 39.41 232 *e*P P 16 11 56.5 +0.5
LIC Lamto 39.41 232 *e*P P 16 11 56.5 +0.5
TKM2 Tokmak 2 39.90 62 *e*P P 16 12 01.2 +1.3
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
TKM2 Tokmak 2 39.90 62 *e*P P 16 12 01.2 +1.3
comp=Z,3.3nm,0.8s,mb4.1
TKM2 Tokmak 2 39.90 62 *e*P P 16 12 01.2 +1.3
comp=Z,3.3nm,0.8s,mb4.1
KURK Kurchatov 41.80 50*c i*P P 16 12 15.9 +0.5
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KURK Kurchatov 41.80 50 *e*P P 16 12 15.8 +0.4
comp=Z,6.8nm,1.0s,mb4.2
KURK Kurchatov 41.80 50 *e*P P 16 12 15.8 +0.4
comp=Z,6.8nm,1.0s,mb4.2
MKAR Makanchi Array 44.33 56 P P 16 12 37.0 +1.1
comp=Z,5.4nm,0.7s,mb4.4,baz=277,slow=6.7,SNR=49
NVS Novosibirsk 44.78 44⇑ *i*P P 16 12 40.2 +0.8
NVS pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=E,4.0nm,0.8s
NVS Novosibirsk 44.78 44 *i*P P 16 12 40.2 +0.8
comp=E,9.0nm,0.7s,mb4.7
ZAA0 Zalesovo Array 45.68 46 *e*P P 16 12 46.4 -0.1
ZAA0 Zalesovo Array 45.68 46 *e*P P 16 12 46.4 -0.1
ZALV Zalesovo Beam 45.68 46 P P 16 12 46.6 +0.1
comp=E,12nm,0.4s,mb5.2,baz=270,slow=8.6,SNR=48
WMQ Urumqi 48.51 59 *e*P P 16 13 11.8 +3.0
LSA Lhasa 55.34 75 *e*P P 16 14 01.6 +1.7
LSA pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LSA Lhasa 55.34 75 *e*P P 16 14 01.6 +1.8
comp=Z,3.1nm,0.5s,mb4.6
LSA Lhasa 55.34 75 *e*P P 16 14 01.6 +1.7
comp=Z,3.1nm,0.5s,mb4.6
ZAK Zakamensk 57.39 48⇑ *e*P P 16 14 15.8 +1.6
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
ZAK Zakamensk 57.39 48 *e*P P 16 14 15.8 +1.6
comp=Z,4.0nm,1.0s,mb4.4
GTA Gaotai 58.44 61 ⇑P P 16 14 23.3 +1.6
GTA pP pP 16 14 38.6 +8.1
GTA sP sP 16 14 44.8 +11
GTA S **S** **16 22 24.5 +1.4**
GTA sS sS 16 22 46.0 +8.5
GTA SS SS 16 26 17.8 +2.6
GTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
GTA LR LR
comp=N,160nm,18.0s,MS4.4
GTA LR LR
comp=E,230nm,19.8s,MS4.4
GTA LR LR
comp=Z,350nm,21.6s,MS4.4
SONM Songino Array 60.11 50 P P 16 14 34.3 +1.2
comp=Z,3.5nm,0.6s,mb4.5,baz=287,slow=7.3,SNR=22
SONM Songino Array 60.11 50 P P 16 14 34.3 +1.2
ULN Ulaanbaatar 60.52 50 *e*P P 16 14 37.1 +1.2
ULN pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
ULN Ulaanbaatar 60.52 50 *e*P P 16 14 37.1 +1.2
comp=Z,1.8nm,0.4s,mb4.5
ULN Ulaanbaatar 60.52 50 *e*P P 16 14 37.1 +1.2
comp=Z,1.8nm,0.4s,mb4.5
BOD Bodaibo 61.21 38 *e*P P 16 14 39.5 -0.9
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
BOD Bodaibo 61.21 38 *e*P P 16 14 39.5 -0.9
comp=Z,5.0nm,0.8s,mb4.7
TIXI Tiksi 62.05 20 *e*P P 16 14 44.5 -1.4
TIXI pmax pmax
comp=Z,5.0nm,1.9s,mb4.3
TIXI Tiksi 62.05 20 *e*P P 16 14 44.5 -1.4
comp=Z,5.0nm,1.9s,mb4.3
LZH Lanzhou 62.65 63 *e*P P 16 14 51.0 +0.5
LZH pP pP 16 15 07.0 +7.7
LZH sP sP 16 15 14.3 +12
LZH pmax pmax
comp=Z,18nm,1.3s,mb5.0
SCHQ Schefferville 63.86 320 P P 16 14 58.2 0.0
comp=Z,4.2nm,0.4s,mb4.8,baz=83,slow=4.6,SNR=14
SCHQ Schefferville 63.86 320 P P 16 14 58.2 0.0
CD2 Chengdu 64.76 69 P P 16 15 05.0 +0.5
CD2 pP pP 16 15 21.3 +7.9
CD2 sP sP 16 15 28.3 +12
CD2 PP PP 16 17 30.0 +3.1
CD2 S **S** **16 23 39.0 -4.5**
CD2 sS sS 16 24 06.8 +8.8
CD2 SS SS 16 27 52.6 -1.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,300nm,8.9s
CD2 LR LR
comp=N,570nm,19.6s
CD2 LR LR
comp=Z,680nm,20.8s,MS4.8
KMI Kunming 66.59 75 P P 16 15 18.8 +2.4
KMI pP pP 16 15 34.0 +8.7
KMI sP sP 16 15 40.1 +11
KMI PP PP 16 17 47.9 +4.8
KMI S S 16 24 04.3 -1.6
KMI sS sS 16 24 31.3 +11
KMI SS SS 16 28 23.8 +0.6
KMI pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KMI pmax pmax
comp=Z,130nm,4.8s
KMI LR LR
comp=N,650nm,21.8s,MS4.8
KMI LR LR
comp=E,240nm,19.4s,MS4.8
KMI LR LR
comp=Z,620nm,21.8s,MS4.8
CMAR Chiang Mai Arr 66.72 83 P P 16 15 17.9 +0.5
comp=Z,0.8nm,0.6s,mb3.9,baz=297,slow=7.4,SNR=7.9
CMAR Chiang Mai Arr 66.72 83 P P 16 15 17.9 +0.6
BJI Beijing 69.70 55 P P 16 15 35.5 -0.2
BJI pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
BJI pmax pmax
comp=Z,190nm,8.1s
BJI LR LR
comp=N,370nm,19.1s
BJI LR LR
comp=E,440nm,25.4s
BJI LR LR
comp=Z,550nm,27.0s
MDJ Mudanjiang 75.88 45 P P 16 16 11.8 -0.5
MDJ pmax pmax
comp=Z,220nm,11.6s
MDJ LR LR
comp=N,180nm,24.4s,MS4.4
MDJ LR LR
comp=E,120nm,25.8s,MS4.4
MDJ LR LR
comp=Z,320nm,22.2s,MS4.6
YKA Yellowknife Ar 78.31 342 P P 16 16 25.3 -0.3
comp=Z,0.4nm,0.8s,mb3.4,baz=33,slow=5.7,SNR=8.1
YKA Yellowknife Ar 78.31 342 P P 16 16 25.3 -0.3
KSRS Korea Array 78.88 52 P P 16 16 29.5 +0.3
comp=Z,2.6nm,0.6s,mb4.3,baz=307,slow=4.7,SNR=8.6
KSRS Korea Array 78.88 52 P P 16 16 29.5 +0.3
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KSRS Korea Array 78.88 52 P P 16 16 29.5 +0.3
comp=Z,3.0nm,0.6s,mb4.4
PPLA Purkeypile 83.18 359 *e*P P 16 16 52.3 +0.7
comp=Z,2.7nm,0.6s,mb4.5
PPLA Purkeypile 83.18 359 *e*P P 16 16 52.3 +0.7
comp=Z,2.7nm,0.6s,mb4.5
ASAR Alice Springs 117.92 101 PKP PKPdf 16 23 12.9 +0.2
comp=Z,0.3nm,0.6s,baz=317,slow=1.6,SNR=7.3

ISCJB ***20*** *16:20:41.8±0.4, 31°.43N±0°.03×104°.29E±0°.05, h10km, mb3.8/10, Error ellipse: s-maj=6.7km s-min=4.5km az=14.9*
IDC ***20*** *16:20:42.8±1.2, 31°.52N×104°.27E, h0km, mb3.7/10, mb1 3.7/11, mb1mx3.6/28, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=42.5km s-min=20.9km az=47.0*
NEIC ***20*** *16:20:44.6±0.7, 31°.46N×104°.06E, h10km, mb4.1/2, Error ellipse: s-maj=22.4km s-min=9.9km az=46.0*
BJI ***20*** *16:20:46.5, 31°.66N×104°.08E, h13km, ML3.4/10*
ISC 20 16:20:44.0±0.4, 31°.48N±0°.03×104°.21E±0°.05, h10km, n22, σ1§11/28, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.69**	**214**	Pg	**Pg**	**16 20 55.8**	**-1.5**
CD2				Sg	**Sg**	**16 21 05.0**	**-1.3**
CD2				smax			
	comp=N,990nm,0.8s						
LZH	**Lanzhou**	**4.60**	**356**	*e*Pg	**Pb**	**16 22 01.5**	**-3.4**
LZH				Sg	**Sb**	**16 22 59.3**	**-1.1**
LZH				smax			
	comp=N,48nm,0.7s						
LZH				smax			
	comp=E,84nm,0.6s						
ENH	**Enshi**	**4.70**	**104**	P	**Pn**	**16 21 58.0**	**+3.1**
XAN	**Xi'an**	**4.72**	**56**	Pn	**Pn**	**16 21 55.3**	**0.0**
XAN				Pg	**Pg**	**16 22 13.9**	**-0.6**
XAN				Sn	**Sn**	**16 22 50.6**	**+0.5**
XAN				Sg	**Sg**	**16 23 12.8**	**-2.8**
XAN				smax			
	comp=N,78nm,0.8s						
XAN				smax			
	comp=E,40nm,0.8s						
GYA	**Guiyang**	**5.45**	**156**	Pg	**Pg**	**16 22 29.3**	**+0.9**
GYA				Sg	**Sg**	**16 23 38.4**	**-0.5**
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,60nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.81**	**201**	Pn	**Pn**	**16 24 08.9**	**+9.0**
	comp=E,0.1nm,0.3s,baz=6.8,slow=8.5,SNR=7.4						
SONM	**Songino Array**	**16.42**	**5**	Pn	**Pn**	**16 24 35.7**	**+1.3**
	comp=E,0.2nm,0.3s,baz=191,slow=14,SNR=2.6						
KSRS	**Korea Array**	**20.42**	**67**	P	**P**	**16 25 20.8**	**-0.5**
	comp=E,0.9nm,1.0s,baz=255,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**16 25 47.2**	**+0.9**
	comp=E,2.6nm,1.0s,mb3.6,baz=122,slow=9.3,SNR=14						
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**16 25 47.2**	**+0.9**
ZAA0	**Zalesovo Array**	**26.42**	**334**	*e*P	**P**	**16 26 21.6**	**+0.9**
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**16 26 21.6**	**+0.9**
	comp=E,2.3nm,0.7s,mb3.8,baz=131,slow=9.9,SNR=10						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**16 26 26.7**	**+0.8**
	comp=E,1.8nm,0.8s,mb3.6,baz=127,slow=9.0,SNR=16						
KURK	**Kurchatov**	**27.00**	**323**	*e*P	**P**	**16 26 26.4**	**+0.5**
	comp=E,2.7nm,1.1s,mb3.7						
BVAR	**Borovoye Array**	**32.55**	**321**	P	**P**	**16 27 16.0**	**+0.9**
	comp=E,0.6nm,0.7s,mb3.6,baz=133,slow=16,SNR=3.5						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**16 30 31.2**	**-0.5**
	comp=E,1.8nm,0.8s,mb4.1,baz=113,slow=8.7,SNR=4.0						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**16 30 31.2**	**-0.5**
WRAB	**Tennant Creek**	**58.73**	**146**	*e*P	**P**	**16 30 43.3**	**+1.2**
	comp=E,2.8nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**16 31 03.8**	**+1.0**
	comp=E,0.4nm,0.8s,mb3.6,baz=337,slow=6.4,SNR=6.6						
HFS	**Hagfors**	**63.51**	**326**	P	**P**	**16 31 14.2**	**0.0**
	comp=E,1.5nm,0.9s,mb4.0,baz=93,slow=2.9,SNR=5.2						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**16 31 18.7**	**-1.2**
	comp=E,0.3nm,0.5s,mb3.6,baz=71,slow=5.5,SNR=2.9						
YKA	**Yellowknife Ar**	**81.31**	**17**	P	**P**	**16 32 59.4**	**-0.8**
	comp=E,0.2nm,0.7s,mb3.1,baz=328,slow=5.1,SNR=2.9						

IDC ***20*** *16:37:51.1±0.7, 59°.92S×26°.75W, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.2/16, mbtmp4.2/9, ML5.1/1, Error ellipse: s-maj=24.2km s-min=20.4km az=56.0*
NEIC ***20*** *16:37:56.4±0.6, 59°.95S×26°.73W, h35km, mb4.1/1, Error ellipse: s-maj=15.8km s-min=14.7km az=218.0*
ISC 20 16:37:59.2±3.0, 60°.3S±0°.2×26°.7W±0°.2, h71km±33km, n22, σ0§95/18, mb4.0/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.84**	**152**	*e*	**Pn**	**16 40 59.6**	**+1.1**
VNA1				*e*S	**Sn**	**16 43 17.3**	**-2.0**
VNA2	**Neumayer--Watz**	**13.24**	**152**	*e*	**Pn**	**16 41 04.1**	**+0.3**
VNA2				*e*S	**Sn**	**16 43 19.1**	**-10**
PMSA	**Palmer Station**	**17.62**	**239**	P	**Pn**	**16 42 00.1**	**+0.6**
	0.7nm,0.3s,baz=69,slow=14,SNR=3.6						
QSPA	**South Pole Qui**	**29.96**	**180**	P	**P**	**16 44 05.8**	**+5.7**
	2.6nm,0.5s,mb4.1,baz=196,slow=2.6,SNR=61						
QSPA	**South Pole Qui**	**29.96**	**180**	P	**P**	**16 44 05.8**	**+5.7**
TRQA	**Tornquist**	**31.42**	**299**	*e*P	**P**	**16 44 13.7**	**+0.4**
PLCA	**Paso Flores**	**33.21**	**286**	P	**P**	**16 44 28.4**	**-0.6**
	2.1nm,0.8s,mb4.0,baz=83,slow=18,SNR=3.9						
PLCA	**Paso Flores**	**33.21**	**286**	*e*P	**P**	**16 44 28.3**	**-0.7**
	2.3nm,0.8s,mb4.1						
CFAA	**Coronel Fontan**	**39.61**	**297**	P	**P**	**16 45 22.9**	**-0.5**
	0.2nm,0.3s,mb3.4,baz=177,slow=7.9,SNR=4.8						
CPUP	**Villa Florida**	**39.89**	**315**	P	**P**	**16 45 25.1**	**-0.7**
	0.5nm,0.3s,mb3.8,baz=138,slow=7.6,SNR=5.2						
CPUP	**Villa Florida**	**39.89**	**315**	*e*P	**P**	**16 45 25.1**	**-0.7**
LPAZ	**La Paz**	**53.10**	**307**	P	**P**	**16 47 07.8**	**-1.4**
	1.4nm,0.5s,mb4.3,baz=114,slow=5.4,SNR=9.3						
LPAZ	**La Paz**	**53.10**	**307**	*e*P	**P**	**16 47 09.3**	**+0.1**
DBIC	**Dimbokro**	**68.93**	**23**	P	**P**	**16 48 55.8**	**-0.6**
	5.6nm,1.0s,mb4.4,baz=174,slow=10,SNR=2.9						
TORD	**Toroidi Ar. Bea**	**76.64**	**28**	P	**P**	**16 49 42.8**	**+0.9**
	2.3nm,0.6s,mb4.1,baz=198,slow=6.2,SNR=29						
ASAR	**Alice Springs**	**94.87**	**162**	P	**P**	**16 51 14.6**	**+1.5**
	0.7nm,0.6s,mb4.2,baz=184,slow=4.0,SNR=17						
CMAR	**Chiang Mai Arr**	**123.26**	**113**	PKP	PKPdf	16 56 49.8	+2.2
	0.8nm,0.8s,baz=231,slow=3.9,SNR=6.8						
YKA	**Yellowknife Ar**	**139.41**	**315**	PKP	PKPdf	16 57 16.6	+0.1
	0.2nm,0.5s,baz=126,slow=2.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**143.84**	**69**	PKhKP		16 57 23.4	
	1.1nm,0.4s,baz=221,slow=4.4,SNR=5.1						
INK	**Inuvik**	**149.14**	**316**	PKPbc	PKPbc	16 57 37.2	-0.3
	0.8nm,0.7s,baz=311,slow=1.9,SNR=3.8						
SONM	**Songino Array**	**150.46**	**94**	PKPbc	PKPbc	16 57 43.0	+1.6
	3.5nm,0.8s,baz=222,slow=3.0,SNR=15						
KSRS	**Korea Array**	**152.04**	**133**	PKPbc	PKPbc	16 57 47.0	+1.6
	0.9nm,0.7s,baz=217,slow=2.8,SNR=3.6						

ISCJB ***20*** *16:38:36.1±0.4, 30°.79N±0°.03×103°.60E±0°.05, h10km, mb3.7/11, Error ellipse: s-maj=6.0km s-min=4.2km az=7.2*
IDC ***20*** *16:38:36.6±1.0, 30°.99N×103°.63E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/27, mbtmp3.6/11, ML3.0/2, MS4.1/1, Ms1 4.1/1, ms1mx2.8/39, Error ellipse: s-maj=30.9km s-min=18.6km az=53.0*
NEIC ***20*** *16:38:38.8±4.7, 30°.92N×103°.68E, h17km±31km, mb4.0/2, Error ellipse: s-maj=13.3km s-min=9.1km az=66.0*
BJI ***20*** *16:38:38.4, 30°.87N×103°.54E, h12km, mb4.5/3, ML3.7/15, Ms3.7/3, Ms7 3.8/2*
ISC 20 16:38:38.2±0.4, 30°.79N±0°.03×103°.52E±0°.05, h10km, n27, σ1§34/36, mb3.7/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.24**	**60**	Pg	**Pg**	**16 38 45.8**	**+2.7**
CD2				Sg	**Sg**	**16 38 51.9**	**+5.5**
CD2				smax			
	comp=N,35μm,0.8s						
GYA	**Guiyang**	**5.13**	**147**	Pg	**Pg**	**16 40 18.3**	**+1.8**
GYA				Sg	**Sg**	**16 41 30.5**	**+7.6**
GYA				smax			
	comp=N,150nm,1.0s						
GYA				smax			
	comp=E,110nm,0.9s						
ENH	**Enshi**	**5.18**	**94**	*e*Pn	**Pn**	**16 39 53.1**	**-2.6**
	comp=E,44nm,0.5s						
LZH	**Lanzhou**	**5.29**	**3**	*e*Pn	**Pg**	**16 40 24.8**	**+5.3**
LZH				Sn	**Sb**	**16 41 14.6**	**+0.3**
LZH				Sg	**Sg**	**16 41 30.0**	**+2.0**
LZH				smax			
	comp=N,46nm,0.5s						
LZH				smax			
	comp=E,80nm,0.7s						
LZH				LR	LR		
	comp=E,730nm,6.3s						
LZH				LR	LR		
	comp=Z,840nm,7.3s						
XAN	**Xi'an**	**5.60**	**53**	Pn	**Pn**	**16 40 01.1**	**-0.5**
XAN				Pg	**Pg**	**16 40 20.6**	**-4.9**
XAN				Sn	**Sn**	**16 41 05.0**	**-1.0**
XAN				Sg	**Sg**	**16 41 33.3**	**-4.8**
XAN				smax			
	comp=N,180nm,0.7s						
XAN				smax			
	comp=E,60nm,0.9s						
KMI	**Kunming**	**5.69**	**187**	Pn	**Pn**	**16 40 03.0**	**+0.2**
KMI				Sn	**Sn**	**16 41 08.8**	**+0.6**
KMI				smax			
	comp=N,34nm,1.3s						
KMI				smax			
	comp=E,29nm,1.5s						
KMI				LR	LR		
	comp=N,560nm,15.5s						
KMI				LR	LR		
	comp=E,590nm,10.8s						
WHN	**Wuhan**	**9.34**	**89**	P	**Pn**	**16 40 52.0**	**-0.8**
WHN				S	**Sn**	**16 42 37.8**	**-0.1**
HHC	**Hu-ho-hao-te**	**11.97**	**31**	*e*P	**Pn**	**16 41 31.1**	**+2.3**
HHC				pP		16 41 35.6	
HHC				PP		16 41 41.5	
HHC				S	**Sn**	**16 43 45.3**	**+2.9**
HHC				sS		16 43 53.0	
HHC				SS		16 44 00.8	
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				LR	LR		
	comp=N,220nm,4.8s						
HHC				LR	LR		
	comp=E,250nm,4.1s						
HHC				LR	LR		
	comp=Z,220nm,5.1s						
CM31	**Chiang Mai Arr**	**12.96**	**200**	Pn	**Pn**	**16 41 42.4**	**-0.2**
	comp=Z,1.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.96**	**200**	Pn	**Pn**	**16 41 46.0**	**+3.4**
	comp=Z,0.0nm,0.3s,baz=9.4,slow=11,SNR=7.7						
SONM	**Songino Array**	**17.16**	**7**	Pn	**Pn**	**16 42 36.5**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=165,slow=7.4,SNR=2.0						
KSRS	**Korea Array**	**21.24**	**65**	P	**P**	**16 43 23.6**	**-0.8**
	comp=Z,2.0nm,0.6s,mb3.6,baz=243,slow=10,SNR=8.4						
MK31	**Makanchi Array**	**22.89**	**320**	*e*P	**P**	**16 43 42.7**	**+0.8**
MKAR	**Makanchi Array**	**22.89**	**320**	P	**P**	**16 43 42.4**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.3,baz=124,slow=12,SNR=8.2						
UCH	**Uchtor**	**25.83**	**304**	*e*P	**P**	**16 44 11.2**	**+1.6**
AAK	**Ala-Archa**	**25.96**	**305**	P	**P**	**16 44 12.5**	**+1.6**
	comp=Z,1.7nm,0.7s,mb3.7,baz=157,slow=6.3,SNR=5.8						
AAK	**Ala-Archa**	**25.96**	**305**	*e*P	**P**	**16 44 10.3**	**-0.5**
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**16 44 17.3**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.5,baz=134,slow=11,SNR=3.5						
KURK	**Kurchatov**	**27.20**	**324**	P	**P**	**16 44 20.6**	**-1.3**
	comp=Z,1.4nm,0.7s,mb3.6,baz=131,slow=9.7,SNR=10						
ABKAR	**Akbulak array**	**37.51**	**312**	*e*P	**P**	**16 45 51.2**	**-0.8**
	comp=Z,0.2nm,0.3s,mb3.3						
MMAI	**Mount Meron Ar**	**56.92**	**292**	LR	LR	17 17 45.6	
	comp=Z,201nm,21.6s,baz=140,slow=41						
FINES	**FINESS Array B**	**57.55**	**326**	P	**P**	**16 48 26.3**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=107,slow=4.6,SNR=4.6						
WRAB	**Tennant Creek**	**58.50**	**146**	*e*P	**P**	**16 48 34.7**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**61.49**	**148**	P	**P**	**16 48 56.0**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.8,baz=337,slow=6.9,SNR=24						
NOA	**NORSAR Array B**	**64.65**	**327**	P	**P**	**16 49 13.2**	**-2.6**
	comp=Z,0.4nm,0.5s,mb3.7,baz=88,slow=4.1,SNR=3.1						
STKA	**Stephens Creek**	**72.02**	**147**	*e*P	**P**	**16 50 02.3**	**0.0**
YKA	**Yellowknife Ar**	**82.14**	**17**	P	**P**	**16 50 56.9**	**-1.9**
	comp=Z,0.3nm,0.6s,mb3.4,baz=328,slow=5.2,SNR=3.9						

SKO ***20*** *16:43:01.8, 40°.01N×21°.56E, h4km*
ISCJB ***20*** *16:43:02.6±0.8, 40°.12N±0°.04×21°.60E±0°.08, h5km±11km, Error ellipse: s-maj=11.0km s-min=4.5km az=149.2*
CSEM ***20*** *16:43:02.7±0.3, 40°.14N×21°.64E, h10km, ML2.8/2, Error ellipse: s-maj=10.9km s-min=3.6km az=63.0*
THE ***20*** *16:43:03.2, 40°.14N×21°.63E, h8km±2km, ML2.8/2, Error ellipse: s-maj=2.5km s-min=0.7km az=52.0*
ISC 20 16:43:03.3±0.8, 40°.13N±0°.04×21°.64E±0°.09, h12km±9km, n16, σ0§94/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.20**	**31**	P	**Pg**	**16 43 07.6**	**-0.1**
KZN				S	**Sg**	**16 43 10.8**	**+0.1**
KZN	**Kozani**	**0.20**	**31**	P	**Pg**	**16 43 07.6**	**-0.1**
KZN				S	**Sg**	**16 43 10.8**	**+0.1**
THL	**Klokotos Trika**	**0.64**	**153**	P	**Pg**	**16 43 14.7**	**-1.0**
THL				S	**Sg**	**16 43 25.0**	**+0.9**
THL	**Klokotos Trika**	**0.64**	**153**	P	**Pg**	**16 43 14.7**	**-1.0**
THL				S	**Sg**	**16 43 25.0**	**+0.9**
LIT	**Litokhoron**	**0.66**	**93**	P	**Pg**	**16 43 15.0**	**-1.0**
LIT				S	**Sg**	**16 43 25.1**	**+0.5**
LIT	**Litokhoron**	**0.66**	**93**	P	**Pg**	**16 43 15.0**	**-1.0**
LIT				S	**Sg**	**16 43 25.1**	**+0.5**
FNA	**Florina**	**0.68**	**343**	P	**Pg**	**16 43 16.1**	**-0.4**
FNA				S	**Sg**	**16 43 25.4**	**0.0**
FNA	**Florina**	**0.68**	**343**	P	**Pg**	**16 43 16.1**	**-0.4**
FNA				S	**Sg**	**16 43 25.4**	**0.0**
BIA	**Bitola**	**0.92**	**345**	*e*Pg	**Pg**	**16 43 19.8**	**-1.2**
BIA				*e*Sg	**Sg**	**16 43 34.3**	**+1.3**
BIA	**Bitola**	**0.92**	**345**	*e*Pg	**Pg**	**16 43 19.7**	**-1.3**
BIA				*e*Sg	**Sg**	**16 43 34.2**	**+1.2**
AGG	**Agios Georgios**	**1.23**	**154**	P	**Pn**	**16 43 26.3**	**0.0**
AGG				S	**Sb**	**16 43 43.8**	**+1.5**
AGG	**Agios Georgios**	**1.23**	**154**	P	**Pn**	**16 43 26.3**	**0.0**
AGG				S	**Sb**	**16 43 43.8**	**+1.5**
KRUS	**Krusevo**	**1.27**	**347**	*e*Pg	**Pg**	**16 43 26.6**	**-1.0**
KRUS				*e*Sg	**Sg**	**16 43 45.9**	**+1.7**
KRUS	**Krusevo**	**1.27**	**347**	*e*Pg	**Pg**	**16 43 26.6**	**-1.1**
KRUS				*e*Sg	**Sg**	**16 43 45.8**	**+1.6**
XOR	**Xorichti**	**1.42**	**122**	P	**Pn**	**16 43 27.9**	**-1.0**
XOR	**Xorichti**	**1.42**	**122**	P	**Pn**	**16 43 27.9**	**-1.0**

IDC ***20*** *16:50:43.0±0.4, 14°.85N×60°.99W, h103km±4km, mb3.6/8, mb1 3.9/8, mb1mx3.5/26, mbtmp3.6/8, Error ellipse: s-maj=22.1km s-min=6.6km az=84.0*
ISCJB ***20*** *16:50:43.2±0.4, 14°.87N±0°.02×60°.95W±0°.08, h116km±2km, mb3.9/8, Error ellipse: s-maj=12.2km s-min=2.9km az=169.6*
TRN ***20*** *16:50:43.5, 14°.86N×60°.95W, h104km, MD3.9, M3.6(FDF)*
NEIC ***20*** *16:50:43.9, 14°.85N×60°.96W, h102km, MD3.9(TRN), After TRN.*
ISC 20 16:50:44.2±0.4, 14°.87N±0°.02×60°.93W±0°.08, h110km±2km, n76, σ0§80/123, mb3.9/8, 9C-11D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.26**	**238**	⇓*i*Pn	**Pn**	**16 50 59.3**	**-0.5**
FDF				*e*Sn	**Sn**	**16 51 09.5**	**-1.9**
FDF	**Fort de France**	**0.26**	**238**	⇑*i*P	**Pn**	**16 50 59.4**	**-0.4**
FDF	**Fort de France**	**0.26**	**238**	⇓*i*P	**Pn**	**16 50 59.4**	**-0.3**
FDF				⇓*e*S	**Sn**	**16 51 10.2**	**-1.2**
F

DSHT	**Scott's Head**	**0.55 308**	*e*P	**Pn**	**16 51 01.9**	**+0.6**
DSHT			*e*S	**Sn**	**16 51 13.8**	**-0.5**
DSHT	**Scott's Head**	**0.55 308**	*e*P	**Pn**	**16 51 01.9**	**+0.6**
DSHT			*e*S	**Sn**	**16 51 13.8**	**-0.5**
DFBT	**Forest Bistro**	**0.55 312**	*e*P	**Pn**	**16 51 01.7**	**+0.3**
DFBT			*e*S	**Sn**	**16 51 13.5**	**-0.8**
DFBT	**Forest Bistro**	**0.55 312**	*e*P	**Pn**	**16 51 01.7**	**+0.3**
DFBT			*e*S	**Sn**	**16 51 13.5**	**-0.8**
DLPL	**La Plaine**	**0.55 326**	*e*P	**Pn**	**16 51 01.0**	**-0.4**
DLPL			*e*S	**Sn**	**16 51 13.5**	**-0.8**
DPMT	**Pointe Michel**	**0.58 312**	*e*P	**Pn**	**16 51 02.1**	**+0.5**
DPMT			*e*S	**Sn**	**16 51 14.0**	**-0.7**
DPMT	**Pointe Michel**	**0.58 312**	*e*P	**Pn**	**16 51 02.1**	**+0.5**
DPMT			*e*S	**Sn**	**16 51 14.0**	**-0.7**
MDN	**Morne-Daniel**	**0.63 315**	*e*P	**Pn**	**16 51 02.8**	**+0.8**
MDN			*e*S	**Sn**	**16 51 15.1**	**-0.3**
MDN	**Morne-Daniel**	**0.63 315**	*e*P	**Pn**	**16 51 02.8**	**+0.8**
MDN			*e*S	**Sn**	**16 51 15.1**	**-0.3**
DWS	**Wesley**	**0.79 332**	*e*P	**Pn**	**16 51 04.8**	**+1.5**
DWS			*e*S	**Sn**	**16 51 18.5**	**+0.8**
DWS	**Wesley**	**0.79 332**	*e*P	**Pn**	**16 51 04.8**	**+1.5**
DWS			*e*S	**Sn**	**16 51 18.5**	**+0.8**
SLW	**Petit Monier**	**0.84 181**	⇓*i*P	**Pn**	**16 51 04.1**	**+0.2**
SLW			*e*S	**Sn**	**16 51 18.1**	**-0.5**
SLW	**Petit Monier**	**0.84 181**	⇓*i*P	**Pn**	**16 51 04.1**	**+0.2**
SLW			*e*S	**Sn**	**16 51 18.1**	**-0.5**
SLPE	**Piton Saint Es**	**1.02 184**	*e*P	**Pn**	**16 51 06.3**	**+0.7**
SLPE			*e*S	**Sn**	**16 51 22.2**	**+0.4**
SLPE	**Piton Saint Es**	**1.02 184**	*e*P	**Pn**	**16 51 06.3**	**+0.7**
SLPE			*e*S	**Sn**	**16 51 22.2**	**+0.4**
SLB	**Belfond**	**1.04 186**	*e*P	**Pn**	**16 51 05.1**	**-0.8**
SLB	**Belfond**	**1.04 186**	*e*P	**Pn**	**16 51 05.1**	**-0.8**
SLDE	**Delcer**	**1.07 187**	*e*P	**Pn**	**16 51 06.8**	**+0.6**
SLDE			*e*S	**Sn**	**16 51 23.4**	**+0.8**
SLDE	**Delcer**	**1.07 187**	*e*P	**Pn**	**16 51 06.8**	**+0.6**
SLDE			*e*S	**Sn**	**16 51 23.4**	**+0.8**
MCLT	**Moule a Chique**	**1.15 181**	*e*P	**Pn**	**16 51 07.5**	**+0.5**
MCLT			*e*S	**Sn**	**16 51 22.6**	**-1.7**
MCLT	**Moule a Chique**	**1.15 181**	*e*P	**Pn**	**16 51 07.5**	**+0.5**
MCLT			*e*S	**Sn**	**16 51 23.8**	**-0.5**
TBG	**Guadaloupe-3**	**1.20 325**	⇑*i*P	**Pn**	**16 51 07.0**	**-0.5**
PHG	**Guadaloupe-2**	**1.33 329**	*e*P	**Pn**	**16 51 09.1**	**0.0**
HMG	**Houelmont**	**1.33 326**	⇑*e*P	**Pn**	**16 51 09.0**	**-0.1**
HMG			⇑*e*S	**Sn**	**16 51 29.0**	**+1.1**
SCG	**Saint Claude**	**1.36 328**	⇑*i*P	**Pn**	**16 51 09.4**	**0.0**
SCG			⇑*e*S	**Sn**	**16 51 30.2**	**+1.7**
BCG	**Bois Riant Cap**	**1.38 331**	*e*P	**Pn**	**16 51 09.5**	**-0.1**
LZG	**Guadaloupe-1**	**1.50 327**	⇑*i*P	**Pn**	**16 51 10.9**	**-0.1**
SSV	**Crater Summit**	**1.56 190**	*e*P	**Pn**	**16 51 11.4**	**-0.3**
SSV			*e*S	**Sn**	**16 51 31.3**	**-1.3**
SSV	**Crater Summit**	**1.56 190**	*e*P	**Pn**	**16 51 11.4**	**-0.3**
SSV			*e*S	**Sn**	**16 51 33.0**	**+0.4**
SVV	**Soufriere Volc**	**1.57 190**	*e*P	**Pn**	**16 51 11.5**	**-0.4**
SVV			*e*S	**Sn**	**16 51 33.9**	**+1.0**
SVV	**Soufriere Volc**	**1.57 190**	*e*P	**Pn**	**16 51 11.5**	**-0.4**
SVV			*e*S	**Sn**	**16 51 33.9**	**+1.0**
BHS	**Barnard House**	**1.58 187**	⇓*i*P	**Pn**	**16 51 11.8**	**-0.2**
BHS			*e*S	**Sn**	**16 51 33.0**	**0.0**
BHS	**Barnard House**	**1.58 187**	⇓*i*P	**Pn**	**16 51 11.8**	**-0.2**
BHS			*e*S	**Sn**	**16 51 33.0**	**0.0**
SVB	**Belmont**	**1.62 191**	*e*P	**Pn**	**16 51 12.1**	**-0.4**
SVB			*e*S	**Sn**	**16 51 34.3**	**+0.3**
SVB	**Belmont**	**1.62 191**	*e*P	**Pn**	**16 51 12.1**	**-0.4**
SVB			*e*S	**Sn**	**16 51 34.3**	**+0.3**
FCV	**Fort Charlotte**	**1.73 190**	*e*P	**Pn**	**16 51 13.0**	**-0.9**
FCV			*e*S	**Sn**	**16 51 39.0**	**+2.6**
FCV	**Fort Charlotte**	**1.73 190**	*e*P	**Pn**	**16 51 13.0**	**-0.8**
FCV			*e*S	**Sn**	**16 51 34.5**	**-1.9**
BBGH	**Gun Hill**	**2.17 142**	*e*Pn	**Pn**	**16 51 20.1**	**+0.7**
GRCU	**Cariacou**	**2.44 192**	*e*P	**Pn**	**16 51 22.9**	**0.0**
GRCU			*e*S	**Sn**	**16 51 53.3**	**+0.8**
GRCU	**Cariacou**	**2.44 192**	*e*P	**Pn**	**16 51 22.9**	**0.0**
GRCU			*e*S	**Sn**	**16 51 51.9**	**-0.6**
GRSS	**Sisters**	**2.64 195**	*e*P	**Pn**	**16 51 25.7**	**+0.1**
GRSS			*e*S	**Sn**	**16 51 57.8**	**+0.5**
GRSS	**Sisters**	**2.64 195**	*e*P	**Pn**	**16 51 25.7**	**+0.1**
GRSS			*e*S	**Sn**	**16 51 57.8**	**+0.5**
GRIC	**Isle de Caille**	**2.65 194**	*e*P	**Pn**	**16 51 26.1**	**+0.5**
GRIC			*e*S	**Sn**	**16 51 57.0**	**-0.4**
GRW	**Mount Saint Ca**	**2.79 195**	*e*P	**Pn**	**16 51 28.3**	**+0.9**
GRW			*e*S	**Sn**	**16 52 00.5**	**-0.2**
GRW	**Mount Saint Ca**	**2.79 195**	*e*P	**Pn**	**16 51 28.3**	**+0.9**
GRW			*e*S	**Sn**	**16 52 00.5**	**-0.2**
GRGR	**Grenville**	**2.81 195**	*e*Pn	**Pn**	**16 51 27.3**	**-0.5**
ANWB	**Willy Bob**	**2.90 344**	*e*Pn	**Pn**	**16 51 27.8**	**-1.1**
SKI	**Saint Kitts**	**3.00 325**	*e*P	**Pn**	**16 51 30.5**	**+0.2**
SKI			*e*S	**Sn**	**16 52 05.2**	**-0.6**
TOSP	**Speyside**	**3.57 174**	*e*P	**Pn**	**16 51 37.5**	**-0.4**
TOSP			*e*S	**Sn**	**16 52 17.6**	**-1.7**
TPR	**Prospect**	**3.67 178**	*e*P	**Pn**	**16 51 40.7**	**+1.6**
TPR	**Prospect**	**3.67 178**	*e*P	**Pn**	**16 51 40.7**	**+1.6**
TRN	**Trinidad (W)**	**4.22 186**	*e*P	**Pn**	**16 51 46.8**	**+0.2**
TRN			*e*S	**Sn**	**16 52 33.1**	**-1.8**
TRN	**Trinidad (W)**	**4.22 186**	*e*P	**Pn**	**16 51 46.8**	**+0.2**
TRN			*e*S	**Sn**	**16 52 33.1**	**-1.8**
TCE	**Chacachacare**	**4.23 191**	*e*P	**Pn**	**16 51 48.7**	**+2.1**
TCE	**Chacachacare**	**4.23 191**	*e*P	**Pn**	**16 51 48.5**	**+1.8**
TBH	**Brigand Hill**	**4.36 182**	*e*P	**Pn**	**16 51 49.5**	**+1.0**
TBH	**Brigand Hill**	**4.36 182**	*e*P	**Pn**	**16 51 49.5**	**+1.0**
CBYP	**Canovanas**	**5.81 306**	*e*Pn	**Pn**	**16 52 07.7**	**-0.3**
ROSC	**El Rosal**	**16.52 234**	P	**Pn**	**16 54 30.8**	**+1.3**
	2.2nm,0.3s,baz=265,slow=16,SNR=3.1					
APG	**El Apazote**	**28.53 274**	P	**P**	**16 56 29.9**	**+0.2**
	1.5nm,0.6s,mb3.8,baz=133,slow=19,SNR=4.2					
TXAR	**Lajitas Array**	**41.89 297**	P	**P**	**16 58 22.5**	**-1.4**
	0.2nm,0.4s,mb3.2,baz=118,slow=6.7,SNR=13					
PDAR	**Pinedale Array**	**49.97 314**	P	**P**	**16 59 26.6**	**-0.5**
	2.4nm,0.6s,mb4.3,baz=118,slow=9.6,SNR=13					
NVAR	**Mina Array Bea**	**55.44 307**	P	**P**	**17 00 07.6**	**+0.1**
	0.9nm,0.6s,mb4.0,baz=105,slow=6.4,SNR=6.6					
YKA	**Yellowknife Ar**	**60.54 335**	P	**P**	**17 00 41.5**	**-1.1**
	1.5nm,0.4s,mb4.4,baz=106,slow=7.5,SNR=24					
YKA	**Yellowknife Ar**	**60.54 335**	P	**P**	**17 00 41.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**60.61 83**	P	**P**	**17 00 44.1**	**+0.2**
	0.5nm,0.5s,mb3.8,baz=276,slow=5.9,SNR=7.5					
DLBC	**Dease Lake**	**66.53 328**	P	**P**	**17 01 22.8**	**+0.8**
	0.9nm,0.4s,mb4.0,baz=36,slow=8.7,SNR=3.3					
INK	**Inuvik**	**69.86 338**	P	**P**	**17 01 41.6**	**-1.0**
	0.4nm,0.5s,mb3.5,baz=78,slow=3.8,SNR=6.2					
ASAR	**Alice Springs**	**163.50 236**	PKPab	PKPab	17 11 24.5	-2.1
	0.2nm,0.5s,baz=117,slow=3.9,SNR=5.7					

ISCJB ***20*** *16:58:13.8±1.8, 36°.87N±0°.06×28°.30E±0°.07, h26km±17km, Error ellipse: s-maj=9.4km s-min=9.1km az=26.3*
CSEM ***20*** *16:58:13.9±0.4, 36°.86N×28°.29E, h18km±3km, ML1.6, Error ellipse: s-maj=8.4km s-min=5.8km az=154.0*
DDA ***20*** *16:58:14.8, 36°.93N×28°.30E, h7km±7km, Md2.6*
ISK ***20*** *16:58:14.2, 36°.94N×28°.17E, h30km, ML1.6*

ISC 20 16:58:13.6±1.7, 36°.87N±0°.05×28°.30E±0°.07, h29km±18km, n12, σ0°.72/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.24**	**89**	*i* P	**Pb**	**16 58 20.2**	**+0.1**
TURN				*i* S	**Sb**	**16 58 23.5**	**-1.1**
TURN	**Turunc**	**0.24**	**89**	*i* P	**Pb**	**16 58 20.2**	**+0.1**
TURN				*i* S	**Sb**	**16 58 23.5**	**-1.0**
YER	**Yerkesik**	**0.26**	**357**	*e*PG	**Pb**	**16 58 21.3**	**+0.9**
YER				*e*SG	**Sb**	**16 58 25.7**	**+0.7**
YER	**Yerkesik**	**0.26**	**357**	*e*Pg	**Pb**	**16 58 21.3**	**+0.9**
YER				*e*Sg	**Sb**	**16 58 25.7**	**+0.7**
MLSB	**Milas**	**0.60**	**315**	*e*PG	**Pb**	**16 58 24.5**	**-1.0**
MLSB				*e*SG	**Sb**	**16 58 32.9**	**-0.8**
MLSB	**Milas**	**0.60**	**315**	*e*Pg	**Pb**	**16 58 24.5**	**-1.0**
MLSB				*e*Sg	**Sb**	**16 58 32.9**	**-0.7**
DAT	**Datca**	**0.60**	**257**	*e*PG	**Pb**	**16 58 25.7**	**+0.2**
DAT				*e*SG	**Sb**	**16 58 34.0**	**+0.4**
DAT	**Datca**	**0.60**	**257**	*e*Pg	**Pb**	**16 58 25.7**	**+0.2**
DAT				*e*Sg	**Sb**	**16 58 34.0**	**+0.4**
BDRM	**Kayabasi**	**0.71**	**286**	*i* P	**Pb**	**16 58 28.0**	**+0.6**
BDRM				*i* S	**Sb**	**16 58 36.0**	**-0.9**
BDRM	**Kayabasi**	**0.71**	**286**	*i* P	**Pb**	**16 58 28.0**	**+0.6**
BDRM				*i* S	**Sb**	**16 58 36.0**	**-0.9**
AYDN	**Tasoluk**	**0.86**	**337**	*i* P	**Pb**	**16 58 30.8**	**+0.9**
AYDN				*i* S	**Sb**	**16 58 40.6**	**-0.4**
AYDN	**Tasoluk**	**0.86**	**337**	*i* P	**Pb**	**16 58 30.8**	**+0.9**
AYDN				*i* S	**Sb**	**16 58 40.6**	**-0.4**

NEIC ***20*** *17:07:19.6, 16°.09N×98°.78W, h5km, MD3.7(MEX), After MEX.*

MEX 20 17:07:19.6±0.9, 16°.09N×98°.78W, h5km±20km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.70**	**65**	*i* P	**Pg**	17 07 31.9	-1.2
PNIG				*i* S	**Sg**	17 07 41.8	-0.3
PNIG	**Pinotepa**	**0.70**	**65**	*i* P	**Pg**	17 07 31.9	-1.2
PNIG				*i* S	**Sg**	17 07 41.8	-0.3
ACX	**Acapulco**	**1.33**	**305**	*i* P	**Pn**	17 07 40.8	-4.0
ACX				*i* S	**Sb**	17 07 57.1	-5.3
ACX	**Acapulco**	**1.33**	**305**	*i* P	**Pn**	17 07 40.8	-4.0
ACX				*i* S	**Sb**	17 07 57.1	-5.3
CAIG	**El Cayaco**	**1.71**	**304**	*i* P	**Pn**	17 07 47.5	-2.6
CAIG				*i* S	**Sn**	17 08 08.3	-3.9
CAIG	**El Cayaco**	**1.71**	**304**	*i* P	**Pn**	17 07 47.5	-2.6
CAIG				*i* S	**Sn**	17 08 08.3	-3.9
UTMO	**Huajuapan**	**1.96**	**28**	*i* P	**Pn**	17 07 50.6	-2.9
UTMO				*i* S	**Sn**	17 08 14.5	-4.0
VHO	**Vista Hermosa**	**2.19**	**63**	*i* P	**Pn**	17 07 54.0	-2.6
VHO				*i* S	**Sn**	17 08 19.8	-4.4
VHO	**Vista Hermosa**	**2.19**	**63**	*i* P	**Pn**	17 07 54.0	-2.6
VHO				*i* S	**Sn**	17 08 19.8	-4.4
PLIG	**Platanillo**	**2.39**	**343**	*i* P	**Pn**	17 07 53.6	-5.8
PLIG				*i* S	**Sn**	17 08 24.9	-4.1
PLIG	**Platanillo**	**2.39**	**343**	*i* P	**Pn**	17 07 53.6	-5.8
PLIG				*i* S	**Sn**	17 08 24.9	-4.1

BJI ***20*** *17:07:56.8, 3°.50S×101°.32E, h56km, mB5.5/46, mb5.5/61, Ms5.3/72, Ms7 5.2/61*
MOS ***20*** *17:07:57.5±0.8, 3°.07S×101°.53E, h33km, mb5.9/84, MS4.9/52, Error ellipse: s-maj=9.0km s-min=4.4km az=116.5*
ISCJB ***20*** *17:07:59.2±0.1, 3°.22S±0°.02×101°.37E±0°.02, h50km, mb5.6/247, MS5.1/164, Error ellipse: s-maj=3.1km s-min=2.1km az=25.0*
GCMT ***20*** *17:08:00.2±0.2, 3°.48S×101°.17E, h51km, MW5.6/87, Moment Tensor Solution. s83,c150; s87,c188; Duration: 1s5 Moment tensor: Scale 10^17Nm; Mrr2.08±.05; Mθθ-1.13±.04; Mφφ-0.95±.04; Mrθ1.58±.04; Mrφ1.42±.03; Mθr-0.79±.04; Best double couple: M0 2.88600×10^17 NP1:φs327.00000°, δ28.00000°, λ112.00000°. NP2:φs122.00000°, δ64.00000°, λ79.00000°. Principal axes: T 2.7390, Plg69.0000°, Azm10.0000°; N 0.2910, Plg10.0000°, Azm127.0000°; P -3.0330, Plg19.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
TEH ***20*** *17:08:00.0, 3°.42S×101°.41E, h55km*
IDC ***20*** *17:08:00.8±0.3, 3°.16S×101°.53E, h51km±2km, mb5.1/35, mb1 5.1/36, mb1mx5.1/37, mbtmp5.1/36, MS4.8/25, Ms1 4.8/25, ms1mx4.8/27, Error ellipse: s-maj=9.5km s-min=7.6km az=55.0*
NEIC ***20*** *17:08:00.2±0.1, 3°.18S×101°.48E, mb5.6/107, MS5.2/101, MW5.7, Error ellipse: s-maj=5.7km s-min=4.3km az=40.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^17Nm; Mrr4.52; Mθθ0.51; Mφφ-5.03; Mrθ-0.04; Mrφ1.27; Mθr-0.19; Best double couple: M0 5.00000×10^17 NP1: φs169.00000°, δ46.00000°, λ92.00000°. NP2: φs346.00000°, δ44.00000°, λ88.00000°. Principal axes: T 4.5200, Plg88.0000°, Azm127.0000°; N 0.7800, Plg1.0000°, Azm347.0000°; P -5.3100, Plg1.0000°, Azm257.0000°;*
NEIC Felt [III] at Bengkulu, Kapahiang, Lais and Padang.
SZGRF ***20*** *17:08:01.3, 2°.70S×102°.07E, h49km, mb5.6, MS4.9, Southern Sumatera, Indonesia*
DJA ***20*** *17:08:01, 3°.36S×101°.28E, h54km, Mw5.7/38*

ISC 20 17:08:01.1±0.1, 3°.24S±0°.02×101°.36E±0°.02, h52km, h52km±.8km; pP-P, n1288, σ0°.97/806, mb5.6/247, MS5.1/164, 290C-209D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.30**	**109**	P	**Pn**	**17 08 22.0**	**-0.9**
PPSI	**Pulau Pagai**	**1.43**	**289**	P	**Pn**	**17 08 24.8**	**+0.1**
MNAI	**Manna**	**1.94**	**125**	P	**Pn**	**17 08 31.1**	**-0.6**
LHSI	**Lahat**	**2.24**	**105**	P	**Pn**	**17 08 38.2**	**+2.5**
SDSI	**Sungai Dareh**	**2.29**	**2**	P	**Pn**	**17 08 38.1**	**+1.6**
PDSI	**Padang**	**2.48**	**339**	P	**Pn**	**17 08 39.5**	**+0.4**
PPI	**Padang Panjang**	**2.92**	**341**	P	**Pn**	**17 08 46.4**	**+1.2**
SISI	**Saibi**	**2.96**	**310**	P	**Pn**	**17 08 45.8**	**+0.2**
RGRI	**Rengat**	**3.03**	**19**	P	**Pn**	**17 08 48.8**	**+2.2**
MDSI	**Maura Dua**	**3.07**	**114**	P	**Pn**	**17 08 47.4**	**+0.2**
LWLI	**Liwa**	**3.22**	**123**	P	**Pn**	**17 08 49.4**	**+0.2**
PMBI	**Palembang**	**3.42**	**85**	P	**Pn**	**17 08 51.7**	**-0.3**
BKNI	**Bangkinang**	**3.55**	**355**	P	**Pn**	**17 08 56.1**	**+2.3**
KLI	**Kotabumi**	**3.84**	**115**	P	**Pn**	**17 08 58.7**	**+0.9**
KASI	**Kota Agung**	**3.87**	**126**	P	**Pn**	**17 08 57.3**	**-0.8**
MNSI	**Mandailing Nat**	**4.38**	**336**	P	**Pn**	**17 09 06.0**	**+0.8**
RBSI	**Rajabasa**	**5.08**	**121**	P	**Pn**	**17 09 16.8**	**+2.1**
	2μm,0.9s,15nm						
CGJI	**Cibinong**	**5.47**	**128**	P	**Pn**	**17 09 19.0**	**-1.1**
	2μm,0.9s						
KGM	**Kluang**	**5.57**	**21**	P	**Pn**	**17 09 24.0**	**+2.5**
MYKOM	**Kota Tinggi**	**5.58**	**27**	P	**Pn**	**17 09 24.1**	**+2.5**
TRSI	**Tarutung**	**5.75**	**335**	P	**Pn**	**17 09 26.9**	**+2.9**
	2μm,0.8s,13nm						
GSI	**Gunungsitoli**	**5.89**	**320**	P	**Pn**	**17 09 25.1**	**-0.7**
	1μm,1.0s,14nm						
TNG	**Tangerang**	**6.02**	**119**	P	**Pn**	**17 09 25.1**	**-2.6**
DBJI	**Dramaga**	**6.30**	**122**	P	**Pn**	**17 09 31.5**	**0.0**
	1μm,1.0s,12nm						
TPI	**Tanjungpandan**	**6.30**	**86**	P	**Pn**	**17 09 31.5**	**0.0**
	227nm,0.7s,6μm4.4nm						
FRIM	**Kepong**	**6.43**	**2**	P	**Pn**	**17 09 35.5**	**+2.2**
LEM	**Lembang**	**7.18**	**120**	P	**Pn**	**17 09 44.9**	**+1.3**
	1μm,0.9s,6.3nm						
IPM	**Ipoh**	**7.67**	**357**	P	**Pn**	**17 09 53.7**	**+3.4**
XMIS	**Christmas Isla**	**8.36**	**150**	*e*P	**Pn**	**17 09 51.7**	**-8.1**
XMIS				*e*S	**Sn**	**17 11 17.8**	**-15**
XMIS	**Christmas Isla**	**8.36**	**150**	*e*Pn	**Pn**	**17 09 52.0**	**-7.8**
	149nm,0.6s						
XMIS				*e*Sn	**Sn**	**17 11 17.8**	**-15**
XMIS	**Christmas Isla**	**8.36**	**150**	P	**Pn**	**17 09 51.8**	**-8.0**
KULM	**Kulim**	**8.50**	**355**	P	**Pn**	**17 10 03.4**	**+1.8**
KTGM	**Kuala Trenggan**	**8.69**	**12**	P	**Pn**	**17 10 06.7**	**+2.5**
LHMI	**Lhok Sumawe**	**9.49**	**332**	P	**Pn**	**17 10 15.5**	**+0.2**
	277nm,0.9s,4μm						
SMRI	**Semarang**	**9.80**	**113**	P	**Pn**	**17 10 21.7**	**+2.2**
	986nm,1.0s,9μm						
COCO	**West Island**	**9.96**	**206**	Pn	**Pn**	**17 10 17.0**	**-4.7**
	8μm,0.9s,SNR=21						
COCO	**West Island**	**9.96**	**206**	*e*P	**Pn**	**17 10 17.0**	**-4.7**
COCO				pmax	pmax		
	comp=Z,1μm,0.9s						
COCO	**West Island**	**9.96**	**206**	*e*Pn	**Pn**	**17 10 17.0**	**-4.7**
	comp=Z,1μm,0.9s						
COCO				*e*Sn	**Sn**	**17 11 57.1**	**-15**
COCO	**West Island**	**9.96**	**206**	Pn	**Pn**	**17 10 18.3**	**-3.4**
	SNR=8.5						
COCO				Pn	**Pn**	**17 10 18.3**	**-3.4**
	SNR=8.5						
COCO	**West Island**	**9.96**	**206**	P	**Pn**	**17 10 17.7**	**-4.0**
	comp=Z,1μm,0.9s						
KSM	**Kuching**	**10.09**	**63**	P	**Pn**	**17 10 24.6**	**+1.1**
UGM	**Wanagama**	**10.23**	**117**	P	**Pn**	**17 10 24.4**	**-1.0**
	comp=Z,637nm,1.7s,comp=Z,7μm						
BSI	**Banda Aceh**	**10.58**	**325**	P	**Pn**	**17 10 28.2**	**-2.0**
	comp=Z,416nm,1.1s,comp=Z,4μm						
STKI	**Sintang**	**10.63**	**72**	P	**Pn**	**17 10 33.9**	**+3.1**
	comp=Z,193nm,1.0s,comp=Z,3μm						
PCJI	**Pacitan**	**10.94**	**117**	P	**Pn**	**17 10 33.2**	**-1.9**
SJI	**Sawahan**	**11.28**	**114**	P	**Pn**	**17 10 40.1**	**+0.4**
	comp=Z,656nm,1.0s,comp=Z,7μm						
PWJI	**Pagerwojo**	**11.43**	**115**	P	**Pn**	**17 10 41.6**	**-0.1**
	comp=Z,364nm,0.9s,comp=Z,4μm						
GRJI	**Gresik**	**11.66**	**109**	P	**Pn**	**17 10 45.7**	**+0.8**
	comp=Z,790nm,1.1s,comp=Z,8μm						
SBUM	**Sibu**	**12.23**	**63**	P	**Pn**	**17 10 53.8**	**+1.0**
GMJI	**Gumukmas**	**13.02**	**113**	P	**Pn**	**17 11 03.6**	**+0.1**
	comp=Z,178nm,1.2s,comp=Z,3μm						
KMMI	**Kalianget**	**13.11**	**107**	P	**Pn**	**17 11 04.7**	**-0.1**
	comp=Z,331nm,1.4s,comp=Z,5μm						
BTM	**Bintulu**	**13.35**	**61**	P	**Pn**	**17 11 11.8**	**+3.8**
BBKI	**Banjar Baru**	**13.46**	**91**	P	**Pn**	**17 11 18.1**	**+8.6**
ABJI	**Asem Bagus**	**13.59**	**110**	P	**Pn**	**17 11 13.0**	**+1.7**
	comp=Z,928nm,0.6s,comp=Z,9μm						
SRBI	**Singaraja**	**14.60**	**110**	P	**Pn**	**17 11 24.8**	**0.0**
KBKI	**Kotabaru**	**14.78**	**91**	P	**Pn**	**17 11 31.9**	**+4.7**
IGBI	**Denpasar**	**14.78**	**113**	P	**Pn**	**17 11 24.2**	**-3.0**
	comp=Z,401nm,0.6s,comp=Z,8μm						
KHKI	**Kahang-Kahang**	**15.06**	**110**	P	**Pn**	**17 11 29.2**	**-1.6**
	comp=Z,142nm,0.9s,comp=Z,2μm						
KKM	**Kota Kinabalu**	**17.46**	**58**	P	**Pn**	**17 12 03.4**	**+2.2**
SDKM	**Sandakan**	**18.11**	**61**	P	**Pn**	**17 12 10.6**	**+1.5**
TSM	**Tawau**	**18.11**	**66**	P	**Pn**	**17 12 11.2**	**+2.0**
KAPI	**Kappang**	**18.43**	**96**	Pn	**Pn**	**17 12 12.3**	**-0.7**
	comp=Z,2μm,1.3s,SNR=34						
KAPI	**Kappang**	**18.43**	**96**	P	**Pn**	**17 12 11.2**	**-1.8**
	comp=Z,9.2nm,0.3s,baz=271,slow=11,SNR=34						
KAPI				LR	LR	17 21 09.6	
	comp=Z,4μm,18.1s,baz=284,slow=43						
TTSI	**Tana Toraja**	**18.43**	**90**	P	**Pn**	**17 12 13.4**	**+0.4**
	comp=Z,317nm,1.5s,comp=Z,4μm						
KDM	**Kudat**	**18.44**	**57**	P	**Pn**	**17 12 15.0**	**+1.8**
UBT	**Ubonrachathani**	**18.71**	**11**	⇓P	**Pn**	**17 12 16.3**	**-0.1**
NST	**Nakhon Sawan**	**18.82**	**356**	P	**Pn**	**17 12 13.0**	**-4.7**
MYLDM	**Lahad Datu**	**19.05**	**64**	P	**Pn**	**17 12 22.2**	**+1.7**
KKTK	**Khon Kaen**	**19.50**	**4**	⇓P	**Pn**	**17 12 23.5**	**-2.3**
	comp=Z,1μm,0.9s						
WSI	**Waingapu**	**19.86**	**110**	P	**Pn**	**17 12 25.6**	**-4.5**
	comp=Z,1μm,0.7s						
BATP	**Bataraza**	**20.29**	**54**	*e*P	**P**	**17 12 34.6**	**+1.9**
APSI	**Ampana**	**20.40**	**84**	P	**P**	**17 12 35.3**	**+1.2**
	comp=Z,991nm,1.1s						
BDT	**Bhumibol Dam**	**20.48**	**354**	P	**P**	**17 12 32.5**	**-2.3**
	comp=Z,38nm,0.9s						
MRSI	**Marisa**	**20.90**	**80**	P	**P**	**17 12 39.3**	**-0.1**
	comp=Z,528nm,0.8s,comp=Z,4μm						
KDI	**Kendari**	**21.23**	**93**	P	**P**	**17 12 44.2**	**+1.2**
	comp=Z,350nm,1.3s,comp=Z,4μm,mb5.5						
MMRI	**Maumere**	**21.44**	**105**	P	**P**	**17 12 43.5**	**-1.7**
	comp=Z,178nm,0.7s,comp=Z,2μm,mb5.5						
LUWI	**Luwuk**	**21.50**	**85**	P	**P**	**17 12 46.6**	**+0.7**
	comp=Z,954nm,1.1s,comp=Z,9μm,mb6.2						
PPR	**Puerto Princes**	**21.60**	**53**	⇑P	**P**	**17 12 48.0**	**+1.1**
CM31	**Chiang Mai Arr**	**21.69**	**354**	*e*P	**P**	**17 12 44.5**	**-3.2**
	comp=Z,195nm,1.1s,mb5.5						
CM31				*e*S	**S**	**17 16 46.3**	**+1.3**
CM31				*e*ScP	ScP	17 20 20.8	+0.2
CMAR	**Chiang Mai Arr**	**21.69**	**354**	P	**P**	**17 12 46.0**	**-1.8**
	comp=Z,50nm,1.1s,mb4.9,baz=185,slow=9.9,SNR=85						
CMAR				PcP	PcP	17 16 48.1	+0.6
	comp=Z,13nm,0.8s,baz=205,slow=3.7,SNR=9.5						
CMAR				ScP	ScP	17 20 18.6	-2.0
	comp=Z,3.2nm,1.0s,baz=211,slow=5.0,SNR=4.3						
CMAR				LR	LR	17 22 11.5	
	comp=Z,5μm,18.4s,MS4.9,baz=327,slow=39						
CMAR	**Chiang Mai Arr**	**21.69**	**354**	P	**P**	**17 12 46.0**	**-1.8**
CMAR						17 16 48.1	
CHG	**Chiang Mai**	**22.04**	**354**	⇑P	**P**	**17 12 48.9**	**-2.6**
	comp=Z,62nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**22.04**	**354**	⇑*e*P	**P**	**

comp=Z,212nm,1.0s,mb5.7
PVCP Virac 28.13 53 *e*P **P 17 13 47.6 -0.9**
ABRA Dolores 28.20 42 *e*P **P 17 13 49.0 -0.1**
KMI Kunming 28.22 3 ⇑P **P 17 13 49.6 +0.4**
KMI pP pP 17 14 04.1 +1.7
KMI sP sP 17 14 09.5 +0.9
KMI PP PP 17 14 44.0 -10
KMI PcP PcP 17 17 02.0 +0.1
KMI S **S 17 18 32.8 +1.3**
KMI sS sS 17 18 55.9 +2.0
KMI SS SS 17 19 59.6 -33
KMI ScP ScP 17 20 39.3 +0.5
KMI PcS PcS 17 20 41.8 -2.5
KMI ScS ScS 17 24 31.0 -0.7
KMI pmax pmax
comp=Z,35nm,0.8s,mb5.0
KMI pmax pmax
comp=Z,340nm,5.9s
KMI LR LR
comp=N,5μm,18.1s,MS5.3
KMI LR LR
comp=E,4μm,15.7s,MS5.3
KMI LR LR
comp=Z,5μm,16.1s,MS5.2
CAUP Cauayan 28.47 45 *e*P **P 17 13 51.2 -0.3**
CAL Calcutta 28.61 334 *e*P **P 17 13 52.2 -0.4**
APYP Conner 28.70 42 *e*P **P 17 13 53.6 0.0**
IMP Imphal 28.77 346 *e*P **P 17 13 53.0 -1.1**
PALP Palanan 28.97 45 *e*P **P 17 13 57.7 +1.7**
DGAR Diego Garcia 29.07 261 PFAKE 17 14 10.0 +13
DGAR LR LR
comp=Z,3μm,22.0s,MS4.9
GYA Guiyang 29.96 10⇑*i*P **P 17 14 04.4 -0.3**
GYA pP pP 17 14 16.3 -1.6
GYA sP sP 17 14 21.8 -2.2
GYA PP PP 17 15 02.5 -11
GYA PcP PcP 17 17 07.3 +1.0
GYA S **S 17 18 54.6 -4.3**
GYA pmax pmax
comp=Z,100nm,0.9s,mb5.5
GYA pmax pmax
comp=Z,430nm,4.9s
GYA LR LR
comp=N,2μm,22.1s,MS5.0
GYA LR LR
comp=E,3μm,19.5s,MS5.0
GYA LR LR
comp=Z,3μm,20.8s,MS4.9
SHL Shillong 30.07 343⇑*i*P **P 17 14 06.0 +0.4**
SHL *e*S **S 17 19 00.5 -0.1**
HYB Hyderabad 30.46 313⇑*i*P **P 17 14 09.0 -0.2**
HYB *e*S **S 17 19 06.0 -0.9**
BBP Basco 31.02 40 *e*P **P 17 14 12.6 -1.5**
KAKA Kakadu 32.15 109⇑*i*P **P 17 14 19.6 -4.5**
comp=Z,21nm,0.5s,mb5.2
KAKA Kakadu 32.15 109 *e*P **P 17 14 19.8 -4.4**
comp=Z,103nm,0.7s,mb5.8
KAKA *e*ScP ScP 17 20 42.3 -10
KAKA Kakadu 32.15 109 P **P 17 14 20.4 -3.7**
KLBR Kellerberrin 32.15 153 *e*P **P 17 14 23.6 -0.4**
comp=Z,36nm,0.9s,mb5.2
TWG Pinlang 32.26 36 *e*P **P 17 14 25.1 +0.1**
comp=Z,47nm,0.8s,mb5.4
TPUB Ta-pu 32.38 35⇑*i*P **P 17 14 26.1 0.0**
comp=Z,123nm,1.0s,mb5.7
TPUB *e* pP 17 14 39.5 +0.2
QZH Quanzhou 32.63 30⇑*i*P **P 17 14 26.5 -1.7**
QZH S **S 17 19 35.0 -5.6**
QZH pmax pmax
comp=Z,130nm,0.9s,mb5.9
QZH pmax pmax
comp=Z,1μm,4.0s
QZH LR LR
comp=N,4μm,16.8s
QZH LR LR
comp=E,2μm,11.7s
QZH LR LR
comp=Z,4μm,16.6s,MS5.2
YULB Yu-li 32.84 35 *e*P **P 17 14 29.3 -0.7**
comp=Z,36nm,0.8s,mb5.4
SSLB Suanglung 32.95 34⇑*i*P **P 17 14 31.0 0.0**
comp=Z,59nm,0.9s,mb5.5
NWAO Narrogin (SRO) 33.07 155 P **P 17 14 32.6 +0.7**
comp=Z,19nm,0.8s,mb5.1,baz=319,slow=10,SNR=10
NWAO PcP PcP 17 17 14.5 -0.1
comp=Z,13nm,0.8s,baz=352,slow=7.4,SNR=4.4
NWAO LR LR 17 25 55.7
comp=Z,20nm,19.8s,baz=37,slow=32
NWAO Narrogin (SRO) 33.07 155 P **P 17 14 32.6 +0.7**
NWAO 17 17 14.5
NWAO pmax pmax
comp=Z,19nm,0.8s
NWAO pmax pmax
comp=Z,13nm,0.8s
NWAO MLR MLR
comp=Z,20nm,19.8s
NWAO Narrogin (SRO) 33.07 155 *e*P **P 17 14 34.2 +2.3**
comp=Z,65nm,1.0s,mb5.5
NACB Ninganchiao 33.61 35⇑*i*P **P 17 14 37.0 +0.2**
comp=Z,72nm,0.9s,mb5.6
KAD Karad 33.70 308 *e*P **P 17 14 36.6 -1.0**
KAD AMb AMB 17 14 40.3
comp=Z,83nm,0.8s,mb5.7
YHNB Yeheng 33.88 34 *e*P **P 17 14 39.0 -0.1**
comp=Z,75nm,0.9s,mb5.6
CD2 Chengdu 34.03 4 P **P 17 14 38.9 -1.4**
CD2 pP pP 17 14 53.8 +0.1
CD2 sP sP 17 15 01.0 +1.2
CD2 PP PP 17 15 54.8 -3.4
CD2 S **S 17 19 59.4 -2.8**
CD2 sS sS 17 20 25.3 +0.5
CD2 SS SS 17 22 10.8 -20
CD2 pmax pmax
comp=Z,80nm,0.9s,mb5.7
CD2 pmax pmax
comp=Z,570nm,5.3s
CD2 LR LR
comp=N,6μm,21.4s
CD2 LR LR
comp=Z,7μm,20.2s,MS5.4
ALBI Allahabad 34.13 327 *e*P **P 17 14 40.0 -1.3**
LSA Lhasa 34.18 344 P **P 17 14 41.8 +0.2**
LSA pP pP 17 14 53.1 -1.9
LSA sP sP 17 14 59.8 -1.3
LSA S **S 17 20 03.9 -0.6**
LSA pmax pmax
comp=Z,90nm,1.0s,mb5.7
LSA LR LR
comp=N,1μm,30.1s
LSA LR LR
comp=E,2μm,38.5s
LSA LR LR
comp=Z,2μm,25.9s,MS4.8
LSA Lhasa 34.18 344⇑*i*P **P 17 14 41.7 +0.1**
LSA pmax pmax
comp=Z,133nm,1.1s,mb5.8
LSA Lhasa 34.18 344⇑*i*P **P 17 14 41.7 +0.1**
comp=Z,133nm,1.1s,mb5.8
ENH Enshi 34.21 13⇑*i*P **P 17 14 40.8 -1.1**
comp=Z,133nm,0.9s,mb5.9
PKI Pulchoki 34.27 334 *e*P **P 17 14 43.2 +0.7**
comp=Z,285nm,1.0s,mb6.2
PKIN Phulchoki 34.28 334 *e*P **P 17 14 42.9 +0.4**
comp=Z,231nm,0.8s,mb6.2
GUN Gumba 34.37 335 *e*P **P 17 14 44.4 +1.1**
comp=Z,1μm,0.9s,mb6.8
DMN Daman 34.44 334 *e*P **P 17 14 44.8 +0.9**
comp=Z,497nm,1.0s,mb6.4
KKN Kakani 34.52 334 *e*P **P 17 14 45.3 +0.7**
comp=Z,736nm,1.0s,mb6.6
POO Poona 34.67 310 *e*P **P 17 14 47.0 +1.0**
POO AMb AMB 17 14 48.6
comp=Z,87nm,1.0s,mb5.6
BHPL Bhopal 35.18 320 *e*P **P 17 14 51.0 +0.7**
BHPL AMb AMB 17 14 52.8
comp=Z,66nm,1.0s,mb5.5
WHN Wuhan 35.81 19 ⇑P **P 17 14 55.8 +0.2**
WHN pP pP 17 15 07.0 -2.1
WHN PP PP 17 16 22.4 +4.5
WHN S **S 17 20 29.4 -0.2**
WHN pmax pmax
comp=Z,71nm,0.8s,mb5.7
WHN pmax pmax
comp=Z,980nm,7.6s
WHN LR LR
comp=E,3μm,11.8s
WHN LR LR
comp=Z,4μm,14.2s,MS5.4
WRAB Tennant Creek 36.21 120 P **P 17 14 58.0 -1.2**
comp=Z,1μm,0.8s,mb6.8
WRAB Tennant Creek 36.21 120⇑*i*P **P 17 14 57.8 -1.4**
WRAB *e*S **S 17 20 29.2 -6.8**
WRAB pmax pmax
comp=Z,85nm,0.6s,mb5.8
WRAB Tennant Creek 36.21 120⇑*i*P **P 17 14 57.8 -1.5**
comp=Z,85nm,0.6s,mb5.8
WRAB *e*S **S 17 20 29.2 -6.8**
WRAB Tennant Creek 36.21 120 P **P 17 14 58.1 -1.1**
comp=Z,224nm,1.6s,comp=Z,3μm,mb5.8
FORT Forrest 37.23 140 *e*P **P 17 15 07.7 -0.1**
comp=Z,97nm,0.8s,mb5.7
FORT *e*PCP PcP 17 17 27.0 +0.2
FORT Forrest 37.23 140⇑*e*P **P 17 15 07.6 -0.2**
comp=Z,98nm,0.7s,mb5.8
FORT *e*PcP PcP 17 17 26.6 -0.2
SMPI Sarmi 37.33 89 P **P 17 15 07.2 -1.7**
ASAR Alice Springs 37.43 126 P **P 17 15 09.0 -0.6**
comp=Z,105nm,0.6s,mb5.8,baz=298,slow=8.1,SNR=1667
ASAR PcP PcP 17 17 27.4 -0.1
comp=Z,16nm,0.7s,baz=303,slow=2.5,SNR=6.8
ASAR S **S 17 20 49.8 -4.9**
comp=Z,12nm,0.7s,baz=296,slow=15,SNR=11
ASAR P3KPbc 17 45 29.6
comp=Z,0.6nm,0.8s,baz=122,slow=3.4,SNR=6.2
ASAR Alice Springs 37.43 126 P **P 17 15 09.0 -0.6**
ASAR PcP PcP 17 17 27.4 -0.1
ASAR S **S 17 20 49.8 -4.9**
ASAR *e* 17 45 29.6
XAN Xi'an 37.75 10 P **P 17 15 11.3 -0.8**
XAN pP pP 17 15 24.0 -1.6
XAN sP sP 17 15 28.5 -3.2
XAN PP PP 17 16 38.5 -0.7
XAN S **S 17 20 54.1 -5.0**
XAN ScS ScS 17 25 18.0 -2.5
XAN pmax pmax
comp=Z,31nm,0.9s,mb5.0
XAN pmax pmax
comp=Z,150nm,12.6s
XAN LR LR
comp=N,2μm,24.9s,MS4.9
XAN LR LR
comp=E,1μm,22.4s,MS4.9
XAN LR LR
comp=Z,1μm,18.4s,MS4.8
AGRA Agra 37.79 325 *e*P **P 17 15 11.3 -1.3**
AGRA AMb AMB 17 15 13.2
comp=Z,74nm,0.4s,mb5.8
PTH Pithoragarh 38.38 330 *e*x x 17 15 28.2
NJ2 Nanjing 38.83 24 *e*P **P 17 15 21.6 +0.4**
NJ2 pP pP 17 15 33.6 -1.2
NJ2 sP sP 17 15 38.5 -2.3
NJ2 PP PP 17 16 55.6 +4.5
NJ2 S **S 17 21 15.0 -0.5**
NJ2 sS sS 17 21 37.5 -0.7
NJ2 pmax pmax
comp=Z,50nm,0.8s,mb5.3
NJ2 pmax pmax
comp=Z,490nm,8.4s
NJ2 LR LR
comp=N,3μm,17.9s,MS5.2
NJ2 LR LR
comp=E,2μm,17.8s,MS5.2
NJ2 LR LR
comp=Z,4μm,16.6s,MS5.3
SSE Sheshan 39.02 28 ⇑P **P 17 15 23.5 +0.7**
SSE pP pP 17 15 36.9 +0.5
SSE sP sP 17 15 42.3 -0.1
SSE PcP PcP 17 17 33.0 +0.7
SSE S **S 17 21 19.5 +1.1**
SSE sS sS 17 21 42.3 +1.1
SSE pmax pmax
comp=Z,70nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,320nm,4.8s
SSE LR LR
comp=N,2μm,22.0s,MS4.9
SSE LR LR
comp=E,600nm,22.0s,MS4.9
SSE LR LR
comp=Z,2μm,27.1s
SONA Sohna 39.05 325 *e*P **P 17 15 23.4 +0.2**
SONA AMb AMB 17 15 24.9
comp=Z,136nm,0.9s,mb5.7
BISR Bishrakh 39.10 326 *e*P **P 17 15 23.9 +0.3**
BISR AMb AMB 17 15 25.8
comp=Z,308nm,0.9s,mb6.0
LZH Lanzhou 39.19 3 ⇑P **P 17 15 24.0 -0.1**
LZH pP pP 17 15 38.5 +0.8
LZH sP sP 17 15 44.5 +0.8
LZH PP PP 17 16 59.5 +4.6
LZH S **S 17 21 21.0 +0.3**
LZH sS sS 17 21 45.0 +1.5
LZH SS SS 17 24 09.0 -6.5
LZH pmax pmax
comp=Z,150nm,1.2s,mb5.6
LZH pmax pmax
comp=Z,520nm,4.5s
LZH LR LR
comp=N,5μm,15.7s
LZH LR LR
comp=Z,8μm,16.3s,MS5.6
AYAN Aya Nagar 39.21 325 *e*P **P 17 15 24.7 +0.3**
AYAN AMb AMB 17 15 25.3
comp=Z,111nm,0.8s,mb5.6
AJM Ajmer 39.24 320 *e*P **P 17 15 25.6 +0.9**
AJM AMb AMB 17 15 27.5
comp=Z,78nm,1.2s,mb5.3
NDI New Delhi 39.31 325 *e*P **P 17 15 24.0 -1.3**
NDI *e*x x 17 21 21.0
JOSI Joshimath 39.53 330 *e*P **P 17 15 27.9 +0.9**
KHET Khetri 39.67 323 *e*P **P 17 15 28.8 +0.5**
KHET AMb AMB 17 15 29.9
comp=Z,73nm,1.0s,mb5.4
DDI Dehra Dun 40.12 328⇑*i*P **P 17 15 31.0 -1.0**
DDI *e*x x 17 19 25.5
KKR Kurukshetra 40.51 326 *e*P **P 17 15 36.3 +1.1**
BHJ Bhuj 40.60 312 *e*P **P 17 15 35.8 -0.3**
BHJ AMb AMB 17 15 39.9
comp=Z,144nm,1.2s,mb5.5
KLP Kalpa 40.98 329 *e*P **P 17 15 39.9 +0.8**
KLP AMb AMB 17 15 44.9
comp=Z,272nm,1.1s,mb5.8
SMLA Simla 41.22 328 *i* P **P 17 15 38.4 -2.7**
SMLA *e*x x 17 15 46.9
comp=Z,490nm,0.7s
SMLA *i* S **S 17 21 51.8 +0.5**
SDNR Sundarnagar 41.62 328 *e*x x 17 15 46.5
SDNR *e*x x 17 18 58.1
BHK Bhakra 41.85 327 *e*x **P 17 15 43.0 -3.2**
TIA Tai'an 41.92 19 *e*P **P 17 15 45.3 -1.4**
TIA LR LR
comp=N,1μm,14.0s,MS5.1
TIA LR LR
comp=E,1μm,14.0s,MS5.1
TIY Taiyuan 42.02 13 *e*P **P 17 15 47.3 -0.2**
TIY S **S 17 22 02.6 -0.2**
TIY pmax pmax
comp=Z,560nm,4.5s
TIY LR LR
comp=N,4μm,16.5s
TIY LR LR
comp=E,660nm,11.0s
TIY LR LR
comp=Z,4μm,18.5s,MS5.3
GTA Gaotai 42.46 358 ⇑P **P 17 15 50.8 -0.2**
GTA pP pP 17 16 04.0 -0.7
GTA sP sP 17 16 09.3 -1.4
GTA PP PP 17 17 32.3 +2.0
GTA PcP PcP 17 17 43.6 +0.3
GTA ScP ScP 17 21 29.8 -0.1
GTA S **S 17 22 09.3 0.0**
GTA ScS ScS 17 25 45.1 -3.1
GTA pmax pmax
comp=Z,19nm,0.9s,mb4.7
GTA pmax pmax
comp=Z,650nm,4.2s
GTA LR LR
comp=N,4μm,18.7s,MS5.4
GTA LR LR
comp=E,2μm,18.3s,MS5.4
GTA LR LR
comp=Z,6μm,19.2s,MS5.5
COEN Coen 42.62 107 P **P 17 15 50.9 -1.9**
comp=Z,89nm,0.9s,mb5.5
THN Thein Dam 43.01 328 *e*P **P 17 15 54.9 -0.8**
THN *e*x x 17 16 08.3
BTO Baotou 44.34 9 *e*P **P 17 16 05.3 -0.9**
HHC Hu-ho-hao-te 44.85 11 ⇑P **P 17 16 11.1 +0.8**
HHC pP pP 17 16 23.6 -0.4
HHC sP sP 17 16 28.9 -1.2
HHC PP PP 17 17 57.3 +1.4
HHC ScP ScP 17 21 39.8 +0.2
HHC S **S 17 22 46.3 +2.1**
HHC sS sS 17 23 06.3 -1.0
HHC SS SS 17 25 59.9 -7.1
HHC ScS ScS 17 26 02.5 -0.7
HHC pmax pmax
comp=Z,60nm,1.2s,mb5.3
HHC pmax pmax
comp=Z,580nm,5.4s
HHC LR LR
comp=N,2μm,17.7s,MS5.3
HHC LR LR
comp=E,2μm,17.2s,MS5.3
HHC LR LR
comp=Z,3μm,19.4s,MS5.2
BJT Baijiatuau 45.14 16 *e*P **P 17 16 11.8 -0.8**
BJT pmax pmax
comp=Z,39nm,0.4s
BJT Baijiatuau 45.14 16 *e*P **P 17 16 11.8 -0.7**
comp=Z,39nm,0.4s,mb5.6
BJI Beijing 45.16 16 P **P 17 16 12.4 -0.3**
BJI pmax pmax
comp=Z,63nm,1.1s,mb5.4
BJI pmax pmax
comp=Z,740nm,3.8s
BJI LR LR
comp=N,3μm,18.1s,MS5.4
BJI LR LR
comp=E,1μm,15.6s,MS5.4
BJI LR LR
comp=Z,2μm,19.2s,MS5.1
MSEY Mahe Island 45.79 267 PFAKE 17 16 30.0 +12
MSEY LR LR
comp=Z,2μm,22.0s,MS5.0
DL2 Dalian 45.91 22 P **P 17 16 18.8 +0.1**
DL2 S **S 17 22 59.3 -0.3**
DL2 pmax pmax
comp=Z,40nm,1.5s,mb5.1
DL2 pmax pmax
comp=Z,370nm,4.5s
DL2 LR LR
comp=N,1μm,17.6s
DL2 LR LR
comp=Z,1μm,17.2s,MS4.9
GUMO Guam 46.29 68 P **P 17 16 17.6 -4.5**
comp=Z,83nm,0.6s,mb5.9,baz=216,slow=2.8,SNR=14
GUMO LR LR 17 35 11.0
comp=Z,479nm,21.4s,MS4.4,baz=254,slow=35
GUMO Guam 46.29 68 P **P 17 16 17.6 -4.5**
GUMO pmax pmax
comp=Z,83nm,0.6s,mb5.8
GUMO MLR MLR
comp=Z,479nm,21.4s,MS4.4
GUMO Guam 46.29 68 *e*P **P 17 16 18.2 -3.9**
comp=Z,82nm,0.6s,mb5.8
GUMO LR LR
comp=Z,622nm,22.0s,MS4.5
INCN Inchon 46.82 28 *e*P **P 17 16 25.2 -0.7**
comp=Z,38nm,1.0s,mb5.3
INCN LR LR
comp=Z,898nm,19.0s,MS4.8
STKA Stephens Creek 47.32 132⇑*i*P **P 17 16 29.6 -0.3**
comp=Z,95nm,0.8s,mb5.8
STKA Stephens Creek 47.32 132 P **P 17 16 29.7 -0.2**
comp=Z,30nm,0.6s,mb5.4,baz=304,slow=7.7,SNR=83
STKA LR LR 17 36 30.6
comp=Z,2μm,21.6s,MS5.1,baz=290,slow=36
STKA Stephens Creek 47.32 132⇑*i*P **P 17 16 29.5 -0.4**
comp=Z,34nm,1.0s,mb5.2
KSRS Korea Array 47.41 29 P **P 17 16 30.1 -0.4**
comp=Z,21nm,0.8s,mb5.1,baz=221,slow=8.2,SNR=42
KSRS pP pP 17 16 42.4 -1.9
comp=Z,56nm,0.9s,baz=236,slow=8.9,SNR=31
KSRS LR LR 17 41 16.7
comp=Z,715nm,18.3s,MS4.7,baz=226,slow=42
KSRS Korea Array 47.41 29 P **P 17 16 30.1 -0.4**
KSRS *PP pP 17 16 42.4 -1.9
KSRS pmax pmax
comp=Z,21nm,0.9s,mb5.1
KSRS pmax pmax
comp=Z,56nm,0.9s,mb5.5
KSRS MLR MLR
comp=Z,715nm,18.3s,MS4.7
KBL Kabul 48.33 324⇑*i*P **P 17 16 37.2 -0.4**
KBL pmax pmax
comp=Z,54nm,0.9s,mb5.6
KBL Kabul 48.33 324⇑*i*P **P 17 16 37.2 -0.4**
comp=Z,54nm,0.9s,mb5.6
WMQ Urumqi 48.43 347 P **P 17 16 39.0 +0.8**
WMQ pP pP 17 16 55.3 +3.2
WMQ PcP PcP 17 18 06.0 +2.1
WMQ PP PP 17 18 31.6 +0.2
WMQ S **S 17 23 33.8 -1.4**
WMQ sS sS 17 24 00.1 +1.5
WMQ ScS ScS 17 26 24.0 -2.4
WMQ SS SS 17 26 59.5 -6.3
WMQ pmax pmax
comp=Z,660nm,1.0s,mb6.6
WMQ pmax pmax
comp=Z,560nm,3.4s
WMQ LR LR
comp=N,1μm,18.0s,MS5.0
WMQ LR LR
comp=E,1μm,20.0s,MS5.0
WMQ LR LR
comp=Z,1μm,23.0s,MS4.8
KSH Kashi 48.53 334⇑*i*P **P 17 16 37.9 -1.2**
KSH *e*pP pP 17 16 49.8 -3.2
KSH *e*sP sP 17 16 54.9 -4.1
KSH *e*PcP PcP 17 18 04.8 +0.4
KSH *e*PP PP 17 18 28.8 -3.6
KSH *e*ScP ScP 17 21 54.9 -0.1
KSH *e*PcS PcS 17 21 59.9 -0.5
KSH *e*S **S 17 23 31.6 -5.3**
KSH *e*ScS ScS 17 26 23.9 -3.4
KSH pmax pmax
comp=Z,70nm,1.0s,mb5.7
KSH pmax pmax
comp=Z,440nm,3.6s
KSH LR LR
comp=N,190nm,7.4s
KSH LR LR
comp=E,190nm,6.7s
KSH LR LR
comp=Z,140nm,6.6s
WBK Wadi Bani Khal 48.70 304 P **P 17 16 42.4 +1.7**
SNR=6.2
SNY Shenyang 49.19 22 ⇑P **P 17 16 43.1 -1.0**
SNY S **S 17 23 39.3 -6.7**
SNY pmax pmax
comp=Z,29nm,1.1s,mb5.2
SNY pmax pmax
comp=Z,600nm,11.4s
SNY LR LR
comp=N,2μm,16.8s,MS5.2
SNY LR LR
comp=E,2μm,18.0s,MS5.2
SNY LR LR
comp=Z,1μm,29.9s
CBIJ Chichi jima 49.60 50 P **P 17 16 45.0 -2.5**
comp=Z,74nm,0.5s,mb6.0,baz=316,slow=9.8,SNR=8.5
CBIJ LR LR 17 38 55.1
comp=Z,576nm,18.0s,MS4.6,baz=234,slow=38
SMDO Samad 49.66 304 P **P 17 16 49.4 +1.4**
SNR=8.7
BIDO Bidbid 49.80 305 P **P 17 16 50.5 +1.4**
SNR=11
BSY Bisya 50.23 303 P **P 17 16 53.9 +1.6**
SNR=7.2
HOQ Hoqain 50.50 304 P **P 17 16 55.8 +1.4**
SNR=12
ULHL Ulahol 50.68 336 P **P 17 16 55.8 +0.4**
SNR=66
KZA Kyzart 50.95 335 P **P 17 16 58.3 +0.9**
SNR=153

SONM Songino Array 51.05 4 P **P** **17 16 58.7 +0.6**
comp=Z,123nm,1.0s,mb5.8,baz=185,slow=8.3,SNR=367
SONM pP pP 17 17 11.2 -0.8
comp=Z,71nm,0.9s,baz=187,slow=10,SNR=11
SONM PcP PcP 17 18 13.2 -0.1
comp=Z,23nm,0.8s,baz=186,slow=4.3,SNR=5.6
SONM ScP ScP 17 22 04.2 -1.4
comp=Z,5.2nm,1.0s,baz=198,slow=2.9,SNR=4.4
SONM LR LR 17 41 50.9
comp=Z,3μm,18.7s,MS5.4,baz=186,slow=40
SONM Songino Array 51.05 4 P **P** **17 16 58.7 +0.7**
SONM *PP pP 17 17 11.2 -0.8
SONM 17 18 13.2
ARQ Araqi 51.05 304 P **P** **17 17 00.0 +1.5**
SNR=7.4
ULN Ulaanbaatar 51.13 5⇑ *iP* **P** **17 16 58.9 +0.2**
ULN *e* pP 17 17 12.1 -0.6
ULN pmax pmax
comp=Z,62nm,0.8s,mb5.6
ULN Ulaanbaatar 51.13 5⇑ *iP* **P** **17 16 58.9 +0.2**
comp=Z,62nm,0.8s,mb5.6
ULN *e* pP 17 17 12.1 -0.6
ULN Ulaanbaatar 51.13 5 P **P** **17 16 59.4 +0.8**
SNR=35
ULN P 17 16 59.4
SNR=35
ULN Ulaanbaatar 51.13 5 P **P** **17 16 59.1 +0.4**
comp=Z,84nm,1.1s,comp=Z,1μm,mb5.6
UCH Uchtor 51.38 335 P **P** **17 17 01.6 +0.9**
SNR=86
UCH Uchtor 51.38 335⇑ *iP* **P** **17 17 01.3 +0.6**
comp=Z,77nm,0.9s,mb5.6
UCH *e*pP pP 17 17 14.2 -0.5
UCH *e*S **S** **17 24 12.9 -3.6**
WHFO Wadi Hawf 51.39 296 P **P** **17 17 02.4 +1.2**
SNR=5.7
TKM2 Tokmak 2 51.50 336 P **P** **17 17 01.9 +0.3**
SNR=264
TKM2 Tokmak 2 51.50 336⇑ *iP* **P** **17 17 01.7 +0.1**
TKM2 *e**PP pP 17 17 14.8 -0.8
TKM2 pmax pmax
comp=Z,163nm,0.8s,mb6.0
TKM2 Tokmak 2 51.50 336⇑ *iP* **P** **17 17 01.7 +0.1**
comp=Z,164nm,0.8s,mb6.0
TKM2 *e*pP pP 17 17 14.8 -0.8
KBK Karagaybulak 51.55 335 P **P** **17 17 02.8 +0.8**
SNR=89
CN2 Changchun 51.59 22 *eP* **P** **17 17 01.3 -0.9**
CN2 *e*pP pP 17 17 16.9 +0.7
CN2 *e*sP sP 17 17 23.9 +1.8
CN2 PP PP 17 18 59.8 -0.3
CN2 *e*S **S** **17 24 25.1 +5.8**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,2μm,17.0s,MS5.2
CN2 LR LR
comp=E,1μm,17.0s,MS5.2
CN2 LR LR
comp=Z,1μm,21.0s,MS4.9
ABTO Aybut 51.64 295 P **P** **17 17 04.5 +1.5**
SNR=5.2
AML Almayashu 51.66 334 P **P** **17 17 03.6 +0.8**
SNR=124
AML Almayashu 51.66 334⇑ *iP* **P** **17 17 03.3 +0.6**
comp=Z,117nm,0.8s,mb5.9
AML *e*pP pP 17 17 17.1 +0.3
AAK Ala-Archa 51.72 335 P **P** **17 17 04.6 +1.4**
comp=Z,373nm,0.9s,mb6.3,SNR=36
AAK Ala-Archa 51.72 335 P **P** **17 17 04.0 +0.8**
SNR=41
AAK Ala-Archa 51.72 335 P **P** **17 17 04.0 +0.8**
comp=Z,41nm,0.8s,mb5.4,baz=156,slow=5.2,SNR=82
AAK pP pP 17 17 17.2 0.0
comp=Z,35nm,0.9s,baz=185,slow=14,SNR=6.0
AAK LR LR 17 43 13.7
comp=Z,682nm,21.4s,MS4.7,baz=143,slow=41
AAK Ala-Archa 51.72 335⇑ *iP* **P** **17 17 03.7 +0.5**
AAK pmax pmax
comp=Z,58nm,0.9s,mb5.5
AAK MLR MLR
comp=Z,785nm,22.0s,MS4.7
AAK Ala-Archa 51.72 335⇑ *iP* **P** **17 17 03.7 +0.5**
comp=Z,58nm,0.9s,mb5.5
AAK LR LR
comp=Z,785nm,22.0s,MS4.7
AAK Ala-Archa 51.72 335 P **P** **17 17 04.1 +0.9**
SNR=40
AAK P 17 17 04.1
SNR=40
AAK Ala-Archa 51.72 335 P **P** **17 17 03.9 +0.7**
comp=Z,20nm,1.5s,comp=Z,475nm,mb4.8
FRU Bishkek 51.84 335 *i* P **P** **17 17 04.0 0.0**
FRU *i* pP 17 17 17.0 -1.1
FRU *e*S **S** **17 24 24.0 +1.3**
FRU pmax pmax
comp=Z,170nm,1.6s,mb5.7
FRU pmax pmax
comp=Z,900nm,5.0s
FRU MLR MLR
comp=Z,500nm,18.0s,MS4.6
CHMS Chumysh 51.91 335 P **P** **17 17 04.7 0.0**
SNR=64
ASHO Ashiyiah 52.01 305 P **P** **17 17 07.2 +1.6**
SNR=5.1
EKS2 Erkin-Say 52.05 334 P **P** **17 17 06.5 +0.8**
SNR=508
EKS2 Erkin-Say 52.05 334⇑ *iP* **P** **17 17 06.3 +0.6**
comp=Z,309nm,0.9s,mb6.2
EKS2 *e*pP pP 17 17 19.2 -0.5
EKS2 LR LR
comp=Z,628nm,19.0s,MS4.7
USP Ospenovka 52.24 335 P **P** **17 17 07.2 +0.1**
SNR=71
MAJO Matsushiro 52.40 38⇑ *eP* **P** **17 17 06.4 -1.9**
MAJO pmax pmax
comp=Z,45nm,0.9s,mb5.4
MAJO Matsushiro 52.40 38⇑ *eP* **P** **17 17 06.4 -1.9**
comp=Z,45nm,0.9s,mb5.4
MAT Matsushiro 52.40 38 P **P** **17 17 06.8 -1.5**
MAT S **S** **17 24 27.0 -3.6**
MJAR Matsushiro Arr 52.40 38 P **P** **17 17 07.3 -1.0**
comp=Z,41nm,0.8s,mb5.4,baz=216,slow=7.3,SNR=76
MJAR pP pP 17 17 19.5 -2.8
comp=Z,38nm,1.1s,baz=225,slow=7.6,SNR=6.9
MJAR ScP ScP 17 22 11.0 -0.7
comp=Z,6.0nm,1.0s,baz=208,slow=4.4,SNR=5.3
MJAR LR LR 17 38 45.6
comp=Z,771nm,21.8s,MS4.7,baz=265,slow=35
MJAR Matsushiro Arr 52.40 38 P **P** **17 17 07.3 -1.0**
MJAR *PP pP 17 17 19.5 -2.9
FAQ Al Faqa, Dubai 52.42 305 P **P** **17 17 09.4 +0.7**
SNR=6.6
EIDS Eidsvold 52.56 120⇑ *iP* **P** **17 17 09.1 -0.8**
comp=Z,134nm,1.2s,mb5.8
EIDS *e*pP pP 17 17 19.7 -4.2
MK31 Makanchi Array 52.58 344⇑ *iP* **P** **17 17 09.1 -0.4**
MK31 *e**PP pP 17 17 21.8 -1.8
MKAR Makanchi Array 52.58 344 P **P** **17 17 09.3 -0.2**
comp=Z,369nm,1.1s,mb6.2,baz=151,slow=8.0,SNR=510
MKAR pP pP 17 17 22.5 -1.1
comp=Z,81nm,0.8s,baz=147,slow=7.3,SNR=11
MKAR S **S** **17 24 33.4 +0.6**
comp=Z,4.1nm,1.2s,baz=171,slow=14,SNR=3.5
MKAR LR LR 17 44 25.5
comp=Z,805nm,20.8s,MS4.7,baz=154,slow=42
MKAR Makanchi Array 52.58 344 P **P** **17 17 09.3 -0.2**
MKAR *PP pP 17 17 22.5 -1.1
MKAR S **S** **17 24 33.4 +0.6**
TOO Toolangi 52.88 136 *eP* **P** **17 17 12.2 +0.2**
IDAH Dahanechah 53.12 316 *eP* **P** **17 17 14.7 +0.9**
ZAK Zakamensk 53.43 2⇓ *eP* **P** **17 17 15.3 -0.4**
ZAK *e* 17 18 19.2
ZAK pmax pmax
comp=Z,42nm,0.9s,mb5.4
IKOO Kooshah 53.55 315 *eP* **P** **17 17 16.5 -0.5**
MDJ Mudanjiang 53.91 25 P **P** **17 17 18.9 -0.4**
MDJ pP pP 17 17 31.4 -2.0
MDJ PP PP 17 19 20.1 -1.0
MDJ S **S** **17 24 52.3 +1.3**
MDJ SS SS 17 28 35.6 +2.6
MDJ pmax pmax
comp=Z,96nm,0.9s,mb5.7
MDJ pmax pmax
comp=Z,440nm,8.1s
MDJ LR LR
comp=N,2μm,23.8s,MS5.1
MDJ LR LR
comp=E,1μm,23.0s,MS5.1
MDJ LR LR
comp=Z,2μm,24.6s,MS5.1
MDJ Mudanjiang 53.91 25⇑ *iP* **P** **17 17 18.9 -0.4**
comp=Z,76nm,0.8s,mb5.7
CAN Canberra 54.38 132 *eP* **P** **17 17 23.1 +0.1**
CAN pmax pmax
comp=Z,77nm,1.0s,mb5.6
CAN MLR MLR
comp=Z,2μm,21.0s,MS5.2
CAN Canberra 54.38 132 *eP* **P** **17 17 23.1 +0.1**
comp=Z,77nm,1.0s,mb5.6
CAN LR LR
comp=Z,2μm,21.0s,MS5.2
ARMA Armidale 54.58 125⇑ *iP* **P** **17 17 25.0 +0.5**
ARMA Armidale 54.58 125⇑ *iP* **P** **17 17 25.0 +0.4**
comp=Z,90nm,1.1s,mb5.7
CNB Canberra Magne 54.65 132 *eP* **P** **17 17 24.8 -0.1**
HIA Hailar 54.67 15⇑ *iP* **P** **17 17 23.7 -1.0**
HIA *e* 17 18 27.6
HIA pmax pmax
comp=Z,50nm,0.8s
HIA Hailar 54.67 15⇑ *iP* **P** **17 17 23.7 -1.0**
comp=Z,50nm,0.8s,mb5.6
HIA *e*PcP PcP 17 18 27.6 +0.6
MOY Mondy 54.69 360 *eP* **P** **17 17 25.2 +0.3**
MOY pmax pmax
comp=Z,129nm,2.8s,mb5.5
TLY Talaya 54.74 2 P **P** **17 17 26.7 +1.5**
comp=Z,781nm,0.9s,mb6.7,SNR=31
TLY Talaya 54.74 2⇑ *iP* **P** **17 17 25.8 +0.6**
TLY *e* 17 19 31.7
TLY *e*S **S** **17 25 03.2 +1.3**
TLY pmax pmax
comp=Z,120nm,0.9s,mb5.9
TLY MLR MLR
comp=Z,3μm,18.0s,MS5.4
TLY Talaya 54.74 2⇑ *iP* **P** **17 17 25.7 +0.5**
comp=Z,122nm,0.9s,mb5.9
TLY Talaya 54.74 2 P **P** **17 17 26.2 +1.0**
SNR=46
TLY P 17 17 26.2
SNR=46
IMYA Miami 55.05 319 *eP* **P** **17 17 27.7 0.0**
OPO Ambohidratompo 55.10 250 P **P** **17 17 30.7 +2.2**
comp=Z,8.4nm,0.8s,mb4.8,baz=81,slow=3.9,SNR=11
OPO pP pP 17 17 43.5 +0.9
comp=Z,7.5nm,0.9s,baz=69,slow=12,SNR=3.1
ABPO Ambohimpanom 55.14 249 *eP* **P** **17 17 30.5 +1.8**
ABPO pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ABPO MLR MLR
comp=Z,2μm,21.0s,MS5.2
ABPO Ambohimpanom 55.14 249 *eP* **P** **17 17 30.5 +1.8**
comp=Z,10nm,0.8s,mb4.9
ABPO LR LR
comp=Z,2μm,21.0s,MS5.2
IRK Irkutsk 55.32 2 *eP* **P** **17 17 28.7 -0.7**
IRK *e*S **S** **17 25 13.6 +3.9**
IRK pmax pmax
comp=Z,120nm,1.1s,mb5.8
IMOG Moghan 55.41 319 *eP* **P** **17 17 30.8 +0.5**
ISRO Mashad 55.44 319 *eP* **P** **17 17 30.7 +0.1**
IBAF Bafgh 55.61 312 *eP* **P** **17 17 31.6 -0.3**
IPAY Payeh 55.83 319 *eP* **P** **17 17 34.6 +1.2**
CIT Chita 56.01 9 *eP* **P** **17 17 34.6 +0.2**
CIT *e* 17 17 41.6
CIT *e* pP 17 17 47.8 -0.7
CIT pmax pmax
comp=Z,189nm,2.3s,mb5.7
IAKL Akhelmad 56.08 319 *eP* **P** **17 17 33.1 -2.0**
IMEH Mehriz 56.22 311 *eP* **P** **17 17 35.2 -1.1**
IKRD Kardeh 56.34 319 *eP* **P** **17 17 32.6 -4.4**
ISRV Sarvestan 56.43 309 *eP* **P** **17 17 37.7 -0.1**
IMOK Mouk 56.60 308 *eP* **P** **17 17 39.3 +0.3**
IEMG Emamgholi 56.62 320 *eP* **P** **17 17 37.5 -1.5**
TAU Tasmania Unive 56.77 141 *eP* **P** **17 17 40.7 +0.7**
TAU pmax pmax
comp=Z,94nm,1.3s,mb5.7
TAU Tasmania Unive 56.77 141 *eP* **P** **17 17 40.7 +0.7**
comp=Z,94nm,1.3s,mb5.7
ICHK Chekchek 56.79 312 *eP* **P** **17 17 40.1 -0.2**
ISFR Sfrayin 56.83 319 *eP* **P** **17 17 39.4 -1.1**
KURK Kurchatov 57.17 343 P **P** **17 17 42.1 -0.5**
comp=Z,1μm,0.9s,mb7.0,SNR=68
KURK Kurchatov 57.17 343 P **P** **17 17 41.2 -1.4**
comp=Z,80nm,0.8s,mb5.8,baz=162,slow=6.7,SNR=158
KURK pP pP 17 17 54.6 -2.2
comp=Z,125nm,0.8s,baz=165,slow=6.9,SNR=19
KURK PcP PcP 17 18 36.2 -0.5
comp=Z,29nm,0.8s,baz=156,slow=3.0,SNR=5.8
KURK S **S** **17 25 33.1 -1.1**
comp=Z,1.4nm,0.9s,baz=226,slow=52,SNR=4.2
KURK LR LR 17 45 30.7
comp=Z,865nm,18.5s,MS4.9,baz=130,slow=39
KURK PKP2bc 17 47 41.8
comp=Z,1.2nm,0.8s,baz=321,slow=2.6,SNR=5.9
KURK Kurchatov 57.17 343 P **P** **17 17 41.2 -1.4**
KURK *PP pP 17 17 54.7 -2.1
KURK 17 18 36.3
KURK S **S** **17 25 33.1 -1.1**
KURK pmax pmax
comp=Z,80nm,0.8s,mb5.8
KURK pmax pmax
comp=Z,125nm,0.9s,mb5.9
KURK pmax pmax
comp=Z,29nm,0.8s,mb5.4
KURK smax
comp=N,1.0nm,0.9s
KURK MLR MLR
comp=Z,865nm,18.5s,MS4.9
KURK Kurchatov 57.17 343⇑ *iP* **P** **17 17 41.9 -0.8**
comp=Z,247nm,0.9s,mb6.2
KURK *e*pP pP 17 17 54.8 -2.1
KURK LR LR
comp=Z,1μm,20.0s,MS4.9
KURK Kurchatov 57.17 343 P **P** **17 17 42.5 -0.2**
SNR=75
KURK P 17 17 42.5
SNR=75
ABKT Ailbek 57.26 320 P **P** **17 17 43.6 +0.1**
comp=Z,472nm,0.9s,mb6.5,SNR=40
ISHV Shirvan 57.30 319 *eP* **P** **17 17 44.2 +0.4**
KLR Kul'dur 58.52 23 *d iP* **P** **17 17 48.1 -4.0**
KLR *e*S **S** **17 25 43.5 -8.4**
KLR pmax pmax
comp=E,110nm,1.2s
KLR pmax pmax
comp=Z,220nm,1.2s,mb6.1
KLR MLR MLR
comp=E,1μm,16.0s
KLR MLR MLR
comp=Z,2μm,16.0s,MS5.3
IGAR Gharneh 58.62 311 *eP* **P** **17 17 53.4 +0.2**
ZAA0 Zalesovo Array 58.63 349⇑ *iP* **P** **17 17 52.0 -0.8**
ZAA0 *e*pP pP 17 18 04.9 -2.1
ZAA0 *e*sP sP 17 18 10.2 -2.7
ZAA0 *e*S **S** **17 25 51.4 -1.8**
ZALV Zalesovo Beam 58.63 349 P **P** **17 17 52.2 -0.6**
comp=Z,476nm,0.8s,mb6.6,baz=163,slow=5.4,SNR=880
ZALV pP pP 17 18 05.5 -1.6
comp=Z,229nm,0.8s,baz=160,slow=4.7,SNR=8.6
ZALV S **S** **17 25 51.4 -1.8**
comp=Z,3.2nm,0.7s,baz=149,slow=11,SNR=6.1
ZALV LR LR 17 46 58.5
comp=Z,1μm,19.6s,MS5.0,baz=152,slow=40
ZALV PKPPKP 17 47 29.1
comp=Z,0.9nm,0.7s,baz=306,slow=3.5,SNR=3.8
ZALV Zalesovo Beam 58.63 349 P **P** **17 17 52.2 -0.6**
ZALV *PP pP 17 18 05.5 -1.5
ZALV S **S** **17 25 51.4 -1.8**
ZALV Zalesovo Beam 58.63 349 P **P** **17 17 52.2 -0.6**
ZALV pP pP 17 18 05.5 -1.6
ZALV S **S** **17 25 51.4 -1.8**
ZALV LR LR 17 46 58.5
ZALV P'P' 17 47 29.1
IZEF Zefreh 58.64 312 *eP* **P** **17 17 51.9 -1.4**
IANJ Anjilo 58.75 315 *eP* **P** **17 17 53.7 -0.3**
IGLO Ghaloghah 59.34 316 *eP* **P** **17 17 58.0 -0.1**
ILAS Lasjerd 59.38 315 *eP* **P** **17 17 58.0 -0.4**
ISFB Sefidab 59.39 313 *eP* **P** **17 17 58.4 -0.1**
IPIR Pirpir 59.62 311 *eP* **P** **17 18 04.8 +4.7**
IFIR Firoozkooh 59.65 315 *eP* **P** **17 18 00.9 +0.6**
NVS Novosibirsk 59.79 348⇑ *iP* **P** **17 17 59.6 -1.2**
NVS *i* pP 17 18 12.4 -2.7
NVS *i* S **S** **17 26 04.3 -3.9**
NVS pmax pmax
comp=Z,175nm,1.1s,mb6.0
NVS pmax pmax
comp=N,138nm,1.4s
NVS pmax pmax
comp=E,72nm,1.2s
NVS smax
comp=N,92nm,2.0s
NVS smax
comp=E,83nm,1.8s
ASAJ Asahikawa 59.87 33 P **P** **17 18 01.4 -0.2**
comp=E,40nm,0.4s,mb5.8,baz=246,slow=9.2,SNR=40
ASAJ Asahikawa 59.87 33 P **P** **17 18 01.4 -0.2**
ASAJ pmax pmax
comp=Z,40nm,0.4s
ATD Arta Tunnel 60.00 285 P **P** **17 18 02.6 -0.4**
comp=Z,5.2nm,0.5s,mb4.9,baz=208,slow=22,SNR=5.5
IVRN Varamin 60.07 314 *eP* **P** **17 18 03.2 +0.1**
IVRN *eP* 17 18 03.3
IDMV Damavand 60.13 315 *eP* **P** **17 18 03.5 -0.1**
IPRN Peran 60.24 315 *eP* **P** **17 18 03.9 -0.4**
QRN Al-Qurain 60.30 306 *eP* **P** **17 18 04.8 0.0**
QRN AMb AMB 17 18 05.7
comp=Z,152nm,0.8s,mb6.1
KBD Kabd 60.65 306 *eP* **P** **17 18 07.3 +0.1**
KBD AMb AMB 17 18 09.2
comp=Z,121nm,0.8s,mb6.1
RDF Al-Radifah 60.67 306 *eP* **P** **17 18 07.5 +0.1**
RDF AMb AMB 17 18 08.7
comp=Z,229nm,1.0s,mb6.3
UMR Umm Al-Rimmam 60.78 306 *eP* **P** **17 18 08.0 -0.1**
UMR AMb AMB 17 18 09.6
comp=Z,250nm,1.0s,mb6.3
IR3 Iran Long-Peri 60.81 314 *eP* **P** **17 18 08.1 0.0**
IR5 Iran Long-Peri 61.00 314 *eP* **P** **17 18 09.6 +0.1**
NAY Al-Naaiem 61.04 306 *eP* **P** **17 18 09.4 -0.5**
NAY AMb AMB 17 18 11.1
comp=Z,91nm,1.0s,mb5.9
MIB Mutribah 61.18 307 *eP* **P** **17 18 10.9 +0.1**
MIB AMb AMB 17 18 12.3
comp=Z,302nm,1.0s,mb6.4
IRAZ Razeghan 61.56 313 *eP* **P** **17 18 13.0 -0.3**
BOD Bodaibo 61.70 8⇓ *iP* **P** **17 18 13.3 -0.4**
BOD pmax pmax
comp=Z,147nm,0.9s,mb6.1
BVAR Borovoye Array 61.81 339 P **P** **17 18 13.5 -1.1**
comp=Z,83nm,0.9s,mb5.9,baz=142,slow=7.5,SNR=228
BVAR PKP2bc 17 47 32.8
comp=Z,1.2nm,0.8s,baz=211,slow=2.6,SNR=7.7
BVAR Borovoye Array 61.81 339 P **P** **17 18 13.5 -1.1**
BVAR ⇑*e* 17 47 32.8
YSS Yuzh-Sakhalins 61.82 31⇑ *iP* **P** **17 18 14.3 -0.4**
YSS *e* pP 17 18 27.8 -1.3
YSS pmax pmax
comp=N,90nm,0.9s
YSS pmax pmax
comp=E,110nm,0.9s
YSS pmax pmax
comp=Z,280nm,0.9s,mb6.4
YSS Yuzh-Sakhalins 61.82 31⇑ *iP* **P** **17 18 14.4 -0.3**
comp=Z,317nm,0.8s,mb6.5
BRVK Borovoye 61.87 339 P **P** **17 18 13.8 -1.2**
comp=Z,442nm,0.9s,mb6.6,SNR=55
BRVK Borovoye 61.87 339 *eP* **P** **17 18 13.7 -1.3**
BRVK *e**PP pP 17 18 27.1 -2.2
BRVK pmax pmax
comp=Z,76nm,0.9s,mb5.8
BRVK MLR MLR
comp=Z,640nm,20.0s,MS4.8
BRVK Borovoye 61.87 339 *eP* **P** **17 18 13.7 -1.2**
comp=Z,76nm,0.9s,mb5.8
BRVK *e*pP pP 17 18 27.1 -2.2
BRVK *e*sP sP 17 18 31.9 -3.3
BRVK LR LR
comp=Z,640nm,20.0s,MS4.8
BRVK Borovoye 61.87 339 P **P** **17 18 14.2 -0.7**
SNR=33
BRVK P 17 18 14.2
SNR=33
NRGR Nerungri 62.65 14 *i* P **P** **17 18 19.9 -0.2**
NRGR S **S** **17 27 02.0 +18**
NRGR smax
comp=N,55nm,0.8s
IKOM Komasi 62.81 311 *eP* pP 17 18 32.5 -3.5
CLNS Chul'man 62.85 14 *c iP* **P** **17 18 21.2 -0.2**
CLNS *e**PP pP 17 18 28.5 -7.3
CLNS pmax pmax
comp=Z,126nm,0.8s,mb6.1
CLNS pmax pmax
comp=E,55nm,1.0s
CLNS pmax pmax
comp=N,61nm,0.8s
CLNS pmax pmax
comp=N,38nm,1.3s
CLNS pmax pmax
comp=Z,17nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,17nm,1.2s
CLNS MLR MLR
comp=N,877nm,17.0s,MS5.1
CLNS MLR MLR
comp=Z,2μm,22.0s,MS5.2
CLNS MLR MLR
comp=E,873nm,19.0s,MS5.1
CASY Casey 63.26 176⇑ *iP* **P** **17 18 24.7 +0.7**
CASY Casey 63.26 176 *eP* **P** **17 18 24.6 +0.6**
comp=E,32nm,1.1s,mb5.4
CASY LR LR
comp=Z,1μm,20.0s,MS5.1
ABKAR Akbulak array 63.37 331⇑ *iP* **P** **17 18 24.0 -1.0**
comp=Z,207nm,0.9s,mb6.3
ABKAR *e*pP pP 17 18 37.4 -2.0
ABKAR *e*PP PP 17 20 39.9 -5.1
MIR Mirnyy 63.47 184 *eP* pP 17 18 41.0 +1.2
MIR pmax pmax
comp=Z,144nm,2.0s,mb5.8
ILIN Lien 63.53 312 *eP* **P** **17 18 25.8 -0.6**
IGHG Ghaleghazi 63.58 311 *eP* **P** **17 18 25.7 -1.1**
KMBO Kilima Mbogo 64.09 270 P **P** **17 18 31.8 +1.3**
comp=Z,7.8nm,1.0s,mb4.7,baz=180,slow=24,SNR=13
KMBO LR LR 17 40 47.5
comp=Z,1μm,21.9s,MS5.0,baz=275,slow=31
KMBO Kilima Mbogo 64.09 270 P **P** **17 18 31.8 +1.3**
KMBO pmax pmax
comp=Z,8.0nm,1.0s
KMBO MLR MLR
comp=Z,1μm,21.9s
KMBO Kilima Mbogo 64.09 270 *eP* **P** **17 18 31.5 +1.0**
comp=Z,24nm,1.3s,mb5.1
KMBO LR LR
comp=Z,1μm,22.0s,MS5.0
KMBO Kilima Mbogo 64.09 270⇓ *iP* **P** **17 18 32.0 +1.5**
ISRB Sarab 64.28 315 *eP* **P** **17 18 31.3 0.0**
IBST Bostanabad 64.78 314 *eP* **P** **17 18 33.6 -0.9**
BHD Baghdad 64.84 309 *eP* **P** **17 18 33.0 -2.0**
BHD *e*S **S** **17 27 09.0 -3.5**
BHD *e*PS 17 27 35.0
IHRS Heris 64.95 315 *eP* **P** **17 18 35.7 +0.1**
AKTO Aktyubinsk 65.09 331 LR LR 17 50 26.1
comp=Z,796nm,21.9s,MS4.9,baz=134,slow=39
DZM Mont Dzumac 65.72 113 *e*LR LR 17 38 26.5
comp=Z,1μm,22.9s
ISHB Shabestar 65.94 315 *eP* **P** **17 18 42.6 +0.6**
IMRD Marand 66.06 315 *eP* **P** **17 18 43.3 +0.5**
MAK Makhachkala 66.78 320 *c iP* **P** **17 18 47.3 0.0**
MAK *i* 17 21 12.8
MAK *e*PPP 17 22 54.2
MAK *e*S S 17 27 34.3 -1.5
MAK pmax pmax
comp=Z,146nm,1.4s,mb5.8
MAK MLR MLR
comp=Z,587nm,23.0s,MS4.7
HAKT HAKKARI 67.01 313 *i* P **P** **17 18 49.0 +0.1**
GNI Garni 67.35 316 LR LR 17 53 47.8
comp=Z,193nm,20.6s,MS4.3,baz=101,slow=41
GNI Garni 67.35 316⇑ *iP* **P** **17 18 51.4 +0.4**
GNI *e* pP 17 19 05.8 +0.3
GNI pmax pmax
comp=Z,81nm,1.0s
GNI MLR MLR

comp=Z,308nm,21.0s
GNI Garni 67.35 316⇑ *i*P P 17 18 51.4 +0.3
comp=Z,81nm,1.0s,mb5.7
GNI *e* pP 17 19 05.8 +0.3
GNI LR LR
comp=Z,308nm,21.0s,MS4.5
GNI Garni 67.35 316 P **P 17 18 51.8 +0.8**
SNR=18
GNI P 17 18 51.8
SNR=18
WAKE Wake Island 67.93 68 *e*P **P 17 18 52.2 -2.8**
comp=Z,87nm,0.8s,mb5.8
MTA Mtatsminda 67.99 318 P **P 17 18 55.8 +0.8**
MTA S S 17 27 49.5 -0.8
TBLG Delisi 68.04 318 *i* P **P 17 18 55.7 +0.4**
TBLG Delisi 68.04 318 P **P 17 18 55.7 +0.4**
SVE Sverdlovsk 68.34 337⇓ *e*P **P 17 18 56.4 -0.4**
SVE *e* pP 17 19 13.6 +2.2
SVE *e* 17 21 31.3
SVE *e*S S 17 27 54.7 +0.8
SVE *e* 17 28 56.7
SVE pmax pmax
comp=Z,174nm,1.0s,mb6.0
SVE MLR MLR
comp=Z,1μm,24.0s,MS5.0
GOR Gori 68.57 318 P **P 17 18 59.7 +1.1**
YAK Yakutsk 68.60 14*c* *i*P **P 17 18 56.9 -1.4**
YAK *e**PP pP 17 19 06.2 -6.7
YAK *e* 17 19 21.4
YAK *e* 17 21 26.9
YAK *e*S S 17 27 58.9 +2.1
YAK *e**SS sS 17 28 13.9 -7.3
YAK *e* 17 28 47.0
YAK pmax pmax
comp=E,56nm,0.9s
YAK pmax pmax
comp=Z,384nm,0.8s,mb6.4
YAK pmax pmax
comp=N,90nm,1.0s
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
YAK pmax pmax
comp=E,67nm,2.0s
YAK pmax pmax
comp=N,32nm,1.8s
YAK smax
comp=N,77nm,2.5s
YAK smax
comp=E,75nm,2.5s
YAK MLR MLR
comp=E,1μm,17.0s,MS5.2
YAK MLR MLR
comp=Z,2μm,17.0s,MS5.3
YAK MLR MLR
comp=N,643nm,17.0s,MS5.2
YAK Yakutsk 68.60 14⇑ *i*P **P 17 18 56.6 -1.7**
comp=N,438nm,0.8s,mb6.4
DRV Dumont d'Urvil 68.77 165 P **P 17 19 07.0 +7.6**
DRV S S 17 28 07.0 +8.1
DRV Dumont d'Urvil 68.77 165 P **P 17 19 07.0 +7.6**
DRV S S 17 28 07.0 +8.1
KEH Kehvi 68.83 318 P **P 17 18 59.8 -0.4**
ARU Arti 68.88 336 P **P 17 18 59.2 -1.0**
comp=N,498nm,1.0s,mb6.4,SNR=32
ARU Arti 68.88 336*d* *i*P **P 17 18 59.1 -1.1**
ARU *e**PP pP 17 19 12.7 -2.0
ARU *e* 17 19 21.3
ARU *e* 17 21 30.6
ARU *e*PPP 17 23 09.3
ARU S S 17 28 01.2 +0.8
ARU SS SS 17 32 21.6 -5.0
ARU pmax pmax
comp=Z,103nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,1μm,26.0s,MS5.0
ARU Arti 68.88 336⇑ *i*P **P 17 18 59.2 -1.0**
comp=Z,89nm,1.0s,mb5.7
ARU *e*pP pP 17 19 12.2 -2.6
ARU *e*PP PP 17 21 31.3 -1.6
ARU LR LR
comp=Z,786nm,20.0s,MS5.0
BEST Besiri 68.92 313 *i* P **P 17 19 01.5 +0.6**
ZEI Tsey 69.05 318 *e*P **P 17 19 00.7 -0.9**
ZEI *e**PP pP 17 19 16.8 +0.6
ZEI *e**SP sP 17 19 23.9 +1.9
ZEI *e* 17 21 34.0
ZEI *e*S S 17 27 58.5 -4.5
ZEI pmax pmax
comp=Z,100nm,1.0s,mb5.7
ONI Oni 69.27 318 P **P 17 19 03.5 +0.6**
ONI S S 17 28 06.4 +0.8
MAW Mawson 69.44 195 LR LR 17 42 50.2
comp=Z,3μm,21.6s,MS5.4,baz=33,slow=30
MAW Mawson 69.44 195 *e*P **P 17 18 54.2 -9.3**
MAW pmax pmax
comp=Z,9.0nm,1.0s
MAW Mawson 69.44 195 *e*P **P 17 18 54.2 -9.3**
comp=Z,9.0nm,1.0s,mb4.7
MAW *e*pP pP 17 19 16.1 -2.0
ARTV Artvin 69.73 316 *i* P **P 17 19 06.1 +0.3**
DDEM Demirkent 69.73 316 *i* P **P 17 19 06.2 +0.3**
KIV Kislovodsk 70.36 319 P **P 17 19 09.7 +0.1**
comp=Z,747nm,0.9s,mb6.6,SNR=28
KIV Kislovodsk 70.36 319*c* *i*P **P 17 19 09.8 +0.2**
KIV *e* pP 17 19 23.9 -0.3
KIV *e*S S 17 28 18.1 -0.2
KIV pmax pmax
comp=Z,133nm,1.0s,mb5.8
KIV pmax pmax
comp=Z,219nm,4.4s
KIV Kislovodsk 70.36 319⇑ *i*P **P 17 19 09.1 -0.5**
comp=Z,124nm,0.9s,mb5.8
KIV *e*pP pP 17 19 23.1 -1.1
KIV LR LR
comp=Z,436nm,20.0s,MS4.7
KIV Kislovodsk 70.36 319 P **P 17 19 10.1 +0.4**
SNR=42
KIV P 17 19 10.1
SNR=42
POGA Pongola 70.55 242⇓ *i*P **P 17 19 11.5 +0.3**
POGA AMb AMB 17 19 30.5
comp=Z,77nm,2.0s,mb5.3
ELZG Elazig 70.82 313 *i* P **P 17 19 13.3 +0.8**
SKR Severo-Kuril's 71.14 33 *e*P **P 17 19 12.0 -2.2**
SKR *e* 17 19 19.0
SKR *e* 17 28 52.0
SKR pmax pmax
comp=N,160nm,0.9s
SKR pmax pmax
comp=E,160nm,0.9s
SKR pmax pmax
comp=Z,460nm,0.9s,mb6.4
SKR pmax pmax
comp=Z,2μm,4.0s
KELT Kelkit 71.21 314 *i* P **P 17 19 15.6 +0.7**
KEMA Kemaliye 71.45 313 *i* P **P 17 19 16.9 +0.6**
GZT Gaziantep 71.49 311 *i* P **P 17 19 17.7 +1.0**
MSNA Messina 71.52 248 *e*P **P 17 19 18.8 +1.7**
MSNA AMb AMB 17 19 37.2
comp=Z,34nm,1.6s,mb5.0
SOKR Solikamsk 71.71 338*c* *i*P **P 17 19 17.2 -0.3**
SOKR pmax pmax
comp=Z,120nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,970nm,26.0s,MS5.0
MMAI Mount Meron Ar 71.86 306 P **P 17 19 20.3 +1.4**
comp=Z,42nm,0.8s,mb5.4,baz=102,slow=7.8,SNR=49
MMAI pP pP 17 19 34.7 +1.2
comp=Z,15nm,0.7s,baz=96,slow=8.5,SNR=6.8
MMAI LR LR 17 53 42.1
comp=Z,688nm,18.8s,MS5.0,baz=110,slow=38
SOC Sochi 72.18 318*c* *i*P **P 17 19 19.8 -0.8**
SOC *e**PP pP 17 19 34.3 -0.9
SOC *e**SP sP 17 19 41.0 -0.1
SOC *e* 17 21 59.3
SOC *e*S S 17 28 36.8 -2.5
SOC *e**SS sS 17 29 06.0 +2.1
SOC *e* 17 29 20.1
SOC pmax pmax
comp=Z,130nm,0.9s,mb5.9
SOC pmax pmax
comp=Z,310nm,6.4s
SOC MLR MLR
comp=Z,294nm,19.0s,MS4.6
YAYL Yayladag 72.19 309 *i* P **P 17 19 20.9 +0.1**

GRSN GIRESUNGRSN 72.19 315 *i* P **P 17 19 19.3 -1.5**
ANDN Andirin 72.48 311 *i* P **P 17 19 23.0 +0.5**
YURE YUREGIR 72.79 310 *i* P **P 17 19 24.3 -0.1**
LSZ Lusaka 72.92 255 P **P 17 19 26.5 +0.8**
comp=Z,3.5nm,0.6s,mb4.5,baz=96,slow=5.0,SNR=7.9
LSZ pP pP 17 19 41.4 +1.1
comp=Z,25nm,1.1s,baz=85,slow=7.3,SNR=7.4
LSZ Lusaka 72.92 255 P **P 17 19 26.5 +0.9**
LSZ *PP pP 17 19 41.4 +1.1
LSZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LSZ pmax pmax
comp=Z,25nm,1.1s,mb5.1
LSZ Lusaka 72.92 255 *e*P **P 17 19 26.1 +0.5**
comp=Z,45nm,1.3s,mb5.2
LSZ Lusaka 72.92 255⇓ *i*P **P 17 19 26.4 +0.8**
RPZ Rata Peaks 73.15 135 P **P 17 19 26.0 -0.4**
comp=Z,24nm,0.7s,mb5.3,baz=259,slow=3.0,SNR=17
RPZ Rata Peaks 73.15 135 *e*P **P 17 19 26.0 -0.4**
comp=Z,76nm,1.1s,mb5.5
RPZ *e*PP PP 17 22 18.8 +8.9
ERBA Erbaa 73.19 314 *i* P **P 17 19 27.1 +0.4**
PEA0B Petropavlovsk- 73.21 32⇑ *i*P **P 17 19 25.1 -1.4**
PETK Petropavlovsk- 73.21 32 P **P 17 19 25.6 -0.9**
comp=Z,56nm,0.8s,mb5.5,baz=206,slow=3.1,SNR=56
SLR Silverton 73.36 244 *e*P **P 17 19 28.7 +0.6**
SLR AMb AMB 17 19 48.8
comp=Z,84nm,1.4s,mb5.5
ERPM east rand prop 73.45 244 *e*P **P 17 19 30.5 +2.0**
ERPM AMb AMB 17 19 48.6
comp=Z,48nm,1.3s,mb5.3
PET Petropavlovsk 73.67 32⇑ *i*P **P 17 19 28.3 -0.9**
PET *e* pP 17 19 40.5 -3.4
PET *e*S S 17 28 55.4 -0.5
PET pmax pmax
comp=Z,700nm,5.4s
PET pmax pmax
comp=Z,212nm,0.9s,mb6.1
PET pmax pmax
comp=Z,500nm,17.9s
PET MLR MLR
comp=Z,400nm,18.0s,MS4.8
PET MLR MLR
comp=Z,300nm,16.0s
PET Petropavlovsk 73.67 32⇑ *i*P **P 17 19 28.0 -1.2**
comp=Z,147nm,0.8s,mb6.0
CSS Prodhromos 74.05 308 PFAKE 17 19 40.0 +8.1
CSS LR LR
comp=Z,794nm,22.0s,MS5.0
VRHR Novokhopersk 74.11 326*c* *i*P **P 17 19 31.1 -0.7**
VRHR pmax pmax
comp=Z,460nm,0.9s,mb6.4
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,140nm,1.1s
ANN Anapa 74.16 318 *e*P **P 17 19 30.4 -1.9**
ANN *e**PP pP 17 19 47.4 +0.5
ANN *e* 17 22 18.6
ANN *e*S S 17 28 56.8 -4.9
ANN *e*SS SS 17 33 46.4 -1.6
ANN pmax pmax
comp=Z,33nm,1.3s,mb5.1
SEK Senekal 74.16 242 *e*P **P 17 19 33.3 +0.6**
SEK AMb AMB 17 19 53.4
comp=Z,71nm,1.4s,mb5.4
PRYS Parys 74.28 243⇓ *i*P **P 17 19 34.2 +0.8**
PRYS AMb AMB 17 19 53.3
comp=Z,49nm,1.4s,mb5.2
CDAG Cicekdag 74.58 312 *i* P **P 17 19 34.1 -0.8**
CTKT Corum 74.58 314 *i* P **P 17 19 34.9 0.0**
KSR Koster 74.62 244 *e*P pP 17 19 54.0 +3.9
KSR AMb AMB 17 20 11.8
comp=Z,27nm,2.0s,mb4.8
BRTR Keskin Array B 75.15 312 P **P 17 19 37.5 -0.7**
comp=Z,51nm,0.8s,mb5.5,baz=129,slow=7.2,SNR=291
BRTR pP pP 17 19 52.3 -0.6
comp=Z,38nm,1.0s,baz=143,slow=7.0,SNR=5.2
BRTR LR LR 17 54 12.9
comp=Z,162nm,20.9s,MS4.3,baz=222,slow=37
BRTR Keskin Array B 75.15 312 P **P 17 19 37.5 -0.7**
BRTR *PP pP 17 19 52.3 -0.6
BR131 Keskin Array S 75.15 312 PFAKE 17 19 50.0 +12
BR131 LR LR
comp=Z,347nm,21.0s,MS4.6
GAZI Gazipasa 75.19 309 *i* P **P 17 19 37.8 -0.7**
VORD Divnogorie 75.39 325*c* *i*P **P 17 19 38.2 -1.0**
VORD pmax pmax
comp=Z,130nm,0.8s,mb5.9
VORD pmax pmax
comp=N,80nm,1.0s
VORD pmax pmax
comp=E,140nm,0.9s
ILGA Ilgaz 75.49 314 *i* P **P 17 19 40.5 +0.4**
ELDT Eldivan 75.53 313 *i* P **P 17 19 40.2 -0.1**
VSR Storozhevoye 75.56 325*c* *i*P **P 17 19 39.1 -1.1**
VSR pmax pmax
comp=Z,330nm,0.9s,mb6.3
VSR pmax pmax
comp=N,70nm,0.8s
VSR pmax pmax
comp=E,180nm,0.8s
LBTB Lobatse 75.74 245 P **P 17 19 42.8 +0.9**
comp=E,4.7nm,0.6s,mb4.6,baz=90,slow=6.9,SNR=8.3
LBTB pP pP 17 19 56.4 -0.2
comp=E,5.4nm,0.6s,baz=150,slow=15,SNR=7.8
LBTB Lobatse 75.74 245 P **P 17 19 42.8 +0.9**
LBTB *PP pP 17 19 56.4 -0.2
LBTB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LBTB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LBTB Lobatse 75.74 245 *e*P **P 17 19 42.6 +0.7**
comp=Z,47nm,1.3s,mb5.3
LBTB *e*pP pP 17 19 55.2 -1.4
LBTB LR LR
comp=Z,2μm,21.0s,MS5.3
LBTB Lobatse 75.74 245⇓ *i*P **P 17 19 42.5 +0.6**
LBTB AMb AMB 17 20 02.3
comp=Z,58nm,1.4s,mb5.3
VOR Voronezh 75.75 325⇑ *i*P **P 17 19 41.0 -0.3**
VOR pmax pmax
comp=Z,300nm,1.0s,mb6.2
BALT Daday 75.87 314 *i* P **P 17 19 42.6 +0.3**
SWZ Schweizer 76.10 243⇓ *i*P **P 17 19 44.8 +0.9**
SWZ AMb AMB 17 20 04.7
comp=Z,80nm,1.3s,mb5.5
HVD Gariep Dam 76.19 239 *e*P **P 17 19 45.0 +0.6**
HVD AMb AMB 17 20 11.8
comp=Z,51nm,1.7s,mb5.2
BOSA Boshof 76.26 241 P **P 17 19 45.0 +0.3**
comp=Z,4.4nm,0.6s,mb4.6,baz=121,slow=4.7,SNR=18
BOSA LR LR 17 47 02.4
comp=Z,1μm,20.8s,MS5.1,baz=96,slow=31
BOSA Boshof 76.26 241 *e*P **P 17 19 45.1 +0.3**
BOSA *e**PP pP 17 19 59.7 +0.2
BOSA pmax pmax
comp=Z,43nm,1.1s,mb5.3
BOSA MLR MLR
comp=Z,2μm,21.0s,MS5.3
BOSA Boshof 76.26 241 *e*P **P 17 19 45.1 +0.4**
comp=Z,43nm,1.1s,mb5.3
BOSA *e*pP pP 17 19 59.7 +0.2
BOSA LR LR
comp=Z,2μm,21.0s,MS5.3
BOSA Boshof 76.26 241⇓ *i*P **P 17 19 45.2 +0.5**
BOSA AMb AMB 17 20 36.1
comp=Z,114nm,17.3s
SEY Seymchan 76.26 21*c* *i*P **P 17 19 43.5 -0.5**
SOE Somerset East 76.31 237 *e*P **P 17 19 43.1 -1.9**
SOE AMb AMB 17 20 06.5
comp=Z,97nm,1.4s,mb5.5
MSVF Nonsavu 76.35 107 *e*P **P 17 19 45.2 -0.2**
comp=Z,92nm,1.1s,mb5.6
MSVF LR LR
comp=Z,663nm,21.0s,MS4.9
SIM Simferopol' 76.42 318 *i* P **P 17 19 46.2 +0.9**
SIM *e**PP pP 17 20 00.7 +0.7
SIM 17 22 42.0
SIM PPP 17 24 24.0
SIM *e*S S 17 29 24.0 -2.8
SIM *e**SS sS 17 29 49.0 -2.6
SIM *e*PS 17 30 15.0
SIM *e*SS SS 17 34 28.0 +5.6
SIM pmax pmax

comp=Z,110nm,0.8s,mb5.8
SIM MLR MLR
comp=Z,212nm,17.2s,MS4.5
SGKT Sivrigoynuk 76.56 313 *i* P **P 17 19 45.8 -0.4**
URZ Urewera 76.82 128 P **P 17 19 46.5 -1.2**
comp=Z,4.7nm,0.5s,mb4.7,baz=21,slow=19,SNR=6.6
URZ Urewera 76.82 128 P **P 17 19 47.2 -0.5**
TIXI Tiksi 76.86 9⇑ *i*P **P 17 19 45.2 -2.0**
TIXI *e**PP pP 17 19 58.4 -3.6
TIXI pmax pmax
comp=Z,115nm,1.1s,mb5.7
TIXI Tiksi 76.86 9⇑ *i*P **P 17 19 45.2 -2.0**
comp=Z,115nm,1.1s,mb5.7
TIXI *e*pP pP 17 19 58.4 -3.5
BOLV Bolvadin 76.88 311 *i* P **P 17 19 47.5 -0.5**
ISP Isparta 76.98 310⇑ *i*P **P 17 19 47.3 -1.3**
ISP *e**PP pP 17 20 01.1 -2.3
ISP pmax pmax
comp=Z,18nm,0.8s,mb5.0
ISP MLR MLR
comp=Z,408nm,19.0s,MS4.8
ISP Isparta 76.98 310⇑ *i*P **P 17 19 47.3 -1.3**
comp=Z,18nm,0.8s,mb5.0
ISP *e*pP pP 17 20 01.1 -2.2
ISP LR LR
comp=Z,408nm,19.0s,MS4.8
ISP Isparta 76.98 310⇑ *i*P **P 17 19 47.4 -1.2**
ISP Isparta 76.98 310 P **P 17 19 47.6 -1.0**
SYO Syowa Base 77.15 199⇓ *e*P **P 17 19 50.4 +1.5**
SYO Syowa Base 77.15 199⇑ *e*sP sP 17 20 10.0 +0.5
ESKT Eskisehir 77.17 312 *i* P **P 17 19 49.4 -0.2**
AKAS Kas 77.31 308 *i* P **P 17 19 42.1 -8.3**
FUNA Funafuti 77.50 98 PFAKE 17 20 00.0 +8.0
FUNA LR LR
comp=Z,20μm,20.0s,MS6.4
BORA Eskisehir 77.56 312 *i* P **P 17 19 51.4 -0.4**
GOLH Golhisar 77.58 309 *i* P **P 17 19 51.2 -0.8**
KHAL Karahalli 77.90 310 *i* P **P 17 19 53.0 -0.7**
TURN Turunc 78.24 309 *i* P **P 17 19 57.4 +1.8**
MOS Moscow 78.25 329 *e*P **P 17 19 53.8 -1.5**
MOS *e* pP 17 20 05.1 -5.0
MOS *e* 17 22 49.9
MOS *e*S S 17 29 41.3 -4.9
MOS pmax pmax
comp=Z,179nm,0.9s,mb6.0
MOS pmax pmax
comp=Z,200nm,1.0s,mb6.0
PKA Prieska 78.50 241⇓ *i*P **P 17 19 58.0 +0.7**
PKA AMb AMB 17 20 17.0
comp=Z,31nm,1.3s,mb5.1
OBN Obninsk 78.56 328 P **P 17 19 56.2 -0.8**
comp=Z,1μm,0.8s,mb6.9,SNR=18
OBN Obninsk 78.56 328*c* *i*P **P 17 19 56.5 -0.5**
OBN *i* pP 17 20 10.7 -1.1
OBN *i* 17 22 54.1
OBN *i* S S 17 29 47.1 -2.4
OBN *i* 17 30 06.0
OBN *i* SS SS 17 34 52.4 -1.7
OBN pmax pmax
comp=Z,202nm,0.8s,mb6.1
OBN MLR MLR
comp=Z,700nm,23.0s,MS4.9
OBN Obninsk 78.56 328⇑ *i*P **P 17 19 56.5 -0.5**
comp=Z,160nm,0.8s,mb6.0
OBN *e*pP pP 17 20 10.1 -1.7
MANT Manisa 78.64 310 *i* P **P 17 19 58.0 +0.1**
DURS Dursunbey 78.97 311 *i* P **P 17 19 59.1 -0.5**
AYDN Tasoluk 78.98 309 *i* P **P 17 20 00.2 +0.5**
BDRM Kayabasi 79.19 309 *i* P **P 17 20 00.3 -0.5**
AKHS Akhisar 79.30 310 *i* P **P 17 20 01.8 +0.3**
BALY Balya 79.64 311 *i* P **P 17 20 03.0 -0.3**
UPI Upington 79.77 242 *e*P **P 17 20 06.5 +2.3**
UPI AMb AMB 17 20 24.5
comp=Z,68nm,1.6s,mb5.3
URLA Izmir 80.12 310 *i* P **P 17 20 06.2 +0.3**
LAST Lasithi 80.36 306 P **P 17 20 07.8 +0.5**
CHOS Chios island 80.54 310 P **P 17 20 08.7 +0.6**
CFR Carcaliu 80.55 317⇓ P **P 17 20 08.1 +0.1**
CFR Carcaliu 80.55 317⇓ *i*P **P 17 20 08.1 +0.1**
KIS Kishinev 80.55 319 *e*P **P 17 20 05.0 -3.0**
KIS Kishinev 80.55 319 *e*PP PP 17 23 08.0 -4.1
KIS *e*S S 17 30 05.0 -6.0
KIS Kishinev 80.55 319 *e*P **P 17 20 05.0 -3.0**
KIS *e* pP 17 20 20.0 -2.9
KIS *e* 17 23 08.0
KIS *e* 17 25 10.0
KIS *e*S S 17 30 05.0 -6.0
KIS MLR MLR
comp=Z,300nm,17.0s,MS4.7
KIS MLR MLR
comp=Z,300nm,16.0s
HARR Harsova 80.57 316⇓ P **P 17 20 08.5 +0.3**
HARR Harsova 80.57 316⇓ *i*P **P 17 20 08.4 +0.2**
LEOM Leova 80.80 318⇓ P **P 17 20 09.4 +0.1**
LEOM Leova 80.80 318⇓ *i*P **P 17 20 09.4 +0.1**
BOZC Bozcaada 80.84 311 *i* P **P 17 20 09.1 -0.6**
SIVA Sivas 80.88 306 P **P 17 20 10.4 +0.4**
JMB Yambol 81.01 314 P **P 17 20 11.2 +0.6**
ALN Alexandroupoli 81.07 312 P **P 17 20 09.7 -1.2**
CVNA Calvinia 81.16 239 *e*P **P 17 20 12.1 +0.5**
CVNA AMb AMB 17 20 33.8
comp=Z,93nm,1.6s,mb5.5
AKASG Malin Array Be 81.29 322 P **P 17 20 10.3 -1.6**
comp=Z,56nm,0.8s,mb5.5,baz=87,slow=5.0,SNR=130
AKASG PP PP 17 23 15.9 -2.1
comp=Z,9.3nm,0.9s,baz=86,slow=6.3,SNR=6.0
AKASG Malin Array Be 81.29 322 P **P 17 20 10.3 -1.6**
AKASG PP PP 17 23 15.9 -2.1
AKBB Malin Array Si 81.29 322⇑ *i*P **P 17 20 10.8 -1.0**
AKBB *e**PP pP 17 20 24.7 -2.0
AKBB *e* 17 23 16.2
KIEV Kiev 81.29 322⇑ *i*P **P 17 20 10.7 -1.2**
KIEV *e**PP pP 17 20 24.6 -2.1
KIEV pmax pmax
comp=Z,61nm,0.9s,mb5.5
KIEV MLR MLR
comp=Z,429nm,19.0s,MS4.8
KIEV Kiev 81.29 322⇑ *i*P **P 17 20 10.7 -1.2**
comp=Z,61nm,0.9s,mb5.5
KIEV *e*pP pP 17 20 24.6 -2.1
KIEV LR LR
comp=Z,429nm,19.0s,MS4.8
RDO Rodhopi 81.49 312 P **P 17 20 12.7 -0.5**
ISR Istrita 81.63 316⇓ *i*P sP 17 20 37.0 +2.6
KARN Karanos 81.66 306 P **P 17 20 14.7 +0.5**
VRI Vrincioaia 81.68 317 P **P 17 20 15.0 +1.0**
PLOR Plostina 81.72 317⇓ P **P 17 20 15.0 +0.7**
PLOR Plostina 81.72 317⇓ *i*P **P 17 20 15.0 +0.7**
SBA Scott Base 81.79 169 *e*P **P 17 20 14.7 +0.7**
SBA pmax pmax
comp=Z,37nm,0.9s,mb5.3
SBA Scott Base 81.79 169 *e*P **P 17 20 14.7 +0.7**
comp=Z,37nm,0.9s,mb5.3
MLR Muntele Rosu 82.13 317⇓ P **P 17 20 16.9 +0.5**
MLR Muntele Rosu 82.13 317⇓ *i*P **P 17 20 16.9 +0.5**
KAVA Kavala 82.22 312 P **P 17 20 17.1 +0.1**
PLD Plovdiv 82.30 313 P **P 17 20 17.4 0.0**
OUR Ouranopolis 82.49 311 P **P 17 20 17.8 -0.6**
PAIG Paliouri 82.65 311 P **P 17 20 19.9 +0.7**
LTK Loutraki 82.86 309 P **P 17 20 18.6 -1.8**
PLG Polygyros 82.91 311 P **P 17 20 19.6 -1.0**
XOR Xorichti 82.92 310 P **P 17 20 19.5 -1.2**
SRS Serrai 82.93 312 P **P 17 20 19.9 -0.8**
LKR Lokris 82.94 309 P **P 17 20 19.7 -1.1**
SOH Sokhos 83.05 312 P **P 17 20 20.8 -0.5**
TSUM Tsumeb 83.07 251 P **P 17 20 22.2 +0.4**
comp=Z,4.6nm,0.9s,mb4.5,baz=77,slow=8.8,SNR=5.6
TSUM Tsumeb 83.07 251 *e*P **P 17 20 22.5 +0.6**
comp=Z,31nm,1.3s,mb5.2
TSUM Tsumeb 83.07 251⇓ *i*P **P 17 20 22.6 +0.8**
BURAR Bucovina Array 83.08 319⇓ P **P 17 20 22.4 +1.1**
BURAR Bucovina Array 83.08 319⇓ *i*P **P 17 20 22.4 +1.1**
BUR08 Bucovina Ar. S 83.10 319⇑ *i*P **P 17 20 22.0 +0.7**
MICGM Minsk 83.11 326⇑ *e*P **P 17 20 18.0 -3.3**
MNK Minsk 83.13 326⇑ *e*P **P 17 20 18.0 -3.4**
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.4
HORT Hortiatis 83.20 311 P **P 17 20 21.3 -0.8**
VLX Vlachokerasia 83.22 308 P **P 17 20 21.9 -0.3**
DSF Desfina 83.27 309 P **P 17 20 21.0 -1.5**
GUR Goura 83.33 309 P **P 17 20 23.1 +0.3**
PUL Pulkovo 83.35 331*d* *i*P **P 17 20 23.0 +0.6**
PUL pmax pmax

comp=Z,166nm,0.9s,mb6.1
VTS Vitosha 83.48 313 P **P** **17 20 23.4 -0.1**
ITM Ithomi 83.54 308 P **P** **17 20 23.5 -0.4**
KALE Kalithea 83.57 309 P **P** **17 20 22.9 -1.1**
LIT Litokhoron 83.58 311 P **P** **17 20 23.2 -0.8**
TRIZ Trizonia 83.61 309 P **P** **17 20 23.3 -1.0**
PYL PYLOS 83.64 307 P **P** **17 20 23.7 -0.8**
LAKA Lakka 83.67 309 P **P** **17 20 24.4 -0.1**
VAY Valandovo 83.72 312 *i* P **P** **17 20 24.3 -0.4**
EFP Efpalio 83.75 309 P **P** **17 20 23.8 -1.2**
NACGM Naroch 83.83 326 *eP* **P** **17 20 22.0 -2.9**
BILL Bilibino 83.84 20*c i*P **P** **17 20 23.5 -1.3**
BILL *i* 17 20 30.7
BILL *i* pP 17 20 37.1 -2.6
BILL pmax pmax
comp=Z,25nm,1.0s,mb5.3
BILL Bilibino 83.84 20⇑*iP* **P** **17 20 23.2 -1.6**
comp=Z,21nm,0.9s,mb5.3
BILL *e*pP pP 17 20 36.8 -2.9
BILL LR LR
comp=Z,997nm,19.0s,MS5.2
THL Klokotos Trika 83.85 310 P **P** **17 20 23.8 -1.7**
JOF Joensuu 83.91 334 *eP* **P** **17 20 24.9 -0.3**
JOF pmax pmax
comp=Z,30nm,0.8s,mb5.5
JOF Joensuu 83.91 334 *ep* **P** **17 20 24.9 -0.3**
comp=Z,30nm,0.8s,mb5.5
IDID Didziasalis 83.95 326 *eP* **P** **17 20 26.0 +0.4**
BMR Baia Mare 84.23 318 P **P** **17 20 28.3 +1.1**
IIGN Ignalina 84.25 326 *eP* **P** **17 20 27.5 +0.4**
GZR Gura Zlata 84.29 316 P **P** **17 20 28.0 +0.4**
DEV Deva 84.29 317⇑*iP* **P** **17 20 28.8 +1.3**
LVV L'vov 84.31 321*d iP* **P** **17 20 27.4 -0.1**
LVV *e*S S 17 30 47.8 -1.5
ISAL Salakas 84.35 327 *eP* **P** **17 20 28.0 +0.4**
LVZ Lovozero 84.40 340*c iP* **P** **17 20 26.8 -0.8**
LVZ pmax pmax
comp=Z,53nm,0.8s,mb5.7
LVZ Lovozero 84.40 340 PFAKE 17 20 40.0 +12
LVZ LR LR
comp=Z,748nm,22.0s,MS5.0
FNA Florina 84.53 311 P **P** **17 20 27.8 -1.1**
KFL Anninata 84.58 309 P **P** **17 20 29.2 0.0**
DRGR 84.59 317⇑*iP* **P** **17 20 29.6 +0.6**
DRGR 84.59 317⇑*iP* **P** **17 20 29.6 +0.6**
SKO Skopje 84.67 312 *eP* **P** **17 20 29.6 0.0**
KRUS Krusevo 84.71 312 *i* P **P** **17 20 28.7 -1.1**
APA Apatity 84.72 339⇑*iP* **P** **17 20 29.0 -0.2**
APA *e*S S 17 30 50.0 -2.7
APA pmax pmax
comp=Z,49nm,1.0s,mb5.6
APA MLR MLR
comp=Z,1µm,23.0s,MS5.2
VLS Valsamata 84.74 309 P **P** **17 20 29.8 -0.2**
VSU Vasula 84.75 329*c iP* **P** **17 20 29.4 -0.2**
VSU pmax pmax
comp=Z,115nm,1.0s,mb6.0
OHR Ohrid 85.01 312 *i* P **P** **17 20 30.1 -1.2**
KWP Kalwaria Pacla 85.12 320 *i* P **P** **17 20 32.0 +0.4**
comp=Z,200nm,1.2s,mb6.1
KWP *e*pP pP 17 20 46.6 0.0
KWP LMZ 17 59 36.8
comp=Z,500nm,25.7s
KWP Kalwaria Pacla 85.12 320⇑*iP* **P** **17 20 32.0 +0.4**
KWP *e**PP pP 17 20 46.6 0.0
KWP pmax pmax
comp=Z,200nm,1.2s,mb6.1
KWP MLR MLR
comp=Z,500nm,25.7s,MS4.8
KWP Kalwaria Pacla 85.12 320⇑*iP* **P** **17 20 31.6 0.0**
comp=Z,86nm,1.0s,mb5.8
KWP *e*pP pP 17 20 46.2 -0.3
KWP LR LR
comp=Z,515nm,21.0s,MS4.9
KWP Kalwaria Pacla 85.12 320⇑*iP* **P** **17 20 31.8 +0.2**
IGT Igoumenitsa 85.13 310 P **P** **17 20 31.9 0.0**
UZH Uzhgorod 85.20 319⇓*iP* **P** **17 20 32.3 +0.3**
UZH *e* pP 17 20 46.7 -0.3
UZH *e* 17 23 50.0
KOLS Kolonicke sedl 85.27 319 *eP* **P** **17 20 33.4 +1.0**
KOLS *e*S S 17 30 52.9 -5.9
KOLS pmax pmax
comp=Z,166nm,0.9s,mb6.2
KOLS MLR MLR
comp=Z,200nm,25.7s,MS4.4
KOLS Kolonicke sedl 85.27 319 *eP* **P** **17 20 33.4 +1.0**
comp=Z,166nm,0.9s,mb6.2
KOLS *e* pP 17 20 52.5 +5.2
KOLS *e*S S 17 30 52.9 -5.9
KOLS LR LR
comp=Z,200nm,25.7s,MS4.4
KOLS Kolonicke sedl 85.27 319 *eP* **P** **17 20 33.4 +1.0**
KOLS *e*sP sP 17 20 52.5 -0.6
KOLS *e*S S 17 30 52.9 -5.9
KEK Kerkira 85.56 310 P **P** **17 20 33.9 -0.2**
SUW Suwalki 85.67 325 *i* P **P** **17 20 34.0 -0.3**
comp=Z,600nm,1.1s,mb6.7
SUW *e*pP pP 17 20 48.0 -1.2
SUW *e*sP sP 17 20 53.2 -1.8
SUW *e*SKS 17 31 01.1
SUW LMZ 17 57 57.4
comp=Z,500nm,28.1s
SUW Suwalki 85.67 325⇑*iP* **P** **17 20 34.0 -0.3**
SUW *e**PP pP 17 20 48.0 -1.2
SUW *e* 17 31 01.1
SUW pmax pmax
comp=Z,600nm,1.1s,mb6.7
SUW MLR MLR
comp=Z,500nm,28.1s,MS4.8
SUW Suwalki 85.67 325⇑*iP* **P** **17 20 33.9 -0.4**
comp=Z,479nm,1.0s,mb6.7
SUW *e*pP pP 17 20 47.4 -1.8
FINES FINESS Array B 85.83 332 P **P** **17 20 34.7 -0.2**
comp=Z,32nm,0.9s,mb5.5,baz=102,slow=6.2,SNR=50
FINES pP pP 17 20 49.9 0.0
comp=Z,12nm,0.8s,baz=97,slow=4.3,SNR=4.9
FINES PP PP 17 23 49.8 -5.1
comp=Z,8.2nm,0.7s,baz=116,slow=8.9,SNR=4.8
FINES PKKPbc PKKPbc 17 38 36.4 -2.5
comp=Z,1.2nm,0.8s,baz=270,slow=3.8,SNR=4.2
FINES LR LR 18 05 10.4
comp=Z,222nm,19.2s,MS4.6,baz=104,slow=40
FINES FINESS Array B 85.83 332 P **P** **17 20 34.7 -0.2**
FINES **PP pP 17 20 49.9 0.0
FINES 17 23 49.8
KAF Kangasniemi 85.89 333 *eP* **P** **17 20 35.2 0.0**
KAF pmax pmax
comp=Z,38nm,0.8s,mb5.7
KAF Kangasniemi 85.89 333 *ep* **P** **17 20 35.2 0.0**
comp=Z,38nm,0.8s,mb5.7
STHS Stebnicka Huta 86.02 320 *eP* **P** **17 20 36.8 +0.7**
STHS pmax pmax
comp=Z,52nm,0.9s,mb5.8
STHS Stebnicka Huta 86.02 320 *eP* **P** **17 20 36.8 +0.7**
comp=Z,52nm,0.9s,mb5.8
STHS *e* pP 17 20 55.8 +4.7
STHS Stebnicka Huta 86.02 320 *eP* **P** **17 20 36.8 +0.7**
STHS *e*sP sP 17 20 55.8 -1.0
AFI Afiamalu 86.19 104 P **P** **17 20 37.2 -0.4**
comp=Z,59nm,0.8s,mb5.8,baz=52,slow=24,SNR=5.1
KECS Kecovo 86.36 319 *eP* **P** **17 20 38.1 +0.3**
KECS *e* pP 17 20 54.3 +1.5
KECS pmax pmax
comp=Z,18nm,0.9s,mb5.3
KECS Kecovo 86.36 319 *eP* **P** **17 20 38.1 +0.3**
comp=Z,18nm,0.9s,mb5.3
KECS *e*PP pP 17 20 54.3 +1.5
KECS Kecovo 86.36 319 *eP* **P** **17 20 38.1 +0.3**
KECS *e*pP pP 17 20 54.3 +1.5
NIE Niedzica 86.62 320 *eP* **P** **17 20 39.6 +0.6**
NIE *e**PP pP 17 20 58.3 +4.3
WAR Warsaw 86.63 323 *eP* **P** **17 20 37.9 -1.1**
WAR *e*pP pP 17 20 54.6 +0.6
PSZ Piszkesteto 86.67 318⇑*iP* **P** **17 20 39.4 +0.1**
PSZ *e**PP pP 17 20 53.6 -0.7
PSZ pmax pmax
comp=Z,41nm,0.9s,mb5.7
PSZ Piszkesteto 86.67 318⇑*iP* **P** **17 20 39.4 +0.1**
comp=Z,41nm,0.9s,mb5.7
PSZ *e*pP pP 17 20 53.6 -0.7
PSZ Piszkesteto 86.67 318⇑*eP* **P** **17 20 39.6 +0.3**
PSZ Piszkesteto 86.67 318⇑*iP* **P** **17 20 39.5 +0.2**
QSPA South Pole Qui 86.73 180 PKKPbc PKKPbc 17 38 33.0 -4.0
comp=Z,2.8nm,0.8s,baz=178,slow=2.7,SNR=6.9

NVL N'lazarevskaya 86.81 199 *eP* pP 17 20 55.2 +0.6
NVL *e**PP sP 17 21 01.1 +0.8
NVL *e**SP sP 17 21 12.3 +12
NVL pmax pmax
comp=Z,22nm,1.1s,mb5.3
MAIT Maitri 86.84 199 *eP* **P** **17 20 41.9 +2.2**
MAIT *e*E pP 17 20 55.6 +0.9
OJC Ojcow 87.07 320 *eP* **P** **17 20 41.1 -0.1**
OJC *e*pP pP 17 20 56.0 -0.2
OJC *e*S S 17 31 15.9 -0.5
OJC L 18 08 48.9
comp=Z,0.6nm,22.4s
BUD Budapest 87.19 318⇑*eP* **P** **17 20 41.8 -0.1**
PKSM Moragy 87.28 316 ⇑*iP* **P** **17 20 42.3 0.0**
PKSM Moragy 87.28 316⇑*iP* **P** **17 20 42.3 0.0**
VYHS Vyhne 87.45 319 *eP* **P** **17 20 43.4 +0.3**
VYHS *e* pP 17 20 57.8 -0.3
VYHS *e*S S 17 31 19.0 -1.1
VYHS pmax pmax
comp=Z,22nm,1.2s,mb5.3
VYHS Vyhne 87.45 319 *eP* **P** **17 20 43.4 +0.3**
comp=Z,22nm,1.2s,mb5.3
VYHS *e*PP pP 17 20 57.8 -0.3
VYHS *e*S S 17 31 19.0 -1.1
VYHS Vyhne 87.45 319 *eP* **P** **17 20 43.4 +0.3**
VYHS *e*pP pP 17 20 57.8 -0.3
KEV Kevo 87.64 340⇑*iP* **P** **17 20 42.8 -0.8**
KEV pmax pmax
comp=Z,66nm,0.9s,mb5.9
KEV MLR MLR
comp=Z,795nm,21.0s,MS5.1
KEV Kevo 87.64 340⇑*iP* **P** **17 20 42.8 -0.8**
comp=Z,66nm,0.9s,mb5.9
KEV LR LR
comp=Z,795nm,21.0s,MS5.1
KEV Kevo 87.64 340 *ep* **P** **17 20 42.6 -1.0**
comp=Z,45nm,0.8s,mb5.8
KOLL Kolacno 87.74 319 *eP* **P** **17 20 44.9 +0.4**
KOLL Kolacno 87.74 319 *eP* **P** **17 20 44.9 +0.4**
TIP Timpagrande 87.84 309⇑*eP* **P** **17 20 45.4 +0.2**
comp=Z,48nm,1.1s,mb5.6
GRI Girifalco 88.06 309 P **P** **17 20 47.7 +1.4**
GRI pmax pmax
comp=Z,78nm,1.0s,mb5.9
GRI Girifalco 88.06 309 P **P** **17 20 47.7 +1.4**
comp=Z,78nm,1.0s,mb5.9
OKC Ostrava-Krasne 88.07 320 *eP* **P** **17 20 46.6 +0.6**
OKC *e**PP pP 17 21 02.0 +0.9
OKC *e*S S 17 31 24.1 -1.9
OKC MLR MLR
comp=Z,400nm,21.6s,MS4.8
OKC Ostrava-Krasne 88.07 320 *eP* **P** **17 20 46.6 +0.6**
OKC *e*pP pP 17 21 02.0 +0.9
OKC *e*S S 17 31 24.1 -1.9
OKC AMS AMS 18 09 40.0
comp=Z,400nm,21.6s
ARCES ARCESS Array B 88.09 340 P **P** **17 20 45.5 -0.3**
comp=Z,72nm,0.8s,mb5.9,baz=104,slow=4.1,SNR=111
ARCES pP pP 17 20 59.7 -1.0
comp=Z,27nm,0.9s,baz=91,slow=6.1,SNR=6.0
ARCES PP PP 17 24 11.6 -1.3
comp=Z,18nm,1.1s,baz=106,slow=7.7,SNR=5.3
ARE0 ARCESS Array S 88.09 340⇑*iP* **P** **17 20 44.9 -0.8**
ARE0 *e*pP pP 17 20 59.1 -1.6
ARE0 *e*PP PP 17 24 11.0 -1.9
CEL Celeste 88.42 308⇑*iP* **P** **17 20 48.8 +0.8**
comp=Z,83nm,1.0s,mb5.9
CEL *e*pP pP 17 21 03.2 +0.1
CEL *e*PP PP 17 24 16.5 +0.1
CEL LR LR
comp=Z,360nm,21.0s,MS4.8
MORC Moravsky Berou 88.45 320⇑*iP* **P** **17 20 48.3 +0.5**
comp=Z,57nm,0.9s,mb5.8
MORC *e*pP pP 17 20 59.8 -3.1
MORC Moravsky Berou 88.45 320⇓*iP* **P** **17 20 48.4 +0.6**
MTTG Motta San Giov 88.56 308 P **P** **17 20 49.8 +1.2**
comp=Z,130nm,1.0s,mb6.2
ZST Bratislava 88.56 318 *eP* **P** **17 20 49.2 +0.8**
ZST *e* pP 17 21 05.1 +1.7
ZST pmax pmax
comp=Z,54nm,0.9s,mb5.9
ZST Bratislava 88.56 318 *eP* **P** **17 20 49.2 +0.8**
comp=Z,54nm,0.9s,mb5.9
ZST *e*PP pP 17 21 05.1 +1.7
ZST Bratislava 88.56 318 *eP* **P** **17 20 49.2 +0.8**
ZST *e*pP pP 17 21 05.1 +1.7
SCLL Scilla 88.56 308 P **P** **17 20 44.1 -4.5**
KOGS Kog 88.95 316 *i* P **P** **17 20 50.8 +0.5**
VRAC Vranov 89.01 319 P **P** **17 20 51.0 +0.5**
GKP Gorka Klasztor 89.05 323 *eP* **P** **17 20 50.7 +0.2**
comp=Z,200nm,0.8s,mb6.5
GKP *e*pP pP 17 21 02.6 -3.1
GKP *e*S S 17 31 34.8 -0.3
GKP LMZ 17 58 19.1
comp=Z,600nm,28.0s
GKP Gorka Klasztor 89.05 323 *eP* **P** **17 20 50.7 +0.1**
GKP *e**PP pP 17 21 02.6 -3.0
GKP *e*S S 17 31 34.8 -0.3
GKP pmax pmax
comp=Z,200nm,0.8s,mb6.5
GKP MLR MLR
comp=Z,600nm,28.0s,MS4.9
DPC Dobruska-Polom 89.30 320 *ep*P pP 17 21 08.9 +2.0
DPC *e*S S 17 31 37.9 +0.4
DPC AMS AMS 18 09 50.0
comp=Z,500nm,22.2s
FG2 Serracapriola 89.30 312 P **P** **17 20 52.4 +0.4**
comp=Z,400nm,0.9s,mb6.8
CONA Conrad Observa 89.36 318⇑*iP* **P** **17 20 52.3 +0.1**
comp=Z,24nm,1.0s,mb5.5,SNR=9.8
KSP Ksiaz 89.37 321 *i* P **P** **17 20 53.0 +0.9**
comp=Z,200nm,1.1s,mb6.4
KSP *e*pP pP 17 21 07.8 +0.7
KSP *e*S S 17 31 38.6 +0.5
KSP LMZ 18 06 22.2
comp=Z,900nm,24.4s
KSP Ksiaz 89.37 321⇑*iP* **P** **17 20 53.0 +0.9**
KSP *e**PP pP 17 21 07.4 +0.2
KSP *e*S S 17 31 37.0 -1.1
DOBS Dobrina 89.46 316 *e* **P** **17 20 53.2 +0.5**
DOBS *e* pP 17 21 08.3 +0.6
UPC Upice 89.51 320 *eP* **P** **17 20 53.7 +0.9**
UPC *e**PP pP 17 21 09.7 +1.9
UPC Upice 89.51 320 *eP* **P** **17 20 53.7 +0.9**
UPC *e*pP pP 17 21 09.7 +1.9
ARSA Arzberg 89.52 317⇓*iPcP* PcP 17 20 53.4 -0.9
comp=Z,58nm,1.0s,SNR=16
BOJS Bojanci 89.55 315 *i* P **P** **17 20 53.5 +0.4**
BOJS *e*S S 17 31 38.7 -1.4
TREC Trest 89.73 319 *eP* **P** **17 20 54.5 +0.6**
TREC *e**PP pP 17 21 09.9 +1.0
TREC MLR MLR
comp=Z,600nm,22.8s,MS5.0
TREC Trest 89.73 319 *eP* **P** **17 20 54.5 +0.6**
TREC *e*pP pP 17 21 09.9 +1.0
TREC AMS AMS 18 10 30.0
comp=Z,600nm,22.8s
PERS Pernice 89.75 317 *i* P **P** **17 20 54.6 +0.6**
PERS *e*S S 17 31 40.8 -1.0
SOKA Soboth 89.81 317⇑*iPcP* PcP 17 20 54.8 -0.7
comp=Z,86nm,1.0s
CSLB Castelbuono 89.84 308 P **P** **17 20 54.5 -0.1**
LJU Ljubljana 90.10 316 *i* P **P** **17 20 56.4 +0.7**
LJU *e* pP 17 21 11.4 +0.7
LJU *e*S S 17 31 43.6 -1.5
OBKA Obir 90.13 316⇓*iPcP* PcP 17 20 56.4 -0.5
comp=Z,42nm,1.0s
PRU Pruhonice 90.40 320 *eP* **P** **17 20 58.3 +1.3**
PRU *e**PP pP 17 21 17.0 +5.0
PRU *e*S S 17 31 39.9 -7.9
PRU MLR MLR
comp=Z,400nm,19.6s,MS4.9
PRU smax
comp=N,2.0nm,0.3s
PRU Pruhonice 90.40 320 *eP* **P** **17 20 58.3 +1.3**
PRU *e*pP pP 17 21 17.0 +5.0
PRU *e*S S 17 31 39.9 -7.9
PRU AMS AMS 18 10 40.0
comp=N,400nm,19.6s
MOA Molln 90.42 318⇑*iP* **P** **17 20 56.9 -0.2**
comp=N,23nm,0.9s,mb5.5
PVCC Panska Ves 90.43 320 *eP* **P** **17 20 58.0 +0.9**
PVCC *e**PP pP 17 21 13.5 +1.4
PVCC *e*S S 17 31 45.5 -2.5

PVCC MLR MLR
comp=Z,600nm,19.7s,MS5.0
PVCC Panska Ves 90.43 320 *eP* **P** **17 20 58.0 +0.9**
PVCC *e*pP pP 17 21 13.5 +1.4
PVCC *e*S S 17 31 45.5 -2.5
PVCC AMS AMS 18 10 30.0
comp=Z,600nm,19.7s
PRA Prague 90.48 320⇑*iP* **P** **17 20 58.0 +0.7**
PRA *ex* x 17 21 13.0
PRA pP pP 17 21 18.0 +5.6
VOY Vojsko 90.54 316 *eP* **P** **17 20 58.0 +0.3**
VOY *e* pP 17 21 08.6 -4.2
VOY *e* pP 17 21 13.3 +0.5
BSD Bornholm Skovb 90.59 325⇑*iP* **P** **17 20 57.2 -0.5**
BSD pmax pmax
comp=Z,37nm,1.0s,mb5.7
BSD Bornholm Skovb 90.59 325⇑*iP* **P** **17 20 57.2 -0.5**
comp=Z,37nm,1.0s,mb5.7
AQU L'Aquila 90.65 312⇑*iP* **P** **17 20 58.5 +0.2**
AQU pmax pmax
comp=Z,64nm,0.9s,mb6.0
AQU MLR MLR
comp=Z,410nm,22.0s,MS4.8
AQU L'Aquila 90.65 312⇑*iP* **P** **17 20 58.5 +0.2**
comp=Z,64nm,0.9s,mb6.0
AQU LR LR
comp=Z,410nm,22.0s,MS4.8
CADS Cadrg 90.67 316 *i* P **P** **17 20 58.4 +0.1**
BRG Berggiesshubel 90.85 321 *eP* **P** **17 20 59.7 +0.7**
comp=Z,47nm,1.0s,mb5.8
BRG *e*pP pP 17 21 14.3 +0.2
BRG *e*S S 17 31 56.0 +4.2
BRG Berggiesshubel 90.85 321 *i* P **P** **17 20 59.6 +0.5**
comp=Z,47nm,1.0s,mb5.8
BRG *i* pP pP 17 21 14.6 +0.5
comp=Z,42nm,1.6s
BRG sP sP 17 21 21.0 +1.2
BRG *e*PP PP 17 24 36.8 +1.4
comp=Z,20nm,1.3s
BRG S S 17 31 54.0 +2.2
BRG *e* 17 35 56.3
comp=Z,2.3nm,0.7s
BRG
comp=N,239nm,25.2s
BRG
comp=E,516nm,25.0s
BRG
comp=Z,513nm,21.9s
BRG Berggiesshubel 90.85 321 *i* P **P** **17 20 59.6 +0.6**
BRG *i **PP pP 17 21 14.6 +0.5
BRG *e* 17 24 36.8
BRG S S 17 31 54.0 +2.2
BRG pmax pmax
comp=Z,28nm,1.0s,mb5.5
BRG pmax pmax
comp=Z,25nm,1.6s,mb5.3
BRG pmax pmax
comp=Z,12nm,1.3s,mb5.1
BRG pmax pmax
comp=Z,1.0nm,0.7s,mb4.2
BRG MLR MLR
comp=N,143nm,25.2s,MS4.7
BRG MLR MLR
comp=E,309nm,25.0s,MS4.7
BRG MLR MLR
comp=Z,307nm,21.9s,MS4.7
GEC2 GERESS Array S 90.87 319 *eP* **P** **17 20 59.8 +0.6**
comp=Z,55nm,1.1s,mb5.8
GEC2 *e*S S 17 31 55.4 +3.3
GEC2 GERESS Array S 90.87 319 *eP* **P** **17 20 59.8 +0.6**
GEC2 *e*S S 17 31 55.4 +3.3
GEC2 pmax pmax
comp=Z,55nm,1.1s,mb5.8
GERES GERESS Array B 90.87 319 P **P** **17 20 59.7 +0.5**
comp=Z,23nm,0.9s,mb5.5,baz=94,slow=4.4,SNR=74
GERES pP pP 17 21 15.5 +1.2
comp=Z,11nm,0.9s,baz=111,slow=3.3,SNR=8.1
KHC Kasperske Hory 90.97 319 *eP* **P** **17 21 00.2 +0.6**
KHC *e**PP pP 17 21 18.9 +4.2
KHC *e*S S 17 31 52.3 -0.7
KHC MLR MLR
comp=Z,700nm,21.2s,MS5.1
KHC Kasperske Hory 90.97 319 *eP* **P** **17 20 59.8 +0.1**
comp=Z,9.8nm,0.9s,mb5.1
KHC Kasperske Hory 90.97 319 *eP* **P** **17 21 00.2 +0.6**
KHC *e*pP pP 17 21 18.9 +4.2
KHC *e*S S 17 31 52.3 -0.7
KHC AMS AMS 18 11 00.0
comp=Z,700nm,21.2s
KBA Koelnbreinsper 90.99 317⇑*iP* **P** **17 20 59.7 -0.1**
comp=Z,27nm,1.1s,mb5.5
RUE Ruedersdorf 91.06 322 *eP* **P** **17 21 00.6 +0.6**
comp=Z,104nm,1.1s,mb6.1
RUE Ruedersdorf 91.06 322 *eP* **P** **17 21 00.6 +0.6**
comp=Z,72nm,1.0s,mb6.0
RJOB Jochberg 91.40 318 *eP* **P** **17 21 01.3 -0.4**
comp=Z,30nm,1.1s,mb5.5
RJOB *e*S S 17 32 01.8 +4.8
WET Wettzell 91.43 319 *eP* **P** **17 21 02.3 +0.5**
comp=Z,49nm,1.0s,mb5.8
WET *e*S S 17 32 01.5 +4.3
WET Wettzell 91.43 319 *eP* **P** **17 21 02.3 +0.5**
WET *e*S S 17 32 01.5 +4.3
WET pmax pmax
comp=Z,49nm,1.0s,mb5.8
RGN Rugen 91.47 324 *eP* **P** **17 21 00.4 -1.4**
comp=Z,39nm,1.3s,mb5.6
CLL Collm 91.47 321 *eP* **P** **17 21 02.1 +0.2**
comp=Z,28nm,1.1s,mb5.5
CLL *e*S S 17 32 00.1 +2.6
CLL Collm 91.47 321⇑*iP* **P** **17 21 01.2 -0.7**
CLL *i **PP pP 17 21 16.3 -0.7
CLL *e*S S 17 31 51.0 -6.5
CLL pmax pmax
comp=Z,28nm,1.1s,mb5.5
CLL MLR MLR
comp=Z,500nm,22.9s,MS4.9
CLL Collm 91.47 321⇑*iP* **P** **17 21 01.2 -0.7**
comp=Z,28nm,1.1s,mb5.5
CLL *i* pP pP 17 21 16.3 -0.7
CLL *e* 17 21 27.0
CLL *e*S S 17 31 51.0 -6.5
CLL LR LR
comp=Z,500nm,22.9s,MS4.9
CLL Collm 91.47 321⇑*iP* **P** **17 21 01.2 -0.7**
comp=Z,28nm,1.1s,mb5.5
CLL *i* pP pP 17 21 16.3 -0.7
CLL *e* 17 21 27.0
CLL *e* 17 21 37.0
CLL *e*S S 17 31 57.0 -0.5
CLL *e*PS PS 17 33 09.0 -4.0
CLL *e*SSSS 17 44 42.0
ABTA Abfaltersbach 91.54 317⇑*iP* **P** **17 21 01.8 -0.5**
comp=Z,24nm,1.0s,mb5.5
NKC Novy Kostel 91.77 320 *eP* **P** **17 21 04.1 +0.8**
NKC *e**PP pP 17 21 21.7 +3.3
NKC MLR MLR
comp=Z,600nm,27.0s,MS4.9
NKC Novy Kostel 91.77 320 *eP* **P** **17 21 04.1 +0.8**
NKC *e*pP pP 17 21 21.7 +3.3
NKC *e*S S 17 32 21.8 +22
NKC AMS AMS 18 09 20.0
comp=Z,600nm,27.0s
TANN Tannenbergstha 91.77 320 *eP* **P** **17 21 03.6 +0.3**
comp=Z,21nm,1.2s,mb5.3
TANN *e*pP pP 17 21 18.2 -0.2
TANN *e*S S 17 32 04.9 +4.7
ROTZ Rotzenmuhle 91.90 320 *eP* **P** **17 21 04.7 +0.8**
comp=Z,33nm,1.1s,mb5.6
ROTZ *e*pP pP 17 21 19.4 +0.4
ROTZ *e*S S 17 32 05.7 +4.3
SPB4 Spitsbergen Ar 92.12 348⇑*iP* **P** **17 21 02.7 -1.7**
WTTA Wattenberg 92.17 317⇑*iP* **P** **17 21 05.0 -0.2**
comp=Z,50nm,0.9s,mb5.8
WATA Walderalm 92.21 317⇓*iP* **P** **17 21 04.9 -0.5**
comp=Z,20nm,0.9s,mb5.5
MOX Moxa 92.32 320 *eP* **P** **17 21 05.9 +0.1**
comp=Z,32nm,1.3s,mb5.5
MOX *e* pP 17 21 20.8 -0.1
MOX Moxa 92.32 320 *eP* **P** **17 21 06.0 +0.2**
comp=Z,23nm,1.1s,mb5.4
MOX *e*pP pP 17 21 20.5 -0.4
MOX *e*S S 17 32 08.8 +3.7
MOX Moxa 92.32 320 *eP* **P** **17 21 05.9 +0.1**
MOX *e* pP 17 21 20.8 -0.1

MOX pmax pmax
comp=Z,32nm,1.3s,mb5.5
FUR Furstenfeldbru 92.44 318 *eP* **P 17 21 06.1 -0.4**
comp=Z,47nm,1.1s,mb5.7
FUR *eS* S 17 32 09.7 +3.4
FUR Furstenfeldbru 92.44 318 *eP* **P 17 21 06.1 -0.4**
FUR *eS* S 17 32 09.7 +3.4
FUR pmax pmax
comp=Z,47nm,1.1s,mb5.7
MOTA Moosalm 92.53 317⇑ *iP* **P 17 21 06.7 -0.2**
comp=Z,43nm,0.9s,mb5.9,SNR=12
GRA1 Grafenberg Arr 92.53 319 *eP* **P 17 21 07.5 +0.6**
comp=Z,58nm,1.2s,mb5.9
GRA1 *e*pP pP 17 21 21.5 -0.4
GRA1 *eS* S 17 32 11.2 +4.1
GRA1 LR LR
comp=Z,400nm,20.9s,MS4.8
GRF Grafenberg Arr 92.53 319 *eP* **P 17 21 07.5 +0.6**
comp=Z,58nm,1.2s,mb5.9
GRF *e*pP pP 17 21 21.5 -0.4
GRF *eS* S 17 32 11.2 +4.1
GRF *eL* 18 13 45.1
comp=Z,400nm,20.9s
GRF Grafenberg Arr 92.53 319 *eP* **P 17 21 07.5 +0.6**
GRF *e**PP pP 17 21 21.5 -0.4
GRF *eS* S 17 32 11.2 +4.1
GRF pmax pmax
comp=Z,58nm,1.2s,mb5.9
GRF MLR MLR
comp=Z,400nm,20.9s,MS4.8
GRF Grafenberg Arr 92.53 319 *eP* **P 17 21 07.5 +0.6**
GRF *e**PP pP 17 21 21.5 -0.4
GRF *eS* S 17 32 11.2 +4.1
GRF pmax pmax
comp=Z,58nm,1.2s,mb5.9
GRF MLR MLR
comp=Z,400nm,20.9s,MS4.8
RETA Reutte 92.77 317⇑ *iPcP* PcP 17 21 08.0 -0.7
comp=Z,35nm,0.9s,SNR=7.3
FETA Feichten 92.78 317 *i PcP* PcP 17 21 08.3 -0.3
comp=Z,26nm,1.0s,SNR=13
NOA NORSAR Array B 92.88 331 P **P 17 21 07.5 -0.6**
comp=Z,16nm,0.9s,mb5.4,baz=95,slow=5.0,SNR=41
NOA pP pP 17 21 23.3 0.0
comp=Z,5.3nm,0.7s,baz=94,slow=4.6,SNR=4.8
NOA PP PP 17 24 53.7 +2.7
comp=Z,4.6nm,0.8s,baz=91,slow=7.7,SNR=6.5
NOA LR LR 18 09 25.1
comp=Z,453nm,21.6s,MS4.9,baz=105,slow=40
NOA NORSAR Array B 92.88 331 P **P 17 21 07.6 -0.6**
NOA *PP pP 17 21 23.3 0.0
NOA 17 24 53.7
NOA NORSAR Array B 92.88 331 P **P 17 21 07.5 -0.6**
NOA pP pP 17 21 23.3 0.0
NOA PP PP 17 24 53.7 +2.7
NOA LR LR 18 09 25.1
VNA2 Neumayer--Watz 93.02 198 *eP* **P 17 21 09.1 +0.4**
NAO01 NORSAR Array S 93.03 331⇑ *iP* **P 17 21 07.7 -1.2**
comp=Z,20nm,1.1s,mb5.5
KBS Kingsbay 93.04 349⇑ *eP* **P 17 21 07.6 -1.0**
KBS pmax pmax
comp=Z,11nm,0.8s,mb5.3
KBS Kingsbay 93.04 349 PFAKE 17 21 20.0 +11
KBS LR LR
comp=Z,1µm,19.0s,MS5.3
CLZ Clausthal 93.13 322 *eP* **P 17 21 09.9 +0.3**
comp=Z,26nm,1.1s,mb5.6
CLZ *e*pP pP 17 21 24.3 -0.4
CLZ *eS* S 17 32 15.1 +2.8
CLZ Clausthal 93.13 322 *eP* **P 17 21 09.9 +0.3**
CLZ *e**PP pP 17 21 24.3 -0.4
CLZ *eS* S 17 32 15.1 +2.8
CLZ pmax pmax
comp=Z,26nm,1.1s,mb5.6
BSEG Bad Segeberg 93.21 324 *eP* **P 17 21 10.3 +0.4**
comp=Z,28nm,1.0s,mb5.7
BSEG *eS* S 17 32 15.7 +2.8
NRDL Niedersach Rie 93.31 322 *eP* **P 17 21 10.7 +0.3**
comp=Z,27nm,1.1s,mb5.6
NRDL *eS* S 17 32 15.4 +1.6
UBBA Unterbreizbach 93.35 321 *eP* **P 17 21 10.6 0.0**
comp=Z,27nm,1.6s,mb5.4
UBBA *eS* S 17 32 16.6 +2.4
DAVA Damuels 93.36 317 *i PcP* PcP 17 21 11.2 -0.1
comp=Z,56nm,0.9s,SNR=12
KEST Kesra 93.51 305 P **P 17 21 13.0 +1.3**
comp=Z,12nm,0.9s,mb5.3,baz=208,slow=2.1,SNR=19
KEST LR LR 18 01 30.5
comp=Z,211nm,21.9s,MS4.6,baz=316,slow=34
KONO Kongsberg 93.66 329⇑ *eP* **P 17 21 11.2 -0.6**
KONO pmax pmax
comp=Z,14nm,0.9s,mb5.4
KONO MLR MLR
comp=Z,729nm,21.0s,MS5.1
KONO Kongsberg 93.66 329⇑ *eP* **P 17 21 11.2 -0.7**
comp=Z,14nm,0.9s,mb5.4
KONO LR LR
comp=Z,729nm,21.0s,MS5.1
STU Stuttgart 93.84 319 *eP* **P 17 21 13.1 +0.2**
comp=Z,26nm,1.0s,mb5.6
STU *eS* S 17 32 22.9 +4.2
TNS Taunus Mts 94.33 320 *eP* **P 17 21 15.6 +0.5**
comp=Z,66nm,0.9s,mb6.1
TNS *eS* S 17 32 28.7 +5.8
TNS Taunus Mts 94.33 320 *eP* **P 17 21 15.6 +0.5**
TNS *eS* S 17 32 28.7 +5.8
TNS pmax pmax
comp=Z,66nm,0.9s,mb6.1
BFO Black Forest 94.42 318 *eP* **P 17 21 15.2 -0.4**
comp=Z,13nm,1.0s,mb5.3
BFO *eS* S 17 32 25.8 +2.1
BFO Black Forest 94.42 318 *eP* **P 17 21 15.2 -0.4**
BFO *eS* S 17 32 25.8 +2.1
BFO pmax pmax
comp=Z,13nm,1.0s,mb5.3
IBBN Ibbenburen 94.75 322 *eS* S 17 32 29.0 +2.6
BUG Bochum--Univer 95.07 321 *eS* S 17 32 31.7 +2.5
CDF Champ du Feu 95.12 318 *eP* **P 17 21 17.9 -0.9**
comp=Z,23nm,1.1s,mb5.2
CDF Champ du Feu 95.12 318 *eP* **P 17 21 17.9 -0.9**
CDF pmax pmax
comp=Z,11nm,1.1s,mb5.2
CDF Champ du Feu 95.12 318 *eP* **P 17 21 17.9 -0.9**
comp=Z,11nm,1.1s,mb5.2
ECH Echery 95.20 318 PFAKE 17 21 30.0 +11
ECH LR LR
comp=Z,429nm,21.0s,MS4.9
LPG La Plagne 95.53 315 *eP* **P 17 21 20.4 -0.3**
comp=Z,24nm,1.1s,mb5.2
LPG La Plagne 95.53 315 *eP* **P 17 21 20.4 -0.3**
LPG pmax pmax
comp=Z,12nm,1.1s,mb5.2
LPG La Plagne 95.53 315 *eP* **P 17 21 20.4 -0.3**
comp=Z,12nm,1.1s,mb5.2
LPL La Plagne 95.54 315 *eP* **P 17 21 20.4 -0.4**
comp=Z,24nm,0.9s,mb5.3
LPL La Plagne 95.54 315 *eP* **P 17 21 20.4 -0.4**
LPL pmax pmax
comp=Z,12nm,0.9s,mb5.3
LPL La Plagne 95.54 315 *eP* **P 17 21 20.4 -0.4**
comp=Z,12nm,0.9s,mb5.3
BNI Bardonecchia 95.58 315 PFAKE 17 21 30.0 +9.0
BNI LR LR
comp=Z,541nm,22.0s,MS5.0
HAU Haudompre 95.75 318 *eP* **P 17 21 20.8 -0.9**
comp=Z,30nm,1.0s,mb5.4
HAU *e*MLR MLR
comp=Z,493nm,21.5s,MS4.7
HAU Haudompre 95.75 318 *eP* **P 17 21 20.8 -0.9**
HAU pmax pmax
comp=Z,15nm,1.0s,mb5.4
HAU MLR MLR
comp=Z,490nm,21.5s,MS5.0
HAU Haudompre 95.75 318 *eP* **P 17 21 20.8 -0.9**
comp=Z,15nm,1.0s,mb5.4
HAU LR LR
comp=Z,490nm,21.5s,MS5.0
WLF Walferdange 95.83 319 P **P 17 21 22.6 +0.6**
WLF Walferdange 95.83 319 *eP* **P 17 21 22.4 +0.4**
comp=Z,17nm,1.1s,mb5.4
WLF *eS* S 17 32 38.0 +2.1
MEM Membach 95.89 320 P **P 17 21 22.4 +0.2**
comp=Z,5.4nm,1.0s,mb4.9
CABF La Chapelle 95.96 316 *eP* **P 17 21 22.3 -0.4**
comp=Z,34nm,1.0s,mb5.4
CABF La Chapelle 95.96 316 *eP* **P 17 21 22.3 -0.4**
CABF pmax pmax
comp=Z,17nm,1.0s,mb5.4
CABF La Chapelle 95.96 316 *eP* **P 17 21 22.3 -0.4**
comp=Z,17nm,1.0s,mb5.4
ORIF Oris-en-Rattie 96.15 315 *eP* **P 17 21 23.1 -0.5**
comp=Z,28nm,1.2s,mb5.2
ORIF *e*MLR MLR
comp=Z,500nm,21.8s,MS4.7
ORIF Oris-en-Rattie 96.15 315 *eP* **P 17 21 23.1 -0.5**
ORIF pmax pmax
comp=Z,14nm,1.2s,mb5.3
ORIF Oris-en-Rattie 96.15 315 *eP* **P 17 21 23.1 -0.5**
comp=Z,14nm,1.2s,mb5.3
BCLA Clavier 96.34 320 P **P 17 21 23.7 -0.6**
comp=Z,9.4nm,1.6s,mb5.0
MEZF Maizieres J'vi 96.59 318 *eP* **P 17 21 24.9 -0.6**
TAM Tamanrasset 96.62 292 *eP* **P 17 21 27.5 +1.3**
TAM pmax pmax
comp=Z,2.0nm,0.3s,mb5.0
TAM Tamanrasset 96.62 292 *eP* **P 17 21 27.4 +1.2**
comp=Z,1.5nm,0.3s,mb4.9
DOU Dourbes 96.81 320 P **P 17 21 26.3 -0.2**
comp=Z,6.3nm,1.3s,mb4.9
SNF Seneffe 96.99 320 P **P 17 21 27.6 +0.4**
BAIF Baives 97.06 320 *eP* **P 17 21 27.1 -0.5**
comp=Z,26nm,0.9s,mb5.4
BAIF Baives 97.06 320 *eP* **P 17 21 27.1 -0.5**
BAIF pmax pmax
comp=Z,13nm,0.9s,mb5.4
BAIF Baives 97.06 320 *eP* **P 17 21 27.1 -0.5**
comp=Z,13nm,0.9s,mb5.3
LOR Lormes 97.46 317 *eP* **P 17 21 27.6 -1.8**
comp=Z,41nm,1.2s,mb5.4
LOR *e*MLR MLR
comp=Z,414nm,22.5s,MS4.6
LOR Lormes 97.46 317 *eP* **P 17 21 27.6 -1.8**
LOR pmax pmax
comp=Z,21nm,1.2s,mb5.4
LOR MLR MLR
comp=Z,410nm,22.5s,MS4.9
LOR Lormes 97.46 317 *eP* **P 17 21 27.6 -1.8**
comp=Z,20nm,1.2s,mb5.4
LOR LR LR
comp=Z,410nm,22.5s,MS4.9
SMF Signal de Mont 97.51 316 *eP* **P 17 21 28.9 -0.8**
comp=Z,28nm,1.0s,mb5.5
SMF Signal de Mont 97.51 316 *eP* **P 17 21 28.9 -0.8**
SMF pmax pmax
comp=Z,14nm,1.0s,mb5.5
SMF Signal de Mont 97.51 316 *eP* **P 17 21 28.9 -0.8**
comp=Z,14nm,1.0s,mb5.5
AVF Avril sur Loir 97.83 317 *eP* **P 17 21 29.4 -1.7**
comp=Z,13nm,0.9s,mb5.1
AVF Avril sur Loir 97.83 317 *eP* **P 17 21 29.4 -1.7**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb5.2
AVF Avril sur Loir 97.83 317 *eP* **P 17 21 29.4 -1.7**
comp=Z,6.5nm,0.9s,mb5.2
BGF Bois d'Agland 98.20 316 *eP* **P 17 21 31.3 -1.5**
comp=Z,36nm,1.1s,mb5.5
BGF Bois d'Agland 98.20 316 *eP* **P 17 21 31.3 -1.5**
BGF pmax pmax
comp=Z,18nm,1.1s,mb5.5
BGF Bois d'Agland 98.20 316 *eP* **P 17 21 31.3 -1.5**
comp=Z,18nm,1.1s,mb5.5
DAG Danmarks Havn 99.76 348⇓ *eP* Pdif 17 21 37.3 -2.3
DAG pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
DAG Danmarks Havn 99.76 348⇓ *iP* Pdif 17 21 37.3 -2.3
comp=Z,3.0nm,0.8s
LDF La Druitiere 100.01 319 *eP* Pdif 17 21 40.0 -0.7
comp=Z,30nm,1.0s
LDF La Druitiere 100.01 319 *eP* Pdif 17 21 40.0 -0.7
LDF pmax pmax
comp=Z,15nm,1.0s
LDF La Druitiere 100.01 319 *eP* Pdif 17 21 40.0 -0.7
comp=Z,15nm,1.0s
TOA0 Torodi Ar. Sit 100.14 283 *e*Pdif Pdif 17 21 42.1 +0.9
TORD Torodi Ar. Bea 100.14 283 P Pdif 17 21 42.3 +1.1
comp=Z,2.4nm,1.0s,baz=84,slow=3.3,SNR=7.4
TORD pP 17 21 56.8
comp=Z,3.0nm,0.9s,baz=85,slow=3.3,SNR=4.7
TORD PP PP 17 25 54.0 +5.6
comp=Z,2.0nm,1.0s,baz=67,slow=6.2,SNR=4.0
TORD PKKPbc PKKPbc 17 37 58.8 -1.1
comp=Z,0.2nm,0.4s,baz=311,slow=3.0,SNR=5.3
FLN La Foliniere 100.23 319 *eP* Pdif 17 21 40.8 -0.9
comp=Z,36nm,1.2s
FLN *e*MLR MLR
comp=Z,372nm,21.2s,MS4.6
FLN La Foliniere 100.23 319 *eP* Pdif 17 21 40.8 -0.9
FLN pmax pmax
comp=Z,18nm,1.2s
FLN MLR MLR
comp=Z,370nm,21.3s,MS4.9
FLN La Foliniere 100.23 319 *eP* Pdif 17 21 40.8 -0.9
comp=Z,18nm,1.2s
FLN LR LR
comp=Z,370nm,21.3s,MS4.9
MFF Saint Martin d 100.25 317 *eP* Pdif 17 21 41.3 -0.4
comp=Z,15nm,1.0s
MFF Saint Martin d 100.25 317 *eP* Pdif 17 21 41.3 -0.4
MFF pmax pmax
comp=Z,7.0nm,1.0s
MFF Saint Martin d 100.25 317 *eP* Pdif 17 21 41.3 -0.4
comp=Z,7.4nm,1.0s
TRF Thorofare Moun 101.03 26 *e*Pdif Pdif 17 21 43.4 -1.8
comp=Z,2.8nm,0.8s
COLA College 101.65 24 PFAKE 17 22 00.0 +12
COLA LR LR
comp=Z,633nm,19.0s,MS5.2
ESLA Sonseca Array 103.84 310 PFAKE 17 22 10.0 +12
ESLA LR LR
comp=Z,2µm,19.0s,MS5.6
EGAK Eagle 104.36 23 PFAKE 17 22 10.0 +10
EGAK LR LR
comp=Z,1µm,21.0s,MS5.4
INK Inuvik 105.40 18 Pdiff Pdif 17 22 03.2 -1.4
comp=Z,1.0nm,0.6s,baz=347,slow=5.6,SNR=7.6
INK PKiKP PKiKP 17 26 16.0 -1.8
comp=Z,3.0nm,0.9s,baz=328,slow=3.7,SNR=5.0
MTE Manteigas 106.45 311 PFAKE 17 26 30.0 +9.4
MTE LR LR
comp=Z,299nm,19.0s,MS4.9
DBIC Dimbokro 106.47 276 PFAKE 17 26 30.0 +8.6
DBIC LR LR
comp=Z,553nm,21.0s,MS5.1
PPT Papeete 107.11 109 *e*LR LR 17 57 42.0
comp=Z,481nm,23.8s
RES Resolute Bay 107.98 4 PKiKP PKiKP 17 26 20.5 -2.0
comp=Z,2.0nm,0.8s,baz=206,slow=1.3,SNR=6.5
YKA Yellowknife Ar 115.14 18 PKP PKiKP 17 26 34.9 -1.4
comp=Z,3.8nm,0.8s,baz=311,slow=2.1,SNR=35
YKA PP PP 17 27 32.4 -3.9
comp=Z,2.1nm,0.8s,baz=329,slow=7.6,SNR=6.3
YKA PKKPbc PKKPbc 17 37 11.8 -2.4
comp=Z,0.2nm,0.5s,baz=120,slow=3.3,SNR=5.5
YKA Yellowknife Ar 115.14 18 PKP PKiKP 17 26 34.9 -1.4
YKA PP PP 17 27 32.4 -3.9
YKA PKKPbc PKKPbc 17 37 11.8 -2.4
TAOE Nuku Hiva Isla 117.52 102 *e*LR LR 18 02 32.1
comp=Z,457nm,23.7s
RKT Rikitea 119.19 119 *e*LR LR 18 03 18.8
comp=Z,429nm,30.2s
OSD Olympics--Snow 121.11 34 P PKPdf 17 26 48.9 +0.6
A05A Maple Falls 121.30 32⇑P PKPdf 17 26 47.3 -1.3
baz=121
JCW Jim Creek 121.86 33 *e*PKPdf PKPdf 17 26 49.1 -0.6
E03A Lebam 121.90 35⇓P PKPdf 17 26 49.4 -0.5
baz=122
B06A Marblemount 121.91 32⇓P PKPdf 17 26 49.4 -0.3
baz=122
D05A Enumclaw 122.42 34⇓P PKPdf 17 26 49.8 -1.0
baz=122
EDM Edmonton 122.57 24 *e*PKiKP PKPdf 17 26 49.3 -1.6
LON Longmire 122.78 34 *e*PKiKP PKPdf 17 26 50.5 -1.0
TDL Tradedollar La 122.78 35 P PKPdf 17 26 51.8 +0.3
F04A Amboy 122.91 35⇓P PKPdf 17 26 51.5 -0.3
baz=123
ETW Entiat 123.08 32 *e*PKPdf PKPdf 17 26 51.2 -0.8
COR Corvallis 123.14 37 PFAKE 17 27 00.0 +7.7
COR LR LR
comp=Z,617nm,21.0s,MS5.2
B08A Colville Reser 123.14 31⇓P PKPdf 17 26 51.3 -0.8
baz=123
RNO Roman Nose 123.23 38 P PKPdf 17 26 53.0 +0.5
G04A Mulino 123.28 36⇓P PKPdf 17 26 52.6 0.0
baz=123
FCC Fort Churchill 123.33 10 *e*PKPdf PKPdf 17 26 50.3 -1.9
FCC *e*PP PP 17 28 24.7 -7.7
NAC Naches 123.33 34 P PKPdf 17 26 52.7 +0.1
B09A Rice 123.71 31⇓P PKPdf 17 26 52.4 -0.8
baz=124
H04A Detroit Lake 123.75 36⇓P PKPdf 17 26 52.6 -0.8
baz=124
C09A Chrisman Ranch 124.04 31⇓P PKPdf 17 26 53.6 -0.3
baz=124
D08A Wollman Farm, 124.17 32⇑P PKPdf 17 26 53.7 -0.5
baz=124
A11A Hall Mountain, 124.24 29⇓P PKPdf 17 26 53.6 -0.6
baz=124
HAWA Hanford 124.25 33 *e*PKPdf PKPdf 17 26 54.2 -0.1
HAWA LR LR
comp=Z,562nm,19.0s,MS5.2
NEW Newport 124.33 30 *e*PKIKP PKPdf 17 26 54.3 -0.1
G06A Carlson Farm, 124.33 35⇑P PKPdf 17 26 54.4 -0.1
baz=124
F07A Phinny Hill Vi 124.34 34⇑P PKPdf 17 26 54.1 -0.4
baz=124
HUMO Hull Mountain 124.42 39 *e*PKPdf PKPdf 17 26 54.7 -0.1
HUMO LR LR
comp=Z,410nm,20.0s,MS5.1
E08A Dider Farm, El 124.45 33⇓P PKPdf 17 26 53.7 -1.0
baz=124
D09A Jones Farm, Ri 124.49 32⇓P PKPdf 17 26 53.6 -1.2
baz=124
B11A Sandpoint 124.59 30⇓P PKPdf 17 26 54.8 -0.1
baz=124
A12A Yaak River Ran 124.60 29⇓P PKPdf 17 26 54.7 -0.3
baz=124
VIPM Ingram Point 124.77 36 PKIKP PKPdf 17 26 55.7 +0.3
E09A Wood Farm, Sta 124.93 32⇑P PKPdf 17 26 55.1 -0.6
baz=125
F08A Pendleton 125.03 33⇑P PKPdf 17 26 55.2 -0.7
baz=125
YBH Yreka Blue Hor 125.04 39 *e*PKIKP PKPdf 17 26 55.2 -0.8
D10A Wagner Farm, O 125.04 31⇓P PKPdf 17 26 55.5 -0.3
baz=125
G08A Pilot Rock 125.25 34⇓P PKPdf 17 26 55.8 -0.5
baz=125
FFC Flin Flon 125.27 16 *i* PKIKP PKPdf 17 26 55.1 -0.9
FFC Flin Flon 125.27 16 *e*PKPdf PKPdf 17 26 54.9 -1.1
FFC *e*PP PP 17 28 35.9 -10
FFC LR LR
comp=Z,953nm,19.0s,MS5.5
E10A Myers Farm, Un 125.50 32⇓P PKPdf 17 26 56.4 -0.3
baz=125
C12B Naegeli Ranch, 125.52 30⇑P PKPdf 17 26 56.2 -0.5
baz=125
D11A Klaveano Farm, 125.53 31⇓P PKPdf 17 26 55.7 -1.1
baz=125
B13A Whitefish 125.56 29⇑P PKPdf 17 26 56.9 +0.1
baz=125
F09A S2 Ranch, Elgi 125.56 33⇑P PKPdf 17 26 56.6 -0.3
baz=125
K05A Summer Lake 125.62 38⇑P PKPdf 17 26 56.5 -0.6
baz=125
A14A Double T Ranch 125.63 28⇓P PKPdf 17 26 56.1 -0.8
baz=125
I07A Izee 125.66 35⇓P PKPdf 17 26 57.0 -0.1
baz=126
WDC Whiskeytown Da 125.75 41 *e*PKIKP PKPdf 17 26 55.7 -1.7
WDC *e* 17 27 11.4
F10A Beach Ranch, E 125.76 32⇑P PKPdf 17 26 56.9 -0.4
baz=126
BSMT Bassoo Peak 125.77 29 *e*PKPdf PKPdf 17 26 56.1 -1.1
H08A Prairie City 125.88 35⇓P PKPdf 17 26 57.8 +0.3
baz=126
G09A Cove 125.91 33⇓P PKPdf 17 26 56.4 -1.2
baz=126
A15A Johnson Ranch, 125.94 27⇑P PKPdf 17 26 56.4 -1.1
baz=126
C13A Hot Springs 125.99 29⇓P PKPdf 17 26 56.9 -0.7
baz=126
E11A Bogner Ranch, 126.05 31⇓P PKPdf 17 26 57.0 -0.8
baz=126
JTMT Jette 126.08 29 *e*PKPdf PKPdf 17 26 56.3 -1.5
JTMT *ep*PKPdf pPKPdf 17 27 11.7 -1.7
JTMT *e*PP PP 17 28 50.5 -0.9
HOPS Hopland 126.21 43 PFAKE 17 27 10.0 +12
HOPS LR LR
comp=Z,480nm,20.0s,MS5.2
G10A Bishop Farm, J 126.26 33⇑P PKPdf 17 26 57.7 -0.5
baz=126
E12A Beaver Dam Sad 126.34 31⇓P PKPdf 17 26 57.7 -0.7
baz=126
H09A Durkee 126.35 34⇓P PKPdf 17 26 57.5 -1.0
baz=126
LBCM Butte Creek Ri 126.38 40 P PKPdf 17 26 58.9 +0.2
SWMT Swartz Lake 126.39 29 *e*PKPdf PKPdf 17 26 57.1 -1.3
F11A Grangeville 126.39 32⇓P PKPdf 17 26 57.3 -1.2
baz=126
D13A Huson 126.45 30⇑P PKPdf 17 26 57.9 -0.7
baz=126
MOD Modoc 126.45 38 *e*PKPdf PKPdf 17 26 58.2 -0.5
MOD LR LR
comp=Z,430nm,19.0s,MS5.1
A16A West Butte Ran 126.47 26⇓P PKPdf 17 26 57.5 -1.1
baz=126
B15A Bradely Ranch, 126.50 28⇑P PKPdf 17 26 57.5 -1.1
baz=126
G11A Walters Elk Ra 126.65 32⇓P PKPdf 17 26 58.1 -0.9
baz=126
I09A Lost Marbles R 126.74 35⇑P PKPdf 17 26 58.5 -0.7
baz=126
MCCM Marconi Confer 126.76 43 PFAKE 17 27 10.0 +11
MCCM LR LR
comp=Z,502nm,20.0s,MS5.2
B16A M & M Farms, S 126.82 27⇓P PKPdf 17 26 58.4 -0.7
baz=127
SLMT Seeley Lake 126.82 29 *e*PKPdf PKPdf 17 26 57.7 -1.5
C15A Salmond Ranch, 126.86 28⇑P PKPdf 17 26 58.7 -0.6
baz=127
A17A Triple J Farms 126.87 26⇑P PKPdf 17 26 58.5 -0.8
baz=127
MSO Missoula 126.89 30 *e*PKPdf PKPdf 17 26 58.1 -1.2
MSO LR LR
comp=Z,521nm,19.0s,MS5.2
H10A Noah's Angus R 126.91 33⇓P PKPdf 17 26 58.9 -0.6
baz=127
D14A Greenough 126.92 29⇓P PKPdf 17 26 58.5 -1.0
baz=127
F12A Elk City 126.95 32⇑P PKPdf 17 26 58.4 -1.1
baz=127
E13A Victor 127.03 30⇓P PKPdf 17 26 58.8 -0.9
baz=127
J09A Fry Pan Ranch, 127.12 35⇓P PKPdf 17 27 00.1 +0.1
baz=127
WVOR Wild Horse Val 127.15 37 *e*PKIKP PKPdf 17 26 59.8 -0.2
CHMT Chamberlain Mo 127.17 29 *e*PKPdf PKPdf 17 26 58.8 -1.1
CHMT *ep*PKPdf pPKPdf 17 27 13.5 -2.0
H11A Donnelly 127.24 33⇓P PKPdf 17 26 59.2 -0.9
baz=127
C16A Fuhringer Ranc 127.25 28⇓P PKPdf 17 26 59.3 -0.7
baz=127
A18A Metzger Ranch, 127.26 25⇓P PKPdf 17 26 59.4 -0.6
baz=127
B17A L&G Farms, Che 127.31 27⇑P PKPdf 17 26 59.9 -0.2
baz=127
E14A Clinton 127.40 30⇑P PKPdf 17 26 59.7 -0.7
baz=127
F13A Darby 127.40 31⇑P PKPdf 17 26 59.2 -1.2
baz=127
D15A Lincoln 127.43 29⇑P PKPdf 17 26 59.5 -0.9
baz=127
BEKR Beckwourth 127.54 40⇑P PKPdf 17 27 00.5 -0.4
baz=127
J10A Berg Farm, Mel 127.63 35⇓P PKPdf 17 27 00.5 -0.5
baz=127
SCHQ Schefferville 127.67 351 PKP PKPdf 17 26 59.1 -1.5
comp=Z,12nm,0.8s,baz=50,slow=2.8,SNR=11
SCHQ PP PP 17 28 58.2 -3.2
comp=Z,6.7nm,0.8s,baz=350,slow=6.7,SNR=4.1
SCHQ Schefferville 127.67 351 *e*PKPdf PKPdf 17 26 59.1 -1.5
SCHQ *e*PP PP 17 28 54.1 -7.3
B18A Beardsley Farm 127.69 26⇓P PKPdf 17 27 00.2 -0.7
baz=128
I11A Placerville 127.78 34⇑P PKPdf 17 27 00.9 -0.2
baz=128
E15A Deer Lodge 127.81 29⇑P PKPdf 17 27 00.9 -0.3
baz=128
C17A Wharram Farm, 127.82 27⇑P PKPdf 17 27 00.5 -0.6
baz=128
F14A Wisdom 127.88 30⇑P PKPdf 17 27 01.4 +0.1

baz=128
D16A Dana Ranch, Ca 127.90 28 ⇓P PKPdf 17 27 01.1 -0.2
baz=128
G13A Cobalt 127.93 32 ⇓P PKPdf 17 27 00.4 -1.0
baz=128
H12A Diamond D Ranc 127.96 32 ⇓P PKPdf 17 27 01.3 -0.2
baz=128
EGMT Eagleton 127.98 26 ⇑P PKPdf 17 27 01.5 +0.1
baz=128
EGMT Eagleton 127.98 26 ePKPdf PKPdf 17 27 00.8 -0.6
EGMT LR LR
comp=Z,533nm,19.0s,MS5.2
K10A MacKenzie Ranc 127.98 35 ⇓P PKPdf 17 27 01.1 -0.5
baz=128
MFID Camas Ranch 128.17 34 ⇑P PKPdf 17 27 01.4 -0.5
baz=128
E16A East Helena 128.20 29 ⇓P PKPdf 17 27 01.4 -0.5
baz=128
D17A Six Diamond Ra 128.21 27 ⇑P PKPdf 17 27 01.9 0.0
baz=128
G14A Jackson 128.22 31 ⇓P PKPdf 17 27 02.2 +0.2
baz=128
WCN Washoe City 128.24 41 ⇑P PKPdf 17 27 01.9 -0.3
baz=128
H13A Challis 128.27 32 ⇑P PKPdf 17 27 02.5 +0.4
baz=128
F15A Butte 128.30 30 ⇓P PKPdf 17 27 01.8 -0.3
baz=128
I12A Atlanta 128.31 33 ⇓P PKPdf 17 27 01.7 -0.5
baz=128
LRM Limekiln Ridge 128.33 30 ePKPdf PKPdf 17 27 00.0 -2.2
K11A Parker Ranch, 128.46 35 ⇓P PKPdf 17 27 02.3 -0.2
baz=128
CMB Columbia Colle 128.51 42 ePKIKP PKPdf 17 27 02.8 +0.1
CMB MLR MLR
comp=Z,281nm,21.0s,MS4.9
DLMT Dillon 128.58 30 ePKPdf PKPdf 17 27 02.4 -0.2
D18A Linhart Farms, 128.58 27 ⇓P PKPdf 17 27 02.7 +0.1
baz=128
E17A Martinsdale 128.64 28 ⇓P PKPdf 17 27 02.6 -0.2
baz=128
L10A Juniper Basin 128.65 36 ⇑P PKPdf 17 27 02.5 -0.4
baz=128
J12A Stokes Ranch, 128.68 34 ⇑P PKPdf 17 27 02.6 -0.4
baz=128
H14A Leadore 128.70 31 ⇑P PKPdf 17 27 02.6 -0.3
baz=128
F16A Kennard Place, 128.76 29 ⇓P PKPdf 17 27 02.6 -0.4
baz=128
G15A Dillon 128.77 30 ⇑P PKPdf 17 27 03.5 +0.4
baz=128
I13A Wildhorse Cree 128.78 33 ⇓P PKPdf 17 27 03.2 +0.1
baz=129
MCMT McKenzie Canyo 128.82 31 ePKPdf PKPdf 17 27 03.3 +0.2
MCMT ePP PP 17 29 00.5 -9.0
HLID Hailey 128.85 33 ⇑P PKPdf 17 27 03.6 +0.4
baz=129
HLID Hailey 128.85 33 ePKPdf PKPdf 17 27 03.3 0.0
HLID ePP PP 17 29 12.2 +2.4
HLID eSKPdf SKPdf 17 30 18.6 -16
HLID LR LR
comp=Z,582nm,20.0s,MS5.3
BOZ Bozeman (W) 128.86 29 ⇓P PKPdf 17 27 03.3 +0.1
baz=129
BOZ Bozeman (W) 128.86 29 ePKIKP PKPdf 17 27 02.7 -0.5
BOZ MLR MLR
comp=Z,505nm,19.0s,MS5.2
BOZ Bozeman (W) 128.86 29 ePKPdf PKPdf 17 27 02.7 -0.5
BOZ LR LR
comp=Z,505nm,19.0s,MS5.2
M10A I.L. Ranch, Tu 128.95 36 ⇓P PKPdf 17 27 03.8 +0.3
baz=129
E18A Harlowton 129.00 27 ⇓P PKPdf 17 27 03.4 0.0
baz=129
L11A Cat Creek Ranc 129.01 35 ⇓P PKPdf 17 27 04.1 +0.5
baz=129
H15A Lima 129.08 31 ⇑P PKPdf 17 27 04.1 +0.4
baz=129
J13A Cove Ranch, Pi 129.09 33 ⇓P PKPdf 17 27 03.9 +0.2
baz=129
I14A Mackay 129.13 32 ⇑P PKPdf 17 27 04.1 +0.4
baz=129
F17A Fitzpatrick Pl 129.14 29 ⇓P PKPdf 17 27 04.5 +0.8
baz=129
K12A Draper Farm, C 129.19 34 ⇑P PKPdf 17 27 04.3 +0.4
baz=129
BMN Battle Mountai 129.20 38 PFAKE 17 27 20.0 +16
BMN LR LR
comp=Z,328nm,19.0s,MS5.0
L12A House Creek Ra 129.44 35 ⇓P PKPdf 17 27 04.6 +0.2
baz=129
G17A Pierce Place, 129.53 29 ⇓P PKPdf 17 27 04.5 0.0
baz=129
QLMT Earthquake Lak 129.54 30 ePKPdf PKPdf 17 27 05.3 +0.8
F18A Big Timber 129.59 28 ⇑P PKPdf 17 27 04.8 +0.3
baz=129
I15A Monteview 129.59 31 ⇓P PKPdf 17 27 04.6 0.0
baz=129
NVAR Mina Array Bea 129.67 41 PKP PKPdf 17 27 06.2 +1.2
comp=Z,9.9nm,0.7s,baz=265,slow=2.0,SNR=38
NVAR pPKP pPKPdf 17 27 21.3 +0.7
comp=Z,2.5nm,0.7s,baz=272,slow=1.9,SNR=3.3
NVAR SKPbc 17 30 22.5
comp=Z,7.5nm,0.9s,baz=277,slow=3.3,SNR=8.5
NVAR Mina Array Bea 129.67 41 PKP PKPdf 17 27 06.2 +1.2
NVAR pPKP pPKPdf 17 27 21.3 +0.7
NVAR SKPbc 17 30 22.5
GCMT Greycliff 129.69 28 ePKPdf PKPdf 17 27 04.5 -0.3
H16A Russell Place, 129.72 30 ⇓P PKPdf 17 27 04.9 0.0
baz=130
DGMT Dagmar 129.89 22 ⇓P PKPdf 17 27 05.3 +0.3
baz=130
DGMT Dagmar 129.89 22 PFAKE 17 27 20.0 +15
DGMT LR LR
comp=Z,610nm,19.0s,MS5.3
YMR Madison River 129.89 30 ePKPdf PKPdf 17 27 05.1 0.0
M12A Wells 129.97 35 ⇑P PKPdf 17 27 06.1 +0.7
baz=130
J15A Blackfoot 130.03 32 ⇑P PKPdf 17 27 06.5 +1.0
baz=130
L13A Double Diamond 130.09 34 ⇓P PKPdf 17 27 06.8 +1.1
baz=130
YFT Old Faithful 130.11 30 ePKPdf PKPdf 17 27 07.9 +2.3
P10A Eureka 130.15 38 ⇓P PKPdf 17 27 07.2 +1.3
baz=130
ELK Elko 130.20 36 PFAKE 17 27 20.0 +14
ELK LR LR
comp=Z,582nm,20.0s,MS5.3
K14A Jones Ranch, D 130.21 33 ⇓P PKPdf 17 27 06.8 +1.0
baz=130
LKWY Lake 130.24 30 PFAKE 17 27 20.0 +14
LKWY LR LR
comp=Z,843nm,20.0s,MS5.4
N12A Clover Valley, 130.25 36 ⇓P PKPdf 17 27 06.6 +0.7
baz=130
N12A Clover Valley, 130.25 36 ePKPdf PKPdf 17 27 06.5 +0.5
N12A eSKP 17 30 24.4
H17A Grant Village 130.28 30 ⇑P PKPdf 17 27 07.4 +1.5
baz=130
O11A Cowboy Ranch, 130.33 37 ⇑P PKPdf 17 27 06.9 +0.7
baz=130
M13A Montello 130.44 35 ⇑P PKPdf 17 27 07.6 +1.3
baz=130
M13A Montello 130.44 35 ePKPdf PKPdf 17 27 06.9 +0.6
M13A eSKP 17 30 25.1
IMW Indian Meadow 130.45 31 ePKPdf PKPdf 17 27 06.3 0.0
K15A Arbon 130.47 33 ⇓P PKPdf 17 27 07.5 +1.1
baz=130
PKM Peak Mountain 130.51 45 ⇑P PKPdf 17 27 06.8 +0.2
baz=130
L14A Malta 130.51 34 ⇑P PKPdf 17 27 07.1 +0.7
baz=130
LAO LASA Array 130.53 25 ePKPdf PKPdf 17 27 06.6 +0.3
LAO eSKP 17 30 24.9
LAO LR LR
comp=Z,591nm,20.0s,MS5.3
J16A Bone 130.55 32 ⇑P PKPdf 17 27 07.0 +0.5
baz=130
P11A Circle Ranch, 130.62 38 ⇓P PKPdf 17 27 07.6 +0.9
baz=130
RRI2 Red Ridge 130.65 31 ePKPdf PKPdf 17 27 06.7 +0.1
RRI2 eSKP 17 30 25.3
Q10A Clear Creek Ra 130.66 39 ⇑P PKPdf 17 27 07.9 +1.1
baz=130
TPAW Teton Pass 130.74 31 ePKPdf PKPdf 17 27 07.7 +0.8
N13A Wendover, West 130.74 36 ⇑P PKPdf 17 27 07.7 +0.8
baz=130

O12A Currie 130.79 37 ⇓P PKPdf 17 27 07.9 +0.8
baz=131
REDW Red Top Meadow 130.88 31 ePKPdf PKPdf 17 27 06.9 -0.2
ULM Lac du Bonnet 130.93 15 PKP PKPdf 17 27 05.9 -1.1
comp=Z,21nm,0.8s,baz=347,slow=3.4,SNR=17
ULM SKPbc SKPbc 17 30 24.4 -2.7
comp=Z,7.9nm,0.8s,baz=0.1,slow=4.4,SNR=4.4
HVU Hansel Valley 130.94 34 ePKPdf PKPdf 17 27 07.1 -0.2
HVU eSKP 17 30 26.6
J17A Brown Place, J 130.95 31 ⇓P PKPdf 17 27 07.2 0.0
baz=131
L15A Malad City 131.01 33 ⇓P PKPdf 17 27 07.2 -0.2
baz=131
S10A Tonopah Range, 131.06 40 ⇓P PKPdf 17 27 08.1 +0.5
baz=131
Q11A Duckwater 131.12 39 ⇓P PKPdf 17 27 08.2 +0.5
baz=131
AHID Auburn Hatcher 131.17 32 PFAKE 17 27 20.0 +12
AHID LR LR
comp=Z,789nm,22.0s,MS5.4
P12A McGill 131.19 37 ⇑P PKPdf 17 27 08.0 +0.2
baz=131
N14A Grayback Hills 131.33 35 ⇓P PKPdf 17 27 08.2 +0.1
baz=131
DAC Darwin (Calif) 131.33 43 PFAKE 17 27 20.0 +12
DAC LR LR
comp=Z,392nm,19.0s,MS5.1
M15A Larsen Ranch, 131.34 34 ⇓P PKPdf 17 27 08.3 +0.3
baz=131
BGU Big Grassy Mou 131.37 35 ePKPdf PKPdf 17 27 08.0 -0.1
BGU eSKP 17 30 27.1
J18A Kendall Valley 131.41 31 ⇑P PKPdf 17 27 08.3 +0.2
baz=131
R11A Troy Canyon, C 131.46 39 ⇑P PKPdf 17 27 08.9 +0.5
baz=131
Q12A Willow Creek R 131.50 38 ⇓P PKPdf 17 27 08.6 +0.1
baz=131
MPMC Manual Prospec 131.52 43 ⇓P PKPdf 17 27 08.3 -0.2
baz=131
N15A Stansbury Isla 131.68 34 ⇑P PKPdf 17 27 08.8 +0.1
baz=132
HWUT Hardware Ranch 131.73 33 ePKPdf PKPdf 17 27 08.4 -0.3
HWUT eSKP 17 30 29.4
HWUT LR LR
comp=Z,584nm,19.0s,MS5.3
P13A Bates Ranch, G 131.74 37 ⇓P PKPdf 17 27 08.4 -0.4
baz=132
EDW2 Edwards Air Fo 131.81 44 ⇑P PKPdf 17 27 08.6 -0.6
baz=132
K18A Toltan Ranch, 131.81 31 ⇓P PKPdf 17 27 08.3 -0.6
baz=132
BW06 Boulder Array 131.97 31 ⇓P PKPdf 17 27 08.4 -0.7
baz=132
BW06 Boulder Array 131.97 31 PFAKE 17 27 20.0 +11
BW06 LR LR
comp=Z,453nm,19.0s,MS5.2
PDAR Pinedale Array 131.97 31 PKhKP 17 27 01.1
comp=Z,0.7nm,0.7s,baz=329,slow=1.7,SNR=4.7
PDAR PKP PKPdf 17 27 08.9 -0.2
comp=Z,3.6nm,0.7s,baz=72,slow=1.9,SNR=19
PDAR SKPbc SKPbc 17 30 30.6 -0.6
comp=Z,5.1nm,0.9s,baz=342,slow=1.8,SNR=8.4
PDAR Pinedale Array 131.97 31 PKP PKPdf 17 27 08.9 -0.2
PDAR SKPbc SKPbc 17 30 30.6 -0.6
DUG Dugway 131.97 35 ⇑P PKPdf 17 27 09.2 0.0
baz=132
DUG Dugway 131.97 35 ePKIKP PKPdf 17 27 09.3 0.0
DUG MLR MLR
comp=Z,490nm,19.0s,MS5.2
DUG Dugway 131.97 35 ePKPdf PKPdf 17 27 09.2 0.0
DUG LR LR
comp=Z,490nm,19.0s,MS5.2
Q13A Wheeler Ranch, 132.05 37 ⇑P PKPdf 17 27 09.3 -0.2
baz=132
P14A Drum Mountains 132.22 36 ⇓P PKPdf 17 27 10.4 +0.7
baz=132
K19A Absolon Red Bu 132.28 30 ⇑P PKPdf 17 27 09.4 -0.4
baz=132
N16A Rees Ranch, Co 132.29 34 ⇓P PKPdf 17 27 09.3 -0.5
baz=132
M17A Scullys Gap (B 132.31 33 ⇓P PKPdf 17 27 09.4 -0.5
baz=132
T11A Corn Creek, Al 132.35 40 ⇓P PKPdf 17 27 10.3 +0.2
baz=132
S12A Delamar Landin 132.37 39 ⇑P PKPdf 17 27 10.2 +0.1
baz=132
BFSC Mount Baldy St 132.38 45 ⇓P PKPdf 17 27 09.8 -0.4
baz=132
GSC Goldstone 132.40 43 ⇓P PKPdf 17 27 10.0 -0.3
baz=132
GSC Goldstone 132.40 43 ePKPdf PKPdf 17 27 10.0 -0.2
GSC eSKP 17 30 32.6
Q14A Sevier Lake (B 132.48 37 ⇑P PKPdf 17 27 10.4 +0.2
baz=132
L19A Farson 132.55 31 ⇑P PKPdf 17 27 09.5 -0.7
baz=132
R13A O'Grain Ranch, 132.57 38 ⇓P PKPdf 17 27 10.6 +0.1
baz=132
M18A Lyman 132.66 32 ⇑P PKPdf 17 27 09.9 -0.6
baz=132
P15A Leamington 132.69 36 ⇓P PKPdf 17 27 10.3 -0.3
baz=132
DAU Daniels Canyon 132.71 34 ePKPdf PKPdf 17 27 10.7 0.0
DAU eSKP 17 30 33.9
AGMN Agassiz Refuge 132.73 16 ePKPdf PKPdf 17 27 09.0 -1.4
AGMN LR LR
comp=Z,417nm,22.0s,MS5.1
HEC Hector,Ludlow 132.99 43 ⇓P PKPdf 17 27 11.7 +0.3
baz=133
S13A Holt Ranch, En 133.00 39 ⇓P PKPdf 17 27 11.4 +0.1
baz=133
Q15A Fillmore 133.01 36 ⇓P PKPdf 17 27 11.8 +0.6
baz=133
MURC Murrieta 133.04 45 ⇑P PKPdf 17 27 11.7 +0.2
baz=133
M19A Rock Springs 133.08 31 ⇓P PKPdf 17 27 11.9 +0.6
baz=133
L20A Wamsutter 133.14 30 ⇓P PKPdf 17 27 11.1 -0.3
baz=133
O17A Robinson Place 133.15 34 ⇓P PKPdf 17 27 11.8 +0.3
baz=133
N18A Larsen Ranch, 133.19 32 ⇓P PKPdf 17 27 11.8 +0.3
baz=133
U12A Valley of Fire 133.27 40 ⇓P PKPdf 17 27 12.0 +0.2
baz=133
T13A Saint George 133.32 39 ⇓P PKPdf 17 27 12.7 +0.8
baz=133
S14A Cedar City 133.32 38 ⇑P PKPdf 17 27 12.4 +0.5
baz=133
CCUT Cedar City 133.33 38 ePKPdf PKPdf 17 27 12.6 +0.7
MVU Marysvale 133.43 37 PFAKE 17 27 20.0 +7.9
MVU LR LR
comp=Z,531nm,20.0s,MS5.2
MSU Marysvale 133.44 37 ePKPdf PKPdf 17 27 12.8 +0.8
MSU eSKP 17 30 35.2
GMRC Granite Mounta 133.47 43 ⇓P PKPdf 17 27 12.7 +0.4
baz=133
V12A Nelson 133.48 41 ⇑P PKPdf 17 27 12.1 -0.2
baz=133
O18A Roosevelt 133.50 33 ⇑P PKPdf 17 27 11.7 -0.4
baz=133
N19A John Jarvie Ra 133.51 32 ⇑P PKPdf 17 27 11.8 -0.3
baz=133
RSSD Black Hills 133.51 25 ePKHKP 17 27 00.2
RSSD e 17 27 11.0
RSSD Black Hills 133.51 25 ePKPpre 17 27 00.1
RSSD ePKPdf PKPdf 17 27 10.9 -1.1
RSSD eSKP 17 30 33.9
PFO Pinyon Flat Ob 133.56 45 ePKPdf PKPdf 17 27 12.9 +0.4
PFO eSKP 17 30 36.9
M20A Sweetwater, Wa 133.59 31 ⇑P PKPdf 17 27 12.2 0.0
baz=133
P17A Butcher Ranch, 133.64 35 ⇑P PKPdf 17 27 12.1 -0.3
baz=133
U13A Pakoon Wash 133.65 40 ⇑P PKPdf 17 27 12.8 +0.3
baz=133
L21A Rawlins 133.65 30 ⇓P PKPdf 17 27 11.7 -0.7
baz=133
BELC Belle Mtn. 133.67 44 ⇓P PKPdf 17 27 13.1 +0.5
baz=134
Q16A Castle Valley 133.77 36 ⇑P PKPdf 17 27 13.4 +0.7
baz=134
T14A Hurricane 133.81 39 ⇑P PKPdf 17 27 14.1 +1.3
baz=134
P18A Preston Nutter 133.81 34 ⇓P PKPdf 17 27 13.6 +0.9
baz=134
M21A Separation Pea 133.92 30 ⇑P PKPdf 17 27 12.4 -0.5

baz=134
RWWY Rawlins 133.94 30 ePKPdf PKPdf 17 27 12.0 -0.9
RWWY eSKP 17 30 36.9
O19A Miners Draw (B 133.96 33 ⇑P PKPdf 17 27 12.5 -0.5
baz=134
MONP Monument Peak 133.97 46 ⇓P PKPdf 17 27 14.2 +0.9
baz=134
V13A Grand Canyon W 133.97 41 ⇓P PKPdf 17 27 13.7 +0.5
baz=134
R16A Teasdale 134.00 36 ⇓P PKPdf 17 27 13.9 +0.7
baz=134
SRU San Rafael 134.01 35 ⇓P PKPdf 17 27 12.9 -0.2
baz=134
SRU San Rafael 134.01 35 ePKPdf PKPdf 17 27 12.6 -0.5
N20A Spence Gulch, 134.03 31 ⇓P PKPdf 17 27 13.7 +0.5
baz=134
EYMN Ely 134.10 12 PFAKE 17 27 20.0 +7.0
EYMN LR LR
comp=Z,763nm,22.0s,MS5.4
U14A Mt Trumbull 134.15 40 ⇑P PKPdf 17 27 13.8 +0.3
baz=134
IRM Iron Mountain 134.17 43 ⇑P PKPdf 17 27 13.7 +0.1
baz=134
BC3 Big Chuckw Mtn 134.24 44 ⇑P PKPdf 17 27 14.4 +0.7
baz=134
Q18A Rafter H Ranch 134.24 35 ⇓P PKPdf 17 27 13.7 +0.1
baz=134
T15A Red Dirt Ranch 134.28 38 ⇓P PKPdf 17 27 14.0 +0.3
baz=134
DVTC Desert V Tower 134.32 46 ⇑P PKPdf 17 27 14.2 +0.3
baz=134
R17A Hanksville Air 134.37 36 ⇓P PKPdf 17 27 14.5 +0.7
baz=134
SWSC Sam W. Stewart 134.38 45 ⇑P PKPdf 17 27 14.2 +0.1
baz=134
M22A Cedar Creek Ra 134.46 30 ⇑P PKPdf 17 27 14.1 +0.2
baz=134
N21A Black Mountain 134.47 31 ⇑P PKPdf 17 27 14.3 +0.4
baz=134
W13A Hualapai Mount 134.48 42 ⇑P PKPdf 17 27 15.4 +1.3
baz=134
P19A Cripple Cowboy 134.51 33 ⇑P PKPdf 17 27 14.6 +0.5
baz=134
O20A White River Ci 134.55 32 ⇑P PKPdf 17 27 14.0 -0.1
baz=134
V14A Boquillas Ranc 134.67 40 ⇓P PKPdf 17 27 14.8 +0.3
baz=134
U15A North Rim 134.70 39 ⇓P PKPdf 17 27 14.7 +0.2
baz=134
PDMCI Parker Dam,Lak 134.78 43 ⇑P PKPdf 17 27 14.9 +0.2
baz=135
X13A Yucca 134.81 42 ⇑P PKPdf 17 27 15.0 +0.2
baz=135
Y12C Blythe 134.83 44 ⇓P PKPdf 17 27 15.3 +0.4
baz=135
S17A Black Ridge (B 134.84 37 ⇓P PKPdf 17 27 14.8 +0.1
baz=135
T16A Glen Canyon Da 134.84 38 ⇑P PKPdf 17 27 14.7 0.0
baz=135
R18A Canyonlands Na 134.86 35 ⇓P PKPdf 17 27 14.7 -0.1
baz=135
O21A Pagoda 134.90 31 ⇑P PKPdf 17 27 14.4 -0.3
baz=135
P20A De Beque 134.93 33 ⇓P PKPdf 17 27 14.9 0.0
baz=135
W14A Seligman 134.94 41 ⇓P PKPdf 17 27 15.2 +0.2
baz=135
N22A Wattenberg Ran 134.98 30 ⇓P PKPdf 17 27 15.0 +0.1
baz=135
GLA Glamis 135.01 45 ⇓P PKPdf 17 27 15.1 0.0
baz=135
GLA Glamis 135.01 45 ePKPdf PKPdf 17 27 14.9 -0.3
PHWY Pilot Hill 135.09 29 ePKPdf PKPdf 17 27 11.9 -3.1
V15A Kaibab Nationa 135.16 40 ⇓P PKPdf 17 27 15.2 -0.2
baz=135
T17A Navajo Res., N 135.26 37 ⇑P PKPdf 17 27 15.6 +0.1
baz=135
Y13A Salome 135.27 43 ⇑P PKPdf 17 27 15.4 -0.3
baz=135
S18A Hurst Farm, Bl 135.28 36 ⇑P PKPdf 17 27 15.5 0.0
baz=135
R19A Curley Farm, L 135.29 35 ⇑P PKPdf 17 27 15.7 +0.1
baz=135
Q20A Ridgley Place, 135.37 33 ⇑P PKPdf 17 27 15.8 +0.1
baz=135
PV04 Paradox Valley 135.42 34 ePKPdf PKPdf 17 27 15.6 -0.2
W15A Williams 135.49 40 ⇓P PKPdf 17 27 16.4 +0.4
baz=135
X14A Yava 135.51 42 ⇑P PKPdf 17 27 16.6 +0.5
baz=135
U17A Shonto 135.60 38 ⇓P PKPdf 17 27 17.4 +1.2
baz=135
U16A Tuba City 135.61 38 ⇓P PKPdf 17 27 17.0 +0.8
baz=135
PLCA Paso Flores 135.62 189 PKhKP 17 27 11.7
comp=Z,1.5nm,0.7s,baz=268,slow=17,SNR=3.8
PLCA PKP PKPdf 17 27 17.1 +1.0
comp=Z,3.6nm,0.7s,baz=190,slow=2.0,SNR=7.2
T18A Mexican Hat 135.72 36 ⇑P PKPdf 17 27 16.8 +0.4
baz=136
S19A Harvey Farm, M 135.74 35 ⇓P PKPdf 17 27 16.4 0.0
baz=136
Z13A Yuma Proving G 135.74 44 ⇓P PKPdf 17 27 16.7 +0.2
baz=136
PV01 Paradox Valley 135.79 34 ePKPdf PKPdf 17 27 16.9 +0.4
Q21A Lamborn Mesa, 135.84 33 ⇑P PKPdf 17 27 17.1 +0.5
baz=136
WUAZ Wupatki 135.85 39 ⇓P PKPdf 17 27 17.1 +0.4
baz=136
WUAZ Wupatki 135.85 39 ePKPdf PKPdf 17 27 16.1 -0.5
WUAZ eSKP 17 30 42.6
R20A Redvale 135.86 34 ⇑P PKPdf 17 27 17.2 +0.6
baz=136
113A Mohawk Valley, 135.91 44 ⇑P PKPdf 17 27 17.7 +0.8
baz=136
X15A Humboldt 135.94 41 ⇓P PKPdf 17 27 17.5 +0.6
baz=136
W16A Flagstaff 136.02 40 ⇑P PKPdf 17 27 17.6 +0.6
baz=136
Z14A Wintersburg 136.13 43 ⇑P PKPdf 17 27 17.5 +0.2
baz=136
V17A Tonalea, Kykot 136.15 39 ⇑P PKPdf 17 27 18.0 +0.7
baz=136
ISCO Idaho Springs 136.16 30 ePKIKP PKPdf 17 27 16.2 -0.9
Q22A Crested Butte, 136.18 32 ⇓P PKPdf 17 27 17.5 +0.3
baz=136
R21A Cimarron 136.19 33 ⇑P PKPdf 17 27 17.7 +0.5
baz=136
Y15A Casa Rosa Ranc 136.19 42 ⇑P PKPdf 17 27 17.9 +0.6
baz=136
U18A Rough Rock, Ch 136.20 37 ⇓P PKPdf 17 27 18.0 +0.6
baz=136
COWI Conover 136.33 11 PFAKE 17 27 30.0 +13
COWI LR LR
comp=Z,734nm,20.0s,MS5.4
T19A Beclabito 136.43 36 ⇓P PKPdf 17 27 18.1 +0.4
baz=136
MVCO Mesa Verde 136.47 35 ⇓P PKPdf 17 27 18.6 +0.8
baz=136
MVCO Mesa Verde 136.47 35 ePKPdf PKPdf 17 27 18.0 +0.2
X16A Lo Mia Camp, P 136.50 41 ⇑P PKPdf 17 27 19.4 +1.5
baz=136
114A Black Gap (USA 136.53 44 ⇑P PKPdf 17 27 18.4 +0.4
baz=136
S21A Coal Bank Pass 136.56 34 ⇓P PKPdf 17 27 18.9 +0.9
baz=136
V18A Ganado 136.63 38 ⇓P PKPdf 17 27 19.1 +1.0
baz=136
ECSD EROS Data Cent 136.64 19 ePKPdf PKPdf 17 27 13.8 -4.1
ECSD ePP PP 17 29 54.5 -4.7
ECSD eSKP 17 30 45.6
ECSD LR LR
comp=Z,776nm,21.0s,MS5.4
U19A Dine' College, 136.68 37 ⇑P PKPdf 17 27 18.6 +0.4
baz=136
R22A Saguache, Gunn 136.72 33 ⇑P PKPdf 17 27 19.2 +0.9
baz=136
Y16A Circle Bar Ran 136.80 41 ⇓P PKPdf 17 27 19.4 +0.9
baz=137
X17A Forest Lakes 136.96 40 ⇑P PKPdf 17 27 19.5 +0.7
baz=137
115A Sonoran Desert 137.00 43 ⇑P PKPdf 17 27 19.8 +0.9
baz=137
214A Organ Pipe Nat 137.03 44 ⇓P PKPdf 17 27 20.1 +1.1
baz=137
U20A Newcomb 137.03 36 ⇑P PKPdf 17 27 20.1 +1.2
baz=137
W18A Petrified Fore 137.14 38 ⇓P PKPdf 17 27 20.0 +1.0

baz=137
V19A Window Rock 137.17 37 ⇓P PKPdf 17 27 20.2 +1.1
baz=137
Y17A Roosevelt 137.33 41 ⇓P PKPdf 17 27 19.8 +0.3
baz=137
X18A Snowflake 137.38 39 ⇑P PKPdf 17 27 20.0 +0.4
baz=137
116A Eloy 137.44 43 ⇑P PKPdf 17 27 20.1 +0.4
baz=137
V20A Brimhall 137.46 37 ⇑P PKPdf 17 27 20.4 +0.7
baz=137
T22A Edith 137.52 34 ⇑P PKPdf 17 27 21.0 +1.3
baz=137
SDCO Great Sand Dun 137.75 32 *e*PKPdf PKPdf 17 27 19.5 -0.7
Z17A San Carlos Hig 137.82 41 ⇑P PKPdf 17 27 21.6 +1.1
baz=138
X19A St. Johns 137.86 39 ⇑P PKPdf 17 27 21.4 +0.9
baz=138
W20A Ramah 137.89 37 ⇑P PKPdf 17 27 21.3 +0.8
baz=138
216A Three Points, 137.94 43 ⇑P PKPdf 17 27 20.9 +0.2
baz=138
117A Oracle 138.09 42 ⇓P PKPdf 17 27 21.7 +0.7
baz=138
Y19A Nutrioso 138.19 39 ⇓P PKPdf 17 27 22.5 +1.4
baz=138
TUC Tucson 138.22 43 *e*PKPdf PKPdf 17 27 13.4 -7.8
TUC *e*SKP 17 30 51.2
GLMI Grayling 138.25 6 PFAKE 17 27 30.0 +9.2
GLMI LR LR
comp=Z,859nm,20.0s,MS5.5
X20A Quemado 138.28 38 ⇓P PKPdf 17 27 22.1 +0.9
baz=138
V22A San Miguel Ran 138.29 35 ⇑P PKPdf 17 27 21.7 +0.5
baz=138
217A Green Valley 138.51 43 ⇓P PKPdf 17 27 22.2 +0.5
baz=138
118A Homack Ranch, 138.56 42 ⇑P PKPdf 17 27 22.5 +0.7
baz=138
Z19A T-Link Ranch, 138.61 40 ⇓P PKPdf 17 27 22.6 +0.8
baz=138
LBNH Lisbon 138.74 353 PFAKE 17 27 30.0 +8.3
LBNH LR LR
comp=Z,726nm,20.0s,MS5.4
Y20A Horse Springs, 138.78 39 ⇑P PKPdf 17 27 22.8 +0.6
baz=139
X21A Alamocita Cree 138.78 38 ⇓P PKPdf 17 27 23.3 +1.2
baz=139
V23A Ortiz Mt. (NFS 138.83 35 ⇓P PKPdf 17 27 23.1 +0.9
baz=139
218A Dragoon 138.92 42 ⇓P PKPdf 17 27 22.9 +0.5
baz=139
119A Ashpeak Ranch, 138.92 41 ⇑P PKPdf 17 27 23.5 +1.1
baz=139
Y21A Point of Rocks 139.15 38 ⇑P PKPdf 17 27 23.8 +1.0
baz=139
Z20A Nine Sixteen R 139.16 40 ⇓P PKPdf 17 27 23.8 +1.0
baz=139
JFWS Jewell Farm 139.16 13 *e*PKIKP PKPdf 17 27 19.7 -2.9
JFWS *e* 17 30 10.5
JFWS MLR MLR
comp=Z,693nm,20.0s,MS5.4
X22A Bernardo 139.21 37 ⇓P PKPdf 17 27 23.8 +0.9
baz=139
ANMO Albuquerque 139.23 36 *e*PKHKP 17 27 15.2
ANMO MLR MLR
comp=Z,487nm,19.0s
NCB Newcomb 139.25 355 PFAKE 17 27 30.0 +7.3
NCB LR LR
comp=Z,678nm,22.0s,MS5.3
318A Bisbee 139.28 43 ⇓P PKPdf 17 27 23.1 -0.1
baz=139
219A White Tail Can 139.43 42 ⇑P PKPdf 17 27 24.0 +0.6
baz=139
120A U Bar Ranch, L 139.50 41 ⇑P PKPdf 17 27 24.0 +0.5
baz=139
Y22A Socorro 139.63 38 ⇓P PKPdf 17 27 23.8 +0.1
baz=139
W24A Lazy 6 Ranch, 139.65 35 ⇓P PKPdf 17 27 24.0 +0.3
baz=139
BNM Barren Site 139.68 37 *e*PKPpre 17 27 16.7
BNM *e*PKPdf PKPdf 17 27 23.8 0.0
U26A Atchley Ranch, 139.69 32 ⇓P PKPdf 17 27 23.9 +0.2
baz=140
CBKS Cedar Bluff 139.70 26 PFAKE 17 27 30.0 +6.3
CBKS LR LR
comp=Z,882nm,19.0s,MS5.5
319A Douglas 139.80 42 ⇓P PKPdf 17 27 24.3 +0.2
baz=140
220A Playas Peak, P 139.97 41 ⇑P PKPdf 17 27 24.7 +0.3
baz=140
121A Cookes Peak, D 140.05 40 ⇑P PKPdf 17 27 24.6 +0.1
baz=140
Z22A Elephant Butte 140.09 38 ⇑P PKPdf 17 27 25.0 +0.5
baz=140
V26A Tequesquite Ra 140.12 33 ⇓P PKPdf 17 27 24.8 +0.3
baz=140
Y23A Lovelace Mesa, 140.18 37 ⇑P PKPdf 17 27 24.9 +0.2
baz=140
W25A X Bar L Ranch, 140.18 34 ⇓P PKPdf 17 27 24.0 -0.7
baz=140
320A Kipp Ranch, An 140.33 42 ⇑P PKPdf 17 27 24.8 -0.3
baz=140
221A Mesquite Ranch 140.39 40 ⇑P PKPdf 17 27 25.1 -0.1
baz=140
Z23A Rita Site, Whi 140.53 38 ⇓P PKPdf 17 27 25.6 +0.2
baz=140
Y24A Capitan 140.55 36 ⇑P PKPdf 17 27 25.9 +0.5
baz=140
X25A Clemmons Ranch 140.57 35 ⇓P PKPdf 17 27 25.5 +0.1
baz=140
W26A Owens Ranch, T 140.66 33 ⇑P PKPdf 17 27 25.8 +0.3
baz=140
KSU1 Kansas State U 140.73 22 *e*PKPdf PKPdf 17 27 24.9 -0.6
KSU1 LR LR
comp=Z,745nm,19.0s,MS5.5
222A Williams Famil 140.77 40 ⇓P PKPdf 17 27 26.4 +0.5
baz=141
AAM Ann Arbor 140.85 6 PFAKE 17 27 40.0 +14
AAM LR LR
comp=Z,1μm,21.0s,MS5.6
Y25A Mesa, Roswell 140.99 35 ⇓P PKPdf 17 27 26.8 +0.6
baz=141
Z24A Sheeppen Canyo 141.01 37 ⇑P PKPdf 17 27 26.7 +0.5
baz=141
X26A CR and CF Fran 141.03 34 ⇓P PKPdf 17 27 26.5 +0.2
baz=141
W27A Bowe Ranch, En 141.06 33 ⇑P PKPdf 17 27 26.4 +0.1
baz=141
BINY Binghamton 141.13 357 PFAKE 17 27 40.0 +14
BINY LR LR
comp=Z,766nm,20.0s,MS5.5
ERPA Erie 141.27 2 PFAKE 17 27 40.0 +14
ERPA LR LR
comp=Z,698nm,21.0s,MS5.4
X27A F and S Farms, 141.35 33 ⇓P PKPdf 17 27 27.4 +0.6
baz=141
124A Stringfield Ra 141.39 38 ⇓P PKPdf 17 27 27.6 +0.7
baz=141
HDIL Hopedale 141.62 13 PFAKE 17 27 40.0 +13
HDIL LR LR
comp=Z,475nm,21.0s,MS5.2
Z26A Caprock 141.87 35 ⇓P PKPdf 17 27 28.7 +1.0
baz=142
Y27A Causey 141.88 34 ⇑P PKPdf 17 27 28.2 +0.4
baz=142
125A Gardner Draw, 141.90 37 ⇑P PKPdf 17 27 28.1 +0.3
baz=142
AMTX Amarillo 141.93 31 PFAKE 17 27 40.0 +12
AMTX LR LR
comp=Z,683nm,22.0s,MS5.4
MSTX Muleshoe 142.04 34 ⇓P PKPdf 17 27 28.2 +0.2
baz=142
CPRX Cap Rock 142.10 36 *e*PKPdf 17 27 22.1
MNTX Cornudas Mount 142.12 39 *e*PKPpre 17 27 22.9
MNTX *e*PKPdf PKPdf 17 27 28.1 -0.1
MNTX LR LR
comp=Z,434nm,20.0s,MS5.2
324A Moseley Ranch, 142.23 39 ⇑P PKPdf 17 27 29.0 +0.5
baz=142
Z27A Tatum 142.27 35 ⇓P PKPdf 17 27 29.0 +0.5
baz=142
126A Clayton Basin, 142.29 36 ⇓P PKPdf 17 27 28.6 0.0
baz=142
325A Bean Ranch, Si 142.60 39 ⇑P PKPdf 17 27 29.5 +0.4
baz=142
CLNB Carlsbad 142.65 37 *e*PKPpre 17 27 25.3

226A Malaga, Loving 142.66 37 ⇑P PKPdf 17 27 29.2 0.0
baz=142
ACSO Alum Creek Sta 142.96 6 *e*PKPdf 17 27 23.6
ACSO *e*PP PP 17 30 34.0 -3.8
ACSO LR LR
comp=Z,687nm,19.0s,MS5.4
CCM Cathedral Cave 143.47 17 *e*PKHKP 17 27 25.6
CCM MLR MLR
comp=Z,692nm,19.0s,MS5.4
WMOK Wichita Mounta 143.49 28 *e*PKHKP 17 27 24.5
OLIL Olney 143.63 13 *e*PKPdf 17 27 27.0
MCWV Mont Chateau 143.73 2 *e*PKPdf 17 27 26.2
MCWV LR LR
comp=Z,1μm,21.0s,MS5.6
CPUP Villa Florida 144.10 214 PKP PKPdf 17 27 30.2 -1.7
comp=Z,8.4nm,0.6s,baz=124,slow=2.2,SNR=31
CPUP pPKP pPKPdf 17 27 47.5 0.0
comp=Z,38nm,0.8s,baz=98,slow=3.0,SNR=15
CPUP Villa Florida 144.10 214 PKP PKPdf 17 27 30.2 -1.7
CPUP pPKP pPKPdf 17 27 47.5 -0.1
SIUC Southern Illin 144.34 14 *e*PKPdf PKPdf 17 27 28.6 -3.4
USIN University of 144.46 12 *e*PKPdf PKPdf 17 27 29.7 -2.5
WCI Wyandotte Cave 144.47 10 *e*PKIKP PKPdf 17 27 29.4 -2.8
528A Cox Ranch, San 144.79 38 ⇓P PKPdf 17 27 32.4 -0.6
baz=145
TXAR Lajitas Array 144.81 40 PKP PKPdf 17 27 32.1 -1.0
comp=Z,47nm,0.8s,baz=291,slow=1.3,SNR=554
TXAR pPKP pPKPdf 17 27 49.2 +0.6
comp=Z,23nm,0.8s,baz=238,slow=1.5,SNR=5.9
TXAR Lajitas Array 144.81 40 PKP PKPdf 17 27 32.1 -1.0
TXAR pPKP pPKPdf 17 27 49.2 +0.6
627A Terlingua Ranc 144.91 39 ⇓P PKPdf 17 27 32.8 -0.4
baz=145
CBN Corbin 145.18 358 PFAKE 17 27 40.0 +7.0
CBN LR LR
comp=Z,744nm,20.0s,MS5.5
628A Black Gap, Mar 145.20 39 ⇓P PKPbc 17 27 33.8 +0.4
baz=145
GLAT Glass 145.69 15 *e*PKPdf PKPdf 17 27 33.4 -0.9
UTMT University of 145.73 15 *e*PKPdf PKPdf 17 27 33.6 -0.8
GNAR Gosnell 145.78 17 *e*PKPdf PKPdf 17 27 34.1 -0.4
GNAR *ep*PKPdf pPKPdf 17 27 47.3 -2.8
MIAR Mount Ida 145.89 22 *e*PKP2 PKPab 17 27 34.4 -1.5
ELN Prospectdale 146.12 3 *e*PKPdf PKPdf 17 27 34.3 -0.7
ELN *ep*PKPdf pPKPdf 17 27 48.1 -2.6
BLA Blacksburg 146.15 3 *e*PKP2 PKPab 17 27 34.5 -2.2
BLA MLR MLR
comp=Z,687nm,19.0s,MS5.5
WVT Waverly 146.18 13 *e*PKP2 PKPab 17 27 34.8 -2.1
JCT Junction City 146.31 34 *e*PKP2 PKPab 17 27 34.9 -2.7
JCT MLR MLR
comp=Z,786nm,21.0s,MS5.5
MAIG Mazatlaan 146.59 51 *i* P PKPdf 17 27 33.6 -2.7
LCO Las Campanas 147.05 193 *e*PKPdf PKPdf 17 27 37.2 +0.4
PLAL Pickwick Lake 147.22 14 *e*PKPdf PKPdf 17 27 35.2 -1.8
PLAL *e*PKPbc PKPbc 17 27 37.8 -1.5
OXF Oxford 147.31 17 *e*PKP2 PKPab 17 27 38.1 -3.2
TKL Tuckaleechee C 147.39 8 *e*PKIKP PKPdf 17 27 36.3 -0.9
SWET Sewanee 147.47 11 *e*PKPdf PKPdf 17 27 37.0 -0.4
CPCT Cooper Cave 147.49 9 *e*PKPdf PKPdf 17 27 36.5 -0.9
CPCT *e*PKPbc PKPbc 17 27 38.9 -1.0
NATX Nacogdoches 147.87 26 *e*PKPdf PKPdf 17 27 37.5 -0.7
NATX LR LR
comp=Z,662nm,19.0s,MS5.4
CNNC Cliffs of the 148.15 359 PFAKE 17 27 50.0 +11
CNNC LR LR
comp=Z,2μm,20.0s,MS5.8
BBSR BB Station 148.20 337 *e*PKPdf PKPdf 17 27 41.1 +2.5
BBSR LR LR
comp=Z,753nm,21.0s,MS5.5
HKT Hockley 148.83 30 *e*PKIKP PKPdf 17 27 39.7 -0.1
HKT *e* 17 27 43.9
HKT MLR MLR
comp=Z,733nm,22.0s,MS5.4
JSC Jenkinsville 149.01 4 *e*PKIKP PKPdf 17 27 39.7 -0.3
JSC *e* 17 27 43.3
VBMS Vicksburg 149.08 20 *e*PKPbc PKPbc 17 27 43.3 -0.9
LRAL Lakeview Retre 149.34 14 *e*PKPdf PKPdf 17 27 39.2 -1.3
LRAL *e*PKPbc PKPbc 17 27 43.4 -1.5
LRAL *e*PKPab PKPab 17 27 47.8 -1.6
LRAL LR LR
comp=Z,553nm,21.0s,MS5.3
CJM Chamela 149.57 56 *i* P PKPbc 17 27 45.4 -0.4
KVTX Kingsville 149.62 35 PFAKE 17 27 50.0 +8.9
KVTX LR LR
comp=Z,678nm,20.0s,MS5.4
GOGA Godfrey 149.64 8 *e*PKHKP 17 27 40.5
GOGA *e* 17 27 44.8
GOGA MLR MLR
comp=Z,944nm,20.0s,MS5.6
COW Cow Castle Cre 149.95 3 *e*PKPdf PKPdf 17 27 41.6 +0.2
COW *e*PKPbc PKPbc 17 27 45.6 -0.8
NHSC New Hope 150.25 3 PFAKE 17 27 50.0 +8.0
NHSC LR LR
comp=Z,960nm,20.0s,MS5.6
BRAL Brewton 151.25 15 *e*PKPbc PKPbc 17 27 49.0 -0.6
BRAL LR LR
comp=Z,678nm,20.0s,MS5.5
DWPF Disney 155.12 6 PFAKE 17 28 00.0 +11
DWPF LR LR
comp=Z,688nm,21.0s,MS5.5
LPAZ La Paz 158.00 208 PKP PKPdf 17 27 54.2 +1.0
comp=Z,4.5nm,1.0s,baz=66,slow=2.1,SNR=9.8
LPAZ La Paz 158.00 208 PKIKP PKPdf 17 27 54.3 +1.1
LPAZ pmax pmax
comp=Z,5.0nm,1.0s
LPAZ La Paz 158.00 208 *e*PKPdf PKPdf 17 27 53.5 +0.3
ANWB Willy Bob 158.12 312 PFAKE 17 28 00.0 +6.6
ANWB LR LR
comp=Z,501nm,20.0s,MS5.3
BBGH Gun Hill 158.72 299 PFAKE 17 28 00.0 +5.8
BBGH LR LR
comp=Z,1μm,19.0s,MS5.7
CMIG Matias Romero 158.93 48 *i* P PKPdf 17 27 53.6 -0.8
FDF Fort de France 159.31 305 PFAKE 17 28 10.0 +15
FDF LR LR
comp=Z,389nm,21.0s,MS5.2
GRTK Grand Turk 160.42 339 PFAKE 17 28 10.0 +14
GRTK LR LR
comp=Z,533nm,21.0s
GRGR Grenville 161.00 299 PFAKE 17 28 10.0 +13
GRGR LR LR
comp=Z,357nm,21.0s
GTBY Guantanamo Bay 163.06 349 PFAKE 17 28 10.0 +11
GTBY LR LR
comp=Z,707nm,22.0s
NNA Nana 164.77 187 PFAKE 17 28 10.0 +10
NNA LR LR
comp=Z,608nm,21.0s
BCIP Isla Barro Col 173.99 11 PFAKE 17 28 20.0 +14
BCIP LR LR
comp=Z,636nm,20.0s
ROSC El Rosal 175.41 291 PKP PKPdf 17 28 05.6 -1.0
comp=Z,5.9nm,0.7s,baz=248,slow=23,SNR=7.0
OTAV Otavalo 177.02 184 *e*PKPdf PKPdf 17 28 06.8 -0.1

ISCJB ***20*** *17:08:32.9±1.5, 49.°11N±0.°05×156.°3E±0.°1, h16km±10km, mb4.4/49, Error ellipse: s-maj=13.4km s-min=5.3km az=33.9*
MOS ***20*** *17:08:32.7±1.3, 49.°23N×156.°08E, h12km, mb4.9/16, Error ellipse: s-maj=12.9km s-min=5.2km az=86.2*
SZGRF ***20*** *17:08:32.9, 48.°69N×158.°69E, h33km, mb4.8, East of Kuril Islands, Russia*
IDC ***20*** *17:08:32.3±1.0, 49.°34N×156.°10E, h0km, mb4.1/18, mb1 4.2/20, mb1mx4.2/28, mbtmp4.1/20, ML4.4/2, Error ellipse: s-maj=29.8km s-min=14.9km az=159.0*
KRSC ***20*** *17:08:33.4±0.8, 49.°07N×156.°99E, h10km±10km, ML4.8*
BJI ***20*** *17:08:34.4, 49.°20N×156.°10E, h20km, mB4.5/3, mb4.3/5*
NEIC ***20*** *17:08:35.5±2.8, 49.°19N×156.°07E, h20km±18km, mb4.7/18, Error ellipse: s-maj=15.3km s-min=9.1km az=148.0*
ISC 20 17:08:36.4±1.6, 49.°16N±0.°06×156.°2E±0.°1, h27km±10km, n142, σ1°10/153, mb4.4/49, 8C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.53**	**358**	*e*PN	**Pn**	**17 09 01.2**	**-0.6**
SKR				*i* S	**Sn**	**17 09 20.5**	**-0.3**
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				smax			
	comp=N,4μm,0.3s						
SKR				smax			
	comp=E,6μm,0.3s						
SKR				smax			
	comp=N,2μm,2.0s						
SKR				smax			
	comp=E,4μm,2.0s						
ALID	**Alaid**	**1.77**	**346**	*i* P	**Pn**	**17 09 07.6**	**+2.5**
ALID				*i* S	**Sn**	**17 09 32.1**	**+5.5**
MIPR	**Malaya Ipel'ka**	**3.14**	**6**	*e*P	**Pn**	**17 09 25.4**	**+1.4**
MIPR				*e*S	**Sn**	**17 10 03.6**	**+3.1**
RUS	**Russkaya**	**3.59**	**23**	*e*P	**Pn**	**17 09 29.6**	**-0.5**
RUS				*i* S	**Sn**	**17 10 10.5**	**-1.0**
PEA0B	**Petropavlovsk-**	**4.06**	**13**	*e*P	**Pn**	**17 09 38.3**	**+1.6**
PETK	**Petropavlovsk-**	**4.06**	**13**	Pn	**Pn**	**17 09 36.8**	**+0.1**
	comp=E,2.1nm,0.3s,baz=204,slow=12,SNR=65						
PET	**Petropavlovsk**	**4.16**	**21**	*e*PN	**Pn**	**17 09 39.6**	**+1.6**
PET				*e*S	**Sn**	**17 10 29.5**	**+3.8**
PET				pmax	pmax		
	comp=Z,53nm,0.6s						
PET				smax			
	comp=E,343nm,0.6s						
PET				smax			
	comp=N,253nm,0.4s						
PET	**Petropavlovsk**	**4.16**	**21**	*e*P	**Pn**	**17 09 38.3**	**+0.3**
PET				*i* S	**Sn**	**17 10 26.8**	**+1.1**
PET	**Petropavlovsk**	**4.16**	**21**	*e*P	**Pn**	**17 09 38.0**	**-0.1**
SDLR	**Sedlovina**	**4.45**	**21**	*e*P	**Pn**	**17 09 42.3**	**+0.3**
SDLR				*i* S	**Sn**	**17 10 32.6**	**-0.3**
NLC	**Nalytchevo**	**4.47**	**25**	*e*P	**Pn**	**17 09 41.0**	**-1.3**
NLC				*i* S	**Sn**	**17 10 31.7**	**-1.7**
SPN	**Mys Shipunski**	**4.61**	**30**	*e*P	**Pn**	**17 09 43.6**	**-0.6**
SPN				*i* S	**Sn**	**17 10 36.2**	**-0.7**
GNL	**Ganaly**	**4.67**	**13**	*e*P	**Pn**	**17 09 47.1**	**+2.1**
KII	**Karymskiy**	**5.28**	**21**	P	**Pn**	**17 09 55.5**	**+2.1**
KII				*i* S	**Sn**	**17 10 56.7**	**+3.4**
MKZ	**Mys Kozlova**	**6.39**	**30**	*e*P	**Pn**	**17 10 06.5**	**-2.1**
MKZ				*i* S	**Sn**	**17 11 16.2**	**-4.4**
KMNR	**Kamenistaya**	**7.05**	**19**	*e*P	**Pn**	**17 10 20.2**	**+2.6**
SRDR	**Sredinnyy**	**7.48**	**15**	P	**Pn**	**17 10 23.7**	**+0.2**
SRKR	**Sorokina**	**8.08**	**20**	P	**Pn**	**17 10 31.4**	**-0.4**
KBTR	**Krutoberegovo**	**8.12**	**27**	*e*P	**Pn**	**17 10 30.9**	**-1.4**
ASAJ	**Asahikawa**	**10.63**	**247**	Pn	**Pn**	**17 11 07.2**	**+0.3**
	comp=N,6.3nm,0.3s,baz=72,slow=16,SNR=22						
ASAJ	**Asahikawa**	**10.63**	**247**	PN	**Pn**	**17 11 07.2**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR	**Matsushiro Arr**	**18.20**	**233**	P	**Pn**	**17 12 46.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=29,slow=9.8,SNR=5.6						
YAK	**Yakutsk**	**19.59**	**321**	*e*P	**Pn**	**17 13 00.1**	**-3.3**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK	**Yakutsk**	**19.59**	**321**	*e*P	**Pn**	**17 13 00.7**	**-2.7**
	comp=E,15nm,0.6s						
BILL	**Bilibino**	**19.59**	**11**	*e*P	**Pn**	**17 13 01.5**	**-2.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BILL	**Bilibino**	**19.59**	**11**	*e*P	**Pn**	**17 13 01.5**	**-2.0**
	comp=Z,3.6nm,0.6s						
KSRS	**Korea Array**	**23.54**	**251**	P	**P**	**17 13 44.6**	**+0.2**
	comp=Z,4.6nm,0.8s,mb4.0,baz=51,slow=9.8,SNR=11						
KSRS	**Korea Array**	**23.54**	**251**	P	**P**	**17 13 44.6**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
TIXI	**Tiksi**	**25.82**	**340**	*e*P	**P**	**17 14 01.8**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
TIXI	**Tiksi**	**25.82**	**340**	*e*P	**P**	**17 14 01.9**	**-2.9**
	comp=Z,5.6nm,0.6s,mb4.3						
ZAK	**Zakamensk**	**33.61**	**293**	*e*P	**P**	**17 15 13.6**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
INK	**Inuvik**	**38.49**	**34**	P	**P**	**17 15 54.5**	**-1.1**
	comp=Z,1.4nm,0.8s,mb3.8,baz=275,slow=9.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**42.93**	**305**	P	**P**	**17 16 29.7**	**-2.7**
	comp=Z,0.8nm,0.5s,mb3.7,baz=54,slow=7.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**42.93**	**305**	P	**P**	**17 16 29.7**	**-2.7**
YKA	**Yellowknife Ar**	**47.74**	**39**	P	**P**	**17 17 10.0**	**-0.4**
	comp=Z,1.0nm,0.9s,mb3.9,baz=298,slow=7.4,SNR=9.5						
YKA	**Yellowknife Ar**	**47.74**	**39**	P	**P**	**17 17 10.0**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**47.78**	**303**	P	**P**	**17 17 10.3**	**-0.6**
	comp=Z,4.4nm,0.8s,mb4.5,baz=65,slow=8.2,SNR=28						
KURK	**Kurchatov**	**47.78**	**303**	P	**P**	**17 17 10.3**	**-0.6**
RES	**Resolute Bay**	**47.87**	**20**	P	**P**	**17 17 11.4**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=310,slow=6.6,SNR=6.8						
RES	**Resolute Bay**	**47.87**	**20**	*e*P	**P**	**17 17 11.0**	**-0.3**
BVAR	**Borovoye Array**	**50.95**	**309**	P	**P**	**17 17 34.0**	**-1.1**
	comp=Z,2.0nm,0.6s,mb4.2,baz=58,slow=8.5,SNR=15						
BRVK	**Borovoye**	**50.98**	**309**	*e*P	**P**	**17 17 34.0**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**50.98**	**309**	*e*P	**P**	**17 17 34.0**	**-1.3**
	comp=Z,2.3nm,0.6s,mb4.3						
ARU	**Arti**	**54.65**	**318**	P	**P**	**17 18 00.6**	**-1.7**
ARU	**Arti**	**54.65**	**318**	*e*P	**P**	**17 18 00.4**	**-1.9**
	comp=Z,9.4nm,0.6s,mb5.0						
CMAR	**Chiang Mai Arr**	**54.95**	**257**	P	**P**	**17 18 03.7**	**-1.3**
	comp=Z,1.7nm,0.8s,mb4.2,baz=35,slow=7.0,SNR=4.2						
ARCES	**ARCESS Array B**	**56.25**	**341**	P	**P**	**17 18 11.1**	**-2.5**
	comp=Z,4.1nm,1.0s,mb4.4,baz=36,slow=7.9,SNR=4.5						
NVAR	**Mina Array Bea**	**59.50**	**65**	P	**P**	**17 18 37.2**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=315,slow=8.9,SNR=3.5						
JOF	**Joensuu**	**60.08**	**334**	*e*P	**P**	**17 18 38.8**	**-1.7**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
JOF	**Joensuu**	**60.08**	**334**	*e*p	**P**	**17 18 38.8**	**-1.7**
	comp=Z,1.6nm,0.5s,mb4.3						
PDAR	**Pinedale Array**	**61.66**	**57**	P	**P**	**17 18 52.4**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.8,baz=330,slow=5.3,SNR=3.9						
FINES	**FINESS Array B**	**62.73**	**336**	P	**P**	**17 18 56.4**	**-2.0**
	comp=Z,2.8nm,0.8s,mb4.5,baz=33,slow=8.8,SNR=10						
NB2	**NORSAR Subarra**	**66.59**	**342**	P	**P**	**17 19 22.7**	**-0.9**
	comp=Z,1.2nm,0.8s,mb4.0,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**66.59**	**342**	P	**P**	**17 19 22.3**	**-1.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=25,slow=6.4,SNR=4.6						
GOF	**Gofitskoye**	**69.58**	**316**	*e*P	**P**	**17 19 37.4**	**-5.2**
GOF				pmax	pmax		
	comp=Z,187nm,1.0s						
AKASG	**Malin Array Be**	**70.67**	**327**	P	**P**	**17 19 47.9**	**-1.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=31,slow=6.1,SNR=4.1						
KWP	**Kalwaria Pacla**	**73.79**	**331**	*e*P	**P**	**17 20 08.1**	**+0.3**
KWP				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KWP	**Kalwaria Pacla**	**73.79**	**331**	*e*P	**P**	**17 20 08.1**	**+0.3**
	comp=Z,11nm,0.8s,mb4.8						
STHS	**Stebnicka Huta**	**74.44**	**331**	*e*P	**P**	**17 20 12.7**	**+1.0**
STHS	**Stebnicka Huta**	**74.44**	**331**	*e*P	**P**	**17 20 12.7**	**+1.0**
TXAR	**Lajitas Array**	**74.52**	**63**	P	**P**	**17 20 11.6**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=298,slow=4.8,SNR=6.9						
KOLS	**Kolonicke sedl**	**74.53**	**330**	*e*P	**P**	**17 20 12.3**	**+0.1**
KOLS	**Kolonicke sedl**	**74.53**	**330**	*e*P	**P**	**17 20 12.3**	**+0.1**
NRDL	**Niedersach Rie**	**74.71**	**339**	*e*P	**P**	**17 20 13.7**	**+0.5**
	comp=Z,7.0nm,1.2s,mb4.5						
OKC	**Ostrava-Krasne**	**75.01**	**333**	*e*P	**P**	**17 20 13.0**	**-1.9**
OKC	**Ostrava-Krasne**	**75.01**	**333**	*e*P	**P**	**17 20 13.0**	**-1.9**
DPC	**Dobruska-Polom**	**75.08**	**335**	*e*P	**P**	**17 20 15.7**	**+0.4**
DPC				MLR	MLR		
	comp=Z,500nm,22.2s						
CLL	**Collm**	**75.10**	**337**	*e*P	**P**	**17 20 14.9**	**-0.5**
	comp=Z,7.0nm,0.9s,mb4.6						
CLL	**Collm**	**75.10**	**337**	⇓*i*P	**P**	**17 20 15.2**	**-0.2**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
CLL	**Collm**	**75.10**	**337**	⇓*i*P	**P**	**17 20 15.2**	**-0.2**
	comp=Z,7.0nm,0.9s,mb4.6						
CLL	**Collm**	**75.10**	**337**	⇓*i*P	**P**	**17 20 15.2**	**-0.2**
	comp=Z,7.0nm,0.9s,mb4.6						
CLZ	**Clausthal**	**75.25**	**339**	*e*P	**P**	**17 20 16.8**	**+0.5**
	comp=Z,10.0nm,1.0s,mb4.7						
CLZ	**Clausthal**	**75.25**	**339**	*e*P	**P**	**17 20 16.8**	**+0.5**
CLZ				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KECS	**Kecovo**	**75.50**	**331**	*e*P	**P**	**17 20 18.2**	**+0.4**
KECS	**Kecovo**	**75.50**	**331**	*e*P	**P**	**17 20 18.2**	**+0.4**
PRU	**Pruhonice**	**75.89**	**336**	*e*P	**P**	**17 20 20.9**	**+0.9**
PRU	**Pruhonice**	**75.89**	**336**	*e*P	**P**	**17 20 20.9**	**+0.9**

VYHS Vyhne 76.00 332 eP P 17 20 21.2 +0.5
VYHS Vyhne 76.00 332 eP P 17 20 21.2 +0.5
MOX Moxa 76.06 338 eP P 17 20 20.8 -0.1
comp=Z,5.0nm,0.9s,mb4.4
MOX Moxa 76.06 338 eP P 17 20 20.9 0.0
comp=Z,6.0nm,1.0s,mb4.5
MOX Moxa 76.06 338 eP P 17 20 20.8 -0.1
MOX pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
WERN Wernitzgruen 76.19 337 eP P 17 20 22.1 +0.4
comp=Z,10.0nm,0.9s,mb4.8
NKC Novy Kostel 76.22 337 eP P 17 20 18.6 -3.3
NKC Novy Kostel 76.22 337 eP P 17 20 18.6 -3.3
TREC Trest 76.26 335 eP P 17 20 17.2 -4.9
ROTZ Rotzenmuhle 76.71 337 eP P 17 20 25.7 +1.0
comp=Z,7.0nm,0.9s,mb4.6
KHC Kasperske Hory 76.94 336 eP P 17 20 26.4 +0.5
KHC Kasperske Hory 76.94 336 eP P 17 20 26.4 +0.5
GRA1 Grafenberg Arr 77.03 338 eP P 17 20 26.8 +0.3
comp=Z,14nm,0.8s,mb4.9
GRF Grafenberg Arr 77.03 338 eP P 17 20 26.8 +0.3
comp=Z,14nm,0.8s,mb4.9
GRF Grafenberg Arr 77.03 338 eP P 17 20 26.8 +0.3
GRF pmax pmax
comp=Z,14nm,0.8s,mb4.9
GRF Grafenberg Arr 77.03 338 eP P 17 20 26.8 +0.3
GRF pmax pmax
comp=Z,14nm,0.8s,mb4.9
WET Wettzell 77.11 336 eP P 17 20 27.4 +0.5
comp=Z,5.0nm,0.9s,mb4.4
WET Wettzell 77.11 336 eP P 17 20 27.4 +0.5
WET pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GEC2 GERESS Array S 77.16 336 eP P 17 20 27.0 -0.2
comp=Z,4.0nm,0.7s,mb4.5
GEC2 GERESS Array S 77.16 336 eP P 17 20 27.0 -0.2
GEC2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
GERES GERESS Array B 77.16 336 P P 17 20 27.5 +0.3
comp=Z,1.9nm,0.6s,mb4.2,baz=35,slow=5.1,SNR=12
TNS Taunus Mts 77.21 339 eP P 17 20 27.7 +0.3
comp=Z,12nm,0.7s,mb4.9
TNS Taunus Mts 77.21 339 eP P 17 20 27.7 +0.3
TNS pmax pmax
comp=Z,12nm,0.7s,mb4.9
CONA Conrad Observa 77.39 334⇑iP P 17 20 29.4 +0.9
comp=Z,6.2nm,0.7s,mb4.6
MOA Molln 77.92 335⇑iP P 17 20 31.5 +0.1
comp=Z,2.5nm,0.7s,mb4.3
BRTR Keskin Array B 78.02 318 P P 17 20 33.1 +0.9
comp=Z,9.8nm,0.9s,mb4.7,baz=81,slow=3.5,SNR=1.8
ARSA Arzberg 78.10 334⇓iP P 17 20 31.7 -0.8
comp=Z,4.4nm,0.9s,mb4.4
GIVF Givet 78.11 342 eP P 17 20 32.6 +0.1
WLF Walferdange 78.25 341 eP P 17 20 32.2 -1.0
comp=Z,7.0nm,0.9s,mb4.6
BAIF Baives 78.28 342 eP P 17 20 33.7 +0.3
RJOB Jochberg 78.42 336 eP P 17 20 34.7 +0.5
comp=Z,4.0nm,0.8s,mb4.4
SOKA Soboth 78.76 334⇑iP P 17 20 36.6 +0.4
comp=Z,7.4nm,0.9s,mb4.6
KBA Koelnbreinsper 78.88 335⇓iP P 17 20 37.8 +1.0
comp=Z,20nm,1.0s,mb5.0,SNR=8.0
WATA Walderalm 79.12 336⇑iP P 17 20 38.8 +0.7
comp=Z,3.2nm,0.5s,mb4.5
WTTA Wattenberg 79.17 336⇑iP P 17 20 39.3 +0.9
comp=Z,9.9nm,1.0s,mb4.7
CDF Champ du Feu 79.17 340 eP P 17 20 38.7 +0.3
comp=Z,9.8nm,0.8s,mb4.5
CDF Champ du Feu 79.17 340 eP P 17 20 38.7 +0.3
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 79.17 340 eP P 17 20 38.7 +0.3
comp=Z,4.9nm,0.8s,mb4.5
MOTA Moosalm 79.23 337⇑iP P 17 20 39.2 +0.5
comp=Z,14nm,1.1s,mb4.8
ABTA Abfaltersbach 79.41 336⇑iP P 17 20 40.4 +0.7
comp=Z,6.6nm,1.0s,mb4.5
DIVS Divibare 79.54 330 P P 17 20 36.6 -3.8
DAVA Damuels 79.60 337⇑iP P 17 20 41.1 +0.4
comp=Z,7.3nm,0.9s,mb4.6
HAU Haudompre 79.77 340 eP P 17 20 41.7 +0.1
comp=Z,10nm,0.9s,mb4.5
HAU Haudompre 79.77 340 eP P 17 20 41.7 +0.1
HAU pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HAU Haudompre 79.77 340 eP P 17 20 41.7 +0.1
comp=Z,5.1nm,0.9s,mb4.5
FLN La Foliniere 80.41 345 eP P 17 20 45.4 +0.4
GRR Gorron 80.83 345 eP P 17 20 47.9 +0.6
comp=Z,23nm,0.9s,mb4.8
GRR Gorron 80.83 345 eP P 17 20 47.9 +0.6
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRR Gorron 80.83 345 eP P 17 20 47.9 +0.6
comp=Z,12nm,0.9s,mb4.8
SSF Saint Saulge 81.28 342 eP P 17 20 50.2 +0.5
SSF Saint Saulge 81.28 342 eP P 17 20 50.2 +0.5
SSF Saint Saulge 81.28 342 eP P 17 20 50.2 +0.5
AVF Avril sur Loir 81.57 342 eP P 17 20 52.0 +0.7
AVF Avril sur Loir 81.57 342 eP P 17 20 52.0 +0.7
AVF Avril sur Loir 81.57 342 eP P 17 20 52.0 +0.7
LPL La Plagne 82.02 339 eP P 17 20 54.8 +1.1
LPL La Plagne 82.02 339 eP P 17 20 54.8 +1.1
LPL La Plagne 82.02 339 eP P 17 20 54.8 +1.1
LPG La Plagne 82.04 339 eP P 17 20 55.2 +1.4
LPG La Plagne 82.04 339 eP P 17 20 55.2 +1.4
LPG La Plagne 82.04 339 eP P 17 20 55.2 +1.4
TCF Toulx Ste Croi 82.28 342 eP P 17 20 56.0 +1.0
comp=Z,5.3nm,0.8s,mb4.2
TCF Toulx Ste Croi 82.28 342 eP P 17 20 56.0 +1.0
TCF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 82.28 342 eP P 17 20 56.0 +1.0
comp=Z,2.7nm,0.8s,mb4.2
MMAI Mount Meron Ar 82.73 313 P P 17 20 58.4 +0.8
comp=Z,2.0nm,0.5s,mb4.4,baz=52,slow=7.7,SNR=3.9

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*NEIC **20** 17:10:05.1±3.7, 55.°86S×28.°02W, h138km±33km, mb4.0/1, Error ellipse: s-maj=16.0km s-min=11.8km az=219.0*
IDC 20 17:10:03.6±6.7, 55.°93S×28.°06W, h124km±59km, mb3.7/6, mb1 3.8/6, mb1mx3.7/14, mbtmp3.7/6, Error ellipse: s-maj=31.3km s-min=18.9km az=30.0, South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CPUP Villa Florida 36.37 312 P P 17 16 54.9 -0.7
0.3nm,0.3s,baz=108,slow=6.4,SNR=3.3
MAW Mawson 40.53 144 P P 17 17 30.1 +0.2
1.5nm,0.7s,baz=270,slow=11,SNR=3.0
SBA Scott Base 46.16 184 eP P 17 18 16.0 +1.1
3.5nm,0.9s
BOSA Boshof 46.41 77 P P 17 18 17.4 -0.2
1.0nm,0.5s,baz=210,slow=9.1,SNR=6.3
LBTB Lobatse 49.44 74 P P 17 18 40.6 -0.2
2.4nm,0.6s,baz=246,slow=12,SNR=3.9
LPAZ La Paz 49.91 306 P P 17 18 45.5 +1.0
1.5nm,0.6s,baz=134,slow=4.2,SNR=7.6
LPAZ La Paz 49.91 306 P P 17 18 45.5 +1.0
TORD Torodi Ar. Bea 73.19 30 P P 17 21 21.3 +0.6
2.4nm,0.4s,baz=200,slow=6.4,SNR=41
FINES FINESS Array B 124.51 28 PKP PKPdf 17 28 45.9 -0.6
2.2nm,0.5s,baz=170,slow=1.6,SNR=19
KAF Kangasniemi 125.12 28 ep PKPdf 17 28 46.4 -1.3
2.1nm,0.5s
CMAR Chiang Mai Arr 125.56 111 PKP PKPdf 17 28 49.6 -0.3
1.0nm,0.9s,baz=244,slow=4.5,SNR=4.9
JOF Joensuu 127.14 30 ep PKPdf 17 28 50.2 -1.3
2.0nm,0.6s
ARCES ARCESS Array B 131.01 22 PKP PKPdf 17 28 58.4 -0.3
1.5nm,0.6s,baz=229,slow=0.6,SNR=13
ARCES ARCESS Array B 131.01 22 PKP PKPdf 17 28 58.4 -0.3
BVAR Borovoye Array 135.13 58 PKP PKPdf 17 29 06.7 -0.3
0.5nm,0.5s,baz=178,slow=1.7,SNR=4.8
YKA Yellowknife Ar 135.76 318 PKP PKPdf 17 29 07.3 -0.5
0.6nm,0.5s,baz=132,slow=2.1,SNR=7.7
ZALV Zalesovo Beam 142.75 64 PKhKP 17 29 16.9
0.7nm,0.4s,baz=241,slow=6.0,SNR=4.1
SONM Songino Array 151.21 87 PKPbc PKPbc 17 29 41.2 0.0
5.1nm,0.5s,baz=220,slow=3.8,SNR=29

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*ISCJB **20** 17:11:10.4±0.7, 3.°1S±0.°1×101.°5E±0.°1, h45km, mb4.7/18, Error ellipse: s-maj=18.4km s-min=18.1km az=23.3*
*NEIC **20** 17:11:11.7±0.6, 3.°20S×101.°41E, mb5.0/3, Error ellipse: s-maj=17.6km s-min=13.3km az=71.0*
*IDC **20** 17:11:11.8±1.1, 3.°24S×101.°36E, h45km±6km, mb4.4/16, mb1 4.5/16, mb1mx4.3/22, mbtmp4.4/16, MS4.8/1, Ms1 4.8/1, ms1mx3.7/29, Error ellipse: s-maj=23.8km s-min=22.7km az=29.0*
ISC 20 17:11:12.3±0.7, 3.°2S±0.°1×101.°5E±0.°1, h47km, h47km±1.2km:pP-P, n32, σ0.°74/30, mb4.7/18, Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CMAR Chiang Mai Arr 21.65 353 P P 17 15 57.5 -1.3
2.3nm,0.5s,mb3.9,baz=191,slow=9.2,SNR=2.4
ENH Enshi 34.13 12 eP P 17 17 52.6 -0.2
9.7nm,0.6s,mb4.9
ASAR Alice Springs 37.37 126 P P 17 18 20.4 -0.3
5.8nm,0.6s,mb4.6,baz=311,slow=8.5,SNR=3.2
KSRS Korea Array 47.31 29 P P 17 19 42.1 +0.8
1.9nm,0.7s,mb4.1,baz=222,slow=7.2,SNR=3.8
KSRS pP pP 17 19 54.7 +0.5
9.1nm,1.1s,baz=217,slow=7.9,SNR=5.4
SONM Songino Array 50.99 4 P P 17 20 10.6 +1.4
10nm,0.7s,mb4.9,baz=190,slow=9.1,SNR=5.5
SONM pP pP 17 20 22.9 +0.6
8.9nm,0.8s,baz=182,slow=8.1,SNR=4.7
MJAR Matsushiro Arr 52.28 38 P P 17 20 19.3 +0.2
4.6nm,0.8s,mb4.5,baz=216,slow=7.6,SNR=6.2
MKAR Makanchi Array 52.56 343 P P 17 20 21.2 +0.2
12nm,0.6s,mb5.0,baz=155,slow=9.0,SNR=7.5
MKAR pP pP 17 20 33.4 -0.7
11nm,0.8s,baz=145,slow=9.1,SNR=4.0
KURK Kurchatov 57.15 343 P P 17 20 53.4 -0.7
12nm,0.7s,mb5.1,baz=160,slow=7.0,SNR=4.3
KURK pP pP 17 21 06.0 -1.4
22nm,0.8s,baz=159,slow=7.0,SNR=7.2
KURK Kurchatov 57.15 343 eP P 17 20 53.9 -0.3
21nm,0.8s,mb5.2
KURK e pP 17 21 06.5 -0.9
ZALV Zalesovo Beam 58.60 349 P P 17 21 04.0 -0.2
60nm,0.9s,mb5.6,baz=161,slow=4.8,SNR=7.9
ZALV pP pP 17 21 16.4 -1.1
17nm,0.7s,baz=161,slow=6.2,SNR=5.2
BVAR Borovoye Array 61.80 339 P P 17 21 24.4 -1.7
7.4nm,0.7s,mb4.9,baz=135,slow=6.5,SNR=5.1
BVAR pP pP 17 21 38.6 -0.8
6.7nm,0.7s,baz=139,slow=9.3,SNR=2.6
YAK Yakutsk 68.52 14 eP P 17 22 08.9 -0.6
MMAI Mount Meron Ar 71.92 306 P P 17 22 31.4 +0.5
4.1nm,0.6s,mb4.5,baz=90,slow=9.6,SNR=4.5
PETK Petropavlovsk- 73.10 32 P P 17 22 37.0 -0.5
4.8nm,0.8s,mb4.5,baz=203,slow=5.9,SNR=5.0
BRTR Keskin Array B 75.20 312 P P 17 22 49.2 -0.8
8.2nm,0.7s,mb4.8,baz=136,slow=7.5,SNR=7.2
BOSA Boshof 76.38 241 P P 17 22 56.1 -1.0
1.9nm,0.6s,mb4.2,baz=114,slow=3.1,SNR=5.3
KOLS Kolonicke sedl 85.30 319 eP P 17 23 45.1 +0.9
KOLS Kolonicke sedl 85.30 319 e P 17 23 45.1 +0.9
KOLS Kolonicke sedl 85.30 319 e P 17 23 45.1 +0.9
STHS Stebnicka Huta 86.05 320 eP P 17 23 48.9 +1.0
STHS Stebnicka Huta 86.05 320 e P 17 23 48.9 +1.0
KECS Kecovo 86.39 319 eP P 17 23 50.0 +0.4
KECS Kecovo 86.39 319 e P 17 23 50.0 +0.4
VYHS Vyhne 87.48 319 eP P 17 23 55.5 +0.6
VYHS Vyhne 87.48 319 e P 17 23 55.5 +0.6
ARCES ARCESS Array B 88.08 340 P P 17 23 57.6 +0.3
8.7nm,0.8s,mb5.0,baz=72,slow=4.0,SNR=5.8
MORC Moravsky Berou 88.48 320 eP P 17 23 59.7 0.0
6.2nm,0.9s,mb4.8
GERES GERESS Array B 90.90 319 P P 17 24 11.3 +0.3
2.1nm,0.8s,mb4.5,baz=76,slow=5.4,SNR=4.9
GERES LR LR 18 12 01.4
comp=Z,438nm,21.2s,baz=84,slow=40
GERES GERESS Array B 90.90 319 P P 17 24 11.3 +0.3
GERES LR LR 18 12 01.4
NOA NORSAR Array B 92.89 331 P P 17 24 20.4 +0.5
2.6nm,0.9s,mb4.7,baz=77,slow=10,SNR=4.1
NVAR Mina Array Bea 129.56 41 PKP PKPdf 17 30 17.6 +1.2
3.0nm,1.0s,baz=343,slow=2.8,SNR=3.3
NVAR SKPbc 17 33 34.4
1.7nm,0.9s,baz=276,slow=3.5,SNR=4.6
TXAR Lajitas Array 144.70 40 PKP PKPdf 17 30 43.9 -0.7
4.4nm,0.7s,baz=305,slow=1.1,SNR=6.1

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*ISCJB **20** 17:34:30.9±0.8, 36.°41N±0.°05×3.°32W±0.°04, h19km±7km, Error ellipse: s-maj=9.2km s-min=5.5km az=170.4*
*CSEM **20** 17:34:30.8±0.2, 36.°47N×3.°23W, h12km, ML2.4/7, Error ellipse: s-maj=4.0km s-min=3.3km az=166.0*
*SFS **20** 17:34:31.0, 36.°45N×3.°20W, h10km, ML2.2*
*MDD **20** 17:34:31.7±0.5, 36.°45N×3.°21W, h11km±1km, mbLg2.2/15, Error ellipse: s-maj=4.3km s-min=3.6km az=44.0, PRIMO*
ISC 20 17:34:30.6±0.8, 36.°46N±0.°05×3.°29W±0.°04, h10km±4km, n73, σ1.°00/93, 4D, Strait of Gibraltar

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EGUA Guajares 0.44 329 ⇓Pg Pg 17 34 40.7 +1.6
52nm,0.1s,SNR=18
EGUA Lg 17 34 47.0
189nm,0.2s,SNR=7.9
EGUA Guajares 0.44 329 ⇓Pg Pg 17 34 40.7 +1.6
52nm,0.1s,SNR=18
EGUA Lg 17 34 47.0
189nm,0.2s,SNR=7.9
EGUA Guajares 0.44 329 Pg Pg 17 34 40.7 +1.5
52nm,0.1s,SNR=18
EGUA Lg 17 34 47.0
189nm,0.2s,SNR=7.9
EBER Berja 0.54 36 Pg Pg 17 34 41.3 +0.1
13nm,0.2s,SNR=56
EBER Lg 17 34 48.3
132nm,0.1s
EBER Berja 0.54 36 Pg Pg 17 34 41.3 +0.1
13nm,0.2s,SNR=56
EBER Lg 17 34 48.3
132nm,0.1s
EBER Berja 0.54 36 Pg Pg 17 34 41.3 +0.1
13nm,0.2s,SNR=56
EBER Lg 17 34 48.3
132nm,0.1s
EALB Alboran 0.56 158 Pg Pg 17 34 41.4 0.0
43nm,0.1s,SNR=7.9
EALB Lg 17 34 48.6
200nm,0.2s,SNR=7.9
EALB Alboran 0.56 158 Pg Pg 17 34 41.4 0.0
43nm,0.1s,SNR=7.9
EALB Lg 17 34 48.6
200nm,0.2s,SNR=7.9
EALB Alboran 0.56 158 Pg Pg 17 34 41.4 0.0
43nm,0.1s,SNR=7.9
EALB Lg 17 34 48.6
200nm,0.2s,SNR=7.9
ERON Agron 0.70 324 Pg Pg 17 34 44.9 +0.8
4.7nm,0.2s,SNR=7.9
ERON Lg 17 34 55.2
24nm,0.2s,SNR=7.9
ERON Agron 0.70 324 Pg Pg 17 34 44.9 +0.8
4.7nm,0.2s,SNR=7.9
ERON Lg 17 34 55.2
24nm,0.2s,SNR=7.9
ERON Agron 0.70 324 Pg Pg 17 34 44.9 +0.8
4.7nm,0.2s,SNR=7.9
ERON Lg 17 34 55.2
24nm,0.2s,SNR=7.9
EQUE Quentar 0.76 351 ⇓Pg Pg 17 34 46.4 +1.2
38nm,0.2s,SNR=18
EQUE Lg 17 34 56.1
16nm,0.1s,SNR=5.1
EQUE Quentar 0.76 351 ⇓Pg Pg 17 34 46.4 +1.2
38nm,0.2s,SNR=18
EQUE Lg 17 34 56.1
16nm,0.1s,SNR=5.1
EQUE Quentar 0.76 351 Pg Pg 17 34 46.4 +1.2
38nm,0.2s,SNR=18
EQUE Lg 17 34 56.1
16nm,0.1s,SNR=5.1
ECOG Cogollos-Vega 0.85 345 Pg Pg 17 34 48.0 +1.0
14nm,0.1s,SNR=12
ECOG Lg 17 34 58.8
12nm,0.2s,SNR=5.0
ECOG Cogollos-Vega 0.85 345 Pg Pg 17 34 48.0 +1.0
14nm,0.1s,SNR=12
ECOG Lg 17 34 58.8
12nm,0.2s,SNR=5.0
ECOG Cogollos-Vega 0.85 345 Pg Pg 17 34 48.0 +1.0
14nm,0.1s,SNR=12
ECOG Lg 17 34 58.8
12nm,0.2s,SNR=5.0
EMAL Malaga-Limoner 0.97 289 Pg Pg 17 34 54.3 +5.0
EMAL Lg 17 35 00.1
EMAL Malaga-Limoner 0.97 289 Pg Pg 17 34 54.3 +5.0
EMAL Lg 17 35 00.1
EMAL Malaga-Limoner 0.97 289 eP Pg 17 34 54.3 +5.1
EMAL eS Sg 17 35 00.1 -1.7
ELOJ Sierra Loja 0.98 315 Lg 17 35 04.4
6.3nm,0.3s,SNR=4.9
ELOJ Sierra Loja 0.98 315 Lg 17 35 04.4
6.3nm,0.3s,SNR=4.9
ELOJ Sierra Loja 0.98 315 Lg 17 35 04.4
6.3nm,0.3s,SNR=4.9
ENIJ Nijar 1.01 59 Pg Pg 17 34 48.8 -1.3
17nm,0.2s,SNR=15
ENIJ Lg 17 35 01.8
46nm,0.3s,SNR=8.3
ENIJ Nijar 1.01 59 Pg Pg 17 34 48.8 -1.3
17nm,0.2s,SNR=15
ENIJ Lg 17 35 01.8
46nm,0.3s,SNR=8.3
ENIJ Nijar 1.01 59 Pg Pg 17 34 48.8 -1.2
17nm,0.2s,SNR=15
ENIJ Lg 17 35 01.8
46nm,0.3s,SNR=8.3
EMIJ Mijas 1.20 276 Pg Pg 17 34 51.8 -1.9
2.0nm,0.1s,SNR=14
EMIJ Lg 17 35 05.8
8.5nm,0.1s,SNR=6.8
EMIJ Mijas 1.20 276 Pg Pg 17 34 51.8 -1.9
2.0nm,0.1s,SNR=14
EMIJ Lg 17 35 05.8
8.5nm,0.1s,SNR=6.8
EMIJ Mijas 1.20 276 Pg Pg 17 34 51.8 -1.9
2.0nm,0.1s,SNR=14
EMIJ Lg 17 35 05.8
8.5nm,0.1s,SNR=6.8
ELUQ Luque 1.35 325 Pg Pg 17 34 56.4 -0.1
4.1nm,0.2s,SNR=7.9
ELUQ Lg 17 35 17.2
5.2nm,0.2s,SNR=7.9
ELUQ Luque 1.35 325 Pg Pg 17 34 56.4 -0.1
4.1nm,0.2s,SNR=7.9
ELUQ Lg 17 35 17.2
5.2nm,0.2s,SNR=7.9
EQES Quesada 1.35 7 Pg Pg 17 34 57.1 +0.5
19nm,0.2s,SNR=37
EQES Lg 17 35 15.5
16nm,0.2s,SNR=10
EQES Quesada 1.35 7 Pg Pg 17 34 57.1 +0.5
19nm,0.2s,SNR=37
EQES Lg 17 35 15.5
16nm,0.2s,SNR=10
EQES Quesada 1.35 7 Pg Pg 17 34 57.1 +0.5
19nm,0.2s,SNR=37
EQES Lg 17 35 15.5
16nm,0.2s,SNR=10
EHUE Huescar 1.47 22 Pg Pg 17 34 58.1 -0.7
1.8nm,0.2s,SNR=7.9
EHUE Lg 17 35 18.2
7.1nm,0.2s,SNR=7.9
EHUE Huescar 1.47 22 Pg Pg 17 34 58.1 -0.7
1.8nm,0.2s,SNR=7.9
EHUE Lg 17 35 18.2
7.1nm,0.2s,SNR=7.9
EHUE Huescar 1.47 22 Pg Pg 17 34 58.1 -0.6
1.8nm,0.2s,SNR=7.9
EHUE Lg 17 35 18.2
7.1nm,0.2s,SNR=7.9
EBAN Banos Encina 1.75 347 Pg Pg 17 35 03.6 -0.6
4.4nm,0.2s,SNR=7.9
EBAN Lg 17 35 28.1
3.5nm,0.2s,SNR=7.9
EBAN Banos Encina 1.75 347 Pg Pg 17 35 03.6 -0.6
4.4nm,0.2s,SNR=7.9
EBAN Lg 17 35 28.1
3.5nm,0.2s,SNR=7.9
EBAN Banos Encina 1.75 347 Pg Pg 17 35 03.6 -0.6
4.4nm,0.2s,SNR=7.9
EBAN Lg 17 35 28.1
3.5nm,0.2s,SNR=7.9
EADA Adamuz 1.99 329 Pg Pg 17 35 08.6 -0.3
2.0nm,0.2s,SNR=14
EADA Sn Sn 17 35 29.4 -0.1
1.3nm,0.1s,SNR=7.9
EADA Lg 17 35 35.4
5.5nm,0.2s,SNR=5.0
EADA Adamuz 1.99 329 Pg Pg 17 35 08.6 -0.3
2.0nm,0.2s,SNR=14
EADA Sn Sn 17 35 29.4 -0.1
1.3nm,0.1s,SNR=7.9
EADA Lg 17 35 35.4
5.5nm,0.2s,SNR=5.0
EADA Adamuz 1.99 329 Pg Pg 17 35 08.6 -0.2
2.0nm,0.2s,SNR=14
EADA Sn Sn 17 35 29.4 0.0
1.3nm,0.1s,SNR=7.9
EADA Lg 17 35 35.4
5.5nm,0.2s,SNR=5.0
EVIA Vianos 2.27 16 Pg Pg 17 35 13.3 -0.7
2.9nm,0.3s,SNR=7.3
EVIA Lg 17 35 41.9
16nm,0.7s,SNR=5.0
EVIA Vianos 2.27 16 Pg Pg 17 35 13.3 -0.7
2.9nm,0.3s,SNR=7.3
EVIA Lg 17 35 41.9
16nm,0.7s,SNR=5.0
EVIA Vianos 2.27 16 Pg Pg 17 35 13.3 -0.8
2.9nm,0.3s,SNR=7.3
EVIA Lg 17 35 45.3
16nm,0.7s,SNR=5.0
ETOB Tobarra 2.58 32 Pn Pn 17 35 13.2 +0.7
0.3nm,0.2s,SNR=8.0
ETOB Sn Sn 17 35 42.8 -1.2
0.6nm,0.1s,SNR=5.6
ETOB Tobarra 2.58 32 Pn Pn 17 35 13.2 +0.7
0.3nm,0.2s,SNR=8.0
ETOB Sn Sn 17 35 42.8 -1.2
0.6nm,0.1s,SNR=5.6
ETOB Tobarra 2.58 32 Pn Pn 17 35 13.2 +0.7
0.3nm,0.2s,SNR=8.0
ETOB Sn Sn 17 35 42.8 -1.2
0.6nm,0.1s,SNR=5.6
EMIN Mina Concepcio 3.00 297 Pn Pn 17 35 18.9 +0.6
0.1nm,0.1s,SNR=7.9
EMIN Sn Sn 17 35 54.3 -0.1
0.3nm,0.1s,SNR=7.9
EMIN Mina Concepcio 3.00 297 Pn Pn 17 35 18.9 +0.6
0.1nm,0.1s,SNR=7.9
EMIN Sn Sn 17 35 54.3 -0.1
0.3nm,0.1s,SNR=7.9
EMIN Mina Concepcio 3.00 297 Pn Pn 17 35 18.9 +0.6
0.1nm,0.1s,SNR=7.9
EMIN Sn Sn 17 35 54.3 -0.1
0.3nm,0.1s,SNR=7.9
PBAR Barrancos 3.45 301 ePn Pn 17 35 26.0 +1.6
PBAR eSn Sn 17 36 06.0 +0.7
PBAR A 17 36 25.3
1.8nm,0.4s
PBAR Barrancos 3.45 301 Pn Pn 17 35 26.0 +1.6
PBAR Sn Sn 17 36 06.0 +0.7
1.8nm,0.4s
PBAR Barrancos 3.45 301 Pn Pn 17 35 26.0 +1.6
PBAR Sn Sn 17 36 06.0 +0.7
1.8nm,0.4s
PBAR Barrancos 3.45 301 ePn Pn 17 35 26.0 +1.6
PBAR eSn Sn 17 36 06.0 +0.7
1.8nm,0.4s
EGRO El Granado 3.53 289 Pn Pn 17 35 25.2 -0.3
0.2nm,0.2s,SNR=7.9
EGRO Sn Sn 17 36 06.8 -0.4
0.7nm,0.2s,SNR=7.9
EGRO El Granado 3.53 289 Pn Pn 17 35 25.2 -0.3
0.2nm,0.2s,SNR=7.9
EGRO Sn Sn 17 36 06.8 -0.4
0.7nm,0.2s,SNR=7.9
EGRO El Granado 3.53 289 Pn Pn 17 35 25.2 -0.3
0.2nm,0.2s,SNR=7.9
EGRO Sn Sn 17 36 06.8 -0.4
0.7nm,0.2s,SNR=7.9
PVAQ Vaqueiros 3.67 286 ePn Pn 17 35 28.9 +1.4
PVAQ eSn Sn 17 36 10.7 -0.1
PVAQ A 17 36 13.0
2.2nm,1.3s
PVAQ Vaqueiros 3.67 286 Pn Pn 17 35 28.9 +1.4

PVAQ				Sn	Sn	17 36 10.7	-0.1
	2.2nm,1.3s						
PVAQ	**Vaqueiros**	**3.67**	**286**	Pn	**Pn**	**17 35 28.9**	**+1.4**
PVAQ				Sn	**Sn**	**17 36 10.7**	**-0.1**
	2.2nm,1.3s						
PVAQ	**Vaqueiros**	**3.67**	**286**	*e*Pn	**Pn**	**17 35 28.9**	**+1.4**
PVAQ				*e*Sn	**Sn**	**17 36 10.7**	**-0.1**
	2.2nm,1.3s						
EBAD	**Badajoz**	**3.74**	**309**	Pn	**Pn**	**17 35 29.0**	**+0.5**
	0.2nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**17 36 10.4**	**-2.2**
	0.3nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.74**	**309**	Pn	**Pn**	**17 35 29.0**	**+0.5**
	0.2nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**17 36 10.4**	**-2.2**
	0.3nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.74**	**309**	Pn	**Pn**	**17 35 29.0**	**+0.5**
	0.2nm,0.2s,SNR=7.9						
PCVE	**Castro Verde**	**3.98**	**289**	*e*Sn	**Sn**	**17 36 19.8**	**+1.4**
PCVE				A		17 36 28.5	
	2.1nm,0.5s						
PCVE	**Castro Verde**	**3.98**	**289**	Sn	**Sn**	**17 36 19.8**	**+1.4**
	2.1nm,0.5s						
PCVE	**Castro Verde**	**3.98**	**289**	Sn	**Sn**	**17 36 19.8**	**+1.4**
	2.1nm,0.5s						
PCVE	**Castro Verde**	**3.98**	**289**	*e*Sn	**Sn**	**17 36 19.8**	**+1.4**
	2.1nm,0.5s						
PFVI	**Vila Bisbo**	**4.50**	**280**	*e*Sn	**Sn**	**17 36 29.9**	**-1.3**
PFVI	**Vila Bisbo**	**4.50**	**280**	*e*Sn	**Sn**	**17 36 29.9**	**-1.3**

NEIC ***20*** *17:44:53.4,50°.71N×178°.57E,h6km,mb4.3/6, ML3.7(AEIC),After AEIC.*
IDC ***20*** *17:44:53.3±0.9,51°.18N×178°.62E,h0km,mb3.8/15, mb1 4.0/16,mb1mx3.9/28,mbtmp3.8/16,Error ellipse: s-maj=29.1km s-min=15.7km az=171.0*
MOS ***20*** *17:44:55.2±1.2,50°.99N×178°.90E,h33km,mb4.3/12,Error ellipse: s-maj=16.7km s-min=10.4km az=119.4*
ISCJB ***20*** *17:44:58.1±1.4,51°.1N±0°.1×178°.69E±0°.08,h52km±11km, mb4.0/24,Error ellipse: s-maj=20.1km s-min=8.2km az=172.8*

ISC 20 17:44:59.8±1.3,51°.1N±0°.1×178°.67E±0°.08,h50km±10km, n48,σ0s97/49,mb4.0/24,**4C-2D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.28**	**302**	P	**Pn**	**17 45 48.3**	**-0.3**
SMY				S	**Sn**	**17 46 30.8**	**+4.6**
FX1	**Attu Island--F**	**3.85**	**300**	P	**Pn**	**17 45 55.6**	**-0.8**
ATKA	**Atka Island**	**4.58**	**73**	P	**Pn**	**17 46 06.2**	**-0.2**
PETK	**Petropavlovsk-**	**13.05**	**287**	Pn	**Pn**	**17 48 05.2**	**+3.0**
	0.5nm,0.3s,baz=78,slow=21,SNR=4.3						
KDAK	**Kodiak Island**	**17.91**	**57**	P	**Pn**	**17 49 01.7**	**-3.3**
BILL	**Bilibino**	**18.06**	**345**	⇑*i*P	**Pn**	**17 49 08.0**	**+1.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL	**Bilibino**	**18.06**	**345**	*e*P	**Pn**	**17 49 07.6**	**+0.9**
	comp=Z,5.6nm,0.9s						
PPLA	**Purkeypile**	**19.58**	**42**	*e*P	**Pn**	**17 49 24.6**	**-0.4**
	comp=Z,14nm,1.1s						
KTH	**Kantishna Hill**	**20.37**	**41**	*e*P	**P**	**17 49 32.1**	**+0.3**
	comp=Z,25nm,1.0s						
TRF	**Thorofare Moun**	**20.59**	**41**	*e*P	**P**	**17 49 34.5**	**+0.2**
	comp=Z,9.5nm,1.0s						
EGAK	**Eagle**	**24.81**	**41**	*e*P	**P**	**17 50 16.3**	**-0.4**
	comp=Z,17nm,1.0s,mb4.5						
ERM	**Erimo**	**25.84**	**263**	*e*P	**P**	**17 50 26.0**	**-0.3**
INK	**Inuvik**	**28.61**	**35**	P	**P**	**17 50 50.5**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=264,slow=5.9,SNR=4.4						
INK	**Inuvik**	**28.61**	**35**	*e*P	**P**	**17 50 50.1**	**-0.8**
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
INK	**Inuvik**	**28.61**	**35**	*e*P	**P**	**17 50 50.1**	**-0.7**
	comp=Z,5.3nm,1.0s,mb4.2						
MDJ	**Mudanjiang**	**33.05**	**278**	P	**P**	**17 51 28.9**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,200nm,13.5s						
YKA	**Yellowknife Ar**	**36.58**	**46**	P	**P**	**17 51 60.0**	**-0.4**
	comp=Z,0.5nm,0.8s,mb3.4,baz=286,slow=8.7,SNR=4.8						
YKA	**Yellowknife Ar**	**36.58**	**46**	P	**P**	**17 51 60.0**	**-0.4**
BOD	**Bodaibo**	**36.88**	**306**	*e*P	**P**	**17 52 02.3**	**-0.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KSRS	**Korea Array**	**38.05**	**269**	P	**P**	**17 52 13.7**	**+0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=59,slow=5.9,SNR=4.0						
KSRS	**Korea Array**	**38.05**	**269**	P	**P**	**17 52 13.7**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
NVAR	**Mina Array Bea**	**45.17**	**81**	P	**P**	**17 53 13.6**	**+2.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=312,slow=8.1,SNR=3.3						
NVAR	**Mina Array Bea**	**45.17**	**81**	P	**P**	**17 53 13.6**	**+2.2**
SONM	**Songino Array**	**45.35**	**296**	P	**P**	**17 53 13.8**	**+1.2**
	comp=Z,0.6nm,0.5s,mb3.7,baz=57,slow=7.6,SNR=6.5						
ZAK	**Zakamensk**	**45.74**	**300**	*e*P	**P**	**17 53 14.2**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
PDAR	**Pinedale Array**	**47.91**	**70**	P	**P**	**17 53 34.0**	**+1.2**
	comp=Z,0.7nm,0.8s,mb3.8,baz=308,slow=7.3,SNR=4.4						
KURK	**Kurchatov**	**58.06**	**312**	⇑*i*P	**P**	**17 54 47.5**	**+0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**58.96**	**307**	P	**P**	**17 54 52.5**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=51,slow=6.5,SNR=8.7						
MKAR	**Makanchi Array**	**58.96**	**307**	*ce*P	**P**	**17 54 53.4**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**60.07**	**319**	P	**P**	**17 55 02.0**	**+0.7**
	comp=Z,2.9nm,0.6s,mb4.5,baz=52,slow=7.4,SNR=13						
BRVK	**Borovoye**	**60.09**	**319**	⇓*i*P	**P**	**17 55 02.4**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
TXAR	**Lajitas Array**	**60.27**	**79**	P	**P**	**17 55 02.6**	**-0.4**
	comp=Z,0.1nm,0.5s,mb3.7,baz=307,slow=5.4,SNR=6.9						
ARU	**Arti**	**62.00**	**327**	*d i*P	**P**	**17 55 15.0**	**+0.7**
ARU				*e*		17 57 27.2	
ARU				S	**S**	**18 03 29.9**	**-4.7**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
FINES	**FINESS Array B**	**65.70**	**346**	P	**P**	**17 55 38.1**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=15,slow=5.8,SNR=2.7						
FINES	**FINESS Array B**	**65.70**	**346**	P	**P**	**17 55 38.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**65.82**	**308**	*e*P	**P**	**17 55 39.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
NB2	**NORSAR Subarra**	**67.77**	**353**	P	**P**	**17 55 52.6**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=9.4,slow=6.2						
NOA	**NORSAR Array B**	**67.77**	**353**	P	**P**	**17 55 51.3**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.8,baz=11,slow=6.4,SNR=4.0						
NOA	**NORSAR Array B**	**67.77**	**353**	P	**P**	**17 55 51.3**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**69.46**	**274**	P	**P**	**17 56 02.2**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=32,slow=7.7,SNR=5.0						
CMAR	**Chiang Mai Arr**	**69.46**	**274**	P	**P**	**17 56 02.2**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**75.32**	**340**	P	**P**	**17 56 36.6**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.8,baz=21,slow=6.5,SNR=3.3						
ZEI	**Tsey**	**78.58**	**328**	*e*P	**P**	**17 56 56.4**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**84.21**	**220**	P	**P**	**17 57 26.2**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.6,baz=21,slow=5.3,SNR=12						
BRTR	**Keskin Array B**	**84.53**	**334**	P	**P**	**17 57 27.3**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.1,baz=84,slow=2.7,SNR=8.6						
BRTR	**Keskin Array B**	**84.53**	**334**	*ce*P	**P**	**17 57 28.5**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PALK	**Pallekele**	**89.38**	**281**	*i* P	**P**	**17 57 48.9**	**-2.2**
BOSA	**Boshof**	**149.95**	**308**	PKPbc	PKPbc	18 04 45.5	+1.3
	comp=Z,1.8nm,0.6s,baz=72,slow=3.2,SNR=3.9						

IDC 20 17:53:30.1±3.3,2°.08S×99°.68E,h0km,mb3.5/5,mb1 3.6/5, mb1mx3.4/22,mbtmp3.6/5,Error ellipse: s-maj=133.9km s-min=24.7km az=60.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.43**	**358**	P	P	17 58 09.6	+0.5
	0.3nm,0.6s,baz=184,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**39.46**	**126**	P	P	18 01 02.5	0.0
	0.3nm,0.5s,baz=303,slow=7.9,SNR=11						
SONM	**Songino Array**	**50.06**	**6**	P	P	18 02 27.1	+0.5
	0.9nm,0.7s,baz=194,slow=7.3,SNR=8.1						
MKAR	**Makanchi Array**	**51.02**	**345**	P	P	18 02 33.9	0.0
	0.5nm,0.6s,baz=155,slow=8.8,SNR=8.0						
ZALV	**Zalesovo Beam**	**57.19**	**350**	P	P	18 03 18.2	-0.6
	1.1nm,0.4s,baz=177,slow=5.3,SNR=6.0						

NEIC ***20*** *18:07°.56.7±6.0,34°.68N×141°.78E,h61km±28km,mb4.4/4, Error ellipse: s-maj=134.5km s-min=11.0km az=63.0*
ISCJB ***20*** *18:08:03.0±0.5,34°.25N±0°.03×140°.35E±0°.05,h88km±4km, mb3.8/7,Error ellipse: s-maj=7.4km s-min=5.1km az=170.6*
JMA ***20*** *18:08:03.8±0.2,34°.28N×140°.32E,h78km±2km,M3.2 Broadband fault plane solution: P waves. NP1: φs=33.00000°,δ10.00000°,λ136.00000°. NP2: φs=166.00000°,δ83.00000°,λ83.00000°. Principal axes: T Plg51.0000°, Azm68.0000°; N Plg7.0000°, Azm167.0000°; P Plg38.0000°, Azm262.0000°;*
IDC ***20*** *18:08:05.0±3.3,34°.21N×140°.19E,h87km±16km,mb3.4/4, mb1 3.5/5,mb1mx3.2/25,mbtmp3.4/5,MS3.1/2,Ms1 3.1/2, ms1mx2.6/26 Error ellipse: s-maj=70.6km s-min=7.5km az=75.0*

ISC 20 18:08:04.2±0.5,34°.25N±0°.03×140°.34E±0°.05,h81km±4km, n30,σ0s67/42,mb3.8/7,**3C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.56**	**15**	⇓P	**Pn**	**18 08 17.9**	**-0.7**
BSO3				S	**Sn**	**18 08 29.4**	**+0.2**
BSO2	**Boso 2**	**0.60**	**35**	*e*S	**Sn**	**18 08 31.0**	**+1.1**
BSO1	**Boso 1**	**0.66**	**53**	⇓P	**Pn**	**18 08 18.7**	**-0.8**
BSO1				*e*S	**Sn**	**18 08 31.1**	**+0.2**
JMY	**Miyakejima3**	**0.71**	**255**	P	**Pn**	**18 08 19.6**	**-0.3**
BSO4	**Boso 4**	**0.73**	**0**	P	**Pn**	**18 08 20.0**	**-0.3**
BSO4				*e*S	**Sn**	**18 08 32.8**	**+0.6**
TATJ	**Tateyama 2**	**0.86**	**335**	P	**Pn**	**18 08 21.6**	**0.0**
TATJ				*e*S	**Sn**	**18 08 35.1**	**+0.5**
JIM2	**Oshima 3**	**0.88**	**302**	⇑P	**Pn**	**18 08 21.1**	**-0.7**
JIM2				S	**Sn**	**18 08 34.0**	**-1.0**
KTR	**Katsuura**	**0.89**	**359**	⇓P	**Pn**	**18 08 21.5**	**-0.5**
KTR				S	**Sn**	**18 08 34.5**	**-0.8**
JHJ2	**Mitsune**	**1.22**	**201**	⇑P	**Pn**	**18 08 26.3**	**+0.4**
JHJ2				S	**Sn**	**18 08 42.9**	**+0.6**
JHJ	**Hachijo jima 2**	**1.22**	**202**	P	**Pn**	**18 08 26.3**	**+0.3**
	340nm,0.3s,baz=64,slow=23,SNR=107						
JHJ				S	**Sn**	**18 08 41.9**	**-0.4**
	190nm,0.3s,baz=76,slow=23,SNR=21						
JIZS	**Izushimoda**	**1.29**	**291**	⇑P	**Pn**	**18 08 26.8**	**0.0**
JIZS				*e*S	**Sn**	**18 08 43.9**	**+0.1**
JOD2	**Odawara 2**	**1.44**	**315**	P	**Pn**	**18 08 28.3**	**-0.4**
JOD2				S	**Sn**	**18 08 46.4**	**-0.8**
JIM	**Shimob**	**1.93**	**311**	P	**Pn**	**18 08 35.6**	**+0.5**
JYN				S	**Sn**	**18 08 59.8**	**+1.2**
SHZ3	**Shizuoka 3**	**1.93**	**295**	P	**Pn**	**18 08 36.0**	**+0.9**
JRY	**Ryogami san**	**2.12**	**327**	P	**Pn**	**18 08 37.7**	**+0.1**
JRY				S	**Sn**	**18 09 03.2**	**+0.1**
JAG	**Ashikaga**	**2.28**	**342**	P	**Pn**	**18 08 39.4**	**-0.4**
MJAR	**Matsushiro Arr**	**2.87**	**323**	P	**Pn**	**18 08 48.2**	**+0.5**
	7.2nm,0.3s,baz=154,slow=12,SNR=60						
MJAR				S	**Sn**	**18 09 21.3**	**+0.1**
	7.1nm,0.3s,baz=251,slow=30,SNR=14						
MAJO	**Matsushiro**	**2.87**	**323**	*e*P	**Pn**	**18 08 47.9**	**+0.2**
MAJO				*e*Sn	**Sn**	**18 09 18.6**	**-2.7**
MAT	**Matsushiro**	**2.87**	**323**	P	**Pn**	**18 08 48.5**	**+0.8**
MAT				S	**Sn**	**18 09 21.8**	**+0.5**
KSRS	**Korea Array**	**10.57**	**291**	LR	LR	18 14 28.2	
	comp=Z,31nm,19.1s,baz=215,slow=36						
GUMO	**Guam**	**20.98**	**168**	P	**P**	**18 12 36.5**	**-4.5**
	121nm,1.1s						
ULN	**Ulaanbaatar**	**28.30**	**309**	P	**P**	**18 13 50.8**	**+0.9**
	1.8nm,0.8s,mb3.6						
SONM	**Songino Array**	**28.72**	**308**	P	**P**	**18 13 53.8**	**+0.2**
	0.9nm,0.7s,mb3.5,baz=102,slow=8.2,SNR=5.1						
SONM				LR	LR	18 25 30.5	
	comp=Z,114nm,18.3s,baz=75,slow=36						
ZALV	**Zalesovo Beam**	**43.19**	**315**	P	**P**	**18 15 56.6**	**-0.2**
	0.6nm,0.3s,mb3.7,baz=104,slow=6.3,SNR=3.6						
MKAR	**Makanchi Array**	**44.91**	**304**	P	**P**	**18 16 10.2**	**-0.4**
	0.8nm,0.5s,mb3.7,baz=84,slow=9.8,SNR=12						
AML	**Almayashu**	**51.78**	**300**	*e*P	**P**	**18 17 04.4**	**+0.8**
	3.1nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**54.19**	**187**	*e*P	**P**	**18 17 20.4**	**-0.9**
	1.0nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**57.92**	**187**	P	**P**	**18 17 47.6**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=23,slow=12,SNR=6.3						
TORD	**Torodi Ar. Bea**	**118.62**	**313**	PKP	PKPdf	18 26 42.4	-0.9
	0.2nm,0.8s,baz=45,slow=0.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**118.62**	**313**	PKP	PKPdf	18 26 42.4	-0.9

CASC 20 18:08:28.4±2.0,12°.17N×87°.97W,h16km±10km,MD3.7, ML3.1,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.04**	**60**	*e*P	Pb	18 08 47.6	-0.4
CRIN				*e*S	Sb	18 09 02.4	+1.1
CRIN				AML	AML	18 09 04.6	
	comp=N,477nm,0.3s						
CNCH	**Conchagua**	**1.10**	**7**	*e*P	Pb	18 08 48.6	-0.5
CNCH				*e*S	Sb	18 09 04.6	+1.3
CNGN	**Cerro Negro**	**1.28**	**75**	*e*P	Pn	18 08 50.4	-1.3
CNGN				*e*S	Sb	18 09 06.3	-2.1
VSM	**San Miguel**	**1.28**	**346**	*e*P	Pn	18 08 51.3	-0.3
VSM				*e*S	Sb	18 09 08.7	+0.3
BLLM	**Bellamira**	**1.29**	**348**	*e*P	Pn	18 08 51.4	-0.4
BLLM				*e*S	Sb	18 09 09.1	+0.4
CSAN		**1.51**	**89**	*e*P	Pn	18 08 55.6	+0.8
APYN	**Apoyeque**	**1.58**	**88**	*e*P	Pn	18 08 55.5	-0.3
CAHU	**Cacacuatique**	**1.60**	**351**	*e*P	Pn	18 08 56.7	+0.6
CAHU				*e*S	Sn	18 09 17.8	+1.3
LFRS	**El Faro**	**1.79**	**324**	*e*P	Pn	18 08 57.7	-1.0
LFRS				*e*S	Sn	18 09 21.5	+0.3
RBDL	**Robledal**	**2.55**	**319**	*e*P	Pn	18 09 09.4	+0.2

IDC ***20*** *18:16:54.5±1.7,35°.28N×23°.61E,h0km,mb3.7/3, mb1 3.7/3,mb1mx3.3/24,mbtmp3.7/3,Error ellipse: s-maj=359.9km s-min=27.5km az=139.0*
CSEM ***20*** *18:16:56.8,34°.67N×24°.14E,h19km,MD3.6,After ATH*
NEIC ***20*** *18:16:56.8,34°.67N×24°.14E,h19km,MD3.6(ATH),After ATH.*
ATH ***20*** *18:16:56.8,34°.67N×24°.14E,h19km±1km,MD3.6/6*
ISCJB ***20*** *18:16:57.2±0.9,34°.69N±0°.06×24°.14E±0°.06,h23km±5km, mb3.6/3,Error ellipse: s-maj=11.2km s-min=8.1km az=28.0*

ISC 20 18:16:58.0±0.9,34°.72N±0°.06×24°.19E±0°.06,h18km±4km, n30,σ1s23/38,mb3.6/3,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.15**	**324**	*e*PB	**Pg**	**18 17 01.9**	**-0.4**
GVD				*e*SB	**Sg**	**18 17 05.2**	**+0.1**
GVD	**Gavdhos**	**0.15**	**324**	*e*Pb	**Pg**	**18 17 01.9**	**-0.4**
GVD				*e*Sb	**Sg**	**18 17 05.2**	**+0.1**
SIVA	**Sivas**	**0.59**	**60**	*e*PB	**Pb**	**18 17 09.3**	**-0.5**
SIVA	**Sivas**	**0.59**	**60**	*e*Pb	**Pb**	**18 17 09.3**	**-0.5**
VAM	**Vamos**	**0.69**	**1**	*e*PN	**Pn**	**18 17 10.7**	**-2.1**
VAM				*e*SN	**Sb**	**18 17 21.8**	**+1.3**
VAM	**Vamos**	**0.69**	**1**	*e*Pn	**Pn**	**18 17 10.7**	**-2.1**
VAM				*e*Sn	**Sb**	**18 17 21.8**	**+1.3**
KARN	**Karanos**	**0.72**	**342**	*e*PN	**Pn**	**18 17 11.1**	**-2.1**
KARN				*e*SN	**Sn**	**18 17 22.0**	**-1.7**
KARN	**Karanos**	**0.72**	**342**	*e*Pn	**Pn**	**18 17 11.1**	**-2.1**
KARN				*e*Sn	**Sn**	**18 17 22.0**	**-1.7**
IDI	**Anoyia**	**0.81**	**45**	*e*PN	**Pn**	**18 17 13.3**	**-1.1**
IDI				*e*SN	**Sn**	**18 17 26.3**	**+0.4**
IDI	**Anoyia**	**0.81**	**45**	*e*Pn	**Pn**	**18 17 13.3**	**-1.1**
IDI				*e*Sn	**Sn**	**18 17 26.3**	**+0.4**
LAST	**Lasithi**	**1.15**	**67**	*e*PN	**Pn**	**18 17 20.1**	**+1.0**
LAST	**Lasithi**	**1.15**	**67**	*e*Pn	**Pn**	**18 17 20.1**	**+1.0**
XRY	**Khrisi**	**1.25**	**82**	*e*PN	**Pn**	**18 17 21.4**	**+0.9**
XRY	**Khrisi**	**1.25**	**82**	*e*Pn	**Pn**	**18 17 21.4**	**+0.9**
ZKR	**Zakros**	**1.71**	**76**	*e*PN	**Pn**	**18 17 28.1**	**+1.3**
ZKR	**Zakros**	**1.71**	**76**	*e*Pn	**Pn**	**18 17 28.1**	**+1.3**
KYTH	**Kithira**	**1.82**	**329**	*e*PN	**Pn**	**18 17 30.3**	**+1.9**
KYTH	**Kithira**	**1.82**	**329**	*e*Pn	**Pn**	**18 17 30.3**	**+1.9**
VLI	**Veliai**	**2.24**	**333**	*e*PN	**Pn**	**18 17 36.1**	**+2.0**
VLI	**Veliai**	**2.24**	**333**	*e*Pn	**Pn**	**18 17 36.1**	**+2.0**
KARP	**Karpathos**	**2.57**	**70**	*e*PB	**Pb**	**18 17 42.5**	**-1.0**
KARP	**Karpathos**	**2.57**	**70**	*e*Pb	**Pb**	**18 17 42.5**	**-1.0**
ITM	**Ithomi**	**3.07**	**324**	*e*PN	**Pn**	**18 17 46.9**	**+1.4**
ITM	**Ithomi**	**3.07**	**324**	*e*Pn	**Pn**	**18 17 46.9**	**+1.4**
TORD	**Torodi Ar. Bea**	**29.60**	**229**	P	**P**	**18 23 01.6**	**-0.5**
	0.2nm,0.4s,mb3.2,baz=32,slow=8.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	**29.60**	**229**	P	**P**	**18 23 01.6**	**-0.5**
MKAR	**Makanchi Array**	**44.68**	**56**	P	**P**	**18 25 09.6**	**0.0**
	0.5nm,0.5s,mb3.6,baz=263,slow=7.5,SNR=4.5						
MKAR	**Makanchi Array**	**44.68**	**56**	P	**P**	**18 25 09.6**	**0.0**
ZALV	**Zalesovo Beam**	**45.88**	**46**	P	**P**	**18 25 17.9**	**-1.1**
	1.1nm,0.5s,mb4.1,baz=274,slow=9.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**45.88**	**46**	P	**P**	**18 25 17.9**	**-1.1**

ISCJB ***20*** *18:28:50.9±0.7,51°.21N±0°.05×178°.76E±0°.03,h36km±6km, mb4.8/160,MS4.1/30,Error ellipse: s-maj=7.7km s-min=2.5km az=6.2*
MOS ***20*** *18:28:50.3±1.1,51°.15N×178°.73E,h34km,mb5.0/66, MS4.0/12,Error ellipse: s-maj=7.5km s-min=5.2km az=99.8*
NEIC ***20*** *18:28:52.6±0.2,51°.19N×178°.72E,mb4.8/114, ML4.8(AEIC),Error ellipse: s-maj=6.9km s-min=3.0km az=185.0*
IDC ***20*** *18:28:52.2±0.7,51°.29N×178°.85E,h35km±5km,mb4.4/26, mb1 4.5/28,mb1mx4.4/34,mbtmp4.4/28,ML3.9/1,MS4.0/14, Ms1 4.0/14,ms1mx3.8/39,Error ellipse: s-maj=18.0km s-min=9.5km az=165.0*
BJI ***20*** *18:28:52.4,51°.63N×178°.34E,h36km,mB5.1/23,mb4.9/36, Ms4.6/23,Ms7 4.3/23*

ISC 20 18:28:53.2±0.6,51°.25N±0°.05×178°.75E±0°.03,h39km±5km, h40km±1.2km:pP-P,n603,σ0s72/607,mb4.8/160,**MS4.1**/30, **140C-142D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.23**	**299**	*e*P	**Pn**	**18 29 41.3**	**0.0**
FX1	**Attu Island--F**	**3.81**	**297**	P	**Pn**	**18 29 50.2**	**+0.9**
ATKA	**Atka Island**	**4.49**	**75**	P	**Pn**	**18 29 59.2**	**+0.7**
ATKA				S	**Sn**	**18 30 53.8**	**+4.4**
UNV	**Unalaska Valle**	**9.35**	**68**	P	**Pn**	**18 31 06.7**	**+1.5**
PET	**Petropavlovsk**	**12.47**	**286**	*e*P	**Pn**	**18 31 49.0**	**+1.1**
PET				*e*S	**Sn**	**18 34 08.1**	**+2.8**
PET				pmax	pmax		
	comp=Z,30nm,1.3s						
PET				pmax	pmax		
	comp=Z,200nm,17.6s						
PET				MLR	MLR		
	comp=Z,400nm,11.0s						
PETK	**Petropavlovsk-**	**13.05**	**286**	Pn	**Pn**	**18 31 53.9**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=80,slow=17,SNR=15						
PETK				Sn	**Sn**	**18 34 18.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=112,slow=19,SNR=2.9						
PETK	**Petropavlovsk-**	**13.05**	**286**	Pn	**Pn**	**18 31 53.9**	**-1.8**
PETK				Sn	**Sn**	**18 34 18.0**	**-1.4**
GAMB	**Gambell**	**13.54**	**18**	*e*Pn	**Pn**	**18 32 00.0**	**-2.4**
	comp=Z,46nm,1.1s						
SKR	**Severo-Kuril's**	**14.27**	**277**	*e*P	**Pn**	**18 32 10.5**	**-1.9**
TNA	**Tin City**	**15.89**	**20**	Pn	**Pn**	**18 32 34.8**	**+1.1**
	comp=Z,69nm,1.2s						
SVW2	**Sparrevohn**	**17.24**	**45**	*e*P	**Pn**	**18 32 53.0**	**+2.4**
OHAK	**Old Harbor**	**17.32**	**59**	*e*P	**Pn**	**18 32 50.3**	**-1.4**
	comp=Z,10nm,0.3s						
KDAK	**Kodiak Island**	**17.78**	**57**	P	**Pn**	**18 32 55.4**	**-2.0**
KDAK				S	**S**	**18 36 10.3**	**-10**
TTA	**Tatalina**	**17.87**	**39**	*e*P	**Pn**	**18 33 00.6**	**+2.2**
BILL	**Bilibino**	**17.91**	**345**	⇑*i*P	**Pn**	**18 33 00.8**	**+1.9**
BILL				pmax	pmax		
	comp=Z,43nm,1.2s						
BILL				MLR	MLR		
	comp=Z,600nm,15.0s						
BILL	**Bilibino**	**17.91**	**345**	⇑*i*Pn	**Pn**	**18 33 01.0**	**+2.1**
	comp=Z,29nm,0.8s						
RSO	**Redoubt South**	**18.32**	**49**	*e*P	**Pn**	**18 33 02.3**	**-1.6**
SEY	**Seymchan**	**18.33**	**320**	⇑*e*P	**

MDJ pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
MDJ pmax pmax
comp=Z,66nm,4.8s
MDJ LR LR
comp=E,120nm,22.8s
MDJ LR LR
comp=Z,190nm,22.8s,MS3.7
CN2 Changchun 36.06 279 eP P **18 35 52.1 +1.5**
CN2 esP sP 18 36 08.0 +1.8
CN2 eS S **18 41 27.4 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,700nm,25.0s,MS4.4
CN2 LR LR
comp=E,500nm,25.0s,MS4.4
CN2 LR LR
comp=Z,300nm,21.0s,MS4.0
YKA Yellowknife Ar 36.43 46 P P **18 35 52.8 -0.7**
comp=Z,6.0nm,0.8s,mb4.6,baz=282,slow=8.7,SNR=43
YKA PcP PcP 18 38 15.2 -1.6
comp=Z,2.6nm,0.9s,baz=289,slow=3.2,SNR=6.6
YKA pPcP 18 38 28.6
comp=Z,2.3nm,0.7s,baz=290,slow=3.2,SNR=8.0
YKA ScP ScP 18 42 00.6 +0.6
comp=Z,2.4nm,0.7s,baz=293,slow=3.2,SNR=25
YKA LR LR 18 52 29.1
comp=Z,37nm,20.3s,MS3.2,baz=170,slow=39
YKA Yellowknife Ar 36.43 46 P P **18 35 52.9 -0.6**
YKA 18 38 15.2
YKA Yellowknife Ar 36.43 46 P P **18 35 52.9 -0.7**
YKA PcP PcP 18 38 15.2 -1.6
YKA pPcP 18 38 28.6
YKA ScP ScP 18 42 00.6 +0.6
YKA LR LR 18 52 29.1
NLWA Neilton Lookou 36.78 73 ⇑P P **18 35 57.4 +0.6**
baz=37
BOD Bodaibo 36.82 306 ⇓iP P **18 35 55.7 -1.2**
BOD pmax pmax
comp=Z,28nm,0.9s,mb5.1
KSRS Korea Array 38.10 269 P P **18 36 08.4 +0.4**
comp=Z,7.8nm,0.9s,mb4.5,baz=60,slow=7.9,SNR=20
KSRS LR LR 18 49 07.4
comp=Z,107nm,21.4s,MS3.6,baz=204,slow=32
KSRS Korea Array 38.10 269 P P **18 36 08.4 +0.4**
KSRS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
KSRS MLR MLR
comp=Z,107nm,21.4s,MS3.6
LON Longmire 38.33 73 eP P **18 36 10.5 +0.7**
LON pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
LON Longmire 38.33 73 eP P **18 36 10.5 +0.7**
comp=Z,6.0nm,0.7s,mb4.4
F04A Amboy 38.36 74 ⇑P P **18 36 10.3 +0.2**
baz=38
ETW Entiat 38.79 71 eP P **18 36 14.6 +0.9**
comp=Z,5.5nm,0.6s,mb4.5
B08A Colville Reser 39.02 69 ⇑P P **18 36 15.4 -0.2**
baz=39
H04A Detroit Lake 39.14 76 ⇑P P **18 36 16.8 +0.1**
baz=39
B09A Rice 39.69 68 ⇓P P **18 36 21.2 0.0**
baz=40
HUMO Hull Mountain 39.78 79 eP P **18 36 21.0 -1.0**
comp=Z,7.0nm,0.8s,mb4.4
EDM Edmonton 40.21 60 eP P **18 36 24.8 -0.6**
NEW Newport 40.36 68 eP P **18 36 25.6 -1.2**
NEW pmax pmax
comp=Z,10.0nm,0.8s
NEW Newport 40.36 68 eP P **18 36 25.6 -1.2**
comp=Z,10nm,0.8s,mb4.6
YBH Yreka Blue Hor 40.42 80 eP P **18 36 28.9 +1.6**
YBH pmax pmax
comp=Z,6.0nm,0.7s
YBH Yreka Blue Hor 40.42 80 eP P **18 36 28.9 +1.6**
comp=Z,6.0nm,0.7s,mb4.4
A11A Hall Mountain, 40.47 67 ⇓P P **18 36 27.6 0.0**
baz=40
RES Resolute Bay 40.49 24 eP P **18 36 27.5 0.0**
RES e 18 38 28.8
RES pmax pmax
comp=Z,13nm,1.0s,mb4.6
RES Resolute Bay 40.49 24 eP P **18 36 27.5 0.0**
comp=Z,13nm,1.0s,mb4.6
RES ePcP PcP 18 38 28.8 -0.6
B11A Sandpoint 40.72 68 ⇓P P **18 36 30.1 +0.4**
baz=41
G08A Pilot Rock 40.78 73 ⇓P P **18 36 30.3 0.0**
baz=41
K05A Summer Lake 40.98 78 ⇓P P **18 36 32.2 +0.2**
baz=41
I07A Izee 41.09 75 ⇑P P **18 36 32.8 0.0**
baz=41,SNR=19
WDC Whiskeytown Da 41.18 81 eP P **18 36 33.4 -0.2**
WDC pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
WDC Whiskeytown Da 41.18 81 eP P **18 36 33.4 -0.2**
comp=Z,9.6nm,0.9s,mb4.4
E10A Myers Farm, Un 41.26 71 ⇓P P **18 36 34.6 +0.4**
baz=41
H08A Prairie City 41.36 74 ⇓P P **18 36 35.1 +0.1**
baz=41,SNR=5.8
D11A Klaveano Farm, 41.43 69 ⇓P P **18 36 35.5 -0.1**
baz=41
F10A Beach Ranch, E 41.46 71 ⇑P P **18 36 35.6 -0.2**
baz=41
LTIM Timbered Crate 41.49 80 P P **18 36 37.9 +1.8**
G09A Cove 41.49 72 ⇓P P **18 36 35.7 -0.4**
baz=41,SNR=10.0
C12B Naegeli Ranch, 41.60 68 ⇑P P **18 36 36.8 -0.2**
baz=42
MOD Modoc 41.81 78 eP P **18 36 39.0 +0.3**
comp=Z,34nm,1.1s,mb4.9
WALA Waterton Lakes 41.83 66 eP P **18 36 38.6 -0.2**
comp=Z,0.9nm,1.1s
E11A Bogner Ranch, 41.86 70 ⇑P P **18 36 38.9 -0.2**
baz=42
G10A Bishop Farm, J 41.88 72 ⇓P P **18 36 39.3 0.0**
baz=42,SNR=9.5
H09A Durkee 41.89 73 ⇑P P **18 36 39.4 0.0**
baz=42
BSMT Bassoo Peak 41.93 68 eP P **18 36 39.0 -0.6**
comp=Z,19nm,0.8s,mb4.8
C13A Hot Springs 42.14 68 ⇑P P **18 36 40.8 -0.5**
baz=42
F11A Grangeville 42.14 71 ⇑P P **18 36 40.7 -0.7**
baz=42
A14A Double T Ranch 42.15 65 ⇑P P **18 36 41.0 -0.4**
baz=42
I09A Lost Marbles R 42.22 74 ⇑P P **18 36 41.9 -0.1**
baz=42
JTMT Jette 42.27 67 eP P **18 36 42.3 -0.1**
comp=Z,14nm,1.3s,mb4.4
G11A Walters Elk Ra 42.33 71 ⇑P P **18 36 42.3 -0.6**
baz=42,SNR=5.6
YBMT Yellow Bay 42.37 67 eP P **18 36 42.2 -1.0**
comp=Z,3.2nm,0.9s,mb4.0
H10A Noah's Angus R 42.48 73 ⇓P P **18 36 43.8 -0.4**
baz=42,SNR=19
D13A Huson 42.51 68 ⇑P P **18 36 43.8 -0.6**
baz=42
WVOR Wild Horse Val 42.53 77 eP P **18 36 44.9 +0.3**
WVOR pmax pmax
comp=Z,21nm,0.9s,mb4.9
WVOR Wild Horse Val 42.53 77 eP P **18 36 44.9 +0.3**
comp=Z,21nm,0.9s,mb4.9
A15A Johnson Ranch, 42.54 65 ⇓P P **18 36 44.0 -0.6**
baz=42
J09A Fry Pan Ranch, 42.55 75 ⇓P P **18 36 44.5 -0.3**
baz=42,SNR=13
SWMT Swartz Lake 42.56 68 P P **18 36 44.2 -0.6**
comp=Z,3.2nm,0.7s,mb4.2
F12A Elk City 42.74 70 ⇑P P **18 36 45.9 -0.4**
baz=43,SNR=14
H11A Donnelly 42.86 72 ⇓P P **18 36 47.0 -0.3**
baz=43,SNR=10
MSO Missoula 42.95 68 eP P **18 36 47.4 -0.6**
comp=Z,6.7nm,0.8s,mb4.4
B15A Bradely Ranch, 42.98 66 ⇑P P **18 36 47.4 -0.8**
baz=43
SLMT Seeley Lake 42.99 68 eP P **18 36 47.0 -1.2**
comp=Z,10nm,0.9s,mb4.6
D14A Greenough 43.07 68 ⇓P P **18 36 48.4 -0.5**
baz=43,SNR=8.7
J10A Berg Farm, Mel 43.11 74 ⇑P P **18 36 48.9 -0.4**
baz=43
A16A West Butte Ran 43.20 65 ⇑P P **18 36 49.2 -0.8**
baz=43
C15A Salmond Ranch, 43.23 67 ⇑P P **18 36 49.2 -0.9**
baz=43,SNR=21
F13A Darby 43.27 70 ⇑P P **18 36 50.1 -0.5**
baz=43
CHMT Chamberlain Mo 43.30 68 eP P **18 36 49.9 -0.9**
I11A Placerville 43.33 73 ⇑P P **18 36 50.4 -0.7**
baz=43,SNR=7.0
K10A MacKenzie Ranc 43.41 75 ⇑P P **18 36 51.8 +0.1**
baz=43,SNR=24
B16A M & M Farms, S 43.41 65 ⇑P P **18 36 51.4 -0.3**
baz=43
E14A Clinton 43.43 69 ⇑P P **18 36 51.2 -0.6**
baz=43
H12A Diamond D Ranc 43.63 72 ⇑P P **18 36 53.2 -0.3**
baz=44
D15A Lincoln 43.66 67 ⇓P P **18 36 53.5 -0.2**
baz=44,SNR=6.9
MFID Camas Ranch 43.68 74 ⇓P P **18 36 53.5 -0.4**
baz=44,SNR=6.5
G13A Cobalt 43.71 71 ⇑P P **18 36 53.3 -0.8**
baz=44,SNR=9.8
C16A Fuhringer Ranc 43.71 66 ⇑P P **18 36 53.5 -0.6**
baz=44
A17A Triple J Farms 43.71 64 ⇑P P **18 36 53.2 -0.9**
baz=44
I12A Atlanta 43.89 73 ⇓P P **18 36 55.2 -0.3**
baz=44,SNR=17
BJI Beijing 43.89 281 P P **18 36 55.3 -0.3**
BJI S S **18 43 23.6 -0.5**
BJI pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
BJI pmax pmax
comp=Z,110nm,3.5s
BJI LR LR
comp=N,180nm,18.5s,MS4.1
BJI LR LR
comp=E,160nm,18.8s,MS4.1
BJI LR LR
comp=Z,120nm,22.7s,MS3.8
E15A Deer Lodge 43.92 68 ⇓P P **18 36 54.6 -1.2**
baz=44
K11A Parker Ranch, 43.92 75 ⇑P P **18 36 55.1 -0.7**
baz=44,SNR=10
B17A L&G Farms, Che 43.99 65 ⇑P P **18 36 55.5 -0.8**
baz=44,SNR=6.0
CMB Columbia Colle 44.04 83 eP P **18 36 57.4 +0.6**
CMB pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CMB Columbia Colle 44.04 83 eP P **18 36 57.4 +0.6**
comp=Z,9.4nm,1.0s,mb4.5
L10A Juniper Basin 44.05 76 ⇓P P **18 36 56.8 -0.1**
baz=44,SNR=11
A18A Metzger Ranch, 44.21 64 ⇓P P **18 36 57.9 -0.2**
baz=44
J12A Stokes Ranch, 44.21 73 ⇑P P **18 36 58.0 -0.2**
baz=44,SNR=24
D16A Dana Ranch, Ca 44.23 67 ⇓P P **18 36 57.9 -0.3**
baz=44
HRY Holter Researc 44.24 67 eP P **18 36 58.1 -0.2**
comp=Z,9.2nm,0.7s,mb4.6
F15A Butte 44.32 69 ⇓P P **18 36 58.9 -0.1**
baz=44
M10A I.L. Ranch, Tu 44.33 76 ⇓P P **18 36 58.9 -0.2**
baz=44,SNR=8.1
C17A Wharram Farm, 44.36 66 ⇑P P **18 36 58.5 -0.8**
baz=44
E16A East Helena 44.42 68 ⇑P P **18 36 59.3 -0.5**
baz=44
I13A Wildhorse Cree 44.43 72 ⇑P P **18 36 59.7 -0.2**
baz=44,SNR=16
L11A Cat Creek Ranc 44.44 75 ⇑P P **18 37 00.1 +0.2**
baz=44,SNR=25
HLID Hailey 44.45 73 ⇑P P **18 36 60.0 -0.1**
baz=44,SNR=26
HLID Hailey 44.45 73 eP P **18 36 59.6 -0.4**
comp=Z,16nm,0.9s,mb4.8
H14A Leadore 44.48 71 ⇓P P **18 36 59.9 -0.4**
baz=44
B18A Beardsley Farm 44.52 64 ⇑P P **18 37 00.2 -0.3**
baz=44
BMN Battle Mountai 44.55 78 eP P **18 37 01.9 +1.0**
BMN pmax pmax
comp=Z,14nm,0.8s,mb4.8
BMN Battle Mountai 44.55 78 eP P **18 37 01.9 +0.9**
comp=Z,14nm,0.8s,mb4.8
D17A Six Diamond Ra 44.66 66 ⇓P P **18 37 01.6 -0.1**
baz=44
MCMT McKenzie Canyo 44.67 70 eP P **18 37 01.7 -0.1**
comp=Z,5.7nm,0.9s,mb4.4
K12A Draper Farm, C 44.68 74 ⇓P P **18 37 01.8 -0.1**
baz=44,SNR=21
J13A Cove Ranch, Pi 44.69 73 ⇑P P **18 37 02.0 +0.1**
baz=44,SNR=28
G15A Dillon 44.70 70 ⇓P P **18 37 01.7 -0.3**
baz=45
EGMT Eagleton 44.73 65 ⇓P P **18 37 01.9 -0.3**
baz=45
EGMT Eagleton 44.73 65 eP P **18 37 01.4 -0.8**
comp=Z,11nm,0.7s,mb4.8
I14A Mackay 44.82 72 ⇑P P **18 37 02.8 -0.2**
baz=45,SNR=11
TLY Talaya 44.83 301 eP P **18 37 03.2 +0.3**
TLY ePPP 18 39 36.6
TLY eS S **18 43 33.6 -3.7**
TLY pmax pmax
comp=Z,14nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,432nm,19.0s,MS4.4
TLY Talaya 44.83 301 eP P **18 37 02.3 -0.7**
comp=Z,22nm,1.4s,mb4.8
M11A Holland Ranch, 44.84 76 ⇑P P **18 37 03.3 +0.1**
baz=45,SNR=11
L12A House Creek Ra 44.90 75 ⇓P P **18 37 03.5 -0.1**
baz=45,SNR=12
H15A Lima 44.91 70 ⇓P P **18 37 03.3 -0.4**
baz=45
ULN Ulaanbaatar 44.93 295 eP P **18 37 04.1 +0.3**
ULN pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
ULN Ulaanbaatar 44.93 295 eP P **18 37 04.1 +0.3**
comp=Z,9.4nm,0.8s,mb4.7
BOZ Bozeman (W) 44.94 69 ⇓P P **18 37 04.0 +0.1**
baz=45,SNR=10
BOZ Bozeman (W) 44.94 69 eP P **18 37 03.4 -0.5**
BOZ pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
BOZ Bozeman (W) 44.94 69 eP P **18 37 03.4 -0.5**
comp=Z,7.9nm,0.7s,mb4.7
E17A Martinsdale 44.94 67 ⇑P P **18 37 04.0 +0.1**
baz=45,SNR=6.1
NVAR Mina Array Bea 45.09 81 P P **18 37 05.7 +0.4**
comp=Z,6.2nm,0.7s,mb4.5,baz=293,slow=7.9,SNR=19
SONM Songino Array 45.32 295 P P **18 37 07.6 +0.7**
comp=Z,7.1nm,0.8s,mb4.5,baz=56,slow=10,SNR=36
SONM PcP PcP 18 38 45.8 -0.2
comp=Z,2.3nm,0.7s,baz=52,slow=2.6,SNR=3.9
SONM pPcP 18 38 56.8
comp=Z,1.1nm,0.7s,baz=64,slow=2.0,SNR=4.2
SONM ScP ScP 18 42 37.2 +2.0
comp=Z,0.5nm,0.4s,baz=60,slow=3.5,SNR=5.1
SONM LR LR 18 58 30.1
comp=Z,237nm,18.7s,MS4.2,baz=254,slow=39
SONM Songino Array 45.32 295 P P **18 37 07.6 +0.7**
SONM 18 38 45.8
SONM 18 38 56.8
F17A Fitzpatrick Pl 45.36 68 ⇓P P **18 37 07.0 -0.2**
baz=45
M12A Wells 45.38 75 ⇓P P **18 37 07.5 0.0**
baz=45
E18A Harlowton 45.43 67 ⇑P P **18 37 07.5 -0.2**
baz=45,SNR=7.7
FFC Flin Flon 45.45 53 ceP P **18 37 08.1 +0.2**
P10A Eureka 45.51 78 ⇓P P **18 37 08.4 -0.1**
baz=45
QLMT Earthquake Lak 45.51 69 eP P **18 37 08.7 +0.2**
comp=Z,5.9nm,0.8s,mb4.6
L13A Double Diamond 45.58 74 ⇓P P **18 37 09.1 0.0**
baz=45,SNR=10
ELK Elko 45.58 76 eP P **18 37 10.1 +1.0**
ELK pmax pmax
comp=Z,17nm,0.8s
ELK Elko 45.58 76 eP P **18 37 10.1 +1.0**
comp=Z,17nm,0.8s,mb5.0
N12A Clover Valley, 45.64 76 ⇓P P **18 37 09.5 -0.1**
baz=46
N12A Clover Valley, 45.64 76 eP P **18 37 09.5 -0.1**
comp=Z,28nm,0.9s,mb5.2
H16A Russell Place, 45.69 69 ⇓P P **18 37 09.9 +0.1**
baz=46,SNR=14
O11A Cowboy Ranch, 45.69 77 ⇑P P **18 37 09.9 -0.1**
baz=46
ZAK Zakamensk 45.70 300 ⇓iP P **18 37 09.6 -0.2**
ZAK e 18 38 47.3
ZAK pmax pmax
comp=Z,14nm,1.4s,mb4.7
J15A Blackfoot 45.73 72 ⇑P P **18 37 10.6 +0.4**
baz=46,SNR=8.2
K14A Jones Ranch, D 45.77 73 ⇓P P **18 37 10.8 +0.2**
baz=46
M13A Montello 45.87 75 ⇓P P **18 37 11.6 +0.3**
baz=46,SNR=11
M13A Montello 45.87 75 eP P **18 37 11.6 +0.3**
comp=Z,18nm,0.9s,mb5.0
F18A Big Timber 45.91 67 ⇑P P **18 37 11.8 +0.3**
baz=46
GCMT Greycliff 46.00 67 eP P **18 37 11.0 -1.3**
comp=Z,4.6nm,0.8s,mb4.5
Q10A Clear Creek Ra 46.03 79 ⇑P P **18 37 12.7 +0.1**
baz=46,SNR=11
L14A Malta 46.03 74 ⇑P P **18 37 13.1 +0.4**
baz=46
YFT Old Faithful 46.07 70 eP P **18 37 14.3 +1.4**
comp=Z,5.5nm,0.3s,mb5.0
K15A Arbon 46.08 73 ⇓P P **18 37 13.0 0.0**
baz=46,SNR=9.3
N13A Wendover, West 46.15 76 eP P **18 37 13.6 0.0**
comp=Z,26nm,0.8s,mb5.2
O12A Currie 46.17 77 ⇑P P **18 37 13.7 0.0**
baz=46,SNR=17
VES Vestal, Richgr 46.22 84 ⇑P P **18 37 13.8 -0.4**
baz=46
MOY Mondy 46.25 303 eP P **18 37 15.0 +0.8**
H17A Grant Village 46.26 69 ⇓P P **18 37 15.3 +0.9**
baz=46,SNR=11
J16A Bone 46.29 71 ⇑P P **18 37 15.0 +0.4**
baz=46,SNR=6.8
G18A Lazy EL Ranch, 46.33 68 ⇑P P **18 37 14.9 0.0**
baz=46
IMW Indian Meadow 46.33 70 eP P **18 37 15.8 +0.9**
comp=Z,8.4nm,0.9s,mb4.7
R10A Warm Springs 46.42 80 ⇓P P **18 37 15.9 +0.2**
baz=46
RRI2 Red Ridge 46.42 71 eP P **18 37 16.0 +0.3**
comp=Z,11nm,0.8s,mb4.8
S10A Tonopah Range, 46.46 80 ⇓P P **18 37 16.6 +0.6**
baz=46,SNR=18
HVU Hansel Valley 46.47 74 eP P **18 37 15.3 -0.7**
HVU pmax pmax
comp=Z,123nm,1.0s,mb5.8
HVU Hansel Valley 46.47 74 eP P **18 37 15.3 -0.7**
comp=Z,123nm,1.0s,mb5.8
Q11A Duckwater 46.48 79 ⇓P P **18 37 16.9 +0.7**
baz=46,SNR=14
P12A McGill 46.55 78 ⇑P P **18 37 17.1 +0.4**
baz=46,SNR=8.2
TPAW Teton Pass 46.56 71 eP P **18 37 17.7 +1.0**
comp=Z,24nm,0.6s,mb5.3
K16A Soda Springs 46.56 72 ⇓P P **18 37 17.3 +0.5**
baz=46,SNR=8.1
REDW Red Top Meadow 46.69 71 eP P **18 37 18.5 +0.8**
comp=Z,10nm,1.1s,mb4.7
ISA Isabella 46.72 84 eP P **18 37 16.9 -1.2**
ISA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ISA Isabella 46.72 84 eP P **18 37 16.9 -1.1**
comp=Z,10nm,1.0s,mb4.7
N14A Grayback Hills 46.77 75 ⇑P P **18 37 18.4 0.0**
baz=47,SNR=6.8
BGU Big Grassy Mou 46.82 75 eP P **18 37 18.7 -0.1**
comp=Z,14nm,1.0s,mb4.8
R11A Troy Canyon, C 46.82 79 ⇑P P **18 37 19.0 +0.1**
baz=47,SNR=17
M15A Larsen Ranch, 46.85 74 ⇑P P **18 37 19.2 +0.1**
baz=47,SNR=15
AHID Auburn Hatcher 46.89 72 eP P **18 37 18.3 -1.0**
MPMC Manual Prospec 47.08 83 ⇑P P **18 37 20.9 0.0**
baz=47
I18A Diamond G Ranc 47.10 70 ⇓P P **18 37 20.6 -0.4**
baz=47
P13A Bates Ranch, G 47.11 77 ⇑P P **18 37 21.2 +0.1**
baz=47,SNR=7.8
L16A Fish Haven 47.13 73 ⇓P P **18 37 21.5 +0.3**
baz=47,SNR=19
FCC Fort Churchill 47.15 45 eP P **18 37 19.4 -1.7**
comp=Z,0.2nm,0.7s
FCC ePcP PcP 18 38 49.6 -2.5
N15A Stansbury Isla 47.15 75 ⇓P P **18 37 21.5 +0.1**
baz=47,SNR=8.2
S11A Rachel 47.16 80 ⇑P P **18 37 22.4 +0.9**
baz=47
J18A Kendall Valley 47.27 70 ⇑P P **18 37 22.1 -0.2**
baz=47,SNR=11
NJ2 Nanjing 47.28 270 eP P **18 37 23.3 +0.8**
NJ2 pmax pmax
comp=Z,30nm,0.5s,mb5.5
HWUT Hardware Ranch 47.30 73 eP P **18 37 22.0 -0.5**
BTO Baotou 47.32 285 eP P **18 37 23.3 +0.6**
DUG Dugway 47.39 75 ⇓P P **18 37 23.4 +0.1**
baz=47,SNR=24
DUG Dugway 47.39 75 eP P **18 37 23.6 +0.3**
DUG pmax pmax
comp=Z,32nm,0.9s,mb5.2
DUG Dugway 47.39 75 eP P **18 37 23.6 +0.4**
comp=Z,32nm,0.9s,mb5.2
M16A Huntsville 47.43 73 ⇓P P **18 37 23.8 +0.3**
baz=47,SNR=14
R12A Pony Springs, 47.44 79 ⇓P P **18 37 23.5 -0.1**
baz=47
EDW2 Edwards Air Fo 47.52 85 ⇑P P **18 37 24.7 +0.3**
baz=47
O15A The Old Anders 47.55 75 ⇑P P **18 37 24.8 +0.3**
baz=47
K18A Toltan Ranch, 47.59 71 ⇓P P **18 37 25.4 +0.5**
baz=47,SNR=10
P14A Drum Mountains 47.60 76 ⇑P P **18 37 24.9 0.0**
baz=48,SNR=13
T11A Corn Creek, Al 47.74 80 ⇓P P **18 37 26.1 +0.1**
baz=48,SNR=18
BW06 Boulder Array 47.81 71 ⇓P P **18 37 26.5 0.0**
baz=48,SNR=29
PDAR Pinedale Array 47.81 71 P P **18 37 26.4 -0.1**
comp=Z,12nm,0.9s,mb4.9,baz=308,slow=4.9,SNR=50
Q14A Sevier Lake (B 47.85 77 ⇓P P **18 37 27.1 +0.2**
baz=48,SNR=18
MWC Mount Wilson 47.91 85 eP P **18 37 26.8 -0.5**
MWC pmax pmax
comp=Z,22nm,1.0s,mb5.1
MWC Mount Wilson 47.91 85 eP P **18 37 26.8 -0.6**
comp=Z,22nm,1.0s,mb5.1
M17A Scullys Gap (B 47.92 73 ⇓P P **18 37 26.8 -0.6**
baz=48
R13A O'Grain Ranch, 47.92 78 ⇑P P **18 37 26.9 -0.5**
baz=48
JLU Jordanelle 47.97 74 eP P **18 37 28.2 +0.5**
comp=Z,17nm,1.0s,mb5.0
NLU North Lily Min 47.99 75 eP P **18 37 27.2 -0.7**
comp=Z,10nm,0.8s,mb4.9
GSC Goldstone 47.99 83 eP P **18 37 28.5 +0.5**
GSC pmax pmax
comp=Z,14nm,0.9s,mb5.0
GSC Goldstone 47.99 83 eP P **18 37 28.5 +0.5**
comp=Z,14nm,0.9s,mb5.0
L18A Fontenelle, Gr 48.02 72 ⇓P P **18 37 27.8 -0.3**
baz=48,SNR=5.1
P15A Leamington 48.10 76 ⇓P P **18 37 29.3 +0.5**
baz=48
K19A Absolon Red Bu 48.19 70 ⇑P P **18 37 29.4 -0.1**
baz=48,SNR=9.3
DAU Daniels Canyon 48.20 74 eP P **18 37 30.4 +0.8**
M18A Lyman 48.30 72 ⇓P P **18 37 30.2 -0.1**
baz=48
L19A Farson 48.32 71 ⇑P P **18 37 30.8 +0.3**
baz=48
S13A Holt Ranch, En 48.37 79 ⇑P P **18 37 30.7 -0.2**
baz=48,SNR=9.9
K20A Yellowstone Ra 48.59 70 ⇓P P **18 37 32.2 -0.3**
baz=48
O17A Robinson Place 48.65 74 ⇓P P **18 37 33.1 +0.1**
baz=48,SNR=6.6
CCUT Cedar City 48.69 79 eP P **18 37 34.0 +0.6**
comp=Z,8.7nm,1.0s,mb4.7

T13A **Saint George** 48.69 80 ⇓P P 18 37 33.5 +0.1
baz=49,SNR=6.1
N18A **Larsen Ranch,** 48.81 73 ⇑P P 18 37 33.4 -0.8
baz=49,SNR=8.7
MSU **Marysvale** 48.82 77 *e*P P 18 37 35.4 +1.1
MSU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MSU **Marysvale** 48.82 77 *e*P P 18 37 35.4 +1.1
comp=Z,9.3nm,0.8s,mb4.9
TMUT **Trail Mountain** 48.92 75 *e*P P 18 37 36.2 +1.1
comp=Z,13nm,0.6s,mb5.1
L20A **Wamsutter** 48.98 71 ⇓P P 18 37 35.2 -0.3
baz=49
U13A **Pakoon Wash** 49.04 80 ⇓P P 18 37 36.0 0.0
baz=49
GMRC **Granite Mounta** 49.04 83 ⇑P P 18 37 35.7 -0.4
baz=49
O18A **Roosevelt** 49.05 74 ⇓P P 18 37 36.3 +0.3
baz=49
P17A **Butcher Ranch,** 49.09 75 ⇓P P 18 37 36.7 +0.2
baz=49,SNR=5.2
N19A **John Jarvie Ra** 49.16 72 ⇑P P 18 37 36.4 -0.5
baz=49,SNR=6.0
T14A **Hurricane** 49.17 79 ⇑P P 18 37 37.4 +0.3
baz=49,SNR=5.3
Q16A **Castle Valley** 49.18 76 ⇑P P 18 37 37.2 +0.1
baz=49
P18A **Preston Nutter** 49.30 74 ⇓P P 18 37 38.0 0.0
baz=49,SNR=17
BELC **Belle Mtn.** 49.34 84 ⇓P P 18 37 38.6 +0.2
baz=49
R16A **Teasdale** 49.38 77 ⇑P P 18 37 38.6 0.0
baz=49,SNR=8.3
M20A **Sweetwater, Wa** 49.39 71 ⇑P P 18 37 38.8 +0.2
baz=49
V13A **Grand Canyon W** 49.39 81 ⇑P P 18 37 39.2 +0.5
baz=49,SNR=6.3
SRU **San Rafael** 49.45 75 ⇓P P 18 37 39.8 +0.6
baz=49
SRU **San Rafael** 49.45 75 *e*P P 18 37 40.2 +1.1
SRU pmax pmax
comp=Z,25nm,0.9s,mb5.2
SRU **San Rafael** 49.45 75 *e*P P 18 37 40.2 +1.1
comp=Z,25nm,0.9s,mb5.2
U14A **Mt Trumbull** 49.52 80 ⇑P P 18 37 40.0 +0.2
baz=49
O19A **Miners Draw (B** 49.56 73 ⇑P P 18 37 39.8 -0.1
baz=49,SNR=16
L21A **Rawlins** 49.58 70 ⇓P P 18 37 40.4 +0.3
baz=49,SNR=13
T15A **Red Dirt Ranch** 49.63 78 ⇑P P 18 37 40.5 0.0
baz=50,SNR=9.5
Q18A **Rafter H Ranch** 49.69 75 ⇓P P 18 37 41.0 0.0
baz=50,SNR=12
N20A **Spence Gulch,** 49.74 72 ⇓P P 18 37 41.6 +0.3
baz=50,SNR=8.5
IRM **Iron Mountain** 49.77 83 ⇓P P 18 37 41.6 0.0
baz=50
R17A **Hanksville Air** 49.77 76 ⇓P P 18 37 41.8 +0.2
baz=50,SNR=14
BAR **Barrett** 49.79 86 *e*P P 18 37 42.0 +0.1
comp=Z,15nm,0.9s,mb5.0
M21A **Separation Pea** 49.81 71 ⇓P P 18 37 41.7 -0.1
baz=50
MONP **Monument Peak** 49.81 85 ⇓P P 18 37 42.3 +0.3
baz=50
RWWY **Rawlins** 49.85 70 *e*P P 18 37 42.0 -0.1
comp=Z,24nm,1.2s,mb5.1
BC3 **Big Chuckw Mtn** 49.91 84 ⇓P P 18 37 42.9 +0.2
baz=50
W13A **Hualapai Mount** 49.94 81 ⇑P P 18 37 43.1 +0.2
baz=50,SNR=5.3
P19A **Cripple Cowboy** 50.06 74 ⇓P P 18 37 43.4 -0.4
baz=50,SNR=28
U15A **North Rim** 50.07 79 ⇑P P 18 37 43.8 0.0
baz=50,SNR=17
V14A **Boquillas Ranc** 50.08 80 ⇓P P 18 37 44.2 +0.2
baz=50,SNR=11
O20A **White River Ci** 50.19 73 ⇓P P 18 37 44.7 -0.1
baz=50
S17A **Black Ridge (B** 50.21 77 ⇑P P 18 37 44.9 0.0
baz=50,SNR=14
RSSD **Black Hills** 50.22 66 *e*P P 18 37 44.8 -0.1
RSSD pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
RSSD **Black Hills** 50.22 66 *e*P P 18 37 44.8 -0.1
comp=Z,3.3nm,0.8s,mb4.4
N21A **Black Mountain** 50.23 72 ⇑P P 18 37 44.7 -0.3
baz=50
R18A **Canyonlands Na** 50.29 75 ⇓P P 18 37 45.9 +0.4
baz=50,SNR=12
PDMCI **Parker Dam,Lak** 50.30 82 ⇓P P 18 37 45.6 0.0
baz=50
X13A **Yucca** 50.30 82 ⇓P P 18 37 45.7 0.0
baz=50
W14A **Seligman** 50.36 81 ⇓P P 18 37 46.4 +0.2
baz=50
M22A **Cedar Creek Ra** 50.38 70 ⇑P P 18 37 46.2 0.0
baz=50,SNR=5.5
SPB4 **Spitsbergen Ar** 50.38 355 *e*P P 18 37 44.9 -0.8
P20A **De Beque** 50.50 73 ⇓P P 18 37 47.1 0.0
baz=50,SNR=9.4
V15A **Kaibab Nationa** 50.53 80 ⇑P P 18 37 47.7 +0.3
baz=50,SNR=9.0
O21A **Pagoda** 50.60 72 ⇑P P 18 37 47.8 -0.1
baz=50
T17A **Navajo Res., N** 50.62 77 ⇓P P 18 37 48.1 +0.1
baz=50
S18A **Hurst Farm, Bl** 50.67 76 ⇑P P 18 37 48.0 -0.4
baz=50,SNR=15
R19A **Curley Farm, L** 50.73 75 ⇓P P 18 37 49.1 +0.2
baz=51,SNR=5.3
N22A **Wattenberg Ran** 50.84 71 ⇑P P 18 37 49.5 -0.1
baz=51,SNR=7.2
PV04 **Paradox Valley** 50.88 75 *e*P P 18 37 50.3 +0.3
Q20A **Ridgley Place,** 50.90 74 ⇓P P 18 37 50.2 +0.1
baz=51,SNR=6.3
X14A **Yava** 50.97 81 ⇓P P 18 37 51.2 +0.5
baz=51,SNR=8.0
T18A **Mexican Hat** 51.10 77 ⇓P P 18 37 51.9 +0.2
baz=51,SNR=8.4
WHN **Wuhan** 51.13 272 ⇓P P 18 37 50.0 -1.9
S19A **Harvey Farm, M** 51.16 76 ⇑P P 18 37 52.3 +0.2
baz=51,SNR=9.3
WUAZ **Wupatki** 51.22 79 ⇓P P 18 37 53.7 +1.1
baz=51,SNR=6.4
WUAZ **Wupatki** 51.22 79 *e*P P 18 37 53.3 +0.7
comp=Z,19nm,1.0s,mb5.0
PV01 **Paradox Valley** 51.25 75 *e*P P 18 37 52.6 -0.2
comp=Z,2μm,0.9s
R20A **Redvale** 51.33 75 ⇓P P 18 37 53.4 0.0
baz=51
Z13A **Yuma Proving G** 51.33 83 ⇑P P 18 37 53.5 +0.1
baz=51
X15A **Humboldt** 51.37 81 ⇑P P 18 37 53.9 +0.2
baz=51
W16A **Flagstaff** 51.40 80 ⇓P P 18 37 53.8 -0.1
baz=51
Q21A **Lamborn Mesa,** 51.41 74 ⇓P P 18 37 53.8 -0.1
baz=51
V17A **Tonalea, Kykot** 51.51 79 ⇓P P 18 37 54.7 0.0
baz=51,SNR=9.0
SMCO **Snowmass** 51.55 73 *e*P P 18 37 54.8 -0.2
comp=Z,6.6nm,0.3s,mb5.0
Y15A **Casa Rosa Ranc** 51.66 81 ⇓P P 18 37 56.0 +0.1
baz=52
R21A **Cimarron** 51.72 74 ⇑P P 18 37 56.5 +0.2
baz=52,SNR=7.5
DAG **Danmarks Havn** 51.77 5 *e*P P 18 37 55.0 -1.1
DAG **Danmarks Havn** 51.77 5 *i*P P 18 37 55.0 -1.1
SSLB **Suanglung** 51.77 261 *e*P P 18 37 56.0 -0.8
comp=Z,30nm,0.8s,mb5.3
Q22A **Crested Butte,** 51.79 73 ⇑P P 18 37 56.8 0.0
baz=52
T19A **Beclabito** 51.81 76 ⇓P P 18 37 57.5 +0.5
baz=52,SNR=10
MVCO **Mesa Verde** 51.89 76 ⇑P P 18 37 57.7 +0.1
baz=52
MVCO **Mesa Verde** 51.89 76 *e*P P 18 37 57.8 +0.3
comp=Z,5.9nm,0.5s,mb4.8
X16A **Lo Mia Camp, P** 51.90 80 ⇑P P 18 37 57.7 0.0
baz=52
ISCO **Idaho Springs** 51.97 71 *e*P P 18 37 58.2 +0.1
ISCO pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ISCO **Idaho Springs** 51.97 71 *e*P P 18 37 58.2 +0.1
comp=Z,8.6nm,1.0s,mb4.6
S21A **Coal Bank Pass** 52.03 75 ⇓P P 18 37 58.7 +0.1
baz=52,SNR=6.5
114A **Black Gap (USA** 52.12 83 ⇑P P 18 37 59.1 -0.1
baz=52
Y16A **Circle Bar Ran** 52.24 81 ⇓P P 18 38 00.4 +0.2
baz=52
R22A **Saguache, Gunn** 52.29 74 ⇑P P 18 38 00.9 +0.4
baz=52,SNR=15
214A **Organ Pipe Nat** 52.70 84 ⇑P P 18 38 04.1 +0.5
baz=53
Y17A **Roosevelt** 52.75 81 ⇓P P 18 38 04.2 +0.2
baz=53,SNR=6.0
V20A **Brimhall** 52.83 77 ⇑P P 18 38 05.1 +0.6
baz=53
T22A **Edith** 52.99 75 ⇓P P 18 38 05.9 +0.2
baz=53,SNR=8.7
ZALV **Zalesovo Beam** 52.99 312 P P 18 38 03.8 -1.7
comp=Z,2.8nm,0.6s,mb4.4,baz=27,slow=6.7,SNR=12
ZALV LR LR 19 02 24.4
comp=Z,190nm,18.0s,MS4.2,baz=254,slow=38
NVS **Novosibirsk** 53.16 314 ⇑*i*P P 18 38 06.3 -0.4
NVS *e**PP pP 18 38 15.1 -2.9
NVS *e* 18 39 13.9
NVS *e*S S 18 45 31.6 -2.6
NVS pmax pmax
comp=Z,29nm,1.4s,mb5.0
NVS pmax pmax
comp=N,17nm,1.5s
NVS pmax pmax
comp=E,22nm,1.5s
NVS smax
comp=N,8.0nm,1.7s
NVS smax
comp=E,11nm,1.7s
SDCO **Great Sand Dun** 53.36 73 *e*P P 18 38 08.6 +0.3
comp=E,13nm,1.0s,mb4.8
V22A **San Miguel Ran** 53.70 76 ⇑P P 18 38 11.5 +0.5
baz=54
TUC **Tucson** 53.72 82 *e*P P 18 38 10.4 -0.7
TUC pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TUC **Tucson** 53.72 82 *e*P P 18 38 10.4 -0.7
comp=Z,6.5nm,1.0s,mb4.5
SUMG **Summit** 53.78 13 *e*P P 18 38 11.2 +0.2
comp=Z,8.0nm,0.5s,mb4.9
LZH **Lanzhou** 53.94 285 *e*P P 18 38 13.4 +0.7
LZH pP pP 18 38 23.9 -0.1
LZH sP sP 18 38 28.5 -0.1
LZH PP PP 18 40 16.0 +2.1
LZH pmax pmax
comp=Z,40nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,130nm,4.3s
LZH LR LR
comp=E,420nm,14.1s
LZH LR LR
comp=Z,580nm,16.8s,MS4.7
Y20A **Horse Springs,** 54.14 79 ⇑P P 18 38 14.3 +0.1
baz=54
X21A **Alamocita Cree** 54.14 78 ⇓P P 18 38 14.6 +0.5
baz=54,SNR=8.5
GTA **Gaotai** 54.18 290 ⇑P P 18 38 14.8 +0.4
GTA pP pP 18 38 25.6 -0.1
GTA sP sP 18 38 29.3 -1.0
GTA PP PP 18 40 17.0 +1.0
GTA S S 18 45 49.8 +1.4
GTA sS sS 18 46 06.3 -0.9
GTA pmax pmax
comp=Z,18nm,1.1s,mb4.9
GTA pmax pmax
comp=Z,64nm,3.9s
GTA LR LR
comp=N,140nm,15.6s,MS4.2
GTA LR LR
comp=E,71nm,15.0s,MS4.2
GTA LR LR
comp=Z,80nm,15.9s,MS3.9
V23A **Ortiz Mt. (NFS** 54.26 76 ⇑P P 18 38 15.2 +0.3
baz=54
119A **Ashpeak Ranch,** 54.33 80 ⇓P P 18 38 15.8 +0.2
baz=54
218A **Dragoon** 54.41 82 ⇑P P 18 38 16.8 +0.6
baz=54
Y21A **Point of Rocks** 54.50 78 ⇓P P 18 38 17.2 +0.4
baz=54
Z20A **Nine Sixteen R** 54.54 80 ⇓P P 18 38 17.4 +0.4
baz=54
LAZ **Ladron** 54.57 77 *e*P P 18 38 17.5 +0.2
comp=Z,3.5nm,0.9s,mb4.4
X22A **Bernardo** 54.58 77 ⇓P P 18 38 17.7 +0.4
baz=54
318A **Bisbee** 54.81 82 ⇓P P 18 38 19.5 +0.5
baz=55
219A **White Tail Can** 54.88 81 ⇓P P 18 38 20.2 +0.6
baz=55
120A **U Bar Ranch, L** 54.90 80 ⇑P P 18 38 19.8 +0.1
baz=55,SNR=6.2
BNM **Barren Site** 55.05 77 *e*P P 18 38 21.9 +1.1
comp=Z,11nm,1.2s,mb4.8
W24A **Lazy 6 Ranch,** 55.08 76 ⇓P P 18 38 21.2 +0.2
baz=55,SNR=9.1
319A **Douglas** 55.29 82 ⇑P P 18 38 23.2 +0.6
baz=55
220A **Playas Peak, P** 55.40 81 ⇑P P 18 38 23.4 +0.1
baz=55,SNR=8.5
121A **Cookes Peak, D** 55.43 80 ⇓P P 18 38 24.0 +0.5
baz=55
Y23A **Lovelace Mesa,** 55.55 77 ⇓P P 18 38 24.6 +0.2
baz=55,SNR=6.5
W25A **X Bar L Ranch,** 55.66 75 ⇓P P 18 38 25.1 0.0
baz=56,SNR=16
V26A **Tequesquite Ra** 55.68 74 ⇑P P 18 38 25.5 +0.3
baz=56
320A **Kipp Ranch, An** 55.79 81 ⇓P P 18 38 26.6 +0.5
baz=56
Y24A **Capitan** 55.93 77 ⇓P P 18 38 27.5 +0.4
baz=56
X25A **Clemmons Ranch** 56.00 76 ⇓P P 18 38 27.7 +0.1
baz=56,SNR=5.7
W26A **Owens Ranch, T** 56.16 75 ⇓P P 18 38 29.4 +0.6
baz=56
SFJD **Kangerlussuaq** 56.33 21 *i*P P 18 38 27.8 -1.6
SFJD pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
SFJD **Kangerlussuaq** 56.33 21 *i*P P 18 38 27.8 -1.6
comp=Z,6.4nm,0.9s,mb4.7
Z24A **Sheeppen Canyo** 56.38 77 ⇓P P 18 38 30.4 +0.1
baz=56
Y25A **Mesa, Roswell** 56.39 76 ⇓P P 18 38 30.0 -0.4
baz=56,SNR=5.8
X26A **CR and CF Fran** 56.50 75 ⇓P P 18 38 31.2 0.0
baz=56
W27A **Bowe Ranch, En** 56.60 74 ⇓P P 18 38 31.8 -0.1
baz=56
124A **Stringfield Ra** 56.75 78 ⇑P P 18 38 33.5 +0.5
baz=57
224A **Corundas Mount** 57.14 78 ⇑P P 18 38 35.8 +0.1
baz=57
Z26A **Caprock** 57.26 76 ⇑P P 18 38 36.7 +0.1
baz=57
125A **Gardner Draw,** 57.27 77 ⇑P P 18 38 37.1 +0.5
baz=57
Y27A **Causey** 57.34 75 ⇑P P 18 38 37.4 +0.3
baz=57
MNTX **Cornudas Mount** 57.48 79 *e*P P 18 38 36.5 -1.6
comp=Z,8.7nm,1.0s,mb4.7
CD2 **Chengdu** 57.49 280 P P 18 38 39.0 +0.8
CD2 pP pP 18 38 49.1 -0.5
CD2 sP sP 18 38 53.0 -1.2
CD2 PP PP 18 40 47.8 +2.1
CD2 S S 18 46 31.1 -1.6
CD2 sS sS 18 46 48.0 -3.7
CD2 SS SS 18 50 22.0 -0.4
CD2 pmax pmax
comp=Z,140nm,4.3s
CD2 LR LR
comp=N,220nm,8.3s
CD2 LR LR
comp=Z,210nm,7.7s
CPRX **Cap Rock** 57.50 76 *e*P P 18 38 39.2 +1.0
comp=Z,5.0nm,0.7s,mb4.7
MSTX **Muleshoe** 57.52 75 ⇑P P 18 38 38.7 +0.3
baz=57
324A **Moseley Ranch,** 57.60 79 ⇓P P 18 38 39.5 +0.5
baz=58
SCO **Scoresbysund** 57.65 8 *e*P P 18 38 37.7 -1.1
SCO pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SCO **Scoresbysund** 57.65 8 *i*P P 18 38 37.7 -1.1
comp=Z,9.6nm,1.0s,mb4.8
Z27A **Tatum** 57.70 76 ⇓P P 18 38 40.2 +0.5
baz=58
ARCES **ARCESS Array B** 57.94 349 P P 18 38 39.8 -1.0
comp=Z,5.3nm,1.1s,mb4.5,baz=30,slow=7.1,SNR=8.8
ARCES PcP PcP 18 39 32.5 0.0
comp=Z,3.2nm,0.7s,baz=22,slow=5.1,SNR=4.5
ARCES LR LR 19 08 53.3
comp=Z,126nm,18.9s,MS4.0,baz=202,slow=42
ARCES **ARCESS Array B** 57.94 349 P P 18 38 39.8 -1.0
ARCES 18 39 32.6
325A **Bean Ranch, Si** 57.96 79 ⇓P P 18 38 41.5 0.0
baz=58
KURK **Kurchatov** 57.98 312 P P 18 38 41.8 +0.4
comp=Z,11nm,0.7s,mb5.0,baz=42,slow=6.6,SNR=49
KURK PcP PcP 18 39 32.4 -0.7
comp=Z,1.7nm,0.6s,baz=54,slow=4.8,SNR=4.0
KURK **Kurchatov** 57.98 312 *c i*P P 18 38 41.3 -0.1
KURK pmax pmax
comp=Z,36nm,1.2s,mb5.3
KURK **Kurchatov** 57.98 312 *e*P P 18 38 41.1 -0.2
comp=Z,37nm,1.1s,mb5.3
WMQ **Urumqi** 58.11 302 P P 18 38 42.8 +0.4
WMQ pmax pmax
comp=Z,23nm,1.2s,mb5.1
WMQ pmax pmax
comp=Z,160nm,4.6s
WMQ LR LR
comp=N,210nm,20.0s,MS4.3
WMQ LR LR
comp=E,160nm,22.0s,MS4.3
WMQ LR LR
comp=Z,280nm,20.0s,MS4.4
425A **Indio Mountain** 58.36 79 ⇓P P 18 38 44.0 -0.3
baz=58
GYA **Guiyang** 58.80 274 *e*P P 18 38 48.0 +0.6
GYA pP pP 18 39 01.3 +2.4
GYA sP sP 18 39 04.8 +1.4
GYA PcP PcP 18 39 37.6 +0.9
GYA ScP ScP 18 43 32.9 -1.0
GYA S S 18 46 48.5 -1.5
GYA SS SS 18 50 43.3 0.0
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.2
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,480nm,19.8s,MS4.8
GYA LR LR
comp=E,460nm,18.7s,MS4.8
GYA LR LR
comp=Z,120nm,19.0s,MS4.0
MK31 **Makanchi Array** 58.90 307 *e*P P 18 38 46.8 -1.0
MKAR **Makanchi Array** 58.90 307 P P 18 38 47.2 -0.6
comp=Z,4.0nm,0.7s,mb4.6,baz=54,slow=6.9,SNR=24
MKAR LR LR 19 05 39.6
comp=Z,182nm,19.1s,MS4.2,baz=7.4,slow=38
MKAR **Makanchi Array** 58.90 307 P P 18 38 47.2 -0.6
MKAR LR LR 19 05 39.6
426A **McDonald Obser** 59.03 79 ⇑P P 18 38 48.3 -0.7
baz=59
328A **Wristen Ranch,** 59.28 77 ⇓P P 18 38 50.5 -0.2
baz=59
427A **Hayter Ranch,** 59.29 78 ⇑P P 18 38 50.5 -0.2
baz=59
WMOK **Wichita Mounta** 59.40 72 *e*P P 18 38 50.8 -0.6
WMOK pmax pmax
comp=Z,11nm,0.9s,mb4.9
WMOK **Wichita Mounta** 59.40 72 *e*P P 18 38 50.8 -0.7
comp=Z,11nm,0.9s,mb4.9
526A **Mary Lane Ranc** 59.42 79 ⇑P P 18 38 51.2 -0.5
baz=59
527A **Woodward Ranch** 59.65 79 ⇓P P 18 38 53.1 -0.2
baz=60
626A **Big Bend Ranch** 59.75 80 ⇓P P 18 38 53.6 -0.3
baz=60
428A **Kincaid Ranch,** 59.82 78 ⇓P P 18 38 54.1 -0.3
baz=60
BVAR **Borovoye Array** 59.98 319 P P 18 38 55.6 +0.5
comp=Z,20nm,0.6s,mb5.3,baz=52,slow=7.0,SNR=190
BVAR LR LR 19 07 38.2
comp=Z,282nm,18.0s,MS4.5,baz=46,slow=39
SOKR **Solikamsk** 59.99 330 *d i*P P 18 38 56.3 +1.2
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,180nm,18.0s,MS4.2
BRVK **Borovoye** 60.00 319 *e*P P 18 38 55.6 +0.3
BRVK pmax pmax
comp=Z,23nm,0.6s,mb5.4
BRVK **Borovoye** 60.00 319 *e*P P 18 38 55.6 +0.3
comp=Z,23nm,0.6s,mb5.4
TXAR **Lajitas Array** 60.19 79 P P 18 38 56.7 -0.3
comp=Z,1.0nm,0.5s,mb4.1,baz=299,slow=4.9,SNR=6.1
TXAR **Lajitas Array** 60.19 79 P P 18 38 56.7 -0.3
627A **Terlingua Ranc** 60.28 79 ⇓P P 18 38 57.5 -0.1
baz=60
628A **Black Gap, Mar** 60.56 79 ⇓P P 18 38 59.2 -0.3
baz=60
SVE **Sverdlovsk** 60.86 326 ⇓*e*P P 18 39 02.5 +1.4
SVE *e*S S 18 47 23.2 +7.6
SVE pmax pmax
comp=Z,46nm,1.3s,mb5.5
SVE MLR MLR
comp=Z,262nm,19.0s,MS4.4
SCHQ **Schefferville** 61.04 37 P P 18 38 59.5 -2.9
comp=Z,5.8nm,0.9s,mb4.7,baz=312,slow=12,SNR=3.0
JCT **Junction City** 61.75 76 *e*P P 18 39 06.2 -1.4
JCT pmax pmax
comp=Z,12nm,0.9s,mb5.0
JCT **Junction City** 61.75 76 *e*P P 18 39 06.2 -1.3
comp=Z,12nm,0.9s,mb5.0
ARU **Arti** 61.89 327 *c i*P P 18 39 08.8 +0.8
ARU *e* 18 41 27.6
ARU S S 18 47 32.8 +4.2
ARU SS SS 18 51 36.2 +6.1
ARU pmax pmax
comp=Z,69nm,1.2s,mb5.7
ARU **Arti** 61.89 327 *e*P P 18 39 08.7 +0.6
comp=Z,53nm,0.9s,mb5.7
KMI **Kunming** 62.22 276 P P 18 39 09.5 -1.2
KMI pmax pmax
comp=Z,9.0nm,1.4s,mb4.7
MIAR **Mount Ida** 62.60 68 *e*P P 18 39 13.0 -0.2
MIAR *e* pP 18 39 24.7 -0.1
MIAR pmax pmax
comp=Z,47nm,1.2s,mb5.5
MIAR **Mount Ida** 62.60 68 *e*P P 18 39 12.9 -0.3
comp=Z,47nm,1.2s,mb5.5
MIAR *e* pP 18 39 24.7 0.0
JOF **Joensuu** 63.31 344 *e*P P 18 39 17.6 +0.2
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
JOF **Joensuu** 63.31 344 *e*p P 18 39 17.6 +0.2
comp=Z,4.9nm,0.7s,mb4.8
HKT **Hockley** 64.53 73 *e*P P 18 39 25.9 -0.1
HKT pmax pmax
comp=Z,20nm,1.1s,mb5.1
HKT **Hockley** 64.53 73 *e*P P 18 39 25.9 -0.1
comp=Z,20nm,1.1s,mb5.0
KAF **Kangasniemi** 64.88 346 *e*P P 18 39 27.6 -0.1
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KAF **Kangasniemi** 64.88 346 *e*p P 18 39 27.6 -0.1
comp=Z,3.6nm,0.6s,mb4.6
TKM2 **Tokmak 2** 64.99 308 P P 18 39 29.4 +0.6
SNR=11
TKM2 **Tokmak 2** 64.99 308 *e*P P 18 39 29.0 +0.2
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
TKM2 **Tokmak 2** 64.99 308 *e*P P 18 39 29.0 +0.2
comp=Z,6.7nm,0.8s,mb4.7
ULHL **Ulahol** 65.17 307 P P 18 39 30.5 +0.6
SNR=9.8
USP **Ospenovka** 65.28 309 P P 18 39 31.5 +0.9
SNR=9.1
KBK **Karagaybulak** 65.51 308 P P 18 39 32.9 +0.8
SNR=9.0
FRU **Bishkek** 65.54 308 *i*P P 18 39 32.0 -0.4
FRU *e* pP 18 39 45.0 +1.0
FRU pmax pmax
comp=Z,40nm,1.6s,mb5.2
FINES **FINESS Array B** 65.55 346 P P 18 39 30.4 -1.7
comp=Z,4.3nm,0.7s,mb4.6,baz=26,slow=7.9,SNR=17
FINES LR LR 19 12 57.3

comp=Z,86nm,20.7s,MS3.9,baz=217,slow=40
AAK Ala-Archa 65.75 308 P **P 18 39 34.4 +0.7**
comp=Z,4.2nm,0.5s,mb4.7,baz=115,slow=3.9,SNR=17
AAK Ala-Archa 65.75 308 ⇑*i*P **P 18 39 34.2 +0.5**
AAK pmax pmax
comp=Z,11nm,1.7s,mb4.6
AAK Ala-Archa 65.75 308 *e*P **P 18 39 33.7 0.0**
comp=Z,9.7nm,0.8s,mb4.9
KZA Kyzart 65.79 307 P **P 18 39 35.3 +1.3**
SNR=7.0
LSA Lhasa 66.03 288 P **P 18 39 35.8 +0.1**
LSA Lhasa 66.03 288 *e*P **P 18 39 35.6 -0.1**
LSA pmax pmax
comp=Z,11nm,0.7s,mb5.0
LSA Lhasa 66.03 288 *e*P **P 18 39 35.6 -0.1**
comp=Z,11nm,0.7s,mb5.0
UCH Uchtor 66.04 308 P **P 18 39 37.3 +1.7**
SNR=6.0
UCH Uchtor 66.04 308 *e*P **P 18 39 35.7 +0.1**
comp=Z,8.4nm,1.2s,mb4.7
EKS2 Erkin-Say 66.08 309 P **P 18 39 36.8 +1.0**
SNR=14
EKS2 Erkin-Say 66.08 309 *e*P **P 18 39 36.5 +0.6**
comp=Z,7.9nm,0.6s,mb4.9
AML Almayashu 66.52 308 P **P 18 39 40.2 +1.5**
SNR=8.6
AML Almayashu 66.52 308 *e*P **P 18 39 39.6 +1.0**
comp=Z,10nm,0.9s,mb4.9
AKTK Aktyubinsk 66.88 323 P **P 18 39 41.6 +0.8**
AKTO Aktyubinsk 66.88 323 P **P 18 39 41.6 +0.8**
comp=Z,18nm,0.6s,mb5.3,baz=52,slow=7.2,SNR=136
ABKAR Akbulak array 67.09 321 *e*P **P 18 39 42.7 +0.5**
comp=Z,5.1nm,0.5s,mb4.8
KSH Kashi 67.33 305 P **P 18 39 47.8 +4.0**
KSH *e*pP pP 18 39 57.6 +2.1
KSH *e*sP sP 18 40 01.6 +1.6
KSH *e*PcP PcP 18 40 14.6 +3.3
KSH *e*PP PP 18 42 17.6 +5.6
KSH *e*ScP 18 44 14.6
KSH *e*PcS 18 44 17.6
KSH *e*S S 18 48 38.8 +2.6
KSH *e*sS sS 18 48 56.6 +1.1
KSH *e*ScS ScS 18 49 38.6 +0.1
KSH *e*SS SS 18 53 00.0 +4.4
KSH pmax pmax
comp=Z,12nm,1.0s,mb4.9
KSH LR LR
comp=N,89nm,5.6s
KSH LR LR
comp=E,110nm,5.9s
KSH LR LR
comp=Z,150nm,6.0s
NB2 NORSAR Subarra 67.61 353 P **P 18 39 44.5 -0.8**
comp=Z,0.7nm,0.8s,mb3.7,baz=13,slow=6.2
NOA NORSAR Array B 67.61 353 P **P 18 39 44.7 -0.5**
comp=Z,3.6nm,0.7s,mb4.5,baz=10,slow=6.4,SNR=20
NOA LR LR 19 12 56.3
comp=Z,43nm,19.3s,MS3.7,baz=80,slow=39
NOA NORSAR Array B 67.61 353 P **P 18 39 44.7 -0.5**
NOA LR LR 19 12 56.3
VSU Vasula 68.28 345 *e*P **P 18 39 49.1 -0.4**
VSU pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KKM Kota Kinabalu 68.31 252 *e*P **P 18 39 49.4 -0.9**
comp=Z,2.6nm,0.8s,mb4.3
KKM *e* pP 18 40 00.9 -1.0
SHL Shillong 68.60 284 *e*P **P 18 39 53.5 +1.5**
CHTO Chiang Mai 69.23 274 *e*P **P 18 39 53.7 -2.3**
CHTO *e* pP 18 40 06.5 -1.2
CHTO pmax pmax
comp=Z,301nm,2.0s,mb5.9
CHTO Chiang Mai 69.23 274 *e*P **P 18 39 53.7 -2.3**
comp=Z,302nm,2.0s,mb5.9
CHTO *e* pP 18 40 06.5 -1.2
OBN Obninsk 69.43 338 *c i*P **P 18 39 56.3 -0.4**
OBN *i* pP 18 40 07.0 -1.3
OBN *i* 18 40 19.2
OBN *e* 18 42 30.0
OBN pmax pmax
comp=Z,21nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
MRSI Marisa 69.49 243 P **P 18 40 01.3 +3.7**
CMAR Chiang Mai Arr 69.49 274 P **P 18 39 57.0 -0.7**
comp=Z,2.5nm,0.7s,mb4.2,baz=25,slow=6.8,SNR=16
CMAR pP pP 18 40 08.1 -1.3
comp=Z,3.7nm,0.6s,baz=34,slow=7.2,SNR=13
TAOE Nuku Hiva Isla 69.57 136 *e*LR LR 19 01 11.8
comp=Z,221nm,21.9s
GUN Gumba 70.47 290 *e*P **P 18 40 04.3 +0.8**
comp=Z,152nm,1.0s,mb5.9
APSI Ampana 70.79 243 P pP 18 40 16.4 -0.9
KKN Kakani 70.91 291 *e*P **P 18 40 06.8 +0.6**
comp=Z,57nm,0.8s,mb5.5
PKI Pulchoki 71.00 290 *e*P **P 18 40 07.2 +0.5**
comp=Z,94nm,1.1s,mb5.6
PKIN Phulchoki 71.00 290 *e*P **P 18 40 07.0 +0.2**
comp=Z,70nm,0.8s,mb5.7
ISAL Salakas 71.14 344 *e*P **P 18 40 07.1 0.0**
DMN Daman 71.15 291 *e*P **P 18 40 08.2 +0.5**
comp=Z,75nm,1.0s,mb5.6
IDID Didziasalis 71.28 344 *e*P **P 18 40 07.7 -0.2**
IIGN Ignalina 71.33 344 *e*P **P 18 40 08.3 0.0**
DDI Dehra Dun 73.15 297 *ex* x 18 40 19.5
DZM Mont Dzumac 73.80 192 *e*LR LR 19 03 00.4
comp=Z,234nm,23.5s
PPT Papeete 73.93 149 *e*LR LR 19 03 08.4
comp=Z,256nm,25.8s
PPT Papeete 73.93 149 LR LR 19 06 28.1
comp=Z,229nm,20.5s,MS4.5,baz=290,slow=30
KBL Kabul 74.69 306 *e*P **P 18 40 27.1 -1.4**
KBL pmax pmax
comp=Z,18nm,0.9s,mb5.0
KBL Kabul 74.69 306 *e*P **P 18 40 27.1 -1.4**
comp=Z,18nm,0.9s,mb5.0
AKASG Malin Array Be 75.17 341 P **P 18 40 28.9 -2.1**
comp=Z,1.8nm,0.4s,mb4.4,baz=25,slow=6.0,SNR=19
AKASG LR LR 19 17 55.4
comp=Z,80nm,18.1s,MS4.1,baz=265,slow=39
AKASG Malin Array Be 75.17 341 *ce*P **P 18 40 30.6 -0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 75.17 341 *e*P **P 18 40 29.9 -1.1**
KIEV Kiev 75.18 341 *e*P **P 18 40 29.9 -1.2**
KIEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KIEV Kiev 75.18 341 *e*P **P 18 40 29.9 -1.2**
comp=Z,5.9nm,0.6s,mb4.7
CLL Collm 77.10 351 *e*P **P 18 40 42.0 0.0**
CLL *e* 18 40 47.0
CLL MLR MLR
comp=Z,100nm,20.6s,MS4.1
CLL Collm 77.10 351 *e*P **P 18 40 42.0 0.0**
CLL Lm 18 22 00.0
comp=Z,100nm,20.6s
KWP Kalwaria Pacla 77.44 344 *e*P **P 18 40 42.4 -1.5**
KWP pmax pmax
comp=Z,23nm,0.8s,mb5.2
KWP Kalwaria Pacla 77.44 344 *e*P **P 18 40 42.4 -1.5**
comp=Z,23nm,0.8s,mb5.2
KIV Kislovodsk 77.81 329 *e*P **P 18 40 47.1 +1.0**
KIV pmax pmax
comp=Z,14nm,0.9s,mb4.9
KIV Kislovodsk 77.81 329 *e*P **P 18 40 46.1 0.0**
comp=Z,6.1nm,0.6s,mb4.7
STHS Stebnicka Huta 77.89 345 *e*P **P 18 40 48.5 +2.1**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS Stebnicka Huta 77.89 345 *e*P **P 18 40 48.5 +2.1**
comp=Z,5.8nm,1.0s,mb4.5
STHS Stebnicka Huta 77.89 345 *e*P **P 18 40 48.5 +2.1**
KOLS Kolonicke sedl 78.19 344 *e*P **P 18 40 48.1 0.0**
KOLS pmax pmax
comp=Z,11nm,1.5s,mb4.6
KOLS Kolonicke sedl 78.19 344 *e*P **P 18 40 48.1 0.0**
comp=Z,11nm,1.5s,mb4.6
KOLS Kolonicke sedl 78.19 344 *e*P **P 18 40 48.1 0.0**
ZEI Tsey 78.47 328 *e*P **P 18 40 49.9 +0.2**
ZEI pmax pmax
comp=Z,34nm,1.1s,mb5.2
ANN Anapa 78.64 333 *e*P pP 18 41 02.1 -0.4
ANN *e**PP sP 18 41 10.7 +3.7
ANN pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BUR08 Bucovina Ar. S 78.90 342 *e*P **P 18 40 51.9 -0.1**
KECS Kecovo 78.91 345 *e*P **P 18 40 52.3 +0.2**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 78.91 345 *e*P **P 18 40 52.3 +0.2**
comp=Z,2.7nm,0.9s,mb4.2
KECS Kecovo 78.91 345 *e*P **P 18 40 52.3 +0.2**
BURAR Bucovina Array 78.92 342 ⇑P **P 18 40 52.4 +0.3**
BURAR Bucovina Array 78.92 342 ⇑*i*P **P 18 40 52.4 +0.3**
BAIF Baives 78.96 356 *e*P **P 18 40 52.8 +0.5**
KOLL Kolacno 79.13 347 *e*P **P 18 40 54.5 +1.2**
KOLL Kolacno 79.13 347 *e*P **P 18 40 54.5 +1.2**
VYHS Vyhne 79.15 347 *e*P **P 18 40 54.3 +0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
VYHS Vyhne 79.15 347 *e*P **P 18 40 54.3 +0.9**
comp=Z,5.9nm,1.6s,mb4.3
VYHS Vyhne 79.15 347 *e*P **P 18 40 54.3 +0.9**
KHC Kasperske Hory 79.19 350 *e*P **P 18 40 53.6 0.0**
comp=Z,6.1nm,1.3s,mb4.4
GERES GERESS Array B 79.46 350 P **P 18 40 53.7 -1.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=35,slow=7.3,SNR=4.5
ZST Bratislava 79.69 348 *e*P **P 18 40 58.2 +1.9**
ZST pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ZST Bratislava 79.69 348 *e*P **P 18 40 58.2 +1.9**
comp=Z,6.8nm,0.6s,mb4.8
ZST Bratislava 79.69 348 *e*P **P 18 40 58.2 +1.9**
DRGR 80.18 344 ⇓P **P 18 41 00.2 +1.2**
DRGR 80.18 344 ⇓*i*P **P 18 41 00.2 +1.2**
FLN La Foliniere 80.36 359 *e*P **P 18 41 00.2 +0.3**
comp=Z,47nm,1.3s,mb5.0
FLN *e*MLR MLR
comp=Z,82nm,22.8s,MS3.7
FLN La Foliniere 80.36 359 *e*P **P 18 41 00.2 +0.3**
FLN pmax pmax
comp=Z,24nm,1.3s,mb5.0
FLN MLR MLR
comp=Z,80nm,22.8s,MS4.0
FLN La Foliniere 80.36 359 *e*P **P 18 41 00.2 +0.3**
comp=Z,24nm,1.3s,mb5.0
FLN LR LR
comp=Z,80nm,22.8s,MS4.0
MEZF Maizieres J'vi 80.48 356 *e*P **P 18 41 00.8 +0.2**
GNI Garni 80.51 326 P **P 18 41 02.1 +1.3**
comp=Z,8.2nm,0.8s,mb4.7,baz=343,slow=3.7,SNR=8.8
GNI Garni 80.51 326 *c i*P **P 18 41 00.6 -0.3**
GNI pmax pmax
comp=Z,23nm,1.2s
GNI Garni 80.51 326 *e*P **P 18 41 02.6 +1.7**
comp=Z,25nm,1.1s,mb5.1
LDF La Druitiere 80.53 359 *e*P **P 18 41 00.7 -0.1**
comp=Z,31nm,1.2s,mb4.8
LDF La Druitiere 80.53 359 *e*P **P 18 41 00.7 -0.1**
LDF pmax pmax
comp=Z,16nm,1.2s,mb4.8
LDF La Druitiere 80.53 359 *e*P **P 18 41 00.7 -0.1**
comp=Z,16nm,1.2s,mb4.8
GRR Gorron 80.74 360 *e*P **P 18 41 02.2 +0.2**
ROSF Rostrenen 80.78 1 *e*P **P 18 41 03.1 +0.9**
comp=Z,56nm,1.3s,mb5.0
ROSF Rostrenen 80.78 1 *e*P **P 18 41 03.1 +0.9**
ROSF pmax pmax
comp=Z,28nm,1.3s,mb5.0
ROSF Rostrenen 80.78 1 *e*P **P 18 41 03.1 +0.9**
comp=Z,28nm,1.3s,mb5.0
MLR Muntele Rosu 80.81 341 ⇓P **P 18 41 04.0 +1.6**
MLR Muntele Rosu 80.81 341 ⇓*i*P **P 18 41 04.0 +1.6**
SGMF Saint Gilles 80.87 1 *e*P **P 18 41 03.4 +0.8**
VOIR 81.04 342 ⇓P **P 18 41 05.4 +1.8**
VOIR 81.04 342 ⇓*i*P **P 18 41 05.4 +1.8**
HINF Hinteralfeld 81.07 354 *e*P **P 18 41 03.8 +0.1**
KBA Koelnbreinsper 81.25 350 ⇑*i*P **P 18 41 05.5 +0.8**
comp=Z,14nm,0.8s,mb4.9
SOKA Soboth 81.45 349 ⇑*i*P **P 18 41 06.7 +1.0**
comp=Z,12nm,1.2s,mb4.7
GZR Gura Zlata 81.52 343 ⇑P **P 18 41 05.7 -0.5**
GZR Gura Zlata 81.52 343 ⇑*i*P **P 18 41 05.7 -0.5**
TGUH Tegucigalpa,Un 81.64 78 *e*P **P 18 41 07.1 -0.1**
LOR Lormes 81.76 356 *e*P **P 18 41 07.8 +0.4**
comp=Z,12nm,1.0s,mb4.5
LOR *e*MLR MLR
comp=Z,108nm,23.0s,MS3.9
LOR Lormes 81.76 356 *e*P **P 18 41 07.8 +0.4**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LOR MLR MLR
comp=Z,110nm,23.0s,MS4.2
LOR Lormes 81.76 356 *e*P **P 18 41 07.8 +0.4**
comp=Z,5.8nm,1.0s,mb4.5
LOR LR LR
comp=Z,110nm,23.0s,MS4.2
SSF Saint Saulge 81.98 357 *e*P **P 18 41 09.3 +0.7**
comp=Z,7.1nm,0.8s,mb4.3
SSF Saint Saulge 81.98 357 *e*P **P 18 41 09.3 +0.7**
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SSF Saint Saulge 81.98 357 *e*P **P 18 41 09.3 +0.7**
comp=Z,3.5nm,0.8s,mb4.3
AVF Avril sur Loir 82.26 357 *e*P **P 18 41 09.8 -0.2**
SMF Signal de Mont 82.38 356 *e*P **P 18 41 11.2 +0.5**
comp=Z,13nm,1.0s,mb4.5
SMF Signal de Mont 82.38 356 *e*P **P 18 41 11.2 +0.5**
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SMF Signal de Mont 82.38 356 *e*P **P 18 41 11.2 +0.5**
comp=Z,6.7nm,1.0s,mb4.5
MFF Saint Martin d 82.52 359 *e*P **P 18 41 11.1 -0.3**
TCF Toulx Ste Croi 82.79 358 *e*P **P 18 41 12.2 -0.6**
comp=Z,4.9nm,0.7s,mb4.3
TCF Toulx Ste Croi 82.79 358 *e*P **P 18 41 12.2 -0.6**
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
TCF Toulx Ste Croi 82.79 358 *e*P **P 18 41 12.2 -0.6**
comp=Z,2.5nm,0.7s,mb4.3
HYB Hyderabad 82.81 289 *i*P **P 18 41 12.0 -1.3**
HYB *e* pP 18 41 24.0 -1.3
ASAR Alice Springs 84.37 221 P **P 18 41 19.5 -1.5**
comp=Z,3.4nm,0.7s,mb4.6,baz=23,slow=5.5,SNR=46
ASAR pP pP 18 41 31.9 -1.1
comp=Z,2.7nm,0.8s,baz=24,slow=5.4,SNR=7.6
BR131 Keskin Array S 84.40 334 *e*P **P 18 41 21.6 +0.4**
comp=Z,7.1nm,0.8s,mb4.8
BR131 *e* pP 18 41 33.5 +0.4
BRTR Keskin Array B 84.40 334 P **P 18 41 21.9 +0.8**
comp=Z,7.8nm,0.7s,mb4.9,baz=57,slow=2.9,SNR=58
BRTR pP pP 18 41 33.3 +0.2
comp=Z,5.0nm,0.7s,baz=61,slow=3.0,SNR=12
BRTR LR LR 19 27 05.0
comp=Z,57nm,18.7s,MS4.0,baz=184,slow=41
BRTR Keskin Array B 84.40 334 P **P 18 41 22.0 +0.8**
BRTR *PP pP 18 41 33.3 +0.2
FRF La Foret Royal 85.32 354 *e*P **P 18 41 25.1 -0.6**
LMR La Mourre 85.55 354 *e*P **P 18 41 26.8 -0.1**
EPF Esparros 86.09 359 *e*P **P 18 41 29.0 -0.5**
comp=Z,11nm,1.1s,mb4.7
EPF Esparros 86.09 359 *e*P **P 18 41 29.0 -0.5**
EPF pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
EPF Esparros 86.09 359 *e*P **P 18 41 29.0 -0.5**
comp=Z,5.6nm,1.1s,mb4.7
ETSF Etsaut 86.23 359 *e*P **P 18 41 30.2 0.0**
comp=Z,19nm,1.2s,mb4.9
ETSF Etsaut 86.23 359 *e*P **P 18 41 30.2 0.0**
ETSF pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
ETSF Etsaut 86.23 359 *e*P **P 18 41 30.2 0.0**
comp=Z,9.7nm,1.3s,mb4.9
STKA Stephens Creek 89.01 211 LR LR 19 20 13.1
comp=Z,200nm,19.2s,MS4.5,baz=205,slow=35
MMAI Mount Meron Ar 90.10 330 P **P 18 41 47.0 -1.9**
comp=Z,2.2nm,0.7s,mb4.6,baz=45,slow=8.3,SNR=3.9
MTP Monte Pirata 91.09 59 *e*P **P 18 41 53.6 -0.1**
comp=Z,40nm,0.9s,mb5.8
MTP *e* pP 18 42 04.9 -0.8
EIL Elat 93.34 329 LR LR 19 29 51.4
comp=Z,123nm,20.4s,MS4.3,baz=297,slow=39
TORD Torodi Ar. Bea 115.82 357 PKP PKPdf 18 47 30.4 -1.2
comp=Z,0.4nm,0.7s,baz=132,slow=2.1,SNR=2.8
TSUM Tsumeb 144.73 328 *e*PKPdf PKPdf 18 48 24.6 -1.0
MAW Mawson 145.45 217 PKPbc PKPbc 18 48 23.5 -2.0
comp=Z,4.6nm,0.9s,baz=110,slow=2.6,SNR=4.4
MAW Mawson 145.45 217 PKIKP PKPdf 18 48 23.5 -1.8
MAW pmax pmax
comp=Z,5.0nm,0.9s
LBTB Lobatse 146.70 312 *e*PKP2 PKPab 18 48 30.7 -1.0
BOSA Boshof 149.89 309 PKPbc PKPbc 18 48 37.8 -1.0
comp=Z,6.5nm,0.7s,baz=162,slow=0.9,SNR=12
BOSA Boshof 149.89 309 PKP2 PKPbc 18 48 37.8 -1.0
BOSA pmax pmax
comp=Z,7.0nm,0.7s

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*NEIC **20** 18:44:57.2, 15.°66N×96.°53W, h24km, MD3.8(MEX), After MEX.*
MEX 20 18:44:57.2±1.3, 15.°66N×96.°53W, h24km±55km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.42**	**352**	*e*P	Pn	18 45 18.7	-2.7
VHO				*i* S	Sn	18 45 35.8	-3.6
VHO	**Vista Hermosa**	**1.42**	**352**	*e*P	Pn	18 45 18.7	-2.7
VHO				*i* S	Sn	18 45 35.8	-3.6
OXX	**Oaxaca**	**1.42**	**353**	*i* P	Pn	18 45 19.3	-2.3
OXX				*i* S	Sn	18 45 36.2	-3.4
OXX	**Oaxaca**	**1.42**	**353**	*i* P	Pn	18 45 19.3	-2.3
OXX				*i* S	Sn	18 45 36.2	-3.4
PNIG	**Pinotepa**	**1.70**	**296**	*e*P	Pn	18 45 23.6	-1.7
PNIG				*i* S	Sn	18 45 42.4	-3.9
PNIG	**Pinotepa**	**1.70**	**296**	*e*P	Pn	18 45 23.6	-1.7
PNIG				*i* S	Sn	18 45 42.4	-3.9
CMIG	**Matias Romero**	**2.13**	**48**	*i* P	Pn	18 45 27.3	-3.9
CMIG				*i* S	Sn	18 45 55.0	-1.9
CMIG	**Matias Romero**	**2.13**	**48**	*i* P	Pn	18 45 27.3	-3.9
CMIG				*i* S	Sn	18 45 55.0	-1.9
UTMO	**Huajuapan**	**2.48**	**331**	*i* P	Pn	18 45 34.6	-1.5
UTMO				*i* S	Sn	18 46 02.6	-2.9
TPIG	**Tehuac#an**	**2.85**	**344**	*i* S	Sn	18 46 11.8	-3.1
PCIG		**3.19**	**89**	*i* P	Pn	18 45 42.9	-3.0
PCIG				*i* S	Sn	18 46 19.5	-3.7
TGIG		**3.46**	**71**	*i* S	Sn	18 46 27.7	-2.1

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*NEIC **20** 19:10:20.1±2.8, 27.°80N×83.°92E, h10km, mb3.7/2, Error ellipse: s-maj=46.8km s-min=32.8km az=177.0*
*IDC **20** 19:10:21.5±4.7, 28.°17N×83.°70E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.5/27, mbtmp3.8/8, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/37, Error ellipse: s-maj=86.9km s-min=44.9km az=162.0*
ISC 20 19:10:27.9±3.0, 28.°4N±0.°3×83.°7E±0.°3, h35km, n11, σ0s51/11, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**15.72**	**334**	*e*P	**Pn**	**19 14 11.6**	**+5.0**
	2.9nm,0.7s						
MKAR	**Makanchi Array**	**18.45**	**357**	P	**Pn**	**19 14 40.9**	**+0.2**
	0.6nm,0.3s,baz=179,slow=10,SNR=14						
KURK	**Kurchatov**	**22.67**	**352**	P	**P**	**19 15 24.9**	**-1.0**
	1.5nm,0.5s,mb3.7,baz=174,slow=10,SNR=7.8						
KURK	**Kurchatov**	**22.67**	**352**	*e*P	**P**	**19 15 25.9**	**0.0**
	2.5nm,0.8s,mb3.7						
ZALV	**Zalesovo Beam**	**25.59**	**2**	P	**P**	**19 15 53.6**	**0.0**
	0.7nm,0.7s,mb3.3,baz=180,slow=10,SNR=4.8						
SONM	**Songino Array**	**26.26**	**36**	P	**P**	**19 15 59.7**	**0.0**
	0.5nm,0.6s,mb3.2,baz=224,slow=10,SNR=3.8						
FINES	**FINESS Array B**	**50.12**	**328**	P	**P**	**19 19 19.8**	**+0.5**
	1.0nm,0.5s,mb4.1,baz=98,slow=8.3,SNR=5.9						
ARCES	**ARCESS Array B**	**52.72**	**338**	P	**P**	**19 19 39.2**	**+0.5**
	1.2nm,0.8s,mb3.9,baz=92,slow=8.1,SNR=4.0						
HFS	**Hagfors**	**55.95**	**325**	P	**P**	**19 20 02.5**	**+0.2**
	1.2nm,0.6s,mb4.1,baz=97,slow=12,SNR=3.5						
NOA	**NORSAR Array B**	**57.19**	**326**	P	**P**	**19 20 10.1**	**-1.0**
	0.4nm,0.7s,mb3.5,baz=90,slow=7.3,SNR=3.4						
NOA	**NORSAR Array B**	**57.19**	**326**	P	**P**	**19 20 10.1**	**-1.0**

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*HLW **20** 19:19:03.9, 38.°36N×22.°56E, h33km±32km, Ml3.6*
*IDC **20** 19:19:08.9±2.1, 38.°15N×22.°19E, h47km±29km, mb3.4/6, mb1 3.4/8, mb1mx3.2/28, mbtmp3.4/8, ML3.4/2, MS3.6/2, Ms1 3.6/2, ms1mx2.6/27, Error ellipse: s-maj=24.5km s-min=16.2km az=60.0*
*ATH **20** 19:19:09.0, 38.°10N×22.°15E, h63km±1km, ML3.3*
*ISCJB **20** 19:19:09.1±0.3, 38.°10N±0.°02×22.°14E±0.°03, h66km±2km, mb3.4/6, Error ellipse: s-maj=3.9km s-min=3.1km az=167.5*
*NEIC **20** 19:19:09.0, 38.°12N×22.°10E, h10km, ML3.2(ATH), After ATH.*
*CSEM **20** 19:19:10.0±0.1, 38.°10N×22.°12E, h58km±1km, ML3.9/10, Error ellipse: s-maj=3.2km s-min=2.3km az=72.0*
*THE **20** 19:19:10.2, 38.°12N×22.°16E, h58km±1km, ML3.9/10, Error ellipse: s-maj=1.4km s-min=0.8km az=268.0*
ISC 20 19:19:10.1±0.3, 38.°09N±0.°02×22.°14E±0.°03, h60km±3km, n159, σ0s76/213, mb3.5/6, MS3.6/2, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.20**	**320**	P	**Pn**	**19 19 18.7**	**-0.8**
LAKA				S	**Sn**	**19 19 25.4**	**-0.8**
LAKA	**Lakka**	**0.20**	**320**	P	**Pn**	**19 19 18.7**	**-0.8**
LAKA				S	**Sn**	**19 19 25.4**	**-0.8**
GUR	**Goura**	**0.22**	**133**	*e*P	**Pn**	**19 19 19.0**	**-0.6**
GUR				*e*S	**Sn**	**19 19 26.6**	**+0.1**
GUR	**Goura**	**0.22**	**133**	P	**Pn**	**19 19 19.0**	**-0.6**
GUR	**Goura**	**0.22**	**133**	P	**Pn**	**19 19 19.0**	**-0.6**
GUR				*e*S	**Sn**	**19 19 26.6**	**+0.1**
TRIZ	**Trizonia**	**0.28**	**350**	P	**Pn**	**19 19 19.6**	**-0.4**
TRIZ				S	**Sn**	**19 19 26.4**	**-0.8**
TRIZ	**Trizonia**	**0.28**	**350**	P	**Pn**	**19 19 19.6**	**-0.4**
TRIZ				S	**Sn**	**19 19 26.4**	**-0.8**
KALE	**Kalithea**	**0.30**	**0**	P	**Pn**	**19 19 19.9**	**-0.3**
KALE				S	**Sn**	**19 19 27.1**	**-0.3**
KALE	**Kalithea**	**0.30**	**0**	P	**Pn**	**19 19 19.9**	**-0.3**
KALE				S	**Sn**	**19 19 27.1**	**-0.3**
UPR	**University Cam**	**0.34**	**305**	*e*P	**Pn**	**19 19 20.3**	**-0.1**
UPR				*e*S	**Sn**	**19 19 28.3**	**+0.4**
UPR	**University Cam**	**0.34**	**305**	P	**Pn**	**19 19 20.3**	**-0.1**
UPR				S	**Sn**	**19 19 28.5**	**+0.6**
UPR	**University Cam**	**0.34**	**305**	P	**Pn**	**19 19 20.3**	**-0.1**
UPR				*e*S	**Sn**	**19 19 28.3**	**+0.4**
EFP	**Efpalio**	**0.38**	**332**	*e*P	**Pn**	**19 19 20.5**	**-0.3**
EFP				*e*S	**Sn**	**19 19 29.0**	**+0.4**
EFP	**Efpalio**	**0.38**	**332**	P	**Pn**	**19 19 20.4**	**-0.4**
EFP	**Efpalio**	**0.38**	**332**	P	**Pn**	**19 19 20.4**	**-0.4**
EFP				*e*S	**Sn**	**19 19 29.0**	**+0.4**
DSF	**Desfina**	**0.44**	**44**	P	**Pn**	**19 19 21.1**	**-0.3**
DSF				S	**Sn**	**19 19 29.5**	**-0.2**
DSF	**Desfina**	**0.44**	**44**	P	**Pn**	**19 19 21.1**	**-0.3**
DSF				S	**Sn**	**19 19 29.5**	**-0.2**
RLS	**Riolos of Patr**	**0.53**	**267**	*e*P	**Pn**	**19 19 21.8**	**-0.5**
RLS				*e*S	**Sn**	**19 19 32.4**	**+1.2**
RLS	**Riolos of Patr**	**0.53**	**267**	P	**Pn**	**19 19 22.1**	**-0.2**
RLS	**Riolos of Patr**	**0.53**	**267**	P	**Pn**	**19 19 22.1**	**-0.2**
RLS				*e*S	**Sn**	**19 19 32.4**	**+1.2**
LTK	**Loutraki**	**0.66**	**96**	*e*P	**Pn**	**19 19 23.6**	**-0.2**
LTK				*e*S	**Sn**	**19 19 33.9**	**+0.1**
LTK	**Loutraki**	**0.66**	**96**	P	**Pn**	**19 19 23.5**	**-0.3**
LTK				S	**Sn**	**19 19 33.5**	**-0.3**
LTK	**Loutraki**	**0.66**	**96**	*e*P	**Pn**	**19 19 23.6**	**-0.2**
LTK				*e*S	**Sn**	**19 19 33.9**	**+0.1**
VLX	**Vlachokerasia**	**0.74**	**165**	*e*P	**Pn**	**19 19 25.1**	**+0.3**
VLX	**Vlachokerasia**	**0.74**	**165**	P	**Pn**	**19 19 25.0**	**+0.2**
VLX	**Vlachokerasia**	**0.74**	**165**	P	**Pn**	**19 19 25.0**	**+0.2**
EVR	**Evrytania**	**0.86**	**343**	*e*P	**Pn**	**19 19 27.4**	**+1.1**
EVR	**Evrytania**	**0.86**	**343**	P	**Pn**	**19 19 27.5**	**+1.2**
EVR	**Evrytania**	**0.86**	**343**	*e*P	**Pn**	**19 19 27.4**	**+1.1**
LKR	**Lokris**	**0.88**	**50**	P	**Pn**	**19 19 26.6**	**+0.1**
LKR	**Lokris**	**0.88**	**50**	P	**Pn**	**19 19 26.5**	**0.0**
LKR				S	**Sn**	**19 19 38.9**	**+0.3**
LKR	**Lokris**	**0.88**	**50**	P	**Pn**	**19 19 26.5**	**0.0**
LKR				S	**Sn**	**19 19 38.9**	**+0.3**
ATAL	**Atalanti**	**0.92**	**49**	P	**Pn**	**19 19 27.1**	**+0.1**
ATAL				S	**Sn**	**19 19 40.2**	**+0.7**
ATAL	**Atalanti**	**0.92**	**49**	P	**Pn**	**19 19 27.1**	**+0.1**
ATAL				S	**Sn**	**19 19 40.2**	**+0.7**
ITM	**Ithomi**	**0.92**	**191**	*e*P	**Pn**	**19 19 28.2**	**+1.1**
ITM	**Ithomi**	**0.92**	**191**	P	**Pn**	**19 19 28.1**	**+1.0**
ITM	**Ithomi**	**0.92**	**191**	P	**Pn**	**19 19 27.9**	**+0.8**
ITM	**Ithomi**	**0.92**	**191**	P	**Pn**	**19 19 27.9**	**+0.8**
AGG	**Agios Georgios**	**0.94**	**9**	*e*P	**Pn**	**19 19 27.4**	**+0.1**
AGG				*e*S	**Sn**	**19 19 40.6**	**+0.5**
AGG	**Agios Georgios**	**0.94**	**9**	P	**Pn**	**19 19 27.4**	**+0.1**
AGG				S	**Sn**	**19 19 40.3**	**+0.2**
AGG	**Agios Georgios**	**0.94**	**9**	P	**Pn**	**19 19 27.4**	**+0.1**
AGG				S	**Sn**	**19 19 40.3**	**+0.2**
KFL	**Anninata**	**1.06**	**271**	P	**Pn**	**19 19 29.1**	**+0.2**

NAIG	Nisos Aigina	1.12	107	eP	Pn	19 19 29.5	-0.1
NAIG	Nisos Aigina	1.12	107	eP	Pn	19 19 29.5	-0.1
VLS	Valsamata	1.22	275	eP	Pn	19 19 30.7	-0.3
VLS	Valsamata	1.22	275	P	Pn	19 19 30.8	-0.2
VLS	Valsamata	1.22	275	P	Pn	19 19 30.4	-0.6
VLS	Valsamata	1.22	275	P	Pn	19 19 30.8	-0.2
PYL	PYLOS	1.23	195	eP	Pn	19 19 31.6	+0.5
PYL	PYLOS	1.23	195	P	Pn	19 19 31.6	+0.5
PYL	PYLOS	1.23	195	P	Pn	19 19 31.6	+0.5
ATH	Athens Observa	1.25	95	eP	Pn	19 19 31.5	+0.1
ATH	Athens Observa	1.25	95	P	Pn	19 19 31.8	+0.4
ATH	Athens Observa	1.25	95	eP	Pn	19 19 31.5	+0.1
ATHU	Athens Univers	1.31	95	P	Pn	19 19 32.2	+0.1
ATHU				S	Sn	19 19 48.4	-0.2
ATHU	Athens Univers	1.31	95	P	Pn	19 19 32.2	+0.1
ATHU				S	Sn	19 19 48.4	-0.2
PTL	Penteli	1.36	91	P	Pn	19 19 33.2	+0.3
PTL	Penteli	1.36	91	P	Pn	19 19 33.2	+0.3
THL	Klokotos Trika	1.48	356	eP	Pn	19 19 34.5	+0.1
THL	Klokotos Trika	1.48	356	P	Pn	19 19 34.5	+0.1
THL	Klokotos Trika	1.48	356	P	Pn	19 19 34.5	+0.1
NEO	Neokhori	1.48	35	eP	Pn	19 19 34.5	0.0
NEO				eS	Sn	19 19 52.6	-0.3
NEO	Neokhori	1.48	35	P	Pn	19 19 34.7	+0.2
NEO	Neokhori	1.48	35	eP	Pn	19 19 34.5	0.0
NEO				eS	Sn	19 19 52.6	-0.3
VLI	Veliai	1.51	155	eP	Pn	19 19 34.3	-0.6
VLI	Veliai	1.51	155	eP	Pn	19 19 34.3	-0.6
XOR	Xorichti	1.52	33	P	Pn	19 19 34.9	-0.1
XOR				S	Sn	19 19 53.1	-0.6
XOR	Xorichti	1.52	33	P	Pn	19 19 34.9	-0.1
XOR				S	Sn	19 19 53.1	-0.6
AOS	Alonnisos	1.74	51	P	Pn	19 19 37.8	-0.2
AOS				S	Sn	19 19 58.5	-0.6
AOS	Alonnisos	1.74	51	P	Pn	19 19 37.8	-0.2
AOS				S	Sn	19 19 58.5	-0.6
JAN	Janina	1.86	328	eP	Pn	19 19 40.8	+1.2
JAN	Janina	1.86	328	P	Pn	19 19 41.4	+1.8
JAN	Janina	1.86	328	eP	Pn	19 19 40.8	+1.2
KYTH	Kithira	1.94	158	eP	Pn	19 19 41.5	+0.8
KYTH	Kithira	1.94	158	eP	Pn	19 19 41.5	+0.8
LIT	Litokhoron	2.03	8	eP	Pn	19 19 41.5	-0.4
LIT				eS	Sn	19 20 05.6	-0.5
LIT	Litokhoron	2.03	8	P	Pn	19 19 41.5	-0.4
LIT	Litokhoron	2.03	8	P	Pn	19 19 41.5	-0.4
LIT				eS	Sn	19 20 05.6	-0.5
PAIG	Paliouri	2.19	33	P	Pn	19 19 43.7	-0.4
PAIG				S	Sn	19 20 10.0	-0.1
PAIG	Paliouri	2.19	33	P	Pn	19 19 43.7	-0.4
PAIG				S	Sn	19 20 10.0	-0.1
KZN	Kozani	2.23	353	eP	Pn	19 19 45.7	+1.1
KZN	Kozani	2.23	353	P	Pn	19 19 48.0	+3.4
KZN	Kozani	2.23	353	P	Pn	19 19 45.3	+0.7
KZN	Kozani	2.23	353	P	Pn	19 19 45.3	+0.7
KEK	Kerkira	2.44	312	eP	Pn	19 19 47.0	-0.5
KEK	Kerkira	2.44	312	P	Pn	19 19 47.1	-0.4
KEK	Kerkira	2.44	312	P	Pn	19 19 47.1	-0.4
PLG	Polygyros	2.50	24	eP	Pn	19 19 48.6	+0.3
PLG	Polygyros	2.50	24	P	Pn	19 19 47.7	-0.6
PLG	Polygyros	2.50	24	eP	Pn	19 19 48.6	+0.3
HORT	Hortiatis	2.61	16	P	Pn	19 19 49.2	-0.6
HORT	Hortiatis	2.61	16	P	Pn	19 19 49.2	-0.6
OUR	Ouranopolis	2.66	32	P	Pn	19 19 50.1	-0.4
OUR	Ouranopolis	2.66	32	P	Pn	19 19 50.1	-0.4
FNA	Florina	2.75	348	P	Pn	19 19 52.9	+1.1
FNA	Florina	2.75	348	P	Pn	19 19 52.9	+1.1
APE	Apeiranthos	2.88	110	P	Pn	19 19 53.5	0.0
APE	Apeiranthos	2.88	110	P	Pn	19 19 53.5	0.0
SOH	Sokhos	2.89	19	eP	Pn	19 19 54.1	+0.5
SOH	Sokhos	2.89	19	P	Pn	19 19 54.0	+0.4
SOH				S	Sn	19 20 27.6	+0.5
SOH	Sokhos	2.89	19	P	Pn	19 19 54.0	+0.4
SOH				S	Sn	19 20 27.6	+0.5
BIA	Bitola	2.99	348	ePn	Pn	19 19 55.6	+0.6
BIA	Bitola	2.99	348	ePn	Pn	19 19 55.6	+0.6
KARN	Karanos	3.04	151	P	Pn	19 19 57.0	+1.3
KARN	Karanos	3.04	151	P	Pn	19 19 57.0	+1.3
CHOS	Chios island	3.10	83	eP	Pn	19 19 57.2	+0.7
CHOS				eS	Sn	19 20 31.6	-0.7
CHOS	Chios island	3.10	83	eP	Pn	19 19 57.2	+0.7
CHOS				eS	Sn	19 20 31.6	-0.7
VAM	Vamos	3.15	148	eP	Pn	19 19 56.9	-0.3
VAM	Vamos	3.15	148	eP	Pn	19 19 56.9	-0.3
SRS	Serrai	3.23	20	P	Pn	19 19 58.5	+0.3
	30nm,0.7s						
SRS				S	Sn	19 20 35.6	+0.2
SRS	Serrai	3.23	20	P	Pn	19 19 58.5	+0.3
	30nm,0.7s						
SRS				S	Sn	19 20 35.6	+0.2
VAY	Valandovo	3.25	6	ePn	Pn	19 19 59.2	+0.8
VAY				eSg	Sn	19 20 36.7	+0.9
VAY	Valandovo	3.25	6	ePn	Pn	19 19 59.2	+0.7
KRUS	Krusevo	3.35	348	ePn	Pn	19 19 60.0	+0.1
KRUS				eSg	Sn	19 20 38.1	-0.2
KRUS	Krusevo	3.35	348	ePn	Pn	19 19 59.9	0.0
KAVA	Kavala	3.44	32	P	Pn	19 20 00.5	-0.6
KAVA	Kavala	3.44	32	P	Pn	19 20 00.5	-0.6
IDI	Anoyia	3.56	141	P	Pn	19 20 02.6	-0.2
	1.1nm,0.3s,baz=33,slow=22,SNR=22						
IDI				S	Sn	19 20 43.6	-0.2
	4.8nm,0.3s,baz=75,slow=21,SNR=7.0						
IDI	Anoyia	3.56	141	P	Pn	19 20 02.6	-0.3
IDI				S	Sn	19 20 43.5	-0.2
SMG	Samos	3.74	94	P	Pn	19 20 06.0	+0.8
SMG	Samos	3.74	94	P	Pn	19 20 06.0	+0.8
RDO	Rodhopi	4.03	40	P	Pn	19 20 09.1	-0.1
RDO	Rodhopi	4.03	40	P	Pn	19 20 09.1	-0.1
TIP	Timpagrande	4.35	286	eP	Pn	19 20 12.5	-1.1
TIP	Timpagrande	4.35	286	eP	Pn	19 20 12.5	-1.1
BARS	Barje	4.73	357	ePn	Pn	19 20 19.5	+0.7
BARS				i Sn	Sn	19 21 12.7	+0.5
KARP	Karpathos	4.76	121	eP	Pn	19 20 20.7	+1.4
KARP	Karpathos	4.76	121	P	Pn	19 20 21.9	+2.6
KARP	Karpathos	4.76	121	eP	Pn	19 20 20.7	+1.4
STON	Ston	5.85	326	ePn	Pn	19 20 30.4	-3.7
STON				Sn	Sn	19 21 32.7	-7.2
DIVS	Divibare	6.22	346	i Pn	Pn	19 20 37.9	-1.2
SLUM		7.05	158	P	Pn	19 20 48.0	-2.6
	baz=161						
SLUM				AMP		19 22 00.0	
	comp=E,30μm,0.3s,logA/T=5.0,baz=161						
SLUM		7.05	158	P	Pn	19 20 51.9	+1.3
MLR	Muntele Rosu	7.92	20	P	Pn	19 21 04.6	+2.2
	comp=E,0.3nm,0.3s,baz=185,slow=7.2,SNR=8.2						
MLR	Muntele Rosu	7.92	20	P	Pn	19 21 04.6	+2.1
HMAT	Matruh	8.09	148	P	Pn	19 21 01.1	-3.7
	baz=151						
HMAT				S	Sn	19 22 23.9	-11
	baz=151						
HMAT	Matruh	8.09	148	P	Pn	19 21 05.0	+0.2
HMAT				S	Sn	19 22 23.9	-11
NVLJ	Novalja	8.47	322	ePn	Pn	19 21 07.5	-2.3
NVLJ				Sn	Sn	19 22 36.1	-7.8
NVLJ	Novalja	8.47	322	ePn	Pn	19 21 07.6	-2.3
SWA2		9.24	162	P	Pn	19 21 18.0	-2.7
	baz=164						
SWA2				S	Sn	19 22 53.5	-10
	baz=164						
SWA2		9.24	162	P	Pn	19 21 21.9	+1.2
SWA2				S	Sn	19 22 53.4	-10
AWBH		11.27	148	P	Pn	19 21 44.8	-3.5
	baz=150						
AWBH		11.27	148	P	Pn	19 21 48.7	+0.5
GERES	GERESS Array B	12.36	333	P	Pn	19 22 03.2	+0.1
	comp=E,0.2nm,0.3s,baz=167,slow=15,SNR=2.8						
GERES	GERESS Array B	12.36	333	P	Pn	19 22 03.2	+0.1
HDK1	Dakhla	13.94	152	P	Pn	19 22 22.2	-2.4
	baz=153						
HDK1	Dakhla	13.94	152	P	Pn	19 22 22.2	-2.4
HFS	Hagfors	22.71	349	P	P	19 24 05.4	-1.0
	comp=E,0.7nm,0.4s,mb3.4,baz=167,slow=9.1,SNR=5.2						
HFS	Hagfors	22.71	349	P	P	19 24 05.4	-1.0
NOA	NORSAR Array B	23.97	347	P	P	19 24 17.8	-0.8
	comp=E,0.3nm,0.4s,mb3.0,baz=149,slow=9.8,SNR=4.5						
NOA	NORSAR Array B	23.97	347	P	P	19 24 17.8	-0.8
EKA	Eskdalemuir Ar	24.25	324	P	P	19 24 21.0	-0.1
	comp=E,1.8nm,0.6s,mb3.7,baz=124,slow=9.5,SNR=17						
EKA	Eskdalemuir Ar	24.25	324	P	P	19 24 21.0	-0.1
TORD	Torodi Ar. Bea	30.79	222	P	P	19 25 20.9	+0.8
	comp=E,0.2nm,0.4s,mb3.3,baz=24,slow=7.4,SNR=3.4						
BVAR	Borovoye Array	36.20	50	LR	LR	19 44 25.4	
	comp=E,63nm,18.3s,MS3.4,baz=28,slow=42						
KMBO	Kilima Mbogo	41.44	157	LR	LR	19 44 47.8	
	comp=E,118nm,21.5s,MS3.7,baz=90,slow=37						
MKAR	Makanchi Array	44.26	59	P	P	19 27 13.7	+0.3
	comp=E,0.4nm,0.4s,mb3.5,baz=268,slow=7.7,SNR=4.7						
ZALV	Zalesovo Beam	44.80	48	P	P	19 27 16.6	-1.0
	comp=E,0.7nm,0.3s,mb3.9,baz=270,slow=10,SNR=4.3						
ZALV	Zalesovo Beam	44.80	48	P	P	19 27 16.6	-1.1

NEIC ***20*** *19:22:16.7, 34°.21N×25°.05E, h3km, MD3.6(ATH), After ATH.*
CSEM ***20*** *19:22:16.7, 34°.21N×25°.05E, h3km, MD3.6, After ATH*

ATH 20 19:22:16.7, 34°.21N×25°.05E, h3km, MD3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.83	346	ePB	Pg	19 22 32.6	0.0
SIVA				eSG	Sg	19 22 44.5	+1.1
SIVA	Sivas	0.83	346	ePb	Pg	19 22 32.6	0.0
SIVA				eSg	Sg	19 22 44.5	+1.1
LAST	Lasithi	1.01	20	ePG	Pg	19 22 35.9	-0.2
LAST	Lasithi	1.01	20	ePg	Pg	19 22 35.9	-0.2
GVD	Gavdhos	1.01	309	ePG	Pg	19 22 35.8	-0.3
GVD	Gavdhos	1.01	309	ePg	Pg	19 22 35.8	-0.3
IDI	Anoyia	1.08	353	ePB	Pg	19 22 36.7	-0.8
IDI	Anoyia	1.08	353	ePb	Pg	19 22 36.7	-0.8
NPS	Neapolis	1.15	24	ePG	Pg	19 22 38.2	-0.5
NPS	Neapolis	1.15	24	ePg	Pg	19 22 38.2	-0.5
ZKR	Zakros	1.32	46	ePN	Pn	19 22 42.1	+0.1
ZKR				eSB	Sb	19 22 59.1	-0.3
ZKR	Zakros	1.32	46	ePn	Pn	19 22 42.1	+0.1
ZKR				eSb	Sb	19 22 59.1	-0.3
VAM	Vamos	1.38	330	ePG	Pg	19 22 42.6	-0.6
VAM	Vamos	1.38	330	ePg	Pg	19 22 42.6	-0.6
KARN	Karanos	1.51	322	ePN	Pn	19 22 45.0	+0.4
KARN	Karanos	1.51	322	ePn	Pn	19 22 45.0	+0.4
KARP	Karpathos	2.19	52	ePN	Pb	19 22 56.3	-0.6
KARP	Karpathos	2.19	52	ePn	Pb	19 22 56.3	-0.6
KYTH	Kithira	2.64	322	ePB	Pb	19 23 02.2	-2.5
KYTH	Kithira	2.64	322	ePb	Pb	19 23 02.2	-2.5
VLI	Veliai	3.04	326	ePN	Pn	19 23 08.0	+2.3
VLI	Veliai	3.04	326	ePn	Pn	19 23 08.0	+2.3

MOS ***20*** *19:34:18.0±1.1, 49°.53N×156°.95E, h10km, mb4.2/1, Error ellipse: s-maj=74.7km s-min=19.6km az=80.8*

KRSC 20 19:34:18.0±0.8, 49°.53N×156°.94E, h10km±10km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.27	336	ePN	Pn	19 34 40.0	-1.8
SKR				i S	Sb	19 34 57.5	-0.9
SKR				smax			
	comp=N,310nm,0.3s						
SKR				smax			
	comp=E,150nm,0.3s						
ALID	Alaid	1.61	327	P	Pn	19 34 44.9	-1.6
ALID				eS	Sn	19 35 04.1	-3.2
MIPR	Malaya Ipel'ka	2.75	358	P	Pn	19 35 03.4	+1.3
MIPR				S	Sn	19 35 37.2	+1.8
RUS	Russkaya	3.07	18	eP	Pn	19 35 08.7	+2.2
RUS				eS	Sn	19 35 46.5	+3.2
PET	Petropavlovsk	3.66	16	S	Sn	19 36 02.6	+4.8
AVH	Avacha	3.91	16	i P	Pn	19 35 21.4	+3.4
NLC	Nalytchevo	3.94	22	S	Sn	19 36 07.0	+2.2
SPN	Mys Shipunski	4.06	27	P	Pn	19 35 22.9	+2.8
SPN				eS	Sn	19 36 10.7	+3.0
GNL	Ganaly	4.22	8	P	Pn	19 35 25.9	+3.6
MKZ	Mys Kozlova	5.84	29	PN	Pn	19 35 45.6	+1.1
MKZ	Mys Kozlova	5.84	29	P	Pn	19 35 45.6	+1.1
MKZ				S	Sn	19 36 51.0	-0.4
KBTR	Krutoberegovo	7.57	26	PN	Pn	19 36 10.1	+1.8
KBTR	Krutoberegovo	7.57	26	P	Pn	19 36 10.1	+1.8

ISCJB ***20*** *19:41:50.7±0.9, 13°.08N±0°.09×143°.3E±0°.1, h204km±10km, mb3.7/17, Error ellipse: s-maj=22.9km s-min=14.8km az=174.5*
IDC ***20*** *19:41:51.9±0.8, 13°.10N×143°.39E, h201km±9km, mb3.5/13, mb1 3.7/14, mb1mx3.6/23, mbtmp3.5/14, Error ellipse: s-maj=17.8km s-min=12.3km az=74.0*
NEIC ***20*** *19:41:52.3±0.8, 13°.09N×143°.37E, h206km±8km, mb4.2/3, Error ellipse: s-maj=14.0km s-min=9.4km az=78.0*

ISC 20 19:41:52.1±0.9, 13°.10N±0°.09×143°.4E±0°.1, h204km±9km, n22, σ0°.73/22, mb3.7/17, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.51	71	P	Pn	19 42 26.9	+0.6
	21nm,0.3s,baz=196,slow=12,SNR=22						
GUMO				S	Sn	19 42 52.2	-0.5
	113nm,0.3s,baz=168,slow=22,SNR=39						
JOW	Kunigami	19.69	316	P	P	19 46 06.8	+0.9
	baz=90,slow=20						
JOW	Kunigami	19.69	316	P	P	19 46 06.8	+0.9
MJAR	Matsushiro Arr	23.81	350	P	P	19 46 45.5	-0.8
	1.5nm,0.6s,mb3.8,baz=173,slow=11,SNR=4.7						
WRAB	Tennant Creek	34.01	195	eP	P	19 48 16.8	0.0
	10.0nm,0.7s,mb4.5						
ASAR	Alice Springs	37.70	194	P	P	19 48 48.1	0.0
	2.1nm,0.7s,mb3.8,baz=19,slow=12,SNR=36						
CMAR	Chiang Mai Arr	43.03	283	P	P	19 49 31.9	-0.1
	0.6nm,0.4s,mb3.4,baz=80,slow=6.5,SNR=8.9						
STKA	Stephens Creek	44.75	182	P	P	19 49 44.9	-0.4
	1.3nm,0.5s,mb3.5,baz=320,slow=18,SNR=8.5						
SONM	Songinu Array	46.32	326	P	P	19 49 57.3	-0.2
	0.5nm,0.5s,mb3.1,baz=145,slow=7.3,SNR=4.0						
TIXI	Tiksi	59.19	355	eP	P	19 51 30.7	-0.5
	1.0nm,0.5s,mb3.7						
MKAR	Makanchi Array	60.86	316	P	P	19 51 43.8	+0.8
	0.4nm,0.3s,mb3.5,baz=90,slow=8.3,SNR=7.8						
ZALV	Zalesovo Beam	61.20	325	P	P	19 51 45.3	+0.1
	0.6nm,0.4s,mb3.6,baz=90,slow=5.8,SNR=2.7						
ZALV				PcP	PcP	19 52 24.9	-0.9
	1.0nm,0.5s,baz=97,slow=4.6,SNR=4.4						
ZALV	Zalesovo Beam	61.20	325	P	P	19 51 45.3	+0.1
ZALV				PcP	PcP	19 52 24.9	-0.9
KURK	Kurchatov	64.04	320	eP	P	19 52 04.5	+0.5
	3.5nm,0.9s,mb4.0						
BVAR	Borovoye Array	69.43	322	P	P	19 52 38.5	+0.5
	2.0nm,0.4s,mb4.1,baz=103,slow=8.0,SNR=15						
YKA	Yellowknife Ar	83.95	27	P	P	19 53 59.3	+0.3
	0.5nm,0.4s,mb3.6,baz=289,slow=5.2,SNR=10.0						
ARCES	ARCESS Array B	87.11	342	P	P	19 54 13.9	-0.5
	2.0nm,0.9s,mb3.9,baz=90,slow=8.5,SNR=5.0						
JOF	Joensuu	88.14	335	ep	P	19 54 18.1	-1.4
	0.7nm,0.5s,mb3.8						
NVAR	Mina Array Bea	88.34	51	P	P	19 54 22.8	+1.9
	0.6nm,0.4s,mb3.8,baz=246,slow=6.2,SNR=4.8						
FINES	FINESS Array B	91.00	335	P	P	19 54 31.6	-1.2
	1.0nm,0.4s,mb4.1,baz=68,slow=5.2,SNR=18						
PDAR	Pinedale Array	93.32	45	P	P	19 54 44.2	+0.2
	0.2nm,0.5s,mb3.5,baz=313,slow=2.1,SNR=2.4						
LPAZ	La Paz	149.35	100	PKPbc	PKPbc	20 01 19.4	+1.7
	0.8nm,0.4s,baz=229,slow=2.7,SNR=4.9						

IDC 20 19:58:49.9±1.6, 32°.07N×104°.89E, h0km, mb3.2/4, mb1 3.4/5, mb1mx3.2/25, mbtmp3.2/5, ML3.6/1, Error ellipse: s-maj=79.8km s-min=25.1km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.58	203	Pn	Pn	20 02 16.9	-0.5
	0.1nm,0.3s,baz=7.6,slow=9.7,SNR=5.9						
MKAR	Makanchi Array	22.71	317	P	P	20 03 53.8	+0.7
	0.1nm,0.3s,baz=110,slow=12,SNR=3.3						
KURK	Kurchatov	26.89	322	P	P	20 04 32.3	-0.1
	0.1nm,0.5s,baz=129,slow=9.4,SNR=2.6						
FINES	FINESS Array B	57.14	326	P	P	20 08 37.6	-0.4
	0.2nm,0.4s,baz=96,slow=10,SNR=4.3						
ASAR	Alice Springs	61.98	150	P	P	20 09 12.0	+0.2
	0.2nm,0.6s,baz=334,slow=7.0,SNR=4.7						

CASC 20 20:04:24.6±1.9, 9°.35N×82°.20W, h27km±6km, MD3.6, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI	Changuinola	0.32	282	i P	Pb	20 04 32.5	+0.5
CNI				⇓eP		20 04 32.5	
CNI				eS	Sb	20 04 37.1	0.0
TBS2		0.71	219	eP	Pb	20 04 37.6	-0.8
TBS2				⇑eP		20 04 37.7	
TBS2				eS	Sb	20 04 48.4	+0.5
TBS2				eS	Sb	20 04 48.4	+0.6
BRU2	Volcan	0.73	221	eP	Pb	20 04 38.6	-0.1
BRU2				eP		20 04 38.7	
BRU2				eS	Sb	20 04 50.7	+2.2
BRU2				eS	Sb	20 04 50.9	+2.5
BAR1		1.10	265	⇑i P	Pn	20 04 43.9	-0.4
BAR1				⇑eP		20 04 43.9	
BAR1				eS	Sn	20 04 59.4	+0.8
BAR1				eS	Sn	20 04 59.9	+1.3
BUS	Buena Vista	1.55	278	eP	Pn	20 04 51.0	+0.6
BUS				eP		20 04 51.8	
URSC	Urasca	1.63	287	eP	Pn	20 04 51.6	+0.1
URSC				eS	Sn	20 05 12.9	+1.2
QCR	Quepos	1.94	272	eP	Pn	20 04 56.9	+1.1

ISCJB ***20*** *20:07:32.8±0.7, 36°.88N±0°.04×28°.25E±0°.04, h14km±6km, Error ellipse: s-maj=7.5km s-min=5.9km az=5.4*
DDA ***20*** *20:07:32.1, 36°.90N×28°.25E, h7km±5km, Md2.8*
CSEM ***20*** *20:07:33.5±0.3, 36°.89N×28°.22E, h2km, ML1.5, Error ellipse: s-maj=5.9km s-min=4.3km az=14.0*
ISK ***20*** *20:07:33.3, 36°.93N×28°.19E, h19km, ML1.5*

ISC 20 20:07:33.1±0.8, 36°.90N±0°.05×28°.25E±0°.04, h16km±8km, n14, σ0°.78/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.24	7	ePG	Pg	20 07 39.4	+0.9
YER				eSG	Sg	20 07 42.9	+0.8
YER	Yerkesik	0.24	7	ePg	Pg	20 07 39.4	+1.0
YER				eSg	Sg	20 07 42.9	+0.8
TURN	Turunc	0.29	95	i P	Pg	20 07 38.7	-0.5
TURN				i S	Sg	20 07 41.8	-1.5
TURN	Turunc	0.29	95	i P	Pg	20 07 38.7	-0.5
TURN				i S	Sg	20 07 41.8	-1.6
MLSB	Milas	0.55	317	ePG	Pg	20 07 43.8	-0.1
MLSB				eSG	Sg	20 07 50.9	-0.4
MLSB	Milas	0.55	317	ePg	Pg	20 07 43.8	-0.1
MLSB				eSg	Sg	20 07 50.9	-0.4
DAT	Datca	0.56	253	ePG	Pg	20 07 44.3	+0.2
DAT				eSG	Sg	20 07 52.5	+0.8
DAT	Datca	0.56	253	ePg	Pg	20 07 44.3	+0.1
DAT				eSg	Sg	20 07 52.5	+0.8
BDRM	Kayabasi	0.66	285	i P	Pg	20 07 45.6	-0.5
BDRM				i S	Sg	20 07 54.0	-0.9
BDRM	Kayabasi	0.66	285	i P	Pg	20 07 45.6	-0.5
BDRM				i S	Sg	20 07 54.0	-0.9
FETY	Fethiye	0.72	111	ePG	Pg	20 07 48.5	+1.4
FETY	Fethiye	0.72	111	ePg	Pg	20 07 48.5	+1.4
AYDN	Tasoluk	0.82	339	i P	Pb	20 07 48.9	0.0
AYDN				i S	Sb	20 07 59.4	-0.2
AYDN	Tasoluk	0.82	339	i P	Pb	20 07 48.9	+0.1
AYDN				i S	Sb	20 07 59.4	-0.2

IDC ***20*** *20:10:54.5±1.3, 35°.14N×80°.65E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.4/27, mbtmp3.5/8, ML3.2/4, MS2.3/1, Ms1 2.3/1, ms1mx2.0/31, Error ellipse: s-maj=30.1km s-min=23.8km az=71.0*
ISCJB ***20*** *20:10:57.7±1.1, 35°.6N±0°.1×81°.7E±0°.1, h10km, mb3.4/5, Error ellipse: s-maj=19.5km s-min=12.6km az=136.0*
NEIC ***20*** *20:10:59.1±1.2, 35°.49N×81°.70E, h10km, mb3.6/2, Error ellipse: s-maj=24.9km s-min=14.2km az=50.0*
BJI ***20*** *20:11:00.2, 35°.41N×81°.57E, h29km, ML3.9/6*

ISC 20 20:10:59.2±1.1, 35°.5N±0°.1×81°.7E±0°.1, h10km, n19, σ1°.34/20, mb3.4/6, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	6.04	313	ePn	Pn	20 12 30.0	+1.4
KSH				Sn	Sn	20 13 33.8	-4.0
KSH				smax			
	comp=N,75nm,0.9s						
KSH				smax			
	comp=E,100nm,1.1s						
UCH	Uchtor	8.73	323	eP	Pn	20 13 05.7	+0.2
	comp=E,5.9nm,0.8s						
AAK	Ala-Archa	9.04	324	Pn	Pn	20 13 11.7	+2.0
	comp=E,0.0nm,0.3s,baz=152,slow=1.6,SNR=3.2						
AAK				Pg	Pn	20 13 44.4	+35
	comp=E,0.0nm,0.3s,baz=161,slow=9.1,SNR=6.9						
AAK				Lg		20 15 36.9	
	comp=E,0.0nm,0.3s,baz=310,slow=20,SNR=2.4						
AML	Almayashu	9.08	319	eP	Pn	20 13 12.3	+2.0
	comp=E,3.2nm,0.7s						
MK31	Makanchi Array	11.30	2	eP	Pn	20 13 41.6	+1.0
MKAR	Makanchi Array	11.30	2	Pn	Pn	20 13 41.7	+1.1
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=6.3						
MKAR	Makanchi Array	11.30	2	Pn	Pn	20 13 41.7	+1.0
KURK	Kurchatov	15.37	353	Pn	Pn	20 14 33.0	-3.1
	comp=E,0

MATI	**Mati**	**3.19 179**	*e*P	**Pn**	**20 15 50.2**	**+1.4**
DCPH	**Dipolog City**	**3.21 241**⇑	*e*P	**Pn**	**20 15 48.3**	**-0.7**
GUIM	**Jordan**	**3.58 278**	*e*P	**Pn**	**20 15 53.8**	**-0.1**
PVCP	**Virac**	**3.95 330**	*e*P	**Pn**	**20 16 00.1**	**+1.0**
ASAR	**Alice Springs**	**34.45 167**	P	**P**	**20 21 42.4**	**-0.4**
	0.1nm,0.3s,mb3.2,baz=349,slow=6.9,SNR=8.0					
MKAR	**Makanchi Array**	**52.07 323**	P	**P**	**20 24 03.6**	**-0.9**
	0.3nm,0.4s,mb3.6,baz=120,slow=7.1,SNR=4.5					
KURK	**Kurchatov**	**56.11 326**	P	**P**	**20 24 33.4**	**-0.4**
	0.4nm,0.5s,mb3.7,baz=126,slow=6.7,SNR=4.2					
YKA	**Yellowknife Ar**	**93.89 24**	P	**P**	**20 28 12.8**	**+1.3**
	0.3nm,0.5s,mb4.0,baz=301,slow=4.5,SNR=5.0					

*JMA **20** 20:19:02.3±0.4,23°.88N×121°.77E,h3km,M2.9*
*ISCJB **20** 20:19:03.5±0.3,23°.94N±0°.02×121°.66E±0°.02,h27km±2km, Error ellipse: s-maj=3.0km s-min=2.2km az=41.7*
*TAP **20** 20:19:03.8,23°.97N×121°.55E,h36km,ML3.5,B*

ISC 20 20:19:03.8±0.3,23°.95N±0°.02×121°.65E±0°.02,h27km±2km, n62,σ0s88/108,6C-11D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**308**	*i* P	**Pb**	**20 19 10.1**	**+1.6**
	baz=75						
HWA				*e*S	**Sb**	**20 19 14.8**	**+3.3**
	baz=75						
TWD	**Chiawan**	**0.14**	**341**	⇓*i*P	**Pb**	**20 19 10.0**	**+0.9**
	baz=10.0						
TWD				*i* S	**Sb**	**20 19 14.1**	**+1.5**
	baz=10.0						
ESF	**Shoufeng Towns**	**0.15**	**239**	P	**Pb**	**20 19 09.8**	**+0.6**
	baz=214						
ESL	**Shilin**	**0.23**	**235**	⇑*i*P	**Pb**	**20 19 10.3**	**+0.2**
	baz=216						
ESL				S	**Sb**	**20 19 14.8**	**+0.4**
	baz=216						
TEGC	**Jichi Village**	**0.26**	**202**	P	**Pb**	**20 19 11.4**	**+1.1**
	baz=192						
TEGC				*e*S	**Sb**	**20 19 17.8**	**+2.9**
	baz=192						
WHF	**Hehuan Shan**	**0.40**	**300**	⇑*i*P	**Pb**	**20 19 12.6**	**+0.1**
	baz=301						
WHF				S	**Sb**	**20 19 18.5**	**+0.1**
	baz=301						
ENA	**Nanau**	**0.49**	**10**	⇓*i*P	**Pb**	**20 19 13.8**	**-0.1**
	baz=14						
TWT	**Tachien**	**0.53**	**305**	P	**Pb**	**20 19 14.7**	**+0.1**
	baz=309						
TWT				S	**Sb**	**20 19 21.8**	**0.0**
	baz=309						
EHY	**Hungye**	**0.53**	**214**	⇑*i*P	**Pb**	**20 19 13.5**	**-1.1**
	baz=205						
EHY				*e*S	**Sb**	**20 19 20.6**	**-1.4**
	baz=205						
NNS	**Nan Shan**	**0.55**	**333**	P	**Pb**	**20 19 14.7**	**-0.2**
	baz=344						
NNS				*e*S	**Sb**	**20 19 22.2**	**-0.2**
	baz=344						
TWF1	**Yuli**	**0.67**	**208**	*e*P	**Pb**	**20 19 15.5**	**-1.5**
	baz=201						
TWF1				*e*S	**Sb**	**20 19 24.1**	**-1.8**
	baz=201						
SMLT	**Sun Moon Lake**	**0.69**	**265**	⇑P	**Pb**	**20 19 16.7**	**-0.5**
	baz=263						
SMLT				*e*S	**Sb**	**20 19 24.7**	**-1.6**
	baz=263						
ENTT	**Nioudou**	**0.69**	**354**	*e*P	**Pb**	**20 19 16.3**	**-1.1**
	baz=9.0						
TYC	**Yuchr**	**0.72**	**267**	P	**Pb**	**20 19 17.1**	**-0.7**
	baz=265						
TYC				S	**Sb**	**20 19 26.0**	**-1.3**
	baz=265						
NSK	**Sanguang**	**0.77**	**340**	⇓*i*P	**Pb**	**20 19 18.1**	**-0.5**
	baz=353						
NSK				S	**Sb**	**20 19 27.8**	**-0.9**
	baz=353						
TWE	**Neicheng**	**0.77**	**2**	⇓*i*P	**Pb**	**20 19 17.7**	**-0.9**
	baz=14						
TWE				S	**Sb**	**20 19 28.1**	**-0.7**
	baz=14						
YUS	**Yu-Shan**	**0.78**	**234**	⇓P	**Pb**	**20 19 18.8**	**0.0**
	baz=224						
YUS				S	**Sb**	**20 19 28.4**	**-0.7**
	baz=224						
WNT	**Mingjian**	**0.88**	**266**	*e*P	**Pn**	**20 19 20.5**	**0.0**
	baz=265						
WNT				S	**Sb**	**20 19 32.5**	**+0.6**
	baz=265						
CHKT	**Chengkung**	**0.88**	**197**	⇓P	**Pn**	**20 19 19.5**	**-1.0**
	baz=192						
CHKT				*e*S	**Sb**	**20 19 31.3**	**-0.6**
	baz=192						
ALS	**Alishan**	**0.88**	**241**	⇑*i*P	**Pn**	**20 19 20.4**	**-0.1**
	baz=230						
ALS				*e*S	**Sb**	**20 19 31.2**	**-0.8**
	baz=230						
TWQ1	**Liyutan**	**0.89**	**297**	P	**Pn**	**20 19 20.8**	**+0.2**
	baz=299						
TWQ1				*e*S	**Sb**	**20 19 31.9**	**-0.2**
	baz=299						
NSTT	**Nanjuang**	**0.90**	**319**	⇓*i*P	**Pn**	**20 19 20.7**	**0.0**
	baz=311						
NSTT				*i* S	**Sb**	**20 19 31.7**	**-0.7**
	baz=311						
TCU	**Taichung**	**0.91**	**283**	⇓*i*P	**Pn**	**20 19 21.4**	**+0.5**
	baz=284						
TCU				*e*S	**Sb**	**20 19 33.0**	**+0.4**
	baz=284						
NSY	**Sanyi**	**0.93**	**300**	*e*P	**Pn**	**20 19 21.4**	**+0.2**
	baz=303						
NSY				*e*S	**Sb**	**20 19 33.7**	**+0.3**
	baz=303						
ELDTW	**Lidau**	**0.95**	**217**	*e*P	**Pn**	**20 19 19.6**	**-1.8**
	baz=204						
CHN5	**Tsauling**	**0.95**	**249**	⇓P	**Pn**	**20 19 21.1**	**-0.4**
	baz=246						
CHN5				*i* S	**Sb**	**20 19 34.4**	**+0.4**
	baz=246						
WGK	**Gukeng**	**1.02**	**255**	*e*P	**Pn**	**20 19 22.5**	**+0.1**
	baz=254						
WGK				*e*S	**Sn**	**20 19 36.3**	**+0.3**
	baz=254						
TWA	**Mucha**	**1.03**	**357**	*e*P	**Pn**	**20 19 21.8**	**-0.7**
	baz=8.0						
TWA				*e*S	**Sn**	**20 19 34.8**	**-1.3**
	baz=8.0						
HSN	**Hsinchu**	**1.05**	**324**	*e*P	**Pn**	**20 19 23.3**	**+0.5**
	baz=331						
HSN				*e*S	**Sn**	**20 19 37.4**	**+0.8**
	baz=331						
TAP1	**Taipei**	**1.09**	**354**	*e*P	**Pn**	**20 19 23.4**	**0.0**
	baz=358						
TAP1				*e*S	**Sn**	**20 19 37.0**	**-0.7**
	baz=358						
NCU	**National Centr**	**1.10**	**338**	*e*P	**Pn**	**20 19 24.0**	**+0.5**
	baz=329						
NCU				*e*S	**Sn**	**20 19 38.1**	**+0.3**
	baz=329						
TWB1	**Santiao Chiao**	**1.10**	**16**	*e*P	**Pn**	**20 19 24.2**	**+0.7**
	baz=14						
NWF	**Wu-fen Shan**	**1.12**	**6**	*e*P	**Pn**	**20 19 23.5**	**-0.3**
	baz=9.0						
STYT	**Tauyuan**	**1.13**	**226**	P	**Pn**	**20 19 23.5**	**-0.4**
	baz=223						
STYT				*e*S	**Sn**	**20 19 38.0**	**-0.6**
	baz=223						
CHN4	**Tsaushan**	**1.13**	**239**	P	**Pn**	**20 19 24.5**	**+0.5**
	baz=225						
CHN4				*e*S	**Sn**	**20 19 39.5**	**+0.9**
	baz=225						
CHN2	**Minshiung**	**1.15**	**249**	*e*P	**Pn**	**20 19 24.8**	**+0.6**
	baz=247						
CHN2				*e*S	**Sn**	**20 19 40.8**	**+1.8**
	baz=247						
TWS1	**Kuangyinshan**	**1.17**	**350**	*e*P	**Pn**	**20 19 24.5**	**+0.1**
	baz=4.0						
TWS1				*e*S	**Sn**	**20 19 40.0**	**+0.6**
	baz=4.0						
WTP	**Ta-pu**	**1.18**	**234**	⇓*i*P	**Pn**	**20 19 24.8**	**+0.3**
	baz=231						
WTP				*e*S	**Sn**	**20 19 40.2**	**+0.5**
	baz=231						
CHY	**Chiayi**	**1.21**	**248**	*e*P	**Pn**	**20 19 25.2**	**+0.3**
	baz=247						
CHY				*e*S	**Sn**	**20 19 41.0**	**+0.6**
	baz=247						
TWG	**Pinlang**	**1.24**	**205**	*e*P	**Pn**	**20 19 22.5**	**-2.9**
	baz=189						
WTCT	**Ta-ch'eng**	**1.25**	**266**	*e*P	**Pn**	**20 19 25.4**	**-0.1**
	baz=277						
WTCT				*e*S	**Sn**	**20 19 41.8**	**+0.3**
	baz=277						
TWK	**Hsinying**	**1.26**	**238**	⇑P	**Pn**	**20 19 26.0**	**+0.3**
	baz=225						
TWK				*e*S	**Sn**	**20 19 41.9**	**+0.1**
	baz=225						
CHN1	**Nanshi**	**1.28**	**234**	⇓P	**Pn**	**20 19 26.0**	**+0.1**
	baz=231						
CHN1				*e*S	**Sn**	**20 19 43.4**	**+1.3**
	baz=231						
SGST	**Jiashian**	**1.30**	**229**	P	**Pn**	**20 19 26.9**	**+0.7**
	baz=226						
SGST				*e*S	**Sn**	**20 19 44.0**	**+1.2**
	baz=226						
TWY	**Chenhua**	**1.32**	**358**	*e*P	**Pn**	**20 19 26.6**	**0.0**
	baz=2.0						
WSF	**Szhu**	**1.34**	**257**	*e*P	**Pn**	**20 19 27.1**	**+0.3**
	baz=256						
WSF				*e*S	**Sn**	**20 19 44.7**	**+1.0**
	baz=256						
YOJ	**Yonaguni jima**	**1.35**	**67**	P	**Pn**	**20 19 26.4**	**-0.5**
YOJ				*e*S	**Sn**	**20 19 43.6**	**-0.3**
CHN8	**Yiju**	**1.45**	**246**	*e*P	**Pn**	**20 19 27.9**	**-0.3**
	baz=233						
CHN8				*e*S	**Sn**	**20 19 47.4**	**+1.0**
	baz=233						
CHN3	**Shinhua**	**1.46**	**234**	*e*P	**Pn**	**20 19 26.6**	**-1.8**
	baz=232						
ECL	**Taimali**	**1.49**	**205**	*e*P	**Pn**	**20 19 26.2**	**-2.6**
	baz=192						
SSD	**Sandimen**	**1.52**	**218**	*e*P	**Pn**	**20 19 29.1**	**-0.2**
	baz=203						
SSD				*e*S	**Sn**	**20 19 49.4**	**+1.3**
	baz=203						
TWM1	**Shoushan**	**1.59**	**225**	*e*P	**Pn**	**20 19 31.4**	**+1.2**
	baz=222						
EAST	**Anshuo**	**1.72**	**205**	*e*P	**Pn**	**20 19 32.4**	**+0.4**
	baz=194						
SCZT	**Fangliau**	**1.83**	**211**	*e*P	**Pn**	**20 19 34.0**	**+0.5**
	baz=194						
LAY	**Lan-yu**	**1.90**	**183**	*e*P	**Pn**	**20 19 32.0**	**-2.6**
	baz=172						
IRIF	**Iriomote-Funau**	**1.94**	**78**	P	**Pn**	**20 19 35.2**	**+0.1**
IRIF				*e*S	**Sn**	**20 19 59.0**	**+0.4**
WDGT	**Dungji**	**1.94**	**250**	*e*P	**Pn**	**20 19 34.8**	**-0.3**
	baz=250						
PNG	**Penghu**	**1.95**	**259**	*e*P	**Pn**	**20 19 34.4**	**-0.8**
	baz=260						
PNG				*e*S	**Sn**	**20 19 57.9**	**-0.9**
	baz=260						
HATJ	**Hateruma jima**	**1.98**	**86**	*e*S	**Sn**	**20 19 59.8**	**+0.3**
JKRS	**Kuro-shima**	**2.18**	**82**	P	**Pn**	**20 19 39.1**	**+0.8**
JKRS				*e*S	**Sn**	**20 20 05.7**	**+1.2**
JIJ	**Ishigaki jima**	**2.32**	**79**	P	**Pn**	**20 19 40.2**	**-0.1**
JIJ				*e*S	**Sn**	**20 20 06.6**	**-1.3**
JTJ	**Tarama**	**2.87**	**75**	P	**Pn**	**20 19 48.5**	**+0.6**
JTJ				*e*S	**Sn**	**20 20 22.6**	**+1.0**

*NEIC **20** 20:20:46.0,17°.93N×101°.88W,h28km,MD4.1(MEX),After MEX.*

MEX 20 20:20:46.0±0.8,17°.93N×101°.88W,h28km±13km,MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.51**	**129**	*e*P	Pb	20 20 54.9	-1.7
ZIIG				*i* S	Sb	20 21 01.6	-2.1
ZIIG	**Zihuatanejo**	**0.51**	**129**	*e*P	Pb	20 20 54.9	-1.7
ZIIG				*i* S	Sb	20 21 01.6	-2.1
CAIG	**El Cayaco**	**1.77**	**119**	*e*P	Pn	20 21 12.6	-2.2
CAIG				*i* S	Sn	20 21 34.1	-2.3
CAIG	**El Cayaco**	**1.77**	**119**	*e*P	Pn	20 21 12.6	-2.2
CAIG				*i* S	Sn	20 21 34.1	-2.3
MOIG	**Morelia**	**1.86**	**21**	*e*P	Pn	20 21 14.2	-1.8
MOIG				*i* S	Sn	20 21 36.5	-2.0
MOIG	**Morelia**	**1.86**	**21**	*e*P	Pn	20 21 14.2	-1.8
MOIG				*i* S	Sn	20 21 36.5	-2.0
ACX	**Acapulco**	**2.15**	**119**	*i* P	Pn	20 21 18.8	-1.2
ACX				*i* S	Sn	20 21 42.5	-3.3
ACX	**Acapulco**	**2.15**	**119**	*i* P	Pn	20 21 18.8	-1.2
ACX				*i* S	Sn	20 21 42.5	-3.3
PLIG	**Platanillo**	**2.31**	**78**	*e*P	Pn	20 21 19.7	-2.5
PLIG				*i* S	Sn	20 21 47.4	-2.3
PLIG	**Platanillo**	**2.31**	**78**	*e*P	Pn	20 21 19.7	-2.5
PLIG				*i* S	Sn	20 21 47.4	-2.3
SFJM	**Santa Fe**	**2.77**	**337**	*i* P	Pn	20 21 24.0	-4.5
SFJM				*i* S	Sn	20 21 57.7	-3.3
SFJM	**Santa Fe**	**2.77**	**337**	*i* P	Pn	20 21 24.0	-4.5
SFJM				*i* S	Sn	20 21 57.7	-3.3
UTMO	**Huajuapan**	**3.88**	**91**	*i* P	Pn	20 21 41.4	-2.4
UTMO				*i* S	Sn	20 22 26.3	-2.3
PNIG	**Pinotepa**	**3.90**	**113**	*e*P	Pn	20 21 41.5	-2.6
PNIG				*i* S	Sn	20 22 27.6	-1.4
PNIG	**Pinotepa**	**3.90**	**113**	*e*P	Pn	20 21 41.5	-2.6
PNIG				*i* S	Sn	20 22 27.6	-1.4
VHO	**Vista Hermosa**	**4.99**	**99**	*i* P	Pn	20 21 57.6	-1.4
VHO				*i* S	Sn	20 22 52.2	-3.5
VHO	**Vista Hermosa**	**4.99**	**99**	*i* P	Pn	20 21 57.6	-1.4
VHO				*i* S	Sn	20 22 52.2	-3.5

*IDC **20** 20:41:11.9±1.4,50°.16N×179°.66E,h0km,mb3.6/5, mb1 3.9/6,mb1mx3.8/28,mbtmp3.6/6,ML3.3/1,Error ellipse: s-maj=51.0km s-min=27.8km az=150.0*
*NEIC **20** 20:41:12.3±1.2,50°.69N×178°.78E,h10km,mb4.0/2, ML3.6(AEIC),ML3.7(PMR),Error ellipse: s-maj=27.5km s-min=13.4km az=181.0*
*ISCJB **20** 20:41:17.4±2.0,50°.8N±0°.1×179°.0E±0°.1,h62km±18km, mb3.6/6,Error ellipse: s-maj=24.9km s-min=10.6km az=174.6*

ISC 20 20:41:19.0±1.9,50°.7N±0°.2×179°.0E±0°.1,h60km±18km,n15, σ0s96/16,mb3.6/6,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.66**	**305**	*e*P	**Pn**	**20 42 13.5**	**+0.5**
SMY				S	**Sn**	**20 42 54.6**	**-0.2**
FX1	**Attu Island--F**	**4.23**	**303**	P	**Pn**	**20 42 15.0**	**-5.8**
ATKA	**Atka Island**	**4.49**	**68**	P	**Pn**	**20 42 24.3**	**0.0**
PETK	**Petropavlovsk-**	**13.37**	**289**	Pn	**Pn**	**20 44 31.3**	**+5.7**
	0.2nm,0.3s,baz=99,slow=18,SNR=4.4						
KTH	**Kantishna Hill**	**20.50**	**40**	*e*P	**P**	**20 45 51.2**	**-0.5**
	2μm,0.6s						
BPAW	**Bear Paw Mtn.**	**20.71**	**38**	*e*P	**P**	**20 45 53.0**	**-0.9**
	4.8nm,1.1s						
EGAK	**Eagle**	**24.94**	**41**	*e*P	**P**	**20 46 35.3**	**-0.9**
	3.3nm,0.6s,mb4.0						
DAWY	**Dawson**	**25.52**	**43**	*e*P	**P**	**20 46 43.0**	**+1.6**
INK	**Inuvik**	**28.78**	**35**	P	**P**	**20 47 13.6**	**+3.0**
	1.0nm,0.6s,mb3.7,baz=241,slow=5.2,SNR=3.7						
JWZ	**Kozaga**	**35.83**	**258**	P	**P**	**20 48 12.7**	**+0.1**
YKA	**Yellowknife Ar**	**36.67**	**45**	P	**P**	**20 48 19.0**	**-0.4**
	0.2nm,0.4s,mb3.3,baz=279,slow=8.0,SNR=3.8						
JMN	**Monobe**	**36.84**	**260**	P	**P**	**20 48 20.5**	**-0.7**
PDAR	**Pinedale Array**	**47.82**	**70**	P	**P**	**20 49 51.4**	**+1.2**
	0.4nm,0.4s,mb3.8,baz=349,slow=6.0,SNR=3.9						
TXAR	**Lajitas Array**	**60.12**	**79**	P	**P**	**20 51 18.7**	**-1.3**
	0.2nm,0.5s,mb3.4,baz=302,slow=6.0,SNR=2.7						
ASAR	**Alice Springs**	**84.09**	**221**	P	**P**	**20 53 43.4**	**+0.4**
	0.3nm,0.8s,mb3.5,baz=19,slow=5.5,SNR=5.7						

*BJI **20** 20:42:39.9,53°.48N×108°.81E,h5km,mB5.2/30,mb4.8/53, Ms5.7/66,Ms7 5.3/55*
*IDC **20** 20:42:41.8±0.4,53°.35N×108°.51E,h0km,mb4.7/31, mb1 4.8/35,mb1mx4.8/36,mbtmp4.7/35,ML4.3/4,MS4.6/23, Ms1 4.6/23,ms1mx4.5/32,Error ellipse: s-maj=12.0km s-min=10.5km az=3.0*
*ISCJB **20** 20:42:42.7±0.1,53°.33N±0°.01×108°.39E±0°.02,h10km, mb5.1/258,MS5.0/74,Error ellipse: s-maj=1.9km s-min=1.5km az=142.8*
*LDG **20** 20:42:42.0±0.2,53°.44N×108°.20E,h10km,Mb5.3/31, Ms4.7/8,Error ellipse: s-maj=10.1km s-min=3.9km az=93.0*
*BYKL **20** 20:42:43.4±0.1,53°.30N×108°.49E,h15km±2km, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 88.00 70.00 6.00 34 0 IEC + 356.00 84.00 160.00 IEC #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 310.00 18.00 162.00 69.00 44.00 10.00 IEC + 3.21 14.00 46.70 5.69 99.60 10.69 IEC FELT I=V-VI MSK at Maksimikha, V at Ust-Barguzin, Goryachinsk, Turka, IV-V at Kotokel,Gremyachinsk, Khuzhir, Barguzin, Suvo, Baturino*
*GCMT **20** 20:42:43.7±0.1,53°.32N×108°.54E,h19km,MW5.3/90, Moment Tensor Solution. s69,c117; s90,c169; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr-0.42±.02; Mθθ-0.26±.02; Mφφ0.67±.02; Mrθ-0.31±.04; Mθφ1.01±.02; Mφr0.09±.04; Best double couple: M0 1.19000×10^17 NP1:φs170.00000°,δ70.00000°, λ-163.00000°. NP2:φs74.00000°,δ74.00000°, λ-21.00000°. Principal axes: T 1.3270, Plg3.0000°, Azm123.0000°; N -0.2740, Plg64.0000°, Azm219.0000°; P -1.0530, Plg26.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **20** 20:42:43.3±1.0,53°.30N×108°.49E,h21km,mb5.3/98, MS5.0/43 Error ellipse: s-maj=5.6km s-min=3.9km az=109.7*
MOS Felt (V) at Ust'-Barguzin, Barguzin, (IV-V) at Suvo, Uro, (IV) at Onguryeny, Elantcy, (III) at Irkutsk, (II-III) at Shelekhov, Angarsk, (II) at Ulan-Ude, Chita.
*NEIC **20** 20:42:43.7±0.1,53°.30N×108°.43E,h10km,mb5.2/188, MS4.9/7,Error ellipse: s-maj=3.6km s-min=2.6km az=168.0*
*SZGRF **20** 20:43:03.3,55°.70N×106°.81E,h33km,mb5.2,MS5.0,Lake Baykal, Russia, region*

ISC 20 20:42:44.3±0.1,53°.33N±0°.01×108°.45E±0°.02,h10km, (h16km±1.0km:pP-P),n1056,σ0s90/1193,mb5.1/258, MS5.0/74,230C-233D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.19**	**112**	⇑*i*Pg	**Pg**	**20 42 46.7**	**-1.6**
MXMB				*e*Sg	**Sg**	**20 42 49.6**	**-1.4**
OGRR	**Ongureny**	**0.60**	**302**	*e*PG	**Pg**	**20 42 55.8**	**-0.1**
OGRR				*e*		20 43 04.9	
OGRR				pmax	pmax		
	comp=Z,32μm,0.2s						
OGRR				smax			
	comp=N,34μm,0.3s						
OGRR	**Ongureny**	**0.60**	**302**	⇑*i*Pg	**Pg**	**20 42 55.8**	**-0.1**
OGRR				Pmax		20 42 57.3	
	comp=N,74μm,1.6s						
OGRR				*e*Sg	**Sg**	**20 43 04.7**	**+1.0**
OGRR				Smax		20 43 06.2	
	comp=N,53μm,0.4s						
KELR	**Kotokel**	**0.62**	**202**	⇑*i*Pg	**Pg**	**20 42 54.6**	**-1.6**
KELR				*e*Sg	**Sg**	**20 43 02.8**	**-1.4**
SYVR	**Suvo**	**0.98**	**70**	*e*PG	**Pg**	**20 43 01.0**	**-2.1**
SYVR				*e*		20 43 14.0	
SYVR				pmax	pmax		
	comp=Z,15μm,0.3s						
SYVR				smax			
	comp=N,222μm,0.3s						
SYVR	**Suvo**	**0.98**	**70**	⇓*i*Pg	**Pg**	**20 43 01.0**	**-2.1**
	comp=N,2μm,0.8s						
SYVR				⇓*i*Pg	**Pg**	**20 43 01.0**	**-2.1**
	comp=N,6μm,0.8s						
SYVR				⇓*i*Pg	**Pg**	**20 43 01.0**	**-2.1**
	comp=N,6μm,0.8s						
SYVR				Pmax		20 43 02.1	
	comp=N,14μm,0.8s						
SYVR				*e*		20 43 06.9	
SYVR				*i* Sg	**Sg**	**20 43 14.1**	**-1.7**
SYVR				Smax		20 43 15.9	
	comp=N,213μm,1.8s						
ZRHB	**Zarechye**	**1.11**	**226**	⇓*i*Pg	**Pg**	**20 43 03.7**	**-1.8**
ZRHB				Pmax		20 43 09.5	
	comp=N,18μm,0.7s						
ZRHB				*e*Sg	**Sg**	**20 43 19.0**	**-0.9**
ZRHB				*e*		20 43 27.1	
ZRHB				max		20 43 29.6	
	comp=N,201μm,1.1s						
TRG	**Tyrgan**	**1.39**	**247**	*e*PN	**Pn**	**20 43 08.7**	**-1.0**
TRG				*e*		20 43 27.3	
TRG				pmax	pmax		
	comp=Z,6μm,0.4s						
TRG				smax			
	comp=N,172μm,0.7s						
TRG	**Tyrgan**	**1.39**	**247**	⇓*i*Pg	**Pn**	**20 43 08.5**	**-1.2**
	comp=N,690nm,1.0s						
TRG				⇓*i*Pg	**Pn**	**20 43 08.5**	**-1.2**
	comp=N,1μm,1.0s						
TRG				⇑*i*Pg	**Pn**	**20 43 08.5**	**-1.2**
	comp=N,1μm,1.0s						
TRG				*i* Pb	**Pb**	**20 43 09.5**	**-0.8**
TRG				max		20 43 10.0	
	comp=N,7μm,0.5s						
TRG				*i* Sg	**Sg**	**20 43 28.1**	**-0.9**
TRG				Smax		20 43 31.0	
	comp=N,97μm,0.3s						
UUDB	**Ulan-Yde**	**1.55**	**198**	⇑*i*Pg	**Pn**	**20 43 10.9**	**-0.9**
	comp=N,22μm,1.0s						
UUDB				⇑*i*Pg	**Pn**	**20 43 10.9**	**-0.9**
	comp=N,7μm,1.0s						
UUDB				⇓*i*Pg	**Pn**	**20 43 10.9**	**-0.9**
	comp=N,3μm,1.0s						
UUDB				Pmax		20 43 15.0	
	comp=N,33μm,1.1s						
UUDB				*i* Sg	**Sg**	**20 43 31.9**	**-2.0**
UUDB				Smax		20 43 34.2	
	comp=N,112μm,1.6s						
UUDB				*e*		20 43 38.0	
FFNB	**Fofonovo**	**1.65**	**219**	⇑*i*Pg	**Pn**	**20 43 12.4**	**-0.8**
FFNB				Pmax		20 43 14.0	
	comp=N,17μm,0.3s						
FFNB				*e*		20 43 16.2	
FFNB				*e*Sg	**Sg**	**20 43 35.4**	**-1.8**
FFNB				Smax		20 43 36.5	
	comp=N,257μm,1.1s						
YLYR	**Ulyunkhan**	**2.22**	**45**	*e*PN	**Pn**	**20 43 23.0**	**+1.9**
YLYR				*i*		20 43 52.9	
YLYR				pmax	pmax		
	comp=Z,25μm,0.8s						
YLYR				smax			
	comp=N,48μm,0.9s						
YLYR	**Ulyunkhan**	**2.22**	**45**	⇓*i*Pn	**Pn**	**20 43 20.8**	**-0.3**
	comp=N,2μm,0.7s						
YLYR				⇓*i*Pn	**Pn**	**20 43 20.8**	**-0.3**
	comp=N,3μm,0.7s						
YLYR				⇓*i*Pn	**Pn**	**20 43 20.8**	**-0.3**
	comp=N,3μm,0.7s						
YLYR				⇓*i*Pg	**Pg**	**20 43 22.8**	**-4.0**
	comp=N,14μm,1.2s						
YLYR				⇓*i*Pg	**Pg**	**20 43 22.8**	**-4.0**
	comp=N,3μm,1.2s						
YLYR				⇓*i*Pg	**Pg**	**20 43 22.8**	**-4.0**
	comp=N,4μm,1.2s						
YLYR				Pmax		20 43 25.2	
	comp=N,12μm,1.0s						
YLYR				*i* Sg	**Sg**	**20 43 52.9**	**-2.7**
YLYR				Smax		20 44 10.1	
	comp=N,42μm,2.1s						
NIZ	**Nizh Angarsk**	**2.53**	**14**	*e*PN	**Pb**	**20 43 29.4**	**-0.3**
NIZ				*e*		20 44 03.1	
NIZ				pmax	pmax		
	comp=Z,12μm,1.0s						
NIZ				smax			
	comp=N,19μm,1.3s						
NIZ	**Nizh Angarsk**	**2.53**	**14**	⇓*i*Pn	**Pn**	**20 43 25.7**	**+0.4**
	comp=N,1μm,1.3s						
NIZ				⇓*i*Pn	**Pn**	**20 43 25.7**	**+0.4**
	comp=N,690nm,1.3s						
NIZ				⇓

	comp=N,3μm,1.2s						
LSTR				*e*Sn	**Sn**	**20 43 56.6**	**-2.5**
LSTR				*i* Sg	**Sb**	**20 44 05.1**	**+0.8**
LSTR				Smax		20 44 21.9	
	comp=N,61μm,1.8s						
IRK	**Irkutsk**	**2.76**	**248**	*e*PN	**Pn**	**20 43 28.4**	**-0.1**
IRK				*e*		20 43 33.3	
IRK				*e*		20 44 08.2	
IRK				pmax	pmax		
	comp=Z,3μm,0.3s						
IRK				smax			
	comp=N,96μm,0.6s						
IRK	**Irkutsk**	**2.76**	**248**	⇑*i*Pn	**Pn**	**20 43 28.2**	**-0.3**
IRK				*e*		20 43 29.3	
IRK				⇑*e*Pg	**Pb**	**20 43 32.7**	**-1.0**
IRK				*e*PgPg		20 43 36.0	
IRK				max		20 43 40.6	
	comp=N,6μm,1.1s						
IRK				*e*Sg	**Sb**	**20 44 08.8**	**+1.2**
IRK				Smax		20 44 14.1	
	comp=N,112μm,0.6s						
KMO	**Kumora**	**3.02**	**31**	*e*PN	**Pn**	**20 43 30.9**	**-1.1**
KMO				*e*		20 43 36.9	
KMO				*e*S	**Sn**	**20 44 07.2**	**-1.0**
KMO				*e*		20 44 16.0	
KMO				pmax	pmax		
	comp=Z,32μm,0.8s						
KMO				smax			
	comp=N,72μm,1.5s						
KMO	**Kumora**	**3.02**	**31**	⇓*i*Pn	**Pn**	**20 43 32.1**	**+0.1**
KMO				⇑*i*Pg	**Pb**	**20 43 37.2**	**-0.8**
KMO				Pmax		20 43 39.1	
	comp=N,6μm,1.0s						
KMO				*e*Sg	**Sb**	**20 44 17.4**	**+2.6**
KMO				Smax		20 44 39.5	
	comp=N,72μm,1.5s						
CIT	**Chita**	**3.37**	**111**	*e*PN	**Pn**	**20 43 35.1**	**-1.8**
CIT				*e*		20 43 43.0	
CIT				*e*		20 44 26.7	
CIT				pmax	pmax		
	comp=Z,20μm,0.8s						
CIT				smax			
	comp=N,110μm,1.6s						
CIT	**Chita**	**3.37**	**111**	⇑*i*Pn	**Pn**	**20 43 35.1**	**-1.8**
CIT				*e*		20 43 38.6	
CIT				⇑*e*Pg	**Pb**	**20 43 43.2**	**-0.8**
CIT				Pmax		20 43 45.3	
	comp=N,20μm,0.8s						
CIT				*e*		20 44 17.9	
CIT				*i* Sg	**Sb**	**20 44 26.6**	**+1.6**
CIT				Smax		20 44 39.5	
	comp=N,70μm,1.5s						
TLY	**Talaya**	**3.37**	**243**	Pn	**Pn**	**20 43 36.2**	**-0.7**
	comp=N,15μm,0.8s						
TLY	**Talaya**	**3.37**	**243**	*d i*PN	**Pn**	**20 43 36.1**	**-0.8**
TLY				*e*		20 43 44.3	
TLY				*e*		20 44 26.8	
TLY				pmax	pmax		
	comp=Z,657nm,0.3s						
TLY				smax			
	comp=E,15μm,0.7s						
TLY	**Talaya**	**3.37**	**243**	⇓*i*Pn	**Pn**	**20 43 36.2**	**-0.7**
TLY				⇓*i*Pg	**Pb**	**20 43 44.8**	**+0.8**
TLY				Pmax		20 43 49.3	
	comp=E,2μm,0.6s						
TLY				*i* Sg	**Sb**	**20 44 27.8**	**+2.7**
TLY				Smax		20 44 40.7	
	comp=E,35μm,1.7s						
TLY	**Talaya**	**3.37**	**243**	*e*Pn	**Pn**	**20 43 36.0**	**-0.9**
TLY				*e*Pb	**Pb**	**20 43 44.4**	**+0.4**
TLY				*e*Pg	**Pg**	**20 43 48.3**	**-0.5**
TLY				*e*Sg	**Sb**	**20 44 27.8**	**+2.8**
TLY	**Talaya**	**3.37**	**243**	Pn	**Pn**	**20 43 36.6**	**-0.3**
	SNR=252						
TLY				Pn	**Pn**	**20 43 36.6**	**-0.3**
	SNR=252						
YOA	**Uoyan**	**3.39**	**33**	⇑*e*PN	**Pn**	**20 43 37.9**	**+0.8**
YOA				*i*		20 43 44.7	
YOA	**Uoyan**	**3.39**	**33**	⇓*i*Pn	**Pn**	**20 43 37.9**	**+0.8**
YOA				*e*Pg	**Pb**	**20 43 43.9**	**-0.4**
YOA				*e*		20 43 52.5	
YOA				max		20 43 57.7	
	comp=E,4μm,1.3s						
YOA				*e*		20 44 10.2	
YOA				*e*Sg	**Sg**	**20 44 29.1**	**-3.8**
YOA				Smax		20 44 51.7	
	comp=E,179μm,1.4s						
UKT	**Uakit**	**3.72**	**52**	*e*PN	**Pn**	**20 43 47.9**	**+6.3**
UKT				*e*		20 44 37.6	
UKT				pmax	pmax		
	comp=Z,13μm,0.9s						
UKT				smax			
	comp=N,45μm,1.1s						
UKT	**Uakit**	**3.72**	**52**	⇓*i*Pn	**Pn**	**20 43 41.4**	**-0.2**
	comp=N,464nm,1.3s						
UKT				⇓*i*Pn	**Pn**	**20 43 41.4**	**-0.2**
	comp=N,348nm,1.3s						
UKT				⇓*i*Pn	**Pn**	**20 43 41.4**	**-0.2**
	comp=N,812nm,1.3s						
UKT				⇓*i*		20 43 48.6	
UKT				⇓*i*Pg	**Pb**	**20 43 50.4**	**+0.5**
	comp=N,2μm,1.4s						
UKT				⇓*i*Pg	**Pb**	**20 43 50.4**	**+0.5**
	comp=N,2μm,1.4s						
UKT				⇓*i*Pg	**Pb**	**20 43 50.4**	**+0.5**
	comp=N,4μm,1.4s						
UKT				Pmax		20 43 53.5	
	comp=N,14μm,1.8s						
UKT				*e*Sg	**Sg**	**20 44 38.8**	**-4.7**
UKT				Smax		20 44 44.8	
	comp=N,50μm,2.4s						
ARS	**Arshan**	**3.94**	**251**	*e*PN	**Pb**	**20 43 55.6**	**+1.9**
ARS				*e*		20 44 43.2	
ARS				pmax	pmax		
	comp=Z,5μm,0.6s						
ARS				smax			
	comp=N,81μm,1.0s						
ARS	**Arshan**	**3.94**	**251**	⇓*i*Pn	**Pn**	**20 43 43.9**	**-0.7**
ARS				*e*		20 43 49.6	
ARS				⇓*e*Pg	**Pg**	**20 43 54.1**	**-5.5**
ARS				*e*		20 43 59.0	
ARS				max		20 43 59.6	
	comp=N,5μm,0.8s						
ARS				*i* Sg	**Sg**	**20 44 44.7**	**-5.9**
ARS				Smax		20 44 49.5	
	comp=N,81μm,1.0s						
ZAK	**Zakamensk**	**4.36**	**229**	*e*PN	**Pn**	**20 43 50.5**	**0.0**
ZAK				*e*		20 44 01.1	
ZAK				*e*		20 44 59.2	
ZAK				pmax	pmax		
	comp=Z,3μm,1.1s						
ZAK				smax			
	comp=N,20μm,1.4s						
ZAK	**Zakamensk**	**4.36**	**229**	⇓*i*Pn	**Pn**	**20 43 50.4**	**-0.1**
ZAK				*e*Pg	**Pg**	**20 44 01.6**	**-6.1**
ZAK				Pmax		20 44 05.4	
	comp=N,3μm,1.0s						
ZAK				*e*Sg	**Sg**	**20 44 59.1**	**-5.0**
ZAK				Smax		20 45 05.9	
	comp=N,20μm,1.5s						
ZAK				*e*		20 45 23.5	
KPC	**Khapcheranga**	**4.38**	**144**	*e*S	**Sn**	**20 44 38.7**	**-3.2**
KPC				*e*S	**Sb**	**20 44 56.0**	**+1.8**
KPC				smax			
	comp=N,36μm,2.0s						
KPC	**Khapcheranga**	**4.38**	**144**	⇓*i*Pn	**Pn**	**20 43 48.3**	**-2.5**
	comp=N,219nm,1.5s						
KPC				⇑*i*Pn	**Pn**	**20 43 48.3**	**-2.5**
	comp=N,125nm,1.5s						
KPC				⇑*i*Pn	**Pn**	**20 43 48.3**	**-2.5**
	comp=N,345nm,1.5s						
KPC				*e*Pg	**Pg**	**20 44 00.8**	**-7.4**
KPC				Pmax		20 44 10.9	
	comp=N,4μm,1.3s						
KPC				*e*Sn	**Sn**	**20 44 39.1**	**-2.8**
KPC				*i* Sg	**Sg**	**20 44 55.9**	**-9.0**
KPC				Smax		20 45 01.8	
	comp=N,49μm,1.3s						
MOY	**Mondy**	**4.85**	**253**	*e*PN	**Pn**	**20 43 59.2**	**+2.0**
MOY				*e*		20 44 09.6	
MOY				*e*S	**Sn**	**20 44 54.5**	**+1.1**
MOY				*e*		20 45 10.7	
MOY				pmax	pmax		
	comp=Z,5μm,1.0s						
MOY				smax			
	comp=N,22nm,2.0s						
MOY	**Mondy**	**4.85**	**253**	*e*Pn	**Pn**	**20 43 57.7**	**+0.5**
MOY				⇓*i*Pg	**Pg**	**20 44 09.7**	**-7.4**
MOY				⇑*i*		20 44 18.4	
MOY				max		20 44 19.5	
	comp=N,5μm,1.1s						
MOY				*e*		20 44 55.7	
MOY				*e*Sg	**Sg**	**20 45 13.2**	**-6.7**
MOY				*e*		20 45 22.8	
MOY				max		20 45 25.7	
	comp=N,45μm,2.3s						
NLYR	**Nelyaty**	**5.24**	**50**	*e*PN	**Pn**	**20 44 01.8**	**-0.8**
NLYR				*e*		20 44 17.1	
NLYR				*e*		20 45 25.0	
NLYR				pmax	pmax		
	comp=Z,4μm,1.3s						
NLYR				smax			
	comp=N,67μm,1.4s						
NLYR	**Nelyaty**	**5.24**	**50**	⇓*i*Pn	**Pn**	**20 44 01.9**	**-0.7**
NLYR				*e*		20 44 09.9	
NLYR				⇓*e*Pg	**Pg**	**20 44 17.5**	**-7.1**
NLYR				Pmax		20 44 28.0	
	comp=N,4μm,1.3s						
NLYR				*e*Sn	**Sn**	**20 44 59.0**	**-4.0**
NLYR				*i* Sg	**Sg**	**20 45 26.3**	**-6.2**
NLYR				*e*		20 45 38.7	
NLYR				max		20 45 41.1	
	comp=N,67μm,1.4s						
ORL	**Orlik**	**5.29**	**265**	*e*PN	**Pn**	**20 44 03.7**	**+0.5**
ORL				*e*		20 44 18.9	
ORL				*e*		20 45 25.5	
ORL				pmax	pmax		
	comp=Z,3μm,1.0s						
ORL				smax			
	comp=N,52μm,1.9s						
ORL	**Orlik**	**5.29**	**265**	⇑*i*Pn	**Pn**	**20 44 03.6**	**+0.4**
ORL				*e*		20 44 11.1	
ORL				max		20 44 13.7	
	comp=N,3μm,0.9s						
ORL				*e*Sn	**Sn**	**20 45 04.2**	**+0.1**
ORL				*i* Sg	**Sg**	**20 45 25.4**	**-8.5**
ORL				Smax		20 45 32.6	
	comp=N,52μm,1.9s						
BOD	**Bodaibo**	**5.49**	**33**	*e*PN	**Pn**	**20 44 05.2**	**-0.7**
BOD				*e*		20 44 21.7	
BOD				*e*		20 45 33.0	
BOD				pmax	pmax		
	comp=Z,2μm,1.3s						
BOD				smax			
	comp=N,12μm,1.5s						
BOD	**Bodaibo**	**5.49**	**33**	⇓*i*Pn	**Pn**	**20 44 05.2**	**-0.7**
	comp=N,241nm,1.5s						
BOD				⇓*i*Pn	**Pn**	**20 44 05.2**	**-0.7**
	comp=N,175nm,1.5s						
BOD				⇓*i*Pn	**Pn**	**20 44 05.2**	**-0.7**
	comp=N,284nm,1.5s						
BOD				*e*Pg	**Pg**	**20 44 21.5**	**-7.8**
BOD				*e*		20 44 25.1	
BOD				max		20 44 26.4	
	comp=N,2μm,1.5s						
BOD				*e*		20 44 43.3	
BOD				*e*		20 45 17.1	
BOD				*e*Sg	**Sg**	**20 45 32.7**	**-7.6**
BOD				Smax		20 45 46.2	
	comp=N,12μm,1.7s						
ULN	**Ulaanbaatar**	**5.55**	**190**	*e*PN	**Pn**	**20 44 05.9**	**-0.9**
ULN				*e*		20 44 23.0	
ULN				*e*		20 45 12.8	
ULN				*e*S	**Sb**	**20 45 32.5**	**+4.9**
ULN				pmax	pmax		
	comp=Z,1μm,0.8s						
ULN	**Ulaanbaatar**	**5.55**	**190**	*e*Pn	**Pn**	**20 44 06.6**	**-0.2**
ULN				⇑*i*		20 44 23.0	
ULN				*e*		20 45 09.6	
ULN				*i* Sg	**Sg**	**20 45 34.9**	**-7.3**
ULN	**Ulaanbaatar**	**5.55**	**190**	*e*Pn	**Pn**	**20 44 05.9**	**-0.8**
	comp=Z,1μm,0.8s						
ULN				*e*Pb	**Pb**	**20 44 23.0**	**+1.9**
ULN				*e*Sn	**Sn**	**20 45 12.8**	**+2.3**
ULN				*e*Sb	**Sb**	**20 45 32.5**	**+4.9**
ULN	**Ulaanbaatar**	**5.55**	**190**	Pn	**Pn**	**20 44 06.6**	**-0.2**
	SNR=136						
ULN				Pn	**Pn**	**20 44 06.6**	**-0.2**
	SNR=136						
SONM	**Songino Array**	**5.66**	**194**	Pn	**Pn**	**20 44 07.8**	**-0.5**
	comp=Z,17nm,0.3s,baz=8.1,slow=13,SNR=237						
SONM				Pg	**Pg**	**20 44 25.4**	**-7.1**
	comp=Z,123nm,0.3s,baz=2.4,slow=16,SNR=32						
SONM				Sn	**Sn**	**20 45 14.6**	**+1.4**
	comp=Z,87nm,0.3s,baz=18,slow=20,SNR=5.5						
SONM				Lg		20 45 35.4	
	comp=Z,91nm,0.3s,baz=22,slow=24,SNR=6.2						
SONM				LR	LR	20 46 15.6	
	comp=Z,5μm,20.7s,baz=13,slow=38						
SONM	**Songino Array**	**5.66**	**194**	PN	**Pn**	**20 44 07.8**	**-0.5**
SONM						20 44 25.4	
SONM						20 45 14.6	
SONM						20 45 35.4	
CRS	**Chara**	**6.67**	**54**	*e*PG	**Pb**	**20 44 45.5**	**+5.4**
CRS				*e*		20 46 11.6	
CRS				pmax	pmax		
	comp=Z,6μm,1.0s						
CRS				smax			
	comp=N,47μm,1.7s						
CRS	**Chara**	**6.67**	**54**	⇓*i*Pn	**Pn**	**20 44 21.5**	**-0.6**
CRS				⇓*i*		20 44 31.1	
CRS				*e*Pg	**Pb**	**20 44 44.4**	**+4.3**
CRS				Pmax		20 44 50.4	
	comp=N,6μm,1.0s						
CRS				*e*		20 45 48.8	
CRS				*e*Sg	**Sg**	**20 46 10.5**	**-7.6**
CRS				Smax		20 46 20.9	
	comp=N,39μm,1.6s						
TUP	**Tupik**	**6.89**	**76**	*e*PN	**Pn**	**20 44 23.9**	**-1.3**
TUP				*e*		20 44 45.7	
TUP				*e*S	**Sn**	**20 45 40.6**	**-2.9**
TUP				*e*		20 46 14.9	
TUP				pmax	pmax		
	comp=Z,1μm,1.0s						
TUP				smax			
	comp=N,84μm,1.7s						
TUP	**Tupik**	**6.89**	**76**	⇓*i*Pn	**Pn**	**20 44 23.9**	**-1.3**
TUP				*e*Pg	**Pg**	**20 44 46.8**	**-9.3**
TUP				Pmax		20 44 52.8	
	comp=N,1μm,1.5s						
TUP				*e*		20 45 54.6	
TUP				*i* Sg	**Sg**	**20 46 15.8**	**-9.4**
TUP				Smax		20 46 28.6	
	comp=N,40μm,1.6s						
HIA	**Hailar**	**8.16**	**115**	⇑*i*PN	**Pn**	**20 44 38.3**	**-4.3**
HIA				*e*		20 46 59.7	
HIA				pmax	pmax		
	comp=Z,368nm,0.7s						
HIA	**Hailar**	**8.16**	**115**	*e*	**Pn**	**20 44 39.1**	**-3.5**
HIA				*e*Pg	**Pb**	**20 45 10.5**	**+4.9**
HIA				*e*		20 45 54.0	
HIA				*e*		20 46 43.2	
HIA				*e*Sg	**Sb**	**20 46 54.5**	**+12**
HIA	**Hailar**	**8.16**	**115**	⇑*i*Pn	**Pn**	**20 44 38.3**	**-4.3**
	comp=Z,368nm,0.7s						
HIA				*e*Sg	**Sb**	**20 46 59.7**	**+17**
IENR	**Iengra**	**9.91**	**66**	*e*Pn	**Pn**	**20 45 05.0**	**-1.5**
IENR				*e*		20 45 17.4	
IENR				*e*Pg	Pn	20 45 41.4	+35
NRGR	**Nerungri**	**9.92**	**64**	*e*P	**Pn**	**20 45 05.7**	**-1.0**
CLNS	**Chul'man**	**10.05**	**63**	*e*P	**Pn**	**20 45 07.3**	**-1.2**
CLNS				pmax	pmax		
	comp=Z,34nm,0.7s						
CLNS				pmax	pmax		
	comp=N,14nm,1.1s						
CLNS				pmax	pmax		
	comp=E,18nm,0.6s						
CLNS				MLR	MLR		
	comp=E,4μm,13.0s						
CLNS				MLR	MLR		
	comp=N,1μm,10.0s						
CLNS				MLR	MLR		
	comp=Z,4μm,12.0s						
CLNS	**Chul'man**	**10.05**	**63**	*e*Pn	**Pn**	**20 45 07.4**	**-1.1**
CLNS				⇑*i*Pg	Pn	20 45 45.2	+37
CLNS				*e*		20 47 09.9	
CLNS				*e*Sg	Sn	20 47 53.7	+52
HHC	**Hu-ho-hao-te**	**12.67**	**169**	*e*P	**Pn**	**20 45 43.1**	**-1.2**
HHC				pP		20 45 46.4	
HHC				PP		20 45 53.5	
HHC				S	**Sn**	**20 48 06.1**	**+0.8**
HHC				sS		20 48 10.8	
HHC				pmax	pmax		
	comp=Z,65nm,1.2s						
HHC				LR	LR		
	comp=N,5μm,5.1s						
HHC				LR	LR		
	comp=E,8μm,5.3s						
HHC				LR	LR		
	comp=Z,7μm,7.3s						
BTO	**Baotou**	**12.78**	**175**	*e*P	**Pn**	**20 45 46.1**	**+0.3**
BTO				S	**Sn**	**20 48 07.6**	**-0.4**
BTO				LR	LR		
	comp=N,4μm,10.1s						
BTO				LR	LR		
	comp=E,23μm,8.6s						
ZAA0	**Zalesovo Array**	**14.02**	**282**	⇑*i*Pn	**Pn**	**20 46 01.5**	**-1.2**
ZAA0				*e*Sn	**Sn**	**20 48 45.3**	**+7.1**
ZALV	**Zalesovo Beam**	**14.02**	**282**	Pn	**Pn**	**20 46 01.1**	**-1.7**
	comp=E,0.4nm,0.3s,baz=80,slow=9.2,SNR=60						
ZALV				Lg		20 49 58.2	
	comp=E,3.9nm,0.3s,baz=94,slow=22,SNR=14						
ZALV				LR	LR	20 52 38.0	
	comp=E,394nm,21.1s,baz=85,slow=42						
YAK	**Yakutsk**	**14.25**	**44**	*e*P	**Pn**	**20 46 01.5**	**-4.2**
YAK				*e*		20 48 38.2	
YAK				pmax	pmax		
	comp=Z,216nm,0.9s						
YAK				pmax	pmax		
	comp=N,94nm,1.2s						
YAK				pmax	pmax		
	comp=E,220nm,1.4s						
YAK				smax			
	comp=N,342nm,0.9s						
YAK				smax			
	comp=E,151nm,0.8s						
YAK				MLR	MLR		
	comp=Z,8μm,10.0s						
YAK	**Yakutsk**	**14.25**	**44**	⇓*i*Pn	**Pn**	**20 46 02.0**	**-3.8**
	comp=Z,290nm,0.9s						
YAK				*e*Sn	**Sn**	**20 48 44.3**	**+0.7**
BJI	**Beijing**	**14.30**	**155**	P	**Pn**	**20 46 04.6**	**-2.0**
BJI				S	**Sn**	**20 48 46.3**	**+1.1**
BJI				pmax	pmax		
	comp=Z,180nm,0.8s						
BJI				pmax	pmax		
	comp=Z,200nm,3.9s						
BJI				LR	LR		
	comp=N,25μm,10.6s						
BJI				LR	LR		
	comp=E,59μm,11.3s						
BJI				LR	LR		
	comp=Z,3μm,13.9s						
BJT	**Baijiatuau**	**14.32**	**155**	*e*P	**Pn**	**20 46 04.6**	**-2.3**
BJT				*e*S	**Sn**	**20 48 35.3**	**-10**
BJT				pmax	pmax		
	comp=Z,169nm,0.8s						
BJT	**Baijiatuau**	**14.32**	**155**	*e*Pn	**Pn**	**20 46 04.6**	**-2.3**
	comp=Z,169nm,0.8s						
BJT				*e*S	**Sn**	**20 48 35.2**	**-10**
BJT				*e*Lg		20 50 07.7	
CN2	**Changchun**	**14.71**	**124**	*e*P	**Pn**	**20 46 08.4**	**-3.8**
CN2				*e*pP	pP	20 46 11.9	-9.3
CN2				*e*sP	sP	20 46 15.5	-7.0
CN2				PP		20 46 20.3	
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,9μm,10.0s						
CN2				LR	LR		
	comp=E,8μm,10.0s						
CN2				LR	LR		
	comp=Z,12μm,11.0s						
NVS	**Novosibirsk**	**14.85**	**286**	⇑*i*P	**Pn**	**20 46 12.7**	**-1.3**
KLR	**Kul'dur**	**15.12**	**96**	*e*P	**Pn**	**20 46 12.8**	**-4.9**
KLR				*e*		20 49 05.5	
KLR				MLR	MLR		
	comp=E,8μm,13.0s						
KLR				MLR	MLR		
	comp=Z,18μm,13.0s						
GTA	**Gaotai**	**15.13**	**206**	⇓P	**Pn**	**20 46 16.8**	**-1.1**
GTA				pP	pP	20 46 19.9	-6.0
GTA				sP	sP	20 46 22.3	-4.9
GTA				PP		20 46 29.5	
GTA				S	**Sn**	**20 49 03.9**	**-1.5**
GTA				pmax	pmax		
	comp=Z,14nm,1.2s						
GTA				pmax	pmax		
	comp=Z,630nm,4.5s						
GTA				LR	LR		
	comp=N,13μm,9.3s						
GTA				LR	LR		
	comp=E,10μm,8.3s						
GTA				LR	LR		
	comp=Z,16μm,8.7s						
SNY	**Shenyang**	**15.34**	**133**	⇑P	**Pn**	**20 46 17.3**	**-3.4**
SNY				S	**Sn**	**20 49 17.5**	**+6.9**
SNY				pmax	pmax		
	comp=Z,21nm,1.1s						
SNY				pmax	pmax		
	comp=Z,390nm,7.8s						
SNY				LR	LR		
	comp=N,13μm,9.0s						
SNY				LR	LR		
	comp=E,12μm,8.6s						
SNY				LR	LR		
	comp=Z,18μm,9.6s						
TIY	**Taiyuan**	**15.86**	**168**	*e*P	**Pn**	**20 46 28.8**	**+1.3**
TIY				S	**Sn**	**20 49 31.3**	**+8.1**
TIY				LR	LR		
	comp=E,22μm,6.2s						
TIY				LR	LR		
	comp=Z,6μm,7.6s						
MDJ	**Mudanjiang**	**16.34**	**114**	P	**Pn**	**20 46 30.1**	**-3.5**
MDJ				sP	sP	20 46 37.6	-3.0
MDJ				pmax	pmax		
	comp=Z,49nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.4s						
MDJ				LR	LR		
	comp=N,16μm,10.9s						
MDJ				LR	LR		
	comp=E,13μm,10.9s						
MDJ				LR	LR		
	comp=Z,16μm,10.2s						
MDJ	**Mudanjiang**	**16.34**	**114**	⇑*e*P	**Pn**	**20 46 33.1**	**-0.5**
	comp=Z,124nm,1.4s						
MDJ				*e*S	**Sn**	**20 49 38.4**	**+3.6**
MDJ				*e*Lg		20 51 14.2	
WMQ	**Urumqi**	**16.66**	**244**	P	**Pn**	**20 46 40.1**	**+2.5**
WMQ				sP	sP	20 46 46.6	+2.5
WMQ				S	**Sn**	**20 49 43.8**	**+1.4**
WMQ				sS	sS	20 49 49.3	-8.9
WMQ				SS		20 50 03.6	
WMQ				pmax	pmax		
	comp=Z,110nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,420nm,4.0s						
WMQ				LR	LR		
	comp=N,14μm,19.0s						
WMQ				LR	LR		
	comp=E,8μm,21.0s						
WMQ				LR	LR		
	comp=Z,4μm,17.0s						
DL2	**Dalian**	**17.03**	**143**	P	**Pn**	**20 46 40.4**	**-2.0**
DL2				S	**Sn**	**20 49 48.1**	**-3.5**
DL2				pmax	pmax		
	comp=Z,30nm,0.9s						
DL2				pmax	pmax		
	comp=Z,280nm,2.6s						
DL2				LR	LR		
	comp=N,4μm,17.3s						
DL2				LR	LR		
	comp=E,6μm,15.5s						
DL2				LR	LR		
	comp=Z,3μm,9.6s						
LZH	**Lanzhou**	**17.55**	**192**	*e*P	**Pn**	**20 46 51.3**	**+2.5**
LZH				pP	pP	20 46 55.0	+2.3
LZH				sP	sP	20 46 58.0	+4.0
LZH				*e*S	**Sn**	**20 50 07.0**	**+3.0**
LZH				sS	sS	20 50 11.0	-5.4
LZH				*e*SS		20 50 23.0	

LZH				pmax	pmax		
	comp=Z,130nm,1.1s						
LZH				pmax	pmax		
	comp=Z,760nm,6.3s						
LZH				LR	LR		
	comp=E,10μm,11.4s						
LZH				LR	LR		
	comp=Z,13μm,13.0s						
MK31	**Makanchi Array**	**17.96 259⇑**	*e*P		**Pn**	**20 46 51.2**	**-2.6**
MKAR	**Makanchi Array**	**17.96 259**	P		**Pn**	**20 46 51.9**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=70,slow=7.7,SNR=35						
MKAR				Lg		20 52 02.5	
	comp=Z,0.3nm,0.3s,baz=51,slow=9.7,SNR=3.9						
MKAR				LR	LR	20 53 57.9	
	comp=Z,6μm,18.1s,baz=232,slow=38						
MKAR	**Makanchi Array**	**17.96 259**	P		**Pn**	**20 46 51.9**	**-1.9**
MKAR				Lg		20 52 02.5	
MKAR				LR	LR	20 53 57.9	
TIA	**Tai'an**	**18.17 157**	*e*P		**Pn**	**20 46 55.8**	**-0.6**
TIA				S	**Sn**	**20 50 22.5**	**+3.4**
TIA				LR	LR		
	comp=N,7μm,9.0s						
KURK	**Kurchatov**	**18.48 274**	P		**Pn**	**20 46 56.6**	**-3.6**
	comp=N,453nm,0.8s,SNR=22						
KURK	**Kurchatov**	**18.48 274**	P		**Pn**	**20 46 58.4**	**-1.8**
	comp=N,0.5nm,0.3s,baz=70,slow=11,SNR=34						
KURK				Lg		20 52 23.6	
	comp=N,0.2nm,0.3s,baz=334,slow=22,SNR=7.0						
KURK				LR	LR	20 54 35.7	
	comp=N,1μm,21.8s,baz=80,slow=38						
KURK	**Kurchatov**	**18.48 274**	*c i*P		**Pn**	**20 46 56.7**	**-3.5**
KURK				pmax	pmax		
	comp=Z,61nm,1.7s						
KURK	**Kurchatov**	**18.48 274⇑**	*i*Pn		**Pn**	**20 46 56.5**	**-3.7**
	comp=Z,63nm,0.8s						
KURK	**Kurchatov**	**18.48 274**	Pn		**Pn**	**20 46 57.2**	**-3.0**
	SNR=46						
KURK				Pn	**Pn**	**20 46 57.2**	**-3.0**
	SNR=46						
XAN	**Xi'an**	**19.29 179**	P		**Pn**	**20 47 10.8**	**+0.7**
XAN				PP		20 47 26.6	
XAN				S	**Sn**	**20 50 35.5**	**-11**
XAN				SS		20 51 06.4	
XAN				pmax	pmax		
	comp=Z,15nm,1.3s						
XAN				pmax	pmax		
	comp=Z,110nm,6.1s						
XAN				LR	LR		
	comp=N,4μm,12.2s						
XAN				LR	LR		
	comp=E,9μm,15.6s						
XAN				LR	LR		
	comp=Z,2μm,10.9s						
INCN	**Inchon**	**20.26 134**	*e*P		**P**	**20 47 22.2**	**+2.7**
	comp=Z,112nm,1.3s						
TIXI	**Tiksi**	**20.44 18***d i*P			**P**	**20 47 19.8**	**-1.5**
TIXI				*e*S	**S**	**20 51 01.9**	**-7.9**
TIXI				*e*SSS		20 51 31.9	
TIXI				pmax	pmax		
	comp=Z,388nm,1.2s						
TIXI				MLR	MLR		
	comp=Z,5μm,12.0s,MS5.1						
TIXI	**Tiksi**	**20.44 18⇓**	*i*P		**P**	**20 47 19.5**	**-1.8**
	comp=Z,285nm,1.0s						
TIXI				*e*S	**S**	**20 50 50.3**	**-19**
KSRS	**Korea Array**	**20.85 132**	P		**P**	**20 47 25.1**	**-0.9**
	comp=Z,50nm,1.1s,baz=335,slow=11,SNR=18						
KSRS				Lg		20 53 37.9	
	comp=Z,23nm,1.1s,baz=332,slow=29,SNR=5.1						
KSRS				LR	LR	20 56 39.2	
	comp=Z,858nm,18.0s,MS4.2,baz=320,slow=40						
NJ2	**Nanjing**	**22.55 156**	*e*P		**P**	**20 47 44.0**	**-0.3**
NJ2				pP		20 47 48.0	
NJ2				sP	sP	20 47 50.3	+1.8
NJ2				PP		20 48 11.3	
NJ2				S	**S**	**20 51 49.0**	**-2.8**
NJ2				sS	sS	20 51 59.5	+3.1
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.5						
NJ2				pmax	pmax		
	comp=Z,150nm,5.7s						
NJ2				LR	LR		
	comp=N,4μm,16.8s,MS5.5						
NJ2				LR	LR		
	comp=E,14μm,16.2s,MS5.5						
NJ2				LR	LR		
	comp=Z,3μm,15.2s,MS4.8						
BVAR	**Borovoye Array**	**22.64 285**	P		**P**	**20 47 42.9**	**-2.1**
	comp=Z,54nm,1.0s,mb4.9,baz=76,slow=7.8,SNR=43						
BVAR				S	**S**	**20 51 39.1**	**-14**
	comp=Z,10nm,0.7s,baz=58,slow=14,SNR=1.9						
BVAR				Lg		20 54 39.2	
	comp=Z,26nm,0.9s,baz=50,slow=28,SNR=2.7						
BVAR				LR	LR	20 57 05.0	
	comp=Z,4μm,18.1s,MS4.9,baz=76,slow=38						
BVAR	**Borovoye Array**	**22.64 285**	P		**P**	**20 47 42.9**	**-2.2**
BVAR				S	**S**	**20 51 39.1**	**-14**
CD2	**Chengdu**	**22.67 191**	P		**P**	**20 47 46.3**	**+0.8**
CD2				pP		20 47 50.5	
CD2				sP	sP	20 47 53.3	+3.7
CD2				PP		20 48 14.5	
CD2				S	**S**	**20 51 49.4**	**-4.5**
CD2				sS	sS	20 51 56.3	-2.2
CD2				SS		20 52 31.3	
CD2				pmax	pmax		
	comp=Z,40nm,0.9s,mb4.8						
CD2				pmax	pmax		
	comp=Z,430nm,3.7s						
CD2				LR	LR		
	comp=N,17μm,11.3s						
CD2				LR	LR		
	comp=Z,6μm,11.3s,MS5.3						
BRVK	**Borovoye**	**22.69 285**	P		**P**	**20 47 44.6**	**-1.0**
	comp=Z,759nm,0.8s,mb6.2,SNR=18						
BRVK	**Borovoye**	**22.69 285***c i*P			**P**	**20 47 43.3**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,36nm,0.8s,mb4.8						
BRVK	**Borovoye**	**22.69 285⇑**	*i*P		**P**	**20 47 42.9**	**-2.7**
	comp=Z,125nm,0.9s,mb5.3						
BRVK	**Borovoye**	**22.69 285**	P		**P**	**20 47 43.9**	**-1.7**
	SNR=42						
BRVK				P		20 47 43.9	
	SNR=42						
YSS	**Yuzh-Sakhalins**	**22.73 92**	*e*P		**P**	**20 47 46.4**	**+0.3**
YSS				*e*S	**S**	**20 51 56.0**	**+1.2**
YSS				*e*SS		20 52 44.0	
YSS				MLR	MLR		
	comp=Z,3μm,10.0s,MS5.1						
YSS				MLR	MLR		
	comp=N,3μm,12.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,2μm,12.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**22.73 92**	*e*P		**P**	**20 47 46.9**	**+0.8**
	comp=E,337nm,1.6s,mb5.5						
ENH	**Enshi**	**23.06 178**	*e*P		**P**	**20 47 51.1**	**+1.5**
	comp=E,71nm,1.1s,mb5.0						
ENH				*e*Lg		20 54 21.2	
AAA	**Alma-Ata**	**23.07 257**	*i* P		**P**	**20 47 54.4**	**+4.7**
AAA				MLR	MLR		
	comp=Z,14μm,13.0s,MS5.6						
WHN	**Wuhan**	**23.18 167**	P		**P**	**20 47 52.6**	**+1.7**
WHN				S	**S**	**20 52 06.9**	**+4.6**
WHN				LR	LR		
	comp=N,10μm,8.2s						
WHN				LR	LR		
	comp=E,38μm,14.2s						
WHN				LR	LR		
	comp=Z,11μm,7.2s						
SSE	**Sheshan**	**24.07 152**	*e*P		**P**	**20 47 58.8**	**-0.7**
SSE				pP		20 48 02.4	
SSE				S	**S**	**20 52 16.5**	**-0.2**
SSE				sS	sS	20 52 21.3	-0.4
SSE				pmax	pmax		
	comp=Z,35nm,0.7s,mb4.9						
SSE				pmax	pmax		
	comp=Z,68nm,6.3s						
SSE				LR	LR		
	comp=N,2μm,16.7s,MS5.4						
SSE				LR	LR		
	comp=E,10μm,16.7s,MS5.4						
SSE				LR	LR		
	comp=Z,5μm,13.4s,MS5.2						
TKM2	**Tokmak 2**	**24.07 258**	P		**P**	**20 47 59.8**	**+0.4**
	SNR=25						
TKM2	**Tokmak 2**	**24.07 258⇑**	*i*P		**P**	**20 47 59.5**	**0.0**
TKM2				pmax	pmax		
	comp=Z,314nm,1.9s,mb5.4						
TKM2	**Tokmak 2**	**24.07 258⇑**	*i*P		**P**	**20 47 59.5**	**0.0**
	comp=Z,314nm,1.9s,mb5.4						
ULHL	**Ulahol**	**24.11 256**	P		**P**	**20 48 00.1**	**+0.3**
	SNR=20						
USP	**Ospenovka**	**24.51 260**	P		**P**	**20 48 04.3**	**+0.8**
	SNR=7.4						
CHMS	**Chumysh**	**24.52 259**	P		**P**	**20 48 03.8**	**+0.2**
	SNR=17						
KBK	**Karagaybulak**	**24.61 258**	P		**P**	**20 48 05.2**	**+0.8**
	SNR=18						
SEY	**Seymchan**	**24.61 50**	*e*P		**P**	**20 48 04.1**	**-0.1**
FRU	**Bishkek**	**24.70 259**	*i* P		**P**	**20 48 05.0**	**-0.2**
FRU				pmax	pmax		
	comp=Z,160nm,2.0s,mb5.2						
FRU				MLR	MLR		
	comp=Z,7μm,14.0s,MS5.3						
KZA	**Kyzart**	**24.79 256**	P		**P**	**20 48 07.5**	**+1.5**
	SNR=59						
AAK	**Ala-Archa**	**24.89 258**	P		**P**	**20 48 07.6**	**+0.6**
	comp=Z,107nm,1.0s,mb5.3,SNR=10						
AAK	**Ala-Archa**	**24.89 258**	P		**P**	**20 48 07.7**	**+0.7**
	SNR=12						
AAK	**Ala-Archa**	**24.89 258**	P		**P**	**20 48 06.6**	**-0.3**
	comp=Z,7.9nm,0.6s,mb4.4,baz=68,slow=5.9,SNR=35						
AAK				S	**S**	**20 52 33.0**	**+3.1**
	comp=Z,1.0nm,0.3s,baz=219,slow=19,SNR=1.7						
AAK				Lg		20 55 46.8	
	comp=Z,3.4nm,0.6s,baz=141,slow=16,SNR=3.7						
AAK				LR	LR	20 58 20.7	
	comp=Z,3μm,20.9s,MS4.8,baz=34,slow=38						
AAK	**Ala-Archa**	**24.89 258***c i*P			**P**	**20 48 06.9**	**-0.1**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**24.89 258⇑**	*i*P		**P**	**20 48 07.0**	**0.0**
	comp=Z,34nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**24.89 258**	P		**P**	**20 48 07.8**	**+0.8**
	SNR=23						
AAK				P		20 48 07.8	
	SNR=23						
UCH	**Uchtor**	**25.13 258**	P		**P**	**20 48 10.7**	**+1.6**
	SNR=26						
UCH	**Uchtor**	**25.13 258**	*e*P		**P**	**20 48 10.0**	**+0.9**
	comp=Z,44nm,1.1s,mb4.9						
JHS	**Saijyo**	**25.27 127**	P		**P**	**20 48 08.8**	**-1.6**
JFU	**Fukue jima 2**	**25.28 137**	P		Px	20 48 28.9	
EKS2	**Erkin-Say**	**25.30 259**	P		**P**	**20 48 11.3**	**+0.7**
	SNR=106						
EKS2	**Erkin-Say**	**25.30 259⇑**	*i*P		**P**	**20 48 11.0**	**+0.3**
	comp=Z,44nm,0.4s,mb5.3						
AML	**Almayashu**	**25.67 258**	P		**P**	**20 48 14.7**	**+0.7**
	SNR=17						
AML	**Almayashu**	**25.67 258**	*e*P		**P**	**20 48 14.1**	**0.0**
	comp=Z,26nm,1.1s,mb4.7						
JNU	**Nakatsue**	**25.79 133**	P		**P**	**20 48 18.4**	**+3.2**
KSH	**Kashi**	**26.04 251**	*e*P		**P**	**20 48 22.8**	**+5.4**
KSH				*e*pP	pP	20 48 26.8	+6.4
KSH				*e*sP	sP	20 48 29.8	+8.1
KSH				*e*PP		20 49 05.8	
KSH				*e*PcP	PcP	20 51 47.8	+2.8
KSH				*e*S	**S**	**20 52 53.9**	**+5.7**
KSH				*e*ScP	ScP	20 55 26.8	+2.4
KSH				*e*ScS	ScS	20 59 14.8	+0.8
KSH				pmax	pmax		
	comp=Z,49nm,2.1s,mb4.7						
KSH				LR	LR		
	comp=N,2μm,7.7s						
KSH				LR	LR		
	comp=E,2μm,8.4s						
KSH				LR	LR		
	comp=Z,1μm,6.2s						
JWT	**Wachi**	**26.17 123**	P		**P**	**20 48 20.8**	**+2.2**
MAT	**Matsushiro**	**26.66 117**	P		**P**	**20 48 24.3**	**+1.3**
MAT				S	**S**	**20 53 03.0**	**+5.0**
MAT	**Matsushiro**	**26.66 117**	P		**P**	**20 48 23.3**	**+0.3**
MJAR	**Matsushiro Arr**	**26.66 117**	P		**P**	**20 48 21.6**	**-1.4**
	comp=Z,1.3nm,0.6s,mb3.6,baz=302,slow=10.0,SNR=4.8						
LSA	**Lhasa**	**26.79 215**	P		**P**	**20 48 27.6**	**+3.3**
LSA				LR	LR		
	comp=N,2μm,13.6s						
LSA				LR	LR		
	comp=Z,5μm,13.6s,MS5.2						
LSA	**Lhasa**	**26.79 215⇑**	*e*P		**P**	**20 48 28.6**	**+4.3**
LSA				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.7						
LSA	**Lhasa**	**26.79 215⇑**	*e*P		**P**	**20 48 28.6**	**+4.3**
	comp=Z,29nm,1.1s,mb4.7						
GYA	**Guiyang**	**26.88 184**	P		**P**	**20 48 27.0**	**+2.0**
GYA				PP		20 49 12.0	
GYA				PcP	PcP	20 51 50.3	+3.1
GYA				S	**S**	**20 53 02.8**	**+1.3**
GYA				SS		20 54 14.8	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=Z,920nm,17.0s,MS4.4						
SVE	**Sverdlovsk**	**27.15 297⇑**	*e*P		**P**	**20 48 27.2**	**0.0**
SVE				*e*S	**S**	**20 53 06.1**	**+0.8**
SVE				pmax	pmax		
	comp=Z,196nm,1.0s,mb5.6						
SVE				MLR	MLR		
	comp=Z,4μm,12.0s,MS5.2						
JIE	**Ise**	**27.53 122**	P		Px	20 48 46.7	
ARU	**Arti**	**28.36 297**	P		**P**	**20 48 37.1**	**-0.9**
	comp=Z,210nm,0.8s,mb5.8,SNR=12						
ARU	**Arti**	**28.36 297***c i*P			**P**	**20 48 36.9**	**-1.1**
ARU				*e*PPP		20 49 31.4	
ARU				S	**S**	**20 53 25.8**	**+1.4**
ARU				SS		20 54 44.6	
ARU				SSS		20 54 59.1	
ARU				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.7						
ARU				MLR	MLR		
	comp=Z,2μm,15.0s,MS4.8						
ARU	**Arti**	**28.36 297⇑**	*i*P		**P**	**20 48 36.5**	**-1.5**
	comp=Z,64nm,1.0s,mb5.2						
KMI	**Kunming**	**28.50 191**	P		**P**	**20 48 41.4**	**+1.8**
KMI				pP	pP	20 48 43.8	+1.2
KMI				sP	sP	20 48 45.3	+1.4
KMI				PP	PP	20 49 33.4	-10
KMI				PcP	PcP	20 51 53.6	+2.5
KMI				S	**S**	**20 53 27.8**	**+0.7**
KMI				sS	sS	20 53 32.6	+0.5
KMI				SS		20 54 52.1	
KMI				ScP	ScP	20 55 33.4	+1.4
KMI				PcS	PcS	20 55 34.6	+0.9
KMI				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4						
KMI				pmax	pmax		
	comp=Z,220nm,4.2s						
KMI				LR	LR		
	comp=N,6μm,10.6s,MS5.7						
KMI				LR	LR		
	comp=E,10μm,12.0s,MS5.7						
KMI				LR	LR		
	comp=Z,4μm,12.5s,MS5.2						
SOKR	**Solikamsk**	**28.58 303***c i*P			**P**	**20 48 39.5**	**-0.5**
SOKR				S	**S**	**20 53 28.7**	**+0.9**
SOKR				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,1μm,12.0s,MS4.7						
PETK	**Petropavlovsk-**	**29.02 70**	P		**P**	**20 48 43.2**	**-0.8**
	comp=Z,10nm,0.8s,mb4.6,baz=275,slow=3.5,SNR=14						
PETK				LR	LR	20 59 52.8	
	comp=Z,479nm,20.4s,MS4.1,baz=287,slow=36						
PETK	**Petropavlovsk-**	**29.02 70**	P		**P**	**20 48 43.2**	**-0.8**
PETK				LR	LR	20 59 52.8	
QZH	**Quanzhou**	**29.36 161**	P		**P**	**20 48 49.0**	**+1.8**
QZH				S	**S**	**20 53 43.1**	**+2.5**
QZH				LR	LR		
	comp=N,10μm,13.2s,MS6.2						
QZH				LR	LR		
	comp=E,38μm,15.3s,MS6.2						
QZH				LR	LR		
	comp=Z,5μm,15.7s,MS5.2						
PET	**Petropavlovsk**	**29.59 70**	*e*P		**P**	**20 48 47.2**	**-1.8**
PET				*e*S	**S**	**20 53 39.3**	**-4.5**
PET				pmax	pmax		
	comp=Z,57nm,2.1s,mb4.9						
PET				pmax	pmax		
	comp=Z,100nm,18.8s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s,MS4.7						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET	**Petropavlovsk**	**29.59 70**	*e*P		**P**	**20 48 48.8**	**-0.2**
	comp=Z,85nm,1.4s,mb5.3						
JHJ	**Hachijo jima 2**	**30.11 120**	LR		LR	21 01 33.5	
	comp=Z,311nm,19.8s,MS4.0,baz=308,slow=38						
JHJ2	**Mitsune**	**30.13 120**	P		**P**	**20 48 58.9**	**+4.9**
ABKAR	**Akbulak array**	**30.14 282⇑**	*e*P		**P**	**20 48 52.6**	**-1.3**
	comp=Z,0.9nm,0.6s,mb3.7						
YHNB	**Yeheng**	**30.24 156**	*e*P		**P**	**20 48 55.0**	**0.0**
SHL	**Shillong**	**30.39 211**	*e*x		x	20 49 01.0	
SHL			*e*x		x	20 51 47.0	
SHL			*e*x		x	20 54 38.0	
BILL	**Bilibino**	**30.51 39***c i*P			**P**	**20 48 57.2**	**+0.2**
BILL			*i*			20 49 51.9	
BILL			*i*			20 50 07.7	
BILL			*e*			20 51 52.4	
BILL			*i* S		**S**	**20 54 01.5**	**+3.6**
BILL			pmax		pmax		
	comp=Z,44nm,1.0s,mb5.2						
BILL			MLR		MLR		
	comp=Z,3μm,17.0s,MS5.1						
BILL	**Bilibino**	**30.51 39⇓**	*i*P		**P**	**20 48 57.4**	**+0.4**
	comp=Z,15nm,0.8s,mb4.9						
AKTK	**Aktyubinsk**	**30.74 285**	P		**P**	**20 48 58.6**	**-0.6**
AKTO	**Aktyubinsk**	**30.74 285**	P		**P**	**20 48 58.6**	**-0.6**
	comp=Z,9.3nm,1.0s,mb4.6,baz=71,slow=9.0,SNR=18						
KLP	**Kalpa**	**30.79 237**	*e*P		**P**	**20 49 00.5**	**+0.7**
JOSI	**Joshimath**	**30.94 234**	*e*P		**P**	**20 49 01.4**	**+0.3**
JOSI			AMb		AMB	20 49 08.4	
	comp=Z,98nm,1.0s,mb5.6						
SMLA	**Simla**	**31.66 238**	*e*P		**P**	**20 49 07.5**	**0.0**
DDI	**Dehra Dun**	**31.87 236**	*e*x		x	20 49 08.0	
KBL	**Kabul**	**33.47 252**	*e*P		**P**	**20 49 21.3**	**-2.0**
KBL			pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KBL	**Kabul**	**33.47 252**	*e*P		**P**	**20 49 21.3**	**-2.0**
	comp=Z,8.8nm,1.0s,mb4.6						
BISR	**Bishrakh**	**33.61 235**	*e*x		x	20 49 33.4	
AYAN	**Aya Nagar**	**33.84 235**	*e*P		**P**	**20 49 26.4**	**-0.2**
SONA	**Sohna**	**34.05 235**	*e*P		**P**	**20 49 27.8**	**-0.6**
CHRT	**Chiangrai**	**34.07 195**	⇓P		**P**	**20 49 30.0**	**+1.4**
QIZ	**Qiongzhong**	**34.25 178**	P		**P**	**20 49 30.6**	**+0.4**
QIZ			sP		sP	20 49 37.9	+3.4
QIZ			S		**S**	**20 54 55.5**	**-1.5**
QIZ			pmax		pmax		
	comp=Z,38nm,1.9s,mb5.0						
QIZ			pmax		pmax		
	comp=Z,160nm,3.3s						
QIZ			LR		LR		
	comp=N,3μm,11.2s,MS5.4						
QIZ			LR		LR		
	comp=E,3μm,12.1s,MS5.4						
QIZ			LR		LR		
	comp=Z,3μm,10.7s,MS5.3						
CAL	**Calcutta**	**34.35 214**	*e*x		x	20 55 00.0	
CAL			*e*x		x	20 55 00.0	
CAL			*e*x		x	20 58 06.0	
AGRA	**Agra**	**34.48 233**	*e*P		**P**	**20 49 31.0**	**-1.2**
AGRA			AMb		AMB	20 49 33.8	
	comp=Z,52nm,0.6s,mb5.7						
KHET	**Khetri**	**34.83 237**	*e*P		**P**	**20 49 34.8**	**-0.3**
CHG	**Chiang Mai**	**35.23 196**	⇑P		**P**	**20 49 38.6**	**-0.1**
	comp=Z,17nm,0.7s,mb5.1						
CHTO	**Chiang Mai**	**35.23 196**	*e*P		**P**	**20 49 37.3**	**-1.4**
CHTO			pmax		pmax		
	comp=Z,13nm,1.0s,mb4.8						
CHTO	**Chiang Mai**	**35.23 196**	*e*P		**P**	**20 49 37.3**	**-1.4**
	comp=Z,13nm,1.0s,mb4.8						
CM31	**Chiang Mai Arr**	**35.58 196**	*e*P		**P**	**20 49 41.5**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**35.58 196**	P		**P**	**20 49 40.8**	**-0.9**
	comp=Z,7.1nm,0.8s,mb4.6,baz=1.0,slow=9.1,SNR=27						
CMAR			LR		LR	21 04 39.8	
	comp=Z,712nm,20.0s,MS4.4,baz=194,slow=37						
KLMR	**Klimovskoe**	**36.55 310**	*e*P		**P**	**20 49 47.7**	**-1.9**
KLMR			*e*			20 51 11.0	
KLMR			*e*S		**S**	**20 55 28.1**	**-3.6**
KLMR			*e*SS		SS	20 57 53.8	-17
KLMR			pmax		pmax		
	comp=Z,34nm,5.1s						
KLMR			pmax		pmax		
	comp=Z,150nm,1.5s,mb5.6						
KLMR			MLR		MLR		
	comp=Z,1μm,20.0s,MS4.8						
AJM	**Ajmer**	**36.73 237**	*e*P		**P**	**20 49 50.6**	**-0.8**
AJM			AMb		AMB	20 49 56.1	
	comp=Z,149nm,3.8s						
BDT	**Bhumibol Dam**	**36.76 195**	P		**P**	**20 49 53.0**	**+1.2**
APA	**Apatity**	**37.03 322⇑**	*i*P		**P**	**20 49 56.4**	**+2.8**
APA			*i*			20 51 25.0	
APA			*i* S		**S**	**20 55 36.0**	**-2.8**
APA			pmax		pmax		
	comp=Z,27nm,1.4s,mb4.9						
APA			MLR		MLR		
	comp=Z,1μm,15.0s,MS4.8						
ABKT	**Ailbek**	**37.58 267**	P		**P**	**20 49 59.7**	**+1.1**
	comp=Z,82nm,1.1s,mb5.4,SNR=7.5						
QUE	**Quetta**	**37.88 249**	*e*P		**P**	**20 50 05.0**	**+3.8**
QUE			*e*S		**S**	**20 55 59.0**	**+6.5**
BHPL	**Bhopal**	**38.12 230**	*e*P		**P**	**20 50 02.7**	**-0.6**
BHPL			AMb		AMB	20 50 08.0	
	comp=Z,28nm,1.1s,mb4.9						
JASL	**Jaisalmer**	**38.28 241**	*e*P		**P**	**20 50 04.3**	**-0.3**
JASL			AMb		AMB	20 50 06.0	
	comp=Z,35nm,1.3s,mb4.9						
KEV	**Kevo**	**38.63 327**	*e*P		**P**	**20 50 06.5**	**-0.6**
KEV			pmax		pmax		
	comp=Z,19nm,0.9s,mb4.8						
KEV	**Kevo**	**38.63 327**	*e*P		**P**	**20 50 06.5**	**-0.6**
	comp=Z,19nm,0.9s,mb4.8						
SPITS	**Spitsbergen Ar**	**38.88 341**	P		**P**	**20 50 08.8**	**-0.3**
	comp=Z,7.1nm,0.6s,mb4.6,baz=76,slow=10,SNR=14						
SPB4	**Spitsbergen Ar**	**38.88 341**	*e*P		**P**	**20 50 09.4**	**+0.2**
ARCES	**ARCESS Array B**	**39.20 326**	P		**P**	**20 50 10.9**	**-1.0**
	comp=Z,6.2nm,0.7s,mb4.5,baz=70,slow=8.2,SNR=14						
ARCES			LR		LR	21 11 30.5	
	comp=Z,871nm,18.2s,MS4.6,baz=51,slow=44						
ARE0	**ARCESS Array S**	**39.20 326**	*e*P		**P**	**20 50 13.7**	**+1.9**
NGP	**Nagpur**	**39.22 226**	*e*x		x	20 50 05.2	
BJO	**Bjornoya**	**39.39 335**	AMS		AMS	21 09 00.7	
	comp=Z,2μm,18.0s,MS5.1						
HSP	**Hornsund**	**39.41 339**	*e*P		**P**	**20 50 14.5**	**+0.9**
JOF	**Joensuu**	**39.42 315**	*e*P		**P**	**20 50 11.5**	**-2.2**
JOF			pmax		pmax		
	comp=Z,11nm,0.6s,mb4.8						
JOF	**Joensuu**	**39.42 315**	*e*p		**P**	**20 50 11.5**	**-2.2**
	comp=Z,11nm,0.6s,mb4.8						
KBS	**Kingsbay**	**39.47 342**	*e*		Px	20 51 51.8	
KBS			AMS		AMS	21 06 22.6	
	comp=Z,3μm,15.9s,MS5.2						
KBS	**Kingsbay**	**39.47 342**	*e*P		**P**	**20 50 13.7**	**-0.4**
MOS	**Moscow**	**39.53 303**	*e*P		**P**	**20 50 10.3**	**-4.5**
MOS			*e*			20 51 42.9	
MOS			*e*PPP			20 52 08.6	
MOS			*e*S		**S**	**20 56 16.7**	**-0.1**
MOS			*e*SS		SS	20 59 03.7	-7.2
MOS			*e*SSS			20 59 39.8	
MOS			pmax		pmax		
	comp=Z,100nm,1.3s,mb5.4						
MOS			pmax		pmax		
	comp=Z,48nm,1.0s,mb5.2						
MOS			MLR		MLR		
	comp=Z,1μm,10.0s,MS5.0						
VRHR	**Novokh

GAMB	**Gambell**	**40.20**	**43**	*e*P	**P**	**20 50 20.1**	**-0.1**
	comp=E,48nm,1.3s,mb5.1						
OBN	**Obninsk**	**40.35**	**303**	*c i*P	**P**	**20 50 20.3**	**-1.3**
OBN				*i*	pP	20 50 24.4	-0.3
OBN				*i*		20 51 59.9	
OBN				*i* S	**S**	**20 56 30.4**	**+1.3**
OBN				*e*SS	SS	20 59 27.1	-0.3
OBN				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.0						
OBN	**Obninsk**	**40.35**	**303**	*e*P	**P**	**20 50 17.8**	**-3.8**
	comp=Z,135nm,1.6s,mb5.4						
TGY	**Tagaytay City**	**40.37**	**161**	P	**P**	**20 50 24.8**	**+2.7**
	comp=Z,72nm,0.3s,mb5.8,baz=204,slow=11,SNR=3.7						
VOR	**Voronezh**	**40.65**	**297**	P	**P**	**20 50 22.0**	**-2.1**
VOR				pmax	pmax		
	comp=Z,140nm,1.6s,mb5.3						
VSR	**Storozhevoye**	**40.93**	**296**	*e*P	**P**	**20 50 25.5**	**-0.9**
VSR				*e**PP	pP	20 50 30.1	+0.6
VSR				*e*S	**S**	**20 56 37.0**	**-0.8**
VSR				pmax	pmax		
	comp=N,20nm,1.1s						
VSR				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
VSR				pmax	pmax		
	comp=E,30nm,1.0s						
VSR				smax			
	comp=E,440nm,4.5s						
VSR				smax			
	comp=Z,340nm,8.7s						
VSR				smax			
	comp=N,290nm,3.8s						
VSR				MLR	MLR		
	comp=Z,2μm,14.0s,MS5.2						
VSR				MLR	MLR		
	comp=N,260nm,7.0s						
VSR				MLR	MLR		
	comp=E,2μm,12.0s						
TNA	**Tin City**	**40.94**	**39**	*e*P	**P**	**20 50 26.6**	**+0.2**
	comp=E,92nm,1.2s,mb5.3						
PUL	**Pulkovo**	**41.19**	**311**	*i* P	**P**	**20 50 26.5**	**-1.9**
PUL				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.3						
TRO	**Tromso**	**41.30**	**328**	*e*PP	PP	20 52 03.3	-0.9
TRO				*e*S	**S**	**20 56 45.0**	**+2.1**
TRO				AMS	AMS	21 12 41.1	
	comp=Z,1μm,12.9s,MS5.0						
KAF	**Kangasniemi**	**41.86**	**316**	*e*P	**P**	**20 50 32.9**	**-1.0**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**41.86**	**316**	*e*p	**P**	**20 50 32.9**	**-1.0**
	comp=Z,8.0nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**42.27**	**315**	P	**P**	**20 50 36.8**	**-0.4**
	comp=Z,8.8nm,0.9s,mb4.4,baz=70,slow=7.8,SNR=20						
FINES				LR	LR	21 09 41.7	
	comp=Z,1μm,18.7s,MS4.8,baz=69,slow=38						
HYB	**Hyderabad**	**42.74**	**225**	*i* P	**P**	**20 50 44.0**	**+2.4**
KIV	**Kislovodsk**	**43.01**	**285**	P	**P**	**20 50 44.3**	**+0.8**
	comp=Z,242nm,1.1s,mb5.8,SNR=11						
KIV	**Kislovodsk**	**43.01**	**285**	*e*P	**P**	**20 50 42.5**	**-1.0**
KIV				*e*		20 52 19.0	
KIV				*e*S	**S**	**20 57 06.9**	**-1.8**
KIV				*e*SS	SS	21 00 17.4	-2.8
KIV				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.2						
KIV				pmax	pmax		
	comp=Z,31nm,4.2s						
KIV				MLR	MLR		
	comp=Z,478nm,16.0s,MS4.5						
KIV	**Kislovodsk**	**43.01**	**285**	*e*P	**P**	**20 50 43.8**	**+0.3**
	comp=Z,59nm,1.1s,mb5.2						
KIV	**Kislovodsk**	**43.01**	**285**	P	**P**	**20 50 44.7**	**+1.2**
	SNR=18						
KIV				P		20 50 44.7	
	SNR=18						
ZEI	**Tsey**	**43.02**	**283**	*e*P	**P**	**20 50 42.1**	**-1.5**
ZEI				*e*S	**S**	**20 57 12.2**	**+3.4**
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
MTA	**Mtatsminda**	**43.15**	**281**	P	**P**	**20 50 44.5**	**-0.2**
TBLG	**Delisi**	**43.16**	**281**	P	**P**	**20 50 45.2**	**+0.4**
KEH	**Kehvi**	**43.28**	**282**	P	**P**	**20 50 45.7**	**0.0**
VSU	**Vasula**	**43.44**	**311**	*c i*P	**P**	**20 50 45.8**	**-1.0**
VSU				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.0						
GNI	**Garni**	**44.15**	**279**	P	**P**	**20 50 53.5**	**+0.8**
	comp=Z,1.5nm,0.5s,mb4.0,baz=18,slow=5.3,SNR=11						
GNI	**Garni**	**44.15**	**279**	⇑*i*P	**P**	**20 50 52.1**	**-0.6**
GNI				pmax	pmax		
	comp=Z,32nm,1.7s						
GNI	**Garni**	**44.15**	**279**	*e*P	**P**	**20 50 53.5**	**+0.8**
	comp=Z,23nm,0.9s,mb4.9						
GNI	**Garni**	**44.15**	**279**	P	**P**	**20 50 54.3**	**+1.6**
	SNR=10						
GNI				P		20 50 54.3	
	SNR=10						
ALE	**Alert**	**44.32**	**358**	P	**P**	**20 50 53.0**	**-0.6**
	comp=Z,117nm,1.1s,mb5.5,SNR=6.2						
KAD	**Karad**	**44.76**	**230**	*e*P	**P**	**20 50 55.7**	**-2.1**
SOC	**Sochi**	**44.95**	**287**	*e*P	**P**	**20 50 58.3**	**-0.8**
SOC				*e*		20 52 42.1	
SOC				*e*S	**S**	**20 57 38.4**	**+1.5**
SOC				*e*SS	SS	21 00 50.2	-7.8
SOC				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
SOC				MLR	MLR		
	comp=Z,1μm,17.0s,MS4.9						
MICGM	**Minsk**	**44.99**	**306**	*e*	**P**	**20 50 56.0**	**-3.2**
IDID	**Didziasalis**	**45.09**	**307**	*e*P	**P**	**20 50 59.2**	**-0.9**
ISAL	**Salakas**	**45.24**	**308**	*e*P	**P**	**20 51 00.8**	**-0.4**
NACGM	**Naroch**	**45.30**	**306**	*e*P	**P**	**20 51 04.0**	**+2.3**
IIGN	**Ignalina**	**45.32**	**307**	*e*P	**P**	**20 51 01.2**	**-0.6**
ANN	**Anapa**	**45.51**	**289**	*e*P	**P**	**20 51 01.8**	**-1.7**
ANN				*e*S	**S**	**20 57 44.7**	**-0.3**
ANN				*e*SSS		21 01 59.0	
ANN				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.1						
ANN				MLR	MLR		
	comp=Z,1μm,16.0s,MS5.0						
DAG	**Danmarks Havn**	**45.95**	**345**	*e*P	**P**	**20 51 05.0**	**-1.6**
DAG	**Danmarks Havn**	**45.95**	**345**	*i* P	**P**	**20 51 05.0**	**-1.6**
COLD	**Coldfoot**	**46.28**	**32**	*e*P	**P**	**20 51 08.6**	**-0.7**
	comp=Z,38nm,1.3s,mb5.2						
AKASG	**Malin Array Be**	**46.46**	**300**	P	**P**	**20 51 09.7**	**-1.2**
	comp=Z,4.9nm,0.7s,mb4.5,baz=48,slow=8.1,SNR=29						
AKASG				LR	LR	21 11 29.8	
	comp=Z,2μm,19.6s,MS5.0,baz=45,slow=37						
AKASG	**Malin Array Be**	**46.46**	**300**	*i* P	**P**	**20 51 09.6**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKBB	**Malin Array Si**	**46.46**	**300**	*e*P	**P**	**20 51 09.4**	**-1.5**
KIEV	**Kiev**	**46.47**	**300**	*e*P	**P**	**20 51 09.3**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KIEV	**Kiev**	**46.47**	**300**	*e*P	**P**	**20 51 09.3**	**-1.7**
	comp=Z,16nm,0.9s,mb5.0						
TTA	**Tatalina**	**46.76**	**39**	*e*P	**P**	**20 51 13.3**	**+0.2**
SIM	**Simferopol'**	**47.28**	**291**	P	**P**	**20 51 18.8**	**+1.4**
SIM				*e*		20 52 55.0	
SIM				*e*S	**S**	**20 58 12.0**	**+1.5**
SIM				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
SIM				MLR	MLR		
	comp=Z,870nm,15.9s,MS4.8						
SUW	**Suwalki**	**47.53**	**307**	*e*P	**P**	**20 51 18.6**	**-0.7**
SUW				LMZ		21 10 54.7	
	comp=Z,900nm,26.0s						
SUW	**Suwalki**	**47.53**	**307**	*e*P	**P**	**20 51 18.4**	**-0.9**
SUW				*e*		20 52 52.9	
SUW				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
SUW	**Suwalki**	**47.53**	**307**	*e*P	**P**	**20 51 18.4**	**-0.9**
	comp=Z,38nm,1.0s,mb5.4						
SUW				*e*PcP	PcP	20 52 52.9	+3.9
CHUM	**Lake Minchumin**	**47.55**	**36**	*e*P	**P**	**20 51 19.5**	**+0.2**
	comp=Z,32nm,1.0s,mb5.3						
BPAW	**Bear Paw Mtn.**	**47.89**	**36**	*e*P	**P**	**20 51 21.1**	**-0.8**
	comp=Z,59nm,1.7s,mb5.3						
SVW2	**Sparrevohn**	**48.00**	**41**	*e*P	**P**	**20 51 23.6**	**+0.8**
JMIC	**Jan Mayen**	**48.17**	**337**	*e*PP	PP	20 53 15.8	-0.1
JMIC				*e*S	**S**	**20 58 25.1**	**+2.6**
JMIC				*e*SS	SS	21 01 52.9	+1.9
DAV	**Davao City (W)**	**48.19**	**157**	P	**P**	**20 51 25.9**	**+1.1**
PPLA	**Purkeypile**	**48.19**	**37**	*e*P	**P**	**20 51 24.5**	**+0.3**
	comp=Z,71nm,1.7s,mb5.4						
KTH	**Kantishna Hill**	**48.24**	**36**	*e*P	**P**	**20 51 24.6**	**0.0**
	comp=Z,112nm,1.6s,mb5.6						
KULM	**Kulim**	**48.32**	**190**	*e*P	**P**	**20 51 24.9**	**-0.8**
	comp=Z,26nm,1.1s,mb5.2						
COLA	**College**	**48.48**	**34**	*e*P	**P**	**20 51 26.1**	**-0.3**
COLA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
COLA	**College**	**48.48**	**34**	*e*P	**P**	**20 51 26.1**	**-0.3**
	comp=Z,18nm,0.8s,mb5.2						
NB2	**NORSAR Subarra**	**48.53**	**320**	P	**P**	**20 51 26.5**	**-0.4**
	comp=Z,14nm,0.9s,mb5.0,baz=52,slow=7.9						
NOA	**NORSAR Array B**	**48.53**	**320**	P	**P**	**20 51 25.9**	**-1.0**
	comp=Z,7.3nm,1.1s,mb4.6,baz=51,slow=7.3,SNR=9.3						
NOA				LR	LR	21 12 35.2	
	comp=Z,726nm,21.0s,MS4.6,baz=70,slow=37						
TRF	**Thorofare Moun**	**48.53**	**36**	*e*P	**P**	**20 51 26.8**	**-0.1**
	comp=Z,84nm,1.5s,mb5.5						
NAO01	**NORSAR Array S**	**48.77**	**320**	*e*P	**P**	**20 51 26.1**	**-2.7**
	comp=Z,29nm,1.2s,mb5.2						
MCK	**McKinley**	**48.83**	**35**	*e*P	**P**	**20 51 28.3**	**-0.8**
MCK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
MCK	**McKinley**	**48.83**	**35**	*e*P	**P**	**20 51 28.3**	**-0.8**
	comp=Z,19nm,1.0s,mb5.1						
KIS	**Kishinev**	**48.91**	**297**	*e*P	**P**	**20 51 28.0**	**-2.0**
KIS				*e*S	**S**	**20 58 34.0**	**+0.5**
KIS				*e*SS	SS	21 02 06.0	+2.4
KIS				LRM		21 13 20.0	
	comp=Z,2μm,13.0s						
KIS	**Kishinev**	**48.91**	**297**	*e*P	**P**	**20 51 28.0**	**-2.0**
KIS				*e*S	**S**	**20 58 34.0**	**+0.5**
KIS				MLR	MLR		
	comp=Z,2μm,12.0s,MS5.4						
KIS				MLR	MLR		
	comp=N,2μm,13.0s,MS5.4						
KIS				MLR	MLR		
	comp=E,1μm,13.0s,MS5.4						
KIS				MLR	MLR		
	comp=Z,2μm,14.0s						
RSO	**Redoubt South**	**49.49**	**40**	*e*P	**P**	**20 51 34.5**	**+0.3**
MIB	**Mutribah**	**49.65**	**267**	*e*P	**P**	**20 51 35.3**	**-0.5**
MIB				AMb	AMB	20 51 37.0	
	comp=Z,42nm,1.0s,mb5.4						
LVV	**L'vov**	**49.65**	**302**	*e*P	**P**	**20 51 34.8**	**-0.8**
LVV				*e*S	**S**	**20 58 48.2**	**+4.4**
LVV				MLR	MLR		
	comp=Z,1μm,13.0s,MS5.0						
LVV				MLR	MLR		
	comp=N,700nm,12.0s,MS5.2						
LVV				MLR	MLR		
	comp=E,1μm,12.0s,MS5.2						
KONO	**Kongsberg**	**50.02**	**319**	AMS	AMS	21 16 48.0	
	comp=Z,2μm,9.3s						
NAY	**Al-Naaiem**	**50.10**	**267**	*e*P	**P**	**20 51 39.0**	**-0.3**
NAY				AMb	AMB	20 51 40.4	
	comp=Z,43nm,1.0s,mb5.4						
PMR	**Palmer**	**50.13**	**37**	*e*P	**P**	**20 51 38.5**	**-0.6**
PMR				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
PMR	**Palmer**	**50.13**	**37**	*e*P	**P**	**20 51 38.5**	**-0.6**
	comp=Z,24nm,1.1s,mb5.1						
RDF	**Al-Radifah**	**50.16**	**266**	*e*P	**P**	**20 51 39.7**	**-0.1**
RDF				AMb	AMB	20 51 49.0	
	comp=Z,68nm,1.2s,mb5.6						
RC01	**Rabbit Creek A**	**50.23**	**38**	*e*P	**P**	**20 51 39.4**	**-0.5**
	comp=Z,12nm,0.3s,mb5.4						
INK	**Inuvik**	**50.35**	**25**	P	**P**	**20 51 39.5**	**-1.1**
	comp=Z,11nm,0.9s,mb4.9,baz=324,slow=9.7,SNR=22						
INK	**Inuvik**	**50.35**	**25**	*e*P	**P**	**20 51 40.0**	**-0.7**
INK				pmax	pmax		
	comp=Z,55nm,1.6s						
INK	**Inuvik**	**50.35**	**25**	*e*P	**P**	**20 51 40.0**	**-0.7**
	comp=Z,55nm,1.6s,mb5.3						
BUR08	**Bucovina Ar. S**	**50.42**	**299**	*e*P	**P**	**20 51 40.6**	**-0.8**
BURAR	**Bucovina Array**	**50.43**	**299**	P	**P**	**20 51 41.6**	**+0.1**
BURAR	**Bucovina Array**	**50.43**	**299**	⇑*i*P	**P**	**20 51 41.2**	**-0.3**
KWP	**Kalwaria Pacla**	**50.44**	**303**	*e*P	**P**	**20 51 42.1**	**+0.5**
KWP				LMZ		21 12 40.2	
	comp=Z,1μm,22.0s						
KWP	**Kalwaria Pacla**	**50.44**	**303**	*e*P	**P**	**20 51 41.4**	**-0.2**
	comp=Z,71nm,1.3s,mb5.5						
KWP	**Kalwaria Pacla**	**50.44**	**303**	⇓*i*P	**P**	**20 51 42.1**	**+0.5**
FOO	**Floro**	**50.48**	**323**	*e*S	**S**	**20 58 56.9**	**+1.8**
FOO				*e*SS	SS	21 02 35.8	+7.5
FOO				AMS	AMS	21 15 53.8	
	comp=Z,1μm,13.0s,MS5.2						
BSD	**Bornholm Skovb**	**50.68**	**312**	*e*P	**P**	**20 51 50.4**	**+7.1**
BSD				MLR	MLR		
	comp=Z,650nm,17.0s,MS4.7						
BSD	**Bornholm Skovb**	**50.68**	**312**	*i* P	**P**	**20 51 50.4**	**+7.1**
BSD							
	comp=Z,650nm,17.0s						
EGAK	**Eagle**	**50.69**	**31**	*e*P	**P**	**20 51 42.7**	**-0.6**
	comp=Z,51nm,1.3s,mb5.3						
GKP	**Gorka Klasztor**	**50.79**	**309**	*e*P	**P**	**20 51 44.5**	**+0.3**
GKP				LMZ		21 13 29.3	
	comp=Z,1μm,20.4s						
BR131	**Keskin Array S**	**50.91**	**286**	*e*P	**P**	**20 51 45.4**	**+0.1**
	comp=Z,8.1nm,0.8s,mb4.7						
BRTR	**Keskin Array B**	**50.91**	**286**	P	**P**	**20 51 44.5**	**-0.7**
	comp=Z,4.4nm,0.8s,mb4.5,baz=68,slow=5.2,SNR=32						
BRTR				LR	LR	21 16 56.2	
	comp=Z,534nm,18.4s,MS4.6,baz=221,slow=40						
BRTR	**Keskin Array B**	**50.91**	**286**	*i* P	**P**	**20 51 45.9**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEW	**Seward**	**50.98**	**39**	*e*P	**P**	**20 51 44.0**	**-1.5**
	comp=Z,66nm,1.3s,mb5.4						
KOLS	**Kolonicke sedl**	**51.10**	**302**	*e*P	**P**	**20 51 46.5**	**-0.1**
KOLS				*e*	pP	20 51 51.1	+1.3
KOLS				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.0						
KOLS	**Kolonicke sedl**	**51.10**	**302**	*e*P	**P**	**20 51 46.5**	**-0.1**
	comp=Z,29nm,1.5s,mb5.0						
KOLS				*e*	pP	20 51 51.1	+1.3
KOLS	**Kolonicke sedl**	**51.10**	**302**	*e*P	**P**	**20 51 46.5**	**-0.1**
KOLS				*e*pP	pP	20 51 51.1	+1.3
MENT	**Mentasta**	**51.13**	**34**	*e*P	**P**	**20 51 45.2**	**-1.4**
BER	**Bergen**	**51.18**	**322**	*e*S	**S**	**20 59 03.4**	**-1.3**
BER				AMS	AMS	21 15 36.5	
	comp=Z,1μm,8.7s						
KDAK	**Kodiak Island**	**51.27**	**43**	P	**P**	**20 51 46.5**	**-1.2**
	comp=Z,18nm,0.9s,mb5.0						
KDAK	**Kodiak Island**	**51.27**	**43**	*i* P	**P**	**20 51 47.5**	**-0.2**
BMR	**Baia Mare**	**51.29**	**300**	⇓P	**P**	**20 51 52.0**	**+4.0**
BMR	**Baia Mare**	**51.29**	**300**	⇓*i*P	**P**	**20 51 52.0**	**+4.0**
UZH	**Uzhgorod**	**51.29**	**302**	*e*P	**P**	**20 51 49.0**	**+1.0**
UZH				*e*S	**S**	**20 59 08.0**	**+1.4**
UZH				MLR	MLR		
	comp=Z,900nm,14.0s,MS5.0						
RES	**Resolute Bay**	**51.31**	**8**	*e*P	**P**	**20 51 46.9**	**-0.9**
RES				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
RES	**Resolute Bay**	**51.31**	**8**	*e*P	**P**	**20 51 46.9**	**-0.9**
	comp=Z,29nm,1.2s,mb5.1						
STHS	**Stebnicka Huta**	**51.31**	**303**	*e*P	**P**	**20 51 48.0**	**-0.2**
STHS				*e*	pP	20 51 52.6	+1.3
STHS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
STHS	**Stebnicka Huta**	**51.31**	**303**	*e*P	**P**	**20 51 48.0**	**-0.2**
	comp=Z,4.4nm,1.0s,mb4.3						
STHS				*e*	pP	20 51 52.6	+1.3
STHS				*e*		20 52 08.0	
STHS	**Stebnicka Huta**	**51.31**	**303**	*e*P	**P**	**20 51 48.0**	**-0.2**
STHS				*e*pP	pP	20 51 52.6	+1.3
STHS				*e*		20 52 08.0	
OHAK	**Old Harbor**	**51.35**	**44**	*e*P	**P**	**20 51 47.7**	**-0.6**
	comp=Z,128nm,1.6s,mb5.6						
OHAK				LR	LR		
	comp=Z,2μm,17.0s,MS5.1						
MLR	**Muntele Rosu**	**51.41**	**297**	⇓P	**P**	**20 51 54.0**	**+5.1**
MLR	**Muntele Rosu**	**51.41**	**297**	⇓*i*P	**P**	**20 51 54.0**	**+5.1**
SCO	**Scoresbysund**	**51.47**	**341**	*i* P	**P**	**20 51 52.8**	**+3.8**
SCO							
	comp=Z,610nm,17.0s						
OJC	**Ojcow**	**51.52**	**305**	*e*P	**P**	**20 51 45.5**	**-4.2**
OJC				i		20 51 53.8	
OJC				*e*S	**S**	**20 59 03.2**	**-6.4**
OJC				*e*SS	SS	21 02 41.9	-3.1
OJC				L		21 20 26.6	
	comp=Z,0.4nm,22.0s						
OJC	**Ojcow**	**51.52**	**305**	*e*P	**P**	**20 51 45.5**	**-4.2**
OJC				*e*		20 51 53.8	
OJC				*e*S	**S**	**20 59 03.2**	**-6.4**
OJC				*e*SS	SS	21 02 41.9	-3.1
OJC				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.4						
DIV	**Divide**	**51.65**	**37**	*e*P	**P**	**20 51 50.4**	**-0.1**
	comp=Z,40nm,1.4s,mb5.2						
DAWY	**Dawson**	**51.74**	**31**	*e*P	**P**	**20 51 50.2**	**-1.0**
RGN	**Rugen**	**51.75**	**312**	*e*P	**P**	**20 51 51.6**	**+0.3**
	comp=Z,42nm,0.9s,mb5.4						
NIE	**Niedzica**	**51.78**	**304**	*e*P	**P**	**20 51 52.3**	**+0.7**
VOIR		**51.92**	**297**	⇓P	**P**	**20 51 58.0**	**+5.2**
VOIR		**51.92**	**297**	⇓*i*P	**P**	**20 51 58.0**	**+5.2**
BMRM	**Bremner River**	**52.17**	**36**	*e*P	**P**	**20 51 54.2**	**-0.2**
	comp=Z,31nm,1.1s,mb5.2						
DRGR		**52.27**	**300**	⇓P	**P**	**20 51 56.0**	**+0.7**
DRGR		**52.27**	**300**	⇓*i*P	**P**	**20 51 56.0**	**+0.7**
MUD	**Monsted U'grnd**	**52.28**	**316**	*i* P	**P**	**20 51 58.6**	**+3.3**
MUD				*e*S	**S**	**20 59 19.3**	**-0.6**
MUD							
	comp=Z,910nm,15.0s						
SUMG	**Summit**	**52.29**	**348**	*e*P	**P**	**20 51 54.8**	**-0.4**
	comp=Z,34nm,1.6s,mb5.0						
KECS	**Kecovo**	**52.30**	**303**	*e*P	**P**	**20 51 55.7**	**+0.2**
KECS				*e*	pP	20 52 00.3	+1.6
KECS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
KECS	**Kecovo**	**52.30**	**303**	*e*P	**P**	**20 51 55.7**	**+0.2**
	comp=Z,12nm,1.1s,mb4.7						
KECS				*e*	pP	20 52 00.3	+1.6
KECS				*e*		20 52 10.1	
KECS	**Kecovo**	**52.30**	**303**	*e*P	**P**	**20 51 55.7**	**+0.2**
KECS				*e*pP	pP	20 52 00.3	+1.6
KECS				*e*		20 52 10.1	
OKC	**Ostrava-Krasne**	**52.57**	**305**	*e*P	**P**	**20 51 58.3**	**+0.7**
OKC				*e*S	**S**	**20 59 28.0**	**+3.8**
OKC				MLR	MLR		
	comp=Z,2μm,12.9s,MS5.4						
OKC	**Ostrava-Krasne**	**52.57**	**305**	*e*P	**P**	**20 51 58.3**	**+0.7**
OKC				*e*S	**S**	**20 59 28.0**	**+3.8**
OKC				*e*SS	SS	21 03 15.2	+14
OKC				AMS	AMS	21 16 30.0	
	comp=Z,2μm,12.9s						
KSP	**Ksiaz**	**52.81**	**307**	*e*P	**P**	**20 51 59.8**	**+0.5**
KSP				LMZ		21 16 01.5	
	comp=Z,2μm,16.7s						
KSP	**Ksiaz**	**52.81**	**307**	*e*P	**P**	**20 51 58.9**	**-0.4**
KSP				*e**PP	pP	20 52 03.8	+1.3
KSP				*e*S	**S**	**20 59 27.0**	**-0.3**
KSP				MLR	MLR		
	comp=Z,3μm,16.7s,MS5.4						
MORC	**Moravsky Berou**	**52.91**	**306**	*e*P	**P**	**20 51 59.6**	**-0.5**
	comp=Z,22nm,1.2s,mb5.0						
MORC	**Moravsky Berou**	**52.91**	**306**	⇑*i*P	**P**	**20 52 00.3**	**+0.3**
PSZ	**Piszkesteto**	**52.97**	**303**	*e*P	**P**	**20 52 00.2**	**-0.3**
	comp=Z,35nm,1.3s,mb5.1						
PSZ	**Piszkesteto**	**52.97**	**303**	⇑*e*P	**P**	**20 52 01.1**	**+0.6**
PSZ	**Piszkesteto**	**52.97**	**303**	⇑*i*P	**P**	**20 52 01.0**	**+0.5**
DPC	**Dobruska-Polom**	**53.12**	**307**	*e*P	**P**	**20 52 02.4**	**+0.8**
DPC				*e*S	**S**	**20 59 35.0**	**+3.4**
DPC				MLR	MLR		
	comp=Z,2μm,12.4s,MS5.4						
DPC	**Dobruska-Polom**	**53.12**	**307**	*e*P	**P**	**20 52 02.4**	**+0.8**
DPC				*e*S	**S**	**20 59 35.0**	**+3.4**
DPC				*e*x	x	21 03 44.1	
DPC				AMS	AMS	21 17 10.0	
	comp=Z,2μm,12.4s						
VYHS	**Vyhne**	**53.12**	**304**	*e*P	**P**	**20 52 01.8**	**+0.2**
VYHS				*e*		20 52 06.9	
VYHS				*e*		20 52 15.2	
VYHS				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
VYHS	**Vyhne**	**53.12**	**304**	*e*P	**P**	**20 52 01.8**	**+0.2**
	comp=Z,30nm,1.4s,mb5.0						
VYHS				*e*		20 52 06.9	
VYHS				*e*		20 52 15.2	
VYHS	**Vyhne**	**53.12**	**304**	*e*P	**P**	**20 52 01.8**	**+0.2**
VYHS				*e*pP	pP	20 52 06.9	+2.1
VYHS				*e*		20 52 15.2	
GZR	**Gura Zlata**	**53.16**	**299**	P	**P**	**20 52 03.4**	**+1.5**
KOLL	**Kolacno**	**53.28**	**304**	*e*P	**P**	**20 52 03.1**	**+0.3**
KOLL				*e*	pP	20 52 07.7	+1.7
KOLL				*e*		20 52 16.9	
KOLL	**Kolacno**	**53.28**	**304**	*e*P	**P**	**20 52 03.1**	**+0.3**
KOLL				*e*pP	pP	20 52 07.7	+1.7
KOLL				*e*		20 52 16.9	
BSEG	**Bad Segeberg**	**53.48**	**313**	*e*P	**P**	**20 52 03.1**	**-1.1**
	comp=Z,46nm,1.4s,mb5.2						
BSEG	**Bad Segeberg**	**53.48**	**313**	*e*P	**P**	**20 52 03.1**	**-1.1**
BSEG	**Bad Segeberg**	**53.48**	**313**	*e*P	**P**	**20 52 03.1**	**-1.1**
VRAC	**Vranov**	**53.68**	**306**	⇑P	**P**	**20 52 04.7**	**-1.0**
VRAC	**Vranov**	**53.68**	**306**	⇑*i*P	**P**	**20 52 04.7**	**-1.0**
PVCC	**Panska Ves**	**53.84**	**308**	*e*P	**P**	**20 52 07.6**	**+0.8**
PVCC				MLR	MLR		
	comp=Z,2μm,11.9s,MS5.3						
PVCC	**Panska Ves**	**53.84**	**308**	*e*P	**P**	**20 52 07.6**	**+0.8**
PVCC				*e*x	x	21 03 33.2	
PVCC				AMS	AMS	21 17 10.0	
	comp=Z,2μm,11.9s						
BRG	**Berggiesshubel**	**53.90**	**309**	*e*P	**P**	**20 52 07.3**	**0.0**
	comp=Z,61nm,1.7s,mb5.2						
BRG	**Berggiesshubel**	**53.90**	**309**	*e*P	**P**	**20 52 07.0**	**-0.

PRU MLR MLR
comp=Z,2µm,13.2s,MS5.3
PRU Pruhonice 54.21 307 *eP* **P 20 52 10.8 +1.2**
PRU *eS* **S 20 59 48.7 +2.3**
PRU *ex* x 21 03 40.3
PRU AMS AMS 21 18 00.0
comp=Z,2µm,13.2s
TREC Trest 54.23 306 *eP* **P 20 52 10.3 +0.6**
TREC MLR MLR
comp=Z,2µm,14.1s,MS5.3
TREC Trest 54.23 306 *eP* **P 20 52 10.3 +0.6**
TREC *ex* x 21 03 42.6
TREC AMS AMS 21 17 40.0
comp=Z,2µm,14.1s
MMAI Mount Meron Ar 54.49 279 P **P 20 52 11.7 -0.2**
comp=Z,16nm,1.1s,mb4.9,baz=57,slow=17,SNR=8.9
MMAI LR LR 21 17 57.2
comp=Z,782nm,20.3s,MS4.8,baz=15,slow=39
NRDL Niedersach Rie 54.55 312 *eP* **P 20 52 12.2 +0.2**
comp=Z,36nm,1.3s,mb5.2
PKSM Moragy 54.75 302 ⇓P **P 20 52 15.0 +1.5**
PKSM Moragy 54.75 302 ⇓*iP* **P 20 52 15.0 +1.5**
CLZ Clausthal 54.88 311 *eP* **P 20 52 14.8 +0.4**
comp=Z,65nm,1.8s,mb5.4
CLZ Clausthal 54.88 311 *eP* **P 20 52 14.8 +0.4**
CLZ pmax pmax
comp=Z,65nm,1.8s,mb5.4
CLZ Clausthal 54.88 311 *eP* **P 20 52 14.8 +0.4**
comp=Z,65nm,1.8s,mb5.4
NKC Novy Kostel 55.03 309 *eP* **P 20 52 16.5 +0.9**
NKC *eS* **S 21 00 03.6 +6.1**
NKC MLR MLR
comp=Z,2µm,13.0s,MS5.4
NKC Novy Kostel 55.03 309 *eP* **P 20 52 16.5 +0.9**
NKC *eS* **S 21 00 03.6 +6.1**
NKC *ex* x 21 03 55.8
NKC AMS AMS 21 18 20.0
comp=Z,2µm,13.0s
MOX Moxa 55.14 310 *eP* **P 20 52 16.1 -0.2**
comp=Z,67nm,1.5s,mb5.5
MOX
comp=Z,1µm,22.0s
MOX Moxa 55.14 310 *eP* **P 20 52 16.6 +0.3**
comp=Z,57nm,1.5s,mb5.4
MOX Moxa 55.14 310 *eP* **P 20 52 16.1 -0.2**
MOX pmax pmax
comp=Z,67nm,1.5s,mb5.5
MOX MLR MLR
comp=Z,1µm,22.0s,MS4.9
KHC Kasperske Hory 55.26 307 *eP* **P 20 52 17.2 0.0**
KHC *e* 20 52 22.5
KHC *eS* **S 21 00 05.7 +5.2**
KHC MLR MLR
comp=Z,2µm,14.9s,MS5.3
KHC Kasperske Hory 55.26 307 *eP* **P 20 52 17.0 -0.2**
comp=Z,50nm,1.5s,mb5.3
KHC Kasperske Hory 55.26 307 *eP* **P 20 52 17.2 0.0**
KHC *ex* x 20 52 22.5
KHC *ex* x 20 52 35.0
KHC *eS* **S 21 00 05.7 +5.2**
KHC *ex* x 21 04 01.3
KHC AMS AMS 21 18 40.0
comp=Z,2µm,14.9s
GEC2 GERESS Array S 55.40 307 *eP* **P 20 52 18.3 +0.1**
comp=Z,28nm,1.4s,mb5.1
GEC2 GERESS Array S 55.40 307 *eP* **P 20 52 18.3 +0.1**
GEC2 pmax pmax
comp=Z,28nm,1.4s,mb5.1
GEC2 GERESS Array S 55.40 307 *eP* **P 20 52 17.3 -0.9**
comp=Z,6µm,1.3s
GERES GERESS Array B 55.40 307 P **P 20 52 17.3 -0.9**
comp=Z,7.3nm,1.1s,mb4.6,baz=49,slow=6.1,SNR=14
GERES LR LR 21 19 42.3
comp=Z,1µm,18.0s,MS5.0,baz=216,slow=40
ROTZ Rotzenmuhle 55.47 309 *eP* **P 20 52 19.4 +0.7**
comp=Z,54nm,1.7s,mb5.3
WET Wettzell 55.58 308 *eP* **P 20 52 20.2 +0.7**
comp=Z,43nm,1.5s,mb5.3
WET Wettzell 55.58 308 *eP* **P 20 52 20.2 +0.7**
WET pmax pmax
comp=Z,43nm,1.5s,mb5.3
WET Wettzell 55.58 308 *eP* **P 20 52 20.2 +0.7**
comp=Z,43nm,1.5s,mb5.3
ARSA Arzberg 55.60 304 ⇑*iP* **P 20 52 18.7 -1.0**
comp=Z,26nm,1.4s,mb5.1
IBBN Ibbenburen 55.72 313 *eP* **P 20 52 20.1 -0.4**
comp=Z,30nm,1.1s,mb5.2
UBBA Unterbreizbach 55.76 311 *eP* **P 20 52 20.9 +0.1**
comp=Z,46nm,1.9s,mb5.2
GRA1 Grafenberg Arr 55.98 309 *eP* **P 20 52 23.1 +0.7**
comp=Z,71nm,1.3s,mb5.5
GRA1 LR LR
comp=Z,1µm,20.0s,MS5.0
GRF Grafenberg Arr 55.98 309 *eP* **P 20 52 23.1 +0.7**
comp=Z,71nm,1.3s,mb5.5
GRF *eL* 21 17 51.4
comp=Z,1µm,20.0s
GRF Grafenberg Arr 55.98 309 *eP* **P 20 52 23.1 +0.7**
GRF pmax pmax
comp=Z,71nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,1µm,20.0s,MS5.0
GRF Grafenberg Arr 55.98 309 *eP* **P 20 52 23.1 +0.7**
GRF pmax pmax
comp=Z,71nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,1µm,20.0s,MS5.0
GRF Grafenberg Arr 55.98 309 *eP* **P 20 52 23.1 +0.7**
comp=Z,71nm,1.3s,mb5.5
GRF LR LR
comp=Z,1µm,20.0s,MS5.0
SOKA Soboth 56.24 304 ⇓*iP* **P 20 52 23.9 -0.4**
comp=Z,31nm,1.3s,mb5.2
SKAG Skagway 56.45 33 *eP* **P 20 52 25.1 -0.5**
comp=Z,77nm,1.7s,mb5.5
BUG Bochum--Univer 56.55 313 *eP* **P 20 52 26.2 -0.2**
comp=Z,33nm,1.2s,mb5.2
RJOB Jochberg 56.60 306 *eP* **P 20 52 28.0 +1.2**
comp=Z,75nm,2.1s,mb5.3
KBA Koelnbreinsper 56.80 306 ⇑*iP* **P 20 52 29.0 +0.8**
comp=Z,55nm,1.3s,mb5.4
TNS Taunus Mts 56.88 311 *eP* **P 20 52 29.1 +0.3**
comp=Z,36nm,1.3s,mb5.2
TNS Taunus Mts 56.88 311 *eP* **P 20 52 29.1 +0.3**
TNS pmax pmax
comp=Z,36nm,1.3s,mb5.2
TNS Taunus Mts 56.88 311 *eP* **P 20 52 29.1 +0.3**
comp=Z,36nm,1.3s,mb5.2
FUR Furstenfeldbru 57.03 308 *eP* **P 20 52 30.6 +0.8**
comp=Z,117nm,1.9s,mb5.6
FUR Furstenfeldbru 57.03 308 *eP* **P 20 52 30.6 +0.8**
FUR pmax pmax
comp=Z,117nm,1.9s,mb5.6
FUR Furstenfeldbru 57.03 308 *eP* **P 20 52 30.6 +0.8**
comp=Z,117nm,1.9s,mb5.6
STU Stuttgart 57.57 309 *eP* **P 20 52 34.0 +0.3**
comp=Z,42nm,1.3s,mb5.3
STU Stuttgart 57.57 309 *eP* **P 20 52 34.1 +0.4**
STU Stuttgart 57.57 309 *eP* **P 20 52 34.1 +0.4**
MEM Membach 57.70 313 E 20 52 40.0
RUP Ruppelstein 57.88 311 *eP* **P 20 52 36.7 +0.8**
ESK Eskdalemuir 57.99 321 *eP* **P 20 52 36.0 -0.5**
ESK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ESK Eskdalemuir 57.99 321 *eP* **P 20 52 36.0 -0.5**
comp=Z,9.4nm,0.8s,mb4.9
BCLA Clavier 58.15 313 P **P 20 52 37.5 -0.2**
SPAK Spaichingen-Ko 58.24 309 *eP* **P 20 52 41.9 +3.5**
BFO Black Forest 58.29 309 *eP* **P 20 52 39.2 +0.5**
comp=Z,30nm,1.3s,mb5.2
BFO Black Forest 58.29 309 *eP* **P 20 52 39.2 +0.5**
BFO pmax pmax
comp=Z,30nm,1.3s,mb5.2
BFO Black Forest 58.29 309 *eP* **P 20 52 38.7 0.0**
comp=Z,33nm,1.4s,mb5.2
WLF Walferdange 58.32 312 E 20 52 45.4
GIVF Givet 58.59 313 *eP* **P 20 52 40.2 -0.6**
DAVOX Davos/Dischmat 58.68 307 P **P 20 52 41.7 +0.3**
comp=Z,5.0nm,0.9s,mb4.5,baz=314,slow=7.3,SNR=3.8
DOU Dourbes 58.69 313 P **P 20 52 43.1 +1.6**
CDF Champ du Feu 58.72 310 *eP* **P 20 52 41.3 -0.4**
comp=Z,88nm,1.5s,mb5.3
CDF Champ du Feu 58.72 310 *eP* **P 20 52 41.3 -0.4**
CDF pmax pmax
comp=Z,44nm,1.5s,mb5.3
CDF Champ du Feu 58.72 310 *eP* **P 20 52 41.3 -0.4**
comp=Z,44nm,1.5s,mb5.3
FELD Feldberg im Sc 58.77 309 *eP* **P 20 52 42.8 +0.7**
BAIF Baives 58.89 313 *eP* **P 20 52 42.1 -0.8**
comp=Z,75nm,1.5s,mb5.2
BAIF Baives 58.89 313 *eP* **P 20 52 42.1 -0.8**
BAIF pmax pmax
comp=Z,38nm,1.5s,mb5.2
BAIF Baives 58.89 313 *eP* **P 20 52 42.1 -0.8**
comp=Z,38nm,1.5s,mb5.2
ECH Echery 58.91 310 *eP* **P 20 52 44.1 +1.0**
ECH Echery 58.91 310 *eP* **P 20 52 43.1 0.0**
ECH pmax pmax
comp=Z,17nm,1.0s,mb5.0
ECH Echery 58.91 310 *eP* **P 20 52 43.1 0.0**
comp=Z,17nm,1.0s,mb5.0
DLBC Dease Lake 58.96 32 *eP* **P 20 52 43.6 +0.4**
SFJD Kangerlussuaq 58.96 351 *eP* **P 20 52 41.7 -1.4**
SFJD MLR MLR
comp=Z,670nm,17.0s,MS4.8
SFJD Kangerlussuaq 58.96 351 *iP* **P 20 52 41.7 -1.4**
SFJD pmax pmax
comp=Z,660nm,17.0s
MOF Molkenrain 59.19 310 *eP* **P 20 52 48.4 +3.4**
BBS Basel-Blauen 59.30 309 *eP* **P 20 52 46.9 +1.2**
HINF Hinteralfeld 59.35 310 *eP* **P 20 52 45.5 -0.6**
comp=Z,109nm,1.6s,mb5.3
HINF Hinteralfeld 59.35 310 *eP* **P 20 52 45.5 -0.6**
HINF pmax pmax
comp=Z,54nm,1.6s,mb5.3
HINF Hinteralfeld 59.35 310 *eP* **P 20 52 45.5 -0.6**
comp=Z,54nm,1.6s,mb5.3
HAU Haudompre 59.44 310 *eP* **P 20 52 46.1 -0.6**
comp=Z,105nm,1.7s,mb5.3
HAU *e*MLR MLR
comp=Z,690nm,18.5s,MS4.5
HAU Haudompre 59.44 310 *eP* **P 20 52 46.1 -0.6**
HAU pmax pmax
comp=Z,53nm,1.7s,mb5.3
HAU MLR MLR
comp=Z,690nm,18.5s,MS4.8
HAU Haudompre 59.44 310 *eP* **P 20 52 46.1 -0.6**
comp=Z,53nm,1.7s,mb5.3
HAU LR LR
comp=Z,690nm,18.5s,MS4.8
YKA Yellowknife Ar 59.65 22 P **P 20 52 46.0 -1.9**
comp=Z,15nm,0.8s,mb5.1,baz=331,slow=6.8,SNR=130
YKA Yellowknife Ar 59.65 22 P **P 20 52 46.0 -1.9**
MEZF Maizieres J'vi 59.66 311 *eP* **P 20 52 47.9 -0.3**
comp=Z,111nm,1.5s,mb5.4
MEZF Maizieres J'vi 59.66 311 *eP* **P 20 52 47.9 -0.3**
comp=Z,111nm,1.5s,mb5.7
LOMF Lomont 59.70 310 *eP* **P 20 52 49.7 +1.2**
AQU L'Aquila 60.13 302 *eP* **P 20 52 51.7 +0.1**
AQU pmax pmax
comp=Z,56nm,1.1s,mb5.5
AQU L'Aquila 60.13 302 *eP* **P 20 52 51.6 +0.1**
comp=Z,56nm,1.1s,mb5.5
CABF La Chapelle 60.59 309 *eP* **P 20 52 54.3 -0.3**
comp=Z,68nm,1.4s,mb5.3
CABF La Chapelle 60.59 309 *eP* **P 20 52 54.3 -0.3**
CABF pmax pmax
comp=Z,34nm,1.4s,mb5.3
CABF La Chapelle 60.59 309 *eP* **P 20 52 54.3 -0.3**
comp=Z,34nm,1.4s,mb5.3
TIP Timpagrande 60.68 297 *eP* **P 20 52 55.4 0.0**
comp=Z,70nm,1.5s,mb5.6
LPL La Plagne 61.10 308 *eP* **P 20 52 58.1 0.0**
comp=Z,51nm,1.3s,mb5.2
LPL La Plagne 61.10 308 *eP* **P 20 52 58.1 0.0**
LPL pmax pmax
comp=Z,25nm,1.3s,mb5.2
LPL La Plagne 61.10 308 *eP* **P 20 52 58.1 0.0**
comp=Z,26nm,1.3s,mb5.2
LPG La Plagne 61.10 308 *eP* **P 20 52 58.1 0.0**
LOR Lormes 61.12 311 *eP* **P 20 52 57.1 -1.1**
comp=Z,110nm,1.6s,mb5.4
LOR *e*MLR MLR
comp=Z,738nm,19.8s,MS4.5
LOR Lormes 61.12 311 *eP* **P 20 52 57.1 -1.1**
LOR pmax pmax
comp=Z,55nm,1.6s,mb5.4
LOR MLR MLR
comp=Z,740nm,19.8s,MS4.8
LOR Lormes 61.12 311 *eP* **P 20 52 57.1 -1.1**
comp=Z,55nm,1.6s,mb5.4
LOR LR LR
comp=Z,740nm,19.8s,MS4.8
SSF Saint Saulge 61.43 311 *eP* **P 20 52 59.4 -0.9**
comp=Z,101nm,1.5s,mb5.4
SSF Saint Saulge 61.43 311 *eP* **P 20 52 59.4 -0.9**
SSF pmax pmax
comp=Z,50nm,1.5s,mb5.4
SSF Saint Saulge 61.43 311 *eP* **P 20 52 59.4 -0.9**
comp=Z,50nm,1.5s,mb5.4
BNI Bardonecchia 61.47 308 *eP* **P 20 52 59.8 -0.8**
BNI pmax pmax
comp=Z,38nm,1.1s,mb5.4
BNI Bardonecchia 61.47 308 *eP* **P 20 52 59.8 -0.8**
comp=Z,38nm,1.1s,mb5.4
SMF Signal de Mont 61.59 311 *eP* **P 20 53 00.6 -0.8**
comp=Z,24nm,0.9s,mb5.0
SMF Signal de Mont 61.59 311 *eP* **P 20 53 00.6 -0.8**
SMF pmax pmax
comp=Z,12nm,0.9s,mb5.0
SMF Signal de Mont 61.59 311 *eP* **P 20 53 00.6 -0.8**
comp=Z,12nm,0.9s,mb5.0
HYF Humbligny 61.66 312 *eP* **P 20 53 01.4 -0.5**
MBDF Montbardon 61.66 308 *eP* **P 20 53 01.4 -0.5**
comp=Z,37nm,0.9s,mb5.2
MBDF Montbardon 61.66 308 *eP* **P 20 53 01.4 -0.5**
MBDF pmax pmax
comp=Z,19nm,0.9s,mb5.2
MBDF Montbardon 61.66 308 *eP* **P 20 53 01.4 -0.5**
comp=Z,19nm,0.9s,mb5.2
AVF Avril sur Loir 61.70 311 *eP* **P 20 53 01.3 -0.9**
comp=Z,41nm,1.3s,mb5.1
AVF Avril sur Loir 61.70 311 *eP* **P 20 53 01.3 -0.9**
AVF pmax pmax
comp=Z,21nm,1.3s,mb5.1
AVF Avril sur Loir 61.70 311 *eP* **P 20 53 01.3 -0.9**
comp=Z,20nm,1.3s,mb5.1
LDF La Druitiere 61.86 314 *eP* **P 20 53 01.8 -1.4**
comp=Z,112nm,1.4s,mb5.5
LDF La Druitiere 61.86 314 *eP* **P 20 53 01.8 -1.4**
LDF pmax pmax
comp=Z,56nm,1.4s,mb5.5
LDF La Druitiere 61.86 314 *eP* **P 20 53 01.8 -1.4**
comp=Z,56nm,1.4s,mb5.5
FLN La Foliniere 61.89 315 *eP* **P 20 53 01.9 -1.5**
FLN *e*MLR MLR
comp=Z,1µm,21.5s,MS4.8
FLN La Foliniere 61.89 315 *eP* **P 20 53 01.9 -1.5**
FLN LR LR
comp=Z,1µm,21.5s,MS5.1
AUTN L'Aution 61.90 307 *eP* **P 20 53 07.7 +4.2**
ORIF Oris-en-Rattie 61.94 308 *eP* **P 20 53 03.6 -0.2**
comp=Z,53nm,1.1s,mb5.3
ORIF *e*MLR MLR
comp=Z,1µm,20.2s,MS4.8
ORIF Oris-en-Rattie 61.94 308 *eP* **P 20 53 03.6 -0.2**
ORIF pmax pmax
comp=Z,26nm,1.1s,mb5.3
ORIF Oris-en-Rattie 61.94 308 *eP* **P 20 53 03.6 -0.2**
comp=Z,26nm,1.1s,mb5.3
TOUF Mont Tournerai 61.97 307 *eP* **P 20 53 07.4 +3.4**
SBF Sospel 61.99 306 *eP* **P 20 53 03.3 -0.8**
comp=Z,174nm,1.3s,mb5.7
SBF Sospel 61.99 306 *eP* **P 20 53 03.3 -0.8**
SBF pmax pmax
comp=Z,87nm,1.3s,mb5.7
SBF Sospel 61.99 306 *eP* **P 20 53 03.3 -0.8**
comp=Z,87nm,1.3s,mb5.7
LUCF Luceram 62.01 307 *eP* **P 20 53 07.7 +3.4**
MVIF Mont Vial 62.10 307 *eP* **P 20 53 10.5 +5.6**
BGF Bois d'Agland 62.11 311 *eP* **P 20 53 04.2 -0.7**
comp=Z,42nm,1.1s,mb5.2
BGF Bois d'Agland 62.11 311 *eP* **P 20 53 04.2 -0.7**
BGF pmax pmax
comp=Z,21nm,1.1s,mb5.2
BGF Bois d'Agland 62.11 311 *eP* **P 20 53 04.2 -0.7**
comp=Z,21nm,1.1s,mb5.2
CALN Calern 62.34 307 *eP* **P 20 53 11.4 +4.9**
AGO Saint Agoulin 62.36 311 *eP* **P 20 53 12.7 +6.1**
COLF Collangettes 62.51 310 *eP* **P 20 53 10.1 +2.5**
VIVF Saint-Julien-l 62.56 309 *eP* **P 20 53 07.5 -0.4**
FRF La Foret Royal 62.59 307 *eP* **P 20 53 07.3 -0.9**
comp=Z,163nm,1.5s,mb5.6
FRF La Foret Royal 62.59 307 *eP* **P 20 53 07.3 -0.9**
FRF pmax pmax
comp=Z,81nm,1.5s,mb5.6
FRF La Foret Royal 62.59 307 *eP* **P 20 53 07.3 -0.9**
comp=Z,81nm,1.5s,mb5.6
TCF Toulx Ste Croi 62.60 311 *eP* **P 20 53 07.5 -0.7**
comp=Z,65nm,1.3s,mb5.3
TCF Toulx Ste Croi 62.60 311 *eP* **P 20 53 07.5 -0.7**
TCF pmax pmax
comp=Z,32nm,1.3s,mb5.3
TCF Toulx Ste Croi 62.60 311 *eP* **P 20 53 07.5 -0.7**
comp=Z,32nm,1.3s,mb5.3
LMR La Mourre 62.83 307 *eP* **P 20 53 09.0 -0.8**
comp=Z,92nm,1.5s,mb5.4
LMR La Mourre 62.83 307 *eP* **P 20 53 09.0 -0.8**
LMR pmax pmax
comp=Z,46nm,1.5s,mb5.4
LMR La Mourre 62.83 307 *eP* **P 20 53 09.0 -0.8**
comp=Z,46nm,1.5s,mb5.4
LBL Lubilhac 62.93 310 *eP* **P 20 53 15.5 +5.1**
SGMF Saint Gilles 63.16 316 *eP* **P 20 53 10.7 -1.2**
ROSF Rostrenen 63.39 316 *eP* **P 20 53 12.1 -1.3**
comp=Z,62nm,1.1s,mb5.3
ROSF Rostrenen 63.39 316 *eP* **P 20 53 12.1 -1.3**
ROSF pmax pmax
comp=Z,31nm,1.1s,mb5.3
ROSF Rostrenen 63.39 316 *eP* **P 20 53 12.1 -1.3**
comp=Z,31nm,1.1s,mb5.3
MFF Saint Martin d 63.41 313 *eP* **P 20 53 12.8 -0.7**
comp=Z,84nm,1.4s,mb5.4
MFF Saint Martin d 63.41 313 *eP* **P 20 53 12.8 -0.7**
MFF pmax pmax
comp=Z,42nm,1.4s,mb5.4
MFF Saint Martin d 63.41 313 *eP* **P 20 53 12.8 -0.7**
comp=Z,42nm,1.4s,mb5.4
LASF Ste Croix 63.53 309 *eP* **P 20 53 14.5 +0.1**
comp=Z,126nm,1.6s,mb5.4
QUIF Quistinic 63.68 316 *eP* **P 20 53 14.3 -1.0**
comp=Z,30nm,0.8s,mb5.1
QUIF Quistinic 63.68 316 *eP* **P 20 53 14.3 -1.0**
QUIF pmax pmax
comp=Z,15nm,0.8s,mb5.1
QUIF Quistinic 63.68 316 *eP* **P 20 53 14.3 -1.0**
comp=Z,15nm,0.8s,mb5.1
CAF Calviac 63.71 311 *eP* **P 20 53 15.7 +0.1**
BST Brest 63.75 317 *eP* **P 20 53 15.9 +0.1**
LFF La Frestale 64.30 311 *eP* **P 20 53 19.4 0.0**
comp=Z,143nm,1.6s,mb5.5
LFF La Frestale 64.30 311 *eP* **P 20 53 19.4 0.0**
LFF pmax pmax
comp=Z,72nm,1.6s,mb5.5
LFF La Frestale 64.30 311 *eP* **P 20 53 19.4 0.0**
comp=Z,72nm,1.6s,mb5.5
MTLF Montolieu 64.86 309 *eP* **P 20 53 23.1 0.0**
comp=Z,52nm,1.3s,mb5.1
MTLF Montolieu 64.86 309 *eP* **P 20 53 23.1 0.0**
MTLF pmax pmax
comp=Z,26nm,1.3s,mb5.1
MTLF Montolieu 64.86 309 *eP* **P 20 53 23.1 0.0**
comp=Z,26nm,1.3s,mb5.1
EPF Esparros 65.96 310 *eP* **P 20 53 29.7 -0.6**
comp=Z,22nm,0.9s,mb4.9
EPF Esparros 65.96 310 *eP* **P 20 53 29.7 -0.6**
EPF pmax pmax
comp=Z,11nm,0.9s,mb4.9
EPF Esparros 65.96 310 *eP* **P 20 53 29.7 -0.6**
comp=Z,11nm,0.9s,mb4.9
EMIR Miracle 66.28 309 P **P 20 53 36.1 +3.7**
EBIE Bielsa 66.32 310 P **P 20 53 36.3 +3.7**
comp=Z,48nm,0.9s,mb5.5
ETSF Etsaut 66.47 311 *eP* **P 20 53 33.0 -0.6**
EALK Alkurruntz 66.65 312 P **P 20 53 37.8 +3.1**
comp=Z,39nm,0.9s,mb5.4
FCC Fort Churchill 66.78 13 *eP* **P 20 53 33.7 -1.6**
comp=Z,1.5nm,1.3s,mb3.9
EPOB Poblet 66.93 309 P **P 20 53 40.0 +3.5**
comp=Z,69nm,1.0s,mb5.6
KEST Kesra 67.17 299 P **P 20 53 38.5 +0.4**
comp=Z,13nm,1.1s,mb4.9,baz=165,slow=0.9,SNR=9.7
KEST LR LR 21 23 06.3
comp=Z,187nm,18.1s,MS4.3,baz=334,slow=36
ESAC San Caprasio 67.36 310 P **P 20 53 43.3 +4.1**
comp=Z,104nm,0.9s,mb5.9
CMAH Djebel Manchou 67.48 301 P **P 20 53 40.3 +0.2**
ELAN Lanestosa 67.50 313 P **P 20 53 40.9 +0.8**
comp=Z,26nm,1.2s,mb5.1
ABSA Djebel Ababsia 67.72 301 P **P 20 53 42.0 +0.4**
EARI Arriondas 68.22 314 P **P 20 53 44.4 -0.2**
comp=Z,58nm,1.5s,mb5.4
CASM Ain Smara 68.24 302 P **P 20 53 49.0 +4.1**
EDM Edmonton 68.25 26 *eP* **P 20 53 44.1 -0.5**
DFRA Djebel Bou Aff 68.33 302 P **P 20 53 49.6 +4.2**
EMOS Mosqueruela 68.43 309 P **P 20 53 49.8 +3.8**
comp=Z,48nm,0.9s,mb5.5
ETOR Torete 68.80 310 P **P 20 53 48.6 +0.3**
ETOR pmax pmax
comp=Z,20nm,0.8s,mb5.1
ETOR Torete 68.80 310 P **P 20 53 48.6 +0.3**
comp=Z,20nm,0.8s,mb5.1
SET Setif 68.84 302 P **P 20 53 52.0 +3.4**
KAKA Kakadu 68.92 155 *eP* **P 20 53 47.2 -1.9**
comp=Z,19nm,0.8s,mb5.1
KAKA Kakadu 68.92 155 *eP* **P 20 53 45.6 -3.5**
comp=Z,70nm,0.8s,mb5.6
EPON Pontenova 69.02 315 P **P 20 53 53.0 +3.4**
comp=Z,49nm,1.1s,mb5.3
FFC Flin Flon 69.40 18 P **P 20 53 50.8 -1.0**
comp=Z,100nm,1.1s,mb5.7,SNR=8.1
FFC Flin Flon 69.40 18 *iP* **P 20 53 51.0 -0.8**
FFC Flin Flon 69.40 18 *eP* **P 20 53 50.2 -1.6**
comp=Z,20nm,1.1s,mb5.0
A05A Maple Falls 69.45 33 ⇓P **P 20 53 51.2 -0.9**
baz=69
A06A Chilliwack 69.56 32 ⇓P **P 20 53 51.7 -1.1**
baz=69
ERUA La Rua 69.78 315 P **P 20 53 55.0 +0.6**
comp=Z,2.6nm,1.2s,mb4.0
GUD Guadarrama 69.89 312 P **P 20 53 56.0 +0.9**
GUD pmax pmax
comp=Z,17nm,1.1s,mb4.9
GUD Guadarrama 69.89 312 P **P 20 53 56.0 +1.0**
comp=Z,17nm,1.1s,mb4.9
STS Santiago 69.97 316 P **P 20 53 58.0 +2.5**
B06A Marblemount 70.06 33 ⇑P **P 20 53 55.4 -0.6**
baz=70
EMAZ Mazaricos 70.10 316 P **P 20 53 59.4 +3.1**
comp=Z,23nm,1.0s,mb5.1
RPW Rockport 70.11 33 *eP* **P 20 53 55.6 -0.6**
comp=Z,1.7nm,0.6s,mb4.2
JCW Jim Creek 70.20 33 *eP* **P 20 53 56.9 +0.1**
NLWA Neilton Lookou 70.24 35 ⇑P **P 20 53 57.4 +0.4**
baz=70
ESDC Sonseca Array 70.59 311 P **P 20 53 59.2 -0.2**
comp=Z,10nm,1.0s,mb4.7,baz=31,slow=6.5,SNR=21
ESDC Sonseca Array 70.59 311 P **P 20 53 59.7 +0.3**
comp=Z,33nm,1.0s,mb5.2
ESLA Sonseca Array 70.59 311 *eP* **P 20 53 59.4 0.0**
comp=Z,15nm,1.3s,mb4.8
ELOB Lobios 70.61 315 P **P 20 53 59.4 0.0**
comp=Z,110nm,1.7s,mb5.5
EVIA Vianos 70.75 309 P **P 20 54 01.4 +1.0**
EVIA pmax pmax
comp=Z,19nm,0.8s,mb5.1
EVIA Vianos 70.75 309 P **P 20 54 01.4 +1.0**
comp=Z,19nm,0.8s,mb5.1
NLW Nelson Butte 70.81 32 P **P 20 54 00.7 +0.2**
PAB San Pablo 70.87 311 *eP* **P 20 53 58.5 -2.5**
PAB pmax pmax
comp=Z,34nm,1.5s,mb5.1
PAB San Pablo 70.87 311 *eP* **P 20 53 58.5 -2.6**
comp=Z,34nm,1.5s,mb5.0
RMW Rattlesnake Mo 70.88 34 P **P 20 54 01.7 +0.7**
A10A Northport 70.88 30 ⇓P **P 20 54 00.8 -0.1**
baz=71
B08A Colville Reser 70.89 32 ⇑P **P 20 54 01.0 0.0**
baz=71,SNR=16
D05A Enumclaw 71.06 34 ⇑P **P 20 54 02.7 +0.6**
baz=71
E03A Lebam 71.08 35 ⇑P **P 20 54 02.6 +0.4**
baz=71
B09A Rice 71.20 31 ⇓P **P 20 54 03.2 +0.3**
baz=71,SNR=11
ETW Entiat 71.23 33 P **P 20 54 03.2 +0.1**
A11A Hall Mountain, 71.26 29 ⇓P **P 20 54 03.7 +0.5**
baz=71,SNR=8.1
WTV Waterville 71.27 32 P **P 20 54 03.4 0.0**

EHUE **Huescar** 71.46 309 P P 20 54 05.9 +1.2
comp=Z,5.5nm,0.8s,mb4.5
A12A **Yaak River Ran** 71.49 29 ⇓P P 20 54 05.0 +0.4
baz=71
B10A **Chitwood Farm,** 71.59 30 ⇓P P 20 54 05.4 +0.1
baz=71
MTE **Manteigas** 71.59 314 eP P 20 54 05.1 -0.3
comp=Z,31nm,1.3s,mb5.1
F03A **Seaside** 71.61 35 ⇓P P 20 54 05.9 +0.5
baz=71
NEW **Newport** 71.65 30 eP P 20 54 04.7 -0.9
comp=Z,5.5nm,0.7s,mb4.6
TDL **Tradedollar La** 71.71 34 P P 20 54 06.6 +0.6
C09A **Chrisman Ranch** 71.71 31 ⇓P P 20 54 06.1 +0.1
baz=71,SNR=7.2
B11A **Sandpoint** 71.72 30 ⇑P P 20 54 06.3 +0.3
baz=71
EBAN **Banos Encina** 71.73 310 P P 20 54 06.9 +0.6
EBAN pmax pmax
comp=Z,22nm,1.1s,mb5.0
EBAN **Banos Encina** 71.73 310 P P 20 54 06.9 +0.6
comp=Z,22nm,1.1s,mb5.0
NAC **Naches** 71.84 33 P P 20 54 07.3 +0.5
WALA **Waterton Lakes** 71.87 28 eP P 20 54 05.5 -1.4
comp=Z,0.7nm,1.1s
F04A **Amboy** 72.01 35 ⇓P P 20 54 07.9 +0.1
baz=72
A14A **Double T Ranch** 72.08 28 ⇓P P 20 54 07.8 -0.4
baz=72,SNR=20
EADA **Adamuz** 72.09 310 P P 20 54 08.4 0.0
comp=Z,26nm,1.1s,mb5.1
SCHQ **Schefferville** 72.13 357 P P 20 54 07.2 -1.2
comp=Z,14nm,1.1s,mb4.8,baz=14,slow=8.0,SNR=6.2
SCHQ LR LR 21 25 02.0
comp=Z,480nm,19.9s,MS4.8,baz=104,slow=35
SCHQ **Schefferville** 72.13 357 eP P 20 54 06.9 -1.5
comp=Z,31nm,1.2s,mb5.1
D08A **Wollman Farm,** 72.17 32 ⇓P P 20 54 08.6 -0.1
baz=72
A15A **Johnson Ranch,** 72.27 27 ⇓P P 20 54 08.6 -0.7
baz=72,SNR=57
E07A **Sunnyside** 72.31 33 ⇑P P 20 54 09.9 +0.3
baz=72
B13A **Whitefish** 72.33 28 ⇑P P 20 54 09.7 0.0
baz=72,SNR=8.4
D09A **Jones Farm, Ri** 72.36 32 ⇓P P 20 54 10.0 +0.1
baz=72,SNR=6.0
RSW **Rattlesnake Hi** 72.54 33 eP P 20 54 09.8 -1.1
comp=Z,11nm,0.9s,mb4.8
HAWA **Hanford** 72.56 33 eP P 20 54 11.5 +0.4
comp=Z,29nm,1.4s,mb5.0
A16A **West Butte Ran** 72.60 26 ⇑P P 20 54 10.6 -0.7
baz=72,SNR=12
G04A **Mulino** 72.62 35 ⇑P P 20 54 11.8 +0.3
baz=72,SNR=6.1
E08A **Dider Farm, El** 72.63 32 ⇑P P 20 54 11.7 +0.2
baz=72
C12B **Naegeli Ranch,** 72.64 29 ⇓P P 20 54 12.2 +0.7
baz=72
D10A **Wagner Farm, O** 72.68 31 ⇑P P 20 54 12.0 +0.2
baz=72
EBAD **Badajoz** 72.71 312 P P 20 54 11.1 -1.0
comp=Z,21nm,1.1s,mb5.0
BSMT **Bassoo Peak** 72.71 29 eP P 20 54 12.2 +0.2
comp=Z,34nm,1.2s,mb5.2
ELOJ **Sierra Loja** 72.73 309 P P 20 54 15.3 +3.1
ELOJ pmax pmax
comp=Z,11nm,1.0s,mb4.7
ELOJ **Sierra Loja** 72.73 309 P P 20 54 15.3 +3.1
comp=Z,11nm,1.0s,mb4.7
A17A **Triple J Farms** 72.84 26 ⇑P P 20 54 12.1 -0.6
baz=72,SNR=34
E09A **Wood Farm, Sta** 72.90 32 ⇓P P 20 54 13.1 0.0
baz=73
B15A **Bradely Ranch,** 72.92 27 ⇓P P 20 54 12.6 -0.6
baz=73,SNR=14
YBMT **Yellow Bay** 72.92 28 eP P 20 54 13.5 +0.2
comp=Z,34nm,1.1s,mb5.2
C13A **Hot Springs** 72.93 29 ⇓P P 20 54 13.6 +0.4
baz=73,SNR=24
JTMT **Jette** 72.95 29 eP P 20 54 13.4 0.0
comp=Z,29nm,1.1s,mb5.1
D11A **Klaveano Farm,** 72.98 30 ⇓P P 20 54 13.5 0.0
baz=73,SNR=13
B16A **M & M Farms, S** 73.06 27 ⇑P P 20 54 13.5 -0.5
baz=73,SNR=18
A18A **Metzger Ranch,** 73.09 25 ⇓P P 20 54 13.4 -0.8
baz=73,SNR=13
H04A **Detroit Lake** 73.18 35 ⇓P P 20 54 14.8 0.0
baz=73
G06A **Carlson Farm,** 73.22 34 ⇓P P 20 54 15.1 +0.1
baz=73,SNR=5.3
SWMT **Swartz Lake** 73.25 29 eP P 20 54 15.6 +0.4
comp=Z,86nm,1.0s,mb5.6
D12A **Red Ives Fores** 73.27 30 ⇑P P 20 54 15.3 0.0
baz=73,SNR=8.7
F08A **Pendleton** 73.33 32 ⇓P P 20 54 16.4 +0.8
baz=73
EVO **Evora** 73.33 313 eP P 20 54 16.2 +0.4
comp=Z,22nm,1.0s,mb4.8
EVO eMLR MLR
comp=Z,1µm,21.5s,MS4.9
EMIN **Mina Concepcio** 73.37 312 P P 20 54 16.6 +0.5
comp=Z,33nm,1.3s,mb5.1
C15A **Salmond Ranch,** 73.40 28 ⇑P P 20 54 15.7 -0.4
baz=73,SNR=9.0
B17A **L&G Farms, Che** 73.42 26 ⇑P P 20 54 15.8 -0.3
baz=73,SNR=30
D13A **Huson** 73.49 29 ⇓P P 20 54 16.6 0.0
baz=73,SNR=6.9
B18A **Beardsley Farm** 73.59 25 ⇑P P 20 54 16.4 -0.7
baz=73,SNR=16
C16A **Fuhringer Ranc** 73.61 27 ⇓P P 20 54 16.7 -0.5
baz=73,SNR=5.5
SLMT **Seeley Lake** 73.64 28 eP P 20 54 17.5 0.0
comp=Z,60nm,0.9s,mb5.5
E11A **Bogner Ranch,** 73.64 30 ⇓P P 20 54 17.6 +0.1
baz=73
F10A **Beach Ranch, E** 73.67 31 ⇑P P 20 54 18.0 +0.4
baz=73,SNR=10
F09A **S2 Ranch, Elgi** 73.69 32 ⇓P P 20 54 18.0 +0.2
baz=73
G08A **Pilot Rock** 73.72 33 ⇑P P 20 54 18.5 +0.5
baz=73,SNR=7.4
ESPR **Espera** 73.74 310 P P 20 54 18.5 +0.3
comp=Z,8.9nm,0.7s,mb4.8
D14A **Greenough** 73.78 28 ⇑P P 20 54 18.3 +0.1
baz=74,SNR=80
VIPM **Ingram Point** 73.87 34 P P 20 54 19.3 +0.5
MSO **Missoula** 73.88 29 eP P 20 54 18.9 0.0
comp=Z,52nm,1.3s,mb5.3
EGMT **Eagleton** 73.94 26 ⇑P P 20 54 18.6 -0.6
baz=74,SNR=14
EGMT **Eagleton** 73.94 26 eP P 20 54 18.4 -0.8
comp=Z,55nm,1.4s,mb5.3
CHMT **Chamberlain Mo** 74.00 28 eP P 20 54 19.5 -0.1
comp=Z,18nm,0.9s,mb5.0
C17A **Wharram Farm,** 74.03 26 ⇑P P 20 54 18.9 -0.8
baz=74,SNR=20
F11A **Grangeville** 74.07 31 ⇓P P 20 54 20.2 +0.2
baz=74,SNR=20
D15A **Lincoln** 74.09 28 ⇑P P 20 54 19.9 -0.2
baz=74,SNR=14
G09A **Cove** 74.11 32 ⇑P P 20 54 20.5 +0.2
baz=74,SNR=12
E13A **Victor** 74.16 29 ⇓P P 20 54 20.4 -0.1
baz=74,SNR=18
G10A **Bishop Farm, J** 74.31 32 ⇓P P 20 54 21.7 +0.3
baz=74,SNR=21
D16A **Dana Ranch, Ca** 74.37 27 ⇓P P 20 54 21.2 -0.5
baz=74,SNR=11
E14A **Clinton** 74.39 29 ⇓P P 20 54 21.8 -0.1
baz=74,SNR=18
F12A **Elk City** 74.47 30 ⇓P P 20 54 22.0 -0.3
baz=74,SNR=8.6
G11A **Walters Elk Ra** 74.48 31 ⇑P P 20 54 22.4 0.0
baz=74,SNR=33
D17A **Six Diamond Ra** 74.49 27 ⇓P P 20 54 22.0 -0.4
baz=74,SNR=13
H08A **Prairie City** 74.50 33 ⇓P P 20 54 23.3 +0.8
baz=74,SNR=11
HRY **Holter Researc** 74.59 27 eP P 20 54 22.7 -0.3
comp=Z,32nm,0.8s,mb5.3
I07A **Izee** 74.62 34 ⇑P P 20 54 23.9 +0.7
baz=74,SNR=16
E15A **Deer Lodge** 74.62 28 ⇑P P 20 54 23.1 -0.1
baz=74,SNR=12
D18A **Linhart Farms,** 74.69 26 ⇓P P 20 54 23.3 -0.3
baz=74
H09A **Durkee** 74.70 32 ⇓P P 20 54 24.2 +0.5
baz=74
F13A **Darby** 74.71 30 ⇑P P 20 54 23.3 -0.4
baz=74,SNR=10
ULM **Lac du Bonnet** 74.77 16 P P 20 54 22.7 -1.3
comp=Z,12nm,1.1s,mb4.8,baz=358,slow=5.5,SNR=8.0
ULM LR LR 21 28 52.1
comp=Z,837nm,18.3s,MS5.1,baz=2.7,slow=37
ULM **Lac du Bonnet** 74.77 16 P P 20 54 22.7 -1.3
ULM LR LR 21 28 52.1
E16A **East Helena** 74.79 27 ⇑P P 20 54 24.2 0.0
baz=74,SNR=23
MBWA **Marble Bar** 74.82 169 eP P 20 54 26.8 +2.3
DGMT **Dagmar** 74.86 22 ⇓P P 20 54 24.1 -0.4
baz=74,SNR=7.5
DGMT **Dagmar** 74.86 22 eP P 20 54 24.2 -0.4
comp=Z,45nm,0.9s,mb5.4
F14A **Wisdom** 74.97 29 ⇑P P 20 54 25.5 +0.2
baz=75
H10A **Noah's Angus R** 75.06 32 ⇓P P 20 54 25.4 -0.4
baz=75
E17A **Martinsdale** 75.08 27 ⇓P P 20 54 25.8 0.0
baz=75,SNR=15
H11A **Donnelly** 75.18 31 ⇑P P 20 54 26.3 -0.2
baz=75,SNR=31
F15A **Butte** 75.20 28 ⇓P P 20 54 26.6 +0.1
baz=75,SNR=14
LRM **Limekiln Ridge** 75.23 28 eP P 20 54 26.7 0.0
comp=Z,127nm,1.4s,mb5.7
E18A **Harlowton** 75.24 26 ⇓P P 20 54 26.6 -0.1
baz=75,SNR=17
I09A **Lost Marbles R** 75.29 33 ⇑P P 20 54 27.8 +0.6
baz=75,SNR=20
K05A **Summer Lake** 75.34 35 ⇑P P 20 54 28.2 +0.8
baz=75,SNR=11
G13A **Cobalt** 75.37 30 ⇑P P 20 54 27.1 -0.4
baz=75,SNR=15
G14A **Jackson** 75.46 29 ⇑P P 20 54 28.2 +0.1
baz=75
I10A **Payette** 75.49 32 ⇑P P 20 54 28.3 0.0
baz=75
F16A **Kennard Place,** 75.49 28 ⇓P P 20 54 28.1 -0.2
baz=75
YBH **Yreka Blue Hor** 75.57 37 eP P 20 54 28.6 -0.2
YBH pmax pmax
comp=Z,21nm,1.6s
YBH **Yreka Blue Hor** 75.57 37 eP P 20 54 28.6 -0.2
comp=Z,22nm,1.6s,mb4.8
DLMT **Dillon** 75.61 29 eP P 20 54 29.2 +0.3
comp=Z,49nm,1.1s,mb5.3
BOZ **Bozeman (W)** 75.62 28 ⇑P P 20 54 29.1 +0.1
baz=75,SNR=9.0
BOZ **Bozeman (W)** 75.62 28 eP P 20 54 29.0 0.0
BOZ pmax pmax
comp=Z,25nm,1.5s,mb4.9
BOZ **Bozeman (W)** 75.62 28 eP P 20 54 29.0 +0.1
comp=Z,25nm,1.5s,mb4.9
F17A **Fitzpatrick Pl** 75.65 27 ⇑P P 20 54 29.1 0.0
baz=75,SNR=16
H12A **Diamond D Ranc** 75.68 30 ⇓P P 20 54 28.8 -0.5
baz=75
G15A **Dillon** 75.81 29 ⇑P P 20 54 30.2 +0.1
baz=76,SNR=13
J09A **Fry Pan Ranch,** 75.85 33 ⇑P P 20 54 30.7 +0.4
baz=76,SNR=13
F18A **Big Timber** 75.90 26 ⇑P P 20 54 30.6 0.0
baz=76,SNR=13
I11A **Placerville** 75.91 31 ⇓P P 20 54 30.8 +0.1
baz=76,SNR=7.3
MCMT **McKenzie Canyo** 76.02 29 eP P 20 54 31.7 +0.4
comp=Z,8.7nm,1.0s,mb4.6
GCMT **Greycliff** 76.02 26 eP P 20 54 30.9 -0.4
comp=Z,38nm,1.3s,mb5.2
H14A **Leadore** 76.06 29 ⇑P P 20 54 31.8 +0.2
baz=76,SNR=22
J10A **Berg Farm, Mel** 76.09 32 ⇓P P 20 54 32.0 +0.3
baz=76
G17A **Pierce Place,** 76.17 27 ⇓P P 20 54 32.5 +0.4
baz=76,SNR=5.6
H15A **Lima** 76.27 29 ⇓P P 20 54 33.0 +0.3
baz=76,SNR=16
I12A **Atlanta** 76.28 31 ⇑P P 20 54 33.2 +0.5
baz=76,SNR=50
MOD **Modoc** 76.28 35 eP P 20 54 33.0 +0.2
comp=Z,42nm,1.3s,mb5.2
WRAB **Tennant Creek** 76.33 155 P P 20 54 32.0 -1.1
comp=Z,211nm,0.8s,mb6.1,SNR=8.5
WRAB **Tennant Creek** 76.33 155 eP P 20 54 31.6 -1.5
WRAB pmax pmax
comp=Z,30nm,0.8s,mb5.3
WRAB **Tennant Creek** 76.33 155 eP P 20 54 31.6 -1.5
comp=Z,30nm,0.8s,mb5.3
MFID **Camas Ranch** 76.40 32 ⇑P P 20 54 33.6 +0.1
baz=76,SNR=16
QLMT **Earthquake Lak** 76.42 28 eP P 20 54 33.9 +0.3
comp=Z,27nm,1.5s,mb5.0
I13A **Wildhorse Cree** 76.48 30 ⇑P P 20 54 33.8 -0.1
baz=76,SNR=23
G18A **Lazy EL Ranch,** 76.49 27 ⇓P P 20 54 33.5 -0.4
baz=76
H16A **Russell Place,** 76.59 28 ⇑P P 20 54 34.7 +0.2
baz=76,SNR=19
K10A **MacKenzie Ranc** 76.64 33 ⇓P P 20 54 35.2 +0.4
baz=76,SNR=12
WDC **Whiskeytown Da** 76.64 37 eP P 20 54 34.1 -0.8
WDC pmax pmax
comp=Z,23nm,1.4s,mb4.9
WDC **Whiskeytown Da** 76.64 37 eP P 20 54 34.1 -0.8
comp=Z,23nm,1.4s,mb4.9
AGMN **Agassiz Refuge** 76.66 16 eP P 20 54 33.1 -1.8
comp=Z,22nm,1.4s,mb4.9
I14A **Mackay** 76.66 30 ⇓P P 20 54 35.0 +0.1
baz=76,SNR=8.4
HLID **Hailey** 76.71 31 ⇑P P 20 54 35.4 +0.2
baz=76,SNR=21
HLID **Hailey** 76.71 31 eP P 20 54 35.4 +0.2
comp=Z,13nm,0.9s,mb4.9
J12A **Stokes Ranch,** 76.78 31 ⇓P P 20 54 36.4 +0.8
baz=76,SNR=29
I15A **Monteview** 76.88 29 ⇓P P 20 54 36.6 +0.4
baz=77
K11A **Parker Ranch,** 76.92 32 ⇑P P 20 54 36.8 +0.4
baz=77,SNR=9.4
J13A **Cove Ranch, Pi** 76.93 30 ⇓P P 20 54 37.0 +0.6
baz=77,SNR=24
YFT **Old Faithful** 76.94 28 eP P 20 54 38.3 +1.8
comp=Z,21nm,1.0s,mb5.0
LKWY **Lake** 76.95 27 eP P 20 54 38.4 +1.8
LKWY pmax pmax
comp=Z,15nm,0.9s,mb4.9
LKWY **Lake** 76.95 27 eP P 20 54 38.4 +1.8
comp=Z,15nm,0.9s,mb4.9
H17A **Grant Village** 77.06 28 ⇓P P 20 54 38.5 +1.3
baz=77,SNR=9.4
I16A **Newdale** 77.28 28 ⇓P P 20 54 39.2 +0.8
baz=77,SNR=8.8
K12A **Draper Farm, C** 77.40 31 ⇑P P 20 54 39.8 +0.7
baz=77,SNR=9.7
L10A **Juniper Basin** 77.40 33 ⇑P P 20 54 39.8 +0.7
baz=77
IMW **Indian Meadow** 77.42 28 eP P 20 54 39.9 +0.7
comp=Z,32nm,1.2s,mb5.1
J15A **Blackfoot** 77.45 29 ⇑P P 20 54 40.1 +0.7
baz=77,SNR=14
I17A **Pilgrim Ck.** 77.50 28 ⇓P P 20 54 40.8 +1.1
baz=77
L11A **Cat Creek Ranc** 77.55 32 ⇑P P 20 54 40.5 +0.6
baz=77,SNR=17
MTSU **Mount Surprise** 77.61 145 eP P 20 54 40.6 +0.2
comp=Z,68nm,1.3s,mb5.4
DCID1 **Drake Creek** 77.63 28 eP P 20 54 41.3 +0.9
comp=Z,78nm,1.2s,mb5.5
K13A **Stover Farm, H** 77.64 31 ⇑P P 20 54 41.4 +1.0
baz=77
LOHW **Long Hollow** 77.78 28 eP P 20 54 41.8 +0.6
TPAW **Teton Pass** 77.79 28 eP P 20 54 42.5 +1.2
comp=Z,75nm,1.4s,mb5.4
J16A **Bone** 77.80 29 ⇑P P 20 54 42.2 +0.8
baz=78,SNR=21
L12A **House Creek Ra** 77.81 32 ⇓P P 20 54 42.3 +0.9
baz=78,SNR=7.9
RRI2 **Red Ridge** 77.82 29 eP P 20 54 41.6 +0.2
comp=Z,37nm,1.5s,mb5.1
SNOW **Snow King Moun** 77.87 28 eP P 20 54 42.7 +0.9
comp=Z,9.2nm,0.6s,mb4.9
M10A **I.L. Ranch, Tu** 77.88 33 ⇓P P 20 54 42.7 +0.9
baz=78,SNR=5.4
I18A **Diamond G Ranc** 77.91 27 ⇓P P 20 54 42.5 +0.5
baz=78
REDW **Red Top Meadow** 77.94 28 eP P 20 54 42.0 -0.1
comp=Z,49nm,1.4s,mb5.2
J17A **Brown Place, J** 77.98 28 ⇓P P 20 54 42.9 +0.6
baz=78,SNR=6.8
K14A **Jones Ranch, D** 78.01 30 ⇓P P 20 54 43.4 +0.9
baz=78,SNR=7.7
BEKR **Beckwourth** 78.06 36 ⇑P P 20 54 43.0 +0.1
baz=78
K15A **Arbon** 78.07 30 ⇓P P 20 54 43.7 +0.9
baz=78,SNR=7.2
L13A **Double Diamond** 78.19 31 ⇓P P 20 54 44.7 +1.1
baz=78,SNR=8.3
M11A **Holland Ranch,** 78.20 32 ⇓P P 20 54 44.7 +1.0
baz=78,SNR=14
K16A **Soda Springs** 78.21 29 ⇑P P 20 54 44.3 +0.7
baz=78
J18A **Kendall Valley** 78.31 28 ⇓P P 20 54 44.6 +0.4
baz=78,SNR=35
AHID **Auburn Hatcher** 78.42 29 eP P 20 54 44.8 0.0
comp=Z,16nm,1.1s,mb4.9
L14A **Malta** 78.45 30 ⇓P P 20 54 45.7 +0.7
baz=78,SNR=8.7
K17A **Gardner Place,** 78.48 28 ⇑P P 20 54 45.1 -0.1
baz=78
M12A **Wells** 78.50 32 ⇓P P 20 54 45.9 +0.6
baz=78,SNR=10.0
N10A **Dunphy** 78.61 33 ⇓P P 20 54 46.7 +0.8
baz=78
L15A **Malad City** 78.74 30 ⇓P P 20 54 46.8 +0.2
baz=78,SNR=6.4
WCN **Washoe City** 78.77 36 ⇓P P 20 54 46.7 -0.1
baz=78
N11A **Elko Archery C** 78.78 33 ⇓P P 20 54 47.7 +0.9
baz=78
M13A **Montello** 78.78 31 ⇑P P 20 54 47.5 +0.7
baz=78
M13A **Montello** 78.78 31 eP P 20 54 47.5 +0.6
comp=Z,6.2nm,0.9s,mb4.5
K18A **Toltan Ranch,** 78.83 28 ⇑P P 20 54 47.4 +0.3
baz=78,SNR=7.0
BW06 **Boulder Array** 78.85 28 ⇓P P 20 54 46.3 -0.8
baz=78,SNR=8.5
PDAR **Pinedale Array** 78.85 28 P P 20 54 46.4 -0.8
comp=Z,4.9nm,0.8s,mb4.5,baz=5.7,slow=3.0,SNR=32
PDAR LR LR 21 33 44.4
comp=Z,723nm,19.8s,MS5.0,baz=350,slow=39
PDAR **Pinedale Array** 78.85 28 P P 20 54 46.4 -0.8
PDAR LR LR 21 33 44.4
N12A **Clover Valley,** 78.97 32 ⇓P P 20 54 48.6 +0.7
baz=79,SNR=12
N12A **Clover Valley,** 78.97 32 eP P 20 54 48.7 +0.8
comp=Z,18nm,0.6s,mb5.2
K19A **Absolon Red Bu** 78.99 27 ⇓P P 20 54 47.3 -0.7
baz=79
RSSD **Black Hills** 79.00 23 eP P 20 54 47.4 -0.6
RSSD pmax pmax
comp=Z,17nm,1.0s,mb4.9
RSSD **Black Hills** 79.00 23 eP P 20 54 47.4 -0.6
comp=Z,17nm,1.0s,mb4.9
O10A **Cortez Mining,** 79.00 33 ⇑P P 20 54 48.9 +0.8
baz=79
L16A **Fish Haven** 79.01 29 ⇓P P 20 54 48.3 +0.3
baz=79,SNR=9.8
L17A **Cokeville** 79.09 29 ⇓P P 20 54 48.4 -0.1
baz=79,SNR=9.2
M15A **Larsen Ranch,** 79.22 30 ⇑P P 20 54 49.3 +0.1
baz=79
N13A **Wendover, West** 79.23 32 ⇑P P 20 54 49.7 +0.4
baz=79,SNR=6.3
N13A **Wendover, West** 79.23 32 eP P 20 54 49.4 +0.1
comp=Z,26nm,0.9s,mb5.2
K20A **Yellowstone Ra** 79.28 27 ⇓P P 20 54 48.8 -0.7
baz=79,SNR=9.3
HWUT **Hardware Ranch** 79.35 29 eP P 20 54 50.0 +0.1
comp=Z,45nm,1.0s,mb5.3
TAM **Tamanrasset** 79.38 294 eP P 20 54 51.2 +0.9
TAM pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TAM **Tamanrasset** 79.38 294 eP P 20 54 51.2 +0.9
comp=Z,7.4nm,1.0s,mb4.6
O11A **Cowboy Ranch,** 79.42 33 ⇓P P 20 54 51.1 +0.7
baz=79,SNR=7.0
L18A **Fontenelle, Gr** 79.50 28 ⇑P P 20 54 50.4 -0.3
baz=79,SNR=6.7
L19A **Farson** 79.52 28 ⇑P P 20 54 50.4 -0.5
baz=79,SNR=6.6
N14A **Grayback Hills** 79.55 31 ⇑P P 20 54 51.3 +0.3
baz=79
O12A **Currie** 79.59 32 ⇑P P 20 54 51.8 +0.5
baz=79,SNR=6.6
M16A **Huntsville** 79.60 30 ⇓P P 20 54 51.2 0.0
baz=79
P10A **Eureka** 79.62 34 ⇓P P 20 54 51.7 +0.3
baz=79
CMB **Columbia Colle** 79.67 37 eP P 20 54 51.5 -0.2
N15A **Stansbury Isla** 79.72 30 ⇑P P 20 54 52.0 0.0
baz=79,SNR=6.0
M17A **Scullys Gap (B** 79.73 29 ⇑P P 20 54 51.8 -0.2
baz=79,SNR=9.9
KMBO **Kilima Mbogo** 79.77 254 P P 20 54 53.4 +0.8
comp=Z,5.0nm,0.9s,mb4.5,baz=177,slow=23,SNR=5.2
KMBO **Kilima Mbogo** 79.77 254 eP P 20 54 51.6 -0.9
KMBO pmax pmax
comp=Z,10.0nm,1.2s
KMBO **Kilima Mbogo** 79.77 254 eP P 20 54 51.6 -1.0
comp=Z,10nm,1.2s,mb4.6
ASAR **Alice Springs** 79.80 156 P P 20 54 51.5 -0.9
comp=Z,18nm,0.8s,mb5.0,baz=352,slow=5.3,SNR=69
L20A **Wamsutter** 79.89 27 ⇓P P 20 54 52.6 -0.3
baz=80,SNR=12
P11A **Circle Ranch,** 79.92 33 ⇓P P 20 54 53.5 +0.5
baz=80
M18A **Lyman** 79.95 28 ⇑P P 20 54 53.0 -0.2
baz=80
O13A **Hicks Ranch, I** 79.96 32 ⇓P P 20 54 53.8 +0.5
baz=80
N16A **Rees Ranch, Co** 80.05 30 ⇑P P 20 54 54.1 +0.4
baz=80
NVAR **Mina Array Bea** 80.06 36 P P 20 54 53.5 -0.4
comp=Z,5.1nm,0.8s,mb4.5,baz=300,slow=3.9,SNR=14
NVAR **Mina Array Bea** 80.06 36 P P 20 54 53.5 -0.4
MEEK **Meekatharra** 80.12 171 eP P 20 54 56.2 +2.2
M19A **Rock Springs** 80.13 28 ⇑P P 20 54 53.9 -0.2
baz=80
N17A **Moffit Pass** 80.17 29 ⇑P P 20 54 54.4 0.0
baz=80
L21A **Rawlins** 80.19 26 ⇑P P 20 54 53.8 -0.6
baz=80
DUG **Dugway** 80.27 31 ⇓P P 20 54 55.3 +0.4
baz=80,SNR=9.6
DUG **Dugway** 80.27 31 eP P 20 54 54.8 -0.1
DUG pmax pmax
comp=Z,23nm,1.1s,mb5.0
DUG **Dugway** 80.27 31 eP P 20 54 54.8 -0.1
comp=Z,23nm,1.1s,mb5.0
O15A **The Old Anders** 80.29 31 ⇑P P 20 54 55.5 +0.5
baz=80
JLU **Jordanelle** 80.30 30 eP P 20 54 53.5 -1.6
comp=Z,20nm,1.3s,mb4.9
Q10A **Clear Creek Ra** 80.36 34 ⇓P P 20 54 55.4 0.0
baz=80
M20A **Sweetwater, Wa** 80.41 27 ⇑P P 20 54 55.9 +0.2
baz=80,SNR=5.2
N18A **Larsen Ranch,** 80.48 28 ⇓P P 20 54 55.6 -0.4
baz=80
M21A **Separation Pea** 80.53 26 ⇓P P 20 54 55.6 -0.7
baz=80
P13A **Bates Ranch, G** 80.56 32 ⇑P P 20 54 56.8 +0.3
baz=80
Q11A **Duckwater** 80.59 33 ⇑P P 20 54 57.1 +0.4
baz=80,SNR=9.4
MLAC **Mammoth Lakes** 80.59 36 ⇑P P 20 54 57.5 +0.8
baz=80
O16A **Springville** 80.65 30 ⇑P P 20 54 57.2 +0.2
baz=80
Q12A **Willow Creek R** 80.68 33 ⇑P P 20 54 57.6 +0.4
baz=80,SNR=9.1
N19A **John Jarvie Ra** 80.69 28 ⇑P P 20 54 56.7 -0.5
baz=80,SNR=9.1
NLU **North Lily Min** 80.71 30 eP P 20 54 57.7 +0.4
comp=Z,23nm,1.0s,mb5.1
P14A **Drum Mountains** 80.74 31 ⇑P P 20 54 57.8 +0.4
baz=80,SNR=7.1
R10A **Warm Springs** 80.87 34 ⇓P P 20 54 58.4 +0.2
baz=81
O17A **Robinson Place** 80.89 29 ⇓P P 20 54 59.0 +0.8

baz=81,SNR=12
M22A Cedar Creek Ra 80.92 26 ⇑P P 20 54 58.1 -0.3
baz=81,SNR=5.5
ECSD EROS Data Cent 80.94 18 eP P 20 54 57.0 -1.5
comp=Z,44nm,1.5s,mb5.2
P15A Leamington 81.00 31 ⇑P P 20 54 59.1 +0.3
baz=81,SNR=12
N20A Spence Gulch, 81.00 27 ⇑P P 20 54 59.4 +0.6
baz=81,SNR=14
Q13A Wheeler Ranch, 81.02 32 ⇓P P 20 54 59.3 +0.3
baz=81
O18A Roosevelt 81.04 29 ⇑P P 20 54 59.3 +0.2
baz=81,SNR=5.3
R11A Troy Canyon, C 81.06 34 ⇑P P 20 54 59.2 0.0
baz=81,SNR=7.5
S10A Tonopah Range, 81.11 35 ⇓P P 20 54 59.6 +0.2
baz=81,SNR=20
P16A Fountain Green 81.15 30 ⇑P P 20 55 00.3 +0.6
baz=81
Q14A Sevier Lake (B 81.22 32 ⇑P P 20 55 00.2 +0.2
baz=81
O19A Miners Draw (B 81.26 28 ⇓P P 20 55 00.2 0.0
baz=81,SNR=14
N21A Black Mountain 81.27 27 ⇓P P 20 55 00.4 +0.1
baz=81,SNR=11
PHWY Pilot Hill 81.31 25 eP P 20 55 00.4 -0.1
comp=Z,41nm,1.5s,mb5.1
TIN Tinemaha 81.32 36 ⇓P P 20 55 01.4 +0.8
baz=81
Q15A Fillmore 81.49 31 ⇓P P 20 55 01.8 +0.3
baz=81
N22A Wattenberg Ran 81.52 26 ⇓P P 20 55 01.9 +0.3
baz=81,SNR=8.5
P17A Butcher Ranch, 81.56 30 ⇓P P 20 55 01.8 0.0
baz=81,SNR=7.7
P18A Preston Nutter 81.56 29 ⇑P P 20 55 02.1 +0.3
baz=81,SNR=7.7
RCTC Rector, Farmer 81.62 37 ⇑P P 20 55 02.5 +0.3
baz=81
O20A White River Ci 81.66 28 ⇓P P 20 55 02.3 -0.1
baz=81,SNR=9.4
GRAC Grapevine Rang 81.67 35 ⇑P P 20 55 03.3 +0.9
baz=81
R13A O'Grain Ranch, 81.74 32 ⇑P P 20 55 03.2 +0.4
baz=81
O21A Pagoda 81.80 27 ⇑P P 20 55 03.4 +0.3
baz=82
P19A Cripple Cowboy 81.92 28 ⇓P P 20 55 03.5 -0.2
baz=82,SNR=14
Q16A Castle Valley 81.94 30 ⇓P P 20 55 04.1 +0.2
baz=82,SNR=5.3
SRU San Rafael 81.95 30 ⇓P P 20 55 03.8 -0.1
baz=82
SRU San Rafael 81.95 30 eP P 20 55 03.4 -0.5
comp=Z,5.2nm,0.9s,mb4.5
S12A Delamar Landin 81.97 33 ⇓P P 20 55 04.8 +0.7
baz=82
MSU Marysvale 82.00 31 eP P 20 55 04.3 +0.1
MSU pmax pmax
comp=Z,37nm,1.6s,mb5.1
MSU Marysvale 82.00 31 eP P 20 55 04.3 +0.1
comp=Z,37nm,1.6s,mb5.1
Q18A Rafter H Ranch 82.08 29 ⇓P P 20 55 04.1 -0.5
baz=82,SNR=8.2
VES Vestal, Richgr 82.10 37 ⇓P P 20 55 05.5 +0.7
baz=82
T11A Corn Creek, Al 82.19 34 ⇓P P 20 55 05.6 +0.5
baz=82,SNR=6.0
P20A De Beque 82.21 28 ⇓P P 20 55 05.3 +0.1
baz=82
SMMC Simmler 82.24 38 ⇑P P 20 55 05.4 -0.1
baz=82
R15A Junction 82.25 31 ⇑P P 20 55 06.5 +1.0
baz=82
MORW Morawa 82.32 173 eP P 20 55 04.6 -1.0
S13A Holt Ranch, En 82.32 33 ⇑P P 20 55 06.0 +0.1
baz=82,SNR=5.6
FURC Furnace Creek, 82.32 35 ⇑P P 20 55 06.5 +0.6
baz=82
S14A Cedar City 82.38 32 ⇑P P 20 55 06.4 +0.2
baz=82
R16A Teasdale 82.43 31 ⇓P P 20 55 06.9 +0.5
baz=82,SNR=9.5
MPMC Manual Prospec 82.47 36 ⇑P P 20 55 06.8 +0.1
baz=82,SNR=8.8
R17A Hanksville Air 82.54 30 ⇑P P 20 55 06.5 -0.5
baz=82,SNR=17
U10A Ash Meadows, A 82.55 35 ⇓P P 20 55 07.7 +0.6
baz=82
PKM Peak Mountain 82.67 38 ⇓P P 20 55 08.4 +0.7
baz=82
ISCO Idaho Springs 82.68 26 eP P 20 55 07.4 -0.3
ISCO pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
ISCO Idaho Springs 82.68 26 eP P 20 55 07.4 -0.3
comp=Z,8.1nm,1.1s,mb4.7
S15A Panguitch 82.71 32 ⇑P P 20 55 09.0 +1.1
baz=82
Q20A Ridgley Place, 82.74 28 ⇑P P 20 55 07.9 -0.2
baz=82
R18A Canyonlands Na 82.81 29 ⇑P P 20 55 07.7 -0.7
baz=82,SNR=8.5
T13A Saint George 82.82 33 ⇑P P 20 55 08.9 +0.4
baz=82
T12A Moapa 82.82 34 ⇓P P 20 55 08.9 +0.4
baz=82
U11A Corn Creek 82.87 34 ⇓P P 20 55 09.6 +0.8
baz=83
SMCO Snowmass 82.90 27 eP P 20 55 09.5 +0.7
comp=Z,19nm,0.3s,mb5.6
SHOC Shoshone 83.04 35 ⇑P P 20 55 10.2 +0.5
baz=83
T14A Hurricane 83.05 32 ⇑P P 20 55 10.2 +0.5
baz=83
Q21A Lamborn Mesa, 83.06 28 ⇓P P 20 55 10.0 +0.3
baz=83
R19A Curley Farm, L 83.08 29 ⇓P P 20 55 10.0 +0.2
baz=83,SNR=7.2
PV04 Paradox Valley 83.09 29 eP P 20 55 09.3 -0.6
Q22A Crested Butte, 83.21 27 ⇓P P 20 55 10.7 +0.2
baz=83,SNR=7.6
S17A Black Ridge (B 83.23 30 ⇓P P 20 55 10.6 0.0
baz=83,SNR=16
SCIA State Center 83.31 16 eP P 20 55 09.7 -1.2
U13A Pakoon Wash 83.35 33 ⇓P P 20 55 11.4 +0.2
baz=83
EDW2 Edwards Air Fo 83.35 37 ⇓P P 20 55 11.3 0.0
baz=83
GSC Goldstone 83.39 36 eP P 20 55 11.8 +0.3
GSC pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
GSC Goldstone 83.39 36 eP P 20 55 11.8 +0.3
comp=Z,10nm,1.1s,mb4.8
S18A Hurst Farm, Bl 83.42 30 ⇓P P 20 55 11.4 -0.2
baz=83,SNR=12
PV01 Paradox Valley 83.43 29 eP P 20 55 11.8 +0.2
comp=Z,2μm,1.2s
R20A Redvale 83.43 28 ⇓P P 20 55 12.2 +0.6
baz=83,SNR=5.0
R21A Cimarron 83.50 28 ⇓P P 20 55 12.4 +0.4
baz=83,SNR=7.1
BSC Santa Cruz Isl 83.54 38 ⇑P P 20 55 12.3 0.0
baz=83
T16A Glen Canyon Da 83.62 31 ⇓P P 20 55 11.8 -0.7
baz=83
S19A Harvey Farm, M 83.62 29 ⇓P P 20 55 12.1 -0.6
baz=83
V12A Nelson 83.68 34 ⇑P P 20 55 13.4 +0.5
baz=83
R22A Saguache, Gunn 83.85 27 ⇓P P 20 55 14.5 +0.8
baz=84,SNR=8.9
U15A North Rim 83.88 32 ⇑P P 20 55 13.5 -0.4
baz=84
T18A Mexican Hat 83.97 30 ⇓P P 20 55 14.1 -0.3
baz=84,SNR=11
BFSC Mount Baldy St 84.05 37 ⇓P P 20 55 14.7 -0.2
baz=84
S21A Coal Bank Pass 84.09 28 ⇓P P 20 55 15.7 +0.7
baz=84,SNR=9.9
U17A Shonto 84.23 31 ⇑P P 20 55 15.9 +0.1
baz=84,SNR=11
GMRC Granite Mounta 84.27 35 ⇓P P 20 55 16.2 +0.3
baz=84,SNR=6.5
MVCO Mesa Verde 84.31 29 ⇑P P 20 55 16.0 -0.2
baz=84
MVCO Mesa Verde 84.31 29 eP P 20 55 16.3 +0.2
comp=Z,28nm,1.4s,mb5.2
V14A Boquillas Ranc 84.35 33 ⇑P P 20 55 17.1 +0.7
baz=84,SNR=14
V15A Kaibab Nationa 84.48 32 ⇑P P 20 55 17.5 +0.5
baz=84,SNR=8.3
U16A Tuba City 84.51 31 ⇑P P 20 55 17.5 +0.3
baz=84,SNR=5.4
T19A Beclabito 84.51 29 ⇑P P 20 55 17.2 +0.1
baz=84,SNR=18
CIS Catalina Islan 84.52 38 ⇑P P 20 55 16.9 -0.4
baz=84
W13A Hualapai Mount 84.58 34 ⇓P P 20 55 17.8 +0.3
baz=84,SNR=7.3
U18A Rough Rock, Ch 84.64 30 ⇑P P 20 55 17.8 0.0
baz=84,SNR=6.6
SDCO Great Sand Dun 84.64 26 eP P 20 55 17.9 +0.1
comp=Z,24nm,1.3s,mb5.2
W14A Seligman 84.74 33 ⇓P P 20 55 18.4 0.0
baz=84
U19A Dine' College, 84.95 30 ⇑P P 20 55 19.0 -0.4
baz=85
IRM Iron Mountain 85.00 35 ⇑P P 20 55 20.2 +0.5
baz=85,SNR=12
WUAZ Wupatki 85.01 32 ⇓P P 20 55 20.1 +0.4
baz=85,SNR=5.8
WUAZ Wupatki 85.01 32 eP P 20 55 19.0 -0.7
comp=Z,23nm,1.2s,mb5.2
W15A Williams 85.03 32 ⇓P P 20 55 20.6 +0.8
baz=85,SNR=5.8
PFO Pinyon Flat Ob 85.05 36 ⇑P P 20 55 19.6 -0.3
baz=85
U20A Newcomb 85.08 29 ⇓P P 20 55 19.9 -0.1
baz=85
V17A Tonalea, Kykot 85.09 31 ⇓P P 20 55 20.5 +0.4
baz=85,SNR=20
PDMCI Parker Dam,Lak 85.22 34 ⇑P P 20 55 20.6 -0.2
baz=85
V18A Ganado 85.27 30 ⇑P P 20 55 21.2 +0.2
baz=85,SNR=8.4
W16A Flagstaff 85.35 32 ⇑P P 20 55 22.0 +0.7
baz=85
BC3 Big Chuckw Mtn 85.36 35 ⇑P P 20 55 21.7 +0.2
baz=85
FORT Forrest 85.48 163 eP P 20 55 24.1 +2.3
comp=Z,24nm,0.8s,mb5.4
X14A Yava 85.48 33 ⇑P P 20 55 22.5 +0.5
baz=85,SNR=6.9
V19A Window Rock 85.54 30 ⇑P P 20 55 22.3 0.0
baz=85
Y12C Blythe 85.59 35 ⇓P P 20 55 22.9 +0.2
baz=85
V20A Brimhall 85.63 29 ⇓P P 20 55 22.6 -0.1
baz=85
X15A Humboldt 85.68 33 ⇑P P 20 55 23.8 +0.7
baz=85,SNR=6.6
MONP Monument Peak 85.71 37 ⇓P P 20 55 23.5 +0.3
baz=85
Y13A Salome 85.77 34 ⇓P P 20 55 23.8 +0.3
baz=86
V21A Milan 85.87 29 ⇓P P 20 55 23.9 -0.1
baz=86
SWSC Sam W. Stewart 85.88 36 ⇓P P 20 55 24.2 +0.1
baz=86
W18A Petrified Fore 85.88 31 ⇑P P 20 55 24.2 +0.2
baz=86
Y14A Wickenburg 85.93 33 ⇑P P 20 55 24.5 +0.2
baz=86
V22A San Miguel Ran 85.97 28 ⇓P P 20 55 24.8 +0.3
baz=86,SNR=7.0
W19A Sanders 85.99 30 ⇓P P 20 55 25.0 +0.4
baz=86,SNR=5.3
X16A Lo Mia Camp, P 86.00 32 ⇓P P 20 55 25.4 +0.8
baz=86,SNR=5.2
GLA Glamis 86.12 35 ⇑P P 20 55 25.2 0.0
baz=86
Y15A Casa Rosa Ranc 86.14 33 ⇓P P 20 55 25.3 0.0
baz=86
W20A Ramah 86.25 30 ⇓P P 20 55 25.8 -0.1
baz=86
ACSO Alum Creek Sta 86.29 9 eP P 20 55 24.6 -1.4
comp=Z,113nm,0.6s,mb6.3
V23A Ortiz Mt. (NFS 86.33 28 ⇑P P 20 55 26.6 +0.3
baz=86
X18A Snowflake 86.36 31 ⇓P P 20 55 26.5 0.0
baz=86
U26A Atchley Ranch, 86.38 26 ⇓P P 20 55 26.2 -0.3
baz=86
Z13A Yuma Proving G 86.39 34 ⇓P P 20 55 26.9 +0.3
baz=86,SNR=8.7
Y16A Circle Bar Ran 86.48 32 ⇑P P 20 55 27.6 +0.6
baz=86,SNR=8.4
X19A St. Johns 86.66 30 ⇑P P 20 55 28.1 +0.2
baz=86
113A Mohawk Valley, 86.74 35 ⇓P P 20 55 28.5 +0.2
baz=86
X20A Quemado 86.79 30 ⇓P P 20 55 29.3 +0.8
baz=86,SNR=17
RMQ Roma 86.85 145 eP P 20 55 32.8 +4.2
comp=Z,18nm,1.1s,mb5.2
Y17A Roosevelt 86.85 32 ⇑P P 20 55 29.5 +0.7
baz=86
W23A Wyner Place, 86.89 28 ⇑P P 20 55 29.5 +0.5
baz=87,SNR=6.8
V26A Tequesquite Ra 86.93 26 ⇓P P 20 55 28.6 -0.5
baz=87
ANMO Albuquerque 87.00 28 eP P 20 55 29.3 -0.2
ANMO pmax pmax
comp=Z,21nm,1.4s
ANMO Albuquerque 87.00 28 eP P 20 55 29.3 -0.2
comp=Z,21nm,1.4s,mb5.2
W24A Lazy 6 Ranch, 87.05 27 ⇓P P 20 55 29.9 +0.1
baz=87
114A Black Gap (USA 87.06 34 ⇑P P 20 55 30.2 +0.3
baz=87
X21A Alamocita Cree 87.09 29 ⇑P P 20 55 30.8 +0.8
baz=87,SNR=12
Y19A Nutrioso 87.11 31 ⇑P P 20 55 31.1 +1.0
baz=87,SNR=6.2
X22A Bernardo 87.26 29 ⇑P P 20 55 31.6 +0.8
baz=87
W25A X Bar L Ranch, 87.30 26 ⇑P P 20 55 30.8 -0.2
baz=87
LAZ Ladron 87.32 29 eP P 20 55 32.2 +1.1
comp=Z,12nm,1.4s,mb4.9
115A Sonoran Desert 87.32 33 ⇓P P 20 55 31.3 +0.2
baz=87
Y20A Horse Springs, 87.42 30 ⇓P P 20 55 32.3 +0.8
baz=87,SNR=5.3
W26A Owens Ranch, T 87.60 26 ⇓P P 20 55 32.6 +0.1
baz=87
116A Eloy 87.62 33 ⇑P P 20 55 32.9 +0.3
baz=87
Y22D IRIS PASSCAL I 87.69 29 ⇑P P 20 55 33.5 +0.6
baz=87
BNM Barren Site 87.70 28 eP P 20 55 33.4 +0.4
comp=Z,14nm,1.4s,mb5.0
Y22A Socorro 87.81 29 ⇓P P 20 55 34.1 +0.7
baz=88,SNR=6.9
214A Organ Pipe Nat 87.81 34 ⇑P P 20 55 33.5 0.0
baz=88
W27A Bowe Ranch, En 87.81 25 ⇑P P 20 55 33.3 -0.2
baz=88,SNR=6.6
X25A Clemmons Ranch 87.90 27 ⇑P P 20 55 33.8 -0.1
baz=88
Y23A Lovelace Mesa, 88.07 28 ⇑P P 20 55 34.8 +0.1
baz=88
Z20A Nine Sixteen R 88.09 30 ⇓P P 20 55 35.4 +0.6
baz=88,SNR=8.4
X26A CR and CF Fran 88.10 26 ⇓P P 20 55 35.0 +0.2
baz=88
118A Homack Ranch, 88.11 32 ⇓P P 20 55 35.2 +0.3
baz=88
X27A F and S Farms, 88.20 26 ⇓P P 20 55 35.3 0.0
baz=88
Y24A Capitan 88.25 28 ⇑P P 20 55 35.6 0.0
baz=88
Z22A Elephant Butte 88.44 29 ⇓P P 20 55 36.8 +0.4
baz=88,SNR=10.0
Y25A Mesa, Roswell 88.46 27 ⇑P P 20 55 36.4 -0.1
baz=88,SNR=6.6
120A U Bar Ranch, L 88.61 31 ⇑P P 20 55 37.9 +0.7
baz=88
217A Green Valley 88.63 33 ⇓P P 20 55 38.1 +0.7
baz=88,SNR=7.3
Z23A Rita Site, Whi 88.65 28 ⇑P P 20 55 37.7 +0.2
baz=88
218A Dragoon 88.70 32 ⇓P P 20 55 38.5 +0.8
baz=88,SNR=6.9
Z24A Sheeppen Canyo 88.83 28 ⇑P P 20 55 38.8 +0.5
baz=88,SNR=8.8
121A Cookes Peak, D 88.88 30 ⇓P P 20 55 38.8 +0.2
baz=89
Y27A Causey 88.90 26 ⇑P P 20 55 38.6 -0.1
baz=89
219A White Tail Can 88.92 31 ⇑P P 20 55 39.1 +0.4
baz=89,SNR=7.2
MSTX Muleshoe 88.92 26 ⇑P P 20 55 38.7 0.0
baz=89
Z25A Roswell 89.06 27 ⇑P P 20 55 39.6 +0.3
baz=89,SNR=5.5
BBOO Buckleboo 89.08 157 eP P 20 55 37.1 -2.0
comp=Z,8.0nm,1.1s,mb5.0
WMOK Wichita Mounta 89.16 22 eP P 20 55 40.0 +0.2
WMOK pmax pmax
comp=Z,27nm,1.2s,mb5.5
WMOK Wichita Mounta 89.16 22 eP P 20 55 40.0 +0.2
comp=Z,27nm,1.2s,mb5.5
318A Bisbee 89.21 32 ⇑P P 20 55 40.2 +0.1
baz=89
123A Bell Site, Whi 89.23 29 ⇑P P 20 55 40.1 -0.1
baz=89
220A Playas Peak, P 89.24 31 ⇑P P 20 55 40.7 +0.4
baz=89,SNR=7.2
Z26A Caprock 89.27 27 ⇓P P 20 55 40.0 -0.4
baz=89,SNR=7.6
TOA0 Torodi Ar. Sit 89.29 291 eP P 20 55 40.5 -0.2
TORD Torodi Ar. Bea 89.29 291 P P 20 55 40.3 -0.4
comp=Z,12nm,0.9s,mb5.2,baz=32,slow=3.8,SNR=23
TORD PP PP 20 59 11.5 +0.6
comp=Z,4.5nm,1.1s,baz=37,slow=6.3,SNR=3.8
TORD LR LR 21 43 00.3
comp=Z,267nm,20.4s,MS4.7,baz=30,slow=40
TORD Torodi Ar. Bea 89.29 291 P P 20 55 40.3 -0.4
TORD PP PP 20 59 11.5 +0.6
TORD LR LR 21 43 00.3
221A Mesquite Ranch 89.36 30 ⇑P P 20 55 40.7 -0.1
baz=89
124A Stringfield Ra 89.40 28 ⇓P P 20 55 41.3 +0.3
baz=89,SNR=5.3
Z27A Tatum 89.43 26 ⇑P P 20 55 40.7 -0.4
baz=89,SNR=9.8
222A Williams Famil 89.48 30 ⇑P P 20 55 41.4 +0.1
baz=89
319A Douglas 89.49 32 ⇑P P 20 55 41.4 -0.1
baz=89
CPRX Cap Rock 89.52 27 eP P 20 55 41.1 -0.5
comp=Z,4.2nm,0.9s,mb4.8
STKA Stephens Creek 89.61 152 eP P 20 55 40.7 -0.9
comp=Z,4.4nm,0.9s,mb4.8
STKA Stephens Creek 89.61 152 P P 20 55 40.5 -1.2
comp=Z,5.7nm,0.9s,mb4.9,baz=323,slow=4.6,SNR=6.4
STKA Stephens Creek 89.61 152 eP P 20 55 40.3 -1.3
comp=Z,4.2nm,1.3s,mb4.6
125A Gardner Draw, 89.66 27 ⇓P P 20 55 41.9 -0.3
baz=89
320A Kipp Ranch, An 89.76 31 ⇑P P 20 55 42.9 +0.1
baz=90
224A Corundas Mount 89.96 28 ⇑P P 20 55 43.8 +0.2
baz=90,SNR=8.8
DZM Mont Dzumac 90.23 128 eS S 21 06 40.4 +1.8
comp=Z,80nm,25.8s
DZM eSS SS 21 12 36.3 -2.3
comp=Z,286nm,29.8s
DZM eLR LR 21 24 40.6
comp=Z,344nm,24.0s
325A Bean Ranch, Si 90.78 28 ⇓P P 20 55 47.8 +0.3
baz=90,SNR=7.7
326A Caldwell Ranch 91.11 27 ⇑P P 20 55 48.7 -0.3
baz=91,SNR=5.6
425A Indio Mountain 91.33 28 ⇑P P 20 55 50.3 +0.3
baz=91,SNR=5.3
427A Hayter Ranch, 91.71 27 ⇓P P 20 55 51.8 0.0
baz=91
428A Kincaid Ranch, 92.02 26 ⇓P P 20 55 53.3 +0.1
baz=92,SNR=5.7
526A Mary Lane Ranc 92.27 28 ⇑P P 20 55 54.5 +0.1
baz=92
527A Woodward Ranch 92.32 27 ⇑P P 20 55 54.5 -0.1
baz=92
626A Big Bend Ranch 92.73 28 ⇓P P 20 55 55.8 -0.7
baz=92
627A Terlingua Ranc 93.03 27 ⇓P P 20 55 57.8 -0.1
baz=93,SNR=6.8
TXAR Lajitas Array 93.07 28 P P 20 55 56.9 -1.1
comp=Z,1.3nm,0.9s,mb4.4,baz=11,slow=1.3,SNR=8.1
TXAR PP PP 20 59 30.3 -10
comp=Z,2.3nm,1.1s,baz=336,slow=2.7,SNR=4.2
628A Black Gap, Mar 93.14 27 ⇓P P 20 55 58.1 -0.3
baz=93,SNR=9.2
DBIC Dimbokro 98.24 293 LR LR 21 47 34.3
comp=Z,432nm,19.0s,MS5.0,baz=16,slow=40
TAOE Nuku Hiva Isla 109.79 78 eLR LR 21 33 41.5
comp=Z,551nm,28.8s
PPT Papeete 111.02 91 eSS SS 21 17 17.0 -11
comp=Z,488nm,29.2s
PPT eLR LR 21 34 14.2
comp=Z,881nm,30.2s
MAW Mawson 125.33 200 PKP PKPdf 21 01 44.2 +0.6
comp=Z,3.0nm,1.0s,baz=9.1,slow=6.8,SNR=2.3
LPAZ La Paz 142.94 355 PKP PKPdf 21 02 17.6 -0.4
comp=Z,2.4nm,0.8s,baz=13,slow=5.3,SNR=6.1
LPAZ La Paz 142.94 355 ePKPdf PKPdf 21 02 17.5 -0.5
QSPA South Pole Qui 143.09 180 PKP PKPdf 21 02 15.0 -1.4
comp=Z,2.9nm,0.8s,baz=276,slow=3.7,SNR=18
QSPA South Pole Qui 143.09 180 PKP PKPdf 21 02 15.0 -1.4
VNA2 Neumayer--Watz 147.32 213 ePKPdf PKPdf 21 02 24.7 +0.8
VNA1 Neumayer--Stat 147.60 214 ePKPdf PKPdf 21 02 25.8 +1.4
CPUP Villa Florida 151.01 333 PKP PKPdf 21 02 30.2 -1.1
comp=Z,4.7nm,0.8s,baz=255,slow=8.9,SNR=3.3
CPUP PKPbc PKPbc 21 02 35.6 -1.4
comp=Z,4.7nm,0.8s,baz=1.7,slow=3.2,SNR=13
CPUP Villa Florida 151.01 333 PKP PKPdf 21 02 30.2 -1.1
CPUP PKPbc PKPbc 21 02 35.6 -1.4

*DDA **20** 20:49:16.9, 37°.49N×38°.73E, h7km±2km, Md3.0*
*ISCJB **20** 20:49:17.8±0.6, 37°.50N±0°.04×38°.68E±0°.04, h5km±6km,*
Error ellipse: s-maj=7.0km s-min=4.5km az=159.0
*CSEM **20** 20:49:17.7±0.3, 37°.50N×38°.70E, h8km, MD2.8, Error*
ellipse: s-maj=7.8km s-min=5.4km az=162.0
*ISK **20** 20:49:17.3, 37°.49N×38°.68E, h6km, MD2.8*
ISC 20 20:49:18.1±0.6, 37°.48N±0°.04×38°.69E±0°.04, h8km±4km,
n22, σ0.93/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.11**	**112**	*e*PG	**Pg**	**20 49 20.4**	**-0.1**
URFA				*e*SG	**Sg**	**20 49 22.6**	**+0.3**
URFA	**Urfa**	**0.11**	**112**	*e*Pg	**Pg**	**20 49 20.5**	**-0.1**
URFA				*e*Sg	**Sg**	**20 49 22.6**	**+0.3**
ATAB	**Bozova**	**0.32**	**268**	*i* P	**Pg**	**20 49 23.6**	**-0.6**
ATAB				*i* S	**Sg**	**20 49 28.9**	**+0.5**
ATAB	**Bozova**	**0.32**	**268**	*i* P	**Pg**	**20 49 23.6**	**-0.7**
ATAB				*i* S	**Sg**	**20 49 28.9**	**+0.4**
AKCD	**Akcadag**	**1.01**	**323**	*i* P	**Pg**	**20 49 36.6**	**-0.9**
AKCD				*i* S	**Sg**	**20 49 51.6**	**+0.8**
AKCD	**Akcadag**	**1.01**	**323**	*i* P	**Pg**	**20 49 36.6**	**-1.0**
AKCD				*i* S	**Sg**	**20 49 51.6**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.02**	**28**	*e*PG	**Pg**	**20 49 37.4**	**-0.2**
SVRC				*e*SG	**Sg**	**20 49 51.5**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.02**	**28**	*e*Pg	**Pg**	**20 49 37.4**	**-0.2**
SVRC				*e*Sg	**Sg**	**20 49 51.6**	**+0.7**
DIYA	**Diyarbakir**	**1.22**	**68**	*i* P	**Pb**	**20 49 39.5**	**-1.8**
DIYA				*i* S	**Sb**	**20 49 58.3**	**+1.1**
DIYA	**Diyarbakir**	**1.22**	**68**	*i* P	**Pb**	**20 49 39.5**	**-1.9**
DIYA				*i* S	**Sb**	**20 49 58.3**	**+1.1**
GAZ	**Gaziantep**	**1.22**	**256**	*e*PN	**Pn**	**20 49 41.0**	**-0.4**
GAZ				*e*SN	**Sn**	**20 49 57.6**	**-0.6**
GAZ	**Gaziantep**	**1.22**	**256**	*e*Pn	**Pn**	**20 49 41.0**	**-0.5**
GAZ				*e*Sn	**Sn**	**20 49 57.6**	**-0.6**
KMRS	**Kahramanmaras**	**1.43**	**271**	*e*PN	**Pn**	**20 49 43.9**	**-0.3**
KMRS	**Kahramanmaras**	**1.43**	**271**	*e*Pn	**Pn**	**20 49 43.9**	**-0.4**
KUZU	**Kuzuini**	**1.47**	**242**	*i* P	**Pn**	**20 49 45.8**	**+0.8**
KUZU				*i* S	**Sn**	**20 50 05.5**	**+1.1**
KUZU	**Kuzuini**	**1.47**	**242**	*i* P	**Pn**	**20 49 45.8**	**+0.9**
KUZU				*i* S	**Sn**	**20 50 05.5**	**+1.1**
PTK	**Pertek**	**1.51**	**21**	*e*PN	**Pn**	**20 49 45.8**	**+0.4**
PTK	**Pertek**	**1.51**	**21**	*e*Pn	**Pn**	**20 49 45.8**	**+0.3**
DARE	**Darende-Malaty**	**1.62**	**335**	*e*PN	**Pn**	**20 49 44.8**	**-2.2**
DARE	**Darende-Malaty**	**1.62**	**335**	*e*Pn	**Pn**	**20 49 44.8**	**-2.2**
SARI	**SarD1z-Kayseri**	**1.98**	**308**	*e*PN	**Pn**	**20 49 53.1**	**+1.2**
SARI	**SarD1z-Kayseri**	**1.98**	**308**	*e*Pn	**Pn**	**20 49 53.1**	**+1.2**

*ISCJB **20** 20:51:09.0±0.6, 36°.85N±0°.04×29°.13E±0°.04, h10km, Error ellipse: s-maj=5.9km s-min=4.3km az=140.5*
*CSEM **20** 20:51:08.9±0.2, 36°.85N×29°.15E, h10km, MD2.8, Error ellipse: s-maj=6.2km s-min=5.0km az=160.0*
*ISK **20** 20:51:08.0, 36°.87N×29°.12E, h3km, MD2.8*
*DDA **20** 20:51:10.1, 36°.91N×29°.13E, h7km±7km, Md2.8*
ISC 20 20:51:09.4±0.6, 36°.85N±0°.04×29°.12E±0°.06, h5km±11km, n18, σ1§07/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.22**	**188**	*e*PG	**Pg**	**20 51 13.3**	**-0.4**
FETY				*e*SG	**Sg**	**20 51 17.3**	**+0.7**
FETY	**Fethiye**	**0.22**	**188**	*e*Pg	**Pg**	**20 51 13.3**	**-0.4**
FETY				*e*Sg	**Sg**	**20 51 17.3**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.42**	**45**	*e*PG	**Pg**	**20 51 16.8**	**-0.8**
GLHS				*e*SG	**Sg**	**20 51 23.1**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.42**	**45**	*e*Pg	**Pg**	**20 51 16.8**	**-0.8**
GLHS				*e*Sg	**Sg**	**20 51 23.1**	**0.0**
GOLH	**Golhisar**	**0.52**	**42**	*i* P	**Pg**	**20 51 18.2**	**-1.2**
GOLH				*i* S	**Sg**	**20 51 27.8**	**+1.7**
GOLH	**Golhisar**	**0.52**	**42**	*i* P	**Pg**	**20 51 18.2**	**-1.2**
GOLH				*i* S	**Sg**	**20 51 27.8**	**+1.7**
ELL	**Elmali**	**0.64**	**99**	*e*PG	**Pg**	**20 51 21.0**	**-0.7**
ELL				*e*SG	**Sg**	**20 51 31.4**	**+1.4**
ELL	**Elmali**	**0.64**	**99**	*e*Pg	**Pg**	**20 51 21.0**	**-0.7**
ELL				*e*Sg	**Sg**	**20 51 31.4**	**+1.5**
YER	**Yerkesik**	**0.73**	**293**	*e*PG	**Pg**	**20 51 23.4**	**0.0**
YER	**Yerkesik**	**0.73**	**293**	*e*Pg	**Pg**	**20 51 23.4**	**0.0**
AKAS	**Kas**	**0.73**	**148**	*i* P	**Pg**	**20 51 22.5**	**-0.9**
AKAS				*i* S	**Sg**	**20 51 37.4**	**+4.6**
AKAS	**Kas**	**0.73**	**148**	*i* P	**Pg**	**20 51 22.5**	**-0.9**
AKAS				*i* S	**Sg**	**20 51 37.4**	**+4.5**
MLSB	**Milas**	**1.16**	**293**	*e*PN	**Pn**	**20 51 30.8**	**-1.6**
MLSB	**Milas**	**1.16**	**293**	*e*Pn	**Pn**	**20 51 30.8**	**-1.6**
DAT	**Datca**	**1.25**	**265**	*e*PN	**Pn**	**20 51 33.3**	**-0.2**
DAT	**Datca**	**1.25**	**265**	*e*Pn	**Pn**	**20 51 33.3**	**-0.2**
BDRM	**Kayabasi**	**1.36**	**279**	*i* P	**Pn**	**20 51 35.5**	**+0.4**
BDRM				*i* S	**Sb**	**20 51 55.7**	**+2.6**
BDRM	**Kayabasi**	**1.36**	**279**	*i* P	**Pn**	**20 51 35.5**	**+0.4**
BDRM				*i* S	**Sb**	**20 51 55.7**	**+2.6**

*ISCJB **20** 20:52:30.5±0.4, 42°.39N±0°.02×18°.91E±0°.03, h8km±4km, Error ellipse: s-maj=3.6km s-min=3.0km az=35.3*
*CSEM **20** 20:52:30.9±0.2, 42°.39N×18°.89E, h2km, ML2.3/8, Error ellipse: s-maj=4.0km s-min=3.3km az=34.0*
*PDG **20** 20:52:30.8±0.2, 42°.38N×18°.92E, h11km±1km, MD2.3/3, ML2.3/8, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*BEO **20** 20:52:31.2±0.4, 42°.36N×18°.84E, h0km, ML2.4/6*
ISC 20 20:52:31.2±0.4, 42°.38N±0°.02×18°.91E±0°.03, h5km±5km, n37, σ1§12/68, 4C-17D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUM	**Brajici-Budva**	**0.08**	**187**	⇑*i*Pg	**Pg**	**20 52 33.3**	**+0.4**
BUM				*e*Sg	**Sg**	**20 52 35.2**	**+1.2**
BUM	**Brajici-Budva**	**0.08**	**187**	⇑*i*Pg	**Pg**	**20 52 33.3**	**+0.4**
BUM				*e*Sg	**Sg**	**20 52 35.2**	**+1.2**
PDG	**Podgorica**	**0.27**	**78**	⇓*i*Pg	**Pg**	**20 52 35.8**	**-0.5**
PDG				*e*Sg	**Sg**	**20 52 40.0**	**+0.2**
TTG	**Podgorica**	**0.27**	**78**	⇓*i*Pg	**Pg**	**20 52 35.8**	**-0.5**
TTG				*e*Sg	**Sg**	**20 52 40.0**	**+0.2**
HCY	**Herceg Novi**	**0.31**	**283**	⇓*i*Pg	**Pg**	**20 52 36.9**	**-0.4**
HCY				*e*Sg	**Sg**	**20 52 42.1**	**+0.7**
HCY	**Herceg Novi**	**0.31**	**283**	⇓*i*Pg	**Pg**	**20 52 36.9**	**-0.4**
HCY				*e*Sg	**Sg**	**20 52 42.1**	**+0.7**
NKY	**Niksic**	**0.44**	**8**	⇓*i*Pg	**Pg**	**20 52 38.6**	**-1.1**
NKY				*e*Sg	**Sg**	**20 52 45.9**	**+0.5**
NKY	**Niksic**	**0.44**	**8**	⇓*i*Pg	**Pg**	**20 52 38.6**	**-1.1**
NKY				*e*Sg	**Sg**	**20 52 45.9**	**+0.5**
ULC	**Ulcinj**	**0.48**	**148**	⇓*i*Pg	**Pg**	**20 52 39.8**	**-0.7**
ULC				*e*Sg	**Sg**	**20 52 47.5**	**+0.7**
ULC	**Ulcinj**	**0.48**	**148**	⇓*i*Pg	**Pg**	**20 52 39.8**	**-0.7**
ULC				*e*Sg	**Sg**	**20 52 47.5**	**+0.7**
TREB	**Trebinje**	**0.54**	**310**	*e*Pg	**Pg**	**20 52 40.4**	**-1.1**
TREB				*i* Sg	**Sg**	**20 52 47.6**	**-0.9**
TREB	**Trebinje**	**0.54**	**310**	*e*Pg	**Pg**	**20 52 40.4**	**-1.1**
TREB				*i* Sg	**Sg**	**20 52 47.6**	**-0.9**
BRY	**Bratogost**	**0.59**	**333**	⇑*i*Pg	**Pg**	**20 52 41.5**	**-1.0**
BRY				*e*Sg	**Sg**	**20 52 51.3**	**+1.1**
BRY	**Bratogost**	**0.59**	**333**	⇑*i*Pg	**Pg**	**20 52 41.5**	**-1.0**
BRY				*e*Sg	**Sg**	**20 52 51.3**	**+1.1**
PVY	**Plav**	**0.82**	**74**	⇓*i*Pg	**Pg**	**20 52 45.7**	**-1.2**
PVY				*e*Sg	**Sg**	**20 52 59.0**	**+1.6**
PVY	**Plav**	**0.82**	**74**	⇓*i*Pg	**Pg**	**20 52 45.7**	**-1.2**
PVY				*e*Sg	**Sg**	**20 52 59.0**	**+1.6**
UPM	**Unac-Piva**	**0.82**	**360**	⇓*i*Pg	**Pg**	**20 52 46.0**	**-1.0**
UPM				*e*Sg	**Sg**	**20 52 59.1**	**+1.3**
UPM	**Unac-Piva**	**0.82**	**360**	⇓*i*Pg	**Pg**	**20 52 46.0**	**-1.0**
UPM				*e*Sg	**Sg**	**20 52 59.1**	**+1.3**
BEY	**Berane**	**0.88**	**56**	⇓*i*Pg	**Pg**	**20 52 47.3**	**-0.8**
BEY				*e*Sg	**Sg**	**20 53 01.2**	**+1.7**
IVA	**Berane**	**0.88**	**56**	⇓*i*Pg	**Pg**	**20 52 47.3**	**-0.8**
IVA				*e*Sg	**Sg**	**20 53 01.2**	**+1.7**
PLE	**Pljevlja**	**1.02**	**20**	⇓*i*Pg	**Pg**	**20 52 49.9**	**-0.8**
PLE				*e*Sg	**Sg**	**20 53 05.6**	**+1.7**
PLE	**Pljevlja**	**1.02**	**20**	⇓*i*Pg	**Pg**	**20 52 49.9**	**-0.8**
PLE				*e*Sg	**Sg**	**20 53 05.6**	**+1.7**
STON	**Ston**	**1.02**	**299**	*i* Pg	**Pg**	**20 52 48.9**	**-1.9**
STON				Sg	**Sg**	**20 53 04.8**	**+0.8**
STON	**Ston**	**1.02**	**299**	*i* Pg	**Pg**	**20 52 48.8**	**-2.0**
STON				Sg	**Sg**	**20 53 04.8**	**+0.8**
SJES	**Sjenica**	**1.18**	**41**	*e*Pg	**Pg**	**20 52 53.9**	**+0.1**
SJES				*e*Sg	**Sg**	**20 53 09.8**	**+0.7**
TIR	**Tirane**	**1.25**	**145**	*e*Pn	**Pg**	**20 52 56.1**	**+0.9**
TIR				*i* Sg	**Sg**	**20 53 10.8**	**-0.6**
TIR	**Tirane**	**1.25**	**145**	*e*Pn	**Pg**	**20 52 56.1**	**+0.9**
BBLS	**Lazići**	**1.53**	**14**	*i* Pn	**Pg**	**20 52 59.7**	**-0.9**
BBLS				*e*Sg	**Sg**	**20 53 20.1**	**-0.3**
DIVS	**Divibare**	**1.89**	**24**	*e*Pn	**Pg**	**20 53 05.3**	**-2.2**
DIVS				*e*Sg	**Sg**	**20 53 32.2**	**+0.2**
DIVS	**Divibare**	**1.89**	**24**	*e*Pn	**Pg**	**20 53 05.3**	**-2.2**
DIVS				*e*Sg	**Sg**	**20 53 32.2**	**+0.2**
BARS	**Barje**	**2.19**	**77**	*i* Pn	**Pb**	**20 53 09.2**	**-2.1**
BARS				*i* Sn	**Sb**	**20 53 38.2**	**-0.5**
NISS		**2.46**	**64**	*e*Pn	**Pn**	**20 53 13.1**	**+1.2**
ZAPS	**Zavoj**	**2.88**	**71**	*e*Pn	**Pn**	**20 53 19.0**	**+1.3**
ZAPS				*i* Sn	**Sb**	**20 53 55.3**	**-3.3**
ZAPS	**Zavoj**	**2.88**	**71**	*e*Pn	**Pn**	**20 53 19.0**	**+1.3**
NVLJ	**Novalja**	**3.66**	**308**	⇓*i*Pn	**Pn**	**20 53 30.6**	**+2.2**
NVLJ	**Novalja**	**3.66**	**308**	Sn	**Sn**	**20 54 12.8**	**+0.8**
NVLJ	**Novalja**	**3.66**	**308**	Sn	**Sn**	**20 54 12.8**	**+0.8**

*MOS **20** 20:56:25.6±1.4, 53°.27N×108°.52E, h11km, mb4.5/1, Error ellipse: s-maj=20.4km s-min=12.8km az=62.5*
BYKL 20 20:56:26.1±0.2, 53°.29N×108°.50E, h10km±3km, 3C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.15**	**100**	⇑*i*Pg	Pg	20 56 29.5	+0.1
MXMB				*e*Sg	Sg	20 56 32.1	+0.4
KELR	**Kotokel**	**0.59**	**206**	*e*Pg	Pg	20 56 36.8	-0.7
KELR				*e*Sg	Sg	20 56 45.3	+0.1
KELR	463nm,0.1s			Pmax			
KELR	7μm,0.4s			Smax			
OGRR	**Ongureny**	**0.65**	**304**	*e*PG	Pg	20 56 38.6	0.0
OGRR				*e*		20 56 47.8	
OGRR	comp=Z,362nm,0.2s			pmax	pmax		
OGRR	comp=N,1μm,0.3s			smax			
OGRR	**Ongureny**	**0.65**	**304**	⇑*i*Pg	Pg	20 56 38.6	0.0
OGRR				*e*Sg	Sg	20 56 47.6	+0.5
OGRR	comp=N,370nm,0.2s			Pmax			
OGRR	comp=N,1μm,0.2s			Smax			
SYVR	**Suvo**	**0.97**	**67**	*e*PG	Pg	20 56 43.6	-1.1
SYVR				*e*		20 56 56.7	
SYVR	comp=Z,132nm,0.1s			pmax	pmax		
SYVR	comp=E,540nm,0.1s			smax			
SYVR	**Suvo**	**0.97**	**67**	⇓*i*Pg	Pg	20 56 43.7	-1.0
SYVR				*e*Sg	Sg	20 56 56.7	-0.6
SYVR	comp=E,120nm,0.1s			Pmax			
SYVR	comp=E,517nm,0.2s			Smax			
ZRHB	**Zarechye**	**1.10**	**228**	*e*Pg	Pg	20 56 47.0	-0.2
ZRHB				*e*Sg	Sg	20 57 02.3	+0.8
ZRHB	comp=E,601nm,0.3s			Pmax			
ZRHB	comp=E,2μm,0.3s			Smax			
TRG	**Tyrgan**	**1.40**	**249**	*e*PG	Pg	20 56 51.5	-1.5
TRG				*e*		20 57 11.3	
TRG	comp=Z,261nm,0.3s			pmax	pmax		
TRG	comp=E,2μm,0.3s			smax			
TRG	**Tyrgan**	**1.40**	**249**	*e*Pg	Pg	20 56 51.5	-1.5
TRG				*e*Sg	Sg	20 57 10.8	-0.4
TRG	comp=E,210nm,0.2s			Pmax			
TRG	comp=E,2μm,0.3s			Smax			
UUDB	**Ulan-Yde**	**1.51**	**200**	⇓*i*Pg	Pg	20 56 53.5	-1.6
UUDB				*e*Sg	Sg	20 57 13.9	-0.8
UUDB	comp=E,401nm,0.2s			Pmax			
UUDB	comp=E,706nm,0.4s			Smax			
FFNB	**Fofonovo**	**1.63**	**221**	⇓*i*Pg	Pg	20 56 55.9	-1.5
FFNB				*e*Sg	Sg	20 57 17.4	-1.2
FFNB	comp=E,1μm,0.3s			Pmax			
FFNB	comp=E,2μm,0.3s			Smax			
YLYR	**Ulyunkhan**	**2.23**	**44**	*e*PN	Pn	20 57 03.6	+0.5
YLYR				*e*		20 57 05.5	
YLYR				*e*		20 57 35.8	
YLYR	comp=Z,65nm,0.3s			pmax	pmax		
YLYR	comp=N,362nm,0.4s			smax			
YLYR	**Ulyunkhan**	**2.23**	**44**	*e*Pn	Pn	20 57 03.6	+0.5
YLYR				⇓*i*Pg	Pg	20 57 05.5	-3.4
YLYR				*e*Sg	Sg	20 57 35.5	-2.3
YLYR	comp=N,58nm,0.3s			Pmax			
YLYR	comp=N,363nm,0.5s			Smax			
NIZ	**Nizh Angarsk**	**2.56**	**13**	*e*PN	Pn	20 57 08.7	+1.1
NIZ				*e*		20 57 12.2	
NIZ				*e*S	Sn	20 57 39.8	+1.0
NIZ				*e*		20 57 46.1	
NIZ	comp=Z,54nm,0.3s			pmax	pmax		
NIZ	comp=N,485nm,1.6s			smax			
NIZ	**Nizh Angarsk**	**2.56**	**13**	*e*Pn	Pn	20 57 08.7	+1.1
NIZ				*e*Pg	Pg	20 57 12.2	-3.0
NIZ				*e*Sn	Sn	20 57 39.0	+0.2
NIZ				*e*Sg	Sg	20 57 45.7	-2.7
NIZ	comp=N,38nm,0.2s			Pmax			
NIZ	comp=N,378nm,0.6s			Smax			
LSTR	**Listvyanka**	**2.65**	**239**	⇓*i*Pn	Pn	20 57 08.9	0.0
LSTR				*e*Pg	Pg	20 57 13.4	-3.5
LSTR				*e*Sn	Sn	20 57 40.7	-0.3
LSTR				*e*Sg	Sg	20 57 47.3	-3.9
LSTR	comp=N,38nm,0.2s			Pmax			
LSTR	comp=N,237nm,0.4s			Smax			
IRK	**Irkutsk**	**2.77**	**249**	*e*PN	Pn	20 57 09.2	-1.3
IRK				*e*		20 57 14.4	
IRK				*e*		20 57 50.3	
IRK	comp=Z,93nm,0.2s			pmax	pmax		
IRK	comp=N,962nm,0.3s			smax			
IRK	**Irkutsk**	**2.77**	**249**	*e*Pg	Pg	20 57 16.6	-2.6
IRK				*e*		20 57 47.4	
IRK				*e*Sg	Sg	20 57 51.2	-4.0
IRK	comp=N,284nm,0.2s			Pmax			
IRK	comp=N,977nm,0.4s			Smax			
KMO	**Kumora**	**3.04**	**30**	*e*PN	Pn	20 57 18.5	+4.3
KMO				*e*		20 57 57.7	
KMO	comp=Z,108nm,0.4s			pmax	pmax		
KMO	comp=E,478nm,1.4s			smax			
KMO	**Kumora**	**3.04**	**30**	*e*Pn	Pn	20 57 15.4	+1.2
KMO				⇑*i*Pg	Pg	20 57 20.4	-3.9
KMO				*e*Sg	Sg	20 58 00.3	-3.4
KMO	comp=E,78nm,0.4s			Pmax			
KMO	comp=E,318nm,0.7s			Smax			
CIT	**Chita**	**3.33**	**110**	*e*Sg	Sg	20 58 08.9	-4.0
CIT				Smax			
CIT	comp=E,453nm,0.2s						
TLY	**Talaya**	**3.38**	**243**	*e*PN	Pn	20 57 18.8	0.0
TLY				*e*		20 57 26.1	
TLY				*e*		20 58 09.5	
TLY	comp=Z,31nm,0.3s			pmax	pmax		
TLY	comp=E,192nm,0.4s			smax			
TLY	**Talaya**	**3.38**	**243**	*e*Pn	Pn	20 57 18.9	+0.1
TLY				*e*Pg	Pg	20 57 26.0	-4.8
TLY				*e*Sg	Sg	20 58 09.6	-4.9
TLY	comp=E,20nm,0.2s			Pmax			
TLY	comp=E,181nm,0.4s			Smax			
YOA	**Uoyan**	**3.41**	**32**	*e*Pg	Pg	20 57 27.0	-4.3
YOA				*e*Sg	Sg	20 58 12.1	-3.3
YOA	comp=E,48nm,0.2s			Pmax			
YOA	comp=E,620nm,0.4s			Smax			
UKT	**Uakit**	**3.72**	**52**	*e*Pn	Pn	20 57 23.6	+0.1
UKT				*e*Pg	Pg	20 57 31.7	-5.6
UKT				*e*Sg	Sg	20 58 20.9	-4.5
UKT	comp=E,6.0nm,0.2s			Pmax			
UKT	comp=E,80nm,0.3s			Smax			
ARS	**Arshan**	**3.95**	**252**	*e*Pn	Pn	20 57 27.4	+0.7
ARS				*e*Pg	Pg	20 57 36.8	-4.9
ARS				*e*Sg	Sg	20 58 25.9	-6.9
ARS	comp=E,71nm,0.3s			Pmax			
ARS	comp=E,595nm,1.2s			Smax			
KPC	**Khapcheranga**	**4.33**	**144**	*e*PN	Pn	20 57 31.8	-0.1
KPC				*e*		20 57 43.4	
KPC				*e*		20 58 39.4	
KPC	comp=Z,162nm,3.2s			pmax	pmax		
KPC	comp=E,267nm,2.1s			smax			
KPC	**Khapcheranga**	**4.33**	**144**	*e*Pn	Pn	20 57 31.3	-0.6
KPC				*e*Pg	Pg	20 57 43.4	-5.6
KPC				*e*Sn	Sn	20 58 20.3	-2.1
KPC				*e*Sg	Sg	20 58 39.2	-5.9
KPC	comp=E,45nm,0.3s			Pmax			
KPC	comp=E,91nm,0.3s			Smax			
ZAK	**Zakamensk**	**4.35**	**230**	*e*Pn	Pn	20 57 33.8	+1.6
ZAK				*e*Pg	Pg	20 57 44.0	-5.4
ZAK				*e*Sg	Sg	20 58 40.8	-5.0
ZAK	comp=E,18nm,0.2s			Pmax			
ZAK	comp=E,51nm,0.2s			Smax			
MOY	**Mondy**	**4.87**	**253**	*e*PN	Pb	20 57 54.6	+3.2
MOY				*e*		20 58 55.4	
MOY	comp=Z,21nm,0.3s			pmax	pmax		
MOY	comp=N,331nm,1.4s			smax			
MOY	**Mondy**	**4.87**	**253**	*e*Pn	Pn	20 57 41.9	+2.6
MOY				*e*		20 58 37.9	
MOY				*e*Sg	Sg	20 58 55.8	-6.5
MOY	comp=N,328nm,1.2s			Smax			
ORL	**Orlik**	**5.31**	**265**	*e*Pn	Pn	20 57 47.6	+2.2
ORL				*e*Sn	Sn	20 58 46.5	-0.1
ORL				*e*Sg	Sg	20 59 09.8	-6.7
ORL	comp=N,216nm,1.6s			Smax			
BOD	**Bodaibo**	**5.51**	**32**	*e*Sg	Sg	20 59 15.8	-7.0
BOD	comp=N,46nm,1.5s			Smax			
ULN	**Ulaanbaatar**	**5.51**	**190**	*e*Sg	Sg	20 59 17.3	-5.5
TUP	**Tupik**	**6.87**	**76**	*e*Sg	Sg	20 59 58.3	-8.2
TUP	comp=N,91nm,1.3s			Smax			

*IDC **20** 21:00:30.1±1.3, 30°.97N×103°.72E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/24, mbtmp3.5/8, ML3.5/1, Error ellipse: s-maj=56.1km s-min=23.9km az=64.0*
*NEIC **20** 21:00:31.6±0.5, 30°.95N×103°.64E, h10km, mb3.7/1, Error ellipse: s-maj=12.1km s-min=10.0km az=219.0*
*ISCJB **20** 21:00:33.5±0.8, 30°.85N±0°.09×103°.43E±0°.07, h35km±9km, mb3.5/8, Error ellipse: s-maj=15.9km s-min=10.6km az=1.7*
*BJI **20** 21:00:34.7, 30°.88N×103°.43E, h16km, ML3.5/11*
ISC 20 21:00:31.9±1.3, 30°.71N±0°.06×103°.34E±0°.07, h15km±7km, n18, σ1§00/23, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**62**	Pg	**Pg**	**21 00 39.6**	**-0.7**
CD2				Sg	**Sg**	**21 00 47.3**	**+1.4**
CD2	comp=N,5μm,0.8s			smax			
GYA	**Guiyang**	**5.15**	**145**	Pg	**Pg**	**21 02 10.4**	**-0.2**
GYA	comp=N,90nm,0.7s			smax			
GYA	comp=E,80nm,0.8s			smax			
ENH	**Enshi**	**5.33**	**93**	*e*Pn	**Pn**	**21 01 48.3**	**-2.7**
ENH				*e*Pg	**Pb**	**21 02 04.1**	**-0.6**
ENH				*e*Sn	**Sn**	**21 02 52.8**	**+0.7**
LZH	**Lanzhou**	**5.38**	**4**	*e*Pg	**Pg**	**21 02 19.3**	**+4.4**
LZH				Sg	**Sg**	**21 03 24.3**	**-0.2**
LZH	comp=N,92nm,0.6s			smax			
LZH	comp=E,130nm,0.7s			smax			
XAN	**Xi'an**	**5.77**	**53**	Pg	**Pg**	**21 02 22.1**	**-0.4**
XAN				Sg	**Sb**	**21 03 26.3**	**+5.0**
XAN	comp=N,68nm,1.0s			smax			
XAN	comp=E,34nm,1.0s			smax			
LSA	**Lhasa**	**10.59**	**268**	*e*Pn	**Pn**	**21 03 08.3**	**+5.1**
CMAR	**Chiang Mai Arr**	**12.84**	**199**	Pn	**Pn**	**21 03 38.1**	**+4.2**
KSRS	**Korea Array**	**21.41**	**65**	P	**P**	**21 05 19.6**	**+0.3**
MKAR	**Makanchi Array**	**22.85**	**321**	P	**P**	**21 05 36.0**	**+1.6**
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**21 06 11.2**	**0.0**
ZALV	**Zalesovo Beam**	**26.79**	**335**	P	**P**	**21 06 11.2**	**0.0**
KURK	**Kurchatov**	**27.17**	**324**	P	**P**	**21 06 15.2**	**+0.6**
KURK	**Kurchatov**	**27.17**	**324**	P	**P**	**21 06 13.8**	**-0.8**
FINES	**FINESS Array B**	**57.52**	**326**	P	**P**	**21 10 20.2**	**-0.1**
ASAR	**Alice Springs**	**61.51**	**148**	P	**P**	**21 10 49.7**	**+1.4**
NOA	**NORSAR Array B**	**64.63**	**327**	P	**P**	**21 11 08.1**	**-0.5**
YKA	**Yellowknife Ar**	**82.26**	**17**	P	**P**	**21 12 51.0**	**-1.3**
YKA	**Yellowknife Ar**	**82.26**	**17**	P	**P**	**21 12 51.0**	**-1.3**

*MOS **20** 21:04:25.8±2.0, 53°.27N×108°.49E, h10km, mb4.3/1, Error ellipse: s-maj=38.5km s-min=23.4km az=65.0*
BYKL 20 21:04:26.4±0.2, 53°.31N×108°.48E, h15km±4km, 3C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.17**	**106**	⇑*i*Pg	Pg	21 04 29.7	-0.8
MXMB				*e*Sg	Sg	21 04 32.1	-1.1
OGRR	**Ongureny**	**0.63**	**303**	⇑*i*PG	Pg	21 04 38.7	+0.1
OGRR				*e*		21 04 47.6	
OGRR	comp=Z,400nm,0.3s			pmax	pmax		
OGRR	comp=E,663nm,0.3s			smax			
OGRR	**Ongureny**	**0.63**	**303**	⇑*i*Pg	Pg	21 04 38.7	+0.1
OGRR				*e*Sg	Sg	21 04 47.4	+0.5
OGRR	comp=E,401nm,0.2s			Pmax			
OGRR	comp=E,667nm,0.3s			Smax			
SYVR	**Suvo**	**0.97**	**68**	*e*PG	Pg	21 04 43.9	-1.3
SYVR				*e*		21 04 57.1	
SYVR	comp=Z,107nm,0.1s			pmax	pmax		
SYVR	comp=N,400nm,0.2s			smax			
SYVR	**Suvo**	**0.97**	**68**	⇓*i*Pg	Pg	21 04 44.0	-1.2
SYVR				*e*Sg	Sg	21 04 57.2	-0.7
SYVR	comp=N,73nm,0.1s			Pmax			
SYVR	comp=N,402nm,0.2s			Smax			
ZRHB	**Zarechye**	**1.10**	**227**	*e*Pg	Pg	21 04 47.2	-0.5
ZRHB				*e*Sg	Sg	21 05 02.2	+0.1
ZRHB	comp=N,246nm,0.2s			Pmax			
ZRHB	comp=N,1μm,0.5s			Smax			
TRG	**Tyrgan**	**1.40**	**248**	*e*Pg	Pg	21 04 51.6	-1.7
TRG				*e*Sg	Sg	21 05 10.7	-0.8
TRG	comp=N,55nm,0.1s			Pmax			
TRG	comp=N,630nm,0.4s			Smax			
UUDB	**Ulan-Yde**	**1.53**	**199**	⇓*i*Pg	Pg	21 04 53.8	-2.0
UUDB				*e*Sg	Sg	21 05 13.8	-1.8
UUDB	comp=N,52nm,0.2s			Pmax			
UUDB	comp=N,821nm,0.4s			Smax			
FFNB	**Fofonovo**	**1.64**	**220**	*e*Pg	Pg	21 04 56.3	-1.6
FFNB				*e*Sg	Sg	21 05 18.5	-0.7
FFNB	comp=N,337nm,0.2s			Pmax			
FFNB	comp=N,1μm,0.5s			Smax			
YLYR	**Ulyunkhan**	**2.23**	**44**	⇓*i*Pn	Pn	21 05 03.9	+1.2
YLYR				⇓*i*Pg	Pg	21 05 05.8	-3.3
YLYR				*e*Sg	Sg	21 05 35.8	-2.1
YLYR	comp=N,86nm,0.4s			Pmax			
YLYR	comp=N,92nm,0.3s			Smax			
NIZ	**Nizh Angarsk**	**2.55**	**14**	*e*PN	Pn	21 05 09.1	+2.0
NIZ				*e*		21 05 12.4	
NIZ				*e*		21 05 46.5	
NIZ	comp=Z,43nm,0.2s			pmax	pmax		
NIZ	comp=N,190nm,0.6s			smax			
NIZ	**Nizh Angarsk**	**2.55**	**14**	*e*Pg	Pg	21 05 12.3	-2.9
NIZ				*e*		21 05 42.2	
NIZ				*e*Sg	Sg	21 05 45.3	-2.9
NIZ	comp=N,43nm,0.3s			Pmax			
NIZ	comp=N,181nm,0.4s			Smax			
LSTR	**Listvyanka**	**2.65**	**238**	*e*Pn	Pn	21 05 08.7	+0.1
LSTR				*e*Pg	Pg	21 05 13.6	-3.6
LSTR				*e*Sg	Sg	21 05 47.8	-3.8

LSTR				Pmax			
	comp=N,46nm,0.4s						
LSTR				Smax			
	comp=N,90nm,0.4s						
IRK	**Irkutsk**	**2.77**	**249**	*e*PN	Pn	21 05 11.7	+1.5
IRK				*e*		21 05 16.2	
IRK				*e*		21 05 51.1	
IRK				pmax	pmax		
	comp=Z,56nm,0.2s						
IRK				smax			
	comp=N,427nm,0.4s						
IRK	**Irkutsk**	**2.77**	**249**	*e*Pg	Pg	21 05 16.1	-3.4
IRK				*e*Sg	Sg	21 05 51.2	-4.1
IRK				Pmax			
	comp=N,56nm,0.2s						
IRK				Smax			
	comp=N,428nm,0.4s						
KMO	**Kumora**	**3.03**	**30**	*e*PN	Pn	21 05 20.2	+6.5
KMO				*e*		21 05 58.3	
KMO				pmax	pmax		
	comp=Z,75nm,0.4s						
KMO				smax			
	comp=E,182nm,1.2s						
KMO	**Kumora**	**3.03**	**30**	*e*Pg	Pg	21 05 20.2	-4.2
KMO				*e*Sg	Sg	21 06 00.5	-3.1
KMO				Pmax			
	comp=E,76nm,0.4s						
KMO				Smax			
	comp=E,190nm,0.9s						
CIT	**Chita**	**3.35**	**111**	*e*Pg	Pg	21 05 27.3	-3.2
CIT				*e*Sg	Sg	21 06 09.7	-4.1
CIT				Pmax			
	comp=E,58nm,0.1s						
CIT				Smax			
	comp=E,356nm,0.2s						
TLY	**Talaya**	**3.38**	**243**	*e*PN	Pn	21 05 26.8	+8.3
TLY				*e*		21 06 10.6	
TLY				pmax	pmax		
	comp=Z,11nm,0.4s						
TLY				smax			
	comp=E,81nm,0.4s						
TLY	**Talaya**	**3.38**	**243**	*e*Pg	Pg	21 05 26.8	-4.2
TLY				*e*Sg	Sg	21 06 09.4	-5.3
TLY				Pmax			
	comp=E,9.0nm,0.2s						
TLY				Smax			
	comp=E,69nm,0.3s						
YOA	**Uoyan**	**3.40**	**32**	*e*Pg	Pg	21 05 26.6	-4.8
YOA				*e*Sg	Sg	21 06 12.0	-3.4
YOA				Pmax			
	comp=E,39nm,0.2s						
YOA				Smax			
	comp=E,286nm,0.5s						
UKT	**Uakit**	**3.72**	**52**	*e*Pg	Pg	21 05 33.0	-4.5
UKT				*e*Sg	Sg	21 06 22.0	-3.6
UKT				Pmax			
	comp=E,34nm,0.5s						
UKT				Smax			
	comp=E,41nm,0.3s						
ARS	**Arshan**	**3.94**	**252**	*e*Sg	Sg	21 06 27.0	-6.0
ARS				Smax			
	comp=E,274nm,0.4s						
KPC	**Khapcheranga**	**4.36**	**144**	*e*Pn	Pn	21 05 31.3	-0.6
KPC				*e*Pg	Pg	21 05 44.0	-5.8
KPC				*e*Sn	Sn	21 06 21.1	-1.3
KPC				*e*Sg	Sg	21 06 40.0	-6.1
KPC				Pmax			
	comp=E,11nm,0.2s						
KPC				Smax			
	comp=E,37nm,0.5s						
ZAK	**Zakamensk**	**4.36**	**230**	*e*Sg	Sg	21 06 41.8	-4.4
ZAK				Smax			
	comp=E,28nm,0.4s						
ORL	**Orlik**	**5.30**	**265**	*e*	Pn	21 05 42.3	-2.6
ORL				*e*		21 06 48.2	
ORL				*e*Sg	Sg	21 07 09.6	-6.9
ORL				Smax			
	comp=E,113nm,1.1s						
BOD	**Bodaibo**	**5.50**	**33**	*e*Pn	Pn	21 05 48.8	+1.2
BOD				*e*Sg	Sg	21 07 16.1	-6.6
BOD				Smax			
	comp=E,34nm,0.4s						
ULN	**Ulaanbaatar**	**5.53**	**190**	*e*Pg	Pg	21 06 06.5	-5.7
ULN				*e*Sg	Sg	21 07 19.6	-4.1
CRS	**Chara**	**6.67**	**53**	*e*Pg	Pg	21 06 27.3	-6.6
CRS				*e*Sg	Sg	21 07 52.8	-7.4
CRS				Pmax			
	comp=E,2.0nm,0.1s						
CRS				Smax			
	comp=E,21nm,1.0s						
TUP	**Tupik**	**6.88**	**76**	*e*Sg	Sn	21 07 58.5	+34
TUP				Smax			
	comp=E,108nm,1.1s						

IDC 20 21:16:26.7±1.4, 31°.29N×104°.34E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/25, mbtmp3.5/6, Error ellipse: s-maj=45.0km s-min=24.1km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.39**	**66**	P	P	21 21 05.3	+0.3
	3.4nm,0.8s,baz=253,slow=10,SNR=7.6						
MKAR	**Makanchi Array**	**22.97**	**319**	P	P	21 21 33.9	+1.2
	0.1nm,0.3s,baz=115,slow=13,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.64**	**334**	P	P	21 22 06.5	-0.4
	0.7nm,0.7s,baz=113,slow=11,SNR=2.7						
KURK	**Kurchatov**	**27.22**	**323**	P	P	21 22 11.8	-0.3
	0.2nm,0.6s,baz=124,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**61.54**	**149**	P	P	21 26 45.8	+0.1
	0.4nm,0.5s,baz=338,slow=6.0,SNR=6.0						
YKA	**Yellowknife Ar**	**81.46**	**17**	P	P	21 28 45.1	-0.3
	0.3nm,0.6s,baz=333,slow=5.1,SNR=3.4						

*MOS **20** 21:21:26.8±1.4, 53°.29N×108°.62E, h20km, mb4.5/1, Error ellipse: s-maj=18.5km s-min=9.8km az=61.2*
BYKL 20 21:21:27.1±0.2, 53°.30N×108°.49E, h9km±3km, 6C-10D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.16**	**104**	⇓*i*Pg	Pg	21 21 30.3	-0.2
MXMB				*e*Sg	Sg	21 21 32.9	+0.1
KELR	**Kotokel**	**0.59**	**205**	⇑*i*Pg	Pg	21 21 38.1	-0.5
KELR				*e*Sg	Sg	21 21 46.2	-0.1
KELR				Pmax			
	649nm,0.1s						
KELR				Smax			
	4μm,0.3s						
OGRR	**Ongureny**	**0.64**	**303**	⇑*i*PG	Pg	21 21 39.2	-0.2
OGRR				*e*		21 21 48.2	
OGRR				pmax	pmax		
	comp=Z,965nm,0.3s						
OGRR				smax			
	comp=N,1μm,0.4s						
OGRR	**Ongureny**	**0.64**	**303**	⇑*i*Pg	Pg	21 21 39.2	-0.2
	comp=N,730nm,0.3s						
OGRR				⇓*i*Pg	Pg	21 21 39.2	-0.2
	comp=N,650nm,0.3s						
OGRR				⇑*i*Pg	Pg	21 21 39.2	-0.2
	comp=N,1μm,0.3s						
OGRR				*e*Sg	Sg	21 21 48.1	+0.4
OGRR				Pmax			
	comp=N,582nm,0.2s						
OGRR				Smax			
	comp=N,816nm,0.3s						
SYVR	**Suvo**	**0.97**	**68**	*e*PG	Pg	21 21 44.5	-1.2
SYVR				*e*		21 21 57.6	
SYVR				pmax	pmax		
	comp=Z,170nm,0.1s						
SYVR				smax			
	comp=E,1μm,0.3s						
SYVR	**Suvo**	**0.97**	**68**	⇓*i*Pg	Pg	21 21 44.6	-1.1
SYVR				*e*Pb	Pb	21 21 47.0	+0.9
SYVR				*e*Sg	Sg	21 21 57.9	-0.4
SYVR				max			
	comp=E,170nm,0.1s						
SYVR				Smax			
	comp=E,852nm,0.2s						
ZRHB	**Zarechye**	**1.10**	**228**	*e*Pg	Pg	21 21 47.3	-0.9
ZRHB				*e*Sg	Sg	21 22 02.7	+0.2
ZRHB				Pmax			
	comp=E,117nm,0.1s						
ZRHB				Smax			
	comp=E,3μm,0.7s						
TRG	**Tyrgan**	**1.40**	**248**	*e*PN	Pn	21 21 51.8	-1.0
TRG				*e*		21 22 11.2	
TRG				pmax	pmax		
	comp=Z,157nm,0.2s						
TRG				smax			
	comp=N,2μm,0.2s						
TRG	**Tyrgan**	**1.40**	**248**	*e*Pg	Pg	21 21 51.9	-2.1
TRG				*e*Sg	Sg	21 22 11.3	-0.8
TRG				*e*		21 22 14.8	
TRG				Pmax			
	comp=N,157nm,0.2s						
TRG				Smax			
	comp=N,2μm,0.2s						
UUDB	**Ulan-Yde**	**1.52**	**200**	⇓*i*Pg	Pg	21 21 54.3	-1.9
UUDB				*e*		21 21 57.1	
UUDB				*e*Sg	Sg	21 22 14.6	-1.4
UUDB				Pmax			
	comp=N,173nm,0.2s						
UUDB				Smax			
	comp=N,579nm,0.4s						
FFNB	**Fofonovo**	**1.64**	**221**	*e*Pg	Pg	21 21 56.7	-1.8
FFNB				*e*		21 22 01.4	
FFNB				*e*Sg	Sg	21 22 18.1	-1.6
FFNB				Pmax			
	comp=N,497nm,0.2s						
FFNB				Smax			
	comp=N,3μm,0.2s						
YLYR	**Ulyunkhan**	**2.23**	**44**	*e*PN	Pn	21 22 04.4	+0.2
YLYR				*e*		21 22 06.4	
YLYR				*e*		21 22 36.8	
YLYR				pmax	pmax		
	comp=Z,157nm,0.4s						
YLYR				smax			
	comp=N,216nm,0.4s						
YLYR	**Ulyunkhan**	**2.23**	**44**	⇓*i*Pn	Pn	21 22 04.5	+0.3
YLYR				⇓*i*Pg	Pg	21 22 06.5	-3.3
YLYR				*e*Sg	Sg	21 22 36.6	-2.1
YLYR				Pmax			
	comp=N,156nm,0.4s						
YLYR				Smax			
	comp=N,218nm,0.3s						
NIZ	**Nizh Angarsk**	**2.56**	**13**	*e*PN	Pn	21 22 09.6	+1.0
NIZ				*e*		21 22 13.0	
NIZ				*e*		21 22 47.4	
NIZ				pmax	pmax		
	comp=Z,102nm,0.3s						
NIZ				smax			
	comp=N,452nm,0.5s						
NIZ	**Nizh Angarsk**	**2.56**	**13**	*e*Pn	Pn	21 22 09.4	+0.8
NIZ				*e*Pg	Pg	21 22 12.7	-3.3
NIZ				*e*		21 22 16.4	
NIZ				*e*		21 22 43.2	
NIZ				*e*Sg	Sg	21 22 46.2	-2.9
NIZ				Pmax			
	comp=N,101nm,0.3s						
NIZ				Smax			
	comp=N,453nm,0.4s						
LSTR	**Listvyanka**	**2.65**	**239**	*e*Pn	Pn	21 22 10.0	0.0
LSTR				⇓*i*Pg	Pg	21 22 14.9	-3.0
LSTR				*e*Sn	Sn	21 22 40.8	-1.4
LSTR				*e*Sg	Sg	21 22 48.0	-4.2
LSTR				Pmax			
	comp=N,41nm,0.3s						
LSTR				Smax			
	comp=N,215nm,0.4s						
IRK	**Irkutsk**	**2.77**	**249**	*e*PN	Pn	21 22 15.3	+3.7
IRK				*e*		21 22 51.8	
IRK				pmax	pmax		
	comp=Z,126nm,0.2s						
IRK				smax			
	comp=N,1μm,0.4s						
IRK	**Irkutsk**	**2.77**	**249**	*e*Sg	Sg	21 22 52.2	-3.9
IRK				Smax			
	comp=N,1μm,0.5s						
KMO	**Kumora**	**3.03**	**30**	*e*PN	Pn	21 22 14.2	-1.0
KMO				*e*		21 22 20.4	
KMO				*e*S	Sn	21 22 50.9	-0.7
KMO				*e*		21 23 00.0	
KMO				pmax	pmax		
	comp=Z,188nm,0.4s						
KMO				smax			
	comp=N,289nm,0.8s						
KMO	**Kumora**	**3.03**	**30**	*e*Pn	Pn	21 22 15.8	+0.6
KMO				⇓*i*Pg	Pg	21 22 21.0	-4.2
KMO				*e*PgPg		21 22 23.9	
KMO				*e*Sg	Sg	21 23 01.3	-3.2
KMO				Pmax			
	comp=N,189nm,0.4s						
KMO				Smax			
	comp=N,323nm,1.0s						
CIT	**Chita**	**3.34**	**111**	*e*PN	Pn	21 22 25.7	+6.3
CIT				*e*		21 23 09.5	
CIT				pmax	pmax		
	comp=Z,146nm,0.4s						
CIT				smax			
	comp=E,535nm,0.6s						
CIT	**Chita**	**3.34**	**111**	*e*Pg	Pg	21 22 26.3	-4.7
CIT				*e*Sg	Sg	21 23 10.3	-3.9
CIT				Pmax			
	comp=E,143nm,0.1s						
CIT				Smax			
	comp=E,475nm,0.2s						
TLY	**Talaya**	**3.38**	**243**	*e*PN	Pn	21 22 26.0	+6.1
TLY				*e*		21 23 09.6	
TLY				pmax	pmax		
	comp=Z,18nm,0.4s						
TLY				smax			
	comp=E,194nm,0.5s						
TLY	**Talaya**	**3.38**	**243**	*e*Pn	Pn	21 22 19.8	-0.1
TLY				*e*Pg	Pg	21 22 27.1	-4.7
TLY				*e*Sg	Sg	21 23 10.6	-4.9
TLY				Pmax			
	comp=E,19nm,0.2s						
TLY				Smax			
	comp=E,191nm,0.5s						
YOA	**Uoyan**	**3.40**	**32**	⇑*i*PN	Pn	21 22 27.3	+7.0
YOA				*e*		21 23 14.9	
YOA				pmax	pmax		
	comp=Z,126nm,0.4s						
YOA				smax			
	comp=E,632nm,0.6s						
YOA	**Uoyan**	**3.40**	**32**	*e*Pg	Pg	21 22 27.3	-4.9
YOA				*e*Sg	Sg	21 23 13.7	-2.6
YOA				Pmax			
	comp=E,123nm,0.3s						
YOA				Smax			
	comp=E,623nm,0.4s						
UKT	**Uakit**	**3.72**	**52**	*e*PN	Pn	21 22 24.9	+0.3
UKT				*e*		21 22 31.4	
UKT				*e*S	Sn	21 23 05.8	-2.7
UKT				*e*		21 23 22.7	
UKT				pmax	pmax		
	comp=Z,53nm,0.7s						
UKT				smax			
	comp=N,119nm,0.3s						
UKT	**Uakit**	**3.72**	**52**	*e*Pn	Pn	21 22 25.0	+0.4
UKT				*e*		21 22 32.2	
UKT				*e*Pg	Pg	21 22 34.1	-4.2
UKT				*e*Sg	Sg	21 23 22.8	-3.6
UKT				Pmax			
	comp=N,54nm,0.7s						
UKT				Smax			
	comp=N,121nm,0.5s						
ARS	**Arshan**	**3.95**	**252**	*e*PN	Pn	21 22 29.4	+1.6
ARS				*e*		21 22 37.7	
ARS				pmax	pmax		
	comp=Z,63nm,0.3s						
ARS	**Arshan**	**3.95**	**252**	*e*Pn	Pn	21 22 29.3	+1.5
ARS				*e*Pg	Pg	21 22 37.6	-5.1
ARS				*e*Sg	Sg	21 23 27.9	-5.9
ARS				Pmax			
	comp=Z,64nm,0.3s						
ARS				Smax			
	comp=Z,719nm,0.4s						
KPC	**Khapcheranga**	**4.34**	**144**	*e*PN	Pn	21 22 32.3	-0.9
KPC				*e*		21 22 44.3	
KPC				*e*S	Sn	21 23 22.5	-1.4
KPC				*e*		21 23 39.5	
KPC				pmax	pmax		
	comp=Z,37nm,1.5s						
KPC				smax			
	comp=E,114nm,1.2s						
KPC	**Khapcheranga**	**4.34**	**144**	⇑*i*Pn	Pn	21 22 32.0	-1.2
KPC				*e*Pg	Pg	21 22 44.5	-5.7
KPC				*e*Sn	Sn	21 23 21.7	-2.2
KPC				*e*Sg	Sg	21 23 39.8	-6.7
KPC				Pmax			
	comp=E,36nm,0.3s						
KPC				Smax			
	comp=E,99nm,0.6s						
ZAK	**Zakamensk**	**4.36**	**230**	*e*PN	Pn	21 22 33.9	+0.5
ZAK				*e*		21 22 44.3	
ZAK				*e*S	Sn	21 23 41.8	+18
ZAK				pmax	pmax		
	comp=Z,13nm,0.7s						
ZAK				smax			
	comp=N,101nm,1.0s						
ZAK	**Zakamensk**	**4.36**	**230**	*e*Pn	Pn	21 22 35.2	+1.8
ZAK				*e*Pg	Pg	21 22 44.8	-5.7
ZAK				*e*Sg	Sg	21 23 42.4	-4.4
ZAK				Pmax			
	comp=N,13nm,0.3s						
ZAK				Smax			
	comp=N,86nm,1.1s						
ORL	**Orlik**	**5.31**	**265**	⇓⇓*i*Pn	Pn	21 22 48.3	+1.9
ORL				⇓⇓*i*		21 22 56.4	
ORL				*e*		21 23 04.0	
ORL				*e*		21 23 48.9	
ORL				*e*Sg	Sg	21 24 10.3	-7.1
ORL				Smax			
	comp=N,243nm,0.9s						
BOD	**Bodaibo**	**5.50**	**32**	*e*PN	Pn	21 22 48.0	-1.1
BOD				*e*		21 23 04.5	
BOD				*e*		21 24 16.3	
BOD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BOD				smax			
	comp=E,63nm,1.2s						
BOD	**Bodaibo**	**5.50**	**32**	*e*Pn	Pn	21 22 49.2	+0.1
BOD				*e*Pg	Pg	21 23 05.1	-7.3
BOD				*e*Sg	Sg	21 24 16.7	-6.9
BOD				Pmax			
	comp=E,10.0nm,0.5s						
BOD				Smax			
	comp=E,43nm,0.9s						
ULN	**Ulaanbaatar**	**5.52**	**190**	*e*Pn	Pn	21 22 51.8	+2.5
ULN				*e*Pg	Pg	21 23 07.2	-5.5
ULN				*e*Sg	Sg	21 24 18.5	-5.6
CRS	**Chara**	**6.67**	**53**	*e*PG	Pg	21 23 28.4	-6.3
CRS				*e*		21 24 54.2	
CRS				pmax	pmax		
	comp=Z,34nm,1.0s						
CRS				smax			
	comp=E,135nm,1.3s						
CRS	**Chara**	**6.67**	**53**	*e*Pn	Pn	21 23 06.5	+1.4
CRS				*e*Pg	Pg	21 23 28.3	-6.4
CRS				*e*Sg	Sg	21 24 53.4	-7.6
CRS				Pmax			
	comp=E,34nm,1.0s						
CRS				Smax			
	comp=E,135nm,1.4s						
TUP	**Tupik**	**6.88**	**76**	*e*PN	Pn	21 23 07.4	-0.5
TUP				*e*		21 23 29.5	
TUP				*e*S	Sn	21 24 24.3	-1.9
TUP				*e*		21 24 58.3	
TUP				pmax	pmax		
	comp=Z,4.0nm,0.3s						
TUP				smax			
	comp=N,225nm,1.0s						
TUP	**Tupik**	**6.88**	**76**	*e*Pn	Pn	21 23 07.7	-0.2
TUP				*e*Pg	Pg	21 23 30.5	-8.1
TUP				*e*Sg	Sg	21 24 59.2	-8.4
TUP				Pmax			
	comp=N,6.0nm,0.5s						
TUP				Smax			
	comp=N,262nm,1.6s						
HIA	**Hailar**	**8.13**	**115**	*e*Sg	Sn	21 25 38.4	+41
IENR	**Ienga**	**9.90**	**66**	*e*Sg	Sn	21 26 34.3	+54

*IDC **20** 21:35:48.3±4.4, 36°.24N×70°.85E, h162km±38km, mb3.3/8, mb1 3.4/13, mb1mx3.2/29, mbtmp3.3/13, Error ellipse: s-maj=30.3km s-min=19.5km az=20.0*
*NNC **20** 21:35:49.3±7.5, 36°.94N×70°.55E, h0km, mb4.0, mpv4.3, Error ellipse: s-maj=61.7km s-min=46.8km az=2.0*
*ISCJB **20** 21:35:51.0±0.4, 36°.56N±0°.03×70°.95E±0°.05, h186km±6km, mb3.5/7, Error ellipse: s-maj=7.1km s-min=4.4km az=162.0*
*NEIC **20** 21:35:52.1±0.8, 36°.50N×70°.95E, h189km±7km, mb4.7/4, Error ellipse: s-maj=13.0km s-min=8.5km az=132.0*
ISC 20 21:35:51.9±0.4, 36°.57N±0°.03×70°.95E±0°.06, h179km±5km, n59, σ1°.13/75, mb3.5/7, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.55**	**218**	*e*Pn	**Pn**	**21 36 36.7**	**+1.7**
KBL				*e*Sn	**Sn**	**21 37 06.9**	**-1.6**
KSH	**Kashi**	**4.94**	**52**	Pn	**Pn**	**21 37 02.3**	**-2.6**
KSH				Sn	**Sn**	**21 37 53.1**	**-9.2**
KSH				smax			
	comp=N,120nm,0.3s						
KSH				smax			
	comp=E,100nm,0.4s						
THN	**Thein Dam**	**5.70**	**135**	*e*P	**Pn**	**21 37 14.4**	**-0.5**
THN				*ex*	**Sn**	**21 38 20.5**	**+0.3**
AML	**Almayashu**	**5.95**	**20**	P	**Pn**	**21 37 19.4**	**+1.4**
	SNR=122						
AML	**Almayashu**	**5.95**	**20**	*e*Pn	**Pn**	**21 37 19.0**	**+1.0**
	comp=E,82nm,0.6s						
AML				*e*Sn	**Sn**	**21 38 23.8**	**-2.1**
UCH	**Uchtor**	**6.29**	**25**	P	**Pn**	**21 37 24.0**	**+1.5**
	SNR=14						
UCH	**Uchtor**	**6.29**	**25**	*e*Pn	**Pn**	**21 37 23.2**	**+0.7**
UCH				*e*Sn	**Sn**	**21 38 32.6**	**-1.4**
KZA	**Kyzart**	**6.43**	**30**	P	**Pn**	**21 37 25.1**	**+0.7**
	SNR=6.9						
EKS2	**Erkin-Say**	**6.47**	**19**	P	**Pn**	**21 37 26.1**	**+1.3**
	SNR=37						
EKS2	**Erkin-Say**	**6.47**	**19**	*e*Pn	**Pn**	**21 37 26.0**	**+1.2**
	comp=E,20nm,0.3s						
EKS2				*e*Sn	**Sn**	**21 38 36.7**	**-1.4**
KK31	**Karatay Array**	**6.54**	**357**	P	**Pn**	**21 37 26.4**	**+0.7**
	comp=E,5.1nm,0.3s,baz=186,slow=13,SNR=130						
KK31				S	**Sn**	**21 38 36.1**	**-3.7**
	comp=E,31nm,0.7s,baz=179,slow=15,SNR=18						
AAK	**Ala-Archa**	**6.65**	**23**	P	**Pn**	**21 37 28.5**	**+1.3**
	SNR=11						
AAK	**Ala-Archa**	**6.65**	**23**	P	**Pn**	**21 37 28.6**	**+1.4**
	comp=E,0.1nm,0.3s,baz=166,slow=5.7,SNR=33						
AAK				S	**Sn**	**21 38 35.9**	**-6.5**
	comp=E,0.0nm,0.3s,baz=226,slow=4.9,SNR=5.1						
AAK	**Ala-Archa**	**6.65**	**23**	*e*Pn	**Pn**	**21 37 28.1**	**+0.9**
AAK				*e*Sn	**Sn**	**21 38 34.8**	**-7.6**
KBK	**Karagaybulak**	**6.82**	**26**	P	**Pn**	**21 37 31.3**	**+1.8**
	SNR=16						
CHMS	**Chumysh**	**7.06**	**23**	P	**Pn**	**21 37 33.8**	**+1.2**
	SNR=11						
SDNR	**Sundarnagar**	**7.11**	**134**	*e*P	**Pn**	**21 37 33.6**	**+0.2**
SDNR				*ex*	x	21 38 50.6	
USP	**Ospenovka**	**7.23**	**21**	P	**Pn**	**21 37 35.1**	**+0.3**
	SNR=7.8						
TKM2	**Tokmak 2**	**7.29**	**28**	⇑P	**Pn**	**21 37 36.5**	**+0.9**
	comp=E,20nm,0.6s						
TKM2				⇓S	**Sn**	**21 38 55.1**	**-2.5**
	comp=E,4.4nm,0.7s						
TKM2	**Tokmak 2**	**7.29**	**28**	P	**Pn**	**21 37 36.8**	**+1.2**
	SNR=44						
TKM2	**Tokmak 2**	**7.29**	**28**	*e*Pn	**Pn**	**21 37 36.3**	**+0.7**
	comp=E,25nm,0.6s						
SMLA	**Simla**	**7.50**	**135**	*i* x	**Pn**	**21 37 34.9**	**-3.6**
SMLA				*i* S	**Sn**	**21 38 56.5**	**-6.2**
SMLA				*ex*	x	21 38 57.7	
	comp=N,510nm,0.3s						
SMLA				*ex*	x	21 39 01.6	
	comp=E,451nm,0.3s						
KLP	**Kalpa**	**7.87**	**128**	*e*P	**Pn**	**21 37 44.0**	**+0.6**
KLP				*e*S	**Sn**	**21 39 05.6**	**-6.0**
JOSI	**Joshimath**	**9.36**	**127**	*e*P	**Pn**	**21 38 03.4**	**+0.5**
JOSI				*e*S	**Sn**	**21 39 39.7**	**-7.5**
KHET	**Khetri**	**9.41**	**153**	*e*S	**Sn**	**21 39 39.6**	**-9.1**
SONA	**Sohna**	**9.78**	**146**	*e*S	**Sn**	**21 39 47.4**	**-10**
MK31	**Makanchi Array**	**13.26**	**36**	P	**Pn**	**21 38 57.3**	**+4.1**
	comp=E,2.0nm,0.7s,baz=216,slow=8.2,SNR=8.8						
MK31	**Makanchi Array**	**13.26**	**36**	*e*Pn	**Pn**	**21 38 53.4**	**+0.2**
MKAR	**Makanchi Array**	**13.26**	**36**	P	**Pn**	**21 38 55.1**	**+1.9**
	comp=E,0.2nm,0.3s,baz=214,slow=8.4,SNR=12						

DMN Daman 14.95 123 eP Pn 21 39 15.0 +0.7
comp=E,14nm,0.4s
KKN Kakani 14.95 122 eP Pn 21 39 13.8 -0.6
comp=E,6.3nm,0.3s
AB31 Akbulak array 15.00 331 ⇓P Pn 21 39 14.1 -0.8
comp=E,2.1nm,0.6s,baz=150,slow=13,SNR=13
AB31 ⇑S S 21 41 56.2 -5.4
comp=E,1.1nm,0.6s,baz=156,slow=23,SNR=3.0
ABKAR Akbulak array 15.00 331 ePn Pn 21 39 14.0 -0.8
comp=E,3.3nm,0.6s
ABKAR eSn Sn 21 41 55.4 -6.7
KURBB Kurchatov Arra 15.07 19 ⇑P Pn 21 39 16.2 +0.6
comp=E,0.4nm,0.9s
PKIN Phulchoki 15.16 122 eP Pn 21 39 17.1 +0.1
comp=E,23nm,0.5s
PKI Pulchoki 15.18 122 eP Pn 21 39 17.1 -0.1
comp=E,25nm,0.5s
KURK Kurchatov 15.18 19 P Pn 21 39 15.4 -1.6
comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=7.3
KURK Kurchatov 15.18 19 ePn Pn 21 39 18.1 +1.2
GUN Gumba 15.29 120 eP Pn 21 39 17.0 -1.5
comp=E,13nm,0.4s
VOSK Vostochnaya 16.15 0 ⇑P Pn 21 39 28.3 -0.5
comp=E,2.1nm,0.7s
BVAR Borovoye Array 16.46 359 P Pn 21 39 33.4 +0.9
comp=E,0.3nm,0.3s,baz=168,slow=8.1,SNR=3.6
BRVK Borovoye 16.50 359 eP Pn 21 39 33.8 +0.9
AKTK Aktyubinsk 16.70 330 P Pn 21 39 35.9 +0.5
AKTO Aktyubinsk 16.70 330 ⇓P Pn 21 39 35.4 0.0
comp=E,1.2nm,1.4s
AKTO ⇑S S 21 42 35.9 -3.9
comp=E,0.3nm,1.4s
AKTO Aktyubinsk 16.70 330 P Pn 21 39 35.9 +0.5
comp=E,0.7nm,0.3s,baz=139,slow=9.8,SNR=10
ZAA0 Zalesovo Array 19.87 25 eP P 21 40 08.5 -0.6
ZALV Zalesovo Beam 19.87 25 P P 21 40 09.2 +0.1
comp=E,2.3nm,0.6s,baz=221,slow=11,SNR=15
TLY Talaya 27.62 46 P P 21 41 22.4 -0.1
SONM Songino Array 28.33 55 P P 21 41 29.5 +0.7
comp=E,0.4nm,0.5s,mb3.4,baz=268,slow=11,SNR=2.5
SONM Songino Array 28.33 55 P P 21 41 29.4 +0.7
FINES FINESS Array B 37.40 326 P P 21 42 46.9 -0.3
comp=E,0.6nm,0.5s,mb3.5,baz=102,slow=8.0,SNR=5.6
ARCES ARCESS Array B 41.07 338 P P 21 43 18.1 +0.7
comp=E,1.1nm,0.6s,mb3.7,baz=107,slow=7.5,SNR=6.7
YAK Yakutsk 43.94 36 P P 21 43 40.7 +0.1
NB2 NORSAR Subarra 44.30 323 P P 21 43 43.1 -0.4
comp=Z,0.8nm,0.5s,mb3.6,baz=98,slow=7.9
NOA NORSAR Array B 44.30 323 P P 21 43 43.5 0.0
comp=Z,1.0nm,0.7s,mb3.6,baz=96,slow=7.8,SNR=6.9
TORD Torodi Ar. Bea 65.68 269 P P 21 46 14.6 -2.7
comp=Z,0.4nm,0.6s,mb3.4,baz=19,slow=5.3,SNR=2.5
YKA Yellowknife Ar 81.18 3 P P 21 47 47.0 0.0
comp=Z,0.5nm,0.4s,mb3.5,baz=350,slow=5.4,SNR=9.4
YKA Yellowknife Ar 81.18 3 P P 21 47 47.0 -0.1
ASAR Alice Springs 84.33 125 P P 21 48 01.9 -2.0
comp=Z,0.7nm,0.6s,mb3.6,baz=311,slow=4.8,SNR=16

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*MOS **20** 21:37:09.9±0.8, 8.°46S×74.°93W, h118km, mb5.5/111, MS4.1/4, Error ellipse: s-maj=6.6km s-min=4.4km az=81.5*
*ISCJB **20** 21:37:10.7±0.1, 8.°57S±0.°03×74.°95W±0.°02, h129km, mb5.2/341, Error ellipse: s-maj=3.8km s-min=2.4km az=22.9*
*IDC **20** 21:37:11.8±0.5, 8.°59S×74.°92W, h126km±4km, mb4.9/27, mb1 5.0/32, mb1mx5.0/33, mbtmp4.9/32, MS3.9/4, Ms1 3.9/4, ms1mx3.3/25, Error ellipse: s-maj=10.1km s-min=7.4km az=77.0*
*SZGRF **20** 21:37:11.7, 6.°94S×72.°38W, h33km, mb5.4, Peru-Brazil border region*
*GCMT **20** 21:37:12.2±0.2, 8.°55S×74.°85W, h146km±1km, MW5.2/85, Moment Tensor Solution. s64,c89; s85,c145; Duration: 1.s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.75±.01; $M_{\theta\theta}$-0.21±.02; $M_{\phi\phi}$0.96±.02; $M_{r\theta}$-0.17±.01; $M_{\theta\phi}$-0.22±.02; $M_{\phi r}$0.02±.02; Best double couple: $M_0$0.90200×10^{17} NP1:ϕ_s6.00000°,δ46.00000°,λ-66.00000°. NP2: ϕ_s154.00000°,δ49.00000°,λ-113.00000°. Principal axes: T 1.0020, Plg2.0000°, Azm260.0000°; N -0.2010, Plg17.0000°, Azm169.0000°; P -0.8010, Plg73.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 21:37:12.2±0.1, 8.°58S×74.°89W, mb5.4/271 Error ellipse: s-maj=3.4km s-min=2.4km az=219.0*
NEIC Felt [III] at Pucallpa.
*BGS **20** 21:37:13.5±1.9, 8.°15S×74.°85W, h130km, mb5.0*
ISC 20 21:37:12.6±0.1, **8.°59S**±0.°03×**74.°84W**±0.°02, **h131**km, **h131**km±1.2km**:pP-P, n1230,** σ**0.s67**/1106, **mb5.2**/341, **201C-250D, Peru-Brazil border region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
ATAH Atahualpa 3.80 292 P Pn 21 38 09.4 -0.4
374nm,0.3s,baz=92,slow=6.0,SNR=620
ATAH S Sn 21 38 51.3 -2.9
176nm,0.3s,baz=120,slow=5.4,SNR=3.6
NNA Nana 3.90 210 Pn Pn 21 38 10.0 -1.1
3μm,0.5s
NNA Nana 3.90 210 P Pn 21 38 10.8 -0.4
102nm,0.3s,baz=14,slow=8.5,SNR=155
NNA S Sn 21 38 54.3 -2.2
1μm,0.3s,baz=213,slow=18,SNR=31
NNA LR LR 21 39 37.0
comp=Z,2μm,21.9s,baz=57,slow=38
NNA Nana 3.90 210 ⇑iPn Pn 21 38 10.8 -0.3
NNA eSn Sn 21 38 54.5 -2.0
OTAV Otavalo 9.48 338 ePn Pn 21 39 25.1 -0.9
OTAV eSn Sn 21 40 48.2 -23
LPAZ La Paz 10.07 140 P Pn 21 39 33.9 0.0
3.4nm,0.3s,baz=327,slow=11,SNR=103
LPAZ S Sn 21 41 33.9 +8.7
4.5nm,0.3s,baz=184,slow=12,SNR=3.8
LPAZ LR LR 21 44 10.0
comp=Z,490nm,18.7s,baz=338,slow=41
LPAZ La Paz 10.07 140 ePn Pn 21 39 34.3 +0.5
LPAZ eSn Sn 21 41 17.4 -7.7
ROSC El Rosal 13.37 2 P Pn 21 40 17.8 +0.5
7.8nm,0.3s,baz=147,slow=3.1,SNR=13
ROSC S Sn 21 42 56.2 +11
3.2nm,0.3s,baz=92,slow=18,SNR=2.0
ROSC El Rosal 13.37 2 ePn Pn 21 40 18.1 +0.8
CEN1 Los Morros 15.37 164 eP Pn 21 40 46.5 +4.0
PAYG Puerto Ayora 17.27 296 P Pn 21 41 04.8 -1.1
77nm,1.1s
SDV Santo Domingo 17.86 14 P Pn 21 41 12.2 -0.7
18nm,0.3s,baz=184,slow=12,SNR=57
SDV S S 21 44 25.1 -5.2
1.8nm,0.3s,baz=24,slow=21,SNR=3.0
SDV Santo Domingo 17.86 14 ePn Pn 21 41 11.0 -1.9
119nm,0.8s
SDV eS S 21 44 26.1 -4.2
BCIP Isla Barro Col 18.33 344 ePn Pn 21 41 17.3 -1.2
174nm,0.8s
BAR1 19.62 334 eP P 21 41 32.1 +1.2
BUS Buena Vista 20.10 334 eP P 21 41 38.0 +1.9
QCR Quepos 20.16 332 eP P 21 41 38.4 +1.7
URSC Urasca 20.35 334 eP P 21 41 40.5 +1.7
LAJ Bijagual 20.53 333 eP P 21 41 43.2 +2.5
LCO Las Campanas 20.68 170 eP P 21 41 43.4 +1.2
79nm,0.8s
PRS1 Puriscal 20.72 333 eP P 21 41 44.1 +1.3
CGA2 Cerro Gallo 2 20.82 332 eP P 21 41 44.8 +1.0
JCR Jicaral 20.98 331 eP P 21 41 47.2 +1.7
PCRV Puerto La Cruz 21.23 29 P P 21 41 48.8 +0.6
108nm,0.5s,mb5.5,baz=179,slow=4.1,SNR=39
PCRV S S 21 45 31.3 -5.6
12nm,0.6s,baz=201,slow=23,SNR=1.7
JTS JuntasAbangare 21.29 332 P P 21 41 49.4 +0.6
512nm,1.2s,mb5.7,SNR=13
FORC Fortuna 21.31 332 eP P 21 41 51.2 +2.2
TRN Trinidad (W) 23.33 35 eP P 21 42 10.2 +1.0
TRN Trinidad (W) 23.33 35 eP P 21 42 10.2 +1.1
TBH Brigand Hill 23.39 36 eP P 21 42 12.1 +2.4
TBH Brigand Hill 23.39 36 eP P 21 42 12.1 +2.4
CFAA Coronel Fontan 23.71 166 P P 21 42 12.7 +0.3
4.1nm,0.8s,mb4.0,baz=342,slow=12,SNR=48
CFAA PP 21 43 20.6
2.0nm,0.7s,baz=334,slow=8.5,SNR=3.5
TPR Prospect 24.12 36 eP P 21 42 17.3 +0.9
TPR Prospect 24.12 36 eP P 21 42 17.3 +0.9
BOT Bacolet 24.14 36 eP P 21 42 17.9 +1.4
BOT Bacolet 24.14 36 eP P 21 42 17.9 +1.4
CPUP Villa Florida 24.24 139 P P 21 42 16.4 -0.9
24nm,0.7s,mb4.9,baz=306,slow=9.7,SNR=44
CPUP Villa Florida 24.24 139 eP P 21 42 16.4 -1.0
CPUP pmax pmax
comp=Z,107nm,0.6s
CPUP Villa Florida 24.24 139 eP P 21 42 16.4 -0.9
comp=Z,107nm,0.6s,mb5.5
GRGR Grenville 24.41 33 eP P 21 42 18.0 -1.0
comp=Z,863nm,0.6s,mb6.5
GRGR eS S 21 46 28.1 -1.3
GRW Mount Saint Ca 24.43 33 eP P 21 42 19.4 +0.3
GRW Mount Saint Ca 24.43 33 eP P 21 42 19.4 +0.3
GRHS Sauteurs 24.49 33 eP P 21 42 20.8 +1.1
GRHS Sauteurs 24.49 33 eP P 21 42 20.8 +1.1
GRHS Sauteurs 24.49 33 eP P 21 42 22.7 +3.0
GRSS Sisters 24.57 33 eP P 21 42 20.7 +0.3
GRSS Sisters 24.57 33 eP P 21 42 20.7 +0.3
GRSS Sisters 24.57 33 e P 21 42 24.8 +4.4
GRIC Isle de Caille 24.57 33 eP P 21 42 20.2 -0.2
GRIC Isle de Caille 24.57 33 e P 21 42 23.7 +3.3
GRCU Cariacou 24.80 33 eP P 21 42 21.9 -0.6
GRCU Cariacou 24.80 33 eP P 21 42 21.9 -0.6
GRCU Cariacou 24.80 33 e P 21 42 25.8 +3.3
FCV Fort Charlotte 25.48 32 eP P 21 42 29.1 +0.3
FCV Fort Charlotte 25.48 32 eP P 21 42 29.1 +0.3
FCV Fort Charlotte 25.48 32 e P 21 42 32.7 +4.0
SVV Soufriere Volc 25.63 32 eP P 21 42 34.0 +3.9
SVV Soufriere Volc 25.63 32 eP P 21 42 28.0 -2.1
SVV Soufriere Volc 25.63 32 e P 21 42 34.0 +3.9
SSV Crater Summit 25.65 32 eP P 21 42 33.4 +3.1
SSV Crater Summit 25.65 32 eP P 21 42 28.1 -2.2
SSV Crater Summit 25.65 32 e P 21 42 33.4 +3.1
BHS Barnard House 25.66 32 eP P 21 42 33.2 +2.8
BHS Barnard House 25.66 32 eP P 21 42 28.4 -1.9
BHS Barnard House 25.66 32 e P 21 42 33.2 +2.8
TGUH Tegucigalpa,Un 25.66 331 eP P 21 42 31.4 +1.1
comp=Z,355nm,1.9s,mb5.7
SLB Belfond 26.15 32 eP P 21 42 37.2 +2.5
SLB Belfond 26.15 32 eP P 21 42 32.3 -2.4
SLB Belfond 26.15 32 e P 21 42 37.2 +2.5
BBGH Gun Hill 26.40 35 eP P 21 42 37.7 +0.7
MTDJ Mount Denham 26.78 354 eP P 21 42 41.9 +1.6
comp=Z,238nm,1.0s,mb5.8
FDF Fort de France 26.86 30 eP P 21 42 38.0 -3.1
FDF pmax pmax
comp=Z,197nm,0.9s,mb5.7
FDF Fort de France 26.86 30 eP P 21 42 38.0 -3.1
comp=Z,198nm,0.9s,mb5.7
CRPR Cabo Rojo, PR 27.51 16 eP P 21 42 47.9 +1.1
comp=Z,27nm,0.6s,mb5.2
ICM Isla Caja Muer 27.57 17 eP P 21 42 47.6 +0.2
ICM epP pP 21 43 09.6 -6.0
SDDR Presa de Saban 27.62 7 eP P 21 42 48.3 +0.4
comp=Z,45nm,0.7s,mb5.3
LSP Las Mesas 27.68 16 eP P 21 42 48.6 +0.2
OBIP Obispado Ponce 27.69 17 eP P 21 42 48.5 0.0
comp=Z,178nm,1.0s,mb5.8
MPR Mayaguez 27.70 16 eP P 21 42 48.6 +0.1
MPR epP pP 21 43 11.8 -4.9
CELP Cerrillos 27.73 17 eP P 21 42 48.5 -0.3
AGP Aguadilla 27.89 16 eP P 21 42 50.4 +0.2
AOPR Arecibo Observ 27.93 17 eP P 21 42 50.2 -0.5
comp=Z,140nm,0.6s,mb5.9
AGPR Aguadilla, PR 27.95 16 eP P 21 42 50.6 -0.2
comp=Z,85nm,0.8s,mb5.5
CDVI St. Croix 28.01 21 eP P 21 42 51.3 0.0
comp=Z,126nm,0.7s,mb5.8
HUMP Col San Antoni 28.01 18 eP P 21 42 50.7 -0.6
comp=Z,88nm,1.0s,mb5.5
MTP Monte Pirata 28.06 19 eP P 21 42 51.2 -0.6
comp=Z,76nm,0.8s,mb5.5
MTP eS S 21 47 27.1 +0.2
APG El Apazote 28.10 326 P P 21 42 51.9 -0.2
comp=Z,46nm,0.9s,mb5.2,baz=133,slow=5.7,SNR=63
STVI Saint Thomas 28.50 20 eP P 21 42 54.2 -1.4
comp=Z,50nm,0.6s,mb5.4
BPA Boggy Peak 28.53 27 eP P 21 42 54.1 -1.8
BPA Boggy Peak 28.53 27 eP P 21 42 54.1 -1.8
BPA Boggy Peak 28.53 27 e P 21 42 59.1 +3.1
ANWB Willy Bob 29.11 26 eP P 21 42 58.4 -2.7
comp=Z,318nm,0.8s,mb6.1
TEIG Tepich 31.54 335 P P 21 43 21.5 -1.0
comp=Z,97nm,0.9s,mb5.5,SNR=38
TRQA Tornquist 31.55 160 eP P 21 43 21.7 -0.7
comp=Z,48nm,1.3s,mb5.1
PLCA Paso Flores 32.23 174 P P 21 43 28.9 +0.6
comp=Z,7.2nm,0.6s,mb4.6,baz=352,slow=9.1,SNR=25
PLCA PP PP 21 44 37.1 -6.7
comp=Z,4.9nm,0.7s,baz=341,slow=8.4,SNR=3.2
PLCA PcP PcP 21 46 13.7 -0.1
comp=Z,8.5nm,0.9s,baz=324,slow=3.3,SNR=4.5
PLCA ScP ScP 21 49 46.1 +0.7
comp=Z,4.3nm,1.1s,baz=358,slow=6.8,SNR=3.1
PLCA Paso Flores 32.23 174 eP P 21 43 29.0 +0.7
PLCA pmax pmax
comp=Z,154nm,2.3s
PLCA Paso Flores 32.23 174 eP P 21 43 29.0 +0.6
comp=Z,154nm,2.3s,mb5.3
CMIG Matias Romero 32.31 322 P P 21 43 29.9 +0.6
comp=Z,20nm,0.8s,mb4.9,baz=117,slow=6.2,SNR=32
CAM4 Nova Friburgo 33.89 118 ⇓iP P 21 43 42.0 -1.0
CAM4 i 21 43 43.3
CAM4 i 21 43 47.7
CAM4 i 21 43 54.2
CAM4 i 21 44 01.2
CAM4 i 21 44 04.0
CAM4 i 21 44 22.5
CAM4 i 21 54 17.0
CAM4 i 21 54 37.7
CAM4 i 21 55 21.1
CAM4 i 21 55 31.9
CAM4 Nova Friburgo 33.89 118 ⇓iP P 21 43 41.9 -1.1
CAM4 i 21 43 43.1
CAM4 i 21 43 47.6
CAM4 i 21 43 54.1
CAM4 i 21 44 01.1
CAM4 i 21 44 01.1
CAM4 i 21 44 03.9
CAM4 i 21 44 22.6
CAM4 i 21 44 28.3
CAM4 i 21 44 40.2
DWPF Disney 37.04 350 eP P 21 44 10.7 +0.9
comp=Z,238nm,1.3s,mb5.7
DWPF ePcP PcP 21 46 30.0 +2.0
RCBR Riachuelo 38.72 89 eP P 21 44 26.3 +2.1
comp=Z,32nm,0.8s,mb5.0
RCBR epP pP 21 44 57.7 +4.3
NHSC New Hope 41.78 353 eP P 21 44 49.6 +0.6
comp=Z,314nm,0.9s,mb5.9
BBSR BB Station 41.87 13 eP P 21 44 49.3 -0.5
KVTX Kingsville 42.30 329 eP P 21 44 55.5 +2.2
comp=Z,149nm,0.9s,mb5.6
GOGA Godfrey 42.57 349 eP P 21 44 54.5 -0.9
GOGA e 21 46 44.8
GOGA pmax pmax
comp=Z,96nm,1.1s,mb5.3
GOGA Godfrey 42.57 349 eP P 21 44 54.5 -0.9
comp=Z,96nm,1.1s,mb5.3
GOGA ePcP PcP 21 46 44.8 -0.7
LRAL Lakeview Retre 42.98 345 eP P 21 44 57.8 -1.1
comp=Z,37nm,1.1s,mb4.9
JSC Jenkinsville 43.07 352 eP P 21 44 58.0 -1.5
JSC e 21 46 46.9
VBMS Vicksburg 43.26 340 P P 21 45 00.5 -0.5
HKT Hockley 43.31 333 eP P 21 45 01.6 +0.1
HKT e 21 46 47.9
HKT pmax pmax
comp=Z,95nm,1.5s,mb5.2
HKT Hockley 43.31 333 eP P 21 45 01.6 +0.1
comp=Z,95nm,1.5s,mb5.2
HKT ePcP PcP 21 46 47.9 -0.2
NATX Nacogdoches 44.38 336 eP P 21 45 10.7 +0.7
comp=Z,230nm,0.9s,mb5.8
CPCT Cooper Cave 44.75 349 eP P 21 45 12.0 -0.9
TKL Tuckaleechee C 44.81 350 eP P 21 45 12.0 -1.4
TKL e*PP pP 21 45 42.5 -0.7
TKL 21 46 51.6
TKL 21 47 01.2
SWET Sewanee 44.81 347 eP P 21 45 11.9 -1.5
SWET epP pP 21 45 43.3 0.0
SWET PcP PcP 21 46 52.4 -0.7
OXF Oxford 45.03 343 eP P 21 45 14.0 -1.2
OXF e*PP pP 21 45 44.1 -0.9
OXF e 21 46 53.6
OXF e 21 47 03.4
OXF pmax pmax
comp=Z,94nm,1.1s,mb5.3
OXF Oxford 45.03 343 eP P 21 45 13.9 -1.2
comp=Z,94nm,1.1s,mb5.3
OXF epP pP 21 45 44.1 -0.9
OXF ePcP PcP 21 46 53.5 -0.3
OXF ePP PP 21 47 03.4 +0.2
PLAL Pickwick Lake 45.11 345 eP P 21 45 13.5 -2.2
comp=Z,59nm,1.2s,mb5.1
PLAL epP pP 21 45 45.9 +0.2
EFI East Falkland 45.11 165 eP P 21 45 16.3 +0.8
TZTN Tazewell 45.64 350 eP P 21 45 19.0 -0.8
comp=Z,58nm,0.8s,mb5.3
JCT Junction City 45.65 329 eP P 21 45 20.1 +0.1
JCT pmax pmax
comp=Z,28nm,1.0s,mb4.8
JCT Junction City 45.65 329 eP P 21 45 20.1 +0.1
comp=Z,28nm,1.0s,mb4.8
VWCC Virginia Weste 45.85 354 eP P 21 45 21.8 +0.3
BLA Blacksburg 45.86 354 eP P 21 45 21.7 +0.1
BLA e*PP pP 21 45 50.7 -0.9
BLA e*SP sP 21 46 04.6 -1.7
BLA e 21 46 56.6
BLA 21 47 12.5
BLA pmax pmax
comp=Z,39nm,0.8s,mb5.1
BLA Blacksburg 45.86 354 eP P 21 45 21.7 +0.1
comp=Z,39nm,0.8s,mb5.1
BLA epP pP 21 45 50.7 -0.9
BLA esP sP 21 46 04.6 -1.8
BLA ePcP PcP 21 46 56.6 -0.1
BLA PP PP 21 47 12.5 +0.7
ELN Prospectdale 45.91 353 eP P 21 45 22.1 +0.1
ELN epP pP 21 45 51.6 -0.4
ELN esP sP 21 46 05.4 -1.3
ELN ePcP PcP 21 46 56.5 -0.4
JSRW J. Sargeant Re 46.13 357 eP P 21 45 23.7 0.0
WVT Waverly 46.13 345 eP P 21 45 20.5 -3.3
WVT e 21 46 56.5
WVT pmax pmax
comp=Z,12nm,0.5s,mb4.8
WVT Waverly 46.13 345 eP P 21 45 20.5 -3.2
comp=Z,12nm,0.5s,mb4.8
WVT pP pP 21 45 54.8 +1.0
WVT ePcP PcP 21 46 56.5 -1.1
UALR University of 46.20 340 eP P 21 45 23.3 -1.0
comp=Z,131nm,0.9s,mb5.6
HBAR Harrisburg 46.38 342 eP P 21 45 25.0 -0.7
USHA Ushuaia 46.40 175 P P 21 45 26.1 +0.6
comp=Z,22nm,0.7s,mb4.9,baz=342,slow=5.2,SNR=25
MIAR Mount Ida 46.43 339 eP P 21 45 25.3 -0.8
MIAR pmax pmax
comp=Z,83nm,1.3s,mb5.2
MIAR Mount Ida 46.43 339 eP P 21 45 25.2 -0.8
comp=Z,83nm,1.3s,mb5.2
628A Black Gap, Mar 46.51 326 ⇑P P 21 45 27.6 +0.9
baz=47,SNR=48
CBN Corbin 46.61 357 eP P 21 45 27.8 +0.3
comp=Z,180nm,0.6s,mb5.9
627A Terlingua Ranc 46.76 325 ⇑P P 21 45 29.0 +0.2
baz=47,SNR=33
TXAR Lajitas Array 46.83 325 P P 21 45 29.4 +0.1
comp=Z,8.8nm,0.7s,mb4.5,baz=148,slow=8.7,SNR=120
TXAR pP pP 21 45 57.3 -2.1
comp=Z,1.8nm,0.4s,baz=146,slow=7.9,SNR=3.3
TXAR PcP PcP 21 46 59.3 -1.0
comp=Z,7.9nm,0.9s,baz=132,slow=7.4,SNR=6.7
528A Cox Ranch, San 46.97 326 ⇑P P 21 45 30.3 -0.1
baz=47,SNR=32
626A Big Bend Ranch 47.26 325 ⇑P P 21 45 33.3 +0.6
baz=47,SNR=106
428A Kincaid Ranch, 47.35 327 ⇓P P 21 45 33.4 +0.1
baz=48,SNR=15
527A Woodward Ranch 47.41 326 ⇓P P 21 45 33.9 0.0
baz=48,SNR=27
526A Mary Lane Ranc 47.62 325 ⇑P P 21 45 35.8 +0.4
baz=48,SNR=44
WCI Wyandotte Cave 47.79 348 eP P 21 45 35.0 -1.6
WCI pmax pmax
comp=Z,85nm,1.2s,mb5.2
WCI Wyandotte Cave 47.79 348 eP P 21 45 35.0 -1.6
comp=Z,85nm,1.2s,mb5.2
SDMD Soldier’s Deli 47.79 358 eP P 21 45 36.7 +0.1
comp=Z,98nm,0.8s,mb5.5
427A Hayter Ranch, 47.83 326 ⇓P P 21 45 37.1 0.0
baz=48,SNR=9.6
USIN University of 47.84 346 eP P 21 45 35.6 -1.3
comp=Z,99nm,1.0s,mb5.4
SIUC Southern Illin 47.99 345 eP P 21 45 36.7 -1.4
comp=Z,83nm,0.9s,mb5.4
426A McDonald Obser 48.04 326 ⇑P P 21 45 38.8 +0.2
baz=48,SNR=30
MCWV Mont Chateau 48.23 355 eP P 21 45 39.9 0.0
comp=Z,63nm,0.8s,mb5.3
327A Balmorhea Ranc 48.28 327 ⇓P P 21 45 40.7 +0.2
baz=48
MVL Millersville 48.37 358 eP P 21 45 41.5 +0.5
comp=Z,221nm,0.8s,mb5.8
326A Caldwell Ranch 48.51 326 ⇑P P 21 45 42.1 -0.1
baz=49,SNR=23
FVM French Village 48.57 344 eP P 21 45 41.7 -0.9
FVM pmax pmax
comp=Z,83nm,0.9s,mb5.4
FVM French Village 48.57 344 eP P 21 45 41.7 -0.8
comp=Z,83nm,0.9s,mb5.4
425A Indio Mountain 48.67 325 ⇑P P 21 45 43.4 -0.1
baz=49,SNR=60
OLIL Olney 48.67 346 eP P 21 45 41.6 -1.8
comp=Z,53nm,0.8s,mb5.2
WMOK Wichita Mounta 48.69 334 eP P 21 45 42.8 -0.7
WMOK e*PP pP 21 46 12.4 -1.4
WMOK e*SP sP 21 46 27.1 -1.4
WMOK e 21 47 06.3
WMOK e 21 47 35.8
WMOK pmax pmax
comp=Z,67nm,1.5s,mb5.0
WMOK Wichita Mounta 48.69 334 eP P 21 45 42.8 -0.8
comp=Z,67nm,1.5s,mb5.0
WMOK epP pP 21 46 12.4 -1.4
WMOK esP sP 21 46 27.1 -1.4
WMOK ePcP PcP 21 47 06.3 -0.6
WMOK ePP PP 21 47 35.8 -2.2
WMOK eScP ScP 21 50 49.5 -0.1
BLO Bloomington 48.74 348 eP P 21 45 42.9 -1.0
BLO pmax pmax
comp=Z,95nm,0.7s,mb5.5
BLO Bloomington 48.74 348 eP P 21 45 42.9 -1.0
comp=Z,95nm,0.7s,mb5.5
CCM Cathedral Cave 48.87 343 eP P 21 45 43.1 -1.8
CCM pmax pmax
comp=Z,43nm,0.9s,mb5.1
CCM Cathedral Cave 48.87 343 eP P 21 45 43.1 -1.8
comp=Z,43nm,0.9s,mb5.1
SSPA Standing Stone 49.06 357 eP P 21 45 46.3 0.0
comp=Z,94nm,1.3s,mb5.3
SSPA epP pP 21 46 14.5 -2.1
SSPA ePcP PcP 21 47 07.2 -0.9
325A Bean Ranch, Si 49.10 325 ⇓P P 21 45 46.5 -0.3
baz=49,SNR=40
226A Malaga, Loving 49.15 327 ⇑P P 21 45 47.5 +0.4
baz=49,SNR=24
ACSO Alum Creek Sta 49.16 352 eP P 21 45 46.0 -1.1
comp=Z,124nm,0.8s,mb5.6
127A Arkansas Junct 49.22 328 ⇑P P 21 45 47.3 -0.3
baz=49,SNR=6.2
PAL Palisades 49.36 1 eP P 21 45 48.5 0.0
PAL pmax pmax
comp=Z,84nm,1.1s,mb5.3
PAL Palisades 49.36 1 eP P 21 45 48.5 0.0
comp=Z,84nm,1.1s,mb5.3
GDL2 Guadalupe Moun 49.39 327 eP P 21 45 49.2 +0.2
324A Moseley Ranch, 49.44 325 ⇓P P 21 45 48.8 -0.6
baz=50,SNR=43
126A Clayton Basin, 49.55 327 ⇓P P 21 45 50.5 +0.3
baz=50,SNR=19
MNTX Cornudas Mount 49.58 325 eP P 21 45 49.4 -1.0
comp=Z,34nm,1.3s,mb4.8
MNTX epP pP 21 46 19.6 -1.2
MNTX ePcP PcP 21 47 09.2 -1.0
Z27A Tatum 49.65 329 ⇓P P 21 45 50.4 -0.5
baz=50,SNR=48
YLE Yale 49.69 2 eP P 21 45 51.5 +0.5
125A Gardner Draw, 49.90 327 ⇑P P 21 45 52.7 -0.1
baz=50,SNR=30
224A Corundas Mount 49.94 326 ⇑P P 21 45 52.8 -0.3

baz=50,SNR=25
MSTX Muleshoe 49.94 329 ⇑P P 21 45 52.5 -0.6
baz=50,SNR=23
Z26A Caprock 50.01 328 ⇑P P 21 45 53.7 0.0
baz=50,SNR=44
Y27A Causey 50.07 329 ⇑P P 21 45 53.7 -0.4
baz=50,SNR=18
AMTX Amarillo 50.14 331 *eP* **P 21 45 54.0 -0.6**
comp=Z,19nm,0.8s,mb4.8
AMTX *ePcP PcP* 21 47 11.9 -0.2
ALLY Alegheny Colle 50.23 355 *eP* **P 21 45 54.6 -0.5**
comp=Z,123nm,0.8s,mb5.6
124A Stringfield Ra 50.37 326 ⇑P P 21 45 56.6 +0.2
baz=50,SNR=14
223A Chaparral, Ant 50.40 325 ⇓P P 21 45 56.5 -0.1
baz=50
Z25A Roswell 50.41 327 ⇓P P 21 45 56.4 -0.3
baz=51,SNR=34
BINY Binghamton 50.55 359 *eP* **P 21 45 57.8 +0.2**
comp=Z,292nm,0.8s,mb6.0
X27A F and S Farms, 50.64 330 ⇑P P 21 45 58.3 0.0
baz=51,SNR=21
ERPA Erie 50.68 355 *eP* **P 21 45 57.8 -0.7**
comp=Z,133nm,0.8s,mb5.6
HDIL Hopedale 50.69 346 *eP* **P 21 45 56.8 -1.9**
comp=Z,250nm,0.8s,mb5.9
123A Bell Site, Whi 50.77 325 ⇑P P 21 45 59.4 0.0
baz=51
Z24A Sheeppen Canyo 50.80 327 ⇑P P 21 45 59.5 -0.1
baz=51,SNR=25
222A Williams Famil 50.86 324 ⇑P P 21 46 00.5 +0.4
baz=51,SNR=12
Y25A Mesa, Roswell 50.89 328 ⇑P P 21 45 59.7 -0.5
baz=51,SNR=24
X26A CR and CF Fran 50.92 329 ⇑P P 21 46 00.2 -0.3
baz=51,SNR=51
W27A Bowe Ranch, En 50.95 330 ⇑P P 21 46 00.3 -0.4
baz=51,SNR=55
221A Mesquite Ranch 51.18 324 ⇑P P 21 46 03.0 +0.5
baz=51
Z23A Rita Site, Whi 51.22 326 ⇑P P 21 46 03.0 +0.2
baz=51,SNR=37
122A Conniff Cattle 51.24 325 ⇓P P 21 46 03.3 +0.4
baz=51
AAM Ann Arbor 51.28 352 *eP* **P 21 46 01.6 -1.4**
AAM *pmax pmax*
comp=Z,68nm,0.9s,mb5.3
AAM Ann Arbor 51.28 352 *eP* **P 21 46 01.6 -1.4**
comp=Z,68nm,0.9s,mb5.3
Y24A Capitan 51.29 327 ⇑P P 21 46 02.8 -0.4
baz=51,SNR=27
W26A Owens Ranch, T 51.33 329 ⇓P P 21 46 03.2 -0.3
baz=52,SNR=7.2
X25A Clemmons Ranch 51.34 328 ⇑P P 21 46 03.2 -0.4
baz=52,SNR=15
KSU1 Kansas State U 51.58 338 *eP* **P 21 46 04.5 -0.8**
comp=Z,274nm,1.5s,mb5.7
KSU1 *epP pP* 21 46 38.6 +2.7
X24A Lazy VL Ranch, 51.78 328 ⇓P P 21 46 06.8 -0.1
baz=52
HNH Hanover 52.10 2 *eP* **P 21 46 09.6 +0.6**
BNM Barren Site 52.11 326 *eP* **P 21 46 08.7 -0.6**
comp=Z,16nm,1.0s,mb4.6
BNM *epP pP* 21 46 36.9 -3.1
BNM *ePcP PcP* 21 47 19.4 0.0
Y22D IRIS PASSCAL I 52.21 326 ⇑P P 21 46 11.0 +0.9
baz=52
LPM Los Pinos Moun 52.23 327 *eP* **P 21 46 09.8 -0.4**
LENM Lemitar 52.31 326 *eP* **P 21 46 10.3 -0.4**
NCB Newcomb 52.32 1 *eP* **P 21 46 10.7 0.0**
comp=Z,79nm,0.9s,mb5.3
CBKS Cedar Bluff 52.54 336 *eP* **P 21 46 12.4 0.0**
CBKS *pmax pmax*
comp=Z,110nm,0.9s,mb5.6
CBKS Cedar Bluff 52.54 336 *eP* **P 21 46 12.4 0.0**
comp=Z,110nm,0.9s,mb5.6
LAZ Ladron 52.58 326 *eP* **P 21 46 12.6 -0.2**
comp=Z,18nm,1.0s,mb4.7
LAZ *epP pP* 21 46 41.3 -2.2
ANMO Albuquerque 52.62 327 *eP* **P 21 46 13.3 +0.3**
ANMO *pmax pmax*
comp=Z,41nm,1.0s
ANMO Albuquerque 52.62 327 *eP* **P 21 46 13.3 +0.2**
comp=Z,41nm,1.0s,mb5.1
LBNH Lisbon 52.65 3 *eP* **P 21 46 12.9 -0.2**
LBNH *e*PP pP* 21 46 42.5 -1.3
LBNH *e*SP sP* 21 46 57.1 -1.2
LBNH *e* 21 48 13.1
LBNH *pmax pmax*
comp=Z,33nm,1.0s,mb5.0
LBNH Lisbon 52.65 3 *eP* **P 21 46 12.9 -0.2**
comp=Z,33nm,1.0s,mb5.0
LBNH *epP pP* 21 46 42.5 -1.3
LBNH *esP sP* 21 46 57.1 -1.3
LBNH *ePP PP* 21 48 13.1 -0.6
W22A Albuquerque 52.93 327 ⇓P P 21 46 15.6 +0.3
baz=53
LONY Lake Ozonia 52.96 0 *eP* **P 21 46 15.2 -0.1**
comp=Z,99nm,1.0s,mb5.5
LONY *epP pP* 21 46 44.7 -1.5
SCIA State Center 53.00 343 *eP* **P 21 46 14.2 -1.5**
comp=Z,78nm,0.8s,mb5.5
JFWS Jewell Farm 53.15 346 *eP* **P 21 46 15.1 -1.7**
JFWS *pmax pmax*
comp=Z,108nm,0.8s,mb5.6
JFWS Jewell Farm 53.15 346 *eP* **P 21 46 15.1 -1.7**
comp=Z,108nm,0.8s,mb5.6
FRNY Flat Rock 53.19 1 *eP* **P 21 46 17.1 +0.1**
comp=Z,123nm,1.0s,mb5.6
TUC Tucson 53.20 322 *eP* **P 21 46 17.5 +0.1**
TUC *pmax pmax*
comp=Z,18nm,1.0s,mb4.8
TUC Tucson 53.20 322 *eP* **P 21 46 17.5 +0.1**
comp=Z,18nm,1.0s,mb4.8
216A Three Points, 53.41 321 ⇑P P 21 46 18.9 0.0
baz=54,SNR=11
Z17A San Carlos Hig 53.69 323 ⇓P P 21 46 21.0 0.0
baz=54
Y18A Canyon Day Jun 53.77 323 ⇑P P 21 46 21.5 0.0
baz=54
PKME Peaks-Kenny Pk 53.84 5 *eP* **P 21 46 21.8 0.0**
comp=Z,46nm,0.9s,mb5.2
116A Eloy 53.94 321 ⇑P P 21 46 22.6 -0.2
baz=54,SNR=12
Y17A Roosevelt 54.19 323 ⇓P P 21 46 24.9 +0.3
baz=54,SNR=14
214A Organ Pipe Nat 54.23 320 ⇓P P 21 46 25.5 +0.6
baz=54,SNR=31
X18A Snowflake 54.26 324 ⇑P P 21 46 25.4 +0.3
baz=54,SNR=17
SDCO Great Sand Dun 54.28 330 *eP* **P 21 46 25.4 +0.3**
comp=Z,73nm,0.8s,mb5.5
Z16A Peralta Trail, 54.30 322 ⇓P P 21 46 25.1 -0.3
baz=54
V20A Brimhall 54.34 326 ⇑P P 21 46 25.8 +0.2
baz=54,SNR=6.2
W19A Sanders 54.35 325 ⇓P P 21 46 26.0 +0.3
baz=54,SNR=23
115A Sonoran Desert 54.36 321 ⇓P P 21 46 26.0 +0.2
baz=54,SNR=5.5
T22A Edith 54.42 329 ⇓P P 21 46 26.3 +0.2
baz=55,SNR=10
W18A Petrified Fore 54.55 325 ⇓P P 21 46 27.5 +0.3
baz=55,SNR=9.3
V19A Window Rock 54.60 326 ⇑P P 21 46 27.9 +0.4
baz=55
X17A Forest Lakes 54.62 323 ⇓P P 21 46 28.5 +0.9
baz=55,SNR=8.5
Y16A Circle Bar Ran 54.70 323 ⇑P P 21 46 28.8 +0.6
baz=55,SNR=35
Z15A Gila River Ind 54.71 322 ⇑P P 21 46 28.6 +0.2
baz=55
U20A Newcomb 54.79 327 ⇓P P 21 46 28.6 -0.3
baz=55,SNR=13
114A Black Gap (USA 54.80 321 ⇑P P 21 46 29.3 +0.2
baz=55,SNR=8.7
X16A Lo Mia Camp, P 55.05 323 ⇓P P 21 46 31.3 +0.5
baz=55,SNR=33
W17A Winslow 55.09 324 ⇓P P 21 46 31.1 +0.1
baz=55,SNR=6.0
V18A Ganado 55.09 325 ⇓P P 21 46 30.6 -0.4
baz=55,SNR=6.3
U19A Dine' College, 55.11 326 ⇓P P 21 46 30.3 -0.8
baz=55
Z14A Wintersburg 55.25 321 ⇓P P 21 46 32.3 +0.1
baz=55,SNR=6.9
Y15A Casa Rosa Ranc 55.27 322 ⇓P P 21 46 32.5 +0.1
baz=55,SNR=17
R22A Saguache, Gunn 55.27 330 ⇑P P 21 46 32.4 +0.1
baz=55,SNR=8.4
OGNE Ogallala 55.29 335 *eP* **P 21 46 32.3 0.0**
comp=Z,55nm,0.8s,mb5.3
S21A Coal Bank Pass 55.37 328 ⇑P P 21 46 33.0 0.0
baz=56,SNR=7.6
113A Mohawk Valley, 55.37 320 ⇓P P 21 46 32.8 -0.3
baz=56
MVCO Mesa Verde 55.40 327 ⇑P P 21 46 33.1 -0.1
baz=56,SNR=10
MVCO Mesa Verde 55.40 327 *eP* **P 21 46 33.3 +0.1**
comp=Z,230nm,2.5s,mb5.5
T19A Beclabito 55.40 327 ⇓P P 21 46 32.9 -0.4
baz=56,SNR=22
V17A Tonalea, Kykot 55.52 325 ⇓P P 21 46 34.5 +0.4
baz=56,SNR=67
U18A Rough Rock, Ch 55.57 326 ⇑P P 21 46 34.4 0.0
baz=56,SNR=12
X15A Humboldt 55.57 323 ⇑P P 21 46 35.0 +0.5
baz=56,SNR=14
W16A Flagstaff 55.58 324 ⇑P P 21 46 35.3 +0.8
baz=56,SNR=10
Z13A Yuma Proving G 55.59 320 ⇓P P 21 46 34.8 +0.2
baz=56,SNR=9.7
Y14A Wickenburg 55.67 322 ⇑P P 21 46 35.4 +0.2
baz=56,SNR=10
ECSD EROS Data Cent 55.70 341 *eP* **P 21 46 33.9 -1.4**
comp=Z,136nm,1.4s,mb5.6
112A Yuma 55.74 319 ⇓P P 21 46 36.0 +0.2
baz=56
WUAZ Wupatki 55.78 324 ⇑P P 21 46 36.5 +0.6
baz=56,SNR=37
WUAZ Wupatki 55.78 324 *eP* **P 21 46 36.6 +0.6**
comp=Z,79nm,0.9s,mb5.5
R21A Cimarron 55.78 329 ⇑P P 21 46 36.1 +0.2
baz=56,SNR=11
Q22A Crested Butte, 55.84 330 ⇑P P 21 46 36.7 +0.3
baz=56,SNR=13
COWI Conover 55.93 348 *eP* **P 21 46 35.2 -1.6**
comp=Z,60nm,0.8s,mb5.5
COWI *epP pP* 21 47 06.7 -1.2
COWI *ePcP PcP* 21 47 33.4 -0.5
ISCO Idaho Springs 55.95 332 *eP* **P 21 46 37.4 +0.4**
ISCO *pmax pmax*
comp=Z,21nm,0.9s,mb5.0
ISCO Idaho Springs 55.95 332 *eP* **P 21 46 37.4 +0.3**
comp=Z,21nm,0.9s,mb5.0
X14A Yava 55.96 322 ⇑P P 21 46 37.7 +0.4
baz=56,SNR=18
W15A Williams 56.07 323 ⇓P P 21 46 38.9 +0.9
baz=56,SNR=8.0
R20A Redvale 56.07 328 ⇑P P 21 46 38.5 +0.6
baz=56,SNR=16
U16A Tuba City 56.08 325 ⇑P P 21 46 38.5 +0.5
baz=56,SNR=27
T18A Mexican Hat 56.09 326 ⇓P P 21 46 37.7 -0.4
baz=56,SNR=43
Y13A Salome 56.10 321 ⇑P P 21 46 38.5 +0.3
baz=56,SNR=6.1
SMCO Snowmass 56.11 330 *eP* **P 21 46 39.0 +0.8**
comp=Z,36nm,0.9s,mb5.2
PV01 Paradox Valley 56.13 328 *eP* **P 21 46 38.8 +0.4**
comp=Z,5μm,0.9s
U17A Shonto 56.14 325 ⇓P P 21 46 38.8 +0.3
baz=56,SNR=9.8
S19A Harvey Farm, M 56.14 327 ⇑P P 21 46 38.3 -0.2
baz=56,SNR=43
Q21A Lamborn Mesa, 56.15 329 ⇑P P 21 46 38.7 +0.2
baz=56
GLA Glamis 56.23 320 ⇓P P 21 46 39.1 -0.1
baz=56,SNR=8.0
GLA Glamis 56.23 320 *eP* **P 21 46 39.2 0.0**
GLA *pmax pmax*
comp=Z,59nm,1.4s,mb5.2
GLA Glamis 56.23 320 *eP* **P 21 46 39.2 -0.1**
comp=Z,59nm,1.4s,mb5.2
V15A Kaibab Nationa 56.45 324 ⇓P P 21 46 41.4 +0.7
baz=57,SNR=17
Y12C Blythe 56.49 320 ⇑P P 21 46 41.2 +0.2
baz=57,SNR=7.9
PV04 Paradox Valley 56.50 328 *eP* **P 21 46 40.2 -0.8**
PV04 *pP pP* 21 47 11.8 -0.3
PV04 *esP sP* 21 47 25.0 -1.5
T17A Navajo Res., N 56.50 326 ⇓P P 21 46 41.8 +0.7
baz=57,SNR=26
PV10 Paradox Valley 56.55 328 *eP* **P 21 46 40.8 -0.6**
comp=Z,467nm,1.0s,mb6.3
S18A Hurst Farm, Bl 56.56 327 ⇑P P 21 46 41.5 0.0
baz=57,SNR=41
W14A Seligman 56.58 323 ⇓P P 21 46 42.2 +0.6
baz=57,SNR=14
Q20A Ridgley Place, 56.60 329 ⇑P P 21 46 41.6 -0.2
baz=57
R19A Curley Farm, L 56.61 328 ⇑P P 21 46 41.5 -0.3
baz=57,SNR=15
PDMCI Parker Dam,Lak 56.61 321 ⇓P P 21 46 41.8 -0.1
baz=57,SNR=6.4
V14A Boquillas Ranc 56.88 323 ⇑P P 21 46 44.6 +0.9
baz=57,SNR=40
T16A Glen Canyon Da 56.89 325 ⇑P P 21 46 44.1 +0.3
baz=57,SNR=6.0
U15A North Rim 56.95 324 ⇑P P 21 46 45.0 +0.8
baz=57,SNR=32
S17A Black Ridge (B 56.96 326 ⇑P P 21 46 44.5 +0.2
baz=57
W13A Hualapai Mount 56.99 322 ⇓P P 21 46 45.4 +0.9
baz=57,SNR=37
R18A Canyonlands Na 57.01 327 ⇓P P 21 46 44.2 -0.4
baz=57,SNR=18
BC3 Big Chuckw Mtn 57.02 320 ⇓P P 21 46 45.2 +0.4
baz=57,SNR=19
P20A De Beque 57.07 329 ⇑P P 21 46 44.8 -0.1
baz=57,SNR=6.3
PHWY Pilot Hill 57.07 333 *eP* **P 21 46 45.2 +0.3**
comp=Z,61nm,1.2s,mb5.3
N22A Wattenberg Ran 57.13 332 ⇑P P 21 46 45.7 +0.3
baz=57,SNR=9.1
IRM Iron Mountain 57.15 320 ⇑P P 21 46 46.2 +0.4
baz=57,SNR=47
O21A Pagoda 57.16 331 ⇓P P 21 46 46.2 +0.6
baz=57,SNR=9.0
MONP Monument Peak 57.17 318 ⇓P P 21 46 46.1 +0.3
baz=57
NEE2 Needles Airpor 57.22 321 ⇓P P 21 46 46.0 -0.1
baz=57
T15A Red Dirt Ranch 57.41 325 ⇓P P 21 46 47.9 +0.5
baz=58,SNR=23
U14A Mt Trumbull 57.46 324 ⇓P P 21 46 48.3 +0.5
baz=58,SNR=24
P19A Cripple Cowboy 57.47 329 ⇑P P 21 46 47.7 -0.1
baz=58,SNR=17
O20A White River Ci 57.48 330 ⇑P P 21 46 47.8 0.0
baz=58,SNR=6.6
R17A Hanksville Air 57.48 327 ⇑P P 21 46 47.7 -0.2
baz=58,SNR=30
V13A Grand Canyon W 57.55 323 ⇓P P 21 46 48.9 +0.4
baz=58,SNR=18
BELC Belle Mtn. 57.59 320 ⇑P P 21 46 49.1 +0.3
baz=58,SNR=7.5
N21A Black Mountain 57.60 331 ⇓P P 21 46 49.4 +0.7
baz=58,SNR=28
109C Camp Elliot, M 57.62 318 ⇑P P 21 46 49.1 +0.1
baz=58
PFO Pinyon Flat Ob 57.64 319 P P 21 46 49.2 +0.1
comp=Z,163nm,1.0s,mb5.8,SNR=7.6
PFO Pinyon Flat Ob 57.64 319 ⇓P P 21 46 49.8 +0.7
baz=58
PFO Pinyon Flat Ob 57.64 319 *eP* **P 21 46 49.2 +0.1**
PFO *pmax pmax*
comp=Z,46nm,1.0s,mb5.3
PFO Pinyon Flat Ob 57.64 319 *eP* **P 21 46 49.1 0.0**
comp=Z,46nm,1.0s,mb5.3
Q18A Rafter H Ranch 57.67 328 ⇓P P 21 46 49.3 +0.1
baz=58,SNR=28
M22A Cedar Creek Ra 57.67 332 ⇓P P 21 46 49.3 +0.1
baz=58,SNR=7.9
W12A Cal Nev Ari 57.72 322 ⇓P P 21 46 49.2 -0.5
baz=58
LDFC Landfair 57.73 321 *eP* **P 21 46 50.6 +0.9**
R16A Teasdale 57.80 326 ⇓P P 21 46 50.6 +0.4
baz=58,SNR=15
T14A Hurricane 57.84 324 ⇓P P 21 46 51.2 +0.7
baz=58,SNR=19
S15A Panguitch 57.86 325 ⇑P P 21 46 51.1 +0.5
baz=58
GMRC Granite Mounta 57.88 321 ⇑P P 21 46 51.2 +0.5
baz=58,SNR=25
SRU San Rafael 57.88 328 ⇑P P 21 46 50.6 -0.1
baz=58
SRU San Rafael 57.88 328 *eP* **P 21 46 50.8 +0.1**
SRU *pmax pmax*
comp=Z,57nm,1.3s,mb5.2
SRU San Rafael 57.88 328 *eP* **P 21 46 50.8 +0.1**
comp=Z,57nm,1.3s,mb5.2
U13A Pakoon Wash 57.92 323 ⇓P P 21 46 51.6 +0.5
baz=58,SNR=14
V12A Nelson 57.99 322 ⇑P P 21 46 51.5 -0.1
baz=58,SNR=18
N20A Spence Gulch, 58.02 330 ⇓P P 21 46 51.8 +0.1
baz=58,SNR=44
O19A Miners Draw (B 58.04 329 ⇑P P 21 46 51.4 -0.3
baz=58,SNR=16
Q16A Castle Valley 58.09 327 ⇑P P 21 46 52.1 0.0
baz=58,SNR=9.2
P18A Preston Nutter 58.11 328 ⇓P P 21 46 52.3 0.0
baz=58,SNR=16
MURC Murrieta 58.12 319 ⇓P P 21 46 52.3 -0.2
baz=58,SNR=5.1
RWWY Rawlins 58.18 332 *eP* **P 21 46 53.2 +0.4**
comp=Z,96nm,1.1s,mb5.5
R15A Junction 58.19 326 ⇓P P 21 46 52.8 0.0
baz=58,SNR=7.5
M21A Separation Pea 58.19 332 ⇓P P 21 46 52.8 0.0
baz=58,SNR=31
EYMN Ely 58.19 347 *eP* **P 21 46 51.1 -1.5**
comp=Z,97nm,1.0s,mb5.6
P17A Butcher Ranch, 58.26 328 ⇑P P 21 46 53.1 -0.2
baz=58,SNR=14
U12A Valley of Fire 58.27 323 ⇓P P 21 46 53.9 +0.4
baz=58,SNR=8.4
T13A Saint George 58.29 324 ⇑P P 21 46 54.2 +0.6
baz=58,SNR=9.4
HEC Hector,Ludlow 58.33 320 ⇑P P 21 46 54.3 +0.4
baz=58,SNR=12
CCUT Cedar City 58.34 324 *eP* **P 21 46 55.0 +1.1**
comp=Z,46nm,1.3s,mb5.2
MSU Marysvale 58.34 326 *eP* **P 21 46 54.5 +0.6**
BBRC Big Bear Sol-O 58.35 319 ⇓P P 21 46 55.3 +1.3
baz=58
S14A Cedar City 58.37 325 ⇓P P 21 46 54.6 +0.5
baz=58
V11A Goodsprings 58.42 322 ⇓P P 21 46 54.4 -0.1
baz=59,SNR=12
O18A Roosevelt 58.46 329 ⇓P P 21 46 54.9 +0.2
baz=59,SNR=7.5
TUQ Turquoise Moun 58.46 321 ⇑P P 21 46 55.0 +0.1
baz=59
L21A Rawlins 58.47 332 ⇑P P 21 46 54.4 -0.3
baz=59,SNR=27
M20A Sweetwater, Wa 58.49 331 ⇓P P 21 46 54.9 0.0
baz=59,SNR=20
N19A John Jarvie Ra 58.52 330 ⇓P P 21 46 54.6 -0.5
baz=59,SNR=36
T12A Moapa 58.57 323 ⇓P P 21 46 56.0 +0.4
baz=59
S13A Holt Ranch, En 58.65 324 ⇓P P 21 46 56.9 +0.8
baz=59,SNR=18
R14A James Farms, M 58.66 325 ⇑P P 21 46 56.2 0.0
baz=59
SHPR Sheep Range 58.69 322 *eP* **P 21 46 56.9 +0.5**
RSSD Black Hills 58.75 336 *eP* **P 21 46 56.6 0.0**
RSSD *pmax pmax*
comp=Z,73nm,1.2s,mb5.4
RSSD Black Hills 58.75 336 *eP* **P 21 46 56.6 0.0**
comp=Z,73nm,1.2s,mb5.4
U11A Corn Creek 58.77 322 ⇓P P 21 46 57.2 +0.3
baz=59
O17A Robinson Place 58.79 328 ⇓P P 21 46 57.4 +0.4
baz=59,SNR=25
RRX Edison Barstow 58.79 320 ⇓P P 21 46 57.8 +0.7
baz=59
CIS Catalina Islan 58.80 318 ⇑P P 21 46 57.5 +0.3
baz=59
Q15A Fillmore 58.80 326 ⇑P P 21 46 57.3 +0.2
baz=59
BFSC Mount Baldy St 58.81 319 ⇑P P 21 46 57.3 0.0
baz=59,SNR=5.8
N18A Larsen Ranch, 58.82 330 ⇑P P 21 46 56.9 -0.4
baz=59,SNR=23
P16A Fountain Green 58.85 327 ⇑P P 21 46 58.0 +0.6
baz=59
FMP Fort Macarthur 58.91 318 ⇑P P 21 46 58.0 +0.1
baz=59
GSC Goldstone 58.93 320 ⇓P P 21 46 58.5 +0.4
baz=59,SNR=9.6
GSC Goldstone 58.93 320 *eP* **P 21 46 58.7 +0.6**
GSC *pmax pmax*
comp=Z,158nm,2.0s,mb5.5
GSC Goldstone 58.93 320 *eP* **P 21 46 58.7 +0.6**
comp=Z,158nm,2.0s,mb5.5
L20A Wamsutter 58.96 331 ⇑P P 21 46 57.6 -0.5
baz=59,SNR=6.6
M19A Rock Springs 58.97 330 ⇑P P 21 46 58.0 -0.2
baz=59
SHOC Shoshone 58.98 321 ⇓P P 21 46 58.5 +0.1
baz=59
MWC Mount Wilson 59.06 319 *eP* **P 21 46 59.9 +0.9**
MWC *pmax pmax*
comp=Z,26nm,0.9s,mb5.1
MWC Mount Wilson 59.06 319 *eP* **P 21 46 59.9 +0.9**
comp=Z,26nm,0.9s,mb5.1
R13A O'Grain Ranch, 59.12 325 ⇓P P 21 47 00.2 +0.9
baz=59,SNR=7.1
MPU Maple Canyon 59.12 328 *eP* **P 21 46 59.5 +0.1**
comp=Z,25nm,1.1s,mb5.0
P15A Leamington 59.15 327 ⇓P P 21 46 59.5 0.0
baz=59,SNR=7.6
O16A Springville 59.20 328 ⇑P P 21 46 59.7 -0.1
baz=59,SNR=20
DAU Daniels Canyon 59.22 328 *eP* **P 21 47 00.5 +0.6**
T11A Corn Creek, Al 59.22 323 ⇑P P 21 47 00.4 +0.4
baz=59,SNR=18
S12A Delamar Landin 59.24 324 ⇓P P 21 47 00.6 +0.4
baz=59
DECC Green Verdugo 59.26 318 ⇓P P 21 47 00.8 +0.4
baz=59
Q14A Sevier Lake (B 59.29 326 ⇑P P 21 47 01.2 +0.7
baz=59,SNR=17
NLU North Lily Min 59.32 327 *eP* **P 21 47 00.9 +0.2**
comp=Z,10.0nm,0.5s,mb4.9
U10A Ash Meadows, A 59.35 322 ⇓P P 21 47 01.6 +0.7
baz=60
M18A Lyman 59.36 330 ⇓P P 21 47 00.4 -0.5
baz=60,SNR=13
N17A Moffit Pass 59.38 329 ⇑P P 21 47 01.1 0.0
baz=60,SNR=6.7
EDW2 Edwards Air Fo 59.42 319 ⇓P P 21 47 01.3 -0.1
baz=60,SNR=5.2
SNCC San Nicolas Is 59.45 317 ⇓P P 21 47 01.9 +0.1
baz=60
JLU Jordanelle 59.45 328 *eP* **P 21 47 02.1 +0.6**
comp=Z,41nm,0.9s,mb5.3
K20A Yellowstone Ra 59.46 332 ⇓P P 21 47 01.0 -0.5
baz=60,SNR=28
L19A Farson 59.52 331 ⇑P P 21 47 01.7 -0.3
baz=60,SNR=28
R12A Pony Springs, 59.59 324 ⇑P P 21 47 03.7 +1.1
baz=60
P14A Drum Mountains 59.60 326 ⇑P P 21 47 03.3 +0.7
baz=60,SNR=42
LRMC Laurel Mountai 59.60 320 ⇓P P 21 47 03.1 +0.4
baz=60
AGMN Agassiz Refuge 59.61 344 *eP* **P 21 47 01.5 -0.9**
comp=Z,75nm,0.7s,mb5.6
N16A Rees Ranch, Co 59.66 328 ⇓P P 21 47 03.2 +0.2
baz=60,SNR=15
BLG Laguna Peak 59.66 318 ⇑P P 21 47 03.3 +0.2
baz=60
Q13A Wheeler Ranch, 59.68 325 ⇓P P 21 47 03.5 +0.3
baz=60,SNR=33
M17A Scullys Gap (B 59.69 329 ⇑P P 21 47 02.6 -0.5
baz=60,SNR=29
FURC Furnace Creek, 59.71 321 ⇑P P 21 47 03.6 +0.1
baz=60,SNR=12
L18A Fontenelle, Gr 59.72 330 ⇑P P 21 47 02.8 -0.5
baz=60,SNR=13
O15A The Old Anders 59.76 327 ⇑P P 21 47 04.1 +0.4
baz=60,SNR=7.6
S11A Rachel 59.80 323 ⇓P P 21 47 05.1 +1.1
baz=60,SNR=7.9
K19A Absolon Red Bu 59.83 332 ⇓P P 21 47 03.3 -0.7
baz=60,SNR=28
MPMC Manual Prospec 59.84 321 ⇑P P 21 47 04.2 -0.1
baz=60,SNR=12
NOQ North Oquirrh 59.84 328 *eP* **P 21 47 04.7 +0.4**

comp=Z,44nm,0.8s,mb5.3
DUG Dugway 59.88 327 ⇓P P 21 47 05.1 +0.6
baz=60,SNR=26
DUG Dugway 59.88 327 eP P 21 47 05.1 +0.6
DUG pmax pmax
comp=Z,78nm,1.0s,mb5.5
DUG Dugway 59.88 327 eP P 21 47 05.1 +0.6
comp=Z,78nm,1.0s,mb5.5
BSC Santa Cruz Isl 59.97 317 ⇓P P 21 47 05.2 -0.1
baz=60
M16A Huntsville 60.07 329 ⇑P P 21 47 05.4 -0.4
baz=60,SNR=15
ARVC Arvin 60.12 319 ⇑P P 21 47 06.7 +0.5
baz=60
BW06 Boulder Array 60.12 331 ⇓P P 21 47 05.4 -0.7
baz=60,SNR=32
BW06 Boulder Array 60.12 331 eP P 21 47 05.4 -0.6
comp=Z,36nm,1.1s,mb5.1
PDAR Pinedale Array 60.12 331 P P 21 47 05.4 -0.7
comp=Z,15nm,0.9s,mb4.8,baz=147,slow=8.5,SNR=87
R11A Troy Canyon, C 60.17 324 ⇓P P 21 47 07.1 +0.6
baz=60,SNR=58
Q12A Willow Creek R 60.20 325 ⇓P P 21 47 06.9 +0.1
baz=60,SNR=17
ISA Isabella 60.22 320 ⇓P P 21 47 07.2 +0.3
baz=60,SNR=10
ISA Isabella 60.22 320 eP P 21 47 07.4 +0.5
ISA pmax pmax
comp=Z,17nm,0.9s,mb4.9
ISA Isabella 60.22 320 eP P 21 47 07.4 +0.5
comp=Z,17nm,0.9s,mb4.9
N15A Stansbury Isla 60.22 328 ⇑P P 21 47 06.5 -0.4
baz=60,SNR=15
HWUT Hardware Ranch 60.25 329 eP P 21 47 06.7 -0.3
comp=Z,74nm,0.8s,mb5.6
K18A Toltan Ranch, 60.25 331 ⇓P P 21 47 06.9 -0.1
baz=60,SNR=37
L17A Cokeville 60.26 330 ⇑P P 21 47 06.5 -0.6
baz=60,SNR=12
GRAC Grapevine Rang 60.36 321 ⇓P P 21 47 08.3 +0.4
baz=60,SNR=6.9
CWC Cottonwood Cre 60.45 321 ⇓P P 21 47 09.0 +0.5
baz=61
O13A Hicks Ranch, I 60.48 326 ⇑P P 21 47 08.8 +0.3
baz=61,SNR=7.8
L16A Fish Haven 60.48 329 ⇑P P 21 47 08.0 -0.6
baz=61,SNR=47
S10A Tonopah Range, 60.49 323 ⇓P P 21 47 09.1 +0.4
baz=61,SNR=42
SPUT South Promonto 60.49 328 eP P 21 47 08.7 +0.1
comp=Z,84nm,1.2s,mb5.5
BGU Big Grassy Mou 60.52 327 eP P 21 47 08.6 -0.2
comp=Z,36nm,1.0s,mb5.2
BGU epP pP 21 47 39.6 -0.7
BGU ePcP PcP 21 47 51.9 -0.3
Q11A Duckwater 60.54 324 ⇑P P 21 47 09.6 +0.6
baz=61,SNR=94
N14A Grayback Hills 60.55 327 ⇑P P 21 47 08.7 -0.3
baz=61,SNR=23
R10A Warm Springs 60.55 323 ⇑P P 21 47 10.2 +1.1
baz=61,SNR=21
M15A Larsen Ranch, 60.60 328 ⇑P P 21 47 08.9 -0.5
baz=61,SNR=11
PKM Peak Mountain 60.63 318 ⇑P P 21 47 10.1 +0.4
baz=61,SNR=6.4
J18A Kendall Valley 60.68 331 ⇑P P 21 47 09.4 -0.4
baz=61,SNR=64
VES Vestal, Richgr 60.72 319 ⇑P P 21 47 10.6 +0.3
baz=61,SNR=8.2
K17A Gardner Place, 60.77 330 ⇓P P 21 47 09.9 -0.6
baz=61,SNR=8.4
AHID Auburn Hatcher 60.87 330 eP P 21 47 10.9 -0.2
comp=Z,84nm,1.4s,mb5.4
AHID epP pP 21 47 41.7 -1.0
AHID ePcP PcP 21 47 53.2 -0.3
TIN Tinemaha 60.93 321 ⇓P P 21 47 12.1 +0.4
baz=61
I18A Diamond G Ranc 60.95 332 ⇑P P 21 47 11.4 -0.3
baz=61,SNR=20
L15A Malad City 60.96 329 ⇓P P 21 47 11.6 -0.1
baz=61,SNR=12
Q10A Clear Creek Ra 60.96 324 ⇓P P 21 47 12.2 +0.3
baz=61,SNR=14
O12A Currie 60.99 326 ⇑P P 21 47 12.6 +0.6
baz=61,SNR=40
SMMC Simmler 60.99 318 ⇑P P 21 47 12.4 +0.2
baz=61
HVU Hansel Valley 61.00 328 eP P 21 47 11.9 -0.1
HVU pmax pmax
comp=Z,46nm,1.0s,mb5.3
HVU Hansel Valley 61.00 328 eP P 21 47 11.9 -0.2
comp=Z,46nm,1.0s,mb5.3
P11A Circle Ranch, 61.08 325 ⇑P P 21 47 12.9 +0.2
baz=61
N13A Wendover, West 61.10 327 ⇓P P 21 47 12.8 0.0
baz=61,SNR=12
N13A Wendover, West 61.10 327 eP P 21 47 12.9 +0.1
comp=Z,50nm,1.1s,mb5.3
RCTC Rector, Farmer 61.10 320 ⇓P P 21 47 12.5 -0.4
baz=61
J17A Brown Place, J 61.12 331 ⇑P P 21 47 12.8 -0.1
baz=61,SNR=19
K16A Soda Springs 61.16 330 ⇑P P 21 47 12.9 -0.2
baz=61,SNR=17
REDW Red Top Meadow 61.19 331 eP P 21 47 13.2 -0.2
comp=Z,36nm,1.1s,mb5.1
SNOW Snow King Moun 61.22 331 eP P 21 47 13.4 -0.2
comp=Z,26nm,0.9s,mb5.0
LOHW Long Hollow 61.26 331 eP P 21 47 13.2 -0.6
comp=Z,16nm,0.3s,mb5.3
TPAW Teton Pass 61.34 331 eP P 21 47 14.3 0.0
comp=Z,14nm,0.8s,mb4.9
ULM Lac du Bonnet 61.40 345 P P 21 47 13.1 -1.4
comp=Z,98nm,0.9s,mb5.7,baz=158,slow=6.8,SNR=71
ULM pP pP 21 47 43.2 -2.9
comp=Z,20nm,0.7s,baz=152,slow=12,SNR=3.0
ULM Lac du Bonnet 61.40 345 eP P 21 47 13.0 -1.5
comp=Z,117nm,1.0s,mb5.7
RRI2 Red Ridge 61.41 330 eP P 21 47 14.9 +0.1
comp=Z,69nm,0.8s,mb5.5
O11A Cowboy Ranch, 61.41 325 ⇓P P 21 47 15.2 +0.3
baz=62,SNR=22
L14A Malta 61.42 328 ⇓P P 21 47 14.3 -0.6
baz=62,SNR=60
M13A Montello 61.43 327 ⇓P P 21 47 14.6 -0.4
baz=62,SNR=21
M13A Montello 61.43 327 eP P 21 47 14.7 -0.3
comp=Z,21nm,0.9s,mb5.0
I17A Pilgrim Ck. 61.48 331 ⇓P P 21 47 15.8 +0.6
baz=62
J16A Bone 61.50 330 ⇑P P 21 47 15.4 0.0
baz=62,SNR=30
K15A Arbon 61.52 329 ⇑P P 21 47 15.3 -0.3
baz=62,SNR=18
DCID1 Drake Creek 61.53 331 eP P 21 47 15.7 +0.1
P10A Eureka 61.53 324 ⇑P P 21 47 16.2 +0.5
baz=62,SNR=9.3
N12A Clover Valley, 61.56 326 ⇑P P 21 47 15.5 -0.3
baz=62
N12A Clover Valley, 61.56 326 eP P 21 47 14.8 -1.0
comp=Z,12nm,0.9s,mb4.7
ELK Elko 61.59 326 eP P 21 47 15.3 -0.8
ELK e*PP pP 21 47 46.5 -1.2
ELK pmax pmax
comp=Z,25nm,1.1s
ELK Elko 61.59 326 eP P 21 47 15.3 -0.8
comp=Z,25nm,1.1s,mb5.0
ELK epP pP 21 47 46.5 -1.2
IMW Indian Meadow 61.63 331 eP P 21 47 16.3 0.0
comp=Z,42nm,1.0s,mb5.2
MLAC Mammoth Lakes 61.67 321 ⇓P P 21 47 17.4 +0.8
baz=62
LAO LASA Array 61.74 336 eP P 21 47 15.9 -1.0
comp=Z,104nm,1.4s,mb5.5
LAO epP pP 21 47 47.5 -1.1
K14A Jones Ranch, D 61.75 329 ⇑P P 21 47 16.3 -0.8
baz=62,SNR=17
L13A Double Diamond 61.83 328 ⇓P P 21 47 17.8 +0.1
baz=62,SNR=23
H17A Grant Village 61.84 332 ⇓P P 21 47 18.9 +1.2
baz=62,SNR=8.4
NVAR Mina Array Bea 61.84 322 P P 21 47 18.4 +0.6
comp=Z,16nm,0.9s,mb4.9,baz=144,slow=6.6,SNR=49
NVAR Mina Array Bea 61.84 322 P P 21 47 18.4 +0.6
M12A Wells 61.88 327 ⇓P P 21 47 17.3 -0.6
baz=62,SNR=8.0
I16A Newdale 61.88 331 ⇓P P 21 47 18.3 +0.3
baz=62,SNR=12

LKWY Lake 61.88 332 eP P 21 47 17.4 -0.5
LKWY pmax pmax
comp=Z,27nm,0.8s,mb5.1
LKWY Lake 61.88 332 eP P 21 47 17.4 -0.5
comp=Z,27nm,0.8s,mb5.1
N11A Elko Archery C 61.92 326 ⇑P P 21 47 18.2 -0.1
baz=62
J15A Blackfoot 61.99 330 ⇑P P 21 47 18.8 0.0
baz=62,SNR=55
O10A Cortez Mining, 61.99 325 ⇑P P 21 47 19.4 +0.6
baz=62,SNR=17
YFT Old Faithful 62.00 332 eP P 21 47 19.4 +0.7
comp=Z,81nm,1.3s,mb5.4
G18A Lazy EL Ranch, 62.07 333 ⇓P P 21 47 19.1 -0.1
baz=62,SNR=51
YNR Norris Junctio 62.13 332 eP P 21 47 19.2 -0.4
comp=Z,24nm,0.9s,mb5.0
YNR epP pP 21 47 52.2 +1.1
YMR Madison River 62.23 332 eP P 21 47 20.9 +0.7
comp=Z,64nm,0.8s,mb5.5
N10A Dunphy 62.28 325 ⇓P P 21 47 20.7 0.0
baz=62
K13A Stover Farm, H 62.30 328 ⇓P P 21 47 20.4 -0.4
baz=62
M11A Holland Ranch, 62.37 326 ⇓P P 21 47 21.2 0.0
baz=62
H16A Russell Place, 62.38 331 ⇓P P 21 47 22.0 +0.7
baz=62,SNR=53
DGMT Dagmar 62.43 338 ⇓P P 21 47 21.7 +0.2
baz=63,SNR=19
DGMT Dagmar 62.43 338 eP P 21 47 21.6 +0.1
comp=Z,134nm,1.0s,mb5.7
L12A House Creek Ra 62.44 327 ⇓P P 21 47 21.8 +0.1
baz=63,SNR=20
I15A Monteview 62.46 330 ⇑P P 21 47 22.4 +0.6
baz=63,SNR=10
GCMT Greycliff 62.49 333 eP P 21 47 21.7 -0.3
comp=Z,75nm,1.0s,mb5.5
BMN Battle Mountai 62.50 325 eP P 21 47 22.4 +0.2
BMN pmax pmax
comp=Z,30nm,0.8s,mb5.2
BMN Battle Mountai 62.50 325 eP P 21 47 22.4 +0.3
comp=Z,30nm,0.8s,mb5.2
QLMT Earthquake Lak 62.57 331 eP P 21 47 21.6 -0.9
F18A Big Timber 62.59 333 ⇑P P 21 47 22.8 +0.1
baz=63,SNR=92
G17A Pierce Place, 62.61 332 ⇓P P 21 47 23.3 +0.5
baz=63
K12A Draper Farm, C 62.72 328 ⇓P P 21 47 23.9 +0.3
baz=63,SNR=23
M10A I.L. Ranch, Tu 62.84 326 ⇑P P 21 47 24.2 -0.2
baz=63,SNR=8.3
L11A Cat Creek Ranc 62.85 327 ⇑P P 21 47 24.7 +0.3
baz=63,SNR=33
J13A Cove Ranch, Pi 62.87 329 ⇑P P 21 47 24.6 0.0
baz=63,SNR=23
CMB Columbia Colle 62.88 321 eP P 21 47 25.1 +0.4
CMB pmax pmax
comp=Z,13nm,1.0s,mb4.7
CMB Columbia Colle 62.88 321 eP P 21 47 25.1 +0.4
comp=Z,13nm,1.0s,mb4.7
I14A Mackay 62.89 330 ⇓P P 21 47 25.2 +0.6
baz=63,SNR=33
H15A Lima 62.99 331 ⇑P P 21 47 25.8 +0.5
baz=63,SNR=12
F17A Fitzpatrick Pl 63.02 333 ⇑P P 21 47 25.8 +0.3
baz=63,SNR=25
HLID Hailey 63.11 329 ⇓P P 21 47 26.6 +0.4
baz=63,SNR=21
HLID Hailey 63.11 329 eP P 21 47 26.6 +0.5
comp=Z,30nm,0.9s,mb5.1
L10A Juniper Basin 63.18 326 ⇑P P 21 47 26.8 +0.2
baz=63,SNR=30
E18A Harlowton 63.19 334 ⇓P P 21 47 26.6 0.0
baz=63,SNR=38
I13A Wildhorse Cree 63.21 329 ⇑P P 21 47 27.5 +0.7
baz=63,SNR=50
MCMT McKenzie Canyo 63.24 331 eP P 21 47 27.3 +0.3
comp=Z,16nm,1.0s,mb4.8
J12A Stokes Ranch, 63.25 328 ⇓P P 21 47 26.9 -0.2
baz=63,SNR=22
BOZ Bozeman (W) 63.27 332 ⇑P P 21 47 26.8 -0.3
baz=63,SNR=39
BOZ Bozeman (W) 63.27 332 eP P 21 47 26.9 -0.2
BOZ pmax pmax
comp=Z,93nm,1.4s,mb5.4
BOZ Bozeman (W) 63.27 332 eP P 21 47 26.9 -0.2
comp=Z,93nm,1.4s,mb5.4
WCN Washoe City 63.27 322 ⇓P P 21 47 28.0 +0.7
baz=63,SNR=9.0
PAHR Pah Rah Range 63.30 323 eP P 21 47 28.6 +1.2
comp=Z,80nm,1.0s,mb5.5
G15A Dillon 63.32 331 ⇓P P 21 47 27.8 +0.3
baz=64,SNR=15
H14A Leadore 63.34 330 ⇓P P 21 47 27.9 +0.3
baz=64,SNR=36
F16A Kennard Place, 63.37 332 ⇓P P 21 47 27.9 +0.1
baz=64,SNR=18
K11A Parker Ranch, 63.41 327 ⇓P P 21 47 28.2 0.0
baz=64,SNR=39
DLMT Dillon 63.51 331 eP P 21 47 29.4 +0.7
comp=Z,46nm,1.3s,mb5.2
LCCM Lewis and Clar 63.53 332 P P 21 47 28.9 +0.1
E17A Martinsdale 63.53 333 ⇑P P 21 47 28.7 -0.1
baz=64,SNR=49
SCHQ Schefferville 63.54 5 P P 21 47 27.4 -1.3
comp=Z,72nm,1.0s,mb5.5,baz=194,slow=4.9,SNR=54
SCHQ LR LR 22 15 56.1
comp=Z,58nm,20.5s,baz=112,slow=37
SCHQ Schefferville 63.54 5 eP P 21 47 28.1 -0.6
comp=Z,69nm,0.9s,mb5.5
SCHQ epP pP 21 47 59.4 -1.1
SCHQ ePcP PcP 21 48 03.8 -0.3
D18A Linhart Farms, 63.63 334 ⇓P P 21 47 29.5 +0.1
baz=64,SNR=16
I12A Atlanta 63.65 328 ⇑P P 21 47 29.7 +0.1
baz=64,SNR=28
MFID Camas Ranch 63.75 328 ⇓P P 21 47 30.8 +0.4
baz=64,SNR=87
LRM Limekiln Ridge 63.78 332 eP P 21 47 30.5 0.0
F15A Butte 63.82 332 ⇑P P 21 47 30.6 -0.2
baz=64,SNR=13
G14A Jackson 63.84 331 ⇑P P 21 47 30.9 0.0
baz=64
K10A MacKenzie Ranc 63.87 327 ⇑P P 21 47 31.2 +0.1
baz=64,SNR=36
E16A East Helena 63.96 333 ⇓P P 21 47 31.4 -0.2
baz=64,SNR=21
D17A Six Diamond Ra 63.98 334 ⇑P P 21 47 31.8 0.0
baz=64,SNR=43
BEKR Beckwourth 63.99 322 ⇓P P 21 47 32.5 +0.5
baz=64
H12A Diamond D Ranc 64.04 329 ⇓P P 21 47 32.3 +0.1
baz=64,SNR=31
G13A Cobalt 64.11 330 ⇑P P 21 47 32.6 -0.1
baz=64,SNR=29
I11A Placerville 64.16 328 ⇓P P 21 47 32.9 -0.1
baz=64,SNR=7.6
HRY Holter Researc 64.16 333 eP P 21 47 33.2 +0.3
HRY ePcP PcP 21 48 06.0 -0.8
F14A Wisdom 64.21 331 ⇓P P 21 47 33.4 +0.1
baz=64,SNR=7.9
EGMT Eagleton 64.25 335 ⇓P P 21 47 33.5 0.0
baz=64,SNR=34
EGMT Eagleton 64.25 335 eP P 21 47 33.4 -0.1
comp=Z,68nm,1.0s,mb5.4
J10A Berg Farm, Mel 64.25 327 ⇓P P 21 47 33.2 -0.4
baz=64
E15A Deer Lodge 64.32 332 ⇓P P 21 47 33.8 -0.2
baz=64,SNR=16
C17A Wharram Farm, 64.38 334 ⇓P P 21 47 33.8 -0.6
baz=65,SNR=31
B18A Beardsley Farm 64.55 335 ⇑P P 21 47 35.4 0.0
baz=65,SNR=14
F13A Darby 64.66 331 ⇑P P 21 47 36.3 +0.1
baz=65,SNR=19
E14A Clinton 64.71 331 ⇑P P 21 47 36.8 +0.2
baz=65,SNR=25
I10A Payette 64.72 328 ⇓P P 21 47 35.7 -1.0
baz=65
D15A Lincoln 64.72 332 ⇑P P 21 47 36.7 +0.1
baz=65,SNR=13
J09A Fry Pan Ranch, 64.73 327 ⇓P P 21 47 36.3 -0.4
baz=65
H11A Donnelly 64.73 329 ⇓P P 21 47 36.0 -0.7
baz=65,SNR=13
B17A L&G Farms, Che 64.91 334 ⇑P P 21 47 37.3 -0.5
baz=65,SNR=11

C16A Fuhringer Ranc 64.94 333 ⇑P P 21 47 38.0 0.0
baz=65,SNR=42
CHMT Chamberlain Mo 64.97 332 eP P 21 47 38.2 +0.1
A18A Metzger Ranch, 64.99 335 ⇑P P 21 47 38.1 -0.2
baz=65,SNR=64
H10A Noah's Angus R 65.04 328 ⇓P P 21 47 38.0 -0.7
baz=65,SNR=8.5
E13A Victor 65.06 331 ⇑P P 21 47 39.0 +0.2
baz=65,SNR=18
F12A Elk City 65.09 330 ⇓P P 21 47 38.9 -0.2
baz=65,SNR=34
I09A Lost Marbles R 65.14 327 ⇑P P 21 47 39.2 -0.2
baz=65
D14A Greenough 65.21 332 ⇑P P 21 47 39.5 -0.3
baz=65,SNR=16
MOD Modoc 65.22 324 eP P 21 47 39.8 -0.2
comp=Z,74nm,1.1s,mb5.4
MOD e pP 21 48 10.4 -1.5
MSO Missoula 65.22 332 eP P 21 47 40.3 +0.5
comp=Z,70nm,1.1s,mb5.4
C15A Salmond Ranch, 65.31 333 ⇓P P 21 47 40.8 +0.4
baz=66,SNR=93
SLMT Seeley Lake 65.32 332 eP P 21 47 40.5 +0.1
G11A Walters Elk Ra 65.35 329 ⇓P P 21 47 40.1 -0.6
baz=66,SNR=24
A17A Triple J Farms 65.36 335 ⇑P P 21 47 40.6 -0.1
baz=66,SNR=73
B16A M & M Farms, S 65.39 334 ⇓P P 21 47 40.3 -0.6
baz=66,SNR=14
H09A Durkee 65.57 328 ⇓P P 21 47 41.6 -0.5
baz=66
F11A Grangeville 65.63 330 ⇑P P 21 47 42.1 -0.4
baz=66,SNR=41
D13A Huson 65.66 331 ⇓P P 21 47 42.9 +0.3
baz=66,SNR=18
B15A Bradely Ranch, 65.69 333 ⇓P P 21 47 42.5 -0.3
baz=66,SNR=31
G10A Bishop Farm, J 65.71 329 ⇑P P 21 47 43.1 +0.1
baz=66,SNR=19
WDC Whiskeytown Da 65.75 322 eP P 21 47 41.8 -1.6
WDC pmax pmax
comp=Z,17nm,0.8s,mb4.9
WDC Whiskeytown Da 65.75 322 eP P 21 47 41.8 -1.6
comp=Z,17nm,0.8s,mb4.9
SWMT Swartz Lake 65.75 332 eP P 21 47 43.6 +0.4
SWMT epP pP 21 48 06.8 -8.3
A16A West Butte Ran 65.75 334 ⇑P P 21 47 43.1 -0.1
baz=66,SNR=29
CHIE El Hierro 65.78 55 P P 21 47 43.6 -0.3
comp=Z,10nm,0.4s,mb5.0
KCPM Cahto Peak 65.87 321 eP P 21 47 45.6 +1.5
comp=Z,64nm,1.1s,mb5.4
E11A Bogner Ranch, 65.98 330 ⇑P P 21 47 44.2 -0.5
baz=66,SNR=28
H08A Prairie City 66.00 327 ⇑P P 21 47 45.2 +0.3
baz=66,SNR=45
YBMT Yellow Bay 66.01 332 eP P 21 47 45.3 +0.5
G09A Cove 66.04 328 ⇓P P 21 47 45.2 0.0
baz=66,SNR=52
JTMT Jette 66.05 332 eP P 21 47 45.5 +0.4
K05A Summer Lake 66.08 325 ⇓P P 21 47 46.2 +0.8
baz=66,SNR=38
C13A Hot Springs 66.14 332 ⇓P P 21 47 46.1 +0.4
baz=66,SNR=30
I07A Izee 66.17 326 ⇑P P 21 47 46.3 +0.3
baz=66,SNR=69
F10A Beach Ranch, E 66.23 329 ⇑P P 21 47 46.5 +0.1
baz=66,SNR=9.0
HOG Hogback Mounta 66.25 324 P P 21 47 47.1 +0.5
A15A Johnson Ranch, 66.26 334 ⇓P P 21 47 45.7 -0.7
baz=66,SNR=17
BSMT Bassoo Peak 66.36 332 eP P 21 47 47.6 +0.5
F09A S2 Ranch, Elgi 66.40 329 ⇑P P 21 47 47.3 -0.1
baz=67
D11A Klaveano Farm, 66.53 330 ⇑P P 21 47 47.5 -0.7
baz=67,SNR=7.8
YBH Yreka Blue Hor 66.54 323 eP P 21 47 46.6 -1.8
YBH pmax pmax
comp=Z,25nm,0.9s
YBH Yreka Blue Hor 66.54 323 eP P 21 47 46.5 -1.8
comp=Z,25nm,0.9s,mb5.0
A14A Double T Ranch 66.56 333 ⇓P P 21 47 47.7 -0.7
baz=67,SNR=18
C12B Naegeli Ranch, 66.58 331 ⇓P P 21 47 48.9 +0.4
baz=67,SNR=15
B13A Whitefish 66.59 332 ⇑P P 21 47 48.8 +0.2
baz=67,SNR=13
KHMM Horse Mountain 66.65 322 eP P 21 47 50.2 +1.1
comp=Z,62nm,0.8s,mb5.5
G08A Pilot Rock 66.67 328 ⇑P P 21 47 49.0 -0.1
baz=67,SNR=11
LNOR Lincton Mounta 66.70 328 eP P 21 47 49.3 0.0
WALA Waterton Lakes 66.84 333 eP P 21 47 50.2 0.0
comp=Z,1.5nm,0.8s,mb3.9
F08A Pendleton 66.91 328 ⇑P P 21 47 50.0 -0.7
baz=67
D10A Wagner Farm, O 67.00 330 ⇓P P 21 47 50.6 -0.6
baz=67,SNR=5.7
VIPM Ingram Point 67.06 326 P P 21 47 52.3 +0.7
E09A Wood Farm, Sta 67.07 329 ⇑P P 21 47 51.6 0.0
baz=67
FFC Flin Flon 67.07 343 P P 21 47 50.9 -0.6
comp=Z,376nm,0.8s,mb6.3,SNR=24
FFC Flin Flon 67.07 343 eP P 21 47 50.6 -0.9
FFC pmax pmax
comp=Z,55nm,0.9s,mb5.4
FFC Flin Flon 67.07 343 eP P 21 47 50.5 -0.9
comp=Z,55nm,0.9s,mb5.4
CCAN Las Canadas 67.08 55 P P 21 47 53.5 +1.4
comp=Z,7.4nm,0.5s,mb4.8
B12A Libby 67.18 332 ⇑P P 21 47 52.4 +0.1
baz=67
HUMO Hull Mountain 67.21 323 eP P 21 47 51.8 -0.8
comp=Z,12nm,1.0s,mb4.7
BBOR Butler Butte 67.22 324 P P 21 47 51.7 -0.9
EBAJ Bajamar 67.42 54 P P 21 47 56.2 +2.0
comp=Z,120nm,1.5s,mb5.5
D09A Jones Farm, Ri 67.52 329 ⇑P P 21 47 54.5 0.0
baz=68
E08A Dider Farm, El 67.52 329 ⇑P P 21 47 53.9 -0.6
baz=68
B11A Sandpoint 67.52 331 ⇑P P 21 47 54.3 -0.1
baz=68,SNR=15
G06A Carlson Farm, 67.53 327 ⇓P P 21 47 55.4 +0.8
baz=68,SNR=5.2
A12A Yaak River Ran 67.54 332 ⇑P P 21 47 55.1 +0.6
baz=68,SNR=9.8
C10A Spilker Farm, 67.54 331 ⇓P P 21 47 54.8 +0.2
baz=68
HAWA Hanford 67.70 328 eP P 21 47 56.1 +0.5
comp=Z,96nm,1.8s,mb5.2
RSW Rattlesnake Hi 67.73 328 eP P 21 47 56.1 +0.2
comp=Z,6.8nm,0.7s,mb4.5
RSW ePcP PcP 21 48 22.9 +1.2
NEW Newport 67.76 331 eP P 21 47 55.6 -0.4
NEW pmax pmax
comp=Z,38nm,1.1s
NEW Newport 67.76 331 eP P 21 47 55.6 -0.4
comp=Z,38nm,1.1s,mb5.0
D08A Wollman Farm, 67.83 329 ⇑P P 21 47 56.2 -0.2
baz=68
B10A Chitwood Farm, 67.83 331 ⇑P P 21 47 56.1 -0.4
baz=68
A11A Hall Mountain, 67.89 332 ⇑P P 21 47 56.9 +0.1
baz=68,SNR=12
OD2 Odessa Site #2 67.94 329 eP P 21 47 53.6 -3.5
comp=Z,56nm,1.3s,mb5.1
E07A Sunnyside 67.97 328 ⇑P P 21 47 57.8 +0.5
baz=68
C09A Chrisman Ranch 68.00 330 ⇓P P 21 47 57.8 +0.4
baz=68
H04A Detroit Lake 68.04 326 ⇑P P 21 47 57.5 -0.3
baz=68,SNR=12
HOOD Mount Hood Mea 68.14 326 eP P 21 47 57.5 -1.0
comp=Z,44nm,0.6s,mb5.4
HOOD ePcP PcP 21 48 23.0 -0.4
HOOD epP pP 21 48 29.8 -0.8
KEBM Edson Butte 68.19 323 eP P 21 48 00.3 +1.6
comp=Z,99nm,1.1s,mb5.5
B09A Rice 68.37 331 ⇑P P 21 47 59.6 -0.2
baz=68,SNR=21
A10A Northport 68.47 331 ⇓P P 21 47 59.3 -1.1
baz=69
G04A Mulino 68.52 326 ⇑P P 21 48 00.5 -0.3
baz=69
B08A Colville Reser 68.90 330 ⇓P P 21 48 02.9 -0.2
baz=69,SNR=12

FCC **Fort Churchill** 68.91 349 *e*P P 21 48 02.2 -0.7
FCC pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
FCC **Fort Churchill** 68.91 349 *e*P P 21 48 02.2 -0.7
comp=Z,3.8nm,1.2s,mb4.0
ETW **Entiat** 68.91 329 P P 21 48 03.7 +0.6
F04A **Amboy** 68.94 326 ⇓P P 21 48 03.3 -0.1
baz=69,SNR=7.7
LON **Longmire** 69.13 327 *e*P P 21 48 04.5 0.0
LON pmax pmax
comp=Z,16nm,0.9s,mb4.8
LON **Longmire** 69.13 327 *e*P P 21 48 04.5 0.0
comp=Z,16nm,0.9s,mb4.7
D05A **Enumclaw** 69.50 328 ⇓P P 21 48 06.7 0.0
baz=70,SNR=7.9
F03A **Seaside** 69.57 326 ⇓P P 21 48 06.7 -0.5
baz=70
PNT **Penticton** 69.69 331 P P 21 48 08.4 +0.5
EDM **Edmonton** 69.71 336 *e*P P 21 48 07.4 -0.5
E03A **Lebam** 69.95 326 ⇑P P 21 48 09.9 +0.4
baz=70
RPW **Rockport** 70.06 329 *e*P P 21 48 09.9 -0.3
B06A **Marblemount** 70.09 329 ⇓P P 21 48 09.7 -0.7
baz=70,SNR=6.2
JCW **Jim Creek** 70.11 329 *e*P P 21 48 10.0 -0.5
CMW **Cultus Mountai** 70.35 329 P P 21 48 11.7 -0.2
A06A **Chilliwack** 70.46 330 ⇓P P 21 48 12.3 -0.3
baz=71
NLWA **Neilton Lookou** 70.63 327 ⇓P P 21 48 14.3 +0.7
baz=71,SNR=8.4
NLWA **Neilton Lookou** 70.63 327 *e*P P 21 48 14.7 +1.0
comp=Z,63nm,0.9s,mb5.3
A05A **Maple Falls** 70.70 329 ⇑P P 21 48 13.9 -0.2
baz=71,SNR=5.4
VDB **Vedder Mountai** 70.73 329 P P 21 48 14.1 -0.2
LIC **Lamto** 71.14 80 *e*P P 21 48 17.3 -0.2
comp=Z,172nm,1.0s,mb5.7
LIC **Lamto** 71.14 80 *e*P P 21 48 16.8 -0.7
comp=Z,68nm,0.7s,mb5.2,baz=255
LIC *e*MLR MLR
comp=Z,125nm,22.0s
TIC **Toumodi** 71.23 80 *e*P P 21 48 17.6 -0.4
comp=Z,159nm,0.9s,mb5.8
TIC **Toumodi** 71.23 80 *e*P P 21 48 17.6 -0.4
TIC pmax pmax
comp=Z,159nm,0.9s,mb5.8
DBIC **Dimbokro** 71.39 80 P P 21 48 18.4 -0.6
comp=Z,69nm,0.5s,mb5.7,baz=239,slow=6.2,SNR=28
DBIC **Dimbokro** 71.39 80 *e*P P 21 48 18.5 -0.5
DBIC pmax pmax
comp=Z,128nm,1.0s
DBIC **Dimbokro** 71.39 80 *e*P P 21 48 18.5 -0.6
comp=Z,128nm,1.0s,mb5.6
KIC **Kosan Boka** 71.45 80 *e*P P 21 48 18.8 -0.5
comp=Z,131nm,0.6s,mb5.8
PPT **Papeete** 72.97 254 LR LR 22 13 47.5
comp=Z,152nm,20.1s,baz=187,slow=30
VNA1 **Neumayer--Stat** 74.28 161 *e*P P 21 48 35.8 +0.8
VNA1 *e* 21 48 51.3
VNA2 **Neumayer--Watz** 74.64 162 *e*P P 21 48 36.7 -0.3
PFVI **Vila Bisbo** 76.58 49 *e*P P 21 48 49.6 +0.9
comp=Z,80nm,1.2s,mb5.2
MORF **Marmelete** 76.78 49 *e*P P 21 48 51.0 +1.2
comp=Z,141nm,1.2s,mb5.5
PTEO **Sao Teotonio** 76.81 48 *e*P P 21 48 51.3 +1.3
comp=Z,66nm,1.3s,mb5.1
YKA **Yellowknife Ar** 77.20 342 P P 21 48 50.8 -0.8
comp=Z,43nm,0.8s,mb5.2,baz=138,slow=6.2,SNR=592
PBDV **Barranco-do-Ve** 77.29 49 *e*P P 21 48 53.5 +0.8
comp=Z,62nm,1.2s,mb5.1
PCVE **Castro Verde** 77.35 48 *e*P P 21 48 54.7 +1.7
comp=Z,62nm,1.5s,mb5.0
SFJD **Kangerlussuaq** 77.41 10 *e*P P 21 48 51.1 -1.6
SFJD *e* 21 49 01.3
SFJD *e**PP pP 21 49 24.6 -1.0
SFJD pmax pmax
comp=Z,45nm,0.9s,mb5.1
SFJD **Kangerlussuaq** 77.41 10 *e*P P 21 48 51.1 -1.6
comp=Z,45nm,0.9s,mb5.1
SFJD *e*PcP PcP 21 49 01.3 -1.3
SFJD *e*pP pP 21 49 24.6 -0.9
SFJD **Kangerlussuaq** 77.41 10⇓*i*P P 21 48 51.5 -1.2
comp=Z,29nm,0.9s,mb4.9
PVAQ **Vaqueiros** 77.51 49 *e*P P 21 48 55.0 +1.1
comp=Z,48nm,1.7s,mb4.8
PBEJ **Beja** 77.62 48 *e*P P 21 48 55.4 +0.9
comp=Z,38nm,1.6s,mb4.8
EVO **Evora** 77.70 48⇓*i*P P 21 48 54.7 -0.2
comp=Z,84nm,1.0s,mb5.0
EVO *e*MLR MLR
comp=Z,124nm,21.2s
EVO **Evora** 77.70 48 *e*P P 21 48 55.2 +0.3
comp=Z,36nm,0.9s,mb5.0
EGRO **El Granado** 77.73 49 P P 21 48 55.9 +0.8
comp=Z,21nm,0.7s,mb4.9
PESTR **Estremoz** 78.13 47 *e*P P 21 48 57.7 +0.4
comp=Z,55nm,1.4s,mb5.0
PBAR **Barrancos** 78.28 48 *e*P P 21 48 58.8 +0.6
comp=Z,28nm,1.4s,mb4.7
SFS **San Fernando** 78.31 50 P P 21 48 58.4 0.0
EMIN **Mina Concepcio** 78.41 49 P P 21 48 59.1 +0.3
comp=Z,18nm,0.7s,mb4.8
PMRV **Marv??o** 78.47 47 *e*P P 21 48 58.8 -0.4
comp=Z,22nm,1.7s,mb4.5
EBAD **Badajoz** 78.51 48 P P 21 48 59.7 +0.3
comp=Z,16nm,0.7s,mb4.8
PCBR **Castelo Branco** 78.56 46 *e*P P 21 48 59.7 0.0
comp=Z,34nm,1.5s,mb4.8
EZAM **Zamans** 78.57 44 P P 21 48 59.7 0.0
EZAM pmax pmax
comp=Z,5.0nm,0.4s,mb4.5
EZAM **Zamans** 78.57 44 P P 21 48 59.7 +0.1
comp=Z,5.4nm,0.4s,mb4.5
PVIS **Viseu** 78.59 46 *e*P P 21 48 59.7 -0.1
comp=Z,61nm,1.4s,mb5.0
EMAZ **Mazaricos** 78.69 43 P P 21 48 59.0 -1.2
comp=Z,5.8nm,0.4s,mb4.6
ESPR **Espera** 78.72 50 P P 21 49 01.0 +0.4
comp=Z,22nm,0.6s,mb5.0
MTE **Manteigas** 78.72 46 *e*P P 21 49 00.3 -0.2
comp=Z,28nm,1.2s,mb4.8
MTE **Manteigas** 78.72 46 *e*P P 21 49 00.5 0.0
comp=Z,17nm,0.9s,mb4.7
PCAB **Cabril** 78.87 45 *e*P P 21 49 01.3 0.0
comp=Z,47nm,1.6s,mb4.9
EJIF **Jimena Fronter** 78.87 50 P P 21 49 03.2 +1.8
EJIF pmax pmax
comp=Z,19nm,0.8s,mb4.8
EJIF **Jimena Fronter** 78.87 50 P P 21 49 03.2 +1.8
comp=Z,19nm,0.8s,mb4.8
ELOB **Lobios** 78.90 44 P P 21 49 01.9 +0.4
comp=Z,13nm,0.7s,mb4.7
PVRL **Vila Real** 78.92 45 *e*P P 21 49 01.7 +0.1
comp=Z,27nm,1.4s,mb4.7
STS **Santiago** 78.95 43 P P 21 49 01.0 -0.7
STS pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
STS **Santiago** 78.95 43 P P 21 49 01.0 -0.7
comp=Z,7.9nm,0.7s,mb4.5
TOA0 **Torodi Ar. Sit** 79.01 75 *e*P P 21 49 01.9 -0.7
TOA0 *e*PcP PcP 21 49 12.0 +1.3
TORD **Torodi Ar. Bea** 79.01 75 P P 21 49 01.7 -0.9
comp=Z,21nm,0.9s,mb4.8,baz=277,slow=5.4,SNR=83
MVO **Moncorvo** 79.36 45 *e*P P 21 49 04.0 0.0
comp=Z,44nm,1.1s,mb5.0
EMIJ **Mijas** 79.44 50 P P 21 49 05.2 +0.7
comp=Z,62nm,0.8s,mb5.3
ERUA **La Rua** 79.73 44 P P 21 49 05.9 -0.1
ERUA pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
ERUA **La Rua** 79.73 44 P P 21 49 05.9 0.0
comp=Z,8.7nm,0.6s,mb4.6
PBRG **Braganca** 79.80 45 *e*P P 21 49 06.5 +0.2
comp=Z,30nm,1.6s,mb4.7
ECAL **Calabor** 79.85 45 P P 21 49 07.0 +0.4
comp=Z,25nm,0.9s,mb4.8
EPON **Pontenova** 80.07 43 P P 21 49 07.6 -0.1
comp=Z,70nm,1.5s,mb5.1
ELOJ **Sierra Loja** 80.09 50 P P 21 49 09.6 +1.6
ELOJ pmax pmax
comp=Z,85nm,1.1s,mb5.3
ELOJ **Sierra Loja** 80.09 50 P P 21 49 09.6 +1.5
comp=Z,85nm,1.1s,mb5.3
EADA **Adamuz** 80.11 49 P P 21 49 08.5 +0.5
comp=Z,84nm,1.2s,mb5.2
ELUQ **Luque** 80.14 50 P P 21 49 09.2 +0.9
ELUQ pmax pmax
comp=Z,7.0nm,0.3s,mb4.8
ELUQ **Luque** 80.14 50 P P 21 49 09.2 +0.9
comp=Z,7.2nm,0.3s,mb4.8
DLBC **Dease Lake** 80.17 334 *e*P P 21 49 08.4 +0.4
ERON **Agron** 80.32 50 P P 21 49 10.1 +0.8
comp=Z,17nm,0.5s,mb4.9
ECOG **Cogollos-Vega** 80.58 50 P P 21 49 11.7 +1.1
ECOG pmax pmax
comp=Z,39nm,0.7s,mb5.2
ECOG **Cogollos-Vega** 80.58 50 P P 21 49 11.7 +1.1
comp=Z,39nm,0.7s,mb5.1
EBAN **Banos Encina** 80.69 49 P P 21 49 12.2 +1.0
EBAN pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
EBAN **Banos Encina** 80.69 49 P P 21 49 12.2 +1.0
comp=Z,7.4nm,0.5s,mb4.6
PAB **San Pablo** 80.72 48 *e*P P 21 49 11.7 +0.3
PAB *e**PP pP 21 49 43.0 -1.5
PAB pmax pmax
comp=Z,52nm,1.4s,mb5.0
PAB **San Pablo** 80.72 48 *e*P P 21 49 11.7 +0.4
comp=Z,52nm,1.4s,mb5.0
PAB *e*pP pP 21 49 43.0 -1.5
NVL **N'lazarevskaya** 80.85 160 *e*P P 21 49 10.5 -0.9
NVL pmax pmax
comp=Z,54nm,1.2s,mb5.0
EBER **Berja** 80.98 51 P P 21 49 13.7 +1.0
comp=Z,93nm,1.3s,mb5.2
ESDC **Sonseca Array** 81.05 48 P P 21 49 13.2 +0.2
comp=Z,24nm,0.9s,mb4.8,baz=256,slow=5.8,SNR=70
ESDC **Sonseca Array** 81.05 48 P P 21 49 13.6 +0.5
comp=Z,29nm,0.8s,mb5.0
ESLA **Sonseca Array** 81.05 48 *e*P P 21 49 13.7 +0.6
EQES **Quesada** 81.12 50 P P 21 49 14.2 +0.7
comp=Z,60nm,0.9s,mb5.2
GUD **Guadarrama** 81.23 47 P P 21 49 14.4 +0.4
GUD pmax pmax
comp=Z,11nm,0.7s,mb4.6
GUD **Guadarrama** 81.23 47 P P 21 49 14.4 +0.4
comp=Z,11nm,0.7s,mb4.6
EARI **Arriondas** 81.38 44 P P 21 49 15.0 +0.3
comp=Z,11nm,0.6s,mb4.7
EHUE **Huescar** 81.48 50 P P 21 49 15.7 +0.3
EHUE pmax pmax
comp=Z,20nm,0.5s,mb5.0
EHUE **Huescar** 81.48 50 P P 21 49 15.7 +0.3
comp=Z,20nm,0.5s,mb5.0
ENIJ **Nijar** 81.52 51 P P 21 49 15.6 0.0
ENIJ pmax pmax
comp=Z,12nm,0.6s,mb4.7
ENIJ **Nijar** 81.52 51 P P 21 49 15.6 0.0
comp=Z,12nm,0.6s,mb4.7
EVIA **Vianos** 81.80 49 P P 21 49 18.5 +1.4
EVIA pmax pmax
comp=Z,47nm,0.8s,mb5.2
EVIA **Vianos** 81.80 49 P P 21 49 18.5 +1.5
comp=Z,47nm,0.8s,mb5.2
EMUR **La Murta** 82.51 50 P P 21 49 20.4 -0.4
comp=Z,69nm,1.0s,mb5.3
ETOB **Tobarra** 82.52 49 P P 21 49 21.8 +1.0
comp=Z,96nm,0.9s,mb5.5
ELAN **Lanestosa** 82.58 44 P P 21 49 21.2 +0.2
comp=Z,54nm,1.2s,mb5.2
ETOR **Torete** 82.80 47 P P 21 49 23.3 +1.1
ETOR pmax pmax
comp=Z,92nm,1.0s,mb5.5
ETOR **Torete** 82.80 47 P P 21 49 23.3 +1.1
comp=Z,92nm,1.0s,mb5.5
SKAG **Skagway** 83.04 333 *e*P P 21 49 22.8 -0.2
comp=Z,88nm,1.5s,mb5.3
BORG **Borgarnes** 83.22 20 P P 21 49 25.5 +1.7
comp=Z,75nm,0.9s,mb5.4,baz=209,slow=3.2,SNR=15
BORG **Borgarnes** 83.22 20 *e*P P 21 49 24.1 +0.3
ECHE **Chera** 83.22 48 P P 21 49 25.8 +1.4
ECHE pmax pmax
comp=Z,48nm,0.8s,mb5.3
ECHE **Chera** 83.22 48 P P 21 49 25.8 +1.4
comp=Z,48nm,0.8s,mb5.3
EBEN **Beniarda** 83.52 49 P P 21 49 26.6 +0.7
comp=Z,59nm,1.0s,mb5.3
EANR **'Ain N'Sour** 83.79 52 P P 21 49 28.7 +1.3
ETRT **Tiaret** 83.80 53 P P 21 49 29.0 +1.5
EMOS **Mosqueruela** 83.81 48 P P 21 49 28.7 +1.3
comp=Z,108nm,0.9s,mb5.6
DCN **Croghan** 83.83 34 *e*P P 21 49 26.2 -1.0
BST **Brest** 83.87 39 *e*P P 21 49 27.6 +0.1
ELIZ **Elizondo** 83.88 45 P P 21 49 27.5 -0.2
ELIZ pmax pmax
comp=Z,14nm,0.7s,mb4.8
ELIZ **Elizondo** 83.88 45 P P 21 49 27.5 -0.2
comp=Z,14nm,0.7s,mb4.8
EALK **Alkurruntz** 83.92 45 P P 21 49 27.8 -0.1
comp=Z,119nm,1.2s,mb5.5
RES **Resolute Bay** 84.04 355 *e*P P 21 49 27.4 -0.4
RES pmax pmax
comp=Z,33nm,1.0s,mb5.0
RES **Resolute Bay** 84.04 355 *e*P P 21 49 27.4 -0.5
comp=Z,33nm,1.0s,mb5.0
ECHA **Ech Chlef** 84.05 52 P P 21 49 30.0 +1.3
SJPF **Ste Jean** 84.08 45 *e*P P 21 49 29.2 +0.5
comp=Z,142nm,0.9s,mb5.4
SJPF **Ste Jean** 84.08 45 *e*P P 21 49 29.2 +0.5
SJPF pmax pmax
comp=Z,71nm,0.9s,mb5.4
SJPF **Ste Jean** 84.08 45 *e*P P 21 49 29.2 +0.5
comp=Z,71nm,0.9s,mb5.4
OSSF **Osses** 84.10 45 *e*P P 21 49 28.8 0.0
ESAC **San Caprasio** 84.20 46 P P 21 49 30.6 +1.3
comp=Z,66nm,0.7s,mb5.5
EBNR **Beni Rached** 84.22 52 P P 21 49 31.2 +1.6
DMUB **Kingscourt** 84.25 33 *e*P P 21 49 28.0 -1.3
QUIF **Quistinic** 84.30 40 *e*P P 21 49 28.3 -1.4
comp=Z,37nm,0.8s,mb4.8
QUIF **Quistinic** 84.30 40 *e*P P 21 49 28.3 -1.4
QUIF pmax pmax
comp=Z,18nm,0.8s,mb4.8
QUIF **Quistinic** 84.30 40 *e*P P 21 49 28.3 -1.4
comp=Z,18nm,0.8s,mb4.9
SUMG **Summit** 84.36 10 *e*P P 21 49 30.1 +0.6
comp=Z,203nm,1.0s,mb5.8
ROSF **Rostrenen** 84.37 40 *e*P P 21 49 29.7 -0.3
comp=Z,58nm,0.8s,mb5.0
ROSF **Rostrenen** 84.37 40 *e*P P 21 49 29.7 -0.3
ROSF pmax pmax
comp=Z,29nm,0.8s,mb5.1
ROSF **Rostrenen** 84.37 40 *e*P P 21 49 29.7 -0.3
comp=Z,29nm,0.8s,mb5.1
ETSF **Etsaut** 84.48 45 *e*P P 21 49 31.2 +0.5
comp=Z,70nm,1.1s,mb5.0
ETSF **Etsaut** 84.48 45 *e*P P 21 49 31.2 +0.5
ETSF pmax pmax
comp=Z,35nm,1.1s,mb5.0
ETSF **Etsaut** 84.48 45 *e*P P 21 49 31.2 +0.5
comp=Z,35nm,1.1s,mb5.0
ERTA **Horta de San J** 84.57 47 P P 21 49 32.5 +1.2
comp=Z,96nm,1.0s,mb5.5
REYF **Montagne du Re** 84.65 45 *e*P P 21 49 32.1 +0.5
HYT **Haines Junctio** 84.66 334 *e*P P 21 49 33.1 +1.9
SGMF **Saint Gilles** 84.80 40⇓*i*P P 21 49 31.6 -0.6
comp=Z,152nm,1.3s,mb5.3
SGMF **Saint Gilles** 84.80 40⇓*i*P P 21 49 31.6 -0.6
SGMF pmax pmax
comp=Z,76nm,1.3s,mb5.3
SGMF **Saint Gilles** 84.80 40⇓*i*P P 21 49 31.6 -0.6
comp=Z,76nm,1.3s,mb5.3
VIEF **Viey** 84.89 45 *e*P P 21 49 33.4 +0.6
GMM **Mts of Mourne** 84.90 33 *e*P P 21 49 32.1 -0.4
EBIE **Bielsa** 84.92 46 P P 21 49 34.4 +1.5
comp=Z,39nm,0.8s,mb5.2
PNL **Peninsula** 84.97 333 *e*P P 21 49 32.7 0.0
comp=Z,63nm,1.2s,mb5.2
LABF **Labassere** 84.97 45 *e*P P 21 49 33.7 +0.5
HEX **Exmoor** 84.98 37 *e*P P 21 49 33.0 0.0
RESF **Ens** 85.09 46 *e*P P 21 49 34.5 +0.7
EPF **Esparros** 85.15 45 *e*P P 21 49 34.5 +0.4
comp=Z,128nm,1.2s,mb5.2
EPF **Esparros** 85.15 45 *e*P P 21 49 34.5 +0.4
EPF pmax pmax
comp=Z,64nm,1.2s,mb5.2
EPF **Esparros** 85.15 45 *e*P P 21 49 34.5 +0.4
comp=Z,64nm,1.2s,mb5.2
EMHD **Djebel Mahouad** 85.31 52 P P 21 49 36.0 +1.0
MELF **Melles** 85.40 46 *e*P P 21 49 35.9 +0.6
HTR **Trewern Hill** 85.64 36 *e*P P 21 49 36.1 -0.2
GIM **North Isle of** 85.73 34 *e*P P 21 49 36.0 -0.7
MFF **Saint Martin d** 85.85 42 *e*P P 21 49 37.1 -0.3
comp=Z,120nm,1.0s,mb5.3
MFF **Saint Martin d** 85.85 42 *e*P P 21 49 37.1 -0.3
MFF pmax pmax
comp=Z,60nm,1.0s,mb5.3
MFF **Saint Martin d** 85.85 42 *e*P P 21 49 37.1 -0.3
comp=Z,60nm,1.0s,mb5.3
GRR **Gorron** 85.92 40 *e*P P 21 49 37.1 -0.6
comp=Z,105nm,0.9s,mb5.3
GRR **Gorron** 85.92 40 *e*P P 21 49 37.1 -0.6
GRR pmax pmax
comp=Z,53nm,0.9s,mb5.3
GRR **Gorron** 85.92 40 *e*P P 21 49 37.1 -0.6
comp=Z,53nm,0.9s,mb5.3
RRH **Rhenigidale** 85.94 30 *e*P P 21 49 37.5 -0.1
LFF **La Frestale** 85.97 44 *e*P P 21 49 37.8 -0.3
comp=Z,152nm,0.9s,mb5.5
LFF **La Frestale** 85.97 44 *e*P P 21 49 37.8 -0.3
LFF pmax pmax
comp=Z,76nm,0.9s,mb5.4
LFF **La Frestale** 85.97 44 *e*P P 21 49 37.8 -0.3
comp=Z,76nm,0.9s,mb5.4
HLM1 **Long Mynd** 86.01 36 *e*P P 21 49 37.6 -0.5
KPL **Plockton** 86.23 31 *e*P P 21 49 38.4 -0.6
KPL AMb AMB 21 49 52.5
comp=Z,115nm,4.4s
PGBU **Glenifferbraes** 86.27 32 *e*P P 21 49 39.0 -0.2
PGBU AMb AMB 21 49 40.7
comp=Z,144nm,4.9s
FLN **La Foliniere** 86.27 40 *e*P P 21 49 38.9 -0.6
comp=Z,186nm,1.1s,mb5.4
FLN *e*MLR MLR
comp=Z,100nm,22.8s
FLN **La Foliniere** 86.27 40 *e*P P 21 49 38.9 -0.6
FLN pmax pmax
comp=Z,93nm,1.1s,mb5.4
FLN MLR MLR
comp=Z,100nm,22.8s
FLN **La Foliniere** 86.27 40 *e*P P 21 49 38.9 -0.6
comp=Z,93nm,1.1s,mb5.4
FLN LR LR
comp=Z,100nm,22.8s
RRR **Rubha Reidh** 86.35 30 *e*P P 21 49 39.4 -0.2
LDF **La Druitiere** 86.45 40 *e*P P 21 49 39.7 -0.6
comp=Z,81nm,1.0s,mb5.1
LDF **La Druitiere** 86.45 40 *e*P P 21 49 39.7 -0.6
LDF pmax pmax
comp=Z,40nm,1.0s,mb5.1
LDF **La Druitiere** 86.45 40 *e*P P 21 49 39.7 -0.6
comp=Z,40nm,1.0s,mb5.1
KAC **Achnashellach** 86.47 30 *e*P P 21 49 39.9 -0.3
SCO **Scoresbysund** 86.52 16⇓*i*P P 21 49 40.3 +0.1
SCO pmax pmax
comp=Z,31nm,0.8s,mb5.2
SCO **Scoresbysund** 86.52 16⇓*i*P P 21 49 40.3 +0.1
comp=Z,31nm,0.8s,mb5.2
MTLF **Montolieu** 86.56 45 *e*P P 21 49 40.2 -0.8
comp=Z,35nm,1.0s,mb4.8
MTLF **Montolieu** 86.56 45 *e*P P 21 49 40.2 -0.8
MTLF pmax pmax
comp=Z,17nm,1.0s,mb4.8
MTLF **Montolieu** 86.56 45 *e*P P 21 49 40.2 -0.8
comp=Z,17nm,1.0s,mb4.8
RJF **Les Rejaudoux** 86.59 43 *e*P P 21 49 40.5 -0.6
comp=Z,42nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,94nm,19.5s
RJF **Les Rejaudoux** 86.59 43 *e*P P 21 49 40.5 -0.6
RJF pmax pmax
comp=Z,21nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,90nm,19.5s
RJF **Les Rejaudoux** 86.59 43 *e*P P 21 49 40.5 -0.6
comp=Z,21nm,0.9s,mb5.0
RJF LR LR
comp=Z,90nm,19.5s
ESK **Eskdalemuir** 86.77 33 *e*P P 21 49 40.8 -1.0
ESK AMb AMB 21 49 51.9
comp=Z,118nm,4.3s
ESK **Eskdalemuir** 86.77 33 *e*P P 21 49 41.5 -0.3
EKA **Eskdalemuir Ar** 86.80 33 P P 21 49 41.3 -0.6
comp=Z,15nm,0.9s,mb4.8,baz=242,slow=6.3,SNR=29
EKA pP pP 21 50 14.8 -0.6
comp=Z,3.6nm,0.9s,baz=262,slow=4.6,SNR=2.0
CAF **Calviac** 86.87 44 *e*P P 21 49 41.9 -0.6
comp=Z,37nm,0.7s,mb5.0
CAF **Calviac** 86.87 44 *e*P P 21 49 41.9 -0.6
CAF pmax pmax
comp=Z,18nm,0.7s,mb5.0
CAF **Calviac** 86.87 44 *e*P P 21 49 41.9 -0.6
comp=Z,18nm,0.7s,mb5.0
DAWY **Dawson** 86.93 337 *e*P P 21 49 41.4 -0.9
LHO **Holmfirth** 86.93 35 *e*P P 21 49 41.8 -0.8
INK **Inuvik** 86.94 341 *e*P P 21 49 41.9 -0.4
INK pmax pmax
comp=Z,62nm,0.9s
INK **Inuvik** 86.94 341 *e*P P 21 49 41.9 -0.4
comp=Z,62nm,0.9s,mb5.4
CWF **Charnwood Fore** 86.99 36 *e*P P 21 49 43.0 +0.1
TCF **Toulx Ste Croi** 87.32 43⇓*i*P P 21 49 43.7 -0.9
comp=Z,30nm,0.7s,mb4.9
TCF **Toulx Ste Croi** 87.32 43⇓*i*P P 21 49 43.7 -0.9
TCF pmax pmax
comp=Z,15nm,0.7s,mb4.9
TCF **Toulx Ste Croi** 87.32 43⇓*i*P P 21 49 43.7 -0.9
comp=Z,15nm,0.7s,mb4.9
SBA **Scott Base** 87.40 191 *e*P P 21 49 45.9 +1.4
SBA pmax pmax
comp=Z,23nm,1.4s,mb4.8
SBA **Scott Base** 87.40 191 *e*P P 21 49 45.9 +1.5
comp=Z,23nm,1.4s,mb4.8
ORE **Reay** 87.61 30 *e*P P 21 49 45.6 -0.1
PYM **Petit Puy Mans** 87.72 43 *e*P P 21 49 46.4 -0.1
LBL **Lubilhac** 87.75 44 *e*P P 21 49 46.9 +0.2
BGF **Bois d'Agland** 87.82 42⇓*i*P P 21 49 46.2 -0.8
comp=Z,91nm,0.8s,mb5.4
BGF **Bois d'Agland** 87.82 42⇓*i*P P 21 49 46.2 -0.8
BGF pmax pmax
comp=Z,45nm,0.8s,mb5.3
BGF **Bois d'Agland** 87.82 42⇓*i*P P 21 49 46.2 -0.8
comp=Z,45nm,0.8s,mb5.3
BMRM **Bremner River** 87.86 333 *e*P P 21 49 46.6 -0.2
comp=Z,483nm,0.7s,mb6.4
BMRM *e*pP pP 21 50 20.3 -0.2
HYF **Humbligny** 87.86 42⇓*i*P P 21 49 46.6 -0.6
AGO **Saint Agoulin** 87.88 43 *e*P P 21 49 47.0 -0.3
LASF **Ste Croix** 87.89 45 *e*P P 21 49 47.1 -0.3
comp=Z,39nm,0.9s,mb4.9
EGAK **Eagle** 87.93 337 *e*P P 21 49 46.7 -0.4
comp=Z,77nm,0.9s,mb5.5
COLF **Collangettes** 88.13 44 *e*P P 21 49 48.6 +0.1
PLDF **La Plantade** 88.19 43 *e*P P 21 49 48.6 -0.2
AVF **Avril sur Loir** 88.22 42⇓*i*P P 21 49 47.8 -1.1
comp=Z,57nm,0.9s,mb5.1
AVF **Avril sur Loir** 88.22 42⇓*i*P P 21 49 47.8 -1.1
AVF pmax pmax
comp=Z,29nm,0.9s,mb5.1
AVF **Avril sur Loir** 88.22 42⇓*i*P P 21 49 47.8 -1.1
comp=Z,29nm,0.9s,mb5.1
MENT **Mentasta** 88.22 335 *e*P P 21 49 48.1 -0.4
SSF **Saint Saulge** 88.38 42⇓*i*P P 21 49 48.4 -1.2
comp=Z,40nm,1.0s,mb4.9
SSF **Saint Saulge** 88.38 42⇓*i*P P 21 49 48.4 -1.2
SSF pmax pmax
comp=Z,20nm,1.0s,mb4.9
SSF **Saint Saulge** 88.38 42⇓*i*P P 21 49 48.4 -1.2
comp=Z,20nm,1.0s,mb4.9
DIV **Divide** 88.45 333 *e*P P 21 49 48.8 -0.8
comp=Z,68nm,1.0s,mb5.4
DIV *e*pP pP 21 50 22.5 -0.7
SMF **Signal de Mont** 88.50 43⇓*i*P P 21 49 49.4 -0.8
comp=Z,110nm,0.9s,mb5.5
SMF **Signal de Mont** 88.50 43⇓*i*P P 21 49 49.4 -0.8
SMF pmax pmax
comp=Z,55nm,0.9s,mb5.5
SMF **Signal de Mont** 88.50 43⇓*i*P P 21 49 49.4 -0.8
comp=Z,55nm,0.9s,mb5.5
VIVF **Saint-Julien-l** 88.65 44⇓*i*P P 21 49 50.7 -0.2
comp=Z,63nm,1.0s,mb5.2
VIVF **Saint-Julien-l** 88.65 44⇓*i*P P 21 49 50.7 -0.2
VIVF pmax pmax
comp=Z,32nm,1.0s,mb5.2
VIVF **Saint-Julien-l** 88.65 44⇓*i*P P 21 49 50.7 -0.2
comp=Z,32nm,1.0s,mb5.2
SSB **Saint Sauveur** 88.65 44 *e*P P 21 49 50.9 -0.1
SSB **Saint Sauveur** 88.65 44 *e*P P 21 49 50.8 -0.2
SSB *e**PP pP 21 50 23.4 -1.2

SSB pmax pmax
comp=Z,42nm,1.1s,mb5.3
SSB Saint Sauveur 88.65 44 *e*P **P 21 49 50.8 -0.2**
comp=Z,42nm,1.1s,mb5.3
SSB *e*pP pP 21 50 23.4 -1.3
LOR Lormes 88.67 42 *e*P **P 21 49 49.9 -1.1**
comp=Z,50nm,0.9s,mb5.1
LOR *e*MLR MLR
comp=Z,69nm,21.5s
LOR Lormes 88.67 42 *e*P **P 21 49 49.9 -1.1**
LOR pmax pmax
comp=Z,25nm,0.9s,mb5.1
LOR MLR MLR
comp=Z,70nm,21.5s
LOR Lormes 88.67 42 *e*P **P 21 49 49.9 -1.1**
LOR LR LR
comp=Z,70nm,21.5s
SMRF Simiane la Rot 89.08 45⇓*i*P **P 21 49 53.1 +0.1**
comp=Z,77nm,1.2s,mb5.2
SMRF Simiane la Rot 89.08 45⇓*i*P **P 21 49 53.1 +0.1**
comp=Z,77nm,1.2s,mb5.5
TSUM Tsumeb 89.49 109 *e*P **P 21 49 56.1 +0.6**
ORIF Oris-en-Rattie 89.50 45 *e*P **P 21 49 55.1 +0.2**
comp=Z,90nm,0.8s,mb5.5
ORIF *e*MLR MLR
comp=Z,81nm,19.8s
ORIF Oris-en-Rattie 89.50 45 *e*P **P 21 49 55.1 +0.2**
ORIF pmax pmax
comp=Z,45nm,0.8s,mb5.5
ORIF Oris-en-Rattie 89.50 45 *e*P **P 21 49 55.1 +0.2**
comp=Z,45nm,0.8s,mb5.5
BAIF Baives 89.57 39⇓*i*P **P 21 49 54.3 -0.8**
comp=Z,55nm,1.0s,mb5.1
BAIF Baives 89.57 39⇓*i*P **P 21 49 54.3 -0.8**
BAIF pmax pmax
comp=Z,28nm,1.0s,mb5.2
BAIF Baives 89.57 39⇓*i*P **P 21 49 54.3 -0.8**
comp=Z,28nm,1.0s,mb5.1
LMR La Mourre 89.60 46⇓*i*P **P 21 49 55.0 -0.4**
comp=Z,86nm,1.0s,mb5.3
LMR La Mourre 89.60 46⇓*i*P **P 21 49 55.0 -0.4**
LMR pmax pmax
comp=Z,43nm,1.0s,mb5.3
LMR La Mourre 89.60 46⇓*i*P **P 21 49 55.0 -0.4**
comp=Z,43nm,1.0s,mb5.3
SNF Seneffe 89.72 39 P **P 21 49 55.3 -0.5**
comp=Z,15nm,1.1s,mb4.8
MEZF Maizieres J'vi 89.74 41⇓*i*P **P 21 49 55.2 -0.8**
FRF La Foret Royal 89.75 46⇓*i*P **P 21 49 55.6 -0.5**
comp=Z,125nm,1.1s,mb5.5
FRF La Foret Royal 89.75 46⇓*i*P **P 21 49 55.6 -0.5**
FRF pmax pmax
comp=Z,63nm,1.1s,mb5.5
FRF La Foret Royal 89.75 46⇓*i*P **P 21 49 55.6 -0.5**
comp=Z,62nm,1.1s,mb5.5
DOU Dourbes 89.82 39 P **P 21 49 56.1 -0.2**
comp=Z,33nm,1.1s,mb5.2
SEW Seward 89.83 331 *e*P **P 21 49 55.0 -1.1**
comp=Z,34nm,1.1s,mb5.2
SEW *e*pP pP 21 50 28.4 -1.4
UCC Uccle 89.84 39 P **P 21 49 56.2 -0.1**
GIVF Givet 89.96 39⇓*i*P **P 21 49 56.4 -0.6**
comp=Z,178nm,0.8s,mb5.7
GIVF Givet 89.96 39⇓*i*P **P 21 49 56.4 -0.6**
GIVF pmax pmax
comp=Z,89nm,0.8s,mb5.8
GIVF Givet 89.96 39⇓*i*P **P 21 49 56.4 -0.6**
comp=Z,89nm,0.8s,mb5.8
CABF La Chapelle 90.00 43⇓*i*P **P 21 49 56.8 -0.4**
comp=Z,51nm,0.9s,mb5.2
CABF La Chapelle 90.00 43⇓*i*P **P 21 49 56.8 -0.4**
CABF pmax pmax
comp=Z,26nm,0.9s,mb5.2
CABF La Chapelle 90.00 43⇓*i*P **P 21 49 56.8 -0.4**
comp=Z,26nm,0.9s,mb5.2
MBDF Montbardon 90.08 45⇓*i*P **P 21 49 57.6 0.0**
comp=Z,43nm,1.1s,mb5.0
MBDF Montbardon 90.08 45⇓*i*P **P 21 49 57.6 0.0**
MBDF pmax pmax
comp=Z,22nm,1.1s,mb5.0
MBDF Montbardon 90.08 45⇓*i*P **P 21 49 57.6 0.0**
comp=Z,22nm,1.1s,mb5.0
BNI Bardonecchia 90.08 45 *e*P **P 21 49 57.8 +0.2**
PMR Palmer 90.13 333 *e*P **P 21 49 56.8 -0.7**
MVIF Mont Vial 90.17 46 *e*P **P 21 49 58.1 0.0**
RSL Roselend 90.17 44 *e*P **P 21 49 58.2 +0.1**
LPL La Plagne 90.21 44⇓*i*P **P 21 49 58.6 +0.4**
comp=Z,96nm,0.9s,mb5.4
LPL La Plagne 90.21 44⇓*i*P **P 21 49 58.6 +0.4**
LPL pmax pmax
comp=Z,48nm,0.9s,mb5.4
LPL La Plagne 90.21 44⇓*i*P **P 21 49 58.6 +0.4**
comp=Z,48nm,0.9s,mb5.4
LPG La Plagne 90.22 44⇓*i*P **P 21 49 58.8 +0.5**
comp=Z,116nm,0.9s,mb5.5
LPG La Plagne 90.22 44⇓*i*P **P 21 49 58.8 +0.5**
LPG pmax pmax
comp=Z,58nm,0.9s,mb5.5
LPG La Plagne 90.22 44⇓*i*P **P 21 49 58.8 +0.5**
comp=Z,58nm,0.9s,mb5.5
RC01 Rabbit Creek A 90.26 332 *e*P **P 21 49 57.5 -0.6**
comp=Z,32nm,1.0s,mb5.2
RC01 *e*pP pP 21 50 31.1 -0.7
TOUF Mont Tournerai 90.27 46 *e*P **P 21 49 58.2 -0.3**
KEST Kesra 90.28 54 P **P 21 49 59.2 +0.4**
comp=Z,8.2nm,0.8s,mb4.7,baz=259,slow=3.4,SNR=17
THEF They Montfort 90.29 41 *e*P **P 21 49 58.2 -0.3**
LUCF Luceram 90.31 46 *e*P **P 21 49 59.5 +0.8**
BCLA Clavier 90.33 39 P **P 21 49 58.7 0.0**
SBF Sospel 90.37 46⇓*i*P **P 21 49 58.4 -0.6**
comp=Z,105nm,1.2s,mb5.3
SBF Sospel 90.37 46⇓*i*P **P 21 49 58.4 -0.6**
SBF pmax pmax
comp=Z,53nm,1.2s,mb5.3
SBF Sospel 90.37 46⇓*i*P **P 21 49 58.4 -0.6**
comp=Z,53nm,1.2s,mb5.3
AUTN L'Aution 90.39 46 *e*P **P 21 49 59.0 -0.1**
HAU Haudompre 90.48 42⇓*i*P **P 21 49 58.4 -1.0**
comp=Z,31nm,1.0s,mb4.9
HAU *e*MLR MLR
comp=Z,86nm,18.2s
HAU Haudompre 90.48 42⇓*i*P **P 21 49 58.4 -1.0**
HAU pmax pmax
comp=Z,15nm,1.0s,mb4.9
HAU MLR MLR
comp=Z,90nm,18.3s
HAU Haudompre 90.48 42⇓*i*P **P 21 49 58.4 -1.0**
comp=Z,15nm,1.0s,mb4.9
HAU LR LR
comp=Z,90nm,18.3s
SAOF Saorge 90.48 46 *e*P **P 21 49 59.2 -0.3**
SYO Syowa Base 90.51 161⇑*e*P **P 21 49 58.0 -1.2**
COLA College 90.62 336 *e*P **P 21 49 59.4 -0.3**
COLA *e**PP pP 21 50 34.9 +1.5
COLA pmax pmax
comp=Z,73nm,0.9s,mb5.7
COLA College 90.62 336 *e*P **P 21 49 59.4 -0.3**
comp=Z,74nm,0.9s,mb5.7
COLA *e*pP pP 21 50 34.9 +1.5
BEBN Eben Emael 90.65 39 P **P 21 49 59.7 -0.4**
comp=Z,15nm,1.2s,mb4.9
LOMF Lomont 90.66 42 *e*P **P 21 50 00.1 -0.2**
WLF Walferdange 90.70 40 P **P 21 50 00.6 +0.2**
comp=Z,45nm,1.2s,mb5.4
WLF Walferdange 90.70 40 *e*P **P 21 50 00.5 +0.1**
comp=Z,70nm,1.0s,mb5.7
WLF Walferdange 90.70 40 *e*P **P 21 50 00.6 +0.2**
WLF pmax pmax
comp=Z,64nm,1.0s,mb5.6
WLF Walferdange 90.70 40 *e*P **P 21 50 00.6 +0.2**
comp=Z,64nm,1.0s,mb5.6
MCK McKinley 90.71 335 *e*P **P 21 49 59.5 -0.6**
MCK *e**PP pP 21 50 33.5 -0.3
MCK pmax pmax
comp=Z,14nm,0.8s,mb5.0
MCK McKinley 90.71 335 *e*P **P 21 49 59.5 -0.6**
comp=Z,14nm,0.8s,mb5.0
MCK *e*pP pP 21 50 33.5 -0.3
KDAK Kodiak Island 90.74 328 P **P 21 49 59.6 -0.8**
comp=Z,295nm,0.8s,mb6.4,SNR=6.2
KDAK Kodiak Island 90.74 328*c e*P **P 21 49 59.7 -0.7**
HINF Hinterlafeld 90.77 42⇓*i*P **P 21 49 59.8 -1.0**
comp=Z,47nm,1.2s,mb5.1
HINF Hinterlafeld 90.77 42⇓*i*P **P 21 49 59.8 -1.0**
HINF pmax pmax
comp=Z,24nm,1.3s,mb5.1
HINF Hinterlafeld 90.77 42⇓*i*P **P 21 49 59.8 -1.0**
comp=Z,24nm,1.3s,mb5.1
HGN Heimansgroeve 90.80 39 *e*P **P 21 50 00.3 -0.5**
comp=Z,42nm,0.9s,mb5.5
MEM Membach 90.81 39 P **P 21 50 01.0 +0.1**
comp=Z,19nm,1.6s,mb4.9
MOF Molkenrain 90.96 42 *e*P **P 21 50 00.5 -1.2**
OHAK Old Harbor 90.96 328 *e*P **P 21 50 00.8 -0.6**
comp=Z,94nm,1.1s,mb5.7
VSL Villasalto 90.97 50 *e*P **P 21 50 01.2 -0.7**
DAG Danmarks Havn 91.02 11⇑*e*P **P 21 50 00.9 -0.4**
DAG pmax pmax
comp=Z,29nm,0.9s,mb5.3
DAG Danmarks Havn 91.02 11⇑*i*P **P 21 50 00.9 -0.4**
comp=Z,29nm,0.9s,mb5.3
ECH Echery 91.05 41 *e*P **P 21 50 01.4 -0.7**
ECH Echery 91.05 41 *e*P **P 21 50 01.8 -0.3**
ECH *e**PP pP 21 50 36.3 +0.5
ECH *e**SP sP 21 50 48.5 -1.1
ECH pmax pmax
comp=Z,44nm,1.2s,mb5.4
ECH Echery 91.05 41 *e*P **P 21 50 01.8 -0.3**
comp=Z,44nm,1.2s,mb5.4
ECH *e*pP pP 21 50 36.3 +0.5
ECH *e*sP sP 21 50 48.5 -1.1
BBS Basel-Blauen 91.13 42 *e*P **P 21 50 02.2 -0.3**
ALE Alert 91.17 2 P **P 21 50 01.0 -1.0**
comp=Z,113nm,1.5s,mb5.7,SNR=7.5
CDF Champ du Feu 91.17 41⇓*i*P **P 21 50 01.8 -0.8**
comp=Z,70nm,1.1s,mb5.3
CDF Champ du Feu 91.17 41⇓*i*P **P 21 50 01.8 -0.8**
CDF pmax pmax
comp=Z,35nm,1.1s,mb5.3
CDF Champ du Feu 91.17 41⇓*i*P **P 21 50 01.8 -0.8**
comp=Z,35nm,1.1s,mb5.3
TRF Thorofare Moun 91.20 334 *e*P **P 21 50 01.7 -0.7**
comp=Z,15nm,0.7s,mb5.1
TRF *e*pP pP 21 50 36.2 +0.1
TRF *e*PP PP 21 53 39.6 -1.6
RUP Ruppelstein 91.29 40 *e*P **P 21 50 03.2 +0.1**
LIBD Limburg 91.33 42 *e*P **P 21 50 02.8 -0.6**
KTH Kantishna Hill 91.50 334 *e*P **P 21 50 03.1 -0.7**
comp=Z,28nm,0.9s,mb5.3
KTH *e*pP pP 21 50 36.5 -1.1
RSO Redoubt South 91.51 331 *e*P **P 21 50 03.4 -0.5**
FELD Feldberg im Sc 91.54 42 *e*P **P 21 50 03.9 -0.4**
WTSB Winterswijk 91.59 38 *e*P **P 21 50 04.3 -0.2**
comp=Z,65nm,1.1s,mb5.5
LANF Langenberg 91.62 41 *e*P **P 21 50 04.4 -0.3**
BPAW Bear Paw Mtn. 91.68 335 *e*P **P 21 50 04.0 -0.7**
comp=Z,48nm,0.9s,mb5.5
BPAW *e*pP pP 21 50 37.5 -0.9
BPAW *e*PP PP 21 53 44.7 -0.3
WIT Witteveen 91.68 37 *e*P **P 21 50 05.6 +0.7**
comp=Z,203nm,1.1s,mb6.0
BUG Bochum--Univer 91.77 38 *e*P **P 21 50 05.2 -0.1**
comp=Z,71nm,1.3s,mb5.5
BFO Black Forest 91.84 42 *e*P **P 21 50 04.5 -1.2**
comp=Z,18nm,1.5s,mb4.9
BFO Black Forest 91.84 42 *e*P **P 21 50 04.5 -1.2**
BFO pmax pmax
comp=Z,18nm,1.5s,mb4.9
BFO Black Forest 91.84 42 *e*P **P 21 50 04.5 -1.2**
comp=Z,18nm,1.5s,mb4.9
PPLA Purkeypile 91.87 333 *e*P **P 21 50 04.8 -0.8**
comp=Z,40nm,1.0s,mb5.4
PPLA *e*pP pP 21 50 38.5 -0.7
PPLA *e*PP PP 21 53 46.3 -0.2
SPAK Spaichingen-Ko 92.10 42 *e*P **P 21 50 06.5 -0.4**
IBBN Ibbenburen 92.23 38 *e*P **P 21 50 07.6 +0.2**
comp=Z,23nm,0.8s,mb5.3
COLD Coldfoot 92.26 338 *e*P **P 21 50 07.7 +0.4**
comp=Z,17nm,1.0s,mb5.0
TNS Taunus Mts 92.27 40 *e*P **P 21 50 07.4 -0.2**
comp=Z,52nm,1.4s,mb5.4
TNS Taunus Mts 92.27 40 *e*P **P 21 50 07.4 -0.2**
TNS pmax pmax
comp=Z,52nm,1.4s,mb5.4
TNS Taunus Mts 92.27 40 *e*P **P 21 50 07.4 -0.2**
comp=Z,52nm,1.4s,mb5.4
STU Stuttgart 92.49 41 *e*P **P 21 50 08.8 +0.1**
comp=Z,53nm,1.6s,mb5.3
STU Stuttgart 92.49 41 P **P 21 50 08.5 -0.2**
STU Stuttgart 92.49 41 P **P 21 50 08.5 -0.2**
DAVOX Davos/Dischmat 92.60 43 P **P 21 50 09.7 +0.4**
comp=Z,16nm,0.8s,mb5.2,baz=257,slow=2.9,SNR=21
DAVA Damuels 92.68 43⇓*i*P **P 21 50 09.7 +0.1**
comp=Z,30nm,1.3s,mb5.3
SVW2 Sparrevohn 93.00 331 *e*P **P 21 50 09.4 -1.4**
FETA Feichten 93.21 43⇑*i*P **P 21 50 11.8 -0.2**
comp=Z,24nm,1.2s,mb5.2
RETA Reutte 93.31 43⇓*i*P **P 21 50 12.4 -0.2**
comp=Z,12nm,1.0s,mb5.0
UBBA Unterbreizbach 93.35 39 *e*P **P 21 50 12.2 -0.4**
comp=Z,24nm,1.6s,mb5.1
MOTA Moosalm 93.52 43⇑*i*P **P 21 50 13.1 -0.4**
comp=Z,14nm,0.9s,mb5.1,SNR=10
TTA Tatalina 93.58 333 *e*P **P 21 50 12.4 -1.0**
TTA *e* 21 53 59.7
TTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
TTA Tatalina 93.58 333 *e*P **P 21 50 12.4 -1.1**
comp=Z,6.8nm,1.1s,mb4.7
TTA *e*PP PP 21 53 59.7 -0.3
NRDL Niedersach Rie 93.68 38 *e*P **P 21 50 14.2 +0.1**
comp=Z,14nm,1.1s,mb5.0
CLZ Clausthal 93.74 38 *e*P **P 21 50 14.5 +0.1**
comp=Z,15nm,0.9s,mb5.1
CLZ Clausthal 93.74 38 *e*P **P 21 50 14.5 +0.1**
CLZ pmax pmax
comp=Z,15nm,0.9s,mb5.1
CLZ Clausthal 93.74 38 *e*P **P 21 50 14.5 +0.1**
comp=Z,15nm,0.9s,mb5.1
MUD Monsted U'grnd 93.80 34 *i*P **P 21 50 13.9 -0.7**
MUD pmax pmax
comp=Z,15nm,1.0s,mb5.1
MUD Monsted U'grnd 93.80 34 *i*P **P 21 50 13.9 -0.7**
comp=Z,15nm,1.0s,mb5.1
WTTA Wattenberg 93.86 43⇑*i*P **P 21 50 14.9 -0.1**
comp=Z,28nm,1.0s,mb5.3,SNR=9.6
GRA1 Grafenberg Arr 93.95 40 *e*P **P 21 50 14.9 -0.5**
comp=Z,33nm,1.3s,mb5.3
GRF Grafenberg Arr 93.95 40 *e*P **P 21 50 14.9 -0.5**
comp=Z,33nm,1.3s,mb5.3
GRF Grafenberg Arr 93.95 40 *e*P **P 21 50 14.9 -0.5**
GRF pmax pmax
comp=Z,33nm,1.3s,mb5.3
GRF Grafenberg Arr 93.95 40 *e*P **P 21 50 14.9 -0.5**
GRF pmax pmax
comp=Z,33nm,1.3s,mb5.3
GRF Grafenberg Arr 93.95 40 *e*P **P 21 50 14.9 -0.5**
comp=Z,33nm,1.3s,mb5.3
BSEG Bad Segeberg 94.04 36 *e*P **P 21 50 15.5 -0.2**
comp=Z,22nm,1.0s,mb5.2
BSEG Bad Segeberg 94.04 36 *e*P **P 21 50 15.5 -0.2**
BSEG Bad Segeberg 94.04 36 *e*P **P 21 50 15.5 -0.2**
MOX Moxa 94.33 40 *e*P **P 21 50 17.3 +0.1**
comp=Z,33nm,1.8s,mb5.2
MOX Moxa 94.33 40 *e*P **P 21 50 17.1 -0.1**
comp=Z,53nm,2.2s,mb5.3
MOX Moxa 94.33 40 *e*P **P 21 50 17.3 +0.1**
MOX pmax pmax
comp=Z,33nm,1.8s,mb5.2
ABTA Abfaltersbach 94.38 44⇑*i*P **P 21 50 17.2 -0.3**
comp=Z,37nm,1.2s,mb5.4
AQU L'Aquila 94.43 48 *e*P **P 21 50 17.8 0.0**
KONO Kongsberg 94.55 30 *e*P **P 21 50 17.3 -0.6**
KONO pmax pmax
comp=Z,14nm,1.2s,mb5.1
KONO Kongsberg 94.55 30 *e*P **P 21 50 17.3 -0.6**
comp=Z,14nm,1.2s,mb5.1
ROTZ Rotzenmuhle 94.59 41 *e*P **P 21 50 18.4 +0.1**
comp=Z,18nm,1.3s,mb5.1
BOSA Boshof 94.69 120 P **P 21 50 19.9 +0.5**
comp=Z,14nm,1.1s,mb5.1,baz=292,slow=6.1,SNR=6.4
BOSA pP pP 21 50 49.3 -3.8
comp=Z,2.0nm,0.4s,baz=274,slow=6.8,SNR=1.9
BOSA Boshof 94.69 120 *e*P **P 21 50 19.5 +0.1**
BOSA pmax pmax
comp=Z,86nm,2.1s,mb5.6
BOSA Boshof 94.69 120 *e*P **P 21 50 19.5 +0.1**
comp=Z,86nm,2.1s,mb5.6
RJOB Jochberg 94.70 43 *e*P **P 21 50 18.4 -0.5**
comp=Z,13nm,1.0s,mb5.1
TANN Tannenbergstha 94.84 40 *e*P **P 21 50 19.8 +0.3**
comp=Z,20nm,1.1s,mb5.3
WET Wettzell 94.94 41 *e*P **P 21 50 19.7 -0.3**
comp=Z,18nm,1.6s,mb5.0
WET Wettzell 94.94 41 *e*P **P 21 50 19.7 -0.3**
WET pmax pmax
comp=Z,18nm,1.6s,mb5.0
WET Wettzell 94.94 41 *e*P **P 21 50 19.7 -0.3**
comp=Z,18nm,1.6s,mb5.0
KBA Koelnbreinsper 94.99 43⇑*i*P **P 21 50 19.7 -0.5**
comp=Z,22nm,1.0s,mb5.3,SNR=9.8
MYKA Terra Mystica 95.14 44⇑*i*P **P 21 50 20.6 -0.3**
comp=Z,20nm,0.9s,mb5.3
CADS Cadrg 95.15 44 *i* P **P 21 50 20.6 -0.5**
CLL Collm 95.29 39 *e*P **P 21 50 21.5 0.0**
comp=Z,11nm,0.9s,mb5.1
CLL Collm 95.29 39⇓*i*P **P 21 50 21.5 0.0**
CLL *e*S S 22 01 25.0 -0.9
CLL pmax pmax
comp=Z,11nm,0.9s,mb5.1
CLL Collm 95.29 39⇓*i*P **P 21 50 21.5 0.0**
comp=Z,11nm,0.9s,mb5.1
CLL *i* 21 50 28.2
CLL *i* 21 50 43.4
CLL *e*SKS 22 00 54.0
CLL *e*S S 22 01 25.0 -0.9
CLL Collm 95.29 39⇓*i*P **P 21 50 21.5 0.0**
comp=Z,11nm,0.9s,mb5.1
CLL *i* 21 50 28.2
CLL *i* 21 50 43.4
CLL *e*SKSac SKSac 22 00 54.0 +9.0
CLL *e*S S 22 01 24.0 -1.9
NAO01 NORSAR Array S 95.36 29 *e*P **P 21 50 21.7 +0.1**
comp=Z,14nm,1.0s,mb5.2
KHC Kasperske Hory 95.40 41 *e*P **P 21 50 21.6 -0.4**
comp=Z,3.4nm,0.9s,mb4.6
GEC2 GERESS Array S 95.44 42 *e*P **P 21 50 21.8 -0.5**
comp=Z,8.0nm,1.1s,mb4.9
GEC2 GERESS Array S 95.44 42 *e*P **P 21 50 21.8 -0.5**
GEC2 pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
GEC2 GERESS Array S 95.44 42 *e*P **P 21 50 21.8 -0.5**
comp=Z,8.0nm,1.1s,mb4.9
GERES GERESS Array B 95.44 42 P **P 21 50 22.3 0.0**
comp=Z,3.4nm,0.9s,mb4.6,baz=230,slow=3.3,SNR=17
CRNS Crni Vrh 95.50 44 *e*P **P 21 50 22.6 0.0**
NB2 NORSAR Subarra 95.54 29 P **P 21 50 22.9 +0.5**
comp=Z,0.9nm,0.8s,mb4.2,baz=260,slow=4.3
NOA NORSAR Array B 95.54 29 P **P 21 50 22.9 +0.4**
comp=Z,11nm,0.9s,mb5.2,baz=263,slow=4.7,SNR=31
MOA Molln 95.70 43⇑*i*P **P 21 50 23.2 -0.2**
comp=Z,22nm,1.0s,mb5.5,SNR=12
LBTB Lobatse 95.75 116 *e*P **P 21 50 24.9 +0.6**
BRG Berggiesshubel 95.83 40 *e*P **P 21 50 23.9 -0.1**
comp=Z,18nm,1.1s,mb5.3
BRG Berggiesshubel 95.83 40 *i* P **P 21 50 23.9 -0.1**
comp=Z,18nm,1.1s,mb5.3
BRG Berggiesshubel 95.83 40 *i* P **P 21 50 23.9 -0.1**
BRG pmax pmax
comp=Z,11nm,1.1s,mb5.1
RGN Rugen 95.87 36 P **P 21 50 23.6 -0.5**
ZAVS Zavodnje 96.06 44 *e*P **P 21 50 25.0 -0.2**
ARSA Arzberg 96.49 43⇑*i*P **P 21 50 26.6 -0.5**
comp=Z,19nm,1.1s,mb5.3
TIP Timpagrande 96.60 51 *e*P **P 21 50 26.6 -1.1**
HFS Hagfors 96.66 30 P **P 21 50 27.2 -0.3**
comp=Z,14nm,0.9s,mb5.3,baz=242,slow=3.2,SNR=25
CONA Conrad Observa 96.78 43⇑*i*P **P 21 50 28.2 -0.1**
comp=Z,30nm,1.4s,mb5.4
KSP Ksiaz 97.31 40 *e*P **P 21 50 31.3 +0.7**
KSP Ksiaz 97.31 40 *e*P **P 21 50 30.7 0.0**
VRAC Vranov 97.38 41 P **P 21 50 31.3 +0.3**
comp=Z,10nm,1.0s,mb5.1,baz=256,slow=5.6,SNR=10
ZST Bratislava 97.63 42 *e*P **P 21 50 32.3 +0.1**
ZST pmax pmax
comp=Z,13nm,1.0s,mb5.3
ZST Bratislava 97.63 42 *e*P **P 21 50 32.3 +0.1**
comp=Z,13nm,1.0s,mb5.3
ZST *e* 21 50 39.2
ZST Bratislava 97.63 42 *e*P **P 21 50 32.3 +0.1**
ZST *e* 21 50 39.2
MORC Moravsky Berou 98.03 41 *e*P **P 21 50 33.3 -0.6**
MORC pmax pmax
comp=Z,17nm,1.3s,mb5.3
MORC Moravsky Berou 98.03 41 *e*P **P 21 50 33.3 -0.6**
comp=Z,18nm,1.3s,mb5.3
GKP Gorka Klasztor 98.06 37 *e*P **P 21 50 34.6 +0.7**
GKP Gorka Klasztor 98.06 37 *e*P **P 21 50 34.6 +0.6**
MAW Mawson 98.24 165 P **P 21 50 34.7 +0.2**
comp=Z,2.7nm,0.9s,mb4.7,baz=257,slow=12,SNR=3.6
MAW Mawson 98.24 165 *e*P **P 21 50 34.2 -0.3**
KOLL Kolacno 98.52 42 *e*P **P 21 50 36.8 +0.6**
KOLL *e* 21 50 43.5
KOLL Kolacno 98.52 42 PDIF **P 21 50 36.8 +0.6**
KOLL *e* 21 50 43.5
SPITS Spitsbergen Ar 98.60 12 P **P 21 50 35.3 -0.7**
comp=Z,6.6nm,1.0s,mb5.0,baz=149,slow=23,SNR=3.8
VYHS Vyhne 98.80 42 *e*P **P 21 50 37.7 +0.3**
VYHS pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
VYHS Vyhne 98.80 42 *e*P **P 21 50 37.7 +0.3**
comp=Z,8.0nm,1.2s,mb5.0
VYHS *e* 21 50 44.8
VYHS Vyhne 98.80 42 PDIF **P 21 50 37.7 +0.3**
VYHS *e* 21 50 44.8
VYHS *e* 21 52 21.5
PSZ Piszkesteto 99.48 43 *e*P Pdif 21 50 40.6 +0.2
OJC Ojcow 99.51 40 *e*P Pdif 21 50 40.8 +0.3
NIE Niedzica 99.81 41 *e*P Pdif 21 50 42.8 +0.9
KECS Kecovo 99.90 42 *e*P Pdif 21 50 43.0 +0.8
KECS pmax pmax
comp=Z,5.0nm,1.4s,mb4.8
KECS Kecovo 99.90 42 *e*P Pdif 21 50 43.0 +0.8
comp=Z,5.2nm,1.4s
KECS Kecovo 99.90 42 PDIF Pdif 21 50 43.0 +0.8
LSZ Lusaka 100.16 107 P Pdif 21 50 44.7 +1.3
STHS Stebnicka Huta 100.42 41 *e*P Pdif 21 50 46.0 +1.4
STHS pmax pmax
comp=Z,5.0nm,1.4s
STHS Stebnicka Huta 100.42 41 *e*P Pdif 21 50 46.0 +1.4
comp=Z,4.7nm,1.4s
STHS Stebnicka Huta 100.42 41 PDIF Pdif 21 50 46.0 +1.4
UZH Uzhgorod 101.10 42 *e*P Pdif 21 50 38.0 -10
KWP Kalwaria Pacla 101.38 41 *e*P Pdif 21 50 49.4 +0.6
KWP Kalwaria Pacla 101.38 41 *e*P Pdif 21 50 49.9 +1.1
KWP pmax pmax
comp=Z,13nm,1.1s
KWP Kalwaria Pacla 101.38 41 *e*Pdif Pdif 21 50 49.9 +1.1
comp=Z,13nm,1.1s
ARCES ARCESS Array B 101.62 21 P Pdif 21 50 48.8 -1.1
comp=Z,5.6nm,1.1s,baz=250,slow=2.5,SNR=6.2
FINES FINESS Array B 102.72 29 P Pdif 21 50 54.7 -0.1
comp=Z,2.7nm,1.1s,baz=258,slow=1.8,SNR=4.5
FINES PKKPbc PKKPbc 22 06 53.0 -2.7
comp=Z,0.6nm,0.5s,baz=103,slow=2.5,SNR=5.8
FINES FINESS Array B 102.72 29 P Pdif 21 50 54.7 -0.1
FINES PKKPbc PKKPbc 22 06 53.0 -2.7
BUR08 Bucovina Ar. S 103.06 43 *e*Pdif Pdif 21 50 57.1 +0.8
AKASG Malin Array Be 105.51 40 PP PP 21 55 29.4 -1.3
comp=Z,0.6nm,0.6s,baz=273,slow=6.4,SNR=5.8
BR131 Keskin Array S 109.65 51 *e*PKiKP PKiKP 21 55 28.4 +0.3
BRTR Keskin Array B 109.65 51 PKiKP PKiKP 21 55 28.5 +0.4
comp=Z,1.3nm,1.0s,baz=174,slow=1.4,SNR=7.8
MMAI Mount Meron Ar 111.59 58 PKiKP PKiKP 21 55 31.7 -0.3
comp=Z,1.8nm,0.8s,baz=15,slow=6.1,SNR=3.3
ANN Anapa 111.79 45 *i* PKIKP PKiKP 21 55 31.6 -0.4
ANN pmax pmax
comp=Z,10.0nm,1.6s
ASF Jabal al Asfar 112.91 59 PKiKP PKiKP 21 55 35.4 +0.8
comp=Z,1.9nm,0.6s,baz=310,slow=3.2,SNR=4.2
KIV Kislovodsk 115.64 45 *e*PKIKP PKPdf 21 55 38.5 -0.9
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV Kislovodsk 115.64 45 *e*PKPdf PKPdf 21 55 39.4 0.0
ZEI Tsey 116.78 46 *e*PKIKP PKPdf 21 55 41.0 -0.6
ZEI pmax pmax
comp=Z,7.0nm,1.4s
GNI Garni 118.01 49 PKP PKPdf 21 55 44.9 +0.8
comp=Z,2.9nm,0.6s,baz=243,slow=5.3,SNR=6.5
GNI Garni 118.01 49*c i* PKIKP PKPdf 21 55 43.8 -0.3
GNI pmax pmax
comp=Z,15nm,2.5s
GNI Garni 118.01 49 *e*PKPdf PKPdf 21 55 44.2 +0.1
ARU Arti 120.06 28 *i* PKIKP PKPdf 21 55 46.3 -1.2
ARU 21 57 12.3
ARU 22 02 31.3

ARU					SS	SS	22 13 28.4	-1.1
ARU	**Arti**	**120.06**	**28**	*e*PKPdf	PKPdf	21 55 46.7	-0.9
ARU				*ep*PKPdf	pPKPdf	21 56 22.1	-0.7
MIB	**Mutribah**	**122.09**	**60**	*e*P	PKPdf	21 55 52.4	+0.2
MIB				AMb	AMB	21 55 53.4	
comp=Z,34nm,0.9s								
NAY	**Al-Naaiem**	**122.09**	**61**	*e*P	PKPdf	21 55 52.1	-0.2
NAY				AMb	AMB	21 55 53.1	
comp=Z,12nm,1.3s								
UMR	**Umm Al-Rimmam**	**122.45**	**60**	*e*P	PKPdf	21 55 53.1	+0.1
UMR				AMb	AMB	21 55 53.7	
comp=Z,52nm,0.8s								
AKTK	**Aktyubinsk**	**122.98**	**34**	PKP	PKPdf	21 55 53.7	+0.4
AKTK				PKKPbc	PKKPbc	22 05 45.1	-2.1
AKTO	**Aktyubinsk**	**122.98**	**34**	PKP	PKPdf	21 55 53.7	+0.4
comp=Z,11nm,0.8s,baz=315,slow=2.2,SNR=25								
AKTO				PKKPbc	PKKPbc	22 05 45.1	-2.1
comp=Z,0.9nm,0.5s,baz=80,slow=6.2,SNR=5.5								
CMSA	**Cobar Meteorol**	**124.37**	**222**	*e*PKP	PKPdf	21 55 56.2	-0.4
CMSA				*ep*PKP	pPKPdf	21 56 32.6	+0.7
ABKAR	**Akbulak array**	**124.65**	**34**	*e*PKPdf	PKPdf	21 55 56.7	+0.1
STKA	**Stephens Creek**	**126.79**	**219**	*e*PKP	PKPdf	21 56 01.0	-0.3
comp=Z,4.5nm,0.6s								
STKA				*ep*PKP	pPKPdf	21 56 35.0	-1.5
STKA	**Stephens Creek**	**126.79**	**219**	PKP	PKPdf	21 56 01.0	-0.2
comp=Z,8.2nm,0.8s,baz=126,slow=2.3,SNR=17								
STKA				pPKP	pPKPdf	21 56 35.6	-0.9
comp=Z,3.2nm,0.6s,baz=126,slow=2.1,SNR=3.8								
STKA	**Stephens Creek**	**126.79**	**219**	*e*PKPdf	PKPdf	21 56 01.1	-0.2
STKA				*ep*PKPdf	pPKPdf	21 56 35.8	-0.7
BRVK	**Borovoye**	**127.45**	**26**	*e*PKIKP	PKPdf	21 56 02.1	+0.3
BRVK				*e*		21 56 37.3	
BVAR	**Borovoye Array**	**127.52**	**26**	PKP	PKPdf	21 56 02.3	+0.4
comp=Z,12nm,0.8s,baz=270,slow=1.5,SNR=63								
BOD	**Bodaibo**	**130.42**	**354**	*e*PKIKP	PKPdf	21 56 03.6	-3.7
BOD				pmax	pmax		
comp=Z,7.0nm,1.5s								
NVS	**Novosibirsk**	**130.68**	**17**	*i* PKIKP	PKPdf	21 56 07.8	-0.1
NVS				*i*		21 56 44.2	
NVS				pmax	pmax		
comp=Z,52nm,1.6s								
NVS				pmax	pmax		
comp=E,14nm,1.5s								
ZAA0	**Zalesovo Array**	**131.90**	**16**	*e*PKPdf	PKPdf	21 56 10.0	-0.2
ZAA0				*ep*PKPdf	pPKPdf	21 56 45.2	-0.3
ZAA0				*e*SKP		21 59 24.1	
ZALV	**Zalesovo Beam**	**131.90**	**16**	PKP	PKPdf	21 56 10.2	0.0
comp=E,44nm,1.0s,baz=318,slow=2.0,SNR=91								
ZALV				pPKP	pPKPdf	21 56 45.0	-0.5
comp=E,3.7nm,0.6s,baz=304,slow=2.7,SNR=2.4								
ZALV				SKP		21 59 34.1	
comp=E,8.0nm,0.7s,baz=337,slow=4.4,SNR=13								
ZALV	**Zalesovo Beam**	**131.90**	**16**	PKIKP	PKPdf	21 56 10.2	0.0
ZALV						21 56 45.0	
ASAJ	**Asahikawa**	**131.95**	**324**	PKP	PKPdf	21 56 10.6	0.0
comp=E,29nm,1.2s,baz=249,slow=14,SNR=3.5								
KURK	**Kurchatov**	**132.61**	**23**	PKP	PKPdf	21 56 12.1	+0.5
comp=E,21nm,0.9s,baz=314,slow=2.6,SNR=61								
KURK				pPKP	pPKPdf	21 56 46.5	-0.4
comp=E,5.3nm,1.0s,baz=307,slow=1.7,SNR=3.5								
KURK				PP	PP	21 58 37.9	+1.4
comp=E,2.0nm,1.0s,baz=327,slow=7.5,SNR=3.9								
KURK				SKPbc	SKPbc	21 59 25.1	-1.8
comp=E,1.4nm,0.8s,baz=323,slow=8.2,SNR=4.3								
KURK	**Kurchatov**	**132.61**	**23**	*d i* PKIKP	PKPdf	21 56 11.7	0.0
KURK				pmax	pmax		
comp=Z,36nm,1.0s								
KURK	**Kurchatov**	**132.61**	**23**	*e*PKPdf	PKPdf	21 56 12.0	+0.3
KURK				*ep*PKPdf	pPKPdf	21 56 48.7	+1.8
KURK				*e*PP	PP	21 58 32.0	-4.5
KLR	**Kul'dur**	**133.77**	**336**	*e*PKIKP	PKPdf	21 56 09.0	-4.9
USP	**Ospenovka**	**136.29**	**33**	P	PKPdf	21 56 19.9	+1.1
SNR=11								
EKS2	**Erkin-Say**	**136.30**	**34**	P	PKPdf	21 56 20.8	+1.9
SNR=12								
EKS2	**Erkin-Say**	**136.30**	**34**	*e*PKPdf	PKPdf	21 56 19.2	+0.4
EKS2				*ep*PKPdf	pPKPdf	21 56 54.4	+0.3
CHMS	**Chumysh**	**136.60**	**33**	P	PKPdf	21 56 20.8	+1.4
SNR=6.9								
AML	**Almayashu**	**136.61**	**34**	P	PKPdf	21 56 21.0	+1.5
SNR=10								
AML	**Almayashu**	**136.61**	**34**	*e*PKPdf	PKPdf	21 56 19.6	+0.2
AML				*ep*PKPdf	pPKPdf	21 56 53.9	-0.8
AAK	**Ala-Archa**	**136.71**	**33**	P	PKPdf	21 56 21.3	+1.7
SNR=11								
AAK	**Ala-Archa**	**136.71**	**33**	PKP	PKPdf	21 56 19.9	+0.3
comp=Z,12nm,0.9s,baz=166,slow=2.1,SNR=30								
AAK	**Ala-Archa**	**136.71**	**33**	*c i* PKIKP	PKPdf	21 56 21.3	+1.7
AAK				pmax	pmax		
comp=Z,13nm,1.2s								
AAK	**Ala-Archa**	**136.71**	**33**	*e*PKPdf	PKPdf	21 56 20.1	+0.5
KBK	**Karagaybulak**	**136.94**	**33**	P	PKPdf	21 56 21.8	+1.7
SNR=12								
UCH	**Uchtor**	**137.00**	**34**	P	PKPdf	21 56 22.3	+2.2
SNR=21								
UCH	**Uchtor**	**137.00**	**34**	*e*PKPdf	PKPdf	21 56 21.6	+1.4
UCH				*ep*PKPdf	pPKPdf	21 56 54.3	-1.1
TKM2	**Tokmak 2**	**137.11**	**32**	P	PKPdf	21 56 21.4	+1.1
SNR=17								
TKM2	**Tokmak 2**	**137.11**	**32**	*e*PKPdf	PKPdf	21 56 20.4	+0.1
TKM2				*ep*PKPdf	pPKPdf	21 56 54.4	-1.2
NWAO	**Narrogin (SRO)**	**137.14**	**195**	*e*PKIKP	PKPdf	21 56 21.3	+0.5
MK31	**Makanchi Array**	**137.22**	**23**	*e*PKIKP	PKPdf	21 56 19.8	-0.6
MK31				*e*		21 56 55.6	
MKAR	**Makanchi Array**	**137.22**	**23**	PKP	PKPdf	21 56 19.3	-1.1
comp=Z,15nm,0.9s,baz=338,slow=2.0,SNR=49								
MKAR				PP	PP	21 59 07.0	+1.5
comp=Z,0.4nm,0.5s,baz=316,slow=6.8,SNR=3.6								
MKAR				SKPbc	SKPbc	21 59 40.9	-0.7
comp=Z,1.5nm,0.7s,baz=316,slow=3.3,SNR=4.1								
MKAR	**Makanchi Array**	**137.22**	**23**	*c i* PKIKP	PKPdf	21 56 20.2	-0.2
MKAR				pmax	pmax		
comp=Z,15nm,0.9s								
MKAR	**Makanchi Array**	**137.22**	**23**	PKP	PKPdf	21 56 19.3	-1.1
MKAR				PP	PP	21 59 07.0	+1.5
MKAR				SKPbc	SKPbc	21 59 40.9	-0.7
ASAR	**Alice Springs**	**137.37**	**221**	PKhKP		21 56 12.8	
comp=Z,0.8nm,0.6s,baz=125,slow=2.1,SNR=16								
ASAR				PKP	PKPdf	21 56 20.5	-0.9
comp=Z,9.1nm,0.9s,baz=121,slow=1.4,SNR=16								
ASAR				pPKP	pPKPdf	21 56 55.2	-1.4
comp=Z,3.3nm,0.6s,baz=126,slow=2.0,SNR=4.6								
ASAR				SKPbc	SKPbc	21 59 41.6	-1.3
comp=Z,3.9nm,1.1s,baz=136,slow=3.5,SNR=7.2								
ASAR	**Alice Springs**	**137.37**	**221**	PKHKP		21 56 12.8	
ASAR						21 56 20.5	
ASAR						21 56 55.3	
KZA	**Kyzart**	**137.50**	**33**	P	PKPdf	21 56 23.4	+2.4
SNR=6.0								
HIA	**Hailar**	**137.65**	**346**	*e*PKIKP	PKPdf	21 56 20.4	-0.7
ULHL	**Ulahol**	**137.92**	**32**	P	PKPdf	21 56 23.6	+1.7
SNR=34								
KBL	**Kabul**	**138.01**	**47**	*e*PKIKP	PKPdf	21 56 22.6	+0.3
KBL						21 56 57.9	
MDJ	**Mudanjiang**	**138.32**	**334**	PKP	PKPdf	21 56 22.1	-0.4
MDJ				sPKP		21 57 05.8	
MDJ				LR	LR		
comp=N,39nm,25.4s								
MDJ				LR	LR		
comp=E,93nm,21.5s								
MDJ				LR	LR		
comp=Z,60nm,20.5s								
MDJ	**Mudanjiang**	**138.32**	**334**	*e*PKPdf	PKPdf	21 56 22.2	-0.3
MJAR	**Matsushiro Arr**	**139.07**	**318**	PKhKP		21 56 14.2	
comp=Z,3.1nm,0.8s,baz=51,slow=2.3,SNR=6.8								
MJAR				PKP	PKPdf	21 56 23.8	-0.4
comp=Z,8.4nm,1.1s,baz=263,slow=1.0,SNR=8.0								
MJAR				SKPbc	SKPbc	21 59 46.2	-1.0
comp=Z,5.3nm,0.8s,baz=129,slow=1.1,SNR=9.4								
MJAR	**Matsushiro Arr**	**139.07**	**318**	PKHKP		21 56 14.2	
MJAR						21 56 23.8	
MJAR	**Matsushiro Arr**	**139.07**	**318**	PKP		21 56 14.2	
MJAR				PKP	PKPdf	21 56 23.8	-0.4
MJAR				SKPbc	SKPbc	21 59 46.2	-1.0
MAJO	**Matsushiro**	**139.07**	**318**	*e*PKIKP	PKPdf	21 56 23.2	-0.9
WRAB	**Tennant Creek**	**139.63**	**225**	*e*PKIKP	PKPdf	21 56 25.6	0.0
WRAB				*e*		21 57 01.1	
KSH	**Kashi**	**139.64**	**36**	*e*PKP	PKPdf	21 56 24.0	-1.1
KSH				*e*PKS		21 59 58.3	
KSH				*e*SKS	SKSdf	22 03 19.3	-4.1
KSH				AMB	AMB		
comp=Z,93nm,6.0s								
KSH				LR	LR		
comp=N,60nm,4.6s								
KSH				LR	LR		
comp=E,93nm,5.4s								
KSH				LR	LR		
comp=Z,100nm,4.9s								
CN2	**Changchun**	**140.71**	**337**	*e*PKP	PKPdf	21 56 26.1	-0.8
ULN	**Ulaanbaatar**	**140.83**	**358**	*e*PKHKP		21 56 19.3	
ULN				*e*		21 56 27.6	
ULN				*e*		21 59 24.2	
SONM	**Songino Array**	**140.88**	**359**	PKhKP		21 56 18.4	
comp=Z,2.8nm,0.6s,baz=324,slow=2.8,SNR=13								
SONM				PP	PP	21 59 25.7	-2.0
comp=Z,2.3nm,0.9s,baz=2.0,slow=5.1,SNR=7.0								
WMQ	**Urumqi**	**141.74**	**21**	*e*PKP	PKPdf	21 56 28.8	+0.1
WMQ				LR	LR		
comp=Z,29nm,29.0s								
KSRS	**Korea Array**	**144.64**	**328**	PKP	PKPdf	21 56 32.6	-1.4
comp=Z,22nm,0.8s,baz=64,slow=2.7,SNR=59								
KAKA	**Kakadu**	**145.61**	**232**	*e*PKP	PKPdf	21 56 35.6	-0.7
comp=Z,112nm,1.4s								
KAKA				*ep*PKP	pPKPdf	21 57 09.1	-2.5
KAKA	**Kakadu**	**145.61**	**232**	*e*PKPdf	PKPdf	21 56 35.2	-1.2
KAKA				*ep*PKPdf	pPKPdf	21 57 09.5	-2.1
KKR	**Kurukshetra**	**146.01**	**47**	*e*PKP	PKPdf	21 56 38.2	+1.6
AJM	**Ajmer**	**146.04**	**55**	*e*PKP	PKPdf	21 56 36.8	0.0
AJM				*i* pP		21 57 12.2	
KLP	**Kalpa**	**146.13**	**44**	*e*PKP	PKPdf	21 56 38.7	+1.9
KLP				*i* pP		21 57 14.9	
KHET	**Khetri**	**146.22**	**51**	*e*PKP	PKPdf	21 56 37.5	+0.5
KHET				*i* pP		21 57 11.4	
KNA	**Kununurra**	**146.36**	**224**	*e*PKP	PKPdf	21 56 38.9	+1.3
comp=Z,78nm,1.1s								
KNA				*ep*PKP	pPKPdf	21 57 11.8	-1.1
FITZ	**Fitzroy Crossi**	**146.64**	**217**	*e*PKP	PKPdf	21 56 37.9	-0.1
comp=Z,125nm,1.0s								
FITZ				*ep*PKP	pPKPdf	21 57 11.8	-1.5
FITZ	**Fitzroy Crossi**	**146.64**	**217**	*e*PKPdf	PKPdf	21 56 37.9	-0.1
FITZ				*ep*PKPdf	pPKPdf	21 57 13.3	0.0
AYAN	**Aya Nagar**	**147.02**	**49**	*e*PKP	PKPdf	21 56 38.6	+0.3
SONA	**Sohna**	**147.11**	**50**	*e*PKP	PKPdf	21 56 39.5	+0.9
SONA				*i* pP		21 57 14.5	
MBWA	**Marble Bar**	**147.15**	**206**	*e*PKP	PKPdf	21 56 38.7	-0.1
MBWA				*ep*PKP	pPKPdf	21 57 14.1	0.0
MBWA	**Marble Bar**	**147.15**	**206**	*e*PKPdf	PKPdf	21 56 38.5	-0.3
MBWA				*e*PKPbc	PKPbc	21 56 41.0	-0.1
MBWA				*e*PKPab	PKPab	21 56 43.2	+0.3
BJI	**Beijing**	**147.18**	**344**	PKPbc	PKPbc	21 56 37.8	-2.8
BJI				pPKP	pPKPdf	21 57 10.0	-3.6
BJI				sPKP		21 57 22.3	
BJI				SS	SS	22 18 57.9	+2.3
BJI				LR	LR		
comp=N,150nm,15.1s								
BJI				LR	LR		
comp=E,140nm,14.5s								
BJI				LR	LR		
comp=Z,46nm,17.1s								
BJT	**Baijiatuau**	**147.20**	**344**	*e*PKIKP	PKPdf	21 56 38.3	0.0
BJT				*e*		21 56 40.1	
BISR	**Bishrakh**	**147.21**	**49**	*e*PKP	PKPdf	21 56 39.0	+0.3
HHC	**Hu-ho-hao-te**	**147.38**	**351**	*e*PKPbc	PKPbc	21 56 39.3	-1.9
HHC				SKS	SKSdf	22 03 29.3	-5.9
HHC				AMB	AMB		
comp=Z,73nm,6.2s								
HHC				LR	LR		
comp=N,150nm,18.4s								
HHC				LR	LR		
comp=E,180nm,17.2s								
HHC				LR	LR		
comp=Z,110nm,17.9s								
BTO	**Baotou**	**147.83**	**353**	*e*PKPbc	PKPbc	21 56 41.9	-0.5
POO	**Poona**	**148.06**	**69**	*e*P	PKPdf	21 56 41.4	+1.1
POO				*ex*	x	21 57 15.1	
AGRA	**Agra**	**148.28**	**51**	*e*PKP	PKPdf	21 56 40.6	+0.1
KAD	**Karad**	**148.64**	**71**	*e*P	PKPdf	21 56 42.2	+0.9
GTA	**Gaotai**	**148.94**	**8**	*e*PKPbc	PKPbc	21 56 42.0	-3.3
GTA				pPKP	pPKPdf	21 57 09.8	-6.7
GTA				PP	PP	22 00 15.5	-0.2
GTA				SKS	SKSdf	22 03 39.1	+1.7
GTA				SKKS	SKKSac	22 06 49.5	-6.1
GTA				AMB	AMB		
comp=Z,130nm,6.5s								
GTA				LR	LR		
comp=N,73nm,16.7s								
GTA				LR	LR		
comp=E,84nm,19.3s								
GTA				LR	LR		
comp=Z,79nm,13.4s								
BHPL	**Bhopal**	**149.70**	**58**	*e*P	PKPdf	21 56 45.9	+3.0
BHPL				AMb	AMB	21 56 49.1	
comp=Z,54nm,1.0s								
LZH	**Lanzhou**	**152.61**	**2**	*e*PKPbc	PKPdf	21 56 47.8	+0.8
LZH				PKPab	PKPab	21 57 04.0	-0.9
LZH				PP	PP	22 00 34.9	-1.8
LZH				*e*SS	SS	22 19 58.5	+2.8
LZH				AMB	AMB		
comp=Z,150nm,4.3s								
HYB	**Hyderabad**	**152.67**	**69**	⇑ *i* PKP	PKPdf	21 56 48.0	+0.5
HYB				*e*		21 56 54.5	
HYB				*e*PKPAB	PKPab	21 57 06.0	+0.2
HYB				*e*		21 57 31.5	
KKN	**Kakani**	**153.23**	**42**	*e*P	PKPdf	21 56 48.4	+0.3
DMN	**Daman**	**153.23**	**42**	*e*P	PKPdf	21 56 48.3	+0.2
NJ2	**Nanjing**	**153.42**	**333**	*e*PKPbc	PKPdf	21 56 48.3	0.0
PKIN	**Phulchoki**	**153.44**	**42**	*e*P	PKPdf	21 56 48.2	-0.2
PKI	**Pulchoki**	**153.46**	**42**	*e*P	PKPdf	21 56 48.4	0.0
GUN	**Gumba**	**153.54**	**41**	*e*P	PKPdf	21 56 48.8	+0.3
LSA	**Lhasa**	**155.23**	**30**	PKP	PKPdf	21 56 52.1	+1.2
LSA	**Lhasa**	**155.23**	**30**	*e*PKPdf	PKPdf	21 56 51.9	+1.1
LSA				*e*PKPbc	PKPdf	21 57 01.1	+10
CD2	**Chengdu**	**157.76**	**3**	PKP	PKPdf	21 56 48.8	-5.3
CD2				PKPab	PKPab	21 57 24.0	-3.0
CD2				pPKP	pPKPdf	21 57 31.3	+1.8
CD2				PKS		22 00 21.1	
CD2				PP	PP	22 01 04.6	-0.7
CD2				AMB	AMB		
comp=Z,100nm,6.5s								
CD2				LR	LR		
comp=N,270nm,4.9s								
CD2				LR	LR		
comp=Z,200nm,6.5s								
ENH	**Enshi**	**158.06**	**350**	*e*PKPdf	PKPdf	21 56 54.1	-0.3
ENH				*e*PKPab	PKPab	21 57 27.3	-1.0
GYA	**Guiyang**	**162.17**	**356**	PKP	PKPdf	21 56 59.5	+0.3
GYA				pPKP	pPKPdf	21 57 29.5	-5.1
GYA				PKPab	PKPab	21 57 45.9	-0.4
GYA				PKS		22 00 31.6	
GYA				SKS	SKSdf	22 03 53.3	+1.1
GYA				SKKS	SKKSac	22 08 02.1	-4.4
GYA				LR	LR		
comp=N,380nm,22.0s								
GYA				LR	LR		
comp=E,100nm,21.8s								
GYA				LR	LR		
comp=Z,210nm,22.9s								
KMI	**Kunming**	**163.40**	**8**	PKP	PKPdf	21 56 59.4	-1.0
KMI				sPKP		21 57 46.5	
KMI				PKPab	PKPab	21 57 52.3	+0.6
KMI				PP	PP	22 01 39.5	+3.8
KMI				SKKS	SKKSac	22 08 08.8	-4.0
KMI				SS	SS	22 21 50.8	+0.3
KMI				AMB	AMB		
comp=Z,140nm,9.2s								
KMI				AMB	AMB		
comp=Z,120nm,6.9s								
KMI				LR	LR		
comp=N,160nm,9.5s								
KMI				LR	LR		
comp=E,320nm,9.8s								
KMI				LR	LR		
comp=Z,75nm,14.1s								
CHTO	**Chiang Mai**	**168.19**	**30**	*e*PKIKP	PKPdf	21 57 03.4	-1.0
CHTO				*e*		21 58 12.8	
CM31	**Chiang Mai Arr**	**168.49**	**31**	*e*PKPdf	PKPdf	21 57 03.9	-0.7
CM31				*e*PKPab	PKPab	21 58 14.3	-0.1
CMAR	**Chiang Mai Arr**	**168.49**	**31**	PKP	PKPdf	21 57 03.8	-0.8
comp=Z,5.6nm,0.9s,baz=294,slow=1.9,SNR=34								
CMAR				PKPab	PKPab	21 58 14.7	+0.3
comp=Z,22nm,0.9s,baz=318,slow=5.9,SNR=61								
CMAR				PP	PP	22 02 01.9	-0.7
comp=Z,1.3nm,0.9s,baz=306,slow=5.9,SNR=4.0								
KKM	**Kota Kinabalu**	**168.74**	**258**	*e*PKPdf	PKPdf	21 57 03.2	-1.8

MAN 20 21:46:43, 8°.94N×125°.95E, h24km, mb4.4, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.32**	**274**	*e*P	Pb	21 46 51.2	+0.9
BUTP				*e*S	Sb	21 47 00.3	+5.1
CGP	**Cagayan de Oro**	**1.33**	**249**	‖ *i* P	Pn	21 47 05.5	-0.5
CGP				*i* S	Sn	21 47 26.8	+3.8
BUKP	**Musuan**	**1.37**	**220**	*e*P	Pn	21 47 07.3	+0.6
BUKP				*e*S	Sn	21 47 24.2	+0.1
MSLP	**Maasin**	**1.59**	**318**	*e*P	Pn	21 47 09.2	-0.5

ISCJB ***20*** *22:10:02.2±0.5, 24°.39N±0°.03×122°.64E±0°.02, h52km±9km, Error ellipse: s-maj=5.4km s-min=2.8km az=178.8*
TAP ***20*** *22:10:02.5, 24°.43N×122°.59E, h63km±1km, ML3.5, C*
JMA ***20*** *22:10:02.1±0.2, 24°.62N×122°.69E, h60km±2km, M2.3*
ISC 20 22:10:02.8±0.4, 24°.40N±0°.03×122°.65E±0°.02, h49km±11km, n43, σ0°.84/80, 3C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.34**	**80**	P	**Pn**	**22 10 12.4**	**+0.2**
YOJ				S	**Sn**	**22 10 19.9**	**+1.0**
ENA	**Nanau**	**0.82**	**272**	P	**Pn**	**22 10 18.0**	**-0.1**
baz=270							
ENA				*e*S	**Sn**	**22 10 29.6**	**+0.3**
baz=270							
TWB1	**Santiao Chiao**	**0.85**	**315**	*e*P	**Pn**	**22 10 17.9**	**-0.6**
baz=325							
TWB1				*e*S	**Sn**	**22 10 29.2**	**-0.7**
baz=325							
ILA	**Ilan**	**0.89**	**294**	*e*P	**Pn**	**22 10 19.4**	**+0.3**
baz=294							
ILA				*i* S	**Sn**	**22 10 30.9**	**-0.1**
baz=294							
TWE	**Neicheng**	**0.94**	**290**	P	**Pn**	**22 10 19.6**	**-0.2**
baz=295							
TWE				*e*S	**Sn**	**22 10 31.8**	**-0.4**
baz=295							
IRIF	**Iriomote-Funau**	**0.99**	**94**	P	**Pn**	**22 10 19.9**	**-0.5**
IRIF				S	**Sn**	**22 10 33.3**	**-0.1**
TWD	**Chiawan**	**1.01**	**252**	P	**Pn**	**22 10 19.6**	**-1.0**
baz=249							
TWD				*e*S	**Sn**	**22 10 32.7**	**-1.0**
baz=249							
ENTT	**Nioudou**	**1.01**	**284**	P	**Pn**	**22 10 21.0**	**+0.3**
baz=290							
ENTT				S	**Sn**	**22 10 33.8**	**0.0**
baz=290							
NWF	**Wu-fen Shan**	**1.03**	**310**	P	**Pn**	**22 10 20.9**	**0.0**
baz=311							
NWF				S	**Sn**	**22 10 33.9**	**-0.4**
baz=311							
HWA	**Hwalien**	**1.04**	**246**	*e*P	**Pn**	**22 10 20.3**	**-0.7**
baz=243							
HWA				*e*S	**Sn**	**22 10 35.3**	**+0.8**
baz=243							
HATJ	**Hateruma jima**	**1.11**	**108**	S	**Sn**	**22 10 38.2**	**+1.9**
TWA	**Mucha**	**1.12**	**301**	*e*P	**Pn**	**22 10 22.2**	**0.0**
baz=301							
NNS	**Nan Shan**	**1.16**	**272**	P	**Pn**	**22 10 22.7**	**+0.1**
baz=271							
NNS				S	**Sn**	**22 10 37.5**	**0.0**
baz=271							
NSK	**Sanguang**	**1.20**	**283**	*i* P	**Pn**	**22 10 23.7**	**+0.4**
baz=291							
NSK				*e*S	**Sn**	**22 10 38.8**	**+0.3**
baz=291							
ESL	**Shilin**	**1.25**	**242**	*e*P	**Pn**	**22 10 23.0**	**-0.9**
baz=240							
ESL				*e*S	**Sn**	**22 10 38.5**	**-1.1**
baz=240							
JKRS	**Kuro-shima**	**1.25**	**97**	P	**Pn**	**22 10 23.9**	**-0.1**
JKRS				*e*S	**Sn**	**22 10 40.2**	**+0.5**
WHF	**Hehuan Shan**	**1.28**	**259**	P	**Pn**	**22 10 24.2**	**-0.1**
baz=247							
WHF				*e*S	**Sn**	**22 10 40.2**	**-0.3**
baz=247							
TWY	**Chenhua**	**1.29**	**313**	*e*P	**Pn**	**22 10 24.9**	**+0.5**
baz=313							
TWS1	**Kuangyinshan**	**1.31**	**302**	*e*P	**Pn**	**22 10 24.4**	**-0.4**
baz=302							
TWS1				*e*S	**Sn**	**22 10 40.6**	**-0.6**
baz=302							
TWT	**Tachien**	**1.35**	**264**	*e*P	**Pn**	**22 10 25.4**	**+0.2**
baz=262							
TWT				S	**Sn**	**22 10 42.9**	**+0.9**
baz=262							
JIJ	**Ishigaki jima**	**1.37**	**91**	P	**Pn**	**22 10 24.8**	**-0.7**
JIJ				*e*S	**Sn**	**22 10 41.2**	**-1.3**
EHY	**Hungye**	**1.50**	**234**	*e*P	**Pn**	**22 10 26.7**	**-0.6**
baz=231							
EHY				*e*S	**Sn**	**22 10 42.9**	**-2.9**
baz=231							
NSTT	**Nanjuang**	**1.52**	**279**	*e*P	**Pn**	**22 10 27.3**	**-0.2**
baz=278							
NSTT				*e*S	**Sn**	**22 10 46.3**	**+0.2**
baz=278							
TWF1	**Yuli**	**1.62**	**230**	⇑ *i* P	**Pn**	**22 10 28.2**	**-0.7**
baz=239							
TWF1				*e*S	**Sn**	**22 10 46.5**	**-2.1**
baz=239							
SMLT	**Sun Moon Lake**	**1.68**	**252**	⇑ *i* P	**Pn**	**22 10 29.9**	**+0.2**
baz=244							
SMLT				*e*S	**Sn**	**22 10 49.1**	**-0.9**
baz=244							
TYC	**Yuchr**	**1.71**	**253**	P	**Pn**	**22 10 30.1**	**0.0**

EAST	Anshuo	2.60	220	*eP*		Pn	22 10 42.1	-0.3
	baz=218							

*ISCJB **20** 22:11:09.3±1.0, 37°.59N±0°.03×27°.08E±0°.08, h8km±9km, Error ellipse: s-maj=10.6km s-min=4.6km az=163.4*
*CSEM **20** 22:11:09.8±0.2, 37°.60N×27°.09E, h5km, MD2.8, Error ellipse: s-maj=4.0km s-min=2.3km az=81.0*
*DDA **20** 22:11:09.0, 37°.63N×27°.10E, h15km±2km, Md2.8*
*ISK **20** 22:11:09.5, 37°.61N×27°.13E, h8km, MD2.8*

ISC 20 22:11:10.0±1.0, 37°.60N±0°.03×27°.09E±0°.08, h9km±8km, n18, σ0°54/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.16**	**48**	*i* P	**Pg**	**22 11 13.1**	**-0.3**
GCAM				*i* S	**Sg**	**22 11 15.6**	**0.0**
GCAM	**G?zelcaml?**	**0.16**	**48**	*i* P	**Pg**	**22 11 13.1**	**-0.3**
GCAM				*i* S	**Sg**	**22 11 15.6**	**0.0**
BDRM	**Kayabasi**	**0.60**	**152**	*i* P	**Pg**	**22 11 21.1**	**-0.5**
BDRM				*i* S	**Sg**	**22 11 30.2**	**+0.8**
BDRM	**Kayabasi**	**0.60**	**152**	*i* P	**Pg**	**22 11 21.1**	**-0.5**
BDRM				*i* S	**Sg**	**22 11 30.2**	**+0.8**
MLSB	**Milas**	**0.62**	**118**	*e*PG	**Pg**	**22 11 21.9**	**-0.1**
MLSB				*e*SG	**Sg**	**22 11 30.0**	**-0.2**
MLSB	**Milas**	**0.62**	**118**	*e*Pg	**Pg**	**22 11 21.9**	**-0.2**
MLSB				*e*Sg	**Sg**	**22 11 30.0**	**-0.2**
AYDN	**Tasoluk**	**0.63**	**84**	*i* P	**Pg**	**22 11 22.0**	**-0.2**
AYDN				*i* S	**Sg**	**22 11 30.4**	**-0.1**
AYDN	**Tasoluk**	**0.63**	**84**	*i* P	**Pg**	**22 11 22.0**	**-0.2**
AYDN				*i* S	**Sg**	**22 11 30.4**	**-0.1**
BLCB	**Balcova**	**0.79**	**357**	*e*PG	**Pg**	**22 11 24.1**	**-1.2**
BLCB				*e*SG	**Sg**	**22 11 35.5**	**-0.1**
BLCB	**Balcova**	**0.79**	**357**	*e*Pg	**Pg**	**22 11 24.1**	**-1.1**
BLCB				*e*Sg	**Sg**	**22 11 35.5**	**0.0**
IZM	**Izmir**	**0.81**	**10**	*e*PG	**Pg**	**22 11 26.0**	**+0.3**
IZM				*e*SG	**Sg**	**22 11 37.6**	**+1.3**
IZM	**Izmir**	**0.81**	**10**	*e*Pg	**Pg**	**22 11 26.0**	**+0.3**
IZM				*e*Sg	**Sg**	**22 11 37.6**	**+1.3**
DAT	**Datca**	**0.95**	**155**	*e*PG	**Pg**	**22 11 28.5**	**+0.2**
DAT	**Datca**	**0.95**	**155**	*e*Pg	**Pg**	**22 11 28.5**	**+0.3**
KULA	**Kula-Manisa**	**1.54**	**53**	*e*PN	**Pn**	**22 11 37.4**	**-0.3**
KULA	**Kula-Manisa**	**1.54**	**53**	*e*Pn	**Pn**	**22 11 37.4**	**-0.3**
FETY	**Fethiye**	**1.86**	**120**	*e*PN	**Pn**	**22 11 42.4**	**+0.3**
FETY	**Fethiye**	**1.86**	**120**	*e*Pn	**Pn**	**22 11 42.4**	**+0.3**

CASC 20 22:20:11.3±1.2, 13°.23N×89°.75W, h33km±2km, MD3.5, ML2.7, 4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.62**	**12**	⇓*e*P	Pn	22 20 23.8	0.0
SBLS				*e*S	Sb	22 20 33.9	+1.5
SNJE	**San Jose**	**0.65**	**13**	⇓*i*P	Pn	22 20 24.2	0.0
SNJE				*e*S	Sb	22 20 34.9	+1.6
RTR	**El Retiro**	**0.67**	**9**	*e*P	Pn	22 20 24.6	+0.1
RTR				*e*S	Sb	22 20 35.2	+1.4
BOQS	**Boqueron**	**0.68**	**42**	*e*P	Pn	22 20 24.8	+0.2
BOQS				*e*S	Sb	22 20 35.5	+1.5
SNET	**Serv Nac Est T**	**0.68**	**48**	*e*S	Sb	22 20 35.9	+1.9
LFRS	**El Faro**	**0.78**	**60**	⇓*e*P	Pn	22 20 26.0	+0.1
LFRS				*e*S	Sn	22 20 37.5	+1.1
LBRS	**Las Brisas**	**0.85**	**54**	*e*P	Pn	22 20 27.2	+0.2
LBRS				*e*S	Sn	22 20 39.7	+1.4
RBDL	**Robledal**	**0.88**	**4**	⇓*e*P	Pn	22 20 27.7	+0.3
RBDL				*e*S	Sn	22 20 40.4	+1.4
SNVI	**San Vicente**	**0.97**	**67**	*e*P	Pn	22 20 28.7	+0.2
SNVI				*e*S	Sn	22 20 42.5	+1.4
SNVI				AML	AML	22 20 49.4	
	comp=Z,145nm,0.3s						
IXG	**Ixpaco**	**1.16**	**324**	*e*P	Pn	22 20 31.2	0.0
MTO2	**Montecristo 2**	**1.22**	**18**	*e*P	Pn	22 20 31.6	-0.5
MTO2				*e*S	Sn	22 20 48.1	+0.6
VSM	**San Miguel**	**1.45**	**82**	*e*P	Pn	22 20 35.7	+0.5
VSM				*e*S	Sn	22 20 54.5	+1.4
NBG	**Las Nubes**	**1.47**	**337**	*e*P	Pn	22 20 37.0	+1.6
NBG				*e*S	Sn	22 20 55.7	+2.2
BLLM	**Bellamira**	**1.49**	**82**	*e*P	Pn	22 20 36.4	+0.7
CAHU	**Cacacuatique**	**1.59**	**70**	*e*P	Pn	22 20 37.5	+0.3
CAHU				*e*S	Sn	22 20 57.6	+1.0
FUG	**Fuego 3**	**1.61**	**319**	*e*P	Pn	22 20 38.2	+0.9
FUG				*e*S	Sn	22 20 58.2	+1.2
CNCH	**Conchagua**	**1.87**	**88**	*e*P	Pn	22 20 41.2	+0.3
CNCH				*e*S	Sn	22 21 05.2	+1.8

*ISCJB **20** 22:22:17.0±0.6, 50°.15N±0°.03×18°.39E±0°.03, h0km, Error ellipse: s-maj=5.0km s-min=2.6km az=9.0*
*CSEM **20** 22:22:18.5±0.2, 50°.13N×18°.42E, h1km, ML1.5/4, Error ellipse: s-maj=5.1km s-min=2.5km az=3.0*
*IPEC **20** 22:22:19.1±0.1, 50°.06N×18°.45E, h0km, ML1.5/4, Error ellipse: s-maj=2.0km s-min=0.7km az=163.0*
*PRU **20** 22:22:19.9, 50°.08N×18°.39E, h0km*
*WAR **20** 22:22:19.2, 50°.06N×18°.45E*

ISC 20 22:22:18.7±0.5, 50°.11N±0°.03×18°.41E±0°.03, h0km, n29, σ1°10/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.14**	**261**	*e*Pg	**Pg**	**22 22 23.3**	**+1.9**
RAC				*e*Sg	**Sg**	**22 22 26.6**	**+3.3**
OKC	**Ostrava-Krasne**	**0.32**	**213**	*e*PG	**Pg**	**22 22 25.4**	**+0.6**
OKC				*e*SG	**Sg**	**22 22 31.1**	**+2.2**
OKC	**Ostrava-Krasne**	**0.32**	**213**	Pg	**Pg**	**22 22 25.4**	**+0.6**
OKC				Sg	**Sg**	**22 22 31.1**	**+2.2**
MORC	**Moravsky Berou**	**0.65**	**240**	*e*Pg	**Pg**	**22 22 31.5**	**+0.3**
	baz=64						
MORC				*e*Sg	**Sg**	**22 22 40.2**	**+0.6**
	15nm,0.2s,baz=64						
OJC	**Ojcow**	**0.90**	**82**	*e*Pg	**Pg**	**22 22 35.5**	**-0.4**
OJC				*e*Sg	**Sg**	**22 22 47.8**	**+0.2**
OJC	**Ojcow**	**0.90**	**82**	*e*Pg	**Pg**	**22 22 35.5**	**-0.4**
	baz=260						
OJC				*e*Sg	**Sg**	**22 22 47.6**	**0.0**
	baz=260						
JAVC	**Velka Javorina**	**1.34**	**201**	*e*Sg	**Sg**	**22 23 01.5**	**-0.2**
	7.0nm,0.4s						
DPC	**Dobruska-Polom**	**1.36**	**281**	*e*PG	**Pg**	**22 22 45.2**	**+0.3**
DPC				*e*SG	**Sg**	**22 23 03.7**	**+1.1**
DPC	**Dobruska-Polom**	**1.36**	**281**	Pg	**Pg**	**22 22 45.2**	**+0.3**
DPC				*e*Sg	**Sg**	**22 23 03.2**	**+0.6**
	baz=101						
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	**Pg**	**22 22 45.8**	**+0.1**
NIE				*e*Sg	**Sg**	**22 23 05.2**	**+1.2**
NIE	**Niedzica**	**1.41**	**118**	*e*Pg	**Pg**	**22 22 45.8**	**+0.1**
NIE				*e*Sg	**Sg**	**22 23 05.2**	**+1.2**
VRAC	**Vranov**	**1.43**	**237**	*e*Pn	**Pn**	**22 22 45.4**	**-0.4**
	baz=57						
VRAC				*e*Sg	**Sg**	**22 23 04.0**	**-0.5**
	7.2nm,0.2s,baz=57						
KOLL	**Kolacno**	**1.53**	**180**	*e*PN	**Pn**	**22 22 47.2**	**0.0**
KOLL				*e*SN	**Sn**	**22 23 06.9**	**-0.9**
KOLL	**Kolacno**	**1.53**	**180**	*e*Pn	**Pn**	**22 22 47.2**	**0.0**
KOLL				*e*Sn	**Sn**	**22 23 06.9**	**-0.9**
VYHS	**Vyhne**	**1.64**	**170**	*e*PN	**Pn**	**22 22 48.4**	**-0.3**
VYHS				*e*SN	**Sn**	**22 23 09.9**	**-0.5**
VYHS	**Vyhne**	**1.64**	**170**	*e*Pn	**Pn**	**22 22 48.4**	**-0.3**
VYHS				*e*Sn	**Sn**	**22 23 09.9**	**-0.5**
KRUC	**Moravsky**	**1.68**	**232**	*e*Pn	**Pn**	**22 22 49.3**	**0.0**
	baz=52						
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	**Pn**	**22 22 56.6**	**+3.4**
STHS				*e*SN	**Sg**	**22 23 22.3**	**+0.6**
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*Pn	**Pn**	**22 22 56.6**	**+3.4**
STHS				*e*Sg	**Sg**	**22 23 22.3**	**+0.6**
KECS	**Kecovo**	**2.12**	**139**	*e*SN	**Sn**	**22 23 20.0**	**-2.3**
KECS	**Kecovo**	**2.12**	**139**	*e*Sn	**Sn**	**22 23 20.0**	**-2.3**
PRU	**Pruhonice**	**2.50**	**269**	*e*PG	**Pg**	**22 23 04.9**	**-1.7**
PRU				*e*SG	**Sg**	**22 23 38.3**	**-0.6**
PRU	**Pruhonice**	**2.50**	**269**	Pg	**Pg**	**22 23 04.9**	**-1.7**
PRU				Sg	**Sg**	**22 23 38.3**	**-0.6**
BRG	**Berggiesshubel**	**2.96**	**287**	SG	**Sg**	**22 23 52.3**	**-1.4**
	3.2nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**255**	*e*PG	**Pg**	**22 23 19.1**	**-2.7**
KHC				*e*SG	**Sg**	**22 24 04.6**	**+0.2**
KHC	**Kasperske Hory**	**3.29**	**255**	Pg	**Pg**	**22 23 19.1**	**-2.7**
KHC				Sg	**Sg**	**22 24 04.6**	**+0.2**
CLL	**Collm**	**3.64**	**291**	*e*Sg	**Sg**	**22 24 17.0**	**+1.3**
NKC	**Novy Kostel**	**3.84**	**274**	*e*SG	**Sg**	**22 24 20.9**	**-1.0**
NKC	**Novy Kostel**	**3.84**	**274**	Sg	**Sg**	**22 24 20.9**	**-1.0**

*ISK **20** 22:30:18.6, 36°.87N×29°.09E, h10km, MD2.6*
*ISCJB **20** 22:30:19.0±1.0, 36°.88N±0°.04×29°.06E±0°.08, h7km±13km, Error ellipse: s-maj=10.9km s-min=5.6km az=20.2*
*CSEM **20** 22:30:19.1±0.1, 36°.89N×29°.07E, h10km, MD2.6, Error ellipse: s-maj=3.8km s-min=2.5km az=122.0*
*DDA **20** 22:30:21.9, 36°.82N×29°.36E, h7km±7km, Md2.9*

ISC 20 22:30:19.1±1.2, 36°.89N±0°.04×29°.02E±0°.10, h5km±20km, n13, σ0°86/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**169**	*e*Pg	**Pg**	**22 30 24.2**	**0.0**
FETY				*e*Sg	**Sg**	**22 30 27.6**	**0.0**
FETY	**Fethiye**	**0.26**	**169**	*e*PG	**Pg**	**22 30 24.1**	**0.0**
FETY				*e*SG	**Sg**	**22 30 27.6**	**+0.1**
TURN	**Turunc**	**0.34**	**267**	*e*P	**Pg**	**22 30 33.6**	**+8.0**
TURN				*i* S	**Sg**	**22 30 43.6**	**+14**
GLHS	**Glhisar (BURDU**	**0.46**	**55**	*e*PG	**Pg**	**22 30 27.4**	**-0.7**
GLHS				*e*SG	**Sg**	**22 30 34.4**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.46**	**55**	*e*Pg	**Pg**	**22 30 27.4**	**-0.7**
GLHS				*e*Sg	**Sg**	**22 30 34.4**	**+0.3**
GOLH	**Golhisar**	**0.55**	**51**	*i* P	**Pg**	**22 30 29.4**	**-0.4**
GOLH				*i* S	**Sg**	**22 30 38.5**	**+1.6**
GOLH	**Golhisar**	**0.55**	**51**	*i* P	**Pg**	**22 30 29.4**	**-0.3**
GOLH				*i* S	**Sg**	**22 30 38.5**	**+1.6**
ELL	**Elmali**	**0.72**	**101**	*e*PG	**Pg**	**22 30 31.2**	**-1.9**
ELL				*e*SG	**Sg**	**22 30 41.9**	**-0.5**
ELL	**Elmali**	**0.72**	**101**	*e*Pg	**Pg**	**22 30 31.2**	**-1.8**
ELL				*e*Sg	**Sg**	**22 30 41.9**	**-0.5**
AKAS	**Kas**	**0.81**	**144**	*i* P	**Pg**	**22 30 34.5**	**-0.1**
AKAS				*i* S	**Sg**	**22 30 46.3**	**+1.3**
AKAS	**Kas**	**0.81**	**144**	*i* P	**Pg**	**22 30 34.5**	**-0.1**
AKAS				*i* S	**Sg**	**22 30 46.3**	**+1.3**
DAT	**Datca**	**1.17**	**263**	*e*PN	**Pn**	**22 30 42.4**	**+0.2**
DAT	**Datca**	**1.17**	**263**	*e*Pn	**Pn**	**22 30 42.4**	**+0.2**

GUC 20 22:30:20.7±0.5, 32°.30S×71°.87W, h14km±4km, MD3.6, ML3.0, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.99**	**133**	*e*P	Pb	22 30 38.5	-1.1
ROCH				*i* S	Sb	22 30 51.9	-0.5
JACH	**Jahuel**	**1.14**	**110**	⇑*i*P	Pb	22 30 40.9	-1.3
JACH				*i* S	Sb	22 30 56.5	-0.5
LCCH	**Las Cruces**	**1.20**	**168**	*e*P	Pn	22 30 41.8	-1.3
LCCH				*e*S	Sb	22 30 57.5	-1.1
PEL	**Peldehue**	**1.31**	**131**	⇓*i*P	Pn	22 30 43.5	-1.0
PEL				*i* S	Sb	22 31 00.9	-0.7
PEL				AML	AML	22 31 03.9	
	comp=E,651nm,0.3s						
TACH	**Talagante**	**1.56**	**150**	*e*P	Pn	22 30 47.5	-0.6
TACH				*e*S	Sn	22 31 07.8	-0.3
FCH	**Farellones**	**1.68**	**128**	*e*P	Pn	22 30 49.9	+0.3
FCH				*i* S	Sn	22 31 12.1	+1.2
LNV	**Longovilo**	**1.70**	**167**	*e*P	Pn	22 30 49.2	-0.7
PCH	**Pirque**	**1.74**	**140**	*e*P	Pn	22 30 50.8	+0.3
PCH				*e*S	Sn	22 31 13.4	+0.9
CHCH	**Chadas Angostu**	**1.93**	**148**	*e*P	Pn	22 30 53.4	+0.4
TLL	**Tololo Astrono**	**2.31**	**24**	*e*P	Pn	22 30 59.8	+1.5
TLL				*e*S	Sn	22 31 29.4	+3.0
TLL				AML	AML	22 31 40.5	
	comp=N,76nm,0.6s						

*IDC **20** 22:32:04.8±5.6, 8°.84N×91°.60E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.6/26, mbtmp3.9/6, ML4.1/2, Error ellipse: s-maj=107.4km s-min=37.2km az=150.0*

ISC 20 22:31:55.5±4.0, 7°.1N±0°.4×92°.7E±0°.3, h46km±20km, n12, σ0°77/13, mb4.3/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.86**	**272**	Pn	**Pn**	**22 34 42.1**	**+0.1**
	1.5nm,0.3s,baz=91,slow=13,SNR=12						
PALK				Sn	**Sn**	**22 36 37.5**	**-16**
	5.5nm,0.3s,baz=166,slow=20,SNR=15						
CMAR	**Chiang Mai Arr**	**12.88**	**28**	Pn	**Pn**	**22 34 55.9**	**-0.1**
	0.3nm,0.3s,baz=231,slow=14,SNR=32						
PKI	**Pulchoki**	**21.52**	**342**	*e*P	**P**	**22 36 41.0**	**+0.3**
	81nm,0.9s,mb5.1						
PKIN	**Phulchoki**	**21.53**	**342**	*e*P	**P**	**22 36 41.1**	**+0.3**
	63nm,0.9s,mb5.0						
DMN	**Daman**	**21.65**	**342**	*e*P	**P**	**22 36 45.4**	**+3.3**
	18nm,0.6s,mb4.7						
GUN	**Gumba**	**21.70**	**344**	*e*P	**P**	**22 36 36.1**	**-6.6**
KKN	**Kakani**	**21.76**	**342**	*e*P	**P**	**22 36 41.9**	**-1.4**
LSA	**Lhasa**	**22.56**	**357**	P	**P**	**22 36 52.4**	**+0.6**
MKAR	**Makanchi Array**	**40.57**	**349**	P	**P**	**22 39 30.2**	**-0.2**
	0.7nm,0.4s,mb3.6,baz=165,slow=8.1,SNR=9.6						
KURK	**Kurchatov**	**45.05**	**347**	P	**P**	**22 40 06.1**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=174,slow=7.3,SNR=13						
ZALV	**Zalesovo Beam**	**47.17**	**354**	P	**P**	**22 40 24.0**	**+0.6**
	1.1nm,0.9s,mb3.8,baz=179,slow=7.4,SNR=4.0						
BVAR	**Borovoye Array**	**49.29**	**342**	P	**P**	**22 40 39.6**	**-0.1**
	1.0nm,0.7s,mb3.9,baz=142,slow=7.5,SNR=5.6						

*IDC **20** 22:35:01.2±1.0, 31°.73N×104°.27E, h0km, mb3.7/12, mb1 3.8/12, mb1mx3.7/25, mbtmp3.7/12, Error ellipse: s-maj=34.9km s-min=19.8km az=46.0*
*NEIC **20** 22:35:02.8±0.5, 31°.81N×104°.28E, h10km, mb4.6/3, Error ellipse: s-maj=13.0km s-min=8.8km az=223.0*
*BJI **20** 22:35:04.4, 31°.84N×104°.55E, h14km, mb4.1/2, ML3.5/12, Ms3.5/3, Ms7 3.5/3*

ISC 20 22:35:02.0±0.8, 31°.82N±0°.03×104°.42E±0°.04, h5km±5km, n30, σ1°07/39, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.07**	**212**	Pg	**Pg**	**22 35 23.3**	**+0.9**
CD2				Sg	**Sg**	**22 35 36.6**	**+0.4**
CD2				smax			
	comp=N,4μm,0.7s						
LZH	**Lanzhou**	**4.28**	**354**	*e*Pn	**Pn**	**22 36 11.8**	**+4.0**
LZH				Pg	**Pg**	**22 36 25.1**	**+1.1**
LZH				Sn	**Sn**	**22 37 00.3**	**+2.2**
LZH				Sg	**Sg**	**22 37 19.4**	**-0.2**
LZH				smax			
	comp=N,62nm,0.5s						
LZH				smax			
	comp=E,110nm,0.6s						
LZH				LR	LR		
	comp=N,440nm,7.8s						
LZH				LR	LR		
	comp=Z,550nm,8.8s						
XAN	**Xi'an**	**4.39**	**58**	Pn	**Pn**	**22 36 10.3**	**+1.1**
XAN				Pg	**Pg**	**22 36 24.1**	**-2.0**
XAN				Sn	**Sn**	**22 37 06.9**	**+6.2**
XAN				Sg	**Sg**	**22 37 20.1**	**-2.8**
XAN				smax			
	comp=N,82nm,0.6s						
XAN				smax			
	comp=E,49nm,1.0s						
ENH	**Enshi**	**4.62**	**108**	*e*Pn	**Pn**	**22 36 14.7**	**+2.3**
ENH				*e*Pg	**Pg**	**22 36 29.9**	**-0.5**
ENH				*e*S	**Sg**	**22 37 30.6**	**+0.3**
GYA	**Guiyang**	**5.69**	**159**	Pn	**Pn**	**22 36 28.3**	**+1.2**
GYA				Sn	**Sn**	**22 37 31.8**	**-1.0**
GYA				smax			
	comp=N,70nm,0.9s						
GYA				smax			
	comp=E,60nm,1.0s						
WHN	**Wuhan**	**8.61**	**96**	P	Px	22 37 17.6	
SONM	**Songino Array**	**16.07**	**5**	Pn	**Pn**	**22 38 47.2**	**-1.2**
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=2.9						
KSRS	**Korea Array**	**20.12**	**67**	P	**P**	**22 39 38.3**	**+1.6**
	comp=E,2.9nm,0.7s,baz=253,slow=9.9,SNR=8.2						
MK31	**Makanchi Array**	**22.62**	**318**	P	**P**	**22 40 02.5**	**-1.0**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**22 40 03.9**	**+0.4**
	comp=E,0.3nm,0.3s,mb3.2,baz=130,slow=11,SNR=5.3						
UCH	**Uchtor**	**25.92**	**302**	P	**P**	**22 40 34.0**	**-0.8**
AAK	**Ala-Archa**	**26.03**	**303**	*e*P	**P**	**22 40 35.4**	**-0.5**
	comp=E,1.2nm,0.3s,mb3.9						
ZALV	**Zalesovo Beam**	**26.20**	**333**	P	**P**	**22 40 37.8**	**+0.5**
	comp=E,0.8nm,0.4s,mb3.6,baz=132,slow=10,SNR=5.3						
EKS2	**Erkin-Say**	**26.55**	**303**	P	**P**	**22 40 39.6**	**-1.0**
KURK	**Kurchatov**	**26.84**	**322**	P	**P**	**22 40 43.6**	**+0.5**
	comp=E,0.7nm,0.7s,mb3.3,baz=124,slow=8.7,SNR=6.5						
BVAR	**Borovoye Array**	**32.40**	**321**	P	**P**	**22 41 33.3**	**+0.9**
	comp=E,0.4nm,0.6s,mb3.4,baz=81,slow=8.9,SNR=2.6						
PALK	**Pallekele**	**32.94**	**227**	*e*P	**P**	**22 41 36.5**	**-1.1**
	comp=E,51nm,1.4s						
AKTK	**Aktyubinsk**	**38.85**	**312**	P	**P**	**22 42 28.6**	**+0.8**
AKTO	**Aktyubinsk**	**38.85**	**312**	P	**P**	**22 42 28.6**	**+0.8**
	comp=E,0.6nm,0.5s,mb3.5,baz=84,slow=14,SNR=3.3						
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**22 44 44.5**	**-1.4**
	comp=E,0.4nm,0.6s,mb3.7,baz=125,slow=6.5,SNR=3.0						
ARCES	**ARCESS Array B**	**56.72**	**336**	P	**P**	**22 44 46.4**	**+0.3**
	comp=E,3.0nm,1.0s,mb4.3,baz=54,slow=8.2,SNR=3.9						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**22 44 49.3**	**+0.2**
	comp=E,1.1nm,0.5s,mb4.2,baz=84,slow=7.5,SNR=14						
CSS	**Prodhromos**	**58.27**	**294**	*e*P	**P**	**22 44 56.8**	**-0.8**
	comp=E,3.4nm,0.6s,mb4.5						
TIRR	**Tirgusor**	**59.09**	**306**	P	**P**	**22 45 02.0**	**-1.2**
ASAR	**Alice Springs**	**61.97**	**149**	P	**P**	**22 45 23.4**	**+0.6**
	comp=E,0.5nm,0.5s,mb3.9,baz=338,slow=6.7,SNR=7.3						
NB2	**NORSAR Subarra**	**64.20**	**327**	P	**P**	**22 45 36.5**	**-0.9**
	comp=Z,0.1nm,0.7s,mb3.0,baz=75,slow=7.4						
NOA	**NORSAR Array B**	**64.20**	**327**	P	**P**	**22 45 36.8**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.8,baz=73,slow=6.7,SNR=4.1						
YKA	**Yellowknife Ar**	**80.93**	**17**	P	**P**	**22 47 17.0**	**+0.1**
	comp=Z,0.1nm,0.3s,mb3.3,baz=90,slow=11,SNR=2.9						
BOSA	**Boshof**	**96.27**	**240**	P	**P**	**22 48 30.7**	**-0.8**
	comp=Z,5.3nm,1.0s,mb4.9,baz=335,slow=21,SNR=3.8						
BOSA	**Boshof**	**96.27**	**240**	P	**P**	**22 48 30.7**	**-0.8**

*ROM **20** 22:56:03.2±0.4, 39°.96N×15°.95E, h277km±5km, Ml3.4/26, Error ellipse: s-maj=10.1km s-min=4.2km az=94.0*
*NEIC **20** 22:56:03.2, 39°.96N×15°.95E, h277km, MG3.4(ROM), After ROM.*
*ISCJB **20** 22:56:04.2±0.3, 40°.05N±0°.04×15°.86E±0°.07, h270km±2km, mb3.3/9, Error ellipse: s-maj=9.5km s-min=5.3km az=21.5*
*CSEM **20** 22:56:04.9±0.1, 40°.05N×15°.92E, h268km±1km, Error ellipse: s-maj=13.0km s-min=5.8km az=107.0*
*IDC **20** 22:56:06.2±1.2, 40°.12N×15°.73E, h278km±16km, mb3.0/8, mb1 3.1/14, mb1mx3.0/30, mbtmp3.0/14, Error ellipse: s-maj=17.1km s-min=14.0km az=74.0*

ISC 20 22:56:05.2±0.3, 40°.04N±0°.04×15°.84E±0°.07, h264km±2km, n123, σ0°87/148, mb3.3/9, 45C-6D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRI	**Monte Sirino -**	**0.14**	**10**	Pg	**Pn**	**22 56 39.5**	**+0.5**
SIRI	**Monte Sirino -**	**0.14**	**10**	P	**Pn**	**22 56 39.5**	**+0.5**
MGR	**Morigerati**	**0.24**	**294**	⇑*i*Pg	**Pn**	**22 56 39.4**	**+0.3**
MGR	**Morigerati**	**0.24**	**294**	⇑*i*Pg	**Pn**	**22 56 39.4**	**+0.3**
	69nm,0.7s						
MGR	**Morigerati**	**0.24**	**294**	⇑*i*P	**Pn**	**22 56 39.4**	**+0.3**
	69nm,0.7s						
SCHR	**S. Chirico Rap**	**0.24**	**50**	⇑*i*Pg	**Pn**	**22 56 39.8**	**+0.7**
SCHR				Sg	**S**	**22 57 06.9**	**+1.0**
	81nm,1.0s						
SCHR	**S. Chirico Rap**	**0.24**	**50**	⇑*i*P	**Pn**	**22 56 39.8**	**+0.7**
SCHR				S	**S**	**22 57 06.9**	**+1.0**
	81nm,1.0s						
ORI	**Oriolo Calabro**	**0.47**	**87**	Pg	**Pn**	**22 56 40.1**	**+0.5**
ORI				Sg	**S**	**22 57 07.3**	**+0.6**
ORI	**Oriolo Calabro**	**0.47**	**87**	Pg	**Pn**	**22 56 40.1**	**+0.5**
ORI				Sg	**S**	**22 57 07.3**	**+0.6**
	282nm,0.3s						
ORI	**Oriolo Calabro**	**0.47**	**87**	P	**Pn**	**22 56 40.1**	**+0.5**
ORI				S	**S**	**22 57 07.3**	**+0.6**
	282nm,0.3s						
CRAC	**Craco**	**0.56**	**55**	⇑*i*Pg	**Pn**	**22 56 40.4**	**+0.6**
CRAC				Sg	**S**	**22 57 08.0**	**+0.9**
	136nm,0.3s						
CRAC	**Craco**	**0.56**	**55**	⇑*i*P	**Pn**	**22 56 40.4**	**+0.6**
CRAC				S	**S**	**22 57 08.0**	**+0.9**
	136nm,0.3s						
CDRU	**Civita di Ruta**	**0.60**	**318**	⇑*i*Pg	**Pn**	**22 56 40.8**	**+0.9**
	456nm,2.9s						
CDRU	**Civita di Ruta**	**0.60**	**318**	⇑*i*P	**Pn**	**22 56 40.8**	**+0.9**
	456nm,2.9s						
SGO	**Sicignano**	**0.66**	**322**	Pg	**Pn**	**22 56 41.1**	**+1.0**
SGO	**Sicignano**	**0.66**	**322**	Pg	**Pn**	**22 56 41.1**	**+1.0**
	65nm,0.5s						
SGO	**Sicignano**	**0.66**	**322**	P	**Pn**	**22 56 41.1**	**+1.0**
	65nm,0.5s						
CARO	**Carolei**	**0.84**	**159**	Pg	**Pn**	**22 56 40.5**	**-0.5**
CARO				Sg	**S**	**22

MTTG	Motta San Giov	2.04	183⇑	*i*Pg	Pn	22 56 48.9	-0.3
	58nm,0.4s						
MTTG	Motta San Giov	2.04	183⇑	*i*P	Pn	22 56 48.9	-0.3
	58nm,0.4s						
MPAZ	Palizzi	2.09	176⇑	*i*Pg	Pn	22 56 49.2	-0.5
	80nm,0.4s						
MPAZ	Palizzi	2.09	176⇑	*i*P	Pn	22 56 49.2	-0.5
	80nm,0.4s						
MMME	Mongiuffi-Meli	2.15	192⇑	*i*Pg	Pn	22 56 50.4	+0.2
	44nm,0.5s						
MMME	Mongiuffi-Meli	2.15	192⇑	*i*P	Pn	22 56 50.4	+0.2
	44nm,0.5s						
GIB	Gibilmanna	2.49	215	Pg	Pn	22 56 54.4	+1.0
GIB	Gibilmanna	2.49	215	Pg	Pn	22 56 54.4	+1.0
	224nm,1.1s						
GIB	Gibilmanna	2.49	215	P	Pn	22 56 54.4	+1.0
	224nm,1.1s						
GALF	Gagliano Caste	2.53	203	Pg	Pn	22 56 56.2	+2.4
GALF	Gagliano Caste	2.53	203	P	Pn	22 56 56.2	+2.4
VAE	Valguarnera	2.79	204	P	Pn	22 56 59.6	+3.2
	6.3nm,0.3s,baz=0.0,slow=5.1,SNR=19						
VAE	Valguarnera	2.79	204	P	Pn	22 56 59.6	+3.2
VAE	Valguarnera	2.79	204	P	Pn	22 56 59.6	+3.2
ALJA	Alia	2.81	216	Pg	Pn	22 56 58.6	+2.0
	456nm,2.9s						
ALJA	Alia	2.81	216	P	Pn	22 56 58.6	+2.0
	456nm,2.9s						
SSY	Sortino	2.95	192	Pg	Pn	22 56 57.2	-0.8
SSY	Sortino	2.95	192	Pg	Pn	22 56 57.2	-0.8
	290nm,1.8s						
SSY	Sortino	2.95	192	P	Pn	22 56 57.2	-0.8
	290nm,1.8s						
HVZN	Vizzini	2.99	197⇓	*i*Pg	Pn	22 56 59.2	+0.7
HVZN	Vizzini	2.99	197⇓	*i*Pg	Pn	22 56 59.2	+0.7
	186nm,0.5s						
HVZN	Vizzini	2.99	197⇓	*i*P	Pn	22 56 59.2	+0.7
	186nm,0.5s						
RAFF	Raffo Rosso	3.04	203	Pg	Pn	22 57 00.0	+1.0
RAFF	Raffo Rosso	3.04	203	Pg	Pn	22 57 00.0	+1.0
	669nm,2.7s						
RAFF	Raffo Rosso	3.04	203	P	Pn	22 57 00.0	+1.0
	669nm,2.7s						
HAVL	Avola	3.13	191⇓	*i*Pg	Pn	22 56 59.0	-0.9
HAVL	Avola	3.13	191⇓	*i*Pg	Pn	22 56 59.0	-0.9
	93nm,0.2s						
HAVL	Avola	3.13	191⇓	*i*P	Pn	22 56 59.0	-0.9
	93nm,0.2s						
STON	Ston	3.15	26	*i* Pn	Pn	22 57 00.2	+0.2
STON				Sn	S	22 57 43.3	-0.4
OHR	Ohrid	3.93	73	*e*Pn	Pn	22 57 09.2	+0.5
BIA	Bitola	4.29	75	*e*Pn	Pn	22 57 13.1	+0.1
KRUS	Krusevo	4.32	70	*e*Pn	Pn	22 57 13.3	+0.1
VAY	Valandovo	5.28	74	*e*Pn	Pn	22 57 23.8	-0.8
GERES	GERESS Array B	8.93	351	P	Pn	22 58 09.9	-0.1
	0.1nm,0.3s,baz=161,slow=13,SNR=12						
MLR	Muntele Rosu	9.21	50	P	Pn	22 58 15.6	+2.1
	baz=228,slow=12						
BRTR	Keskin Array B	13.68	86	P	Pn	22 59 09.7	+0.9
	0.1nm,0.3s,baz=270,slow=12,SNR=5.3						
IIGN	Ignalina	16.80	21	*e*P	P	22 59 44.2	+0.6
IIGN	Ignalina	16.80	21	*e*P	P	22 59 44.2	+0.6
	SNR=33						
IDID	Didziasalis	16.92	22	*e*P	P	22 59 45.0	+0.2
IDID	Didziasalis	16.92	22	*e*P	P	22 59 45.0	+0.2
	SNR=29						
ISAL	Salakas	16.97	20	*e*P	P	22 59 45.9	+0.5
ISAL	Salakas	16.97	20	*e*P	P	22 59 45.9	+0.5
	SNR=28						
MMAI	Mount Meron Ar	17.20	108	P	P	22 59 49.2	+1.0
	1.4nm,0.3s,baz=321,slow=7.8,SNR=9.2						
EKA	Eskdalemuir Ar	19.84	327	P	P	23 00 15.4	-0.7
	baz=127,slow=9.0,SNR=5.3						
EKA	Eskdalemuir Ar	19.84	327	P	P	23 00 15.4	-0.8
HFS	Hagfors	20.16	357	P	P	23 00 18.3	-1.2
	3.3nm,0.4s,baz=163,slow=10,SNR=21						
HFS	Hagfors	20.16	357	P	P	23 00 18.3	-1.2
NB2	NORSAR Subarra	21.22	354	P	P	23 00 28.7	-1.7
	comp=Z,1.3nm,0.5s,mb3.5,baz=168,slow=10						
NB2	NORSAR Subarra	21.22	354	P	P	23 00 28.7	-1.7
	comp=Z,1.3nm,0.5s,mb3.5,SNR=8.2						
NOA	NORSAR Array B	21.22	354	P	P	23 00 29.4	-1.0
	comp=Z,0.8nm,0.4s,mb3.4,baz=168,slow=7.7,SNR=8.8						
NOA	NORSAR Array B	21.22	354	P	P	23 00 29.4	-1.0
NOA	NORSAR Array B	21.22	354	P	P	23 00 29.4	-1.0
FINES	FINESS Array B	22.33	13	P	P	23 00 40.0	-0.6
	comp=Z,1.9nm,0.3s,mb3.9,baz=188,slow=8.6,SNR=40						
FINES	FINESS Array B	22.33	13	P	P	23 00 40.0	-0.6
FINES	FINESS Array B	22.33	13	P	P	23 00 40.0	-0.6
KAF	Kangasniemi	23.00	13	*e*p	P	23 00 45.9	-0.7
	comp=Z,0.4nm,0.3s,mb3.2						
KAF	Kangasniemi	23.00	13	*e*P	P	23 00 45.9	-0.7
	comp=Z,0.4nm,0.3s,mb3.2						
JOF	Joensuu	24.72	17	*e*p	P	23 01 01.7	-0.5
	comp=Z,1.0nm,0.6s,mb3.4						
JOF	Joensuu	24.72	17	*e*P	P	23 01 01.7	-0.5
	comp=Z,1.0nm,0.6s,mb3.4						
TORD	Torodi Ar. Bea	29.54	209	P	P	23 01 45.2	-0.3
	comp=Z,0.2nm,0.6s,mb2.9,baz=14,slow=9.1,SNR=3.9						
ARCES	ARCESS Array B	30.00	7	P	P	23 01 47.8	-1.2
	comp=Z,1.4nm,0.7s,mb3.6,baz=194,slow=9.7,SNR=8.7						
ARCES	ARCESS Array B	30.00	7	P	P	23 01 47.8	-1.2
BVAR	Borovoye Array	38.77	52	P	P	23 03 04.7	+0.6
	comp=Z,0.2nm,0.4s,mb2.9,baz=316,slow=6.0,SNR=3.2						
BVAR	Borovoye Array	38.77	52	P	P	23 03 04.8	+0.7
MKAR	Makanchi Array	47.44	59	P	P	23 04 13.1	-0.2
	comp=Z,0.5nm,0.4s,mb3.2,baz=278,slow=7.0,SNR=4.1						
YKA	Yellowknife Ar	70.35	338	P	P	23 06 49.7	-0.1
	comp=Z,0.1nm,0.3s,mb3.0,baz=35,slow=5.5,SNR=4.7						

*BJI **20** 23:42:12.2, 32°.22N×76°.08E, h35km, ML3.6/2*
*IDC **20** 23:42:13.6±1.3, 32°.68N×75°.81E, h0km, mb3.8/7, mb1 3.9/10, mb1mx3.6/27, mbtmp3.8/10, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/39, Error ellipse: s-maj=26.8km s-min=21.5km az=68.0*
*ISCJB **20** 23:42:15.6±0.6, 32°.83N±0°.03×75°.83E±0°.05, h21km±6km, mb3.6/7, Error ellipse: s-maj=7.8km s-min=4.1km az=154.3*
*NDI **20** 23:42:18.4±2.9, 32°.71N×75°.75E, h35km, ML3.9, mb3.8(NEIC)*
*NEIC **20** 23:42:18.5±0.8, 32°.73N×75°.83E, h35km, mb3.8/3, Error ellipse: s-maj=11.9km s-min=11.2km az=177.0*
*NNC **20** 23:42:20.9±4.8, 33°.23N×75°.42E, h0km, mb3.5, Error ellipse: s-maj=68.8km s-min=45.3km az=107.0*

ISC 20 23:42:17.4±0.6, 32°.76N±0°.03×75°.90E±0°.05, h22km±5km, n48, σ1§21/67, mb3.6/7, 3C-3D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	Dalhousie	0.22	165	*e*P	Pb	23 42 22.0	-1.0
DLH				*e*S	Sb	23 42 27.0	+0.2
THN	Thein Dam	0.36	206	*ex*	Pb	23 42 22.3	-2.8
THN				*e*S	Sb	23 42 30.9	+0.6
JMU	Jammu	0.84	268	*i* P	Pb	23 42 25.0	-8.3
JMU				*i* S	Sb	23 42 35.0	-9.2
BHK	Bhakra	1.41	162	*e*P	Pn	23 42 40.9	-0.7
BHK				*ex*	Sn	23 43 03.3	+3.8
SDNR	Sundarnagar	1.55	144	*ex*	Pn	23 42 47.5	+3.9
SDNR				*ex*	Sn	23 43 08.1	+5.1
SMLA	Simla	1.95	146	*i* P	Pn	23 42 49.2	+0.1
SMLA				*i* S	Sn	23 43 13.5	+0.6
SMLA				*ex*	x	23 43 18.2	
	comp=N,6μm,0.3s						
SMLA				*ex*	x	23 43 19.4	
	comp=E,6μm,0.5s						
KLP	Kalpa	2.34	121	*e*P	Pn	23 42 55.8	+1.4
KLP				*e*S	Sn	23 43 24.4	+1.9
KLP				AML	AML	23 43 34.5	
	comp=E,2μm,0.6s						
KLP				AML	AML	23 43 35.7	
	comp=N,2μm,0.6s						
DDI	Dehra Dun	3.04	142	*ex*	Pb	23 43 12.5	+1.6
DDI				*ex*	Sb	23 43 59.5	+12
JOSI	Joshimath	3.81	124	*ex*	Pn	23 43 18.8	+4.0
JOSI				*e*S	Sn	23 43 57.8	-1.1
JOSI				AML	AML	23 44 14.4	
	comp=N,304nm,0.9s						
JOSI				AML	AML	23 44 15.6	
	comp=E,236nm,0.7s						
NDI	New Delhi	4.21	164	*ex*	Pb	23 43 31.0	+0.2
SONA	Sohna	4.61	167	*e*P	Pn	23 43 26.0	+0.3
SONA				*e*S	Sn	23 44 14.1	-4.4
KHET	Khetri	4.67	181	*e*P	Pn	23 43 27.5	+1.0
KHET				*ex*	x	23 44 19.0	
KHET				AML	AML	23 44 50.2	
	comp=N,50nm,0.3s						
KHET				AML	AML	23 44 50.3	
	comp=E,45nm,0.3s						
KBL	Kabul	5.99	289	*e*Pn	Pn	23 43 43.1	-1.6
KBL				*e*Sn	Sn	23 44 53.2	+0.6
KSH	Kashi	6.75	0	P	Pn	23 43 55.3	+0.2
KSH				S	Sn	23 45 06.0	-5.2
KSH				smax			
	comp=N,45nm,0.3s						
KSH				smax			
	comp=E,61nm,0.5s						
DMN	Daman	9.47	120	*e*P	Sn	23 46 16.8	-1.5
	comp=E,39nm,0.6s						
KKN	Kakani	9.50	119	*e*P	Sn	23 46 17.7	-1.2
	comp=E,27nm,0.4s						
UCH	Uchtor	9.52	354	*e*Pn	Pn	23 44 34.5	+1.4
	comp=E,8.6nm,0.7s						
UCH				*e*Sn	Sn	23 46 17.4	-1.9
AML	Almayashu	9.52	350	*e*Pn	Pn	23 44 32.9	-0.2
	comp=E,11nm,0.5s						
AML				*e*Sn	Sn	23 46 21.7	+2.3
PKIN	Phulchoki	9.70	120	*e*P	Sn	23 46 21.2	-2.7
	comp=E,29nm,0.4s						
PKI	Pulchoki	9.71	120	*e*P	Sn	23 46 20.9	-3.4
	comp=E,32nm,0.3s						
AAK	Ala-Archa	9.92	354	Pn	Pn	23 44 38.3	-0.3
	comp=E,0.0nm,0.3s,baz=44,slow=2.0,SNR=6.9						
AAK				Sn	Sn	23 46 30.7	+1.5
	comp=E,0.0nm,0.3s,baz=315,slow=16,SNR=2.5						
AAK				LR	LR	23 48 56.4	
	comp=E,44nm,18.8s,baz=219,slow=40						
AAK	Ala-Archa	9.92	354	*e*Pn	Pn	23 44 39.1	+0.5
AAK				Sn	Sn	23 46 30.7	+1.5
EKS2	Erkin-Say	10.03	351	*e*Pn	Pn	23 44 40.0	-0.1
	comp=E,2.0nm,0.6s						
EKS2				*e*Sn	Sn	23 46 29.3	-2.6
TKM2	Tokmak 2	10.15	359	⇑P	Pn	23 44 44.4	+2.7
	comp=E,2.2nm,0.6s						
TKM2				⇑S	Sn	23 46 34.9	+0.1
	comp=E,2.5nm,0.9s						
TKM2	Tokmak 2	10.15	359	*e*Pn	Pn	23 44 43.1	+1.4
	comp=E,2.3nm,0.3s						
KK31	Karatay Array	11.17	339	P	Pn	23 44 55.4	-0.2
	comp=E,2.2nm,0.6s,baz=145,slow=11,SNR=32						
KK31				⇓S	Sn	23 46 50.8	-9.0
	comp=E,3.1nm,0.6s,baz=156,slow=23,SNR=9.2						
MK31	Makanchi Array	14.85	17	P	Pn	23 45 45.9	0.0
	comp=E,0.7nm,0.4s,baz=194,slow=12,SNR=28						
MK31	Makanchi Array	14.85	17	*e*Pn	Pn	23 45 46.0	+0.2
MKAR	Makanchi Array	14.85	17	Pn	Pn	23 45 44.9	-0.9
	comp=E,0.4nm,0.3s,baz=198,slow=12,SNR=16						
KURBB	Kurchatov Arra	17.96	5	⇓P	Pn	23 46 23.0	-2.4
	comp=E,0.3nm,0.5s						
KURK	Kurchatov	18.06	6	P	Pn	23 46 23.7	-3.0
	comp=E,0.1nm,0.3s,baz=193,slow=11,SNR=13						
KURK	Kurchatov	18.06	6	*e*Pn	Pn	23 46 24.3	-2.4
	comp=E,2.4nm,0.4s						
AB31	Akbulak array	20.34	329	P	P	23 46 52.1	0.0
	comp=E,0.3nm,0.4s,baz=115,slow=11,SNR=20						
ABKAR	Akbulak array	20.34	329	*e*P	P	23 46 52.3	+0.2
	comp=E,0.9nm,0.4s						
BVA0	Borovoye Array	20.64	351	⇑P	P	23 46 55.7	+0.5
	comp=E,1.2nm,0.6s,baz=162,slow=12,SNR=46						
BVAR	Borovoye Array	20.64	351	P	P	23 46 56.3	+1.0
	comp=E,8.2nm,0.6s,baz=159,slow=10,SNR=50						
BRVK	Borovoye	20.69	350	*e*P	P	23 46 55.5	-0.3
	comp=E,11nm,0.6s						
AKTK	Aktyubinsk	22.06	328	P	P	23 47 11.0	+0.5
AKTO	Aktyubinsk	22.06	328	⇓P	P	23 47 11.0	+0.5
	comp=E,0.8nm,1.1s,mb3.1						
AKTO	Aktyubinsk	22.06	328	P	P	23 47 11.0	+0.6
	comp=E,1.6nm,0.6s,mb3.6,baz=109,slow=13,SNR=6.4						
ZALV	Zalesovo Beam	22.12	14	P	P	23 47 11.4	+0.4
	comp=E,3.3nm,0.5s,mb4.1,baz=212,slow=10.0,SNR=18						
CMAR	Chiang Mai Arr	25.11	119	P	P	23 47 40.7	0.0
	comp=E,0.9nm,0.6s,mb3.5,baz=307,slow=9.3,SNR=6.1						
GNI	Garni	26.03	295	*e*P	P	23 47 47.5	-1.4
SONM	Songino Array	27.49	48	P	P	23 48 02.6	+0.8
	comp=E,0.7nm,0.5s,mb3.4,baz=228,slow=8.6,SNR=3.9						
ULN	Ulaanbaatar	27.91	48	P	P	23 48 05.7	0.0
BRTR	Keskin Array B	34.54	294	P	P	23 49 08.6	+4.5
	comp=E,0.4nm,0.8s,mb3.4,baz=117,slow=7.1,SNR=3.6						
ARCES	ARCESS Array B	46.13	338	P	P	23 50 40.6	+1.0
	comp=E,1.3nm,0.9s,mb3.9,baz=103,slow=7.8,SNR=2.8						
TORD	Torodi Ar. Bea	69.81	273	P	P	23 53 25.1	-1.4
	comp=E,0.6nm,0.5s,mb3.8,baz=49,slow=5.4,SNR=8.0						

*IDC **20** 23:45:56.0±1.1, 30°.46S×177°.51W, h0km, mb4.3/2, mb1 4.3/3, mb1mx4.0/15, mbtmp4.2/3, ML3.4/1, Error ellipse: s-maj=35.6km s-min=20.0km az=92.0*
*ISCJB **20** 23:45:58.0±1.0, 30°.59S±0°.06×177°.5W±0°.2, h33km, mb4.4/6, Error ellipse: s-maj=18.9km s-min=8.0km az=2.1*
*NEIC **20** 23:46:00.6±0.5, 30°.55S×177°.49W, h35km, mb4.5/4, Error ellipse: s-maj=14.1km s-min=10.4km az=108.0*

ISC 20 23:45:57.3±5.0, 30°.51S±0°.06×177°.5W±0°.2, h13km±32km, n22, σ0§67/17, mb4.4/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.31	342	Pn	Pn	23 46 21.3	0.0
	597nm,0.3s,baz=56,slow=20,SNR=15						
RAO				Sn	Sn	23 46 37.9	-0.8
	1μm,0.3s,baz=18,slow=21,SNR=17						
RAO	Raoul Island	1.31	342	*e*Pn	Pn	23 46 21.4	+0.1
RAO				*e*Sn	Sn	23 46 37.8	-0.9
URZ	Urewera	8.94	209	Pn	Pn	23 48 04.9	-1.1
	0.4nm,0.3s,baz=172,slow=23,SNR=5.9						
URZ				Sn	Sn	23 49 42.1	-4.5
	3.0nm,0.3s,baz=142,slow=23,SNR=7.5						
URZ	Urewera	8.94	209	*e*Pn	Pn	23 48 05.2	-0.8
URZ				*e*Sn	Sn	23 49 46.2	-0.3
TAU	Tasmania Unive	30.61	236	P	P	23 52 10.7	-0.2
CTAO	Charters Tower	34.28	279	*e*P	P	23 52 44.5	+1.2
	5.6nm,0.6s,mb4.7						
STKA	Stephens Creek	34.91	257	P	P	23 52 50.2	+1.6
	6.0nm,0.8s,mb4.6,baz=114,slow=13,SNR=10						
STKA	Stephens Creek	34.91	257	*e*P	P	23 52 49.2	+0.6
ASAR	Alice Springs	43.57	267	P	P	23 54 00.8	-0.2
	1.2nm,0.4s,mb4.0,baz=104,slow=6.8,SNR=24						
WRAB	Tennant Creek	44.56	272	*e*P	P	23 54 09.5	+0.4
	3.1nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	52.83	270	*e*P	P	23 55 12.6	-0.1
	6.6nm,1.1s,mb4.5						
CASY	Casey	55.26	208	*e*P	P	23 55 29.3	-0.4
	3.6nm,0.7s,mb4.5						
RPN	Rapa Nui	58.96	105	P	P	23 55 56.9	+0.3
BVAR	Borovoye Array	126.81	316	PKP	PKPdf	00 05 00.8	+0.7
	0.3nm,0.4s,baz=139,slow=2.2,SNR=4.9						
JOF	Joensuu	142.69	339	*e*pkp	PKPdf	00 05 26.2	-3.2
KAF	Kangasniemi	144.81	341	*e*pkp	PKPdf	00 05 31.4	-1.7
	baz=40,slow=3.4						
FINES	FINESS Array B	145.41	340	PKPbc	PKPbc	00 05 34.0	-0.1
	3.3nm,0.4s,baz=52,slow=4.3,SNR=60						
NOA	NORSAR Array B	148.93	352	PKPbc	PKPbc	00 05 44.5	+0.5
	1.0nm,0.7s,baz=15,slow=4.2,SNR=7.4						
AKASG	Malin Array Be	151.67	323	PKPbc	PKPbc	00 05 50.6	-0.3
	0.6nm,0.3s,baz=43,slow=2.6,SNR=4.5						
MMAI	Mount Meron Ar	152.01	284	PKPbc	PKPbc	00 05 53.6	+1.3
	1.6nm,0.4s,baz=89,slow=7.7,SNR=7.4						
BRTR	Keskin Array B	153.06	298	PKPbc	PKPbc	00 05 55.1	+0.7
	0.5nm,0.6s,baz=140,slow=5.6,SNR=5.0						
TORD	Torodi Ar. Bea	162.70	177	PKPab	PKPab	00 06 49.2	+1.3
	0.4nm,0.7s,baz=172,slow=3.7,SNR=5.8						

*ISCJB **20** 23:51:04.8±0.7, 1°.44S±0°.04×80°.66W±0°.05, h52km±7km, mb3.7/7, Error ellipse: s-maj=8.3km s-min=5.8km az=154.5*
*IGQ **20** 23:51:05.2, 1°.38S×80°.58W, h50km, Mb4.6, Ms4.4, Error ellipse: s-maj=3.4km s-min=1.5km az=144.3*
*NEIC **20** 23:51:08.3±1.6, 1°.33S×80°.32W, h72km±17km, mb3.9/2, MD4.6(IGQ), Error ellipse: s-maj=20.2km s-min=11.5km az=83.0*
NEIC Felt in Manabi.
*IDC **20** 23:51:11.1±2.4, 1°.62S×80°.60W, h98km±26km, mb3.4/6, mb1 3.7/12, mb1mx3.6/24, mbtmp3.6/12, MS3.2/5, Ms1 3.2/5, ms1mx2.9/18, Error ellipse: s-maj=24.4km s-min=15.0km az=86.0*

ISC 20 23:51:05.6±0.8, 1°.45S±0°.04×80°.66W±0°.05, h44km±8km, n62, σ1§18/67, mb3.7/7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.40	350	P	Pn	23 51 14.6	-0.7
JAMA	Jama	1.26	21	S	Sn	23 51 42.6	0.0
JAMA	Jama	1.26	21	P	Pn	23 51 25.6	-1.2
IGUA	Igualata	2.02	91	P	Pn	23 51 36.9	-0.3
RIOE	Riobamba	2.05	99	P	Pn	23 51 36.9	-0.7
JUI6	Juive	2.19	89	S	Sn	23 52 04.9	-0.5
JUI6	Juive	2.19	89	P	Pn	23 51 39.6	+0.1
ARRY	Arrayan	2.20	92	P	Pn	23 51 39.5	-0.2
RETU	Refugio	2.21	90	P	Pn	23 51 40.3	+0.4
RETU	Refugio	2.21	90	S	Sn	23 52 07.6	+1.7
PATA	Patacocha	2.22	91	P	Pn	23 51 40.2	+0.2
ULBA	Ulba	2.25	90	S	Sn	23 52 06.1	-0.8
ULBA	Ulba	2.25	90	P	Pn	23 51 40.7	+0.3
CAMI	Rancho Maria	2.28	70	P	Pn	23 51 40.5	-0.4
PISA	Pisayambo	2.30	80	P	Pn	23 51 41.3	+0.2
NAS2	Nasa	2.33	70	P	Pn	23 51 41.6	+0.1
MOV1	Cotopaxi Vol s	2.33	72	P	Pn	23 51 41.7	+0.2
JUA2	San Juan 2	2.39	59	P	Pn	23 51 41.6	-0.7
VC1	Cotopaxi 1	2.39	70	P	Pn	23 51 42.6	+0.3
PITA	Cotopaxi Volc	2.39	68	P	Pn	23 51 42.3	0.0
TAMB	Tambo	2.41	72	P	Pn	23 51 43.7	+1.2
PINO	Pino	2.42	58	P	Pn	23 51 41.8	-0.9
GGP	Refugio Guagua	2.42	58	P	Pn	23 51 41.9	-0.8
COV1	Cotopaxi Volc	2.44	71	P	Pn	23 51 42.0	-1.0
YANA	Yana	2.47	58	P	Pn	23 51 42.5	-0.8
MACE	Macas	2.58	108	S	Sn	23 52 14.9	-0.3
MACE	Macas	2.58	108	P	Pn	23 51 45.4	+0.4
ANTI	Antisana	2.69	68	P	Pn	23 51 46.8	+0.4
OTAV	Otavalo	2.77	53	S	Sn	23 52 21.2	+1.4
OTAV	Otavalo	2.77	53	P	Pn	23 51 46.5	-1.1
OTAV	Otavalo	2.77	53	*e*Pn	Pn	23 51 46.7	-0.8
OTAV				*e*Sn	Sn	23 52 17.4	-2.4
COTA	Cotacachi	2.92	53	P	Pn	23 51 49.1	-0.4
CAYR	Refugio Cayamb	3.02	61	P	Pn	23 51 52.8	+1.8
CAYA	Cayambe	3.06	61	P	Pn	23 51 53.0	+1.4
CHAR	Charly	3.28	66	P	Pn	23 51 56.5	+2.0
CONE	Cono NE Rev Vo	3.31	66	P	Pn	23 51 58.5	+3.5
CONE	Cono NE Rev Vo	3.31	66	S	Sn	23 52 36.0	+3.0
ATAH	Atahualpa	5.96	158	P	Pn	23 52 35.7	+4.3
	1.9nm,0.3s,baz=359,slow=9.9,SNR=6.9						
ATAH				S	Sn	23 53 43.4	+5.0
	1.4nm,0.3s,baz=282,slow=22,SNR=3.7						
ATAH				LR	LR	23 55 11.8	
	comp=Z,390nm,18.9s,baz=25,slow=41						
ROSC	El Rosal	8.90	45	P	Pn	23 53 17.0	+5.3
	1.9nm,0.3s,baz=283,slow=22,SNR=4.1						
ROSC				S	Sn	23 54 58.0	+7.3
	baz=108,slow=19,SNR=2.0						
ROSC				LR	LR	23 57 03.1	
	comp=Z,66nm,19.6s,baz=25,slow=39						
ROSC	El Rosal	8.90	45	Pn	Pn	23 53 10.1	-1.6
ROSC				S	Sn	23 54 58.0	+7.3
ROSC				LR	LR	23 57 03.1	
NNA	Nana	11.13	160	P	Pn	23 53 46.6	+4.3
	2.2nm,0.3s,baz=333,slow=14,SNR=7.0						
NNA				S	Sn	23 55 44.8	-0.7
	6.8nm,0.3s,baz=232,slow=19,SNR=10						
NNA	Nana	11.13	160	*e*Pn	Pn	23 53 44.7	+2.4
NNA				*e*Sn	Sn	23 55 43.8	-1.7
SDV	Santo Domingo	14.32	44	P	Pn	23 54 32.2	+6.3
	1.0nm,0.3s,baz=249,slow=13,SNR=11						
SDV				LR	LR	00 00 51.2	
	comp=Z,79nm,19.9s,baz=185,slow=40						
SDV	Santo Domingo	14.32	44	*e*Pn	Pn	23 54 23.3	-2.6
SDV				LR	LR	00 00 51.2	
APG	El Apazote	19.01	330	LR	LR	00 01 20.3	
	comp=Z,93nm,20.0s,baz=352,slow=32						
LPAZ	La Paz	19.23	141	P	Pn	23 55 27.6	0.0
	0.3nm,0.3s,baz=322,slow=6.1,SNR=6.8						
LPAZ	La Paz	19.23	141	*e*P	Pn	23 55 26.1	-1.4
	2.6nm,0.7s						
PCRV	Puerto La Cruz	19.69	54	P	Pn	23 55 34.8	+1.8
	1.6nm,0.3s,baz=271,slow=5.7,SNR=5.1						
PCRV				LR	LR	00 04 03.4	
	comp=Z,83nm,21.1s,baz=220,slow=39						
CMIG	Matias Romero	23.16	323	P	P	23 56 10.5	+2.0
	4.3nm,1.1s,mb3.8,baz=103,slow=7.0,SNR=4.8						
CMIG	Matias Romero	23.16	323	P	P	23 56 10.5	+2.0
TXAR	Lajitas Array	37.70	326	P	P	23 58 19.1	+2.1
	0.4nm,0.7s,mb3.2,baz=148,slow=9.6,SNR=7.2						
WVT	Waverly	37.98	351	*e*P	P	23 58 17.4	-1.9
ANMO	Albuquerque

MAT				S	S	00 11 16.0	-5.1
JMM	Marumori	8.26	20	P	P	00 00 15.0	-1.5
JMM				eS	S	00 01 49.3	-5.2
JOW	Kunigami	8.49	249	P	P	00 00 19.7	+0.7
	1.9nm,0.3s,baz=96,slow=9.2,SNR=9.4						
JOW	Kunigami	8.49	249	P	P	00 00 19.7	+0.7
KSRS	Korea Array	10.58	316	P	P	00 00 40.2	-0.4
	1.9nm,0.3s,baz=129,slow=11,SNR=44						
INCN	Inchon	11.40	313	P	P	00 00 48.9	-0.3
NACB	Ninganchiao	15.07	250	P	P	00 01 24.7	-3.1
MDJ	Mudanjiang	15.63	340	P	P	00 01 32.6	-0.6
YULB	Yu-li	15.68	248	eP	P	00 01 31.3	-2.8
SSLB	Suanglung	15.77	250	eP	P	00 01 34.1	-1.0
	11nm,0.3s						
TPUB	Ta-pu	16.26	249	eP	P	00 01 38.4	-1.7
	13nm,0.7s						
CN2	Changchun	16.50	329	eP	P	00 01 41.6	-0.7
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
BJT	Baijiatuau	19.75	306	eP	P	00 02 11.6	-0.7
	comp=Z,33nm,1.1s						
HIA	Hailar	23.22	330	eP	P	00 02 42.8	-0.7
	comp=Z,12nm,1.0s,mb4.5						
LZH	Lanzhou	28.43	291	⇑P	P	00 03 29.5	-0.1
LZH				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.6						
LZH				pmax	pmax		
	comp=Z,89nm,4.6s						
ULN	Ulaanbaatar	29.07	316	eP	P	00 03 34.2	-0.8
	comp=Z,3.1nm,0.6s,mb4.1						
SONM	Songino Array	29.45	316	P	P	00 03 38.7	+0.3
	comp=Z,1.4nm,0.5s,mb3.9,baz=127,slow=7.9,SNR=11						
SONM				ScP	ScP	00 09 20.7	+0.6
	comp=Z,1.4nm,0.8s,baz=110,slow=2.7,SNR=6.1						
GTA	Gaotai	31.84	297	eP	P	00 03 59.3	+0.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
TLY	Talaya	32.78	321	eP	P	00 04 07.8	+0.9
	comp=Z,4.7nm,0.5s,mb4.3						
CHTO	Chiang Mai	36.41	261	eP	P	00 04 36.9	-0.7
	comp=Z,4.9nm,1.0s,mb4.0						
CHTO				ePcP	PcP	00 06 43.9	-4.0
CMAR	Chiang Mai Arr	36.56	260	P	P	00 04 39.5	+0.6
	comp=Z,1.4nm,0.5s,mb3.7,baz=59,slow=6.4,SNR=7.5						
LSA	Lhasa	39.66	281	P	P	00 05 04.3	+0.2
BILL	Bilibino	41.61	16	eP	P	00 05 19.8	+0.8
	comp=Z,19nm,1.2s,mb4.5						
TIXI	Tiksi	41.80	356	eP	P	00 05 18.9	-1.5
	comp=Z,4.2nm,0.3s,mb4.5						
KULM	Kulim	42.35	242	eP	P	00 05 24.7	-0.9
	comp=Z,5.5nm,0.8s,mb4.1						
KAKA	Kakadu	42.86	187	eP	P	00 05 28.7	-0.8
	comp=Z,12nm,1.0s,mb4.4						
ZAA0	Zalesovo Array	44.28	318	eP	P	00 05 39.1	-0.9
ZALV	Zalesovo Beam	44.28	318	P	P	00 05 39.8	-0.3
	comp=Z,4.5nm,0.4s,mb4.4,baz=100,slow=7.2,SNR=25						
ZALV				ScP	ScP	00 10 15.1	-0.4
	comp=Z,0.3nm,0.4s,baz=134,slow=4.3,SNR=3.7						
GUN	Gumba	44.59	280	ePn	P	00 05 43.9	+1.0
	comp=Z,25nm,0.4s,mb5.1						
PKI	Pulchoki	45.08	280	ePn	P	00 05 47.5	+0.8
	comp=Z,4.4nm,0.3s,mb4.5						
PKIN	Phulchoki	45.09	280	ePn	P	00 05 47.4	+0.6
	comp=Z,6.0nm,0.5s,mb4.4						
MK31	Makanchi Array	45.12	308	eP	P	00 05 46.8	+0.1
MKAR	Makanchi Array	45.12	308	P	P	00 05 46.8	+0.1
	comp=Z,3.6nm,0.3s,mb4.4,baz=84,slow=10,SNR=35						
MKAR				ScP	ScP	00 10 19.2	+0.1
	comp=Z,0.4nm,0.3s,baz=90,slow=6.1,SNR=6.6						
KKN	Kakani	45.13	280	ePn	P	00 05 46.3	-0.8
	comp=Z,8.4nm,0.3s,mb4.7						
DMN	Daman	45.33	280	ePn	P	00 05 47.8	-0.8
	comp=Z,9.1nm,0.3s,mb4.7						
KURK	Kurchatov	47.69	313	eP	P	00 06 05.5	-0.5
	comp=Z,5.6nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	49.24	195	⇓iP	P	00 06 18.5	+0.5
	comp=Z,4.6nm,0.8s,mb4.1						
FITZ	Fitzroy Crossi	49.24	195	eP	P	00 06 18.8	+0.8
	comp=Z,2.2nm,0.4s,mb4.0						
WRAB	Tennant Creek	49.87	183	eP	P	00 06 22.9	+0.2
	comp=Z,12nm,0.4s,mb4.7						
TKM2	Tokmak 2	50.05	303	P	P	00 06 24.9	+1.2
	SNR=5.6						
TKM2	Tokmak 2	50.05	303	eP	P	00 06 24.4	+0.7
	comp=Z,2.6nm,0.5s,mb3.9						
KZA	Kyzart	50.41	302	P	P	00 06 28.4	+2.0
	SNR=8.6						
KBK	Karagaybulak	50.56	302	P	P	00 06 28.4	+1.0
	SNR=7.7						
AAK	Ala-Archa	50.89	302	P	P	00 06 30.3	+0.4
	comp=Z,2.0nm,0.4s,mb3.8,baz=168,slow=7.4,SNR=6.6						
AAK	Ala-Archa	50.89	302	eP	P	00 06 29.8	-0.1
	comp=Z,3.0nm,0.8s,mb3.7						
UCH	Uchtor	50.93	302	P	P	00 06 32.0	+1.8
	SNR=9.9						
UCH	Uchtor	50.93	302	eP	P	00 06 31.0	+0.8
	comp=Z,5.7nm,0.9s,mb3.9						
EKS2	Erkin-Say	51.41	302	eP	P	00 06 33.2	-0.5
	comp=Z,2.7nm,0.9s,mb3.6						
AML	Almayashu	51.55	302	P	P	00 06 36.4	+1.7
	SNR=7.1						
BVAR	Borovoye Array	52.80	316	P	P	00 06 43.6	+0.1
	comp=Z,9.3nm,0.5s,mb4.4,baz=91,slow=8.4,SNR=72						
BVAR				ScP	ScP	00 10 52.5	+0.6
	comp=Z,0.5nm,0.7s,baz=123,slow=5.5,SNR=3.5						
BRVK	Borovoye	52.86	316	eP	P	00 06 42.7	-1.2
	comp=Z,9.2nm,0.9s,mb4.1						
ASAR	Alice Springs	43.60	184	P	P	00 06 50.3	+0.8
	comp=Z,2.5nm,0.3s,mb4.0,baz=20,slow=11,SNR=64						
MBWA	Marble Bar	53.70	200	⇓iP	P	00 06 50.4	+0.1
MBWA	Marble Bar	53.70	200	eP	P	00 06 50.2	-0.1
	comp=Z,6.6nm,0.3s,mb4.4						
KBL	Kabul	56.73	294	P	P	00 07 10.7	-0.6
BMRM	Bremner River	58.51	34	eP	P	00 07 24.9	+1.9
ARU	Arti	59.29	321	eP	P	00 07 28.0	-0.3
	comp=Z,7.3nm,0.4s,mb4.3						
ABKAR	Abkulak array	59.79	312	eP	P	00 07 31.2	-0.6
	comp=Z,5.1nm,0.4s,mb4.2						
AKTK	Aktyubinsk	60.75	314	P	P	00 07 38.2	+0.1
AKTO	Aktyubinsk	60.75	314	P	P	00 07 38.2	+0.1
FORT	Forrest	61.21	189	eP	P	00 07 41.9	+0.6
	comp=Z,14nm,0.8s,mb4.3						
STKA	Stephens Creek	61.83	176	⇓iP	P	00 07 46.2	+0.8
	comp=Z,1.8nm,0.4s,mb3.9						
STKA	Stephens Creek	61.83	176	P	P	00 07 46.4	+1.1
	comp=Z,2.9nm,0.6s,mb3.9,baz=334,slow=6.6,SNR=7.3						
STKA	Stephens Creek	61.83	176	eP	P	00 07 46.2	+0.9
	comp=Z,0.4nm,0.4s,mb3.2						
NWAO	Narrogin (SRO)	65.51	198	eP	P	00 08 09.2	+0.3
	comp=Z,26nm,0.3s,mb5.2						
NWAO	Narrogin (SRO)	65.51	198	eP	P	00 08 09.3	+0.4
	comp=Z,3.9nm,0.4s,mb4.3						
DLBC	Dease Lake	66.25	35	P	P	00 08 10.7	-2.6
KEV	Kevo	68.61	339	ep	P	00 08 27.7	+0.2
	comp=Z,2.9nm,0.5s,mb4.1						
ARCES	ARCESS Array B	69.18	340	P	P	00 08 31.4	+0.5
	comp=Z,3.1nm,0.4s,mb4.2,baz=56,slow=7.7,SNR=53						
ARE0	ARCESS Array S	69.18	340	eP	P	00 08 31.5	+0.6
RES	Resolute Bay	70.11	13	eP	P	00 08 37.5	+1.1
JOF	Joensuu	70.36	332	ep	P	00 08 37.5	-0.6
	comp=Z,3.9nm,0.4s,mb4.3						
OBN	Obninsk	71.48	323	eP	P	00 08 42.5	-2.3
	comp=Z,6.2nm,0.4s,mb4.5						
OBN				ePcP	PcP	00 08 58.5	-2.2
YKA	Yellowknife Ar	71.53	28	P	P	00 08 46.2	+1.2
	comp=Z,0.8nm,0.4s,mb3.5,baz=299,slow=6.0,SNR=12						
YKA	Yellowknife Ar	71.53	28	P	P	00 08 46.2	+1.2
KIV	Kislovodsk	72.73	311	P	P	00 08 53.0	+0.7
KAF	Kangasniemi	72.78	333	ep	P	00 08 51.7	-0.5
	comp=Z,4.6nm,0.6s,mb4.1,baz=57,slow=5.3						
FINES	FINESS Array B	73.23	332	P	P	00 08 54.7	-0.1
	comp=Z,2.2nm,0.3s,mb4.0,baz=66,slow=5.0,SNR=24						
FINES	FINESS Array B	73.23	332	P	P	00 08 54.7	-0.1
IDID	Didziasalis	76.27	327	eP	P	00 09 12.4	+0.4
ISAL	Salakas	76.42	327	eP	P	00 09 13.3	+0.5
IIGN	Ignalina	76.50	327	eP	P	00 09 13.8	+0.5
AKASG	Malin Array Be	77.52	322	P	P	00 09 18.7	-0.2
	comp=Z,1.4nm,0.3s,mb3.8,baz=53,slow=5.6,SNR=7.0						
AKASG	Malin Array Be	77.52	322	P	P	00 09 18.7	-0.2
HFS	Hagfors	78.83	335	P	P	00 09 25.2	-0.6
	comp=Z,3.3nm,0.4s,mb4.0,baz=116,slow=3.4,SNR=14						
NOA	NORSAR Array B	79.10	336	P	P	00 09 26.9	-0.3
	comp=Z,2.8nm,0.6s,mb3.8,baz=47,slow=5.0,SNR=23						
BRTR	Keskin Array B	80.68	311	P	P	00 09 36.0	+0.1
	comp=Z,2.4nm,0.9s,mb3.6,baz=111,slow=3.1,SNR=13						
BRTR	Keskin Array B	80.68	311	P	P	00 09 36.0	+0.1
BUR08	Bucovina Ar. S	81.42	321	eP	P	00 09 40.1	+0.5
MLR	Muntele Rosu	82.25	319	P	P	00 09 44.1	+0.3
	comp=Z,0.7nm,0.4s,mb3.4,baz=191,slow=1.3,SNR=4.3						
MMAI	Mount Meron Ar	82.95	304	P	P	00 09 46.5	-1.1
	comp=Z,0.4nm,0.3s,mb3.4,baz=54,slow=7.3,SNR=3.3						
ANMO	Albuquerque	91.79	47	P	P	00 10 26.2	-3.3
TORD	Torodi Ar. Bea	119.24	308	PKP	PKPdf	00 16 07.3	-0.5
	comp=Z,0.3nm,0.6s,baz=83,slow=0.5,SNR=6.8						

*ISK **20** 23:59:06.8, 40°.50N×34°.06E, h14km, MD2.5*
*ISCJB **20** 23:59:07.1±0.6, 40°.50N±0°.04×34°.09E±0°.04, h5km±7km, Error ellipse: s-maj=7.4km s-min=4.3km az=23.4*
*CSEM **20** 23:59:07.1±0.2, 40°.49N×34°.09E, h15km, MD2.5, Error ellipse: s-maj=5.5km s-min=3.3km az=24.0*
*DDA **20** 23:59:07.3, 40°.50N×34°.07E, h7km±1km, Md3.0*
ISC 20 23:59:07.5±0.6, 40°.51N±0°.04×34°.09E±0°.04, h11km±7km, n15, σ0°79/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	Cankiri	0.37	285	ePG	Pg	23 59 14.6	-0.3
CANT				eSG	Sg	23 59 19.9	0.0
ELDT	Eldivan	0.51	268	iP	Pg	23 59 17.1	-0.3
ELDT				iS	Sg	23 59 24.1	0.0
ELDT	Eldivan	0.51	268	iP	Pg	23 59 17.1	-0.3
ELDT				iS	Sg	23 59 24.1	0.0
CORM	Corum	0.53	129	ePG	Pg	23 59 17.6	-0.2
CORM				eSG	Sg	23 59 26.2	+1.4
CORM	Corum	0.53	129	ePg	Pg	23 59 17.6	-0.1
CORM				eSg	Sg	23 59 26.2	+1.5
CTKT	Corum	0.54	78	iP	Pg	23 59 18.4	+0.3
CTKT				iS	Sg	23 59 24.1	-1.1
CTKT	Corum	0.54	78	iP	Pg	23 59 18.4	+0.4
CTKT				iS	Sg	23 59 24.1	-1.1
CDAG	Cicekdag	0.91	166	iP	Pg	23 59 23.8	-1.2
CDAG				iS	Sg	23 59 38.0	+1.1
CDAG	Cicekdag	0.91	166	iP	Pg	23 59 23.8	-1.2
CDAG				iS	Sg	23 59 38.0	+1.1
BALT	Daday	1.15	333	iP	Pb	23 59 29.5	+0.1
BALT				iS	Sb	23 59 45.7	+1.4
BALT	Daday	1.15	333	iP	Pb	23 59 29.5	+0.1
BALT				iS	Sb	23 59 45.7	+1.4
LOD	Lodumlu	1.19	239	ePN	Pn	23 59 29.3	-0.7
LOD	Lodumlu	1.19	239	ePn	Pn	23 59 29.3	-0.7
YOZ	Yozgat	1.28	132	ePN	Pn	23 59 30.6	-0.6
YOZ	Yozgat	1.28	132	ePn	Pn	23 59 30.6	-0.6

*ISCJB **21** 00:12:24.2±0.6, 51°.53N±0°.04×16°.08E±0°.03, h0km, Error ellipse: s-maj=5.3km s-min=2.6km az=7.8*
*IPEC **21** 00:12:25.4±0.2, 51°.55N×16°.14E, h0km, ML2.0/3, Error ellipse: s-maj=1.5km s-min=1.1km az=31.0*
*WAR **21** 00:12:26.7, 51°.54N×16°.07E, ML2.5, Mining Induced*
*CSEM **21** 00:12:27.3±0.3, 51°.44N×16°.06E, h2km, ML3.1/9, Error ellipse: s-maj=5.0km s-min=2.8km az=3.0*
*PRU **21** 00:12:28.2, 51°.44N×16°.04E, h0km*
*VIE **21** 00:12:28.4±0.3, 51°.28N×16°.17E, h0km, mb1.9/2, ML2.6/3, Error ellipse: s-maj=2.2km s-min=1.8km az=169.0 62 km WNW of Wroclaw Suspected Mining induced.*
ISC 21 00:12:25.8±0.6, 51°.54N±0°.03×16°.06E±0°.03, h0km, n41, σ1°08/76, 3C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	168	ePg	Pg	00 12 39.6	+0.2
KSP				eSg	Sg	00 12 49.0	+0.4
KSP	Ksiaz	0.71	168	ePg	Pg	00 12 39.4	0.0
	baz=352						
KSP				eSg	Sg	00 12 48.8	+0.2
	baz=352						
UPC	Upice	1.03	182	ePG	Pg	00 12 45.7	+0.1
UPC	Upice	1.03	182	ePg	Pg	00 12 45.6	0.0
	baz=4.2						
DPC	Dobruska-Polom	1.20	172	ePG	Pn	00 12 48.3	-1.5
DPC				eSG	Sn	00 13 03.9	-2.9
	comp=Z,26nm,0.3s						
DPC	Dobruska-Polom	1.20	172	Pg	Pn	00 12 48.3	-1.5
DPC				eSg	Sn	00 13 03.4	-3.4
	baz=354						
PVCC	Panska Ves	1.38	223	ePn	Pn	00 12 52.1	-0.2
	baz=43						
PVCC				eSg	Sg	00 13 10.8	+0.7
	baz=43						
BRG	Berggiesshubel	1.49	244	PG	Pg	00 12 54.1	-0.2
BRG				SG	Sg	00 13 14.1	+0.6
	comp=Z,44nm,0.5s						
PRU	Pruhonice	1.83	212	ePN	Pn	00 12 58.4	0.0
PRU				ePG	Pg	00 13 00.5	-0.3
PRU				eSG	Sg	00 13 24.1	-0.3
	comp=Z,36nm,0.3s						
PRU	Pruhonice	1.83	212	ePn	Pn	00 12 58.5	+0.1
	baz=32						
PRU	Pruhonice	1.83	212	Pg	Pg	00 13 00.5	-0.3
PRU				Sg	Sg	00 13 24.1	-0.3
	comp=Z,36nm,0.3s						
CLL	Collm	1.93	264	ePg	Pg	00 13 02.0	-0.7
CLL				iSg	Sg	00 13 27.3	-0.3
	comp=Z,24nm,0.6s						
MORC	Moravsky Berou	2.00	151	ePn	Pn	00 12 59.9	-0.9
	baz=334						
MORC				eSg	Sn	00 13 27.6	+1.1
	comp=Z,16nm,0.3s,baz=334						
OKC	Ostrava-Krasne	2.16	141	ePN	Pn	00 13 05.1	+2.1
OKC				ePG	Pg	00 13 06.7	-0.5
OKC				eSG	Sg	00 13 34.0	-1.2
	comp=Z,19nm,0.5s						
OKC	Ostrava-Krasne	2.16	141	Pn	Pn	00 13 05.1	+2.1
OKC	Ostrava-Krasne	2.16	141	Pg	Pg	00 13 06.7	-0.5
OKC				Sg	Sg	00 13 34.0	-1.2
	comp=Z,19nm,0.5s						
VRAC	Vranov	2.26	171	ePn	Pn	00 13 04.2	-0.1
	baz=353						
VRAC				eSg	Sn	00 13 36.1	+3.2
	comp=Z,6.7nm,0.2s,baz=353						
TREC	Trest	2.28	189	ePn	Pn	00 13 04.9	+0.3
	baz=10						
KRUC	Moravsky	2.49	175	ePn	Pn	00 13 08.0	+0.5
	baz=356						
KRUC				eSg	Sn	00 13 43.0	+4.5
	comp=Z,6.0nm,0.3s,baz=356						
NKC	Novy Kostel	2.63	242	ePN	Pn	00 13 10.6	+1.1
NKC				ePG	Pg	00 13 16.5	+0.3
NKC				eSG	Sg	00 13 52.2	+1.9
	comp=Z,25nm,0.5s						
NKC	Novy Kostel	2.63	242	ePn	Pn	00 13 10.2	+0.7
	baz=59						
NKC	Novy Kostel	2.63	242	Pg	Pg	00 13 16.5	+0.3
NKC				Sg	Sg	00 13 52.2	+1.9
	comp=Z,25nm,0.5s						
OJC	Ojcow	2.71	118	ePg	Pg	00 13 17.8	0.0
OJC				eSg	Sg	00 13 52.9	0.0
OJC	Ojcow	2.71	118	ePg	Pg	00 13 17.8	0.0
OJC				eSg	Sg	00 13 52.9	0.0
KHC	Kasperske Hory	2.89	214	ePN	Pn	00 13 13.2	+0.2
KHC				ePG	Pg	00 13 18.6	-2.5
KHC				eSN	Sn	00 13 49.4	+1.1
KHC				eSG	Sg	00 13 58.3	-0.2
	comp=Z,7.2nm,0.4s						
KHC	Kasperske Hory	2.89	214	Pn	Pn	00 13 13.2	+0.2
KHC	Kasperske Hory	2.89	214	Pg	Pg	00 13 18.6	-2.5
KHC				Sn	Sn	00 13 49.4	+1.1
KHC				Sg	Sg	00 13 58.3	-0.2
	comp=Z,7.2nm,0.4s						
MOX	Moxa	2.94	254	ePG	Pg	00 13 21.7	-0.4
MOX				eSG	Sg	00 14 00.9	+0.7
KOLL	Kolacno	3.33	152	eSG	Sg	00 14 11.7	-0.9
KOLL	Kolacno	3.33	152	eSg	Sg	00 14 11.7	-0.9
NIE	Niedzica	3.45	126	eP	Pg	00 13 32.6	+0.7
NIE				eS	Sg	00 14 16.9	+0.4
VYHS	Vyhne	3.54	148	ePN	Pn	00 13 23.6	+1.7
VYHS				eSG	Sg	00 14 17.4	-1.9
VYHS	Vyhne	3.54	148	ePn	Pn	00 13 23.6	+1.7
VYHS				eSg	Sg	00 14 17.4	-1.9
CSNA	Conrad Observa	3.62	182	⇑iSg	Sg	00 14 19.7	-2.2
	comp=Z,7.7nm,0.4s						
CSNA	Conrad Observa	3.62	182	Sg	Sg	00 14 19.7	-2.2
	comp=Z,7.7nm,0.4s						
BSD	Bornholm Skovb	3.65	350	iP	Pn	00 13 21.6	-1.8
BSD				iS	Sn	00 14 03.5	-3.6
BSD	Bornholm Skovb	3.65	350	iP	Pn	00 13 21.7	-1.7
	SNR=49						
MOA	Molln	3.87	198	⇑iPn	Pn	00 13 26.3	-0.2
MOA				⇑iSg	Sg	00 14 29.4	-0.7
	comp=Z,4.1nm,0.3s						
MOA	Molln	3.87	198	Pn	Pn	00 13 26.3	-0.2
MOA				Sg	Sg	00 14 29.4	-0.7
	comp=Z,4.1nm,0.3s						
STHS	Stebnicka Huta	3.94	121	ePG	Pg	00 13 42.5	+1.3
STHS				eSG	Sg	00 14 34.0	+1.9
STHS	Stebnicka Huta	3.94	121	ePg	Pg	00 13 42.5	+1.3
STHS				eSg	Sg	00 14 34.0	+1.9

*ISCJB **21** 00:21:04.4±1.6, 31°.2S±0°.1×179°.5W±0°.2, h396km±23km, mb4.1/9, Error ellipse: s-maj=33.1km s-min=17.4km az=32.4*
*NEIC **21** 00:21:04.2±1.4, 30°.92S×179°.74W, h360km±14km, mb3.8/5, Error ellipse: s-maj=18.2km s-min=13.5km az=109.0*
*IDC **21** 00:21:04.9±4.2, 30°.89S×179°.72W, h362km±37km, mb4.0/3, mb1 4.1/5, mb1mx3.7/16, mbtmp4.0/5, Error ellipse: s-maj=35.4km s-min=21.0km az=48.0*
ISC 21 00:21:04.6±1.5, 31°.1S±0°.1×179°.5W±0°.2, h380km±22km, n34, σ0°93/26, mb4.0/9, 2C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.66	200	P	Pn	00 22 56.6	+1.5
	98nm,0.3s,baz=303,slow=2.7,SNR=157						
URZ				S	S	00 24 23.6	-1.8
	22nm,0.3s,baz=69,slow=24,SNR=22						
SNZO	South Karori	11.20	203	eP	Pn	00 23 37.0	+0.6
SNZO				S	S	00 25 27.4	-14
KHZ	Kahutara	12.58	204	eP	P	00 23 50.5	-0.8
	64nm,0.6s						
KHZ				eS	S	00 26 00.1	-9.1
RPZ	Rata Peaks	14.64	208	P	P	00 24 15.3	+1.6
	0.6nm,0.3s,baz=143,slow=20,SNR=3.3						
RPZ				S	S	00 26 42.2	-8.2
	0.6nm,0.3s,baz=143,slow=20,SNR=5.8						
AFI	Afiamalu	18.53	24	P	P	00 24 55.4	-0.4
EIDS	Eidsvold	26.50	275	eP	P	00 26 08.9	-0.2
	2.2nm,0.7s,mb3.5						
STKA	Stephens Creek	33.07	258	⇑iP	P	00 27 07.5	+1.1
	6.7nm,0.9s,mb3.9						
STKA	Stephens Creek	33.07	258	P	P	00 27 07.6	+1.2
	4.3nm,0.3s,mb4.1,baz=101,slow=11,SNR=18						
STKA	Stephens Creek	33.07	258	eP	P	00 27 07.5	+1.1
	2.5nm,0.9s,mb3.4						
BBOO	Buckleboo	37.54	255	eP	P	00 27 44.3	+0.2
	9.6nm,0.9s,mb4.0						
ASAR	Alice Springs	41.80	268	P	P	00 28 18.4	-0.4
	6.9nm,0.5s,mb4.0,baz=104,slow=7.5,SNR=88						
WRAB	Tennant Creek	42.85	274	eP	P	00 28 26.8	-0.4
	12nm,0.9s,mb4.0						
FORT	Forrest	44.63	256	eP	P	00 28 40.0	-1.1
	23nm,0.7s,mb4.4						
SBA	Scott Base	47.24	184	eP	P	00 29 05.5	+5.0
FITZ	Fitzroy Crossi	51.08	271	⇑iP	P	00 29 29.8	-0.3
	12nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	51.08	271	eP	P	00 29 29.7	-0.5
	5.7nm,0.6s,mb4.0						
NWAO	Narrogin (SRO)	52.95	250	P	P	00 29 44.9	+1.3
CASY	Casey	53.91	208	eP	P	00 29 49.2	-0.7
	3.2nm,0.9s,mb3.6						
QSPA	South Pole Qui	59.00	180	P	P	00 30 29.4	+4.3
	5.3nm,0.6s,mb4.1,baz=15,slow=0.5,SNR=37						
QSPA	South Pole Qui	59.00	180	P	P	00 30 29.4	+4.3
KSM	Kuching	73.90	282	eP	P	00 31 60.0	+0.4
YULB	Yu-li	78.44	306	P	P	00 32 23.9	-0.7
SPITS	Spitsbergen Ar	132.32	356	PKP	PKPdf	00 39 34.6	+1.7
	5.3nm,1.0s,baz=0.0,slow=0.8,SNR=5.4						
AKTK	Aktyubinsk	133.62	312	PKP	PKPdf	00 39 38.2	+2.1
AKTO	Aktyubinsk	133.62	312	PKP	PKPdf	00 39 38.2	+2.1
	0.5nm,0.5s,baz=135,slow=5.7,SNR=2.9						
ARCES	ARCESS Array B	139.00	347	PKhKP		00 39 39.7	
	1.2nm,0.8s,baz=50,slow=2.1,SNR=7.5						
ARCES				PKP	PKPdf	00 39 48.5	+3.0
	1.9nm,0.9s,baz=97,slow=3.9,SNR=3.8						
ARCES	ARCESS Array B	139.00	347	PKP		00 39 39.7	
ARCES				PKP	PKPdf	00 39 48.5	+3.0
FINES	FINESS Array B	145.36	339	PKPbc	PKPbc	00 39 58.7	+1.0
	7.8nm,0.5s,baz=42,slow=3.7,SNR=130						
NOA	NORSAR Array B	149.24	350	PKPbc	PKPbc	00 40 09.5	+1.3
	1.8nm,0.6s,baz=16,slow=4.2,SNR=13						
EIL	Elat	150.32	276	PKPbc	PKPbc	00 40 13.1	+1.4
	2.2nm,0.7s,baz=143,slow=1.2,SNR=4.1						
MMAI	Mount Meron Ar	150.44	283	PKPbc	PKPbc	00 40 14.0	+2.0
	1.3nm,0.4s,baz=81,slow=7.7,SNR=9.2						
AKASG	Malin Array Be	151.06	321	PKPbc	PKPbc	00 40 13.9	+1.1
	0.3nm,0.3s,baz=59,slow=3.5,SNR=6.7						
BRTR	Keskin Array B	151.79	297	PKPbc	PKPbc	00 40 15.3	+0.5
	0.8nm,0.6s,baz=143,slow=4.1,SNR=6.7						
TORD	Torodi Ar. B

DST				*e*SG	**Sg**	**00 32 40.5**	**+1.5**
DST	**Dursunbey**	**0.55**	**299**	*e*Pg	**Pg**	**00 32 33.0**	**+1.2**
DST				*e*Sg	**Sg**	**00 32 40.5**	**+1.6**
DURS	**Dursunbey**	**0.66**	**294**	*i* P	**Pg**	**00 32 33.1**	**-0.6**
DURS				*i* S	**Sg**	**00 32 41.8**	**-0.5**
DURS	**Dursunbey**	**0.66**	**294**	*i* P	**Pg**	**00 32 33.1**	**-0.7**
DURS				*i* S	**Sg**	**00 32 41.8**	**-0.5**
ALT	**Altintas**	**0.72**	**112**	*e*PG	**Pg**	**00 32 35.3**	**+0.2**
ALT	**Altintas**	**0.72**	**112**	*e*Pg	**Pg**	**00 32 35.3**	**+0.3**
KULA	**Kula-Manisa**	**0.94**	**209**	*e*PG	**Pg**	**00 32 38.8**	**-0.4**
KULA				*e*SG	**Sg**	**00 32 50.5**	**-0.9**
KULA	**Kula-Manisa**	**0.94**	**209**	*e*Pg	**Pg**	**00 32 38.8**	**-0.4**
KULA				*e*Sg	**Sg**	**00 32 50.5**	**-0.9**
KHAL	**Karahalli**	**0.98**	**169**	*i* P	**Pg**	**00 32 40.1**	**+0.1**
KHAL				*i* S	**Sg**	**00 32 53.1**	**+0.4**
KHAL	**Karahalli**	**0.98**	**169**	*i* P	**Pg**	**00 32 40.1**	**+0.1**
KHAL				*i* S	**Sg**	**00 32 53.1**	**+0.4**
MANT	**Manisa**	**1.00**	**213**	*i* P	**Pg**	**00 32 40.1**	**-0.3**
MANT				*i* S	**Sg**	**00 32 53.1**	**-0.3**
MANT	**Manisa**	**1.00**	**213**	*i* P	**Pg**	**00 32 40.1**	**-0.3**
MANT				*i* S	**Sg**	**00 32 53.1**	**-0.2**
BORA	**Eskisehir**	**1.08**	**59**	*i* P	**Pg**	**00 32 41.4**	**-0.4**
BORA				*i* S	**Sg**	**00 32 55.6**	**-0.1**
BORA	**Eskisehir**	**1.08**	**59**	*i* P	**Pg**	**00 32 41.4**	**-0.4**
BORA				*i* S	**Sg**	**00 32 55.6**	**-0.2**
GEMT	**Gemlik**	**1.10**	**358**	*e*PN	**Pn**	**00 32 43.0**	**-0.8**
GEMT	**Gemlik**	**1.10**	**358**	*e*Pn	**Pn**	**00 32 43.0**	**-0.8**
BALB	**Balikesir**	**1.10**	**286**	*e*PN	**Pn**	**00 32 42.6**	**-1.3**
BALB	**Balikesir**	**1.10**	**286**	*e*Pn	**Pn**	**00 32 42.6**	**-1.3**
ADVT	**Abdulvahap**	**1.16**	**19**	*e*PN	**Pn**	**00 32 44.3**	**-0.4**
ADVT	**Abdulvahap**	**1.16**	**19**	*e*Pn	**Pn**	**00 32 44.3**	**-0.3**
AKS	**Akhisar**	**1.21**	**248**	*e*PN	**Pn**	**00 32 43.3**	**-2.0**
AKS	**Akhisar**	**1.21**	**248**	*e*Pn	**Pn**	**00 32 43.3**	**-2.0**
ESKT	**Eskisehir**	**1.25**	**81**	*e*PN	**Pn**	**00 32 45.9**	**-0.1**
ESKT	**Eskisehir**	**1.25**	**81**	*e*Pn	**Pn**	**00 32 45.9**	**0.0**
BALY	**Balya**	**1.32**	**288**	*i* P	**Pg**	**00 32 46.1**	**-0.4**
BALY				*i* S	**Sg**	**00 33 05.0**	**+1.2**
BALY	**Balya**	**1.32**	**288**	*i* P	**Pg**	**00 32 46.1**	**-0.5**
BALY				*i* S	**Sg**	**00 33 05.0**	**+1.3**
GULT	**Gulveren**	**1.47**	**41**	*e*PN	**Pn**	**00 32 48.7**	**-0.2**
GULT	**Gulveren**	**1.47**	**41**	*e*Pn	**Pn**	**00 32 48.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.09**	**311**	*e*PN	**Pn**	**00 32 57.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.09**	**311**	*e*Pn	**Pn**	**00 32 57.8**	**+0.4**
LPK	**Lapseki**	**2.18**	**299**	*e*PN	**Pn**	**00 32 59.5**	**+0.8**
LPK	**Lapseki**	**2.18**	**299**	*e*Pn	**Pn**	**00 32 59.5**	**+0.9**

IGQ 21 00:37:23.0, 0°.91S×79°.69W, h102km±4km, Mb4.1, Ms3.9, 14C-6D, Error ellipse: s-maj=2.0km s-min=1.5km az=165.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.82**	**321**	P	Pn	00 37 42.0	+0.4
IGUA	**Igualata**	**1.20**	**119**	⇑P	Pn	00 37 46.7	+0.9
CAMI	**Rancho Maria**	**1.21**	**79**	P	Pn	00 37 47.0	+1.2
NAS2	**Nasa**	**1.25**	**78**	⇑P	Pn	00 37 47.9	+1.5
MOV1	**Cotopaxi Vol s**	**1.27**	**81**	⇓P	Pn	00 37 47.9	+1.3
MOV1	**Cotopaxi Vol s**	**1.27**	**81**	⇓S	Sn	00 38 05.1	+0.8
JUA2	**San Juan 2**	**1.29**	**58**	⇑P	Pn	00 37 47.8	+1.0
PITA	**Cotopaxi Volc**	**1.31**	**75**	⇓P	Pn	00 37 48.3	+1.3
TERV	**Terraza Guagua**	**1.31**	**56**	⇑P	Pn	00 37 47.8	+0.8
TERV	**Terraza Guagua**	**1.31**	**56**	⇑S	Sn	00 38 06.7	+1.5
PINO	**Pino**	**1.31**	**56**	⇑S	Sn	00 38 06.5	+1.2
PINO	**Pino**	**1.31**	**56**	⇑P	Pn	00 37 47.8	+0.7
GGP	**Refugio Guagua**	**1.32**	**57**	⇑P	Pn	00 37 48.0	+0.8
PISA	**Pisayambo**	**1.32**	**97**	⇑P	Pn	00 37 48.4	+1.3
VC1	**Cotopaxi 1**	**1.32**	**79**	P	Pn	00 37 48.5	+1.4
JUI6	**Juive**	**1.33**	**113**	P	Pn	00 37 48.0	+0.7
TAMB	**Tambo**	**1.34**	**81**	⇑P	Pn	00 37 48.9	+1.5
RUN5	**Runtun**	**1.37**	**112**	P	Pn	00 37 48.4	+0.7
YANA	**Yana**	**1.37**	**55**	⇑P	Pn	00 37 48.3	+0.6
COV1	**Cotopaxi Volc**	**1.37**	**80**	⇓S	Sn	00 38 06.2	-0.3
COV1	**Cotopaxi Volc**	**1.37**	**80**	⇓P	Pn	00 37 48.2	+0.4
ARRY	**Arrayan**	**1.38**	**116**	⇑P	Pn	00 37 48.4	+0.6
PATA	**Patacocha**	**1.39**	**115**	P	Pn	00 37 49.4	+1.4
ANTI	**Antisana**	**1.60**	**74**	⇑P	Pn	00 37 51.8	+1.2
COTA	**Cotacachi**	**1.83**	**48**	⇑P	Pn	00 37 54.9	+1.4
CAYR	**Refugio Cayamb**	**1.92**	**62**	P	Pn	00 37 56.6	+2.0
CAYA	**Cayambe**	**1.96**	**60**	⇓P	Pn	00 37 56.9	+1.8

*IDC **21** 00:40:23.6±2.9, 13°.84N×92°.58W, h0km, mb3.9/1, mb1 4.0/5, mb1mx3.7/23, mbtmp3.8/5, ML3.1/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/29, Error ellipse: s-maj=51.2km s-min=25.9km az=3.0*
*MEX **21** 00:40:28.0±1.7, 13°.80N×92°.58W, h16km±111km, MD4.2*
*NEIC **21** 00:40:28.0, 13°.80N×92°.58W, h16km, MD4.2(MEX), After MEX.*

ISC 21 00:40:26.0±1.6, 13°.95N±0°.06×92°.62W±0°.05, h4km±8km, n23, σ1°.9±10/33, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.01**	**20**	*i* P	**Pg**	**00 40 44.9**	**-0.5**
THIG				*i* S	**Sg**	**00 40 58.7**	**+0.1**
PCIG		**1.84**	**342**	*e*P	**Pn**	**00 40 57.0**	**-1.3**
PCIG				*i* S	**Sn**	**00 41 21.2**	**-0.8**
APG	**El Apazote**	**2.33**	**63**	Pn	**Pn**	**00 41 04.5**	**-0.6**
	12nm,0.3s,baz=249,slow=14,SNR=197						
APG				Sn	**Sn**	**00 41 34.2**	**-0.1**
	14nm,0.3s,baz=250,slow=24,SNR=9.1						
CCIG	**Comitan**	**2.37**	**11**	*e*P	**Pn**	**00 41 07.2**	**+1.6**
CCIG				*i* S	**Sn**	**00 41 34.1**	**-0.9**
CCIG	**Comitan**	**2.37**	**11**	*e*P	**Pn**	**00 41 07.2**	**+1.6**
CCIG				*i* S	**Sn**	**00 41 34.1**	**-0.9**
SCX	**San Cristobal**	**2.77**	**360**	*i* P	**Pn**	**00 41 13.0**	**+1.9**
SCX	**San Cristobal**	**2.77**	**360**	*i* P	**Pn**	**00 41 13.0**	**+1.9**
TGIG		**2.86**	**350**	*i* P	**Pn**	**00 41 12.5**	**+0.2**
TGIG				*i* S	**Sn**	**00 41 47.7**	**+0.6**
CMIG	**Matias Romero**	**3.81**	**325**	Pn	**Pn**	**00 41 25.3**	**-0.2**
	2.1nm,0.3s,baz=141,slow=10,SNR=17						
CMIG				Sn	**Sn**	**00 42 13.2**	**+2.4**
	4.9nm,0.3s,baz=52,slow=21,SNR=7.0						
CMIG	**Matias Romero**	**3.81**	**325**	*e*P	**Pn**	**00 41 25.4**	**-0.1**
CMIG				*i* S	**Sn**	**00 42 10.0**	**-0.7**
VHO	**Vista Hermosa**	**5.04**	**309**	*i* P	**Pn**	**00 41 41.1**	**-1.2**
VHO				*i* S	**Sn**	**00 42 41.7**	**+0.7**
VHO	**Vista Hermosa**	**5.04**	**309**	*i* P	**Pn**	**00 41 41.1**	**-1.2**
VHO				*i* S	**Sn**	**00 42 41.7**	**+0.7**
PNIG	**Pinotepa**	**5.85**	**295**	*i* P	**Pn**	**00 41 54.6**	**+1.2**
PNIG				*i* S	**Sn**	**00 42 59.4**	**-1.6**
PNIG	**Pinotepa**	**5.85**	**295**	*i* P	**Pn**	**00 41 54.6**	**+1.2**
PNIG				*i* S	**Sn**	**00 42 59.4**	**-1.6**
UTMO	**Huajuapan**	**6.31**	**308**	*i* P	**Pn**	**00 41 58.3**	**-1.5**
TEIG	**Tepich**	**7.50**	**33**	Pn	**Pn**	**00 42 15.2**	**-0.9**
	baz=354,slow=0.0						
TEIG				LR	LR	00 45 38.9	
	comp=Z,86nm,19.2s,baz=313,slow=42						
TXAR	**Lajitas Array**	**18.42**	**328**	P	**Pn**	**00 44 43.4**	**+1.1**
	0.0nm,0.3s,baz=145,slow=9.9,SNR=3.5						
MNTX	**Cornudas Mount**	**21.19**	**329**	*e*P	**P**	**00 45 12.9**	**+0.4**
WMOK	**Wichita Mounta**	**21.44**	**346**	P	**P**	**00 45 16.6**	**+1.5**
TKL	**Tuckaleechee C**	**23.04**	**19**	LR	LR	00 55 36.3	
	comp=Z,32nm,19.2s,baz=18,slow=40						
ANMO	**Albuquerque**	**24.36**	**332**	P	**P**	**00 45 46.5**	**+1.5**
YKA	**Yellowknife Ar**	**50.94**	**347**	P	**P**	**00 49 26.6**	**-1.5**
	1.2nm,0.6s,baz=151,slow=7.4,SNR=16						
CMAR	**Chiang Mai Arr**	**145.84**	**340**	PKPbc	PKPbc	01 00 05.3	-2.0
	0.7nm,0.4s,baz=22,slow=5.1,SNR=5.8						

IDC 21 00:44:38.2±1.1, 13°.52S×14°.56W, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/21, mbtmp3.8/7, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=53.5km s-min=26.4km az=122.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**31.00**	**32**	P	P	00 50 57.3	-0.4
	0.9nm,0.6s,baz=212,slow=8.6,SNR=14						
TORD				LR	LR	01 00 43.8	
	comp=Z,58nm,18.4s,baz=75,slow=31						
BOSA	**Boshof**	**39.87**	**119**	LR	LR	01 06 00.9	
	comp=Z,116nm,18.8s,baz=333,slow=32						
CPUP	**Villa Florida**	**41.99**	**246**	P	P	00 52 31.4	-0.1
	0.2nm,0.3s,baz=68,slow=5.4,SNR=2.9						
CPUP				LR	LR	01 07 57.1	
	comp=Z,54nm,18.3s,baz=59,slow=33						
ROSC	**El Rosal**	**62.06**	**283**	LR	LR	01 19 07.5	
	comp=Z,63nm,19.9s,baz=360,slow=33						
BRTR	**Keskin Array B**	**69.38**	**38**	P	P	00 55 49.3	+1.3
	0.3nm,0.7s,baz=202,slow=7.3,SNR=3.0						
MAW	**Mawson**	**72.81**	**157**	P	P	00 56 08.3	-0.1
	2.4nm,0.8s,baz=264,slow=10,SNR=2.9						
MAW	**Mawson**	**72.81**	**157**	P	P	00 56 08.3	-0.1
AKASG	**Malin Array Be**	**74.50**	**27**	P	P	00 56 17.1	-1.3
	0.1nm,0.3s,baz=225,slow=6.6,SNR=4.3						
NOA	**NORSAR Array B**	**77.09**	**13**	P	P	00 56 33.8	+0.7
	0.6nm,0.8s,baz=206,slow=5.7,SNR=3.7						
FINES	**FINESS Array B**	**81.31**	**18**	P	P	00 56 56.2	+0.1
	1.0nm,0.9s,baz=298,slow=9.3,SNR=3.8						
FINES				LR	LR	01 35 20.9	
	comp=Z,41nm,19.6s,baz=310,slow=37						

IGQ 21 00:54:47.9, 1°.28S×80°.17W, h20km±4km, Mb4.1, Ms3.9, 14C-13D, Error ellipse: s-maj=7.5km s-min=1.7km az=154.4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**1.01**	**358**	⇑S	Sb	00 55 22.1	+2.5
JAMA	**Jama**	**1.01**	**358**	⇑P	Pb	00 55 06.0	-0.8
IGUA	**Igualata**	**1.55**	**98**	⇑S	Sn	00 55 42.2	+8.4
IGUA	**Igualata**	**1.55**	**98**	⇑P	Pn	00 55 16.9	+2.5
RIOE	**Riobamba**	**1.61**	**107**	P	Pn	00 55 16.6	+1.4
JUI6	**Juive**	**1.71**	**95**	⇑P	Pn	00 55 19.5	+2.9
ARRY	**Arrayan**	**1.73**	**97**	⇑P	Pn	00 55 19.4	+2.6
PATA	**Patacocha**	**1.75**	**97**	⇓S	Sn	00 55 46.0	+7.1
PATA	**Patacocha**	**1.75**	**97**	⇓P	Pn	00 55 20.2	+3.1
RUN5	**Runtun**	**1.75**	**94**	⇓P	Pn	00 55 20.2	+3.0
CAMI	**Rancho Maria**	**1.77**	**70**	⇓P	Pn	00 55 21.6	+4.1
ULBA	**Ulba**	**1.77**	**95**	S	Sn	00 55 46.9	+7.6
ULBA	**Ulba**	**1.77**	**95**	P	Pn	00 55 20.6	+3.1
PISA	**Pisayambo**	**1.80**	**83**	S	Sn	00 55 48.2	+8.2
PISA	**Pisayambo**	**1.80**	**83**	P	Pn	00 55 21.4	+3.6
NAS2	**Nasa**	**1.82**	**70**	P	Pn	00 55 21.5	+3.5
MOV1	**Cotopaxi Vol s**	**1.82**	**72**	⇓P	Pn	00 55 21.5	+3.4
VC1	**Cotopaxi 1**	**1.88**	**70**	P	Pn	00 55 23.3	+4.4
PITA	**Cotopaxi Volc**	**1.88**	**68**	P	Pn	00 55 22.8	+3.9
JUA2	**San Juan 2**	**1.89**	**56**	⇑P	Pn	00 55 21.5	+2.4
TAMB	**Tambo**	**1.90**	**72**	⇓P	Pn	00 55 23.6	+4.4
TERV	**Terraza Guagua**	**1.91**	**55**	⇓S	Sn	00 55 53.3	+10
TERV	**Terraza Guagua**	**1.91**	**55**	⇓P	Pn	00 55 21.8	+2.4
PINO	**Pino**	**1.92**	**55**	⇑P	Pn	00 55 21.7	+2.2
GGP	**Refugio Guagua**	**1.92**	**55**	⇑P	Pn	00 55 21.7	+2.2
COV1	**Cotopaxi Volc**	**1.93**	**71**	⇑S	Sn	00 55 53.8	+11
COV1	**Cotopaxi Volc**	**1.93**	**71**	⇑P	Pn	00 55 21.9	+2.3
YANA	**Yana**	**1.97**	**54**	⇓P	Pn	00 55 22.4	+2.2
ANTI	**Antisana**	**2.17**	**68**	⇑P	Pn	00 55 27.0	+4.1
MACE	**Macas**	**2.20**	**116**	⇓P	Pn	00 55 26.1	+2.8
MACE	**Macas**	**2.20**	**116**	⇓S	Sn	00 55 54.9	+5.0
COTA	**Cotacachi**	**2.44**	**49**	⇑P	Pn	00 55 29.6	+3.0
CAYR	**Refugio Cayamb**	**2.52**	**59**	⇓S	Sn	00 56 12.9	+15
CAYR	**Refugio Cayamb**	**2.52**	**59**	⇓P	Pn	00 55 32.8	+5.1
CAYA	**Cayambe**	**2.56**	**58**	⇑P	Pn	00 55 32.8	+4.5
CHAR	**Charly**	**2.77**	**65**	P	Pn	00 55 37.9	+6.8

*IDC **21** 01:27:05.0±1.8, 31°.25N×103°.56E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.6/26, mbtmp3.9/8, ML3.8/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/33, Error ellipse: s-maj=37.1km s-min=27.1km az=10.0*
*BJI **21** 01:27:06.8, 31°.15N×103°.62E, h12km, mb4.3/3, ML3.5/14, Ms3.5/3, Ms7 3.4/3*
*NEIC **21** 01:27:07.0±0.7, 31°.27N×103°.63E, h10km, mb4.1/7, Error ellipse: s-maj=13.5km s-min=11.8km az=69.0*

ISC 21 01:27:06.0±0.8, 31°.32N±0°.03×103°.68E±0°.05, h1km±6km, n24, σ1°.21/34, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.42**	**170**	Pg	**Pg**	**01 27 13.6**	**-0.4**
CD2				Sg	**Sg**	**01 27 20.5**	**+1.1**
CD2				smax			
	comp=N,4μm,1.1s						
LZH	**Lanzhou**	**4.75**	**2**	Pg	**Pg**	**01 28 37.5**	**+0.4**
LZH				Sg	**Sg**	**01 29 35.4**	**-3.3**
LZH				smax			
	comp=N,54nm,0.8s						
LZH				smax			
	comp=E,61nm,0.9s						
LZH				LR	LR		
	comp=E,500nm,5.3s						
LZH				LR	LR		
	comp=Z,740nm,5.9s						
ENH	**Enshi**	**5.11**	**100**	*e*Pn	**Pn**	**01 28 25.2**	**+1.6**
	comp=Z,13nm,0.4s						
ENH				*e*Pg	**Pg**	**01 28 43.9**	**0.0**
ENH				*e*Sn	**Sn**	**01 29 24.0**	**+0.8**
ENH				*e*Sg	**Sg**	**01 29 46.0**	**-4.1**
XAN	**Xi'an**	**5.19**	**57**	Pn	**Pn**	**01 28 26.6**	**+1.9**
XAN				Pg	**Pg**	**01 28 44.4**	**-1.0**
XAN				Sn	**Sn**	**01 29 24.6**	**-0.5**
XAN				Sg	**Sg**	**01 29 50.8**	**-1.8**
XAN				smax			
	comp=N,140nm,0.9s						
XAN				smax			
	comp=E,59nm,0.9s						
GYA	**Guiyang**	**5.51**	**151**	Pg	**Pg**	**01 28 52.8**	**+1.2**
GYA				Sg	**Sg**	**01 29 53.3**	**-10**
GYA				smax			
	comp=N,60nm,1.0s						
GYA				smax			
	comp=E,90nm,0.9s						
KMI	**Kunming**	**6.23**	**188**	Pn	**Pn**	**01 28 38.1**	**-1.0**
KMI				Sn	**Sn**	**01 29 48.1**	**-2.8**
KMI				smax			
	comp=N,16nm,1.2s						
KMI				smax			
	comp=E,18nm,1.1s						
KMI				LR	LR		
	comp=N,210nm,10.0s						
KMI				LR	LR		
	comp=E,370nm,10.0s						
KMI				LR	LR		
	comp=Z,180nm,10.6s						
CMAR	**Chiang Mai Arr**	**13.51**	**200**	Pn	**Pn**	**01 30 17.1**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=27,slow=12,SNR=5.5						
SONM	**Songino Array**	**16.62**	**6**	Pn	**Pn**	**01 31 01.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=185,slow=15,SNR=3.9						
ULN	**Ulaanbaatar**	**16.72**	**8**	*e*P	**Pn**	**01 31 02.3**	**+0.9**
	comp=Z,3.7nm,0.9s						
KSRS	**Korea Array**	**20.90**	**66**	P	**P**	**01 31 50.2**	**+0.6**
	comp=Z,4.5nm,0.9s,baz=260,slow=10,SNR=11						
KSRS				LR	LR	01 40 22.2	
	comp=Z,17nm,20.9s,baz=215,slow=38						
CN2	**Changchun**	**21.21**	**48**	*e*P	**P**	**01 31 53.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**22.57**	**319**	P	**P**	**01 32 07.8**	**+0.3**
	comp=Z,6.6nm,1.0s,mb4.0,baz=125,slow=12,SNR=28						
UCH	**Uchtor**	**25.65**	**303**	*e*P	**P**	**01 32 39.5**	**+2.4**
	comp=Z,4.7nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**25.78**	**304**	P	**P**	**01 32 36.8**	**-1.5**
	comp=Z,0.6nm,0.3s,mb3.6,baz=146,slow=3.6,SNR=2.1						
AAK	**Ala-Archa**	**25.78**	**304**	*e*P	**P**	**01 32 41.6**	**+3.3**
	comp=Z,3.1nm,0.8s,mb3.9						
AML	**Almayashu**	**26.21**	**303**	*e*P	**P**	**01 32 43.9**	**+1.6**
	comp=Z,1.9nm,0.7s,mb3.7						
ZAA0	**Zalesovo Array**	**26.37**	**335**	*e*P	**P**	**01 32 43.3**	**-0.2**
ZALV	**Zalesovo Beam**	**26.37**	**335**	P	**P**	**01 32 41.9**	**-1.5**
	comp=Z,9.0nm,1.3s,mb4.1,baz=142,slow=7.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.37**	**335**	P	**P**	**01 32 41.9**	**-1.5**
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**01 32 47.5**	**-0.4**
	comp=Z,2.4nm,0.6s,mb3.9,baz=128,slow=10,SNR=14						
KURK	**Kurchatov**	**26.85**	**323**	*e*P	**P**	**01 32 46.9**	**-1.0**
	comp=Z,3.7nm,0.9s,mb3.9						
COLD	**Coldfoot**	**67.42**	**24**	*e*P	**P**	**01 38 02.3**	**-0.4**
	comp=Z,1.6nm,0.9s,mb4.0						
BPAW	**Bear Paw Mtn.**	**68.57**	**27**	*e*P	**P**	**01 38 09.5**	**-0.5**
	comp=Z,2.0nm,1.0s,mb4.0						
YKA	**Yellowknife Ar**	**81.59**	**17**	P	**P**	**01 39 24.5**	**-0.6**
	comp=Z,0.2nm,0.8s,mb3.1,baz=326,slow=4.4,SNR=3.3						

*IDC **21** 01:30:19.5±0.8, 9°.93S×150°.91E, h0km, mb4.7/18, mb1 4.8/19, mb1mx4.8/20, mbtmp4.7/19, ML4.5/1, MS4.2/17, Ms1 4.2/17, ms1mx4.1/20, Error ellipse: s-maj=25.4km s-min=14.4km az=105.0*
*BJI **21** 01:30:21.0, 10°.09S×151°.31E, h36km, mB5.3/32, mb5.0/43, Ms4.9/28, Ms7 4.5/28*
*MOS **21** 01:30:23.2±1.0, 9°.94S×150°.84E, h33km, mb5.3/25, Error ellipse: s-maj=12.3km s-min=7.9km az=92.6*
*ISCJB **21** 01:30:23.1±0.2, 9°.97S±0°.04×150°.91E±0°.05, h33km, mb5.1/74, MS4.3/31, Error ellipse: s-maj=6.7km s-min=5.1km az=172.6*
*GCMT **21** 01:30:24.8±0.1, 9°.96S×150°.97E, h12km, MW5.2/95, Moment Tensor Solution. s66,c90; s95,c161; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.95±.11; $M_{\theta\theta}$3.18±.11; $M_{\phi\phi}$3.76±.12; $M_{r\theta}$1.10±.31; $M_{r\phi}$-3.85±.10; $M_{\theta\phi}$-2.21±.33; Best double couple: $M_0$7.55700×10^{16} NP1:ϕ_s131.00000°, δ36.00000°, λ-99.00000°. NP2: ϕ_s323.00000°, δ54.00000°, λ-83.00000°. Principal axes: T 7.7150, Plg9.0000°, Azm48.0000°; N -0.3250, Plg5.0000°, Azm139.0000°; P -7.4000, Plg79.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 01:30:24.8±1.1, 9°.95S×150°.91E, h36km±9km, mb5.1/37 Error ellipse: s-maj=7.7km s-min=6.0km az=75.0*
*DJA **21** 01:30:37, 10°.22S×150°.78E, h135km, Mw5.5/25*

ISC 21 01:30:21.5±1.3, 9°.98S±0°.03×151°.03E±0°.05, h13km±7km, h34km±1.9km; pP-P, n198, σ0°.97/173, mb5.1/74, MS4.3/31, 9C-5D, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.64**	**242**	*e*Pn	**Pn**	**01 32 25.2**	**-1.1**
	206nm,0.6s						
COEN				*e*Sn	**Sn**	**01 33 56.9**	**-6.8**
CTA	**Charters Tower**	**11.06**	**204**	*e*P	**Pn**	**01 32 59.8**	**+0.4**
	4.7nm,0.3s						
CTA				*e*S	**Sn**	**01 34 58.2**	**-4.8**
CTA	**Charters Tower**	**11.06**	**204**	Pn	**Pn**	**01 32 59.2**	**-0.2**
	2.5nm,0.3s,baz=27,slow=13,SNR=10						
CTA				Sn	**Sn**	**01 35 00.5**	**-2.5**
	0.7nm,0.3s,baz=114,slow=19,SNR=3.1						
CTA				LR	LR	01 36 45.5	
	comp=Z,2μm,20.0s,baz=23,slow=35						
CTA	**Charters Tower**	**11.06**	**204**	P	**Pn**	**01 32 59.2**	**-0.2**
CTA						01 35 00.5	
CTA	**Charters Tower**	**11.06**	**204**	Pn	**Pn**	**01 32 59.2**	**-0.2**
CTA				Sn	**Sn**	**01 35 00.5**	**-2.5**
CTA				LR	LR	01 36 45.5	
CTAO	**Charters Tower**	**11.06**	**204**	*e*P	**Pn**	**01 33 00.1**	**+0.7**
CTAO				*e*		01 35 01.3	
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**11.06**	**204**	*e*Pn	**Pn**	**01 33 00.1**	**+0.7**
	comp=Z,13nm,0.8s						
CTAO				*e*Sn	**Sn**	**01 35 01.3**	**-1.7**
EIDS	**Eidsvold**	**15.31**	**180**	*e*Pn	**Pn**	**01 33 59.8**	**+2.5**
	comp=Z,38nm,0.9s						
KAKA	**Kakadu**	**18.43**	**260**	*e*P	**Pn**	**01 34 35.7**	**-1.1**
	comp=Z,42nm,0.6s						
KAKA	**Kakadu**	**18.43**	**260**	*e*P	**Pn**	**01 34 36.0**	**-0.8**
	comp=Z,168nm,0.8s						
WRAB	**Tennant Creek**	**18.89**	**237**	Pn	**Pn**	**01 34 42.9**	**+0.5**
	comp=Z,252nm,0.9s,SNR=16						
WRAB	**Tennant Creek**	**18.89**	**237**	*e*P	**Pn**	**01 34 42.1**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**18.89**	**237**	*e*P	**Pn**	**01 34 42.1**	**-0.3**
	comp=Z,29nm,0.8s						
DZM	**Mont Dzumac**	**19.06**	**131**	*e*P	**Pn**	**01 34 49.6**	**+5.2**
	comp=Z,179nm,1.3s						
DZM				*e*S	**Sn**	**01 38 16.4**	**-1.5**
	comp=Z,571nm,24.8s						
DZM				*e*LR	LR	01 39 16.9	
	comp=Z,1μm,21.9s						
ARMA	**Armidale**	**20.34**	**179**	*e*P	**P**	**01 34 58.7**	**+1.1**
ARMA	**Armidale**	**20.34**	**179**	*e*P	**P**	**01 35 00.6**	**+3.0**
	comp=Z,74nm,1.4s						
ASAR	**Alice Springs**	**21.27**	**228**	P	**P**	**01 35 07.3**	**-0.4**
	comp=Z,9.1nm,0.7s,mb4.2,baz=65,slow=9.0,SNR=81						
STKA	**Stephens Creek**	**23.48**	**200**	*

WHN	**Wuhan**	**53.52 320**	P	**P**	**01 39 42.8 +0.8**
WHN			S	**S**	**01 47 08.3 -6.5**
WHN			pmax	pmax	
	comp=Z,160nm,1.2s,mb5.8				
WHN			LR	LR	
	comp=N,280nm,19.2s,MS4.5				
WHN			LR	LR	
	comp=E,330nm,22.9s,MS4.5				
WHN			LR	LR	
	comp=Z,490nm,26.7s,MS4.4				
GYA	**Guiyang**	**56.29 311**	P	**P**	**01 40 04.0 +1.9**
GYA			pP	pP	01 40 15.8 +10
GYA			sP	sP	01 40 20.8 +13
GYA			PcP	PcP	01 41 02.8 +3.3
GYA			PP	PP	01 42 12.0 +4.3
GYA			ScP	ScP	01 44 55.9 -2.9
GYA			S	**S**	**01 47 50.3 -1.8**
GYA			sS	sS	01 48 07.6 +8.6
GYA			SS	SS	01 51 38.0 -1.3
GYA			pmax	pmax	
	comp=Z,20nm,1.0s,mb5.1				
GYA			pmax	pmax	
	comp=Z,140nm,4.8s				
GYA			LR	LR	
	comp=N,570nm,18.9s,MS4.9				
GYA			LR	LR	
	comp=E,740nm,19.0s,MS4.9				
GYA			LR	LR	
	comp=Z,590nm,17.9s,MS4.7				
NST	**Nakhon Sawan**	**56.48 296**	P	**P**	**01 40 03.4 -0.2**
ENH	**Enshi**	**56.53 317**	*e*P	**P**	**01 40 03.1 -0.6**
	comp=Z,78nm,1.5s,mb5.5				
DRV	**Dumont d'Urvil**	**57.11 185**	S	**S**	**01 48 03.0 +1.2**
DRV			R		01 58 00.0
DRV			R		03 13 00.0
MDJ	**Mudanjiang**	**57.70 342**	P	**P**	**01 40 11.4 -0.3**
MDJ			pP	pP	01 40 20.5 +4.6
MDJ			sP	sP	01 40 24.0 +6.5
MDJ			PP	PP	01 42 19.1 -0.8
MDJ			S	**S**	**01 48 10.8 +0.7**
MDJ			sS	sS	01 48 22.9 +6.0
MDJ			ScS	ScS	01 49 58.3 -2.7
MDJ			pmax	pmax	
	comp=Z,10.0nm,1.5s,mb4.6				
MDJ			pmax	pmax	
	comp=Z,170nm,4.9s				
MDJ			LR	LR	
	comp=N,150nm,37.7s,MS4.0				
MDJ			LR	LR	
	comp=E,170nm,35.2s,MS4.0				
MDJ			LR	LR	
	comp=Z,200nm,35.6s,MS4.0				
PPT	**Papeete**	**57.99 104**	*e*S	**S**	**01 48 17.6 +2.7**
	comp=Z,260nm,30.5s				
PPT			*e*LQ		01 54 48.0
	comp=Z,2μm,30.8s				
PPT			*e*LR	LR	01 57 20.1
	comp=Z,1μm,33.0s,baz=272				
PPT	**Papeete**	**57.99 104**	LR	LR	01 59 11.7
	comp=Z,266nm,21.1s,MS4.3,baz=276,slow=30				
CN2	**Changchun**	**58.36 338**	*e*P	**P**	**01 40 21.3 +4.9**
CN2			*es*P	sP	01 40 35.3 +13
CN2			PcP	PcP	01 41 10.9 +3.7
CN2			*e*S	**S**	**01 48 21.0 +2.3**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.7s,mb5.0				
CN2			pmax	pmax	
	comp=Z,200nm,5.0s				
CN2			LR	LR	
	comp=N,300nm,19.0s,MS4.7				
CN2			LR	LR	
	comp=E,400nm,19.0s,MS4.7				
CN2			LR	LR	
	comp=Z,200nm,19.0s,MS4.2				
KMI	**Kunming**	**58.57 308**	P	**P**	**01 40 19.1 +0.9**
KMI			pP	pP	01 40 28.4 +6.0
KMI			sP	sP	01 40 31.8 +7.8
KMI			PP	PP	01 42 29.0 +1.0
KMI			S	**S**	**01 48 18.9 -3.3**
KMI			sS	sS	01 48 35.4 +6.3
KMI			SS	SS	01 52 14.8 -0.4
KMI			pmax	pmax	
	comp=Z,18nm,1.3s,mb4.9				
KMI			pmax	pmax	
	comp=Z,140nm,4.1s				
KMI			LR	LR	
	comp=N,130nm,23.3s,MS4.2				
KMI			LR	LR	
	comp=E,170nm,22.1s,MS4.2				
KMI			LR	LR	
	comp=Z,130nm,26.9s,MS3.9				
CMAR	**Chiang Mai Arr**	**58.64 299**	P	**P**	**01 40 18.9 0.0**
	comp=Z,2.2nm,0.4s,mb4.5,baz=121,slow=5.2,SNR=28				
CMAR			LR	LR	02 05 55.5
	comp=Z,108nm,21.7s,MS3.9,baz=125,slow=36				
CHG	**Chiang Mai**	**58.79 299**	⇑P	**P**	**01 40 20.8 +0.9**
	comp=Z,14nm,1.0s,mb5.0				
CHTO	**Chiang Mai**	**58.79 299**	*e*P	**P**	**01 40 20.2 +0.3**
CHTO			pmax	pmax	
	comp=Z,8.0nm,1.0s,mb4.7				
CHTO	**Chiang Mai**	**58.79 299**	*e*P	**P**	**01 40 20.2 +0.3**
	comp=Z,7.7nm,1.0s,mb4.7				
XAN	**Xi'an**	**59.27 320**	P	**P**	**01 40 22.3 -0.7**
XAN			pP	pP	01 40 31.5 +4.3
XAN			pmax	pmax	
	comp=Z,13nm,1.4s,mb4.8				
XAN			pmax	pmax	
	comp=Z,54nm,5.1s				
BJI	**Beijing**	**59.32 329**	P	**P**	**01 40 21.8 -1.3**
BJI			PP	PP	01 42 34.1 -0.3
BJI			S	**S**	**01 48 36.0 +4.7**
BJI			SS	SS	01 52 27.6 +1.1
BJI			pmax	pmax	
	comp=Z,21nm,1.7s,mb4.9				
BJI			pmax	pmax	
	comp=Z,180nm,4.8s				
BJI			LR	LR	
	comp=N,190nm,28.1s				
BJI			LR	LR	
	comp=E,190nm,20.1s				
BJI			LR	LR	
	comp=Z,260nm,36.6s				
CD2	**Chengdu**	**60.89 314**	P	**P**	**01 40 35.8 +1.7**
CD2			sP	sP	01 40 49.8 +10
CD2			PP	PP	01 42 52.1 +3.6
CD2			S	**S**	**01 48 49.8 -2.1**
CD2			sS	sS	01 49 07.1 +8.3
CD2			SS	SS	01 52 51.3 -0.2
CD2			pmax	pmax	
	comp=Z,30nm,1.1s,mb5.3				
CD2			pmax	pmax	
	comp=Z,230nm,4.2s				
CD2			LR	LR	
	comp=E,170nm,6.5s				
CD2			LR	LR	
	comp=Z,260nm,10.1s,MS4.7				
KLR	**Kul'dur**	**61.34 346**	*e*P	**P**	**01 40 33.0 -3.8**
HHC	**Hu-ho-hao-te**	**62.31 327**	*e*P	**P**	**01 40 46.8 +3.3**
HHC			pP	pP	01 40 59.5 +12
HHC			sP	sP	01 41 04.9 +16
HHC			PcP	PcP	01 41 25.6 +2.4
HHC			PP	PP	01 43 06.8 +6.0
HHC			ScP	ScP	01 45 22.3 -2.8
HHC			PcS	PcS	01 45 27.1 +0.8
HHC			S	**S**	**01 49 09.8 +0.3**
HHC			sS	sS	01 49 31.5 +15
HHC			ScS	ScS	01 50 31.4 -4.1
HHC			SS	SS	01 53 15.8 +2.5
HHC			pmax	pmax	
	comp=Z,25nm,1.0s,mb5.3				
HHC			pmax	pmax	
	comp=Z,110nm,5.6s				
HHC			LR	LR	
	comp=N,190nm,13.7s,MS4.7				
HHC			LR	LR	
	comp=E,270nm,12.5s,MS4.7				
HHC			LR	LR	
	comp=Z,230nm,14.1s,MS4.5				
CASY	**Casey**	**62.58 197**	*e*P	**P**	**01 40 44.6 -0.3**
CASY	**Casey**	**62.58 197**	*e*P	**P**	**01 40 44.7 -0.2**
	comp=Z,26nm,1.4s,mb5.2				
BTO	**Baotou**	**62.98 326**	*e*P	**P**	**01 40 46.8 -1.2**
PET	**Petropavlovsk**	**63.09 5**	*e*P	**P**	**01 40 53.2 +4.8**
PET			*e*S	**S**	**01 49 25.0 +6.1**
PET			pmax	pmax	
	comp=Z,100nm,15.9s				
PETK	**Petropavlovsk-**	**63.09 5**	P	**P**	**01 40 48.3 -0.1**
	comp=Z,16nm,1.2s,mb5.0,baz=152,slow=6.5,SNR=8.7				
PETK			LR	LR	02 05 54.3
	comp=Z,84nm,18.6s,MS3.9,baz=190,slow=34				
LZH	**Lanzhou**	**63.81 319**	⇑P	**P**	**01 40 54.8 +1.2**
LZH			pP	pP	01 41 06.3 +8.5
LZH			sP	sP	01 41 09.0 +10
LZH			PP	PP	01 43 11.0 -3.2
LZH			*e*S	**S**	**01 49 29.1 +0.6**
LZH			sS	sS	01 49 43.4 +7.9
LZH			SS	SS	01 53 36.0 -1.1
LZH			pmax	pmax	
	comp=Z,120nm,1.4s,mb5.7				
LZH			pmax	pmax	
	comp=Z,290nm,4.2s				
LZH			LR	LR	
	comp=N,1μm,14.8s				
LZH			LR	LR	
	comp=Z,2μm,16.2s,MS5.3				
HIA	**Hailar**	**65.08 338**	*e*P	**P**	**01 41 01.7 +0.1**
HIA			pmax	pmax	
	comp=Z,21nm,1.0s				
HIA	**Hailar**	**65.08 338**	*e*P	**P**	**01 41 01.7 +0.1**
	comp=Z,21nm,1.0s,mb5.1				
SHL	**Shillong**	**67.52 303**	⇑*i*P	**P**	**01 41 20.0 +2.2**
TAOE	**Nuku Hiva Isla**	**67.79 96**	*e*LR	LR	02 01 53.3
	comp=Z,446nm,31.8s				
GTA	**Gaotai**	**68.34 319**	P	**P**	**01 41 23.1 +0.5**
GTA			pP	pP	01 41 32.8 +5.9
GTA			sP	sP	01 41 37.3 +8.9
GTA			PP	PP	01 43 58.8 +5.2
GTA			S	S	01 50 25.3 +1.8
GTA			sS	sS	01 50 41.8 +11
GTA			SS	SS	01 54 51.4 +4.1
GTA			pmax	pmax	
	comp=Z,19nm,1.8s,mb4.8				
GTA			pmax	pmax	
	comp=Z,220nm,5.6s				
GTA			LR	LR	
	comp=N,340nm,18.4s,MS4.8				
GTA			LR	LR	
	comp=E,410nm,19.3s,MS4.8				
GTA			LR	LR	
	comp=Z,81nm,17.3s,MS4.0				
SBA	**Scott Base**	**68.34 176**	*e*P	**P**	**01 41 22.1 0.0**
SBA			pmax	pmax	
	comp=Z,16nm,1.6s,mb4.8				
SBA	**Scott Base**	**68.34 176**	*e*P	**P**	**01 41 22.1 0.0**
	comp=Z,16nm,1.6s,mb4.8				
MIR	**Mirnyy**	**68.49 201**	⇓*i*P	**P**	**01 41 23.8 +0.6**
MIR			pmax	pmax	
	comp=Z,91nm,1.6s,mb5.5				
ULN	**Ulaanbaatar**	**69.51 330**	*e*P	**P**	**01 41 29.8 +0.1**
ULN			pmax	pmax	
	comp=Z,76nm,1.9s,mb5.3				
ULN	**Ulaanbaatar**	**69.51 330**	*e*P	**P**	**01 41 29.8 +0.1**
	comp=Z,76nm,1.9s,mb5.3				
CIT	**Chita**	**69.65 336**	*e*P	**P**	**01 41 29.3 -1.2**
CIT			*e*		01 41 45.6
LSA	**Lhasa**	**69.80 307**	*e*P	**P**	**01 41 32.4 +0.4**
LSA			pmax	pmax	
	comp=Z,8.0nm,0.7s,mb4.8				
LSA	**Lhasa**	**69.80 307**	*e*P	**P**	**01 41 32.4 +0.4**
	comp=Z,7.8nm,0.7s,mb4.8				
SONM	**Songino Array**	**69.81 330**	P	**P**	**01 41 31.8 +0.2**
	comp=Z,12nm,1.1s,mb4.8,baz=136,slow=5.3,SNR=44				
SONM			LR	LR	02 11 55.4
	comp=Z,231nm,20.0s,MS4.4,baz=280,slow=36				
CLNS	**Chul'man**	**69.99 345**	*e*P	**P**	**01 41 32.4 -0.1**
CLNS			*e**PP	pP	01 41 38.7 +2.0
CLNS			*e*		01 41 55.6
CLNS			*e*		01 44 04.1
CLNS			*e*S	S	01 50 31.7 -11
CLNS			*e**SS	sS	01 51 25.5 +36
CLNS			pmax	pmax	
	comp=Z,36nm,1.1s,mb5.2				
CLNS			pmax	pmax	
	comp=E,8.0nm,1.0s				
CLNS			pmax	pmax	
	comp=N,26nm,1.1s				
CLNS			pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.5				
CLNS			pmax	pmax	
	comp=N,9.0nm,0.9s				
CLNS			pmax	pmax	
	comp=E,8.0nm,0.9s				
CLNS			smax		
	comp=E,169nm,13.0s				
CLNS			smax		
	comp=N,108nm,11.8s				
SEY	**Seymchan**	**72.70 1**	⇑*e*P	**P**	**01 41 48.1 -0.6**
ZAK	**Zakamensk**	**73.03 330**	⇓*i*P	**P**	**01 41 51.4 +0.4**
ZAK			pmax	pmax	
	comp=Z,24nm,1.4s,mb4.9				
YAK	**Yakutsk**	**73.70 350**	*e*P	**P**	**01 41 53.9 -0.7**
YAK			pmax	pmax	
	comp=Z,36nm,1.0s,mb5.3				
YAK			pmax	pmax	
	comp=N,16nm,1.3s				
TLY	**Talaya**	**73.71 331**	*e*P	**P**	**01 41 55.5 +0.6**
TLY			*e*S	S	01 51 31.3 +5.9
TLY			*e*		01 51 55.3
TLY			pmax	pmax	
	comp=Z,18nm,1.4s,mb4.8				
BOD	**Bodaibo**	**74.01 340**	*e*P	**P**	**01 41 54.9 -1.7**
BOD			*e*		01 52 17.6
BOD			pmax	pmax	
	comp=Z,15nm,1.5s,mb4.7				
MOY	**Mondy**	**74.97 330**	*e*P	**P**	**01 42 02.3 0.0**
MOY			pmax	pmax	
	comp=Z,66nm,2.1s,mb5.2				
WMQ	**Urumqi**	**78.39 319**	P	**P**	**01 42 21.9 +0.1**
WMQ			pP	pP	01 42 32.8 +6.7
WMQ			PP	PP	01 45 21.0 +1.7
WMQ			S	S	01 52 15.1 -2.2
WMQ			SKS		01 52 29.0
WMQ			ScS	ScS	01 52 37.3 -4.9
WMQ			SS	SS	01 57 20.1 -0.5
WMQ			pmax	pmax	
	comp=Z,31nm,1.6s,mb5.0				
WMQ			pmax	pmax	
	comp=Z,200nm,5.8s				
WMQ			LR	LR	
	comp=N,89nm,21.0s,MS4.1				
WMQ			LR	LR	
	comp=E,29nm,23.0s,MS4.1				
WMQ			LR	LR	
	comp=Z,62nm,24.0s,MS3.9				
BILL	**Bilibino**	**78.58 6κ**	*i*P	**P**	**01 42 22.6 +0.3**
BILL			*e*		01 42 29.3
BILL			*e*		01 42 34.9
BILL			*e*		01 52 29.1
BILL			*e*SS	SS	01 57 24.3 +1.8
BILL			pmax	pmax	
	comp=Z,43nm,1.2s,mb5.2				
BILL			MLR	MLR	
	comp=Z,100nm,22.0s,MS4.1				
BILL	**Bilibino**	**78.58 6**	*e*P	**P**	**01 42 22.9 +0.6**
	comp=Z,49nm,1.4s,mb5.2				
MAW	**Mawson**	**80.15 203**	*e*P	**P**	**01 42 30.9 -0.1**
	comp=Z,8.7nm,1.4s,mb4.5				
MAW	**Mawson**	**80.15 203**	P	**P**	**01 42 31.2 +0.2**
	comp=Z,7.2nm,1.0s,mb4.5,baz=64,slow=7.9,SNR=6.7				
MAW			LR	LR	02 11 37.1
	comp=Z,180nm,21.0s,MS4.4,baz=88,slow=31				
TIXI	**Tiksi**	**82.78 353**	*e*P	**P**	**01 42 43.1 -1.7**
TIXI			pmax	pmax	
	comp=Z,25nm,1.8s,mb4.9				
TIXI	**Tiksi**	**82.78 353**	*e*P	**P**	**01 42 43.9 -0.9**
	comp=Z,18nm,1.1s,mb5.0				
MK31	**Makanchi Array**	**83.09 320**	*e*P	**P**	**01 42 46.8 -0.1**
MKAR	**Makanchi Array**	**83.09 320**	P	**P**	**01 42 46.7 -0.2**
	comp=Z,8.1nm,0.9s,mb4.8,baz=99,slow=7.5,SNR=53				
MKAR	**Makanchi Array**	**83.09 320**	P	**P**	**01 42 46.7 -0.2**
TTA	**Tatalina**	**83.20 22**	*e*P	**P**	**01 42 46.1 -1.0**
TTA			pmax	pmax	
	comp=Z,11nm,1.1s,mb4.8				
TTA	**Tatalina**	**83.20 22**	*e*P	**P**	**01 42 46.1 -1.0**
	comp=Z,10nm,1.1s,mb4.8				
ZAA0	**Zalesovo Array**	**84.49 327**	*e*P	**P**	**01 42 52.3 -1.6**
ZALV	**Zalesovo Beam**	**84.49 327**	P	**P**	**01 42 52.1 -1.8**
	comp=Z,6.0nm,0.6s,mb4.9,baz=111,slow=5.1,SNR=28				
ZALV			LR	LR	02 17 40.1
	comp=Z,68nm,20.3s,MS4.0,baz=247,slow=34				
RC01	**Rabbit Creek A**	**84.58 25**	*e*P	**P**	**01 42 54.2 0.0**
	comp=Z,22nm,1.4s,mb5.1				
PPLA	**Purkeypile**	**84.60 23**	*e*P	**P**	**01 42 53.9 -0.4**
	comp=Z,31nm,1.9s,mb5.1				
KSH	**Kashi**	**84.99 311**	*e*P	**P**	**01 42 58.1 +1.3**
KSH			*e*pP	pP	01 43 07.6 +6.5
KSH			*es*P	sP	01 43 11.6 +8.9
KSH			*e*PP	PP	01 46 15.5 +1.7
KSH			*e*SKS		01 53 15.6
KSH			*e*S	S	01 53 21.3 -4.4
KSH			*es*S	sS	01 53 38.6 +5.7
KSH			pmax	pmax	
	comp=Z,18nm,1.2s,mb5.1				
KSH			pmax	pmax	
	comp=Z,170nm,5.1s				
KSH			LR	LR	
	comp=N,82nm,5.4s				
KSH			LR	LR	
	comp=E,60nm,3.2s				
KSH			LR	LR	
	comp=Z,140nm,5.6s				
CHUM	**Lake Minchumin**	**85.11 22**	*e*P	**P**	**01 42 57.2 +0.4**
	comp=Z,22nm,1.4s,mb5.1				
KTH	**Kantishna Hill**	**85.44 22**	*e*P	**P**	**01 42 57.6 -0.9**
	comp=Z,5.1nm,1.1s,mb4.6				
ULHL	**Ulahol**	**85.61 314**	P	**P**	**01 43 00.1 +0.3**
	SNR=14				
NVS	**Novosibirsk**	**85.70 328**	⇓*i*P	**P**	**01 42 58.7 -1.3**
NVS			pmax	pmax	
	comp=Z,74nm,1.8s,mb5.6				
NVS			pmax	pmax	
	comp=N,20nm,1.6s				
NVS			pmax	pmax	
	comp=E,35nm,1.6s				
KZA	**Kyzart**	**86.26 314**	P	**P**	**01 43 04.4 +1.3**
	SNR=38				
TKM2	**Tokmak 2**	**86.26 315**	P	**P**	**01 43 03.3 +0.3**
	SNR=11				
TKM2	**Tokmak 2**	**86.26 315**	*e*P	**P**	**01 43 03.0 0.0**
TKM2			pmax	pmax	
	comp=Z,26nm,1.4s,mb5.3				
TKM2	**Tokmak 2**	**86.26 315**	*e*P	**P**	**01 43 03.0 0.0**
	comp=Z,26nm,1.4s,mb5.3				
MCK	**McKinley**	**86.29 23**	*e*P	**P**	**01 43 02.1 -0.6**
MCK			pmax	pmax	
	comp=Z,29nm,1.4s,mb5.3				
MCK	**McKinley**	**86.29 23**	*e*P	**P**	**01 43 02.1 -0.6**
	comp=Z,29nm,1.4s,mb5.3				
KBK	**Karagaybulak**	**86.64 314**	P	**P**	**01 43 05.2 +0.3**
	SNR=7.1				
KURK	**Kurchatov**	**86.77 323**	P	**P**	**01 43 04.1 -1.2**
	comp=Z,1.5nm,0.6s,mb4.4,baz=105,slow=4.6,SNR=9.3				
KURK	**Kurchatov**	**86.77 323**	⇑*e*P	**P**	**01 43 04.2 -1.1**
KURK			pmax	pmax	
	comp=Z,28nm,2.5s,mb5.0				
KURK	**Kurchatov**	**86.77 323**	*e*P	**P**	**01 43 04.6 -0.7**
	comp=Z,15nm,1.3s,mb5.0				
UCH	**Uchtor**	**86.83 314**	P	**P**	**01 43 06.9 +1.1**
	SNR=15				
UCH	**Uchtor**	**86.83 314**	*e*P	**P**	**01 43 06.2 +0.3**
	comp=Z,37nm,1.5s,mb5.4				
CHMS	**Chumysh**	**86.88 314**	P	**P**	**01 43 06.1 0.0**
	SNR=9.2				
FRU	**Bishkek**	**86.93 314**	*e*P	**P**	**01 43 06.0 -0.3**
FRU			*e*		01 43 16.0
FRU			pmax	pmax	
	comp=Z,60nm,1.4s,mb5.6				
AAK	**Ala-Archa**	**86.96 314**	P	**P**	**01 43 06.9 +0.4**
	comp=Z,75nm,1.4s,mb5.7,SNR=5.1				
AAK	**Ala-Archa**	**86.96 314**	P	**P**	**01 43 06.8 +0.4**
	SNR=7.0				
AAK	**Ala-Archa**	**86.96 314**	P	**P**	**01 43 06.5 0.0**
	comp=Z,3.1nm,0.8s,mb4.6,baz=150,slow=2.5,SNR=22				
AAK	**Ala-Archa**	**86.96 314**	*e*P	**P**	**01 43 06.1 -0.4**
AAK			pmax	pmax	
	comp=Z,35nm,1.4s,mb5.4				
AAK	**Ala-Archa**	**86.96 314**	*e*P	**P**	**01 43 06.1 -0.4**
	comp=Z,35nm,1.4s,mb5.4				
USP	**Ospenovka**	**87.13 315**	P	**P**	**01 43 06.8 -0.5**
	SNR=16				
COLA	**College**	**87.28 22**	*e*P	**P**	**01 43 06.8 -0.7**
COLA			pmax	pmax	
	comp=Z,8.0nm,0.9s,mb5.0				
COLA	**College**	**87.28 22**	*e*P	**P**	**01 43 06.8 -0.7**
	comp=Z,8.0nm,0.9s,mb5.0				
AML	**Almayashu**	**87.39 313**	P	**P**	**01 43 09.3 +0.7**
	SNR=10				
AML	**Almayashu**	**87.39 313**	*e*P	**P**	**01 43 08.9 +0.3**
	comp=Z,49nm,1.6s,mb5.5				
EKS2	**Erkin-Say**	**87.47 314**	*e*P	**P**	**01 43 09.2 +0.2**
COLD	**Coldfoot**	**87.69 19**	*e*P	**P**	**01 43 10.2 +0.8**
	comp=Z,27nm,1.8s,mb5.2				
MENT	**Mentasta**	**87.96 25**	*e*P	**P**	**01 43 11.6 +0.7**
EGAK	**Eagle**	**89.78 23**	*e*P	**P**	**01 43 20.1 +0.7**
	comp=Z,16nm,1.2s,mb5.2				
DAWY	**Dawson**	**90.20 24**	*e*P	**P**	**01 43 22.2 +0.9**
BVAR	**Borovoye Array**	**92.32 323**	P	**P**	**01 43 29.9 -1.5**
	comp=Z,1.7nm,0.7s,mb4.5,baz=103,slow=6.5,SNR=11				
BVAR			LR	LR	02 21 35.9
	comp=Z,92nm,21.6s,MS4.2,baz=186,slow=33				
BRVK	**Borovoye**	**92.39 323**	⇑*i*P	**P**	**01 43 30.6 -1.1**
BRVK			pmax	pmax	
	comp=Z,11nm,2.5s,mb4.7				
INK	**Inuvik**	**93.89 21**	*e*P	**P**	**01 43 38.0 -0.3**
NVAR	**Mina Array Bea**	**96.64 52**	P	**P**	**01 43 53.5 +2.0**
	comp=Z,1.0nm,0.3s,mb4.7,baz=250,slow=3.0,SNR=4.7				
ABKAR	**Akbulak array**	**98.18 319**	*e*P	**P**	**01 43 56.1 -2.2**
	comp=Z,2.6nm,1.0s,mb4.7				
YKA	**Yellowknife Ar**	**100.80 28**	P	Pdif	01 44 09.7 -0.1
	comp=Z,0.1nm,0.5s,baz=256,slow=5.0,SNR=3.1				
YKA	**Yellowknife Ar**	**100.80 28**	P	Pdif	01 44 09.7 -0.1
OBN	**Obninsk**	**112.04 326**	*i* PKIKP	PKiKP	01 48 57.0 +0.6
OBN			pmax	pmax	
	comp=Z,10.0nm,1.1s				
OBN			MLR	MLR	
	comp=Z,100nm,23.0s,MS4.3				
BRTR	**Keskin Array B**	**117.33 310**	PKP	PKPdf	01 49 05.2 -1.9
	comp=Z,0.3nm,0.4s,baz=108,slow=3.2,SNR=5.1				
BRTR	**Keskin Array B**	**117.33 310**	*c i* PKIKP	PKPdf	01 49 06.8 -0.3
NOA	**NORSAR Array B**	**121.11 338**	PKP	PKPdf	01 49 13.4 -0.3
	comp=Z,0.7nm,0.8s,baz=53,slow=1.9,SNR=3.3				
KOLS	**Kolonicke sedl**	**122.42 322**	*e*PKIKP	PKPdf	01 49 16.1 -0.5
KOLS			*e*		01 51 00.1
KOLS	**Kolonicke sedl**	**122.42 322**	*e*PKP	PKPdf	01 49 16.0 -0.6
KOLS			*e*PP	PP	01 51 00.1 +7.5
NIE	**Niedzica**	**123.37 324**	*e*PKIKP	PKPdf	01 49 19.0 +0.6
PSZ	**Piszkesteto**	**124.28 322**	*e*PKIKP	PKPdf	01 49 19.4 -0.8
VYHS	**Vyhne**	**124.66 323**	*e*PKIKP	PKPdf	01 49 19.3 -1.6
VYHS			*e*		01 51 08.9
VYHS	**Vyhne**	**124.66 323**	*e*PKP	PKPdf	01 49 19.3 -1.6
VYHS			*e*PP	PP	01 51 08.9 +1.3
MORC	**Moravsky Berou**	**124.79 325**	*e*PKIKP	PKPdf	01 49 20.1 -1.0
BRG	**Berggiesshubel**	**126.18 328**	*e*(P)	PKPdf	01 49 23.5 -0.2
	comp=Z,25nm,1.9s				
BRG					
	comp=N,132nm,28.8s				
BRG					
	comp=E,125nm,20.9s				
BRG					
	comp=Z,160nm,31.9s				
BRG	**Berggiesshubel**	**126.18 328**	*e*PKIKP	PKPdf	01 49 23.5 -0.2
BRG			pmax	pmax	
	comp=Z,15nm,1.9s				
BRG			MLR	MLR	
	comp=N,79nm,28.8s				
BRG			MLR	MLR	
	comp=E,75nm,20.9s				
BRG			MLR	MLR	
	comp=Z,96nm,31.9s,MS4.3				
CLL	**Collm**	**126.42 329**	*e*PP	PP	01 51 22.0 +2.8
CLL			*e*PS	PS	02 01 23.0 +0.1
CLL			*e*PPS		02 03 02.0
CLL			*e*SS	SS	02 08 36.0 +13
CLL			*e*		02 14 24.0
GERES	**GERESS Array B**	**127.42 326**	PKP	PKPdf	01 49 25.8 -0.4
	comp=Z,0.8nm,0.5s,baz=75,slow=1.8,SNR=11				
GRA1	**Grafenberg Arr**	**128.29 328**	*e*PKP	PKPdf	01 49 27.5 -0.3
GRF	**Grafenberg Arr**	**128.29 328**	*e*PKPdf	PKPdf	01 49 27.5 -0.3
WTTA	**Wattenberg**	**129.45 325**	⇑*i*PKPdf	PKPdf	01 49 30.1 +0.1
	comp=Z,13nm,1.0s				
OTAV	**Otavalo**	**129.84 98**	*e*PKPdf	PKPdf	01 49 31.6 -0.3
FETA	**Feichten**	**130.10 325**	⇑*i*PKPdf	PKPdf	01 49 27.2 -4.1
	comp=Z,10nm,1.6s				
LPAZ	**La Paz**	**133.28 124**	PKP	PKPdf	01 49 40.0 +1.8
	comp=Z,2.0nm,1.1s,baz=24,slow=3.6,SNR=6.3				
LPAZ	**La Paz**	**133.28 124**	*e*PKPdf	PKPdf	01 49 40.0 +1.8

SDV	**Santo Domingo**	**138.91**	**88**	*e*PKPdf	PKPdf	01 49 48.6	-0.2
MVO	**Moncorvo**	**143.39**	**332**	*e*PKPdf	PKPdf	01 49 54.3	-1.7
TAM	**Tamanrasset**	**144.64**	**295**	*e*PKIKP	PKPdf	01 49 58.2	-0.6
PMRV	**Marv??o**	**144.92**	**330**	*e*PKPdf	PKPdf	01 49 57.6	-1.2
PBAR	**Barrancos**	**145.71**	**329**	*e*PKPdf	PKPdf	01 50 00.3	+0.1
EVO	**Evora**	**145.92**	**330**	*e*PKPdf	PKPdf	01 50 00.7	+0.2
PCVE	**Castro Verde**	**146.63**	**329**	*e*PKPdf	PKPab	01 50 04.2	-0.1
PVAQ	**Vaqueiros**	**146.64**	**328**	*e*PKPdf	PKPdf	01 50 01.0	-0.8
TOA0	**Torodi Ar. Sit**	**149.80**	**279**	*e*PKPdf	PKPdf	01 50 07.2	-0.3
TOA0				*e*PKPbc	PKPbc	01 50 11.8	-0.5
TOA0				*e*PKPab	PKPab	01 50 18.0	+0.3
TORD	**Torodi Ar. Bea**	**149.80**	**279**	PKP	PKPdf	01 50 06.5	-1.0
	comp=Z,16nm,0.6s,baz=63,slow=1.7,SNR=123						
TORD				PKPbc	PKPbc	01 50 12.0	-0.3
	comp=Z,16nm,0.6s,baz=64,slow=2.4,SNR=166						
TORD				PKPab	PKPab	01 50 18.1	+0.4
	comp=Z,7.2nm,0.9s,baz=87,slow=3.2,SNR=7.5						
KIC	**Kosan Boka**	**155.75**	**263**	*e*P	PKPab	01 50 40.0	-2.8
	comp=Z,61nm,1.3s						
DBIC	**Dimbokro**	**155.92**	**264**	PKPab	PKPab	01 50 42.9	-0.7
	comp=Z,4.5nm,0.9s,baz=74,slow=4.7,SNR=5.8						
LIC	**Lamto**	**156.01**	**263**	*e*P	PKPab	01 50 43.0	-0.9
	comp=Z,57nm,1.3s						
TIC	**Toumodi**	**156.07**	**264**	*e*P	PKPab	01 50 40.7	-3.5
	comp=Z,56nm,1.2s						

*IDC **21** 01:37:31.9±2.3, 9°.89S×150°.98E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/14, mbtmp4.0/6, Error ellipse: s-maj=76.5km s-min=25.6km az=104.0*
*NEIC **21** 01:37:32.5±1.4, 9°.91S×151°.19E, h10km, mb4.3/2, Error ellipse: s-maj=39.4km s-min=16.2km az=109.0*
*ISCJB **21** 01:37:35.2±1.8, 9°.9S±0°.2×151°.0E±0°.3, h33km, mb3.9/7, Error ellipse: s-maj=46.9km s-min=18.7km az=17.2*
ISC 21 01:37:36.4±1.9, 10°.0S±0°.2×151°.1E±0°.3, h35km, n9, σ0°60/8, mb3.9/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**18.99**	**237**	*e*P	**Pn**	**01 41 56.9**	**+1.0**
	6.9nm,0.7s						
ASAR	**Alice Springs**	**21.36**	**228**	P	**P**	**01 42 20.1**	**-0.7**
	1.3nm,0.7s,mb3.4,baz=64,slow=11,SNR=5.4						
STKA	**Stephens Creek**	**23.53**	**201**	P	**P**	**01 42 43.8**	**+0.2**
	14nm,1.1s,mb4.3,baz=16,slow=11,SNR=9.6						
FITZ	**Fitzroy Crossi**	**26.00**	**249**	P	**P**	**01 43 05.8**	**-0.4**
	2.5nm,0.7s,mb3.8,baz=102,slow=3.9,SNR=4.0						
KULM	**Kulim**	**52.51**	**285**	*e*P	**P**	**01 46 46.3**	**-0.4**
	6.9nm,1.0s,mb4.5						
SONM	**Songino Array**	**69.84**	**330**	P	**P**	**01 48 44.4**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=131,slow=5.9,SNR=5.2						
MKAR	**Makanchi Array**	**83.13**	**320**	P	**P**	**01 49 58.6**	**-0.1**
	1.2nm,0.8s,mb4.0,baz=104,slow=5.1,SNR=7.0						
ZALV	**Zalesovo Beam**	**84.52**	**327**	P	**P**	**01 50 05.1**	**-0.5**
	1.2nm,0.7s,mb4.1,baz=100,slow=6.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**149.90**	**279**	PKPbc	PKPbc	01 57 24.9	+1.0
	3.0nm,0.7s,baz=57,slow=2.7,SNR=26						

IDC 21 02:00:13.4±1.8, 6°.80S×129°.76E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/17, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=90.1km s-min=26.6km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.93**	**199**	Pn	Pn	02 03 04.8	0.0
	0.5nm,0.3s,baz=25,slow=11,SNR=9.2						
FITZ				Sn	Sn	02 05 02.5	-16
	0.7nm,0.3s,baz=59,slow=5.9,SNR=3.5						
ASAR	**Alice Springs**	**17.23**	**167**	P	Pn	02 04 16.4	+0.8
	0.4nm,0.3s,baz=337,slow=9.8,SNR=24						
ASAR				S	Sn	02 07 14.2	-14
	baz=354,slow=27,SNR=3.1						
STKA	**Stephens Creek**	**27.29**	**158**	P	P	02 05 59.4	-0.3
	2.8nm,1.1s,baz=333,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**67.93**	**327**	P	P	02 11 14.1	+0.2
	0.2nm,0.4s,baz=117,slow=6.8,SNR=3.2						

IDC 21 02:01:30.4±1.8, 5°.82S×131°.11E, h0km, mb4.2/2, mb1 4.3/4, mb1mx3.8/16, mbtmp4.2/4, ML3.8/1, Error ellipse: s-maj=94.7km s-min=25.3km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.32**	**203**	Pn	Pn	02 04 40.4	-0.6
	0.3nm,0.3s,baz=32,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**17.95**	**172**	P	Pn	02 05 43.1	+1.6
	1.1nm,0.3s,baz=349,slow=9.8,SNR=27						
STKA	**Stephens Creek**	**27.72**	**161**	P	P	02 07 20.1	-0.5
	1.0nm,0.3s,baz=328,slow=10,SNR=4.5						
MKAR	**Makanchi Array**	**67.86**	**326**	P	P	02 12 30.8	+0.2
	1.2nm,0.4s,baz=128,slow=7.8,SNR=14						

IDC 21 02:18:00.2±1.2, 10°.81N×141°.21E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/21, mbtmp3.7/4, Error ellipse: s-maj=40.6km s-min=29.2km az=78.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.00**	**192**	P	P	02 24 54.4	-0.1
	0.8nm,0.5s,baz=18,slow=12,SNR=16						
CMAR	**Chiang Mai Arr**	**41.51**	**286**	P	P	02 25 48.6	-0.9
	0.7nm,0.3s,baz=84,slow=8.3,SNR=5.1						
MKAR	**Makanchi Array**	**61.06**	**318**	P	P	02 28 16.7	+0.9
	0.2nm,0.6s,baz=89,slow=9.2,SNR=3.2						
YKA	**Yellowknife Ar**	**86.95**	**27**	P	P	02 30 46.3	-0.6
	0.3nm,0.5s,baz=290,slow=5.4,SNR=6.3						
LPAZ	**La Paz**	**150.98**	**104**	PKPbc	PKPbc	02 37 57.1	+1.1
	0.5nm,0.6s,baz=226,slow=2.5,SNR=3.6						

*ISCJB **21** 02:45:45.8±1.2, 9°.97S±0°.04×150°.95E±0°.05, h1km±7km, mb5.0/74, MS4.5/29, Error ellipse: s-maj=7.7km s-min=6.5km az=179.6*
*IDC **21** 02:45:46.7±0.6, 9°.95S×150°.93E, h0km, mb4.9/17, mb1 4.9/18, mb1mx4.9/19, mbtmp4.9/18, ML4.7/1, MS4.4/19, Ms1 4.4/19, ms1mx4.2/26, Error ellipse: s-maj=21.5km s-min=13.5km az=94.0*
*BJI **21** 02:45:46.8, 10°.51S×151°.34E, h39km, mB5.5/36, mb4.9/42, Ms5.0/36, Ms7 4.6/35*
*MOS **21** 02:45:50.7±0.9, 9°.96S×150°.81E, h32km, mb5.2/26, Error ellipse: s-maj=13.6km s-min=7.9km az=81.6*
*GCMT **21** 02:45:52.6±0.1, 10°.00S×151°.03E, h12km, MW5.4/101, Moment Tensor Solution. s82,c137; s101,c191; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr=1.37±.02; Mθθ=0.64±.02; Mφφ=0.72±.02; Mrθ=0.17±.04; Mθφ=-0.75±.02; Mφr=-0.44±.04; Best double couple: M0=1.47900×10^17 NP1:φs=129.00000°, δ37.00000°, λ=-102.00000°. NP2:φs=324.00000°, δ54.00000°, λ=-81.00000°. Principal axes: T 1.5010, Plg9.0000°, Azm47.0000°; N -0.0490, Plg7.0000°, Azm139.0000°; P -1.4570, Plg79.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 02:45:52.6±1.0, 9°.98S×150°.89E, h39km±9km, mb5.1/45 Error ellipse: s-maj=6.5km s-min=5.4km az=62.0*
*DJA **21** 02:46:00, 10°.40S×150°.71E, h92km, Mw5.6/14*
ISC 21 02:45:50.0±1.3, 9°.99S±0°.04×150°.98E±0°.05, h18km±8km, h36km±1.8km; pP-P, n209, σ1s03/170, mb5.0/74, MS4.5/29, 6C-8D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.60**	**242**	*e*Pn	**Pn**	**02 47 52.0**	**-1.6**
	384nm,0.8s						
COEN				*e*Sn	**Sn**	**02 49 25.8**	**-4.5**
CTA	**Charters Tower**	**11.03**	**204**	*e*P	**Pn**	**02 48 27.1**	**+0.1**
	6.4nm,0.4s						
CTA				*e*S	**Sn**	**02 50 26.4**	**-3.6**
CTA	**Charters Tower**	**11.03**	**204**	Pn	**Pn**	**02 48 27.1**	**0.0**
	3.3nm,0.3s,baz=30,slow=14,SNR=18						
CTA				Sn	**Sn**	**02 50 27.1**	**-2.9**
	3.5nm,0.3s,baz=312,slow=11,SNR=5.2						
CTA				LR	LR	02 52 12.7	
	comp=Z,5μm,20.1s,baz=22,slow=35						
CTA	**Charters Tower**	**11.03**	**204**	P	**Pn**	**02 48 27.1**	**+0.1**
CTA						02 50 27.1	
CTAO	**Charters Tower**	**11.03**	**204**	*e*P	**Pn**	**02 48 27.1**	**+0.1**
EIDS	**Eidsvold**	**15.30**	**180**	*e*Pn	**Pn**	**02 49 25.6**	**+0.4**
	161nm,1.3s						
KAKA	**Kakadu**	**18.38**	**260**	*e*P	**Pn**	**02 50 03.9**	**-0.3**
	133nm,1.1s						
KAKA	**Kakadu**	**18.38**	**260**	*e*P	**Pn**	**02 50 04.4**	**+0.2**
	279nm,1.0s						
WRAB	**Tennant Creek**	**18.85**	**236**	Pn	**Pn**	**02 50 09.0**	**-0.9**
	541nm,1.3s,SNR=26						
WRAB	**Tennant Creek**	**18.85**	**236**	*e*P	**Pn**	**02 50 09.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,137nm,1.2s						
WRAB	**Tennant Creek**	**18.85**	**236**	*e*P	**Pn**	**02 50 09.4**	**-0.4**
	comp=Z,137nm,1.2s						
DZM	**Mont Dzumac**	**19.09**	**131**	*e*P	**Pn**	**02 50 13.9**	**+1.2**
	comp=Z,282nm,1.4s						
DZM				*e*LR	LR	02 54 43.2	
	comp=Z,2μm,22.1s						
DZM	**Mont Dzumac**	**19.09**	**131**	*e*P	**Pn**	**02 50 13.7**	**+1.0**
	comp=Z,187nm,1.4s						
ARMA	**Armidale**	**20.34**	**178**	*e*P	**P**	**02 50 26.1**	**+0.7**
ARMA				*e*S	**S**	**02 54 25.0**	**+12**
ARMA	**Armidale**	**20.34**	**178**	*e*P	**P**	**02 50 26.0**	**+0.5**
	comp=Z,142nm,1.1s						
ASAR	**Alice Springs**	**21.23**	**228**	P	**P**	**02 50 35.6**	**+0.4**
	comp=Z,23nm,0.8s,mb4.5,baz=62,slow=10,SNR=72						
STKA	**Stephens Creek**	**23.45**	**200**	||*i*P	**P**	**02 50 57.9**	**-0.8**
	comp=Z,107nm,1.0s,mb5.2						
STKA	**Stephens Creek**	**23.45**	**200**	P	**P**	**02 50 58.1**	**-0.6**
	comp=Z,159nm,1.0s,mb5.4,baz=6.9,slow=9.1,SNR=103						
STKA				LR	LR	03 00 02.8	
	comp=Z,2μm,18.5s,MS4.7,baz=16,slow=36						
STKA	**Stephens Creek**	**23.45**	**200**	*e*P	**P**	**02 50 58.1**	**-0.7**
	comp=Z,33nm,1.0s,mb4.7						
RIV	**Riverview**	**23.73**	**180**	*e*P	**P**	**02 51 02.5**	**+1.2**
GUMO	**Guam**	**24.20**	**345**	LR	LR	02 58 25.6	
	comp=Z,865nm,18.5s,MS4.3,baz=47,slow=31						
CNB	**Canberra Magne**	**25.25**	**183**	*e*P	**P**	**02 51 16.0**	**+0.8**
CAN	**Canberra**	**25.28**	**184**	*e*P	**P**	**02 51 16.3**	**+0.9**
CAN				pmax	pmax		
	comp=Z,111nm,1.3s,mb5.2						
CAN	**Canberra**	**25.28**	**184**	*e*P	**P**	**02 51 16.2**	**+0.8**
	comp=Z,111nm,1.3s,mb5.2						
FITZ	**Fitzroy Crossi**	**25.85**	**249**	*e*P	**P**	**02 51 20.2**	**-0.6**
	comp=Z,43nm,0.7s,mb5.1						
FITZ				*e*S	**S**	**02 55 52.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**25.85**	**249**	P	**P**	**02 51 19.9**	**-0.9**
	comp=Z,10nm,0.7s,mb4.5,baz=91,slow=7.0,SNR=24						
FITZ				LR	LR	03 01 13.0	
	comp=Z,2μm,21.3s,MS4.6,baz=71,slow=36						
FITZ	**Fitzroy Crossi**	**25.85**	**249**	*e*P	**P**	**02 51 20.4**	**-0.4**
	comp=Z,23nm,0.8s,mb4.8						
TOO	**Toolangi**	**27.90**	**189**	*e*P	**P**	**02 51 39.5**	**+0.4**
FORT	**Forrest**	**29.71**	**223**	*e*P	**P**	**02 51 54.5**	**-0.7**
	comp=Z,33nm,0.8s,mb5.1						
FORT	**Forrest**	**29.71**	**223**	*e*P	**P**	**02 51 55.3**	**0.0**
	comp=Z,102nm,1.2s,mb5.4						
KAPI	**Kappang**	**31.34**	**277**	P	**P**	**02 52 09.7**	**-0.2**
	comp=Z,383nm,1.0s,mb6.2,SNR=7.9						
KAPI	**Kappang**	**31.34**	**277**	P	**P**	**02 52 08.1**	**-1.8**
	comp=Z,68nm,1.1s,mb5.4,baz=96,slow=4.2,SNR=12						
KAPI	**Kappang**	**31.34**	**277**	P	**P**	**02 52 08.1**	**-1.8**
MBWA	**Marble Bar**	**32.02**	**246**	*e*P	**P**	**02 52 15.6**	**-0.2**
	comp=Z,35nm,1.1s,mb5.1						
RAO	**Raoul Island**	**34.83**	**128**	LR	LR	03 02 24.2	
	comp=Z,166nm,19.5s,MS3.8,baz=342,slow=29						
TSM	**Tawau**	**35.91**	**292**	P	**P**	**02 52 51.0**	**+1.4**
AFI	**Afiamalu**	**36.62**	**100**	LR	LR	03 05 09.2	
	comp=Z,454nm,21.2s,MS4.2,baz=86,slow=32						
URZ	**Urewera**	**36.63**	**144**	P	**P**	**02 53 00.2**	**+4.7**
	comp=Z,10nm,0.8s,mb4.7,baz=340,slow=10,SNR=3.2						
URZ				LR	LR	03 03 57.9	
	comp=Z,710nm,20.5s,MS4.4,baz=320,slow=30						
SDKM	**Sandakan**	**37.07**	**293**	P	**P**	**02 53 00.3**	**+0.7**
KLBR	**Kellerberrin**	**37.53**	**230**	*e*P	**P**	**02 53 02.4**	**-0.9**
	comp=Z,42nm,0.9s,mb5.2						
RPZ	**Rata Peaks**	**37.86**	**156**	P	**P**	**02 53 05.6**	**-0.2**
	comp=Z,20nm,0.9s,mb4.8,baz=291,slow=8.6,SNR=4.0						
RPZ				LR	LR	03 05 50.7	
	comp=Z,845nm,21.9s,MS4.5,baz=321,slow=32						
KKM	**Kota Kinabalu**	**38.12**	**293**	P	**P**	**02 53 08.9**	**+0.4**
KKM	**Kota Kinabalu**	**38.12**	**293**	*e*P	**P**	**02 53 08.1**	**-0.4**
	comp=Z,50nm,1.1s,mb5.2						
NWAO	**Narrogin (SRO)**	**38.55**	**229**	P	**P**	**02 53 11.6**	**-0.3**
	comp=Z,26nm,0.9s,mb4.9,baz=56,slow=7.0,SNR=7.9						
NWAO	**Narrogin (SRO)**	**38.55**	**229**	P	**P**	**02 53 11.6**	**-0.3**
BTM	**Bintulu**	**39.96**	**287**	P	**P**	**02 53 25.9**	**+2.1**
SBUM	**Sibu**	**40.53**	**286**	P	**P**	**02 53 30.4**	**+1.8**
KSM	**Kuching**	**42.06**	**283**	P	**P**	**02 53 42.8**	**+1.6**
KSM	**Kuching**	**42.06**	**283**	*e*P	**P**	**02 53 41.6**	**+0.4**
	comp=Z,68nm,1.1s,mb5.2						
NACB	**Ninganchiao**	**44.46**	**320**	*e*P	**P**	**02 54 00.0**	**-0.4**
	comp=Z,74nm,1.4s,mb5.2						
YHNB	**Yeheng**	**44.96**	**320**	*e*P	**P**	**02 54 04.0**	**-0.4**
	comp=Z,45nm,1.1s,mb5.2						
QZH	**Quanzhou**	**46.94**	**318**	P	**P**	**02 54 22.3**	**+2.3**
QZH				S	**S**	**03 01 12.5**	**+2.0**
QZH				LR	LR		
	comp=Z,870nm,26.8s,MS4.6						
MJAR	**Matsushiro Arr**	**47.82**	**346**	P	**P**	**02 54 26.3**	**-0.3**
	comp=Z,8.6nm,0.9s,mb4.8,baz=173,slow=8.4,SNR=6.8						
MJAR				LR	LR	03 11 39.3	
	comp=Z,251nm,19.6s,MS4.2,baz=180,slow=32						
MAJO	**Matsushiro**	**47.82**	**346**	*e*P	**P**	**02 54 27.6**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.3						
MAJO	**Matsushiro**	**47.82**	**346**	*e*P	**P**	**02 54 27.6**	**+1.0**
	comp=Z,35nm,1.2s,mb5.3						
MAT	**Matsushiro**	**47.82**	**346**	P	**P**	**02 54 27.4**	**+0.8**
MAT				S	**S**	**03 01 19.0**	**-3.7**
MYKOM	**Kota Tinggi**	**48.36**	**281**	P	**P**	**02 54 32.1**	**+0.8**
QIZ	**Qiongzhong**	**49.76**	**305**	P	**P**	**02 54 39.0**	**-2.9**
QIZ				S	**S**	**03 01 45.1**	**-5.6**
QIZ				pmax	pmax		
	comp=Z,290nm,7.3s						
QIZ				LR	LR		
	comp=N,270nm,17.8s						
QIZ				LR	LR		
	comp=Z,400nm,25.6s						
IPM	**Ipoh**	**51.80**	**284**	P	**P**	**02 54 57.8**	**+0.4**
NJ2	**Nanjing**	**51.88**	**325**	*e*P	**P**	**02 54 58.9**	**+1.3**
NJ2				pP	pP	02 55 08.6	+5.3
NJ2				sP	sP	02 55 12.8	+7.4
NJ2				PP	PP	02 56 56.8	+1.1
NJ2				S	**S**	**03 02 19.0**	**-0.6**
NJ2				sS	sS	03 02 37.0	+8.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				pmax	pmax		
	comp=Z,390nm,4.2s						
NJ2				LR	LR		
	comp=N,400nm,19.5s,MS4.8						
NJ2				LR	LR		
	comp=E,890nm,24.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,370nm,19.6s,MS4.4						
KSRS	**Korea Array**	**51.91**	**337**	P	**P**	**02 54 57.2**	**-0.5**
	comp=Z,4.1nm,0.7s,mb4.5,baz=156,slow=8.1,SNR=10						
KSRS				LR	LR	03 16 00.1	
	comp=Z,393nm,19.8s,MS4.5,baz=124,slow=35						
KULM	**Kulim**	**52.38**	**285**	P	**P**	**02 55 02.0**	**+0.2**
KULM	**Kulim**	**52.38**	**285**	*e*P	**P**	**02 55 00.9**	**-0.8**
	comp=Z,28nm,0.8s,mb5.2						
GYA	**Guiyang**	**56.26**	**311**	P	**P**	**02 55 30.8**	**+1.1**
GYA				pP	pP	02 55 42.3	+6.9
GYA				sP	sP	02 55 48.8	+11
GYA				PcP	PcP	02 56 28.4	+1.2
GYA				PP	PP	02 57 39.3	+4.0
GYA				ScP	ScP	03 00 23.4	-2.5
GYA				S	**S**	**03 03 17.8**	**-1.3**
GYA				sS	sS	03 03 35.8	+7.4
GYA				SS	SS	03 07 06.3	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=N,580nm,18.6s,MS4.9						
GYA				LR	LR		
	comp=E,760nm,19.2s,MS4.9						
GYA				LR	LR		
	comp=Z,790nm,18.4s,MS4.8						
MDJ	**Mudanjiang**	**57.70**	**342**	P	**P**	**02 55 39.1**	**-0.4**
MDJ				pP	pP	02 55 48.1	+2.9
MDJ				sP	sP	02 55 52.1	+4.7
MDJ				ScP	ScP	03 00 29.4	-2.3
MDJ				PcS	PcS	03 00 33.1	-0.3
MDJ				S	**S**	**03 03 36.0**	**-1.3**
MDJ				ScS	ScS	03 05 26.0	-2.2
MDJ				pmax	pmax		
	comp=Z,230nm,6.4s						
MDJ				LR	LR		
	comp=N,330nm,45.8s,MS4.2						
MDJ				LR	LR		
	comp=E,320nm,46.4s,MS4.2						
MDJ				LR	LR		
	comp=Z,440nm,47.4s,MS4.2						
PPT	**Papeete**	**58.03**	**104**	*e*S	**S**	**03 03 41.9**	**-0.9**
	comp=Z,562nm,31.2s						
PPT				*e*LQ		03 10 16.9	
	comp=Z,3μm,30.0s						
PPT				*e*LR	LR	03 12 47.8	
	comp=Z,2μm,32.0s,baz=268						
PPT	**Papeete**	**58.03**	**104**	LR	LR	03 14 50.3	
	comp=Z,285nm,20.4s,MS4.4,baz=269,slow=30						
CN2	**Changchun**	**58.35**	**338**	*e*P	**P**	**02 55 49.1**	**+5.0**
CN2				*e*pP	pP	02 55 59.1	+9.2
CN2				*e*sP	sP	02 56 03.1	+11
CN2				*e*S	**S**	**03 03 49.6**	**+3.6**
CN2				SS	SS	03 07 44.0	+5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,600nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.5						
KMI	**Kunming**	**58.54**	**308**	P	**P**	**02 55 46.9**	**+1.1**
KMI				pP	pP	02 56 01.3	+10
KMI				sP	sP	02 56 07.1	+13
KMI				PP	PP	02 57 57.3	+1.7
KMI				S	**S**	**03 03 49.3**	**+0.2**
KMI				sS	sS	03 04 13.1	+15
KMI				SS	SS	03 07 45.4	+3.3
KMI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
KMI				pmax	pmax		
	comp=Z,280nm,4.6s						
KMI				LR	LR		
	comp=N,120nm,23.2s,MS4.4						
KMI				LR	LR		
	comp=E,290nm,20.8s,MS4.4						
KMI				LR	LR		
	comp=Z,240nm,25.6s,MS4.2						
CMAR	**Chiang Mai Arr**	**58.61**	**299**	P	**P**	**02 55 45.6**	**-0.8**
	comp=Z,6.3nm,0.9s,mb4.7,baz=118,slow=5.4,SNR=15						
CHTO	**Chiang Mai**	**58.75**	**299**	*e*P	**P**	**02 55 48.0**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
CHTO	**Chiang Mai**	**58.75**	**299**	*e*P	**P**	**02 55 48.0**	**+0.5**
	comp=Z,12nm,1.0s,mb4.9						
BJI	**Beijing**	**59.30**	**329**	P	**P**	**02 55 49.9**	**-0.9**
BJI				PP	PP	02 58 06.3	+4.2
BJI				S	**S**	**03 03 58.3**	**-0.2**
BJI				SS	SS	03 07 53.1	-0.5
BJI				pmax	pmax		
	comp=Z,20nm,2.5s,mb4.7						
BJI				pmax	pmax		
	comp=Z,300nm,5.0s						
BJI				LR	LR		
	comp=N,320nm,28.2s						
BJI				LR	LR		
	comp=E,290nm,22.2s						
BJI				LR	LR		
	comp=Z,310nm,35.0s						
CD2	**Chengdu**	**60.86**	**314**	P	**P**	**02 56 04.5**	**+2.7**
CD2				pP	pP	02 56 14.6	+7.1
CD2				sP	sP	02 56 18.5	+8.8
CD2				PP	PP	02 58 21.0	+4.9
CD2				S	**S**	**03 04 19.0**	**+0.1**
CD2				sS	sS	03 04 35.8	+7.5
CD2				SS	SS	03 08 20.0	+1.5
CD2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.5						
CD2				pmax	pmax		
	comp=Z,360nm,5.7s						
CD2				LR	LR		
	comp=N,300nm,13.7s						
CD2				LR	LR		
	comp=Z,380nm,19.0s						
KLR	**Kul'dur**	**61.34**	**346**	*e*P	**P**	**02 56 05.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**62.29**	**327**	*e*P	**P**	**02 56 13.5**	**+2.3**
HHC				pP	pP	02 56 26.4	+9.5
HHC				sP	sP	02 56 31.6	+13
HHC				PcP	PcP	02 56 51.9	+1.0
HHC				PP	PP	02 58 33.1	+4.6
HHC				ScP	ScP	03 00 48.8	-3.4
HHC				PcS	PcS	03 00 53.6	-0.4
HHC				S	**S**	**03 04 37.4**	**+0.8**
HHC				sS	sS	03 04 57.8	+12
HHC				ScS	ScS	03 05 57.5	-5.1
HHC				SS	SS	03 08 42.6	+2.1
HHC				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
HHC				LR	LR		
	comp=N,280nm,13.1s,MS4.8						
HHC				LR	LR		
	comp=E,320nm,13.3s,MS4.8						
HHC				LR	LR		
	comp=Z,400nm,14.2s,MS4.7						
CASY	**Casey**	**62.56**	**197**	||*i*P	**P**	**02 56 12.1**	**-0.5**
CASY	**Casey**	**62.56**	**197**	*e*P	**P**	**02 56 12.0**	**-0.5**
	comp=Z,46nm,1.4s,mb5.4						
PET	**Petropavlovsk**	**63.10**	**5**	*e*P	**P**	**02 56 18.3**	**+2.0**
PET				*e*S	**S**	**03 04 49.3**	**+3.0**
PET				*e*SS	SS	03 08 48.2	-4.5
PET				pmax	pmax		
	comp=Z,100nm,16.0s						
PETK	**Petropavlovsk-**	**63.11**	**5**	P	**P**	**02 56 16.4**	**0.0**
	comp=Z,10nm,0.9s,mb5.0,baz=106,slow=3.8,SNR=8.1						
PETK				LR	LR	03 21 21.5

comp=Z,14nm,1.2s,mb4.9
SBA Scott Base 68.33 176 *e*P **P 02 56 50.6 +0.8**
comp=Z,14nm,1.2s,mb4.9
MIR Mirnyy 68.47 201 ⇓*i*P **P 02 56 51.0 +0.2**
MIR pmax pmax
comp=Z,62nm,1.0s,mb5.6
ULN Ulaanbaatar 69.50 330 *e*P **P 02 56 57.3 -0.1**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ULN Ulaanbaatar 69.50 330 *e*P **P 02 56 57.3 -0.1**
comp=Z,5.2nm,0.8s,mb4.5
SONM Songino Array 69.80 330 P **P 02 56 59.9 +0.5**
comp=Z,8.7nm,1.1s,mb4.6,baz=145,slow=6.2,SNR=21
SONM LR LR 03 27 24.0
comp=Z,424nm,20.9s,MS4.7,baz=277,slow=36
CLNS Chul'man 69.99 345 *e*P **P 02 57 01.0 +0.7**
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=Z,18nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,10.0nm,1.1s
RKT Rikitea 71.54 111 *e*LR LR 03 19 04.3
comp=E,616nm,33.2s
SEY Seymchan 72.71 1⇑*e*P **P 02 57 15.8 -0.8**
TLY Talaya 73.69 332 *e*P **P 02 57 28.4 +5.7**
TLY *e*PS 03 07 36.0
TLY *e* 03 07 45.2
TLY pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
YAK Yakutsk 73.70 350 *e*P **P 02 57 21.9 -0.6**
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.1
YAK pmax pmax
comp=N,9.0nm,1.1s
BOD Bodaibo 74.00 340 *e*P **P 02 57 21.1 -3.2**
BOD pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
MOY Mondy 74.95 330 *e*P **P 02 57 30.1 +0.1**
MOY pmax pmax
comp=Z,63nm,2.6s,mb5.1
WMQ Urumqi 78.37 319 *e*P **P 02 57 49.1 -0.4**
WMQ pP pP 02 58 00.4 +5.0
WMQ PP PP 03 00 48.8 +1.8
WMQ S S 03 07 41.4 -3.0
WMQ SKS 03 07 56.3
WMQ ScS ScS 03 08 04.1 -5.2
WMQ SS SS 03 12 46.6 -1.0
WMQ pmax pmax
comp=Z,25nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,540nm,5.8s
WMQ LR LR
comp=N,140nm,23.0s,MS4.2
WMQ LR LR
comp=E,65nm,28.0s,MS4.2
WMQ LR LR
comp=Z,92nm,30.0s,MS3.9
BILL Bilibino 78.59 6κ *i*P **P 02 57 50.1 -0.1**
BILL *i* pP 02 57 55.8 -0.3
BILL 03 07 46.0
BILL *e*PS 03 08 21.0
BILL SS SS 03 12 55.0 +5.0
BILL pmax pmax
comp=Z,23nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.2
BILL Bilibino 78.59 6 *e*P **P 02 57 50.4 +0.2**
comp=Z,46nm,1.2s,mb5.3
QSPA South Pole Qui 80.00 180 P **P 02 57 57.9 0.0**
comp=Z,27nm,1.1s,mb5.1,baz=354,slow=2.2,SNR=25
QSPA LR LR 03 29 55.9
comp=Z,258nm,20.4s,MS4.6,baz=45,slow=33
QSPA South Pole Qui 80.00 180 *e*P **P 02 57 57.7 -0.2**
comp=Z,26nm,1.0s,mb5.1
MAW Mawson 80.12 203 ⇓*i*P **P 02 57 58.7 0.0**
comp=Z,10nm,1.2s,mb4.6
MAW Mawson 80.12 203 P **P 02 57 58.5 -0.2**
comp=Z,16nm,1.1s,mb4.9,baz=82,slow=6.1,SNR=10.0
MAW LR LR 03 30 20.7
comp=Z,258nm,19.0s,MS4.6,baz=90,slow=33
MAW Mawson 80.12 203 *e*P **P 02 57 58.8 +0.1**
MAW pmax pmax
comp=Z,9.0nm,1.4s
MAW Mawson 80.12 203 *e*P **P 02 57 58.8 +0.1**
comp=Z,8.8nm,1.4s,mb4.5
SVW2 Sparrevohn 82.27 23 *e*P **P 02 58 10.8 +0.6**
TIXI Tiksi 82.78 353 *e*P **P 02 58 10.9 -1.7**
TIXI pmax pmax
comp=Z,11nm,1.2s,mb4.8
MK31 Makanchi Array 83.07 320 *e*P **P 02 58 13.8 -0.8**
MKAR Makanchi Array 83.07 320 P **P 02 58 14.1 -0.5**
comp=Z,5.4nm,0.7s,mb4.7,baz=104,slow=6.6,SNR=59
TTA Tatalina 83.23 22 *e*P **P 02 58 15.1 +0.1**
TTA pmax pmax
comp=Z,13nm,1.2s,mb4.8
TTA Tatalina 83.23 22 *e*P **P 02 58 15.1 0.0**
comp=Z,13nm,1.2s,mb4.8
ZAA0 Zalesovo Array 84.47 327 *e*P **P 02 58 19.8 -1.8**
ZALV Zalesovo Beam 84.47 327 P **P 02 58 19.2 -2.4**
comp=Z,5.8nm,0.6s,mb4.9,baz=112,slow=5.2,SNR=22
ZALV LR LR 03 38 18.1
comp=Z,113nm,18.6s,MS4.3,baz=87,slow=37
RC01 Rabbit Creek A 84.61 25 *e*P **P 02 58 21.7 -0.5**
comp=Z,19nm,1.2s,mb5.1
KSH Kashi 84.96 311 P **P 02 58 24.8 +0.4**
KSH *e*pP pP 02 58 34.8 +4.5
KSH *e*sP sP 02 58 38.9 +6.4
KSH *e*PP PP 03 01 42.8 +1.4
KSH *e*SKS 03 08 42.8
KSH *e*S S 03 08 47.9 -4.8
KSH pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
KSH pmax pmax
comp=Z,170nm,3.5s
KSH LR LR
comp=N,110nm,6.8s
KSH LR LR
comp=E,100nm,7.3s
KSH LR LR
comp=Z,74nm,7.1s
PMR Palmer 85.12 25 *e*P **P 02 58 23.3 -1.4**
PMR pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
PMR Palmer 85.12 25 *e*P **P 02 58 23.3 -1.5**
comp=Z,10nm,1.1s,mb4.9
CHUM Lake Minchumin 85.14 22 *e*P **P 02 58 24.5 -0.2**
comp=Z,15nm,1.1s,mb5.0
KTH Kantishna Hill 85.47 22 *e*P **P 02 58 25.5 -0.9**
comp=Z,4.6nm,0.9s,mb4.6
ULHL Ulahol 85.58 314 P **P 02 58 27.3 -0.2**
SNR=12
TRF Thorofare Moun 85.65 23 *e*P **P 02 58 27.3 0.0**
comp=Z,36nm,1.9s,mb5.3
NVS Novosibirsk 85.69 328 *i*P **P 02 58 25.9 -1.8**
NVS pmax pmax
comp=Z,37nm,1.7s,mb5.3
NVS pmax pmax
comp=N,14nm,1.6s
NVS pmax pmax
comp=E,18nm,1.6s
KZA Kyzart 86.23 314 P **P 02 58 31.4 +0.7**
SNR=26
TKM2 Tokmak 2 86.24 315 P **P 02 58 30.2 -0.4**
SNR=8.5
TKM2 Tokmak 2 86.24 315 *e*P **P 02 58 30.2 -0.5**
TKM2 pmax pmax
comp=Z,11nm,1.2s,mb5.0
TKM2 Tokmak 2 86.24 315 *e*P **P 02 58 30.2 -0.5**
comp=Z,11nm,1.2s,mb5.0
MCK McKinley 86.31 23 *e*P **P 02 58 29.6 -1.0**
MCK pmax pmax
comp=Z,16nm,0.9s,mb5.2
MCK McKinley 86.31 23 *e*P **P 02 58 29.6 -1.0**
comp=Z,16nm,0.9s,mb5.2
BMRM Bremner River 86.73 26 *e*P **P 02 58 32.0 -0.7**
comp=Z,26nm,1.4s,mb5.3
KURK Kurchatov 86.75 323⇑*e*P **P 02 58 31.3 -1.7**
KURK pmax pmax
comp=Z,13nm,1.2s,mb5.0
KURK Kurchatov 86.75 323 *e*P **P 02 58 31.7 -1.3**
comp=Z,12nm,1.3s,mb5.0
UCH Uchtor 86.80 314 P **P 02 58 33.3 -0.2**
SNR=12
UCH Uchtor 86.80 314 *e*P **P 02 58 33.1 -0.4**
comp=Z,12nm,1.2s,mb5.0

FRU Bishkek 86.90 314 *e*P **P 02 58 30.0 -4.0**
AAK Ala-Archa 86.93 314 *e*P **P 02 58 33.7 -0.4**
AAK pmax pmax
comp=Z,12nm,1.1s,mb5.0
AAK Ala-Archa 86.93 314 *e*P **P 02 58 33.7 -0.4**
comp=Z,12nm,1.1s,mb5.0
USP Ospenovka 87.11 315 P **P 02 58 34.8 -0.2**
SNR=7.7
COLA College 87.31 22 *e*P **P 02 58 34.4 -1.0**
COLA pmax pmax
comp=Z,14nm,0.9s,mb5.2
COLA College 87.31 22 *e*P **P 02 58 34.4 -1.0**
comp=Z,14nm,0.9s,mb5.2
AML Almayashu 87.36 313 P **P 02 58 36.2 0.0**
SNR=7.8
AML Almayashu 87.36 313 *e*P **P 02 58 35.9 -0.3**
comp=Z,27nm,1.4s,mb5.3
EKS2 Erkin-Say 87.45 314 P **P 02 58 36.9 +0.3**
SNR=7.8
EKS2 Erkin-Say 87.45 314 *e*P **P 02 58 35.9 -0.7**
comp=Z,16nm,1.3s,mb5.1
COLD Coldfoot 87.72 19 *e*P **P 02 58 38.2 +0.9**
comp=Z,13nm,1.5s,mb4.9
SYO Syowa Base 88.21 200⇑*e*PcP PcP 02 58 43.2 +1.7
EGAK Eagle 89.81 23 *e*P **P 02 58 47.6 +0.3**
comp=Z,19nm,1.1s,mb5.3
DAWY Dawson 90.23 24 *e*P **P 02 58 50.0 +0.7**
BVAR Borovoye Array 92.30 323 P **P 02 58 57.1 -2.0**
comp=Z,1.8nm,0.7s,mb4.5,baz=116,slow=3.4,SNR=7.8
BVAR LR LR 03 41 51.2
comp=Z,111nm,20.3s,MS4.3,baz=334,slow=36
INK Inuvik 93.91 21 *e*P **P 02 59 07.0 +0.8**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 93.91 21 *e*P **P 02 59 07.0 +0.8**
comp=Z,6.4nm,1.1s,mb5.0
RPN Rapa Nui 93.99 118 LR LR 03 32 57.1
comp=Z,202nm,18.1s,MS4.6,baz=214,slow=30
NVL N'Iazarevskaya 94.84 193 *e*P **P 02 59 13.6 +3.1**
NVL *e*S PP 03 03 04.1 +5.4
NVL *e*SKKS SS 03 16 51.6 +4.9
ETW Entiat 96.41 43 *e*P **P 02 59 18.0 -0.1**
comp=Z,8.7nm,1.2s,mb5.1
NVAR Mina Array Bea 96.68 52 P **P 02 59 20.7 +1.2**
comp=Z,1.5nm,0.5s,mb4.7,baz=263,slow=6.6,SNR=4.4
WVOR Wild Horse Val 96.93 48 *e*P **P 02 59 20.3 -0.3**
WVOR pmax pmax
comp=Z,12nm,1.4s,mb5.1
WVOR Wild Horse Val 96.93 48 *e*P **P 02 59 20.2 -0.3**
comp=Z,12nm,1.4s,mb5.1
ABKAR Akbulak array 98.16 319 *e*P **P 02 59 23.5 -2.4**
comp=Z,0.6nm,0.6s,mb4.3
NEW Newport 98.63 42 *e*P **P 02 59 28.0 -0.1**
NEW pmax pmax
comp=Z,8.0nm,1.1s
NEW Newport 98.63 42 *e*P **P 02 59 28.0 0.0**
comp=Z,7.9nm,1.1s,mb5.2
AKTO Aktyubinsk 99.50 320 LR LR 03 42 38.7
comp=Z,120nm,21.5s,MS4.4,baz=262,slow=34
YKA Yellowknife Ar 100.83 28 P Pdif 02 59 37.1 -0.7
comp=Z,0.7nm,0.9s,baz=267,slow=4.5,SNR=3.6
YKA PKKPbc PKKPbc 03 15 49.5 -3.5
comp=Z,0.6nm,0.8s,baz=87,slow=2.9,SNR=13
YKA Yellowknife Ar 100.83 28 P Pdif 02 59 37.1 -0.7
YKA PKKPbc PKKPbc 03 15 49.5 -3.5
PDAR Pinedale Array 103.64 48 Pdiff Pdif 02 59 50.4 +0.1
comp=Z,1.3nm,1.0s,baz=264,slow=3.0,SNR=4.2
BRTR Keskin Array B 117.30 310 PKP PKPdf 03 04 32.8 -2.0
comp=Z,1.1nm,1.0s,baz=11,slow=2.5,SNR=6.4
BRTR Keskin Array B 117.30 310*c i*PKIKP PKPdf 03 04 33.5 -1.3
BRTR pmax pmax
comp=Z,1.0nm,1.0s
LSZ Lusaka 118.02 247 *e*PKIKP PKPdf 03 04 35.9 -0.9
NOA NORSAR Array B 121.10 338 PKP PKPdf 03 04 40.0 -1.4
comp=Z,0.5nm,0.6s,baz=50,slow=1.8,SNR=4.5
NAO01 NORSAR Array S 121.35 338 *e*PKPdf PKPdf 03 04 41.2 -0.7
KOLS Kolonicke sedl 122.40 322 *e*P Pdif 03 01 13.2 -0.5
KOLS *e* 03 04 44.0
KOLS Kolonicke sedl 122.40 322 PDIF Pdif 03 01 13.2 -0.5
KOLS Kolonicke sedl 122.40 322 *e*PKP PKPdf 03 04 44.0 -0.3
NIE Niedzica 123.35 324 *e*PKIKP PKPdf 03 04 46.3 +0.2
KECS Kecovo 123.66 323 *e*PKIKP PKPdf 03 04 44.0 -2.7
KECS Kecovo 123.66 323 *e*PKP PKPdf 03 04 44.0 -2.7
PSZ Piszkesteto 124.26 322 *e*PKIKP PKPdf 03 04 47.0 -0.9
VYHS Vyhne 124.64 323 *e*P Pdif 03 01 23.4 -0.2
VYHS *e* 03 04 46.7
VYHS Vyhne 124.64 323 PDIF Pdif 03 01 23.4 -0.2
VYHS Vyhne 124.64 323 *e*PKP PKPdf 03 04 46.7 -1.9
MORC Moravsky Berou 124.77 325 *e*PKIKP PKPdf 03 04 48.3 -0.5
BRG Berggiesshubel 126.16 328 *e*PKP PKPdf 03 04 50.9 -0.6
comp=Z,12nm,1.6s
BRG Berggiesshubel 126.16 328 *e*PKIKP PKPdf 03 04 50.9 -0.5
BRG pmax pmax
comp=Z,7.0nm,1.6s
CLL Collm 126.41 329 *e*PS PS 03 16 45.0 -5.6
CLL *e* 03 17 30.0
CLL *e*PPS 03 18 24.0
CLL *e* 03 19 38.0
CLL *e*SS SS 03 23 51.0 +1.0
CLL *e*SSS 03 28 18.0
CLL *e* 03 29 52.0
KHC Kasperske Hory 127.32 326 *e*PKIKP PKPdf 03 04 53.0 -0.7
GERES GERESS Array B 127.41 326 PKP PKPdf 03 04 53.4 -0.5
comp=Z,0.9nm,0.6s,baz=104,slow=0.9,SNR=14
NNA Nana 127.70 114 *e*PKPdf PKPdf 03 04 55.2 -0.2
WTTA Wattenberg 129.43 325⇑*i*PKPdf PKPdf 03 04 58.6 +0.9
comp=Z,10nm,1.2s
OTAV Otavalo 129.89 98 *e*PKPdf PKPdf 03 05 00.8 +1.1
FETA Feichten 130.08 325⇑*i*PKPdf PKPdf 03 04 58.6 -0.5
comp=Z,5.9nm,1.0s
LPAZ La Paz 133.31 124 PKP PKPdf 03 05 05.9 -0.1
comp=Z,4.0nm,1.1s,baz=246,slow=6.3,SNR=6.3
LPAZ La Paz 133.31 124 *e*PKPdf PKPdf 03 05 06.7 +0.7
CPUP Villa Florida 134.61 143 PKP PKPdf 03 05 08.0 -0.3
comp=Z,1.8nm,0.7s,baz=199,slow=2.5,SNR=8.3
CPUP Villa Florida 134.61 143 *e*PKPdf PKPdf 03 05 07.8 -0.5
SDV Santo Domingo 138.95 88 *e*PKPdf PKPdf 03 05 16.0 -0.6
ESDC Sonseca Array 142.97 327 PKhKP 03 05 18.6
comp=Z,0.2nm,0.3s,baz=13,slow=4.7,SNR=4.7
MVO Moncorvo 143.38 332 *e*PKPdf PKPdf 03 05 20.4 -3.4
TAM Tamanrasset 144.60 295 *e*PKIKP PKPdf 03 05 25.8 -0.7
PMRV Marv??o 144.91 330 *e*PKPdf PKPdf 03 05 25.6 -0.9
CAM4 Nova Friburgo 145.22 158 ⇓*i*P PKPbc 03 05 26.1 -1.1
CAM4 *i* 03 05 32.8
CAM4 *i* 03 05 35.7
CAM4 *i* 03 05 42.9
CAM4 *i* 03 05 46.2
CAM4 *i* 03 05 54.9
CAM4 *i* 03 06 15.9
CAM4 *i* 03 06 21.0
CAM4 Nova Friburgo 145.22 158 ⇓*i*P PKPbc 03 05 27.1 0.0
CAM4 *i* 03 05 32.9
CAM4 *i* 03 05 35.6
CAM4 *i* 03 05 42.7
CAM4 *i* 03 05 46.4
CAM4 *i* 03 05 54.6
CAM4 *i* 03 05 57.0
CAM4 *i* 03 06 08.4
CAM4 *i* 03 06 15.8
PESTR Estremoz 145.44 330 *e*PKPdf PKPdf 03 05 26.7 -0.7
PBAR Barrancos 145.69 328 *e*PKPdf PKPdf 03 05 27.9 0.0
EVO Evora 145.91 330 *e*PKPdf PKPdf 03 05 28.2 -0.1
PVAQ Vaqueiros 146.62 328 *e*PKPdf PKPdf 03 05 31.2 +1.7
MORF Marmelete 147.18 329 *e*PKPdf PKPdf 03 05 32.4 +2.0
TOA0 Torodi Ar. Sit 149.76 279 *e*PKPdf PKPdf 03 05 34.0 -1.2
TOA0 *e*PKPbc PKPbc 03 05 39.2 -0.8
TOA0 *e*PKPab PKPab 03 05 44.8 -0.5
TORD Torodi Ar. Bea 149.76 279 PKP PKPdf 03 05 33.9 -1.4
comp=Z,23nm,0.8s,baz=63,slow=1.8,SNR=34
TORD PKPbc PKPbc 03 05 39.6 -0.4
comp=Z,23nm,0.8s,baz=64,slow=2.5,SNR=148
DBIC Dimbokro 155.87 264 PKPbc PKPdf 03 05 53.5 +9.2
comp=Z,5.0nm,0.9s,baz=104,slow=9.1,SNR=4.5
DBIC PKPab PKPab 03 06 10.8 -0.3
comp=Z,12nm,1.1s,baz=80,slow=4.6,SNR=5.7
DBIC Dimbokro 155.87 264 *e*PKIKP PKPdf 03 05 43.3 -1.0
DBIC 03 05 53.5
DBIC *e* 03 06 10.2

GUC 21 02:47:20.5±0.5, 23°.93S×67°.51W, h200km, ML3.8, 1C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.39**	**303**	*i* P	Pn	02 48 05.1	+1.9
PECH				*i* S	Sn	02 48 38.7	+2.2
PECH				AML	AML	02 48 39.6	
comp=E,406nm,0.4s							
PB04	**Plate Boundary**	**2.46**	**312**	⇓*i*P	Pn	02 48 10.8	+6.8
PB04				*i* S	Sn	02 48 49.3	+11
PB04				AML	AML	02 48 54.5	
comp=N,111nm,0.1s							
CEN1	**Los Morros**	**2.53**	**282**	⇓*i*P	Pn	02 48 07.3	+2.6
CEN1				*i* S	Sn	02 48 42.5	+3.4
ANCH	**Antofagasta**	**2.67**	**275**	⇓*i*P	Pn	02 48 06.7	+0.4
ANCH				*i* S	Sn	02 48 42.8	+0.8
PB01	**Plate Boundary**	**3.40**	**327**	⇓*i*P	Pn	02 48 16.7	+1.7
PB01				*e*S	Sn	02 49 00.1	+2.4
PB01				AML	AML	02 49 06.9	
comp=N,57nm,0.3s							
HMBC	**Humberston**	**4.25**	**328**	⇑*i*P	Pn	02 48 28.1	+2.6
HMBC				*i* S	Sn	02 49 19.3	+2.8
HMBC				AML	AML	02 49 24.6	
comp=E,40nm,0.4s							
PSGC	**Pisagua**	**4.95**	**330**	AML	AML	02 49 34.3	
comp=N,14nm,0.5s							

ISK ***21*** *02:57:28.9, 39°.17N×40°.42E, h7km, MD3.0*
ISCJB ***21*** *02:57:29.9±0.5, 39°.15N±0°.04×40°.43E±0°.04, h10km, Error ellipse: s-maj=5.5km s-min=4.1km az=163.7*
CSEM ***21*** *02:57:29.2±0.2, 39°.13N×40°.41E, h5km, MD3.0, Error ellipse: s-maj=6.0km s-min=3.7km az=154.0*
DDA ***21*** *02:57:29.1, 39°.15N×40°.43E, h7km±3km, Md2.8*
ISC 21 02:57:29.6±0.7, 39°.14N±0°.04×40°.44E±0°.04, h5km±7km, n19, σ0s85/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.85**	**254**	PG	**Pg**	**02 57 45.4**	**-0.5**
PTK				*e*SG	**Sg**	**02 57 57.8**	**+0.8**
PTK	**Pertek**	**0.85**	**254**	*i* Pg	**Pg**	**02 57 45.4**	**-0.6**
PTK				*e*Sg	**Sg**	**02 57 57.8**	**+0.8**
EZC	**Erzincan**	**1.04**	**307**	*e*PG	**Pg**	**02 57 48.6**	**-1.1**
EZM	**Erzurum**	**1.05**	**42**	*e*PG	**Pg**	**02 57 49.1**	**-0.6**
ERZM	**Erzurum**	**1.05**	**43**	*i* P	**Pg**	**02 57 49.4**	**-0.4**
ERZM				*i* S	**Sg**	**02 58 05.1**	**+1.6**
ERZM	**Erzurum**	**1.05**	**43**	*i* P	**Pg**	**02 57 49.4**	**-0.4**
ERZM				*i* S	**Sg**	**02 58 05.1**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.17**	**230**	*e*PN	**Pn**	**02 57 51.9**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.17**	**230**	*e*Pn	**Pn**	**02 57 51.9**	**-0.7**
BTMT	**Batman**	**1.25**	**139**	*e*PN	**Pn**	**02 57 53.5**	**-0.2**
ELZG	**Elazig**	**1.30**	**241**	*i* P	**Pn**	**02 57 53.2**	**-1.3**
ELZG				*i* S	**Sg**	**02 58 12.4**	**+0.8**
ELZG	**Elazig**	**1.30**	**241**	*i* P	**Pn**	**02 57 53.2**	**-1.3**
KELT	**Kelkit**	**1.36**	**318**	*i* P	**Pn**	**02 57 54.9**	**-0.4**
KELT				*i* S	**Sb**	**02 58 14.9**	**+1.5**
KELT	**Kelkit**	**1.36**	**318**	*i* P	**Pn**	**02 57 54.9**	**-0.4**
KELT				*i* S	**Sb**	**02 58 14.9**	**+1.5**
BEST	**Besiri**	**1.40**	**152**	*i* P	**Pn**	**02 57 55.6**	**-0.2**
BEST				*i* S	**Sb**	**02 58 15.6**	**+1.2**
GUMT	**Gumushane**	**1.52**	**331**	*e*PN	**Pn**	**02 57 56.7**	**-0.7**
KEMA	**Kemaliye**	**1.52**	**276**	*i* P	**Pn**	**02 57 57.0**	**-0.4**
KEMA				*i* S	**Sn**	**02 58 18.4**	**+0.8**
KEMA	**Kemaliye**	**1.52**	**276**	*i* P	**Pn**	**02 57 57.0**	**-0.4**
KEMA				*i* S	**Sn**	**02 58 18.4**	**+0.8**
AGRB	**Hanur-Agry**	**2.03**	**77**	*e*PN	**Pn**	**02 58 04.3**	**-0.1**
AGRB	**Hanur-Agry**	**2.03**	**77**	*e*Pn	**Pn**	**02 58 04.3**	**-0.1**

IDC ***21*** *03:00:00.7±2.4, 0°.79N×98°.05E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, ML4.5/1, Error ellipse: s-maj=101.5km s-min=25.4km az=60.0*
DJA ***21*** *03:00:07, 1°.53N×99°.24E, h7km, MLv3.8/4*
ISC 21 03:00:05.6±2.9, 1°.5N±0°.1×99°.2E±0°.1, h4km±16km, n10, σ1s26/11, mb3.6/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.30**	**288**	P	**Pg**	**03 00 10.7**	**-0.8**
SBSI				S	**Sg**	**03 00 15.4**	**-0.1**
TRSI	**Tarutung**	**0.61**	**339**	P	**Pg**	**03 00 17.8**	**+0.6**
GSI	**Gunungsitoli**	**1.61**	**265**	P	**Pn**	**03 00 36.2**	**+1.4**
BKNI	**Bangkinang**	**2.17**	**121**	P	**Pn**	**03 00 47.6**	**+5.1**
CMAR	**Chiang Mai Arr**	**16.90**	**359**	P	**Pn**	**03 04 07.2**	**+4.2**
0.7nm,0.3s,baz=190,slow=11,SNR=9.3							
ASAR	**Alice Springs**	**41.99**	**129**	P	**P**	**03 07 57.9**	**-0.2**
0.3nm,0.6s,mb3.1,baz=298,slow=6.2,SNR=3.2							
SONM	**Songino Array**	**46.62**	**7**	P	**P**	**03 08 36.7**	**+2.0**
0.5nm,0.6s,mb3.6,baz=176,slow=8.2,SNR=2.9							
MKAR	**Makanchi Array**	**47.50**	**344**	P	**P**	**03 08 40.1**	**-1.5**
0.7nm,0.7s,mb3.8,baz=150,slow=7.9,SNR=6.1							
ZALV	**Zalesovo Beam**	**53.64**	**350**	P	**P**	**03 09 27.9**	**0.0**
0.7nm,0.4s,mb3.9,baz=180,slow=4.3,SNR=3.7							
BVAR	**Borovoye Array**	**56.68**	**340**	P	**P**	**03 09 47.0**	**-2.9**
0.5nm,0.6s,mb3.8,baz=134,slow=8.3,SNR=2.8							

IDC 21 03:21:17.5±1.1, 32°.27S×178°.45W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/15, mbtmp3.9/2, Error ellipse: s-maj=47.1km s-min=37.6km az=82.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.99**	**210**	Pn	Pn	03 22 54.5	-6.7
2.3nm,0.3s,baz=215,slow=3.6,SNR=14							
URZ				Sn	Sn	03 24 08.5	-13
6.0nm,0.3s,baz=156,slow=18,SNR=13							
ASAR	**Alice Springs**	**42.66**	**269**	P	P	03 29 16.2	+0.1
2.1nm,0.9s,baz=112,slow=7.9,SNR=11							
QSPA	**South Pole Qui**	**57.85**	**180**	P	P	03 31 10.9	+0.6
0.9nm,0.8s,baz=46,slow=9.2,SNR=3.7							
MKAR	**Makanchi Array**	**118.67**	**309**	PKP	PKPdf	03 40 05.3	-1.9
0.1nm,0.4s,baz=116,slow=3.4,SNR=2.7							
KURK	**Kurchatov**	**122.05**	**313**	PKP	PKPdf	03 40 12.8	-0.7
0.6nm,0.8s,baz=118,slow=1.7,SNR=4.1							
FINES	**FINESS Array B**	**146.75**	**339**	PKPbc	PKPbc	03 41 00.7	+0.1
1.7nm,0.7s,baz=14,slow=3.9,SNR=6.9							
NOA	**NORSAR Array B**	**150.53**	**350**	PKPbc	PKPbc	03 41 11.2	+0.7
0.3nm,0.6s,baz=14,slow=4.1,SNR=2.6							
HFS	**Hagfors**	**150.99**	**347**	PKPbc	PKPbc	03 41 10.8	-0.7
1.1nm,0.8s,baz=20,slow=4.6,SNR=3.7							

IDC 21 03:52:54.1±2.6, 46°.59N×155°.07E, h0km, mb4.7/1, mb1 4.7/1, mb1mx3.3/22, mbtmp4.7/1, ML3.0/1, Error ellipse: s-maj=64.7km s-min=39.8km az=2.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.74**	**14**	Pn	Pn	03 54 34.3	0.0
0.3nm,0.3s,baz=196,slow=16,SNR=5.1							
KURK	**Kurchatov**	**48.57**	**304**	P	P	04 01 39.6	+0.7
0.9nm,0.2s,baz=67,slow=8.2,SNR=3.4							
YKA	**Yellowknife Ar**	**50.24**	**37**	P	P	04 01 51.4	-0.1
0.3nm,0.7s,baz=297,slow=7.0,SNR=4.7							
TXAR	**Lajitas Array**	**76.39**	**62**	P	P	04 04 45.5	+0.2
0.7nm,0.6s,baz=297,slow=4.0,SNR=11							

NEIC ***21*** *04:43:25.4, 18°.34N×103°.68W, h20km, MD4.0(MEX), After MEX.*
MEX 21 04:43:25.4±1.9, 18°.34N×103°.68W, h20km±31km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.32**	**99**	*e*P	Pb	04 43 31.1	-1.3
MMIG				*i* S	Sb	04 43 36.6	-0.6
R15V		**0.88**	**341**	*e*P	Pb	04 43 39.5	-2.4
R15V				*i* S	Sb	04 43 51.6	-1.6
EZ5V		**1.14**	**4**	*i* P	Pn	04 43 41.8	-4.3
EZ5V				*i* S	Sb	04 43 56.0	-4.7
SFJM	**Santa Fe**	**2.22**	**16**	*e*P	Pn	04 43 59.0	-2.1
SFJM				*i* S	Sn	04 44 25.3	-2.7
SFJM	**Santa Fe**	**2.22**	**16**	*e*P	Pn	04 43 59.0	-2.1
SFJM				*i* S	Sn	04 44 25.3	-2.7
ZIIG	**Zihuatanejo**	**2.23**	**109**	*i* P	Pn	04 43 58.1	-3.1
ZIIG				*i* S	Sn	04 44 25.7	-2.5
ZIIG	**Zihuatanejo**	**2.23**	**109**	*i* P	Pn	04 43 58.1	-3.1
ZIIG				*i* S	Sn	04 44 25.7	-2.5
MOIG	**Morelia**	**2.71**	**60**	*i* P	Pn	04 44 03.5	-4.3
MOIG				*i* S	Sn	04 44 35.4	-4.5

MOIG	**Morelia**	**2.71**	**60**	*i* P	Pn	04 44 03.5	-4.3
MOIG				*i* S	Sn	04 44 35.4	-4.5
CAIG	**El Cayaco**	**3.50**	**111**	*i* P	Pn	04 44 13.4	-5.2
CAIG				*i* S	Sn	04 44 49.6	-10
CAIG	**El Cayaco**	**3.50**	**111**	*i* P	Pn	04 44 13.4	-5.2
CAIG				*i* S	Sn	04 44 49.6	-10
UTMO	**Huajuapan**	**5.61**	**94**	*i* P	Pn	04 44 40.7	-7.0
UTMO				*i* S	Sn	04 46 02.1	+10

MEX 21 04:45:19.9±0.4, 16°.15N×90°.64W, h15km±47km, MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.44**	**275**	*e*P	Pn	04 45 42.0	-3.4
CCIG				*i* S	Sn	04 45 59.6	-4.6
THIG		**2.00**	**232**	*i* P	Pn	04 45 49.6	-3.5
THIG				*i* S	Sn	04 46 13.2	-4.7
SCX	**San Cristobal**	**2.00**	**287**	*i* P	Pn	04 45 50.7	-2.4
SCX				*i* S	Sn	04 46 14.8	-3.1
TGIG		**2.46**	**285**	*i* P	Pn	04 45 56.2	-3.3
TGIG				*i* S	Sn	04 46 24.8	-4.5
PCIG		**2.52**	**260**	*i* P	Pn	04 45 58.2	-2.1
PCIG				*i* S	Sn	04 46 26.2	-4.5
CMIG	**Matias Romero**	**4.17**	**284**	*i* P	Pn	04 46 21.2	-1.8
CMIG				*i* S	Sn	04 47 08.5	-3.1

DJA 21 04:46:20, 8°.14S×107°.02E, h56km, MLv4.0/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.43**	**24**	P	Pn	04 46 43.2	-0.5
LEM				S	Sn	04 47 03.7	+2.2
DBJI	**Dramaga**	**1.60**	**350**	P	Pn	04 46 45.9	-0.1
DBJI				S	Sn	04 47 07.4	+1.9
CGJI	**Cibinong**	**2.01**	**319**	P	Pn	04 46 51.3	-0.2
CGJI				S	Sn	04 47 16.3	+0.8
JCJI	**Jatiwangi**	**2.06**	**37**	P	Pn	04 46 50.4	-1.8
JCJI				S	Sn	04 47 12.7	-4.0
RBSI	**Rajabasa**	**2.61**	**331**	P	Pn	04 47 01.7	+1.9
RBSI				S	Sn	04 47 31.6	+1.3
UGM	**Wanagama**	**3.48**	**87**	P	Pn	04 47 12.9	+1.3
UGM				S	Sn	04 47 53.2	+1.6

*IDC **21** 04:51:20.7±1.5, 13°.03N×120°.92E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/22, mbtmp3.7/3, Error ellipse: s-maj=38.1km s-min=12.6km az=91.0*
*ISCJB **21** 04:51:22.9±0.6, 13°.10N±0°.03×120°.78E±0°.04, h18km±7km, mb3.6/3, Error ellipse: s-maj=6.1km s-min=5.2km az=148.4*
*MAN **21** 04:51:24, 13°.05N×120°.86E, h29km, mb4.4, ML3.2, MS3.0*
MAN INTENSITY II - PTO GALERA ORIENTAL MINDORO.

ISC 21 04:51:22.2±0.6, 13°.09N±0°.03×120°.79E±0°.03, h6km±5km, n17, σ0s92/23, mb3.6/3, 1C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.71**	**153**	*e*P	**Pg**	**04 51 36.6**	**+0.7**
SJMP				*e*S	**Sg**	**04 51 46.4**	**+1.3**
LUBP	**Lubang**	**0.82**	**321**	*e*P	**Pg**	**04 51 38.9**	**+0.8**
LUBP				*e*S	**Sg**	**04 51 47.7**	**-1.1**
TGY	**Tagaytay City**	**1.01**	**8**	Pg	**Pg**	**04 51 41.7**	**0.0**
	708nm,0.3s,baz=193,slow=3.3,SNR=66						
TGY				Lg		04 51 55.6	
	1μm,0.3s,baz=333,slow=23,SNR=12						
TGY	**Tagaytay City**	**1.01**	**8**	*e*P	**Pg**	**04 51 41.6**	**-0.1**
BOAC	**Boac**	**1.09**	**71**	*e*P	**Pg**	**04 51 42.1**	**-1.1**
BOAC				*e*S	**Sg**	**04 51 57.2**	**-0.2**
BUSP	**Coron**	**1.23**	**208**	*e*P	**Pg**	**04 51 45.9**	**+0.2**
BUSP				*e*S	**Sg**	**04 52 00.2**	**-1.5**
OTRP	**Odiongan**	**1.41**	**121**	*e*P	**Pn**	**04 51 47.4**	**-1.0**
OTRP				*e*S	**Sb**	**04 52 03.0**	**-4.2**
AUQP	**San Andres**	**1.85**	**83**	*e*P	**Pn**	**04 51 54.6**	**0.0**
POLP	**Polilio Island**	**1.97**	**34**	*e*P	**Pn**	**04 51 57.8**	**+1.5**
KALP	**Kalibo**	**2.07**	**133‖**	*e*P	**Sn**	**04 52 22.9**	**-0.8**
CUYO	**Cuyo Island**	**2.24**	**174**	*e*P	**Pn**	**04 51 59.4**	**-0.6**
ENPP	**El Nido**	**2.30**	**215**	*e*P	**Pn**	**04 52 01.1**	**+0.4**
RCP	**Roxas**	**2.45**	**128‖**	*e*P	**Pn**	**04 52 03.8**	**+1.0**
RCP				*e*S	**Sn**	**04 52 33.1**	**0.0**
PPR	**Puerto Princes**	**3.86**	**212‖**	*i* P	**Pn**	**04 52 23.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**21.68**	**287**	P	**P**	**04 56 15.2**	**+1.3**
	1.4nm,0.3s,mb3.8,baz=95,slow=8.4,SNR=3.4						
ASAR	**Alice Springs**	**38.72**	**161**	P	**P**	**04 58 45.9**	**-1.5**
	0.5nm,0.5s,mb3.5,baz=337,slow=7.0,SNR=9.9						
MKAR	**Makanchi Array**	**46.57**	**324**	P	**P**	**04 59 50.5**	**-0.4**
	0.6nm,0.8s,mb3.6,baz=122,slow=8.7,SNR=4.7						

*TAP **21** 04:55:14.6, 21°.40N×121°.83E, h20km±1km, ML3.6, D*
*JMA **21** 04:55:18.1±0.4, 21°.61N×121°.88E, h60km*

ISC 21 04:55:16.0±1.0, 21°.47N±0°.06×121°.93E±0°.03, h14km±6km, n36, σ1s29/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.66**	**328**	*i* P	**Pg**	**04 55 28.1**	**-0.8**
	baz=339						
LAY				*i* S	**Sg**	**04 55 37.8**	**+0.1**
	baz=339						
TSEB	**Hengchuen, Pin**	**1.04**	**294**	*e*P	**Pb**	**04 55 34.7**	**-1.1**
	baz=299						
TSEB				S	**Sb**	**04 55 48.4**	**-0.9**
	baz=299						
TWK1	**Hengchun**	**1.14**	**294**	P	**Pb**	**04 55 35.4**	**-2.0**
	baz=300						
TWK1				S	**Sb**	**04 55 50.1**	**-2.0**
	baz=300						
HEN	**Hengchun**	**1.23**	**296**	*e*S	**Sb**	**04 55 52.8**	**-1.7**
	baz=301						
TAW	**Tawu**	**1.30**	**313**	*e*P	**Pn**	**04 55 39.2**	**-0.4**
	baz=319						
TAW				*e*S	**Sb**	**04 55 53.4**	**-3.2**
	baz=319						
EAST	**Anshuo**	**1.35**	**312**	*e*P	**Pn**	**04 55 38.5**	**-1.9**
	baz=318						
EAST				*e*S	**Sn**	**04 55 57.2**	**-0.8**
	baz=318						
ECL	**Taimali**	**1.44**	**321**	*e*P	**Pn**	**04 55 41.0**	**-0.5**
	baz=327						
ECL				*e*S	**Sn**	**04 55 58.8**	**-1.4**
	baz=327						
SCZT	**Fangliau**	**1.51**	**307**	*e*P	**Pn**	**04 55 41.7**	**-0.8**
	baz=326						
SCZT				*e*S	**Sn**	**04 56 01.2**	**-0.7**
	baz=326						
TWG	**Pinlang**	**1.56**	**330**	*e*P	**Pn**	**04 55 42.4**	**-0.8**
	baz=320						
TWG				*e*S	**Sn**	**04 56 03.4**	**+0.3**
	baz=320						
TWP	**Hsiaoliuchiu**	**1.69**	**301**	*e*P	**Pn**	**04 55 44.9**	**-0.1**
	baz=306						
CHKT	**Chengkung**	**1.70**	**342**	*e*P	**Pn**	**04 55 42.7**	**-2.5**
	baz=359						
CHKT				*e*S	**Sn**	**04 56 04.4**	**-2.3**
	baz=359						
SSD	**Sandimen**	**1.75**	**317**	*e*P	**Pn**	**04 55 46.3**	**+0.5**
	baz=329						
ELDTW	**Lidau**	**1.90**	**334**	*e*P	**Pn**	**04 55 46.9**	**-1.0**
	baz=338						
ELDTW				*e*S	**Sn**	**04 56 12.2**	**+0.5**
	baz=338						
TWM1	**Shoushan**	**1.94**	**314**	*e*P	**Pn**	**04 55 50.3**	**+1.9**
	baz=331						
TWF1	**Yuli**	**1.96**	**343**	*e*P	**Pn**	**04 55 47.4**	**-1.3**
	baz=356						
TWF1				*e*S	**Sn**	**04 56 13.7**	**+0.6**
	baz=356						
STYT	**Tauyuan**	**2.00**	**327**	*e*P	**Pn**	**04 55 49.2**	**-0.1**
	baz=332						
SGST	**Jiashian**	**2.03**	**322**	*e*P	**Pn**	**04 55 51.5**	**+1.9**
	baz=327						
SGST				*e*S	**Sn**	**04 56 17.0**	**+2.2**
	baz=327						
EHY	**Hungye**	**2.10**	**345**	*e*P	**Pn**	**04 55 50.5**	**-0.2**
	baz=359						
EHY				*e*S	**Sn**	**04 56 17.3**	**+0.8**
	baz=359						
CHN1	**Nanshi**	**2.14**	**323**	*e*P	**Pn**	**04 55 53.0**	**+1.9**
	baz=327						
CHN1				*e*S	**Sn**	**04 56 21.0**	**+3.5**
	baz=327						
WTP	**Ta-pu**	**2.14**	**326**	*e*P	**Pn**	**04 55 52.7**	**+1.5**
	baz=330						
YUS	**Yu-Shan**	**2.20**	**336**	*e*P	**Pn**	**04 55 53.0**	**+0.9**
	baz=340						
YUS				*e*S	**Sn**	**04 56 20.0**	**+1.0**
	baz=340						
TWK	**Hsinying**	**2.23**	**324**	*e*P	**Pn**	**04 55 53.0**	**+0.6**
	baz=328						
TWK				*e*S	**Sn**	**04 56 19.5**	**-0.2**
	baz=328						
CHN4	**Tsaushan**	**2.24**	**327**	*e*P	**Pn**	**04 55 54.5**	**+2.0**
	baz=331						
ALS	**Alishan**	**2.28**	**333**	*e*P	**Pn**	**04 55 54.7**	**+1.6**
	baz=337						
ALS				*e*S	**Sn**	**04 56 23.9**	**+3.0**
	baz=337						
CHN5	**Tsauling**	**2.41**	**332**	*e*P	**Pn**	**04 55 55.9**	**+1.0**
	baz=335						
SMLT	**Sun Moon Lake**	**2.58**	**339**	*e*P	**Pn**	**04 55 58.4**	**+1.1**
	baz=329						
SMLT				*e*S	**Sn**	**04 56 29.3**	**+0.9**
	baz=329						
TYC	**Yuchr**	**2.61**	**338**	P	**Pn**	**04 55 59.3**	**+1.6**
	baz=342						
TYC				*e*S	**Sn**	**04 56 30.4**	**+1.2**
	baz=342						
WHF	**Hehuan Shan**	**2.73**	**347**	*e*P	**Pn**	**04 56 00.0**	**+0.7**
	baz=2.0						
NNS	**Nan Shan**	**3.00**	**350**	*e*P	**Pn**	**04 56 04.2**	**+1.3**
	baz=5.0						
HATJ	**Hateruma jima**	**3.10**	**34**	P	**Pn**	**04 56 04.6**	**+0.2**
HATJ				*e*S	**Sn**	**04 56 39.5**	**-1.7**
YOJ	**Yonaguni jima**	**3.14**	**18**	P	**Pn**	**04 56 04.7**	**-0.2**
NSK	**Sanguang**	**3.23**	**351**	*e*P	**Pn**	**04 56 07.9**	**+1.7**
	baz=5.0						
IRIF	**Iriomote-Funau**	**3.30**	**30**	P	**Pn**	**04 56 07.3**	**+0.2**
IRIF				*e*S	**Sn**	**04 56 44.8**	**-1.3**
JKRS	**Kuro-shima**	**3.35**	**35**	P	**Pn**	**04 56 08.3**	**+0.4**
JKRS				*e*S	**Sn**	**04 56 45.9**	**-1.6**
JIJ	**Ishigaki jima**	**3.53**	**35**	P	**Pn**	**04 56 10.1**	**-0.2**
JIJ				*e*S	**Sn**	**04 56 49.5**	**-2.3**
JTJ	**Tarama**	**4.06**	**39**	P	**Pn**	**04 56 18.6**	**+1.0**
JTJ				*e*S	**Sn**	**04 57 03.4**	**-1.5**

IDC 21 04:55:23.7±3.8, 45°.43N×150°.69E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, MS2.6/1, Ms1 2.6/1, ms1mx2.0/44, Error ellipse: s-maj=119.0km s-min=29.4km az=3.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**8.94**	**28**	LR	LR	05 01 01.6	
	comp=Z,35nm,19.9s,baz=39,slow=38						
ZALV	**Zalesovo Beam**	**42.02**	**306**	P	P	05 03 16.4	0.0
	0.9nm,0.5s,baz=93,slow=7.2,SNR=2.4						
MKAR	**Makanchi Array**	**46.05**	**297**	P	P	05 03 49.5	+0.6
	0.7nm,0.7s,baz=72,slow=8.3,SNR=6.4						
YKA	**Yellowknife Ar**	**52.98**	**35**	P	P	05 04 42.1	+0.5
	0.1nm,0.6s,baz=300,slow=7.2,SNR=3.1						
NB2	**NORSAR Subarra**	**68.92**	**340**	P	P	05 06 29.4	-0.4
	comp=Z,0.4nm,0.4s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.92**	**340**	P	P	05 06 29.9	+0.1
	comp=Z,0.6nm,0.6s,baz=28,slow=6.4,SNR=4.6						
AKASG	**Malin Array Be**	**71.69**	**325**	P	P	05 06 46.0	-1.0
	comp=Z,0.4nm,0.4s,baz=39,slow=6.1,SNR=2.5						
TXAR	**Lajitas Array**	**79.61**	**59**	P	P	05 07 32.9	+0.1
	comp=Z,0.1nm,0.4s,baz=297,slow=7.9,SNR=2.8						

*NEIC **21** 05:05:00.8, 18°.22N×98°.55W, h62km, MD3.5(MEX), After MEX.*

MEX 21 05:05:00.8±0.7, 18°.22N×98°.55W, h62km±11km, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAIG	**Yautepec**	**0.80**	**322**	*i* P	Pn	05 05 15.2	-1.2
YAIG				*i* S	Sn	05 05 26.1	-1.8
YAIG	**Yautepec**	**0.80**	**322**	*i* P	Pn	05 05 15.2	-1.2
YAIG				*i* S	Sn	05 05 26.1	-1.8
UTMO	**Huajuapan**	**0.81**	**119**	*e*P	Pn	05 05 15.3	-1.2
UTMO				*i* S	Sn	05 05 26.6	-1.6
PLIG	**Platanillo**	**0.92**	**281**	*e*P	Pn	05 05 16.9	-1.0
PLIG				*i* S	Sn	05 05 29.0	-1.5
PLIG	**Platanillo**	**0.92**	**281**	*e*P	Pn	05 05 16.9	-1.0
PLIG				*i* S	Sn	05 05 29.0	-1.5
TPIG	**Tehuac#an**	**1.15**	**80**	*e*P	Pn	05 05 19.7	-1.2
TPIG				*i* S	Sn	05 05 34.0	-1.8
PNIG	**Pinotepa**	**1.86**	**167**	*i* P	Pn	05 05 28.9	-1.6
PNIG				*i* S	Sn	05 05 50.5	-2.5
PNIG	**Pinotepa**	**1.86**	**167**	*i* P	Pn	05 05 28.9	-1.6
PNIG				*i* S	Sn	05 05 50.5	-2.5
ACX	**Acapulco**	**1.88**	**224**	*i* P	Pn	05 05 28.6	-2.0
ACX				*i* S	Sn	05 05 53.3	+0.1
ACX	**Acapulco**	**1.88**	**224**	*i* P	Pn	05 05 28.6	-2.0
ACX				*i* S	Sn	05 05 52.0	-1.2
CAIG	**El Cayaco**	**2.01**	**235**	*i* P	Pn	05 05 30.1	-2.4
CAIG				*i* S	Sn	05 05 55.2	-1.4
CAIG	**El Cayaco**	**2.01**	**235**	*i* P	Pn	05 05 30.1	-2.4
CAIG				*i* S	Sn	05 05 55.2	-1.4
VHO	**Vista Hermosa**	**2.08**	**123**	*i* P	Pn	05 05 33.5	+0.2
VHO				*i* S	Sn	05 05 57.2	-0.9
VHO	**Vista Hermosa**	**2.08**	**123**	*i* P	Pn	05 05 33.5	+0.2
VHO				*i* S	Sn	05 05 57.2	-0.9

*ATH **21** 05:05:17.5, 39°.00N×23°.36E, h25km, MD3.1/5, ML2.9*
*NEIC **21** 05:05:17.5, 39°.00N×23°.36E, h25km, ML2.9(ATH), After ATH.*
*ISCJB **21** 05:05:18.5±0.4, 39°.00N±0°.02×23°.38E±0°.03, h17km±5km, Error ellipse: s-maj=4.6km s-min=3.5km az=178.4*
*CSEM **21** 05:05:18.5±0.1, 38°.99N×23°.37E, h20km, ML2.9, Error ellipse: s-maj=3.3km s-min=2.5km az=99.0*
*THE **21** 05:05:18.2, 38°.97N×23°.35E, h11km±1km, ML3.1/4, Error ellipse: s-maj=1.2km s-min=0.5km az=125.0*

ISC 21 05:05:18.1±0.4, 38°.98N±0°.02×23°.36E±0°.03, h12km±3km, n55, σ0s52/81, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEO	**Neokhori**	**0.34**	**342**	*e*PB	**Pg**	**05 05 25.4**	**+0.4**
NEO				*e*SB	**Sg**	**05 05 30.3**	**+0.6**
NEO	**Neokhori**	**0.34**	**342**	*e*Pb	**Pg**	**05 05 25.4**	**+0.4**
NEO				*e*Sb	**Sg**	**05 05 30.3**	**+0.6**
XOR	**Xorichti**	**0.41**	**341**	P	**Pg**	**05 05 26.4**	**+0.2**
XOR	**Xorichti**	**0.41**	**341**	P	**Pg**	**05 05 26.4**	**+0.2**
LKR	**Lokris**	**0.43**	**221**	*e*PB	**Pg**	**05 05 26.5**	**-0.2**
LKR	**Lokris**	**0.43**	**221**	P	**Pg**	**05 05 26.4**	**-0.3**
LKR				S	**Sg**	**05 05 32.2**	**-0.3**
LKR	**Lokris**	**0.43**	**221**	*e*Pb	**Pg**	**05 05 26.5**	**-0.2**
LKR				S	**Sg**	**05 05 32.2**	**-0.3**
AOS	**Alonnisos**	**0.45**	**65**	P	**Pg**	**05 05 26.9**	**0.0**
AOS				S	**Sg**	**05 05 33.4**	**+0.5**
AOS	**Alonnisos**	**0.45**	**65**	P	**Pg**	**05 05 26.9**	**0.0**
AOS				S	**Sg**	**05 05 33.4**	**+0.5**
AGG	**Agios Georgios**	**0.81**	**273**	*e*PN	**Pg**	**05 05 32.8**	**-0.9**
AGG				*e*SN	**Sg**	**05 05 44.8**	**+0.6**
AGG	**Agios Georgios**	**0.81**	**273**	P	**Pg**	**05 05 32.9**	**-0.8**
AGG				S	**Sg**	**05 05 44.9**	**+0.7**
AGG	**Agios Georgios**	**0.81**	**273**	P	**Pg**	**05 05 32.9**	**-0.8**
AGG				S	**Sg**	**05 05 44.9**	**+0.7**
PAIG	**Paliouri**	**0.98**	**15**	P	**Pg**	**05 05 36.9**	**-0.1**
PAIG	**Paliouri**	**0.98**	**15**	P	**Pg**	**05 05 36.9**	**-0.1**
LTK	**Loutraki**	**1.01**	**198**	*e*PN	**Pg**	**05 05 37.6**	**+0.1**
LTK				*e*SN	**Sn**	**05 05 52.3**	**+0.2**
LTK	**Loutraki**	**1.01**	**198**	P	**Pg**	**05 05 36.7**	**-0.8**
LTK				S	**Sg**	**05 05 51.9**	**+1.3**
LTK	**Loutraki**	**1.01**	**198**	P	**Pg**	**05 05 36.7**	**-0.8**
LTK	**Loutraki**	**1.01**	**198**	*e*Pn	**Pg**	**05 05 37.6**	**+0.1**
LTK				S	**Sg**	**05 05 51.9**	**+1.3**
LTK				*e*Sn	**Sn**	**05 05 52.3**	**+0.2**
PTL	**Penteli**	**1.01**	**157**	*e*PN	**Pg**	**05 05 37.3**	**-0.3**
PTL				*e*SN	**Sg**	**05 05 50.4**	**-0.4**
PTL	**Penteli**	**1.01**	**157**	*e*Pn	**Pg**	**05 05 37.3**	**-0.3**
PTL				*e*Sn	**Sg**	**05 05 50.4**	**-0.4**
ATH	**Athens Observa**	**1.04**	**164**	*e*PN	**Pg**	**05 05 37.9**	**-0.4**
ATH				*e*SN	**Sg**	**05 05 52.2**	**+0.3**
ATH	**Athens Observa**	**1.04**	**164**	*e*Pn	**Pg**	**05 05 37.9**	**-0.4**
ATH				*e*Sn	**Sg**	**05 05 52.2**	**+0.3**
KALE	**Kalithea**	**1.12**	**239**	P	**Pg**	**05 05 38.6**	**-1.2**
KALE				S	**Sg**	**05 05 54.2**	**-0.2**
KALE	**Kalithea**	**1.12**	**239**	P	**Pg**	**05 05 38.6**	**-1.2**
KALE				S	**Sg**	**05 05 54.2**	**-0.2**
VLY	**Voula,Athens**	**1.18**	**163**	*e*PN	**Pn**	**05 05 40.3**	**-0.1**
VLY	**Voula,Athens**	**1.18**	**163**	*e*Pn	**Pn**	**05 05 40.3**	**-0.1**
THL	**Klokotos Trika**	**1.20**	**300**	*e*PN	**Pn**	**05 05 40.5**	**-0.2**
THL				*e*SN	**Sn**	**05 05 56.6**	**-0.3**
THL	**Klokotos Trika**	**1.20**	**300**	P	**Pn**	**05 05 40.8**	**+0.1**
THL				S	**Sb**	**05 05 56.8**	**+0.6**
THL	**Klokotos Trika**	**1.20**	**300**	*e*Pn	**Pn**	**05 05 40.5**	**-0.2**
THL	**Klokotos Trika**	**1.20**	**300**	P	**Pn**	**05 05 40.8**	**+0.1**
THL				*e*Sn	**Sn**	**05 05 56.6**	**-0.3**
EVR	**Evrytania**	**1.21**	**267**	*e*PN	**Pn**	**05 05 40.7**	**-0.2**
EVR	**Evrytania**	**1.21**	**267**	*e*Pn	**Pn**	**05 05 40.7**	**-0.2**
NAIG	**Nisos Aigina**	**1.23**	**175**	*e*PN	**Pn**	**05 05 41.3**	**+0.2**
NAIG	**Nisos Aigina**	**1.23**	**175**	*e*Pn	**Pn**	**05 05 41.3**	**+0.2**
EFP	**Efpalio**	**1.27**	**245**	*e*PN	**Pn**	**05 05 40.9**	**-0.7**
EFP	**Efpalio**	**1.27**	**245**	*e*Pn	**Pn**	**05 05 40.9**	**-0.7**
LIT	**Litokhoron**	**1.31**	**329**	*e*PN	**Pn**	**05 05 41.9**	**-0.3**
LIT	**Litokhoron**	**1.31**	**329**	P	**Pn**	**05 05 41.8**	**-0.4**
LIT	**Litokhoron**	**1.31**	**329**	*e*Pn	**Pn**	**05 05 41.9**	**-0.3**
GUR	**Goura**	**1.31**	**218**	*e*PN	**Pn**	**05 05 42.3**	**0.0**
GUR				*e*SN	**Sn**	**05 06 00.5**	**+0.8**
GUR	**Goura**	**1.31**	**218**	P	**Pn**	**05 05 41.7**	**-0.6**
GUR				S	**Sb**	**05 05 59.3**	**-0.2**
GUR	**Goura**	**1.31**	**218**	P	**Pn**	**05 05 41.7**	**-0.6**
GUR	**Goura**	**1.31**	**218**	*e*Pn	**Pn**	**05 05 42.3**	**0.0**
GUR				S	**Sb**	**05 05 59.3**	**-0.2**
GUR				*e*Sn	**Sn**	**05 06 00.5**	**+0.8**
PLG	**Polygyros**	**1.39**	**3**	*e*PN	**Pn**	**05 05 42.7**	**-0.7**
PLG	**Polygyros**	**1.39**	**3**	P	**Pn**	**05 05 42.9**	**-0.5**
PLG	**Polygyros**	**1.39**	**3**	P	**Pn**	**05 05 42.9**	**-0.5**
OUR	**Ouranopolis**	**1.43**	**19**	P	**Pn**	**05 05 43.4**	**-0.5**
OUR	**Ouranopolis**	**1.43**	**19**	P	**Pn**	**05 05 43.4**	**-0.5**
RLS	**Riolos of Patr**	**1.75**	**239**	*e*PN	**Pn**	**05 05 48.4**	**+0.1**
RLS	**Riolos of Patr**	**1.75**	**239**	*e*Pn	**Pn**	**05 05 48.4**	**+0.1**
VLX	**Vlachokerasia**	**1.79**	**206**	*e*PN	**Pn**	**05 05 49.2**	**+0.4**
VLX	**Vlachokerasia**	**1.79**	**206**	*e*Pn	**Pn**	**05 05 49.2**	**+0.4**
ITM	**Ithomi**	**2.12**	**213**	*e*PB	**Pn**	**05 05 54.5**	**+1.1**
VLI	**Veliai**	**2.28**	**189**	*e*PN	**Pn**	**05 05 55.8**	**+0.2**
VLI	**Veliai**	**2.28**	**189**	*e*Pn	**Pn**	**05 05 55.8**	**+0.2**

*ISCJB **21** 05:10:14.8±1.2, 31°.82N±0°.07×104°.43E±0°.07, h3km±9km, mb3.4/6, Error ellipse: s-maj=13.9km s-min=6.6km az=139.5*
*IDC **21** 05:10:16.3±1.4, 31°.79N×104°.30E, h0km, mb3.3/6, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, Error ellipse: s-maj=46.5km s-min=24.3km az=41.0*
*NEIC **21** 05:10:17.3±0.7, 31°.78N×104°.34E, h10km, mb3.8/1, Error ellipse: s-maj=35.2km s-min=11.2km az=220.0*
*BJI **21** 05:10:17.9, 31°.81N×104°.53E, h13km, ML3.3/9*

ISC 21 05:10:16.9±0.9, 31°.85N±0°.04×104°.32E±0°.06, h4km±7km, n13, σ0s77/18, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.05**	**207**	Pg	**Pg**	**05 10 37.6**	**+0.5**
CD2				Sg	**Sg**	**05 10 50.5**	**-0.3**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**4.24**	**355**	Pg	**Pg**	**05 11 47.9**	**+10**
LZH				Sg	**Sg**	**05 12 32.5**	**-0.7**
LZH				smax			
	comp=N,47nm,0.6s						
LZH				smax			
	comp=E,45nm,0.8s						
LZH				LR	LR		
	comp=E,220nm,4.5s						
LZH				LR	LR		
	comp=Z,370nm,5.0s						
XAN	**Xi'an**	**4.44**	**59**	Pn	**Pn**	**05 11 25.6**	**+0.7**
XAN				Sn	**Sn**	**05 12 23.3**	**+6.3**
XAN				Sg	**Sg**	**05 12 39.5**	**0.0**
XAN				smax			
	comp=N,76nm,0.8s						
XAN				smax			
	comp=E,27nm,0.9s						
ENH	**Enshi**	**4.70**	**108**	*e*Pn	**Pn**	**05 11 27.6**	**-1.0**
GYA	**Guiyang**	**5.75**	**159**	Pg	**Pg**	**05 12 07.5**	**+0.4**
GYA				Sg	**Sg**	**05 13 17.3**	**-4.3**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,40nm,0.9s						
KSRS	**Korea Array**	**20.18**	**67**	P	**P**	**05 14 53.1**	**+0.8**
	comp=E,1.8nm,0.7s,baz=245,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**22.55**	**318**	P	**P**	**05 15 18.1**	**+0.5**
	comp=E,0.1nm,0.3s,mb2.7,baz=105,slow=9.7,SNR=3.1						
KURK	**Kurchatov**	**26.77**	**322**	P	**P**	**05 15 58.9**	**+1.4**
	comp=E,0.3nm,0.2s,mb3.4,baz=131,slow=8.2,SNR=2.5						
ABKAR	**Akbulak array**	**37.32**	**311**	*e*P	**P**	**05 17 28.6**	**-1.4**
	comp=E,0.9nm,0.5s,mb3.9						
WRAB	**Tennant Creek**	**58.99**	**147**	*e*P	**P**	**05 20 16.4**	**-1.2**
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**05 20 38.5**	**+0.1**
	comp=E,0.3nm,0.5s,mb3.7,baz=336,slow=6.5,SNR=4.1						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**05 20 52.0**	**+0.1**
	comp=E,0.2nm,0.4s,mb3.5,baz=88,slow=9.0,SNR=2.7						
YKA	**Yellowknife Ar**	**80.92**	**17**	P	**P**	**05 22 32.1**	**+0.1**
	comp=E,0.2nm,0.7s,mb3.2,baz=327,slow=4.8,SNR=4.1						

*MEX **21**

KRSC 21 05:18:29.0±0.5, 56°.12N×163°.15E, h11km±11km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.20	296	*i* P	Pg	05 18 34.3	+0.9
KBTR				S	Sg	05 18 37.9	+1.6
SRKR	Sorokina	1.23	297	*i* P	Pn	05 18 51.3	-0.7
SRKR				*e*S	Sb	05 19 08.1	+0.2
ZLN	Zelenaya	1.32	266	*i* P	Pn	05 18 53.5	+0.2
ZLN				*e*S	Sb	05 19 12.0	+1.4
BZGR	Bezymyannyi-Gr	1.39	264	*i* P	Pn	05 18 54.7	+0.4
BZGR				*e*S	Sn	05 19 13.9	+1.3
KLY	Klyuchi	1.41	279	*i* P	Pn	05 18 52.5	-2.0
KLY				*i* S	Sn	05 19 09.7	-3.4
KRSR	Krestovskiy	1.45	275	*e*P	Pn	05 18 55.0	-0.1
KRSR				S	Sn	05 19 13.8	-0.2
KPT	Kopyto	1.65	266	*i* P	Pn	05 18 58.6	+0.7
KPT				*e*S	Sn	05 19 20.5	+1.5
KMNR	Kamenistaya	1.68	259	*i* P	Pn	05 18 59.7	+1.5
KMNR				*e*S	Sn	05 19 22.4	+2.7
MKZ	Mys Kozlova	1.77	208	*e*P	Pn	05 18 58.8	-0.6
MKZ				*e*S	Sn	05 19 20.3	-1.5
KOZ	Kozyrevsk	1.84	269	*e*P	Pn	05 19 01.8	+1.4
KOZ				*e*S	Sn	05 19 26.3	+2.7
BKI	Bering	1.84	119	*e*P	Pn	05 18 59.3	-1.2
BKI				*e*S	Sn	05 19 21.5	-2.3
SRDR	Sredinnyy	1.93	277	*e*P	Pn	05 19 03.2	+1.5
SRDR				*e*S	Sn	05 19 27.9	+2.0
SPN	Mys Shipunski	3.53	212	S	Sn	05 20 05.3	-0.1
AVH	Avacha	3.84	224	*e*P	Pn	05 19 30.8	+2.9
GNL	Ganaly	3.87	233	*e*P	Pn	05 19 30.1	+1.8
RUS	Russkaya	4.58	218	*e*P	Pn	05 19 38.8	+0.6

*IDC **21** 05:37:38.8±5.1, 22°.08S×68°.65W, h0km, mb3.7/1, mb1 3.6/2, mb1mx3.4/15, mbtmp3.5/2, ML3.4/1, Error ellipse: s-maj=150.7km s-min=55.5km az=72.0*
*GUC **21** 05:37:54.5±0.8, 21°.02S×68°.96W, h89km±9km, ML3.5*
ISC 21 05:37:53.8±1.1, 20°.97S±0°.05×68°.9W±0°.2, h100km, n8, σ0§86/12, 1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.52	262	⇑*i* P	Pn	05 38 09.0	-0.7
PB01				*i* S	Sn	05 38 20.7	-0.9
PB01				AML	AML	05 38 22.2	
	comp=E,4μm,0.3s						
PB04	Plate Boundary	1.39	201	*i* P	Pn	05 38 23.3	+4.6
PB04				*i* S	Sn	05 38 44.6	+7.1
PB04				AML	AML	05 39 01.4	
	comp=E,263nm,0.4s						
MACH	Maria Elena	1.44	212	*i* P	Pn	05 38 19.4	+0.1
MACH				*i* S	Sn	05 38 38.8	+0.2
PECH	Pedro de Valdi	1.76	203	*i* P	Pn	05 38 24.1	+0.8
PECH				*i* S	Sn	05 38 46.1	+0.4
PECH				AML	AML	05 38 46.3	
	comp=E,489nm,0.3s						
MNMC	Miaee Miae	1.93	341	*e*P	Pn	05 38 25.0	-0.5
MNMC				*i* S	Sn	05 38 50.2	+0.6
MNMC				AML	AML	05 38 51.5	
	comp=E,865nm,0.2s						
LPAZ	La Paz	4.72	10	Pn	Pn	05 39 06.4	+3.6
	comp=E,0.5nm,0.3s,baz=187,slow=6.6,SNR=20						
TORD	Torodi Ar. Bea	77.21	70	P	P	05 49 35.9	-1.5
	comp=E,0.2nm,0.4s,baz=245,slow=5.4,SNR=9.0						
MKAR	Makanchi Array	145.22	35	PKPbc	PKPbc	05 57 19.5	0.0
	comp=E,0.5nm,0.8s,baz=318,slow=2.9,SNR=4.9						

IDC 21 05:46:06.3±11.0, 3°.85S×100°.62E, h0km, mb3.6/2, mb1 3.7/2, mb1mx3.3/22, mbtmp3.6/2, Error ellipse: s-maj=582.3km s-min=32.7km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	37.69	125	P	P	05 53 23.7	0.0
	0.3nm,0.3s,baz=297,slow=8.2,SNR=4.9						
MKAR	Makanchi Array	52.96	344	P	P	05 55 24.5	0.0
	0.3nm,0.4s,baz=161,slow=8.5,SNR=8.3						
TXAR	Lajitas Array	145.76	40	PKPbc	PKPbc	06 05 47.4	-0.7
	0.3nm,0.7s,baz=317,slow=1.4,SNR=4.4						

IDC 21 06:02:05.5±1.6, 16°.39N×147°.34E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/21, mbtmp3.4/3, Error ellipse: s-maj=66.1km s-min=35.5km az=101.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.92	199	P	P	06 09 58.0	0.0
	0.3nm,0.6s,baz=19,slow=8.8,SNR=3.9						
MKAR	Makanchi Array	61.19	315	P	P	06 12 22.1	0.0
	0.2nm,0.6s,baz=108,slow=7.2,SNR=4.0						
YKA	Yellowknife Ar	79.29	28	P	P	06 14 12.8	+0.1
	0.2nm,0.6s,baz=285,slow=5.5,SNR=4.5						

*ISK **21** 06:08:03.5, 37°.30N×37°.44E, h5km, MD2.9*
*ISCJB **21** 06:08:04.6±0.7, 37°.28N±0°.05×37°.39E±0°.05, h10km±5km, Error ellipse: s-maj=9.8km s-min=5.2km az=151.0*
*CSEM **21** 06:08:04.0±0.3, 37°.27N×37°.36E, h8km, MD2.9, Error ellipse: s-maj=10.9km s-min=5.3km az=144.0*
*DDA **21** 06:08:04.3, 37°.17N×37°.44E, h7km±4km, Md2.8*
ISC 21 06:08:04.6±0.7, 37°.26N±0°.06×37°.39E±0°.05, h11km±5km, n15, σ0§64/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.17	237	*e*PG	Pg	06 08 08.7	+0.4
GAZ	Gaziantep	0.17	237	*e*Pg	Pg	06 08 08.7	+0.4
GZT	Gaziantep	0.17	57	*i* P	Pg	06 08 07.3	-1.1
GZT				*i* S	Sg	06 08 11.2	+0.2
ATAB	Bozova	0.75	74	*i* P	Pg	06 08 19.2	0.0
ATAB				*i* S	Sg	06 08 29.2	+0.2
ATAB	Bozova	0.75	74	*i* P	Pg	06 08 19.2	0.0
ATAB				*i* S	Sg	06 08 29.2	+0.2
AKCD	Akcadag	1.11	22	*i* P	Pb	06 08 27.1	+1.1
AKCD				*i* S	Sb	06 08 44.4	+4.0
AKCD	Akcadag	1.11	22	*i* P	Pb	06 08 27.0	+1.1
AKCD				*i* S	Sb	06 08 44.4	+4.0
URFA	Urfa	1.16	81	*e*PN	Pn	06 08 26.8	+0.1
URFA				*e*SN	Sn	06 08 41.9	-0.6
URFA	Urfa	1.16	81	*e*Pn	Pn	06 08 26.8	+0.1
URFA				*e*Sn	Sn	06 08 41.9	-0.6
COBT	Iskenderun	1.17	231	*i* P	Pb	06 08 26.5	-0.3
COBT				*i* S	Sb	06 08 42.5	+0.5
COBT	Iskenderun	1.17	231	*i* P	Pb	06 08 26.5	-0.4
COBT				*i* S	Sb	06 08 42.5	+0.5
MYA	Malataya	1.34	37	*e*PN	Pn	06 08 29.3	0.0
MYA				*e*SN	Sn	06 08 47.8	+0.7
MYA	Malataya	1.34	37	*e*Pn	Pn	06 08 29.3	0.0
MYA				*e*Sn	Sn	06 08 47.8	+0.7
SARI	SarD1z-Kayseri	1.52	339	*e*PN	Pn	06 08 30.6	-1.1
SARI				*e*SN	Sn	06 08 51.0	-0.3
SARI	SarD1z-Kayseri	1.52	339	*e*Pn	Pn	06 08 30.6	-1.1
SARI				*e*Sn	Sn	06 08 51.0	-0.4

*ISCJB **21** 06:11:19.7±0.7, 72°.26N±0°.06×0°.8E±0°.2, h10km, mb3.6/3, MS2.8/2, Error ellipse: s-maj=10.1km s-min=9.2km az=179.7*
*IDC **21** 06:11:21.4±1.1, 72°.21N×0°.50E, h0km, mb3.6/3, mb1 3.7/8, mb1mx3.5/28, mbtmp3.6/8, ML3.3/5, MS2.8/4, Ms1 2.8/4, ms1mx2.4/38, Error ellipse: s-maj=23.1km s-min=18.9km az=41.0*
*CSEM **21** 06:11:22.1, 72°.25N×0°.62E, h10km, After NEIC*
*NEIC **21** 06:11:22.1±0.7, 72°.25N×0°.62E, h10km, Error ellipse: s-maj=11.3km s-min=10.2km az=65.0*
ISC 21 06:11:22.2±0.7, 72°.27N±0°.06×0°.6E±0°.2, h10km, n29, σ1§03/26, mb3.6/3, MS2.8/2, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	3.17	251	Pn	Pn	06 12 10.7	-1.3
	7.5nm,0.3s,baz=354,slow=3.4,SNR=4.3						
JMIC	Jan Mayen	3.17	251	Pn	Pn	06 12 10.6	-1.4
HSP	Hornsund	6.17	33	*e*P	Pn	06 12 52.4	-0.8
SPB4	Spitsbergen Ar	7.14	27	*e*Pn	Pn	06 13 07.1	+0.7
SPB4	Spitsbergen Ar	7.14	27	*e*Pn	Pn	06 13 07.1	+0.7
SPITS	Spitsbergen Ar	7.14	27	Pn	Pn	06 13 07.7	+1.4
	baz=206,slow=13,SNR=34						
SPITS	Spitsbergen Ar	7.14	27	Pn	Pn	06 13 07.7	+1.3
KBS	Kingsbay	7.24	17	*e*Pn	Pn	06 13 07.0	-0.8
KBS	Kingsbay	7.24	17	*e*Pn	Pn	06 13 07.0	-0.8
ARCES	ARCESS Array B	8.56	96	Pn	Pn	06 13 25.4	-0.5
	0.4nm,0.3s,baz=305,slow=13,SNR=10.0						
ARCES	ARCESS Array B	8.56	96	Pn	Pn	06 13 25.4	-0.5
ARCES	ARCESS Array B	8.56	96	Pn	Pn	06 13 25.4	-0.5
ARE0	ARCESS Array S	8.56	96	*e*Pn	Pn	06 13 25.2	-0.7
ARE0	ARCESS Array S	8.56	96	*e*Pn	Pn	06 13 25.2	-0.7
KEV	Kevo	8.91	94	Pn	Pn	06 13 31.0	+0.3
KEV	Kevo	8.91	94	Pn	Pn	06 13 31.0	+0.3
NOA	NORSAR Array B	12.00	155	LR	LR	06 18 42.2	
	comp=Z,32nm,18.1s,baz=350,slow=37						
HFS	Hagfors	13.22	150	Pn	Pn	06 14 30.2	+0.6
	0.1nm,0.3s,baz=0.0,slow=12,SNR=4.4						
HFS				LR	LR	06 18 59.7	
	comp=Z,37nm,21.4s,baz=336,slow=35						
HFS	Hagfors	13.22	150	Pn	Pn	06 14 30.2	+0.6
FINES	FINESS Array B	14.59	125	Pn	Pn	06 14 46.6	-1.6
	0.2nm,0.3s,baz=327,slow=14,SNR=4.7						
FINES	FINESS Array B	14.59	125	Pn	Pn	06 14 46.6	-1.6
VRAC	Vranov	24.14	154	LR	LR	06 26 17.7	
	comp=Z,22nm,19.2s,MS2.6,baz=268,slow=37						
GERES	GERESS Array B	24.24	159	P	P	06 16 41.1	+2.4
	1.0nm,0.8s,mb3.3,baz=353,slow=8.1,SNR=5.7						
GERES	GERESS Array B	24.24	159	P	P	06 16 41.1	+2.4
DAVOX	Davos/Dischmat	25.93	165	LR	LR	06 26 43.2	
	comp=Z,31nm,18.4s,MS2.9,baz=83,slow=36						
YKA	Yellowknife Ar	38.52	318	P	P	06 18 44.2	+0.3
	0.8nm,0.9s,mb3.5,baz=21,slow=8.4,SNR=7.7						
YKA	Yellowknife Ar	38.52	318	P	P	06 18 44.2	+0.3
YKA	Yellowknife Ar	38.52	318	P	P	06 18 44.2	+0.2
TORD	Torodi Ar. Bea	59.09	179	P	P	06 21 22.9	+0.6
	1.3nm,0.7s,mb4.1,baz=2.6,slow=6.3,SNR=9.8						

*NEIC **21** 06:21:35.4, 19°.24N×70°.83W, h134km, MD4.5(RSPR), After RSPR.*
RSPR 21 06:21:35.4, 19°.24N×70°.83W, h134km±16km, MD4.5/13, MD4.5/13, 12C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.51	239	⇑*e*P	Pn	06 21 53.9	-1.1
SDDR	Presa de Saban	0.51	239	*e*S	Sn	06 22 11.1	+1.2
SDDR	Presa de Saban	0.51	239	*e*Pn	Pn	06 21 53.9	-1.2
SDDR				*e*Sn	Sn	06 22 10.6	+0.7
DR12	Loma Pena Alta	1.44	108	⇑*e*P	Pn	06 22 01.9	-1.3
DR12				*e*S	Sn	06 22 26.5	+2.1
PCDR	Punta Cana, DR	2.42	107	⇑*e*P	Pn	06 22 15.8	+0.9
PCDR	Punta Cana, DR	2.42	107	*e*S	Sn	06 22 46.9	+1.7
IMO	Isla Mona	2.99	112	⇑*e*P	Pn	06 22 26.6	+4.5
AGPR	Aguadilla, PR	3.60	102	⇑*e*P	Pn	06 22 36.0	+6.0
CRPR	Cabo Rojo, PR	3.73	109	⇑*e*P	Pn	06 22 36.2	+4.4
AOPR	Arecibo Observ	3.96	102	⇑*e*P	Pn	06 22 36.8	+2.0
CELP	Cerrillos	4.19	105	⇑*e*P	Pn	06 22 40.3	+2.4
CBYP	Canovanas	4.81	101	⇑*e*P	Pn	06 22 45.5	-0.5
CPD	Cerro la Pandu	4.81	104	⇑*e*P	Pn	06 22 46.8	+0.7
HUMP	Col San Antoni	4.84	102	⇑*e*P	Pn	06 22 45.9	-0.7
MTP	Monte Pirata	5.13	102	⇑*e*P	Pn	06 22 50.1	-0.3
STVI	Saint Thomas	5.63	98	⇑*e*P	Pn	06 22 53.2	-3.9

*IDC **21** 06:31:40.6±0.9, 4°.87S×102°.80E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.2/22, mbtmp4.3/13, MS3.7/1, Ms1 3.6/1, ms1mx2.5/27, Error ellipse: s-maj=42.4km s-min=14.2km az=54.0*
*NEIC **21** 06:31:46.2±0.5, 4°.71S×103°.04E, h35km, mb4.6/5, Error ellipse: s-maj=23.8km s-min=6.4km az=53.0*
*ISCJB **21** 06:31:48.2±0.8, 4°.92S±0°.07×103°.00E±0°.08, h76km±5km, mb4.4/25, Error ellipse: s-maj=16.7km s-min=5.3km az=135.4*
*DJA **21** 06:31:49, 5°.00S×103°.00E, h48km, MLv4.6/6*
ISC 21 06:31:49.1±0.8, 4°.93S±0°.07×103°.00E±0°.07, h68km±6km, n45, σ0§79/48, mb4.4/25, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.57	356	P	Pn	06 32 02.1	-0.4
MNAI				S	Sn	06 32 11.6	-0.7
LWLI	Liwa	1.06	95	P	Pn	06 32 08.3	0.0
LWLI				S	Sn	06 32 22.1	-0.4
LHSI	Lahat	1.21	25	S	Sn	06 32 26.9	+0.8
MDSI	Maura Dua	1.25	69	P	Pn	06 32 10.8	0.0
MDSI				S	Sn	06 32 27.4	+0.4
KSI	Kapahiang	1.33	342	P	Pn	06 32 11.9	0.0
KSI				S	Sn	06 32 30.2	+1.3
KASI	Kota Agung	1.60	112	P	Pn	06 32 15.1	-0.3
KASI				S	Sn	06 32 34.6	-0.7
RBSI	Rajabasa	2.88	109	P	Pn	06 32 36.1	+3.4
CGJI	Cibinong	3.16	122	P	Pn	06 32 36.6	+0.1
CGJI				S	Sn	06 33 11.8	-1.2
PDSI	Padang	4.73	328	P	Pn	06 32 58.8	+0.8
KULM	Kulim	10.42	347	Pn	Pn	06 34 09.7	-6.1
CMAR	Chiang Mai Arr	23.58	350	P	P	06 36 52.8	-1.0
	1.8nm,0.4s,mb3.7,baz=185,slow=8.6,SNR=12						
FITZ	Fitzroy Crossi	25.71	122	P	P	06 37 14.3	+1.0
	2.7nm,0.4s,mb4.0,baz=65,slow=14,SNR=24						
WRAB	Tennant Creek	33.96	119	*e*P	P	06 38 26.7	+0.4
	3.3nm,0.5s,mb4.4						
ASAR	Alice Springs	35.12	125	P	P	06 38 37.6	+1.3
	1.5nm,0.3s,mb4.3,baz=296,slow=7.7,SNR=39						
ASAR				PcP	PcP	06 41 08.2	+1.5
	1.1nm,0.5s,baz=307,slow=2.6,SNR=12						
TAPN	Taplejung	35.33	336	*e*P	P	06 38 38.3	+0.3
	5.8nm,0.4s,mb4.7						
RAMN	Ramite	35.44	334	*e*P	P	06 38 36.6	-2.4
JIRN	Jiri	36.24	334	*e*P	P	06 38 45.8	0.0
PKI	Pulchoki	36.51	333	*e*P	P	06 38 48.0	0.0
	3.2nm,0.3s,mb4.7						
PKIN	Phulchoki	36.52	333	*e*P	P	06 38 48.0	-0.1
	5.0nm,0.4s,mb4.8						
GUN	Gumba	36.59	334	*e*P	P	06 38 49.1	+0.3
	16nm,0.4s,mb5.3						
KKN	Kakani	36.75	333	*e*P	P	06 38 50.0	-0.1
	9.9nm,0.4s,mb5.1						
STKA	Stephens Creek	44.98	131	P	P	06 39 59.9	+2.0
	3.2nm,0.5s,mb4.3,baz=304,slow=7.8,SNR=14						
STKA				PcP	PcP	06 41 39.7	+1.6
	1.1nm,0.4s,baz=295,slow=5.4,SNR=2.8						
STKA				LR	LR	06 58 30.9	
	comp=Z,89nm,20.3s,baz=207,slow=36						
STKA	Stephens Creek	44.98	131	P	P	06 39 59.9	+2.0
STKA				PcP	PcP	06 41 39.7	+1.6
STKA				LR	LR	06 58 30.9	
KSRS	Korea Array	48.13	27	P	P	06 40 22.4	0.0
	1.7nm,0.6s,mb4.1,baz=230,slow=7.6,SNR=5.8						
SONM	Songino Array	52.62	3	P	P	06 40 56.6	+0.6
	3.3nm,0.5s,mb4.6,baz=183,slow=9.5,SNR=18						
SONM				PcP	PcP	06 42 05.7	+0.4
	0.9nm,0.4s,baz=206,slow=2.9,SNR=4.1						
UCH	Uchtor	53.61	334	*e*P	P	06 41 03.5	+0.1
	1.3nm,0.6s,mb4.1						
TKM2	Tokmak 2	53.71	335	*e*P	P	06 41 03.9	-0.3
	11nm,0.4s,mb5.2						
EKS2	Erkin-Say	54.28	334	*e*P	P	06 41 08.3	-0.1
	5.0nm,0.7s,mb4.7						
MK31	Makanchi Array	54.67	343	*e*P	P	06 41 10.3	-0.7
MKAR	Makanchi Array	54.67	343	P	P	06 41 10.5	-0.5
	2.3nm,0.7s,mb4.3,baz=145,slow=8.2,SNR=35						
ZAA0	Zalesovo Array	60.61	348	*e*P	P	06 41 51.8	-0.8
ZALV	Zalesovo Beam	60.61	348	P	P	06 41 52.1	-0.6
	3.4nm,0.4s,mb4.7,baz=160,slow=4.7,SNR=11						
BVAR	Borovoye Array	63.97	339	P	P	06 42 14.1	-0.9
	3.0nm,0.5s,mb4.4,baz=141,slow=8.9,SNR=17						
ABKAR	Akbulak array	65.64	331	*e*P	P	06 42 25.3	-0.7
	2.9nm,0.5s,mb4.4						
BRTR	Keskin Array B	77.50	312	P	P	06 43 38.0	+0.5
	1.3nm,0.7s,mb3.8,baz=137,slow=7.7,SNR=8.4						
AKASG	Malin Array Be	83.62	322	P	P	06 44 09.8	-0.3
	0.5nm,0.3s,mb3.8,baz=80,slow=6.2,SNR=3.2						
BUR08	Bucovina Ar. S	85.44	318	*e*P	P	06 44 21.0	+1.6
JOF	Joensuu	86.14	334	*e*p	P	06 44 22.8	+0.3
	1.7nm,0.5s,mb4.2						
FINES	FINESS Array B	88.08	332	P	P	06 44 32.4	+0.5
	1.5nm,0.4s,mb4.4,baz=121,slow=5.7,SNR=11						
FINES	FINESS Array B	88.08	332	P	P	06 44 32.4	+0.5
KAF	Kangasniemi	88.14	333	*e*p	P	06 44 31.6	-0.5
	2.1nm,0.5s,mb4.4						
ARCES	ARCESS Array B	90.23	340	P	P	06 44 41.4	-0.4
	3.3nm,0.9s,mb4.4,baz=134,slow=3.5,SNR=5.7						
TXAR	Lajitas Array	144.99	43	PKPbc	PKPdf	06 51 19.7	+0.4
	1.8nm,0.6s,baz=226,slow=0.8,SNR=34						
JCT	Junction City	146.72	38	*e*PKPbc	PKPbc	06 51 24.5	+0.6
MIAR	Mount Ida	146.77	25	*e*PKPbc	PKPbc	06 51 23.9	-0.1

MAN 21 06:32:24, 17°.56N×122°.54E, h33km, mb4.3, ML3.2, MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.51	193	*e*P	Pb	06 32 36.0	+1.3
PALP				*e*S	Sb	06 32 44.3	+2.2
SGCP	Mt. Cagua	0.83	325	*e*P	Pn	06 32 39.4	0.0
APYP	Conner	1.28	284	*e*P	Pn	06 32 47.4	+1.9
APYP				*e*S	Sn	06 33 01.8	+0.3

IDC 21 06:37:09.6±5.6, 33°.33S×15°.52W, h0km, mb4.4/3, mb1 4.3/3, mb1mx3.7/18, mbtmp4.4/3, MS3.4/2, Ms1 3.4/2, ms1mx3.0/17, Error ellipse: s-maj=369.2km s-min=66.6km az=122.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	35.12	93	LR	LR	06 54 33.4	
	comp=Z,51nm,20.4s,baz=163,slow=30						
LIC	Lamto	40.58	16	*e*P	P	06 44 50.9	-0.1
	63nm,1.4s						
KIC	Kosan Boka	40.77	17	*e*P	P	06 44 52.6	0.0
	18nm,0.6s						
TIC	Toumodi	40.98	16	*e*P	P	06 44 54.2	-0.1
	71nm,1.3s						
DBIC	Dimbokro	41.05	16	P	P	06 44 54.0	-0.8
	3.3nm,0.5s,baz=175,slow=12,SNR=7.6						
TORD	Torodi Ar. Bea	49.05	22	P	P	06 45 58.6	+0.1
	9.7nm,1.1s,baz=199,slow=7.3,SNR=32						
MDT	Midelt	66.59	10	P	P	06 48 02.5	+1.0
	2.8nm,1.2s,baz=212,slow=9.5,SNR=3.6						
GERES	GERESS Array B	85.86	19	LR	LR	07 26 38.3	
	comp=Z,25nm,18.0s,baz=93,slow=35						
YKA	Yellowknife Ar	123.07	327	PKP	PKPdf	06 56 06.6	-0.5
	0.2nm,0.8s,baz=100,slow=2.6,SNR=2.7						

IDC 21 06:38:10.7±5.9, 33°.39S×15°.34W, h0km, mb4.4/3, mb1 4.4/3, mb1mx3.8/17, mbtmp4.4/3, MS3.9/2, Ms1 3.8/2, ms1mx3.2/15, Error ellipse: s-maj=397.6km s-min=65.1km az=122.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	41.06	16	P	P	06 45 55.9	-0.2
	9.5nm,1.0s,baz=175,slow=9.1,SNR=5.3						
TORD	Torodi Ar. Bea	49.04	22	P	P	06 46 59.5	-0.1
	8.8nm,1.0s,baz=200,slow=7.1,SNR=11						
MAW	Mawson	55.15	153	LR	LR	07 08 47.7	
	comp=Z,96nm,18.0s,baz=35,slow=33						
ESDC	Sonseca Array	73.45	9	P	P	06 49 45.0	+0.3
	0.3nm,0.4s,baz=196,slow=3.6,SNR=4.6						
SCHQ	Schefferville	98.36	333	LR	LR	07 30 24.4	
	comp=Z,52nm,19.3s,baz=78,slow=32						
YKA	Yellowknife Ar	123.21	327	PKP	PKPdf	06 57 08.3	-0.3
	0.2nm,0.6s,baz=94,slow=1.4,SNR=3.8						

*DDA **21** 07:07:59.7, 37°.15N×30°.47E, h7km±4km, Md2.8*
*ISK **21** 07:08:00.7, 37°.14N×30°.30E, h5km, MD2.9*
*ISCJB **21** 07:08:02.0±0.5, 37°.13N±0°.03×30°.32E±0°.03, h8km±6km, Error ellipse: s-maj=5.2km s-min=4.2km az=149.1*
*CSEM **21** 07:08:01.7±0.2, 37°.14N×30°.30E, h8km, MD2.8, Error ellipse: s-maj=5.2km s-min=3.9km az=147.0*
ISC 21 07:08:02.2±0.5, 37°.13N±0°.03×30°.32E±0°.03, h10km±5km, n23, σ1§11/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	Korkueli	0.13	169	*i* P	Pg	07 08 03.9	-1.3
KORT				*i* S	Sg	07 08 06.7	-0.6
KORT	Korkueli	0.13	169	*i* P	Pg	07 08 03.9	-1.3
KORT				*i* S	Sg	07 08 06.7	-0.6
ANTB	Antalya	0.35	130	*e*PG	Pg	07 08 08.4	-0.7
ANTB				*e*SG	Sg	07 08 15.5	+1.7
ANTB	Antalya	0.35	130	*e*Pg	Pg	07 08 08.5	-0.6
ANTB				*e*Sg	Sg	07 08 15.5	+1.7
BCK	Bucak	0.40	33	*e*PG	Pg	07 08 09.2	-0.9
BCK				*e*SG	Sg	07 08 16.1	+0.7
BCK	Bucak	0.40	33	*e*Pg	Pg	07 08 09.2	-0.9
BCK				*e*Sg	Sg	07 08 16.1	+0.7
ELL	Elmali	0.50	221	*e*PG	Pg	07 08 11.4	-0.5
ELL				*e*SG	Sg	07 08 20.5	+1.9
ELL	Elmali	0.50	221	*e*Pg	Pg	07 08 11.5	-0.5
ELL				*e*Sg	Sg	07 08 20.5	+2.0
GOLH	Golhisar	0.61	281	*i* P	Pg	07 08 13.0	-1.2
GOLH				*i* S	Sg	07 08 24.9	+2.7
GOLH	Golhisar	0.61	281	*i* P	Pg	07 08 13.0	-1.2
SUTC	Sutluce-Ispart	0.65	57	*e*PG	Pg	07 08 13.8	-0.9
SUTC				*e*SG	Sg	07 08 25.1	+1.9
SUTC	Sutluce-Ispart	0.65	57	*e*Pg	Pg	07 08 13.9	-0.8
SUTC				*e*Sg	Sg	07 08 25.1	+1.9
GLHS	Glhisar (BURDU	0.66	273	*e*PG	Pg	07 08 13.9	-1.0
GLHS				*e*SG	Sg	07 08

*IDC **21** 07:35:20.2±0.9, 12.20N×93.15E, h0km, mb4.0/16, mb1 4.1/17, mb1mx4.0/28, mbtmp4.0/17, MS3.3/3, Ms1 3.3/3, ms1mx2.7/37, Error ellipse: s-maj=27.1km s-min=17.4km az=49.0*

*ISCJB **21** 07:35:22.2±4.1, 12.26N±0.07×93.26E±0.09, h25km±30km, mb4.1/21, MS3.4/2, Error ellipse: s-maj=14.2km s-min=11.8km az=7.2*

*NEIC **21** 07:35:25.4±3.3, 12.27N×93.21E, h32km±23km, mb4.4/4, Error ellipse: s-maj=15.2km s-min=6.6km az=61.0*

ISC 21 07:35:26.6±2.0, 12.25N±0.07×93.3E±0.1, h44km±20km, n48, σ0=69/44, mb4.1/21, MS3.4/2, 2C-3D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.26**	**41**	Pn	**Pn**	**07 37 24.0**	**+0.1**
	0.3nm,0.3s,baz=236,slow=15,SNR=9.3						
CMAR				Sn	**Sn**	**07 38 57.1**	**+1.2**
	0.2nm,0.3s,baz=236,slow=27,SNR=3.1						
CHTO	**Chiang Mai**	**8.52**	**39**	*e*Pn	**Pn**	**07 37 25.9**	**-1.7**
KULM	**Kulim**	**10.05**	**133**	Pn	**Pn**	**07 37 48.9**	**+0.3**
PALK	**Pallekele**	**13.32**	**249**	LR	LR	07 43 42.6	
	comp=Z,80nm,19.2s,baz=91,slow=38						
TKM2	**Tokmak 2**	**34.18**	**337**	*e*P	**P**	**07 42 07.2**	**-0.6**
AML	**Almayashu**	**34.31**	**334**	*e*P	**P**	**07 42 08.9**	**+0.1**
	1.4nm,0.6s,mb4.1						
AAK	**Ala-Archa**	**34.38**	**335**	P	**P**	**07 42 10.1**	**+0.6**
	0.7nm,0.3s,mb4.1,baz=153,slow=14,SNR=4.1						
AAK				LR	LR	07 57 03.6	
	comp=Z,46nm,19.8s,MS3.2,baz=184,slow=38						
EKS2	**Erkin-Say**	**34.70**	**334**	*e*P	**P**	**07 42 12.9**	**+0.6**
	1.9nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**35.66**	**347**	P	**P**	**07 42 20.6**	**+0.3**
	1.0nm,0.7s,mb3.9,baz=170,slow=8.5,SNR=7.7						
SONM	**Songino Array**	**37.14**	**15**	P	**P**	**07 42 32.3**	**-0.8**
	0.5nm,0.4s,mb3.7,baz=202,slow=7.2,SNR=3.1						
KSRS	**Korea Array**	**39.87**	**45**	P	**P**	**07 42 56.0**	**-0.1**
	1.1nm,0.8s,mb3.6,baz=238,slow=35,SNR=3.5						
KURK	**Kurchatov**	**40.19**	**346**	P	**P**	**07 42 57.9**	**-0.7**
	1.2nm,0.6s,mb3.8,baz=162,slow=8.1,SNR=4.4						
KURK				ScP	ScP	07 48 50.9	+3.2
	0.5nm,0.4s,baz=161,slow=3.7,SNR=3.8						
KURK	**Kurchatov**	**40.19**	**346**	P	**P**	**07 42 57.9**	**-0.7**
KURK				ScP	ScP	07 48 50.9	+3.2
ZALV	**Zalesovo Beam**	**42.13**	**353**	P	**P**	**07 43 14.8**	**+0.3**
	1.8nm,0.4s,mb4.0,baz=169,slow=8.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**42.13**	**353**	P	**P**	**07 43 14.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**43.94**	**133**	P	**P**	**07 43 29.4**	**-0.2**
	1.1nm,0.5s,mb3.9,baz=321,slow=7.2,SNR=3.7						
BVAR	**Borovoye Array**	**44.60**	**340**	P	**P**	**07 43 34.3**	**-0.1**
	1.3nm,0.6s,mb3.9,baz=138,slow=9.3,SNR=7.1						
AKTK	**Aktyubinsk**	**47.73**	**330**	P	**P**	**07 43 59.0**	**0.0**
AKTO	**Aktyubinsk**	**47.73**	**330**	P	**P**	**07 43 59.0**	**0.0**
	1.3nm,0.5s,mb4.2,baz=126,slow=7.4,SNR=4.4						
ASAR	**Alice Springs**	**53.42**	**132**	P	**P**	**07 44 42.6**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=305,slow=6.7,SNR=8.1						
BRTR	**Keskin Array B**	**58.97**	**309**	P	**P**	**07 45 21.2**	**-0.6**
	0.9nm,0.8s,mb3.9,baz=108,slow=7.9,SNR=6.0						
AKASG	**Malin Array Be**	**64.23**	**321**	P	**P**	**07 45 56.5**	**-0.5**
	1.8nm,0.7s,mb4.2,baz=96,slow=4.3,SNR=8.2						
AKASG	**Malin Array Be**	**64.23**	**321**	P	**P**	**07 45 56.5**	**-0.5**
VRI	**Vrincioaia**	**64.99**	**315**	⇑*i*P	**P**	**07 46 03.3**	**+1.2**
PETK	**Petropavlovsk-**	**65.01**	**37**	LR	LR	08 18 14.9	
	comp=Z,27nm,18.1s,MS3.5,baz=186,slow=40						
PLOR	**Plostina**	**65.04**	**315**	⇑*i*P	**P**	**07 46 03.8**	**+1.4**
MLR	**Muntele Rosu**	**65.48**	**314**	⇓*i*P	**P**	**07 46 06.3**	**+1.0**
BURAR	**Bucovina Array**	**66.27**	**317**	⇓*i*P	**P**	**07 46 11.1**	**+0.8**
BUR08	**Bucovina Ar. S**	**66.28**	**317**	*e*P	**P**	**07 46 10.8**	**+0.4**
JOF	**Joensuu**	**66.56**	**334**	*e*p	**P**	**07 46 11.3**	**-0.6**
	4.1nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**68.47**	**332**	P	**P**	**07 46 23.5**	**-0.4**
	2.1nm,0.5s,mb4.4,baz=97,slow=7.7,SNR=9.3						
FINES	**FINESS Array B**	**68.47**	**332**	P	**P**	**07 46 23.5**	**-0.4**
BZS	**Buzias**	**68.52**	**314**	⇓*i*P	**P**	**07 46 19.7**	**-4.9**
KAF	**Kangasniemi**	**68.53**	**332**	*e*p	**P**	**07 46 22.9**	**-1.4**
ARCES	**ARCESS Array B**	**70.89**	**340**	P	**P**	**07 46 38.9**	**+0.1**
	1.2nm,0.6s,mb4.0,baz=79,slow=6.5,SNR=7.3						
GERES	**GERESS Array B**	**74.02**	**317**	P	**P**	**07 46 58.1**	**+0.3**
	2.2nm,0.6s,mb4.3,baz=87,slow=5.5,SNR=20						
NB2	**NORSAR Subarra**	**75.53**	**330**	P	**P**	**07 47 05.4**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.8,baz=90,slow=5.9						
NOA	**NORSAR Array B**	**75.53**	**330**	P	**P**	**07 47 05.7**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=91,slow=5.7,SNR=5.1						
LPG	**La Plagne**	**78.95**	**314**	*e*P	**P**	**07 47 26.2**	**+0.5**
	comp=Z,14nm,0.9s,mb4.6						
LPG	**La Plagne**	**78.95**	**314**	*e*P	**P**	**07 47 26.2**	**+0.5**
	comp=Z,7.0nm,0.9s,mb4.6						
LPL	**La Plagne**	**78.96**	**314**	*e*P	**P**	**07 47 26.2**	**+0.4**
	comp=Z,8.2nm,0.7s,mb4.5						
LPL	**La Plagne**	**78.96**	**314**	*e*P	**P**	**07 47 26.2**	**+0.4**
	comp=Z,4.1nm,0.7s,mb4.5						
LOR	**Lormes**	**80.72**	**316**	*e*P	**P**	**07 47 34.3**	**-1.0**
SMF	**Signal de Mont**	**80.82**	**316**	*e*P	**P**	**07 47 35.5**	**-0.3**
AVF	**Avril sur Loir**	**81.13**	**316**	*e*P	**P**	**07 47 37.0**	**-0.5**
PDAR	**Pinedale Array**	**121.40**	**20**	PKP	PKPdf	07 54 16.4	+1.0
	comp=Z,0.3nm,0.5s,baz=5.7,slow=4.5,SNR=2.7						
NVAR	**Mina Array Bea**	**121.58**	**29**	PKP	PKPdf	07 54 17.7	+1.8
	comp=Z,0.9nm,0.6s,baz=259,slow=1.8,SNR=3.0						
TXAR	**Lajitas Array**	**135.55**	**21**	PKP	PKPdf	07 54 43.7	+1.0
	comp=Z,0.1nm,0.5s,baz=175,slow=0.2,SNR=4.4						

IDC 21 07:43:57.7±6.0, 6.61S×10.83W, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/23, mbtmp3.8/6, ML3.2/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=249.6km s-min=78.0km az=134.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**14.47**	**24**	Pn	Pn	07 47 23.0	-0.9
	0.1nm,0.3s,baz=192,slow=9.3,SNR=2.8						
DBIC				LR	LR	07 51 12.0	
	comp=Z,58nm,21.8s,baz=171,slow=30						
TORD	**Torodi Ar. Bea**	**23.23**	**32**	P	P	07 49 07.0	+0.2
	4.0nm,1.1s,baz=210,slow=11,SNR=12						
TORD				LR	LR	07 56 47.0	
	comp=Z,44nm,19.0s,baz=185,slow=33						
CPUP	**Villa Florida**	**48.39**	**241**	LR	LR	08 10 44.8	
	comp=Z,34nm,20.1s,baz=9.3,slow=33						
GERES	**GERESS Array B**	**59.25**	**19**	P	P	07 54 01.6	+0.8
	0.2nm,0.4s,baz=190,slow=11,SNR=4.3						
AKASG	**Malin Array Be**	**66.71**	**26**	P	P	07 54 50.2	-0.2
	0.3nm,0.3s,baz=222,slow=7.2,SNR=3.3						
NOA	**NORSAR Array B**	**69.61**	**11**	P	P	07 55 08.6	+0.2
	0.2nm,0.3s,baz=205,slow=6.4,SNR=2.0						
FINES	**FINESS Array B**	**73.65**	**17**	P	P	07 55 32.4	-0.3
	0.9nm,0.6s,baz=220,slow=3.6,SNR=4.0						
RPN	**Rapa Nui**	**94.54**	**242**	LR	LR	08 34 14.4	
	comp=Z,111nm,20.3s,baz=137,slow=32						

*IDC **21** 07:44:13.3±2.2, 22.39S×68.85W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.7/14, mbtmp3.8/4, ML4.0/2, Error ellipse: s-maj=53.7km s-min=53.2km az=167.0*

*ISCJB **21** 07:44:30.9±0.8, 21.05S±0.05×68.6W±0.1, h118km±11km, mb3.5/2, Error ellipse: s-maj=20.1km s-min=8.5km az=178.3*

*GUC **21** 07:44:32.6±0.5, 21.06S×68.95W, h132km±4km, MD3.7, ML3.6*

ISC 21 07:44:31.9±0.8, 21.05S±0.05×68.6W±0.1, h114km±11km, n12, σ0=79/15, mb3.5/2, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.86**	**270**	⇑*i*P	**Pn**	**07 44 52.3**	**+0.3**
PB01				*i* S	**Sn**	**07 45 06.9**	**-0.3**
PB01				AML	AML	07 45 08.5	
	comp=N,2μm,0.2s						
HMBC	**Humberston**	**1.45**	**301**	⇑*i*P	**Pn**	**07 44 58.5**	**+0.1**
HMBC				*i* S	**Sn**	**07 45 17.9**	**-0.6**
HMBC				AML	AML	07 45 19.5	
	comp=E,2μm,0.5s						
PECH	**Pedro de Valdi**	**1.85**	**213**	*i* P	**Pn**	**07 45 03.9**	**+0.7**
PECH				*i* S	**Sn**	**07 45 27.3**	**+0.1**
PECH				AML	AML	07 45 30.6	
	comp=N,923nm,0.4s						
PSGC	**Pisagua**	**2.05**	**314**	⇑*i*P	**Pn**	**07 45 05.2**	**-0.5**
PSGC				*i* S	**Sn**	**07 45 30.1**	**-1.4**
PSGC				AML	AML	07 45 31.7	
	comp=E,357nm,0.3s						
MNMC	**Miaee Miae**	**2.13**	**333**	*e*P	**Pn**	**07 45 08.0**	**+1.3**
MNMC				*i* S	**Sn**	**07 45 34.9**	**+1.5**
MNMC				AML	AML	07 45 40.5	
	comp=N,560nm,0.2s						
CEN1	**Los Morros**	**2.78**	**213**	AML	AML	07 46 00.7	
	comp=E,111nm,0.5s						
ANCH	**Antofagasta**	**3.13**	**213**	*i* P	**Pn**	**07 45 19.4**	**-0.2**
LPAZ	**La Paz**	**4.75**	**5**	Pn	**Pn**	**07 45 45.9**	**+4.4**
	comp=E,0.6nm,0.3s,baz=192,slow=6.1,SNR=34						
SIV	**San Ignacio**	**8.71**	**56**	Pn	**Pn**	**07 46 34.3**	**-0.7**
	comp=E,3.7nm,0.3s,baz=223,slow=10,SNR=121						
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P	**P**	**07 56 11.2**	**-0.8**
	comp=E,0.6nm,0.4s,mb3.7,baz=245,slow=5.6,SNR=5.6						
YKA	**Yellowknife Ar**	**90.86**	**340**	P	**P**	**07 57 22.5**	**+0.6**
	comp=E,0.2nm,0.7s,mb3.4,baz=139,slow=4.9,SNR=5.9						
MKAR	**Makanchi Array**	**145.08**	**36**	PKPbc	PKPbc	08 03 57.0	+1.6
	comp=E,0.4nm,0.4s,baz=310,slow=3.6,SNR=6.5						

*ISCJB **21** 08:00:00.3±0.5, 24.21N±0.05×94.69E±0.04, h119km±4km, mb4.3/38, Error ellipse: s-maj=9.0km s-min=4.3km az=33.3*

*NEIC **21** 08:00:02.9±0.8, 24.35N×95.08E, h133km±8km, mb4.4/19, Error ellipse: s-maj=9.5km s-min=5.3km az=53.0*

*IDC **21** 08:00:02.4±0.6, 24.28N×94.96E, h128km±4km, mb4.0/20, mb1 4.0/21, mb1mx3.9/32, mbtmp4.0/21, MS3.2/6, Ms1 3.2/6, ms1mx2.7/46, Error ellipse: s-maj=18.6km s-min=10.0km az=54.0*

*BJI **21** 08:00:02.0, 24.46N×95.06E, h125km, mB4.2/3, mb4.5/12*

ISC 21 08:00:01.4±0.4, 24.22N±0.05×94.70E±0.04, h113km±4km, h131km±1.9km; pP-P, n104, σ=1.03/109, mb4.3/38, 1C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.90**	**309**	*e*P	**Pn**	**08 00 22.0**	**+0.1**
IMP				*ex*	**Sn**	**08 00 37.0**	**-0.3**
SHL	**Shillong**	**2.89**	**298**	*e*P	**Pn**	**08 00 46.8**	**+0.7**
SHL				*e*S	**Sn**	**08 01 20.3**	**-0.1**
SHL				AML	AML	08 01 21.8	
SHL				AML	AML	08 01 21.9	
AGT	**Agartala**	**3.17**	**265**	*ex*	Px	08 01 02.0	
TURI	**Tura**	**4.18**	**289**	*e*P	**Pn**	**08 01 04.0**	**+0.7**
TURI				*ex*	x	08 02 24.0	
GTK	**Gangtok**	**6.30**	**301**	*e*P	**Pn**	**08 01 41.0**	**+9.1**
GTK				*e*S	**Sn**	**08 02 52.5**	**+10**
LSA	**Lhasa**	**6.31**	**331**	P	**Pn**	**08 01 33.1**	**+1.1**
LSA				S	**Sn**	**08 02 38.8**	**-3.9**
LSA				smax			
	comp=N,150nm,0.7s						
LSA				smax			
	comp=E,280nm,0.7s						
LSA	**Lhasa**	**6.31**	**331**	*e*Pn	**Pn**	**08 01 33.2**	**+1.2**
LSA				*e*Sn	**Sn**	**08 02 42.8**	**+0.1**
CHG	**Chiang Mai**	**6.67**	**143**	⇑P	**Pn**	**08 01 38.5**	**+1.6**
	comp=E,31nm,0.7s						
CHTO	**Chiang Mai**	**6.67**	**143**	*e*Pn	**Pn**	**08 01 37.7**	**+0.8**
CM31	**Chiang Mai Arr**	**6.96**	**145**	*e*Pn	**Pn**	**08 01 40.9**	**0.0**
CMAR	**Chiang Mai Arr**	**6.96**	**145**	P	**Pn**	**08 01 41.6**	**+0.7**
	comp=E,0.8nm,0.3s,baz=314,slow=13,SNR=60						
TAPN	**Taplejung**	**7.03**	**298**	*e*Pn	**Pn**	**08 01 42.3**	**+0.5**
TAPN				*e*Sn	**Sn**	**08 03 00.4**	**+0.2**
	comp=E,846nm,0.7s						
ODAN	**Odare**	**7.11**	**293**	*e*Pn	**Pn**	**08 01 43.7**	**+0.9**
ODAN				*e*Sn	**Sn**	**08 03 01.3**	**-0.8**
	comp=E,489nm,0.3s						
RAMN	**Ramite**	**7.80**	**292**	*e*Pn	**Pn**	**08 01 53.0**	**+0.7**
RAMN				*e*Sn	**Sn**	**08 03 18.2**	**-0.8**
	comp=E,403nm,0.3s						
BDT	**Bhumibol Dam**	**8.02**	**149**	P	**Pn**	**08 01 54.0**	**-1.2**
BOK	**Bokaro**	**8.07**	**269**	*e*P	**Pn**	**08 01 56.6**	**+0.7**
BOK				*e*S	**Sn**	**08 03 22.4**	**-3.1**
JIRN	**Jiri**	**8.39**	**296**	*e*Pn	**Pn**	**08 02 01.6**	**+1.4**
JIRN				*e*Sn	**Sn**	**08 03 31.9**	**-1.4**
	comp=E,306nm,0.2s						
GUN	**Gumba**	**8.74**	**297**	*e*Pn	**Pn**	**08 02 05.5**	**+0.5**
GUN				*e*Sn	**Sn**	**08 03 41.3**	**-0.5**
	comp=E,306nm,0.3s						
PKI	**Pulchoki**	**9.01**	**294**	*e*Pn	**Pn**	**08 02 08.9**	**+0.3**
PKIN	**Phulchoki**	**9.02**	**294**	*e*Pn	**Pn**	**08 02 08.9**	**+0.1**
PKIN				*e*Sn	**Sn**	**08 03 46.9**	**-1.6**
	comp=E,157nm,0.4s						
KKN	**Kakani**	**9.19**	**295**	*e*Pn	**Pn**	**08 02 11.2**	**+0.1**
KKN				*e*Sn	**Sn**	**08 03 50.6**	**-2.0**
	comp=E,115nm,0.2s						
DMN	**Daman**	**9.28**	**293**	*e*Pn	**Pn**	**08 02 12.0**	**-0.2**
DMN				*e*Sn	**Sn**	**08 03 53.9**	**-0.8**
	comp=E,154nm,0.4s						
LZH	**Lanzhou**	**14.22**	**32**	*e*P	**Pn**	**08 03 18.1**	**+0.6**
LZH				pP		08 03 23.0	
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
ENH	**Enshi**	**14.46**	**62**	*e*Pn	**Pn**	**08 03 15.2**	**-5.5**
	comp=Z,40nm,0.7s						
QIZ	**Qiongzhong**	**14.99**	**107**	*e*P	**Pn**	**08 03 29.0**	**+1.5**
	comp=Z,30nm,1.0s						
GTA	**Gaotai**	**15.75**	**15**	*e*P	**Pn**	**08 03 34.8**	**-2.0**
GTA				pP	pP	08 03 42.3	-17
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN	**Xi'an**	**15.80**	**49**	P	**Pn**	**08 03 34.4**	**-3.1**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,10.0nm,4.7s						
BHPL	**Bhopal**	**15.85**	**270**	*e*P	**Pn**	**08 03 37.9**	**-0.3**
BHPL				*ex*	x	08 06 24.1	
SMLA	**Simla**	**16.98**	**298**	*ex*	x	08 05 14.4	
SMLA				AMb	AMB	08 05 20.3	
	comp=Z,74nm,1.8s						
SMLA				*ex*	x	08 06 51.2	
WMQ	**Urumqi**	**20.38**	**345**	*e*P	**P**	**08 04 28.4**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
WMQ				LR	LR		
	comp=Z,35nm,29.0s						
TKM2	**Tokmak 2**	**24.42**	**324**	*e*P	**P**	**08 05 11.0**	**+1.6**
	comp=Z,10nm,1.0s,mb4.1						
UCH	**Uchtor**	**24.55**	**322**	*e*P	**P**	**08 05 12.6**	**+2.0**
	comp=Z,3.1nm,0.7s,mb3.9						
MK31	**Makanchi Array**	**24.63**	**339**	*e*P	**P**	**08 05 11.8**	**+0.6**
MKAR	**Makanchi Array**	**24.63**	**339**	P	**P**	**08 05 11.6**	**+0.4**
	comp=Z,20nm,0.5s,mb4.8,baz=147,slow=9.7,SNR=171						
MKAR				ScP	ScP	08 12 12.5	-1.8
	comp=Z,1.7nm,1.0s,baz=138,slow=4.2,SNR=9.0						
MKAR				LR	LR	08 17 13.6	
	comp=Z,16nm,20.2s,baz=184,slow=42						
AAK	**Ala-Archa**	**24.83**	**323**	P	**P**	**08 05 14.2**	**+1.1**
	comp=Z,2.8nm,0.6s,mb3.9,baz=101,slow=7.6,SNR=10						
AAK	**Ala-Archa**	**24.83**	**323**	*e*P	**P**	**08 05 14.8**	**+1.8**
	comp=Z,4.3nm,0.7s,mb4.0						
AML	**Almayashu**	**24.96**	**321**	*e*P	**P**	**08 05 15.7**	**+1.5**
	comp=Z,4.1nm,0.7s,mb4.0						
EKS2	**Erkin-Say**	**25.25**	**322**	*e*P	**P**	**08 05 18.9**	**+2.0**
	comp=Z,3.9nm,0.8s,mb3.9						
SONM	**Songino Array**	**25.34**	**19**	P	**P**	**08 05 15.6**	**-1.9**
	comp=Z,1.7nm,0.6s,mb3.7,baz=190,slow=9.9,SNR=7.4						
KURK	**Kurchatov**	**29.24**	**339**	P	**P**	**08 05 51.9**	**-0.5**
	comp=Z,1.6nm,0.3s,mb4.1,baz=150,slow=9.6,SNR=16						
KURK				pP	pP	08 06 20.2	+3.0
	comp=Z,2.8nm,0.6s,baz=150,slow=9.5,SNR=5.2						
KURK				ScP	ScP	08 12 25.6	-2.4
	comp=Z,1.0nm,0.6s,baz=155,slow=3.1,SNR=8.3						
KURK				LR	LR	08 18 49.6	
	comp=Z,29nm,19.8s,baz=60,slow=39						
KURK	**Kurchatov**	**29.24**	**339**	*e*P	**P**	**08 05 51.6**	**-0.8**
	comp=Z,4.0nm,0.6s,mb4.2						
JOW	**Kunigami**	**30.36**	**78**	P	**P**	**08 05 59.4**	**-3.3**
	comp=Z,4.1nm,0.3s,mb4.5,baz=239,slow=6.4,SNR=6.3						
JOW				LR	LR	08 18 46.4	
	comp=Z,3μm,21.8s,baz=310,slow=37						
ZALV	**Zalesovo Beam**	**30.61**	**349**	P	**P**	**08 06 03.7**	**-0.8**
	comp=Z,1.0nm,0.3s,mb4.0,baz=141,slow=7.4,SNR=3.1						
ZALV				pP	pP	08 06 32.7	+3.3
	comp=Z,1.4nm,0.6s,baz=161,slow=9.4,SNR=2.1						
ZALV	**Zalesovo Beam**	**30.61**	**349**	P	**P**	**08 06 03.6**	**-0.8**
ZALV				pP	pP	08 06 32.7	+3.3
BVAR	**Borovoye Array**	**34.14**	**334**	P	**P**	**08 06 35.5**	**+0.2**
	comp=Z,2.2nm,0.5s,mb4.2,baz=143,slow=12,SNR=9.8						
BVAR				pP	pP	08 07 05.1	+4.6
	comp=Z,2.5nm,0.6s,baz=141,slow=11,SNR=5.3						
BVAR				LR	LR	08 22 07.4	
	comp=Z,40nm,18.8s,baz=222,slow=39						
ABKAR	**Akbulak array**	**36.91**	**322**	*e*P	**P**	**08 07 00.1**	**+1.0**
	comp=Z,2.2nm,0.4s,mb4.4						
AKTK	**Aktyubinsk**	**38.57**	**322**	P	**P**	**08 07 13.8**	**+0.8**
AKTK				ScP	ScP	08 12 59.5	-1.4
AKTO	**Aktyubinsk**	**38.57**	**322**	P	**P**	**08 07 13.8**	**+0.8**
	comp=Z,0.7nm,0.3s,mb4.0,baz=117,slow=9.2,SNR=5.0						
AKTO				ScP	ScP	08 12 59.5	-1.4
	comp=Z,1.3nm,0.8s,baz=174,slow=8.8,SNR=5.0						
ASF	**Jabal al Asfar**	**51.05**	**293**	P	**P**	**08 08 52.5**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=22,slow=7.9,SNR=3.5						
FITZ	**Fitzroy Crossi**	**51.77**	**142**	*e*P	**P**	**08 08 56.6**	**-1.0**
	comp=Z,10nm,1.2s,mb4.7						
KNA	**Kununurra**	**51.81**	**137**	*e*P	**P**	**08 08 56.5**	**-1.4**
	comp=Z,27nm,0.4s,mb5.6						
BRTR	**Keskin Array B**	**53.10**	**302**	P	**P**	**08 09 08.3**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.8,baz=119,slow=7.2,SNR=4.9						
AKASG	**Malin Array Be**	**56.24**	**316**	pP	pP	08 09 59.6	+2.7
	comp=Z,1.1nm,0.4s,baz=80,slow=6.9,SNR=3.8						
JOF	**Joensuu**	**56.64**	**331**	*e*p	**P**	**08 09 32.8**	**+0.4**
	comp=Z,2.1nm,0.3s,mb4.7						
WRAB	**Tennant Creek**	**58.45**	**135**	*e*P	**P**	**08 09 44.9**	**-0.8**
	comp=Z,17nm,0.9s,mb5.1						
FINES	**FINESS Array B**	**58.83**	**328**	P	**P**	**08 09 47.4**	**-0.4**
	comp=Z,0.8nm,0.3s,mb4.2,baz=90,slow=8.3,SNR=6.2						
FINES				pP	pP	08 10 16.7	+1.6
	comp=Z,1.9nm,0.6s,baz=100,slow=6.4,SNR=4.4						
KEV	**Kevo**	**59.80**	**338**	*e*p	**P**	**08 09 52.0**	**-2.3**
ARCES	**ARCESS Array B**	**60.27**	**338**	P	**P**	**08 09 57.7**	**+0.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=82,slow=8.9,SNR=7.2						
ARCES				PcP	PcP	08 10 41.0	-0.6
	comp=Z,1.2nm,0.6s,baz=101,slow=5.1,SNR=4.0						
ARCES	**ARCESS Array B**	**60.27**	**338**	P	**P**	**08 09 57.7**	**+0.2**
ARCES				PcP	PcP	08 10 41.0	-0.6
ASAR	**Alice Springs**	**60.93**	**138**	P	**P**	**08 10 02.0**	**-0.6**
	comp=Z,9.0nm,0.4s,mb5.1,baz=321,slow=6.8,SNR=188						
ASAR				PcP	PcP	08 10 43.1	-1.9
	comp=Z,1.6nm,0.5s,baz=322,slow=4.8,SNR=5.2						
KMBO	**Kilima Mbogo**	**61.11**	**254**	*e*P	**P**	**08 09 56.5**	**-7.5**
	comp=Z,8.5nm,1.1s,mb4.7						
VRAC	**Vranov**	**64.44**	**315**	LR	LR	08 43 50.4	
	comp=Z,20nm,18.1s,baz=129,slow=41						
NB2	**NORSAR Subarra**	**66.00**	**328**	P	**P**	**08 10 34.7**	**-0.8**
	comp=Z,1.5nm,0.5s,mb4.1,baz=82,slow=6.5						
NOA	**NORSAR Array B**	**66.00**	**328**	P	**P**	**08 10 34.4**	**-1.0**
	comp=Z,1.1nm,0.5s,mb3.9,baz=83,slow=6.4,SNR=10.0						
NOA				pP	pP	08 11 05.7	+2.3
	comp=Z,1.1nm,0.5s,baz=84,slow=6.4,SNR=3.5						
NOA				LR	LR	08 41 57.4	
	comp=Z,7.7nm,21.2s,baz=90,slow=38						
NOA	**NORSAR Array B**	**66.00**	**328**	P	**P**	**08 10 34.4**	**-1.0**
NOA				pP	pP	08 11 05.7	+2.3
NOA				LR	LR	08 41 57.4	
GERES	**GERESS Array B**	**66.39**	**315**	P	**P**	**08 10 38.3**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=69,slow=7.3,SNR=12						
GERES				pP	pP	08 11 09.8	+3.7
	comp=Z,1.2nm,0.6s,baz=76,slow=5.6,SNR=4.2						
CTA	**Charters Tower**	**66.78**	**127**	P	**P**	**08 10 39.9**	**-1.1**
	comp=Z,6.1nm,0.7s,mb4.5,baz=344,slow=6.0,SNR=5.8						
CTAO	**Charters Tower**	**66.78**	**127**	*e*P	**P**	**08 10 40.1**	**-0.9**
	comp=Z,7.0nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**70.64**	**315**	*e*P	**P**	**08 11 04.5**	**-0.1**
	comp=Z,6.2nm,0.6s,mb4.3						
CDF	**Champ du Feu**	**70.64**	**315**	*e*P	**P**	**08 11 04.5**	**-0.1**
	comp=Z,3.1nm,0.6s,mb4.3						
HAU	**Haudompre**	**71.35**	**315**	*e*P	**P**	**08 11 10.4**	**+1.5**
	comp=Z,3.9nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**71.55**	**139**	*e*P	**P**	**08 11 07.9**	**-2.3**
	comp=Z,3.2nm,0.6s,mb4.3						

comp=Z,21nm,1.8s,mb4.4
ASAR Alice Springs 32.92 253 P **P 08 10 58.8 0.0**
comp=Z,12nm,0.6s,mb4.6,baz=81,slow=9.0,SNR=71
ASAR S **S 08 15 59.0 -0.9**
comp=Z,1.7nm,0.8s,baz=84,slow=16,SNR=12
BBOO Buckleboo 32.93 236 *e*P **P 08 10 53.7 -5.0**
comp=Z,8.2nm,0.6s,mb4.4
MJAR Matsushiro Arr 60.91 332 P **P 08 14 34.1 -0.4**
comp=Z,1.5nm,0.8s,mb3.7,baz=169,slow=7.1,SNR=7.9
ASAJ Asahikawa 65.75 340 P **P 08 15 06.7 +0.7**
comp=Z,7.1nm,0.8s,mb4.3,baz=151,slow=13,SNR=4.0
PETK Petropavlovsk- 70.94 353 P **P 08 15 38.2 +0.3**
comp=Z,3.9nm,0.7s,mb4.2,baz=134,slow=7.5,SNR=5.2
CMAR Chiang Mai Arr 77.17 294 P **P 08 16 15.7 +1.0**
comp=Z,0.8nm,0.4s,mb3.7,baz=118,slow=5.4,SNR=4.3
SONM Songino Array 85.43 323 P **P 08 16 57.2 -0.2**
comp=Z,0.5nm,0.4s,mb3.6,baz=149,slow=5.4,SNR=4.8
OSI Osito Adit 86.32 52 P **P 08 17 02.5 +0.3**
comp=Z,1.8nm,0.5s,mb4.1
NVAR Mina Array Bea 88.18 49 P **P 08 17 11.0 +0.1**
comp=Z,1.2nm,0.7s,mb3.8,baz=224,slow=4.1,SNR=3.9
NVAR Mina Array Bea 88.18 49 P **P 08 17 11.0 +0.1**
TXAR Lajitas Array 96.55 61 P **P 08 17 49.6 -0.1**
comp=Z,0.1nm,0.7s,mb3.1,baz=262,slow=6.1,SNR=2.9
YKA Yellowknife Ar 99.46 27 P Pdif 08 18 00.6 -1.7
comp=Z,0.2nm,0.5s,baz=254,slow=4.8,SNR=3.4
MKAR Makanchi Array 100.03 316 P Pdif 08 18 05.2 +0.3
comp=Z,0.3nm,0.5s,baz=90,slow=7.6,SNR=6.3
ARCES ARCESS Array B 123.23 345 PKP PKPdf 08 23 13.6 -1.0
comp=Z,1.2nm,0.9s,baz=129,slow=1.7,SNR=4.8

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*ISCJB **21** 08:08:16.5±1.0, 32°.22N±0°.04×105°.10E±0°.05, h6km±7km, mb3.6/7, Error ellipse: s-maj=7.0km s-min=5.9km az=21.3*
*IDC **21** 08:08:17.9±1.1, 32°.38N×105°.13E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML4.1/2, Error ellipse: s-maj=49.2km s-min=21.3km az=63.0*
*NEIC **21** 08:08:19.2±0.6, 32°.40N×105°.16E, h10km, Error ellipse: s-maj=16.9km s-min=9.6km az=63.0*
*BJI **21** 08:08:19.3, 32°.24N×105°.15E, h11km, ML3.8/10, Ms3.4/3, Ms7 3.3/3*
ISC 21 08:08:19.6±0.9, 32°.24N±0°.04×105°.03E±0°.04, h11km±6km, n16, σ1§38/25, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**220**	Pg	**Pg**	**08 08 54.8**	**+2.3**
CD2				Sg	**Sg**	**08 09 14.5**	**-0.2**
CD2				smax			
	comp=N,1μm,0.6s						
XAN	**Xi'an**	**3.73**	**60**	Pn	**Pb**	**08 09 28.8**	**+3.4**
XAN				Pg	**Pg**	**08 09 32.1**	**+1.1**
XAN				Sn	**Sb**	**08 10 11.6**	**+1.1**
XAN				Sg	**Sg**	**08 10 19.1**	**-0.1**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,50nm,0.6s						
LZH	**Lanzhou**	**3.96**	**346**	Pn	**Pn**	**08 09 25.6**	**+5.4**
LZH				Pg	**Pg**	**08 09 32.9**	**-2.5**
LZH				Sn	**Sn**	**08 10 09.4**	**+2.8**
LZH				Sg	**Sg**	**08 10 21.8**	**-4.9**
LZH				smax			
	comp=N,130nm,0.5s						
LZH				smax			
	comp=E,290nm,0.7s						
LZH				LR	LR		
	comp=E,320nm,5.7s						
LZH				LR	LR		
	comp=Z,520nm,6.2s						
ENH	**Enshi**	**4.29**	**116**	*e*Pn	**Pn**	**08 09 23.9**	**-0.9**
ENH				*e*Sg	**Sg**	**08 10 36.6**	**-0.9**
GYA	**Guiyang**	**5.94**	**166**	Pn	**Pn**	**08 09 43.9**	**-3.5**
GYA				Sn	**Sn**	**08 10 54.6**	**-0.8**
GYA				smax			
	comp=N,80nm,0.7s						
GYA				smax			
	comp=E,70nm,0.9s						
CMAR	**Chiang Mai Arr**	**14.78**	**203**	Pn	**Pn**	**08 11 50.1**	**+1.5**
	comp=E,0.8nm,0.3s,baz=10,slow=10,SNR=2.8						
SONM	**Songino Array**	**15.61**	**3**	Pn	**Pn**	**08 11 56.1**	**-3.2**
	comp=E,0.1nm,0.3s,baz=193,slow=5.9,SNR=2.1						
MK31	**Makanchi Array**	**22.67**	**316**	*e*P	**P**	**08 13 19.9**	**-0.8**
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**08 13 20.9**	**+0.2**
	comp=E,0.2nm,0.3s,mb3.0,baz=124,slow=12,SNR=3.8						
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**08 14 01.0**	**+1.3**
	comp=E,0.4nm,0.6s,mb3.1,baz=128,slow=11,SNR=4.2						
ARCES	**ARCESS Array B**	**56.55**	**336**	P	**P**	**08 18 00.3**	**-1.2**
	comp=E,2.2nm,1.0s,mb4.2,baz=78,slow=8.8,SNR=4.8						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**08 18 03.5**	**-1.8**
	comp=E,0.7nm,0.7s,mb3.8,baz=116,slow=8.7,SNR=3.7						
WRAB	**Tennant Creek**	**58.99**	**147**	*e*P	**P**	**08 18 20.4**	**+1.1**
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**08 18 41.0**	**+0.8**
	comp=E,0.5nm,0.4s,mb4.0,baz=342,slow=7.5,SNR=9.5						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**08 18 52.2**	**-1.3**
	comp=E,0.3nm,0.5s,mb3.6,baz=69,slow=5.2,SNR=3.0						
YKA	**Yellowknife Ar**	**80.37**	**17**	P	**P**	**08 20 30.8**	**+0.2**
	comp=E,0.2nm,0.4s,mb3.4,baz=329,slow=5.1,SNR=4.4						

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*ISK **21** 08:13:51.8, 39°.12N×43°.14E, h26km, MD2.8*
*ISCJB **21** 08:13:52.5±0.5, 39°.06N±0°.02×43°.13E±0°.05, h10km, Error ellipse: s-maj=5.7km s-min=3.4km az=0.6*
*DDA **21** 08:13:52.4, 39°.02N×43°.17E, h4km±4km, Md2.8*
*CSEM **21** 08:13:53.2±0.3, 39°.05N×43°.17E, h2km, MD2.8, Error ellipse: s-maj=10.2km s-min=6.2km az=89.0*
ISC 21 08:13:52.9±0.5, 39°.06N±0°.02×43°.11E±0°.05, h2km±13km, n23, σ0§95/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.51**	**155**	PG	**Pg**	**08 14 03.9**	**+1.2**
VANB				*e*SG	**Sg**	**08 14 12.6**	**+3.2**
VANB	**Van**	**0.51**	**155**	*i* Pg	**Pg**	**08 14 03.9**	**+1.2**
AGRB	**Hanur-Agry**	**0.52**	**350**	PG	**Pg**	**08 14 01.9**	**-1.0**
AGRB				*e*SG	**Sg**	**08 14 09.8**	**+0.1**
AGRB	**Hanur-Agry**	**0.52**	**350**	*i* Pg	**Pg**	**08 14 01.9**	**-1.0**
AGRB				*e*Sg	**Sg**	**08 14 09.8**	**+0.1**
TVAN	**Van**	**0.58**	**157**	*i* P	**Pg**	**08 14 03.6**	**-0.4**
TVAN				*e*S	**Sg**	**08 14 10.1**	**-1.4**
TVAN	**Van**	**0.58**	**157**	*i* P	**Pg**	**08 14 03.6**	**-0.4**
TVAN				*e*S	**Sg**	**08 14 10.1**	**-1.4**
CLDR	**Caldiran**	**0.63**	**82**	*e*PG	**Pg**	**08 14 04.6**	**-0.3**
CLDR	**Caldiran**	**0.63**	**82**	*e*Pg	**Pg**	**08 14 04.6**	**-0.4**
VANT	**Van**	**0.65**	**169**	*e*PG	**Pg**	**08 14 06.5**	**+1.1**
VANT	**Van**	**0.65**	**169**	*e*Pg	**Pg**	**08 14 06.5**	**+1.2**
DYDN	**Diyadin**	**0.66**	**43**	*e*P	**Pg**	**08 14 04.4**	**-1.0**
DYDN				*i* S	**Sg**	**08 14 13.2**	**-0.8**
DYDN	**Diyadin**	**0.66**	**43**	*e*P	**Pg**	**08 14 04.4**	**-1.1**
DYDN				*i* S	**Sg**	**08 14 13.2**	**-0.8**
TATV	**Tatvan**	**0.86**	**230**	*i* P	**Pg**	**08 14 09.2**	**-0.2**
TATV				*i* S	**Sg**	**08 14 20.0**	**-0.6**
TATV	**Tatvan**	**0.86**	**230**	*i* P	**Pg**	**08 14 09.2**	**-0.2**
TATV				*i* S	**Sg**	**08 14 20.0**	**-0.6**
HOMI	**Horasan**	**1.36**	**317**	*i* P	**Pg**	**08 14 19.1**	**+0.2**
DIGO	**Kars**	**1.37**	**8**	*i* P	**Pg**	**08 14 19.6**	**+0.5**
DIGO				*i* S	**Sg**	**08 14 39.1**	**+2.3**
DIGO	**Kars**	**1.37**	**8**	*i* P	**Pg**	**08 14 19.6**	**+0.5**
DIGO				*i* S	**Sg**	**08 14 39.1**	**+2.3**
HAKT	**HAKKARI**	**1.57**	**163**	*e*P	**Pn**	**08 14 21.9**	**+0.1**
HAKT	**HAKKARI**	**1.57**	**163**	*e*P	**Pn**	**08 14 21.9**	**+0.2**
DDEM	**Demirkent**	**2.11**	**331**	*i* P	**Pb**	**08 14 31.7**	**-0.1**
DDEM	**Demirkent**	**2.11**	**331**	*i* P	**Pb**	**08 14 31.7**	**-0.1**
DBAD	**Bademkaya**	**2.24**	**331**	*i* P	**Pb**	**08 14 33.7**	**-0.2**
DBAD	**Bademkaya**	**2.24**	**331**	*i* P	**Pb**	**08 14 33.7**	**-0.3**

IDC 21 08:27:23.3±1.1, 33°.60S×179°.03W, h0km, mb4.1/3, mb1 4.2/4, mb1mx4.0/16, mbtmp4.1/4, ML4.2/1, Error ellipse: s-maj=42.0km s-min=31.1km az=152.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.61**	**213**	Pn	Pn	08 28 48.4	+0.4
	7.7nm,0.3s,baz=34,slow=4.9,SNR=32						
URZ				Sn	Sn	08 29 45.2	-7.9
	8.5nm,0.3s,baz=259,slow=23,SNR=9.6						
RPZ	**Rata Peaks**	**12.72**	**215**	Pn	Pn	08 30 20.5	-5.0
	0.4nm,0.3s,baz=6.3,slow=9.2,SNR=3.4						
RPZ				Sn	Sn	08 32 30.2	-18
	0.6nm,0.3s,baz=166,slow=18,SNR=10						
STKA	**Stephens Creek**	**33.04**	**262**	P	P	08 34 01.3	+0.9
	1.7nm,0.9s,baz=333,slow=20,SNR=3.1						
CTA	**Charters Tower**	**33.61**	**285**	P	P	08 34 07.2	+1.7
	1.1nm,0.3s,baz=96,slow=13,SNR=5.3						
ASAR	**Alice Springs**	**42.18**	**271**	P	P	08 35 16.9	-1.0
	1.4nm,0.6s,baz=114,slow=7.5,SNR=27						
ASAR				PcP	PcP	08 37 10.1	-2.2
	0.2nm,0.4s,baz=120,slow=4.3,SNR=4.1						
VNA2	**Neumayer--Watz**	**75.60**	**177**	*e*	P	08 39 11.3	+1.8
VNA2				*e*		08 39 15.6	
VNA2				*e*		08 39 25.7	
ARCES	**ARCESS Array B**	**141.50**	**346**	PKhKP		08 46 51.8	
	1.4nm,0.9s,baz=5.5,slow=2.8,SNR=3.6						
JOF	**Joensuu**	**145.02**	**336**	*e*p	PKPbc	08 47 00.0	-1.0
	0.8nm,0.4s						
KAF	**Kangasniemi**	**147.22**	**338**	*e*p	PKPdf	08 47 07.6	+2.2
	1.7nm,0.5s						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	PKPbc	08 47 08.7	-0.6
	2.9nm,0.5s,baz=30,slow=3.8,SNR=12						
MMAI	**Mount Meron Ar**	**151.29**	**278**	PKPbc	PKPbc	08 47 18.2	-0.7
	0.9nm,0.4s,baz=52,slow=1.4,SNR=3.7						
NOA	**NORSAR Array B**	**151.75**	**349**	PKPbc	PKPbc	08 47 20.4	+1.4
	0.3nm,0.4s,baz=24,slow=3.9,SNR=5.6						
HFS	**Hagfors**	**152.17**	**346**	PKPbc	PKPbc	08 47 20.2	+0.2
	1.3nm,0.6s,baz=183,slow=3.0,SNR=6.2						
BRTR	**Keskin Array B**	**153.19**	**293**	PKPbc	PKPbc	08 47 22.9	-0.1
	0.2nm,0.4s,baz=100,slow=4.8,SNR=4.0						
AKASG	**Malin Array Be**	**153.20**	**318**	PKPbc	PKPbc	08 47 21.5	-1.1
	0.5nm,0.5s,baz=60,slow=1.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**159.63**	**182**	PKPab	PKPab	08 48 03.2	+0.5
	1.0nm,0.8s,baz=174,slow=3.7,SNR=4.3						

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*SGS **21** 08:28:50.2, 31°.12N×34°.27E, h14km*
*CSEM **21** 08:28:51.6±0.2, 30°.90N×34°.96E, h2km, ML3.3, Error ellipse: s-maj=4.9km s-min=3.4km az=99.0*
HLW 21 08:28:54.4, 30°.74N×34°.83E, h0km, Ml2.6, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNKL	**Nakhl**	**1.09**	**222**	P	Pg	08 29 15.8	+0.5
	baz=223						
HNKL				AMP		08 29 00.0	
	comp=E,40μm,0.4s,logA/T=5.0,baz=223						
HNKL	**Nakhl**	**1.09**	**222**	P	Pg	08 29 15.8	+0.5
AMAG	**Maghara**	**1.40**	**266**	P	Pn	08 29 20.7	-0.4
	baz=267						
AMAG				S	Sg	08 29 39.7	+0.4
	baz=267						
AMAG	**Maghara**	**1.40**	**266**	P	Pn	08 29 20.7	-0.4
AMAG				S	Sg	08 29 39.7	+0.4
HBST	**Basata**	**1.52**	**183**	P	Pn	08 29 22.6	-0.2
	baz=184						
HBST				AMP		08 29 00.0	
	comp=N,220μm,0.4s,logA/T=5.8,baz=184						
HBST	**Basata**	**1.52**	**183**	P	Pn	08 29 22.6	-0.2
HAQS	**Haql**	**1.69**	**177**	P	Pn	08 29 23.7	-1.4
HAQS	**Haql**	**1.69**	**177**	P	Pn	08 29 23.7	-1.4
HAQS				S	Sn	08 29 48.6	+1.2
SUZ		**1.94**	**243**	P	Pn	08 29 28.0	-0.6
	baz=244						
SUZ		**1.94**	**243**	P	Pn	08 29 28.0	-0.6
HDHB	**Dhahab**	**2.02**	**185**	P	Pn	08 29 29.7	0.0
	baz=186						
HDHB	**Dhahab**	**2.02**	**185**	P	Pn	08 29 29.7	0.0
JLOS		**2.08**	**164**	P	Pn	08 29 30.0	-0.6
JLOS		**2.08**	**164**	P	Pn	08 29 30.0	-0.5
JLOS				S	Sn	08 29 59.9	+2.8
BDAS	**Al Bad'**	**2.31**	**174**	P	Pn	08 29 31.8	-1.9
BDAS	**Al Bad'**	**2.31**	**174**	P	Pn	08 29 31.8	-1.9
HKAT	**Jabal Katrina**	**2.32**	**198**	P	Pn	08 29 33.4	-0.5
	baz=199						
HKAT	**Jabal Katrina**	**2.32**	**198**	P	Pn	08 29 33.4	-0.5
TBKS	**Tabuk**	**2.92**	**149**	P	Sn	08 30 03.9	-14
TBKS	**Tabuk**	**2.92**	**149**	P	Sn	08 30 03.9	-14

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*IDC **21** 08:31:37.3±2.9, 54°.51N×86°.78E, h0km, mb1 3.1/3, mb1mx3.0/25, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=25.0km s-min=17.0km az=54.0*
*NNC **21** 08:31:40.3±4.1, 54°.11N×86°.72E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=47.4km s-min=19.6km az=177.0*
ISC 21 08:31:40.5±2.2, 54°.5N±0°.1×86°.4E±0°.2, h10km, n7, σ1§12/11, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.11**	**238**	Pg	**Pg**	**08 31 60.0**	**-1.8**
	1.4nm,0.3s,baz=65,slow=15,SNR=8.0						
ZALV				Lg		08 32 18.3	
	2.0nm,0.3s,baz=60,slow=24,SNR=6.3						
KURK	**Kurchatov**	**6.10**	**234**	⇓Pn	**Pn**	**08 33 11.0**	**+0.4**
	1.1nm,0.6s						
KURK				⇑Sn	**Sn**	**08 34 21.2**	**+0.9**
	1.5nm,0.9s						
KURK				⇓Lg		08 34 52.7	
	3.5nm,0.8s						
KURK	**Kurchatov**	**6.10**	**234**	Pn	**Pn**	**08 33 13.1**	**+2.5**
	0.1nm,0.3s,baz=54,slow=14,SNR=9.4						
KURK				Lg		08 34 59.2	
	0.0nm,0.3s,baz=58,slow=32,SNR=8.3						
KURBB	**Kurchatov Arra**	**6.20**	**234**	⇑Pn	**Pn**	**08 33 12.7**	**+0.7**
	0.3nm,0.5s						
KURBB				⇑Sn	**Sn**	**08 34 22.5**	**-0.4**
	0.3nm,0.6s						
KURBB				⇑Lg		08 34 54.9	
	1.8nm,1.4s						
MK31	**Makanchi Array**	**8.19**	**200**	⇑Pn	**Pn**	**08 33 38.2**	**-1.0**
	baz=27,slow=14,SNR=8.6						
MK31				⇑Lg		08 35 53.5	
	1.9nm,0.8s,baz=31,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	**8.19**	**200**	Pn	**Pn**	**08 33 38.1**	**-1.1**
	0.1nm,0.3s,baz=18,slow=9.6,SNR=4.3						
MKAR				Sn	**Sn**	**08 35 12.6**	**+0.9**
	0.1nm,0.3s,baz=21,slow=25,SNR=4.0						
MKAR				Lg		08 35 58.6	
	0.0nm,0.3s,baz=26,slow=27,SNR=6.5						
BVAR	**Borovoye Array**	**9.61**	**267**	Pn	**Pn**	**08 33 60.0**	**+1.4**
	0.2nm,0.3s,baz=65,slow=11,SNR=2.7						
BVAR				Sn	**Sn**	**08 35 45.6**	**-0.8**
	0.2nm,0.3s,baz=68,slow=27,SNR=2.9						

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*ISK **21** 08:37:31.9, 36°.98N×29°.22E, h5km, MD3.2*
*IDC **21** 08:37:32.4±1.1, 37°.02N×29°.22E, h0km, mb3.5/5, mb1 3.6/10, mb1mx3.5/28, mbtmp3.6/10, ML3.7/5, Error ellipse: s-maj=21.4km s-min=18.1km az=126.0*
*NEIC **21** 08:37:32.7, 36°.94N×29°.27E, h8km, MD3.5(ISK), ML3.0(ATH), After ISK.*
*ISCJB **21** 08:37:33.7±0.4, 36°.95N±0°.02×29°.27E±0°.03, h13km±3km, mb3.4/5, Error ellipse: s-maj=3.9km s-min=3.0km az=28.9*
*CSEM **21** 08:37:33.8±0.1, 36°.99N×29°.25E, h8km, MD3.2, Error ellipse: s-maj=3.2km s-min=3.0km az=108.0*
*DDA **21** 08:37:33.4, 37°.01N×29°.23E, h26km±1km, Md3.5, Ml3.6*
*HLW **21** 08:37:42.1, 36°.48N×29°.20E, h33km±21km, Ml3.5*
ISC 21 08:37:34.1±0.4, 36°.99N±0°.02×29°.24E±0°.03, h7km±3km, n114, σ1§03/154, mb3.4/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**51**	PG	**Pg**	**08 37 38.8**	**-0.6**
GLHS				SG	**Sg**	**08 37 44.0**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.27**	**51**	Pg	**Pg**	**08 37 38.5**	**-0.8**
GLHS				Sg	**Sg**	**08 37 43.5**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.27**	**51**	*i* Pg	**Pg**	**08 37 38.8**	**-0.5**
GLHS				Sg	**Sg**	**08 37 43.5**	**+0.6**
GOLH	**Golhisar**	**0.36**	**46**	*i* P	**Pg**	**08 37 40.7**	**-0.4**
GOLH				*i* S	**Sg**	**08 37 47.5**	**+1.7**
GOLH	**Golhisar**	**0.36**	**46**	*i* P	**Pg**	**08 37 40.7**	**-0.4**
GOLH				*i* S	**Sg**	**08 37 47.5**	**+1.7**
FETY	**Fethiye**	**0.37**	**200**	PG	**Pg**	**08 37 40.0**	**-1.3**
FETY				*e*SG	**Sg**	**08 37 46.3**	**0.0**
FETY	**Fethiye**	**0.37**	**200**	*i* Pg	**Pg**	**08 37 40.0**	**-1.4**
FETY				*e*Sg	**Sg**	**08 37 46.3**	**0.0**
TURN	**Turunc**	**0.53**	**258**	*i* P	**Pg**	**08 37 48.3**	**+4.1**
TURN				*i* S	**Sg**	**08 37 59.9**	**+8.8**
TURN	**Turunc**	**0.53**	**258**	*i* P	**Pg**	**08 37 48.3**	**+4.1**
ELL	**Elmali**	**0.58**	**114**	*e*PG	**Pg**	**08 37 44.4**	**-0.9**
ELL				*e*SG	**Sg**	**08 37 54.4**	**+1.4**
ELL	**Elmali**	**0.58**	**114**	Pg	**Pg**	**08 37 43.7**	**-1.7**
ELL	**Elmali**	**0.58**	**114**	*e*Pg	**Pg**	**08 37 44.4**	**-1.0**
ELL				*e*Sg	**Sg**	**08 37 54.4**	**+1.4**
DNZL	**Cakiroluk**	**0.72**	**348**	*i* P	**Pg**	**08 37 46.8**	**-1.1**
DNZL				*i* S	**Sg**	**08 37 58.1**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**348**	*i* P	**Pg**	**08 37 46.8**	**-1.1**
DNZL				*i* S	**Sg**	**08 37 58.1**	**+0.8**
DENT	**Denizli**	**0.78**	**348**	*e*PG	**Pg**	**08 37 47.9**	**-1.2**
DENT	**Denizli**	**0.78**	**348**	Pg	**Pg**	**08 37 47.3**	**-1.9**
DENT	**Denizli**	**0.78**	**348**	*e*Pg	**Pg**	**08 37 47.9**	**-1.3**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pg**	**08 37 49.1**	**-0.5**
AKAS				*i* S	**Sg**	**08 38 04.2**	**+4.1**
AKAS	**Kas**	**0.81**	**159**	*i* P	**Pg**	**08 37 49.1**	**-0.5**
KSL	**Kastellorizon**	**0.88**	**162**	*e*P	**Pg**	**08 37 51.0**	**0.0**
KORT	**Korkueli**	**0.89**	**89**	*i* P	**Pg**	**08 37 51.3**	**+0.1**
KORT				*i* S	**Sg**	**08 38 06.4**	**+3.8**
KORT	**Korkueli**	**0.89**	**89**	*i* P	**Pg**	**08 37 51.3**	**+0.2**
KORT				*i* S	**Sg**	**08 38 06.4**	**+3.7**
ANTB	**Antalya**	**1.13**	**94**	*e*PN	**Pn**	**08 37 55.4**	**-1.0**
ANTB	**Antalya**	**1.13**	**94**	*e*Pn	**Pn**	**08 37 55.4**	**-0.9**
BCK	**Bucak**	**1.17**	**66**	*e*PN	**Pn**	**08 37 56.0**	**-0.9**
BCK	**Bucak**	**1.17**	**66**	Pn	**Pn**	**08 37 55.1**	**-1.8**
BCK	**Bucak**	**1.17**	**66**	*e*Pn	**Pn**	**08 37 56.0**	**-0.9**
ARG	**Arkhangelos**	**1.18**	**230**	*e*P	**Pb**	**08 37 54.9**	**-1.9**
ARG	**Arkhangelos**	**1.18**	**230**	P	**Pb**	**08 37 55.5**	**-1.3**
ARG	**Arkhangelos**	**1.18**	**230**	P	**Pb**	**08 37 55.5**	**-1.3**
MLSB	**Milas**	**1.21**	**285**	*e*PN	**Pn**	**08 37 56.6**	**-0.8**
MLSB	**Milas**	**1.21**	**285**	*e*Pn	**Pn**	**08 37 56.6**	**-0.8**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**08 37 57.6**	**-0.8**
AYDN				*i* S	**Sb**	**08 38 16.1**	**+1.0**
AYDN	**Tasoluk**	**1.28**	**302**	*i* P	**Pn**	**08 37 57.6**	**-0.7**
AYDN				*i* S	**Sb**	**08 38 16.0**	**+0.9**
ISP	**Isparta**	**1.32**	**49**	P	**Pn**	**08 38 00.0**	**+1.1**
ISP	**Isparta**	**1.32**	**49**	P	**Pn**	**08 38 00.0**	**+1.1**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**08 37 59.1**	**-0.2**
KHL	**Karahalli**	**1.35**	**9**	*e*Pn	**Pn**	**08 37 59.2**	**-0.1**
DAT	**Datca**	**1.36**	**260**	*e*PN	**Pn**	**08 37 58.7**	**-0.7**
DAT	**Datca**	**1.36**	**260**	*e*Pn	**Pn**	**08 37 58.7**	**-0.7**
KHAL	**Karahalli**	**1.40**	**8**	*i* P	**Pn**	**08 37 59.8**	**-0.2**
KHAL				*i* S	**Sb**	**08 38 19.3**	**+0.9**
KHAL	**Karahalli**	**1.40**	**8**	*i* P	**Pn**	**08 37 59.8**	**-0.1**
KHAL				*i* S	**Sb**	**08 38 19.3**	**+0.9**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**08 38 00.2**	**-0.4**
BDRM				*i* S	**Sn**	**08 38 19.8**	**+0.1**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**08 38 00.2**	**-0.4**
BDRM				*i* S	**Sn**	**08 38 19.8**	**+0.1**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*PN	**Pn**	**08 38 02.7**	**+0.1**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*Pn	**Pn**	**08 38 02.7**	**+0.1**
MANT	**Manisa**	**1.60**	**340**	*i* P	**Pn**	**08 38 02.3**	**-0.4**
MANT				*i* S	**Sn**	**08 38 23.5**	**0.0**
MANT	**Manisa**	**1.60**	**340**	*i* P	**Pn**	**08 38 02.3**	**-0.4**
MANT				*i* S	**Sn**	**08 38 23.5**	**0.0**
GCAM	**G?zelcaml?**	**1.75**	**295**	*i* P	**Pn**	**08 38 04.8**	**0.0**
GCAM				*i* S	**Sn**	**08 38 26.8**	**-0.5**
GCAM	**G?zelcaml?**	**1.75**	**295**	*i* P	**Pn**	**08 38 04.8**	**0.0**
GCAM				*i* S	**Sn**	**08 38 26.8**	**-0.6**
SHUT	**Suhut-Afyon**	**1.88**	**33**	*e*PN	**Pn**	**08 38 06.0**	**-0.5**
SHUT	**Suhut-Afyon**	**1.88**	**33**	*e*Pn	**Pn**	**08 38 06.0**	**-0.5**
SMG	**Samos**	**2.05**	**291**	*e*P	**Pn**	**08 38 08.0**	**-0.9**
SMG	**Samos**	**2.05**	**291**	P	**Pn**	**08 38 08.8**	**-0.1**
SMG	**Samos**	**2.05**	**291**	P	**Pn**	**08 38 08.8**	**-0.1**
DEMI	**Demirci**	**2.09**	**349**	*i* P	**Pn**	**08 38 09.3**	**-0.2**
DEMI				*i* S	**Sn**	**08 38 37.0**	**+1.2**
DEMI	**Demirci**	**2.09**	**349**	*i* P	**Pn**	**08 38 09.3**	**-0.2**
DEMI				*i* S	**Sn**	**08 38 37.0**	**+1.2**
GDZ	**Gediz**	**2.11**	**5**	*i* P	**Pn**	**08 38 10.2**	**+0.5**
GDZ	**Gediz**	**2.11**	**5**	*i* P	**Pn**	**08 38 10.2**	**+0.5**
IZM	**Izmir**	**2.11**	**312**	*e*PN	**Pn**	**08 38 09.7**	**-0.1**
IZM	**Izmir**	**2.11**	**312**	*e*Pn	**Pn**	**08 38 09.7**	**0.0**
BOLV	**Bolvadin**	**2.19**	**38**	*e*P	**Pn**	**08 38 12.4**	**+1.5**
BOLV				*i* S	**Sn**	**08 38 42.3**	**+4.0**
BOLV	**Bolvadin**	**2.19**	**38**	*e*P	**Pn**	**08 38 12.4**	**+1.5**
BOLV				*i* S	**Sn**	**08 38 42.3**	**+4.0**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**	**08 38 10.2**	**-0.8**
AKHS				*i* S	**Sn**	**08 38 37.4**	**-1.0**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**	**08 38 10.2**	**-0.8**
AKHS				*i* S	**Sn**	**08 38

mb4.0/20, MS3.0/6, Error ellipse: s-maj=5.9km s-min=4.7km az=155.7
*MOS **21** 08:40:55.4±1.2, 31°.35N×103°.47E, h33km, mb4.2/11, Error ellipse: s-maj=18.0km s-min=9.0km az=105.7*
ISC 21 08:40:54.9±0.9, 31°.31N±0°.03×103°.37E±0°.03, h16km±6km, n57, σ1§13/65, mb4.0/20, MS3.0/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.52**	**140**	Pg	**Pg**	**08 41 04.6**	**-0.6**
CD2				Sg	**Sg**	**08 41 13.9**	**+1.7**
CD2				smax			
	comp=N,15μm,0.8s						
LZH	**Lanzhou**	**4.78**	**5**	Pn	**Pn**	**08 42 08.0**	**+1.8**
LZH				Pg	**Pb**	**08 42 20.9**	**+2.6**
LZH				Sg	**Sb**	**08 43 19.1**	**+3.5**
LZH				smax			
	comp=N,120nm,0.6s						
LZH				smax			
	comp=E,190nm,0.7s						
LZH				LR	LR		
	comp=E,640nm,5.8s						
LZH				LR	LR		
	comp=Z,850nm,6.6s						
ENH	**Enshi**	**5.37**	**100**	*e*Pn	**Pn**	**08 42 14.1**	**-0.2**
	comp=Z,67nm,0.5s						
ENH				*e*Sn	**Sn**	**08 43 15.3**	**-0.4**
XAN	**Xi'an**	**5.42**	**58**	Pn	**Pn**	**08 42 14.1**	**-0.9**
XAN				Pg	**Pb**	**08 42 29.0**	**-0.1**
XAN				Sg	**Sg**	**08 43 47.1**	**-1.7**
XAN				smax			
	comp=N,280nm,0.7s						
XAN				smax			
	comp=E,110nm,0.7s						
GYA	**Guiyang**	**5.63**	**148**	Pn	**Pn**	**08 42 18.3**	**+0.4**
GYA				Sn	**Sn**	**08 43 21.3**	**-1.0**
GYA				smax			
	comp=N,260nm,0.8s						
GYA				smax			
	comp=E,230nm,0.8s						
KMI	**Kunming**	**6.19**	**185**	Pn	**Pn**	**08 42 26.3**	**+0.7**
KMI				Sn	**Sn**	**08 43 37.3**	**+1.3**
KMI				smax			
	comp=N,36nm,1.4s						
KMI				smax			
	comp=E,46nm,1.3s						
KMI				LR	LR		
	comp=N,410nm,10.0s						
KMI				LR	LR		
	comp=E,2μm,10.9s						
KMI				LR	LR		
	comp=Z,310nm,8.2s						
GTA	**Gaotai**	**8.59**	**341**	*e*P	**Pn**	**08 42 54.9**	**-3.6**
GTA				pP		08 42 59.1	
GTA				sP		08 43 02.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WHN	**Wuhan**	**9.47**	**92**	P	Px	08 43 26.4	
WHN				S	**Sn**	**08 44 49.8**	**-6.9**
WHN				LR	LR		
	comp=N,1μm,6.0s						
WHN				LR	LR		
	comp=E,340nm,2.8s						
WHN				LR	LR		
	comp=Z,550nm,5.5s						
HHC	**Hu-ho-hao-te**	**11.60**	**33**	*e*P	**Pn**	**08 43 38.0**	**-1.7**
HHC				pP		08 43 41.3	
HHC				PP		08 43 47.8	
HHC				S	**Sn**	**08 45 47.9**	**-0.9**
HHC				SS		08 46 01.8	
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,80nm,5.1s						
HHC				LR	LR		
	comp=N,230nm,4.9s						
HHC				LR	LR		
	comp=E,340nm,5.3s						
HHC				LR	LR		
	comp=Z,200nm,6.1s						
CHTO	**Chiang Mai**	**13.07**	**199**	P	**Pn**	**08 44 04.2**	**+4.3**
CMAR	**Chiang Mai Arr**	**13.41**	**198**	Pn	**Pn**	**08 44 06.2**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=11,slow=12,SNR=5.3						
ODAN	**Odare**	**14.65**	**256**	*e*P	**Pn**	**08 44 20.5**	**-1.0**
	comp=Z,14nm,0.5s						
RAMN	**Ramite**	**15.28**	**258**	*e*P	**Pn**	**08 44 28.3**	**-1.6**
	comp=Z,14nm,0.6s						
GUN	**Gumba**	**15.58**	**262**	*e*P	**Pn**	**08 44 32.5**	**-1.3**
	comp=Z,45nm,0.8s						
PKI	**Pulchoki**	**16.08**	**261**	*e*P	**Pn**	**08 44 38.9**	**-1.4**
	comp=Z,18nm,0.5s						
PKIN	**Phulchoki**	**16.09**	**261**	*e*P	**Pn**	**08 44 38.9**	**-1.5**
	comp=Z,29nm,0.6s						
KKN	**Kakani**	**16.12**	**262**	*e*P	**Pn**	**08 44 39.1**	**-1.8**
	comp=Z,34nm,0.6s						
DMN	**Daman**	**16.32**	**262**	*e*P	**Pn**	**08 44 42.0**	**-1.4**
	comp=Z,47nm,0.9s						
SONM	**Songino Array**	**16.67**	**7**	Pn	**Pn**	**08 44 47.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=6.0						
SONM				LR	LR	08 52 09.5	
	comp=Z,59nm,20.4s,baz=240,slow=41						
ZAK	**Zakamensk**	**19.05**	**360**	*e*P	**Pn**	**08 45 18.2**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	**Korea Array**	**21.15**	**66**	P	**P**	**08 45 39.6**	**+0.5**
	comp=Z,6.4nm,0.7s,mb4.1,baz=261,slow=10,SNR=14						
KSRS				LR	LR	08 54 21.9	
	comp=Z,40nm,21.5s,MS2.8,baz=195,slow=38						
KSRS	**Korea Array**	**21.15**	**66**	P	**P**	**08 45 39.7**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,40nm,21.5s,MS2.8						
CN2	**Changchun**	**21.42**	**48**	*e*P	**P**	**08 45 43.1**	**+1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
JOW	**Kunigami**	**22.21**	**95**	P	**P**	**08 45 51.1**	**+0.5**
	comp=Z,6.2nm,0.6s,mb4.2,baz=0.0,slow=1.0,SNR=4.0						
MK31	**Makanchi Array**	**22.41**	**320**	*e*P	**P**	**08 45 52.9**	**+0.3**
MKAR	**Makanchi Array**	**22.41**	**320**	P	**P**	**08 45 53.1**	**+0.5**
	comp=Z,3.1nm,0.9s,mb3.8,baz=122,slow=12,SNR=22						
MKAR	**Makanchi Array**	**22.41**	**320**	P	**P**	**08 45 53.1**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TKM2	**Tokmak 2**	**24.88**	**306**	*e*P	**P**	**08 46 18.6**	**+1.9**
UCH	**Uchtor**	**25.44**	**303**	*e*P	**P**	**08 46 22.6**	**+0.8**
	comp=Z,6.6nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**25.57**	**304**	P	**P**	**08 46 24.9**	**+1.9**
	comp=Z,0.9nm,0.3s,mb3.8,baz=286,slow=10,SNR=5.7						
AAK				LR	LR	08 57 35.4	
	comp=Z,60nm,18.6s,MS3.1,baz=198,slow=39						
AAK	**Ala-Archa**	**25.57**	**304**	P	**P**	**08 46 24.9**	**+1.9**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK				MLR	MLR		
	comp=Z,60nm,18.6s,MS3.1						
AML	**Almayashu**	**26.00**	**303**	*e*P	**P**	**08 46 28.6**	**+1.7**
	comp=Z,2.4nm,0.8s,mb3.8						
ZALV	**Zalesovo Beam**	**26.27**	**335**	P	**P**	**08 46 28.8**	**-0.4**
	comp=Z,1.6nm,0.4s,mb3.9,baz=151,slow=9.4,SNR=4.5						
ZALV				LR	LR	08 57 57.6	
	comp=Z,22nm,18.6s,MS2.7,baz=147,slow=39						
ZALV	**Zalesovo Beam**	**26.27**	**335**	P	**P**	**08 46 28.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,22nm,18.6s,MS2.7						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**08 46 33.5**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.0,baz=129,slow=9.6,SNR=25						
KURK				LR	LR	08 57 59.6	
	comp=Z,50nm,20.6s,MS3.0,baz=135,slow=38						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**08 46 33.5**	**+0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
KURK				MLR	MLR		
	comp=Z,50nm,20.6s,MS3.0						
KURK	**Kurchatov**	**26.71**	**324**	P	**P**	**08 46 33.5**	**+0.3**
KURK				LR	LR	08 57 59.5	
BVAR	**Borovoye Array**	**32.24**	**322**	P	**P**	**08 47 22.8**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.8,baz=131,slow=10,SNR=4.9						
BVAR				PcP	PcP	08 50 13.2	+2.8
	comp=Z,0.7nm,0.7s,baz=252,slow=1.4,SNR=3.9						
BVAR				LR	LR	09 00 36.7	
	comp=Z,45nm,20.3s,MS3.1,baz=247,slow=37						
BVAR	**Borovoye Array**	**32.24**	**322**	P	**P**	**08 47 22.8**	**+0.5**
BVAR						08 50 13.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,45nm,20.3s						
ABKAR	**Akbulak array**	**37.06**	**312**	*e*P	**P**	**08 48 04.0**	**-0.1**
PETK	**Petropavlovsk-comp=Z,29nm,19.2s,MS3.2,baz=70,slow=37**	**44.49**	**44**	LR	LR	09 08 37.1	
AKASG	**Malin Array Be**	**56.78**	**313**	P	**P**	**08 50 37.5**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=68,slow=6.2,SNR=3.6						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**08 50 37.6**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=10,slow=21,SNR=3.8						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**08 50 37.6**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**08 50 39.1**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=76,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**08 50 39.1**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRAB	**Tennant Creek**	**58.99**	**146**	*e*P	**P**	**08 50 53.0**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**58.99**	**146**	*e*P	**P**	**08 50 53.0**	**-0.9**
	comp=Z,7.1nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**08 51 14.0**	**-0.3**
	comp=Z,1.2nm,0.7s,mb4.2,baz=341,slow=6.5,SNR=13						
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**08 51 14.0**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**63.25**	**326**	P	**P**	**08 51 22.4**	**+0.1**
	comp=Z,0.5nm,0.4s,mb4.0,baz=84,slow=15,SNR=2.6						
HFS	**Hagfors**	**63.25**	**326**	P	**P**	**08 51 22.4**	**+0.1**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**08 51 28.1**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=72,slow=6.7,SNR=2.6						
GERES	**GERESS Array B**	**66.95**	**314**	P	**P**	**08 51 48.2**	**+1.7**
	comp=Z,0.5nm,0.2s,mb4.2,baz=94,slow=4.0,SNR=3.5						
GERES	**GERESS Array B**	**66.95**	**314**	P	**P**	**08 51 48.2**	**+1.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.2s						
STKA	**Stephens Creek**	**72.53**	**146**	P	**P**	**08 52 20.1**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=333,slow=7.4,SNR=3.4						
YKA	**Yellowknife Ar**	**81.68**	**17**	P	**P**	**08 53 12.1**	**0.0**
	comp=Z,0.2nm,0.4s,mb3.4,baz=329,slow=5.4,SNR=3.5						

DJA 21 08:45:14, 1°.67N×99°.23E, h10km, MLv3.6/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.36**	**251**	P	Pg	08 45 20.2	-0.9
SBSI				S	Sg	08 45 26.7	+0.7
TRSI	**Tarutung**	**0.45**	**323**	P	Pg	08 45 22.5	-0.2
MNSI	**Mandailing Nat**	**0.94**	**158**	P	Pg	08 45 30.9	-1.2
GSI	**Gunungsitoli**	**1.69**	**258**	P	Pn	08 45 43.6	0.0
GSI				S	Sn	08 46 06.1	+0.7
BKNI	**Bangkinang**	**2.25**	**126**	P	Pn	08 45 54.1	+2.8

IDC 21 08:56:21.6±1.6, 5°.45S×122°.15E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.4/20, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=41.2km s-min=26.4km az=37.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.43**	**280**	Pn	Pn	08 57 02.7	+0.2
	4.8nm,0.3s,baz=103,slow=8.0,SNR=14						
KAPI				Sn	Sn	08 57 34.2	+1.2
	6.3nm,0.3s,baz=287,slow=14,SNR=6.5						
ASAR	**Alice Springs**	**21.36**	**149**	P	P	09 01 10.8	+0.2
	0.5nm,0.7s,baz=330,slow=12,SNR=4.7						
SONM	**Songino Array**	**54.84**	**347**	P	P	09 05 54.2	+0.6
	0.3nm,0.4s,baz=162,slow=5.0,SNR=2.1						
MKAR	**Makanchi Array**	**62.84**	**330**	P	P	09 06 48.7	-0.5
	0.5nm,0.6s,baz=135,slow=8.3,SNR=4.9						

*CSEM **21** 09:00:20.9, 46°.87N×8°.60E, h-2km, ML1.8, Suspected Mining explosion. After ZUR*
ZUR 21 09:00:20.9, 46°.87N×8°.60E, h-2km±5km, ML1.8/4, 4C, Suspected Mining explosion., Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUO	**Muotathal**	**0.10**	**13⇑**	*i*Pg		09 00 23.6	
	571nm,0.6s						
MUO	**Muotathal**	**0.10**	**13⇑**	*i*Pg		09 00 23.6	
	571nm,0.6s						
BNALP	**Bannalp**	**0.12**	**272⇑**	*i*Pg		09 00 23.9	
	402nm,0.7s						
BNALP	**Bannalp**	**0.12**	**272⇑**	*i*Pg		09 00 23.9	
	402nm,0.7s						
HASLI	**Hasliberg/Brie**	**0.33**	**251**	*e*Pg		09 00 28.0	
	214nm,0.5s						
HASLI	**Hasliberg/Brie**	**0.33**	**251**	*e*Pg		09 00 28.0	
	214nm,0.5s						
FUSIO	**Fusio**	**0.41**	**174**	*i* Pg		09 00 29.7	
	71nm,0.5s						
FUSIO	**Fusio**	**0.41**	**174**	*i* Pg		09 00 29.7	
	71nm,0.5s						

*ISCJB **21** 09:00:35.7±0.5, 37°.26N±0°.03×28°.24E±0°.03, h10km, Error ellipse: s-maj=4.3km s-min=3.6km az=17.6*
*CSEM **21** 09:00:35.7±0.1, 37°.26N×28°.27E, h2km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.7km az=63.0*
*ISK **21** 09:00:35.9, 37°.23N×28°.16E, h5km, MD2.9*
*DDA **21** 09:00:35.2, 37°.25N×28°.26E, h7km±7km, Md2.8*
ISC 21 09:00:36.2±0.5, 37°.27N±0°.03×28°.23E±0°.03, h10km, n21, σ0§97/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**164**	*e*PG	**Pg**	**09 00 38.4**	**-0.9**
YER				*e*SG	**Sg**	**09 00 41.2**	**-0.3**
YER	**Yerkesik**	**0.14**	**164**	*e*Pg	**Pg**	**09 00 38.4**	**-0.9**
YER				*e*Sg	**Sg**	**09 00 41.2**	**-0.3**
MLSB	**Milas**	**0.37**	**274**	*e*PG	**Pg**	**09 00 43.1**	**-0.3**
MLSB				*e*SG	**Sg**	**09 00 48.5**	**+0.2**
MLSB	**Milas**	**0.37**	**274**	*e*Pg	**Pg**	**09 00 43.1**	**-0.3**
MLSB				*e*Sg	**Sg**	**09 00 48.5**	**+0.2**
AYDN	**Tasoluk**	**0.48**	**324**	*i* P	**Pg**	**09 00 45.5**	**-0.1**
AYDN				*i* S	**Sg**	**09 00 52.5**	**+0.4**
AYDN	**Tasoluk**	**0.48**	**324**	*i* P	**Pg**	**09 00 45.5**	**-0.2**
AYDN				*i* S	**Sg**	**09 00 52.5**	**+0.5**
TURN	**Turunc**	**0.49**	**143**	*i* P	**Pg**	**09 00 44.7**	**-1.1**
TURN				*i* S	**Sg**	**09 00 51.1**	**-1.1**
TURN	**Turunc**	**0.49**	**143**	*i* P	**Pg**	**09 00 44.7**	**-1.1**
TURN				*i* S	**Sg**	**09 00 51.2**	**-1.1**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 00 48.0**	**-1.0**
BDRM				*i* S	**Sg**	**09 00 57.6**	**-0.1**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 00 48.0**	**-1.0**
BDRM				*i* S	**Sg**	**09 00 57.6**	**-0.1**
DAT	**Datca**	**0.75**	**225**	*e*PG	**Pg**	**09 00 50.3**	**-0.4**
DAT				*e*SG	**Sg**	**09 01 01.4**	**+0.8**
DAT	**Datca**	**0.75**	**225**	*e*Pg	**Pg**	**09 00 50.3**	**-0.4**
DAT				*e*Sg	**Sg**	**09 01 01.4**	**+0.9**
DNZL	**Cakiroluk**	**0.77**	**57**	*i* P	**Pg**	**09 00 51.7**	**+0.6**
DNZL				*i* S	**Sg**	**09 00 59.5**	**-1.7**
DNZL	**Cakiroluk**	**0.77**	**57**	*i* P	**Pg**	**09 00 51.7**	**+0.6**
DNZL				*i* S	**Sg**	**09 00 59.5**	**-1.7**
FETY	**Fethiye**	**0.93**	**133**	*e*PG	**Pg**	**09 00 56.2**	**+2.2**
MANT	**Manisa**	**1.25**	**12**	*i* P	**Pn**	**09 01 00.0**	**+0.3**
MANT	**Manisa**	**1.25**	**12**	*i* P	**Pn**	**09 01 00.0**	**+0.3**
ELL	**Elmali**	**1.44**	**111**	*e*PN	**Pg**	**09 01 05.0**	**+1.2**
ELL	**Elmali**	**1.44**	**111**	*e*Pn	**Pg**	**09 01 05.0**	**+1.2**
AKAS	**Kas**	**1.51**	**133**	*i* P	**Pg**	**09 01 06.8**	**+1.7**
AKAS				*i* S	**Sg**	**09 01 30.8**	**+6.1**
AKAS	**Kas**	**1.51**	**133**	*i* P	**Pg**	**09 01 06.8**	**+1.7**

*IDC **21** 09:01:58.1±0.8, 5°.49N×92°.76E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/27, mbtmp3.9/13, ML4.3/2, MS3.8/4, Ms1 3.8/4, ms1mx3.1/38, Error ellipse: s-maj=33.6km s-min=17.3km az=53.0*
*ISCJB **21** 09:02:00.8±0.6, 5°.5N±0°.1×92°.81E±0°.08, h33km, mb4.0/16, MS3.8/3, Error ellipse: s-maj=16.2km s-min=10.1km az=32.0*
*NEIC **21** 09:02:02.9±0.5, 5°.46N×92°.80E, h35km, mb4.3/4, Error ellipse: s-maj=13.1km s-min=8.7km az=213.0*
ISC 21 09:02:00.4±5.0, 5°.5N±0°.1×92°.80E±0°.09, h14km±31km, n30, σ0§65/27, mb4.0/16, MS3.8/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.82**	**91**	*e*Pn	**Pn**	**09 03 54.0**	**+0.2**
	12nm,0.7s						
PALK	**Pallekele**	**12.15**	**279**	Pn	**Pn**	**09 04 53.0**	**-0.2**
	1.8nm,0.3s,baz=111,slow=13,SNR=6.3						
PALK				Sn	**Sn**	**09 06 57.6**	**-11**
	1.5nm,0.3s,baz=14,slow=16,SNR=5.9						
PALK				LR	LR	09 08 48.2	
	comp=Z,454nm,21.6s,baz=96,slow=34						
PALK				T		09 16 37.0	
	1.7nm,0.3s,baz=94,slow=21,SNR=4.5						
PALK	**Pallekele**	**12.15**	**279**	Pn	**Pn**	**09 04 53.0**	**-0.2**
PALK				Sn	**Sn**	**09 06 57.6**	**-11**
PALK				LR	LR	09 08 48.2	
CMAR	**Chiang Mai Arr**	**14.23**	**24**	Pn	**Pn**	**09 05 21.5**	**-0.1**
	0.5nm,0.3s,baz=219,slow=14,SNR=14						
UCH	**Uchtor**	**40.05**	**339**	*e*P	**P**	**09 09 36.2**	**+1.1**
	4.0nm,1.3s,mb4.0						
AML	**Almayashu**	**40.27**	**338**	*e*P	**P**	**09 09 38.4**	**+1.6**
	6.7nm,1.3s,mb4.2						
AAK	**Ala-Archa**	**40.41**	**339**	LR	LR	09 29 21.0	
	comp=Z,78nm,18.2s,MS3.6,baz=294,slow=41						
MKAR	**Makanchi Array**	**42.15**	**349**	P	**P**	**09 09 51.3**	**-1.0**
	0.7nm,0.7s,mb3.4,baz=184,slow=7.1,SNR=5.7						
SONM	**Songino Array**	**43.78**	**13**	P	**P**	**09 10 05.9**	**+0.4**
	1.1nm,0.9s,mb3.6,baz=197,slow=8.3,SNR=6.2						
SONM				PcP	PcP	09 11 52.7	+0.6
	0.6nm,0.4s,baz=212,slow=2.8,SNR=3.6						
KURK	**Kurchatov**	**46.63**	**348**	P	**P**	**09 10 27.5**	**-0.5**
	0.9nm,0.6s,mb3.9,baz=166,slow=6.3,SNR=3.9						
KURK	**Kurchatov**	**46.63**	**348**	P	**P**	**09 10 27.5**	**-0.6**
WRAB	**Tennant Creek**	**48.03**	**123**	*e*P	**P**	**09 10 39.3**	**-0.2**
ZALV	**Zalesovo Beam**	**48.76**	**354**	P	**P**	**09 10 44.8**	**+0.2**
	1.1nm,0.5s,mb4.2,baz=172,slow=14,SNR=4.6						
ASAR	**Alice Springs**	**49.46**	**128**	P	**P**	**09 10 50.4**	**-0.1**
	0.6nm,0.4s,mb4.0,baz=297,slow=8.0,SNR=18						
ASAR				PcP	PcP	09 12 13.2	+0.6
	0.9nm,0.7s,baz=318,slow=3.6,SNR=6.8						
BVAR	**Borovoye Array**	**50.84**	**343**	P	**P**	**09 10 59.1**	**-1.3**
	0.5nm,0.4s,mb3.8,baz=138,slow=9.0,SNR=4.7						
ABKAR	**Akbulak array**	**51.72**	**333**	*e*P	**P**	**09 11 07.3**	**+0.2**
	4.6nm,1.1s,mb4.3						
MJAR	**Matsushiro Arr**	**51.76**	**47**	LR	LR	09 35 16.5	
	comp=Z,106nm,20.3s,MS3.9,baz=230,slow=39						
AKTK	**Aktyubinsk**	**53.44**	**333**	P	**P**	**09 11 19.7**	**-0.1**
AKTO	**Aktyubinsk**	**53.44**	**333**	P	**P**	**09 11 19.7**	**-0.1**
	1.8nm,0.9s,mb4.0,baz=123,slow=8.7						
STKA	**Stephens Creek**	**59.46**	**132**	P	**P**	**09 12 03.2**	**+0.1**
	1.4nm,0.7s,mb4.1,baz=270,slow=17,SNR=3.8						
STKA	**Stephens Creek**	**59.46**	**132**	P	**P**	**09 12 03.2**	**+0.1**
BRTR	**Keskin Array B**	**63.00**	**312**	P	**P**	**09 12 26.2**	**-0.8**
	0.4nm,0.5s,mb3.9,baz=128,slow=9.5,SNR=5.2						
BRTR	**Keskin Array B**	**63.00**	**312**	P	**P**	**09 12 26.2**	**-0.8**
TIXI	**Tiksi**	**69.83**	**11**	*e*P	**P**	**09 13 09.6**	**-0.5**
	3.8nm,0.8s,mb4.4						
MLR	**Muntele Rosu**	**69.96**	**316**	P	**P**	**09 13 12.1**	**+0.7**
	9.0nm,1.2s,mb4.6,baz=115,slow=3.8,SNR=3.1						
BOSA	**Boshof**	**73.19**	**238**	LR	LR	09 40 33.5	
	comp=Z,85nm,18.4s,MS4.1,baz=337,slow=32						
FINES	**FINESS Array B**	**74.21**	**333**	P	**P**	**09 13 36.2**	**-0.3**
	1.2nm,0.7s,mb3.9,baz=83,slow=12,SNR=3.4						
GERES	**GERESS Array B**	**78.72**	**319**	P	**P**	**09 14 03.1**	**+0.7**
	0.3nm,0.3s,mb3.6,baz=121,slow=9.5,SNR=6.5						
TXAR	**Lajitas Array**	**141.95**	**24**	PKhKP		09 21 29.4	
	0.1nm,0.4s,baz=215,slow=0.9,SNR=4.7						
CPUP	**Villa Florida**	**144.73**	**231**	PKP	PKPdf	09 21 36.4	-1.2
	0.5nm,0.5s,baz=66,slow=6.4,SNR=3.9						

*DDA **21** 09:07:37.8, 37°.23N×30°.71E, h7km±6km, Md3.0*
*ISCJB **21** 09:07:38.6±0.7, 37°.21N±0°.04×30°.70E±0°.04, h108km±7km, Error ellipse: s-maj=7.6km s-min=5.3km az=22.4*
*CSEM **21** 09:07:41.4±0.2, 37°.16N×30°.74E, h60km, MD3.1, Error ellipse: s-maj=8.8km s-min=6.2km az=20.0*
*ISK **21** 09:07:41.7, 37°.05N×30°.94E, h60km, MD3.1*
ISC 21 09:07:39.5±0.7, 37°.21N±0°.04×30°.70E±0°.04, h103km±7km, n41, σ0§89/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.26**	**340**	PG	**Pn**	**09 07 54.3**	**0.0**
BCK				*e*SG	**Sn**	**09 08 03.3**	**-2.0**
BCK	**Bucak**	**0.26**	**340**	*i* Pg	**Pn**	**09 07 54.3**	**0.0**
BCK				*e*Sg	**Sn**	**09 08 03.3**	**-2.0**
ANTB	**Antalya**	**0.32**	**187**	*e*PG	**Pn**	**09 07 51.8**	**-2.7**
ANTB	**Antalya**	**0.32**	**187**	*e*Pg	**Pn**	**09 07 51.8**	**-2.7**
KORT	**Korkueli**	**0.35**	**233**	*i* P	**Pn**	**09 07 54.6**	**-0.1**
KORT				*i* S	**Sn**	**09 08 06.3**	**+0.3**
KORT	**Korkueli**	**0.35**	**233**	*i* P	**Pn**	**09 07 54.6**	**-0.1**
KORT				*i* S	**Sn**	**09 08 06.3**	**+0.3**
SUTC	**Sutluce-Ispart**	**0.36**	**42**	PG	**Pn**	**09 07 53.9**	**-0.8**
SUTC	**Sutluce-Ispart**	**0.36**	**42**	*i* Pg	**Pn**	**09 07 53.9**	**-0.8**
ISP	**Isparta**	**0.65**	**347**	*e*PG	**Pn**	**09 07 56.7**	**0.0**
ISP				*e*SG	**Sn**	**09 08 10.3**	**+0.6**
ELL	**Elmali**	**0.79**	**234**	*e*PG	**Pn**	**09 07 58.9**	**+0.9**
ELL	**Elmali**	**0.79**	**234**	*e*Pg	**Pn**	**09 07 58.9**	**+0.9**
GOLH	**Golhisar**	**0.91**	**272**	*i* P	**Pn**	**09 07 59.1**	**-0.1**
GOLH				*i* S	**Sn**	**09 08 14.7**	**+0.8**
GOLH	**Golhisar**	**0.91**	**272**	*i* P	**Pn**	**09 07 59.1**	**-

1.7nm,0.5s
KURK ⇑Lg 09 15 31.3
4.2nm,0.6s
KURK Kurchatov 2.08 119 Pn **Pn 09 15 02.2 -0.2**
0.4nm,0.3s,baz=306,slow=22,SNR=14
KURK Lg 09 15 33.8
0.5nm,0.3s,baz=308,slow=29,SNR=10
KURBB Kurchatov Arra 2.08 122 ⇓Pn **Pn 09 15 04.1 +1.7**
0.2nm,0.3s
KURBB ⇑Lg 09 15 34.3
4.0nm,0.6s
VOSK Vostochnaya 3.10 290 ⇓Pn **Pn 09 15 17.4 +1.0**
1.3nm,0.4s
VOSK ⇓Sn **Sn 09 15 53.9 +0.5**
9.0nm,0.8s
BVA0 Borovoye Array 3.53 293 Pn **Pn 09 15 23.7 +1.4**
0.4nm,0.8s,baz=107,slow=17,SNR=8.3
BVA0 ⇑Sn **Sn 09 16 07.8 +3.8**
0.6nm,0.6s,baz=113,slow=28,SNR=5.8
BVAR Borovoye Array 3.53 293 Pn **Pn 09 15 18.6 -3.7**
0.4nm,0.3s,baz=115,slow=16,SNR=4.4
BVAR Pg **Pg 09 15 23.7 -11**
0.6nm,0.3s,baz=112,slow=16,SNR=8.4
BVAR Sn **Sn 09 16 01.8 -2.2**
0.4nm,0.3s,baz=95,slow=15,SNR=2.7
BVAR Lg 09 16 08.8
0.9nm,0.3s,baz=114,slow=30,SNR=5.1
ZALV Zalesovo Beam 5.90 65 Pn **Pn 09 15 54.5 -0.4**
0.1nm,0.3s,baz=247,slow=7.5,SNR=2.8
MK31 Makanchi Array 6.55 137 ⇓Pn **Pn 09 16 03.0 -0.9**
0.3nm,0.5s,baz=109,slow=20,SNR=3.3
MK31 ⇓Lg 09 17 50.1
1.6nm,0.7s,baz=247,slow=28,SNR=3.5
MKAR Makanchi Array 6.55 137 Pn **Pn 09 16 01.7 -2.2**
0.1nm,0.3s,baz=306,slow=14,SNR=3.6
MKAR Sn **Sn 09 17 19.2 +0.6**
0.1nm,0.3s,baz=327,slow=21,SNR=3.8
MKAR Lg 09 17 52.7
0.2nm,0.3s,baz=334,slow=26,SNR=5.0

IDC 21 09:26:05.2±2.3, 53°.56N×88°.04E, h0km, mb1 3.3/3, mb1mx3.1/27, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=19.4km s-min=11.9km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.95**	**283**	Pn	Pn	09 26 38.9	-0.7
	2.6nm,0.3s,baz=105,slow=13,SNR=18						
ZALV				Lg		09 27 05.2	
	2.5nm,0.3s,baz=102,slow=25,SNR=12						
KURK	**Kurchatov**	**6.46**	**248**	Pn	Pn	09 27 43.1	+1.6
	0.2nm,0.3s,baz=61,slow=14,SNR=15						
KURK				Sn	Sn	09 28 57.1	+1.2
	0.0nm,0.3s,baz=64,slow=24,SNR=2.3						
KURK				Lg		09 29 30.8	
	0.1nm,0.3s,baz=62,slow=30,SNR=2.7						
MKAR	**Makanchi Array**	**7.71**	**211**	Pn	Pn	09 27 59.1	+0.4
	0.2nm,0.3s,baz=27,slow=13,SNR=5.0						
MKAR				Sn	Sn	09 29 27.4	+0.7
	0.1nm,0.3s,baz=27,slow=26,SNR=2.8						
MKAR				Lg		09 30 07.4	
	0.1nm,0.3s,baz=34,slow=30,SNR=7.6						
BVAR	**Borovoye Array**	**10.59**	**274**	Pn	Pn	09 28 38.7	+0.7
	0.2nm,0.3s,baz=53,slow=17,SNR=2.9						
BVAR				Sn	Sn	09 30 33.8	-3.3
	0.3nm,0.3s,baz=78,slow=22,SNR=2.4						

NNC 21 09:32:34.4±2.7, 43°.39N×78°.79E, h0km, mb3.6, mpv3.3, 2C-1D, Error ellipse: s-maj=60.6km s-min=9.7km az=150.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**2.38**	**260**	⇑Pn	Pn	09 33 15.5	+0.8
	6.9nm,0.5s						
TKM2				⇑Lg		09 33 49.2	
	4.2nm,0.4s						
MK31	**Makanchi Array**	**4.21**	**35**	Pn	Pn	09 33 42.2	+2.4
	baz=214,slow=12,SNR=8.6						
MK31				⇓Lg		09 34 49.5	
	0.3nm,0.3s,baz=212,slow=28,SNR=5.8						
KK31	**Karatay Array**	**6.05**	**270**	Pg	Pg	09 34 25.5	-4.9
	0.7nm,0.1s,baz=139,slow=30,SNR=3.0						
KK31				Lg		09 35 41.1	
	0.4nm,0.2s,baz=332,slow=41,SNR=4.6						

IDC ***21*** *09:33:13.3±0.6, 32°.34N×105°.07E, h0km, mb4.2/17, mb1 4.2/20, mb1mx4.2/30, mbtmp4.2/20, ML4.1/3, MS3.6/6, Ms1 3.6/6, ms1mx3.1/37, Error ellipse: s-maj=23.0km s-min=12.7km az=45.0*
BJI ***21*** *09:33:14.4, 32°.42N×105°.26E, h13km, mB4.8/10, mb4.6/13, ML4.7/23, Ms4.5/25, Ms7 4.2/24*
ISCJB ***21*** *09:33:15.1±1.5, 32°.30N±0°.03×105°.18E±0°.04, h21km±11km, mb4.4/39, MS3.8/11, Error ellipse: s-maj=5.3km s-min=4.8km az=44.1*
NEIC ***21*** *09:33:15.5±0.3, 32°.34N×105°.07E, h10km, mb4.5/18, Error ellipse: s-maj=8.5km s-min=7.1km az=58.0*
MOS ***21*** *09:33:17.0±2.2, 32°.23N×105°.19E, h33km, mb4.6/27, Error ellipse: s-maj=9.4km s-min=6.3km az=101.3*

ISC 21 09:33:16.6±0.8, 32°.35N±0°.03×105°.18E±0°.03, h17km±5km, n127, σ1°32/142, mb4.4/39, MS3.8/11, 4C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**220**	Pn	Pn	09 33 49.8	+1.9
CD2				Pg	Pg	09 33 52.4	-0.3
CD2				Sg	Sg	09 34 18.8	+1.6
CD2				smax			
	comp=N,42μm,0.6s						
XAN	**Xi'an**	**3.56**	**61**	Pn	Pn	09 34 11.3	+0.2
XAN				Pg	Pg	09 34 17.9	-7.0
XAN				Sn	Sn	09 35 00.1	+7.3
XAN				Sg	Sg	09 35 11.1	+0.1
XAN				smax			
	comp=N,2μm,0.9s						
XAN				smax			
	comp=E,1μm,0.8s						
XAN				LR	LR		
	comp=N,6μm,11.5s						
XAN				LR	LR		
	comp=E,1μm,9.2s						
XAN				LR	LR		
	comp=Z,740nm,8.1s						
LZH	**Lanzhou**	**3.88**	**344**	Pn	Pn	09 34 16.8	+1.3
LZH				Pg	Pg	09 34 26.3	-4.7
LZH				Sg	Sg	09 35 13.3	-8.1
LZH				smax			
	comp=N,4μm,0.6s						
LZH				smax			
	comp=E,5μm,0.7s						
LZH				LR	LR		
	comp=E,9μm,4.9s						
LZH				LR	LR		
	comp=Z,10μm,5.2s						
ENH	**Enshi**	**4.23**	**118**	*e*Pn	Pn	09 34 23.0	+2.7
ENH				*e*Sg	Sg	09 35 32.0	-0.5
GYA	**Guiyang**	**6.01**	**167**	Pn	Pn	09 34 46.6	+1.8
GYA				Sn	Sn	09 35 53.8	+0.5
GYA				smax			
	comp=N,580nm,0.6s						
GYA				smax			
	comp=E,640nm,0.7s						
GYA				LR	LR		
	comp=N,1μm,2.5s						
GYA				LR	LR		
	comp=E,2μm,4.5s						
GYA				LR	LR		
	comp=Z,980nm,2.2s						
KMI	**Kunming**	**7.51**	**197**	Pn	Pn	09 35 06.3	+0.9
KMI				Sn	Sn	09 36 30.3	+0.1
KMI				smax			
	comp=N,87nm,1.0s						
KMI				smax			
	comp=E,86nm,0.8s						
KMI				LR	LR		
	comp=N,500nm,5.2s						
KMI				LR	LR		
	comp=E,1μm,7.5s						
KMI				LR	LR		
	comp=Z,470nm,13.8s						
WHN	**Wuhan**	**8.04**	**101**	P	Pn	09 35 14.9	+2.3
WHN				S	Sn	09 36 37.9	-5.3
WHN				LR	LR		
	comp=E,4μm,6.3s						
WHN				LR	LR		
	comp=Z,2μm,6.6s						
GTA	**Gaotai**	**8.28**	**330**	*e*P	Pn	09 35 14.6	-1.2
GTA				pP		09 35 22.3	
GTA				sP		09 35 26.1	
GTA				S	Sn	09 36 51.4	+2.5
GTA				sS		09 37 00.4	
GTA				pmax	pmax		
	comp=Z,14nm,0.7s						
GTA				pmax	pmax		
	comp=Z,36nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,12.9s						
GTA				LR	LR		
	comp=E,2μm,11.4s						
GTA				LR	LR		
	comp=Z,2μm,9.3s						
BTO	**Baotou**	**9.11**	**24**	*e*P	Pn	09 35 23.3	-4.0
BTO				S	Sn	09 37 19.6	+10
BTO				LR	LR		
	comp=N,230nm,7.3s						
BTO				LR	LR		
	comp=E,200nm,8.9s						
HHC	**Hu-ho-hao-te**	**9.91**	**29**	*e*P	Pn	09 35 36.6	-1.6
HHC				pP		09 35 43.6	
HHC				sP		09 35 48.4	
HHC				S	Sn	09 37 27.8	-1.2
HHC				sS		09 37 38.9	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
HHC				LR	LR		
	comp=N,810nm,5.4s						
HHC				LR	LR		
	comp=E,500nm,4.1s						
HHC				LR	LR		
	comp=Z,460nm,5.0s						
BJI	**Beijing**	**11.73**	**46**	P	Pn	09 36 00.1	-3.0
BJI				S	Sn	09 38 05.9	-7.7
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,130nm,4.8s						
BJI				LR	LR		
	comp=N,2μm,12.6s						
BJI				LR	LR		
	comp=E,1μm,12.4s						
BJI				LR	LR		
	comp=Z,200nm,16.7s						
LSA	**Lhasa**	**12.32**	**261**	P	Pn	09 36 12.0	+0.8
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA				LR	LR		
	comp=N,180nm,9.0s						
LSA				LR	LR		
	comp=E,290nm,8.0s						
LSA				LR	LR		
	comp=Z,380nm,8.0s						
LSA	**Lhasa**	**12.32**	**261**	*e*P	Pn	09 36 13.9	+2.7
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**12.32**	**261**	*e*Pn	Pn	09 36 13.9	+2.7
	comp=Z,12nm,0.8s						
SHL	**Shillong**	**13.45**	**243**	*e*P	Pn	09 36 25.0	-1.8
SHL				*ex*	x	09 40 44.0	
QZH	**Quanzhou**	**13.89**	**119**	*e*P	Pn	09 36 31.5	-1.2
QZH				*e*S	Sn	09 39 05.9	-0.7
QZH				LR	LR		
	comp=N,1μm,7.9s						
QZH				LR	LR		
	comp=E,860nm,7.4s						
QZH				LR	LR		
	comp=Z,1μm,8.0s						
CHTO	**Chiang Mai**	**14.60**	**204**	*e*P	Pn	09 36 42.2	-0.2
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	**Chiang Mai**	**14.60**	**204**	*e*Pn	Pn	09 36 42.2	-0.3
	comp=Z,6.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.93**	**204**	Pn	Pn	09 36 44.8	-2.2
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=22						
CMAR	**Chiang Mai Arr**	**14.93**	**204**	P	Pn	09 36 44.8	-2.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**15.49**	**3**	Pn	Pn	09 36 52.4	-1.7
	comp=Z,0.3nm,0.3s,baz=184,slow=13,SNR=12						
ULN	**Ulaanbaatar**	**15.56**	**5**	*e*P	Pn	09 36 54.2	-0.8
ULN				pmax	pmax		
	comp=Z,15nm,0.9s						
ULN	**Ulaanbaatar**	**15.56**	**5**	*e*Pn	Pn	09 36 54.2	-0.8
	comp=Z,15nm,0.9s						
TAPN	**Taplejung**	**15.95**	**256**	*e*P	Pn	09 37 00.8	+0.6
	comp=Z,34nm,0.8s						
ODAN	**Odare**	**16.40**	**255**	*e*P	Pn	09 37 06.5	+0.4
	comp=Z,206nm,0.9s						
RAMN	**Ramite**	**17.02**	**256**	*e*P	Pn	09 37 12.2	-1.6
	comp=Z,28nm,0.7s						
GUN	**Gumba**	**17.27**	**260**	*e*P	Pn	09 37 15.8	-1.1
	comp=Z,36nm,0.6s						
PKI	**Pulchoki**	**17.77**	**260**	*e*P	Pn	09 37 22.0	-1.2
	comp=Z,40nm,0.8s						
PKIN	**Phulchoki**	**17.78**	**260**	*e*P	Pn	09 37 22.0	-1.4
	comp=Z,45nm,0.6s						
KKN	**Kakani**	**17.81**	**260**	*e*P	Pn	09 37 21.9	-1.8
	comp=Z,92nm,1.1s						
DMN	**Daman**	**18.01**	**260**	*e*P	Pn	09 37 24.4	-1.8
	comp=Z,51nm,0.8s						
ZAK	**Zakamensk**	**18.07**	**356**	*e*P	Pn	09 37 29.8	+3.1
KSRS	**Korea Array**	**19.32**	**68**	P	Pn	09 37 41.1	-0.9
	comp=Z,0.7nm,0.3s,baz=252,slow=11,SNR=15						
KSRS	**Korea Array**	**19.32**	**68**	P	Pn	09 37 41.2	-0.8
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY	**Talaya**	**19.35**	**357**	*e*P	Pn	09 37 49.0	+6.8
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,165nm,11.0s						
MOY	**Mondy**	**19.54**	**352**	*e*P	Pn	09 37 49.0	+4.5
CN2	**Changchun**	**19.57**	**48**	*e*P	Pn	09 37 50.5	+5.5
CN2				*es*P	sP	09 37 57.0	+6.3
CN2				*e*S	Sn	09 41 43.8	+20
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,10.0s						
CN2				LR	LR		
	comp=E,500nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
IRK	**Irkutsk**	**19.89**	**358**	*e*P	Pn	09 37 52.9	+4.3
IRK				pmax	pmax		
	comp=Z,51nm,1.5s						
HIA	**Hailar**	**20.11**	**29**	P	P	09 37 51.6	+2.2
HIA				pmax	pmax		
	comp=Z,14nm,0.6s						
HIA	**Hailar**	**20.11**	**29**	Pn	P	09 37 51.6	+2.2
	comp=Z,14nm,0.6s						
JOW	**Kunigami**	**20.81**	**99**	P	P	09 37 57.1	0.0
	comp=Z,14nm,0.8s,baz=319,slow=2.0,SNR=5.4						
JOSI	**Joshimath**	**21.92**	**272**	*e*P	P	09 38 08.9	-0.1
MKAR	**Makanchi Array**	**22.68**	**316**	P	P	09 38 16.6	-0.4
	comp=Z,3.9nm,0.7s,mb4.0,baz=113,slow=12,SNR=20						
MKAR				LR	LR	09 46 38.6	
	comp=Z,184nm,19.2s,MS3.5,baz=312,slow=36						
MKAR	**Makanchi Array**	**22.68**	**316**	P	P	09 38 16.6	-0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,184nm,19.2s						
SMLA	**Simla**	**23.83**	**275**	*e*P	P	09 38 28.1	-0.8
AGRA	**Agra**	**24.15**	**265**	*e*P	P	09 38 32.0	+0.1
BISR	**Bishrakh**	**24.18**	**268**	*e*P	P	09 38 32.7	+0.7
KKR	**Kurukshetra**	**24.36**	**272**	*e*P	P	09 38 34.9	+1.2
AYAN	**Aya Nagar**	**24.47**	**268**	*e*P	P	09 38 34.4	-0.4
AYAN				AMb	AMB	09 38 41.4	
	comp=Z,16nm,0.8s,mb4.5						
SONA	**Sohna**	**24.57**	**268**	*e*P	P	09 38 35.4	-0.2
TKM2	**Tokmak 2**	**25.57**	**303**	*e*P	P	09 38 45.7	+1.1
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**25.57**	**303**	*e*P	P	09 38 45.7	+1.1
	comp=Z,9.4nm,0.8s,mb4.4						
KHET	**Khetri**	**25.70**	**268**	*e*P	P	09 38 45.5	-0.4
ZALV	**Zalesovo Beam**	**26.02**	**332**	LR	LR	09 50 53.8	
	comp=Z,68nm,18.6s,MS3.2,baz=119,slow=41						
KLR	**Kul'dur**	**26.05**	**42**	*e*P	P	09 38 48.2	-0.7
KLR				MLR	MLR		
	comp=N,700nm,15.0s,MS4.4						
KLR				MLR	MLR		
	comp=E,500nm,15.0s,MS4.4						
KLR				MLR	MLR		
	comp=Z,800nm,12.0s,MS4.5						
BHPL	**Bhopal**	**26.11**	**257**	*e*P	P	09 38 48.6	-1.1
BOD	**Bodaibo**	**26.17**	**11**	*e*P	P	09 38 48.3	-1.6
BOD				*e*	pP	09 38 52.9	-2.2
UCH	**Uchtor**	**26.19**	**301**	*e*P	P	09 38 51.4	+1.2
	comp=Z,17nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**26.29**	**302**	LR	LR	09 51 21.8	
	comp=Z,150nm,18.6s,MS3.6,baz=314,slow=42						
AAK	**Ala-Archa**	**26.29**	**302**	P	P	09 38 51.8	+0.7
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**26.29**	**302**	P	P	09 38 51.8	+0.7
	comp=Z,6.7nm,1.0s,mb4.1						
NIL	**Nilore**	**26.75**	**282**	*e*P	P	09 38 53.1	-2.3
NIL				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
NIL	**Nilore**	**26.75**	**282**	*e*P	P	09 38 53.1	-2.3
	comp=Z,17nm,0.6s,mb4.8						
AML	**Almayashu**	**26.77**	**300**	*e*P	P	09 38 57.2	+1.8
	comp=Z,11nm,0.8s,mb4.4						
KURK	**Kurchatov**	**26.82**	**321**	P	P	09 38 55.4	-0.4
	comp=Z,3.1nm,0.6s,mb4.0,baz=108,slow=7.7,SNR=6.1						
KURK	**Kurchatov**	**26.82**	**321**	P	P	09 38 55.4	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**27.48**	**72**	P	P	09 39 03.4	+1.5
	comp=Z,0.8nm,0.7s,mb3.3,baz=276,slow=8.4,SNR=2.7						
MJAR	**Matsushiro Arr**	**27.48**	**72**	P	P	09 39 03.4	+1.5
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBL	**Kabul**	**30.13**	**284**	P	P	09 39 25.8	+0.3
KBL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
KBL	**Kabul**	**30.13**	**284**	P	P	09 39 25.8	+0.3
	comp=Z,4.6nm,0.5s,mb4.5						
JASL	**Jaisalmer**	**30.20**	**269**	*ex*	x	09 39 14.6	
YSS	**Yuzh-Sakhalins**	**32.06**	**52**	*e*P	P	09 39 47.3	+4.9
YSS				pmax	pmax		
	comp=Z,203nm,2.5s,mb5.5						
BVAR	**Borovoye Array**	**32.40**	**320**	P	P	09 39 44.9	-0.4
	comp=Z,1.9nm,0.7s,mb4.1,baz=119,slow=9.3,SNR=6.8						
BVAR				LR	LR	09 53 58.2	
	comp=Z,63nm,20.7s,MS3.3,baz=109,slow=38						
BVAR	**Borovoye Array**	**32.40**	**320**	P	P	09 39 44.9	-0.4
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,63nm,20.7s						
BRVK	**Borovoye**	**32.48**	**320**	*ce*P	P	09 39 50.5	+4.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**37.55**	**310**	*e*P	P	09 40 30.6	+0.9
	comp=Z,4.6nm,0.8s,mb4.3						
ARU	**Arti**	**40.02**	**321**	*d i*P	P	09 40 53.1	+2.7
ARU				*e*		09 42 28.6	
ARU				S	S	09 46 54.8	-0.3
ARU				SS	SS	09 49 43.6	-8.6
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
GUMO	**Guam**	**40.74**	**108**	*e*P	P	09 40 53.9	-2.9
GUMO				pmax	pmax		
	comp=Z,73nm,0.4s						
GUMO	**Guam**	**40.74**	**108**	*e*P	P	09 40 53.9	-3.0
	comp=Z,74nm,0.4s						
TIXI	**Tiksi**	**41.35**	**11**	*e*P	P	09 41 00.6	-0.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,215nm,15.0s,MS4.1						
TIXI	**Tiksi**	**41.35**	**11**	*e*P	P	09 41 02.7	+1.5
	comp=Z,4.0nm,0.6s,mb4.2						
SEY	**Seymchan**	**42.56**	**30**	*ce*P	P	09 41 14.5	+3.4
KIV	**Kislovodsk**	**49.41**	**302**	*e*P	P	09 42 10.0	+4.6
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
KIV				MLR	MLR		
	comp=Z,84nm,17.0s,MS3.8						
BILL	**Bilibino**	**49.66**	**26**	P	P	09 42 10.0	+3.1
BILL				*e*SSS		09 54 09.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.0						
BILL	**Bilibino**	**49.66**	**26**	*e*P	P	09 42 08.3	+1.4
	comp=Z,1.6nm,0.5s,mb4.3						
VSR	**Storozhevoye**	**50.92**	**312**	*e*P	P	09 42 19.5	+2.8
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.5s						
OBN	**Obninsk**	**52.17**	**317**	⇑*e*P	P	09 42 28.2	+2.1
OBN				*e*	pP	09 42 34.0	+2.5
OBN				*e*		09 42 46.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
FITZ	**Fitzroy Crossi**	**53.86**	**156**	P	P	09 42 38.5	-0.3
	comp=Z,2.7nm,0.9s,mb4.2,baz=49,slow=9.3,SNR=2.9						
ARCES	**ARCESS Array B**	**56.50**	**335**	P	P	09 42 56.2	-1.1
	comp=Z,2.9nm,0.7s,mb4.4,baz=40,slow=9.6,SNR=11						
ARCES				LR	LR	10 09 09.9	
	comp=Z,99nm,18.6s,MS3.9,baz=276,slow=38						
ARCES	**ARCESS Array B**	**56.50**	**335**	P	P	09 42 56.3	-1.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,99nm,18.6s						
BR131	**Keskin Array S**	**56.93**	**299**	P	P	09 43 04.5	+3.7
	comp=Z,2.0nm,0.7s,mb4.3						
BRTR	**Keskin Array B**	**56.93**	**299**	P	P	09 43 00.7	-0.2
	comp=Z,2.4nm,0.8s,mb4.3,baz=105,slow=7.8,SNR=6.3						
BRTR				LR	LR	10 11 16.2	
	comp=Z,29nm,19.2s,MS3.4,baz=251,slow=40						
BRTR	**Keskin Array B**	**56.93**	**299**	*i* P	P	09 43 00.9	+0.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**57.05**	**326**	P	P	09 43 00.6	-0.7
	comp=Z,2.1nm,0.7s,mb4.3,baz=309,slow=1.2,SNR=4.0						
FINES	**FINESS Array B**	**57.05**	**326**	P	P	09 43 00.6	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VSU	**Vasula**	**57.17**	**322**	*ce*P	P	09 43 04.8	+2.6
VSU				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
AKASG	**Malin Array Be**	**57.20**	**313**	P	P	09 43 01.8	-0.8
	comp=Z,2.4nm,0.6s,mb4.4,baz=69,slow=6.3,SNR=7.1						
AKASG	**Malin Array Be**	**57.20**	**313**	P	P	09 43 01.8	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	P	09 43 15.6	+0.1
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**59.01**	**148**	*e*P	P	09 43 15.6	0.0
	comp=Z,15nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**62.10**	**150**	P	P	09 43 36.9	+0.3
	comp=Z,1.9nm,0.7s,mb4.3,baz=341,slow=7.2,SNR=18						
ASAR	**Alice Springs**	**62.10**	**150**	P	P	09 43 36.9	+0.4
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OJC	**Ojcow**	**63.13**	**314**	*e*P	P	09 43 47.8	+4.6
OJC	**Ojcow**	**63.13**	**314**	*e*P	P	09 43 47.8	+4.6
HFS	**Hagfors**	**63.25**	**326**	P	P	09 43 42.6	-1.2
	comp=Z,1.8nm,0.5s,mb4.4,baz=104,slow=5.0,SNR=6.2						
HFS	**Hagfors**	**63.25**	**326**	P	P	09 43 42.6	-1.2
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NB2	**NORSAR Subarra**	**64.10**	**327**	P	P	09 43 47.9	-1.5
	comp=Z,3.1nm,0.8s,mb4.4,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.10**	**327**	P	P	09 43 47.9	-1.6
	comp=Z,2.0nm,0.7s,mb4.3,baz=71,slow=6.7,SNR=9.7						
NOA	**NORSAR Array B**	**64.10**	**327**	P	P	09 43 47.9	-1.5
NOA				pmax	pmax		

comp=Z,2.0nm,0.7s
CLL Collm 66.77 317 *e*P **P 09 44 10.0 +3.1**
CLL Collm 66.77 317 *e*pP **P 09 44 10.0 +3.1**
CLL *e*PPP 09 48 09.0
CLL *e*SSS 10 00 36.0
BPAW Bear Paw Mtn. 67.07 28 P **P 09 44 10.1 +1.6**
comp=Z,3.2nm,0.9s,mb4.3
GERES GERESS Array B 67.33 314 P **P 09 44 10.0 -0.5**
comp=Z,0.2nm,0.3s,mb3.6,baz=69,slow=5.4,SNR=2.6
COLA College 67.91 26 P **P 09 44 15.8 +1.9**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
COLA College 67.91 26 P **P 09 44 15.8 +2.0**
comp=Z,3.8nm,0.8s,mb4.5
STKA Stephens Creek 72.57 148 P **P 09 44 41.8 -0.9**
comp=Z,1.6nm,0.7s,mb4.1,baz=325,slow=7.7,SNR=7.6
LPG La Plagne 73.06 313 *e*P **P 09 44 45.7 0.0**
comp=Z,16nm,0.8s,mb4.7
LPG La Plagne 73.06 313 *e*P **P 09 44 45.7 0.0**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LPG La Plagne 73.06 313 *e*P **P 09 44 45.7 0.0**
comp=Z,7.8nm,0.8s,mb4.7
LPL La Plagne 73.06 313 *e*P **P 09 44 45.6 -0.1**
comp=Z,14nm,0.8s,mb4.7
LPL La Plagne 73.06 313 *e*P **P 09 44 45.6 -0.1**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPL La Plagne 73.06 313 *e*P **P 09 44 45.6 -0.1**
comp=Z,7.1nm,0.8s,mb4.7
SKAG Skagway 75.81 27 P **P 09 45 01.5 +0.1**
comp=Z,4.9nm,0.9s,mb4.4
YKA Yellowknife Ar 80.23 18 P **P 09 45 25.1 -0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=326,slow=5.0,SNR=20
YKA Yellowknife Ar 80.23 18 P **P 09 45 25.1 -0.8**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 80.23 18 P **P 09 45 25.1 -0.8**
TORD Torodi Ar. Bea 94.12 288 P **P 09 46 33.0 -1.8**
comp=Z,0.2nm,0.7s,mb3.7,baz=33,slow=4.9,SNR=3.3

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*IDC **21** 09:36:03.4±2.2, 53°.58N×87°.85E, h0km, mb1 3.8/3, mb1mx3.4/27, mbtmp3.8/3, ML3.6/3, Error ellipse: s-maj=20.4km s-min=12.3km az=76.0*
*NNC **21** 09:36:03.6±4.2, 53°.50N×87°.80E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=42.8km s-min=23.9km az=17.0*
ISC 21 09:36:05.3±2.0, 53°.8N±0°.1×87°.7E±0°.2, h10km, n8, σ1§09/12, 3C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.69**	**277**	Pn	**Pn**	**09 36 35.6**	**+0.8**
	8.7nm,0.3s,baz=104,slow=15,SNR=40						
ZALV				Lg		09 37 01.2	
	13nm,0.3s,baz=101,slow=30,SNR=14						
KURK	**Kurchatov**	**6.34**	**245**	⇓Pn	**Pn**	**09 37 38.7**	**0.0**
	3.8nm,0.6s						
KURK				⇓Sn	**Sn**	**09 38 51.5**	**+0.4**
	2.5nm,0.5s						
KURK				⇓Lg		09 39 24.7	
	15nm,1.2s						
KURK	**Kurchatov**	**6.34**	**245**	Pn	**Pn**	**09 37 39.6**	**+0.9**
	0.8nm,0.3s,baz=59,slow=13,SNR=52						
KURBB	**Kurchatov Arra**	**6.44**	**244**	⇓Pn	**Pn**	**09 37 40.2**	**+0.1**
	1.2nm,0.4s						
KURBB				⇓Sn	**Sn**	**09 38 55.0**	**+1.5**
	1.5nm,0.6s						
KURBB				⇑Lg		09 39 27.9	
	2.4nm,0.6s						
MK31	**Makanchi Array**	**7.79**	**208**	⇑Pn	**Pn**	**09 37 57.5**	**-1.1**
	0.5nm,0.3s,baz=27,slow=11,SNR=22						
MK31				⇓Lg		09 40 03.7	
	2.3nm,0.6s						
MKAR	**Makanchi Array**	**7.79**	**208**	Pn	**Pn**	**09 37 57.8**	**-0.8**
	0.6nm,0.3s,baz=27,slow=13,SNR=23						
MKAR				Lg		09 40 03.1	
	0.0nm,0.3s,baz=27,slow=29,SNR=2.3						
VOSK	**Vostochnaya**	**10.06**	**271**	⇓Pn	**Pn**	**09 38 32.8**	**+3.2**
	0.8nm,0.6s						
VOSK				⇑Sn	**Sn**	**09 40 20.7**	**-1.6**
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**10.34**	**273**	Pn	**Pn**	**09 38 33.7**	**+0.2**
	0.5nm,0.3s,baz=76,slow=13,SNR=6.0						
BVAR				Sn	**Sn**	**09 40 28.3**	**-1.1**
	0.4nm,0.3s,baz=70,slow=25,SNR=3.3						

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*ISCJB **21** 09:46:08.8±0.4, 37°.89N±0°.02×27°.48E±0°.04, h12km±5km, Error ellipse: s-maj=4.9km s-min=3.4km az=162.7*
*DDA **21** 09:46:08.8, 37°.90N×27°.45E, h7km±4km, Md2.8*
*CSEM **21** 09:46:09.2±0.2, 37°.87N×27°.45E, h15km, MD2.8, Error ellipse: s-maj=5.9km s-min=3.7km az=67.0*
*ISK **21** 09:46:09.5, 37°.91N×27°.36E, h30km, MD2.7*
ISC 21 09:46:09.3±0.4, 37°.88N±0°.02×27°.46E±0°.04, h14km±4km, n30, σ1§07/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**225**	*i* P	**Pg**	**09 46 14.2**	**-0.6**
GCAM				*i* S	**Sg**	**09 46 17.7**	**-0.8**
GCAM	**G?zelcaml?**	**0.26**	**225**	*i* P	**Pg**	**09 46 14.2**	**-0.6**
GCAM				*i* S	**Sg**	**09 46 17.7**	**-0.8**
AYDN	**Tasoluk**	**0.40**	**124**	*i* P	**Pg**	**09 46 17.1**	**-0.2**
AYDN				*i* S	**Sg**	**09 46 22.2**	**-0.5**
AYDN	**Tasoluk**	**0.40**	**124**	*i* P	**Pg**	**09 46 17.1**	**-0.2**
AYDN				*i* S	**Sg**	**09 46 22.2**	**-0.5**
IZM	**Izmir**	**0.54**	**343**	PG	**Pg**	**09 46 21.3**	**+1.4**
IZM				*e*SG	**Sg**	**09 46 28.2**	**+1.1**
IZM	**Izmir**	**0.54**	**343**	*i* Pg	**Pg**	**09 46 21.3**	**+1.4**
IZM				*e*Sg	**Sg**	**09 46 28.2**	**+1.1**
BLCB	**Balcova**	**0.60**	**327**	PG	**Pg**	**09 46 21.3**	**+0.2**
BLCB				*e*SG	**Sg**	**09 46 28.9**	**-0.2**
BLCB	**Balcova**	**0.60**	**327**	*i* Pg	**Pg**	**09 46 21.3**	**+0.2**
BLCB				*e*Sg	**Sg**	**09 46 29.0**	**-0.1**
MLSB	**Milas**	**0.64**	**157**	*e*PG	**Pg**	**09 46 23.0**	**+1.2**
MLSB	**Milas**	**0.64**	**157**	*e*Pg	**Pg**	**09 46 23.0**	**+1.2**
BDRM	**Kayabasi**	**0.82**	**181**	*i* P	**Pg**	**09 46 24.4**	**-0.8**
BDRM				*i* S	**Sg**	**09 46 37.0**	**+1.2**
BDRM	**Kayabasi**	**0.82**	**181**	*i* P	**Pg**	**09 46 24.4**	**-0.8**
BDRM				*i* S	**Sg**	**09 46 37.0**	**+1.1**
URLA	**Izmir**	**0.83**	**305**	*i* P	**Pg**	**09 46 25.3**	**-0.2**
URLA				*i* S	**Sg**	**09 46 36.6**	**+0.1**
URLA	**Izmir**	**0.83**	**305**	*i* P	**Pg**	**09 46 25.3**	**-0.2**
URLA				*i* S	**Sg**	**09 46 36.6**	**+0.2**
YER	**Yerkesik**	**0.99**	**139**	*e*PG	**Pg**	**09 46 28.9**	**+0.4**
YER				*e*SG	**Sg**	**09 46 42.4**	**+1.0**
YER	**Yerkesik**	**0.99**	**139**	*e*Pg	**Pg**	**09 46 28.9**	**+0.4**
YER				*e*Sg	**Sg**	**09 46 42.4**	**+1.0**
AKS	**Akhisar**	**1.03**	**15**	*e*PG	**Pg**	**09 46 28.4**	**-0.9**
AKS				*e*SG	**Sg**	**09 46 41.9**	**-0.9**
AKS	**Akhisar**	**1.03**	**15**	*e*Pg	**Pg**	**09 46 28.4**	**-0.9**
AKS				*e*Sg	**Sg**	**09 46 41.9**	**-0.9**
MANT	**Manisa**	**1.05**	**55**	*i* P	**Pg**	**09 46 29.7**	**0.0**
MANT				*i* S	**Sg**	**09 46 41.6**	**-1.9**
MANT	**Manisa**	**1.05**	**55**	*i* P	**Pg**	**09 46 29.7**	**0.0**
MANT				*i* S	**Sg**	**09 46 41.6**	**-1.9**
KULA	**Kula-Manisa**	**1.14**	**56**	*e*PN	**Pn**	**09 46 30.6**	**-0.2**
KULA	**Kula-Manisa**	**1.14**	**56**	*e*Pn	**Pn**	**09 46 30.6**	**-0.2**
DAT	**Datca**	**1.16**	**175**	*e*PN	**Pn**	**09 46 31.2**	**+0.1**
DAT				*e*SN	**Sn**	**09 46 46.1**	**-0.5**
DAT	**Datca**	**1.16**	**175**	*e*Pn	**Pn**	**09 46 31.2**	**+0.1**
DAT				*e*Sn	**Sn**	**09 46 46.1**	**-0.5**
DNZL	**Cakiroluk**	**1.27**	**98**	*e*P	**Pn**	**09 46 34.4**	**+1.8**
DNZL				*i* S	**Sb**	**09 46 52.2**	**+3.0**
DNZL	**Cakiroluk**	**1.27**	**98**	*e*P	**Pn**	**09 46 34.4**	**+1.8**
TURN	**Turunc**	**1.36**	**138**	*e*P	**Pn**	**09 46 31.9**	**-1.9**
TURN				*i* S	**Sn**	**09 46 49.5**	**-2.1**
TURN	**Turunc**	**1.36**	**138**	*e*P	**Pn**	**09 46 31.9**	**-1.9**
TURN				*i* S	**Sn**	**09 46 49.5**	**-2.1**
KHL	**Karahalli**	**1.68**	**74**	*e*PN	**Pn**	**09 46 39.7**	**+1.4**
KHL	**Karahalli**	**1.68**	**74**	*e*Pn	**Pn**	**09 46 39.7**	**+1.4**

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*ISCJB **21** 09:46:23.0±0.7, 59°.36N±0°.03×27°.01E±0°.09, h0km, Error ellipse: s-maj=6.3km s-min=3.5km az=10.2*
*NAO **21** 09:46:24.8±1.0, 59°.30N×26°.92E, ML2.5*
*CSEM **21** 09:46:24.7±0.3, 59°.33N×27°.06E, h2km, ML2.5, Error ellipse: s-maj=8.5km s-min=5.1km az=102.0, Mining explosion.*
*BER **21** 09:46:25.2±2.1, 59°.33N×27°.11E, h2km±9km, ML2.5(NAO)*
*IDC **21** 09:46:26.5±2.1, 59°.42N×27°.20E, h0km, mb1 3.0/4, mb1mx2.9/26, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=17.4km s-min=10.4km az=124.0*
ISC 21 09:46:24.3±0.6, 59°.34N±0°.03×27°.08E±0°.08, h0km, n23, σ1§16/37, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.90**	**192**	Pg	**Pg**	**09 46 41.1**	**-0.4**
VSU				Lg		09 46 52.3	
VSU	**Vasula**	**0.90**	**192**	Pg	**Pg**	**09 46 41.1**	**-0.4**
VSU				*e*S	**Sg**	**09 46 51.6**	**-1.5**
	73nm,0.2s,SNR=90						
VSU				Lg		09 46 52.3	
	SNR=138						
VJF	**Virojoki**	**1.23**	**11**	Pg	**Pg**	**09 46 46.7**	**-1.0**
VJF				Sg	**Sg**	**09 47 03.7**	**+0.1**
PVF	**Pernaja**	**1.35**	**334**	Pg	**Pg**	**09 46 50.4**	**+0.2**
PVF				Sg	**Sg**	**09 47 08.5**	**+0.7**
MEF	**Metsahovi**	**1.62**	**304**	Pg	**Pg**	**09 46 55.2**	**-0.1**
MEF				*e*S	**Sn**	**09 47 16.6**	**+1.1**
	SNR=50						
MEF				Sg	**Sg**	**09 47 16.9**	**+0.7**
MTSE	**Matsula**	**1.80**	**251**	Pn	**Pn**	**09 46 57.6**	**+1.1**
MTSE				Sg	**Sg**	**09 47 21.7**	**-0.4**
FIA0	**FINESS Array S**	**2.17**	**347**	Pn	**Pn**	**09 47 02.9**	**+1.3**
	baz=171,slow=16						
FIA0				Lg		09 47 33.2	
	baz=163,slow=37						
FIA0				Rg		09 47 45.2	
	baz=169,slow=37						
FIA0	**FINESS Array S**	**2.17**	**347**	Pn	**Pn**	**09 47 02.7**	**+1.1**
FIA0				Sg	**Sg**	**09 47 31.9**	**-2.0**
FIA0				Lg		09 47 33.2	
	baz=163,slow=29,SNR=70						
FIA1	**FINESS Array S**	**2.17**	**347**	Pn	**Pn**	**09 47 02.8**	**+1.2**
FIA1				Sg	**Sg**	**09 47 33.0**	**-0.9**
FINES	**FINESS Array B**	**2.17**	**347**	Pn	**Pn**	**09 47 02.8**	**+1.2**
	2.1nm,0.3s,baz=163,slow=16,SNR=27						
FINES				Lg		09 47 33.0	
	4.6nm,0.3s,baz=169,slow=25,SNR=18						
KAF	**Kangasniemi**	**2.81**	**353**	Pn	**Pn**	**09 47 12.3**	**+2.0**
KAF				Sg	**Sg**	**09 47 52.8**	**-1.6**
KEF	**Keuruu**	**3.04**	**340**	Pn	**Pn**	**09 47 15.2**	**+1.7**
KEF				Sg	**Sg**	**09 48 01.2**	**-0.5**
SLIT	**Slitere, Latvi**	**3.05**	**238**	*e*P	**Pn**	**09 47 17.6**	**+4.0**
	SNR=50						
SUF	**Sumiainen**	**3.42**	**353**	Pn	**Pn**	**09 47 19.7**	**+0.9**
JOF	**Joensuu**	**4.13**	**28**	Pn	**Pn**	**09 47 30.0**	**+1.5**
HFS	**Hagfors**	**6.81**	**282**	Sn	**Sn**	**09 49 18.4**	**-5.1**
	baz=90,slow=28						
HFS				Lg		09 49 55.5	
	baz=94,slow=37						
HFS	**Hagfors**	**6.81**	**282**	Pn	**Pn**	**09 48 05.7**	**+0.3**
	0.1nm,0.3s,baz=95,slow=16,SNR=2.8						
HFS				Sn	**Sn**	**09 49 22.5**	**-1.0**
	0.4nm,0.3s,baz=97,slow=26,SNR=6.0						
HFS				Lg		09 49 57.5	
	0.7nm,0.3s,baz=95,slow=29,SNR=6.3						
NB2	**NORSAR Subarra**	**8.09**	**289**	Pn	**Pn**	**09 48 22.2**	**-0.6**
	baz=92,slow=14						
NB2				Lg		09 50 36.0	
NB2	**NORSAR Subarra**	**8.09**	**289**	Pn	**Pn**	**09 48 22.2**	**-0.6**
	baz=92,slow=14,SNR=4.0						
NOA	**NORSAR Array B**	**8.09**	**289**	Pn	**Pn**	**09 48 22.7**	**-0.1**
	0.2nm,0.3s,baz=92,slow=11,SNR=3.8						
NOA				Sn	**Sn**	**09 49 51.1**	**-3.7**
	0.2nm,0.3s,baz=90,slow=11,SNR=2.4						
NOA				Lg		09 50 35.4	
	0.3nm,0.3s,baz=141,slow=21,SNR=5.1						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**09 48 51.2**	**-1.3**
	baz=172,slow=16						
ARA0				Sn	**Sn**	**09 50 40.5**	**-7.5**
	baz=176,slow=28						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**09 48 51.2**	**-1.3**
	baz=172,slow=14,SNR=1.1						
ARCES	**ARCESS Array B**	**10.26**	**357**	Pn	**Pn**	**09 48 50.5**	**-1.9**
	0.1nm,0.3s,baz=174,slow=14,SNR=7.1						
ARCES				Sn	**Sn**	**09 50 40.6**	**-7.4**
	0.2nm,0.3s,baz=174,slow=22,SNR=3.9						
ARCES				Lg		09 51 44.0	
	0.3nm,0.3s,baz=177,slow=28,SNR=9.1						

CASC 21 09:54:43.7±1.4, 12°.98N×88°.84W, h58km±22km, MD4.2, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.63**	**360**	*e*P	Pn	09 54 57.0	-0.1
SNVI				*e*S	Sn	09 55 08.0	+1.3
LFRS	**El Faro**	**0.68**	**341**	⇑*i*P	Pn	09 54 57.3	-0.3
LFRS				*e*S	Sn	09 55 07.6	-0.1
VSM	**San Miguel**	**0.71**	**51**	*e*P	Pn	09 54 58.5	+0.5
VSM				*e*S	Sn	09 55 10.4	+2.0
BLLM	**Bellamira**	**0.74**	**52**	*e*P	Pn	09 54 58.4	0.0
BLLM				*e*S	Sn	09 55 11.4	+2.2
LBRS	**Las Brisas**	**0.78**	**345**	*e*P	Pn	09 54 59.0	+0.2
LBRS				*e*S	Sn	09 55 10.6	+0.6
BOQS	**Boqueron**	**0.87**	**330**	*e*P	Pn	09 55 00.1	+0.2
BOQS				*e*S	Sn	09 55 12.8	+0.9
CAHU	**Cacacuatique**	**1.00**	**38**	*e*P	Pn	09 55 01.4	-0.2
CAHU				*e*S	Sn	09 55 15.9	+1.0
CNCH	**Conchagua**	**1.02**	**73**	*e*P	Pn	09 55 01.9	-0.1
SBLS	**San Blas**	**1.15**	**318**	*e*P	Pn	09 55 04.0	+0.4
SBLS				*e*S	Sn	09 55 20.3	+1.8
SNJE	**San Jose**	**1.16**	**320**	*e*P	Pn	09 55 04.1	+0.3
RTR	**El Retiro**	**1.20**	**319**	*e*P	Pn	09 55 04.9	+0.5
RBDL	**Robledal**	**1.40**	**324**	*e*P	Pn	09 55 07.2	+0.2

IDC 21 09:57:27.5±6.0, 13°.33S×165°.41E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.8/15, mbtmp4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=184.4km s-min=36.2km az=114.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.59**	**226**	P	P	10 03 25.6	+0.2
	0.8nm,0.6s,baz=57,slow=6.3,SNR=4.1						
STKA				LR	LR	10 15 08.5	
	comp=Z,96nm,18.7s,baz=205,slow=37						
ASAR	**Alice Springs**	**31.53**	**246**	P	P	10 03 51.5	-0.1
	0.4nm,0.5s,baz=75,slow=9.4,SNR=12						
SONM	**Songino Array**	**80.31**	**324**	P	P	10 09 40.2	-0.1
	1.9nm,0.6s,baz=130,slow=4.5,SNR=3.2						
MKAR	**Makanchi Array**	**94.95**	**317**	P	P	10 10 52.4	+0.6
	0.6nm,0.8s,baz=101,slow=5.1,SNR=4.8						

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*BYKL **21** 09:59:33.7±0.2, 53°.29N×108°.48E*
MOS 21 09:59:33.1±1.8, 53°.31N×108°.53E, h10km, mb4.4/1, 16C-12D, Error ellipse: s-maj=16.8km s-min=9.2km az=52.8, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.61**	**206**	⇑*i*Pg	Pg	09 59 44.8	-0.2
KELR				*e*Sg	Sg	09 59 52.8	-0.2
KELR				Pmax			
	689nm,0.4s						
KELR				Smax			
	3μm,0.4s						
OGRR	**Ongureny**	**0.65**	**301**	⇑*i*PG	Pg	09 59 45.9	+0.2
OGRR				*e*		09 59 54.8	
OGRR				pmax	pmax		
	comp=Z,251nm,0.3s						
OGRR				smax			
	comp=N,797nm,0.4s						
OGRR	**Ongureny**	**0.65**	**301**	⇑*i*Pg	Pg	09 59 45.9	+0.2
	comp=N,255nm,0.5s						
OGRR				⇓*i*Pg	Pg	09 59 45.9	+0.2
	comp=N,286nm,0.5s						
OGRR				⇑*i*Pg	Pg	09 59 45.9	+0.2
	comp=N,416nm,0.5s						
OGRR				*e*Sg	Sg	09 59 54.7	+0.5
OGRR				Pmax			
	comp=N,239nm,0.3s						
OGRR				Smax			
	comp=N,793nm,0.4s						
SYVR	**Suvo**	**0.94**	**68**	*e*PG	Pg	09 59 51.4	+0.1
SYVR				*e*		10 00 04.6	
SYVR				pmax	pmax		
	comp=Z,274nm,0.1s						
SYVR				smax			
	comp=N,1μm,0.4s						
SYVR	**Suvo**	**0.94**	**68**	⇓*i*Pg	Pg	09 59 51.4	+0.1
SYVR				⇑*i*		09 59 52.1	
SYVR				⇑*i*Pb	Pb	09 59 53.6	+2.1
SYVR				*e*Sg	Sg	10 00 04.7	+1.2
SYVR				*e*Sb	Sb	10 00 08.5	+4.4
SYVR				max			
	comp=N,267nm,0.4s						
SYVR				max			
	comp=N,1μm,0.4s						
ZRHB	**Zarechye**	**1.13**	**228**	*e*Pg	Pg	09 59 54.1	-0.6
ZRHB				*e*Sg	Sg	10 00 09.1	-0.2
ZRHB				Pmax			
	comp=N,214nm,0.7s						
ZRHB				Smax			
	comp=N,847nm,0.6s						
TRG	**Tyrgan**	**1.43**	**248**	*e*PG	Pg	09 59 58.4	-2.1
TRG				*e*		10 00 17.8	
TRG				pmax	pmax		
	comp=Z,83nm,0.1s						
TRG				smax			
	comp=E,784nm,0.2s						
TRG	**Tyrgan**	**1.43**	**248**	⇓*i*Pg	Pg	09 59 58.5	-2.0
TRG				*e*Sg	Sg	10 00 17.0	-2.0
TRG				Pmax			
	comp=E,84nm,0.4s						
TRG				Smax			
	comp=E,779nm,0.4s						
UUDB	**Ulan-Yde**	**1.54**	**200**	⇓*i*Pg	Pg	10 00 00.9	-1.7
UUDB				*e*Sg	Sg	10 00 21.2	-1.3
UUDB				Pmax			
	comp=E,111nm,0.6s						
UUDB				Smax			
	comp=E,675nm,0.5s						
FFNB	**Fofonovo**	**1.66**	**221**	*e*Pg	Pg	10 00 03.5	-1.4
FFNB				*e*Sg	Sg	10 00 24.9	-1.5
FFNB				Pmax			
	comp=E,370nm,0.1s						
FFNB				Smax			
	comp=E,1μm,0.3s						
YLYR	**Ulyunkhan**	**2.21**	**44**	*e*PN	Pn	10 00 13.1	+3.4
YLYR				*e*		10 00 43.8	
YLYR				pmax	pmax		
	comp=Z,119nm,0.4s						
YLYR				smax			
	comp=N,151nm,0.4s						
YLYR	**Ulyunkhan**	**2.21**	**44**	⇓*i*Pn	Pn	10 00 11.0	+1.3
	comp=N,25nm,0.4s						
YLYR				⇓*i*Pn	Pn	10 00 11.0	+1.3
	comp=N,17nm,0.4s						
YLYR				⇓*i*Pn	Pn	10 00 11.0	+1.3
	comp=N,39nm,0.4s						
YLYR				⇓*i*Pg	Pg	10 00 13.1	-2.2
YLYR				*e*Sg	Sg	10 00 43.7	-0.2
YLYR				Pmax			
	comp=N,118nm,0.5s						
YLYR				Smax			
	comp=N,166nm,0.8s						
NIZ	**Nizh Angarsk**	**2.54**	**13**	*e*PN	Pn	10 00 16.3	+2.0
NIZ				*e*		10 00 19.7	
NIZ				*e*S	Sn	10 00 48.0	+2.8
NIZ				*e*		10 00 53.5	
NIZ				pmax	pmax		
	comp=Z,49nm,0.4s						
NIZ				smax			
	comp=N,227nm,0.5s						
NIZ	**Nizh Angarsk**	**2.54**	**13**	⇑*i*Pn	Pn	10 00 16.0	+1.7
NIZ				⇑*i*Pg	Pg	10 00 19.7	-2.0
NIZ				*e*Sg	Sg	10 00 53.3	-1.3
NIZ				Pmax			
	comp=N,50nm,0.5s						
NIZ				Smax			
	comp=N,231nm,0.5s						
LSTR	**Listvyanka**	**2.68**	**239**	⇓*i*Pn	Pn	10 00 16.1	-0.1
LSTR				⇑*i*Pg	Pg	10 00 21.0	-3.4
LSTR				*e*Sn	Sn	10 00 48.3	-0.4
LSTR				*e*Sg	Sg	10 00 54.8	-4.3
LSTR				Pmax			
	comp=N,40nm,0.4s						
LSTR				Smax			
	comp=N,170nm,1.4s						
IRK	**Irkutsk**	**2.80**	**249**	*e*PN	Pn	10 00 23.6	+5.7
IRK				*e*		10 00 58.4	
IRK				pmax	pmax		
	comp=Z,117nm,0.1s						
IRK				smax			
	comp=N,597nm,0.4s						
IRK	**Irkutsk**	**2.80**	**249**	*e*Sg	Sg	10 00 58.2	-4.7
IRK				Smax			
	comp=N,592nm,0.5s						
KMO	**Kumora**	**3.01**	**30**	*e*PN	Pn	10 00 21.9	+1.1
KMO				*e*		10 00 27.4	
KMO				*e*S	Sn	10 00 57.2	+0.3
KMO	**Kumora**	**3.01**	**30**	⇑*i*Pg	Pg	10 00 27.4	-3.4
KMO				*e*Sg	Sg	10 01 07.9	-1.9
KMO				Pmax			
	comp=N,123nm,0.6s						
KMO				Smax			
	comp=N,302nm,1.0s						
CIT	**Chita**	**3.32**	**111**	*e*PN	Pg	10 00 34.8	-1.8
CIT				*e*		10 01 17.3	
CIT				pmax	pmax		
	comp=Z,68nm,1.7s						
CIT				smax			
	comp=E,456nm,1.1s						
CIT	**Chita**	**3.32**	**111**	*e*Pg	Pg	10 00 32.3	-4.3
CIT				*e*Sg	Sg	10 01 16.9	-2.7
CIT				Pmax			
	comp=E,87nm,0.3s						
CIT				Smax			
	comp=E,748nm,0.8s						
YOA	**Uoyan**	**3.38**	**32**	*e*PN	Pn	10 00 34.2	+8.3
YOA				*i*		10 01 20.9	
YOA				pmax	pmax		
	comp=Z,107nm,0.3s						
YOA				smax			
	comp=N,584nm,1.0s						
YOA	**Uoyan**	**3.38**	**32**	*e*Pg	Pg	10 00 35.2	-2.6
YOA				*e*Sg	Sg	10 01 20.8	-0.8
YOA				Pmax			
	comp=N,107nm,0.5s						
YOA				Smax			
	comp=N,582nm,1.7s						
TLY	**Talaya**	**3.40**	**243**	*e*PN	Pn	10 00 25.5	-0.7
TLY				*e*		10 00 32.8	
TLY				*e*		10 01 17.3	
TLY				pmax	pmax		
	comp=Z,14nm,0.5s						
TLY				smax			
	comp=E,104nm,0.6s						
TLY	**Talaya**	**3.40**	**243**	*e*Pn	Pn	10 00 26.8	+0.6
TLY				*e*Pg	Pg	10 00 33.9	-4.3
TLY				*e*Sg	Sg	10 01 17.1	-5.2
TLY				Pmax			
	comp=E,13nm,0.5s						
TLY				Smax			
	comp=E,102nm,0.6s						
UKT	**Uakit**	**3.69**	**52**	⇓*i*Pn	Pn	10 00 31.5	+1.4
UKT				⇓*i*Pg	Pg	10 00 41.3	-2.5
UKT				*e*Sg	Sg	10 01 29.9	-1.7
UKT				Pmax			
	comp=E,49nm,1.0s						
UKT				Smax			
	comp=E,91nm,1.6s						
ARS	**Arshan**	**3.97**	**252**	*e*PN	Pn	10 00 44.2	+10
ARS	**Arshan**	**3.97**	**252**	*e*Pn	Pn	10 00 36.4	+2.4
ARS				*e*Pg	Pg	10 00 44.2	-5.0
ARS				*e*Sg	Sg	10 01 35.1	-5.5
ARS			

MOY				*e*		10 02 02.9	
MOY				pmax	pmax		
	comp=Z,8.0nm,0.4s						
MOY				smax			
	comp=N,144nm,1.3s						
MOY	**Mondy**	**4.89**	**253**	*e*Pg	Pg	10 00 59.9	-6.8
MOY				*e*Sg	Sg	10 02 03.0	-7.0
MOY				Pmax			
	comp=N,21nm,1.4s						
MOY				Smax			
	comp=N,145nm,1.4s						
NLYR	**Nelyaty**	**5.22**	**50**	*e*PN	Pn	10 00 51.9	+0.8
NLYR				*e*		10 01 06.7	
NLYR				*e*		10 02 14.0	
NLYR				pmax	pmax		
	comp=Z,22nm,0.8s						
NLYR				smax			
	comp=N,156nm,1.2s						
NLYR	**Nelyaty**	**5.22**	**50**	*e*Pn	Pn	10 00 53.0	+1.9
NLYR				*e*Pg	Pg	10 01 08.3	-4.7
NLYR				*e*Sg	Sg	10 02 16.8	-3.8
NLYR				Pmax			
	comp=N,18nm,0.7s						
NLYR				Smax			
	comp=N,156nm,1.2s						
ORL	**Orlik**	**5.33**	**265**	*e*PN	Pn	10 00 55.2	+2.5
ORL				*e*S	Sn	10 01 53.1	-1.0
ORL	**Orlik**	**5.33**	**265**	*e*Pn	Pn	10 00 55.0	+2.3
ORL				⇑*i*		10 00 56.9	
ORL				⇑*i*		10 01 03.4	
ORL				*e*Sn	Sn	10 01 53.1	-1.0
ORL				*e*Sg	Sg	10 02 15.9	-8.2
ORL				max			
	comp=N,12nm,0.7s						
ORL				Smax			
	comp=N,149nm,1.8s						
BOD	**Bodaibo**	**5.48**	**32**	*e*PN	Pn	10 00 54.9	+0.2
BOD				*e*		10 01 11.4	
BOD				*e*		10 02 24.0	
BOD				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BOD				smax			
	comp=E,49nm,1.4s						
BOD	**Bodaibo**	**5.48**	**32**	⇑*i*Pn	Pn	10 00 55.8	+1.1
BOD				*e*Pg	Pg	10 01 12.4	-5.6
BOD				*e*Sg	Sg	10 02 24.2	-4.7
BOD				Pmax			
	comp=E,6.0nm,0.6s						
BOD				Smax			
	comp=E,43nm,1.4s						
ULN	**Ulaanbaatar**	**5.53**	**190**	*e*Pn	Pn	10 00 57.4	+2.0
ULN				*e*Pg	Pg	10 01 13.7	-5.3
ULN				*e*Sg	Sg	10 02 25.7	-4.9
CRS	**Chara**	**6.64**	**53**	⇑*i*Pn	Pn	10 01 11.3	+0.7
CRS				⇑*i*		10 01 35.6	
CRS				*e*Sg	Sg	10 03 00.4	-5.8
CRS				max			
	comp=E,32nm,1.9s						
CRS				Smax			
	comp=E,89nm,1.4s						
TUP	**Tupik**	**6.85**	**76**	*e*PN	Pn	10 01 14.2	+0.7
TUP				*e*		10 01 36.2	
TUP				*e*		10 03 06.0	
TUP				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TUP				smax			
	comp=N,134nm,1.0s						
TUP	**Tupik**	**6.85**	**76**	⇑*i*Pn	Pn	10 01 14.4	+0.9
TUP				*e*Pg	Pg	10 01 37.9	-6.2
TUP				*e*Sg	Sg	10 03 06.2	-6.5
TUP				Pmax			
	comp=N,1.0nm,0.4s						
TUP				Smax			
	comp=N,166nm,1.4s						
TDJR	**Todzha**	**7.58**	**268**	*e*Sg	Sg	10 03 28.2	-8.0

MAN 21 10:01:54, 17°.61N×122°.64E, h25km, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.58**	**201**	*e*P	Pb	10 02 06.6	+0.9
PALP				*e*S	Sb	10 02 15.7	+2.2
SGCP	**Mt. Cagua**	**0.84**	**318**	*e*P	Pb	10 02 09.9	-0.1
SGCP				*e*S	Sb	10 02 18.3	-2.6
CAUP	**Cauayan**	**1.02**	**230**	*e*P	Pn	10 02 16.4	+3.6
APYP	**Conner**	**1.35**	**281**	*e*P	Pn	10 02 17.4	+0.1
BALP	**Baler**	**2.12**	**209**	*e*P	Pn	10 02 28.8	+0.9
ASAR	**Alice Springs**	**42.48**	**165**	P	P	10 09 47.4	+0.1
	0.4nm,0.8s,baz=352,slow=7.4,SNR=5.3						

*IDC **21** 10:01:57.9±1.2, 31°.09N×103°.41E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.3/40, Error ellipse: s-maj=34.2km s-min=23.9km az=60.0*
*ISCJB **21** 10:01:58.8±0.9, 31°.10N±0°.04×103°.47E±0°.06, h15km±6km, mb3.6/7, Error ellipse: s-maj=8.8km s-min=7.0km az=153.0*
*BJI **21** 10:01:58.8, 31°.06N×103°.53E, h13km, ML3.5/9, Ms3.4/1, Ms7 3.2/1*
*NEIC **21** 10:01:59.8±0.6, 31°.10N×103°.39E, h10km, mb4.1/2, Error ellipse: s-maj=14.3km s-min=11.4km az=64.0*

ISC 21 10:02:00.3±0.9, 30°.99N±0°.04×103°.47E±0°.06, h17km±5km, n17, σ1°17/24, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**107**	Pg	**Pg**	**10 02 05.5**	**-0.7**
CD2				Sg	**Sg**	**10 02 12.0**	**+1.8**
CD2				smax			
	comp=N,10μm,0.9s						
LZH	**Lanzhou**	**5.09**	**3**	Pg	**Pg**	**10 03 36.9**	**-1.0**
LZH				Sg	**Sg**	**10 04 44.8**	**+0.9**
LZH				smax			
	comp=N,18nm,0.5s						
LZH				smax			
	comp=E,39nm,0.5s						
LZH				LR	LR		
	comp=E,340nm,5.8s						
LZH				LR	LR		
	comp=Z,490nm,6.9s						
ENH	**Enshi**	**5.24**	**96**	*e*Pn	**Pn**	**10 03 20.1**	**+2.2**
	comp=Z,46nm,0.7s						
ENH				*e*Sn	**Sn**	**10 04 17.4**	**-0.4**
GYA	**Guiyang**	**5.32**	**147**	Pg	**Pg**	**10 03 40.0**	**-2.1**
GYA				Sg	**Sg**	**10 04 47.1**	**-3.9**
GYA				smax			
	comp=N,70nm,0.9s						
GYA				smax			
	comp=E,50nm,0.9s						
XAN	**Xi'an**	**5.52**	**55**	Pn	**Pn**	**10 03 21.3**	**-0.4**
XAN				Pg	**Pg**	**10 03 37.4**	**-8.7**
XAN				Sn	**Sn**	**10 04 24.4**	**-0.4**
XAN				Sg	**Sg**	**10 04 51.5**	**-6.1**
XAN				smax			
	comp=N,99nm,0.7s						
XAN				smax			
	comp=E,59nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.13**	**199**	Pn	**Pn**	**10 05 08.1**	**+2.0**
	comp=E,0.2nm,0.3s,baz=9.8,slow=11,SNR=3.1						
SONM	**Songino Array**	**16.97**	**7**	Pn	**Pn**	**10 05 56.6**	**-0.2**
	comp=E,1.0nm,0.3s,baz=195,slow=10,SNR=3.0						
SONM	**Songino Array**	**16.97**	**7**	Pn	**Pn**	**10 05 56.6**	**-0.2**
TLY	**Talaya**	**20.68**	**0**	*e*P	**P**	**10 06 33.1**	**-6.1**
	comp=E,3.4nm,0.8s						
KSRS	**Korea Array**	**21.20**	**66**	P	**P**	**10 06 45.8**	**+0.8**
	comp=E,1.2nm,0.6s,mb3.4,baz=240,slow=9.0,SNR=5.3						
MKAR	**Makanchi Array**	**22.71**	**320**	P	**P**	**10 07 01.9**	**+0.8**
	comp=E,0.5nm,0.8s,mb3.0,baz=126,slow=11,SNR=4.6						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**10 07 40.3**	**-1.0**
	comp=E,1.1nm,0.2s,mb4.0,baz=126,slow=9.3,SNR=1.6						
KURK	**Kurchatov**	**27.01**	**324**	P	**P**	**10 07 40.3**	**-1.0**
KBL	**Kabul**	**29.08**	**286**	P	**P**	**10 08 00.2**	**+0.4**
	comp=E,3.8nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**57.36**	**326**	P	**P**	**10 11 45.8**	**-1.4**
	comp=E,0.3nm,0.3s,mb3.8,baz=68,slow=23,SNR=2.6						
FINES				LR	LR	10 39 11.0	
	comp=E,65nm,20.2s,baz=346,slow=39						
ASAR	**Alice Springs**	**61.68**	**148**	P	**P**	**10 12 18.4**	**+1.0**
	comp=E,0.3nm,0.7s,mb3.5,baz=337,slow=6.8,SNR=3.8						
YKA	**Yellowknife Ar**	**81.96**	**17**	P	**P**	**10 14 18.0**	**-0.7**
	comp=E,0.3nm,0.5s,mb3.5,baz=329,slow=5.0,SNR=6.4						

*IDC **21** 10:03:19.1±2.9, 7°.88N×127°.31E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/21, mbtmp3.6/3, Error ellipse: s-maj=121.9km s-min=30.2km az=60.0*
*MAN **21** 10:04:41, 17°.62N×122°.46E, h25km, mb5.0, ML4.0, MS4.1 MAN INTENSITY II - ILAGAN ISABELA.*
*ISCJB **21** 10:04:42.1±1.4, 17°.62N±0°.08×122°.39E±0°.09, h22km±11km, Error ellipse: s-maj=16.3km s-min=10.3km az=142.6*

ISC 21 10:04:42.5±1.3, 17°.60N±0°.07×122°.28E±0°.08, h12km±11km, n8, σ0°92/10, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**165**	*e*P	**Pg**	**10 04 52.0**	**-1.2**
SGCP	**Mt. Cagua**	**0.68**	**341**	*e*P	**Pg**	**10 04 55.8**	**+0.1**
CAUP	**Cauayan**	**0.78**	**214**	*e*P	**Pg**	**10 04 59.6**	**+2.0**
APYP	**Conner**	**1.02**	**285**	*e*P	**Pg**	**10 05 03.0**	**+0.9**
APYP				*e*S	**Sg**	**10 05 15.8**	**+0.3**
ABRA	**Dolores**	**1.49**	**272**	*e*P	**Pg**	**10 05 10.5**	**-0.6**
ABRA				*e*S	**Sg**	**10 05 29.4**	**-1.2**
BALP	**Baler**	**1.96**	**200**	*e*P	**Pn**	**10 05 15.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**22.20**	**276**	P	**P**	**10 09 25.6**	**-13**
	1.1nm,0.3s,baz=120,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**43.91**	**320**	P	**P**	**10 12 48.8**	**-0.1**
	0.3nm,0.6s,baz=113,slow=8.1,SNR=3.6						

MAN 21 10:11:17, 17°.59N×122°.39E, h7km, mb5.0, ML4.0, MS4.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.53**	**176**	*e*P	Pg	10 11 28.1	+0.9
PALP				*e*S	Sg	10 11 35.2	+1.2
SGCP	**Mt. Cagua**	**0.72**	**333**	*e*P	Pg	10 11 31.9	+0.9
CAUP	**Cauayan**	**0.84**	**220**	*e*P	Pg	10 11 35.3	+2.1
CAUP				*e*S	Sg	10 11 43.5	-0.6
APYP	**Conner**	**1.12**	**284**	*e*P	Pg	10 11 39.0	+0.4
APYP				*e*S	Sg	10 11 52.8	-0.4
ABRA	**Dolores**	**1.60**	**272**	*e*P	Pn	10 11 46.4	+0.7
PIP	**Pasuquin**	**1.83**	**294**	⇑*i*P	Pn	10 11 50.1	+1.2
PIP				*e*S	Sn	10 12 15.7	+3.3
BALP	**Baler**	**2.00**	**203**	*e*P	Pn	10 11 51.7	+0.6
BOLP	**Bolinao**	**2.66**	**243**	*e*P	Pn	10 12 02.7	+2.4
BBP	**Basco**	**2.86**	**352**	*e*P	Sn	10 12 34.3	-3.6

MAN 21 10:17:17, 17°.60N×122°.57E, h20km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**194**	*e*P	Pb	10 17 28.9	+0.9
CAUP	**Cauayan**	**0.96**	**228**	*e*P	Pb	10 17 35.6	+0.6
APYP	**Conner**	**1.29**	**282**	*e*P	Pn	10 17 39.8	-0.1
BALP	**Baler**	**2.08**	**207**	*e*P	Pn	10 17 51.8	+1.1

*IDC **21** 10:36:22.3±0.9, 51°.08N×178°.75E, h0km, mb3.9/14, mb1 4.1/16, mb1mx3.9/31, mbtmp4.0/16, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/45, Error ellipse: s-maj=27.6km s-min=15.6km az=169.0*
*NEIC **21** 10:36:23.5, 50°.63N×178°.83E, h5km, mb4.0/7, ML3.8(AEIC), After AEIC.*
*MOS **21** 10:36:26.1±1.5, 51°.01N×178°.84E, h43km, mb4.3/9, Error ellipse: s-maj=15.9km s-min=11.9km az=105.2*
*ISCJB **21** 10:36:27.4±1.2, 51°.0N±0°.1×178°.79E±0°.07, h51km±9km, mb4.0/18, MS3.5/2, Error ellipse: s-maj=19.9km s-min=6.7km az=175.2*

ISC 21 10:36:29.3±1.0, 51°.0N±0°.1×178°.77E±0°.07, h50km±8km, n55, σ1°05/54, mb4.0/18, MS3.5/2, 1D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.97**	**72**	P	**Pn**	**10 37 12.5**	**-1.3**
ADK				S	**Sn**	**10 37 49.5**	**+1.4**
SMY	**Shemya**	**3.35**	**302**	P	**Pn**	**10 37 20.5**	**+1.4**
SMY				S	**Sn**	**10 38 05.4**	**+7.8**
FX1	**Attu Island--F**	**3.93**	**300**	P	**Pn**	**10 37 27.1**	**+0.1**
ATKA	**Atka Island**	**4.54**	**72**	P	**Pn**	**10 37 34.2**	**-1.1**
ATKA				S	**Sn**	**10 38 29.5**	**+2.9**
NIKO	**Nikolski**	**7.88**	**71**	P	**Pn**	**10 38 21.1**	**0.0**
UNV	**Unalaska Valle**	**9.43**	**67**	P	**Pn**	**10 38 42.4**	**+0.1**
PETK	**Petropavlovsk-**	**13.12**	**287**	Pn	**Pn**	**10 39 30.0**	**-2.7**
	0.4nm,0.3s,baz=317,slow=28,SNR=4.1						
PETK	**Petropavlovsk-**	**13.12**	**287**	Pn	**Pn**	**10 39 30.0**	**-2.7**
KDAK	**Kodiak Island**	**17.89**	**57**	P	**Pn**	**10 40 30.7**	**-3.5**
KDAK	**Kodiak Island**	**17.89**	**57**	P	**Pn**	**10 40 30.7**	**-3.5**
BILL	**Bilibino**	**18.12**	**345**	*e*P	**Pn**	**10 40 37.7**	**+0.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**18.12**	**345**	*e*P	**Pn**	**10 40 37.5**	**+0.6**
	comp=Z,2.4nm,0.7s						
RSO	**Redoubt South**	**18.45**	**48**	*e*P	**Pn**	**10 40 42.5**	**+1.6**
PPLA	**Purkeypile**	**19.58**	**42**	*e*P	**Pn**	**10 40 53.7**	**-0.7**
	comp=Z,5.6nm,0.8s						
CHUM	**Lake Minchumin**	**19.95**	**39**	*e*P	**Pn**	**10 40 57.4**	**-1.3**
	comp=Z,6.4nm,0.7s						
KTH	**Kantishna Hill**	**20.37**	**40**	*e*P	**P**	**10 41 01.4**	**+0.1**
	comp=Z,9.7nm,0.9s						
BPAW	**Bear Paw Mtn.**	**20.57**	**39**	*e*P	**P**	**10 41 03.5**	**0.0**
	comp=Z,8.3nm,1.1s						
TRF	**Thorofare Moun**	**20.59**	**41**	*e*P	**P**	**10 41 03.7**	**0.0**
	comp=Z,8.4nm,0.9s						
MENT	**Mentasta**	**23.27**	**45**	*e*P	**P**	**10 41 31.9**	**-0.2**
EGAK	**Eagle**	**24.81**	**41**	*e*P	**P**	**10 41 45.7**	**-0.4**
	comp=Z,11nm,1.0s,mb4.3						
DAWY	**Dawson**	**25.40**	**43**	*e*P	**P**	**10 41 52.7**	**+1.1**
INK	**Inuvik**	**28.62**	**35**	P	**P**	**10 42 21.5**	**+1.2**
	comp=Z,1.6nm,0.7s,mb3.9,baz=262,slow=7.1,SNR=3.4						
INK	**Inuvik**	**28.62**	**35**	P	**P**	**10 42 21.5**	**+1.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	**Inuvik**	**28.62**	**35**	P	**P**	**10 42 21.5**	**+1.2**
MDJ	**Mudanjiang**	**33.12**	**278**	P	**P**	**10 43 01.1**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,95nm,4.4s						
CN2	**Changchun**	**36.11**	**280**	*e*P	**P**	**10 43 26.5**	**+0.5**
CN2				*e*S	**S**	**10 49 03.3**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
YKA	**Yellowknife Ar**	**36.57**	**46**	P	**P**	**10 43 28.7**	**-1.0**
	comp=Z,0.5nm,0.8s,mb3.4,baz=280,slow=8.0,SNR=7.2						
YKA				PcP	PcP	10 45 52.4	+0.4
	comp=Z,0.2nm,0.5s,baz=289,slow=3.2,SNR=4.1						
YKA	**Yellowknife Ar**	**36.57**	**46**	P	**P**	**10 43 28.7**	**-1.0**
YKA						10 45 52.4	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSRS	**Korea Array**	**38.11**	**269**	P	**P**	**10 43 43.7**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.6,baz=255,slow=24,SNR=4.6						
KSRS	**Korea Array**	**38.11**	**269**	P	**P**	**10 43 43.7**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
RES	**Resolute Bay**	**40.68**	**24**	P	**P**	**10 44 02.6**	**-1.4**
	comp=Z,0.6nm,0.8s,mb3.3,baz=320,slow=7.9,SNR=3.0						
RES	**Resolute Bay**	**40.68**	**24**	P	**P**	**10 44 02.6**	**-1.5**
RES				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
SONM	**Songino Array**	**45.43**	**296**	P	**P**	**10 44 40.4**	**-2.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=56,slow=11,SNR=4.0						
SONM	**Songino Array**	**45.43**	**296**	P	**P**	**10 44 40.4**	**-2.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GUMO	**Guam**	**46.32**	**229**	LR	LR	11 02 06.5	
	comp=Z,34nm,18.5s,MS3.3,baz=316,slow=33						
PDAR	**Pinedale Array**	**47.87**	**70**	P	**P**	**10 45 01.8**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.1,baz=316,slow=4.1,SNR=9.9						
SPITS	**Spitsbergen Ar**	**50.60**	**355**	P	**P**	**10 45 20.9**	**-1.4**
	comp=Z,4.9nm,0.9s,mb4.4,baz=59,slow=7.0,SNR=8.3						
SPITS	**Spitsbergen Ar**	**50.60**	**355**	P	**P**	**10 45 20.9**	**-1.4**
SPITS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**59.04**	**307**	P	**P**	**10 46 22.9**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.8,baz=51,slow=7.6,SNR=7.5						
MKAR	**Makanchi Array**	**59.04**	**307**	P	**P**	**10 46 22.9**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**60.15**	**319**	P	**P**	**10 46 31.4**	**+0.2**
	comp=Z,2.5nm,0.5s,mb4.5,baz=44,slow=8.1,SNR=11						
BVAR				LR	LR	11 15 12.0	
	comp=Z,52nm,18.5s,MS3.7,baz=332,slow=39						
BVAR	**Borovoye Array**	**60.15**	**319**	P	**P**	**10 46 31.4**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,52nm,18.5s						
TXAR	**Lajitas Array**	**60.22**	**79**	P	**P**	**10 46 32.2**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=302,slow=4.8,SNR=8.6						
AKTO	**Aktyubinsk**	**67.06**	**323**	P	**P**	**10 47 17.5**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.5,baz=65,slow=6.0,SNR=12						
AKTO	**Aktyubinsk**	**67.06**	**323**	P	**P**	**10 47 17.5**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NOA	**NORSAR Array B**	**67.83**	**353**	P	**P**	**10 47 21.2**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=11,slow=6.3,SNR=3.3						
NOA	**NORSAR Array B**	**67.83**	**353**	P	**P**	**10 47 21.2**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZEI	**Tsey**	**78.66**	**328**	*e*P	**P**	**10 48 25.6**	**0.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**84.22**	**221**	P	**P**	**10 48 55.1**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.7,baz=20,slow=5.8,SNR=11						
BRTR	**Keskin Array B**	**84.60**	**334**	P	**P**	**10 48 57.8**	**+0.8**
	comp=Z,1.2nm,0.7s,mb4.1,baz=20,slow=2.1,SNR=7.6						
BRTR	**Keskin Array B**	**84.60**	**334**	P	**P**	**10 48 57.8**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LBTB	**Lobatse**	**146.85**	**312**	PKPbc	PKPbc	10 56 06.5	+0.9
	comp=Z,1.7nm,0.4s,baz=90,slow=20,SNR=4.1						
LBTB	**Lobatse**	**146.85**	**312**	PKP2	PKPab	10 56 06.6	-0.5
LBTB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BOSA	**Boshof**	**150.03**	**308**	PKPbc	PKPbc	10 56 14.2	+0.4
	comp=Z,1.0nm,0.5s,baz=128,slow=14,SNR=4.1						
BOSA	**Boshof**	**150.03**	**308**	PKIKP	PKPbc	10 56 14.2	+0.4
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*ISCJB **21** 10:52:34.4±0.6, 31°.25N±0°.05×104°.26E±0°.08, h10km, mb3.5/7, Error ellipse: s-maj=10.1km s-min=6.1km az=25.4*
*IDC **21** 10:52:35.8±1.2, 31°.52N×104°.34E, h0km, mb3.5/8, mb1 3.7/8, mb1mx3.5/28, mbtmp3.6/8, Error ellipse: s-maj=46.2km s-min=21.7km az=47.0*
*NEIC **21** 10:52:37.3±1.1, 31°.66N×104°.83E, h10km, mb3.9/1, Error ellipse: s-maj=37.1km s-min=13.8km az=223.0*
*BJI **21** 10:52:39.9, 31°.36N×104°.90E, h8km, ML3.5/9*

ISC 21 10:52:35.5±0.6, 31°.20N±0°.05×104°.30E±0°.07, h10km, n15, σ1°18/19, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**239**	Pg	**Pg**	**10 52 45.9**	**-0.2**
CD2				Sg	**Sg**	**10 52 53.1**	**-0.2**
CD2				smax			
	comp=N,7μm,0.6s						
ENH	**Enshi**	**4.56**	**100**	*e*Pn	**Pn**	**10 53 40.8**	**-3.7**
XAN	**Xi'an**	**4.82**	**53**	Pg	**Pn**	**10 53 52.5**	**+4.4**
XAN				Sn	**Sn**	**10 54 48.4**	**+4.5**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,57nm,1.0s						
LZH	**Lanzhou**	**4.89**	**356**	Pg	**Pg**	**10 54 03.8**	**-5.3**
LZH				Sn	**Sn**	**10 54 47.6**	**+1.9**
LZH				Sg	**Sg**	**10 55 05.3**	**-7.2**
LZH				smax			
	comp=N,52nm,0.8s						
LZH				smax			
	comp=E,59nm,0.6s						
GYA	**Guiyang**	**5.16**	**156**	Pg	**Pb**	**10 54 06.0**	**+0.2**
GYA				smax			
	comp=N,60nm,1.0s						
GYA				smax			
	comp=E,80nm,0.9s						
KMI	**Kunming**	**6.21**	**193**	P	**Pn**	**10 54 08.3**	**+1.1**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	**Korea Array**	**20.46**	**66**	P	**P**	**10 57 12.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=251,slow=11,SNR=2.7						
TLY	**Talaya**	**20.47**	**359**	*e*P	**P**	**10 57 10.4**	**-2.8**
	comp=Z,3.3nm,0.6s						
MKAR	**Makanchi Array**	**23.02**	**319**	P	**P**	**10 57 41.2**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.1,baz=123,slow=12,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.71**	**334**	P	**P**	**10 58 15.3**	**+0.6**
	comp=Z,0.6nm,0.3s,mb3.5,baz=140,slow=5.6,SNR=1.9						
KURK	**Kurchatov**	**27.27**	**323**	P	**P**	**10 58 17.8**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.2,baz=126,slow=8.9,SNR=3.4						
ARCES	**ARCESS Array B**	**57.24**	**336**	P	**P**	**11 02 22.9**	**+0.3**
	comp=Z,2.0nm,0.9s,mb4.2,baz=87,slow=6.7,SNR=5.1						
ASAR	**Alice Springs**	**61.48**	**149**	P	**P**	**11 02 56.4**	**+4.0**
	comp=Z,0.3nm,0.5s,mb3.7,baz=338,slow=6.4,SNR=6.9						
NOA	**NORSAR Array B**	**64.67**	**327**	P	**P**	**11 03 12.7**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.6,baz=80,slow=9.4,SNR=3.1						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**11 04 53.6**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=328,slow=5.3,SNR=6.8						

IDC 21 10:53:12.7±5.4, 8°.36N×128°.19E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/22, mbtmp3.7/4, Error ellipse: s-maj=463.6km s-min=26.2km az=69.0, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.32**	**170**	P	P	10 59 43.9	+0.2
	0.1nm,0.4s,baz=334,slow=6.2,SNR=2.6						
MKAR	**Makanchi Array**	**54.68**	**323**	P	P	11 02 43.8	+0.2
	0.9nm,0.5s,baz=110,slow=8.0,SNR=16						
MKAR				PcP	PcP	11 03 45.4	-1.1
	0.4nm,0.5s,baz=109,slow=4.8,SNR=4.2						
KURK	**Kurchatov**	**58.70**	**326**	P	P	11 03 12.3	+0.2
	1.1nm,0.6s,baz=126,slow=6.5,SNR=10.0						
BVAR	**Borovoye Array**	**64.30**	**325**	P	P	11 03 50.1	+0.2
	0.7nm,0.7s,baz=125,slow=14,SNR=3.2						

*SKO **21** 11:28:57.5, 40°.24N×21°.77E, h15km, M1.7, ML2.2*
*ISCJB **21** 11:28:58.6±0.5, 40°.37N±0°.02×21°.80E±0°.04, h8km±5km, Error ell

KRUS	**Krusevo**	**1.09**	**338**	*e*Pg	**Pg**	**11 29 18.6**	**-1.3**
KRUS				*e*Sg	**Sg**	**11 29 36.1**	**+1.9**
KRUS				*e*Lg		11 29 37.8	
	comp=N,13nm,0.8s						
KRUS				*e*Lg		11 29 37.8	
	comp=E,3.1nm,0.4s						
KRUS	**Krusevo**	**1.09**	**338**	*e*Pg	**Pg**	**11 29 18.6**	**-1.3**
KRUS				*e*Sg	**Sg**	**11 29 36.1**	**+1.9**
VAY	**Valandovo**	**1.13**	**31**	*e*Pg	**Pg**	**11 29 19.0**	**-1.7**
VAY				*e*Sg	**Sg**	**11 29 37.0**	**+1.7**
VAY				*e*Lg		11 29 46.7	
	comp=N,43nm,0.8s						
VAY				*e*Lg		11 29 46.8	
	comp=E,44nm,1.0s						
VAY	**Valandovo**	**1.13**	**31**	*e*Pg	**Pg**	**11 29 18.9**	**-1.7**
VAY				*e*Sg	**Sg**	**11 29 37.0**	**+1.7**
SOH	**Sokhos**	**1.27**	**68**	P	**Pn**	**11 29 20.6**	**-1.8**
SOH				S	**Sb**	**11 29 39.4**	**+0.4**
SOH	**Sokhos**	**1.27**	**68**	P	**Pn**	**11 29 20.6**	**-1.8**
SOH				S	**Sb**	**11 29 39.4**	**+0.4**
AGG	**Agios Georgios**	**1.40**	**163**	P	**Pn**	**11 29 25.6**	**+1.6**
AGG				S	**Sn**	**11 29 42.2**	**-0.1**
AGG	**Agios Georgios**	**1.40**	**163**	P	**Pn**	**11 29 25.6**	**+1.6**
AGG				S	**Sn**	**11 29 42.2**	**-0.1**

*ISCJB **21** 11:30:17.7±0.6, 22°.40N±0°.04×142°.00E±0°.08, h364km±6km, mb3.9/27, Error ellipse: s-maj=12.1km s-min=6.8km az=176.8*
*IDC **21** 11:30:18.3±1.0, 22°.34N×141°.89E, h352km±10km, mb3.6/22, mb1 3.7/28, mb1mx3.6/35, mbtmp3.6/28, Error ellipse: s-maj=15.4km s-min=7.4km az=85.0*
*NEIC **21** 11:30:19.2±1.1, 22°.35N×141°.94E, h364km±11km, mb4.8/4, Error ellipse: s-maj=12.4km s-min=6.9km az=80.0*
*JMA **21** 11:30:20.4±0.2, 22°.61N×141°.98E, h374km±2km, M4.8*

ISC 21 11:30:18.5±0.6, 22°.34N±0°.04×142°.08E±0°.09, h357km±6km, n61, σ1º07/67, mb3.9/26, 3D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.27**	**1**	P	**Pn**	**11 31 31.4**	**+0.8**
JHHJ				S	**S**	**11 32 26.9**	**-1.9**
CBIJ	**Chichi jima**	**4.73**	**1**	P	**Pn**	**11 31 36.1**	**+0.6**
CBIJ				S	**S**	**11 32 35.2**	**-2.5**
CBIJ	**Chichi jima**	**4.73**	**1**	P	**Pn**	**11 31 36.2**	**+0.8**
	46nm,0.3s,baz=280,slow=20,SNR=17						
CBIJ				S	**S**	**11 32 35.4**	**-2.4**
	146nm,0.3s,baz=218,slow=22,SNR=17						
GUMO	**Guam**	**9.10**	**163**	P	**Pn**	**11 32 27.5**	**+1.7**
	8.5nm,0.3s,baz=345,slow=22,SNR=9.0						
JMZ	**Minamidaito 2**	**10.51**	**291**	P	**Pn**	**11 32 43.0**	**+0.5**
JHJ2	**Mitsune**	**10.91**	**350**	P	**Pn**	**11 32 46.5**	**-0.6**
JHJ2				*e*S	**S**	**11 34 43.5**	**-6.0**
JHJ	**Hachijo jima 2**	**10.93**	**350**	P	**Pn**	**11 32 46.7**	**-0.6**
	40nm,0.3s,baz=240,slow=19,SNR=10						
JHJ				S	**S**	**11 34 42.6**	**-7.1**
	10nm,0.3s,baz=66,slow=20,SNR=4.3						
BSO1	**Boso 1**	**12.30**	**356**	P	**P**	**11 33 03.4**	**+0.4**
BSO1				*e*S	**S**	**11 35 12.6**	**-6.6**
JWZ	**Kozaga**	**12.48**	**335**	P	**P**	**11 33 07.0**	**+2.0**
JAM	**Amami Oshima**	**12.79**	**301**	P	**P**	**11 33 09.4**	**+0.9**
JIE	**Ise**	**12.90**	**340**	P	**P**	**11 33 11.1**	**+1.5**
JOD2	**Odawara 2**	**13.14**	**349**	P	**P**	**11 33 12.0**	**-0.2**
JTO	**Tosashimizu**	**13.31**	**324**	P	**P**	**11 33 17.5**	**+3.3**
JOW	**Kunigami**	**13.33**	**292**	P	**P**	**11 33 14.3**	**-0.2**
JOW	**Kunigami**	**13.33**	**292**	P	**P**	**11 33 14.0**	**-0.5**
	2.2nm,0.3s,baz=138,slow=13,SNR=10.0						
JOW	**Kunigami**	**13.33**	**292**	P	**P**	**11 33 14.0**	**-0.5**
JRY	**Ryogami san**	**13.90**	**349**	P	**P**	**11 33 19.6**	**-1.0**
JRY				*e*S	**S**	**11 35 44.5**	**-7.1**
JSJ	**Shimokoshiki**	**14.41**	**313**	P	**P**	**11 33 26.9**	**+0.7**
JKE	**Kume jima 2**	**14.50**	**289**	P	**P**	**11 33 28.8**	**+1.5**
MJAR	**Matsushiro Arr**	**14.54**	**347**	P	**P**	**11 33 26.2**	**-1.4**
	1.0nm,0.3s,baz=168,slow=9.7,SNR=8.9						
MAJO	**Matsushiro**	**14.54**	**347**	*e*P	**P**	**11 33 27.6**	**0.0**
JHS	**Saijyo**	**14.85**	**330**	P	**P**	**11 33 32.8**	**+1.8**
JMK	**Ichinoseki**	**16.57**	**358**	P	**P**	**11 33 50.9**	**+1.3**
JMK				*e*S	**S**	**11 36 45.7**	**+1.0**
KSRS	**Korea Array**	**19.39**	**324**	P	**P**	**11 34 18.3**	**-1.3**
	0.6nm,0.3s,baz=141,slow=9.1,SNR=15						
KAPI	**Kappang**	**34.88**	**221**	P	**P**	**11 36 36.1**	**-1.6**
	7.8nm,0.7s,mb4.0,baz=131,slow=3.0,SNR=5.5						
SONM	**Songino Array**	**38.19**	**321**	P	**P**	**11 37 04.7**	**-0.2**
	0.3nm,0.4s,mb2.9,baz=120,slow=8.8,SNR=4.2						
CMAR	**Chiang Mai Arr**	**40.52**	**273**	P	**P**	**11 37 23.7**	**-0.7**
	0.6nm,0.3s,mb3.3,baz=57,slow=9.1,SNR=6.1						
CTA	**Charters Tower**	**42.37**	**174**	*i*P	**P**	**11 37 39.8**	**+0.7**
	3.4nm,0.4s,mb3.8						
CTA	**Charters Tower**	**42.37**	**174**	P	**P**	**11 37 39.7**	**+0.6**
	7.1nm,0.7s,mb3.9,baz=8.9,slow=9.1,SNR=12						
WRAB	**Tennant Creek**	**42.69**	**191**	*e*P	**P**	**11 37 41.6**	**-0.1**
	40nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**43.30**	**203**	*i*P	**P**	**11 37 46.0**	**-0.5**
	22nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**43.30**	**203**	P	**P**	**11 37 46.2**	**-0.3**
	10.0nm,0.6s,mb4.1,baz=32,slow=8.0,SNR=40						
ASAR	**Alice Springs**	**46.42**	**190**	P	**P**	**11 38 10.4**	**-0.4**
	6.8nm,0.6s,mb4.0,baz=16,slow=12,SNR=134						
ASAR				PcP	PcP	11 39 39.2	+0.3
	0.7nm,0.8s,baz=0.1,slow=2.4,SNR=4.9						
ASAR				S	**S**	**11 44 29.1**	**-1.8**
	1.3nm,0.8s,baz=21,slow=20,SNR=11						
MKAR	**Makanchi Array**	**53.51**	**312**	P	**P**	**11 39 03.6**	**+0.3**
	0.6nm,0.7s,mb3.0,baz=99,slow=8.5,SNR=4.5						
MKAR				PcP	PcP	11 40 04.9	0.0
	0.9nm,0.7s,baz=86,slow=5.4,SNR=6.5						
STKA	**Stephens Creek**	**53.91**	**181**	*i*P	**P**	**11 39 06.3**	**0.0**
	5.7nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**53.91**	**181**	P	**P**	**11 39 06.5**	**+0.3**
	8.0nm,0.7s,mb4.2,baz=343,slow=6.4,SNR=25						
STKA	**Stephens Creek**	**53.91**	**181**	*e*P	**P**	**11 39 06.3**	**0.0**
STKA				*e*PcP	PcP	11 40 04.0	-2.5
FORT	**Forrest**	**54.51**	**195**	*e*P	**P**	**11 39 10.2**	**-0.3**
	21nm,0.4s,mb4.8						
FORT	**Forrest**	**54.51**	**195**	*e*P	**P**	**11 39 10.4**	**-0.1**
	35nm,0.6s,mb4.9						
KURK	**Kurchatov**	**56.31**	**317**	P	**P**	**11 39 23.2**	**+0.1**
	1.4nm,0.5s,mb3.6,baz=96,slow=7.6,SNR=7.5						
KURK	**Kurchatov**	**56.31**	**317**	P	**P**	**11 39 23.2**	**+0.1**
NWAO	**Narrogin (SRO)**	**59.86**	**204**	P	**P**	**11 39 47.5**	**-0.1**
	8.1nm,1.0s,mb4.1,baz=329,slow=22,SNR=5.8						
BVAR	**Borovoye Array**	**61.52**	**319**	P	**P**	**11 39 58.6**	**+0.2**
	2.6nm,0.5s,mb4.0,baz=84,slow=8.0,SNR=12						
ABKAR	**Akbulak array**	**68.38**	**316**	*e*P	**P**	**11 40 42.0**	**-0.3**
	0.4nm,0.5s,mb3.4						
AKTK	**Aktyubinsk**	**69.40**	**317**	P	**P**	**11 40 48.0**	**-0.6**
AKTO	**Aktyubinsk**	**69.40**	**317**	P	**P**	**11 40 48.0**	**-0.6**
	1.2nm,0.6s,mb3.8,baz=101,slow=6.8,SNR=6.8						
SPITS	**Spitsbergen Ar**	**75.02**	**350**	P	**P**	**11 41 22.2**	**+1.2**
	0.4nm,0.4s,mb3.5,baz=102,slow=7.8,SNR=6.1						
YKA	**Yellowknife Ar**	**76.36**	**28**	P	**P**	**11 41 29.5**	**+0.7**
	0.6nm,0.4s,mb3.7,baz=292,slow=5.8,SNR=18						
ARCES	**ARCESS Array B**	**77.99**	**341**	P	**P**	**11 41 38.2**	**+0.6**
	4.3nm,0.7s,mb4.3,baz=75,slow=8.4,SNR=18						
ARCES	**ARCESS Array B**	**77.99**	**341**	P	**P**	**11 41 38.2**	**+0.6**
FINES	**FINESS Array B**	**82.16**	**334**	P	**P**	**11 41 59.5**	**-0.4**
	1.8nm,0.4s,mb4.3,baz=67,slow=5.0,SNR=9.4						
NVAR	**Mina Array Bea**	**83.54**	**51**	P	**P**	**11 42 09.4**	**+2.0**
	1.6nm,0.6s,mb4.0,baz=310,slow=5.2,SNR=7.6						
FFC	**Flin Flon**	**85.81**	**32**	*e*P	**P**	**11 42 19.5**	**+1.2**
	11nm,1.5s,mb4.5						
YMR	**Madison River**	**85.86**	**43**	*e*P	**P**	**11 42 17.0**	**-1.8**
	9.1nm,0.7s,mb4.7						
AKASG	**Malin Array Be**	**86.39**	**324**	P	**P**	**11 42 20.0**	**-1.2**
	0.3nm,0.3s,mb3.5,baz=106,slow=20,SNR=4.0						
HFS	**Hagfors**	**87.74**	**337**	P	**P**	**11 42 25.7**	**-1.6**
	0.7nm,0.4s,mb3.9,baz=96,slow=6.7,SNR=4.7						
NOA	**NORSAR Array B**	**87.97**	**338**	P	**P**	**11 42 27.1**	**-1.4**
	0.1nm,0.3s,mb3.1,baz=66,slow=5.3,SNR=2.1						
BRTR	**Keskin Array B**	**89.16**	**313**	P	**P**	**11 42 33.8**	**-0.6**
	1.0nm,0.8s,mb3.7,baz=72,slow=5.3,SNR=6.1						
TXAR	**Lajitas Array**	**98.50**	**54**	P	Pdif	11 43 18.0	+1.2
	0.4nm,1.0s,baz=334,slow=10.0,SNR=2.7						
TORD	**Torodi Ar. Bea**	**127.54**	**308**	PKP	PKPdf	11 48 41.2	-1.1
	0.4nm,0.6s,baz=356,slow=3.9,SNR=3.8						
LPAZ	**La Paz**	**150.89**	**83**	PKPbc	PKPbc	11 49 32.3	+2.3
	2.1nm,0.6s,baz=271,slow=3.4,SNR=11						

*TIF **21** 11:41:33.3, 42°.69N×45°.25E, h10km*
*ISCJB **21** 11:41:35.7±0.8, 42°.53N±0°.03×45°.33E±0°.06, h7km±6km, Error ellipse: s-maj=8.0km s-min=4.0km az=164.9*
*CSEM **21** 11:41:36.3±0.4, 42°.51N×45°.25E, h8km, mb3.9, Error ellipse: s-maj=7.9km s-min=4.0km az=81.0*
*MOS **21** 11:41:36.7±0.5, 42°.50N×45°.13E, h6km, mb3.9/1, Error ellipse: s-maj=18.2km s-min=6.8km az=118.0*

ISC 21 11:41:36.3±0.8, 42°.49N±0°.03×45°.30E±0°.07, h12km±5km, n37, σ0º95/74, 2C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.68**	**328**	*e*PG	**Pg**	**11 41 49.2**	**-0.3**
SNJR				*e*S	**Sg**	**11 41 59.9**	**+1.5**
SNJR	**Sundja**	**0.68**	**328**	*e*Pg	**Pg**	**11 41 49.2**	**-0.3**
SNJR				*e*Sg	**Sg**	**11 41 59.9**	**+1.5**
VLKR	**Vladikavkaz**	**0.72**	**321**	*e*PG	**Pg**	**11 41 49.8**	**-0.5**
VLKR				*i* S	**Sg**	**11 42 00.4**	**+0.7**
VLKR	**Vladikavkaz**	**0.72**	**321**	*e*Pg	**Pg**	**11 41 49.8**	**-0.5**
VLKR				*i* Sg	**Sg**	**11 42 00.4**	**+0.7**
LACR	**Lac**	**0.81**	**295**	⇑*i*PG	**Pg**	**11 41 50.5**	**-1.5**
LACR				*i* S	**Sg**	**11 42 01.9**	**-0.7**
LACR	**Lac**	**0.81**	**295**	*i* Pg	**Pg**	**11 41 50.5**	**-1.5**
LACR				*i* Sg	**Sg**	**11 42 01.9**	**-0.7**
TBLG	**Delisi**	**0.87**	**209**	*e*PG	**Pg**	**11 41 53.2**	**+0.2**
TBLG				*e*S	**Sg**	**11 42 08.4**	**+4.1**
TBLG	**Delisi**	**0.87**	**209**	P	**Pg**	**11 41 53.3**	**+0.3**
TBLG				S	**Sg**	**11 42 08.4**	**+4.1**
TBLG	**Delisi**	**0.87**	**209**	P	**Pg**	**11 41 53.3**	**+0.3**
TBLG				S	**Sg**	**11 42 08.4**	**+4.1**
MTA	**Mtatsminda**	**0.88**	**205**	P	**Pg**	**11 41 53.6**	**+0.3**
MTA				S	**Sg**	**11 42 08.9**	**+4.1**
MTA	**Mtatsminda**	**0.88**	**205**	P	**Pg**	**11 41 53.6**	**+0.3**
MTA				S	**Sg**	**11 42 08.9**	**+4.1**
GOR	**Gori**	**1.02**	**241**	P	**Pb**	**11 41 55.6**	**-0.3**
GOR				S	**Sb**	**11 42 10.9**	**+1.8**
GOR	**Gori**	**1.02**	**241**	P	**Pb**	**11 41 55.6**	**-0.3**
GOR				S	**Sb**	**11 42 10.9**	**+1.7**
ARNR	**Ardon**	**1.02**	**313**	*e*PG	**Pg**	**11 41 55.0**	**-1.0**
ARNR				*e*S	**Sg**	**11 42 09.7**	**+0.3**
ARNR	**Ardon**	**1.02**	**313**	*e*Pg	**Pg**	**11 41 55.0**	**-1.0**
ARNR				*e*Sg	**Sg**	**11 42 09.7**	**+0.3**
KEH	**Kehvi**	**1.03**	**260**	P	**Pb**	**11 41 54.8**	**-1.2**
KEH				S	**Sb**	**11 42 09.6**	**+0.1**
KEH	**Kehvi**	**1.03**	**260**	P	**Pb**	**11 41 54.8**	**-1.2**
KEH				S	**Sb**	**11 42 09.6**	**+0.1**
DGRG	**David-gareji**	**1.04**	**177**	P	**Pb**	**11 41 57.7**	**+1.4**
DGRG				S	**Sb**	**11 42 14.9**	**+5.1**
DGRG	**David-gareji**	**1.04**	**177**	P	**Pb**	**11 41 57.7**	**+1.4**
DGRG				S	**Sb**	**11 42 14.9**	**+5.1**
BTKR	**Batakoyurt**	**1.04**	**328**	*e*PG	**Pg**	**11 41 55.8**	**-0.6**
BTKR				*e*S	**Sg**	**11 42 11.1**	**+1.2**
BTKR	**Batakoyurt**	**1.04**	**328**	*e*Pg	**Pg**	**11 41 55.8**	**-0.6**
BTKR				*e*Sg	**Sg**	**11 42 11.1**	**+1.2**
ZEI	**Tsey**	**1.07**	**286**	*e*PG	**Pg**	**11 41 55.4**	**-1.5**
ZEI				*e*S	**Sb**	**11 42 09.5**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,31nm,0.3s						
ZEI				smax			
	comp=N,57nm,0.2s						
ZEI				smax			
	comp=E,49nm,0.3s						
ZEI	**Tsey**	**1.07**	**286**	*e*Pg	**Pg**	**11 41 55.4**	**-1.5**
	comp=E,31nm,0.3s						
ZEI				*e*Sg	**Sb**	**11 42 09.5**	**-1.2**
	comp=E,57nm,0.2s						
KORR	**Kora**	**1.08**	**304**	⇑*i*PG	**Pg**	**11 41 57.3**	**+0.1**
KORR				*i* S	**Sg**	**11 42 12.6**	**+1.3**
KORR	**Kora**	**1.08**	**304**	*i* Pg	**Pg**	**11 41 57.3**	**+0.1**
KORR				*i* Sg	**Sg**	**11 42 12.6**	**+1.3**
KMSR	**Komsomolskaya**	**1.15**	**320**	*e*PG	**Pg**	**11 41 57.3**	**-1.1**
KMSR				*e*S	**Sg**	**11 42 13.8**	**+0.4**
KMSR	**Komsomolskaya**	**1.15**	**320**	*e*Pg	**Pg**	**11 41 57.3**	**-1.1**
KMSR				*e*Sg	**Sg**	**11 42 13.8**	**+0.4**
TRKR	**Terskaya**	**1.30**	**342**	*e*PG	**Pg**	**11 42 00.7**	**-0.6**
TRKR				*e*S	**Sg**	**11 42 19.5**	**+1.3**
TRKR	**Terskaya**	**1.30**	**342**	*e*Pg	**Pg**	**11 42 00.7**	**-0.6**
TRKR				*e*Sg	**Sg**	**11 42 19.5**	**+1.3**
DIGR	**Digorskoe uzhe**	**1.33**	**288**	*e*PG	**Pn**	**11 41 59.4**	**-1.3**
DIGR				*e*S	**Sb**	**11 42 17.5**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.33**	**288**	*e*Pg	**Pn**	**11 41 59.4**	**-1.3**
DIGR				*e*Sg	**Sb**	**11 42 17.5**	**-0.7**
LSNR	**Lesken**	**1.34**	**306**	*e*PG	**Pn**	**11 42 00.2**	**-0.7**
LSNR				*e*S	**Sb**	**11 42 18.7**	**+0.2**
LSNR	**Lesken**	**1.34**	**306**	*e*Pg	**Pn**	**11 42 00.2**	**-0.7**
LSNR				*e*Sg	**Sb**	**11 42 18.7**	**+0.2**
ONI	**Oni**	**1.37**	**275**	P	**Pn**	**11 42 01.6**	**+0.4**
ONI				S	**Sn**	**11 42 20.6**	**+1.4**
ONI	**Oni**	**1.37**	**275**	P	**Pn**	**11 42 01.6**	**+0.4**
ONI				S	**Sn**	**11 42 20.6**	**+1.3**
PRTR	**Priterechnaya**	**1.46**	**330**	*e*PG	**Pn**	**11 42 03.0**	**+0.4**
PRTR				*e*S	**Sg**	**11 42 23.5**	**+0.1**
PRTR	**Priterechnaya**	**1.46**	**330**	*e*Pg	**Pn**	**11 42 03.0**	**+0.4**
PRTR				*e*Sg	**Sg**	**11 42 23.5**	**+0.1**

*ISCJB **21** 11:43:17.4±0.3, 15°.89N±0°.02×61°.07W±0°.04, h87km±2km, mb4.4/34, Error ellipse: s-maj=6.9km s-min=2.3km az=159.9*
*TRN **21** 11:43:17.3, 15°.90N×60°.97W, h71km, MD4.1, M3.8(FDF)*
TRN Felt II Martinique, St. Lucia.Guadeloup e III.
*NEIC **21** 11:43:17.5, 15°.89N×60°.97W, h69km, mb4.6/21, MD4.1(TRN), MD4.9(RSPR), After TRN.*
NEIC Felt at Capesterre and Petit-Bourg. Felt [II] on Martinique and Saint Lucia.
*IDC **21** 11:43:17.5±0.8, 15°.82N×61°.11W, h76km±8km, mb3.8/13, mb1 4.1/16, mb1mx3.9/27, mbtmp3.9/16, MS3.0/3, Ms1 3.0/3, ms1mx2.7/25, Error ellipse: s-maj=15.0km s-min=10.3km az=98.0*
*RSPR **21** 11:43:20.5, 16°.00N×61°.29W, h129km±11km, MD4.9/13, MD4.9/13*

ISC 21 11:43:18.4±0.3, 15°.90N±0°.02×61°.05W±0°.04, h79km±2km, n319, σ0º65/361, mb4.4/34, 111C-106D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFG	**Saint Francois**	**0.38**	**338**	⇓*i*P	**Pn**	**11 43 30.9**	**-0.2**
DEG	**La Desirade**	**0.41**	**358**	⇑*i*P	**Pn**	**11 43 30.5**	**-0.9**
PSDMZ	**Portsmouth**	**0.51**	**231**	⇓*i*P	**Pn**	**11 43 31.7**	**-0.5**
TBG	**Guadaloupe-3**	**0.58**	**265**	⇓*i*P	**Pn**	**11 43 32.6**	**-0.2**
BCG	**Bois Riant Cap**	**0.58**	**288**	⇓*i*P	**Pn**	**11 43 32.8**	**0.0**
PHG	**Guadaloupe-2**	**0.58**	**281**	⇓*i*P	**Pn**	**11 43 32.8**	**0.0**
DLPL	**La Plaine**	**0.60**	**199**	⇓*i*P	**Pn**	**11 43 32.6**	**-0.4**
DLPL				*e*S	**Sn**	**11 43 43.4**	**-0.4**
SCG	**Saint Claude**	**0.62**	**282**	⇓*i*P	**Pn**	**11 43 33.1**	**-0.1**
HMG	**Houelmont**	**0.63**	**277**	⇓*i*P	**Pn**	**11 43 33.2**	**-0.1**
SEG	**Port Louis**	**0.67**	**319**	*e*P	**Pn**	**11 43 33.8**	**+0.1**
MDN	**Morne-Daniel**	**0.67**	**210**	⇑*i*P	**Pn**	**11 43 34.7**	**+1.0**
MDN				*e*S	**Sn**	**11 43 46.8**	**+1.9**
MDN	**Morne-Daniel**	**0.67**	**210**	⇑*i*P	**Pn**	**11 43 34.7**	**+1.0**
MDN				*e*S	**Sn**	**11 43 46.6**	**+1.7**
DBCT	**Belle View Cho**	**0.69**	**205**	*e*P	**Pn**	**11 43 34.8**	**+0.8**
DBCT				*e*S	**Sn**	**11 43 44.1**	**-1.2**
DBCT	**Belle View Cho**	**0.69**	**205**	*e*P	**Pn**	**11 43 34.8**	**+0.8**
DBCT				*e*S	**Sn**	**11 43 44.1**	**-1.2**
DSTT	**Stowe**	**0.70**	**201**	⇓*i*P	**Pn**	**11 43 34.4**	**+0.4**
DSTT				*e*S	**Sn**	**11 43 45.6**	**+0.1**
DSTT	**Stowe**	**0.70**	**201**	⇓*i*P	**Pn**	**11 43 34.4**	**+0.4**
DSTT				*e*S	**Sn**	**11 43 45.6**	**+0.1**
DPMT	**Pointe Michel**	**0.71**	**207**	*e*P	**Pn**	**11 43 35.1**	**+1.0**
DPMT				*e*S	**Sn**	**11 43 46.1**	**+0.3**
DPMT	**Pointe Michel**	**0.71**	**207**	*e*P	**Pn**	**11 43 35.1**	**+1.0**
DPMT				*e*S	**Sn**	**11 43 46.1**	**+0.3**
DFBT	**Forest Bistro**	**0.72**	**204**	*e*P	**Pn**	**11 43 35.1**	**+0.8**
DFBT				*e*S	**Sn**	**11 43 46.3**	**+0.4**
DFBT	**Forest Bistro**	**0.72**	**204**	*e*P	**Pn**	**11 43 35.1**	**+0.8**
DFBT				*e*S	**Sn**	**11 43 46.3**	**+0.4**
LZG	**Guadaloupe-1**	**0.74**	**289**	⇓*i*P	**Pn**	**11 43 34.3**	**-0.2**
DSHT	**Scott's Head**	**0.75**	**205**	*e*P	**Pn**	**11 43 35.5**	**+0.9**
DSHT				*e*S	**Sn**	**11 43 47.2**	**+0.7**
DSHT	**Scott's Head**	**0.75**	**205**	*e*P	**Pn**	**11 43 35.5**	**+0.9**
DSHT				*e*S	**Sn**	**11 43 47.2**	**+0.7**
FDF	**Fort de France**	**1.17**	**185**	*e*Pn	**Pn**	**11 43 38.6**	**-0.9**
FDF				*e*Sn	**Sn**	**11 43 53.6**	**-1.6**
FDF	**Fort de France**	**1.17**	**185**	⇑*e*P	**Pn**	**11 43 38.7**	**-0.8**
MVM	**Montagne Vaucl**	**1.35**	**174**	⇓*e*P	**Pn**	**11 43 41.3**	**-0.5**
BIM	**Bigot**	**1.38**	**181**	*e*P	**Pn**	**11 43 41.7**	**-0.5**
ANWB	**Willy Bob**	**1.89**	**338**	*e*Pn	**Pn**	**11 43 47.7**	**-1.2**
ANWB				*e*Sn	**Sn**	**11 44 10.2**	**-1.9**
SLB	**Belfond**	**2.06**	**180**	⇑*e*P	**Pn**	**11 43 51.0**	**-0.1**
SLB	**Belfond**	**2.06**	**180**	⇑*e*P	**Pn**	**11 43 51.0**	**-0.1**
SKI	**Saint Kitts**	**2.16**	**311**	⇑*i*P	**Pn**	**11 43 53.0**	**+0.5**
SKI				*e*S	**Sn**	**11 44 20.0**	**+1.6**
SKI	**Saint Kitts**	**2.16**	**311**	⇑*i*P	**Pn**	**11 43 53.0**	**+0.5**
SKI				*e*S	**Sn**	**11 44 20.0**	**+1.6**
MCLT	**Moule a Chique**	**2.18**	**177**	⇑*i*P	**Pn**	**11 43 52.5**	**-0.2**
MCLT				*e*S	**Sn**	**11 44 18.5**	**-0.5**
MCLT	**Moule a Chique**	**2.18**	**177**	⇑*i*P	**Pn**	**11 43 52.5**	**-0.2**
MCLT				*e*S	**Sn**	**11 44 18.5**	**-0.5**
SEUS	**St. Eustatius**	**2.44**	**311**	⇓*i*P	**Pn**	**11 43 56.6**	**+0.4**
SEUS	**St. Eustatius**	**2.44**	**311**	*e*S	**Sn**	**11 44 25.5**	**+0.5**
SSV	**Crater Summit**	**2.56**	**183**	⇑*e*P	**Pn**	**11 43 57.7**	**-0.2**
SSV				*e*S	**Sn**	**11 44 30.4**	**+2.2**
SSV	**Crater Summit**	**2.56**	**183**	⇑*e*P	**Pn**	**11 43 57.7**	**-0.2**
SSV				*e*S	**Sn**	**11 44 29.1**	**+0.9**
SVV	**Soufriere Volc**	**2.57**	**184**	*e*P	**Pn**	**11 43 58.0**	**0.0**
SVV				*e*S	**Sn**	**11 44 27.8**	**-0.6**
SVV	**Soufriere Volc**	**2.57**	**184**	*e*P	**Pn**	**11 43 58.0**	**0.0**
SVV				*e*S	**Sn**	**11 44 27.8**	**-0.6**
BHS	**Barnard House**	**2.59**	**182**	⇑*i*P	**Pn**	**11 43 58.5**	**+0.2**
BHS				*e*S	**Sn**	**11 44 28.8**	**0.0**
BHS	**Barnard House**	**2.59**	**182**	⇑*i*P	**Pn**	**11 43 58.5**	**+0.2**
BHS				*e*S	**Sn**	**11 44 28.8**	**0.0**
SVB	**Belmont**	**2.62**	**184**	⇑*i*P	**Pn**	**11 43 58.9**	**+0.2**
SVB				*e*S	**Sn**	**11 44 30.9**	**+1.3**
SVB	**Belmont**	**2.62**	**184**	⇑*i*P	**Pn**	**11 43 58.9**	**+0.2**
SVB				*e*S	**Sn**	**11 44 28.5**	**-1.0**
SABA	**Saba**	**2.71**	**309**	⇓*i*P	**Pn**	**11 44 00.1**	**+0.2**
FCV	**Fort Charlotte**	**2.73**	**184**	*e*P	**Pn**	**11 43 59.8**	**-0.4**
FCV				*e*S	**Sn**	**11 44 32.6**	**+0.3**
FCV	**Fort Charlotte**	**2.73**	**184**	*e*P	**Pn**	**11 43 59.8**	**-0.4**
FCV				*e*S	**Sn**	**11 44 32.6**	**+0.3**
SMRT	**St. Maarten**	**2.89**	**318**	⇑*e*P	**Pn**	**11 44 01.4**	**-0.9**
SMRT	**St. Maarten**	**2.89**	**318**	*e*S	**Sn**	**11 44 33.4**	**-2.6**
BBGH	**Gun Hill**	**3.10**	**152**	*e*Pn	**Pn**	**11 44 05.0**	**-0.2**
GRSS	**Sisters**	**3.62**	**189**	*e*P	**Pn**	**11 44 12.0**	**-0.3**
GRSS				*e*S	**Sn**	**11 44 54.0**	**+0.1**
GRSS	**Sisters**	**3.62**	**189**	*e*P	**Pn**	**11 44 12.0**	**-0.3**
GRSS				*e*S	**Sn**	**11 44 54.0**	**+0.1**
GRIC	**Isle de Caille**	**3.63**	**188**	*e*P	**Pn**	**11 44 12.6**	**+0.2**
GRIC				*e*S	**Sn**	**11 44 53.1**	**-1.0**
GRHS	**Sauteurs**	**3.70**	**189**	*e*P	**Pn**	**11 44 13.2**	**-0.1**
GRHS				*e*S	**Sn**	**11 44 55.6**	**-0.2**
GRHS	**Sauteurs**	**3.70**	**189**	*e*P	**Pn**	**11 44 13.2**	**-0.1**
GRHS				*e*S	**Sn**	**11 44 55.6**	**-0.2**
GRW	**Mount Saint Ca**	**3.77**	**189**	*e*P

125A	Gardner Draw,	42.78	301	⇓P	P	11 51 07.5 -0.9
	baz=43					
325A	Bean Ranch, Si	42.79	299	⇑P	P	11 51 08.0 -0.5
	baz=43,SNR=14					
V26A	Tequesquite Ra	42.85	306	⇑P	P	11 51 08.1 -0.8
	baz=43					
Z25A	Roswell	42.97	302	⇑P	P	11 51 10.0 +0.1
	baz=43					
Y25A	Mesa, Roswell	43.09	303	⇑P	P	11 51 10.4 -0.5
	baz=43					
AGMN	Agassiz Refuge	43.10	326	eP	P	11 51 09.9 -0.8
	8.7nm,0.3s,mb5.0					
MNTX	Cornudas Mount	43.20	300	eP	P	11 51 10.8 -1.0
	3.3nm,0.4s,mb4.4					
W25A	X Bar L Ranch,	43.23	305	⇑P	P	11 51 11.5 -0.4
	baz=43					
324A	Moseley Ranch,	43.23	299	⇑P	P	11 51 11.3 -0.7
	baz=43,SNR=10					
224A	Corundas Mount	43.38	300	⇑P	P	11 51 12.8 -0.5
	baz=43,SNR=6.7					
124A	Stringfield Ra	43.45	301	⇓P	P	11 51 13.6 -0.2
	baz=44					
Y24A	Capitan	43.70	303	⇓P	P	11 51 15.7 -0.1
	baz=44,SNR=6.6					
W24A	Lazy 6 Ranch,	43.98	304	⇓P	P	11 51 17.9 -0.1
	baz=44,SNR=5.4					
Y23A	Lovelace Mesa,	44.20	302	⇓P	P	11 51 19.7 -0.1
	baz=44,SNR=9.1					
Z23A	Rita Site, Whi	44.20	302	⇑P	P	11 51 19.6 -0.2
	baz=44					
W23A	Werner Place,	44.56	304	⇓P	P	11 51 22.5 -0.2
	baz=45					
222A	Williams Famil	44.71	300	⇓P	P	11 51 23.7 -0.1
	baz=45					
BNM	Barren Site	44.71	303	eP	P	11 51 23.8 -0.1
BNM				epP	pP	11 51 43.0 -0.1
122A	Conniff Cattle	44.73	301	⇑P	P	11 51 24.6 +0.5
	baz=45,SNR=5.3					
ANMO	Albuquerque	44.75	304	eP	P	11 51 23.5 -0.7
	33nm,2.7s,mb4.6					
V22A	San Miguel Ran	45.34	305	⇑P	P	11 51 29.4 +0.6
	baz=45					
121A	Cookes Peak, D	45.35	300	⇓P	P	11 51 29.3 +0.4
	baz=45,SNR=6.6					
Z21A	St. Cloud Mine	45.40	301	⇑P	P	11 51 29.7 +0.4
	baz=45					
Y21A	Point of Rocks	45.53	302	⇑P	P	11 51 30.9 +0.5
	baz=46,SNR=5.9					
T22A	Edith	45.60	306	⇑P	P	11 51 31.3 +0.4
	baz=46					
X21A	Alamocita Cree	45.71	303	⇑P	P	11 51 32.3 +0.5
	baz=46					
W21A	San Fidel	45.74	304	⇓P	P	11 51 32.3 +0.3
	baz=46					
320A	Kipp Ranch, An	45.79	298	⇓P	P	11 51 32.8 +0.3
	baz=46					
R22A	Saguache, Gunn	45.82	308	⇓P	P	11 51 33.1 +0.5
	baz=46					
PHWY	Pilot Hill	45.82	313	eP	P	11 51 32.1 -0.4
	5.5nm,1.0s,mb4.2					
220A	Playas Peak, P	45.87	299	⇓P	P	11 51 33.3 +0.2
	baz=46,SNR=5.2					
V21A	Milan	45.89	305	⇓P	P	11 51 33.6 +0.5
	baz=46					
120A	U Bar Ranch, L	46.06	300	⇑P	P	11 51 35.0 +0.5
	baz=46					
Y20A	Horse Springs,	46.09	302	⇑P	P	11 51 35.4 +0.6
	baz=46					
Q22A	Crested Butte,	46.11	309	⇑P	P	11 51 34.8 -0.1
	baz=46					
Z20A	Nine Sixteen R	46.12	301	⇑P	P	11 51 35.4 +0.4
	baz=46					
SMCO	Snowmass	46.25	309	eP	P	11 51 35.7 -0.2
	14nm,1.9s,mb4.4					
SMCO				eScP	ScP	11 56 56.9 +0.2
X20A	Quemado	46.31	303	⇑P	P	11 51 36.8 +0.3
	baz=46					
319A	Douglas	46.43	298	⇓P	P	11 51 37.7 +0.2
	baz=46,SNR=6.0					
219A	White Tail Can	46.50	299	⇓P	P	11 51 38.5 +0.5
	baz=46					
Y19A	Nutrioso	46.81	302	⇓P	P	11 51 41.0 +0.5
	baz=47					
X19A	St. Johns	46.93	302	⇓P	P	11 51 41.7 +0.4
	baz=47					
318A	Bisbee	47.04	298	⇓P	P	11 51 42.5 +0.3
	baz=47,SNR=6.1					
218A	Dragoon	47.16	299	⇓P	P	11 51 43.5 +0.4
	baz=47					
118A	Homack Ranch,	47.19	300	⇑P	P	11 51 43.6 +0.2
	baz=47,SNR=5.8					
T19A	Beclabito	47.21	306	⇑P	P	11 51 43.4 0.0
	baz=47					
Y18A	Canyon Day Jun	47.42	301	⇓P	P	11 51 45.7 +0.5
	baz=47					
X18A	Snowflake	47.48	302	⇑P	P	11 51 45.9 +0.3
	baz=48					
S19A	Harvey Farm, M	47.51	307	⇑P	P	11 51 45.9 +0.1
	baz=48					
N20A	Spence Gulch,	47.68	311	⇑P	P	11 51 47.6 +0.5
	baz=48					
Z17A	San Carlos Hig	47.70	301	⇑P	P	11 51 47.9 +0.5
	baz=48					
CFAA	Coronel Fontan	47.73	188	P	P	11 51 44.9 -2.6
	0.7nm,0.7s,mb3.6,baz=8.6,slow=7.6,SNR=9.2					
217A	Green Valley	47.78	299	⇑P	P	11 51 48.0 +0.1
	baz=48					
117A	Oracle	47.82	300	⇑P	P	11 51 48.4 +0.1
	baz=48,SNR=5.2					
TUC	Tucson	47.82	299	eP	P	11 51 48.5 +0.2
	2.4nm,0.8s,mb4.1					
Q19A	Hogan Spring (	47.90	308	⇓P	P	11 51 49.1 +0.2
	baz=48					
T18A	Mexican Hat	47.94	306	⇑P	P	11 51 49.0 -0.2
	baz=48,SNR=6.2					
Y17A	Roosevelt	48.07	301	⇓P	P	11 51 50.7 +0.5
	baz=48					
L20A	Wamsutter	48.09	313	⇓P	P	11 51 50.4 +0.2
	baz=48					
S18A	Hurst Farm, Bl	48.16	307	⇓P	P	11 51 51.3 +0.5
	baz=48					
R18A	Canyonlands Na	48.24	308	⇓P	P	11 51 51.2 -0.3
	baz=48					
K20A	Yellowstone Ra	48.30	313	⇓P	P	11 51 51.5 -0.3
	baz=48					
N19A	John Jarvie Ra	48.36	311	⇑P	P	11 51 52.0 -0.3
	baz=48					
V17A	Tonalea, Kykot	48.36	304	⇑P	P	11 51 52.4 0.0
	baz=48,SNR=7.1					
Y16A	Circle Bar Ran	48.62	301	⇑P	P	11 51 54.3 -0.2
	baz=49					
T17A	Navajo Res., N	48.64	305	⇓P	P	11 51 54.8 +0.3
	baz=49					
X16A	Lo Mia Camp, P	48.68	302	⇓P	P	11 51 55.2 +0.4
	baz=49					
K19A	Absolon Red Bu	48.70	313	⇓P	P	11 51 54.4 -0.5
	baz=49,SNR=6.0					
WUAZ	Wupatki	48.81	303	⇑P	P	11 51 56.1 +0.3
	baz=49					
P18A	Preston Nutter	48.81	309	⇓P	P	11 51 55.9 +0.1
	baz=49					
L19A	Farson	48.84	312	⇓P	P	11 51 56.3 +0.3
	baz=49					
R17A	Hanksville Air	48.87	307	⇓P	P	11 51 56.1 -0.2
	baz=49					
P17A	Butcher Ranch,	49.14	309	⇓P	P	11 51 58.6 +0.2
	baz=49					
M18A	Lyman	49.16	311	⇓P	P	11 51 58.6 +0.2
	baz=49					
BW06	Boulder Array	49.19	313	⇑P	P	11 51 58.4 -0.2
	baz=49,SNR=7.5					
BW06	Boulder Array	49.19	313	eP	P	11 51 58.3 -0.2
	6.3nm,1.0s,mb4.5					
PDAR	Pinedale Array	49.19	313	P	P	11 51 58.4 -0.2
	5.0nm,0.7s,mb4.6,baz=108,slow=9.5,SNR=25					
T16A	Glen Canyon Da	49.19	305	⇑P	P	11 51 58.7 0.0
	baz=49					
L18A	Fontenelle, Gr	49.27	312	⇓P	P	11 51 59.7 +0.4
	baz=49					
O17A	Robinson Place	49.32	310	⇓P	P	11 51 59.9 +0.3
	baz=49,SNR=6.9					
X15A	Humboldt	49.34	302	⇑P	P	11 52 00.4 +0.5
	baz=49					
Y15A	Casa Rosa Ranc	49.34	301	⇓P	P	11 51 60.0 +0.1
	baz=49					
R16A	Teasdale	49.44	307	⇑P	P	11 52 00.9 +0.3
	baz=49					
K18A	Toltan Ranch,	49.49	313	⇓P	P	11 52 01.6 +0.7
	baz=50					
M17A	Scullys Gap (B	49.60	311	⇓P	P	11 52 02.2 +0.4
	baz=50					
J18A	Kendall Valley	49.64	314	⇑P	P	11 52 02.3 +0.2
	baz=50					
I18A	Diamond G Ranc	49.65	314	⇓P	P	11 52 02.5 +0.4
	baz=50					
U15A	North Rim	49.70	304	⇓P	P	11 52 03.0 +0.4
	baz=50					
P16A	Fountain Green	49.87	309	⇓P	P	11 52 04.3 +0.5
	baz=50					
X14A	Yava	49.87	302	⇓P	P	11 52 04.3 +0.3
	baz=50					
T15A	Red Dirt Ranch	49.88	305	⇓P	P	11 52 04.3 +0.3
	baz=50,SNR=5.0					
O16A	Springville	49.89	309	⇑P	P	11 52 04.6 +0.6
	baz=50					
N16A	Rees Ranch, Co	50.01	310	⇓P	P	11 52 05.3 +0.4
	baz=50					
K17A	Gardner Place,	50.14	313	⇑P	P	11 52 06.0 +0.2
	baz=50					
J17A	Brown Place, J	50.17	314	⇑P	P	11 52 06.4 +0.3
	baz=50,SNR=6.1					
M16A	Huntsville	50.26	311	⇓P	P	11 52 06.5 -0.2
	baz=50					
F18A	Big Timber	50.31	317	⇓P	P	11 52 07.5 +0.4
	baz=50,SNR=6.3					
P15A	Leamington	50.32	308	⇓P	P	11 52 07.6 +0.3
	baz=50					
TPAW	Teton Pass	50.37	314	eP	P	11 52 07.5 -0.1
	4.0nm,0.8s,mb4.4					
U14A	Mt Trumbull	50.41	304	⇓P	P	11 52 08.6 +0.6
	baz=50					
T14A	Hurricane	50.44	305	⇓P	P	11 52 08.6 +0.4
	baz=50					
Y13A	Salome	50.55	301	⇓P	P	11 52 09.4 +0.3
	baz=51					
RRI2	Red Ridge	50.59	313	eP	P	11 52 09.2 -0.1
	5.5nm,1.0s,mb4.5					
E18A	Harlowton	50.67	318	⇑P	P	11 52 10.1 +0.3
	baz=51					
W13A	Hualapai Mount	50.77	302	⇑P	P	11 52 10.9 +0.2
	baz=51					
J16A	Bone	50.77	313	⇓P	P	11 52 10.7 +0.1
	baz=51					
D18A	Linhart Farms,	50.82	319	⇓P	P	11 52 11.7 +0.8
	baz=51					
I16A	Newdale	50.86	314	⇑P	P	11 52 11.6 +0.3
	baz=51					
DUG	Dugway	50.86	309	⇓P	P	11 52 11.8 +0.5
	baz=51					
DUG	Dugway	50.86	309	eP	P	11 52 11.4 +0.1
	3.7nm,0.9s,mb4.4					
DUG				epP	pP	11 52 31.9 +0.9
M15A	Larsen Ranch,	50.89	311	⇑P	P	11 52 12.0 +0.5
	baz=51					
P14A	Drum Mountains	50.92	308	⇑P	P	11 52 12.5 +0.7
	baz=51					
F17A	Fitzpatrick Pl	50.93	317	⇑P	P	11 52 12.4 +0.6
	baz=51					
H16A	Russell Place,	50.94	315	⇑P	P	11 52 12.5 +0.6
	baz=51					
L15A	Malad City	50.98	311	⇑P	P	11 52 12.0 -0.2
	baz=51					
U13A	Pakoon Wash	51.03	304	⇓P	P	11 52 13.0 +0.4
	baz=51					
T13A	Saint George	51.08	305	⇑P	P	11 52 13.5 +0.5
	baz=51					
EGMT	Eagleton	51.09	320	⇑P	P	11 52 13.7 +0.8
	baz=51					
EGMT	Eagleton	51.09	320	eP	P	11 52 13.6 +0.7
	8.2nm,0.8s,mb4.8					
QLMT	Earthquake Lak	51.10	315	eP	P	11 52 13.4 -0.3
S13A	Holt Ranch, En	51.14	306	⇓P	P	11 52 13.7 +0.3
	baz=51					
B18A	Beardsley Farm	51.24	320	⇑P	P	11 52 14.6 +0.6
	baz=51					
E17A	Martinsdale	51.25	317	⇓P	P	11 52 14.7 +0.6
	baz=51					
N14A	Grayback Hills	51.29	310	⇑P	P	11 52 14.4 -0.1
	baz=51					
A18A	Metzger Ranch,	51.48	321	⇑P	P	11 52 15.9 +0.1
	baz=52					
BOZ	Bozeman (W)	51.49	316	⇑P	P	11 52 16.4 +0.5
	baz=52					
BOZ	Bozeman (W)	51.49	316	eP	P	11 52 15.2 -0.7
	37nm,3.0s					
Q13A	Wheeler Ranch,	51.52	307	⇑P	P	11 52 16.3 +0.1
	baz=52,SNR=5.9					
M14A	Sheep Mountain	51.56	311	⇓P	P	11 52 16.3 -0.3
	baz=52					
C17A	Wharram Farm,	51.59	319	⇑P	P	11 52 16.9 +0.3
	baz=52					
L14A	Malta	51.61	311	⇑P	P	11 52 17.0 +0.1
	baz=52					
P13A	Bates Ranch, G	51.61	308	⇑P	P	11 52 17.0 +0.1
	baz=52,SNR=5.4					
B17A	L&G Farms, Che	51.84	320	⇑P	P	11 52 19.1 +0.6
	baz=52					
R12A	Pony Springs,	51.85	306	⇓P	P	11 52 18.8 0.0
	baz=52					
BC3	Big Chuckw Mtn	51.88	300	⇓P	P	11 52 19.2 +0.2
	baz=52					
D16A	Dana Ranch, Ca	51.88	318	⇑P	P	11 52 19.5 +0.6
	baz=52					
G15A	Dillon	51.92	315	⇓P	P	11 52 19.8 +0.6
	baz=52					
A17A	Triple J Farms	52.02	320	⇑P	P	11 52 19.7 0.0
	baz=52					
F15A	Butte	52.13	316	⇓P	P	11 52 21.1 +0.5
	baz=52					
C16A	Fuhringer Ranc	52.27	319	⇑P	P	11 52 21.3 -0.3
	baz=52					
D15A	Lincoln	52.52	318	⇑P	P	11 52 23.7 +0.1
	baz=52					
A16A	West Butte Ran	52.57	320	⇑P	P	11 52 24.1 +0.2
	baz=53,SNR=7.2					
J13A	Cove Ranch, Pi	52.61	313	⇑P	P	11 52 24.7 +0.4
	baz=53					
S11A	Rachel	52.63	305	⇑P	P	11 52 24.8 +0.2
	baz=53					
N12A	Clover Valley,	52.66	309	⇓P	P	11 52 24.7 0.0
	baz=53					
M12A	Wells	52.69	310	⇑P	P	11 52 25.2 +0.3
	baz=53					
I13A	Wildhorse Cree	52.70	313	⇓P	P	11 52 25.3 +0.4
	baz=53					
C15A	Salmond Ranch,	52.81	318	⇓P	P	11 52 25.8 +0.1
	baz=53,SNR=7.6					
HLID	Hailey	52.82	313	eP	P	11 52 25.7 -0.1
	46nm,2.7s,mb5.0					
B15A	Bradely Ranch,	52.95	319	⇑P	P	11 52 26.4 -0.3
	baz=53					
H13A	Challis	52.96	314	⇓P	P	11 52 26.8 -0.1
	baz=53					
O11A	Cowboy Ranch,	52.98	308	⇓P	P	11 52 27.3 +0.2
	baz=53,SNR=5.4					
R10A	Warm Springs	53.16	306	⇑P	P	11 52 29.0 +0.5
	baz=53					
J12A	Stokes Ranch,	53.23	312	⇑P	P	11 52 28.9 0.0
	baz=53					
A15A	Johnson Ranch,	53.28	320	⇑P	P	11 52 29.2 0.0
	baz=53,SNR=8.9					
M11A	Holland Ranch,	53.34	310	⇑P	P	11 52 30.0 +0.3
	baz=53					
S10A	Tonopah Range,	53.34	306	⇑P	P	11 52 30.3 +0.6
	baz=53					
E13A	Victor	53.43	316	⇑P	P	11 52 30.5 +0.2
	baz=53					
L11A	Cat Creek Ranc	53.46	311	⇓P	P	11 52 30.4 -0.2
	baz=54					
A14A	Double T Ranch	53.71	320	⇑P	P	11 52 32.0 -0.2
	baz=54					
D13A	Huson	53.79	317	⇑P	P	11 52 32.9 0.0
	baz=54					
DAC	Darwin (Calif)	53.91	303	eP	P	11 52 34.4 +0.4
	3.7nm,1.0s,mb4.4					
DAC				ePcP	PcP	11 53 34.5 -4.0
F12A	Elk City	53.96	315	⇓P	P	11 52 34.1 -0.1
	baz=54					
L10A	Juniper Basin	53.96	311	⇑P	P	11 52 34.1 -0.2
	baz=54					
H11A	Donnelly	54.21	314	⇑P	P	11 52 36.0 0.0
	baz=54					
K10A	MacKenzie Ranc	54.39	311	⇑P	P	11 52 37.6 +0.2
	baz=54					
F11A	Grangeville	54.60	315	⇑P	P	11 52 38.3 -0.4
	baz=55					
H10A	Noah's Angus R	54.70	314	⇑P	P	11 52 38.9 -0.6
	baz=55					
NVAR	Mina Array Bea	54.74	306	P	P	11 52 40.2 +0.2
	1.9nm,0.7s,mb4.2,baz=98,slow=6.4,SNR=7.0					
NVAR	Mina Array Bea	54.74	306	P	P	11 52 40.2 +0.2
E11A	Bogner Ranch,	54.75	316	⇑P	P	11 52 39.8 -0.1
	baz=55					
D11A	Klaveano Farm,	55.02	317	⇓P	P	11 52 41.6 -0.2
	baz=55					
EDM	Edmonton	55.16	325	eP	P	11 52 41.8 -0.9
H09A	Durkee	55.35	314	⇓P	P	11 52 43.7 -0.5
	baz=55					
G09A	Cove	55.56	314	⇓P	P	11 52 45.1 -0.6
	baz=56					
J08A	Circle Bar Ran	55.66	312	⇓P	P	11 52 46.2 -0.3
	baz=56					
DBIC	Dimbokro	55.72	93	P	P	11 52 47.6 +0.3
	2.8nm,0.6s,mb4.5,baz=240,slow=7.7,SNR=4.7					
NEW	Newport	55.85	318	eP	P	11 52 47.4 -0.4
	7.6nm,0.8s,mb4.8					
H08A	Prairie City	56.02	313	⇑P	P	11 52 48.9 -0.1
	baz=56					
I07A	Izee	56.53	313	⇑P	P	11 52 52.0 -0.7
	baz=56					
PLCA	Paso Flores	57.03	189	P	P	11 52 54.9 -1.2
	3.7nm,0.6s,mb4.6,baz=2.0,slow=9.7,SNR=7.2					
YKA	Yellowknife Ar	59.57	334	P	P	11 53 12.4 -1.1
	2.7nm,0.6s,mb4.5,baz=105,slow=7.5,SNR=55					
YKA	Yellowknife Ar	59.57	334	P	P	11 53 12.4 -1.1
TORD	Torodi Ar. Bea	60.60	84	P	P	11 53 21.0 -0.5
	0.5nm,0.7s,mb3.6,baz=283,slow=5.8,SNR=2.6					
DLBC	Dease Lake	65.60	327	eP	P	11 53 53.9 +0.1
NOA	NORSAR Array B	67.63	30	P	P	11 54 07.7 +1.0
	0.3nm,0.5s,mb3.4,baz=248,slow=9.7,SNR=2.4					
GERES	GERESS Array B	68.18	43	P	P	11 54 10.0 -0.3
	0.2nm,0.2s,mb3.5,baz=255,slow=8.2,SNR=3.5					
MENT	Mentasta	72.65	332	eP	P	11 54 37.7 +0.4
WMQ	Urumqi	114.05	24	eP	Pdif	11 57 56.4 -0.8
CN2	Changchun	120.29	355	ePKP	PKPdf	12 02 07.3 +6.6
CN2				PP	PP	12 03 36.3 +10
HHC	Hu-ho-hao-te	123.13	7	ePKP	PKPdf	12 02 02.4 -3.9
HHC				PP	PP	12 03 46.4 +1.1
HHC				PKS		12 05 37.6
HHC				AMB	AMB	
	comp=Z,90nm,8.6s					
HHC				LR	LR	
	comp=N,120nm,21.3s					
HHC				LR	LR	
	comp=E,91nm,20.2s					
HHC				LR	LR	
	comp=Z,77nm,22.0s					
NJ2	Nanjing	132.32	0	ePKP	PKPdf	12 02 28.4 +4.3
GYA	Guiyang	136.23	16	ePdif	Pdif	11 59 34.8 -1.0
GYA				PKP	PKPdf	12 02 30.3 -1.2
GYA				sPKP		12 03 02.4
GYA				PP	PP	12 05 14.3 +3.5
GYA				AMB	AMB	
	comp=Z,90nm,7.8s					
KMI	Kunming	136.27	21	Pdif	Pdif	11 59 34.1 -1.9
KMI				PKP	PKPdf	12 02 30.3 -1.3
KMI				sPKP		12 03 01.1
KMI				PP	PP	12 05 13.8 +2.7
ASAR	Alice Springs	163.96	239	PKPab	PKPab	12 04 05.2 -1.4
	comp=Z,0.6nm,0.6s,baz=116,slow=4.1,SNR=9.1					

ISCJB ***21*** *12:43:22.9±0.4, 33°.33N±0°.02×35°.39E±0°.03, h8km±3km,*
Error ellipse: s-maj=4.7km s-min=2.7km az=25.1
HLW ***21*** *12:43:23.0, 33°.52N×35°.28E, h16km±23km, Ml3.3*
CSEM ***21*** *12:43:23.2±0.1, 33°.35N×35°.40E, h5km, ML3.6, Error*
ellipse: s-maj=2.7km s-min=1.6km az=112.0
GII ***21*** *12:43:23.5±0.3, 33°.27N×35°.43E, h1km, Md3.1/8, Mm2.6/9*
NEIC ***21*** *12:43:23.5, 33°.27N×35°.43E, h1km, MD3.1(GII),*
MD3.6(GRAL), After GII.
NSSC ***21*** *12:43:24, 33°.29N×35°.54E, h3km±2km*
GRAL ***21*** *12:43:24.4±0.3, 33°.33N×35°.45E, h1km±4km, MD3.6*

ISC 21 12:43:23.5±0.4, 33°.34N±0°.02×35°.41E±0°.03, h6km±3km, n70, ∘0°66/102, 4C-8D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.17	335	eP	Pg	12 43 27.7	+0.8
MATL	Matirih	0.17	335	eP	Pg	12 43 27.7	+0.8
KSDI	Kefar Szold	0.25	125	⇓Pg	Pg	12 43 28.3	-0.2
KSDI	Kefar Szold	0.25	125	⇓Pg	Pg	12 43 28.3	-0.2
HRI	Mount Hermon	0.28	105	Pg	Pg	12 43 28.8	-0.2
HRI	Mount Hermon	0.28	105	Pg	Pg	12 43 28.8	-0.2
HNTI	Hanita	0.32	218	Pg	Pg	12 43 30.1	+0.3
HNTI				Sg	Sg	12 43 35.1	+1.1
HNTI	Hanita	0.32	218	Pg	Pg	12 43 30.1	+0.3
HNTI				Sg	Sg	12 43 35.1	+1.1
RCY	Rachaya	0.37	67	eP	Pg	12 43 31.0	+0.3
RCY				eS	Sg	12 43 35.8	+0.2
RCY	Rachaya	0.37	67	eP	Pg	12 43 31.0	+0.3
RCY				eS	Sg	12 43 35.8	+0.2
KSHT	Keshet	0.49	137	Pg	Pg	12 43 33.1	+0.2
KSHT	Keshet	0.49	137	Pg	Pg	12 43 33.1	+0.2
BEYL	Beyrouth	0.54	7	eP	Pg	12 43 34.1	+0.2
BEYL	Beyrouth	0.54	7	eP	Pg	12 43 34.1	+0.2
BHL	Bhannes	0.60	20	eP	Pg	12 43 35.1	0.0
BHL				eS	Sg	12 43 42.9	0.0
BHL	Bhannes	0.60	20	eP	Pg	12 43 35.1	0.0
BHL				eS	Sg	12 43 42.9	0.0
QASN	Qassioun	0.75	75	⇑P	Pg	12 43 38.0	+0.1
QASN				⇑S	Sg	12 43 48.0	+0.4
QASN	Qassioun	0.75	75	⇑iP	Pg	12 43 38.3	+0.4
QASN				⇑iS	Sg	12 43 48.8	+1.2
OFRI	'Ofer	0.80	207	⇑Pg	Pg	12 43 38.8	-0.1
OFRI	'Ofer	0.80	207	⇑Pg	Pg	12 43 38.8	-0.1
TCHB	Talchebab	0.81	145	⇓P	Pg	12 43 39.0	-0.1
TCHB				⇑S	Sg	12 43 49.0	-0.7
TCHB	Talchebab	0.81	145	⇓iP	Pg	12 43 39.3	+0.2
TCHB				⇑iS	Sg	12 43 49.5	-0.2
TOTH	TOTAH	0.85	88	⇓P	Pg	12 43 39.0	-0.9
TOTH				⇑S	Sg	12 43 51.0	+0.1
TOTH	TOTAH	0.85	88	⇓iP	Pg	12 43 39.9	0.0
TOTH				⇑iS	Sg	12 43 51.0	+0.1
MMLI	Mount Malkishu	0.90	179	⇑Pg	Pg	12 43 40.1	-0.6
MMLI				Sg	Sg	12 43 52.7	+0.3
MMLI	Mount Malkishu	0.90	179	⇑Pg	Pg	12 43 40.1	-0.6
MMLI				Sg	Sg	12 43 52.7	+0.3
HWQ	Hawqa	1.04	25	eP	Pg	12 43 43.5	0.0
HWQ				eS	Sg	12 43 56.5	-0.4
HWQ	Hawqa	1.04	25	eP	Pg	12 43 43.4	0.0
HWQ				eS	Sg	12 43 56.5	-0.4
HWQ	Hawqa	1.04	25	eP	Pg	12 43 43.4	0.0
HWQ				eS	Sg	12 43 56.5	-0.4
HMDT	Nahal Hemdat	1.09	175	Pg	Pg	12 43 43.5	-0.8
HMDT				Sg	Sg	12 43 58.8	+0.4
HMDT	Nahal Hemdat	1.09	175	Pg	Pg	12 43 43.5	-0.8
HMDT				Sg	Sg	12 43 58.8	+0.4
MARH	Ras Al Marh	1.13	52	⇑P	Pg	12 43 45.0	-0.1
MARH				⇑S	Sg	12 44 00.0	+0.3
MARH	Ras Al Marh	1.13	52	⇑iP	Pg	12 43 45.0	-0.1
MARH				⇑iS	Sg	12 44 00.8	+1.1
SLTI	Sal'it	1.14	196	Pg	Pg	12 43 44.9	-0.4
SLTI				Sg	Sg	12 44 00.2	+

RTMI	**Retamim**	**2.36 195**	Pn	**Pn**	**12 44 03.5**	**+0.8**
RTMI	**Retamim**	**2.36 195**	Pn	**Pn**	**12 44 03.5**	**+0.8**
LFK	**Lefkose**	**2.48 322**	Pn	**Pn**	**12 44 02.8**	**-1.7**
LFK	**Lefkose**	**2.48 322**	Pn	**Pn**	**12 44 02.8**	**-1.7**
PRNI	**Paran**	**3.00 187**	Pn	**Pn**	**12 44 11.9**	**+0.4**
PRNI	**Paran**	**3.00 187**	Pn	**Pn**	**12 44 11.9**	**+0.4**
COBT	**Iskenderun**	**3.25 12**	*i* P	**Pn**	**12 44 14.9**	**-0.1**
COBT	**Iskenderun**	**3.25 12**	*i* P	**Pn**	**12 44 14.9**	**-0.1**
AMAG	**Maghara**	**3.27 215**	P	**Pn**	**12 44 14.4**	**-0.9**
	baz=213					
AMAG			S	**Sn**	**12 44 51.0**	**-3.6**
	baz=213					
AMAG	**Maghara**	**3.27 215**	P	**Pn**	**12 44 14.4**	**-1.0**
AMAG			S	**Sn**	**12 44 51.0**	**-3.6**
HNKL	**Nakhl**	**3.61 200**	P	**Pn**	**12 44 20.4**	**+0.5**
	baz=198					
HNKL	**Nakhl**	**3.61 200**	P	**Pn**	**12 44 20.4**	**+0.4**
GULE	**Gulek**	**3.97 353**	*i* P	**Pn**	**12 44 24.8**	**-0.1**
GULE	**Gulek**	**3.97 353**	*i* P	**Pn**	**12 44 24.8**	**-0.1**
SUZ		**4.12 213**	P	**Pn**	**12 44 26.2**	**-0.8**
	baz=211					
SUZ		**4.12 213**	P	**Pn**	**12 44 26.2**	**-0.8**
HBST	**Basata**	**4.15 188**	AMP		12 45 00.0	
	comp=N,80μm,0.5s,logA/T=5.2,baz=187					
HDHB	**Dhahab**	**4.65 189**	P	**Pn**	**12 44 34.5**	**+0.3**
	baz=187					
HDHB	**Dhahab**	**4.65 189**	P	**Pn**	**12 44 34.5**	**+0.2**
HKAT	**Jabal Katrina**	**4.95 195**	P	**Pn**	**12 44 38.3**	**-0.1**
	baz=193					
HKAT	**Jabal Katrina**	**4.95 195**	P	**Pn**	**12 44 38.3**	**-0.1**

DDA 21 12:44:22.9, 39°.09N×27°.59E, h7km±3km, Md2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.28**	**140**	*i* P	Pg	12 44 27.6	-0.7
AKHS				*i* S	Sg	12 44 33.2	+1.3
DURS	**Dursunbey**	**0.86**	**53**	*i* P	Pg	12 44 39.4	0.0
DURS				*i* S	Sg	12 44 53.6	+3.1

*ISCJB **21** 13:00:33.2±1.5, 20°.5S±0°.2×178°.4W±0°.2, h595km±30km, mb3.7/5, Error ellipse: s-maj=36.8km s-min=20.3km az=142.8*
*NEIC **21** 13:00:34.3±1.3, 20°.43S×178°.34W, h608km±19km, mb4.0/2, Error ellipse: s-maj=32.8km s-min=16.6km az=143.0*
*IDC **21** 13:00:34.4±2.2, 20°.46S×178°.32W, h605km±29km, mb2.9/3, mb1 3.3/5, mb1mx3.0/16, mbtmp3.2/5, Error ellipse: s-maj=39.1km s-min=20.0km az=143.0*

ISC 21 13:00:33.8±1.5, 20°.5S±0°.2×178°.4W±0°.2, h588km±28km, n11, σ0°80/8, mb3.7/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.10**	**45**	P	**P**	**13 02 43.6**	**0.0**
	1.6nm,0.3s,baz=186,slow=9.2,SNR=1.8						
URZ	**Urewera**	**18.12**	**191**	P	**P**	**13 04 10.6**	**-0.3**
	2.1nm,0.3s,baz=232,slow=1.8,SNR=16						
URZ	**Urewera**	**18.12**	**191**	*eP*	**P**	**13 04 10.6**	**-0.2**
CTAO	**Charters Tower**	**33.13**	**264**	*eP*	**P**	**13 06 23.3**	**+0.3**
	2.2nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**37.47**	**244**	P	**P**	**13 06 59.5**	**+0.9**
	0.7nm,0.6s,mb3.4,baz=78,slow=9.3,SNR=2.8						
ASAR	**Alice Springs**	**44.17**	**257**	P	**P**	**13 07 51.9**	**0.0**
	1.6nm,0.5s,mb3.8,baz=90,slow=7.7,SNR=31						
ASAR				PcP	PcP	13 09 22.9	-0.7
	0.4nm,0.5s,baz=103,slow=3.8,SNR=6.2						
WRAB	**Tennant Creek**	**44.24**	**262**	*eP*	**P**	**13 07 51.2**	**-1.1**
	1.1nm,0.3s,mb3.9						
TXAR	**Lajitas Array**	**87.36**	**57**	P	**P**	**13 12 19.6**	**+0.1**
	0.5nm,0.8s,mb3.3,baz=205,slow=5.5,SNR=6.1						
AKASG	**Malin Array Be**	**142.85**	**331**	PKhKP		13 18 55.3	
	1.0nm,0.5s,baz=44,slow=4.5,SNR=6.0						
BRTR	**Keskin Array B**	**146.58**	**312**	PKPbc	PKPbc	13 19 07.6	-2.8
	0.7nm,0.6s,baz=121,slow=5.6,SNR=3.6						
GERES	**GERESS Array B**	**150.11**	**344**	PKPbc	PKPbc	13 19 16.9	-1.9
	0.3nm,0.4s,baz=91,slow=5.2,SNR=3.9						

GUC 21 13:10:24.3±0.4, 21°.94S×68°.82W, h113km±5km, MD3.6, ML3.8, 1C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**1.03**	**230**	⇓*i* P	Pn	13 10 46.7	+0.7
PECH				*i* S	Sn	13 11 03.8	+1.4
PECH				AML	AML	13 11 05.3	
	comp=E,6μm,0.2s						
PB01	**Plate Boundary**	**1.09**	**325**	⇑*i* P	Pn	13 10 47.0	+0.3
PB01				*i* S	Sn	13 11 04.4	+0.8
PB01				AML	AML	13 11 06.2	
	comp=E,3μm,0.6s						
MECH	**Mejillones**	**1.90**	**232**	⇓*i* P	Pn	13 10 56.9	+0.7
MECH				*i* S	Sn	13 11 21.6	+1.1
MECH				AML	AML	13 11 37.5	
	comp=N,633nm,0.4s						
CEN1	**Los Morros**	**1.92**	**221**	AML	AML	13 11 25.4	
	comp=N,335nm,0.6s						
ANCH	**Antofagasta**	**2.27**	**220**	*eP*	Pn	13 11 01.5	+0.6
ANCH				AML	AML	13 11 31.2	
	comp=E,439nm,0.2s						
PSGC	**Pisagua**	**2.63**	**332**	AML	AML	13 11 40.1	
	comp=N,218nm,0.6s						
MNMC	**Miæe Miæ**	**2.89**	**345**	AML	AML	13 11 46.0	
	comp=E,684nm,0.2s						

*NNC **21** 13:17:19.0±26.0, 37°.51N×71°.83E, h167km±514km, mb2.7, mpv3.8, Error ellipse: s-maj=285.7km s-min=122.3km az=3.0*

ISC 21 13:17:20.2±2.9, 37°.6N±0°.2×72°.0E±0°.2, h208km±50km, n10, σ0°51/13, 2C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.65**	**57**	Pn	**Pn**	**13 18 11.1**	**-6.8**
KSH				Sn	**Sn**	**13 18 50.5**	**-13**
KSH				smax			
	comp=N,110nm,0.3s						
KSH				smax			
	comp=E,100nm,0.5s						
AML	**Almayashu**	**4.70**	**15**	P	**Pn**	**13 18 31.4**	**+0.5**
	SNR=28						
UCH	**Uchtor**	**5.00**	**22**	P	**Pn**	**13 18 34.8**	**+0.1**
	SNR=11						
KZA	**Kyzart**	**5.12**	**28**	P	**Pn**	**13 18 35.7**	**-0.5**
	SNR=12						
AAK	**Ala-Archa**	**5.37**	**20**	P	**Pn**	**13 18 40.0**	**+0.5**
	SNR=5.9						
KK09	**Karatay Array**	**5.63**	**349**	⇑P	**Pn**	**13 18 43.4**	**+0.6**
	comp=E,5.5nm,0.6s,baz=157,slow=11						
KK09				⇓S	**Sn**	**13 19 47.6**	**-0.6**
	comp=E,6.3nm,0.8s,baz=176,slow=24						
ULHL	**Ulahol**	**5.66**	**34**	P	**Pn**	**13 18 42.3**	**-0.8**
	SNR=7.5						
TKM2	**Tokmak 2**	**5.98**	**26**	⇓P	**Pn**	**13 18 46.7**	**-0.4**
	comp=E,4.9nm,0.5s						
TKM2				⇑S	**Sn**	**13 19 56.6**	**+0.5**
	comp=E,2.1nm,0.9s						
TKM2	**Tokmak 2**	**5.98**	**26**	P	**Pn**	**13 18 47.0**	**-0.1**
	SNR=11						
AB31	**Akbulak array**	**14.55**	**327**	P	**Pn**	**13 20 36.4**	**0.0**
	comp=E,0.3nm,0.6s,baz=157,slow=10,SNR=7.7						

GUC 21 13:23:40.4±0.5, 30°.92S×71°.72W, h18km±3km, MD3.5, ML2.8, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.55**	**55**	⇑*i* P	Pg	13 23 51.0	-0.3
OVCH				*i* S	Sg	13 23 59.0	+0.3
OVCH				AML	AML	13 23 59.2	
	comp=N,1μm,0.3s						
TLL	**Tololo Astrono**	**1.09**	**47**	⇑*i* P	Pb	13 24 00.1	-0.7
TLL				*i* S	Sb	13 24 14.8	+0.1
JACH	**Jahuel**	**2.00**	**152**	*i* S	Sn	13 24 39.9	+1.9
LCO	**Las Campanas**	**2.10**	**25**	⇓*i* P	Pn	13 24 14.5	-0.2
LCO				*i* S	Sn	13 24 41.9	+1.5
LCO				AML	AML	13 24 46.1	
	comp=E,42nm,0.4s						
ROCH	**El Roble**	**2.13**	**164**	*i* S	Sn	13 24 44.0	+2.8
PEL	**Peldehue**	**2.39**	**159**	*eP*	Pn	13 24 19.6	+1.0
PEL				⇑*i* S	Sn	13 24 49.9	+2.4
PEL				AML	AML	13 24 52.9	
	comp=E,214nm,0.3s						
TACH	**Talagante**	**2.81**	**166**	*eP*	Pn	13 24 25.6	+1.2
TACH				*i* S	Sn	13 24 59.6	+1.8

*NEIC **21** 13:31:10.3, 16°.30N×98°.26W, h10km, MD3.6(MEX), After MEX.*

MEX 21 13:31:10.3±0.4, 16°.30N×98°.26W, h10km±2km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.16**	**53**	*eP*	Pg	13 31 13.3	-0.6
PNIG				*i* S	Sg	13 31 16.1	-0.2
PNIG	**Pinotepa**	**0.16**	**53**	*eP*	Pg	13 31 13.3	-0.6
PNIG				*i* S	Sg	13 31 16.1	-0.2
UTMO	**Huajuapan**	**1.58**	**16**	*eP*	Pn	13 31 35.4	-3.0
UTMO				*i* S	Sn	13 31 54.2	-4.8
VHO	**Vista Hermosa**	**1.65**	**62**	*i* P	Pn	13 31 36.1	-3.3
VHO				*i* S	Sn	13 31 55.7	-4.9
VHO	**Vista Hermosa**	**1.65**	**62**	*i* P	Pn	13 31 36.1	-3.3
VHO				*i* S	Sn	13 31 55.7	-4.9
TPIG	**Tehuac#an**	**2.28**	**22**	*i* P	Pn	13 31 45.5	-2.4
TPIG				*i* S	Sn	13 32 12.4	-3.7
PLIG	**Platanillo**	**2.40**	**330**	*i* P	Pn	13 31 46.7	-2.9
PLIG				*i* S	Sn	13 32 14.7	-4.4
PLIG	**Platanillo**	**2.40**	**330**	*i* P	Pn	13 31 46.7	-2.9
PLIG				*i* S	Sn	13 32 14.7	-4.4
CMIG	**Matias Romero**	**3.33**	**76**	*eP*	Pn	13 31 59.3	-3.1
CMIG				*i* S	Sn	13 32 38.6	-3.4
CMIG	**Matias Romero**	**3.33**	**76**	*eP*	Pn	13 31 59.3	-3.1
CMIG				*i* S	Sn	13 32 38.6	-3.4

*BJI **21** 13:35:59.6, 17°.88S×178°.36W, h605km, mB4.9/11, mb4.4/16*
*NEIC **21** 13:36:01.0±0.6, 17°.96S×178°.45W, h610km±6km, mb4.3/32, Error ellipse: s-maj=15.3km s-min=6.3km az=149.0*
*IDC **21** 13:36:01.0±1.6, 18°.04S×178°.46W, h608km±19km, mb3.6/13, mb1 3.9/14, mb1mx3.8/17, mbtmp3.7/14, Error ellipse: s-maj=21.2km s-min=10.9km az=145.0*
*ISCJB **21** 13:36:01.6±0.8, 17°.8S±0°.1×178°.65W±0°.06, h620km±10km, mb4.3/52, Error ellipse: s-maj=16.3km s-min=6.3km az=159.0*

ISC 21 13:36:02.2±0.8, 17°.80S±0°.10×178°.62W±0°.06, h612km±10km, n386, σ0°53/306, mb4.3/52, 122C-127D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.18**	**271**	*eP*	**P**	**13 37 24.6**	**+1.2**
AFI	**Afiamalu**	**7.63**	**61**	P	**P**	**13 37 55.7**	**-2.9**
	6.5nm,0.3s,baz=300,slow=2.5,SNR=12						
AFI	**Afiamalu**	**7.63**	**61**	*eP*	**P**	**13 37 55.5**	**-3.1**
DZM	**Mont Dzumac**	**14.68**	**251**	P	**P**	**13 39 06.5**	**-0.4**
	14nm,0.6s						
URZ	**Urewera**	**20.73**	**190**	P	**P**	**13 39 58.0**	**-3.7**
	6.6nm,0.9s,baz=164,slow=20,SNR=3.0						
EIDS	**Eidsvold**	**29.12**	**250**	*eP*	**P**	**13 41 15.2**	**-0.6**
EIDS	**Eidsvold**	**29.12**	**250**	*eP*	**P**	**13 41 15.2**	**-0.6**
	3.9nm,0.8s,mb4.1						
RMQ	**Roma**	**31.36**	**248**	*eP*	**P**	**13 41 35.2**	**+0.2**
	18nm,0.8s,mb4.7						
CTA	**Charters Tower**	**33.27**	**260**	*eP*	**P**	**13 41 51.3**	**+0.2**
	18nm,0.7s,mb4.8						
CTAO	**Charters Tower**	**33.27**	**260**	*eP*	**P**	**13 41 51.3**	**+0.1**
	16nm,0.6s,mb4.8						
CNB	**Canberra Magne**	**33.34**	**232**	*eP*	**P**	**13 41 51.6**	**+0.1**
CMSA	**Cobar Meteorol**	**35.03**	**240**	*eP*	**P**	**13 42 05.3**	**-0.4**
QLP	**Quilpie**	**35.39**	**249**	*eP*	**P**	**13 42 08.3**	**-0.4**
COEN	**Coen**	**36.91**	**270**	*eP*	**P**	**13 42 22.4**	**+1.1**
COEN	**Coen**	**36.91**	**270**	*eP*	**P**	**13 42 22.5**	**+1.2**
	311nm,0.6s						
TOO	**Toolangi**	**37.09**	**231**	*eP*	**P**	**13 42 22.2**	**-0.2**
STKA	**Stephens Creek**	**38.51**	**241**	*eP*	**P**	**13 42 34.0**	**0.0**
	9.6nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**13 42 34.2**	**+0.2**
	11nm,0.5s,mb4.7,baz=89,slow=9.4,SNR=36						
STKA	**Stephens Creek**	**38.51**	**241**	*eP*	**P**	**13 42 34.1**	**+0.1**
	3.6nm,0.8s,mb4.0						
BBOO	**Buckleboo**	**43.29**	**241**	*eP*	**P**	**13 43 11.2**	**-0.5**
	11nm,0.4s,mb4.8						
WRAB	**Tennant Creek**	**44.45**	**259**	*eP*	**P**	**13 43 20.2**	**-0.6**
	9.4nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**13 43 22.1**	**-0.1**
	56nm,0.7s,mb5.2,baz=87,slow=8.8,SNR=736						
ASAR				S	**S**	**13 49 14.5**	**-0.8**
	4.1nm,0.8s,baz=90,slow=15,SNR=23						
KAKA	**Kakadu**	**47.39**	**269**	*eP*	**P**	**13 43 42.4**	**-0.7**
	16nm,0.5s,mb4.8						
KAKA	**Kakadu**	**47.39**	**269**	*eP*	**P**	**13 43 42.0**	**-1.0**
	43nm,0.6s,mb5.2						
FORT	**Forest**	**49.88**	**245**	*eP*	**P**	**13 43 59.9**	**-1.3**
	20nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.85**	**260**	P	**P**	**13 44 22.9**	**+0.2**
	1.1nm,0.4s,mb3.5,baz=81,slow=22,SNR=1.8						
MBWA	**Marble Bar**	**57.91**	**256**	*eP**	**P**	**13 44 57.0**	**-0.7**
MJAR	**Matsushiro Arr**	**67.70**	**323**	P	**P**	**13 46 00.5**	**+0.5**
	3.1nm,0.5s,mb4.0,baz=153,slow=6.0,SNR=11						
MAT	**Matsushiro**	**67.70**	**323**	P	**P**	**13 46 00.2**	**+0.2**
PEA0B	**Petropavlovsk-**	**73.52**	**345**	*eP*	**P**	**13 46 34.3**	**+0.6**
PETK	**Petropavlovsk-**	**73.52**	**345**	P	**P**	**13 46 34.0**	**+0.3**
	6.4nm,0.6s,mb4.3,baz=108,slow=7.4,SNR=16						
KSRS	**Korea Array**	**74.49**	**318**	P	**P**	**13 46 41.1**	**+1.5**
	1.2nm,0.7s,mb3.5,baz=133,slow=7.1,SNR=4.7						
MURC	**Murrieta**	**77.69**	**49**	⇑P	**P**	**13 46 57.0**	**-0.2**
	baz=78						
BFSC	**Mount Baldy St**	**77.70**	**48**	⇓P	**P**	**13 46 57.0**	**-0.2**
	baz=78						
NJ2	**Nanjing**	**77.72**	**310**	*eP*	**P**	**13 46 53.1**	**-4.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
EDW2	**Edwards Air Fo**	**77.80**	**47**	⇓P	**P**	**13 46 57.7**	**-0.1**
	baz=78						
ISA	**Isabella**	**77.88**	**46**	⇓P	**P**	**13 46 58.2**	**0.0**
	baz=78						
ISA	**Isabella**	**77.88**	**46**	*eP*	**P**	**13 46 58.1**	**-0.1**
	comp=Z,10nm,0.9s,mb4.2						
MONP	**Monument Peak**	**77.89**	**50**	⇑P	**P**	**13 46 58.3**	**0.0**
	baz=78						
MDJ	**Mudanjiang**	**77.98**	**325**	P	**P**	**13 47 00.0**	**+1.5**
MDJ				pP	pP	13 49 04.9	-0.6
MDJ				sP	sP	13 50 06.3	-1.3
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,86nm,4.8s						
MPMC	**Manual Prospec**	**78.77**	**46**	⇓P	**P**	**13 47 02.7**	**-0.3**
	baz=79						
BEKR	**Beckwourth**	**78.94**	**42**	⇑P	**P**	**13 47 03.7**	**0.0**
	baz=79						
BC3	**Big Chuckw Mtn**	**78.98**	**49**	⇑P	**P**	**13 47 04.4**	**+0.3**
	baz=79						
WCN	**Washoe City**	**79.01**	**43**	⇓P	**P**	**13 47 04.4**	**+0.3**
	baz=79						
GLA	**Glamis**	**79.13**	**50**	⇑P	**P**	**13 47 05.2**	**+0.3**
	baz=79						
GRAC	**Grapevine Rang**	**79.34**	**46**	⇓P	**P**	**13 47 06.1**	**+0.1**
	baz=80						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**13 47 06.8**	**+0.3**
	comp=Z,5.1nm,0.7s,mb4.0,baz=226,slow=8.5,SNR=20						
Y12C	**Blythe**	**79.70**	**50**	⇑P	**P**	**13 47 08.1**	**+0.3**
	baz=80						
U10A	**Ash Meadows, A**	**79.76**	**47**	⇓P	**P**	**13 47 08.7**	**+0.6**
	baz=80						
113A	**Mohawk Valley,**	**79.78**	**51**	⇑P	**P**	**13 47 08.6**	**+0.3**
	baz=80						
CN2	**Changchun**	**79.81**	**322**	*eP*	**P**	**13 47 09.8**	**+1.6**
CN2				*eS*	S	13 56 24.8	+2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.0						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
Z13A	**Yuma Proving G**	**80.06**	**50**	⇓P	**P**	**13 47 09.9**	**+0.2**
	baz=80						
MOD	**Modoc**	**80.13**	**40**	*eP*	**P**	**13 47 09.9**	**+0.1**
	comp=Z,9.3nm,0.8s,mb4.2						
K05A	**Summer Lake**	**80.24**	**39**	⇓P	**P**	**13 47 10.9**	**+0.5**
	baz=80,SNR=5.4						
S10A	**Tonopah Range,**	**80.35**	**45**	⇓P	**P**	**13 47 10.9**	**-0.2**
	baz=80,SNR=9.5						
X13A	**Yucca**	**80.61**	**49**	⇑P	**P**	**13 47 12.7**	**+0.2**
	baz=81						
H04A	**Detroit Lake**	**80.62**	**37**	⇓P	**P**	**13 47 12.0**	**-0.4**
	baz=81						
Z14A	**Wintersburg**	**80.66**	**51**	⇓P	**P**	**13 47 12.9**	**+0.1**
	baz=81						
R10A	**Warm Springs**	**80.74**	**45**	⇑P	**P**	**13 47 13.5**	**+0.3**
	baz=81,SNR=11						
SVW2	**Sparrevohn**	**80.77**	**11**	*eP*	**P**	**13 47 11.8**	**-0.9**
S11A	**Rachel**	**80.78**	**46**	⇑P	**P**	**13 47 13.5**	**+0.1**
	baz=81						
T11A	**Corn Creek, Al**	**80.94**	**46**	⇓P	**P**	**13 47 14.5**	**+0.3**
	baz=81						
Q10A	**Clear Creek Ra**	**80.95**	**44**	⇓P	**P**	**13 47 14.2**	**0.0**
	baz=81						
U12A	**Valley of Fire**	**81.01**	**47**	⇓P	**P**	**13 47 14.7**	**+0.1**
	baz=81						
V13A	**Grand Canyon W**	**81.11**	**48**	⇑P	**P**	**13 47 15.2**	**0.0**
	baz=81						
216A	**Three Points,**	**81.14**	**52**	⇓P	**P**	**13 47 15.9**	**+0.6**
	baz=81						
SEW	**Seward**	**81.15**	**14**	*eP*	**P**	**13 47 13.7**	**-1.0**
	comp=Z,9.8nm,1.1s,mb4.2						
116A	**Eloy**	**81.21**	**52**	⇓P	**P**	**13 47 16.0**	**+0.3**
	baz=81						
X14A	**Yava**	**81.23**	**50**	⇑P	**P**	**13 47 15.9**	**+0.2**
	baz=81,SNR=7.4						
F04A	**Amboy**	**81.23**	**36**	⇑P	**P**	**13 47 15.4**	**-0.1**
	baz=81						
BMN	**Battle Mountai**	**81.26**	**43**	*eP*	**P**	**13 47 15.7**	**-0.1**
	comp=Z,6.3nm,0.9s,mb4.0						
P10A	**Eureka**	**81.33**	**44**	⇑P	**P**	**13 47 16.4**	**+0.3**
	baz=81						
S12A	**Delamar Landin**	**81.38**	**46**	⇓P	**P**	**13 47 17.2**	**+0.7**
	baz=82						
Y15A	**Casa Rosa Ranc**	**81.39**	**50**	⇓P	**P**	**13 47 16.6**	**0.0**
	baz=82,SNR=6.9						
U13A	**Pakoon Wash**	**81.40**	**47**	⇓P	**P**	**13 47 16.7**	**+0.1**
	baz=82,SNR=8.9						
W14A	**Seligman**	**81.45**	**49**	⇑P	**P**	**13 47 17.1**	**+0.3**
	baz=82,SNR=7.7						
Q11A	**Duckwater**	**81.46**	**45**	⇓P	**P**	**13 47 16.6**	**-0.2**
	baz=82,SNR=6.5						
V14A	**Boquillas Ranc**	**81.63**	**49**	⇑P	**P**	**13 47 18.3**	**+0.5**
	baz=82						
O10A	**Cortez Mining,**	**81.65**	**43**	⇑P	**P**	**13 47 17.8**	**+0.1**
	baz=82						
X15A	**Humboldt**	**81.71**	**50**	⇓P	**P**	**13 47 18.5**	**+0.3**
	baz=82,SNR=5.0						
T13A	**Saint George**	**81.74**	**47**	⇓P	**P**	**13 47 18.8**	**+0.5**
	baz=82						
P11A	**Circle Ranch,**	**81.76**	**44**	⇑P	**P**	**13 47 18.4**	**+0.1**
	baz=82						
G06A	**Carlson Farm,**	**81.84**	**37**	⇓P	**P**	**13 47 18.7**	**+0.1**
	baz=82						
I07A	**Izee**	**81.84**	**39**	⇓P	**P**	**13 47 18.5**	**-0.1**
	baz=82,SNR=8.3						
R12A	**Pony Springs,**	**81.91**	**46**	⇓P	**P**	**13 47 19.3**	**+0.2**
	baz=82						
117A	**Oracle**	**81.94**	**52**	⇑P	**P**	**13 47 19.6**	**+0.2**
	baz=82						
U14A	**Mt Trumbull**	**81.96**	**48**	⇑P	**P**	**13 47 19.8**	**+0.4**
	baz=82,SNR=5.1						
Y16A	**Circle Bar Ran**	**81.99**	**51**	⇓P	**P**	**13 47 20.2**	**+0.5**
	baz=82						
318A	**Bisbee**	**82.00**	**53**	⇑P	**P**	**13 47 20.0**	**+0.3**
	baz=82						
S13A	**Holt Ranch, En**	**82.05**	**47**	⇓P	**P**	**13 47 20.0**	**+0.1**
	baz=82						
J08A	**Circle Bar Ran**	**82.06**	**40**	⇓P	**P**	**13 47 19.6**	**-0.1**
	baz=82,SNR=7.4						
Q12A	**Willow Creek R**	**82.11**	**45**	⇑P	**P**	**13 47 20.2**	**0.0**
	baz=82,SNR=5.7						
O11A	**Cowboy Ranch,**	**82.12**	**44**	⇓P	**P**	**13 47 20.2**	**+0.1**
	baz=82,SNR=8.1						
218A	**Dragoon**	**82.20**	**53**	⇓P	**P**	**13 47 21.0**	**+0.3**
	baz=82						
X16A	**Lo Mia Camp, P**	**82.26**	**50**	⇓P	**P**	**13 47 21.3**	**+0.3**
	baz=82,SNR=8.4						
R13A	**O'Grain Ranch,**	**82.27**	**46**	⇓P	**P**	**13 47 20.9**	**0.0**
	baz=82						
M10A	**I.L. Ranch, Tu**	**82.28**	**42**	⇓P	**P**	**13 47 21.2**	**+0.3**
	baz=82,SNR=7.7						
P12A	**McGill**	**82.28**	**44**	⇓P	**P**	**13 47 21.0**	**0.0**
	baz=82,SNR=5.5						
T14A	**Hurricane**	**82.33**	**47**	⇑P	**P**	**13 47 21.4**	**+0.1**
	baz=82						
Y17A	**Roosevelt**	**82.37**	**51**	⇑P	**P**	**13 47 21.8**	**+0.3**
	baz=82						
V15A	**Kaibab Nationa**	**82.39**	**49**	⇓P	**P**	**13 47 22.0**	**+0.4**
	baz=82						
TTA	**Tatalina**	**82.40**	**10**	*eP*	**P**	**13 47 20.9**	**-0.1**
	comp=Z,16nm,1.1s,mb4.5						
J09A	**Fry Pan Ranch,**	**82.49**	**40**	⇑P	**P**	**13 47 21.9**	**-0.1**
	baz=83,SNR=9.9						
W16A	**Flagstaff**	**82.51**	**50**	⇑P	**P**	**13 47 22.6**	**+0.4**
	baz=83						
319A	**Douglas**	**82.52**	**54**	⇓P	**P**	**13 47 22.9**	**+0.5**
	baz=83						
118A	**Homack Ranch,**	**82.55**	**52**	⇑P	**P**	**13 47 22.9**	**+0.4**
	baz=83						
H08A	**Prairie City**	**82.58**	**39**	⇑P	**P**	**13 47 22.3**	**-0.1**
	baz=83						
U15A	**North Rim**	**82.59**	**48**	⇑P	**P**	**13 47 23.0**	**+0.4**
	baz=83,SNR=15						
L10A	**Juniper Basin**	**82.61**	**42**	⇓P	**P**	**13 47 22.6**	**+0.1**
	baz=83,SNR=5.8						
Q13A	**Wheeler Ranch,**	**82.62**	**45**	⇓P	**P**	**13 47 22.6**	**-0.1**
	baz=83,SNR=11						
X17A	**Forest Lakes**	**82.69**	**51**	⇑P	**P**	**13 47 23.4**	**+0.3**
	baz=83						
M11A	**Holland Ranch,**	**82.

Z20A	Nine Sixteen R	83.80	53	⇑P		P	13 47 29.1 +0.4
	baz=84						
X19A	St. Johns	83.85	51	⇑P		P	13 47 29.4 +0.5
	baz=84						
I11A	Placerville	83.90	40	⇑P		P	13 47 28.7 -0.2
	baz=84,SNR=5.2						
KTH	Kantishna Hill	83.91	12	*e*P		P	13 47 26.8 -1.6
	comp=Z,8.6nm,0.8s,mb4.3						
G10A	Bishop Farm, J	83.93	39	⇓P		P	13 47 28.4 -0.6
	baz=84,SNR=5.2						
CHUM	Lake Minchumin	83.94	11	*e*P		P	13 47 27.1 -1.5
	comp=Z,4.7nm,0.5s,mb4.3						
TRF	Thorofare Moun	83.94	12	*e*P		P	13 47 27.4 -1.2
	comp=Z,23nm,0.7s,mb4.8						
V18A	Ganado	83.95	50	⇓P		P	13 47 29.4 0.0
	baz=84						
R16A	Teasdale	84.03	47	⇓P		P	13 47 30.3 +0.6
	baz=84						
J12A	Stokes Ranch,	84.09	41	⇓P		P	13 47 29.7 -0.1
	baz=84						
121A	Cookes Peak, D	84.16	53	⇓P		P	13 47 31.0 +0.5
	baz=84						
A07A	Ashnola River,	84.19	34	⇓P		P	13 47 30.0 -0.1
	baz=84						
D09A	Jones Farm, Ri	84.20	37	⇓P		P	13 47 30.4 +0.1
	baz=84						
S17A	Black Ridge (B	84.21	48	⇑P		P	13 47 31.2 +0.6
	baz=84						
F10A	Beach Ranch, E	84.23	38	⇓P		P	13 47 30.0 -0.5
	baz=84,SNR=5.9						
H11A	Donnelly	84.28	40	⇑P		P	13 47 31.0 +0.3
	baz=84						
Y20A	Horse Springs,	84.31	52	⇑P		P	13 47 31.4 +0.3
	baz=84						
I12A	Atlanta	84.34	41	⇑P		P	13 47 31.2 +0.2
	baz=84,SNR=5.0						
B08A	Colville Reser	84.36	35	⇓P		P	13 47 30.5 -0.5
	baz=84						
BPAW	Bear Paw Mtn.	84.39	12	*e*P		P	13 47 29.0 -1.8
	comp=Z,2.8nm,0.7s,mb3.9						
K13A	Stover Farm, H	84.42	42	⇓P		P	13 47 31.5 0.0
	baz=84						
MCK	McKinley	84.48	13	*e*P		P	13 47 29.5 -1.7
	comp=Z,13nm,0.9s,mb4.5						
X20A	Quemado	84.49	51	⇑P		P	13 47 32.0 0.0
	baz=85						
G11A	Walters Elk Ra	84.49	39	⇓P		P	13 47 31.6 -0.2
	baz=85						
Z21A	St. Cloud Mine	84.58	53	⇑P		P	13 47 33.4 +0.9
	baz=85						
R17A	Hanksville Air	84.63	47	⇑P		P	13 47 32.9 +0.2
	baz=85						
C09A	Chrisman Ranch	84.64	36	⇓P		P	13 47 32.3 -0.1
	baz=85						
T18A	Mexican Hat	84.64	48	⇑P		P	13 47 32.8 +0.1
	baz=85,SNR=11						
L14A	Malta	84.66	43	⇑P		P	13 47 32.4 -0.2
	baz=85						
HLID	Hailey	84.67	41	⇑P		P	13 47 33.0 +0.4
	baz=85						
HLID	Hailey	84.67	41	*e*P		P	13 47 32.8 +0.1
	comp=Z,4.4nm,0.8s,mb4.1						
J13A	Cove Ranch, Pi	84.74	41	⇓P		P	13 47 33.2 +0.2
	baz=85,SNR=5.7						
W20A	Ramah	84.74	51	⇓P		P	13 47 33.6 +0.4
	baz=85						
GYA	Guiyang	84.81	300	P		P	13 47 33.8 0.0
GYA				pmax		pmax	
	comp=Z,10.0nm,1.0s,mb4.4						
F11A	Grangeville	84.82	38	⇓P		P	13 47 32.1 -1.2
	baz=85						
H12A	Diamond D Ranc	84.91	40	⇓P		P	13 47 33.4 -0.3
	baz=85,SNR=7.9						
G12A	Big Creek, Yel	84.92	39	⇓P		P	13 47 33.7 -0.1
	baz=85						
X21A	Alamocita Cree	84.98	52	⇑P		P	13 47 35.3 +0.9
	baz=85						
MENT	Mentasta	84.99	15	*e*P		P	13 47 33.2 -0.5
E11A	Bogner Ranch,	85.04	38	⇑P		P	13 47 33.4 -1.0
	baz=85						
I13A	Wildhorse Cree	85.04	41	⇑P		P	13 47 34.8 +0.3
	baz=85						
B09A	Rice	85.05	36	⇑P		P	13 47 33.6 -0.7
	baz=85						
SRU	San Rafael	85.08	46	⇓P		P	13 47 34.6 -0.2
	baz=85						
Z22A	Elephant Butte	85.09	53	⇑P		P	13 47 35.4 +0.4
	baz=85						
H13A	Challis	85.28	40	⇓P		P	13 47 35.5 -0.1
	baz=85						
F12A	Elk City	85.29	39	⇑P		P	13 47 35.1 -0.5
	baz=85,SNR=13						
D11A	Klaveano Farm,	85.33	37	⇓P		P	13 47 35.3 -0.4
	baz=86						
Q18A	Rafter H Ranch	85.35	47	⇑P		P	13 47 35.8 -0.3
	baz=85						
Y22A	Socorro	85.38	52	⇑P		P	13 47 36.4 +0.1
	baz=86						
S19A	Harvey Farm, M	85.44	48	⇓P		P	13 47 36.5 0.0
	baz=86						
O17A	Robinson Place	85.44	45	⇑P		P	13 47 36.9 +0.4
	baz=86						
I14A	Mackay	85.46	41	⇓P		P	13 47 36.8 +0.3
	baz=86,SNR=6.3						
324A	Moseley Ranch,	85.49	55	⇓P		P	13 47 36.6 -0.3
	baz=86						
G13A	Cobalt	85.56	40	⇑P		P	13 47 36.8 -0.1
	baz=86						
425A	Indio Mountain	85.62	56	⇓P		P	13 47 37.8 +0.2
	baz=86						
COLA	College	85.71	13	*e*P		P	13 47 35.4 -1.7
	comp=Z,4.4nm,0.5s,mb4.3						
224A	Corundas Mount	85.72	55	⇓P		P	13 47 38.0 +0.1
	baz=86,SNR=7.1						
DLBC	Dease Lake	85.81	23	*e*P		P	13 47 37.8 +0.1
626A	Big Bend Ranch	85.81	57	⇑P		P	13 47 38.7 +0.2
	baz=86,SNR=11						
L16A	Fish Haven	85.83	44	⇑P		P	13 47 37.9 -0.3
	baz=86						
J15A	Blackfoot	85.84	42	⇑P		P	13 47 38.9 +0.6
	baz=86						
H14A	Leadore	85.86	41	⇓P		P	13 47 38.4 +0.1
	baz=86,SNR=5.6						
F13A	Darby	85.86	39	⇑P		P	13 47 37.6 -0.7
	baz=86,SNR=5.1						
325A	Bean Ranch, Si	85.86	55	⇑P		P	13 47 38.7 0.0
	baz=86						
Q19A	Hogan Spring (	85.89	47	⇑P		P	13 47 38.3 -0.3
	baz=86						
124A	Stringfield Ra	86.02	54	⇓P		P	13 47 39.4 0.0
	baz=86						
526A	Mary Lane Ranc	86.05	57	⇓P		P	13 47 39.8 +0.3
	baz=86,SNR=6.1						
B11A	Sandpoint	86.05	36	⇑P		P	13 47 38.9 -0.2
	baz=86						
Y23A	Lovelace Mesa,	86.06	53	⇑P		P	13 47 39.3 -0.3
	baz=86						
TXAR	Lajitas Array	86.10	58	P		P	13 47 40.3 +0.5
	comp=Z,6.7nm,0.8s,mb4.3,baz=220,slow=6.1,SNR=83						
I15A	Monteview	86.10	41	⇓P		P	13 47 40.0 +0.5
	baz=86						
K16A	Soda Springs	86.11	43	⇑P		P	13 47 39.9 +0.3
	baz=86						
C12B	Naegeli Ranch,	86.18	37	⇑P		P	13 47 39.3 -0.4
	baz=86						
MCMT	McKenzie Canyo	86.28	41	*e*P		P	13 47 40.4 +0.1
	comp=Z,2.2nm,0.7s,mb3.9						
BILL	Billbino	86.30	354	*e*P		P	13 47 39.4 -0.5
	comp=Z,2.1nm,0.6s,mb3.9						
H15A	Lima	86.31	41	⇓P		P	13 47 40.5 +0.1
	baz=86,SNR=6.5						
J16A	Bone	86.31	42	⇑P		P	13 47 40.7 +0.2
	baz=86,SNR=12						
426A	McDonald Obser	86.33	56	⇑P		P	13 47 41.0 +0.1
	baz=86,SNR=5.7						
S21A	Coal Bank Pass	86.36	49	⇓P		P	13 47 41.0 +0.1
	baz=86						
627A	Terlingua Ranc	86.37	58	⇑P		P	13 47 41.5 +0.4
	baz=86,SNR=19						
D13A	Huson	86.45	38	⇑P		P	13 47 40.6 -0.4
	baz=87						
M18A	Lyman	86.46	45	⇓P		P	13 47 41.5 +0.3
	baz=87						
527A	Woodward Ranch	86.46	57	⇓P		P	13 47 41.2 -0.3
	baz=86,SNR=7.1						
N18A	Larsen Ranch,	86.52	45	⇑P		P	13 47 41.4 -0.1
	baz=87						
RRI2	Red Ridge	86.53	42	*e*P		P	13 47 41.6 0.0
	comp=Z,13nm,0.8s,mb4.7						
Y24A	Capitan	86.53	53	⇑P		P	13 47 41.5 -0.3
	baz=87,SNR=10						
Q20A	Ridgley Place,	86.56	47	⇑P		P	13 47 42.2 +0.4
	baz=87						
125A	Gardner Draw,	86.62	54	⇓P		P	13 47 42.4 +0.2
	baz=87						
G15A	Dillon	86.67	40	⇑P		P	13 47 42.0 -0.1
	baz=87,SNR=5.7						
I16A	Newdale	86.68	42	⇓P		P	13 47 42.8 +0.6
	baz=87						
E14A	Clinton	86.68	39	⇓P		P	13 47 42.1 0.0
	baz=87						
226A	Malaga, Loving	86.82	55	⇑P		P	13 47 43.0 -0.2
	baz=87						
TPAW	Teton Pass	86.84	42	*e*P		P	13 47 43.1 +0.2
	comp=Z,6.0nm,1.0s,mb4.3						
REDW	Red Top Meadow	86.84	43	*e*P		P	13 47 42.6 -0.4
	comp=Z,9.4nm,1.0s,mb4.5						
427A	Hayter Ranch,	86.90	56	⇓P		P	13 47 43.7 +0.1
	baz=87,SNR=7.5						
J17A	Brown Place, J	86.93	43	⇑P		P	13 47 43.6 +0.2
	baz=87						
F15A	Butte	87.00	40	⇓P		P	13 47 43.3 -0.3
	baz=87						
D14A	Greenough	87.00	38	⇑P		P	13 47 43.5 -0.1
	baz=87						
K18A	Toltan Ranch,	87.03	43	⇑P		P	13 47 44.0 +0.1
	baz=87,SNR=7.1						
IMW	Indian Meadow	87.03	42	*e*P		P	13 47 44.1 +0.2
	comp=Z,9.4nm,1.0s,mb4.5						
DAWY	Dawson	87.04	16	*e*P		P	13 47 42.9 -0.5
HHC	Hu-ho-hao-te	87.05	315	*e*P		P	13 47 45.6 +1.6
HHC				pP		pP	13 49 54.6 -0.4
HHC				sP		sP	13 50 53.8 -2.3
HHC				PP		PP	13 51 23.1 +3.5
HHC				SKS			13 57 15.0
HHC				S		S	13 57 32.1 -0.8
HHC				sS		sS	14 01 24.4 -1.8
HHC				SS		SS	14 03 39.3 +3.3
HHC				pmax		pmax	
	comp=Z,13nm,1.1s,mb4.6						
HHC				pmax		pmax	
	comp=Z,90nm,5.3s						
CHMT	Chamberlain Mo	87.07	39	*e*P		P	13 47 43.3 -0.6
	comp=Z,1.2nm,0.5s,mb3.9						
W24A	Lazy 6 Ranch,	87.08	52	⇑P		P	13 47 43.8 -0.5
	baz=87						
Y25A	Mesa, Roswell	87.10	53	⇓P		P	13 47 44.3 -0.2
	baz=87						
B13A	Whitefish	87.10	37	⇑P		P	13 47 43.6 -0.5
	baz=87						
M19A	Rock Springs	87.10	45	⇓P		P	13 47 44.0 -0.2
	baz=87						
LOHW	Long Hollow	87.12	42	*e*P		P	13 47 44.1 -0.2
	comp=Z,1.8nm,0.5s,mb4.1						
528A	Cox Ranch, San	87.12	57	⇑P		P	13 47 45.1 +0.4
	baz=87						
G16A	Moss Hill, Enn	87.12	41	⇑P		P	13 47 44.4 +0.2
	baz=87						
EGAK	Eagle	87.16	15	*e*P		P	13 47 43.2 -0.8
	comp=Z,4.2nm,0.7s,mb4.3						
C14A	Swan Lake	87.21	38	⇑P		P	13 47 44.4 -0.2
	baz=87						
H16A	Russell Place,	87.22	41	⇓P		P	13 47 45.5 +0.7
	baz=87,SNR=5.2						
L19A	Farson	87.24	44	⇓P		P	13 47 44.8 -0.1
	baz=87						
J18A	Kendall Valley	87.31	43	⇓P		P	13 47 45.1 -0.1
	baz=87,SNR=19						
R22A	Saguache, Gunn	87.34	49	⇓P		P	13 47 45.8 +0.3
	baz=87						
COLD	Coldfoot	87.34	11	*e*P		P	13 47 44.7 -0.1
	comp=Z,9.1nm,1.1s,mb4.4						
Z26A	Caprock	87.39	54	⇓P		P	13 47 45.2 -0.6
	baz=88,SNR=5.1						
BW06	Boulder Array	87.41	44	⇑P		P	13 47 45.4 -0.2
	baz=88						
PDAR	Pinedale Array	87.41	44	P		P	13 47 45.5 -0.2
	comp=Z,4.2nm,0.6s,mb4.3,baz=220,slow=2.9,SNR=26						
N20A	Spence Gulch,	87.41	46	⇓P		P	13 47 46.0 +0.3
	baz=88						
428A	Kincaid Ranch,	87.42	57	⇑P		P	13 47 46.3 +0.3
	baz=88						
BOZ	Bozeman (W)	87.43	40	⇓P		P	13 47 45.4 -0.3
	baz=88						
Q22A	Crested Butte,	87.50	48	⇓P		P	13 47 45.8 -0.4
	baz=88						
H17A	Grant Village	87.50	42	⇓P		P	13 47 47.5 +1.4
	baz=88						
F16A	Kennard Place,	87.50	40	⇓P		P	13 47 46.0 0.0
	baz=88						
D15A	Lincoln	87.57	39	⇑P		P	13 47 46.4 +0.1
	baz=88						
328A	Wristen Ranch,	87.57	56	⇓P		P	13 47 46.6 -0.1
	baz=88						
KMI	Kunming	87.61	297	P		P	13 47 48.6 +1.6
KMI				pmax		pmax	
	comp=Z,6.0nm,0.8s,mb4.4						
I18A	Diamond G Ranc	87.66	43	⇑P		P	13 47 47.1 +0.2
	baz=88						
M20A	Sweetwater, Wa	87.75	45	⇓P		P	13 47 47.2 -0.1
	baz=88						
Y26A	Elida	87.76	53	⇑P		P	13 47 47.2 -0.3
	baz=88						
W25A	X Bar L Ranch,	87.79	52	⇓P		P	13 47 47.1 -0.5
	baz=88						
L20A	Wamsutter	87.87	45	⇑P		P	13 47 47.9 0.0
	baz=88,SNR=7.0						
C15A	Salmond Ranch,	87.88	38	⇑P		P	13 47 47.3 -0.4
	baz=88						
N21A	Black Mountain	87.89	46	⇓P		P	13 47 48.0 0.0
	baz=88,SNR=5.1						
K19A	Absolon Red Bu	87.90	44	⇓P		P	13 47 47.3 -0.6
	baz=88						
A14A	Double T Ranch	88.00	37	⇓P		P	13 47 47.9 -0.3
	baz=88						
X26A	CR and CF Fran	88.02	53	⇓P		P	13 47 48.8 +0.1
	baz=88						
D16A	Dana Ranch, Ca	88.14	39	⇓P		P	13 47 49.0 0.0
	baz=88						
F17A	Fitzpatrick Pl	88.15	40	⇓P		P	13 47 49.3 +0.3
	baz=88						
K20A	Yellowstone Ra	88.16	44	⇑P		P	13 47 48.4 -0.7
	baz=88,SNR=6.2						
B15A	Bradely Ranch,	88.17	38	⇑P		P	13 47 48.2 -0.8
	baz=88						
Y27A	Causey	88.25	54	⇑P		P	13 47 49.6 -0.2
	baz=88						
M21A	Separation Pea	88.36	45	⇑P		P	13 47 49.8 -0.4
	baz=88						
A15A	Johnson Ranch,	88.40	37	⇓P		P	13 47 49.5 -0.6
	baz=88						
C16A	Fuhringer Ranc	88.40	38	⇓P		P	13 47 49.9 -0.3
	baz=88						
L21A	Rawlins	88.51	45	⇓P		P	13 47 50.3 -0.5
	baz=89						
G18A	Lazy EL Ranch,	88.56	41	⇑P		P	13 47 50.8 -0.2
	baz=89						
MSTX	Muleshoe	88.58	54	⇑P		P	13 47 50.8 -0.6
	baz=89						
N22A	Wattenberg Ran	88.64	46	⇓P		P	13 47 51.5 +0.1
	baz=89,SNR=6.0						
CMAR	Chiang Mai Arr	88.66	290	P		P	13 47 53.3 +1.2
	comp=Z,0.8nm,0.8s,mb3.6,baz=106,slow=1.9,SNR=6.0						
F18A	Big Timber	88.74	41	⇓P		P	13 47 51.6 -0.2
	baz=89						
M22A	Cedar Creek Ra	88.79	46	⇑P		P	13 47 52.4 +0.3
	baz=89						
CD2	Chengdu	88.84	303	P		P	13 47 53.8 +1.2
C17A	Wharram Farm,	88.90	39	⇑P		P	13 47 52.2 -0.3
	baz=89						
E18A	Harlowton	88.92	40	⇑P		P	13 47 52.9 +0.3
	baz=89						
A16A	West Butte Ran	89.04	37	⇑P		P	13 47 53.1 0.0
	baz=89						
L22A	Ellis Ranch, M	89.17	45	⇓P		P	13 47 54.1 +0.3
	baz=89						
A17A	Triple J Farms	89.56	38	⇓P		P	13 47 55.4 -0.1
	baz=90						
A18A	Metzger Ranch,	90.04	38	⇑P		P	13 47 57.4 -0.3
	baz=90						
RSSD	Black Hills	91.62	44	*e*P		P	13 48 04.4 -0.7
	comp=Z,2.3nm,0.8s,mb4.3						
SONM	Songino Array	93.34	319	P		P	13 48 14.1 +1.2
	comp=Z,0.4nm,0.4s,mb3.8,baz=178,slow=40,SNR=2.2						
YKA	Yellowknife Ar	94.31	25	P		P	13 48 16.0 -1.0
	comp=Z,1.6nm,0.7s,mb4.2,baz=243,slow=4.4,SNR=23						
YKA	Yellowknife Ar	94.31	25	P		P	13 48 16.0 -1.0
WMQ	Urumqi	104.71	312	*e*P		Pdif	13 49 03.9 +0.1
ZALV	Zalesovo Beam	108.02	322	PKiKP		PKiKP	13 53 19.8 -1.4
	comp=Z,1.0nm,0.3s,baz=333,slow=11,SNR=5.1						
KURK	Kurchatov	111.61	318	PKiKP		PKiKP	13 53 26.6 -1.4
	comp=Z,0.8nm,0.6s,baz=92,slow=2.0,SNR=7.1						
BVAR	Borovoye Array	116.64	321	PKP		PKPdf	13 53 36.3 -1.3
	comp=Z,1.5nm,0.5s,baz=119,slow=1.9,SNR=11						
AKTK	Aktyubinsk	124.66	320	PKP		PKPdf	13 53 52.3 -0.9
AKTO	Aktyubinsk	124.66	320	PKP		PKPdf	13 53 52.3 -0.9
	comp=Z,0.8nm,0.6s,baz=247,slow=0.3,SNR=5.4						
ARCES	ARCESS Array B	126.17	350	PKP		PKPdf	13 53 54.6 -0.9
	comp=Z,2.1nm,0.5s,baz=63,slow=0.9,SNR=18						
NOA	NORSAR Array B	136.24	353	PKhKP			13 54 07.7
	comp=Z,0.4nm,0.7s,baz=21,slow=3.8,SNR=4.0						
NOA				PKP		PKPdf	13 54 13.8 -0.9
	comp=Z,0.8nm,0.6s,baz=14,slow=4.1,SNR=5.6						
NOA	NORSAR Array B	136.24	353	PKP			13 54 07.7
NOA				PKP		PKPdf	13 54 13.8 -0.9
HFS	Hagfors	136.79	351	PKhKP			13 54 05.0
	comp=Z,0.9nm,0.5s,baz=64,slow=6.9,SNR=5.4						
HFS				PKP		PKPdf	13 54 16.1 +0.4
	comp=Z,1.5nm,0.8s,baz=232,slow=1.7,SNR=4.0						
AKASG	Malin Array Be	140.37	332	PKhKP			13 54 15.7
	comp=Z,1.2nm,0.4s,baz=43,slow=4.4,SNR=8.2						
AKASG				PKP		PKPdf	13 54 22.9 +0.3
	comp=Z,0.8nm,0.4s,baz=44,slow=3.4,SNR=2.4						
EKA	Eskdalemuir Ar	142.37	4	PKhKP			13 54 21.9
	comp=Z,1.8nm,0.7s,baz=329,slow=2.9,SNR=4.7						
KWP	Kalwaria Pacla	143.89	336	*e*PKPbc		PKPdf	13 54 28.1 -0.7
KWP	Kalwaria Pacla	143.89	336	⇓*i*P		PKPdf	13 54 28.2 -0.6
BUR08	Bucovina Ar. S	144.41	332	*e*PKPbc		PKPdf	13 54 30.6 +0.8
BURAR	Bucovina Array	144.42	332	⇑*i*P		PKPdf	13 54 30.8 +1.0
BR131	Keskin Array S	144.56	315	*e*PKPbc		PKPdf	13 54 30.7 +0.4
BRTR	Keskin Array B	144.56	315	PKP		PKPdf	13 54 30.7 +0.4
	comp=Z,4.3nm,0.9s,baz=131,slow=3.4,SNR=22						
STHS	Stebnicka Huta	144.61	337	*e*P		PKPdf	13 54 30.8 +0.7
STHS	Stebnicka Huta	144.61	337	*e*PKP		PKPdf	13 54 30.8 +0.7
KOLS	Kolonicke sedl	144.62	336	*e*P		PKPdf	13 54 30.5 +0.4
KOLS	Kolonicke sedl	144.62	336	*e*PKP		PKPdf	13 54 30.5 +0.4
ASF	Jabal al Asfar	144.95	301	PKPbc		PKPdf	13 54 31.7 +0.5
	comp=Z,1.4nm,0.3s,baz=120,slow=5.4,SNR=3.6						
VRI	Vrincioaia	144.98	329	⇑*i*P		PKPdf	13 54 31.9 +1.1
PLOR	Plostina	145.03	329	⇓*i*P		PKPdf	13 54 31.3 +0.4
TRPA	Tarpa	145.16	335	⇓*i*P		PKPdf	13 54 32.1 +1.0
HARR	Harsova	145.17	326	⇓*i*P		PKPdf	13 54 32.8 +1.6
OKC	Ostrava-Krasne	145.30	341	⇑*e*PKP		PKPdf	13 54 32.4 +1.2
CLL	Collm	145.31	347	⇑*i*PKPbc		PKPbc	13 54 32.0 -0.5
	comp=Z,25nm,0.8s						
UPC	Upice	145.33	344	⇑*e*PKP		PKPdf	13 54 32.9 +1.6
DPC	Dobruska-Polom	145.39	343	⇑*e*PKP		PKPdf	13 54 33.2 +1.8
BRG	Berggiesshubel	145.51	346	*i* PKP		PKPdf	13 54 32.9 +1.4
	comp=Z,10nm,0.7s						
MORC	Moravsky Berou	145.54	341	⇓*i*P		PKPdf	13 54 33.1 +1.4
MLR	Muntele Rosu	145.64	329	⇑*i*P		PKPdf	13 54 33.5 +1.5
KECS	Kecovo	145.67	337	*e*P		PKPdf	13 54 33.8 +1.9
KECS	Kecovo	145.67	337	*e*PKP		PKPdf	13 54 33.8 +1.9
PVCC	Panska Ves	145.68	345	⇑*e*PKP		PKPdf	13 54 33.8 +1.9
MMAI	Mount Meron Ar	145.92	303	PKPbc		PKPbc	13 54 35.2 +0.4
	comp=Z,4.4nm,0.5s,baz=71,slow=5.4,SNR=7.4						
DRGR		146.15	333	⇓*i*P		PKPbc	13 54 35.5 +0.5
PRU	Pruhonice	146.19	345	⇑*e*PKP		PKPbc	13 54 35.3 +0.3
VRAC	Vranov	146.25	342	⇓*i*P		PKPdf	13 54 30.2 -2.6
VYHS	Vyhne	146.25	339	*e*PKP		PKPbc	13 54 35.3 +0.1
KOLL	Kolacno	146.32	339	*e*PKP		PKPbc	13 54 35.5 +0.1
PSZ	Piszkesteto	146.36	337	*e*PKPbc		PKPbc	13 54 35.4 -0.2
PSZ	Piszkesteto	146.36	337	⇑*i*P		PKPbc	13 54 35.7 +0.1
TREC	Trest	146.57	343	⇑*e*PKP		PKPbc	13 54 36.2 +0.1
UCC	Uccle	146.99	357	PKPbc		PKPbc	13 54 37.3 +0.2
MEM	Membach	147.06	355	PKPbc		PKPbc	13 54 37.2 -0.1
GRF	Grafenberg Arr	147.21	348	*e*PKP		PKPbc	13 54 37.9 +0.1
KHC	Kasperske Hory	147.22	345	*e*PKPbc		PKPbc	13 54 37.7 -0.1
KHC				*e*PKPab		PKPab	13 54 42.5 +0.8
KHC	Kasperske Hory	147.22	345	⇑*e*PKP		PKPbc	13 54 37.8 0.0
KHC				*e*PKPAB		PKPab	13 54 42.6 +1.0
GEC2	GERESS Array S	147.45	345	*e*PKPbc		PKPbc	13 54 37.9 -0.5
GERES	GERESS Array B	147.45	345	PKPbc		PKPbc	13 54 38.2 -0.2
	comp=Z,6.4nm,0.6s,baz=28,slow=3.2,SNR=41						
GIVF	Givet	147.65	356	*e*PKP1		PKPbc	13 54 38.1 -0.8
	comp=Z,20nm,0.5s						
DOU	Dourbes	147.68	356	PKPbc		PKPbc	13 54 38.6 -0.4
BAIF	Baives	147.74	357	*e*PKP1		PKPbc	13 54 38.4 -0.7
	comp=Z,16nm,0.6s						
WLF	Walferdange	147.98	354	PKPbc		PKPbc	13 54 38.7 -1.0
PKSM	Moragy	148.26	337	⇓*i*P		PKPdf	13 54 31.0 -5.3
BFO	Black Forest	149.02	351	*e*PKPbc		PKPbc	13 54 41.8 -0.5
FLN	La Foliniere	149.08	2	*e*PKP1		PKPbc	13 54 41.2 -1.2
	comp=Z,22nm,0.7s						
CDF	Champ du Feu	149.09	352	*e*PKP1		PKPbc	13 54 41.8 -0.7
	comp=Z,8.2nm,0.5s						
LDF	La Druitiere	149.26	2	*e*PKP1		PKPbc	13 54 41.6 -1.3
	comp=Z,7.7nm,0.4s						
WTTA	Wattenberg	149.43	346	⇑*i*PKiKP		PKiKP	13 54 43.0 -1.1
	comp=Z,16nm,0.5s						
GRR	Gorron	149.43	3	*e*PKP1		PKPbc	13 54 42.2 -1.1
	comp=Z,16nm,0.5s	

KBA eSg Sg 13 40 11.8 +0.4
KBA Koelnbreinsper 0.47 199 ePg Pg 13 40 05.5 +0.1
87nm,0.2s,SNR=262
KBA ⇑iSg Sg 13 40 11.8 +0.5
2µm,0.5s
KBA Koelnbreinsper 0.47 199 Pg Pg 13 40 05.5 +0.1
87nm,0.2s,SNR=262
KBA Sg Sg 13 40 11.8 +0.4
2µm,0.5s
RJOB Jochberg 0.57 293⇑iPg Pg 13 40 08.5 +1.1
RJOB eSg Sg 13 40 17.7 +2.9
RJOB Jochberg 0.57 293 Pg Pg 13 40 08.5 +1.1
RJOB Sg Sg 13 40 17.7 +2.9
MOA Molln 0.58 54 ePg Pg 13 40 09.2 +1.7
SNR=122
MOA eSg Sg 13 40 17.8 +2.8
SNR=5.9
MOA Molln 0.58 54 ePn Pg 13 40 09.3 +1.8
MOA eSn Sg 13 40 17.7 +2.7
MOA Molln 0.58 54⇓ePg Pg 13 40 09.2 +1.6
132nm,0.2s,SNR=153
MOA ⇑iSg Sg 13 40 17.7 +2.7
355nm,0.2s
MOA Molln 0.58 54 Pg Pg 13 40 09.2 +1.7
132nm,0.2s,SNR=153
MOA Sg Sg 13 40 17.7 +2.7
355nm,0.2s
MYKA Terra Mystica 0.89 177⇓iPg Pg 13 40 13.3 -0.2
64nm,0.2s
MYKA ⇓iSg Sg 13 40 24.2 -0.8
236nm,0.3s
MYKA Terra Mystica 0.89 177 Pg Pg 13 40 13.3 -0.2
64nm,0.2s
MYKA Sg Sg 13 40 24.2 -0.8
236nm,0.3s
ACOM Acomizza, Ital 0.97 182⇓iPg Pg 13 40 15.0 -0.1
ACOM i Sg Sg 13 40 27.7 +0.1
ACOM Acomizza, Ital 0.97 182 i Pg Pg 13 40 15.0 -0.1
ACOM i Sg Sg 13 40 27.7 +0.1
PLRO Paularo 1.01 197⇓iPg Pg 13 40 15.6 -0.2
PLRO i Sg Sg 13 40 28.6 -0.3
PLRO Paularo 1.01 197 i Pg Pg 13 40 15.6 -0.2
PLRO i Sg Sg 13 40 28.6 -0.3
LSR Lussari 1.04 182⇓iPg Pg 13 40 16.2 -0.2
LSR Lussari 1.04 182 i Pg Pg 13 40 16.2 -0.2
LSR eSg Sg 13 40 30.0 +0.1
ZOU Zoufplan 1.04 203 ePg Pg 13 40 16.6 +0.1
ZOU eSg Sg 13 40 30.0 0.0
ABTA Abfaltersbach 1.06 224 ePg Pg 13 40 16.6 -0.1
50nm,0.2s,SNR=17
ABTA ⇑iSg Sg 13 40 30.3 -0.1
108nm,0.3s
ABTA Abfaltersbach 1.06 224 Pg Pg 13 40 16.6 -0.1
50nm,0.2s,SNR=17
ABTA Sg Sg 13 40 30.3 -0.1
108nm,0.3s
FVI Forni Avoltri 1.07 211 Pn Pg 13 40 16.9 0.0
FVI Sn Sg 13 40 30.1 -0.7
FVI Forni Avoltri 1.07 211 Pn Pg 13 40 16.9 0.0
FVI Sn Sg 13 40 30.1 -0.7
442nm,0.6s
FVI Forni Avoltri 1.07 211 Pn Pg 13 40 16.9 0.0
FVI Sn Sg 13 40 30.1 -0.7
442nm,0.6s
PTCC Patocco-Chiusa 1.12 188 Pn Pg 13 40 18.0 0.0
PTCC Patocco-Chiusa 1.12 188 Pn Pg 13 40 18.0 0.0
PTCC Patocco-Chiusa 1.12 188 Pn Pg 13 40 18.0 0.0
FUSE Fusea 1.17 200⇓ePg Pg 13 40 18.6 -0.3
FUSE eSg Sg 13 40 34.0 -0.1
FUSE Fusea 1.17 200 ePg Pg 13 40 18.6 -0.3
FUSE eSg Sg 13 40 34.0 0.0
CSMI Casera Mimoias 1.19 212⇑ePg Pg 13 40 19.0 -0.2
CSMI eSg Sg 13 40 33.9 -0.7
CSMI Casera Mimoias 1.19 212 ePg Pg 13 40 19.0 -0.2
CSMI eSg Sg 13 40 33.9 -0.7
OBKA Obir 1.21 146 ePg Pg 13 40 19.2 -0.4
SNR=31
OBKA eSg Sg 13 40 35.7 +0.4
SNR=3.2
OBKA Obir 1.21 146 ePn Pn 13 40 19.5 -1.1
OBKA Obir 1.21 146⇑ePg Pg 13 40 19.0 -0.7
57nm,0.3s,SNR=18
OBKA ⇓iSg Sg 13 40 35.0 -0.3
205nm,0.4s
OBKA Obir 1.21 146 Pg Pg 13 40 19.2 -0.5
SNR=31
OBKA Sg Sg 13 40 35.0 -0.3
205nm,0.4s
ROBS Robic 1.27 182 i Pg Pg 13 40 20.4 -0.5
ROBS i Sg Sg 13 40 37.8 +0.5
ROBS Robic 1.27 182 i Pg Pg 13 40 20.4 -0.5
ROBS i Sg Sg 13 40 37.8 +0.4
VINO Villanova 1.28 189⇓iPg Pg 13 40 20.6 -0.3
VINO i Sg Sg 13 40 37.7 +0.2
VINO Villanova 1.28 189 i Pg Pg 13 40 20.6 -0.3
VINO i Sg Sg 13 40 37.7 +0.2
BAD Bernadia 1.30 190⇑ePg Pg 13 40 21.2 -0.2
BAD eSg Sg 13 40 39.0 +0.8
BAD Bernadia 1.30 190 ePg Pg 13 40 21.2 -0.2
BAD eSg Sg 13 40 39.0 +0.8
SOKA Soboth 1.30 130⇓iPg Pg 13 40 20.8 -0.7
34nm,0.3s
SOKA ⇓iSg Sg 13 40 38.0 -0.4
89nm,0.4s
SOKA Soboth 1.30 130 Pg Pg 13 40 20.8 -0.7
34nm,0.3s
SOKA Sg Sg 13 40 38.0 -0.4
89nm,0.4s
GEC2 GERESS Array S 1.33 4 ePg Pg 13 40 23.3 +1.3
SNR=349
GEC2 eSg Sg 13 40 41.8 +2.5
SNR=7.9
GEC2 GERESS Array S 1.33 4 ePn Pn 13 40 22.8 +0.5
GEC2 eSn Sn 13 40 41.2 +0.5
GEC2 GERESS Array S 1.33 4 ePn Pn 13 40 22.8 +0.5
GEC2 eSn Sn 13 40 41.2 +0.5
GEC2 eSg Sg 13 40 41.7 +2.4
baz=183
BUA Buia 1.33 193 ePg Pg 13 40 22.3 +0.3
BUA eSg Sg 13 40 40.0 +0.7
BUA Buia 1.33 193 ePg Pg 13 40 22.3 +0.2
BUA eSg Sg 13 40 40.0 +0.7
MPRI Monte Prat 1.34 198⇑iPg Pg 13 40 22.0 -0.1
MPRI i Sg Sg 13 40 39.7 +0.3
MPRI Monte Prat 1.34 198 i Pg Pg 13 40 22.0 -0.1
MPRI i Sg Sg 13 40 39.7 +0.3
WTTA Wattenberg 1.34 260 ePg Pg 13 40 22.7 +0.6
SNR=87
WTTA Wattenberg 1.34 260⇓ePg Pg 13 40 23.0 +0.9
65nm,0.1s,SNR=87
WTTA ⇑iSg Sg 13 40 41.7 +2.3
1µm,0.4s
WTTA Wattenberg 1.34 260 Pg Pg 13 40 22.7 +0.6
SNR=87
WTTA eSg Sg 13 40 41.4 +1.9
baz=80
DRE Drenchia 1.34 178⇓iPg Pg 13 40 21.6 -0.7
DRE i Sg Sg 13 40 40.7 +1.0
DRE Drenchia 1.34 178 i Pg Pg 13 40 21.6 -0.7
DRE i Sg Sg 13 40 40.7 +1.0
ARSA Arzberg 1.35 101 ePg Pg 13 40 23.5 +1.1
SNR=15
ARSA eSg Sg 13 40 41.0 +1.1
SNR=2.7
ARSA Arzberg 1.35 101 ePn Pn 13 40 22.6 0.0
ARSA Arzberg 1.35 101⇓ePg Pg 13 40 22.4 0.0
29nm,0.3s,SNR=24
ARSA ⇑iSg Sg 13 40 40.7 +0.7
86nm,0.4s
ARSA Arzberg 1.35 101 Pg Pg 13 40 22.4 0.0
29nm,0.3s,SNR=24
ARSA eSg Sg 13 40 40.6 +0.7
baz=281
SCE Schlegeis 1.35 250⇑iPg Pg 13 40 22.2 -0.2
SCE ⇑iSg Sg 13 40 40.4 +0.4
SCE Schlegeis 1.35 250 Pg Pg 13 40 22.2 -0.2
SCE Sg Sg 13 40 40.4 +0.4
WATA Walderalm 1.37 263⇓iPn Pn 13 40 22.6 -0.2
WATA ⇓ePg Pg 13 40 23.7 +1.0
46nm,0.3s,SNR=21
WATA ⇓iSg Sg 13 40 42.5 +2.2
132nm,0.2s
WATA Walderalm 1.37 263 Pn Pn 13 40 22.6 -0.1
AFL Alpe Faloria 1.37 224⇓ePg Pg 13 40 22.4 -0.3

AFL Alpe Faloria 1.37 224 ePg Pg 13 40 22.4 -0.4
BISS Bistriski jare 1.37 129 i Pg Pg 13 40 22.4 -0.4
BISS i Sg Sg 13 40 39.9 -0.7
BISS Bistriski jare 1.37 129 i Pg Pg 13 40 22.4 -0.4
BISS i Sg Sg 13 40 39.9 -0.7
COLI Coloredo 1.39 186⇑ePg Pg 13 40 22.8 -0.3
COLI eSg Sg 13 40 42.5 +1.3
COLI Coloredo 1.39 186 ePg Pg 13 40 22.8 -0.3
COLI eSg Sg 13 40 42.5 +1.4
CIMO Cimolais 1.44 213⇑ePg Pg 13 40 23.3 -0.6
CIMO eSg Sg 13 40 41.9 -0.6
CIMO Cimolais 1.44 213 ePg Pg 13 40 23.3 -0.7
CIMO eSg Sg 13 40 41.9 -0.7
VOY Vojsko 1.50 171⇓ePn Pn 13 40 24.7 +0.1
VOY eSn Sn 13 40 45.8 +1.0
VOY Vojsko 1.50 171⇓ePn Pn 13 40 24.7 +0.1
VOY eSn Sn 13 40 45.8 +1.0
CSO Casso 1.51 215 ePg Pg 13 40 25.4 -0.1
CSO eSg Sg 13 40 44.7 -0.3
CSO Casso 1.51 215 ePg Pg 13 40 25.4 0.0
CSO eSg Sg 13 40 44.7 -0.3
MLNI Malnisio 1.52 206⇑iPg Pg 13 40 25.6 0.0
MLNI i Sg Sg 13 40 46.2 +1.0
MLNI Malnisio 1.52 206 i Pg Pg 13 40 25.5 -0.1
MLNI i Sg Sg 13 40 46.2 +1.0
SABO M.te Sabotino 1.54 179⇓ePg Pg 13 40 25.1 -0.9
SABO eSg Sg 13 40 46.2 +0.4
SABO M.te Sabotino 1.54 179 ePg Pg 13 40 25.1 -0.8
SABO eSg Sg 13 40 46.2 +0.3
CONA Conrad Observa 1.60 74⇓ePn Pn 13 40 25.3 -0.6
SNR=50
CONA ⇑iPg Pg 13 40 27.5 +0.3
36nm,0.3s
CONA ⇑iSn Sn 13 40 46.8 -0.5
CONA Conrad Observa 1.60 74 Pn Pn 13 40 25.3 -0.7
SNR=50
LJU Ljubljana 1.61 156 ePn Pn 13 40 28.0 +1.9
LJU eSn Sn 13 40 48.2 +0.6
KHC Kasperske Hory 1.62 0 ePN Pn 13 40 26.8 +0.6
KHC ePG Pg 13 40 28.4 +0.9
KHC eSG Sg 13 40 50.1 +1.7
comp=Z,209nm,0.5s
KHC Kasperske Hory 1.62 0 ePn Pn 13 40 26.7 +0.5
baz=180
KHC Kasperske Hory 1.62 0 Pg Pg 13 40 28.4 +0.9
KHC eSg Sg 13 40 49.1 +0.7
baz=180
TLI Talmassons 1.63 192 ePg Pg 13 40 25.7 -1.9
TLI Talmassons 1.63 192 ePg Pg 13 40 25.7 -2.0
FUR Furstenfeldbru 1.68 294 ePg Pg 13 40 29.4 +0.8
SNR=3.3
FUR eSg Sg 13 40 51.3 +1.0
SNR=7.6
FUR Furstenfeldbru 1.68 294 Pg Pg 13 40 29.4 +0.8
SNR=3.3
FUR Sg Sg 13 40 51.3 +1.0
SNR=7.6
MOTA Moosalm 1.68 265⇑ePn Pn 13 40 26.9 -0.2
SNR=32
MOTA ⇓iPg Pg 13 40 29.5 +0.7
comp=Z,13nm,0.1s
MOTA ⇑iSg Sg 13 40 52.9 +2.3
comp=Z,156nm,0.3s
MOTA Moosalm 1.68 265 Pn Pn 13 40 26.9 -0.2
SNR=32
FAU Forcella Aurin 1.69 221⇑iPg Pg 13 40 28.4 -0.4
FAU Forcella Aurin 1.69 221 i Pg Pg 13 40 28.4 -0.4
WET Wettzell 1.69 344 ePn Pn 13 40 27.5 +0.3
SNR=168
WET ePg Pg 13 40 30.0 +1.1
SNR=6.7
WET eSg Sg 13 40 52.0 +1.1
SNR=5.1
WET Wettzell 1.69 344 ePn Pn 13 40 27.4 +0.2
WET Wettzell 1.69 344 ePn Pn 13 40 27.4 +0.2
CAE Caneva 1.70 208⇑iPg Pg 13 40 27.5 -1.5
CAE i Sg Sg 13 40 52.0 +0.9
CAE Caneva 1.70 208 i Pg Pg 13 40 27.5 -1.6
CAE i Sg Sg 13 40 52.0 +0.9
TRI Trieste 1.81 176⇓iPg Pg 13 40 29.6 -1.7
TRI i Sg Sg 13 40 53.0 -1.8
TRI Trieste 1.81 176 Pn Pn 13 40 29.6 +0.7
TRI Sn Sn 13 40 53.1 +0.6
comp=Z,53nm,0.5s
TRI Trieste 1.81 176 i Pn Pn 13 40 29.6 +0.7
TRI Sn Sn 13 40 53.1 +0.6
comp=Z,53nm,0.5s
VARN Col Varnada, M 1.83 214⇑iPg Pg 13 40 29.6 -1.9
VARN i Sg Sg 13 40 55.0 -0.2
VARN Col Varnada, M 1.83 214 i Pg Pg 13 40 29.6 -1.9
VARN i Sg Sg 13 40 55.0 -0.2
RETA Reutte 1.91 270⇑ePn Pn 13 40 30.3 +0.2
SNR=13
RETA ⇓iSn Sn 13 40 55.3 +0.6
RETA Reutte 1.91 270 Pn Pn 13 40 30.3 +0.2
SNR=13
RETA Sn Sn 13 40 55.3 +0.5
APPI Appiano 1.91 238 Pn Pn 13 40 32.2 +2.0
APPI Sn Sn 13 40 57.2 +2.3
APPI Appiano 1.91 238 Pn Pn 13 40 32.2 +2.0
APPI Sn Sn 13 40 57.2 +2.3
comp=Z,198nm,0.5s
APPI Appiano 1.91 238 Pn Pn 13 40 32.2 +2.0
APPI Sn Sn 13 40 57.2 +2.3
comp=Z,198nm,0.5s
VISS Visnje 1.92 153 i Pn Pn 13 40 31.6 +1.2
VISS i Sn Sn 13 40 57.7 +2.4
VISS Visnje 1.92 153 i Pn Pn 13 40 31.6 +1.2
VISS i Sn Sn 13 40 57.7 +2.5
SKDS Skadanscina 1.99 171 i Pn Pn 13 40 32.0 +0.6
SKDS i Sn Sn 13 40 57.2 +0.2
CGRP Cima Grappa 2.04 217 ePn Pn 13 40 33.0 +1.0
CGRP Cima Grappa 2.04 217 ePn Pn 13 40 33.0 +1.0
TREC Trest 2.19 35 ePN Pn 13 40 34.3 +0.2
TREC ePG Pg 13 40 37.1 -1.4
TREC eSG Sg 13 41 06.6 -0.2
comp=Z,444nm,0.3s
TREC Trest 2.19 35 ePn Pn 13 40 34.3 +0.2
baz=216
TREC Trest 2.19 35 Pg Pg 13 40 37.1 -1.4
TREC Sg Sg 13 41 06.6 -0.2
comp=Z,444nm,0.3s
ROTZ Rotzenmuhle 2.43 339 ePn Pn 13 40 37.1 -0.2
FUORN Ofenpass-Fuorn 2.43 250 Pn Pn 13 40 39.8 +2.4
FUORN Ofenpass-Fuorn 2.43 250 Pn Pn 13 40 39.8 +2.4
KRUC Moravsky 2.44 50 ePn Pn 13 40 36.9 -0.6
baz=231
KRUC eSn Sn 13 41 07.8 -0.2
baz=231
KRUC eSg Sg 13 41 14.1 -0.7
comp=Z,34nm,0.2s,baz=231
ZST Bratislava 2.47 73 ePn Pn 13 40 39.5 +1.5
ZST eSg Sg 13 41 13.8 -2.1
ZST Bratislava 2.47 73 ePN Pn 13 40 39.5 +1.5
ZST eSG Sg 13 41 13.8 -2.1
ZST Bratislava 2.47 73 ePn Pn 13 40 39.5 +1.5
ZST eSg Sg 13 41 13.8 -2.1
DAVA Damuels 2.52 266 ePn Pn 13 40 39.2 +0.7
DAVA Damuels 2.52 266 ePn Pn 13 40 39.2 +0.6
DAVA Damuels 2.52 266 Pn Pn 13 40 39.2 +0.6
PRU Pruhonice 2.56 14 ePN Pn 13 40 40.1 +1.0
PRU ePG Pg 13 40 44.4 -1.1
PRU eSG Sg 13 41 20.0 +1.4
comp=Z,137nm,0.4s
PRU Pruhonice 2.56 14 Pn Pn 13 40 40.1 +1.0
PRU Pruhonice 2.56 14 Pg Pg 13 40 44.4 -1.1
PRU Sg Sg 13 41 20.0 +1.4
comp=Z,137nm,0.4s
MABI Malga Bissina 2.56 236 Pn Pn 13 40 42.9 +3.8
MABI Malga Bissina 2.56 236 Pn Pn 13 40 42.9 +3.8
MABI Malga Bissina 2.56 236 Pn Pn 13 40 42.9 +3.8
MGBB Grossbuechelbe 2.62 340⇓iPn Pn 13 40 39.8 -0.1
MGBB Grossbuechelbe 2.62 340 Pn Pn 13 40 39.8 -0.1
DAVOX Davos/Dischmat 2.62 255 Pn Pn 13 40 41.8 +1.8
DAVOX Davos/Dischmat 2.62 255 Pn Pn 13 40 41.8 +1.8
MAGA Magasa 2.67 230 Pn Pn 13 40 43.4 +2.7
comp=Z,483nm,0.6s
MAGA Magasa 2.67 230 Pn Pn 13 40 43.4 +2.7
comp=Z,483nm,0.6s
GRA1 Grafenberg Arr 2.68 325 ePn Pn 13 40 41.2 +0.4
GRA1 Grafenberg Arr 2.68 325 Pn Pn 13 40 41.2 +0.4
GRA1 Grafenberg Arr 2.68 325 Pg Pg 13 40 48.6 +0.8
SNR=7.3

GRA1 Sg Sg 13 41 22.3 -0.2
SNR=5.2
GRF Grafenberg Arr 2.68 325 ePn Pn 13 40 41.2 +0.5
GRF ePg Pg 13 40 48.6 +0.8
SNR=7.3
GRF eSg Sg 13 41 22.3 -0.2
SNR=5.2
GRF Grafenberg Arr 2.68 325 ePn Pn 13 40 41.2 +0.4
GRF Grafenberg Arr 2.68 325 ePn Pn 13 40 41.2 +0.4
VRAC Vranov 2.70 47 ePn Pn 13 40 40.6 -0.4
baz=229
VRAC eSn Sn 13 41 13.2 -1.1
VRAC eSg Sg 13 41 23.7 +0.6
comp=Z,67nm,0.3s,baz=229
SMOL Smolenice 2.77 68 ePg Pg 13 40 46.6 -3.1
SMOL eSn Sg 13 41 25.1 -0.5
SMOL Smolenice 2.77 68 ePN Pg 13 40 46.6 -3.1
SMOL eSN Sg 13 41 25.1 -0.5
SMOL Smolenice 2.77 68 ePg Pg 13 40 46.6 -3.1
NKC Novy Kostel 2.82 345 ePN Pn 13 40 42.6 -0.1
NKC ePG Pg 13 40 50.0 -0.5
NKC eSG Sg 13 41 27.9 +0.9
comp=Z,121nm,0.3s
NKC Novy Kostel 2.82 345 Pn Pn 13 40 42.6 -0.1
NKC Novy Kostel 2.82 345 Pg Pg 13 40 50.0 -0.5
NKC Sg Sg 13 41 27.9 +0.9
comp=Z,121nm,0.3s
WERN Wernitzgruen 2.88 345 ePn Pn 13 40 43.3 -0.3
WERN Wernitzgruen 2.88 345 Pn Pn 13 40 43.3 -0.3
GUNZ Gunzen 2.96 344 ePn Pn 13 40 44.8 +0.1
SNR=13
GUNZ ePg Pg 13 40 52.9 -0.4
SNR=6.5
GUNZ Gunzen 2.96 344 Pn Pn 13 40 44.8 +0.1
SNR=13
TANN Tannenbergstha 2.99 346 ePn Pn 13 40 45.0 -0.1
SNR=20
TANN ePg Pg 13 40 54.0 +0.2
SNR=9.4
TANN Tannenbergstha 2.99 346 Pn Pn 13 40 45.0 -0.1
SNR=20
WERD Werda 3.05 345 ePn Pn 13 40 45.9 0.0
SNR=15
WERD eSg Sg 13 41 35.0 +0.6
SNR=3.3
WERD Werda 3.05 345 Pn Pn 13 40 45.9 0.0
SNR=15
WERD Sg Sg 13 41 35.0 +0.6
SNR=3.3
PVCC Panska Ves 3.08 12 eSG Sg 13 41 36.7 +1.1
comp=Z,246nm,0.4s
PVCC Panska Ves 3.08 12 Sg Sg 13 41 36.7 +1.1
comp=Z,246nm,0.4s
NVLJ Novalja 3.09 162 ePn Pn 13 40 47.1 +0.7
NVLJ Sn Sn 13 41 25.5 +1.5
NVLJ Novalja 3.09 162 ePn Pn 13 40 47.1 +0.7
NVLJ Sn Sn 13 41 25.4 +1.4
PLN Plauen 3.12 343 ePn Pn 13 40 46.2 -0.5
PLN Plauen 3.12 343 Pn Pn 13 40 46.2 -0.6
STU Stuttgart 3.19 295 eSg Sg 13 41 37.6 -1.3
SNR=5.6
STU Stuttgart 3.19 295 Sg Sg 13 41 37.6 -1.3
SNR=5.6
SPAK Spaichingen-Ko 3.28 282 P Pn 13 40 48.7 -0.3
SPAK S Sg 13 41 41.6 -0.2
SPAK Spaichingen-Ko 3.28 282 P Pn 13 40 48.7 -0.3
DPC Dobruska-Polom 3.37 32 ePG Pg 13 41 00.1 -0.9
DPC eSG Sg 13 41 45.1 +0.5
comp=Z,74nm,0.4s
DPC Dobruska-Polom 3.37 32 ePn Pn 13 40 49.7 -0.5
baz=213
DPC Dobruska-Polom 3.37 32 Pg Pg 13 41 00.1 -0.9
DPC Sg Sg 13 41 45.1 +0.5
comp=Z,74nm,0.4s
BRG Berggiesshubel 3.37 4 ePn Pn 13 40 50.4 +0.1
SNR=3.1
BRG ePg Pg 13 41 00.4 -0.7
SNR=3.2
BRG Berggiesshubel 3.37 4 PN Pn 13 40 50.2 -0.1
BRG PG Pg 13 41 00.9 -0.1
BRG SN Sn 13 41 27.8 -3.1
BRG SG Sg 13 41 43.0 -1.7
comp=Z,55nm,0.4s
BRG Berggiesshubel 3.37 4 Pn Pn 13 40 50.4 +0.1
SNR=3.1
MOX Moxa 3.38 338 ePN Pn 13 40 50.3 -0.2
MOX eSN Sn 13 41 30.3 -1.0
MOX eSG Sg 13 41 45.3 +0.1
MOX Moxa 3.38 338 ePn Pn 13 40 50.2 -0.3
SNR=36
MOX eSn Sn 13 41 30.3 -1.0
MOX eSg Sg 13 41 45.3 +0.1
MOX Moxa 3.38 338 ePn Pn 13 40 50.3 -0.2
MOX Sn Sn 13 41 30.3 -1.0
MOX Sg Sg 13 41 45.3 +0.1
UPC Upice 3.40 27 ePG Pg 13 40 59.9 -1.7
UPC eSG Sg 13 41 45.7 +0.1
UPC Upice 3.40 27 Pg Pg 13 40 59.9 -1.7
UPC Sg Sg 13 41 45.7 +0.1
KOLL Kolacno 3.41 70 eSG Sg 13 41 40.0 -6.0
MORC Moravsky Berou 3.47 48 ePn Pn 13 40 51.8 +0.1
baz=230
BFO Black Forest 3.62 285 ePn Pn 13 40 54.1 +0.5
SNR=4.9
BFO eSn Sn 13 41 33.3 -3.7
SNR=3.3
BFO Black Forest 3.62 285 ePn Pn 13 40 53.8 +0.1
BFO Black Forest 3.62 285 ePn Pn 13 40 53.8 +0.1
VYHS Vyhne 3.67 73 ePn Pn 13 40 55.5 +1.1
VYHS eSn Sn 13 41 33.2 -5.1
VYHS eSg Sg 13 41 52.9 -1.4
VYHS Vyhne 3.67 73 ePN Pn 13 40 55.5 +1.1
VYHS eSN Sn 13 41 33.2 -5.1
VYHS eSG Sg 13 41 52.9 -1.4
VYHS Vyhne 3.67 73 ePn Pn 13 40 55.5 +1.1
VYHS eSn Sn 13 41 33.2 -5.1
VYHS eSg Sg 13 41 52.9 -1.4
FELD Feldberg im Sc 3.78 278 P Pn 13 40 56.0 +0.1
FELD Feldberg im Sc 3.78 278 P Pn 13 40 56.0 +0.1
KSP Ksiaz 3.78 27 ePn Pn 13 40 55.8 -0.1
KSP Ksiaz 3.78 27 ePg Pg 13 41 08.2 -0.7
KSP eSg Sg 13 41 57.0 -0.8
TOD Tromm 3.79 305 P Pn 13 40 56.4 +0.3
TOD S Sg 13 41 56.9 -1.4
TOD Tromm 3.79 305 P Pn 13 40 56.4 +0.3
CLL Collm 3.81 355 ePn Pn 13 40 56.2 -0.2
SNR=12
CLL i Pg Pg 13 41 09.5 0.0
CLL eSg Sg 13 41 59.1 +0.2
SNR=5.1
CLL Collm 3.81 355 i Pn Pn 13 40 56.3 -0.1
CLL i Pg Pg 13 41 09.5 0.0
CLL i Sg Sg 13 42 00.3 +1.4
CLL Collm 3.81 355 i Pn Pn 13 40 56.3 -0.1
CLL i Pg Pg 13 41 09.5 0.0
CLL i Sg Sg 13 42 00.3 +1.4
comp=Z,37nm,0.6s
CLL i 13 42 04.9
CLL Collm 3.81 355 i Pn Pn 13 40 56.3 -0.1
OKC Ostrava-Krasne 3.82 51 ePN Pn 13 40 58.6 +2.2
OKC ePG Pg 13 41 06.3 -3.4
OKC eSG Sg 13 41 58.4 -0.7
comp=Z,42nm,0.5s
OKC Ostrava-Krasne 3.82 51 Pn Pn 13 40 58.6 +2.2
OKC Ostrava-Krasne 3.82 51 Pg Pg 13 41 06.3 -3.4
OKC Sg Sg 13 41 58.4 -0.7
comp=Z,42nm,0.5s
NEUB Neuenburg 3.88 343 eSg Sg 13 42 01.1 +0.1
SNR=2.8
NEUB Neuenburg 3.88 343 Sg Sg 13 42 01.1 +0.1
SNR=2.8
PIEI Pieia 4.05 191 Pn Pn 13 40 59.2 -0.4
PIEI Pieia 4.05 191 Pn Pn 13 40 59.2 -0.4
comp=Z,96nm,1.9s
PIEI Pieia 4.05 191 Pn Pn 13 40 59.2 -0.4
comp=Z,96nm,1.9s
UBBA Unterbreizbach 4.05 326 eSg Sg 13 42 05.1 -1.5
SNR=2.6
UBBA Unterbreizbach 4.05 326 Sg Sg 13 42 05.1 -1.5
SNR=2.6
CDF Champ du Feu 4.32 284 ePg Pg 13 41 18.4 -0.9
CDF eSn Sn 13 41 51.5 -2.9
CDF eSg Sg 13 42 11.7 -3.6
comp=Z,70nm,0.7s

CDF	**Champ du Feu**	**4.32 284**	*e*Pn	**Pn**	**13 41 03.8 +0.4**
CDF			*e*Pg	**Pg**	**13 41 18.4 -0.9**
CDF			*e*Sn	**Sn**	**13 41 51.5 -2.9**
CDF			*e*Sg	**Sg**	**13 42 11.7 -3.6**
CDF	**Champ du Feu**	**4.32 284**	*e*Pn	**Pn**	**13 41 03.8 +0.4**
CDF	**Champ du Feu**	**4.32 284**	*e*Pg	**Pg**	**13 41 18.4 -0.9**
CDF			*e*Sn	**Sn**	**13 41 51.5 -2.9**
CDF			*e*Sg	**Sg**	**13 42 11.7 -3.6**
	comp=Z,35nm,0.7s				
TNS	**Taunus Mts**	**4.33 311**	*e*Pn	**Pn**	**13 41 04.6 +1.1**
	SNR=26				
TNS			*e*Sn	**Sn**	**13 41 51.3 -3.3**
	SNR=4.3				
TNS	**Taunus Mts**	**4.33 311**	*e*Pn	**Pn**	**13 41 04.3 +0.8**
TNS	**Taunus Mts**	**4.33 311**	*e*Pn	**Pn**	**13 41 04.3 +0.8**
MOF	**Molkenrain**	**4.36 277**	P	**Pn**	**13 41 03.3 -0.6**
MOF	**Molkenrain**	**4.36 277**	P	**Pn**	**13 41 03.3 -0.6**
ECH	**Echery**	**4.37 282**	P	**Pn**	**13 41 04.2 +0.1**
ECH	**Echery**	**4.37 282**	P	**Pn**	**13 41 04.2 +0.1**
HINF	**Hinteralfeld**	**4.55 276**	*e*Pn	**Pn**	**13 41 05.4 -1.1**
HINF			*e*Sn	**Sn**	**13 41 53.8 -6.2**
HINF			*e*Sg	**Sg**	**13 42 21.5 -1.1**
	comp=Z,13nm,0.2s				
HINF	**Hinteralfeld**	**4.55 276**	*e*Pn	**Pn**	**13 41 05.4 -1.1**
HINF			*e*Sg	**Sg**	**13 42 21.5 -1.1**
	comp=Z,6.7nm,0.2s				
ABH	**Alteburg**	**4.64 303**	P	**Pn**	**13 41 08.3 +0.6**
ABH	**Alteburg**	**4.64 303**	P	**Pn**	**13 41 08.3 +0.6**
NRCA	**Norcia**	**4.69 184**	Pn	**Pn**	**13 41 07.8 -0.7**
NRCA	**Norcia**	**4.69 184**	Pn	**Pn**	**13 41 07.8 -0.7**
	comp=Z,3.0nm,0.4s				
NRCA	**Norcia**	**4.69 184**	Pn	**Pn**	**13 41 07.8 -0.7**
	comp=Z,3.0nm,0.4s				
KECS	**Kecovo**	**4.74 76**	*e*Pn	**Pn**	**13 41 09.1 0.0**
KECS			*e*Pg	**Pg**	**13 41 30.6 +3.3**
KECS			*e*Sn	**Sn**	**13 42 01.0 -3.7**
KECS	**Kecovo**	**4.74 76**	*e*PN	**Pn**	**13 41 09.1 0.0**
KECS			*e*PG	**Pg**	**13 41 30.6 +3.3**
KECS			*e*SN	**Sn**	**13 42 01.0 -3.7**
CLZ	**Clausthal**	**4.80 336**	*e*Pg	**Pg**	**13 41 28.9 +0.5**
	SNR=2.7				
CLZ	**Clausthal**	**4.80 336**	Pg	**Pg**	**13 41 28.9 +0.4**
	SNR=2.7				
HAU	**Haudompre**	**4.90 278**	*e*Pn	**Pn**	**13 41 11.3 +0.1**
HAU			*e*Sn	**Sn**	**13 42 04.2 -4.3**
HAU			*e*Sg	**Sg**	**13 42 31.1 -2.6**
	comp=Z,26nm,0.3s				
HAU	**Haudompre**	**4.90 278**	*e*Pn	**Pn**	**13 41 11.3 +0.1**
HAU			*e*Sn	**Sn**	**13 42 04.2 -4.3**
HAU			*e*Sg	**Sg**	**13 42 31.1 -2.6**
	comp=Z,13nm,0.3s				
LPG	**La Plagne**	**5.12 249**	*e*Pn	**Pn**	**13 41 15.9 +1.5**
LPG			*e*Sn	**Sn**	**13 42 10.5 -3.6**
	comp=Z,4.7nm,0.3s				
LPG	**La Plagne**	**5.12 249**	*e*Pn	**Pn**	**13 41 15.9 +1.5**
LPG			*e*Sn	**Sn**	**13 42 10.5 -3.6**
	comp=Z,2.3nm,0.3s				
LPL	**La Plagne**	**5.13 250**	*e*Pn	**Pn**	**13 41 16.0 +1.6**
LPL	**La Plagne**	**5.13 250**	*e*Pn	**Pn**	**13 41 16.0 +1.6**
CABF	**La Chapelle**	**5.19 263**	*e*Pn	**Pn**	**13 41 13.2 -2.1**
CABF			*e*Sn	**Sn**	**13 42 07.7 -8.2**
	comp=Z,14nm,0.5s				
CABF	**La Chapelle**	**5.19 263**	*e*Pn	**Pn**	**13 41 13.2 -2.1**
STHS	**Stebnicka Huta**	**5.45 67**	*e*SG	**Sg**	**13 42 57.8 +6.5**
STON	**Ston**	**5.48 146**	*i* Pn	**Pn**	**13 41 20.9 +1.5**
STON	**Ston**	**5.48 146**	*i* Pn	**Pn**	**13 41 20.8 +1.5**
MBDF	**Montbardon**	**5.49 242**	*e*Pn	**Pn**	**13 41 22.3 +2.9**
MBDF			*e*Sn	**Sn**	**13 42 20.8 -2.3**
	comp=Z,5.5nm,0.4s				
SFTF	**Sexfontaines**	**5.78 280**	*e*Pn	**Pn**	**13 41 21.8 -1.6**
SFTF			*e*Sn	**Sn**	**13 42 25.4 -5.0**
SFTF			*e*Sg	**Sg**	**13 43 00.2 -2.0**
	comp=Z,19nm,0.5s				
SFTF	**Sexfontaines**	**5.78 280**	*e*Pn	**Pn**	**13 41 21.8 -1.6**
PGF	**Pioggiola**	**5.93 215**	*e*Pn	**Pn**	**13 41 25.6 +0.1**
PGF	**Pioggiola**	**5.93 215**	*e*Pn	**Pn**	**13 41 25.6 +0.1**
ORIF	**Oris-en-Rattie**	**5.94 247**	*e*Pn	**Pn**	**13 41 26.5 +1.0**
ORIF			*e*Sn	**Sn**	**13 42 29.8 -4.4**
	comp=Z,5.1nm,0.3s				
ORIF	**Oris-en-Rattie**	**5.94 247**	*e*Pn	**Pn**	**13 41 26.5 +1.0**
FRF	**La Foret Royal**	**6.27 233**	*e*Pn	**Pn**	**13 41 28.0 -2.1**
FRF	**La Foret Royal**	**6.27 233**	*e*Pn	**Pn**	**13 41 28.0 -2.1**
GIVF	**Givet**	**6.33 297**	*e*Sn	**Sn**	**13 42 39.6 -4.2**
	comp=Z,9.7nm,0.2s				
LOR	**Lormes**	**6.60 271**	*e*Pn	**Pn**	**13 41 34.1 -0.5**
LOR			*e*Sn	**Sn**	**13 42 45.6 -4.9**
	comp=Z,3.1nm,0.3s				
LOR	**Lormes**	**6.60 271**	*e*Pn	**Pn**	**13 41 34.1 -0.5**
SMRF	**Simiane la Rot**	**6.62 241**	*e*Pn	**Pn**	**13 41 35.3 +0.4**
SMRF	**Simiane la Rot**	**6.62 241**	*e*Pn	**Pn**	**13 41 35.3 +0.4**
SMF	**Signal de Mont**	**6.70 266**	*e*Pn	**Pn**	**13 41 35.1 -0.9**
SMF			*e*Sn	**Sn**	**13 42 48.1 -4.9**
	comp=Z,6.8nm,0.4s				
SMF	**Signal de Mont**	**6.70 266**	*e*Pn	**Pn**	**13 41 35.1 -0.9**
VIVF	**Saint-Julien-l**	**6.72 250**	*e*Pn	**Pn**	**13 41 35.1 -1.3**
VIVF			*e*Sn	**Sn**	**13 42 48.5 -5.1**
	comp=Z,4.1nm,0.3s				
VIVF	**Saint-Julien-l**	**6.72 250**	*e*Pn	**Pn**	**13 41 35.1 -1.3**
SSF	**Saint Saulge**	**6.86 270**	*e*Pn	**Pn**	**13 41 36.2 -2.0**
SSF	**Saint Saulge**	**6.86 270**	*e*Pn	**Pn**	**13 41 36.2 -2.0**
AVF	**Avril sur Loir**	**7.01 268**	*e*Pn	**Pn**	**13 41 40.5 +0.3**
AVF	**Avril sur Loir**	**7.01 268**	*e*Pn	**Pn**	**13 41 40.5 +0.3**
BGF	**Bois d'Agland**	**7.39 266**	*e*Pn	**Pn**	**13 41 43.9 -1.6**
BGF			*e*Sn	**Sn**	**13 43 05.3 -4.7**
	comp=Z,7.5nm,0.2s				
BGF	**Bois d'Agland**	**7.39 266**	*e*Pn	**Pn**	**13 41 43.9 -1.6**
HYF	**Humbligny**	**7.43 272**	*e*Pn	**Pn**	**13 41 46.1 +0.1**
HYF	**Humbligny**	**7.43 272**	*e*Pn	**Pn**	**13 41 46.1 +0.1**
LASF	**Ste Croix**	**7.61 247**	*e*Pn	**Pn**	**13 41 47.2 -1.3**
LASF	**Ste Croix**	**7.61 247**	*e*Pn	**Pn**	**13 41 47.2 -1.3**
TCF	**Toulx Ste Croi**	**7.88 265**	*e*Pn	**Pn**	**13 41 50.9 -1.3**
TCF			*e*Sn	**Sn**	**13 43 16.4 -5.6**
	comp=Z,2.6nm,0.2s				
TCF	**Toulx Ste Croi**	**7.88 265**	*e*Pn	**Pn**	**13 41 50.9 -1.3**
CAF	**Calviac**	**8.39 256**	*e*Pn	**Pn**	**13 41 57.9 -1.3**
CAF	**Calviac**	**8.39 256**	*e*Pn	**Pn**	**13 41 57.9 -1.3**
MTLF	**Montolieu**	**9.01 247**	*e*Pn	**Pn**	**13 42 06.4 -1.3**
MTLF	**Montolieu**	**9.01 247**	*e*Pn	**Pn**	**13 42 06.4 -1.3**
MFF	**Saint Martin d**	**9.41 269**	*e*Pn	**Pn**	**13 42 11.9 -1.3**
MFF	**Saint Martin d**	**9.41 269**	*e*Pn	**Pn**	**13 42 11.9 -1.3**

*IDC **21** 13:45:14.0±2.3, 7°.44S×109°.75E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML3.6/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/33, Error ellipse: s-maj=137.0km s-min=17.7km az=55.0*
*NEIC **21** 13:45:19.5±0.9, 7°.33S×109°.95E, h35km, mb4.4/2, Error ellipse: s-maj=47.4km s-min=11.1km az=55.0*
NEIC Felt [III] at Kendal, Sukareja and Temanggung.
*ISCJB **21** 13:45:20.3±0.5, 7°.08S±0°.07×110°.22E±0°.05, h54km±5km, mb4.0/8, Error ellipse: s-maj=12.2km s-min=6.1km az=24.8*
*DJA **21** 13:45:20, 7°.11S×110°.21E, h17km, MLv4.4/9*
ISC 21 13:45:21.9±0.5, 7°.08S±0°.07×110°.25E±0°.05, h48km±6km, n34, σ1§20/30, mb4.0/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRI	**Semarang**	**0.20**	**80**	P	**Pn**	**13 45 25.1**	**-4.8**
SMRI				S	**Sn**	**13 45 33.8**	**-1.8**
UGM	**Wanagama**	**0.87**	**162**	P	**Pn**	**13 45 34.1**	**-3.7**
UGM				S	**Sn**	**13 45 49.7**	**+0.3**
NGJI	**Ngawi**	**1.24**	**103**	P	**Pn**	**13 45 42.8**	**0.0**
SJI	**Sawahan**	**1.64**	**113**	P	**Pn**	**13 45 47.8**	**-0.5**
PWJI	**Pagerwojo**	**1.80**	**121**	P	**Pn**	**13 45 49.7**	**-0.8**
PWJI				S	**Sn**	**13 46 14.9**	**+2.6**
JCJI	**Jatiwangi**	**2.05**	**287**	P	**Pn**	**13 45 47.4**	**-6.5**
GRJI	**Gresik**	**2.22**	**86**	P	**Pn**	**13 45 56.6**	**+0.3**
KRKI	**Karangkates**	**2.43**	**116**	P	**Pn**	**13 46 01.0**	**+1.8**
LEM	**Lembang**	**2.62**	**275**	P	**Pn**	**13 45 57.2**	**-4.6**
GMJI	**Gumukmas**	**3.38**	**111**	P	**Pn**	**13 46 14.3**	**+2.1**
DBJI	**Dramaga**	**3.51**	**278**	P	**Pn**	**13 46 13.8**	**-0.2**
KMMI	**Kalianget**	**3.69**	**90**	P	**Pn**	**13 46 15.5**	**-1.0**
ABJI	**Asem Bagus**	**4.02**	**100**	P	**Pn**	**13 46 21.3**	**+0.4**
NBBI	**Negara**	**4.52**	**107**	P	Px	13 46 49.5	
CGJI	**Cibinong**	**4.54**	**276**	P	**Pn**	**13 46 29.3**	**+1.1**
RBSI	**Rajabasa**	**4.64**	**285**	P	**Pn**	**13 46 30.0**	**+0.5**
TPI	**Tanjungpandan**	**5.01**	**329**	P	Px	13 46 43.4	
SRBI	**Singaraja**	**5.02**	**102**	P	Px	13 46 43.4	
KHKI	**Kahang-Kahang**	**5.46**	**104**	P	**Pn**	**13 46 46.7**	**+5.9**
BBKI	**Banjar Baru**	**5.82**	**52**	P	Px	13 47 04.5	
KASI	**Kota Agung**	**5.92**	**285**	P	**Pn**	**13 46 45.5**	**-1.6**
	67nm,1.0s,0.3nm						
LWLI	**Liwa**	**6.49**	**288**	P	Px	13 46 59.2	
MDSI	**Maura Dua**	**6.56**	**293**	P	**Pn**	**13 46 57.8**	**+1.9**
KBKI	**Kotabaru**	**6.99**	**58**	P	Px	13 47 27.4	
KSI	**Kapahiang**	**8.35**	**294**	P	Px	13 47 25.9	
FITZ	**Fitzroy Crossi**	**18.57**	**128**	P	**Pn**	**13 49 35.0**	**-0.7**
	0.1nm,0.3s,baz=294,slow=10.0,SNR=2.8						
FITZ				LR	LR	13 57 35.3	
	comp=Z,106nm,18.9s,baz=322,slow=40						
WRAB	**Tennant Creek**	**26.64**	**121**	*e*P	**P**	**13 50 55.7**	**-0.6**
	4.2nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**27.72**	**336**	P	**P**	**13 51 07.0**	**+1.1**
	1.3nm,0.7s,mb3.7,baz=174,slow=8.7,SNR=11						
ASAR	**Alice Springs**	**28.07**	**129**	P	**P**	**13 51 09.2**	**+0.1**
	2.7nm,0.7s,mb4.0,baz=302,slow=8.5,SNR=29						
ASAR				PcP	PcP	13 54 22.4	-0.5
	0.5nm,0.6s,baz=327,slow=2.1,SNR=5.9						
STKA	**Stephens Creek**	**38.24**	**134**	P	**P**	**13 52 36.6**	**-0.9**
	2.0nm,0.5s,mb4.1,baz=306,slow=11,SNR=5.7						
STKA				LR	LR	14 08 44.0	
	comp=Z,66nm,19.2s,baz=210,slow=37						
SONM	**Songino Array**	**54.78**	**357**	P	**P**	**13 54 47.5**	**+0.8**
	1.0nm,0.8s,mb3.9,baz=177,slow=9.7,SNR=5.7						
MKAR	**Makanchi Array**	**59.11**	**338**	P	**P**	**13 55 15.7**	**-1.7**
	0.2nm,0.3s,mb3.6,baz=81,slow=15,SNR=1.9						
ZALV	**Zalesovo Beam**	**64.47**	**344**	P	**P**	**13 55 53.7**	**+0.4**
	0.8nm,0.4s,mb4.1,baz=298,slow=41,SNR=1.9						
SBA	**Scott Base**	**76.37**	**170**	*e*P	**P**	**13 57 03.7**	**-1.9**
	5.6nm,0.7s,mb4.6						

*ISCJB **21** 13:45:30.0±0.9, 37°.95N±0°.04×36°.17E±0°.06, h10km, Error ellipse: s-maj=7.1km s-min=5.0km az=19.7*
*CSEM **21** 13:45:30.7±0.5, 37°.95N×36°.17E, h2km, MD2.5, Error ellipse: s-maj=11.7km s-min=6.7km az=107.0*
*ISK **21** 13:45:33.3, 37°.74N×36°.22E, h6km, MD2.5*
*DDA **21** 13:45:34.3, 37°.68N×36°.15E, h3km±3km, Md2.8*
ISC 21 13:45:30.6±0.9, 37°.95N±0°.04×36°.15E±0°.06, h10km, n10, σ1§03/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.40**	**157**	*i* P	**Pg**	**13 45 38.3**	**-0.1**
ANDN				*i* S	**Sg**	**13 45 41.4**	**-2.3**
ANDN	**Andirin**	**0.40**	**157**	*i* P	**Pg**	**13 45 38.3**	**-0.1**
ANDN				*i* S	**Sg**	**13 45 41.4**	**-2.3**
KOZT	**Kozan**	**0.53**	**209**	*e*PG	**Pg**	**13 45 42.5**	**+1.6**
KOZT				*e*SG	**Sg**	**13 45 47.3**	**-0.6**
KMRS	**Kahramanmaras**	**0.74**	**126**	*e*PG	**Pg**	**13 45 45.0**	**+0.2**
KMRS				*e*SG	**Sg**	**13 45 53.7**	**-0.8**
KMRS	**Kahramanmaras**	**0.74**	**126**	*e*Pg	**Pg**	**13 45 45.1**	**+0.2**
KMRS				*e*Sg	**Sg**	**13 45 53.7**	**-0.8**
SARI	**SarD1z-Kayseri**	**0.85**	**30**	*e*PG	**Pg**	**13 45 46.6**	**-0.3**
SARI				*e*SG	**Sg**	**13 45 57.2**	**-0.8**
SARI	**SarD1z-Kayseri**	**0.85**	**30**	*e*Pg	**Pg**	**13 45 46.7**	**-0.2**
SARI				*e*Sg	**Sg**	**13 45 57.2**	**-0.8**
GZT	**Gaziantep**	**1.27**	**117**	*i* P	**Pg**	**13 45 56.0**	**+1.1**
GZT				*i* S	**Sg**	**13 46 12.8**	**+1.4**
KUZU	**Kuzuini**	**1.38**	**148**	*i* P	**Pg**	**13 45 57.4**	**+0.2**
KUZU	**Kuzuini**	**1.38**	**148**	*i* P	**Pg**	**13 45 57.4**	**+0.3**

*IDC **21** 13:59:05.9±0.5, 31°.33N×103°.92E, h0km, mb4.4/24, mb1 4.4/26, mb1mx4.4/30, mbtmp4.4/26, ML3.9/2, MS3.5/7, Ms1 3.6/7, ms1mx3.2/28, Error ellipse: s-maj=19.2km s-min=10.4km az=49.0*
*NEIC **21** 13:59:07.8±0.2, 31°.40N×103°.98E, h10km, mb4.6/37, Error ellipse: s-maj=4.4km s-min=4.1km az=63.0*
*BJI **21** 13:59:07.5, 31°.36N×104°.01E, h13km, mB4.7/25, mb4.6/31, ML4.5/23, Ms4.3/39, Ms7 4.1/37*
*ISCJB **21** 13:59:08.9±0.7, 31°.36N±0°.02×103°.94E±0°.03, h31km±5km, mb4.6/79, MS3.8/14, Error ellipse: s-maj=3.9km s-min=3.6km az=174.9*
*MOS **21** 13:59:09.0±0.8, 31°.37N×103°.94E, h32km, mb4.8/48, Error ellipse: s-maj=8.7km s-min=5.2km az=104.4*
ISC 21 13:59:09.5±0.8, 31°.37N±0°.02×103°.91E±0°.03, h19km±5km, h18km±1.5km:pP-P, n211, σ1§00/229, mb4.6/79, MS3.8/14, 25C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**196**	Pg	**Pg**	**13 59 17.9**	**-1.4**
CD2				Sg	**Sg**	**13 59 24.5**	**-1.3**
CD2				smax			
	comp=N,19μm,0.8s						
LZH	**Lanzhou**	**4.70**	**359**	*e*Pn	**Pn**	**14 00 22.3**	**+2.9**
LZH				Pg	**Pg**	**14 00 34.4**	**-5.2**
LZH				Sn	**Sn**	**14 01 14.8**	**+1.4**
LZH				Sg	**Sb**	**14 01 31.8**	**+4.2**
LZH				smax			
	comp=N,500nm,1.0s						
LZH				smax			
	comp=E,420nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.6s						
LZH				LR	LR		
	comp=Z,2μm,7.8s						
ENH	**Enshi**	**4.92**	**101**	*e*Pn	**Pn**	**14 00 22.4**	**-0.1**
XAN	**Xi'an**	**4.99**	**56**	Pn	**Pn**	**14 00 22.4**	**-1.0**
XAN				Pg	**Pb**	**14 00 37.6**	**+1.3**
XAN				Sn	**Sn**	**14 01 19.4**	**-1.1**
XAN				Sg	**Sg**	**14 01 42.9**	**-6.9**
XAN				smax			
	comp=N,700nm,0.8s						
XAN				smax			
	comp=E,540nm,0.9s						
GYA	**Guiyang**	**5.46**	**153**	Pn	**Pn**	**14 00 32.8**	**+3.0**
GYA				Sn	**Sn**	**14 01 37.3**	**+5.3**
GYA				smax			
	comp=N,580nm,0.6s						
GYA				smax			
	comp=E,640nm,0.7s						
GYA				LR	LR		
	comp=N,1μm,2.5s						
GYA				LR	LR		
	comp=E,2μm,4.1s						
GYA				LR	LR		
	comp=Z,980nm,2.8s						
KMI	**Kunming**	**6.31**	**190**	Pn	**Pn**	**14 00 42.4**	**+0.9**
KMI				Sn	**Sn**	**14 01 53.4**	**+0.4**
KMI				smax			
	comp=N,150nm,0.6s						
KMI				smax			
	comp=E,220nm,0.6s						
KMI				LR	LR		
	comp=N,950nm,9.4s						
KMI				LR	LR		
	comp=E,1μm,8.6s						
KMI				LR	LR		
	comp=Z,870nm,7.9s						
GTA	**Gaotai**	**8.69**	**339**	*e*P	**Pn**	**14 01 16.3**	**+2.2**
GTA				pP		14 01 20.6	
GTA				sP		14 01 24.1	
GTA				S	**Sn**	**14 02 54.0**	**+2.5**
GTA				sS		14 03 01.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,58nm,4.8s						
GTA				LR	LR		
	comp=N,1μm,11.7s						
GTA				LR	LR		
	comp=E,870nm,8.4s						
GTA				LR	LR		
	comp=Z,2μm,14.1s						
WHN	**Wuhan**	**9.00**	**93**	P	**Pn**	**14 01 14.5**	**-4.0**
WHN				S	**Sn**	**14 02 53.3**	**-6.0**
WHN				LR	LR		
	comp=N,4μm,2.6s						
WHN				LR	LR		
	comp=E,2μm,2.4s						
WHN				LR	LR		
	comp=Z,3μm,3.0s						
BTO	**Baotou**	**10.46**	**27**	*e*P	**Pn**	**14 01 42.5**	**+4.2**
BTO				S	**Sn**	**14 03 36.1**	**+1.2**
BTO				LR	LR		
	comp=N,290nm,11.0s						
BTO				LR	LR		
	comp=E,220nm,8.6s						
LSA	**Lhasa**	**11.13**	**265**	P	**Pn**	**14 01 49.4**	**+1.8**
LSA				pP		14 01 55.0	
LSA				S	**Sn**	**14 04 05.1**	**+14**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA				pmax	pmax		
	comp=Z,50nm,5.0s						
LSA				LR	LR		
	comp=N,290nm,9.0s						
LSA				LR	LR		
	comp=E,920nm,10.0s						
LSA				LR	LR		
	comp=Z,1μm,10.0s						
LSA	**Lhasa**	**11.13**	**265**	*e*P	**Pn**	**14 01 49.7**	**+2.1**
LSA				pmax	pmax		
	comp=Z,12nm,0.7s						
LSA	**Lhasa**	**11.13**	**265**	*e*Pn	**Pn**	**14 01 49.7**	**+2.2**
	comp=Z,12nm,0.7s						
HHC	**Hu-ho-hao-te**	**11.30**	**31**	*e*P	**Pn**	**14 01 49.5**	**-0.3**
HHC				pP		14 01 56.5	
HHC				sP		14 02 01.4	
HHC				S	**Sn**	**14 03 56.1**	**+0.6**
HHC				sS		14 04 06.8	
HHC				SS		14 04 11.3	
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
HHC				LR	LR		
	comp=N,680nm,4.5s						
HHC				LR	LR		
	comp=E,430nm,5.3s						
HHC				LR	LR		
	comp=Z,560nm,5.7s						
SHL	**Shillong**	**12.05**	**244**	*e*P	**Pn**	**14 02 01.0**	**+0.8**
NJ2	**Nanjing**	**12.74**	**83**	*e*P	**Pn**	**14 02 14.1**	**+4.4**
NJ2				PP		14 02 25.4	
NJ2				S	**Sn**	**14 04 37.1**	**+6.1**
NJ2				sS		14 04 42.3	
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,60nm,4.0s						
NJ2				LR	LR		
	comp=N,430nm,10.0s						
NJ2				LR	LR		
	comp=E,1μm,11.2s						
NJ2				LR	LR		
	comp=Z,1μm,13.3s						
BJI	**Beijing**	**13.19**	**46**	P	**Pn**	**14 02 15.1**	**-0.6**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=N,630nm,4.8s						
BJI				LR	LR		
	comp=E,450nm,6.3s						
BJI				LR	LR		
	comp=Z,120nm,19.9s						
CHG	**Chiang Mai**	**13.28**	**201**	⇑P	**Pn**	**14 02 18.8**	**+1.7**
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**13.28**	**201**	*e*P	**Pn**	**14 02 18.7**	**+1.6**
CHTO				pmax	pmax		
	comp=Z,22nm,1.0s						
CHTO	**Chiang Mai**	**13.28**	**201**	*e*Pn	**Pn**	**14 02 18.7**	**+1.6**
	comp=Z,22nm,1.0s						
QIZ	**Qiongzhong**	**13.41**	**155**	P	**Pn**	**14 02 18.9**	**+0.1**
QIZ				S	**Sn**	**14 04 48.9**	**+1.6**
QIZ				sS		14 05 01.0	
QIZ				SS		14 05 05.9	
QIZ				pmax	pmax		
	comp=Z,12nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,92nm,3.7s						
QIZ				LR	LR		
	comp=N,510nm,8.2s						
QIZ				LR	LR		
	comp=Z,690nm,10.8s						
CM31	**Chiang Mai Arr**	**13.62**	**200**	*e*Pn	**Pn**	**14 02 23.1**	**+1.4**
	comp=Z,26nm,0.9s						
CM31				*e*pP		14 02 31.3	
CMAR	**Chiang Mai Arr**	**13.62**	**200**	Pn	**Pn**	**14 02 21.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=9.8,slow=11,SNR=40						
CMAR				PcP	PcP	14 07 46.2	-0.7
	comp=Z,0.2nm,0.3s,baz=304,slow=2.4,SNR=7.3						
CMAR				LR	LR	14 08 26.1	
	comp=Z,88nm,18.4s,baz=20,slow=41						
CMAR				ScP	ScP	14 11 19.7	+0.3
	comp=Z,0.1nm,0.3s,baz=322,slow=2.1,SNR=4.8						
QZH	**Quanzhou**	**14.44**	**113**	P	**Pn**	**14 02 35.4**	**+2.5**
QZH				S	**Sn**	**14 05 14.5**	**+2.0**
QZH				LR	LR		
	comp=N,1μm,7.5s						
QZH				LR	LR		
	comp=E,2μm,7.8s						
QZH				LR	LR		
	comp=Z,3μm,11.1s						
BDT	**Bhumibol Dam**	**14.75**	**199**	P	**Pn**	**14 02 41.5**	**+4.3**
	comp=Z,16nm,0.8s						
SSE	**Sheshan**	**14.79**	**87**	P	**Pn**	**14 02 38.3**	**+0.7**
SSE				S	**Sn**	**14 05 21.0**	**+0.1**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,67nm,5.7s						
SSE				LR	LR		
	comp=N,1μm,12.8s						
SSE				LR	LR		
	comp=E,260nm,12.8s						
SSE				LR	LR		
	comp=Z,710nm,12.5s						
NST	**Nakhon Sawan**	**16.00**	**193**	P	**Pn**	**14 02 47.3**	**-6.3**
SONM	**Songino Array**	**16.55**	**6**	Pn	**Pn**	**14 02 59.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=23						
SONM				LR	LR	14 09 59.8	
	comp=Z,326nm,19.1s,baz=188,slow=39						
ULN	**Ulaanbaatar**	**16.65**	**7**	*e*P	**Pn**	**14 03 01.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	**Ulaanbaatar**	**16.65**	**7**	*e*P	**Pn**	**14 03 01.4**	**-0.2**
	comp=Z,15nm,1.3s						
YHNB	**Yeheng**	**16.80**	**109**	*e*P	**Pn**	**14 03 07.5**	**+3.8**
	comp=Z,19nm,0.7s						
SSLB	**Suanglung**	**16.88**	**112**	*e*P	**Pn**	**14 03 08.0**	**+3.3**
	comp=Z,56nm,0.9s						
WMQ	**Urumqi**	**17.84**	**319**	*e*P	**Pn**	**14 03 17.8**	**+1.3**
WMQ				pP	pP	14 03 25.9	+3.3
WMQ				PP		14 03 33.8	
WMQ				S	**Sn**	**14 06 32.8**	**-1.9**
WMQ				sS	sS	14 06 47.8	-2.1
WMQ				SS		14 06 55.8	
WMQ				PcP	PcP	14 07 55.5	+2.7
WM

CN2 *e*S **S** **14 07 39.0 -6.3**
CN2 pmax pmax
comp=Z,30nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,10.0s,MS4.0
CN2 LR LR
comp=E,200nm,10.0s,MS4.0
CN2 LR LR
comp=Z,300nm,12.0s,MS3.9
HIA Hailar 21.49 29 *e*P **P** **14 03 56.9 0.0**
HIA pmax pmax
comp=Z,13nm,0.6s
HIA Hailar 21.49 29 *e*P **P** **14 03 56.9 0.0**
comp=Z,13nm,0.6s,mb4.5
JOW Kunigami 21.75 96 P **P** **14 04 00.6 +0.7**
comp=Z,6.2nm,0.4s,mb4.4,baz=271,slow=10,SNR=5.1
MK31 Makanchi Array 22.67 319 *e*P **P** **14 04 09.9 +0.4**
MKAR Makanchi Array 22.67 319 P **P** **14 04 10.0 +0.5**
comp=Z,12nm,0.7s,mb4.4,baz=123,slow=10,SNR=83
MKAR Makanchi Array 22.67 319 P **P** **14 04 10.0 +0.5**
MKAR pmax pmax
comp=Z,12nm,0.7s
MDJ Mudanjiang 24.06 49 P **P** **14 04 23.9 +0.5**
MDJ pP 14 04 32.5
MDJ sP sP 14 04 36.3 +4.6
MDJ S **S** **14 08 39.8 +0.1**
MDJ ScP ScP 14 11 40.8 -1.2
MDJ pmax pmax
comp=Z,17nm,1.1s,mb4.4
MDJ pmax pmax
comp=Z,16nm,3.5s
MDJ LR LR
comp=Z,62nm,19.3s,MS3.1
MDJ Mudanjiang 24.06 49 *e*P **P** **14 04 23.9 +0.5**
comp=Z,27nm,1.1s,mb4.6
KSH Kashi 24.10 297 *e*P **P** **14 04 27.1 +3.3**
KSH *e*pP 14 04 31.1
KSH *e*sP sP 14 04 34.1 +2.0
KSH *e*PP 14 05 01.1
KSH *e*PcP PcP 14 08 10.1 +5.3
KSH *e*S **S** **14 08 39.8 -0.6**
KSH pmax pmax
comp=Z,11nm,0.8s,mb4.3
KSH pmax pmax
comp=Z,110nm,3.5s
KSH LR LR
comp=N,200nm,8.1s
KSH LR LR
comp=E,170nm,6.7s
KSH LR LR
comp=Z,120nm,5.3s
ULHL Ulahol 24.57 304 P **P** **14 04 29.8 +1.8**
SNR=10
VLA Vladivostok 25.06 54 *c*e*P* **P** **14 04 32.5 0.0**
VLA pmax pmax
comp=Z,38nm,1.7s,mb4.7
TKM2 Tokmak 2 25.22 305 P **P** **14 04 35.6 +1.6**
SNR=6.4
KZA Kyzart 25.23 303 P **P** **14 04 36.2 +2.2**
SNR=20
KBK Karagaybulak 25.60 304 P **P** **14 04 39.4 +2.0**
SNR=7.7
UCH Uchtor 25.79 303 P **P** **14 04 41.6 +2.4**
SNR=13
UCH Uchtor 25.79 303 *e*P **P** **14 04 40.6 +1.4**
comp=Z,10nm,0.9s,mb4.4
AAK Ala-Archa 25.92 304 P **P** **14 04 41.4 +1.0**
comp=Z,1.6nm,0.4s,mb3.9,baz=103,slow=5.5,SNR=6.6
AAK Ala-Archa 25.92 304 P **P** **14 04 41.4 +1.1**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
AAK Ala-Archa 25.92 304 P **P** **14 04 41.4 +1.1**
comp=Z,4.0nm,0.8s,mb4.0
AML Almayashu 26.36 303 P **P** **14 04 46.1 +1.8**
SNR=5.2
AML Almayashu 26.36 303 *e*P **P** **14 04 45.8 +1.5**
comp=Z,7.3nm,1.0s,mb4.2
ZAA0 Zalesovo Array 26.41 334 *e*P **P** **14 04 44.5 -0.1**
ZALV Zalesovo Beam 26.41 334 P **P** **14 04 44.7 +0.1**
comp=Z,14nm,0.8s,mb4.6,baz=134,slow=8.5,SNR=40
ZALV Zalesovo Beam 26.41 334 P **P** **14 04 44.7 +0.1**
ZALV pmax pmax
comp=Z,14nm,0.8s,mb4.5
HYB Hyderabad 26.86 245 *i* P **P** **14 04 47.0 -2.1**
KURK Kurchatov 26.93 323 P **P** **14 04 48.8 -0.6**
comp=Z,13nm,0.8s,mb4.5,baz=131,slow=9.1,SNR=42
KURK PcP PcP 14 08 09.8 -1.2
comp=Z,2.5nm,0.7s,baz=113,slow=2.0,SNR=5.5
KURK Kurchatov 26.93 323 P **P** **14 04 48.8 -0.6**
KURK 14 08 09.8
KURK pmax pmax
comp=Z,13nm,0.9s,mb4.5
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
KURK Kurchatov 26.93 323 *e*P **P** **14 04 49.4 0.0**
comp=Z,20nm,1.1s,mb4.6
BOD Bodaibo 27.34 12 *e*P **P** **14 04 52.6 -0.4**
BOD pmax pmax
comp=Z,3.0nm,1.5s,mb3.6
KLR Kul'dur 27.50 42 *e*P **P** **14 04 54.7 +0.2**
KLR MLR MLR
comp=Z,800nm,13.0s,MS4.5
NVS Novosibirsk 27.69 334 *e*P **P** **14 04 53.9 -2.2**
MJAR Matsushiro Arr 28.82 70 P **P** **14 05 05.9 -0.5**
comp=Z,1.5nm,0.9s,mb3.7,baz=286,slow=9.0,SNR=4.9
MJAR LR LR 14 15 37.7
comp=Z,85nm,21.3s,MS3.3,baz=255,slow=34
MJAR Matsushiro Arr 28.82 70 P **P** **14 05 05.9 -0.5**
MJAR pmax pmax
comp=Z,2.0nm,0.9s
MJAR MLR MLR
comp=Z,85nm,21.3s
KBL Kabul 29.34 286 *e*P **P** **14 05 12.4 +1.3**
KBL pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
KBL Kabul 29.34 286 *e*P **P** **14 05 12.4 +1.4**
comp=Z,9.2nm,0.7s,mb4.6
BVAR Borovoye Array 32.48 322 P **P** **14 05 38.8 +0.3**
comp=Z,2.2nm,0.6s,mb4.2,baz=120,slow=8.8,SNR=17
BVAR PcP PcP 14 08 24.4 -0.8
comp=Z,1.7nm,0.5s,baz=140,slow=3.3,SNR=8.6
BVAR LR LR 14 19 49.9
comp=Z,181nm,18.7s,MS3.8,baz=300,slow=38
BVAR Borovoye Array 32.48 322 P **P** **14 05 38.8 +0.3**
BVAR 14 08 24.4
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR MLR MLR
comp=Z,181nm,18.7s
BRVK Borovoye 32.55 322 *e*P **P** **14 05 39.5 +0.3**
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
BRVK Borovoye 32.55 322 *e*P **P** **14 05 39.5 +0.3**
comp=Z,4.6nm,0.6s,mb4.6
YSS Yuzh-Sakhalins 33.52 51 *e*P **P** **14 05 48.4 +0.7**
YSS pmax pmax
comp=Z,38nm,1.3s,mb5.2
YAK Yakutsk 34.92 21 *e*P **P** **14 05 58.7 -0.9**
YAK pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ABKAR Akbulak array 37.37 311 *e*P **P** **14 06 20.6 -0.1**
comp=Z,3.7nm,0.6s,mb4.4
AKTK Aktyubinsk 38.83 313 P **P** **14 06 33.2 +0.2**
AKTK PcP PcP 14 08 43.0 -1.0
AKTO Aktyubinsk 38.83 313 P **P** **14 06 33.2 +0.2**
comp=Z,3.4nm,0.5s,mb4.3,baz=96,slow=9.0,SNR=14
AKTO PcP PcP 14 08 43.0 -1.0
comp=Z,1.5nm,0.6s,baz=92,slow=4.3,SNR=3.5
AKTO Aktyubinsk 38.83 313 P **P** **14 06 33.3 +0.2**
AKTO 14 08 43.0
AKTO pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
SVE Sverdlovsk 39.19 323⇑ *e*P **P** **14 06 36.9 +1.0**
SVE pmax pmax
comp=Z,21nm,1.0s,mb4.8
KAPI Kappang 39.21 155 P **P** **14 06 34.8 -1.8**
comp=Z,8.9nm,0.8s,mb4.5,baz=286,slow=7.4,SNR=3.4
ARU Arti 40.12 322 *c i*P **P** **14 06 43.7 0.0**
ARU S **S** **14 12 49.4 +0.5**
ARU SS SS 14 15 38.8 -7.7
ARU pmax pmax
comp=Z,18nm,1.0s,mb4.8
ARU Arti 40.12 322 *e*P **P** **14 06 43.7 0.0**
comp=Z,15nm,0.9s,mb4.7
SOKR Solikamsk 42.08 326 *c i*P **P** **14 07 00.2 +0.4**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.8
TIXI Tiksi 42.52 11 *e*P **P** **14 07 02.0 -1.3**
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TIXI MLR MLR
comp=Z,220nm,18.0s,MS4.1
TIXI Tiksi 42.52 11 *e*P **P** **14 07 01.7 -1.6**
comp=Z,2.3nm,0.5s,mb4.2
PETK Petropavlovsk- 44.12 44 LR LR 14 28 00.1
comp=Z,62nm,18.4s,MS3.5,baz=50,slow=39
MIB Mutribah 48.26 284 *e*P **P** **14 07 48.3 -1.1**
MIB AMb AMB 14 07 50.5
comp=Z,49nm,1.0s,mb5.5
RDF Al-Radifah 48.34 282 *e*P **P** **14 07 49.4 -0.6**
RDF AMb AMB 14 07 50.6
comp=Z,80nm,0.9s,mb5.8
NAY Al-Naaiem 48.50 283 *e*P **P** **14 07 50.6 -0.6**
NAY AMb AMB 14 07 52.2
comp=Z,48nm,0.8s,mb5.6
KIV Kislovodsk 49.03 303 *e*P **P** **14 07 55.9 +0.9**
KIV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KIV MLR MLR
comp=Z,76nm,17.0s,MS3.8
VRHR Novokhopersk 49.24 313 *e*P **P** **14 07 55.8 -0.7**
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.4s
VORD Divnogorie 50.72 312 *e*P **P** **14 08 06.6 -1.1**
VORD pmax pmax
comp=N,5.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
VSR Storozhevoye 50.78 313 *e*P **P** **14 08 07.4 -0.8**
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.8s
BILL Bilibino 51.01 25⇑ *e*P **P** **14 08 08.8 -0.9**
BILL *e* pP 14 08 15.3 -0.5
BILL pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.0
BILL Bilibino 51.01 25 *e*P **P** **14 08 08.6 -1.1**
comp=Z,13nm,1.4s,mb4.7
OBN Obninsk 52.17 318⇑ *e*P **P** **14 08 18.6 0.0**
OBN *i* pP 14 08 23.5 -1.2
OBN pmax pmax
comp=Z,12nm,0.4s,mb5.2
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.9
KNA Kununurra 52.58 149 *e*P **P** **14 08 21.4 -0.6**
comp=Z,14nm,0.6s,mb5.1
FITZ Fitzroy Crossi 53.43 154 *e*P **P** **14 08 27.3 -0.9**
comp=Z,4.5nm,0.4s,mb4.8
APA Apatity 53.99 333⇑ *i*P **P** **14 08 31.0 -0.8**
APA *e*S **S** **14 15 56.0 -10**
APA pmax pmax
comp=Z,15nm,1.0s,mb4.9
APA MLR MLR
comp=Z,500nm,14.0s,MS4.7
JOF Joensuu 54.71 328 *e*P **P** **14 08 36.1 -1.0**
JOF pmax pmax
comp=Z,11nm,0.6s,mb5.1
JOF Joensuu 54.71 328 *e*p **P** **14 08 36.1 -1.0**
comp=Z,11nm,0.6s,mb5.0
KEV Kevo 56.42 336 *e*P **P** **14 08 48.3 -1.0**
KEV pmax pmax
comp=Z,11nm,0.7s,mb5.0
KEV Kevo 56.42 336 *e*p **P** **14 08 48.3 -1.0**
comp=Z,11nm,0.7s,mb5.0
BR131 Keskin Array S 56.47 299 *e*P **P** **14 08 50.0 -0.1**
comp=Z,1.1nm,0.6s,mb4.1
BRTR Keskin Array B 56.47 299 P **P** **14 08 49.9 -0.2**
comp=Z,1.5nm,0.8s,mb4.1,baz=91,slow=6.4,SNR=9.8
BRTR Keskin Array B 56.47 299 P **P** **14 08 49.9 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 56.95 336 P **P** **14 08 52.6 -0.4**
comp=Z,6.6nm,0.7s,mb4.8,baz=81,slow=7.7,SNR=29
ARCES PcP PcP 14 09 47.5 -0.7
comp=Z,1.8nm,0.5s,baz=81,slow=4.3,SNR=8.2
ARCES ARCESS Array B 56.95 336 P **P** **14 08 52.7 -0.3**
ARCES 14 09 47.5
ARCES pmax pmax
comp=Z,7.0nm,0.7s
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 56.95 336 P **P** **14 08 52.6 -0.4**
ARCES PcP PcP 14 09 47.5 -0.7
MMAI Mount Meron Ar 57.03 291 P **P** **14 08 55.3 +1.1**
comp=Z,0.5nm,0.3s,mb4.0,baz=35,slow=42,SNR=2.5
KAF Kangasniemi 57.08 327 *e*P **P** **14 08 53.4 -0.6**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KAF Kangasniemi 57.08 327 *e*p **P** **14 08 53.4 -0.6**
comp=Z,7.7nm,0.7s,mb4.8,baz=84,slow=6.8
AKASG Malin Array Be 57.08 313 P **P** **14 08 53.5 -0.7**
comp=Z,2.4nm,0.6s,mb4.4,baz=71,slow=5.9,SNR=6.3
AKASG Malin Array Be 57.08 313 P **P** **14 08 53.6 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 57.25 326 P **P** **14 08 54.8 -0.5**
comp=Z,7.6nm,0.6s,mb4.9,baz=94,slow=8.0,SNR=32
FINES FINESS Array B 57.25 326 P **P** **14 08 54.8 -0.5**
FINES pmax pmax
comp=Z,8.0nm,0.6s
VSU Vasula 57.28 322 *c e*P **P** **14 08 55.0 -0.6**
VSU pmax pmax
comp=Z,15nm,0.6s,mb5.2
IDID Didziasalis 57.75 319 *e*P **P** **14 08 59.0 +0.1**
IIGN Ignalina 58.03 319 *e*P **P** **14 09 01.1 +0.2**
ISAL Salakas 58.05 319 *e*P **P** **14 09 00.3 -0.7**
COEN Coen 58.75 134 *e*P **P** **14 09 05.6 -0.8**
WRAB Tennant Creek 58.78 146 *e*P **P** **14 09 05.9 -0.6**
WRAB pmax pmax
comp=Z,13nm,0.6s,mb5.1
WRAB Tennant Creek 58.78 146 *e*P **P** **14 09 05.9 -0.6**
comp=Z,13nm,0.6s,mb5.1
SPB4 Spitsbergen Ar 59.04 346 *e*P **P** **14 09 07.2 -0.4**
KWP Kalwaria Pacla 61.40 313 *e*P **P** **14 09 24.7 +0.5**
KWP *e* pP 14 09 29.4 -1.0
KWP Kalwaria Pacla 61.40 313 *e*P **P** **14 09 24.3 +0.1**
KWP pmax pmax
comp=Z,19nm,1.3s,mb5.1
KWP Kalwaria Pacla 61.40 313 *e*P **P** **14 09 24.3 +0.1**
comp=Z,19nm,1.3s,mb5.1
ASAR Alice Springs 61.80 149 P **P** **14 09 26.9 -0.3**
comp=Z,2.1nm,0.7s,mb4.3,baz=336,slow=6.6,SNR=31
ASAR Alice Springs 61.80 149 P **P** **14 09 26.9 -0.2**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
STHS Stebnicka Huta 62.38 313 *e*P **P** **14 09 31.0 +0.2**
STHS *e* pP 14 09 37.4 +0.3
STHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.2
STHS Stebnicka Huta 62.38 313 *e*P **P** **14 09 31.0 +0.2**
comp=Z,3.3nm,1.4s,mb4.3
STHS *e* pP 14 09 37.4 +0.3
STHS Stebnicka Huta 62.38 313 *e*P **P** **14 09 31.0 +0.2**
STHS *e*pP pP 14 09 37.4 +0.3
VYHS Vyhne 64.17 313 *e*P **P** **14 09 42.8 +0.1**
VYHS *e* 14 09 52.3
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
VYHS Vyhne 64.17 313 *e*P **P** **14 09 42.8 +0.1**
comp=Z,2.4nm,0.9s,mb4.2
VYHS *e* 14 09 52.3
VYHS Vyhne 64.17 313 *e*P **P** **14 09 42.8 +0.1**
VYHS *e* 14 09 52.3
NB2 NORSAR Subarra 64.34 327 P **P** **14 09 42.0 -1.6**
comp=Z,3.7nm,0.6s,mb4.6,baz=73,slow=6.9
NOA NORSAR Array B 64.34 327 P **P** **14 09 42.3 -1.2**
comp=Z,4.5nm,0.7s,mb4.6,baz=74,slow=6.7,SNR=27
NOA LR LR 14 39 25.1
comp=Z,27nm,20.5s,MS3.4,baz=85,slow=38
NOA NORSAR Array B 64.34 327 P **P** **14 09 42.3 -1.3**
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA MLR MLR
comp=Z,27nm,20.5s
NWAO Narrogin (SRO) 65.18 168 P **P** **14 09 48.0 -1.3**
comp=Z,6.4nm,0.8s,mb4.7,baz=331,slow=12,SNR=7.2
NWAO Narrogin (SRO) 65.18 168 P **P** **14 09 48.0 -1.2**
NWAO pmax pmax
comp=Z,6.0nm,0.8s
CTA Charters Tower 65.33 136 P **P** **14 09 50.5 0.0**
comp=Z,3.2nm,0.8s,mb4.4
CTA Charters Tower 65.33 136 P **P** **14 09 50.5 0.0**
CTA pmax pmax
comp=Z,3.0nm,0.8s
CTA Charters Tower 65.33 136 P **P** **14 09 50.5 0.0**
BRG Berggiesshubel 66.35 316 *e*P **P** **14 09 56.4 -0.4**
comp=Z,4.8nm,0.8s,mb4.6
BRG *e* pP 14 10 01.0 -2.1
comp=Z,3.5nm,0.8s
BRG Berggiesshubel 66.35 316 *e*P **P** **14 09 56.3 -0.5**
BRG *e* pP 14 10 01.0 -2.1
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
CLL Collm 66.75 317 *e*P **P** **14 09 58.0 -1.3**
CLL *e* pP 14 10 04.0 -1.6
CLL Collm 66.75 317 *e*P **P** **14 09 58.0 -1.3**
CLL *e*pP pP 14 10 04.0 -1.6
CLL *e*PcP PcP 14 10 27.0 -1.2
TTA Tatalina 66.91 29 *e*P **P** **14 09 59.9 -0.2**
TTA pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
TTA Tatalina 66.91 29 *e*P **P** **14 09 59.9 -0.3**
comp=Z,9.0nm,1.1s,mb4.7
GERES GERESS Array B 67.24 314 P **P** **14 10 02.2 -0.3**
comp=Z,1.5nm,0.7s,mb4.2,baz=54,slow=6.8,SNR=12
GERES GERESS Array B 67.24 314 P **P** **14 10 02.2 -0.3**
GERES pmax pmax
comp=Z,2.0nm,0.7s
COLD Coldfoot 67.30 24 *e*P **P** **14 10 02.2 -0.3**
comp=Z,8.8nm,0.9s,mb4.8
SVW2 Sparrevohn 67.85 31 *e*P **P** **14 10 06.3 +0.2**
CHUM Lake Minchumin 68.02 28 *e*P **P** **14 10 06.9 -0.2**
comp=Z,6.8nm,0.8s,mb4.7
PPLA Purkeypile 68.51 29 *e*P **P** **14 10 09.8 -0.3**
comp=Z,11nm,0.7s,mb4.9
TRF Thorofare Moun 69.02 28 *e*P **P** **14 10 13.2 -0.1**
comp=Z,2.9nm,0.7s,mb4.3
COLA College 69.26 26 *e*P **P** **14 10 14.5 -0.3**
COLA pmax pmax
comp=Z,14nm,0.8s,mb4.9
COLA College 69.26 26 *e*P **P** **14 10 14.5 -0.3**
comp=Z,14nm,0.8s,mb4.9
RSO Redoubt South 69.38 31 P **P** **14 10 16.3 +0.7**
MCK McKinley 69.41 27 *e*P **P** **14 10 15.2 -0.6**
MCK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MCK McKinley 69.41 27 *e*P **P** **14 10 15.2 -0.6**
comp=Z,4.9nm,0.8s,mb4.5
KDAK Kodiak Island 70.71 33 *i* P **P** **14 10 23.2 -0.6**
KMBO Kilima Mbogo 70.81 256 P **P** **14 10 25.2 0.0**
comp=Z,1.7nm,0.7s,mb4.1,baz=179,slow=23,SNR=4.2
KMBO Kilima Mbogo 70.81 256 P **P** **14 10 25.2 0.0**
KMBO pmax pmax
comp=Z,2.0nm,0.7s
PAX Paxson 71.15 27 *e*P **P** **14 10 25.2 -1.2**
PAX pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
PAX Paxson 71.15 27 *e*P **P** **14 10 25.2 -1.2**
comp=Z,2.5nm,0.7s,mb4.2
CDF Champ du Feu 71.31 316⇑ *i*P **P** **14 10 27.0 -0.7**
comp=Z,7.5nm,0.6s,mb4.5
CDF Champ du Feu 71.31 316⇑ *i*P **P** **14 10 27.0 -0.7**
CDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CDF Champ du Feu 71.31 316⇑ *i*P **P** **14 10 27.0 -0.7**
comp=Z,3.8nm,0.6s,mb4.5
RMQ Roma 71.72 138 *e*P **P** **14 10 31.1 +0.8**
comp=Z,12nm,1.4s,mb4.6
EGAK Eagle 71.73 24 *e*P **P** **14 10 28.6 -1.3**
comp=Z,2.6nm,0.8s,mb4.2
MENT Mentasta 71.84 26 *e*P **P** **14 10 29.7 -0.8**
INK Inuvik 71.96 19 *e*P **P** **14 10 30.1 -1.1**
INK pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 71.96 19 *e*P **P** **14 10 30.1 -1.1**
comp=Z,7.1nm,0.8s,mb4.7
STKA Stephens Creek 72.32 147 *e*P **P** **14 10 33.2 -0.6**
comp=Z,2.0nm,0.6s,mb4.2
STKA Stephens Creek 72.32 147 P **P** **14 10 33.4 -0.4**
comp=Z,2.2nm,0.6s,mb4.2,baz=334,slow=6.3,SNR=6.2
BMRM Bremner River 72.58 28 *e*P **P** **14 10 34.7 -0.3**
comp=Z,446nm,0.6s
DAWY Dawson 72.77 24 *e*P **P** **14 10 34.9 -1.2**
LPG La Plagne 72.95 313⇑ *i*P **P** **14 10 37.7 +0.2**
comp=Z,22nm,0.7s,mb4.9
LPG La Plagne 72.95 313⇑ *i*P **P** **14 10 37.7 +0.2**
LPG pmax pmax
comp=Z,11nm,0.7s,mb4.9
LPG La Plagne 72.95 313⇑ *i*P **P** **14 10 37.7 +0.2**
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 72.95 313⇑ *i*P **P** **14 10 37.6 +0.1**
comp=Z,20nm,0.7s,mb4.9
LPL La Plagne 72.95 313⇑ *i*P **P** **14 10 37.6 +0.1**
LPL pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LPL La Plagne 72.95 313⇑ *i*P **P** **14 10 37.6 +0.1**
comp=Z,9.8nm,0.7s,mb4.8
SUMG Summit 73.15 349 *e*P **P** **14 10 37.7 -0.6**
comp=Z,6.2nm,0.8s,mb4.6
CMSA Cobar Meteorol 74.04 144 *e*P **P** **14 10 44.0 0.0**
SMF Signal de Mont 74.19 315⇑ *i*P **P** **14 10 43.9 -0.9**
comp=Z,17nm,0.8s,mb4.7
SMF Signal de Mont 74.19 315⇑ *i*P **P** **14 10 43.9 -0.9**
SMF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SMF Signal de Mont 74.19 315⇑ *i*P **P** **14 10 43.9 -0.9**
comp=Z,8.5nm,0.8s,mb4.7
TCF Toulx Ste Croi 75.35 315⇑ *i*P **P** **14 10 51.0 -0.5**
CAF Calviac 76.12 314⇑ *i*P **P** **14 10 55.9 -0.1**
comp=Z,5.8nm,0.7s,mb4.3
CAF Calviac 76.12 314⇑ *i*P **P** **14 10 55.9 -0.1**
CAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CAF Calviac 76.12 314⇑ *i*P **P** **14 10 55.9 -0.1**
comp=Z,2.9nm,0.7s,mb4.3
SKAG Skagway 77.18 27 *e*P **P** **14 11 01.8 +0.1**
comp=Z,9.9nm,1.0s,mb4.7
YKA Yellowknife Ar 81.49 17 P **P** **14 11 24.6 -0.5**
comp=Z,2.7nm,0.6s,mb4.4,baz=330,slow=5.3,SNR=44
YKA Yellowknife Ar 81.49 17 P **P** **14 11 24.6 -0.5**
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA Yellowknife Ar 81.49 17 P **P** **14 11 24.6 -0.5**
EDM Edmonton 89.74 21 *e*P **P** **14 12 06.8 +0.5**
EDM *e* pP 14 12 11.1 -1.7
FFC Flin Flon 91.40 15 *i*P **P** **14 12 13.9 -0.1**
TORD Torodi Ar. Bea 93.39 287 P **P** **14 12 23.3 -0.7**
comp=Z,1.4nm,0.8s,mb4.4,baz=51,slow=3.5,SNR=6.4
TXAR Lajitas Array 114.18 26 PKP PKiKP 14 17 46.9 -1.0
comp=Z,0.2nm,0.6s,baz=117,slow=0.1,SNR=5.4
TXAR Lajitas Array 114.18 26 PKP PKiKP 14 17 46.9 -1.0
QSPA South Pole Qui 121.14 180 PKP PKPdf 14 17 58.8 -0.9
comp=Z,4.7nm,0.5s,baz=299,slow=1.0,SNR=58
QSPA South Pole Qui 121.14 180 PKP PKPdf 14 17 58.8 -0.9
OTAV Otavalo 148.49 5 *e*PKPbc PKPbc 14 18 55.8 +0.3

NIED ***21*** *14:39:00,24.°90N×124.°00E,h104km,Mw3.9 Best double couple: M0=7.47000×10^14 NP1:φs=62.00000°, δ76.00000°,λ132.00000°. NP2:φs=167.00000°,δ44.00000°, λ21.00000°.*

ISCJB ***21*** *14:39:23.1±0.3,24.°98N±0.°06×124.°01E±0.°04, h112km±4km,mb3.9/14,Error ellipse: s-maj=10.4km s-min=3.6km az=153.7*

IDC ***21*** *14:39:23.7±3.0,25.°02N×124.°05E,h102km±29km, mb3.5/10,mb1 3.6/13,mb1mx3.5/26,mbtmp3.5/13,Error ellipse: s-maj=22.3km s-min=18.1km az=60.0*

*NEIC **21** 14:39:24.3±0.6, 24°.96N×124°.00E, h108km±6km, mb4.1/4, Error ellipse: s-maj=10.5km s-min=7.4km az=153.0*
*JMA **21** 14:39:25.5±0.1, 24°.89N×123°.98E, h100km±2km, M3.8*

ISC 21 14:39:24.2±0.3, 24°.99N±0°.06×124°.00E±0°.04, h105km±4km, n49, σ0.96/70, mb3.9/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.63**	**168**	P	**Pn**	**14 39 41.4**	**-0.2**
JIJ				*eS*	**Sn**	**14 39 53.1**	**-1.5**
IRIF	**Iriomote-Funau**	**0.69**	**201**	P	**Pn**	**14 39 41.9**	**-0.2**
IRIF				*eS*	**Sn**	**14 39 54.8**	**-0.7**
JTJ	**Tarama**	**0.73**	**118**	P	**Pn**	**14 39 43.2**	**+0.9**
JTJ				*eS*	**Sn**	**14 39 56.5**	**+0.5**
JKRS	**Kuro-shima**	**0.74**	**179**	P	**Pn**	**14 39 42.6**	**0.0**
JKRS				*eS*	**Sn**	**14 39 55.7**	**-0.6**
HATJ	**Hateruma jima**	**0.94**	**191**	P	**Pn**	**14 39 44.4**	**-0.1**
HATJ				*eS*	**Sn**	**14 39 58.8**	**-0.9**
YOJ	**Yonaguni jima**	**1.04**	**240**	P	**Pn**	**14 39 46.0**	**+0.5**
YOJ				*eS*	**Sn**	**14 40 01.2**	**-0.3**
JMJ	**Miyako jima 2**	**1.19**	**98**	P	**Pn**	**14 39 48.3**	**+1.2**
JMJ				*eS*	**Sn**	**14 40 05.2**	**+0.8**
JOGS	**Gusukube**	**1.30**	**100**	P	**Pn**	**14 39 49.7**	**+1.4**
JOGS				*eS*	**Sn**	**14 40 08.2**	**+1.6**
TATO	**Taipei**	**2.28**	**270**	*eP*	**Pn**	**14 40 02.1**	**+1.5**
NACB	**Ninganchiao**	**2.33**	**250**	*ePn*	**Pn**	**14 40 01.0**	**-0.3**
YHNB	**Yeheng**	**2.40**	**263**	*eP*	**Pn**	**14 40 03.8**	**+1.6**
JKE	**Kume jima 2**	**2.85**	**61**	P	**Pn**	**14 40 08.9**	**+0.8**
JKE				*eS*	**Sn**	**14 40 42.5**	**+0.7**
YULB	**Yu-li**	**2.93**	**238**	*eP*	**Pn**	**14 40 08.2**	**-1.0**
YULB				*eS*	**Sn**	**14 40 35.0**	**-8.9**
SSLB	**Suanglung**	**3.02**	**247**	*eP*	**Pn**	**14 40 10.3**	**-0.1**
JAGN	**Aguni-jima**	**3.33**	**61**	P	**Pn**	**14 40 15.2**	**+0.7**
JAGN				*eS*	**Sn**	**14 40 53.5**	**+0.2**
TWG	**Pinlang**	**3.44**	**232**	*eP*	**Pn**	**14 40 14.1**	**-1.9**
TWG				*eSn*	**Sn**	**14 40 49.1**	**-6.8**
TPUB	**Ta-pu**	**3.50**	**242**	*eP*	**Pn**	**14 40 17.8**	**+1.0**
NAH1	**Naha**	**3.55**	**69**	P	**Pn**	**14 40 18.9**	**+1.5**
NAH1				*eS*	**Sn**	**14 40 57.8**	**-0.7**
JJT2	**Tamagusuku 2**	**3.58**	**70**	P	**Pn**	**14 40 18.6**	**+0.8**
JJT2				*eS*	**Sn**	**14 41 00.4**	**+1.2**
JIH	**Iheya**	**4.11**	**59**	P	**Pn**	**14 40 25.3**	**+0.3**
JIH				*eS*	**Sn**	**14 41 11.1**	**-1.0**
JOW	**Kunigami**	**4.27**	**64**	P	**Pn**	**14 40 26.8**	**-0.3**
JOW				*eS*	**Sn**	**14 41 13.6**	**-2.3**
JOW	**Kunigami**	**4.27**	**64**	P	**Pn**	**14 40 26.9**	**-0.1**
JOW	32nm,0.3s,baz=171,slow=11,SNR=298			S	**Sn**	**14 41 13.4**	**-2.5**
JOW	14nm,0.3s,baz=120,slow=25,SNR=6.6						
JOW	**Kunigami**	**4.27**	**64**	P	**Pn**	**14 40 26.9**	**-0.1**
JOW				S	**Sn**	**14 41 13.4**	**-2.5**
JTK	**Tokunoshima**	**5.24**	**57**	P	**Pn**	**14 40 39.6**	**-0.7**
JTK				*eS*	**Sn**	**14 41 37.5**	**-2.0**
JAM	**Amami Oshima**	**6.06**	**55**	P	**Pn**	**14 40 50.5**	**-0.9**
JAM				*eS*	**Sn**	**14 41 56.4**	**-3.0**
JZK	**Kikaishima**	**6.29**	**57**	P	**Pn**	**14 40 53.8**	**-0.6**
JMZ	**Minamidaito 2**	**6.58**	**81**	P	**Pn**	**14 40 55.8**	**-2.7**
JMZ				*eS*	**Sn**	**14 42 04.8**	**-7.3**
KSRS	**Korea Array**	**12.87**	**14**	P	**Pn**	**14 42 23.1**	**-0.1**
	0.2nm,0.3s,baz=199,slow=11,SNR=3.0						
MJAR	**Matsushiro Arr**	**16.77**	**43**	P	**Pn**	**14 43 13.2**	**+0.6**
	0.2nm,0.3s,baz=228,slow=9.1,SNR=3.1						
CN2	**Changchun**	**18.81**	**3**	*eP*	**P**	**14 43 36.9**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.14**	**259**	P	**P**	**14 44 31.5**	**+0.9**
	comp=Z,0.2nm,0.4s,mb2.8,baz=91,slow=9.0,SNR=3.2						
SONM	**Songino Array**	**26.72**	**333**	P	**P**	**14 44 53.6**	**0.0**
	comp=Z,1.1nm,0.8s,mb3.5,baz=156,slow=12,SNR=9.3						
MK31	**Makanchi Array**	**39.58**	**314**	*eP*	**P**	**14 46 44.5**	**-0.6**
MKAR	**Makanchi Array**	**39.58**	**314**	P	**P**	**14 46 44.7**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=96,slow=9.3,SNR=16						
MKAR	**Makanchi Array**	**39.58**	**314**	P	**P**	**14 46 44.7**	**-0.4**
ZALV	**Zalesovo Beam**	**41.01**	**325**	P	**P**	**14 46 55.5**	**-1.2**
	comp=Z,1.5nm,0.5s,mb4.1,baz=122,slow=9.1,SNR=5.6						
KURK	**Kurchatov**	**43.16**	**319**	*eP*	**P**	**14 47 14.0**	**-0.3**
	comp=Z,1.3nm,0.3s,mb4.1						
WRAB	**Tennant Creek**	**45.77**	**166**	*eP*	**P**	**14 47 35.6**	**+0.3**
	comp=Z,3.1nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**48.70**	**320**	P	**P**	**14 47 57.8**	**+0.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=102,slow=8.1,SNR=7.0						
BRVK	**Borovoye**	**48.77**	**320**	*eP*	**P**	**14 47 58.3**	**0.0**
	comp=Z,1.8nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**49.31**	**168**	P	**P**	**14 48 02.3**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=351,slow=8.3,SNR=18						
ABKAR	**Akbulak array**	**54.73**	**314**	*eP*	**P**	**14 48 43.1**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.9						
MENT	**Mentasta**	**69.08**	**29**	*eP*	**P**	**14 50 19.6**	**+1.1**
ARCES	**ARCESS Array B**	**69.75**	**338**	P	**P**	**14 50 21.8**	**-0.7**
	comp=Z,1.8nm,0.9s,mb3.9,baz=77,slow=7.6,SNR=4.5						
ARCES	**ARCESS Array B**	**69.75**	**338**	P	**P**	**14 50 21.8**	**-0.7**
FINES	**FINESS Array B**	**72.04**	**330**	P	**P**	**14 50 36.2**	**-0.3**
	comp=Z,0.8nm,0.4s,mb3.9,baz=48,slow=6.9,SNR=6.4						
FINES	**FINESS Array B**	**72.04**	**330**	P	**P**	**14 50 36.2**	**-0.3**
NOA	**NORSAR Array B**	**78.70**	**333**	P	**P**	**14 51 14.3**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.5,baz=56,slow=5.4,SNR=3.4						
YKA	**Yellowknife Ar**	**81.23**	**24**	P	**P**	**14 51 28.5**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.8,baz=304,slow=5.3,SNR=17						

*BJI **21** 14:55:36.3, 43°.44N×84°.84E, h10km, ML2.6/5*

NNC 21 14:55:33.0±4.9, 43°.62N×85°.29E, h0km, mb2.6, mpv2.2, 4C-1D, Error ellipse: s-maj=108.8km s-min=44.0km az=58.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.82**	**327**	⇑Pn	Pn	14 56 35.4	+2.5
	0.1nm,0.3s,baz=320,slow=20,SNR=15						
MK31				⇑Pg	Pg	14 56 44.5	-1.6
	0.4nm,0.3s,baz=148,slow=16,SNR=13						
MK31				⇑Lg		14 57 31.6	
	3.0nm,0.4s,baz=144,slow=29,SNR=11						
KURBB	**Kurchatov Arra**	**8.38**	**329**	⇓Lg		14 59 56.7	
	0.5nm,0.8s						
KURK	**Kurchatov**	**8.43**	**330**	⇑Lg		15 00 00.2	
	5.6nm,1.3s						

*IDC **21** 14:57:59.5±1.5, 31°.13N×103°.30E, h0km, mb3.5/5, mb1 3.5/6, mb1mx3.4/24, mbtmp3.5/6, MS2.7/2, Ms1 2.7/2, ms1mx2.4/24, Error ellipse: s-maj=44.1km s-min=23.8km az=49.0*
*ISCJB **21** 14:58:00.4±1.2, 31°.33N±0°.05×103°.5E±0°.1, h14km±8km, mb3.3/5, MS2.6/2, Error ellipse: s-maj=17.4km s-min=7.1km az=169.7*
*NEIC **21** 14:58:01.0±0.7, 31°.14N×103°.32E, h10km, Error ellipse: s-maj=19.7km s-min=9.6km az=48.0*
*BJI **21** 14:58:01.5, 31°.35N×103°.43E, h12km, ML3.4/11, Ms3.5/2, Ms7 3.1/2*

ISC 21 14:58:01.9±1.0, 31°.37N±0°.03×103°.61E±0°.08, h10km±7km, n12, σ1.34/16, mb3.3/4, MS2.6/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**165**	Pg	**Pg**	**14 58 10.0**	**-1.1**
CD2				Sg	**Sg**	**14 58 18.4**	**+1.0**
CD2				smax			
	comp=N,9μm,0.9s						
LZH	**Lanzhou**	**4.71**	**2**	*e*Pg	**Pg**	**14 59 33.5**	**+1.4**
LZH				Sg	**Sg**	**15 00 32.1**	**-1.0**
LZH				smax			
	comp=N,43nm,0.5s						
LZH				smax			
	comp=E,49nm,0.5s						
ENH	**Enshi**	**5.17**	**101**	*e*Pn	**Pn**	**14 59 21.3**	**+2.0**
	comp=E,20nm,0.6s						
XAN	**Xi'an**	**5.21**	**58**	Pg	**Pg**	**14 59 37.3**	**-4.3**
XAN				Sg	**Sg**	**15 00 47.4**	**-1.7**
XAN				smax			
	comp=N,52nm,0.7s						
XAN				smax			
	comp=E,21nm,0.6s						
KMI	**Kunming**	**6.27**	**187**	Pn	**Pn**	**14 59 35.3**	**+0.9**
KMI				Sn	**Sn**	**15 00 44.8**	**-1.3**
KMI				smax			
	comp=N,21nm,1.8s						
KMI				smax			
	comp=E,20nm,1.1s						
KMI				LR	LR		
	comp=N,140nm,8.9s						
KMI				LR	LR		
	comp=E,610nm,10.5s						
KMI				LR	LR		
	comp=Z,100nm,9.2s						
SONM	**Songino Array**	**16.58**	**7**	Pn	**Pn**	**15 01 57.1**	**+2.8**
	baz=192,slow=13,SNR=3.2						
KSRS	**Korea Array**	**20.93**	**67**	P	**P**	**15 02 47.0**	**+2.4**
	comp=Z,2.4nm,0.9s,baz=258,slow=11,SNR=5.8						
KSRS				LR	LR	15 11 12.4	
	comp=Z,18nm,18.6s,MS2.5,baz=225,slow=37						
MKAR	**Makanchi Array**	**22.50**	**319**	P	**P**	**15 03 01.1**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.1,baz=120,slow=10,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.30**	**335**	P	**P**	**15 03 37.3**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.3,baz=134,slow=9.3,SNR=3.2						
ZALV				LR	LR	15 14 27.7	
	comp=Z,18nm,18.3s,MS2.6,baz=64,slow=37						
KURK	**Kurchatov**	**26.78**	**323**	P	**P**	**15 03 41.2**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.4,baz=130,slow=9.6,SNR=4.6						
WRAB	**Tennant Creek**	**58.92**	**146**	P	**P**	**15 08 00.3**	**-1.0**
ASAR	**Alice Springs**	**61.94**	**148**	P	**P**	**15 08 20.8**	**-1.1**
	comp=Z,0.1nm,0.4s,mb3.3,baz=322,slow=7.9,SNR=4.2						

*ISCJB **21** 15:08:33.3±1.1, 49°.2S±0°.1×121°.7E±0°.3, h10km, mb3.8/5, MS3.4/2, Error ellipse: s-maj=32.2km s-min=18.1km az=2.5*
*IDC **21** 15:08:33.5±1.1, 49°.16S×121°.69E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/13, mbtmp4.0/5, ML2.7/1, MS3.6/2, Ms1 3.5/2, ms1mx2.8/14, Error ellipse: s-maj=46.0km s-min=22.5km az=97.0*
*NEIC **21** 15:08:34.9±0.8, 49°.19S×121°.71E, h10km, mb4.2/1, Error ellipse: s-maj=27.1km s-min=14.8km az=94.0*

ISC 21 15:08:35.1±1.1, 49°.2S±0°.1×121°.7E±0°.3, h10km, n11, σ0.66/8, mb3.8/5, MS3.4/2, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.56**	**347**	Pn	**Pn**	**15 12 27.0**	**-0.3**
	1.3nm,0.3s,baz=175,slow=15,SNR=9.9						
NWAO	**Narrogin (SRO)**	**16.56**	**347**	*eP*	**Pn**	**15 12 27.7**	**+0.4**
STKA	**Stephens Creek**	**22.84**	**48**	P	**P**	**15 13 38.8**	**+0.6**
	3.3nm,0.8s,mb3.8,baz=213,slow=14,SNR=6.1						
STKA				LR	LR	15 20 41.7	
	comp=Z,198nm,19.6s,MS3.6,baz=205,slow=32						
STKA	**Stephens Creek**	**22.84**	**48**	P	**P**	**15 13 38.8**	**+0.6**
STKA				LR	LR	15 20 41.7	
ASAR	**Alice Springs**	**27.20**	**25**	P	**P**	**15 14 17.5**	**-1.4**
	2.2nm,0.9s,mb3.7,baz=198,slow=8.7,SNR=9.3						
WRAB	**Tennant Creek**	**30.88**	**24**	*eP*	**P**	**15 14 52.0**	**+0.4**
	2.5nm,0.8s,mb4.1						
MAW	**Mawson**	**34.21**	**216**	LR	LR	15 26 31.7	
	comp=Z,61nm,20.4s,MS3.3,baz=221,slow=32						
QSPA	**South Pole Qui**	**40.96**	**180**	P	**P**	**15 16 17.2**	**-0.1**
	1.5nm,0.6s,mb3.8,baz=257,slow=1.7,SNR=15						
CMAR	**Chiang Mai Arr**	**70.29**	**337**	P	**P**	**15 19 48.9**	**+0.3**
	0.6nm,0.7s,mb3.7,baz=191,slow=5.4,SNR=4.2						
YKA	**Yellowknife Ar**	**146.85**	**45**	PKPbc	PKPbc	15 28 17.0	+0.8
	0.4nm,0.6s,baz=273,slow=2.4,SNR=6.6						
TKL	**Tuckaleechee C**	**156.99**	**116**	PKP	PKPdf	15 28 29.6	-0.8
	3.1nm,0.6s,baz=240,slow=11,SNR=4.5						
TKL				PKPab	PKPab	15 29 00.3	-0.3
	4.2nm,0.5s,baz=264,slow=6.5,SNR=5.9						

*IDC **21** 15:08:59.6±1.4, 31°.02N×103°.96E, h0km, mb3.4/5, mb1 3.4/7, mb1mx3.3/25, mbtmp3.4/7, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.0/19, Error ellipse: s-maj=35.2km s-min=23.8km az=60.0*
*ISCJB **21** 15:09:00.4±1.3, 31°.02N±0°.05×104°.09E±0°.09, h20km±10km, mb3.2/4, Error ellipse: s-maj=13.4km s-min=9.0km az=4.5*
*NEIC **21** 15:09:00.9±0.6, 31°.07N×104°.07E, h10km, Error ellipse: s-maj=14.2km s-min=9.9km az=64.0*
*BJI **21** 15:09:01.4, 30°.94N×103°.67E, h14km, ML3.4/13, Ms3.1/1, Ms7 2.9/1*

ISC 21 15:09:00.3±1.2, 31°.10N±0°.04×104°.08E±0°.09, h5km±8km, n13, σ0.86/17, mb3.2/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**236**	Pg	**Pg**	**15 09 06.8**	**0.0**
CD2				Sg	**Sg**	**15 09 12.1**	**+0.9**
CD2				smax			
	comp=N,7μm,0.8s						
ENH	**Enshi**	**4.73**	**99**	Pn	**Pn**	**15 10 12.4**	**+0.2**
LZH	**Lanzhou**	**4.98**	**358**	*e*Pg	**Pg**	**15 10 35.4**	**-0.2**
LZH				Sg	**Sg**	**15 11 38.9**	**-1.2**
LZH				smax			
	comp=N,35nm,1.1s						
LZH				smax			
	comp=E,54nm,1.0s						
XAN	**Xi'an**	**5.03**	**53**	Pg	**Pn**	**15 11 05.0**	**-10**
XAN				Sg	**Sg**	**15 11 47.3**	**+5.5**
XAN				smax			
	comp=N,91nm,0.7s						
XAN				smax			
	comp=E,70nm,0.9s						
KMI	**Kunming**	**6.07**	**192**	Pn	**Pn**	**15 10 29.3**	**-1.4**
KMI				Sn	**Sn**	**15 11 39.8**	**-0.7**
KMI				smax			
	comp=N,21nm,0.8s						
KMI				smax			
	comp=E,15nm,0.9s						
KMI				LR	LR		
	comp=N,180nm,9.9s						
KMI				LR	LR		
	comp=E,81nm,8.0s						
KMI				LR	LR		
	comp=Z,120nm,11.4s						
CMAR	**Chiang Mai Arr**	**13.42**	**201**	Pn	**Pn**	**15 12 11.2**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=22,slow=15,SNR=3.7						
SONM	**Songino Array**	**16.81**	**5**	Pn	**Pn**	**15 12 56.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=183,slow=9.8,SNR=4.1						
KSRS	**Korea Array**	**20.67**	**66**	P	**P**	**15 13 42.6**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=247,slow=10,SNR=8.6						
MK31	**Makanchi Array**	**22.97**	**319**	*eP*	**P**	**15 14 05.6**	**+0.1**
MKAR	**Makanchi Array**	**22.97**	**319**	P	**P**	**15 14 04.3**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.0,baz=122,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.72**	**334**	P	**P**	**15 14 41.1**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.4,baz=140,slow=8.8,SNR=2.7						
KURK	**Kurchatov**	**27.24**	**323**	P	**P**	**15 14 46.0**	**+1.0**
	comp=Z,0.3nm,0.5s,mb3.1,baz=127,slow=10,SNR=3.1						
KURK				LR	LR	15 26 22.6	
	comp=Z,17nm,18.7s,baz=80,slow=38						
ASAR	**Alice Springs**	**61.50**	**149**	P	**P**	**15 19 17.5**	**-0.6**
	comp=Z,0.3nm,0.9s,mb3.4,baz=337,slow=6.6,SNR=3.3						

*IDC **21** 15:10:39.5±1.1, 51°.17N×179°.77W, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.9/30, mbtmp4.0/15, ML2.6/1, MS3.9/3, Ms1 3.9/3, ms1mx3.0/31, Error ellipse: s-maj=30.6km s-min=18.4km az=168.0*
*ISCJB **21** 15:10:45.2±1.3, 51°.1N±0°.1×179°.82W±0°.08, h53km±10km, mb4.1/20, MS3.9/3, Error ellipse: s-maj=22.7km s-min=7.2km az=170.9*
*BJI **21** 15:10:45.8, 51°.10N×179°.80W, h56km, mB4.6/3, mb4.8/4, Ms4.9/2, Ms7 4.5/2*
*NEIC **21** 15:10:46.8±1.0, 51°.05N×179°.85W, h56km±7km, mb4.3/11, ML4.2(AEIC), Error ellipse: s-maj=17.4km s-min=5.6km az=172.0*

ISC 21 15:10:47.3±1.1, 51°.2N±0°.1×179°.81W±0°.08, h54km±9km, n47, σ1.06/44, mb4.1/20, MS3.9/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**3.64**	**72**	P	**Pn**	**15 11 40.6**	**-0.5**
SMY	**Shemya**	**4.07**	**295**	P	**Pn**	**15 11 47.1**	**+0.2**
FX1	**Attu Island--F**	**4.66**	**294**	P	**Pn**	**15 11 55.2**	**+0.2**
NIKO	**Nikolski**	**6.99**	**71**	P	**Pn**	**15 12 26.6**	**-0.2**
UNV	**Unalaska Valle**	**8.54**	**67**	P	**Pn**	**15 12 49.1**	**+0.9**
PETK	**Petropavlovsk-**	**13.93**	**287**	Pn	**Pn**	**15 14 00.5**	**-1.2**
	0.0nm,0.3s,baz=99,slow=18,SNR=2.2						
OHAK	**Old Harbor**	**16.58**	**58**	*eP*	**Pn**	**15 14 31.6**	**-4.3**
	30nm,0.8s						
SVW2	**Sparrevohn**	**16.65**	**44**	*eP*	**Pn**	**15 14 39.3**	**+2.7**
KDAK	**Kodiak Island**	**17.06**	**57**	P	**Pn**	**15 14 38.4**	**-3.4**
TTA	**Tatalina**	**17.35**	**38**	P	**Pn**	**15 14 47.9**	**+2.5**
	15nm,1.2s						
PPLA	**Purkeypile**	**18.88**	**41**	*eP*	**Pn**	**15 15 05.1**	**+1.3**
	20nm,1.0s						
SEW	**Seward**	**19.16**	**51**	*eP*	**Pn**	**15 15 06.8**	**-0.4**
CHUM	**Lake Minchumin**	**19.27**	**38**	*eP*	**Pn**	**15 15 08.6**	**0.0**
	13nm,1.0s						
KTH	**Kantishna Hill**	**19.68**	**40**	*eP*	**Pn**	**15 15 12.5**	**-0.9**
	21nm,0.8s						
TRF	**Thorofare Moun**	**19.89**	**41**	*eP*	**Pn**	**15 15 14.4**	**-1.5**
	19nm,1.1s						
BPAW	**Bear Paw Mtn.**	**19.89**	**38**	*eP*	**Pn**	**15 15 14.1**	**-1.8**
DIV	**Divide**	**21.16**	**49**	*eP*	**P**	**15 15 29.0**	**+1.4**
	12nm,0.7s,mb4.3						
BMRM	**Bremner River**	**21.68**	**50**	*eP*	**P**	**15 15 34.4**	**+1.3**
	11nm,0.8s,mb4.3						
PAX	**Paxson**	**21.77**	**44**	*eP*	**P**	**15 15 33.1**	**-0.9**
	4.9nm,0.6s,mb4.1						
MENT	**Mentasta**	**22.53**	**45**	*eP*	**P**	**15 15 42.6**	**+0.5**
EGAK	**Eagle**	**24.11**	**41**	*eP*	**P**	**15 15 56.6**	**-0.9**
	3.3nm,0.6s,mb3.9						
DAWY	**Dawson**	**24.68**	**43**	*eP*	**P**	**15 16 01.9**	**-0.7**
INK	**Inuvik**	**27.98**	**35**	LR	LR	15 28 05.5	
	comp=Z,32nm,20.0s,MS2.9,baz=290,slow=37						
MDJ	**Mudanjiang**	**33.98**	**279**	P	**P**	**15 17 25.0**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,39nm,3.8s						
YKA	**Yellowknife Ar**	**35.82**	**46**	P	**P**	**15 17 40.1**	**-1.0**
	comp=Z,1.2nm,0.5s,mb4.0,baz=282,slow=8.3,SNR=18						
YKA				ScP	ScP	15 23 51.9	+3.3
	comp=Z,0.3nm,0.5s,baz=295,slow=3.3,SNR=5.0						
BOZ	**Bozeman (W)**	**44.12**	**69**	*eP*	**P**	**15 18 49.8**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.3						
SONM	**Songino Array**	**46.16**	**296**	P	**P**	**15 19 05.8**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=58,slow=7.3,SNR=5.2						
PDAR	**Pinedale Array**	**46.97**	**71**	P	**P**	**15 19 13.1**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=306,slow=5.0,SNR=15						
SPB4	**Spitsbergen Ar**	**50.52**	**356**	*eP*	**P**	**15 19 40.7**	**+1.4**
SPITS	**Spitsbergen Ar**	**50.52**	**356**	P	**P**	**15 19 38.9**	**-0.4**
	comp=Z,0.9nm,0.4s,mb4.1,baz=26,slow=5.9,SNR=14						
ARCES	**ARCESS Array B**	**58.17**	**350**	P	**P**	**15 20 33.7**	**-1.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=24,slow=9.4,SNR=4.6						
ARCES	**ARCESS Array B**	**58.17**	**350**	P	**P**	**15 20 33.7**	**-1.2**
KURK	**Kurchatov**	**58.69**	**313**	P	**P**	**15 20 40.0**	**+1.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=44,slow=6.5,SNR=4.3						
KURK	**Kurchatov**	**58.69**	**313**	P	**P**	**15 20 40.0**	**+1.2**
MKAR	**Makanchi Array**	**59.65**	**308**	P	**P**	**15 20 45.2**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.9,baz=64,slow=6.2,SNR=6.8						
MKAR	**Makanchi Array**	**59.65**	**308**	P	**P**	**15 20 45.2**	**-0.3**
BVAR	**Borovoye Array**	**60.62**	**319**	P	**P**	**15 20 51.5**	**-0.6**
	comp=Z,0.5nm,0.3s,mb4.1,baz=51,slow=7.7,SNR=7.5						
KMI	**Kunming**	**63.12**	**277**	P	**P**	**15 21 11.8**	**+2.5**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.1						
FINES	**FINESS Array B**	**65.83**	**347**	P	**P**	**15 21 26.5**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=21,slow=6.5,SNR=4.6						
FINES	**FINESS Array B**	**65.83**	**347**	P	**P**	**15 21 26.5**	**+0.2**
AAK	**Ala-Archa**	**66.50**	**309**	P	**P**	**15 21 31.9**	**+1.0**
	comp=Z,0.8nm,0.3s,mb4.2,baz=270,slow=6.1,SNR=2.9						
NB2	**NORSAR Subarra**	**67.77**	**354**	P	**P**	**15 21 38.8**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=8.7,slow=6.2						
NOA	**NORSAR Array B**	**67.77**	**354**	P	**P**	**15 21 37.8**	**-0.9**
	comp=Z,0.9nm,0.7s,mb3.9,baz=7.7,slow=6.2,SNR=4.8						
CMAR	**Chiang Mai Arr**	**70.40**	**275**	P	**P**	**15 21 55.6**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=35,slow=6.2,SNR=5.5						
PPT	**Papeete**	**73.41**	**150**	LR	LR	15 47 46.2	
	comp=Z,140nm,21.9s,MS4.2,baz=134,slow=30						
ASAR	**Alice Springs**	**84.92**	**222**	P	**P**	**15 23 15.8**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=34,slow=5.5,SNR=10						
RPN	**Rapa Nui**	**99.50**	**122**	LR	LR	15 59 43.6	
	comp=Z,262nm,20.9s,MS4.7,slow=30						

MAN 21 15:15:54, 17°.44N×122°.59E, h35km, mb4.3, ML3.2, MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.41**	**203**	*eP*	Pn	15 16 05.7	+2.2
PALP				*eS*	Sn	15 16 13.4	+3.6
CAUP	**Cauayan**	**0.89**	**236**	*eP*	Pn	15 16 12.9	+3.0
CAUP				*eS*	Sn	15 16 24.1	+2.4
APYP	**Conner**	**1.35**	**288**	*eP*	Pn	15 16 17.5	+1.1
APYP				*eS*	Sn	15 16 31.0	-2.2
ABRA	**Dolores**	**1.81**	**277**	*eP*	Pn	15 16 24.2	+1.6
BALP	**Baler**	**1.95**	**210**	*eP*	Pn	15 16 29.4	+4.8

*IDC **21** 15:16:22.1±1.5, 13°.81N×92°.38W, h0km, mb3.8/3, mb1 4.1/7, mb1mx3.8/23, mbtmp3.9/7, ML3.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/28, Error ellipse: s-maj=31.0km s-min=22.7km az=32.0*
*ISCJB **21** 15:16:25.2±0.9, 13°.91N±0°.06×92°.54W±0°.04, h33km, mb3.7/3, Error ellipse: s-maj=8.3km s-min=5.4km az=7.7*
*NEIC **21** 15:16:25.9±5.0, 13°.78N×92°.40W, h27km±36km, MD4.3(MEX), Error ellipse: s-maj=22.8km s-min=15.5km az=180.0*
*MEX **21** 15:16:29.2±1.2, 13°.98N×92°.59W, h16km±66km, MD4.3*

**ISC 21 15:16:27.5±0.9, 13°.95N±0°.06×92°.49W±0°.04, h35km, n22

CD2				Pg	**Pg**	**15 20 54.5**	**+0.4**
CD2				Sg	**Sg**	**15 21 08.1**	**-0.5**
CD2				smax			
	comp=N,1μm,0.5s						
LZH	**Lanzhou**	**4.29**	**353**	*e*Pn	**Pn**	**15 21 40.1**	**+2.7**
LZH				Pg	**Pg**	**15 21 55.1**	**+0.3**
LZH				Sg	**Sg**	**15 22 45.8**	**-4.5**
LZH				smax			
	comp=N,83nm,0.8s						
LZH				smax			
	comp=E,110nm,0.6s						
XAN	**Xi'an**	**4.32**	**58**	Pg	**Pg**	**15 21 55.3**	**-0.2**
XAN				Sg	**Sg**	**15 22 50.4**	**-1.1**
XAN				smax			
	comp=N,120nm,0.7s						
XAN				smax			
	comp=E,93nm,0.7s						
ENH	**Enshi**	**4.55**	**109**	Pn	**Pn**	**15 21 42.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**14.22**	**202**	Pn	**Pn**	**15 23 54.6**	**+1.0**
	comp=E,0.1nm,0.3s,baz=8.5,slow=8.9,SNR=3.2						
SONM	**Songino Array**	**16.06**	**5**	Pn	**Pn**	**15 24 18.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=183,slow=11,SNR=6.4						
KSRS	**Korea Array**	**20.05**	**67**	P	**P**	**15 25 06.1**	**+0.8**
	comp=E,1.7nm,0.7s,baz=254,slow=11,SNR=7.2						
MK31	**Makanchi Array**	**22.67**	**318**	*e*P	**P**	**15 25 34.2**	**+0.8**
MKAR	**Makanchi Array**	**22.67**	**318**	P	**P**	**15 25 33.8**	**+0.5**
	comp=E,0.5nm,0.4s,mb3.3,baz=116,slow=11,SNR=7.9						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**15 26 05.8**	**-1.1**
	comp=E,1.4nm,0.5s,mb3.7,baz=126,slow=10.0,SNR=5.5						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	**P**	**15 26 05.8**	**-1.1**
KURK	**Kurchatov**	**26.88**	**322**	P	**P**	**15 26 12.7**	**-0.1**
	comp=E,0.9nm,0.7s,mb3.4,baz=128,slow=8.6,SNR=7.1						
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**15 27 02.7**	**+0.6**
	comp=E,0.3nm,0.4s,mb3.5,baz=119,slow=10.0,SNR=2.7						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**15 30 17.9**	**-0.7**
	comp=E,0.8nm,0.5s,mb4.0,baz=77,slow=8.8,SNR=3.4						
WRAB	**Tennant Creek**	**58.88**	**147**	*e*P	**P**	**15 30 30.8**	**-0.3**
	comp=E,3.2nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**61.93**	**149**	P	**P**	**15 30 52.0**	**+0.1**
	comp=E,0.9nm,0.5s,mb4.1,baz=332,slow=6.5,SNR=34						
NOA	**NORSAR Array B**	**64.24**	**327**	P	**P**	**15 31 04.8**	**-2.0**
	comp=E,0.4nm,0.6s,mb3.6,baz=73,slow=9.0,SNR=3.2						
MORC	**Moravsky Berou**	**64.61**	**314**	*e*P	**P**	**15 31 08.3**	**-1.2**
	comp=E,4.1nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**72.43**	**147**	P	**P**	**15 31 58.0**	**-0.4**
	comp=E,0.8nm,0.7s,mb3.8,baz=319,slow=17,SNR=2.9						
STKA	**Stephens Creek**	**72.43**	**147**	*e*P	**P**	**15 31 58.3**	**0.0**
	comp=E,0.1nm,0.4s,mb3.1						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**15 32 45.8**	**-0.2**
	comp=E,0.6nm,0.6s,mb3.7,baz=329,slow=5.2,SNR=9.7						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**15 32 45.8**	**-0.2**

*IDC **21** 15:29:52.5±0.7, 32.°35N×105.°18E, h0km, mb4.1/14, mb1 4.2/17, mb1mx4.1/27, mbtmp4.1/17, ML3.6/3, MS3.5/12, Ms1 3.5/12, ms1mx3.3/28, Error ellipse: s-maj=24.0km s-min=14.5km az=47.0*

*NEIC **21** 15:29:54.9±0.3, 32.°37N×105.°08E, h10km, mb4.4/11, Error ellipse: s-maj=9.1km s-min=5.9km az=71.0*

*BJI **21** 15:29:54.5, 32.°32N×105.°01E, h12km, mB4.8/23, mb4.4/24, ML4.5/18, Ms4.3/33, Ms7 4.1/34*

*ISCJB **21** 15:29:55.2±1.1, 32.°29N±0.°03×104.°94E±0.°03, h15km±7km, mb4.3/35, MS3.6/15, Error ellipse: s-maj=4.9km s-min=4.2km az=161.1*

*MOS **21** 15:29:56.4±2.2, 32.°22N×105.°15E, h32km, mb4.6/22, MS3.8/13, Error ellipse: s-maj=11.3km s-min=6.0km az=100.6*

ISC 21 15:29:57.0±1.0, 32.°34N±0.°02×104.°94E±0.°03, h16km±6km, n112, σ1§49/126, mb4.3/35, MS3.6/15, 4C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.75**	**216**	Pn	**Pn**	**15 30 27.4**	**+0.9**
CD2				Pg	**Pg**	**15 30 30.1**	**-0.4**
CD2				Sg	**Sg**	**15 30 54.8**	**+1.6**
CD2				smax			
	comp=N,19μm,0.8s						
XAN	**Xi'an**	**3.74**	**62**	Pn	**Pn**	**15 30 55.1**	**+1.1**
XAN				Sn	**Sn**	**15 31 34.4**	**-3.3**
XAN				Sg	**Sg**	**15 31 49.3**	**-7.9**
XAN				smax			
	comp=N,1μm,0.8s						
XAN				smax			
	comp=E,680nm,0.9s						
LZH	**Lanzhou**	**3.85**	**347**	*e*Pn	**Pn**	**15 30 56.4**	**+1.0**
LZH				Pg	**Pg**	**15 31 07.3**	**-3.4**
LZH				Sn	**Sn**	**15 31 40.5**	**+0.2**
LZH				Sg	**Sg**	**15 31 54.3**	**-6.2**
LZH				smax			
	comp=N,3μm,0.7s						
LZH				smax			
	comp=E,6μm,0.7s						
LZH				LR	LR		
	comp=E,6μm,5.3s						
LZH				LR	LR		
	comp=Z,6μm,8.1s						
ENH	**Enshi**	**4.40**	**117**	*e*Pn	**Pn**	**15 31 03.4**	**+0.4**
GYA	**Guiyang**	**6.05**	**165**	Pn	**Pn**	**15 31 26.8**	**+1.1**
GYA				Sn	**Sn**	**15 32 34.8**	**+0.2**
GYA				smax			
	comp=N,380nm,0.6s						
GYA				smax			
	comp=E,440nm,0.7s						
GYA				LR	LR		
	comp=N,980nm,2.8s						
GYA				LR	LR		
	comp=E,750nm,4.2s						
GYA				LR	LR		
	comp=Z,880nm,3.4s						
KMI	**Kunming**	**7.45**	**196**	Pn	**Pn**	**15 31 44.4**	**-0.5**
KMI				Sn	**Sn**	**15 33 08.3**	**-0.7**
KMI				smax			
	comp=N,71nm,1.4s						
KMI				smax			
	comp=E,91nm,1.4s						
KMI				LR	LR		
	comp=N,640nm,12.8s						
KMI				LR	LR		
	comp=E,790nm,10.1s						
KMI				LR	LR		
	comp=Z,750nm,15.3s						
GTA	**Gaotai**	**8.19**	**331**	*e*P	**Pn**	**15 31 54.3**	**-0.7**
GTA				pP		15 31 58.3	
GTA				sP		15 32 01.6	
GTA				S	**Sn**	**15 33 32.8**	**+5.6**
GTA				sS		15 33 39.9	
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,58nm,6.0s						
GTA				LR	LR		
	comp=N,1μm,13.5s						
GTA				LR	LR		
	comp=E,1μm,8.9s						
GTA				LR	LR		
	comp=Z,2μm,10.2s						
WHN	**Wuhan**	**8.23**	**100**	P	**Pn**	**15 31 55.8**	**+0.1**
WHN				LR	LR		
	comp=N,5μm,4.5s						
WHN				LR	LR		
	comp=E,4μm,9.6s						
WHN				LR	LR		
	comp=Z,2μm,6.1s						
BTO	**Baotou**	**9.21**	**25**	*e*P	**Pn**	**15 32 07.9**	**-1.1**
BTO				S	**Sn**	**15 34 03.3**	**+11**
BTO				LR	LR		
	comp=N,280nm,14.0s						
BTO				LR	LR		
	comp=E,230nm,9.4s						
HHC	**Hu-ho-hao-te**	**10.02**	**30**	*e*P	**Pn**	**15 32 15.6**	**-4.5**
HHC				pP		15 32 22.8	
HHC				sP		15 32 27.5	
HHC				S	**Sn**	**15 34 06.8**	**-5.3**
HHC				sS		15 34 17.6	
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,4.7s						
HHC				LR	LR		
	comp=N,630nm,4.7s						
HHC				LR	LR		
	comp=E,420nm,4.9s						
HHC				LR	LR		
	comp=Z,370nm,5.3s						

NJ2	**Nanjing**	**11.79**	**88**	*e*P	**Pn**	**15 32 46.6**	**+2.2**
NJ2				pP		15 32 51.1	
NJ2				sP		15 32 54.6	
NJ2				PP		15 32 56.4	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,30nm,3.8s						
NJ2				LR	LR		
	comp=N,490nm,11.0s						
NJ2				LR	LR		
	comp=E,440nm,11.7s						
NJ2				LR	LR		
	comp=Z,640nm,12.2s						
BJI	**Beijing**	**11.88**	**47**	P	**Pn**	**15 32 45.3**	**-0.3**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,84nm,5.8s						
BJI				LR	LR		
	comp=N,1μm,12.8s						
BJI				LR	LR		
	comp=E,910nm,12.0s						
BJI				LR	LR		
	comp=Z,220nm,19.0s						
SHL	**Shillong**	**13.27**	**243**	*e*P	**Pn**	**15 33 04.0**	**-0.7**
SHL				*e*S	Sx	15 37 10.0	
SSE	**Sheshan**	**13.89**	**91**	P	**Pn**	**15 33 12.9**	**-0.2**
SSE				S	**Sn**	**15 35 46.0**	**-0.9**
SSE				pmax	pmax		
	comp=Z,37nm,0.7s						
SSE				pmax	pmax		
	comp=Z,47nm,3.8s						
SSE				LR	LR		
	comp=N,800nm,13.2s						
SSE				LR	LR		
	comp=E,220nm,13.2s						
SSE				LR	LR		
	comp=Z,340nm,10.6s						
QIZ	**Qiongzhong**	**13.97**	**160**	*e*Pn	**Pn**	**15 33 09.8**	**-4.4**
QZH	**Quanzhou**	**14.06**	**118**	*e*P	**Pn**	**15 33 16.8**	**+1.3**
QZH				S	**Sn**	**15 35 53.9**	**+2.7**
QZH				LR	LR		
	comp=N,1μm,15.2s						
QZH				LR	LR		
	comp=E,2μm,9.8s						
QZH				LR	LR		
	comp=Z,3μm,12.5s						
CHG	**Chiang Mai**	**14.51**	**203**	||P	**Pn**	**15 33 23.3**	**+1.7**
CHTO	**Chiang Mai**	**14.51**	**203**	*e*P	**Pn**	**15 33 21.5**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,15nm,1.1s						
CHTO	**Chiang Mai**	**14.51**	**203**	*e*Pn	**Pn**	**15 33 21.5**	**-0.1**
	comp=Z,15nm,1.1s						
CM31	**Chiang Mai Arr**	**14.84**	**203**	*e*Pn	**Pn**	**15 33 25.6**	**-0.5**
	comp=Z,12nm,0.7s						
CM31				*e*		15 33 32.4	
CMAR	**Chiang Mai Arr**	**14.84**	**203**	Pn	**Pn**	**15 33 25.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=46						
CMAR				LR	LR	15 39 52.5	
	comp=Z,170nm,20.1s,baz=10.0,slow=40						
SONM	**Songino Array**	**15.52**	**4**	Pn	**Pn**	**15 33 33.1**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=11						
SONM				Lg		15 38 04.5	
	comp=Z,0.1nm,0.3s,baz=185,slow=28,SNR=4.1						
ULN	**Ulaanbaatar**	**15.59**	**5**	*e*P	**Pn**	**15 33 34.6**	**-1.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**15.59**	**5**	*e*Pn	**Pn**	**15 33 34.6**	**-1.2**
	comp=Z,8.9nm,0.9s						
BDT	**Bhumibol Dam**	**15.96**	**201**	P	**Pn**	**15 33 45.0**	**+4.2**
GUN	**Gumba**	**17.07**	**260**	*e*P	**Pn**	**15 33 54.3**	**-0.6**
	comp=Z,53nm,0.8s						
PKI	**Pulchoki**	**17.58**	**259**	*e*P	**Pn**	**15 34 00.0**	**-1.2**
	comp=Z,29nm,0.7s						
PKIN	**Phulchoki**	**17.59**	**259**	*e*P	**Pn**	**15 33 59.9**	**-1.4**
	comp=Z,35nm,0.7s						
KKN	**Kakani**	**17.61**	**260**	*e*P	**Pn**	**15 33 59.3**	**-2.3**
	comp=Z,34nm,0.9s						
WMQ	**Urumqi**	**17.73**	**315**	*e*P	**Pn**	**15 34 05.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ				LR	LR		
	comp=N,560nm,11.0s						
WMQ				LR	LR		
	comp=E,650nm,10.0s						
WMQ				LR	LR		
	comp=Z,190nm,20.0s						
DMN	**Daman**	**17.82**	**260**	*e*P	**Pn**	**15 34 01.7**	**-2.5**
	comp=Z,43nm,0.8s						
ZAK	**Zakamensk**	**18.07**	**357**	*e*P	**Pn**	**15 34 07.8**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY	**Talaya**	**19.35**	**358**	*e*P	**Pn**	**15 34 23.3**	**+0.7**
TLY				*e*SS		15 38 03.1	
TLY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,242nm,11.0s						
KSRS	**Korea Array**	**19.51**	**68**	P	**Pn**	**15 34 18.8**	**-6.0**
	comp=Z,0.2nm,0.3s,baz=247,slow=10,SNR=3.2						
KSRS				LR	LR	15 41 28.4	
	comp=Z,79nm,19.9s,baz=260,slow=36						
MOY	**Mondy**	**19.53**	**353**	*e*P	**Pn**	**15 34 29.1**	**+4.3**
CN2	**Changchun**	**19.73**	**49**	*e*P	**Pn**	**15 34 29.8**	**+2.5**
CN2				*es*P	sP	15 34 40.0	+7.5
CN2				*e*PP		15 34 48.5	
CN2				*e*S	**Sn**	**15 38 06.3**	**-2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,12.0s						
CN2				LR	LR		
	comp=E,500nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
IRK	**Irkutsk**	**19.90**	**359**	*e*P	**Pn**	**15 34 32.3**	**+3.2**
IRK				pmax	pmax		
	comp=Z,37nm,1.4s						
HIA	**Hailar**	**20.22**	**29**	*e*P	**P**	**15 34 33.5**	**+2.5**
HIA				pmax	pmax		
	comp=Z,11nm,0.6s						
HIA	**Hailar**	**20.22**	**29**	*e*P	**P**	**15 34 33.5**	**+2.5**
	comp=Z,11nm,0.6s						
MK31	**Makanchi Array**	**22.55**	**316**	*e*P	**P**	**15 34 55.8**	**-0.3**
MKAR	**Makanchi Array**	**22.55**	**316**	P	**P**	**15 34 55.7**	**-0.4**
	comp=Z,5.6nm,0.8s,mb4.1,baz=115,slow=12,SNR=56						
MKAR				LR	LR	15 44 42.5	
	comp=Z,228nm,19.2s,MS3.6,baz=118,slow=39						
MKAR	**Makanchi Array**	**22.55**	**316**	P	**P**	**15 34 55.7**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,228nm,19.2s						
MDJ	**Mudanjiang**	**22.76**	**50**	P	**P**	**15 34 59.4**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,160nm,4.2s						
KSH	**Kashi**	**24.46**	**295**	*e*P	**P**	**15 35 19.1**	**+4.1**
KSH				*e*pP		15 35 23.1	
KSH				*es*P	sP	15 35 26.1	+4.1
KSH				*e*PP		15 35 55.0	
KSH				*e*PcP	PcP	15 38 57.0	+3.5
KSH				*e*S	**S**	**15 39 36.6**	**+2.2**
KSH				*es*S	sS	15 39 43.1	+0.5
KSH				*e*SS		15 40 32.1	
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
KSH				LR	LR		
	comp=N,130nm,6.6s						
KSH				LR	LR		
	comp=E,170nm,9.1s						
KSH				LR	LR		
	comp=Z,160nm,7.2s						
TKM2	**Tokmak 2**	**25.41**	**303**	*e*P	**P**	**15 35 24.3**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**25.41**	**303**	*e*P	**P**	**15 35 24.3**	**+0.7**
	comp=Z,6.4nm,0.8s,mb4.2						
ZAA0	**Zalesovo Array**	**25.94**	**332**	*e*P	**P**	**15 35 27.4**	**-0.9**
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**15 35 27.5**	**-0.8**
	comp=Z,5.6nm,0.7s,mb4.2,baz=128,slow=9.9,SNR=17						
ZALV	**Zalesovo Beam**	**25.94**	**332**	P	**P**	**15 35 27.5**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						

UCH	**Uchtor**	**26.02**	**301**	*e*P	**P**	**15 35 30.9**	**+1.8**
	comp=Z,19nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**26.13**	**302**	LR	LR	15 48 02.8	
	comp=Z,253nm,19.3s,MS3.8,baz=203,slow=42						
KLR	**Kul'dur**	**26.19**	**42**	*e*P	**P**	**15 35 27.6**	**-3.0**
BOD	**Bodaibo**	**26.22**	**11**	*e*P	**P**	**15 35 33.7**	**+2.9**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb3.9						
AML	**Almayashu**	**26.60**	**300**	*e*P	**P**	**15 35 36.2**	**+1.8**
	comp=Z,7.5nm,0.9s,mb4.2						
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**15 35 35.0**	**-0.3**
	comp=Z,6.3nm,0.8s,mb4.2,baz=126,slow=9.9,SNR=19						
KURK				LR	LR	15 46 33.0	
	comp=Z,127nm,18.9s,MS3.5,baz=160,slow=37						
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**15 35 35.0**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
KURK				MLR	MLR		
	comp=Z,127nm,18.9s,MS3.5						
KURK	**Kurchatov**	**26.71**	**321**	*e*P	**P**	**15 35 34.8**	**-0.4**
	comp=Z,9.8nm,0.8s,mb4.4						
NVS	**Novosibirsk**	**27.23**	**332**	*e*P	**P**	**15 35 43.9**	**+4.0**
NVS				pmax	pmax		
	comp=Z,59nm,3.3s						
MJAR	**Matsushiro Arr**	**27.67**	**72**	P	**P**	**15 35 41.2**	**-2.9**
	comp=Z,0.5nm,0.6s,mb3.3,baz=279,slow=8.9,SNR=2.5						
MJAR				LR	LR	15 48 00.1	
	comp=Z,54nm,18.3s,MS3.2,baz=235,slow=40						
MJAR	**Matsushiro Arr**	**27.67**	**72**	P	**P**	**15 35 41.2**	**-2.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR				MLR	MLR		
	comp=Z,54nm,18.3s						
BVAR	**Borovoye Array**	**32.28**	**320**	P	**P**	**15 36 24.6**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.8,baz=116,slow=10,SNR=8.7						
BVAR				LR	LR	15 50 40.5	
	comp=Z,135nm,19.2s,MS3.6,baz=263,slow=38						
BVAR	**Borovoye Array**	**32.28**	**320**	P	**P**	**15 36 24.6**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,135nm,19.2s						
BVAR	**Borovoye Array**	**32.28**	**320**	P	**P**	**15 36 24.6**	**-0.1**
BVAR				LR	LR	15 50 40.5	
BRVK	**Borovoye**	**32.36**	**320**	*ce*P	**P**	**15 36 25.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
CBIJ	**Chichi jima**	**32.65**	**89**	LR	LR	15 49 03.9	
	comp=Z,46nm,19.7s,MS3.2,baz=122,slow=36						
YAK	**Yakutsk**	**33.70**	**21**	*e*P	**P**	**15 36 40.9**	**+4.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
YAK				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,117nm,15.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,124nm,16.0s,MS3.9						
ABKAR	**Akbulak array**	**37.40**	**310**	*e*P	**P**	**15 37 08.9**	**0.0**
	comp=E,1.7nm,0.6s,mb4.0						
SVE	**Sverdlovsk**	**38.95**	**322**	*e*P	**P**	**15 37 22.0**	**+0.2**
ARU	**Arti**	**39.91**	**321**	*c i*P	**P**	**15 37 29.6**	**-0.2**
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.5						
ARU	**Arti**	**39.91**	**321**	*e*P	**P**	**15 37 29.0**	**-0.8**
	comp=Z,10nm,0.9s,mb4.5						
TIXI	**Tiksi**	**41.41**	**11**	*e*P	**P**	**15 37 42.7**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TIXI				MLR	MLR		
	comp=Z,278nm,18.0s,MS4.2						
TIXI	**Tiksi**	**41.41**	**11**	*e*P	**P**	**15 37 43.9**	**+1.9**
	comp=Z,2.6nm,0.6s,mb4.0						
SEY	**Seymchan**	**42.67**	**30**	*c i*P	**P**	**15 38 01.0**	**+8.6**
ZEI	**Tsey**	**48.55**	**301**	*e*P	**P**	**15 38 41.5**	**+2.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KIV	**Kislovodsk**	**49.24**	**302**	*e*P	**P**	**15 38 48.9**	**+4.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=Z,90nm,18.0s,MS3.8						
BILL	**Bilibino**	**49.76**	**26**	P	**P**	**15 38 54.0**	**+5.9**
BILL				*e*		15 39 01.6	
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
VSR	**Storozhevoye**	**50.78**	**312**	*e*P	**P**	**15 38 59.1**	**+3.0**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
VSR				pmax	pmax		
	comp=N,9.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.6s						
KAKA	**Kakadu**	**51.95**	**145**	*e*P	**P**	**15 39 04.3**	**-1.0**
OBN	**Obninsk**	**52.05**	**317**	||*e*P	**P**	**15 39 09.3**	**+3.7**
OBN				*PP	pP	15 39 18.0	+7.2
OBN				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
KEV	**Kevo**	**55.90**	**336**	*e*P	**P**	**15 39 36.3**	**+2.8**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KEV	**Kevo**	**55.90**	**336**	*e*p	**P**	**15 39 36.3**	**+2.8**
	comp=Z,6.0nm,0.8s,mb4.7						
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**15 39 35.8**	**-1.5**
	comp=Z,4.4nm,0.8s,mb4.5,baz=61,slow=7.3,SNR=3.2						
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**15 39 35.8**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KAF	**Kangasniemi**	**56.75**	**327**	*e*P	**P**	**15 39 41.2**	**+1.6**
KAF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
KAF	**Kangasniemi**	**56.75**	**327**	*e*p	**P**	**15 39 41.2**	**+1.6**
	comp=Z,4.6nm,1.1s,mb4.4						
BR131	**Keskin Array S**	**56.76**	**299**	P	**P**	**15 39 43.4**	**+3.4**
	comp=Z,2.3nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**56.76**	**299**	P	**P**	**15 39 39.6**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.3,baz=115,slow=7.3,SNR=3.6						
BRTR				LR	LR	16 07 29.2	
	comp=Z,27nm,19.2s,MS3.4,baz=276,slow=40						
BRTR	**Keskin Array B**	**56.76**	**299**	P	**P**	**15 39 39.6**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR				MLR	MLR		
	comp=Z,27nm,19.2s						
FINES	**FINESS Array B**	**56.95**	**326**	P	**P**	**15 39 39.5**	**-1.5**
	comp=Z,4.2nm,0.8s,mb4.5,baz=120,slow=7.5,SNR=9.6						
FINES	**FINESS Array B**	**56.95**	**326**	P	**P**	**15 39 39.6**	**-1.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSU	**Vasula**	**57.06**	**322**	*ce*P	**P**	**15 39 44.8**	**+2.9**
VSU				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**15 39 40.9**	**-1.2**
	comp=Z,2.3nm,0.6s,mb4.4,baz=66,slow=6.6,SNR=3.6						
AKASG	**Malin Array Be**	**57.07**	**313**	P	**P**	**15 39 40.9**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
IDID	**Didziasalis**	**57.61**	**318**	*e*P	**P**	**15 39 49.2**	**+3.4**
IIGN	**Ignalina**	**57.89**	**319**	*e*P	**P**	**15 39 50.4**	**+2.6**
ISAL	**Salakas**	**57.90**	**319**	*e*P	**P**	**15 39 50.2**	**+2.4**
WRAB	**Tennant Creek**	**59.11**	**147**	*e*P	**P**	**15 39 54.6**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**59.11**	**147**	*e*P	**P**	**15 39 54.6**	**-2.1**
	comp=Z,13nm,0.8s,mb5.0						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P

BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
GERES GERESS Array B 67.20 314 P **P** **15 40 48.8 -1.3**
comp=Z,0.2nm,0.4s,mb3.5,baz=61,slow=5.6,SNR=3.1
GERES LR LR 16 11 58.6
comp=Z,78nm,19.0s,MS4.0,baz=270,slow=38
STKA Stephens Creek 72.66 148 P **P** **15 41 21.1 -2.6**
comp=Z,2.4nm,0.8s,mb4.2,baz=349,slow=4.4,SNR=4.4
LPG La Plagne 72.93 313 *e*P **P** **15 41 24.4 -0.9**
comp=Z,19nm,0.7s,mb4.8
LPL La Plagne 72.93 313 *e*P **P** **15 41 24.4 -0.9**
comp=Z,11nm,0.6s,mb4.7
YKA Yellowknife Ar 80.30 17 P **P** **15 42 04.5 -2.2**
comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=5.2,SNR=10.0
YKA LR LR 16 19 23.0
comp=Z,3.7nm,19.1s,MS2.8,baz=180,slow=37
YKA Yellowknife Ar 80.30 17 P **P** **15 42 04.5 -2.2**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,4.0nm,19.1s
YKA Yellowknife Ar 80.30 17 P **P** **15 42 04.5 -2.2**
YKA LR LR 16 19 23.0

DJA 21 15:30:45,1°.84N×99°.04E,h10km,MLv3.8/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.20**	**336**	P	Pg	15 30 49.2	-0.1
MNSI	**Mandailing Nat**	**1.17**	**153**	P	Pb	15 31 02.3	-5.0
GSI	**Gunungsitoli**	**1.56**	**250**	P	Pn	15 31 12.5	-0.3
GSI				S	Sn	15 31 33.5	+0.4
BKNI	**Bangkinang**	**2.50**	**127**	P	Pn	15 31 27.9	+2.1
BKNI				S	Sn	15 31 58.2	+1.8
PPI	**Padang Panjang**	**2.65**	**149**	P	Pn	15 31 34.8	+6.9
SISI	**Saibi**	**3.15**	**179**	P	Pn	15 31 34.9	+0.3
IPM	**Ipoh**	**3.29**	**37**	P	Pn	15 31 37.0	+0.4
KULM	**Kulim**	**3.79**	**25**	P	Pn	15 31 43.0	-0.4
RGRI	**Rengat**	**3.95**	**123**	P	Pn	15 31 48.7	+3.0

*IDC **21** 15:34:16.7±1.4,47°.07N×153°.76E,h0km,mb3.5/3, mb1 3.8/5,mb1mx3.4/25,mbtmp3.6/5,ML2.9/2,Error ellipse: s-maj=59.6km s-min=24.5km az=127.0*
*ISCJB **21** 15:34:22.8±3.2,47°.3N±0°.3×153°.2E±0°.5,h64km±33km, mb3.4/3,Error ellipse: s-maj=71.8km s-min=11.4km az=41.7*
*MOS **21** 15:34:25.0±2.1,47°.77N×152°.66E,h88km,mb3.9/1,Error ellipse: s-maj=87.0km s-min=21.8km az=60.3*
ISC 21 15:34:24.1±3.4,47°.2N±0°.4×153°.4E±0°.6,h57km±37km,n7, σ1§02/9,mb3.4/3,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.95**	**26**	*e*PN	**Pn**	**15 35 22.5**	**+0.5**
SKR				*e*S	**Sn**	**15 36 05.5**	**-1.5**
SKR				pmax	pmax		
comp=Z,80nm,0.4s
SKR pmax pmax
comp=N,50nm,0.2s
SKR smax
comp=N,90nm,0.2s
SKR smax
comp=E,120nm,0.2s
PETK Petropavlovsk- 6.55 23 Pn **Pn** **15 35 53.4 -4.3**
comp=E,0.0nm,0.3s,baz=224,slow=16,SNR=2.7
PETK Sn **Sn** **15 37 13.1 +2.1**
baz=220,slow=25,SNR=3.5
ASAJ Asahikawa 8.15 252 Pn **Pn** **15 36 19.4 -0.2**
comp=E,0.3nm,0.3s,baz=63,slow=11,SNR=3.7
YKA Yellowknife Ar 50.47 37 P **P** **15 43 14.9 -0.8**
comp=E,0.5nm,0.7s,mb3.7,baz=300,slow=7.3,SNR=2.6
YKA Yellowknife Ar 50.47 37 P **P** **15 43 14.9 -0.8**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 72.67 199 P **P** **15 45 46.0 +0.4**
comp=Z,0.2nm,0.9s,mb3.0,baz=24,slow=7.1,SNR=3.1
TXAR Lajitas Array 77.12 61 P **P** **15 46 11.6 +0.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=305,slow=3.2,SNR=6.5

*DDA **21** 16:39:02.0,40°.77N×32°.73E,h7km±6km,Md3.5*
*CSEM **21** 16:39:02.9±0.1,40°.80N×32°.69E,h1km±1km,MD3.4,Error ellipse: s-maj=2.1km s-min=1.4km az=169.0*
*ISK **21** 16:39:02.1,40°.81N×32°.70E,h3km,MD3.4*
*ISCJB **21** 16:39:03.2±0.3,40°.82N±0°.03×32°.72E±0°.02,h10km,Error ellipse: s-maj=3.9km s-min=2.5km az=163.4*
ISC 21 16:39:03.1±0.5,40°.82N±0°.03×32°.70E±0°.03,h2km±4km, n68,σ0§72/90,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAFT	**Safranbolu**	**0.42**	**359**	*e*PG	**Pg**	**16 39 11.6**	**+0.4**
SAFT	**Safranbolu**	**0.42**	**359**	*e*Pg	**Pg**	**16 39 11.6**	**+0.4**
SGKT	**Sivrigoynuk**	**0.55**	**244**	*i* P	**Pg**	**16 39 13.9**	**+0.4**
SGKT				*i* S	**Sg**	**16 39 24.6**	**+4.1**
SGKT	**Sivrigoynuk**	**0.55**	**244**	*i* P	**Pg**	**16 39 13.9**	**+0.4**
SGKT				*i* S	**Sg**	**16 39 24.6**	**+4.0**
ELDT	**Eldivan**	**0.64**	**120**	*i* P	**Pg**	**16 39 14.4**	**-1.0**
ELDT				*i* S	**Sg**	**16 39 22.9**	**-0.8**
ELDT	**Eldivan**	**0.64**	**120**	*i* P	**Pg**	**16 39 14.4**	**-1.0**
ELDT				*i* S	**Sg**	**16 39 22.9**	**-0.8**
CANT	**Cankiri**	**0.73**	**106**	*e*PG	**Pg**	**16 39 16.7**	**-0.4**
CANT				*e*SG	**Sg**	**16 39 27.4**	**+0.9**
ILGA	**Ilgaz**	**0.81**	**73**	*i* P	**Pg**	**16 39 17.6**	**-1.0**
ILGA				*i* S	**Sg**	**16 39 30.4**	**+1.4**
ILGA	**Ilgaz**	**0.81**	**73**	*i* P	**Pg**	**16 39 17.5**	**-1.0**
ILGA				*i* S	**Sg**	**16 39 30.4**	**+1.4**
BALT	**Daday**	**0.89**	**36**	*i* P	**Pg**	**16 39 20.1**	**+0.1**
BALT				*i* S	**Sg**	**16 39 30.8**	**-0.8**
BALT	**Daday**	**0.89**	**36**	*i* P	**Pg**	**16 39 20.1**	**+0.1**
BALT				*i* S	**Sg**	**16 39 30.8**	**-0.7**
LOD	**Lodumlu**	**0.93**	**177**	*e*PG	**Pg**	**16 39 20.4**	**-0.4**
LOD				*e*SG	**Sg**	**16 39 34.0**	**+1.2**
LOD	**Lodumlu**	**0.93**	**177**	*e*Pg	**Pg**	**16 39 20.4**	**-0.4**
LOD				*e*Sg	**Sg**	**16 39 34.0**	**+1.2**
TOS	**Tosya**	**1.03**	**77**	*e*PG	**Pg**	**16 39 21.6**	**-1.1**
TOS				*e*SG	**Sg**	**16 39 37.5**	**+1.4**
TOS	**Tosya**	**1.03**	**77**	*e*Pg	**Pg**	**16 39 21.7**	**-1.1**
TOS				*e*Sg	**Sg**	**16 39 37.5**	**+1.4**
KDZE	**Karadeniz Ereo**	**1.07**	**298**	*e*PG	**Pg**	**16 39 23.4**	**-0.1**
KDZE	**Karadeniz Ereo**	**1.07**	**298**	*e*Pg	**Pg**	**16 39 23.4**	**-0.2**
MDU	**Mudurnu**	**1.18**	**253**	*e*PN	**Pn**	**16 39 25.4**	**-1.2**
MDU	**Mudurnu**	**1.18**	**253**	*e*Pn	**Pn**	**16 39 25.4**	**-1.2**
BZK	**Bozkurt**	**1.51**	**40**	*e*PN	**Pn**	**16 39 30.9**	**-0.1**
BZK	**Bozkurt**	**1.51**	**40**	*e*Pn	**Pn**	**16 39 31.0**	**0.0**
CTKT	**Corum**	**1.60**	**96**	*i* P	**Pn**	**16 39 32.1**	**-0.3**
CTKT				*i* S	**Sn**	**16 39 53.1**	**-0.5**
CTKT	**Corum**	**1.60**	**96**	*i* P	**Pn**	**16 39 32.1**	**-0.2**
CTKT				*i* S	**Sn**	**16 39 53.1**	**-0.5**
CORM	**Corum**	**1.61**	**113**	*e*PN	**Pn**	**16 39 32.3**	**-0.1**
CORM	**Corum**	**1.61**	**113**	*e*Pn	**Pn**	**16 39 32.3**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.64**	**214**	*e*PN	**Pn**	**16 39 32.3**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.64**	**214**	*e*Pn	**Pn**	**16 39 32.3**	**-0.5**
BYBT	**Boyabat**	**1.69**	**67**	*e*PN	**Pn**	**16 39 34.0**	**+0.4**
BYBT	**Boyabat**	**1.69**	**67**	*e*Pn	**Pn**	**16 39 34.0**	**+0.4**
GULT	**Gulveren**	**1.71**	**258**	*e*PN	**Pn**	**16 39 33.6**	**-0.2**
GULT	**Gulveren**	**1.71**	**258**	*e*Pn	**Pn**	**16 39 33.6**	**-0.2**
CDAG	**Cicekdag**	**1.75**	**132**	*i* P	**Pn**	**16 39 33.6**	**-0.8**
CDAG				*i* S	**Sn**	**16 39 57.3**	**0.0**
CDAG	**Cicekdag**	**1.75**	**132**	*i* P	**Pn**	**16 39 33.6**	**-0.8**
CDAG				*i* S	**Sn**	**16 39 57.3**	**+0.1**
ESKT	**Eskisehir**	**1.92**	**228**	*e*PN	**Pn**	**16 39 36.6**	**0.0**
ESKT	**Eskisehir**	**1.92**	**228**	*i* P	**Pn**	**16 39 36.0**	**-0.7**
ESKT				*i* S	**Sn**	**16 40 01.9**	**+0.5**
ESKT	**Eskisehir**	**1.92**	**228**	*e*Pn	**Pn**	**16 39 36.7**	**0.0**
SEYT	**Eskypehyr**	**1.92**	**228**	*i* P	**Pn**	**16 39 36.0**	**-0.7**
SEYT				*i* S	**Sn**	**16 40 01.9**	**+0.5**
BORA	**Eskisehir**	**1.95**	**242**	*i* P	**Pn**	**16 39 36.8**	**-0.4**
BORA				*i* S	**Sn**	**16 40 04.2**	**+2.0**
BORA	**Eskisehir**	**1.95**	**242**	*i* P	**Pn**	**16 39 36.8**	**-0.4**
BORA				*i* S	**Sn**	**16 40 04.2**	**+2.0**
KIZT	**Kizilcal**	**2.03**	**198**	*e*PN	**Pn**	**16 39 37.8**	**-0.4**
KIZT	**Kizilcal**	**2.03**	**198**	*e*Pn	**Pn**	**16 39 37.8**	**-0.5**
DIKM	**Dikmen**	**2.10**	**66**	*e*PN	**Pn**	**16 39 39.7**	**+0.5**
DIKM	**Dikmen**	**2.10**	**66**	*e*Pn	**Pn**	**16 39 39.7**	**+0.5**
CAVI	**Cavuskoy**	**2.26**	**255**	*e*PN	**Pn**	**16 39 41.0**	**-0.4**
CAVI	**Cavuskoy**	**2.26**	**255**	*e*Pn	**Pn**	**16 39 41.0**	**-0.4**
ADVT	**Abdulvahap**	**2.29**	**261**	*e*PN	**Pn**	**16 39 41.9**	**+0.2**
ADVT	**Abdulvahap**	**2.29**	**261**	*e*Pn	**Pn**	**16 39 41.9**	**+0.2**
YOZ	**Yozgat**	**2.33**	**119**	*e*PN	**Pn**	**16 39 42.8**	**+0.5**
YOZ	**Yozgat**	**2.33**	**119**	*e*Pn	**Pn**	**16 39 42.8**	**+0.5**
BOLV	**Bolvadin**	**2.49**	**213**	*i* P	**Pn**	**16 39 44.5**	**-0.1**
BOLV				*i* S	**Sn**	**16 40 14.2**	**-1.4**
BOLV	**Bolvadin**	**2.49**	**213**	*i* P	**Pn**	**16 39 44.5**	**-0.1**
BOLV				*i* S	**Sn**	**16 40 14.2**	**-1.3**
YLV	**Yalova**	**2.54**	**265**	*e*PN	**Pn**	**16 39 46.0**	**+0.7**
YLV	**Yalova**	**2.54**	**265**	*e*Pn	**Pn**	**16 39 46.0**	**+0.8**
KVT	**Kavak**	**2.55**	**83**	*e*PN	**Pn**	**16 39 45.8**	**+0.5**
KVT	**Kavak**	**2.55**	**83**	*e*Pn	**Pn**	**16 39 45.8**	**+0.4**
LADK	**Ladik-KONYA**	**2.63**	**186**	*e*PN	**Pn**	**16 39 47.1**	**+0.7**
LADK	**Ladik-KONYA**	**2.63**	**186**	*e*Pn	**Pn**	**16 39 47.2**	**+0.8**
AVNT	**Avonos**	**2.63**	**140**	*i* P	Px	16 39 32.1	
AVNT				*i* S	Sx	16 40 10.4	
ALT	**Altintas**	**2.66**	**229**	*e*PN	**Pn**	**16 39 46.9**	**+0.1**
ALT	**Altintas**	**2.66**	**229**	*e*Pn	**Pn**	**16 39 46.9**	**+0.1**
SULT	**Sultanhani-AKS**	**2.69**	**166**	*e*PN	**Pn**	**16 39 47.6**	**+0.3**
SULT	**Sultanhani-AKS**	**2.69**	**166**	*e*Pn	**Pn**	**16 39 47.6**	**+0.3**
KLYT	**Kilyos**	**2.80**	**280**	*e*PN	**Pn**	**16 39 48.5**	**-0.3**
KLYT	**Kilyos**	**2.80**	**280**	*e*Pn	**Pn**	**16 39 48.5**	**-0.3**
SHUT	**Suhut-Afyon**	**2.80**	**217**	*e*PN	**Pn**	**16 39 49.0**	**+0.1**
SHUT	**Suhut-Afyon**	**2.80**	**217**	*e*Pn	**Pn**	**16 39 49.0**	**+0.1**
CTKS	**Kestanelik-??a**	**3.20**	**279**	*e*PN	**Pn**	**16 39 54.6**	**+0.3**
CTKS	**Kestanelik-??a**	**3.20**	**279**	*e*Pn	**Pn**	**16 39 54.6**	**+0.3**

*IDC **21** 16:49:21.1±1.3,16°.86S×176°.57E,h0km,mb4.1/8, mb1 4.4/8,mb1mx4.2/14,mbtmp4.0/8,MS3.6/10, Ms1 3.6/10,ms1mx3.5/20,Error ellipse: s-maj=74.5km s-min=21.6km az=150.0*
*ISCJB **21** 16:49:24.8±0.6,16°.9S±0°.1×176°.6E±0°.1,h33km,mb4.1/9, MS3.7/9,Error ellipse: s-maj=21.5km s-min=15.2km az=6.0*
*NEIC **21** 16:49:26.2±0.6,17°.06S×176°.66E,h35km,mb4.4/1,Error ellipse: s-maj=25.8km s-min=16.0km az=182.0*
ISC 21 16:49:26.2±0.7,17°.0S±0°.2×176°.7E±0°.1,h35km,n20, σ1§07/11,mb4.1/9,MS3.7/9,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.50**	**117**	⇑*i*Pn	**Pn**	**16 49 50.4**	**-0.3**
DZM	**Mont Dzumac**	**10.84**	**241**	*e*LR	LR	16 54 15.4	
973nm,26.7s
AFI Afiamalu 11.58 76 LR LR 16 55 10.5
comp=Z,110nm,21.7s,baz=236,slow=30
CTA Charters Tower 28.95 259 LR LR 17 04 32.7
comp=Z,107nm,19.3s,MS3.5,baz=83,slow=32
PPT Papeete 32.23 96 *e*LQ 17 03 18.0
771nm,26.2s
PPT *e*LR LR 17 04 24.3
278nm,29.8s
STKA Stephens Creek 34.98 238 P **P** **16 56 16.4 +1.1**
18nm,0.8s,mb5.1,baz=64,slow=6.8,SNR=34
STKA LR LR 17 08 40.1
comp=Z,227nm,20.6s,MS3.9,baz=26,slow=33
ASAR Alice Springs 40.50 253 P **P** **16 57 00.2 -1.8**
4.8nm,0.8s,mb4.2,baz=82,slow=9.2,SNR=98
SBA Scott Base 61.03 182 *e*P **P** **16 59 40.5 +4.7**
3.1nm,0.9s,mb4.4
MJAR Matsushiro Arr 64.49 326 LR LR 17 27 24.3
comp=Z,40nm,18.9s,MS3.6,baz=235,slow=36
KSRS Korea Array 70.99 321 LR LR 17 24 50.1
comp=Z,58nm,21.8s,MS3.8,baz=4.8,slow=30
NVAR Mina Array Bea 82.14 46 P **P** **17 01 43.2 -0.3**
1.1nm,0.4s,mb4.1,baz=235,slow=5.6,SNR=3.2
CMAR Chiang Mai Arr 84.17 291 P **P** **17 01 54.5 +0.1**
0.6nm,0.8s,mb3.8,baz=126,slow=3.2,SNR=4.7
CMAR LR LR 17 36 29.3
comp=Z,61nm,18.0s,MS4.0,baz=130,slow=34
TXAR Lajitas Array 89.56 59 P **P** **17 02 22.0 +1.6**
0.6nm,0.9s,mb3.9,baz=224,slow=5.2,SNR=4.9
TXAR LR LR 17 32 20.2
comp=Z,78nm,21.3s,MS4.1,baz=180,slow=29
TXAR Lajitas Array 89.56 59 P **P** **17 02 22.0 +1.6**
TXAR LR LR 17 32 20.2
SONM Songino Array 89.86 321 P **P** **17 02 22.2 +0.8**
0.3nm,0.6s,mb3.8,baz=131,slow=4.1,SNR=3.9
SONM LR LR 17 39 01.7
comp=Z,39nm,18.4s,MS3.9,baz=92,slow=33
PDAR Pinedale Array 90.03 45 P **P** **17 02 22.3 +0.1**
0.2nm,0.4s,mb3.8,baz=233,slow=3.8,SNR=2.5
PDAR LR LR 17 33 42.2
comp=Z,49nm,21.1s,MS3.9,baz=356,slow=30
YKA Yellowknife Ar 95.56 26 P **P** **17 02 45.6 -1.7**
0.2nm,0.7s,mb3.6,baz=263,slow=5.6,SNR=3.8
YKA LR LR 17 39 48.6
comp=Z,4.5nm,20.4s,MS2.9,baz=75,slow=32
GRF Grafenberg Arr 145.37 343 *e*PKP PKPdf 17 09 02.0 +1.7
GERES GERESS Array B 145.37 340 PKPbc PKPbc 17 09 00.3 +0.1
0.3nm,0.7s,baz=2.9,slow=2.0,SNR=4.5
GERES GERESS Array B 145.37 340 PKPbc PKPbc 17 09 00.3 +0.1

ISC 21 16:50:29.5±4.0,40°.1N±0°.3×73°.9E±0°.3,h10km,n11, σ1§31/12,3C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.73**	**110**	*e*Pg	**Pg**	**16 51 03.1**	**+0.5**
KSH				Sg	**Sg**	**16 51 24.6**	**-0.4**
KSH				smax			
comp=N,78nm,0.2s
KSH smax
comp=E,77nm,0.5s
AML Almayashu 2.01 356 P **Pn** **16 51 01.6 -1.9**
SNR=23
UCH Uchtor 2.16 13 P **Pn** **16 51 03.5 -2.0**
SNR=28
KZA Kyzart 2.21 28 P **Pn** **16 51 05.2 -1.1**
SNR=19
EKS2 Erkin-Say 2.54 358 P **Pn** **16 51 11.6 +0.9**
SNR=13
AAK Ala-Archa 2.55 10 P **Pn** **16 51 11.5 +0.6**
SNR=10
ULHL Ulahol 2.78 39 P **Pn** **16 51 14.7 +0.7**
SNR=19
TKM2 Tokmak 2 3.08 24 ⇓Pn **Pn** **16 51 18.7 +0.5**
comp=E,9.4nm,1.1s
TKM2 ⇑Lg 16 51 54.3
comp=E,10nm,0.5s
TKM2 Tokmak 2 3.08 24 P **Pn** **16 51 21.1 +2.9**
SNR=8.1
USP Ospenovka 3.18 8 P **Pn** **16 51 22.7 +3.2**
SNR=8.1
KK09 Karatay Array 3.92 321 ⇑Pn **Pn** **16 51 38.3 +8.5**
comp=E,1.4nm,0.6s,baz=132,slow=16
KK09 ⇑Lg 16 52 28.5
comp=E,4.5nm,0.6s,baz=129,slow=28

*IDC **21** 17:09:51.7±1.0,31°.34N×103°.91E,h0km,mb3.7/10, mb1 3.7/12,mb1mx3.6/26,mbtmp3.6/12,ML3.1/2,MS3.2/2, Ms1 3.2/2,ms1mx2.4/32,Error ellipse: s-maj=33.9km s-min=18.9km az=56.0*
*NEIC **21** 17:09:53.4±0.5,31°.36N×103°.99E,h10km,mb3.5/1,Error ellipse: s-maj=12.3km s-min=8.2km az=60.0*
*BJI **21** 17:09:54.8,31°.27N×104°.19E,h17km,ML3.4/14,Ms3.4/1, Ms7 3.2/1*
ISC 21 17:09:52.6±0.9,31°.41N±0°.03×104°.02E±0°.06,h2km±6km, n24,σ0§96/29,mb3.7/9,MS3.2/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**204**	Pg	**Pg**	**17 10 02.8**	**-0.3**
CD2				Sg	**Sg**	**17 10 10.4**	**+0.2**
CD2				smax			
comp=N,4μm,0.7s
LZH Lanzhou 4.67 358 *e*Pg **Pg** **17 11 22.3 +0.3**
LZH Sg **Sg** **17 12 22.6 +0.1**
LZH smax
comp=N,39nm,0.9s
LZH smax
comp=E,68nm,1.0s
ENH Enshi 4.84 102 *e*P **Pn** **17 11 07.1 +0.6**
XAN Xi'an 4.89 56 Pn **Pn** **17 11 08.3 +1.1**
XAN Pg **Pg** **17 11 21.3 -5.1**
XAN Sn **Sn** **17 12 04.3 -0.1**
XAN Sg **Sg** **17 12 26.8 -3.0**
XAN smax
comp=N,110nm,0.9s
XAN smax
comp=E,53nm,0.8s
KMI Kunming 6.37 191 Pn **Pn** **17 11 29.4 +1.9**
KMI Sn **Sn** **17 12 40.1 -0.7**
KMI smax
comp=N,13nm,1.2s
KMI smax
comp=E,9.0nm,1.1s
KMI LR LR
comp=N,160nm,7.7s
KMI LR LR
comp=E,220nm,7.1s
KMI LR LR
comp=Z,130nm,6.7s
CMAR Chiang Mai Arr 13.69 201 Pn **Pn** **17 13 07.2 -0.7**
comp=Z,0.0nm,0.3s,baz=9.1,slow=8.6,SNR=2.7
SONM Songino Array 16.50 6 Pn **Pn** **17 13 45.9 +0.7**
comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=5.6
KSRS Korea Array 20.59 66 P **P** **17 14 34.4 +1.4**
comp=Z,1.2nm,0.7s,baz=254,slow=10.0,SNR=5.4
CN2 Changchun 20.93 48 *e*P **P** **17 14 38.3 +1.7**
MK31 Makanchi Array 22.70 319 *e*P **P** **17 14 56.2 +0.7**
MKAR Makanchi Array 22.70 319 P **P** **17 14 56.1 +0.6**
comp=Z,0.8nm,0.5s,mb3.4,baz=122,slow=12,SNR=18
ZAA0 Zalesovo Array 26.41 334 *e*P **P** **17 15 30.9 +0.4**
ZALV Zalesovo Beam 26.41 334 P **P** **17 15 30.8 +0.3**
comp=Z,1.4nm,0.7s,mb3.6,baz=132,slow=8.8,SNR=9.4
ZALV Zalesovo Beam 26.41 334 P **P** **17 15 30.8 +0.3**
KURK Kurchatov 26.96 323 P **P** **17 15 35.3 -0.1**
comp=Z,0.5nm,0.2s,mb3.6,baz=128,slow=9.2,SNR=6.9
KURK Kurchatov 26.96 323 *e*P **P** **17 15 35.7 +0.3**
comp=Z,0.8nm,0.8s,mb3.3
BVAR Borovoye Array 32.51 321 LR LR 17 32 07.7
comp=Z,25nm,19.6s,MS2.9,baz=225,slow=41
ABKAR Abkulak array 37.42 311 *e*P **P** **17 17 06.7 -0.3**
ARCES ARCESS Array B 56.95 336 P **P** **17 19 38.6 -0.4**
comp=Z,1.0nm,0.7s,mb3.9,baz=79,slow=7.5,SNR=4.3
FINES FINESS Array B 57.27 326 P **P** **17 19 39.6 -1.8**
comp=Z,0.4nm,0.4s,mb3.8,baz=110,slow=7.6,SNR=3.4
FINES LR LR 17 48 44.5
comp=Z,29nm,19.6s,MS3.4,baz=129,slow=41
ASAR Alice Springs 61.79 149 P **P** **17 20 12.3 -0.6**
comp=Z,0.7nm,0.8s,mb3.9,baz=337,slow=6.5,SNR=14
HFS Hagfors 63.48 326 P **P** **17 20 22.9 -1.0**
comp=Z,0.7nm,0.5s,mb4.0,baz=63,slow=7.2,SNR=5.1
NOA NORSAR Array B 64.36 327 P **P** **17 20 28.3 -1.3**
comp=Z,0.2nm,0.5s,mb3.4,baz=73,slow=6.9,SNR=3.0
YKA Yellowknife Ar 81.42 17 P **P** **17 22 10.0 -0.8**
comp=Z,0.2nm,0.4s,mb3.4,baz=330,slow=5.4,SNR=3.8

CASC 21 17:13:01.9±1.1,12°.54N×87°.93W,h69km±21km,MD3.5, ML3.3,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.73**	**8**	*e*P	Pn	17 13 17.0	-0.2
CRIN	**San Cristobal**	**0.88**	**80**	*e*P	Pn	17 13 19.0	+0.2
CRIN				*e*S	Sn	17 13 32.2	+0.9
CRIN				AML	AML	17 13 35.4	
comp=E,1μm,0.1s
BLLM Bellamira 0.94 342 *e*P Pn 17 13 19.4 -0.2
TEL3 Telica 3 1.06 88 *e*P Pn 17 13 20.9 -0.3
TELN Telica 1.08 87 *e*P Pn 17 13 21.3 0.0
MIRN Miramar 1.20 95 *e*P Pn 17 13 22.7 -0.1
CNGN Cerro Negro 1.21 92 *e*P Pn 17 13 22.6 -0.4
CNGN *e*S Sn 17 13 39.7 +1.0
CNGN AML AML 17 13 47.3
comp=N,303nm,0.1s
CAHU Cacacuatique 1.25 348 *e*P Pn 17 13 24.5 +1.0
CAHU *e*S Sn 17 13 41.1 +1.3
COPN Copaltepe 1.36 105 *e*P Pn 17 13 24.6 -0.4
MOMN Momotombo 1.37 95 *e*P Pn 17 13 25.1 0.0
CSAN 1.52 103 *e*P Pn 17 13 27.4 +0.3
LFRS El Faro 1.54 314 *e*P Pn 17 13 27.3 0.0
LFRS *e*S Sn 17 13 47.4 +0.9
APYN Apoyeque 1.58 101 *e*P Pn 17 13 27.9 0.0
LBRS Las Brisas 1.61 318 *e*P Pn 17 13 28.6 +0.4
LBRS *e*S Sn 17 13 48.8 +0.7
TICN Ticuantepe 1.74 107 *e*P Pn 17 13 30.5 +0.5
RBDL Robledal 2.31 313 *e*P Pn 17 13 38.9 +1.2

*ISCJB **21** 17:24:40.9±0.6,38°.61N±0°.03×30°.77E±0°.03,h3km±5km, Error ellipse: s-maj=4.7km s-min=4.0km az=175.2*
*DDA **21** 17:24:40.7,38°.62N×30°.78E,h19km±2km,Md3.1*
*ISK **21** 17:24:40.7,38°.61N×30°.77E,h7km,MD3.2*
*CSEM **21** 17:24:41.2±0.1,38°.61N×30°.79E,h5km,MD3.1,Error ellipse: s-maj=2.4km s-min=2.1km az=159.0*
ISC 21 17:24:41.6±0.5,38°.61N±0°.03×30°.78E±0°.03,h6km±4km, n61,σ0§55/81,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.17**	**51**	*i* P	**Pg**	**17 24 45.2**	**+0.1**
BOLV				*i* S	**Sg**	**17 24 48.0**	**+0.6**
BOLV	**Bolvadin**	**0.17**	**51**	*i* P	**Pg**	**17 24 45.2**	**+0.1**
BOLV				*i* S	**Sg**	**17 24 48.0**	**+0.5**
SHUT	**Suhut-Afyon**	**0.18**	**252**	PG	**Pg**	**17 24 45.1**	**-0.1**
SHUT	**Suhut-Afyon**	**0.18**	**252**	*i* Pg	**Pg**	**17 24 45.1**	**-0.1**
ALT	**Altintas**	**0.68**	**311**	PG	**Pg**	**17 24 54.0**	**-0.8**
ALT				*e*SG	**Sg**	**17 25 03.7**	**+0.1**
ALT	**Altintas**	**0.68**	**311**	*i* Pg	**Pg**	**17 24 54.0**	**-0.7**
ALT				*e*Sg	**Sg**	**17 25 03.7**	**+0.1**
KIZT	**Kizilcal**	**0.91**	**72**	PG	**Pg**	**17 24 58.7**	**-0.2**
KIZT				*e*SG	**Sg**	**17 25 11.4**	**+0.7**
KIZT	**Kizilcal**	**0.91**	**72**	*i* Pg	**Pg**	**17 24 58.7**	**-0.2**
KIZT				*e*Sg	**Sg**	**17 25 11.4**	**+0.7**
ESKT	**Eskisehir**	**0.91**	**4**	PG	**Pg**	**17 24 58.6**	**-0.4**
ESKT	**Eskisehir**	**0.91**	**4**	*i* P	**Pg**	**17 24 58.1**	**-0.9**
ESKT				*i* S	**Sg**	**17 25 11.2**	**+0.3**
ESKT	**Eskisehir**	**0.91**	**4**	*i* Pg	**Pg**	**17 24 58.6**	**-0.5**
SEYT	**Eskypehyr**	**0.91**	**4**	*i* P	**Pg**	**17 24 58.1**	**-1.0**
SEYT				*i* S	**Sg**	**17 25 11.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.02**	**35**	*e*PG	**Pg**	**17 25 00.9**	**-0.2**
SVRH	**Sivrihisar-ESK**	**1.02**	**35**	*e*Pg	**Pg**	**17 25 00.9**	**-0.2**
KHL	**Karahalli**	**1.02**	**254**	*e*PG	**Pg**	**17 25 00.6**	**-0.6**
KHL	**Karahalli**	**1.02**	**254**	*e*Pg	**Pg**	**17 25 00.6**	**-0.6**
KHAL	**Karahalli**	**1.03**	**257**	*i* P	**Pg**	**17 25 01.1**	**-0.3**
KHAL				*i* S	**Sg**	**17 25 15.3**	**+0.4**
KHAL	**Karahalli**	**1.03**	**257**	*i* P	**Pg**	**17 25 01.1**	**-0.3**
KHAL				*i* S	**Sg**	**17 25 15.3**	**+0.5**
GDZ	**Gediz**	**1.12**	**296**	*i* P	**Pg**	**17 25 03.5**	**+0.5**
GDZ				*i* S	**Sg**	**17 25 17.6**	**+0.1**
GDZ	**Gediz**	**1.12**	**296**	*i* P	**Pg**	**17 25 03.5**	**+0.5**
GDZ				*i* S	**Sg**	**17 25 17.6**	**+0.1**
BCK	**Bucak**	**1.16**	**187**	*e*PN	Pn	**17 25 02.9**	**-1.3**
BCK	**Bucak**	**1.16**	**187**	*e*Pn	Pn	**17 25 02.9**	**-1.3**
BORA	**Eskisehir**	**1.29**	**349**	*i* P	Pn	**17 25 05.3**	**-0.8**
BORA				*i* S	**Sg**	**17 25 23.1**	**-0.1**
BORA	**Eskisehir**	**1.29**	**349**	*i* P	Pn	**17 25 05.3**	**-0.8**
BORA				*i* S	**Sg**	**17 25 23.1**	**-0.1**
LADK	**Ladik-KONYA**	**1.31**	**108**	*e*

SULT	Sultanhani-AKS	2.19 100	*e*Pn	Pn	17 25 18.3	-0.2
GEMT	Gemlik	2.20 327	*e*PN	Pn	17 25 18.8	+0.3
GEMT	Gemlik	2.20 327	*e*Pn	Pn	17 25 18.8	+0.2
SGKT	Sivrigoynuk	2.20 26	*i* P	Pn	17 25 22.3	+3.7
SGKT			*i* S	Sn	17 25 51.7	+5.7
YLV	Yalova	2.24 331	*e*PN	Pn	17 25 18.7	-0.4
YLV	Yalova	2.24 331	*e*Pn	Pn	17 25 18.7	-0.4
FETY	Fethiye	2.38 215	*e*PN	Pn	17 25 21.6	+0.5
FETY	Fethiye	2.38 215	*e*Pn	Pn	17 25 21.6	+0.5

DJA 21 17:33:58, 1.80N×99.07E, h10km, MLv3.5/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	0.25	334	P	Pg	17 34 04.1	+1.0
MNSI	Mandailing Nat	1.12	153	P	Pb	17 34 15.4	-4.1
GSI	Gunungsitoli	1.57	252	P	Pn	17 34 24.2	-1.8
GSI				S	Sn	17 34 47.9	+1.5
BKNI	Bangkinang	2.45	127	P	Pn	17 34 38.9	+0.8
BKNI				S	Sn	17 35 11.4	+3.2
PPI	Padang Panjang	2.60	149	P	Pn	17 34 42.0	+1.8
PDSI	Padang	3.03	153	P	Pn	17 34 44.4	-1.7
SISI	Saibi	3.11	180	P	Pn	17 34 45.0	-2.1
IPM	Ipoh	3.30	36	P	Pn	17 34 50.1	+0.3
KULM	Kulim	3.81	24	P	Pn	17 34 56.5	-0.3
MYKOM	Kota Tinggi	4.78	90	P	Pn	17 35 07.8	-2.3

IDC 21 17:36:49.2±1.6, 56.28S×27.52W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.9/14, mbtmp3.9/4, MS3.4/1, Ms1 3.4/1, ms1mx3.0/14, Error ellipse: s-maj=58.0km s-min=38.2km az=32.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.86	281	LR	LR	17 55 42.6	
	comp=Z,59nm,18.9s,baz=225,slow=36						
CPUP	Villa Florida	36.83	312	P	P	17 43 58.5	-0.3
	0.8nm,0.5s,baz=151,slow=2.1,SNR=4.0						
LPAZ	La Paz	50.36	306	P	P	17 45 48.9	+1.0
	2.0nm,0.6s,baz=155,slow=5.7,SNR=8.7						
TORD	Torodi Ar. Bea	73.34	30	P	P	17 48 22.7	+0.2
	0.2nm,0.4s,baz=202,slow=6.0,SNR=4.7						
ASAR	Alice Springs	98.83	163	P	P	17 50 30.9	0.0
	0.2nm,0.6s,baz=180,slow=4.9,SNR=6.7						
YKA	Yellowknife Ar	136.22	318	PKP	PKPdf	17 56 09.6	-1.3
	0.2nm,0.4s,baz=126,slow=2.4,SNR=5.4						

MAN 21 17:44:16, 6.44N×125.55E, h30km, mb4.6, ML3.5, MS3.4, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.64	356	*i* P	Pb	17 44 29.3	+0.6
DMPH				*i* S	Sb	17 44 39.4	+2.1
GSPH	General Santos	0.69	239	*e* P	Pb	17 44 27.1	-2.5
GSPH				*e*S	Sb	17 44 36.2	-2.7
KCP	Kidapawan	0.72	321	*i* P	Pb	17 44 33.2	+3.1
KCP				*i* S	Sb	17 44 41.9	+2.2
MATI	Mati	0.86	55	*e* P	Pn	17 44 33.2	+1.1
MATI				*e*S	Sb	17 44 42.7	-1.0
BUKP	Musuan	1.50	341	*e* P	Pn	17 44 43.1	+2.2
BUKP				*e*S	Sn	17 44 57.5	-2.1

*ISCJB **21** 18:09:02.8±1.6, 36.4N±0.2×91.9E±0.2, h10km, Error ellipse: s-maj=30.0km s-min=19.4km az=138.5*
*IDC **21** 18:09:04.0±1.9, 36.38N×92.15E, h0km, mb3.2/1, mb1 3.4/4, mb1mx3.1/25, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=74.2km s-min=26.1km az=58.0*
ISC 21 18:09:05.3±1.6, 36.5N±0.2×91.9E±0.2, h10km, n5, σ2§12/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	6.92	63	*e* P	Pn	18 10 56.3	+10
GTA				pP		18 11 00.4	
GTA				sP		18 11 03.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	12.52	328	Pn	Pn	18 12 04.0	+0.7
	comp=Z,0.3nm,0.3s,baz=136,slow=14,SNR=18						
MKAR				Sn	Sn	18 14 20.1	-2.7
	comp=Z,0.1nm,0.3s,baz=137,slow=17,SNR=3.6						
SONM	Songino Array	15.60	39	Pn	Pn	18 12 45.0	0.0
	comp=Z,0.0nm,0.3s,baz=219,slow=16,SNR=2.9						
KURK	Kurchatov	17.10	330	P	Pn	18 13 06.5	+2.3
	comp=Z,0.1nm,0.3s,baz=136,slow=12,SNR=12						
ASAR	Alice Springs	71.80	140	P	P	18 20 27.1	-1.0
	comp=Z,0.2nm,0.9s,baz=324,slow=6.3,SNR=5.9						

*IDC **21** 18:18:28.0±1.5, 6.82S×102.43E, h0km, mb4.0/11, mb1 4.0/11, mb1mx3.9/23, mbtmp4.0/11, Error ellipse: s-maj=62.7km s-min=16.1km az=54.0*
*NEIC **21** 18:18:32.6±1.0, 6.90S×102.32E, h35km, mb4.2/2, Error ellipse: s-maj=47.1km s-min=9.4km az=53.0*
*ISCJB **21** 18:18:33.8±2.2, 6.6S±0.1×102.6E±0.1, h53km±15km, mb4.0/13, Error ellipse: s-maj=30.9km s-min=9.9km az=135.8*
*DJA **21** 18:18:40, 5.76S×103.19E, h164km, MLv3.7/8*
ISC 21 18:18:35.0±2.1, 6.6S±0.1×102.6E±0.1, h44km±15km, n31, σ1§14/30, mb4.0/13, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	Liwa	2.12	42	P	Pn	18 19 08.2	+0.2
KASI	Kota Agung	2.14	60	P	Pn	18 19 08.0	-0.3
MNAI	Manna	2.25	8	P	Pn	18 19 08.6	-1.2
MDSI	Maura Dua	2.61	36	P	Pn	18 19 14.9	+0.2
KLI	Kotabumi	2.81	52	P	Pn	18 19 16.6	-0.8
KSI	Kapahiang	2.93	359	P	Pn	18 19 17.5	-1.6
CGJI	Cibinong	3.04	90	P	Pn	18 19 20.0	-0.6
DBJI	Dramaga	4.09	90	P	Pn	18 19 37.9	+2.8
LEM	Lembang	4.96	93	P	Pn	18 19 49.1	+2.1
PDSI	Padang	6.05	339	P	Pn	18 19 58.8	-3.2
	42nm,0.6s,2μm						
TPI	Tanjungpandan	6.30	53	P	Pn	18 19 55.9	-9.5
	16nm,1.3s,0.1nm						
SISI	Saibi	6.32	326	P	Pn	18 20 08.6	+2.9
CM31	Chiang Mai Arr	25.16	352	*e* P	P	18 23 56.6	+0.3
	3.0nm,0.5s,mb4.1						
CMAR	Chiang Mai Arr	25.16	352	P	P	18 23 56.7	+0.4
	2.7nm,0.6s,mb4.0,baz=184,slow=9.2,SNR=24						
CMAR	Chiang Mai Arr	25.16	352	P	P	18 23 56.7	+0.4
FITZ	Fitzroy Crossi	25.18	119	P	P	18 23 56.5	0.0
	1.5nm,0.8s,mb3.6,baz=276,slow=9.4,SNR=8.9						
ASAR	Alice Springs	34.50	123	P	P	18 25 18.3	-0.9
	1.4nm,1.0s,mb3.8,baz=298,slow=8.2,SNR=12						
ENH	Enshi	37.25	10	*e* P	P	18 25 38.5	-4.0
STKA	Stephens Creek	44.18	130	P	P	18 26 38.2	-1.6
	1.7nm,0.6s,mb4.0,baz=307,slow=9.1,SNR=5.9						
KSRS	Korea Array	49.79	26	P	P	18 27 24.1	+0.7
	1.6nm,0.6s,mb4.2,baz=223,slow=7.0,SNR=5.9						
SONM	Songino Array	54.30	3	P	P	18 27 58.2	+1.4
	0.8nm,0.6s,mb3.9,baz=186,slow=8.7,SNR=8.0						
MK31	Makanchi Array	56.15	343	*e* P	P	18 28 10.6	+0.5
MKAR	Makanchi Array	56.15	343	P	P	18 28 10.4	+0.3
	1.5nm,0.6s,mb4.2,baz=147,slow=8.2,SNR=21						
KURK	Kurchatov	60.74	343	P	P	18 28 42.2	+0.1
	0.2nm,0.3s,mb3.8,baz=159,slow=6.4,SNR=4.1						
KURK	Kurchatov	60.74	343	P	P	18 28 42.2	+0.1
ZAA0	Zalesovo Array	62.16	348	*e* P	P	18 28 51.6	0.0
ZALV	Zalesovo Beam	62.16	348	P	P	18 28 51.6	0.0
	2.0nm,0.5s,mb4.5,baz=167,slow=5.4,SNR=18						
BVAR	Borovoye Array	65.38	339	P	P	18 29 12.6	-0.2
	0.4nm,0.5s,mb3.7,baz=131,slow=7.9,SNR=4.7						
ABKAR	Akbulak array	66.91	331	*e* P	P	18 29 20.4	-2.2
	1.5nm,0.8s,mb4.1						
FINES	FINESS Array B	89.38	332	P	P	18 31 27.2	+0.5
	0.3nm,0.5s,mb3.9,baz=90,slow=2.8,SNR=4.4						
TXAR	Lajitas Array	146.45	44	PKPbc	PKPbc	18 38 12.8	+0.8
	0.6nm,0.7s,baz=294,slow=1.3,SNR=8.0						

*ISCJB **21** 18:23:38.8±2.9, 12.6N±0.1×142.4E±0.3, h145km±32km, mb3.5/8, Error ellipse: s-maj=44.6km s-min=24.3km az=179.8*
*NEIC **21** 18:23:40.3±1.8, 12.64N×142.44E, h146km±18km, mb4.0/1, Error ellipse: s-maj=27.3km s-min=16.3km az=77.0*
*IDC **21** 18:23:40.5±2.6, 12.65N×142.45E, h146km±26km, mb3.2/7, mb1 3.3/8, mb1mx3.2/22, mbtmp3.2/8, Error ellipse: s-maj=32.8km s-min=20.0km az=83.0*
ISC 21 18:23:40.8±2.6, 12.6N±0.1×142.5E±0.3, h150km±30km, n11, σ0§60/12, mb3.5/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.52	68	P	Pn	18 24 22.4	+0.3
	baz=236,slow=3.6						
GUMO				S	Sn	18 24 54.1	0.0
	15nm,0.3s,baz=240,slow=20,SNR=2.9						
GUMO	Guam	2.52	68	*e* P	Pn	18 24 21.8	-0.4
GUMO				S	Sn	18 24 54.1	0.0
MJAR	Matsushiro Arr	24.11	352	P	P	18 28 42.5	0.0
	0.7nm,0.6s,mb3.4,baz=156,slow=10,SNR=3.3						
ASAR	Alice Springs	37.04	193	P	P	18 30 36.4	+0.1
	0.2nm,0.5s,mb3.0,baz=17,slow=11,SNR=7.1						
SONM	Songino Array	46.20	327	P	P	18 31 51.1	+0.6
	0.3nm,0.4s,mb3.3,baz=138,slow=7.5,SNR=4.7						
MKAR	Makanchi Array	60.56	317	P	P	18 33 35.8	+0.5
	0.3nm,0.6s,mb3.3,baz=99,slow=7.7,SNR=4.0						
ZALV	Zalesovo Beam	61.05	325	P	P	18 33 38.4	-0.1
	0.5nm,0.4s,mb3.7,baz=113,slow=8.7,SNR=3.6						
KURK	Kurchatov	63.81	321	*e* P	P	18 33 56.7	-0.2
	1.2nm,0.7s,mb3.8						
YKA	Yellowknife Ar	84.77	27	P	P	18 35 58.6	+0.7
	0.2nm,0.4s,mb3.2,baz=292,slow=5.3,SNR=3.8						
FINES	FINESS Array B	91.02	335	P	P	18 36 26.2	-1.6
	0.3nm,0.3s,mb3.8,baz=43,slow=6.3,SNR=2.5						
LPAZ	La Paz	150.16	101	PKPbc	PKPbc	18 43 16.1	+1.2
	1.6nm,0.6s,baz=321,slow=3.3,SNR=4.9						

*IDC **21** 18:26:11.3±0.7, 34.33N×24.99E, h0km, mb4.2/19, mb1 4.3/30, mb1mx4.2/37, mbtmp4.2/30, ML4.2/9, MS3.2/6, Ms1 3.2/6, ms1mx2.7/34, Error ellipse: s-maj=13.6km s-min=11.7km az=3.0*
*BJI **21** 18:26:12.2, 34.32N×24.44E, h39km, mB5.1/11, mb4.8/17, Ms4.7/4, Ms7 4.6/3*
*THE **21** 18:26:14.9, 34.33N×25.03E, h0km±1km, ML4.3/2, Error ellipse: s-maj=3.0km s-min=1.0km az=183.0*
*ISCJB **21** 18:26:14.1±0.3, 34.20N±0.02×25.03E±0.02, h39km±3km, mb4.4/66, MS3.2/13, Error ellipse: s-maj=3.2km s-min=2.6km az=34.4*
*HLW **21** 18:26:14.3, 34.38N×25.16E, h33km±43km, Ml4.2*
*ATH **21** 18:26:14.6, 34.32N×25.03E, h27km, MD3.8/16, ML3.8*
*NEIC **21** 18:26:15.2±1.2, 34.27N×25.04E, h29km±9km, mb4.3/31, ML3.8(ATH), Error ellipse: s-maj=6.1km s-min=3.6km az=184.0*
*MOS **21** 18:26:16.0±1.2, 34.40N×24.96E, h46km, mb4.5/38, Error ellipse: s-maj=6.0km s-min=3.4km az=103.3*
*CSEM **21** 18:26:16.2±0.1, 34.24N×25.03E, h40km, mb4.4/18, Ms2.9, Error ellipse: s-maj=3.5km s-min=2.8km az=33.0*
*GII **21** 18:26:20.8±0.6, 33.83N×25.93E, h3km±63km, Mb4.2/7, Md4.0/7*
ISC 21 18:26:14.9±0.6, 34.22N±0.02×25.01E±0.02, h26km±5km, h39km±2.5km: pP-P, n450, σ1§14/495, mb4.4/66, MS3.2/13, 13C-2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.81	349	*e*PN	Pb	18 26 28.9	-1.5
SIVA				*e*SN	Sn	18 26 39.0	-2.9
SIVA	Sivas	0.81	349	P	Pb	18 26 28.9	-1.5
SIVA				S	Sb	18 26 39.6	-1.4
SIVA	Sivas	0.81	349	P	Pb	18 26 28.9	-1.5
SIVA				*e*Sn	Sn	18 26 39.0	-2.9
SIVA				S	Sb	18 26 39.6	-1.4
XRY	Khrisi	0.87	41	*e*PN	Pn	18 26 29.9	-1.5
XRY	Khrisi	0.87	41	*e*Pn	Pn	18 26 29.9	-1.5
GVD	Gavdhos	0.98	309	*e*PN	Pn	18 26 32.7	-0.2
GVD				*e*SN	Sn	18 26 46.5	+0.5
GVD	Gavdhos	0.98	309	P	Pn	18 26 32.7	-0.2
GVD				S	Sn	18 26 47.9	+1.9
GVD	Gavdhos	0.98	309	P	Pn	18 26 32.7	-0.2
GVD				*e*Sn	Sn	18 26 46.5	+0.5
GVD				S	Sn	18 26 47.9	+1.9
LAST	Lasithi	1.02	22	*e*PN	Pn	18 26 32.3	-1.1
LAST				*e*SN	Sn	18 26 45.5	-1.4
LAST	Lasithi	1.02	22	P	Pn	18 26 32.2	-1.2
LAST				S	Sn	18 26 47.2	+0.3
LAST	Lasithi	1.02	22	*e*Pn	Pn	18 26 32.3	-1.1
LAST				*e*Sn	Sn	18 26 45.5	-1.4
LAST				S	Sn	18 26 47.2	+0.3
IDI	Anoyia	1.07	355	Pn	Pn	18 26 33.0	-1.2
	90nm,0.3s,baz=170,slow=19,SNR=793						
IDI				LR	LR	18 26 44.0	
	comp=Z,3μm,19.3s,baz=239,slow=34						
IDI				Sn	Sn	18 26 47.2	-1.1
	300nm,0.3s,baz=162,slow=20,SNR=17						
IDI	Anoyia	1.07	355	*e*PN	Pn	18 26 33.0	-1.2
IDI				*e*SN	Sn	18 26 47.2	-1.0
IDI	Anoyia	1.07	355	*e*Pn	Pn	18 26 33.0	-1.2
IDI				*e*Sn	Sn	18 26 47.2	-1.0
NPS	Neapolis	1.16	25	*e*PN	Pn	18 26 34.5	-0.8
NPS	Neapolis	1.16	25	*e*Pn	Pn	18 26 34.5	-0.8
ZKR	Zakros	1.34	48	*e*PN	Pn	18 26 38.2	+0.3
ZKR				*e*SN	Sn	18 26 55.5	+0.7
ZKR	Zakros	1.34	48	P	Pn	18 26 38.1	+0.2
ZKR				S	Sn	18 26 56.9	+2.1
ZKR	Zakros	1.34	48	*e*Pn	Pn	18 26 38.2	+0.3
ZKR				*e*Sn	Sn	18 26 55.5	+0.7
ZKR				S	Sn	18 26 56.9	+2.1
VAM	Vamos	1.36	331	*e*PN	Pn	18 26 38.3	+0.2
VAM				*e*SN	Sn	18 26 56.7	+1.4
VAM	Vamos	1.36	331	*e*Pn	Pn	18 26 38.3	+0.2
VAM				*e*Sn	Sn	18 26 56.7	+1.4
KARN	Karanos	1.48	323	*e*PN	Pn	18 26 40.6	+0.8
KARN	Karanos	1.48	323	P	Pn	18 26 40.6	+0.8
KARN	Karanos	1.48	323	P	Pn	18 26 40.6	+0.8
THR1	Thera Island	2.18	10	P	Pn	18 26 49.5	+0.1
THR1	Thera Island	2.18	10	P	Pn	18 26 49.5	+0.1
KARP	Karpathos	2.21	53	*e*PB	Pb	18 26 51.4	-2.8
KARP	Karpathos	2.21	53	*e*Pb	Pb	18 26 51.4	-2.8
THR5	Thira Island,	2.21	7	P	Pn	18 26 50.5	+0.6
THR5	Thira Island,	2.21	7	P	Pn	18 26 50.5	+0.6
LTBQ	Tobruq	2.34	203	*i* P	Pn	18 26 54.3	+2.6
	145nm,0.7s,SNR=91						
LTBQ				*e*S	Sn	18 27 23.5	+3.9
	151nm,0.7s,SNR=91						
KYTH	Kithira	2.62	322	*e*PN	Pn	18 26 56.8	+1.4
KYTH	Kithira	2.62	322	*e*Pn	Pn	18 26 56.8	+1.4
SLUM		2.73	176	P	Pn	18 26 58.0	+1.1
	baz=179						
SLUM				S	Sn	18 27 28.8	-0.2
	baz=179						
SLUM		2.73	176	P	Pn	18 26 58.0	+1.1
SLUM				S	Sn	18 27 28.8	-0.2
APE	Apeiranthos	2.88	8	*e*PN	Pn	18 26 59.6	+0.6
APE	Apeiranthos	2.88	8	P	Pn	18 26 59.6	+0.6
APE				S	Sn	18 27 35.1	+2.4
APE	Apeiranthos	2.88	8	P	Pn	18 26 59.6	+0.6
VLI	Veliai	3.01	326	*e*PN	Pn	18 27 02.2	+1.3
VLI	Veliai	3.01	326	*e*Pn	Pn	18 27 02.2	+1.3
ARG	Arkhangelos	3.24	51	*e*PN	Pn	18 27 05.5	+1.5
ARG				*e*SN	Sn	18 27 41.8	+0.1
ARG	Arkhangelos	3.24	51	P	Pn	18 27 05.4	+1.4
ARG				S	Sn	18 27 42.8	+1.1
ARG	Arkhangelos	3.24	51	P	Pn	18 27 05.4	+1.4
ARG				*e*Sn	Sn	18 27 41.8	+0.1
ARG				S	Sn	18 27 42.8	+1.1
DAT	Datca	3.27	39	*e*PN	Pn	18 27 05.1	+0.7
DAT	Datca	3.27	39	*e*Pn	Pn	18 27 05.1	+0.7
HMAT	Matruh	3.58	150	P	Pn	18 27 08.7	0.0
	baz=153						
HMAT				S	Sn	18 27 47.0	-3.1
	baz=153						
HMAT	Matruh	3.58	150	P	Pn	18 27 08.7	0.0
HMAT				S	Sn	18 27 47.0	-3.1
NAIG	Nisos Aigina	3.74	341	*e*PN	Pn	18 27 11.7	+0.8
NAIG	Nisos Aigina	3.74	341	*e*Pn	Pn	18 27 11.7	+0.8
PYL	PYLOS	3.77	316	*e*PN	Pn	18 27 13.2	+1.9
PYL	PYLOS	3.77	316	*e*Pn	Pn	18 27 13.2	+1.9
SMG	Samos	3.79	23	*e*PN	Pn	18 27 12.1	+0.6
SMG	Samos	3.79	23	*e*Pn	Pn	18 27 12.1	+0.6
VLX	Vlachokerasia	3.80	327	*e*PN	Pn	18 27 13.2	+1.5
VLX	Vlachokerasia	3.80	327	*e*Pn	Pn	18 27 13.2	+1.5
MLSB	Milas	3.81	35	*e*PN	Pn	18 27 12.9	+1.1
MLSB	Milas	3.81	35	*e*Pn	Pn	18 27 12.9	+1.1
ITM	Ithomi	3.88	321	*e*PN	Pn	18 27 13.9	+1.2
ITM	Ithomi	3.88	321	*e*Pn	Pn	18 27 13.9	+1.2
ATH	Athens Observa	3.89	345	*e*PN	Pn	18 27 13.6	+0.7
ATH	Athens Observa	3.89	345	*e*Pn	Pn	18 27 13.6	+0.7
PTL	Penteli	3.93	347	*e*PN	Pn	18 27 14.1	+0.6
PTL	Penteli	3.93	347	*e*Pn	Pn	18 27 14.1	+0.6
YER	Yerkesik	3.95	42	*e*PN	Pn	18 27 15.4	+1.7
YER	Yerkesik	3.95	42	*e*Pn	Pn	18 27 15.4	+1.7
FETY	Fethiye	4.11	53	*e*PN	Pn	18 27 16.4	+0.5
FETY	Fethiye	4.11	53	*e*Pn	Pn	18 27 16.4	+0.4
KSL	Kastellorizon	4.21	61	*e*PN	Pn	18 27 18.2	+0.8
CHOS	Chios island	4.25	11	P	Pn	18 27 18.7	+0.9
CHOS				S	Sn	18 28 07.8	+1.3
CHOS	Chios island	4.25	11	P	Pn	18 27 18.7	+0.9
CHOS				S	Sn	18 28 07.8	+1.3
GUR	Goura	4.29	331	*e*PN	Pn	18 27 19.4	+0.9
GUR	Goura	4.29	331	P	Pn	18 27 19.2	+0.7
GUR	Goura	4.29	331	*e*Pn	Pn	18 27 19.4	+0.9
BLCB	Balcova	4.47	21	*e* P	Pn	18 27 20.4	-0.5
BLCB	Balcova	4.47	21	*e* P	Pn	18 27 20.4	-0.5
DSF	Desfina	4.64	335	P	Pn	18 27 24.0	+0.8
DSF	Desfina	4.64	335	P	Pn	18 27 24.0	+0.8
GLHS	Glhisar (BURDU	4.69	50	*e* P	Pn	18 27 25.0	+1.1
GLHS	Glhisar (BURDU	4.69	50	*e* P	Pn	18 27 25.0	+1.1
EFP	Efpalio	4.89	330	P	Pn	18 27 27.9	+1.2
EFP	Efpalio	4.89	330	P	Pn	18 27 27.9	+1.2
AKS	Akhisar	5.17	25	*e* P	Pn	18 27 29.9	-0.6
AKS	Akhisar	5.17	25	*e* P	Pn	18 27 29.9	-0.6
KULA	Kula-Manisa	5.20	33	*e* P	Pn	18 27 29.3	-1.7
KULA	Kula-Manisa	5.20	33	*e* P	Pn	18 27 29.3	-1.7
LJBD	Adjabya	5.23	232	*i* P	Pn	18 27 32.7	+1.3
	SNR=76						
LJBD				*e*S	Sn	18 28 29.8	-1.0
	SNR=76						
AGG	Agios Georgios	5.25	337	P	Pn	18 27 33.0	+1.3
AGG				S	Sn	18 28 32.1	+0.7
AGG	Agios Georgios	5.25	337	P	Pn	18 27 33.0	+1.3
AGG				S	Sn	18 28 32.1	+0.7
ANTB	Antalya	5.32	58	*e* P	Pn	18 27 32.1	-0.5
ANTB	Antalya	5.32	58	*e* P	Pn	18 27 32.1	-0.5
XOR	Xorichti	5.34	345	P	Pn	18 27 33.8	+0.9
XOR	Xorichti	5.34	345	P	Pn	18 27 33.8	+0.9
KHL	Karahalli	5.49	40	*e* P	Pn	18 27 32.8	-2.1
BCK	Bucak	5.57	53	*e* P	Pn	18 27 36.4	+0.4
BCK	Bucak	5.57	53	*e* P	Pn	18 27 36.4	+0.4
SUTC	Sutluce-Ispart	5.85	55	*e* P	Pn	18 27 41.3	+1.4
SUTC	Sutluce-Ispart	5.85	55	*e* P	Pn	18 27 41.3	+1.4
SHUT	Suhut-Afyon	6.22	44	*e* P	Pn	18 27 44.5	-0.4
ALT	Altintas	6.33	39	*e* P	Pn	18 27 46.3	-0.2
HDMB	Hadim	6.68	64	*e* P	Pn	18 27 53.3	+2.0
RKY	Sarkoy-Tekirda	6.68	14	*e* P	Pn	18 27 52.6	+1.3
AWBH		6.76	149	P	Pn	18 27 52.6	+0.2
	baz=151						
AWBH		6.76	149	P	Pn	18 27 52.6	+0.2
MFT	Murefte	6.80	15	*e* P	Pn	18 27 54.6	+1.7
FYM	Al Fayyum	6.83	130	P	Pn	18 27 53.6	+0.3
	baz=131						
FYM	Al Fayyum	6.83	130	P	Pn	18 27 53.6	+0.2
CSS	Prodhromos	6.91	81	*e* P	Pn	18 27 52.2	-2.1
	17nm,0.4s						
KONT	Konya--Tatoy	7.02	56	*e* P	Pn	18 27 57.2	+1.3
KOT	Kottamia	7.20	125	P	Pn	18 27 58.5	+0.1
	baz=126						
KOT	Kottamia	7.20	125	P	Pn	18 27 58.5	+0.1
HSAF	As Saff	7.21	128	P	Pn	18 27 58.8	+0.2
	baz=129						
HSAF	As Saff	7.21	128	P	Pn	18 27 58.8	+0.2
KIZT	Kizilcal	7.23	48	*e* P	Pn	18 27 59.2	+0.5
GLL	Jalalah	7.34	127	P	Pn	18 28 00.0	-0.3
	baz=128						
GLL	Jalalah	7.34	127	P	Pn	18 28 00.0	-0.3
VAY	Valandovo	7.35	345	*e*Pn	Px	18 28 11.2	
HHAG	Hagoal	7.37	123	P	Pn	18 28 00.3	-0.4
	baz=125						
HHAG	Hagoal	7.37	123	P	Pn	18 28 00.3	-0.4
HBNS	Bani Suwayf	7.45	133	P	Pn	18 28 02.0	+0.1
	baz=134						
HBNS	Bani Suwayf	7.45	133	P	Pn	18 28 02.0	+0.1
HFRF	Wahat Farafira	7.60	157	P	Pn	18 28 03.8	-0.1
	baz=158						
HFRF	Wahat Farafira	7.60	157	P	Pn	18 28 03.8	-0.1
KRUS	Krusevo	7.73	338	*e*Pn	Pn	18 28 04.6	-1.1
AMAG	Maghara	7.79	115	P	Pn	18 28 04.7	-1.9
	baz=116						
AMAG	Maghara	7.79	115	P	Pn	18 28 04.7	-1.9
RSH		8.04	111	P	Pn	18 28 08.8	-1.1
SOI	Samo	8.20	301	P	Pn	18 28 13.0	+0.9
SOI				pmax	pmax		
	comp=Z,19nm,0.6s						
SOI	Samo	8.20	301	Pn	Pn	18 28 13.0	+0.9
	comp=Z,19nm,0.6s						
SOI	Samo	8.20	301	P	Pn	18 28 13.0	+0.9
	comp=Z,19nm,0.6s						
ZNM		8.25	124	AMP		18 29 00.0	
	comp=E,240μm,0.6s,logA/T=5.6,baz=125						
TIP	Timpagrande	8.27	309

KOLS	Kolonicke sedl	14.84	353	*e*PN	Pn	18 29 39.8	-3.1
VYHS	Vyhne	14.99	344	*e*Pn	Pn	18 29 39.7	-5.1
VYHS				*e*P		18 29 48.9	
VYHS	Vyhne	14.99	344	*e*PN	Pn	18 29 39.7	-5.1
PGF	Pioggiola	15.04	308	*e*P	Pn	18 29 47.0	+1.4
	comp=Z,26nm,0.7s						
PGF	Pioggiola	15.04	308	*e*P	Pn	18 29 47.0	+1.4
PGF				pmax	pmax		
	comp=Z,13nm,0.7s						
PGF	Pioggiola	15.04	308	*e*P	Pn	18 29 47.0	+1.4
	comp=Z,13nm,0.7s						
STHS	Stebnicka Huta	15.44	351	*e*P	Pn	18 29 55.1	+4.4
STHS	Stebnicka Huta	15.44	351	*e*P	Pn	18 29 55.1	+4.4
STHS	Stebnicka Huta	15.44	351	*e*P	Pn	18 29 55.1	+4.4
KBA	Koelnbreinsper	15.58	329⇑	*i*P	Pn	18 29 57.9	+5.3
	comp=Z,5.3nm,0.7s						
KBA	Koelnbreinsper	15.58	329	P	Pn	18 29 57.8	+5.3
	comp=Z,5.3nm,0.7s						
ABTA	Abfaltersbach	15.69	327⇑	*i*P	Pn	18 29 57.1	+3.1
	comp=Z,9.6nm,0.6s						
ABTA	Abfaltersbach	15.69	327	P	Pn	18 29 57.1	+3.1
	comp=Z,9.6nm,0.6s						
VRAC	Vranov	16.32	340	Pn	Pn	18 30 02.3	+0.3
	comp=Z,0.6nm,0.3s,baz=134,slow=9.1,SNR=13						
VRAC	Vranov	16.32	340	P	Pn	18 30 02.3	+0.3
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	Vranov	16.32	340	Pn	Pn	18 30 02.3	+0.3
OKC	Ostrava-Krasne	16.41	344	AMS	AMS	18 37 40.0	
	comp=Z,100nm,11.4s						
MORC	Moravsky Berou	16.49	343	*e*P	Pn	18 30 02.9	-1.4
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	16.49	343	*e*P	Pn	18 30 02.9	-1.4
	comp=Z,5.6nm,0.9s						
TREC	Trest	16.63	338	AMS	AMS	18 37 40.0	
	comp=Z,200nm,5.8s						
FETA	Feichten	16.73	324⇓	*i*P	Pn	18 30 11.3	+4.0
	comp=Z,8.2nm,1.0s						
FETA	Feichten	16.73	324	P	Pn	18 30 11.3	+4.0
	comp=Z,8.2nm,1.0s						
KIEV	Kiev	16.75	9	*e*P	Pn	18 30 05.4	-2.1
KIEV				pmax	pmax		
	comp=Z,23nm,0.8s						
KIEV	Kiev	16.75	9	*e*P	Pn	18 30 05.4	-2.1
	comp=Z,23nm,0.8s						
AKASG	Malin Array Be	16.76	9	Pn	Pn	18 30 05.8	-1.8
	comp=Z,2.9nm,0.3s,baz=200,slow=11,SNR=33						
AKASG				Sn	Sn	18 33 15.5	+2.6
	baz=193,slow=21,SNR=4.2						
AKASG	Malin Array Be	16.76	9	P	Pn	18 30 05.8	-1.8
AKASG						18 33 15.5	
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	16.76	9	Pn	Pn	18 30 05.8	-1.8
AKASG				Sn	Sn	18 33 15.5	+2.6
AKASG	Malin Array Be	16.76	9	Pn	Pn	18 30 05.8	-1.8
AKBB	Malin Array Si	16.76	9	*e*P	Pn	18 30 05.8	-1.8
KIV	Kislovodsk	16.79	49	*e*P	Pn	18 30 10.0	+1.9
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV				MLR	MLR		
	comp=Z,62nm,13.0s						
KIV	Kislovodsk	16.79	49	*e*P	Pn	18 30 11.5	+3.4
	comp=Z,42nm,1.0s						
KIV	Kislovodsk	16.79	49	*e*P	Pn	18 30 10.0	+1.9
	comp=Z,62nm,13.0s						
GEC2	GERESS Array S	16.86	333	*e*P	Pn	18 30 10.7	+1.8
GEC2				pmax	pmax		
	comp=Z,3µm,0.7s						
GEC2	GERESS Array S	16.86	333	*e*P	Pn	18 30 10.7	+1.8
	comp=Z,3µm,0.7s						
GEC2	GERESS Array S	16.86	333	*e*P	Pn	18 30 10.7	+1.8
	comp=Z,3µm,0.7s						
GERES	GERESS Array B	16.86	333	Pn	Pn	18 30 08.1	-0.8
	comp=Z,1.5nm,0.3s,baz=147,slow=12,SNR=106						
GERES	GERESS Array B	16.86	333	P	Pn	18 30 08.1	-0.8
GERES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GERES	GERESS Array B	16.86	333	Pn	Pn	18 30 08.1	-0.8
DAVOX	Davos/Dischmat	16.99	322	Pn	Pn	18 30 08.9	-1.6
	comp=Z,0.2nm,0.3s,baz=147,slow=15,SNR=2.1						
DAVOX	Davos/Dischmat	16.99	322	Pn	Pn	18 30 08.9	-1.6
FRF	La Foret Royal	17.04	309	*e*P	Pn	18 30 10.0	-1.2
ZEI	Tsey	17.05	54	*e*P	Pn	18 30 14.0	+2.7
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
ZEI	Tsey	17.05	54	*e*P	Pn	18 30 14.0	+2.7
	comp=Z,19nm,1.0s						
KHC	Kasperske Hory	17.14	334	*e*P	Pn	18 30 13.1	+0.7
KHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KHC	Kasperske Hory	17.14	334	*e*P	Pn	18 30 13.1	+0.7
	comp=Z,10nm,0.8s						
KHC	Kasperske Hory	17.14	334	*e*P	Pn	18 30 13.5	+1.1
KHC				*ex*	x	18 30 23.0	
KHC				AMS	AMS	18 37 50.0	
	comp=Z,300nm,12.3s						
KHC	Kasperske Hory	17.14	334	*e*P	Pn	18 30 13.1	+0.7
	comp=Z,10nm,0.8s						
DPC	Dobruska-Polom	17.33	341	*e*P	Pn	18 30 15.1	+0.3
DPC				MLR	MLR		
	comp=Z,100nm,6.5s						
DPC	Dobruska-Polom	17.33	341	*e*P	Pn	18 30 15.1	+0.3
DPC				AMS	AMS	18 38 10.0	
	comp=Z,100nm,6.5s						
DPC	Dobruska-Polom	17.33	341	*e*P	Pn	18 30 15.1	+0.3
	comp=Z,100nm,6.5s						
MBDF	Montbardon	17.52	312	*e*P	Pn	18 30 16.5	-0.7
	comp=Z,12nm,0.9s						
MBDF	Montbardon	17.52	312	*e*P	Pn	18 30 16.5	-0.7
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MBDF	Montbardon	17.52	312	*e*P	Pn	18 30 16.5	-0.7
	comp=Z,5.9nm,0.9s						
MBDF	Montbardon	17.52	312	*e*P	Pn	18 30 16.5	-0.7
	comp=Z,5.9nm,0.9s						
PRU	Pruhonice	17.54	337	*e*P	Pn	18 30 18.6	+1.2
PRU				MLR	MLR		
	comp=Z,100nm,10.1s						
PRU	Pruhonice	17.54	337	*e*P	Pn	18 30 18.6	+1.2
PRU				AMS	AMS	18 38 10.0	
	comp=Z,100nm,10.1s						
PRU	Pruhonice	17.54	337	*e*P	Pn	18 30 18.6	+1.2
	comp=Z,100nm,10.1s						
LPG	La Plagne	17.94	314	*e*P	Pn	18 30 22.0	-0.3
LPG	La Plagne	17.94	314	*e*P	Pn	18 30 22.0	-0.3
LPL	La Plagne	17.96	314	*e*P	Pn	18 30 21.8	-0.8
LPL	La Plagne	17.96	314	*e*P	Pn	18 30 21.8	-0.8
PVCC	Panska Ves	18.00	338	*e*P	Pn	18 30 24.2	+1.2
PVCC				MLR	MLR		
	comp=Z,100nm,9.1s						
PVCC	Panska Ves	18.00	338	*e*P	Pn	18 30 24.2	+1.2
PVCC				AMS	AMS	18 38 30.0	
	comp=Z,100nm,9.1s						
PVCC	Panska Ves	18.00	338	*e*P	Pn	18 30 24.2	+1.2
	comp=Z,100nm,9.1s						
ORIF	Oris-en-Rattie	18.17	312	*e*P	Pn	18 30 25.8	+0.7
ORIF				*e*MLR	MLR		
	comp=Z,140nm,22.8s						
ORIF	Oris-en-Rattie	18.17	312	*e*P	Pn	18 30 25.8	+0.7
NKC	Novy Kostel	18.47	334	*e*P	Pn	18 30 29.4	+0.7
NKC				MLR	MLR		
	comp=Z,300nm,13.5s						
NKC	Novy Kostel	18.47	334	*e*P	Pn	18 30 29.4	+0.7
NKC				AMS	AMS	18 38 40.0	
	comp=Z,300nm,13.5s						
NKC	Novy Kostel	18.47	334	*e*P	Pn	18 30 29.4	+0.7
	comp=Z,300nm,13.5s						
BRG	Berggiesshubel	18.50	337	*e*P	Pn	18 30 28.5	-0.6
	comp=Z,3.7nm,0.8s						
BRG	Berggiesshubel	18.50	337	*e*P	Pn	18 30 28.5	-0.6
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRG	Berggiesshubel	18.50	337	*e*P	Pn	18 30 28.5	-0.6
	comp=Z,2.0nm,0.9s						
BFO	Black Forest	18.81	324	*e*P	Pn	18 30 32.9	0.0
BFO	Black Forest	18.81	324	*e*P	Pn	18 30 32.9	0.0
VIVF	Saint-Julien-l	18.89	310	*e*P	Pn	18 30 33.8	-0.2
VIVF	Saint-Julien-l	18.89	310	*e*P	Pn	18 30 33.8	-0.2
CABF	La Chapelle	18.93	316	*e*P	Pn	18 30 33.1	-1.4
	comp=Z,18nm,0.9s						
CABF	La Chapelle	18.93	316	*e*P	Pn	18 30 33.1	-1.4
CABF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CABF	La Chapelle	18.93	316	*e*P	Pn	18 30 33.1	-1.4
	comp=Z,8.9nm,0.9s						
CABF	La Chapelle	18.93	316	*e*P	Pn	18 30 33.1	-1.4
	comp=Z,8.9nm,0.9s						
LASF	Ste Croix	19.08	307	*e*P	Pn	18 30 34.9	-1.4
LASF	Ste Croix	19.08	307	*e*P	Pn	18 30 34.9	-1.4
MOX	Moxa	19.11	333	*e*P	Pn	18 30 35.9	-0.6
	comp=Z,13nm,1.0s						
MOX	Moxa	19.11	333	*e*P	Pn	18 30 35.9	-0.6
MOX				pmax	pmax		
	comp=Z,13nm,1.0s						
MOX	Moxa	19.11	333	*e*P	Pn	18 30 35.9	-0.6
	comp=Z,13nm,1.0s						
CLL	Collm	19.18	337	*e*P	Pn	18 30 35.0	-2.3
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,100nm,19.4s						
CLL	Collm	19.18	337	*e*P	Pn	18 30 35.0	-2.3
	comp=Z,8.0nm,0.9s						
CLL				*i* pP	pP	18 30 44.1	+0.7
CLL				*i*		18 30 47.1	
CLL	Collm	19.18	337	*e*P	Pn	18 30 35.0	-2.3
	comp=Z,8.0nm,0.9s						
CLL				*i* (pP)	pP	18 30 44.1	+0.7
CLL				*i* sP	sP	18 30 47.1	+0.4
CLL				*i* PP		18 30 51.1	
CLL				LmV		18 38 00.0	
	comp=Z,100nm,19.4s						
CLL	Collm	19.18	337	*e*P	Pn	18 30 35.0	-2.3
	comp=Z,8.0nm,0.9s						
HINF	Hinteralfeld	19.23	320	*e*P	Pn	18 30 37.4	-0.6
	comp=Z,7.0nm,0.6s						
HINF	Hinteralfeld	19.23	320	*e*P	Pn	18 30 37.4	-0.6
HINF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HINF	Hinteralfeld	19.23	320	*e*P	Pn	18 30 37.4	-0.6
	comp=Z,3.5nm,0.6s						
HINF	Hinteralfeld	19.23	320	*e*P	Pn	18 30 37.4	-0.6
	comp=Z,3.5nm,0.6s						
CDF	Champ du Feu	19.39	322	*e*P	Pn	18 30 39.4	-0.5
CDF	Champ du Feu	19.39	322	*e*P	Pn	18 30 39.4	-0.5
MIB	Mutribah	19.43	97	*e*P	Pn	18 30 40.1	-0.5
MIB				AMb	AMB	18 30 48.4	
	comp=Z,17nm,0.5s						
MIB	Mutribah	19.43	97	*e*P	Pn	18 30 40.1	-0.5
	comp=Z,17nm,0.5s						
NAY	Al-Naaiem	19.54	99	*e*P	Pn	18 30 41.7	-0.1
NAY				AMb	AMB	18 30 44.0	
	comp=Z,19nm,1.2s						
NAY	Al-Naaiem	19.54	99	*e*P	Pn	18 30 41.7	-0.1
	comp=Z,19nm,1.2s						
HAU	Haudompre	19.61	320	*e*P	Pn	18 30 41.7	-0.8
	comp=Z,9.7nm,0.6s						
HAU				*e*MLR	MLR		
	comp=Z,57nm,18.8s						
HAU	Haudompre	19.61	320	*e*P	Pn	18 30 41.7	-0.8
HAU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HAU	Haudompre	19.61	320	*e*P	Pn	18 30 41.7	-0.8
	comp=Z,4.8nm,0.6s						
HAU	Haudompre	19.61	320	*e*P	Pn	18 30 41.7	-0.8
	comp=Z,4.8nm,0.6s						
UMR	Umm Al-Rimmam	19.82	97	*e*P	Pn	18 30 43.9	-1.3
UMR				AMb	AMB	18 30 46.5	
	comp=Z,45nm,1.1s						
UMR	Umm Al-Rimmam	19.82	97	*e*P	Pn	18 30 43.9	-1.3
	comp=Z,45nm,1.1s						
SUW	Suwalki	19.83	357	*e*P	Pn	18 30 42.8	-2.3
SUW				*e*		18 30 43.7	
SUW	Suwalki	19.83	357	*e*P	Pn	18 30 41.3	-3.8
SUW				pmax	pmax		
	comp=Z,76nm,0.8s						
SUW	Suwalki	19.83	357	*e*P	Pn	18 30 41.3	-3.8
	comp=Z,76nm,0.8s						
SUW	Suwalki	19.83	357	*e*P	Pn	18 30 41.3	-3.8
	comp=Z,76nm,0.8s						
VSR	Storozhevoye	19.86	27	*e*P	Pn	18 30 44.8	-0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR				pmax	pmax		
	comp=N,8.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VSR	Storozhevoye	19.86	27	*e*P	Pn	18 30 44.8	-0.7
	comp=E,8.0nm,0.9s						
MTLF	Montolieu	19.92	304	*e*P	Pn	18 30 45.0	-1.2
	comp=E,10nm,1.0s						
MTLF	Montolieu	19.92	304	*e*P	Pn	18 30 45.0	-1.2
MTLF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MTLF	Montolieu	19.92	304	*e*P	Pn	18 30 45.0	-1.2
	comp=Z,5.3nm,1.0s						
MTLF	Montolieu	19.92	304	*e*P	Pn	18 30 45.0	-1.2
	comp=Z,5.2nm,1.0s						
SMF	Signal de Mont	20.26	314	*e*P	P	18 30 46.9	-1.3
SMF	Signal de Mont	20.26	314	*e*P	P	18 30 46.9	-1.3
TAM	Tamanrasset	20.52	241	*e*P	P	18 30 54.0	+2.8
TAM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TAM	Tamanrasset	20.52	241	*e*P	P	18 30 54.0	+2.8
	comp=Z,7.6nm,1.2s						
TAM	Tamanrasset	20.52	241	*e*P	P	18 30 54.0	+2.8
	comp=Z,7.6nm,1.2s						
LOR	Lormes	20.57	316	*e*P	P	18 30 52.4	+0.8
LOR				*e*MLR	MLR		
	comp=Z,76nm,19.2s,MS2.8						
LOR	Lormes	20.57	316	*e*P	P	18 30 52.4	+0.8
LOR				LR	LR		
	comp=Z,80nm,19.3s,MS3.1						
LOR	Lormes	20.57	316	*e*P	P	18 30 52.4	+0.8
CAF	Calviac	20.60	308	*e*P	P	18 30 52.3	+0.4
	comp=Z,9.0nm,0.9s						
CAF	Calviac	20.60	308	*e*P	P	18 30 52.3	+0.4
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CAF	Calviac	20.60	308	*e*P	P	18 30 52.3	+0.4
	comp=Z,4.5nm,0.9s						
CAF	Calviac	20.60	308	*e*P	P	18 30 52.3	+0.4
	comp=Z,4.5nm,0.9s						
MEZF	Maizieres J'vi	20.60	320	*e*P	P	18 30 52.3	+0.5
	comp=Z,35nm,0.9s						
MEZF	Maizieres J'vi	20.60	320	*e*P	P	18 30 52.3	+0.5
	comp=Z,35nm,0.9s						
MEZF	Maizieres J'vi	20.60	320	*e*P	P	18 30 52.3	+0.5
	comp=Z,18nm,0.9s						
AVF	Avril sur Loir	20.63	314	*e*P	P	18 30 52.6	+0.5
AVF	Avril sur Loir	20.63	314	*e*P	P	18 30 52.6	+0.5
VRHR	Novokhopersk	20.75	31	*e*P	P	18 30 52.8	-0.6
VRHR				pmax	pmax		
	comp=Z,60nm,0.6s						
VRHR				pmax	pmax		
	comp=N,60nm,1.5s						
VRHR				pmax	pmax		
	comp=E,30nm,0.9s						
VRHR	Novokhopersk	20.75	31	*e*P	P	18 30 52.8	-0.6
	comp=E,60nm,1.5s						
WLF	Walferdange	20.77	324	P	P	18 30 52.7	-0.9
WLF	Walferdange	20.77	324	*e*P	P	18 30 52.2	-1.4
WLF				pmax	pmax		
	comp=Z,12nm,0.9s						
WLF	Walferdange	20.77	324	*e*P	P	18 30 52.2	-1.4
	comp=Z,12nm,0.9s						
WLF	Walferdange	20.77	324	*e*P	P	18 30 52.2	-1.4
	comp=Z,12nm,0.9s						
BGF	Bois d'Agland	20.82	313	*e*P	P	18 30 54.0	-0.2
	comp=Z,22nm,0.7s						
BGF	Bois d'Agland	20.82	313	*e*P	P	18 30 54.0	-0.2
BGF				pmax	pmax		
	comp=Z,11nm,0.7s						
BGF	Bois d'Agland	20.82	313	*e*P	P	18 30 54.0	-0.2
	comp=Z,11nm,0.7s						
BGF	Bois d'Agland	20.82	313	*e*P	P	18 30 54.0	-0.2
	comp=Z,11nm,0.7s						
TCF	Toulx Ste Croi	21.08	312	*e*P	P	18 30 55.5	-1.6
TCF	Toulx Ste Croi	21.08	312	*e*P	P	18 30 55.5	-1.6
RJF	Les Rejaudoux	21.11	309	*e*P	P	18 30 57.7	+0.4
RJF				*e*MLR	MLR		
	comp=Z,77nm,22.0s,MS2.7						
RJF	Les Rejaudoux	21.11	309	*e*P	P	18 30 57.7	+0.4
RJF				LR	LR		
	comp=Z,80nm,22.0s,MS3.1						
RJF	Les Rejaudoux	21.11	309	*e*P	P	18 30 57.7	+0.4
MEM	Membach	21.46	325	P	P	18 31 02.0	+0.9
	comp=Z,14nm,1.0s,mb4.2						
MEM	Membach	21.46	325	P	P	18 31 02.0	+0.9
	comp=Z,14nm,1.0s,mb4.2						
BCLA	Clavier	21.67	324	P	P	18 31 03.7	+0.3
	comp=Z,16nm,2.0s,mb4.1						
BCLA	Clavier	21.67	324	P	P	18 31 03.6	+0.2
	comp=Z,16nm,2.0s,mb4.1						
ETSF	Etsaut	21.73	301	*e*P	P	18 31 04.7	+0.7
	comp=Z,11nm,0.9s,mb4.0						
ETSF	Etsaut	21.73	301	*e*P	P	18 31 04.7	+0.7
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
ETSF	Etsaut	21.73	301	*e*P	P	18 31 04.7	+0.7
	comp=Z,5.7nm,0.9s,mb4.0						
ETSF	Etsaut	21.73	301	*e*P	P	18 31 04.7	+0.7
	comp=Z,5.7nm,0.9s,mb4.0						
DOU	Dourbes	21.82	323	P	P	18 31 05.3	+0.5
DOU	Dourbes	21.82	323	P	P	18 31 05.3	+0.4
BAIF	Baives	21.99	322	*e*P	P	18 31 06.1	-0.6
	comp=Z,16nm,0.7s,mb4.3						
BAIF	Baives	21.99	322	*e*P	P	18 31 06.1	-0.6
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.3						
BAIF	Baives	21.99	322	*e*P	P	18 31 06.1	-0.6
	comp=Z,7.8nm,0.7s,mb4.2						
BAIF	Baives	21.99	322	*e*P	P	18 31 06.1	-0.6
	comp=Z,7.8nm,0.7s,mb4.3						
BSD	Bornholm Skovb	22.05	344	*i* P	P	18 31 03.7	-3.6
BSD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
BSD	Bornholm Skovb	22.05	344	*i* P	P	18 31 03.7	-3.6
	comp=Z,8.0nm,0.9s,mb4.2						
BSD	Bornholm Skovb	22.05	344	*i* P	sP	18 31 24.6	+6.8
	comp=Z,11nm,1.0s						
OBN	Obninsk	22.39	18⇑	*e*P	P	18 31 10.9	-0.1
OBN				*e*		18 31 20.6	
OBN				*e*		18 31 29.8	
OBN				*e*		18 31 34.7	
OBN				pmax	pmax		
	comp=Z,36nm,1.7s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,12.0s,MS3.5						
OBN	Obninsk	22.39	18	*e*P	P	18 31 10.9	-0.1
	comp=Z,36nm,1.7s,mb4.5						
SARR	Saratov	22.59	34	*e*P	P	18 31 11.5	-1.6
	comp=Z,68nm,1.2s,mb5.0						
MFF	Saint Martin d	22.69	311	*e*P	P	18 31 13.2	-1.0
	comp=Z,20nm,0.9s,mb4.2						
MFF	Saint Martin d	22.69	311	*e*P	P	18 31 13.2	-1.0
MFF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MFF	Saint Martin d	22.69	311	*e*P	P	18 31 13.2	-1.0
	comp=Z,10nm,0.9s,mb4.2						
MFF	Saint Martin d	22.69	311	*e*P	P	18 31 13.2	-1.0
	comp=Z,10nm,0.9s,mb4.2						
LDF	La Druitiere	23.56	315	*e*P	P	18 31 22.0	-1.2
	comp=Z,9.0nm,0.6s,mb4.1						
LDF	La Druitiere	23.56	315	*e*P	P	18 31 22.0	-1.2
LDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
LDF	La Druitiere	23.56	315	*e*P	P	18 31 22.0	-1.2
	comp=Z,4.5nm,0.6s,mb4.1						
ESDC	Sonseca Array	23.73	292	P	P	18 31 25.0	+0.1
	comp=Z,1.3nm,0.5s,mb3.6,baz=86,slow=9.1,SNR=8.3						
FLN	La Foliniere	23.85	315	*e*P	P	18 31 23.1	-2.7
FLN				*e*MLR	MLR		
	comp=Z,70nm,21.5s,MS2.8						
FLN	La Foliniere	23.85	315	*e*P	P	18 31 23.1	-2.7
FLN				LR	LR		
	comp=Z,70nm,21.5s,MS3.1						
GRR	Gorron	23.89	314	*e*P	P	18 31 25.6	-0.7
VSU	Vasula	24.28	2*c*	*e*P	P	18 31 28.3	-1.4
VSU				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.2						
MDT	Midelt	24.70	275	P	P	18 31 33.5	-0.3
	comp=Z,1.1nm,0.7s,mb3.5,baz=104,slow=11,SNR=2.0						
MUD	Monsted U'grnd	24.75	339	*i* P	P	18 31 31.6	-2.4
MUD				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
MUD	Monsted U'grnd	24.75	339	*i* P	P	18 31 31.6	-2.4
	comp=Z,16nm,0.9s,mb4.5						
MUD	Monsted U'grnd	24.75	339	*i* P	P	18 31 34.1	+0.1
	comp=Z,16nm,0.9s,mb4.6,SNR=46						
SGMF	Saint Gilles	24.86	313	*e*P	P	18 31 35.7	+0.6
	comp=Z,42nm,1.0s,mb4.6						
SGMF	Saint Gilles	24.86	313	*e*P	P	18 31 35.7	+0.6
SGMF				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.6						
SGMF	Saint Gilles	24.86	313	*e*P	P	18 31 35.7	+0.6
	comp=Z,21nm,1.0s,mb4.6						
QUIF	Quistinic	25.10	312	*e*P	P	18 31 36.9	-0.4
	comp=Z,32nm,0.7s,mb4.7						
QUIF	Quistinic	25.10	312	*e*P	P	18 31 36.9	-0.4
QUIF				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.7						
QUIF	Quistinic	25.10	312	*e*P	P	18 31 36.9	-0.4
	comp=Z,16nm,0.7s,mb4.7						
ROSF	Rostrenen	25.33	312	*e*P	P	18 31 37.5	-1.9
EVO	Evora	26.85	289	*e*P	P	18 31 56.0	+2.8
	comp=Z,33nm,1.3s,mb4.4						
EVO				*e*MLR	MLR		
	comp=Z,64nm,20.0s,MS2.9						
HFS	Hagfors	26.96	347	P	P	18 31 52.6	-1.4
	comp=Z,2.6nm,0.6s,mb3.9,baz=161,slow=9.2,SNR=10						
HFS				LR	LR	18 44 21.0	
	comp=Z,50nm,18.1s,MS3.1,baz=171,slow=41						
HFS	Hagfors	26.96	347	P	P	18 31 52.6	-1.4
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS				MLR	MLR		
	comp=Z,50nm,18.1s						
FINES	FINESS Array B	27.25	1	P	P	18 31 54.7	-1.9
	comp=Z,3.5nm,0.8s,mb3.9,baz=158,slow=12,SNR=12						
FINES				PcP	PcP	18 35 16.6	+0.8
	comp=Z,0.4nm,0.5s,baz=174,slow=1.4,SNR=3.4						
FINES				LR	LR	18 43 27.2	
	comp=Z,29nm,21.8s,MS2.8,baz=130,slow=38						
FINES	FINESS Array B	27.25	1	P	P	18 31 54.7	-1.9
FINES						18 35 16.6	
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES				MLR	ML

TORD	Torodi Ar. Bea	29.79	231	P	P	18 32 20.9	+1.3
	comp=Z,6.1nm,0.7s,mb4.5,baz=37,slow=8.9,SNR=37						
ARU	Arti	31.89	36	*c iP*	P	18 32 36.5	-1.2
ARU				*e*		18 33 39.4	
ARU				S	S	18 37 43.0	-3.8
ARU				SS	SS	18 39 31.1	-33
ARU				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.5						
ARU	Arti	31.89	36	*eP*	P	18 32 36.4	-1.3
	comp=Z,4.5nm,0.6s,mb4.5						
SOKR	Solikamsk	32.82	30	*eP*	P	18 32 45.2	-0.7
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
SVE	Sverdlovsk	33.09	36⇑	*eP*	P	18 32 47.6	-0.6
SVE				*e*		18 34 03.5	
SVE				*eS*	S	18 38 01.5	-3.9
SVE				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
APA	Apatity	33.75	6⇑	*iP*	sP	18 33 10.7	+5.9
APA				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.7						
ARCES	ARCESS Array B	35.37	0	P	P	18 33 06.0	-1.8
	comp=Z,1.5nm,0.6s,mb4.1,baz=173,slow=9.4,SNR=15						
ARCES	ARCESS Array B	35.37	0	P	P	18 33 06.1	-1.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	37.04	45	*deP*	P	18 33 22.6	+0.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.5s,mb4.2						
BRVK	Borovoye	37.04	45	*eP*	P	18 33 22.6	+0.3
	comp=Z,10.0nm,2.5s,mb4.2						
BVAR	Borovoye Array	37.09	45	P	P	18 33 22.8	+0.1
	comp=Z,1.7nm,0.8s,mb3.9,baz=248,slow=7.8,SNR=8.4						
BVAR				LR	LR	18 53 31.1	
	comp=Z,44nm,19.5s,MS3.3,baz=153,slow=44						
BVAR	Borovoye Array	37.09	45	P	P	18 33 22.8	0.0
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,44nm,19.5s						
BVAR	Borovoye Array	37.09	45	P	P	18 33 22.8	0.0
	comp=Z,44nm,19.5s						
DBIC	Dimbokro	38.88	232	P	P	18 33 38.6	+0.3
	comp=Z,4.2nm,0.9s,mb4.2,baz=26,slow=11,SNR=3.9						
DBIC	Dimbokro	38.88	232	P	P	18 33 38.7	+0.4
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	Dimbokro	38.88	232	P	P	18 33 38.7	+0.4
	comp=Z,4.0nm,0.9s,mb4.2						
TIC	Toumodi	39.01	232	*eP*	P	18 33 39.1	-0.3
	comp=Z,26nm,1.0s,mb4.9						
TIC	Toumodi	39.01	232	*eP*	P	18 33 39.1	-0.3
TIC				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.9						
TIC	Toumodi	39.01	232	*eP*	P	18 33 39.1	-0.3
	comp=Z,26nm,1.0s,mb4.9						
KIC	Kosan Boka	39.04	232	*eP*	P	18 33 40.5	+0.9
	comp=Z,86nm,1.8s,mb5.2						
KIC	Kosan Boka	39.04	232	*eP*	P	18 33 40.5	+0.9
	comp=Z,86nm,1.8s,mb5.2						
AAK	Ala-Archa	39.20	63	*ceP*	P	18 33 41.8	+1.2
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
AAK	Ala-Archa	39.20	63	*eP*	P	18 33 41.8	+1.2
	comp=Z,3.0nm,1.2s,mb3.9						
LIC	Lamto	39.33	232	*eP*	P	18 33 41.9	-0.1
	comp=Z,30nm,1.0s,mb5.0						
LIC	Lamto	39.33	232	*eP*	P	18 33 41.9	-0.1
	comp=Z,30nm,1.0s,mb5.0						
KURK	Kurchatov	41.88	50	*ceP*	P	18 34 02.6	-0.1
KURK				*i *PP*	pP	18 34 25.4	+15
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
KURK	Kurchatov	41.88	50	*eP*	P	18 34 02.6	-0.1
	comp=Z,5.0nm,0.7s,mb4.2						
KURK	Kurchatov	41.88	50	*e*	P	18 34 02.8	+0.1
MK31	Makanchi Array	44.40	56	*eP*	P	18 34 23.6	+0.4
MK31	Makanchi Array	44.40	56	*eP*	P	18 34 23.6	+0.4
MKAR	Makanchi Array	44.40	56	P	P	18 34 23.8	+0.6
	comp=Z,5.7nm,0.7s,mb4.4,baz=278,slow=6.3,SNR=76						
MKAR	Makanchi Array	44.40	56	P	P	18 34 23.8	+0.6
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	44.40	56	P	P	18 34 23.8	+0.6
	comp=Z,6.0nm,0.7s,mb4.4						
NVS	Novosibirsk	44.85	44⇑	*iP*	P	18 34 27.0	+0.4
NVS				*eS*	S	18 40 57.1	-5.2
NVS				pmax	pmax		
	comp=Z,27nm,1.5s,mb4.9						
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				smax			
	comp=N,8.0nm,1.7s						
NVS				smax			
	comp=E,11nm,2.0s						
KBS	Kingsbay	45.15	356	*ceP*	P	18 34 27.8	-0.9
ZAA0	Zalesovo Array	45.75	46	*eP*	P	18 34 33.3	-0.5
ZALV	Zalesovo Beam	45.75	46	P	P	18 34 33.2	-0.5
	comp=E,10nm,0.4s,mb5.1,baz=270,slow=8.7,SNR=46						
ZALV	Zalesovo Beam	45.75	46	P	P	18 34 33.2	-0.5
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.1						
ZALV	Zalesovo Beam	45.75	46	P	P	18 34 33.2	-0.5
DAG	Danmarks Havn	46.94	347	*eP*	P	18 34 42.0	-0.8
DAG	Danmarks Havn	46.94	347	*i P*	P	18 34 42.0	-0.8
WMQ	Urumqi	48.59	59	P	P	18 34 58.4	+2.3
WMQ				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
DMN	Daman	51.35	80	*eP*	P	18 35 17.3	+0.1
	comp=Z,22nm,0.8s,mb5.1						
KKN	Kakani	51.42	80	*eP*	P	18 35 18.1	+0.4
	comp=Z,16nm,0.6s,mb5.1						
PKIN	Phulchoki	51.59	80	*eP*	P	18 35 19.3	+0.2
	comp=Z,12nm,0.7s,mb4.9						
PKI	Pulchoki	51.61	80	*eP*	P	18 35 19.5	+0.3
	comp=Z,25nm,0.9s,mb5.2						
GUN	Gumba	51.86	79	*eP*	P	18 35 21.4	+0.4
	comp=Z,21nm,0.7s,mb5.2						
LSA	Lhasa	55.42	75	*eP*	P	18 35 48.1	+1.0
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
LSA	Lhasa	55.42	75	*eP*	P	18 35 48.1	+0.9
	comp=Z,3.4nm,0.6s,mb4.5						
TLY	Talaya	57.34	46	*eP*	P	18 36 01.9	+1.5
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZAK	Zakamensk	57.46	48	*eP*	P	18 36 01.8	+0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
GTA	Gaotai	58.52	61	*eP*	P	18 36 09.9	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
SONM	Songino Array	60.18	50	P	P	18 36 21.4	+1.1
	comp=Z,3.4nm,0.7s,mb4.5,baz=288,slow=8.0,SNR=35						
SONM				PcP	PcP	18 37 07.1	+1.5
	comp=Z,0.7nm,0.7s,baz=284,slow=5.1,SNR=1.9						
SONM	Songino Array	60.18	50	P	P	18 36 21.4	+1.1
SONM						18 37 07.1	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	Ulaanbaatar	60.59	50	*eP*	P	18 36 23.7	+0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.7						
ULN	Ulaanbaatar	60.59	50	*eP*	P	18 36 23.7	+0.6
	comp=Z,7.0nm,1.1s,mb4.7						
BOD	Bodaibo	61.27	38⇑	*iP*	P	18 36 26.2	-1.3
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
TIXI	Tiksi	62.09	20	*eP*	P	18 36 31.9	-0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.3						
BOSA	Boshof	62.49	180	LR	LR	19 03 34.8	
	comp=Z,64nm,18.2s,MS3.8,baz=161,slow=36						
SCHQ	Schefferville	63.82	320	P	P	18 36 44.7	+0.1
	comp=Z,2.6nm,0.5s,mb4.5,baz=71,slow=6.0,SNR=6.6						
CD2	Chengdu	64.85	69	P	P	18 36 53.6	+1.9
CD2				pP	pP	18 37 06.6	+6.7
CD2				sP	sP	18 37 11.8	+8.8
CD2				PP	PP	18 39 18.0	+3.7
CD2				S	S	18 45 28.9	-2.4
CD2				sS	sS	18 45 50.8	+5.9
CD2				SS	SS	18 49 43.0	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,120nm,5.1s						
CD2				LR	LR		
	comp=Z,120nm,5.4s						
HHC	Hu-ho-hao-te	66.27	56	*eP*	P	18 37 02.0	+1.3
HHC				pP	pP	18 37 12.3	+3.3
HHC				sP	sP	18 37 16.3	+4.2
HHC				PcP	PcP	18 37 31.5	+0.8
HHC				PP	PP	18 39 30.5	+4.0
HHC				ScP		18 41 29.9	
HHC				S	S	18 45 47.3	-1.1
HHC				sS	sS	18 46 05.8	+3.8
HHC				ScS	ScS	18 46 52.3	-3.3
HHC				SS	SS	18 50 06.3	+2.0
HHC				pmax	pmax		
	comp=Z,95nm,5.4s						
HHC				LR	LR		
	comp=N,82nm,17.0s,MS4.2						
HHC				LR	LR		
	comp=E,96nm,16.2s,MS4.2						
KMI	Kunming	66.67	75	P	P	18 37 06.9	+3.3
KMI				pP	pP	18 37 17.8	+6.0
KMI				sP	sP	18 37 24.8	+10
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
YAK	Yakutsk	66.75	30	*eP*	P	18 37 02.6	-0.9
YAK				pmax	pmax		
	comp=Z,10.0nm,1.9s,mb4.5						
CMAR	Chiang Mai Arr	66.81	83	P	P	18 37 04.8	+0.3
	comp=Z,0.6nm,0.6s,mb3.8,baz=292,slow=7.7,SNR=8.1						
CMAR	Chiang Mai Arr	66.81	83	P	P	18 37 04.8	+0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GYA	Guiyang	69.16	72	P	P	18 37 20.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BJI	Beijing	69.77	55	P	P	18 37 18.6	-4.2
BJI				S	S	18 46 26.4	-4.0
BJI				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.1						
BJI				pmax	pmax		
	comp=Z,38nm,3.9s						
CN2	Changchun	73.90	48	*eP*	P	18 37 48.5	+1.0
CN2				*eS*	S	18 47 14.5	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
SEY	Seymchan	74.48	22	*ceP*	P	18 37 50.9	+0.4
MDJ	Mudanjiang	75.95	45	P	P	18 37 59.8	+0.5
MDJ				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,97nm,3.7s						
YKA	Yellowknife Ar	78.31	342	P	P	18 38 11.9	-0.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=31,slow=5.7,SNR=4.5						
KSRS	Korea Array	78.96	52	P	P	18 38 16.8	+0.5
	comp=Z,2.8nm,0.7s,mb4.3,baz=312,slow=4.7,SNR=8.5						
KSRS	Korea Array	78.96	52	P	P	18 38 16.8	+0.5
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PPLA	Purkeypile	83.19	359	*eP*	P	18 38 38.9	+0.5
MJAR	Matsushiro Arr	86.05	48	P	P	18 38 54.0	+0.7
	comp=Z,1.9nm,0.8s,mb4.4,baz=296,slow=5.2,SNR=4.8						
MJAR	Matsushiro Arr	86.05	48	P	P	18 38 54.0	+0.7
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						

IDC 21 18:36:47.6±3.9, 23°.42S×179°.96W, h506km±34km, mb3.1/4, mb1 3.3/4, mb1mx3.1/15, mbtmp3.1/4, Error ellipse: s-maj=150.2km s-min=30.9km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.94	247	P	P	18 42 56.5	-0.1
	1.1nm,0.5s,baz=94,slow=14,SNR=3.8						
ASAR	Alice Springs	42.15	260	P	P	18 43 55.1	-0.2
	2.4nm,0.6s,baz=94,slow=7.4,SNR=98						
ASAR				ScP	ScP	18 48 40.0	-0.5
	0.5nm,0.7s,baz=106,slow=4.2,SNR=9.8						
FITZ	Fitzroy Crossi	50.91	265	P	P	18 45 02.0	+0.2
	0.9nm,0.4s,baz=111,slow=6.6,SNR=6.7						
TXAR	Lajitas Array	90.14	58	P	P	18 48 53.8	+0.1
	0.2nm,0.5s,baz=205,slow=5.5,SNR=3.5						

IDC 21 18:38:25.9±2.8, 36°.74N×141°.67E, h0km, mb3.2/5, mb1 3.4/8, mb1mx3.3/25, mbtmp3.4/8, ML2.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/15, Error ellipse: s-maj=48.4km s-min=27.5km az=114.0
ISCJB 21 18:38:28.6±1.2, 36°.64N±0°.04×141°.60E±0°.07, h27km±6km, mb3.1/5, Error ellipse: s-maj=9.6km s-min=6.6km az=5.7
JMA 21 18:38:31.0±0.1, 36°.68N×141°.43E, h48km±2km, M3.4
ISC 21 18:38:28.6±1.2, 36°.67N±0°.04×141°.57E±0°.06, h16km±5km, n18, σ0°99/28, mb3.1/5, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.75	305	⇓P	Pg	18 38 43.8	+0.5
ONAJ				S	Sg	18 38 53.6	+0.3
JHO	Hitachi	0.81	266	P	Pg	18 38 44.4	0.0
JHO				S	Sg	18 38 54.5	-0.5
JFK	Kawauchi	0.89	321	⇓P	Pg	18 38 45.9	0.0
JFK				S	Sg	18 38 57.0	-0.6
JYT	Yasato	1.20	249	⇑P	Pn	18 38 50.0	-0.7
JYT				S	Sb	18 39 04.6	-1.5
JFT	Otama	1.30	311	⇓P	Pn	18 38 52.8	+0.7
JFT				S	Sb	18 39 08.0	-1.1
JMM	Marumori	1.34	333	P	Pn	18 38 52.9	+0.2
JMM				S	Sn	18 39 09.6	-0.6
JFY	Yanaizu	1.66	297	P	Pn	18 38 58.5	+1.4
JFY				S	Sn	18 39 18.3	+0.2
JAG	Ashikaga	1.72	262	P	Pn	18 38 57.9	0.0
JAG				S	Sn	18 39 17.9	-1.7
MJAR	Matsushiro Arr	2.71	268	Pn	Pn	18 39 12.9	+1.4
	9.3nm,0.3s,baz=88,slow=15,SNR=57						
MJAR				Sn	Sn	18 39 45.6	+1.7
	8.2nm,0.3s,baz=94,slow=25,SNR=6.8						
MAT	Matsushiro	2.71	268	P	Pn	18 39 13.4	+1.9
MAT				S	Sn	18 39 45.1	+1.2
JHJ	Hachijo jima 2	3.84	203	Pn	Pn	18 39 27.9	+0.9
	12nm,0.3s,baz=66,slow=20,SNR=9.2						
JHJ				Sn	Sn	18 40 10.3	-1.4
	21nm,0.3s,baz=49,slow=20,SNR=4.8						
ASAJ	Asahikawa	7.48	6	Pn	Pn	18 40 15.2	-1.8
	0.1nm,0.3s,baz=217,slow=18,SNR=1.7						
KSRS	Korea Array	10.94	278	LR	LR	18 44 53.5	
	comp=Z,33nm,19.8s,baz=80,slow=35						
SONM	Songino Array	28.09	304	P	P	18 44 18.4	-1.0
	0.3nm,0.6s,mb3.1,baz=107,slow=10.0,SNR=4.0						
CMAR	Chiang Mai Arr	41.53	256	P	P	18 46 14.8	-0.6
	0.4nm,0.8s,mb3.1,baz=15,slow=7.8,SNR=3.1						
ZALV	Zalesovo Beam	42.25	313	P	P	18 46 21.0	+0.2
	0.2nm,0.3s,mb3.2,baz=86,slow=8.8,SNR=2.2						
MKAR	Makanchi Array	44.42	302	P	P	18 46 39.1	+0.7
	0.2nm,0.6s,mb3.0,baz=78,slow=8.2,SNR=3.3						
BVAR	Borovoye Array	50.91	313	P	P	18 47 29.0	+0.3
	0.1nm,0.3s,mb3.2,baz=97,slow=8.0,SNR=2.2						

ISCJB 21 18:46:41.9±0.8, 18°.7N±0°.1×145°.4E±0°.2, h587km±12km, mb3.6/15, Error ellipse: s-maj=24.5km s-min=15.0km az=170.5
NEIC 21 18:46:42.5±0.8, 18°.67N×145°.44E, h577km±11km, mb3.7/2, Error ellipse: s-maj=15.8km s-min=10.7km az=69.0
IDC 21 18:46:42.4±1.2, 18°.66N×145°.43E, h574km±16km, mb3.2/12, mb1 3.3/15, mb1mx3.2/24, mbtmp3.2/15, Error ellipse: s-maj=19.8km s-min=13.2km az=78.0
ISC 21 18:46:42.4±0.9, 18°.6N±0°.1×145°.4E±0°.2, h577km±12km, n25, σ0°61/24, mb3.6/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.04	186	P	P	18 48 14.6	+0.2
	7.8nm,0.3s,baz=72,slow=14,SNR=10						
GUMO				S	S	18 49 28.8	-0.4
	4.9nm,0.3s,baz=0.0,slow=20,SNR=2.9						
JOW	Kunigami	17.79	300	P	P	18 50 17.7	+0.6
	2.2nm,0.3s,baz=134,slow=16,SNR=4.7						
MJAR	Matsushiro Arr	18.94	342	P	P	18 50 26.9	-0.5
	0.5nm,0.3s,baz=167,slow=9.4,SNR=5.0						
MJAR	Matsushiro Arr	18.94	342	P	P	18 50 26.9	-0.5
KSRS	Korea Array	24.22	324	P	P	18 51 14.2	-0.5
	1.9nm,0.7s,mb3.8,baz=141,slow=10,SNR=6.9						
ASAJ	Asahikawa	25.52	355	P	P	18 51 27.1	+1.0
	6.8nm,0.9s,mb4.3,baz=216,slow=9.2,SNR=4.8						
FITZ	Fitzroy Crossi	41.36	209	P	P	18 53 39.7	+0.4
	3.8nm,1.2s,mb3.8,baz=38,slow=9.8,SNR=7.5						
SONM	Songino Array	43.03	322	P	P	18 53 52.4	+0.5
	1.7nm,0.5s,mb3.8,baz=125,slow=5.8,SNR=23						
ASAR	Alice Springs	43.52	195	P	P	18 53 55.9	-0.1
	0.1nm,0.4s,mb2.7,baz=16,slow=6.6,SNR=3.7						
ASAR	Alice Springs	43.52	195	P	P	18 53 55.9	-0.1
CMAR	Chiang Mai Arr	43.97	278	P	P	18 54 00.3	+0.6
	0.8nm,0.7s,mb3.4,baz=62,slow=6.2,SNR=8.2						
ZALV	Zalesovo Beam	57.91	323	P	P	18 55 39.3	-0.6
	1.1nm,0.4s,mb3.3,baz=170,slow=8.5,SNR=5.9						
MK31	Makanchi Array	58.32	314	*eP*	P	18 55 43.3	+0.4
MKAR	Makanchi Array	58.32	314	P	P	18 55 43.3	+0.5
	1.2nm,0.6s,mb3.2,baz=88,slow=8.5,SNR=18						
KURK	Kurchatov	61.15	318	*eP*	P	18 56 01.1	-0.4
	4.6nm,0.8s,mb3.8						
BVAR	Borovoye Array	66.36	320	P	P	18 56 34.5	-0.1
	1.9nm,0.5s,mb3.8,baz=95,slow=8.0,SNR=19						
BRVK	Borovoye	66.42	320	*eP*	P	18 56 35.0	0.0
ABKAR	Akbulak array	73.21	317	*eP*	P	18 57 14.8	-0.6
	0.9nm,0.6s,mb3.5						
YKA	Yellowknife Ar	78.17	28	P	P	18 57 42.7	+0.2
	0.9nm,0.5s,mb3.5,baz=288,slow=5.1,SNR=10						
YKA	Yellowknife Ar	78.17	28	P	P	18 57 42.7	+0.2
ARCES	ARCESS Array B	82.48	342	P	P	18 58 04.3	-0.4
	1.5nm,0.6s,mb3.7,baz=54,slow=6.2,SNR=7.9						
NVAR	Mina Array Bea	83.38	52	P	P	18 58 10.6	+0.7
	0.5nm,0.3s,mb3.5,baz=270,slow=8.1,SNR=3.0						
FINES	FINESS Array B	86.84	335	P	P	18 58 24.3	-1.7
	0.9nm,0.4s,mb3.9,baz=65,slow=4.1,SNR=14						
LPAZ	La Paz	147.93	91	PKPbc	PKPbc	19 05 25.7	+1.4
	0.7nm,0.5s,baz=305,slow=3.3,SNR=4.7						
LPAZ	La Paz	147.93	91	PKPbc	PKPbc	19 05 25.7	+1.4

NEIC 21 18:48:37.0±3.9, 18°.73N×145°.73E, h575km±46km, mb3.4/2, Error ellipse: s-maj=52.5km s-min=19.4km az=87.0
IDC 21 18:48:37.1±4.8, 18°.73N×145°.66E, h571km±60km, mb2.6/8, mb1 2.7/9, mb1mx2.6/21, mbtmp2.6/9, Error ellipse: s-maj=59.6km s-min=18.5km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	18.92	341	P	P	18 52 21.4	-0.8
	0.1nm,0.3s,baz=163,slow=6.3,SNR=2.9						
KSRS	Korea Array	24.27	324	P	P	18 53 09.9	-0.3
	0.7nm,0.5s,baz=140,slow=8.9,SNR=4.2						
SONM	Songino Array	43.10	321	P	P	18 55 48.8	+1.3
	0.5nm,0.6s,baz=128,slow=7.8,SNR=4.1						
ASAR	Alice Springs	43.67	196	P	P	18 55 52.4	+0.1
	0.3nm,0.9s,baz=8.7,slow=6.1,SNR=3.4						
CMAR	Chiang Mai Arr	44.18	277	P	P	18 55 55.5	-0.9
	0.3nm,0.7s,baz=84,slow=4.8,SNR=4.2						
ZALV	Zalesovo Beam	57.97	322	P	P	18 57 36.0	+0.5
	0.4nm,0.3s,baz=98,slow=6.0,SNR=2.2						
MKAR	Makanchi Array	58.42	314	P	P	18 57 39.1	+0.5
	0.2nm,0.4s,baz=101,slow=5.8,SNR=3.6						
KURK	Kurchatov	61.23	318	*eP*	P	18 57 57.1	-0.1
	0.9nm,0.3s						
BVAR	Borovoye Array	66.43	320	P	P	18 58 30.4	+0.2
	0.4nm,0.4s,baz=87,slow=8.8,SNR=3.3						
ABKAR	Akbulak array	73.29	317	*eP*	P	18 59 10.6	-0.5
	0.3nm,0.4s						
FINES	FINESS Array B	86.84	335	P	P	19 00 19.9	-1.4
	0.3nm,0.3s,baz=49,slow=2.6,SNR=3.0						

IGQ 21 18:49:08.0, 2°.85S×78°.11W, h10km±2km, Mb4.2, Ms4.0, 10C-16D, Error ellipse: s-maj=5.5km s-min=1.7km az=161.0, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	Macas	0.60	351	⇓S	Sg	18 49 28.4	+0.8
MACE	Macas	0.60	351	⇓P	Pg	18 49 20.6	+1.0
RIOE	Riobamba	1.21	334	S	Sb	18 49 48.1	+1.3
RIOE	Riobamba	1.21	334	P	Pn	18 49 31.7	+0.6
PATA	Patacocha	1.38	346	⇑P	Pn	18 49 33.9	+0.6
ARRY	Arrayan	1.38	345	⇑S	Sb	18 49 51.7	0.0
ARRY	Arrayan	1.38	345	⇑P	Pn	18 49 33.6	+0.2
ULBA	Ulba	1.43	348	⇑P	Pn	18 49 34.8	+0.7
ULBA	Ulba	1.43	348	⇑S	Sn	18 49 53.3	+0.4
BIL2	Estacion Bilba	1.44	344	⇑S	Sn	18 49 55.6	+2.4
BIL2	Estacion Bilba	1.44	344	⇑P	Pn	18 49 35.4	+1.1
IGUA	Igualata	1.45	339	⇑S	Sn	18 49 56.0	+2.5
IGUA	Igualata	1.45	339	⇑P	Pn	18 49 36.4	+2.0
RUN5	Runtun	1.46	347	S	Sn	18 49 55.4	+1.6
RUN5	Runtun	1.46	347	P	Pn	18 49 35.1	+0.6
PISA	Pisayambo	1.80	351	⇓S	Sn	18 50 06.2	+4.1
PISA	Pisayambo	1.80	351	⇓P	Pn	18 49 41.0	+1.8
MOV1	Cotopaxi Vol s	2.15	351	⇓P	Pn	18 49 46.9	+2.9
TAMB	Tambo	2.16	353	⇓P	Pn	18 49 46.9	+2.8
TAMB	Tambo	2.16	353	⇓S	Sn	18 50 15.8	+4.8
COV1	Cotopaxi Volc	2.19	354	P	Pn	18 49 48.2	+3.7
COV1	Cotopaxi Volc	2.19	354	S	Sn	18 50 17.9	+6.2
CAMI	Rancho Maria	2.20	350	⇓S	Sn	18 50 18.3	+6.3
CAMI	Rancho Maria	2.20	350	⇓P	Pn	18 49 48.3	+3.7
VC1	Cotopaxi 1	2.22	352	⇓S	Sn	18 50 18.0	+5.6
VC1	Cotopaxi 1	2.22	352	⇓P	Pn	18 49 48.0	+3.1
NAS2	Nasa	2.22	351	⇓S	Sn	18 50 19.0	+6.4
NAS2	Nasa	2.22	351	⇓P	Pn	18 49 48.7	+3.7

ellipse: s-maj=0.8km s-min=1.2km az=0.0
*TIR **21** 19:04:25.2±3.0, 41°.11N×20°.12E, h4km, 9km, ML3.3*
*ISCJB **21** 19:04:26.0±0.3, 41°.13N±0°.02×20°.14E±0°.02, h10km, Error ellipse: s-maj=2.9km s-min=1.8km az=146.7*
*BEO **21** 19:04:27.0±0.7, 41°.16N×20°.11E, h4km, 2km*

ISC 21 19:04:26.0±0.4, 41°.12N±0°.02×20°.11E±0°.02, h1km±3km, n80, σ1s24/147, 13C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**321**	⇑*i*Pg	**Pg**	**19 04 31.0**	**-0.6**
TIR				*i* Sg	**Sg**	**19 04 36.5**	**+1.1**
TIR	**Tirane**	**0.29**	**321**	P	**Pg**	**19 04 31.0**	**-0.6**
TIR				S	**Sg**	**19 04 35.5**	**+0.1**
TIR	**Tirane**	**0.29**	**321**	P	**Pg**	**19 04 31.0**	**-0.6**
TIR				S	**Sg**	**19 04 35.5**	**+0.1**
TIR				*i* Sg	**Sg**	**19 04 36.5**	**+1.1**
OHR	**Ohrid**	**0.52**	**91**	*i* Pg	**Pg**	**19 04 34.9**	**-1.0**
OHR				*i* Sg	**Sg**	**19 04 43.4**	**+0.6**
OHR				*e*Lg		19 04 43.9	
	comp=N,244nm,0.8s						
OHR				*e*Lg		19 04 47.3	
	comp=E,352nm,0.5s						
OHR	**Ohrid**	**0.52**	**91**	P	**Pg**	**19 04 35.0**	**-1.0**
OHR				S	**Sg**	**19 04 43.0**	**+0.3**
OHR	**Ohrid**	**0.52**	**91**	P	**Pg**	**19 04 35.0**	**-1.0**
OHR				S	**Sg**	**19 04 43.0**	**+0.3**
OHR				*e*Lg		19 04 43.8	
	comp=E,244nm,0.8s						
KBN	**Korca**	**0.71**	**134**	*e*PG	**Pg**	**19 04 38.4**	**-1.3**
KBN				*i* SG	**Sg**	**19 04 50.1**	**+1.2**
KRUS	**Krusevo**	**0.89**	**74**	*i* Pg	**Pg**	**19 04 41.6**	**-1.6**
KRUS				*i* Sg	**Sg**	**19 04 55.2**	**+0.5**
KRUS				*e*Lg		19 04 55.8	
	comp=E,88nm,0.4s						
KRUS				*e*Lg		19 04 56.1	
	comp=N,61nm,0.3s						
BIA	**Bitola**	**0.92**	**96**	*i* Pg	**Pg**	**19 04 42.7**	**-1.0**
BIA				*i* Sg	**Sg**	**19 04 56.2**	**+0.6**
BIA				*e*Lg		19 04 56.7	
	comp=E,82nm,0.3s						
BIA				*e*Lg		19 04 56.9	
	comp=N,89nm,0.3s						
BIA	**Bitola**	**0.92**	**96**	*i* Pg	**Pg**	**19 04 42.6**	**-1.1**
BIA				*i* Sg	**Sg**	**19 04 56.2**	**+0.5**
BIA				*e*Lg		19 04 56.7	
	comp=N,82nm,0.3s						
PUK	**Puka**	**0.94**	**350**	*e*PG	**Pg**	**19 04 42.9**	**-1.0**
PUK				*i* SG	**Sg**	**19 04 58.7**	**+2.6**
FNA	**Florina**	**1.02**	**109**	P	**Pg**	**19 04 44.8**	**-0.7**
FNA				S	**Sg**	**19 04 59.7**	**+1.1**
FNA	**Florina**	**1.02**	**109**	P	**Pg**	**19 04 44.8**	**-0.7**
FNA				S	**Sg**	**19 04 59.7**	**+1.1**
ULC	**Ulcinj**	**1.06**	**323**	*e*PN	**Pg**	**19 04 45.1**	**-1.2**
ULC				*i* SN	**Sg**	**19 05 01.2**	**+1.1**
ULC	**Ulcinj**	**1.06**	**323**	⇑*i*Pg	**Pg**	**19 04 45.1**	**-1.2**
ULC				*e*Sg	**Sg**	**19 05 01.2**	**+1.1**
ULC	**Ulcinj**	**1.06**	**323**	*e*Pn	**Pg**	**19 04 45.1**	**-1.2**
ULC				*i* Sn	**Sg**	**19 05 01.2**	**+1.1**
SRN	**Sarande**	**1.24**	**184**	*e*PG	**Pg**	**19 04 49.7**	**-0.1**
SRN				*i* SG	**Sg**	**19 05 08.3**	**+2.4**
SKO	**Skopje**	**1.31**	**49**	⇑*i*Pg	**Pg**	**19 04 51.3**	**+0.2**
SKO				*i* Sg	**Sg**	**19 05 09.3**	**+1.2**
SKO	**Skopje**	**1.31**	**49**	*i* Pg	**Pg**	**19 04 51.2**	**+0.1**
SKO				*i* Sg	**Sg**	**19 05 09.9**	**+1.7**
SKO				*e*Lg		19 05 10.7	
	comp=E,87nm,0.5s						
SKO				*e*Lg		19 05 10.7	
	comp=N,135nm,0.5s						
SKO	**Skopje**	**1.31**	**49**	*i* Pg	**Pg**	**19 04 51.2**	**+0.1**
SKO				*i* Sg	**Sg**	**19 05 09.3**	**+1.2**
SKO				*e*Lg		19 05 10.7	
	comp=N,135nm,0.5s						
KEK	**Kerkira**	**1.43**	**190**	*e*PB	**Pn**	**19 04 52.0**	**-1.0**
KEK				*e*SB	**Sn**	**19 05 13.5**	**+1.2**
KEK	**Kerkira**	**1.43**	**190**	P	**Pn**	**19 04 51.8**	**-1.2**
KEK				S	**Sg**	**19 05 12.3**	**+0.5**
KEK	**Kerkira**	**1.43**	**190**	*e*Pb	**Pn**	**19 04 52.0**	**-1.0**
KEK				*e*Sb	**Sn**	**19 05 13.5**	**+1.2**
PDG	**Podgorica**	**1.45**	**334**	*e*PN	**Pn**	**19 04 53.2**	**-1.1**
PDG				*i* SN	**Sn**	**19 05 14.7**	**+1.7**
PDG	**Podgorica**	**1.45**	**334**	*e*Sg	**Sn**	**19 05 14.7**	**+1.7**
TTG	**Podgorica**	**1.45**	**334**	⇑*i*Pg	**Pn**	**19 04 52.3**	**-1.1**
TTG				*e*Sg	**Sn**	**19 05 14.7**	**+1.7**
PVY	**Plav**	**1.48**	**356**	*e*PN	**Pn**	**19 04 52.7**	**-1.0**
PVY				*i* SN	**Sg**	**19 05 16.4**	**+2.9**
PVY	**Plav**	**1.48**	**356**	⇑*i*Pg	**Pn**	**19 04 52.7**	**-1.0**
PVY				*e*Sg	**Sg**	**19 05 16.4**	**+2.9**
PVY	**Plav**	**1.48**	**356**	⇑*i*Pg	**Pn**	**19 04 52.7**	**-1.0**
PVY				*e*Sg	**Sg**	**19 05 16.4**	**+2.9**
BUM	**Brajici-Budva**	**1.49**	**323**	*e*PN	**Pn**	**19 04 52.7**	**-1.1**
BUM				*i* SN	**Sg**	**19 05 15.5**	**+1.7**
BUM	**Brajici-Budva**	**1.49**	**323**	⇓*i*Pg	**Pn**	**19 04 52.7**	**-1.1**
BUM				*e*Sg	**Sg**	**19 05 15.5**	**+1.7**
BUM	**Brajici-Budva**	**1.49**	**323**	*e*Sg	**Sg**	**19 05 15.5**	**+1.7**
KZN	**Kozani**	**1.50**	**122**	*e*PB	**Pb**	**19 04 53.8**	**-0.8**
KZN				*e*SB	**Sg**	**19 05 15.8**	**+1.6**
KZN	**Kozani**	**1.50**	**122**	P	**Pn**	**19 04 52.9**	**-1.1**
KZN				S	**Sn**	**19 05 12.4**	**-1.8**
KZN	**Kozani**	**1.50**	**122**	P	**Pn**	**19 04 52.9**	**-1.1**
KZN	**Kozani**	**1.50**	**122**	*e*Pb	**Pb**	**19 04 53.8**	**-0.8**
KZN				S	**Sn**	**19 05 12.4**	**-1.8**
KZN				*e*Sb	**Sg**	**19 05 15.8**	**+1.6**
JAN	**Janina**	**1.57**	**159**	*e*PG	**Pg**	**19 04 55.0**	**-1.0**
JAN				*e*SN	**Sg**	**19 05 18.5**	**+2.1**
JAN	**Janina**	**1.57**	**159**	*e*Pg	**Pg**	**19 04 55.0**	**-1.0**
JAN				*e*Sn	**Sg**	**19 05 18.5**	**+2.1**
IGT	**Igoumenitsa**	**1.59**	**174**	P	**Pn**	**19 04 54.3**	**-1.0**
IGT				S	**Sn**	**19 05 16.4**	**-0.1**
IGT	**Igoumenitsa**	**1.59**	**174**	P	**Pn**	**19 04 54.3**	**-1.0**
IGT				S	**Sn**	**19 05 16.4**	**-0.1**
BEY	**Berane**	**1.76**	**355**	*e*PN	**Pn**	**19 04 58.1**	**+0.6**
BEY				*i* SN	**Sg**	**19 05 24.6**	**+2.1**
BEY	**Berane**	**1.76**	**355**	⇑*i*Pn	**Pn**	**19 04 58.1**	**+0.6**
BEY				*e*Sn	**Sg**	**19 05 24.6**	**+2.1**
IVA	**Berane**	**1.76**	**355**	⇑*i*Pn	**Pn**	**19 04 58.1**	**+0.6**
IVA				*e*Sn	**Sg**	**19 05 24.6**	**+2.1**
IVA	**Berane**	**1.76**	**355**	⇑*i*Pn	**Pn**	**19 04 58.1**	**+0.6**
IVA				*e*Sn	**Sg**	**19 05 24.6**	**+2.1**
HCY	**Herceg Novi**	**1.79**	**318**	⇓*i*Pn	**Pn**	**19 04 57.5**	**-0.5**
HCY				*e*Sn	**Sn**	**19 05 24.0**	**+2.6**
VAY	**Valandovo**	**1.87**	**83**	*e*Pn	**Pn**	**19 04 59.4**	**+0.4**
VAY				*e*Sg	**Sg**	**19 05 25.9**	**-0.1**
VAY				*e*Lg		19 05 27.5	
	comp=N,32nm,0.6s						
VAY				*e*Lg		19 05 27.7	
	comp=E,24nm,0.4s						
VAY	**Valandovo**	**1.87**	**83**	P	**Pn**	**19 04 56.3**	**-2.7**
VAY	**Valandovo**	**1.87**	**83**	P	**Pn**	**19 04 56.3**	**-2.7**
VAY	**Valandovo**	**1.87**	**83**	*e*Pn	**Pn**	**19 04 59.4**	**+0.4**
VAY				*e*Sg	**Sg**	**19 05 25.8**	**-0.2**
VAY				*e*Lg		19 05 27.4	
	comp=E,32nm,0.6s						
NKY	**Niksic**	**1.88**	**334**	⇓*i*Pn	**Pn**	**19 04 59.6**	**+0.3**
NKY				*e*Sn	**Sg**	**19 05 26.9**	**+0.4**
NKY	**Niksic**	**1.88**	**334**	⇓*i*Pn	**Pn**	**19 04 59.6**	**+0.3**
NKY				*e*Sn	**Sg**	**19 05 26.9**	**+0.4**
TREB	**Trebinje**	**2.07**	**321**	*i* Pn	**Pn**	**19 05 01.6**	**-0.2**
TREB				*e*Sg	**Sg**	**19 05 32.8**	**+0.4**
TREB	**Trebinje**	**2.07**	**321**	*i* Pn	**Pn**	**19 05 01.6**	**-0.2**
TREB				*e*Sg	**Sg**	**19 05 32.8**	**+0.4**
BARS	**Barje**	**2.12**	**36**	*i* Pn	**Pn**	**19 05 01.8**	**-0.7**
BARS				*i* Sg	**Sn**	**19 05 31.9**	**+2.5**
BARS	**Barje**	**2.12**	**36**	*i* Pn	**Pn**	**19 05 01.8**	**-0.7**
BARS				*i* Sg	**Sn**	**19 05 31.9**	**+2.5**
BRY	**Bratogost**	**2.13**	**327**	⇑*i*Pn	**Pn**	**19 05 02.9**	**+0.3**
BRY				*e*Sn	**Sg**	**19 05 32.5**	**-1.8**
BRY	**Bratogost**	**2.13**	**327**	⇑*i*Pn	**Pn**	**19 05 02.9**	**+0.3**
BRY				*e*Sn	**Sg**	**19 05 32.5**	**-1.8**
THL	**Klokotos Trika**	**2.13**	**136**	*e*PN	**Pn**	**19 05 02.8**	**+0.2**
THL	**Klokotos Trika**	**2.13**	**136**	*e*Pn	**Pn**	**19 05 02.8**	**+0.2**
SJES	**Sjenica**	**2.14**	**357**	*e*Pg	**Pn**	**19 05 04.7**	**+1.9**
SJES				*e*Sg	**Sg**	**19 05 33.3**	**-1.5**
SJES	**Sjenica**	**2.14**	**357**	*e*Pg	**Pn**	**19 05 04.7**	**+1.9**
SJES				*e*Sg	**Sg**	**19 05 33.3**	**-1.5**
UPM	**Unac-Piva**	**2.26**	**337**	*e*Pn	**Pn**	**19 05 05.6**	**+1.1**
UPM				*e*Sn	**Sg**	**19 05 36.4**	**-2.3**
UPM	**Unac-Piva**	**2.26**	**337**	*e*Pn	**Pn**	**19 05 05.6**	**+1.1**
UPM				*e*Sn	**Sg**	**19 05 36.4**	**-2.3**
PLE	**Pljevlja**	**2.27**	**347**	⇑*i*Pn	**Pn**	**19 05 05.1**	**+0.5**
PLE				*e*Sn	**Sg**	**19 05 36.6**	**-2.4**
PLE	**Pljevlja**	**2.27**	**347**	⇑*i*Pn	**Pn**	**19 05 05.1**	**+0.5**
PLE				*e*Sn	**Sg**	**19 05 36.6**	**-2.4**
EVR	**Evrytania**	**2.56**	**149**	*e*PN	**Pn**	**19 05 08.9**	**+0.4**
EVR	**Evrytania**	**2.56**	**149**	*e*Pn	**Pn**	**19 05 08.9**	**+0.4**
VTS	**Vitosha**	**2.74**	**57**	*i* Pn	**Pn**	**19 05 10.9**	**-0.2**
VTS				*i* Sn	**Sn**	**19 05 43.6**	**-1.2**
VTS	**Vitosha**	**2.74**	**57**	*i* Pn	**Pn**	**19 05 10.9**	**-0.2**
VTS				*i* Sn	**Sn**	**19 05 43.6**	**-1.2**
BBLS	**Laziói**	**2.79**	**349**	*e*Pg	**Pg**	**19 05 16.3**	**-3.2**
BBLS				*e*Sg	**Sg**	**19 05 54.6**	**-1.1**
BBLS	**Laziói**	**2.79**	**349**	*e*Pg	**Pg**	**19 05 16.3**	**-3.2**
BBLS				*e*Sg	**Sg**	**19 05 54.6**	**-1.1**
ZAPS	**Zavoj**	**2.85**	**40**	*e*Pn	**Pn**	**19 05 13.1**	**+0.5**
ZAPS				*i* Sn	**Sn**	**19 05 49.5**	**+1.9**
VLS	**Valsamata**	**2.96**	**173**	*e*PN	**Pn**	**19 05 12.6**	**-1.5**
VLS	**Valsamata**	**2.96**	**173**	*e*Pn	**Pn**	**19 05 12.6**	**-1.5**
DIVS	**Divibare**	**2.98**	**358**	*e*Pn	**Pn**	**19 05 14.9**	**+0.6**
DIVS				*e*Sn	**Sn**	**19 05 49.7**	**-0.9**
DIVS	**Divibare**	**2.98**	**358**	*e*Pn	**Pn**	**19 05 14.9**	**+0.6**
DIVS				*e*Sn	**Sn**	**19 05 49.7**	**-0.9**
NEO	**Neokhori**	**3.00**	**126**	*e*PN	**Pn**	**19 05 13.9**	**-0.6**
NEO	**Neokhori**	**3.00**	**126**	*e*Pn	**Pn**	**19 05 13.9**	**-0.6**
LKR	**Lokris**	**3.32**	**137**	*e*PN	**Pn**	**19 05 18.9**	**-0.1**
LKR	**Lokris**	**3.32**	**137**	*e*Pn	**Pn**	**19 05 18.9**	**-0.1**

*IDC **21** 19:23:55.3±1.0, 4°.08S×40°.34W, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.8/6, MS3.7/11, Ms1 3.7/11, ms1mx3.5/26, Error ellipse: s-maj=44.3km s-min=24.9km az=165.0*
*ISCJB **21** 19:23:56.1±0.8, 3°.9S±0°.2×40°.45W±0°.09, h10km, mb3.6/6, MS3.7/11, Error ellipse: s-maj=27.8km s-min=9.4km az=21.4*
*NEIC **21** 19:23:57.3±0.7, 3°.91S×40°.44W, h10km, Error ellipse: s-maj=30.1km s-min=16.1km az=191.0*
NEIC Minor damage at Alcantaras. Felt [III] at Fortaleza. Felt at Sobral.

ISC 21 19:23:57.6±0.7, 3°.9S±0°.2×40°.36W±0°.09, h10km, n19, σ1s17/13, mb3.6/6, MS3.7/11, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**4.83**	**113**	*e*Pn	**Pn**	**19 25 12.2**	**+1.7**
RCBR				*e*Pg	**Pg**	**19 25 29.0**	**-1.2**
RCBR				*e*Sn	**Sn**	**19 26 10.0**	**+3.6**
RCBR				*e*Sg	**Sg**	**19 26 32.4**	**-0.4**
CPUP	**Villa Florida**	**27.57**	**214**	LR	LR	19 41 47.4	
	comp=Z,138nm,19.7s,MS3.5,baz=14,slow=39						
LPAZ	**La Paz**	**29.91**	**244**	**P**	**P**	**19 30 05.5**	**-0.5**
	0.4nm,0.4s,mb3.5,baz=53,slow=5.1,SNR=2.8						
LPAZ				LR	LR	19 42 52.1	
	comp=Z,172nm,21.6s,MS3.6,baz=96,slow=38						
LPAZ	**La Paz**	**29.91**	**244**	P	**P**	**19 30 05.5**	**-0.5**
LPAZ				P	pP	19 30 09.8	+0.8
LPAZ				LR	LR	19 42 52.1	
ROSC	**El Rosal**	**35.04**	**284**	LR	LR	19 46 24.2	
	comp=Z,83nm,20.1s,MS3.5,baz=212,slow=38						
TORD	**Torodi Ar. Bea**	**45.07**	**67**	**P**	**P**	**19 32 13.1**	**-1.2**
	3.2nm,1.0s,mb4.1,baz=252,slow=8.1,SNR=10						
TORD				LR	LR	19 49 17.9	
	comp=Z,66nm,20.6s,MS3.5,baz=155,slow=34						
PLCA	**Paso Flores**	**45.61**	**212**	LR	LR	19 52 50.6	
	comp=Z,364nm,18.8s,MS4.3,baz=29,slow=38						
KEST	**Kesra**	**60.96**	**45**	LR	LR	19 58 39.5	
	comp=Z,45nm,20.2s,MS3.6,baz=277,slow=34						
BOSA	**Boshof**	**66.76**	**119**	LR	LR	19 57 52.3	
	comp=Z,63nm,18.9s,MS3.9,baz=168,slow=31						
DAVOX	**Davos/Dischmat**	**67.10**	**35**	LR	LR	19 59 55.8	
	comp=Z,74nm,18.4s,MS3.9,baz=266,slow=32						
TXAR	**Lajitas Array**	**69.01**	**303**	P	**P**	**19 35 03.5**	**-0.3**
	0.4nm,0.8s,mb3.4,baz=122,slow=6.1,SNR=4.6						
GERES	**GERESS Array B**	**70.39**	**35**	LR	LR	20 01 30.4	
	comp=Z,41nm,20.3s,MS3.7,baz=101,slow=32						
NOA	**NORSAR Array B**	**75.98**	**23**	LR	LR	20 04 35.5	
	comp=Z,30nm,20.6s,MS3.6,baz=90,slow=32						
BRTR	**Keskin Array B**	**80.28**	**49**	P	**P**	**19 36 10.2**	**+1.2**
	0.3nm,0.5s,mb3.5,baz=268,slow=5.2,SNR=4.2						
BRTR				LR	LR	20 10 45.1	
	comp=Z,23nm,21.0s,MS3.5,baz=134,slow=35						
NVAR	**Mina Array Bea**	**83.02**	**309**	P	**P**	**19 36 24.8**	**+1.3**
	0.4nm,0.4s,mb3.8,baz=106,slow=5.1,SNR=2.4						
NVAR	**Mina Array Bea**	**83.02**	**309**	P	**P**	**19 36 24.8**	**+1.3**
YKA	**Yellowknife Ar**	**86.24**	**333**	P	**P**	**19 36 38.0**	**-1.1**
	0.3nm,0.8s,mb3.6,baz=108,slow=5.4,SNR=4.1						
YKA	**Yellowknife Ar**	**86.24**	**333**	P	**P**	**19 36 38.0**	**-1.2**
ASAR	**Alice Springs**	**152.01**	**169**	PKPbc	PKPbc	19 43 52.9	-1.1
	1.4nm,0.6s,baz=186,slow=2.1,SNR=30						

IDC 21 19:31:02.5±3.5, 32°.19S×178°.42W, h0km, mb4.0/1, mb1 4.2/1, mb1mx3.7/14, mbtmp4.0/1, MS3.6/1, Ms1 3.5/1, ms1mx2.9/16, Error ellipse: s-maj=208.2km s-min=49.2km az=161.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.77**	**260**	LR	LR	19 51 24.9	
	comp=Z,94nm,18.5s,baz=119,slow=36						
ASAR	**Alice Springs**	**42.69**	**269**	P	P	19 39 01.2	0.0
	1.3nm,0.6s,baz=110,slow=7.7,SNR=31						
KURK	**Kurchatov**	**122.01**	**313**	PKP	PKPdf	19 49 57.6	-0.8
	0.2nm,0.7s,baz=115,slow=1.7,SNR=3.9						
FINES	**FINESS Array B**	**146.68**	**339**	PKPbc	PKPbc	19 50 45.1	-0.4
	2.0nm,0.5s,baz=38,slow=3.8,SNR=14						
NOA	**NORSAR Array B**	**150.45**	**350**	PKPbc	PKPbc	19 50 54.8	-0.4
	0.8nm,0.8s,baz=16,slow=4.2,SNR=3.5						
MMAI	**Mount Meron Ar**	**151.56**	**281**	PKPbc	PKPbc	19 50 59.1	+0.3
	1.3nm,0.7s,baz=100,slow=4.4,SNR=3.8						

FUNV 21 19:31:43.4, 10°.70N×67°.66W, h4km, MW3.8, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURV	**Turiamo**	**0.31**	**215**	⇑*i*P	Pg	19 31 49.0	-0.3
TURV				*e*S	Sg	19 31 53.1	-0.2
FUNV	**FUNVISIS**	**0.87**	**105**	*e*P	Pg	19 32 00.1	0.0
FUNV				*e*S	Sg	19 32 11.8	+0.4
MAPV	**Macapo**	**1.17**	**222**	*e*P	Pg	19 32 05.4	-0.4
JACV	**Jacura**	**1.21**	**289**	*e*P	Pg	19 32 05.7	-1.0
JACV				*e*S	Sg	19 32 22.6	+0.2
BIRV	**Birongo**	**1.39**	**99**	*e*P	Pn	19 32 08.8	-0.7
BIRV				*e*S	Sb	19 32 27.6	-0.4
TEPV	**Terepaima**	**1.68**	**244**	*e*P	Pn	19 32 12.8	-0.7
TEPV				*e*S	Sn	19 32 34.9	-0.6
BAUV	**El Baul**	**1.79**	**192**	*e*P	Pn	19 32 15.3	+0.2
ORCV	**Isla La Orchil**	**1.81**	**52**	*e*P	Pn	19 32 14.6	-0.9
CUPV	**Cepira**	**1.95**	**109**	⇓*e*P	Pn	19 32 17.7	+0.4
MERV	**Las Mercedes**	**1.97**	**137**	⇓*e*P	Pn	19 32 17.8	+0.2
SIQV	**Siquisique**	**2.11**	**269**	*e*P	Pn	19 32 19.1	-0.4
SIQV				*e*S	Sn	19 32 45.0	-1.3
SANV	**Sanarito**	**2.20**	**237**	*e*P	Pn	19 32 20.4	-0.4
SANV				*e*S	Sn	19 32 47.7	-0.7
CURV	**Curarigua**	**2.37**	**253**	*e*P	Pn	19 32 23.0	-0.1
CURV				*e*S	Sn	19 32 51.1	-1.4
MONV	**Montecano**	**2.59**	**299**	*e*P	Pn	19 32 25.8	-0.3
QARV	**Quebrada Arrib**	**2.86**	**260**	*e*P	Pn	19 32 28.9	-0.9
QARV				*e*S	Sn	19 33 02.7	-2.0
PCRV	**Puerto La Cruz**	**3.02**	**100**	*e*P	Pn	19 32 32.5	+0.5
IBAV	**Isla La Blanqu**	**3.22**	**69**	*e*P	Pn	19 32 32.9	-2.0
IBAV				*e*S	Sn	19 33 10.3	-3.4
CAOV	**Caicara del Or**	**3.60**	**158**	*e*P	Pn	19 32 39.0	-1.1
CAOV				*e*S	Sn	19 33 19.4	-3.7
VIGV	**El Vigia**	**4.09**	**243**	*e*P	Pn	19 32 45.2	-1.6
ITEV	**Isla Los Testi**	**4.49**	**81**	*e*P	Pn	19 32 50.5	-1.9
VIRV	**Villa del Rosa**	**4.67**	**268**	*e*P	Pn	19 32 53.1	-1.6
GUNV	**Guanoco**	**4.67**	**96**	*e*P	Pn	19 32 54.0	-0.8
RIOV	**Rio Grande**	**6.33**	**114**	*e*P	Pn	19 33 15.2	-2.4
LUEV	**Luepa**	**7.80**	**128**	*e*P	Pn	19 33 35.8	-2.1

IDC 21 19:47:06.0±1.0, 2°.81N×127°.95E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=86.6km s-min=18.4km az=72.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.94**	**168**	P	P	19 52 49.5	+0.2
	0.3nm,1.0s,baz=354,slow=7.8,SNR=3.4						
KSRS	**Korea Array**	**34.48**	**360**	P	P	19 53 55.5	-0.2
	0.5nm,0.4s,baz=180,slow=10,SNR=3.7						
STKA	**Stephens Creek**	**36.85**	**160**	P	P	19 54 15.9	-0.2
	1.6nm,0.9s,baz=333,slow=9.0,SNR=3.7						
SONM	**Songino Array**	**48.56**	**341**	P	P	19 55 51.7	+0.6
	0.3nm,0.6s,baz=149,slow=9.2,SNR=6.2						
MKAR	**Makanchi Array**	**59.01**	**325**	P	P	19 57 07.9	+0.3
	0.8nm,0.4s,baz=112,slow=8.3,SNR=11						
KURK	**Kurchatov**	**63.17**	**327**	P	P	19 57 35.3	-0.6
	1.0nm,0.5s,baz=126,slow=6.4,SNR=8.2						

*IDC **21** 19:51:15.1±1.9, 37°.52N×69°.39E, h0km, mb3.5/5, mb1 3.7/11, mb1mx3.5/28, mbtmp3.6/11, ML3.4/6, MS2.8/2, Ms1 2.8/2, ms1mx2.3/29, Error ellipse: s-maj=28.4km s-min=17.6km az=174.0*
*NNC **21** 19:51:16.4±8.0, 37°.73N×69°.35E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=82.2km s-min=37.6km az=19.0*
*NEIC **21** 19:51:18.8±3.8, 37°.89N×69°.25E, h10km, 26km, mb3.9/1, Error ellipse: s-maj=11.1km s-min=9.6km az=132.0*
*BJI **21** 19:51:19.4, 38°.43N×69°.28E, h10km, mb4.1/2, ML3.5/3*
*MOS **21** 19:51:20.0±1.7, 37°.96N×69°.35E, h33km, mb3.8/4, Error ellipse: s-maj=19.4km s-min=8.0km az=75.6*

ISC 21 19:51:19.1±1.9, 37°.95N±0°.04×69°.12E±0°.07, h7km±12km, n58, σ1s50/64, mb3.5/6, 8C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.40**	**181**	*e*PN	**Pn**	**19 52 11.5**	**-1.0**
KBL				*e*S	**Sn**	**19 52 55.4**	**+2.4**
KK09	**Karatay Array**	**5.28**	**11**	⇑Pn	**Pn**	**19 52 41.3**	**+3.1**
	1.3nm,0.6s,baz=198,slow=14						
KK09				⇓Pg	**Pg**	**19 52 58.5**	**-1.6**
	22nm,0.7s,baz=188,slow=14						
KK09				⇓Lg		19 54 10.5	
	51nm,0.6s,baz=186,slow=26						
AML	**Almayashu**	**5.46**	**39**	P	**Pn**	**19 52 43.1**	**+2.4**
	SNR=6.9						
AML	**Almayashu**	**5.46**	**39**	*e*P	**Pn**	**19 52 41.2**	**+0.5**
	30nm,0.6s						
KSH	**Kashi**	**5.58**	**72**	*e*Pn	**Pn**	**19 52 37.4**	**-5.1**
KSH				Sn	**Sn**	**19 53 37.3**	**-10**
KSH				smax			
	comp=N,170nm,0.6s						
KSH				smax			
	comp=E,220nm,1.1s						
EKS2	**Erkin-Say**	**5.90**	**36**	*e*P	**Pn**	**19 52 47.0**	**+0.1**
	comp=E,15nm,0.7s						
UCH	**Uchtor**	**5.95**	**42**	P	**Pn**	**19 52 50.1**	**+2.6**
	SNR=8.2						
UCH	**Uchtor**	**5.95**	**42**	*e*P	**Pn**	**19 52 46.7**	**-0.8**
	comp=E,18nm,0.6s						
AAK	**Ala-Archa**	**6.23**	**40**	P	**Pn**	**19 52 53.9**	**+2.5**
	SNR=10						
AAK	**Ala-Archa**	**6.23**	**40**	Pn	**Pn**	**19 52 53.0**	**+1.6**
	comp=E,0.0nm,0.3s,baz=199,slow=7.5,SNR=34						
AAK				Lg		19 54 30.1	
	comp=E,0.0nm,0.3s,baz=322,slow=8.4,SNR=4.1						
AAK				LR	LR	19 55 37.3	
	comp=E,66nm,18.1s,baz=218,slow=41						
AAK	**Ala-Archa**	**6.23**	**40**	*e*P	**Pn**	**19 52 51.8**	**+0.5**
	comp=E,15nm,0.6s						
KZA	**Kyzart**	**6.26**	**47**	P	**Pn**	**19 52 53.2**	**+1.5**
	SNR=29						
KBK	**Karagaybulak**	**6.48**	**42**	P	**Pn**	**19 52 56.9**	**+2.2**
	SNR=10.0						
CHMS	**Chumysh**	**6.62**	**39**	P	**Pn**	**19 52 59.6**	**+2.8**
	SNR=8.6						
USP	**Ospenovka**	**6.71**	**36**	P	**Pn**	**19 53 00.6**	**+2.7**
	SNR=6.8						
ULHL	**Ulahol**	**6.94**	**50**	P	**Pn**	**19 53 02.3**	**+1.1**
	SNR=9.2				

ARCES pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 42.33 322 P **P** **19 59 14.2 +1.0**
comp=Z,0.5nm,0.7s,mb3.3,baz=97,slow=8.2,SNR=3.1
NOA NORSAR Array B 42.33 322 P **P** **19 59 14.2 +1.0**
NOA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 79.86 2 P **P** **20 03 27.6 -0.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=352,slow=5.3,SNR=9.6
YKA Yellowknife Ar 79.86 2 P **P** **20 03 27.6 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s

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*ISCJB **21** 20:09:17.5±0.4,37°.05N±0°.03×71°.95E±0°.05,h152km±6km, mb3.9/19,Error ellipse: s-maj=6.2km s-min=4.1km az=172.7*
*BJI **21** 20:09:17.7,37°.08N×71°.81E,h150km,mb4.6/3*
*MOS **21** 20:09:18.6±1.0,37°.12N×71°.79E,h159km,mb3.9/10,Error ellipse: s-maj=15.1km s-min=8.0km az=81.8*
*NEIC **21** 20:09:19.3±0.9,37°.11N×71°.82E,h150km±8km,mb4.3/10, Error ellipse: s-maj=10.5km s-min=8.9km az=146.0*
*IDC **21** 20:09:20.3±1.1,37°.06N×71°.89E,h163km±9km,mb3.5/12, mb1 3.7/17,mb1mx3.5/27,mbtmp3.6/17,Error ellipse: s-maj=17.0km s-min=13.1km az=170.0*
*NNC **21** 20:09:26.9±5.7,37°.72N×71°.69E,h212km±44km,mb3.2, mpv4.7,Error ellipse: s-maj=50.3km s-min=29.8km az=13.0*
ISC 21 20:09:18.4±0.4,37°.03N±0°.03×71°.94E±0°.05,h147km±5km, h163km±7.4km:pP-P,n94,σ1°.21/113,mb3.9/19,7C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.42**	**224**	*e*P	**Pn**	**20 10 12.1**	**+1.1**
KBL				*e*S	**Sn**	**20 10 51.4**	**-0.4**
KSH	**Kashi**	**4.03**	**51**	*e*P	**Pn**	**20 10 16.4**	**-2.5**
KSH				S	**Sn**	**20 10 57.0**	**-8.9**
KSH	comp=N,2μm,0.8s			smax			
KSH	comp=E,2μm,0.6s			smax			
JMU	**Jammu**	**4.94**	**150**	*e*S	**Sn**	**20 11 31.0**	**+3.4**
AML	**Almayashu**	**5.27**	**14**	P	**Pn**	**20 10 36.5**	**+1.2**
	SNR=891						
AML	**Almayashu**	**5.27**	**14**	*e*P	**Pn**	**20 10 36.3**	**+1.0**
	comp=E,524nm,0.4s						
THN	**Thein Dam**	**5.54**	**145**	*e*P	**Pn**	**20 10 39.8**	**+0.8**
THN				*e*S	**Sn**	**20 11 40.7**	**-1.1**
UCH	**Uchtor**	**5.56**	**20**	P	**Pn**	**20 10 40.5**	**+1.4**
	SNR=134						
UCH	**Uchtor**	**5.56**	**20**	*e*P	**Pn**	**20 10 40.4**	**+1.3**
	comp=E,190nm,0.5s						
KZA	**Kyzart**	**5.65**	**26**	P	**Pn**	**20 10 41.4**	**+1.0**
	SNR=48						
EKS2	**Erkin-Say**	**5.80**	**14**	P	**Pn**	**20 10 43.4**	**+1.1**
	SNR=111						
EKS2	**Erkin-Say**	**5.80**	**14**	*e*P	**Pn**	**20 10 43.1**	**+0.8**
	comp=E,59nm,0.6s						
AAK	**Ala-Archa**	**5.93**	**19**	P	**Pn**	**20 10 45.5**	**+1.5**
	SNR=95						
AAK	**Ala-Archa**	**5.93**	**19**	P	**Pn**	**20 10 45.7**	**+1.6**
	comp=E,0.6nm,0.3s,baz=170,slow=5.7,SNR=168						
AAK				S	**Sn**	**20 11 49.8**	**-1.3**
	comp=E,0.1nm,0.3s,baz=225,slow=7.5,SNR=5.6						
AAK	**Ala-Archa**	**5.93**	**19**	*e*P	**Pn**	**20 10 45.3**	**+1.2**
	comp=E,98nm,0.5s						
KBK	**Karagaybulak**	**6.08**	**21**	P	**Pn**	**20 10 47.2**	**+1.1**
	SNR=79						
ULHL	**Ulahol**	**6.18**	**31**	P	**Pn**	**20 10 48.2**	**+0.9**
	SNR=36						
KK09	**Karatay Array**	**6.18**	**350**	⇓P	**Pn**	**20 10 47.6**	**+0.2**
	comp=E,58nm,0.5s,baz=178,slow=13						
KK09				⇓S	**Sn**	**20 11 52.3**	**-4.9**
	comp=E,86nm,0.5s,baz=167,slow=20						
CHMS	**Chumysh**	**6.34**	**19**	P	**Pn**	**20 10 50.3**	**+0.7**
	SNR=46						
TKM2	**Tokmak 2**	**6.52**	**24**	⇓P	**Pn**	**20 10 53.0**	**+1.0**
	comp=E,33nm,0.7s						
TKM2				⇑S	**Sn**	**20 12 04.8**	**-0.4**
	comp=E,38nm,0.9s						
TKM2	**Tokmak 2**	**6.52**	**24**	P	**Pn**	**20 10 53.0**	**+1.1**
	SNR=51						
TKM2	**Tokmak 2**	**6.52**	**24**	*e*PN	**Pn**	**20 10 52.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,30nm,0.7s						
TKM2	**Tokmak 2**	**6.52**	**24**	*e*P	**Pn**	**20 10 52.7**	**+0.8**
	comp=Z,30nm,0.7s						
USP	**Ospenovka**	**6.53**	**17**	P	**Pn**	**20 10 52.4**	**+0.3**
	SNR=59						
BHK	**Bhakra**	**6.71**	**145**	*e*S	**Sn**	**20 12 05.6**	**-4.4**
SDNR	**Sundarnagar**	**6.91**	**141**	*e*S	**Sn**	**20 12 13.5**	**-1.2**
SMLA	**Simla**	**7.31**	**142**	*i* P	**Pn**	**20 11 00.6**	**-2.0**
SMLA				*i* S	**Sn**	**20 12 17.1**	**-7.2**
SMLA				*i* S	**Sn**	**20 12 17.3**	**-7.0**
SMLA				*e*x	x	20 12 21.8	
	comp=E,958nm,0.4s						
SMLA				*e*x	x	20 12 23.4	
	comp=N,971nm,0.2s						
JOSI	**Joshimath**	**9.05**	**133**	*e*P	**Pn**	**20 11 27.8**	**+2.0**
JOSI				*e*S	**Sn**	**20 13 00.8**	**-5.4**
JOSI				AML	AML	20 13 09.4	
	comp=E,160nm,0.7s						
JOSI				AML	AML	20 13 11.2	
	comp=N,144nm,0.8s						
NDI	**New Delhi**	**9.43**	**150**	*e*S	**Sn**	**20 13 07.0**	**-8.4**
KHET	**Khetri**	**9.51**	**159**	*e*S	**Sn**	**20 13 10.5**	**-6.8**
KHET				AML	AML	20 13 13.1	
	comp=E,34nm,0.6s						
KHET				AML	AML	20 13 17.3	
	comp=N,19nm,0.5s						
SONA	**Sohna**	**9.77**	**152**	*e*S	**Sn**	**20 13 15.1**	**-8.4**
MK31	**Makanchi Array**	**12.42**	**35**	⇑P	**Pn**	**20 12 09.7**	**-0.4**
	comp=N,4.5nm,0.7s,baz=197,slow=11,SNR=55						
MK31	**Makanchi Array**	**12.42**	**35**	*e*P	**Pn**	**20 12 09.9**	**-0.2**
MKAR	**Makanchi Array**	**12.42**	**35**	P	**Pn**	**20 12 09.6**	**-0.5**
	comp=N,0.5nm,0.3s,baz=224,slow=14,SNR=63						
MKAR	**Makanchi Array**	**12.42**	**35**	P	**Pn**	**20 12 09.6**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**14.39**	**17**	⇓P	**Pn**	**20 12 32.6**	**-2.5**
	comp=Z,3.2nm,0.7s						
KURK	**Kurchatov**	**14.50**	**17**	⇓P	**Pn**	**20 12 34.0**	**-2.5**
	comp=Z,16nm,0.8s						
KURK	**Kurchatov**	**14.50**	**17**	P	**Pn**	**20 12 32.5**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=209,slow=12,SNR=34						
KURK				S	**Sn**	**20 15 23.4**	**+6.4**
	comp=Z,0.0nm,0.3s,baz=192,slow=27,SNR=2.9						
KURK	**Kurchatov**	**14.50**	**17**	*e*P	**Pn**	**20 12 33.6**	**-2.8**
	comp=Z,19nm,0.8s						
KKN	**Kakani**	**14.54**	**125**	*e*P	**Pn**	**20 12 36.2**	**-1.0**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**14.55**	**126**	*e*P	**Pn**	**20 12 37.5**	**+0.1**
	comp=Z,8.4nm,0.4s						
PKIN	**Phulchoki**	**14.76**	**126**	*e*P	**Pn**	**20 12 39.4**	**-0.6**
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**14.77**	**126**	*e*P	**Pn**	**20 12 39.6**	**-0.5**
	comp=Z,7.7nm,0.4s						
GUN	**Gumba**	**14.86**	**124**	*e*P	**Pn**	**20 12 41.1**	**-0.1**
	comp=Z,12nm,0.4s						
AB31	**Akbulak array**	**15.01**	**328**	⇑P	**Pn**	**20 12 42.5**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=142,slow=14,SNR=133						
AB31				⇑S	**S**	**20 15 12.7**	**-23**
	comp=Z,4.8nm,0.5s,baz=149,slow=26,SNR=10						
ABKAR	**Akbulak array**	**15.01**	**328**	*e*P	**Pn**	**20 12 40.4**	**-2.4**
	comp=Z,4.4nm,0.4s						
ABKAR				*e*S	**S**	**20 15 12.5**	**-23**
VOSK	**Vostochnaya**	**15.71**	**358**	⇓P	**Pn**	**20 12 49.5**	**-2.0**
	comp=Z,7.3nm,0.8s						
BVA0	**Borovoye Array**	**16.03**	**357**	P	**Pn**	**20 12 54.2**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=163,slow=14,SNR=57						
BVA0				⇑S	**S**	**20 15 45.2**	**-8.6**
	comp=Z,1.3nm,1.2s,baz=168,slow=23,SNR=8.4						
BVAR	**Borovoye Array**	**16.03**	**357**	P	**Pn**	**20 12 54.4**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=164,slow=12,SNR=48						
BVAR				S	**S**	**20 15 42.7**	**-11**
	comp=Z,0.7nm,0.3s,baz=165,slow=23,SNR=7.0						
BVAR	**Borovoye Array**	**16.03**	**357**	P	**Pn**	**20 12 54.4**	**-1.0**
BVAR				S	**S**	**20 15 42.7**	**-11**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	**16.07**	**356**	*e*P	**Pn**	**20 12 53.4**	**-2.5**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRVK	**Borovoye**	**16.07**	**356**	*e*P	**Pn**	**20 12 53.4**	**-2.5**
	comp=Z,9.4nm,0.8s						
AKTK	**Aktyubinsk**	**16.72**	**328**	P	**Pn**	**20 13 02.9**	**-0.9**
AKTK				S	**S**	**20 15 55.4**	**-14**
AKTO	**Aktyubinsk**	**16.72**	**328**	⇑P	**Pn**	**20 13 04.7**	**+0.9**
	comp=Z,0.7nm,0.8s						
AKTO				⇑S	**S**	**20 15 55.7**	**-14**
	comp=Z,0.7nm,0.6s						
AKTO	**Aktyubinsk**	**16.72**	**328**	P	**Pn**	**20 13 02.9**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=136,slow=9.0,SNR=10						
AKTO				S	**S**	**20 15 55.4**	**-14**
	comp=Z,0.2nm,0.3s,baz=149,slow=19,SNR=6.1						
AKTO	**Aktyubinsk**	**16.72**	**328**	P	**Pn**	**20 13 02.9**	**-0.9**
AKTO				S	**S**	**20 15 55.4**	**-14**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LSA	**Lhasa**	**17.62**	**109**	*e*P	**Pn**	**20 13 17.6**	**+2.8**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	**Lhasa**	**17.62**	**109**	*e*P	**Pn**	**20 13 17.6**	**+2.8**
	comp=Z,15nm,0.6s						
ZAA0	**Zalesovo Array**	**19.12**	**24**	*e*P	**P**	**20 13 30.3**	**+0.5**
ZALV	**Zalesovo Beam**	**19.12**	**24**	P	**P**	**20 13 30.6**	**+0.8**
	comp=Z,4.6nm,0.3s,baz=224,slow=10.0,SNR=168						
ZALV	**Zalesovo Beam**	**19.12**	**24**	P	**P**	**20 13 30.7**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
NVS	**Novosibirsk**	**19.42**	**20**	*e*P	**P**	**20 13 33.3**	**+0.2**
NVS				pmax	pmax		
	comp=N,20nm,0.6s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,21nm,0.6s						
ARU	**Arti**	**21.39**	**339**	*e*P	**P**	**20 13 54.4**	**+0.3**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
ARU	**Arti**	**21.39**	**339**	*e*P	**P**	**20 13 54.4**	**+0.3**
	comp=Z,2.2nm,0.6s,mb3.7						
MIB	**Mutribah**	**21.73**	**258**	*e*P	**P**	**20 13 57.2**	**-0.7**
MIB				AMb	AMB	20 14 00.5	
	comp=Z,31nm,0.9s,mb4.7						
RDF	**Al-Radifah**	**21.96**	**255**	*e*P	**P**	**20 14 01.6**	**+1.3**
RDF				AMb	AMB	20 14 06.9	
	comp=Z,47nm,1.7s,mb4.6						
GTA	**Gaotai**	**22.00**	**75**	*e*P	**P**	**20 14 04.3**	**+3.6**
GTA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
NAY	**Al-Naaiem**	**22.05**	**257**	*e*P	**P**	**20 14 01.2**	**-0.2**
NAY				AMb	AMB	20 14 03.0	
	comp=Z,14nm,1.0s,mb4.3						
ZEI	**Tsey**	**22.21**	**294**	*e*P	**P**	**20 14 04.3**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
SONM	**Songino Array**	**27.41**	**56**	P	**P**	**20 14 52.6**	**+2.6**
	comp=Z,1.5nm,0.5s,mb3.9,baz=266,slow=9.2,SNR=17						
SONM				pP	pP	20 15 26.5	+5.5
	comp=Z,1.0nm,0.8s,baz=266,slow=8.9,SNR=4.3						
SONM	**Songino Array**	**27.41**	**56**	P	**P**	**20 14 52.6**	**+2.5**
SONM				*PP	pP	20 15 26.5	+5.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	**Ulaanbaatar**	**27.86**	**56**	*e*P	**P**	**20 14 55.6**	**+1.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**27.86**	**56**	*e*P	**P**	**20 14 55.5**	**+1.6**
	comp=Z,1.7nm,0.6s,mb4.0						
BR131	**Keskin Array S**	**30.00**	**287**	*e*P	**P**	**20 15 14.8**	**+1.7**
	comp=Z,1.1nm,0.5s,mb3.8						
BRTR	**Keskin Array B**	**30.00**	**287**	P	**P**	**20 15 13.3**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.0,baz=107,slow=9.1,SNR=13						
BRTR	**Keskin Array B**	**30.00**	**287**	P	**P**	**20 15 13.4**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**33.21**	**308**	P	**P**	**20 15 40.4**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.7,baz=81,slow=7.3,SNR=4.6						
AKASG	**Malin Array Be**	**33.21**	**308**	P	**P**	**20 15 40.4**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**37.47**	**325**	P	**P**	**20 16 17.6**	**+0.3**
	comp=Z,1.1nm,0.4s,mb3.8,baz=136,slow=8.6,SNR=11						
FINES	**FINESS Array B**	**37.47**	**325**	P	**P**	**20 16 17.6**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**40.95**	**337**	P	**P**	**20 16 47.2**	**+1.2**
	comp=Z,2.0nm,0.9s,mb3.7,baz=112,slow=8.3,SNR=6.3						
ARCES				pP	pP	20 17 20.5	+2.1
	comp=Z,1.2nm,0.7s,baz=119,slow=7.3,SNR=2.3						
ARCES	**ARCESS Array B**	**40.95**	**337**	P	**P**	**20 16 47.3**	**+1.3**
ARCES				*PP	pP	20 17 20.5	+2.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	**NORSAR Subarra**	**44.41**	**323**	P	**P**	**20 17 14.2**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.7,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.41**	**323**	P	**P**	**20 17 14.1**	**0.0**
	comp=Z,1.4nm,0.6s,mb3.8,baz=96,slow=7.7,SNR=12						
NOA	**NORSAR Array B**	**44.41**	**323**	P	**P**	**20 17 14.1**	**0.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KEST	**Kesra**	**49.58**	**288**	P	**P**	**20 17 55.7**	**+1.2**
	comp=Z,0.7nm,0.5s,mb3.5,baz=102,slow=2.3,SNR=9.4						
ESDC	**Sonseca Array**	**57.88**	**298**	P	**P**	**20 18 55.5**	**+0.7**
	comp=Z,0.7nm,0.4s,mb3.9,baz=54,slow=7.3,SNR=6.9						
ESDC	**Sonseca Array**	**57.88**	**298**	P	**P**	**20 18 55.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**66.48**	**269**	P	**P**	**20 19 50.6**	**-1.8**
	comp=Z,0.9nm,0.5s,mb3.9,baz=51,slow=6.2,SNR=16						
YKA	**Yellowknife Ar**	**80.68**	**3**	P	**P**	**20 21 14.2**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.1,baz=348,slow=5.2,SNR=5.8						
YKA				pP	pP	20 21 55.7	+4.6
	comp=Z,0.8nm,0.9s,baz=350,slow=5.0,SNR=3.9						
YKA	**Yellowknife Ar**	**80.68**	**3**	P	**P**	**20 21 14.2**	**-0.4**
YKA				*PP	pP	20 21 55.7	+4.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**80.68**	**3**	P	**P**	**20 21 14.2**	**-0.4**
YKA				pP	pP	20 21 55.7	+4.6
ASAR	**Alice Springs**	**83.94**	**126**	P	**P**	**20 21 31.1**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=310,slow=5.5,SNR=8.8						
ASAR	**Alice Springs**	**83.94**	**126**	P	**P**	**20 21 31.2**	**-0.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**94.50**	**127**	P	**P**	**20 22 21.6**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.2,baz=329,slow=18,SNR=2.4						

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*IDC **21** 20:12:53.8±1.0,31°.38N×103°.91E,h0km,mb3.6/9, mb1 3.7/11,mb1mx3.6/24,mbtmp3.6/11,ML3.3/2,Error ellipse: s-maj=33.1km s-min=19.4km az=57.0*
*ISCJB **21** 20:12:54.2±0.8,31°.40N±0°.03×103°.89E±0°.07,h14km±6km, mb3.7/10,Error ellipse: s-maj=9.8km s-min=5.4km az=3.0*
*NEIC **21** 20:12:55.6±0.5,31°.40N×103°.91E,h10km,mb4.3/1,Error ellipse: s-maj=13.5km s-min=8.4km az=62.0*
*BJI **21** 20:12:55.2,31°.39N×103°.92E,h10km,mb4.3/1,ML3.6/13, Ms3.3/2,Ms7 3.2/2*
ISC 21 20:12:56.3±0.8,31°.36N±0°.03×103°.86E±0°.07,h15km±5km, n20,σ0°.75/28,mb3.7/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**191**	Pg	**Pg**	**20 13 04.6**	**-0.8**
CD2				Sg	**Sg**	**20 13 11.4**	**-0.2**
CD2				smax			
	comp=N,7μm,0.7s						
LZH	**Lanzhou**	**4.71**	**360**	*e*Pn	**Pn**	**20 14 14.5**	**+7.7**
LZH				Pg	**Pg**	**20 14 27.3**	**+0.8**
LZH				Sn	**Sn**	**20 15 10.3**	**+9.1**
LZH				Sg	**Sg**	**20 15 27.0**	**-0.6**
LZH				smax			
	comp=N,47nm,0.7s						
LZH				smax			
	comp=E,71nm,0.8s						
LZH				LR	LR		
	comp=E,340nm,5.4s						
LZH				LR	LR		
	comp=Z,370nm,5.9s						
ENH	**Enshi**	**4.96**	**101**	*e*P	**Pn**	**20 14 10.5**	**+0.2**
XAN	**Xi'an**	**5.04**	**57**	Pn	**Pn**	**20 14 12.4**	**+1.1**
XAN				Sn	**Sn**	**20 15 08.3**	**-0.9**
XAN				Sg	**Sg**	**20 15 30.8**	**-7.1**
XAN				smax			
	comp=N,95nm,0.7s						
XAN				smax			
	comp=E,43nm,0.7s						
GYA	**Guiyang**	**5.47**	**153**	Pg	**Pn**	**20 14 22.5**	**+5.3**
GYA				Sg	**Sn**	**20 15 20.9**	**+1.0**
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,110nm,0.9s						
KMI	**Kunming**	**6.29**	**189**	Pn	**Pn**	**20 14 29.3**	**+0.7**
KMI				Sn	**Sn**	**20 15 38.9**	**-1.3**
KMI				smax			
	comp=N,19nm,1.1s						
KMI				smax			
	comp=E,17nm,1.4s						
KMI				LR	LR		
	comp=N,140nm,13.1s						
KMI				LR	LR		
	comp=E,180nm,9.5s						
KMI				LR	LR		
	comp=Z,150nm,12.4s						
CMAR	**Chiang Mai Arr**	**13.60**	**200**	Pn	**Pn**	**20 16 09.9**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=9.5,slow=11,SNR=7.9						
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**20 16 48.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=2.3						
KSRS	**Korea Array**	**20.74**	**66**	P	**P**	**20 17 36.1**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=257,slow=8.9,SNR=6.8						
CN2	**Changchun**	**21.07**	**48**	*e*P	**P**	**20 17 39.8**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**22.65**	**319**	P	**P**	**20 17 56.7**	**0.0**
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**20 17 58.4**	**+1.7**
	comp=Z,0.3nm,0.4s,mb3.1,baz=117,slow=12,SNR=6.1						
ZALV	**Zalesovo Beam**	**26.40**	**334**	P	**P**	**20 18 31.6**	**-0.3**
	comp=Z,1.1nm,0.6s,mb3.5,baz=131,slow=8.8,SNR=3.6						
KURK	**Kurchatov**	**26.91**	**323**	P	**P**	**20 18 37.2**	**+0.6**
	comp=Z,0.9nm,0.7s,mb3.4,baz=127,slow=8.8,SNR=2.6						
ARCES	**ARCESS Array B**	**56.94**	**336**	P	**P**	**20 22 39.5**	**-1.0**
	comp=Z,2.2nm,1.0s,mb4.1,baz=82,slow=8.7,SNR=3.8						
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**20 22 42.2**	**-0.4**
	comp=Z,0.8nm,0.9s,mb3.8,baz=74,slow=6.4,SNR=3.2						
WRAB	**Tennant Creek**	**58.80**	**146**	*e*P	**P**	**20 22 53.8**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**61.82**	**149**	P	**P**	**20 23 14.5**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=337,slow=6.5,SNR=12						
NOA	**NORSAR Array B**	**64.33**	**327**	P	**P**	**20 23 30.2**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.7,baz=71,slow=6.9,SNR=4.2						
YKA	**Yellowknife Ar**	**81.51**	**17**	P	**P**	**20 25 12.4**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=332,slow=5.5,SNR=5.8						

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*BJI **21** 20:17:30.8,4°.20S×102°.50E,h33km,mB5.0/28,mb5.3/46, Ms4.8/35,Ms7 4.4/36*
*ISCJB **21** 20:17:31.9±0.2,4°.20S±0°.03×102°.26E±0°.02,h34km, mb5.3/132,MS4.1/36,Error ellipse: s-maj=4.5km s-min=2.9km az=27.4*
*MOS **21** 20:17:34.0±1.0,4°.03S×102°.64E,h54km,mb5.5/53,Error ellipse: s-maj=9.7km s-min=5.1km az=114.0*
*GCMT **21** 20:17:34.8±0.4,4°.54S×102°.37E,h67km±2km,MW4.9/55, Moment Tensor Solution. s28,c39; s55,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.89±.14; $M_{\theta\theta}$-2.02±.10; $M_{\phi\phi}$0.12±.13; $M_{r\theta}$0.88±.07; $M_{\theta\phi}$1.37±.08; $M_{\phi r}$-0.35±.09; Best double couple: $M_0$2.47700×10^{16} NP1:ϕ_s299.00000°,δ34.00000°,λ95.00000°. NP2: ϕ_s113.00000°,δ56.00000°,λ87.00000°. Principal axes: T 2.0800, Plg78.0000°, Azm11.0000°; N 0.7860, Plg3.0000°, Azm115.0000°; P -2.8740, Plg11.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 20:17:34.8±0.9,4°.19S×102°.46E,h53km±7km,mb5.2/52, MS4.3/1 Error ellipse: s-maj=6.1km s-min=4.5km az=52.0*
NEIC Felt [III] at Kapahiang.
*DJA **21** 20:17:35,4°.32S×102°.30E,h25km,Mw5.3/15*
*IDC **21** 20:17:36.9±1.5,4°.09S×102°.58E,h66km±12km,mb4.9/31, mb1 4.9/32,mb1mx4.8/33,mbtmp4.9/32,MS3.8/18, Ms1 3.8/18,ms1mx3.7/26,Error ellipse: s-maj=13.8km s-min=9.8km az=41.0*
ISC 21 20:17:33.9±0.2,4°.21S±0°.03×102°.26E±0°.02,h36km, h36km±2.3km:pP-P,n429,σ1°.14/403,mb5.3/132,MS4.1/36, 29C-11D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.65**	**31**	P	**Pn**	**20 17 49.9**	**+3.4**
KSI				S	**Sn**	**20 18 00.1**	**+4.6**
MNAI	**Manna**	**0.71**	**102**	P	**Pn**	**20 17 48.7**	**+1.3**
MNAI				S	**Sn**	**20 17 57.8**	**+0.8**
LHSI	**Lahat**	**1.31**	**73**	P	**Pn**	**20 17 59.3**	**+3.6**
MDSI	**Maura Dua**	**1.93**	**98**	P	**Pn**	**20 18 05.1**	**+0.9**
LWLI	**Liwa**	**1.96**	**114**	P	**Pn**	**20 18 07.6**	**+3.0**
KASI	**Kota Agung**	**2.58**	**120**	P	**Pn**	**20 18 13.2**	**+0.1**
KLI	**Kotabumi**	**2.67**	**104**	P	**Pn**	**20 18 15.3**	**+1.0**
PMBI	**Palembang**	**2.81**	**63**	P	**Pn**	**20 18 17.2**	**+0.9**
PDSI	**Padang**	**3.74**	**331**	P	**Pn**	**20 18 34.1**	**+5.0**
RBSI	**Rajabasa**	**3.83**	**115**	P	**Pn**	**20 18 32.7**	**+2.4**
CGJI	**Cibinong**	**4.17**	**125**	P	**Pn**	**20 18 35.3**	**+0.3**
PPI	**Padang Panjang**	**4.17**	**333**	P	**Pn**	**20 18 40.0**	**+5.0**
SISI	**Saibi**	**4.27**	**312**	P	**Pn**	**20 18 41.5**	**+5.1**
BKNI	**Bangkinang**	**4.67**	**345**	P	**Pn**	**20 18 47.2**	**+5.3**
TNG	**Tangerang**	**4.78**	**114**	P	**Pn**	**20 18 46.6**	**+3.2**
TNG	**Tangerang**	**4.78**	**114**	P		20 18 46.6	
TPI	**Tanjungpandan**	**5.57**

IGBI	**Denpasar**	13.59	110	P		**Pn**	20 20 42.2 -2.0
	234nm,1.0s,5μm						
KBKI	**Kotabaru**	13.90	87	P		**Pn**	20 20 51.9 +3.4
KKM	**Kota Kinabalu**	17.26	54	P		**Pn**	20 21 34.3 +2.1
KKM	**Kota Kinabalu**	17.26	54	*e*P		**Pn**	20 21 30.6 -1.6
	60nm,1.0s						
KAPI	**Kappang**	17.45	93	P		**Pn**	20 21 33.6 -1.0
	383nm,0.7s,SNR=8.1						
KAPI	**Kappang**	17.45	93	P		**Pn**	20 21 32.7 -1.9
	2.9nm,0.3s,baz=272,slow=9.7,SNR=15						
KAPI				LR		LR	20 28 48.6
	comp=Z,221nm,20.7s,baz=46,slow=39						
TSM	**Tawau**	17.74	62	P		**Pn**	20 21 40.8 +2.7
SDKM	**Sandakan**	17.84	57	P		**Pn**	20 21 42.0 +2.7
KDM	**Kudat**	18.27	53	P		**Pn**	20 21 46.0 +1.3
MYLDM	**Lahad Datu**	18.71	60	P		**Pn**	20 21 52.0 +2.0
UBT	**Ubonrachathani**	19.52	8	P		**Pn**	20 22 00.0 +0.3
NST	**Nakhon Sawan**	19.87	354	P		**Pn**	20 22 02.6 -1.2
BATP	**Bataraza**	20.17	50	*e*P		**P**	20 22 06.4 +1.0
KKTK	**Khon Kaen**	20.42	2	⇓P		**P**	20 22 09.4 +1.3
	1μm,0.6s						
BDT	**Bhumibol Dam**	21.56	351	P		**P**	20 22 20.0 -0.3
CM31	**Chiang Mai Arr**	22.76	352	*e*P		**P**	20 22 33.2 +0.1
	32nm,0.7s,mb4.9						
CMAR	**Chiang Mai Arr**	22.76	352	P		**P**	20 22 33.3 +0.2
	33nm,0.7s,mb4.9,baz=185,slow=8.8,SNR=252						
CMAR				PcP		PcP	20 26 24.2 -0.1
	6.3nm,0.8s,baz=208,slow=3.0,SNR=15						
CMAR				ScP		ScP	20 29 55.8 -3.7
	0.5nm,0.3s,baz=204,slow=4.0,SNR=4.1						
CMAR				LR		LR	20 31 51.6
	comp=Z,220nm,18.4s,MS3.6,baz=164,slow=38						
CMAR	**Chiang Mai Arr**	22.76	352	P		**P**	20 22 33.3 +0.2
CMAR							20 26 24.2
ENPP	**El Nido**	22.94	48	*e*P		**P**	20 22 35.3 +0.2
CHG	**Chiang Mai**	23.11	352	⇑P		**P**	20 22 35.5 -1.3
	55nm,0.7s,mb5.1						
CHTO	**Chiang Mai**	23.11	352	*e*P		**P**	20 22 36.0 -0.8
CHTO				*e*			20 26 24.8
CHTO				pmax		pmax	
	comp=Z,39nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	23.11	352	*e*P		**P**	20 22 36.0 -0.8
	comp=Z,39nm,0.8s,mb4.9						
CHTO				*e*PcP		PcP	20 26 24.8 -0.2
CHTO	**Chiang Mai**	23.11	352	P		**P**	20 22 36.7 -0.1
	SNR=18						
CHTO				P			20 22 36.7
	SNR=18						
MBWA	**Marble Bar**	23.91	136	*e*P		**P**	20 22 43.3 -1.2
MBWA	**Marble Bar**	23.91	136	*e*P		**P**	20 22 42.9 -1.7
	comp=Z,16nm,0.8s,mb4.5						
CUYO	**Cuyo Island**	23.93	51	*e*P		**P**	20 22 44.5 -0.2
BUSP	**Coron**	24.03	48	*e*P		**P**	20 22 45.4 -0.3
QIZ	**Qiongzhong**	24.27	18	P		**P**	20 22 49.8 +2.0
QIZ				S		**S**	20 26 58.6 -5.7
QIZ				pmax		pmax	
	comp=Z,48nm,1.1s,mb4.8						
QIZ				LR		LR	
	comp=Z,270nm,26.7s,MS3.6						
QIZ	**Qiongzhong**	24.27	18	*e*P		**P**	20 22 48.0 +0.2
	comp=Z,47nm,1.0s,mb4.9						
PALK	**Pallekele**	24.35	298	P		**P**	20 22 52.6 +3.9
	comp=Z,16nm,0.9s,mb4.5,baz=105,slow=8.1,SNR=5.7						
PALK				LR		LR	20 31 41.3
	comp=Z,102nm,20.4s,MS3.3,baz=123,slow=34						
SJMP	**San Jose**	25.01	48	*e*P		**P**	20 22 54.5 -0.1
GUIM	**Jordan**	25.04	54	*e*P		**P**	20 22 53.9 -1.0
LUBP	**Lubang**	25.23	45	*e*P		**P**	20 22 55.9 -0.7
RCP	**Roxas**	25.70	52	⇑*e*P		**P**	20 23 00.7 -0.2
BUKP	**Musuan**	25.72	62	*e*P		**P**	20 23 00.5 -0.6
DAV	**Davao City (W)**	25.83	64	P		**P**	20 22 59.9 -2.2
	comp=Z,118nm,0.4s,mb5.8,baz=252,slow=20,SNR=2.2						
DAV				LR		LR	20 34 28.8
	comp=Z,132nm,20.5s,MS3.5,baz=229,slow=40						
DAV	**Davao City (W)**	25.83	64	P		**P**	20 23 02.6 +0.6
	SNR=5.2						
DAV				P			20 23 02.6
	SNR=5.2						
TGY	**Tagaytay City**	25.96	45	P		**P**	20 23 02.1 -1.1
	comp=Z,62nm,0.4s,mb5.5,baz=156,slow=16,SNR=5.5						
FITZ	**Fitzroy Crossi**	26.71	123	*e*P		**P**	20 23 07.8 -2.2
	comp=Z,68nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	26.71	123	P		**P**	20 23 08.1 -1.9
	comp=Z,40nm,0.8s,mb5.0,baz=291,slow=5.2,SNR=87						
FITZ				LR		LR	20 33 31.2
	comp=Z,128nm,18.7s,MS3.5,baz=309,slow=36						
KMI	**Kunming**	29.16	1	P		**P**	20 23 33.3 +1.5
KMI				pP		pP	20 23 43.3 +1.2
KMI				sP		sP	20 23 47.1 +0.6
KMI				PP		PP	20 24 30.8 -7.3
KMI				S		**S**	20 28 24.0 +2.3
KMI				sS		sS	20 28 41.1 +2.3
KMI				pmax		pmax	
	comp=Z,46nm,0.9s,mb5.2						
KMI				pmax		pmax	
	comp=Z,53nm,3.1s						
KMI				LR		LR	
	comp=N,140nm,27.1s						
KMI				LR		LR	
	comp=E,260nm,16.7s						
KMI				LR		LR	
	comp=Z,270nm,31.3s,MS3.7						
GYA	**Guiyang**	30.78	8	P		**P**	20 23 48.0 +1.9
GYA				pP		pP	20 23 58.9 +2.4
GYA				sP		sP	20 24 03.4 +2.5
GYA				PP		PP	20 24 51.8 -4.3
GYA				PcP		PcP	20 26 44.9 +1.8
GYA				S		**S**	20 28 49.3 +2.2
GYA				sS		sS	20 29 07.0 +2.7
GYA				ScP		ScP	20 30 22.6 -0.5
GYA				SS		SS	20 30 24.9 -35
GYA				pmax		pmax	
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax		pmax	
	comp=Z,160nm,4.9s						
GYA				LR		LR	
	comp=N,580nm,16.6s,MS4.5						
GYA				LR		LR	
	comp=E,760nm,17.2s,MS4.5						
GYA				LR		LR	
	comp=Z,790nm,15.4s,MS4.5						
KAKA	**Kakadu**	30.99	108	*e*P		**P**	20 23 42.8 -5.3
	comp=Z,9.5nm,0.5s,mb4.9						
KAKA	**Kakadu**	30.99	108	*e*P		**P**	20 23 42.4 -5.7
	comp=Z,68nm,0.9s,mb5.5						
SHL	**Shillong**	31.27	342	*e*P		**P**	20 23 51.0 +0.6
HYB	**Hyderabad**	31.78	313	*i* P		**P**	20 23 56.5 +1.5
TWG	**Pinlang**	32.55	34	*e*P		**P**	20 24 01.5 -0.2
TPUB	**Ta-pu**	32.69	32	*e*P		**P**	20 24 01.7 -1.2
KMBL	**Kambalda**	32.71	148	*e*P		**P**	20 24 02.9 -0.2
	comp=Z,91nm,0.9s,mb5.7						
QZH	**Quanzhou**	33.04	28	P		**P**	20 24 07.1 +1.1
QZH				S		**S**	20 29 22.1 -0.3
QZH				LR		LR	
	comp=Z,710nm,25.2s,MS4.3						
YULB	**Yu-li**	33.13	33	*e*P		**P**	20 24 07.0 +0.2
NGP	**Nagpur**	33.96	319	*e*P		**P**	20 24 12.7 -1.3
YHNB	**Yeheng**	34.20	32	*e*P		**P**	20 24 14.2 -1.9
WRAB	**Tennant Creek**	34.95	119	P		**P**	20 24 20.0 -2.6
	comp=Z,374nm,0.8s,mb6.4,SNR=56						
WRAB	**Tennant Creek**	34.95	119	*e*P		**P**	20 24 20.1 -2.5
WRAB				pmax		pmax	
	comp=Z,42nm,0.8s,mb5.4						
WRAB	**Tennant Creek**	34.95	119	*e*P		**P**	20 24 20.1 -2.5
	comp=Z,42nm,0.8s,mb5.4						
CD2	**Chengdu**	34.95	2	P		**P**	20 24 21.8 -0.7
CD2				pP		pP	20 24 31.5 -1.4
CD2				sP		sP	20 24 35.3 -2.0
CD2				PP		PP	20 25 40.8 -1.5
CD2				S		**S**	20 29 51.4 -0.4
CD2				sS		sS	20 30 07.4 -1.7
CD2				SS		SS	20 32 07.8 -17
CD2				pmax		pmax	
	comp=Z,60nm,0.7s,mb5.6						
CD2				pmax		pmax	
	comp=Z,60nm,3.7s						
CD2				LR		LR	
	comp=N,860nm,8.9s						
CD2				LR		LR	
	comp=Z,590nm,8.1s						
ENH	**Enshi**	34.98	11	*e*P		**P**	20 24 21.8 -1.0
	comp=Z,23nm,0.8s,mb5.2						
KAD	**Karad**	35.01	308	*e*P		**P**	20 24 23.8 +0.6
PKI	**Pulchoki**	35.54	334	*e*P		**P**	20 24 28.6 +1.0
	comp=Z,53nm,0.6s,mb5.6						
PKIN	**Phulchoki**	35.55	334	*e*P		**P**	20 24 28.6 +0.9
	comp=Z,70nm,0.7s,mb5.7						
GUN	**Gumba**	35.63	335	*e*P		**P**	20 24 29.6 +1.3
	comp=Z,257nm,0.5s,mb6.5						
DMN	**Daman**	35.70	333	*e*P		**P**	20 24 29.9 +0.9
	comp=Z,187nm,1.0s,mb6.0						
KKN	**Kakani**	35.78	334	*e*P		**P**	20 24 30.7 +1.0
	comp=Z,55nm,0.4s,mb5.8						
FORT	**Forrest**	35.91	140	*e*P		**P**	20 24 31.2 +0.5
	comp=Z,33nm,0.7s,mb5.4						
FORT	**Forrest**	35.91	140	*e*P		**P**	20 24 31.1 +0.3
	comp=Z,35nm,0.7s,mb5.4						
POO	**Poona**	35.98	310	*e*P		**P**	20 24 32.0 +0.5
ASAR	**Alice Springs**	36.13	125	P		**P**	20 24 31.1 -1.7
	comp=Z,25nm,0.9s,mb5.2,baz=304,slow=8.1,SNR=149						
ASAR				PcP		PcP	20 26 57.3 -0.9
	comp=Z,12nm,0.7s,baz=305,slow=2.2,SNR=19						
BHPL	**Bhopal**	36.50	319	*e*P		**P**	20 24 36.3 +0.5
BHPL				AMb		AMB	20 24 43.0
	comp=Z,24nm,0.8s,mb5.2						
XAN	**Xi'an**	38.56	9	P		**P**	20 24 52.0 -1.1
XAN				pP		pP	20 24 58.8 -4.9
XAN				pmax		pmax	
	comp=Z,17nm,0.9s,mb4.8						
XAN				pmax		pmax	
	comp=Z,11nm,4.3s						
AGRA	**Agra**	39.10	324	*e*P		**P**	20 24 58.9 +1.1
AGRA				AMb		AMB	20 24 59.5
	comp=Z,50nm,0.4s,mb5.6						
NJ2	**Nanjing**	39.36	22	*e*P		**P**	20 24 59.8 -0.1
NJ2				pP		pP	20 25 09.8 -0.7
NJ2				sP		sP	20 25 13.4 -1.4
NJ2				PP		PP	20 26 34.3 +3.5
NJ2				S		**S**	20 30 58.0 -0.9
NJ2				sS		sS	20 31 15.0 -1.3
NJ2				pmax		pmax	
	comp=Z,10.0nm,1.0s,mb4.5						
NJ2				pmax		pmax	
	comp=Z,90nm,6.9s						
NJ2				LR		LR	
	comp=N,210nm,21.5s,MS4.0						
NJ2				LR		LR	
	comp=E,140nm,21.0s,MS4.0						
NJ2				LR		LR	
	comp=Z,330nm,27.4s						
JOW	**Kunigami**	39.81	38	P		**P**	20 25 01.1 -2.6
	comp=Z,7.7nm,0.5s,mb4.7,baz=194,slow=12,SNR=3.6						
LZH	**Lanzhou**	40.11	2	*e*P		**P**	20 25 06.4 +0.3
LZH				pP		pP	20 25 16.3 -0.3
LZH				sP		sP	20 25 21.1 +0.1
LZH				PcP		PcP	20 27 14.1 +3.9
LZH				*e*S		**S**	20 31 11.1 +1.1
LZH				sS		sS	20 31 24.4 -3.0
LZH				SS		SS	20 34 05.1 -3.6
LZH				pmax		pmax	
	comp=Z,72nm,1.2s,mb5.3						
LZH				pmax		pmax	
	comp=Z,200nm,5.5s						
LZH				LR		LR	
	comp=N,1μm,14.8s						
LZH				LR		LR	
	comp=Z,2μm,17.7s,MS4.9						
SONA	**Sohna**	40.37	325	*e*P		**P**	20 25 09.4 +1.1
SONA				AMb		AMB	20 25 10.3
	comp=Z,102nm,0.7s,mb5.7						
BISR	**Bishrakh**	40.41	325	*e*P		**P**	20 25 09.6 +1.0
AYAN	**Aya Nagar**	40.52	325	*e*P		**P**	20 25 10.5 +1.0
AYAN				AMb		AMB	20 25 11.4
	comp=Z,88nm,0.6s,mb5.5						
AJM	**Ajmer**	40.56	320	*e*P		**P**	20 25 10.4 +0.5
AJM				AMb		AMB	20 25 13.3
	comp=Z,30nm,1.4s,mb4.8						
NDI	**New Delhi**	40.62	325	*e*P		**P**	20 25 12.0 +1.6
JOSI	**Joshimath**	40.82	329	*e*P		**P**	20 25 13.1 +1.1
KHET	**Khetri**	40.99	323	*e*P		**P**	20 25 14.5 +1.0
KKR	**Kurukshetra**	41.81	326	*e*P		**P**	20 25 21.1 +0.9
SMLA	**Simla**	42.52	327	*i* x		**P**	20 25 23.3 -2.6
SDNR	**Sundarnagar**	42.92	328	*e*P		**P**	20 25 31.0 +1.8
SDNR				*e*x		x	20 27 21.0
GTA	**Gaotai**	43.46	357	⇑P		**P**	20 25 33.5 +0.1
GTA				pP		pP	20 25 42.6 -1.4
GTA				sP		sP	20 25 47.0 -1.4
GTA				PP		PP	20 27 17.3 +2.3
GTA				PcP		PcP	20 27 21.0 -0.2
GTA				S		**S**	20 31 58.8 -0.7
GTA				sS		sS	20 32 16.4 -0.6
GTA				SS		SS	20 35 05.6 -9.3
GTA				pmax		pmax	
	comp=Z,44nm,1.0s,mb5.1						
GTA				pmax		pmax	
	comp=Z,84nm,5.1s						
GTA				LR		LR	
	comp=N,220nm,13.8s,MS4.2						
GTA				LR		LR	
	comp=E,81nm,14.4s,MS4.2						
GTA				LR		LR	
	comp=Z,300nm,15.9s,MS4.3						
BTO	**Baotou**	45.16	8	*e*P		**P**	20 25 46.0 -1.0
CTA	**Charters Tower**	45.63	114	*e*P		**P**	20 25 49.1 -2.0
	comp=Z,52nm,0.9s,mb5.5						
CTA	**Charters Tower**	45.63	114	P		**P**	20 25 49.4 -1.7
	comp=Z,67nm,0.9s,mb5.6,baz=284,slow=11						
CTA				LR		LR	20 44 34.6
	comp=Z,100nm,19.3s,MS3.8,baz=134,slow=36						
CTA	**Charters Tower**	45.63	114	P		**P**	20 25 49.4 -1.7
CTA				LR		LR	20 44 34.6
CTAO	**Charters Tower**	45.63	114	*e*P		**P**	20 25 49.1 -2.0
CTAO				pmax		pmax	
	comp=Z,72nm,0.8s,mb5.7						
CTAO	**Charters Tower**	45.63	114	*e*P		**P**	20 25 49.1 -2.0
	comp=Z,72nm,0.8s,mb5.7						
HHC	**Hu-ho-hao-te**	45.64	10	⇑P		**P**	20 25 51.5 +0.7
HHC				PcP		PcP	20 27 28.5 -0.1
HHC				PP		PP	20 27 40.4 +2.1
HHC				ScP		ScP	20 31 13.6 -5.3
HHC				S		**S**	20 32 31.4 +0.3
HHC				ScS		ScS	20 35 39.0 -5.2
HHC				SS		SS	20 35 50.3 -5.6
HHC				pmax		pmax	
	comp=Z,73nm,1.1s,mb5.5						
HHC				pmax		pmax	
	comp=Z,87nm,4.6s						
HHC				LR		LR	
	comp=N,400nm,15.3s,MS4.6						
HHC				LR		LR	
	comp=E,300nm,15.9s,MS4.6						
HHC				LR		LR	
	comp=Z,210nm,15.7s,MS4.2						
BJT	**Baijiatuau**	45.83	15	*e*P		**P**	20 25 52.2 -0.1
BJT				pmax		pmax	
	comp=Z,61nm,0.6s						
BJT	**Baijiatuau**	45.83	15	*e*P		**P**	20 25 52.2 -0.1
	comp=Z,61nm,0.6s,mb5.7						
GUMO	**Guam**	45.83	67	P		**P**	20 25 48.5 -4.2
	comp=Z,32nm,0.5s,mb5.5,baz=253,slow=19						
BJI	**Beijing**	45.85	15	P		**P**	20 25 52.3 -0.2
BJI				PP		PP	20 27 42.9 +2.4
BJI				S		**S**	20 32 36.3 +2.1
BJI				pmax		pmax	
	comp=Z,90nm,0.7s,mb5.8						
BJI				pmax		pmax	
	comp=Z,90nm,5.9s						
BJI				LR		LR	
	comp=N,400nm,18.4s						
BJI				LR		LR	
	comp=E,250nm,10.2s						
BJI				LR		LR	
	comp=Z,160nm,25.3s						
STKA	**Stephens Creek**	46.00	131	*e*P		**P**	20 25 52.5 -1.4
	comp=Z,33nm,0.6s,mb5.4						
STKA	**Stephens Creek**	46.00	131	P		**P**	20 25 52.8 -1.1
	comp=Z,39nm,0.7s,mb5.5,baz=306,slow=7.6,SNR=115						
STKA				PcP		PcP	20 27 28.7 -1.4
	comp=Z,5.9nm,0.8s,baz=358,slow=8.8,SNR=3.3						
STKA	**Stephens Creek**	46.00	131	*e*P		**P**	20 25 52.5 -1.3
	comp=Z,7.7nm,0.7s,mb4.7						
STKA				*e*PcP		PcP	20 27 28.5 -1.7
KSRS	**Korea Array**	47.84	28	P		**P**	20 26 07.2 -0.8
	comp=Z,12nm,0.9s,mb4.9,baz=217,slow=7.4,SNR=29						
KSRS				PcP		PcP	20 27 34.5 -2.0
	comp=Z,6.7nm,0.8s,baz=216,slow=4.5,SNR=11						
KSRS				ScP		ScP	20 31 23.0 -5.2
	comp=Z,1.1nm,0.8s,baz=242,slow=2.6,SNR=3.9						
WMQ	**Urumqi**	49.58	346	P		**P**	20 26 22.0 +0.7
WMQ				sP		sP	20 26 37.9 +1.5
WMQ				PcP		PcP	20 27 43.9 +1.3
WMQ				PP		PP	20 28 16.8 +0.8
WMQ				S		**S**	20 33 26.8 -0.2
WMQ				sS		sS	20 33 45.6 +0.9
WMQ				ScS		ScS	20 36 08.3 -1.9
WMQ				SS		SS	20 36 55.0 -4.6
WMQ				pmax		pmax	
	comp=Z,170nm,1.0s,mb6.0						
WMQ				LR		LR	
	comp=N,810nm,11.0s,MS5.0						
WMQ				LR		LR	
	comp=E,440nm,12.0s,MS5.0						
WMQ				LR		LR	
	comp=Z,150nm,14.0s,MS4.1						
KBL	**Kabul**	49.64	324	*e*P		**P**	20 26 22.1 +0.1
KBL				pmax		pmax	
	comp=Z,22nm,1.0s,mb5.1						
KBL	**Kabul**	49.64	324	*e*P		**P**	20 26 22.1 +0.1
	comp=Z,22nm,1.0s,mb5.1						
KSH	**Kashi**	49.80	333	P		**P**	20 26 22.3 -0.8
KSH				*e*pP		pP	20 26 37.3 +3.4
KSH				*e*PcP		PcP	20 27 43.3 -0.2
KSH				*e*PP		PP	20 28 17.3 -0.8
KSH				*e*ScP		ScP	20 31 31.0 -5.5
KSH				*e*PcS		PcS	20 31 38.1 -2.2
KSH				*e*S		**S**	20 33 23.8 -6.4
KSH				*e*ScS		ScS	20 36 06.1 -5.8
KSH				pmax		pmax	
	comp=Z,20nm,0.7s,mb5.3						
KSH				LR		LR	
	comp=N,1μm,15.0s,MS5.2						
KSH				LR		LR	
	comp=E,550nm,11.7s,MS5.2						
KSH				LR		LR	
	comp=Z,100nm,4.8s						
BIDO	**Bidbid**	51.09	305	P		**P**	20 26 35.4 +2.2
	SNR=5.2						
EIDS	**Eidsvold**	51.30	119	*e*P		**P**	20 26 33.2 -1.6
EIDS	**Eidsvold**	51.30	119	*e*P		**P**	20 26 32.9 -1.9
	comp=Z,12nm,0.9s,mb4.8						
ULHL	**Ulahol**	51.93	336	P		**P**	20 26 39.4 +0.4
	SNR=45						
SONM	**Songino Array**	51.95	4	P		**P**	20 26 39.6 +0.5
	comp=Z,100nm,0.8s,mb5.8,baz=181,slow=8.5,SNR=640						
SONM				PcP		PcP	20 27 50.1 -1.2
	comp=Z,6.3nm,0.6s,baz=182,slow=4.5,SNR=9.2						
SONM				ScP		ScP	20 31 41.5 -4.1
	comp=Z,2.0nm,1.0s,baz=190,slow=4.4,SNR=5.9						
SONM	**Songino Array**	51.95	4	P		**P**	20 26 39.6 +0.5
SONM							20 27 50.1
ULN	**Ulaanbaatar**	52.03	4	*e*P		**P**	20 26 39.8 +0.1
ULN				pmax		pmax	
	comp=Z,69nm,0.9s,mb5.6						
ULN	**Ulaanbaatar**	52.03	4	*e*P		**P**	20 26 39.8 +0.1
	comp=Z,69nm,0.9s,mb5.6						
ULN	**Ulaanbaatar**	52.03	4	P		**P**	20 26 40.3 +0.7
	SNR=30						
ULN				P			20 26 40.3
	SNR=30						
CN2	**Changchun**	52.16	21	*e*P		**P**	20 26 39.0 -1.7
CN2				*e*sP		pP	20 26 48.8 -2.7
CN2				PcP		PcP	20 27 50.9 -1.3
CN2				*e*S		**S**	20 34 00.3 -2.3
CN2				pmax		pmax	
	comp=Z,20nm,0.8s,mb5.1						
CN2				pmax		pmax	
	comp=Z,200nm,4.0s						
CN2				LR		LR	
	comp=N,300nm,12.0s,MS4.7						
CN2				LR		LR	
	comp=E,300nm,12.0s,MS4.7						
CN2				LR		LR	
	comp=Z,300nm,14.0s,MS4.5						
YNG	**Young**	52.19	131	*e*P		**P**	20 26 40.0 -1.2
	comp=Z,16nm,0.7s,mb5.1						
KZA	**Kyzart**	52.21	335	P		**P**	20 26 42.1 +1.0
	SNR=44						
MAJO	**Matsushiro**	52.63	37	*e*P		**P**	20 26 41.3 -3.1
MAJO				pmax		pmax	
	comp=Z,14nm,0.8s,mb4.9						
MAJO	**Matsushiro**	52.63	37	*e*P		**P**	20 26 41.3 -3.1
	comp=Z,14nm,0.8s,mb4.9						
MAT	**Matsushiro**	52.63	37	P		**P**	20 26 41.5 -2.9
MJAR	**Matsushiro Arr**	52.63	37	P		**P**	20 26 41.7 -2.7
	comp=Z,19nm,1.0s,mb5.0,baz=217,slow=7.4,SNR=42						
MJAR				PcP		PcP	20 27 52.5 -1.6
	comp=Z,4.3nm,0.8s,baz=199,slow=4.5,SNR=7.0						
UCH	**Uchtor**	52.65	334	P		**P**	20 26 45.4 +1.0
	SNR=31						
UCH	**Uchtor**	52.65	334	*e*P		**P**	20 26 45.1 +0.7
	comp=Z,18nm,0.7s,mb5.1						
TKM2	**Tokmak 2**	52.76	336	P		**P**	20 26 45.6 +0.4
	SNR=109						
TKM2	**Tokmak 2**	52.76	336	*e*P		**P**	20 26 45.4 +0.2
TKM2				pmax		pmax	
	comp=Z,77nm,0.8s,mb5.7						
TKM2	**Tokmak 2**	52.76	336	*e*P		**P**	20 26 45.4 +0.2
	comp=Z,77nm,0.8s,mb5.7						
KBK	**Karagaybulak**	52.81	335	P		**P**	20 26 46.5 +0.9
	SNR=49						
AML	**Almayashu**	52.93	334	P		**P**	20 26 47.3 +0.9
	SNR=50						
AML	**Almayashu**	52.93	334	*e*P		**P**	20 26 47.2 +0.7
	comp=Z,46nm,0.8s,mb5.5						
AAK	**Ala-Archa**	52.98	334	P		**P**	20 26 47.7 +0.8
	comp=Z,121nm,0.7s,mb5.9,SNR=11						
AAK	**Ala-Archa**	52.98	334	P		**P**	20 26 47.6 +0.8
	SNR=11						
AAK	**Ala-Archa**	52.98	334	P		**P**	20 26 47.6 +0.7
	comp=Z,15nm,0.8s,mb4.9,baz=158,slow=4.9,SNR=34						
AAK				PcP		PcP	20 27 56.0 +0.7
	comp=Z,10nm,0.7s,baz=128,slow=3.6,SNR=4.9						
AAK				LR		LR	20 53 13.9
	comp=Z,211nm,18.0s,MS4.2,baz=127,slow=40						
AAK	**Ala-Archa**	52.98	334	*ce*P		**P**	20 26 47.3 +0.4
AAK				pmax		pmax	
	comp=Z,9.0nm,0.8s,mb4.8						
AAK	**Ala-Archa**	52.98	334	*e*P		**P**	20 26 47.5 +0.6
	comp=Z,17nm,0.8s,mb5.0						
AAK	**Ala-Archa**	52.98	334	P		**P**	20 26 47.7 +0.8
	SNR=13						
AAK				P			20 26 47.7
	SNR=13						
CAN	**Canberra**	53.06	132	*e*P		**P**	20 26 47.0 -0.7
CAN				pmax		pmax	
	comp=Z,14nm,1.0s,mb4.8						
CAN	**Canberra**	53.06	132	*e*P		**P**	20 26 47.0 -0.6
	comp=Z,14nm,1.0s,mb4.9						
FRU	**Bishkek**	53.09	335

HIA pmax pmax
comp=Z,45nm,1.3s
HIA Hailar 55.39 14 *e*P **P 20 27 02.7 -1.6**
comp=Z,45nm,1.3s,mb5.3
MOY Mondy 55.67 359 *e*P **P 20 27 06.1 -0.2**
MOY pmax pmax
comp=Z,34nm,2.2s,mb5.0
TLY Talaya 55.69 1 P **P 20 27 07.4 +1.0**
comp=Z,244nm,0.8s,mb6.3,SNR=5.1
TLY Talaya 55.69 1 *e*P **P 20 27 07.0 +0.6**
TLY pmax pmax
comp=Z,34nm,0.8s,mb5.4
TLY Talaya 55.69 1 P **P 20 27 07.3 +0.9**
SNR=12
TLY P 20 27 07.3
SNR=12
IRK Irkutsk 56.26 1 *e*P **P 20 27 10.0 -0.5**
IRK pmax pmax
comp=Z,36nm,1.3s,mb5.2
KURK Kurchatov 58.36 343 P **P 20 27 24.2 -1.1**
comp=Z,473nm,0.8s,mb6.6,SNR=51
KURK Kurchatov 58.36 343 P **P 20 27 24.2 -1.1**
comp=Z,43nm,0.8s,mb5.5,baz=161,slow=6.3,SNR=218
KURK Kurchatov 58.36 343 *e*P **P 20 27 24.5 -0.8**
KURK pmax pmax
comp=Z,69nm,0.8s,mb5.7
KURK Kurchatov 58.36 343 *e*P **P 20 27 24.5 -0.8**
comp=Z,69nm,0.8s,mb5.7
KURK Kurchatov 58.36 343 P **P 20 27 25.0 -0.3**
SNR=26
KURK P 20 27 25.0
SNR=26
ABKT Ailbek 58.58 320 P **P 20 27 27.0 -0.1**
comp=Z,189nm,0.8s,mb6.2,SNR=13
KLR Kul'dur 59.07 22⇓*i*P **P 20 27 25.2 -5.1**
KLR pmax pmax
comp=E,28nm,0.8s
KLR pmax pmax
comp=Z,62nm,0.8s,mb5.7
ERM Erimo 59.12 35*ce*P **P 20 27 29.4 -1.4**
ERM pmax pmax
comp=Z,71nm,1.7s,mb5.4
ZAA0 Zalesovo Array 59.76 348 *e*P **P 20 27 34.0 -0.9**
ZALV Zalesovo Beam 59.76 348 P **P 20 27 34.1 -0.9**
comp=Z,127nm,0.8s,mb6.0,baz=164,slow=4.9,SNR=397
ZALV LR LR 20 56 39.1
comp=Z,102nm,20.9s,MS3.9,baz=257,slow=39
HABR Khabarovsk 59.77 25 *e*P **P 20 27 31.5 -3.6**
HABR *e*SS sS 20 35 57.7 -4.1
HABR *e*SS SS 20 39 37.1 -3.2
HABR pmax pmax
comp=Z,80nm,1.7s,mb5.5
HABR MLR MLR
comp=Z,208nm,22.0s,MS4.2
ASAJ Asahikawa 60.20 32 LR LR 20 54 50.7
comp=Z,55nm,19.5s,MS3.7,baz=347,slow=37
NVS Novosibirsk 60.93 348⇑*i*P **P 20 27 41.5 -1.4**
NVS *e*S **S 20 35 52.0 -6.4**
NVS pmax pmax
comp=Z,42nm,1.2s,mb5.4
NVS pmax pmax
comp=N,34nm,1.4s
NVS pmax pmax
comp=E,19nm,1.1s
NVS smax
comp=N,19nm,2.1s
NVS smax
comp=E,36nm,2.3s
RDF Al-Radifah 61.97 306 *e*P **P 20 27 51.8 +1.3**
RDF AMb AMB 20 27 53.6
comp=Z,91nm,0.9s,mb5.9
UMR Umm Al-Rimmam 62.08 307 *e*P **P 20 27 52.2 +1.0**
UMR AMb AMB 20 27 53.0
comp=Z,127nm,0.7s,mb6.1
YSS Yuzh-Sakhalins 62.20 30⇑*e*P **P 20 27 49.2 -2.4**
YSS pmax pmax
comp=Z,120nm,1.0s,mb6.0
YSS Yuzh-Sakhalins 62.20 30 *e*P **P 20 27 50.2 -1.5**
comp=Z,100nm,0.8s,mb6.0
NAY Al-Naaiem 62.34 306 *e*P **P 20 27 53.6 +0.6**
NAY AMb AMB 20 27 54.9
comp=Z,48nm,0.8s,mb5.7
MIB Mutribah 62.48 307 *e*P **P 20 27 54.7 +0.8**
MIB AMb AMB 20 27 56.1
comp=Z,91nm,1.0s,mb5.9
BOD Bodaibo 62.55 7⇓*i*P **P 20 27 52.5 -1.3**
BOD pmax pmax
comp=Z,45nm,1.0s,mb5.5
BVAR Borovoye Array 63.03 339 P **P 20 27 56.1 -1.0**
comp=Z,31nm,0.7s,mb5.5,baz=144,slow=8.2,SNR=217
BRVK Borovoye 63.10 339 P **P 20 27 56.3 -1.2**
comp=Z,202nm,1.1s,mb6.2,SNR=37
BRVK Borovoye 63.10 339 *e*P **P 20 27 56.5 -1.0**
BRVK pmax pmax
comp=Z,33nm,0.9s,mb5.5
BRVK Borovoye 63.10 339 *e*P **P 20 27 56.5 -1.1**
comp=Z,33nm,0.9s,mb5.5
BRVK Borovoye 63.10 339 P **P 20 27 56.8 -0.7**
SNR=16
BRVK P 20 27 56.8
SNR=16
ABKAR Akbulak array 64.66 331 *e*P **P 20 28 07.1 -0.8**
comp=Z,70nm,0.7s,mb5.8
KMBO Kilima Mbogo 65.00 271 LR LR 20 50 07.8
comp=Z,90nm,21.6s,MS3.9,baz=87,slow=30
AKTK Aktyubinsk 66.37 331 P **P 20 28 18.1 -0.8**
AKTO Aktyubinsk 66.37 331 P **P 20 28 18.1 -0.8**
comp=Z,9.3nm,0.6s,mb5.0,baz=130,slow=7.3,SNR=39
MAW Mawson 68.73 195 P **P 20 28 35.1 +1.5**
comp=Z,4.8nm,0.9s,mb4.4,baz=52,slow=6.4,SNR=6.0
MAW LR LR 20 52 43.7
comp=Z,233nm,21.7s,MS4.4,baz=24,slow=31
YAK Yakutsk 69.33 13 *e*P **P 20 28 34.9 -2.4**
YAK pmax pmax
comp=Z,100nm,0.8s,mb5.8
YAK pmax pmax
comp=E,20nm,1.1s
YAK pmax pmax
comp=N,34nm,1.2s
YAK Yakutsk 69.33 13 *e*P **P 20 28 35.0 -2.3**
comp=N,151nm,0.8s,mb6.0
TBLG Delisi 69.36 318 *e*P **P 20 28 38.8 +0.8**
TBLG Delisi 69.36 318 P **P 20 28 38.9 +0.9**
SVE Sverdlovsk 69.58 337⇓*e*P **P 20 28 38.7 -0.2**
SVE *e* 20 31 16.1
SVE *e*PPP 20 33 01.9
SVE *e*S S 20 37 44.6 +0.3
SVE pmax pmax
comp=Z,77nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,155nm,20.0s,MS4.2
ARU Arti 70.13 336 P **P 20 28 41.2 -1.1**
comp=Z,242nm,0.8s,mb6.2,SNR=21
ARU Arti 70.13 336*c i*P **P 20 28 41.5 -0.8**
ARU *e* 20 29 03.1
ARU *e* 20 31 14.4
ARU S S 20 37 52.6 +1.8
ARU pmax pmax
comp=Z,52nm,1.0s,mb5.4
ARU Arti 70.13 336 *e*P **P 20 28 41.4 -0.9**
comp=Z,53nm,1.0s,mb5.4
ZEI Tsey 70.38 318 *e*P **P 20 28 44.8 +0.6**
ZEI pmax pmax
comp=Z,33nm,0.9s,mb5.3
ONI Oni 70.59 318 P **P 20 28 46.3 +0.8**
KIV Kislovodsk 71.68 319 P **P 20 28 52.7 +0.6**
comp=Z,190nm,0.9s,mb6.0,SNR=9.4
KIV Kislovodsk 71.68 319 *e*P **P 20 28 52.2 +0.1**
KIV *e* 20 29 07.4
KIV *e*S S 20 38 07.5 -1.8
KIV pmax pmax
comp=Z,37nm,1.1s,mb5.2
KIV Kislovodsk 71.68 319 *e*P **P 20 28 52.3 +0.2**
comp=Z,28nm,0.9s,mb5.2
KIV Kislovodsk 71.68 319 P **P 20 28 52.7 +0.6**
SNR=15
KIV P 20 28 52.7
SNR=15
ASF Jabal al Asfar 71.70 306 P **P 20 28 54.3 +1.9**
comp=Z,17nm,0.9s,mb5.0,baz=342,slow=4.0,SNR=32
RPZ Rata Peaks 71.83 135 LR LR 20 58 50.5
comp=Z,35nm,21.8s,MS3.6,baz=233,slow=34
GOF Gofitskoye 71.93 320 *e*P pP 20 29 07.1 +2.4
GOF pmax pmax
comp=Z,50nm,1.0s,mb5.4
SOKR Solikamsk 72.95 338*c i*P **P 20 28 59.1 -0.2**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.3
MMAI Mount Meron Ar 73.16 306 P **P 20 29 02.9 +1.8**
comp=Z,12nm,0.7s,mb4.9,baz=96,slow=7.6,SNR=24
MMAI LR LR 21 01 27.7
comp=Z,54nm,19.6s,MS3.8,baz=215,slow=36
SOC Sochi 73.50 318*c i*P **P 20 29 02.1 -0.8**
SOC *e* 20 31 42.5
SOC *e*PPP 20 33 34.3
SOC *e*S S 20 38 30.8 +0.7
SOC *e* 20 39 06.7
SOC *e*SS SS 20 43 18.1 +4.6
SOC pmax pmax
comp=Z,29nm,0.7s,mb5.3
PETK Petropavlovsk- 73.56 31 P **P 20 29 01.1 -1.9**
comp=Z,13nm,0.7s,mb5.0,baz=206,slow=4.3,SNR=12
PET Petropavlovsk 74.02 32 *e*P **P 20 29 03.4 -2.3**
PET pmax pmax
comp=Z,62nm,0.7s,mb5.7
PET Petropavlovsk 74.02 32 *e*P **P 20 29 03.3 -2.4**
comp=Z,24nm,0.6s,mb5.3
CSS Prodhromos 75.35 308 *e*P **P 20 29 13.9 +0.1**
comp=Z,50nm,1.2s,mb5.3
VRHR Novokhopersk 75.42 325*c i*P **P 20 29 13.2 -0.7**
VRHR pmax pmax
comp=Z,100nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.5s
ANN Anapa 75.48 318 *e*P **P 20 29 09.3 -5.0**
ANN *e*S S 20 38 47.4 -4.8
ANN pmax pmax
comp=Z,12nm,1.2s,mb4.7
URZ Urewera 75.51 128 LR LR 21 03 36.3
comp=Z,101nm,21.9s,MS4.1,baz=228,slow=37
BR131 Keskin Array S 76.47 312 *e*P **P 20 29 19.5 -0.6**
comp=Z,8.5nm,0.7s,mb4.8
BRTR Keskin Array B 76.47 312 P **P 20 29 19.7 -0.4**
comp=Z,10nm,0.8s,mb4.8,baz=130,slow=6.7,SNR=66
BRTR LR LR 21 04 18.9
comp=Z,23nm,18.8s,MS3.5,baz=216,slow=37
BOSA Boshof 76.59 242 P **P 20 29 23.0 +1.9**
comp=Z,6.3nm,0.7s,mb4.6,baz=98,slow=4.0,SNR=9.9
BOSA LR LR 20 57 09.9
comp=Z,193nm,18.4s,MS4.5,baz=267,slow=31
VORD Divnogorie 76.70 325 *e*P **P 20 29 20.3 -0.8**
VORD pmax pmax
comp=Z,30nm,0.9s,mb5.2
VORD pmax pmax
comp=N,9.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.5s
SEY Seymchan 76.84 21*ce*P **P 20 29 20.2 -1.5**
VSR Storozhevoye 76.87 325*c i*P **P 20 29 21.2 -0.9**
VSR *e*S S 20 39 00.3 -7.0
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=Z,60nm,0.7s,mb5.6
VSR pmax pmax
comp=E,30nm,0.8s
VSR smax
comp=N,30nm,1.0s
VSR smax
comp=Z,70nm,4.0s
VSR smax
comp=E,30nm,1.3s
TIXI Tiksi 77.69 8 *e*P **P 20 29 23.4 -2.9**
TIXI pmax pmax
comp=Z,36nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,224nm,19.0s,MS4.5
TIXI Tiksi 77.69 8 *e*P **P 20 29 23.6 -2.6**
comp=Z,31nm,1.0s,mb5.2
SIM Simferopol' 77.75 318*c i*P **P 20 29 28.0 +0.8**
SIM pmax pmax
comp=Z,35nm,0.8s,mb5.3
MOS Moscow 79.55 329 *e*P **P 20 29 34.7 -2.1**
MOS *e* 20 29 55.6
MOS *e*S S 20 39 40.9 +5.1
MOS pmax pmax
comp=Z,75nm,0.9s,mb5.6
OBN Obninsk 79.85 328 P **P 20 29 38.8 +0.3**
comp=Z,389nm,0.7s,mb6.4,SNR=5.8
OBN Obninsk 79.85 328*α i*P **P 20 29 38.2 -0.3**
OBN *e* pP 20 29 48.5 -1.4
OBN *e* 20 29 55.5
OBN pmax pmax
comp=Z,78nm,1.2s,mb5.5
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.2
OBN Obninsk 79.85 328 *e*P **P 20 29 38.1 -0.4**
comp=Z,31nm,0.7s,mb5.3
SBA Scott Base 80.66 169 *e*P **P 20 29 42.9 +0.4**
SBA pmax pmax
comp=Z,13nm,1.1s,mb4.8
SBA Scott Base 80.66 169 *e*P **P 20 29 42.9 +0.4**
comp=Z,13nm,1.1s,mb4.8
LEOM Leova 82.12 318⇑P **P 20 29 51.4 +0.6**
LEOM Leova 82.12 318⇑*i*P **P 20 29 51.4 +0.6**
JMB Yambol 82.33 314 P **P 20 29 52.0 0.0**
AKASG Malin Array Be 82.60 322 P **P 20 29 52.4 -0.8**
comp=Z,7.0nm,0.6s,mb4.8,baz=88,slow=4.7,SNR=33
AKASG PP PP 20 33 00.9 -2.2
comp=Z,0.5nm,0.4s,baz=86,slow=6.5,SNR=4.4
AKASG LR LR 21 11 57.9
comp=Z,106nm,18.4s,MS4.2,baz=165,slow=39
AKASG Malin Array Be 82.60 322 P **P 20 29 52.4 -0.8**
AKASG 20 33 00.9
AKBB Malin Array Si 82.60 322 *e*P **P 20 29 52.3 -0.9**
KIEV Kiev 82.61 322 *e*P **P 20 29 52.3 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KIEV Kiev 82.61 322 *e*P **P 20 29 52.2 -1.0**
comp=Z,5.3nm,0.6s,mb4.8
SZH Strazhica 82.97 314 P **P 20 29 54.0 -1.3**
VRI Vrincioaia 83.00 317 P **P 20 29 56.6 +1.2**
VRI Vrincioaia 83.00 317⇓*i*P **P 20 29 56.6 +1.2**
DIM Dimitrovgrad 83.00 313 P **P 20 29 55.0 -0.5**
KDZ Kurdzhali 83.00 313 P **P 20 29 54.5 -1.0**
PLOR Plostina 83.05 317⇑P **P 20 29 56.9 +1.2**
PLOR Plostina 83.05 317⇑*i*P **P 20 29 56.9 +1.2**
MLR Muntele Rosu 83.45 317⇓P **P 20 29 58.9 +1.2**
MLR Muntele Rosu 83.45 317⇓*i*P **P 20 29 58.8 +1.1**
RZN Rozhen 83.53 313 P **P 20 29 58.0 -0.2**
PLD Plovdiv 83.62 313 P **P 20 29 57.0 -1.7**
PGB Panagyurishte 84.09 313 P **P 20 30 00.0 -1.1**
BURAR Bucovina Array 84.40 319 P **P 20 30 04.0 +1.5**
BURAR Bucovina Array 84.40 319⇓*i*P **P 20 30 04.0 +1.5**
MICGM Minsk 84.41 326 *e* **P 20 30 01.0 -1.4**
BUR08 Bucovina Ar. S 84.42 319 *e*P **P 20 30 03.6 +1.0**
MNK Minsk 84.44 326 *e*P **P 20 30 01.0 -1.6**
BILL Bilibino 84.44 20⇑*e*P **P 20 30 00.3 -2.0**
BILL pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.3
BILL Bilibino 84.44 20 *e*P **P 20 30 00.2 -2.1**
comp=Z,4.6nm,0.8s,mb4.7
KKB Krupnik 84.76 313 P **P 20 30 03.5 -1.0**
VTS Vitosha 84.80 313 *i*P **P 20 30 05.0 +0.3**
NACGM Naroch 85.13 326 *e* **P 20 30 03.0 -3.0**
JOF Joensuu 85.17 334 *e*P **P 20 30 05.6 -0.5**
JOF pmax pmax
comp=Z,21nm,0.8s,mb5.3
JOF Joensuu 85.17 334 *e*p **P 20 30 05.6 -0.5**
comp=Z,20nm,0.8s,mb5.3
IDID Didziasalis 85.26 326 *e*P **P 20 30 06.9 +0.3**
IIGN Ignalina 85.55 326 *e*P **P 20 30 08.3 +0.2**
LVV L'vov 85.63 321 *e*P **P 20 30 08.2 -0.5**
IZAR Zarasai 85.64 327 *e*P **P 20 30 08.8 +0.3**
ISAL Salakas 85.66 326 *e*P **P 20 30 08.8 +0.2**
APA Apatity 85.95 339⇑*i*P **P 20 30 09.5 -0.3**
APA pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
APA MLR MLR
comp=Z,200nm,15.0s,MS4.6
VSU Vasula 86.05 329*ce*P **P 20 30 10.2 -0.3**
VSU pmax pmax
comp=Z,60nm,1.0s,mb5.8
TRPA Tarpa 86.27 319⇑*i*P **P 20 30 12.1 +0.2**
KWP Kalwaria Pacla 86.44 320 *e*P **P 20 30 13.0 +0.4**
KWP Kalwaria Pacla 86.44 320 *e*P **P 20 30 11.4 -1.2**
KWP pmax pmax
comp=Z,22nm,1.1s,mb5.3
KWP Kalwaria Pacla 86.44 320 *e*P **P 20 30 11.4 -1.3**
comp=Z,22nm,1.1s,mb5.3
KWP Kalwaria Pacla 86.44 320⇓*i*P **P 20 30 13.3 +0.7**
BZS Buzias 86.46 316 P **P 20 30 13.5 +0.7**
BZS Buzias 86.46 316⇓*i*P **P 20 30 13.3 +0.5**
KOLS Kolonicke sedl 86.59 319 *e*P **P 20 30 14.6 +1.2**
KOLS pmax pmax
comp=Z,35nm,1.0s,mb5.5
KOLS Kolonicke sedl 86.59 319 *e*P **P 20 30 14.6 +1.2**
comp=Z,35nm,1.0s,mb5.5
KOLS Kolonicke sedl 86.59 319 *e*P **P 20 30 14.6 +1.2**
SUW Suwalki 86.98 325 *e*P **P 20 30 15.0 -0.2**
SUW Suwalki 86.98 325 *e*P **P 20 30 14.8 -0.4**
SUW pmax pmax
comp=Z,102nm,1.0s,mb6.0
SUW Suwalki 86.98 325 *e*P **P 20 30 14.8 -0.4**
comp=Z,102nm,1.0s,mb6.0
FINES FINESS Array B 87.11 332 P **P 20 30 15.3 -0.3**
comp=Z,15nm,0.7s,mb5.3,baz=103,slow=6.1,SNR=60
FINES FINESS Array B 87.11 332 P **P 20 30 15.3 -0.3**
KAF Kangasniemi 87.17 333 *e*P **P 20 30 15.4 -0.5**
KAF pmax pmax
comp=Z,23nm,0.7s,mb5.5
KAF Kangasniemi 87.17 333 *ep* **P 20 30 15.4 -0.5**
comp=Z,23nm,0.7s,mb5.5,baz=118,slow=4.7
STHS Stebnicka Huta 87.34 320 *i*P **P 20 30 18.1 +1.1**
STHS pmax pmax
comp=Z,16nm,0.8s,mb5.3
STHS Stebnicka Huta 87.34 320 *i*P **P 20 30 18.1 +1.1**
comp=Z,16nm,0.8s,mb5.3
STHS Stebnicka Huta 87.34 320 *i*P **P 20 30 18.1 +1.1**
KECS Kecovo 87.68 319 *e*P **P 20 30 18.9 +0.2**
KECS pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
KECS Kecovo 87.68 319 *e*P **P 20 30 18.9 +0.2**
comp=Z,6.4nm,0.8s,mb4.9
KECS *e*PP pP 20 30 28.7 -1.5
KECS Kecovo 87.68 319 *e*P **P 20 30 18.9 +0.2**
KECS *ep*P pP 20 30 28.7 -1.5
PSZ Piszkesteto 87.99 318 *e*P **P 20 30 20.7 +0.5**
PSZ pmax pmax
comp=Z,12nm,1.0s,mb5.1
PSZ Piszkesteto 87.99 318 *e*P **P 20 30 20.7 +0.6**
comp=Z,12nm,1.0s,mb5.1
PSZ Piszkesteto 87.99 318⇑*e*P **P 20 30 20.3 +0.1**
PSZ Piszkesteto 87.99 318⇑*i*P **P 20 30 20.2 0.0**
OJC Ojcow 88.39 320 *e*P **P 20 30 22.0 0.0**
BUD Budapest 88.51 318 *e*P **P 20 30 23.0 +0.3**
PKSM Moragy 88.60 316 P **P 20 30 23.4 +0.3**
PKSM Moragy 88.60 316⇓*i*P **P 20 30 23.4 +0.3**
VYHS Vyhne 88.77 319 *e*P **P 20 30 24.1 +0.2**
VYHS *e* pP 20 30 35.6 +0.3
VYHS pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
VYHS Vyhne 88.77 319 *e*P **P 20 30 24.1 +0.2**
comp=Z,6.7nm,1.3s,mb4.8
VYHS *e* pP 20 30 35.6 +0.3
VYHS Vyhne 88.77 319 *e*P **P 20 30 24.1 +0.2**
VYHS *ep*P pP 20 30 35.6 +0.3
KEV Kevo 88.86 340 *e*P **P 20 30 23.6 -0.2**
KEV pmax pmax
comp=Z,18nm,0.9s,mb5.4
KEV Kevo 88.86 340 *ep* **P 20 30 23.6 -0.2**
comp=Z,18nm,0.9s,mb5.4
KOLL Kolacno 89.07 319 *e*P **P 20 30 25.8 +0.5**
KOLL Kolacno 89.07 319 *e*P **P 20 30 25.8 +0.5**
ARCES ARCESS Array B 89.31 340 P **P 20 30 25.4 -0.5**
comp=Z,12nm,0.7s,mb5.3,baz=97,slow=5.1,SNR=46
MORC Moravsky Berou 89.77 320 *e*P **P 20 30 28.9 +0.4**
MORC pmax pmax
comp=Z,16nm,1.1s,mb5.3
MORC Moravsky Berou 89.77 320 *e*P **P 20 30 28.9 +0.4**
comp=Z,16nm,1.1s,mb5.3
MORC Moravsky Berou 89.77 320⇑*i*P **P 20 30 28.8 +0.3**
ZST Bratislava 89.88 318 *e*P **P 20 30 29.6 +0.5**
ZST pmax pmax
comp=Z,13nm,1.1s,mb5.2
ZST Bratislava 89.88 318 *e*P **P 20 30 29.6 +0.5**
comp=Z,13nm,1.1s,mb5.2
ZST Bratislava 89.88 318 *e*P **P 20 30 29.6 +0.5**
GKP Gorka Klasztor 90.36 323 *e*P **P 20 30 31.2 -0.1**
KSP Ksiaz 90.69 321 *e*P **P 20 30 33.6 +0.8**
KSP Ksiaz 90.69 321 *e*P **P 20 30 33.3 +0.5**
BOJS Bojanci 90.88 315 *i*P **P 20 30 34.3 +0.5**
PERS Pernice 91.07 317 *i*P **P 20 30 35.1 +0.4**
VISS Visnje 91.19 316 *i*P **P 20 30 35.4 +0.1**
CRNS Crni Vrh 91.61 316 *e*P **P 20 30 35.6 -1.6**
BRG Berggiesshubel 92.17 321 *i*P **P 20 30 40.0 +0.4**
comp=Z,3.8nm,0.8s,mb4.8
BRG Berggiesshubel 92.17 321 *i*P **P 20 30 40.0 +0.3**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
GEC2 GERESS Array S 92.19 319 *e*P **P 20 30 40.1 +0.3**
GEC2 pmax pmax
comp=Z,2μm,1.1s
GEC2 GERESS Array S 92.19 319 *e*P **P 20 30 40.1 +0.3**
comp=Z,2μm,1.1s
GERES GERESS Array B 92.19 319 P **P 20 30 40.1 +0.3**
comp=Z,4.2nm,0.9s,mb4.8,baz=99,slow=4.3,SNR=23
GERES PP PP 20 34 20.7 +0.4
comp=Z,0.9nm,0.9s,baz=72,slow=4.3,SNR=4.1
GERES LR LR 21 18 14.4
comp=Z,75nm,19.1s,MS4.2,baz=276,slow=39
GERES GERESS Array B 92.19 319 P **P 20 30 40.1 +0.3**
GERES 20 34 20.7
VNA2 Neumayer--Watz 92.37 198 *e*P **P 20 30 40.1 -0.1**
VNA2 *e* 20 30 57.4
CLL Collm 92.79 321 *i*P **P 20 30 41.9 -0.6**
CLL *e* 20 31 08.0
CLL pmax pmax
comp=Z,5.0nm,1.3s,mb4.8
CLL MLR MLR
comp=Z,100nm,19.9s,MS4.3
CLL Collm 92.79 321 *i*P **P 20 30 41.9 -0.6**
comp=Z,5.0nm,1.3s,mb4.8
CLL *e* 20 31 08.0
CLL LR LR
comp=Z,100nm,19.9s,MS4.3
CLL Collm 92.79 321 *i*P **P 20 30 41.9 -0.6**
comp=Z,5.0nm,1.3s,mb4.8
CLL Lm 20 17 00.0
comp=Z,100nm,19.9s
SPB4 Spitsbergen Ar 93.25 348 *e*P **P 20 30 41.5 -2.6**
GRF Grafenberg Arr 93.86 319 *e*P **P 20 30 47.8 +0.3**
NOA NORSAR Array B 94.16 331 P **P 20 30 47.9 -0.7**
comp=Z,3.9nm,0.7s,mb5.0,baz=93,slow=4.7,SNR=27
NOA PP PP 20 34 37.4 +2.0
comp=Z,1.1nm,0.9s,baz=90,slow=7.6,SNR=5.6
KEST Kesra 94.80 305 P **P 20 30 53.4 +1.2**
comp=Z,1.8nm,0.8s,mb4.5,baz=298,slow=4.1,SNR=7.1
CDF Champ du Feu 96.44 318 *e*P **P 20 30 58.4 -0.9**
comp=Z,3.7nm,0.6s,mb4.7
CDF Champ du Feu 96.44 318 *e*P **P 20 30 58.4 -0.9**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
CDF Champ du Feu 96.44 318 *e*P **P 20 30 58.4 -0.9**
comp=Z,1.9nm,0.6s,mb4.7
LPG La Plagne 96.85 315 *e*P **P 20 31 00.9 -0.3**
comp=Z,4.6nm,0.8s,mb4.7
LPG La Plagne 96.85 315 *e*P **P 20 31 00.9 -0.3**
LPG pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
LPG La Plagne 96.85 315 *e*P **P 20 31 00.9 -0.3**
comp=Z,2.3nm,0.8s,mb4.7
LPL La Plagne 96.86 315 *e*P **P 20 31 00.9 -0.4**
CABF La Chapelle 97.28 316 *e*P **P 20 31 02.5 -0.7**
LOR Lormes 98.78 317 *e*P **P 20 31 09.2 -0.7**
TORD Torodi Ar. Bea 101.23 283 P Pdif 20 31 21.1 +0.5
comp=Z,0.6nm,0.9s,baz=83,slow=4.5,SNR=3.5
YKA Yellowknife Ar 115.79 18 PKP PKPdf 20 36 10.0 -2.1
comp=Z,1.3nm,0.9s,baz=316,slow=2.0,SNR=11
YKA PP PP 20 37 03.0 -12
comp=Z,0.4nm,0.8s,baz=319,slow=7.3,SNR=4.6
YKA PKKPbc PKKPbc 20 46 44.1 -2.4
comp=Z,0.1nm,0.3s,baz=111,slow=2.7,SNR=3.6
YKA PKKP PKKPdf 20 47 02.1 -9.1
comp=Z,0.8nm,0.9s,baz=128,slow=3.8,SNR=4.9
YKA Yellowknife Ar 115.79 18 PKIKP PKPdf 20 36 10.1 -2.1
YKA 20 46 44.2
YKA Yellowknife Ar 115.79 18 PKP PKPdf 20 36 10.1 -2.1
YKA PP PP 20 37 03.0 -12
YKA PKKPbc PKKPbc 20 46 44.1 -2.4
YKA PKKP PKKPdf 20 47 02.1 -9.2
EDM Edmonton 123.08 25 *e*PKIKP PKPdf 20 36 25.1 -1.4

FCC	**Fort Churchill**	**124.12**	**10**	*e*PKIKP	PKPdf	20 36 24.6	-3.7
FFC	**Flin Flon**	**125.94**	**17**	*i* PKIKP	PKPdf	20 36 30.9	-1.0
FFC	**Flin Flon**	**125.94**	**17**	*e*PKPdf	PKPdf	20 36 30.1	-1.9
BSMT	**Bassoo Peak**	**126.16**	**30**	*e*PKPdf	PKPdf	20 36 31.0	-1.6
EGMT	**Eagleton**	**128.44**	**27**	*e*PKPdf	PKPdf	20 36 36.5	-0.4
SCHQ	**Schefferville**	**128.76**	**352**	PKP	PKPdf	20 36 36.7	-0.6
	comp=Z,1.6nm,0.5s,baz=18,slow=3.8,SNR=5.4						
SCHQ	**Schefferville**	**128.76**	**352**	PKP	PKPdf	20 36 36.7	-0.6
DLMT	**Dillon**	**128.95**	**31**	*e*PKPdf	PKPdf	20 36 37.2	-0.8
NVAR	**Mina Array Bea**	**129.81**	**42**	PKP	PKPdf	20 36 38.4	-1.4
	comp=Z,1.8nm,0.6s,baz=298,slow=1.9,SNR=6.6						
PDAR	**Pinedale Array**	**132.33**	**32**	PKP	PKPdf	20 36 44.5	0.0
	comp=Z,1.0nm,0.5s,baz=56,slow=0.5,SNR=4.5						
PDAR				SKPbc	SKPbc	20 40 04.2	-4.2
	comp=Z,2.2nm,0.9s,baz=351,slow=2.0,SNR=7.8						
CPUP	**Villa Florida**	**143.77**	**212**	PKP	PKPdf	20 37 03.9	-2.1
	comp=Z,6.4nm,0.9s,baz=83,slow=3.0,SNR=16						
WMOK	**Wichita Mounta**	**143.90**	**30**	*e*PKIKP	PKPdf	20 37 01.0	-4.9
CCM	**Cathedral Cave**	**144.13**	**18**	*e*PKIKP	PKPdf	20 37 01.5	-4.7
OLIL	**Olney**	**144.37**	**14**	*e*PKPpre	PKPdf	20 37 03.5	-3.1
FVM	**French Village**	**144.44**	**17**	*e*PKIKP	PKPdf	20 37 02.8	-4.0
TXAR	**Lajitas Array**	**144.96**	**42**	PKP	PKPdf	20 37 06.2	-1.7
	comp=Z,29nm,0.8s,baz=285,slow=1.3,SNR=257						
TXAR				SKPbc	SKPbc	20 40 39.6	-5.1
	comp=Z,1.2nm,0.7s,baz=15,slow=1.2,SNR=5.1						
TXAR	**Lajitas Array**	**144.96**	**42**	PKP	PKPdf	20 37 06.2	-1.7
TXAR				SKPbc	SKPbc	20 40 39.6	-5.1
SIUC	**Southern Illin**	**145.04**	**16**	*e*PKPdf	PKPdf	20 37 05.2	-2.6
USIN	**University of**	**145.20**	**14**	*e*PKPdf	PKPdf	20 37 05.5	-2.6
WCI	**Wyandotte Cave**	**145.25**	**12**	*e*PKIKP	PKPdf	20 37 06.0	-2.2
MIAR	**Mount Ida**	**146.43**	**24**	*e*PKP2	PKPab	20 37 09.7	-2.8
JCT	**Junction City**	**146.59**	**36**	*e*PKP2	PKPbc	20 37 09.8	-2.4
UALR	**University of**	**146.71**	**22**	*e*PKPdf	PKPdf	20 37 09.2	-1.5
WVT	**Waverly**	**146.90**	**15**	*e*PKIKP	PKPdf	20 37 09.4	-1.6
PLAL	**Pickwick Lake**	**147.92**	**16**	*e*PKPdf	PKPdf	20 37 11.0	-1.8
OXF	**Oxford**	**147.96**	**18**	*e*PKP2	PKPbc	20 37 14.6	-1.3
SWET	**Sewanee**	**148.23**	**13**	*e*PKPbc	PKPbc	20 37 14.1	-2.5
NATX	**Nacogdoches**	**148.32**	**28**	*e*PKPbc	PKPbc	20 37 15.6	-1.3
HKT	**Hockley**	**149.21**	**32**	*e*PKP2	PKPbc	20 37 18.4	-0.8
VBMS	**Vicksburg**	**149.67**	**22**	*e*PKPbc	PKPbc	20 37 18.1	-2.2
LRAL	**Lakeview Retre**	**150.05**	**16**	*e*PKPdf	PKPdf	20 37 15.4	-0.8
GOGA	**Godfrey**	**150.46**	**10**	*e*PKIKP	PKPbc	20 37 20.6	-1.6
LPAZ	**La Paz**	**157.53**	**205**	PKP	PKPdf	20 37 27.6	+0.3
	comp=Z,2.5nm,1.1s,baz=166,slow=13,SNR=6.1						

IDC ***21*** *20:27:07.3±1.1,5.°90S×133.°60E, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.9/15, mbtmp3.9/8, ML4.3/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/20, Error ellipse: s-maj=58.5km s-min=20.0km az=69.0*

ISCJB ***21*** *20:27:10.7±0.8, 6.°09S±0.°05×133.°4E±0.°1, h33km, mb3.8/6, Error ellipse: s-maj=20.8km s-min=7.9km az=179.1*

NEIC ***21*** *20:27:12.5±0.5, 6.°01S×133.°53E, h35km, mb4.0/1, Error ellipse: s-maj=21.5km s-min=7.8km az=80.0*

ISC 21 20:27:12.8±0.8, 6.°06S±0.°06×133.°4E±0.°2, h35km, n14, σ0.65/14, mb3.8/6, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**13.82**	**176**	*e*P	**Pn**	**20 30 26.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**14.17**	**212**	Pn	**Pn**	**20 30 32.5**	**+1.4**
	1.3nm,0.3s,baz=35,slow=9.9,SNR=14						
FITZ				Sn	**Sn**	**20 33 06.4**	**-0.8**
	0.8nm,0.3s,baz=12,slow=9.3,SNR=7.5						
ASAR	**Alice Springs**	**17.52**	**178**	P	**Pn**	**20 31 14.3**	**-0.1**
	0.9nm,0.3s,baz=5.6,slow=12,SNR=8.9						
ASAR				S	**S**	**20 34 24.4**	**-11**
	0.1nm,0.3s,baz=0.2,slow=27,SNR=3.1						
ASAR	**Alice Springs**	**17.52**	**178**	P	**Pn**	**20 31 14.3**	**-0.1**
ASAR				S	**S**	**20 34 24.4**	**-11**
STKA	**Stephens Creek**	**26.81**	**164**	P	**P**	**20 32 50.0**	**+0.3**
	2.4nm,0.5s,mb4.0,baz=336,slow=8.5,SNR=5.5						
CMAR	**Chiang Mai Arr**	**41.81**	**306**	P	**P**	**20 35 00.2**	**+0.7**
	0.5nm,0.6s,baz=134,slow=6.4,SNR=3.3						
PALK	**Pallekele**	**54.22**	**283**	LR	LR	21 01 38.0	
	comp=Z,58nm,19.7s,baz=315,slow=38						
MKAR	**Makanchi Array**	**69.34**	**325**	P	**P**	**20 38 16.3**	**-0.5**
	0.4nm,0.5s,mb3.6,baz=123,slow=8.3,SNR=5.1						
ZALV	**Zalesovo Beam**	**72.28**	**332**	P	**P**	**20 38 33.5**	**-1.0**
	1.2nm,0.8s,mb3.9,baz=122,slow=5.2,SNR=4.3						
KURK	**Kurchatov**	**73.52**	**327**	P	**P**	**20 38 42.1**	**+0.1**
	0.8nm,0.9s,mb3.7,baz=124,slow=4.8,SNR=4.0						
BVAR	**Borovoye Array**	**79.10**	**327**	P	**P**	**20 39 13.6**	**+0.1**
	1.1nm,0.9s,mb3.8,baz=106,slow=5.4,SNR=5.3						
BRVK	**Borovoye**	**79.17**	**327**	*e*P	**P**	**20 39 14.1**	**+0.1**
	1.3nm,0.8s,mb3.9						
CPUP	**Villa Florida**	**146.16**	**163**	PKPbc	PKPbc	20 46 49.7	-0.5
	0.5nm,0.4s,baz=144,slow=19,SNR=3.8						
LPAZ	**La Paz**	**149.23**	**136**	PKPbc	PKPbc	20 47 00.1	+1.3
	1.4nm,0.9s,baz=225,slow=5.7,SNR=4.4						

ISCJB ***21*** *20:36:25.2±0.8, 32.°14N±0.°02×104.°88E±0.°03, h9km±5km, mb4.4/63, MS3.7/5, Error ellipse: s-maj=4.2km s-min=3.7km az=15.9*

IDC ***21*** *20:36:25.1±0.5, 32.°13N×104.°88E, h0km, mb4.3/26, mb1 4.4/29, mb1mx4.4/34, mbtmp4.3/29, ML3.6/3, MS3.3/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=17.3km s-min=10.5km az=50.0*

NEIC ***21*** *20:36:27.0±0.2, 32.°19N×104.°94E, h10km, mb4.5/24, Error ellipse: s-maj=5.4km s-min=4.1km az=62.0*

NEIC Felt at Chengdu.

BJI ***21*** *20:36:26.3, 32.°18N×104.°89E, h11km, mB4.7/13, mb4.3/16, ML4.5/20, Ms4.3/27, Ms7 4.0/22*

MOS ***21*** *20:36:28.0±0.8, 32.°15N×104.°91E, h30km, mb4.7/44, Error ellipse: s-maj=9.2km s-min=5.3km az=111.2*

ISC 21 20:36:26.7±0.8, 32.°16N±0.°02×104.°85E±0.°03, h5km±5km, n181, σ1.903/197, mb4.4/63, MS3.7/5, 8C-7D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.56**	**217**	Pg	**Pg**	**20 36 56.5**	**-0.1**
CD2				Sg	**Sg**	**20 37 19.1**	**+2.3**
CD2				smax			
	comp=N,23μm,0.7s						
XAN	**Xi'an**	**3.90**	**60**	Pn	**Pn**	**20 37 31.9**	**+4.7**
XAN				Pg	**Pg**	**20 37 40.5**	**-0.8**
XAN				Sn	**Sn**	**20 38 13.4**	**+0.1**
XAN				Sg	**Sg**	**20 38 25.8**	**-6.0**
XAN				smax			
	comp=N,1μm,0.9s						
XAN				smax			
	comp=E,770nm,1.0s						
XAN				LR	LR		
	comp=N,3μm,10.7s						
XAN				LR	LR		
	comp=E,660nm,11.6s						
XAN				LR	LR		
	comp=Z,590nm,6.9s						
LZH	**Lanzhou**	**4.00**	**348**	*e*Pn	**Pn**	**20 37 30.3**	**+1.7**
LZH				Pg	**Pg**	**20 37 42.3**	**-1.1**
LZH				Sn	**Sn**	**20 38 17.3**	**+1.4**
LZH				Sg	**Sg**	**20 38 32.4**	**-2.8**
LZH				smax			
	comp=N,4μm,0.7s						
LZH				smax			
	comp=E,4μm,0.6s						
LZH				LR	LR		
	comp=N,6μm,5.4s						
LZH				LR	LR		
	comp=Z,6μm,6.8s						
ENH	**Enshi**	**4.40**	**114**	*e*Pn	**Pn**	**20 37 34.6**	**+0.6**
GYA	**Guiyang**	**5.90**	**164**	Pn	**Pn**	**20 37 55.5**	**+0.7**
GYA				Sn	**Sn**	**20 38 57.4**	**-5.4**
GYA				smax			
	comp=N,780nm,0.6s						
GYA				smax			
	comp=E,880nm,0.9s						
GYA				LR	LR		
	comp=N,970nm,6.8s						
GYA				LR	LR		
	comp=E,1μm,4.8s						
GYA				LR	LR		
	comp=Z,2μm,4.2s						
KMI	**Kunming**	**7.25**	**195**	Pn	**Pn**	**20 38 16.6**	**+3.2**
KMI				Sn	**Sn**	**20 39 37.1**	**+0.9**
KMI				smax			
	comp=N,92nm,1.4s						
KMI				smax			
	comp=E,130nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,6.8s						
KMI				LR	LR		
	comp=E,970nm,6.1s						
KMI				LR	LR		
	comp=Z,1μm,7.7s						
WHN	**Wuhan**	**8.28**	**99**	⇓P	**Pn**	**20 38 27.8**	**+0.3**
WHN				S	**Sn**	**20 39 56.5**	**-4.9**
WHN				LR	LR		
	comp=N,3μm,5.4s						
WHN				LR	LR		
	comp=E,2μm,5.6s						
WHN				LR	LR		
	comp=Z,1μm,6.4s						
GTA	**Gaotai**	**8.31**	**332**	P	**Pn**	**20 38 27.6**	**-0.2**
GTA				pP		20 38 35.0	
GTA				sP		20 38 38.3	
GTA				S	**Sn**	**20 40 05.3**	**+3.3**
GTA				sS		20 40 14.1	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,54nm,4.2s						
GTA				LR	LR		
	comp=N,1μm,10.8s						
GTA				LR	LR		
	comp=E,900nm,7.1s						
GTA				LR	LR		
	comp=Z,990nm,11.1s						
BTO	**Baotou**	**9.40**	**25**	*e*P	**Pn**	**20 38 43.5**	**+0.8**
BTO				S	**Sn**	**20 40 32.3**	**+3.6**
BTO				LR	LR		
	comp=N,280nm,8.0s						
BTO				LR	LR		
	comp=E,230nm,7.8s						
HHC	**Hu-ho-hao-te**	**10.21**	**30**	*e*P	**Pn**	**20 38 55.5**	**+1.7**
HHC				pP		20 38 59.9	
HHC				sP		20 39 03.1	
HHC				S	**Sn**	**20 40 51.5**	**+2.8**
HHC				sS		20 40 56.0	
HHC				SS		20 41 03.8	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,79nm,5.1s						
HHC				LR	LR		
	comp=N,760nm,4.3s						
HHC				LR	LR		
	comp=E,790nm,4.4s						
HHC				LR	LR		
	comp=Z,580nm,5.6s						
NJ2	**Nanjing**	**11.88**	**87**	*e*P	**Pn**	**20 39 19.5**	**+2.8**
NJ2				pP		20 39 26.6	
NJ2				PP		20 39 30.5	
NJ2				sP		20 39 31.8	
NJ2				S	**Sn**	**20 41 30.5**	**+0.9**
NJ2				sS		20 41 35.4	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,60nm,4.1s						
NJ2				LR	LR		
	comp=N,350nm,12.0s						
NJ2				LR	LR		
	comp=E,450nm,11.8s						
NJ2				LR	LR		
	comp=Z,470nm,11.2s						
LSA	**Lhasa**	**12.02**	**262**	P	**Pn**	**20 39 20.4**	**+1.7**
LSA				pP		20 39 27.0	
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LSA				pmax	pmax		
	comp=Z,110nm,5.0s						
LSA				LR	LR		
	comp=N,110nm,8.0s						
LSA				LR	LR		
	comp=E,300nm,8.0s						
LSA				LR	LR		
	comp=Z,400nm,8.0s						
LSA	**Lhasa**	**12.02**	**262**	*e*P	**Pn**	**20 39 19.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**12.02**	**262**	*e*Pn	**Pn**	**20 39 19.8**	**+1.2**
	comp=Z,6.8nm,0.6s						
SHL	**Shillong**	**13.12**	**243**	*e*P	**Pn**	**20 39 35.0**	**+1.2**
SHL				eS	Sx	20 43 13.0	
QIZ	**Qiongzhong**	**13.83**	**160**	P	**Pn**	**20 39 42.8**	**-0.6**
QIZ				S	**Sn**	**20 42 17.3**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,77nm,3.4s						
QIZ				LR	LR		
	comp=N,1μm,11.2s						
QIZ				LR	LR		
	comp=E,230nm,10.2s						
QIZ				LR	LR		
	comp=Z,1μm,11.8s						
QIZ	**Qiongzhong**	**13.83**	**160**	*e*P	**Pn**	**20 39 40.8**	**-2.7**
CHTO	**Chiang Mai**	**14.32**	**203**	*e*P	**Pn**	**20 39 51.6**	**+1.5**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	**Chiang Mai**	**14.32**	**203**	*e*P	**Pn**	**20 39 51.6**	**+1.5**
	comp=Z,5.0nm,0.7s						
CM31	**Chiang Mai Arr**	**14.65**	**203**	*e*P	**Pn**	**20 39 56.3**	**+1.6**
	comp=Z,12nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.65**	**203**	Pn	**Pn**	**20 39 54.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=13,slow=13,SNR=5.6						
CMAR				Lg		20 44 19.8	
	comp=Z,0.1nm,0.3s,baz=16,slow=30,SNR=3.4						
CMAR				LR	LR	20 46 13.0	
	comp=Z,143nm,20.3s,baz=355,slow=40						
SONM	**Songino Array**	**15.70**	**4**	Pn	**Pn**	**20 40 07.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=181,slow=11,SNR=18						
SONM				Lg		20 44 38.6	
	comp=Z,0.1nm,0.3s,baz=204,slow=31,SNR=3.3						
SONM				LR	LR	20 46 52.9	
	comp=Z,250nm,20.0s,baz=184,slow=40						
BDT	**Bhumibol Dam**	**15.77**	**201**	P	**Pn**	**20 40 15.0**	**+5.4**
ULN	**Ulaanbaatar**	**15.77**	**5**	*e*P	**Pn**	**20 40 09.6**	**+0.2**
ULN				pmax	pmax		
	comp=Z,24nm,1.1s						
ULN	**Ulaanbaatar**	**15.77**	**5**	*e*P	**Pn**	**20 40 09.6**	**+0.2**
	comp=Z,24nm,1.1s						
SSLB	**Suanglung**	**16.48**	**116**	*e*P	**Pn**	**20 40 24.3**	**+5.6**
	comp=Z,39nm,1.2s						
GUN	**Gumba**	**16.96**	**260**	*e*P	**Pn**	**20 40 24.5**	**-0.3**
	comp=Z,52nm,0.8s						
NST	**Nakhon Sawan**	**16.97**	**196**	P	**Pn**	**20 40 24.6**	**-0.3**
PKI	**Pulchoki**	**17.47**	**260**	*e*P	**Pn**	**20 40 29.5**	**-1.6**
	comp=Z,51nm,0.6s						
PKIN	**Phulchoki**	**17.48**	**260**	*e*P	**Pn**	**20 40 29.9**	**-1.3**
	comp=Z,41nm,0.6s						
KKN	**Kakani**	**17.50**	**261**	*e*P	**Pn**	**20 40 29.9**	**-1.7**
	comp=Z,37nm,0.8s						
DMN	**Daman**	**17.71**	**260**	*e*P	**Pn**	**20 40 32.4**	**-1.7**
	comp=Z,58nm,1.0s						
ZAK	**Zakamensk**	**18.24**	**357**	*e*P	**Pn**	**20 40 40.6**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY	**Talaya**	**19.52**	**358**	*e*P	**Pn**	**20 41 01.4**	**+5.4**
TLY				pmax	pmax		
	comp=Z,12nm,0.8s						
TLY				MLR	MLR		
	comp=Z,242nm,11.0s						
KSRS	**Korea Array**	**19.65**	**68**	P	**Pn**	**20 40 56.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=255,slow=10,SNR=18						
MOY	**Mondy**	**19.69**	**353**	*e*P	**Pn**	**20 41 00.6**	**+2.6**
MOY				pmax	pmax		
	comp=Z,29nm,1.9s						
CN2	**Changchun**	**19.91**	**48**	*e*P	**Pn**	**20 41 00.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
IRK	**Irkutsk**	**20.07**	**359**	*e*P	**P**	**20 41 02.4**	**+1.7**
IRK				pmax	pmax		
	comp=Z,70nm,1.0s						
HIA	**Hailar**	**20.41**	**29**	*e*P	**P**	**20 41 03.2**	**-1.3**
HIA				pmax	pmax		
	comp=Z,23nm,1.1s						
HIA	**Hailar**	**20.41**	**29**	*e*P	**P**	**20 41 03.2**	**-1.3**
	comp=Z,23nm,1.1s						
JOW	**Kunigami**	**21.05**	**99**	P	**P**	**20 41 11.1**	**-0.5**
	comp=Z,11nm,0.6s,mb4.4,baz=253,slow=19,SNR=5.5						
JOW				LR	LR	20 49 52.6	
	comp=Z,108nm,18.6s,MS3.3,baz=109,slow=38						
JOW	**Kunigami**	**21.05**	**99**	P	**P**	**20 41 11.1**	**-0.5**
JOW				LR	LR	20 49 52.6	
MK31	**Makanchi Array**	**22.62**	**317**	*e*P	**P**	**20 41 28.6**	**+0.4**
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**20 41 28.5**	**+0.3**
	comp=Z,2.3nm,0.6s,mb3.8,baz=114,slow=12,SNR=22						
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**20 41 28.5**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TKM2	**Tokmak 2**	**25.44**	**303**	*e*P	**P**	**20 41 55.9**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
TKM2	**Tokmak 2**	**25.44**	**303**	*e*P	**P**	**20 41 55.9**	**+0.6**
	comp=Z,3.7nm,0.6s,mb4.1						
UCH	**Uchtor**	**26.05**	**301**	*e*P	**P**	**20 42 02.5**	**+1.7**
	comp=Z,7.7nm,1.0s,mb4.2						
ZAA0	**Zalesovo Array**	**26.06**	**333**	*e*P	**P**	**20 42 00.2**	**-0.7**
ZALV	**Zalesovo Beam**	**26.06**	**333**	P	**P**	**20 42 00.9**	**+0.1**
	comp=Z,6.6nm,0.7s,mb4.3,baz=128,slow=9.7,SNR=13						
ZALV				PcP	PcP	20 45 29.1	+0.6
	comp=Z,1.0nm,0.6s,baz=155,slow=3.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.06**	**333**	P	**P**	**20 42 00.9**	**+0.1**
ZALV						20 45 29.1	
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
AAK	**Ala-Archa**	**26.16**	**302**	P	**P**	**20 42 01.7**	**-0.1**
	comp=Z,1.0nm,0.4s,mb3.7,baz=117,slow=9.0,SNR=2.1						
AAK				PcP	PcP	20 45 28.4	-0.6
	comp=Z,0.8nm,0.3s,baz=124,slow=7.3,SNR=2.8						
AAK	**Ala-Archa**	**26.16**	**302**	P	**P**	**20 42 01.7**	**-0.1**
AAK						20 45 28.4	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK	**Ala-Archa**	**26.16**	**302**	P	**P**	**20 42 01.7**	**-0.1**
AAK				PcP	PcP	20 45 28.4	-0.6
KLR	**Kul'dur**	**26.38**	**42**	*e*P	**P**	**20 42 06.6**	**+2.9**
KLR				MLR	MLR		
	comp=Z,700nm,11.5s,MS4.4						
BOD	**Bodaibo**	**26.41**	**11**	*e*P	**P**	**20 42 04.0**	**+0.1**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
AML	**Almayashu**	**26.62**	**301**	*e*P	**P**	**20 42 07.5**	**+1.4**
	comp=Z,3.3nm,0.6s,mb4.0						
EKS2	**Erkin-Say**	**26.68**	**302**	*e*P	**P**	**20 42 07.1**	**+0.6**
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**20 42 07.6**	**+0.1**
	comp=Z,2.4nm,0.6s,mb3.9,baz=127,slow=10,SNR=20						
KURK				PcP	PcP	20 45 29.4	-0.9
	comp=Z,3.5nm,0.6s,baz=114,slow=2.1,SNR=9.3						
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**20 42 07.6**	**+0.1**
KURK						20 45 29.4	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
KURK	**Kurchatov**	**26.80**	**321**	*e*P	**P**	**20 42 07.1**	**-0.5**
KURK				PcP	PcP	20 45 29.4	-0.9
NVS	**Novosibirsk**	**27.35**	**332**	*e*P	**P**	**20 42 14.3**	**+1.9**
NVS				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.1						
NVS				pmax	pmax		
	comp=E,6.0nm,1.4s						
MJAR	**Matsushiro Arr**	**27.80**	**72**	P	**P**	**20 42 15.9**	**-0.9**
	comp=E,2.0nm,0.6s,mb4.0,baz=276,slow=10,SNR=10						
MJAR	**Matsushiro Arr**	**27.80**	**72**	P	**P**	**20 42 15.9**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKM	**Kota Kinabalu**	**28.07**	**155**	*e*P	**P**	**20 42 19.2**	**0.0**
	comp=Z,24nm,1.1s,mb4.8						
KBL	**Kabul**	**29.91**	**284**	*e*P	**P**	**20 42 36.5**	**+1.0**
KBL				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
KBL	**Kabul**	**29.91**	**284**	*e*P	**P**	**20 42 36.5**	**+1.0**
	comp=Z,11nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**32.37**	**320**	P	**P**	**20 42 57.3**	**+0.3**
	comp=Z,1.3nm,0.7s,mb3.9,baz=112,slow=9.6,SNR=11						
BVAR				PcP	PcP	20 45 43.6	-0.9
	comp=Z,2.3nm,0.6s,baz=151,slow=3.4,SNR=7.6						
BVAR	**Borovoye Array**	**32.37**	**320**	P	**P**	**20 42 57.3**	**+0.4**
BVAR						20 45 43.6	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**32.44**	**320**	*e*P	**P**	**20 42 57.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
BRVK	**Borovoye**	**32.44**	**320**	*e*P	**P**	**20 42 57.2**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.2						
YAK	**Yakutsk**	**33.89**	**21**	*e*P	**P**	**20 43 10.4**	**+0.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
ABKAR	**Akbulak array**	**37.46**	**310**	*e*P	**P**	**20 43 40.7**	**-0.2**
	comp=Z,2.5nm,0.4s,mb4.4						
AKTK	**Aktyubinsk**	**38.89**	**312**	P	**P**	**20 43 53.3**	**+0.3**
AKTO	**Aktyubinsk**	**38.89**	**312**	P	**P**	**20 43 53.3**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.0,baz=85,slow=8.3,SNR=10						
AKTO	**Aktyubinsk**	**38.89**	**312**	P	**P**	**20 43 53.3**	**+0.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
SVE	**Sverdlovsk**	**39.04**	**323**	*e*P	**P**	**20 43 54.7**	**+0.6**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
KAPI	**Kappang**	**39.60**	**156**	P	**P**	**20 43 57.2**	**-2.0**
	comp=Z,15nm,0.7s,mb4.8,baz=358,slow=7.6,SNR=7.0						
ARU	**Arti**	**40.00**	**321**	*d i*P	**P**	**20 44 02.4**	**+0.3**
ARU				S	**S**	**20 50 06.6**	**-1.3**
ARU				SS	SS	20 53 02.5	-1.9
ARU				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
ARU	**Arti**	**40.00**	**321**	*e*P	**P**	**20 44 02.0**	**-0.1**
	comp=Z,17nm,0.8s,mb4.8						
TIXI	**Tiksi**	**41.59**	**11**	*e*P	**P**	**20 44 14.1**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,182nm,17.0s,MS4.0						
TIXI	**Tiksi**	**41.59**	**11**	*e*P	**P**	**20 44 13

comp=Z,4.6nm,0.6s,mb4.6
SIM Simferopol' 55.13 305 *e*P P **20 46 01.0 +1.1**
SIM pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KEV Kevo 56.03 336 *e*P P **20 46 05.1 -0.8**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KEV Kevo 56.03 336 *e*p P **20 46 05.1 -0.8**
comp=Z,6.6nm,0.6s,mb4.8
ARCES ARCESS Array B 56.56 336 P P **20 46 08.9 -0.8**
comp=Z,2.4nm,0.4s,mb4.5,baz=84,slow=7.3,SNR=20
ARCES ARCESS Array B 56.56 336 P P **20 46 08.9 -0.8**
ARCES pmax pmax
comp=Z,2.0nm,0.4s
BRTR Keskin Array B 56.78 299 P P **20 46 11.2 -0.6**
comp=Z,2.0nm,0.7s,mb4.3,baz=92,slow=6.1,SNR=4.2
BRTR Keskin Array B 56.78 299 P P **20 46 11.2 -0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 56.86 327 *e*P P **20 46 10.9 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KAF Kangasniemi 56.86 327 *e*p P **20 46 10.9 -1.1**
comp=Z,3.9nm,0.6s,mb4.6,baz=82,slow=6.7
FINES FINESS Array B 57.05 326 P P **20 46 12.6 -0.7**
comp=Z,4.0nm,0.4s,mb4.8,baz=83,slow=6.7,SNR=42
FINES FINESS Array B 57.05 326 P P **20 46 12.6 -0.7**
FINES pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 57.13 313 P P **20 46 12.9 -1.2**
comp=Z,1.7nm,0.5s,mb4.4,baz=72,slow=6.0,SNR=7.3
AKASG Malin Array Be 57.13 313 P P **20 46 12.9 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
VSU Vasula 57.15 322 *c*e P P **20 46 13.0 -1.1**
VSU pmax pmax
comp=Z,19nm,1.0s,mb5.1
IDID Didziasalis 57.69 319 *e*P P **20 46 17.7 -0.3**
IIGN Ignalina 57.97 319 *e*P P **20 46 20.0 +0.1**
ISAL Salakas 57.98 319 *e*P P **20 46 19.8 -0.2**
SPITS Spitsbergen Ar 58.47 346 P P **20 46 22.7 -0.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=109,slow=9.8,SNR=11
SPITS Spitsbergen Ar 58.47 346 P P **20 46 22.7 -0.4**
SPITS pmax pmax
comp=Z,2.0nm,0.7s
WRAB Tennant Creek 59.00 147 *e*P P **20 46 27.3 -0.2**
VRI Vrincioaia 59.94 308 ⇑P P **20 46 34.0 +0.2**
VRI Vrincioaia 59.94 308 *i*P P **20 46 34.0 +0.2**
BURAR Bucovina Array 60.44 310 ⇓P P **20 46 37.3 +0.1**
BURAR Bucovina Array 60.44 310 ⇓*i*P P **20 46 37.3 +0.1**
MLR Muntele Rosu 60.57 308 ⇑P P **20 46 39.3 +1.2**
MLR Muntele Rosu 60.57 308 ⇑*i*P P **20 46 39.3 +1.2**
KWP Kalwaria Pacla 61.45 313 *e*P P **20 46 44.3 +0.2**
KWP Kalwaria Pacla 61.45 313 *e*P P **20 46 43.9 -0.1**
KWP pmax pmax
comp=Z,15nm,0.9s,mb5.1
KWP Kalwaria Pacla 61.45 313 *e*P P **20 46 43.9 -0.1**
comp=Z,15nm,0.9s,mb5.1
KWP Kalwaria Pacla 61.45 313 ⇑*i*P P **20 46 44.2 +0.2**
KOLS Kolonicke sedl 61.93 312 *e*P P **20 46 47.3 0.0**
KOLS *e* 20 46 55.4
KOLS pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
KOLS Kolonicke sedl 61.93 312 *e*P P **20 46 47.3 0.0**
comp=Z,2.9nm,1.3s,mb4.2
KOLS *e* 20 46 55.4
KOLS Kolonicke sedl 61.93 312 *e*P P **20 46 47.2 -0.1**
KOLS *e*pP pP 20 46 55.4 +6.5
ASAR Alice Springs 62.07 150 P P **20 46 48.5 +0.1**
comp=Z,4.7nm,0.5s,mb4.9,baz=333,slow=6.5,SNR=51
ASAR Alice Springs 62.07 150 P P **20 46 48.5 +0.1**
ASAR pmax pmax
comp=Z,5.0nm,0.5s
STHS Stebnicka Huta 62.43 313 *e*P P **20 46 51.5 +0.9**
STHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
STHS Stebnicka Huta 62.43 313 *e*P P **20 46 51.5 +0.9**
comp=Z,2.0nm,1.1s,mb4.2
STHS Stebnicka Huta 62.43 313 *e*P P **20 46 51.5 +0.9**
NB2 NORSAR Subarra 64.11 327 P P **20 47 00.0 -1.5**
comp=Z,3.4nm,0.5s,mb4.6,baz=72,slow=6.9
NOA NORSAR Array B 64.11 327 P P **20 47 00.1 -1.4**
comp=Z,3.8nm,0.6s,mb4.6,baz=73,slow=6.7,SNR=16
NOA NORSAR Array B 64.11 327 P P **20 47 00.1 -1.4**
NOA pmax pmax
comp=Z,4.0nm,0.6s
VYHS Vyhne 64.23 313 *e*P P **20 47 02.5 0.0**
VYHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
VYHS Vyhne 64.23 313 *e*P P **20 47 02.5 0.0**
comp=Z,4.6nm,1.4s,mb4.3
VYHS Vyhne 64.23 313 *e*P P **20 47 02.5 0.0**
KOLL Kolacno 64.47 313 *e*P P **20 47 03.6 -0.5**
KOLL Kolacno 64.47 313 *e*P P **20 47 03.6 -0.5**
MORC Moravsky Berou 64.58 314 ⇓P P **20 47 04.2 -0.6**
MORC Moravsky Berou 64.58 314 ⇓*i*P P **20 47 04.2 -0.6**
NWAO Narrogin (SRO) 65.79 169 P P **20 47 11.3 -1.4**
comp=Z,18nm,1.0s,mb5.0,baz=333,slow=4.5,SNR=7.2
NWAO Narrogin (SRO) 65.79 169 P P **20 47 11.3 -1.4**
NWAO pmax pmax
comp=Z,18nm,1.0s
BRG Berggiesshubel 66.34 316 *e*(P) P **20 47 19.4 +3.3**
comp=Z,3.8nm,0.9s,mb4.4
BRG Berggiesshubel 66.34 316 *e*P P **20 47 19.5 +3.3**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
CLL Collm 66.72 317 *i*P P **20 47 19.5 +0.9**
CLL *i* 20 47 27.4
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CLL Collm 66.72 317 *i*P P **20 47 19.5 +0.9**
comp=Z,5.0nm,0.9s,mb4.5
CLL *i* 20 47 27.4
CLL Collm 66.72 317 *i*P P **20 47 19.5 +0.9**
comp=Z,5.0nm,0.9s,mb4.5
CLL *i* 20 47 27.4
GERES GERESS Array B 67.27 314 P P **20 47 21.8 -0.4**
comp=Z,1.1nm,0.7s,mb4.0,baz=72,slow=4.3,SNR=7.2
GERES GERESS Array B 67.27 314 P P **20 47 21.8 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.7s
KDAK Kodiak Island 69.61 34 *i*P P **20 47 37.2 +0.6**
INK Inuvik 70.95 20 *e*P P **20 47 43.9 -0.7**
INK pmax pmax
comp=Z,12nm,1.3s
INK Inuvik 70.95 20 *e*P P **20 47 43.9 -0.7**
comp=Z,12nm,1.3s,mb4.7
CDF Champ du Feu 71.30 316 *e*P P **20 47 46.4 -0.7**
comp=Z,6.7nm,0.9s,mb4.3
CDF Champ du Feu 71.30 316 *e*P P **20 47 46.4 -0.7**
CDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CDF Champ du Feu 71.30 316 *e*P P **20 47 46.4 -0.7**
comp=Z,3.3nm,0.9s,mb4.3
BMRM Bremner River 71.50 29 *e*P P **20 47 48.4 +0.3**
comp=Z,8.1nm,0.9s,mb4.7
KMBO Kilima Mbogo 71.77 257 P P **20 47 50.5 0.0**
comp=Z,2.0nm,0.4s,mb4.4,baz=183,slow=24,SNR=7.7
KMBO Kilima Mbogo 71.77 257 P P **20 47 50.5 0.0**
KMBO pmax pmax
comp=Z,2.0nm,0.4s
STKA Stephens Creek 72.55 148 *e*P P **20 47 54.3 -0.4**
comp=Z,5.0nm,0.7s,mb4.5
STKA Stephens Creek 72.55 148 P P **20 47 54.0 -0.7**
comp=Z,6.1nm,0.7s,mb4.7,baz=330,slow=7.4,SNR=8.1
LPG La Plagne 72.99 313 *e*P P **20 47 57.5 +0.2**
comp=Z,23nm,0.8s,mb4.9
LPG La Plagne 72.99 313 *e*P P **20 47 57.5 +0.2**
LPG pmax pmax
comp=Z,12nm,0.8s,mb4.9
LPG La Plagne 72.99 313 *e*P P **20 47 57.5 +0.2**
comp=Z,12nm,0.8s,mb4.9
LPL La Plagne 72.99 313 *e*P P **20 47 57.4 +0.1**
comp=Z,14nm,0.6s,mb4.8
LPL La Plagne 72.99 313 *e*P P **20 47 57.4 +0.1**
LPL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LPL La Plagne 72.99 313 *e*P P **20 47 57.4 +0.1**
comp=Z,6.8nm,0.6s,mb4.8
SMF Signal de Mont 74.19 315 *e*P P **20 48 03.5 -0.9**
comp=Z,9.4nm,0.8s,mb4.5
SMF Signal de Mont 74.19 315 *e*P P **20 48 03.5 -0.9**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMF Signal de Mont 74.19 315 *e*P P **20 48 03.5 -0.9**
comp=Z,4.7nm,0.8s,mb4.5

TCF Toulx Ste Croi 75.35 316 *e*P P **20 48 10.4 -0.6**
KEST Kesra 76.01 303 P P **20 48 15.1 0.0**
comp=Z,1.2nm,0.8s,mb3.9,baz=166,slow=2.6,SNR=4.2
CAF Calviac 76.14 314 *e*P P **20 48 15.5 -0.1**
YKA Yellowknife Ar 80.49 17 P P **20 48 38.6 -0.7**
comp=Z,2.5nm,0.7s,mb4.3,baz=331,slow=5.3,SNR=35
YKA LR LR 21 28 49.9
comp=Z,6.2nm,21.0s,MS2.9,baz=200,slow=39
YKA Yellowknife Ar 80.49 17 P P **20 48 38.6 -0.8**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,6.0nm,21.0s
ESDC Sonseca Array 82.78 313 P P **20 48 51.6 -0.3**
comp=Z,1.0nm,0.7s,mb3.9,baz=46,slow=3.7,SNR=3.6
FFC Flin Flon 90.43 15 *i*P P **20 49 29.4 +0.3**
TORD Torodi Ar. Bea 93.92 288 P P **20 49 43.4 -2.5**
comp=Z,0.6nm,0.7s,mb4.1,baz=50,slow=3.2,SNR=3.2

MAN 21 20:40:22,6°.18N×126°.68E,h36km,mb4.8,ML3.7,MS3.7, 1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.87**	**331**	*e*P	Pn	20 40 39.0	+1.2
MATI				*e*S	Sn	20 40 50.6	+1.4
DMPH	**Davao City--Mi**	**1.47**	**308**	⇓*i*P	Pn	20 40 45.1	-0.9
DMPH				*e*S	Sn	20 41 03.0	-1.0
GSPH	**General Santos**	**1.72**	**267**	*e*P	Pn	20 40 42.6	-6.8
GSPH				*e*S	Sn	20 40 58.9	-11
KCP	**Kidapawan**	**1.78**	**298**	⇑*e*P	Pn	20 40 52.6	+2.3
KCP				*i*S	Sn	20 41 12.7	+1.0
BUKP	**Musuan**	**2.33**	**317**	*e*P	Pn	20 40 58.4	+0.6
BUKP				*e*S	Sn	20 41 19.3	-5.9
CGP	**Cagayan de Oro**	**3.00**	**319**	⇓*e*P	Pn	20 41 08.5	+1.4
CGP				*e*S	Sn	20 41 44.4	+2.7

*ISCJB **21** 20:40:52.0±0.8, 18°.18S±0°.08×178°.02W±0°.08, h572km±10km, mb4.4/41, Error ellipse: s-maj=14.1km s-min=8.0km az=137.5*
*IDC **21** 20:40:53.0±1.2, 18°.25S×177°.96W, h569km±15km, mb3.9/20, mb1 3.9/21, mb1mx3.9/23, mbtmp3.9/21, Error ellipse: s-maj=14.5km s-min=9.1km az=134.0*
*BJI **21** 20:40:52.7, 18°.20S×177°.90W, h582km, mB4.9/4, mb4.6/8*
*NEIC **21** 20:40:53.8±0.6, 18°.23S×177°.93W, h582km±7km, mb4.5/12, Error ellipse: s-maj=12.3km s-min=8.3km az=137.0*
*MOS **21** 20:40:56.0±1.6, 17°.49S×178°.31W, h577km, mb4.5/17, Error ellipse: s-maj=15.4km s-min=12.8km az=120.1*
ISC 21 20:40:52.7±0.8, 18°.19S±0°.08×177°.94W±0°.08, h567km±9km, n188, σ0:94/79, mb4.4/41, 21C-14D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.84**	**276**	*e*P	P	**20 42 19.0**	**+4.3**
AFI	**Afiamalu**	**7.29**	**55**	P	P	**20 42 44.6**	**+0.4**
7.1nm,0.3s,baz=288,slow=19,SNR=5.2							
AFI				S	S	**20 44 14.8**	**-0.6**
11nm,0.3s,baz=203,slow=23,SNR=6.9							
AFI	**Afiamalu**	**7.29**	**55**	P	P	**20 42 44.6**	**+0.4**
AFI				S	S	**20 44 14.8**	**-0.6**
AFI				pmax	pmax		
comp=Z,7.0nm,0.3s							
AFI				smax			
comp=N,11nm,0.3s							
URZ	**Urewera**	**20.46**	**191**	P	P	**20 44 50.2**	**-1.7**
comp=N,18nm,0.4s,baz=343,slow=4.1,SNR=25							
RPZ	**Rata Peaks**	**27.09**	**198**	P	P	**20 45 50.0**	**-0.6**
comp=N,3.5nm,0.4s,mb4.4,baz=42,slow=11,SNR=5.4							
EIDS	**Eidsvold**	**29.59**	**251**	*e*P	P	**20 46 12.9**	**+0.2**
CTA	**Charters Tower**	**33.84**	**261**	P	P	**20 46 49.1**	**+0.1**
comp=N,15nm,0.6s,mb4.7,baz=92,slow=11,SNR=20							
CTA	**Charters Tower**	**33.84**	**261**	P	P	**20 46 49.1**	**+0.2**
CTA				pmax	pmax		
comp=Z,15nm,0.6s							
CMSA	**Cobar Meteorol**	**35.40**	**241**	*e*P	P	**20 47 02.5**	**+0.7**
COEN	**Coen**	**37.55**	**271**	*e*P	P	**20 47 20.4**	**+0.7**
STKA	**Stephens Creek**	**38.89**	**242**	*e*P	P	**20 47 31.3**	**+1.0**
comp=Z,8.3nm,0.9s,mb4.3							
STKA	**Stephens Creek**	**38.89**	**242**	P	P	**20 47 31.4**	**+1.1**
comp=Z,10nm,0.8s,mb4.4,baz=78,slow=9.3,SNR=21							
STKA	**Stephens Creek**	**38.89**	**242**	P	P	**20 47 31.4**	**+1.1**
STKA				pmax	pmax		
comp=Z,10.0nm,0.8s							
BBOO	**Buckleboo**	**43.66**	**241**	*e*P	P	**20 48 08.2**	**+0.2**
comp=Z,9.5nm,0.6s,mb4.5							
ASAR	**Alice Springs**	**45.15**	**254**	P	P	**20 48 19.7**	**+0.2**
comp=Z,40nm,0.8s,mb5.0,baz=86,slow=8.7,SNR=194							
ASAR				PcP	PcP	20 49 47.6	-0.2
comp=Z,1.7nm,0.6s,baz=96,slow=5.3,SNR=4.2							
ASAR				S	S	**20 54 15.6**	**-2.8**
comp=Z,5.7nm,0.8s,baz=91,slow=15,SNR=26							
ASAR	**Alice Springs**	**45.15**	**254**	P	P	**20 48 19.7**	**+0.2**
ASAR						20 49 47.6	
ASAR				S	S	**20 54 15.6**	**-2.8**
ASAR				pmax	pmax		
comp=Z,40nm,0.8s							
ASAR				pmax	pmax		
comp=Z,2.0nm,0.6s							
ASAR				smax			
comp=N,6.0nm,0.8s							
KAKA	**Kakadu**	**48.03**	**269**	*e*P	P	**20 48 40.3**	**-1.1**
comp=N,17nm,0.4s,mb4.9							
KAKA	**Kakadu**	**48.03**	**269**	*e*P	P	**20 48 40.0**	**-1.4**
comp=N,74nm,0.6s,mb5.4							
GUMO	**Guam**	**48.40**	**308**	P	P	**20 48 44.5**	**+0.5**
comp=N,117nm,0.9s,mb5.4,baz=210,slow=23,SNR=4.8							
GUMO	**Guam**	**48.40**	**308**	P	P	**20 48 44.5**	**+0.5**
GUMO				pmax	pmax		
comp=Z,117nm,0.9s,mb5.4							
KNA	**Kununurra**	**50.89**	**264**	*e*P	P	**20 49 01.9**	**-0.5**
comp=Z,11nm,0.5s,mb4.5							
FITZ	**Fitzroy Crossi**	**53.42**	**261**	*e*P	P	**20 49 20.1**	**-0.4**
comp=Z,3.2nm,0.3s,mb4.1							
FITZ	**Fitzroy Crossi**	**53.42**	**261**	P	P	**20 49 20.4**	**-0.1**
comp=Z,1.9nm,0.3s,mb3.9,baz=94,slow=8.1,SNR=12							
MBWA	**Marble Bar**	**58.44**	**256**	*e*P	P	**20 49 54.6**	**-0.5**
MJAR	**Matsushiro Arr**	**68.40**	**323**	P	P	**20 50 57.9**	**-0.4**
comp=Z,11nm,0.6s,mb4.6,baz=156,slow=5.9,SNR=43							
MJAR	**Matsushiro Arr**	**68.40**	**323**	P	P	**20 50 57.9**	**-0.4**
MJAR				pmax	pmax		
comp=Z,11nm,0.6s							
MAJO	**Matsushiro**	**68.40**	**323**	*e*P	P	**20 50 58.1**	**-0.2**
MAJO				pmax	pmax		
comp=Z,6.0nm,0.3s,mb4.6							
MAJO	**Matsushiro**	**68.40**	**323**	*e*P	P	**20 50 58.1**	**-0.2**
comp=Z,5.6nm,0.3s,mb4.6							
MAT	**Matsushiro**	**68.40**	**323**	P	P	**20 50 57.7**	**-0.6**
JOW	**Kunigami**	**68.74**	**309**	P	P	**20 51 01.3**	**+0.7**
comp=Z,10nm,0.6s,mb4.5,baz=131,slow=14,SNR=4.0							
ASAJ	**Asahikawa**	**71.73**	**331**	P	P	**20 51 19.4**	**+1.5**
comp=Z,5.9nm,0.5s,mb4.3,baz=330,slow=5.7,SNR=9.9							
ASAJ	**Asahikawa**	**71.73**	**331**	P	P	**20 51 19.4**	**+1.5**
ASAJ				pmax	pmax		
comp=Z,6.0nm,0.5s							
YSS	**Yuzh-Sakhalins**	**73.86**	**333**	*e*P	P	**20 51 27.9**	**-2.1**
YSS				pmax	pmax		
comp=Z,87nm,2.5s,mb4.7							
PETK	**Petropavlovsk-**	**74.06**	**345**	P	P	**20 51 30.9**	**0.0**
comp=Z,23nm,0.8s,mb4.7,baz=108,slow=8.5,SNR=22							
PETK	**Petropavlovsk-**	**74.06**	**345**	P	P	**20 51 31.0**	**0.0**
PETK				pmax	pmax		
comp=Z,23nm,0.8s,mb4.7							
KSRS	**Korea Array**	**75.21**	**318**	P	P	**20 51 38.7**	**+0.9**
comp=Z,2.1nm,0.7s,mb3.7,baz=136,slow=6.5,SNR=7.1							
KSRS	**Korea Array**	**75.21**	**318**	P	P	**20 51 38.7**	**+0.9**
KSRS				pmax	pmax		
comp=Z,2.0nm,0.7s,mb3.7							
NJ2	**Nanjing**	**78.46**	**309**	*e*P	P	**20 51 52.8**	**-2.9**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.3							
HABR	**Khabarovsk**	**78.47**	**330**	*e*P	P	**20 51 55.0**	**-0.3**
HABR				*e*		20 52 00.8	
HABR				*e*		20 54 58.3	
HABR				S	S	21 01 07.9	+2.5
HABR				*e*SS	SS	21 06 24.2	-1.6
HABR				pmax	pmax		
comp=N,30nm,1.9s							
HABR				pmax	pmax		
comp=Z,39nm,1.0s,mb4.7							
HABR				pmax	pmax		
comp=E,17nm,1.0s							

KDAK Kodiak Island 78.56 14 P P **20 51 55.5 -0.1**
comp=E,6.1nm,0.6s,mb4.1
KDAK Kodiak Island 78.56 14 P P **20 51 55.5 -0.1**
KDAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.1
MDJ Mudanjiang 78.67 325 *e*P P **20 51 57.5 +1.0**
comp=Z,16nm,1.0s,mb4.3
NVAR Mina Array Bea 79.31 44 P P **20 52 01.8 +1.8**
comp=Z,2.3nm,0.6s,mb3.7,baz=225,slow=9.8,SNR=7.6
CN2 Changchun 80.51 322 *e*P P **20 52 06.9 +0.7**
CN2 pmax pmax
comp=Z,20nm,1.1s,mb4.5
WVOR Wild Horse Val 81.33 40 *e*P P **20 52 11.4 +1.0**
WVOR pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
WVOR Wild Horse Val 81.33 40 *e*P P **20 52 11.4 +1.0**
comp=Z,3.2nm,0.8s,mb3.8
DIV Divide 83.15 15 *e*P P **20 52 19.0 -0.1**
comp=Z,28nm,1.2s,mb4.7
PNL Peninsula 83.68 19 *e*P P **20 52 21.9 +0.1**
comp=Z,10.0nm,0.8s,mb4.4
MAW Mawson 83.75 200 P P **20 52 22.2 0.0**
comp=Z,1.4nm,0.4s,mb3.8,baz=106,slow=6.5,SNR=4.5
MAW Mawson 83.75 200 P P **20 52 22.2 0.0**
MAW pmax pmax
comp=Z,1.0nm,0.4s
SEY Seymchan 84.15 347 *c*e P P **20 52 24.0 0.0**
KTH Kantishna Hill 84.15 12 *e*P P **20 52 22.9 -1.1**
comp=Z,12nm,0.9s,mb4.4
TRF Thorofare Moun 84.19 12 *e*P P **20 52 23.6 -0.6**
comp=Z,22nm,0.7s,mb4.8
MCK McKinley 84.71 13 *e*P P **20 52 26.4 -0.4**
MCK pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
MCK McKinley 84.71 13 *e*P P **20 52 26.4 -0.4**
comp=Z,8.6nm,0.7s,mb4.4
ENH Enshi 84.80 304 *e*P P **20 52 28.5 +0.5**
comp=Z,40nm,1.3s,mb4.8
JLU Jordanelle 84.97 44 *e*P P **20 52 25.3 -3.3**
comp=Z,2.8nm,0.8s,mb3.8
BILL Bilibino 86.75 354 ⇑*e*P P **20 52 36.2 -0.2**
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
DAWY Dawson 87.23 16 *e*P P **20 52 38.4 -0.4**
PDAR Pinedale Array 87.25 43 P P **20 52 40.4 +1.1**
comp=Z,1.5nm,0.7s,mb3.7,baz=209,slow=2.7,SNR=9.4
EGAK Eagle 87.37 15 *e*P P **20 52 39.5 +0.1**
comp=Z,11nm,1.1s,mb4.4
KMI Kunming 88.36 297 P P **20 52 46.8 +1.8**
KMI pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KMI pmax pmax
comp=Z,90nm,4.8s
CMAR Chiang Mai Arr 89.40 290 P P **20 52 51.1 +1.2**
comp=Z,4.0nm,0.9s,mb4.3,baz=106,slow=2.9,SNR=15
CMAR Chiang Mai Arr 89.40 290 P P **20 52 51.2 +1.3**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
YAK Yakutsk 90.00 338 *e*P P **20 52 50.6 -1.1**
YAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
PLCA Paso Flores 90.82 134 P P **20 52 57.9 +1.7**
comp=Z,2.1nm,1.1s,mb4.0,baz=84,slow=0.7,SNR=4.7
PLCA Paso Flores 90.82 134 P P **20 52 57.9 +1.8**
PLCA pmax pmax
comp=Z,2.0nm,1.1s
VNA2 Neumayer--Watz 90.88 177 *e*Pdiff P **20 52 55.2 -0.6**
VNA1 Neumayer--Stat 91.10 177 *e*Pdiff P **20 52 57.2 +0.4**
ULN Ulaanbaatar 93.66 319 *e*P P **20 53 08.8 0.0**
SONM Songino Array 94.05 319 P P **20 53 10.2 -0.4**
comp=Z,1.1nm,1.0s,mb3.9,baz=107,slow=2.9,SNR=6.2
SONM Songino Array 94.05 319 P P **20 53 10.2 -0.4**
SONM pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 94.40 25 P P **20 53 11.8 -0.1**
comp=Z,1.0nm,0.5s,mb4.2,baz=243,slow=4.5,SNR=14
YKA Yellowknife Ar 94.40 25 P P **20 53 11.8 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.5s
TIXI Tiksi 96.54 345 *e*P P **20 53 19.3 -2.0**
TIXI pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
MKAR Makanchi Array 109.65 314 PKiKP PKiKP 20 58 18.2 -1.2
comp=Z,0.3nm,0.3s,baz=70,slow=1.7,SNR=3.8
MKAR Makanchi Array 109.65 314 PKPdf PKiKP 20 58 18.2 -1.2
KURK Kurchatov 112.33 318 PKiKP PKiKP 20 58 23.2 -1.1
comp=Z,1.1nm,0.8s,baz=92,slow=2.2,SNR=7.7
KURK PP PP 20 59 16.0 -5.2
comp=Z,0.4nm,0.8s,baz=84,slow=6.0,SNR=3.6
KURK Kurchatov 112.33 318 *i*PKIKP PKiKP 20 58 23.2 -1.1
KURK 20 59 16.0
KURK pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 117.34 321 PKP PKPdf 20 58 33.0 -0.9
comp=Z,1.1nm,0.6s,baz=0.0,slow=0.1,SNR=7.1
BVAR PP PP 20 59 51.3 -4.5
comp=Z,0.5nm,0.6s,baz=116,slow=6.8,SNR=4.5
BVAR Borovoye Array 117.34 321 PKIKP PKPdf 20 58 33.0 -0.9
BVAR 20 59 51.3
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 117.40 321 *i*PKIKP PKPdf 20 58 32.9 -1.1
ARU Arti 123.33 326 *i*PKIKP PKPdf 20 58 44.3 -1.0
ARU 21 00 30.5
ARU SS SS 21 16 32.2 -6.2
ARU Arti 123.33 326 *e*PKPdf PKPdf 20 58 44.5 -0.8
ARCES ARCESS Array B 126.67 350 PKP PKPdf 20 58 50.5 -0.8
comp=Z,1.1nm,0.6s,baz=34,slow=0.6,SNR=12
ARCES ARCESS Array B 126.67 350 PKIKP PKPdf 20 58 50.5 -0.8
ARCES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 133.58 344 PKhKP 20 58 53.6
comp=Z,0.7nm,0.8s,baz=50,slow=2.2,SNR=2.6
FINES PKP PKPdf 20 59 03.3 -1.3
comp=Z,1.0nm,0.6s,baz=11,slow=2.8,SNR=4.5
FINES PP PP 21 01 41.5 +0.2
comp=Z,1.4nm,0.9s,baz=45,slow=4.1,SNR=6.6
FINES FINESS Array B 133.58 344 PKHKP 20 58 53.7
FINES 20 59 03.3
FINES 21 01 41.5
FINES pmax pmax
comp=Z,1.0nm,0.8s
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 136.70 354 PKP PKPdf 20 59 11.4 +1.0
comp=Z,0.6nm,0.6s,baz=16,slow=4.0,SNR=4.0
NOA NORSAR Array B 136.70 354 PKIKP PKPdf 20 59 11.4 +1.0
NOA pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 141.01 333 PKhKP 20 59 11.4
comp=Z,0.6nm,0.3s,baz=44,slow=4.2,SNR=9.9
AKASG PKP PKPdf 20 59 20.4 +1.8
comp=Z,0.1nm,0.3s,baz=40,slow=2.2,SNR=5.0
AKASG Malin Array Be 141.01 333 PKHKP 20 59 11.4
AKASG 20 59 20.4
AKASG pmax pmax
comp=Z,1.0nm,0.3s
SIM Simferopol' 142.24 322 *c i*PKHKP PKPdf 20 59 19.0 -2.0
SIM pmax pmax
comp=Z,9.0nm,0.9s
GKP Gorka Klasztor 143.05 345 *e*PKP PKPdf 20 59 20.1 -2.0
LVV L'vov 143.84 336 *e*PKHKP PKPdf 20 59 21.8 -1.8
KWP Kalwaria Pacla 144.50 337 *e*PKP PKPdf 20 59 25.2 +0.4
KWP Kalwaria Pacla 144.50 337 *e*PKPdf PKPdf 20 59 24.9 +0.2
KWP Kalwaria Pacla 144.50 337 ⇓*i*P PKPdf 20 59 25.1 +0.3
OJC Ojcow 145.03 340 *e*PKP PKPdf 20 59 25.4 -0.3
TLCR 145.05 326 ⇓PKIKP PKPdf 20 59 27.0 +1.1
TLCR 145.05 326 ⇓*i*P PKPdf 20 59 27.0 +1.1
BUR08 Bucovina Ar. S 145.05 332 *e*PKPdf PKPdf 20 59 27.0 +1.2
BURAR Bucovina Array 145.07 332 ⇓PKIKP PKPdf 20 59 27.5 +1.7
BURAR Bucovina Array 145.07 332 ⇓*i*P PKPdf 20 59 27.5 +1.7
STHS Stebnicka Huta 145.22 338 *e*PKIKP PKPdf 20 59 27.7 +1.7
STHS Stebnicka Huta 145.22 338 *e*PKP PKPdf 20 59 27.7 +1.7
KOLS Kolonicke sedl 145.24 336 *e*PKIKP PKPdf 20 59 27.4 +1.3
KOLS Kolonicke sedl 145.24 336 *e*PKP PKPdf 20 59 27.4 +1.3
KOLS *e* 21 02 57.9
BR131 Keskin Array S 145.29 315 *e*PKPdf PKPdf 20 59 27.3 +0.8
BRTR Keskin Array B 145.30 315 PKPbc PKPbc 20 59 27.5 -0.2
comp=Z,5.1nm,0.7s,baz=61,slow=2.6,SNR=27
BRTR Keskin Array B 145.30 315 PKIKP PKPbc 20 59 27.5 -0.1
BRTR pmax pmax

comp=Z,5.0nm,0.7s
UZH Uzhgorod 145.48 336 ⇑*i*PKIKP PKPbc 20 59 28.0 +0.1
KSP Ksiaz 145.50 344 *e*PKIKP PKPbc 20 59 28.3 +0.5
KSP Ksiaz 145.50 344 *e*PKIKP PKPbc 20 59 28.1 +0.3
NIE Niedzica 145.54 339 *e*PKIKP PKPbc 20 59 28.6 +0.6
VRI Vrincioaia 145.65 329 ⇑PKIKP PKPdf 20 59 26.6 -0.3
VRI Vrincioaia 145.65 329 ⇑*i*P PKPdf 20 59 26.5 -0.4
TRPA Tarpa 145.79 335 ⇑*i*P PKPbc 20 59 28.9 +0.1
CLL Collm 145.83 348 ⇓*i*PKIKP PKPbc 20 59 28.5 -0.3
CLL pmax pmax
comp=Z,29nm,0.9s
CLL Collm 145.83 348 ⇓*i*PKPbc PKPbc 20 59 28.5 -0.3
comp=Z,29nm,0.9s
HARR Harsova 145.85 326 ⇓PKIKP PKPbc 20 59 29.5 +0.4
HARR Harsova 145.85 326 ⇓*i*P PKPbc 20 59 29.5 +0.4
OKC Ostrava-Krasne 145.88 341 ⇑*e*PKP PKPbc 20 59 29.2 +0.2
OKC *e*PKPAB PKPab 20 59 31.1 +0.3
UPC Upice 145.88 344 ⇑*e*PKP PKPbc 20 59 29.4 +0.5
UPC *e*PKPAB PKPab 20 59 31.7 +0.9
DPC Dobruska-Polom 145.94 344 ⇑*e*PKP PKPbc 20 59 29.7 +0.6
DPC *e*PKPAB PKPab 20 59 32.1 +1.0
BRG Berggiesshubel 146.04 346 *e*PKP PKPdf 20 59 28.4 +1.0
comp=Z,4.0nm,1.0s
BRG *i* 20 59 29.7
comp=Z,12nm,0.9s
BRG Berggiesshubel 146.04 346 *e*PKIKP PKPdf 20 59 28.4 +1.0
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 146.12 342 *e*PKIKP PKPdf 20 59 28.0 +0.5
PVCC Panska Ves 146.22 346 ⇑*e*PKP PKPbc 20 59 30.3 +0.4
PVCC *e*PKPAB PKPab 20 59 32.7 +0.5
KECS Kecovo 146.27 338 *e*PKIKP PKPbc 20 59 30.3 +0.2
KECS *e* 20 59 31.6
KECS Kecovo 146.27 338 *e*PKP PKPbc 20 59 30.3 +0.2
KECS *e* 20 59 31.5
MLR Muntele Rosu 146.30 329 ⇓PKIKP PKPbc 20 59 30.5 +0.2
MLR Muntele Rosu 146.30 329 ⇓*i*P PKPbc 20 59 30.5 +0.2
MMAI Mount Meron Ar 146.67 303 PKPbc PKPbc 20 59 32.1 +0.4
comp=Z,8.6nm,0.7s,baz=64,slow=5.7,SNR=17
PRU Pruhonice 146.73 345 ⇑*e*PKP PKPbc 20 59 31.8 +0.5
PRU *e*PKPAB PKPab 20 59 34.8 +0.6
MOX Moxa 146.73 349 *e*PKP PKPbc 20 59 31.3 0.0
comp=Z,19nm,1.8s
MOX Moxa 146.73 349 *e*PKIKP PKPbc 20 59 31.3 0.0
MOX pmax pmax
comp=Z,19nm,1.8s
DRGR 146.79 334 ⇑PKIKP PKPbc 20 59 31.5 0.0
DRGR 146.79 334 ⇑*i*P PKPbc 20 59 31.5 0.0
VYHS Vyhne 146.84 339 *e*PKIKP PKPbc 20 59 31.8 +0.2
VYHS *e* 20 59 35.3
VYHS Vyhne 146.84 339 *e*PKP PKPbc 20 59 31.8 +0.2
VYHS *e* 20 59 35.3
KOLL Kolacno 146.91 340 *e*PKIKP PKPbc 20 59 32.4 +0.6
KOLL Kolacno 146.91 340 *e*PKP PKPbc 20 59 32.4 +0.6
PSZ Piszkesteto 146.96 338 ⇑PKIKP PKPbc 20 59 32.4 +0.4
PSZ Piszkesteto 146.96 338 ⇑*i*P PKPbc 20 59 32.4 +0.4
NKC Novy Kostel 146.96 348 ⇑*e*PKP PKPbc 20 59 32.2 +0.3
NKC *e*PKPAB PKPab 20 59 35.1 -0.1
TREC Trest 147.13 344 ⇑*e*PKP PKPbc 20 59 32.5 +0.1
TREC *e*PKPAB PKPab 20 59 36.0 +0.1
CSS Prodhromos 147.60 307 *e*PKPbc PKPbc 20 59 32.9 -1.2
ZST Bratislava 147.65 341 *e*PKP PKPbc 20 59 34.7 +0.9
GRF Grafenberg Arr 147.72 349 *e*PKIKP PKPbc 20 59 34.0 +0.1
KHC Kasperske Hory 147.76 346 *e*PKPdf PKPdf 20 59 30.2 0.0
KHC *e*PKPbc PKPbc 20 59 34.4 +0.4
KHC *e*PKPab PKPab 20 59 38.8 +0.4
GEC2 GERESS Array S 148.00 345 *e*PKIKP PKPbc 20 59 34.5 -0.1
GERES GERESS Array B 148.00 345 PKPbc PKPbc 20 59 34.7 +0.1
comp=Z,6.0nm,0.7s,baz=23,slow=3.0,SNR=43
GERES GERESS Array B 148.00 345 PKIKP PKPbc 20 59 34.7 +0.1
GERES pmax pmax
comp=Z,6.0nm,0.7s
GIVF Givet 148.08 357 *e*PKP1 PKPbc 20 59 34.5 -0.3
BAIF Baives 148.16 357 *e*PKP1 PKPbc 20 59 34.8 -0.2
comp=Z,11nm,0.7s
BZS Buzias 148.18 334 ⇑PKIKP PKPbc 20 59 35.1 -0.1
BZS Buzias 148.18 334 ⇑*i*P PKPbc 20 59 35.1 -0.1
CONA Conrad Observa 148.27 342 ⇓*i*PKiKP PKiKP 20 59 35.9 -0.7
comp=Z,14nm,1.1s
FLN La Foliniere 149.43 3 *e*PKP1 PKPbc 20 59 37.4 -0.7
comp=Z,51nm,1.2s
BFO Black Forest 149.50 352 *e*PKHKP PKPbc 20 59 38.1 -0.2
CDF Champ du Feu 149.56 353 *e*PKP1 PKPbc 20 59 38.2 -0.2
comp=Z,20nm,1.0s
ROSF Rostrenen 149.62 7 *e*PKP1 PKPbc 20 59 37.6 -1.0
LDF La Druitiere 149.62 3 *e*PKP1 PKPbc 20 59 37.8 -0.8
MEZF Maizieres J'vi 149.66 356 *e*PKP1 PKPbc 20 59 38.6 -0.1
SGMF Saint Gilles 149.78 6 *e*PKP1 PKPbc 20 59 38.1 -0.8
comp=Z,34nm,1.1s
GRR Gorron 149.78 4 *e*PKP1 PKPbc 20 59 38.4 -0.6
HAU Haudompre 150.05 354 *e*PKP1 PKPbc 20 59 39.2 -0.4
comp=Z,11nm,0.7s
HINF Hinteralfeld 150.19 353 *e*PKP1 PKPbc 20 59 39.4 -0.5
comp=Z,7.5nm,0.7s
ABTA Abfaltersbach 150.24 345 ⇑*i*PKPbc PKPbc 20 59 39.7 -0.4
comp=Z,13nm,0.7s
DAVA Damuels 150.28 349 ⇓*i*PKPbc PKPbc 20 59 39.7 -0.4
comp=Z,16nm,1.4s
FETA Feichten 150.37 348 ⇓*i*PKiKP PKiKP 20 59 40.3 -0.6
comp=Z,11nm,1.0s
VISS Visnje 150.49 342 *i*P PKPab 20 59 49.3 -0.5
LOR Lormes 150.96 357 *e*PKP1 PKPbc 20 59 41.4 -0.3
comp=Z,9.9nm,0.6s
HYF Humbligny 150.99 359 *e*PKP1 PKPbc 20 59 41.8 0.0
SSF Saint Saulge 151.18 358 *e*PKP1 PKPbc 20 59 41.9 -0.3
comp=Z,8.7nm,0.7s
AVF Avril sur Loir 151.46 358 *e*PKP1 PKPbc 20 59 42.1 -0.8
comp=Z,11nm,1.1s
CABF La Chapelle 151.46 354 *e*PKP1 PKPbc 20 59 43.1 +0.2
comp=Z,27nm,1.1s
MFF Saint Martin d 151.60 3 *e*PKP1 PKPbc 20 59 42.6 -0.6
comp=Z,5.4nm,0.6s
BGF Bois d'Agland 151.70 359 *e*PKP1 PKPbc 20 59 43.0 -0.4
comp=Z,13nm,0.9s
TCF Toulx Ste Croi 151.98 360 *e*PKP1 PKPbc 20 59 43.4 -0.6
LPL La Plagne 152.47 353 *e*PKP1 PKPbc 20 59 45.6 +0.5
LPG La Plagne 152.49 353 *e*PKP1 PKPbc 20 59 45.6 +0.4
RJF Les Rejaudoux 152.96 1 *e*PKP1 PKPbc 20 59 45.6 -0.6
MBDF Montbardon 153.25 353 *e*PKP1 PKPbc 20 59 47.3 +0.5
comp=Z,6.4nm,0.7s
LFF La Frestale 153.30 2 *e*PKP1 PKPbc 20 59 45.3 -1.7
ESDC Sonseca Array 157.96 12 PKPab PKPab 21 00 22.1 +0.1
comp=Z,1.0nm,0.7s,baz=357,slow=5.7,SNR=4.9
KEST Kesra 161.37 341 PKPab PKPab 21 00 36.1 -0.9
comp=Z,1.7nm,0.8s,baz=327,slow=5.3,SNR=6.6

*ISCJB **21** 20:44:37.8±0.7, 40°.41N±0°.04×31°.37E±0°.05, h11km±6km, Error ellipse: s-maj=6.6km s-min=6.2km az=149.0*
*DDA **21** 20:44:37.1, 40°.61N×31°.08E, h3km±42km, Md3.1*
*ISK **21** 20:44:37.0, 40°.42N×31°.40E, h8km, MD2.9*
*CSEM **21** 20:44:38.0±0.3, 40°.41N×31°.34E, h15km, MD2.9, Error ellipse: s-maj=6.7km s-min=5.5km az=153.0*
ISC 21 20:44:38.2±0.7, **40°.42N**±0°.04×**31°.35E**±0°.05, **h16**km±5km, **n22**, σ0**83**/34, **1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDU	**Mudurnu**	**0.11**	**295**	PG	**Pg**	**20 44 40.6**	**-1.2**
MDU	**Mudurnu**	**0.11**	**295**	*i* Pg	**Pg**	**20 44 40.6**	**-1.2**
SGKT	**Sivrigoynuk**	**0.56**	**74**	⇓*i*P	**Pg**	**20 44 51.0**	**+1.6**
SGKT				*e*S	**Sg**	**20 45 01.8**	**+4.9**
SGKT	**Sivrigoynuk**	**0.56**	**74**	*i* P	**Pg**	**20 44 51.0**	**+1.7**
SGKT				*e*S	**Sg**	**20 45 01.8**	**+4.9**
GULT	**Gulveren**	**0.64**	**272**	*e*PG	**Pg**	**20 44 50.2**	**-0.5**
GULT				*e*SG	**Sg**	**20 45 00.3**	**+1.1**
GULT	**Gulveren**	**0.64**	**272**	*e*Pg	**Pg**	**20 44 50.2**	**-0.5**
GULT				*e*Sg	**Sg**	**20 45 00.3**	**+1.1**
BORA	**Eskisehir**	**0.87**	**232**	⇑*i*P	**Pb**	**20 44 53.3**	**-1.7**
BORA				*i* S	**Sb**	**20 45 06.3**	**0.0**
BORA	**Eskisehir**	**0.87**	**232**	*i* P	**Pb**	**20 44 53.3**	**-1.6**
BORA				*i* S	**Sb**	**20 45 06.3**	**0.0**
ESKT	**Eskisehir**	**0.98**	**203**	*e*PG	**Pg**	**20 44 57.2**	**+0.1**
ESKT				*e*SG	**Sg**	**20 45 10.1**	**+0.2**
ESKT	**Eskisehir**	**0.98**	**203**	*e*P	**Pb**	**20 44 57.2**	**+0.5**
ESKT				*e*S	**Sb**	**20 45 09.8**	**+0.5**
ESKT	**Eskisehir**	**0.98**	**203**	*e*Pg	**Pg**	**20 44 57.2**	**+0.1**
ESKT				*e*Sg	**Sg**	**20 45 10.1**	**+0.2**
SEYT	**Eskypehyr**	**0.98**	**203**	*e*P	**Pg**	**20 44 57.2**	**+0.1**
SEYT				*e*S	**Sb**	**20 45 09.8**	**+0.5**
SVRH	**Sivrihisar-ESK**	**0.98**	**172**	*e*PG	**Pg**	**20 44 56.6**	**-0.6**
SVRH				*e*SG	**Sg**	**20 45 10.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**0.98**	**172**	*e*Pg	**Pg**	**20 44 56.6**	**-0.6**
SVRH				*e*Sg	**Sg**	**20 45 10.3**	**+0.2**
LOD	**Lodumlu**	**1.21**	**116**	*e*PN	**Pn**	**20 44 59.2**	**-1.1**
LOD	**Lodumlu**	**1.21**	**116**	*e*Pn	**Pn**	**20 44 59.2**	**-1.2**
ADVT	**Abdulvahap**	**1.23**	**271**	*e*PN	**Pn**	**20 45 01.4**	**+0.7**
ADVT	**Abdulvahap**	**1.23**	**271**	*e*Pn	**Pn**	**20 45 01.4**	**+0.7**
SAFT	**Safranbolu**	**1.31**	**51**	*e*PN	**Pn**	**20 45 01.7**	**0.0**
SAFT	**Safranbolu**	**1.31**	**51**	*e*Pn	**Pn**	**20 45 01.7**	**0.0**
KIZT	**Kizilcal**	**1.59**	**165**	*e*PN	**Pn**	**20 45 05.8**	**+0.1**
KIZT	**Kizilcal**	**1.59**	**165**	*e*Pn	**Pn**	**20 45 05.8**	**+0.1**

*IDC **21** 20:45:43.5±1.9, 7°.47S×109°.51E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/22, mbtmp3.9/9, ML3.5/1, MS3.6/5, Ms1 3.6/5, ms1mx3.0/29, Error ellipse: s-maj=123.4km s-min=16.2km az=54.0*
*ISCJB **21** 20:45:47.7±0.9, 7°.14S±0°.07×109°.98E±0°.04, h29km±7km, mb4.0/11, MS3.6/4, Error ellipse: s-maj=13.3km s-min=5.3km az=21.1*
*NEIC **21** 20:45:47.2±1.2, 7°.75S×109°.25E, h35km, mb4.2/3, Error ellipse: s-maj=65.5km s-min=10.5km az=54.0*
*DJA **21** 20:45:49, 7°.21S×110°.05E, h15km, MLv4.4/11*
ISC 21 20:45:46.8±1.1, **7°.15S**±0°.07×**109°.99E**±0°.04, **h9**km±7km, **n36**, σ1**13**/38, **mb4.0**/11, **MS3.6**/4, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRI	**Semarang**	**0.46**	**77**	P	**Pg**	**20 45 55.7**	**-0.1**
UGM	**Wanagama**	**0.93**	**145**	P	**Pg**	**20 46 04.7**	**+0.1**
NGJI	**Ngawi**	**1.48**	**98**	P	**Pn**	**20 46 14.3**	**+0.6**
JCJI	**Jatiwangi**	**1.83**	**291**	P	**Pn**	**20 46 18.4**	**0.0**
JCJI				S	**Sn**	**20 46 44.8**	**+3.1**
PWJI	**Pagerwojo**	**2.00**	**116**	P	**Pn**	**20 46 20.1**	**-0.7**
PWJI				S	**Sn**	**20 46 46.5**	**+0.5**
LEM	**Lembang**	**2.37**	**278**	P	**Pn**	**20 46 27.5**	**+1.5**
GRJI	**Gresik**	**2.49**	**85**	P	**Pn**	**20 46 27.2**	**-0.3**
GRJI				S	**Sn**	**20 46 59.3**	**+1.3**
GMJI	**Gumukmas**	**3.60**	**108**	P	**Pn**	**20 46 43.0**	**+0.1**
KMMI	**Kalianget**	**3.95**	**89**	P	**Pn**	**20 46 47.1**	**-0.6**
ABJI	**Asem Bagus**	**4.26**	**99**	P	**Pn**	**20 46 53.2**	**+1.2**
CGJI	**Cibinong**	**4.30**	**277**	P	**Pn**	**20 46 55.9**	**+3.5**
RBSI	**Rajabasa**	**4.41**	**287**	P	**Pb**	**20 47 03.6**	**-1.0**
NBBI	**Negara**	**4.75**	**105**	P	**Pb**	**20 47 10.1**	**-0.2**
SRBI	**Singaraja**	**5.26**	**100**	P	**Pn**	**20 47 06.9**	**+1.1**
64nm,0.8s,0.3nm							
BBKI	**Banjar Baru**	**6.07**	**53**	P	**Pn**	**20 47 20.0**	**+3.2**
MDSI	**Maura Dua**	**6.36**	**294**	P	**Pn**	**20 47 24.3**	**+3.5**
KBKI	**Kotabaru**	**7.25**	**58**	P	**Pg**	**20 48 01.3**	**-4.4**
MBWA	**Marble Bar**	**16.82**	**147**	*e*P	**Pn**	**20 49 37.7**	**-5.0**
FITZ	**Fitzroy Crossi**	**18.74**	**127**	P	**Pn**	**20 50 05.7**	**-0.8**
0.1nm,0.3s,baz=308,slow=5.3,SNR=4.2							
FITZ				LR	LR	20 57 48.1	
comp=Z,113nm,18.7s,baz=314,slow=38							
WRAB	**Tennant Creek**	**26.83**	**121**	*e*P	**P**	**20 51 27.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**27.68**	**337**	P	**P**	**20 51 35.8**	**+0.3**
2.4nm,0.8s,mb3.9,baz=173,slow=8.3,SNR=16							
CMAR				LR	LR	21 04 29.5	
comp=Z,78nm,18.5s,MS3.3,baz=205,slow=40							
ASAR	**Alice Springs**	**28.23**	**128**	P	**P**	**20 51 39.8**	**-0.5**
3.7nm,0.7s,mb4.1,baz=304,slow=8.5,SNR=26							
ASAR				PcP	PcP	20 54 52.3	-1.6
0.8nm,0.8s,baz=315,slow=1.9,SNR=4.6							
STKA	**Stephens Creek**	**38.37**	**134**	P	**P**	**20 53 08.1**	**-0.4**
4.4nm,0.8s,mb4.2,baz=313,slow=9.5,SNR=8.5							
STKA				LR	LR	21 08 04.2	
comp=Z,108nm,19.8s,MS3.7,baz=25,slow=35							
STKA	**Stephens Creek**	**38.37**	**134**	*e*P	**P**	**20 53 08.5**	**-0.1**
STKA				LR	LR	21 08 04.2	
LSA	**Lhasa**	**40.87**	**335**	*e*P	**P**	**20 53 30.6**	**+1.3**
3.6nm,0.7s,mb4.1							
ULN	**Ulaanbaatar**	**54.84**	**358**	*e*P	**P**	**20 55 18.1**	**+0.8**
2.0nm,0.9s,mb4.2							
SONM	**Songino Array**	**54.84**	**357**	P	**P**	**20 55 17.7**	**+0.4**
0.9nm,0.8s,mb3.9,baz=180,slow=9.8,SNR=6.4							
SONM				LR	LR	21 22 27.7	
comp=Z,45nm,18.5s,MS3.6,baz=338,slow=40							
MK31	**Makanchi Array**	**59.08**	**338**	*e*P	**P**	**20 55 46.4**	**-1.0**
MKAR	**Makanchi Array**	**59.08**	**338**	P	**P**	**20 55 46.4**	**-1.0**
0.8nm,0.6s,mb4.0,baz=145,slow=7.7,SNR=10							
MKAR	**Makanchi Array**	**59.08**	**338**	P	**P**	**20 55 46.4**	**-1.0**
KURK	**Kurchatov**	**63.69**	**338**	P	**P**	**20 56 15.8**	**-2.7**
1.1nm,1.1s,mb3.8,baz=149,slow=6.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**64.46**	**344**	P	**P**	**20 56 22.0**	**-1.6**
0.7nm,0.7s,mb3.8,baz=138,slow=6.9,SNR=3.4							
MAW	**Mawson**	**68.10**	**198**	LR	LR	21 17 23.0	
comp=Z,105nm,21.3s,MS4.0,baz=125,slow=28							
BVAR	**Borovoye Array**	**68.69**	**336**	P	**P**	**20 56 49.4**	**-1.2**
0.3nm,0.5s,mb3.5,baz=159,slow=4.3,SNR=3.9							
ABKAR	**Akbulak array**	**71.09**	**328**	*e*P	**P**	**20 57 00.5**	**-4.9**
TIXI	**Tiksi**	**79.62**	**6**	*e*P	**P**	**20 57 51.9**	**-2.2**
2.4nm,1.0s,mb4.1							

*ISCJB **21** 21:02:10.2±0.6, 50°.07N±0°.04×19°.11E±0°.03, h0km, Error ellipse: s-maj=6.2km s-min=2.9km az=2.7*
*PRU **21** 21:02:10.7, 50°.15N×19°.06E, h0km*
*IPEC **21** 21:02:10.5±0.1, 50°.09N×19°.12E, h2km±1km, ML1.7/3, Error ellipse: s-maj=1.4km s-min=0.7km az=166.0*
*CSEM **21** 21:02:10.2±0.2, 50°.16N×19°.05E, h2km, ML2.7/4, Error ellipse: s-maj=6.3km s-min=2.8km az=3.0*
*WAR **21** 21:02:10.3, 50°.08N×19°.15E*
ISC 21 21:02:10.6±0.6, **50°.09N**±0°.04×**19°.08E**±0°.03, **h0**km, **n27**, σ0**99**/44, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.48**	**74**	*e*Pg	**Pg**	**21 02 19.0**	**-0.8**
OJC				*e*Sg	**Sg**	**21 02 25.4**	**-0.6**
OJC	**Ojcow**	**0.48**	**74**	*e*Pg	**Pg**	**21 02 19.0**	**-0.8**
baz=254							
OJC				*e*Sg	**Sg**	**21 02 25.1**	**-0.9**
baz=254							
OKC	**Ostrava-Krasne**	**0.66**	**248**	*e*PG	**Pg**	**21 02 23.8**	**+0.6**
OKC				*e*SG	**Sg**	**21 02 33.6**	**+2.0**
comp=Z,15nm,0.3s							
OKC	**Ostrava-Krasne**	**0.66**	**248**	*e*Pg	**Pg**	**21 02 23.7**	**+0.5**
baz=68							
OKC				*e*Sg	**Sg**	**21 02 33.0**	**+1.4**
baz=68							
MORC	**Moravsky Berou**	**1.04**	**253**	*e*Pg	**Pg**	**21 02 30.6**	**0.0**
baz=72							
MORC				*e*Sg	**Sg**	**21 02 44.5**	**+0.4**
comp=Z,14nm,0.4s,baz=72							
NIE	**Niedzica**	**1.04**	**130**	*e*Pg	**Pg**	**21 02 30.0**	**-0.6**
NIE				*e*Sg	**Sg**	**21 02 44.6**	**+0.5**
JAVC	**Velka Javorina**	**1.54**	**217**	*e*Pn	**Pn**	**21 02 40.1**	**+0.8**
baz=37							
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*PN	**Pg**	**21 02 40.1**	**-0.3**
STHS				*e*SN	**Sg**	**21 03 02.2**	**+1.7**
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*Pn	**Pg**	**21 02 40.1**	**-0.3**
STHS				*e*Sn	**Sg**	**21 03 02.2**	**+1.7**
KOLL	**Kolacno**	**1.58**	**197**	*e*PN	**Pg**	**21 02 41.0**	**+0.2**
KOLL				*e*SN	**Sn**	**21 03 01.2**	**+0.3**
KOLL	**Kolacno**	**1.58**	**197**	*e*Pn	**Pg**	**21 02 41.0**	**+0.2**
KOLL				*e*Sn	**Sn**	**21 03 01.2**	**+0.3**
VYHS	**Vyhne**	**1.60**	**186**	*e*PN	**Pn**	**21 02 39.2**	**-1.0**
VYHS				*e*SN	**Sn**	**21 03 00.6**	**-1.0**
VYHS	**Vyhne**	**1.60**	**186**	*e*Pn	**Pn**	**21 02 39.0**	**-1.2**
baz=6.6							
VYHS				*e*Sn	**Sn**	**21 03 00.6**	**-1.0**
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*PG	**Pn**	**21 02 42.9**	**+0.1**
DPC				*e*SG	**Sn**	**21 03 06.8**	**+0.6**
comp=Z,9.6nm,0.3s							
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*Pn	**Pn**	**21 02 42.3**	**-0.5**
baz=97							
DPC	**Dobruska-Polom**	**1.79**	**279**	Pg	**Pn**	**21 02 42.9**	**+0.1**
DPC				Sg	**Sn**	**21 03 06.8**	**+0.6**
comp=Z,9.6nm,0.3s							
VRAC	**Vranov**	**1.79**	**245**	*e*Pn	**Pn**	**21 02 43.5**	**+0.7**
baz=64							
VRAC				*e*Sg	**Sg**	**21 03 07.3**	**-1.0**
comp=Z,4.6nm,0.4s,baz=64							
KECS	**Kecovo**	**1.85**	**150**	*e*PN	**Pn**	**21 02 43.5**	**-0.1**
KECS				*e*SN	**Sn**	**21 03 07.3**	**-0.4**
KRUC	**Moravsky**	**2.03**	**241**	*e*Pn	**Pn**	**21 02 46.8**	**+0.8**
baz=59							
KRUC				*e*Sg	**Sg**	**21 03 14.1**	**-1.7**
comp=Z,5.4nm,0.5s,baz=59							
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*SN	**Sn**	**21 03 20.9**	**+0.2**
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*Sn	**Sn**	**21 03 20.9**	**+0.2**
PRU	**Pruhonice**	**2.93**	**270**	*e*SG	**Sb**	**21 03 42.4**	**+2.4**
PRU	**Pruhonice**	**2.93**	**270**	Sg	**Sb**	**21 03 42.4**	**+2.4**
KHC	**Kasperske Hory**	**3.71**	**257**	*e*SG	**Sg**	**21 04 08.4**	**-1.2**
KHC	**Kasperske Hory**	**3.71**	**257**	Sg	**Sg**	**21 04 08.4**	**-1.2**
NKC	**Novy Kostel**	**4.27**	**274**	*e*SG	**Sg**	**21 04 24.9**	**-2.8**
NKC	**Novy Kostel**	**4.27**	**274**	Sg	**Sg**	**21 04 24.9**	**-2.8**

*ISCJB **21** 21:23:55.6±3.5, 43°.9N±0°.4×86°.3E±0°.2, h10km, Error ellipse: s-maj=61.3km s-min=6.4km az=22.1*
*NNC **21** 21:23:56.4±3.5, 44°.11N×86°.12E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=102.8km s-min=25.0km az=44.0*
*BJI **21** 21:23:56.2, 43°.95N×86°.23E, h10km, ML2.5/7*
ISC 21 21:23:56.4±3.7, **43°.8N**±0°.4×**86°.3E**±0°.2, **h10**km, **n4**, σ0**84**/6, **4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.02**	**88**	Pg	**Pg**	**21 24 16.8**	**+0.7**
WMQ				Sg	**Sg**	**21 24 29.0**	**-0.4**
WMQ				smax			
comp=N,29nm,0.4s							
WMQ				smax			
comp=E,50nm,0.5s							
MK31	**Makanchi Array**	**4.11**	**318**	⇑Pn	**Pn**	**21 24 59.1**	**-0.1**
comp=E,0.5nm,0.5s,baz=131,slow=14,SNR=11							
MK31				⇑Sn	**Sn**	**21 25 47.8**	**+0.5**
comp=E,1.3nm,0.4s,baz=136,slow=21,SNR=3.9							
MK31				⇓Lg		21 26 00.2	
comp=E,4.0nm,0.5s,baz=129,slow=29,SNR=6.1							
KURBB	**Kurchatov Arra**	**8.62**	**325**	⇑Pn	**Pn**	**21 26 00.3**	**-0.8**
comp=E,1.0nm,2.0s							
KURBB				⇓Lg		21 28 21.1	
comp=E,0.6nm,0.7s							
KURK	**Kurchatov**	**8.65**	**326**	⇑Pn	**Pn**	**21 25 57.1**	**-4.5**
comp=E,2.2nm,1.2s							
KURK				⇓Lg		21 28 23.7	
comp=E,1.7nm,0.6s							

CASC 21 22:17:51.8±4.1, **10°.64N×87°.71W**, **h89**km±282km, **MD3.5, ML3.5, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.88**	**36**	*e*P	Pn	22 18 24.1	+1.7
SSN	**San Juan del S**	**1.94**	**70**	*e*P	Pn	22 18 21.0	-2.1
CSAN		**1.98**	**39**	*e*P	Pn	22 18 24.5	+0.8
TICN	**Ticuantepe**	**2.00**	**46**	*e*P	Pn	22 18 25.1	+1.2
XAVN	**Gruta Xavier**	**2.02**	**42**	*e*P	Pn	22 18 24.9	+0.7
MIRN	**Miramar**	**2.03**	**29**	*e*P	Pn	22 18 27.7	+3.2
TISN	**Laguna Tiscapa**	**2.05**	**43**	*e*P	Pn	22 18 25.0	+0.4
APYN	**Apoyeque**	**2.07**	**40**	*e*P	Pn	22 18 25.7	+0.9
MGAN	**Managua**	**2.07**	**44**	*e*P	Pn	22 18 25.1	+0.3
CNGN	**Cerro Negro**	**2.09**	**28**	*e*P	Pn	22 18 28.1	+2.9
CNGN				*e*S	Sn	22 18 49.8	-0.9
MOMN	**Momotombo**	**2.09**	**33**	*e*P	Pn	22 18 27.8	+2.6
WILN	**Americas 2**	**2.12**	**45**	*e*P	Pn	22 18 25.7	+0.2
CRIN	**San Cristobal**	**2.14**	**17**	*e*P	Pn	22 18 31.5	+5.6
CRIN				*e*S	Sn	22 18 52.0	+0.1
CRIN				AML	AML	22 19 06.0	
comp=N,368nm,0.3s							
CONN	**Concepcion**	**2.24**	**66**	*e*P	Pn	22 18 25.8	-1.3
HUEN		**2.26**	**42**	*e*P	Pn	22 18 28.0	+0.6
CNCH	**Conchagua**	**2.62**	**357**	*e*P	Pn	22 18 42.2	+10
BOAB	**BOACO BROADBAN**	**2.69**	**48**	*e*P	Pn	22 18 32.5	-0.6
SBLS	**San Blas**	**3.69**	**330**	*e*P	Pn	22 18 48.0	+1.4
SNJE	**San Jose**	**3.70**	**330**	*e*P	Pn	22 18 48.4	+1.5
RTR	**El Retiro**	**3.75**	**330**	⇑*e*P	Pn	22 18 47.0	-0.5
RBDL	**Robledal**	**3.95**	**331**	*e*P	Pn	22 18 49.2	-1.0

*ISCJB **21** 22:20:09.6±0.5, 40°.14N±0°.03×24°.92E±0°.03, h23km±4km, Error ellipse: s-maj=5.4km s-min=3.8km az=17.2*
*ISK **21** 22:20:09.9, 40°.18N×25°.05E, h18km, MD2.9*
*CSEM **21** 22:20:11.6±0.2, 40°.17N×25°.13E, h15km, ML2.8/2, Error ellipse: s-maj=4.4km s-min=3.3km az=54.0*
*THE **21** 22:20:11.6, 40°.17N×25°.10E, h8km±1km, ML2.8/2, Error ellipse: s-maj=2.1km s-min=0.6km az=260.0*
*SKO **21** 22:20:17.9, 40°.00N×24°.10E, h5km*
*SOF **21** 22:20:18.4, 40°.61N×24°.89E, h20km, MD2.5*
*DDA **21** 22:20:19.7, 40°.21N×25°.93E, h7km±7km, Md2.9*
ISC 21 22:20:09.5±0.4, **40°.17N**±0°.03×**24°.95E**±0°.03, **h18**km±3km, **n62**, σ1**25**/100, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.25**	**156**	P	**Pg**	**22 20 16.1**	**+0.8**
LOS				S	**Sg**	**22 20 19.3**	**+0.1**
LOS	**Limnos**	**0.25**	**156**	P	**Pg**	**22 20 16.1**

XOR	**Xorichti**	**1.57**	**240**	P	**Pn**	**22 20 34.2**	**-2.2**
XOR				S	**Sn**	**22 20 48.8**	**-7.5**
AYVA	**Ayvalik**	**1.59**	**122**	*e*P	**Pn**	**22 20 38.4**	**+1.7**
AYVA				*i* S	**Sn**	**22 20 56.8**	**-0.1**
AYVA	**Ayvalik**	**1.59**	**122**	*e*P	**Pn**	**22 20 38.4**	**+1.6**
AYVA				*i* S	**Sn**	**22 20 56.8**	**-0.1**
MMB	**Musomiste**	**1.69**	**327**	*i* P	**Pn**	**22 20 42.2**	**+4.0**
MMB	**Musomiste**	**1.69**	**327**	*i* P	**Pn**	**22 20 42.2**	**+4.0**
RKY	**Sarkoy-Tekirda**	**1.78**	**72**	*e*PN	**Pn**	**22 20 39.0**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.78**	**72**	*e*Pn	**Pn**	**22 20 39.0**	**-0.3**
SART	**Tekirdag**	**1.78**	**72**	*i* P	**Pn**	**22 20 39.6**	**+0.3**
SART				*i* S	**Sn**	**22 21 00.2**	**-1.3**
SART	**Tekirdag**	**1.78**	**72**	*i* P	**Pn**	**22 20 39.6**	**+0.2**
SART				*i* S	**Sn**	**22 21 00.2**	**-1.3**
MFT	**Murefte**	**1.89**	**70**	*e*PN	**Pn**	**22 20 40.5**	**-0.3**
MFT	**Murefte**	**1.89**	**70**	*e*Pn	**Pn**	**22 20 40.5**	**-0.3**
PLD	**Plovdiv**	**1.95**	**355**	*i* P	**Pn**	**22 20 48.7**	**+7.1**
BALY	**Balya**	**2.10**	**101**	*e*P	**Pn**	**22 20 45.1**	**+1.4**
BALY				*i* S	**Sn**	**22 21 07.8**	**-1.5**
BALY	**Balya**	**2.10**	**101**	*e*P	**Pn**	**22 20 45.1**	**+1.4**
BALY				*i* S	**Sn**	**22 21 07.8**	**-1.5**
VAY	**Valandovo**	**2.14**	**303**	*e*Pn	**Pn**	**22 20 48.8**	**+4.5**
VAY	**Valandovo**	**2.14**	**303**	*e*Pn	**Pn**	**22 20 48.8**	**+4.5**
EDRB	**Edirne**	**2.16**	**38**	*e*PN	**Pn**	**22 20 45.6**	**+1.1**
EDRB	**Edirne**	**2.16**	**38**	*e*Pn	**Pn**	**22 20 45.6**	**+1.0**
CRLT	**Corlu**	**2.33**	**65**	*e*PN	**Pn**	**22 20 46.7**	**-0.2**
CRLT	**Corlu**	**2.33**	**65**	*e*Pn	**Pn**	**22 20 46.7**	**-0.2**

IDC 21 22:21:20.9±1.3, 0°57S×124°21E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=95.3km s-min=21.3km az=61.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**24.81**	**158**	P	P	22 26 44.7	-0.1
	0.3nm,0.5s,baz=347,slow=7.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**31.21**	**309**	P	P	22 27 42.6	+0.4
	0.8nm,0.7s,baz=138,slow=7.4,SNR=8.5						
STKA	**Stephens Creek**	**35.21**	**154**	P	P	22 28 17.3	+0.3
	1.3nm,0.9s,baz=351,slow=13,SNR=2.8						
SONM	**Songino Array**	**50.64**	**345**	P	P	22 30 23.1	+1.4
	0.6nm,0.6s,baz=152,slow=6.8,SNR=5.1						
MKAR	**Makanchi Array**	**59.73**	**328**	P	P	22 31 26.0	-1.4
	0.3nm,0.5s,baz=119,slow=7.5,SNR=5.2						

*IDC **21** 22:22:50.5±0.5, 4°24S×101°20E, h0km, mb5.4/22, mb1 5.4/23, mb1mx5.3/26, mbtmp5.4/23, ML5.1/1, Error ellipse: s-maj=19.6km s-min=11.6km az=55.0*
*ISCJB **21** 22:22:53.4±0.4, 4°23S±0°06×101°22E±0°07, h33km, mb5.4/31, MS5.1/8, Error ellipse: s-maj=11.4km s-min=7.4km az=141.4*

ISC 21 22:22:50.2±2.4, 4°27S±0°06×101°20E±0°07, h0km±15km, n67, σ0°93/64, mb5.4/31, MS5.1/8, 1C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**8.97**	**208**	Pn	**Pn**	**22 24 58.1**	**-3.0**
	6μm,0.6s,SNR=18						
COCO	**West Island**	**8.97**	**208**	‖*e*Pn	**Pn**	**22 24 58.2**	**-2.9**
COCO	**West Island**	**8.97**	**208**	Pn	**Pn**	**22 25 01.4**	**+0.3**
	SNR=8.4						
COCO				Pn	**Pn**	**22 25 01.4**	**+0.3**
	SNR=8.4						
COCO	**West Island**	**8.97**	**208**	P	**Pn**	**22 24 58.0**	**-3.1**
	1μm,1.0s,9μm						
BSI	**Banda Aceh**	**11.35**	**329**	P	**Pn**	**22 25 34.7**	**+1.0**
	595nm,0.9s,4μm						
KAPI	**Kappang**	**18.51**	**93**	P	**Pn**	**22 27 08.2**	**0.0**
	5.5nm,0.3s,baz=269,slow=10,SNR=22						
NST	**Nakhon Sawan**	**19.84**	**357**	P	**Pn**	**22 27 24.0**	**-0.2**
BDT	**Bhumibol Dam**	**21.49**	**354**	P	**P**	**22 27 41.0**	**+0.5**
	87nm,0.9s,mb5.1						
CMAR	**Chiang Mai Arr**	**22.69**	**354**	P	**P**	**22 27 53.1**	**-0.4**
	170nm,0.8s,mb5.6,baz=182,slow=8.7,SNR=76						
PALK	**Pallekele**	**23.45**	**299**	P	**P**	**22 27 59.0**	**-2.5**
	17nm,1.4s,515nm,mb4.4						
FITZ	**Fitzroy Crossi**	**27.58**	**122**	*e*P	**P**	**22 28 39.7**	**+0.5**
	159nm,0.8s,mb5.9						
FITZ				*e*S	**S**	**22 33 19.0**	**-2.8**
FITZ	**Fitzroy Crossi**	**27.58**	**122**	P	**P**	**22 28 39.6**	**+0.4**
	86nm,0.9s,mb5.6,baz=296,slow=5.5,SNR=31						
FITZ	**Fitzroy Crossi**	**27.58**	**122**	*e*P	**P**	**22 28 39.7**	**+0.5**
	82nm,0.8s,mb5.6						
FITZ				*e*PcP	PcP	22 31 55.0	-2.3
FITZ				*e*S	**S**	**22 33 26.7**	**+4.9**
BBP	**Basco**	**31.92**	**39**	*e*P	**P**	**22 29 13.8**	**-3.8**
KAKA	**Kakadu**	**31.98**	**107**	*e*P	**P**	**22 29 16.3**	**-2.0**
	97nm,0.9s,mb5.7						
KAKA	**Kakadu**	**31.98**	**107**	*e*P	**P**	**22 29 16.3**	**-2.0**
	297nm,0.9s,mb6.2						
NWAO	**Narrogin (SRO)**	**32.21**	**154**	*e*P	**P**	**22 29 20.4**	**+0.4**
	182nm,0.9s,mb6.0						
NWAO	**Narrogin (SRO)**	**32.21**	**154**	P	**P**	**22 29 20.8**	**+0.8**
	41nm,1.0s,mb5.3,baz=292,slow=12,SNR=6.9						
NWAO	**Narrogin (SRO)**	**32.21**	**154**	*e*P	**P**	**22 29 20.9**	**+0.9**
NWAO				pmax	pmax		
	comp=Z,25nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,3μm,20.0s						
NWAO	**Narrogin (SRO)**	**32.21**	**154**	*e*P	**P**	**22 29 20.9**	**+0.8**
	comp=Z,25nm,0.8s,mb5.2						
NWAO				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
ENH	**Enshi**	**35.25**	**12**	*e*P	**P**	**22 29 46.8**	**+0.3**
	comp=Z,149nm,0.8s,mb6.0						
ENH				*e*PP	PP	22 31 00.4	-6.2
ENH				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
ASAR	**Alice Springs**	**36.97**	**125**	P	**P**	**22 30 01.8**	**+0.4**
	comp=Z,27nm,0.9s,mb5.0,baz=298,slow=7.8,SNR=86						
XAN	**Xi'an**	**38.80**	**10**	P	**P**	**22 30 16.8**	**+0.2**
XAN				pP		22 30 26.8	
XAN				sP	sP	22 30 30.9	+14
XAN				S	**S**	**22 36 20.9**	**+5.7**
XAN				SS	SS	22 39 02.9	-3.2
XAN				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.9						
XAN				pmax	pmax		
	comp=Z,140nm,7.4s						
XAN				LR	LR		
	comp=N,4μm,14.0s,MS5.4						
XAN				LR	LR		
	comp=E,1μm,16.9s,MS5.4						
XAN				LR	LR		
	comp=Z,3μm,15.2s,MS5.2						
JOW	**Kunigami**	**40.52**	**39**	P	**P**	**22 30 31.4**	**+0.3**
	comp=Z,46nm,0.9s,mb5.2,baz=216,slow=7.3,SNR=7.2						
CTA	**Charters Tower**	**46.58**	**114**	P	**P**	**22 31 20.6**	**+0.5**
	comp=Z,135nm,1.1s,mb6.0,baz=284,slow=11,SNR=27						
STKA	**Stephens Creek**	**46.76**	**131**	P	**P**	**22 31 22.2**	**+0.8**
	comp=Z,34nm,0.9s,mb5.5,baz=298,slow=7.5,SNR=29						
DL2	**Dalian**	**46.93**	**22**	P	**P**	**22 31 23.0**	**+0.4**
DL2				S	**S**	**22 38 14.5**	**-0.2**
DL2				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.5						
DL2				pmax	pmax		
	comp=Z,280nm,8.2s						
DL2				LR	LR		
	comp=N,1μm,18.6s,MS5.0						
DL2				LR	LR		
	comp=E,1μm,18.6s,MS5.0						
DL2				LR	LR		
	comp=Z,1μm,18.4s,MS5.0						
KSRS	**Korea Array**	**48.39**	**29**	P	**P**	**22 31 34.4**	**+0.5**
	comp=Z,125nm,0.9s,mb6.0,baz=214,slow=8.1,SNR=42						
KSH	**Kashi**	**49.38**	**334**	P	**P**	**22 31 41.4**	**-0.1**
KSH				*e*pP		22 31 49.6	
KSH				*e*sP	sP	22 31 51.5	+10
KSH				*e*PP	PP	22 33 36.8	+1.1
KSH				*e*PcS	PcS	22 37 02.5	+2.0
KSH				*e*S	**S**	**22 38 42.3**	**-7.1**
KSH				pmax	pmax		
	comp=Z,420nm,3.2s						
KSH				LR	LR		
	comp=N,990nm,14.7s,MS5.2						
KSH				LR	LR		
	comp=E,2μm,17.3s,MS5.2						
KSH				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
CN2	**Changchun**	**52.60**	**22**	⇑P	**P**	**22 32 05.9**	**+0.2**
CN2				*e*pP		22 32 15.8	
CN2				*e*sP	sP	22 32 19.8	+14
CN2				PcP	PcP	22 33 15.8	-0.1
CN2				PP	PP	22 34 05.9	+1.1
CN2				*e*S	**S**	**22 39 29.3**	**-4.6**
CN2				SS	SS	22 43 17.1	+4.7
CN2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s,MS5.5						
CN2				LR	LR		
	comp=E,3μm,16.0s,MS5.5						
CN2				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
MAJO	**Matsushiro**	**53.31**	**37**	*e*P	**P**	**22 32 09.8**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,132nm,1.1s,mb5.8						
MAJO				MLR	MLR		
	comp=Z,972nm,20.0s,MS4.8						
MAJO	**Matsushiro**	**53.31**	**37**	*e*P	**P**	**22 32 09.8**	**-1.3**
	comp=Z,132nm,1.1s,mb5.8						
MAJO				LR	LR		
	comp=Z,972nm,20.0s,MS4.8						
MJAR	**Matsushiro Arr**	**53.31**	**37**	P	**P**	**22 32 10.6**	**-0.5**
	comp=Z,25nm,0.8s,mb5.2,baz=137,slow=33,SNR=4.9						
MKAR	**Makanchi Array**	**53.52**	**344**	P	**P**	**22 32 13.1**	**+0.6**
	comp=Z,104nm,0.7s,mb6.0,baz=147,slow=8.2,SNR=162						
KLR	**Kul'dur**	**59.53**	**23**	*e*P	**P**	**22 32 52.0**	**-3.2**
KLR				*e*S	**S**	**22 41 06.5**	**+0.7**
KLR				pmax	pmax		
	comp=E,120nm,1.2s						
KLR				pmax	pmax		
	comp=Z,200nm,1.2s,mb6.0						
KLR				MLR	MLR		
	comp=E,1μm,13.0s						
KLR				MLR	MLR		
	comp=Z,3μm,13.0s,MS5.5						
ZALV	**Zalesovo Beam**	**59.61**	**349**	P	**P**	**22 32 56.1**	**+0.5**
	comp=Z,127nm,0.8s,mb6.0,baz=177,slow=4.9,SNR=78						
BVAR	**Borovoye Array**	**62.71**	**340**	P	**P**	**22 33 16.6**	**-0.1**
	comp=Z,43nm,0.7s,mb5.7,baz=146,slow=8.7,SNR=111						
MAW	**Mawson**	**68.40**	**195**	P	**P**	**22 33 53.9**	**+0.6**
	comp=Z,14nm,0.9s,mb5.2,baz=38,slow=9.6,SNR=14						
MMAI	**Mount Meron Ar**	**72.34**	**306**	P	**P**	**22 34 19.8**	**+1.7**
	comp=Z,19nm,0.8s,mb5.3,baz=90,slow=10,SNR=33						
PETK	**Petropavlovsk-**	**74.17**	**32**	P	**P**	**22 34 28.2**	**-0.2**
	comp=Z,33nm,0.8s,mb5.4,baz=217,slow=3.6,SNR=26						
BRTR	**Keskin Array B**	**75.73**	**313**	P	**P**	**22 34 37.4**	**-0.4**
	comp=Z,16nm,0.8s,mb5.2,baz=137,slow=7.6,SNR=72						
GOLH	**Golhisar**	**78.10**	**309**	*i* P	**P**	**22 34 48.5**	**-2.7**
KHAL	**Karahalli**	**78.44**	**310**	*i* P	**P**	**22 34 53.6**	**+0.5**
AKASG	**Malin Array Be**	**82.00**	**322**	P	**P**	**22 35 11.7**	**-0.3**
	comp=Z,10nm,0.8s,mb5.0,baz=88,slow=4.8,SNR=36						
MICGM	**Minsk**	**83.86**	**326**	*e*P	**P**	**22 35 22.0**	**+0.4**
NACGM	**Naroch**	**84.59**	**326**	*e*P	**P**	**22 35 26.0**	**+0.8**
FINES	**FINESS Array B**	**86.67**	**332**	P	**P**	**22 35 35.8**	**+0.3**
	comp=Z,16nm,0.8s,mb5.3,baz=101,slow=7.5,SNR=45						
FINES	**FINESS Array B**	**86.67**	**332**	P	**P**	**22 35 35.8**	**+0.4**
FINES				pmax	pmax		
	comp=Z,16nm,0.8s						
ARCES	**ARCESS Array B**	**89.00**	**340**	P	**P**	**22 35 46.5**	**0.0**
	comp=Z,30nm,0.8s,mb5.6,baz=79,slow=5.6,SNR=19						
ARCES	**ARCESS Array B**	**89.00**	**340**	P	**P**	**22 35 46.5**	**0.0**
ARCES				pmax	pmax		
	comp=Z,31nm,0.8s						
GERES	**GERESS Array B**	**91.53**	**319**	P	**P**	**22 35 59.4**	**+0.6**
	comp=Z,5.9nm,0.8s,mb5.0,baz=99,slow=5.2,SNR=43						
GERES	**GERESS Array B**	**91.53**	**319**	P	**P**	**22 35 59.4**	**+0.7**
GERES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**92.17**	**321**	*e*P	**P**	**22 36 00.0**	**-1.6**
CLL	**Collm**	**92.17**	**321**	*e*P	**P**	**22 36 00.0**	**-1.6**
	comp=Z,15nm,1.4s,mb5.1						
CLL	**Collm**	**92.17**	**321**	*e*P	**P**	**22 36 00.0**	**-1.6**
	comp=Z,18nm,2.4s,mb5.0						
NOA	**NORSAR Array B**	**93.70**	**331**	P	**P**	**22 36 08.4**	**-0.1**
	comp=Z,4.6nm,0.9s,mb4.8,baz=95,slow=5.0,SNR=14						
YKA	**Yellowknife Ar**	**116.17**	**18**	PKP	PKPdf	22 41 34.0	-1.1
	comp=Z,3.0nm,0.8s,baz=315,slow=1.9,SNR=29						
YKA	**Yellowknife Ar**	**116.17**	**18**	PKP	PKPdf	22 41 34.0	-1.1
NVAR	**Mina Array Bea**	**130.55**	**41**	PKP	PKPdf	22 42 05.2	+1.8
	comp=Z,5.6nm,0.7s,baz=240,slow=3.6,SNR=14						
NVAR	**Mina Array Bea**	**130.55**	**41**	PKP	PKPdf	22 42 05.2	+1.8
CPUP	**Villa Florida**	**143.15**	**213**	PKP	PKPdf	22 42 28.0	+1.0
	comp=Z,1.2nm,0.7s,baz=219,slow=14,SNR=4.3						
CPUP	**Villa Florida**	**143.15**	**213**	PKP	PKPdf	22 42 28.0	+1.0
SLM	**Saint Louis**	**144.25**	**15**	*e*PKHKP	PKPdf	22 42 26.1	-2.4
CCM	**Cathedral Cave**	**144.51**	**17**	*e*PKHKP	PKPdf	22 42 27.1	-1.9
BLO	**Bloomington**	**144.56**	**10**	*e*PKHKP	PKPdf	22 42 26.3	-2.8
FVM	**French Village**	**144.81**	**16**	*e*PKHKP	PKPdf	22 42 27.2	-2.3
TXAR	**Lajitas Array**	**145.70**	**41**	PKPbc	PKPbc	22 42 32.6	+0.9
	comp=Z,117nm,0.9s,baz=278,slow=1.4,SNR=74						

*IDC **21** 22:22:47.2±2.4, 7°03S×150°62E, h0km, mb4.1/3, mb1 4.2/3, mb1mx4.0/15, mbtmp4.0/3, Error ellipse: s-maj=141.4km s-min=33.5km az=132.0*
*ISCJB **21** 22:22:50.5±1.1, 7°0S±0°1×150°5E±0°2, h33km, mb3.8/3, Error ellipse: s-maj=37.5km s-min=16.9km az=21.0*
*NEIC **21** 22:22:52.4±0.9, 7°02S×150°53E, h35km, mb4.0/2, Error ellipse: s-maj=31.2km s-min=13.6km az=112.0*

ISC 21 22:22:52.4±1.1, 7°0S±0°1×150°5E±0°2, h35km, n9, σ0°73/8, mb3.8/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**20.28**	**229**	*e*P	**P**	**22 27 24.9**	**-0.3**
	6.9nm,1.0s						
ASAR	**Alice Springs**	**23.00**	**222**	P	**P**	**22 27 54.2**	**-0.2**
	1.1nm,0.5s,mb3.5,baz=54,slow=9.5,SNR=16						
FITZ	**Fitzroy Crossi**	**26.64**	**243**	P	**P**	**22 28 28.5**	**+0.4**
	4.4nm,0.7s,mb4.1,baz=70,slow=6.3,SNR=8.3						
FITZ	**Fitzroy Crossi**	**26.64**	**243**	*e*P	**P**	**22 28 28.2**	**+0.1**
	2.8nm,0.6s,mb4.0						
TAU	**Tasmania Unive**	**35.85**	**184**	P	**P**	**22 29 48.9**	**+0.1**
MAJO	**Matsushiro**	**44.85**	**346**	*e*P	**P**	**22 31 02.1**	**-1.2**
TLY	**Talaya**	**70.90**	**331**	P	**P**	**22 34 07.3**	**+1.4**
YKA	**Yellowknife Ar**	**98.43**	**28**	P	**P**	**22 36 26.6**	**0.0**
	0.3nm,0.7s,mb3.9,baz=276,slow=4.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	**148.75**	**284**	PKPbc	PKPbc	22 42 37.5	+0.3
	1.8nm,0.6s,baz=63,slow=3.1,SNR=14						

*BJI **21** 22:22:47.7, 4°91S×100°99E, h19km, mB5.6/44, mb5.5/62, Ms5.5/75, Ms7 5.2/62*
*IDC **21** 22:22:53.5±0.4, 4°23S×101°25E, h0km, mb5.4/28, mb1 5.4/29, mb1mx5.4/29, mbtmp5.4/29, ML5.0/1, Error ellipse: s-maj=14.5km s-min=10.7km az=52.0*
*GCMT **21** 22:22:55.7±0.2, 4°71S×100°91E, h25km, MW5.5/81, Moment Tensor Solution. s81,c137; s73,c136; Duration: 1s4 Moment tensor: Scale 1017Nm; Mrr0.97±.03; Mθθ-0.66±.02; Mφφ-0.30±.03; Mrθ 1.65±.04; Mθφ0.68±.02; Mφr-0.93±.05; Best double couple: M0 2.18000×1017 NP1:φs318.00000°, δ15.00000°, λ108.00000°. NP2:φs120.00000°, δ75.00000°, λ85.00000°. Principal axes: T 2.0830, Plg59.0000°, Azm23.0000°; N 0.1930, Plg5.0000°, Azm121.0000°; P -2.2770, Plg30.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 22:22:55.7±0.1, 4°13S×101°27E, h19km, mb5.5/82, MS5.2/181, MW5.4 Error ellipse: s-maj=6.1km s-min=4.8km az=50.0, Moment Tensor Solution. s63 Moment tensor: Scale 1017Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mφr0.00; Best double couple: M0 1.50000×1017 NP1:φs116.00000°, δ68.00000°, λ62.00000°. NP2:φs351.00000°, δ36.00000°, λ139.00000°. Principal axes: T 1.3200, Plg57.0000°, Azm346.0000°; N 0.2500, Plg26.0000°, Azm127.0000°; P -1.5700, Plg17.0000°, Azm226.0000°;*
NEIC Felt (II) at Kapahiang.
*ISCJB **21** 22:22:55.5±0.1, 4°21S±0°02×101°22E±0°02, h27km, mb5.5/174, MS5.2/214 Error ellipse: s-maj=3.3km s-min=2.3km az=24.1*
*DJA **21** 22:22:55, 4°47S×100°85E, h40km, Mw5.7/37*
*MOS **21** 22:22:56.8±1.3, 4°11S×101°32E, h33km, mb5.7/88, MS5.1/81, Error ellipse: s-maj=8.3km s-min=4.6km az=113.7*

*SZGRF **21** 22:22:59.3, 4°43S×100°61E, h33km, mb5.3, Southwest of Sumatera, Indonesia*

ISC 21 22:22:57.7±0.1, 4°18S±0°02×101°21E±0°02, h28km, h28km±1.1km: pP-P, n1033, σ1°14/581, mb5.5/174, MS5.2/214, 174C-156D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.47**	**69**	P	**Pn**	**22 23 21.9**	**-0.5**
MNAI	**Manna**	**1.75**	**96**	P	**Pn**	**22 23 26.0**	**-0.2**
LHSI	**Lahat**	**2.33**	**82**	P	**Pn**	**22 23 37.7**	**+3.5**
LWLI	**Liwa**	**2.96**	**107**	P	**Pn**	**22 23 43.6**	**+0.7**
MDSI	**Maura Dua**	**2.98**	**96**	P	**Pn**	**22 23 41.8**	**-1.3**
MDSI				S	**Sn**	**22 24 20.4**	**+2.5**
PDSI	**Padang**	**3.33**	**347**	P	**Pn**	**22 23 46.6**	**-1.3**
SISI	**Saibi**	**3.54**	**323**	P	**Pn**	**22 23 48.8**	**-2.0**
KASI	**Kota Agung**	**3.54**	**112**	P	**Pn**	**22 23 47.8**	**-3.0**
KLI	**Kotabumi**	**3.70**	**101**	P	**Pn**	**22 23 54.6**	**+1.6**
PMBI	**Palembang**	**3.76**	**71**	P	**Pn**	**22 23 56.1**	**+2.2**
PPI	**Padang Panjang**	**3.78**	**348**	P	**Pn**	**22 23 53.8**	**-0.4**
BKNI	**Bangkinang**	**4.47**	**358**	P	**Pn**	**22 24 06.3**	**+2.6**
RBSI	**Rajabasa**	**4.81**	**110**	P	**Pn**	**22 24 08.7**	**+0.4**
	2μm,1.1s,10nm						
CGJI	**Cibinong**	**5.08**	**119**	P	**Pn**	**22 24 10.6**	**-1.4**
MNSI	**Mandailing Nat**	**5.20**	**342**	P	**Pn**	**22 24 13.3**	**-0.4**
	552nm,1.0s						
TNG	**Tangerang**	**5.76**	**110**	P	**Pn**	**22 24 22.5**	**+1.0**
	4μm,1.3s,20nm						
MYKOM	**Kota Tinggi**	**6.49**	**24**	P	**Pn**	**22 24 34.8**	**+3.5**
MYKOM	**Kota Tinggi**	**6.49**	**24**	P	**Pn**	**22 24 34.7**	**+3.3**
	447nm,1.3s,6μm3.0nm						
KGM	**Kluang**	**6.50**	**19**	P	**Pn**	**22 24 34.7**	**+3.1**
TPI	**Tanjungpandan**	**6.58**	**78**	P	**Pn**	**22 24 34.9**	**+2.2**
	140nm,1.1s,4μm4.1nm						
LEM	**Lembang**	**6.90**	**113**	P	**Pn**	**22 24 36.1**	**-1.0**
	2μm,1.5s,4.9nm						
JCJI	**Jatiwangi**	**7.39**	**108**	P	**Pn**	**22 24 45.4**	**+1.5**
	853nm,1.7s,5.3nm						
IPM	**Ipoh**	**8.60**	**359**	P	**Pn**	**22 25 01.2**	**+0.8**
IPM	**Ipoh**	**8.60**	**359**	P	**Pn**	**22 25 01.9**	**+1.5**
	208nm,0.9s,3μm						
COCO	**West Island**	**9.06**	**208**	S	**Sn**	**22 26 49.4**	**+1.4**
KULM	**Kulim**	**9.42**	**357**	P	**Pn**	**22 25 12.3**	**+0.7**
KULM	**Kulim**	**9.42**	**357**	‖*e*Pn	**Pn**	**22 25 10.7**	**-0.9**
	520nm,1.3s						
KULM					Sn	**Sn**	**22 26 55.2**	**-1.5**
KULM	**Kulim**	**9.42**	**357**	P	**Pn**	**22 25 11.2**	**-0.4**
	315nm,1.5s,4μm						
SMRI	**Semarang**	**9.62**	**108**	P	**Pn**	**22 25 14.8**	**+0.4**
	650nm,0.9s,7μm						
KTGM	**Kuala Trenggan**	**9.63**	**12**	P	**Pn**	**22 25 17.2**	**+2.6**
UGM	**Wanagama**	**9.98**	**112**	P	**Pn**	**22 25 19.0**	**-0.3**
	595nm,0.9s,6μm						
LHMI	**Lhok Sumawe**	**10.27**	**335**	P	**Pn**	**22 25 21.8**	**-1.5**
	493nm,0.9s,4μm						
NGJI	**Ngawi**	**10.68**	**108**	P	**Pn**	**22 25 30.6**	**+1.7**
	254nm,1.1s,4μm						
KSM	**Kuching**	**10.68**	**59**	P	**Pn**	**22 25 32.3**	**+3.4**
KSM	**Kuching**	**10.68**	**59**	*e*Pn	**Pn**	**22 25 30.1**	**+1.1**
	192nm,1.1s						
KSM				*e*Sn	**Sn**	**22 27 31.9**	**+4.1**
KSM	**Kuching**	**10.68**	**59**	P	**Pn**	**22 25 32.4**	**+3.4**
	148nm,1.2s,2μm						
STKI	**Sintang**	**11.09**	**68**	P	**Pn**	**22 25 39.2**	**+4.7**
PWJI	**Pagerwojo**	**11.20**	**110**	P	**Pn**	**22 25 34.5**	**-1.6**
	256nm,1.0s,2μm						
GRJI	**Gresik**	**11.54**	**104**	P	**Pn**	**22 25 42.6**	**+1.9**
	1μm,1.2s						
SBUM	**Sibu**	**12.82**	**59**	P	**Pn**	**22 26 01.8**	**+3.6**
SBUM	**Sibu**	**12.82**	**59**	P	**Pn**	**22 26 02.2**	**+4.0**
	332nm,1.1s,6μm						
KMMI	**Kalianget**	**13.01**	**103**	P	**Pn**	**22 26 02.2**	**+1.4**
	376nm,1.4s						
ABJI	**Asem Bagus**	**13.44**	**106**	P	**Pn**	**22 26 07.7**	**+1.0**
BBKI	**Banjar Baru**	**13.62**	**87**	P	**Pn**	**22 26 10.9**	**+1.7**
	435nm,1.2s,7μm						
BTM	**Bintulu**	**13.94**	**58**	P	**Pn**	**22 26 17.3**	**+3.7**
NBBI	**Negara**	**13.96**	**108**	P	**Pn**	**22 26 20.6**	**+6.8**
SRBI	**Singaraja**	**14.45**	**106**	P	**Pn**	**22 26 20.2**	**-0.3**
	302nm,1.0s,3μm						
KBKI	**Kotabaru**	**14.95**	**87**	P	**Pn**	**22 26 28.0**	**+0.7**
	300nm,1.1s,3μm						
KKM	**Kota Kinabalu**	**18.10**	**56**	P	**Pn**	**22 27 08.2**	**+1.0**
KKM	**Kota Kinabalu**	**18.10**	**56**	*e*Pn	**Pn**	**22 27 06.1**	**-1.1**
	331nm,1.2s						
KKM				*e*PcP	PcP	22 31 40.4	-0.4
KKM	**Kota Kinabalu**	**18.10**	**56**	P	**Pn**	**22 27 07.3**	**+0.1**
	266nm,1.5s,6μm						
KAPI	**Kappang**	**18.50**	**93**	Pn	**Pn**	**22 27 10.9**	**-1.3**
	1μm,1.0s,SNR=14						
KAPI	**Kappang**	**18.50**	**93**	P	**Pn**	**22 27 10.0**	**-2.2**
	4.7nm,0.3s,baz=279,slow=9.1,SNR=29						
KAPI	**Kappang**	**18.50**	**93**	P	**Pn**	**22 27 10.0**	**-2.2**
TTSI	**Tana Toraja**	**18.61**	**87**	P	**Pn**

QIZ LR LR
comp=Z,4μm,22.0s,MS4.9
MBWA Marble Bar 24.68 135 *e*P **P** **22 28 14.6 -1.8**
MBWA *e*S **S** **22 32 43.0 +6.5**
MBWA Marble Bar 24.68 135 *e*P **P** **22 28 14.9 -1.5**
comp=Z,80nm,1.3s,mb5.1
MBWA *e*PcP PcP 22 31 53.5 +0.1
MBWA *e*S **S** **22 32 37.3 +0.8**
MBWA LR LR
comp=Z,5μm,20.0s,MS5.0
MBWA Marble Bar 24.68 135 P **P** **22 28 15.2 -1.2**
CUYO Cuyo Island 24.73 53 *e*P **P** **22 28 19.0 +2.1**
BUSP Coron 24.80 49 *e*P **P** **22 28 19.4 +1.9**
SJMP San Jose 25.78 50 *e*P **P** **22 28 27.4 +0.9**
NLAI Namlea 25.85 89 P **P** **22 28 26.7 -0.5**
comp=Z,112nm,0.8s,mb5.5
GUIM Jordan 25.87 55 *e*P **P** **22 28 27.8 +0.5**
RCP Roxas 26.52 54⇓*e*P **P** **22 28 31.7 -1.5**
TNTI Ternate 26.59 80 P **P** **22 28 31.8 -2.1**
comp=Z,172nm,1.3s,comp=Z,2μm,mb5.4
BUKP Musuan 26.64 63 *e*P **P** **22 28 34.6 +0.3**
TGY Tagaytay City 26.69 47 P **P** **22 28 34.5 -0.2**
comp=Z,136nm,0.5s,mb5.7,baz=170,slow=12,SNR=11
TGY Tagaytay City 26.69 47 P **P** **22 28 34.5 -0.2**
TGY pmax pmax
comp=Z,137nm,0.5s
DAV Davao City (W) 26.76 65 P **P** **22 28 34.5 -0.9**
comp=Z,94nm,0.3s,mb5.8,baz=107,slow=15,SNR=5.8
DAV Davao City (W) 26.76 65 *e*P **P** **22 28 32.6 -2.8**
comp=Z,259nm,1.0s,mb5.7
DAV LR LR
comp=Z,3μm,20.0s,MS4.9
DAV Davao City (W) 26.76 65 P **P** **22 28 36.3 +0.9**
SNR=10
DAV P 22 28 36.3
SNR=10
DAV Davao City (W) 26.76 65⇑*i*P **P** **22 28 33.7 -1.7**
MDRS Chennai 26.96 310 *e*x x 22 28 60.0
FITZ Fitzroy Crossi 27.62 122 P **P** **22 28 42.1 -1.0**
comp=Z,86nm,0.9s,mb5.4,baz=300,slow=8.8,SNR=50
FITZ S **S** **22 33 20.5 -2.8**
comp=Z,4.1nm,0.9s,baz=20,slow=12,SNR=1.9
FITZ Fitzroy Crossi 27.62 122 P **P** **22 28 41.8 -1.3**
comp=Z,234nm,1.1s,comp=Z,3μm,mb5.7
MEEK Meekatharra 27.86 145 *e*P **P** **22 28 44.7 -0.4**
MEEK *e*S **S** **22 33 23.0 -3.8**
BALP Baler 28.25 45 *e*P **P** **22 28 48.7 +0.1**
DGAR Diego Garcia 28.79 262 P **P** **22 28 52.9 -0.6**
DGAR MLR MLR
comp=Z,3μm,19.0s,MS4.8
KMI Kunming 29.16 3 P **P** **22 28 56.6 0.0**
KMI pP pP 22 28 59.3 -5.6
KMI PP PP 22 29 52.8 -10
KMI S **S** **22 33 47.9 +0.7**
KMI pmax pmax
comp=Z,22nm,1.0s,mb4.8
KMI pmax pmax
comp=Z,640nm,3.8s
KMI LR LR
comp=N,6μm,16.5s,MS5.4
KMI LR LR
comp=E,2μm,14.5s,MS5.4
KMI LR LR
comp=Z,6μm,17.6s,MS5.3
CAUP Cauayan 29.24 44 *e*P **P** **22 28 57.7 +0.2**
CAL Calcutta 29.38 335 *e*x **P** **22 29 01.8 +3.1**
CAL *e*x x 22 36 00.1
APYP Conner 29.50 41 *e*P **P** **22 28 58.7 -1.0**
AGT Agartala 29.53 341 *e*x **P** **22 28 56.0 -3.9**
GZH Guangzhou 29.57 23 P **P** **22 29 06.8 +6.5**
GZH S **S** **22 34 06.0 +12**
GZH LR LR
comp=N,4μm,17.4s,MS5.2
GZH LR LR
comp=E,3μm,17.0s,MS5.2
GZH LR LR
comp=Z,5μm,19.1s,MS5.2
GYA Guiyang 30.91 10 P **P** **22 29 14.0 +1.9**
GYA pP pP 22 29 24.8 +4.4
GYA PP PP 22 30 18.6 -3.6
GYA S **S** **22 34 15.8 +1.2**
GYA sS sS 22 34 33.0 +4.7
GYA ScP ScP 22 35 49.4 -0.1
GYA pmax pmax
comp=Z,70nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,360nm,5.9s
GYA LR LR
comp=N,3μm,16.6s,MS5.0
GYA LR LR
comp=E,2μm,17.2s,MS5.0
GYA LR LR
comp=Z,3μm,15.4s,MS5.0
SHL Shillong 30.92 343 *e*P **P** **22 29 12.0 -0.2**
SHL *e*S **S** **22 34 16.0 +1.1**
HYB Hyderabad 30.99 314 *i*P **P** **22 29 14.0 +1.0**
comp=Z,50nm,1.0s,mb5.3
HYB *e*S **S** **22 34 16.0 -0.2**
KAKA Kakadu 32.00 107 P **P** **22 29 18.9 -3.0**
comp=Z,180nm,0.9s,comp=Z,1μm,mb5.9
NWAO Narrogin (SRO) 32.29 154 P **P** **22 29 23.7 -0.5**
comp=Z,41nm,1.0s,mb5.2,baz=294,slow=10,SNR=7.1
TWG Pinlang 33.11 35 P **P** **22 29 31.4 -0.1**
comp=Z,135nm,1.2s,mb5.8
TWG *e*S **S** **22 34 48.6 -0.6**
TPUB Ta-pu 33.24 34 *e*P **P** **22 29 32.3 -0.3**
comp=Z,93nm,0.9s,mb5.7
TPUB *e*PcP PcP 22 32 15.9 +1.0
TPUB *e*S **S** **22 34 50.7 -0.5**
NGP Nagpur 33.25 320 *e*P **P** **22 29 30.7 -2.0**
NGP AMb AMB 22 29 40.9
comp=Z,71nm,1.6s,mb5.3
QZH Quanzhou 33.51 29 P **P** **22 29 36.4 +1.4**
QZH PP PP 22 30 49.9 -1.3
QZH S **S** **22 34 59.1 +3.8**
QZH LR LR
comp=N,6μm,14.3s,MS5.5
QZH LR LR
comp=E,1μm,11.2s,MS5.5
QZH LR LR
comp=Z,4μm,17.1s
YULB Yu-li 33.69 35 *e*P **P** **22 29 36.0 -0.5**
comp=Z,53nm,1.0s,mb5.4
YULB *e*PP PP 22 30 51.5 -1.6
YULB *e*PcP PcP 22 32 16.1 0.0
SSLB Suanglung 33.80 34 *e*P **P** **22 29 36.5 -1.1**
comp=Z,50nm,1.0s,mb5.4
SSLB *e*PP PP 22 30 53.1 -1.4
SSLB *e*PcP PcP 22 32 17.5 +1.0
SSLB *e*S **S** **22 34 59.2 -0.6**
KAD Karad 34.17 309 *e*P **P** **22 29 40.6 -0.2**
KAD AMb AMB 22 29 52.0
comp=Z,34nm,1.2s,mb5.2
NACB Ninganchiao 34.47 34 *e*P **P** **22 29 42.0 -1.3**
comp=Z,81nm,1.0s,mb5.6
NACB *e*PP PP 22 31 07.7 +5.9
NACB *e*PcP PcP 22 32 16.2 -2.1
NACB *e*S **S** **22 35 09.6 -0.6**
YHNB Yeheng 34.74 33 *e*P **P** **22 29 44.7 -0.9**
comp=Z,61nm,1.0s,mb5.5
YHNB LR LR
comp=Z,2μm,21.0s,MS4.8
CD2 Chengdu 34.97 4 P **P** **22 29 48.0 +0.4**
CD2 pP pP 22 29 57.8 +1.9
CD2 sP sP 22 30 01.6 +2.3
CD2 S **S** **22 35 17.6 -0.1**
CD2 sS sS 22 35 33.6 +2.1
CD2 pmax pmax
comp=Z,330nm,0.9s,mb6.3
CD2 pmax pmax
comp=Z,530nm,6.9s
CD2 LR LR
comp=N,7μm,13.7s
CD2 LR LR
comp=Z,6μm,19.0s
LSA Lhasa 35.04 345 P **P** **22 29 47.8 -0.3**
LSA S **S** **22 35 14.8 -3.9**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LSA pmax pmax
comp=Z,420nm,5.0s
LSA LR LR
comp=N,1μm,26.0s,MS4.8
LSA LR LR
comp=E,2μm,26.0s,MS4.8
LSA LR LR
comp=Z,2μm,24.0s,MS4.8
LSA Lhasa 35.04 345 *e*P **P** **22 29 47.7 -0.4**
LSA *e* 22 32 20.9
LSA *e*S **S** **22 35 19.9 +1.2**
LSA pmax pmax
comp=Z,71nm,0.9s,mb5.6
LSA MLR MLR
comp=Z,2μm,22.0s,MS4.9
LSA Lhasa 35.04 345 *e*P **P** **22 29 47.7 -0.4**
comp=Z,71nm,0.9s,mb5.6
LSA *e*PcP PcP 22 32 20.9 +1.0
LSA *e*S **S** **22 35 19.9 +1.1**
LSA LR LR
comp=Z,2μm,22.0s,MS4.9
TATO Taipei 35.04 33 PFAKE 22 30 00.0 +12
TATO LR LR
comp=Z,2μm,21.0s,MS4.7
PKI Pulchoki 35.05 335 *e*P **P** **22 29 48.0 -0.3**
comp=Z,687nm,1.7s,mb6.3
PKIN Phulchoki 35.06 335 *e*P **P** **22 29 48.3 -0.1**
comp=Z,187nm,1.0s,mb6.0
POO Poona 35.15 311 *e*P **P** **22 29 48.1 -1.2**
POO AMb AMB 22 30 02.8
comp=Z,40nm,1.2s,mb5.2
GUN Gumba 35.16 336 *e*P **P** **22 29 48.9 -0.3**
comp=Z,1μm,1.2s,mb6.7
DMN Daman 35.21 335 *e*P **P** **22 29 49.1 -0.6**
comp=Z,292nm,1.1s,mb6.1
KKN Kakani 35.30 335 *e*P **P** **22 29 49.6 -0.8**
comp=Z,450nm,1.0s,mb6.4
BHPL Bhopal 35.80 321 *e*P **P** **22 29 56.0 +1.3**
BHPL AMb AMB 22 30 06.1
comp=Z,55nm,0.2s,mb6.1
WRAB Tennant Creek 35.88 119 P **P** **22 29 54.9 -0.7**
comp=Z,670nm,1.0s,mb6.5,SNR=14
WRAB Tennant Creek 35.88 119 *e*P **P** **22 29 54.6 -1.0**
WRAB pmax pmax
comp=Z,119nm,1.0s,mb5.8
WRAB MLR MLR
comp=Z,3μm,22.0s,MS5.1
WRAB Tennant Creek 35.88 119 *e*P **P** **22 29 54.6 -1.0**
comp=Z,119nm,1.0s,mb5.8
WRAB LR LR
comp=Z,3μm,22.0s,MS5.1
WRAB Tennant Creek 35.88 119 P **P** **22 29 52.9 -2.7**
comp=Z,131nm,1.1s,comp=Z,2μm,mb5.8
WHN Wuhan 36.74 19 ⇓P **P** **22 30 01.5 -1.2**
WHN pP pP 22 30 11.3 +0.2
WHN sP sP 22 30 18.5 +4.0
WHN PP PP 22 31 32.8 +6.0
WHN PcP PcP 22 32 22.9 -2.0
WHN S **S** **22 35 44.4 -0.4**
WHN pmax pmax
comp=Z,190nm,0.8s,mb6.0
WHN pmax pmax
comp=Z,830nm,10.0s
WHN LR LR
comp=N,6μm,13.4s,MS5.6
WHN LR LR
comp=E,5μm,14.1s,MS5.6
WHN LR LR
comp=Z,9μm,15.6s,MS5.7
ASAR Alice Springs 37.02 125 P **P** **22 30 04.7 -0.5**
comp=Z,27nm,0.9s,mb5.1,baz=296,slow=7.6,SNR=78
ASAR PcP PcP 22 32 25.9 -0.1
comp=Z,10nm,0.9s,baz=293,slow=2.4,SNR=6.3
ASAR S **S** **22 35 45.1 -4.2**
comp=Z,6.7nm,1.1s,baz=292,slow=15,SNR=6.5
ASAR Alice Springs 37.02 125 P **P** **22 30 04.7 -0.5**
ASAR 22 32 25.9
ASAR S **S** **22 35 45.2 -4.1**
ASAR pmax pmax
comp=Z,27nm,1.0s
ASAR pmax pmax
comp=Z,10.0nm,0.9s
ASAR smax
comp=N,7.0nm,1.1s
SMPI Sarmi 37.50 88 P **P** **22 30 07.3 -2.2**
comp=N,116nm,1.4s,comp=N,2μm,mb5.4
PTH Pithoragarh 39.11 330 *e*P **P** **22 30 22.2 -0.6**
PTH *e*x x 22 31 55.0
AJM Ajmer 39.87 321 *e*P **P** **22 30 27.8 -1.4**
AJM AMb AMB 22 30 32.4
comp=Z,70nm,1.4s,mb5.2
SSE Sheshan 39.92 27 P **P** **22 30 29.3 -0.2**
SSE pP pP 22 30 38.0 +0.1
SSE PP PP 22 32 00.8 -0.8
SSE S **S** **22 36 31.4 -1.5**
SSE sS sS 22 36 46.8 0.0
SSE pmax pmax
comp=Z,120nm,1.0s,mb5.6
SSE pmax pmax
comp=Z,430nm,10.3s
SSE LR LR
comp=N,3μm,15.7s,MS5.4
SSE LR LR
comp=E,2μm,15.7s,MS5.4
SSE LR LR
comp=Z,2μm,13.3s,MS5.2
NDI New Delhi 40.00 326 *e*P **P** **22 30 31.0 +0.8**
LZH Lanzhou 40.13 3 *e*P **P** **22 30 30.5 -0.6**
LZH pP pP 22 30 40.8 +1.3
LZH sP sP 22 30 44.6 +1.6
LZH PP PP 22 32 03.0 -0.8
LZH *e*S **S** **22 36 33.4 -2.5**
LZH sS sS 22 36 51.0 +1.3
LZH ScS ScS 22 40 37.1 +1.0
LZH pmax pmax
comp=Z,120nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,600nm,6.2s
LZH LR LR
comp=E,7μm,15.6s
LZH LR LR
comp=Z,8μm,17.4s,MS5.6
JOW Kunigami 40.43 39 P **P** **22 30 34.5 +0.7**
comp=Z,52nm,1.0s,mb5.2,baz=246,slow=5.0,SNR=8.8
DDI Dehra Dun 40.83 329 *e*P **P** **22 30 38.0 +0.9**
DDI *e*S **S** **22 36 47.0 +0.4**
SMLA Simla 41.94 328 *i*P **P** **22 30 44.1 -2.1**
SMLA *e*x x 22 30 46.5
comp=Z,213nm,0.8s
SMLA *i*x x 22 37 00.9
SDNR Sundarnagar 42.33 329 *e*P **P** **22 30 49.0 -0.4**
COEN Coen 42.49 106 *e*P **P** **22 30 49.1 -1.9**
comp=Z,554nm,1.1s,mb6.1
COEN *e*PP PP 22 32 27.6 -2.1
COEN *e*PcP PcP 22 32 42.3 -1.3
COEN Coen 42.49 106 P **P** **22 30 49.5 -1.4**
comp=Z,238nm,1.2s,comp=Z,3μm,mb5.7
BHK Bhakra 42.56 328 *e*P **P** **22 30 49.2 -2.0**
TIA Tai'an 42.85 19 P **P** **22 30 53.8 +0.4**
TIA S **S** **22 37 29.0 +13**
TIA LR LR
comp=E,3μm,16.0s
TIY Taiyuan 42.96 13 *e*P **P** **22 30 55.3 +1.0**
TIY pmax pmax
comp=Z,530nm,5.5s
TIY LR LR
comp=N,3μm,14.8s,MS5.3
TIY LR LR
comp=E,650nm,12.8s,MS5.3
TIY LR LR
comp=Z,2μm,17.8s,MS5.0
GTA Gaotai 43.39 358 P **P** **22 30 56.8 -1.0**
GTA pP pP 22 31 06.0 -0.2
GTA sP sP 22 31 10.1 +0.5
GTA S **S** **22 37 23.9 -0.1**
GTA sS sS 22 37 38.3 +0.3
GTA ScS ScS 22 40 54.5 -1.4
GTA pmax pmax
comp=Z,11nm,1.0s,mb4.5
GTA pmax pmax
comp=Z,570nm,6.6s
GTA LR LR
comp=N,1μm,18.4s,MS5.5
GTA LR LR
comp=E,5μm,19.0s,MS5.5
GTA LR LR
comp=Z,5μm,15.3s,MS5.5
BTO Baotou 45.29 9 *e*P **P** **22 31 13.1 +0.1**
BTO pmax pmax
comp=Z,22nm,2.0s,mb4.6
MSEY Mahe Island 45.59 268 PFAKE 22 31 30.0 +14
MSEY LR LR
comp=Z,2μm,19.0s,MS5.1
HHC Hu-ho-hao-te 45.80 11⇑*i*P **P** **22 31 19.3 +2.3**
HHC pP pP 22 31 25.3 -0.2
HHC PP PP 22 33 07.8 +3.1
HHC ScP ScP 22 36 46.4 +0.9
HHC S **S** **22 38 04.0 +5.0**
HHC sS sS 22 38 12.3 -0.7
HHC ScS ScS 22 41 11.3 +0.2
HHC SS SS 22 41 20.0 -4.0
HHC pmax pmax
comp=Z,120nm,1.2s,mb5.7
HHC pmax pmax
comp=Z,660nm,6.0s
HHC LR LR
comp=N,6μm,15.9s,MS5.7
HHC LR LR
comp=E,3μm,16.1s,MS5.7
HHC LR LR
comp=Z,6μm,15.4s,MS5.6
BJT Baijiatuau 46.08 16 *e*P **P** **22 31 17.8 -1.4**
BJT *e* 22 32 55.7
BJT *e* 22 33 07.1
BJT pmax pmax
comp=Z,200nm,1.0s
BJT MLR MLR
comp=Z,3μm,20.0s
BJT Baijiatuau 46.08 16 *e*P **P** **22 31 17.8 -1.4**
comp=Z,200nm,1.0s,mb6.0
BJT *e*PcP PcP 22 32 55.7 +0.5
BJT *e*PP PP 22 33 07.1 -0.6
BJT LR LR
comp=Z,3μm,20.0s,MS5.2
BJI Beijing 46.10 16 P **P** **22 31 20.4 +1.0**
BJI PP PP 22 33 08.3 +0.4
BJI S **S** **22 38 05.8 +2.4**
BJI SS SS 22 41 29.0 +0.1
BJI pmax pmax
comp=Z,180nm,1.2s,mb5.9
BJI pmax pmax
comp=Z,770nm,3.5s
BJI LR LR
comp=N,3μm,21.3s,MS5.3
BJI LR LR
comp=E,1μm,18.7s,MS5.3
BJI LR LR
comp=Z,2μm,20.3s,MS5.1
CTA Charters Tower 46.60 114 *e*P **P** **22 31 21.5 -2.2**
comp=Z,102nm,1.1s,mb5.7
CTA *e*S **S** **22 38 10.8 -0.5**
CTA Charters Tower 46.60 114 P **P** **22 31 23.3 -0.4**
comp=Z,135nm,1.1s,mb5.8,baz=287,slow=8.9,SNR=40
CTA S **S** **22 38 09.2 -2.1**
comp=Z,1.1nm,0.3s,baz=44,slow=22,SNR=5.3
CTA Charters Tower 46.60 114 P **P** **22 31 23.3 -0.4**
CTA S **S** **22 38 09.2 -2.1**
CTA pmax pmax
comp=Z,135nm,1.1s
CTA smax
comp=N,1.0nm,0.4s
CTAO Charters Tower 46.60 114 *e*P **P** **22 31 21.6 -2.1**
CTAO pmax pmax
comp=Z,248nm,1.2s,mb6.0
CTAO MLR MLR
comp=Z,2μm,22.0s,MS5.0
CTAO Charters Tower 46.60 114 *e*P **P** **22 31 21.6 -2.1**
comp=Z,248nm,1.2s,mb6.0
CTAO LR LR
comp=Z,2μm,22.0s,MS5.0
CTAO Charters Tower 46.60 114 P **P** **22 31 23.7 0.0**
GUMO Guam 46.78 67 P **P** **22 31 22.4 -2.8**
GUMO MLR MLR
comp=Z,724nm,20.0s,MS4.6
STKA Stephens Creek 46.81 131 *e*P **P** **22 31 22.9 -2.3**
comp=Z,28nm,0.6s,mb5.4
STKA *e*S **S** **22 38 09.0 -5.0**
STKA Stephens Creek 46.81 131 P **P** **22 31 25.2 0.0**
comp=Z,37nm,1.0s,mb5.3,baz=277,slow=5.9,SNR=35
STKA Stephens Creek 46.81 131 *e*P **P** **22 31 22.9 -2.3**
comp=Z,16nm,1.1s,mb4.8
RER Riviere de l'E 47.24 245 PFAKE 22 31 40.0 +11
RER LR LR
comp=Z,2μm,20.0s,MS5.0
INCN Inchon 47.72 27 *e*P **P** **22 31 31.2 -0.8**
comp=Z,36nm,0.8s,mb5.5
INCN *e*PcP PcP 22 33 00.3 -0.8
INCN LR LR
comp=Z,1μm,20.0s,MS4.8
KSRS Korea Array 48.30 29 P **P** **22 31 37.5 +0.9**
comp=Z,124nm,0.9s,mb5.9,baz=217,slow=7.6,SNR=101
KSRS Korea Array 48.30 29 P **P** **22 31 37.5 +0.9**
KSRS pmax pmax
comp=Z,124nm,0.9s,mb5.9
KBL Kabul 48.99 324 *e*P **P** **22 31 41.9 -0.1**
KBL pmax pmax
comp=Z,29nm,0.8s,mb5.4
KBL Kabul 48.99 324 *e*P **P** **22 31 41.9 -0.1**
comp=Z,29nm,0.8s,mb5.4
WMQ Urumqi 49.30 347 P **P** **22 31 43.4 -0.8**
WMQ pP pP 22 31 53.4 +0.6
WMQ PcP PcP 22 33 06.5 -0.2
WMQ PP PP 22 33 38.3 -0.1
WMQ S **S** **22 38 47.8 -0.9**
WMQ sS sS 22 39 05.4 +2.5
WMQ ScS ScS 22 41 28.4 -5.8
WMQ SS SS 22 42 15.8 -5.0
WMQ pmax pmax
comp=Z,290nm,1.0s,mb6.3
WMQ pmax pmax
comp=Z,230nm,3.0s
WMQ LR LR
comp=N,860nm,13.0s,MS5.3
WMQ LR LR
comp=E,2μm,18.0s,MS5.3
WMQ LR LR
comp=Z,2μm,21.0s,MS5.0
SNY Shenyang 50.11 22 ⇑P **P** **22 31 50.3 -0.1**
SNY PP PP 22 33 47.9 +2.1
SNY S **S** **22 39 03.3 +3.2**
SNY pmax pmax
comp=Z,83nm,1.2s,mb5.6
SNY pmax pmax
comp=Z,480nm,5.5s
SNY LR LR
comp=N,2μm,16.2s,MS5.4
SNY LR LR
comp=E,2μm,14.7s,MS5.4
SNY LR LR
comp=Z,3μm,14.7s,MS5.4
ULHL Ulahol 51.47 336 P **P** **22 32 02.2 +1.6**
SNR=25
KZA Kyzart 51.73 335 P **P** **22 32 01.7 -0.9**
SNR=38
SONM Songino Array 51.99 4 P **P** **22 32 03.6 -0.7**
comp=Z,150nm,0.8s,mb6.0,baz=184,slow=9.1,SNR=140
SONM Songino Array 51.99 4 P **P** **22 32 06.4 +2.0**
comp=Z,150nm,0.8s,mb6.0,baz=184,slow=8.5,SNR=178
SONM PcP PcP 22 33 17.7 +1.2
comp=Z,16nm,0.8s,baz=190,slow=4.3,SNR=5.6
SONM Songino Array 51.99 4 P **P** **22 32 06.4 +2.0**
SONM 22 33 17.7
SONM pmax pmax
comp=Z,150nm,0.8s
SONM pmax pmax
comp=Z,16nm,0.8s
ULN Ulaanbaatar 52.07 5 *e*P **P** **22 32 04.0 -1.0**
ULN pmax pmax
comp=Z,113nm,0.9s,mb5.8
ULN MLR MLR
comp=Z,2μm,20.0s,MS5.2
ULN Ulaanbaatar 52.07 5 *e*P **P** **22 32 04.0 -1.0**
comp=Z,113nm,0.9s,mb5.8
ULN LR LR
comp=Z,2μm,20.0s,MS5.2
ULN Ulaanbaatar 52.07 5 P **P** **22 32 04.5 -0.5**
SNR=87
ULN P 22 32 04.5
SNR=87
ULN Ulaanbaatar 52.07 5 P **P** **22 32 04.3 -0.7**
UCH Uchtor 52.16 335 P **P** **22 32 07.7 +1.9**
SNR=22
UCH Uchtor 52.16 335 *e*P **P** **22 32 04.7 -1.1**
comp=Z,62nm,1.3s,mb5.4
UCH *e*PcP PcP 22 33 17.1 -0.2
UCH *e*PP PP 22 34 02.5 -1.9
UCH LR LR

comp=Z,2μm,21.0s,MS5.2
EIDS Eidsvold 52.24 119 *e*P **P 22 32 04.9 -1.8**
comp=Z,132nm,1.3s,mb5.7
TKM2 Tokmak 2 52.30 336 P **P 22 32 05.5 -1.3**
SNR=122
TKM2 Tokmak 2 52.30 336 *e*P **P 22 32 05.4 -1.3**
TKM2 *e* 22 33 17.1
TKM2 pmax pmax
comp=Z,97nm,0.9s,mb5.7
TKM2 MLR MLR
comp=Z,2μm,20.0s,MS5.2
TKM2 Tokmak 2 52.30 336 *e*P **P 22 32 05.3 -1.4**
comp=Z,97nm,0.9s,mb5.7
TKM2 *e*PcP PcP 22 33 17.1 -0.7
TKM2 LR LR
comp=Z,2μm,20.0s,MS5.2
KBK Karagaybulak 52.34 336 P **P 22 32 09.1 +2.0**
SNR=52
AML Almayashu 52.44 334 P **P 22 32 09.8 +2.0**
SNR=57
AML Almayashu 52.44 334 *e*P **P 22 32 06.6 -1.2**
comp=Z,63nm,0.9s,mb5.5
AML *e*PcP PcP 22 33 17.4 -1.0
AAK Ala-Archa 52.51 335 P **P 22 32 09.6 +1.3**
comp=Z,203nm,0.8s,mb6.1,SNR=17
AAK Ala-Archa 52.51 335 P **P 22 32 10.2 +1.9**
SNR=12
AAK Ala-Archa 52.51 335 *e*P **P 22 32 07.2 -1.1**
AAK pmax pmax
comp=Z,386nm,2.5s,mb5.9
AAK MLR MLR
comp=Z,3μm,20.0s,MS5.3
AAK Ala-Archa 52.51 335 *e*P **P 22 32 07.2 -1.1**
comp=Z,386nm,2.5s,mb5.9
AAK LR LR
comp=Z,3μm,20.0s,MS5.3
AAK Ala-Archa 52.51 335 P **P 22 32 10.4 +2.1**
SNR=41
AAK P 22 32 10.4
SNR=41
AAK Ala-Archa 52.51 335 P **P 22 32 10.4 +2.1**
FRU Bishkek 52.62 336⇓ *i*P **P 22 32 10.0 +0.8**
FRU pmax pmax
comp=Z,240nm,2.0s,mb5.8
CHMS Chumysh 52.70 336 P **P 22 32 10.9 +1.1**
SNR=17
EKS2 Erkin-Say 52.83 335 P **P 22 32 09.6 -1.1**
SNR=140
EKS2 Erkin-Say 52.83 335 *e*P **P 22 32 09.5 -1.2**
comp=Z,101nm,0.8s,mb5.8
EKS2 *e*PcP PcP 22 33 18.4 -1.4
EKS2 LR LR
comp=Z,2μm,21.0s,MS5.1
YNG Young 53.01 131 *e*P **P 22 32 12.4 +0.2**
comp=Z,32nm,1.3s,mb5.1
USP Ospenovka 53.03 336 P **P 22 32 10.3 -1.8**
SNR=61
MAT Matsushiro 53.23 37 P **P 22 32 10.8 -3.0**
MAT S **S 22 39 57.0 +14**
MJAR Matsushiro Arr 53.23 37 P **P 22 32 13.3 -0.5**
comp=Z,81nm,0.9s,mb5.7,baz=217,slow=7.3,SNR=119
MJAR PcP PcP 22 33 21.7 +0.3
comp=Z,16nm,0.9s,baz=213,slow=5.0,SNR=4.1
MJAR ScP ScP 22 37 18.2 +0.8
comp=Z,1.2nm,0.8s,baz=224,slow=4.4,SNR=4.5
MJAR Matsushiro Arr 53.23 37 P **P 22 32 13.3 -0.5**
MJAR 22 33 21.7
MJAR pmax pmax
comp=Z,81nm,0.9s
MJAR pmax pmax
comp=Z,16nm,0.9s
MJAR pmax pmax
comp=N,1.0nm,0.8s
MJAR Matsushiro Arr 53.23 37 P **P 22 32 13.3 -0.5**
MJAR PcP PcP 22 33 21.7 +0.3
MJAR ScP ScP 22 37 18.2 +0.8
MK31 Makanchi Array 53.44 344 *e*P **P 22 32 13.4 -1.7**
MKAR Makanchi Array 53.44 344 P **P 22 32 16.6 +1.5**
comp=N,104nm,0.7s,mb5.8,baz=146,slow=8.3,SNR=160
MKAR S **S 22 39 47.5 +1.8**
comp=N,0.2nm,0.2s,baz=302,slow=35,SNR=3.5
MKAR Makanchi Array 53.44 344 P **P 22 32 16.6 +1.5**
MKAR S **S 22 39 47.5 +1.8**
MKAR pmax pmax
comp=Z,104nm,0.7s
CAN Canberra 53.87 131 *e*P **P 22 32 18.6 0.0**
CAN pmax pmax
comp=Z,96nm,1.4s,mb5.5
CAN MLR MLR
comp=Z,4μm,21.0s,MS5.4
CAN Canberra 53.87 131 *e*P **P 22 32 18.6 0.0**
comp=Z,96nm,1.4s,mb5.5
CAN LR LR
comp=Z,4μm,21.0s,MS5.4
ARMA Armidale 54.17 125 *e*P **P 22 32 22.0 +1.2**
ARMA *e*S **S 22 39 59.0 +2.7**
ARMA Armidale 54.17 125 *e*P **P 22 32 20.5 -0.4**
comp=Z,139nm,1.5s,mb5.7
ZAK Zakamensk 54.37 2⇑ *i*P **P 22 32 20.3 -1.5**
ZAK pmax pmax
comp=Z,47nm,0.8s,mb5.5
VLA Vladivostok 54.63 27*d i*P **P 22 32 24.7 +0.8**
VLA *i* pP 22 32 32.2 -0.4
VLA pmax pmax
comp=Z,229nm,1.3s,mb6.0
VLA MLR MLR
comp=Z,1μm,17.8s,MS5.1
ABPO Ambohimpanom 54.67 250 *e*P **P 22 32 23.4 -1.2**
ABPO *e* 22 33 26.7
ABPO pmax pmax
comp=Z,20nm,1.1s,mb5.1
ABPO MLR MLR
comp=Z,1μm,20.0s,MS5.0
ABPO Ambohimpanom 54.67 250 *e*P **P 22 32 23.4 -1.3**
comp=Z,20nm,1.1s,mb5.0
ABPO *e*PcP PcP 22 33 26.7 -0.6
ABPO LR LR
comp=Z,1μm,20.0s,MS5.0
MDJ Mudanjiang 54.82 25 P **P 22 32 26.0 +0.7**
MDJ pP pP 22 32 29.3 -4.6
MDJ sP sP 22 32 30.3 -7.0
MDJ PcS PcS 22 37 27.6 +0.7
MDJ S **S 22 40 08.5 +4.0**
MDJ pmax pmax
comp=Z,87nm,1.2s,mb5.7
MDJ pmax pmax
comp=Z,380nm,5.1s
MDJ LR LR
comp=N,1μm,20.4s,MS5.1
MDJ LR LR
comp=E,1μm,19.9s,MS5.1
MDJ LR LR
comp=Z,2μm,20.9s,MS5.1
MDJ Mudanjiang 54.82 25 *e*P **P 22 32 23.7 -1.6**
comp=Z,81nm,0.9s,mb5.8
MDJ *e*PcP PcP 22 33 27.0 -0.4
MDJ LR LR
comp=Z,2μm,22.0s,MS5.1
HIA Hailar 55.61 15 *e*P **P 22 32 28.6 -2.2**
HIA *e* 22 33 30.4
HIA pmax pmax
comp=Z,32nm,0.8s
HIA MLR MLR
comp=Z,3μm,19.0s
HIA Hailar 55.61 15 *e*P **P 22 32 28.6 -2.2**
comp=Z,32nm,0.8s,mb5.4
HIA *e*PcP PcP 22 33 30.4 +0.2
HIA LR LR
comp=Z,3μm,19.0s,MS5.4
MOY Mondy 55.63 360 *e*P **P 22 32 32.7 +1.8**
MOY pmax pmax
comp=Z,118nm,2.2s,mb5.5
TLY Talaya 55.68 2 P **P 22 32 33.5 +2.2**
comp=Z,590nm,0.9s,mb6.6,SNR=14
TLY Talaya 55.68 2*c i*P **P 22 32 33.2 +1.9**
TLY *e*S **S 22 40 20.0 +4.3**
TLY *e* 22 40 33.3
TLY *e* 22 42 17.6
TLY pmax pmax
comp=Z,107nm,1.0s,mb5.8
TLY MLR MLR
comp=Z,3μm,16.0s,MS5.5
TLY Talaya 55.68 2 *e*P **P 22 32 30.2 -1.0**
comp=Z,90nm,0.9s,mb5.8
TLY LR LR
comp=Z,1μm,19.0s,MS5.1
TLY Talaya 55.68 2 P **P 22 32 33.6 +2.3**
SNR=25
TLY P 22 32 33.6
SNR=25
TAU Tasmania Unive 56.15 140 *e*P **P 22 32 35.2 +0.3**
TAU MLR MLR
comp=Z,2μm,20.0s,MS5.2
IRK Irkutsk 56.26 2 *e*P **P 22 32 36.5 +1.1**
IRK pmax pmax
comp=Z,170nm,2.0s,mb5.7
CIT Chita 56.96 9 *e*P **P 22 32 42.2 +1.8**
ABKT Ailbek 57.88 320 P **P 22 32 44.0 -3.2**
comp=Z,247nm,0.9s,mb6.2,SNR=13
KURK Kurchatov 58.02 343 P **P 22 32 46.0 -1.9**
comp=Z,901nm,1.0s,SNR=16
KURK Kurchatov 58.02 343 S **S 22 40 45.7 -1.0**
comp=Z,0.4nm,0.2s,baz=64,slow=11,SNR=3.1
KURK Kurchatov 58.02 343*ce*P **P 22 32 48.2 +0.3**
KURK pmax pmax
comp=Z,173nm,0.9s,mb6.1
KURK Kurchatov 58.02 343 *e*P **P 22 32 45.7 -2.2**
comp=Z,144nm,0.9s,mb6.0
KURK LR LR
comp=Z,3μm,20.0s,MS5.3
KURK Kurchatov 58.02 343 P **P 22 32 46.3 -1.7**
SNR=62
KURK P 22 32 46.3
SNR=62
ZAA0 Zalesovo Array 59.52 349 *e*P **P 22 32 55.9 -2.3**
ZAA0 *e*PcP PcP 22 33 44.4 -1.2
ZALV Zalesovo Beam 59.52 349 P **P 22 32 59.2 +1.0**
comp=Z,128nm,0.9s,mb6.0,baz=175,slow=4.6,SNR=162
ZALV S **S 22 41 05.7 -0.4**
comp=Z,2.0nm,0.9s,baz=149,slow=17,SNR=5.9
ZALV Zalesovo Beam 59.52 349 P **P 22 32 59.2 +0.9**
ZALV S **S 22 41 05.7 -0.3**
ZALV pmax pmax
comp=Z,128nm,0.9s,mb6.0
ZALV smax
comp=N,2.0nm,0.9s
ERM Erimo 59.70 35 *e*P **P 22 32 59.3 -0.4**
ERM pmax pmax
comp=Z,57nm,0.8s,mb5.7
ERM MLR MLR
comp=Z,888nm,19.0s,MS4.9
ERM Erimo 59.70 35 *e*P **P 22 32 59.2 -0.5**
comp=Z,57nm,0.8s,mb5.7
ERM LR LR
comp=Z,888nm,19.0s,MS4.9
HABR Khabarovsk 60.18 25 *e*P **P 22 33 01.7 -1.2**
HABR *e**PP pP 22 33 09.9 -1.8
HABR *e**SP sP 22 33 14.0 -1.0
HABR *e* 22 33 45.0
HABR *e* 22 35 12.9
HABR *e**SS sS 22 41 29.5 +0.4
HABR *e* 22 42 48.1
HABR SS SS 22 45 10.4 -2.0
HABR pmax pmax
comp=N,17nm,0.3s
HABR pmax pmax
comp=Z,180nm,1.2s,mb6.0
HABR pmax pmax
comp=E,112nm,1.3s
HABR MLR MLR
comp=Z,2μm,19.0s,MS5.2
NVS Novosibirsk 60.67 348 *e*P **P 22 33 06.3 +0.1**
NVS *e*S **S 22 41 15.1 -5.7**
NVS pmax pmax
comp=Z,155nm,2.0s,mb5.8
NVS pmax pmax
comp=N,140nm,1.8s
NVS pmax pmax
comp=E,60nm,1.9s
NVS smax
comp=N,91nm,2.0s
RDF Al-Radifah 61.10 306 *e*P **P 22 33 09.3 -0.3**
RDF AMb AMB 22 33 12.1
comp=Z,108nm,1.0s,mb5.9
UMR Umm Al-Rimmam 61.22 307 *e*P **P 22 33 09.9 -0.5**
UMR AMb AMB 22 33 12.2
comp=Z,106nm,1.0s,mb5.9
NAY Al-Naaiem 61.47 306 *e*P **P 22 33 11.4 -0.8**
NAY AMb AMB 22 33 13.6
comp=Z,45nm,0.9s,mb5.6
MIB Mutribah 61.62 307 *e*P **P 22 33 12.9 -0.2**
MIB AMb AMB 22 33 30.1
comp=Z,127nm,0.9s,mb6.0
CASY Casey 62.34 176 *e*P **P 22 33 16.2 -1.1**
comp=Z,38nm,1.2s,mb5.4
CASY *e*PcP PcP 22 33 56.8 +0.1
CASY LR LR
comp=Z,2μm,20.0s,MS5.3
MIR Mirnyy 62.53 184⇑ *i*P **P 22 33 18.0 -0.5**
MIR pmax pmax
comp=Z,53nm,1.0s,mb5.6
MIR MLR MLR
comp=N,2μm,18.0s,MS5.3
MIR MLR MLR
comp=E,900nm,18.0s,MS5.3
MIR MLR MLR
comp=Z,2μm,18.0s,MS5.3
BVAR Borovoye Array 62.63 340 P **P 22 33 19.2 -0.2**
comp=Z,43nm,0.7s,mb5.7,baz=144,slow=8.3,SNR=64
BVAR Borovoye Array 62.63 340 P **P 22 33 19.2 -0.2**
BVAR pmax pmax
comp=Z,43nm,0.7s
BVAR Borovoye Array 62.63 340 P **P 22 33 19.2 -0.2**
BOD Bodaibo 62.65 8 *e*P **P 22 33 17.2 -2.2**
BOD pmax pmax
comp=Z,90nm,1.2s,mb5.8
BRVK Borovoye 62.69 340 P **P 22 33 17.6 -2.2**
comp=Z,361nm,0.9s,mb6.5,SNR=11
BRVK Borovoye 62.69 340*ce*P **P 22 33 19.2 -0.6**
BRVK pmax pmax
comp=Z,104nm,1.6s,mb5.7
BRVK Borovoye 62.69 340 *e*P **P 22 33 17.3 -2.5**
comp=Z,53nm,0.9s,mb5.7
BRVK LR LR
comp=Z,1μm,20.0s,MS5.1
BRVK Borovoye 62.69 340 P **P 22 33 20.3 +0.5**
SNR=32
BRVK P 22 33 20.3
SNR=32
YSS Yuzh-Sakhalins 62.70 31 *e*P **P 22 33 17.0 -3.0**
YSS *e* 22 33 28.0
YSS pmax pmax
comp=Z,350nm,1.0s,mb6.4
YSS MLR MLR
comp=Z,1μm,16.0s,MS5.2
YSS Yuzh-Sakhalins 62.70 31 *e*P **P 22 33 17.5 -2.5**
comp=Z,300nm,0.9s,mb6.4
CLNS Chul'man 63.79 14 *e*P **P 22 33 27.8 +0.8**
CLNS *e* 22 34 02.7
CLNS *e* 22 35 49.1
CLNS *e*S **S 22 42 04.7 +4.6**
CLNS *e* 22 43 17.7
CLNS *e*SS SS 22 46 13.3 +4.6
CLNS pmax pmax
comp=Z,81nm,0.9s,mb5.8
CLNS pmax pmax
comp=E,42nm,1.0s
CLNS pmax pmax
comp=N,50nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CLNS smax
comp=N,210nm,14.1s
CLNS smax
comp=E,98nm,14.3s
CLNS MLR MLR
comp=E,2μm,16.0s,MS5.6
CLNS MLR MLR
comp=N,2μm,16.0s,MS5.6
CLNS MLR MLR
comp=Z,3μm,16.0s,MS5.5
KMBO Kilima Mbogo 63.95 271 P **P 22 33 30.5 +1.5**
comp=Z,2.2nm,1.0s,baz=154,slow=10,SNR=3.3
KMBO Kilima Mbogo 63.95 271 *e*P **P 22 33 28.5 -0.5**
KMBO pmax pmax
comp=Z,10.0nm,1.3s
KMBO MLR MLR
comp=Z,661nm,20.0s
KMBO Kilima Mbogo 63.95 271 *e*P **P 22 33 28.5 -0.4**
comp=Z,10nm,1.3s,mb4.7
KMBO LR LR
comp=Z,661nm,20.0s,MS4.8
ABKAR Akbulak array 64.11 331 *e*P **P 22 33 26.8 -2.6**
comp=Z,90nm,0.8s,mb5.8
BHD Baghdad 65.31 309 *e*P **P 22 33 34.0 -3.5**
BHD *e*S S 22 42 16.0 -3.8
DZM Mont Dzumac 65.51 112 *e*P **P 22 33 38.5 -0.5**
comp=Z,108nm,1.4s,mb5.7
DZM *e*LR LR 22 53 27.4
comp=Z,3μm,24.6s
MAK Makhachkala 67.40 320*c i*P **P 22 33 51.5 +0.9**
MAK *e* 22 34 14.8
MAK *e* 22 36 19.4
MAK *e*PPP 22 37 55.2
MAK *i* S S 22 42 45.1 +0.4
MAK *e* 22 43 43.6
MAK pmax pmax
comp=Z,56nm,0.8s,mb5.7
MAK MLR MLR
comp=Z,638nm,19.0s,MS4.9
MSL Mosul 67.51 312 *e*P **P 22 33 56.0 +4.5**
MSL *e*S S 22 42 49.0 +2.7
HAKT HAKKARI 67.55 314 *i*P **P 22 33 52.0 +0.4**
DGRG David-gareji 68.08 318 P **P 22 33 56.8 +1.9**
TVAN Van 68.16 314 *i*P **P 22 33 58.7 +3.1**
MAW Mawson 68.50 195 P **P 22 33 56.7 -0.4**
comp=Z,13nm,0.8s,mb5.0,baz=0.9,slow=8.1,SNR=14
MAW Mawson 68.50 195 *e*P **P 22 33 57.2 +0.1**
MAW pmax pmax
comp=Z,16nm,1.6s
MAW MLR MLR
comp=Z,4μm,21.0s
MAW Mawson 68.50 195 *e*P **P 22 33 57.2 +0.1**
comp=Z,16nm,1.6s,mb4.8
MAW LR LR
comp=Z,4μm,21.0s,MS5.6
MTA Mtatsminda 68.58 318 P **P 22 33 59.7 +1.6**
TBLG Delisi 68.63 318 *e*P **P 22 33 59.4 +1.0**
TBLG Delisi 68.63 318 P **P 22 33 59.4 +1.0**
SVE Sverdlovsk 69.14 338 *e*P **P 22 33 59.6 -1.6**
SVE *e* 22 36 34.8
SVE *e*PPP 22 38 17.7
SVE *e*S S 22 43 05.1 +0.2
SVE *e* 22 43 50.6
SVE *e*SS SS 22 47 29.9 -1.8
SVE pmax pmax
comp=Z,183nm,1.0s,mb6.0
SVE MLR MLR
comp=Z,2μm,22.0s,MS5.4
KEH Kehvi 69.42 318 P **P 22 34 03.1 -0.3**
BEST Besiri 69.45 313 *i*P **P 22 34 04.7 +1.1**
YAK Yakutsk 69.54 14*c i*P **P 22 34 03.2 -0.4**
YAK *e**PP pP 22 34 10.8 -1.7
YAK *e* 22 34 24.2
YAK *e* 22 36 35.8
YAK *e*PPP 22 38 18.3
YAK *e*S S 22 43 06.2 -3.2
YAK *e* 22 44 00.6
YAK pmax pmax
comp=Z,243nm,0.9s,mb6.1
YAK pmax pmax
comp=N,89nm,1.4s
YAK pmax pmax
comp=E,64nm,1.5s
YAK pmax pmax
comp=Z,51nm,1.4s,mb5.3
YAK pmax pmax
comp=N,35nm,1.8s
YAK pmax pmax
comp=E,30nm,1.4s
YAK smax
comp=N,126nm,3.2s
YAK smax
comp=E,32nm,1.5s
YAK MLR MLR
comp=Z,4μm,18.0s,MS5.7
YAK MLR MLR
comp=E,2μm,19.0s,MS5.6
YAK MLR MLR
comp=N,2μm,16.0s,MS5.6
YAK Yakutsk 69.54 14 *e*P **P 22 34 03.7 +0.1**
comp=N,269nm,0.9s,mb6.2
YAK LR LR
comp=Z,1μm,20.0s,MS5.2
ZEI Tsey 69.65 319 *e*P **P 22 34 05.6 +0.9**
ZEI *e*PPP 22 38 27.7
ZEI *e*S S 22 43 14.9 +3.4
ZEI pmax pmax
comp=Z,29nm,0.9s,mb5.2
ARU Arti 69.67 336 P **P 22 34 02.8 -1.7**
comp=Z,511nm,0.9s,mb6.5,SNR=13
ARU Arti 69.67 336*c i*P **P 22 34 04.7 +0.2**
ARU *e* 22 34 24.4
ARU *e* 22 36 39.3
ARU *e*PPP 22 38 25.3
ARU S S 22 43 13.7 +2.5
ARU 22 43 59.8
ARU SS SS 22 47 42.2 +2.4
ARU pmax pmax
comp=Z,167nm,1.7s,mb5.7
ARU MLR MLR
comp=Z,1μm,23.0s,MS5.1
ARU Arti 69.67 336 *e*P **P 22 34 01.9 -2.6**
comp=Z,94nm,1.0s,mb5.7
ARU LR LR
comp=Z,1μm,22.0s,MS5.2
HOMI Horasan 69.85 315 *i*P **P 22 34 07.0 +1.0**
ONI Oni 69.87 318 P **P 22 34 07.4 +1.3**
ERZM Erzurum 70.17 315 *i*P **P 22 34 09.2 +1.3**
ARTV Artvin 70.30 316 *i*P **P 22 34 09.4 +0.6**
DDEM Demirkent 70.30 316 *i*P **P 22 34 09.6 +0.8**
DIYA Diyarbakir 70.30 313 *i*P **P 22 34 10.0 +1.1**
DBOC Borcka 70.55 316 *i*P **P 22 34 10.7 +0.5**
KOPT Kop Dagi 70.83 315 *i*P **P 22 34 12.8 +0.8**
KIV Kislovodsk 70.97 319 P **P 22 34 13.5 +0.7**
comp=Z,200nm,1.0s,mb6.0,SNR=9.4
KIV Kislovodsk 70.97 319 *e*P **P 22 34 11.3 -1.5**
KIV *e* 22 34 29.9
KIV *e* 22 36 48.4
KIV *e*S S 22 43 26.5 -0.4
KIV pmax pmax
comp=Z,36nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,546nm,20.0s,MS4.8
KIV Kislovodsk 70.97 319 *e*P **P 22 34 10.8 -1.9**
comp=Z,37nm,1.0s,mb5.3
KIV LR LR
comp=Z,639nm,20.0s,MS4.9
KIV Kislovodsk 70.97 319 P **P 22 34 13.6 +0.8**
SNR=15
KIV P 22 34 13.6
SNR=15
GOF Gofitskoye 71.23 321 *e*P PcP 22 34 33.6 -0.6
GOF pmax pmax
comp=Z,50nm,1.0s,mb5.4
ATAB Bozova 71.49 312 *i*P **P 22 34 17.2 +1.2**
MACK Trabzon 71.70 316 *i*P **P 22 34 18.2 +0.9**
KELT Kelkit 71.76 315 *i*P **P 22 34 18.5 +0.9**
TARA Tarawa 71.87 87 PFAKE 22 34 30.0 +11
TARA LR LR
comp=Z,915nm,21.0s,MS5.0
KEMA Kemaliye 71.98 313 *i*P **P 22 34 19.5 +0.5**
GZT Gaziantep 71.99 311 *i*P **P 22 34 18.0 -1.1**
SKR Severo-Kuril's 72.00 33 *e*P **P 22 34 16.6 -2.2**
SKR *e* 22 34 32.0
SKR *e* 22 36 54.0
SKR *e*S S 22 43 43.0 +4.5
SKR *e* 22 44 20.0
SKR *e*SS SS 22 48 14.0 -1.9
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.1
SKR smax
comp=N,2μm,10.0s
SKR smax
comp=E,2μm,10.0s
SKR MLR MLR
comp=N,2μm,16.0s,MS5.6
SKR MLR MLR
comp=E,1μm,16.0s,MS5.6
SKR MLR MLR
comp=Z,2μm,16.0s,MS5.6
AKCD Akcadag 72.05 312 *i*P **P 22 34 19.7 +0.2**

MMAI	**Mount Meron Ar**	**72.29 306**	P	**P**	**22 34 22.2**	**+1.3**
	comp=Z,19nm,0.8s,mb5.1,baz=98,slow=8.5,SNR=32					
SOKR	**Solikamsk**	**72.52 338**c	*i*P	**P**	**22 34 20.1**	**-1.6**
SOKR			S	S	22 43 34.9	-9.2
SOKR			pmax	pmax		
	comp=Z,150nm,0.9s,mb5.9					
SOKR			MLR	MLR		
	comp=Z,2μm,25.0s,MS5.3					
LSZ	**Lusaka**	**72.54 255**	*e*P	**P**	**22 34 22.5**	**-0.3**
LSZ			pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0					
LSZ			MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2					
LSZ	**Lusaka**	**72.54 255**	*e*P	**P**	**22 34 22.5**	**-0.3**
	comp=Z,28nm,1.3s,mb5.0					
LSZ			LR	LR		
	comp=Z,1μm,20.0s,MS5.2					
RPZ	**Rata Peaks**	**72.60 134**	P	**P**	**22 34 23.4**	**+0.8**
	comp=Z,25nm,1.0s,mb5.1,baz=270,slow=17,SNR=3.8					
YAYL	**Yayladag**	**72.66 310**	*i* P	**P**	**22 34 23.4**	**+0.3**
COBT	**Iskenderun**	**72.71 310**	*i* P	**P**	**22 34 24.5**	**+1.1**
GRSN	**GIRESUNGRSN**	**72.75 315**	*i* P	**P**	**22 34 23.4**	**-0.1**
SOC	**Sochi**	**72.77 318**c	*i*P	**P**	**22 34 22.9**	**-0.7**
SOC			*e**PP	pP	22 34 30.9	-1.6
SOC			*e**SP	sP	22 34 35.0	-0.8
SOC			*e*		22 34 37.3	
SOC			*e*		22 37 03.3	
SOC			*i* S	S	22 43 45.0	-2.6
SOC			*e*		22 44 24.5	
SOC			pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4					
SOC			pmax	pmax		
	comp=Z,99nm,4.0s					
SOC			MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8					
ANDN	**Andirin**	**72.98 311**	*i* P	**P**	**22 34 25.7**	**+0.8**
PINB	**Pinarbasi**	**73.30 312**	*i* P	**P**	**22 34 27.7**	**+0.9**
GULE	**Gulek**	**74.07 311**	*i* P	**P**	**22 34 32.1**	**+0.7**
PETK	**Petropavlovsk-**	**74.08 32**	P	**P**	**22 34 31.0**	**-0.1**
	comp=Z,33nm,0.8s,mb5.3,baz=207,slow=3.8,SNR=26					
PETK	**Petropavlovsk-**	**74.08 32**	P	**P**	**22 34 31.0**	**-0.1**
PETK			pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3					
CSS	**Prodhromos**	**74.50 308**	*e*P	**P**	**22 34 33.6**	**-0.4**
	comp=Z,56nm,1.1s,mb5.4					
CSS			LR	LR		
	comp=Z,1μm,19.0s,MS5.2					
PET	**Petropavlovsk**	**74.54 32**	*e*P	**P**	**22 34 33.7**	**0.0**
PET			*e*		22 34 47.7	
PET			*e*		22 37 22.5	
PET			*e*PPP		22 39 03.9	
PET			*e*S	S	22 44 03.9	-3.3
PET			*e*PS		22 44 39.0	
PET			*e*PPS		22 44 56.5	
PET			pmax	pmax		
	comp=Z,600nm,3.5s					
PET			pmax	pmax		
	comp=Z,168nm,0.9s,mb6.0					
PET			pmax	pmax		
	comp=Z,400nm,4.2s					
PET			MLR	MLR		
	comp=Z,700nm,16.0s,MS5.0					
PET			MLR	MLR		
	comp=Z,800nm,16.0s					
PET	**Petropavlovsk**	**74.54 32**	*e*P	**P**	**22 34 33.0**	**-0.8**
	comp=Z,125nm,0.9s,mb5.8					
PET			LR	LR		
	comp=Z,748nm,20.0s,MS5.0					
ANN	**Anapa**	**74.75 319**	*e*P	**P**	**22 34 32.3**	**-2.9**
ANN			*e*S	S	22 44 06.2	-3.7
ANN			pmax	pmax		
	comp=Z,122nm,8.4s					
VRHR	**Novokhopersk**	**74.80 326**	*e*P	**P**	**22 34 35.1**	**-0.2**
VRHR			*e*S	S	22 44 06.4	-3.7
VRHR			pmax	pmax		
	comp=Z,90nm,0.8s,mb5.8					
VRHR			pmax	pmax		
	comp=N,10.0nm,0.7s					
VRHR			pmax	pmax		
	comp=E,60nm,1.1s					
VRHR			smax			
	comp=N,400nm,3.0s					
VRHR			smax			
	comp=Z,20nm,4.9s					
VRHR			smax			
	comp=E,20nm,0.9s					
SNZO	**South Karori**	**74.87 132**	PFAKE		22 34 50.0	+14
SNZO			LR	LR		
	comp=Z,2μm,20.0s,MS5.5					
CDAG	**Cicekdag**	**75.11 313**	*i* P	**P**	**22 34 37.3**	**-0.1**
CTKT	**Corum**	**75.12 314**	*i* P	**P**	**22 34 37.8**	**+0.4**
LBTB	**Lobatse**	**75.21 245**	*e*P	**P**	**22 34 34.9**	**-3.4**
LBTB			pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0					
LBTB			MLR	MLR		
	comp=Z,2μm,21.0s,MS5.4					
LBTB	**Lobatse**	**75.21 245**	*e*P	**P**	**22 34 34.9**	**-3.4**
	comp=Z,23nm,1.1s,mb5.0					
LBTB			LR	LR		
	comp=Z,2μm,21.0s,MS5.4					
BR131	**Keskin Array S**	**75.67 313**	*e*P	**P**	**22 34 37.7**	**-2.9**
BR131			LR	LR		
	comp=Z,687nm,20.0s,MS5.0					
BRTR	**Keskin Array B**	**75.67 313**	P	**P**	**22 34 40.1**	**-0.5**
	comp=Z,16nm,0.8s,mb5.0,baz=132,slow=7.5,SNR=76					
BRTR	**Keskin Array B**	**75.67 313**	P	**P**	**22 34 40.1**	**-0.5**
BRTR			pmax	pmax		
	comp=Z,16nm,0.8s					
BOSA	**Boshof**	**75.68 242**	P	**P**	**22 34 40.7**	**-0.2**
	comp=Z,5.5nm,0.9s,mb4.5,baz=106,slow=5.7,SNR=6.2					
BOSA	**Boshof**	**75.68 242**	*e*P	**P**	**22 34 40.8**	**-0.1**
BOSA			pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2					
BOSA			MLR	MLR		
	comp=Z,2μm,19.0s,MS5.4					
BOSA	**Boshof**	**75.68 242**	*e*P	**P**	**22 34 40.8**	**-0.1**
	comp=Z,50nm,1.4s,mb5.2					
BOSA			LR	LR		
	comp=Z,2μm,19.0s,MS5.4					
VORD	**Divnogorie**	**76.06 325**	*e*P	**P**	**22 34 42.2**	**-0.4**
VORD			pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3					
VORD			pmax	pmax		
	comp=N,20nm,0.6s					
VORD			pmax	pmax		
	comp=E,20nm,0.7s					
VORD			MLR	MLR		
	comp=Z,540nm,19.0s,MS4.9					
VORD			MLR	MLR		
	comp=N,180nm,14.0s					
VORD			MLR	MLR		
	comp=E,350nm,20.0s					
MSVF	**Nonsavu**	**76.21 107**	*e*P	**P**	**22 34 45.4**	**+1.3**
	comp=E,50nm,1.3s,mb5.3					
MSVF			LR	LR		
	comp=Z,828nm,21.0s,MS5.0					
VSR	**Storozhevoye**	**76.24 325**	*e*P	**P**	**22 34 43.0**	**-0.6**
VSR			*e*S	S	22 44 18.5	-7.6
VSR			pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4					
VSR			pmax	pmax		
	comp=N,10.0nm,0.7s					
VSR			pmax	pmax		
	comp=E,30nm,1.0s					
VSR			smax			
	comp=N,470nm,5.2s					
VSR			smax			
	comp=Z,70nm,3.9s					
VSR			smax			
	comp=E,290nm,5.1s					
VSR			MLR	MLR		
	comp=Z,970nm,22.0s,MS5.1					
VSR			MLR	MLR		
	comp=N,90nm,14.0s					
VSR			MLR	MLR		
	comp=E,780nm,22.0s					
URZ	**Urewera**	**76.36 128**	P	**P**	**22 34 43.8**	**-0.8**
	comp=E,7.6nm,0.8s,mb4.7,baz=328,slow=7.6,SNR=4.1					
BALT	**Daday**	**76.42 314**	*i* P	**P**	**22 34 44.7**	**-0.1**
SIM	**Simferopol'**	**77.01 318**c	*i*P	**P**	**22 34 49.0**	**+0.9**
SIM			*e*S	S	22 44 34.0	-0.9
SIM			pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2					
SEY	**Seymchan**	**77.19 21**c*e*P		**P**	**22 34 46.9**	**-1.8**
BOLV	**Bolvadin**	**77.38 311**	*i* P	**P**	**22 34 50.5**	**+0.2**
ISP	**Isparta**	**77.47 310**	PFAKE		22 35 00.0	+9.2
ISP			LR	LR		
	comp=Z,634nm,20.0s,MS4.9					
FUNA	**Funafuti**	**77.53 98**	PFAKE		22 35 00.0	+8.4
FUNA			LR	LR		
	comp=Z,12μm,19.0s,MS6.2					
ESKT	**Eskisehir**	**77.67 312**	*i* P	**P**	**22 34 51.6**	**-0.4**
TIXI	**Tiksi**	**77.81 9**c	*i*P	**P**	**22 34 51.3**	**-0.7**
TIXI			*e*	pP	22 34 59.7	-1.3
TIXI			*e*		22 37 42.3	
TIXI			*e*S	S	22 44 38.3	-4.2
TIXI			pmax	pmax		
	comp=Z,84nm,1.0s,mb5.6					
TIXI			MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5					
TIXI	**Tiksi**	**77.81 9**	*e*P	**P**	**22 34 48.8**	**-3.2**
TIXI			LR	LR		
	comp=Z,2μm,19.0s,MS5.5					
BORA	**Eskisehir**	**78.07 312**	*i* P	**P**	**22 34 53.5**	**-0.7**
GDZ	**Gediz**	**78.58 311**	*i* P	**P**	**22 34 56.0**	**-1.0**
TURN	**Turunc**	**78.70 309**	*i* P	**P**	**22 34 59.1**	**+1.4**
MOS	**Moscow**	**78.97 329**	*e*P	**P**	**22 34 55.9**	**-2.8**
MOS			*e*		22 35 12.4	
MOS			*e*		22 37 55.8	
MOS			*e*S	S	22 44 51.8	-3.7
MOS			pmax	pmax		
	comp=Z,82nm,1.1s,mb5.6					
MOS			pmax	pmax		
	comp=Z,500nm,2.2s,mb6.1					
MOS			MLR	MLR		
	comp=Z,2μm,23.0s,MS5.4					
MANT	**Manisa**	**79.13 310**	*i* P	**P**	**22 35 00.3**	**+0.3**
DEMI	**Demirci**	**79.15 311**	*i* P	**P**	**22 35 00.2**	**+0.1**
OBN	**Obninsk**	**79.27 328**	P	**P**	**22 35 01.5**	**+1.1**
	comp=Z,465nm,0.8s,mb6.5,SNR=7.6					
OBN	**Obninsk**	**79.27 328**c	*i*P	**P**	**22 35 00.4**	**0.0**
OBN			*i*	pP	22 35 08.3	-1.1
OBN			*i*		22 38 00.4	
OBN			*i*		22 44 56.4	
OBN			*e*		22 45 08.6	
OBN			*i*		22 45 34.9	
OBN			*e*SS	SS	22 50 14.1	+8.3
OBN			pmax	pmax		
	comp=Z,137nm,1.7s,mb5.6					
OBN	**Obninsk**	**79.27 328**	*e*P	**P**	**22 34 58.2**	**-2.1**
OBN			LR	LR		
	comp=Z,1μm,20.0s,MS5.2					
DURS	**Dursunbey**	**79.47 311**	*i* P	**P**	**22 35 01.6**	**-0.2**
BDRM	**Kayabasi**	**79.65 309**	*i* P	**P**	**22 35 02.6**	**-0.3**
SUR	**Sutherland**	**79.67 238**	PFAKE		22 35 10.0	+6.9
SUR			LR	LR		
	comp=Z,704nm,21.0s,MS5.0					
BALY	**Balya**	**80.14 311**	*i* P	**P**	**22 35 05.3**	**-0.2**
URLA	**Izmir**	**80.60 310**	*i* P	**P**	**22 35 08.6**	**+0.6**
SART	**Tekirdag**	**80.69 312**	*i* P	**P**	**22 35 08.0**	**-0.4**
AYVA	**Ayvalik**	**80.74 311**	*i* P	**P**	**22 35 08.3**	**-0.4**
SBA	**Scott Base**	**80.90 169**	*e*P	**P**	**22 35 09.0**	**+0.2**
SBA			pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0					
SBA			MLR	MLR		
	comp=Z,686nm,19.0s,MS5.0					
SBA	**Scott Base**	**80.90 169**	*e*P	**P**	**22 35 09.0**	**+0.1**
	comp=Z,22nm,1.1s,mb5.0					
SBA			LR	LR		
	comp=Z,686nm,19.0s,MS5.0					
HARR	**Harsova**	**81.14 316**	⇓P	**P**	**22 35 12.0**	**+1.3**
HARR	**Harsova**	**81.14 316**⇓	*i*P	**P**	**22 35 12.0**	**+1.3**
KIS	**Kishinev**	**81.15 319**	*e*P	**P**	**22 35 08.0**	**-2.7**
KIS			*e*pcP		22 35 24.0	
KIS	**Kishinev**	**81.15 319**	*e*PP	PP	22 38 12.0	-4.2
KIS			*e*S	S	22 45 13.0	-5.9
KIS	**Kishinev**	**81.15 319**	*e*P	**P**	**22 35 08.0**	**-2.7**
KIS			*e*		22 35 24.0	
KIS			*e*		22 38 12.0	
KIS			*e*		22 40 08.0	
KIS			*e*S	S	22 45 13.0	-5.9
KIS			MLR	MLR		
	comp=Z,300nm,17.0s,MS4.7					
KIS			MLR	MLR		
	comp=E,300nm,18.0s					
KIS			MLR	MLR		
	comp=Z,300nm,18.0s					
LEOM	**Leova**	**81.39 318**	⇓P	**P**	**22 35 12.2**	**+0.2**
LEOM	**Leova**	**81.39 318**⇓	*i*P	**P**	**22 35 12.2**	**+0.2**
AKASG	**Malin Array Be**	**81.93 322**	P	**P**	**22 35 14.3**	**-0.4**
	comp=Z,10nm,0.8s,mb4.8,baz=88,slow=4.8,SNR=36					
AKASG			PP	PP	22 38 20.9	-1.7
	comp=Z,0.3nm,0.3s,baz=111,slow=7.1,SNR=4.9					
AKASG	**Malin Array Be**	**81.93 322**	P	**P**	**22 35 14.4**	**-0.3**
AKASG					22 38 20.9	
AKASG			pmax	pmax		
	comp=Z,10.0nm,0.8s					
AKASG	**Malin Array Be**	**81.93 322**	P	**P**	**22 35 14.3**	**-0.4**
AKASG			PP	PP	22 38 20.9	-1.7
AKBB	**Malin Array Si**	**81.93 322**	*e*P	**P**	**22 35 14.0**	**-0.7**
AKBB			*e*		22 38 21.2	
KIEV	**Kiev**	**81.94 322**	*e*P	**P**	**22 35 14.2**	**-0.6**
KIEV			*e*		22 38 21.7	
KIEV			pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8					
KIEV			MLR	MLR		
	comp=Z,647nm,20.0s,MS5.0					
KIEV	**Kiev**	**81.94 322**	*e*P	**P**	**22 35 14.2**	**-0.6**
	comp=Z,11nm,0.8s,mb4.8					
KIEV			*e*PP	PP	22 38 21.7	-0.9
KIEV			LR	LR		
	comp=Z,647nm,20.0s,MS5.0					
SZH	**Strazhica**	**82.20 315**	*i* P	**P**	**22 35 15.7**	**-0.6**
KDZ	**Kurdzhali**	**82.21 313**	*i* P	**P**	**22 35 15.3**	**-1.1**
VRI	**Vrincioaia**	**82.26 317**	P	**P**	**22 35 17.7**	**+1.1**
VRI	**Vrincioaia**	**82.26 317**⇓	*i*P	**P**	**22 35 17.2**	**+0.6**
PLOR	**Plostina**	**82.31 317**	⇓P	**P**	**22 35 17.3**	**+0.5**
PLOR	**Plostina**	**82.31 317**⇓	*i*P	**P**	**22 35 17.3**	**+0.5**
TSUM	**Tsumeb**	**82.63 251**	*e*P	**P**	**22 35 17.8**	**-1.3**
	comp=Z,26nm,1.4s,mb5.1					
TSUM			LR	LR		
	comp=Z,1μm,20.0s,MS5.3					
MLR	**Muntele Rosu**	**82.70 317**	⇑P	**P**	**22 35 17.6**	**-1.3**
MLR	**Muntele Rosu**	**82.70 317**⇑	*i*P	**P**	**22 35 17.6**	**-1.3**
RZN	**Rozhen**	**82.73 313**	*i* P	**P**	**22 35 19.4**	**+0.3**
PLD	**Plovdiv**	**82.83 313**	*i* P	**P**	**22 35 19.5**	**-0.1**
PGB	**Panagyurishte**	**83.31 314**	*i* P	**P**	**22 35 21.7**	**-0.4**
MMB	**Musomiste**	**83.44 313**	*i* P	**P**	**22 35 21.9**	**-0.9**
BURAR	**Bucovina Array**	**83.68 319**	⇑P	**P**	**22 35 23.2**	**-0.7**
BURAR	**Bucovina Array**	**83.68 319**⇑	*i*P	**P**	**22 35 23.2**	**-0.7**
BUR08	**Bucovina Ar. S**	**83.70 319**	*e*P	**P**	**22 35 22.5**	**-1.5**
MNK	**Minsk**	**83.82 326**	*e*P	**P**	**22 35 22.0**	**-2.4**
KKB	**Krupnik**	**83.96 313**	*i* P	**P**	**22 35 23.7**	**-1.8**
VTS	**Vitosha**	**84.01 313**	*i* P	**P**	**22 35 25.5**	**-0.2**
PUL	**Pulkovo**	**84.10 331**c*e*P		**P**	**22 35 25.8**	**+0.1**
PUL			pmax	pmax		
	comp=Z,128nm,0.8s,mb6.1					
VAY	**Valandovo**	**84.24 312**	*e*P	**P**	**22 35 26.0**	**-0.9**
IDID	**Didziasalis**	**84.65 326**	*e*P	**P**	**22 35 29.6**	**+1.0**
JOF	**Joensuu**	**84.69 334**	*e*P	**P**	**22 35 26.6**	**-2.1**
JOF			pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2					
JOF	**Joensuu**	**84.69 334**	*e*p	**P**	**22 35 26.6**	**-2.1**
	comp=Z,20nm,0.9s,mb5.2					
BILL	**Bilibino**	**84.77 20**α	*i*P	**P**	**22 35 29.0**	**0.0**
BILL			*i* *PP	pP	22 35 37.4	-0.7
BILL			*e*		22 38 53.2	
BILL			*i*		22 45 49.9	
BILL			*e*PS		22 46 59.2	
BILL			pmax	pmax		
	comp=Z,146nm,2.4s,mb5.7					
BILL	**Bilibino**	**84.77 20**	*e*P	**P**	**22 35 26.7**	**-2.3**
	comp=Z,82nm,1.3s,mb5.7					
BILL			LR	LR		
	comp=Z,1μm,20.0s,MS5.3					
BMR	**Baia Mare**	**84.83 318**	P	**P**	**22 35 31.6**	**+1.9**
LVV	**L'vov**	**84.94 321**	*e*P	**P**	**22 35 29.3**	**-0.9**
LVV			*e*	pP	22 35 37.9	-1.4
IIGN	**Ignalina**	**84.94 326**	*e*P	**P**	**22 35 31.0**	**+0.9**
IZAR	**Zarasai**	**85.03 327**	*e*P	**P**	**22 35 31.2**	**+0.6**
ISAL	**Salakas**	**85.05 327**	*e*P	**P**	**22 35 31.3**	**+0.6**
DRGR		**85.18 317**	P	**P**	**22 35 32.7**	**+1.2**
SKO	**Skopje**	**85.19 313**	*e*P	**P**	**22 35 31.6**	**-0.1**
KRUS	**Krusevo**	**85.22 312**	*e*P	**P**	**22 35 30.6**	**-1.3**
LVZ	**Lovozero**	**85.23 340**c*e*P		**P**	**22 35 31.3**	**0.0**
LVZ			pmax	pmax		
	comp=Z,106nm,2.2s,mb5.6					
LVZ	**Lovozero**	**85.23 340**	PFAKE		22 35 40.0	+8.7
LVZ			LR	LR		
	comp=Z,2μm,22.0s,MS5.3					
VSU	**Vasula**	**85.48 329**c*e*P		**P**	**22 35 32.1**	**-0.6**
VSU			pmax	pmax		
	comp=Z,46nm,0.8s,mb5.7					
OHR	**Ohrid**	**85.52 312**	*e*P	**P**	**22 35 31.9**	**-1.4**
APA	**Apatity**	**85.54 339**⇑	*i*P	**P**	**22 35 34.2**	**+1.4**
APA			*i*		22 35 40.0	
APA			*i*		22 35 53.0	
APA			*i*		22 46 03.0	
APA			*i* PS		22 47 00.0	
APA			*i* SS	SS	22 51 34.0	-4.4
APA			pmax	pmax		
	comp=Z,43nm,1.2s,mb5.5					
APA			pmax	pmax		
	comp=Z,400nm,9.0s					
APA			MLR	MLR		
	comp=Z,2μm,20.0s,MS5.4					
TRPA	**Tarpa**	**85.55 319**⇓	*i*P	**P**	**22 35 34.0**	**+0.7**
BZS	**Buzias**	**85.70 316**	⇑P	**P**	**22 35 34.9**	**+0.7**
BZS	**Buzias**	**85.70 316**⇑	*i*P	**P**	**22 35 34.8**	**+0.6**
KWP	**Kalwaria Pacla**	**85.74 320**	*e*P	**P**	**22 35 35.0**	**+0.7**
	comp=Z,100nm,2.0s,mb5.7					
KWP			*e*S	S	22 46 05.6	+0.5
KWP			LMZ		23 20 39.5	
	comp=Z,700nm,22.7s					
KWP	**Kalwaria Pacla**	**85.74 320**	*e*P	**P**	**22 35 35.0**	**+0.8**
KWP			*e*S	S	22 46 05.6	+0.5
KWP			pmax	pmax		
	comp=Z,100nm,2.0s,mb5.7					
KWP			MLR	MLR		
	comp=Z,700nm,22.7s,MS5.0					
KWP	**Kalwaria Pacla**	**85.74 320**	*e*P	**P**	**22 35 32.4**	**-1.9**
	comp=Z,35nm,1.0s,mb5.5					
KWP			*e*PP	PP	22 38 52.6	-1.0
KWP			LR	LR		
	comp=Z,735nm,22.0s,MS5.0					
QSPA	**South Pole Qui**	**85.80 180**	PFAKE		22 35 50.0	+16
QSPA			LR	LR		
	comp=Z,1μm,20.0s,MS5.3					
UZH	**Uzhgorod**	**85.81 319**	*e*P	**P**	**22 35 34.8**	**+0.2**
UZH			*e*		22 35 48.0	
UZH			*e*S	S	22 46 05.0	-0.8
UZH			*e*		22 47 07.0	
UZH			*e*		22 51 50.0	
UZH			MLR	MLR		
	comp=N,200nm,19.0s,MS4.8					
UZH			MLR	MLR		
	comp=E,300nm,19.0s,MS4.8					
UZH			MLR	MLR		
	comp=Z,200nm,19.0s,MS4.5					
KOLS	**Kolonicke sedl**	**85.88 320**	*e*P	**P**	**22 35 33.8**	**-1.2**
KOLS			*e*		22 35 45.0	
KOLS			*e*		22 39 02.5	
KOLS			*e*S	S	22 46 08.3	+1.8
KOLS			pmax	pmax		
	comp=Z,42nm,0.9s,mb5.7					
KOLS	**Kolonicke sedl**	**85.88 320**	*e*P	**P**	**22 35 33.8**	**-1.2**
	comp=Z,42nm,0.9s,mb5.7					
KOLS			*e*	PcP	22 35 36.4	-1.3
KOLS			*e*PP	pP	22 35 45.0	+1.0
KOLS			*e*PP	PP	22 39 02.5	+7.6
KOLS			*e*S	S	22 46 08.3	+1.8
KOLS			*e*SS	SS	22 51 54.9	+11
KOLS			LR	LR		
	comp=Z,400nm,21.2s,MS4.8					
KOLS	**Kolonicke sedl**	**85.88 320**	*e*P	**P**	**22 35 33.8**	**-1.2**
KOLS			*e*PCP	PcP	22 35 36.4	-1.3
KOLS			*e*pP	pP	22 35 45.0	+1.0
KOLS			*e*PP	PP	22 39 02.5	+7.6
KOLS			*e*S	S	22 46 08.3	+1.8
KOLS			*e*SS	SS	22 51 54.9	+11
MAIT	**Maitri**	**85.91 199**	*e*P	**P**	**22 35 36.0**	**+1.3**
MAIT			*e*E		22 35 41.6	
TIR	**Tirane**	**86.25 312**	PFAKE		22 35 50.0	+13
TIR			LR	LR		
	comp=Z,631nm,20.0s,MS5.0					
SUW	**Suwalki**	**86.35 325**	*e*P	**P**	**22 35 37.5**	**+0.4**
	comp=Z,200nm,1.0s,mb6.3					
SUW			*e*pP	pP	22 35 42.6	-3.6
SUW			*e*PP	PP	22 39 00.4	+1.9
SUW			*e*SKS		22 46 02.7	
SUW			*e*S	S	22 46 09.7	-1.2
SUW			LMZ		23 22 08.3	
	comp=Z,600nm,20.5s					
SUW	**Suwalki**	**86.35 325**⇑	*e*P	**P**	**22 35 37.5**	**+0.4**
SUW			*e**PP	pP	22 35 42.6	-3.6
SUW			*e*		22 39 00.4	
SUW			*e*		22 46 02.7	
SUW			*e*S	S	22 46 09.7	-1.2
SUW			MLR	MLR		
	comp=Z,600nm,20.5s,MS5.0					
SUW	**Suwalki**	**86.35 325**	*e*P	**P**	**22 35 34.4**	**-2.7**
	comp=Z,118nm,0.9s,mb6.1					
SUW			*e*PP	PP	22 38 59.2	+0.7
FINES	**FINESS Array B**	**86.59 332**	P	**P**	**22 35 38.7**	**+0.6**
	comp=Z,16nm,0.8s,mb5.3,baz=100,slow=7.9,SNR=46					
STHS	**Stebnicka Huta**	**86.63 320**	*e*P	**P**	**22 35 39.8**	**+1.1**
STHS			pmax	pmax		
	comp=Z,12nm,0.9s,mb5.1					
STHS	**Stebnicka Huta**	**86.63 320**	*e*P	**P**	**22 35 39.8**	**+1.1**
	comp=Z,12nm,0.9s,mb5.1					
STHS	**Stebnicka Huta**	**86.63 320**	*e*P	**P**	**22 35 39.8**	**+1.1**
KAF	**Kangasniemi**	**86.66 333**	*e*P	**P**	**22 35 36.4**	**-2.1**
KAF			pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5					
KAF	**Kangasniemi**	**86.66 333**	*e*p	**P**	**22 35 36.4**	**-2.1**
	comp=Z,32nm,0.9s,mb5.5,baz=100,slow=4.4					
KECS	**Kecovo**	**86.96 319**	*e*P	**P**	**22 35 41.1**	**+0.8**
KECS			pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9					
KECS	**Kecovo**	**86.96 319**	*e*P	**P**	**22 35 41.1**	**+0.8**
	comp=Z,6.5nm,0.9s,mb4.9					
KECS			*e*PP	sP	22 35 49.7	-3.0
KECS	**Kecovo**	**86.96 319**	*e*P	**P**	**22 35 41.1**	**+0.8**
KECS			*e*pP	pP	22 35 49.7	+0.3
NIE	**Niedzica**	**87.23 320**	*e*P	**P**	**22 35 43.1**	**+1.5**
PSZ	**Piszkesteto**	**87.26 318**	*e*P	**P**	**22 35 41.3**	**-0.4**
PSZ			*e*		22 39 03.4	
PSZ			pmax	pmax		
	comp=Z,49nm,1.7s,mb5.5					
PSZ			MLR	MLR		
	comp=Z,360nm,19.0s,MS4.8					
PSZ	**Piszkesteto**	**87.26 318**	*e*P	**P**	**22 35 41.3**	**-0.4**
	comp=Z,49nm,1.7s,mb5.5					
PSZ			*e*PP	PP	22 39 03.4	-2.6
PSZ			LR	LR		
	comp=Z,360nm,19.0s,MS4.8					
PSZ	**Piszkesteto**	**87.26 318**⇑	*e*PcP	PcP	22 35 42.3	-1.5
PSZ	**Piszkesteto**	**87.26 318**⇑	*i*P	**P**	**22 35 42.4**	**+0.7**
WAR	**Warsaw**	**87.28 323**	*e*P	**P**	**22 35 42.7**	**+0.9**
WAR			*e*SKS		22 46 09.2	
WAR			*e*S	S	22 46 19.8	-0.1
WAR			LMZ		23 19 23.3	
	comp=Z,900nm,22.6s					
OJC	**Ojcow**	**87.69 321**	*e*P	**P**	**22 35 41.5**	**-2.3**
OJC			*e*PcP	PcP	22 35 44.1	-1.6
OJC			*e*pP	pP	22 35 52.1	-0.8
OJC			*e*sP	sP	22 35 58.1	+1.9
OJC			*e*PP	PP	22 39 13.1	+3.7
OJC			*e*S	S	22 46 23.8	-0.2
OJC			*e*SS	SS	22 52 18.0	+7.2
OJC			L		23 21 53.9	
	comp=Z,0.5nm,19.9s					
BUD	**Budapest**	**87.78 318**⇑	*e*PcP	PcP	22 35 44.6	-1.5
PKSM	**Moragy**	**87.85 316**	⇑P	**P**	**22 35

ADK Adak 88.39 38 *e*P **P 22 35 45.7 -1.3**
comp=Z,60nm,1.1s,mb5.7
ADK LR LR
comp=Z,599nm,19.0s,MS5.0
KEV Kevo 88.47 340 *e*P **P 22 35 47.5 +0.5**
KEV pmax pmax
comp=Z,36nm,1.0s,mb5.6
KEV MLR MLR
comp=Z,2μm,22.0s,MS5.4
KEV Kevo 88.47 340 *e*P **P 22 35 47.5 +0.5**
comp=Z,36nm,1.0s,mb5.5
KEV LR LR
comp=Z,2μm,22.0s,MS5.4
KEV Kevo 88.47 340 *e*p **P 22 35 47.3 +0.3**
comp=Z,32nm,1.0s,mb5.5
OKC Ostrava-Krasne 88.69 320 *e*P **P 22 35 49.4 +0.9**
OKC *e*pP pP 22 35 57.0 -0.6
OKC *e*S S 22 46 34.9 +1.4
OKC AMS AMS 23 23 00.0
comp=Z,400nm,16.2s
CEL Celeste 88.88 308 *e*P **P 22 35 50.7 +1.0**
comp=Z,22nm,1.1s,mb5.4
CEL LR LR
comp=Z,434nm,21.0s,MS4.8
ARCES ARCESS Array B 88.92 340 P **P 22 35 50.0 +0.9**
comp=Z,31nm,0.8s,mb5.7,baz=102,slow=5.1,SNR=47
MORC Moravsky Berou 89.07 320 *e*P **P 22 35 51.0 +0.7**
MORC *e* 22 39 19.9
MORC pmax pmax
comp=Z,22nm,1.0s,mb5.4
MORC Moravsky Berou 89.07 320 *e*P **P 22 35 51.0 +0.8**
comp=Z,22nm,1.0s,mb5.4
MORC *e*PP PP 22 39 19.9 -0.5
MORC Moravsky Berou 89.07 320⇓*i*P **P 22 35 51.8 +1.5**
ZST Bratislava 89.15 318 *e*P **P 22 35 51.9 +1.2**
ZST pmax pmax
comp=Z,16nm,1.0s,mb5.3
ZST Bratislava 89.15 318 *e*P **P 22 35 51.9 +1.2**
comp=Z,16nm,1.0s,mb5.3
ZST *e*S S 22 46 50.8 +13
ZST Bratislava 89.15 318 *e*P **P 22 35 51.9 +1.2**
GKP Gorka Klasztor 89.71 323 *e*P **P 22 35 53.8 +0.6**
GKP *e*S S 22 46 43.4 +0.5
GKP LMZ 23 22 09.8
comp=Z,700nm,24.9s
WDD Wield Dalam 89.73 306 PFAKE 22 36 00.0 +6.2
WDD LR LR
comp=Z,493nm,20.0s,MS4.9
GCIS Gornji Cirnik 89.89 316 *i* P **P 22 35 55.2 +1.0**
DPC Dobruska-Polom 89.92 320 *e*P **P 22 35 55.8 +1.5**
DPC *e*pP pP 22 36 04.1 +0.7
DPC *e*S S 22 46 46.8 +1.8
DPC AMS AMS 23 25 10.0
comp=Z,600nm,19.1s
CONA Conrad Observa 89.95 318⇑*i*P **P 22 35 54.8 +0.3**
comp=Z,7.6nm,1.0s,mb5.0
KSP Ksiaz 89.99 321 *e*P **P 22 35 55.8 +1.2**
KSP LMZ 23 20 56.4
comp=Z,1μm,22.8s
KSP Ksiaz 89.99 321⇑*e*P **P 22 35 55.7 +1.1**
KSP *e*S S 22 46 45.5 -0.2
KSP *e*SP SP 22 47 56.5 +5.2
KSP MLR MLR
comp=Z,1μm,22.8s,MS5.3
ARSA Arzberg 90.11 317⇑*i*P **P 22 35 56.1 +0.9**
comp=Z,17nm,0.9s,mb5.4
BOJS Bojanci 90.11 315 *i* P **P 22 35 56.0 +0.7**
UPC Upice 90.13 320 *e*P **P 22 35 56.8 +1.5**
UPC *e*pP pP 22 36 05.0 +0.6
PERS Pernice 90.32 317 *i* P **P 22 35 57.1 +0.8**
TREC Trest 90.34 319 *e*P **P 22 35 57.5 +1.2**
TREC *e*pP pP 22 36 05.4 0.0
TREC *e*S S 22 46 49.4 +0.4
TREC AMS AMS 23 23 10.0
comp=Z,500nm,22.0s
VISS Visnje 90.43 316 *i* P **P 22 35 57.3 +0.6**
OBKA Obir 90.70 316⇓*i*P **P 22 35 59.0 +1.0**
comp=Z,16nm,1.1s,mb5.2
JAVS Javornik 90.98 316 *i* P **P 22 36 00.0 +0.7**
MOA Molln 91.01 318⇑*i*P **P 22 35 59.5 +0.1**
comp=Z,6.3nm,0.9s,mb4.9
PRU Pruhonice 91.02 320 *e*P **P 22 36 00.6 +1.2**
PRU *e*pP pP 22 36 09.1 +0.6
PRU *e*S S 22 46 57.0 +1.8
PRU AMS AMS 23 20 30.0
comp=Z,500nm,22.1s
PVCC Panska Ves 91.05 320 *e*P **P 22 36 00.6 +1.1**
PVCC *e*pP pP 22 36 08.8 +0.1
PVCC *e*S S 22 46 55.9 +0.5
PVCC AMS AMS 23 21 20.0
comp=Z,600nm,22.9s
PRA Prague 91.10 320 P **P 22 36 01.0 +1.2**
PRA pP pP 22 36 08.0 -0.9
AQU L'Aquila 91.16 312 *e*P **P 22 35 59.9 -0.3**
AQU MLR MLR
comp=Z,423nm,19.0s,MS4.9
TRI Trieste 91.17 316 PFAKE 22 36 10.0 +10
TRI LR LR
comp=Z,348nm,19.0s,MS4.8
TRO Tromso 91.19 340 *e*P **P 22 35 55.1 -4.7**
TRO *e*PP PP 22 39 40.5 +3.7
TRO *e*SKS 22 46 28.2
TRO AMS AMS 23 20 23.2
comp=Z,1μm,20.9s,MS5.3
GEC2 GERESS Array S 91.47 319 *e*P **P 22 36 01.6 +0.1**
comp=Z,22nm,1.1s,mb5.4
GEC2 *e*S S 22 46 57.1 -2.2
GEC2 GERESS Array S 91.47 319 *e*P **P 22 36 01.6 +0.1**
GEC2 *e*S S 22 46 57.1 -2.2
GEC2 pmax pmax
comp=Z,22nm,1.1s,mb5.4
GERES GERESS Array B 91.47 319 P **P 22 36 02.3 +0.8**
comp=Z,6.5nm,0.8s,mb5.0,baz=93,slow=4.5,SNR=44
BRG Berggiesshubel 91.48 321 *e*P **P 22 36 01.9 +0.4**
comp=Z,17nm,1.1s,mb5.3
BRG *e*S S 22 46 59.7 +0.4
BRG Berggiesshubel 91.48 321 *e*P **P 22 36 02.4 +0.9**
comp=Z,17nm,1.1s,mb5.3
BRG PP PP 22 39 42.0 +2.4
BRG SKS 22 46 39.0
BRG S S 22 47 01.0 +1.7
BRG PS PS 22 48 12.0 +0.2
BRG SS SS 22 53 10.0 +4.4
BRG *e* 23 00 35.9
comp=Z,3.3nm,1.4s
BRG
comp=N,412nm,21.7s
BRG
comp=E,543nm,20.9s
BRG
comp=Z,583nm,17.4s
BRG Berggiesshubel 91.48 321 *e*P **P 22 36 02.4 +0.9**
BRG 22 39 42.0
BRG S S 22 47 01.0 +1.7
BRG PS PS 22 48 12.0 +0.2
BRG SS SS 22 53 10.0 +4.4
BRG pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
BRG pmax pmax
comp=Z,2.0nm,1.4s
BRG MLR MLR
comp=N,247nm,21.7s,MS4.8
BRG MLR MLR
comp=E,325nm,20.9s,MS4.8
BRG MLR MLR
comp=Z,349nm,17.4s,MS4.9
KHC Kasperske Hory 91.57 319 *e*P **P 22 36 02.2 +0.3**
comp=Z,3.5nm,0.9s,mb4.7
KHC Kasperske Hory 91.57 319 *e*P **P 22 36 02.5 +0.5**
KHC *e*pP pP 22 36 10.7 -0.4
KHC *e*S S 22 47 01.1 +0.9
KHC AMS AMS 23 27 00.0
comp=Z,600nm,15.7s
RUE Ruedersdorf 91.71 322 *e*P **P 22 36 03.1 +0.6**
comp=Z,33nm,1.0s,mb5.6
WET Wettzell 92.03 319 *e*P **P 22 36 04.1 0.0**
comp=Z,18nm,1.1s,mb5.3
WET Wettzell 92.03 319 *e*P **P 22 36 04.1 0.0**
WET pmax pmax
comp=Z,18nm,1.1s,mb5.3
VNA2 Neumayer--Watz 92.08 198 *e*P **P 22 36 04.3 +0.4**
CLL Collm 92.10 321 *e*P **P 22 36 04.1 -0.3**
CLL Collm 92.10 321 *i* **P 22 36 04.6 +0.2**
CLL *i* pP 22 36 12.2 -1.3
CLL *e*SKS SKSac 22 46 38.0 +2.4
CLL *e*S S 22 46 57.0 -7.9
CLL LR LR
comp=Z,500nm,20.4s,MS5.0
CLL Collm 92.10 321 *i* pP 22 36 12.2 -1.3
CLL *e* 22 46 38.0
CLL *e*S S 22 46 57.0 -7.9
CLL pmax pmax
comp=Z,15nm,1.4s,mb5.1
CLL MLR MLR
comp=Z,500nm,20.4s,MS5.0
CLL Collm 92.10 321 *i* Pmax **P 22 36 04.6 +0.2**
comp=Z,15nm,1.4s,mb5.1
CLL *i* sP pP 22 36 12.2 -1.3
CLL *i* 22 36 46.7
CLL *e*PP PP 22 39 48.0 +3.5
CLL *e*(PPPP) 22 43 00.0
CLL *e*SKSac SKSac 22 46 48.0 +12
CLL *e*S S 22 47 03.0 -1.9
comp=N,400nm,23.0s
CLL *e*PS PS 22 48 20.0 +1.3
CLL *e*SS SS 22 53 26.0 +11
CLL *e*SSS 22 57 06.0
CLL *e*SSSS 23 00 22.0
CLL Lm 23 24 00.0
comp=N,500nm,18.4s
CLL Lm 23 24 00.0
comp=E,500nm,20.8s
CLL Lm 23 24 00.0
comp=Z,500nm,20.4s
NKC Novy Kostel 92.38 320 *e*P **P 22 36 06.7 +1.0**
NKC *e* pP 22 36 14.9 +0.1
NKC *e*S S 22 47 11.6 +4.1
NKC MLR MLR
comp=Z,600nm,22.3s,MS5.0
NKC smax
comp=N,5.0nm,0.4s
NKC Novy Kostel 92.38 320 *e*P **P 22 36 06.7 +1.0**
NKC *e*pP pP 22 36 14.9 +0.1
NKC *e*S S 22 47 11.6 +4.1
NKC AMS AMS 23 21 30.0
comp=N,600nm,22.3s
GUNZ Gunzen 92.47 320 *e*P **P 22 36 06.7 +0.6**
MOX Moxa 92.94 320 *e*P **P 22 36 08.8 +0.5**
comp=N,22nm,1.8s,mb5.3
MOX
comp=Z,400nm,21.0s
MOX Moxa 92.94 320 *e*P **P 22 36 08.5 +0.2**
comp=Z,11nm,1.2s,mb5.2
MOX Moxa 92.94 320 *e*P **P 22 36 08.8 +0.5**
MOX pmax pmax
comp=Z,22nm,1.8s,mb5.3
MOX MLR MLR
comp=Z,400nm,21.0s,MS4.8
SPB4 Spitsbergen Ar 93.00 348 *e*P **P 22 36 07.5 -0.5**
GRA1 Grafenberg Arr 93.14 319 *e*P **P 22 36 10.1 +0.9**
comp=Z,25nm,1.2s,mb5.5
GRF Grafenberg Arr 93.14 319 *e*P **P 22 36 10.1 +0.9**
comp=Z,25nm,1.2s,mb5.5
GRF Grafenberg Arr 93.14 319 *e*P **P 22 36 10.1 +0.9**
GRF pmax pmax
comp=Z,25nm,1.2s,mb5.5
GRF Grafenberg Arr 93.14 319 *e*P **P 22 36 10.1 +0.9**
GRF pmax pmax
comp=Z,25nm,1.2s,mb5.5
VLC Villacollemand 93.47 314 PFAKE 22 36 20.0 +9.1
VLC LR LR
comp=Z,696nm,22.0s,MS5.1
NOA NORSAR Array B 93.62 331 P **P 22 36 11.0 -0.2**
comp=Z,4.6nm,0.9s,mb4.9,baz=93,slow=4.6,SNR=14
NOA PP PP 22 39 54.8 -1.3
comp=Z,2.7nm,0.9s,baz=90,slow=7.2,SNR=4.5
NOA NORSAR Array B 93.62 331 P **P 22 36 11.0 -0.2**
NOA 22 39 54.8
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA pmax pmax
comp=Z,3.0nm,0.9s
CLZ Clausthal 93.77 322 *e*P **P 22 36 12.3 +0.2**
comp=Z,17nm,1.3s,mb5.3
CLZ Clausthal 93.77 322 *e*P **P 22 36 12.3 +0.2**
CLZ pmax pmax
comp=Z,17nm,1.3s,mb5.3
NAO01 NORSAR Array S 93.77 331 PFAKE 22 36 20.0 +8.1
NAO01 LR LR
comp=Z,461nm,19.0s,MS5.0
BSEG Bad Segeberg 93.87 324 *e*P **P 22 36 12.6 +0.1**
comp=Z,20nm,1.4s,mb5.3
BSEG Bad Segeberg 93.87 324 *e*P **P 22 36 12.6 +0.1**
BSEG pmax pmax
comp=Z,20nm,1.4s,mb5.3
KEST Kesra 93.92 305 P **P 22 36 15.0 +1.8**
comp=Z,1.6nm,0.8s,mb4.5,baz=341,slow=2.1,SNR=7.3
KBS Kingsbay 93.93 349 AMS AMS 23 27 02.5
comp=Z,1μm,16.2s,MS5.5
KBS Kingsbay 93.93 349 *ce*P **P 22 36 11.7 -0.6**
KBS pmax pmax
comp=Z,16nm,1.0s,mb5.4
KBS Kingsbay 93.93 349 PFAKE 22 36 20.0 +7.7
KBS LR LR
comp=Z,1μm,19.0s,MS5.4
DAVA Damuels 93.94 317⇑*i*P **P 22 36 13.5 +0.5**
comp=Z,9.9nm,1.1s,mb5.2
NRDL Niedersach Rie 93.95 322 *e*P **P 22 36 13.5 +0.6**
comp=Z,12nm,1.1s,mb5.2
VSL Villasalto 94.04 309 PFAKE 22 36 20.0 +6.4
VSL LR LR
comp=Z,289nm,22.0s,MS4.7
KONO Kongsberg 94.39 329 *e*PP PP 22 40 03.0 +0.8
KONO *e* 22 47 19.3
KONO AMS AMS 23 25 24.6
comp=Z,746nm,20.7s,MS5.1
KONO Kongsberg 94.39 329 *e*P **P 22 36 14.7 0.0**
KONO pmax pmax
comp=Z,14nm,1.2s,mb5.3
KONO MLR MLR
comp=Z,968nm,20.0s,MS5.3
KONO Kongsberg 94.39 329 *e*P **P 22 36 14.7 0.0**
comp=Z,14nm,1.2s,mb5.3
KONO LR LR
comp=Z,968nm,20.0s,MS5.3
TNS Taunus Mts 94.95 320 *e*P **P 22 36 18.3 +0.8**
comp=Z,22nm,1.0s,mb5.5
TNS Taunus Mts 94.95 320 *e*P **P 22 36 18.3 +0.8**
TNS pmax pmax
comp=Z,22nm,1.0s,mb5.5
BFO Black Forest 95.01 318 PFAKE 22 36 30.0 +12
BFO LR LR
comp=Z,461nm,19.0s,MS5.0
BUG Bochum--Univer 95.70 321 *e*P **P 22 36 21.0 +0.1**
comp=Z,6.0nm,0.8s,mb5.1
ECH Echery 95.79 318 PFAKE 22 36 30.0 +8.6
ECH LR LR
comp=Z,498nm,22.0s,MS4.9
LPG La Plagne 96.08 315 *e*P **P 22 36 23.1 +0.3**
LPL La Plagne 96.09 315 *e*P **P 22 36 23.2 +0.3**
comp=Z,6.1nm,0.8s,mb4.8
LPL La Plagne 96.09 315 *e*P **P 22 36 23.2 +0.3**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
LPL La Plagne 96.09 315 *e*P **P 22 36 23.2 +0.3**
comp=Z,3.0nm,0.8s,mb4.8
BNI Bardonecchia 96.14 315 PFAKE 22 36 30.0 +6.9
BNI LR LR
comp=Z,497nm,20.0s,MS5.0
WLF Walferdange 96.44 319 PFAKE 22 36 30.0 +5.7
WLF LR LR
comp=Z,598nm,20.0s,MS5.1
BER Bergen 96.52 330 *e*PP PP 22 40 16.2 -2.4
BER AMS AMS 23 24 17.6
comp=Z,627nm,20.5s,MS5.1
FOO Floro 96.59 331 *e*PP PP 22 40 23.5 +4.4
FOO AMS AMS 23 29 42.5
comp=Z,751nm,18.6s,MS5.2
TAM Tamanrasset 96.84 292 PFAKE 22 36 40.0 +13
TAM LR LR
comp=Z,565nm,20.0s,MS5.0
BCLA Clavier 96.96 320 P **P 22 36 26.3 -0.4**
comp=Z,16nm,3.5s
UCC Uccle 97.55 321 P **P 22 36 28.9 -0.4**
comp=Z,20nm,3.3s
SSB Saint Sauveur 97.64 315 PFAKE 22 36 40.0 +10
SSB LR LR
comp=Z,348nm,20.0s,MS4.8
TOA0 Torodi Ar. Sit 100.19 283 *e*Pdif Pdif 22 36 41.1 +0.1
TORD Torodi Ar. Bea 100.19 283 P Pdif 22 36 42.2 +1.1
comp=Z,1.4nm,1.2s,baz=200,slow=12,SNR=4.1
TORD PKKPbc PKKPbc 22 53 00.3 +0.9
comp=Z,0.7nm,0.8s,baz=326,slow=3.6,SNR=3.6
JMIC Jan Mayen 100.29 342 *e*PP PP 22 40 47.6 +0.4
JMIC AMS AMS 23 26 38.7
comp=Z,616nm,20.9s,MS5.1
DAG Danmarks Havn 100.65 348 *e*P Pdif 22 36 41.0 -2.1
DAG pmax pmax
comp=Z,2.0nm,0.7s
DAG Danmarks Havn 100.65 348 *i* P Pdif 22 36 41.0 -2.1
comp=Z,2.1nm,0.7s
COLD Coldfoot 100.97 22 *e*Pdif Pdif 22 36 43.7 -0.8
comp=Z,35nm,1.9s
ESK Eskdalemuir 101.61 326 PFAKE 22 37 00.0 +13
ESK LR LR
comp=Z,767nm,19.0s,MS5.2
COLA College 102.57 24 PFAKE 22 37 00.0 +8.4
COLA LR LR
comp=Z,465nm,20.0s,MS5.0
ESLA Sonseca Array 104.33 310 PFAKE 22 37 10.0 +11
ESLA LR LR
comp=Z,2μm,21.0s,MS5.6
PAB San Pablo 104.64 310 PFAKE 22 37 10.0 +9.2
PAB LR LR
comp=Z,269nm,19.0s,MS4.8
EGAK Eagle 105.28 23 PFAKE 22 41 30.0 +13
EGAK LR LR
comp=Z,1μm,21.0s,MS5.3
TBI Tubuai 105.96 116 *e*PP PP 22 41 23.7 -7.2
comp=Z,48nm,26.8s
TBI *e*Sdif Sdif 22 48 59.1 -3.5
comp=Z,294nm,25.5s
TBI Tubuai 105.96 116 *e*PS PS 22 50 49.2 +0.3
comp=Z,138nm,25.5s
TBI *e*SS SS 22 56 33.3 +3.4
comp=Z,638nm,27.0s
TBI *e*LR LR 23 12 13.2
comp=Z,1μm,23.0s
TBI Tubuai 105.96 116 *e*PP PP 22 41 23.7 -7.2
TBI *e*Sdif Sdif 22 48 59.1 -3.5
TBI *e*PS PS 22 50 49.2 +0.3
TBI *e*SS SS 22 56 33.3 +3.4
INK Inuvik 106.33 18 *e*Pdif Pdif 22 37 07.2 -1.1
INK *e*PKiKP PKiKP 22 41 18.9 -0.3
DBIC Dimbokro 106.41 276 PFAKE 22 41 30.0 +9.1
DBIC LR LR
comp=Z,790nm,19.0s,MS5.3
SFS San Fernando 106.47 307 PFAKE 22 41 30.0 +10
SFS LR LR
comp=Z,640nm,19.0s,MS5.2
PPT Papeete 106.94 110 *e*Pdif Pdif 22 37 11.7 +0.6
comp=Z,43nm,27.8s
PPT *e*Sdif Sdif 22 49 06.0 -4.9
comp=Z,555nm,24.8s
PPT Papeete 106.94 110 *e*PS PS 22 50 59.4 +0.2
PPT *e*SS SS 22 56 38.3 -5.3
comp=Z,649nm,27.2s
PPT *e*LR LR 23 12 32.4
comp=Z,714nm,22.5s
PPT Papeete 106.94 110 *e*Pdif Pdif 22 37 11.7 +0.6
PPT *e*PS PS 22 50 59.4 +0.2
MTE Manteigas 106.95 311 PFAKE 22 41 30.0 +8.8
MTE LR LR
comp=Z,354nm,20.0s,MS4.9
RTC Rabat Centre 107.29 304 PFAKE 22 41 30.0 +8.0
RTC LR LR
comp=Z,488nm,19.0s,MS5.1
RES Resolute Bay 108.93 4 PKiKP PKiKP 22 41 23.7 -0.3
PMSA Palmer Station 110.37 187 PFAKE 22 41 40.0 +13
PMSA LR LR
comp=Z,994nm,20.0s,MS5.4
DLBC Dease Lake 112.95 26 *e*PKiKP PKiKP 22 41 32.1 +0.2
SFJD Kangerlussuaq 114.33 348 PFAKE 22 41 50.0 +16
SFJD LR LR
comp=Z,777nm,20.0s,MS5.3
YKA Yellowknife Ar 116.08 18 PKP PKPdf 22 41 36.8 -1.0
comp=Z,3.0nm,0.8s,baz=313,slow=2.1,SNR=30
YKA PP PP 22 42 43.8 +1.7
comp=Z,1.9nm,0.9s,baz=324,slow=7.1,SNR=7.2
YKA PKKPbc PKKPbc 22 52 12.4 +1.9
comp=Z,0.2nm,0.6s,baz=130,slow=4.0,SNR=3.8
YKA Yellowknife Ar 116.08 18 PKIKP PKPdf 22 41 36.8 -1.0
YKA 22 42 43.8
YKA 22 52 12.4
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 116.08 18 PKP PKPdf 22 41 36.8 -1.0
YKA PP PP 22 42 43.9 +1.7
YKA PKKPbc PKKPbc 22 52 12.4 +1.9
TAOE Nuku Hiva Isla 117.48 102 *e*PS PS 22 52 38.3 -0.8
comp=Z,247nm,23.9s
TAOE *e*LR LR 23 17 30.5
comp=Z,831nm,24.1s
RKT Rikitea 118.87 119 *e*SS SS 22 59 20.4 -0.9
comp=Z,552nm,28.8s
EFI East Falkland 121.62 195 PFAKE 22 42 00.0 +11
EFI LR LR
comp=Z,706nm,21.0s,MS5.3
NLWA Neilton Lookou 122.11 35 PFAKE 22 42 00.0 +10
NLWA LR LR
comp=Z,579nm,22.0s,MS5.2
VDB Vedder Mountai 122.15 32 P PKPdf 22 41 50.0 +0.1
A05A Maple Falls 122.17 32⇑P PKPdf 22 41 50.1 +0.1
baz=122
MBW Mount Baker 122.40 32 P PKPdf 22 41 50.8 +0.4
HDW Hoodsport 122.43 34 P PKPdf 22 41 52.0 +1.5
JCW Jim Creek 122.73 33 P PKPdf 22 41 52.0 +0.9
B06A Marblemount 122.78 32⇓P PKPdf 22 41 51.6 +0.5
baz=123
D05A Enumclaw 123.28 34⇓P PKPdf 22 41 52.8 +0.7
baz=123
RCM Mount Rainier- 123.63 34 P PKPdf 22 41 54.5 +1.7
F04A Amboy 123.75 35⇓P PKPdf 22 41 53.3 +0.2
baz=124
ESD East Dome 123.76 35 P PKPdf 22 41 54.8 +1.7
MTMW Mount Mitchell 123.82 35 P PKPdf 22 41 54.4 +1.2
B08A Colville Reser 124.01 32⇓P PKPdf 22 41 53.3 -0.2
baz=124
G04A Mulino 124.12 36⇓P PKPdf 22 41 54.2 +0.3
baz=124
NAC Naches 124.19 34 P PKPdf 22 41 54.7 +0.8
FCC Fort Churchill 124.27 10 *e*PKPdf PKPdf 22 41 53.1 -0.6
FCC *e*PP PP 22 43 34.2 -4.0
B09A Rice 124.58 31⇑P PKPdf 22 41 55.3 +0.7
baz=124
H04A Detroit Lake 124.59 37⇓P PKPdf 22 41 54.8 +0.1
baz=124
E07A Sunnyside 124.84 34⇑P PKPdf 22 41 55.5 +0.4
baz=125
C09A Chrisman Ranch 124.92 32⇑P PKPdf 22 41 55.7 +0.4
baz=125
D08A Wollman Farm, 125.04 33⇓P PKPdf 22 41 55.8 +0.2
baz=125
HAWA Hanford 125.11 34 PFAKE 22 42 10.0 +14
HAWA LR LR
comp=Z,435nm,20.0s,MS5.1
A11A Hall Mountain, 125.13 29⇓P PKPdf 22 41 56.8 +1.2
baz=125
H2OWA Water 125.17 33 P PKPdf 22 41 57.2 +1.4
NEW Newport 125.21 30 *e*PKIKP PKPdf 22 41 55.5 -0.3
NEW MLR MLR
comp=Z,683nm,20.0s
HUMO Hull Mountain 125.24 39 *e*PKPdf PKPdf 22 41 54.7 -1.4
HUMO LR LR
comp=Z,664nm,22.0s,MS5.3
E08A Dider Farm, El 125.31 33⇑P PKPdf 22 41 56.5 +0.5
baz=125
D09A Jones Farm, Ri 125.36 32⇓P PKPdf 22 41 56.0 -0.1
baz=125
B11A Sandpoint 125.47 30⇓P PKPdf 22 41 56.8 +0.5
baz=125
A12A Yaak River Ran 125.49 29⇓P PKPdf 22 41 56.9 +0.5
baz=125
B12A Libby 125.84 29⇓P PKPdf 22 41 57.5 +0.5
baz=126
YBH Yreka Blue Hor 125.85 40 PFAKE 22 42 10.0 +13
YBH LR LR
comp=Z,463nm,22.0s,MS5.1
F08A Pendleton 125.89 34⇓P PKPdf 22 41 57.4 +0.2
baz=126
D10A Wagner Farm, O 125.92 32⇓P PKPdf 22 41 57.3 +0.1
baz=126
G08A Pilot Rock 126.10 34⇓P PKPdf 22 41 57.9 +0.3
baz=126
FFC Flin Flon 126.21 16 *e*PKIKP PKPdf 22 41 56.7 -0.8

FFC MLR MLR
comp=Z,908nm,20.0s,MS5.4
WALA Waterton Lakes 126.23 28 *e*PKPdf PKPdf 22 41 56.8 -0.9
E10A Myers Farm, Un 126.37 32 ⇊P PKPdf 22 41 57.8 -0.3
baz=126
C12B Naegeli Ranch, 126.41 30 ⇊P PKPdf 22 41 57.5 -0.6
baz=126
D11A Klaveano Farm, 126.41 31 ⇊P PKPdf 22 41 58.0 -0.2
baz=126
F09A S2 Ranch, Elgi 126.43 33 ⇊P PKPdf 22 41 58.1 -0.1
baz=126
B13A Whitefish 126.45 29 ⇑P PKPdf 22 41 58.7 +0.5
baz=126
K05A Summer Lake 126.45 38 ⇊P PKPdf 22 41 59.3 +1.0
baz=126
I07A Izee 126.51 36 ⇊P PKPdf 22 41 59.3 +0.9
baz=126
A14A Double T Ranch 126.52 28 ⇊P PKPdf 22 41 58.0 -0.3
baz=126
WDC Whiskeytown Da 126.56 41 PFAKE 22 42 10.0 +11
WDC LR LR
comp=Z,435nm,21.0s,MS5.1
F10A Beach Ranch, E 126.63 33 ⇑P PKPdf 22 41 58.9 +0.3
baz=126
BSMT Bassoo Peak 126.65 30 *e*PKPdf PKPdf 22 41 58.4 -0.2
H08A Prairie City 126.73 35 ⇊P PKPdf 22 41 59.3 +0.5
baz=127
G09A Cove 126.77 34 ⇊P PKPdf 22 41 58.7 -0.2
baz=127
A15A Johnson Ranch, 126.84 27 ⇑P PKPdf 22 41 58.4 -0.5
baz=127,SNR=11
C13A Hot Springs 126.87 30 ⇊P PKPdf 22 41 58.5 -0.5
baz=127
E11A Bogner Ranch, 126.93 32 ⇑P PKPdf 22 41 59.1 -0.1
baz=127
JTMT Jette 126.97 29 *e*PKPdf PKPdf 22 41 59.5 +0.3
YBMT Yellow Bay 127.02 29 *e*PKPdf PKPdf 22 41 58.6 -0.7
G10A Bishop Farm, J 127.12 33 ⇑P PKPdf 22 41 59.0 -0.6
baz=127
LBCM Butte Creek Ri 127.19 40 P PKPdf 22 42 01.1 +1.2
H09A Durkee 127.21 34 ⇊P PKPdf 22 41 59.9 +0.1
baz=127
F11A Grangeville 127.26 32 ⇊P PKPdf 22 41 59.6 -0.2
baz=127
SWMT Swartz Lake 127.27 29 *e*PKPdf PKPdf 22 41 58.9 -0.9
MOD Modoc 127.28 38 *e*PKPdf PKPdf 22 42 00.0 +0.1
MOD LR LR
comp=Z,442nm,20.0s,MS5.1
D13A Huson 127.33 30 ⇑P PKPdf 22 41 59.5 -0.4
baz=127
A16A West Butte Ran 127.38 27 ⇑P PKPdf 22 41 59.8 -0.1
baz=127,SNR=8.5
B15A Bradely Ranch, 127.39 28 ⇑P PKPdf 22 41 59.9 -0.1
baz=127,SNR=18
J08A Circle Bar Ran 127.54 36 ⇊P PKPdf 22 42 01.5 +1.1
baz=127
I09A Lost Marbles R 127.59 35 ⇑P PKPdf 22 42 00.7 +0.2
baz=128
SLMT Seeley Lake 127.71 29 *e*PKPdf PKPdf 22 42 00.5 -0.2
B16A M & M Farms, S 127.72 27 ⇑P PKPdf 22 42 00.1 -0.5
baz=128
C15A Salmond Ranch, 127.76 28 ⇊P PKPdf 22 42 01.0 +0.3
baz=128,SNR=39
H10A Noah's Angus R 127.77 34 ⇑P PKPdf 22 42 00.8 0.0
baz=128
MSO Missoula 127.77 30 *e*PKPdf PKPdf 22 42 00.4 -0.4
MSO LR LR
comp=Z,371nm,20.0s,MS5.1
A17A Triple J Farms 127.78 26 ⇊P PKPdf 22 42 00.8 +0.1
baz=128,SNR=18
D14A Greenough 127.81 30 ⇊P PKPdf 22 42 00.5 -0.3
baz=128,SNR=8.6
F12A Elk City 127.82 32 ⇊P PKPdf 22 42 00.8 -0.1
baz=128
E13A Victor 127.91 31 ⇊P PKPdf 22 42 01.0 -0.1
baz=128
J09A Fry Pan Ranch, 127.97 36 ⇑P PKPdf 22 42 02.1 +0.8
baz=128
WVOR Wild Horse Val 127.99 37 PFAKE 22 42 10.0 +8.7
WVOR LR LR
comp=Z,466nm,19.0s,MS5.2
H11A Donnelly 128.10 33 ⇑P PKPdf 22 42 02.1 +0.6
baz=128
C16A Fuhringer Ranc 128.14 28 ⇑P PKPdf 22 42 00.9 -0.5
baz=128,SNR=10
B17A L&G Farms, Che 128.22 27 ⇑P PKPdf 22 42 01.2 -0.4
baz=128,SNR=11
BEKR Beckwourth 128.35 41 ⇊P PKPdf 22 42 02.4 +0.3
baz=128
J10A Berg Farm, Mel 128.49 35 ⇊P PKPdf 22 42 02.8 +0.6
baz=128
SCHQ Schefferville 128.57 351 PKP PKPdf 22 42 02.6 +0.6
comp=Z,6.1nm,0.8s,baz=8.4,slow=3.9,SNR=5.9
SCHQ Schefferville 128.57 351 *e*PKPdf PKPdf 22 42 01.8 -0.2
SCHQ LR LR
comp=Z,1μm,21.0s,MS5.5
B18A Beardsley Farm 128.59 26 ⇑P PKPdf 22 42 02.6 +0.3
baz=128,SNR=6.3
I11A Placerville 128.64 34 ⇑P PKPdf 22 42 02.6 +0.1
baz=128
E15A Deer Lodge 128.70 30 ⇊P PKPdf 22 42 02.4 -0.1
baz=129,SNR=6.0
C17A Wharram Farm, 128.72 27 ⇑P PKPdf 22 42 02.5 -0.1
baz=129,SNR=17
F14A Wisdom 128.76 31 ⇑P PKPdf 22 42 03.1 +0.4
baz=129
D16A Dana Ranch, Ca 128.79 28 ⇊P PKPdf 22 42 02.9 +0.2
baz=129,SNR=23
G13A Cobalt 128.80 32 ⇑P PKPdf 22 42 03.0 +0.2
baz=129
K10A MacKenzie Ranc 128.83 36 ⇑P PKPdf 22 42 04.3 +1.4
baz=129
H12A Diamond D Ranc 128.83 33 ⇊P PKPdf 22 42 03.3 +0.5
baz=129
EGMT Eagleton 128.88 26 ⇑P PKPdf 22 42 03.0 +0.2
baz=129,SNR=7.6
EGMT Eagleton 128.88 26 *e*PKPdf PKPdf 22 42 02.8 -0.1
EGMT LR LR
comp=Z,579nm,21.0s,MS5.2
HRY Holter Researc 128.89 29 PKPdf PKPdf 22 42 02.9 0.0
MFID Camas Ranch 129.03 34 ⇑P PKPdf 22 42 03.6 +0.3
baz=129
WCN Washoe City 129.05 41 ⇑P PKPdf 22 42 04.0 +0.6
baz=129
E16A East Helena 129.09 29 ⇊P PKPdf 22 42 03.1 -0.2
baz=129,SNR=8.2
G14A Jackson 129.10 31 ⇊P PKPdf 22 42 03.7 +0.4
baz=129
H13A Challis 129.14 32 ⇑P PKPdf 22 42 03.7 +0.2
baz=129,SNR=18
I12A Atlanta 129.17 34 ⇑P PKPdf 22 42 04.5 +0.9
baz=129
F15A Butte 129.18 30 ⇑P PKPdf 22 42 03.7 +0.3
baz=129,SNR=5.8
CMB Columbia Colle 129.30 43 PFAKE 22 42 10.0 +6.1
CMB LR LR
comp=Z,322nm,20.0s,MS5.0
K11A Parker Ranch, 129.31 35 ⇑P PKPdf 22 42 04.7 +0.9
baz=129
DLMT Dillon 129.46 31 *e*PKPdf PKPdf 22 42 02.9 -1.1
DLMT *e*PP PP 22 44 11.6 -1.5
D18A Linhart Farms, 129.48 27 ⇑P PKPdf 22 42 04.0 0.0
baz=129
L10A Juniper Basin 129.49 36 ⇑P PKPdf 22 42 04.8 +0.6
baz=129
E17A Martinsdale 129.53 28 ⇑P PKPdf 22 42 04.1 0.0
baz=129,SNR=6.5
J12A Stokes Ranch, 129.54 34 ⇑P PKPdf 22 42 05.0 +0.8
baz=129
H14A Leadore 129.58 32 ⇊P PKPdf 22 42 05.0 +0.7
baz=129
I13A Wildhorse Cree 129.65 33 ⇊P PKPdf 22 42 05.6 +1.2
baz=130,SNR=12
F16A Kennard Place, 129.65 30 ⇊P PKPdf 22 42 04.7 +0.4
baz=130
G15A Dillon 129.65 31 ⇑P PKPdf 22 42 05.2 +0.8
baz=130,SNR=13
MCMT McKenzie Canyo 129.70 31 *e*PKPdf PKPdf 22 42 04.0 -0.5
HLID Hailey 129.72 33 ⇑P PKPdf 22 42 05.6 +1.0
baz=130,SNR=10
HLID Hailey 129.72 33 *e*PKPdf PKPdf 22 42 04.8 +0.2
HLID LR LR
comp=Z,595nm,21.0s,MS5.3
BOZ Bozeman (W) 129.75 30 ⇑P PKPdf 22 42 05.2 +0.6
baz=130,SNR=13
BOZ Bozeman (W) 129.75 30 *e*PKIKP PKPdf 22 42 03.0 -1.6
BOZ *e* 22 44 14.6
BOZ MLR MLR
comp=Z,515nm,21.0s,MS5.2
BOZ Bozeman (W) 129.75 30 *e*PKPdf PKPdf 22 42 03.0 -1.6
BOZ *e*PP PP 22 44 14.6 -0.3
BOZ LR LR
comp=Z,515nm,21.0s,MS5.2
L11A Cat Creek Ranc 129.85 36 ⇊P PKPdf 22 42 06.1 +1.2
baz=130
E18A Harlowton 129.90 28 ⇊P PKPdf 22 42 05.3 +0.5
baz=130
H15A Lima 129.95 31 ⇊P PKPdf 22 42 06.0 +1.1
baz=130,SNR=5.5
G16A Moss Hill, Enn 129.95 30 ⇑P PKPdf 22 42 05.7 +0.7
baz=130,SNR=15
J13A Cove Ranch, Pi 129.96 33 ⇊P PKPdf 22 42 05.8 +0.8
baz=130,SNR=19
I14A Mackay 130.00 32 ⇊P PKPdf 22 42 05.9 +0.8
baz=130
BMN Battle Mountai 130.02 38 PFAKE 22 42 20.0 +15
BMN LR LR
comp=Z,304nm,20.0s,MS5.0
F17A Fitzpatrick Pl 130.03 29 ⇑P PKPdf 22 42 05.7 +0.6
baz=130,SNR=9.0
K12A Draper Farm, C 130.04 35 ⇑P PKPdf 22 42 05.9 +0.6
baz=130
N10A Dunphy 130.29 38 ⇊P PKPdf 22 42 06.8 +1.1
baz=130
L12A House Creek Ra 130.29 35 ⇑P PKPdf 22 42 06.9 +1.2
baz=130
G17A Pierce Place, 130.41 29 ⇊P PKPdf 22 42 06.9 +1.1
baz=130
QLMT Earthquake Lak 130.42 30 *e*PKPdf PKPdf 22 42 06.0 +0.1
I15A Monteview 130.46 32 ⇑P PKPdf 22 42 06.9 +0.9
baz=130
NVAR Mina Array Bea 130.47 41 PKP PKPdf 22 42 08.0 +1.9
comp=Z,5.7nm,0.7s,baz=256,slow=1.7,SNR=14
NVAR SKPbc SKPbc 22 45 29.8 +2.0
baz=130
comp=Z,3.7nm,0.8s,baz=274,slow=5.0,SNR=8.5
NVAR Mina Array Bea 130.47 41 PKP PKPdf 22 42 08.0 +1.9
NVAR SKPbc SKPbc 22 45 29.8 +2.0
F18A Big Timber 130.48 28 ⇊P PKPdf 22 42 06.3 +0.4
baz=130
K13A Stover Farm, H 130.50 34 ⇊P PKPdf 22 42 07.0 +0.9
baz=130
O10A Cortez Mining, 130.55 38 ⇊P PKPdf 22 42 07.2 +0.9
baz=130
H16A Russell Place, 130.60 30 ⇑P PKPdf 22 42 07.8 +1.6
baz=130,SNR=5.3
N11A Elko Archery C 130.70 37 ⇊P PKPdf 22 42 08.0 +1.4
baz=131
YMR Madison River 130.77 30 *e*PKPdf PKPdf 22 42 07.3 +0.8
DGMT Dagmar 130.81 22 PFAKE 22 42 20.0 +14
DGMT LR LR
comp=Z,602nm,20.0s,MS5.3
M12A Wells 130.81 36 ⇑P PKPdf 22 42 08.3 +1.6
baz=131,SNR=14
J15A Blackfoot 130.90 32 ⇑P PKPdf 22 42 08.1 +1.3
baz=131,SNR=12
L13A Double Diamond 130.94 35 ⇑P PKPdf 22 42 08.4 +1.5
baz=131
P10A Eureka 130.97 39 ⇑P PKPdf 22 42 08.2 +1.1
baz=131
YFT Old Faithful 130.99 30 *e*PKPdf PKPdf 22 42 07.3 +0.3
ELK Elko 131.04 37 *e*PKPdf PKPdf 22 42 07.9 +0.8
ELK *e*SKP 22 45 31.0
ELK LR LR
comp=Z,423nm,20.0s,MS5.1
I16A Newdale 131.07 31 ⇊P PKPdf 22 42 07.6 +0.5
baz=131
K14A Jones Ranch, D 131.07 34 ⇑P PKPdf 22 42 08.6 +1.5
baz=131
N12A Clover Valley, 131.09 37 ⇑P PKPdf 22 42 08.7 +1.4
baz=131,SNR=5.8
N12A Clover Valley, 131.09 37 *e*PKPdf PKPdf 22 42 07.6 +0.3
LKWY Lake 131.13 30 PFAKE 22 42 20.0 +13
LKWY LR LR
comp=Z,1μm,19.0s,MS5.6
H17A Grant Village 131.16 30 ⇊P PKPdf 22 42 08.4 +1.2
baz=131
O11A Cowboy Ranch, 131.16 38 ⇊P PKPdf 22 42 08.7 +1.3
baz=131,SNR=6.0
M13A Montello 131.28 35 ⇑P PKPdf 22 42 08.6 +0.9
baz=131,SNR=5.2
K15A Arbon 131.33 33 ⇑P PKPdf 22 42 08.9 +1.2
baz=131,SNR=6.1
IMW Indian Meadow 131.33 31 *e*PKPdf PKPdf 22 42 08.1 +0.5
L14A Malta 131.37 34 ⇊P PKPdf 22 42 08.8 +1.1
baz=131
TPH Tonopah 131.38 41 PFAKE 22 42 20.0 +12
TPH LR LR
comp=Z,379nm,20.0s,MS5.1
LAO LASA Array 131.44 25 PFAKE 22 42 20.0 +12
LAO LR LR
comp=Z,586nm,19.0s,MS5.3
Q10A Clear Creek Ra 131.48 40 ⇑P PKPdf 22 42 08.7 +0.6
baz=131
RRI2 Red Ridge 131.52 32 *e*PKPdf PKPdf 22 42 07.2 -0.7
RRI2 *e*PP PP 22 44 24.0 -2.5
N13A Wendover, West 131.58 36 ⇑P PKPdf 22 42 09.1 +0.9
baz=131
N13A Wendover, West 131.58 36 PKPdf PKPdf 22 42 05.3 -2.9
TPAW Teton Pass 131.61 31 *e*PKPdf PKPdf 22 42 07.6 -0.5
O12A Currie 131.63 37 ⇑P PKPdf 22 42 09.5 +1.2
baz=132,SNR=8.0
M14A Sheep Mountain 131.66 35 ⇑P PKPdf 22 42 09.5 +1.2
baz=132,SNR=6.5
LOHW Long Hollow 131.71 31 *e*PKPdf PKPdf 22 42 08.2 -0.1
SNOW Snow King Moun 131.73 31 *e*PKPdf PKPdf 22 42 08.1 -0.3
K16A Soda Springs 131.74 32 ⇊P PKPdf 22 42 09.4 +1.0
baz=132
REDW Red Top Meadow 131.75 31 *e*PKPdf PKPdf 22 42 07.6 -0.9
HVU Hansel Valley 131.80 34 *e*PKPdf PKPdf 22 42 09.0 +0.4
HVU *e*SKP 22 45 34.0
J17A Brown Place, J 131.83 31 ⇊P PKPdf 22 42 09.2 +0.6
baz=132
R10A Warm Springs 131.85 40 ⇊P PKPdf 22 42 09.5 +0.7
baz=132
L15A Malad City 131.87 34 ⇊P PKPdf 22 42 09.4 +0.7
baz=132,SNR=9.2
S10A Tonopah Range, 131.87 41 ⇑P PKPdf 22 42 09.9 +1.1
baz=132
Q11A Duckwater 131.94 39 ⇊P PKPdf 22 42 10.0 +1.1
baz=132,SNR=9.1
P12A McGill 132.02 38 ⇊P PKPdf 22 42 10.2 +1.1
baz=132,SNR=13
AHID Auburn Hatcher 132.04 32 PFAKE 22 42 20.0 +11
AHID LR LR
comp=Z,464nm,20.0s,MS5.2
DAC Darwin (Calif) 132.12 43 PFAKE 22 42 20.0 +11
DAC LR LR
comp=Z,409nm,19.0s,MS5.2
K17A Gardner Place, 132.15 32 ⇑P PKPdf 22 42 10.0 +0.8
baz=132
O13A Hicks Ranch, I 132.17 37 ⇊P PKPdf 22 42 10.3 +1.0
baz=132
N14A Grayback Hills 132.18 35 ⇑P PKPdf 22 42 10.6 +1.3
baz=132,SNR=6.8
M15A Larsen Ranch, 132.19 34 ⇊P PKPdf 22 42 10.3 +0.9
baz=132
BGU Big Grassy Mou 132.22 35 *e*PKPdf PKPdf 22 42 08.8 -0.6
R11A Troy Canyon, C 132.27 40 ⇑P PKPdf 22 42 10.9 +1.3
baz=132,SNR=5.4
J18A Kendall Valley 132.29 31 ⇊P PKPdf 22 42 10.6 +1.1
baz=132
MPMC Manual Prospec 132.31 43 ⇊P PKPdf 22 42 10.7 +1.0
baz=132,SNR=7.6
Q12A Willow Creek R 132.33 38 ⇑P PKPdf 22 42 10.4 +0.7
baz=132
L16A Fish Haven 132.38 33 ⇊P PKPdf 22 42 10.6 +0.9
baz=132
N15A Stansbury Isla 132.53 35 ⇑P PKPdf 22 42 10.9 +0.9
baz=132
P13A Bates Ranch, G 132.57 37 ⇊P PKPdf 22 42 11.3 +1.2
baz=132,SNR=6.4
EDW2 Edwards Air Fo 132.58 45 ⇊P PKPdf 22 42 11.1 +0.8
baz=132
S11A Rachel 132.58 40 ⇊P PKPdf 22 42 11.2 +1.1
baz=132
HWUT Hardware Ranch 132.59 33 *e*PKPdf PKPdf 22 42 08.8 -1.3
HWUT LR LR
comp=Z,446nm,19.0s,MS5.2
L17A Cokeville 132.63 32 ⇊P PKPdf 22 42 10.6 +0.4
baz=132
DECC Green Verdugo 132.66 46 ⇑P PKPdf 22 42 10.8 +0.3
baz=133
K18A Toltan Ranch, 132.69 31 ⇊P PKPdf 22 42 11.3 +1.1
baz=132
M16A Huntsville 132.75 34 ⇑P PKPdf 22 42 11.0 +0.7
baz=133
DUG Dugway 132.82 36 ⇊P PKPdf 22 42 11.5 +1.0
baz=133,SNR=12
DUG Dugway 132.82 36 *e*PKIKP PKPdf 22 42 09.7 -0.8
DUG MLR MLR
comp=Z,629nm,22.0s,MS5.3
DUG Dugway 132.82 36 *e*PKPdf PKPdf 22 42 09.7 -0.8
DUG LR LR
comp=Z,629nm,22.0s,MS5.3
BW06 Boulder Array 132.84 31 ⇑P PKPdf 22 42 11.1 +0.6
baz=133
BW06 Boulder Array 132.84 31 *e*PKPdf PKPdf 22 42 10.6 +0.1
BW06 LR LR
comp=Z,532nm,21.0s,MS5.2
PDAR Pinedale Array 132.84 31 PKP PKPdf 22 42 11.2 +0.7
comp=Z,2.5nm,0.8s,baz=5.7,slow=1.5,SNR=7.1
PDAR PP PP 22 44 36.1 +1.1
comp=Z,1.9nm,0.9s,baz=328,slow=5.3,SNR=5.0
Q13A Wheeler Ranch, 132.88 38 ⇑P PKPdf 22 42 11.3 +0.6
baz=133,SNR=10
U10A Ash Meadows, A 132.89 42 ⇊P PKPdf 22 42 11.4 +0.6
baz=133
O15A The Old Anders 132.96 35 ⇊P PKPdf 22 42 11.7 +0.9
baz=133
P14A Drum Mountains 133.06 37 ⇑P PKPdf 22 42 12.1 +1.1
baz=133
T11A Corn Creek, Al 133.16 41 ⇊P PKPdf 22 42 11.3 0.0
baz=133,SNR=8.3
K19A Absolon Red Bu 133.16 30 ⇊P PKPdf 22 42 10.7 -0.4
baz=133
M17A Scullys Gap (B 133.17 33 ⇊P PKPdf 22 42 11.8 +0.7
baz=133
GSC Goldstone 133.18 44 ⇑P PKPdf 22 42 11.7 +0.4
baz=133,SNR=6.3
GSC Goldstone 133.18 44 *e*PKPdf PKPdf 22 42 11.6 +0.2
L18A Fontenelle, Gr 133.19 32 ⇑P PKPdf 22 42 11.4 +0.2
baz=133
Q14A Sevier Lake (B 133.31 37 ⇑P PKPdf 22 42 12.4 +0.8
baz=133,SNR=6.0
JLU Jordanelle 133.33 34 *e*PKPdf PKPdf 22 42 11.1 -0.4
R13A O'Grain Ranch, 133.39 39 ⇑P PKPdf 22 42 12.9 +1.2
baz=133
L19A Farson 133.43 31 ⇊P PKPdf 22 42 12.2 +0.6
baz=133
M18A Lyman 133.53 33 ⇊P PKPdf 22 42 12.4 +0.5
baz=133
P15A Leamington 133.54 36 ⇊P PKPdf 22 42 12.4 +0.5
baz=133
K20A Yellowstone Ra 133.54 30 ⇊P PKPdf 22 42 12.9 +1.1
baz=133
AGMN Agassiz Refuge 133.67 16 PFAKE 22 42 20.0 +8.1
AGMN LR LR
comp=Z,729nm,22.0s,MS5.3
HEC Hector,Ludlow 133.76 44 ⇊P PKPdf 22 42 12.8 +0.3
baz=134
Q15A Fillmore 133.85 37 ⇊P PKPdf 22 42 13.8 +1.3
baz=134
O17A Robinson Place 134.01 34 ⇑P PKPdf 22 42 13.8 +1.0
baz=134
L20A Wamsutter 134.02 31 ⇊P PKPdf 22 42 13.7 +0.9
baz=134
U12A Valley of Fire 134.07 41 ⇊P PKPdf 22 42 14.3 +1.2
baz=134
T13A Saint George 134.13 40 ⇊P PKPdf 22 42 14.4 +1.3
baz=134
S14A Cedar City 134.15 39 ⇊P PKPdf 22 42 14.2 +1.0
baz=134
GMRC Granite Mounta 134.25 44 ⇊P PKPdf 22 42 14.5 +1.1
baz=134
MVU Marysvale 134.26 37 PFAKE 22 42 20.0 +6.7
MVU LR LR
comp=Z,599nm,20.0s,MS5.3
V12A Nelson 134.27 42 ⇑P PKPdf 22 42 14.8 +1.3
baz=134
MSU Marysvale 134.28 37 *e*PKIKP PKPdf 22 42 14.1 +0.8
PFO Pinyon Flat Ob 134.32 45 ⇊P PKPdf 22 42 14.4 +0.8
baz=134
O18A Roosevelt 134.37 34 ⇊P PKPdf 22 42 14.2 +0.7
baz=134
N19A John Jarvie Ra 134.38 32 ⇑P PKPdf 22 42 14.2 +0.7
baz=134
RSSD Black Hills 134.42 25 PFAKE 22 42 20.0 +6.6
RSSD LR LR
comp=Z,508nm,19.0s,MS5.3
BELC Belle Mtn. 134.44 45 ⇊P PKPdf 22 42 14.8 +1.0
baz=134
U13A Pakoon Wash 134.46 41 ⇊P PKPdf 22 42 14.8 +1.1
baz=134
M20A Sweetwater, Wa 134.47 31 ⇑P PKPdf 22 42 14.9 +1.3
baz=134
P17A Butcher Ranch, 134.49 35 ⇊P PKPdf 22 42 14.7 +0.9
baz=134
L21A Rawlins 134.54 30 ⇊P PKPdf 22 42 14.2 +0.5
baz=134
T14A Hurricane 134.63 39 ⇑P PKPdf 22 42 15.4 +1.4
baz=134
P18A Preston Nutter 134.67 35 ⇊P PKPdf 22 42 15.5 +1.4
baz=134
PLCA Paso Flores 134.68 189 PFAKE 22 42 30.0 +16
PLCA LR LR
comp=Z,947nm,20.0s,MS5.5
MONP Monument Peak 134.72 46 ⇑P PKPdf 22 42 14.7 +0.4
baz=135
V13A Grand Canyon W 134.77 41 ⇊P PKPdf 22 42 15.2 +0.8
baz=135
M21A Separation Pea 134.81 30 ⇊P PKPdf 22 42 14.6 +0.4
baz=135
O19A Miners Draw (B 134.83 33 ⇊P PKPdf 22 42 14.7 +0.3
baz=135
R16A Teasdale 134.84 37 ⇊P PKPdf 22 42 14.8 +0.4
baz=135
SRU San Rafael 134.86 35 ⇑P PKPdf 22 42 15.2 +0.8
baz=135
SRU San Rafael 134.86 35 *e*PKPdf PKPdf 22 42 13.9 -0.5
SRU *e*SKPbc SKPbc 22 45 43.5 +0.5
N20A Spence Gulch, 134.91 32 ⇑P PKPdf 22 42 15.1 +0.6
baz=135
IRM Iron Mountain 134.95 44 ⇑P PKPdf 22 42 15.9 +1.2
baz=135
L22A Ellis Ranch, M 134.95 29 ⇊P PKPdf 22 42 15.3 +0.8
baz=135
U14A Mt Trumbull 134.96 40 ⇑P PKPdf 22 42 16.0 +1.3
baz=135
BC3 Big Chuckw Mtn 135.01 45 ⇊P PKPdf 22 42 15.5 +0.6
baz=135
EYMN Ely 135.04 12 PFAKE 22 42 30.0 +16
EYMN LR LR
comp=Z,901nm,20.0s,MS5.5
Q18A Rafter H Ranch 135.09 35 ⇊P PKPdf 22 42 15.4 +0.6
baz=135
SWSC Sam W. Stewart 135.15 46 ⇊P PKPdf 22 42 15.5 +0.4
baz=135
TRQA Tornquist 135.18 199 PFAKE 22 42 30.0 +15
TRQA LR LR
comp=Z,552nm,20.0s,MS5.3
R17A Hanksville Air 135.21 36 ⇊P PKPdf 22 42 15.6 +0.5
baz=135
W13A Hualapai Mount 135.28 42 ⇊P PKPdf 22 42 16.4 +1.1
baz=135
M22A Cedar Creek Ra 135.34 30 ⇊P PKPdf 22 42 16.2 +1.0
baz=135
N21A Black Mountain 135.35 31 ⇑P PKPdf 22 42 16.1 +0.8
baz=135
P19A Cripple Cowboy 135.37 34 ⇑P PKPdf 22 42 16.0 +0.7
baz=135
O20A White River Ci 135.42 32 ⇑P PKPdf 22 42 16.1 +0.7
baz=135
V14A Boquillas Ranc 135.48 41 ⇊P PKPdf 22 42 16.9 +1.2
baz=135
U15A North Rim 135.52 39 ⇑P PKPdf 22 42 17.2 +1.5
baz=135
X13A Yucca 135.61 43 ⇑P PKPdf 22 42 17.0 +1.0
baz=136
Y12C Blythe 135.61 44 ⇑P PKPdf 22 42 17.1 +1.1
baz=136
T16A Glen Canyon Da 135.66 38 ⇑P PKPdf 22 42 16.5 +0.5
baz=136
S17A Black Ridge (B 135.67 37 ⇊P PKPdf 22 42 16.5 +0.5
baz=136
Q19A Hogan Spring (135.69 34 ⇑P PKPdf 22 42 17.0 +1.0
baz=136
R18A Canyonlands Na 135.71 36 ⇑P PKPdf 22 42 16.7 +0.6
baz=136
W14A Seligman 135.74 41 ⇊P PKPdf 22 42 17.6 +1.4
baz=136
GLA Glamis 135.78 45 ⇑P PKPdf 22 42 17.2 +0.9
baz=136

P20A	**De Beque**	135.79	33	⇑P	PKPdf		22 42 16.9 +0.8
	baz=136						
N22A	**Wattenberg Ran**	135.86	30	⇑P	PKPdf		22 42 17.2 +1.0
	baz=136						
V15A	**Kaibab Nationa**	135.97	40	⇓P	PKPdf		22 42 17.4 +0.8
	baz=136						
PHWY	**Pilot Hill**	135.98	29	PKPdf	PKPdf		22 42 16.2 -0.2
RCBR	**Riachuelo**	136.03	257	PFAKE			22 42 30.0 +13
RCBR				LR	LR		
	comp=Z,872nm,20.0s,MS5.5						
Y13A	**Salome**	136.05	44	⇓P	PKPdf		22 42 17.3 +0.5
	baz=136						
T17A	**Navajo Res., N**	136.09	38	⇓P	PKPdf		22 42 17.6 +0.8
	baz=136						
S18A	**Hurst Farm, Bl**	136.12	36	⇑P	PKPdf		22 42 17.8 +1.0
	baz=136						
R19A	**Curley Farm, L**	136.14	35	⇑P	PKPdf		22 42 18.1 +1.3
	baz=136						
PV10	**Paradox Valley**	136.21	35	*e*PKPdf	PKPdf		22 42 17.1 +0.1
Q20A	**Ridgley Place,**	136.23	34	⇑P	PKPdf		22 42 17.9 +0.9
	baz=136						
X14A	**Yava**	136.31	42	⇑P	PKPdf		22 42 17.9 +0.6
	baz=136						
Z13A	**Yuma Proving G**	136.51	44	⇑P	PKPdf		22 42 18.8 +1.1
	baz=136						
Y14A	**Wickenburg**	136.54	43	⇑P	PKPdf		22 42 18.5 +0.8
	baz=136						
T18A	**Mexican Hat**	136.56	37	⇓P	PKPdf		22 42 19.1 +1.5
	baz=136						
S19A	**Harvey Farm, M**	136.59	36	⇑P	PKPdf		22 42 19.1 +1.5
	baz=136						
PV01	**Paradox Valley**	136.65	35	*e*PKPdf	PKPdf		22 42 16.4 -1.4
WUAZ	**Wupatki**	136.67	40	⇓P	PKPdf		22 42 19.3 +1.4
	baz=136						
WUAZ	**Wupatki**	136.67	40	PFAKE			22 42 30.0 +12
WUAZ				LR	LR		
	comp=Z,547nm,21.0s,MS5.3						
113A	**Mohawk Valley,**	136.68	45	⇓P	PKPdf		22 42 19.1 +1.1
	baz=137						
Q21A	**Lamborn Mesa,**	136.71	33	⇓P	PKPdf		22 42 19.3 +1.4
	baz=137						
R20A	**Redvale**	136.72	35	⇓P	PKPdf		22 42 19.5 +1.6
	baz=137						
X15A	**Humboldt**	136.74	42	⇓P	PKPdf		22 42 19.4 +1.4
	baz=137						
W16A	**Flagstaff**	136.83	40	⇓P	PKPdf		22 42 19.6 +1.4
	baz=137						
Z14A	**Wintersburg**	136.91	43	⇑P	PKPdf		22 42 19.6 +1.2
	baz=137						
V17A	**Tonalea, Kykot**	136.97	39	⇑P	PKPdf		22 42 19.6 +1.2
	baz=137						
Y15A	**Casa Rosa Ranc**	136.99	42	⇓P	PKPdf		22 42 20.0 +1.5
	baz=137						
ISCO	**Idaho Springs**	137.04	31	*e*PKIKP	PKPdf		22 42 16.8 -1.6
ISCO				*e*			22 45 00.5
ISCO				MLR	MLR		
	comp=Z,404nm,19.0s,MS5.2						
Q22A	**Crested Butte,**	137.05	33	⇑P	PKPdf		22 42 20.0 +1.5
	baz=137						
R21A	**Cimarron**	137.05	34	⇑P	PKPdf		22 42 19.8 +1.2
	baz=137						
T19A	**Beclabito**	137.27	37	⇑P	PKPdf		22 42 19.5 +0.6
	baz=137						
COWI	**Conover**	137.28	11	*e*PKPdf	PKPdf		22 42 16.6 -2.1
COWI				LR	LR		
	comp=Z,813nm,21.0s,MS5.4						
X16A	**Lo Mia Camp, P**	137.30	41	⇓P	PKPdf		22 42 20.3 +1.2
	baz=137						
114A	**Black Gap (USA**	137.30	44	⇓P	PKPdf		22 42 20.4 +1.2
	baz=137						
MVCO	**Mesa Verde**	137.32	36	⇑P	PKPdf		22 42 20.4 +1.3
	baz=137						
MVCO	**Mesa Verde**	137.32	36	PFAKE			22 42 30.0 +11
MVCO				LR	LR		
	comp=Z,718nm,22.0s,MS5.4						
S21A	**Coal Bank Pass**	137.41	35	⇑P	PKPdf		22 42 20.8 +1.6
	baz=137						
ECSD	**EROS Data Cent**	137.57	19	*e*PKPpre			22 42 09.5
ECSD				*e*PKPdf	PKPdf		22 42 18.0 -1.3
ECSD				*e*PP	PP		22 45 02.8 -1.7
ECSD				LR	LR		
	comp=Z,991nm,22.0s,MS5.5						
R22A	**Saguache, Gunn**	137.59	33	⇑P	PKPdf		22 42 20.7 +1.2
	baz=137						
Y16A	**Circle Bar Ran**	137.60	42	⇓P	PKPdf		22 42 20.6 +1.0
	baz=138						
OGNE	**Ogallala**	137.85	26	PFAKE			22 42 30.0 +10
OGNE				LR	LR		
	comp=Z,776nm,21.0s,MS5.4						
W18A	**Petrified Fore**	137.96	39	⇑P	PKPdf		22 42 21.5 +1.2
	baz=138						
Y17A	**Roosevelt**	138.13	42	⇑P	PKPdf		22 42 22.0 +1.3
	baz=138						
X18A	**Snowflake**	138.20	40	⇑P	PKPdf		22 42 22.4 +1.6
	baz=138						
PKME	**Peaks-Kenny Pk**	138.24	350	PFAKE			22 42 30.0 +10
PKME				LR	LR		
	comp=Z,505nm,19.0s,MS5.3						
Y18A	**Canyon Day Jun**	138.61	41	⇓P	PKPdf		22 42 23.4 +1.8
	baz=138						
SDCO	**Great Sand Dun**	138.62	33	*e*PKPdf	PKPdf		22 42 20.8 -0.6
SDCO				LR	LR		
	comp=Z,625nm,20.0s,MS5.3						
W20A	**Ramah**	138.72	38	⇑P	PKPdf		22 42 22.8 +1.1
	baz=139						
TUC	**Tucson**	139.00	43	PFAKE			22 42 30.0 +7.7
TUC				LR	LR		
	comp=Z,461nm,19.0s,MS5.2						
X20A	**Quemado**	139.11	39	⇓P	PKPdf		22 42 24.0 +1.6
	baz=139						
GLMI	**Grayling**	139.19	6	PFAKE			22 42 30.0 +7.7
GLMI				LR	LR		
	comp=Z,658nm,20.0s,MS5.4						
118A	**Homack Ranch,**	139.35	42	⇓P	PKPdf		22 42 23.5 +0.5
	baz=139						
LONY	**Lake Ozonia**	139.55	355	PFAKE			22 42 30.0 +7.1
LONY				LR	LR		
	comp=Z,877nm,21.0s,MS5.5						
X21A	**Alamocita Cree**	139.61	38	⇑P	PKPdf		22 42 24.9 +1.6
	baz=140						
LBNH	**Lisbon**	139.64	352	PFAKE			22 42 30.0 +6.9
LBNH				LR	LR		
	comp=Z,920nm,19.0s,MS5.5						
LAZ	**Ladron**	140.04	38	*e*PKPdf	PKPdf		22 42 21.2 -3.0
318A	**Bisbee**	140.06	44	⇓P	PKPdf		22 42 25.5 +1.2
	baz=140						
ANMO	**Albuquerque**	140.07	36	*e*PKIKP	PKPdf		22 42 18.2 -6.0
ANMO				MLR	MLR		
	comp=Z,530nm,20.0s						
JFWS	**Jewell Farm**	140.10	13	PFAKE			22 42 40.0 +16
JFWS				LR	LR		
	comp=Z,592nm,20.0s,MS5.3						
NCB	**Newcomb**	140.16	355	PFAKE			22 42 40.0 +16
NCB				LR	LR		
	comp=Z,806nm,19.0s,MS5.5						
SCIA	**State Center**	140.28	17	PFAKE			22 42 40.0 +16
SCIA				LR	LR		
	comp=Z,963nm,22.0s,MS5.5						
Y22A	**Socorro**	140.46	38	⇑P	PKPdf		22 42 26.3 +1.4
	baz=140						
W24A	**Lazy 6 Ranch,**	140.50	35	⇑P	PKPdf		22 42 26.1 +1.2
	baz=140						
U26A	**Atchley Ranch,**	140.56	32	⇑P	PKPdf		22 42 26.1 +1.1
	baz=140						
319A	**Douglas**	140.59	43	⇓P	PKPdf		22 42 26.4 +1.2
	baz=140						
CBKS	**Cedar Bluff**	140.61	26	PFAKE			22 42 40.0 +15
CBKS				LR	LR		
	comp=Z,708nm,19.0s,MS5.4						
220A	**Playas Peak, P**	140.77	42	⇑P	PKPdf		22 42 26.4 +0.9
	baz=141						
121A	**Cookes Peak, D**	140.86	40	⇑P	PKPdf		22 42 27.3 +1.6
	baz=141						
Z22A	**Elephant Butte**	140.91	39	⇓P	PKPdf		22 42 27.2 +1.5
	baz=141						
V26A	**Tequesquite Ra**	140.99	33	⇓P	PKPdf		22 42 26.6 +0.8
	baz=141						
W25A	**X Bar L Ranch,**	141.04	34	⇓P	PKPdf		22 42 27.3 +1.4
	baz=141						
320A	**Kipp Ranch, An**	141.12	43	⇑P	PKPdf		22 42 27.5 +1.3
	baz=141						
Y24A	**Capitan**	141.39	37	⇑P	PKPdf		22 42 27.2 +0.7
	baz=141						
W26A	**Owens Ranch, T**	141.52	34	⇓P	PKPdf		22 42 27.5 +0.7
	baz=141						
KSU1	**Kansas State U**	141.65	23	*e*PKPdf	PKPdf		22 42 21.9 -5.0
KSU1				LR	LR		
	comp=Z,947nm,22.0s,MS5.5						
AAM	**Ann Arbor**	141.79	6	PFAKE			22 42 40.0 +13
AAM				LR	LR		
	comp=Z,703nm,20.0s,MS5.4						
Y25A	**Mesa, Roswell**	141.83	36	⇑P	PKPdf		22 42 27.8 +0.4
	baz=142						
X26A	**CR and CF Fran**	141.89	34	⇑P	PKPdf		22 42 28.1 +0.7
	baz=142						
W27A	**Bowe Ranch, En**	141.93	33	⇓P	PKPdf		22 42 28.3 +0.8
	baz=142						
BINY	**Binghamton**	142.06	357	PFAKE			22 42 40.0 +12
BINY				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
ERPA	**Erie**	142.21	1	PFAKE			22 42 40.0 +12
ERPA				LR	LR		
	comp=Z,765nm,21.0s,MS5.4						
HDIL	**Hopedale**	142.56	13	PFAKE			22 42 40.0 +12
HDIL				LR	LR		
	comp=Z,542nm,21.0s,MS5.3						
Y27A	**Causey**	142.74	35	⇑P	PKPdf		22 42 29.9 +0.9
	baz=143						
AMTX	**Amarillo**	142.80	32	*e*PKPdf	PKPdf		22 42 26.6 -2.5
AMTX				LR	LR		
	comp=Z,647nm,20.0s,MS5.4						
MSTX	**Muleshoe**	142.90	34	⇑P	PKPdf		22 42 29.9 +0.6
	baz=143						
MNTX	**Cornudas Mount**	142.94	39	*e*PKPdf	PKPdf		22 42 25.2 -4.3
MNTX				LR	LR		
	comp=Z,377nm,20.0s,MS5.2						
324A	**Moseley Ranch,**	143.05	40	⇓P	PKPdf		22 42 30.3 +0.7
	baz=143						
GDL2	**Guadalupe Moun**	143.23	38	*e*PKPpre			22 42 24.4
GDL2				*e*PKPdf	PKPdf		22 42 28.6 -1.3
CPUP	**Villa Florida**	143.24	213	PKP	PKPdf		22 42 31.9 +1.8
	comp=Z,3.1nm,0.8s,baz=113,slow=3.8,SNR=6.3						
CPUP	**Villa Florida**	143.24	213	PKP	PKPdf		22 42 31.9 +1.8
CPUP				LR	LR		
	comp=Z,86nm,21.0s,MS4.5						
SSPA	**Standing Stone**	143.69	359	*e*PKPdf	PKPdf		22 42 26.0 -4.4
SSPA				LR	LR		
	comp=Z,820nm,22.0s,MS5.5						
ACSO	**Alum Creek Sta**	143.91	5	*e*PKPdf	PKPdf		22 42 27.9 -2.9
ACSO				LR	LR		
	comp=Z,596nm,19.0s,MS5.4						
SLM	**Saint Louis**	144.15	15	*e*	PKPdf		22 42 29.5 -1.8
WMOK	**Wichita Mounta**	144.38	29	*e*PKIKP	PKPdf		22 42 27.7 -4.1
WMOK				MLR	MLR		
	comp=Z,835nm,22.0s,MS5.5						
CCM	**Cathedral Cave**	144.41	17	*e*	PKPdf		22 42 29.9 -1.9
CCM				MLR	MLR		
	comp=Z,617nm,19.0s,MS5.4						
BLO	**Bloomington**	144.46	10	*e*	PKPdf		22 42 30.5 -1.4
OLIL	**Olney**	144.57	13	*e*PKPdf	PKPdf		22 42 27.8 -4.2
MCWV	**Mont Chateau**	144.66	1	*e*PKPpre			22 42 26.6
MCWV				*e*PKPdf	PKPdf		22 42 31.1 -1.1
MCWV				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
FVM	**French Village**	144.71	16	*e*	PKPdf		22 42 31.1 -1.2
526A	**Mary Lane Ranc**	144.86	40	⇓P	PKPdf		22 42 33.7 +0.9
	baz=145						
527A	**Woodward Ranch**	145.11	39	⇑P	PKPbc		22 42 34.1 +1.4
	baz=145						
626A	**Big Bend Ranch**	145.17	41	⇓P	PKPbc		22 42 34.1 +1.2
	baz=145						
SIUC	**Southern Illin**	145.28	15	*e*PKPdf	PKPdf		22 42 32.7 -0.6
428A	**Kincaid Ranch,**	145.29	38	⇓P	PKPbc		22 42 34.8 +1.6
	baz=145						
USIN	**University of**	145.40	12	*e*PKP	PKPdf		22 42 32.0 -1.5
WCI	**Wyandotte Cave**	145.42	10	*e*PKP2	PKPab		22 42 30.0 -3.6
WCI				MLR	MLR		
	comp=Z,702nm,22.0s,MS5.4						
528A	**Cox Ranch, San**	145.62	39	⇓P	PKPdf		22 42 35.4 +1.3
	baz=146						
TXAR	**Lajitas Array**	145.62	41	PKPbc	PKPbc		22 42 35.6 +1.2
	comp=Z,119nm,0.9s,baz=289,slow=2.8,SNR=164						
627A	**Terlingua Ranc**	145.72	40	⇓P	PKPdf		22 42 35.9 +1.5
	baz=146						
LCO	**Las Campanas**	146.10	193	*e*PKPdf	PKPdf		22 42 34.7 -0.3
LCO				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
CBN	**Corbin**	146.10	358	*e*PKP	PKPdf		22 42 35.0 +0.3
CBN				LR	LR		
	comp=Z,735nm,22.0s,MS5.4						
GLAT	**Glass**	146.63	16	*e*PKPdf	PKPdf		22 42 35.2 -0.5
UTMT	**University of**	146.67	15	*e*PKPdf	PKPdf		22 42 35.0 -0.7
UTMT				*e*PKPab	PKPab		22 42 37.9 -0.5
GNAR	**Gosnell**	146.71	17	*e*PKPdf	PKPdf		22 42 35.1 -0.7
MIAR	**Mount Ida**	146.81	23	*e*PKIKP	PKPdf		22 42 35.3 -0.7
MIAR				*e*			22 42 38.2
MIAR				MLR	MLR		
	comp=Z,729nm,20.0s,MS5.5						
ELN	**Prospectdale**	147.06	3	*e*PKPdf	PKPdf		22 42 35.3 -1.0
UALR	**University of**	147.06	21	*e*PKPdf	PKPdf		22 42 35.0 -1.4
UALR				*e*PKPab	PKPab		22 42 38.8 -1.1
BLA	**Blacksburg**	147.09	2	*e*PKIKP	PKPdf		22 42 34.0 -2.4
BLA				*e*			22 42 38.0
BLA				MLR	MLR		
	comp=Z,691nm,21.0s,MS5.4						
WVT	**Waverly**	147.13	14	*e*PKIKP	PKPdf		22 42 35.9 -0.6
WVT				*e*			22 42 38.8
WVT				MLR	MLR		
	comp=Z,557nm,19.0s,MS5.4						
JCT	**Junction City**	147.17	35	*e*PKIKP	PKPdf		22 42 36.0 -0.7
JCT				MLR	MLR		
	comp=Z,521nm,21.0s,MS5.3						
TZTN	**Tazewell**	147.49	7	*e*PKPdf	PKPdf		22 42 36.1 -0.9
TZTN				*e*PKPbc	PKPbc		22 42 39.0 -0.6
PLAL	**Pickwick Lake**	148.16	15	*e*PKPdf	PKPdf		22 42 37.7 -0.6
PLAL				*e*PKPbc	PKPbc		22 42 40.9 -0.5
PLAL				LR	LR		
	comp=Z,759nm,19.0s,MS5.5						
OXF	**Oxford**	148.24	17	*e*PKIKP	PKPdf		22 42 38.3 -0.1
OXF				*e*			22 42 41.3
OXF				MLR	MLR		
	comp=Z,583nm,21.0s,MS5.3						
TKL	**Tuckaleechee C**	148.34	8	*e*PKIKP	PKPdf		22 42 38.3 -0.2
SWET	**Sewanee**	148.41	11	*e*PKPdf	PKPdf		22 42 38.2 -0.4
SWET				*e*PKPbc	PKPbc		22 42 41.5 -0.6
CPCT	**Cooper Cave**	148.43	9	*e*PKPdf	PKPdf		22 42 38.8 +0.2
CPCT				*e*PKPbc	PKPbc		22 42 42.1 0.0
NATX	**Nacogdoches**	148.77	27	*e*PKPdf	PKPdf		22 42 39.5 +0.2
NATX				*e*PKPbc	PKPbc		22 42 43.5 +0.4
NATX				LR	LR		
	comp=Z,723nm,19.0s,MS5.5						
BBSR	**BB Station**	149.00	336	PFAKE			22 42 50.0 +10
BBSR				LR	LR		
	comp=Z,535nm,20.0s,MS5.3						
CNNC	**Cliffs of the**	149.08	359	*e*PKPdf	PKPdf		22 42 40.5 +0.8
CNNC				*e*PKPbc	PKPbc		22 42 43.2 -0.6
CNNC				LR	LR		
	comp=Z,754nm,21.0s,MS5.5						
HKT	**Hockley**	149.72	30	*e*PKHKP	PKPdf		22 42 40.4 -0.5
HKT				MLR	MLR		
	comp=Z,863nm,21.0s,MS5.5						
JSC	**Jenkinsville**	149.96	4	*e*PKHKP	PKPdf		22 42 41.5 +0.3
JSC				*e*			22 42 46.3
VBMS	**Vicksburg**	150.01	20	PFAKE			22 42 50.0 +8.7
VBMS				LR	LR		
	comp=Z,597nm,19.0s,MS5.4						
LRAL	**Lakeview Retre**	150.28	14	*e*PKPdf	PKPdf		22 42 41.8 +0.1
LRAL				*e*PKPbc	PKPbc		22 42 46.6 -0.2
LRAL				LR	LR		
	comp=Z,673nm,21.0s,MS5.4						
KVTX	**Kingsville**	150.47	36	PKPdf	PKPdf		22 42 41.7 -0.5
KVTX				LR	LR		
	comp=Z,693nm,20.0s,MS5.5						
GOGA	**Godfrey**	150.59	8	*e*PKIKP	PKPdf		22 42 42.4 +0.2
GOGA				*e*			22 42 47.5
GOGA				MLR	MLR		
	comp=Z,718nm,20.0s,MS5.5						
COW	**Cow Castle Cre**	150.89	3	*e*PKPdf	PKPdf		22 42 42.3 -0.3
NHSC	**New Hope**	151.19	2	*e*PKPdf	PKPdf		22 42 42.4 -0.7
NHSC				LR	LR		
	comp=Z,712nm,19.0s,MS5.5						
SFJM	**Santa Fe**	151.37	53	*i* P	PKPbc		22 42 51.5 +1.8
BRAL	**Brewton**	152.19	15	*e*PKPdf	PKPdf		22 42 44.5 -0.2
BRAL				*e*PKPab	PKPab		22 43 00.2 -0.7
BRAL				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
DWPF	**Disney**	156.06	6	PFAKE			22 43 00.0 +10
DWPF				LR	LR		
	comp=Z,932nm,22.0s,MS5.6						
LPAZ	**La Paz**	157.10	207	PKP	PKPdf		22 42 52.7 +0.9
	comp=Z,1.0nm,0.7s,baz=113,slow=0.6,SNR=5.3						
LPAZ	**La Paz**	157.10	207	*e*PKPdf	PKPdf		22 42 52.1 +0.3
LPAZ				*e*PKPab	PKPab		22 43 24.0 +1.8
LPAZ				LR	LR		
	comp=Z,701nm,21.0s,MS5.5						
ANWB	**Willy Bob**	158.62	310	PFAKE			22 43 00.0 +6.3
ANWB				LR	LR		
	comp=Z,501nm,22.0s,MS5.3						
BBGH	**Gun Hill**	159.02	296	PFAKE			22 43 00.0 +5.8
BBGH				LR	LR		
	comp=Z,931nm,21.0s,MS5.6						
FDF	**Fort de France**	159.70	302	PFAKE			22 43 10.0 +15
FDF				LR	LR		
	comp=Z,372nm,20.0s,MS5.2						
GRTK	**Grand Turk**	161.23	337	PFAKE			22 43 10.0 +13
GRTK				LR	LR		
	comp=Z,655nm,20.0s						
GRGR	**Grenville**	161.30	296	PFAKE			22 43 10.0 +13
GRGR				LR	LR		
	comp=Z,358nm,20.0s						
SDDR	**Presa de Saban**	163.56	334	PFAKE			22 43 10.0 +11
SDDR				LR	LR		
	comp=Z,745nm,21.0s						
NNA	**Nana**	163.83	187	PFAKE			22 43 10.0 +11
NNA				LR	LR		
	comp=Z,673nm,21.0s						
GTBY	**Guantanamo Bay**	163.94	347	PFAKE			22 43 10.0 +11
GTBY				LR	LR		
	comp=Z,627nm,20.0s						
MTDJ	**Mount Denham**	165.98	355	PFAKE			22 43 10.0 +9.0
MTDJ				LR	LR		
	comp=Z,546nm,20.0s						
TGUH	**Tegucigalpa,Un**	167.10	40	PFAKE			22 43 10.0 +8.0
TGUH				LR	LR		
	comp=Z,601nm,20.0s						
SDV	**Santo Domingo**	170.64	300	*e*PKPdf	PKPdf		22 43 02.5 -1.9
SDV				LR	LR		
	comp=Z,345nm,19.0s						
BCIP	**Isla Barro Col**	174.93	12	PFAKE			22 43 20.0 +14
BCIP				LR	LR		
	comp=Z,668nm,20.0s						
OTAV	**Otavalo**	176.07	185	*e*PKPdf	PKPdf		22 43 06.3 -0.1
OTAV				*e*PKPab	PKPab		22 44 46.1 +0.6
OTAV				LR	LR		
	comp=Z,662nm,20.0s						

ISCJB ***21*** *22:27:08.8±0.5, 37.°14N±0.°03×28.°88E±0.°03, h7km±5km, Error ellipse: s-maj=5.0km s-min=4.0km az=165.5*
CSEM ***21*** *22:27:08.8±0.1, 37.°14N×28.°87E, h12km, MD2.9, Error ellipse: s-maj=1.9km s-min=1.5km az=175.0*
ISK ***21*** *22:27:08.4, 37.°12N×28.°88E, h14km, MD3.0*
DDA ***21*** *22:27:09.2, 37.°17N×28.°87E, h7km±6km, Md2.9*
ISC 21 22:27:09.2±0.4, 37.°14N±0.°03×28.°88E±0.°03, h14km±4km, n31, σ0.°84/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.35**	**219**	*i* P	**Pg**	**22 27 20.0**	**+3.7**
TURN				*i* S	**Sg**	**22 27 29.5**	**+8.5**
YER	**Yerkesik**	**0.47**	**269**	*e*PG	**Pg**	**22 27 17.9**	**-0.7**
YER				*e*SG	**Sg**	**22 27 26.0**	**+1.0**
YER	**Yerkesik**	**0.47**	**269**	*e*Pg	**Pg**	**22 27 17.9**	**-0.7**
YER				*e*Sg	**Sg**	**22 27 26.0**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.50**	**88**	*e*PG	**Pg**	**22 27 18.8**	**-0.2**
GLHS				*e*SG	**Sg**	**22 27 26.1**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.50**	**88**	*e*Pg	**Pg**	**22 27 18.8**	**-0.2**
GLHS				*e*Sg	**Sg**	**22 27 26.1**	**+0.4**
FETY	**Fethiye**	**0.53**	**162**	*e*PG	**Pg**	**22 27 18.5**	**-1.2**
FETY				*e*SG	**Sg**	**22 27 26.4**	**-0.4**
FETY	**Fethiye**	**0.53**	**162**	*e*Pg	**Pg**	**22 27 18.5**	**-1.2**
FETY				*e*Sg	**Sg**	**22 27 26.4**	**-0.3**
GOLH	**Golhisar**	**0.56**	**80**	*i* P	**Pg**	**22 27 19.3**	**-0.8**
GOLH				*i* S	**Sg**	**22 27 29.3**	**+1.8**
GOLH	**Golhisar**	**0.56**	**80**	*i* P	**Pg**	**22 27 19.3**	**-0.8**
GOLH				*i* S	**Sg**	**22 27 29.3**	**+1.8**
DNZL	**Cakiroluk**	**0.56**	**14**	*i* P	**Pg**	**22 27 20.2**	**-0.1**
DNZL				*e*S	**Sg**	**22 27 27.1**	**-0.7**
DNZL	**Cakiroluk**	**0.56**	**14**	*i* P	**Pg**	**22 27 20.2**	**-0.1**
DNZL				*e*S	**Sg**	**22 27 27.1**	**-0.7**
MLSB	**Milas**	**0.89**	**280**	*e*PG	**Pg**	**22 27 25.9**	**-0.6**
MLSB	**Milas**	**0.89**	**280**	*e*Pg	**Pg**	**22 27 25.9**	**-0.6**
ELL	**Elmali**	**0.92**	**115**	*e*PG	**Pg**	**22 27 27.2**	**+0.3**
ELL	**Elmali**	**0.92**	**115**	*e*Pg	**Pg**	**22 27 27.2**	**+0.3**
AYDN	**Tasoluk**	**0.95**	**303**	*i* P	**Pg**	**22 27 27.2**	**-0.3**
AYDN				*i* S	**Sg**	**22 27 41.1**	**+1.1**
AYDN	**Tasoluk**	**0.95**	**303**	*i* P	**Pg**	**22 27 27.2**	**-0.4**
AYDN				*i* S	**Sg**	**22 27 41.1**	**+1.1**
AKAS	**Kas**	**1.08**	**147**	*i* P	**Pb**	**22 27 29.6**	**-0.1**
AKAS				*i* S	**Sb**	**22 27 47.4**	**+3.8**
AKAS	**Kas**	**1.08**	**147**	*i* P	**Pb**	**22 27 29.6**	**-0.1**
DAT	**Datca**	**1.12**	**249**	*e*PN	**Pn**	**22 27 29.6**	**-0.9**
DAT				*e*SN	**Sn**	**22 27 46.2**	**+0.5**
DAT	**Datca**	**1.12**	**249**	*e*Pn	**Pn**	**22 27 29.6**	**-0.9**
DAT				*e*Sn	**Sn**	**22 27 46.2**	**+0.5**
BDRM	**Kayabasi**	**1.15**	**267**	*i* P	**Pb**	**22 27 30.0**	**-0.8**
BDRM				*i* S	**Sb**	**22 27 46.1**	**+0.5**
BDRM	**Kayabasi**	**1.15**	**267**	*i* P	**Pb**	**22 27 30.0**	**-0.9**
BDRM				*i* S	**Sb**	**22 27 46.1**	**+0.5**
KHL	**Karahalli**	**1.29**	**23**	*e*PN	**Pn**	**22 27 31.9**	**-0.9**
KHL	**Karahalli**	**1.29**	**23**	*e*Pn	**Pn**	**22 27 31.9**	**-0.9**
KHAL	**Karahalli**	**1.32**	**21**	*i* P	**Pn**	**22 27 33.4**	**+0.1**
KHAL				*i* S	**Sb**	**22 27 50.7**	**+0.1**
KHAL	**Karahalli**	**1.32**	**21**	*i* P	**Pn**	**22 27 33.4**	**+0.1**
KHAL	

KKM	Kota Kinabalu	36.64	290	eP		P	22 50 49.3 +0.4
	2.7nm,0.6s,mb4.2						
KLBR	Kellerberrin	39.17	227	eP		P	22 51 05.7 -4.4
	13nm,0.7s,mb4.8						
JOW	Kunigami	39.98	328	P		P	22 51 16.6 -0.2
	25nm,0.9s,mb5.0,baz=170,slow=12,SNR=5.6						
NWAO	Narrogin (SRO)	40.26	226	P		P	22 51 18.5 -0.6
NACB	Ninganchiao	41.94	319	eP		P	22 51 32.7 -0.3
YHNB	Yeheng	42.43	319	eP		P	22 51 36.2 -0.8
MJAR	Matsushiro Arr	44.84	346	P		P	22 51 54.9 -1.3
	1.8nm,0.8s,mb4.0,baz=171,slow=9.0,SNR=6.6						
MJAR	Matsushiro Arr	44.84	346	P		P	22 51 54.9 -1.3
MAJO	Matsushiro	44.84	346	P		P	22 51 54.3 -2.0
KSRS	Korea Array	49.03	336	P		P	22 52 28.9 -0.1
	3.7nm,0.8s,mb4.5,baz=152,slow=8.1,SNR=11						
KULM	Kulim	51.28	282	eP		P	22 52 46.1 -0.4
	3.4nm,0.5s,mb4.5						
COCO	West Island	53.15	260	P		P	22 52 59.9 -0.5
ENH	Enshi	54.08	315	P		P	22 53 06.2 -0.8
MDJ	Mudanjiang	54.75	342	P		P	22 53 13.3 +1.8
MDJ				pmax		pmax	
	comp=Z,5.0nm,1.8s,mb4.2						
KMI	Kunming	56.42	306	P		P	22 53 24.5 +0.6
KMI				pP		pP	22 53 35.1 +5.3
KMI				sP		sP	22 53 39.8 +7.8
KMI				PP		PP	22 55 32.4 +2.6
KMI				S		S	23 01 13.0 -1.3
KMI				sS		sS	23 01 30.4 +6.5
KMI				SS		SS	23 05 01.3 -0.5
KMI				pmax		pmax	
	comp=Z,7.0nm,1.4s,mb4.5						
KMI				LR		LR	
	comp=N,390nm,13.2s,MS4.7						
KMI				LR		LR	
	comp=E,230nm,13.8s,MS4.7						
KMI				LR		LR	
	comp=Z,220nm,12.1s,MS4.5						
CMAR	Chiang Mai Arr	56.84	297	P		P	22 53 27.6 +0.5
	comp=Z,1.2nm,0.4s,mb4.3,baz=131,slow=5.6,SNR=9.4						
CHTO	Chiang Mai	56.97	298	eP		P	22 53 28.1 +0.1
CD2	Chengdu	58.53	313	P		P	22 53 41.0 +2.3
CD2				pP		pP	22 53 51.1 +6.6
CD2				sP		sP	22 53 55.0 +8.3
CD2				PP		PP	22 55 52.4 +4.0
CD2				S		S	23 01 41.1 -0.7
CD2				sS		sS	23 01 57.8 +6.4
CD2				SS		SS	23 05 33.6 -1.1
CD2				pmax		pmax	
	comp=Z,20nm,1.0s,mb5.1						
CD2				pmax		pmax	
	comp=Z,1μm,10.2s						
CD2				LR		LR	
	comp=N,390nm,12.5s						
CD2				LR		LR	
	comp=Z,320nm,11.3s,MS4.7						
HHC	Hu-ho-hao-te	59.58	326	eP		P	22 53 48.9 +3.1
HHC				sP		sP	22 54 02.8 +8.9
HHC				PcP		PcP	22 54 35.1 +2.1
HHC				PP		PP	22 56 02.5 +4.9
HHC				ScP		ScP	22 58 32.3 -0.9
HHC				S		S	23 01 56.0 +0.9
HHC				sS		sS	23 02 13.4 +8.7
HHC				ScS		ScS	23 03 33.9 -1.5
HHC				SS		SS	23 05 54.4 +3.4
HHC				pmax		pmax	
	comp=Z,20nm,1.2s,mb5.0						
HHC				LR		LR	
	comp=N,500nm,16.2s,MS4.8						
HHC				LR		LR	
	comp=E,320nm,16.9s,MS4.8						
HHC				LR		LR	
	comp=Z,400nm,15.7s,MS4.7						
PETK	Petropavlovsk-	60.19	5	P		P	22 53 48.9 -0.9
	comp=Z,4.9nm,0.8s,mb4.6,baz=158,slow=9.0,SNR=3.3						
ULN	Ulaanbaatar	66.72	330	eP		P	22 54 33.1 +0.1
	comp=Z,3.0nm,0.9s,mb4.3						
SONM	Songino Array	67.03	329	P		P	22 54 35.1 +0.1
	comp=Z,2.0nm,0.5s,mb4.4,baz=149,slow=4.7,SNR=15						
LSA	Lhasa	67.68	306	eP		P	22 54 40.3 +0.8
	comp=Z,3.1nm,0.8s,mb4.4						
TLY	Talaya	70.89	331	eP		P	22 54 58.8 -0.1
BILL	Bilibino	75.69	6	eP		P	22 55 26.5 -0.5
TNA	Tin City	78.52	16	eP		P	22 55 43.1 +0.2
	comp=Z,15nm,1.6s,mb4.7						
SVW2	Sparrevohn	79.72	24	eP		P	22 55 49.7 +0.1
MK31	Makanchi Array	80.53	320	eP		P	22 55 54.1 -0.2
MKAR	Makanchi Array	80.53	320	P		P	22 55 53.8 -0.4
	comp=Z,0.7nm,0.4s,mb3.9,baz=100,slow=6.8,SNR=10						
TTA	Tatalina	80.63	22	eP		P	22 55 55.0 +0.6
ZALV	Zalesovo Beam	81.76	327	P		P	22 55 59.0 -1.6
	comp=Z,1.7nm,0.6s,mb4.2,baz=113,slow=5.2,SNR=8.8						
PMR	Palmer	82.61	25	eP		P	22 56 04.5 -0.4
MAW	Mawson	82.68	203	P		P	22 56 05.0 -0.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=150,slow=6.5,SNR=3.0						
MAW	Mawson	82.68	203	eP		P	22 56 04.7 -0.5
KSH	Kashi	82.69	311	eP		P	22 56 07.1 +1.3
KSH				epP		pP	22 56 17.1 +5.2
KSH				esP		sP	22 56 21.1 +7.1
KSH				ePP		PP	22 59 19.1 +3.3
KSH				eS		S	23 06 21.0 -1.8
KSH				eSS		SS	23 11 47.0 +1.7
KSH				pmax		pmax	
	comp=Z,4.0nm,0.8s,mb4.5						
KSH				pmax		pmax	
	comp=Z,67nm,5.1s						
KSH				LR		LR	
	comp=N,84nm,6.6s						
KSH				LR		LR	
	comp=E,89nm,5.7s						
KSH				LR		LR	
	comp=Z,150nm,5.7s						
KTH	Kantishna Hill	82.90	23	eP		P	22 56 05.8 -0.6
	comp=Z,9.2nm,1.2s,mb4.7						
TRF	Thorofare Moun	83.09	23	eP		P	22 56 06.6 -0.8
	comp=Z,3.5nm,0.7s,mb4.5						
MCK	McKinley	83.75	23	eP		P	22 56 10.2 -0.5
	comp=Z,29nm,1.2s,mb5.3						
TKM2	Tokmak 2	83.86	314	eP		P	22 56 11.6 -0.2
	comp=Z,2.1nm,0.5s,mb4.5						
KZA	Kyzart	83.89	314	P		P	22 56 13.3 +1.3
	SNR=14						
KURK	Kurchatov	84.14	323	P		P	22 56 12.3 -0.7
	comp=Z,2.9nm,0.9s,mb4.4,baz=107,slow=3.6,SNR=16						
KURK	Kurchatov	84.14	323	eP		P	22 56 11.2 -1.8
	comp=Z,8.2nm,1.0s,mb4.8						
UCH	Uchtor	84.45	314	P		P	22 56 15.8 +1.0
	SNR=13						
UCH	Uchtor	84.45	314	eP		P	22 56 15.5 +0.7
	comp=Z,8.8nm,0.9s,mb4.9						
AAK	Ala-Archa	84.57	314	P		P	22 56 15.9 +0.5
	comp=Z,3.8nm,0.5s,mb4.8,baz=120,slow=2.3,SNR=14						
AAK	Ala-Archa	84.57	314	eP		P	22 56 15.7 +0.3
	comp=Z,4.7nm,0.6s,mb4.8						
COLA	College	84.72	22	eP		P	22 56 14.2 -1.5
	comp=Z,5.7nm,0.7s,mb4.8						
USP	Ospenovka	84.72	315	P		P	22 56 17.6 +1.4
	SNR=9.8						
AML	Almayashu	85.02	313	P		P	22 56 19.1 +1.5
	SNR=19						
AML	Almayashu	85.02	313	eP		P	22 56 18.0 +0.3
	comp=Z,20nm,0.9s,mb5.2						
EKS2	Erkin-Say	85.09	314	P		P	22 56 19.0 +1.0
	SNR=11						
EKS2	Erkin-Say	85.09	314	eP		P	22 56 17.8 -0.2
	comp=Z,11nm,0.9s,mb5.0						
KBL	Kabul	86.99	305	P		P	22 56 26.6 -1.0
EGAK	Eagle	87.26	23	eP		P	22 56 29.0 +0.8
	comp=Z,5.2nm,0.8s,mb4.8						
HYT	Haines Junctio	87.42	28	eP		P	22 56 31.9 +2.9
DAWY	Dawson	87.71	24	eP		P	22 56 31.6 +1.2
BVAR	Borovoye Array	89.67	323	P		P	22 56 39.0 -0.9
	comp=Z,1.4nm,0.5s,mb4.5,baz=243,slow=40,SNR=5.5						
WVOR	Wild Horse Val	95.27	48	eP		P	22 57 06.1 0.0
YKA	Yellowknife Ar	98.41	28	P		P	22 57 20.8 +1.0
	comp=Z,1.1nm,0.7s,mb4.5,baz=272,slow=4.7,SNR=21						
KWP	Kalwaria Pacla	119.22	324	ePKPdf		PKPdf	23 02 30.7 -0.5
RUE	Ruedersdorf	122.57	330	ePKPdf		PKPdf	23 02 37.5 -0.1
GERES	GERESS Array B	124.71	327	PKP		PKPdf	23 02 41.6 -0.2
	comp=Z,0.9nm,0.7s,baz=101,slow=1.4,SNR=8.3						
BNI	Bardonecchia	130.83	326	ePKPdf		PKPdf	23 02 53.8 +0.3
VSL	Villasalto	132.47	319	ePKPdf		PKPdf	23 02 56.6 -0.3
SDV	Santo Domingo	139.18	85	PKP		PKPdf	23 03 09.9 -0.1
	comp=Z,2.9nm,0.5s,baz=243,slow=2.3,SNR=4.8						
ESLA	Sonseca Array	140.24	329	PKPdf		PKPdf	23 03 11.3 +0.1
TOA0	Torodi Ar. Sit	148.76	284	ePKPbc		PKPbc	23 03 30.1 -0.4
TORD	Torodi Ar. Bea	148.76	284	PKPbc		PKPbc	23 03 30.2 -0.3
	comp=Z,7.6nm,0.6s,baz=58,slow=2.9,SNR=74						
TORD				PP		PP	23 07 01.8 +1.0
	comp=Z,2.2nm,1.2s,baz=60,slow=4.4,SNR=4.6						

TAP ***21*** *23:00:15.7,23°.80N×122°.46E,h15km±2km,ML3.1,D*
JMA ***21*** *23:00:16.3±0.4,23°.87N×122°.51E,h21km,M2.6*
ISC 21 23:00:14.2±0.6,23°.75N±0°.03×122°.50E±0°.02,h9km±3km,
n37,σ0°.77/70,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.85	33	P	Pg	23 00 30.5	-0.1
YOJ				eS	Sg	23 00 40.3	-1.4
HWA	Hwalien	0.85	286	P	Pg	23 00 30.8	+0.1
	baz=282						
HWA				S	Sg	23 00 41.5	-0.3
	baz=282						
TWD	Chiawan	0.90	292	P	Pg	23 00 31.5	+0.1
	baz=272						
TWD				eS	Sg	23 00 42.7	-0.4
	baz=272						
ENA	Nanau	0.97	314	P	Pg	23 00 33.6	+0.7
	baz=313						
ENA				S	Sg	23 00 45.9	+0.3
	baz=313						
ESL	Shilin	0.98	274	P	Pg	23 00 32.5	-0.5
	baz=270						
ESL				i S	Sg	23 00 45.4	-0.5
	baz=270						
EHY	Hungye	1.11	258	P	Pg	23 00 35.3	-0.2
	baz=253						
EHY				S	Sg	23 00 49.7	-0.2
	baz=253						
TWF1	Yuli	1.17	251	P	Pb	23 00 36.1	-0.5
	baz=246						
TWF1				S	Sb	23 00 51.8	-0.1
	baz=246						
WHF	Hehuan Shan	1.20	290	eP	Pb	23 00 36.6	-0.5
	baz=286						
WHF				S	Sb	23 00 52.1	-0.6
	baz=286						
CHKT	Chengkung	1.23	239	eP	Pn	23 00 37.2	-0.2
	baz=234						
CHKT				eS	Sb	23 00 51.6	-1.8
	baz=234						
HATJ	Hateruma jima	1.23	75	P	Pn	23 00 37.9	+0.4
HATJ				eS	Sb	23 00 53.5	-0.1
ENTT	Nioudou	1.23	316	P	Pn	23 00 38.0	+0.4
	baz=297						
ENTT				S	Sb	23 00 54.2	+0.5
	baz=297						
TWE	Neicheng	1.24	322	P	Pn	23 00 37.8	+0.1
	baz=320						
TWE				eS	Sb	23 00 53.8	+0.1
	baz=320						
NNS	Nan Shan	1.24	304	P	Pn	23 00 37.7	0.0
	baz=287						
NNS				eS	Sb	23 00 53.5	-0.4
	baz=287						
IRIF	Iriomote-Funau	1.27	62	P	Pn	23 00 37.5	-0.5
IRIF				eS	Sb	23 00 53.8	-0.8
NSK	Sanguang	1.40	312	P	Pn	23 00 39.8	0.0
	baz=295						
NSK				eS	Sb	23 00 58.2	-0.1
	baz=295						
YUS	Yu-Shan	1.45	260	P	Pn	23 00 41.0	+0.5
	baz=256						
YUS				eS	Sn	23 00 58.9	-0.7
	baz=256						
JKRS	Kuro-shima	1.46	70	P	Pn	23 00 41.2	+0.5
JKRS				eS	Sn	23 00 59.2	-0.8
ELDTW	Lidau	1.47	248	eP	Pn	23 00 40.4	-0.4
	baz=244						
ELDTW				eS	Sn	23 00 58.2	-2.0
	baz=244						
NWF	Wu-fen Shan	1.48	334	eP	Pn	23 00 40.7	-0.2
	baz=332						
SMLT	Sun Moon Lake	1.48	276	P	Pn	23 00 41.0	+0.1
	baz=272						
SMLT				eS	Sn	23 00 59.6	-0.7
	baz=272						
TWA	Mucha	1.49	326	eP	Pn	23 00 41.4	+0.4
	baz=324						
TWA				eS	Sn	23 01 01.1	+0.4
	baz=324						
TYC	Yuchr	1.52	276	eP	Pn	23 00 41.5	+0.1
	baz=272						
TYC				eS	Sn	23 01 00.7	-0.6
	baz=272						
ALS	Alishan	1.57	262	eP	Pn	23 00 42.7	+0.5
	baz=257						
ALS				eS	Sn	23 01 02.9	+0.2
	baz=257						
TWG	Pinlang	1.61	235	eP	Pn	23 00 42.4	-0.2
	baz=222						
TWG				eS	Sn	23 01 01.6	-1.9
	baz=222						
JIJ	Ishigaki jima	1.62	67	P	Pn	23 00 43.0	+0.1
JIJ				eS	Sn	23 01 03.5	-0.4
NSTT	Nanjuang	1.63	303	eP	Pn	23 00 44.1	+1.1
	baz=285						
NSTT				eS	Sn	23 01 04.3	+0.2
	baz=285						
CHN5	Tsauling	1.68	265	eP	Pn	23 00 44.5	+0.8
	baz=261						
CHN5				eS	Sn	23 01 04.9	-0.4
	baz=261						
TWQ1	Liyutan	1.69	291	eP	Pn	23 00 45.0	+1.2
	baz=287						
TWQ1				eS	Sn	23 01 04.1	-1.5
	baz=287						
CHN4	Tsaushan	1.80	258	eP	Pn	23 00 45.8	+0.5
	baz=242						
CHN4				eS	Sn	23 01 09.2	+1.0
	baz=242						
WTP	Ta-pu	1.80	254	eP	Pn	23 00 46.6	+1.2
	baz=250						
WTP				eS	Sn	23 01 08.2	-0.2
	baz=250						
ECL	Taimali	1.83	232	eP	Pn	23 00 46.1	+0.4
	baz=228						
ECL				eS	Sn	23 01 07.6	-1.3
	baz=228						
SGST	Jiashian	1.88	250	eP	Pn	23 00 47.5	+1.0
	baz=246						
SGST				eS	Sn	23 01 11.0	+0.7
	baz=246						
CHN1	Nanshi	1.90	253	eP	Pn	23 00 48.4	+1.7
	baz=249						
CHN1				eS	Sn	23 01 12.7	+2.0
	baz=249						
TWK	Hsinying	1.91	256	eP	Pn	23 00 49.0	+2.2
	baz=252						
LAY	Lan-yu	1.91	208	eP	Pn	23 00 46.8	-0.1
	baz=205						
EAST	Anshuo	2.04	229	eP	Pn	23 00 49.4	+0.8
	baz=225						
EAST				eS	Sn	23 01 14.6	+0.4
	baz=225						
JTJ	Tarama	2.20	66	P	Pn	23 00 51.0	+0.2

BJI ***21*** *23:01:19.2,41°.83N×79°.75E,h26km,ML2.9/8*
NNC ***21*** *23:01:22.6±3.7,42°.30N×79°.58E,h0km,mb3.4,mpv3.1,*
Error ellipse: s-maj=38.2km s-min=14.0km az=152.0
ISC 21 23:01:25.7±1.5,42°.15N±0°.10×79°.5E±0°.2,h10km,n7,
σ1°.11/7,6C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.13	301	⇓Pn	Pn	23 02 01.4	+0.1
KNDC				⇓Lg		23 02 33.2	
TKM2	Tokmak 2	2.96	286	⇑Pn	Pn	23 02 11.3	-1.4
	2.5nm,0.3s						
TKM2				⇑Lg		23 02 53.7	
	25nm,0.5s						
KSH	Kashi	3.73	226	Pg	Pb	23 02 33.1	+1.4
KSH				Sg	Sg	23 03 25.1	-0.5
KSH				smax			
	comp=N,20nm,0.6s						
KSH				smax			
	comp=E,25nm,0.8s						
MK31	Makanchi Array	5.06	23	⇓Pn	Pn	23 02 40.0	-1.6
	comp=E,1.6nm,0.6s,baz=206,slow=13,SNR=10						
MK31				⇑Sn	Sn	23 03 41.2	+1.1
	comp=E,4.2nm,0.6s,baz=159,slow=40,SNR=4.8						
KK09	Karatay Array	6.69	281	⇓Pg	Pb	23 03 22.9	+0.9
	comp=E,0.6nm,0.4s,baz=84,slow=17						
KK09				⇓Lg		23 04 50.0	
	comp=E,2.7nm,0.6s,baz=95,slow=30						
KURBB	Kurchatov Arra	8.50	356	⇑Pg	Px	23 03 52.6	
	comp=E,0.4nm,1.1s						
KURBB				⇓Lg		23 05 55.6	
	comp=E,1.9nm,0.7s						
KURK	Kurchatov	8.59	356	⇑Pg	Px	23 03 55.3	
	comp=E,3.2nm,1.3s						
KURK				⇑Lg		23 05 54.6	
	comp=E,7.8nm,0.9s						

ISCJB ***21*** *23:05:01.1±1.5,18°.09N±0°.07×80°.02W±0°.03,h6km±10km,*
mb4.0/15,Error ellipse: s-maj=12.7km s-min=4.5km
az=11.5
IDC ***21*** *23:05:01.1±0.9,17°.90N×80°.06W,h0km,mb4.0/12,*
mb1 4.2/14,mb1mx4.0/25,mbtmp4.0/14,ML4.2/2,Error
ellipse: s-maj=23.9km s-min=20.1km az=71.0
NEIC ***21*** *23:05:02.3±0.4,17°.89N×80°.05W,h10km,mb4.2/5,Error*
ellipse: s-maj=8.5km s-min=5.6km az=205.0
JSN ***21*** *23:05:03.2±0.7,17°.82N×80°.04W,h9km±44km,MD4.6*
SSNC ***21*** *23:05:08.9±3.8,18°.45N×80°.03W,h49km±999km,MD3.8,*
ML3.3
ISC 21 23:05:02.1±1.7,18°.03N±0°.06×79°.99W±0°.03,h3km±12km,
n46,σ1°.06/58,mb4.0/15,8C-1D,North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEJ	Negril	1.60	82	↓iP	Pn	23 05 31.5	+0.2
NEJ				i S	Sn	23 05 51.9	-0.5
MBJ	Montego Bay	2.06	79	i S	Sn	23 06 04.1	+0.3
MCJ	Malvern	2.20	92	↑eP	Pn	23 05 39.5	-0.1
MTDJ	Mount Denham	2.35	85	ePn	Pn	23 05 41.5	-0.1
MTDJ				eSn	Sn	23 06 12.4	+1.5
PCJ	Portland Cotta	2.72	96	↑eP	Pn	23 05 46.4	-0.3
BNJ	Bonny Gate	2.91	84	↑eP	Pn	23 05 50.0	+0.7
STH	Stony Hill	3.03	89	↑eP	Pn	23 05 51.2	+0.2
STH				↑eS	Sn	23 06 27.4	-0.5
HOJ	Hope	3.09	90	↑eP	Pn	23 05 51.2	-0.6
HOJ				i P		23 05 51.9	
GWJ	Greenwich	3.11	89	↑eP	Pn	23 05 52.4	+0.4
CMJ	Castle Mountai	3.45	88	↑eP	Pn	23 05 57.3	+0.6
LMGC	Las Mercedes	3.48	54	eP	Pn	23 05 57.3	+0.1
LMGC				eS	Sn	23 06 33.4	-5.5
	comp=N,191nm,0.1s						
LMGC				e			
	comp=E,168nm,0.1s						
RCC	Rio Carpintero	4.51	64	eP	Pn	23 06 10.5	-0.9
RCC				eS	Sn	23 06 59.1	-5.3
	comp=N,58nm,0.2s						
RCC				e			
	comp=E,92nm,0.5s						
GTBY	Guantanamo Bay	4.99	67	ePn	Pn	23 06 18.1	+0.1
	comp=E,82nm,0.6s						
GTBY				eSn	Sn	23 07 14.0	-2.2
MOAC	Moa	5.43	60	eP	Pn	23 06 23.7	-0.3
MOAC				eS	Sn	23 07 24.2	-2.8
	comp=N,24nm,0.7s						
MOAC				e			
	comp=E,24nm,0.2s						
SOR	Soroa	5.52	330	eP	Pn	23 06 24.5	-0.7
SOR				eS	Sn	23 07 16.5	-13
	comp=N,1.2nm,0.1s						
SOR				e			
	comp=E,0.1nm,0.2s						
MASC	Masc	5.85	68	eP	Pn	23 06 32.1	+2.3
MASC				eS	Sn	23 07 35.7	-1.8
	comp=N,2.8nm,0.3s						
MASC				e			
	comp=E,2.6nm,0.4s						
TEIG	Tepich	8.13	287	Pn	Pn	23 07 00.1	-0.9
	baz=313,slow=0.0						
SDDR	Presa de Saban	8.31	82	ePn	Pn	23 07 04.4	+0.8
	comp=E,22nm,0.7s						
SDDR				eSn	Sn	23 08 40.5	+2.3
BCIP	Isla Barro Col	8.81	179	Pn	Pn	23 07 08.0	-2.4
GRTK	Grand Turk	9.04	66	ePn	Pn	23 07 13.9	+0.4
GRTK				eSn	Sn	23 08 51.4	-4.5
DWPF	Disney	10.12	353	Pn	Pn	23 07 28.7	+0.3
SDV	Santo Domingo	12.86	134	Pn	Pn	23 08 04.4	-1.5
	comp=E,1.4nm,0.3s,baz=347,slow=13,SNR=7.8						
SDV				Sn	Sn	23 10 22.5	-7.1
	comp=E,0.4nm,0.3s,baz=316,slow=16,SNR=2.8						
SDV	Santo Domingo	12.86	134	Pn	Pn	23 08 04.4	-1.5
SDV				Sn	Sn	23 10 22.5	-7.1
LRAL	Lakeview Retre	16.22	338	ePn	Pn	23 08 49.7	-1.4
	comp=E,7.4nm,0.3s						
TKL	Tuckaleechee C	17.88	350	P	Pn	23 09 12.4	+0.5
	comp=E,0.7nm,0.3s,baz=168,slow=13,SNR=5.7						
HKT	Hockley	18.69	312	eP	Pn	23 09 21.3	-0.6
	comp=E,6.1nm,0.8s						
KVTX	Kingsville	19.01	303	P	Pn	23 09 23.2	-2.6
MIAR	Mount Ida	20.43	326	eP	P	23 09 40.5	-0.1
	comp=E,9.4nm,0.9s						
OLIL	Olney	21.81	343	P	P	23 09 56.5	+1.1
JCT	Junction City	21.86	308	P	P	23 09 56.5	+0.4
	comp=E,7.8nm,0.6s,mb4.3						
FVM	French Village	21.88	337	P	P	23 10 02.0	+5.8
	comp=E,7.7nm,0.8s,mb4.2						
TXAR	Lajitas Array	24.38	302	P	P	23 10 21.1	-0.6
	comp=E,1.0nm,0.8s,mb3.3,baz=123,slow=12,SNR=9.4						
ATAH	Atahualpa	24.92	176	P	P	23 10 27.8	+1.2
	comp=E,3.6nm,0.6s,mb4.1,baz=294,slow=10.0,SNR=2.5						
SADO	Sadowa	26.67	1	P	P	23 10 44.0	+1.8
	comp=E,8.8nm,1.0s,mb4.2,baz=180,slow=6.1,SNR=2.5						
TUC	Tucson	31.16	303	eP	P	23 11 23.4	+1.0
	comp=E,32nm,0.6s,mb5.3						
SCHQ	Schefferville	38.10	12	P	P	23 12 23.8	+1.7
	comp=E,5.6nm,0.7s,mb4.4,baz=207,slow=8.2,SNR=8.8						
SCHQ	Schefferville	38.10	12	P	P	23 12 23.8	+1.7
YKA	Yellowknife Ar	50.51	340	P	P	23 14 01.3	+0.1
	comp=E,0.2nm,0.4s,mb3.4,baz=134,slow=8.4,SNR=6.3						
EKA	Eskdalemuir Ar	67.90	37	P	P	23 16 02.6	+0.7
	comp=E,1.5nm,0.6s,mb4.2,baz=269,slow=6.4,SNR=9.2						
ESDC	Sonseca Array	68.11	54	P	P	23 16 03.1	-0.5
	comp=E,0.8nm,0.6s,mb3.9,baz=283,slow=5.9,SNR=7.0						
NOA	NORSAR Array B	75.00	30	P	P	23 16 46.0	+1.4
	comp=E,0.6nm,0.8s,mb3.6,baz=280,slow=5.8,SNR=3.1						
ARCES	ARCESS Array B	78.55	20	P	P	23 17 04.1	-0.5
	comp=E,1.0nm,0.8s,mb3.8,baz=287,slow=4.9,SNR=7.0						
GERES	GERESS Array B	79.03	42	P	P	23 17 07.4	-0.2
	comp=E,0.3nm,0.6s,mb3.4,baz=267,slow=9.4,SNR=3.7						
FINES	FINESS Array B	81.77	28	P	P	23 17 22.5	+0.4
	comp=E,0.9nm,0.6s,mb3.9,baz=308,slow=4.3,SNR=6.4						
MLR	Muntele Rosu	88.01	43	P	P	23 17 53.8	0.0
	comp=E,2.2nm,0.8s,mb4.4,baz=80,slow=7.2,SNR=3.9						
ASAR	Alice Springs	147.88	254	PKPbc	PKPbc	23 24 47.1	-2.3
	comp=E,0.6nm,1.0s,baz=98,slow=2.8,SNR=3.5						

ISK ***21*** *23:17:06.0,37°.07N×29°.05E,h12km,MD2.9*
ISCJB ***21*** *23:17:08.3±0.6,37°.02N±0°.03×29°.13E±0°.04,h10km,Error*
ellipse: s-maj=4.6km s-min=4.1km az=165.0
CSEM ***21*** *23:17:08

DNZL				*i* S	**Sg**	**23 17 29.9**	**+0.2**
DNZL	**Cakiroluk**	**0.66**	**357**	*i* P	**Pg**	**23 17 20.6**	**-0.5**
DNZL				*i* S	**Sg**	**23 17 29.9**	**+0.2**
ELL	**Elmali**	**0.71**	**113**	*e*PG	**Pg**	**23 17 21.4**	**-0.7**
ELL				*e*SG	**Sg**	**23 17 32.5**	**+1.1**
ELL	**Elmali**	**0.71**	**113**	*e*Pg	**Pg**	**23 17 21.4**	**-0.7**
ELL				*e*Sg	**Sg**	**23 17 32.5**	**+1.1**
AKAS	**Kas**	**0.90**	**152**	*i* P	**Pg**	**23 17 27.9**	**+2.3**
AKAS				*i* S	**Sg**	**23 17 42.2**	**+5.0**
AKAS	**Kas**	**0.90**	**152**	*i* P	**Pg**	**23 17 27.9**	**+2.4**
AKAS				*i* S	**Sg**	**23 17 42.2**	**+5.0**
AYDN	**Tasoluk**	**1.15**	**303**	*e*P	**Pg**	**23 17 31.0**	**+0.5**
AYDN				*i* S	**Sg**	**23 17 47.5**	**+2.1**
AYDN	**Tasoluk**	**1.15**	**303**	*e*P	**Pg**	**23 17 31.0**	**+0.5**
AYDN				*i* S	**Sg**	**23 17 47.5**	**+2.1**
DAT	**Datca**	**1.25**	**257**	*e*PN	**Pn**	**23 17 29.3**	**-2.6**
DAT	**Datca**	**1.25**	**257**	*e*Pn	**Pn**	**23 17 29.3**	**-2.6**
KHAL	**Karahalli**	**1.38**	**13**	*i* P	**Pn**	**23 17 34.3**	**+0.7**
KHAL				*i* S	**Sb**	**23 17 51.8**	**0.0**
KHAL	**Karahalli**	**1.38**	**13**	*i* P	**Pn**	**23 17 34.3**	**+0.6**
KHAL				*i* S	**Sb**	**23 17 51.8**	**-0.1**

GUC 21 23:21:24.7±0.7,20°.20'S×69°.32'W,h115km±5km,MD3.5, ML3.7,2C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.85**	**191**	⇑*i*P	Pn	23 21 45.5	+0.5
PB01				*i* S	Sn	23 22 00.8	+0.6
PB01				AML	AML	23 22 01.7	
	comp=E,2μm,0.3s						
MNMC	**Miæe Miæ**	**1.09**	**346**	*e*P	Pn	23 21 48.4	+1.0
MNMC				*i* S	Sn	23 22 05.6	+1.2
MNMC				AML	AML	23 22 07.5	
	comp=E,3μm,0.2s						
MACH	**Maria Elena**	**2.03**	**192**	*i* P	Pn	23 21 59.4	+1.1
MACH				*i* S	Sn	23 22 25.9	+1.9
PB04	**Plate Boundary**	**2.06**	**184**	*i* P	Pn	23 22 01.4	+2.7
PB04				*i* S	Sn	23 22 29.5	+4.8
PB04				AML	AML	23 22 40.2	
	comp=E,240nm,0.2s						
PECH	**Pedro de Valdi**	**2.41**	**188**	*i* P	Pn	23 22 06.6	+3.5
PECH				*i* S	Sn	23 22 36.7	+4.0
PECH				AML	AML	23 22 40.9	
	comp=E,467nm,0.6s						
CEN1	**Los Morros**	**3.28**	**194**	⇑*i*P	Pn	23 22 18.8	+4.3
CEN1				*i* S	Sn	23 22 59.9	+6.8
CEN1				AML	AML	23 23 12.6	
	comp=E,74nm,0.3s						

*IDC **21** 23:23:06.6±0.6,4°.26S×101°.16E,h0km,mb4.5/29, mb1 4.6/30,mb1mx4.5/33,mbtmp4.5/30,ML4.2/1,Error ellipse: s-maj=18.9km s-min=12.4km az=45.0*
*BJI **21** 23:23:07.6,4°.63S×101°.12E,h33km,mB5.1/26,mb5.1/43, Ms4.8/44,Ms7 4.6/39*
*MOS **21** 23:23:08.8±1.0,4°.42S×101°.17E,h32km,mb5.3/31, MS4.5/9,Error ellipse: s-maj=12.0km s-min=6.4km az=103.6*
*ISCJB **21** 23:23:08.6±0.2,4°.42S±0°.03×101°.10E±0°.03,h29km, mb5.0/88,MS4.6/21,Error ellipse: s-maj=5.4km s-min=4.0km az=35.6*
*GCMT **21** 23:23:09.2±0.4,4°.62S×100°.89E,h19km,MW5.2/56, Moment Tensor Solution. s44,c63; s56,c77; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}3.41±.19; $M_{\theta\theta}$-2.01±.12; $M_{\phi\phi}$-1.40±.17; $M_{r\theta}$5.34±.29; $M_{\theta\phi}$2.08±.10; $M_{r\phi}$-3.69±.35; Best double couple: $M_0$7.42800×10^{16} NP1:ϕ_s318.00000°,δ15.00000°,λ102.00000°. NP2: ϕ_s125.00000°,δ76.00000°,λ87.00000°. Principal axes: T 7.2480, Plg59.0000°, Azm31.0000°; N 0.3600, Plg3.0000°, Azm126.0000°; P -7.6080, Plg30.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 23:23:09.2±2.0,4°.45S×101°.10E,h22km±13km,mb5.2/33 Error ellipse: s-maj=6.6km s-min=5.3km az=61.0*
*DJA **21** 23:23:10,4°.39S×101°.05E,h30km,Mw5.3/4*
ISC 21 23:23:10.7±0.2,4°.42S±0°.03×101°.11E±0°.03,h30km, h30km±.5km:pP-P,n249,σ1s04/232,mb5.0/88,MS4.6/21, 5C-8D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.66**	**63**	P	**Pn**	**23 23 38.0**	**+0.2**
MNAI	**Manna**	**1.84**	**88**	P	**Pn**	**23 23 40.4**	**+0.2**
LWLI	**Liwa**	**2.99**	**101**	P	**Pn**	**23 23 57.2**	**+1.1**
MDSI	**Maura Dua**	**3.06**	**91**	P	**Pn**	**23 23 58.1**	**+1.1**
KASI	**Kota Agung**	**3.54**	**108**	P	**Pn**	**23 24 04.1**	**+0.4**
PDSI	**Padang**	**3.55**	**349**	P	**Pn**	**23 24 03.0**	**-0.8**
SISI	**Saibi**	**3.68**	**327**	P	**Pn**	**23 24 04.8**	**-0.8**
PPI	**Padang Panjang**	**4.00**	**350**	P	**Pn**	**23 24 09.9**	**-0.2**
CGJI	**Cibinong**	**5.05**	**116**	P	**Pn**	**23 24 24.0**	**-0.4**
MNSI	**Mandailing Nat**	**5.41**	**343**	P	**Pn**	**23 24 28.6**	**-0.7**
	230nm,1.0s,6μm1.9nm						
MYKOM	**Kota Tinggi**	**6.75**	**24**	P	**Pn**	**23 24 50.8**	**+3.0**
MYKOM	**Kota Tinggi**	**6.75**	**24**	P	**Pn**	**23 24 48.5**	**+0.7**
	148nm,1.1s,2μm1.4nm						
LEM	**Lembang**	**6.90**	**111**	P	**Pn**	**23 24 52.4**	**+2.6**
	368nm,0.9s,4μm1.6nm						
FRIM	**Kepong**	**7.63**	**4**	P	**Pn**	**23 25 00.9**	**+1.1**
COCO	**West Island**	**8.80**	**208**	*i* P	**Pn**	**23 25 15.5**	**-0.5**
COCO	**West Island**	**8.80**	**208**	*e*Pn	**Pn**	**23 25 14.1**	**-1.8**
IPM	**Ipoh**	**8.84**	**359**	P	**Pn**	**23 25 17.2**	**+0.6**
KULM	**Kulim**	**9.66**	**357**	P	**Pn**	**23 25 28.4**	**+0.7**
KULM	**Kulim**	**9.66**	**357**	*e*Pn	**Pn**	**23 25 26.7**	**-1.0**
	134nm,1.1s						
KULM	**Kulim**	**9.66**	**357**	P	**Pn**	**23 25 27.7**	**-0.1**
KSM	**Kuching**	**10.90**	**58**	P	**Pn**	**23 25 48.3**	**+3.6**
KSM	**Kuching**	**10.90**	**58**	*e*Pn	**Pn**	**23 25 45.8**	**+1.1**
KKM	**Kota Kinabalu**	**18.32**	**56**	P	**Pn**	**23 27 23.7**	**+1.0**
KKM	**Kota Kinabalu**	**18.32**	**56**	*e*P	**Pn**	**23 27 22.9**	**+0.2**
	238nm,1.6s						
KAPI	**Kappang**	**18.58**	**93**	P	**Pn**	**23 27 23.6**	**-2.3**
	0.7nm,0.3s,baz=296,slow=9.5,SNR=9.2						
TSM	**Tawau**	**18.85**	**63**	P	**Pn**	**23 27 29.1**	**-0.1**
SDKM	**Sandakan**	**18.92**	**58**	P	**Pn**	**23 27 29.8**	**-0.2**
KDM	**Kudat**	**19.32**	**54**	P	**Pn**	**23 27 34.6**	**-0.1**
MYLDM	**Lahad Datu**	**19.81**	**61**	P	**Pn**	**23 27 39.7**	**-1.1**
KKTK	**Khon Kaen**	**20.70**	**5**	P	**P**	**23 27 47.6**	**-1.0**
	802nm,0.9s						
BDT	**Bhumibol Dam**	**21.63**	**355**	P	**P**	**23 27 57.0**	**-1.6**
CM31	**Chiang Mai Arr**	**22.84**	**355**	*e*P	**P**	**23 28 11.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**22.84**	**355**	P	**P**	**23 28 09.1**	**-2.3**
	29nm,0.9s,mb4.7,baz=183,slow=8.6,SNR=78						
CHTO	**Chiang Mai**	**23.19**	**355**	*e*P	**P**	**23 28 14.6**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**23.19**	**355**	*e*P	**P**	**23 28 14.6**	**-0.5**
	comp=Z,70nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**23.19**	**355**	P	**P**	**23 28 14.9**	**-0.2**
	SNR=26						
CHTO				P		23 28 14.9	
	SNR=26						
QIZ	**Qiongzhong**	**24.84**	**20**	P	**P**	**23 28 29.9**	**-0.7**
QIZ				pP		23 28 38.9	
QIZ				sP	sP	23 28 42.5	-0.6
QIZ				S	**S**	**23 32 54.6**	**+3.0**
QIZ				sS	sS	23 33 04.3	-1.9
QIZ				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.5						
QIZ				LR	LR		
	comp=N,720nm,11.5s,MS4.4						
QIZ				LR	LR		
	comp=E,420nm,15.0s,MS4.4						
QIZ				LR	LR		
	comp=Z,750nm,13.4s,MS4.4						
QIZ	**Qiongzhong**	**24.84**	**20**	*e*P	**P**	**23 28 29.6**	**-1.0**
	comp=Z,61nm,1.0s,mb5.1						
DAV	**Davao City (W)**	**26.95**	**65**	P	**P**	**23 28 49.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**27.57**	**121**	*e*P	**P**	**23 28 55.6**	**+0.3**
	comp=Z,16nm,1.1s,mb4.6						
FITZ	**Fitzroy Crossi**	**27.57**	**121**	P	**P**	**23 28 55.6**	**+0.3**
	comp=Z,4.2nm,0.5s,mb4.3,baz=300,slow=7.0,SNR=6.5						
FITZ	**Fitzroy Crossi**	**27.57**	**121**	*e*P	**P**	**23 28 56.0**	**+0.6**
	comp=Z,23nm,0.8s,mb4.9						
FITZ				LR	LR	23 39 28.4	
FITZ	**Fitzroy Crossi**	**27.57**	**121**	LR	LR	23 39 28.4	
	comp=Z,850nm,21.4s,MS4.3,baz=310,slow=35						
KMI	**Kunming**	**29.41**	**3**	P	**P**	**23 29 12.8**	**+1.2**
KMI				pP	pP	23 29 21.8	+1.3
KMI				sP	sP	23 29 25.3	+1.1
KMI				PP	PP	23 30 13.6	-4.8
KMI				S	**S**	**23 34 11.5**	**+7.8**
KMI				sS	sS	23 34 21.3	+2.9
KMI				SS	SS	23 35 43.6	-26
KMI				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
KMI				pmax	pmax		
	comp=Z,140nm,6.6s						
KMI				LR	LR		
	comp=N,810nm,19.3s						
KMI				LR	LR		
	comp=E,1μm,12.4s						
KMI				LR	LR		
	comp=Z,1μm,13.8s						
SHL	**Shillong**	**31.13**	**344**	⇓*e*P	**P**	**23 29 28.0**	**+1.2**
GYA	**Guiyang**	**31.17**	**10**	P	**P**	**23 29 30.0**	**+2.9**
GYA				pP	pP	23 29 39.4	+3.4
GYA				sP	sP	23 29 45.8	+6.1
GYA				PP	PP	23 30 36.0	-1.9
GYA				PcP	PcP	23 32 24.8	+3.0
GYA				S	**S**	**23 34 36.0**	**+4.8**
GYA				sS	sS	23 34 50.3	+4.4
GYA				ScP	ScP	23 36 05.1	+2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,160nm,4.9s						
GYA				LR	LR		
	comp=N,580nm,16.2s,MS4.5						
GYA				LR	LR		
	comp=E,660nm,17.0s,MS4.5						
GYA				LR	LR		
	comp=Z,590nm,15.8s,MS4.3						
TPUB	**Ta-pu**	**33.50**	**34**	*e*P	**P**	**23 29 46.9**	**-0.7**
QZH	**Quanzhou**	**33.78**	**29**	*e*P	**P**	**23 29 51.6**	**+1.6**
QZH				S	**S**	**23 35 11.3**	**-0.6**
QZH				LR	LR		
	comp=N,2μm,17.2s,MS5.0						
QZH				LR	LR		
	comp=E,600nm,14.0s,MS5.0						
QZH				LR	LR		
	comp=Z,960nm,15.2s,MS4.6						
NACB	**Ninganchiao**	**34.73**	**34**	P	**P**	**23 29 57.6**	**-0.7**
YHNB	**Yeheng**	**35.00**	**33**	P	**P**	**23 30 00.8**	**+0.2**
CD2	**Chengdu**	**35.23**	**4**	P	**P**	**23 30 01.3**	**-1.2**
CD2				pP	pP	23 30 11.0	-0.4
CD2				sP	sP	23 30 14.8	-0.3
CD2				PP	PP	23 31 22.0	-0.8
CD2				S	**S**	**23 35 35.1**	**+1.0**
CD2				sS	sS	23 35 49.5	+0.6
CD2				SS	SS	23 37 53.3	-15
CD2				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
CD2				pmax	pmax		
	comp=Z,160nm,6.4s						
CD2				LR	LR		
	comp=N,1μm,12.5s						
CD2				LR	LR		
	comp=Z,1μm,13.7s,MS4.9						
PKI	**Pulchoki**	**35.24**	**335**	*e*P	**P**	**23 30 03.8**	**+1.2**
	comp=Z,111nm,1.1s,mb5.7						
PKIN	**Phulchoki**	**35.25**	**335**	*e*P	**P**	**23 30 04.1**	**+1.4**
	comp=Z,67nm,0.8s,mb5.6						
LSA	**Lhasa**	**35.25**	**345**	*e*P	**P**	**23 30 03.4**	**+0.7**
LSA				*e*	pP	23 30 12.6	+1.0
LSA				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
LSA	**Lhasa**	**35.25**	**345**	*e*P	**P**	**23 30 03.4**	**+0.7**
	comp=Z,33nm,0.9s,mb5.3						
LSA				*e*	pP	23 30 12.6	+1.0
GUN	**Gumba**	**35.34**	**336**	*e*P	**P**	**23 30 05.1**	**+1.6**
	comp=Z,312nm,1.0s						
DMN	**Daman**	**35.40**	**335**	*e*P	**P**	**23 30 05.1**	**+1.1**
	comp=Z,102nm,0.9s,mb5.7						
ENH	**Enshi**	**35.42**	**13**	*e*P	**P**	**23 30 02.8**	**-1.4**
	comp=Z,41nm,0.6s,mb5.5						
ENH				*e*	pP	23 30 12.5	-0.5
KKN	**Kakani**	**35.48**	**335**	*e*P	**P**	**23 30 05.7**	**+1.0**
	comp=Z,182nm,1.0s,mb6.0						
WRAB	**Tennant Creek**	**35.85**	**118**	P	**P**	**23 30 08.0**	**0.0**
	comp=Z,192nm,0.7s,mb6.1,SNR=5.8						
WRAB	**Tennant Creek**	**35.85**	**118**	*e*P	**P**	**23 30 08.4**	**+0.4**
WRAB				*e*	pP	23 30 18.1	+1.1
WRAB				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**35.85**	**118**	*e*P	**P**	**23 30 08.4**	**+0.4**
	comp=Z,25nm,0.8s,mb5.2						
WRAB				*e*	pP	23 30 18.1	+1.1
ASAR	**Alice Springs**	**36.95**	**124**	P	**P**	**23 30 18.1**	**+0.7**
	comp=Z,1.5nm,0.5s,mb4.1,baz=295,slow=7.5,SNR=14						
ASAR	**Alice Springs**	**36.95**	**124**	P	**P**	**23 30 18.1**	**+0.7**
WHN	**Wuhan**	**37.00**	**19**	P	**P**	**23 30 11.3**	**-6.4**
WHN				S	**S**	**23 36 20.9**	**+20**
WHN				LR	LR		
	comp=N,760nm,11.0s,MS5.0						
WHN				LR	LR		
	comp=E,1μm,13.4s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,12.8s,MS5.1						
AGRA	**Agra**	**38.62**	**326**	*ex*	pP	23 30 38.8	-1.6
AGRA				AMb	AMB	23 30 39.6	
	comp=Z,38nm,0.4s,mb5.5						
XAN	**Xi'an**	**38.96**	**10**	P	**P**	**23 30 33.3**	**-0.8**
XAN				pP	pP	23 30 43.6	+0.4
XAN				S	**S**	**23 36 37.3**	**+6.4**
XAN				SS	SS	23 39 18.4	-5.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
XAN				pmax	pmax		
	comp=Z,21nm,4.6s						
XAN				LR	LR		
	comp=N,880nm,16.2s,MS4.7						
XAN				LR	LR		
	comp=E,240nm,17.4s,MS4.7						
XAN				LR	LR		
	comp=Z,520nm,15.8s,MS4.5						
SONA	**Sohna**	**39.89**	**326**	*e*P	**P**	**23 30 41.6**	**-0.4**
AYAN	**Aya Nagar**	**40.04**	**326**	*e*P	**P**	**23 30 43.2**	**-0.1**
AYAN				AMb	AMB	23 30 53.3	
	comp=Z,21nm,1.1s,mb4.8						
LZH	**Lanzhou**	**40.38**	**3**	*e*P	**P**	**23 30 47.1**	**+1.2**
LZH				pP	pP	23 30 54.6	-0.4
LZH				sP	sP	23 30 58.8	+0.2
LZH				PP	PP	23 32 26.4	+7.1
LZH				PcP	PcP	23 32 47.3	-1.5
LZH				*e*S	**S**	**23 36 55.3**	**+3.2**
LZH				sS	sS	23 37 06.1	-0.9
LZH				ScS	ScS	23 40 49.8	-0.3
LZH				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.1						
LZH				pmax	pmax		
	comp=Z,150nm,5.1s						
LZH				LR	LR		
	comp=N,940nm,13.9s						
LZH				LR	LR		
	comp=Z,1μm,15.5s,MS4.8						
JOSI	**Joshimath**	**40.43**	**331**	*e*P	**P**	**23 30 47.1**	**+0.6**
JOSI				AMb	AMB	23 30 57.2	
	comp=Z,226nm,1.2s,mb5.8						
KHET	**Khetri**	**40.48**	**324**	*e*P	**P**	**23 30 46.9**	**0.0**
KHET				AMb	AMB	23 30 58.1	
	comp=Z,28nm,1.4s,mb4.8						
JOW	**Kunigami**	**40.69**	**39**	P	**P**	**23 30 48.5**	**-0.2**
	comp=Z,16nm,0.9s,mb4.7,baz=137,slow=10,SNR=4.1						
DDI	**Dehra Dun**	**40.99**	**329**	*ex*	**P**	**23 30 50.5**	**-0.6**
KKR	**Kurukshetra**	**41.36**	**327**	*e*P	**P**	**23 30 54.8**	**+0.7**
SMLA	**Simla**	**42.10**	**329**	*i* x	**P**	**23 30 57.1**	**-3.1**
SDNR	**Sundarnagar**	**42.49**	**329**	*e*P	**P**	**23 31 05.0**	**+1.6**
SDNR				*ex*	x	23 32 42.0	
COEN	**Coen**	**42.52**	**106**	*e*P	**P**	**23 31 03.2**	**-0.7**
	comp=Z,93nm,1.1s,mb5.4						
COEN				*e*	pP	23 31 12.1	-0.8
GTA	**Gaotai**	**43.63**	**359**	P	**P**	**23 31 12.8**	**+0.4**
GTA				pP	pP	23 31 20.3	-1.2
GTA				sP	sP	23 31 23.3	-1.9
GTA				S	**S**	**23 37 39.8**	**-0.3**
GTA				SS	SS	23 40 49.4	-6.7
GTA				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.5						
GTA				pmax	pmax		
	comp=Z,89nm,5.1s						
GTA				LR	LR		
	comp=N,560nm,13.7s,MS4.7						
GTA				LR	LR		
	comp=E,350nm,16.1s,MS4.7						
GTA				LR	LR		
	comp=Z,410nm,13.4s,MS4.5						
HHC	**Hu-ho-hao-te**	**46.06**	**11**	*e*P	**P**	**23 31 35.0**	**+3.3**
HHC				pP	pP	23 31 42.6	+1.7
HHC				sP	sP	23 31 45.9	+1.3
HHC				PcP	PcP	23 33 10.1	+2.3
HHC				PP	PP	23 33 23.0	+2.8
HHC				ScP	ScP	23 37 00.8	+1.8
HHC				S	**S**	**23 38 19.8**	**+4.5**
HHC				sS	sS	23 38 32.5	+2.2
HHC				ScS	ScS	23 41 25.9	+0.6
HHC				SS	SS	23 41 38.6	-2.2
HHC				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
HHC				pmax	pmax		
	comp=Z,220nm,5.3s						
HHC				LR	LR		
	comp=N,1μm,14.9s,MS5.0						
HHC				LR	LR		
	comp=E,450nm,14.5s,MS5.0						
HHC				LR	LR		
	comp=Z,1μm,14.6s,MS5.0						
BJT	**Baijiatuau**	**46.34**	**16**	*e*P	**P**	**23 31 34.3**	**+0.3**
BJT				*e*	pP	23 31 43.0	-0.1
BJT				pmax	pmax		
	comp=Z,28nm,0.6s						
BJT	**Baijiatuau**	**46.34**	**16**	*e*P	**P**	**23 31 34.3**	**+0.3**
	comp=Z,28nm,0.6s,mb5.4						
BJT				*e*	pP	23 31 43.0	-0.2
BJI	**Beijing**	**46.36**	**16**	P	**P**	**23 31 34.4**	**+0.2**
BJI				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
BJI				pmax	pmax		
	comp=Z,160nm,5.9s						
BJI				LR	LR		
	comp=N,440nm,20.3s,MS4.5						
BJI				LR	LR		
	comp=E,360nm,16.9s,MS4.5						
BJI				LR	LR		
	comp=Z,350nm,20.0s,MS4.3						
CTA	**Charters Tower**	**46.59**	**113**	*e*P	**P**	**23 31 34.7**	**-1.6**
	comp=Z,11nm,1.2s,mb4.7						
CTA	**Charters Tower**	**46.59**	**113**	P	**P**	**23 31 36.1**	**-0.2**
	comp=Z,14nm,1.1s,mb4.8,baz=274,slow=9.8,SNR=5.0						
CTAO	**Charters Tower**	**46.59**	**113**	*e*P	**P**	**23 31 34.9**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
CTAO	**Charters Tower**	**46.59**	**113**	*e*P	**P**	**23 31 34.9**	**-1.4**
	comp=Z,46nm,1.1s,mb5.3						
STKA	**Stephens Creek**	**46.73**	**131**	*e*P	**P**	**23 31 39.1**	**+1.9**
	comp=Z,2.8nm,0.7s,mb4.3						
STKA				*e*pP	pP	23 31 47.7	+1.3
STKA	**Stephens Creek**	**46.73**	**131**	P	**P**	**23 31 39.3**	**+2.0**
	comp=Z,3.1nm,0.7s,mb4.3,baz=312,slow=9.1,SNR=4.5						
STKA	**Stephens Creek**	**46.73**	**131**	*e*P	**P**	**23 31 38.3**	**+1.1**
	comp=Z,4.0nm,0.8s,mb4.4						
STKA				*e*	pP	23 31 47.7	+1.3
KSRS	**Korea Array**	**48.56**	**29**	P	**P**	**23 31 50.7**	**-0.6**
	comp=Z,17nm,0.9s,mb5.1,baz=215,slow=8.0,SNR=51						
KBL	**Kabul**	**49.14**	**325**	*e*P	**P**	**23 31 55.5**	**-0.3**
KBL				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KBL	**Kabul**	**49.14**	**325**	*e*P	**P**	**23 31 55.5**	**-0.3**
	comp=Z,13nm,1.0s,mb4.9						
KSH	**Kashi**	**49.48**	**334**	P	**P**	**23 31 57.3**	**-1.1**
KSH				*e*pP	pP	23 32 03.1	-4.5
KSH				*e*PcP	PcP	23 33 21.3	+1.2
KSH				*e*PP	PP	23 33 50.3	-2.6
KSH				*e*ScP	ScP	23 37 13.0	-0.5
KSH				*e*PcS	PcS	23 37 16.3	-0.4
KSH				*e*S	**S**	**23 38 58.8**	**-5.2**
KSH				*e*ScS	ScS	23 41 45.0	-3.1
KSH				*e*SS	SS	23 42 25.1	-11
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KSH				LR	LR		
	comp=N,66nm,4.8s						
KSH				LR	LR		
	comp=E,170nm,6.0s						
KSH				LR	LR		
	comp=Z,170nm,8.1s						
WMQ	**Urumqi**	**49.52**	**347**	P	**P**	**23 31 59.6**	**+1.0**
WMQ				pP	pP	23 32 08.3	+0.5
WMQ				PcP	PcP	23 33 21.0	+0.9
WMQ				S	**S**	**23 39 04.3**	**0.0**
WMQ				sS	sS	23 39 18.6	-0.9
WMQ				ScS	ScS	23 41 45.9	-2.2
WMQ				SS	SS	23 42 30.9	-5.9
WMQ				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.6						
WMQ				pmax	pmax		
	comp=Z,440nm,3.0s						
WMQ				LR	LR		
	comp=N,300nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=E,64nm,17.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,300nm,21.0s,MS4.3						
CMSA	**Cobar Meteorol**	**49.74**	**128**	*e*P	**P**	**23 32 02.4**	**+1.9**
CMSA				*e*pP	pP	23 32 11.7	+2.0
SNY	**Shenyang**	**50.38**	**22**	⇓P	**P**	**23 32 02.9**	**-2.2**
SNY				PP	PP	23 34 05.4	+4.5
SNY				S	**S**	**23 39 16.3**	**0.0**
SNY				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
SNY				pmax	pmax		
	comp=Z,110nm,5.1s						
SNY				LR	LR		
	comp=N,410nm,16.7s,MS4.7						
SNY				LR	LR		
	comp=E,320nm,13.7s,MS4.7						
SNY				LR	LR		
	comp=Z,440nm,16.5s,MS4.5						
KZA	**Kyzart**	**51.92**	**336**	P	**P**	**23 32 18.4**	**+1.8**
	SNR=7.1						
EIDS	**Eidsvold**	**52.20**	**119**	*e*P	**P**	**23 32 19.2**	**0.0**
	comp=Z,31nm,1.4s,mb5.0						
SONM	**Songino Array**	**52.24**	**4**	P	**P**	**23 32 19.7**	**+0.8**
	comp=Z,23nm,0.8s,mb5.1,baz=183,slow=9.1,SNR=155						
ULN	**Ulaanbaatar**	**52.33**	**5**	*e*P	**P**	**23 32 20.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.4						
ULN	**Ulaanbaatar**	**52.33**	**5**	*e*P	**P**	**23 32 20.2**	**+0.6**
	comp=Z,48nm,1.0s,mb5.4						
ULN	**Ulaanbaatar**	**52.33**	**5**	P	**P**	**23 32 20.6**	**+1.0**
	SNR=20						
ULN				P		23 32 20.6	
	SNR=20						
UCH	**Uchtor**	**52.35**	**335**	P	**P**	**23 32 21.4**	**+1.5**
	SNR=5.6						
UCH	**Uchtor**	**52.35**	**335**	*e*P	**P**	**23 32 20.1**	**+0.3**
	comp=Z,8.9nm,0.6s,mb4.9						
UCH				*e*	pP	23 32 29.2	+0.1
TKM2	**Tokm

comp=Z,43nm,1.2s,mb5.2
MAJO Matsushiro 53.48 37 *e*P P **23 32 26.8 -1.5**
comp=Z,43nm,1.2s,mb5.2
MAT Matsushiro 53.48 37 P P **23 32 26.5 -1.8**
MJAR Matsushiro Arr 53.48 37 P P **23 32 26.7 -1.6**
comp=Z,12nm,1.0s,mb4.8,baz=218,slow=7.7,SNR=24
MK31 Makanchi Array 53.65 344 *e*P P **23 32 29.4 +0.1**
MKAR Makanchi Array 53.65 344 P P **23 32 29.4 +0.1**
comp=Z,16nm,0.8s,mb5.0,baz=146,slow=8.2,SNR=170
ZAK Zakamensk 54.62 2 ⇓*i*P P **23 32 36.0 -0.3**
ZAK pmax pmax
comp=Z,19nm,1.0s,mb5.1
MDJ Mudanjiang 55.09 25 P P **23 32 41.5 +1.6**
MDJ pP pP 23 32 47.9 -1.3
MDJ S S **23 40 24.6 +4.0**
MDJ pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
MDJ pmax pmax
comp=Z,100nm,3.9s
MDJ LR LR
comp=N,100nm,22.7s
MDJ LR LR
comp=E,86nm,30.9s
MDJ LR LR
comp=Z,230nm,22.3s,MS4.2
MDJ Mudanjiang 55.09 25 *e*P P **23 32 39.0 -0.9**
comp=Z,25nm,1.0s,mb5.2
MDJ *e* pP 23 32 47.6 -1.6
HIA Hailar 55.87 15 *e*P P **23 32 44.6 -0.8**
HIA *e* pP 23 32 53.2 -1.5
TLY Talaya 55.93 2 *e*P P **23 32 45.5 -0.3**
TLY pmax pmax
comp=Z,41nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,481nm,17.0s,MS4.7
TLY Talaya 55.93 2 *e*P P **23 32 45.6 -0.1**
comp=Z,34nm,0.9s,mb5.4
TLY *e* pP 23 32 54.5 -0.6
TLY Talaya 55.93 2 P P **23 32 47.0 +1.2**
SNR=14
TLY P 23 32 47.0
SNR=14
KURK Kurchatov 58.23 343 P P **23 33 02.3 +0.2**
comp=Z,324nm,1.0s,SNR=19
KURK Kurchatov 58.23 343 P P **23 33 01.5 -0.6**
comp=Z,13nm,0.9s,mb5.0,baz=162,slow=6.7,SNR=54
KURK Kurchatov 58.23 343 *e*P P **23 33 01.9 -0.2**
KURK pmax pmax
comp=Z,54nm,0.9s,mb5.6
KURK Kurchatov 58.23 343 *e*P P **23 33 01.9 -0.2**
comp=Z,54nm,0.9s,mb5.6
KURK Kurchatov 58.23 343 P P **23 33 02.4 +0.3**
SNR=26
KURK P 23 33 02.4
SNR=26
KLR Kul'dur 59.70 23 *e*P P **23 33 08.0 -4.3**
KLR *e* pP 23 33 16.4 -5.3
KLR pmax pmax
comp=E,43nm,1.2s
KLR pmax pmax
comp=Z,68nm,1.2s,mb5.5
ZAA0 Zalesovo Array 59.74 349 *e*P P **23 33 11.9 -0.6**
ZAA0 *e* pP 23 33 20.5 -1.4
ZALV Zalesovo Beam 59.74 349 P P **23 33 12.2 -0.3**
comp=Z,17nm,0.8s,mb5.1,baz=160,slow=4.7,SNR=95
ATD Arta Tunnel 60.08 286 P P **23 33 14.9 -0.7**
comp=Z,1.4nm,0.4s,mb4.3,baz=9.0,slow=19,SNR=2.1
NVS Novosibirsk 60.90 348 ⇑*i*P P **23 33 18.2 -2.2**
NVS *e*S S **23 41 33.5 -2.6**
NVS pmax pmax
comp=Z,59nm,1.9s,mb5.4
NVS pmax pmax
comp=N,54nm,1.6s
NVS pmax pmax
comp=E,22nm,1.5s
NVS smax
comp=N,26nm,2.0s
NVS smax
comp=E,12nm,1.6s
CASY Casey 62.10 176 P P **23 33 27.0 -1.3**
BVAR Borovoye Array 62.83 340 P P **23 33 32.8 -0.6**
comp=E,7.1nm,0.7s,mb4.9,baz=142,slow=8.6,SNR=43
BRVK Borovoye 62.89 340 *e*P P **23 33 33.1 -0.7**
BRVK *e* pP 23 33 41.2 -2.1
BRVK pmax pmax
comp=Z,24nm,0.9s,mb5.3
BRVK Borovoye 62.89 340 *e*P P **23 33 33.1 -0.8**
comp=Z,24nm,0.9s,mb5.3
BRVK *e* pP 23 33 41.2 -2.1
BRVK Borovoye 62.89 340 P pP 23 33 41.6 -1.7
SNR=5.9
BRVK P pP 23 33 41.6 -1.7
SNR=5.9
BOD Bodaibo 62.91 8 *e*P P **23 33 33.1 -0.7**
BOD *e* pP 23 33 42.4 -0.9
BOD pmax pmax
comp=Z,13nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 62.96 31 *e*P P **23 33 33.5 -0.9**
YSS *e* pP 23 33 42.3 -1.6
YSS *e* 23 33 49.2
YSS Yuzh-Sakhalins 62.96 31 *e*P P **23 33 34.4 0.0**
comp=Z,62nm,0.8s,mb5.8
ABKAR Akbulak array 64.29 331 *e*P P **23 33 42.7 -0.4**
comp=Z,18nm,0.7s,mb5.2
ABKAR *e* pP 23 33 51.3 -1.3
BHD Baghdad 65.39 310 *e*P P **23 33 56.0 +5.3**
BHD *e*S S 23 42 37.0 +3.7
AKTK Aktyubinsk 66.00 331 P P **23 33 53.9 -0.4**
AKTO Aktyubinsk 66.00 331 P P **23 33 53.9 -0.4**
comp=Z,3.0nm,1.0s,mb4.3,baz=118,slow=6.1,SNR=9.1
MAW Mawson 68.23 195 P P **23 34 10.6 +2.5**
comp=Z,3.9nm,1.0s,mb4.4,baz=68,slow=12,SNR=3.3
MAW Mawson 68.23 195 *e*P P **23 34 06.5 -1.6**
MAW *e* 23 34 18.8
SVE Sverdlovsk 69.33 338 ⇓*e*P P **23 34 15.1 0.0**
SVE *e* 23 36 43.7
SVE *e*S S 23 43 18.5 -1.2
SVE pmax pmax
comp=Z,76nm,1.0s,mb5.6
SVE MLR MLR
comp=Z,511nm,23.0s,MS4.7
ZEI Tsey 69.78 319 *e*P P **23 34 18.6 +0.4**
ZEI pmax pmax
comp=Z,14nm,1.0s,mb4.8
YAK Yakutsk 69.80 14 *e*P P **23 34 15.9 -2.0**
YAK *e**PP pP 23 34 24.9 -2.6
YAK *e* 23 34 32.7
YAK *e*S S 23 43 27.2 +2.2
YAK *e* 23 44 14.2
YAK pmax pmax
comp=Z,45nm,1.2s,mb5.3
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=N,11nm,1.1s
YAK smax
comp=E,77nm,3.6s
YAK smax
comp=N,32nm,3.4s
YAK MLR MLR
comp=Z,618nm,17.0s,MS4.9
YAK MLR MLR
comp=N,387nm,16.0s,MS4.8
YAK MLR MLR
comp=E,171nm,16.0s,MS4.8
YAK Yakutsk 69.80 14 *e*P P **23 34 17.4 -0.5**
ARU Arti 69.86 336 *c i*P P **23 34 18.1 -0.3**
ARU *e* 23 34 40.0
ARU *e* 23 36 56.9
ARU *e*PPP 23 38 39.0
ARU S S 23 43 28.6 +2.7
ARU SS SS 23 47 53.7 -1.6
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.8
ARU MLR MLR
comp=Z,243nm,23.0s,MS4.4
ARU Arti 69.86 336 *e*P P **23 34 18.2 -0.2**
comp=Z,47nm,1.1s,mb5.3
KIV Kislovodsk 71.09 319 *e*P P **23 34 26.6 +0.4**
KIV *e* 23 34 44.2
KIV *e* 23 37 06.3
KIV *e*S S 23 43 42.6 +1.8
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,102nm,19.0s,MS4.1
KIV Kislovodsk 71.09 319 *e*P P **23 34 27.1 +0.9**
EIL Elat 71.76 303 P P **23 34 32.0 +1.4**
comp=Z,4.0nm,0.9s,mb4.3,baz=287,slow=2.0,SNR=3.7
MMAI Mount Meron Ar 72.36 307 P P **23 34 35.5 +1.4**
comp=Z,2.4nm,0.8s,mb4.2,baz=142,slow=4.2,SNR=5.5
SOKR Solikamsk 72.71 338 *c i*P P **23 34 36.1 +0.5**
SOKR PP 23 37 14.0 -3.7
SOKR S SKSac 23 44 36.2 -2.2
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,280nm,21.0s,MS4.5
SOC Sochi 72.89 318 *e*P P **23 34 35.5 -1.5**
SOC *i* pP 23 34 45.7 -0.9
SOC pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SOC pmax pmax
comp=Z,16nm,0.9s,mb5.0
PETK Petropavlovsk- 74.34 32 P P **23 34 44.6 -0.7**
comp=Z,9.1nm,0.9s,mb4.7,baz=117,slow=0.9,SNR=5.1
CSS Prodhromos 74.58 308 *e*P P **23 34 47.3 +0.2**
comp=Z,19nm,1.0s,mb5.0
CSS *e* pP 23 34 54.6 -2.1
LBTB Lobatse 75.02 245 P P **23 34 49.0 -0.9**
LBTB *e* pP 23 34 59.2 -0.3
BOSA Boshof 75.48 242 *e*P P **23 34 51.6 -0.9**
BOSA *e* pP 23 35 00.7 -1.4
BR131 Keskin Array S 75.77 313 *e*P P **23 34 53.9 0.0**
BR131 *e*pP pP 23 35 02.4 -1.1
BRTR Keskin Array B 75.77 313 P P **23 34 53.0 -0.8**
comp=Z,2.5nm,0.9s,mb4.2,baz=140,slow=8.1,SNR=15
SYO Syowa Base 75.95 199 ⇓*e*P P **23 34 55.0 +0.7**
SEY Seymchan 77.45 21 *de*P P **23 35 02.8 0.0**
TIXI Tiksi 78.06 9 *e*P P **23 35 04.6 -1.5**
TIXI *e* pP 23 35 13.4 -2.4
TIXI pmax pmax
comp=Z,13nm,1.2s,mb4.7
TIXI MLR MLR
comp=Z,424nm,19.0s,MS4.8
TIXI Tiksi 78.06 9 *e*P P **23 35 04.8 -1.3**
OBN Obninsk 79.43 328 ⇑*e*P P **23 35 14.1 +0.2**
OBN *i* pP 23 35 23.3 -0.3
OBN *i* 23 35 31.8
OBN pmax pmax
comp=Z,18nm,1.2s,mb4.9
OBN Obninsk 79.43 328 *e*P P **23 35 14.1 +0.2**
AKASG Malin Array Be 82.07 322 P P **23 35 27.0 -1.2**
comp=Z,0.2nm,0.2s,baz=84,slow=5.2,SNR=5.1
AKASG Malin Array Be 82.07 322 P P **23 35 27.0 -1.1**
MLR Muntele Rosu 82.82 317 P P **23 35 33.3 +1.1**
comp=Z,3.2nm,0.8s,mb4.4,baz=196,slow=0.8,SNR=8.0
BUR08 Bucovina Ar. S 83.82 319 *e*P P **23 35 37.9 +0.6**
BUR08 *e* pP 23 35 48.0 +1.0
JOF Joensuu 84.87 334 *e*P P **23 35 42.3 0.0**
JOF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
JOF Joensuu 84.87 334 *ep* P **23 35 42.3 0.0**
comp=Z,3.5nm,0.8s,mb4.5
BILL Bilibino 85.03 20 ⇓*e*P P **23 35 43.1 +0.1**
BILL *i* *PP pP 23 35 52.0 -0.7
BILL *i* *SP sP 23 35 59.7 +3.4
BILL *i* PS 23 47 12.4
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
BILL Bilibino 85.03 20 *e*P P **23 35 42.0 -1.0**
comp=Z,3.7nm,0.8s,mb4.6
BILL *e* pP 23 35 50.8 -1.9
KWP Kalwaria Pacla 85.87 320 *e*P P **23 35 48.0 +0.5**
KWP *e* pP 23 35 56.8 -0.5
KWP pmax pmax
comp=Z,16nm,1.2s,mb5.1
KWP Kalwaria Pacla 85.87 320 *e*P P **23 35 48.0 +0.4**
comp=Z,16nm,1.2s,mb5.1
KWP *e* pP 23 35 56.8 -0.5
KWP Kalwaria Pacla 85.87 320 ⇓*i*P P **23 35 48.4 +0.9**
UZH Uzhgorod 85.93 319 *e*P P **23 35 45.8 -2.1**
UZH *e* pP 23 35 56.6 -1.1
KOLS Kolonicke sedl 86.01 320 *e*P P **23 35 49.7 +1.4**
KOLS *e* 23 36 07.7
KOLS pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KOLS Kolonicke sedl 86.01 320 *e*P P **23 35 49.7 +1.4**
comp=Z,5.5nm,0.9s,mb4.8
KOLS *e*PP pP 23 35 58.6 +0.6
KOLS *e* 23 36 07.7
KOLS Kolonicke sedl 86.01 320 *e*P P **23 35 49.7 +1.4**
KOLS *ep*P pP 23 35 58.6 +0.6
KOLS *e* 23 36 07.7
SUW Suwalki 86.49 325 *e*P P **23 35 51.0 +0.5**
FINES FINESS Array B 86.76 332 P P **23 35 52.0 +0.4**
comp=Z,1.9nm,0.7s,mb4.4,baz=106,slow=6.8,SNR=8.3
STHS Stebnicka Huta 86.76 320 *e*P P **23 35 53.7 +1.7**
STHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.4
STHS Stebnicka Huta 86.76 320 *e*P P **23 35 53.7 +1.7**
comp=Z,3.0nm,1.2s,mb4.4
STHS *e*PP pP 23 36 02.4 +0.7
STHS Stebnicka Huta 86.76 320 *e*P P **23 35 53.7 +1.7**
STHS *ep*P pP 23 36 02.4 +0.7
KAF Kangasniemi 86.83 333 *e*P P **23 35 51.9 -0.1**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
KAF Kangasniemi 86.83 333 *ep* P **23 35 51.9 -0.1**
comp=Z,4.2nm,0.7s,mb4.8
PSZ Piszkesteto 87.38 318 *e*P P **23 35 54.9 -0.1**
PSZ *e* pP 23 36 04.0 -0.8
KEV Kevo 88.67 340 *e*P P **23 36 06.1 +5.4**
KEV Kevo 88.67 340 *ep* P **23 36 06.1 +5.4**
ARCES ARCESS Array B 89.12 340 P P **23 36 03.2 +0.5**
comp=Z,4.5nm,0.9s,mb4.8,baz=93,slow=7.5,SNR=11
MORC Moravsky Berou 89.20 320 *e*P P **23 36 03.5 -0.1**
MORC *e* pP 23 36 11.7 -1.7
MORC pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MORC Moravsky Berou 89.20 320 *e*P P **23 36 03.5 -0.1**
comp=Z,8.0nm,0.9s,mb5.0
MORC *e* pP 23 36 11.7 -1.6
GEC2 GERESS Array S 91.59 319 *e*P P **23 36 14.1 -0.7**
GEC2 *e* pP 23 36 24.0 -0.6
GEC2 pmax pmax
comp=Z,1μm,0.9s
GEC2 GERESS Array S 91.59 319 *e*P P **23 36 14.1 -0.7**
comp=Z,1μm,0.9s
GEC2 *e* pP 23 36 24.0 -0.6
GERES GERESS Array B 91.59 319 P P **23 36 15.7 +1.0**
comp=Z,0.9nm,0.8s,mb4.2,baz=108,slow=3.1,SNR=9.0
GERES GERESS Array B 91.59 319 P P **23 36 15.7 +1.0**
CLL Collm 92.24 321 *e*P P **23 36 15.0 -2.7**
CLL *e* 23 36 27.0
CLL *e* 23 39 55.0
CLL Collm 92.24 321 *e*P P **23 36 15.0 -2.7**
CLL *es*P sP 23 36 27.0 -4.0
CLL *e*PP PP 23 39 55.0 -3.3
HFS Hagfors 92.51 330 P P **23 36 19.5 +0.8**
comp=Z,1.8nm,0.8s,mb4.5,baz=113,slow=11,SNR=4.8
SPITS Spitsbergen Ar 93.22 348 P P **23 36 21.3 -0.4**
comp=Z,3.2nm,0.9s,mb4.8,baz=143,slow=6.8,SNR=3.1
SPITS Spitsbergen Ar 93.22 348 P P **23 36 21.3 -0.4**
NB2 NORSAR Subarra 93.79 331 P P **23 36 24.1 -0.5**
comp=Z,8.4nm,1.4s,mb5.0,baz=89,slow=4.8
NOA NORSAR Array B 93.79 331 P P **23 36 24.8 +0.1**
comp=Z,0.9nm,0.9s,mb4.2,baz=92,slow=4.7,SNR=3.7
NOA NORSAR Array B 93.79 331 P P **23 36 24.8 +0.1**
VSL Villasalto 94.12 309 *e*P P **23 36 25.2 -1.5**
VSL *e* pP 23 36 34.4 -2.1
STU Stuttgart 94.56 318 P P **23 36 27.7 -0.8**
YKA Yellowknife Ar 116.34 18 PKP PKPdf 23 41 50.4 -0.6
comp=Z,0.5nm,0.9s,baz=308,slow=2.0,SNR=5.5
YKA Yellowknife Ar 116.34 18 PKP PKPdf 23 41 50.4 -0.6
CPUP Villa Florida 142.98 213 PKP PKPdf 23 42 47.2 +4.9
comp=Z,0.3nm,0.4s,baz=180,slow=5.1,SNR=4.3
CPUP Villa Florida 142.98 213 *e*PKIKP PKPdf 23 42 39.8 -2.5
CPUP 23 42 47.2
CPUP Villa Florida 142.98 213 *e*PKPdf PKPdf 23 42 39.8 -2.5
CPUP PKP PKPdf 23 42 47.2 +4.9
WMOK Wichita Mounta 144.65 29 *e*PKIKP PKPdf 23 42 43.4 -1.6
WMOK *e* 23 42 52.7
CCM Cathedral Cave 144.68 17 *e*PKIKP PKPdf 23 42 43.2 -1.7
CCM *e* 23 42 52.5
OLIL Olney 144.84 13 *e*PKPdf PKPdf 23 42 44.1 -1.1
OLIL *e* 23 42 53.4
MCWV Mont Chateau 144.91 1 *e*PKP PKPdf 23 42 44.0 -1.3
MCWV *e* 23 42 52.7
FVM French Village 144.97 16 *e*PKIKP PKPdf 23 42 44.3 -1.1
FVM *e* 23 42 53.2
USIN University of 145.67 12 *e*PKPdf PKPdf 23 42 46.3 -0.3
USIN *e* 23 42 54.8
TXAR Lajitas Array 145.87 41 PKPbc PKPbc 23 42 48.9 +1.1
comp=Z,16nm,0.9s,baz=282,slow=1.6,SNR=100
TXAR Lajitas Array 145.87 41 PKPbc PKPbc 23 42 48.9 +1.1
UTMT University of 146.94 15 *e*PKP PKPdf 23 42 50.1 +1.3
UTMT *e* 23 43 00.5
ELN Prospectdale 147.31 3 *e*PKPdf PKPdf 23 42 50.0 +0.5
ELN *e* 23 42 59.8
UALR University of 147.32 21 *e*PKPdf PKPdf 23 42 49.4 -0.2
UALR *e* 23 43 01.5
WVT Waverly 147.39 14 *e*PKP PKPdf 23 42 51.9 +2.3
WVT *e* 23 43 01.6
JCT Junction City 147.43 35 *e*PKP PKPdf 23 42 51.5 +1.7
JCT *e* 23 43 02.1
TZTN Tazewell 147.75 7 *e*PKPbc PKPbc 23 42 52.4 -0.6
TZTN *e* 23 43 01.8
PLAL Pickwick Lake 148.42 15 *e*PKPbc PKPbc 23 42 53.9 -0.9
PLAL *e* 23 43 03.5
OXF Oxford 148.51 17 *e*PKPbc PKPbc 23 42 54.5 -0.5
OXF *e* 23 43 03.1
TKL Tuckaleechee C 148.59 8 *e*PKPbc PKPbc 23 42 55.2 -0.1
TKL *e* 23 43 03.9
SWET Sewanee 148.67 11 *e*PKPbc PKPbc 23 42 54.6 -0.9
SWET *e* 23 43 03.5
CPCT Cooper Cave 148.69 9 *e*PKPbc PKPbc 23 42 55.6 +0.1
CPCT *e* 23 43 04.3
NATX Nacogdoches 149.03 27 *e*PKPdf PKPdf 23 42 51.7 -0.8
NATX *e*PKPbc PKPbc 23 42 57.7 +1.2
HKT Hockley 149.98 30 *e*PKPbc PKPbc 23 42 59.5 +0.6
HKT *e* 23 43 08.5
JSC Jenkinsville 150.21 4 *e*PKIKP PKPbc 23 42 59.2 -0.1
JSC *e* 23 43 08.6
LRAL Lakeview Retre 150.54 14 *e*PKPbc PKPbc 23 42 59.9 -0.3
GOGA Godfrey 150.85 8 *e*PKIKP PKPbc 23 43 00.7 -0.2
GOGA *e* 23 43 10.3

IDC 21 23:23:15.9±0.4,4°.19S×101°.18E,h0km,mb4.9/31,
mb1 5.0/32,mb1mx4.9/34,mbtmp4.9/32,ML4.5/1,
MS4.2/2,Ms1 4.2/2,ms1mx3.4/21,5C-6D,Error ellipse:
s-maj=15.3km s-min=9.7km az=48.0,Southern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**3.73**	**100**	P	Pn	23 24 17.5	+2.8
PMBI	**Palembang**	**3.80**	**71**	P	Pn	23 24 18.7	+3.0
RBSI	**Rajabasa**	**4.83**	**110**	P	Pn	23 24 32.0	+2.1
KGM	**Kluang**	**6.53**	**19**	P	Pn	23 24 50.6	-2.6
TPI	**Tanjungpandan**	**6.62**	**78**	P	Pn	23 24 56.9	+2.4
SMRI	**Semarang**	**9.64**	**108**	P	Pn	23 25 38.5	+2.5
KTGM	**Kuala Trenggan**	**9.65**	**12**	P	Pn	23 25 33.5	-2.7
SBUM	**Sibu**	**12.85**	**59**	P	Pn	23 26 17.0	-3.0
BTM	**Bintulu**	**13.98**	**58**	P	Pn	23 26 32.4	-2.9
KAPI	**Kappang**	**18.53**	**93**	P	Pn	23 27 33.2	-1.0
	1.4nm,0.3s,baz=276,slow=9.8,SNR=9.7						
KAPI	**Kappang**	**18.53**	**93**	P	Pn	23 27 33.2	-1.0
CMAR	**Chiang Mai Arr**	**22.61**	**354**	P	P	23 28 19.5	+1.2
	77nm,0.9s,baz=184,slow=8.3,SNR=42						
CMAR				PcP	PcP	23 32 12.5	+0.6
	1.3nm,0.5s,baz=210,slow=3.4,SNR=4.9						
MBWA	**Marble Bar**	**24.69**	**135**	*e*P	P	23 28 38.1	-0.6
TGY	**Tagaytay City**	**26.73**	**47**	P	P	23 28 57.5	+0.2
	110nm,0.4s,baz=224,slow=4.7,SNR=5.0						
TGY	**Tagaytay City**	**26.73**	**47**	P	P	23 28 57.5	+0.2
TGY	**Tagaytay City**	**26.73**	**47**	P	P	23 28 57.5	+0.2
FITZ	**Fitzroy Crossi**	**27.64**	**122**	P	P	23 29 05.2	-0.2
	24nm,0.8s,baz=295,slow=5.7,SNR=19						
FITZ	**Fitzroy Crossi**	**27.64**	**122**	*ep*P	P	23 29 05.2	-0.3
HYB	**Hyderabad**	**30.98**	**314**	*i* P	P	23 29 35.0	-0.2
KAKA	**Kakadu**	**32.02**	**107**	*e*P	P	23 29 41.5	-2.9
	32nm,0.8s						
KAKA	**Kakadu**	**32.02**	**107**	*e*P	P	23 29 40.8	-3.6
	86nm,0.8s						
NWAO	**Narrogin (SRO)**	**32.29**	**154**	P	P	23 29 46.1	-0.3
	14nm,0.8s,baz=274,slow=13,SNR=4.1						
NWAO	**Narrogin (SRO)**	**32.29**	**154**	P	P	23 29 46.2	-0.3
NWAO	**Narrogin (SRO)**	**32.29**	**154**	P	P	23 29 46.1	-0.3
ASAR	**Alice Springs**	**37.03**	**125**	P	P	23 30 27.3	-0.4
	8.9nm,0.8s,baz=296,slow=8.1,SNR=26						
ASAR				PcP	PcP	23 32 48.8	0.0
	3.4nm,0.8s,baz=313,slow=3.0,SNR=5.5						
ASAR				S	S	23 36 16.4	+1.7
	1.1nm,0.8s,baz=305,slow=16,SNR=4.6						
ASAR	**Alice Springs**	**37.03**	**125**	PcP	PcP	23 32 48.8	0.0
BISR	**Bishrakh**	**39.78**	**326**	*ex*	P	23 30 49.6	-1.1
NDI	**New Delhi**	**39.99**	**326**	*ex*	P	23 30 51.0	-1.5
BJI	**Beijing**	**46.12**	**16**	P	P	23 31 42.6	+0.6
BJI				pmax	pmax		
	comp=Z,76nm,1.1s						
BJI				pmax	pmax		
	comp=Z,23nm,5.5s						
BJI				LR	LR		
	comp=N,460nm,16.2s						
CTA	**Charters Tower**	**46.62**	**114**	P	P	23 31 46.8	+0.5
	comp=N,28nm,1.0s,baz=294,slow=8.1,SNR=11						
CTA	**Charters Tower**	**46.62**	**114**	*ep*P	P	23 31 46.6	+0.3
STKA	**Stephens Creek**	**46.83**	**131**	P	P	23 31 48.3	+0.5
	comp=N,16nm,0.9s,baz=307,slow=8.1,SNR=17						
KSRS	**Korea Array**	**48.33**	**29**	P	P	23 31 59.0	-0.2
	comp=N,40nm,0.9s,baz=217,slow=7.9,SNR=31						
SONM	**Songino Array**	**52.01**	**4**	P	P	23 32 27.8	+0.9
	comp=N,55nm,0.8s,baz=187,slow=7.7,SNR=39						
AAK	**Ala-Archa**	**52.51**	**335**	P	P	23 32 31.8	+1.0
	comp=N,5.9nm,0.7s,baz=155,slow=3.2,SNR=13						
AAK	**Ala-Archa**	**52.51**	**335**	P	P	23 32 31.9	+1.1
	SNR=7.2						
AAK				P		23 32 31.9	
	SNR=7.2						
CN2	**Changchun**	**52.53**	**22**	⇓P	P	23 32 29.9	-1.1
CN2				*ep*P		23 32 37.5	
CN2				PcP	PcP	23 33 37.6	-3.8
CN2				PP	PP	23 34 31.0	+1.0
CN2				*e*S	S	23 39 57.3	-1.5
CN2				pmax	pmax		
	comp=Z,90nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,400nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
FRU	**Bishkek**	**52.62**	**336**	*e*P	P	23 32 32.0	+0.4
CHMS	**Chumysh**	**52.70**	**336**	P	P	23 32 32.7	+0.4
	SNR=5.2						
MJAR	**Matsushiro Arr**	**53.26**	**37**	P	P	23 32 34.9	-1.6
	comp=Z,28nm,0.9s,baz=218,slow=7.4,SNR=27						
MJAR				PcP	PcP	23 33 44.2	-0.1
	comp=Z,4.6nm,0.8s,baz=196,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**53.44**	**344**	P	P	23 32 37.5	-0.2
	comp=Z,38nm,0.7s,baz=147,slow=7.0,SNR=42						
MKAR				LR	LR	23 59 24.6	
	comp=Z,152nm,21.5s,baz=352,slow=41						
OPO	**Ambohidratompo**	**54.61**	**250**	P	P	23 32 46.8	+0.2
	comp=Z,3.8nm,0.9s,baz=80,slow=9.7,SNR=4.1						
OPO	**Ambohidratompo**	**54.61**	**250**	P	P	23 32 46.8	+0.2
MOY	**Mondy**	**55.64**	**360**	*e*P	P	23 32 55.2	+1.7
IRK	**Irkutsk**	**56.28**	**2**	*e*P	P	23 32 58.8	+0.7
IRK				pmax	pmax		
	comp=Z,73nm,1.7s						
KURK	**Kurchatov**	**58.03**	**343**	P	P	23 33 09.8	-0.7
	comp=Z,30nm,0.9s,baz=161,slow=6.7,SNR=37						
ZALV	**Zalesovo Beam**	**59.53**	**349**	P	P	23 33 20.7	-0.2
	comp=Z,52nm,0.9s,baz=181,slow=4.1,SNR=27						
BVAR	**Borovoye Array**	**62.63**	**340**	P	P	23 33 41.3	-0.7
	comp=Z,19nm,0.7s,baz=145,slow=8.9,SNR=32						
DZM	**Mont Dzumac**	**65.53**	**112**	*e*LR	LR	23 53 34.7	
	comp=Z,544nm,25.2s						
AKTO	**Aktyubinsk**	**65.83**	**331**	P	P	23 34 03.3	+0.2
	comp=Z,9.7nm,1.1s,baz=107,slow=6.7,SNR=11						
MAW	**Mawson**	**68.47**	**195**	P	P	23 34 19.4	-0.1
	comp=Z,4.9nm,0.9s,baz=34,slow=7.2,SNR=6.0						
MTA	**Mtatsminda**	**68.57**	**318**	P	P	23 34 21.5	+0.9
TBLG	**Delisi**	**68.62**	**318**	*e*P	P	23 34 20.6	-0.3
TBLG	**Delisi**	**68.62**	**318**	P	P	23 34 20.7	-0.3
ONI	**Oni**	**69.86**	**318**	P	P	23 34 29.9	+1.3
KIV	**Kislovodsk**	**70.96**	**319**	P	P	23 34 35.8	+0.5
	SNR=5.7						
KIV				P		23 34 35.8	

SNR=5.7
EIL Elat 71.69 303 P P 23 34 40.9 +0.9
comp=Z,17nm,0.9s,baz=75,slow=3.2,SNR=15
MMAI Mount Meron Ar 72.28 306 P P 23 34 45.0 +1.5
comp=Z,8.7nm,0.8s,baz=99,slow=10,SNR=14
PETK Petropavlovsk- 74.11 32 P P 23 34 53.5 -0.3
comp=Z,9.4nm,0.8s,baz=187,slow=2.7,SNR=6.7
PET Petropavlovsk 74.57 32 *e*P P 23 34 56.4 -0.1
PET pmax pmax
comp=Z,60nm,1.0s
PET MLR MLR
comp=Z,300nm,24.0s
PET MLR MLR
comp=Z,200nm,23.0s
VRHR Novokhopersk 74.79 326 *e*P P 23 34 56.8 -1.1
VRHR pmax pmax
comp=Z,30nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.5s
BOSA Boshof 75.65 242 P P 23 35 02.1 -1.2
comp=E,4.0nm,1.0s,baz=138,slow=10,SNR=5.7
BRTR Keskin Array B 75.66 313 P P 23 35 01.9 -1.3
comp=E,7.8nm,0.8s,baz=130,slow=7.1,SNR=36
VSR Storozhevoye 76.24 325 *e*P P 23 35 04.8 -1.4
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,1.2s
HARR Harsova 81.13 316 ⇑P P 23 35 34.0 +0.7
HARR Harsova 81.13 316 ⇑*i*P P 23 35 34.0 +0.7
IDI Anoyia 81.28 306 P P 23 35 35.3 +1.0
comp=E,7.2nm,0.7s,baz=47,slow=9.5,SNR=3.6
IDI Anoyia 81.28 306 P P 23 35 35.3 +1.0
AKASG Malin Array Be 81.93 322 P P 23 35 36.8 -0.6
comp=E,4.3nm,0.7s,baz=86,slow=5.1,SNR=14
VRI Vrincioaia 82.25 317 ⇓P P 23 35 39.4 +0.2
VRI Vrincioaia 82.25 317 ⇓*i*P P 23 35 39.4 +0.2
MLR Muntele Rosu 82.69 317 P P 23 35 42.2 +0.7
comp=E,11nm,0.9s,baz=176,slow=1.9,SNR=19
MLR Muntele Rosu 82.69 317 ⇓*i*P P 23 35 42.3 +0.8
BURAR Bucovina Array 83.67 319 ⇑P P 23 35 47.7 +1.2
BURAR Bucovina Array 83.67 319 ⇑*i*P P 23 35 47.7 +1.2
IDID Didziasalis 84.64 326 *e*P P 23 35 51.2 -0.1
IIGN Ignalina 84.94 326 *e*P P 23 35 52.9 +0.1
ISAL Salakas 85.05 327 *e*P P 23 35 53.2 -0.1
APA Apatity 85.54 339⇑*e*P P 23 35 56.7 +1.2
APA MLR MLR
comp=Z,300nm,22.0s
TRPA Tarpa 85.54 319 ⇓*i*P P 23 35 56.6 +0.6
KWP Kalwaria Pacla 85.73 320 *e*P P 23 35 57.4 +0.5
SUW Suwalki 86.34 325 *e*P P 23 35 59.8 0.0
FINES FINESS Array B 86.59 332 P P 23 36 00.3 -0.5
comp=Z,6.5nm,0.9s,baz=96,slow=5.7,SNR=14
KECS Kecovo 86.96 319 *e*pP P 23 36 04.0 +1.1
KECS *e* 23 36 11.5
OJC Ojcow 87.69 321 *e*P P 23 36 06.4 0.0
VYHS Vyhne 88.04 319 *e*pP P 23 36 08.7 +0.5
VYHS *e* 23 36 17.6
KOLL Kolacno 88.34 319 *e*pP P 23 36 10.6 +1.0
KOLL *e* 23 36 18.9
ARCES ARCESS Array B 88.92 340 P P 23 36 11.8 0.0
comp=Z,8.8nm,0.8s,baz=92,slow=4.1,SNR=16
MORC Moravsky Berou 89.06 320 ⇓*i*P P 23 36 13.1 +0.1
ZST Bratislava 89.15 318 *e*pP P 23 36 14.3 +0.9
GKP Gorka Klasztor 89.70 323 *e*P P 23 36 15.8 -0.1
BOJS Bojanci 90.10 315 *i*P P 23 36 18.3 +0.4
PERS Pernice 90.31 317 *e*P P 23 36 19.5 +0.7
VISS Visnje 90.42 316 *i*P P 23 36 20.1 +0.6
GERES GERESS Array B 91.46 319 P P 23 36 24.8 +0.6
comp=Z,3.1nm,0.8s,baz=94,slow=4.3,SNR=18
GERES PP PP 23 40 01.9 0.0
comp=Z,0.4nm,0.5s,baz=46,slow=3.9,SNR=5.1
GERES GERESS Array B 91.46 319 PP PP 23 40 01.9 0.0
BRG Berggiesshubel 91.47 321 *e*P P 23 36 24.7 +0.5
comp=Z,8.9nm,1.1s
BRG Berggiesshubel 91.47 321 *e*P P 23 36 24.7 +0.5
BRG pmax pmax
comp=Z,5.0nm,1.1s
HFS Hagfors 92.35 330 P P 23 36 28.4 +0.4
comp=Z,4.2nm,0.9s,baz=130,slow=4.6,SNR=8.8
MOX Moxa 92.93 320 *e*P P 23 36 31.7 +0.8
SPITS Spitsbergen Ar 93.00 348 P P 23 36 30.0 -0.7
comp=Z,4.1nm,0.8s,baz=116,slow=7.5,SNR=4.3
NOA NORSAR Array B 93.62 331 P P 23 36 33.5 -0.4
comp=Z,2.8nm,1.1s,baz=94,slow=4.7,SNR=4.1
NOA PP PP 23 40 19.1 +0.6
comp=Z,2.1nm,1.1s,baz=91,slow=7.5,SNR=3.5
NOA NORSAR Array B 93.62 331 PP PP 23 40 19.1 +0.6
TBI Tubuai 105.98 116 *e*LR LR 00 12 16.8
comp=Z,244nm,23.5s
PPT Papeete 106.97 110 *e*LR LR 00 12 45.5
comp=Z,165nm,23.0s
YKA Yellowknife Ar 116.10 18 PKP PKPdf 23 41 59.9 -0.8
comp=Z,1.1nm,0.8s,baz=311,slow=2.1,SNR=10
YKA PP PP 23 43 01.9 -3.0
comp=Z,0.8nm,1.0s,baz=322,slow=7.4,SNR=4.6
YKA Yellowknife Ar 116.10 18 PKP PKPdf 23 41 59.9 -0.8
YKA PP PP 23 43 01.9 -3.0
NVAR Mina Array Bea 130.50 41 PKP PKPdf 23 42 30.6 +1.6
comp=Z,1.7nm,0.7s,baz=281,slow=1.9,SNR=6.4
NVAR SKPbc SKPbc 23 45 52.0 -1.9
comp=Z,0.5nm,0.3s,baz=245,slow=6.4,SNR=3.5
NVAR Mina Array Bea 130.50 41 PKP PKPdf 23 42 30.6 +1.6
NVAR SKPbc SKPbc 23 45 52.0 -1.9
PDAR Pinedale Array 132.87 31 PKP PKPdf 23 42 34.4 +1.0
comp=Z,0.6nm,0.6s,baz=50,slow=2.3,SNR=5.8
PDAR Pinedale Array 132.87 31 PKP PKPdf 23 42 34.4 +1.0
CPUP Villa Florida 143.21 213 PKP PKPdf 23 42 57.0 +4.2
comp=Z,1.1nm,0.7s,baz=179,slow=1.9,SNR=4.7
CPUP Villa Florida 143.21 213 PKP PKPdf 23 42 57.0 +4.2
TXAR Lajitas Array 145.65 41 PKPbc PKPbc 23 42 57.8 +0.5
comp=Z,53nm,1.0s,baz=278,slow=2.6,SNR=56
LPAZ La Paz 157.07 207 PKPab PKPab 23 43 44.9 +0.2
comp=Z,3.9nm,1.2s,baz=219,slow=3.4,SNR=3.1

IDC 21 23:31:17.4±1.0, 35°.41N×75°.54E, h0km, mb3.7/9, mb1 3.8/12, mb1mx3.6/25, mbtmp3.7/12, ML3.9/1, Error ellipse: s-maj=27.6km s-min=19.8km az=45.0, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**15.46**	**7**	Pn	Pn	23 34 56.2	-0.5
	0.1nm,0.3s,baz=194,slow=14,SNR=4.1						
BVAR	**Borovoye Array**	**17.98**	**350**	P	Pn	23 35 27.6	-1.1
	baz=168,slow=8.3,SNR=2.2						
ZALV	**Zalesovo Beam**	**19.64**	**16**	P	Pn	23 35 46.2	-2.5
	0.3nm,0.3s,baz=207,slow=9.0,SNR=2.6						
SONM	**Songino Array**	**26.01**	**52**	P	P	23 36 51.9	0.0
	0.9nm,0.7s,baz=255,slow=8.7,SNR=4.3						
CMAR	**Chiang Mai Arr**	**26.73**	**123**	P	P	23 37 00.1	+1.3
	1.6nm,0.8s,baz=312,slow=11,SNR=8.0						
FINES	**FINESS Array B**	**40.45**	**326**	P	P	23 38 58.7	+1.5
	1.5nm,0.8s,baz=110,slow=11,SNR=3.2						
ARCES	**ARCESS Array B**	**43.57**	**337**	P	P	23 39 21.3	-1.3
	0.9nm,0.5s,baz=104,slow=7.6,SNR=6.4						
HFS	**Hagfors**	**46.19**	**322**	P	P	23 39 44.5	+0.9
	2.5nm,1.0s,baz=72,slow=14,SNR=4.1						
NOA	**NORSAR Array B**	**47.46**	**323**	P	P	23 39 53.3	-0.2
	0.4nm,0.5s,baz=93,slow=7.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**69.40**	**272**	P	P	23 42 27.4	-0.2
	0.3nm,0.5s,baz=45,slow=5.4,SNR=11						
ASAR	**Alice Springs**	**80.64**	**128**	P	P	23 43 30.9	-1.3
	0.4nm,0.8s,baz=324,slow=5.8,SNR=3.1						
YKA	**Yellowknife Ar**	**82.09**	**5**	P	P	23 43 39.7	+0.3
	0.6nm,1.0s,baz=344,slow=5.1,SNR=3.0						

IDC 21 23:40:27.3±1.4, 9°.67S×66°.50E, h0km, mb3.6/10, mb1 3.7/10, mb1mx3.6/23, mbtmp3.6/10, Error ellipse: s-maj=42.1km s-min=26.5km az=23.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**42.49**	**49**	P	P	23 48 25.5	+0.8
	0.7nm,0.3s,baz=218,slow=11,SNR=3.5						
CMAR				PcP	PcP	23 50 18.9	+1.2
	0.8nm,0.3s,baz=232,slow=2.2,SNR=3.1						
BRTR	**Keskin Array B**	**57.83**	**330**	P	P	23 50 20.4	-0.3
	0.2nm,0.5s,baz=148,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**57.95**	**13**	P	P	23 50 20.7	-0.7
	0.3nm,0.8s,baz=188,slow=5.7,SNR=3.6						
BVAR	**Borovoye Array**	**62.53**	**3**	P	P	23 50 52.2	-0.5
	0.3nm,0.4s,baz=170,slow=8.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**65.25**	**12**	P	P	23 51 10.6	0.0
	0.2nm,0.3s,baz=194,slow=5.5,SNR=2.4						
ASAR	**Alice Springs**	**65.54**	**112**	P	P	23 51 12.5	-0.7
	0.3nm,0.3s,baz=270,slow=8.3,SNR=5.1						
SONM	**Songino Array**	**67.27**	**28**	P	P	23 51 24.4	+0.7
	0.6nm,0.6s,baz=211,slow=4.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**68.22**	**288**	P	P	23 51 31.6	+1.3
	0.6nm,1.0s,baz=104,slow=6.1,SNR=2.6						
AKASG	**Malin Array Be**	**68.28**	**336**	P	P	23 51 31.6	+1.7
	0.2nm,0.2s,baz=144,slow=5.7,SNR=4.2						
GERES	**GERESS Array B**	**74.43**	**327**	P	P	23 52 05.8	-1.5
	0.2nm,0.6s,baz=130,slow=9.1,SNR=3.5						

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*ISCJB **21** 23:53:24.2±0.9, 31°.45N±0°.03×103°.50E±0°.05, h3km±6km, mb3.8/11, Error ellipse: s-maj=7.2km s-min=5.3km az=161.7*
*IDC **21** 23:53:25.9±1.1, 31°.46N×103°.44E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.7/26, mbtmp3.8/13, ML4.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=31.2km s-min=20.1km az=50.0*
*BJI **21** 23:53:25.8, 31°.08N×103°.41E, h11km, ML3.9/14, Ms3.9/4, Ms7 3.3/4*
*NEIC **21** 23:53:27.1±0.5, 31°.44N×103°.42E, h10km, mb3.9/4, Error ellipse: s-maj=10.2km s-min=8.4km az=60.0*
ISC 21 23:53:26.6±0.9, 31°.39N±0°.03×103°.48E±0°.05, h7km±6km, n40, σ0s95/47, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**154**	Pg	**Pg**	**23 53 35.4**	**-1.5**
CD2				Sg	**Sg**	**23 53 43.5**	**-0.4**
CD2				smax			
	comp=N,9μm,0.6s						
LZH	**Lanzhou**	**4.69**	**4**	*e*Pn	**Pn**	**23 54 44.4**	**+6.6**
LZH				Pg	**Pg**	**23 54 57.9**	**+1.4**
LZH				Sn	**Sn**	**23 55 40.3**	**+7.8**
LZH				Sg	**Sg**	**23 55 57.3**	**0.0**
LZH				smax			
	comp=N,110nm,1.1s						
LZH				smax			
	comp=E,210nm,1.2s						
LZH				LR	LR		
	comp=N,970nm,6.1s						
LZH				LR	LR		
	comp=Z,1μm,8.1s						
ENH	**Enshi**	**5.28**	**101**	*e*Pn	**Pn**	**23 54 46.1**	**+0.1**
	comp=Z,27nm,0.4s						
ENH				Sn	**Sn**	**23 55 48.0**	**+0.8**
XAN	**Xi'an**	**5.29**	**59**	Pg	**Pg**	**23 55 02.1**	**-5.8**
XAN				Sn	**Sn**	**23 55 52.6**	**+5.3**
XAN				Sg	**Sg**	**23 56 09.1**	**-7.3**
XAN				smax			
	comp=N,120nm,0.9s						
XAN				smax			
	comp=E,56nm,1.0s						
XAN				LR	LR		
	comp=N,880nm,14.7s						
XAN				LR	LR		
	comp=E,240nm,17.7s						
XAN				LR	LR		
	comp=Z,520nm,15.2s						
KMI	**Kunming**	**6.28**	**186**	Pn	**Pn**	**23 54 52.8**	**-6.9**
KMI				Sn	**Sn**	**23 55 59.0**	**-13**
KMI				smax			
	comp=N,42nm,1.7s						
KMI				smax			
	comp=E,31nm,1.3s						
KMI				LR	LR		
	comp=N,210nm,7.8s						
KMI				LR	LR		
	comp=E,1μm,9.6s						
KMI				LR	LR		
	comp=Z,350nm,14.1s						
SHL	**Shillong**	**11.74**	**243**	*e*P	**Pn**	**23 56 15.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**13.52**	**199**	Pn	**Pn**	**23 56 39.6**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=5.5,slow=10,SNR=3.8						
GUN	**Gumba**	**15.69**	**262**	*e*P	**Pn**	**23 57 11.9**	**+3.7**
	comp=Z,41nm,0.9s						
PKI	**Pulchoki**	**16.19**	**261**	*e*P	**Pn**	**23 57 16.7**	**+2.0**
	comp=Z,18nm,0.5s						
PKIN	**Phulchoki**	**16.20**	**261**	*e*P	**Pn**	**23 57 16.8**	**+2.0**
	comp=Z,35nm,0.7s						
KKN	**Kakani**	**16.24**	**262**	*e*P	**Pn**	**23 57 14.7**	**-0.5**
	comp=Z,69nm,0.7s						
DMN	**Daman**	**16.44**	**261**	*e*P	**Pn**	**23 57 17.7**	**-0.1**
	comp=Z,46nm,0.8s						
SONM	**Songino Array**	**16.57**	**7**	Pn	**Pn**	**23 57 20.5**	**+1.1**
	baz=182,slow=11,SNR=8.3						
ULN	**Ulaanbaatar**	**16.68**	**8**	*e*Pn	**Pn**	**23 57 20.5**	**-0.3**
	comp=Z,1.7nm,0.8s						
TLY	**Talaya**	**20.27**	**0**	P	**P**	**23 58 01.7**	**-0.9**
	comp=Z,3.3nm,0.8s						
KSRS	**Korea Array**	**21.02**	**67**	P	**P**	**23 58 11.2**	**+0.4**
	comp=Z,2.5nm,0.7s,mb3.7,baz=262,slow=10,SNR=9.3						
CN2	**Changchun**	**21.29**	**48**	*e*P	**P**	**23 58 05.8**	**-7.9**
MK31	**Makanchi Array**	**22.41**	**319**	*e*P	**P**	**23 58 22.7**	**-3.0**
MKAR	**Makanchi Array**	**22.41**	**319**	P	**P**	**23 58 26.7**	**+0.9**
	comp=Z,2.5nm,1.0s,mb3.6,baz=132,slow=7.0,SNR=10						
TKM2	**Tokmak 2**	**24.91**	**305**	P	**P**	**23 58 49.9**	**-0.3**
UCH	**Uchtor**	**25.48**	**303**	*e*P	**P**	**23 58 55.2**	**-0.1**
AAK	**Ala-Archa**	**25.60**	**304**	*e*P	**P**	**23 58 55.2**	**-1.2**
EKS2	**Erkin-Say**	**26.12**	**304**	P	**P**	**23 59 00.6**	**-0.5**
ZAA0	**Zalesovo Array**	**26.23**	**335**	*e*P	**P**	**23 59 01.4**	**-0.6**
ZALV	**Zalesovo Beam**	**26.23**	**335**	P	**P**	**23 59 02.2**	**+0.2**
	comp=Z,2.0nm,0.8s,mb3.7,baz=138,slow=9.3,SNR=9.4						
ZALV	**Zalesovo Beam**	**26.23**	**335**	P	**P**	**23 59 02.2**	**+0.2**
KURK	**Kurchatov**	**26.70**	**323**	P	**P**	**23 59 06.7**	**+0.3**
	comp=Z,3.7nm,0.9s,mb3.9,baz=128,slow=9.5,SNR=28						
KURK	**Kurchatov**	**26.70**	**323**	*e*P	**P**	**23 59 06.0**	**-0.3**
	comp=Z,5.9nm,1.0s,mb4.1						
KBL	**Kabul**	**28.98**	**286**	P	**P**	**23 59 26.4**	**-0.6**
BVAR	**Borovoye Array**	**32.24**	**322**	P	**P**	**23 59 55.6**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=107,slow=9.5,SNR=4.2						
AKTO	**Aktyubinsk**	**38.55**	**313**	LR	LR	00 19 31.3	
	comp=Z,64nm,21.7s,baz=227,slow=41						
ARU	**Arti**	**39.88**	**322**	*e*P	**P**	**00 01 00.5**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**56.78**	**336**	P	**P**	**00 03 10.6**	**-0.4**
	comp=Z,1.7nm,0.9s,mb4.1,baz=65,slow=6.8,SNR=4.2						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**00 03 12.3**	**-0.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=77,slow=10.0,SNR=5.1						
KWP	**Kalwaria Pacla**	**61.12**	**313**	*e*P	**P**	**00 03 41.7**	**+0.2**
ASAR	**Alice Springs**	**62.01**	**148**	P	**P**	**00 03 49.3**	**+1.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=332,slow=7.1,SNR=4.7						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**00 03 59.3**	**-2.0**
	comp=Z,0.7nm,0.9s,mb3.7,baz=75,slow=6.7,SNR=2.9						
INK	**Inuvik**	**72.06**	**19**	P	**P**	**00 04 50.6**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=275,slow=6.1,SNR=3.8						
YKA	**Yellowknife Ar**	**81.57**	**17**	P	**P**	**00 05 44.7**	**-0.1**
	comp=Z,0.3nm,0.8s,mb3.2,baz=325,slow=4.6,SNR=3.9						
YKA	**Yellowknife Ar**	**81.57**	**17**	P	**P**	**00 05 44.7**	**-0.1**

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*ISCJB **21** 23:57:07.1±0.2, 37°.54N±0°.01×112°.31W±0°.01, h10km, Error ellipse: s-maj=1.7km s-min=1.6km az=18.4*
*NEIC **21** 23:57:07.0, 37°.53N×112°.32W, h1km, ML3.0(SLC), After SLC.*
*IDC **21** 23:57:07.8±1.4, 37°.51N×112°.41W, h0km, mb3.0/1, mb1 3.1/5, mb1mx3.1/26, mbtmp2.8/5, ML3.1/4, Error ellipse: s-maj=15.2km s-min=10.9km az=12.0*
ISC 21 23:57:07.2±0.2, 37°.533N±0°.010×112°.30W±0°.01, h10km, n81, σ1s15/153, 31C-34D, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S15A	**Panguitch**	**0.15**	**341**	⇑P	**Pg**	**23 57 10.9**	**+0.3**
	baz=0.2,SNR=1000						
S15A				⇑S	**Sg**	**23 57 14.0**	**+1.1**
	baz=0.2						
T15A	**Red Dirt Ranch**	**0.52**	**187**	P	**Pg**	**23 57 16.9**	**-0.3**
	baz=0.5,SNR=946						
T15A				⇑S	**Sg**	**23 57 23.6**	**-0.4**
	baz=0.5						
R15A	**Junction**	**0.68**	**2**	P	**Pg**	**23 57 20.4**	**+0.2**
	baz=0.7,SNR=204						
R15A				⇓S	**Sg**	**23 57 29.5**	**+0.3**
	baz=0.7						
S14A	**Cedar City**	**0.72**	**288**	P	**Pg**	**23 57 21.1**	**-0.1**
	baz=0.7,SNR=329						
S14A				⇓S	**Sg**	**23 57 30.7**	**+0.1**
	baz=0.7						
T14A	**Hurricane**	**0.78**	**233**	⇓P	**Pg**	**23 57 21.8**	**-0.5**
	baz=0.8,SNR=52						
T14A				⇑S	**Sg**	**23 57 31.4**	**-1.1**
	baz=0.8						
T16A	**Glen Canyon Da**	**0.84**	**131**	⇓P	**Pg**	**23 57 22.9**	**-0.4**
	baz=0.8,SNR=332						
T16A				⇑S	**Sg**	**23 57 33.7**	**-0.5**
	baz=0.8						
CCUT	**Cedar City**	**0.84**	**272**	*e*P	**Pg**	**23 57 22.8**	**-0.7**
CCUT				*e*S	**Sg**	**23 57 33.3**	**-1.1**
R14A	**James Farms, M**	**0.95**	**324**	⇑P	**Pg**	**23 57 25.6**	**+0.1**
	baz=1.0,SNR=83						
R14A				⇓S	**Sg**	**23 57 38.5**	**+0.5**
	baz=1.0						
MSU	**Marysvale**	**0.98**	**6**	*e*P	**Pg**	**23 57 25.5**	**-0.6**
MSU				*e*S	**Sg**	**23 57 38.8**	**-0.1**
R16A	**Teasdale**	**0.99**	**41**	⇓P	**Pg**	**23 57 25.5**	**-0.7**
	baz=1.0,SNR=58						
R16A				⇑S	**Sg**	**23 57 39.4**	**+0.2**
	baz=1.0						
U15A	**North Rim**	**1.10**	**180**	P	**Pb**	**23 57 27.4**	**-0.9**
	baz=1.1,SNR=441						
U15A				⇑S	**Sg**	**23 57 41.9**	**-0.8**
	baz=1.1						
S17A	**Black Ridge (B**	**1.20**	**85**	⇑P	**Pb**	**23 57 29.2**	**-0.7**
	baz=1.2,SNR=479						
S17A				⇑S	**Sb**	**23 57 44.9**	**-0.5**
	baz=1.2						
T17A	**Navajo Res., N**	**1.31**	**114**	⇑Pg	**Pg**	**23 57 31.4**	**-0.9**
	baz=1.3,SNR=450						
T17A				⇓S	**Sb**	**23 57 48.3**	**-0.3**
	baz=1.3						
U14A	**Mt Trumbull**	**1.32**	**213**	⇓Pb	**Pb**	**23 57 31.1**	**-0.9**
	baz=1.3,SNR=65						
U14A				⇓S	**Sb**	**23 57 48.3**	**-0.6**
	baz=1.3						
T13A	**Saint George**	**1.38**	**249**	Pg	**Pg**	**23 57 32.7**	**-1.0**
	baz=1.4,SNR=308						
T13A				⇓S	**Sb**	**23 57 49.9**	**-0.8**
	baz=1.4						
Q15A	**Fillmore**	**1.47**	**358**	⇓Pb	**Pb**	**23 57 34.8**	**+0.3**
	baz=1.5,SNR=26						
Q15A				⇑S	**Sn**	**23 57 53.4**	**+0.5**
	baz=1.5						
R13A	**O'Grain Ranch,**	**1.47**	**297**	Pg	**Pg**	**23 57 34.9**	**-0.5**
	baz=1.5,SNR=410						
R13A				⇑Sb	**Sb**	**23 57 54.3**	**+1.0**
	baz=1.5						
Q14A	**Sevier Lake (B**	**1.64**	**332**	⇓Pb	**Pb**	**23 57 37.4**	**-0.1**
	baz=1.7,SNR=188						
Q14A				⇑Sb	**Sb**	**23 57 59.2**	**+0.9**
	baz=1.7						
Q16A	**Castle Valley**	**1.64**	**32**	⇓Pb	**Pb**	**23 57 37.3**	**-0.2**
	baz=1.7,SNR=28						
V15A	**Kaibab Nationa**	**1.71**	**177**	Pb	**Pb**	**23 57 38.2**	**-0.6**
	baz=1.7,SNR=297						
U13A	**Pakoon Wash**	**1.74**	**231**	⇑Pb	**Pb**	**23 57 38.6**	**-0.6**
	baz=1.7,SNR=105						
S18A	**Hurst Farm, Bl**	**1.84**	**84**	⇓Pg	**Pg**	**23 57 40.9**	**-1.6**
	baz=1.8,SNR=1000						
S18A				⇑Sb	**Sb**	**23 58 04.4**	**+0.5**
	baz=1.8						
TMUT	**Trail Mountain**	**1.96**	**26**	*e*Pn	**Pn**	**23 57 41.4**	**+0.9**
TMUT				*e*Sn	**Sn**	**23 58 05.8**	**+0.7**
Q13A	**Wheeler Ranch,**	**1.96**	**317**	Pb	**Pb**	**23 57 42.5**	**-0.5**
	baz=2.0,SNR=34						
T18A	**Mexican Hat**	**1.97**	**101**	Pb	**Pb**	**23 57 42.0**	**-1.2**
	baz=2.0,SNR=626						
T18A				⇓Sb	**Sb**	**23 58 08.2**	**+0.4**
	baz=2.0						
R12A	**Pony Springs,**	**1.99**	**294**	⇑Pg	**Pg**	**23 57 44.1**	**-1.3**
	baz=2.0						
R12A				⇓Sb	**Sb**	**23 58 10.0**	**+1.8**
	baz=2.0						
V14A	**Boquillas Ranc**	**2.00**	**199**	⇓Pb	**Pb**	**23 57 42.6**	**-1.1**
	baz=2.0,SNR=180						
P15A	**Leamington**	**2.04**	**0**	⇑Pg	**Pg**	**23 57 45.6**	**-0.6**
	baz=2.1						
R18A	**Canyonlands Na**	**2.08**	**65**	Pb	**Pb**	**23 57 44.5**	**-0.6**
	baz=2.1,SNR=251						
R18A				⇓Sb	**Sb**	**23 58 11.2**	**+0.2**
	baz=2.1						
T12A	**Moapa**	**2.09**	**248**	⇓Sb	**Sb**	**23 58 11.9**	**+0.7**
	baz=2.1						
U12A	**Valley of Fire**	**2.10**	**239**	⇓Pb	**Pb**	**23 57 44.1**	**-1.3**
	baz=2.1,SNR=50						
U12A				⇑Sb	**Sb**	**23 58 12.2**	**+0.7**
	baz=2.1						
SRU	**San Rafael**	**2.11**	**41**	⇑Sb	**Sb**	**23 58 13.0**	**+1.4**
	baz=2.1						
SRU	**San Rafael**	**2.11**	**41**	*e*Pn	**Pn**	**23 57 45.5**	**+3.0**
SRU				*e*S	**Sn**	**23 58 11.8**	**+3.1**
WUAZ	**Wupatki**	**2.15**	**159**	⇓Pb	**Pb**	**23 57 44.9**	**-1.2**
	baz=2.1						
WUAZ				⇑Sb	**Sb**	**23 58 13.3**	**+0.5**
	baz=2.1						
WUAZ	**Wupatki**	**2.15**	**159**	*e*Pn	**Pn**	**23 57 44.4**	**+1.4**
WUAZ				*e*S	**Sn**	**23 58 12.4**	**+2.7**
V13A	**Grand Canyon W**	**2.15**	**219**	Pb	**Pb**	**23 57 45.1**	**-1.1**
	baz=2.1,SNR=52						
U18A	**Rough Rock, Ch**	**2.24**	**119**	⇑Pb	**Pb**	**23 57 46.6**	**-1.1**
	baz=2.2						
U18A				⇓Sb	**Sb**	**23 58 16.1**	**+0.6**
	baz=2.2						
V17A	**Tonalea, Kykot**	**2.26**	**147**	⇑Pb	**Pb**	**23 57 46.9**	**-1.1**
	baz=2.2						
V17A				⇓Sb	**Sb**	**23 58 16.4**	**+0.3**
	baz=2.2						
Q18A	**Rafter H Ranch**	**2.32**	**47**	⇓Sb	**Sb**	**23 58 18.5**	**+0.8**
	baz=2.3						
T11A	**Corn Creek, Al**	**2.34**	**264**	⇓P	**Pn**	**23 57 46.8**	**+1.1**
	baz=2.3						
T11A				⇓Sb	**Sb**	**23 58 19.9**	**+1.4**
	baz=2.3						
W15A	**Williams**	**2.35**	**179**	⇓Sb	**Sb**	**23 58 19.2**	**+0.5**
	baz=2.3						
W14A	**Seligman**	**2.40**	**195**	⇑Sb	**Sb**	**23 58 20.8**	**+0.7**
	baz=2.4						
NLU	**North Lily Min**	**2.42**	**4**	*e*Pn	**Pn**	**23 57 48.6**	**+1.7**
NLU				*e*Pg	**Pg**	**23 57 52.6**	**-1.0**
NLU				*e*S	**Sg**	**23 58 23.8**	**-1.3**
Q12A	**Willow Creek R**	**2.50**	**308**	⇓P	**Pn**	**23 57 48.7**	**+0.9**
	baz=2.5,SNR=12						
Q12A				⇑Sb	**Sb**	**23 58 25.3**	**+2.5**
	baz=2.5						
W16A	**Flagstaff**	**2.51**	**165**	⇓Sb	**Sb**	**23 58 24.1**	**+0.8**
	baz=2.5						

BGU	Big Grassy Mou	3.44	351	*e*Pn	Pn	23 58 00.4	-0.4
BGU				*e*Pg	Pg	23 58 12.0	-1.0
BGU				*e*S	Sg	23 58 56.5	-1.0
N13A	Wendover, West	3.63	337	*e*Pn	Pn	23 58 06.0	+2.6
N13A				*e*Pg	Pg	23 58 14.9	-1.8
N13A				*e*S	Sg	23 59 01.5	-2.3
GMRC	Granite Mounta	3.86	226	⇑P	Pn	23 58 07.3	+0.7
	baz=3.9,SNR=14						
ELK	Elko	3.94	325	Pn	Pn	23 58 09.8	+2.2
	0.2nm,0.3s,baz=160,slow=5.3,SNR=4.1						
ELK				Pg	Pg	23 58 21.1	-1.5
	1.5nm,0.3s,baz=128,slow=12,SNR=11						
ELK				Lg		23 59 10.8	
	1.8nm,0.3s,baz=238,slow=23,SNR=11						
N12A	Clover Valley,	3.94	328	*e*Pn	Pn	23 58 10.8	+3.2
N12A				*e*Pg	Pg	23 58 21.9	-0.8
N12A				*e*S	Sg	23 59 12.7	-0.9
HWUT	Hardware Ranch	4.11	8	*e*Pn	Pn	23 58 09.7	-0.3
HWUT				*e*Pg	Pg	23 58 23.9	-1.9
HWUT				*e*S	Sg	23 59 18.9	-0.2
HVU	Hansel Valley	4.26	355	*e*Pn	Pn	23 58 13.3	+1.2
HVU				*e*Pg	Pg	23 58 27.7	-1.0
HVU				*e*S	Sg	23 59 22.3	-1.6
GSC	Goldstone	4.26	240	*e*Pn	Pn	23 58 12.0	-0.1
GSC				*e*Pg	Pg	23 58 26.2	-2.6
GSC				*e*S	Sg	23 59 22.7	-1.3
MPMC	Manual Prospec	4.42	252	⇑P	Pn	23 58 15.6	+1.4
	baz=4.4,SNR=12						
SMCO	Snowmass	4.50	67	*e*Pn	Pn	23 58 16.8	+1.5
SMCO				*e*Pg	Pg	23 58 32.3	-1.0
SMCO				*e*S	Sg	23 59 23.1	-8.5
NVAR	Mina Array Bea	4.83	283	Pn	Pn	23 58 21.3	+1.5
	0.6nm,0.3s,baz=316,slow=23,SNR=2.6						
NVAR				Pg	Pg	23 58 38.0	-1.7
	2.2nm,0.3s,baz=104,slow=17,SNR=9.9						
NVAR				Lg		23 59 36.8	
	2.0nm,0.3s,baz=101,slow=34,SNR=4.1						
LAZ	Ladron	5.22	125	*e*Pn	Pn	23 58 25.4	+0.1
	7.9nm,0.8s						
LAZ				*e*Pg	Pg	23 58 43.8	-3.4
LAZ				*e*S	Sg	23 59 51.0	-3.8
TUC	Tucson	5.36	166	*e*Pn	Pn	23 58 29.2	+2.0
	3.9nm,0.5s						
TUC				*e*Pg	Pg	23 58 44.9	-4.9
TUC				*e*S	Sg	23 59 47.2	-12
ANMO	Albuquerque	5.38	117	Pn	Pn	23 58 30.1	+2.7
	0.7nm,0.3s,baz=306,slow=14,SNR=5.6						
ANMO				Pg	Pg	23 58 48.2	-2.0
	1.9nm,0.3s,baz=304,slow=16,SNR=11						
ANMO				Lg		23 59 57.8	
	1.7nm,0.3s,baz=46,slow=23,SNR=3.3						
ANMO	Albuquerque	5.38	117	*e*Pn	Pn	23 58 28.7	+1.3
	8.6nm,0.6s						
ANMO				*e*Pg	Pg	23 58 48.7	-1.5
ANMO				*e*S	Sg	23 59 54.6	-5.2
PDAR	Pinedale Array	5.63	21	Pn	Pn	23 58 37.2	+6.2
	0.1nm,0.3s,baz=210,slow=15,SNR=2.7						
PDAR				Pg	Pg	23 58 54.7	-0.3
	0.3nm,0.3s,baz=193,slow=14,SNR=4.6						
PDAR				Lg		00 00 03.9	
	0.2nm,0.3s,baz=196,slow=16,SNR=2.8						
ISCO	Idaho Springs	5.70	65	*e*Pn	Pn	23 58 31.6	-0.3
	1.8nm,0.5s						
ISCO				*e*Pg	Pg	23 58 52.4	-4.0
BNM	Barren Site	5.71	125	Pn	Pn	23 58 31.8	-0.2
BNM				*e*Pg	Pg	23 58 52.0	-4.5
BNM				*e*S	Sg	00 00 04.7	-5.9
YKA	Yellowknife Ar	25.03	357	P	P	00 02 33.4	+2.3
	0.2nm,0.6s,baz=173,slow=9.8,SNR=4.1						

*ATH **22** 00:13:52.8, 38°.27N×20°.39E, h15km, MD3.5/9, ML3.4*
*NEIC **22** 00:13:52.8, 38°.27N×20°.39E, h15km, ML3.1(ROM), ML3.8(PDG), ML3.4(ATH), ML3.9(THE), After ATH.*
*ISCJB **22** 00:13:53.0±0.6, 38°.37N±0°.03×20°.42E±0°.02, h1km±5km, Error ellipse: s-maj=4.5km s-min=2.6km az=21.5*
*PDG **22** 00:13:54.6±0.5, 38°.37N×20°.53E, h11km±1km, ML3.8/10, Error ellipse: s-maj=1.1km s-min=1.1km az=90.0*
*CSEM **22** 00:13:54.6±0.1, 38°.32N×20°.50E, h10km, ML3.4, Error ellipse: s-maj=3.8km s-min=2.3km az=27.0*
*THE **22** 00:13:54.4, 38°.35N×20°.52E, h0km±3km, ML3.9/5, Error ellipse: s-maj=3.2km s-min=1.0km az=239.0*
*ROM **22** 00:13:55.2±0.7, 38°.43N×20°.46E, h10km, Md3.3/8, Ml3.1/2, Error ellipse: s-maj=10.2km s-min=5.2km az=115.0*

ISC 22 00:13:54.0±0.5,**38°.34N**±0°.02×**20°.45E**±0°.02,**h1**km±4km, **n175**,σ0§**88**/243,**11C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.20	147	*e*PB	Pg	00 13 57.9	+0.1
VLS				*e*SB	Sg	00 14 01.3	+1.0
VLS	Valsamata	0.20	147	P	Pg	00 13 58.0	+0.2
VLS				S	Sg	00 14 01.3	+1.0
VLS	Valsamata	0.20	147	*e*Pb	Pg	00 13 57.9	+0.1
VLS				S	Sg	00 14 01.3	+1.0
KFL	Anninata	0.35	131	P	Pg	00 14 00.6	-0.1
KFL				S	Sg	00 14 05.5	+0.2
RLS	Riolos of Patr	0.85	109	*e*PB	Pg	00 14 09.0	-1.2
RLS				*e*SN	Sg	00 14 21.4	+0.2
RLS	Riolos of Patr	0.85	109	*e*Pb	Pg	00 14 09.0	-1.2
RLS				*e*SN	Sg	00 14 21.4	+0.2
UPR	University Cam	1.05	93	*e*PN	Pg	00 14 13.3	-0.8
UPR				*e*SN	Sg	00 14 28.2	+0.5
UPR	University Cam	1.05	93	P	Pg	00 14 13.2	-0.9
UPR	University Cam	1.05	93	P	Pg	00 14 13.2	-0.9
UPR				*e*Sn	Sg	00 14 28.2	+0.5
EFP	Efpalio	1.15	85	*e*PN	Pg	00 14 15.0	-0.9
EFP				*e*SN	Sg	00 14 31.9	+1.1
EFP	Efpalio	1.15	85	P	Pg	00 14 13.8	-2.1
EFP				S	Sg	00 14 31.2	+0.4
EFP	Efpalio	1.15	85	P	Pg	00 14 13.8	-2.1
EFP	Efpalio	1.15	85	*e*Pn	Pg	00 14 15.0	-0.9
EFP				S	Sg	00 14 31.2	+0.4
EFP				*e*Sn	Sg	00 14 31.9	+1.1
IGT	Igoumenitsa	1.19	356	P	Pg	00 14 16.1	-0.8
IGT				S	Sg	00 14 33.9	+1.6
IGT	Igoumenitsa	1.19	356	P	Pg	00 14 16.1	-0.8
IGT				S	Sg	00 14 33.9	+1.6
IGT	Igoumenitsa	1.19	356	P	Pg	00 14 16.1	-0.8
IGT				S	Sg	00 14 33.9	+1.6
EVR	Evrytania	1.21	61	*e*PN	Pn	00 14 16.7	-1.3
EVR				*e*SN	Sn	00 14 35.0	0.0
EVR	Evrytania	1.21	61	*e*Pn	Pn	00 14 16.7	-1.3
EVR				*e*Sn	Sn	00 14 35.0	0.0
TRIZ	Trizonia	1.27	88	P	Pg	00 14 16.2	-2.2
TRIZ				S	Sg	00 14 34.4	-0.5
TRIZ	Trizonia	1.27	88	P	Pg	00 14 16.2	-2.2
TRIZ				S	Sg	00 14 34.4	-0.5
KALE	Kalithea	1.33	87	P	Pg	00 14 25.9	+6.5
JAN	Janina	1.35	13	*e*PN	Pn	00 14 19.8	-0.2
JAN				*e*SN	Sn	00 14 38.9	+0.4
JAN	Janina	1.35	13	*e*Pn	Pn	00 14 19.8	-0.2
JAN				*e*Sn	Sn	00 14 38.9	+0.4
KEK	Kerkira	1.46	340	*e*PN	Pn	00 14 20.9	-0.6
KEK	Kerkira	1.46	340	P	Pn	00 14 21.1	-0.4
KEK	Kerkira	1.46	340	P	Pn	00 14 21.1	-0.4
GUR	Goura	1.54	105	*e*PN	Pn	00 14 21.8	-0.8
GUR				*e*SN	Sn	00 14 43.9	+0.6
GUR	Goura	1.54	105	P	Pn	00 14 20.8	-1.8
GUR				S	Sn	00 14 43.6	+0.3
GUR	Goura	1.54	105	P	Pn	00 14 20.8	-1.8
GUR	Goura	1.54	105	*e*Pn	Pn	00 14 21.8	-0.8
GUR				S	Sn	00 14 43.6	+0.3
GUR				*e*Sn	Sn	00 14 43.9	+0.6
MEV	Metsovon	1.56	23	P	Pn	00 14 24.1	+1.2
MEV	Metsovon	1.56	23	P	Pn	00 14 24.2	+1.3
MEV	Metsovon	1.56	23	P	Pn	00 14 24.1	+1.2
AGG	Agios Georgios	1.62	65	*e*Pn	Pn	00 14 23.2	-0.5
AGG				S	Sn	00 14 46.1	+0.9
AGG	Agios Georgios	1.62	65	P	Pn	00 14 23.1	-0.6
AGG				S	Sn	00 14 46.1	+0.9
AGG	Agios Georgios	1.62	65	*e*Pn	Pn	00 14 23.2	-0.5
AGG				S	Sn	00 14 46.1	+0.9
DSF	Desfina	1.63	87	P	Pn	00 14 21.9	-1.9
DSF	Desfina	1.63	87	P	Pn	00 14 21.9	-1.9
ITM	Ithomi	1.65	134	*e*PN	Pn	00 14 23.5	-0.5
ITM	Ithomi	1.65	134	P	Pn	00 14 23.5	-0.5
ITM	Ithomi	1.65	134	P	Pn	00 14 23.5	-0.5
THL	Klokotos Trika	1.72	44	*e*PN	Pn	00 14 25.3	+0.2
THL				*e*SN	Sn	00 14 49.8	+2.0
THL	Klokotos Trika	1.72	44	P	Pn	00 14 24.6	-0.5
THL				S	Sn	00 14 50.1	+2.3
THL	Klokotos Trika	1.72	44	P	Pn	00 14 24.6	-0.5
THL	Klokotos Trika	1.72	44	*e*Pn	Pn	00 14 25.3	+0.2
THL				S	Sn	00 14 50.1	+2.3
PYL	PYLOS	1.77	144	*e*PN	Pn	00 14 24.9	-0.8
PYL	PYLOS	1.77	144	P	Pn	00 14 24.6	-1.1
PYL	PYLOS	1.77	144	P	Pn	00 14 24.6	-1.1
PYL	PYLOS	1.77	144	*e*Pn	Pn	00 14 24.9	-0.8
VLX	Vlachokerasia	1.81	122	P	Pn	00 14 28.5	+2.2
VLX				S	Sn	00 14 53.9	+4.1
VLX	Vlachokerasia	1.81	122	P	Pn	00 14 28.5	+2.2
LTK	Loutraki	2.01	98	*e*PN	Pn	00 14 29.2	+0.2
LTK	Loutraki	2.01	98	P	Pn	00 14 29.1	+0.1
LTK	Loutraki	2.01	98	P	Pn	00 14 29.1	+0.1
LKR	Lokris	2.02	80	*e*PN	Pn	00 14 29.5	+0.3
LKR	Lokris	2.02	80	P	Pn	00 14 29.5	+0.3
LKR	Lokris	2.02	80	P	Pn	00 14 29.5	+0.3
ATAL	Atalanti	2.04	79	P	Pn	00 14 29.8	+0.3
ATAL	Atalanti	2.04	79	P	Pn	00 14 29.8	+0.3
KZN	Kozani	2.21	27	*e*Pn	Pn	00 14 32.8	+1.0
KZN				P		00 14 36.3	
KZN	Kozani	2.21	27	P	Pn	00 14 32.6	+0.8
KZN	Kozani	2.21	27	P	Pn	00 14 32.6	+0.8
SCTE	Santa Cesarea	2.32	319	Pn	Pn	00 14 32.7	-0.6
SCTE				Sn	Sn	00 15 01.1	-1.3
	186nm,0.5s						
SCTE	Santa Cesarea	2.32	319	Pn	Pn	00 14 32.7	-0.6
SCTE				Sn	Sn	00 15 01.1	-1.3
	186nm,0.5s						
LIT	Litokhoron	2.36	41	*e*PB	Pn	00 14 34.3	+0.4
LIT	Litokhoron	2.36	41	P	Pn	00 14 34.0	+0.1
LIT	Litokhoron	2.36	41	P	Pn	00 14 34.0	+0.1
NEO	Neokhori	2.37	65	*e*PB	Pn	00 14 34.3	+0.3
XOR	Xorichti	2.37	64	P	Pn	00 14 34.3	+0.3
XOR	Xorichti	2.37	64	P	Pn	00 14 34.3	+0.3
XOR	Xorichti	2.37	64	P	Pn	00 14 34.3	+0.3
NAIG	Nisos Aigina	2.47	103	*e*PB	Pn	00 14 35.2	-0.1
FNA	Florina	2.54	16	P	Pn	00 14 36.7	+0.4
FNA	Florina	2.54	16	P	Pn	00 14 36.7	+0.4
FNA	Florina	2.54	16	P	Pn	00 14 36.7	+0.4
VLI	Veliai	2.56	129	*e*PB	Pn	00 14 36.3	-0.2
ATH	Athens Observa	2.60	97	*e*PN	Pn	00 14 36.5	-0.7
ATH	Athens Observa	2.60	97	*e*Pn	Pn	00 14 36.5	-0.7
PTL	Penteli	2.70	95	*e*PN	Pn	00 14 38.6	0.0
PTL	Penteli	2.70	95	*e*Pn	Pn	00 14 38.6	0.0
BIA	Bitola	2.76	14	*e*Pn	Pn	00 14 40.4	+1.1
BIA	Bitola	2.76	14	P	Pn	00 14 40.3	+1.0
BIA	Bitola	2.76	14	P	Pn	00 14 40.3	+1.0
OHR	Ohrid	2.78	5	*e*PN	Pn	00 14 41.3	+1.7
OHR	Ohrid	2.78	5	*e*Pn	Pn	00 14 41.2	+1.6
AOS	Alonnisos	2.80	72	P	Pn	00 14 39.8	-0.2
AOS	Alonnisos	2.80	72	P	Pn	00 14 39.8	-0.2
AOS	Alonnisos	2.80	72	P	Pn	00 14 39.8	-0.2
KYTH	Kithira	2.91	134	*e*PB	Pn	00 14 41.5	+0.1
TIP	Timpagrande	3.01	287	Pn	Pn	00 14 43.5	+0.8
TIP				P		00 14 43.8	
TIP	Timpagrande	3.01	287	Pn	Pn	00 14 43.5	+0.8
TIP	Timpagrande	3.01	287	Pn	Pn	00 14 43.5	+0.8
TIP	Timpagrande	3.01	287	P	Pn	00 14 43.8	+1.1
SERS	Sersale	3.03	284	Pn	Pn	00 14 43.3	+0.3
SERS	Sersale	3.03	284	Pn	Pn	00 14 43.3	+0.3
TIR	Tirane	3.04	352	P	Pn	00 14 43.2	+0.1
TIR				S	Sn	00 15 19.5	-0.6
TIR	Tirane	3.04	352	P	Pn	00 14 43.2	+0.1
TIR				S	Sn	00 15 20.1	0.0
TIR	Tirane	3.04	352	Pn	Pn	00 14 43.1	0.0
TIR	Tirane	3.04	352	P	Pn	00 14 43.2	+0.1
TIR				S	Sn	00 15 20.1	0.0
PLG	Polygyros	3.08	48	P	Pn	00 14 43.2	-0.6
PLG	Polygyros	3.08	48	P	Pn	00 14 43.2	-0.6
PLG	Polygyros	3.08	48	P	Pn	00 14 43.2	-0.6
KRUS	Krusevo	3.08	11	*e*Pn	Pn	00 14 44.4	+0.5
KRUS	Krusevo	3.08	11	*e*Pn	Pn	00 14 44.3	+0.5
GRI	Girifalco	3.20	280	Pn	Pn	00 14 45.6	+0.2
GRI	Girifalco	3.20	280	Pn	Pn	00 14 45.6	+0.2
GRI	Girifalco	3.20	280	Pn	Pn	00 14 45.6	+0.2
TAR1	Taranto	3.28	313	*e*Pn	Pn	00 14 46.8	+0.3
TAR1				*e*Sn	Sn	00 15 24.0	-2.2
SOH	Sokhos	3.34	41	P	Pn	00 14 47.5	+0.2
SOH				S	Sn	00 15 26.3	-1.3
SOH	Sokhos	3.34	41	P	Pn	00 14 47.5	+0.2
SOH				S	Sn	00 15 27.1	-0.5
SOH	Sokhos	3.34	41	P	Pn	00 14 47.5	+0.2
SOH				S	Sn	00 15 27.1	-0.5
SOI	Samo	3.48	267	Pn	Pn	00 14 51.6	+2.4
SOI	Samo	3.48	267	Pn	Pn	00 14 51.6	+2.4
SOI	Samo	3.48	267	Pn	Pn	00 14 51.6	+2.4
MPAZ	Palizzi	3.53	265	Pn	Pn	00 14 50.6	+0.7
MPAZ	Palizzi	3.53	265	Pn	Pn	00 14 50.6	+0.7
NOCI	Noci	3.58	314	Pn	Pn	00 14 50.3	-0.3
NOCI	Noci	3.58	314	Pn	Pn	00 14 50.3	-0.3
CEL	Celeste	3.59	270	P	Pn	00 14 51.2	+0.5
CEL	Celeste	3.59	270	P	Pn	00 14 51.2	+0.5
JOPP	Joppolo	3.59	276	Pn	Pn	00 14 51.2	+0.4
JOPP	Joppolo	3.59	276	Pn	Pn	00 14 51.2	+0.4
LTRZ	Laterza	3.61	310	Pn	Pn	00 14 51.0	0.0
LTRZ	Laterza	3.61	310	Pn	Pn	00 14 51.0	0.0
	29nm,1.1s						
LTRZ	Laterza	3.61	310	Pn	Pn	00 14 51.0	0.0
	29nm,1.1s						
SRS	Serrai	3.68	40	P	Pn	00 14 51.4	-0.6
SRS	Serrai	3.68	40	P	Pn	00 14 51.4	-0.6
SRS	Serrai	3.68	40	P	Pn	00 14 51.4	-0.6
ULC	Ulcinj	3.73	346	⇑*i*Pn	Pn	00 14 53.5	+0.8
ULC				*e*Sn	Sn	00 15 37.8	+0.5
ULC	Ulcinj	3.73	346	⇑*i*Pn	Pn	00 14 53.5	+0.8
ULC				*e*Sn	Sn	00 15 37.8	+0.5
SG1	Sgolgore (BA)	3.84	312	*e*Pn	Pn	00 14 53.8	-0.4
SG1				*e*Sn	Sn	00 15 38.6	-1.3
BAI	Bari	3.90	316	*e*Pn	Pn	00 14 54.7	-0.3
BAI				*e*Sn	Sn	00 15 39.1	-2.4
BUM	Brajici-Budva	4.13	344	⇑*i*Pn	Pn	00 14 59.3	+1.1
BUM				*e*Sn	Sn	00 15 47.3	+0.2
BUM	Brajici-Budva	4.13	344	⇑*i*Pn	Pn	00 14 59.3	+1.1
BUM				*e*Sn	Sn	00 15 47.3	+0.2
PDG	Podgorica	4.18	348	⇑*i*Pn	Pn	00 14 59.4	+0.5
PDG				*e*Sn	Sn	00 15 48.4	0.0
TTG	Podgorica	4.18	348	⇑*i*Pn	Pn	00 14 59.4	+0.5
TTG				*e*Sn	Sn	00 15 48.4	0.0
TTG	Podgorica	4.18	348	⇑*i*Pn	Pn	00 14 59.4	+0.5
TTG				*e*Sn	Sn	00 15 48.4	0.0
PVY	Plav	4.26	355	⇓*i*Pn	Pn	00 15 00.7	+0.7
PVY				*e*Sn	Sn	00 15 50.4	0.0
PVY	Plav	4.26	355	⇓*i*Pn	Pn	00 15 00.7	+0.7
PVY				*e*Sn	Sn	00 15 50.4	0.0
HCY	Herceg Novi	4.36	341	⇑*i*Pn	Pn	00 15 02.7	+1.3
HCY				*e*Sn	Sn	00 15 52.7	-0.2
HCY	Herceg Novi	4.36	341	⇑*i*Pn	Pn	00 15 02.7	+1.3
HCY				*e*Sn	Sn	00 15 52.7	-0.2
BEY	Berane	4.54	355	⇓*i*Pn	Pn	00 15 03.9	0.0
BEY				*e*Sn	Sn	00 15 57.3	0.0
IVA	Berane	4.54	355	⇓*i*Pn	Pn	00 15 03.9	0.0
IVA				*e*Sn	Sn	00 15 57.3	0.0
IVA	Berane	4.54	355	⇓*i*Pn	Pn	00 15 03.9	0.0
IVA				*e*Sn	Sn	00 15 57.3	0.0
BARS	Barje	4.59	13	*e*Pn	Pn	00 15 04.0	-0.5
NKY	Niksic	4.60	347	⇓*i*Pn	Pn	00 15 05.3	+0.6
NKY				*e*Sn	Sn	00 15 58.7	0.0
NKY	Niksic	4.60	347	⇓*i*Pn	Pn	00 15 05.3	+0.6
NKY				*e*Sn	Sn	00 15 58.7	0.0
BRY	Bratogost	4.78	343	⇑*i*Pn	Pn	00 15 07.7	+0.6
BRY				*e*Sn	Sn	00 16 02.5	-0.6
BRY	Bratogost	4.78	343	⇑*i*Pn	Pn	00 15 07.7	+0.6
BRY				*e*Sn	Sn	00 16 02.5	-0.6
RDO	Rodhopi	4.82	53	P	Pn	00 15 07.2	-0.4
RDO	Rodhopi	4.82	53	P	Pn	00 15 07.2	-0.4
RDO	Rodhopi	4.82	53	P	Pn	00 15 07.2	-0.4
FG5	Orsara di Pugl	4.96	308	Pn	Pn	00 15 11.1	+1.6
FG5	Orsara di Pugl	4.96	308	Pn	Pn	00 15 11.1	+1.6
	11nm,0.3s						
FG5	Orsara di Pugl	4.96	308	Pn	Pn	00 15 11.1	+1.6
	11nm,0.3s						
UPM	Unac-Piva	5.00	347	⇓*i*Pn	Pn	00 15 10.1	0.0
UPM				*e*Sn	Sn	00 16 08.3	-0.1
UPM	Unac-Piva	5.00	347	⇓*i*Pn	Pn	00 15 10.1	0.0
UPM				*e*Sn	Sn	00 16 08.3	-0.1
RGNG	Rignano Grg	5.00	313	Pn	Pn	00 15 10.0	-0.2
RGNG	Rignano Grg	5.00	313	Pn	Pn	00 15 10.0	-0.2
RGNG	Rignano Grg	5.00	313	Pn	Pn	00 15 10.0	-0.2
PLE	Pljevlja	5.05	351	⇓*i*Pn	Pn	00 15 11.9	+1.1
PLE				*e*Sn	Sn	00 16 09.7	0.0
PLE	Pljevlja	5.05	351	⇓*i*Pn	Pn	00 15 11.9	+1.1
PLE				*e*Sn	Sn	00 16 09.7	0.0
FG2	Serracapriola	5.33	312	Pn	Pn	00 15 15.7	+1.0
	37nm,0.3s						
FG2	Serracapriola	5.33	312	Pn	Pn	00 15 15.7	+1.0
	37nm,0.3s						
FG2	Serracapriola	5.33	312	Pn	Pn	00 15 15.7	+1.0
	37nm,0.3s						
BBLS	Lazići	5.58	352	*e*Pn	Pn	00 15 17.1	-0.9
DIVS	Divibare	5.76	357	*e*Pn	Pn	00 15 21.1	+0.5
BOJS	Bojanci	8.14	333	*i*Pn	Pn	00 15 52.1	-1.0
BOJS				*i*Sn	Sn	00 17 21.7	-4.1
BOJS	Bojanci	8.14	333	*i*Pn	Pn	00 15 52.2	-1.0
VISS	Visnje	8.54	333	*i*Pn	Pn	00 15 57.8	-0.9
VISS				*i*Sn	Sn	00 17 30.2	-5.5
VISS	Visnje	8.54	333	*i*Pn	Pn	00 15 57.8	-0.9
JAVS	Javornik	8.91	330	*i*Pn	Pn	00 16 03.1	-0.7
JAVS				*i*Sn	Sn	00 17 38.3	-6.5
JAVS	Javornik	8.91	330	*i*Pn	Pn	00 16 03.1	-0.7
PERS	Pernice	9.18	336	*e*Pn	Pn	00 16 05.4	-2.0
PERS	Pernice	9.18	336	*e*Pn	Pn	00 16 05.4	-2.0

*NEIC **22** 00:28:08.5, 16°.14N×95°.69W, h26km, MD4.1(MEX), After MEX.*

MEX 22 00:28:08.5±0.8,**16°.14N**×**95°.69W**,**h26**km±21km,**MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXX	Oaxaca	1.36	313	*i*P	Pn	00 28 30.2	-1.7
OXX				*i*S	Sn	00 28 46.5	-2.6
OXX	Oaxaca	1.36	313	*i*P	Pn	00 28 30.2	-1.7
OXX				*i*S	Sn	00 28 46.5	-2.6
VHO	Vista Hermosa	1.36	313	*e*P	Pn	00 28 29.5	-2.4
VHO				*i*S	Sn	00 28 45.6	-3.5
VHO	Vista Hermosa	1.36	313	*e*P	Pn	00 28 29.5	-2.4
VHO				*i*S	Sn	00 28 45.6	-3.5
PNIG	Pinotepa	2.36	276	*i*P	Pn	00 28 43.3	-2.2
PNIG				*i*S	Sn	00 29 10.7	-3.0
PNIG	Pinotepa	2.36	276	*i*P	Pn	00 28 43.3	-2.2
PNIG				*i*S	Sn	00 29 10.7	-3.0
PCIG		2.42	100	*i*P	Pn	00 28 45.2	-1.2
PCIG				*i*S	Sn	00 29 11.4	-3.7
TGIG		2.54	75	*i*P	Pn	00 28 45.9	-2.1
TGIG				*i*S	Sn	00 29 15.2	-3.0
UTMO	Huajuapan	2.63	310	*i*P	Pn	00 28 48.3	-1.0
UTMO				*i*S	Sn	00 29 18.4	-1.9
TPIG	Tehuac#an	2.77	325	*i*P	Pn	00 28 50.2	-1.0
TPIG				*i*S	Sn	00 29 21.5	-2.4
CCIG	Comitan	3.41	87	*e*P	Pn	00 28 58.1	-2.0
CCIG				*i*S	Sn	00 29 37.3	-2.5
CCIG	Comitan	3.41	87	*e*P	Pn	00 28 58.1	-2.0
CCIG				*i*S	Sn	00 29 37.3	-2.5
KVTX	Kingsville	11.53	350	Pn	Pn	00 30 50.8	-0.7
MNTX	Cornudas Mount	17.82	332	Pn	Pn	00 32 14.2	-0.6
ANMO	Albuquerque	21.07	335	*e*P	P	00 32 50.5	-0.2

*ISCJB **22** 00:32:18.6±0.4, 32°.65N±0°.04×105°.51E±0°.04, h10km, mb3.8/11, Error ellipse: s-maj=5.9km s-min=5.2km az=171.8*
*IDC **22** 00:32:19.0±1.1, 32°.65N×105°.33E, h0km, mb3.6/10, mb1 3.7/12, mb1mx3.6/28, mbtmp3.6/12, ML3.6/2, Error ellipse: s-maj=41.4km s-min=21.1km az=46.0*
*NEIC **22** 00:32:20.4±0.6, 32°.58N×105°.40E, h10km, mb3.7/1, Error ellipse: s-maj=19.8km s-min=9.9km az=221.0*
*BJI **22** 00:32:20.3, 32°.78N×105°.51E, h13km, mb3.7/1, ML3.7/7, Ms3.5/1, Ms7 3.2/2*

ISC 22 00:32:20.8±0.4,**32°.70N**±0°.04×**105°.49E**±0°.04,**h10**km,**n25**, σ1§**10**/32,**mb3.8**/11,**Sichuan**

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

comp=N,18µm,0.8s
LZH **Lanzhou** 4.82 0 Pn Pn 00 39 49.0 +5.9
LZH Pg Pg 00 40 02.8 +0.3
LZH Sg Sg 00 41 03.6 -1.4
LZH smax
comp=N,67nm,0.9s
LZH smax
comp=E,110nm,1.0s
ENH **Enshi** 4.96 100 *e*Pn Pb 00 39 56.6 -0.8
ENH *e*Sn Sn 00 40 42.9 +0.2
XAN **Xi'an** 5.11 56 Pg Pb 00 40 00.8 +0.9
XAN smax
comp=N,110nm,0.8s
XAN smax
comp=E,43nm,0.9s
KMI **Kunming** 6.18 189 Pn Pn 00 40 02.4 +0.5
KMI Sn Sn 00 41 17.5 +4.7
KMI smax
comp=N,27nm,1.8s
KMI smax
comp=E,29nm,1.7s
KMI LR LR
comp=Z,240nm,10.6s
CMAR **Chiang Mai Arr** 13.49 200 Pn Pn 00 41 40.5 -1.5
comp=Z,0.5nm,0.3s,baz=198,slow=30,SNR=3.7
SONM **Songino Array** 16.68 6 Pn Pn 00 42 26.0 +1.8
comp=Z,0.2nm,0.3s,baz=188,slow=10.0,SNR=3.2
SONM LR LR 00 49 25.9
comp=Z,59nm,21.2s,baz=106,slow=39
SONM **Songino Array** 16.68 6 Pn Pn 00 42 26.0 +1.8
SONM LR LR 00 49 25.9
KSRS **Korea Array** 20.80 66 P P 00 43 11.8 -0.2
comp=Z,0.5nm,0.3s,baz=223,slow=29,SNR=3.1
KSRS LR LR 00 50 56.3
comp=Z,39nm,19.6s,baz=330,slow=36
MK31 **Makanchi Array** 22.71 319 *e*P P 00 43 32.7 +0.3
MKAR **Makanchi Array** 22.71 319 P P 00 43 33.1 +0.8
comp=Z,0.8nm,0.5s,mb3.5,baz=121,slow=12,SNR=11
UCH **Uchtor** 25.80 303 *e*P P 00 44 02.5 +0.7
comp=Z,1.4nm,0.8s,mb3.5
ZALV **Zalesovo Beam** 26.49 334 P P 00 44 08.3 +0.5
comp=Z,2.0nm,0.9s,mb3.7,baz=128,slow=9.6,SNR=7.5
ZALV **Zalesovo Beam** 26.49 334 P P 00 44 08.3 +0.5
KURK **Kurchatov** 26.99 323 P P 00 44 12.3 -0.1
comp=Z,1.3nm,0.7s,mb3.6,baz=127,slow=9.4,SNR=15
KURK **Kurchatov** 26.99 323 *e*P P 00 44 13.0 +0.6
comp=Z,2.5nm,1.0s,mb3.7
KBL **Kabul** 29.31 286 P P 00 44 31.0 -2.3
KEV **Kevo** 56.50 336 P P 00 48 12.1 -0.4
ASAR **Alice Springs** 61.74 149 P P 00 48 48.4 -0.9
comp=Z,0.3nm,0.5s,mb3.7,baz=330,slow=6.2,SNR=4.3

ISK ***22*** *00:49:01.9, 38°.45N×39°.39E, h16km, MD2.7*
ISCJB ***22*** *00:49:03.4±0.7, 38°.48N±0°.04×39°.30E±0°.05, h10km±5km, Error ellipse: s-maj=6.8km s-min=5.8km az=35.6*
CSEM ***22*** *00:49:03.4±0.2, 38°.50N×39°.29E, h15km, MD2.6, Error ellipse: s-maj=4.5km s-min=3.9km az=18.0*
DDA ***22*** *00:49:03.4, 38°.48N×39°.28E, h7km±5km, Md2.6*
ISC 22 00:49:03.4±0.6, 38°.48N±0°.04×39°.30E±0°.05, h16km±6km, n16, σ0§92/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.10	179	PG	Pg	00 49 05.5	-1.4
SVRC	Sivrice-ELAZID	0.10	179	*i* Pg	Pg	00 49 05.5	-1.4
ELZG	Elazig	0.25	274	*i* P	Pg	00 49 09.0	0.0
ELZG				*i* S	Sg	00 49 13.3	+0.5
ELZG	Elazig	0.25	274	*i* P	Pg	00 49 09.0	0.0
ELZG				*i* S	Sg	00 49 13.3	+0.5
PTK	Pertek	0.41	10	*e*PG	Pg	00 49 11.3	-0.6
PTK				*e*SG	Sg	00 49 18.2	+0.6
PTK	Pertek	0.41	10	*e*Pg	Pg	00 49 11.3	-0.6
PTK				*e*Sg	Sg	00 49 18.2	+0.6
MYA	Malataya	0.71	258	*e*PG	Pg	00 49 17.3	0.0
MYA	Malataya	0.71	258	*e*Pg	Pg	00 49 17.3	0.0
DIYA	Diyarbakir	0.85	131	*i* P	Pg	00 49 20.3	+0.3
DIYA				*i* S	Sg	00 49 32.4	+1.2
DIYA	Diyarbakir	0.85	131	*i* P	Pg	00 49 20.3	+0.3
DIYA				*i* S	Sg	00 49 32.4	+1.2
KEMA	Kemaliye	1.01	321	*i* P	Pb	00 49 20.0	-2.5
KEMA				*i* S	Sb	00 49 36.1	+0.6
KEMA	Kemaliye	1.01	321	*i* P	Pb	00 49 20.0	-2.5
KEMA				*i* S	Sb	00 49 36.1	+0.6
AKCD	Akcadag	1.10	261	*i* P	Pb	00 49 24.4	+0.3
AKCD				*i* S	Sb	00 49 39.0	+0.8
AKCD	Akcadag	1.10	261	*i* P	Pb	00 49 24.4	+0.3
AKCD				*i* S	Sb	00 49 39.0	+0.9
URFA	Urfa	1.11	200	*e*PN	Pn	00 49 23.1	-1.1
URFA	Urfa	1.11	200	*e*Pn	Pn	00 49 23.2	-1.0

BJI 22 01:06:42.1, 24°.96N×104°.17E, h13km, ML3.5/5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.31	277	Pg	Pg	01 07 08.3	+1.0
KMI				Sg	Sg	01 07 27.5	+3.2
KMI	smax
comp=N,290nm,1.2s
KMI smax
comp=E,99nm,0.9s
GYA **Guiyang** 2.70 56 Pn Pn 01 07 24.1 -1.1
GYA Sg Sg 01 08 04.3 -4.6
GYA smax
comp=N,150nm,0.9s
GYA smax
comp=E,290nm,0.9s

ISCJB ***22*** *01:09:46.4±0.9, 38°.23N±0°.03×25°.86E±0°.04, h3km±5km, Error ellipse: s-maj=6.2km s-min=3.9km az=146.2*
ISK ***22*** *01:09:46.8, 38°.21N×25°.91E, h14km, MD3.1*
DDA ***22*** *01:09:47.3, 38°.31N×25°.95E, h26km±1km, Md3.0*
CSEM ***22*** *01:09:47.5±0.3, 38°.23N×25°.93E, h8km, ML3.1/3, Error ellipse: s-maj=6.1km s-min=3.7km az=60.0*
NEIC ***22*** *01:09:48.8, 38°.25N×26°.00E, h38km, MD3.1(ATH), After ATH.*
ATH ***22*** *01:09:48.8, 38°.25N×26°.00E, h38km±2km, MD3.1/3*
THE ***22*** *01:09:49.6, 38°.29N×26°.01E, h9km±1km, ML3.1/3, Error ellipse: s-maj=1.5km s-min=0.6km az=43.0*
ISC 22 01:09:47.9±0.9, 38°.24N±0°.03×25°.91E±0°.05, h12km±4km, n54, σ0§90/86, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.18	38	P	Pg	01 09 52.2	+0.2
CHOS				S	Sg	01 09 54.2	-0.6
CHOS	Chios island	0.18	38	P	Pg	01 09 52.2	+0.2
CHOS				S	Sg	01 09 54.2	-0.6
URLA	Izmir	0.55	77	*i* P	Pg	01 09 58.4	-0.2
URLA				*i* S	Sg	01 10 05.8	-0.2
URLA	Izmir	0.55	77	*i* P	Pg	01 09 58.4	-0.3
URLA				*i* S	Sg	01 10 05.8	-0.2
BLCB	Balcova	0.90	80	*e*PG	Pg	01 10 04.7	-0.5
BLCB				*e*SG	Sg	01 10 17.6	+0.5
BLCB	Balcova	0.90	80	P	Pg	01 10 04.8	-0.5
BLCB				S	Sg	01 10 17.4	+0.3
BLCB	Balcova	0.90	80	P	Pg	01 10 04.8	-0.5
BLCB				S	Sg	01 10 17.4	+0.3
SMG	Samos	0.91	126	*e*PN	Pn	01 10 05.4	-1.0
SMG				*e*SN	Sn	01 10 17.9	-1.4
SMG	Samos	0.91	126	*e*Pn	Pn	01 10 05.4	-1.0
SMG				*e*Sn	Sn	01 10 17.9	-1.4
SIGR	SIGRI	0.97	357	P	Pg	01 10 07.0	+0.4
SIGR				S	Sg	01 10 20.4	+1.2
SIGR	SIGRI	0.97	357	P	Pg	01 10 07.0	+0.4
SIGR				S	Sg	01 10 20.4	+1.2
PRK	Paraskevi	1.04	16	*e*PN	Pn	01 10 08.1	-0.2
PRK				*e*SN	Sn	01 10 22.3	-0.4
PRK	Paraskevi	1.04	16	P	Pb	01 10 08.0	+0.2
PRK				S	Sb	01 10 21.8	+0.4
PRK	Paraskevi	1.04	16	P	Pb	01 10 08.0	+0.2
PRK				S	Sb	01 10 21.8	+0.4
PRK				*e*Sn	Sn	01 10 22.3	-0.4
IZM	Izmir	1.07	81	*e*PN	Pn	01 10 08.2	-0.5
GCAM	G?zelcaml?	1.18	117	*i* P	Pn	01 10 09.7	-0.4
GCAM				*i* S	Sb	01 10 25.6	+0.3
GCAM	G?zelcaml?	1.18	117	*i* P	Pn	01 10 09.7	-0.4
GCAM				*i* S	Sb	01 10 25.6	+0.3
APE	Apeiranthos	1.21	195	*e*PN	Pn	01 10 11.6	+1.1
APE	Apeiranthos	1.21	195	*e*Pn	Pn	01 10 11.6	+1.1
AYVA	Ayvalik	1.23	30	*i* P	Pn	01 10 09.9	-0.9
AYVA				*i* S	Sb	01 10 26.6	-0.2
AYVA	Ayvalik	1.23	30	*i* P	Pn	01 10 09.9	-0.9
AYVA				*i* S	Sb	01 10 26.6	-0.2
BOZC	Bozcaada	1.60	4	*i* P	Pn	01 10 14.4	-1.5
BOZC				*i* S	Sn	01 10 35.0	-1.6
EZN	Ezine	1.61	11	*e*PN	Pn	01 10 15.8	-0.3
EZN	Ezine	1.61	11	*e*Pn	Pn	01 10 15.8	-0.3
AKHS	Akhisar	1.62	66	*i* P	Pn	01 10 14.5	-1.8
AKHS				*i* S	Sn	01 10 39.0	+2.0
AKHS	Akhisar	1.62	66	*i* P	Pn	01 10 14.5	-1.7
AKHS				*i* S	Sn	01 10 39.0	+2.0
AYDN	Tasoluk	1.66	110	*i* P	Pn	01 10 18.7	+2.0
AYDN				*i* S	Sn	01 10 39.2	+1.3
AYDN	Tasoluk	1.66	110	*i* P	Pn	01 10 18.7	+1.9
AYDN				*i* S	Sn	01 10 39.2	+1.2
BDRM	Kayabasi	1.69	133	*i* P	Pn	01 10 12.1	-5.1
BDRM				*i* S	Sn	01 10 42.9	+4.1
BDRM	Kayabasi	1.69	133	*i* P	Pn	01 10 12.1	-5.1
BDRM				*i* S	Sn	01 10 42.8	+4.1
LIA	Limnos Island	1.75	341	*e*PN	Pn	01 10 18.5	+0.5
LIA	Limnos Island	1.75	341	*e*Pn	Pn	01 10 18.5	+0.5
GADA	Gvkgeada	1.95	360	*e*PN	Pn	01 10 20.9	+0.2
GADA	Gvkgeada	1.95	360	*e*Pn	Pn	01 10 20.9	+0.2
BALY	Balya	2.00	41	*i* P	Pn	01 10 20.4	-1.0
BALY				*i* S	Sn	01 10 51.2	+4.8
BALY	Balya	2.00	41	*i* P	Pn	01 10 20.4	-1.1
BALY				*i* S	Sn	01 10 51.2	+4.8
DAT	Datca	2.01	138	*e*PN	Pn	01 10 20.6	-1.0
DAT	Datca	2.01	138	*e*Pn	Pn	01 10 20.6	-0.9
MANT	Manisa	2.10	82	*i* P	Pn	01 10 26.5	+3.7
MANT				*i* S	Sn	01 10 52.6	+3.9
MANT	Manisa	2.10	82	*i* P	Pn	01 10 26.5	+3.8
MANT				*i* S	Sn	01 10 52.6	+3.9
KULA	Kula-Manisa	2.18	82	*e*PN	Pn	01 10 24.1	+0.2
KULA	Kula-Manisa	2.18	82	*e*Pn	Pn	01 10 24.1	+0.2
LPK	Lapseki	2.23	17	*e*PN	Pn	01 10 24.9	+0.4
LPK	Lapseki	2.23	17	*e*Pn	Pn	01 10 24.9	+0.3
DEMI	Demirci	2.34	69	*i* P	Pn	01 10 26.0	0.0
DEMI				*i* S	Sn	01 11 00.3	+5.6
DEMI	Demirci	2.34	69	*i* P	Pn	01 10 26.0	-0.1
DEMI				*i* S	Sn	01 11 00.3	+5.6
ENEZ	Enez	2.50	4	*e*PN	Pn	01 10 28.6	+0.4
ENEZ	Enez	2.50	4	*e*Pn	Pn	01 10 28.6	+0.3
RKY	Sarkoy-Tekirda	2.63	21	*e*PN	Pn	01 10 30.7	+0.6
RKY	Sarkoy-Tekirda	2.63	21	*e*Pn	Pn	01 10 30.7	+0.6
ALN	Alexandroupoli	2.66	2	*e*PN	Pn	01 10 30.8	+0.4
ALN	Alexandroupoli	2.66	2	*e*Pn	Pn	01 10 30.8	+0.4
RDO	Rodhopi	2.92	354	*e*PN	Pn	01 10 34.8	+0.8
RDO	Rodhopi	2.92	354	*e*Pn	Pn	01 10 34.8	+0.8

IDC ***22*** *01:15:55.4±2.5, 4°.42S×100°.62E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/22, mbtmp3.9/6, Error ellipse: s-maj=109.0km s-min=24.1km az=57.0*
DJA ***22*** *01:15:55, 5°.44S×101°.48E, h36km, MLv4.4/11*
ISC 22 01:15:57.8±1.7, 4°.8S±0°.2×100°.94E±0°.08, h35km, n19, σ0§77/14, mb3.9/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.98	56	P	Pn	01 16 28.4	-0.5
KSI				S	Sn	01 16 52.6	+0.1
MNAI	Manna	2.05	79	P	Pn	01 16 24.5	-5.3
MNAI				S	Sn	01 16 47.0	-7.2
LHSI	Lahat	2.74	70	P	Pn	01 16 35.4	-3.9
MDSI	Maura Dua	3.24	85	P	Pn	01 16 46.7	+0.5
PDSI	Padang	3.85	353	P	Px	01 17 03.1	
KLI	Kotabumi	3.91	92	P	Px	01 16 46.6	
JMBI	JAMBI	4.11	41	P	Pn	01 16 59.5	+1.3
PMBI	Palembang	4.24	65	P	Pn	01 16 56.0	-3.9
PPI	Padang Panjang	4.30	353	P	Px	01 17 09.4	
BLSI	Bandar Lampung	4.33	98	P	Px	01 16 50.6	
RBSI	Rajabasa	4.91	103	P	Px	01 16 58.2	
CGJI	Cibinong	5.08	112	P	Px	01 16 58.7	
CMAR	Chiang Mai Arr	23.15	355	P	P	01 21 00.2	-1.1
	1.3nm,0.4s,mb3.7,baz=182,slow=9.1,SNR=10						
ASAR	Alice Springs	36.92	124	P	P	01 23 10.4	+6.8
	0.2nm,0.4s,mb3.3,baz=300,slow=7.9,SNR=4.2						
SONM	Songino Array	52.59	5	P	P	01 25 08.2	+0.3
	1.9nm,0.8s,mb4.1,baz=188,slow=7.8,SNR=9.2						
MKAR	Makanchi Array	53.92	344	P	P	01 25 18.1	+0.3
	1.5nm,0.7s,mb4.0,baz=141,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	60.03	349	P	P	01 26 01.3	+0.4
	0.6nm,0.3s,mb4.1,baz=180,slow=2.8,SNR=5.2						
BVAR	Borovoye Array	63.08	340	P	P	01 26 21.4	-0.1
	0.8nm,0.5s,mb4.1,baz=120,slow=8.5,SNR=3.4						
TXAR	Lajitas Array	146.24	41	PKPbc	PKPbc	01 35 36.9	+1.5
	1.5nm,0.9s,baz=276,slow=1.3,SNR=11						

GUC ***22*** *01:33:58.6±0.6, 30°.18S×72°.37W, h6km±3km, MD4.4, ML4.6*
ISCJB ***22*** *01:34:00.1±0.4, 30°.17S±0°.03×72°.23W±0°.05, h10km, mb4.6/13, MS3.8/2, Error ellipse: s-maj=6.2km s-min=3.8km az=175.7*
IDC ***22*** *01:34:00.7±1.0, 30°.32S×72°.11W, h0km, mb4.2/4, mb1 4.2/9, mb1mx4.1/16, mbtmp4.1/9, ML3.9/5, MS3.8/3, Ms1 3.8/3, ms1mx3.1/25, Error ellipse: s-maj=33.9km s-min=21.3km az=43.0*
NEIC ***22*** *01:34:04.9±0.4, 30°.22S×71°.94W, mb4.9/9, Error ellipse: s-maj=9.9km s-min=7.5km az=74.0*
ISC 22 01:34:01.7±0.4, 30°.17S±0°.03×72°.22W±0°.04, h10km, n50, σ1§12/51, mb4.6/13, MS3.8/2, 3C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.98	117	*i* P	Pg	01 34 18.9	-1.8
OVCH				*i* S	Sg	01 34 34.3	+0.9
OVCH				AML	AML	01 34 37.9	
comp=N,18µm,0.6s							
TLL	Tololo Astrono	1.22	90	⇓*i* P	Pn	01 34 23.4	-1.5
TLL				*i* S	Sb	01 34 42.4	+1.6
TLL				AML	AML	01 34 47.7	
comp=N,10µm,0.6s							
LCO	Las Campanas	1.75	49	*e*Pn	Pn	01 34 31.4	-0.8
LCO				*e*S	Sg	01 34 56.5	-1.6
LCO	Las Campanas	1.75	49	⇑*i* P	Pn	01 34 31.4	-0.8
LCO				*i* S	Sg	01 34 57.0	-1.2
LCO				AML	AML	01 35 02.5	
comp=N,11µm,0.7s							
JACH	Jahuel	2.86	151	*i* P	Pn	01 34 47.3	-0.2
JACH				*i* S	Sn	01 35 24.2	+2.2
IHA	Instituto Hidr	2.89	170	*e*P	Pn	01 34 46.5	-1.3
IHA				*i* S	Sn	01 35 22.9	+0.3
ROCH	El Roble	2.98	160	⇑*i* P	Pn	01 34 48.5	-0.6
ROCH				*i* S	Sn	01 35 26.1	+1.3
PEL	Peldehue	3.24	157	⇓*i* P	Pn	01 34 52.2	-0.4
PEL				*i* S	Sn	01 35 32.1	+0.8
PEL				AML	AML	01 35 47.6	
comp=N,4µm,0.5s							
LCCH	Las Cruces	3.34	171	*i* P	Pn	01 34 52.6	-1.5
LCCH				*i* S	Sn	01 35 33.4	-0.4
CFAA	Coronel Fontan	3.71	114	Pn	Pn	01 34 59.2	+0.1
comp=N,1.4nm,0.3s,baz=297,slow=12,SNR=96							
CFAA				Sn	Sn	01 35 43.1	+0.2
comp=N,3.0nm,0.3s,baz=260,slow=23,SNR=3.3							
CFAA	Coronel Fontan	3.71	114	Pn	Pn	01 34 59.2	+0.1
CFAA				Sn	Sn	01 35 43.1	+0.2
PCH	Pirque	3.73	158	*i* P	Pn	01 34 58.7	-0.7
PCH				*i* S	Sn	01 35 44.2	+0.8
LNV	Longovilo	3.84	170	⇓*i* P	Pn	01 34 59.4	-1.4
CHCH	Chadas Angostu	3.98	161	⇑*i* P	Pn	01 35 01.9	-0.9
CACH	El Canelo	4.17	161	*i* P	Pn	01 35 05.2	-0.2
PLCA	Paso Flores	10.63	173	Pn	Pn	01 36 33.5	-0.6
comp=N,0.3nm,0.3s,baz=340,slow=14,SNR=7.8							
PLCA	Paso Flores	10.63	173	*e*Pn	Pn	01 36 33.1	-0.9
TRQA	Tornquist	11.56	136	*e*Pn	Pn	01 36 46.4	-0.4
comp=N,10nm,0.6s							
TRQA				*e*Sn	Sn	01 38 57.8	+1.8
CPUP	Villa Florida	13.67	77	Pn	Pn	01 37 16.3	+0.6
comp=N,0.4nm,0.3s,baz=235,slow=13,SNR=5.2							
CPUP				LR	LR	01 42 48.7	
comp=N,504nm,18.7s,baz=233,slow=39							
CPUP	Villa Florida	13.67	77	*e*Pn	Pn	01 37 12.0	-3.6
CPUP				LR	LR	01 42 48.7	
LPAZ	La Paz	14.32	16	Pn	Pn	01 37 26.8	+2.3
comp=N,0.2nm,0.3s,baz=188,slow=7.8,SNR=39							
SIV	San Ignacio	17.43	38	P	Pn	01 38 05.2	+0.2
comp=N,0.4nm,0.3s,baz=229,slow=12,SNR=32							
VNA2	Neumayer--Watz	53.60	158	*e*	P	01 43 21.8	-0.9
QSPA	South Pole Qui	60.06	180	*e*P	P	01 44 09.1	+0.8
comp=N,7.0nm,1.1s,mb4.6							
SWET	Sewanee	66.31	348	*e*P	P	01 44 51.2	+1.0
TXAR	Lajitas Array	66.33	330	P	P	01 44 52.6	+2.0
comp=N,0.6nm,0.7s,mb3.7,baz=152,slow=8.7,SNR=9.9							
ANMO	Albuquerque	72.37	331	LR	LR	02 11 07.2	
comp=N,39nm,19.4s,MS3.7,baz=320,slow=31							
LIC	Lamto	73.74	73	*e*P	P	01 45 35.4	-1.1
comp=N,47nm,1.2s,mb5.3							
TIC	Toumodi	73.98	72	*e*P	P	01 45 37.3	-0.6
comp=N,4.7nm,0.2s,mb5.0							
KIC	Kosan Boka	74.06	73	*e*P	P	01 45 37.8	-0.5
comp=N,41nm,0.9s,mb5.3							
DBIC	Dimbokro	74.13	72	*e*P	P	01 45 38.5	-0.3
comp=N,16nm,0.9s,mb5.0							
DBIC				*e*pP	pP	01 45 46.6	+4.6
SMCO	Snowmass	76.21	333	*e*P	P	01 45 52.7	+2.7
comp=N,5.1nm,0.9s,mb4.5							
ECSD	EROS Data Cent	76.86	342	*e*P	P	01 45 54.4	+0.8
comp=N,16nm,1.4s,mb4.8							
HWUT	Hardware Ranch	80.13	331	*e*P	P	01 46 13.0	+1.2
comp=N,3.6nm,0.8s,mb4.3							
PDAR	Pinedale Array	80.28	333	P	P	01 46 15.9	+3.3
comp=N,0.7nm,1.0s,mb3.5,baz=191,slow=5.6,SNR=4.1							
ELK	Elko	81.03	328	LR	LR	02 17 39.2	
comp=N,59nm,18.4s,MS4.0,baz=245,slow=32							
BOSA	Boshof	82.00	118	P	P	01 46 20.8	-1.5
comp=N,2.4nm,0.8s,mb4.2,baz=324,slow=0.9,SNR=3.7							
TOA0	Torodi Ar. Sit	83.06	71	*e*P	P	01 46 27.5	-0.4
TOA0				*e*pP	pP	01 46 36.0	+4.8
TORD	Torodi Ar. Bea	83.06	71	P	P	01 46 27.6	-0.3
comp=N,10nm,0.8s,mb4.9,baz=276,slow=4.4,SNR=53							
TAM	Tamanrasset	91.31	64	*e*P	P	01 47 08.1	+0.2
comp=N,1.1nm,0.8s,mb4.2							
BVAR	Borovoye Array	144.50	39	PKP	PKPdf	01 53 36.9	-1.0
comp=N,0.6nm,0.6s,baz=7.0,slow=6.0,SNR=4.6							
AML	Almayashu	150.19	57	*e*PKPbc	PKPbc	01 53 54.2	+1.4
HYB	Hyderabad	150.49	109	*i* PKP	PKPbc	01 53 54.5	+0.2
AAK	Ala-Archa	150.65	56	*e*PKPbc	PKPbc	01 53 55.2	+1.3
UCH	Uchtor	150.76	57	*e*PKPbc	PKPbc	01 53 55.6	+1.4
ZAA0	Zalesovo Array	151.00	28	*e*PKPbc	PKPbc	01 53 54.5	+0.2
ZALV	Zalesovo Beam	151.00	28	PKPbc	PKPbc	01 53 55.0	+0.7
comp=N,6.6nm,0.7s,baz=292,slow=3.0,SNR=26							
TKM2	Tokmak 2	151.36	55	*e*PKPbc	PKPbc	01 53 55.9	+0.4
MKAR	Makanchi Array	154.21	43	PKPbc	PKPbc	01 54 01.1	-0.6
comp=N,0.2nm,0.5s,baz=260,slow=4.7,SNR=3.8							
MKAR				PKPab	PKPab	01 54 18.5	+2.9
comp=N,0.9nm,0.8s,baz=291,slow=3.6,SNR=5.4							
SONM	Songino Array	162.33	3	PKPab	PKPab	01 54 51.4	+0.9
comp=N,0.2nm,0.3s,baz=341,slow=8.5,SNR=3.9							

GUC ***22*** *01:56:50.5±0.8, 30°.15S×72°.30W, h32km±3km, ML4.6*
IDC ***22*** *01:56:50.9±0.8, 30°.27S×72°.25W, h0km, mb4.2/7, mb1 4.3/11, mb1mx4.2/17, mbtmp4.1/11, ML4.5/3, MS4.1/9, Ms1 4.1/9, ms1mx3.7/18, Error ellipse: s-maj=30.0km s-min=18.6km az=52.0*
ISCJB ***22*** *01:56:54.4±0.3, 30°.27S±0°.02×72°.14W±0°.05, h33km, mb4.5/32, MS4.2/7, Error ellipse: s-maj=6.2km s-min=3.0km az=169.0*
NEIC ***22*** *01:56:57.6±0.4, 30°.32S×71°.62W, h35km, mb4.7/25, Error ellipse: s-maj=14.3km s-min=10.2km az=66.0*
BJI ***22*** *01:56:57.4, 29°.78S×72°.40W, h39km, mB4.6/3, Ms4.9/3, Ms7 4.9/3*
ISC 22 01:56:56.6±0.3, 30°.28S±0°.02×72°.08W±0°.05, h35km, n84, σ1§44/79, mb4.5/32, MS4.2/7, 2C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.83	113	⇓*i* P	Pn	01 57 08.6	-3.2
OVCH				*i* S	Sn	01 57 23.2	+0.5
OVCH				AML	AML	01 57 26.1	
comp=N,12µm,0.6s							
TLL	Tololo Astrono	1.11	84	*e*P	Pn	01 57 13.5	-2.2
TLL				*i* S	Sn	01 57 31.4	+1.6
TLL				AML	AML	01 57 35.7	
comp=N,8µm,0.9s							
LCO	Las Campanas	1.75	44	*e*Pn	Pn	01 57 21.4	-3.0
LCO				*e*S	Sn	01 57 48.6	+3.2
LCO	Las Campanas	1.75	44	*i* P	Pn	01 57 21.4	-3.0
LCO				*i* S	Sn	01 57 44.3	-1.2
LCO				AML	AML	01 57 53.3	
comp=N,7µm,0.6s							
JACH	Jahuel	2.71	152	⇓*i* P	Pn	01 57 37.2	-0.5
JACH				*i* S	Sn	01 58 11.8	+2.5
IHA	Instituto Hidr	2.76	172	*i* P	Pn	01 57 35.4	-3.0
IHA				*i* S	Sn	01 58 10.4	0.0
ROCH	El Roble	2.83	161	⇑*i* P	Pn	01 57 38.3	-1.1
ROCH				*i* S	Sn	01 58 13.8	+1.6
PEL	Peldehue	3.09	158	⇓*i* P	Pn	01 57 42.2	-0.7
PEL				*i* S	Sn	01 58 20.9	+2.3
PEL				AML	AML	01 58 37.7	
comp=N,2µm,0.3s							
LCCH	Las Cruces	3.21	172	*i* P	Pn	01 57 42.4	-2.2
LCCH				*i* S	Sn	01 58 21.6	-0.1
CLCH	Cerro Calan	3.37	157	*i* P	Pn	01 57 45.2	-1.5
CLCH				*i* S	Sn	01 58 26.7	+1.1
CLCH				AML	AML	01 58 50.9	
comp=E,2µm,0.6s							
RCDM	Rinconada Maip	3.38	162	*i* P	Pn	01 57 45.9	-1.0
RCDM				*i* S	Sn	01 58 27.4	+1.8
RCDM				AML	AML	01 58 53.1	
comp=E,628nm,0.6s							
SAN	Santiago	3.38	159	AML	AML	01 58 48.6	
comp=E,2µm,0.5s							
FCH	Farellones	3.40	154	⇑*i* P	Pn	01 57 46.5	-0.7
FCH				*i* S	Sn	01 58 28.7	+2.5
FCH				AML	AML	01 58 57.5	
comp=N,631nm,1.1s							
TACH	Talagante	3.50	164	*e*P	Pn	01 57 46.7	-1.9
TACH				*i* S	Sn	01 58 29.1	+0.4
CFAA	Co

comp=N,134nm,21.3s,MS4.2,baz=42,slow=27
ANMO Albuquerque 72.52 331 *eP* **P 02 08 24.3 +4.5**
comp=N,5.2nm,1.3s,mb4.3
LIC Lamto 73.67 73 *eP* **P 02 08 25.5 -1.6**
comp=N,77nm,1.7s,mb5.4
TIC Toumodi 73.91 72 *eP* **P 02 08 28.1 -0.4**
comp=N,58nm,1.4s,mb5.3
KIC Kosan Boka 73.98 73 *eP* **P 02 08 27.6 -1.3**
comp=N,86nm,1.5s,mb5.5
DBIC Dimbokro 74.06 72 *eP* **P 02 08 28.4 -0.9**
comp=N,7.5nm,0.6s,mb4.8
SDCO Great Sand Dun 74.54 333 *eP* **P 02 08 32.9 +1.3**
comp=N,33nm,2.3s,mb4.8
WUAZ Wupatki 75.17 328 *eP* **P 02 08 40.3 +5.0**
comp=N,14nm,0.6s,mb5.1
WUAZ *e*pP pP 02 09 08.0 +22
MVCO Mesa Verde 75.31 331 *eP* **P 02 08 40.5 +4.5**
comp=N,6.5nm,0.9s,mb4.6
SMCO Snowmass 76.36 333 *eP* **P 02 08 43.0 +1.0**
comp=N,7.9nm,0.8s,mb4.7
ISCO Idaho Springs 76.37 334 *eP* **P 02 08 44.3 +2.3**
comp=N,3.2nm,0.8s,mb4.3
MAW Mawson 76.75 164 LR LR 02 42 02.1
comp=N,133nm,18.2s,MS4.3,baz=74,slow=35
ECSD EROS Data Cent 77.01 342 *eP* **P 02 08 45.0 -0.6**
comp=N,9.5nm,0.8s,mb4.8
CCUT Cedar City 77.75 328 *eP* **P 02 08 54.8 +4.9**
comp=N,7.3nm,1.1s,mb4.5
MSU Marysvale 77.99 329 *eP* **P 02 08 55.8 +4.6**
comp=N,8.1nm,1.3s,mb4.5
RWWY Rawlins 78.61 334 *eP* **P 02 08 58.6 +4.1**
comp=N,14nm,1.0s,mb4.8
DUG Dugway 79.65 329 *eP* **P 02 09 04.4 +4.1**
comp=N,20nm,1.7s,mb4.8
HWUT Hardware Ranch 80.28 331 *eP* **P 02 09 03.6 0.0**
comp=N,6.9nm,0.9s,mb4.6
PDAR Pinedale Array 80.44 333 P **P 02 09 03.1 -1.3**
comp=N,0.5nm,0.4s,mb3.8,baz=180,slow=11,SNR=3.5
NVAR Mina Array Bea 80.82 325 P **P 02 09 06.2 -0.4**
comp=N,0.3nm,0.3s,mb3.7,baz=164,slow=31,SNR=2.2
ELK Elko 81.18 328 P **P 02 09 09.2 +0.7**
comp=N,2.5nm,0.9s,mb4.2,baz=158,slow=2.6,SNR=8.3
REDW Red Top Meadow 81.45 332 *eP* **P 02 09 12.7 +2.8**
comp=N,12nm,1.6s,mb4.6
TPAW Teton Pass 81.60 333 *eP* **P 02 09 14.1 +3.5**
comp=N,4.0nm,0.9s,mb4.3
RRI2 Red Ridge 81.63 332 *eP* **P 02 09 14.9 +4.2**
comp=N,14nm,1.6s,mb4.6
BOSA Boshof 81.84 118 LR LR 02 40 41.6
comp=N,118nm,18.3s,MS4.3,baz=356,slow=32
TORD Torodi Ar. Bea 82.99 70 P **P 02 09 17.8 -0.8**
comp=N,7.5nm,0.7s,mb4.8,baz=282,slow=5.5,SNR=117
TORD LR LR 02 44 53.9
comp=N,190nm,18.4s,MS4.5,baz=200,slow=35
HLID Hailey 83.09 330 P **P 02 09 19.7 +1.3**
comp=N,4.6nm,0.9s,mb4.5
MCMT McKenzie Canyo 83.47 332 *eP* **P 02 09 22.5 +2.1**
comp=N,3.2nm,1.1s,mb4.3
WALA Waterton Lakes 87.36 334 *eP* **P 02 09 43.3 +3.7**
comp=N,2.1nm,2.8s,mb3.9
ESDC Sonseca Array 94.03 46 LR LR 02 51 39.9
comp=N,76nm,19.1s,MS4.2,baz=295,slow=35
YKA Yellowknife Ar 98.53 341 P **P 02 10 29.8 -1.0**
comp=N,0.2nm,0.7s,mb3.8,baz=150,slow=4.8,SNR=3.6
YKA Yellowknife Ar 98.53 341 P **P 02 10 29.8 -1.0**
BVAR Borovoye Array 144.51 39 PKP PKPdf 02 16 27.2 -1.5
comp=N,0.8nm,0.5s,baz=307,slow=3.0,SNR=4.4
KURK Kurchatov 150.10 39 *e*PKPbc PKPbc 02 16 43.9 +0.8
EKS2 Erkin-Say 150.10 56 *e*PKPbc PKPbc 02 16 44.9 +1.4
AAK Ala-Archa 150.62 56 *e*PKPbc PKPbc 02 16 44.8 +0.1
UCH Uchtor 150.73 57 *e*PKPbc PKPbc 02 16 46.2 +1.2
ZAA0 Zalesovo Array 151.05 29 *e*PKPbc PKPbc 02 16 44.9 -0.4
ZALV Zalesovo Beam 151.05 29 PKPbc PKPbc 02 16 44.8 -0.6
comp=N,5.0nm,0.6s,baz=297,slow=3.2,SNR=14
TKM2 Tokmak 2 151.33 55 *e*PKPbc PKPbc 02 16 46.8 +0.4
KSH Kashi 152.35 62 PKPbc PKPbc 02 16 51.0 +2.2
KSH pPKP pPKPdf 02 17 01.1 +7.6
KSH sPKP 02 17 05.1
KSH PKS 02 20 23.1
KSH PP PP 02 20 46.3 +15
KSH SKS SKSdf 02 23 51.6 +5.1
KSH SKKS SKKSac 02 27 47.0 +28
KSH SS SS 02 40 53.0 +54
KSH AMB AMB
comp=Z,56nm,3.3s
KSH LR LR
comp=N,120nm,7.3s
KSH LR LR
comp=E,81nm,5.5s
KSH LR LR
comp=Z,140nm,6.3s
MK31 Makanchi Array 154.21 43 *e*PKPbc PKPbc 02 16 53.5 +0.9
MKAR Makanchi Array 154.21 43 PKPbc PKPbc 02 16 55.3 +2.6
comp=Z,0.4nm,0.2s,baz=51,slow=14,SNR=12
WMQ Urumqi 159.02 44 *e*PKP PKPdf 02 16 53.4 +2.7
CN2 Changchun 160.61 319 *e*PKP PKPdf 02 16 55.3 +2.8
HHC Hu-ho-hao-te 169.05 345 *e*PKP PKPdf 02 17 01.1 +1.2
HHC pPKP pPKPdf 02 17 11.9 +0.5
HHC sPKP 02 17 15.6
HHC PKS 02 20 33.0
HHC PP PP 02 22 05.9 +5.8
HHC SKS SKSdf 02 23 59.8 -1.0
HHC AMB AMB
comp=Z,45nm,7.6s
HHC LR LR
comp=N,81nm,23.5s
HHC LR LR
comp=E,130nm,22.9s
HHC LR LR
comp=Z,64nm,22.4s
NJ2 Nanjing 170.46 283 *e*PKP PKPdf 02 17 03.4 +2.4
KMI Kunming 173.11 137 PKP PKPdf 02 17 04.1 +1.6
KMI pPKP pPKPdf 02 17 14.9 +0.9
KMI sPKP 02 17 19.9
LZH Lanzhou 173.28 29 *e*PKP PKPdf 02 17 04.5 +2.3
LZH pPKP pPKPdf 02 17 15.3 +1.6
LZH sPKP 02 17 19.0
LZH PKPab PKPab 02 18 33.5 +3.2
LZH LR LR
comp=E,130nm,18.2s
LZH LR LR
comp=Z,180nm,20.1s
GYA Guiyang 176.03 164 *e*PKP PKPdf 02 17 04.8 +1.4
GYA pPKP pPKPdf 02 17 16.3 +1.4
GYA sPKP 02 17 21.4
GYA PKPab PKPab 02 18 46.3 +3.6
GYA PKS 02 20 35.8
GYA PP PP 02 22 40.0 +5.5
GYA AMB AMB
comp=Z,90nm,8.4s
CD2 Chengdu 176.36 79 PKP PKPdf 02 17 05.3 +2.0

*ISCJB **22** 02:10:52.2±1.2, 43°.48N±0°.04×127°.2W±0°.1, h15km±11km, mb3.5/3, MS3.4/5, Error ellipse: s-maj=12.9km s-min=6.1km az=161.2*
*NEIC **22** 02:10:52.7±1.1, 43°.39N×127°.17W, h10km, mb3.8/5, Error ellipse: s-maj=13.7km s-min=6.5km az=67.0*
*IDC **22** 02:10:59.3±3.2, 43°.59N×126°.12W, h0km, mb3.0/2, mb1 3.6/6, mb1mx3.4/27, mbtmp3.3/6, ML3.5/4, MS3.4/7, Ms1 3.3/7, ms1mx3.0/15, Error ellipse: s-maj=50.5km s-min=18.6km az=56.0*
ISC 22 02:10:53.7±1.4, 43°.44N±0°.04×127°.2W±0°.1, h16km±13km, n58, σ1°04/62, mb3.5/3, MS3.4/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.17**	**104**	P	**Pn**	**02 11 26.3**	**-2.7**
RNO	**Roman Nose**	**2.55**	**78**	P	**Pn**	**02 11 32.7**	**-1.6**
DBO	**Dodson Butte**	**2.90**	**95**	P	**Pn**	**02 11 37.2**	**-1.9**
COR	**Corvallis**	**3.03**	**66**	*e*Pn	**Pn**	**02 11 40.4**	**-0.5**
COR				*e*Sn	**Sn**	**02 12 16.9**	**+0.1**
HEBO	**Mount Hebo**	**3.04**	**53**	*e*Pn	**Pn**	**02 11 40.0**	**-1.0**
HEBO				*e*Sn	**Sn**	**02 12 18.3**	**+1.2**
HUMO	**Hull Mountain**	**3.21**	**104**	*e*Pn	**Pn**	**02 11 41.7**	**-1.8**
HUMO				*e*Sn	**Sn**	**02 12 22.1**	**+0.8**
BBOR	**Butler Butte**	**3.35**	**98**	P	**Pn**	**02 11 44.1**	**-1.2**
KMOR	**Kings Mountain**	**3.44**	**49**	P	**Pn**	**02 11 45.8**	**-0.8**
YBH	**Yreka Blue Hor**	**3.72**	**116**	Pn	**Pn**	**02 11 50.5**	**0.0**
	1.5nm,0.3s,baz=292,slow=13,SNR=21						
YBH				Lg		02 12 35.8	
	0.5nm,0.3s,baz=156,slow=12,SNR=2.4						
YBH	**Yreka Blue Hor**	**3.72**	**116**	*e*Pn	**Pn**	**02 11 50.4**	**0.0**
YBH				*e*Sn	**Sn**	**02 12 33.7**	**-0.2**
NLO	**Nicolai Mounta**	**3.76**	**44**	P	**Pn**	**02 11 50.6**	**-0.3**
GT2	**Goat Mountain**	**3.93**	**62**	P	**Pn**	**02 11 53.5**	**+0.2**
WIFE	**Three Sisters-**	**3.94**	**79**	P	**Pn**	**02 11 53.1**	**-0.4**
BKCOR	**Black Crater**	**4.07**	**76**	P	**Pn**	**02 11 55.1**	**0.0**
RVW	**Rose Valley**	**4.17**	**48**	P	**Pn**	**02 11 56.4**	**-0.2**
LVP	**Lakeview Peak**	**4.30**	**51**	P	**Pn**	**02 11 58.6**	**+0.2**
MTMW	**Mount Mitchell**	**4.39**	**52**	P	**Pn**	**02 11 59.5**	**-0.1**
HOOD	**Mount Hood Mea**	**4.39**	**63**	*e*Pn	**Pn**	**02 12 00.1**	**+0.5**
HOOD				*e*Sn	**Sn**	**02 12 48.7**	**-1.7**
FL2	**Flat Top 2**	**4.41**	**50**	P	**Pn**	**02 12 00.2**	**+0.3**
SHW	**Mount Saint He**	**4.47**	**50**	P	**Pn**	**02 12 01.1**	**+0.3**
CDFW	**Cedar Flats**	**4.54**	**52**	P	**Pn**	**02 12 01.8**	**+0.2**
TDL	**Tradedollar La**	**4.58**	**49**	P	**Pn**	**02 12 02.5**	**+0.3**
NLWA	**Neilton Lookou**	**4.59**	**29**	*e*Pn	**Pn**	**02 12 02.1**	**-0.3**
NLWA				*e*Sn	**Sn**	**02 12 55.6**	**+0.2**
ASR	**Mount Adams--S**	**4.82**	**54**	P	**Pn**	**02 12 06.1**	**+0.6**
GHW	**Garrison Hill**	**5.00**	**42**	P	**Pn**	**02 12 08.1**	**0.0**
LON	**Longmire**	**5.05**	**47**	P	**Pn**	**02 12 09.2**	**+0.5**
GNW	**Green Mountain**	**5.14**	**35**	*e*Pn	**Pn**	**02 12 09.0**	**-0.9**
	7.0nm,0.4s						
GNW				*e*Sn	**Sn**	**02 13 08.2**	**-0.7**
GL2	**New Goldendale**	**5.19**	**59**	P	**Pn**	**02 12 10.9**	**+0.3**
PGC	**Sidney**	**5.83**	**25**	*e*Pn	**Pn**	**02 12 19.2**	**-0.1**
PGC				*e*Sn	**Sn**	**02 13 23.6**	**-2.0**
JCW	**Jim Creek**	**6.01**	**36**	*e*Pn	**Pn**	**02 12 21.8**	**0.0**
JCW				*e*Sn	**Sn**	**02 13 32.3**	**+2.0**
RSW	**Rattlesnake Hi**	**6.15**	**59**	*e*Pn	**Pn**	**02 12 24.8**	**+1.0**
	8.8nm,0.4s						
HAWA	**Hanford**	**6.19**	**59**	*e*Pn	**Pn**	**02 12 24.7**	**+0.4**
	7.3nm,0.4s						
ETW	**Entiat**	**6.37**	**47**	*e*Pn	**Pn**	**02 12 27.7**	**+1.0**
	8.1nm,0.5s						
RPW	**Rockport**	**6.38**	**36**	*e*Pn	**Pn**	**02 12 26.9**	**-0.1**
	5.8nm,0.3s						
RPW				*e*Sn	**Sn**	**02 13 39.2**	**-0.3**
NEW	**Newport**	**8.52**	**52**	*e*Pn	**Pn**	**02 12 53.5**	**-2.8**
	9.1nm,0.9s						
ELK	**Elko**	**9.29**	**103**	Pn	**Pn**	**02 13 09.1**	**+2.3**
	0.1nm,0.3s,baz=269,slow=14,SNR=2.6						
BSMT	**Bassoo Peak**	**9.74**	**59**	*e*Pn	**Pn**	**02 13 14.8**	**+1.8**
	8.1nm,1.2s						
MSO	**Missoula**	**9.96**	**66**	*e*Pn	**Pn**	**02 13 15.8**	**-0.2**
	4.3nm,0.9s						
YBMT	**Yellow Bay**	**10.23**	**60**	*e*Pn	**Pn**	**02 13 20.2**	**+0.5**
	5.6nm,1.0s						
CHMT	**Chamberlain Mo**	**10.44**	**66**	*e*Pn	**Pn**	**02 13 22.4**	**-0.1**
	1.5nm,0.8s						
WALA	**Waterton Lakes**	**10.77**	**54**	*e*Pn	**Pn**	**02 13 28.4**	**+1.2**
	0.2nm,0.7s						
BOZ	**Bozeman (W)**	**11.33**	**73**	*e*Pn	**Pn**	**02 13 35.8**	**+1.1**
	4.0nm,1.1s						
PDAR	**Pinedale Array**	**12.91**	**87**	Pn	**Pn**	**02 13 56.7**	**+0.3**
	0.1nm,0.3s,baz=283,slow=14,SNR=7.4						
PDAR				LR	LR	02 18 55.0	
	comp=Z,154nm,21.9s,baz=344,slow=39						
DLBC	**Dease Lake**	**15.12**	**354**	LR	LR	02 19 37.3	
	comp=Z,72nm,21.4s,baz=137,slow=34						
PHWY	**Pilot Hill**	**16.20**	**90**	*e*P	**Pn**	**02 14 44.7**	**+4.2**
	8.8nm,0.6s						
ISCO	**Idaho Springs**	**16.53**	**95**	*e*P	**Pn**	**02 14 47.0**	**+2.3**
	2.7nm,0.9s						
ANMO	**Albuquerque**	**18.13**	**111**	P	**Pn**	**02 15 05.5**	**+0.8**
	0.1nm,0.3s,baz=296,slow=13,SNR=2.9						
FFC	**Flin Flon**	**19.89**	**47**	*e*P	**Pn**	**02 15 23.3**	**-2.4**
	4.8nm,0.9s						
YKA	**Yellowknife Ar**	**20.47**	**17**	P	**P**	**02 15 33.0**	**+2.7**
	1.3nm,0.7s,baz=208,slow=11,SNR=14						
YKA	**Yellowknife Ar**	**20.47**	**17**	P	**P**	**02 15 33.0**	**+2.7**
ECSD	**EROS Data Cent**	**22.09**	**79**	*e*P	**P**	**02 15 47.9**	**-0.1**
	3.1nm,0.8s,mb3.8						
TXAR	**Lajitas Array**	**23.49**	**119**	P	**P**	**02 16 02.8**	**0.0**
	0.3nm,0.8s,mb2.8,baz=292,slow=6.6,SNR=3.9						
BPAW	**Bear Paw Mtn.**	**24.74**	**335**	*e*P	**P**	**02 16 13.7**	**-0.2**
	2.4nm,0.8s,mb3.8						
INK	**Inuvik**	**25.15**	**354**	LR	LR	02 25 50.7	
	comp=Z,87nm,18.2s,MS3.3,baz=218,slow=36						
TKL	**Tuckaleechee C**	**34.06**	**88**	LR	LR	02 32 04.7	
	comp=Z,95nm,19.7s,MS3.5,baz=288,slow=38						
SADO	**Sadowa**	**34.13**	**71**	LR	LR	02 31 50.4	
	comp=Z,91nm,18.3s,MS3.5,baz=217,slow=38						
RES	**Resolute Bay**	**34.50**	**15**	LR	LR	02 31 45.1	
	comp=Z,58nm,18.2s,MS3.4,baz=268,slow=36						
SCHQ	**Schefferville**	**39.89**	**52**	LR	LR	02 33 27.2	
	comp=Z,23nm,19.5s,MS3.0,baz=145,slow=34						

*IDC **22** 02:25:46.9±5.8, 36°.23N×71°.22E, h59km±44km, mb3.4/6, mb1 3.6/10, mb1mx3.3/26, mbtmp3.5/10, ML3.3/3, MS4.0/1, Ms1 4.0/1, ms1mx2.4/26, Error ellipse: s-maj=53.0km s-min=32.3km az=142.0*
*ISCJB **22** 02:25:51.0±0.5, 36°.54N±0°.04×71°.20E±0°.08, h108km±8km, mb3.5/6, Error ellipse: s-maj=10.8km s-min=5.5km az=19.8*
*NEIC **22** 02:25:51.6±1.0, 36°.50N×71°.29E, h97km±10km, mb3.7/1, Error ellipse: s-maj=17.4km s-min=9.2km az=129.0*
*NNC **22** 02:25:54.7±6.0, 36°.84N×70°.83E, h118km±97km, mb3.0, mpv3.9, Error ellipse: s-maj=48.0km s-min=33.1km az=23.0*
ISC 22 02:25:52.4±0.4, 36°.51N±0°.04×71°.23E±0°.08, h105km±7km, n36, σ0°93/44, mb3.5/6, 7C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.66**	**223**	*e*Pn	**Pn**	**02 26 33.6**	**0.0**
KBL				*e*S	**Sn**	**02 27 06.3**	**+1.0**
CEP	**Cherat**	**2.74**	**168**	⇑P	**Pn**	**02 26 34.4**	**-0.4**
CEP				S	**Sn**	**02 27 07.0**	**-0.4**
CHCP	**Chirah Chowk**	**3.30**	**149**	P	**Pn**	**02 26 42.5**	**+0.2**
KSH	**Kashi**	**4.80**	**50**	Pn	**Pn**	**02 26 57.3**	**-5.0**
KSH				Sn	**Sn**	**02 27 45.0**	**-12**
KSH				smax			
	comp=N,480nm,0.4s						
KSH				smax			
	comp=E,220nm,0.4s						
AML	**Almayashu**	**5.93**	**18**	P	**Pn**	**02 27 18.4**	**+0.8**
	SNR=25						
UCH	**Uchtor**	**6.25**	**23**	P	**Pn**	**02 27 22.2**	**+0.3**
	SNR=14						
KZA	**Kyzart**	**6.37**	**28**	P	**Pn**	**02 27 24.1**	**+0.4**
	SNR=5.6						
EKS2	**Erkin-Say**	**6.45**	**17**	P	**Pn**	**02 27 25.8**	**+1.1**
	SNR=9.3						
KK01	**Karatay Array**	**6.61**	**355**	⇑P	**Pn**	**02 27 25.5**	**-1.3**
	comp=E,4.0nm,0.3s,baz=183,slow=14						
KK01				⇑S	**Sn**	**02 28 35.8**	**-4.8**
	comp=E,5.4nm,0.3s,baz=189,slow=23						
AAK	**Ala-Archa**	**6.61**	**21**	P	**Pn**	**02 27 27.4**	**+0.5**
	SNR=6.7						
AAK	**Ala-Archa**	**6.61**	**21**	P	**Pn**	**02 27 26.9**	**0.0**
	comp=E,0.0nm,0.3s,baz=183,slow=6.9,SNR=17						
AAK				S	**Sn**	**02 28 42.4**	**+1.7**
	comp=E,0.0nm,0.3s,baz=343,slow=20,SNR=10						
AAK	**Ala-Archa**	**6.61**	**21**	*e*Pn	**Pn**	**02 27 27.0**	**+0.1**
AAK				*e*S	**Sn**	**02 28 41.9**	**+1.1**
CHMS	**Chumysh**	**7.02**	**22**	P	**Pn**	**02 27 32.2**	**-0.3**
	SNR=6.9						
USP	**Ospenovka**	**7.20**	**19**	P	**Pn**	**02 27 35.7**	**+0.8**
	SNR=5.4						
TKM2	**Tokmak 2**	**7.23**	**26**	⇑P	**Pn**	**02 27 35.0**	**-0.2**
	comp=E,8.1nm,1.0s						
TKM2				⇑S	**Sn**	**02 28 55.4**	**-0.4**
	comp=E,7.2nm,1.1s						
TKM2	**Tokmak 2**	**7.23**	**26**	P	**Pn**	**02 27 35.4**	**+0.1**
	SNR=11						
MK31	**Makanchi Array**	**13.17**	**35**	*e*Pn	**Pn**	**02 28 54.5**	**-0.7**
MKAR	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**02 28 54.2**	**-1.0**
	comp=E,0.1nm,0.3s,baz=217,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**13.17**	**35**	P	**Pn**	**02 28 54.2**	**-1.0**
KURK	**Kurchatov**	**15.16**	**18**	P	**Pn**	**02 29 20.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=5.0						
AB31	**Akbulak array**	**15.16**	**331**	P	**Pn**	**02 29 17.9**	**-2.8**
	comp=E,0.3nm,0.3s,baz=156,slow=12,SNR=29						
AB31				⇑S	**S**	**02 31 58.9**	**-19**
	comp=E,1.9nm,0.6s,baz=155,slow=23,SNR=7.1						
AKTK	**Aktyubinsk**	**16.86**	**330**	P	**Pn**	**02 29 40.7**	**-1.0**
AKTO	**Aktyubinsk**	**16.86**	**330**	⇓P	**Pn**	**02 29 38.0**	**-3.8**
	comp=E,0.3nm,0.7s						
AKTO				⇑S	**S**	**02 32 40.2**	**-10**
	comp=E,0.3nm,0.8s						
AKTO	**Aktyubinsk**	**16.86**	**330**	P	**Pn**	**02 29 40.7**	**-1.0**
	comp=E,0.2nm,0.3s,baz=143,slow=14,SNR=8.7						
ZAA0	**Zalesovo Array**	**19.83**	**24**	*e*P	**P**	**02 30 14.1**	**-0.4**
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**02 30 13.8**	**-0.7**
	comp=E,4.2nm,0.6s,baz=228,slow=11,SNR=7.2						
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**02 30 13.8**	**-0.7**
FINES	**FINESS Array B**	**37.58**	**326**	P	**P**	**02 32 57.3**	**+1.1**
	comp=E,0.5nm,0.6s,mb3.5,baz=238,slow=36,SNR=4.0						
ARCES	**ARCESS Array B**	**41.20**	**338**	P	**P**	**02 33 27.7**	**+1.6**
	comp=E,1.1nm,0.6s,mb3.9,baz=115,slow=8.7,SNR=10						
NB2	**NORSAR Subarra**	**44.48**	**323**	P	**P**	**02 33 53.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.3,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.48**	**323**	P	**P**	**02 33 53.7**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.4,baz=97,slow=7.7,SNR=4.8						
NOA	**NORSAR Array B**	**44.48**	**323**	P	**P**	**02 33 53.7**	**+1.0**
CBIJ	**Chichi jima**	**59.82**	**77**	LR	LR	03 02 19.6	
	comp=Z,136nm,21.8s,baz=192,slow=37						
TORD	**Torodi Ar. Bea**	**65.90**	**269**	P	**P**	**02 36 26.4**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.3,baz=46,slow=6.6,SNR=6.4						
YKA	**Yellowknife Ar**	**81.22**	**3**	P	**P**	**02 37 57.9**	**+1.8**
	comp=Z,0.4nm,0.6s,mb3.5,baz=350,slow=5.4,SNR=9.9						
WRAB	**Tennant Creek**	**81.84**	**122**	*e*P	**P**	**02 37 59.7**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.7						

*ISCJB **22** 02:34:17.4±1.0, 31°.33N±0°.03×103°.58E±0°.05, h11km±7km, mb3.9/12, MS3.0/2, Error ellipse: s-maj=7.5km s-min=5.4km az=167.5*
*BJI **22** 02:34:17.9, 31°.39N×103°.60E, h13km, mB4.3/2, mb4.1/4, ML4.0/17, Ms3.9/9, Ms7 3.7/8*
*IDC **22** 02:34:18.0±0.9, 31°.26N×103°.67E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/26, mbtmp3.9/13, ML4.2/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/25, Error ellipse: s-maj=29.7km s-min=18.1km az=48.0*
*NEIC **22** 02:34:19.4±0.5, 31°.26N×103°.69E, h10km, mb4.3/2, Error ellipse: s-maj=14.0km s-min=8.9km az=57.0*
*MOS **22** 02:34:20.4±1.2, 31°.21N×103°.70E, h33km, mb4.1/9, Error ellipse: s-maj=21.1km s-min=10.5km az=107.3*
ISC 22 02:34:18.9±0.9, 31°.30N±0°.03×103°.55E±0°.05, h8km±6km, n43, σ1°32/52, mb3.9/13, MS3.0/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**155**	Pg	**Pg**	**02 34 26.8**	**-0.5**
CD2				Sg	**Sg**	**02 34 34.3**	**+1.4**
CD2				smax			
	comp=N,42μm,0.4s						
LZH	**Lanzhou**	**4.78**	**3**	Pg	**Pn**	**02 35 39.4**	**+8.2**
LZH				Sg	**Sg**	**02 36 51.5**	**-0.9**
LZH				smax			
	comp=N,200nm,0.9s						
LZH				smax			
	comp=E,190nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,9.0s						
ENH	**Enshi**	**5.21**	**100**	*e*Pn	**Pn**	**02 35 36.6**	**-0.6**
	comp=Z,97nm,0.7s						
XAN	**Xi'an**	**5.29**	**57**	Pn	**Pn**	**02 35 37.4**	**-0.8**
XAN				Pg	**Pg**	**02 35 53.8**	**-6.4**
XAN				Sn	**Sn**	**02 36 35.9**	**-3.4**
XAN				Sg	**Sg**	**02 36 58.9**	**-10**
XAN				smax			
	comp=N,250nm,0.9s						
XAN				smax			
	comp=E,100nm,0.9s						
GYA	**Guiyang**	**5.54**	**150**	Pn	**Pn**	**02 35 45.8**	**+4.0**
GYA				Sn	**Sn**	**02 36 47.9**	**+2.2**
GYA				smax			
	comp=N,250nm,0.9s						
GYA				smax			
	comp=E,250nm,0.9s						
GYA				LR	LR		
	comp=N,390nm,4.5s						
GYA				LR	LR		
	comp=E,250nm,6.2s						
GYA				LR	LR		
	comp=Z,340nm,5.6s						
KMI	**Kunming**	**6.20**	**187**	Pn	**Pn**	**02 35 50.8**	**+0.1**
KMI				Sn	**Sn**	**02 37 01.1**	**-0.7**
KMI				smax			
	comp=N,57nm,1.4s						
KMI				smax			
	comp=E,51nm,1.3s						
KMI				LR	LR		
	comp=N,420nm,10.6s						
KMI				LR	LR		
	comp=E,1μm,11.9s						
KMI				LR	LR		
	comp=Z,600nm,10.8s						
GTA	**Gaotai**	**8.65**	**340**	*e*P	**Pn**	**02 36 27.0**	**+2.7**
GTA				pP		02 36 34.5	
GTA				sP		02 36 37.9	
GTA				S	**Sn**	**02 37 57.8**	**-4.2**
GTA				sS		02 38 10.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,50nm,5.6s						
GTA				LR	LR		
	comp=N,160nm,11.3s						
GTA				LR	LR		
	comp=E,250nm,7.7s						
GTA				LR	LR		
	comp=Z,240nm,7.4s						
WHN	**Wuhan**	**9.31**	**92**	P	**Pn**	**02 36 27.6**	**-5.8**
WHN				S	**Sn**	**02 38 12.1**	**-6.2**
WHN				LR	LR		
	comp=N,880nm,7.7s						
WHN				LR	LR		
	comp=E,1μm,6.9s						
WHN				LR	LR		
	comp=Z,880nm,7.6s						
CMAR	**Chiang Mai Arr**	**13.45**	**199**	Pn	**Pn**	**02 37 30.9**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=16,slow=12,SNR=4.4						
CMAR	**Chiang Mai Arr**	**13.45**	**199**	P	**Pn**	**02 37 30.9**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GUN	**Gumba**	**15.74**	**262**	*e*P	**Pn**	**02 37 59.3**	**-1.7**
	comp=Z,25nm,0.7s						
PKI	**Pulchoki**	**16.24**	**261**	*e*P	**Pn**	**02 38 05.6**	**-1.8**
	comp=Z,20nm,0.6s						
PKIN	**Phulchoki**	**16.24**	**261**	*e*Pn	**Pn**	**02 38 04.9**	**-2.6**
	comp=Z,12nm,0.4s						
KKN	**Kakani**	**16.28**	**262**	*e*P	**Pn**	**02 38 05.9**	**-2.1**
	comp=Z,46nm,0.9s						
DMN	**Daman**	**16.48**	**262**	*e*P	**Pn**	**02 38 08.7**	**-1.8**
	comp=Z,51nm,0.9s						
SONM	**Songino Array**	**16.66**	**7**	Pn	**Pn**	**02 38 13.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=8.8						
ZAK	**Zakamensk**	**19.06**	**359**	*e*P	**Pn**	**02 38 43.4**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	**Korea Array**	**21.00**	**66**	P	**P**	**02 39 02.7**	**-0.2**
	comp=Z,6.0nm,0.8s,mb4.0,baz=259,slow=10.0,SNR=17						
KSRS	**Korea Array**	**21.00**

comp=Z,0.8nm,0.4s,mb3.9,baz=268,slow=39,SNR=3.8
BVAR LR LR 02 55 37.0
comp=Z,26nm,21.3s,MS2.9,baz=19,slow=39
BVAR Borovoye Array 32.34 322 P P 02 40 49.6 +1.1
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR MLR MLR
comp=Z,27nm,21.3s
AKTK Aktyubinsk 38.66 313 P P 02 41 42.9 +0.1
AKTO Aktyubinsk 38.66 313 P P 02 41 42.9 +0.1
comp=Z,0.6nm,0.5s,mb3.5,baz=139,slow=4.0,SNR=3.7
AKTO Aktyubinsk 38.66 313 P P 02 41 42.9 +0.1
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
FINES FINESS Array B 57.14 326 P P 02 44 05.8 0.0
comp=Z,1.0nm,0.7s,mb4.0,baz=181,slow=32,SNR=3.0
FINES FINESS Array B 57.14 326 P P 02 44 05.8 0.0
FINES pmax pmax
comp=Z,1.0nm,0.7s
WRAB Tennant Creek 58.90 146 *eP* **P 02 44 16.5 -2.0**
WRAB pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
WRAB Tennant Creek 58.90 146 *eP* **P 02 44 16.5 -2.1**
comp=Z,5.1nm,0.9s,mb4.5
ASAR Alice Springs 61.91 148 *eP* **P 02 44 38.2 -0.8**
comp=Z,0.8nm,0.5s,mb4.1,baz=342,slow=6.5,SNR=11
ASAR Alice Springs 61.91 148 P **P 02 44 38.3 -0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 67.07 314 P **P 02 45 14.9 +2.2**
comp=Z,0.2nm,0.5s,mb3.4,baz=348,slow=12,SNR=2.8
YKA Yellowknife Ar 81.64 17 P **P 02 46 38.3 +1.1**
comp=Z,0.4nm,0.6s,mb3.5,baz=326,slow=5.1,SNR=8.4

DJA 22 02:54:15.1±82.N×99.06E, h10km, MLv3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.23**	**334**	P	Pg	02 54 20.3	+0.6
TRSI				S	Sg	02 54 25.5	+2.6
MNSI	**Mandailing Nat**	**1.14**	**153**	P	Pb	02 54 33.7	-3.2
MNSI				S	Sb	02 54 50.8	-1.0
GSI	**Gunungsitoli**	**1.57**	**251**	P	Pn	02 54 41.6	-1.3
GSI				S	Sn	02 55 05.4	+2.0
BKNI	**Bangkinang**	**2.47**	**127**	P	Pn	02 54 56.9	+1.5
BKNI				S	Sn	02 55 29.0	+3.3
PPI	**Padang Panjang**	**2.63**	**149**	P	Pn	02 54 57.1	-0.4
IPM	**Ipoh**	**3.29**	**37**	P	Px	02 55 21.5	

*ISCJB **22** 02:55:20.4±0.8, 37.46N±0.07×71.9E±0.1, h124km±9km, mb3.6/5, Error ellipse: s-maj=20.0km s-min=6.1km az=33.3*
*NEIC **22** 02:55:21.7±1.1, 37.51N×71.78E, h116km±12km, mb4.2/5, Error ellipse: s-maj=25.4km s-min=10.9km az=127.0*
*NNC **22** 02:55:23.4±4.7, 37.65N×71.48E, h106km±85km, mb3.3, mpv3.8, Error ellipse: s-maj=39.2km s-min=25.6km az=3.0*
*IDC **22** 02:55:24.6±6.5, 37.68N×71.89E, h135km±39km, mb3.3/5, mb1 3.4/9, mb1mx3.2/26, mbtmp3.4/9, Error ellipse: s-maj=66.2km s-min=28.2km az=155.0*
ISC 22 02:55:22.1±0.8, 37.51N±0.07×71.7E±0.1, h118km±8km, n35, σ1§06/47, mb3.6/5, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.68**	**217**	*e*Pn	**Pn**	**02 56 16.8**	**-0.6**
KBL				*e*Sn	**Sn**	**02 57 00.0**	**-0.1**
KSH	**Kashi**	**3.88**	**58**	Pn	**Pn**	**02 56 14.8**	**-5.1**
KSH				Sn	**Sn**	**02 56 54.4**	**-10**
KSH				smax			
KSH	comp=N,880nm,0.4s			smax			
	comp=E,760nm,0.4s						
AML	**Almayashu**	**4.85**	**17**	P	**Pn**	**02 56 33.2**	**+0.2**
AML	SNR=31			*e*Pn	**Sn**	**02 56 33.3**	**+0.3**
AML	**Almayashu**	**4.85**	**17**	*e*Sn	**Sn**	**02 57 23.8**	**-4.3**
AML				P	**Pn**	**02 56 37.6**	**+0.3**
UCH	**Uchtor**	**5.17**	**23**	*e*Pn	**Pn**	**02 56 37.5**	**+0.2**
UCH	**Uchtor**	**5.17**	**23**				
UCH	SNR=9.1			*e*Sg	**Sn**	**02 57 34.5**	**-1.3**
KZA	**Kyzart**	**5.30**	**30**	P	**Pn**	**02 56 39.3**	**+0.3**
EKS2	**Erkin-Say**	**5.38**	**16**	P	**Pn**	**02 56 40.9**	**+0.9**
EKS2	**Erkin-Say**	**5.38**	**16**	*e*Pn	**Pn**	**02 56 39.5**	**-0.5**
EKS2				*e*Sg	**Sn**	**02 57 41.3**	**+0.6**
AAK	**Ala-Archa**	**5.54**	**22**	P	**Pn**	**02 56 42.9**	**+0.7**
AAK	**Ala-Archa**	**5.54**	**22**	P	**Pn**	**02 56 42.9**	**+0.7**
AAK				S	**Sn**	**02 57 43.5**	**-1.1**
AAK	**Ala-Archa**	**5.54**	**22**	*e*Pn	**Pn**	**02 56 42.8**	**+0.6**
AAK				*e*Sg	**Sn**	**02 57 45.6**	**+1.1**
KK01	**Karatay Array**	**5.67**	**351**	⇑P	**Pn**	**02 56 43.9**	**-0.1**
KK01				⇑S	**Sn**	**02 57 45.2**	**-2.5**
ULHL	**Ulahol**	**5.86**	**35**	P	**Pn**	**02 56 46.8**	**+0.3**
CHMS	**Chumysh**	**5.95**	**22**	P	**Pn**	**02 56 48.0**	**+0.3**
USP	**Ospenovka**	**6.12**	**19**	P	**Pn**	**02 56 49.9**	**-0.2**
TKM2	**Tokmak 2**	**6.16**	**27**	⇑P	**Pn**	**02 56 50.7**	**+0.1**
TKM2				⇓S	**Sn**	**02 58 00.8**	**+1.2**
TKM2	**Tokmak 2**	**6.16**	**27**	P	**Pn**	**02 56 51.0**	**+0.5**
TKM2	**Tokmak 2**	**6.16**	**27**	*e*Pn	**Pn**	**02 56 50.9**	**+0.4**
SMLA	**Simla**	**7.79**	**143**	*i* P	**Pn**	**02 57 05.8**	**-7.0**
SMLA				*i* S	**Sn**	**02 58 22.9**	**-16**
SMLA				*i* S	**Sn**	**02 58 24.3**	**-15**
SMLA				*ex*	x	02 58 30.4	
	comp=N,724nm,0.3s						
SMLA				*ex*	x	02 58 30.5	
	comp=E,704nm,0.3s						
KURK	**Kurchatov**	**14.09**	**18**	P	**Pn**	**02 58 33.5**	**-2.7**
	comp=E,0.0nm,0.3s,baz=210,slow=13,SNR=2.6						
AB31	**Akbulak array**	**14.52**	**328**	⇑P	**Pn**	**02 58 39.0**	**-2.7**
	comp=E,1.3nm,0.5s,baz=144,slow=12,SNR=41						
ABKAR	**Akbulak array**	**14.52**	**328**	*e*Pn	**Pn**	**02 58 39.1**	**-2.6**
	comp=E,1.6nm,0.4s						
ABKAR				*e*Sn	**Sn**	**03 01 06.6**	**-15**
AKTK	**Aktyubinsk**	**16.23**	**327**	P	**Pn**	**02 59 04.2**	**+1.2**
AKTO	**Aktyubinsk**	**16.23**	**327**	⇑P	**Pn**	**02 59 03.9**	**+0.8**
	comp=E,1.5nm,0.6s						
AKTO	**Aktyubinsk**	**16.23**	**327**	P	**Pn**	**02 59 04.2**	**+1.2**
	comp=E,2.7nm,0.3s,baz=137,slow=9.2,SNR=43						
ZALV	**Zalesovo Beam**	**18.75**	**25**	P	**P**	**02 59 30.7**	**-1.0**
	comp=E,0.6nm,0.3s,baz=146,slow=30,SNR=4.1						
ZALV	**Zalesovo Beam**	**18.75**	**25**	P	**P**	**02 59 30.7**	**-1.0**
BRTR	**Keskin Array B**	**29.71**	**286**	P	**P**	**03 01 18.4**	**+1.5**
	comp=E,0.4nm,0.4s,mb3.4,baz=108,slow=8.2,SNR=4.2						
BRTR	**Keskin Array B**	**29.71**	**286**	P	**P**	**03 01 18.4**	**+1.5**
FINES	**FINESS Array B**	**36.98**	**325**	P	**P**	**03 02 20.1**	**+0.4**
	comp=E,0.9nm,0.4s,mb4.1,baz=110,slow=8.6,SNR=10						
ARCES	**ARCESS Array B**	**40.44**	**337**	P	**P**	**03 02 48.5**	**0.0**
	comp=E,1.3nm,0.8s,mb3.8,baz=108,slow=7.8,SNR=6.4						
NB2	**NORSAR Subarra**	**43.94**	**322**	P	**P**	**03 03 16.7**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.5,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.94**	**322**	P	**P**	**03 03 16.9**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=94,slow=7.7,SNR=5.3						
YKA	**Yellowknife Ar**	**80.21**	**3**	P	**P**	**03 07 18.8**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.2,baz=349,slow=5.4,SNR=6.7						

*ISCJB **22** 03:10:16.5±0.6, 36.91N±0.03×29.36E±0.04, h8km±5km, Error ellipse: s-maj=6.5km s-min=4.7km az=141.5*
*CSEM **22** 03:10:16.4±0.1, 36.91N×29.34E, h8km, MD3.0, Error ellipse: s-maj=3.8km s-min=2.7km az=158.0*
*DDA **22** 03:10:16.2, 36.96N×29.33E, h7km±5km, Md3.1*
*ISK **22** 03:10:16.0, 36.93N×29.31E, h6km, MD3.0*
ISC 22 03:10:16.7±0.6, 36.92N±0.04×29.35E±0.04, h9km±5km, n35, σ1§59/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**27**	*e*PG	**Pg**	**03 10 21.7**	**-0.4**
GLHS				*e*SG	**Sg**	**03 10 26.2**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.27**	**27**	*e*Pg	**Pg**	**03 10 21.7**	**-0.4**
GLHS				*e*Sg	**Sg**	**03 10 26.2**	**+0.4**
FETY	**Fethiye**	**0.35**	**217**	*e*PG	**Pg**	**03 10 23.0**	**-0.6**
FETY				*e*SG	**Sg**	**03 10 28.6**	**+0.4**
FETY	**Fethiye**	**0.35**	**217**	*e*Pg	**Pg**	**03 10 23.0**	**-0.6**
FETY				*e*Sg	**Sg**	**03 10 28.7**	**+0.5**
ELL	**Elmali**	**0.48**	**110**	*e*PG	**Pg**	**03 10 26.6**	**+0.5**
ELL	**Elmali**	**0.48**	**110**	*e*Pg	**Pg**	**03 10 26.6**	**+0.5**
TURN	**Turunc**	**0.60**	**266**	*i* P	**Pg**	**03 10 31.9**	**+3.6**
TURN				*i* S	**Sg**	**03 10 44.0**	**+8.0**
TURN	**Turunc**	**0.60**	**266**	*i* P	**Pg**	**03 10 31.9**	**+3.6**
AKAS	**Kas**	**0.71**	**163**	*i* P	**Pg**	**03 10 30.5**	**+0.1**
YER	**Yerkesik**	**0.88**	**285**	*e*PG	**Pg**	**03 10 32.7**	**-0.9**
YER	**Yerkesik**	**0.88**	**285**	*e*Pg	**Pg**	**03 10 32.7**	**-0.9**
ANTB	**Antalya**	**1.05**	**90**	*e*PN	**Pn**	**03 10 36.5**	**-1.1**
ANTB	**Antalya**	**1.05**	**90**	*e*Pn	**Pn**	**03 10 36.5**	**-1.2**
BCK	**Bucak**	**1.13**	**61**	*e*PN	**Pn**	**03 10 38.5**	**-0.3**
BCK	**Bucak**	**1.13**	**61**	*e*Pn	**Pn**	**03 10 38.5**	**-0.3**
MLSB	**Milas**	**1.31**	**287**	*e*PN	**Pn**	**03 10 40.7**	**-0.6**
MLSB	**Milas**	**1.31**	**287**	*e*Pn	**Pn**	**03 10 40.7**	**-0.6**
AYDN	**Tasoluk**	**1.39**	**303**	*i* P	**Pn**	**03 10 41.7**	**-0.6**
AYDN				*i* S	**Sb**	**03 11 00.6**	**0.0**
AYDN	**Tasoluk**	**1.39**	**303**	*i* P	**Pn**	**03 10 41.7**	**-0.6**
AYDN				*i* S	**Sb**	**03 11 00.6**	**-0.1**
KHL	**Karahalli**	**1.41**	**6**	*e*PN	**Pn**	**03 10 42.8**	**+0.1**
KHL	**Karahalli**	**1.41**	**6**	*e*Pn	**Pn**	**03 10 42.8**	**+0.1**
DAT	**Datca**	**1.43**	**263**	*e*PN	**Pn**	**03 10 42.5**	**-0.4**
DAT	**Datca**	**1.43**	**263**	*e*Pn	**Pn**	**03 10 42.6**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.44**	**67**	*e*PN	**Pn**	**03 10 43.6**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.44**	**67**	*e*Pn	**Pn**	**03 10 43.6**	**+0.6**
KHAL	**Karahalli**	**1.46**	**5**	*i* P	**Pn**	**03 10 43.6**	**+0.3**
KHAL				*i* S	**Sn**	**03 11 02.5**	**-0.1**
KHAL	**Karahalli**	**1.46**	**5**	*i* P	**Pn**	**03 10 43.6**	**+0.3**
KHAL				*i* S	**Sn**	**03 11 02.5**	**0.0**
BDRM	**Kayabasi**	**1.53**	**276**	*i* P	**Pn**	**03 10 44.8**	**+0.6**
BDRM				*i* S	**Sn**	**03 11 05.2**	**+0.9**
BDRM	**Kayabasi**	**1.53**	**276**	*i* P	**Pn**	**03 10 44.8**	**+0.5**
BDRM				*i* S	**Sn**	**03 11 05.2**	**+0.9**
KULA	**Kula-Manisa**	**1.69**	**341**	*e*PN	**Pn**	**03 10 46.3**	**-0.2**
KULA	**Kula-Manisa**	**1.69**	**341**	*e*Pn	**Pn**	**03 10 46.3**	**-0.1**
SHUT	**Suhut-Afyon**	**1.89**	**30**	*e*PN	**Pn**	**03 10 49.5**	**+0.2**
SHUT	**Suhut-Afyon**	**1.89**	**30**	*e*Pn	**Pn**	**03 10 49.5**	**+0.2**
ALT	**Altintas**	**2.22**	**16**	*e*PN	**Pn**	**03 10 54.1**	**+0.3**
ALT	**Altintas**	**2.22**	**16**	*e*Pn	**Pn**	**03 10 54.1**	**+0.3**

*ISCJB **22** 03:25:31.2±0.6, 35.73N±0.06×81.67E±0.07, h10km, mb3.8/14, Error ellipse: s-maj=10.0km s-min=6.8km az=37.5*
*IDC **22** 03:25:31.4±0.9, 35.66N×81.64E, h0km, mb3.7/12, mb1 3.9/16, mb1mx3.8/26, mbtmp3.8/16, ML3.7/4, MS3.0/4, Ms1 3.0/4, ms1mx2.6/39, Error ellipse: s-maj=25.1km s-min=15.2km az=37.0*
*NEIC **22** 03:25:33.1±0.8, 35.74N×81.74E, h10km, mb3.5/3, Error ellipse: s-maj=12.2km s-min=11.0km az=207.0*
*MOS **22** 03:25:34.9±1.3, 35.82N×81.61E, h33km, mb4.1/10, Error ellipse: s-maj=15.3km s-min=7.6km az=105.7*
*BJI **22** 03:25:36.1, 36.15N×81.66E, h13km, ML4.0/7*
ISC 22 03:25:32.8±0.6, 35.65N±0.06×81.71E±0.07, h10km, n53, σ1§07/56, mb3.8/14, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.97**	**312**	*e*Pn	**Pn**	**03 27 01.3**	**+0.2**
KSH				Sn	**Sn**	**03 28 02.8**	**-6.7**
KSH				smax			
KSH	comp=N,400nm,1.1s			smax			
	comp=E,730nm,1.2s						
UCH	**Uchtor**	**8.63**	**322**	*e*Pn	**Pn**	**03 27 38.0**	**+0.4**
	comp=E,15nm,0.8s						
TKM2	**Tokmak 2**	**8.67**	**329**	*e*P	**Pn**	**03 27 40.2**	**+2.1**
TKM2				*e*		03 29 17.0	
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TKM2	**Tokmak 2**	**8.67**	**329**	*e*Pn	**Pn**	**03 27 40.2**	**+2.1**
	comp=Z,8.0nm,0.6s						
TKM2				*e*Sn	**Sn**	**03 29 17.0**	**+1.1**
AAK	**Ala-Archa**	**8.94**	**323**	LR	LR	03 30 54.5	
	comp=Z,30nm,19.7s,baz=150,slow=36						
AAK	**Ala-Archa**	**8.94**	**323**	*e*P	**Pn**	**03 27 41.8**	**-0.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	**Ala-Archa**	**8.94**	**323**	*e*Pn	**Pn**	**03 27 41.8**	**-0.1**
	comp=Z,10nm,0.8s						
AML	**Almayashu**	**8.99**	**318**	*e*Pn	**Pn**	**03 27 43.7**	**+1.1**
	comp=Z,23nm,0.8s						
AML				*e*Sn	**Sn**	**03 29 25.1**	**+1.2**
EKS2	**Erkin-Say**	**9.32**	**321**	*e*Pn	**Pn**	**03 27 48.7**	**+1.6**
	comp=Z,6.2nm,0.8s						
WMQ	**Urumqi**	**9.37**	**28**	*e*P	**Pn**	**03 27 48.0**	**+0.2**
WMQ				smax			
	comp=N,29nm,1.1s						
WMQ				smax			
	comp=E,29nm,1.0s						
KBL	**Kabul**	**10.44**	**268**	*e*P	**Pn**	**03 28 03.4**	**+0.9**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	**Kabul**	**10.44**	**268**	*e*Pn	**Pn**	**03 28 03.4**	**+0.9**
	comp=Z,3.9nm,0.6s						
MK31	**Makanchi Array**	**11.14**	**2**	*e*P	**Pn**	**03 28 10.7**	**-1.3**
MK31				*e*S	**Sn**	**03 30 09.5**	**-7.1**
MKAR	**Makanchi Array**	**11.14**	**2**	Pn	**Pn**	**03 28 11.2**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=180,slow=12,SNR=48						
MKAR	**Makanchi Array**	**11.14**	**2**	P	**Pn**	**03 28 11.2**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**15.22**	**353**	Pn	**Pn**	**03 29 03.1**	**-4.5**
	comp=Z,0.0nm,0.3s,baz=172,slow=12,SNR=4.1						
KURK				LR	LR	03 35 41.8	
	comp=Z,100nm,18.7s,baz=220,slow=40						
KURK	**Kurchatov**	**15.22**	**353**	*e*P	**Pn**	**03 29 04.5**	**-3.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**15.22**	**353**	*e*Pn	**Pn**	**03 29 04.5**	**-3.1**
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**18.43**	**6**	P	**Pn**	**03 29 47.2**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=192,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**18.43**	**6**	P	**Pn**	**03 29 47.3**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**19.12**	**339**	P	**Pn**	**03 29 55.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=138,slow=12,SNR=12						
BVAR				LR	LR	03 37 40.4	
	comp=Z,63nm,20.7s,baz=340,slow=38						
BRVK	**Borovoye**	**19.18**	**339**	*e*P	**Pn**	**03 29 54.8**	**-2.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	**Borovoye**	**19.18**	**339**	*e*Pn	**Pn**	**03 29 54.8**	**-2.5**
	comp=Z,5.1nm,0.9s						
ABKAR	**Akbulak array**	**20.94**	**317**	*e*P	**P**	**03 30 15.1**	**-0.4**
	comp=Z,1.1nm,0.5s						
MOY	**Mondy**	**21.13**	**35**	*e*P	**P**	**03 30 20.1**	**+2.5**
SONM	**Songino Array**	**21.97**	**49**	P	**P**	**03 30 28.6**	**+1.9**
	comp=Z,0.3nm,0.4s,mb3.0,baz=43,slow=35,SNR=3.6						
AKTK	**Aktyubinsk**	**22.63**	**318**	P	**P**	**03 30 32.5**	**-1.1**
AKTO	**Aktyubinsk**	**22.63**	**318**	P	**P**	**03 30 32.5**	**-1.1**
	comp=Z,1.8nm,0.7s,mb3.6,baz=117,slow=11,SNR=6.4						
AKTO	**Aktyubinsk**	**22.63**	**318**	P	**P**	**03 30 32.5**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
CMAR	**Chiang Mai Arr**	**22.93**	**134**	P	**P**	**03 30 37.6**	**+0.6**
	comp=Z,1.4nm,0.3s,mb3.9,baz=105,slow=33,SNR=3.3						
CMAR	**Chiang Mai Arr**	**22.93**	**134**	P	**P**	**03 30 37.6**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**36.88**	**73**	P	**P**	**03 32 42.5**	**+1.0**
	comp=Z,1.4nm,0.5s,mb4.0,baz=142,slow=39,SNR=4.0						
KSRS				LR	LR	03 47 44.5	
	comp=Z,22nm,18.0s,baz=185,slow=36						
KSRS	**Korea Array**	**36.88**	**73**	P	**P**	**03 32 42.5**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
KSRS				MLR	MLR		
	comp=Z,22nm,18.0s						
BRTR	**Keskin Array B**	**37.90**	**291**	P	**P**	**03 32 49.9**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.7,baz=98,slow=7.6,SNR=9.3						
BRTR	**Keskin Array B**	**37.90**	**291**	P	**P**	**03 32 49.9**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**40.25**	**309**	P	**P**	**03 33 09.8**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.6,baz=76,slow=7.6,SNR=4.4						
AKASG	**Malin Array Be**	**40.25**	**309**	P	**P**	**03 33 09.8**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**03 33 32.8**	**-0.2**
	comp=Z,2.0nm,0.8s,mb3.9,baz=90,slow=7.6,SNR=6.7						
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**03 33 32.8**	**-0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**45.37**	**336**	P	**P**	**03 33 51.1**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.1,baz=104,slow=8.9,SNR=12						
ARCES	**ARCESS Array B**	**45.37**	**336**	P	**P**	**03 33 51.2**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**50.27**	**323**	P	**P**	**03 34 28.3**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.7,baz=87,slow=7.4						
NOA	**NORSAR Array B**	**50.27**	**323**	P	**P**	**03 34 28.5**	**-0.4**
	comp=Z,1.1nm,0.8s,mb3.9,baz=86,slow=7.5,SNR=6.1						
NOA	**NORSAR Array B**	**50.27**	**323**	P	**P**	**03 34 28.5**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**50.42**	**307**	P	**P**	**03 34 31.0**	**+0.8**
	comp=Z,1.5nm,0.9s,mb4.0,baz=78,slow=6.2,SNR=11						
GERES	**GERESS Array B**	**50.42**	**307**	P	**P**	**03 34 31.0**	**+0.7**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CDF	**Champ du Feu**	**54.67**	**308**	*e*P	**P**	**03 35 00.8**	**-0.9**
LPG	**La Plagne**	**55.87**	**305**	*e*P	**P**	**03 35 09.7**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.4						
LPL	**La Plagne**	**55.87**	**305**	*e*P	**P**	**03 35 09.8**	**-0.6**
	comp=Z,3.4nm,0.6s,mb4.3						
SMF	**Signal de Mont**	**57.42**	**307**	*e*P	**P**	**03 35 20.4**	**-1.0**
ASAR	**Alice Springs**	**76.93**	**132**	P	**P**	**03 37 25.5**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=317,slow=5.9,SNR=7.1						
ASAR	**Alice Springs**	**76.93**	**132**	P	**P**	**03 37 25.5**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**81.32**	**8**	P	**P**	**03 37 48.1**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=341,slow=4.9,SNR=5.7						

*NIED **22** 03:39:00, 24.20N×125.20E, h17km, Mw3.9 Best double couple: M0:7.28000×10^14 NP1:φs:254.00000°, δ79.00000°, λ-98.00000°. NP2:φs:109.00000°, δ14.00000°, λ-56.00000°.*
*IDC **22** 03:39:14.5±1.1, 24.86N×124.09E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.5/24, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.3/30, Error ellipse: s-maj=33.0km s-min=23.4km az=80.0*
*ISCJB **22** 03:39:22.1±1.4, 24.14N±0.08×125.36E±0.04, h23km±10km, mb3.9/4, Error ellipse: s-maj=14.5km s-min=5.4km az=162.4*
*NEIC **22** 03:39:24.5, 24.23N×125.25E, h22km, MG4.2(JMA), After JMA.*
NEIC Recorded [1 JMA] on Miyako-jima.
*JMA **22** 03:39:24.4±0.2, 24.23N×125.25E, h22km, M4.2*
JMA Felt I J1.
ISC 22 03:39:23.8±1.4, 24.22N±0.08×125.30E±0.04, h24km±10km, n25, σ0§87/31, mb3.9/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.55**	**10**	P	**Pb**	**03 39 35.3**	**+0.4**
JOGS				S	**Sb**	**03 39 43.4**	**+1.0**
JMJ	**Miyako jima 2**	**0.60**	**360**	P	**Pb**	**03 39 35.6**	**-0.1**
JMJ				S	**Sb**	**03 39 43.9**	**+0.2**
JTJ	**Tarama**	**0.69**	**308**	P	**Pb**	**03 39 36.7**	**-0.5**
JTJ				S	**Sb**	**03 39 45.4**	**-0.9**
JIJ	**Ishigaki jima**	**1.06**	**278**	P	**Pn**	**03 39 43.0**	**-0.2**
JIJ				S	**Sn**	**03 39 56.9**	**-0.4**
JKRS	**Kuro-shima**	**1.18**	**271**	P	**Pn**	**03 39 45.2**	**+0.4**
JKRS				S	**Sn**	**03 40 00.4**	**+0.3**
HATJ	**Hateruma jima**	**1.37**	**264**	P	**Pn**	**03 39 47.5**	**0.0**
HATJ				S	**Sn**	**03 40 04.7**	**-0.2**
IRIF	**Iriomote-Funau**	**1.44**	**275**	P	**Pn**	**03 39 48.7**	**+0.3**
IRIF				S	**Sn**	**03 40 07.8**	**+1.3**
YOJ	**Yonaguni jima**	**2.10**	**277**	P	**Pn**	**03 39 58.7**	**+1.2**
JKE	**Kume jima 2**	**2.50**	**32**	P	**Pn**	**03 40 03.2**	**+0.3**
NACB	**Ninganchiao**	**3.38**	**270**	*e*Pn	**Pn**	**03 40 14.2**	**-0.9**
YHNB	**Yeheng**	**3.60**	**278**	*e*Pn	**Pn**	**03 40 21.8**	**+3.6**
JOW	**Kunigami**	**3.74**	**45**	P	**Pn**	**03 40 20.7**	**+0.6**
JOW	**Kunigami**	**3.74**	**45**	Pn	**Pn**	**03 40 20.4**	**+0.3**
	2.9nm,0.3s,baz=197,slow=14,SNR=15						
JOW	**Kunigami**	**3.74**	**45**	Pn	**Pn**	**03 40 20.4**	**+0.3**
YULB	**Yu-li**	**3.76**	**258**	*e*Pn	**Pn**	**03 40 19.0**	**-1.3**
TWG	**Pinlang**	**4.12**	**251**	*e*Pn	**Pn**	**03 40 23.7**	**-1.6**
TPUB	**Ta-pu**	**4.37**	**259**	*e*Pn	**Pn**	**03 40 29.6**	**+0.8**
JTK	**Tokunoshima**	**4.84**	**42**	P	**Pn**	**03 40 34.0**	**-1.2**
JAM	**Amami Oshima**	**5.69**	**42**	P	**Pn**	**03 40 46.4**	**-0.5**
MJAR	**Matsushiro Arr**	**16.56**	**39**	Pn	**Pn**	**03 43 11.1**	**-3.3**
	0.3nm,0.3s,baz=256,slow=5.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.31**	**325**	LR	LR	04 06 24.4	
	comp=Z,22nm,18.4s,baz=184,slow=40						
ASAR	**Alice Springs**	**48.32**	**169**	P	**P**	**03 48 04.8**	**+1.4**
	1.0nm,0.5s,mb4.1,baz=356,slow=14,SNR=20						
STKA	**Stephens Creek**	**57.91**	**164**	P	**P**	**03 49 14.2**	**+0.2**
	1.7

113nm,0.3s,SNR=18
EMUR Lg 03 45 51.6
285nm,0.3s,SNR=26
EMUR La Murta 0.58 204 Pg Pg 03 45 42.0 -0.6
113nm,0.3s,SNR=18
EMUR Lg 03 45 51.6
285nm,0.3s,SNR=26
EBEN Beniarda 0.65 59 ⇑Pg Pg 03 45 44.0 0.0
EBEN Lg 03 45 53.8
EBEN Beniarda 0.65 59 ⇑Pg Pg 03 45 44.0 0.0
30nm,0.4s,SNR=18
EBEN Lg 03 45 53.8
143nm,0.5s,SNR=9.2
EBEN Beniarda 0.65 59 ⇑Pg Pg 03 45 44.0 0.0
30nm,0.4s,SNR=18
EBEN Lg 03 45 53.8
143nm,0.5s,SNR=9.2
EBEN Beniarda 0.65 59 Pg Pg 03 45 44.0 0.0
30nm,0.4s,SNR=18
EBEN Lg 03 45 53.8
143nm,0.5s,SNR=9.2
CART Cartagena 0.79 184 *e*Pg Pg 03 45 45.8 -0.7
CART Cartagena 0.79 184 Pg Pg 03 45 45.7 -0.8
CART Lg 03 45 56.3
CART Cartagena 0.79 184 Pg Pg 03 45 45.7 -0.8
CART Lg 03 45 56.3
CART Cartagena 0.79 184 *e*P Pg 03 45 45.7 -0.8
CART *e*S Sg 03 45 56.3 -0.4
ECHE Chera 1.22 359 ⇑Pg Pg 03 45 54.6 -0.2
ECHE Lg 03 46 12.1
ECHE Chera 1.22 359 ⇑Pg Pg 03 45 54.6 -0.2
46nm,0.4s,SNR=18
ECHE Lg 03 46 12.1
62nm,0.6s
ECHE Chera 1.22 359 ⇑Pg Pg 03 45 54.6 -0.2
46nm,0.4s,SNR=18
ECHE Lg 03 46 12.1
62nm,0.6s
ECHE Chera 1.22 359 Pg Pg 03 45 54.6 -0.2
46nm,0.4s,SNR=18
ECHE Lg 03 46 12.1
62nm,0.6s
EVIA Vianos 1.26 283 ⇑Pg Pg 03 45 55.4 -0.1
EVIA Lg 03 46 12.3
EVIA Vianos 1.26 283 ⇑Pg Pg 03 45 55.4 -0.1
61nm,0.4s,SNR=18
EVIA Lg 03 46 12.3
85nm,0.3s,SNR=11
EVIA Vianos 1.26 283 ⇑Pg Pg 03 45 55.4 -0.1
61nm,0.4s,SNR=18
EVIA Lg 03 46 12.3
85nm,0.3s,SNR=11
EVIA Vianos 1.26 283 Pg Pg 03 45 55.4 -0.1
61nm,0.4s,SNR=18
EVIA Lg 03 46 12.3
85nm,0.3s,SNR=11
EHUE Huescar 1.42 247 ⇑Pg Pg 03 45 58.6 -0.1
EHUE Lg 03 46 20.2
EHUE Huescar 1.42 247 ⇑Pg Pg 03 45 58.6 -0.1
18nm,0.3s,SNR=18
EHUE Lg 03 46 20.2
47nm,0.4s,SNR=7.9
EHUE Huescar 1.42 247 ⇑Pg Pg 03 45 58.6 -0.1
18nm,0.3s,SNR=18
EHUE Lg 03 46 20.2
47nm,0.4s,SNR=7.9
EHUE Huescar 1.42 247 Pg Pg 03 45 58.6 0.0
18nm,0.3s,SNR=18
EHUE Lg 03 46 20.2
47nm,0.4s,SNR=7.9
ENIJ Nijar 1.72 216 Pn Pn 03 46 00.7 -0.8
ENIJ Pg Pg 03 46 04.6 +0.2
ENIJ Sn Sn 03 46 24.5 +0.9
ENIJ Nijar 1.72 216 Pn Pn 03 46 00.7 -0.8
3.2nm,0.3s,SNR=7.9
ENIJ Pg Pg 03 46 04.6 +0.2
9.5nm,0.4s,SNR=7.9
ENIJ Sn Sn 03 46 24.5 +0.9
SNR=7.9
ENIJ Nijar 1.72 216 Pn Pn 03 46 00.7 -0.8
3.2nm,0.3s,SNR=7.9
ENIJ Pg Pg 03 46 04.6 +0.2
9.5nm,0.4s,SNR=7.9
ENIJ Sn Sn 03 46 24.5 +0.9
SNR=7.9
ENIJ Nijar 1.72 216 Pn Pn 03 46 00.7 -0.8
3.2nm,0.3s,SNR=7.9
ENIJ Nijar 1.72 216 Pg Pg 03 46 04.6 +0.2
9.5nm,0.4s,SNR=7.9
ENIJ Sn Sn 03 46 24.5 +0.9
SNR=7.9
EQES Quesada 1.78 252 Pn Pn 03 46 03.3 +1.0
EQES Lg 03 46 30.2
EQES Quesada 1.78 252 Pn Pn 03 46 03.3 +1.0
24nm,0.3s,SNR=41
EQES Lg 03 46 30.2
104nm,0.4s,SNR=9.9
EQES Quesada 1.78 252 Pn Pn 03 46 03.3 +1.0
24nm,0.3s,SNR=41
EQES Lg 03 46 30.2
104nm,0.4s,SNR=9.9
EQES Quesada 1.78 252 Pn Pn 03 46 03.3 +1.0
24nm,0.3s,SNR=41
EQES Lg 03 46 30.2
104nm,0.4s,SNR=9.9
EIBI Ibiza 1.90 69 Pn Pn 03 46 03.0 -1.0
EIBI Sn Sn 03 46 27.5 -0.6
EIBI Ibiza 1.90 69 Pn Pn 03 46 03.0 -1.0
1.8nm,0.3s,SNR=9.9
EIBI Sn Sn 03 46 27.5 -0.6
13nm,0.4s,SNR=5.0
EIBI Ibiza 1.90 69 Pn Pn 03 46 03.0 -1.0
1.8nm,0.3s,SNR=9.9
EIBI Sn Sn 03 46 27.5 -0.6
13nm,0.4s,SNR=5.0
EIBI Ibiza 1.90 69 Pn Pn 03 46 03.0 -1.0
1.8nm,0.3s,SNR=9.9
EIBI Sn Sn 03 46 27.5 -0.6
13nm,0.4s,SNR=5.0
EMOS Mosqueruela 2.02 10 Pn Pn 03 46 07.2 +1.5
EMOS Pg Pg 03 46 10.3 +0.1
EMOS Sn Sn 03 46 31.6 +0.5
EMOS Lg 03 46 37.1
EMOS Mosqueruela 2.02 10 Pn Pn 03 46 07.2 +1.5
3.2nm,0.4s,SNR=7.9
EMOS Pg Pg 03 46 10.4 +0.1
4.5nm,0.4s,SNR=7.9
EMOS Sn Sn 03 46 31.5 +0.5
7.4nm,0.4s,SNR=7.9
EMOS Lg 03 46 37.1
113nm,1.4s,SNR=7.9
EMOS Mosqueruela 2.02 10 Pn Pn 03 46 07.2 +1.5
3.2nm,0.4s,SNR=7.9
EMOS Pg Pg 03 46 10.4 +0.1
4.5nm,0.4s,SNR=7.9
EMOS Sn Sn 03 46 31.5 +0.5
7.4nm,0.4s,SNR=7.9
EMOS Lg 03 46 37.1
113nm,1.4s,SNR=7.9
EMOS Mosqueruela 2.02 10 Pn Pn 03 46 07.2 +1.5
3.2nm,0.4s,SNR=7.9
EBER Berja 2.14 227 Pn Pn 03 46 07.2 -0.1
EBER Pg Pg 03 46 11.7 -0.7
EBER Lg 03 46 40.3
EBER Berja 2.14 227 Pn Pn 03 46 07.2 -0.1
1.7nm,0.3s,SNR=7.9
EBER Pg Pg 03 46 11.7 -0.7
5.9nm,0.4s,SNR=7.9
EBER Lg 03 46 40.3
26nm,0.4s,SNR=7.9
EBER Berja 2.14 227 Pn Pn 03 46 07.2 -0.1
1.7nm,0.3s,SNR=7.9
EBER Pg Pg 03 46 11.7 -0.7
5.9nm,0.4s,SNR=7.9
EBER Lg 03 46 40.3
26nm,0.4s,SNR=7.9
EBER Berja 2.14 227 Pn Pn 03 46 07.2 0.0
1.7nm,0.3s,SNR=7.9
EBER Berja 2.14 227 Pg Pg 03 46 11.7 -0.7
5.9nm,0.4s,SNR=7.9
EBER Lg 03 46 40.3
26nm,0.4s,SNR=7.9
EBAN Banos Encina 2.25 266 Pn Pn 03 46 08.9 0.0
EBAN Lg 03 46 46.2
EBAN Banos Encina 2.25 266 Pn Pn 03 46 08.9 0.0
3.4nm,0.2s,SNR=8.0
EBAN Lg 03 46 46.2
25nm,0.4s
EBAN Banos Encina 2.25 266 Pn Pn 03 46 08.9 0.0
3.4nm,0.2s,SNR=8.0
EBAN Lg 03 46 46.2
25nm,0.4s
EBAN Banos Encina 2.25 266 Pn Pn 03 46 08.9 +0.1
3.4nm,0.2s,SNR=8.0
EBAN Lg 03 46 46.2
25nm,0.4s
EQUE Quentar 2.30 240 Pn Pn 03 46 10.5 +1.0
0.7nm,0.3s,SNR=4.0
EQUE Pg Pg 03 46 13.4 -2.1
6.2nm,0.4s,SNR=7.9
EQUE Lg 03 46 46.2
57nm,0.5s,SNR=7.9
EQUE Quentar 2.30 240 Pn Pn 03 46 10.5 +1.0
0.7nm,0.3s,SNR=4.0
EQUE Pg Pg 03 46 13.4 -2.1
6.2nm,0.4s,SNR=7.9
EQUE Lg 03 46 46.2
57nm,0.5s,SNR=7.9
EQUE Quentar 2.30 240 Pn Pn 03 46 10.5 +1.0
0.7nm,0.3s,SNR=4.0
ECOG Cogollos-Vega 2.35 243 Pn Pn 03 46 12.0 +1.8
ECOG Pg Pg 03 46 15.5 -1.0
ECOG Pg Pg 03 46 16.6 +0.1
ECOG Lg 03 46 47.4
ECOG Cogollos-Vega 2.35 243 Pg Pg 03 46 15.5 -1.0
4.0nm,0.4s,SNR=7.9
ECOG Lg 03 46 47.4
52nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 2.35 243 Pg Pg 03 46 15.5 -1.0
4.0nm,0.4s,SNR=7.9
ECOG Lg 03 46 47.4
52nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 2.35 243 Pn Pn 03 46 12.0 +1.8
ECOG Cogollos-Vega 2.35 243 Pg Pg 03 46 15.5 -1.0
4.0nm,0.4s,SNR=7.9
ECOG Lg 03 46 47.4
52nm,0.4s,SNR=7.9
EGUA Guajares 2.59 234 Pn Pn 03 46 15.1 +1.7
EGUA Pg Pg 03 46 19.7 -1.3
EGUA Lg 03 46 55.6
EGUA Guajares 2.59 234 Pg Pg 03 46 19.7 -1.3
19nm,0.5s,SNR=7.9
EGUA Lg 03 46 55.6
68nm,0.8s,SNR=7.9
EGUA Guajares 2.59 234 Pg Pg 03 46 19.7 -1.3
19nm,0.5s,SNR=7.9
EGUA Lg 03 46 55.6
68nm,0.8s,SNR=7.9
EGUA Guajares 2.59 234 Pn Pn 03 46 15.1 +1.6
EGUA Guajares 2.59 234 Pg Pg 03 46 19.7 -1.4
19nm,0.5s,SNR=7.9
EGUA Lg 03 46 55.6
68nm,0.8s,SNR=7.9
ETOR Torete 2.59 341 Pn Pn 03 46 15.5 +2.0
ETOR Pg Pg 03 46 20.7 -0.4
ETOR Lg 03 46 56.0
ETOR Torete 2.59 341 Pg Pg 03 46 20.7 -0.4
20nm,0.4s,SNR=7.9
ETOR Lg 03 46 56.0
25nm,0.6s,SNR=7.9
ETOR Torete 2.59 341 Pg Pg 03 46 20.7 -0.4
20nm,0.4s,SNR=7.9
ETOR Lg 03 46 56.0
25nm,0.6s,SNR=7.9
ETOR Torete 2.59 341 Pn Pn 03 46 15.5 +2.0
ETOR Torete 2.59 341 Pg Pg 03 46 20.7 -0.4
20nm,0.4s,SNR=7.9
ETOR Lg 03 46 56.0
25nm,0.6s,SNR=7.9
ERON Agron 2.65 240 Pn Pn 03 46 16.4 +2.1
ERON Pg Pg 03 46 21.3 -0.8
ERON Sn Sn 03 46 46.3 -0.1
ERON Agron 2.65 240 Pn Pn 03 46 16.4 +2.1
0.2nm,0.2s,SNR=7.9
ERON Pg Pg 03 46 21.3 -0.8
9.5nm,0.4s,SNR=7.9
ERON Sn Sn 03 46 46.3 -0.1
5.9nm,0.4s,SNR=7.9
ERON Agron 2.65 240 Pn Pn 03 46 16.4 +2.1
0.2nm,0.2s,SNR=7.9
ERON Pg Pg 03 46 21.3 -0.8
9.5nm,0.4s,SNR=7.9
ERON Sn Sn 03 46 46.3 -0.1
5.9nm,0.4s,SNR=7.9
ERON Agron 2.65 240 Pn Pn 03 46 16.4 +2.2
0.2nm,0.2s,SNR=7.9
ERON Agron 2.65 240 Pg Pg 03 46 21.3 -0.8
9.5nm,0.4s,SNR=7.9
ERON Sn Sn 03 46 46.3 -0.1
5.9nm,0.4s,SNR=7.9
ESDC Sonseca Array 2.69 300 Pn Pn 03 46 14.5 -0.4
ESDC Pg Pg 03 46 21.5 -1.5
ESDC Lg 03 46 59.4
ESDC Sonseca Array 2.69 300 Pn Pn 03 46 14.5 -0.4
1.4nm,0.3s,baz=116,slow=13,SNR=15
ESDC Pg Pg 03 46 21.5 -1.5
33nm,0.5s,baz=116,slow=17,SNR=78
ESDC Lg 03 46 59.4
3.6nm,0.2s,baz=123,slow=29,SNR=7.9
ESDC Sonseca Array 2.69 300 Pn Pn 03 46 14.5 -0.4
1.4nm,0.3s,baz=116,slow=13,SNR=15
ESDC Pg Pg 03 46 21.5 -1.5
33nm,0.5s,baz=116,slow=17,SNR=78
ESDC Lg 03 46 59.4
3.6nm,0.2s,baz=123,slow=29,SNR=7.9
ESDC Sonseca Array 2.69 300 Pn Pn 03 46 14.5 -0.4
1.4nm,0.3s,SNR=15
ESDC Sonseca Array 2.69 300 Pg Pg 03 46 21.5 -1.5
33nm,0.5s,SNR=78
ESDC Lg 03 46 59.4
3.6nm,0.2s,SNR=7.9
ESLA Sonseca Array 2.69 300 *e*Pn Pn 03 46 14.7 -0.2
ESLA Sonseca Array 2.69 300 *e*Pn Pn 03 46 14.7 -0.2
ELUQ Luque 2.75 254 Pn Pn 03 46 16.9 +1.2
ELUQ Pg Pg 03 46 24.5 +0.3
ELUQ Sn Sn 03 46 48.8 -0.2
ELUQ Lg 03 47 02.1
ELUQ Luque 2.75 254 Pn Pn 03 46 16.9 +1.2
6.6nm,0.5s,SNR=7.9
ELUQ Pg Pg 03 46 24.5 +0.3
12nm,0.3s,SNR=7.9
ELUQ Sn Sn 03 46 48.8 -0.2
7.1nm,0.3s,SNR=7.9
ELUQ Lg 03 47 02.1
28nm,0.6s,SNR=7.9
ELUQ Luque 2.75 254 Pn Pn 03 46 16.9 +1.2
6.6nm,0.5s,SNR=7.9
ELUQ Pg Pg 03 46 24.5 +0.3
12nm,0.3s,SNR=7.9
ELUQ Sn Sn 03 46 48.8 -0.2
7.1nm,0.3s,SNR=7.9
ELUQ Lg 03 47 02.1
28nm,0.6s,SNR=7.9
ELUQ Luque 2.75 254 Pn Pn 03 46 16.9 +1.2
6.6nm,0.5s,SNR=7.9
ELUQ Pg Pg 03 46 24.5 +0.3
12nm,0.3s,SNR=7.9
ELUQ Sn Sn 03 46 48.8 -0.3
7.1nm,0.3s,SNR=7.9
ELUQ Lg 03 47 02.1
28nm,0.6s,SNR=7.9
ERTA Horta de San J 2.76 20 Pn Pn 03 46 16.8 +1.0
ERTA Sn Sn 03 46 49.4 0.0
ERTA Horta de San J 2.76 20 Pn Pn 03 46 16.8 +1.0
4.1nm,0.4s,SNR=8.8
ERTA Sn Sn 03 46 49.3 0.0
4.7nm,0.4s,SNR=5.0
ERTA Horta de San J 2.76 20 Pn Pn 03 46 16.8 +1.0
4.1nm,0.4s,SNR=8.8
ERTA Sn Sn 03 46 49.3 0.0
4.7nm,0.4s,SNR=5.0
ERTA Horta de San J 2.76 20 Pn Pn 03 46 16.8 +0.9
4.1nm,0.4s,SNR=8.8
ERTA Sn Sn 03 46 49.3 0.0
4.7nm,0.4s,SNR=5.0
ELOJ Sierra Loja 2.83 245 Pn Pn 03 46 18.2 +1.5
ELOJ Lg 03 47 05.7
ELOJ Sierra Loja 2.83 245 Pn Pn 03 46 18.2 +1.5
0.8nm,0.2s,SNR=7.9
ELOJ Lg 03 47 05.7
17nm,0.6s,SNR=7.9
ELOJ Sierra Loja 2.83 245 Pn Pn 03 46 18.2 +1.5
0.8nm,0.2s,SNR=7.9
ELOJ Lg 03 47 05.7
17nm,0.6s,SNR=7.9
ELOJ Sierra Loja 2.83 245 Pn Pn 03 46 18.2 +1.5
0.8nm,0.2s,SNR=7.9
ELOJ Lg 03 47 05.7
17nm,0.6s,SNR=7.9
EADA Adamuz 2.87 267 Pn Pn 03 46 16.8 -0.6
EADA Pg Pg 03 46 25.8 -0.6
EADA Sn Sn 03 46 51.9 -0.1
EADA Lg 03 47 04.7
EADA Adamuz 2.87 267 Pn Pn 03 46 16.8 -0.6
0.9nm,0.2s,SNR=12
EADA Pg Pg 03 46 25.8 -0.6
3.3nm,0.2s,SNR=7.9
EADA Sn Sn 03 46 51.9 -0.2
5.4nm,0.3s,SNR=7.0
EADA Lg 03 47 04.6
13nm,0.3s,SNR=5.0
EADA Adamuz 2.87 267 Pn Pn 03 46 16.8 -0.6
0.9nm,0.2s,SNR=12
EADA Pg Pg 03 46 25.8 -0.6
3.3nm,0.2s,SNR=7.9
EADA Sn Sn 03 46 51.9 -0.2
5.4nm,0.3s,SNR=7.0
EADA Lg 03 47 04.6
13nm,0.3s,SNR=5.0
EADA Adamuz 2.87 267 Pn Pn 03 46 16.8 -0.6
0.9nm,0.2s,SNR=12
PAB San Pablo 2.91 295 *e*Pn Pn 03 46 18.0 +0.2
PAB San Pablo 2.91 295 *e*Pn Pn 03 46 18.0 +0.2
ETOS Mallorca 3.24 63 Pn Pn 03 46 21.7 -0.7
ETOS Sn Sn 03 46 59.6 -1.4
ETOS Mallorca 3.24 63 Pn Pn 03 46 21.7 -0.7
2.0nm,0.3s,SNR=7.9
ETOS Sn Sn 03 46 59.6 -1.4
3.1nm,0.3s,SNR=7.9
ETOS Mallorca 3.24 63 Pn Pn 03 46 21.7 -0.7
2.0nm,0.3s,SNR=7.9
ETOS Sn Sn 03 46 59.6 -1.4
3.1nm,0.3s,SNR=7.9
ETOS Mallorca 3.24 63 Pn Pn 03 46 21.7 -0.7
2.0nm,0.3s,SNR=7.9
ETOS Sn Sn 03 46 59.6 -1.4
3.1nm,0.3s,SNR=7.9
EPOB Poblet 3.36 27 Pn Pn 03 46 24.6 +0.5
EPOB Sn Sn 03 47 03.5 -0.5
EPOB Poblet 3.36 27 Pn Pn 03 46 24.6 +0.5
3.1nm,0.3s,SNR=13
EPOB Sn Sn 03 47 03.5 -0.5
2.8nm,0.4s,SNR=5.0
EPOB Poblet 3.36 27 Pn Pn 03 46 24.6 +0.5
3.1nm,0.3s,SNR=13
EPOB Sn Sn 03 47 03.5 -0.5
2.8nm,0.4s,SNR=5.0
EPOB Poblet 3.36 27 Pn Pn 03 46 24.6 +0.6
3.1nm,0.3s,SNR=13
EPOB Sn Sn 03 47 03.5 -0.5
2.8nm,0.4s,SNR=5.0
ESAC San Caprasio 3.37 6 Pn Pn 03 46 25.3 +1.1
ESAC Lg 03 47 20.9
ESAC San Caprasio 3.37 6 Pn Pn 03 46 25.3 +1.1
7.3nm,0.3s,SNR=4.0
ESAC Lg 03 47 20.9
36nm,0.4s,SNR=7.9
ESAC San Caprasio 3.37 6 Pn Pn 03 46 25.3 +1.1
7.3nm,0.3s,SNR=4.0
ESAC Lg 03 47 20.9
36nm,0.4s,SNR=7.9
ESAC San Caprasio 3.37 6 Pn Pn 03 46 25.3 +1.1
7.3nm,0.3s,SNR=4.0
ESAC Lg 03 47 20.9
36nm,0.4s,SNR=7.9
GUD Guadarrama 3.37 313 Pn Pn 03 46 24.0 -0.2
GUD Pg Pg 03 46 35.1 -0.8
GUD Lg 03 47 20.5
GUD Guadarrama 3.37 313 Pn Pn 03 46 24.0 -0.2
0.6nm,0.4s,SNR=7.9
GUD Pg Pg 03 46 35.1 -0.8
8.1nm,0.5s,SNR=7.9
GUD Lg 03 47 20.5
14nm,0.4s,SNR=7.9
GUD Guadarrama 3.37 313 Pn Pn 03 46 24.0 -0.2
0.6nm,0.4s,SNR=7.9
GUD Pg Pg 03 46 35.1 -0.8
8.1nm,0.5s,SNR=7.9
GUD Lg 03 47 20.5
14nm,0.4s,SNR=7.9
GUD Guadarrama 3.37 313 Pn Pn 03 46 24.0 -0.2
0.6nm,0.4s,SNR=7.9
GUD Guadarrama 3.37 313 Pg Pg 03 46 35.1 -0.8
8.1nm,0.5s,SNR=7.9
GUD Lg 03 47 20.5
14nm,0.4s,SNR=7.9
EMIJ Mijas 3.54 241 Pn Pn 03 46 28.5 +1.9
EMIJ Sn Sn 03 47 07.0 -1.6
EMIJ Lg 03 47 26.2
EMIJ Mijas 3.54 241 Pn Pn 03 46 28.5 +1.9
1.8nm,0.3s,SNR=7.9
EMIJ Sn Sn 03 47 07.0 -1.6
4.8nm,0.5s,SNR=7.9
EMIJ Lg 03 47 26.2
9.3nm,0.6s,SNR=7.9
EMIJ Mijas 3.54 241 Pn Pn 03 46 28.5 +1.9
1.8nm,0.3s,SNR=7.9
EMIJ Sn Sn 03 47 07.0 -1.6
4.8nm,0.5s,SNR=7.9
EMIJ Lg 03 47 26.2
9.3nm,0.6s,SNR=7.9
EMIJ Mijas 3.54 241 Pn Pn 03 46 28.5 +1.9
1.8nm,0.3s,SNR=7.9
EMIJ Sn Sn 03 47 07.0 -1.6
4.8nm,0.5s,SNR=7.9
EMIJ Lg 03 47 26.2
9.3nm,0.6s,SNR=7.9
EMIR Miracle 4.01 27 Pn Pn 03 46 32.6 -0.4
EMIR Sn Sn 03 47 20.4 +0.3
EMIR Miracle 4.01 27 Pn Pn 03 46 32.6 -0.4
11nm,0.1s,SNR=7.9
EMIR Sn Sn 03 47 20.4 +0.3
3.3nm,0.3s,SNR=7.9
EMIR Miracle 4.01 27 Pn Pn 03 46 32.6 -0.4
11nm,0.1s,SNR=7.9
EMIR Sn Sn 03 47 20.4 +0.3
3.3nm,0.3s,SNR=7.9
EMIR Miracle 4.01 27 Pn Pn 03 46 32.6 -0.4
11nm,0.1s,SNR=7.9
EMIR Sn Sn 03 47 20.4 +0.3
3.3nm,0.3s,SNR=7.9
EJIF Jimena Fronter 4.08 243 Pn Pn 03 46 33.9 -0.2
EJIF Lg 03 47 42.5
EJIF Jimena Fronter 4.08 243 Lg 03 47 42.5
2.6nm,0.5s,SNR=7.9
EJIF Jimena Fronter 4.08 243 Lg 03 47 42.5
2.6nm,0.5s,SNR=7.9
EJIF Jimena Fronter 4.08 243 Pn Pn 03 46 33.9 -0.1
EJIF Lg 03 47 42.5
2.6nm,0.5s,SNR=7.9
ESPR Espera 4.18 250 Pn Pn 03 46 36.4 +1.0
ESPR Lg 03 47 47.6
ESPR Espera 4.18 250 Pn Pn 03 46 36.4 +1.0
1.1nm,0.2s,SNR=7.9
ESPR Lg 03 47 47.6
10.0nm,0.6s,SNR=7.9
ESPR Espera 4.18 250 Pn Pn 03 46 36.4 +1.0
1.1nm,0.2s,SNR=7.9
ESPR Lg 03 47 47.6
10.0nm,0.6s,SNR=7.9
ESPR Espera 4.18 250 Pn Pn 03 46 36.4 +1.0
1.1nm,0.2s,SNR=7.9
ESPR Lg 03 47 47.6
10.0nm,0.6s,SNR=7.9
EBIE Bielsa 4.39 10 Pn Pn 03 46 40.8 +2.6
EBIE Pg Pg 03 46 55.9 +0.4
EBIE Sn Sn 03 47 29.7 +0.3
EBIE Lg 03 47 52.7
EBIE Bielsa 4.39 10 Pg Pg 03 46 55.9 +0.4
0.8nm,0.3s,SNR=7.9
EBIE Bielsa 4.39 10 Pg Pg 03 46 55.9 +0.4
0.8nm,0.3s,SNR=7.9
EBIE Bielsa 4.39 10 Pn Pn 03 46 40.8 +2.6
EBIE Bielsa 4.39 10 Pg Pg 03 46 55.9 +0.4
0.8nm,0.3s,SNR=7.9
IZUN Zunzarren 4.50 355 Pn Pn 03 46 39.4 -0.4
0.7nm,0.2s,SNR=4.0
IZUN Zunzarren 4.50 355 Pn Pn 03 46 39.4 -0.4
0.7nm,0.2s,SNR=4.0
IZUN Zunzarren 4.50 355 Pn Pn 03 46 39.4 -0.4
0.7nm,0.2s,SNR=4.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EORO	**Oroz-Betelu**	**4.53**	**357**	Pn	**Pn**	**03 46 41.9**	**+1.8**
	1.9nm,0.3s,SNR=8.3						
EORO				Pg	**Pg**	**03 46 57.5**	**-0.7**
	4.2nm,0.3s,SNR=7.9						
EORO				Lg		03 47 57.0	
	2.6nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**4.53**	**357**	Pn	**Pn**	**03 46 41.9**	**+1.8**
	1.9nm,0.3s,SNR=8.3						
EORO				Pg	**Pg**	**03 46 57.5**	**-0.7**
	4.2nm,0.3s,SNR=7.9						
EORO				Lg		03 47 57.0	
	2.6nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**4.53**	**357**	Pn	**Pn**	**03 46 41.9**	**+1.8**
	1.9nm,0.3s,SNR=8.3						
EORO	**Oroz-Betelu**	**4.53**	**357**	Pg	**Pg**	**03 46 57.5**	**-0.6**
	4.2nm,0.3s,SNR=7.9						
EORO				Lg		03 47 57.0	
	2.6nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	**4.53**	**4**	*e*Pn	**Pn**	**03 46 41.7**	**+1.5**
ETSF				*e*Sn	**Sn**	**03 47 31.9**	**-1.0**
	4.3nm,0.6s						
ETSF	**Etsaut**	**4.53**	**4**	Pn	**Pn**	**03 46 41.7**	**+1.5**
ETSF				Sn	**Sn**	**03 47 31.9**	**-1.0**
	2.2nm,0.6s						
ETSF	**Etsaut**	**4.53**	**4**	Pn	**Pn**	**03 46 41.7**	**+1.5**
ETSF				Sn	**Sn**	**03 47 31.9**	**-1.0**
	2.2nm,0.6s						
ETSF	**Etsaut**	**4.53**	**4**	*e*Pn	**Pn**	**03 46 41.7**	**+1.5**
ETSF				*e*Sn	**Sn**	**03 47 31.9**	**-1.0**
	2.2nm,0.6s						
EMIN	**Mina Concepcio**	**4.56**	**264**	Pn	**Pn**	**03 46 40.6**	**0.0**
EMIN				Pg	**Pg**	**03 46 58.7**	**-0.2**
EMIN				Sn	**Sn**	**03 47 32.5**	**-1.3**
EMIN				Lg		03 47 56.5	
EMIN	**Mina Concepcio**	**4.56**	**264**	Pn	**Pn**	**03 46 40.6**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EMIN				Pg	**Pg**	**03 46 58.7**	**-0.2**
	1.0nm,0.4s,SNR=7.9						
EMIN				Sn	**Sn**	**03 47 32.5**	**-1.3**
	1.5nm,0.3s,SNR=7.9						
EMIN				Lg		03 47 56.5	
	10nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.56**	**264**	Pn	**Pn**	**03 46 40.6**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EMIN				Pg	**Pg**	**03 46 58.7**	**-0.2**
	1.0nm,0.4s,SNR=7.9						
EMIN				Sn	**Sn**	**03 47 32.5**	**-1.3**
	1.5nm,0.3s,SNR=7.9						
EMIN				Lg		03 47 56.5	
	10nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.56**	**264**	Pn	**Pn**	**03 46 40.6**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.56**	**264**	Pg	**Pg**	**03 46 58.7**	**-0.2**
	1.0nm,0.4s,SNR=7.9						
EMIN				Sn	**Sn**	**03 47 32.5**	**-1.3**
	1.5nm,0.3s,SNR=7.9						
EMIN				Lg		03 47 56.5	
	10nm,0.5s,SNR=7.9						
SJPF	**Ste Jean**	**4.74**	**357**	*e*Pn	**Pn**	**03 46 44.6**	**+1.5**
SJPF	**Ste Jean**	**4.74**	**357**	Pn	**Pn**	**03 46 44.6**	**+1.5**
SJPF	**Ste Jean**	**4.74**	**357**	Pn	**Pn**	**03 46 44.6**	**+1.5**
SJPF	**Ste Jean**	**4.74**	**357**	*e*Pn	**Pn**	**03 46 44.6**	**+1.5**
EPF	**Esparros**	**4.75**	**11**	*e*Pn	**Pn**	**03 46 43.3**	**+0.1**
EPF				*e*Sn	**Sn**	**03 47 36.5**	**-1.9**
EPF				*e*Sg	**Sg**	**03 48 02.7**	**-1.4**
	4.2nm,0.4s						
EPF	**Esparros**	**4.75**	**11**	Pn	**Pn**	**03 46 43.3**	**+0.1**
EPF				Sn	**Sn**	**03 47 36.5**	**-1.9**
EPF				Lg		03 48 02.7	
	2.1nm,0.4s						
EPF	**Esparros**	**4.75**	**11**	Pn	**Pn**	**03 46 43.3**	**+0.1**
EPF				Sn	**Sn**	**03 47 36.5**	**-1.9**
EPF				Lg		03 48 02.7	
	2.1nm,0.4s						
EPF	**Esparros**	**4.75**	**11**	*e*Pn	**Pn**	**03 46 43.3**	**+0.1**
EPF				*e*Sn	**Sn**	**03 47 36.5**	**-1.9**
EPF				*e*Sg	**Sg**	**03 48 02.7**	**-1.4**
	2.1nm,0.4s						
EBAD	**Badajoz**	**4.78**	**276**	Pn	**Pn**	**03 46 42.8**	**-0.8**
EBAD				Pg	**Pg**	**03 47 01.1**	**-1.8**
EBAD				Sn	**Sn**	**03 47 38.1**	**-0.9**
EBAD				Lg		03 48 01.9	
EBAD	**Badajoz**	**4.78**	**276**	Pn	**Pn**	**03 46 42.8**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EBAD				Pg	**Pg**	**03 47 01.1**	**-1.8**
	1.1nm,0.4s,SNR=7.9						
EBAD				Sn	**Sn**	**03 47 38.1**	**-0.9**
	2.0nm,0.2s,SNR=7.9						
EBAD				Lg		03 48 01.9	
	4.6nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.78**	**276**	Pn	**Pn**	**03 46 42.8**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EBAD				Pg	**Pg**	**03 47 01.1**	**-1.8**
	1.1nm,0.4s,SNR=7.9						
EBAD				Sn	**Sn**	**03 47 38.1**	**-0.9**
	2.0nm,0.2s,SNR=7.9						
EBAD				Lg		03 48 01.9	
	4.6nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.78**	**276**	Pn	**Pn**	**03 46 42.8**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**4.80**	**270**	*e*Pn	**Pn**	**03 46 43.5**	**-0.4**
PBAR				*e*Sg	**Sg**	**03 48 05.7**	**0.0**
PBAR				A		03 48 15.0	
	20nm,0.6s						
PBAR	**Barrancos**	**4.80**	**270**	Pn	**Pn**	**03 46 43.5**	**-0.4**
PBAR				Lg		03 48 05.7	
	20nm,0.6s						
PBAR	**Barrancos**	**4.80**	**270**	Pn	**Pn**	**03 46 43.5**	**-0.4**
PBAR				Lg		03 48 05.7	
	20nm,0.6s						
PBAR	**Barrancos**	**4.80**	**270**	*e*Pn	**Pn**	**03 46 43.5**	**-0.4**
PBAR				*e*Sg	**Sg**	**03 48 05.7**	**0.0**
	20nm,0.6s						
ELIZ	**Elizondo**	**4.81**	**355**	Pn	**Pn**	**03 46 45.9**	**+1.9**
ELIZ	**Elizondo**	**4.81**	**355**	Pn	**Pn**	**03 46 45.9**	**+1.9**
	2.6nm,0.3s,SNR=7.9						
ELIZ	**Elizondo**	**4.81**	**355**	Pn	**Pn**	**03 46 45.9**	**+1.9**
	2.6nm,0.3s,SNR=7.9						
ELIZ	**Elizondo**	**4.81**	**355**	Pn	**Pn**	**03 46 45.9**	**+1.9**
	2.6nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**4.86**	**355**	Pn	**Pn**	**03 46 47.1**	**+2.4**
EALK	**Alkurruntz**	**4.86**	**355**	Pn	**Pn**	**03 46 46.3**	**+1.6**
	3.9nm,0.4s,SNR=5.8						
EALK	**Alkurruntz**	**4.86**	**355**	Pn	**Pn**	**03 46 46.3**	**+1.6**
	3.9nm,0.4s,SNR=5.8						
EALK	**Alkurruntz**	**4.86**	**355**	Pn	**Pn**	**03 46 47.1**	**+2.4**
	3.9nm,0.4s,SNR=5.8						
PMRV	**Marv??o**	**5.14**	**284**	*e*Pg	**Pg**	**03 47 12.7**	**+2.8**
PMRV				*e*Sg	**Sg**	**03 48 17.8**	**+1.2**
PMRV				A		03 48 27.9	
	16nm,0.6s						
PMRV	**Marv??o**	**5.14**	**284**	Pg	**Pg**	**03 47 12.7**	**+2.8**
PMRV				Lg		03 48 17.8	
	16nm,0.6s						
PMRV	**Marv??o**	**5.14**	**284**	Pg	**Pg**	**03 47 12.7**	**+2.8**
PMRV				Lg		03 48 17.8	
	16nm,0.6s						
PMRV	**Marv??o**	**5.14**	**284**	*e*Pg	**Pg**	**03 47 12.7**	**+2.8**
PMRV				*e*Sg	**Sg**	**03 48 17.8**	**+1.2**
	16nm,0.6s						
ELAN	**Lanestosa**	**5.21**	**339**	Pn	**Pn**	**03 46 50.3**	**+0.8**
ELAN				Sn	**Sn**	**03 47 48.4**	**-1.3**
ELAN				Lg		03 48 19.7	
ELAN	**Lanestosa**	**5.21**	**339**	Pn	**Pn**	**03 46 50.3**	**+0.8**
	1.0nm,0.4s,SNR=7.9						
ELAN				Sn	**Sn**	**03 47 48.4**	**-1.3**
	3.1nm,0.5s,SNR=4.0						
ELAN				Lg		03 48 19.7	
	3.0nm,0.5s,SNR=4.0						
ELAN	**Lanestosa**	**5.21**	**339**	Pn	**Pn**	**03 46 50.3**	**+0.8**
	1.0nm,0.4s,SNR=7.9						
ELAN				Sn	**Sn**	**03 47 48.4**	**-1.3**
	3.1nm,0.5s,SNR=4.0						
ELAN				Lg		03 48 19.7	
	3.0nm,0.5s,SNR=4.0						
ELAN	**Lanestosa**	**5.21**	**339**	Pn	**Pn**	**03 46 50.3**	**+0.8**
	1.0nm,0.4s,SNR=7.9						
ELAN				Sn	**Sn**	**03 47 48.4**	**-1.3**
	3.1nm,0.5s,SNR=4.0						
ELAN				Lg		03 48 19.7	
	3.0nm,0.5s,SNR=4.0						
PESTR	**Estremoz**	**5.23**	**277**	*e*Sg	**Sg**	**03 48 19.1**	**-0.3**
PESTR				A		03 48 26.4	
	17nm,0.7s						
PESTR	**Estremoz**	**5.23**	**277**	Lg		03 48 19.1	
	17nm,0.7s						
PESTR	**Estremoz**	**5.23**	**277**	Lg		03 48 19.1	
	17nm,0.7s						
PESTR	**Estremoz**	**5.23**	**277**	*e*Sg	**Sg**	**03 48 19.1**	**-0.3**
	17nm,0.7s						
EGRO	**El Granado**	**5.24**	**263**	Pn	**Pn**	**03 46 49.0**	**-0.9**
EGRO				Sn	**Sn**	**03 47 49.6**	**-0.8**
EGRO				Lg		03 48 18.4	
EGRO	**El Granado**	**5.24**	**263**	Pn	**Pn**	**03 46 49.0**	**-0.9**
	1.4nm,0.3s,SNR=7.9						
EGRO				Sn	**Sn**	**03 47 49.6**	**-0.8**
	1.6nm,0.2s,SNR=7.9						
EGRO				Lg		03 48 18.4	
	3.1nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**5.24**	**263**	Pn	**Pn**	**03 46 49.0**	**-0.9**
	1.4nm,0.3s,SNR=7.9						
EGRO				Sn	**Sn**	**03 47 49.6**	**-0.8**
	1.6nm,0.2s,SNR=7.9						
EGRO				Lg		03 48 18.4	
	3.1nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**5.24**	**263**	Pn	**Pn**	**03 46 49.0**	**-0.9**
	1.4nm,0.3s,SNR=7.9						
EGRO				Sn	**Sn**	**03 47 49.6**	**-0.8**
	1.6nm,0.2s,SNR=7.9						
EGRO				Lg		03 48 18.4	
	3.1nm,0.3s,SNR=7.9						
PCBR	**Castelo Branco**	**5.29**	**288**	*e*Sg	**Sg**	**03 48 22.7**	**+1.3**
PCBR				A		03 48 33.6	
	9.4nm,0.6s						
PCBR	**Castelo Branco**	**5.29**	**288**	Lg		03 48 22.7	
	4.7nm,0.6s						
PCBR	**Castelo Branco**	**5.29**	**288**	Lg		03 48 22.7	
	4.7nm,0.6s						
PCBR	**Castelo Branco**	**5.29**	**288**	*e*Sg	**Sg**	**03 48 22.7**	**+1.3**
	9.4nm,0.6s						
PVAQ	**Vaqueiros**	**5.45**	**262**	*e*Pn	**Pn**	**03 46 52.4**	**-0.4**
PVAQ				*e*Sn	**Sn**	**03 47 54.5**	**-1.1**
PVAQ				A		03 48 33.7	
	8.0nm,0.7s						
PVAQ	**Vaqueiros**	**5.45**	**262**	Pn	**Pn**	**03 46 52.4**	**-0.4**
PVAQ				Sn	**Sn**	**03 47 54.5**	**-1.1**
	8.0nm,0.7s						
PVAQ	**Vaqueiros**	**5.45**	**262**	Pn	**Pn**	**03 46 52.4**	**-0.4**
PVAQ				Sn	**Sn**	**03 47 54.5**	**-1.1**
	8.0nm,0.7s						
PVAQ	**Vaqueiros**	**5.45**	**262**	*e*Pn	**Pn**	**03 46 52.4**	**-0.4**
PVAQ				*e*Sn	**Sn**	**03 47 54.5**	**-1.1**
	8.0nm,0.7s						
MVO	**Moncorvo**	**5.46**	**303**	*e*Pn	**Pn**	**03 46 52.8**	**-0.1**
MVO				*e*Sg	**Sg**	**03 48 28.8**	**+2.1**
MVO				A		03 48 37.6	
	14nm,0.7s						
MVO	**Moncorvo**	**5.46**	**303**	*e*Pn	**Pn**	**03 46 52.8**	**-0.1**
MVO				*e*Sg	**Sg**	**03 48 28.8**	**+2.1**
	14nm,0.7s						
PBEJ	**Beja**	**5.47**	**269**	*e*Sn	**Sn**	**03 47 55.4**	**-0.7**
PBEJ				*e*Sg	**Sg**	**03 48 25.5**	**-1.5**
PBEJ				A		03 48 32.6	
	7.5nm,0.7s						
PBEJ	**Beja**	**5.47**	**269**	Sn	**Sn**	**03 47 55.4**	**-0.7**
PBEJ				Lg		03 48 25.5	
	3.8nm,0.7s						
PBEJ	**Beja**	**5.47**	**269**	Sn	**Sn**	**03 47 55.4**	**-0.7**
PBEJ				Lg		03 48 25.5	
	3.8nm,0.7s						
PBEJ	**Beja**	**5.47**	**269**	*e*Sn	**Sn**	**03 47 55.4**	**-0.7**
PBEJ				*e*Sg	**Sg**	**03 48 25.5**	**-1.5**
	7.5nm,0.7s						
MTE	**Manteigas**	**5.50**	**294**	*e*Pg	**Pg**	**03 47 12.7**	**-4.1**
MTE				*e*Sg	**Sg**	**03 48 26.5**	**-1.6**
MTE				A		03 48 40.0	
	16nm,0.6s						
MTE	**Manteigas**	**5.50**	**294**	*e*Pn	**Pn**	**03 46 54.0**	**+0.5**
MTE	**Manteigas**	**5.50**	**294**	*e*Pn	**Pn**	**03 46 54.0**	**+0.5**
MTE				*e*Sg	**Sg**	**03 48 26.5**	**-1.6**
	16nm,0.6s						
MTLF	**Montolieu**	**5.51**	**25**	*e*Pn	**Pn**	**03 46 53.5**	**-0.1**
MTLF				*e*Sg	**Sg**	**03 48 25.5**	**-2.8**
	3.6nm,0.7s						
MTLF	**Montolieu**	**5.51**	**25**	Pn	**Pn**	**03 46 53.5**	**-0.1**
MTLF				Lg		03 48 25.5	
	1.8nm,0.7s						
MTLF	**Montolieu**	**5.51**	**25**	Pn	**Pn**	**03 46 53.5**	**-0.1**
MTLF				Lg		03 48 25.5	
	1.8nm,0.7s						
MTLF	**Montolieu**	**5.51**	**25**	*e*Pn	**Pn**	**03 46 53.5**	**-0.1**
EVO	**Evora**	**5.56**	**274**	*e*Sg	**Sg**	**03 48 28.5**	**-1.3**
EVO				A		03 48 34.9	
	9.7nm,0.6s						
EVO	**Evora**	**5.56**	**274**	Lg		03 48 28.5	
	9.7nm,0.6s						
EVO	**Evora**	**5.56**	**274**	Lg		03 48 28.5	
	9.7nm,0.6s						
EVO	**Evora**	**5.56**	**274**	*e*Sg	**Sg**	**03 48 28.5**	**-1.3**
	9.7nm,0.6s						
PBRG	**Braganca**	**5.62**	**309**	*e*Pn	**Pn**	**03 46 55.7**	**+0.6**
PBRG				*e*Sg	**Sg**	**03 48 29.1**	**-2.6**
PBRG				A		03 48 37.1	
	7.5nm,0.5s						
PBRG	**Braganca**	**5.62**	**309**	Pn	**Pn**	**03 46 55.7**	**+0.6**
PBRG				Lg		03 48 29.1	
	3.8nm,0.5s						
PBRG	**Braganca**	**5.62**	**309**	Pn	**Pn**	**03 46 55.7**	**+0.6**
PBRG				Lg		03 48 29.1	
	3.8nm,0.5s						
PBRG	**Braganca**	**5.62**	**309**	*e*Pn	**Pn**	**03 46 55.7**	**+0.6**
PBDV	**Barranco-do-Ve**	**5.65**	**261**	*e*Sn	**Sn**	**03 48 00.1**	**-0.5**
PBDV				*e*Sg	**Sg**	**03 48 33.6**	**+0.8**
PBDV				A		03 48 38.7	
	6.6nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.65**	**261**	Sn	**Sn**	**03 48 00.1**	**-0.5**
PBDV				Lg		03 48 33.6	
	6.6nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.65**	**261**	Sn	**Sn**	**03 48 00.1**	**-0.5**
PBDV				Lg		03 48 33.6	
	6.6nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.65**	**261**	*e*Sn	**Sn**	**03 48 00.1**	**-0.5**
PBDV				*e*Sg	**Sg**	**03 48 33.6**	**+0.8**
	6.6nm,0.5s						
PCVE	**Castro Verde**	**5.66**	**265**	*e*Sg	**Sg**	**03 48 34.7**	**+1.7**
PCVE				A		03 48 42.1	
	7.0nm,0.6s						
PCVE	**Castro Verde**	**5.66**	**265**	Lg		03 48 34.7	
	3.5nm,0.6s						
PCVE	**Castro Verde**	**5.66**	**265**	Lg		03 48 34.7	
	3.5nm,0.6s						
PCVE	**Castro Verde**	**5.66**	**265**	*e*Sg	**Sg**	**03 48 34.7**	**+1.7**
	7.0nm,0.6s						
ECAL	**Calabor**	**5.70**	**311**	Pn	**Pn**	**03 46 56.5**	**+0.3**
ECAL				Pg	**Pg**	**03 47 21.2**	**+0.7**
ECAL				Sn	**Sn**	**03 47 59.8**	**-1.9**
ECAL				Lg		03 48 36.3	
ECAL	**Calabor**	**5.70**	**311**	Pn	**Pn**	**03 46 56.5**	**+0.3**
	4.1nm,0.3s,SNR=7.9						
ECAL				Pg	**Pg**	**03 47 21.2**	**+0.7**
	1.8nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**03 47 59.8**	**-1.9**
	2.5nm,0.4s,SNR=7.9						
ECAL				Lg		03 48 36.3	
	8.3nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**5.70**	**311**	Pn	**Pn**	**03 46 56.5**	**+0.3**
	4.1nm,0.3s,SNR=7.9						
ECAL				Pg	**Pg**	**03 47 21.2**	**+0.7**
	1.8nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**03 47 59.8**	**-1.9**
	2.5nm,0.4s,SNR=7.9						
ECAL				Lg		03 48 36.3	
	8.3nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**5.70**	**311**	Pn	**Pn**	**03 46 56.5**	**+0.3**
	4.1nm,0.3s,SNR=7.9						
MOE	**Montemor**	**5.82**	**274**	*e*Sg	**Sg**	**03 48 39.5**	**+1.2**
MOE	**Montemor**	**5.82**	**274**	*e*Sg	**Sg**	**03 48 39.5**	**+1.2**
PVIS	**Viseu**	**5.86**	**296**	*e*Sg	**Sg**	**03 48 39.2**	**-0.5**
PVIS				A		03 48 51.0	
	11nm,0.6s						
PVIS	**Viseu**	**5.86**	**296**	Lg		03 48 39.2	
	5.6nm,0.6s						
PVIS	**Viseu**	**5.86**	**296**	Lg		03 48 39.2	
	5.6nm,0.6s						
PVIS	**Viseu**	**5.86**	**296**	*e*Sg	**Sg**	**03 48 39.2**	**-0.5**
	11nm,0.6s						
EARI	**Arriondas**	**5.89**	**328**	Pn	**Pn**	**03 46 60.0**	**+1.1**
EARI				Pg	**Pg**	**03 47 22.5**	**-1.8**
EARI				Lg		03 48 41.4	
EARI	**Arriondas**	**5.89**	**328**	Pn	**Pn**	**03 46 60.0**	**+1.1**
	1.4nm,0.4s,SNR=7.9						
EARI				Pg	**Pg**	**03 47 22.5**	**-1.8**
	2.4nm,0.5s,SNR=7.9						
EARI				Lg		03 48 41.4	
	2.9nm,0.7s,SNR=7.9						
EARI	**Arriondas**	**5.89**	**328**	Pn	**Pn**	**03 46 60.0**	**+1.1**
	1.4nm,0.4s,SNR=7.9						
EARI				Pg	**Pg**	**03 47 22.5**	**-1.8**
	2.4nm,0.5s,SNR=7.9						
EARI				Lg		03 48 41.4	
	2.9nm,0.7s,SNR=7.9						
EARI	**Arriondas**	**5.89**	**328**	Pn	**Pn**	**03 47 00.0**	**+1.1**
	1.4nm,0.4s,SNR=7.9						
PVRL	**Vila Real**	**5.97**	**301**	*e*Pn	**Pn**	**03 46 59.8**	**-0.1**
PVRL				*e*Sg	**Sg**	**03 48 45.5**	**+2.5**
PVRL				A		03 49 00.7	
	7.1nm,0.7s						
PVRL	**Vila Real**	**5.97**	**301**	Pn	**Pn**	**03 46 59.8**	**-0.1**
PVRL				Lg		03 48 45.5	
	3.6nm,0.7s						
PVRL	**Vila Real**	**5.97**	**301**	Pn	**Pn**	**03 46 59.8**	**-0.1**
PVRL				Lg		03 48 45.5	
	3.6nm,0.7s						
PVRL	**Vila Real**	**5.97**	**301**	*e*Pn	**Pn**	**03 46 59.8**	**-0.1**
PVRL				*e*Sg	**Sg**	**03 48 45.5**	**+2.5**
	7.1nm,0.7s						
MORF	**Marmelete**	**6.20**	**262**	*e*Sn	**Sn**	**03 48 13.1**	**-0.9**
MORF				*e*Sg	**Sg**	**03 48 50.7**	**+0.4**
MORF				A		03 49 04.0	
	2.7nm,0.6s						
MORF	**Marmelete**	**6.20**	**262**	Sn	**Sn**	**03 48 13.1**	**-0.9**
MORF				Lg		03 48 50.7	
	2.7nm,0.6s						
MORF	**Marmelete**	**6.20**	**262**	Sn	**Sn**	**03 48 13.1**	**-0.9**
MORF				Lg		03 48 50.7	
	2.7nm,0.6s						
MORF	**Marmelete**	**6.20**	**262**	*e*Sn	**Sn**	**03 48 13.1**	**-0.9**
MORF				*e*Sg	**Sg**	**03 48 50.7**	**+0.4**
	2.7nm,0.6s						
PTEO	**Sao Teotonio**	**6.21**	**265**	*e*Sg	**Sg**	**03 48 51.9**	**+1.2**
PTEO				A		03 49 05.0	
	10nm,0.7s						
PTEO	**Sao Teotonio**	**6.21**	**265**	Lg		03 48 51.9	
	5.2nm,0.7s						
PTEO	**Sao Teotonio**	**6.21**	**265**	Lg		03 48 51.9	
	5.2nm,0.7s						
PTEO	**Sao Teotonio**	**6.21**	**265**	*e*Sg	**Sg**	**03 48 51.9**	**+1.2**
	10nm,0.7s						
PFVI	**Vila Bisbo**	**6.37**	**261**	*e*Pn	**Pn**	**03 47 06.3**	**+0.8**
PFVI	**Vila Bisbo**	**6.37**	**261**	*e*Pn	**Pn**	**03 47 06.3**	**+0.8**
PCAB	**Cabril**	**6.38**	**304**	*e*Sg	**Sg**	**03 48 59.7**	**+3.5**
PCAB				A		03 49 12.7	
	8.8nm,0.6s						
PCAB	**Cabril**	**6.38**	**304**	Lg		03 48 59.7	
	4.4nm,0.6s						
PCAB	**Cabril**	**6.38**	**304**	Lg		03 48 59.7	
	4.4nm,0.6s						
ELOB	**Lobios**	**6.48**	**305**	Pn	**Pn**	**03 47 07.0**	**+0.1**
ELOB				Sn	**Sn**	**03 48 18.4**	**-2.5**
ELOB				Lg		03 48 59.2	
ELOB	**Lobios**	**6.48**	**305**	Pn	**Pn**	**03 47 07.0**	**+0.1**
	1.9nm,0.4s,SNR=7.5						
ELOB				Sn	**Sn**	**03 48 18.4**	**-2.5**
	1.6nm,0.5s,SNR=7.9						
ELOB				Lg		03 48 59.2	
	3.4nm,0.5s,SNR=5.0						
ELOB	**Lobios**	**6.48**	**305**	Pn	**Pn**	**03 47 07.0**	**+0.1**
	1.9nm,0.4s,SNR=7.5						
ELOB				Sn	**Sn**	**03 48 18.4**	**-2.5**
	1.6nm,0.5s,SNR=7.9						
ELOB				Lg		03 48 59.2	
	3.4nm,0.5s,SNR=5.0						
ELOB	**Lobios**	**6.48**	**305**	Pn	**Pn**	**03 47 07.0**	**+0.1**
	1.9nm,0.4s,SNR=7.5						
ELOB				Sn	**Sn**	**03 48 18.4**	**-2.5**
	1.6nm,0.5s,SNR=7.9						
ELOB				Lg		03 48 59.2	
	3.4nm,0.5s,SNR=5.0						
EPON	**Pontenova**	**6.83**	**318**	Lg		03 49 06.9	
	1.9nm,0.5s,SNR=7.9						
EPON	**Pontenova**	**6.83**	**318**	Lg		03 49 06.9	
	1.9nm,0.5s,SNR=7.9						
EPON	**Pontenova**	**6.83**	**318**	Lg		03 49 06.9	
	1.9nm,0.5s,SNR=7.9						
CAF	**Calviac**	**6.92**	**18**	*e*Pn	**Pn**	**03 47 12.8**	**-0.2**
CAF	**Calviac**	**6.92**	**18**	*e*Pn	**Pn**	**03 47 12.8**	**-0.2**

*ISCJB **22** 03:50:54.9±0.9, 23°.6S±0°.2×180°.0W±0°.1, h600^{km}, mb4.5/11, Error ellipse: s-maj=24.4km s-min=15.6km az=155.0*

*IDC **22** 03:50:59.5±10.0, 23°.99S×179°.94W, h650^{km}±152^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/14, mbtmp3.5/5, Error ellipse: s-maj=115.7km s-min=34.2km az=3.0*

ISC 22 03:50:56.0±0.9**, 23°.7S**±0°.2×**179°.9W**±0°.1**, h600**^{km}**, n20,** σ**0^{s}.83**/16**, mb4.5**/11**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.73**	**189**	P	**P**	**03 53 59.9**	**-1.6**
	0.8nm,0.3s,baz=326,slow=5.4,SNR=6.5						
EIDS	**Eidsvold**	**26.43**	**260**	*e*P	**P**	**03 55 46.5**	**-0.3**
RMQ	**Roma**	**28.48**	**258**	*e*P	**P**	**03 56 05.3**	**+0.6**
	20nm,0.9s,mb4.7						
CNB	**Canberra Magne**	**29.03**	**239**	*e*P	**P**	**03 56 10.7**	**+1.4**
CMSA	**Cobar Meteorol**	**31.38**	**248**	*e*P	**P**	**03 56 29.6**	**+0.2**
CTA	**Charters Tower**	**31.57**	**270**	⇓*i*P	**P**	**03 56 30.8**	**-0.4**
	22nm,0.6s,mb5.0						
TOO	**Toolangi**	**32.63**	**237**	*e*P	**P**	**03 56 41.1**	**+1.1**
STKA	**Stephens Creek**	**34.88**	**248**	P	**P**	**03 56 58.8**	**-0.1**
	9.8nm,0.6s,mb4.6,baz=95,slow=9.3,SNR=17						
ARPS	**Mount Arapiles**	**35.30**	**239**	*e*P	**P**	**03 57 02.9**	**+0.7**
	20nm,0.7s,mb4.9						
BBOO	**Buckleboo**	**39.61**	**247**	*e*P	**P**	**03 57 36.9**	**-0.4**
	6.2nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**42.16**	**260**	P	**P**	**03 57 57.5**	**-0.1**
	13nm,0.8s,mb4.5,baz=96,slow=8.0,SNR=106						
KAKA	**Kakadu**	**46.38**	**275**	*e*P	**P**	**03 58 28.4**	**-1.7**
	9.6nm,0.6s,mb4.5						
FORT	**Forrest**	**46.47**	**249**	*e*P	**P**	**03 58 30.4**	**-0.1**
	30nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**50.94**	**265**	*e*P	**P**	**03 59 03.6**	**-0.1**
	8.2nm,0.6s,mb4.3						
TXAR	**Lajitas Array**	**90.25**	**58**	P	**P**	**04 02 55.0**	**+1.1**
	1.2nm,0.8s,mb3.8,baz=209,slow=6.8,SNR=17						
PDAR	**Pinedale Array**	**92.48**	**44**	P	**P**	**04 03 03.5**	**-0.4**
	0.7nm,0.6s,mb3.9,baz=225,slow=5.9,SNR=5.4						
ARCES	**ARCESS Array B**	**131.71**	**348**	PKP	PKPdf	04 09 01.3	+0.4
	1.4nm,0.8s,baz=35,slow=3.3,SNR=4.2						
NOA	**NORSAR Array B**	**141.90**	**351**	PKhKP		04 09 15.7	
	0.5nm,0.6s,baz=16,slow=4.7,SNR=4.6						
HFS	**Hagfors**	**142.37**	**349**	PKhKP		04 09 17.0	
	1.6nm,0.4s,baz=82,slow=3.1,SNR=17						
EKA	**Eskdalemuir Ar**	**148.32**	**4**	PKPbc	PKPbc	04 09 33.5	-1.7
	0.7nm,0.5s,baz=357,slow=4.3,SNR=5.2						

*ISCJB **22** 03:57:40.2±0.5, 40°.57N±0°.03×34°.80E±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=4.5km az=154.3*

*CSEM **22** 03:57:40.4±0.2, 40°.58N×34°.80E, h5^{km}, MD3.1, Error ellipse: s-maj=4.3km s-min=3.7km az=50.0*

*ISK **22** 03:57:40.0, 40°.58N×34°.78E, h8^{km}, MD3.2*

*DDA **22** 03:57:41.2, 40°.54N×34°.70E, h8^{km}±5^{km}, Md3.1*

ISC 22 03:57:40.6±0.5**, 40°.58N**±0°.03×**34°.80E**±0°.04**, h4**^{km}±5^{km}**, n43,** σ**0^{s}.65**/55**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.05**	**355**	*i* P	**Pg**	**03 57 43.1**	**+1.3**
CTKT				*i* S	**Sg**	**03 57 47.1**	**+4.5**
CTKT	**Corum**	**0.05**	**355**	*i* P	**Pg**	**03 57 43.1**	**+1.3**
CORM	**Corum**	**0.42**	**198**	*e*PG	**Pg**	**03 57 48.7**	**0.0**
CORM				*e*SG	**Sg**	**03 57 55.1**	**+1.0**
CORM	**Corum**	**0.42**	**198**	*e*Pg	**Pg**	**03 57 48.7**	**0.0**
CORM				*e*Sg	**Sg**	**03 57 55.1**	**+1.0**
TOS	**Tosya**	**0.74**	**308**	*e*PG	**Pg**	**03 57 55.0**	**0.0**
TOS	**Tosya**	**0.74**	**308**	*e*Pg	**Pg**	**03 57 55.0**	**+0.1**
BYBT	**Boyabat**	**0.89**	**359**	*e*PG	**Pg**	**03 57 57.6**	**-0.1**
BYBT	**Boyabat**	**0.89**	**359**	*e*Pg	**Pg**	**03 57 57.6**	**-0.1**
CANT	**Cankiri**	**0.90**	**272**	*e*PG	**Pg**	**03 57 57.4**	**-0.5**
CANT				*e*SG	**Sg**	**03 58 09.7**	**+0.3**
ILGA	**Ilgaz**	**0.95**	**300**	*i* P	**Pg**	**03 57 58.4**	**-0.4**
ILGA				*i* S	**Sg**	**03 58 10.6**	**-0.4**
ILGA	**Ilgaz**	**0.95**	**300**	*i* P	**Pg**	**03 57 58.4**	**-0.4**
ILGA				*i* S	**Sg**	**03 58 10.6**	**-0.5**
CDAG	**Cicekdag**	**1.01**	**199**	*i* P	**Pg**	**03 57 58.8**	**-1.1**

CDAG				*i* S	**Sg**	**03 58 12.9**	**-0.1**
CDAG	**Cicekdag**	**1.01 199**		*i* P	**Pg**	**03 57 58.8**	**-1.1**
CDAG				*i* S	**Sg**	**03 58 12.9**	**-0.1**
YOZ	**Yozgat**	**1.02 157**		*e*PG	**Pg**	**03 57 59.7**	**-0.4**
YOZ	**Yozgat**	**1.02 157**		*e*Pg	**Pg**	**03 57 59.7**	**-0.4**
ELDT	**Eldivan**	**1.05 266**		*i* P	**Pg**	**03 58 00.7**	**0.0**
ELDT				*i* S	**Sg**	**03 58 14.1**	**-0.2**
ELDT	**Eldivan**	**1.05 266**		*i* P	**Pg**	**03 58 00.7**	**0.0**
ELDT				*i* S	**Sg**	**03 58 14.1**	**-0.2**
KVT	**Kavak**	**1.07**	**62**	*e*PN	**Pg**	**03 58 00.2**	**-1.0**
KVT	**Kavak**	**1.07**	**62**	*e*Pn	**Pg**	**03 58 00.2**	**-1.0**
DIKM	**Dikmen**	**1.13**	**18**	*e*PN	**Pg**	**03 58 02.2**	**0.0**
DIKM	**Dikmen**	**1.13**	**18**	*e*Pn	**Pg**	**03 58 02.2**	**0.0**
TOKT	**Tokat**	**1.36 100**		*e*PN	**Pn**	**03 58 05.3**	**-1.0**
TOKT	**Tokat**	**1.36 100**		*e*Pn	**Pn**	**03 58 05.3**	**-1.0**
BALT	**Daday**	**1.43 312**		*i* P	**Pn**	**03 58 07.5**	**+0.2**
BALT				*i* S	**Sb**	**03 58 27.1**	**+0.6**
BALT	**Daday**	**1.43 312**		*i* P	**Pn**	**03 58 07.5**	**+0.2**
BALT				*i* S	**Sb**	**03 58 27.0**	**+0.6**
BZK	**Bozkurt**	**1.50 337**		*e*PN	**Pn**	**03 58 08.8**	**+0.4**
BZK	**Bozkurt**	**1.50 337**		*e*Pn	**Pn**	**03 58 08.8**	**+0.5**
LOD	**Lodumlu**	**1.70 247**		*e*PN	**Pn**	**03 58 10.7**	**-0.4**
LOD	**Lodumlu**	**1.70 247**		*e*Pn	**Pn**	**03 58 10.7**	**-0.3**
SAFT	**Safranbolu**	**1.73 293**		*e*PN	**Pn**	**03 58 11.0**	**-0.4**
SAFT	**Safranbolu**	**1.73 293**		*e*Pn	**Pn**	**03 58 11.0**	**-0.4**
SVSK	**Karacayir**	**1.81 111**		*e*PN	**Pn**	**03 58 13.1**	**+0.6**
SVSK	**Karacayir**	**1.81 111**		*e*Pn	**Pn**	**03 58 13.1**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.40 142**		*e*PN	**Pn**	**03 58 22.6**	**+2.0**
SARI	**SarD1z-Kayseri**	**2.40 142**		*e*Pn	**Pn**	**03 58 22.6**	**+2.0**
SULT	**Sultanhani-AKS**	**2.57 203**		*e*PN	**Pn**	**03 58 23.0**	**0.0**
SULT	**Sultanhani-AKS**	**2.57 203**		*e*Pn	**Pn**	**03 58 23.0**	**0.0**
MDU	**Mudurnu**	**2.73 269**		*e*PN	**Pn**	**03 58 25.4**	**+0.2**
MDU	**Mudurnu**	**2.73 269**		*e*Pn	**Pn**	**03 58 25.4**	**+0.2**
SVRH	**Sivrihisar-ESK**	**2.75 247**		*e*PN	**Pn**	**03 58 25.6**	**+0.1**
SVRH	**Sivrihisar-ESK**	**2.75 247**		*e*Pn	**Pn**	**03 58 25.6**	**+0.1**
KIZT	**Kizilcal**	**2.82 234**		*e*PN	**Pn**	**03 58 25.8**	**-0.5**
KIZT	**Kizilcal**	**2.82 234**		*e*Pn	**Pn**	**03 58 25.8**	**-0.5**

*BJI **22** 04:00:22.2,24.′03N×125.′51E, h22km, mB4.0/2, mb4.5/5*
*IDC **22** 04:00:23.9±0.7,24.′27N×125.′19E, h0km, mb4.1/18, mb1 4.1/21, mb1mx4.1/28, mbtmp4.0/21, ML3.4/3, MS3.8/18, Ms1 3.8/18, ms1mx3.5/32, Error ellipse: s-maj=16.5km s-min=14.2km az=105.0*
*ISCJB **22** 04:00:27.4±0.7,24.′26N±0.′05×125.′32E±0.′04, h39km±5km, mb4.1/25, MS3.8/15, Error ellipse: s-maj=9.7km s-min=4.3km az=150.0*
*NEIC **22** 04:00:28.9±0.5,24.′24N×125.′28E, h35km, mb4.6/4, MW4.5(NIED), Error ellipse: s-maj=11.1km s-min=7.5km az=154.0*
NEIC Recorded [1 JMA] on Miyako-jima.
*JMA **22** 04:00:28.3±0.1,24.′27N×125.′24E, h26km±4km, M4.4*
JMA Felt I J1.

ISC 22 04:00:27.7±1.1**,24.′24N**±0.′06×**125.′30E**±0.′04**, h25**km±6km**, n58**,σ0**95/64, mb4.1**/25**, MS3.8**/15**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.53**	**11**	P	**Pb**	**04 00 38.7**	**+0.4**
JOGS				S	**Sb**	**04 00 46.3**	**+0.7**
JMJ	**Miyako jima 2**	**0.57**	**360**	P	**Pb**	**04 00 39.1**	**0.0**
JMJ				S	**Sb**	**04 00 46.8**	**0.0**
JTJ	**Tarama**	**0.67**	**306**	P	**Pb**	**04 00 40.2**	**-0.5**
JTJ				*e*S	**Sb**	**04 00 48.4**	**-1.3**
JIJ	**Ishigaki jima**	**1.06**	**277**	P	**Pn**	**04 00 46.6**	**-0.3**
JIJ				*e*S	**Sn**	**04 01 00.7**	**-0.1**
JKRS	**Kuro-shima**	**1.17**	**270**	P	**Pn**	**04 00 48.9**	**+0.4**
JKRS				*e*S	**Sn**	**04 01 03.6**	**0.0**
HATJ	**Hateruma jima**	**1.37**	**263**	P	**Pn**	**04 00 51.3**	**+0.1**
HATJ				*e*S	**Sn**	**04 01 08.3**	**-0.3**
IRIF	**Iriomote-Funau**	**1.43**	**274**	P	**Pn**	**04 00 52.3**	**+0.3**
YOJ	**Yonaguni jima**	**2.09**	**276**	P	**Pn**	**04 01 02.3**	**+1.2**
JKE	**Kume jima 2**	**2.48**	**33**	P	**Pn**	**04 01 06.0**	**-0.4**
JAGN	**Aguni-jima**	**2.93**	**37**	P	**Pn**	**04 01 13.1**	**+0.5**
NACB	**Ninganchiao**	**3.38**	**270**	*e*Pn	**Pn**	**04 01 18.3**	**-0.5**
TATO	**Taipei**	**3.54**	**283**	*e*Pn	**Pn**	**04 01 23.5**	**+2.5**
YHNB	**Yeheng**	**3.60**	**278**	*e*Pn	**Pn**	**04 01 23.4**	**+1.6**
JOW	**Kunigami**	**3.73**	**46**	P	**Pn**	**04 01 23.5**	**-0.1**
JOW	**Kunigami**	**3.73**	**46**	Pn	**Pn**	**04 01 23.4**	**-0.2**
	4.2nm,0.3s,baz=207,slow=12,SNR=23						
JOW				Pg	**Pn**	**04 01 33.0**	**+9.4**
	14nm,0.3s,baz=249,slow=11,SNR=12						
JOW				Sn	**Sn**	**04 02 06.3**	**-0.3**
	13nm,0.3s,baz=213,slow=17,SNR=3.9						
JOW				Lg		04 02 24.7	
	8.6nm,0.3s,baz=345,slow=28,SNR=6.7						
JOW	**Kunigami**	**3.73**	**46**	Pn	**Pn**	**04 01 23.4**	**-0.2**
JOW				Sn	**Sn**	**04 02 06.3**	**-0.3**
YULB	**Yu-li**	**3.76**	**258**	*e*Pn	**Pn**	**04 01 22.7**	**-1.3**
TWG	**Pinlang**	**4.13**	**251**	*e*Pn	**Pn**	**04 01 27.4**	**-1.7**
TPUB	**Ta-pu**	**4.38**	**259**	*e*Pn	**Pn**	**04 01 33.6**	**+1.0**
JTK	**Tokunoshima**	**4.82**	**42**	P	**Pn**	**04 01 37.2**	**-1.5**
JMZ	**Minamidaito 2**	**5.60**	**72**	P	**Pn**	**04 01 46.5**	**-2.8**
JMZ				*e*S	**Sn**	**04 02 45.4**	**-7.5**
JAM	**Amami Oshima**	**5.67**	**42**	P	**Pn**	**04 01 49.7**	**-0.6**
KSRS	**Korea Array**	**13.36**	**9**	Pn	**Pn**	**04 03 36.0**	**+0.3**
	0.1nm,0.3s,baz=206,slow=25,SNR=3.0						
KSRS				LR	LR	04 09 03.8	
	comp=Z,254nm,18.5s,baz=183,slow=39						
CBIJ	**Chichi jima**	**15.49**	**76**	LR	LR	04 08 54.4	
	comp=Z,194nm,20.3s,baz=204,slow=33						
MAT	**Matsushiro**	**16.54**	**39**	P	**Pn**	**04 04 19.7**	**+1.8**
MJAR	**Matsushiro Arr**	**16.54**	**39**	Pn	**Pn**	**04 04 19.9**	**+2.0**
	0.6nm,0.3s,baz=230,slow=11,SNR=12						
DAV	**Davao City (W)**	**17.08**	**179**	LR	LR	04 10 18.4	
	comp=Z,115nm,21.3s,baz=171,slow=35						
GUMO	**Guam**	**21.31**	**116**	P	**P**	**04 05 18.8**	**+6.1**
	110nm,1.0s,mb5.2,baz=315,slow=10.0,SNR=3.8						
GUMO				LR	LR	04 11 59.4	
	comp=Z,148nm,18.3s,MS3.4,baz=266,slow=32						
LZH	**Lanzhou**	**21.93**	**308**	*e*P	**P**	**04 05 20.0**	**+0.8**
LZH				pP		04 05 24.5	
LZH				sP	sP	04 05 27.1	-2.3
LZH				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
CHTO	**Chiang Mai**	**25.08**	**263**	*e*P	**P**	**04 05 58.4**	**+8.0**
	comp=Z,6.6nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**25.19**	**262**	P	**P**	**04 05 52.2**	**+0.9**
	comp=Z,1.3nm,0.3s,mb3.9,baz=53,slow=12,SNR=3.6						
CMAR				LR	LR	04 16 59.2	
	comp=Z,136nm,19.5s,MS3.5,baz=107,slow=40						
SONM	**Songino Array**	**27.92**	**332**	P	**P**	**04 06 14.3**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.5,baz=141,slow=9.3,SNR=3.2						
SONM				LR	LR	04 18 50.8	
	comp=Z,335nm,18.9s,MS4.0,baz=109,slow=40						
PETK	**Petropavlovsk-**	**37.78**	**32**	P	**P**	**04 07 41.6**	**0.0**
	comp=Z,3.2nm,0.9s,mb4.1,baz=204,slow=3.2,SNR=3.4						
PETK				LR	LR	04 24 17.7	
	comp=Z,36nm,21.1s,MS3.1,baz=26,slow=38						
MK31	**Makanchi Array**	**40.95**	**314**	*e*P	**P**	**04 08 07.3**	**-0.8**
MKAR	**Makanchi Array**	**40.95**	**314**	P	**P**	**04 08 07.4**	**-0.7**
	comp=Z,2.6nm,0.5s,mb4.1,baz=98,slow=11,SNR=28						
MKAR				LR	LR	04 26 29.1	
	comp=Z,134nm,19.7s,MS3.8,baz=259,slow=38						
FITZ	**Fitzroy Crossi**	**42.09**	**180**	P	**P**	**04 08 16.5**	**-1.2**
	comp=Z,3.2nm,0.9s,mb3.9,baz=342,slow=9.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**42.29**	**325**	P	**P**	**04 08 17.1**	**-1.8**
	comp=Z,1.6nm,0.4s,mb4.0,baz=118,slow=9.9,SNR=6.8						
ZALV				LR	LR	04 27 18.8	
	comp=Z,108nm,18.6s,MS3.8,baz=237,slow=38						
KURK	**Kurchatov**	**44.49**	**319**	P	**P**	**04 08 36.1**	**-0.7**
	comp=Z,2.6nm,0.7s,mb4.1,baz=105,slow=32,SNR=16						
TKM2	**Tokmak 2**	**44.70**	**307**	*e*P	**P**	**04 08 38.8**	**+0.2**
	comp=Z,9.0nm,0.8s,mb4.7						
UCH	**Uchtor**	**45.41**	**306**	*e*P	**P**	**04 08 45.9**	**+1.7**
	comp=Z,498nm,0.6s						
AAK	**Ala-Archa**	**45.47**	**307**	P	**P**	**04 08 45.4**	**+0.7**
	comp=Z,0.7nm,0.3s,mb4.0,baz=176,slow=13,SNR=3.1						
AML	**Almayashu**	**46.00**	**306**	*e*P	**P**	**04 08 50.2**	**+1.3**
	comp=Z,4.9nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**48.35**	**169**	P	**P**	**04 09 08.3**	**+1.0**
	comp=Z,2.4nm,0.7s,mb4.3,baz=355,slow=13,SNR=30						
CTA	**Charters Tower**	**48.56**	**153**	LR	LR	04 26 47.9	
	comp=Z,94nm,18.9s,MS3.8,baz=45,slow=33						
BVAR	**Borovoye Array**	**50.03**	**320**	P	**P**	**04 09 19.3**	**-0.6**
	comp=Z,0.8nm,0.5s,mb4.0,baz=103,slow=6.0,SNR=5.5						
BVAR				LR	LR	04 33 42.6	
	comp=Z,86nm,18.9s,MS3.8,baz=203,slow=40						
ABKAR	**Akbulak array**	**56.09**	**314**	*e*P	**P**	**04 10 04.3**	**-0.3**
	comp=Z,6.0nm,0.6s,mb4.8						
AKTK	**Aktyubinsk**	**57.36**	**316**	P	**P**	**04 10 13.1**	**-0.5**
AKTK				LR	LR	04 36 50.4	
AKTO	**Aktyubinsk**	**57.36**	**316**	P	**P**	**04 10 13.1**	**-0.5**
	comp=Z,1.2nm,0.6s,mb4.1,baz=117,slow=17,SNR=8.1						
AKTO				LR	LR	04 36 50.4	
	comp=Z,115nm,18.4s,MS4.0,baz=4.2,slow=38						
STKA	**Stephens Creek**	**57.94**	**164**	P	**P**	**04 10 18.1**	**+0.3**
	comp=Z,0.6nm,0.3s,mb4.0,baz=326,slow=7.8,SNR=5.4						
STKA				LR	LR	04 32 19.0	
	comp=Z,73nm,20.1s,MS3.8,baz=26,slow=33						
JOF	**Joensuu**	**70.49**	**331**	*e*p	**P**	**04 11 39.3**	**-0.5**
	comp=Z,2.8nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**73.27**	**330**	P	**P**	**04 11 56.3**	**-0.2**
	comp=Z,2.7nm,0.6s,mb4.4,baz=58,slow=7.2,SNR=9.9						
FINES				LR	LR	04 47 37.1	
	comp=Z,199nm,18.2s,MS4.4,baz=341,slow=39						
AKASG	**Malin Array Be**	**75.30**	**319**	P	**P**	**04 12 08.0**	**-0.5**
	comp=Z,0.8nm,0.4s,mb4.0,baz=61,slow=6.8,SNR=3.0						
BRTR	**Keskin Array B**	**76.14**	**307**	P	**P**	**04 12 13.4**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=46,slow=5.3,SNR=4.3						
BRTR				LR	LR	04 50 37.0	
	comp=Z,36nm,19.5s,MS3.7,baz=164,slow=40						
HFS	**Hagfors**	**79.32**	**332**	LR	LR	04 51 00.2	
	comp=Z,104nm,19.7s,MS4.2,baz=222,slow=38						
NB2	**NORSAR Subarra**	**79.90**	**333**	P	**P**	**04 12 33.3**	**-0.7**
	comp=Z,6.8nm,0.8s,mb4.6,baz=57,slow=5.6						
NOA	**NORSAR Array B**	**79.90**	**333**	P	**P**	**04 12 33.8**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=56,slow=5.5,SNR=6.0						
NOA				LR	LR	04 52 01.5	
	comp=Z,52nm,18.6s,MS3.9,baz=65,slow=39						
YKA	**Yellowknife Ar**	**81.43**	**24**	P	**P**	**04 12 42.4**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=304,slow=5.3,SNR=7.8						
GERES	**GERESS Array B**	**85.15**	**322**	P	**P**	**04 13 03.3**	**+1.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=35,slow=7.2,SNR=4.2						
GERES				LR	LR	04 53 07.2	
	comp=Z,75nm,20.1s,MS4.1,baz=284,slow=37						

*ISCJB **22** 04:20:44.6±3.2, 18.′6N±0.′1×145.′7E±0.′2, h229km±28km, mb3.7/10, Error ellipse: s-maj=30.0km s-min=22.9km az=6.6*
*IDC **22** 04:20:46.5±5.8, 18.′55N×145.′66E, h232km±54km, mb3.5/9, mb1 3.6/11, mb1mx3.4/24, mbtmp3.6/11, MS3.1/1, Ms1 3.1/1, ms1mx2.2/23, Error ellipse: s-maj=27.0km s-min=19.5km az=88.0*
*NEIC **22** 04:20:48.7±1.7, 18.′52N×145.′61E, h255km±19km, mb4.3/1, Error ellipse: s-maj=22.4km s-min=16.3km az=52.0*

ISC 22 04:20:47.7±1.6**, 18.′6N**±0.′1×**145.′7E**±0.′2**, h244**km±18km**, n15**,σ0**85/14, mb3.7**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.04**	**189**	P	**Pn**	**04 22 04.1**	**+0.3**
	9.3nm,0.3s,baz=15,slow=20,SNR=2.9						
GUMO				S	**S**	**04 22 51.6**	**-13**
	8.8nm,0.3s,baz=113,slow=22,SNR=6.2						
JHJ	**Hachijo jima 2**	**15.39**	**341**	P	**Pn**	**04 24 11.4**	**-1.3**
	13nm,0.3s,baz=103,slow=18,SNR=3.1						
JOW	**Kunigami**	**17.99**	**300**	P	**P**	**04 24 41.4**	**+0.8**
	1.3nm,0.3s,baz=111,slow=3.5,SNR=3.5						
ASAR	**Alice Springs**	**43.54**	**196**	P	**P**	**04 28 26.6**	**-1.1**
	0.5nm,0.6s,mb3.0,baz=12,slow=8.6,SNR=6.9						
ZALV	**Zalesovo Beam**	**58.07**	**323**	LR	LR	04 53 49.0	
	comp=Z,15nm,20.4s,baz=78,slow=34						
MKAR	**Makanchi Array**	**58.50**	**314**	P	**P**	**04 30 19.4**	**+0.9**
	0.2nm,0.3s,mb3.2,baz=88,slow=8.9,SNR=3.4						
BPAW	**Bear Paw Mtn.**	**61.87**	**26**	*e*P	**P**	**04 30 41.2**	**+0.3**
	7.0nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**66.52**	**320**	P	**P**	**04 31 12.3**	**+1.0**
	1.0nm,0.5s,mb3.7,baz=120,slow=9.9,SNR=4.4						
INK	**Inuvik**	**69.48**	**23**	P	**P**	**04 31 29.6**	**+0.1**
	1.8nm,0.6s,mb3.9,baz=302,slow=3.9,SNR=8.8						
YKA	**Yellowknife Ar**	**78.10**	**28**	P	**P**	**04 32 19.5**	**+0.1**
	1.2nm,0.6s,mb3.7,baz=290,slow=5.4,SNR=16						
ARCES	**ARCESS Array B**	**82.58**	**342**	P	**P**	**04 32 43.2**	**+0.2**
	1.0nm,0.7s,mb3.6,baz=74,slow=8.9,SNR=6.2						
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**04 32 48.1**	**+1.0**
	2.0nm,0.7s,mb3.9,baz=263,slow=6.7,SNR=8.5						
FINES	**FINESS Array B**	**86.96**	**335**	P	**P**	**04 33 03.9**	**-1.1**
	0.9nm,0.4s,mb3.8,baz=58,slow=5.0,SNR=6.4						
HFS	**Hagfors**	**92.46**	**338**	P	**P**	**04 33 29.5**	**-1.2**
	0.4nm,0.4s,mb3.7,baz=79,slow=7.5,SNR=3.1						
LPAZ	**La Paz**	**147.72**	**91**	PKPbc	PKPbc	04 40 06.6	+2.1
	0.7nm,0.6s,baz=360,slow=1.9,SNR=4.7						

*CSEM **22** 04:31:54.9±0.8, 41.′19N×19.′69E, h12km, ML1.9, Error ellipse: s-maj=15.6km s-min=8.3km az=37.0*
*ISCJB **22** 04:31:55.2±1.4, 41.′17N±0.′06×19.′65E±0.′08, h17km±7km, Error ellipse: s-maj=12.5km s-min=7.3km az=39.0*
*TIR **22** 04:31:55.0±0.4, 41.′17N×20.′02E, h20km±255km, ML3.0*
*SKO **22** 04:31:55.1, 41.′23N×19.′59E, h9km*
*BEO **22** 04:31:57.8±0.4, 41.′50N×19.′76E, h0km±3km*

ISC 22 04:31:55.1±1.4**, 41.′23N**±0.′06×**19.′64E**±0.′07**, h14**km±5km**, n21**,σ1**32/42**, 2C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.21**	**54**	⇓*i*Pg	**Pg**	**04 32 00.1**	**+0.4**
TIR				*i* Sg	**Sg**	**04 32 03.6**	**+0.7**
TIR	**Tirane**	**0.21**	**54**	⇓*i*Pg	**Pg**	**04 32 00.1**	**+0.4**
TIR				*i* Sg	**Sg**	**04 32 03.6**	**+0.7**
PHP	**Peshkopia**	**0.76**	**52**	*e*PG	**Pg**	**04 32 07.4**	**-2.4**
PHP				*i* SG	**Sg**	**04 32 16.1**	**-3.6**
PHP	**Peshkopia**	**0.76**	**52**	*e*Pg	**Pg**	**04 32 07.4**	**-2.4**
	SNR=91						
PHP				*i* Sg	**Sg**	**04 32 16.1**	**-3.6**
	SNR=91						
PUK	**Puka**	**0.84**	**13**	*e*PG	**Pg**	**04 32 11.9**	**+0.6**
PUK				*i* SG	**Sg**	**04 32 24.7**	**+2.4**
PUK	**Puka**	**0.84**	**13**	*e*Pg	**Pg**	**04 32 11.9**	**+0.6**
	SNR=90						
PUK				*i* Sg	**Sg**	**04 32 24.7**	**+2.4**
	SNR=90						
BCI	**Bajram Curri**	**1.18**	**15**	*e*PG	**Pg**	**04 32 17.8**	**-0.1**
BCI				*i* SG	**Sg**	**04 32 34.4**	**+1.1**
BCI	**Bajram Curri**	**1.18**	**15**	*e*Pg	**Pg**	**04 32 17.8**	**-0.1**
	SNR=90						
BCI				*i* Sg	**Sg**	**04 32 34.4**	**+1.1**
	SNR=90						
KRUS	**Krusevo**	**1.22**	**83**	*i* Pg	**Pg**	**04 32 17.0**	**-1.6**
KRUS				*i* Sg	**Sg**	**04 32 35.0**	**+0.5**
KRUS				*e*Lg		04 32 35.5	
	comp=N,16nm,0.2s						
KRUS				*e*Lg		04 32 35.7	
	comp=E,20nm,0.3s						
KRUS	**Krusevo**	**1.22**	**83**	*i* Pg	**Pg**	**04 32 17.0**	**-1.6**
KRUS				*i* Sg	**Sg**	**04 32 34.9**	**+0.5**
KRUS				*e*Lg		04 32 35.4	
	comp=E,16nm,0.2s						
BIA	**Bitola**	**1.29**	**99**	*e*Pg	**Pg**	**04 32 18.6**	**-1.3**
BIA				*i* Sg	**Sg**	**04 32 37.8**	**+1.2**
BIA				*e*Lg		04 32 38.0	
	comp=N,13nm,0.2s						
BIA				*e*Lg		04 32 39.6	
	comp=E,23nm,0.4s						
BIA	**Bitola**	**1.29**	**99**	*e*Pg	**Pg**	**04 32 18.5**	**-1.4**
BIA				*i* Sg	**Sg**	**04 32 37.7**	**+1.1**
BIA				*e*Lg		04 32 38.0	
	comp=E,13nm,0.2s						
TREB	**Trebinje**	**1.77**	**328**	*i* Pn	**Pn**	**04 32 26.7**	**+1.4**
TREB				*i* Sg	**Sg**	**04 32 49.1**	**-3.0**
TREB	**Trebinje**	**1.77**	**328**	*i* Pn	**Pn**	**04 32 26.7**	**+1.4**
TREB				*i* Sg	**Sg**	**04 32 49.1**	**-3.0**
BARS	**Barje**	**2.27**	**45**	*e*Pn	**Pn**	**04 32 33.4**	**+1.2**
BARS				*i* Sg	**Sg**	**04 33 01.5**	**-6.5**
BBLS	**Lazići**	**2.64**	**356**	*e*Pn	**Pn**	**04 32 37.1**	**-0.2**
BBLS				*e*Sg	**Sg**	**04 33 12.6**	**-7.4**
BBLS	**Lazići**	**2.64**	**356**	*e*Pn	**Pn**	**04 32 37.1**	**-0.2**
BBLS				*e*Sg	**Sg**	**04 33 12.6**	**-7.4**
DIVS	**Divibare**	**2.88**	**5**	*e*Pg	**Pg**	**04 32 45.3**	**-5.0**
DIVS				*e*Sn	**Sn**	**04 33 14.1**	**-0.9**
DIVS	**Divibare**	**2.88**	**5**	*e*Pg	**Pg**	**04 32 45.3**	**-5.0**
DIVS				*e*Sn	**Sn**	**04 33 14.1**	**-0.9**
ZAPS	**Zavoj**	**3.02**	**46**	*e*Pn	**Pn**	**04 32 44.1**	**+1.6**
ZAPS				*i* Sn	**Sn**	**04 33 17.5**	**-0.9**
ZAPS	**Zavoj**	**3.02**	**46**	*e*Pn	**Pn**	**04 32 44.1**	**+1.6**
ZAPS				*i* Sn	**Sn**	**04 33 17.5**	**-0.9**

*ISCJB **22** 04:46:35.7±1.8, 24.′2N±0.′1×125.′28E±0.′07, h28km±12km, Error ellipse: s-maj=20.2km s-min=8.4km az=158.0*
*NEIC **22** 04:46:37.2, 24.′28N×125.′23E, h22km, mb4.1/1, After JMA.*
*JMA **22** 04:46:37.1±0.2, 24.′28N×125.′23E, h22km, M3.4*

ISC 22 04:46:36.3±1.7**, 24.′24N**±0.′09×**125.′26E**±0.′07**, h21**km±11km**, n12**,σ0**89/21**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.53**	**15**	P	**Pb**	**04 46 47.2**	**+0.2**
JOGS				S	**Sb**	**04 46 54.9**	**+0.6**
JMJ	**Miyako jima 2**	**0.57**	**3**	P	**Pb**	**04 46 47.7**	**0.0**
JMJ				S	**Sb**	**04 46 54.8**	**-0.6**
JTJ	**Tarama**	**0.64**	**308**	P	**Pb**	**04 46 48.8**	**-0.1**
JTJ				S	**Sb**	**04 46 56.7**	**-0.8**
JIJ	**Ishigaki jima**	**1.02**	**277**	P	**Pb**	**04 46 54.9**	**-0.5**
JIJ				S	**Sb**	**04 47 08.6**	**+0.2**
JKRS	**Kuro-shima**	**1.14**	**270**	P	**Pn**	**04 46 57.7**	**+0.6**
JKRS				S	**Sb**	**04 47 12.3**	**+0.6**
HATJ	**Hateruma jima**	**1.34**	**262**	P	**Pn**	**04 47 00.0**	**+0.2**
HATJ				S	**Sn**	**04 47 15.7**	**-1.3**
IRIF	**Iriomote-Funau**	**1.40**	**274**	P	**Pn**	**04 47 01.5**	**+0.9**
IRIF				*e*S	**Sn**	**04 47 20.8**	**+2.3**
NACB	**Ninganchiao**	**3.35**	**270**	*e*Pn	**Pn**	**04 47 27.8**	**+0.4**
YULB	**Yu-li**	**3.73**	**258**	*e*Pn	**Pn**	**04 47 32.1**	**-0.5**
TWG	**Pinlang**	**4.09**	**251**	*e*Pn	**Pn**	**04 47 35.9**	**-1.9**
TWG				*e*S	**Sn**	**04 48 19.7**	**-5.4**
TPUB	**Ta-pu**	**4.34**	**258**	*e*Pn	**Pn**	**04 47 42.7**	**+1.5**
TPUB				*e*S	**Sn**	**04 48 30.7**	**-0.5**
ABKAR	**Akbulak array**	**56.07**	**314**	*e*P	**P**	**04 56 13.1**	**-0.6**
	1.3nm,0.6s						

*IDC **22** 05:14:21.1±0.6, 12.′65N×48.′39E, h0km, mb4.1/18, mb1 4.2/19, mb1mx4.1/28, mbtmp4.1/19, ML5.1/2, MS3.7/12, Ms1 3.7/12, ms1mx3.4/30, Error ellipse: s-maj=18.1km s-min=13.5km az=109.0*
*MOS **22** 05:14:21.0±0.9, 12.′64N×48.′42E, h10km, mb4.4/15, Error ellipse: s-maj=19.3km s-min=9.7km az=87.8*
*ISCJB **22** 05:14:22.0±2.4, 12.′72N±0.′06×48.′21E±0.′04, h15km±15km, mb4.2/29, MS3.6/12, Error ellipse: s-maj=9.3km s-min=6.1km az=174.7*
*NEIC **22** 05:14:22.6±0.4, 12.′61N×48.′36E, h10km, mb4.3/7, Error ellipse: s-maj=10.2km s-min=7.1km az=129.0*
*CSEM **22** 05:14:22.9±0.2, 12.′68N×48.′23E, h10km, mb4.3/24, Error ellipse: s-maj=9.0km s-min=7.1km az=161.0*
*DHMR **22** 05:14:25.1±0.4, 12.′49N×47.′58E, h6km±5km, ML3.9*

ISC 22 05:14:24.6±3.1**, 12.′70N**±0.′06×**48.′19E**±0.′04**, h19**km±20km**, n99**,σ1**05/104**, mb4.2**/29**, MS3.6**/12**, 1C-10D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**2.84**	**297**	⇓*e*P	**Pn**	**05 15 08.0**	**-0.9**
BDHA				*i* S	**Sn**	**05 15 41.6**	**-1.0**
BDHA				AML	AML	05 15 46.8	
	comp=E,2μm,0.6s						
BDHA	**Al Bayda'**	**2.84**	**297**	⇓*e*P	**Pn**	**05 15 08.0**	**-0.9**
BDHA				*i* S	**Sn**	**05 15 41.6**	**-1.0**
	comp=E,322nm,0.4s						
LBOS		**3.08**	**292**	⇓*i*P	**Pn**	**05 15 11.3**	**-0.9**
LBOS				⇓*i*S	**Sn**	**05 15 47.5**	**-1.1**
LBOS	

KEST	**Kesra**	**41.80**	**310**	LR	LR	05 40 05.3	
	comp=Z,44nm,19.9s,MS3.3,baz=194,slow=37						
OBN	**Obninsk**	**43.28**	**350**	*e*P	**P**	**05 22 26.9**	**+2.2**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
OBN	**Obninsk**	**43.28**	**350**	*e*P	**P**	**05 22 26.9**	**+2.2**
	comp=Z,7.0nm,0.5s,mb4.7						
LBTB	**Lobatse**	**43.48**	**210**	P	**P**	**05 22 27.0**	**+0.3**
	comp=Z,4.9nm,1.0s,mb4.2,baz=12,slow=7.3,SNR=3.8						
LBTB	**Lobatse**	**43.48**	**210**	P	**P**	**05 22 27.0**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
LBTB	**Lobatse**	**43.48**	**210**	P	**P**	**05 22 27.0**	**+0.3**
	comp=Z,5.0nm,1.0s,mb4.2						
TSUM	**Tsumeb**	**43.75**	**224**	P	**P**	**05 22 29.6**	**+0.6**
	comp=Z,2.2nm,0.8s,mb4.0,baz=101,slow=5.2,SNR=3.4						
TSUM	**Tsumeb**	**43.75**	**224**	P	**P**	**05 22 29.6**	**+0.6**
BVAR	**Borovoye Array**	**43.95**	**19**	P	**P**	**05 22 29.3**	**-0.9**
	comp=Z,1.6nm,0.6s,mb3.9,baz=189,slow=8.8,SNR=8.3						
BVAR				LR	LR	05 43 50.0	
	comp=Z,174nm,19.0s,MS4.0,baz=223,slow=40						
BVAR	**Borovoye Array**	**43.95**	**19**	P	**P**	**05 22 29.3**	**-0.9**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,174nm,19.0s						
BVAR	**Borovoye Array**	**43.95**	**19**	P	**P**	**05 22 29.3**	**-0.9**
	comp=Z,174nm,19.0s						
MKAR	**Makanchi Array**	**44.45**	**33**	P	**P**	**05 22 33.0**	**-1.3**
	comp=Z,2.0nm,0.8s,mb3.9,baz=220,slow=9.2,SNR=13						
MKAR				LR	LR	05 44 56.9	
	comp=Z,46nm,20.9s,MS3.4,baz=359,slow=41						
MKAR	**Makanchi Array**	**44.45**	**33**	P	**P**	**05 22 33.0**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,46nm,20.9s						
TOA0	**Torodi Ar. Sit**	**45.26**	**276**	*e*P	**P**	**05 22 41.7**	**+0.5**
TOA0	**Torodi Ar. Sit**	**45.26**	**276**	*e*P	**P**	**05 22 41.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**45.26**	**276**	P	**P**	**05 22 41.5**	**+0.3**
	comp=Z,3.5nm,0.6s,mb4.4,baz=89,slow=7.1,SNR=33						
TORD				LR	LR	05 43 14.8	
	comp=Z,65nm,18.2s,MS3.6,baz=225,slow=38						
TORD	**Torodi Ar. Bea**	**45.26**	**276**	P	**P**	**05 22 41.5**	**+0.3**
GERES	**GERESS Array B**	**45.94**	**329**	P	**P**	**05 22 46.6**	**+0.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=138,slow=8.8,SNR=9.3						
GERES				LR	LR	05 43 42.7	
	comp=Z,39nm,18.4s,MS3.4,baz=282,slow=38						
GERES	**GERESS Array B**	**45.94**	**329**	P	**P**	**05 22 46.6**	**+0.5**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,39nm,18.5s						
GERES	**GERESS Array B**	**45.94**	**329**	P	**P**	**05 22 46.5**	**+0.4**
BOSA	**Boshof**	**46.68**	**208**	P	**P**	**05 22 51.9**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=46,slow=8.2,SNR=4.5						
BOSA				LR	LR	05 42 02.8	
	comp=Z,187nm,18.1s,MS4.1,baz=44,slow=36						
BOSA	**Boshof**	**46.68**	**208**	P	**P**	**05 22 51.9**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BOSA				MLR	MLR		
	comp=Z,187nm,18.1s,MS4.1						
BOSA	**Boshof**	**46.68**	**208**	P	**P**	**05 22 51.9**	**-0.2**
	comp=Z,187nm,18.1s						
CM31	**Chiang Mai Arr**	**49.10**	**77**	*e*P	**P**	**05 23 09.1**	**-2.1**
	comp=Z,1.2nm,0.4s,mb4.3						
CM31	**Chiang Mai Arr**	**49.10**	**77**	*e*P	**P**	**05 23 09.1**	**-2.0**
	comp=Z,1.2nm,0.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**49.10**	**77**	P	**P**	**05 23 08.6**	**-2.6**
	comp=Z,5.3nm,0.9s,mb4.5,baz=274,slow=8.7,SNR=25						
CMAR	**Chiang Mai Arr**	**49.10**	**77**	P	**P**	**05 23 08.6**	**-2.5**
CMAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.10**	**77**	P	**P**	**05 23 08.6**	**-2.5**
	comp=Z,5.0nm,1.0s,mb4.5						
NVS	**Novosibirsk**	**50.18**	**26**	*e*P	**P**	**05 23 18.7**	**-0.1**
NVS	**Novosibirsk**	**50.18**	**26**	*e*P	**P**	**05 23 18.7**	**-0.1**
ZAA0	**Zalesovo Array**	**50.27**	**27**	*e*P	**P**	**05 23 18.6**	**-0.9**
ZAA0	**Zalesovo Array**	**50.27**	**27**	*e*P	**P**	**05 23 18.6**	**-0.9**
ZALV	**Zalesovo Beam**	**50.27**	**27**	P	**P**	**05 23 17.7**	**-1.8**
	comp=Z,1.9nm,0.5s,mb4.3,baz=228,slow=7.9,SNR=8.1						
ZALV	**Zalesovo Beam**	**50.27**	**27**	P	**P**	**05 23 17.7**	**-1.8**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ZALV	**Zalesovo Beam**	**50.27**	**27**	P	**P**	**05 23 17.7**	**-1.8**
FINES	**FINESS Array B**	**51.24**	**347**	P	**P**	**05 23 26.8**	**+0.2**
	comp=Z,1.9nm,0.5s,mb4.2,baz=148,slow=11,SNR=8.3						
FINES	**FINESS Array B**	**51.24**	**347**	P	**P**	**05 23 26.8**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**51.24**	**347**	P	**P**	**05 23 26.8**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.3						
ESDC	**Sonseca Array**	**53.05**	**310**	P	**P**	**05 23 41.0**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=124,slow=7.7,SNR=3.5						
ESDC	**Sonseca Array**	**53.05**	**310**	P	**P**	**05 23 41.0**	**+0.5**
NB2	**NORSAR Subarra**	**55.23**	**339**	P	**P**	**05 23 55.3**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.2,baz=128,slow=7.9						
NB2	**NORSAR Subarra**	**55.23**	**339**	P	**P**	**05 23 55.3**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.2,SNR=5.1						
NOA	**NORSAR Array B**	**55.23**	**339**	P	**P**	**05 23 57.4**	**+1.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=133,slow=7.1,SNR=5.6						
NOA				LR	LR	05 50 30.2	
	comp=Z,49nm,18.7s,MS3.6,baz=95,slow=39						
NOA	**NORSAR Array B**	**55.23**	**339**	P	**P**	**05 23 57.4**	**+1.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,49nm,18.7s						
NOA	**NORSAR Array B**	**55.23**	**339**	P	**P**	**05 23 57.4**	**+1.4**
NOA				LR	LR	05 50 30.2	
NOA	**NORSAR Array B**	**55.23**	**339**	P	**P**	**05 23 57.4**	**+1.4**
	comp=Z,49nm,18.7s						
ARCES	**ARCESS Array B**	**58.59**	**351**	P	**P**	**05 24 19.8**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.3,baz=167,slow=7.0,SNR=9.3						
ARCES	**ARCESS Array B**	**58.59**	**351**	P	**P**	**05 24 19.8**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.59**	**351**	P	**P**	**05 24 19.8**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.3						
SONM	**Songino Array**	**59.48**	**42**	LR	LR	05 49 22.9	
	comp=Z,44nm,21.1s,MS3.6,baz=262,slow=35						
MAW	**Mawson**	**80.80**	**174**	P	**P**	**05 26 36.4**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2,baz=293,slow=12,SNR=4.1						
MAW				LR	LR	05 55 51.5	
	comp=Z,80nm,19.5s,MS4.1,baz=310,slow=31						
MAW	**Mawson**	**80.80**	**174**	P	**P**	**05 26 36.4**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**91.17**	**114**	P	**P**	**05 27 28.8**	**0.0**
	comp=Z,1.6nm,0.9s,mb4.3,baz=275,slow=4.7,SNR=6.7						
ASAR	**Alice Springs**	**91.17**	**114**	P	**P**	**05 27 28.8**	**0.0**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**91.17**	**114**	P	**P**	**05 27 28.8**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.5						
PETK	**Petropavlovsk-**	**91.27**	**35**	LR	LR	06 13 43.8	
	comp=Z,23nm,19.7s,MS3.6,baz=61,slow=39						

IDC ***22*** *05:37:49.9±1.4, 16°.62S×177°.38W, h396km±17km, mb3.6/9, mb1 3.8/10, mb1mx3.7/16, mbtmp3.6/10, Error ellipse: s-maj=26.0km s-min=13.3km az=140.0*
NEIC ***22*** *05:37:50.7±0.7, 16°.66S×177°.27W, mb4.1/8, Error ellipse: s-maj=29.1km s-min=12.4km az=151.0*
ISCJB ***22*** *05:37:51.4±0.7, 16°.8S±0°.1×177°.18W±0°.09, h445km±7km, mb4.0/18, Error ellipse: s-maj=24.9km s-min=9.2km az=152.7*

ISC 22 05:37:51.7±0.6, 16°.7S±0°.1×177°.15W±0°.09, h435km±7km, n33, σ1§03/34, mb4.0/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.70**	**257**	*e*Pn	**P**	**05 39 12.7**	**+0.3**
MSVF				*e*S	**S**	**05 40 19.0**	**+1.0**
AFI	**Afiamalu**	**5.90**	**62**	P	**P**	**05 39 23.0**	**-1.4**
	14nm,0.3s,baz=263,slow=8.1,SNR=15						
AFI				S	**S**	**05 40 40.1**	**0.0**
	1.9nm,0.3s,baz=258,slow=20,SNR=1.7						
AFI	**Afiamalu**	**5.90**	**62**	P	**P**	**05 39 23.0**	**-1.4**
AFI				S	**S**	**05 40 40.1**	**0.0**
DZM	**Mont Dzumac**	**16.36**	**249**	*e*P	**P**	**05 41 18.1**	**+0.4**
	23nm,1.0s						
URZ	**Urewera**	**22.02**	**192**	P	**P**	**05 42 11.8**	**-0.4**
	4.3nm,0.5s,mb4.1,baz=348,slow=7.8,SNR=5.7						
EIDS	**Eidsvold**	**30.81**	**248**	*e*P	**P**	**05 43 29.9**	**-0.3**
EIDS	**Eidsvold**	**30.81**	**248**	*e*P	**P**	**05 43 29.9**	**-0.3**
	9.9nm,0.9s,mb4.1						
ARMA	**Armidale**	**31.57**	**239**	*e*P	**P**	**05 43 37.9**	**+1.2**
	5.2nm,0.6s,mb4.0						
CTAO	**Charters Tower**	**34.84**	**259**	*e*P	**P**	**05 44 04.4**	**-0.4**
	3.2nm,0.8s,mb3.7						
CTAO				*e*pP	pP	05 45 21.5	-2.5
MTSU	**Mount Surprise**	**36.75**	**262**	*e*P	**P**	**05 44 19.7**	**-1.0**
	70nm,1.6s,mb4.7						
CMSA	**Cobar Meteorol**	**36.77**	**239**	*e*P	**P**	**05 44 21.7**	**+0.9**
QLP	**Quilpie**	**37.08**	**248**	*e*P	**P**	**05 44 22.3**	**-1.1**
COEN	**Coen**	**38.32**	**269**	*e*P	**P**	**05 44 33.5**	**-0.2**
COEN	**Coen**	**38.32**	**269**	*e*P	**P**	**05 44 33.5**	**-0.2**
	120nm,0.8s						
COEN				*e*pP	pP	05 45 51.9	-2.6
STKA	**Stephens Creek**	**40.25**	**240**	*e*P	**P**	**05 44 50.7**	**+1.5**
	7.0nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**40.25**	**240**	P	**P**	**05 44 50.7**	**+1.5**
	8.5nm,0.7s,mb4.2,baz=94,slow=9.0,SNR=19						
STKA	**Stephens Creek**	**40.25**	**240**	P	**P**	**05 44 50.7**	**+1.5**
BBOO	**Buckleboo**	**45.03**	**240**	*e*P	**P**	**05 45 27.0**	**0.0**
	9.0nm,0.9s,mb4.1						
WRAB	**Tennant Creek**	**46.03**	**258**	*e*P	**P**	**05 45 33.3**	**-1.6**
	7.6nm,1.0s,mb4.0						
ASAR	**Alice Springs**	**46.27**	**253**	P	**P**	**05 45 36.0**	**-0.8**
	22nm,0.7s,mb4.6,baz=87,slow=8.0,SNR=150						
ASAR				ScP	ScP	05 50 20.9	+5.9
	0.7nm,0.8s,baz=108,slow=2.8,SNR=4.2						
KAKA	**Kakadu**	**48.82**	**268**	*e*P	**P**	**05 45 54.2**	**-1.9**
	48nm,0.5s,mb5.1						
FORT	**Forrest**	**51.60**	**244**	*e*P	**P**	**05 46 16.2**	**-0.2**
	8.8nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**54.42**	**259**	*e*P	**P**	**05 46 36.2**	**-0.6**
	7.6nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**54.42**	**259**	*e*P	**P**	**05 46 36.6**	**-0.2**
	2.6nm,0.6s,mb3.6						
MBWA	**Marble Bar**	**59.53**	**255**	*e*P	**P**	**05 47 11.9**	**-0.2**
MBWA				*e*PcP	PcP	05 48 00.8	+6.4
MJAR	**Matsushiro Art**	**67.71**	**322**	P	**P**	**05 48 03.5**	**-0.9**
	0.9nm,0.5s,mb3.7,baz=134,slow=5.2,SNR=3.8						
KSRS	**Korea Array**	**74.65**	**318**	P	**P**	**05 48 46.0**	**+0.7**
	0.6nm,0.4s,mb3.6,baz=125,slow=7.8,SNR=4.9						
NVAR	**Mina Array Bea**	**77.75**	**43**	P	**P**	**05 49 05.2**	**+2.6**
	0.9nm,0.7s,mb3.5,baz=227,slow=9.2,SNR=4.3						
TXAR	**Lajitas Array**	**84.35**	**57**	P	**P**	**05 49 40.9**	**+3.8**
	1.6nm,0.9s,mb3.8,baz=222,slow=5.2,SNR=15						
CMAR	**Chiang Mai Arr**	**89.63**	**289**	P	**P**	**05 50 04.2**	**+1.8**
	0.5nm,0.4s,mb3.7,baz=134,slow=2.6,SNR=2.8						
YKA	**Yellowknife Ar**	**92.78**	**24**	P	**P**	**05 50 16.7**	**+0.8**
	0.1nm,0.5s,mb3.0,baz=223,slow=5.2,SNR=3.6						
BRTR	**Keskin Array B**	**144.79**	**317**	PKP	PKPdf	05 56 39.4	+1.2
	1.1nm,0.6s,baz=130,slow=1.9,SNR=9.8						
TORD	**Torodi Ar. Bea**	**176.26**	**162**	PKPab	PKPab	05 58 57.9	+3.1
	0.5nm,0.8s,baz=195,slow=3.7,SNR=2.5						

KRSC 22 06:24:35.6±0.8, 53°.27N×162°.94E, h41km±41km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.47**	**331**	*i* P	Pn	06 25 00.8	+1.2
MKZ				*e*S	Sn	06 25 19.8	+2.2
SPN	**Mys Shipunski**	**1.76**	**266**	*e*P	Pn	06 25 04.4	+0.8
SPN				*e*S	Sn	06 25 25.5	+0.7
NLC	**Nalytchevo**	**2.16**	**269**	*e*P	Pn	06 25 10.5	+1.4
NLC				*e*S	Sn	06 25 35.4	+0.8
KII	**Karymskiy**	**2.21**	**292**	*e*P	Pn	06 25 11.8	+2.0
KII				*e*S	Sn	06 25 38.4	+2.5
AVH	**Avacha**	**2.52**	**272**	*e*P	Pn	06 25 16.2	+2.2
AVH				*e*S	Sn	06 25 45.9	+2.4
PET	**Petropavlovsk**	**2.59**	**266**	P	Pn	06 25 16.5	+1.5
PET				*e*S	Sn	06 25 46.7	+1.5
BKI	**Bering**	**2.63**	**41**	S	Sn	06 25 41.9	-4.2
RUS	**Russkaya**	**2.81**	**254**	*i* P	Pn	06 25 18.6	+0.6
RUS				*e*S	Sn	06 25 50.3	-0.3
KBTR	**Krutoberegovo**	**2.94**	**359**	*e*P	Pn	06 25 20.3	+0.5
KBTR				S	Sn	06 25 53.6	-0.3
KMNR	**Kamenistaya**	**2.95**	**329**	*e*P	Pn	06 25 23.2	+3.4
KMNR				S	Sn	06 25 58.6	+4.7
BZGR	**Bezymyannyi-Gr**	**2.98**	**335**	P	Pn	06 25 23.0	+2.8
BZGR				S	Sn	06 25 58.1	+3.5
GNL	**Ganaly**	**3.02**	**280**	*e*P	Pn	06 25 23.9	+3.1
GNL				*e*S	Sn	06 25 59.8	+4.2
ZLN	**Zelenaya**	**3.02**	**337**	*e*P	Pn	06 25 23.5	+2.7
ZLN				*e*S	Sn	06 25 59.1	+3.4
KPT	**Kopyto**	**3.13**	**331**	P	Pn	06 25 24.6	+2.3
KPT				S	Sn	06 26 00.7	+2.3
KOZ	**Kozyrevsk**	**3.31**	**329**	P	Pn	06 25 27.7	+2.9
KOZ				S	Sn	06 26 06.2	+3.3
KLY	**Klyuchi**	**3.33**	**337**	S	Sn	06 26 05.7	+2.5
SRKR	**Sorokina**	**3.54**	**344**	P	Pn	06 25 29.9	+1.9
SRKR				S	Sn	06 26 10.1	+1.6
SRDR	**Sredinnyy**	**3.58**	**330**	P	Pn	06 25 30.7	+2.2

IDC 22 06:25:15.0±1.8, 58°.18S×158°.71E, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.9/12, mbtmp3.9/2, MS3.7/1, Ms1 3.6/1, ms1mx3.1/11, Error ellipse: s-maj=125.7km s-min=29.9km az=70.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.77**	**329**	LR	LR	06 42 09.8	
	comp=Z,143nm,19.7s,baz=206,slow=35						
QSPA	**South Pole Qui**	**31.93**	**180**	P	P	06 31 43.2	+1.6
	0.9nm,0.8s,baz=358,slow=3.2,SNR=3.4						
QSPA				PcP	PcP	06 34 31.1	-0.4
	1.2nm,0.9s,baz=38,slow=1.7,SNR=3.9						
ASAR	**Alice Springs**	**38.78**	**322**	P	P	06 32 41.9	+0.8
	2.4nm,0.8s,baz=162,slow=8.6,SNR=18						
ASAR				PcP	PcP	06 34 51.9	-0.7
	1.2nm,0.9s,baz=151,slow=3.8,SNR=6.9						
MKAR	**Makanchi Array**	**122.05**	**308**	PKP	PKPdf	06 44 09.1	-1.2
	0.5nm,0.9s,baz=143,slow=2.9,SNR=3.9						
YKA	**Yellowknife Ar**	**137.47**	**43**	PKhKP		06 44 28.9	
	0.1nm,0.5s,baz=212,slow=3.2,SNR=4.4						
YKA				PKP	PKPdf	06 44 39.2	+0.2
	0.4nm,0.7s,baz=225,slow=1.5,SNR=6.7						
AKASG	**Malin Array Be**	**150.31**	**278**	PKPbc	PKPbc	06 45 06.2	-0.7
	0.5nm,0.5s,baz=98,slow=2.0,SNR=3.3						

IDC ***22*** *07:18:42.2±0.5, 31°.07N×103°.68E, h0km, mb4.3/21, mb1 4.3/23, mb1mx4.2/30, mbtmp4.3/23, ML4.0/1, MS4.2/16, Ms1 4.2/16, ms1mx3.9/36, Error ellipse: s-maj=19.3km s-min=12.0km az=51.0*
BJI ***22*** *07:18:43.7, 31°.16N×103°.83E, h11km, mB4.7/22, mb4.5/33, ML4.8/18, Ms4.8/49, Ms7 4.7/38*
NEIC ***22*** *07:18:44.4±0.3, 31°.08N×103°.80E, h10km, mb4.6/31, Error ellipse: s-maj=8.0km s-min=6.1km az=37.0*
NEIC Felt at Chengdu.
GCMT ***22*** *07:18:44.4±0.3, 31°.13N×103°.67E, h26km±1km, MW4.9/58, Moment Tensor Solution. s21,c24; s58,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.76±.19; $M_{\theta\theta}$2.09±.13; $M_{\phi\phi}$-0.33±.12; $M_{r\theta}$0.97±.18; $M_{\theta\phi}$1.07±.08; $M_{\phi r}$0.75±.23; Best double couple: $M_0$2.47600×10^{16} NP1:φs86.00000°, δ32.00000°, λ-65.00000°. NP2: φs237.00000°, δ61.00000°, λ-105.00000°. Principal axes: T 2.8020, Plg15.0000°, Azm338.0000°; N -0.6530, Plg13.0000°, Azm244.0000°; P -2.1510, Plg70.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***22*** *07:18:44.8±0.6, 31°.09N±0°.03×103°.79E±0°.03, h26km±4km, mb4.5/62, MS4.2/27 Error ellipse: s-maj=4.6km s-min=3.7km az=5.5*
MOS ***22*** *07:18:46.1±1.5, 31°.05N×103°.87E, h35km, mb4.6/38, MS4.2/18, Error ellipse: s-maj=9.7km s-min=5.8km az=105.5*
SZGRF ***22*** *07:19:08.9, 33°.33N×101°.66E, h33km, mb4.6, MS4.8, Qinghai, China*

ISC 22 07:18:46.0±0.6, 31°.09N±0°.03×103°.74E±0°.02, h20km±4km, n187, σ1§25/206, mb4.5/62, MS4.2/27, 3C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.18**	**175**	Pg	**Pg**	**07 18 49.9**	**-1.0**
CD2				Sg	**Sg**	**07 18 55.4**	**+1.3**
CD2				smax			
	comp=N,240μm,0.7s						
LZH	**Lanzhou**	**4.98**	**1**	Pn	**Pn**	**07 20 03.3**	**+3.7**
LZH				Pg		07 20 17.8	
LZH				Sn	**Sn**	**07 20 58.8**	**+2.2**
LZH				Sg		07 21 20.5	
LZH				smax			
	comp=N,800nm,1.0s						
LZH				smax			
	comp=E,2μm,1.1s						
LZH				LR	LR		
	comp=E,12μm,6.6s						
LZH				LR	LR		
	comp=Z,13μm,8.8s						
ENH	**Enshi**	**5.02**	**98**	*e*Pn	**Pn**	**07 20 00.7**	**+0.6**
ENH				*e*Sn	**Sn**	**07 20 59.8**	**+2.2**
XAN	**Xi'an**	**5.27**	**55**	Pn	**Pn**	**07 20 03.8**	**+0.2**
XAN				Sn	**Sn**	**07 20 59.8**	**-3.9**
XAN				Sg		07 21 27.4	
XAN				smax			
	comp=N,2μm,0.8s						
XAN				smax			
	comp=E,750nm,0.8s						
GYA	**Guiyang**	**5.28**	**150**	Pg	**Pn**	**07 20 08.8**	**+5.0**
GYA				Sg	**Sn**	**07 21 15.6**	**+12**
GYA				smax			
	comp=N,2μm,0.9s						
GYA				smax			
	comp=E,2μm,0.9s						
GYA				LR	LR		
	comp=N,10μm,8.5s						
GYA				LR	LR		
	comp=E,9μm,8.8s						
GYA				LR	LR		
	comp=Z,15μm,9.8s						
KMI	**Kunming**	**6.01**	**189**	Pn	**Pn**	**07 20 15.3**	**+1.5**
KMI				Sn	**Sn**	**07 21 27.3**	**+5.3**
KMI				smax			
	comp=N,170nm,1.1s						
KMI				smax			
	comp=E,130nm,1.0s						
KMI				LR	LR		
	comp=N,5μm,9.4s						
KMI				LR	LR		
	comp=E,13μm,10.6s						
KMI				LR	LR		
	comp=Z,5μm,12.8s						
GTA	**Gaotai**	**8.90**	**340**	*e*P	**Pn**	**07 20 52.4**	**-0.9**
GTA				pP		07 20 56.8	
GTA				sP		07 21 00.3	
GTA				S	**Sn**	**07 22 33.9**	**+0.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,66nm,6.5s						
GTA				LR	LR		
	comp=N,4μm,10.1s						
GTA				LR	LR		
	comp=E,3μm,10.7s						
GTA				LR	LR		
	comp=Z,3μm,14.3s						
WHN	**Wuhan**	**9.14**	**91**	P	**Pn**	**07 20 57.9**	**+1.1**
WHN				S	**Sn**	**07 22 37.6**	**-1.5**
WHN				LR	LR		
	comp=N,7μm,7.7s						
WHN				LR	LR		
	comp=E,11μm,6.8s						
WHN				LR	LR		
	comp=Z,12μm,7.6s						
BTO	**Baotou**	**10.77**	**26**	*e*P	**Pn**	**07 21 20.3**	**+1.3**
BTO				S	**Sn**	**07 23 14.8**	**-4.2**
BTO				LR	LR		
	comp=N,1μm,9.0s						
BTO				LR	LR		
	comp=E,1μm,12.4s						
LSA	**Lhasa**	**10.96**	**266**	P	**Pn**	**07 21 18.6**	**-3.0**
LSA				S	Sx	07 24 30.0	
LSA				LR	LR		
	comp=N,590nm,11.0s						
LSA				LR	LR		
	comp=E,4μm,9.0s						
LSA				LR	LR		
	comp=Z,5μm,9.0s						
LSA	**Lhasa**	**10.96**	**266**	*e*P	**Pn**	**07 21 24.4**	**+2.8**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
LSA	**Lhasa**	**10.96**	**266**	*e*Pn	**Pn**	**07 21 24.4**	**+2.7**
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.61**	**31**	*e*P	**Pn**	**07 21 29.5**	**-1.0**
HHC				pP		07 21 36.8	
HHC				sP		07 21 41.8	
HHC				S	**Sn**	**07 23 38.5**	**-1.1**
HHC				sS		07 23 49.9	
HHC				SS		07 23 53.1	
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
HHC				LR	LR		
	comp=N,1μm,5.7s						
HHC				LR	LR		
	comp=E,2μm,6.0s						
HHC				LR	LR		
	comp=Z,2μm,6.1s						
GZH	**Guangzhou**	**11.69**	**131**	P	**Pn**	**07 21 24.8**	**-6.9**
GZH				S	**Sn**	**07 23 35.3**	**-6.3**
GZH				LR	LR		
	comp=N,6μm,8.8s						
GZH				LR	LR		
	comp=E,6μm,9.3s						
SHL	**Shillong**	**11.80**	**245**	*e*P	**Pn**	**07 21 32.5**	**-0.7**
SHL				*i* x	x	07 25 06.0	
TIA	**Tai'an**	**12.26**	**62**	*e*P	**Pn**	**07 21 39.3**	**-0.1**
TIA				LR	LR		
	comp=N,1μm,8.0s						
TIA				LR	LR		
	comp=E,1μm,7.0s						
NJ2	**Nanjing**	**12.93**	**82**	*e*P	**Pn**	**07 21 48.8**	**+0.2**
NJ2				pP		07 21 52.1	
NJ2				sP		07 21 55.4	
NJ2				PP		07 21 59.3

comp=Z,13µm,10.7s
TAPN Taplejung 14.48 259 *e*P **Pn 07 22 08.1 -1.7**
comp=Z,60nm,1.2s
SSE Sheshan 14.95 85 P **Pn 07 22 12.9 -3.3**
SSE S **Sn 07 24 57.4 -3.8**
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,91nm,7.6s
SSE LR LR
comp=N,3µm,9.1s
SSE LR LR
comp=E,320nm,9.1s
SSE LR LR
comp=Z,2µm,8.4s
RAMN Ramite 15.55 259 *e*P **Pn 07 22 22.9 -1.1**
comp=Z,34nm,0.8s
NST Nakhon Sawan 15.70 193 P **Pn 07 22 27.2 +1.2**
GUN Gumba 15.87 263 *e*P **Pn 07 22 25.5 -2.7**
comp=Z,85nm,0.9s
PKI Pulchoki 16.36 262 *e*P **Pn 07 22 32.0 -2.6**
comp=Z,45nm,0.7s
KKN Kakani 16.41 263 *e*P **Pn 07 22 33.1 -2.1**
comp=Z,36nm,0.6s
DL2 Dalian 16.59 57 ⇑P **Pn 07 22 39.8 +2.5**
DL2 S **Sn 07 25 46.8 +6.0**
DL2 pmax pmax
comp=Z,20nm,1.1s
DL2 pmax pmax
comp=Z,140nm,5.1s
DL2 LR LR
comp=N,500nm,19.6s
DL2 LR LR
comp=E,470nm,19.3s
DL2 LR LR
comp=Z,360nm,14.4s
DMN Daman 16.61 263 *e*P **Pn 07 22 36.4 -1.3**
comp=Z,69nm,0.9s
SONM Songino Array 16.84 6 Pn **Pn 07 22 40.9 +0.4**
comp=Z,0.6nm,0.3s,baz=184,slow=10,SNR=12
SONM LR LR 07 30 03.9
comp=Z,734nm,18.3s,baz=179,slow=40
SONM Songino Array 16.84 6 P **Pn 07 22 40.9 +0.4**
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM MLR MLR
comp=Z,734nm,18.3s
SSLB Suanglung 16.91 111 *e*P **Pn 07 22 42.0 +0.5**
comp=Z,61nm,1.0s
ULN Ulaanbaatar 16.94 8 *e*P **Pn 07 22 42.0 +0.3**
ULN pmax pmax
comp=Z,14nm,0.9s
ULN Ulaanbaatar 16.94 8 *e*Pn **Pn 07 22 42.0 +0.3**
comp=Z,14nm,0.9s
WMQ Urumqi 17.95 320 *e*P **Pn 07 22 55.0 +0.7**
WMQ pP pP 07 23 01.0 +0.7
WMQ PP 07 23 09.6
WMQ S **Sn 07 26 13.0 -0.8**
WMQ sS sS 07 26 18.6 -10
WMQ SS 07 26 36.4
WMQ PcP PcP 07 27 29.8 +0.5
WMQ pmax pmax
comp=Z,12nm,1.3s
WMQ pmax pmax
comp=Z,190nm,5.4s
WMQ LR LR
comp=N,2µm,11.0s
WMQ LR LR
comp=E,2µm,8.0s
WMQ LR LR
comp=Z,810nm,13.0s
SNY Shenyang 19.18 51 ⇓P **Pn 07 23 11.0 +1.8**
SNY S **Sn 07 26 42.5 -1.0**
SNY pmax pmax
comp=Z,15nm,0.8s
SNY LR LR
comp=N,400nm,9.6s
SNY LR LR
comp=E,580nm,9.0s
SNY LR LR
comp=Z,510nm,9.6s
ZAK Zakamensk 19.27 359 *e*P **Pn 07 23 10.3 0.0**
ZAK pmax pmax
comp=Z,11nm,1.1s
TLY Talaya 20.57 360 *e*P **P 07 23 27.9 +4.6**
TLY *e* 07 23 45.7
TLY *e*SS 07 27 59.0
TLY pmax pmax
comp=Z,10.0nm,1.0s
TLY MLR MLR
comp=Z,1µm,11.0s,MS4.5
TLY Talaya 20.57 360 *e*P **P 07 23 22.8 -0.5**
comp=Z,9.3nm,1.1s
MOY Mondy 20.66 355 *e*P **P 07 23 26.4 +2.1**
MOY pmax pmax
comp=Z,42nm,2.5s
KSRS Korea Array 20.94 66 P **P 07 23 27.9 +0.4**
comp=Z,33nm,0.7s,baz=261,slow=10,SNR=137
KSRS LR LR 07 32 03.2
comp=Z,143nm,19.6s,MS3.4,baz=260,slow=38
KSRS Korea Array 20.94 66 P **P 07 23 27.9 +0.4**
KSRS pmax pmax
comp=Z,33nm,0.7s
KSRS MLR MLR
comp=Z,143nm,19.6s,MS3.4
CN2 Changchun 21.33 47 ⇓P **P 07 23 32.0 +0.4**
CN2 *es*P sP 07 23 38.0 -1.8
CN2 *e*S **S 07 27 21.5 -6.0**
CN2 pmax pmax
comp=Z,40nm,1.0s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,13.0s,MS4.4
CN2 LR LR
comp=E,400nm,13.0s,MS4.4
CN2 LR LR
comp=Z,800nm,15.0s,MS4.2
HIA Hailar 21.81 29 *e*P **P 07 23 37.2 +0.5**
HIA pmax pmax
comp=Z,8.0nm,0.4s
HIA Hailar 21.81 29 *e*P **P 07 23 37.2 +0.6**
comp=Z,7.7nm,0.4s,mb4.5
JOW Kunigami 21.87 95 P **P 07 23 38.1 +0.5**
comp=Z,9.7nm,0.4s,mb4.6,baz=240,slow=7.0,SNR=3.6
SMLA Simla 22.74 277 *e*P **P 07 23 43.3 -3.5**
MK31 Makanchi Array 22.78 320 *e*P **P 07 23 47.8 +0.7**
MKAR Makanchi Array 22.78 320 P **P 07 23 47.5 +0.4**
comp=Z,2.1nm,0.6s,mb3.7,baz=122,slow=11,SNR=25
MKAR ScP ScP 07 31 14.1 -0.8
comp=Z,0.4nm,0.7s,baz=104,slow=6.1,SNR=4.8
MKAR LR LR 07 33 21.2
comp=Z,906nm,19.8s,MS4.2,baz=125,slow=39
MKAR Makanchi Array 22.78 320 P **P 07 23 47.5 +0.4**
MKAR ScP ScP 07 31 14.1 -0.8
MKAR LR LR 07 33 21.2
AGRA Agra 22.83 267 *e*P **P 07 23 47.1 -0.7**
AGRA AMb AMB 07 23 54.6
comp=Z,61nm,0.2s,mb5.8
KKR Kurukshetra 23.20 274 *e*P **P 07 23 49.3 -2.4**
KKR AMb AMB 07 23 51.5
comp=Z,197nm,0.8s,mb5.6
AYAN Aya Nagar 23.23 270 *e*P **P 07 23 51.7 -0.2**
AYAN AMb AMB 07 23 58.0
comp=Z,9.7nm,0.7s,mb4.3
SONA Sohna 23.32 270 *e*P **P 07 23 51.7 -1.2**
SONA AMb AMB 07 23 55.3
comp=Z,18nm,1.1s,mb4.4
KSH Kashi 24.10 298 *e*P **P 07 24 03.3 +3.1**
KSH *e*pP 07 24 07.3
KSH *es*P sP 07 24 10.3 +1.6
KSH *e*PP 07 24 38.3
KSH *e*PcP PcP 07 27 43.1 +1.9
KSH S **S 07 28 18.5 +1.7**
KSH sS sS 07 28 26.3 -0.4
KSH SS 07 29 13.3
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
KSH pmax pmax
comp=Z,110nm,3.8s
KSH LR LR
comp=N,950nm,10.2s,MS4.7
KSH LR LR
comp=E,850nm,11.4s,MS4.7
KSH LR LR
comp=Z,990nm,14.2s,MS4.4

NGP Nagpur 24.23 252 *ex* x 07 23 55.3
MDJ Mudanjiang 24.35 49 P **P 07 24 00.1 -2.3**
MDJ pP 07 24 04.1
MDJ sP sP 07 24 05.4 -5.5
MDJ S **S 07 28 18.4 -2.3**
MDJ sS sS 07 28 25.1 -5.6
MDJ PcS PcS 07 31 21.4 +0.1
MDJ ScS ScS 07 35 07.5 +1.0
MDJ pmax pmax
comp=Z,16nm,1.4s,mb4.3
MDJ pmax pmax
comp=Z,66nm,3.5s
MDJ LR LR
comp=N,330nm,12.8s,MS4.2
MDJ LR LR
comp=E,280nm,10.1s,MS4.2
MDJ LR LR
comp=Z,320nm,9.5s
MDJ Mudanjiang 24.35 49 *e*P **P 07 24 03.9 +1.5**
comp=Z,35nm,1.2s,mb4.7
KHET Khetri 24.45 270 *e*P **P 07 24 03.0 -0.5**
KHET AMb AMB 07 24 10.6
comp=Z,8.2nm,0.6s,mb4.3
BHPL Bhopal 24.64 258 *e*P **P 07 24 05.1 -0.1**
BHPL AMb AMB 07 24 16.7
comp=Z,16nm,1.0s,mb4.5
TKM2 Tokmak 2 25.27 306 *e*P **P 07 24 13.3 +2.5**
TKM2 pmax pmax
comp=Z,14nm,1.3s,mb4.3
TKM2 Tokmak 2 25.27 306 *e*P **P 07 24 13.3 +2.5**
comp=Z,14nm,1.3s,mb4.3
UCH Uchtor 25.82 304 *e*P **P 07 24 18.0 +2.2**
comp=Z,14nm,1.2s,mb4.4
FRU Bishkek 25.92 305 *e*P **P 07 24 20.5 +3.8**
AML Almayashu 26.39 303 P **P 07 24 23.1 +2.2**
comp=Z,9.7nm,1.0s,mb4.3
EKS2 Erkin-Say 26.47 304 *e*P **P 07 24 23.0 +1.4**
comp=Z,4.9nm,0.9s,mb4.0
ZAA0 Zalesovo Array 26.60 335 *e*P **P 07 24 22.9 +0.2**
ZALV Zalesovo Beam 26.60 335 P **P 07 24 22.6 -0.1**
comp=Z,8.0nm,0.8s,mb4.3,baz=136,slow=9.7,SNR=17
ZALV LR LR 07 35 10.1
comp=Z,561nm,18.5s,MS4.2,baz=324,slow=37
ZALV Zalesovo Beam 26.60 335 P **P 07 24 22.6 -0.1**
ZALV pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
ZALV MLR MLR
comp=Z,561nm,18.5s,MS4.2
KURK Kurchatov 27.07 324 P **P 07 24 26.4 -0.6**
comp=Z,7.5nm,1.0s,mb4.2,baz=131,slow=9.1,SNR=25
KURK ScP ScP 07 31 25.8 -1.1
comp=Z,0.5nm,0.8s,baz=125,slow=3.2,SNR=3.7
KURK LR LR 07 35 50.4
comp=Z,724nm,18.5s,MS4.3,baz=115,slow=38
KURK Kurchatov 27.07 324 P **P 07 24 26.4 -0.6**
KURK pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
KURK pmax pmax
comp=N,1.0nm,0.8s
KURK MLR MLR
comp=Z,725nm,18.5s,MS4.3
KURK Kurchatov 27.07 324 *e*P **P 07 24 27.5 +0.5**
comp=Z,18nm,1.2s,mb4.5
BOD Bodaibo 27.64 12 *e*P **P 07 24 31.5 -0.6**
BOD pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
NVS Novosibirsk 27.88 334 *e*P **P 07 24 40.0 +5.8**
PSI Prapat 28.50 190 P **P 07 24 39.4 -0.7**
comp=Z,2.0nm,0.3s,mb4.3,baz=347,slow=7.9,SNR=3.7
PSI Prapat 28.50 190 P **P 07 24 39.4 -0.7**
PSI pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
PSI Prapat 28.50 190 P **P 07 24 39.4 -0.7**
MJAR Matsushiro Arr 29.05 70 P **P 07 24 44.5 -0.4**
comp=Z,1.3nm,0.5s,mb3.9,baz=266,slow=11,SNR=5.1
MJAR LR LR 07 36 15.8
comp=Z,208nm,18.5s,MS3.8,baz=280,slow=36
MJAR Matsushiro Arr 29.05 70 P **P 07 24 44.5 -0.3**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR MLR MLR
comp=Z,208nm,18.5s
KBL Kabul 29.28 286 *e*P **P 07 24 48.1 +1.2**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
KBL Kabul 29.28 286 *e*P **P 07 24 48.1 +1.2**
comp=Z,3.7nm,0.5s,mb4.4
NRGR Nerungri 29.46 24 *e*P **P 07 24 39.7 -8.5**
NRGR S **S 07 29 39.0 -2.2**
NRGR smax
comp=E,39nm,0.4s
BVAR Borovoye Array 32.61 322 P **P 07 25 16.1 +0.1**
comp=E,1.6nm,0.8s,mb4.0,baz=120,slow=8.8,SNR=6.5
BVAR PcP PcP 07 28 00.9 -1.0
comp=E,2.7nm,0.8s,baz=154,slow=3.8,SNR=4.8
BVAR ScP ScP 07 31 43.9 -0.8
comp=E,0.3nm,0.4s,baz=183,slow=2.6,SNR=3.4
BVAR LR LR 07 39 32.2
comp=E,645nm,19.6s,MS4.3,baz=115,slow=38
BVAR Borovoye Array 32.61 322 P **P 07 25 16.1 +0.1**
BVAR 07 28 00.9
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR MLR MLR
comp=Z,645nm,19.6s
BRVK Borovoye 32.68 322 *e*P **P 07 25 17.0 +0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRVK Borovoye 32.68 322 *e*P **P 07 25 17.0 +0.4**
comp=Z,2.7nm,0.8s,mb4.2
YSS Yuzh-Sakhalins 33.80 51 *e*P **P 07 25 32.0 +5.5**
YSS *e* 07 30 55.0
YAK Yakutsk 35.23 21 *e*P **P 07 25 42.5 +3.8**
YAK *e**PP pP 07 25 53.3 +8.5
YAK *e*S **S 07 31 03.7 -7.2**
YAK *e* 07 35 49.5
YAK pmax pmax
comp=Z,18nm,1.0s,mb5.0
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK smax
comp=E,59nm,2.7s
YAK smax
comp=N,12nm,1.6s
YAK MLR MLR
comp=Z,290nm,13.0s,MS4.2
YAK MLR MLR
comp=N,217nm,10.0s,MS4.3
YAK MLR MLR
comp=E,234nm,15.0s,MS4.3
ABKAR Akbulak array 37.45 312 *e*P **P 07 25 58.2 +0.4**
comp=E,1.3nm,0.6s,mb3.9
AKTK Aktyubinsk 38.92 313 P **P 07 26 09.9 -0.3**
AKTO Aktyubinsk 38.92 313 P **P 07 26 09.9 -0.3**
comp=E,1.1nm,0.5s,mb3.8,baz=90,slow=15,SNR=3.7
AKTO Aktyubinsk 38.92 313 P **P 07 26 09.9 -0.3**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KAPI Kappang 39.03 154 P **P 07 26 10.5 -1.0**
comp=Z,5.4nm,0.4s,mb4.6,baz=334,slow=7.5,SNR=3.8
KAPI Kappang 39.03 154 *e*P **P 07 26 10.7 -0.7**
ARU Arti 40.25 322 *c i*P **P 07 26 22.2 +1.0**
ARU S **S 07 32 27.9 +0.7**
ARU SS SS 07 35 20.5 -5.0
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
ARU MLR MLR
comp=Z,377nm,18.0s,MS4.3
ARU Arti 40.25 322 *e*P **P 07 26 21.4 +0.2**
comp=Z,7.9nm,0.6s,mb4.6
SOKR Solikamsk 42.23 326 *e*P **P 07 26 28.0 -9.4**
SOKR pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
SOKR MLR MLR
comp=Z,170nm,11.0s,MS4.2
TIXI Tiksi 42.83 11 *e*P **P 07 26 40.6 -1.5**
TIXI *e*S **S 07 33 03.9 -1.1**
TIXI *e* 07 36 35.8
TIXI pmax pmax
comp=Z,17nm,1.7s,mb4.5
TIXI MLR MLR
comp=Z,239nm,12.0s,MS4.3

TIXI Tiksi 42.83 11 *e*P **P 07 26 41.1 -0.9**
comp=Z,20nm,1.5s,mb4.6
ZEI Tsey 48.31 302 *e*P **P 07 27 28.1 +2.2**
ZEI pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KIV Kislovodsk 49.06 303 *e*P **P 07 27 32.8 +1.2**
KIV *e*S **S 07 34 36.9 +1.6**
KIV pmax pmax
comp=Z,14nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,157nm,17.0s,MS4.1
KIV Kislovodsk 49.06 303 *e*P **P 07 27 33.0 +1.3**
SOC Sochi 51.24 303 *e*P **P 07 27 51.5 +3.3**
SOC *e*S **S 07 35 07.8 +2.1**
SOC pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
SOC MLR MLR
comp=Z,173nm,15.0s,MS4.2
BILL Bilibino 51.32 25⇑*e*P **P 07 27 47.2 -1.2**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BILL Bilibino 51.32 25 *e*P **P 07 27 47.8 -0.6**
comp=Z,6.3nm,0.9s,mb4.5
KAKA Kakadu 51.54 143 *e*P **P 07 27 47.0 -3.7**
comp=Z,15nm,1.1s,mb4.8
ANN Anapa 52.68 305 *e*P **P 07 27 58.0 -0.9**
ANN *e*S **S 07 35 25.6 +0.1**
ANN pmax pmax
comp=Z,19nm,1.1s,mb4.9
ANN MLR MLR
comp=N,200nm,19.0s,MS4.3
ANN MLR MLR
comp=E,159nm,19.0s,MS4.3
ANN MLR MLR
comp=Z,310nm,19.0s,MS4.4
FITZ Fitzroy Crossi 53.25 154 *e*P **P 07 28 02.8 -0.5**
comp=Z,8.2nm,0.8s,mb4.7
FITZ Fitzroy Crossi 53.25 154 *e*P **P 07 28 02.9 -0.4**
comp=Z,7.7nm,1.0s,mb4.6
BRTR Keskin Array B 56.48 300 P **P 07 28 26.1 -0.4**
comp=Z,1.3nm,0.8s,mb4.0,baz=107,slow=4.1,SNR=6.2
BRTR PcP PcP 07 29 23.5 +0.3
comp=Z,1.2nm,0.8s,baz=86,slow=5.9,SNR=2.6
BRTR Keskin Array B 56.48 300 P **P 07 28 26.2 -0.3**
BRTR 07 29 23.5
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
MMAI Mount Meron Ar 56.99 291 LR LR 07 57 08.9
comp=Z,104nm,19.6s,MS3.9,baz=60,slow=40
ARCES ARCESS Array B 57.14 336 P **P 07 28 30.8 0.0**
comp=Z,4.1nm,0.8s,mb4.5,baz=91,slow=8.5,SNR=5.2
ARCES PcP PcP 07 29 24.3 -1.0
comp=Z,1.6nm,0.7s,baz=96,slow=3.6,SNR=4.9
ARCES ARCESS Array B 57.14 336 P **P 07 28 30.8 0.0**
ARCES 07 29 24.3
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 57.14 336 P **P 07 28 30.8 0.0**
ARCES PcP PcP 07 29 24.3 -1.0
AKASG Malin Array Be 57.16 313 P **P 07 28 29.7 -1.6**
comp=Z,0.8nm,0.4s,mb4.1,baz=69,slow=7.0,SNR=5.7
AKASG LR LR 07 54 42.2
comp=Z,258nm,18.9s,MS4.3,baz=75,slow=38
AKASG Malin Array Be 57.16 313 P **P 07 28 29.7 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,258nm,18.9s
AKASG Malin Array Be 57.16 313 P **P 07 28 29.7 -1.6**
AKASG LR LR 07 54 42.1
FINES FINESS Array B 57.40 326 P **P 07 28 32.4 -0.3**
comp=Z,0.8nm,0.4s,mb4.1,baz=87,slow=8.5,SNR=3.5
FINES FINESS Array B 57.40 326 P **P 07 28 32.4 -0.3**
FINES pmax pmax
comp=Z,1.0nm,0.4s
WRAB Tennant Creek 58.63 146 *e*P **P 07 28 42.0 +0.2**
WRAB pmax pmax
comp=Z,17nm,0.7s,mb5.2
WRAB Tennant Creek 58.63 146 *e*P **P 07 28 42.0 +0.1**
comp=Z,17nm,0.7s,mb5.2
COEN Coen 58.66 134 *e*P **P 07 28 41.6 -0.5**
comp=Z,68nm,0.9s,mb5.7
ASAR Alice Springs 61.64 148 P **P 07 29 02.8 +0.4**
comp=Z,4.3nm,0.8s,mb4.6,baz=332,slow=6.4,SNR=33
ASAR Alice Springs 61.64 148 P **P 07 29 02.8 +0.4**
ASAR pmax pmax
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 61.95 312 *e*P **P 07 29 07.4 +3.1**
KOLS Kolonicke sedl 61.95 312 *e*P **P 07 29 07.4 +3.1**
STHS Stebnicka Huta 62.46 313 *e*P **P 07 29 11.4 +3.7**
STHS Stebnicka Huta 62.46 313 *e*P **P 07 29 11.4 +3.7**
OJC Ojcow 63.13 314 *e*P **P 07 29 13.0 +0.9**
VYHS Vyhne 64.25 313 *e*P **P 07 29 22.3 +2.7**
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
VYHS Vyhne 64.25 313 *e*P **P 07 29 22.3 +2.7**
comp=Z,1.9nm,1.0s,mb4.1
VYHS Vyhne 64.25 313 *e*P **P 07 29 22.3 +2.7**
NB2 NORSAR Subarra 64.50 327 P **P 07 29 19.3 -1.7**
comp=Z,1.5nm,0.7s,mb4.1,baz=74,slow=6.5
NOA NORSAR Array B 64.50 327 P **P 07 29 19.2 -1.7**
comp=Z,1.0nm,0.7s,mb4.0,baz=74,slow=6.6,SNR=5.1
NOA LR LR 07 59 34.0
comp=Z,174nm,18.5s,MS4.3,baz=85,slow=38
NOA NORSAR Array B 64.50 327 P **P 07 29 19.3 -1.7**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,174nm,18.5s
CLL Collm 66.85 317 *e*(SS) 07 43 18.0
CLL *e*SSS 07 46 00.0
GERES GERESS Array B 67.33 314 P **P 07 29 38.3 -1.1**
comp=Z,1.1nm,1.0s,mb3.9,baz=45,slow=6.0,SNR=9.8
GERES LR LR 08 00 39.9
comp=Z,439nm,19.1s,MS4.7,baz=210,slow=37
GERES GERESS Array B 67.33 314 P **P 07 29 38.3 -1.1**
GERES pmax pmax
comp=Z,1.0nm,1.0s
GERES MLR MLR
comp=Z,439nm,19.1s
GRA1 Grafenberg Arr 68.51 316 *e*P **P 07 29 49.2 +2.4**
comp=Z,6.0nm,1.5s,mb4.3
GRA1 LR LR
comp=Z,600nm,19.0s,MS4.8
GRF Grafenberg Arr 68.51 316 *e*P **P 07 29 49.2 +2.4**
comp=Z,6.0nm,1.5s,mb4.3
GRF *e*L 08 01 23.2
comp=Z,561nm,19.0s
GRF Grafenberg Arr 68.51 316 *e*P **P 07 29 49.2 +2.4**
GRF pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
GRF MLR MLR
comp=Z,600nm,19.0s,MS4.8
GRF Grafenberg Arr 68.51 316 *e*P **P 07 29 49.2 +2.4**
GRF pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
GRF MLR MLR
comp=Z,600nm,19.0s,MS4.8
GRF Grafenberg Arr 68.51 316 *e*P **P 07 29 49.2 +2.4**
comp=Z,6.0nm,1.5s,mb4.3
GRF LR LR
comp=Z,600nm,19.0s,MS4.8
PPLA Purkeypile 68.82 28 *e*P **P 07 29 48.9 +0.3**
comp=Z,6.3nm,0.8s,mb4.6
COLA College 69.58 26 *e*P **P 07 29 52.4 -0.7**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
COLA College 69.58 26 *e*P **P 07 29 52.4 -0.7**
comp=Z,5.7nm,0.8s,mb4.5
DAVOX Davos/Dischmat 70.51 313 LR LR 08 02 57.3
comp=Z,438nm,18.3s,MS4.8,baz=83,slow=38
PMR Palmer 70.70 29 *e*P **P 07 29 58.7 -1.4**
PMR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PMR Palmer 70.70 29 *e*P **P 07 29 58.7 -1.4**
comp=Z,6.5nm,0.8s,mb4.6
KDAK Kodiak Island 71.02 33 P **P 07 30 01.1 -1.1**
comp=Z,3.4nm,0.6s,mb4.4
KDAK Kodiak Island 71.02 33 P **P 07 30 01.1 -1.0**
KDAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
STKA Stephens Creek 72.17 147 *e*P **P 07 30 09.2 -0.1**

comp=Z,2.9nm,0.5s,mb4.5
STKA Stephens Creek 72.17 147 P **P 07 30 09.2 0.0**
comp=Z,3.5nm,0.5s,mb4.6,baz=331,slow=5.7,SNR=14
STKA Stephens Creek 72.17 147 *e*P **P 07 30 09.4 +0.1**
comp=Z,0.7nm,0.4s,mb3.9
INK Inuvik 72.27 19 *e*P **P 07 30 08.7 -0.8**
INK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 72.27 19 *e*P **P 07 30 08.7 -0.8**
comp=Z,5.8nm,1.0s,mb4.5
BMRM Bremner River 72.89 28 *e*P **P 07 30 09.5 -3.8**
comp=Z,9.3nm,0.8s,mb4.8
LPG La Plagne 73.03 313 *e*P **P 07 30 14.4 0.0**
comp=Z,16nm,0.9s,mb4.6
LPG La Plagne 73.03 313 *e*P **P 07 30 14.4 0.0**
LPG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LPG La Plagne 73.03 313 *e*P **P 07 30 14.4 0.0**
comp=Z,7.8nm,0.9s,mb4.6
LPL La Plagne 73.03 313 *e*P **P 07 30 14.2 -0.2**
comp=Z,13nm,0.8s,mb4.6
LPL La Plagne 73.03 313 *e*P **P 07 30 14.2 -0.2**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPL La Plagne 73.03 313 *e*P **P 07 30 14.2 -0.2**
comp=Z,6.5nm,0.8s,mb4.6
DAWY Dawson 73.08 24 *e*P **P 07 30 12.8 -1.6**
RES Resolute Bay 73.78 5 *e*P **P 07 30 18.5 +0.2**
RES pmax pmax
comp=Z,37nm,2.4s,mb4.9
RES Resolute Bay 73.78 5 *e*P **P 07 30 18.5 +0.2**
comp=Z,37nm,2.4s,mb4.9
SMF Signal de Mont 74.28 315 *e*P **P 07 30 20.6 -1.1**
comp=Z,9.8nm,0.8s,mb4.5
SMF Signal de Mont 74.28 315 *e*P **P 07 30 20.6 -1.1**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMF Signal de Mont 74.28 315 *e*P **P 07 30 20.6 -1.1**
comp=Z,4.9nm,0.8s,mb4.5
BORG Borgarnes 75.36 339 LR LR 08 04 41.2
comp=Z,97nm,18.2s,MS4.1,baz=67,slow=37
TCF Toulx Ste Croi 75.44 315 *e*P **P 07 30 27.6 -0.8**
HYT Haines Junctio 75.78 26 *e*P **P 07 30 32.3 +2.2**
YKA Yellowknife Ar 81.80 17 P **P 07 31 02.7 -0.4**
comp=Z,1.3nm,0.7s,mb4.0,baz=328,slow=5.0,SNR=13
YKA LR LR 08 09 24.4
comp=Z,10nm,19.6s,MS3.2,baz=155,slow=37
YKA Yellowknife Ar 81.80 17 P **P 07 31 02.7 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA MLR MLR
comp=Z,10.0nm,19.6s
YKA Yellowknife Ar 81.80 17 P **P 07 31 02.7 -0.4**
YKA LR LR 08 09 24.4
EDM Edmonton 90.05 21 *e*P **P 07 31 44.7 +0.6**
TORD Torodi Ar. Bea 93.34 287 P **P 07 31 59.8 -0.3**
comp=Z,1.5nm,1.0s,mb4.4,baz=66,slow=3.6,SNR=5.0
SCHQ Schefferville 94.04 355 LR LR 08 14 53.2
comp=Z,75nm,18.1s,MS4.2,baz=103,slow=36
BOSA Boshof 95.41 240 LR LR 08 09 49.2
comp=Z,71nm,21.6s,MS4.1,baz=159,slow=32
KCPM Cahto Peak 97.00 35 *e*P **P 07 32 14.7 -1.7**
ROSC El Rosal 144.21 357 PKP PKPdf 07 38 19.9 -1.3
comp=Z,3.3nm,0.5s,baz=82,slow=18,SNR=4.0
OTAV Otavalo 148.77 4 *e*PKPbc PKPab 07 38 40.1 +3.7

NEIC ***22*** *07:27:33.1, 15.°22N×94.°85W, h16km, MD4.1(MEX), After MEX.*

MEX 22 07:27:33.1±1.1, 15.°22N×94.°85W, h16km±17km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.65**	**73**	*e*P	Pn	07 27 57.0	-4.3
PCIG				*i* S	Sn	07 28 16.3	-5.9
TGIG		**2.27**	**47**	*i* P	Pn	07 28 07.5	-2.5
TGIG				*i* S	Sn	07 28 33.6	-4.0
THIG		**2.52**	**97**	*i* P	Pn	07 28 10.9	-2.4
THIG				*i* S	Sn	07 28 39.1	-4.6
VHO	**Vista Hermosa**	**2.58**	**316**	*e*P	Pn	07 28 12.0	-2.2
VHO				*i* S	Sn	07 28 40.8	-4.5
VHO	**Vista Hermosa**	**2.58**	**316**	*e*P	Pn	07 28 12.0	-2.2
VHO				*i* S	Sn	07 28 40.8	-4.5
SCX	**San Cristobal**	**2.61**	**54**	*i* P	Pn	07 28 12.8	-1.8
SCX				*i* S	Sn	07 28 42.8	-3.2
SCX	**San Cristobal**	**2.61**	**54**	*i* P	Pn	07 28 12.8	-1.8
SCX				*i* S	Sn	07 28 42.8	-3.2
CCIG	**Comitan**	**2.82**	**68**	*e*P	Pn	07 28 15.8	-1.8
CCIG				*i* S	Sn	07 28 48.0	-3.2
CCIG	**Comitan**	**2.82**	**68**	*e*P	Pn	07 28 15.8	-1.8
CCIG				*i* S	Sn	07 28 48.0	-3.2
PNIG	**Pinotepa**	**3.36**	**291**	*e*P	Pn	07 28 21.9	-3.1
PNIG				*i* S	Sn	07 29 00.2	-4.4
PNIG	**Pinotepa**	**3.36**	**291**	*e*P	Pn	07 28 21.9	-3.1
PNIG				*i* S	Sn	07 29 00.2	-4.4
UTMO	**Huajuapan**	**3.84**	**313**	*e*P	Pn	07 28 29.9	-1.7
UTMO				*i* S	Sn	07 29 12.0	-4.4

CSEM 22 07:41:28.5, 48.°37N×19.°83E, h0km, ML1.7/3, 3D, After BUD, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KECS	**Kecovo**	**0.45**	**75**	*e*PG	Pg	07 41 37.1	0.0
KECS				*e*SG	Sg	07 41 43.9	+0.9
PSZ	**Piszkesteto**	**0.45**	**175⇓**	*e*Pg	Pg	07 41 37.5	+0.4
PSZ				*e*Sg	Sg	07 41 44.2	+1.2
PSZ	**Piszkesteto**	**0.45**	**175⇓**	*e*Pg	Pg	07 41 37.5	+0.4
PSZ				⇓*e*Sg	Sg	07 41 44.2	+1.2
VYHS	**Vyhne**	**0.67**	**281**	*e*PG	Pg	07 41 42.1	+0.7
VYHS				*e*SG	Sg	07 41 51.4	+1.3
VYHS	**Vyhne**	**0.67**	**281**	*e*Pg	Pg	07 41 42.1	+0.7
VYHS				*e*Sg	Sg	07 41 51.4	+1.3
NIE	**Niedzica**	**1.10**	**17**	*e*Pg	Pg	07 41 50.0	+0.4
NIE				*e*Sg	Sg	07 42 05.2	+1.4
STHS	**Stebnicka Huta**	**1.40**	**41**	*e*PN	Pn	07 41 56.3	+1.0
STHS				*e*SN	Sn	07 42 17.7	+3.3
STHS	**Stebnicka Huta**	**1.40**	**41**	*e*Pn	Pn	07 41 56.3	+1.0
STHS				*e*Sn	Sn	07 42 17.7	+3.3

NEIC ***22*** *07:57:31.9, 18.°89N×102.°38W, h78km, MD4.0(MEX), After MEX.*

MEX 22 07:57:31.9±0.8, 18.°89N×102.°38W, h78km±13km, MD4.0, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.10**	**237**	*e*P	Pn	07 57 50.5	-1.6
MMIG				*i* S	Sn	07 58 06.0	-1.1
MOIG	**Morelia**	**1.37**	**55**	*e*P	Pn	07 57 54.3	-1.1
MOIG				*i* S	Sn	07 58 11.8	-1.3
MOIG	**Morelia**	**1.37**	**55**	*e*P	Pn	07 57 54.3	-1.1
MOIG				*i* S	Sn	07 58 11.8	-1.3
ZIIG	**Zihuatanejo**	**1.54**	**146**	*e*P	Pn	07 57 56.0	-1.7
ZIIG				*i* S	Sn	07 58 15.0	-2.2
ZIIG	**Zihuatanejo**	**1.54**	**146**	*e*P	Pn	07 57 56.0	-1.7
ZIIG				*i* S	Sn	07 58 15.0	-2.2
SFJM	**Santa Fe**	**1.71**	**339**	*i* P	Pn	07 57 58.4	-1.4
SFJM				*i* S	Sn	07 58 19.3	-1.7
SFJM	**Santa Fe**	**1.71**	**339**	*i* P	Pn	07 57 58.4	-1.4
SFJM				*i* S	Sn	07 58 19.3	-1.7
CAIG	**El Cayaco**	**2.72**	**132**	*e*P	Pn	07 58 12.7	-0.7
CAIG				*i* S	Sn	07 58 44.2	-1.1
CAIG	**El Cayaco**	**2.72**	**132**	*e*P	Pn	07 58 12.7	-0.7
CAIG				*i* S	Sn	07 58 44.2	-1.1
PNIG	**Pinotepa**	**4.75**	**121**	*i* P	Pn	07 58 40.3	-0.8
PNIG				*i* S	Sn	07 59 33.5	-1.4
PNIG	**Pinotepa**	**4.75**	**121**	*i* P	Pn	07 58 40.3	-0.8
PNIG				*i* S	Sn	07 59 33.5	-1.4
VHO	**Vista Hermosa**	**5.67**	**108**	*i* P	Pn	07 58 54.8	+1.2
VHO				*i* S	Sn	07 59 56.9	-0.4
VHO	**Vista Hermosa**	**5.67**	**108**	*i* P	Pn	07 58 54.8	+1.2
VHO				*i* S	Sn	07 59 56.9	-0.4

ISCJB ***22*** *08:02:36.6±0.6, 24.°49N×0.°04×122.°40E±0.°02, h64km±8km, Error ellipse: s-maj=7.1km s-min=2.9km az=172.4*
TAP ***22*** *08:02:36.5, 24.°50N×122.°39E, h65km±1km, ML3.5, D*
JMA ***22*** *08:02:36.6±0.2, 24.°67N×122.°45E, h72km±2km, M2.2*

ISC 22 08:02:37.2±0.6, 24.°50N±0.°04×122.°40E±0.°02, h62km±9km, n33, σ0.°58/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**94**	P	**Pn**	**08 02 50.1**	**+0.1**
YOJ				S	**Sn**	**08 02 59.9**	**+0.6**
ENA	**Nanau**	**0.60**	**263**	*i* P	**Pn**	**08 02 50.3**	**-0.1**
baz=263
ENA S **Sn 08 03 00.5 +0.4**
baz=263
TWB1 Santiao Chiao 0.63 324 P **Pn 08 02 50.7 -0.1**
baz=325
TWB1 S **Sn 08 03 00.9 +0.2**
baz=325
TWE Neicheng 0.70 289 *e*P **Pn 08 02 51.5 0.0**
baz=289
TWE *e*S **Sn 08 03 00.4 -1.6**
baz=289
ENTT Nioudou 0.77 281 P **Pn 08 02 52.6 +0.3**
baz=280
ENTT S **Sn 08 03 04.4 +0.9**
baz=280
NWF Wu-fen Shan 0.80 316 P **Pn 08 02 52.8 0.0**
baz=316
NWF S **Sn 08 03 04.6 +0.4**
baz=316
TWD Chiawan 0.84 240 *e*P **Pn 08 02 53.1 -0.2**
baz=239
TWD *e*S **Sn 08 03 04.1 -1.0**
baz=239
TWA Mucha 0.88 303 P **Pn 08 02 53.7 -0.1**
baz=303
TWA *e*S **Sn 08 03 05.7 -0.4**
baz=303
HWA Hwalien 0.89 234 *e*S **Sn 08 03 05.8 -0.4**
baz=233
NNS Nan Shan 0.93 267 *e*P **Pn 08 02 54.4 0.0**
baz=266
NNS *e*S **Sn 08 03 07.2 0.0**
baz=266
NSK Sanguang 0.96 281 P **Pn 08 02 54.8 0.0**
baz=280
NSK S **Sn 08 03 08.2 +0.3**
baz=280
WHF Hehuan Shan 1.09 251 *i* P **Pn 08 02 56.2 -0.3**
baz=250
WHF S **Sn 08 03 10.5 -0.3**
baz=250
TWT Tachien 1.14 258 *e*P **Pn 08 02 57.4 +0.3**
baz=257
TWT *e*S **Sn 08 03 11.9 0.0**
baz=257
IRIF Iriomote-Funau 1.23 97 P **Pn 08 02 57.8 -0.5**
IRIF *e*S **Sn 08 03 13.9 -0.1**
NSTT Nanjuang 1.28 276 *e*P **Pn 08 02 59.0 +0.1**
baz=276
NSTT *e*S **Sn 08 03 15.4 +0.2**
baz=276
HATJ Hateruma jima 1.36 109 P **Pn 08 03 00.3 +0.3**
HATJ *e*S **Sn 08 03 18.2 +1.0**
EHY Hungye 1.39 225 *e*P **Pn 08 03 00.6 +0.1**
baz=224
JKRS Kuro-shima 1.49 100 P **Pn 08 03 01.8 0.0**
JKRS S **Sn 08 03 20.9 +0.5**
SMLT Sun Moon Lake 1.50 246 *e*P **Pn 08 03 02.3 +0.4**
baz=245
SMLT *e*S **Sn 08 03 20.9 +0.5**
baz=245
TWF1 Yuli 1.52 222 *e*P **Pn 08 03 00.7 -1.5**
baz=220
TYC Yuchr 1.52 248 *e*P **Pn 08 03 02.8 +0.5**
baz=247
TYC *e*S **Sn 08 03 20.3 -0.8**
baz=247
JIJ Ishigaki jima 1.60 94 P **Pn 08 03 02.6 -0.6**
JIJ *e*S **Sn 08 03 21.6 -1.3**
YUS Yu-Shan 1.66 233 *e*P **Pn 08 03 04.0 0.0**
baz=232
YUS *e*S **Sn 08 03 23.6 -0.7**
baz=232
ALS Alishan 1.76 236 P **Pn 08 03 05.8 +0.5**
baz=235
ALS *e*S **Sn 08 03 26.4 -0.3**
baz=235
CHN5 Tsauling 1.81 241 *e*P **Pn 08 03 06.5 +0.4**
baz=240
CHN5 *e*S **Sn 08 03 28.8 +0.8**
baz=240
ELDTW Lidau 1.81 224 *e*P **Pn 08 03 05.8 -0.4**
baz=223
CHN4 Tsaushan 2.01 236 *e*P **Pn 08 03 08.1 -0.7**
baz=235
CHN4 *e*S **Sn 08 03 33.8 +1.0**
baz=235
WTP Ta-pu 2.05 233 *e*P **Pn 08 03 09.5 +0.1**
baz=232
WTP *e*S **Sn 08 03 34.5 +0.6**
baz=232
TWG Pinlang 2.06 216 *e*P **Pn 08 03 08.2 -1.3**
baz=215
JTJ Tarama 2.10 86 P **Pn 08 03 10.0 -0.1**
JTJ *e*S **Sn 08 03 35.4 +0.2**
TWK Hsinying 2.13 235 *e*P **Pn 08 03 11.0 +0.5**
baz=234
TWK *e*S **Sn 08 03 36.9 +1.0**
baz=234
CHN1 Nanshi 2.15 233 *e*P **Pn 08 03 10.7 -0.1**
baz=232
CHN1 *e*S **Sn 08 03 36.2 -0.1**
baz=232
EAST Anshuo 2.54 214 *e*P **Pn 08 03 16.8 +0.7**
baz=213

NEIC ***22*** *08:09:25.8±5.5, 18.°35S×173.°98W, h5km±34km, mb4.5/3, Error ellipse: s-maj=19.4km s-min=9.1km az=147.0*
IDC ***22*** *08:09:25.1±0.8, 18.°35S×174.°00W, h0km, mb4.3/6, mb1 4.4/7, mb1mx4.2/18, mbtmp4.2/7, ML2.0/1, MS3.8/2, Ms1 3.7/2, ms1mx3.0/21, Error ellipse: s-maj=35.6km s-min=19.7km az=146.0*
ISCJB ***22*** *08:09:28.0±0.6, 18.°3S±0.°1×174.°0W±0.°1, h33km, mb4.5/12, MS3.9/2, Error ellipse: s-maj=23.4km s-min=11.5km az=143.7*

ISC 22 08:09:30.2±0.6, 18.°2S±0.°1×174.°0W±0.°1, h35km, n20, σ0.°86/17, mb4.5/12, MS3.9/2, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.76**	**27**	Pn	**Pn**	**08 10 40.4**	**+0.9**
3.7nm,0.3s,baz=79,slow=15,SNR=5.5
AFI Sn **Sn 08 11 32.1 -1.3**
25nm,0.3s,baz=17,slow=22,SNR=6.9
AFI Afiamalu 4.76 27 Pn **Pn 08 10 40.4 +0.9**
AFI Sn **Sn 08 11 32.1 -1.3**
2.6nm,0.6s,mb4.4
URZ Urewera 21.45 199 P **P 08 14 07.1 -8.3**
9.6nm,0.5s,mb4.3,baz=83,slow=3.5,SNR=11
RPZ Rata Peaks 28.40 203 P **P 08 15 20.1 -1.1**
14nm,0.6s,mb4.8,baz=304,slow=10.0,SNR=10
EIDS Eidsvold 33.13 251 *e*P **P 08 16 03.2 -0.1**
4.3nm,0.7s,mb4.5
CTAO Charters Tower 37.54 261 *e*P **P 08 16 41.6 +0.4**
11nm,0.6s,mb4.8
STKA Stephens Creek 42.20 242 P **P 08 17 17.6 -2.1**
1.8nm,0.7s,mb3.8,baz=109,slow=9.6,SNR=6.9
STKA LR LR 08 33 26.3
comp=Z,83nm,21.2s,MS3.6,baz=21,slow=34
WRAB Tennant Creek 48.70 259 *e*P **P 08 18 11.5 +0.1**
2.6nm,0.6s,mb4.4
ASAR Alice Springs 48.75 254 P **P 08 18 11.6 -0.3**
4.8nm,0.7s,mb4.6,baz=92,slow=8.1,SNR=58
KAKA Kakadu 51.77 268 *e*P **P 08 18 35.8 +1.0**
36nm,0.5s,mb5.5
FITZ Fitzroy Crossi 57.12 260 P **P 08 19 14.4 +0.8**
2.2nm,0.6s,mb4.4,baz=112,slow=5.4,SNR=7.5
RPN Rapa Nui 59.78 111 P **P 08 19 32.6 +0.5**
35nm,0.4s,baz=75,slow=6.9,SNR=4.1
MBWA Marble Bar 62.07 255 *e*P **P 08 19 47.6 -0.1**
28nm,1.1s,mb5.3
TXAR Lajitas Array 82.64 56 P **P 08 21 50.3 +0.1**
0.8nm,1.0s,mb3.7,baz=224,slow=5.0,SNR=3.0
PDAR Pinedale Array 84.71 42 P **P 08 22 01.2 +0.7**
0.6nm,0.7s,mb3.8,baz=198,slow=5.6,SNR=3.5
MAW Mawson 84.98 199 LR LR 09 01 01.0
comp=Z,89nm,19.0s,MS4.2,baz=233,slow=36
ARCES ARCESS Array B 127.27 352 PKP PKPdf 08 28 31.4 +1.1
1.9nm,1.1s,baz=304,slow=2.4,SNR=4.7
AKASG Malin Array Be 142.66 336 PKP PKPdf 08 29 00.4 +0.9
0.2nm,0.3s,baz=35,slow=3.4,SNR=2.8
CLL Collm 146.49 352 *e*PKPbc PKPbc 08 29 11.0 +3.5
BRTR Keskin Array B 147.89 318 PKPbc PKPbc 08 29 13.7 +1.9
0.9nm,0.7s,baz=127,slow=4.5,SNR=5.2

IDC 22 08:14:58.0±8.0, 2.°75S×100.°47E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=418.1km s-min=27.6km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.44**	**126**	P	P	08 22 21.7	0.0
0.2nm,0.3s,baz=300,slow=7.9,SNR=4.4
MKAR Makanchi Array 51.87 344 P P 08 24 08.6 +0.5
0.9nm,0.6s,baz=155,slow=7.7,SNR=11
KURK Kurchatov 56.45 344 P P 08 24 40.7 -0.7
0.5nm,0.8s,baz=161,slow=7.1,SNR=3.2
ZALV Zalesovo Beam 57.99 349 P P 08 24 51.9 -0.3
0.7nm,0.3s,baz=157,slow=7.8,SNR=2.6
TXAR Lajitas Array 145.00 39 PKPbc PKPbc 08 34 36.6 -0.6
0.5nm,0.6s,baz=291,slow=1.1,SNR=5.3

ISCJB ***22*** *08:31:04.0±0.3, 32.°59N±0.°03×105.°42E±0.°04, h10km, mb3.8/14, Error ellipse: s-maj=5.1km s-min=4.4km az=141.4*
IDC ***22*** *08:31:04.1±1.0, 32.°57N×105.°33E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.9/25, mbtmp3.9/13, ML3.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/24, Error ellipse: s-maj=34.7km s-min=19.4km az=49.0*
NEIC ***22*** *08:31:05.4±0.4, 32.°63N×105.°54E, h10km, mb3.9/3, Error ellipse: s-maj=12.5km s-min=6.5km az=54.0*
BJI ***22*** *08:31:06.4, 32.°73N×105.°46E, h14km, mB4.4/2, mb3.9/2, ML3.8/13, Ms3.6/2, Ms7 3.3/3*

ISC 22 08:31:05.7±0.3, 32.°62N±0.°03×105.°46E±0.°04, h10km, n29, σ0.°93/38, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.23**	**221**	Pg	**Pg**	**08 31 47.3**	**-1.3**
CD2 Sg **Sg 08 32 17.6 0.0**
CD2 smax
comp=N,2μm,0.7s
XAN Xi'an 3.23 63 Pn **Pn 08 31 57.0 +0.6**
XAN Pg **Pb 08 32 01.9 -1.2**
XAN Sn **Sn 08 32 34.8 -0.1**
XAN Sg **Sb 08 32 42.3 -0.1**
XAN smax
comp=N,380nm,0.9s
XAN smax
comp=E,200nm,1.1s
LZH Lanzhou 3.71 339 Pn **Pn 08 32 04.8 +1.7**
LZH Pg **Pg 08 32 14.0 -2.8**
LZH Sg **Sg 08 33 00.5 -4.4**
LZH smax
comp=N,530nm,1.1s
LZH smax
comp=E,550nm,1.0s
LZH LR LR
comp=E,630nm,5.6s
LZH LR LR
comp=Z,750nm,6.4s
ENH Enshi 4.16 123 Pn **Pn 08 32 08.4 -0.8**
ENH *e*Sn **Sn 08 32 59.1 +1.2**
GYA Guiyang 6.22 170 Pn **Pn 08 32 38.9 +1.3**
GYA Sn **Sn 08 33 48.6 -0.3**
GYA smax
comp=N,50nm,0.8s
GYA smax
comp=E,50nm,0.7s
WHN Wuhan 7.86 103 P **Pb 08 33 14.9 -7.1**
WHN S **Sn 08 34 25.8 -3.3**
WHN LR LR
comp=N,770nm,2.1s
WHN LR LR
comp=E,120nm,2.1s
WHN LR LR
comp=Z,490nm,6.2s
GTA Gaotai 8.18 328 *e*P **Pn 08 33 04.8 +0.4**
GTA pP 08 33 09.0
GTA sP 08 33 12.3
GTA S **Sn 08 34 44.3 +7.4**
GTA sS 08 34 50.1
GTA pmax pmax
comp=Z,3.0nm,1.3s
GTA pmax pmax
comp=Z,74nm,5.9s
GTA LR LR
comp=N,220nm,9.5s
GTA LR LR
comp=E,180nm,10.4s
GTA LR LR
comp=Z,180nm,10.1s
SONM Songino Array 15.22 2 Pn **Pn 08 34 46.2 +5.7**
comp=Z,0.3nm,0.3s,baz=206,slow=9.6,SNR=2.7
CMAR Chiang Mai Arr 15.27 204 Pn **Pn 08 34 41.1 -0.3**
comp=Z,0.1nm,0.3s,baz=17,slow=9.4,SNR=2.8
KSRS Korea Array 19.00 69 P **Pn 08 35 30.3 +2.0**
comp=Z,0.2nm,0.3s,baz=262,slow=9.1,SNR=4.0
KSRS LR LR 08 43 15.5
comp=Z,42nm,18.9s,baz=164,slow=38
MK31 Makanchi Array 22.66 315 *e*P **P 08 36 06.9 0.0**
MKAR Makanchi Array 22.66 315 P **P 08 36 07.3 +0.4**
comp=Z,1.8nm,0.6s,mb3.7,baz=119,slow=14,SNR=16
ZALV Zalesovo Beam 25.91 332 P **P 08 36 37.2 -0.5**
comp=Z,1.1nm,0.4s,mb3.8,baz=123,slow=10,SNR=3.1
UCH Uchtor 26.26 300 *e*P **P 08 36 42.7 +1.7**
comp=Z,4.1nm,1.1s,mb3.9
KURK Kurchatov 26.77 320 P **P 08 36 45.8 +0.2**
comp=Z,0.7nm,0.3s,mb3.7,baz=133,slow=8.6,SNR=9.9
KURK Kurchatov 26.77 320 P **P 08 36 45.8 +0.2**
AML Almayashu 26.84 300 P **P 08 36 46.7 +0.4**
comp=Z,1.4nm,0.6s,mb3.7
MJAR Matsushiro Arr 27.17 73 LR LR 08 47 58.6
comp=Z,40nm,18.5s,baz=100,slow=37
BVAR Borovoye Array 32.36 320 P **P 08 37 35.2 +0.1**
comp=Z,0.3nm,0.4s,mb3.4,baz=112,slow=11,SNR=3.2
ABKAR Akbulak array 37.56 310 P **P 08 38 20.3 +0.2**
comp=Z,0.8nm,0.6s,mb3.6
ARCES ARCESS Array B 56.36 335 P **P 08 40 46.0 -0.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=74,slow=8.9,SNR=12
FINES FINESS Array B 56.97 326 P **P 08 40 50.7 -0.3**
comp=Z,1.4nm,0.4s,mb4.3,baz=80,slow=7.2,SNR=11
FINES FINESS Array B 56.97 326 P **P 08 40 50.7 -0.3**
AKASG Malin Array Be 57.20 313 P **P 08 40 52.4 -0.5**
comp=Z,1.4nm,0.4s,mb4.4,baz=67,slow=7.4,SNR=6.3
ASAR Alice Springs 62.21 150 P **P 08 41 27.5 0.0**
comp=Z,0.7nm,0.6s,mb4.0,baz=332,slow=6.9,SNR=7.5
NB2 NORSAR Subarra 64.01 327 P **P 08 41 38.1 -1.0**
comp=Z,0.9nm,0.4s,mb4.2,baz=72,slow=6.9
NOA NORSAR Array B 64.01 327 P **P 08 41 38.3 -0.8**
comp=Z,1.3nm,0.6s,mb4.2,baz=71,slow=6.7,SNR=6.9
GERES GERESS Array B 67.32 314 P **P 08 42 00.5 -0.2**
comp=Z,0.3nm,0.5s,mb3.5,baz=69,slow=7.3,SNR=4.1
YKA Yellowknife Ar 79.91 18 P **P 08 43 13.9 -0.5**
comp=Z,0.2nm,0.5s,mb3.3,baz=328,slow=5.1,SNR=3.9

IDC 22 08:33:25.3±1.2, 43.°74N×29.°03W, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/29, mbtmp3.6/8, MS3.3/7, Ms1 3.3/7, ms1mx2.9/37, Error ellipse: s-maj=39.9km s-min=21.2km az=9.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**21.97**	**112**	LR	LR	08 45 07.4	
comp=Z,64nm,18.9s,baz=142,slow=32
SCHQ Schefferville 26.72 308 LR LR 08 47 23.3
comp=Z,53nm,21.3s,baz=116,slow=31
DAVOX Davos/Dischmat 27.37 70 LR LR 08 50 28.5
comp=Z,39nm,18.0s,baz=254,slow=37
GERES GERESS Array B 29.67 65 LR LR 08 50 11.0
comp=Z,22nm,18.2s,baz=254,slow=34
TORD Torodi Ar. Bea 40.30 130 P P 08 41 03.9 -0.4
0.8nm,1.0s,baz=321,slow=3.9,SNR=4.0
TORD LR LR 08 56 27.1
comp=Z,65nm,18.8s,baz=165,slow=34
DBIC Dimbokro 42.58 143 LR LR 08 57 18.4
comp=Z,35nm,18.4s,baz=329,slow=34
BRTR Keskin Array B 45.96 72 P P 08 41 50.9 +1.1
0.3nm,0.4s,baz=302,slow=8.3,SNR=3.3
YKA Yellowknife Ar 50.50 323 P P 08 42 25.1 +0.5

0.3nm,0.8s,baz=72,slow=7.2,SNR=5.7
PDAR Pinedale Array 56.37 299 P P 08 43 07.7 -0.3
0.3nm,0.5s,baz=23,slow=7.2,SNR=3.1
TXAR Lajitas Array 59.77 283 P P 08 43 32.6 +0.5
0.7nm,0.7s,baz=81,slow=7.7,SNR=5.1
BVAR Borovoye Array 61.49 43 P P 08 43 42.7 -0.7
0.4nm,0.4s,baz=316,slow=8.1,SNR=3.9
KURK Kurchatov 66.92 41 P P 08 44 18.9 -0.2
0.7nm,0.8s,baz=319,slow=6.6,SNR=4.1
MKAR Makanchi Array 71.37 42 P P 08 44 47.1 +0.3
0.7nm,0.8s,baz=308,slow=4.0,SNR=5.1
BOSA Boshof 87.49 134 LR LR 09 22 03.2
comp=Z,66nm,18.9s,baz=164,slow=33

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*ISCJB **22** 08:56:17.6±0.4,20°.56S±0°.03×68°.92W±0°.06,h105km±4km, mb4.3/25,Error ellipse: s-maj=8.8km s-min=5.1km az=177.9*
*GUC **22** 08:56:19.5±0.8,20°.59S×69°.34W,h117km±8km,MD4.3, ML4.3*
*NEIC **22** 08:56:20.3±0.3,20°.58S×68°.90W,mb4.4/21,Error ellipse: s-maj=11.1km s-min=7.2km az=50.0*
*IDC **22** 08:56:20.4±0.7,20°.50S×68°.95W,h116km±5km,mb3.8/7, mb1 4.0/10,mb1mx3.9/17,mbtmp3.8/10,Error ellipse: s-maj=25.4km s-min=16.2km az=26.0*
ISC 22 08:56:18.5±0.4,20°.54S±0°.03×68°.90W±0°.05,h95km±4km, h113km×3.3km;pP-P,n57,σ1°.15/58,mb4.3/25,3C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.97**	**286**	↑*i*P	**Pn**	**08 56 38.5**	**+0.3**
HMBC				*i* S	**Sn**	**08 56 52.5**	**-0.5**
HMBC				AML	AML	08 56 54.6	
	comp=E,29μm,0.4s						
PSGC	**Pisagua**	**1.49**	**309**	↑*i*P	**Pn**	**08 56 44.2**	**-0.2**
PSGC				*i* S	**Sn**	**08 57 02.8**	**-1.2**
PSGC				AML	AML	08 57 05.9	
	comp=N,6μm,0.7s						
MNMC	**Miæe Miæ**	**1.55**	**335**	↑*i*P	**Pn**	**08 56 47.1**	**+1.9**
MNMC				*i* S	**Sn**	**08 57 08.2**	**+2.8**
PECH	**Pedro de Valdi**	**2.17**	**199**	↓*i*P	**Pn**	**08 56 54.3**	**+1.2**
PECH				*i* S	**Sn**	**08 57 20.8**	**+1.2**
PECH				AML	AML	08 57 27.2	
	comp=N,3μm,0.5s						
MECH	**Mejillones**	**2.93**	**209**	*i* P	**Pn**	**08 57 02.8**	**-0.4**
MECH				*i* S	**Sn**	**08 57 35.3**	**-2.3**
MECH				AML	AML	08 58 01.0	
	comp=N,1μm,0.4s						
CEN1	**Los Morros**	**3.08**	**203**	*i* P	**Pn**	**08 57 05.8**	**+0.6**
CEN1				*i* S	**Sn**	**08 57 42.8**	**+1.6**
CEN1				AML	AML	08 58 08.0	
	comp=N,314nm,0.5s						
ANCH	**Antofagasta**	**3.42**	**204**	↓*i*P	**Pn**	**08 57 08.8**	**-1.0**
ANCH				*i* S	**Sn**	**08 57 47.4**	**-2.1**
LPAZ	**La Paz**	**4.29**	**10**	P	**Pn**	**08 57 26.6**	**+5.0**
	comp=N,2.5nm,0.3s,baz=195,slow=6.7,SNR=39						
LPAZ				S	**Sn**	**08 58 08.6**	**-2.1**
	comp=N,4.4nm,0.3s,baz=209,slow=18,SNR=4.3						
LPAZ	**La Paz**	**4.29**	**10**	*e*Pn	**Pn**	**08 57 26.8**	**+5.2**
LCO	**Las Campanas**	**8.59**	**191**	*e*Pn	**Pn**	**08 58 15.8**	**-4.2**
LCO				*e*Sn	**Sn**	**08 59 49.8**	**-5.4**
SIV	**San Ignacio**	**8.70**	**60**	P	**Pn**	**08 58 23.0**	**+1.4**
	comp=N,7.7nm,0.3s,baz=253,slow=12,SNR=260						
SIV				S	**Sn**	**08 59 57.2**	**-0.9**
	baz=331,slow=19						
NNA	**Nana**	**11.42**	**317**	P	**Pn**	**08 58 58.2**	**-0.5**
	comp=N,2.6nm,0.3s,baz=138,slow=7.2,SNR=4.1						
NNA				S	**Sn**	**09 00 56.8**	**-7.6**
	comp=N,1.8nm,0.3s,baz=223,slow=18,SNR=2.7						
NNA	**Nana**	**11.42**	**317**	*e*Pn	**Pn**	**08 58 58.3**	**-0.4**
NNA				*e*Sn	**Sn**	**09 00 58.2**	**-6.1**
CPUP	**Villa Florida**	**12.08**	**121**	P	**Pn**	**08 59 08.4**	**+1.0**
	comp=N,1.1nm,0.3s,baz=282,slow=11,SNR=13						
CPUP	**Villa Florida**	**12.08**	**121**	*e*Pn	**Pn**	**08 59 08.2**	**+0.8**
	comp=N,30nm,0.8s						
TRQA	**Tornquist**	**18.45**	**163**	P	**Pn**	**09 00 25.7**	**-2.2**
	comp=N,16nm,0.8s						
PLCA	**Paso Flores**	**20.18**	**184**	P	**P**	**09 00 46.4**	**+1.0**
	comp=N,2.5nm,0.8s,baz=7.8,slow=14,SNR=4.1						
OTAV	**Otavalo**	**22.67**	**334**	P	**P**	**09 01 15.0**	**+2.8**
	comp=N,10nm,1.4s,mb4.0						
TGUH	**Tegucigalpa,Un**	**38.84**	**331**	*e*P	**P**	**09 03 35.0**	**+0.5**
	comp=N,4.5nm,0.6s,mb4.5						
MIAR	**Mount Ida**	**59.60**	**336**	*e*P	**P**	**09 06 11.2**	**-1.3**
	comp=N,1.6nm,0.5s,mb4.3						
TXAR	**Lajitas Array**	**59.85**	**325**	P	**P**	**09 06 12.9**	**-1.4**
	comp=N,1.0nm,0.7s,mb4.0,baz=131,slow=3.8,SNR=4.9						
FVM	**French Village**	**61.63**	**341**	*e*P	**P**	**09 06 24.3**	**-1.9**
	comp=N,15nm,1.3s,mb4.9						
ANMO	**Albuquerque**	**65.71**	**327**	*e*P	**P**	**09 06 52.8**	**-0.3**
	comp=N,0.7nm,0.6s,mb3.7						
SDCO	**Great Sand Dun**	**67.43**	**329**	*e*P	**P**	**09 07 03.9**	**-0.1**
	comp=N,5.8nm,1.3s,mb4.2						
LIC	**Lamto**	**68.11**	**74**	*e*P	**P**	**09 07 07.2**	**-1.6**
	comp=N,50nm,1.3s,mb5.2						
TIC	**Toumodi**	**68.29**	**74**	*e*P	**P**	**09 07 10.1**	**+0.2**
	comp=N,4.7nm,0.2s,mb5.0						
KIC	**Kosan Boka**	**68.43**	**74**	*e*P	**P**	**09 07 10.8**	**0.0**
	comp=N,29nm,0.8s,mb5.1						
DBIC	**Dimbokro**	**68.45**	**74**	P	**P**	**09 07 10.9**	**0.0**
	comp=N,6.7nm,0.7s,mb4.6,baz=223,slow=5.5,SNR=10						
WUAZ	**Wupatki**	**68.77**	**324**	*e*P	**P**	**09 07 13.2**	**+0.8**
	comp=N,7.1nm,1.0s,mb4.5						
PV01	**Paradox Valley**	**69.25**	**327**	*e*P	**P**	**09 07 15.3**	**0.0**
	comp=N,2μm,2.0s						
QSPA	**South Pole Qui**	**69.64**	**180**	*e*P	**P**	**09 07 18.3**	**+1.1**
	comp=N,0.9nm,0.7s,mb3.7						
SRU	**San Rafael**	**70.98**	**327**	*e*P	**P**	**09 07 25.9**	**+0.1**
	comp=N,5.2nm,0.7s,mb4.5						
CCUT	**Cedar City**	**71.34**	**324**	*e*P	**P**	**09 07 29.7**	**+1.6**
	comp=N,6.8nm,0.8s,mb4.5						
MSU	**Marysvale**	**71.40**	**325**	*e*P	**P**	**09 07 29.4**	**+1.0**
JLU	**Jordanelle**	**72.57**	**327**	*e*P	**P**	**09 07 35.8**	**+0.4**
	comp=N,11nm,1.3s,mb4.5						
PDAR	**Pinedale Array**	**73.29**	**330**	P	**P**	**09 07 39.3**	**-0.3**
	comp=N,0.5nm,0.6s,mb3.5,baz=106,slow=6.7,SNR=3.1						
PDAR	**Pinedale Array**	**73.29**	**330**	P	**P**	**09 07 39.3**	**-0.3**
TPAW	**Teton Pass**	**74.50**	**330**	*e*P	**P**	**09 07 47.6**	**+1.0**
	comp=N,7.4nm,1.4s,mb4.2						
NVAR	**Mina Array Bea**	**74.75**	**322**	P	**P**	**09 07 48.1**	**-0.1**
	comp=N,0.7nm,0.6s,mb3.6,baz=172,slow=7.9,SNR=4.4						
NVAR				pP	pP	09 08 17.6	+5.1
	comp=N,0.5nm,0.5s,baz=129,slow=7.1,SNR=2.2						
HLID	**Hailey**	**76.24**	**328**	*e*P	**P**	**09 07 57.3**	**+0.7**
	comp=N,1.3nm,0.9s,mb3.7						
HLID				*e*pP	pP	09 08 23.2	+2.2
MCMT	**McKenzie Canyo**	**76.41**	**329**	*e*P	**P**	**09 07 58.3**	**+0.8**
	comp=N,1.3nm,1.0s,mb3.6						
TORD	**Torodi Ar. Bea**	**77.02**	**71**	P	**P**	**09 08 01.4**	**-0.3**
	comp=N,2.3nm,0.5s,mb4.1,baz=251,slow=4.8,SNR=24						
TORD				pP	pP	09 08 31.0	+4.9
	comp=N,3.8nm,0.7s,baz=251,slow=5.5,SNR=5.4						
TORD				sP	sP	09 08 44.1	+7.7
	comp=N,1.2nm,0.5s,baz=254,slow=5.4,SNR=2.0						
EGMT	**Eagleton**	**77.45**	**333**	*e*P	**P**	**09 08 01.7**	**-1.6**
	comp=N,57nm,2.5s,mb4.9						
MOD	**Modoc**	**78.21**	**323**	*e*P	**P**	**09 08 07.8**	**+0.2**
	comp=N,7.0nm,1.1s,mb4.3						
YKA	**Yellowknife Ar**	**90.29**	**341**	P	**P**	**09 09 07.4**	**-0.8**
	comp=N,2.0nm,0.8s,mb4.3,baz=133,slow=4.7,SNR=34						
YKA				pP	pP	09 09 36.8	+3.4
	comp=N,2.9nm,0.9s,baz=134,slow=4.6,SNR=11						
YKA	**Yellowknife Ar**	**90.29**	**341**	P	**P**	**09 09 07.5**	**-0.8**
YKA				pP	pP	09 09 36.8	+3.4
ASAR	**Alice Springs**	**130.76**	**208**	PKP	PKPdf	09 15 18.1	-1.2
	comp=N,0.4nm,0.5s,baz=135,slow=1.8,SNR=7.5						
ZAA0	**Zalesovo Array**	**141.08**	**25**	*e*PKPdf	PKPdf	09 15 36.9	-0.6
MKAR	**Makanchi Array**	**144.85**	**35**	PKP	PKPdf	09 15 43.5	-0.9
	comp=N,0.9nm,0.5s,baz=327,slow=2.6,SNR=11						
MKAR				pPKP	pPKPdf	09 16 14.4	+3.8
	comp=N,1.3nm,0.8s,baz=336,slow=2.7,SNR=4.8						
MJAR	**Matsushiro Arr**	**151.48**	**310**	PKPbc	PKPbc	09 16 00.5	-1.2
	comp=N,1.1nm,0.5s,baz=98,slow=1.5,SNR=3.3						
MJAR				pPKPbc	pPKPbc	09 16 31.6	+3.7
	comp=N,1.0nm,0.6s,baz=62,slow=1.0,SNR=2.6						
MJAR	**Matsushiro Arr**	**151.48**	**310**	PKPbc	PKPbc	09 16 00.5	-1.2
MJAR				pPKPbc	pPKPbc	09 16 31.6	+3.7
SONM	**Songino Array**	**152.51**	**7**	PKPbc	PKPbc	09 16 03.7	0.0
	comp=N,1.0nm,0.5s,baz=0.0,slow=1.6,SNR=3.1						
CN2	**Changchun**	**153.90**	**336**	*e*PKPbc	PKPdf	09 15 58.8	-0.1
HHC	**Hu-ho-hao-te**	**159.75**	**359**	*e*PKP	PKPdf	09 16 00.5	-6.0
HHC				PKS		09 19 32.9	
HHC				PP	PP	09 20 25.3	-1.1
HHC				SKS	SKSdf	09 22 53.5	-10
HHC				SKKS	SKKSac	09 27 02.3	-4.9
HHC				SS	SS	09 40 24.8	-1.0
HHC				AMB	AMB		
	comp=Z,71nm,7.7s						
HHC				LR	LR		
	comp=N,69nm,23.7s						
HHC				LR	LR		
	comp=E,85nm,21.8s						
HHC				LR	LR		
	comp=Z,58nm,22.0s						
NJ2	**Nanjing**	**166.60**	**330**	*e*PKP	PKPdf	09 16 12.8	-0.5
CD2	**Chengdu**	**167.74**	**31**	PKP	PKPdf	09 16 12.5	-1.6
GYA	**Guiyang**	**172.84**	**34**	*e*PKP	PKPdf	09 16 15.8	-1.3
GYA				sPKP		09 16 53.6	
GYA				PKPab	PKPab	09 17 45.8	+2.1
GYA				PKS		09 19 46.0	
GYA				PP	PP	09 21 38.8	+4.2
GYA				AMB	AMB		
	comp=Z,70nm,8.9s						

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*CSEM **22** 09:01:31.1,12°.37N×44°.05E,h10km,ML3.8,After DHMR*
DHMR 22 09:01:31.1±1.7,12°.37N×44°.05E,h10km±45km,ML3.8, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.00**	**66**	*i* P	Pg	09 01 49.2	-1.1
ADEN				*i* S	Sg	09 02 03.8	+0.5
ADEN				AML	AML	09 02 12.5	
	comp=E,4μm,0.6s						
ADEN	**Aden**	**1.00**	**66**	*i* P	Pg	09 01 49.2	-1.1
ADEN				*i* S	Sg	09 02 03.8	+0.5
LBOS		**1.90**	**38**	*i* P	Pn	09 02 05.3	+1.8
LBOS				*i* S	Sn	09 02 32.0	+4.5
BDHA	**Al Bayda'**	**2.18**	**43**	*i* P	Pn	09 02 09.6	+2.3
BDHA				*i* S	Sn	09 02 37.9	+3.5
BDHA				AML	AML	09 02 47.8	
	comp=N,786nm,0.3s						
BDHA	**Al Bayda'**	**2.18**	**43**	*i* P	Pn	09 02 09.6	+2.2
BDHA				*i* S	Sn	09 02 37.9	+3.5
DHBB	**Dhamar BB**	**2.22**	**9**	*i* P	Pn	09 02 09.4	+1.5
DHBB				*i* S	Sn	09 02 40.4	+5.0
DHBB	**Dhamar BB**	**2.22**	**9**	*i* P	Pn	09 02 09.4	+1.5
DHBB				*i* S	Sn	09 02 40.3	+4.9

CASC 22 09:06:42.1±1.9,7°.92N×82°.49W,h22km±9km,MD3.7,1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBS2		**0.89**	**349**	↑*i*P	Pb	09 07 04.2	+5.4
TBS2				*e*S	Sb	09 07 14.5	+4.3
BRU2	**Volcan**	**0.89**	**347**	*e*P	Pb	09 06 58.1	-0.9
BRU2				*e*S	Sb	09 07 11.6	+1.2
CNI	**Changuinola**	**1.49**	**359**	*e*P	Pn	09 07 07.7	+0.1
CNI				*e*S	Sn	09 07 27.3	+1.0
BAR1		**1.55**	**328**	*e*P	Pn	09 07 07.9	-0.5
BAR1				*e*S	Sn	09 07 29.5	+1.7
BUS	**Buena Vista**	**2.06**	**322**	*e*P	Pn	09 07 15.7	+0.3
URSC	**Ursca**	**2.29**	**326**	*e*P	Pn	09 07 19.3	+0.7
PRS1	**Puriscal**	**2.73**	**319**	*e*P	Pn	09 07 24.8	+0.1
PRS1				*e*S	Sn	09 07 55.8	-1.3

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*CSEM **22** 09:12:13.7,64°.57N×20°.73W,h3km,ML3.5,After REY*
REY 22 09:12:13.7,64°.57N×20°.73W,h3km,ML3.3,ML3.5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IASB	**`sbjarnarst**	**0.31**	**305**	P	Pg	09 12 19.9	+0.2
IASB				S	Sg	09 12 24.7	+0.9
IGYG	**Gygjarholskot**	**0.37**	**142**	P	Pg	09 12 20.7	0.0
IGYG				S	Sg	09 12 26.1	+0.7
IHEI	**Heioarbar**	**0.43**	**211**	P	Pg	09 12 21.9	-0.1
IHEI				S	Sg	09 12 27.9	+0.3
IKRO	**Krokur**	**0.51**	**200**	P	Pg	09 12 23.1	-0.2
IKRO				S	Sg	09 12 30.1	+0.2
IKUD	**Kuludalsa**	**0.56**	**244**	P	Pg	09 12 23.8	-0.6
IKUD				S	Sg	09 12 31.5	-0.1
IHVE	**Hveravellir**	**0.58**	**58**	P	Pg	09 12 23.9	-0.9
IHVE				S	Sg	09 12 32.5	+0.2
ISAU	**Saurbar**	**0.60**	**167**	P	Pg	09 12 24.4	-0.7
ISAU				S	Sg	09 12 32.7	-0.2
ISAN	**Sandskeio**	**0.63**	**216**	P	Pg	09 12 25.1	-0.7
ISAN				S	Sg	09 12 33.9	-0.1
ISOL	**Solvholt**	**0.65**	**189**	P	Pg	09 12 25.5	-0.6
ISOL				S	Sg	09 12 34.5	-0.1
IBJA	**Bjarnastaoir**	**0.68**	**202**	P	Pg	09 12 26.0	-0.6
IBJA				S	Sg	09 12 35.3	0.0
IHAU	**Haukadalur**	**0.69**	**151**	P	Pg	09 12 26.1	-0.8
IHAU				S	Sg	09 12 35.8	0.0
IASM	**Asmuli**	**0.74**	**176**	P	Pg	09 12 26.9	-1.0
IASM				S	Sg	09 12 37.1	-0.3
IVOS	**Vogsosar**	**0.84**	**211**	P	Pg	09 12 28.7	-1.0
IVOS				S	Sg	09 12 40.2	-0.3
IVAT	**Vatnsfell**	**0.88**	**115**	P	Pg	09 12 29.3	-1.1
IKRI	**Krysuvik**	**0.91**	**221**	P	Pg	09 12 29.7	-1.4
IKRI				S	Sg	09 12 41.9	-1.0
IVOG	**Vogar**	**0.94**	**231**	P	Pg	09 12 30.3	-1.5
IVOG				S	Sg	09 12 43.3	-0.7
IMID	**Miomork**	**0.99**	**158**	P	Pg	09 12 31.4	-1.2
IMID				S	Sg	09 12 44.6	-0.8
ISKR	**Skrokkalda**	**1.01**	**90**	P	Pg	09 12 31.5	-1.5
ISKR				S	Sg	09 12 45.8	-0.3
IGRV	**Grindav??k**	**1.04**	**227**	S	Sg	09 12 46.2	-0.9
INYL	**Nylenda**	**1.06**	**237**	P	Pg	09 12 32.1	-1.9
INYL				S	Sg	09 12 46.2	-1.6
IESK	**Eystri-Skogar**	**1.19**	**151**	P	Pg	09 12 34.5	-2.0
IESK				S	Sg	09 12 50.4	-1.5
ISNB	**Snabyli**	**1.24**	**131**	P	Pg	09 12 35.2	-2.3
ISNB				S	Sg	09 12 52.6	-1.0
IHVO	**Lagu-Hvolar**	**1.33**	**141**	P	Pn	09 12 36.8	-2.4
IHVO				S	Sg	09 12 55.5	-1.0
IKAL	**Kalfafell**	**1.47**	**114**	P	Pn	09 12 39.1	-1.9
IKAL				S	Sb	09 12 58.3	-2.3
IHRN	**Hraun**	**1.57**	**9**	P	Pn	09 12 39.8	-2.6
IHRN				S	Sn	09 12 59.9	-3.3
ISVA	**Svartarkot**	**1.67**	**61**	P	Pn	09 12 41.8	-2.0
ISVA				S	Sn	09 13 04.7	-0.9
IHLA	**Hella**	**1.69**	**34**	P	Pn	09 12 42.0	-2.2
IHLA				S	Sn	09 13 04.5	-1.8
ISIG	**Siglufjorour**	**1.74**	**25**	P	Pn	09 12 42.8	-2.0
ISIG				S	Sn	09 13 05.1	-2.4
IKRE	**Kreppuhraun**	**1.88**	**82**	P	Pn	09 12 45.0	-1.7
IKRE				S	Sn	09 13 10.9	0.0
IGRA	**Granastaoir**	**1.89**	**43**	P	Pn	09 12 45.6	-1.3
IGRA				S	Sn	09 13 10.8	-0.4
IFAG	**Fagurholsmyri**	**1.91**	**110**	P	Pn	09 12 45.9	-1.2
IFAG				S	Sn	09 13 11.2	-0.5
IMKO	**Mokollar**	**1.92**	**76**	P	Pn	09 12 45.6	-1.7
IMKO				S	Sn	09 13 11.9	-0.1
IREN	**Reynihlio**	**1.94**	**55**	P	Pn	09 12 45.9	-1.7
IBRE	**Brettingsstaoi**	**1.96**	**36**	P	Pn	09 12 46.7	-1.0
IBRE				S	Sn	09 13 12.2	-0.6
IKVO	**Krokottuvotn**	**1.99**	**53**	P	Pn	09 12 47.0	-1.2
IFLA	**Flatey**	**2.00**	**36**	P	Pn	09 12 47.7	-0.7
IBRU	**Bruarjokull**	**2.01**	**80**	P	Pn	09 12 46.9	-1.6
IHED	**Heoinshofoi**	**2.09**	**42**	P	Pn	09 12 49.1	-0.4
IHVA	**Hvannstoosfjol**	**2.12**	**77**	P	Pn	09 12 48.8	-1.2
IVSH	**V-Sauoahnukur**	**2.16**	**81**	P	Pn	09 12 49.8	-0.8
IVSH				S	Sn	09 13 19.5	+1.7
IGRS	**Grimsstaoir**	**2.22**	**59**	S	Sn	09 13 20.8	+1.4
IADA	**Aoalbol**	**2.25**	**76**	P	Pn	09 12 50.8	-1.0
IGRI	**Grimsey**	**2.28**	**28**	P	Pn	09 12 51.0	-1.2
IGRI				S	Sn	09 13 20.9	+0.1

IDC 22 09:23:36.5±11.0,30°.92S×178°.11W,h0km,mb3.3/1, mb1 3.5/1,mb1mx3.4/14,mbtmp3.3/1,Error ellipse: s-maj=601.7km s-min=56.2km az=157.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.99**	**268**	P	P	09 31 37.6	-0.1
	0.3nm,0.7s,baz=105,slow=7.1,SNR=5.7						
FINES	**FINESS Array B**	**145.59**	**340**	PKPbc	PKPbc	09 43 15.6	-0.6
	2.7nm,0.6s,baz=37,slow=3.5,SNR=4.1						
NOA	**NORSAR Array B**	**149.25**	**351**	PKPbc	PKPbc	09 43 25.7	-0.6
	0.5nm,0.6s,baz=18,slow=4.2,SNR=3.4						

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*ISCJB **22** 09:27:29.9±0.6,59°.34N±0°.03×26°.97E±0°.08,h0km,Error ellipse: s-maj=6.1km s-min=3.9km az=14.3*
*CSEM **22** 09:27:32.4±0.4,59°.36N×27°.06E,h2km,ML2.4,Error ellipse: s-maj=10.2km s-min=5.8km az=109.0,Mining explosion.*
*NAO **22** 09:27:32.7±0.9,59°.30N×26°.96E,ML2.4*
*BER **22** 09:27:33.4±2.9,59°.30N×27°.06E,h0km±11km, ML2.4(NAO)*
*IDC **22** 09:27:35.1±1.0,59°.40N×26°.81E,h0km,mb1 3.1/5, mb1mx2.9/27,mbtmp3.0/5,ML2.9/5,Error ellipse: s-maj=13.7km s-min=8.3km az=88.0*
ISC 22 09:27:32.1±0.6,59°.34N±0°.03×27°.04E±0°.08,h0km,n28, σ1°.26/40,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.89**	**190**	Pg	**Pg**	**09 27 49.3**	**+0.2**
VSU				Lg		09 28 00.3	
VSU				Rg		09 28 04.8	
VSU	**Vasula**	**0.89**	**190**	Pg	**Pg**	**09 27 49.3**	**+0.2**
VSU				*e*S	**Sg**	**09 27 59.7**	**-1.0**
	52nm,0.5s,SNR=90						
VSU				Lg		09 28 00.3	
	SNR=92						
VJF	**Virojoki**	**1.23**	**12**	Pg	**Pg**	**09 27 54.2**	**-1.5**
VJF				Sg	**Sg**	**09 28 11.0**	**-0.6**
PVF	**Pernaja**	**1.35**	**334**	Pg	**Pg**	**09 27 57.2**	**-0.7**
PVF				Sg	**Sg**	**09 28 15.1**	**-0.3**
MEF	**Metsahovi**	**1.60**	**305**	*e*P	**Pn**	**09 28 03.2**	**+1.6**
	SNR=50						
MTSE	**Matsula**	**1.78**	**251**	Pn	**Pn**	**09 28 05.8**	**+1.7**
MTSE				Sg	**Sg**	**09 28 29.4**	**+0.1**
FIA0	**FINESS Array S**	**2.17**	**348**	Pn	**Pn**	**09 28 10.5**	**+1.2**
	baz=166,slow=16						
FIA0				Pg	**Pg**	**09 28 11.8**	**-1.8**
	baz=163,slow=16						
FIA0				Sn	**Sn**	**09 28 38.5**	**+1.7**
FIA0				Lg		09 28 41.8	
	baz=167,slow=37						
FIA0				Rg		09 28 54.0	
	baz=167,slow=37						
FIA0	**FINESS Array S**	**2.17**	**348**	Pn	**Pn**	**09 28 10.3**	**+1.0**
FIA0	**FINESS Array S**	**2.17**	**348**	Pg	**Pg**	**09 28 11.8**	**-1.8**
	baz=163,slow=14						
FIA0				Lg		09 28 41.8	
	baz=167,slow=28,SNR=90						
FINES	**FINESS Array B**	**2.17**	**348**	Pn	**Pn**	**09 28 10.5**	**+1.2**
	2.6nm,0.3s,baz=166,slow=15,SNR=39						
FINES				Lg		09 28 41.1	
	6.0nm,0.3s,baz=168,slow=27,SNR=25						
FINES				Rg		09 28 54.1	
	26nm,1.0s,baz=166,slow=32,SNR=16						
FIA1	**FINESS Array S**	**2.17**	**348**	Pn	**Pn**	**09 28 10.7**	**+1.4**
KAF	**Kangasniemi**	**2.81**	**353**	Pn	**Pn**	**09 28 18.9**	**+0.8**
SLIT	**Slitere, Latvi**	**3.03**	**238**	*e*P	**Pn**	**09 28 25.7**	**+4.6**
	SNR=50						
RAF	**Rauma**	**3.13**	**305**	Pn	**Pn**	**09 28 25.4**	**+2.8**
RAF				*e*S	**Sn**	**09 29 04.1**	**+3.5**
	SNR=50						
RAF				Sg	**Sg**	**09 29 09.0**	**-3.6**
SUF	**Sumiainen**	**3.42**	**353**	Pn	**Pn**	**09 28 28.4**	**+1.8**
AAL	**Aland**	**3.67**	**286**	Sg	**Sg**	**09 29 28.5**	**-1.2**
JOF	**Joensuu**	**4.15**	**28**	Pn	**Pn**	**09 28 36.7**	**+0.2**
JOF				Sg	**Sg**	**09 29 40.8**	**-4.3**
HFS	**Hagfors**	**6.80**	**282**	Sn	**Sn**	**09 30 26.7**	**-4.2**
	baz=98,slow=37						
HFS				Lg		09 31 02.9	
	baz=83,slow=37						
HFS	**Hagfors**	**6.80**	**282**	Pn	**Pn**	**09 29 10.5**	**-2.4**
	0.3nm,0.3s,baz=60,slow=12,SNR=5.5						
HFS				Sn	**Sn**	**09 30 31.3**	**+0.5**
	0.5nm,0.3s,baz=115,slow=23,SNR=5.5						
HFS				Lg		09 31 03.0	
	0.7nm,0.3s,baz=90,slow=28,SNR=4.6						
NB2	**NORSAR Subarra**	**8.07**	**289**	Pn	**Pn**	**09 29 29.9**	**-0.5**
	baz=84,slow=14						
NB2	**NORSAR Subarra**	**8.07**	**289**	Pn	**Pn**	**09 29 29.9**	**-0.4**
	baz=84,slow=13,SNR=3.9						
NOA	**NORSAR Array B**	**8.07**	**289**	Pn	**Pn**	**09 29 29.5**	**-0.8**
	0.3nm,0.3s,baz=90,slow=13,SNR=6.3						
NOA				Lg		09 31 44.8	
	0.5nm,0.3s,baz=135,slow=26,SNR=3.5						
APA0	**Apatity Array**	**8.71**	**15**	Pn	**Pn**	**09 29 38.9**	**-0.2**
APA0	**Apatity Array**	**8.71**	**15**	Pn	**Pn**	**09 29 38.8**	**-0.3**
AKASG	**Malin Array Be**	**8.74**	**171**	Pn	**Pn**	**09 29 39.4**	**-0.2**
	0.8nm,0.3s,baz=353,slow=14,SNR=3.6						
AKASG				Lg		09 32 09.4	
	0.8nm,0.3s,baz=346,slow=29,SNR=3.5						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**09 29 59.5**	**-0.9**
	baz=174,slow=14						
ARA0				Sn	**Sn**	**09 31 50.0**	**-5.8**
	baz=175

SIVA	Sivas	1.46 246	*e*PN	Pn	09 33 45.1	+0.9
SIVA	Sivas	1.46 246	P	Pn	09 33 44.9	+0.7
SIVA			S	Sn	09 34 03.5	+1.4
SIVA	Sivas	1.46 246	P	Pn	09 33 44.9	+0.7
SIVA			S	Sn	09 34 03.5	+1.4
ARG	Arkhangelos	1.50 66	*e*PN	Pn	09 33 44.5	-0.2
ARG	Arkhangelos	1.50 66	P	Pn	09 33 44.6	-0.1
ARG			S	Sn	09 34 01.9	-1.1
ARG	Arkhangelos	1.50 66	P	Pn	09 33 44.6	-0.1
ARG			S	Sn	09 34 01.9	-1.1
APE	Apeiranthos	1.61 333	*e*PN	Pn	09 33 45.4	-0.9
APE	Apeiranthos	1.61 333	P	Pn	09 33 45.3	-1.0
APE			S	Sn	09 34 03.6	-2.2
APE	Apeiranthos	1.61 333	*e*Pn	Pn	09 33 45.4	-0.9
APE			S	Sn	09 34 03.6	-2.2
BDRM	Kayabasi	1.65 29	*e*P	Pn	09 33 46.0	-0.8
BDRM			*i* S	Sn	09 34 04.0	-2.8
BDRM	Kayabasi	1.65 29	*e*P	Pn	09 33 46.0	-0.8
BDRM			*i* S	Sn	09 34 04.0	-2.8
VAM	Vamos	1.83 264	*e*PN	Pn	09 33 48.5	-0.8
VAM	Vamos	1.83 264	*e*Pn	Pn	09 33 48.5	-0.8
MLSB	Milas	1.99 33	*e*PN	Pn	09 33 50.9	-0.5
MLSB	Milas	1.99 33	*e*Pn	Pn	09 33 50.9	-0.5
KARN	Karanos	2.06 264	*e*PN	Pn	09 33 52.4	-0.1
KARN	Karanos	2.06 264	P	Pn	09 33 52.2	-0.3
KARN			S	Sn	09 34 16.4	-0.6
KARN	Karanos	2.06 264	*e*Pn	Pn	09 33 52.4	-0.1
KARN			S	Sn	09 34 16.4	-0.6
GVD	Gavdhos	2.07 248	*e*PB	Pn	09 33 54.1	+1.5
SMG	Samos	2.10 9	*e*PN	Pn	09 33 52.0	-1.0
SMG	Samos	2.10 9	*e*Pn	Pn	09 33 52.0	-1.0
YER	Yerkesik	2.12 44	*e*PN	Pn	09 33 52.5	-0.7
YER	Yerkesik	2.12 44	*e*Pn	Pn	09 33 52.5	-0.7
TURN	Turunc	2.15 54⇑	*i*P	Pn	09 33 49.2	-4.5
TURN			*i* S	Sn	09 34 12.5	-6.6
AYDN	Tasoluk	2.34 29⇑	*i*P	Pn	09 33 56.2	-0.1
AYDN	Tasoluk	2.34 29	*i* P	Pn	09 33 56.2	-0.1
FETY	Fethiye	2.37 64	*e*PN	Pn	09 33 56.9	+0.2
FETY	Fethiye	2.37 64	*e*Pn	Pn	09 33 56.9	+0.2
KSL	Kastellorizon	2.61 78	*e*PN	Pn	09 34 01.0	+1.0
KSL	Kastellorizon	2.61 78	*e*Pn	Pn	09 34 01.0	+1.0
AKAS	Kas	2.65 76⇑	*i*P	Pn	09 34 01.3	+0.9
AKAS			*i* S	Sn	09 34 33.0	+1.7
AKAS	Kas	2.65 76	*i* P	Pn	09 34 01.3	+0.8
AKAS			*i* S	Sn	09 34 33.0	+1.7
URLA	Izmir	2.73 3⇓	*i*P	Pn	09 34 00.5	-1.1
URLA			*e*S	Sn	09 34 31.2	-2.2
URLA	Izmir	2.73 3	*i* P	Pn	09 34 00.5	-1.1
URLA			*e*S	Sn	09 34 31.2	-2.2
CHOS	Chios island	2.77 354	P	Pn	09 34 01.3	-0.9
CHOS			S	Sn	09 34 33.3	-1.1
CHOS	Chios island	2.77 354	P	Pn	09 34 01.3	-0.9
CHOS			S	Sn	09 34 33.3	-1.1
BLCB	Balcova	2.79 10	*e*PN	Pn	09 34 01.7	-0.8
BLCB	Balcova	2.79 10	P	Pn	09 34 02.1	-0.4
BLCB	Balcova	2.79 10	*e*Pn	Pn	09 34 01.7	-0.8
BLCB	Balcova	2.79 10	P	Pn	09 34 02.1	-0.4
KYTH	Kithira	2.83 284	*e*PN	Pn	09 34 03.0	0.0
KYTH	Kithira	2.83 284	*e*Pn	Pn	09 34 03.0	0.0
IZM	Izmir	2.84 13	*e*PN	Pn	09 34 02.6	-0.6
IZM	Izmir	2.84 13	*e*Pn	Pn	09 34 02.6	-0.6
GLHS	Glhisar (BURDU	2.91 57	*e*PN	Pn	09 34 04.8	+0.8
GLHS	Glhisar (BURDU	2.91 57	*e*Pn	Pn	09 34 04.8	+0.8
DNZL	Cakiroluk	2.94 45	*e*P	Pn	09 34 05.5	+1.0
DNZL			*e*S	Sn	09 34 41.2	+2.6
DNZL	Cakiroluk	2.94 45	*e*P	Pn	09 34 05.5	+1.0
DNZL			*e*S	Sn	09 34 41.2	+2.6
DENT	Denizli	2.98 44	*e*PN	Pn	09 34 05.5	+0.5
DENT	Denizli	2.98 44	*e*Pn	Pn	09 34 05.5	+0.5
GOLH	Golhisar	2.99 57	*e*P	Pn	09 34 07.0	+1.8
GOLH			*e*S	Sn	09 34 41.4	+1.6
GOLH	Golhisar	2.99 57	*e*P	Pn	09 34 07.1	+1.9
GOLH			*e*S	Sn	09 34 41.4	+1.6
ELL	Elmali	3.03 67	*e*PN	Pn	09 34 06.2	+0.5
ELL	Elmali	3.03 67	*e*Pn	Pn	09 34 06.2	+0.5
VLI	Veliai	3.03 292	*e*PN	Pn	09 34 05.7	0.0
VLI	Veliai	3.03 292	*e*Pn	Pn	09 34 05.7	0.0
VLY	Voula,Athens	3.07 317	*e*PN	Pn	09 34 06.3	0.0
VLY	Voula,Athens	3.07 317	*e*Pn	Pn	09 34 06.3	0.0
ATHU	Athens Univers	3.16 318	P	Pn	09 34 08.0	+0.5
ATHU			S	Sn	09 34 42.0	-1.9
ATHU	Athens Univers	3.16 318	P	Pn	09 34 08.0	+0.5
ATHU			S	Sn	09 34 42.0	-1.9
NAIG	Nisos Aigina	3.18 313	*e*PN	Pn	09 34 08.0	+0.2
NAIG	Nisos Aigina	3.18 313	*e*Pn	Pn	09 34 08.0	+0.2
ATH	Athens Observa	3.20 318	*e*PN	Pn	09 34 07.0	-1.0
ATH	Athens Observa	3.20 318	*e*Pn	Pn	09 34 07.0	-1.0
KULA	Kula-Manisa	3.39 31	*e*PN	Pn	09 34 11.0	+0.3
KULA	Kula-Manisa	3.39 31	*e*Pn	Pn	09 34 11.0	+0.3
AKS	Akhisar	3.43 18	*e*PN	Pn	09 34 11.0	-0.2
AKS	Akhisar	3.43 18	*e*Pn	Pn	09 34 11.0	-0.2
SIGR	SIGRI	3.61 353	P	Pn	09 34 13.0	-0.6
SIGR			S	Sn	09 34 54.7	-0.2
SIGR	SIGRI	3.61 353	P	Pn	09 34 13.0	-0.6
SIGR			S	Sn	09 34 54.7	-0.2
PRK	Paraskevi	3.61 358	*e*PN	Pn	09 34 12.9	-0.9
PRK	Paraskevi	3.61 358	P	Pn	09 34 13.1	-0.7
PRK	Paraskevi	3.61 358	P	Pn	09 34 13.1	-0.7
ANTB	Antalya	3.64 68	*e*PN	Pn	09 34 14.8	+0.7
ANTB	Antalya	3.64 68	*e*Pn	Pn	09 34 14.8	+0.7
KHL	Karahalli	3.66 42	*e*PN	Pn	09 34 15.3	+0.9
KHL	Karahalli	3.66 42	*e*Pn	Pn	09 34 15.3	+1.0
LTK	Loutraki	3.67 312	P	Pn	09 34 15.6	+1.1
LTK	Loutraki	3.67 312	P	Pn	09 34 15.3	+1.1
VLX	Vlachokerasia	3.70 299	*e*PN	Pn	09 34 16.0	+1.1
VLX	Vlachokerasia	3.70 299	P	Pn	09 34 16.6	+1.7
VLX			S	Sn	09 34 57.5	+0.3
VLX	Vlachokerasia	3.70 299	*e*Pn	Pn	09 34 16.0	+1.1
VLX	Vlachokerasia	3.70 299	P	Pn	09 34 16.6	+1.7
VLX			S	Sn	09 34 57.5	+0.3
BCK	Bucak	3.81 60	*e*PN	Pn	09 34 17.9	+1.4
BCK	Bucak	3.81 60	*e*Pn	Pn	09 34 17.9	+1.4
ITM	Ithomi	3.95 294	*e*PN	Pn	09 34 20.0	+1.6
ITM	Ithomi	3.95 294	P	Pn	09 34 20.8	+2.4
ITM	Ithomi	3.95 294	*e*Pn	Pn	09 34 20.0	+1.6
ITM	Ithomi	3.95 294	P	Pn	09 34 20.8	+2.4
PYL	PYLOS	4.00 290	*e*PN	Pn	09 34 19.9	+0.9
PYL	PYLOS	4.00 290	P	Pn	09 34 19.9	+0.9
PYL	PYLOS	4.00 290	P	Pn	09 34 19.9	+0.9
GUR	Goura	4.01 306	*e*PN	Pn	09 34 20.0	+0.8
GUR	Goura	4.01 306	P	Pn	09 34 20.6	+1.4
GUR			S	Sn	09 35 06.2	+1.3
GUR	Goura	4.01 306	*e*Pn	Pn	09 34 20.0	+0.8
GUR	Goura	4.01 306	P	Pn	09 34 20.6	+1.4
GUR			S	Sn	09 35 06.2	+1.3
LKR	Lokris	4.08 319	P	Pn	09 34 21.0	+0.9
LKR	Lokris	4.08 319	P	Pn	09 34 21.0	+0.9
AOS	Alonnisos	4.08 331	P	Pn	09 34 20.6	+0.5
AOS	Alonnisos	4.08 331	P	Pn	09 34 20.6	+0.5
SUTC	Sutluce-Ispart	4.12 62	*e*PN	Pn	09 34 21.9	+1.2
SUTC	Sutluce-Ispart	4.12 62	*e*Pn	Pn	09 34 21.9	+1.3
DSF	Desfina	4.18 313	P	Pn	09 34 22.6	+1.1
DSF	Desfina	4.18 313	P	Pn	09 34 22.6	+1.1
EZN	Ezine	4.19 359	*e*PN	Pn	09 34 20.4	-1.2
EZN	Ezine	4.19 359	*e*Pn	Pn	09 34 20.4	-1.3
SLUM		4.25 194	P	Pn	09 34 23.6	+1.1
SLUM			AMP		09 35 00.0	
	comp=N,60µm,0.2s,logA/T=5.4,baz=199					
SLUM			S	Sn	09 35 08.6	-2.2
	baz=199					
SLUM		4.25 194	P	Pn	09 34 23.6	+1.1
SLUM			S	Sn	09 35 08.6	-2.2
SHUT	Suhut-Afyon	4.40 47	*e*PN	Pn	09 34 25.2	+0.7
SHUT	Suhut-Afyon	4.40 47	*e*Pn	Pn	09 34 25.2	+0.6
KALE	Kalithea	4.41 310	P	Pn	09 34 26.1	+1.5
KALE	Kalithea	4.41 310	P	Pn	09 34 26.1	+1.5
TRIZ	Trizonia	4.43 309	P	Pn	09 34 26.7	+1.7
TRIZ	Trizonia	4.43 309	P	Pn	09 34 26.7	+1.7
ALT	Altintas	4.50 39	*e*PN	Pn	09 34 26.7	+0.7
ALT	Altintas	4.50 39	*e*Pn	Pn	09 34 26.7	+0.7
HMAT	Matruh	4.56 173	P	Pn	09 34 26.8	+0.1
HMAT			S	Sn	09 35 13.5	-4.8
	baz=176					
HMAT	Matruh	4.56 173	P	Pn	09 34 26.8	+0.1
HMAT			S	Sn	09 35 13.5	-4.9
EFP	Efpalio	4.57 309	*e*PN	Pn	09 34 28.5	+1.6
EFP	Efpalio	4.57 309	*e*Pn	Pn	09 34 28.5	+1.6
GADA	Gvkgeada	4.58 355	*e*PN	Pn	09 34 25.4	-1.5
GADA	Gvkgeada	4.58 355	*e*Pn	Pn	09 34 25.4	-1.5
RLS	Riolos of Patr	4.66 303	P	Pn	09 34 32.8	+4.7
RLS	Riolos of Patr	4.66 303	P	Pn	09 34 32.8	+4.7
AGG	Agios Georgios	4.71 317	P	Pn	09 34 30.6	+1.8
AGG	Agios Georgios	4.71 317	P	Pn	09 34 30.6	+1.8
LPK	Lapseki	4.74 3	*e*PN	Pn	09 34 28.3	-1.0
LPK	Lapseki	4.74 3	*e*Pn	Pn	09 34 28.3	-1.0
BNT	Bandirma	4.87 14	*e*PN	Pn	09 34 30.8	-0.1
BNT	Bandirma	4.87 14	*e*Pn	Pn	09 34 30.8	-0.1
HDMB	Hadim	5.07 73	*e*PN	Pn	09 34 34.5	+0.8
HDMB	Hadim	5.07 73	*e*Pn	Pn	09 34 34.6	+0.9
RKY	Sarkoy-Tekirda	5.09 6	*e*PN	Pn	09 34 33.1	-0.8
RKY	Sarkoy-Tekirda	5.09 6	*e*Pn	Pn	09 34 33.1	-0.8
ENEZ	Enez	5.11 358	*e*PN	Pn	09 34 33.3	-0.9
ENEZ	Enez	5.11 358	*e*Pn	Pn	09 34 33.3	-0.9
MFT	Murefte	5.19 7	*e*PN	Pn	09 34 34.5	-0.9
MFT	Murefte	5.19 7	*e*Pn	Pn	09 34 34.5	-0.9
ESKT	Eskisehir	5.24 41	*e*PN	Pn	09 34 37.1	+1.1
ESKT	Eskisehir	5.24 41	*e*Pn	Pn	09 34 37.1	+1.1
THL	Klokotos Trika	5.27 320	P	Pn	09 34 38.2	+1.8
THL	Klokotos Trika	5.27 320	P	Pn	09 34 38.2	+1.8
ALN	Alexandroupoli	5.27 357	P	Pn	09 34 36.2	-0.3
ALN	Alexandroupoli	5.27 357	P	Pn	09 34 36.2	-0.3
KONT	Konya--Tatoy	5.29 62	*e*PN	Pn	09 34 37.8	+1.0
KONT	Konya--Tatoy	5.29 62	*e*Pn	Pn	09 34 37.8	+1.0
LEF	Lefka	5.30 94	*e*PN	Pn	09 34 36.3	-0.6
LEF	Lefka	5.30 94	*e*Pn	Pn	09 34 36.3	-0.6
LADK	Ladik-KONYA	5.40 60	*e*PN	Pn	09 34 39.1	+0.8
LADK	Ladik-KONYA	5.40 60	*e*Pn	Pn	09 34 39.1	+0.8
KIZT	Kizilcal	5.42 52	*e*PN	Pn	09 34 39.8	+1.2
KIZT	Kizilcal	5.42 52	*e*Pn	Pn	09 34 39.8	+1.2
YLV	Yalova	5.45 24	*e*PN	Pn	09 34 39.2	+0.3
YLV	Yalova	5.45 24	*e*Pn	Pn	09 34 39.2	+0.3
SVRH	Sivrihisar-ESK	5.56 45	*e*PN	Pn	09 34 41.8	+1.3
SVRH	Sivrihisar-ESK	5.56 45	*e*Pn	Pn	09 34 41.8	+1.4
CRLT	Corlu	5.59 10	*e*PN	Pn	09 34 40.8	-0.1
CRLT	Corlu	5.59 10	*e*Pn	Pn	09 34 40.8	0.0
GULT	Gulveren	5.78 33	*e*PN	Pn	09 34 44.1	+0.7
GULT	Gulveren	5.78 33	*e*Pn	Pn	09 34 44.1	+0.7
LFK	Lefkose	5.81 91	*e*PN	Pn	09 34 44.5	+0.6
LFK	Lefkose	5.81 91	*e*Pn	Pn	09 34 44.5	+0.6
CTKS	Kestanelik-??a	5.83 16	*e*PN	Pn	09 34 44.4	+0.2
CTKS	Kestanelik-??a	5.83 16	*e*Pn	Pn	09 34 44.4	+0.2
IKL	Isikli	5.92 82	*e*PN	Pn	09 34 45.5	+0.2
IKL	Isikli	5.92 82	*e*Pn	Pn	09 34 45.6	+0.2
EDRB	Edirne	6.21 2	*e*PN	Pn	09 34 48.4	-1.0
EDRB	Edirne	6.21 2	*e*Pn	Pn	09 34 48.4	-1.0
SULT	Sultanhani-AKS	6.23 64	*e*PN	Pn	09 34 50.8	+1.2
SULT	Sultanhani-AKS	6.23 64	*e*Pn	Pn	09 34 50.8	+1.2
EREN	Erenkoy	6.31 89	*e*PN	Pn	09 34 51.1	+0.4
EREN	Erenkoy	6.31 89	*e*Pn	Pn	09 34 51.1	+0.4
SWA2		6.42 188	P	Pn	09 34 53.9	+1.6
	baz=191					
SWA2		6.42 188	P	Pn	09 34 53.9	+1.6
MERS	Mersin	6.65 77	*e*PN	Pn	09 34 56.2	+0.7
MERS	Mersin	6.65 77	*e*Pn	Pn	09 34 56.2	+0.7
HNAT	Natroun	6.94 148	P	Pn	09 34 59.1	-0.4
	baz=150					
HNAT	Natroun	6.94 148	P	Pn	09 34 59.1	-0.4
BRTR	Keskin Array B	7.03 52	P	Pn	09 35 01.5	+0.9
	comp=N,0.9nm,0.3s,baz=220,slow=14,SNR=51					
BRTR			S	Sn	09 36 19.4	+0.2
	comp=N,0.1nm,0.3s,baz=224,slow=22,SNR=2.4					
BRTR	Keskin Array B	7.03 52	P	Pn	09 35 01.5	+0.9
BRTR			S	Sn	09 36 19.4	+0.3
BRTR			pmax	pmax		
	comp=Z,1.0nm,0.3s					
BRTR	Keskin Array B	7.03 52	P	Pn	09 35 01.5	+0.9
	comp=Z,1.0nm,0.3s					
BRTR			S	Sn	09 36 19.4	+0.3
KARA	Karaisali	7.14 74	*e*PN	Pn	09 35 02.8	+0.7
KARA	Karaisali	7.14 74	*e*Pn	Pn	09 35 02.8	+0.7
KOT	Kottamia	7.28 140	P	Pn	09 35 03.0	-1.1
	baz=141					
KOT			AMP		09 36 00.0	
	comp=E,20µm,0.2s,logA/T=4.9,baz=141					
KOT	Kottamia	7.28 140	P	Pn	09 35 02.9	-1.2
HSAF	As Saff	7.39 143	P	Pn	09 35 04.8	-0.8
	baz=144					
HSAF	As Saff	7.39 143	P	Pn	09 35 04.8	-0.8
HHAG	Hagoal	7.40 138	P	Pn	09 35 04.8	-1.0
	baz=139					
HHAG	Hagoal	7.40 138	P	Pn	09 35 04.8	-1.0
GLL	Jalalah	7.50 142	P	Pn	09 35 06.4	-0.6
	baz=143					
GLL	Jalalah	7.50 142	P	Pn	09 35 06.4	-0.7
AWBH		7.58 163	P	Pn	09 35 08.3	+0.1
	baz=165					
AWBH		7.58 163	P	Pn	09 35 08.3	+0.1
RSH		7.67 125	P	Pn	09 35 08.2	-1.3
MMAI	Mount Meron Ar	7.87 107	P	Pn	09 35 10.0	-2.1
	comp=E,4.7nm,0.3s,baz=302,slow=13,SNR=13					
MMAI			S	Sn	09 36 38.1	-1.7
	comp=E,8.0nm,0.3s,baz=310,slow=23,SNR=6.5					
TIP	Timpagrande	8.47 298	*e*Pn	Pn	09 35 20.0	-0.4
	comp=E,15nm,0.7s					
TIP			*e*Sn	Sn	09 36 53.6	-1.0
TIP	Timpagrande	8.47 298	*e*Pn	Pn	09 35 20.0	-0.4
	comp=E,15nm,0.7s					
TIP			*e*Sn	Sn	09 36 53.6	-1.1
HNKL	Nakhl	8.52 130	P	Pn	09 35 19.9	-1.2
	baz=130					
HNKL			S	Sn	09 36 43.8	-12
	baz=130					
HNKL	Nakhl	8.52 130	P	Pn	09 35 19.9	-1.2
HNKL			S	Sn	09 36 43.8	-12
HFRF	Wahat Farafira	8.60 169	P	Pn	09 35 22.5	+0.3
	baz=170					
HFRF	Wahat Farafira	8.60 169	P	Pn	09 35 22.5	+0.2
EIL	Elat	9.32 127	P	Pn	09 35 31.3	-0.8
	comp=E,1.4nm,0.3s,baz=338,slow=9.5,SNR=15					
EIL			S	Sn	09 37 09.1	-6.4
	comp=E,2.5nm,0.3s,baz=112,slow=19,SNR=6.4					
EIL	Elat	9.32 127	P	Pn	09 35 31.3	-0.8
EIL			S	Sn	09 37 09.1	-6.4
EIL	Elat	9.32 127	P	Pn	09 35 31.3	-0.7
ASF	Jabal al Asfar	9.36 109	P	Pn	09 35 31.5	-1.0
	comp=E,0.6nm,0.3s,baz=200,slow=4.3,SNR=4.1					
ASF			S	Sn	09 37 12.9	-3.5
	comp=E,0.3nm,0.3s,baz=273,slow=17,SNR=1.6					
ASF			LR	LR	09 40 04.4	
	comp=E,26nm,20.0s,baz=73,slow=43					
ASF	Jabal al Asfar	9.36 109	P	Pn	09 35 31.5	-1.0
ASF			S	Sn	09 37 12.9	-3.5
ASF			pmax	pmax		
	comp=Z,1.0nm,0.3s					
ASF			MLR	MLR		
	comp=Z,26nm,20.0s					
ASF	Jabal al Asfar	9.36 109	P	Pn	09 35 31.5	-1.0
ASF			S	Sn	09 37 12.9	-3.5
ASF			LR	LR	09 40 04.4	
HBST	Basata	9.49 130	P	Pn	09 35 33.5	-0.8
	baz=131					
HBST	Basata	9.49 130	P	Pn	09 35 33.5	-0.9
TR2		9.51 137	P	Pn	09 35 32.8	-1.8
	baz=138					
TR2		9.51 137	P	Pn	09 35 32.8	-1.8
MLR	Muntele Rosu	9.86 358	P	Pn	09 35 38.5	-0.8
	baz=209,slow=13,SNR=2.8					
MLR	Muntele Rosu	9.86 358	P	Pn	09 35 38.5	-0.8
MLR	Muntele Rosu	9.86 358	P	Pn	09 35 38.5	-0.9
HDK1	Dakhla	10.37 165	P	Pn	09 35 47.0	+0.5
	baz=166					
HDK1	Dakhla	10.37 165	P	Pn	09 35 47.0	+0.5
KEST	Kesra	13.89 275	P	Pn	09 36 33.9	-0.7
	baz=10.0,slow=17,SNR=2.4					
KIEV	Kiev	15.19 7	*e*P	Pn	09 36 53.7	+2.0
KIEV			pmax	pmax		
	comp=Z,5.0nm,0.6s					
KIEV	Kiev	15.19 7	*e*P	Pn	09 36 53.7	+2.0
	comp=Z,4.6nm,0.6s					
KIEV	Kiev	15.19 7	*e*P	Pn	09 36 53.7	+2.0
	comp=Z,4.6nm,0.6s					
AKASG	Malin Array Be	15.20 7	P	Pn	09 36 55.8	+4.0
	comp=Z,2.3nm,0.3s,baz=195,slow=10,SNR=6.0					
AKASG	Malin Array Be	15.20 7	P	Pn	09 36 55.8	+4.0
AKASG			pmax	pmax		
	comp=Z,2.0nm,0.3s					
AKASG	Malin Array Be	15.20 7	P	Pn	09 36 55.8	+4.0
	comp=Z,2.0nm,0.3s					
ZEI	Tsey	15.29 57	*e*P	Pn	09 36 58.2	+5.2
ZEI			pmax	pmax		
	comp=Z,2.0nm,0.5s					
ZEI	Tsey	15.29 57	*e*P	Pn	09 36 58.2	+5.2
	comp=Z,2.0nm,0.5s					
GERES	GERESS Array B	16.20 329	P	Pn	09 37 07.3	+2.7
	comp=Z,0.5nm,0.3s,baz=151,slow=11,SNR=9.4					
GERES			LR	LR	09 43 32.5	
	comp=Z,23nm,18.0s,baz=278,slow=38					
GERES	GERESS Array B	16.20 329	P	Pn	09 37 07.3	+2.7
GERES			pmax	pmax		
	comp=Z,1.0nm,0.3s					
GERES			MLR	MLR		
	comp=Z,23nm,18.0s					
GERES	GERESS Array B	16.20 329	P	Pn	09 37 07.3	+2.7
	comp=Z,23nm,18.0s					
FINES	FINESS Array B	25.84 360	P	P	09 38 47.8	+0.6
	comp=Z,1.2nm,0.4s,mb3.8,baz=167,slow=12,SNR=8.2					
FINES	FINESS Array B	25.84 360	P	P	09 38 47.8	+0.6
FINES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
FINES	FINESS Array B	25.84 360	P	P	09 38 47.8	+0.6
	comp=Z,1.0nm,0.4s,mb3.7					
HFS	Hagfors	25.87 345	P	P	09 38 46.5	-1.0
	comp=Z,0.7nm,0.3s,mb3.7,baz=148,slow=14,SNR=4.0					
HFS	Hagfors	25.87 345	P	P	09 38 46.5	-1.0
HFS			pmax	pmax		
	comp=Z,1.0nm,0.3s					
AKTK	Aktyubinsk	27.17 47	P	P	09 38 59.3	-0.1
AKTK	Aktyubinsk	27.17 47	P	P	09 38 59.3	-0.1
	comp=Z,1.0nm,0.5s,mb3.6					
AKTO	Aktyubinsk	27.17 47	P	P	09 38 59.3	-0.1
	comp=Z,1.0nm,0.5s,mb3.6,baz=208,slow=9.0,SNR=3.8					
AKTO	Aktyubinsk	27.17 47	P	P	09 38 59.3	-0.1
AKTO			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6					
ABKAR	Akbulak array	27.98 50	*e*P	P	09 39 03.7	-2.8
	comp=Z,0.3nm,0.3s,mb3.4					
EKA	Eskdalemuir Ar	28.27 323	P	P	09 39 08.2	-0.9
	comp=Z,0.7nm,0.3s,mb3.7,baz=120,slow=8.9,SNR=6.1					
EKA			pP	pP	09 39 21.3	+0.4
	comp=Z,1.1nm,0.6s,baz=114,slow=8.4,SNR=3.0					
EKA	Eskdalemuir Ar	28.27 323	P	P	09 39 08.2	-0.9
EKA			*PP	pP	09 39 21.3	+0.4
EKA			pmax	pmax		
	comp=Z,1.0nm,0.3s					
EKA			pmax	pmax		
	comp=Z,1.0nm,0.6s					
TORD	Torodi Ar. Bea	31.59 231	P	P	09 39 39.8	+0.9
	comp=Z,0.5nm,0.3s,mb3.8,baz=32,slow=8.5,SNR=16					
TORD			pP	pP	09 39 49.7	-1.0
	comp=Z,0.5nm,0.3s,baz=31,slow=8.7,SNR=4.3					
TORD	Torodi Ar. Bea	31.59 231	P	P	09 39 39.8	+0.9
TORD			pP	pP	09 39 49.7	-1.0
ARCES	ARCESS Array B	33.97 359	P	P	09 39 57.4	-1.7
	comp=Z,1.3nm,0.9s,mb3.9,baz=178,slow=8.3,SNR=5.2					
ARCES	ARCESS Array B	33.97 359	P	P	09 39 57.4	-1.7
ARCES			pmax	pmax		
	comp=Z,1.0nm,0.9s					
KURK	Kurchatov	40.08 51	P	P	09 40 51.3	+0.2
	comp=Z,4.2nm,0.5s,mb4.4,baz=277,slow=8.8,SNR=24					
KURK	Kurchatov	40.08 51	P	P	09 40 51.3	+0.1
KURK			pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4					
DBIC	Dimbokro	40.67 232	P	P	09 40 56.9	+0.4
	comp=Z,1.7nm,0.6s,mb3.9,baz=50,slow=7.9,SNR=3.5					
DBIC	Dimbokro	40.67 232	P	P	09 40 56.9	+0.4
DBIC			pmax	pmax		
	comp=Z,2.0nm,0.6s					
MK31	Makanchi Array	42.65 57	*e*P	P	09 41 13.6	+1.3
MKAR	Makanchi Array	42.65 57	P	P	09 41 13.2	+0.9
	comp=Z,1.3nm,0.4s,mb4.0,baz=284,slow=6.2,SNR=19					
MKAR			pP	pP	09 41 23.4	-1.1
	comp=Z,1.6nm,0.4s,baz=282,slow=6.7,SNR=6.3					
MKAR	Makanchi Array	42.65 57	P	P	09 41 13.3	+1.0
MKAR			*PP	pP	09 41 23.4	-1.1
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
MKAR			pmax	pmax		
	comp=Z,2.0nm,0.4s					
MKAR	Makanchi Array	42.65 57	P	P	09 41 13.2	+0.9
MKAR			pP	pP	09 41 23.4	-1.1
SPITS	Spitsbergen Ar	42.87 357	P	P	09 41 12.5	-1.2
	comp=Z,2.6nm,0.9s,mb4.0,baz=170,slow=12,SNR=3.5					
SPITS	Spitsbergen Ar	42.87 357	P	P	09 41 12.5	-1.2
SPITS			pmax	pmax		
	comp=Z,3.0nm,0.9s					
ZALV	Zalesovo Beam	43.93 47	P	P	09 41 22.5	0.0
	comp=Z,2.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=127						
KOT				S	Sn	09 44 37.9	-4.9
	baz=127						
KOT	**Kottamia**	**6.89**	**126**	P	Pn	09 43 25.5	-0.2
KOT				S	Sn	09 44 37.9	-4.9
HSAF	**As Saff**	**6.91**	**129**	P	Pn	09 43 26.6	+0.6
	baz=130						
HSAF	**As Saff**	**6.91**	**129**	P	Pn	09 43 26.6	+0.6
GLL	**Jalalah**	**7.04**	**129**	P	Pn	09 43 28.1	+0.4
	baz=130						
GLL	**Jalalah**	**7.04**	**129**	P	Pn	09 43 28.1	+0.4
HHAG	**Hagoal**	**7.06**	**125**	S	Sn	09 44 41.1	-5.9
	baz=125						
HHAG	**Hagoal**	**7.06**	**125**	S	Sn	09 44 41.1	-5.8
HFRF	**Wahat Farafira**	**7.42**	**160**	P	Pn	09 43 32.9	-0.1
	baz=160						
HFRF	**Wahat Farafira**	**7.42**	**160**	P	Pn	09 43 32.9	-0.1
AMAG	**Maghara**	**7.47**	**116**	P	Pn	09 43 32.6	-0.9
	baz=117						
AMAG	**Maghara**	**7.47**	**116**	P	Pn	09 43 32.6	-1.0
HNKL	**Nakhl**	**8.41**	**118**	P	Pn	09 43 46.2	-0.2
	baz=119						
HNKL	**Nakhl**	**8.41**	**118**	P	Pn	09 43 46.2	-0.3
MMAI	**Mount Meron Ar**	**8.42**	**95**	P	Pn	09 43 47.5	+1.0
	2.0nm,0.3s,baz=297,slow=13,SNR=3.0						
MMAI				S	Sn	09 45 18.1	-2.1
	2.6nm,0.3s,baz=305,slow=23,SNR=3.5						
BRTR	**Keskin Array B**	**8.61**	**47**	P	Pn	09 43 51.8	+2.6
	0.1nm,0.3s,baz=218,slow=15,SNR=2.7						
BRTR	**Keskin Array B**	**8.61**	**47**	P	Pn	09 43 51.8	+2.6
EIL	**Elat**	**9.26**	**116**	P	Pn	09 43 58.6	+0.5
	1.1nm,0.3s,baz=297,slow=2.3,SNR=8.9						
EIL				S	Sn	09 45 38.2	-2.9
	1.3nm,0.3s,baz=13,slow=18,SNR=4.8						
HDK1	**Dakhla**	**9.26**	**157**	P	Pn	09 43 58.9	+0.7
	baz=157						
HDK1	**Dakhla**	**9.26**	**157**	P	Pn	09 43 58.9	+0.7
AKASG	**Malin Array Be**	**16.76**	**8**	P	Pn	09 45 38.3	-0.4
	1.7nm,0.3s,baz=202,slow=10,SNR=9.1						
AKASG	**Malin Array Be**	**16.76**	**8**	P	Pn	09 45 38.3	-0.4
GERES	**GERESS Array B**	**17.06**	**333**	P	Pn	09 45 42.8	+0.3
	0.1nm,0.3s,baz=154,slow=9.4,SNR=3.9						
GERES	**GERESS Array B**	**17.06**	**333**	P	Pn	09 45 42.8	+0.3
EKA	**Eskdalemuir Ar**	**28.98**	**326**	P	P	09 47 44.7	+2.1
	1.5nm,1.1s,mb3.6,baz=112,slow=15,SNR=3.4						
TORD	**Torodi Ar. Bea**	**30.02**	**232**	P	P	09 47 53.1	+0.9
	0.4nm,0.7s,mb3.2,baz=36,slow=7.8,SNR=5.8						
ARCES	**ARCESS Array B**	**35.42**	**0**	P	P	09 48 36.3	-2.5
	0.6nm,0.7s,mb3.6,baz=179,slow=8.9,SNR=5.1						
KURK	**Kurchatov**	**41.66**	**50**	P	P	09 49 30.8	-0.6
	0.3nm,0.4s,mb3.3,baz=274,slow=8.3,SNR=2.7						
KURK	**Kurchatov**	**41.66**	**50**	P	P	09 49 30.8	-0.6
MKAR	**Makanchi Array**	**44.16**	**56**	P	P	09 49 52.6	+1.0
	0.2nm,0.4s,mb3.2,baz=276,slow=9.7,SNR=5.4						
MKAR	**Makanchi Array**	**44.16**	**56**	P	P	09 49 52.6	+0.9
ZALV	**Zalesovo Beam**	**45.55**	**45**	P	P	09 50 02.1	-0.6
	0.6nm,0.3s,mb4.0,baz=263,slow=8.7,SNR=2.8						
SCHQ	**Schefferville**	**64.08**	**320**	P	P	09 52 16.2	-0.5
	1.5nm,0.5s,mb4.3,baz=124,slow=3.6,SNR=3.3						
SCHQ	**Schefferville**	**64.08**	**320**	P	P	09 52 16.2	-0.5
YKA	**Yellowknife Ar**	**78.46**	**342**	P	P	09 53 43.3	-0.1
	0.1nm,0.4s,mb3.1,baz=30,slow=5.0,SNR=2.9						
YKA	**Yellowknife Ar**	**78.46**	**342**	P	P	09 53 43.3	-0.1

*ISCJB **22** 09:59:32.9±0.5, 50.°13N±0.°03×18.°40E±0.°03, h0km, Error ellipse: s-maj=5.0km s-min=2.7km az=3.9*
*IPEC **22** 09:59:34.2±0.1, 50.°07N×18.°45E, h0km, ML1.7/4, Error ellipse: s-maj=2.0km s-min=0.7km az=163.0*
*CSEM **22** 09:59:34.0±0.2, 50.°11N×18.°42E, h1km, ML2.6/8, Error ellipse: s-maj=4.2km s-min=2.4km az=4.0*
*WAR **22** 09:59:34.3, 50.°06N×18.°45E*
*PRU **22** 09:59:35.4, 50.°10N×18.°37E, h0km*

ISC 22 09:59:34.1±0.5, 50.°11N±0.°03×18.°40E±0.°03, h0km, n26, σ0s85/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.14**	**257**	*e*Pg	**Pg**	09 59 38.5	+1.8
RAC				*e*Sg	**Sg**	09 59 41.8	+3.4
OKC	**Ostrava-Krasne**	**0.32**	**211**	*e*PG	**Pg**	09 59 40.5	+0.3
OKC				*e*SG	**Sg**	09 59 45.0	+0.6
	comp=Z,66nm,0.4s						
OKC	**Ostrava-Krasne**	**0.32**	**211**	*e*Pg	**Pg**	09 59 40.4	+0.2
	baz=39						
OKC				Sg	**Sg**	09 59 45.0	+0.6
	comp=Z,66nm,0.4s						
MORC	**Moravsky Berou**	**0.65**	**239**	*e*Pg	**Pg**	09 59 46.6	+0.1
MORC				*e*Sg	**Sg**	09 59 55.4	+0.5
	comp=Z,12nm,0.1s,baz=63						
OJC	**Ojcow**	**0.91**	**83**	*e*Pg	**Pg**	09 59 50.7	-0.8
OJC				*e*Sg	**Sg**	10 00 02.9	-0.3
OJC	**Ojcow**	**0.91**	**83**	*e*Pg	**Pg**	09 59 50.7	-0.8
OJC				*e*Sg	**Sg**	10 00 02.7	-0.5
	baz=261						
JAVC	**Velka Javorina**	**1.34**	**201**	*e*Sg	**Sg**	10 00 18.3	+1.1
	comp=Z,5.1nm,0.3s						
DPC	**Dobruska-Polom**	**1.35**	**281**	*e*PG	**Pg**	10 00 00.3	+0.2
DPC				*e*SG	**Sg**	10 00 18.2	+0.6
	comp=Z,17nm,0.4s						
DPC	**Dobruska-Polom**	**1.35**	**281**	Pg	**Pg**	10 00 00.3	+0.2
DPC				Sg	**Sg**	10 00 18.2	+0.6
	comp=Z,17nm,0.4s						
VRAC	**Vranov**	**1.42**	**236**	*e*Pn	**Pn**	10 00 00.6	-0.6
	baz=57						
VRAC				*e*Sg	**Sg**	10 00 19.2	-0.6
	comp=Z,11nm,0.3s,baz=57						
NIE	**Niedzica**	**1.42**	**119**	*e*Pg	**Pg**	10 00 01.0	-0.4
NIE				*e*Sg	**Sg**	10 00 20.3	+0.5
NIE	**Niedzica**	**1.42**	**119**	*e*Pg	**Pg**	10 00 01.0	-0.4
NIE				*e*Sg	**Sg**	10 00 20.3	+0.5
KOLL	**Kolacno**	**1.54**	**180**	*e*PN	**Pn**	10 00 02.9	+0.2
KOLL				*e*SN	**Sn**	10 00 22.7	-0.7
KOLL	**Kolacno**	**1.54**	**180**	*e*Pn	**Pn**	10 00 02.9	+0.2
KOLL				*e*Sn	**Sn**	10 00 22.7	-0.7
UPC	**Upice**	**1.58**	**285**	*e*PG	**Pg**	10 00 04.8	+0.4
UPC				*e*SG	**Sg**	10 00 25.1	+0.2
UPC	**Upice**	**1.58**	**285**	Pg	**Pg**	10 00 04.8	+0.4
UPC				Sg	**Sg**	10 00 25.1	+0.2
VYHS	**Vyhne**	**1.65**	**170**	*e*PN	**Pn**	10 00 03.6	-0.6
VYHS				*e*SN	**Sn**	10 00 25.2	-0.9
VYHS	**Vyhne**	**1.65**	**170**	*e*Pn	**Pn**	10 00 03.6	-0.6
VYHS				*e*Sn	**Sn**	10 00 25.2	-0.9
KRUC	**Moravsky**	**1.68**	**232**	*e*Pn	**Pn**	10 00 04.2	-0.5
	baz=52						
KRUC				*e*Sg	**Sg**	10 00 26.5	-1.4
	comp=Z,6.8nm,0.3s,baz=52						
STHS	**Stebnicka Huta**	**1.97**	**110**	*e*PN	**Pg**	10 00 11.9	0.0
STHS				*e*SN	**Sg**	10 00 37.8	+0.4
STHS	**Stebnicka Huta**	**1.97**	**110**	*e*Pn	**Pg**	10 00 11.9	0.0
STHS				*e*Sn	**Sg**	10 00 37.8	+0.4
KECS	**Kecovo**	**2.13**	**139**	*e*SN	**Sn**	10 00 39.4	+1.4
PRU	**Pruhonice**	**2.49**	**269**	*e*SG	**Sg**	10 00 53.7	-0.4
	comp=Z,3.9nm,0.5s						
PRU	**Pruhonice**	**2.49**	**269**	Sg	**Sg**	10 00 53.7	-0.4
	comp=Z,3.9nm,0.5s						
KHC	**Kasperske Hory**	**3.29**	**254**	*e*SG	**Sg**	10 01 17.6	-2.0
	comp=Z,2.8nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**254**	Sg	**Sg**	10 01 17.6	-2.0
	comp=Z,2.8nm,0.4s						

*BEO **22** 09:59:40.5±1.2, 42.°26N×23.°25E, h0km, ML2.2/3*
*CSEM **22** 09:59:45.0±0.3, 42.°58N×23.°03E, h2km, ML3.5/2, Error ellipse: s-maj=8.4km s-min=7.3km az=115.0*
*THE **22** 09:59:45.6, 42.°51N×23.°13E, h0km±3km, ML3.5/2, Error ellipse: s-maj=5.3km s-min=0.6km az=295.0*
*SKO **22** 09:59:46.6, 42.°53N×23.°09E, h2km, M2.2, ML2.5*

ISC 22 09:59:45.7±0.7, 42.°55N±0.°04×23.°08E±0.°06, h7km±5km, n18, σ1s05/33, 2C, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.10**	**68**	⇑*i*Pg	**Pg**	09 59 47.2	-0.8
VTS				*i* Sg	**Sg**	09 59 50.6	+1.1
VTS	**Vitosha**	**0.10**	**68**	P	**Pg**	09 59 47.6	-0.4
VTS				S	**Sg**	09 59 49.6	+0.1
VTS	**Vitosha**	**0.10**	**68**	⇑*i*Pg	**Pg**	09 59 47.2	-0.8
VTS	**Vitosha**	**0.10**	**68**	P	**Pg**	09 59 47.6	-0.4
VTS				S	**Sg**	09 59 49.6	+0.1
VTS				*i* Sg	**Sg**	09 59 50.6	+1.1
ZAPS	**Zavoj**	**0.79**	**335**	*i* Pn	**Pn**	10 00 02.6	-0.7
ZAPS				*e*Sg	**Sg**	10 00 16.1	+4.9
BARS	**Barje**	**0.97**	**286**	*i* Pn	**Pn**	10 00 04.1	-1.6
BARS				*i* Sg	**Sg**	10 00 18.2	+1.2
BARS	**Barje**	**0.97**	**286**	*i* Pn	**Pn**	10 00 04.1	-1.6
BARS				*i* Sg	**Sg**	10 00 18.2	+1.2
VAY	**Valandovo**	**1.29**	**197**	*e*Pg	**Pg**	10 00 09.3	-1.1
VAY				*e*Sg	**Sg**	10 00 27.0	-0.2
VAY				*e*Lg		10 00 27.4	
	comp=N,83nm,0.6s						
VAY				*e*Lg		10 00 30.8	
	comp=E,105nm,0.6s						
VAY	**Valandovo**	**1.29**	**197**	P	**Pn**	10 00 09.2	-0.9
VAY				S	**Sb**	10 00 27.4	+0.4
VAY	**Valandovo**	**1.29**	**197**	*e*Pg	**Pg**	10 00 09.3	-1.1
VAY				*e*Sg	**Sg**	10 00 26.9	-0.3
VAY				*e*Lg		10 00 27.3	
	comp=E,83nm,0.6s						
VAY				S	**Sb**	10 00 27.4	+0.4
SRS	**Serrai**	**1.48**	**165**	P	**Pn**	10 00 12.4	-0.4
SRS				S	**Sn**	10 00 32.2	-0.2
SRS	**Serrai**	**1.48**	**165**	P	**Pn**	10 00 12.4	-0.4
SRS				S	**Sn**	10 00 32.2	-0.2
SOH	**Sokhos**	**1.74**	**173**	P	**Pn**	10 00 15.6	-0.7
SOH				S	**Sn**	10 00 39.5	+0.7
SOH	**Sokhos**	**1.74**	**173**	P	**Pn**	10 00 15.6	-0.7
SOH				S	**Sn**	10 00 39.5	+0.7
KRUS	**Krusevo**	**1.81**	**230**	*e*Pn	**Pn**	10 00 19.1	+1.8
KRUS	**Krusevo**	**1.81**	**230**	*e*Pn	**Pn**	10 00 19.0	+1.8
RDO	**Rodhopi**	**2.31**	**127**	P	**Pn**	10 00 26.6	+2.5
RDO	**Rodhopi**	**2.31**	**127**	P	**Pn**	10 00 26.6	+2.5

*NEIC **22** 09:59:51.0±1.6, 44.°35N×129.°06W, h10km, mb3.9/7, Error ellipse: s-maj=20.0km s-min=9.0km az=77.0*
*IDC **22** 09:59:51.1±2.5, 44.°33N×128.°63W, h0km, mb3.6/2, mb1 3.7/9, mb1mx3.6/28, mbtmp3.5/9, ML3.4/6, MS3.1/2, Ms1 3.1/2, ms1mx2.5/26, Error ellipse: s-maj=47.6km s-min=19.1km az=58.0*

ISC 22 09:59:50.4±1.9, 44.°37N±0.°05×129.°1W±0.°1, h5km±16km, n49, σ1s23/58, mb3.6/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMOR	**Kings Mountain**	**4.17**	**70**	P	**Pn**	10 00 52.5	-2.1
HSO	**Harness Mounta**	**4.42**	**99**	P	**Pn**	10 00 55.8	-2.2
NLWA	**Neilton Lookou**	**4.74**	**49**	*e*Pn	**Pn**	10 01 01.3	-1.1
SSOR	**Sweet Springs**	**4.76**	**82**	P	**Pn**	10 01 01.7	-1.0
HUMO	**Hull Mountain**	**4.80**	**109**	*e*Pn	**Pn**	10 01 00.1	-3.2
HUMO				*e*Sn	**Sn**	10 01 55.3	-4.0
RVW	**Rose Valley**	**4.83**	**66**	P	**Pn**	10 01 02.2	-1.4
MTMW	**Mount Mitchell**	**5.14**	**69**	P	**Pn**	10 01 07.0	-0.9
YBH	**Yreka Blue Hor**	**5.37**	**117**	Pn	**Pn**	10 01 07.4	-3.7
	0.5nm,0.3s,baz=302,slow=9.2,SNR=11						
YBH				Sn	**Sn**	10 02 08.5	-4.8
	0.2nm,0.3s,baz=235,slow=17,SNR=2.4						
YBH	**Yreka Blue Hor**	**5.37**	**117**	Pn	**Pn**	10 01 07.4	-3.7
YBH				*e*Pn	**Pn**	10 01 11.2	+0.1
YBH				Sn	**Sn**	10 02 08.5	-4.8
YBH				*e*Sn	**Sn**	10 02 11.4	-1.9
HOOD	**Mount Hood Mea**	**5.38**	**77**	*e*Pn	**Pn**	10 01 10.5	-0.7
HOOD				*e*Sn	**Sn**	10 02 14.9	+1.4
GNW	**Green Mountain**	**5.41**	**52**	*e*Pn	**Pn**	10 01 10.4	-1.3
	9.3nm,0.4s						
GNW				*e*Sn	**Sn**	10 02 14.1	-0.2
LON	**Longmire**	**5.64**	**63**	*e*Pn	**Pn**	10 01 14.5	-0.3
PGC	**Sidney**	**5.79**	**40**	*e*Pn	**Pn**	10 01 15.7	-1.1
PGC				*e*Sn	**Sn**	10 02 23.5	0.0
JCW	**Jim Creek**	**6.27**	**50**	*e*Pn	**Pn**	10 01 22.9	-0.4
JCW				*e*Sn	**Sn**	10 02 34.8	-0.5
RPW	**Rockport**	**6.64**	**49**	*e*Pn	**Pn**	10 01 28.1	-0.4
ETW	**Entiat**	**6.91**	**59**	*e*Pn	**Pn**	10 01 32.4	+0.2
BBB	**Bella Bella**	**7.85**	**4**	Pn	**Pn**	10 01 46.6	+1.6
	0.5nm,0.3s,baz=126,slow=12,SNR=15						
NEW	**Newport**	**9.15**	**61**	*e*Pn	**Pn**	10 02 01.9	-1.0
NEW				*e*Sn	**Sn**	10 03 47.0	+0.7
NVAR	**Mina Array Bea**	**10.04**	**123**	Pn	**Pn**	10 02 15.8	+0.5
	0.1nm,0.3s,baz=296,slow=13,SNR=3.3						
BSMT	**Bassoo Peak**	**10.53**	**66**	*e*Pn	**Pn**	10 02 21.9	+0.1
HLID	**Hailey**	**10.62**	**89**	*e*Pn	**Pn**	10 02 24.0	+1.0
ELK	**Elko**	**10.85**	**105**	Pn	**Pn**	10 02 27.0	+0.8
	0.1nm,0.3s,baz=334,slow=4.2,SNR=5.3						
ELK				LR	LR	10 06 39.3	
	comp=Z,84nm,21.2s,baz=207,slow=39						
MSO	**Missoula**	**10.90**	**72**	*e*Pn	**Pn**	10 02 26.3	-0.6
SWMT	**Swartz Lake**	**10.97**	**68**	*e*Pn	**Pn**	10 02 29.2	+1.3
SLMT	**Seeley Lake**	**11.27**	**70**	*e*Pn	**Pn**	10 02 33.4	+1.6
CHMT	**Chamberlain Mo**	**11.38**	**72**	*e*Pn	**Pn**	10 02 35.2	+1.7
LRM	**Limekiln Ridge**	**11.86**	**77**	*e*Pn	**Pn**	10 02 41.0	+1.0
BOZ	**Bozeman (W)**	**12.43**	**78**	*e*Pn	**Pn**	10 02 48.7	+0.9
IMW	**Indian Meadow**	**13.06**	**86**	*e*Pn	**Pn**	10 02 58.1	+1.8
TPAW	**Teton Pass**	**13.11**	**88**	*e*Pn	**Pn**	10 02 59.1	+2.0
CCUT	**Cedar City**	**13.69**	**114**	*e*Pn	**Pn**	10 03 04.9	-0.2
MSU	**Marysvale**	**13.97**	**109**	*e*Pn	**Pn**	10 03 09.7	+0.9
DLBC	**Dease Lake**	**14.10**	**358**	LR	LR	10 08 01.8	
	comp=Z,98nm,20.8s,baz=151,slow=35						
PDAR	**Pinedale Array**	**14.26**	**90**	Pn	**Pn**	10 03 12.8	0.0
	0.1nm,0.3s,baz=285,slow=7.5,SNR=5.2						
SRU	**San Rafael**	**14.82**	**104**	*e*Pn	**Pn**	10 03 20.3	-0.1
	12nm,0.9s						
WUAZ	**Wupatki**	**16.19**	**117**	*e*P	**Pn**	10 03 40.3	+1.8
	10nm,1.0s						
RWWY	**Rawlins**	**16.22**	**92**	*e*P	**Pn**	10 03 40.8	+1.9
	7.3nm,0.9s						
PV04	**Paradox Valley**	**16.27**	**105**	*e*Pn	**Pn**	10 03 38.5	-1.1
PV01	**Paradox Valley**	**16.63**	**105**	*e*P	**Pn**	10 03 43.4	-0.6
	599nm,1.1s						
SMCO	**Snowmass**	**17.28**	**100**	*e*P	**Pn**	10 03 54.2	+1.9
	18nm,1.9s						
ISCO	**Idaho Springs**	**18.00**	**97**	*e*P	**Pn**	10 04 02.6	+1.4
	3.0nm,0.8s						
SDCO	**Great Sand Dun**	**18.95**	**102**	*e*P	**Pn**	10 04 12.4	-0.4
	13nm,1.8s						
ANMO	**Albuquerque**	**19.75**	**111**	P	**Pn**	10 04 21.0	-1.5
	0.1nm,0.3s,baz=311,slow=9.4,SNR=6.3						
YKA	**Yellowknife Ar**	**20.01**	**20**	P	**P**	10 04 24.8	+1.2
	0.0nm,0.3s,baz=210,slow=11,SNR=8.3						
FFC	**Flin Flon**	**20.29**	**50**	*e*P	**P**	10 04 25.9	-0.8
	5.0nm,0.8s						
ECSD	**EROS Data Cent**	**23.28**	**80**	*e*P	**P**	10 04 56.4	-2.4
	5.4nm,1.0s,mb3.9						
TXAR	**Lajitas Array**	**25.15**	**118**	P	**P**	10 05 13.6	-2.7
	0.6nm,0.7s,mb3.2,baz=285,slow=8.2,SNR=3.6						
LPAZ	**La Paz**	**81.95**	**122**	P	**P**	10 12 12.1	+0.9
	1.0nm,0.9s,mb3.7,baz=326,slow=3.6,SNR=3.9						
LPAZ	**La Paz**	**81.95**	**122**	P	**P**	10 12 12.1	+0.9

CASC 22 10:43:50.7±1.0, 13.°18N×89.°22W, h49km±12km, MD3.5, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.47**	**19**	⇓*i*P	Pn	10 44 01.6	+0.1
LFRS				*e*S	Sn	10 44 10.5	+1.2
SNET	**Serv Nac Est T**	**0.50**	**359**	*e*P	Pn	10 44 02.3	+0.3
SNET				*e*S	Sn	10 44 11.2	+1.1
BOQS	**Boqueron**	**0.56**	**354**	*e*P	Pn	10 44 03.1	+0.5
BOQS				*e*S	Sn	10 44 12.5	+1.4
SNVI	**San Vicente**	**0.57**	**41**	*e*P	Pn	10 44 02.9	+0.1
SNVI				*e*S	Sn	10 44 11.8	+0.4
LFU	**La Fuente**	**0.57**	**10**	*e*P	Pn	10 44 03.5	+0.6
LBRS	**Las Brisas**	**0.58**	**17**	*e*P	Pn	10 44 03.4	+0.5
SBLS	**San Blas**	**0.76**	**329**	*e*P	Pn	10 44 05.4	+0.1
SBLS				*e*S	Sn	10 44 17.1	+1.2
SNJE	**San Jose**	**0.78**	**331**	*e*P	Pn	10 44 05.8	+0.3
SNJE				*e*S	Sn	10 44 17.2	+1.0
RTR	**El Retiro**	**0.82**	**330**	*e*P	Pn	10 44 06.5	+0.4
RTR				*e*S	Sn	10 44 18.1	+0.8
VSM	**San Miguel**	**0.95**	**75**	*e*P	Pn	10 44 08.2	+0.4
VSM				*e*S	Sn	10 44 22.4	+2.1
BLLM	**Bellamira**	**0.99**	**75**	*e*P	Pn	10 44 08.5	+0.2
BLLM				*e*S	Sn	10 44 21.8	+0.6
RBDL	**Robledal**	**1.03**	**334**	*e*P	Pn	10 44 09.4	+0.5
RBDL				*e*S	Sn	10 44 23.9	+1.7
CAHU	**Cacacuatique**	**1.14**	**59**	*e*P	Pn	10 44 10.9	+0.5
CNCH	**Conchagua**	**1.35**	**86**	*e*P	Pn	10 44 12.9	-0.3
CNCH				*e*S	Sn	10 44 31.3	+1.2
TGUH	**Tegucigalpa,Un**	**2.08**	**65**	*e*P	Pn	10 44 23.4	+0.2

CASC 22 10:57:06.0±2.7, 13.°74N×90.°93W, h33km±16km, MD3.7, ML4.3, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.71**	**7**	*e*P	Pn	10 57 20.3	+0.6
PCG	**Pacaya**	**0.72**	**26**	*e*P	Pn	10 57 20.6	+0.7
PCG				*e*S	Sn	10 57 31.8	+2.0
FG6		**0.81**	**3**	*e*P	Pn	10 57 21.5	+0.3
JAT	**Jato**	**0.89**	**310**	⇓*e*P	Pn	10 57 23.3	+1.1
NBG	**Las Nubes**	**1.01**	**34**	⇓*e*P	Pn	10 57 24.8	+0.9
NBG				*e*S	Sn	10 57 37.7	+0.6
TP2	**Tecpan 2**	**1.04**	**355**	⇑*e*P	Pn	10 57 25.1	+0.8
TP2				*e*S	Sn	10 57 39.1	+1.4
RTR	**El Retiro**	**1.26**	**83**	*e*P	Pn	10 57 27.6	+0.4
RTR				*e*S	Sn	10 57 45.4	+2.4
RBDL	**Robledal**	**1.26**	**73**	⇓*e*P	Pn	10 57 27.1	-0.2
RBDL				*e*S	Sn	10 57 44.4	+1.2
SBLS	**San Blas**	**1.27**	**85**	*e*P	Pn	10 57 27.9	+0.5
SBLS				*e*S	Sn	10 57 46.3	+2.9
SNJE	**San Jose**	**1.29**	**84**	*e*P	Pn	10 57 27.8	+0.1
SNJE				*e*S	Sn	10 57 46.1	+2.2
BOQS	**Boqueron**	**1.60**	**90**	*e*P	Pn	10 57 32.1	+0.1
BOQS				*e*S	Sn	10 57 52.5	+0.9
SNET	**Serv Nac Est T**	**1.65**	**92**	*e*P	Pn	10 57 32.0	-0.7
MTO2	**Montecristo 2**	**1.66**	**67**	*e*P	Pn	10 57 31.5	-1.2
MRL	**Marmol**	**1.78**	**42**	⇑*e*P	Pn	10 57 34.4	-0.1
LFRS	**El Faro**	**1.82**	**93**	*e*P	Pn	10 57 35.1	+0.1
LBRS	**Las Brisas**	**1.83**	**90**	*e*P	Pn	10 57 34.4	-0.8
SNVI	**San Vicente**	**2.04**	**93**	*e*P	Pn	10 57 38.4	+0.4
SNVI				*e*S	Sn	10 58 02.2	-0.1
CAHU	**Cacacuatique**	**2.64**	**89**	*e*P	Pn	10 57 46.0	-0.4
CNCH	**Conchagua**	**3.05**	**98**	*e*P	Pn	10 57 52.3	+0.4
CNCH				*e*S	Sn	10 58 32.8	+5.6
COPN	**Copaltepe**	**4.50**	**110**	*e*P	Pn	10 58 12.2	+0.3
COPN				*e*S	Sn	10 59 02.6	-0.6
CSAN		**4.66**	**109**	*e*P	Pn	10 58 15.0	+0.9
CSAN				AML	AML	10 59 11.7	
	comp=Z,826nm,0.3s						
APYN	**Apoyeque**	**4.71**	**108**	*e*P	Pn	10 58 15.6	+0.8

IDC 22 11:03:27.2±2.2, 31.°27N×103.°51E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=65.3km s-min=37.8km az=93.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.05**	**66**	P	P	11 08 12.6	-0.1
	2.0nm,0.7s,baz=265,slow=11,SNR=10						
ASAR	**Alice Springs**	**61.90**	**148**	P	P	11 13 48.6	0.0
	0.2nm,0.3s,baz=337,slow=6.7,SNR=7.0						
YKA	**Yellowknife Ar**	**81.68**	**17**	P	P	11 15 47.1	0.0
	0.1nm,0.3s,baz=333,slow=5.7,SNR=3.2						

DJA 22 11:16:42, 3.°48S×123.°86E, h15km, MLv3.6/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.33**	**249**	P	Pn	11 17 04.4	-1.6
LUWI	**Luwuk**	**2.66**	**336**	P	Pn	11 17 25.7	+1.4
LUWI				S	Sn	11 17 58.7	+2.5
NLAI	**Namlea**	**3.24**	**86**	P	Pn	11 17 31.9	-0.5
APSI	**Ampana**	**3.38**	**319**	P	Pn	11 17 35.5	+1.3
TTSI	**Tana Toraja**	**4.06**	**276**	P	Pn	11 17 44.7	+1.1
TTSI				S	Sn	11 18 32.8	+1.9
MRSI	**Marisa**	**4.37**	**334**	P	Pn	11 17 49.8	+1.9

*ISCJB **22** 11:22:23.9±0.2, 32.°55N±0.°02×105.°42E±0.°03, h10km, mb4.3/34, MS3.2/5, Error ellipse: s-maj=4.3km s-min=3.3km az=20.8*
*IDC **22** 11:22:24.2±0.6, 32.°61N×105.°48E, h0km, mb4.2/19, mb1 4.3/22, mb1mx4.2/32, mbtm

HHC Hu-ho-hao-te 9.62 29 *eP* **Pn 11 24 46.4 +2.0**
HHC pP 11 24 53.5
HHC sP 11 24 58.3
HHC S **Sn 11 26 33.8 +1.3**
HHC sS 11 26 45.3
HHC pmax pmax
comp=Z,22nm,1.1s
HHC pmax pmax
comp=Z,110nm,4.6s
HHC LR LR
comp=N,580nm,5.2s
HHC LR LR
comp=E,660nm,4.9s
HHC LR LR
comp=Z,370nm,5.3s
GZH Guangzhou 11.78 141 P **Pn 11 25 09.0 -5.0**
GZH S **Sn 11 27 13.1 -12**
GZH LR LR
comp=N,570nm,5.8s
GZH LR LR
comp=E,700nm,6.8s
QIZ Qiongzhong 14.07 162 P **Pn 11 25 43.8 -1.6**
QIZ S **Sn 11 28 21.3 -0.4**
QIZ pmax pmax
comp=Z,11nm,1.8s
QIZ LR LR
comp=N,250nm,9.3s
QIZ LR LR
comp=E,63nm,8.7s
QIZ LR LR
comp=Z,320nm,10.1s
CMAR Chiang Mai Arr 15.21 204 Pn **Pn 11 26 00.2 -0.7**
comp=Z,0.2nm,0.3s,baz=14,slow=11,SNR=7.5
SONM Songino Array 15.26 3 Pn **Pn 11 25 59.7 -1.6**
comp=Z,0.3nm,0.3s,baz=183,slow=16,SNR=3.5
TAPN Taplejung 16.19 256 *eP* **Pn 11 26 13.9 +0.4**
comp=Z,28nm,0.9s
ODAN Odare 16.64 255 *eP* **Pn 11 26 19.6 +0.3**
comp=Z,13nm,0.5s
SNY Shenyang 17.15 52 ⇓P **Pn 11 26 26.3 +0.7**
SNY S **Sn 11 29 35.3 -1.0**
SNY pmax pmax
comp=Z,9.0nm,0.5s
SNY LR LR
comp=N,120nm,6.6s
SNY LR LR
comp=E,250nm,14.4s
SNY LR LR
comp=Z,220nm,17.8s
RAMN Ramite 17.25 256 *eP* **Pn 11 26 27.0 0.0**
comp=Z,14nm,0.7s
JIRN Jiri 17.32 259 *eP* **Pn 11 26 27.4 -0.4**
comp=Z,17nm,0.8s
GUN Gumba 17.49 260 *eP* **Pn 11 26 29.4 -0.6**
comp=Z,23nm,0.6s
ZAK Zakamensk 17.86 356 *eP* **Pn 11 26 32.3 -2.0**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
PKI Pulchoki 18.00 259 *eP* **Pn 11 26 35.7 -0.6**
comp=Z,23nm,0.6s
PKIN Phulchoki 18.01 259 *eP* **Pn 11 26 35.5 -0.9**
comp=Z,16nm,0.6s
KKN Kakani 18.03 260 *eP* **Pn 11 26 35.7 -0.9**
comp=Z,37nm,0.9s
DMN Daman 18.24 260 *eP* **Pn 11 26 37.8 -1.4**
comp=Z,29nm,0.9s
GKN Gorkha 18.49 261 *eP* **Pn 11 26 40.4 -1.9**
comp=Z,28nm,0.7s
KSRS Korea Array 19.07 69 P **Pn 11 26 48.2 -0.9**
comp=Z,0.3nm,0.3s,baz=253,slow=11,SNR=18
KSRS LR LR 11 34 45.5
comp=Z,78nm,18.3s,baz=146,slow=39
KOLN Koldanda 19.44 261 *eP* **Pn 11 26 51.9 -1.8**
comp=Z,26nm,0.8s
PYUN Piuthan 19.84 263 *eP* **Pn 11 26 56.7 -1.8**
comp=Z,35nm,0.9s
JOW Kunigami 20.66 100 P **P 11 27 06.5 +0.5**
comp=Z,4.9nm,0.3s,baz=89,slow=14,SNR=5.9
MK31 Makanchi Array 22.64 316 *eP* **P 11 27 27.3 +0.3**
MKAR Makanchi Array 22.64 316 P **P 11 27 27.4 +0.4**
comp=Z,3.8nm,0.5s,mb4.1,baz=114,slow=12,SNR=28
MKAR Makanchi Array 22.64 316 P **P 11 27 27.4 +0.4**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
TKM2 Tokmak 2 25.61 302 *eP* **P 11 27 57.3 +2.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
TKM2 Tokmak 2 25.61 302 *eP* **P 11 27 57.3 +2.0**
comp=Z,2.7nm,0.7s,mb3.9
KLR Kul'dur 25.76 42 *eP* **P 11 27 52.8 -3.8**
ZALV Zalesovo Beam 25.91 332 P **P 11 27 57.3 -0.7**
comp=Z,5.3nm,0.5s,mb4.3,baz=134,slow=9.6,SNR=7.7
ZALV Zalesovo Beam 25.91 332 P **P 11 27 57.3 -0.7**
ZALV pmax pmax
comp=Z,5.0nm,0.5s,mb4.3
BOD Bodaibo 25.92 11 *eP* **P 11 27 58.3 +0.4**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.1
UCH Uchtor 26.23 300 *eP* **P 11 28 05.5 +4.5**
comp=Z,8.0nm,1.3s,mb4.1
KURK Kurchatov 26.77 321 P **P 11 28 06.5 +0.7**
comp=Z,3.1nm,0.5s,mb4.1,baz=122,slow=11,SNR=14
KURK PcP PcP 11 31 27.9 -0.7
comp=Z,1.0nm,0.6s,baz=113,slow=2.2,SNR=3.6
KURK LR LR 11 38 23.9
comp=Z,21nm,18.3s,MS2.7,baz=115,slow=36
KURK Kurchatov 26.77 321 P **P 11 28 06.5 +0.8**
KURK 11 31 27.9
KURK pmax pmax
comp=Z,3.0nm,0.5s,mb4.1
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
KURK MLR MLR
comp=Z,21nm,18.3s,MS2.7
KURK Kurchatov 26.77 321 P **P 11 28 06.5 +0.7**
KURK PcP PcP 11 31 27.9 -0.7
KURK LR LR 11 38 23.9
MJAR Matsushiro Arr 27.23 72 LR LR 11 37 56.4
comp=Z,61nm,18.7s,MS3.2,baz=280,slow=34
PSI Prapat 30.24 193 P **P 11 28 38.6 +1.6**
comp=Z,3.7nm,0.4s,mb4.4,baz=175,slow=14,SNR=3.8
PSI Prapat 30.24 193 P **P 11 28 38.6 +1.6**
PSI pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
ASAJ Asahikawa 31.11 57 LR LR 11 43 21.3
comp=Z,34nm,18.4s,MS3.0,baz=200,slow=40
BVAR Borovoye Array 32.35 320 P **P 11 28 55.7 +0.5**
comp=Z,0.8nm,0.7s,mb3.7,baz=104,slow=12,SNR=4.8
BVAR PcP PcP 11 31 42.4 -0.4
comp=Z,0.5nm,0.4s,baz=134,slow=4.2,SNR=3.5
BVAR Borovoye Array 32.35 320 P **P 11 28 55.7 +0.5**
BVAR 11 31 42.4
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 32.42 320 *ceP* **P 11 28 57.7 +1.8**
BRVK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
ABKAR Akbulak array 37.55 310 *eP* **P 11 29 40.8 +0.7**
comp=Z,4.5nm,0.7s,mb4.3
AKTK Aktyubinsk 38.96 312 P **P 11 29 52.8 +0.8**
AKTO Aktyubinsk 38.96 312 P **P 11 29 52.8 +0.8**
comp=Z,3.4nm,0.6s,mb4.2,baz=96,slow=9.8,SNR=13
AKTO Aktyubinsk 38.96 312 P **P 11 29 52.8 +0.8**
AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ARU Arti 39.96 321 *dieP* **P 11 30 01.0 +0.7**
ARU 11 31 31.1
ARU S **S 11 36 06.8 +1.4**
ARU SS SS 11 39 02.1 +0.2
ARU pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ARU Arti 39.96 321 *eP* **P 11 29 59.6 -0.6**
comp=Z,5.5nm,0.7s,mb4.4
TIXI Tiksi 41.10 11 *eP* **P 11 30 07.7 -1.8**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
TIXI Tiksi 41.10 11 *eP* **P 11 30 08.5 -1.0**
comp=Z,6.5nm,0.9s,mb4.3
PETK Petropavlovsk- 42.37 45 LR LR 11 50 00.9
comp=Z,48nm,19.1s,MS3.4,baz=60,slow=39
BILL Bilibino 49.38 26⇑ *eP* **P 11 31 16.3 +1.1**
BILL pmax pmax
comp=Z,8.0nm,2.5s,mb4.3
KIV Kislovodsk 49.44 302 *eP* **P 11 31 18.7 +2.6**
KIV pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ANN Anapa 53.00 304 *eP* **P 11 31 43.8 +1.0**
ANN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
JOF Joensuu 54.38 327 *eP* **P 11 31 52.3 -0.3**
JOF pmax pmax
comp=Z,11nm,0.9s,mb4.8
JOF Joensuu 54.38 327 *ep* **P 11 31 52.3 -0.3**
comp=Z,11nm,0.9s,mb4.8
KEV Kevo 55.84 336 *eP* **P 11 32 02.5 -0.5**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 55.84 336 *ep* **P 11 32 02.5 -0.5**
comp=Z,4.0nm,0.6s,mb4.6
ARCES ARCESS Array B 56.38 335 P **P 11 32 06.7 -0.2**
comp=Z,2.1nm,0.6s,mb4.3,baz=75,slow=7.7,SNR=23
ARCES ARCESS Array B 56.38 335 P **P 11 32 06.7 -0.2**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 56.77 326 *eP* **P 11 32 09.1 -0.6**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KAF Kangasniemi 56.77 326 *ep* **P 11 32 09.1 -0.6**
comp=Z,2.6nm,0.4s,mb4.6
FINES FINESS Array B 56.97 326 P **P 11 32 11.2 +0.1**
comp=Z,3.5nm,0.4s,mb4.7,baz=90,slow=7.4,SNR=26
FINES FINESS Array B 56.97 326 P **P 11 32 11.2 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.4s
BR131 Keskin Array S 56.98 299 *eP* **P 11 32 11.9 +0.3**
comp=Z,0.8nm,0.5s,mb4.0
BRTR Keskin Array B 56.98 299 P **P 11 32 11.6 0.0**
comp=Z,1.2nm,0.7s,mb4.1,baz=96,slow=5.9,SNR=8.7
BRTR Keskin Array B 56.98 299 P **P 11 32 11.6 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 57.19 313 P **P 11 32 12.8 -0.1**
comp=Z,4.1nm,0.5s,mb4.7,baz=69,slow=6.3,SNR=8.0
AKASG Malin Array Be 57.19 313 P **P 11 32 12.9 0.0**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
SPITS Spitsbergen Ar 58.17 346 P **P 11 32 19.3 -0.2**
comp=Z,2.0nm,0.7s,mb4.3,baz=133,slow=8.5,SNR=4.1
SPITS Spitsbergen Ar 58.17 346 P **P 11 32 19.3 -0.2**
SPITS pmax pmax
comp=Z,2.0nm,0.7s
WRAB Tennant Creek 59.11 148 *eP* **P 11 32 26.2 -0.4**
WRAB pmax pmax
comp=Z,12nm,0.6s,mb5.1
WRAB Tennant Creek 59.11 148 *eP* **P 11 32 26.1 -0.5**
comp=Z,12nm,0.6s,mb5.1
MLR Muntele Rosu 60.69 308 LR LR 12 03 33.9
comp=Z,32nm,18.8s,MS3.5,baz=297,slow=41
KWP Kalwaria Pacla 61.51 313 *eP* **P 11 32 43.8 +1.0**
ASAR Alice Springs 62.20 150 P **P 11 32 47.5 -0.2**
comp=Z,5.0nm,0.5s,mb4.9,baz=330,slow=6.5,SNR=86
ASAR Alice Springs 62.20 150 P **P 11 32 47.5 -0.2**
ASAR pmax pmax
comp=Z,5.0nm,0.5s
NB2 NORSAR Subarra 64.01 327 P **P 11 32 58.7 -0.6**
comp=Z,4.5nm,0.8s,mb4.5,baz=69,slow=6.5
NOA NORSAR Array B 64.01 327 P **P 11 32 58.8 -0.5**
comp=Z,3.4nm,0.7s,mb4.5,baz=70,slow=6.6,SNR=12
NOA NORSAR Array B 64.01 327 P **P 11 32 58.8 -0.5**
NOA pmax pmax
comp=Z,3.0nm,0.7s
GERES GERESS Array B 67.31 314 P **P 11 33 21.3 +0.5**
comp=Z,1.2nm,0.7s,mb4.0,baz=72,slow=4.3,SNR=11
GERES GERESS Array B 67.31 314 P **P 11 33 21.3 +0.5**
GERES pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 70.40 20 P **P 11 33 39.0 -0.7**
comp=Z,0.9nm,0.7s,mb3.8,baz=336,slow=13,SNR=6.1
INK Inuvik 70.40 20 P **P 11 33 39.0 -0.7**
INK pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 70.40 20 *eP* **P 11 33 39.1 -0.6**
CDF Champ du Feu 71.33 316 *eP* **P 11 33 46.5 +0.8**
STKA Stephens Creek 72.66 148 P **P 11 33 53.2 -0.5**
comp=Z,2.0nm,0.8s,mb4.1,baz=12,slow=11,SNR=4.5
STKA Stephens Creek 72.66 148 P **P 11 33 53.2 -0.5**
LPG La Plagne 73.04 313 *eP* **P 11 33 56.1 +0.1**
comp=Z,5.4nm,0.5s,mb4.4
LPG La Plagne 73.04 313 *eP* **P 11 33 56.1 +0.1**
LPG pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LPG La Plagne 73.04 313 *eP* **P 11 33 56.1 +0.1**
comp=Z,2.7nm,0.5s,mb4.4
LPL La Plagne 73.05 313 *eP* **P 11 33 56.0 0.0**
SMF Signal de Mont 74.22 315 *eP* **P 11 34 02.0 -0.9**
comp=Z,3.5nm,0.6s,mb4.2
SMF Signal de Mont 74.22 315 *eP* **P 11 34 02.0 -0.9**
SMF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SMF Signal de Mont 74.22 315 *eP* **P 11 34 02.0 -0.9**
comp=Z,1.8nm,0.6s,mb4.2
KEST Kesra 76.16 304 P **P 11 34 15.9 +1.6**
comp=Z,1.2nm,1.0s,mb3.8,baz=326,slow=9.7,SNR=3.8
YKA Yellowknife Ar 79.96 18 P **P 11 34 33.8 -1.0**
comp=Z,0.4nm,0.5s,mb3.6,baz=330,slow=5.2,SNR=12

ISCJB ***22*** *12:24:00.9±0.9, 24°.01N±0°.03×122°.43E±0°.02, h6km±7km, Error ellipse: s-maj=4.9km s-min=3.1km az=170.3*
TAP ***22*** *12:24:02.1, 24°.06N×122°.47E, h40km±2km, ML2.9, D*
JMA ***22*** *12:24:02.7±0.3, 24°.69N×122°.43E, h48km, M2.1*
ISC 22 12:24:01.5±0.7, 24°.04N±0°.04×122°.43E±0°.02, h12km±5km, n31, σ0s97/54, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.68**	**51**	P	**Pg**	**12 24 14.8**	**+0.1**
YOJ				*eS*	**Sg**	**12 24 23.4**	**-0.1**
ENA	**Nanau**	**0.74**	**302**	*eP*	**Pg**	**12 24 16.7**	**+0.8**
ENA	baz=298			*eS*	**Sg**	**12 24 26.6**	**+0.9**
TWD	**Chiawan**	**0.77**	**273**	*eP*	**Pg**	**12 24 16.7**	**+0.3**
ESL	baz=271 **Shilin**	**0.94**	**256**	*eP*	**Pg**	**12 24 18.5**	**-1.3**
TWE	baz=248 **Neicheng**	**0.97**	**314**	*eP*	**Pg**	**12 24 20.4**	**+0.1**
TWE	baz=312			*eS*	**Sg**	**12 24 32.2**	**-0.8**
ENTT	**Nioudou**	**0.99**	**307**	*eP*	**Pg**	**12 24 20.8**	**+0.2**
ENTT	baz=305			*eS*	**Sg**	**12 24 34.5**	**+0.9**
NNS	**Nan Shan**	**1.05**	**293**	*eP*	**Pb**	**12 24 21.9**	**+0.3**
WHF	baz=280 **Hehuan Shan**	**1.07**	**276**	P	**Pb**	**12 24 21.5**	**-0.6**
WHF	baz=274			*eS*	**Sb**	**12 24 35.5**	**-0.6**
EHY	**Hungye**	**1.15**	**243**	*eP*	**Pb**	**12 24 22.2**	**-1.2**
EHY	baz=242			*eS*	**Sb**	**12 24 37.1**	**-1.1**
NSK	**Sanguang**	**1.17**	**303**	*eP*	**Pb**	**12 24 23.5**	**-0.1**
NSK	baz=288			*eS*	**Sb**	**12 24 37.8**	**-0.9**
TWT	**Tachien**	**1.17**	**281**	*eP*	**Pb**	**12 24 24.6**	**+0.9**
NWF	baz=269 **Wu-fen Shan**	**1.19**	**330**	*eP*	**Pn**	**12 24 22.1**	**-1.9**
NWF	baz=328			*eS*	**Sb**	**12 24 39.3**	**-0.1**
IRIF	**Iriomote-Funau**	**1.22**	**76**	P	**Pn**	**12 24 23.8**	**-0.7**
IRIF				*eS*	**Sb**	**12 24 40.4**	**+0.1**
TWF1	**Yuli**	**1.25**	**237**	P	**Pn**	**12 24 23.6**	**-1.2**
TWF1	baz=227			*eS*	**Sb**	**12 24 39.4**	**-1.6**
HATJ	**Hateruma jima**	**1.25**	**89**	P	**Pn**	**12 24 26.7**	**+1.8**
HATJ				*eS*	**Sb**	**12 24 42.6**	**+1.3**
NSTT	**Nanjuang**	**1.43**	**295**	*eP*	**Pn**	**12 24 28.4**	**+1.1**
TYC	baz=292 **Yuchr**	**1.45**	**265**	*eP*	**Pn**	**12 24 27.5**	**-0.1**
TYC	baz=263			*eS*	**Sn**	**12 24 46.0**	**-0.5**
JKRS	**Kuro-shima**	**1.45**	**82**	P	**Pn**	**12 24 27.8**	**+0.1**
JKRS				*eS*	**Sn**	**12 24 46.9**	**+0.2**
YUS	**Yu-Shan**	**1.46**	**248**	*eP*	**Pn**	**12 24 27.6**	**-0.2**
YUS	baz=247			*eS*	**Sn**	**12 24 45.6**	**-1.3**
ELDTW	**Lidau**	**1.55**	**237**	*eP*	**Pn**	**12 24 28.0**	**-1.0**
ALS	baz=236 **Alishan**	**1.58**	**251**	*eP*	**Pn**	**12 24 30.8**	**+1.4**
JIJ	baz=249 **Ishigaki jima**	**1.59**	**78**	P	**Pn**	**12 24 28.7**	**-0.9**
JIJ				S	**Sn**	**12 24 48.5**	**-1.6**
CHN5	**Tsauling**	**1.67**	**255**	*eP*	**Pn**	**12 24 30.5**	**-0.1**
CHN5	baz=254			S	**Sn**	**12 24 52.4**	**+0.4**
TWG	**Pinlang**	**1.74**	**226**	*eP*	**Pn**	**12 24 30.7**	**-0.9**
TWG	baz=236			*eS*	**Sn**	**12 24 49.8**	**-3.9**
CHN4	**Tsaushan**	**1.82**	**248**	*eP*	**Pn**	**12 24 35.2**	**+2.5**
CHN4	baz=247			*eS*	**Sn**	**12 24 57.0**	**+1.3**
WTP	**Ta-pu**	**1.84**	**245**	*eP*	**Pn**	**12 24 34.0**	**+0.9**
WTP	baz=244			*eS*	**Sn**	**12 24 56.7**	**+0.4**
TWK	**Hsinying**	**1.94**	**247**	*eP*	**Pn**	**12 24 34.0**	**-0.3**
TWK	baz=246			*eS*	**Sn**	**12 24 59.8**	**+1.0**
CHN1	**Nanshi**	**1.94**	**244**	*eP*	**Pn**	**12 24 36.1**	**+1.7**
CHN1	baz=243			*eS*	**Sn**	**12 24 59.7**	**+0.9**
SGST	**Jiashian**	**1.95**	**241**	*eP*	**Pn**	**12 24 34.1**	**-0.4**
SGST	baz=231			*eS*	**Sn**	**12 24 59.3**	**+0.5**
SSD	**Sandimen**	**2.10**	**232**	*eP*	**Pn**	**12 24 35.4**	**-1.1**
SSD	baz=224			*eS*	**Sn**	**12 25 04.0**	**+1.5**
EAST	**Anshuo**	**2.20**	**222**	*eP*	**Pn**	**12 24 37.8**	**-0.1**
	baz=221						

IDC ***22*** *12:24:52.6±0.7, 3°.16S×138°.44E, h0km, mb4.2/8, mb1 4.4/10, mb1mx4.3/13, mbtmp4.3/10, ML4.4/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/22, Error ellipse: s-maj=26.6km s-min=11.7km az=83.0*
ISCJB ***22*** *12:24:56.6±1.1, 3°.19S±0°.04×138°.61E±0°.06, h48km±11km, mb4.4/15, MS3.7/9, Error ellipse: s-maj=9.8km s-min=6.1km az=176.9*
DJA ***22*** *12:24:56, 3°.05S×138°.54E, h11km, mb4.9/12*
NEIC ***22*** *12:24:57.1±0.4, 3°.11S×138°.52E, h35km, mb4.6/6, Error ellipse: s-maj=14.1km s-min=7.7km az=80.0*
ISC 22 12:24:57.7±0.9, 3°.13S±0°.04×138°.60E±0°.06, h39km±10km, n58, σ1s00/52, mb4.4/15, MS3.7/9, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.14**	**6**	P	**Pn**	**12 25 12.3**	**-4.8**
SMPI				S	**Sn**	**12 25 31.7**	**+0.2**
MMPI	**Merauke**	**5.59**	**162**	P	**Pn**	**12 26 24.1**	**+5.7**
MMPI	2μm,0.6s,9.1nm			S	**Sn**	**12 27 28.8**	**+7.3**
TLE	2μm,0.6s,9.1nm **Tual**	**6.35**	**247**	S	**Sn**	**12 27 45.2**	**+5.0**
KAKA	**Kakadu**	**11.30**	**212**	*eP*	**Pn**	**12 27 34.1**	**-2.7**
KAKA	60nm,0.4s			*eS*	**Sn**	**12 29 41.1**	**-0.8**
KAKA	**Kakadu**	**11.30**	**212**	*ePn*	**Pn**	**12 27 34.5**	**-2.3**
KAKA	15nm,0.3s			*eSn*	**Sn**	**12 29 41.2**	**-0.7**
KAKA	**Kakadu**	**11.30**	**212**	P	**Pn**	**12 27 35.8**	**-1.0**
COEN	195nm,0.6s,2μm **Coen**	**11.67**	**157**	*ePn*	**Pn**	**12 27 41.2**	**-0.5**
COEN				*eSn*	**Sn**	**12 29 51.2**	**+0.3**
COEN	**Coen**	**11.67**	**157**	P	**Pn**	**12 27 42.3**	**+0.5**
MRSI	135nm,0.7s **Marisa**	**17.03**	**282**	P	**Pn**	**12 28 53.9**	**+0.8**
APSI	38nm,1.0s **Ampana**	**17.08**	**277**	P	**Pn**	**12 28 54.4**	**+0.7**
WRAB	81nm,1.5s,1μm **Tennant Creek**	**17.21**	**194**	*ePn*	**Pn**	**12 28 54.1**	**-1.1**
WRAB	60nm,0.8s			*eSn*	**Sn**	**12 31 58.0**	**-7.7**
WRAB	**Tennant Creek**	**17.21**	**194**	P	**Pn**	**12 28 56.6**	**+1.4**
GUMO	87nm,0.8s **Guam**	**17.73**	**20**	LR	LR	12 34 30.3	
	comp=Z,144nm,20.5s,baz=261,slow=32						
CTA	**Charters Tower**	**18.44**	**157**	*eP*	**Pn**	**12 29 10.9**	**+0.6**
CTA	10nm,0.6s **Charters Tower**	**18.44**	**157**	P	**Pn**	**12 29 10.9**	**+0.5**
	0.6nm,0.3s,baz=321,slow=13,SNR=7.8						
CTA				Lg		12 34 36.6	
	0.3nm,0.3s,baz=231,slow=21,SNR=3.3						
CTAO	**Charters Tower**	**18.44**	**157**	*eP*	**Pn**	**12 29 10.4**	**+0.1**
CTAO	31nm,1.0s **Charters Tower**	**18.44**	**157**	P	**Pn**	**12 29 16.6**	**+6.3**
TTSI	31nm,1.2s **Tana Toraja**	**18.75**	**270**	P	**Pn**	**12 29 15.3**	**+1.1**
FITZ	25nm,2.3s,774nm **Fitzroy Crossi**	**19.56**	**220**	*eP*	**Pn**	**12 29 22.7**	**-1.2**
FITZ	25nm,0.6s			*eS*	**S**	**12 32 52.6**	**-8.7**
FITZ	**Fitzroy Crossi**	**19.56**	**220**	P	**Pn**	**12 29 22.7**	**-1.1**
	0.9nm,0.3s,baz=35,slow=12,SNR=15						
FITZ				S	**S**	**12 32 53.7**	**-7.6**
	0.6nm,0.3s,baz=206,slow=13,SNR=5.4						
FITZ	**Fitzroy Crossi**	**19.56**	**220**	P	**Pn**	**12 29 23.5**	**-0.4**
	56nm,1.2s						
ASAR	**Alice Springs**	**20.92**	**192**	P	**P**	**12 29 36.9**	**-0.1**
	32nm,0.7s,baz=19,slow=10,SNR=209						
ASAR				S	**S**	**12 33 30.8**	**+2.7**
	17nm,0.9s,baz=13,slow=25,SNR=8.6						
MYLDM	**Lahad Datu**	**21.71**	**292**	P	**P**	**12 29 46.2**	**+0.6**
	38nm,1.4s,mb4.6						
KKM	**Kota Kinabalu**	**24.14**	**292**	P	**P**	**12 30 09.5**	**-0.8**
	36nm,1.7s,586nm,mb4.5						
TGY	**Tagaytay City**	**24.49**	**315**	P	**P**	**12 30 13.9**	**+0.5**
	49nm,0.3s,mb5.4,baz=234,slow=17,SNR=3.8						
EIDS	**Eidsvold**	**25.17**	**153**	*eP*	**P**	**12 30 20.3**	**+0.8**
	11nm,0.6s,mb4.6						
MBWA	**Marble Bar**	**25.66**	**224**	*eP*	**P**	**12 30 23.4**	**-0.6**
MBWA	**Marble Bar**	**25.66**	**224**	*eP*	**P**	**12 30 23.7**	**-0.3**
	22nm,1.1s,mb4.6						
MBWA	**Marble Bar**	**25.66**	**224**	P	**P**	**12 30 24.1**	**+0.1**
STKA	**Stephens Creek**	**28.74**	**175**	*eP*	**P**	**12 30 52.6**	**+1.1**
	1.4nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**28.74**	**175**	P	**P**	**12 30 51.9**	**+0.4**
	1.3nm,0.4s,mb4.0,baz=5.4,slow=14,SNR=7.2						
STKA				LR	LR	12 43 43.2	
	comp=Z,442nm,18.1s,MS4.1,baz=0.1,slow=39						
DZM	**Mont Dzumac**	**32.94**	**127**	*eLR*	LR	12 40 27.9	
	327nm,29.8s						
MJAR	**Matsushiro Arr**	**39.47**	**360**	LR	LR	12 45 51.5	
	comp=Z,70nm,19.7s,MS3.5,baz=175,slow=32						
KSRS	**Korea Array**	**41.58**	**347**	P	**P**	**12 32 43.8**	**+2.1**
	2.2nm,0.6s,mb3.9,baz=161,slow=8.8,SNR=7.0						
KSRS				LR	LR	12 46 41.0	
	comp=Z,98nm,20.5s,MS3.7,baz=322,slow=32						
CMAR	**Chiang Mai Arr**	**44.55**	**300**	P	**P**	**12 33 05.0**	**-1.1**
	1.8nm,0.6s,mb4.1,baz=122,slow=6.3,SNR=12						
CMAR				LR	LR	12 54 19.6	
	comp=Z,74nm,18.1s,MS3.6,baz=134,slow=40						
URZ	**Urewera**	**49.57**	**140**	LR	LR	12 51 02.7	
	comp=Z,141nm,20.8s,MS3.9,baz=60,slow=32						
YSS	**Yuzh-Sakhalins**	**50.00**	**4**	*eP*	**P**	**12 33 46.2**	**-1.8**
SONM	**Songino Array**	**58.05**	**335**	LR	LR	13 00 34.2	
	comp=Z,66nm,19.3s,MS3.8,baz=61,slow=37						
PETK	**Petropavlovsk-**	**58.29**	**13**	P	**P**	**12 34 53.1**	**+4.8**
	2.9nm,0.6s,mb4.5,baz=145,slow=5.4,SNR=6.7						
PETK				LR	LR	12 57 39.9	
	comp=Z,28nm,18.2s,MS3.4,baz=33,slow=34						
MK31	**Makanchi Array**	**70.05**	**323**	*eP*	**P**	**12 36 05.2**	**-0.4**
MKAR	**Makanchi Array**	**70.05**	**323**	P	**P**	**12 36 05.1**	**-0.5**
	1.6nm,0.6s,mb4.1,baz=112,slow=7.6,SNR=14						
MKAR				LR	LR	13 06 15.2	
	comp=Z,38nm,18.0s,MS3.7,baz=269,slow=36						
MKAR	**Makanchi Array**	**70.05**	**323**	P	**P**	**12 36 05.1**	**-0.5**
MKAR				LR	LR	13 06 15.2	
PPT	**Papeete**	**71.74**	**107**	*eLR*	LR	12 58 42.6	
	96nm,26.2s						
ZALV	**Zalesovo Beam**	**72.24**	**330**	P	**P**	**12 36 20.1**	**+1.4**
	1.2nm,0.5s,mb4.1,baz=116,slow=5.4,SNR=6.1						

ZALV LR LR 13 12 15.2
comp=Z,22nm,18.6s,MS3.5,baz=112,slow=39
KURK Kurchatov 73.99 325 *e*P **P 12 36 29.4 +0.2**
4.0nm,0.9s,mb4.3
BVAR Borovoye Array 79.59 325 P **P 12 36 59.5 -1.2**
4.1nm,0.6s,mb4.6,baz=103,slow=6.7,SNR=7.5
TAOE Nuku Hiva Isla 80.89 98 *e*S S 12 47 29.4 +15
151nm,42.1s
TAOE *e*LR LR 13 02 49.7
100nm,24.4s
MAW Mawson 81.70 202 P **P 12 37 12.3 +0.6**
1.6nm,0.6s,mb4.1,baz=12,slow=9.4,SNR=3.0
EGAK Eagle 88.65 25 *e*P **P 12 37 44.9 -1.6**
5.7nm,1.0s,mb4.9
DAWY Dawson 89.29 26 *e*P **P 12 37 49.0 -0.5**
YKA Yellowknife Ar 100.48 27 P Pdif 12 38 44.5 +3.7
0.1nm,0.6s,baz=292,slow=4.6,SNR=4.1
TORD Torodi Ar. Bea 136.26 286 PKP PKPdf 12 44 15.6 -0.5
1.0nm,1.0s,baz=70,slow=1.5,SNR=3.8
TORD Torodi Ar. Bea 136.26 286 PKP PKPdf 12 44 15.6 -0.5
CPUP Villa Florida 146.91 153 PKPbc PKPbc 12 44 36.4 -0.4
5.6nm,0.9s,baz=211,slow=3.8,SNR=7.5
LPAZ La Paz 147.29 127 PKPbc PKPbc 12 44 38.1 +0.1
13nm,0.9s,baz=243,slow=1.3,SNR=39
SDV Santo Domingo 150.38 78 PKPbc PKPbc 12 44 49.3 +3.3
1.6nm,0.5s,baz=282,slow=9.3,SNR=3.0
SDV Santo Domingo 150.38 78 PKPbc PKPbc 12 44 49.3 +3.3
SIV San Ignacio 152.81 135 PKPbc PKPbc 12 44 52.6 +1.1
4.5nm,0.9s,baz=216,slow=3.7,SNR=8.4
SIV PKPab PKPab 12 45 03.2 +0.8
3.4nm,1.0s,baz=230,slow=2.5,SNR=5.0

ISCJB ***22*** *12:30:14.7±0.7,39°.16N±0°.03×39°.52E±0°.04,h5km±9km, Error ellipse: s-maj=5.9km s-min=5.6km az=36.7*
ISK ***22*** *12:30:14.0,39°.15N×39°.47E,h12km,MD2.9*
CSEM ***22*** *12:30:15.0±0.2,39°.14N×39°.51E,h5km,MD2.9, Error ellipse: s-maj=4.9km s-min=3.8km az=102.0*
DDA ***22*** *12:30:16.4,39°.10N×39°.53E,h11km,Md3.2*
ISC 22 12:30:15.2±0.5,39°.15N±0°.03×39°.51E±0.05,h12km±7km, n20,σ0°82/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.28**	**200**	*e*PG	**Pg**	**12 30 19.6**	**-1.3**
PTK				*e*SG	**Sg**	**12 30 24.9**	**+0.2**
PTK	**Pertek**	**0.28**	**200**	*e*Pg	**Pg**	**12 30 19.6**	**-1.3**
PTK				*e*Sg	**Sg**	**12 30 24.9**	**+0.2**
EZC	**Erzincan**	**0.61**	**348**	*e*PG	**Pg**	**12 30 26.4**	**-0.7**
ELZG	**Elazig**	**0.77**	**212**	*i* P	**Pg**	**12 30 29.5**	**-0.7**
ELZG				*i* S	**Sg**	**12 30 41.5**	**+1.1**
ELZG	**Elazig**	**0.77**	**212**	*i* P	**Pg**	**12 30 29.5**	**-0.7**
ELZG				*i* S	**Sg**	**12 30 41.5**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.79**	**192**	*e*PG	**Pg**	**12 30 29.3**	**-1.2**
SVRC				*e*SG	**Sg**	**12 30 40.5**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.79**	**192**	*e*Pg	**Pg**	**12 30 29.3**	**-1.2**
SVRC				*e*Sg	**Sg**	**12 30 40.5**	**-0.3**
KEMA	**Kemaliye**	**0.80**	**279**	*i* P	**Pg**	**12 30 31.1**	**+0.4**
KEMA				*i* S	**Sg**	**12 30 41.9**	**+0.7**
KEMA	**Kemaliye**	**0.80**	**279**	*i* P	**Pg**	**12 30 31.1**	**+0.4**
KEMA				*i* S	**Sg**	**12 30 41.9**	**+0.7**
BINT	**Bingol**	**0.81**	**110**	*e*PG	**Pg**	**12 30 30.7**	**-0.1**
BINT				*e*SG	**Sg**	**12 30 43.0**	**+1.6**
BINT	**Bingol**	**0.81**	**110**	*e*Pg	**Pg**	**12 30 30.7**	**-0.2**
BINT				*e*Sg	**Sg**	**12 30 43.0**	**+1.6**
KELT	**Kelkit**	**1.01**	**349**	*i* P	**Pb**	**12 30 35.5**	**+0.7**
KELT				*i* S	**Sg**	**12 30 48.2**	**+0.2**
KELT	**Kelkit**	**1.01**	**349**	*i* P	**Pb**	**12 30 35.5**	**+0.7**
KELT				*i* S	**Sg**	**12 30 48.2**	**+0.2**
MYA	**Malataya**	**1.19**	**226**	*e*PN	**Pn**	**12 30 37.5**	**-0.2**
MYA	**Malataya**	**1.19**	**226**	*e*Pn	**Pn**	**12 30 37.5**	**-0.2**
GUMT	**Gumushane**	**1.31**	**359**	*e*PN	**Pn**	**12 30 38.2**	**-1.1**
GUMT	**Gumushane**	**1.31**	**359**	*e*Pn	**Pn**	**12 30 38.3**	**-1.0**
AKCD	**Akcadag**	**1.51**	**236**	*i* P	**Pn**	**12 30 43.1**	**+1.0**
AKCD				*i* S	**Sn**	**12 31 06.4**	**+4.7**
AKCD	**Akcadag**	**1.51**	**236**	*i* P	**Pn**	**12 30 43.1**	**+1.0**
AKCD				*i* S	**Sn**	**12 31 06.4**	**+4.7**
EZM	**Erzurum**	**1.61**	**62**	*e*PN	**Pn**	**12 30 43.4**	**-0.2**

IDC 22 12:36:58.9±6.2,22°.07S×179°.47W,h679km±86km, mb3.1/5,mb1 3.3/6,mb1mx3.0/17,mbtmp3.2/6,Error ellipse: s-maj=49.4km s-min=32.0km az=5.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.40**	**190**	P	P	12 40 16.2	-0.9
	0.7nm,0.3s,baz=281,slow=5.2,SNR=5.2						
CTA	**Charters Tower**	**32.00**	**267**	P	P	12 42 33.5	-0.5
	3.2nm,0.5s,baz=80,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**42.84**	**259**	P	P	12 44 01.4	+0.2
	2.1nm,0.6s,baz=96,slow=8.0,SNR=24						
FITZ	**Fitzroy Crossi**	**51.48**	**264**	P	P	12 45 06.1	+0.8
	0.9nm,0.4s,baz=97,slow=8.1,SNR=10.0						
PETK	**Petropavlovsk-**	**77.44**	**346**	P	P	12 47 46.4	-0.3
	2.6nm,0.7s,baz=132,slow=5.3,SNR=4.0						
TXAR	**Lajitas Array**	**89.05**	**58**	P	P	12 48 46.3	+1.7
	0.2nm,0.7s,baz=208,slow=2.4,SNR=4.4						
AKASG	**Malin Array Be**	**143.68**	**329**	PKP	PKPdf	12 55 16.2	-2.5
	0.5nm,0.3s,baz=28,slow=4.0,SNR=6.0						

BYKL ***22*** *12:41:38.2±0.3,50°.85N×111°.68E*
MOS 22 12:41:36.7±1.3,50°.81N×111°.67E,h10km,mb4.4/1,5C-6D, Error ellipse: s-maj=18.9km s-min=11.5km az=95.5, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIT	**Chita**	**1.69**	**43**	*e*PN	Pn	12 42 07.9	+1.7
CIT				*e*		12 42 29.9	
CIT				pmax	pmax		
	comp=Z,279nm,0.1s						
CIT				smax			
	comp=N,3μm,0.2s						
CIT	**Chita**	**1.69**	**43**	⇓*i*Pg	Pg	12 42 07.9	-1.2
CIT				*e*		12 42 09.0	
CIT				*e*Sg	Sg	12 42 30.2	-0.8
CIT				max			
	comp=N,271nm,0.1s						
CIT				Smax			
	comp=N,3μm,0.3s						
UUDB	**Ulan-Yde**	**2.73**	**294**	*e*Pn	Pn	12 42 23.0	+2.5
UUDB				*e*Pg	Pg	12 42 27.8	-1.1
UUDB				*e*Sg	Sg	12 43 01.9	-2.3
UUDB				Pmax			
	comp=N,49nm,0.3s						
UUDB				Smax			
	comp=N,617nm,1.1s						
TRTB	**Turuntaevo**	**2.90**	**301**	*e*Pn	Pn	12 42 24.6	+1.8
TRTB				*e*Pg	Pg	12 42 29.8	-2.4
TRTB				*e*Sg	Sg	12 43 06.4	-3.3
TRTB				Pmax			
	comp=N,95nm,0.6s						
TRTB				Smax			
	comp=N,463nm,0.4s						
KELR	**Kotokel**	**2.96**	**313**	*e*Pn	Pn	12 42 25.6	+1.9
KELR				*e*Pg	Pg	12 42 30.6	-2.8
KELR				*e*Sg	Sg	12 43 09.4	-2.4
KELR				Pmax			
	comp=N,150nm,0.3s						
KELR				Smax			
	comp=N,1μm,0.4s						
SYVR	**Suvo**	**3.03**	**341**	*e*PN	Pn	12 42 26.5	+1.8
SYVR				*e*		12 42 30.7	
SYVR				*e*		12 43 10.7	
SYVR				pmax	pmax		
	comp=Z,88nm,0.5s						
SYVR				smax			
	comp=E,267nm,0.4s						
SYVR	**Suvo**	**3.03**	**341**	⇑*i*Pn	Pn	12 42 25.9	+1.2
SYVR				⇓*i*Pg	Pg	12 42 32.3	-2.5
SYVR				*e*Sg	Sg	12 43 10.8	-3.2
SYVR				Pmax			
	comp=E,86nm,0.6s						
SYVR				Smax			
	comp=E,255nm,0.5s						
MXMB	**Maximikha**	**3.05**	**325**	*e*Pn	Pn	12 42 26.5	+1.6
MXMB				*e*Pg	Pg	12 42 31.5	-3.6
MXMB				*e*Sg	Sg	12 43 11.6	-3.0
MXMB				Pmax			
	comp=E,142nm,0.5s						
MXMB				Smax			
	comp=E,510nm,0.8s						
ZRHB	**Zarechye**	**3.31**	**304**	*e*Pn	Pn	12 42 30.7	+2.2
ZRHB				*e*Pg	Pg	12 42 36.8	-3.3
ZRHB				*e*Sg	Sg	12 43 18.8	-4.1
ZRHB				Pmax			
	comp=E,36nm,0.3s						
ZRHB				Smax			
	comp=E,852nm,0.6s						
FFNB	**Fofonovo**	**3.31**	**294**	*e*Pn	Pn	12 42 31.0	+2.5
FFNB				*e*Pg	Pg	12 42 37.3	-2.8
FFNB				*e*Sg	Sg	12 43 19.1	-3.9
FFNB				Pmax			
	comp=E,175nm,0.2s						
FFNB				Smax			
	comp=E,953nm,0.5s						
OGRR	**Ongureny**	**3.79**	**320**	*e*PN	Pn	12 42 35.7	+0.7
OGRR				*e*		12 42 45.0	
OGRR				*e*		12 43 34.4	
OGRR				pmax	pmax		
	comp=Z,26nm,0.3s						
OGRR				smax			
	comp=E,163nm,1.6s						
OGRR	**Ongureny**	**3.79**	**320**	⇑*i*Pn	Pn	12 42 35.3	+0.3
OGRR				⇑*i*Pg	Pg	12 42 46.9	-2.3
OGRR				*e*Sn	Sn	12 43 20.0	+0.5
OGRR				*e*Sg	Sg	12 43 34.4	-3.8
OGRR				Pmax			
	comp=E,22nm,0.3s						
OGRR				Smax			
	comp=E,131nm,0.5s						
TRG	**Tyrgan**	**3.84**	**303**	*e*PN	Pn	12 42 36.1	+0.4
TRG				*e*		12 42 45.2	
TRG				*e*S	Sn	12 43 21.1	+0.2
TRG				*e*		12 43 36.0	
TRG				pmax	pmax		
	comp=Z,19nm,0.2s						
TRG				smax			
	comp=N,213nm,0.3s						
TRG	**Tyrgan**	**3.84**	**303**	*e*Pg	Pg	12 42 47.7	-2.5
TRG				*e*Sn	Sn	12 43 21.8	+0.9
TRG				*e*Sg	Sg	12 43 36.1	-3.8
TRG				Pmax			
	comp=N,18nm,0.2s						
TRG				Smax			
	comp=N,269nm,0.8s						
YLYR	**Ulyunkhan**	**4.08**	**356**	*e*	Pn	12 42 36.1	-3.0
YLYR				*e*Pg	Pg	12 42 51.3	-3.6
YLYR				*e*Sg	Sg	12 43 42.3	-5.5
YLYR				Pmax			
	comp=N,22nm,0.3s						
YLYR				Smax			
	comp=N,285nm,1.7s						
ULN	**Ulaanbaatar**	**4.22**	**227**	⇓*i*Pn	Pn	12 42 43.5	+2.5
ULN				⇓*i*Pg	Pg	12 42 55.0	-2.5
ULN				*e*Sg	Sg	12 43 48.4	-3.7
LSTR	**Listvyanka**	**4.42**	**287**	*e*Pn	Pn	12 42 46.2	+2.5
LSTR				*e*Pg	Pg	12 42 58.0	-3.2
LSTR				*e*Sg	Sg	12 43 53.3	-5.1
LSTR				Pmax			
	comp=N,7.0nm,0.6s						
LSTR				Smax			
	comp=N,217nm,1.3s						
UKT	**Uakit**	**4.83**	**13**	⇓*i*Pn	Pn	12 42 50.7	+1.3
UKT				⇑*i*Pg	Pg	12 43 04.7	-4.5
UKT				*e*Sg	Sg	12 44 06.0	-5.7
UKT				Pmax			
	comp=N,13nm,0.9s						
UKT				Smax			
	comp=N,283nm,1.5s						
IRK	**Irkutsk**	**4.84**	**290**	*e*Sg	Sg	12 44 09.1	-2.8
IRK				Smax			
	comp=N,283nm,1.1s						
KMO	**Kumora**	**5.09**	**357**	*e*PN	Pn	12 42 53.6	+0.6
KMO				*e*		12 43 08.1	
KMO				*e*S	Sn	12 43 51.6	-0.2
KMO				*e*		12 44 13.8	
KMO				pmax	pmax		
	comp=Z,44nm,0.4s						
KMO				smax			
	comp=E,319nm,1.0s						
KMO	**Kumora**	**5.09**	**357**	*e*Pn	Pn	12 42 54.6	+1.6
KMO				⇑*i*Pg	Pg	12 43 08.7	-5.5
KMO				*e*Sn	Sn	12 43 51.7	-0.1
KMO				*e*Sg	Sg	12 44 15.0	-5.1
KMO				Pmax			
	comp=E,44nm,0.4s						
KMO				Smax			
	comp=E,319nm,1.0s						
TLY	**Talaya**	**5.12**	**283**	*e*Pn	Pn	12 42 54.6	+1.3
TLY				*e*Pg	Pg	12 43 11.1	-3.5
TLY				*e*Sn	Sn	12 43 52.7	+0.3
TLY				*e*Sg	Sg	12 44 15.6	-5.3
TLY				Pmax			
	comp=E,6.0nm,0.7s						
TLY				Smax			
	comp=E,256nm,1.8s						
NIZ	**Nizh Angarsk**	**5.13**	**346**	*e*PN	Pn	12 42 54.9	+1.4
NIZ				*e*		12 43 09.7	
NIZ				*e*		12 44 15.2	
NIZ				pmax	pmax		
	comp=Z,11nm,0.3s						
NIZ				smax			
	comp=E,43nm,0.9s						
NIZ	**Nizh Angarsk**	**5.13**	**346**	⇓*i*Pn	Pn	12 42 55.0	+1.5
NIZ				*e*Pg	Pg	12 43 10.4	-4.6
NIZ				*e*Sg	Sg	12 44 16.1	-5.3
NIZ				Pmax			
	comp=E,15nm,0.6s						
NIZ				Smax			
	comp=E,73nm,1.1s						
ZAK	**Zakamensk**	**5.36**	**269**	*e*PN	Pn	12 42 57.1	+0.4
ZAK				*e*		12 43 12.7	
ZAK				*e*		12 44 24.0	
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ZAK				smax			
	comp=N,74nm,1.0s						
ZAK	**Zakamensk**	**5.36**	**269**	*e*Pg	Pg	12 43 14.6	-4.7
ZAK				*e*Sg	Sg	12 44 24.2	-4.5
ZAK				Pmax			
	comp=N,8.0nm,0.4s						
ZAK				Smax			
	comp=N,80nm,1.5s						
HIA	**Hailar**	**5.43**	**103**	*e*Pg	Pg	12 43 14.8	-5.8
HIA				*e*Sg	Sg	12 44 25.4	-5.4
ARS	**Arshan**	**5.90**	**284**	*e*PG	Pg	12 43 25.6	-4.0
ARS				*e*S	Sg	12 44 42.2	-3.7
ARS				smax			
	comp=E,157nm,0.7s						
ARS	**Arshan**	**5.90**	**284**	*e*Pg	Pg	12 43 25.4	-4.2
ARS				*e*Sg	Sg	12 44 42.0	-3.9
ARS				Pmax			
	comp=E,8.0nm,0.8s						
ARS				Smax			
	comp=E,158nm,1.3s						
NLYR	**Nelyaty**	**6.17**	**21**	*e*PN	Pn	12 43 08.0	+0.2
NLYR				*e*		12 43 28.3	
NLYR				*e*		12 44 48.2	
NLYR				pmax	pmax		
	comp=Z,22nm,0.4s						
NLYR				smax			
	comp=N,269nm,1.0s						
NLYR	**Nelyaty**	**6.17**	**21**	*e*Pn	Pn	12 43 08.8	+1.0
NLYR				*e*Sg	Sg	12 44 48.2	-6.5
NLYR				max			
	comp=N,3.0nm,0.4s						
NLYR				Smax			
	comp=N,270nm,1.1s						
TUP	**Tupik**	**6.21**	**51**	*e*PN	Pn	12 43 10.3	+2.0
TUP				*e*		12 43 28.6	
TUP				*e*		12 44 46.0	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TUP				smax			
	comp=N,80nm,0.9s						
TUP	**Tupik**	**6.21**	**51**	*e*Pn	Pn	12 43 09.4	+1.1
TUP				*e*Pg	Pg	12 43 28.9	-6.6
TUP				*e*Sg	Sg	12 44 48.6	-7.2
TUP				Pmax			
	comp=N,4.0nm,0.4s						
TUP				Smax			
	comp=N,95nm,1.1s						
MOY	**Mondy**	**6.76**	**281**	*e*Pg	Pg	12 43 41.0	-5.0
MOY				*e*Sg	Sg	12 45 08.6	-4.9
MOY				Pmax			
	comp=N,3.0nm,0.7s						
MOY				Smax			
	comp=N,70nm,1.1s						
BOD	**Bodaibo**	**7.16**	**10**	*e*Pg	Pg	12 43 47.0	-6.6
BOD				*e*Sg	Sg	12 45 17.7	-8.4
BOD				Pmax			
	comp=N,2.0nm,0.3s						
BOD				Smax			
	comp=N,69nm,1.0s						
CRS	**Chara**	**7.24**	**30**	*e*Pg	Pg	12 43 49.9	-5.3
CRS				*e*Sg	Sg	12 45 21.7	-7.1
CRS				Pmax			
	comp=N,2.0nm,0.4s						
CRS				Smax			
	comp=N,143nm,1.3s						
ORL	**Orlik**	**7.58**	**288**	*e*PG	Pg	12 43 50.8	-11
ORL				*e*S	Sn	12 45 32.0	+39
ORL				smax			
	comp=N,65nm,1.6s						
ORL	**Orlik**	**7.58**	**288**	*e*Pg	Pg	12 43 55.4	-6.2
ORL				*e*Sg	Sg	12 45 32.1	-7.5
ORL				Pmax			
	comp=N,2.0nm,0.6s						
ORL				Smax			
	comp=N,64nm,1.3s						
TDJR	**Todzha**	**9.82**	**285**	*e*Sg	Sn	12 46 41.9	+54

ISCJB ***22*** *12:42:57.4±0.4,7°.37N±0°.08×35°.74W±0°.07,h10km, mb4.3/27,MS4.0/20,Error ellipse: s-maj=12.3km s-min=9.4km az=166.6*
IDC ***22*** *12:42:57.7±0.7,7°.49N×35°.85W,h0km,mb4.2/15, mb1 4.4/15,mb1mx4.2/26,mbtmp4.2/15,MS4.0/19, Ms1 4.0/19,ms1mx3.9/25,Error ellipse: s-maj=24.7km s-min=15.0km az=157.0*
NEIC ***22*** *12:42:59.1±0.3,7°.38N×35°.76W,h10km,mb4.6/13,Error ellipse: s-maj=9.5km s-min=7.5km az=169.0*
GCMT ***22*** *12:42:59.1±0.3,7°.42N×35°.85W,h18km±1km,MW5.0/77, Moment Tensor Solution. s32,c39; s77,c105; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}0.25±.13; $M_{\theta\theta}$-0.30±.12; $M_{\phi\phi}$0.05±.12; $M_{r\theta}$-1.41±.32; $M_{\theta\phi}$-3.18±.10; $M_{\phi r}$0.02±.25; Best double couple: $M_0$3.48500×10^16 NP1:ϕ_s2.00000°,δ66.00000°,λ2.00000°. NP2: ϕ_s271.00000°,δ88.00000°,λ156.00000°. Principal axes: T 3.3860, Plg18.0000°, Azm224.0000°; N 0.1990, Plg66.0000°, Azm86.0000°; P -3.5850, Plg15.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 22 12:42:59.4±0.4,7°.38N±0°.08×35°.76W±0°.07,h10km,n45, σ0°80/37,mb4.3/27,MS4.0/20,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.12**	**181**	*e*Pn	**Pn**	**12 46 05.3**	**-0.7**
	10nm,0.6s						
BBTS	**Babate**	**20.20**	**67**	P	**P**	**12 47 36.0**	**+1.3**
	30nm,0.7s,baz=268,slow=2.1,SNR=7.1						
BBTS				S	**S**	**12 51 10.8**	**-11**
	9.1nm,0.4s,baz=70,slow=22,SNR=8.6						
BBTS				LR	LR	12 53 21.8	
	comp=Z,456nm,21.2s,MS3.8,baz=62,slow=31						
BBTS	**Babate**	**20.20**	**67**	P	**P**	**12 47 36.0**	**+1.3**
BBTS				S	**S**	**12 51 10.8**	**-11**
BBTS				LR	LR	12 53 21.8	
PCRV	**Puerto La Cruz**	**28.67**	**278**	LR	LR	13 01 03.5	
	comp=Z,102nm,19.5s,MS3.4,baz=72,slow=38						
DBIC	**Dimbokro**	**30.68**	**89**	P	**P**	**12 49 14.6**	**-0.1**
	3.0nm,0.7s,mb4.2,baz=258,slow=9.7,SNR=3.8						
DBIC	**Dimbokro**	**30.68**	**89**	*e*P	**P**	**12 49 14.2**	**-0.5**
SJG	**San Juan**	**31.45**	**293**	LR	LR	12 59 15.2	
	comp=Z,585nm,21.5s,MS4.2,baz=275,slow=31						
SIV	**San Ignacio**	**34.16**	**227**	P	**P**	**12 49 45.1**	**+0.1**
	3.2nm,1.0s,mb4.2,baz=70,slow=11,SNR=9.8						
TOA0	**Torodi Ar. Sit**	**37.27**	**78**	*e*P	**P**	**12 50 11.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**37.27**	**78**	P	**P**	**12 50 11.3**	**-0.6**
	4.7nm,0.8s,mb4.4,baz=271,slow=9.2,SNR=21						
TORD				LR	LR	13 02 58.5	
	comp=Z,256nm,20.9s,MS4.0,baz=235,slow=32						
ROSC	**El Rosal**	**38.42**	**269**	LR	LR	13 06 35.0	
	comp=Z,212nm,18.8s,MS4.0,baz=61,slow=37						
CPUP	**Villa Florida**	**39.51**	**211**	LR	LR	13 07 06.3	
	comp=Z,183nm,18.7s,MS3.9,baz=16,slow=37						
LPAZ	**La Paz**	**39.74**	**234**	P	**P**	**12 50 32.9**	**+0.4**
	6.6nm,0.8s,mb4.4,baz=62,slow=6.4,SNR=20						
LPAZ				LR	LR	13 05 46.1	
	comp=Z,204nm,21.7s,MS3.9,baz=17,slow=34						
LPAZ	**La Paz**	**39.74**	**234**	*e*P	**P**	**12 50 32.5**	**-0.1**
	0.8nm,1.1s,mb3.4						
LPAZ				LR	LR	13 05 46.1	
KEST	**Kesra**	**49.93**	**49**	P	**P**	**12 51 54.5**	**+0.9**
	2.6nm,0.8s,mb4.3,baz=187,slow=7.9,SNR=8.8						
KEST				LR	LR	13 11 23.9	
	comp=Z,183nm,20.7s,MS4.1,baz=213,slow=34						
SCHQ	**Schefferville**	**53.45**	**338**	LR	LR	13 09 56.6	
	comp=Z,121nm,20.5s,MS3.9,baz=127,slow=30						
ECH	**Echery**	**54.51**	**34**	*e*P	**P**	**12 52 26.6**	**-0.8**
	11nm,1.4s,mb4.7						
PLAL	**Pickwick Lake**	**55.20**	**308**	*e*P	**P**	**12 52 32.4**	**-0.3**
	6.0nm,0.9s,mb4.6						
GRA1	**Grafenberg Arr**	**57.56**	**34**	*e*P	**P**	**12 52 48.9**	**-0.3**
	4.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**57.56**	**34**	*e*P	**P**	**12 52 48.9**	**-0.3**
	comp=Z,4.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**57.56**	**34**	*e*P	**P**	**12 52 48.9**	**-0.3**
	comp=Z,4.0nm,1.0s,mb4.4						
PLCA	**Paso Flores**	**57.58**	**211**	LR	LR	13 18 09.0	
	comp=Z,292nm,18.6s,MS4.4,baz=28,slow=37						
GERES	**GERESS Array B**	**58.56**	**36**	P	**P**	**12 52 55.6**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.7,baz=249,slow=6.6,SNR=6.2						
GERES				LR	LR	13 14 30.1	
	comp=Z,174nm,21.9s,MS4.1,baz=264,slow=32						
NB2	**NORSAR Subarra**	**63.85**	**23**	P	**P**	**12 53 32.1**	**+0.2**
	comp=Z,2.9nm,1.0s,mb4.3,baz=236,slow=6.5						
NOA	**NORSAR Array B**	**63.85**	**23**	LR	LR	13 16 40.8	
	comp=Z,115nm,21.0s,MS4.0,baz=240,slow=32						
MLR	**Muntele Rosu**	**65.08**	**43**	P	**P**	**12 53 41.3**	**+1.1**
	comp=Z,5.2nm,0.8s,mb4.6,baz=253,slow=11,SNR=5.0						
TXAR	**Lajitas Array**	**67.17**	**299**	P	**P**	**12 53 54.1**	**+0.1**
	comp=Z,0.5nm,0.9s,mb3.6,baz=85,slow=5.5,SNR=4.1						
TXAR				LR	LR	13 18 59.5	
	comp=Z,54nm,21.0s,MS3.8,baz=185,slow=32						
AKASG	**Malin Array Be**	**68.58**	**38**	P	**P**	**12 54 01.0**	**-1.5**
	comp=Z,0.7nm,0.4s,mb3.9,baz=257,slow=5.8,SNR=7.2						
BOSA	**Boshof**	**68.79**	**124**	P	**P**	**12 54 05.2**	**+1.0**
	comp=Z,3.9nm,0.9s,mb4.3,baz=310,slow=6.6,SNR=5.1						
BOSA				LR	LR	13 17 37.4	
	comp=Z,155nm,20.8s,MS4.2,baz=88,slow=30						
BRTR	**Keskin Array B**	**69.49**	**50**	P	**P**	**12 54 08.8**	**+0.4**
	comp=Z,1.0nm,0.7s,mb3.9,baz=231,slow=4.0,SNR=6.5						
BRTR				LR	LR	13 24 27.9	
	comp=Z,82nm,21.9s,MS3.9,baz=53,slow=36						
MMAI	**Mount Meron Ar**	**70.23**	**58**	LR	LR	13 26 31.2	
	comp=Z,56nm,21.2s,MS3.8,baz=315,slow=37						
FINES	**FINESS Array B**	**70.32**	**27**	P	**P**	**12 54 12.5**	**-0.5**
	comp=Z,3.0nm,0.9s,mb4.2,baz=211,slow=6.7,SNR=6.5						
LAZ	**Ladron**	**70.51**	**304**	*e*P	**P**	**12 54 13.5**	**-1.2**
	comp=Z,2.2nm,1.0s,mb4.0						
PDAR	**Pinedale Array**	**73.14**	**312**	P	**P**	**12 54 30.2**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.9,baz=90,slow=7.4,SNR=8.0						
PDAR				LR	LR	13 21 59.1	
	comp=Z,119nm,20.7s,MS4.2,baz=116,slow=32						
REDW	**Red Top Meadow**	**74.14**	**313**	*e*P	**P**	**12 54 36.4**	**+0.2**

comp=Z,100nm,18.9s,MS4.3,baz=287,slow=35
KURK Kurchatov 99.31 36 LR LR 13 37 42.9
comp=Z,50nm,21.7s,MS4.0,baz=140,slow=33

IDC 22 12:43:15.8±1.4, 31°.81N×104°.47E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=49.4km s-min=22.5km az=48.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.08**	**67**	P	P	12 47 50.5	-0.3
	1.4nm,0.7s,baz=254,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**22.66**	**318**	P	P	12 48 19.2	+0.7
	0.3nm,0.4s,baz=111,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam**	**26.23**	**333**	P	P	12 48 52.8	+0.6
	0.7nm,0.4s,baz=134,slow=14,SNR=3.2						
KURK	**Kurchatov**	**26.88**	**322**	P	P	12 48 57.1	-1.0
	0.6nm,0.2s,baz=137,slow=7.0,SNR=2.3						
ASAR	**Alice Springs**	**61.93**	**149**	P	P	12 53 37.5	+0.1
	0.2nm,0.5s,baz=332,slow=6.6,SNR=7.0						

*IDC **22** 13:18:27.6±1.2, 35°.35N×81°.49E, h0km, mb3.4/5, mb1 3.5/9, mb1mx3.4/26, mbtmp3.4/9, ML3.4/4, Error ellipse: s-maj=40.9km s-min=19.8km az=61.0*
*ISCJB **22** 13:18:28.4±0.8, 35°.52N±0°.09×81°.7E±0°.1, h10km, mb3.4/6, Error ellipse: s-maj=17.4km s-min=9.3km az=137.6*
*NEIC **22** 13:18:30.7±1.2, 35°.52N×81°.80E, h10km, mb3.6/1, Error ellipse: s-maj=23.7km s-min=14.1km az=50.0*
*BJI **22** 13:18:34.9, 35°.67N×81°.45E, h15km, ML3.7/6*
ISC 22 13:18:30.1±0.8, 35°.47N±0°.09×81°.7E±0°.1, h10km, n17, σ1°36/20, mb3.4/6, 2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.10**	**313**	*e*Pn	**Pn**	**13 20 03.3**	**+3.1**
KSH				Sn	**Sn**	**13 21 08.1**	**-1.9**
KSH				smax			
	comp=N,350nm,1.2s						
KSH				smax			
	comp=E,190nm,1.1s						
UCH	**Uchtor**	**8.78**	**322**	*e*Pn	**Pn**	**13 20 38.0**	**+0.9**
	comp=E,11nm,0.8s						
AML	**Almayashu**	**9.13**	**319**	*e*Pn	**Pn**	**13 20 42.7**	**+0.8**
	comp=E,10nm,0.8s						
EKS2	**Erkin-Say**	**9.47**	**322**	*e*Pn	**Pn**	**13 20 48.0**	**+1.5**
	comp=E,2.6nm,0.7s						
MK31	**Makanchi Array**	**11.33**	**2**	⇓P	**Pn**	**13 21 12.5**	**+0.6**
	comp=E,1.6nm,0.7s,baz=180,slow=13,SNR=8.7						
MK31				⇓S	**Sn**	**13 23 25.4**	**+7.0**
	comp=E,1.4nm,0.7s,baz=182,slow=25,SNR=4.7						
MK31	**Makanchi Array**	**11.33**	**2**	*e*Pn	**Pn**	**13 21 12.9**	**+1.1**
MKAR	**Makanchi Array**	**11.33**	**2**	Pn	**Pn**	**13 21 12.7**	**+0.9**
	comp=E,0.1nm,0.3s,baz=182,slow=13,SNR=8.7						
MKAR				Sn	**Sn**	**13 23 14.8**	**-3.6**
	comp=E,0.1nm,0.3s,baz=170,slow=26,SNR=2.4						
KURK	**Kurchatov**	**15.41**	**353**	Pn	**Pn**	**13 22 04.7**	**-2.7**
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**18.61**	**6**	P	**Pn**	**13 22 47.5**	**-0.1**
	comp=E,0.3nm,0.3s,baz=189,slow=18,SNR=4.5						
BVAR	**Borovoye Array**	**19.30**	**339**	P	**Pn**	**13 22 54.7**	**-1.3**
	comp=E,0.3nm,0.3s,baz=126,slow=7.3,SNR=3.9						
ABKAR	**Akbulak array**	**21.09**	**317**	*e*P	**P**	**13 23 16.7**	**+2.3**
	comp=E,2.3nm,0.8s,mb3.6						
AKTK	**Aktyubinsk**	**22.77**	**318**	P	**P**	**13 23 32.0**	**-0.4**
AKTO	**Aktyubinsk**	**22.77**	**318**	P	**P**	**13 23 32.0**	**-0.4**
	comp=E,0.4nm,0.3s,mb3.3,baz=132,slow=12,SNR=3.2						
CMAR	**Chiang Mai Arr**	**22.80**	**134**	P	**P**	**13 23 33.5**	**+0.6**
	comp=E,0.3nm,0.3s,mb3.2,baz=208,slow=30,SNR=2.7						
TORD	**Torodi Ar. Bea**	**74.44**	**275**	P	**P**	**13 30 06.8**	**-2.0**
	comp=E,0.3nm,0.4s,mb3.5,baz=52,slow=4.3,SNR=3.1						
ASAR	**Alice Springs**	**76.80**	**132**	P	**P**	**13 30 21.3**	**-0.7**
	comp=E,0.3nm,0.8s,mb3.3,baz=323,slow=6.9,SNR=4.1						
YKA	**Yellowknife Ar**	**81.50**	**8**	P	**P**	**13 30 46.7**	**-0.5**
	comp=E,0.2nm,0.6s,mb3.2,baz=348,slow=5.7,SNR=3.4						

*IDC **22** 13:55:18.7±0.7, 1°.57N×126°.48E, h0km, mb4.4/15, mb1 4.4/17, mb1mx4.3/24, mbtmp4.3/17, ML4.3/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/30, Error ellipse: s-maj=33.6km s-min=13.8km az=79.0*
*ISCJB **22** 13:55:22.0±2.4, 1°.52N±0°.07×126°.4E±0°.1, h39km±22km, mb4.5/25, Error ellipse: s-maj=21.6km s-min=8.2km az=154.1*
*NEIC **22** 13:55:23.6±0.5, 1°.54N×126°.40E, h35km, mb4.6/10, Error ellipse: s-maj=16.4km s-min=8.5km az=73.0*
ISC 22 13:55:22.9±3.9, 1°.53N±0°.07×126°.4E±0°.1, h29km±28km, n40, σ1°25/37, mb4.5/25, 2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.30**	**226**	Pn	**Pn**	**13 57 36.4**	**+1.3**
	4.7nm,0.3s,baz=282,slow=0.2,SNR=5.9						
KKM	**Kota Kinabalu**	**11.11**	**294**	*e*Pn	**Pn**	**13 58 01.5**	**+1.5**
	10nm,0.6s						
KAKA	**Kakadu**	**15.36**	**157**	*e*Pn	**Pn**	**13 58 59.0**	**+1.3**
	75nm,0.8s						
KSM	**Kuching**	**16.09**	**270**	*e*Pn	**Pn**	**13 59 06.6**	**-0.6**
	18nm,0.9s						
KNA	**Kununurra**	**17.32**	**172**	*e*P	**Pn**	**13 59 22.3**	**-0.4**
	15nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.52**	**182**	⇓*i*P	**Pn**	**13 59 47.2**	**-2.2**
	9.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.52**	**182**	P	**Pn**	**13 59 46.7**	**-2.8**
	0.5nm,0.3s,baz=30,slow=10,SNR=8.8						
TPUB	**Ta-pu**	**22.36**	**346**	*e*P	**P**	**14 00 18.9**	**+0.3**
	31nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**22.71**	**160**	*e*P	**P**	**14 00 21.6**	**-0.7**
	25nm,0.7s,mb4.8						
MBWA	**Marble Bar**	**23.47**	**196**	*e*P	**P**	**14 00 27.8**	**-2.6**
MBWA	**Marble Bar**	**23.47**	**196**	*e*P	**P**	**14 00 27.9**	**-2.5**
	9.3nm,0.8s,mb4.3						
QIZ	**Qiongzhong**	**23.79**	**318**	*e*P	**P**	**14 00 30.9**	**-2.4**
	5.6nm,1.0s,mb4.0						
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**14 00 54.3**	**+0.2**
	3.8nm,0.7s,mb4.0,baz=345,slow=6.9,SNR=41						
ASAR				PcP	PcP	14 04 22.1	+0.5
	0.9nm,0.5s,baz=349,slow=2.4,SNR=7.0						
ENH	**Enshi**	**32.79**	**332**	*e*P	**P**	**14 01 52.8**	**-0.9**
	13nm,0.9s,mb4.9						
NWAO	**Narrogin (SRO)**	**35.35**	**193**	P	**P**	**14 02 15.7**	**-0.1**
	13nm,1.1s,mb4.8,baz=16,slow=10,SNR=4.6						
BBOO	**Buckleboo**	**35.35**	**166**	*e*P	**P**	**14 02 15.3**	**-0.5**
	5.9nm,0.5s,mb4.8						
KSRS	**Korea Array**	**35.78**	**2**	P	**P**	**14 02 20.8**	**+1.3**
	0.7nm,0.7s,mb3.7,baz=180,slow=9.3,SNR=3.2						
STKA	**Stephens Creek**	**36.21**	**158**	*e*P	**P**	**14 02 23.8**	**+0.6**
	5.2nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**14 02 23.8**	**+0.5**
	6.2nm,0.6s,mb4.8,baz=322,slow=8.9,SNR=22						
ARPS	**Mount Arapiles**	**40.71**	**161**	⇓*i*P	**P**	**14 03 02.0**	**+1.0**
	33nm,0.4s,mb5.3						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**14 04 08.2**	**-0.7**
	0.8nm,0.5s,mb4.0,baz=130,slow=5.8,SNR=2.1						
SONM				LR	LR	14 26 31.2	
	comp=Z,52nm,20.5s,baz=123,slow=38						
PETK	**Petropavlovsk-**	**57.58**	**22**	P	**P**	**14 05 09.0**	**-0.8**
	2.3nm,0.7s,mb4.3,baz=187,slow=5.6,SNR=7.5						
MK31	**Makanchi Array**	**59.18**	**326**	*e*P	**P**	**14 05 19.6**	**-1.5**
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**14 05 20.4**	**-0.8**
	2.0nm,0.4s,mb4.5,baz=122,slow=8.5,SNR=16						
UCH	**Uchtor**	**61.58**	**318**	*e*P	**P**	**14 05 37.2**	**-0.5**
	6.4nm,1.1s,mb4.7						
ZALV	**Zalesovo Beam**	**62.40**	**334**	P	**P**	**14 05 42.0**	**-0.9**
	0.8nm,0.4s,mb4.2,baz=112,slow=6.6,SNR=7.5						
ZALV	**Zalesovo Beam**	**62.40**	**334**	P	**P**	**14 05 42.0**	**-0.9**
KURK	**Kurchatov**	**63.42**	**328**	*e*P	**P**	**14 05 48.1**	**-1.7**
	9.4nm,0.7s,mb5.0						
BVAR	**Borovoye Array**	**68.98**	**328**	P	**P**	**14 06 25.2**	**-0.2**
	1.9nm,0.8s,mb4.1,baz=105,slow=7.3,SNR=6.6						
ABKAR	**Akbulak array**	**73.65**	**321**	*e*P	**P**	**14 06 53.0**	**-0.7**
	1.2nm,0.6s,mb4.0						
AKTK	**Aktyubinsk**	**75.18**	**322**	P	**P**	**14 07 02.8**	**+0.2**
AKTO	**Aktyubinsk**	**75.18**	**322**	P	**P**	**14 07 02.8**	**+0.2**
	1.5nm,0.5s,mb4.2,baz=107,slow=9.8,SNR=6.3						
TRF	**Thorofare Moun**	**85.64**	**27**	P	sP	14 08 17.0	+5.7
ASF	**Jabal al Asfar**	**88.78**	**302**	P	**P**	**14 08 16.6**	**+2.2**
	3.3nm,0.5s,mb4.9,baz=335,slow=4.6,SNR=7.0						
MMAI	**Mount Meron Ar**	**90.02**	**303**	P	**P**	**14 08 22.3**	**+2.1**
	1.0nm,0.4s,mb4.5,baz=137,slow=6.9,SNR=2.8						
BRTR	**Keskin Array B**	**91.17**	**310**	P	**P**	**14 08 27.0**	**+1.6**
	1.2nm,0.9s,mb4.2,baz=98,slow=7.7,SNR=5.4						
ARCES	**ARCESS Array B**	**92.39**	**340**	P	**P**	**14 08 32.3**	**+1.9**
	1.9nm,0.8s,mb4.5,baz=90,slow=6.3,SNR=3.9						
SPITS	**Spitsbergen Ar**	**92.56**	**349**	P	**P**	**14 08 33.1**	**+2.0**
	2.9nm,0.8s,mb4.7,baz=91,slow=9.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**123.27**	**287**	PKP	PKPdf	14 14 18.4	+0.3
	1.6nm,0.7s,baz=53,slow=1.5,SNR=9.9						
DBIC	**Dimbokro**	**130.68**	**280**	PKP	PKPdf	14 14 34.0	+1.8
	1.4nm,0.5s,baz=12,slow=6.6,SNR=4.2						

*IDC **22** 14:00:22.1±1.2, 15°.02N×147°.00E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/24, mbtmp4.1/11, ML4.3/1, MS3.8/2, Ms1 3.8/2, ms1mx2.7/35, Error ellipse: s-maj=31.9km s-min=19.2km az=109.0*
*NEIC **22** 14:00:26.8±0.6, 14°.94N×147°.04E, h35km, mb3.3/1, Error ellipse: s-maj=17.1km s-min=11.8km az=98.0*
ISC 22 14:00:27.3±3.6, 15°.0N±0°.1×147°.1E±0°.2, h39km±30km, n21, σ1°07/16, mb3.9/11, MS3.7/2, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.57**	**238**	Pn	**Pn**	**14 01 05.3**	**-1.2**
	56nm,0.3s,baz=73,slow=1.6,SNR=45						
GUMO				Sn	**Sn**	**14 01 38.1**	**+1.6**
	44nm,0.3s,baz=184,slow=22,SNR=6.8						
JOW	**Kunigami**	**21.14**	**307**	P	**P**	**14 05 08.6**	**-0.4**
	13nm,0.8s,mb4.3,baz=121,slow=14,SNR=3.9						
JOW				LR	LR	14 11 53.7	
	comp=Z,484nm,21.3s,MS3.9,baz=174,slow=33						
JOW	**Kunigami**	**21.14**	**307**	P	**P**	**14 05 08.6**	**-0.4**
JOW				LR	LR	14 11 53.7	
KSRS	**Korea Array**	**28.11**	**326**	P	**P**	**14 06 13.6**	**-1.9**
	0.8nm,0.5s,mb3.6,baz=140,slow=11,SNR=5.8						
ASAJ	**Asahikawa**	**29.29**	**353**	P	**P**	**14 06 27.5**	**+1.6**
	3.8nm,0.9s,mb4.2,baz=180,slow=7.1,SNR=3.1						
ASAR	**Alice Springs**	**40.52**	**199**	P	**P**	**14 08 02.7**	**-0.1**
	0.8nm,0.5s,mb3.6,baz=17,slow=11,SNR=21						
CMAR	**Chiang Mai Arr**	**46.15**	**281**	P	**P**	**14 08 48.6**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=86,slow=6.3,SNR=6.5						
STKA	**Stephens Creek**	**46.89**	**186**	*e*P	**P**	**14 08 53.0**	**-0.9**
	0.3nm,0.8s,mb3.3						
ZALV	**Zalesovo Beam**	**61.77**	**324**	P	**P**	**14 10 41.3**	**-0.6**
	0.6nm,0.4s,mb4.1,baz=116,slow=6.1,SNR=3.7						
MK31	**Makanchi Array**	**62.01**	**315**	*e*P	**P**	**14 10 44.0**	**+0.3**
MKAR	**Makanchi Array**	**62.01**	**315**	P	**P**	**14 10 43.9**	**+0.3**
	1.5nm,0.5s,mb4.4,baz=91,slow=9.7,SNR=11						
BVAR	**Borovoye Array**	**70.19**	**321**	P	**P**	**14 11 35.3**	**-0.6**
	1.6nm,0.5s,mb4.2,baz=109,slow=8.0,SNR=11						
PPT	**Papeete**	**70.32**	**115**	LR	LR	14 42 36.3	
	comp=Z,31nm,18.2s,MS3.6,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**80.63**	**28**	P	**P**	**14 12 38.0**	**+2.3**
	0.2nm,0.5s,mb3.3,baz=294,slow=6.0,SNR=4.2						
YKA	**Yellowknife Ar**	**80.63**	**28**	P	**P**	**14 12 38.0**	**+2.3**
ARCES	**ARCESS Array B**	**86.42**	**343**	P	**P**	**14 13 05.1**	**-0.2**
	1.4nm,0.8s,mb4.2,baz=62,slow=8.4,SNR=5.5						
DBIC	**Dimbokro**	**144.85**	**306**	PKP	PKPdf	14 20 00.5	-0.6
	2.7nm,1.0s,baz=55,slow=4.1,SNR=4.7						
DBIC	**Dimbokro**	**144.85**	**306**	PKP	PKPdf	14 20 00.5	-0.6
KIC	**Kosan Boka**	**144.95**	**305**	*e*PKP2	PKPdf	14 20 00.5	-0.8
	102nm,2.0s						
TIC	**Toumodi**	**144.99**	**306**	*e*PKP2	PKPdf	14 20 00.1	-1.3
	13nm,0.2s						
LIC	**Lamto**	**145.25**	**305**	*e*PKP2	PKPab	14 20 01.5	-0.2
	53nm,1.4s						

*ISCJB **22** 14:16:26.7±0.9, 21°.53N±0°.07×143°.1E±0°.2, h333km±10km, mb3.6/14, Error ellipse: s-maj=22.6km s-min=10.0km az=170.4*
*IDC **22** 14:16:27.2±1.5, 21°.55N×143°.14E, h320km±14km, mb3.4/12, mb1 3.6/15, mb1mx3.4/26, mbtmp3.5/15, Error ellipse: s-maj=18.0km s-min=11.1km az=79.0*
*NEIC **22** 14:16:28.7±1.2, 21°.51N×143°.14E, h340km±13km, mb3.6/3, Error ellipse: s-maj=14.4km s-min=8.6km az=76.0*
ISC 22 14:16:27.3±0.9, 21°.55N±0°.07×143°.2E±0°.1, h324km±10km, n22, σ0°65/21, mb3.6/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.59**	**351**	P	**Pn**	**14 17 51.6**	**-0.9**
	31nm,0.3s,baz=243,slow=7.9,SNR=25						
CBIJ				S	**S**	**14 19 01.1**	**-0.2**
	18nm,0.3s,baz=290,slow=22,SNR=6.3						
GUMO	**Guam**	**8.08**	**168**	P	**Pn**	**14 18 23.8**	**+1.5**
	7.4nm,0.3s,baz=186,slow=11,SNR=5.8						
MJAR	**Matsushiro Arr**	**15.55**	**345**	P	**P**	**14 19 49.1**	**0.0**
	0.7nm,0.3s,baz=162,slow=9.9,SNR=6.8						
KSRS	**Korea Array**	**20.61**	**324**	P	**P**	**14 20 43.1**	**+0.4**
	1.4nm,0.5s,baz=149,slow=9.1,SNR=11						
CTAO	**Charters Tower**	**41.49**	**176**	*e*P	**P**	**14 23 42.8**	**-1.0**
	5.5nm,1.0s,mb3.7						
CM31	**Chiang Mai Arr**	**41.55**	**274**	*e*P	**P**	**14 23 44.5**	**+0.1**
	1.7nm,0.8s,mb3.2						
CMAR	**Chiang Mai Arr**	**41.55**	**274**	P	**P**	**14 23 44.8**	**+0.4**
	0.6nm,0.4s,mb3.0,baz=75,slow=6.9,SNR=5.2						
WRAB	**Tennant Creek**	**42.12**	**192**	*e*P	**P**	**14 23 48.2**	**-0.6**
	1.8nm,0.5s,mb3.5						
ASAR	**Alice Springs**	**45.83**	**192**	P	**P**	**14 24 17.6**	**-0.4**
	0.2nm,0.3s,mb2.7,baz=14,slow=6.9,SNR=16						
STKA	**Stephens Creek**	**53.14**	**182**	P	**P**	**14 25 11.8**	**-0.8**
	0.9nm,0.4s,mb3.5,baz=334,slow=17,SNR=4.9						
ZALV	**Zalesovo Beam**	**54.31**	**322**	P	**P**	**14 25 20.7**	**-0.1**
	1.3nm,0.5s,mb3.5,baz=100,slow=8.1,SNR=6.8						
MK31	**Makanchi Array**	**54.77**	**313**	*e*P	**P**	**14 25 24.7**	**+0.5**
MKAR	**Makanchi Array**	**54.77**	**313**	P	**P**	**14 25 24.7**	**+0.4**
	1.1nm,0.5s,mb3.4,baz=89,slow=9.4,SNR=16						
BVAR	**Borovoye Array**	**62.76**	**320**	P	**P**	**14 26 19.1**	**+0.3**
	2.6nm,0.3s,mb4.2,baz=93,slow=7.6,SNR=14						
INK	**Inuvik**	**67.72**	**24**	P	**P**	**14 26 49.9**	**-0.2**
	1.3nm,0.8s,mb3.7,baz=312,slow=12,SNR=5.2						
YKA	**Yellowknife Ar**	**76.60**	**28**	P	**P**	**14 27 42.2**	**-0.2**
	2.9nm,0.6s,mb4.2,baz=292,slow=5.6,SNR=27						
YKA	**Yellowknife Ar**	**76.60**	**28**	P	**P**	**14 27 42.2**	**-0.2**
ARCES	**ARCESS Array B**	**79.05**	**341**	P	**P**	**14 27 56.0**	**+0.4**
	2.6nm,0.6s,mb4.1,baz=73,slow=8.7,SNR=25						
NVAR	**Mina Array Bea**	**83.26**	**51**	P	**P**	**14 28 19.6**	**+1.3**
	0.6nm,0.5s,mb3.7,baz=298,slow=3.2,SNR=3.8						
FINES	**FINESS Array B**	**83.30**	**334**	P	**P**	**14 28 17.1**	**-0.9**
	1.2nm,0.4s,mb4.1,baz=74,slow=5.2,SNR=8.1						
JSC	**Jenkinsville**	**110.24**	**38**	*e*PKPdf	PKiKP	14 34 19.3	-2.0
LPAZ	**La Paz**	**149.98**	**85**	PKPbc	PKPbc	14 35 42.0	+1.5
	1.4nm,0.6s,baz=333,slow=1.7,SNR=6.2						
LPAZ				PKPab	PKPab	14 35 49.1	+1.7
	0.8nm,0.6s,baz=6.2,slow=5.4,SNR=3.7						

MAN 22 14:24:03, 10°.72N×124°.90E, h31km, mb3.8, ML2.6, MS2.2, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.43**	**319**	*e*P	Pb	14 24 14.3	+1.9
OCLP				*e*S	Sb	14 24 21.4	+2.5
PLP	**Palo**	**0.45**	**10**	*e*P	Pb	14 24 14.2	+1.5
PLP				*e*S	Sb	14 24 21.9	+2.6
MSLP	**Maasin**	**0.58**	**184**	*e*P	Pb	14 24 16.1	+1.3
MSLP				*e*S	Sb	14 24 23.8	+0.9
GUIM	**Jordan**	**2.27**	**268**	*e*P	Pn	14 24 45.8	+7.4

*ISCJB **22** 14:34:44.6±0.5, 7°.32N±0°.10×35°.71W±0°.09, h10km, mb4.0/16, MS3.5/11, Error ellipse: s-maj=15.8km s-min=11.2km az=139.1*
*IDC **22** 14:34:45.3±0.8, 7°.44N×35°.77W, h0km, mb4.0/14, mb1 4.1/14, mb1mx4.0/24, mbtmp4.0/14, MS3.5/11, Ms1 3.5/11, ms1mx3.3/25, Error ellipse: s-maj=30.7km s-min=16.0km az=150.0*
*NEIC **22** 14:34:46.5±0.4, 7°.34N×35°.72W, h10km, mb4.3/2, Error ellipse: s-maj=12.5km s-min=9.1km az=138.0*
ISC 22 14:34:46.7±0.5, 7°.35N±0°.09×35°.74W±0°.09, h10km, n31, σ0°79/26, mb4.0/16, MS3.5/11, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.09**	**181**	*e*Pn	**Pn**	**14 37 52.0**	**-0.8**
	10nm,0.5s						
RCBR				*e*Sn	**Sn**	**14 40 03.6**	**-15**
BBTS	**Babate**	**20.19**	**67**	P	**P**	**14 39 23.4**	**+1.6**
	28nm,0.8s,baz=308,slow=1.8,SNR=7.1						
BBTS				LR	LR	14 46 03.9	
	comp=Z,37nm,19.1s,MS2.8,baz=158,slow=34						
DBIC	**Dimbokro**	**30.66**	**89**	P	**P**	**14 41 01.6**	**-0.1**
	2.4nm,0.7s,mb4.1,baz=250,slow=15,SNR=2.6						
DBIC	**Dimbokro**	**30.66**	**89**	*e*P	**P**	**14 41 00.3**	**-1.4**
	2.9nm,0.8s,mb4.2						
MTP	**Monte Pirata**	**30.93**	**293**	*e*P	**P**	**14 41 03.9**	**-0.2**
	3.4nm,0.6s,mb4.3						
SJG	**San Juan**	**31.48**	**293**	LR	LR	14 51 04.9	
	comp=Z,154nm,19.8s,MS3.7,baz=316,slow=31						
SIV	**San Ignacio**	**34.16**	**227**	P	**P**	**14 41 33.2**	**+0.8**
	2.5nm,0.9s,mb4.2,baz=81,slow=8.4,SNR=11						
TORD	**Torodi Ar. Bea**	**37.25**	**78**	P	**P**	**14 41 58.5**	**-0.5**
	5.1nm,0.9s,mb4.3,baz=273,slow=9.3,SNR=22						
ROSC	**El Rosal**	**38.45**	**269**	LR	LR	14 59 03.6	
	comp=Z,46nm,19.4s,MS3.3,baz=31,slow=38						
CPUP	**Villa Florida**	**39.50**	**211**	LR	LR	14 58 02.9	
	comp=Z,53nm,19.1s,MS3.4,baz=250,slow=35						
LPAZ	**La Paz**	**39.74**	**234**	P	**P**	**14 42 20.8**	**+0.9**
	7.2nm,0.9s,mb4.4,baz=51,slow=6.1,SNR=21						
LPAZ				LR	LR	14 57 23.3	
	comp=Z,76nm,20.4s,MS3.5,baz=193,slow=34						
LPAZ	**La Paz**	**39.74**	**234**	P	**P**	**14 42 20.8**	**+0.9**
LPAZ				LR	LR	14 57 23.3	
KEST	**Kesra**	**49.93**	**49**	P	**P**	**14 43 42.1**	**+1.2**
	1.4nm,0.7s,mb4.1,baz=212,slow=5.3,SNR=5.3						
KEST				LR	LR	15 04 23.0	
	comp=Z,38nm,19.9s,MS3.4,baz=234,slow=36						
SCHQ	**Schefferville**	**53.49**	**338**	P	**P**	**14 44 14.8**	**+7.6**
	2.4nm,0.7s,mb4.3,baz=162,slow=6.4,SNR=4.0						
PLCA	**Paso Flores**	**57.57**	**211**	LR	LR	15 12 05.7	
	comp=Z,91nm,18.9s,MS3.9,baz=35,slow=39						
GERES	**GERESS Array B**	**58.57**	**36**	P	**P**	**14 44 43.1**	**-0.5**
	0.4nm,0.6s,mb3.6,baz=254,slow=9.5,SNR=4.6						
GERES				LR	LR	15 06 04.5	
	comp=Z,49nm,19.1s,MS3.6,baz=98,slow=32						
SFJD	**Kangerlussuaq**	**60.42**	**353**	P	**P**	**14 44 52.4**	**-3.7**
	4.3nm,0.5s,mb4.7,baz=96,slow=20,SNR=4.1						
NB2	**NORSAR Subarra**	**63.87**	**23**	P	**P**	**14 45 19.9**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=233,slow=6.9						
NOA	**NORSAR Array B**	**63.87**	**23**	P	**P**	**14 45 19.5**	**+0.2**
	comp=Z,1.2nm,0.8s,mb4.0,baz=233,slow=6.7,SNR=3.9						
NOA	**NORSAR Array B**	**63.87**	**23**	P	**P**	**14 45 19.5**	**+0.2**
TXAR	**Lajitas Array**	**67.21**	**299**	LR	LR	15 17 00.9	
	comp=Z,40nm,19.8s,MS3.6,baz=5.0,slow=38						
AKASG	**Malin Array Be**	**68.59**	**38**	P	**P**	**14 45 49.7**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.7,baz=254,slow=6.4,SNR=3.4						
AKASG	**Malin Array Be**	**68.59**	**38**	P	**P**	**14 45 49.7**	**-0.2**
BOSA	**Boshof**	**68.75**	**124**	LR	LR	15 08 40.0	
	comp=Z,54nm,18.5s,MS3.8,baz=332,slow=30						
BRTR	**Keskin Array B**	**69.49**	**50**	P	**P**	**14 45 55.8**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=254,slow=8.9,SNR=4.1						
FINES	**FINESS Array B**	**70.34**	**27**	P	**P**	**14 46 00.2**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=338,slow=4.1,SNR=4.6						
FINES	**FINESS Array B**	**70.34**	**27**	P	**P**	**14 46 00.2**	**-0.2**
PDAR	**Pinedale Array**	**73.17**	**312**	P	**P**	**14 46 18.0**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=77,slow=4.0,SNR=3.0						
PDAR				LR	LR	15 16 33.0	
	comp=Z,36nm,20.0s,MS3.6,baz=260,slow=34						
ARCES	**ARCESS Array B**	**73.34**	**19**	P	**P**	**14 46 17.5**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=38,slow=18,SNR=2.8						
YKA	**Yellowknife Ar**	**78.38**	**332**	P	**P**	**14 46 46.5**	**-0.7**
	comp=Z,0.4nm,0.8s,mb3.4,baz=90,slow=4.9,SNR=4.4						
YKA	**Yellowknife Ar**	**78.38**	**332**	P	**P**	**14 46 46.5**	**-0.7**

**IDC 22 14:39:50.7±1.1, 31°.85N×104°.61E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/26, mbtmp3.6/8, ML3.7/

	baz=302						
TWM1	**Shoushan**	**1.24 274**	*e*P		**Pg**	**14 52 37.6**	**+1.1**
	baz=274						
TWK	**Hsinying**	**1.29 294**	P		**Pn**	**14 52 37.3**	**+0.1**
	baz=296						
TWK			*e*S		**Sg**	**14 52 54.1**	**-0.1**
	baz=296						
CHN5	**Tsauling**	**1.32 311**	P		**Pn**	**14 52 38.3**	**+0.6**
	baz=313						
CHN5			*e*S		**Sb**	**14 52 54.8**	**-0.2**
	baz=313						
CHN3	**Shinhua**	**1.33 285**	*e*P		**Pn**	**14 52 39.9**	**+2.0**
	baz=286						
CHN3			*e*S		**Sb**	**14 52 57.9**	**+2.3**
	baz=286						
TWD	**Chiawan**	**1.34 353**	*e*P		**Pn**	**14 52 37.6**	**-0.4**
	baz=7.0						
TWD			*e*S		**Sb**	**14 52 53.0**	**-2.8**
	baz=7.0						
TWP	**Hsiaoliuchiu**	**1.36 253**	P		**Pn**	**14 52 40.5**	**+2.4**
	baz=251						
SMLT	**Sun Moon Lake**	**1.39 325**	*e*P		**Pn**	**14 52 39.0**	**+0.4**
	baz=336						
SMLT			*e*S		**Sb**	**14 52 56.4**	**-0.7**
	baz=336						
CHN2	**Minshiung**	**1.43 304**	*e*P		**Pn**	**14 52 40.9**	**+1.7**
	baz=305						
TYC	**Yuchr**	**1.43 324**	*e*P		**Pn**	**14 52 40.2**	**+1.0**
	baz=334						
CHY	**Chiayi**	**1.45 302**	*e*P		**Pn**	**14 52 38.8**	**-0.6**
	baz=304						
CHY			*e*S		**Sb**	**14 52 59.0**	**+0.2**
	baz=304						
WGK	**Gukeng**	**1.45 311**	*e*P		**Pn**	**14 52 40.7**	**+1.2**
	baz=327						
WGK			*e*S		**Sn**	**14 52 58.9**	**-0.1**
	baz=327						
WHF	**Hehuan Shan**	**1.47 342**	P		**Pn**	**14 52 39.3**	**-0.5**
	baz=345						
WHF			*e*S		**Sn**	**14 52 56.5**	**-2.9**
	baz=345						
WNT	**Mingjian**	**1.51 319**	*e*P		**Pn**	**14 52 41.6**	**+1.4**
	baz=322						
WNT			*e*S		**Sn**	**14 52 60.0**	**-0.3**
	baz=322						
TWT	**Tachien**	**1.60 340**	P		**Pn**	**14 52 42.0**	**+0.5**
	baz=354						
TWT			*e*S		**Sn**	**14 53 00.4**	**-2.2**
	baz=354						
WSF	**Szhu**	**1.68 302**	*e*P		**Pn**	**14 52 43.6**	**+0.9**
	baz=304						
WSF			*e*S		**Sn**	**14 53 03.6**	**-0.9**
	baz=304						
ENA	**Nanau**	**1.68 359**	P		**Pn**	**14 52 42.9**	**+0.3**
	baz=11						
NNS	**Nan Shan**	**1.73 348**	*e*P		**Pn**	**14 52 44.0**	**+0.7**
	baz=351						
NNS			*e*S		**Sn**	**14 53 03.4**	**-2.4**
	baz=351						
WTCT	**Ta-ch'eng**	**1.77 310**	*e*S		**Sn**	**14 53 06.2**	**-0.5**
	baz=311						
TWQ1	**Liyutan**	**1.84 331**	*e*P		**Pn**	**14 52 47.0**	**+2.1**
	baz=319						
TWQ1			*e*S		**Sn**	**14 53 09.3**	**+0.8**
	baz=319						
ENTT	**Nioudou**	**1.90 354**	*e*P		**Pn**	**14 52 45.9**	**+0.2**
	baz=356						
NSK	**Sanguang**	**1.96 349**	*e*P		**Pn**	**14 52 47.4**	**+0.8**
	baz=351						
NSK			*e*S		**Sn**	**14 53 09.5**	**-2.1**
	baz=351						
TWE	**Neicheng**	**1.98 357**	*e*P		**Pn**	**14 52 47.8**	**+1.1**
	baz=348						
NSTT	**Nanjuang**	**2.01 340**	*e*P		**Pn**	**14 52 48.4**	**+1.2**
	baz=342						
NSTT			*e*S		**Sn**	**14 53 13.0**	**+0.3**
	baz=342						
YOJ	**Yonaguni jima**	**2.06 33**	P		**Pn**	**14 52 48.7**	**+0.8**
YOJ			*e*S		**Sn**	**14 53 14.0**	**+0.1**
PNG	**Penghu**	**2.20 292**	*e*P		**Pn**	**14 52 49.2**	**-0.5**
	baz=292						
HATJ	**Hateruma jima**	**2.29 55**	P		**Pn**	**14 52 51.3**	**+0.3**
HATJ			*e*S		**Sn**	**14 53 17.5**	**-2.0**
NWF	**Wu-fen Shan**	**2.32 0**	*e*P		**Pn**	**14 52 53.2**	**+1.8**
	baz=351						
IRIF	**Iriomote-Funau**	**2.40 48**	P		**Pn**	**14 52 52.7**	**+0.1**
JKRS	**Kuro-shima**	**2.54 54**	P		**Pn**	**14 52 55.1**	**+0.6**
JKRS			*e*S		**Sn**	**14 53 24.2**	**-1.6**
JIJ	**Ishigaki jima**	**2.71 53**	P		**Pn**	**14 52 57.2**	**+0.3**
JIJ			*e*S		**Sn**	**14 53 28.4**	**-1.7**
JTJ	**Tarama**	**3.29 54**	P		**Pn**	**14 53 05.2**	**+0.4**
JTJ			*e*S		**Sn**	**14 53 43.0**	**-1.3**
JMJ	**Miyako jima 2**	**3.83 57**	P		**Pn**	**14 53 13.0**	**+0.7**
JOGS	**Gusukube**	**3.89 58**	P		**Pn**	**14 53 13.8**	**+0.7**

MAN 22 14:58:55, 10.°75N×124.°91E, h32km, mb4.1, ML2.9, MS2.6, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.42**	**316**	*e*P	Pb	14 59 05.6	+1.3
OCLP				*e*S	Sb	14 59 10.4	-0.3
PLP	**Palo**	**0.42**	**10**	*e*P	Pb	14 59 05.6	+1.3
PLP				*e*S	Sb	14 59 11.1	+0.3
MSLP	**Maasin**	**0.61**	**184**	*e*P	Pb	14 59 08.7	+1.3
MSLP				*e*S	Sb	14 59 16.9	+1.2

IDC ***22*** *15:00:10.8±0.7, 31.°87N×104.°47E, h0km, mb4.3/16, mb1 4.4/18, mb1mx4.3/27, mbtmp4.3/18, ML4.3/2, MS3.4/6, Ms1 3.3/6, ms1mx3.1/32, Error ellipse: s-maj=22.3km s-min=14.1km az=42.0*

BJI ***22*** *15:00:11.6, 31.°85N×104.°59E, h12km, mB4.4/19, mb4.6/23, ML4.3/23, Ms4.3/35, Ms7 4.1/30*

NEIC ***22*** *15:00:12.6±0.3, 31.°91N×104.°54E, h10km, mb4.4/18, Error ellipse: s-maj=5.9km s-min=5.0km az=92.0*

MOS ***22*** *15:00:13.1±0.9, 31.°85N×104.°54E, h30km, mb4.6/28, Error ellipse: s-maj=10.4km s-min=6.0km az=95.0*

ISC 22 15:00:11.5±0.7, 31.°86N±0.°02×104.°46E±0.°03, h4km±5km, n126, σ1§16/144, mb4.4/42, MS3.6/10, 5C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**212**	Pg	**Pg**	**15 00 32.9**	**-0.2**
CD2				Sg	**Sg**	**15 00 48.3**	**+0.6**
CD2				smax			
	comp=N,44μm,0.8s						
LZH	**Lanzhou**	**4.24**	**353**	Pn	**Pn**	**15 01 20.3**	**+3.4**
LZH				Pg	**Pg**	**15 01 32.5**	**-0.3**
LZH				Sn	**Sn**	**15 02 08.8**	**+1.9**
LZH				Sg	**Sg**	**15 02 27.3**	**-0.5**
LZH				smax			
	comp=N,930nm,1.0s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=N,3μm,8.1s						
LZH				LR	LR		
	comp=Z,4μm,9.0s						
XAN	**Xi'an**	**4.33**	**59**	Pn	**Pn**	**15 01 18.6**	**+0.5**
XAN				Pg	**Pg**	**15 01 31.3**	**-3.2**
XAN				Sn	**Sn**	**15 02 03.0**	**-6.1**
XAN				Sg	**Sg**	**15 02 24.6**	**-6.1**
XAN				smax			
	comp=N,2μm,0.7s						
XAN				smax			
	comp=E,770nm,1.0s						
ENH	**Enshi**	**4.59**	**109**	*e*Pn	**Pn**	**15 01 22.6**	**+0.9**
ENH				*e*Sg	**Sg**	**15 02 39.2**	**+0.1**
GYA	**Guiyang**	**5.72**	**160**	Pn	**Pn**	**15 01 38.4**	**+1.2**
GYA				Sn	**Sn**	**15 02 34.9**	**-8.5**
GYA				smax			
	comp=N,320nm,0.7s						
GYA				smax			
	comp=E,290nm,0.9s						
GYA				LR	LR		
	comp=N,4μm,6.5s						
GYA				LR	LR		
	comp=E,4μm,5.8s						
GYA				LR	LR		
	comp=Z,6μm,6.8s						
KMI	**Kunming**	**6.88**	**193**	Pn	**Pn**	**15 01 56.4**	**+3.2**
KMI				Sn	**Sn**	**15 03 11.9**	**-0.2**
KMI				smax			
	comp=N,81nm,1.4s						
KMI				smax			
	comp=E,100nm,1.2s						
KMI				LR	LR		
	comp=N,1μm,6.4s						
KMI				LR	LR		
	comp=E,2μm,5.8s						
KMI				LR	LR		
	comp=Z,1μm,8.2s						
GTA	**Gaotai**	**8.43**	**335**	*e*P	**Pn**	**15 02 15.1**	**+0.8**
GTA				pP		15 02 19.3	
GTA				sP		15 02 22.3	
GTA				S	**Sn**	**15 03 50.8**	**+0.9**
GTA				sS		15 04 00.3	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,5.9s						
GTA				LR	LR		
	comp=N,640nm,9.8s						
GTA				LR	LR		
	comp=E,460nm,8.6s						
GTA				LR	LR		
	comp=Z,500nm,12.8s						
WHN	**Wuhan**	**8.57**	**96**	P	**Pn**	**15 02 14.5**	**-1.9**
WHN				S	**Sn**	**15 03 46.8**	**-6.8**
WHN				LR	LR		
	comp=N,3μm,7.9s						
WHN				LR	LR		
	comp=E,2μm,6.4s						
WHN				LR	LR		
	comp=Z,2μm,9.2s						
BTO	**Baotou**	**9.81**	**26**	*e*P	**Pn**	**15 02 33.1**	**-0.2**
BTO				S	**Sn**	**15 04 34.3**	**+10**
BTO				LR	LR		
	comp=N,430nm,10.3s						
BTO				LR	LR		
	comp=E,280nm,10.2s						
HHC	**Hu-ho-hao-te**	**10.63**	**31**	*e*P	**Pn**	**15 02 48.5**	**+3.9**
HHC				pP		15 02 51.8	
HHC				PP		15 02 57.0	
HHC				S	**Sn**	**15 04 50.3**	**+6.1**
HHC				sS		15 04 54.8	
HHC				SS		15 05 03.8	
HHC				pmax	pmax		
	comp=Z,31nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						
HHC				LR	LR		
	comp=N,520nm,4.3s						
HHC				LR	LR		
	comp=E,610nm,5.9s						
HHC				LR	LR		
	comp=Z,750nm,5.3s						
LSA	**Lhasa**	**11.65**	**263**	*e*P	**Pn**	**15 03 00.7**	**+2.1**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s						
LSA	**Lhasa**	**11.65**	**263**	*e*Pn	**Pn**	**15 03 00.7**	**+2.1**
	comp=Z,11nm,0.6s						
NJ2	**Nanjing**	**12.23**	**85**	*e*P	**Pn**	**15 03 08.3**	**+1.8**
NJ2				pP		15 03 11.5	
NJ2				sP		15 03 14.8	
NJ2				PP		15 03 18.6	
NJ2				S	**Sn**	**15 05 26.5**	**+3.3**
NJ2				sS		15 05 31.0	
NJ2				pmax	pmax		
	comp=Z,150nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,30nm,3.5s						
NJ2				LR	LR		
	comp=N,430nm,13.6s						
NJ2				LR	LR		
	comp=E,1μm,8.6s						
BJI	**Beijing**	**12.51**	**46**	P	**Pn**	**15 03 17.5**	**+7.3**
BJI				LR	LR		
	comp=N,470nm,11.4s						
BJI				LR	LR		
	comp=E,470nm,9.2s						
BJI				LR	LR		
	comp=Z,160nm,18.3s						
SHL	**Shillong**	**12.69**	**244**	*e*P	**Pn**	**15 03 12.0**	**-0.8**
QIZ	**Qiongzhong**	**13.67**	**158**	P	**Pn**	**15 03 28.3**	**+2.1**
QIZ				S	**Sn**	**15 06 06.0**	**+7.4**
QIZ				LR	LR		
	comp=N,370nm,8.2s						
QIZ				LR	LR		
	comp=E,200nm,7.3s						
QIZ				LR	LR		
	comp=Z,320nm,12.2s						
CHTO	**Chiang Mai**	**13.91**	**202**	*e*P	**Pn**	**15 03 30.8**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,12nm,0.7s						
CHTO	**Chiang Mai**	**13.91**	**202**	*e*Pn	**Pn**	**15 03 30.8**	**+1.3**
	comp=Z,12nm,0.7s						
QZH	**Quanzhou**	**14.21**	**115**	P	**Pn**	**15 03 31.0**	**-2.6**
QZH				S	**Sn**	**15 06 07.0**	**-4.8**
QZH				LR	LR		
	comp=N,1μm,10.1s						
QZH				LR	LR		
	comp=E,750nm,8.5s						
QZH				LR	LR		
	comp=Z,1μm,10.8s						
CM31	**Chiang Mai Arr**	**14.25**	**202**	*e*Pn	**Pn**	**15 03 34.9**	**+0.8**
	comp=Z,19nm,0.7s						
CM31				*e*		15 03 42.6	
CMAR	**Chiang Mai Arr**	**14.25**	**202**	Pn	**Pn**	**15 03 35.9**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=9.5,slow=11,SNR=28						
CMAR	**Chiang Mai Arr**	**14.25**	**202**	P	**Pn**	**15 03 35.9**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**16.02**	**5**	Pn	**Pn**	**15 03 58.0**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=179,slow=8.9,SNR=17						
SONM	**Songino Array**	**16.02**	**5**	P	**Pn**	**15 03 58.0**	**+0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**16.10**	**6**	*e*P	**Pn**	**15 03 58.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,18nm,0.8s						
ULN	**Ulaanbaatar**	**16.10**	**6**	*e*P	**Pn**	**15 03 58.6**	**-0.1**
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**16.59**	**261**	*e*P	**Pn**	**15 04 02.9**	**-2.1**
	comp=Z,84nm,0.8s						
PKI	**Pulchoki**	**17.09**	**260**	*e*P	**Pn**	**15 04 09.3**	**-2.1**
	comp=Z,51nm,0.7s						
PKIN	**Phulchoki**	**17.10**	**260**	*e*P	**Pn**	**15 04 09.2**	**-2.3**
	comp=Z,92nm,0.7s						
KKN	**Kakani**	**17.13**	**261**	*e*P	**Pn**	**15 04 09.3**	**-2.5**
	comp=Z,40nm,0.8s						
DMN	**Daman**	**17.33**	**261**	*e*P	**Pn**	**15 04 12.1**	**-2.3**
	comp=Z,46nm,0.7s						
WMQ	**Urumqi**	**17.79**	**317**	*e*P	**Pn**	**15 04 20.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WMQ				LR	LR		
	comp=N,560nm,17.0s						
WMQ				LR	LR		
	comp=E,320nm,11.0s						
WMQ				LR	LR		
	comp=Z,96nm,19.0s						
ZAK	**Zakamensk**	**18.52**	**358**	⇑*i*P	**Pn**	**15 04 29.5**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**19.81**	**358**	*e*P	**Pn**	**15 04 46.0**	**+1.6**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,252nm,11.0s						
TLY	**Talaya**	**19.81**	**358**	P	**Pn**	**15 04 43.6**	**-0.8**
	comp=Z,7.6nm,0.9s						
MOY	**Mondy**	**19.95**	**354**	*e*P	**Pn**	**15 04 46.7**	**+0.6**
MOY				pmax	pmax		
	comp=Z,23nm,1.9s						
KSRS	**Korea Array**	**20.07**	**67**	P	**P**	**15 04 46.8**	**+1.0**
	comp=Z,18nm,0.7s,baz=256,slow=10,SNR=73						
KSRS				LR	LR	15 13 41.6	
	comp=Z,64nm,20.3s,MS3.0,baz=345,slow=40						
KSRS	**Korea Array**	**20.07**	**67**	P	**P**	**15 04 46.8**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,18nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,64nm,20.3s,MS3.0						
CN2	**Changchun**	**20.35**	**48**	⇑P	**P**	**15 04 50.1**	**+1.2**
CN2				*e*sP	sP	15 04 57.3	+6.9
CN2				*e*S	**S**	**15 08 31.3**	**-6.1**
CN2				pmax	pmax		
	comp=Z,50nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,13.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,15.0s,MS3.6						
IRK	**Irkutsk**	**20.36**	**360**	*e*P	**P**	**15 04 50.7**	**+1.8**
IRK				pmax	pmax		
	comp=Z,65nm,0.8s						
HIA	**Hailar**	**20.83**	**29**	*e*P	**P**	**15 04 54.9**	**+0.9**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
HIA	**Hailar**	**20.83**	**29**	*e*P	**P**	**15 04 54.9**	**+0.9**
	comp=Z,7.9nm,0.3s						
JOW	**Kunigami**	**21.34**	**97**	LR	LR	15 13 50.1	
	comp=Z,109nm,19.5s,MS3.2,baz=126,slow=38						
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**	**15 05 14.0**	**+0.8**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**15 05 14.2**	**+1.0**
	comp=Z,4.9nm,0.8s,mb4.0,baz=113,slow=12,SNR=37						
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**15 05 14.2**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ	**Mudanjiang**	**23.38**	**50**	P	**P**	**15 05 20.6**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,75nm,5.2s						
KSH	**Kashi**	**24.30**	**296**	*e*P	**P**	**15 05 34.1**	**+4.1**
KSH				*e*pP		15 05 38.1	
KSH				*e*sP	sP	15 05 41.1	+10
KSH				*e*PP		15 06 09.1	
KSH				*e*PcP	PcP	15 09 14.3	+4.4
KSH				*e*S	**S**	**15 09 49.3**	**-0.2**
KSH				*e*SS		15 10 44.3	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.0						
KSH				pmax	pmax		
	comp=Z,65nm,4.6s						
KSH				LR	LR		
	comp=N,120nm,6.0s						
KSH				LR	LR		
	comp=E,160nm,8.2s						
KSH				LR	LR		
	comp=Z,88nm,6.4s						
TKM2	**Tokmak 2**	**25.33**	**304**	*e*P	**P**	**15 05 42.4**	**+3.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
TKM2	**Tokmak 2**	**25.33**	**304**	*e*P	**P**	**15 05 42.4**	**+3.1**
	comp=Z,3.4nm,0.7s,mb4.0						
UCH	**Uchtor**	**25.93**	**302**	P	**P**	**15 05 46.6**	**+1.9**
	comp=Z,6.6nm,1.0s,mb4.1						
ZAA0	**Zalesovo Array**	**26.18**	**333**	*e*P	**P**	**15 05 47.0**	**+0.1**
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**15 05 47.1**	**+0.2**
	comp=Z,7.3nm,0.5s,mb4.5,baz=132,slow=9.4,SNR=42						
ZALV	**Zalesovo Beam**	**26.18**	**333**	P	**P**	**15 05 47.1**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
BOD	**Bodaibo**	**26.77**	**11**	*e*P	**P**	**15 05 52.9**	**+0.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb3.7						
KLR	**Kul'dur**	**26.82**	**42**	*e*P	**P**	**15 05 50.2**	**-2.5**
KLR				MLR	MLR		
	comp=E,500nm,11.5s						
KLR				MLR	MLR		
	comp=Z,800nm,11.5s,MS4.5						
KURK	**Kurchatov**	**26.83**	**322**	P	**P**	**15 05 52.8**	**0.0**
	comp=Z,4.9nm,0.8s,mb4.1,baz=128,slow=8.5,SNR=43						
KURK	**Kurchatov**	**26.83**	**322**	*d*iP	**P**	**15 05 52.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
KURK	**Kurchatov**	**26.83**	**322**	*e*P	**P**	**15 05 51.9**	**-0.9**
	comp=Z,9.0nm,1.1s,mb4.2						
NVS	**Novosibirsk**	**27.46**	**333**	*e*P	**P**	**15 05 48.7**	**-10**
MJAR	**Matsushiro Arr**	**28.21**	**71**	P	**P**	**15 06 04.5**	**-0.9**
	comp=Z,0.9nm,0.5s,mb3.6,baz=297,slow=7.5,SNR=3.7						
MJAR				LR	LR	15 16 54.5	
	comp=Z,64nm,19.4s,MS3.2,baz=265,slow=36						
MJAR	**Matsushiro Arr**	**28.21**	**71**	P	**P**	**15 06 04.5**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR				MLR	MLR		
	comp=Z,64nm,19.4s						
KBL	**Kabul**	**29.66**	**285**	P	**P**	**15 06 20.3**	**+2.0**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
KBL	**Kabul**	**29.66**	**285**	P	**P**	**15 06 20.3**	**+2.0**
	comp=Z,4.5nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**32.39**	**321**	P	**P**	**15 06 42.1**	**0.0**
	comp=Z,1.1nm,0.5s,mb3.9,baz=108,slow=9.5,SNR=11						
BVAR	**Borovoye Array**	**32.39**	**321**	P	**P**	**15 06 42.1**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**32.46**	**321**	*ce*P	**P**	**15 06 43.8**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
BRVK	**Borovoye**	**32.46**	**321**	*e*P	**P**	**15 06 42.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.0						
YAK	**Yakutsk**	**34.29**	**21**	*e*P	**P**	**15 06 56.8**	**-1.8**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
YAK	**Yakutsk**	**34.29**	**21**	*e*P	**P**	**15 06 56.8**	**-1.8**
	comp=Z,9.3nm,0.6s,mb4.9						
ABKAR	**Akbulak array**	**37.40**	**311**	*e*P	**P**	**15 07 25.2**	**-0.2**
	comp=Z,0.9nm,0.4s,mb4.0						
SVE	**Sverdlovsk**	**39.08**	**323**	*e*P	**P**	**15 07 40.5**	**+1.1**
SVE				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
ARU	**Arti**	**40.02**	**322**	*c i*P	**P**	**15 07 47.8**	**+0.5**
ARU				*e*		15 09 18.5	
ARU				S	**S**	**15 13 54.2**	**+0.8**
ARU				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
ARU	**Arti**	**40.02**	**322**	*e*P	**P**	**15 07 47.9**	**+0.6**
	comp=Z,23nm,1.0s,mb4.9						
TIXI	**Tiksi**	**41.95**	**11**	*e*P	**P**	**15 08 01.4**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,204nm,16.0s,MS4.1						
TIXI	**Tiksi**	**41.95**	**11**	*e*P	**P**	**15 08 02.1**	**-0.9**
	comp=Z,3.1nm,0.6s,mb4.1						
PETK	**Petropavlovsk-**	**43.44**	**45**	P	**P**	**15 08 15.5**	**+0.2**
	comp=Z,7.8nm,0.7s,mb4.6,baz=300,slow=1.7,SNR=10						
PETK				LR	LR	15 28 48.2	
	comp=Z,63nm,18.0s,MS3.6,baz=49,slow=40						
PETK	**Petropavlovsk-**	**43.44**	**45**	P	**P**	**15 08 15.5**	**+0.2**
PETK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
PETK				MLR	MLR		
	comp=Z,63nm,18.0s,MS3.6						
ZEI	**Tsey**	**48.44**	**301**	*e*P	**P**	**15 08 53.8**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
BILL	**Bilibino**	**50.36**	**26**⇑	*e*P	**P**	**15 09 08.0**	**-1.3**
BILL				*e*		15 09 16.6	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.0						
BILL	**Bilibino**	**50.36**	**26**	*e*P	**P**	**15 09 08.2**	**-1.1**
	comp=Z,4.3nm,0.8s,mb4.5						
ANN	**Anapa**	**52.75**	**305**	*e*P	**P**	**15 09 21.0**	**-6.5**
ANN				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
KNA	**Kununurra**	**52.77**	**150**	*e*P	**P**	**15 09 27.5**	**-0.3**
	comp=Z,15nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**53.67**	**155**	*e*P	**P**	**15 09 33.5**	**-1.0**
	comp=Z,8.7nm,0.9s,mb4.7						
JOF	**Joensuu**	**54.55**	**327**	*e*P	**P**	**15 09 40.0**	**-0.4**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
JOF	**Joensuu**	**54.55**	**327**	*e*p	**P**	**15 09 40.0**	**-0.4**
	comp=Z,2.6nm,0.7s,mb4.4						
KEV	**Kevo**	**56.16**	**336**	*e*P	**P**	**15 09 51.2**	**-0.7**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
KEV	**Kevo**	**56.16**	**336**	*e*p	**P**	**15 09 51.2**	**-0.7**
	comp=Z,5.2nm,0.5s,mb4.8						
BRTR	**Keskin Array B**	**56.63**	**299**	P	**P**	**15 09 55.7**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=101,slow=6.4,SNR=6.8						
BRTR	**Keskin Array B**	**56.63**	**299**	P	**P**	**15 09 55.7**	**-0.1**
BRTR				pmax	pm

comp=Z,3.1nm,0.6s,mb4.5,baz=81,slow=7.9,SNR=19
ARCES ARCESS Array B 56.69 336 P **P 15 09 55.3 -0.4**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 56.92 327 *eP* **P 15 09 56.7 -0.7**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KAF Kangasniemi 56.92 327 *ep* **P 15 09 56.7 -0.7**
comp=Z,2.7nm,0.6s,mb4.5
AKASG Malin Array Be 57.09 313 P **P 15 09 58.3 -0.5**
comp=Z,1.3nm,0.5s,mb4.2,baz=69,slow=6.7,SNR=4.7
AKASG Malin Array Be 57.09 313 P **P 15 09 58.3 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 57.11 326 P **P 15 09 58.7 0.0**
comp=Z,4.2nm,0.5s,mb4.7,baz=81,slow=6.5,SNR=19
FINES LR LR 15 34 37.4
comp=Z,92nm,20.3s,MS3.9,baz=327,slow=36
FINES FINESS Array B 57.11 326 P **P 15 09 58.7 -0.1**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES MLR MLR
comp=Z,92nm,20.3s
FINES FINESS Array B 57.11 326 P **P 15 09 58.7 -0.1**
FINES LR LR 15 34 37.4
WRAB Tennant Creek 58.93 147 *eP* **P 15 10 11.8 -0.2**
WRAB pmax pmax
comp=Z,12nm,0.8s,mb5.0
WRAB Tennant Creek 58.93 147 *eP* **P 15 10 11.8 -0.2**
comp=Z,12nm,0.8s,mb5.0
ASAR Alice Springs 61.98 149 P **P 15 10 32.9 +0.1**
comp=Z,2.5nm,0.6s,mb4.5,baz=331,slow=6.5,SNR=34
ASAR Alice Springs 61.98 149 P **P 15 10 32.9 +0.1**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
NB2 NORSAR Subarra 64.19 327 P **P 15 10 46.0 -1.0**
comp=Z,1.8nm,0.5s,mb4.4,baz=75,slow=6.9
NOA NORSAR Array B 64.19 327 P **P 15 10 46.1 -0.9**
comp=Z,2.2nm,0.7s,mb4.3,baz=73,slow=6.7,SNR=10.0
NOA NORSAR Array B 64.19 327 P **P 15 10 46.1 -0.9**
NOA pmax pmax
comp=Z,2.0nm,0.7s
COLD Coldfoot 66.66 24 *eP* **P 15 11 02.6 -0.3**
comp=Z,3.4nm,0.8s,mb4.4
GERES GERESS Array B 67.24 314 P **P 15 11 06.7 -0.3**
comp=Z,0.7nm,0.7s,mb3.8,baz=74,slow=5.7,SNR=7.6
GERES GERESS Array B 67.24 314 P **P 15 11 06.7 -0.2**
GERES pmax pmax
comp=Z,1.0nm,0.7s
KTH Kantishna Hill 68.06 28 P **P 15 11 08.3 -3.6**
comp=Z,6.6nm,1.2s,mb4.5
COLA College 68.61 26 *eP* **P 15 11 14.8 -0.5**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
COLA College 68.61 26 *eP* **P 15 11 14.8 -0.6**
comp=Z,7.5nm,0.9s,mb4.6
KDAK Kodiak Island 70.04 34 *i P* **P 15 11 23.8 -0.5**
CDF Champ du Feu 71.29 316 *eP* **P 15 11 31.6 -0.5**
INK Inuvik 71.34 19 *eP* **P 15 11 31.4 -0.6**
INK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 71.34 19 *eP* **P 15 11 31.4 -0.7**
comp=Z,2.5nm,0.6s,mb4.3
STKA Stephens Creek 72.48 147 *eP* **P 15 11 39.0 -0.3**
comp=Z,3.6nm,0.7s,mb4.4
STKA Stephens Creek 72.48 147 P **P 15 11 39.1 -0.1**
comp=Z,3.9nm,0.6s,mb4.5,baz=335,slow=6.8,SNR=9.6
LPG La Plagne 72.95 313 *eP* **P 15 11 42.5 +0.4**
comp=Z,9.8nm,0.5s,mb4.7
LPL La Plagne 72.96 313 *eP* **P 15 11 42.5 +0.4**
comp=Z,6.7nm,0.5s,mb4.6
CMSA Cobar Meteorol 74.16 144 *eP* **P 15 11 49.6 +0.4**
SMF Signal de Mont 74.17 315 *eP* **P 15 11 47.8 -1.5**
TCF Toulx Ste Croi 75.33 316 *eP* **P 15 11 54.8 -1.2**
YKA Yellowknife Ar 80.88 17 P **P 15 12 26.0 -0.4**
comp=Z,1.9nm,0.7s,mb4.1,baz=330,slow=5.2,SNR=19
YKA LR LR 15 52 41.2
comp=Z,5.1nm,19.0s,MS2.9,baz=15,slow=39
YKA Yellowknife Ar 80.88 17 P **P 15 12 26.0 -0.4**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA MLR MLR
comp=Z,5.0nm,19.0s
ESDC Sonseca Array 82.73 312 LR LR 15 49 45.3
comp=Z,944nm,20.2s,baz=90,slow=36

IDC 22 15:20:29.0±3.9, 9°.52S×151°.94E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/14, mbtmp3.5/3, Error ellipse: s-maj=119.1km s-min=39.5km az=100.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**22.24**	**229**	P	P	15 25 28.0	+0.4
	0.7nm,0.8s,baz=58,slow=9.9,SNR=8.6						
STKA	**Stephens Creek**	**24.23**	**202**	P	P	15 25 47.1	-0.5
	3.9nm,1.1s,baz=24,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**83.32**	**320**	P	P	15 32 58.0	+0.3
	0.4nm,0.7s,baz=104,slow=6.1,SNR=3.5						

MAN 22 15:33:20, 18°.88N×121°.92E, h1km, mb4.8, ML3.7, MS3.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.65**	**169**	*eP*	Pg	15 33 33.1	+0.7
CVP	**Callao Caves**	**1.17**	**184**	*eP*	Pg	15 33 41.5	-1.0
CVP				*eS*	Sg	15 33 55.5	-2.3
APYP	**Conner**	**1.20**	**212**	*eP*	Pg	15 33 43.2	+0.2
APYP				*eS*	Sg	15 33 56.1	-2.5
BBP	**Basco**	**1.55**	**2**	*eP*	Pn	15 33 49.3	+0.5
BBP				*eS*	Sn	15 34 06.6	-3.0
ABRA	**Dolores**	**1.68**	**223**	*eP*	Pn	15 33 50.9	+0.4
ABRA				*eS*	Sn	15 34 04.9	-7.7
PALP	**Palanan**	**1.87**	**165**	*eP*	Pn	15 33 53.3	+0.1
CAUP	**Cauayan**	**1.93**	**183**	*eP*	Pn	15 33 56.0	+2.1
BCPH	**Baguio City Da**	**2.79**	**207**	||*i P*	Pn	15 34 06.8	+0.9
BCPH				*i S*	Sn	15 34 19.3	-21
BOLP	**Bolinao**	**3.13**	**218**	*eP*	Pn	15 34 12.8	+2.2
BALP	**Baler**	**3.14**	**186**	*eP*	Pn	15 34 12.9	+2.3

*SZGRF **22** 15:41:25.0, 32°.78S×13°.06W, h33km, mb4.8, Southern Mid-Atlantic Ridge*
*ISCJB **22** 15:41:33.8±0.4, 30°.31S±0°.09×13°.87W±0°.09, h10km, mb4.2/19, MS3.8/15, Error ellipse: s-maj=14.4km s-min=9.8km az=152.0*
*IDC **22** 15:41:34.1±0.6, 30°.29S×13°.88W, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.2/22, mbtmp4.2/15, MS3.8/15, Ms1 3.8/15, ms1mx3.7/25, Error ellipse: s-maj=24.9km s-min=13.7km az=167.0*
*NEIC **22** 15:41:35.5±0.4, 30°.28S×13°.89W, h10km, mb4.4/10, Error ellipse: s-maj=13.3km s-min=8.0km az=159.0*
ISC 22 15:41:35.7±0.4, 30°.30S±0°.09×13°.89W±0°.09, h10km, n39, σ0**69**/31**, mb4.2**/19**, MS3.8**/15**, 1C, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**30.54**	**76**	P	P	15 47 48.9	-0.6
	3.7nm,0.7s,mb4.3,baz=235,slow=9.1,SNR=4.6						
TSUM	**Tsumeb**	**30.54**	**76**	*eP*	P	15 47 49.1	-0.4
BOSA	**Boshof**	**34.02**	**97**	P	P	15 48 19.2	-0.6
	8.0nm,0.9s,mb4.6,baz=238,slow=8.7,SNR=7.1						
BOSA				LR	LR	15 59 34.6	
	comp=Z,225nm,19.6s,MS3.9,baz=294,slow=32						
BOSA	**Boshof**	**34.02**	**97**	*eP*	P	15 48 19.6	-0.2
	17nm,1.1s,mb4.9						
BOSA				LR	LR	15 59 34.6	
LBTB	**Lobatse**	**35.24**	**91**	P	P	15 48 30.6	+0.1
	9.1nm,0.9s,mb4.7,baz=258,slow=10,SNR=8.8						
LBTB				LR	LR	15 59 51.5	
	comp=Z,197nm,20.5s,MS3.9,baz=158,slow=31						
LBTB	**Lobatse**	**35.24**	**91**	*eP*	P	15 48 30.4	-0.1
	14nm,1.1s,mb4.8						
LBTB				LR	LR	15 59 51.5	
DBIC	**Dimbokro**	**37.76**	**15**	LR	LR	16 00 40.4	
	comp=Z,50nm,19.0s,MS3.3,baz=164,slow=30						
DBIC	**Dimbokro**	**37.76**	**15**	*eP*	P	15 48 51.4	-0.6
	1.0nm,0.6s,mb3.7						
CPUP	**Villa Florida**	**38.28**	**265**	P	P	15 48 56.4	+0.1
	1.0nm,0.5s,mb3.8,baz=81,slow=8.3,SNR=4.8						
CPUP				LR	LR	16 02 12.0	
	comp=Z,260nm,20.1s,MS4.0,baz=97,slow=32						
CPUP	**Villa Florida**	**38.28**	**265**	P	P	15 48 56.2	-0.1
	20nm,1.2s,mb4.7						
CPUP				LR	LR	16 02 12.0	
TRQA	**Tornquist**	**40.17**	**246**	*eP*	P	15 49 10.8	-1.2
	4.7nm,0.8s,mb4.3						
VNA2	**Neumayer--Watz**	**40.84**	**177**	*e*	P	15 49 16.9	-0.2
	baz=342,slow=9.7						
LSZ	**Lusaka**	**41.32**	**78**	P	P	15 49 22.7	+1.0
	2.7nm,0.6s,mb4.0,baz=229,slow=8.0,SNR=5.6						
LSZ	**Lusaka**	**41.32**	**78**	*eP*	P	15 49 22.6	+0.8
	14nm,1.4s,mb4.4						
SIV	**San Ignacio**	**45.35**	**277**	P	P	15 49 55.4	+1.2
	6.9nm,0.9s,mb4.5,baz=119,slow=10,SNR=22						
TOA0	**Torodi Ar. Sit**	**45.72**	**21**	*eP*	P	15 49 56.6	-0.5
TORD	**Torodi Ar. Bea**	**45.72**	**21**	P	P	15 49 56.5	-0.6
	4.4nm,1.0s,mb4.4,baz=203,slow=8.9,SNR=16						
TORD				LR	LR	16 05 33.7	
	comp=Z,114nm,18.8s,MS3.8,baz=195,slow=32						
CFAA	**Coronel Fontan**	**46.22**	**254**	P	P	15 50 01.4	+0.4
	0.3nm,0.4s,mb3.5,baz=78,slow=6.8,SNR=7.0						
PLCA	**Paso Flores**	**46.57**	**241**	P	P	15 50 04.4	+0.7
	5.4nm,0.9s,mb4.5,baz=106,slow=4.2,SNR=5.5						
PLCA				LR	LR	16 04 54.0	
	comp=Z,113nm,21.5s,MS3.8,baz=350,slow=30						
LPAZ	**La Paz**	**51.30**	**273**	P	P	15 50 39.0	-1.2
	2.6nm,0.8s,mb4.2,baz=122,slow=4.1,SNR=9.9						
LPAZ				LR	LR	16 12 56.8	
	comp=Z,125nm,18.5s,MS4.0,baz=108,slow=37						
LPAZ	**La Paz**	**51.30**	**273**	P	P	15 50 39.4	-0.8
	4.0nm,1.0s,mb4.3						
LPAZ				LR	LR	16 12 56.8	
TAM	**Tamanrasset**	**55.98**	**22**	*eP*	P	15 51 15.4	+1.1
	0.9nm,0.6s,mb4.0						
KMBO	**Kilima Mbogo**	**56.47**	**69**	LR	LR	16 14 06.0	
	comp=Z,126nm,21.4s,MS4.0,baz=94,slow=35						
MAW	**Mawson**	**57.35**	**154**	P	P	15 51 23.8	+0.2
	3.4nm,0.9s,mb4.4,baz=250,slow=8.5,SNR=3.7						
MAW				LR	LR	16 09 38.0	
	comp=Z,91nm,18.4s,MS3.9,baz=347,slow=29						
MDT	**Midelt**	**63.38**	**9**	LR	LR	16 17 04.0	
	comp=Z,33nm,20.6s,MS3.5,baz=262,slow=34						
ROSC	**El Rosal**	**67.48**	**290**	LR	LR	16 18 45.3	
	comp=Z,93nm,18.9s,MS4.0,baz=182,slow=33						
ATD	**Arta Tunnel**	**68.58**	**62**	LR	LR	16 20 34.9	
	comp=Z,66nm,18.2s,MS3.9,baz=187,slow=34						
KEST	**Kesra**	**69.22**	**20**	P	P	15 52 43.5	+1.0
	2.4nm,0.9s,mb4.1,baz=204,slow=2.8,SNR=6.8						
KEST				LR	LR	16 21 11.0	
	comp=Z,42nm,18.5s,MS3.7,baz=336,slow=34						
BR131	**Keskin Array S**	**82.48**	**35**	*eP*	P	15 53 58.8	+0.6
	1.5nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**82.48**	**35**	P	P	15 53 59.1	+0.9
	2.9nm,0.9s,mb4.2,baz=187,slow=5.0,SNR=17						
GERES	**GERESS Array B**	**82.55**	**18**	P	P	15 53 58.6	+0.2
	0.7nm,1.0s,mb3.7,baz=219,slow=12,SNR=3.7						
GERES				LR	LR	16 27 11.2	
	comp=Z,26nm,18.2s,MS3.6,baz=284,slow=33						
GRF	**Grafenberg Arr**	**82.71**	**16**	*eP*	P	15 53 58.7	-0.4
	comp=Z,9.0nm,1.5s,mb4.6						
GRF	**Grafenberg Arr**	**82.71**	**16**	*eP*	P	15 53 58.7	-0.4
	comp=Z,9.0nm,1.5s,mb4.6						
MLR	**Muntele Rosu**	**83.66**	**27**	⇑*i P*	P	15 54 04.2	0.0
CLL	**Collm**	**84.64**	**17**	*eP*	P	15 54 09.0	0.0
AKASG	**Malin Array Be**	**89.19**	**26**	P	P	15 54 30.1	-1.1
	comp=Z,0.5nm,0.4s,mb4.2,baz=223,slow=5.3,SNR=7.5						
HFS	**Hagfors**	**92.91**	**13**	LR	LR	16 35 22.7	
	comp=Z,71nm,19.1s,MS4.1,baz=315,slow=35						
ASAR	**Alice Springs**	**118.08**	**146**	PKP	PKPdf	16 00 22.1	-1.2
	comp=Z,0.7nm,0.9s,baz=184,slow=1.1,SNR=6.4						
KSRS	**Korea Array**	**147.66**	**67**	PKPbc	PKPbc	16 01 20.4	0.0
	comp=Z,3.3nm,0.8s,baz=280,slow=4.7,SNR=11						

*ISCJB **22** 15:47:56.0±0.4, 41°.82N±0°.02×22°.73E±0°.03, h5km±5km, Error ellipse: s-maj=4.3km s-min=3.0km az=1.0*
*SOF **22** 15:47:55.9, 41°.83N×22°.81E, h15km, MD2.9*
*CSEM **22** 15:47:56.4±0.1, 41°.81N×22°.77E, h2km, MD2.9, Error ellipse: s-maj=2.4km s-min=1.9km az=72.0*
*SKO **22** 15:47:57.8, 41°.79N×22°.77E, h0km, M1.7, ML2.2*
*BEO **22** 15:47:57.6±1.0, 41°.80N×22°.77E, h10km±4km, ML2.2/6*
*THE **22** 15:47:57.3, 41°.79N×22°.83E, h2km±1km, ML2.8/3, Error ellipse: s-maj=3.1km s-min=1.0km az=272.0*
ISC 22 15:47:56.8±0.4, 41°.80N±0°.02×22°.77E±0°.03, h4km±4km, n47, σ0**68**/78**, 1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.24**	**75**	*i* Pg	Pg	15 48 01.8	+0.3
KKB	**Krupnik**	**0.24**	**75**	*i* Pg	Pg	15 48 01.8	+0.3
VAY	**Valandovo**	**0.50**	**197**	*e*Pg	Pg	15 48 06.7	+0.3
VAY				*e*Sg	Sg	15 48 13.4	+0.4
VAY				*e*Lg		15 48 13.9	
	comp=N,99nm,0.4s						
VAY				*e*Lg		15 48 14.1	
	comp=E,103nm,0.5s						
VAY	**Valandovo**	**0.50**	**197**	*e*Pg	Pg	15 48 06.6	+0.2
VAY				*e*Sg	Sg	15 48 13.3	+0.4
VAY				*e*Lg		15 48 13.8	
	comp=E,99nm,0.4s						
MMB	**Musomiste**	**0.75**	**106**	*i* Pg	Pg	15 48 11.2	+0.1
MMB	**Musomiste**	**0.75**	**106**	*i* Pg	Pg	15 48 11.2	+0.1
VTS	**Vitosha**	**0.85**	**22**	*i* Pg	Pg	15 48 13.2	+0.1
VTS				*i* Sg	Sg	15 48 24.6	+0.4
VTS	**Vitosha**	**0.85**	**22**	P	Pg	15 48 12.8	-0.3
VTS				S	Sg	15 48 24.5	+0.3
VTS	**Vitosha**	**0.85**	**22**	*i* Pg	Pg	15 48 13.0	-0.1
VTS	**Vitosha**	**0.85**	**22**	*i* Pg	Pg	15 48 13.0	-0.1
VTS				S	Sg	15 48 24.5	+0.3
SRS	**Serrai**	**0.92**	**138**	P	Pg	15 48 13.7	-0.8
SRS				S	Sg	15 48 26.0	-0.4
SRS	**Serrai**	**0.92**	**138**	P	Pg	15 48 13.7	-0.8
SRS				S	Sg	15 48 26.0	-0.4
SOH	**Sokhos**	**1.07**	**156**	P	Pg	15 48 17.3	-0.1
SOH				S	Sg	15 48 32.2	+0.9
SOH	**Sokhos**	**1.07**	**156**	P	Pg	15 48 17.3	-0.1
SOH				S	Sg	15 48 32.2	+0.9
KRUS	**Krusevo**	**1.22**	**250**	*e*Pg	Pg	15 48 20.2	+0.1
KRUS				*e*Sg	Sg	15 48 36.2	+0.3
KRUS	**Krusevo**	**1.22**	**250**	*e*Pg	Pg	15 48 20.2	+0.1
KRUS				*e*Sg	Sg	15 48 36.2	+0.3
HORT	**Hortiatis**	**1.23**	**168**	P	Pg	15 48 19.6	-0.7
HORT				S	Sg	15 48 36.8	+0.6
HORT	**Hortiatis**	**1.23**	**168**	P	Pg	15 48 19.6	-0.7
HORT				S	Sg	15 48 36.8	+0.6
BARS	**Barje**	**1.23**	**325**	⇑*i* Pg	Pg	15 48 20.1	-0.3
BARS				*i* Sg	Sg	15 48 36.5	+0.1
PGB	**Panagyurishte**	**1.28**	**54**	Pg	Pg	15 48 19.9	-1.4
PGB	**Panagyurishte**	**1.28**	**54**	Pg	Pg	15 48 19.9	-1.4
BIA	**Bitola**	**1.34**	**235**	*e*Pg	Pg	15 48 22.6	+0.2
BIA				*e*Sg	Sg	15 48 39.3	-0.4
BIA	**Bitola**	**1.34**	**235**	*e*Pg	Pg	15 48 22.6	+0.2
BIA				*e*Sg	Sg	15 48 39.3	-0.4
RZN	**Rozhen**	**1.46**	**94**	*i* P	Pn	15 48 23.6	-0.3
RZN	**Rozhen**	**1.46**	**94**	*i* P	Pn	15 48 23.6	-0.3
ZAPS	**Zavoj**	**1.47**	**356**	*i* Pg	Pg	15 48 25.1	+0.1
ZAPS				*i* Sg	Sg	15 48 45.2	+1.1
PLD	**Plovdiv**	**1.48**	**78**	P	Pn	15 48 24.6	+0.5
PLD				S	Sb	15 48 44.4	+0.6
PLD	**Plovdiv**	**1.48**	**78**	P	Pn	15 48 24.6	+0.5
PLD				S	Sb	15 48 44.4	+0.6
PLG	**Polygyros**	**1.52**	**160**	P	Pn	15 48 24.2	-0.4
PLG				S	Sn	15 48 44.7	-0.1
PLG	**Polygyros**	**1.52**	**160**	P	Pn	15 48 24.2	-0.4
PLG				S	Sn	15 48 44.7	-0.1
KAVA	**Kavala**	**1.54**	**121**	P	Pn	15 48 24.4	-0.6
KAVA				S	Sn	15 48 45.0	-0.4
KAVA	**Kavala**	**1.54**	**121**	P	Pn	15 48 24.4	-0.6
KAVA				S	Sn	15 48 45.0	-0.4
MPEP	**Malo Peshtene**	**1.71**	**25**	*i* P	Pn	15 48 29.5	+2.2
NISS		**1.71**	**340**	*i* Pg	Pg	15 48 27.8	-1.7
NISS				*i* Sg	Sg	15 48 52.0	+0.3
NISS		**1.71**	**340**	*i* Pg	Pg	15 48 27.8	-1.7
NISS				*i* Sg	Sg	15 48 52.0	+0.3
OUR	**Ouranopolis**	**1.73**	**148**	P	Pn	15 48 26.8	-0.8
OUR				S	Sn	15 48 50.9	+0.8
OUR	**Ouranopolis**	**1.73**	**148**	P	Pn	15 48 26.8	-0.8
OUR				S	Sn	15 48 50.9	+0.8
KDZ	**Kurdzhali**	**1.99**	**94**	*i* P	Pn	15 48 31.9	+0.8
KDZ	**Kurdzhali**	**1.99**	**94**	*i* P	Pn	15 48 31.9	+0.8
RDO	**Rodhopi**	**2.18**	**107**	P	Pn	15 48 33.9	+0.1
RDO				S	Sn	15 49 00.6	-0.6
RDO	**Rodhopi**	**2.18**	**107**	P	Pn	15 48 33.9	+0.1
RDO				S	Sn	15 49 00.6	-0.6
DIVS	**Divibare**	**3.07**	**319**	*e*Pn	Pn	15 48 46.5	+0.5
DIVS	**Divibare**	**3.07**	**319**	*e*Pn	Pn	15 48 46.5	+0.5
BBLS	**Lazići**	**3.22**	**311**	*e*Pn	Pn	15 48 48.0	0.0
BBLS	**Lazići**	**3.22**	**311**	*e*Pn	Pn	15 48 48.0	0.0
BZS	**Buzias**	**3.90**	**348**	*e*Pn	Pn	15 48 57.2	-0.2
BZS				*e*Sn	Sn	15 49 42.6	-1.0
BZS	**Buzias**	**3.90**	**348**	*e*Pn	Pn	15 48 57.2	-0.2
BZS				*e*Sn	Sn	15 49 42.6	-1.0

*ISCJB **22** 15:50:14.9±3.7, 3°.8N±0°.4×123°.4E±0°.6, h534km±48km, mb3.9/6, Error ellipse: s-maj=109.3km s-min=12.9km az=148.5*
*NEIC **22** 15:50:16.8±2.1, 3°.69N×123°.18E, h542km±25km, mb4.5/1, Error ellipse: s-maj=67.1km s-min=9.5km az=58.0*
*IDC **22** 15:50:18.1±4.5, 3°.60N×122°.91E, h550km±56km, mb3.1/5, mb1 3.2/5, mb1mx2.8/23, mbtmp3.1/5, Error ellipse: s-maj=107.4km s-min=17.4km az=63.0*
ISC 22 15:50:15.1±4.0, 3°.9N±0°.4×123°.5E±0°.7, h517km±50km, n16, σ0**42**/15**, mb3.9**/6**, 1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**7.55**	**287**	*eP*	P	15 52 07.6	+0.1
KAKA	**Kakadu**	**18.72**	**152**	*eP*	P	15 54 00.7	-0.6
	13nm,0.5s						
KAKA	**Kakadu**	**18.72**	**152**	*eP*	P	15 54 00.8	-0.4
	27nm,0.6s						
KNA	**Kununurra**	**20.18**	**165**	*eP*	P	15 54 14.8	+0.3
	1.7nm,0.2s						
FITZ	**Fitzroy Crossi**	**21.93**	**174**	*eP*	P	15 54 29.8	-0.5
	8.5nm,1.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.93**	**174**	P	P	15 54 29.7	-0.6
	2.5nm,0.6s,mb4.0,baz=12,slow=8.6,SNR=7.7						
FITZ	**Fitzroy Crossi**	**21.93**	**174**	*eP*	P	15 54 29.9	-0.5
WRAB	**Tennant Creek**	**25.95**	**156**	*eP*	P	15 55 05.8	-0.3
	4.2nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**29.19**	**160**	P	P	15 55 34.8	+0.3
	1.4nm,0.3s,mb4.0,baz=336,slow=7.7,SNR=74						
ASAR				PcP	PcP	15 58 25.1	-0.6
	0.2nm,0.4s,baz=351,slow=2.2,SNR=4.6						
STKA	**Stephens Creek**	**39.50**	**155**	||*i P*	P	15 57 01.8	+1.0
	2.4nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**39.50**	**155**	P	P	15 57 01.9	+1.1
	3.2nm,0.4s,mb4.2,baz=341,slow=7.5,SNR=19						
STKA	**Stephens Creek**	**39.50**	**155**	*eP*	P	15 57 01.4	+0.6
MK31	**Makanchi Array**	**55.63**	**327**	*eP*	P	15 59 01.9	+0.2
MKAR	**Makanchi Array**	**55.63**	**327**	P	P	15 59 01.7	0.0
	0.5nm,0.3s,mb3.2,baz=117,slow=8.3,SNR=5.8						
KURK	**Kurchatov**	**59.92**	**329**	P	P	15 59 30.5	-0.3
	0.3nm,0.3s,mb3.1,baz=132,slow=6.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**119.79**	**287**	PKP	PKPdf	16 08 05.7	-1.7
	0.2nm,0.3s,baz=89,slow=1.7,SNR=5.2						

TAP 22 15:50:58.4, 24°.90N×122°.41E, h10km±1km, ML2.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.40**	**286**	*i* P	Pg	15 51 07.1	+0.8
	baz=285						
TWB1				*i* S	Sg	15 51 13.4	+1.8
	baz=285						
NWF	**Wu-fen Shan**	**0.60**	**287**	P	Pg	15 51 11.1	+1.1
	baz=286						
TWE	**Neicheng**	**0.70**	**255**	P	Pg	15 51 12.3	+0.3
	baz=254						
TWA	**Mucha**	**0.76**	**276**	*eP*	Pg	15 51 14.2	+1.2
	baz=275						
ENA	**Nanau**	**0.77**	**233**	*eP*	Pg	15 51 13.4	+0.1
	baz=231						
PCYT	**Pengchaiyu**	**0.79**	**337**	*i* P	Pg	15 51 14.3	+0.6
	baz=337						
ENTT	**Nioudou**	**0.81**	**252**	P	Pg	15 51 14.8	+0.7
	baz=251						
TWY	**Chenhua**	**0.83**	**297**	*eP*	Pg	15 51 15.6	+1.3
	baz=296						
TATO	**Taipei**	**0.84**	**275**	*e*Pg	Pg	15 51 15.7	+1.0
TATO				*e*Sg	Sg	15 51 25.8	+0.2
TWS1	**Kuangyinshan**	**0.92**	**283**	*eP*	Pg	15 51 18.5	+2.2
	baz=282						
YHNB	**Yeheng**	**0.97**	**257**	*e*Pg	Pg	15 51 17.1	+0.1
YHNB				*e*Sg	Sg	15 51 27.5	-2.2
NSK	**Sanguang**	**0.98**	**257**	*i* P	Pg	15 51 17.4	+0.1
	baz=256						
NACB	**Ninganchiao**	**1.04**	**226**	*e*Pg	Pg	15 51 17.7	-0.7
NACB				*e*Sg	Sg	15 51 28.1	-3.8
WHF	**Hehuan Shan**	**1.29**	**235**	P	Pn	15 51 23.3	+0.9
	baz=234						
NSTT	**Nanjuang**	**1.31**	**259**	*eP*	Pn	15 51 24.7	+1.9
	baz=258						
SSLB	**Suanglung**	**1.73**	**231**	*e*Pg	Pg	15 51 30.6	-1.0
SSLB				*e*Sg	Sg	15 51 40.5	-14
TPUB	**Ta-pu**	**2.28**	**226**	*eP*	Pn	15 51 39.3	+3.2

*TAP **22** 15:51:07.8, 24°.88N×122°.37E, h1km±1km, ML3.8, D*
*ISCJB **22** 15:51:09.5±0.7, 24°.89N±0°.03×122°.46E±0°.04, h10km, mb3.5/4, Error ellipse: s-maj=5.4km s-min=3.9km az=150.9*
*NEIC **22** 15:51:09.2±1.8, 24°.64N×121°.76E, h10km, Error ellipse: s-maj=24.7km s-min=9.6km az=88.0*
*IDC **22** 15:51:12.2±1.6, 24°.65N×121°.21E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=66.4km s-min=26.7km az=65.0*
ISC 22 15:51:09.9±0.6, 24°.89N±0°.03×122°.45E±0°.04, h10km, n54, σ1**19**/71**, mb3.5/4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**285**	*i* P	Pg	15 51 17.4	-1.0
	baz=291						
TWB

WHF	Hehuan Shan	1.31	236	*e*P		Pn	15 51 32.8	-1.4
	baz=233							
TWT	Tachien	1.32	241	*e*P		Pn	15 51 33.5	-0.9
	baz=231							
NSTT	Nanjuang	1.34	259	P		Pn	15 51 35.4	+0.7
	baz=257							
NSTT				*e*S		Sb	15 51 53.1	+0.8
	baz=257							
ESL	Shilin	1.42	221	*i* P		Pn	15 51 34.8	-0.9
	baz=229							
ESL				*e*S		Sn	15 51 53.6	-0.8
	baz=229							
NSY	Sanyi	1.61	253	*e*P		Pn	15 51 39.2	+0.9
	baz=251							
NSY				*e*S		Sn	15 52 03.5	+4.5
	baz=251							
TWQ1	Liyutan	1.62	251	*e*P		Pn	15 51 40.6	+2.2
	baz=250							
TWQ1				*e*S		Sn	15 51 59.1	-0.3
	baz=250							
EHY	Hungye	1.72	217	P		Pn	15 51 39.0	-0.9
	baz=210							
SMLT	Sun Moon Lake	1.73	235	P		Pn	15 51 41.3	+1.2
	baz=232							
TYC	Yuchr	1.75	236	*e*P		Pn	15 51 41.7	+1.4
	baz=231							
TCU	Taichung	1.78	246	*e*P		Pn	15 51 44.0	+3.3
	baz=233							
YULB	Yu-li	1.83	215	*e*P		Pn	15 51 38.5	-2.8
TWF1	Yuli	1.86	215	*e*P		Pn	15 51 41.2	-0.6
	baz=208							
WNT	Mingjian	1.90	238	*e*P		Pn	15 51 45.6	+3.3
	baz=234							
YUS	Yu-Shan	1.95	225	P		Pn	15 51 42.8	-0.4
	baz=203							
ALS	Alishan	2.04	228	*e*P		Pn	15 51 45.5	+1.3
	baz=203							
CHKT	Chengkung	2.04	209	*e*P		Pn	15 51 43.8	-0.5
	baz=188							
CHKT				*e*S		Sn	15 52 09.6	-0.3
	baz=188							
CHN5	Tsauling	2.07	232	*e*P		Pn	15 51 47.2	+2.5
	baz=224							
WGK	Gukeng	2.10	235	*e*P		Pn	15 51 49.2	+4.1
	baz=228							
ELDTW	Lidau	2.14	218	*e*P		Pn	15 51 44.6	-1.1
	baz=199							
ELDTW				*e*S		Sn	15 52 12.0	-0.4
	baz=199							
CHN2	Minshiung	2.25	233	*e*P		Pn	15 51 50.6	+3.4
	baz=245							
CHN4	Tsaushan	2.29	228	*e*P		Pn	15 51 50.6	+2.9
	baz=203							
CHY	Chiayi	2.31	233	*e*P		Pn	15 51 49.7	+1.6
	baz=225							
WTP	Ta-pu	2.34	226	*e*P		Pn	15 51 49.6	+1.2
	baz=202							
TWK	Hsinying	2.42	228	*e*P		Pn	15 51 52.8	+3.4
	baz=219							
TWG	Pinlang	2.42	212	*e*P		Pn	15 51 47.9	-1.6
TWG	Pinlang	2.42	212	*e*P		Pn	15 51 49.8	+0.3
	baz=206							
CHN1	Nanshi	2.44	226	P		Pn	15 51 51.8	+2.0
	baz=201							
SGST	Jiashian	2.48	224	*e*P		Pn	15 51 51.5	+1.1
	baz=200							
ECL	Taimali	2.67	211	*e*P		Pn	15 51 52.6	-0.3
	baz=196							
ECL				*e*S		Sn	15 52 25.1	-0.2
	baz=196							
SSD	Sandimen	2.71	218	*e*P		Pn	15 51 53.5	0.0
	baz=196							
EAST	Anshuo	2.90	211	*e*P		Pn	15 51 55.8	-0.3
	baz=195							
PNG	Penghu	2.95	244	*e*P		Pn	15 51 59.6	+2.7
	baz=238							
SCZT	Fangliau	3.02	214	*e*P		Pn	15 51 59.4	+1.6
	baz=192							
KSRS	Korea Array	13.36	19	Pn		Px	15 54 31.4	
	0.3nm,0.3s,baz=197,slow=11,SNR=14							
MKAR	Makanchi Array	38.64	315	P		P	15 58 31.7	-1.7
	0.7nm,0.6s,mb3.5,baz=106,slow=11,SNR=5.2							
KURK	Kurchatov	42.30	319	P		P	15 59 04.6	+1.0
	0.8nm,0.9s,mb3.4,baz=115,slow=10,SNR=5.9							
KURK	Kurchatov	42.30	319	P		P	15 59 04.6	+1.0
BVAR	Borovoye Array	47.86	320	P		P	15 59 46.2	-1.6
	0.6nm,0.7s,mb3.8,baz=104,slow=9.1,SNR=4.8							
ASAR	Alice Springs	49.53	166	P		P	16 00 05.2	+4.3
	0.2nm,0.5s,mb3.4,baz=344,slow=8.7,SNR=5.2							

NEIC ***22*** *15:57:21.9±0.6,52°.00N×177°.27W,h10km,mb4.2/5, ML3.5(AEIC),Error ellipse: s-maj=12.3km s-min=7.4km az=176.0*
IDC ***22*** *15:57:21.2±0.8,52°.14N×177°.68W,h0km,mb3.9/13, mb1 4.2/13,mb1mx3.9/29,mbtmp3.9/13,MS3.1/4, Ms1 3.1/4,ms1mx2.8/34,Error ellipse: s-maj=25.2km s-min=17.8km az=179.0*
ISCJB ***22*** *15:57:23.3±0.6,51°.99N±0°.09×177°.17W±0°.09,h33km, mb3.9/14,MS3.0/4,Error ellipse: s-maj=12.5km s-min=7.6km az=5.6*

ISC 22 15:57:25.1±0.7,51°.9N±0°.1×177°.11W±0°.09,h35km,n32, σ0°96/31,mb3.9/14,MS3.0/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	0.27	98	P	Pn	15 57 29.2	-3.4
ADK				S	Sn	15 57 37.4	-0.4
GSTR	Great Sitkin T	0.67	75	*e*Pn	Pn	15 57 36.6	-1.5
NIKO	Nikolski	5.16	75	P	Pn	15 58 39.8	0.0
UNV	Unalaska Valle	6.71	69	*e*Pn	Pn	15 59 01.1	+0.2
	36nm,1.0s						
AKUT	Akutan	7.19	68	*e*Pn	Pn	15 59 07.3	-0.3
OHAK	Old Harbor	14.76	60	*e*Pn	Pn	16 00 50.3	-0.8
	14nm,0.7s						
SVW2	Sparrevohn	14.95	44	*e*P	Pn	16 00 59.7	+6.2
RSO	Redoubt South	15.94	48	*e*P	Pn	16 01 10.8	+4.4
PPLA	Purkeypile	17.22	41	*e*P	Pn	16 01 23.1	+0.6
	44nm,1.1s						
KTH	Kantishna Hill	18.03	40	*e*P	Pn	16 01 33.3	+0.8
	26nm,1.1s						
TRF	Thorofare Moun	18.24	40	*e*P	Pn	16 01 36.0	+1.0
	7.4nm,0.9s						
PAX	Paxson	20.07	44	*e*P	P	16 01 55.4	+0.4
	12nm,1.1s						
EGAK	Eagle	22.45	41	*e*P	P	16 02 20.3	-0.2
	5.3nm,0.8s,mb4.0						
DAWY	Dawson	22.99	44	*e*P	P	16 02 26.1	-0.2
INK	Inuvik	26.41	35	P	P	16 02 57.5	-0.3
	1.3nm,0.6s,mb3.7,baz=245,slow=9.7,SNR=5.2						
INK				LR	LR	16 14 50.9	
	comp=Z,36nm,18.7s,MS3.0,baz=321,slow=40						
DLBC	Dease Lake	27.18	57	LR	LR	16 13 32.9	
	comp=Z,70nm,21.9s,MS3.2,baz=260,slow=36						
BBB	Bella Bella	29.68	70	LR	LR	16 12 39.6	
	comp=Z,56nm,20.1s,MS3.2,baz=76,slow=31						
YKA	Yellowknife Ar	34.09	47	P	P	16 04 07.3	+1.5
	0.2nm,0.4s,mb3.4,baz=282,slow=8.5,SNR=4.1						
YKA				LR	LR	16 19 46.9	
	comp=Z,12nm,18.6s,MS2.6,baz=90,slow=39						
YKA	Yellowknife Ar	34.09	47	P	P	16 04 07.3	+1.5
YKA				LR	LR	16 19 46.9	
YBH	Yreka Blue Hor	37.77	84	P	P	16 04 42.0	+4.5
	2.9nm,0.8s,mb4.1,baz=263,slow=7.3,SNR=5.2						
NVAR	Mina Array Bea	42.45	85	P	P	16 05 21.2	+4.8
	1.6nm,0.6s,mb3.8,baz=299,slow=7.8,SNR=6.9						
NVAR	Mina Array Bea	42.45	85	P	P	16 05 21.2	+4.8
TXAR	Lajitas Array	57.54	83	P	P	16 07 14.4	+3.5
	1.2nm,0.7s,mb4.0,baz=287,slow=4.2,SNR=6.5						
ARCES	ARCESS Array B	57.73	351	P	P	16 07 10.9	-0.7
	3.8nm,0.9s,mb4.4,baz=336,slow=5.7,SNR=3.8						
KURK	Kurchatov	59.40	314	P	P	16 07 23.1	-0.5
	0.2nm,0.5s,mb3.4,baz=44,slow=6.5,SNR=3.1						
BVAR	Borovoye Array	61.15	320	P	P	16 07 34.5	-0.9
	1.0nm,0.7s,mb4.1,baz=56,slow=7.9,SNR=6.0						
NOA	NORSAR Array B	67.19	356	P	P	16 08 15.9	+0.9
	0.5nm,0.7s,mb3.6,baz=269,slow=4.7,SNR=2.9						
AKTK	Aktyubinsk	67.84	325	P	P	16 08 18.8	-0.5
AKTO	Aktyubinsk	67.84	325	P	P	16 08 18.8	-0.5
	0.8nm,0.3s,mb4.2,baz=62,slow=1.5,SNR=4.0						
CMAR	Chiang Mai Arr	72.00	277	P	P	16 08 43.8	-1.4
	0.6nm,0.6s,mb3.7,baz=22,slow=5.6,SNR=5.2						
ASAR	Alice Springs	86.60	224	P	P	16 10 05.2	+0.7
	0.8nm,0.6s,mb4.1,baz=24,slow=5.8,SNR=18						
STKA	Stephens Creek	90.96	214	P	P	16 10 27.0	+2.0
	1.3nm,0.6s,mb4.5,baz=254,slow=21,SNR=5.2						

IDC 22 16:03:13.8±1.4,32°.64N×105°.63E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.4/23,mbtmp3.6/5,Error ellipse: s-maj=185.3km s-min=21.9km az=56.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.74	315	P	P	16 08 17.4	+0.1
	0.3nm,0.5s,baz=128,slow=11,SNR=3.6						
ZALV	Zalesovo Beam	25.95	331	P	P	16 08 47.8	+0.1
	0.5nm,0.3s,baz=142,slow=12,SNR=2.4						
KURK	Kurchatov	26.85	320	P	P	16 08 55.9	+0.1
	0.2nm,0.4s,baz=117,slow=11,SNR=4.1						
FINES	FINESS Array B	57.03	326	P	P	16 13 00.8	-0.2
	1.8nm,0.8s,baz=96,slow=8.5,SNR=3.7						
ASAR	Alice Springs	62.16	151	P	P	16 13 37.0	+0.1
	0.4nm,0.6s,baz=331,slow=6.5,SNR=14						

HLW ***22*** *16:06:48.5,34°.08N×25°.60E,h33km±30km,Ml3.6*
ISCJB ***22*** *16:06:48.1±1.0,33°.97N±0°.03×25°.72E±0°.04,h29km±8km, mb3.9/12,Error ellipse: s-maj=6.5km s-min=4.6km az=148.4*
NEIC ***22*** *16:06:48.1,34°.08N×25°.78E,h24km,mb3.6/1, MD3.7(ATH),After ATH.*
ATH ***22*** *16:06:48.1,34°.08N×25°.78E,h24km±3km,MD3.7/9*
CSEM ***22*** *16:06:49.2±0.3,34°.04N×25°.64E,h20km,MD3.7,Error ellipse: s-maj=7.7km s-min=6.4km az=42.0*
IDC ***22*** *16:06:51.5±2.5,34°.10N×25°.66E,h38km±21km,mb3.8/12, mb1 3.8/17,mb1mx3.7/28,mbtmp3.7/17,ML4.0/5,Error ellipse: s-maj=20.7km s-min=14.2km az=18.0*

ISC 22 16:06:50.2±1.2,34°.02N±0°.03×25°.67E±0°.04,h29km±10km, n91,σ1°08/104,mb3.9/12,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	Khrisi	0.85	2	*e*PN	Pn	16 07 03.6	-2.6
XRY	Khrisi	0.85	2	*e*Pn	Pn	16 07 03.6	-2.6
LAST	Lasithi	1.15	352	*e*PB	Pb	16 07 08.6	-2.7
LAST				*e*SN	Sn	16 07 25.6	+0.6
LAST	Lasithi	1.15	352	*e*Pb	Pb	16 07 08.6	-2.7
LAST				*e*Sn	Sn	16 07 25.6	+0.6
ZKR	Zakros	1.18	23	*e*PN	Pn	16 07 09.4	-1.3
ZKR				*e*SN	Sn	16 07 24.6	-1.2
ZKR	Zakros	1.18	23	*e*Pn	Pn	16 07 09.4	-1.3
ZKR				*e*Sn	Sn	16 07 24.6	-1.2
SIVA	Sivas	1.22	325	*e*PN	Pn	16 07 11.9	+0.6
SIVA	Sivas	1.22	325	*e*Pn	Pn	16 07 11.9	+0.6
NPS	Neapolis	1.24	358	*e*PB	Pb	16 07 09.4	-3.5
NPS				*e*SN	Sn	16 07 26.1	-1.1
NPS	Neapolis	1.24	358	*e*Pb	Pb	16 07 09.4	-3.5
NPS				*e*Sn	Sn	16 07 26.1	-1.1
IDI	Anoyia	1.41	333	Pn	Pn	16 07 13.9	-0.1
	6.1nm,0.3s,baz=155,slow=15,SNR=16						
IDI				Sn	Sn	16 07 31.0	-0.6
	17nm,0.3s,baz=290,slow=18,SNR=7.5						
IDI	Anoyia	1.41	333	*e*PN	Pn	16 07 14.3	+0.3
IDI	Anoyia	1.41	333	*e*Pn	Pn	16 07 14.3	+0.3
GVD	Gavdhos	1.54	302	*e*PN	Pn	16 07 16.9	+1.3
GVD	Gavdhos	1.54	302	*e*Pn	Pn	16 07 10.6	-5.0
GVD				*e*Pn	Pn	16 07 16.9	+1.3
GVD	Gavdhos	1.54	302	*e*Pn	Pn	16 07 16.9	+1.3
VAM	Vamos	1.83	319	*e*PN	Pn	16 07 20.7	+1.0
VAM	Vamos	1.83	319	*e*Pn	Pn	16 07 20.7	+1.0
KARN	Karanos	1.99	314	*e*PN	Pn	16 07 22.9	+1.0
KARN	Karanos	1.99	314	*e*Pn	Pn	16 07 22.9	+1.0
HMAT	Matruh	3.16	157	P	Pn	16 07 37.3	-0.7
	baz=156						
HMAT				AMP		16 08 00.0	
	comp=E,130μm,0.5s,logA/T=5.4,baz=156						
HMAT				S	Sn	16 08 11.0	-3.7
	baz=156						
HMAT	Matruh	3.16	157	P	Pn	16 07 37.3	-0.7
HMAT				S	Sn	16 08 11.0	-3.7
AKAS	Kas	3.91	55	*i* P	Pn	16 07 49.2	+0.9
AKAS	Kas	3.91	55	*i* P	Pn	16 07 49.2	+0.9
AYDN	Tasoluk	4.05	26	*i* P	Pn	16 07 51.4	+1.2
AYDN	Tasoluk	4.05	26	*i* P	Pn	16 07 51.4	+1.2
GOLH	Golhisar	4.51	44	*i* P	Pn	16 07 57.9	+1.4
GOLH	Golhisar	4.51	44	*i* P	Pn	16 07 57.9	+1.4
DNZL	Cakiroluk	4.57	36	*i* P	Pn	16 08 00.9	+3.6
DNZL	Cakiroluk	4.57	36	*i* P	Pn	16 08 00.9	+3.5
KORT	Korkueli	4.84	51	*i* P	Pn	16 08 03.0	+1.9
KORT	Korkueli	4.84	51	*i* P	Pn	16 08 03.0	+2.0
KHAL	Karahalli	5.33	34	*i* P	Pn	16 08 08.2	+0.5
KHAL	Karahalli	5.33	34	*i* P	Pn	16 08 08.2	+0.5
BALY	Balya	5.92	15	*i* P	Pn	16 08 16.9	+1.1
BALY	Balya	5.92	15	*i* P	Pn	16 08 17.0	+1.2
HSAF	As Saff	6.66	130	P	Pn	16 08 25.3	-0.8
	baz=129						
HSAF	As Saff	6.66	130	P	Pn	16 08 25.3	-0.8
GLL	Jalalah	6.79	129	P	Pn	16 08 27.7	-0.1
	baz=129						
GLL	Jalalah	6.79	129	P	Pn	16 08 27.7	-0.2
MMAI	Mount Meron Ar	8.19	94	Pn	Pn	16 08 47.1	0.0
	comp=E,1.6nm,0.3s,baz=275,slow=12,SNR=6.4						
MMAI				Sn	Sn	16 10 17.3	-1.4
	comp=E,1.8nm,0.3s,baz=262,slow=23,SNR=3.4						
BR131	Keskin Array S	8.55	46	Pn	Pn	16 08 54.2	+2.2
	comp=E,0.9nm,0.6s						
BR131	Keskin Array S	8.55	46	Pn	Pn	16 08 54.2	+2.2
	comp=E,0.9nm,0.6s						
BRTR	Keskin Array B	8.55	46	Pn	Pn	16 08 53.5	+1.4
	comp=E,0.2nm,0.3s,baz=198,slow=16,SNR=7.3						
BRTR				Sn	Sn	16 10 28.6	+1.1
	comp=E,0.1nm,0.3s,baz=130,slow=23,SNR=2.7						
BRTR	Keskin Array B	8.55	46	Pn	Pn	16 08 53.5	+1.5
BRTR				Sn	Sn	16 10 28.6	+1.1
TIP	Timpagrande	8.81	308	*e*Pn	Pn	16 08 55.1	-0.5
TIP	Timpagrande	8.81	308	*e*Pn	Pn	16 08 55.1	-0.5
CEL	Celeste	8.96	301	*e*Pn	Pn	16 08 56.8	-0.8
CEL	Celeste	8.96	301	*e*Pn	Pn	16 08 56.8	-0.8
EIL	Elat	9.01	116	Pn	Pn	16 08 59.0	+0.7
	comp=E,0.5nm,0.3s,baz=345,slow=18,SNR=8.6						
EIL				Sn	Sn	16 10 34.8	-4.1
	comp=E,0.6nm,0.3s,baz=77,slow=22,SNR=2.9						
EIL	Elat	9.01	116	Pn	Pn	16 08 59.0	+0.7
AKASG	Malin Array Be	16.87	8	Pn	Pn	16 10 44.6	+0.6
	comp=E,2.2nm,0.3s,baz=201,slow=11,SNR=5.5						
AKASG	Malin Array Be	16.87	8	Pn	Pn	16 10 44.6	+0.6
AKBB	Malin Array Si	16.87	8	Pn	Pn	16 10 43.3	-0.7
AKBB	Malin Array Si	16.87	8	Pn	Pn	16 10 43.3	-0.7
GEC2	GERESS Array S	17.28	333	*e*P	Pn	16 10 50.6	+1.4
	comp=E,808nm,1.0s						
GEC2	GERESS Array S	17.28	333	*e*P	Pn	16 10 50.6	+1.4
	comp=E,808nm,1.0s						
GERES	GERESS Array B	17.28	333	P	Pn	16 10 50.4	+1.2
	comp=E,0.5nm,0.3s,baz=146,slow=12,SNR=21						
GERES	GERESS Array B	17.28	333	P	Pn	16 10 50.4	+1.2
GRF	Grafenberg Arr	18.94	330	*e*P	Pn	16 11 08.8	-0.7
	comp=E,4.0nm,1.1s						
GRF	Grafenberg Arr	18.94	330	*e*P	Pn	16 11 08.8	-0.7
	comp=E,4.0nm,1.1s						
CLL	Collm	19.57	336	*e*pP	pP	16 11 19.0	-4.3
CLL				*es*P	sP	16 11 22.0	-5.0
FINES	FINESS Array B	27.44	0	P	P	16 12 31.4	-1.8
	comp=E,1.1nm,0.4s,mb3.8,baz=156,slow=11,SNR=11						
FINES	FINESS Array B	27.44	0	P	P	16 12 31.4	-1.8
AKTK	Aktyubinsk	28.73	45	P	P	16 12 44.3	-0.5
AKTK	Aktyubinsk	28.73	45	P	P	16 12 44.3	-0.6
AKTO	Aktyubinsk	28.73	45	P	P	16 12 44.3	-0.6
	comp=E,1.7nm,0.6s,mb4.0,baz=247,slow=7.7,SNR=5.7						
EKA	Eskdalemuir Ar	29.21	326	P	P	16 12 49.0	0.0
	comp=E,0.7nm,0.6s,mb3.6,baz=186,slow=31,SNR=3.7						
EKA	Eskdalemuir Ar	29.21	326	P	P	16 12 49.0	0.0
TOA0	Torodi Ar. Sit	30.10	232	*e*P	P	16 12 58.1	+0.8
TOA0	Torodi Ar. Sit	30.10	232	*e*P	P	16 12 58.1	+0.8
TORD	Torodi Ar. Bea	30.10	232	P	P	16 12 57.8	+0.5
	comp=E,0.4nm,0.6s,mb3.4,baz=34,slow=8.9,SNR=5.7						
ARCES	ARCESS Array B	35.56	360	P	P	16 13 42.7	-1.8
	comp=E,1.0nm,0.4s,mb4.1,baz=173,slow=9.0,SNR=20						
ARCES	ARCESS Array B	35.56	360	P	P	16 13 42.7	-1.8
ARCES	ARCESS Array B	35.56	360	P	P	16 13 42.7	-1.8
BVAR	Borovoye Array	36.84	45	P	P	16 13 56.2	+0.6
	comp=E,0.8nm,0.7s,mb3.6,baz=254,slow=11,SNR=6.1						
BVAR	Borovoye Array	36.84	45	P	P	16 13 56.2	+0.6
KURK	Kurchatov	41.58	50	P	P	16 14 34.0	-1.3
	comp=E,2.4nm,0.4s,mb4.2,baz=288,slow=10,SNR=23						
KURK	Kurchatov	41.58	50	P	P	16 14 34.0	-1.2
MK31	Makanchi Array	44.06	56	*e*P	P	16 14 55.7	+0.3
MK31	Makanchi Array	44.06	56	*e*P	P	16 14 55.7	+0.3
MKAR	Makanchi Array	44.06	56	P	P	16 14 55.9	+0.5
	comp=E,1.2nm,0.5s,mb3.9,baz=286,slow=5.5,SNR=12						
MKAR	Makanchi Array	44.06	56	P	P	16 14 55.8	+0.4
ZALV	Zalesovo Beam	45.50	45	P	P	16 15 06.7	0.0
	comp=E,2.6nm,0.4s,mb4.4,baz=272,slow=9.5,SNR=9.1						
ZALV	Zalesovo Beam	45.50	45	P	P	16 15 06.7	0.0
SCHQ	Schefferville	64.32	320	P	P	16 17 23.1	+0.2
	comp=E,1.9nm,0.6s,mb4.3,baz=67,slow=6.3,SNR=4.7						
SCHQ	Schefferville	64.32	320	P	P	16 17 23.0	+0.2
CMAR	Chiang Mai Arr	66.29	83	P	P	16 17 36.6	+0.5
	comp=E,0.5nm,0.8s,mb3.6,baz=293,slow=7.8,SNR=4.3						
CMAR	Chiang Mai Arr	66.29	83	P	P	16 17 36.6	+0.5
YKA	Yellowknife Ar	78.66	342	P	P	16 18 49.1	0.0
	comp=E,0.3nm,0.6s,mb3.4,baz=30,slow=5.6,SNR=4.7						
YKA	Yellowknife Ar	78.66	342	P	P	16 18 49.1	0.0

ISCJB ***22*** *16:21:38.0±0.7,31°.18N±0°.07×130°.4E±0°.1,h170km±5km, mb3.4/4,Error ellipse: s-maj=20.0km s-min=11.1km az=175.3*
JMA ***22*** *16:21:40.1±0.1,31°.15N×130°.37E,h158km±1km,M3.2*
IDC ***22*** *16:21:40.3±4.1,31°.00N×129°.37E,h165km±46km,mb3.2/4, mb1 3.2/5,mb1mx2.9/25,mbtmp3.1/5,MS3.5/1,Ms1 3.5/1, ms1mx2.4/13,Error ellipse: s-maj=107.3km s-min=23.1km az=67.0*

ISC 22 16:21:39.2±0.7,31°.18N±0°.07×130°.4E±0°.1,h165km±5km, n14,σ0°55/19,mb3.4/4,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.33	8	P	Pn	16 22 01.9	+0.3
JSU				S	Sn	16 22 19.1	+0.2
JTSR	Tashiro 2	0.45	91	P	Pn	16 22 02.3	+0.3
JTSR				S	Sn	16 22 18.9	-0.5
JTN	Tanegashima 3	0.72	136	P	Pn	16 22 03.8	+0.4
JTN				S	Sn	16 22 21.8	-0.1
JKC	Kuchinoerabu	0.73	194	P	Pn	16 22 03.4	-0.1
JSJ	Shimokoshiki	0.77	311	P	Pn	16 22 03.9	+0.2
JSJ				S	Sn	16 22 22.2	-0.4
JTZ	Takazaki	0.93	39	P	Pn	16 22 05.4	+0.6
JTZ				S	Sn	16 22 23.8	-0.8
JNN	Nakanoshima	1.41	199	P	Pn	16 22 08.9	-0.1
JIU2	Izumi 2	1.41	14	P	Pn	16 22 09.6	+0.6
JIU2				S	Sn	16 22 31.7	-0.3
KSRS	Korea Array	6.59	343	P	Pn	16 23 14.7	+1.0
	0.1nm,0.3s,baz=170,slow=14,SNR=6.3						
KURK	Kurchatov	42.72	313	P	P	16 29 15.8	-3.9
	0.2nm,0.4s,mb3.1,baz=90,slow=8.5,SNR=2.9						
BVAR	Borovoye Array	47.99	315	LR	LR	16 51 18.8	
	comp=Z,58nm,19.8s,baz=154,slow=38						
ASAR	Alice Springs	54.63	176	P	P	16 30 51.0	+0.3
	0.3nm,0.9s,mb3.0,baz=2.1,slow=6.5,SNR=5.7						
FINES	FINESS Array B	69.52	330	P	P	16 32 28.4	-1.0
	1.2nm,0.4s,mb3.9,baz=64,slow=4.4,SNR=6.7						
BRTR	Keskin Array B	75.52	308	P	P	16 33 05.1	-0.2
	1.6nm,0.9s,mb3.6,baz=74,slow=4.4,SNR=5.0						

ISCJB ***22*** *16:25:30.1±0.7,45°.64N±0°.04×26°.60E±0°.06,h128km±6km, Error ellipse: s-maj=7.5km s-min=5.5km az=155.1*
CSEM ***22*** *16:25:30.7±0.2,45°.63N×26°.56E,h123km±2km,MD4.1/3, Error ellipse: s-maj=3.9km s-min=2.9km az=56.0*
BUC ***22*** *16:25:30.5±1.1,45°.63N×26°.59E,h127km±10km,MD4.1/3, Error ellipse: s-maj=8.0km s-min=6.5km az=44.0*
SOF ***22*** *16:25:32.8,45°.51N×26°.60E,h100km,MD3.1*

ISC 22 16:25:30.9±0.8,45°.64N±0°.04×26°.60E±0°.06,h126km±6km, n47,σ0°58/67,27C-6D,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.21	10	⇑*i*P	Pn	16 25 48.1	0.0
PLOR				*i* S	Sn	16 26 01.4	+0.2
PLOR	Plostina	0.21	10	⇑*i*P	Pn	16 25 48.1	0.0
PLOR	Plostina	0.21	10	⇑*i*P	Pn	16 25 48.1	0.0
PLOR				*i* S	Sn	16 26 01.4	+0.2
VRI	Vrincioaia	0.24	22	⇑*i*P	Pn	16 25 48.4	+0.2
VRI				*i* S	Sn	16 26 02.0	+0.6
VRI	Vrincioaia	0.24	22	⇑*i*P	Pn	16 25 48.4	+0.2
VRI	Vrincioaia	0.24	22	⇑*i*P	Pn	16 25 48.4	+0.2
VRI				*i* S	Sn	16 26 02.0	+0.6
MLR	Muntele Rosu	0.48	252	⇑*i*P	Pn	16 25 49.3	0.0
MLR				*i* S	Sn	16 26 03.1	-0.1
MLR	Muntele Rosu	0.48	252	⇑*i*P	Pn	16 25 49.3	0.0
MLR	Muntele Rosu	0.48	252	⇑*i*P	Pn	16 25 49.3	0.0
MLR				*i* S	Sn	16 26 03.1	-0.1
CFR	Carcaliu	1.18	113	⇑*i*P	Pn	16 25 55.2	+0.1

IKLH				*e*			16 33 42.7
	comp=Z,4μm,0.3s						
IZEF	**Zefreh**	**1.86**	**69**	*e*Pn	**Pn**	**16 33 17.4**	**+1.3**
IZEF				*e*		16 33 22.8	
	comp=Z,2μm,0.1s						
NASN	**Na'in**	**2.22**	**75**	*e*Pn	**Pn**	**16 33 23.4**	**+2.4**
ASAO	**Ashtian**	**2.31**	**355**	*e*Pn	**Pn**	**16 33 24.3**	**+2.0**
ASAO				*e*Sg	**Sg**	**16 33 57.0**	**-0.9**
ISFB	**Sefidab**	**2.68**	**38**	*e*Pn	**Pn**	**16 33 27.7**	**+0.4**
ISFB				*e*		16 34 09.7	
	comp=Z,735nm,0.3s						
IVRN	**Varamin**	**3.01**	**24**	*e*Pn	**Pn**	**16 33 32.6**	**+0.7**
IVRN				*e*		16 33 44.9	
	comp=Z,585nm,0.2s						
IKOM	**Komasi**	**3.01**	**311**	*e*Pn	**Pn**	**16 33 31.5**	**-0.4**
IKOM				*e*		16 34 30.3	
	comp=Z,1μm,0.3s						
IRAZ	**Razeghan**	**3.17**	**355**	*e*Pn	**Pn**	**16 33 34.0**	**-0.1**
IRAZ				*e*		16 34 01.7	
	comp=Z,602nm,0.2s						
IRAZ				*e*Sn	**Sn**	**16 34 11.5**	**-0.8**
IPAR	**Pars**	**3.38**	**134**	*e*Pn	**Pn**	**16 33 37.9**	**+0.9**
IPAR				*e*		16 34 48.1	
	comp=Z,543nm,0.4s						
UMR	**Umm Al-Rimmam**	**3.46**	**220**	*e*P	**Pn**	**16 33 38.0**	**-0.1**
UMR	**Umm Al-Rimmam**	**3.46**	**220**	*e*P	**Pn**	**16 33 38.0**	**-0.1**
MIB	**Mutribah**	**3.49**	**227**	*e*P	**Pn**	**16 33 39.3**	**+0.8**
MIB				*e*S	**Sn**	**16 34 20.3**	**+0.1**
MIB				AML	AML	16 34 21.7	
	comp=Z,56nm,0.6s						
MIB	**Mutribah**	**3.49**	**227**	*e*P	**Pn**	**16 33 39.3**	**+0.7**
MIB				*e*S	**Sn**	**16 34 20.3**	**0.0**
IDMV	**Damavand**	**3.64**	**23**	*e*Pn	**Pn**	**16 33 41.0**	**+0.5**
IDMV				*e*		16 33 55.4	
	comp=Z,314nm,0.3s						
ISRV	**Sarvestan**	**3.76**	**139**	*e*Pn	**Pn**	**16 33 43.1**	**+0.9**
ISRV				*e*		16 35 09.1	
	comp=Z,480nm,0.6s						
KBD	**Kabd**	**3.77**	**217**	*e*P	**Pn**	**16 33 43.0**	**+0.6**
KBD				*e*S	**Sn**	**16 34 26.7**	**-0.4**
KBD				AML	AML	16 34 29.9	
	comp=Z,32nm,0.3s						
KBD	**Kabd**	**3.77**	**217**	*e*P	**Pn**	**16 33 43.0**	**+0.6**
KBD				*e*S	**Sn**	**16 34 26.7**	**-0.4**
	comp=Z,32nm,0.3s						
IMEH	**Mehriz**	**3.80**	**102**	*e*Pn	**Pn**	**16 33 44.0**	**+1.3**
IMEH				*e*		16 35 04.2	
	comp=Z,184nm,0.3s						
ILAS	**Lasjerd**	**3.85**	**35**	*e*Pn	**Pn**	**16 33 43.8**	**+0.3**
ILAS				*e*		16 35 06.6	
	comp=Z,395nm,0.3s						
NAY	**Al-Naaiem**	**3.96**	**222**	*e*P	**Pn**	**16 33 45.3**	**+0.4**
NAY				*e*S	**Sn**	**16 34 31.1**	**-0.6**
NAY				AML	AML	16 34 34.4	
	comp=Z,34nm,0.6s						
NAY	**Al-Naaiem**	**3.96**	**222**	*e*P	**Pn**	**16 33 45.3**	**+0.4**
NAY				*e*S	**Sn**	**16 34 31.1**	**-0.6**
QRN	**Al-Qurain**	**4.03**	**211**	*e*P	**Pn**	**16 33 45.8**	**-0.2**
QRN				*e*S	**Sn**	**16 34 32.7**	**-0.8**
QRN				AML	AML	16 34 35.2	
	comp=Z,33nm,0.4s						
IDHR	**Dehrash**	**4.07**	**308**	*e*Pn	**Pn**	**16 33 45.4**	**-1.0**
IDHR				*e*		16 34 35.2	
	comp=N,3μm,0.2s						
IGLO	**Ghaloghah**	**5.17**	**34**	*e*Pn	**Pn**	**16 34 01.5**	**-0.1**
IGLO				*e*		16 34 36.5	
	comp=Z,193nm,0.3s						
ASYS		**6.98**	**229**	P	**Pn**	**16 34 24.4**	**-2.0**
ASYS		**6.98**	**229**	P	**Pn**	**16 34 24.4**	**-2.1**
BTHS		**8.18**	**176**	P	**Pn**	**16 34 41.0**	**-1.9**
BTHS		**8.18**	**176**	P	**Pn**	**16 34 41.0**	**-1.9**
LYLS		**10.51**	**196**	P	**Pn**	**16 35 12.3**	**-2.6**
LYLS		**10.51**	**196**	P	**Pn**	**16 35 12.3**	**-2.6**
LYLS				S	**Sn**	**16 37 09.0**	**-4.0**

*ISCJB **22** 16:54:54.1±0.4, 38.°02N±0.°02×21.°31E±0.°03, h10km, Error ellipse: s-maj=3.5km s-min=2.8km az=18.2*
*CSEM **22** 16:54:54.1±0.2, 38.°01N×21.°31E, h7km, MD3.6, Error ellipse: s-maj=4.1km s-min=3.4km az=49.0*
*THE **22** 16:54:54.5, 38.°01N×21.°35E, h0km±2km, ML3.5/7, Error ellipse: s-maj=2.4km s-min=0.8km az=208.0*
*NEIC **22** 16:54:54.5, 38.°05N×21.°33E, h6km, MD3.6(ATH), After ATH.*
*ATH **22** 16:54:54.5, 38.°05N×21.°33E, h6km±3km, MD3.6/13*

ISC 22 16:54:54.3±0.5, 37.°99N±0.°03×21.°32E±0.°03, h5km±3km, n66, σ0§88/104, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.14**	**61**	*e*PG	**Pg**	**16 54 57.0**	**-0.1**
RLS				*e*SG	**Sg**	**16 54 59.4**	**+0.4**
RLS	**Riolos of Patr**	**0.14**	**61**	*e*Pg	**Pg**	**16 54 57.0**	**-0.1**
RLS				*e*Sg	**Sg**	**16 54 59.4**	**+0.4**
KFX	**Anninata**	**0.43**	**286**	P	**Pg**	**16 55 03.3**	**+0.7**
UPR	**University Cam**	**0.47**	**52**	*e*PB	**Pg**	**16 55 03.4**	**0.0**
UPR				*e*SB	**Sg**	**16 55 09.1**	**-0.5**
UPR	**University Cam**	**0.47**	**52**	P	**Pg**	**16 55 03.2**	**-0.2**
UPR				S	**Sg**	**16 55 10.9**	**+1.3**
UPR	**University Cam**	**0.47**	**52**	P	**Pg**	**16 55 03.2**	**-0.2**
UPR				*e*Sb	**Sg**	**16 55 09.1**	**-0.5**
UPR				S	**Sg**	**16 55 10.9**	**+1.3**
LAKA	**Lakka**	**0.58**	**64**	P	**Pg**	**16 55 04.9**	**-0.5**
LAKA				S	**Sg**	**16 55 13.1**	**+0.1**
LAKA	**Lakka**	**0.58**	**64**	P	**Pg**	**16 55 04.9**	**-0.5**
LAKA				S	**Sg**	**16 55 13.1**	**+0.1**
VLS	**Valsamata**	**0.60**	**288**	*e*PB	**Pg**	**16 55 05.6**	**-0.3**
VLS				*e*SB	**Sg**	**16 55 15.5**	**+1.8**
VLS	**Valsamata**	**0.60**	**288**	P	**Pg**	**16 55 05.6**	**-0.3**
VLS				S	**Sg**	**16 55 15.4**	**+1.7**
VLS	**Valsamata**	**0.60**	**288**	P	**Pg**	**16 55 05.6**	**-0.3**
VLS				S	**Sg**	**16 55 15.4**	**+1.7**
EFP	**Efpalio**	**0.64**	**47**	*e*PB	**Pg**	**16 55 06.0**	**-0.6**
EFP				*e*SB	**Sg**	**16 55 14.4**	**-0.4**
EFP	**Efpalio**	**0.64**	**47**	P	**Pg**	**16 55 05.7**	**-0.9**
EFP				S	**Sg**	**16 55 15.3**	**+0.5**
EFP	**Efpalio**	**0.64**	**47**	P	**Pg**	**16 55 05.7**	**-0.9**
EFP	**Efpalio**	**0.64**	**47**	*e*Pb	**Pg**	**16 55 06.0**	**-0.6**
EFP				*e*Sb	**Sg**	**16 55 14.4**	**-0.4**
EFP				S	**Sg**	**16 55 15.3**	**+0.5**
TRIZ	**Trizonia**	**0.70**	**58**	P	**Pg**	**16 55 06.9**	**-0.9**
TRIZ				S	**Sg**	**16 55 17.1**	**+0.1**
TRIZ	**Trizonia**	**0.70**	**58**	P	**Pg**	**16 55 06.9**	**-0.9**
TRIZ				S	**Sg**	**16 55 17.1**	**+0.1**
KALE	**Kalithea**	**0.76**	**58**	P	**Pg**	**16 55 07.8**	**-1.2**
KALE				S	**Sg**	**16 55 18.5**	**-0.4**
KALE	**Kalithea**	**0.76**	**58**	P	**Pg**	**16 55 07.8**	**-1.2**
KALE				S	**Sg**	**16 55 18.5**	**-0.4**
GUR	**Goura**	**0.81**	**94**	*e*PG	**Pg**	**16 55 09.5**	**-0.4**
GUR				*e*SB	**Sg**	**16 55 21.3**	**+0.8**
GUR	**Goura**	**0.81**	**94**	P	**Pg**	**16 55 08.5**	**-1.4**
GUR				S	**Sg**	**16 55 20.6**	**+0.1**
GUR	**Goura**	**0.81**	**94**	P	**Pg**	**16 55 08.5**	**-1.4**
GUR	**Goura**	**0.81**	**94**	*e*Pg	**Pg**	**16 55 09.5**	**-0.4**
GUR				S	**Sg**	**16 55 20.6**	**+0.1**
GUR				*e*Sb	**Sg**	**16 55 21.3**	**+0.8**
ITM	**Ithomi**	**0.94**	**149**	*e*PB	**Pg**	**16 55 13.5**	**+1.1**
ITM	**Ithomi**	**0.94**	**149**	P	**Pg**	**16 55 12.8**	**+0.4**
ITM	**Ithomi**	**0.94**	**149**	P	**Pg**	**16 55 12.8**	**+0.4**
ITM	**Ithomi**	**0.94**	**149**	*e*Pb	**Pg**	**16 55 13.5**	**+1.1**
EVR	**Evrytania**	**1.00**	**23**	*e*PB	**Pg**	**16 55 12.8**	**-0.7**
EVR	**Evrytania**	**1.00**	**23**	*e*Pb	**Pg**	**16 55 12.8**	**-0.7**
VLX	**Vlachokerasia**	**1.05**	**126**	*e*PN	**Pg**	**16 55 15.7**	**+1.3**
VLX				*e*SB	**Sg**	**16 55 29.6**	**+1.6**
VLX	**Vlachokerasia**	**1.05**	**126**	P	**Pg**	**16 55 14.8**	**+0.4**
VLX				S	**Sg**	**16 55 30.1**	**+2.1**
VLX	**Vlachokerasia**	**1.05**	**126**	P	**Pg**	**16 55 14.8**	**+0.4**
VLX	**Vlachokerasia**	**1.05**	**126**	*e*Pn	**Pg**	**16 55 15.7**	**+1.3**
VLX				*e*Sb	**Sg**	**16 55 29.6**	**+1.6**
VLX				S	**Sg**	**16 55 30.1**	**+2.1**
PYL	**PYLOS**	**1.15**	**163**	*e*PN	**Pn**	**16 55 16.0**	**-0.9**
PYL	**PYLOS**	**1.15**	**163**	P	**Pg**	**16 55 16.2**	**0.0**
PYL	**PYLOS**	**1.15**	**163**	P	**Pg**	**16 55 16.2**	**0.0**
AGG	**Agios Georgios**	**1.30**	**37**	P	**Pn**	**16 55 17.7**	**-1.4**
AGG				S	**Sg**	**16 55 36.8**	**+0.6**
AGG	**Agios Georgios**	**1.30**	**37**	P	**Pn**	**16 55 17.7**	**-1.4**
AGG				S	**Sg**	**16 55 36.8**	**+0.6**
LTK	**Loutraki**	**1.31**	**88**	*e*PB	**Pb**	**16 55 19.0**	**-0.3**
LTK	**Loutraki**	**1.31**	**88**	P	**Pn**	**16 55 17.7**	**-1.4**
LTK				S	**Sg**	**16 55 37.1**	**+0.8**
LTK	**Loutraki**	**1.31**	**88**	P	**Pn**	**16 55 17.7**	**-1.4**
LTK	**Loutraki**	**1.31**	**88**	*e*Pb	**Pb**	**16 55 19.0**	**-0.3**
LTK				S	**Sg**	**16 55 37.1**	**+0.8**
LKR	**Lokris**	**1.48**	**63**	*e*PN	**Pn**	**16 55 20.6**	**-0.9**
LKR	**Lokris**	**1.48**	**63**	P	**Pn**	**16 55 20.8**	**-0.7**
LKR				S	**Sn**	**16 55 43.0**	**+1.8**
LKR	**Lokris**	**1.48**	**63**	P	**Pn**	**16 55 20.8**	**-0.7**
LKR				S	**Sn**	**16 55 43.0**	**+1.8**
ATAL	**Atalanti**	**1.51**	**62**	P	**Pn**	**16 55 21.3**	**-0.7**
ATAL				S	**Sn**	**16 55 42.1**	**0.0**
ATAL	**Atalanti**	**1.51**	**62**	P	**Pn**	**16 55 21.3**	**-0.7**
ATAL				S	**Sn**	**16 55 42.1**	**0.0**
THL	**Klokotos Trika**	**1.66**	**19**	P	**Pn**	**16 55 24.0**	**-0.1**
THL				S	**Sn**	**16 55 47.7**	**+1.9**
THL	**Klokotos Trika**	**1.66**	**19**	P	**Pn**	**16 55 24.0**	**-0.1**
THL				S	**Sn**	**16 55 47.7**	**+1.9**
JAN	**Janina**	**1.70**	**348**	*e*PG	**Pn**	**16 55 24.5**	**-0.1**
JAN	**Janina**	**1.70**	**348**	*e*Pg	**Pn**	**16 55 24.5**	**-0.1**
IGT	**Igoumenitsa**	**1.72**	**334**	P	**Pn**	**16 55 25.4**	**+0.6**
IGT	**Igoumenitsa**	**1.72**	**334**	P	**Pn**	**16 55 25.4**	**+0.6**
VLI	**Veliai**	**1.81**	**134**	*e*PG	**Pg**	**16 55 29.0**	**0.0**
VLI	**Veliai**	**1.81**	**134**	*e*Pg	**Pg**	**16 55 29.0**	**0.0**
VLY	**Voula,Athens**	**1.97**	**93**	*e*PN	**Pn**	**16 55 29.5**	**+1.3**
VLY	**Voula,Athens**	**1.97**	**93**	*e*Pn	**Pn**	**16 55 29.5**	**+1.3**
XOR	**Xorichti**	**2.01**	**46**	P	**Pn**	**16 55 29.4**	**+0.6**
XOR	**Xorichti**	**2.01**	**46**	P	**Pn**	**16 55 29.4**	**+0.6**
KEK	**Kerkira**	**2.09**	**326**	P	**Pn**	**16 55 29.9**	**0.0**
KEK				S	**Sg**	**16 56 01.4**	**0.0**
KEK	**Kerkira**	**2.09**	**326**	P	**Pn**	**16 55 29.9**	**0.0**
KYTH	**Kithira**	**2.19**	**141**	*e*PN	**Pg**	**16 55 34.9**	**-1.4**
LIT	**Litokhoron**	**2.30**	**23**	P	**Pn**	**16 55 33.2**	**+0.4**
LIT	**Litokhoron**	**2.30**	**23**	P	**Pn**	**16 55 33.2**	**+0.4**
BARS	**Barje**	**4.84**	**4**	*i* Pn	**Pn**	**16 56 07.3**	**-0.4**
DIVS	**Divibare**	**6.18**	**351**	*i* Pn	**Pn**	**16 56 24.6**	**-1.6**

*IDC **22** 17:07:43.4±1.7, 6.°05N×92.°86E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=65.8km s-min=28.0km az=59.0*
*ISCJB **22** 17:07:47.1±1.4, 6.°1N±0.°2×93.°1E±0.°3, h33km, mb3.5/5, Error ellipse: s-maj=37.4km s-min=23.1km az=162.4*
*NEIC **22** 17:07:49.0±1.1, 6.°12N×93.°01E, h35km, mb3.6/1, Error ellipse: s-maj=29.0km s-min=18.4km az=75.0*

ISC 22 17:07:49.2±1.4, 6.°1N±0.°2×93.°0E±0.°2, h35km, n6, σ0§95/6, mb3.5/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.55**	**25**	Pn	**Pn**	**17 10 58.5**	**-0.5**
	0.1nm,0.3s,baz=217,slow=14,SNR=4.9						
LSA	**Lhasa**	**23.52**	**356**	*e*P	**P**	**17 12 57.7**	**+1.4**
	1.0nm,0.5s,mb3.5						
MKAR	**Makanchi Array**	**41.56**	**349**	P	**P**	**17 15 33.1**	**-0.2**
	0.5nm,0.5s,mb3.4,baz=167,slow=8.4,SNR=9.2						
ZALV	**Zalesovo Beam**	**48.15**	**353**	P	**P**	**17 16 25.5**	**-0.2**
	0.9nm,0.6s,mb4.0,baz=142,slow=7.3,SNR=4.5						
ASAR	**Alice Springs**	**49.68**	**128**	P	**P**	**17 16 38.1**	**+0.1**
	0.2nm,0.7s,mb3.3,baz=302,slow=7.8,SNR=6.9						
GERES	**GERESS Array B**	**78.39**	**318**	P	**P**	**17 19 45.6**	**-0.6**
	0.3nm,0.5s,mb3.4,baz=64,slow=3.1,SNR=3.8						

DJA 22 17:29:24, 1.°82N×99.°02E, h10km, MLv3.6/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.21**	**343**	P	Pg	17 29 29.4	+0.9
MNSI	**Mandailing Nat**	**1.16**	**151**	P	Pb	17 29 41.8	-4.4
MNSI				S	Sb	17 29 58.3	-3.0
GSI	**Gunungsitoli**	**1.53**	**250**	P	Pn	17 29 50.7	-0.7
GSI				S	Sn	17 30 11.6	+0.2
BKNI	**Bangkinang**	**2.51**	**126**	P	Pn	17 30 06.2	+1.4
BKNI				S	Sn	17 30 37.8	+2.3
PPI	**Padang Panjang**	**2.65**	**149**	P	Pn	17 30 11.3	+4.5
PDSI	**Padang**	**3.07**	**152**	P	Pn	17 30 14.4	+1.8
IPM	**Ipoh**	**3.31**	**37**	P	Pn	17 30 16.2	+0.2
KULM	**Kulim**	**3.81**	**25**	P	Pn	17 30 23.3	+0.5

*CSEM **22** 17:35:42.9±0.2, 41.°94N×42.°72E, h2km, mb4.0, Error ellipse: s-maj=9.3km s-min=3.0km az=131.0*
*TIF **22** 17:35:42.4, 42.°72N×42.°74E, h10km*
*DDA **22** 17:35:44.1, 41.°88N×42.°66E, h7km±3km, Md3.3*
*MOS **22** 17:35:51.8±1.0, 42.°16N×43.°37E, h11km, mb4.0/1, Error ellipse: s-maj=22.4km s-min=6.9km az=69.2*

ISC 22 17:35:43.7±0.6, 41.°92N±0.°03×42.°72E±0.°04, h0km±4km, n44, σ1§08/83, 1C-3D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.87**	**39**	P	**Pg**	**17 35 59.7**	**-0.6**
ONI				S	**Sg**	**17 36 11.7**	**+0.1**
ARTV	**Artvin**	**0.94**	**219**	*i* P	**Pg**	**17 36 01.4**	**-0.3**
ARTV				*i* S	**Sg**	**17 36 14.6**	**+0.8**
ARTV	**Artvin**	**0.94**	**219**	*i* P	**Pg**	**17 36 01.4**	**-0.2**
ARTV				*i* S	**Sg**	**17 36 14.6**	**+0.8**
DBOC	**Borcka**	**0.97**	**234**	*i* P	**Pg**	**17 36 01.8**	**-0.5**
DBOC				*i* S	**Sg**	**17 36 14.6**	**-0.2**
DBOC	**Borcka**	**0.97**	**234**	*i* P	**Pg**	**17 36 01.8**	**-0.5**
DBOC				*i* S	**Sg**	**17 36 14.6**	**-0.2**
KEH	**Kehvi**	**0.99**	**66**	P	**Pg**	**17 36 00.8**	**-1.9**
KEH				S	**Sg**	**17 36 13.8**	**-1.6**
DIGR	**Digorskoe uzhe**	**1.18**	**33**	⇑*i*PG	**Pn**	**17 36 05.3**	**-2.0**
DIGR				*i* S	**Sn**	**17 36 21.3**	**-2.7**
DIGR	**Digorskoe uzhe**	**1.18**	**33**	*i* Pg	**Pn**	**17 36 05.3**	**-2.0**
DIGR				*i* Sg	**Sn**	**17 36 21.3**	**-2.7**
DBAD	**Bademkaya**	**1.18**	**221**	*i* P	**Pn**	**17 36 05.7**	**-1.7**
DBAD				*i* S	**Sn**	**17 36 21.1**	**-3.0**
ZEI	**Tsey**	**1.23**	**45**	⇓*i*PG	**Pn**	**17 36 06.6**	**-1.4**
ZEI				*i* S	**Sn**	**17 36 23.6**	**-1.6**
ZEI	**Tsey**	**1.23**	**45**	*i* Pg	**Pn**	**17 36 06.6**	**-1.4**
ZEI				*i* Sg	**Sn**	**17 36 23.6**	**-1.6**
DDEM	**Demirkent**	**1.25**	**216**	*i* P	**Pg**	**17 36 07.2**	**-0.5**
DDEM				*i* S	**Sg**	**17 36 24.4**	**+0.5**
LACR	**Lac**	**1.48**	**52**	⇓*i*PG	**Pn**	**17 36 11.2**	**-0.4**
LACR				*i* S	**Sn**	**17 36 31.0**	**-0.6**
LACR	**Lac**	**1.48**	**52**	*i* Pg	**Pn**	**17 36 11.2**	**-0.4**
LACR				*i* Sg	**Sn**	**17 36 31.0**	**-0.6**
TBLG	**Delisi**	**1.52**	**96**	*e*PG	**Pn**	**17 36 12.2**	**+0.1**
TBLG				*e*S	**Sn**	**17 36 32.8**	**+0.2**
TBLG	**Delisi**	**1.52**	**96**	P	**Pn**	**17 36 12.3**	**+0.2**
TBLG				S	**Sn**	**17 36 32.8**	**+0.3**
TBLG	**Delisi**	**1.52**	**96**	*e*Pg	**Pn**	**17 36 12.2**	**+0.1**
TBLG				*e*Sg	**Sn**	**17 36 32.8**	**+0.2**
KORR	**Kora**	**1.54**	**40**	*e*PG	**Pn**	**17 36 12.4**	**+0.1**
KORR				*i* S	**Sn**	**17 36 33.6**	**+0.6**
KORR	**Kora**	**1.54**	**40**	*e*Pg	**Pn**	**17 36 12.4**	**+0.1**
KORR				*i* Sg	**Sn**	**17 36 33.6**	**+0.6**
MTA	**Mtatsminda**	**1.57**	**97**	P	**Pn**	**17 36 12.3**	**-0.4**
MTA				S	**Sn**	**17 36 34.2**	**+0.5**
DIGO	**Kars**	**1.58**	**161**	*i* P	**Pn**	**17 36 13.3**	**+0.5**
DIGO				*i* S	**Sn**	**17 36 30.8**	**-3.1**
DIGO	**Kars**	**1.58**	**161**	*i* P	**Pn**	**17 36 13.3**	**+0.4**
DIGO				*i* S	**Sn**	**17 36 30.8**	**-3.1**
LSNR	**Lesken**	**1.58**	**31**	⇓*i*PG	**Pn**	**17 36 13.1**	**+0.2**
LSNR				*i* S	**Sn**	**17 36 35.0**	**+0.9**
LSNR	**Lesken**	**1.58**	**31**	*i* Pg	**Pn**	**17 36 13.1**	**+0.2**
LSNR				*i* Sg	**Sn**	**17 36 35.0**	**+0.9**
ARNR	**Ardon**	**1.72**	**42**	*e*PG	**Pn**	**17 36 15.4**	**+0.6**
ARNR				*e*S	**Sn**	**17 36 38.4**	**+1.0**
ARNR	**Ardon**	**1.72**	**42**	*e*Pg	**Pn**	**17 36 15.4**	**+0.6**
ARNR				*e*Sg	**Sn**	**17 36 38.4**	**+1.0**
KMSR	**Komsomolskaya**	**1.86**	**38**	*e*PG	**Pn**	**17 36 17.3**	**+0.5**
KMSR				*e*S	**Sn**	**17 36 41.8**	**+0.8**
KMSR	**Komsomolskaya**	**1.86**	**38**	*e*Pg	**Pn**	**17 36 17.3**	**+0.5**
KMSR				*e*Sg	**Sn**	**17 36 41.8**	**+0.8**
SNJR	**Sundja**	**1.93**	**53**	*e*PG	**Pn**	**17 36 18.0**	**+0.3**
SNJR				*e*S	**Sn**	**17 36 43.3**	**+0.6**
SNJR	**Sundja**	**1.93**	**53**	*e*Pg	**Pn**	**17 36 18.0**	**+0.3**
SNJR				*e*Sg	**Sn**	**17 36 43.3**	**+0.6**
BTKR	**Batakoyurt**	**1.98**	**42**	*e*PG	**Pn**	**17 36 18.7**	**+0.3**
BTKR				*e*S	**Sn**	**17 36 44.6**	**+0.6**
BTKR	**Batakoyurt**	**1.98**	**42**	*e*Pg	**Pn**	**17 36 18.7**	**+0.3**
BTKR				*e*Sg	**Sn**	**17 36 44.6**	**+0.6**
DGRG	**David-gareji**	**2.04**	**102**	P	**Pn**	**17 36 21.5**	**+2.3**
DGRG				S	**Sg**	**17 36 50.4**	**+1.0**
PRTR	**Priterechnaya**	**2.17**	**32**	*e*PN	**Pn**	**17 36 21.5**	**+0.5**
PRTR				*e*S	**Sn**	**17 36 49.5**	**+1.0**
PRTR	**Priterechnaya**	**2.17**	**32**	*e*Pn	**Pn**	**17 36 21.5**	**+0.5**
PRTR				*e*Sg	**Sn**	**17 36 49.5**	**+1.0**
ERZM	**Erzurum**	**2.25**	**207**	*i* P	**Pn**	**17 36 21.1**	**-1.0**
ERZM				*i* S	**Sg**	**17 36 58.2**	**+2.2**
ERZM	**Erzurum**	**2.25**	**207**	*i* P	**Pn**	**17 36 21.1**	**-1.0**
TRKR	**Terskaya**	**2.34**	**39**	*e*PN	**Pn**	**17 36 23.7**	**+0.4**
TRKR				*e*S	**Sn**	**17 36 53.4**	**+0.7**
TRKR	**Terskaya**	**2.34**	**39**	*e*Pn	**Pn**	**17 36 23.7**	**+0.4**
KOPT	**Kop Dagi**	**2.53**	**222**	*i* P	**Pg**	**17 36 28.3**	**-3.9**
KOPT				*i* S	**Sg**	**17 37 07.5**	**+2.5**
KOPT	**Kop Dagi**	**2.53**	**222**	*i* P	**Pg**	**17 36 28.3**	**-3.9**
GOF	**Gofitskoye**	**3.15**	**4**	*e*PN	**Pb**	**17 36 41.3**	**+0.8**
KELT	**Kelkit**	**3.16**	**237**	*i* P	**Pn**	**17 36 34.7**	**+0.2**
KELT				*i* S	**Sb**	**17 37 19.6**	**+0.1**
KELT	**Kelkit**	**3.16**	**237**	*i* P	**Pn**	**17 36 34.7**	**+0.2**

*IDC **22** 17:37:36.0±0.5, 31.°20N×103.°67E, h0km, mb4.6/27, mb1 4.6/29, mb1mx4.6/30, mbtmp4.5/29, ML4.0/2, MS3.8/8, Ms1 3.8/8, ms1mx3.4/41, Error ellipse: s-maj=16.7km s-min=11.9km az=47.0*
*BJI **22** 17:37:36.8, 31.°17N×103.°85E, h12km, mB4.7/19, mb4.8/33, ML4.7/20, Ms4.5/51, Ms7 4.4/40*
*NEIC **22** 17:37:38.0±0.2, 31.°24N×103.°66E, h10km, mb4.8/58, Error ellipse: s-maj=4.3km s-min=3.4km az=220.0*
*ISCJB **22** 17:37:38.1±0.6, 31.°17N±0.°02×103.°67E±0.°02, h26km±4km, mb4.7/98, MS4.0/18, Error ellipse: s-maj=3.8km s-min=3.4km az=7.5*
*MOS **22** 17:37:39.2±0.8, 31.°19N×103.°70E, h34km, mb4.9/59, MS3.9/12, Error ellipse: s-maj=8.6km s-min=4.8km az=107.8*
*SZGRF **22** 17:37:46.5, 32.°95N×104.°71E, h33km, mb4.8, Sichuan, China*

ISC 22 17:37:38.9±0.7, 31.°18N±0.°02×103.°67E±0.°02, h17km±4km, h14km±2.0km: pP-P, n282, σ1§04/293, mb4.7/98, MS4.0/18, 30C-8D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.28**	**164**	Pg	**Pg**	**17 37 44.6**	**-0.5**
CD2				Sg	**Sg**	**17 37 50.1**	**+0.8**
CD2				smax			
	comp=N,111μm,1.0s						
LZH	**Lanzhou**	**4.89**	**2**	Pn	**Pn**	**17 38 53.8**	**+2.2**
LZH				Sg	**Sg**	**17 40 09.3**	**-6.7**
LZH				smax			
	comp=N,920nm,1.1s						
LZH				smax			
	comp=E,850nm,1.0s						
LZH				LR	LR		
	comp=E,4μm,8.8s						
LZH				LR	LR		
	comp=Z,5μm,9.2s						
ENH	**Enshi**	**5.09**	**99**	*e*Pn	**Pn**	**17 38 54.3**	**-0.1**
	comp=Z,868nm,0.8s						
ENH				*e*Pg	**Pg**	**17 39 13.4**	**-3.1**
ENH				Sn	**Sn**	**17 39 54.4**	**+1.6**
ENH				*e*Sg	**Sg**	**17 40 21.9**	**-0.5**
XAN	**Xi'an**	**5.27**	**56**	Pn	**Pn**	**17 38 55.8**	**-1.0**
XAN				Sn	**Sn**	**17 40 05.5**	**+8.4**
XAN				Sg	**Sg**	**17 40 20.3**	**-7.7**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,770nm,1.1s						
XAN				LR	LR		
	comp=N,3μm,10.9s						
XAN				LR	LR		
	comp=E,650nm,10.3s						
XAN				LR	LR		
	comp=Z,1μm,9.4s						
GYA	**Guiyang**	**5.39**	**150**	Pn	**Pn**	**17 38 59.0**	**+0.5**
GYA				Sn	**Sn**	**17 39 59.8**	**-0.3**
GYA				smax			
	comp=N,2μm,1.0s						
GYA				smax			
	comp=E,1μm,1.0s						
GYA				LR	LR		
	comp=N,18μm,6.5s						
GYA				LR	LR		
	comp=E,10μm,5.8s						
GYA				LR	LR		
	comp=Z,13μm,6.8s						
KMI	**Kunming**	**6.09**	**

HHC sS 17 42 44.3
HHC SS 17 42 47.1
HHC pmax pmax
comp=Z,23nm,1.1s
HHC pmax pmax
comp=Z,78nm,5.1s
HHC LR LR
comp=N,2μm,5.6s
HHC LR LR
comp=E,980nm,5.3s
HHC LR LR
comp=Z,1μm,6.9s
GZH Guangzhou 11.79 131 P Pn 17 40 20.9 -5.5
GZH S **Sn 17 42 28.5 -9.1**
GZH LR LR
comp=N,2μm,8.6s
GZH LR LR
comp=E,2μm,8.2s
GZH LR LR
comp=Z,3μm,9.7s
TIA Tai'an 12.27 62 *e*P **Pn 17 40 29.5 -3.3**
TIA LR LR
comp=N,630nm,7.0s
TIA LR LR
comp=E,620nm,7.0s
NJ2 Nanjing 12.97 82 *e*P **Pn 17 40 41.1 -1.3**
NJ2 pP 17 40 44.4
NJ2 sP 17 40 47.8
NJ2 PP 17 40 52.0
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,30nm,3.5s
NJ2 LR LR
comp=N,3μm,13.5s
NJ2 LR LR
comp=E,3μm,9.1s
NJ2 LR LR
comp=Z,3μm,11.0s
CHTO Chiang Mai 13.04 200 *e*P **Pn 17 40 44.6 +1.3**
QIZ Qiongzhong 13.32 154 P **Pn 17 40 45.9 -1.4**
QIZ S **Sn 17 43 19.1 +4.0**
QIZ sS 17 43 23.8
QIZ SS 17 43 35.6
QIZ pmax pmax
comp=Z,10.0nm,1.5s
QIZ pmax pmax
comp=Z,70nm,4.5s
QIZ LR LR
comp=N,1μm,7.4s
QIZ LR LR
comp=E,360nm,7.3s
QIZ LR LR
comp=Z,1μm,10.1s
CM31 Chiang Mai Arr 13.37 200 *e*Pn **Pn 17 40 49.0 +1.1**
CM31 *e* 17 40 58.7
CMAR Chiang Mai Arr 13.37 200 Pn **Pn 17 40 49.1 +1.2**
comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=37
CMAR LR LR 17 46 31.2
comp=Z,453nm,18.0s,baz=15,slow=40
BJI Beijing 13.46 46 P **Pn 17 40 49.1 0.0**
BJI pmax pmax
comp=Z,13nm,0.7s
BJI LR LR
comp=N,650nm,10.1s
BJI LR LR
comp=E,520nm,9.5s
QZH Quanzhou 14.56 112 P **Pn 17 41 02.5 -1.6**
QZH S **Sn 17 43 42.4 -2.8**
QZH LR LR
comp=N,1μm,10.6s
QZH LR LR
comp=E,4μm,8.6s
QZH LR LR
comp=Z,5μm,11.4s
SSE Sheshan 15.01 86 P **Pn 17 41 10.5 +0.3**
SSE S **Sn 17 43 57.3 +1.4**
SSE pmax pmax
comp=Z,46nm,0.7s
SSE pmax pmax
comp=Z,82nm,4.7s
SSE LR LR
comp=N,2μm,12.7s
SSE LR LR
comp=E,460nm,12.7s
SSE LR LR
comp=Z,1μm,6.7s
GUN Gumba 15.82 263 *e*P **Pn 17 41 19.0 -1.8**
comp=Z,105nm,0.8s
PKI Pulchoki 16.32 262 *e*P **Pn 17 41 25.2 -2.0**
comp=Z,76nm,0.7s
PKIN Phulchoki 16.33 262 *e*P **Pn 17 41 24.9 -2.4**
comp=Z,98nm,0.7s
KKN Kakani 16.36 263 *e*P **Pn 17 41 25.3 -2.5**
comp=Z,146nm,1.0s
DMN Daman 16.56 262 *e*P **Pn 17 41 28.0 -2.4**
comp=Z,122nm,0.8s
DL2 Dalian 16.59 57 P **Pn 17 41 33.8 +3.2**
DL2 pmax pmax
comp=Z,30nm,1.2s
DL2 pmax pmax
comp=Z,280nm,8.0s
DL2 LR LR
comp=N,260nm,15.8s
DL2 LR LR
comp=E,220nm,16.0s
DL2 LR LR
comp=Z,430nm,15.1s
SONM Songino Array 16.76 6 Pn **Pn 17 41 32.2 -0.5**
comp=Z,0.5nm,0.3s,baz=195,slow=9.5,SNR=15
SONM Songino Array 16.76 6 P **Pn 17 41 32.2 -0.5**
SONM pmax pmax
comp=Z,1.0nm,0.3s
ULN Ulaanbaatar 16.86 8 *e*P **Pn 17 41 33.8 -0.2**
ULN pmax pmax
comp=Z,16nm,0.8s
ULN Ulaanbaatar 16.86 8 *e*Pn **Pn 17 41 33.8 -0.2**
comp=Z,16nm,0.8s
TPUB Ta-pu 16.99 113 *e*P **Pn 17 41 37.1 +1.3**
comp=Z,42nm,0.9s
SSLB Suanglung 17.00 111 *e*Pn **Pn 17 41 36.2 +0.3**
comp=Z,104nm,0.8s
NACB Ninganchiao 17.33 109 *e*P **Pn 17 41 41.0 +1.0**
comp=Z,29nm,0.8s
YULB Yu-li 17.47 112 *e*P **Pn 17 41 44.3 +2.5**
comp=Z,22nm,0.8s
SNY Shenyang 19.17 51 ⇑P **Pn 17 42 02.6 +0.2**
SNY S **Sn 17 45 34.1 -2.6**
SNY pmax pmax
comp=Z,16nm,0.6s
SNY LR LR
comp=N,240nm,12.6s
SNY LR LR
comp=E,440nm,16.8s
SNY LR LR
comp=Z,550nm,15.7s
ZAK Zakamensk 19.18 359 *e*P **Pn 17 42 02.5 0.0**
ZAK pmax pmax
comp=Z,26nm,1.4s
INCN Inchon 19.96 65 *e*Pn **Pn 17 42 11.0 -0.8**
comp=Z,35nm,0.8s
TLY Talaya 20.48 360 *e*P **P 17 42 17.3 +1.6**
TLY pmax pmax
comp=Z,14nm,0.9s
TLY MLR MLR
comp=Z,413nm,14.0s,MS4.0
TLY Talaya 20.48 360 *e*Pn **P 17 42 17.2 +1.6**
comp=Z,14nm,1.0s
MOY Mondy 20.56 355 *e*P **P 17 42 18.3 +1.8**
MOY pmax pmax
comp=Z,40nm,1.3s
KSRS Korea Array 20.96 66 P **P 17 42 20.9 0.0**
comp=Z,35nm,0.7s,baz=261,slow=10,SNR=186
KSRS Korea Array 20.96 66 P **P 17 42 21.0 0.0**
KSRS pmax pmax
comp=Z,35nm,0.7s
IRK Irkutsk 21.05 1 *e*P **P 17 42 23.1 +1.3**
IRK pmax pmax
comp=Z,184nm,0.9s,mb5.4
CN2 Changchun 21.31 48 ⇓P **P 17 42 25.3 +0.6**
CN2 *es*P sP 17 42 32.0 +0.1
CN2 *e*S **S 17 46 16.5 -4.1**
CN2 pmax pmax
comp=Z,40nm,0.7s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,11.0s,MS4.0
CN2 LR LR
comp=E,300nm,11.0s,MS4.0
CN2 LR LR
comp=Z,500nm,15.0s,MS4.0
HIA Hailar 21.76 29 *e*P **P 17 42 29.1 -0.3**
HIA pmax pmax
comp=Z,29nm,1.0s
HIA Hailar 21.76 29 *e*P **P 17 42 29.1 -0.3**
comp=Z,29nm,1.0s,mb4.7
JOW Kunigami 21.94 95 P **P 17 42 31.2 -0.4**
comp=Z,15nm,0.6s,mb4.6,baz=16,slow=3.9,SNR=6.7
DDI Dehra Dun 22.02 274 ⇑*i*x x 17 42 36.0
CIT Chita 22.05 16 *e*P **P 17 42 32.9 +0.3**
SMLA Simla 22.67 277 *e*P **P 17 42 36.8 -2.5**
MK31 Makanchi Array 22.68 319 *e*P **P 17 42 39.9 +0.6**
MKAR Makanchi Array 22.68 319 P **P 17 42 39.9 +0.6**
comp=Z,26nm,0.9s,mb4.7,baz=124,slow=10,SNR=74
MKAR PcP PcP 17 46 30.9 -0.5
comp=Z,1.9nm,0.9s,baz=48,slow=2.1,SNR=4.2
MKAR LR LR 17 52 10.9
comp=Z,275nm,18.0s,MS3.7,baz=124,slow=39
MKAR Makanchi Array 22.68 319 P **P 17 42 39.9 +0.6**
MKAR 17 46 30.9
MKAR pmax pmax
comp=Z,26nm,0.9s
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR MLR MLR
comp=Z,275nm,18.0s
AGRA Agra 22.78 267 *e*P **P 17 42 39.7 -0.8**
AGRA AMb AMB 17 42 41.2
comp=Z,76nm,0.9s,mb5.1
BISR Bishrakh 22.88 270 *e*P **P 17 42 40.6 -0.9**
NDI New Delhi 23.04 271 *e*x **P 17 42 40.0 -3.3**
KKR Kurukshetra 23.13 274 *e*P **P 17 42 44.0 -0.3**
KKR AMb AMB 17 42 48.4
comp=Z,148nm,0.1s
AYAN Aya Nagar 23.16 270 *e*P **P 17 42 43.8 -0.8**
AYAN AMb AMB 17 42 51.0
comp=Z,49nm,1.3s,mb4.8
SONA Sohna 23.25 270 *e*P **P 17 42 44.4 -1.2**
SONA AMb AMB 17 42 46.0
comp=Z,44nm,1.0s,mb4.8
BHK Bhakra 23.27 278 *e*x x 17 42 48.8
KSH Kashi 24.00 298 *e*P **P 17 42 56.6 +4.0**
KSH *e*pP 17 43 00.5
KSH *es*P sP 17 43 03.5 +3.4
KSH *e*PP 17 43 31.6
KSH *e*PcP PcP 17 46 36.6 +2.3
KSH *e*S **S 17 47 12.3 +3.5**
KSH *es*S sS 17 47 19.5 +2.0
KSH pmax pmax
comp=Z,14nm,0.8s,mb4.4
KSH pmax pmax
comp=Z,230nm,3.1s
KSH LR LR
comp=N,290nm,7.4s
KSH LR LR
comp=E,320nm,9.0s
KSH LR LR
comp=Z,500nm,9.9s
NGP Nagpur 24.20 252 *e*x x 17 42 50.0
MDJ Mudanjiang 24.34 49 P **P 17 42 55.3 -0.3**
MDJ pP 17 42 58.3
MDJ sP sP 17 42 59.4 -3.7
MDJ S **S 17 47 15.1 +1.0**
MDJ PcS PcS 17 50 09.3 -5.3
MDJ pmax pmax
comp=Z,35nm,1.1s,mb4.7
MDJ pmax pmax
comp=Z,89nm,2.6s,mb4.7
MDJ LR LR
comp=N,240nm,13.6s,MS4.0
MDJ LR LR
comp=E,260nm,14.2s,MS4.0
MDJ LR LR
comp=Z,270nm,16.0s,MS3.8
MDJ Mudanjiang 24.34 49 *e*P **P 17 42 58.5 +2.9**
comp=Z,90nm,1.4s,mb5.0
KHET Khetri 24.39 270 *e*P **P 17 42 56.0 -0.3**
KHET AMb AMB 17 42 57.7
comp=Z,20nm,1.0s,mb4.5
ULHL Ulahol 24.50 304 P **P 17 42 59.0 +1.9**
SNR=15
BHPL Bhopal 24.60 258 *e*P **P 17 42 56.8 -1.5**
BHPL AMb AMB 17 43 00.2
comp=Z,29nm,1.2s,mb4.7
KZA Kyzart 25.16 304 P **P 17 43 05.7 +2.6**
SNR=45
TKM2 Tokmak 2 25.16 306 P **P 17 43 04.8 +1.6**
SNR=8.2
TKM2 Tokmak 2 25.16 306 *e*P **P 17 43 03.8 +0.6**
TKM2 pmax pmax
comp=Z,11nm,0.9s,mb4.4
TKM2 Tokmak 2 25.16 306 *e*P **P 17 43 03.8 +0.6**
comp=Z,10nm,0.9s,mb4.4
VLA Vladivostok 25.33 54 P **P 17 43 04.0 -0.7**
VLA pmax pmax
comp=Z,71nm,1.9s,mb4.9
VLA MLR MLR
comp=Z,400nm,14.5s,MS4.1
KBK Karagaybulak 25.54 305 P **P 17 43 08.9 +2.3**
SNR=13
UCH Uchtor 25.72 304 P **P 17 43 10.6 +2.4**
SNR=19
UCH Uchtor 25.72 304 *e*P **P 17 43 10.3 +2.0**
comp=Z,22nm,1.1s,mb4.6
AJM Ajmer 25.82 267 *e*P **P 17 43 09.2 -0.1**
AJM AMb AMB 17 43 14.6
comp=Z,27nm,0.6s,mb4.9
FRU Bishkek 25.82 305 *e*P **P 17 43 11.0 +1.8**
AAK Ala-Archa 25.85 304 P **P 17 43 10.7 +1.3**
SNR=5.8
AML Almayashu 26.29 303 P **P 17 43 15.4 +2.0**
SNR=12
EKS2 Erkin-Say 26.37 304 *e*P **P 17 43 15.2 +1.1**
comp=Z,13nm,1.2s,mb4.3
ZAA0 Zalesovo Array 26.49 335 *e*P **P 17 43 14.9 -0.2**
ZALV Zalesovo Beam 26.49 335 P **P 17 43 15.2 +0.1**
comp=Z,24nm,0.9s,mb4.8,baz=134,slow=8.5,SNR=105
ZALV Zalesovo Beam 26.49 335 P **P 17 43 15.2 +0.2**
ZALV pmax pmax
comp=Z,24nm,0.9s,mb4.7
HYB Hyderabad 26.60 245 *i* P **P 17 43 16.0 -0.4**
KURK Kurchatov 26.96 324 P **P 17 43 19.6 +0.3**
comp=Z,18nm,0.8s,mb4.7,baz=128,slow=9.6,SNR=65
KURK PcP PcP 17 46 40.1 -0.7
comp=Z,2.4nm,0.8s,baz=108,slow=1.7,SNR=5.6
KURK Kurchatov 26.96 324 P **P 17 43 19.6 +0.3**
KURK 17 46 40.1
KURK pmax pmax
comp=Z,18nm,0.8s,mb4.7
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
KURK Kurchatov 26.96 324 *e*P **P 17 43 19.4 +0.1**
comp=Z,29nm,1.0s,mb4.8
BOD Bodaibo 27.57 12 *e*P **P 17 43 25.3 +0.6**
BOD pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
KKM Kota Kinabalu 27.64 152 *e*P **P 17 43 27.6 +1.9**
comp=Z,37nm,1.5s,mb4.8
NVS Novosibirsk 27.77 334 *i* P **P 17 43 25.3 -1.2**
NVS *e*S **S 17 47 56.6 -12**
NVS pmax pmax
comp=Z,29nm,2.4s,mb4.5
NVS pmax pmax
comp=N,8.0nm,1.5s
NVS smax
comp=E,17nm,1.8s
MJAR Matsushiro Arr 29.07 70 LR LR 17 56 11.5
comp=E,117nm,19.0s,MS3.5,baz=260,slow=38
KBL Kabul 29.19 286 *e*P **P 17 43 40.3 +0.8**
KBL pmax pmax
comp=Z,14nm,0.8s,mb4.7
KBL Kabul 29.19 286 *e*P **P 17 43 40.3 +0.8**
comp=Z,14nm,0.8s,mb4.8
HABR Khabarovsk 29.37 45 *e*P **P 17 43 38.5 -2.4**
HABR *SP sP 17 43 52.1 +3.8
HABR 17 44 33.1
HABR S **S 17 48 30.3 -3.3**
HABR *e*SS sS 17 48 46.4 +4.0
HABR *e* 17 50 26.9
HABR *e* 17 54 17.6
HABR pmax pmax
comp=Z,98nm,3.7s
HABR pmax pmax
comp=E,44nm,2.0s
HABR pmax pmax
comp=N,17nm,1.6s
HABR MLR MLR
comp=Z,202nm,18.0s,MS3.8
JHJ Hachijo jima 2 30.55 77 LR LR 17 57 39.2
comp=Z,381nm,19.4s,MS4.1,baz=272,slow=39
BVAR Borovoye Array 32.50 322 P **P 17 44 08.8 +0.4**
comp=Z,3.9nm,0.7s,mb4.3,baz=117,slow=9.6,SNR=26
BVAR PcP PcP 17 46 54.6 -0.3
comp=Z,4.3nm,0.7s,baz=134,slow=4.3,SNR=13
BVAR LR LR 17 58 02.7
comp=Z,194nm,19.4s,MS3.8,baz=109,slow=38
BVAR Borovoye Array 32.50 322 P **P 17 44 08.8 +0.4**
BVAR 17 46 54.6
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR MLR MLR
comp=Z,194nm,19.5s
BRVK Borovoye 32.57 322 *e*P **P 17 44 08.9 -0.1**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BRVK Borovoye 32.57 322 *e*P **P 17 44 08.9 -0.1**
comp=Z,6.3nm,0.8s,mb4.6
CBIJ Chichi jima 33.77 87 LR LR 17 57 08.7
comp=Z,97nm,19.4s,MS3.5,baz=25,slow=35
YAK Yakutsk 35.16 21 *e*P **P 17 44 30.5 -0.9**
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK MLR MLR
comp=Z,233nm,15.0s,MS4.1
YAK MLR MLR
comp=N,93nm,14.0s,MS4.0
YAK MLR MLR
comp=E,161nm,15.0s,MS4.0
YAK Yakutsk 35.16 21 *e*P **P 17 44 30.8 -0.7**
comp=E,20nm,0.8s,mb5.1
ABKAR Akbulak array 37.34 312 *e*P **P 17 44 50.4 +0.2**
comp=E,3.4nm,0.7s,mb4.3
SVE Sverdlovsk 39.21 324⇑*e*P **P 17 45 06.9 +1.0**
SVE *es*S **S 17 51 03.7 -1.5**
SVE pmax pmax
comp=Z,20nm,1.2s,mb4.7
ARU Arti 40.14 322*d i*P **P 17 45 13.5 -0.1**
ARU *e* 17 46 44.8
ARU S **S 17 51 18.2 -1.0**
ARU SS SS 17 54 09.5 -7.3
ARU pmax pmax
comp=Z,19nm,1.0s,mb4.8
ARU Arti 40.14 322 *e*P **P 17 45 13.6 0.0**
comp=Z,14nm,0.9s,mb4.7
SOKR Solikamsk 42.12 326 *e*P **P 17 45 28.0 -1.9**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb4.7
SOKR MLR MLR
comp=Z,170nm,22.0s,MS3.9
TIXI Tiksi 42.75 11*c i*P **P 17 45 33.6 -1.2**
TIXI pmax pmax
comp=Z,24nm,1.9s,mb4.6
TIXI MLR MLR
comp=Z,382nm,19.0s,MS4.3
TIXI Tiksi 42.75 11 *e*P **P 17 45 33.7 -1.1**
comp=Z,7.7nm,0.8s,mb4.5
PETK Petropavlovsk- 44.39 44 P **P 17 45 48.1 -0.2**
comp=Z,4.5nm,0.9s,mb4.2,baz=206,slow=6.4,SNR=3.6
PETK Petropavlovsk- 44.39 44 P **P 17 45 48.1 -0.2**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
MIB Mutribah 48.10 284 *e*P **P 17 46 17.2 -0.6**
MIB AMb AMB 17 46 18.6
comp=Z,77nm,0.9s,mb5.7
RDF Al-Radifah 48.18 282 *e*P **P 17 46 18.7 +0.2**
RDF AMb AMB 17 46 20.5
comp=Z,56nm,0.8s,mb5.6
ZEI Tsey 48.22 301 *e*P **P 17 46 14.9 -3.6**
ZEI *e* 17 47 41.3
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
NAY Al-Naaiem 48.34 283 *e*P **P 17 46 18.9 -0.8**
NAY AMb AMB 17 46 20.4
comp=Z,57nm,0.8s,mb5.7
KIV Kislovodsk 48.96 303 *e*P **P 17 46 24.8 +0.6**
KIV pmax pmax
comp=Z,39nm,1.3s,mb5.3
KIV Kislovodsk 48.96 303 *e*P **P 17 46 24.8 +0.6**
comp=Z,39nm,1.3s,mb5.3
VORD Divnogorie 50.69 313 *e*P **P 17 46 35.7 -1.6**
VORD pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 50.76 313 *e*P **P 17 46 36.8 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,30nm,1.1s
BILL Bilibino 51.27 25⇓*i*P **P 17 46 40.5 -0.8**
BILL pmax pmax
comp=Z,17nm,1.6s,mb4.7
BILL Bilibino 51.27 25 *e*P **P 17 46 40.7 -0.6**
comp=Z,8.3nm,0.8s,mb4.7
MOS Moscow 51.56 319 *e*P **P 17 46 42.7 -1.0**
MOS pmax pmax
comp=Z,51nm,0.9s,mb5.5
OBN Obninsk 52.17 318⇓*e*P **P 17 46 48.3 0.0**
OBN pmax pmax
comp=Z,14nm,1.0s,mb4.8
KNA Kununurra 52.53 149 *e*P **P 17 46 50.5 -0.8**
comp=Z,19nm,0.6s,mb5.2
ANN Anapa 52.58 305 *e*P **P 17 46 51.1 -0.4**
ANN pmax pmax
comp=Z,18nm,1.4s,mb4.8
FITZ Fitzroy Crossi 53.35 154 *e*P **P 17 46 56.9 -0.5**
comp=Z,8.4nm,0.6s,mb4.8
FITZ Fitzroy Crossi 53.35 154 P **P 17 46 57.2 -0.2**
comp=Z,4.7nm,0.6s,mb4.6,baz=336,slow=5.0,SNR=9.2
MBWA Marble Bar 54.28 161⇑*i*P **P 17 47 03.8 -0.3**
MBWA Marble Bar 54.28 161 *e*P **P 17 47 03.8 -0.3**
comp=Z,32nm,1.4s,mb5.0
ASF Jabal al Asfar 55.97 290 LR LR 18 15 14.2
comp=Z,66nm,18.4s,MS3.8,baz=154,slow=40
BR131 Keskin Array S 56.38 299 *e*P **P 17 47 18.8 -0.4**
BRTR Keskin Array B 56.38 299 P **P 17 47 18.9 -0.3**
comp=Z,3.9nm,0.9s,mb4.5,baz=105,slow=6.4,SNR=19
BRTR PcP PcP 17 48 15.9 -0.3
comp=Z,1.4nm,0.8s,baz=115,slow=4.7,SNR=3.8
BRTR Keskin Array B 56.38 299 P **P 17 47 18.9 -0.3**
BRTR 17 48 15.9
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KEV Kevo 56.51 336 *e*P **P 17 47 19.3 -0.3**
KEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KEV Kevo 56.51 336 *e*P **P 17 47 19.3 -0.4**
comp=Z,8.9nm,0.8s,mb4.8
MMAI Mount Meron Ar 56.90 291 P **P 17 47 23.3 +0.3**
comp=Z,0.5nm,0.3s,mb4.0,baz=134,slow=46,SNR=4.0
ARCES ARCESS Array B 57.03 336 P **P 17 47 23.0 -0.4**
comp=Z,7.1nm,0.8s,mb4.7,baz=71,slow=9.1,SNR=17
ARCES PcP PcP 17 48 17.9 -0.4
comp=Z,2.0nm,0.6s,baz=98,slow=5.0,SNR=8.0
ARCES ARCESS Array B 57.03 336 P **P 17 47 23.0 -0.4**
ARCES 17 48 17.9
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 57.06 313 P **P 17 47 23.0 -0.8**
comp=Z,2.7nm,0.7s,mb4.4,baz=74,slow=5.8,SNR=13
AKASG Malin Array Be 57.06 313 P **P 17 47 23.0 -0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 57.06 313 P **P 17 47 23.0 -0.8**

FINES	**FINESS Array B**	**57.29 326**	P	**P**		**17 47 24.9**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.6,baz=102,slow=8.0,SNR=11						
FINES	**FINESS Array B**	**57.29 326**	P	**P**		**17 47 24.9**	**-0.4**
FINES			pmax	pmax			
	comp=Z,5.0nm,0.8s						
EIL	**Elat**	**58.37 288**	LR	LR		18 16 36.0	
	comp=Z,58nm,19.8s,MS3.7,baz=99,slow=40						
WRAB	**Tennant Creek**	**58.74 146**	*e*P	**P**		**17 47 35.4**	**-0.5**
WRAB			pmax	pmax			
	comp=Z,32nm,0.9s,mb5.3						
WRAB	**Tennant Creek**	**58.74 146**	*e*P	**P**		**17 47 35.4**	**-0.6**
	comp=Z,32nm,0.9s,mb5.3						
COEN	**Coen**	**58.77 134**	*e*P	**P**		**17 47 36.5**	**+0.3**
VRI	**Vrincioaia**	**59.74 308**	⇓P	**P**		**17 47 42.1**	**-0.6**
VRI	**Vrincioaia**	**59.74 308**	⇓*i*P	**P**		**17 47 42.1**	**-0.6**
PLOR	**Plostina**	**59.80 308**	⇑P	**P**		**17 47 43.4**	**+0.4**
PLOR	**Plostina**	**59.80 308**	⇑*i*P	**P**		**17 47 43.4**	**+0.4**
MLR	**Muntele Rosu**	**60.37 308**	⇑P	**P**		**17 47 47.3**	**+0.3**
MLR	**Muntele Rosu**	**60.37 308**	⇑*i*P	**P**		**17 47 47.3**	**+0.3**
KWP	**Kalwaria Pacla**	**61.38 313**	*e*P	**P**		**17 47 54.0**	**+0.3**
KWP	**Kalwaria Pacla**	**61.38 313**	*e*P	**P**		**17 47 53.7**	**-0.1**
KWP			pmax	pmax			
	comp=Z,29nm,1.0s,mb5.4						
KWP	**Kalwaria Pacla**	**61.38 313**	*e*P	**P**		**17 47 53.7**	**-0.1**
	comp=Z,29nm,1.0s,mb5.4						
KWP	**Kalwaria Pacla**	**61.38 313**	⇓*i*P	**P**		**17 47 54.0**	**+0.2**
ASAR	**Alice Springs**	**61.75 148**	P	**P**		**17 47 56.8**	**+0.3**
	comp=Z,5.4nm,0.8s,mb4.8,baz=349,slow=7.2,SNR=39						
ASAR	**Alice Springs**	**61.75 148**	P	**P**		**17 47 56.8**	**+0.3**
ASAR			pmax	pmax			
	comp=Z,5.0nm,0.8s						
KOLS	**Kolonicke sedl**	**61.84 312**	*e*P	**P**		**17 47 57.2**	**+0.3**
KOLS			pmax	pmax			
	comp=Z,3.0nm,1.1s,mb4.3						
KOLS	**Kolonicke sedl**	**61.84 312**	*e*P	**P**		**17 47 57.2**	**+0.3**
	comp=Z,3.3nm,1.1s,mb4.4						
KOLS	**Kolonicke sedl**	**61.84 312**	*e*P	**P**		**17 47 57.2**	**+0.3**
STHS	**Stebnicka Huta**	**62.36 313**	*e*P	**P**		**17 48 01.1**	**+0.8**
STHS			pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.5						
STHS	**Stebnicka Huta**	**62.36 313**	*e*P	**P**		**17 48 01.1**	**+0.8**
	comp=Z,3.5nm,1.0s,mb4.4						
STHS	**Stebnicka Huta**	**62.36 313**	*e*P	**P**		**17 48 01.1**	**+0.8**
NIE	**Niedzica**	**62.94 313**	*e*P	**P**		**17 48 05.0**	**+0.8**
OJC	**Ojcow**	**63.02 314**	*e*P	**P**		**17 48 04.1**	**-0.7**
KECS	**Kecovo**	**63.11 312**	*e*P	**P**		**17 48 06.3**	**+0.9**
KECS			pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.4						
KECS	**Kecovo**	**63.11 312**	*e*P	**P**		**17 48 06.3**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.3						
KECS	**Kecovo**	**63.11 312**	*e*P	**P**		**17 48 06.3**	**+0.9**
KLBR	**Kellerberrin**	**63.84 167**	*e*P	**P**		**17 48 10.6**	**+0.3**
	comp=Z,20nm,0.8s,mb5.2						
VYHS	**Vyhne**	**64.15 313**	*e*P	**P**		**17 48 12.5**	**+0.3**
VYHS			pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.3						
VYHS	**Vyhne**	**64.15 313**	*e*P	**P**		**17 48 12.5**	**+0.3**
	comp=Z,2.7nm,0.9s,mb4.3						
VYHS	**Vyhne**	**64.15 313**	*e*P	**P**		**17 48 12.5**	**+0.3**
NB2	**NORSAR Subarra**	**64.39 327**	P	**P**		**17 48 12.4**	**-1.2**
	comp=Z,4.7nm,0.8s,mb4.6,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**64.39 327**	P	**P**		**17 48 12.3**	**-1.3**
	comp=Z,4.4nm,0.8s,mb4.5,baz=74,slow=6.5,SNR=12						
NOA	**NORSAR Array B**	**64.39 327**	P	**P**		**17 48 12.4**	**-1.2**
NOA			pmax	pmax			
	comp=Z,4.0nm,0.8s						
KOLL	**Kolacno**	**64.39 313**	*e*P	**P**		**17 48 15.1**	**+1.3**
KOLL	**Kolacno**	**64.39 313**	*e*P	**P**		**17 48 15.1**	**+1.3**
MORC	**Moravsky Berou**	**64.55 314**	*e*P	**P**		**17 48 14.7**	**-0.1**
MORC			pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6						
MORC	**Moravsky Berou**	**64.55 314**	*e*P	**P**		**17 48 14.7**	**-0.1**
	comp=Z,5.7nm,1.0s,mb4.6						
MORC	**Moravsky Berou**	**64.55 314**	⇑*i*P	**P**		**17 48 15.1**	**+0.3**
PKSM	**Moragy**	**65.02 310**	⇑P	**P**		**17 48 18.6**	**+0.6**
PKSM	**Moragy**	**65.02 310**	⇑*i*P	**P**		**17 48 18.6**	**+0.6**
DPC	**Dobruska-Polom**	**65.10 315**	*e*P	**P**		**17 48 18.6**	**+0.2**
DPC			*ep*P	pP		17 48 23.3	-0.8
DPC			AMS	AMS		18 17 40.0	
	comp=Z,200nm,19.3s						
UPC	**Upice**	**65.24 315**	*e*P	**P**		**17 48 19.8**	**+0.5**
UPC			*ep*P	pP		17 48 24.7	-0.2
PRU	**Pruhonice**	**66.30 315**	*e*P	**P**		**17 48 25.4**	**-0.8**
PRU			MLR	MLR			
	comp=Z,200nm,18.7s,MS4.3						
PRU	**Pruhonice**	**66.30 315**	*e*P	**P**		**17 48 25.4**	**-0.8**
PRU			AMS	AMS		18 18 30.0	
	comp=Z,200nm,18.7s						
BRG	**Berggiesshubel**	**66.35 316**	*e*P	**P**		**17 48 26.4**	**0.0**
	comp=Z,6.2nm,1.0s,mb4.6						
BRG	**Berggiesshubel**	**66.35 316**	*e*P	**P**		**17 48 26.4**	**0.0**
BRG			pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.4						
CLL	**Collm**	**66.75 317**	*i*P	**P**		**17 48 28.4**	**-0.6**
CLL			pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.5						
CLL			MLR	MLR			
	comp=Z,100nm,19.6s,MS4.0						
CLL	**Collm**	**66.75 317**	*i*P	**P**		**17 48 28.4**	**-0.6**
	comp=Z,5.0nm,1.1s,mb4.5						
CLL			*i*			17 48 31.1	
CLL	**Collm**	**66.75 317**	*i*P	**P**		**17 48 28.4**	**-0.6**
	comp=Z,5.0nm,1.1s,mb4.5						
CLL			*i*pP	pP		17 48 31.1	-3.5
CLL			*e*(SS)			18 02 12.0	
CLL			Lm			18 18 00.0	
	comp=N,100nm,19.6s						
CLL			Lm			18 18 00.0	
	comp=E,100nm,18.5s						
CLL			Lm			18 18 00.0	
	comp=Z,100nm,19.6s						
TTA	**Tatalina**	**67.18 29**	*e*P	**P**		**17 48 32.1**	**+0.6**
KHC	**Kasperske Hory**	**67.20 315**	*e*P	**P**		**17 48 31.7**	**-0.2**
KHC			MLR	MLR			
	comp=Z,200nm,12.1s,MS4.5						
KHC	**Kasperske Hory**	**67.20 315**	*e*P	**P**		**17 48 31.7**	**-0.2**
KHC			AMS	AMS		18 18 40.0	
	comp=Z,200nm,12.1s						
GEC2	**GERESS Array S**	**67.22 314**	*e*P	**P**		**17 48 32.3**	**+0.2**
GEC2			pmax	pmax			
	comp=Z,927nm,1.0s						
GEC2	**GERESS Array S**	**67.22 314**	*e*P	**P**		**17 48 32.3**	**+0.2**
	comp=Z,927nm,1.0s						
GERES	**GERESS Array B**	**67.22 314**	P	**P**		**17 48 32.4**	**+0.3**
	comp=Z,2.5nm,0.9s,mb4.2,baz=76,slow=5.6,SNR=21						
GERES	**GERESS Array B**	**67.22 314**	P	**P**		**17 48 32.4**	**+0.3**
GERES			pmax	pmax			
	comp=Z,3.0nm,0.9s						
COLD	**Coldfoot**	**67.55 24**	*e*P	**P**		**17 48 33.8**	**0.0**
	comp=Z,10nm,0.9s,mb4.9						
SVW2	**Sparrevohn**	**68.12 31**	*e*P	**P**		**17 48 39.1**	**+1.6**
GRA1	**Grafenberg Arr**	**68.41 316**	*e*P	**P**		**17 48 40.0**	**+0.5**
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**		**17 48 40.0**	**+0.5**
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**		**17 48 40.0**	**+0.5**
GRF			pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**68.41 316**	*e*P	**P**		**17 48 40.0**	**+0.5**
GRF			pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.7						
PPLA	**Purkeypile**	**68.77 28**	*e*P	**P**		**17 48 41.1**	**-0.4**
	comp=Z,18nm,0.8s,mb5.0						
COLA	**College**	**69.52 26**	*e*P	**P**		**17 48 46.2**	**0.0**
COLA			pmax	pmax			
	comp=Z,16nm,0.8s,mb5.0						
COLA	**College**	**69.52 26**	*e*P	**P**		**17 48 46.2**	**0.0**
	comp=Z,16nm,0.8s,mb5.0						
MCK	**McKinley**	**69.67 27**	*e*P	**P**		**17 48 46.9**	**-0.2**
MCK			pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7						
MCK	**McKinley**	**69.67 27**	*e*P	**P**		**17 48 46.9**	**-0.2**
	comp=Z,9.2nm,1.0s,mb4.7						
CEL	**Celeste**	**69.89 303**	*e*P	**P**		**17 48 48.0**	**-0.9**
	comp=Z,23nm,0.9s,mb5.1						
KMBO	**Kilima Mbogo**	**70.56 256**	P	**P**		**17 48 54.3**	**+0.9**
	comp=Z,1.3nm,0.7s,mb4.0,baz=6.3,slow=23,SNR=3.4						
KMBO	**Kilima Mbogo**	**70.56 256**	P	**P**		**17 48 54.3**	**+0.9**
KMBO			pmax	pmax			
	comp=Z,1.0nm,0.7s						
RC01	**Rabbit Creek A**	**70.65 30**	*e*P	**P**		**17 48 51.9**	**-1.3**
	comp=Z,8.1nm,0.9s,mb4.7						
PMR	**Palmer**	**70.65 29**	*e*P	**P**		**17 48 53.1**	**-0.1**
BFO	**Black Forest**	**70.70 315**	*e*P	**P**		**17 48 53.3**	**-0.4**
BFO			pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.4						
BFO	**Black Forest**	**70.70 315**	*e*P	**P**		**17 48 53.2**	**-0.5**
	comp=Z,5.9nm,1.1s,mb4.4						
OHAK	**Old Harbor**	**70.91 34**	*e*P	**P**		**17 48 55.0**	**+0.2**
	comp=Z,59nm,1.6s,mb5.3						
KDAK	**Kodiak Island**	**70.98 33**	P	**P**		**17 48 54.7**	**-0.5**
	comp=Z,13nm,0.8s,mb4.9						
KDAK	**Kodiak Island**	**70.98 33**	P	**P**		**17 48 54.7**	**-0.5**
KDAK			pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9						
KDAK	**Kodiak Island**	**70.98 33**	P	**P**		**17 48 54.7**	**-0.5**
CDF	**Champ du Feu**	**71.30 316**	⇑*i*P	**P**		**17 48 57.0**	**-0.3**
	comp=Z,13nm,0.9s,mb4.6						
CDF	**Champ du Feu**	**71.30 316**	⇑*i*P	**P**		**17 48 57.0**	**-0.3**
CDF			pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5						
CDF	**Champ du Feu**	**71.30 316**	⇑*i*P	**P**		**17 48 57.0**	**-0.3**
	comp=Z,6.4nm,0.9s,mb4.5						
WLF	**Walferdange**	**71.41 317**	P	**P**		**17 48 58.9**	**+0.9**
	comp=Z,13nm,1.1s,mb4.8						
WLF	**Walferdange**	**71.41 317**	*e*P	**P**		**17 48 58.3**	**+0.3**
WLF			pmax	pmax			
	comp=Z,16nm,0.8s,mb5.0						
WLF	**Walferdange**	**71.41 317**	*e*P	**P**		**17 48 58.3**	**+0.3**
	comp=Z,16nm,0.8s,mb5.0						
BCLA	**Clavier**	**71.56 318**	AP	pP		17 49 03.3	-1.3
BCLA	**Clavier**	**71.56 318**	P	**P**		**17 48 59.4**	**+0.5**
INK	**Inuvik**	**72.20 19**	P	**P**		**17 49 02.2**	**-0.2**
	comp=Z,12nm,0.7s,mb4.9,baz=325,slow=7.3,SNR=23						
INK	**Inuvik**	**72.20 19**	*e*P	**P**		**17 49 01.9**	**-0.5**
INK			pmax	pmax			
	comp=Z,10.0nm,0.7s						
INK	**Inuvik**	**72.20 19**	*e*P	**P**		**17 49 01.9**	**-0.5**
	comp=Z,10nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**72.28 147**	*e*P	**P**		**17 49 03.2**	**-0.1**
	comp=Z,4.3nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**72.28 147**	P	**P**		**17 49 03.4**	**+0.2**
	comp=Z,5.3nm,0.6s,mb4.7,baz=335,slow=6.9,SNR=15						
STKA	**Stephens Creek**	**72.28 147**	*e*P	**P**		**17 49 03.2**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.9						
BMRM	**Bremner River**	**72.84 28**	*e*P	**P**		**17 49 06.7**	**+0.4**
	comp=Z,434nm,0.6s						
LPG	**La Plagne**	**72.92 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
	comp=Z,21nm,0.8s,mb4.8						
LPG	**La Plagne**	**72.92 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
LPG			pmax	pmax			
	comp=Z,11nm,0.8s,mb4.8						
LPG	**La Plagne**	**72.92 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
	comp=Z,11nm,0.8s,mb4.8						
LPL	**La Plagne**	**72.93 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
	comp=Z,28nm,0.9s,mb4.9						
LPL	**La Plagne**	**72.93 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
LPL			pmax	pmax			
	comp=Z,14nm,0.9s,mb4.9						
LPL	**La Plagne**	**72.93 313**	⇑*i*P	**P**		**17 49 07.6**	**+0.5**
	comp=Z,14nm,0.9s,mb4.9						
DAWY	**Dawson**	**73.02 24**	*e*P	**P**		**17 49 06.8**	**-0.6**
BNI	**Bardonecchia**	**73.17 313**	*e*P	**P**		**17 49 08.5**	**-0.1**
BNI			pmax	pmax			
	comp=Z,14nm,1.2s,mb4.8						
BNI	**Bardonecchia**	**73.17 313**	*e*P	**P**		**17 49 08.5**	**-0.1**
	comp=Z,14nm,1.2s,mb4.8						
SUMG	**Summit**	**73.29 349**	P	**P**		**17 49 08.4**	**-0.4**
	comp=Z,30nm,1.5s,mb5.0						
RES	**Resolute Bay**	**73.69 5**	P	**P**		**17 49 11.2**	**0.0**
	comp=Z,5.6nm,0.9s,mb4.5,baz=8.5,slow=7.4,SNR=16						
RES	**Resolute Bay**	**73.69 5**	P	**P**		**17 49 11.2**	**0.0**
RES			pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5						
RES	**Resolute Bay**	**73.69 5**	*e*P	**P**		**17 49 11.2**	**0.0**
	comp=Z,6.6nm,0.8s,mb4.6						
CMSA	**Cobar Meteorol**	**74.01 144**	*e*P	**P**		**17 49 14.2**	**+0.7**
SMF	**Signal de Mont**	**74.18 315**	⇑*i*P	**P**		**17 49 13.9**	**-0.6**
	comp=Z,37nm,1.1s,mb4.9						
SMF	**Signal de Mont**	**74.18 315**	⇑*i*P	**P**		**17 49 13.9**	**-0.6**
SMF			pmax	pmax			
	comp=Z,18nm,1.1s,mb4.9						
SMF	**Signal de Mont**	**74.18 315**	⇑*i*P	**P**		**17 49 13.9**	**-0.6**
	comp=Z,18nm,1.1s,mb4.9						
TCF	**Toulx Ste Croi**	**75.34 315**	⇑*i*P	**P**		**17 49 21.0**	**-0.2**
	comp=Z,18nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**75.34 315**	⇑*i*P	**P**		**17 49 21.0**	**-0.2**
TCF			pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**75.34 315**	⇑*i*P	**P**		**17 49 21.0**	**-0.2**
	comp=Z,8.9nm,1.0s,mb4.7						
KEST	**Kesra**	**75.70 303**	P	**P**		**17 49 22.6**	**-0.8**
	comp=Z,1.6nm,0.9s,mb4.0,baz=288,slow=3.5,SNR=3.9						
PNL	**Peninsula**	**75.71 28**	*e*P	**P**		**17 49 23.8**	**+0.8**
	comp=Z,19nm,0.9s,mb5.0						
CAF	**Calviac**	**76.11 314**	⇑*i*P	**P**		**17 49 25.8**	**+0.2**
	comp=Z,13nm,1.0s,mb4.5						
CAF	**Calviac**	**76.11 314**	⇑*i*P	**P**		**17 49 25.8**	**+0.2**
CAF			pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.5						
CAF	**Calviac**	**76.11 314**	⇑*i*P	**P**		**17 49 25.8**	**+0.2**
	comp=Z,6.3nm,1.0s,mb4.5						
SKAG	**Skagway**	**77.44 27**	*e*P	**P**		**17 49 33.3**	**+0.5**
	comp=Z,16nm,0.7s,mb5.1						
TOO	**Toolangi**	**78.77 147**	*e*P	**P**		**17 49 41.0**	**+0.6**
YKA	**Yellowknife Ar**	**81.73 17**	P	**P**		**17 49 55.8**	**-0.3**
	comp=Z,3.7nm,0.6s,mb4.5,baz=331,slow=5.3,SNR=52						
ESDC	**Sonseca Array**	**82.69 312**	P	**P**		**17 50 01.7**	**+0.1**
	comp=Z,0.2nm,0.3s,mb3.6,baz=35,slow=4.7,SNR=3.4						
LSZ	**Lusaka**	**85.84 250**	*e*P	**P**		**17 50 17.6**	**-0.3**
LSZ			pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.9						
LSZ	**Lusaka**	**85.84 250**	*e*P	**P**		**17 50 17.6**	**-0.3**
	comp=Z,8.6nm,1.1s,mb4.9						
FCC	**Fort Churchill**	**89.18 9**	*e*P	**P**		**17 50 33.0**	**-0.3**
	comp=Z,0.3nm,1.2s						
FFC	**Flin Flon**	**91.64 15**	*e*P	**P**		**17 50 44.5**	**-0.3**
FFC			pmax	pmax			
	comp=Z,14nm,1.3s,mb5.1						
FFC	**Flin Flon**	**91.64 15**	*e*P	**P**		**17 50 44.5**	**-0.3**
	comp=Z,14nm,1.3s,mb5.1						
TORD	**Torodi Ar. Bea**	**93.25 287**	P	**P**		**17 50 53.0**	**0.0**
	comp=Z,2.6nm,0.8s,mb4.7,baz=59,slow=3.9,SNR=12						
SCHQ	**Schefferville**	**93.95 355**	P	**P**		**17 50 54.7**	**-0.8**
	comp=Z,2.9nm,0.7s,mb4.8,baz=52,slow=6.3,SNR=4.4						
SCHQ	**Schefferville**	**93.95 355**	P	**P**		**17 50 54.7**	**-0.8**
BOSA	**Boshof**	**95.40 240**	P	**P**		**17 51 01.1**	**-1.4**
	comp=Z,2.8nm,0.9s,mb4.7,baz=69,slow=7.7,SNR=4.0						
BOSA	**Boshof**	**95.40 240**	P	**P**		**17 51 01.1**	**-1.4**
BOSA			pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.7						
ROSC	**El Rosal**	**144.11 357**	PKP	PKPdf		17 57 13.2	-1.2
	comp=Z,6.4nm,0.4s,baz=263,slow=21,SNR=4.7						
OTAV	**Otavalo**	**148.69 4**	*e*PKPdf	PKPdf		17 57 23.6	+1.4
OTAV			*e*PKPbc	PKPbc		17 57 26.8	+0.9
CPUP	**Villa Florida**	**162.66 281**	PKP	PKPdf		17 57 40.0	-0.2
	comp=Z,0.2nm,0.3s,baz=166,slow=7.9,SNR=2.7						
LPAZ	**La Paz**	**163.39 331**	PKP	PKPdf		17 57 41.7	+0.5
	comp=Z,0.8nm,0.7s,baz=5.3,slow=7.9,SNR=5.2						
LPAZ	**La Paz**	**163.39 331**	PKIKP	PKPdf		17 57 41.7	+0.5
LPAZ			pmax	pmax			
	comp=Z,1.0nm,0.7s						

SZGRF ***22*** *17:40:00.0, 43.°53N×146.°84E, h33km, mb4.9, Kuril Islands, Russia*

NIED ***22*** *17:40:00, 41.°60N×142.°00E, h59km, Mw4.7 Best double couple: M0=1.23000×10¹⁶ NP1:φ=24.00000°, δ=70.00000°, λ=93.00000°. NP2:φ=197.00000°, δ=20.00000°, λ=83.00000°.*

ISCJB ***22*** *17:40:01.1±0.3, 41.°60N±0.°03×142.°06E±0.°04, h66km±3km, mb4.4/37, Error ellipse: s-maj=5.4km s-min=3.3km az=37.4*

MOS ***22*** *17:40:01.1±0.9, 41.°58N×142.°11E, h73km, mb4.6/19, Error ellipse: s-maj=12.4km s-min=7.7km az=79.2*

BJI ***22*** *17:40:01.1, 41.°64N×142.°14E, h72km, mB5.0/16, mb4.7/24, Ms4.2/18, Ms7 3.9/18*

JMA ***22*** *17:40:01.2±0.2, 41.°57N×142.°05E, h67km±3km, M4.3 Broadband fault plane solution: P waves. NP1: φ=175.00000°, δ=10.00000°, λ=70.00000°. NP2:φ=16.00000°, δ=81.00000°, λ=93.00000°. Principal axes: T Plg=54.0000°, Azm=290.0000°; N Plg=3.0000°, Azm=195.0000°; P Plg=36.0000°, Azm=103.0000°;*

JMA Felt II J1.

NEIC ***22*** *17:40:02.8±0.3, 41.°61N×142.°07E, mb4.7/12, MW4.7(NIED) Error ellipse: s-maj=8.1km s-min=5.7km az=138.0*

NEIC Recorded [2 JMA] in Aomori and [1 JMA] in Iwate, Honshu. Also recorded [1 JMA] in south-central and southwestern Hokkaido.

IDC ***22*** *17:40:02.9±0.7, 41.°63N×142.°06E, h70km±5km, mb3.9/16, mb1 4.1/21, mb1mx4.0/30, mbtmp4.0/21, MS3.8/17, Ms1 3.8/17, ms1mx3.6/36, Error ellipse: s-maj=15.1km s-min=7.8km az=109.0*

ISC 22 17:40:02.1±0.3, 41.°59N±0.°02×142.°09E±0.°04, h61km±3km, h70km±2.8km:pP-P, n122, σ1§01/133, mb4.5/37, 3C-9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.81**	**256**	⇓P	**Pn**	**17 40 16.9**	**-0.8**
JKB	**Kayabe**	**0.85**	**291**	⇓P	**Pn**	**17 40 17.2**	**-1.0**
JNBK	**Urakawa-nobuka**	**0.85**	**35**	⇑P	**Pn**	**17 40 17.6**	**-0.6**
ERM	**Erimo**	**0.90**	**61**	⇓*i*Pn	**Pn**	**17 40 18.8**	**-0.2**
ERM				*e*Sn	**Sn**	**17 40 31.3**	**0.0**
JEM	**Erimo**	**0.90**	**61**	⇑P	**Pn**	**17 40 18.7**	**-0.2**
JEM				*e*S	**Sn**	**17 40 31.7**	**+0.4**
JTM	**Tenmabayashi**	**1.11**	**224**	⇓P	**Pn**	**17 40 20.8**	**-0.8**
JTM				*e*S	**Sn**	**17 40 34.9**	**-1.2**
JANG	**Nango**	**1.29**	**200**	⇓P	**Pn**	**17 40 23.0**	**-1.0**
JANG				*e*S	**Sn**	**17 40 38.9**	**-1.4**
JEW	**Eniwo**	**1.34**	**339**	⇓P	**Pn**	**17 40 24.1**	**-0.5**
JEW				*e*S	**Sn**	**17 40 40.9**	**-0.6**
JCH	**Churui**	**1.40**	**42**	⇑P	**Pn**	**17 40 25.8**	**+0.4**
JCH				*e*S	**Sn**	**17 40 43.7**	**+0.9**
JFR	**Furan**	**1.62**	**13**	⇓P	**Pn**	**17 40 28.4**	**0.0**
JOSM	**Okushiri--Mats**	**2.02**	**285**	P	**Pn**	**17 40 32.8**	**-1.0**
JAR	**Ashorobuto**	**2.11**	**35**	⇓P	**Pn**	**17 40 35.2**	**+0.1**
JSK	**Shakotan**	**2.13**	**326**	P	**Pn**	**17 40 35.3**	**0.0**
JOM	**Ohasama**	**2.20**	**196**	⇓P	**Pn**	**17 40 36.2**	**-0.1**
ASAJ	**Asahikawa**	**2.55**	**8**	P	**Pn**	**17 40 42.0**	**+0.9**
	14nm,0.3s,baz=224,slow=14,SNR=126						
ASAJ				S	**Sn**	**17 41 11.8**	**+0.9**
	27nm,0.3s,baz=316,slow=30,SNR=12						
ASAJ				LR	LR	17 42 02.3	
	comp=Z,1μm,21.9s,baz=162,slow=47						
ASAJ	**Asahikawa**	**2.55**	**8**	P	**Pn**	**17 40 42.0**	**+0.9**
ASAJ				S	**Sn**	**17 41 11.9**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,14nm,0.3s						
ASAJ				smax			
	comp=N,27nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,21.9s						
YUK	**Yuzh-Kuril'sk**	**3.70**	**47**	*e*P	**Pn**	**17 40 56.0**	**-0.7**
YUK				*i* S	**Sn**	**17 41 36.3**	**-2.7**
YUK				pmax	pmax		
	comp=N,380nm,0.5s						
YUK				pmax	pmax		
	comp=E,200nm,0.5s						
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,2μm,0.5s						
YUK				smax			
	comp=N,5μm,1.5s						
YUK				smax			
	comp=E,3μm,1.5s						
YSS	**Yuzh-Sakhalins**	**5.39**	**5**	*e*P	**Pn**	**17 41 21.0**	**+1.2**
YSS				*e*S	**Sn**	**17 42 20.2**	**-0.2**
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=N,600nm,18.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS	**Yuzh-Sakhalins**	**5.39**	**5**	*e*P	**Pn**	**17 41 20.7**	**+0.9**
	comp=E,38nm,0.9s						
KUR	**Kuril'sk**	**5.56**	**47**	*e*P	**Pn**	**17 41 23.0**	**+0.8**
KUR				*e*S	**Sn**	**17 42 23.5**	**-1.3**
KUR				pmax	pmax		
	comp=N,140nm,1.0s						
KUR				pmax	pmax		
	comp=Z,300nm,1.0s						
KUR				smax			
	comp=N,150nm,0.5s						
KUR				smax			
	comp=E,130nm,0.5s						
MAJO	**Matsushiro**	**5.88**	**212**	*e*P	**Pn**	**17 41 28.3**	**+1.8**
MAJO				pmax	pmax		
	comp=Z,36nm,0.6s						
MAJO	**Matsushiro**	**5.88**	**212**	*e*P	**Pn**	**17 41 28.2**	**+1.7**
	comp=Z,36nm,0.6s						
MAT	**Matsushiro**	**5.

HHC pmax pmax
comp=Z,990nm,5.6s
HHC LR LR
comp=N,270nm,7.1s
HHC LR LR
comp=E,310nm,10.0s
HHC LR LR
comp=Z,350nm,10.4s
SONM Songino Array 25.96 296 P **P 17 45 28.8 +0.1**
comp=Z,19nm,1.3s,mb4.5,baz=99,slow=9.2,SNR=4.3
SONM LR LR 17 56 15.6
comp=Z,206nm,20.4s,baz=249,slow=38
SONM Songino Array 25.96 296 P **P 17 45 28.8 +0.1**
SONM pmax pmax
comp=Z,19nm,1.3s
SONM MLR MLR
comp=Z,206nm,20.4s
TLY Talaya 27.96 304 *e*P **P 17 45 42.8 -3.8**
TLY pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
TLY MLR MLR
comp=Z,173nm,16.0s
GUMO Guam 28.00 174 LR LR 17 54 58.5
comp=Z,106nm,20.2s,baz=172,slow=32
LZH Lanzhou 30.12 272 *e*P **P 17 46 07.0 +1.1**
LZH pP pP 17 46 27.3 +6.4
LZH sP sP 17 46 33.3 +5.3
LZH PP PP 17 47 07.5 -7.2
LZH pmax pmax
comp=Z,23nm,1.3s,mb4.8
LZH pmax pmax
comp=Z,62nm,4.7s
LZH LR LR
comp=E,550nm,13.2s
LZH LR LR
comp=Z,740nm,17.0s
GTA Gaotai 31.99 280 *e*P **P 17 46 22.6 +0.2**
GTA pP pP 17 46 40.1 +2.7
GTA sP sP 17 46 50.1 +5.6
GTA PP PP 17 47 29.8 -5.7
GTA S **S 17 51 27.5 -2.0**
GTA sS sS 17 51 56.6 +1.5
GTA SS SS 17 53 20.1 -28
GTA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GTA pmax pmax
comp=Z,240nm,7.1s
GTA LR LR
comp=N,110nm,20.2s
GTA LR LR
comp=E,160nm,19.6s
GTA LR LR
comp=Z,270nm,16.0s
CD2 Chengdu 32.46 263 P **P 17 46 26.8 +0.2**
CD2 pP pP 17 46 44.5 +2.9
CD2 sP sP 17 46 53.8 +5.1
CD2 PP PP 17 47 37.1 -3.7
CD2 S **S 17 51 34.5 -2.5**
CD2 sS sS 17 52 05.4 +2.8
CD2 SS SS 17 53 34.3 -24
CD2 pmax pmax
comp=Z,20nm,1.0s,mb4.9
CD2 pmax pmax
comp=Z,400nm,4.9s
CD2 LR LR
comp=N,260nm,8.5s
CD2 LR LR
comp=Z,170nm,8.9s
GYA Guiyang 32.75 254 P **P 17 46 30.0 +0.8**
GYA pP pP 17 46 48.4 +4.2
GYA sP sP 17 46 55.8 +4.5
GYA PP PP 17 47 41.3 -2.8
GYA PcP PcP 17 49 14.8 +1.5
GYA S **S 17 51 40.8 -0.8**
GYA sS sS 17 52 11.0 +3.8
GYA ScP ScP 17 52 51.4 -0.5
GYA SS SS 17 53 41.9 -23
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=N,530nm,17.8s
GYA LR LR
comp=E,580nm,18.0s
GYA LR LR
comp=Z,590nm,17.9s
KMI Kunming 36.39 256 P **P 17 47 01.1 +0.5**
KMI pP pP 17 47 18.1 +2.4
KMI sP sP 17 47 25.9 +3.1
KMI PP PP 17 48 24.3 +0.1
KMI S **S 17 52 37.3 -0.3**
KMI sS sS 17 53 06.1 +2.7
KMI SS SS 17 55 04.6 -14
KMI pmax pmax
comp=Z,5.0nm,1.9s,mb4.1
KMI pmax pmax
comp=Z,84nm,6.4s
KMI LR LR
comp=N,85nm,19.4s
KMI LR LR
comp=E,150nm,14.3s
KMI LR LR
comp=Z,170nm,21.2s
ZAA0 Zalesovo Array 39.37 308 *e*P **P 17 47 24.6 -0.7**
ZALV Zalesovo Beam 39.37 308 P **P 17 47 25.0 -0.3**
comp=Z,3.8nm,0.7s,mb4.2,baz=86,slow=6.9,SNR=8.5
ZALV LR LR 18 04 41.5
comp=Z,108nm,19.3s,baz=69,slow=38
ZALV Zalesovo Beam 39.37 308 P **P 17 47 25.0 -0.3**
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
ZALV MLR MLR
comp=Z,108nm,19.3s
WMQ Urumqi 39.43 292 *e*P **P 17 47 26.6 +0.6**
WMQ pmax pmax
comp=Z,13nm,1.0s,mb4.6
WMQ LR LR
comp=N,60nm,18.0s
WMQ LR LR
comp=E,160nm,18.0s
WMQ LR LR
comp=Z,150nm,17.0s
MK31 Makanchi Array 42.29 298 *e*P **P 17 47 48.7 -0.8**
MKAR Makanchi Array 42.29 298 P **P 17 47 49.1 -0.3**
comp=Z,6.8nm,1.0s,mb4.2,baz=76,slow=8.7,SNR=5.6
MKAR LR LR 18 06 42.9
comp=Z,93nm,20.0s,baz=104,slow=38
MKAR Makanchi Array 42.29 298 P **P 17 47 49.2 -0.3**
MKAR pmax pmax
comp=Z,7.0nm,1.0s
MKAR MLR MLR
comp=Z,93nm,20.0s
CMAR Chiang Mai Arr 43.32 251 P **P 17 47 58.5 +0.4**
comp=Z,1.8nm,0.8s,mb3.8,baz=42,slow=7.8,SNR=8.9
CMAR LR LR 18 05 51.4
comp=Z,69nm,19.5s,baz=50,slow=36
CMAR Chiang Mai Arr 43.32 251 P **P 17 47 58.5 +0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR MLR MLR
comp=Z,69nm,19.5s
CMAR Chiang Mai Arr 43.32 251 P **P 17 47 58.5 +0.4**
CMAR LR LR 18 05 51.4
KURK Kurchatov 43.66 305 P **P 17 48 00.5 0.0**
comp=Z,6.4nm,0.8s,mb4.4,baz=78,slow=8.7,SNR=17
KURK pP pP 17 48 17.1 +1.1
comp=Z,7.0nm,0.7s,baz=78,slow=9.0,SNR=7.2
KURK Kurchatov 43.66 305 P **P 17 48 00.5 0.0**
KURK *PP pP 17 48 17.2 +1.2
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KURK pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
KURK Kurchatov 43.66 305 *e*P **P 17 47 59.7 -0.8**
comp=Z,7.4nm,0.8s,mb4.5
KURK *e*pP pP 17 48 16.3 +0.3
KTH Kantishna Hill 43.73 37 *e*P **P 17 48 01.9 +1.0**
comp=Z,9.9nm,1.0s,mb4.5
COLA College 44.99 35 *e*P **P 17 48 11.7 +0.8**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
COLA College 44.99 35 *e*P **P 17 48 11.7 +0.8**
comp=Z,7.2nm,0.8s,mb4.5
GUN Gumba 47.38 272 *e*P **P 17 48 30.2 0.0**
comp=Z,26nm,0.5s,mb5.4
KKN Kakani 47.90 272 *e*P **P 17 48 33.7 -0.5**
comp=Z,20nm,0.8s,mb5.2
PKI Pulchoki 47.92 272 *e*P **P 17 48 34.4 +0.1**
comp=Z,6.4nm,0.3s,mb5.1
PKIN Phulchoki 47.92 272 *e*P **P 17 48 34.6 +0.2**
comp=Z,37nm,0.6s,mb5.6
BVAR Borovoye Array 47.99 309 P **P 17 48 34.5 0.0**
comp=Z,1.5nm,0.4s,mb4.3,baz=73,slow=9.1,SNR=11
BVAR LR LR 18 09 58.1
comp=Z,152nm,19.3s,baz=78,slow=37
BVAR Borovoye Array 47.99 309 P **P 17 48 34.5 -0.1**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BVAR MLR MLR
comp=Z,152nm,19.3s
BRVK Borovoye 48.04 310 *e*P **P 17 48 34.5 -0.5**
BRVK pmax pmax
comp=Z,21nm,4.9s
BRVK Borovoye 48.04 310 *e*P **P 17 48 34.5 -0.5**
comp=Z,21nm,4.9s
TKM2 Tokmak 2 48.05 295 *e*P **P 17 48 34.9 -0.3**
DMN Daman 48.12 272 *e*P **P 17 48 36.0 +0.1**
comp=Z,13nm,0.8s,mb5.0
INK Inuvik 50.12 29 P **P 17 48 51.2 +0.6**
comp=Z,2.8nm,0.6s,mb4.5,baz=291,slow=7.8,SNR=12
INK Inuvik 50.12 29 P **P 17 48 51.2 +0.6**
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 50.12 29 *e*P **P 17 48 50.8 +0.1**
comp=Z,13nm,0.8s,mb5.0
ARU Arti 53.36 317 *e*P **P 17 49 14.3 -0.6**
ARU pmax pmax
comp=Z,9.0nm,2.5s,mb4.3
ABKAR Akbulak array 55.48 308 *e*P **P 17 49 29.6 -0.8**
RES Resolute Bay 58.07 15 P **P 17 49 47.4 -1.0**
comp=Z,6.8nm,0.8s,mb4.8,baz=315,slow=7.8,SNR=13
RES Resolute Bay 58.07 15 *e*P **P 17 49 47.7 -0.7**
RES pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
RES Resolute Bay 58.07 15 *e*P **P 17 49 47.7 -0.7**
comp=Z,6.9nm,0.8s,mb4.7
WRAB Tennant Creek 61.63 188 *e*P **P 17 50 12.0 -1.3**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
WRAB Tennant Creek 61.63 188 *e*P **P 17 50 12.0 -1.3**
comp=Z,4.4nm,0.7s,mb4.7
FINES FINESS Array B 65.05 332 P **P 17 50 34.9 -0.6**
comp=Z,6.1nm,0.8s,mb4.7,baz=66,slow=6.9,SNR=9.8
FINES pP pP 17 50 53.9 +2.0
comp=Z,3.6nm,0.6s,baz=46,slow=8.1,SNR=4.8
FINES LR LR 18 20 31.3
comp=Z,200nm,21.8s,baz=130,slow=37
FINES FINESS Array B 65.05 332 P **P 17 50 34.9 -0.7**
FINES *PP pP 17 50 53.9 +2.0
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES MLR MLR
comp=Z,200nm,21.8s
FINES FINESS Array B 65.05 332 P **P 17 50 34.9 -0.6**
FINES pP pP 17 50 53.9 +2.0
FINES LR LR 18 20 31.3
ASAR Alice Springs 65.36 188 P **P 17 50 37.5 -0.4**
comp=Z,1.1nm,0.8s,mb4.0,baz=7.7,slow=6.0,SNR=5.3
ASAR Alice Springs 65.36 188 P **P 17 50 37.5 -0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
SUMG Summit 66.14 0 *e*P **P 17 50 43.4 +1.0**
comp=Z,9.4nm,0.9s,mb4.8
KIV Kislovodsk 68.36 310 *e*P **P 17 50 57.9 +1.0**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.9
KIV Kislovodsk 68.36 310 *e*P **P 17 50 57.9 +1.0**
comp=Z,13nm,1.0s,mb4.9
HFS Hagfors 70.17 335 LR LR 18 23 35.7
comp=Z,114nm,19.3s,baz=234,slow=37
NB2 NORSAR Subarra 70.20 337 P **P 17 51 06.8 -1.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=35,slow=6.5
NOA NORSAR Array B 70.20 337 P **P 17 51 07.3 -0.7**
comp=Z,1.8nm,0.8s,mb4.0,baz=37,slow=6.1,SNR=5.3
NOA pP pP 17 51 26.7 +2.1
comp=Z,1.3nm,0.7s,baz=37,slow=6.1,SNR=3.3
NOA LR LR 18 24 33.7
comp=Z,74nm,21.8s,baz=0.0,slow=38
NOA NORSAR Array B 70.20 337 P **P 17 51 07.3 -0.7**
NOA *PP pP 17 51 26.7 +2.1
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,75nm,21.8s
NOA NORSAR Array B 70.20 337 P **P 17 51 07.3 -0.7**
NOA pP pP 17 51 26.7 +2.1
NOA LR LR 18 24 33.6
AKASG Malin Array Be 71.04 322 P **P 17 51 12.1 -1.1**
comp=Z,1.7nm,0.6s,mb4.2,baz=44,slow=5.8,SNR=9.0
AKASG Malin Array Be 71.04 322 P **P 17 51 12.1 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
NVAR Mina Array Bea 71.88 55 P **P 17 51 19.7 +1.2**
comp=Z,0.8nm,0.7s,mb3.8,baz=295,slow=6.6,SNR=2.8
NVAR pP pP 17 51 36.0 +0.8
comp=Z,1.6nm,0.7s,baz=320,slow=5.9,SNR=4.5
NVAR Mina Array Bea 71.88 55 P **P 17 51 19.7 +1.2**
NVAR pP pP 17 51 36.0 +0.8
PDAR Pinedale Array 74.13 47 P **P 17 51 32.0 +0.2**
comp=Z,0.6nm,0.5s,mb3.8,baz=230,slow=2.2,SNR=3.9
PDAR pP pP 17 51 51.1 +2.6
comp=Z,1.7nm,0.7s,baz=260,slow=2.7,SNR=5.4
KOLS Kolonicke sedl 75.46 324 *e*P **P 17 51 41.0 +1.7**
KOLS *e*pP pP 17 51 56.1 0.0
OJC Ojcow 75.56 326 *e*PX 17 51 40.0
BRTR Keskin Array B 76.24 311 P **P 17 51 43.2 -0.8**
comp=Z,0.4nm,0.6s,mb3.5,baz=27,slow=3.0,SNR=4.8
BRTR LR LR 18 30 06.8
comp=Z,37nm,18.3s,baz=219,slow=39
MORC Moravsky Berou 76.84 327 *e*P **P 17 51 47.1 -0.1**
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MORC Moravsky Berou 76.84 327 *e*P **P 17 51 47.0 -0.1**
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 77.28 325 *e*P **P 17 51 52.5 +2.8**
VYHS *e*pP pP 17 52 07.8 +1.3
CLL Collm 77.42 330 *e*P **P 17 51 50.0 -0.4**
CLL *e*pP pP 17 52 09.0 +1.8
CLL *e*sPcP 17 52 28.0
VRAC Vranov 77.59 327 LR LR 18 29 02.3
comp=Z,111nm,19.1s,baz=201,slow=38
GERES GERESS Array B 79.12 328 P **P 17 51 59.1 -0.8**
comp=Z,0.5nm,0.7s,mb3.5,baz=15,slow=4.1,SNR=3.9
GERES GERESS Array B 79.12 328 P **P 17 51 59.1 -0.8**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GRA1 Grafenberg Arr 79.39 330 *e*P **P 17 52 01.3 0.0**
comp=Z,32nm,2.6s,mb4.8
GRF Grafenberg Arr 79.39 330 *e*P **P 17 52 01.3 0.0**
comp=Z,32nm,2.6s,mb4.8
GRF Grafenberg Arr 79.39 330 *e*P **P 17 52 01.3 0.0**
comp=Z,32nm,2.6s,mb4.8
DAVOX Davos/Dischmat 82.30 329 LR LR 18 29 58.6
comp=Z,86nm,20.6s,baz=83,slow=36
PMOR Pomariorio Ree 85.55 114 *e*T 19 26 05.1
comp=Z,6.4nm,0.2s
PPT Papeete 86.22 117 *e*LR LR 18 19 27.2
comp=Z,170nm,25.5s,baz=316
PPT Papeete 86.22 117 LR LR 18 26 26.4
comp=Z,156nm,18.7s,baz=315,slow=32
TAOE Nuku Hiva Isla 86.79 105 *e*LR LR 18 19 48.3
comp=Z,137nm,23.2s
TBI Tubuai 90.42 121 *e*T 19 32 13.9
comp=Z,9.4nm,0.3s

*IDC **22** 17:55:00.6±0.8, 1°.54N×99°.00E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.0/25, mbtmp4.0/14, ML3.6/1, Error ellipse: s-maj=29.1km s-min=12.7km az=78.0*
*MOS **22** 17:55:03.8±1.0, 1°.59N×99°.10E, h32km, mb4.6/19, Error ellipse: s-maj=23.9km s-min=8.1km az=108.4*
*ISCJB **22** 17:55:05.7±0.9, 1°.80N±0°.05×99°.05E±0°.05, h33km±6km, mb4.3/25, Error ellipse: s-maj=9.9km s-min=7.0km az=144.4*
*BJI **22** 17:55:05.0, 1°.70N×99°.20E, h35km, mb4.5/4, Ms4.6/1*
*DJA **22** 17:55:06, 1°.84N×99°.11E, h8km, MLv4.4/9*
*NEIC **22** 17:55:06.0±0.5, 1°.66N×99°.19E, h35km, mb4.5/5, Error ellipse: s-maj=15.2km s-min=9.1km az=67.0*
NEIC Felt [III] at Sibolga.

ISC 22 17:55:04.3±1.0, 1°.69N±0°.05×99°.06E±0°.06, h15km±5km, n80, σ1°09/84, mb4.3/25, 5C-1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.35**	**343**	P		**Pg**	**Pg**	**17 55 10.9**	**-0.6**
TRSI				S		**Sg**	**Sg**	**17 55 16.8**	**+0.5**
MNSI	**Mandailing Nat**	**1.03**	**150**	P		**Pb**	**Pb**	**17 55 22.6**	**-1.2**
PSI	**Prapat**	**1.11**	**353**	Pg		**Pg**	**Pg**	**17 55 22.8**	**-3.0**
	80nm,0.3s,baz=159,slow=13,SNR=161								
PSI				Lg				17 55 38.0	
	72nm,0.3s,baz=15,slow=17,SNR=11								
PSI	**Prapat**	**1.11**	**353**	P		**Pb**	**Pb**	**17 55 22.8**	**-2.4**
PSI								17 55 38.0	
PSI				pmax		pmax	pmax		
	comp=Z,80nm,0.3s								
PSI	**Prapat**	**1.11**	**353**	Pg		**Pg**	**Pg**	**17 55 22.8**	**-3.0**
PSI				Lg				17 55 38.0	
GSI	**Gunungsitoli**	**1.53**	**256**	P		**Pn**	**Pn**	**17 55 31.7**	**+0.6**
GSI				S		**Sn**	**Sn**	**17 55 56.3**	**+5.6**
BKNI	**Bangkinang**	**2.40**	**124**	P		**Pn**	**Pn**	**17 55 47.1**	**+4.1**
BKNI				S		**Sn**	**Sn**	**17 56 19.0**	**+6.9**
PPI	**Padang Panjang**	**2.52**	**148**	P		**Pn**	**Pn**	**17 55 49.1**	**+4.5**
PDSI	**Padang**	**2.94**	**152**	P		**Pn**	**Pn**	**17 55 53.8**	**+3.3**
FRIM	**Kepong**	**2.99**	**59**	P		**Pn**	**Pn**	**17 55 51.2**	**+0.1**
IPM	**Ipoh**	**3.40**	**35**	P		**Pn**	**Pn**	**17 55 58.5**	**+1.8**
IPM	**Ipoh**	**3.40**	**35**	P		**Pn**	**Pn**	**17 55 57.8**	**+1.1**
KULM	**Kulim**	**3.91**	**24**	P		**Pn**	**Pn**	**17 56 05.1**	**+1.3**
KULM	**Kulim**	**3.91**	**24**	*e*P		**Pn**	**Pn**	**17 56 02.8**	**-1.0**
KULM	**Kulim**	**3.91**	**24**	P		**Pn**	**Pn**	**17 56 04.4**	**+0.6**
LHMI	**Lhok Sumawe**	**4.10**	**329**	P		**Pn**	**Pn**	**17 56 08.1**	**+1.7**
MYKOM	**Kota Tinggi**	**4.79**	**89**	P		**Pn**	**Pn**	**17 56 16.9**	**+1.0**
MYKOM	**Kota Tinggi**	**4.79**	**89**	P		**Pn**	**Pn**	**17 56 16.5**	**+0.6**
BSI	**Banda Aceh**	**5.33**	**315**	P		**Pn**	**Pn**	**17 56 25.3**	**+2.0**
KTGM	**Kuala Trenggan**	**5.44**	**48**	P		**Pn**	**Pn**	**17 56 25.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**16.66**	**360**	Pn		**Pn**	**Pn**	**17 58 58.8**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=15								
SHL	**Shillong**	**24.73**	**344**	*e*P		**P**	**P**	**18 00 25.0**	**-0.1**
LSA	**Lhasa**	**28.85**	**346**	P		**P**	**P**	**18 01 03.5**	**+1.3**
GTA	**Gaotai**	**37.55**	**1**	*e*P		**P**	**P**	**18 02 17.8**	**-0.1**
GTA				pmax		pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0								
ASAR	**Alice Springs**	**42.23**	**129**	P		**P**	**P**	**18 02 54.9**	**-2.1**
	comp=Z,0.6nm,0.9s,mb3.2,baz=298,slow=8.2,SNR=6.7								
ASAR	**Alice Springs**	**42.23**	**129**	P		**P**	**P**	**18 02 54.9**	**-2.1**
ASAR				pmax		pmax	pmax		
	comp=Z,1.0nm,0.9s								
KSRS	**Korea Array**	**44.41**	**33**	P		**P**	**P**	**18 03 14.9**	**+0.5**
	comp=Z,0.9nm,0.8s,mb3.6,baz=217,slow=8.1,SNR=4.4								
KSRS	**Korea Array**	**44.41**	**33**	P		**P**	**P**	**18 03 14.9**	**+0.5**
KSRS				pmax		pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6								
UCH	**Uchtor**	**45.98**	**335**	P		**P**	**P**	**18 03 27.9**	**+1.1**
	SNR=8.6								
UCH	**Uchtor**	**45.98**	**335**	*e*P		**P**	**P**	**18 03 27.6**	**+0.8**
UCH				pmax		pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5								
UCH	**Uchtor**	**45.98**	**335**	*e*P		**P**	**P**	**18 03 27.6**	**+0.8**
	comp=Z,6.7nm,1.0s,mb4.5								
TKM2	**Tokmak 2**	**46.10**	**336**	P		**P**	**P**	**18 03 28.4**	**+0.7**
	SNR=6.2								
TKM2	**Tokmak 2**	**46.10**	**336**	*e*P		**P**	**P**	**18 03 28.2**	**+0.4**
TKM2				pmax		pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5								
TKM2	**Tokmak 2**	**46.10**	**336**	*e*P		**P**	**P**	**18 03 28.2**	**+0.5**
	comp=Z,6.8nm,1.0s,mb4.5								
KBK	**Karagaybulak**	**46.15**	**335**	P		**P**	**P**	**18 03 29.1**	**+1.0**
	SNR=10								
AML	**Almayashu**	**46.26**	**334**	P		**P**	**P**	**18 03 30.1**	**+1.1**
	SNR=6.4								
EKS2	**Erkin-Say**	**46.65**	**334**	P		**P**	**P**	**18 03 33.1**	**+1.0**
	SNR=11								
EKS2	**Erkin-Say**	**46.65**	**334**	*e*P		**P**	**P**	**18 03 32.6**	**+0.5**
EKS2				pmax		pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6								
EKS2	**Erkin-Say**	**46.65**	**334**	*e*P		**P**	**P**	**18 03 32.6**	**+0.5**
	comp=Z,6.0nm,0.8s,mb4.6								
USP	**Ospenovka**	**46.83**	**335**	P		**P**	**P**	**18 03 34.2**	**+0.6**
	SNR=6.7								
MK31	**Makanchi Array**	**47.24**	**344**	*e*P		**P**	**P**	**18 03 36.0**	**-0.7**
MKAR	**Makanchi Array**	**47.24**	**344**	P		**P**	**P**	**18 03 36.2**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.2,baz=152,slow=7.8,SNR=26								
MKAR	**Makanchi Array**	**47.24**	**344**	P		**P**	**P**	**18 03 36.3**	**-0.4**
MKAR				pmax		pmax	pmax		
	comp=Z,2.0nm,0.6s								
KURK	**Kurchatov**	**51.83**	**344**	P		**P**	**P**	**18 04 10.8**	**-0.8**
	comp=Z,3.1nm,0.8s,mb4.3,baz=164,slow=7.1,SNR=20								
KURK	**Kurchatov**	**51.83**	**344**	*de*P		**P**	**P**	**18 04 11.0**	**-0.6**
KURK				pmax		pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6								
KURK	**Kurchatov**	**51.83**	**344**	*e*P		**P**	**P**	**18 04 11.1**	**-0.4**
STKA	**Stephens Creek**	**52.32**	**133**	P		**P**	**P**	**18 04 13.8**	**-1.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=344,slow=13,SNR=3.2								
STKA	**Stephens Creek**	**52.32**	**133**	P		**P**	**P**	**18 04 13.9**	**-1.7**
STKA				pmax		pmax	pmax		
	comp=Z,1.0nm,0.8s								
ZAA0	**Zalesovo Array**	**53.39**	**350**	*e*P		**P**	**P**	**18 04 22.2**	**-0.9**
ZALV	**Zalesovo Beam**	**53.39**	**350**	P		**P**	**P**	**18 04 22.6**	**-0.5**
	comp=Z,3.1nm,0.4s,mb4.6,baz=166,slow=6.7,SNR=21								
ZALV	**Zalesovo Beam**	**53.39**	**350**	P		**P**	**P**	**18 04 22.6**	**-0.5**
ZALV				pmax		pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6								
BVAR	**Borovoye Array**	**56.42**	**340**	P		**P**	**P**	**18 04 44.3**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.2,baz=112,slow=8.8,SNR=8.2								
BVAR	**Borovoye Array**	**56.42**	**340**	P		**P**	**P**	**18 04 44.3**	**-0.7**
BVAR				pmax		pmax	pmax		
	comp=Z,1.0nm,0.5s								
BRVK	**Borovoye**	**56.48**	**340**	*ce*P		**P**	**P**	**18 04 43.9**	**-1.6**
BRVK				pmax		pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4								
BOD	**Bodaibo**	**57.21**	**9**	*e*P		**P**	**P**	**18 04 49.9**	**-0.6**
ABKAR	**Akbulak array**	**57.98**	**331**	*e*P		**P**	**P**	**18 04 54.8**	**-1.3**
	comp=Z,2.8nm,0.7s,mb4.4								
ARU	**Arti**	**63.47**	**336**	*c i*P		**P**	**P**	**18 05 32.3**	**-1.1**
ARU				S		**S**	**S**	**18 13 59.5**	**-6.4**
ARU				pmax		pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6								
ZEI	**Tsey**	**63.88**	**318**	*e*P		**P**	**P**	**18 05 35.4**	**-1.0**
ZEI				pmax		pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7								
YAK	**Yakutsk**	**64.44**	**15**	*e*P		**P**	**P**	**18 05 41.1**	**+1.4**
YAK				pmax		pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6								
KIV	**Kislovodsk**	**65.16**	**318**	*e*P		**P**	**P**	**18 05 45.8**	**+1.0**
KIV				pmax		pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4								
BR131	**Keskin Array S**	**70.17**	**312**	*e*P		**P**	**P**	**18 06 15.3**	**-1.1**
BRTR	**Keskin Array B**	**70.17**	**312**	P		**P**	**P**	**18 06 15.8**	**-0.6**
	comp=Z,1.9nm,1.0s,mb4.0,baz=134,slow=5.8,SNR=7.0								
BRTR	**Keskin Array B**	**70.17**	**312**	P		**P**	**P**	**18 06 15.9**	**-0.6**
BRTR				pmax		pmax	pmax		
	comp=Z,2.0nm,1.0s								
TIXI	**Tiksi**	**72.39**	**10**	*e*P		**P**	**P**	**18 06 27.6**	**-1.7**
TIXI				pmax		pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4								
TIXI	**Tiksi**	**72.39**	**10**	*e*P		**P**	**P**	**18 06 28.0**	**-1.4**
	comp=Z,4.2nm,0.8s,mb4.4								
OBN	**Obninsk**	**73.19**	**328⇑**	*e*P		**P**	**P**	**18 06 34.4**	**+0.1**
OBN				pmax		pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5								
AKASG	**Malin Array Be**	**76.01**	**322**	P		**P**	**P**	**18 06 50.1**	**-0.7**
	comp=Z,2.0nm,0.9s,mb4.1,baz=103,slow=4.0,SNR=8.2								
AKASG	**Malin Array Be**	**76.01**	**322**	P		**P**	**P**	**18 06 50.2**	**-0.6**
AKASG				pmax		pmax	pmax		
	comp=Z,2.0nm,0.9s								
MLR	**Muntele Rosu**	**76.99**	**316**	P		**P**	**P**	**18 06 56.7**	**+0.1**
	comp=Z,4.0nm,1.1s,mb4.3,baz=220,slow=3.3,SNR=4.6								
MLR	**Muntele Rosu**	**76.99**	**316**	P		**P**	**P**	**18 06 56.7**	**+0.2**
MLR				pmax		pmax	pmax		
	comp=Z,4.0nm,1.1s								
MLR	**Muntele Rosu**	**76.99**	**316⇑**	*i*P		**P**	**P**	**18 06 57.2**	**+0.7**
BURAR	**Bucovina Array**	**77.89**	**318⇑**	*i*P		**P**	**P**	**18 07 02.3**	**+0.8**
FINES	**FINESS Array B**	**80.43**	**332**	P		**P**	**P**	**18 07 14.4**	**-0.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=103,slow=8.6,SNR=3.5								
FINES	**FINESS Array B**	**80.43**	**332**	P		**P**	**P**	**18 07 14.4**	**-0.7**
FINES				pmax		pmax	pmax		
	comp=Z,1.0nm,0.7s								
GERES	**GERESS Array B**	**85.67**	**319**	P		**P**	**P**	**18 07 42.7**	**+0.2**
	comp=Z,0.7nm,0.8s,mb4.0,baz=90,slow=5.3,SNR=7.2								
GERES	**GERESS Array B**	**85.67**	**319**	P		**P**	**P**	**18 07 42.7**	**+0.2**
GERES				pmax		pmax	pmax		

comp=Z,1.0nm,0.8s
NB2 NORSAR Subarra 87.48 331 P **P 18 07 50.6 -0.5**
comp=Z,3.2nm,1.0s,mb4.5,baz=93,slow=5.1
NOA NORSAR Array B 87.48 331 P **P 18 07 50.2 -0.9**
comp=Z,1.2nm,0.7s,mb4.2,baz=93,slow=5.0,SNR=4.7
NOA NORSAR Array B 87.48 331 P **P 18 07 50.2 -0.9**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 87.48 331 P **P 18 07 50.2 -0.9**

ISCJB ***22*** *18:08:52.7±0.9, 35°.86N×0°.04×21°.45E±0°.05, h19km±8km, mb3.4/7, Error ellipse: s-maj=7.5km s-min=5.1km az=145.8*
ATH ***22*** *18:08:53.1, 35°.91N×21°.40E, h34km±5km, MD3.8/12*
NEIC ***22*** *18:08:53.1, 35°.91N×21°.40E, h34km, MD3.8(ATH), After ATH.*
THE ***22*** *18:08:54.4, 35°.83N×21°.49E, h71km±13km, ML3.3/1, Error ellipse: s-maj=13.8km s-min=2.8km az=20.0*
CSEM ***22*** *18:08:56.0±0.3, 35°.91N×21°.55E, h66km±3km, MD3.8, Error ellipse: s-maj=7.7km s-min=4.7km az=52.0*
HLW ***22*** *18:08:58.0, 36°.31N×22°.47E, h33km±30km, Md3.6*
IDC ***22*** *18:08:57.2±2.3, 36°.14N×21°.61E, h56km±28km, mb3.3/7, mb1 3.3/10, mb1mx3.2/29, mbtmp3.3/10, ML3.0/2, Error ellipse: s-maj=25.2km s-min=16.3km az=14.0*
ISC 22 18:08:52.9±1.4, 35°.89N±0°.03×21°.50E±0°.05, h9km±10km, n84, σ1°.14/103, mb3.4/7, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.02**	**11**	*e*PN	**Pn**	**18 09 12.3**	**-1.1**
PYL				*e*SN	**Sn**	**18 09 26.9**	**-0.9**
PYL	**PYLOS**	**1.02**	**11**	P	**Pb**	**18 09 12.2**	**-0.5**
PYL	**PYLOS**	**1.02**	**11**	*e*Pn	**Pn**	**18 09 12.3**	**-1.1**
PYL				*e*Sn	**Sn**	**18 09 26.9**	**-0.9**
KYTH	**Kithira**	**1.30**	**72**	*e*PN	**Pn**	**18 09 18.2**	**+1.0**
KYTH	**Kithira**	**1.30**	**72**	*e*Pn	**Pn**	**18 09 18.2**	**+1.0**
ITM	**Ithomi**	**1.33**	**15**	*e*PB	**Pb**	**18 09 17.0**	**-1.0**
ITM	**Ithomi**	**1.33**	**15**	P	**Pn**	**18 09 17.1**	**-0.5**
ITM				S	**Sb**	**18 09 36.8**	**+1.7**
ITM	**Ithomi**	**1.33**	**15**	P	**Pn**	**18 09 17.1**	**-0.5**
ITM				S	**Sb**	**18 09 36.8**	**+1.7**
VLI	**Veliai**	**1.42**	**54**	*e*PB	**Pb**	**18 09 19.2**	**-0.4**
VLX	**Vlachokerasia**	**1.64**	**25**	*e*PB	**Pb**	**18 09 22.2**	**-1.0**
VLX	**Vlachokerasia**	**1.64**	**25**	P	**Pn**	**18 09 22.4**	**+0.6**
VLX				S	**Sn**	**18 09 44.1**	**+1.2**
VLX	**Vlachokerasia**	**1.64**	**25**	P	**Pn**	**18 09 22.4**	**+0.6**
VLX				S	**Sn**	**18 09 44.1**	**+1.2**
GUR	**Goura**	**2.15**	**18**	*e*PN	**Pn**	**18 09 29.3**	**+0.4**
GUR	**Goura**	**2.15**	**18**	P	**Pn**	**18 09 29.8**	**+0.9**
GUR	**Goura**	**2.15**	**18**	*e*Pn	**Pn**	**18 09 29.3**	**+0.4**
GUR	**Goura**	**2.15**	**18**	P	**Pn**	**18 09 29.8**	**+0.9**
VAM	**Vamos**	**2.25**	**102**	*e*PN	**Pn**	**18 09 31.5**	**+1.3**
VAM	**Vamos**	**2.25**	**102**	*e*Pn	**Pn**	**18 09 31.5**	**+1.3**
KFL	**Anninata**	**2.29**	**346**	P	**Pn**	**18 09 31.2**	**+0.4**
KFL				S	**Sn**	**18 10 00.3**	**+1.3**
GVD	**Gavdhos**	**2.36**	**116**	*e*P	**Pn**	**18 09 31.9**	**+0.1**
GVD	**Gavdhos**	**2.36**	**116**	*e*P	**Pn**	**18 09 31.9**	**+0.1**
VLS	**Valsamata**	**2.40**	**343**	*e*PN	**Pn**	**18 09 32.0**	**-0.3**
VLS	**Valsamata**	**2.40**	**343**	P	**Pn**	**18 09 32.1**	**-0.2**
VLS				S	**Sn**	**18 10 01.6**	**-0.1**
VLS	**Valsamata**	**2.40**	**343**	P	**Pn**	**18 09 32.1**	**-0.2**
VLS				S	**Sn**	**18 10 01.6**	**-0.1**
LTK	**Loutraki**	**2.43**	**28**	P	**Pn**	**18 09 32.9**	**+0.2**
LTK	**Loutraki**	**2.43**	**28**	P	**Pn**	**18 09 32.9**	**+0.2**
TRIZ	**Trizonia**	**2.51**	**10**	P	**Pn**	**18 09 35.1**	**+1.3**
TRIZ	**Trizonia**	**2.51**	**10**	P	**Pn**	**18 09 35.1**	**+1.3**
EFP	**Efpalio**	**2.55**	**7**	*e*PN	**Pn**	**18 09 34.8**	**+0.4**
EFP	**Efpalio**	**2.55**	**7**	P	**Pn**	**18 09 35.8**	**+1.4**
EFP	**Efpalio**	**2.55**	**7**	*e*Pn	**Pn**	**18 09 34.8**	**+0.4**
EFP	**Efpalio**	**2.55**	**7**	P	**Pn**	**18 09 35.8**	**+1.4**
VLY	**Voula,Athens**	**2.68**	**43**	*e*PN	**Pn**	**18 09 36.5**	**+0.3**
VLY	**Voula,Athens**	**2.68**	**43**	*e*Pn	**Pn**	**18 09 36.5**	**+0.3**
ATHU	**Athens Univers**	**2.76**	**41**	P	**Pn**	**18 09 38.3**	**+1.0**
ATHU	**Athens Univers**	**2.76**	**41**	P	**Pn**	**18 09 38.3**	**+1.0**
IDI	**Anoyia**	**2.83**	**101**	P	**Pn**	**18 09 38.7**	**+0.5**
IDI				S	**Sn**	**18 10 13.2**	**+0.9**
IDI	**Anoyia**	**2.83**	**101**	P	**Pn**	**18 09 38.7**	**+0.5**
IDI				S	**Sn**	**18 10 13.2**	**+0.9**
LKR	**Lokris**	**3.00**	**23**	*e*PN	**Pn**	**18 09 40.0**	**-0.6**
LKR	**Lokris**	**3.00**	**23**	P	**Pn**	**18 09 40.6**	**0.0**
LKR	**Lokris**	**3.00**	**23**	*e*Pn	**Pn**	**18 09 40.0**	**-0.6**
LKR	**Lokris**	**3.00**	**23**	P	**Pn**	**18 09 40.6**	**0.0**
AGG	**Agios Georgios**	**3.19**	**12**	P	**Pn**	**18 09 44.5**	**+1.3**
AGG	**Agios Georgios**	**3.19**	**12**	P	**Pn**	**18 09 44.5**	**+1.3**
APE	**Apeiranthos**	**3.45**	**69**	P	**Pn**	**18 09 46.4**	**-0.4**
APE				S	**Sn**	**18 10 27.1**	**-0.7**
APE	**Apeiranthos**	**3.45**	**69**	P	**Pn**	**18 09 46.4**	**-0.4**
APE				S	**Sn**	**18 10 27.1**	**-0.7**
NEO	**Neokhori**	**3.67**	**21**	*e*PN	**Pn**	**18 09 50.2**	**+0.4**
NEO	**Neokhori**	**3.67**	**21**	*e*Pn	**Pn**	**18 09 50.2**	**+0.4**
THL	**Klokotos Trika**	**3.69**	**6**	P	**Pn**	**18 09 50.0**	**0.0**
THL				S	**Sn**	**18 10 32.6**	**-1.0**
THL	**Klokotos Trika**	**3.69**	**6**	P	**Pn**	**18 09 50.0**	**0.0**
THL				S	**Sn**	**18 10 32.6**	**-1.0**
XOR	**Xorichti**	**3.72**	**21**	P	**Pn**	**18 09 51.7**	**+1.3**
XOR	**Xorichti**	**3.72**	**21**	P	**Pn**	**18 09 51.7**	**+1.3**
KEK	**Kerkira**	**4.05**	**341**	P	**Pn**	**18 09 54.8**	**-0.2**
KEK	**Kerkira**	**4.05**	**341**	P	**Pn**	**18 09 54.8**	**-0.2**
PLG	**Polygyros**	**4.73**	**18**	P	**Pn**	**18 10 04.4**	**+0.1**
PLG	**Polygyros**	**4.73**	**18**	P	**Pn**	**18 10 04.4**	**+0.1**
TIP	**Timpagrande**	**5.00**	**312**	*e*P	**Pn**	**18 10 07.6**	**-0.5**
TIP	**Timpagrande**	**5.00**	**312**	*e*P	**Pn**	**18 10 07.6**	**-0.4**
SOH	**Sokhos**	**5.13**	**16**	P	**Pn**	**18 10 10.2**	**+0.3**
SOH	**Sokhos**	**5.13**	**16**	P	**Pn**	**18 10 10.2**	**+0.3**
SLUM		**5.37**	**144**	P	**Pn**	**18 10 15.6**	**+2.4**
baz=153
SLUM S **Sn 18 11 10.0 -5.1**
baz=153
SLUM 5.37 144 P **Pn 18 10 15.6 +2.5**
SLUM S **Sn 18 11 10.0 -5.0**
VAE Valguarnera 5.91 288 P **Pn 18 10 22.1 +1.5**
1.5nm,0.3s,baz=90,slow=8.1,SNR=2.5
VAE Valguarnera 5.91 288 P **Pn 18 10 22.1 +1.5**
HMAT Matruh 6.69 134 P **Pn 18 10 31.6 +0.3**
baz=142
HMAT S **Sn 18 11 38.3 -9.2**
baz=142
HMAT Matruh 6.69 134 P **Pn 18 10 31.6 +0.3**
HMAT S **Sn 18 11 38.3 -9.2**
AMAG Maghara 11.11 115 P **Pn 18 11 29.6 -2.2**
baz=119
AMAG Maghara 11.11 115 P **Pn 18 11 29.6 -2.2**
HNKL Nakhl 12.05 116 P **Pn 18 11 42.3 -2.5**
baz=120
HNKL Nakhl 12.05 116 P **Pn 18 11 42.3 -2.5**
AKASG Malin Array Be 15.82 18 P **Pn 18 12 33.6 -2.0**
0.9nm,0.3s,baz=214,slow=11,SNR=4.4
HFS Hagfors 24.78 351 P **P 18 14 11.8 -2.9**
1.9nm,0.7s,mb3.7,baz=147,slow=8.1,SNR=7.0
HFS Hagfors 24.78 351 P **P 18 14 11.8 -2.9**
FINES FINESS Array B 25.74 5 P **P 18 14 19.8 -3.5**
1.1nm,0.7s,mb3.5,baz=172,slow=11,SNR=3.2
FINES FINESS Array B 25.74 5 P **P 18 14 19.8 -3.5**
NOA NORSAR Array B 26.01 349 P **P 18 14 22.6 -3.2**
0.4nm,0.6s,mb3.1,baz=146,slow=10,SNR=3.3
NOA NORSAR Array B 26.01 349 P **P 18 14 22.6 -3.2**
TORD Torodi Ar. Bea 28.82 223 P **P 18 14 52.8 +1.3**
0.3nm,0.7s,mb3.1,baz=36,slow=7.9,SNR=2.4
ARCES ARCESS Array B 33.77 3 P **P 18 15 31.7 -2.8**
1.0nm,0.9s,mb3.8,baz=183,slow=9.0,SNR=6.4
ARCES ARCESS Array B 33.77 3 P **P 18 15 31.7 -2.8**
KURK Kurchatov 43.05 51 P **P 18 16 47.8 -4.9**
0.2nm,0.5s,mb3.1,baz=282,slow=7.9,SNR=3.5
KURK Kurchatov 43.05 51 P **P 18 16 47.8 -4.9**
ZALV Zalesovo Beam 46.66 47 P **P 18 17 17.4 -4.1**
0.3nm,0.4s,mb3.6,baz=259,slow=6.6,SNR=2.6
ZALV Zalesovo Beam 46.66 47 P **P 18 17 17.4 -4.0**

ISCJB ***22*** *18:12:12.3±0.4, 38°.0N±0°.1×21°.70W±0°.03, h10km, Error ellipse: s-maj=15.8km s-min=2.8km az=173.4*
CSEM ***22*** *18:12:14.9, 38°.16N×21°.86W, h10km, mb4.9, After INMG*
PDA ***22*** *18:12:29.5±1.8, 37°.49N×22°.69W, h5km, MD3.8, ML3.4, Error ellipse: s-maj=17.6km s-min=4.3km az=178.0*
ISC 22 18:12:14.6±0.4, 38°.0N±0°.1×21°.79W±0°.03, h10km, n57, σ0°.89/64, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**2.78**	**251**	*e*P	**Pn**	**18 12 57.9**	**-1.3**
PSMN				*e*S	**Sn**	**18 13 20.7**	**-12**
PSMN	**Pico do Norte,**	**2.78**	**251**	*e*P	**Pn**	**18 12 57.9**	**-1.3**
PSMN				*e*S	**Sn**	**18 13 20.7**	**-12**
PSMA	**Santa Maria**	**2.83**	**251**	*e*P	**Pn**	**18 12 58.8**	**-1.1**
PSMA				*e*S	**Sn**	**18 13 21.7**	**-12**
PSMA				A		18 13 29.9	
92nm,0.2s
CMLA Cha da Macela 2.97 267 *e*P **Pn 18 13 02.3 +0.6**
CMLA *e*S **Sn 18 13 28.1 -9.3**
CMLA A 18 13 30.9
490nm,0.4s
CMLA A 18 13 33.3
91nm,0.3s
CMLA Cha da Macela 2.97 267 *e*P **Pn 18 13 02.3 +0.6**
CMLA *e*S **Sn 18 13 28.1 -9.3**
GRON Grota Negra 2.97 267 *e*P **Pn 18 13 01.5 -0.3**
GRON *e*P 18 13 11.0
PDA Ponta Delgada 3.08 267 *e*P **Pn 18 13 04.6 +1.3**
PDA Ponta Delgada 3.08 267 *e*P **Pn 18 13 04.6 +1.3**
PSET Sete Cidades 3.12 269 *e*P **Pn 18 13 04.3 +0.5**
PSET *e*S **Sn 18 13 32.2 -8.9**
PSET A 18 13 41.4
18nm,0.3s
PSET Sete Cidades 3.12 269 *e*P **Pn 18 13 04.3 +0.5**
PSET *e*S **Sn 18 13 32.2 -8.9**
ADH Angra Heroismo 4.34 281 *e*P **Pn 18 13 20.2 -0.4**
ROSA Rosais 5.13 280 *e*P **Pn 18 13 31.0 -0.5**
ROSA Rosais 5.13 280 *e*P **Pn 18 13 31.0 -0.5**
PICO Pico 5.26 278 *e*P **Pn 18 13 33.5 +0.3**
PICO Pico 5.26 278 *e*P **Pn 18 13 33.5 +0.3**
CALA Caldeira 5.48 279 *e*P **Pn 18 13 37.3 +1.1**
CALA Caldeira 5.48 279 *e*P **Pn 18 13 37.3 +1.1**
PMAFR Mafra 9.86 80 *e*S **Sn 18 16 29.7 +2.7**
PMAFR Mafra 9.86 80 *e*S **Sn 18 16 29.7 +2.7**
PFVI Vila Bisbo 10.32 91 *e*S **Sn 18 16 38.1 -0.4**
PFVI Vila Bisbo 10.32 91 *e*S **Sn 18 16 38.1 -0.4**
PTEO Sao Teotonio 10.35 88 *e*S **Sn 18 16 37.7 -1.5**
PTEO Sao Teotonio 10.35 88 *e*S **Sn 18 16 37.7 -1.5**
MORF Marmelete 10.44 90 *e*S **Sn 18 16 40.8 -0.5**
MORF Marmelete 10.44 90 *e*S **Sn 18 16 40.8 -0.5**
MOE Montemor 10.58 83 *e*S **Sn 18 16 46.4 +1.6**
MOE Montemor 10.58 83 *e*S **Sn 18 16 46.4 +1.6**
EVO Evora 10.85 83 *e*S **Sn 18 16 51.2 -0.1**
EVO Evora 10.85 83 *e*S **Sn 18 16 51.2 -0.1**
PCVE Castro Verde 10.88 88 *e*S **Sn 18 16 52.5 +0.3**
PCVE Castro Verde 10.88 88 *e*S **Sn 18 16 52.5 +0.3**
PBEJ Beja 10.99 85 *e*S **Sn 18 16 55.2 +0.5**
PBEJ Beja 10.99 85 *e*S **Sn 18 16 55.2 +0.5**
PBDV Barranco-do-Ve 11.02 90 *e*S **Sn 18 16 55.9 +0.4**
PBDV Barranco-do-Ve 11.02 90 *e*S **Sn 18 16 55.9 +0.4**
PVIS Viseu 11.10 71 *e*S **Sn 18 16 57.4 -0.1**
PVIS Viseu 11.10 71 *e*S **Sn 18 16 57.4 -0.1**
PVAQ Vaqueiros 11.16 89 *e*S **Sn 18 16 59.2 +0.1**
PVAQ Vaqueiros 11.16 89 *e*S **Sn 18 16 59.2 +0.1**
PESTR Estremoz 11.18 81 *e*S **Sn 18 17 00.6 +1.3**
PESTR Estremoz 11.18 81 *e*S **Sn 18 17 00.6 +1.3**
PCAB Cabril 11.22 66 *e*S **Sn 18 17 00.4 0.0**
PCAB Cabril 11.22 66 *e*S **Sn 18 17 00.4 0.0**
PCBR Castelo Branco 11.31 76 *e*S **Sn 18 17 02.6 +0.1**
PCBR Castelo Branco 11.31 76 *e*S **Sn 18 17 02.6 +0.1**
MTE Manteigas 11.32 73 *e*S **Sn 18 17 02.5 -0.3**
MTE Manteigas 11.32 73 *e*S **Sn 18 17 02.5 -0.3**
PVRL Vila Real 11.34 69 *e*S **Sn 18 17 03.7 +0.3**
PVRL Vila Real 11.34 69 *e*S **Sn 18 17 03.7 +0.3**
PMRV Marv??o 11.34 78 *e*S **Sn 18 17 03.7 +0.2**
PMRV Marv??o 11.34 78 *e*S **Sn 18 17 03.7 +0.2**
PBAR Barrancos 11.63 84 *e*S **Sn 18 17 09.8 -0.6**
PBAR Barrancos 11.63 84 *e*S **Sn 18 17 09.8 -0.6**
MVO Moncorvo 11.83 70 *e*S **Sn 18 17 14.3 -1.0**
MVO Moncorvo 11.83 70 *e*S **Sn 18 17 14.3 -1.0**
PBRG Braganca 12.17 67 *e*S **Sn 18 17 21.7 -2.1**
PBRG Braganca 12.17 67 *e*S **Sn 18 17 21.7 -2.1**

ISCJB ***22*** *18:14:01.6±1.0, 37°.51N±0°.06×87°.4E±0°.1, h10km, mb3.3/4, Error ellipse: s-maj=16.5km s-min=8.3km az=6.4*
IDC ***22*** *18:14:01.9±1.6, 37°.37N×87°.18E, h0km, mb3.3/3, mb1 3.6/7, mb1mx3.4/27, mbtmp3.6/7, ML4.0/3, MS4.1/1, Ms1 4.1/1, ms1mx2.5/26, Error ellipse: s-maj=59.5km s-min=21.3km az=67.0*
NEIC ***22*** *18:14:03.2±0.7, 37°.41N×87°.25E, h10km, mb3.6/1, Error ellipse: s-maj=18.5km s-min=9.8km az=67.0*
BJI ***22*** *18:14:08.4, 37°.70N×86°.66E, h14km, mb3.7/1, ML3.7/8*
ISC 22 18:14:03.1±1.0, 37°.46N±0°.08×87°.3E±0°.2, h10km, n18, σ0°.81/19, mb3.3/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**6.36**	**3**	*e*Pn	**Pb**	**18 15 52.5**	**-1.4**
WMQ				Sg	**Sg**	**18 17 31.3**	**+4.0**
WMQ				smax			
comp=N,28nm,0.8s
WMQ smax
comp=E,30nm,0.9s
KSH Kashi 9.12 286 P **Pn 18 16 19.3 +4.5**
KSH pmax pmax
comp=Z,1.0nm,0.3s
MK31 Makanchi Array 10.04 340 *e*P **Pn 18 16 28.1 +0.7**
MKAR Makanchi Array 10.04 340 Pn **Pn 18 16 27.7 +0.3**
comp=Z,2.6nm,0.3s,baz=156,slow=14,SNR=87
MKAR Sn **Sn 18 18 15.3 -4.6**
comp=Z,1.0nm,0.3s,baz=181,slow=23,SNR=6.7
TKM2 Tokmak 2 10.49 305 *e*P **Pn 18 16 33.6 +0.2**
comp=Z,1.5nm,0.4s
KURK Kurchatov 14.63 338 Pn **Pn 18 17 27.2 -2.9**
comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=24
KURK Kurchatov 14.63 338 Pn **Pn 18 17 27.2 -2.9**
ZAA0 Zalesovo Array 16.58 355 *e*P **Pn 18 17 56.0 +0.5**
ZALV Zalesovo Beam 16.58 355 Pn **Pn 18 17 55.8 +0.3**
comp=Z,0.4nm,0.3s,baz=177,slow=12,SNR=11
ZALV Zalesovo Beam 16.58 355 Pn **Pn 18 17 55.8 +0.3**
BVAR Borovoye Array 19.52 328 P **Pn 18 18 32.1 +0.5**
comp=Z,0.6nm,0.3s,baz=120,slow=14,SNR=3.8
CMAR Chiang Mai Arr 21.50 149 P **P 18 18 52.4 +0.2**
comp=Z,0.1nm,0.5s,mb2.5,baz=338,slow=12,SNR=2.9
ABKAR Akbulak array 22.99 310 *e*P **P 18 19 07.8 0.0**
comp=Z,1.4nm,0.7s,mb3.5
AKTK Aktyubinsk 24.58 311 P **P 18 19 22.9 -0.1**
AKTO Aktyubinsk 24.58 311 P **P 18 19 22.9 -0.1**
comp=Z,0.7nm,0.6s,mb3.4,baz=100,slow=8.8,SNR=4.1
JOW Kunigami 36.02 95 LR LR 18 35 28.9
comp=Z,311nm,19.8s,baz=319,slow=36
TORD Torodi Ar. Bea 78.69 278 P **P 18 26 05.6 -0.3**
comp=Z,0.7nm,0.6s,mb3.8,baz=46,slow=4.0,SNR=6.0
TORD Torodi Ar. Bea 78.69 278 P **P 18 26 05.6 -0.3**

IDC ***22*** *18:18:35.8±1.7, 14°.58N×123°.66E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/23, mbtmp3.5/5, ML4.3/1, Error ellipse: s-maj=44.6km s-min=27.3km az=59.0*
MAN ***22*** *18:18:41, 14°.48N×123°.33E, h33km, mb4.9, ML3.9, MS4.0*
ISC 22 18:18:39.9±2.1, 14°.52N±0°.04×123°.42E±0°.05, h17km±14km, n23, σ1°.33/31, mb3.4/4, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.16**	**142**	*e*P	**Pn**	**18 19 01.9**	**+0.6**
PVCP				*e*S	**Sb**	**18 19 14.5**	**-1.8**
AUQP	**San Andres**	**1.39**	**211**	*e*P	**Pn**	**18 19 04.5**	**0.0**
AUQP				*e*S	**Sn**	**18 19 23.6**	**+1.2**
POLP	**Polilio Island**	**1.45**	**278**	*e*P	**Pn**	**18 19 04.0**	**-1.3**
BOAC	**Boac**	**1.86**	**236**	*e*P	**Pn**	**18 19 10.9**	**0.0**
BOAC				*e*S	**Sn**	**18 19 29.7**	**-4.3**
BALP	**Baler**	**2.15**	**305**	*e*P	**Pn**	**18 19 13.7**	**-1.3**
BALP				*e*S	**Sn**	**18 19 41.2**	**-0.2**
CNP	**Catarman**	**2.33**	**149**	*e*P	**Pn**	**18 19 20.4**	**+3.0**
CNP				*e*S	**Sn**	**18 19 46.7**	**+0.9**
TGY	**Tagaytay City**	**2.44**	**261**	Pn	**Pn**	**18 19 21.2**	**+2.3**
48nm,0.3s,baz=73,slow=11,SNR=14
TGY Sn **Sn 18 19 50.7 +2.3**
73nm,0.3s,baz=348,slow=20,SNR=7.5
PCPH Palayan 2.47 295 *e*P **Pn 18 19 18.3 -1.1**
PCPH *i* S **Sn 18 19 47.5 -1.7**
OTRP Odiongan 2.54 213 *e*P **Pn 18 19 19.1 -1.2**
PALP Palanan 2.71 339 *e*P **Pn 18 19 24.0 +1.4**
CAUP Cauayan 2.86 328 *e*P **Pn 18 19 25.4 +0.7**
RCP Roxas 3.01 193 *e*P **Pn 18 19 31.8 +4.9**
SJMP San Jose 3.03 228 *e*P **Pn 18 19 27.2 +0.1**

LUBP Lubang 3.17 256 *e*P **Pn 18 19 29.5 +0.4**
BCPH Baguio City Da 3.30 304 *e*P **Pn 18 19 27.9 -3.0**
BCPH *i* S **Sn 18 20 09.6 -0.1**
BOLP Bolinao 3.85 299 *e*P **Pn 18 19 42.1 +3.6**
APYP Conner 3.93 328 *e*P **Pn 18 19 41.3 +1.9**
BUSP Coron 4.01 232 *e*P **Pn 18 19 39.2 -1.4**
ABRA Dolores 4.06 320 *e*P **Pn 18 19 42.7 +1.5**
CMAR Chiang Mai Arr 23.79 283 P **P 18 23 51.8 -0.2**
0.4nm,0.5s,mb3.1,baz=103,slow=8.7,SNR=4.3
ASAR Alice Springs 39.31 165 P **P 18 26 06.7 -1.5**
0.3nm,0.4s,mb3.4,baz=345,slow=7.1,SNR=4.6
MKAR Makanchi Array 46.98 322 P **P 18 27 08.5 -1.5**
0.3nm,0.6s,mb3.4,baz=99,slow=8.9,SNR=3.1
KURK Kurchatov 51.01 325 P **P 18 27 41.0 +0.2**
0.8nm,0.7s,mb3.8,baz=123,slow=8.2,SNR=9.0

DJA 22 18:28:26.6°.66S×104°.07E, h10km, MLv3.8/8, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.21**	**21**	P	Pn	18 28 46.6	-2.3
KASI				S	Sb	18 29 03.9	-0.7
CGJI	**Cibinong**	**1.61**	**88**	P	Pn	18 28 53.3	-1.2
CGJI				S	Sn	18 29 14.8	-0.6
LWLI	**Liwa**	**1.63**	**360**	P	Pn	18 28 53.9	-0.9
LWLI				S	Sn	18 29 16.8	+0.9
RBSI	**Rajabasa**	**1.85**	**64**	P	Pn	18 28 59.4	+1.6
RBSI				S	Sn	18 29 22.6	+1.4
KLI	**Kotabumi**	**1.95**	**24**	P	Pn	18 29 00.7	+1.5
MDSI	**Maura Dua**	**2.16**	**3**	P	Pn	18 29 01.6	-0.5
MDSI				S	Sn	18 29 32.2	+3.2
MNAI	**Manna**	**2.54**	**334**	P	Pn	18 29 06.6	-0.7
UGM	**Wanagama**	**6.52**	**101**	P	Pn	18 30 03.7	+1.6
120nm,1.7s,0.9nm
PWJI Pagerwojo 7.79 100 P Pn 18 30 20.2 +0.7

NEIC 22 18:44:32.0, 19°.37N×155°.23W, h2km, MD3.6(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.02**	**48**	*e*Pg	Pg	18 44 33.0	+0.5
STCH	**Steam Cracks**	**0.10**	**77**	*e*Pg	Pg	18 44 34.7	+0.7
KHU	**Kahuku**	**0.38**	**252**	*e*Pg	Pg	18 44 39.5	+0.2
POHA	**Pohakuloa**	**0.48**	**324**	*e*Pg	Pg	18 44 40.6	-0.7
POHA				*e*Sg	Sg	18 44 46.5	-1.0

MAN 22 18:55:01, 16°.50N×122°.40E, h25km, mb4.7, ML3.6, MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.56**	**2**	*e*P	Pb	18 55 12.9	+0.8
PALP				*e*S	Sb	18 55 22.5	+2.8
CAUP	**Cauayan**	**0.71**	**308**	*e*P	Pb	18 55 13.8	-0.9
CAUP				*e*S	Sb	18 55 19.9	-4.2
BALP	**Baler**	**1.10**	**226**	*e*P	Pn	18 55 20.6	-0.2
BALP				*e*S	Sn	18 55 34.5	-0.6
PCPH	**Palayan**	**1.57**	**233**	*e*P	Pn	18 55 28.2	+1.0
APYP	**Conner**	**1.75**	**321**	*e*P	Pn	18 55 31.1	+1.3
ABRA	**Dolores**	**1.98**	**305**	*e*P	Pn	18 55 34.2	+1.3

IDC ***22*** *18:57:55.7±0.6, 1°.74N×99°.23E, h0km, mb4.4/15, mb1 4.4/16, mb1mx4.3/23, mbtmp4.4/16, MS3.9/21, Ms1 3.9/21, ms1mx3.7/36, Error ellipse: s-maj=25.5km s-min=10.9km az=67.0*
BJI ***22*** *18:57:59.1, 1°.42N×98°.83E, h44km, mB4.8/18, mb4.7/29, Ms4.7/25, Ms7 4.6/23*
ISCJB ***22*** *18:58:00.6±0.4, 1°.76N±0°.03×99°.07E±0°.03, h37km±3km, mb4.7/76, MS4.1/38, Error ellipse: s-maj=6.3km s-min=5.1km az=135.7*
DJA ***22*** *18:58:01, 1°.80N×99°.08E, h12km, MLv4.9/11*
MOS ***22*** *18:58:01.1±1.1, 1°.86N×99°.32E, h45km, mb5.0/52, Error ellipse: s-maj=14.0km s-min=5.8km az=118.5*
NEIC ***22*** *18:58:02.1±1.4, 1°.75N×99°.17E, h41km±11km, mb4.9/41, MS3.9/2, Error ellipse: s-maj=14.4km s-min=7.2km az=224.0*
NEIC Felt [III] at Sibolga.
SZGRF ***22*** *18:58:15.4, 4°.71N×98°.39E, h33km, mb4.8, Northern Sumatera, Indonesia*
ISC 22 18:58:01.6±0.7, 1°.69N±0°.03×99°.07E±0°.03, h34km±4km, h42km±1.4km: pP-P, n250, σ1°.15/246, mb4.7/76, MS4.1/38, 10C-8D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.35**	**342**	P	**Pb**	**18 58 05.4**	**-4.7**
TRSI				S	**Sb**	**18 58 15.4**	**-0.4**
MNSI	**Mandailing Nat**	**1.03**	**150**	P	**Pn**	**18 58 17.8**	**-1.8**
PSI	**Prapat**	**1.11**	**353**	**Pn**	**Pn**	**18 58 17.2**	**-3.5**
83nm,0.3s,baz=147,slow=18,SNR=101
PSI Lg 18 58 29.9
172nm,0.3s,baz=129,slow=18,SNR=32
GSI Gunungsitoli 1.54 256 P **Pn 18 58 26.5 -0.2**
GSI S **Sn 18 58 50.7 +5.2**
BKNI Bangkinang 2.40 124 P **Pn 18 58 42.2 +3.8**
BKNI S **Sn 18 59 15.5 +8.9**
PPI Padang Panjang 2.52 148 P **Pn 18 58 44.1 +4.0**
PDSI Padang 2.94 152 P **Pn 18 58 47.3 +1.4**
FRIM Kepong 2.98 59 P **Pn 18 58 45.3 -1.2**
SISI Saibi 3.00 180 P **Pn 18 58 48.1 +1.3**
IPM Ipoh 3.39 35 P **Pn 18 58 51.7 -0.4**
IPM Ipoh 3.39 35 P **Pn 18 58 51.9 -0.2**
KULM Kulim 3.91 24 P **Pn 18 58 59.3 0.0**
KULM Kulim 3.91 24 *e*Pn **Pn 18 58 57.9 -1.4**
KULM *e*Sn **Sn 18 59 54.9 +11**
KULM Kulim 3.91 24 P **Pn 18 58 58.4 -0.9**
LHMI Lhok Sumawe 4.10 329 P **Pn 18 59 03.3 +1.4**
KGM Kluang 4.26 86 P **Pn 18 59 03.7 -0.4**
MYKOM Kota Tinggi 4.78 89 P **Pn 18 59 11.0 -0.3**
MYKOM Kota Tinggi 4.78 89 P **Pn 18 59 09.7 -1.6**
BSI Banda Aceh 5.33 315 P **Pn 18 59 19.6 +0.7**
162nm,1.2s,2μm0.8nm
KTGM Kuala Trenggan 5.43 48 P **Pn 18 59 18.8 -1.5**
KSI Kapahiang 6.37 146 P **Pn 18 59 37.8 +4.6**
95nm,1.3s,1.4nm
MDSI Maura Dua 7.99 140 P **Pn 18 59 59.2

comp=E,260nm,12.1s,MS4.2
QIZ LR LR
comp=Z,880nm,11.1s,MS4.4
KAPI Kappang 21.71 108 P **P** **19 02 51.9 +1.8**
comp=Z,5.1nm,0.3s,mb4.4,baz=287,slow=9.7,SNR=4.9
KAPI LR LR 19 11 48.3
comp=Z,644nm,19.9s,MS4.0,baz=261,slow=39
APSI Ampana 22.73 96 P **P** **19 03 03.2 +2.3**
MRSI Marisa 22.90 93 P **P** **19 03 04.7 +2.0**
KMI Kunming 23.56 8 P **P** **19 03 10.8 +1.5**
KMI pP 19 03 25.0
KMI PP 19 03 46.9
KMI S **S** **19 07 21.9 +0.9**
KMI pmax pmax
comp=Z,11nm,1.7s,mb4.0
KMI pmax pmax
comp=Z,98nm,4.0s
KMI LR LR
comp=N,710nm,12.1s,MS4.4
KMI LR LR
comp=E,450nm,12.3s,MS4.4
KMI LR LR
comp=Z,790nm,12.6s,MS4.4
SHL Shillong 24.73 344 ⇓*i*P **P** **19 03 19.0 -0.9**
HYB Hyderabad 25.51 309 *i* P **P** **19 03 27.0 -0.1**
GYA Guiyang 25.68 16 P **P** **19 03 29.8 +1.2**
GYA pP pP 19 03 42.0 +3.7
GYA sP sP 19 03 48.5 +6.1
GYA PcP PcP 19 07 00.4 +1.8
GYA S **S** **19 07 55.4 +0.3**
GYA sS sS 19 08 14.8 +3.6
GYA SS 19 09 01.3
GYA ScP ScP 19 10 34.0 -1.7
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,570nm,16.8s,MS4.3
GYA LR LR
comp=E,540nm,15.0s,MS4.3
GYA LR LR
comp=Z,580nm,16.9s,MS4.2
DAV Davao City (W) 26.96 78 LR LR 19 14 51.1
comp=Z,270nm,21.6s,MS3.8,baz=205,slow=38
CD2 Chengdu 29.40 8 P **P** **19 04 04.1 +2.3**
CD2 pP pP 19 04 15.9 +4.3
CD2 sP sP 19 04 21.4 +5.7
CD2 PP PP 19 05 01.1 -7.5
CD2 S **S** **19 08 54.3 +0.8**
CD2 sS sS 19 09 14.6 +4.9
CD2 SS SS 19 10 29.1 -30
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CD2 pmax pmax
comp=Z,110nm,5.4s
CD2 LR LR
comp=N,970nm,10.0s
CD2 LR LR
comp=Z,910nm,13.1s,MS4.6
QZH Quanzhou 29.83 38 P **P** **19 03 59.1 -6.6**
QZH S **S** **19 08 51.0 -9.4**
QZH LR LR
comp=N,1μm,15.4s,MS4.9
QZH LR LR
comp=E,2μm,16.6s,MS4.9
QZH LR LR
comp=Z,2μm,11.4s
NDI New Delhi 33.98 324 *e*P **P** **19 04 40.0 -2.2**
NJ2 Nanjing 35.49 30 *e*P **P** **19 04 55.8 +0.6**
NJ2 pP pP 19 05 07.8 +2.7
NJ2 sP sP 19 05 13.3 +4.2
NJ2 PP PP 19 06 17.0 +0.8
NJ2 S **S** **19 10 26.0 -2.4**
NJ2 sS sS 19 10 47.0 +2.3
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
NJ2 pmax pmax
comp=Z,30nm,5.8s
NJ2 LR LR
comp=N,440nm,16.4s
NJ2 LR LR
comp=E,430nm,10.8s
NJ2 LR LR
comp=Z,550nm,18.2s,MS4.3
SSE Sheshan 35.96 33 P **P** **19 04 59.8 +0.6**
SSE pP pP 19 05 10.8 +1.7
SSE S **S** **19 10 37.6 +2.0**
SSE sS sS 19 10 56.8 +4.9
SSE pmax pmax
comp=Z,39nm,0.7s,mb5.5
SSE pmax pmax
comp=Z,69nm,3.8s
SSE LR LR
comp=N,270nm,21.8s,MS4.2
SSE LR LR
comp=E,430nm,21.8s,MS4.2
SSE LR LR
comp=Z,590nm,12.7s
KAKA Kakadu 36.09 114 *e*P **P** **19 04 58.7 -1.8**
GTA Gaotai 37.55 1 *e*P **P** **19 05 11.8 -0.8**
GTA pmax pmax
comp=Z,11nm,1.1s,mb4.5
HHC Hu-ho-hao-te 40.59 15 *e*P **P** **19 05 39.8 +1.8**
HHC pP pP 19 05 52.0 +4.0
HHC sP sP 19 05 57.5 +5.5
HHC PP PP 19 07 17.9 +6.0
HHC PcP PcP 19 07 40.9 +1.1
HHC ScP ScP 19 11 25.4 -1.5
HHC S **S** **19 11 46.8 +1.5**
HHC sS sS 19 12 07.6 +5.9
HHC SS SS 19 14 46.0 -0.2
HHC ScS ScS 19 15 39.8 -1.4
HHC pmax pmax
comp=Z,12nm,1.0s,mb4.5
HHC pmax pmax
comp=Z,80nm,4.9s
HHC LR LR
comp=N,740nm,12.8s,MS4.8
HHC LR LR
comp=E,360nm,12.0s,MS4.8
HHC LR LR
comp=Z,580nm,12.9s,MS4.6
WRAB Tennant Creek 40.74 124 *e*P **P** **19 05 37.8 -1.8**
WRAB pmax pmax
comp=Z,13nm,1.1s,mb4.5
WRAB Tennant Creek 40.74 124 *e*P **P** **19 05 37.8 -1.7**
comp=Z,13nm,1.1s,mb4.5
BJI Beijing 41.22 20 P **P** **19 05 44.0 +0.8**
BJI S **S** **19 11 55.3 +0.6**
BJI LR LR
comp=N,220nm,14.2s,MS4.4
BJI LR LR
comp=E,280nm,15.3s,MS4.4
BJI LR LR
comp=Z,170nm,16.5s,MS4.0
ASAR Alice Springs 42.22 129 P **P** **19 05 49.9 -1.8**
comp=Z,1.6nm,1.0s,mb3.6,baz=299,slow=7.3,SNR=8.1
ASAR PcP PcP 19 07 45.5 0.0
comp=Z,2.5nm,1.0s,baz=316,slow=2.6,SNR=8.2
ASAR Alice Springs 42.22 129 P **P** **19 05 49.9 -1.8**
ASAR 19 07 45.5
ASAR pmax pmax
comp=Z,2.0nm,1.0s
ASAR pmax pmax
comp=Z,3.0nm,1.0s
KBL Kabul 43.03 323 *e*P **P** **19 05 57.8 -0.3**
KBL pmax pmax
comp=Z,33nm,1.8s,mb4.8
KBL Kabul 43.03 323 *e*P **P** **19 05 57.8 -0.3**
comp=Z,33nm,1.8s,mb4.8
KSH Kashi 43.13 334 P **P** **19 05 57.1 -1.7**
KSH pmax pmax
comp=Z,61nm,3.3s
WMQ Urumqi 43.15 348 P **P** **19 05 59.5 +0.6**
WMQ pmax pmax
comp=Z,12nm,1.1s,mb4.5
WMQ pmax pmax
comp=Z,81nm,5.2s
WMQ LR LR
comp=N,47nm,30.0s,MS3.6
WMQ LR LR
comp=E,95nm,27.0s,MS3.6
KSRS Korea Array 44.40 33 P **P** **19 06 07.5 -1.6**
comp=E,1.1nm,0.7s,mb3.7,baz=225,slow=8.7,SNR=4.9
KSRS LR LR 19 24 59.4
comp=E,117nm,18.7s,MS3.8,baz=45,slow=37
KSRS Korea Array 44.40 33 P **P** **19 06 07.5 -1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KSRS MLR MLR
comp=Z,117nm,18.7s,MS3.8
ULHL Ulahol 45.27 336 P **P** **19 06 16.3 +0.4**
comp=Z,7.0
KZA Kyzart 45.54 335 P **P** **19 06 18.8 +0.7**
SNR=13
UCH Uchtor 45.98 335 P **P** **19 06 22.6 +1.1**
SNR=22
UCH Uchtor 45.98 335 *e*P **P** **19 06 22.1 +0.6**
UCH pmax pmax
comp=Z,18nm,1.0s,mb5.0
UCH Uchtor 45.98 335 *e*P **P** **19 06 22.1 +0.5**
comp=Z,18nm,1.0s,mb5.0
TKM2 Tokmak 2 46.10 336 P **P** **19 06 23.1 +0.7**
SNR=20
TKM2 Tokmak 2 46.10 336 *e*P **P** **19 06 20.7 -1.8**
TKM2 pmax pmax
comp=Z,24nm,1.2s,mb5.0
TKM2 Tokmak 2 46.10 336 *e*P **P** **19 06 20.7 -1.8**
comp=Z,24nm,1.2s,mb5.0
KBK Karagaybulak 46.15 335 P **P** **19 06 23.6 +0.7**
SNR=29
AML Almayashu 46.26 334 P **P** **19 06 24.8 +1.1**
SNR=12
AML Almayashu 46.26 334 *e*P **P** **19 06 24.2 +0.5**
AML pmax pmax
comp=Z,31nm,1.4s,mb5.0
AML Almayashu 46.26 334 *e*P **P** **19 06 24.1 +0.4**
comp=Z,31nm,1.4s,mb5.0
AAK Ala-Archa 46.32 335 P **P** **19 06 25.4 +1.2**
SNR=8.0
SONM Songino Array 46.40 7 P **P** **19 06 24.5 -0.2**
comp=Z,4.1nm,0.9s,mb4.3,baz=188,slow=7.3,SNR=7.2
SONM PcP PcP 19 07 59.8 +0.6
comp=Z,4.3nm,0.9s,baz=198,slow=4.1,SNR=6.5
SONM Songino Array 46.40 7 P **P** **19 06 24.5 -0.2**
SONM 19 07 59.8
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM pmax pmax
comp=Z,4.0nm,1.0s
FRU Bishkek 46.43 335 *e*P **P** **19 06 25.0 -0.1**
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.2
CHMS Chumysh 46.51 335 P **P** **19 06 25.9 +0.2**
SNR=7.9
ULN Ulaanbaatar 46.51 7 *e*P **P** **19 06 25.6 0.0**
ULN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
ULN Ulaanbaatar 46.51 7 *e*P **P** **19 06 25.6 0.0**
comp=Z,5.4nm,1.2s,mb4.3
EKS2 Erkin-Say 46.65 334 P **P** **19 06 27.8 +1.1**
SNR=17
EKS2 Erkin-Say 46.65 334 *e*P **P** **19 06 26.0 -0.8**
EKS2 pmax pmax
comp=Z,12nm,1.0s,mb4.8
EKS2 Erkin-Say 46.65 334 *e*P **P** **19 06 26.0 -0.8**
comp=Z,12nm,1.0s,mb4.8
USP Ospenovka 46.84 335 P **P** **19 06 28.7 +0.4**
SNR=28
MK31 Makanchi Array 47.24 344 *e*P **P** **19 06 30.8 -0.6**
MKAR Makanchi Array 47.24 344 P **P** **19 06 30.8 -0.6**
comp=Z,5.3nm,0.4s,mb4.8,baz=151,slow=5.7,SNR=12
MKAR LR LR 19 29 39.6
comp=Z,97nm,18.4s,MS3.8,baz=164,slow=40
MKAR Makanchi Array 47.24 344 P **P** **19 06 30.8 -0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.4s
MKAR MLR MLR
comp=Z,97nm,18.4s
CN2 Changchun 48.04 26 *e*P **P** **19 06 39.8 +2.2**
CN2 *e*sP sP 19 06 57.0 +5.3
CN2 *e*S **S** **19 13 35.0 +1.4**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,3.0s
TLY Talaya 49.96 4 *e*P **P** **19 06 54.1 +1.9**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TLY MLR MLR
comp=Z,277nm,18.0s,MS4.3
MJAR Matsushiro Arr 50.08 42 LR LR 19 29 34.2
comp=Z,105nm,18.1s,MS3.9,baz=235,slow=38
MDJ Mudanjiang 50.55 28 P **P** **19 06 57.1 +0.4**
MDJ pP pP 19 07 08.5 +1.6
MDJ sP sP 19 07 13.4 +2.5
MDJ PcP PcP 19 08 13.1 -1.2
MDJ PP PP 19 08 55.4 +2.6
MDJ S **S** **19 14 06.6 -2.1**
MDJ sS sS 19 14 27.8 +2.3
MDJ SS SS 19 17 42.5 -0.7
MDJ pmax pmax
comp=Z,61nm,2.8s,mb5.0
MDJ LR LR
comp=N,320nm,15.5s,MS4.5
MDJ LR LR
comp=E,220nm,13.7s,MS4.5
MDJ LR LR
comp=Z,470nm,16.4s,MS4.6
KURK Kurchatov 51.83 344 *de*P **P** **19 07 05.5 -0.7**
KURK pmax pmax
comp=Z,22nm,1.2s,mb5.0
KURK Kurchatov 51.83 344 *e*P **P** **19 07 05.7 -0.5**
comp=Z,19nm,1.1s,mb4.9
STKA Stephens Creek 52.32 133 P **P** **19 07 08.1 -2.2**
comp=Z,6.1nm,1.1s,mb4.4,baz=241,slow=5.4,SNR=4.1
STKA LR LR 19 29 08.4
comp=Z,212nm,21.3s,MS4.2,baz=24,slow=36
STKA Stephens Creek 52.32 133 P **P** **19 07 08.1 -2.1**
STKA pmax pmax
comp=Z,6.0nm,1.1s
STKA MLR MLR
comp=Z,212nm,21.3s
STKA Stephens Creek 52.32 133 P **P** **19 07 08.1 -2.2**
STKA LR LR 19 29 08.4
ZAA0 Zalesovo Array 53.39 350 *e*P **P** **19 07 16.6 -1.1**
ZALV Zalesovo Beam 53.39 350 P **P** **19 07 16.5 -1.2**
comp=Z,6.5nm,0.8s,mb4.6,baz=165,slow=6.2,SNR=36
ZALV Zalesovo Beam 53.39 350 P **P** **19 07 16.5 -1.2**
ZALV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
NVS Novosibirsk 54.54 349 *e*P **P** **19 07 25.3 -0.8**
NVS pmax pmax
comp=Z,17nm,1.9s,mb4.8
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=E,14nm,2.2s
HABR Khabarovsk 55.93 28 *e*P **P** **19 07 33.7 -2.6**
HABR S **S** **19 15 19.6 -2.3**
HABR *e*SS SS 19 19 06.7 -1.5
HABR pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
HABR pmax pmax
comp=N,3.0nm,1.4s
HABR pmax pmax
comp=E,4.0nm,0.7s
HABR MLR MLR
comp=Z,163nm,18.0s,MS4.2
BVAR Borovoye Array 56.42 340 P **P** **19 07 38.0 -1.6**
comp=Z,3.3nm,0.8s,mb4.4,baz=141,slow=7.5,SNR=24
BVAR LR LR 19 36 08.2
comp=Z,75nm,20.1s,MS3.8,baz=148,slow=41
BVAR Borovoye Array 56.42 340 P **P** **19 07 38.0 -1.7**
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR MLR MLR
comp=Z,75nm,20.1s
BRVK Borovoye 56.48 340 *de*P **P** **19 07 39.3 -0.8**
BRVK pmax pmax
comp=Z,14nm,1.7s,mb4.7
BRVK Borovoye 56.48 340 *e*P **P** **19 07 38.5 -1.6**
comp=Z,6.2nm,0.9s,mb4.6
BOD Bodaibo 57.20 9 *e*P **P** **19 07 44.7 -0.4**
ABKAR Akbulak array 57.98 331 P **P** **19 07 49.1 -1.7**
comp=Z,7.3nm,0.9s,mb4.7
YSS Yuzh-Sakhalins 58.90 34 *e*P **P** **19 07 56.0 -1.3**
YSS Yuzh-Sakhalins 58.90 34 *e*P **P** **19 07 57.1 -0.2**
comp=Z,17nm,1.0s,mb5.0
AKTO Aktyubinsk 59.69 331 LR LR 19 38 15.7
comp=Z,58nm,18.4s,MS3.7,baz=354,slow=40
SVE Sverdlovsk 62.94 337⇑*e*P **P** **19 08 24.5 0.0**
SVE pmax pmax
comp=Z,19nm,1.2s,mb5.1
ARU Arti 63.47 336*c i*P **P** **19 08 26.8 -1.2**
ARU *e* 19 10 44.9
ARU S **S** **19 17 00.0 +1.3**
ARU SS SS 19 21 00.2 -6.0
ARU pmax pmax
comp=Z,20nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,193nm,24.0s,MS4.2
ARU Arti 63.47 336 *e*P **P** **19 08 26.3 -1.8**
comp=Z,48nm,2.0s,mb5.3
ZEI Tsey 63.88 318 *e*P **P** **19 08 30.4 -0.6**
ZEI pmax pmax
comp=Z,11nm,1.0s,mb4.8
YAK Yakutsk 64.44 15 *e*P **P** **19 08 34.4 +0.1**
YAK pmax pmax
comp=Z,20nm,1.3s,mb5.0
KIV Kislovodsk 65.17 318 *e*P **P** **19 08 38.9 -0.5**
KIV pmax pmax
comp=Z,14nm,1.0s,mb5.0
KIV Kislovodsk 65.17 318 *e*P **P** **19 08 39.4 0.0**
comp=Z,20nm,1.1s,mb5.1
ASF Jabal al Asfar 65.71 305 LR LR 19 39 23.2
comp=Z,75nm,20.3s,MS3.9,baz=157,slow=38
EIL Elat 66.78 302 LR LR 19 39 26.4
comp=Z,138nm,18.6s,MS4.2,baz=88,slow=37
SOC Sochi 67.02 317 *e*P **P** **19 08 48.9 -2.4**
SOC pmax pmax
comp=Z,12nm,0.8s,mb5.0
MMAI Mount Meron Ar 67.14 305 P **P** **19 08 53.1 +0.8**
comp=Z,3.6nm,0.9s,mb4.4,baz=105,slow=9.7,SNR=5.6
MMAI LR LR 19 41 44.0
comp=Z,58nm,18.3s,MS3.8,baz=205,slow=39
ANN Anapa 68.98 318 *e*P **P** **19 09 00.5 -3.1**
ANN pmax pmax
comp=Z,11nm,1.7s,mb4.5
BRTR Keskin Array B 70.17 312 P **P** **19 09 10.6 -0.5**
comp=Z,3.3nm,0.9s,mb4.3,baz=125,slow=6.3,SNR=12
BRTR LR LR 19 41 59.4
comp=Z,47nm,18.8s,MS3.8,baz=280,slow=38
BRTR Keskin Array B 70.17 312 P **P** **19 09 10.6 -0.5**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR MLR MLR
comp=Z,47nm,18.8s
PETK Petropavlovsk- 70.30 33 LR LR 19 40 01.8
comp=Z,78nm,18.2s,MS4.0,baz=64,slow=36
TIXI Tiksi 72.39 10 *e*P **P** **19 09 22.1 -1.7**
TIXI *e*S S 19 18 43.6 -1.2
TIXI pmax pmax
comp=Z,30nm,1.1s,mb5.1
TIXI MLR MLR
comp=Z,183nm,15.0s,MS4.5
TIXI Tiksi 72.39 10 *e*P **P** **19 09 22.7 -1.1**
comp=Z,34nm,1.2s,mb5.2
SEY Seymchan 72.59 23*ce*P **P** **19 09 25.1 -0.1**
MOS Moscow 72.88 329 *e*P **P** **19 09 25.5 -1.5**
MOS pmax pmax
comp=Z,48nm,0.7s,mb5.5
OBN Obninsk 73.19 328*d i*P **P** **19 09 28.6 -0.3**
OBN pmax pmax
comp=Z,46nm,1.6s,mb5.2
AKASG Malin Array Be 76.01 322 P **P** **19 09 44.1 -1.3**
comp=Z,2.1nm,0.7s,mb4.2,baz=91,slow=4.7,SNR=22
AKASG LR LR 19 46 28.5
comp=Z,56nm,20.4s,MS3.9,baz=200,slow=38
AKASG Malin Array Be 76.01 322 P **P** **19 09 44.1 -1.3**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG MLR MLR
comp=Z,56nm,20.4s
AKBB Malin Array Si 76.01 322 *e*P **P** **19 09 44.3 -1.1**
KIEV Kiev 76.02 322 *e*P **P** **19 09 44.4 -1.0**
KIEV pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
KIEV Kiev 76.02 322 *e*P **P** **19 09 44.4 -1.0**
comp=Z,8.3nm,1.1s,mb4.6
PLOR Plostina 76.58 317 ⇓*i*P **P** **19 09 49.7 +1.0**
PLOR Plostina 76.58 317 ⇓*i*P **P** **19 09 49.7 +1.0**
MLR Muntele Rosu 77.00 316 ⇑*i*P **P** **19 09 51.1 0.0**
MLR Muntele Rosu 77.00 316 ⇑*i*P **P** **19 09 51.1 0.0**
BURAR Bucovina Array 77.89 318 ⇓*i*P **P** **19 09 57.1 +1.1**
BURAR Bucovina Array 77.89 318 ⇓*i*P **P** **19 09 57.1 +1.1**
BUR08 Bucovina Ar. S 77.91 318 *e*P **P** **19 09 56.7 +0.6**
BZS Buzias 80.02 316 ⇑*i*P **P** **19 10 08.0 +0.3**
BZS Buzias 80.02 316 ⇑*i*P **P** **19 10 08.0 +0.3**
KOLS Kolonicke sedl 80.06 319 *e*P **P** **19 10 09.0 +1.1**
KOLS pmax pmax
comp=Z,11nm,1.3s,mb4.6
KOLS Kolonicke sedl 80.06 319 *e*P **P** **19 10 09.0 +1.1**
comp=Z,11nm,1.3s,mb4.6
KOLS Kolonicke sedl 80.06 319 *e*P **P** **19 10 09.0 +1.1**
SUW Suwalki 80.36 325 *e*P **P** **19 10 09.1 -0.3**
SUW Suwalki 80.36 325 *e*P **P** **19 10 09.2 -0.2**
SUW pmax pmax
comp=Z,41nm,1.1s,mb5.3
SUW Suwalki 80.36 325 *e*P **P** **19 10 09.2 -0.1**
comp=Z,41nm,1.1s,mb5.3
FINES FINESS Array B 80.43 332 P **P** **19 10 09.1 -0.5**
comp=Z,4.0nm,0.9s,mb4.3,baz=145,slow=10,SNR=5.6
FINES LR LR 19 51 34.0
comp=Z,102nm,20.4s,MS4.2,baz=129,slow=40
FINES FINESS Array B 80.43 332 P **P** **19 10 09.1 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES MLR MLR
comp=Z,102nm,20.4s
STHS Stebnicka Huta 80.80 320 *e*P **P** **19 10 12.9 +1.1**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
STHS Stebnicka Huta 80.80 320 *e*P **P** **19 10 12.9 +1.1**
comp=Z,3.5nm,1.1s,mb4.2
STHS Stebnicka Huta 80.80 320 *e*P **P** **19 10 12.9 +1.1**
KECS Kecovo 81.17 319 *e*P **P** **19 10 11.6 -2.2**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 81.17 319 *e*P **P** **19 10 11.6 -2.2**
comp=Z,1.9nm,0.9s,mb4.0
KECS Kecovo 81.17 319 *e*P **P** **19 10 11.6 -2.2**
PSZ Piszkesteto 81.49 318 *e*P **P** **19 10 15.2 -0.3**
PSZ pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
PSZ Piszkesteto 81.49 318 *e*P **P** **19 10 15.2 -0.4**
comp=Z,8.7nm,1.3s,mb4.5
PSZ Piszkesteto 81.49 318⇑*i*P **P** **19 10 15.8 +0.3**
OJC Ojcow 81.83 320 *e*P **P** **19 10 17.3 0.0**
PKSM Moragy 82.15 316 ⇑P **P** **19 10 18.9 -0.2**
PKSM Moragy 82.15 316 ⇑*i*P **P** **19 10 18.9 -0.2**
VYHS Vyhne 82.26 319 *e*P **P** **19 10 19.4 -0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
VYHS Vyhne 82.26 319 *e*P **P** **19 10 19.4 -0.2**
comp=Z,5.1nm,1.4s,mb4.3
VYHS Vyhne 82.26 319 *e*P **P** **19 10 19.4 -0.2**
ARCES ARCESS Array B 82.71 340 P **P** **19 10 21.1 -0.4**
comp=Z,3.3nm,1.0s,mb4.3,baz=47,slow=1.6,SNR=6.9
ARCES ARCESS Array B 82.71 340 P **P** **19 10 21.1 -0.4**
ARCES pmax pmax
comp=Z,3.0nm,1.0s
BRG Berggiesshubel 85.61 321 *e*P **P** **19 10 36.9 +0.3**
comp=Z,10.0nm,1.5s,mb4.8
BRG Berggiesshubel 85.61 321 *e*P **P** **19 10 36.9 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.5s,mb4.6
GEC2 GERESS Array S 85.68 319 *e*P **P** **19 10 36.9 -0.1**
GERES GERESS Array B 85.68 319 P **P** **19 10 37.1 +0.1**
comp=Z,2.6nm,1.0s,mb4.4,baz=98,slow=6.1,SNR=22
GERES GERESS Array B 85.68 319 P **P** **19 10 37.1 +0.1**
GERES pmax pmax
comp=Z,3.0nm,1.0s
CLL Collm 86.22 321 *e*P **P** **19 10 39.0 -0.6**
CLL *e*S S 19 21 17.0 +4.7
CLL pmax pmax
comp=Z,6.0nm,1.3s,mb4.7
CLL Collm 86.22 321 *e*P **P** **19 10 39.0 -0.6**
comp=Z,6.0nm,1.3s,mb4.7
CLL *e*S S 19 21 17.0 +4.7
CLL Collm 86.22 321 *e*P **P** **19 10 39.0 -0.6**
comp=Z,6.0nm,1.3s,mb4.7
CLL *e*S S 19 21 17.0 +4.7
HFS Hagfors 86.23 330 LR LR 19 52 56.8
comp=Z,44nm,19.8s,MS3.9,baz=4.6,slow=38

SPITS Spitsbergen Ar 86.85 348 LR LR 19 57 47.3
comp=Z,79nm,20.2s,MS4.1,baz=60,slow=41
SBA Scott Base 87.04 169 *e*P **P** **19 10 44.7 +1.6**
SBA pmax pmax
comp=Z,17nm,1.6s,mb5.0
SBA Scott Base 87.04 169 *e*P **P** **19 10 44.7 +1.6**
comp=Z,17nm,1.6s,mb5.0
GRA1 Grafenberg Arr 87.32 319 *e*P **P** **19 10 45.7 +0.6**
comp=Z,9.0nm,1.3s,mb4.8
GRF Grafenberg Arr 87.32 319 *e*P **P** **19 10 45.7 +0.6**
comp=Z,9.0nm,1.3s,mb4.8
GRF Grafenberg Arr 87.32 319 *e*P **P** **19 10 45.7 +0.6**
GRF pmax pmax
comp=Z,9.0nm,1.3s,mb4.8
GRF Grafenberg Arr 87.32 319 *e*P **P** **19 10 45.7 +0.6**
GRF pmax pmax
comp=Z,9.0nm,1.3s,mb4.8
GRF Grafenberg Arr 87.32 319 *e*P **P** **19 10 45.7 +0.6**
comp=Z,9.0nm,1.3s,mb4.8
NB2 NORSAR Subarra 87.49 331 P **P** **19 10 44.6 -1.0**
comp=Z,4.9nm,1.0s,mb4.7,baz=93,slow=5.9
NOA NORSAR Array B 87.49 331 P **P** **19 10 43.5 -2.1**
comp=Z,4.3nm,1.0s,mb4.6,baz=92,slow=5.0,SNR=5.5
NOA LR LR 19 54 03.6
comp=Z,38nm,19.9s,MS3.8,baz=105,slow=38
NOA NORSAR Array B 87.49 331 P **P** **19 10 43.5 -2.1**
NOA pmax pmax
comp=Z,4.0nm,1.0s
NOA MLR MLR
comp=Z,39nm,19.9s
NOA NORSAR Array B 87.49 331 P **P** **19 10 43.5 -2.1**
NOA LR LR 19 54 03.6
KEST Kesra 88.80 306 P **P** **19 10 51.8 -0.7**
comp=Z,2.7nm,0.9s,mb4.6,baz=228,slow=3.7,SNR=7.6
CDF Champ du Feu 89.94 318 *e*P **P** **19 10 57.5 0.0**
comp=Z,10.0nm,1.1s,mb4.8
CDF Champ du Feu 89.94 318 *e*P **P** **19 10 57.5 0.0**
CDF pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
CDF Champ du Feu 89.94 318 *e*P **P** **19 10 57.5 0.0**
comp=Z,5.0nm,1.1s,mb4.8
LPG La Plagne 90.43 315 *e*P **P** **19 11 00.5 +0.7**
comp=Z,19nm,1.0s,mb5.1
LPG La Plagne 90.43 315 *e*P **P** **19 11 00.5 +0.7**
LPG pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
LPG La Plagne 90.43 315 *e*P **P** **19 11 00.5 +0.7**
comp=Z,9.7nm,1.0s,mb5.1
LPL La Plagne 90.44 315 *e*P **P** **19 11 00.5 +0.6**
comp=Z,17nm,0.9s,mb5.1
LPL La Plagne 90.44 315 *e*P **P** **19 11 00.5 +0.6**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
LPL La Plagne 90.44 315 *e*P **P** **19 11 00.5 +0.6**
comp=Z,8.4nm,0.9s,mb5.1
HAU Haudompre 90.58 318 *e*P **P** **19 11 00.6 +0.1**
HAU *e*MLR MLR
comp=Z,52nm,20.2s,MS3.6
HAU Haudompre 90.58 318 *e*P **P** **19 11 00.6 +0.1**
HAU LR LR
comp=Z,50nm,20.3s,MS3.9
CABF La Chapelle 90.83 316 *e*P **P** **19 11 02.3 +0.6**
comp=Z,17nm,1.1s,mb5.0
CABF La Chapelle 90.83 316 *e*P **P** **19 11 02.3 +0.6**
CABF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
CABF La Chapelle 90.83 316 *e*P **P** **19 11 02.3 +0.6**
comp=Z,8.4nm,1.1s,mb5.0
ORIF Oris-en-Rattie 91.08 315 *e*P **P** **19 11 03.5 +0.6**
comp=Z,32nm,1.5s,mb5.1
ORIF *e*MLR MLR
comp=Z,68nm,21.2s,MS3.8
ORIF Oris-en-Rattie 91.08 315 *e*P **P** **19 11 03.5 +0.6**
ORIF pmax pmax
comp=Z,16nm,1.5s,mb5.1
ORIF Oris-en-Rattie 91.08 315 *e*P **P** **19 11 03.5 +0.6**
comp=Z,16nm,1.5s,mb5.1
MEZF Maizieres J'vi 91.41 318 *e*P **P** **19 11 04.6 +0.3**
BAIF Baives 91.84 320 *e*P **P** **19 11 06.9 +0.6**
VIVF Saint-Julien-l 91.94 315 *e*P **P** **19 11 07.2 +0.3**
comp=Z,28nm,1.5s,mb5.1
VIVF Saint-Julien-l 91.94 315 *e*P **P** **19 11 07.2 +0.3**
VIVF pmax pmax
comp=Z,14nm,1.5s,mb5.1
VIVF Saint-Julien-l 91.94 315 *e*P **P** **19 11 07.2 +0.3**
comp=Z,14nm,1.5s,mb5.1
LOR Lormes 92.31 317 *e*P **P** **19 11 08.7 +0.2**
comp=Z,34nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,44nm,19.2s,MS3.6
LOR Lormes 92.31 317 *e*P **P** **19 11 08.7 +0.2**
LOR pmax pmax
comp=Z,17nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,40nm,19.3s,MS3.9
LOR Lormes 92.31 317 *e*P **P** **19 11 08.7 +0.2**
comp=Z,17nm,1.3s,mb5.2
LOR LR LR
comp=Z,40nm,19.3s,MS3.9
SMF Signal de Mont 92.38 317 *e*P **P** **19 11 09.1 +0.3**
comp=Z,23nm,1.0s,mb5.2
SMF Signal de Mont 92.38 317 *e*P **P** **19 11 09.1 +0.3**
SMF pmax pmax
comp=Z,12nm,1.0s,mb5.2
SMF Signal de Mont 92.38 317 *e*P **P** **19 11 09.1 +0.3**
comp=Z,12nm,1.0s,mb5.2
SSF Saint Saulge 92.57 317 *e*P **P** **19 11 10.1 +0.4**
comp=Z,22nm,1.3s,mb5.1
SSF Saint Saulge 92.57 317 *e*P **P** **19 11 10.1 +0.4**
SSF pmax pmax
comp=Z,11nm,1.3s,mb5.1
SSF Saint Saulge 92.57 317 *e*P **P** **19 11 10.1 +0.4**
comp=Z,11nm,1.3s,mb5.1
LASF Ste Croix 92.58 314 *e*P **P** **19 11 09.9 +0.1**
comp=Z,50nm,1.6s,mb5.4
AVF Avril sur Loir 92.70 317 *e*P **P** **19 11 10.6 +0.3**
comp=Z,17nm,1.2s,mb5.1
AVF Avril sur Loir 92.70 317 *e*P **P** **19 11 10.6 +0.3**
AVF pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
AVF Avril sur Loir 92.70 317 *e*P **P** **19 11 10.6 +0.3**
comp=Z,8.4nm,1.2s,mb5.0
BGF Bois d'Agland 93.07 317 *e*P **P** **19 11 12.6 +0.6**
comp=Z,19nm,1.1s,mb5.2
BGF Bois d'Agland 93.07 317 *e*P **P** **19 11 12.6 +0.6**
BGF pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
BGF Bois d'Agland 93.07 317 *e*P **P** **19 11 12.6 +0.6**
comp=Z,9.7nm,1.1s,mb5.2
TCF Toulx Ste Croi 93.53 316 *e*P **P** **19 11 14.7 +0.5**
comp=Z,8.4nm,1.1s,mb4.8
TCF Toulx Ste Croi 93.53 316 *e*P **P** **19 11 14.7 +0.5**
TCF pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
TCF Toulx Ste Croi 93.53 316 *e*P **P** **19 11 14.7 +0.5**
comp=Z,4.2nm,1.1s,mb4.8
CAF Calviac 93.78 315 *e*P **P** **19 11 16.2 +0.9**
TORD Torodi Ar. Bea 96.79 283 LR LR 19 51 17.8
comp=Z,57nm,20.2s,MS4.0,baz=150,slow=33
BPAW Bear Paw Mtn. 97.09 25 *e*P **P** **19 11 29.9 -0.1**
comp=Z,5.1nm,1.0s,mb4.9
KDAK Kodiak Island 98.27 31 LR LR 19 55 57.4
comp=Z,60nm,18.8s,MS4.1,slow=36
PDAR Pinedale Array 128.78 27 PKP PKPdf 19 17 05.3 -0.5
comp=Z,0.6nm,0.7s,baz=343,slow=2.8,SNR=5.6
MIAR Mount Ida 142.05 17 PKIKP PKPdf 19 17 25.2 -5.6
TXAR Lajitas Array 142.25 33 PKP PKPdf 19 17 28.8 -2.5
comp=Z,1.1nm,0.9s,baz=304,slow=2.3,SNR=5.6
TXAR Lajitas Array 142.25 33 PKIKP PKPdf 19 17 28.8 -2.5
TXAR pmax pmax
comp=Z,1.0nm,0.9s
LRAL Lakeview Retre 144.99 9 *e*PKPdf PKPdf 19 17 34.5 -1.5
GOGA Godfrey 145.00 4 *e*PKIKP PKPdf 19 17 35.5 -0.5
CPUP Villa Florida 146.61 221 PKPbc PKPbc 19 17 41.1 +0.7
comp=Z,3.3nm,0.8s,baz=120,slow=3.2,SNR=8.5
CPUP Villa Florida 146.61 221 PKP2 PKPab 19 17 41.2 -0.3
CPUP pmax pmax
comp=Z,3.0nm,0.8s
LPAZ La Paz 160.78 220 PKPab PKPab 19 18 43.6 +2.4
comp=Z,0.9nm,0.9s,baz=78,slow=11,SNR=3.9
LPAZ La Paz 160.78 220 PKP2 PKPab 19 18 43.6 +2.4
LPAZ pmax pmax
comp=Z,1.0nm,0.9s

ISCJB ***22*** *19:15:03.0±0.4, 31°.99N±0°.04×104°.55E±0°.08, h10km, mb3.9/11, Error ellipse: s-maj=9.4km s-min=5.4km az=174.9*
IDC ***22*** *19:15:03.2±1.1, 32°.03N×104°.41E, h0km, mb3.7/9, mb1 3.7/11, mb1mx3.6/27, mbtmp3.6/11, ML3.6/2, Error ellipse: s-maj=31.1km s-min=20.6km az=51.0*
NEIC ***22*** *19:15:04.3±0.5, 32°.00N×104°.55E, h10km, mb3.7/1, Error ellipse: s-maj=12.1km s-min=7.7km az=61.0*
BJI ***22*** *19:15:06.4, 32°.20N×104°.66E, h13km, mb3.5/1, ML3.6/15, Ms3.5/2, Ms7 3.5/3*
ISC 22 19:15:05.2±0.4, 32°.06N±0°.03×104°.54E±0°.07, h10km, n25, σ1§10/34, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.33**	**210**	Pg	**Pg**	**19 15 31.8**	**+1.1**
CD2				Sg	**Sg**	**19 15 53.3**	**+5.4**
CD2				smax			
	comp=N,3μm,0.6s						
LZH	**Lanzhou**	**4.06**	**352**	Pn	**Pn**	**19 16 09.3**	**+1.9**
LZH				Pg	**Pg**	**19 16 19.8**	**-3.2**
LZH				Sn	**Sn**	**19 16 55.8**	**+0.9**
LZH				Sg	**Sg**	**19 17 11.4**	**-4.1**
LZH				smax			
	comp=N,190nm,0.9s						
LZH				smax			
	comp=E,310nm,0.8s						
LZH				LR	LR		
	comp=N,410nm,4.7s						
LZH				LR	LR		
	comp=Z,500nm,6.5s						
XAN	**Xi'an**	**4.18**	**61**	Pn	**Pn**	**19 16 10.3**	**+1.3**
XAN				Pg	**Pg**	**19 16 19.3**	**-5.9**
XAN				Sn	**Sn**	**19 17 04.8**	**+7.0**
XAN				Sg	**Sg**	**19 17 13.6**	**-5.7**
XAN				smax			
	comp=N,160nm,0.7s						
XAN				smax			
	comp=E,82nm,0.8s						
ENH	**Enshi**	**4.60**	**112**	*e*P	**Pn**	**19 16 13.2**	**-1.6**
GYA	**Guiyang**	**5.88**	**161**	Pg	**Pg**	**19 16 57.3**	**-0.6**
GYA				Sg	**Sb**	**19 18 00.8**	**+2.4**
GYA				smax			
	comp=N,60nm,0.9s						
GYA				smax			
	comp=E,60nm,0.8s						
KMI	**Kunming**	**7.09**	**193**	Pn	**Pb**	**19 17 00.8**	**-7.7**
KMI				Sn	**Sn**	**19 18 09.3**	**-0.4**
KMI				smax			
	comp=N,15nm,1.2s						
KMI				smax			
	comp=E,8.0nm,1.1s						
KMI				LR	LR		
	comp=N,260nm,11.0s						
KMI				LR	LR		
	comp=E,290nm,11.8s						
KMI				LR	LR		
	comp=Z,280nm,10.1s						
GTA	**Gaotai**	**8.28**	**334**	*e*P	**Pn**	**19 17 05.8**	**+0.5**
GTA				pP		19 17 10.1	
GTA				sP		19 17 13.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**14.46**	**202**	Pn	**Pn**	**19 18 27.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=11,slow=10,SNR=3.6						
SONM	**Songino Array**	**15.82**	**5**	Pn	**Pn**	**19 18 47.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=100,slow=8.1,SNR=2.7						
KSRS	**Korea Array**	**19.93**	**68**	P	**Pn**	**19 19 38.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=255,slow=9.2,SNR=3.8						
MK31	**Makanchi Array**	**22.52**	**317**	*e*P	**P**	**19 20 05.4**	**+0.4**
MKAR	**Makanchi Array**	**22.52**	**317**	P	**P**	**19 20 04.5**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.3,baz=108,slow=12,SNR=9.8						
ZAA0	**Zalesovo Array**	**26.03**	**333**	*e*P	**P**	**19 20 38.0**	**-0.3**
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**19 20 38.5**	**+0.2**
	comp=Z,4.0nm,0.5s,mb4.2,baz=134,slow=9.7,SNR=24						
KURK	**Kurchatov**	**26.71**	**322**	P	**P**	**19 20 44.1**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.3,baz=125,slow=12,SNR=5.6						
ABKAR	**Akbulak array**	**37.33**	**311**	*e*P	**P**	**19 22 17.0**	**-0.5**
	comp=Z,0.8nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**56.54**	**336**	P	**P**	**19 24 45.8**	**-1.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=80,slow=6.7,SNR=6.8						
BRTR	**Keskin Array B**	**56.60**	**299**	P	**P**	**19 24 47.7**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=101,slow=8.7,SNR=2.8						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**19 24 49.5**	**-1.2**
	comp=Z,0.6nm,0.4s,mb4.0,baz=105,slow=6.3,SNR=7.0						
ASAR	**Alice Springs**	**62.12**	**149**	P	**P**	**19 25 26.5**	**+0.1**
	comp=Z,0.4nm,0.8s,mb3.6,baz=321,slow=6.3,SNR=5.3						
CDF	**Champ du Feu**	**71.19**	**316**	*e*P	**P**	**19 26 25.6**	**+1.4**
LPG	**La Plagne**	**72.87**	**313**	*e*P	**P**	**19 26 35.0**	**+0.7**
	comp=Z,6.2nm,0.5s,mb4.5						
LPL	**La Plagne**	**72.87**	**313**	*e*P	**P**	**19 26 34.9**	**+0.6**
	comp=Z,7.9nm,0.5s,mb4.6						
TCF	**Toulx Ste Croi**	**75.23**	**316**	*e*P	**P**	**19 26 49.5**	**+1.4**
YKA	**Yellowknife Ar**	**80.67**	**17**	P	**P**	**19 27 17.2**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=327,slow=4.7,SNR=4.2						

CSEM ***22*** *19:27:56.6, 12°.04N×43°.91E, h7km, ML3.7, After DHMR*
DHMR 22 19:27:56.6±1.0, 12°.04N×43°.91E, h8km±20km, ML3.7, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.28**	**55**	*i* P	Pn	19 28 20.7	-0.1
ADEN				*i* S	Sb	19 28 38.3	+0.6
ADEN				AML	AML	19 28 44.7	
	comp=E,2μm,0.3s						
ADEN	**Aden**	**1.28**	**55**	*i* P	Pn	19 28 20.7	-0.2
ADEN				*i* S	Sb	19 28 38.3	+0.6
	comp=E,1μm,0.3s						
LBOS		**2.24**	**36**	*i* P	Pn	19 28 36.3	+2.2
LBOS				*i* S	Sn	19 29 06.8	+4.8
BDHA	**Al Bayda'**	**2.51**	**40**	*i* P	Pn	19 28 39.7	+1.9
BDHA				*i* S	Sn	19 29 14.8	+6.1
BDHA				AML	AML	19 29 20.0	
	comp=N,410nm,0.3s						
BDHA	**Al Bayda'**	**2.51**	**40**	*i* P	Pn	19 28 39.7	+1.9
BDHA				*i* S	Sn	19 29 14.8	+6.1
	comp=N,205nm,0.3s						
DHBB	**Dhamar BB**	**2.56**	**11**	*i* P	Pn	19 28 41.1	+2.6
DHBB				*i* S	Sn	19 29 16.1	+6.2

ISK ***22*** *19:38:00.6, 37°.15N×29°.06E, h8km, MD2.9*
ISCJB ***22*** *19:38:01.6±0.4, 37°.13N±0°.02×29°.07E±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=3.4km az=35.5*
CSEM ***22*** *19:38:01.2±0.1, 37°.13N×29°.06E, h10km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.3km az=5.0*
DDA ***22*** *19:38:01.9, 37°.13N×29°.06E, h7km±5km, Md3.0*
ISC 22 19:38:01.8±0.4, 37°.14N±0°.02×29°.05E±0°.03, h10km±6km, n31, σ0§92/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.36**	**87**	*e*PG	**Pg**	**19 38 08.2**	**-0.7**
GLHS				*e*SG	**Sg**	**19 38 13.2**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.36**	**87**	*e*Pg	**Pg**	**19 38 08.2**	**-0.7**
GLHS				*e*Sg	**Sg**	**19 38 13.2**	**-0.4**
GOLH	**Golhisar**	**0.42**	**76**	*i* P	**Pg**	**19 38 09.1**	**-0.9**
GOLH				*i* S	**Sg**	**19 38 15.7**	**+0.1**
GOLH	**Golhisar**	**0.42**	**76**	*i* P	**Pg**	**19 38 09.1**	**-0.9**
GOLH				*i* S	**Sg**	**19 38 15.7**	**+0.1**
TURN	**Turunc**	**0.45**	**234**	*i* P	**Pg**	**19 38 16.2**	**+5.7**
TURN				*i* S	**Sg**	**19 38 26.4**	**+10**
FETY	**Fethiye**	**0.50**	**177**	*e*PG	**Pg**	**19 38 10.8**	**-0.8**
FETY				*e*SG	**Sg**	**19 38 18.8**	**+0.6**
FETY	**Fethiye**	**0.50**	**177**	*e*Pg	**Pg**	**19 38 10.8**	**-0.8**
FETY				*e*Sg	**Sg**	**19 38 18.8**	**+0.6**
DNZL	**Cakiroluk**	**0.55**	**359**	*i* P	**Pg**	**19 38 12.4**	**-0.2**
DNZL				*i* S	**Sg**	**19 38 20.9**	**+1.1**
DNZL	**Cakiroluk**	**0.55**	**359**	*i* P	**Pg**	**19 38 12.4**	**-0.2**
DNZL				*i* S	**Sg**	**19 38 20.9**	**+1.0**
YER	**Yerkesik**	**0.62**	**270**	*e*PG	**Pg**	**19 38 13.1**	**-0.7**
YER	**Yerkesik**	**0.62**	**270**	*e*Pg	**Pg**	**19 38 13.1**	**-0.7**
DENT	**Denizli**	**0.62**	**359**	*e*PG	**Pg**	**19 38 12.8**	**-1.0**
DENT				*e*SG	**Sg**	**19 38 21.7**	**-0.2**
DENT	**Denizli**	**0.62**	**359**	*e*Pg	**Pg**	**19 38 12.8**	**-1.0**
DENT				*e*Sg	**Sg**	**19 38 21.7**	**-0.2**
ELL	**Elmali**	**0.79**	**119**	*e*PG	**Pg**	**19 38 16.4**	**-0.6**
ELL	**Elmali**	**0.79**	**119**	*e*Pg	**Pg**	**19 38 16.4**	**-0.6**
AKAS	**Kas**	**1.00**	**154**	*i* P	**Pg**	**19 38 20.7**	**-0.4**
AKAS				*i* S	**Sg**	**19 38 36.5**	**+2.3**
AKAS	**Kas**	**1.00**	**154**	*i* P	**Pg**	**19 38 20.7**	**-0.4**
AKAS				*i* S	**Sg**	**19 38 36.5**	**+2.3**
MLSB	**Milas**	**1.03**	**279**	*e*PG	**Pg**	**19 38 20.9**	**-0.8**
MLSB	**Milas**	**1.03**	**279**	*e*Pg	**Pg**	**19 38 20.9**	**-0.8**
KORT	**Korkueli**	**1.05**	**97**	*e*P	**Pg**	**19 38 21.0**	**-1.0**
KORT				*i* S	**Sg**	**19 38 37.8**	**+2.2**
KORT	**Korkueli**	**1.05**	**97**	*e*P	**Pg**	**19 38 21.0**	**-0.9**
KORT				*i* S	**Sg**	**19 38 37.8**	**+2.2**
AYDN	**Tasoluk**	**1.07**	**300**	*i* P	**Pb**	**19 38 23.4**	**+0.9**
AYDN				*i* S	**Sg**	**19 38 38.5**	**+2.1**
AYDN	**Tasoluk**	**1.07**	**300**	*i* P	**Pb**	**19 38 23.4**	**+1.0**
AYDN				*i* S	**Sg**	**19 38 38.5**	**+2.1**
DAT	**Datca**	**1.25**	**251**	*e*PN	**Pn**	**19 38 25.1**	**-0.2**
DAT	**Datca**	**1.25**	**251**	*e*Pn	**Pn**	**19 38 25.1**	**-0.2**
KHAL	**Karahalli**	**1.28**	**16**	*e*P	**Pn**	**19 38 26.3**	**+0.6**
KHAL				*i* S	**Sb**	**19 38 42.9**	**+0.4**
KHAL	**Karahalli**	**1.28**	**16**	*e*P	**Pn**	**19 38 26.3**	**+0.6**
KHAL				*i* S	**Sb**	**19 38 42.9**	**+0.4**
BDRM	**Kayabasi**	**1.29**	**267**	*i* P	**Pn**	**19 38 25.5**	**-0.3**
BDRM				*i* S	**Sb**	**19 38 42.3**	**-0.4**
BDRM	**Kayabasi**	**1.29**	**267**	*i* P	**Pn**	**19 38 25.5**	**-0.3**
BDRM				*i* S	**Sb**	**19 38 42.3**	**-0.4**
KULA	**Kula-Manisa**	**1.41**	**347**	*e*PN	**Pn**	**19 38 27.1**	**-0.4**
KULA	**Kula-Manisa**	**1.41**	**347**	*e*Pn	**Pn**	**19 38 27.1**	**-0.4**

NIED ***22*** *19:47:00, 30°.70N×131°.60E, h23km, Mw4.6 Best double couple: M0 7.66000×10^15 NP1:φ±32.00000°, δ66.00000°, λ38.00000°. NP2:φ±285.00000°, δ56.00000°, λ151.00000°.*
BJI ***22*** *19:47:08.2, 30°.48N×131°.99E, h35km, mB4.6/18, mb4.4/28, Ms4.2/26, Ms7 4.1/21*
IDC ***22*** *19:47:09.5±0.6, 30°.86N×131°.38E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.2/30, mbtmp4.2/24, ML3.6/3, MS3.7/15, Ms1 3.7/15, ms1mx3.5/38, Error ellipse: s-maj=17.6km s-min=14.8km az=83.0*
MOS ***22*** *19:47:12.4±0.9, 30°.84N×131°.43E, h32km, mb4.7/24, MS4.0/11, Error ellipse: s-maj=12.0km s-min=6.8km az=100.3*
JMA ***22*** *19:47:13.4±0.1, 30°.71N×131°.57E, h39km±2km, M4.4*
JMA Felt I J1.
NEIC ***22*** *19:47:14.8±0.3, 30°.81N×131°.33E, mb4.5/18, MW4.5(NIED), Error ellipse: s-maj=7.8km s-min=5.7km az=133.0*
NEIC Recorded [1 JMA] in Kagoshima.
ISCJB ***22*** *19:47:14.4±0.5, 30°.75N±0°.03×131°.46E±0°.04, h51km±3km, mb4.4/56, MS3.9/22, Error ellipse: s-maj=5.6km s-min=4.1km az=36.0*
ISC 22 19:47:15.2±0.5, 30°.73N±0°.03×131°.43E±0°.04, h41km±3km, h33km±2.8km: pP-P, n135, σ1§07/153, mb4.4/56, MS3.9/22, 11C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.40**	**259**	⇑P	**Pn**	**19 47 24.1**	**-0.6**
JTN				S	**Sn**	**19 47 32.1**	**+0.7**
JTSR	**Tashiro 2**	**0.62**	**315**	⇑P	**Pn**	**19 47 26.9**	**-0.7**
JTSR				*e*S	**Sn**	**19 47 36.5**	**+0.1**
JNAR	**Kushima--Naru**	**0.80**	**350**	⇑P	**Pn**	**19 47 29.4**	**-0.7**
JNAR				*e*S	**Sn**	**19 47 41.5**	**+0.6**
JKC	**Kuchinoerabu**	**1.10**	**256**	⇑P	**Pn**	**19 47 34.4**	**+0.2**
JKC				*e*S	**Sn**	**19 47 50.9**	**+2.7**
JSU	**Suzuyama**	**1.14**	**313**	⇑P	**Pn**	**19 47 34.4**	**-0.3**
JSU				*e*S	**Sn**	**19 47 50.7**	**+1.6**
JTZ	**Takazaki**	**1.20**	**346**	⇑P	**Pn**	**19 47 35.2**	**-0.3**
JTZ				S	**Sn**	**19 47 52.3**	**+1.7**
JTSN	**Tsuno**	**1.51**	**2**	P	**Pn**	**19 47 38.6**	**-1.2**
JTSN				S	**Sn**	**19 47 59.4**	**+1.2**
JZO	**Okuchi**	**1.57**	**333**	⇑P	**Pn**	**19 47 40.4**	**-0.3**
JZO				*e*S	**Sn**	**19 48 01.2**	**+1.4**
JNN	**Nakanoshima**	**1.62**	**237**	P	**Pn**	**19 47 41.5**	**+0.3**
JNN				*e*S	**Sn**	**19 48 03.3**	**+2.5**
JSJ	**Shimokoshiki**	**1.75**	**303**	⇑P	**Pn**	**19 47 42.7**	**-0.3**
JIU2	**Izumi 2**	**1.88**	**344**	⇑P	**Pn**	**19 47 44.7**	**-0.2**
JOW	**Kunigami**	**4.77**	**216**	Pn	**Pn**	**19 48 23.8**	**-0.9**
	7.5nm,0.3s,baz=91,slow=16,SNR=44						
JOW				Sn	**Sn**	**19 49 15.9**	**-2.8**
	9.6nm,0.3s,baz=191,slow=28,SNR=14						
KSRS	**Korea Array**	**7.31**	**337**	Pn	**Pn**	**19 48 57.4**	**-2.0**
	0.4nm,0.3s,baz=157,slow=14,SNR=6.8						
JHJ	**Hachijo jima 2**	**7.49**	**69**	LR	LR	19 51 36.3	
	comp=Z,332nm,21.6s,baz=119,slow=36						
MAJO	**Matsushiro**	**8.09**	**42**	*e*P	**Pn**	**19 49 09.0**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAJO	**Matsushiro**	**8.09**	**42**	*e*P	**Pn**	**19 49 09.0**	**-1.1**
	comp=Z,5.6nm,0.5s						
MAT	**Matsushiro**	**8.09**	**42**	P	**Pn**	**19 49 09.0**	**-1.1**
MAT				S	**Sn**	**19 50 41.0**	**+0.8**
MJAR	**Matsushiro Arr**	**8.09**	**42**	Pn	**Pn**	**19 49 08.9**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=167,slow=11,SNR=6.7						
MJAR	**Matsushiro Arr**	**8.09**	**42**	P	**Pn**	**19 49 08.9**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SSE	**Sheshan**	**8.81**	**275**	P	**Pn**	**19 49 17.5**	**-2.5**
SSE				S	**Sn**	**19 50 55.8**	**-2.2**
SSE				pmax	pmax		
	comp=Z,34nm,0.7s						
SSE				pmax	pmax		
	comp=Z,71nm,3.9s						
SSE				LR	LR		
	comp=N,310nm,15.3s						
SSE				LR	LR		
	comp=E,650nm,15.3s						
SSE				LR	LR		
	comp=Z,900nm,14.3s						
CBIJ	**Chichi jima**	**10.09**	**108**	Pn	**Pn**	**19 49 40.6**	**+3.1**
	comp=Z,2.8nm,0.3s,baz=180,slow=18,SNR=2.9						
CBIJ				LR	LR	19 52 53.8	
	comp=Z,224nm,18.3s,baz=5.2,slow=34						
NJ2	**Nanjing**	**10.83**	**280**	*e*P	**Pn**	**19 49 49.3**	**+1.6**
NJ2				pP		19 49 56.3	
NJ2				PP		19 49 58.0	
NJ2				sP		19 50 01.1	
NJ2				S	**Sn**	**19 51 48.0**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,120nm,4.2s						
NJ2				LR	LR		
	comp=N,530nm,26.8s						
NJ2				LR	LR		
	comp=E,610nm,16.5s						
CN2	**Changchun**	**13.88**	**342**	*e*P	**Pn**	**19 50 30.4**	**+1.2**
CN2				*e*sP		19 50 43.5	
CN2				*e*S	**Sn**	**19 53 03.5**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
MDJ	**Mudanjiang**	**13.94**	**355**	P	**Pn**	**19 50 29.8**	**-0.2**
MDJ				S	**Sn**	**19 53 01.8**	**-1.4**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,46nm,4.4s						
MDJ				LR	LR		
	comp=N,200nm,19.5s						
MDJ				LR	LR		
	comp=E,280nm,18.2s						
MDJ				LR	LR		
	comp=Z,280nm,19.8s						
BJI	**Beijing**	**15.51**	**311**	P	**Pn**	**19 50 55.4**	**+4.5**
BJI				S	**S**	**19 53 39.8**	**-16**
B

YSS	**Yuzh-Sakhalins**	**18.41**	**25**	*e*P	**Pn**	**19 51 36.0**	**+8.9**
KLR	**Kul'dur**	**18.48**	**1**	*e*P	**Pn**	**19 51 24.7**	**-3.2**
ENH	**Enshi**	**18.92**	**274**	*e*P	**Pn**	**19 51 29.3**	**-4.1**
	comp=Z,30nm,0.6s						
ENH				*e*		19 51 39.5	
HHC	**Hu-ho-hao-te**	**18.98**	**308**	*e*P	**Pn**	**19 51 34.0**	**-0.1**
HHC				pP	pP	19 51 41.9	-1.3
HHC				sP	sP	19 51 46.5	-2.0
HHC				PP		19 51 50.4	
HHC				S	**S**	**19 54 59.9**	**-6.5**
HHC				PcP	PcP	19 55 59.8	+2.5
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=N,290nm,8.8s						
HHC				LR	LR		
	comp=E,230nm,9.4s						
HHC				LR	LR		
	comp=Z,320nm,10.6s						
HIA	**Hailar**	**20.52**	**338**	P	**P**	**19 51 49.1**	**-0.6**
GUMO	**Guam**	**21.08**	**141**	LR	LR	19 59 21.8	
	comp=Z,161nm,18.7s,MS3.4,baz=358,slow=34						
GYA	**Guiyang**	**22.15**	**265**	P	**P**	**19 52 06.9**	**-0.6**
GYA				pP		19 52 16.8	
GYA				sP	sP	19 52 22.8	-0.2
GYA				PP		19 52 34.4	
GYA				S	**S**	**19 56 03.3**	**-5.9**
GYA				sS	sS	19 56 19.0	-7.0
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
GYA				pmax	pmax		
	comp=Z,70nm,4.8s						
GYA				LR	LR		
	comp=N,470nm,16.8s,MS4.1						
GYA				LR	LR		
	comp=E,340nm,15.0s,MS4.1						
GYA				LR	LR		
	comp=Z,480nm,16.9s,MS4.0						
QIZ	**Qiongzhong**	**22.75**	**244**	P	**P**	**19 52 12.0**	**-1.8**
QIZ				*e*S	**S**	**19 56 20.9**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb3.7						
QIZ				LR	LR		
	comp=N,290nm,16.3s,MS3.9						
QIZ				LR	LR		
	comp=E,170nm,17.9s,MS3.9						
QIZ				LR	LR		
	comp=Z,400nm,18.0s,MS3.9						
LZH	**Lanzhou**	**23.60**	**290**	*e*P	**P**	**19 52 20.5**	**-1.9**
LZH				pP		19 52 29.8	
LZH				sP	sP	19 52 33.9	-4.5
LZH				PP		19 52 54.0	
LZH				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,70nm,4.5s						
LZH				LR	LR		
	comp=N,530nm,11.8s						
LZH				LR	LR		
	comp=Z,620nm,15.6s,MS4.2						
CD2	**Chengdu**	**23.75**	**278**	P	**P**	**19 52 23.6**	**-0.2**
CD2				pP		19 52 32.9	
CD2				sP	sP	19 52 36.9	-3.0
CD2				PP		19 52 56.4	
CD2				S	**S**	**19 56 32.3**	**-3.9**
CD2				sS	sS	19 56 47.8	-7.0
CD2				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.8						
CD2				pmax	pmax		
	comp=Z,90nm,6.4s						
CD2				LR	LR		
	comp=N,650nm,16.7s						
CD2				LR	LR		
	comp=Z,410nm,13.7s,MS4.1						
ULN	**Ulaanbaatar**	**25.31**	**319**	*e*P	**P**	**19 52 37.3**	**-0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**25.31**	**319**	*e*P	**P**	**19 52 37.3**	**-0.5**
	comp=Z,5.9nm,0.6s,mb4.3						
SONM	**Songino Array**	**25.66**	**319**	P	**P**	**19 52 40.4**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.2,baz=140,slow=9.7,SNR=24						
SONM				LR	LR	20 02 22.5	
	comp=Z,51nm,19.4s,MS3.1,baz=269,slow=36						
SONM	**Songino Array**	**25.66**	**319**	P	**P**	**19 52 40.4**	**-0.6**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,51nm,19.4s						
KMI	**Kunming**	**25.92**	**265**	P	**P**	**19 52 43.8**	**+0.2**
KMI				pP	pP	19 52 52.4	-2.4
KMI				sP	sP	19 52 57.8	-2.0
KMI				PP		19 53 25.0	
KMI				S	**S**	**19 57 08.8**	**-2.2**
KMI				sS	sS	19 57 25.4	-4.4
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
KMI				pmax	pmax		
	comp=Z,69nm,4.1s						
KMI				LR	LR		
	comp=N,540nm,6.6s						
KMI				LR	LR		
	comp=E,350nm,5.9s						
KMI				LR	LR		
	comp=Z,470nm,7.2s						
GTA	**Gaotai**	**27.18**	**297**	*e*P	**P**	**19 52 57.3**	**+2.5**
GTA				pP	pP	19 53 04.8	-1.2
GTA				sP	sP	19 53 08.5	-2.5
GTA				PP		19 53 47.3	
GTA				S	**S**	**19 57 35.8**	**+5.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
GTA				pmax	pmax		
	comp=Z,25nm,5.4s						
GTA				LR	LR		
	comp=N,200nm,15.2s,MS4.0						
GTA				LR	LR		
	comp=E,210nm,14.3s,MS4.0						
GTA				LR	LR		
	comp=Z,310nm,13.7s,MS4.0						
ZAK	**Zakamensk**	**28.76**	**321**	*e*P	**P**	**19 52 59.3**	**-9.4**
ZAK				*e*		19 53 06.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
YAK	**Yakutsk**	**31.33**	**358**	*e*P	**P**	**19 53 31.0**	**-0.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.8						
YAK	**Yakutsk**	**31.33**	**358**	*e*P	**P**	**19 53 31.0**	**-0.3**
	comp=Z,6.3nm,0.4s,mb4.8						
CHTO	**Chiang Mai**	**31.68**	**256**	*e*P	**P**	**19 53 34.9**	**0.0**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
CHTO	**Chiang Mai**	**31.68**	**256**	*e*P	**P**	**19 53 34.9**	**0.0**
	comp=Z,9.5nm,0.6s,mb4.8						
CM31	**Chiang Mai Arr**	**31.85**	**255**	*e*P	**P**	**19 53 36.7**	**+0.3**
	comp=Z,3.3nm,0.5s,mb4.4						
CMAR	**Chiang Mai Arr**	**31.85**	**255**	P	**P**	**19 53 36.8**	**+0.3**
	comp=Z,2.7nm,0.6s,mb4.3,baz=56,slow=8.1,SNR=36						
CMAR				PcP	PcP	19 56 27.4	+0.9
	comp=Z,1.0nm,0.8s,baz=48,slow=1.8,SNR=7.7						
CMAR				LR	LR	20 09 18.1	
	comp=Z,152nm,18.9s,MS3.7,baz=70,slow=42						
CMAR	**Chiang Mai Arr**	**31.85**	**255**	P	**P**	**19 53 36.8**	**+0.4**
CMAR						19 56 27.5	
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,152nm,18.9s						
SEY	**Seymchan**	**34.91**	**17**	*c*eP	**P**	**19 54 03.7**	**+1.2**
WMQ	**Urumqi**	**36.76**	**303**	*e*P	**P**	**19 54 19.5**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
WMQ				LR	LR		
	comp=N,190nm,21.0s,MS3.9						
WMQ				LR	LR		
	comp=E,100nm,24.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,130nm,18.0s						
KAPI	**Kappang**	**37.26**	**199**	LR	LR	20 08 08.4	
	comp=Z,104nm,20.9s,MS3.6,baz=356,slow=34						
GUN	**Gumba**	**39.61**	**278**	*e*P	**P**	**19 54 43.5**	**+0.6**
	comp=Z,46nm,0.7s,mb5.3						
PKI	**Pulchoki**	**40.11**	**277**	*e*P	**P**	**19 54 47.0**	**0.0**
	comp=Z,14nm,0.6s,mb4.9						
PKIN	**Phulchoki**	**40.12**	**277**	*e*P	**P**	**19 54 47.2**	**+0.2**
	comp=Z,37nm,0.6s,mb5.3						
KKN	**Kakani**	**40.16**	**278**	*e*P	**P**	**19 54 47.0**	**-0.4**
	comp=Z,14nm,0.7s,mb4.8						
DMN	**Daman**	**40.35**	**278**	*e*P	**P**	**19 54 48.9**	**-0.1**
	comp=Z,13nm,1.0s,mb4.6						
ZAA0	**Zalesovo Array**	**40.56**	**319**	P	**P**	**19 54 49.3**	**-1.0**
ZALV	**Zalesovo Beam**	**40.56**	**319**	P	**P**	**19 54 48.5**	**-1.8**
	comp=Z,1.7nm,0.7s,mb3.8,baz=108,slow=9.8,SNR=8.3						
ZALV				PcP	PcP	19 56 50.9	-1.0
	comp=Z,1.0nm,0.5s,baz=98,slow=3.1,SNR=5.6						
ZALV				LR	LR	20 12 57.2	
	comp=Z,154nm,18.2s,MS3.9,baz=80,slow=38						
ZALV	**Zalesovo Beam**	**40.56**	**319**	P	**P**	**19 54 48.5**	**-1.8**
ZALV						19 56 50.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ZALV				MLR	MLR		
	comp=Z,154nm,18.2s,MS3.9						
ZALV	**Zalesovo Beam**	**40.56**	**319**	P	**P**	**19 54 48.5**	**-1.8**
ZALV				PcP	PcP	19 56 50.9	-1.0
ZALV				LR	LR	20 12 57.2	
MK31	**Makanchi Array**	**40.84**	**307**	P	**P**	**19 54 51.2**	**-1.6**
MKAR	**Makanchi Array**	**40.84**	**307**	P	**P**	**19 54 51.1**	**-1.7**
	comp=Z,0.8nm,0.6s,mb3.5,baz=89,slow=11,SNR=11						
MKAR	**Makanchi Array**	**40.84**	**307**	P	**P**	**19 54 51.2**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**40.99**	**359**	*e*P	**P**	**19 54 53.2**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.3s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,171nm,17.0s,MS4.0						
TIXI	**Tiksi**	**40.99**	**359**	*e*P	**P**	**19 54 53.4**	**-0.3**
	comp=Z,1.5nm,0.6s,mb3.8						
BILL	**Bilibino**	**42.52**	**19⇓**	*e*P	**P**	**19 55 06.9**	**+0.7**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
BILL	**Bilibino**	**42.52**	**19**	*e*P	**P**	**19 55 07.3**	**+1.1**
	comp=Z,3.0nm,0.6s,mb4.2						
KURK	**Kurchatov**	**43.67**	**313**	P	**P**	**19 55 15.3**	**-0.4**
	comp=Z,5.1nm,0.6s,mb4.4,baz=99,slow=9.4,SNR=20						
KURK				LR	LR	20 14 35.4	
	comp=Z,114nm,20.2s,MS3.8,baz=110,slow=38						
KURK	**Kurchatov**	**43.67**	**313**	P	**P**	**19 55 15.3**	**-0.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
KURK				MLR	MLR		
	comp=Z,114nm,20.2s,MS3.8						
KURK	**Kurchatov**	**43.67**	**313**	*e*P	**P**	**19 55 14.6**	**-1.1**
	comp=Z,20nm,1.1s,mb4.8						
TKM2	**Tokmak 2**	**45.56**	**302**	*e*P	**P**	**19 55 31.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**45.56**	**302**	*e*P	**P**	**19 55 31.7**	**+0.8**
	comp=Z,6.0nm,0.8s,mb4.6						
UCH	**Uchtor**	**46.41**	**301**	*e*P	**P**	**19 55 38.8**	**+1.2**
	comp=Z,2.3nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**48.87**	**187**	LR	LR	20 16 05.6	
	comp=Z,64nm,18.6s,MS3.6,baz=350,slow=35						
BVAR	**Borovoye Array**	**48.92**	**315**	P	**P**	**19 55 56.5**	**-0.5**
	comp=Z,8.7nm,0.5s,mb5.0,baz=102,slow=9.5,SNR=69						
BVAR				PcP	PcP	19 57 20.7	0.0
	comp=Z,2.1nm,0.6s,baz=84,slow=3.2,SNR=6.0						
BVAR				LR	LR	20 19 02.7	
	comp=Z,183nm,18.5s,MS4.1,baz=348,slow=39						
BVAR	**Borovoye Array**	**48.92**	**315**	P	**P**	**19 55 56.5**	**-0.5**
BVAR						19 57 20.7	
BVAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,183nm,18.5s						
BRVK	**Borovoye**	**48.99**	**316**	*c*eP	**P**	**19 55 57.0**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
BRVK	**Borovoye**	**48.99**	**316**	*e*P	**P**	**19 55 56.8**	**-0.6**
	comp=Z,14nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**50.45**	**176**	*e*P	**P**	**19 56 09.3**	**+0.4**
CTA	**Charters Tower**	**52.50**	**162**	LR	LR	20 18 11.6	
	comp=Z,60nm,18.7s,MS3.7,baz=177,slow=35						
ASAR	**Alice Springs**	**54.14**	**177**	P	**P**	**19 56 37.0**	**+0.9**
	comp=Z,1.4nm,0.5s,mb4.1,baz=97,slow=13,SNR=36						
ASAR	**Alice Springs**	**54.14**	**177**	P	**P**	**19 56 37.0**	**+0.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**55.69**	**320**	*d*iP	**P**	**19 56 46.5**	**-0.6**
ARU				*e*		19 58 46.4	
ARU				S	**S**	**20 04 31.1**	**+0.8**
ARU				SS	SS	20 08 15.3	-0.2
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
ARU	**Arti**	**55.69**	**320**	*e*P	**P**	**19 56 46.9**	**-0.2**
	comp=Z,4.3nm,0.9s,mb4.5						
ABKAR	**Akbulak array**	**55.72**	**311**	*e*P	**P**	**19 56 46.9**	**-0.5**
	comp=Z,2.4nm,0.6s,mb4.4						
ABKAR				*e*	pP	19 56 57.1	-2.3
ABKAR				*e*PcP	PcP	19 57 47.6	+1.3
KDAK	**Kodiak Island**	**57.24**	**38**	P	**P**	**19 56 58.1**	**0.0**
	comp=Z,4.0nm,0.6s,mb4.6						
KDAK	**Kodiak Island**	**57.24**	**38**	P	**P**	**19 56 58.1**	**0.0**
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MENT	**Mentasta**	**60.82**	**31**	*e*P	**P**	**19 57 24.4**	**+1.6**
STKA	**Stephens Creek**	**63.01**	**170**	P	**P**	**19 57 39.1**	**+1.3**
	comp=Z,3.5nm,0.6s,mb4.7,baz=352,slow=10,SNR=12						
STKA				LR	LR	20 24 51.3	
	comp=Z,106nm,18.6s,MS4.0,baz=26,slow=36						
INK	**Inuvik**	**63.65**	**24**	P	**P**	**19 57 41.0**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=332,slow=8.6,SNR=3.5						
INK	**Inuvik**	**63.65**	**24**	P	**P**	**19 57 41.0**	**-0.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**65.02**	**348**	P	**P**	**19 57 49.6**	**-0.9**
	comp=Z,4.6nm,1.0s,mb4.5,baz=117,slow=8.9,SNR=4.7						
SPITS	**Spitsbergen Ar**	**65.02**	**348**	P	**P**	**19 57 49.6**	**-0.9**
SPITS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SPITS	**Spitsbergen Ar**	**65.02**	**348**	P	**P**	**19 57 49.6**	**-0.9**
ARCES	**ARCESS Array B**	**66.86**	**338**	P	**P**	**19 58 02.0**	**-0.5**
	comp=Z,2.8nm,1.0s,mb4.3,baz=39,slow=10,SNR=3.5						
ARCES	**ARCESS Array B**	**66.86**	**338**	P	**P**	**19 58 02.0**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZEI	**Tsey**	**68.20**	**308**	*e*P	**P**	**19 58 10.8**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
KIV	**Kislovodsk**	**68.57**	**309**	*e*P	**P**	**19 58 14.8**	**+1.1**
KIV				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
KIV	**Kislovodsk**	**68.57**	**309**	*e*P	**P**	**19 58 14.8**	**+1.1**
	comp=Z,18nm,1.1s,mb4.9						
FINES	**FINESS Array B**	**70.34**	**331**	P	**P**	**19 58 23.4**	**-0.9**
	comp=Z,1.8nm,0.5s,mb4.2,baz=66,slow=5.2,SNR=14						
FINES	**FINESS Array B**	**70.34**	**331**	P	**P**	**19 58 23.4**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
RES	**Resolute Bay**	**70.60**	**12**	*e*P	**P**	**19 58 25.9**	**+0.3**
RES				*e*	pP	19 58 37.1	-0.8
RES				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
RES	**Resolute Bay**	**70.60**	**12**	*e*P	**P**	**19 58 25.9**	**+0.2**
	comp=Z,9.7nm,1.3s,mb4.6						
RES				*e*	pP	19 58 37.1	-0.9
SOC	**Sochi**	**70.70**	**310**	*i* P	**P**	**19 58 27.4**	**+0.6**
MIB	**Mutribah**	**70.83**	**294**	*e*P	**P**	**19 58 27.9**	**0.0**
MIB				AMb	AMB	19 58 38.8	
	comp=Z,16nm,1.5s,mb4.8						
RDF	**Al-Radifah**	**71.03**	**293**	*e*P	**P**	**19 58 29.4**	**+0.4**
RDF				AMb	AMB	19 58 33.0	
	comp=Z,27nm,1.6s,mb4.9						
NAY	**Al-Naaiem**	**71.14**	**293**	*e*P	**P**	**19 58 29.6**	**-0.1**
NAY				AMb	AMB	19 58 31.1	
	comp=Z,13nm,1.6s,mb4.6						
ANN	**Anapa**	**71.68**	**312**	*e*P	**P**	**19 58 31.6**	**-1.1**
ANN				*e**PP	pP	19 58 40.9	-4.1
ANN				*e*S	S	20 07 47.2	-2.2
ANN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
ANN				MLR	MLR		
	comp=N,75nm,18.0s,MS4.3						
ANN				MLR	MLR		
	comp=E,122nm,18.0s,MS4.3						
ANN				MLR	MLR		
	comp=Z,164nm,18.0s,MS4.3						
YKA	**Yellowknife Ar**	**73.26**	**26**	P	**P**	**19 58 42.1**	**+0.4**
	comp=Z,0.3nm,0.7s,mb3.4,baz=306,slow=5.6,SNR=6.1						
AKASG	**Malin Array Be**	**73.94**	**320**	P	**P**	**19 58 45.9**	**-0.1**
	comp=Z,0.8nm,0.3s,mb4.1,baz=51,slow=6.8,SNR=12						
AKASG	**Malin Array Be**	**73.94**	**320**	P	**P**	**19 58 45.9**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BR131	**Keskin Array S**	**76.49**	**308**	*e*P	**P**	**19 59 01.5**	**+0.6**
	comp=Z,4.3nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**76.49**	**308**	P	**P**	**19 59 00.6**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.5,baz=93,slow=5.5,SNR=25						
BRTR	**Keskin Array B**	**76.49**	**308**	P	**P**	**19 59 00.6**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	**NORSAR Subarra**	**76.51**	**334**	P	**P**	**19 59 00.4**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.2,baz=47,slow=5.9						
NOA	**NORSAR Array B**	**76.51**	**334**	P	**P**	**19 59 00.8**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.2,baz=49,slow=5.5,SNR=9.2						
NOA				LR	LR	20 36 26.3	
	comp=Z,67nm,18.9s,MS4.0,baz=50,slow=39						
NOA	**NORSAR Array B**	**76.51**	**334**	P	**P**	**19 59 00.8**	**+0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,67nm,18.9s						
NOA	**NORSAR Array B**	**76.51**	**334**	P	**P**	**19 59 00.8**	**+0.2**
NOA				LR	LR	20 36 26.3	
SUMG	**Summit**	**76.73**	**357**	*e*P	**P**	**19 59 02.4**	**+0.7**
	comp=Z,7.7nm,1.1s,mb4.5						
BUR08	**Bucovina Ar. S**	**77.77**	**318**	*e*P	**P**	**19 59 09.0**	**+1.1**
KWP	**Kalwaria Pacla**	**78.08**	**321**	*e*P	**P**	**19 59 11.0**	**+1.4**
MMAI	**Mount Meron Ar**	**78.48**	**301**	P	**P**	**19 59 13.3**	**+1.2**
	comp=Z,1.2nm,0.5s,mb4.1,baz=98,slow=15,SNR=3.8						
CLL	**Collm**	**82.04**	**326**	*e*P	**P**	**19 59 32.0**	**+1.1**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
CLL				MLR	MLR		
	comp=Z,200nm,18.7s,MS4.5						
CLL	**Collm**	**82.04**	**326**	*e*P	**P**	**19 59 32.0**	**+1.1**
	comp=Z,7.0nm,1.4s,mb4.4						
CLL	**Collm**	**82.04**	**326**	*e*P	**P**	**19 59 32.0**	**+1.1**
GERES	**GERESS Array B**	**83.28**	**324**	P	**P**	**19 59 37.5**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=44,slow=6.1,SNR=5.8						
GERES				LR	LR	20 40 06.5	
	comp=Z,85nm,19.1s,MS4.1,baz=234,slow=38						
GERES	**GERESS Array B**	**83.28**	**324**	P	**P**	**19 59 37.5**	**+0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES				MLR	MLR		
	comp=Z,85nm,19.1s						
HLID	**Hailey**	**84.66**	**42**	P	**P**	**19 59 45.8**	**+1.2**
	comp=Z,1.7nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**85.38**	**48**	P	**P**	**19 59 49.3**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.9,baz=314,slow=4.4,SNR=4.7						
EKA	**Eskdalemuir Ar**	**85.88**	**336**	P	**P**	**19 59 49.1**	**-1.2**
	comp=Z,0.8nm,0.7s,mb4.0,baz=344,slow=6.6,SNR=3.6						
EKA	**Eskdalemuir Ar**	**85.88**	**336**	P	**P**	**19 59 49.2**	**-1.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**87.91**	**40**	P	**P**	**20 00 00.6**	**+0.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=338,slow=3.2,SNR=6.1						

*IDC **22** 19:58:48.7±0.7, 31°.80N×104°.62E, h0km, mb4.1/14, mb1 4.1/17, mb1mx4.0/28, mbtmp4.0/17, ML3.3/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/34, Error ellipse: s-maj=26.8km s-min=14.3km az=51.0*

*BJI **22** 19:58:49.9, 31°.85N×104°.62E, h11km, mB4.6/2, mb4.2/10, ML3.9/16, Ms4.0/4, Ms7 3.9/4*

*NEIC **22** 19:58:50.6±0.4, 31°.81N×104°.62E, h10km, mb4.0/5, Error ellipse: s-maj=9.4km s-min=6.6km az=75.0*

*ISCJB **22** 19:58:51.5±1.7, 31°.75N±0°.03×104°.59E±0°.05, h29km±13km, mb4.2/23, MS3.4/5, Error ellipse: s-maj=6.6km s-min=5.4km az=171.3*

*MOS **22** 19:58:52.3±1.5, 31°.78N×104°.61E, h36km, mb4.3/14, Error ellipse: s-maj=13.5km s-min=8.1km az=104.7*

ISC 22 19:58:51.9±0.9, 31°.78N±0°.03×104°.51E±0°.04, h16km±5km, n72, σ1§47/76, mb4.2/23, MS3.4/5, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.08**	**217**	Pg	**Pg**	**Pg**	**19 59 11.6**	**-1.1**
CD2				Sg	**Sg**	**Sg**	**19 59 27.9**	**+1.1**
CD2				smax				
	comp=N,19μm,0.7s							
LZH	**Lanzhou**	**4.33**	**353**	Pg	**Pg**	**Pg**	**20 00 12.1**	**-2.8**
LZH				Sg	**Sg**	**Sg**	**20 01 03.6**	**-7.4**
LZH				smax				
	comp=N,270nm,0.9s							
LZH				smax				
	comp=E,610nm,1.1s							
LZH				LR	LR			
	comp=E,2μm,8.8s							
LZH				LR	LR			
	comp=Z,2μm,9.1s							
XAN	**Xi'an**	**4.34**	**58**	Pg	**Pn**	**Pn**	**20 00 00.1**	**+2.8**
XAN				Sg	**Sg**	**Sg**	**20 01 13.0**	**+1.6**
XAN				smax				
	comp=N,580nm,0.9s							
XAN				smax				
	comp=E,170nm,1.0s							
XAN				LR	LR			
	comp=N,170nm,7.5s							
XAN				LR	LR			
	comp=E,260nm,9.7s							
XAN				LR	LR			
	comp=Z,380nm,8.3s							
ENH	**Enshi**	**4.53**	**108**	*e*P	**Pn**	**Pn**	**20 00 00.2**	**+0.4**
GYA	**Guiyang**	**5.62**	**160**	Pn	**Pn**	**Pn**	**20 00 15.9**	**+1.0**
GYA				Sn	**Sn**	**Sn**	**20 01 19.5**	**+0.3**
GYA				smax				
	comp=N,220nm,0.8s							
GYA				smax				
	comp=E,220nm,0.7s							
KMI	**Kunming**	**6.81**	**194**	Pn	**Pn**	**Pn**	**20 00 32.9**	**+1.7**
KMI				Sn	**Sn**	**Sn**	**20 01 47.6**	**-0.8**
KMI				smax				
	comp=N,43nm,0.9s							
KMI				smax				
	comp=E,52nm,0.8s							
KMI				LR	LR			
	comp=N,540nm,6.9s							
KMI				LR	LR			
	comp=E,360nm,5.7s							
KMI				LR	LR			
	comp=Z,470nm,8.0s							
GTA	**Gaotai**	**8.52**	**335**	*e*P	**Pn**	**Pn**	**20 00 57.9**	**+3.3**
GTA				pP

PKIN	Phulchoki	17.12	261	*e*P	Pn	20 02 48.9	-1.7
	comp=Z,10nm,0.6s						
KKN	Kakani	17.16	262	*e*P	Pn	20 02 48.3	-2.7
	comp=Z,17nm,0.6s						
DMN	Daman	17.36	261	*e*P	Pn	20 02 50.8	-2.7
	comp=Z,17nm,0.8s						
ZAK	Zakamensk	18.61	358	*e*P	Pn	20 03 11.9	+3.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
KSRS	Korea Array	20.07	67	P	P	20 03 24.1	-0.4
	comp=Z,0.2nm,0.3s,baz=255,slow=9.8,SNR=18						
KSRS				LR	LR	20 10 58.5	
	comp=Z,35nm,21.0s,MS2.7,baz=180,slow=37						
CN2	Changchun	20.38	48	*e*P	P	20 03 27.8	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	Makanchi Array	22.71	318	*e*P	P	20 03 52.2	-0.6
MKAR	Makanchi Array	22.71	318	P	P	20 03 52.4	-0.4
	comp=Z,4.1nm,0.8s,mb3.9,baz=117,slow=12,SNR=18						
MKAR				LR	LR	20 13 26.3	
	comp=Z,133nm,18.5s,MS3.4,baz=99,slow=39						
MKAR	Makanchi Array	22.71	318	P	P	20 03 52.4	-0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,133nm,18.5s						
TGY	Tagaytay City	23.15	136	P	P	20 03 56.7	-1.0
	comp=Z,88nm,0.4s,mb5.5,baz=160,slow=11,SNR=3.3						
TGY	Tagaytay City	23.15	136	P	P	20 03 56.7	-1.0
TGY				pmax	pmax		
	comp=Z,88nm,0.4s						
KSH	Kashi	24.37	296	P	P	20 04 12.8	+3.6
KSH				pmax	pmax		
	comp=Z,35nm,2.8s,mb4.3						
TKM2	Tokmak 2	25.41	304	*e*P	P	20 04 21.2	+2.5
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TKM2	Tokmak 2	25.41	304	*e*P	P	20 04 21.2	+2.6
	comp=Z,2.5nm,0.8s,mb3.8						
UCH	Uchtor	26.00	302	*e*P	P	20 04 25.3	+1.3
	comp=Z,6.9nm,1.2s,mb4.1						
ZAA0	Zalesovo Array	26.27	333	*e*P	P	20 04 26.2	-0.1
ZALV	Zalesovo Beam	26.27	333	P	P	20 04 25.3	-1.0
	comp=Z,4.5nm,0.5s,mb4.2,baz=138,slow=9.1,SNR=31						
ZALV	Zalesovo Beam	26.27	333	P	P	20 04 25.3	-1.0
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
KURK	Kurchatov	26.92	322	P	P	20 04 31.7	-0.5
	comp=Z,2.2nm,0.8s,mb3.8,baz=125,slow=10,SNR=13						
KURK	Kurchatov	26.92	322	P	P	20 04 31.7	-0.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
BVAR	Borovoye Array	32.48	321	P	P	20 05 21.4	-0.1
	comp=Z,1.2nm,0.8s,mb3.8,baz=117,slow=8.6,SNR=6.4						
BVAR	Borovoye Array	32.48	321	P	P	20 05 21.4	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ABKAR	Akbulak array	37.49	311	*e*P	P	20 06 04.2	-0.5
	comp=Z,1.4nm,0.8s,mb3.8						
ARU	Arti	40.12	322	*d i*P	P	20 06 28.5	+1.9
ARU				S	S	20 12 31.2	-0.9
ARU				SS	SS	20 15 25.3	-4.3
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
ARU				MLR	MLR		
	comp=Z,226nm,18.0s,MS4.1						
ARU	Arti	40.12	322	*e*P	P	20 06 28.4	+1.8
	comp=Z,8.5nm,0.8s,mb4.5						
ZEI	Tsey	48.52	301	*e*P	P	20 07 37.0	+2.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
BRTR	Keskin Array B	56.71	299	P	P	20 08 34.4	-0.4
	comp=Z,1.5nm,0.8s,mb4.1,baz=90,slow=5.8,SNR=6.7						
BRTR	Keskin Array B	56.71	299	P	P	20 08 34.4	-0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	56.79	336	P	P	20 08 33.7	-1.1
	comp=Z,3.6nm,1.0s,mb4.3,baz=74,slow=8.9,SNR=5.6						
ARCES	ARCESS Array B	56.79	336	P	P	20 08 33.7	-1.2
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	57.18	313	P	P	20 08 38.8	+0.9
	comp=Z,1.7nm,0.7s,mb4.2,baz=70,slow=6.2,SNR=5.8						
AKASG	Malin Array Be	57.18	313	P	P	20 08 38.8	+0.9
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	57.20	326	P	P	20 08 37.2	-0.7
	comp=Z,2.6nm,0.7s,mb4.3,baz=101,slow=8.0,SNR=8.2						
FINES	FINESS Array B	57.20	326	P	P	20 08 37.2	-0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	57.20	326	P	P	20 08 37.2	-0.7
ASAR	Alice Springs	61.89	149	P	P	20 09 09.8	-0.8
	comp=Z,1.1nm,0.8s,mb4.1,baz=329,slow=5.9,SNR=9.3						
ASAR	Alice Springs	61.89	149	P	P	20 09 09.8	-0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	NORSAR Subarra	64.28	327	P	P	20 09 26.3	+0.2
	comp=Z,0.9nm,0.8s,mb3.9,baz=75,slow=6.9						
NOA	NORSAR Array B	64.28	327	P	P	20 09 25.6	-0.4
	comp=Z,1.3nm,0.7s,mb4.0,baz=72,slow=7.0,SNR=4.3						
NOA	NORSAR Array B	64.28	327	P	P	20 09 25.7	-0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NWAO	Narrogin (SRO)	65.47	168	LR	LR	20 37 56.3	
	comp=Z,4.4nm,20.5s,MS2.6,baz=119,slow=36						
GERES	GERESS Array B	67.33	314	P	P	20 09 46.8	+0.8
	comp=Z,0.8nm,0.8s,mb3.8,baz=86,slow=4.1,SNR=6.6						
GERES	GERESS Array B	67.33	314	P	P	20 09 46.8	+0.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CDF	Champ du Feu	71.38	316	*e*P	P	20 10 12.7	+1.7
INK	Inuvik	71.41	19	P	P	20 10 08.9	-1.9
	comp=Z,1.8nm,0.4s,mb4.4,baz=350,slow=10,SNR=13						
INK	Inuvik	71.41	19	P	P	20 10 09.0	-1.9
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
STKA	Stephens Creek	72.39	147	P	P	20 10 15.5	-1.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=300,slow=8.3,SNR=4.2						
LPG	La Plagne	73.04	313	*e*P	P	20 10 23.5	+2.5
	comp=Z,7.3nm,0.8s,mb4.3						
LPL	La Plagne	73.05	313	*e*P	P	20 10 23.0	+1.9
	comp=Z,3.9nm,0.5s,mb4.3						
TCF	Toulx Ste Croi	75.42	316	*e*P	P	20 10 36.8	+1.9
CAF	Calviac	76.20	314	*e*P	P	20 10 42.3	+2.9
YKA	Yellowknife Ar	80.95	17	P	P	20 11 04.5	-0.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=322,slow=5.3,SNR=5.2						
YKA	Yellowknife Ar	80.95	17	P	P	20 11 04.5	-0.7
BOSA	Boshof	96.32	240	LR	LR	20 53 41.4	
	comp=Z,87nm,19.9s,MS4.2,baz=338,slow=34						

*ISCJB **22** 20:11:03.3±0.6, 37°.99N±0°.04×21°.33E±0°.03, h8km±5km, Error ellipse: s-maj=7.0km s-min=4.3km az=172.1*
*NEIC **22** 20:11:03.8, 38°.02N×21°.32E, h9km, MD3.1(ATH), After ATH.*
*CSEM **22** 20:11:03.2±0.3, 37°.99N×21°.34E, h15km, MD3.1, Error ellipse: s-maj=5.8km s-min=4.3km az=169.0*
*ATH **22** 20:11:03.8, 38°.02N×21°.32E, h9km±3km, MD3.1/10*
*THE **22** 20:11:03.8, 38°.03N×21°.33E, h17km±1km, ML2.7/5, Error ellipse: s-maj=1.5km s-min=0.7km az=177.0*
ISC 22 20:11:03.6±0.7,**37°.99N**±0°.05×**21°.33E**±0°.04,**h12**km±7km, **n33**,σ0°**64**/53,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.13	57	*e*PG	Pg	20 11 06.4	-0.4
RLS				*e*SG	Sg	20 11 08.7	-0.3
RLS	Riolos of Patr	0.13	57	*e*Pg	Pg	20 11 06.4	-0.4
RLS				*e*Sg	Sg	20 11 08.7	-0.3
KFL	Anninata	0.45	286	P	Pg	20 11 12.7	+0.3
UPR	University Cam	0.46	50	*e*PB	Pg	20 11 12.9	+0.2
UPR				*e*SB	Sg	20 11 19.4	+0.5
UPR	University Cam	0.46	50	P	Pg	20 11 12.7	0.0
UPR	University Cam	0.46	50	P	Pg	20 11 12.7	0.0
UPR				*e*Sb	Sg	20 11 19.4	+0.5
LAKA	Lakka	0.57	64	P	Pg	20 11 14.1	-0.6
LAKA				S	Sg	20 11 22.7	+0.5
LAKA	Lakka	0.57	64	P	Pg	20 11 14.1	-0.6
LAKA				S	Sg	20 11 22.7	+0.5
VLS	Valsamata	0.62	288	*e*PB	Pg	20 11 15.0	-0.6
VLS				*e*SB	Sg	20 11 24.6	+0.9
VLS	Valsamata	0.62	288	P	Pg	20 11 15.1	-0.5
VLS				S	Sg	20 11 24.7	+1.0
VLS	Valsamata	0.62	288	P	Pg	20 11 15.1	-0.5
VLS				*e*Sb	Sg	20 11 24.6	+0.9
EFP	Efpalio	0.63	46	*e*PG	Pg	20 11 15.4	-0.4
EFP				*e*SB	Sg	20 11 24.3	+0.2
EFP	Efpalio	0.63	46	P	Pg	20 11 15.1	-0.7
EFP				S	Sg	20 11 24.9	+0.8
EFP	Efpalio	0.63	46	P	Pg	20 11 15.1	-0.7
EFP	Efpalio	0.63	46	*e*Pg	Pg	20 11 15.4	-0.4
EFP				*e*Sb	Sg	20 11 24.3	+0.2
EFP				S	Sg	20 11 24.9	+0.8
TRIZ	Trizonia	0.69	57	P	Pg	20 11 16.3	-0.7
TRIZ				S	Sg	20 11 26.6	+0.4
TRIZ	Trizonia	0.69	57	P	Pg	20 11 16.3	-0.7
TRIZ				S	Sg	20 11 26.6	+0.4
KALE	Kalithea	0.75	57	P	Pg	20 11 17.2	-0.9
KALE				S	Sg	20 11 28.4	+0.4
KALE	Kalithea	0.75	57	P	Pg	20 11 17.2	-0.9
KALE				S	Sg	20 11 28.4	+0.4
GUR	Goura	0.80	93	*e*PB	Pg	20 11 18.1	-0.9
GUR				*e*SB	Sg	20 11 30.8	+1.3
GUR	Goura	0.80	93	P	Pg	20 11 17.9	-1.1
GUR				S	Sg	20 11 30.9	+1.4
GUR	Goura	0.80	93	P	Pg	20 11 17.9	-1.1
GUR				*e*Sb	Sg	20 11 30.8	+1.3
ITM	Ithomi	0.94	150	*e*PB	Pg	20 11 22.2	+0.6
ITM	Ithomi	0.94	150	P	Pg	20 11 22.1	+0.5
ITM	Ithomi	0.94	150	*e*Pb	Pg	20 11 22.2	+0.6
EVR	Evrytania	1.00	22	*e*PB	Pb	20 11 22.2	-0.6
EVR	Evrytania	1.00	22	*e*Pb	Pb	20 11 22.2	-0.6
AGG	Agios Georgios	1.30	37	*e*PB	Pb	20 11 28.3	+0.4
AGG	Agios Georgios	1.30	37	*e*Pb	Pb	20 11 28.3	+0.4
LKR	Lokris	1.47	63	*e*PG	Pg	20 11 31.1	-0.7
LKR	Lokris	1.47	63	*e*Pg	Pg	20 11 31.1	-0.7
THL	Klokotos Trika	1.66	18	*e*PB	Pb	20 11 34.4	+0.3
THL	Klokotos Trika	1.66	18	*e*Pb	Pb	20 11 34.4	+0.3

*ISCJB **22** 20:12:02.4±0.8, 7°.43S±0°.09×119°.6E±0°.1, h290km±10km, mb4.1/19, Error ellipse: s-maj=23.4km s-min=7.1km az=146.4*
*NEIC **22** 20:12:03.4±0.8, 7°.46S×119°.51E, h284km±10km, mb4.3/5, Error ellipse: s-maj=21.8km s-min=7.7km az=60.0*
*IDC **22** 20:12:03.5±1.6, 7°.42S×119°.57E, h280km±16km, mb3.6/9, mb1 3.6/11, mb1mx3.5/22, mbtmp3.6/11, Error ellipse: s-maj=41.8km s-min=11.3km az=58.0*
ISC 22 20:12:03.3±0.8,**7°.42S**±0°.06×**119°.6E**±0°.1,**h283**km±10km, **n34**,σ0°**94**/37,**mb4.1**/19,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.40	4	P	Pn	20 12 51.3	-0.8
	4.5nm,0.3s,baz=197,slow=6.7,SNR=10.0						
FITZ	Fitzroy Crossi	12.14	152	*e*P	Pn	20 14 46.9	-1.1
FITZ				*e*S	S	20 17 00.3	-2.9
	12nm,0.4s						
FITZ	Fitzroy Crossi	12.14	152	P	Pn	20 14 47.9	-0.1
	0.9nm,0.3s,baz=310,slow=6.7,SNR=26						
FITZ				S	S	20 17 03.2	0.0
	1.2nm,0.3s,baz=171,slow=18,SNR=4.1						
KNA	Kununurra	12.22	133	*e*P	Pn	20 14 48.2	-0.8
KNA				*e*S	S	20 17 00.9	-4.1
	30nm,0.5s						
MBWA	Marble Bar	13.66	179	*e*P	Pn	20 15 07.3	+0.9
MBWA				*e*S	S	20 17 38.2	+0.8
MBWA	Marble Bar	13.66	179	*e*P	Pn	20 15 06.4	+0.1
KAKA	Kakadu	13.70	114	*e*P	Pn	20 15 07.5	+0.5
	26μm,2.5s						
KKM	Kota Kinabalu	13.79	346	*e*P	Pn	20 15 09.9	+1.8
	15nm,0.8s						
WRAB	Tennant Creek	18.96	132	*e*P	P	20 16 04.5	+0.1
	9.6nm,0.6s						
ASAR	Alice Springs	21.21	141	P	P	20 16 28.6	+1.1
	1.1nm,0.3s,mb3.6,baz=311,slow=8.5,SNR=25						
PSI	Prapat	22.98	295	P	P	20 16 44.5	+0.7
	4.0nm,0.5s,mb4.0,baz=137,slow=5.3,SNR=4.0						
STKA	Stephens Creek	31.82	143	P	P	20 18 02.7	+0.5
	1.1nm,0.3s,mb3.8,baz=287,slow=5.0,SNR=5.0						
STKA	Stephens Creek	31.82	143	P	P	20 18 02.7	+0.5
CMAR	Chiang Mai Arr	32.80	322	P	P	20 18 11.8	+1.1
	2.0nm,0.9s,mb3.6,baz=155,slow=7.0,SNR=9.6						
LSA	Lhasa	45.93	325	*e*P	P	20 19 59.6	+1.1
GUN	Gumba	47.90	319	*e*P	P	20 20 13.9	+0.2
	14nm,0.6s,mb4.5						
PKI	Pulchoki	47.99	318	*e*P	P	20 20 14.1	-0.3
	10.0nm,0.4s,mb4.5						
PKIN	Phulchoki	48.00	318	*e*P	P	20 20 13.9	-0.6
	36nm,0.6s,mb4.9						
DMN	Daman	48.22	318	*e*P	P	20 20 15.1	-1.0
	12nm,0.6s,mb4.4						
KKN	Kakani	48.22	318	*e*P	P	20 20 15.5	-0.7
	6.2nm,0.6s,mb4.1						
SONM	Songino Array	56.24	349	P	P	20 21 16.2	+1.8
	0.8nm,0.4s,mb3.5,baz=165,slow=8.5,SNR=8.9						
KSH	Kashi	61.70	323	P	P	20 21 51.8	-0.2
KSH				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
MK31	Makanchi Array	63.33	332	*e*P	P	20 22 02.8	+0.2
MKAR	Makanchi Array	63.33	332	P	P	20 22 03.0	+0.5
	comp=Z,4.4nm,0.4s,mb4.5,baz=153,slow=6.5,SNR=79						
KBL	Kabul	63.39	315	*e*P	P	20 22 01.2	-2.0
	comp=Z,6.1nm,0.6s,mb4.4						
EKS2	Erkin-Say	64.96	324	*e*P	P	20 22 13.4	+0.3
	comp=Z,1.5nm,0.6s,mb3.8						
ZAA0	Zalesovo Array	67.78	339	*e*P	P	20 22 30.4	-0.4
ZALV	Zalesovo Beam	67.78	339	P	P	20 22 30.6	-0.2
	comp=Z,3.5nm,0.5s,mb4.3,baz=143,slow=5.5,SNR=19						
KURK	Kurchatov	67.85	333	P	P	20 22 31.3	0.0
	comp=Z,3.9nm,0.7s,mb4.2,baz=147,slow=5.6,SNR=16						
KURK	Kurchatov	67.85	333	P	P	20 22 31.3	0.0
BVAR	Borovoye Array	73.19	331	P	P	20 23 03.4	+0.1
	comp=Z,2.0nm,0.7s,mb3.8,baz=132,slow=6.8,SNR=16						
ABKAR	Akbulak array	76.61	324	*e*P	P	20 23 22.1	-0.9
	comp=Z,2.6nm,0.5s,mb4.2						
BRTR	Keskin Array B	91.58	310	P	P	20 24 36.3	-2.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=79,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	118.74	281	PKP	PKPdf	20 30 17.9	-1.0
	comp=Z,0.6nm,0.5s,baz=59,slow=2.1,SNR=8.7						

*ISCJB **22** 20:26:27.2±0.4, 12°.93N±0°.05×88°.53W±0°.04, h84km±4km, mb4.1/11, Error ellipse: s-maj=10.7km s-min=3.2km az=37.0*
*CASC **22** 20:26:28.1±1.4, 12°.87N×88°.56W, h60km±21km, MD4.3, ML4.2, mb4.4(NEIC)*
*NEIC **22** 20:26:28.9±1.7, 12°.85N×88°.45W, h99km±13km, mb4.4/4, Error ellipse: s-maj=24.1km s-min=12.6km az=216.0*
*IDC **22** 20:26:29.4±2.2, 12°.94N×88°.47W, h97km±20km, mb3.7/6, mb1 4.0/10, mb1mx3.7/23, mbtmp3.8/10, MS3.0/1, Ms1 3.0/1, ms1mx2.3/32, Error ellipse: s-maj=32.2km s-min=16.4km az=45.0*
ISC 22 20:26:28.5±0.4,**12°.95N**±0°.05×**88°.52W**±0°.04,**h76**km±4km, **n58**,σ0°**96**/65,**mb4.1**/11,**2C-8D**,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.53	26	⇓*i*P	Pn	20 26 42.0	-0.1
BLLM	Bellamira	0.56	29	⇓*e*P	Pn	20 26 42.0	-0.4
SNVI	San Vicente	0.73	335	⇓*e*P	Pn	20 26 43.7	-0.5
CNCH	Conchagua	0.74	64	*e*P	Pn	20 26 43.6	-0.6
CNCH				*e*S	Sn	20 26 56.2	+0.2
LFRS	El Faro	0.85	322	⇓*i*P	Pn	20 26 44.8	-0.8
CAHU	Cacacuatique	0.87	20	*e*P	Pn	20 26 46.0	+0.3
CAHU				*e*S	Sn	20 27 00.2	+1.6
LBRS	Las Brisas	0.94	327	*e*P	Pn	20 26 46.1	-0.4
SNET	Serv Nac Est T	1.01	317	*e*P	Pn	20 26 46.6	-0.8
SNET				*e*S	Sn	20 27 01.2	-0.4
BOQS	Boqueron	1.08	317	⇑*i*P	Pn	20 26 48.0	-0.3
BOQS				*e*S	Sn	20 27 02.6	-0.4
SBLS	San Blas	1.39	310	⇓*e*P	Pn	20 26 52.0	-0.3
SNJE	San Jose	1.40	311	⇓*e*P	Pn	20 26 52.0	-0.3
RTR	El Retiro	1.45	311	⇓*e*P	Pn	20 26 53.0	0.0
RBDL	Robledal	1.62	316	*e*P	Pn	20 26 55.0	-0.2
TGUH	Tegucigalpa,Un	1.64	48	*e*P	Pn	20 26 56.1	+0.6
MTO2	Montecristo 2	1.66	331	⇓*i*P	Pn	20 26 56.0	+0.3
TEL3	Telica 3	1.67	103	*e*P	Pn	20 26 55.4	-0.5
TELN	Telica	1.68	102	*e*P	Pn	20 26 55.8	-0.2
CNGN	Cerro Negro	1.83	104	*e*P	Pn	20 26 57.2	-0.8
MIRN	Miramar	1.83	106	*e*P	Pn	20 26 57.3	-0.7
MIRN				*e*S	Sn	20 27 19.4	-1.1
MOMN	Momotombo	2.00	105	*e*P	Pn	20 27 00.1	-0.2
CSAN		2.18	110	*e*P	Pn	20 27 02.4	-0.3
APYN	Apoyeque	2.23	108	*e*P	Pn	20 27 02.8	-0.6
APYN				*e*S	Sn	20 27 29.6	-0.5
APYN				AML	AML	20 27 31.9	
	comp=Z,822nm,0.4s						
HUEN		2.37	105	*e*P	Pn	20 27 04.9	-0.3
APG	El Apazote	2.78	317	P	Pn	20 27 11.7	+0.9
	comp=Z,7.7nm,0.3s,baz=136,slow=7.5,SNR=30						
BOAB	BOACO BROADBAN	2.83	100	*e*P	Pn	20 27 10.4	-1.0
VCR	Vista de Mar	3.98	134	⇑*e*P	Pn	20 27 26.9	-0.2
VCR				*e*S	Sn	20 28 07.1	-5.6
JCR	Jicaral	4.54	132	*e*P	Pn	20 27 34.7	-0.1
CGA2	Cerro Gallo 2	4.93	126	*e*P	Pn	20 27 41.4	+1.4
CGA2				*e*S	Sn	20 28 37.7	+1.9
PRS1	Puriscal	5.07	125	*e*P	Pn	20 27 43.5	+1.6
PRS1				*e*S	Sn	20 28 39.5	+0.3
LAJ	Bijagual	5.29	125	*e*P	Pn	20 27 42.3	-2.6
LAJ				*e*S	Sn	20 28 34.2	-10
QCR	Quepos	5.52	129	*e*P	Pn	20 27 49.0	+0.8
URSC	Urasca	5.58	123	*e*P	Pn	20 27 50.8	+1.9
URSC				*e*S	Sn	20 28 52.4	+0.6
BAR1		6.30	125	*e*P	Pn	20 27 59.7	+0.9
TEIG	Tepich	7.24	2	P	Pn	20 28 13.8	+2.2
	comp=Z,5.4nm,0.3s,baz=303,slow=0.0,SNR=20						
CMIG	Matias Romero	7.40	305	P	Pn	20 28 14.9	+1.1
	comp=Z,1.3nm,0.3s,baz=138,slow=9.5,SNR=6.6						
CMIG				S	Sn	20 29 36.8	+0.5
	comp=Z,1.5nm,0.3s,baz=50,slow=21,SNR=6.5						
SDV	Santo Domingo	18.02	101	P	Pn	20 30 32.9	-1.0
	comp=Z,0.5nm,0.3s,baz=333,slow=6.6,SNR=8.1						
SDV	Santo Domingo	18.02	101	P	Pn	20 30 32.9	-1.0
TXAR	Lajitas Array	21.54	322	P	P	20 31 12.8	+1.3
	comp=Z,2.9nm,0.6s,mb3.8,baz=139,slow=11,SNR=25						
TXAR	Lajitas Array	21.54	322	P	P	20 31 12.8	+1.3
JSC	Jenkinsville	22.24	16	P	P	20 31 21.0	+2.1
TKL	Tuckaleechee C	23.01	10	LR	LR	20 42 25.8	
	comp=Z,33nm,18.8s,baz=313,slow=42						
PDAR	Pinedale Array	34.85	332	P	P	20 33 11.8	-0.4
	comp=Z,1.4nm,0.6s,mb4.0,baz=119,slow=9.7,SNR=9.3						
LPAZ	La Paz	35.36	145	P	P	20 33 16.6	-0.2
	comp=Z,0.8nm,0.6s,mb3.7,baz=270,slow=5.1,SNR=3.8						
REDW	Red Top Meadow	35.90	332	*e*P	P	20 33 22.2	+1.0
	comp=Z,11nm,0.7s,mb4.9						
TPAW	Teton Pass	36.05	332	*e*P	P	20 33 23.7	+1.2
	comp=Z,5.4nm,0.6s,mb4.7						
NVAR	Mina Array Bea	36.65	319	P	P	20 33 28.8	+1.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=134,slow=8.5,SNR=5.9						
CHMT	Chamberlain Mo	39.73	333	*e*P	P	20 33 54.0	+0.5
EDM	Edmonton	44.77	339	*e*P	P	20 34 33.6	-0.7
SCHQ	Schefferville	45.11	18	P	P	20 34 35.1	-1.8
	comp=Z,3.2nm,0.5s,mb4.3,baz=230,slow=5.1,SNR=8.0						
FCC	Fort Churchill	45.92	356	*e*P	P	20 34 41.8	-1.4
	comp=Z,0.2nm,0.5s,mb3.1						
YKA	Yellowknife Ar	52.86	345	P	P	20 35 35.0	-1.1
	comp=Z,2.5nm,0.5s,mb4.5,baz=138,slow=7.9,SNR=48						
YKA	Yellowknife Ar	52.86	345	P	P	20 35 35.0	-1.1
TRF	Thorofare Moun	66.04	334	*e*P	P	20 37 05.8	-1.0
	comp=Z,2.3nm,0.7s,mb4.1						
BPAW	Bear Paw Mtn.	66.55	335	*e*P	P	20 37 08.2	-1.9
	comp=Z,2.7nm,0.8s,mb4.1						
MKAR	Makanchi Array	119.97	7	PKP	PKPdf	20 45 07.5	-2.9
	comp=Z,0.1nm,0.3s,baz=328,slow=2.9,SNR=4.0						
MKAR	Makanchi Array	119.97	7	PKP	PKPdf	20 45 07.5	-2.9
ASAR	Alice Springs	138.48	249	PKhKP		20 45 41.1	
	comp=Z,0.4nm,1.0s,baz=95,slow=3.2,SNR=4.0						
ASAR				PKP	PKPdf	20 45 46.2	+0.1
	comp=Z,0.4nm,0.6s,baz=90,slow=2.4,SNR=6.4						
CMAR	Chiang Mai Arr	147.94	347	PKPbc	PKPdf	20 46 02.0	-0.8
	comp=Z,1.0nm,0.8s,baz=348,slow=3.9,SNR=7.9						

*ISCJB **22** 20:55:59.2±0.7, 27°.86N±0°.04×52°.81E±0°.08, h10km, Error ellipse: s-maj=10.5km s-min=5.1km az=17.4*
*CSEM **22** 20:55:59.8±0.2, 27°.92N×52°.85E, h2km, ML3.0, Error ellipse: s-maj=8.2km s-min=4.5km az=128.0*
*TEH **22** 20:55:59.0, 27°.73N×52°.86E, h10km*
ISC 22 20:56:00.6±0.6,**27°.87N**±0°.04×**52°.83E**±0°.08,**h10**km,**n13**, σ1°**24**/17,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.44	18	*e*Pg	Pg	20 56 07.2	-2.0
GHIR				*e*Sg	Sg	20 56 13.3	-1.8
IMOK	Mouk	1.18	355	*e*Pg	Pg	20 56 22.4	-

PYL	PYLOS	4.29	8	eP	Pn	20 59 31.0	+0.3
PYL	PYLOS	4.29	8	P	Pn	20 59 29.9	-0.8
PYL	PYLOS	4.29	8	P	Pn	20 59 29.9	-0.8
VLI	Veliai	4.38	21	eP	Pn	20 59 33.0	+1.1
LAST	Lasithi	4.52	55	P	Pn	20 59 34.9	+1.1
LAST				S	Sn	21 00 27.0	+0.8
LAST	Lasithi	4.52	55	P	Pn	20 59 34.9	+1.1
LAST				S	Sn	21 00 27.0	+0.8
ITM	Ithomi	4.60	10	P	Pn	20 59 34.8	0.0
ITM	Ithomi	4.60	10	P	Pn	20 59 34.8	0.0
VLX	Vlachokerasia	4.86	13	eP	Pn	20 59 40.6	+2.2
VLX	Vlachokerasia	4.86	13	P	Pn	20 59 39.1	+0.7
VLX	Vlachokerasia	4.86	13	P	Pn	20 59 39.1	+0.7
LZLA	Zalla 124nm,1.1s,SNR=36	5.02	217	⇓iP	Pn	20 59 39.9	-0.8
ZKR	Zakros	5.02	59	eP	Pn	20 59 43.0	+2.3
ZKR	Zakros	5.02	59	P	Pn	20 59 43.1	+2.4
ZKR	Zakros	5.02	59	P	Pn	20 59 43.1	+2.4
LMSR	Misrath 395nm,0.7s,SNR=36	5.04	268	⇑iP	Pn	20 59 40.3	-0.7
SWA2	baz=131	5.14	130	P	Pn	20 59 41.3	-1.0
SWA2				AMP		21 01 00.0	
	comp=E,930µm,0.8s,logA/T=6.0,baz=131						
SWA2		5.14	130	P	Pn	20 59 41.3	-1.0
GUR	Goura	5.40	12	eP	Pn	20 59 47.0	+1.1
GUR	Goura	5.40	12	P	Pn	20 59 46.9	+1.0
GUR				S	Sn	21 00 48.6	+0.7
GUR	Goura	5.40	12	P	Pn	20 59 46.9	+1.0
GUR				S	Sn	21 00 48.6	+0.7
RLS	Riolos of Patr	5.42	4	eP	Pn	20 59 47.8	+1.7
HMAT	Matruh	5.44	105	P	Pn	20 59 46.8	+0.3
HMAT	Matruh baz=108	5.44	105	P	Pn	20 59 44.8	-1.7
HMAT				AMP		21 01 00.0	
	comp=E,360µm,1.0s,logA/T=5.6,baz=108						
HMAT	Matruh	5.44	105	P	Pn	20 59 46.8	+0.3
KFL	Anninata	5.46	359	P	Pn	20 59 46.4	-0.3
VLS	Valsamata	5.53	357	P	Pn	20 59 46.3	-1.4
VLS				S	Sn	21 00 48.4	-2.7
VLS	Valsamata	5.53	357	P	Pn	20 59 46.3	-1.4
LTK	Loutraki	5.61	16	eP	Pn	20 59 49.8	+1.0
LTK	Loutraki	5.61	16	P	Pn	20 59 48.7	-0.1
LTK				S	Sn	21 00 53.0	-0.1
LTK	Loutraki	5.61	16	P	Pn	20 59 48.7	-0.1
LTK				S	Sn	21 00 53.0	-0.1
LAKA	Lakka	5.65	8	P	Pn	20 59 50.4	+1.1
LAKA				S	Sn	21 00 53.8	-0.1
LAKA	Lakka	5.65	8	P	Pn	20 59 50.4	+1.1
LAKA				S	Sn	21 00 53.8	-0.1
LJFR	Jufra comp=E,150nm,0.6s,SNR=36	5.66	233	⇑iP	Pn	20 59 47.7	-1.8
VLY	Voula,Athens	5.69	23	eP	Pn	20 59 49.3	-0.6
ATHU	Athens Univers	5.79	23	P	Pn	20 59 52.3	+1.0
ATHU	Athens Univers	5.79	23	P	Pn	20 59 52.3	+1.0
APE	Apeiranthos	5.80	39	P	Pn	20 59 51.6	+0.3
APE	Apeiranthos	5.80	39	P	Pn	20 59 51.6	+0.3
KALE	Kalithea	5.82	9	P	Pn	20 59 52.4	+0.8
KALE				S	Sn	21 00 58.0	-0.1
KALE	Kalithea	5.82	9	P	Pn	20 59 52.4	+0.8
KALE				S	Sn	21 00 58.0	-0.1
EFP	Efpalio	5.82	7	eP	Pn	20 59 53.8	+2.1
EFP	Efpalio	5.82	7	P	Pn	20 59 52.9	+1.2
EFP	Efpalio	5.82	7	P	Pn	20 59 52.9	+1.2
PTL	Penteli	5.89	23	eP	Pn	20 59 51.8	-0.9
DSF	Desfina	5.90	12	P	Pn	20 59 53.1	+0.4
DSF				S	Sn	21 00 58.7	-1.4
DSF	Desfina	5.90	12	P	Pn	20 59 53.1	+0.4
KARP	Karpathos	5.90	59	eP	Pn	20 59 54.4	+1.6
LKR	Lokris	6.22	15	P	Pn	20 59 56.4	-0.8
LKR				S	Sn	21 01 07.9	-0.2
LKR	Lokris	6.22	15	P	Pn	20 59 56.4	-0.8
LKR				S	Sn	21 01 07.9	-0.2
WDD	Wield Dalam comp=E,68nm,0.6s	6.22	303	eP	Pn	20 59 55.8	-1.4
WDD	Wield Dalam comp=E,68nm,0.6s	6.22	303	eP	Pn	20 59 55.8	-1.4
ATAL	Atalanti	6.27	15	P	Pn	20 59 56.5	-1.3
ATAL	Atalanti	6.27	15	P	Pn	20 59 56.5	-1.3
EVR	Evrytania	6.30	6	eP	Pn	21 00 00.9	+2.7
LSHF	Shwairf comp=E,66nm,0.5s,SNR=34	6.32	247	⇓iP	Pn	20 59 58.0	-0.6
HAVL	Avola	6.45	314	Pn	Pn	20 59 59.1	-1.2
HAVL				Sn	Sn	21 01 10.9	-2.8
HAVL	Avola	6.45	314	Pn	Pn	20 59 59.1	-1.2
AGG	Agios Georgios	6.46	10	eP	Pn	21 00 01.1	+0.6
AGG	Agios Georgios	6.46	10	P	Pn	21 00 00.7	+0.2
AGG				S	Sn	21 01 12.7	-1.3
AGG	Agios Georgios	6.46	10	P	Pn	21 00 00.7	+0.2
SSY	Sortino comp=E,63nm,0.7s	6.61	315	Pn	Pn	21 00 03.4	+0.9
SSY	Sortino comp=E,63nm,0.7s	6.61	315	Pn	Pn	21 00 03.4	+0.9
GHAR	Gharyan comp=E,133nm,1.7s,SNR=34	6.68	268	⇓iP	Pn	21 00 01.8	-1.7
SOI	Samo	6.74	325	P	Pn	21 00 05.0	+0.7
SOI				pmax	pmax		
	comp=Z,17nm,0.5s						
SOI	Samo comp=Z,16nm,0.5s	6.74	325	Pn	Pn	21 00 05.0	+0.7
SOI	Samo comp=Z,17nm,0.5s	6.74	325	P	Pn	21 00 05.0	+0.7
HVZN	Vizzini comp=Z,104nm,0.6s	6.84	313	Pn	Pn	21 00 05.9	+0.2
HVZN	Vizzini comp=Z,104nm,0.6s	6.84	313	Pn	Pn	21 00 05.9	+0.2
MTTG	Motta San Giov	6.86	323	Pn	Pn	21 00 07.0	+1.0
MTTG	Motta San Giov	6.86	323	Pn	Pn	21 00 07.0	+1.0
IGT	Igoumenitsa	6.89	356	P	Pn	21 00 05.7	-0.7
IGT				S	Sn	21 01 21.3	-3.4
IGT	Igoumenitsa	6.89	356	P	Pn	21 00 05.7	-0.7
NEO	Neokhori	6.90	15	eP	Pn	21 00 06.5	0.0
ARG	Arkhangelos	6.91	57	P	Pn	21 00 06.8	+0.2
ARG	Arkhangelos	6.91	57	P	Pn	21 00 06.8	+0.2
AOS	Alonnisos	6.93	19	P	Pn	21 00 06.6	-0.3
AOS	Alonnisos	6.93	19	P	Pn	21 00 06.6	-0.3
XOR	Xorichti	6.95	14	P	Pn	21 00 06.4	-0.8
XOR	Xorichti	6.95	14	P	Pn	21 00 06.4	-0.8
THL	Klokotos Trika	6.96	7	eP	Pn	21 00 07.4	+0.1
THL	Klokotos Trika	6.96	7	P	Pn	21 00 06.6	-0.7
THL				S	Sn	21 01 25.1	-1.2
THL	Klokotos Trika	6.96	7	P	Pn	21 00 06.6	-0.7
CEL	Celeste comp=Z,26nm,0.7s	6.96	325	eP	Pn	21 00 05.7	-1.6
CEL	Celeste comp=Z,26nm,0.7s	6.96	325	eP	Pn	21 00 05.7	-1.6
RAFF	Raffo Rosso comp=Z,70nm,0.7s	7.09	312	Pn	Pn	21 00 09.5	+0.5
RAFF	Raffo Rosso comp=Z,70nm,0.7s	7.09	312	Pn	Pn	21 00 09.5	+0.5
KEK	Kerkira	7.12	353	P	Pn	21 00 08.4	-1.1
KEK				S	Sn	21 01 26.4	-3.8
KEK	Kerkira	7.12	353	P	Pn	21 00 08.4	-1.1
VAE	Valguarnera comp=Z,1.5nm,0.3s,baz=268,slow=4.9,SNR=6.5	7.22	314	Pn	Pn	21 00 11.3	+0.5
VAE				Sn	Sn	21 01 37.9	+5.3
	comp=Z,2.6nm,0.3s,baz=340,slow=2.6,SNR=6.1						
VAE				LR	LR	21 02 31.4	
	comp=Z,236nm,21.2s,baz=90,slow=34						
VAE	Valguarnera	7.22	314	Pn	Pn	21 00 11.3	+0.5
VAE				Sn	Sn	21 01 37.9	+5.3
VAE				LR	LR	21 02 31.4	
VAE	Valguarnera	7.22	314	Pn	Pn	21 00 11.3	+0.5
SRN	Sarande	7.26	354	ePN	Px	21 00 45.5	
TIP	Timpagrande comp=Z,9.1nm,0.8s	7.36	334	eP	Pn	21 00 11.1	-1.6
TIP	Timpagrande comp=Z,9.1nm,0.8s	7.36	334	eP	Pn	21 00 11.1	-1.7
LIT	Litokhoron	7.54	9	eP	Pn	21 00 15.4	+0.1
LIT	Litokhoron	7.54	9	P	Pn	21 00 14.7	-0.6
LIT				S	Sn	21 01 38.3	-2.4
LIT	Litokhoron	7.54	9	P	Pn	21 00 14.7	-0.6
FAVR	Favara comp=Z,25nm,0.5s	7.56	310	Pn	Pn	21 00 17.3	+1.8
FAVR	Favara comp=Z,25nm,0.5s	7.56	310	Pn	Pn	21 00 17.3	+1.8
PAIG	Paliouri	7.59	16	P	Pn	21 00 14.9	-1.1
PAIG	Paliouri	7.59	16	P	Pn	21 00 14.9	-1.1
KZN	Kozani	7.68	5	P	Pn	21 00 16.8	-0.3
KZN	Kozani	7.68	5	P	Pn	21 00 16.8	-0.3
KBN	Korca	7.97	359	ePN	Pb	21 00 39.9	-3.7
PLG	Polygyros	7.97	14	eP	Pn	21 00 24.6	+3.4
AWBH		8.09	120	P	Pn	21 00 22.2	-0.7
	baz=121						
AWBH		8.09	120	P	Pn	21 00 22.2	-0.7
FNA	Florina	8.13	2	P	Pn	21 00 21.4	-2.0
FNA				S	Sn	21 01 51.8	-3.3
BIA	Bitola	8.37	2	ePn	Pn	21 00 27.3	+0.7
BIA	Bitola	8.37	2	ePn	Pn	21 00 27.3	+0.7
SOH	Sokhos	8.39	13	P	Pn	21 00 25.2	-1.7
SOH				S	Sn	21 01 58.6	-2.8
SOH	Sokhos	8.39	13	P	Pn	21 00 25.2	-1.7
HFRF	Wahat Farafira baz=129	8.40	129	P	Pn	21 00 27.0	-0.2
HFRF	Wahat Farafira	8.40	129	P	Pn	21 00 27.0	-0.2
LUMB	Murzuk SNR=34	8.44	221	⇓iP	Pn	21 00 25.8	-1.9
LKFR	Kufra SNR=34	8.68	166	⇓iP	Pn	21 00 32.5	+1.6
KRUS	Krusevo	8.71	1	ePn	Pn	21 00 30.8	-0.5
KRUS	Krusevo	8.71	1	ePn	Pn	21 00 30.8	-0.6
SRS	Serrai	8.72	13	P	Pn	21 00 29.1	-2.3
TIR	Tirane	8.73	355	eP	Pn	21 00 30.8	-0.8
TIR				pmax	pmax		
	comp=Z,43nm,0.6s						
TIR	Tirane	8.73	355	eP	Pn	21 00 30.8	-0.8
	comp=Z,43nm,0.6s						
TIR	Tirane	8.73	355	P	Pn	21 00 30.8	-0.8
TIR	Tirane	8.73	355	P	Pn	21 00 30.8	-0.8
VAY	Valandovo	8.76	8	ePn	Pn	21 00 32.3	+0.4
VAY	Valandovo	8.76	8	ePn	Pn	21 00 32.3	+0.3
SG1	Sgolgore (BA)	8.87	338	ePn	Pn	21 00 33.7	+0.2
KEST	Kesra comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=4.5	10.10	291	Pn	Pn	21 00 50.8	+0.3
KEST				Sn	Sn	21 02 38.9	-4.7
	comp=Z,0.1nm,0.3s,baz=325,slow=24,SNR=2.8						
KEST				LR	LR	21 05 46.2	
	comp=Z,61nm,19.3s,baz=303,slow=44						
BARS	Barje	10.18	4	iPn	Pn	21 00 50.4	-1.0
STON	Ston	10.53	347	ePn	Pn	21 00 53.3	-2.9
STON				Sn	Sn	21 02 45.0	-9.0
CSS	Prodhromos comp=Z,20nm,0.9s	10.55	74	eP	Pn	21 00 54.5	-2.1
CSS	Prodhromos comp=Z,20nm,0.9s	10.55	74	eP	Pn	21 00 54.5	-2.0
AMAG	Maghara baz=99	10.63	98	P	Pn	21 00 56.1	-1.6
AMAG	Maghara	10.63	98	P	Pn	21 00 56.1	-1.5
HNKL	Nakhl baz=102	11.46	100	P	Pn	21 01 07.5	-1.5
HNKL				S	Sn	21 03 10.0	-7.0
	baz=102						
HNKL	Nakhl	11.46	100	P	Pn	21 01 07.5	-1.6
HNKL				S	Sn	21 03 10.0	-6.9
MMAI	Mount Meron Ar comp=Z,1.9nm,0.3s,baz=285,slow=13,SNR=17	12.16	84	Pn	Pn	21 01 16.5	-2.0
MMAI				Sn	Sn	21 03 31.9	-2.0
	comp=Z,1.7nm,0.3s,baz=218,slow=25,SNR=4.0						
EIL	Elat comp=Z,0.3nm,0.3s,baz=300,slow=7.8,SNR=5.5	12.35	100	Pn	Pn	21 01 18.6	-2.6
EIL				LR	LR	21 07 05.6	
	comp=Z,103nm,18.1s,baz=13,slow=42						
BR131	Keskin Array S comp=Z,2.5nm,0.7s	12.44	52	eP	Pn	21 01 21.7	-0.7
BR131	Keskin Array S comp=Z,2.5nm,0.7s	12.44	52	eP	Pn	21 01 21.7	-0.6
BRTR	Keskin Array B comp=Z,0.2nm,0.3s,baz=227,slow=13,SNR=22	12.44	52	Pn	Pn	21 01 21.8	-0.5
BRTR	Keskin Array B	12.44	52	P	Pn	21 01 21.8	-0.5
NVLJ	Novalja	12.81	340	ePn	Pn	21 01 28.4	+1.0
NVLJ				Sn	Sn	21 03 41.9	-8.0
NVLJ	Novalja	12.81	340	ePn	Pn	21 01 28.4	+0.9
ASF	Jabal al Asfar comp=Z,0.2nm,0.3s,baz=133,slow=5.5,SNR=7.1	13.48	88	Pn	Pn	21 01 35.5	-1.1
ASF				LR	LR	21 09 29.9	
	comp=Z,30nm,18.2s,baz=269,slow=49						
SOKA	Soboth comp=Z,1.8nm,0.4s	14.73	344	⇑iPn	Pn	21 01 51.4	-2.2
KECS	Kecovo	15.83	359	eP	Pn	21 02 16.1	+8.0
KECS	Kecovo	15.83	359	eP	Pn	21 02 16.1	+8.0
VYHS	Vyhne	15.92	355	eP	Pn	21 02 09.8	+0.6
VYHS	Vyhne	15.92	355	ePN	Pn	21 02 09.8	+0.6
VYHS	Vyhne	15.92	355	ePn	Pn	21 02 09.8	+0.6
KOLL	Kolacno	16.04	354	eP	Pn	21 02 12.0	+1.2
KOLL	Kolacno	16.04	354	ePN	Pn	21 02 12.0	+1.2
KOLL	Kolacno	16.04	354	ePn	Pn	21 02 12.0	+1.2
KOLS	Kolonicke sedl	16.30	3	eP	Pn	21 02 22.1	+7.9
KOLS	Kolonicke sedl	16.30	3	eP	Pn	21 02 22.1	+7.9
MBDF	Montbardon comp=Z,23nm,1.0s	16.35	322	eP	Pn	21 02 19.0	+4.2
MBDF	Montbardon comp=Z,11nm,1.0s	16.35	322	eP	Pn	21 02 19.0	+4.2
MBDF				pmax	pmax		
MBDF	Montbardon comp=Z,11nm,1.0s	16.35	322	eP	Pn	21 02 19.0	+4.2
MBDF	Montbardon comp=Z,11nm,1.0s	16.35	322	eP	Pn	21 02 19.0	+4.2
KMPD	K-Podol'skiy	16.44	13	P	Pn	21 02 23.0	+7.1
DAVOX	Davos/Dischmat comp=Z,54nm,18.9s,baz=121,slow=39	16.47	332	LR	LR	21 09 04.5	
STHS	Stebnicka Huta	16.76	1	eP	Pn	21 02 26.8	+6.8
STHS	Stebnicka Huta	16.76	1	eP	Pn	21 02 26.8	+6.8
TAM	Tamanrasset comp=Z,5.0nm,0.9s	16.81	238	eP	Pn	21 02 23.1	+2.3
TAM				pmax	pmax		
TAM	Tamanrasset comp=Z,4.5nm,0.9s	16.81	238	eP	Pn	21 02 23.1	+2.3
TAM	Tamanrasset comp=Z,4.5nm,0.9s	16.81	238	eP	Pn	21 02 23.1	+2.3
LPG	La Plagne comp=Z,23nm,1.1s	16.89	324	eP	Pn	21 02 22.7	+1.0
LPG	La Plagne comp=Z,11nm,1.1s	16.89	324	eP	Pn	21 02 22.7	+1.0
LPG				pmax	pmax		
	comp=Z,11nm,1.1s						
LPG	La Plagne comp=Z,11nm,1.1s	16.89	324	eP	Pn	21 02 22.7	+1.0
LPG	La Plagne comp=Z,11nm,1.1s	16.89	324	eP	Pn	21 02 22.7	+1.0
LPL	La Plagne comp=Z,17nm,1.1s	16.92	324	eP	Pn	21 02 21.6	-0.4
LPL	La Plagne comp=Z,8.0nm,1.1s	16.92	324	eP	Pn	21 02 21.6	-0.4
LPL				pmax	pmax		
LPL	La Plagne comp=Z,8.4nm,1.1s	16.92	324	eP	Pn	21 02 21.6	-0.4
ORIF	Oris-en-Rattie comp=Z,18nm,1.0s	16.95	321	eP	Pn	21 02 22.8	+0.4
ORIF				eMLR	MLR		
	comp=Z,64nm,20.2s						
ORIF	Oris-en-Rattie	16.95	321	eP	Pn	21 02 22.8	+0.4
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ORIF	Oris-en-Rattie comp=Z,8.9nm,1.0s	16.95	321	eP	Pn	21 02 22.8	+0.4
ORIF	Oris-en-Rattie comp=Z,8.9nm,1.0s	16.95	321	eP	Pn	21 02 22.8	+0.4
VRAC	Vranov comp=Z,26nm,18.7s,baz=4.3,slow=36	16.97	350	LR	LR	21 08 43.1	
GERES	GERESS Array B comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=6.0	17.08	343	P	Pn	21 02 25.6	+1.6
GERES	GERESS Array B	17.08	343	P	Pn	21 02 25.6	+1.6
TREC	Trest	17.13	348	AMS	AMS	21 13 30.0	
KHC	Kasperske Hory comp=Z,10nm,1.5s	17.38	344	eP	Pn	21 02 30.9	+3.2
KHC	Kasperske Hory	17.38	344	eP	Pn	21 02 31.5	+3.8
KHC				AMS	AMS	21 07 50.0	
KHC	Kasperske Hory comp=Z,10nm,1.5s	17.38	344	eP	Pn	21 02 30.9	+3.2
VIVF	Saint-Julien-l comp=Z,23nm,1.1s	17.57	319	eP	Pn	21 02 30.5	+0.3
VIVF	Saint-Julien-l comp=Z,11nm,1.1s	17.57	319	eP	Pn	21 02 30.5	+0.3
VIVF				pmax	pmax		
VIVF	Saint-Julien-l comp=Z,11nm,1.1s	17.57	319	eP	Pn	21 02 30.5	+0.3
VIVF	Saint-Julien-l comp=Z,11nm,1.1s	17.57	319	eP	Pn	21 02 30.5	+0.3
PRU	Pruhonice	17.98	346	eP	Pn	21 02 38.5	+3.4
PRU				AMS	AMS	21 11 10.0	
PRU	Pruhonice	17.98	346	eP	Pn	21 02 38.5	+3.4
CABF	La Chapelle comp=Z,18nm,1.1s	18.01	325	eP	Pn	21 02 37.0	+1.4
CABF	La Chapelle comp=Z,9.0nm,1.1s	18.01	325	eP	Pn	21 02 37.0	+1.4
CABF				pmax	pmax		
CABF	La Chapelle comp=Z,8.8nm,1.1s	18.01	325	eP	Pn	21 02 37.0	+1.4
CABF	La Chapelle comp=Z,8.8nm,1.1s	18.01	325	eP	Pn	21 02 37.0	+1.4
DPC	Dobruska-Polom	18.02	350	eP	Pn	21 02 41.8	+6.1
DPC				AMS	AMS	21 11 10.0	
PVCC	Panska Ves	18.49	347	AMS	AMS	21 13 50.0	
NKC	Novy Kostel	18.68	343	AMS	AMS	21 08 30.0	
ECH	Echery comp=Z,4.0nm,1.0s	18.73	330	eP	Pn	21 02 46.9	+2.6
ECH				pmax	pmax		
ECH	Echery comp=Z,3.6nm,1.0s	18.73	330	eP	Pn	21 02 46.9	+2.6
ECH	Echery comp=Z,3.6nm,1.0s	18.73	330	eP	Pn	21 02 46.9	+2.6
CDF	Champ du Feu	18.83	331	eP	Pn	21 02 44.6	-1.0
CDF	Champ du Feu	18.83	331	eP	Pn	21 02 44.6	-1.0
BRG	Berggiesshubel comp=Z,2.3nm,1.1s	18.94	346	e(P)	Pn	21 02 49.3	+2.4
BRG	Berggiesshubel comp=Z,1.0nm,1.1s	18.94	346	eP	Pn	21 02 49.3	+2.5
BRG				pmax	pmax		
BRG	Berggiesshubel comp=Z,1.0nm,1.1s	18.94	346	eP	Pn	21 02 49.3	+2.5
KIEV	Kiev comp=Z,5.0nm,0.9s	19.04	16	eP	Pn	21 02 46.4	-1.7
KIEV				pmax	pmax		
KIEV	Kiev comp=Z,5.5nm,0.9s	19.04	16	ePn	Pn	21 02 46.4	-1.6
KIEV	Kiev comp=Z,5.0nm,0.9s	19.04	16	eP	Pn	21 02 46.4	-1.7
AKASG	Malin Array Be comp=Z,1.5nm,0.3s,baz=202,slow=8.8,SNR=8.8	19.05	16	P	Pn	21 02 46.8	-1.4
AKASG	Malin Array Be comp=Z,2.0nm,0.3s	19.05	16	P	Pn	21 02 46.8	-1.4
AKASG				pmax	pmax		
AKASG	Malin Array Be comp=Z,2.0nm,0.3s	19.05	16	P	Pn	21 02 46.8	-1.4
AKBB	Malin Array Si	19.05	16	eP	Pn	21 02 46.1	-2.1
AKBB	Malin Array Si	19.05	16	eP	Pn	21 02 46.1	-2.1
SMF	Signal de Mont comp=Z,7.3nm,0.8s	19.16	322	eP	Pn	21 02 48.5	-1.1
SMF	Signal de Mont comp=Z,4.0nm,0.8s	19.16	322	eP	Pn	21 02 48.5	-1.1
SMF				pmax	pmax		
SMF	Signal de Mont comp=Z,3.7nm,0.8s	19.16	322	eP	Pn	21 02 48.5	-1.1
SMF	Signal de Mont comp=Z,3.7nm,0.8s	19.16	322	eP	Pn	21 02 48.5	-1.1
MOX	Moxa comp=Z,6.0nm,1.0s	19.27	342	eP	Pn	21 02 52.2	+1.4
MOX	Moxa comp=Z,6.0nm,1.0s	19.27	342	eP	Pn	21 02 52.2	+1.4
MOX				pmax	pmax		
MOX	Moxa comp=Z,6.0nm,1.0s	19.27	342	eP	Pn	21 02 52.2	+1.4
AVF	Avril sur Loir comp=Z,9.7nm,1.1s	19.51	322	eP	Pn	21 02 53.0	-0.8
AVF	Avril sur Loir comp=Z,5.0nm,1.1s	19.51	322	eP	Pn	21 02 53.0	-0.8
AVF				pmax	pmax		
AVF	Avril sur Loir comp=Z,5.0nm,1.1s	19.51	322	eP	Pn	21 02 53.0	-0.8
AVF	Avril sur Loir comp=Z,4.8nm,1.1s	19.51	322	eP	Pn	21 02 53.0	-0.8
CLL	Collm comp=Z,5.0nm,0.8s	19.55	345	⇑iP	Pn	21 02 55.6	+1.5
CLL				pmax	pmax		
CLL	Collm comp=Z,5.0nm,0.8s	19.55	345	⇑iP	Pn	21 02 55.6	+1.5
CLL				i		21 02 58.6	
CLL	Collm comp=Z,5.0nm,0.8s	19.55	345	⇑i(P)	Pn	21 02 55.6	+1.5
CLL				i sP	sP	21 02 58.6	+0.2
	comp=Z,9.0nm,1.1s						
CLL	Collm comp=Z,5.0nm,0.8s	19.55	345	i P	Pn	21 02 55.6	+1.5
LOR	Lormes comp=Z,15nm,1.1s	19.57	323	eP	Pn	21 02 53.5	-0.9
LOR				eMLR	MLR		
	comp=Z,31nm,17.1s						
LOR	Lormes comp=Z,7.0nm,1.1s	19.57	323	eP	Pn	21 02 53.5	-0.9
LOR				pmax	pmax		
LOR	Lormes comp=Z,7.4nm,1.1s	19.57	323	eP	Pn	21 02 53.5	-0.9
LOR	Lormes comp=Z,7.4nm,1.1s	19.57	323	eP	Pn	21 02 53.5	-0.9
SSF	Saint Saulge	19.61	322	eP	Pn	21 02 54.8	-0.1
SSF	Saint Saulge	19.61	322	eP	Pn	21 02 54.8	-0.1
BGF	Bois d'Agland	19.63	320	eP	Pn	21 02 55.7	+0.5
BGF	Bois d'Agland	19.63	320	eP	Pn	21 02 55.7	+0.5
RJF	Les Rejaudoux comp=Z,10nm,1.1s	19.65	316	eP	Pn	21 02 54.5	-0.9
RJF				eMLR	MLR		
	comp=Z,24nm,19.5s						
RJF	Les Rejaudoux comp=Z,5.0nm,1.1s	19.65	316	eP	Pn	21 02 54.5	-0.9
RJF				pmax	pmax		
RJF	Les Rejaudoux comp=Z,5.1nm,1.1s	19.65	316	eP	Pn	21 02 54.5	-0.9
RJF	Les Rejaudoux comp=Z,5.1nm,1.1s	19.65	316	eP	Pn	21 02 54.5	-0.9
ETSF	Etsaut comp=Z,12nm,0.9s	19.80	307	eP	Pn	21 02 56.9	-0.4
ETSF	Etsaut comp=Z,6.0nm,0.9s	19.80	307	eP	Pn	21 02 56.9	-0.4
ETSF				pmax	pmax		
ETSF	Etsaut comp=Z,6.2nm,0.9s	19.80	307	eP	Pn	21 02 56.9	-0.4
ETSF	Etsaut comp=Z,6.2nm,0.9s	19.80	307	eP	Pn	21 02 56.9	-0.4
TCF	Toulx Ste Croi comp=Z,6.0nm,0.9s	19.82	319	eP	Pn	21 02 56.4	-1.0
TCF	Toulx Ste Croi comp=Z,3.0nm,0.9s	19.82	319	eP	Pn	21 02 56.4	-1.0
TCF				pmax	pmax		
TCF	Toulx Ste Croi comp=Z,3.0nm,0.9s	19.82	319	eP	Pn	21 02 56.4	-1.0
TCF	Toulx Ste Croi comp=Z,3.0nm,0.9s	19.82	319	eP	Pn	21 02

ESDC Sonseca Array 21.27 296 P **P 21 03 11.5 -0.2**
MFF Saint Martin d 21.33 317 *e*P **P 21 03 14.5 +2.3**
comp=Z,30nm,1.2s,mb4.2
MFF Saint Martin d 21.33 317 *e*P **P 21 03 14.5 +2.3**
MFF pmax pmax
comp=Z,15nm,1.2s,mb4.2
MFF Saint Martin d 21.33 317 *e*P **P 21 03 14.5 +2.3**
comp=Z,15nm,1.2s,mb4.2
MFF Saint Martin d 21.33 317 *e*P **P 21 03 14.5 +2.3**
comp=Z,15nm,1.2s,mb4.2
SUW Suwalki 21.42 4 *e*P **P 21 03 16.0 +2.9**
SUW pmax pmax
comp=Z,20nm,0.8s,mb4.5
SUW Suwalki 21.42 4 *e*P **P 21 03 16.0 +2.8**
comp=Z,20nm,0.8s,mb4.5
SUW Suwalki 21.42 4 *e*P **P 21 03 16.0 +2.9**
comp=Z,20nm,0.8s,mb4.5
MDT Midelt 21.50 277 P **P 21 03 14.2 -0.1**
comp=Z,3.5nm,1.0s,mb3.7,baz=83,slow=10,SNR=5.2
MDT LR LR 21 12 25.0
comp=Z,67nm,20.1s,MS3.0,baz=286,slow=39
MDT Midelt 21.50 277 P **P 21 03 14.2 -0.1**
MDT LR LR 21 12 25.0
MDT Midelt 21.50 277 P **P 21 03 14.2 -0.1**
PAB San Pablo 21.54 296 *e*P **P 21 03 17.2 +2.6**
PAB pmax pmax
comp=Z,7.0nm,0.9s,mb4.1
PAB San Pablo 21.54 296 *e*P **P 21 03 17.2 +2.7**
comp=Z,7.0nm,0.9s,mb4.1
PAB San Pablo 21.54 296 *e*P **P 21 03 17.2 +2.6**
comp=Z,7.0nm,0.9s,mb4.1
LDF La Druitiere 22.47 321 *e*P **P 21 03 26.3 +1.9**
comp=Z,26nm,1.4s,mb4.2
LDF La Druitiere 22.47 321 *e*P **P 21 03 26.3 +1.9**
LDF pmax pmax
comp=Z,13nm,1.4s,mb4.2
LDF La Druitiere 22.47 321 *e*P **P 21 03 26.3 +1.9**
comp=Z,13nm,1.4s,mb4.2
LDF La Druitiere 22.47 321 *e*P **P 21 03 26.3 +1.9**
comp=Z,13nm,1.4s,mb4.2
VSR Storozhevoye 22.86 30 *e*P **P 21 03 28.3 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.9s
VSR Storozhevoye 22.86 30 *e*P **P 21 03 28.3 -0.3**
comp=E,10.0nm,1.0s,mb4.2
OBN Obninsk 25.01 21 P **P 21 03 49.2 +0.2**
OBN pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
OBN Obninsk 25.01 21 P **P 21 03 49.2 +0.2**
comp=Z,9.0nm,0.9s,mb4.3
TORD Torodi Ar. Bea 26.21 227 P **P 21 03 58.5 -1.7**
comp=Z,3.0nm,1.0s,mb3.8,baz=38,slow=8.2,SNR=11
FINES FINESS Array B 29.01 5 P **P 21 04 25.8 +1.0**
comp=Z,2.6nm,0.9s,mb3.9,baz=191,slow=14,SNR=3.4
FINES FINESS Array B 29.01 5 P **P 21 04 25.8 +0.9**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 29.01 5 P **P 21 04 25.8 +0.9**
comp=Z,3.0nm,0.9s,mb4.0
NOA NORSAR Array B 29.11 350 P **P 21 04 26.6 +0.7**
comp=Z,0.3nm,0.6s,mb3.2,baz=156,slow=18,SNR=3.2
NOA LR LR 21 16 50.1
comp=Z,18nm,19.6s,MS2.7,baz=170,slow=38
NOA NORSAR Array B 29.11 350 P **P 21 04 26.6 +0.8**
comp=Z,18nm,19.6s
ABKAR Abkulak array 33.36 49 *e*P **P 21 05 03.2 -0.1**
comp=Z,0.7nm,0.7s,mb3.7
ABKAR Abkulak array 33.36 49 *e*P **P 21 05 03.2 -0.2**
comp=Z,0.6nm,0.7s,mb3.6
LIC Lamto 35.73 228 *e*P **P 21 05 23.3 -0.9**
LIC Lamto 35.73 228 *e*P **P 21 05 23.3 -0.9**
ARCES ARCESS Array B 37.03 3 P **P 21 05 34.5 -0.3**
comp=Z,3.6nm,0.9s,mb4.2,baz=248,slow=4.8,SNR=6.6
ARCES ARCESS Array B 37.03 3 P **P 21 05 34.5 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 37.03 3 P **P 21 05 34.5 -0.3**
ARCES ARCESS Array B 37.03 3 P **P 21 05 34.5 -0.2**
comp=Z,4.0nm,0.9s,mb4.2
MK31 Makanchi Array 48.08 54 *e*P **P 21 07 06.1 +1.3**
MK31 Makanchi Array 48.08 54 *e*P **P 21 07 06.1 +1.3**
MKAR Makanchi Array 48.08 54 P **P 21 07 06.7 +1.9**
comp=Z,3.0nm,0.8s,mb4.4,baz=274,slow=7.1,SNR=25
MKAR Makanchi Array 48.08 54 P **P 21 07 06.7 +1.9**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 48.08 54 P **P 21 07 06.7 +1.9**
comp=Z,3.0nm,0.8s,mb4.4
NVS Novosibirsk 48.32 43 *e*P **P 21 07 07.9 +1.3**
NVS pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
NVS Novosibirsk 48.32 43 *e*P **P 21 07 07.9 +1.3**
comp=Z,10.0nm,1.1s,mb4.8
ZAA0 Zalesovo Array 49.25 44 *e*P **P 21 07 14.6 +0.9**
ZAA0 Zalesovo Array 49.25 44 *e*P **P 21 07 14.6 +0.9**
ZALV Zalesovo Beam 49.25 44 P **P 21 07 14.1 +0.4**
comp=Z,1.3nm,0.4s,mb4.3,baz=274,slow=8.8,SNR=10
ZALV Zalesovo Beam 49.25 44 P **P 21 07 14.1 +0.4**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ZAK Zakamensk 61.02 46 *e*P **P 21 08 40.9 +2.2**
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
ZAK Zakamensk 61.02 46 *e*P **P 21 08 40.9 +2.2**
comp=Z,2.0nm,1.1s,mb4.2
SCHQ Schefferville 62.83 319 P **P 21 08 51.0 +0.2**
comp=Z,8.9nm,0.9s,mb4.4,baz=62,slow=11,SNR=3.5
SCHQ Schefferville 62.83 319 P **P 21 08 51.0 +0.2**
SONM Songino Array 63.77 48 P **P 21 08 58.7 +1.5**
comp=Z,2.2nm,0.9s,mb4.2,baz=287,slow=10,SNR=9.7
SONM Songino Array 63.77 48 P **P 21 08 58.7 +1.5**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 63.77 48 P **P 21 08 58.7 +1.5**
comp=Z,2.0nm,0.9s,mb4.2
ULN Ulaanbaatar 64.18 48 *e*P **P 21 09 01.1 +1.2**
ULN pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
ULN Ulaanbaatar 64.18 48 *e*P **P 21 09 01.1 +1.3**
comp=Z,3.6nm,1.4s,mb4.2
ULN Ulaanbaatar 64.18 48 *e*P **P 21 09 01.1 +1.2**
comp=Z,3.5nm,1.4s,mb4.2
BOD Bodaibo 64.56 36 *e*P **P 21 09 02.0 -0.2**
BOD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BOD Bodaibo 64.56 36 *e*P **P 21 09 02.0 -0.2**
comp=Z,6.0nm,0.8s,mb4.7
YKA Yellowknife Ar 78.71 341 P **P 21 10 27.7 +0.4**
comp=Z,0.2nm,0.4s,mb3.4,baz=38,slow=5.2,SNR=5.8
YKA Yellowknife Ar 78.71 341 P **P 21 10 27.8 +0.5**
KSRS Korea Array 82.58 50 LR LR 21 51 47.7
comp=Z,68nm,18.0s,MS4.1,baz=161,slow=39
PDAR Pinedale Array 92.32 326 LR LR 21 52 33.9
comp=Z,46nm,21.0s,MS3.9,baz=264,slow=35

*DDA **22** 21:10:05.0, 38.°88N×40.°05E, h10km±5km, Md2.9*
*ISK **22** 21:10:05.8, 38.°84N×39.°98E, h17km, MD2.9*
*ISCJB **22** 21:10:06.2±0.6, 38.°86N±0.°03×40.°01E±0.°03, h9km±5km, Error ellipse: s-maj=5.7km s-min=4.3km az=17.5*
*CSEM **22** 21:10:06.1±0.2, 38.°86N×39.°99E, h12km, MD2.9, Error ellipse: s-maj=5.4km s-min=4.8km az=15.0*
ISC 22 21:10:06.7±0.6,**38.°85N**±0.°03×**40.°01E**±0.°03,**h14**km±4km,
n24,σ0**97**/40,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.38**	**86**	*e*PG	**Pg**	**21 10 14.6**	**+0.3**
BINT				*e*SG	**Sg**	**21 10 20.6**	**+1.2**
BINT	**Bingol**	**0.38**	**86**	*e*Pg	**Pg**	**21 10 14.6**	**+0.3**
BINT				*e*Sg	**Sg**	**21 10 20.6**	**+1.2**
PTK	**Pertek**	**0.48**	**275**	*e*PG	**Pg**	**21 10 14.9**	**-1.3**
PTK				*e*SG	**Sg**	**21 10 23.0**	**+0.3**
PTK	**Pertek**	**0.48**	**275**	*e*Pg	**Pg**	**21 10 14.9**	**-1.3**
PTK				*e*Sg	**Sg**	**21 10 23.0**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.72**	**230**	*e*PG	**Pg**	**21 10 19.9**	**-0.8**
SVRC				*e*SG	**Sg**	**21 10 31.1**	**+0.9**
SVRC	**Sivrice-ELAZID**	**0.72**	**230**	*e*Pg	**Pg**	**21 10 19.9**	**-0.8**
SVRC				*e*Sg	**Sg**	**21 10 31.1**	**+0.8**
ELZG	**Elazig**	**0.88**	**247**	*i* P	**Pb**	**21 10 19.2**	**-4.4**
ELZG				*i* S	**Sg**	**21 10 35.3**	**+0.2**
ELZG	**Elazig**	**0.88**	**247**	*i* P	**Pb**	**21 10 19.2**	**-4.4**
ELZG				*i* S	**Sg**	**21 10 35.3**	**+0.2**
DIYA	**Diyarbakir**	**0.93**	**175**	*i* P	**Pb**	**21 10 24.1**	**-0.4**
DIYA				*i* S	**Sb**	**21 10 37.8**	**+1.2**
DIYA	**Diyarbakir**	**0.93**	**175**	*i* P	**Pb**	**21 10 24.1**	**-0.4**
DIYA				*i* S	**Sb**	**21 10 37.8**	**+1.2**
EZC	**Erzincan**	**1.04**	**331**	*e*PG	**Pg**	**21 10 26.1**	**-0.6**
KOPT	**Kop Dagi**	**1.23**	**18**	*i* P	**Pn**	**21 10 20.6**	**-8.8**
KEMA	**Kemaliye**	**1.25**	**290**	*i* P	**Pn**	**21 10 28.2**	**-1.5**
KEMA				*i* S	**Sb**	**21 10 47.6**	**+1.6**
KEMA	**Kemaliye**	**1.25**	**290**	*i* P	**Pn**	**21 10 28.2**	**-1.5**
KEMA				*i* S	**Sb**	**21 10 47.6**	**+1.6**
BTMT	**Batman**	**1.33**	**119**	*e*PN	**Pn**	**21 10 29.1**	**-1.7**
MYA	**Malataya**	**1.35**	**248**	*e*PN	**Pn**	**21 10 30.0**	**-1.0**
MYA	**Malataya**	**1.35**	**248**	*e*Pn	**Pn**	**21 10 30.0**	**-1.0**
BEST	**Besiri**	**1.38**	**134**	*i* P	**Pn**	**21 10 31.8**	**+0.4**
BEST				*i* S	**Sn**	**21 10 49.2**	**-0.2**
KELT	**Kelkit**	**1.42**	**336**	*i* P	**Pn**	**21 10 31.3**	**-0.8**
KELT				*i* S	**Sn**	**21 10 52.2**	**+1.7**
KELT	**Kelkit**	**1.42**	**336**	*i* P	**Pn**	**21 10 31.3**	**-0.7**
KELT				*i* S	**Sn**	**21 10 52.2**	**+1.7**
GUMT	**Gumushane**	**1.66**	**346**	*e*PN	**Pn**	**21 10 35.2**	**-0.1**
GUMT	**Gumushane**	**1.66**	**346**	*e*Pn	**Pn**	**21 10 35.2**	**-0.1**
AKCD	**Akcadag**	**1.73**	**252**	*i* P	**Pn**	**21 10 36.9**	**+0.7**
AKCD				*i* S	**Sn**	**21 11 03.8**	**+5.8**
AKCD	**Akcadag**	**1.73**	**252**	*i* P	**Pn**	**21 10 36.9**	**+0.7**

*IDC **22** 21:12:18.0±1.0, 31.°28N×103.°21E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.8/26, mbtmp3.8/15, ML3.1/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/27, Error ellipse: s-maj=28.8km s-min=19.9km az=50.0*
*NEIC **22** 21:12:19.3±0.3, 31.°28N×103.°22E, h10km, mb4.0/8, Error ellipse: s-maj=7.5km s-min=5.9km az=85.0*
*ISCJB **22** 21:12:21.1±0.8, 31.°30N±0.°04×103.°30E±0.°04, h35km±9km, mb4.0/22, Error ellipse: s-maj=7.2km s-min=5.9km az=154.1*
*MOS **22** 21:12:21.8±0.9, 31.°21N×103.°16E, h49km, mb4.1/12, Error ellipse: s-maj=13.4km s-min=7.8km az=97.6*
*BJI **22** 21:12:21.4, 31.°29N×103.°36E, h14km, mb4.1/1, ML3.7/19, Ms3.5/6, Ms7 3.3/5*
ISC 22 21:12:20.7±0.8,**31.°34N**±0.°03×**103.°27E**±0.°04,**h15**km±5km,
n71,σ1**01**/76,**mb4.0**/22,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.60**	**135**	Pg	**Pg**	**21 12 31.4**	**-1.0**
CD2				Sg	**Sg**	**21 12 40.5**	**+0.1**
CD2				smax			
comp=N,9μm,0.7s
LZH Lanzhou 4.76 6 Pg **Pg 21 13 50.3 -1.5**
LZH Sg **Sg 21 14 54.4 +0.9**
LZH smax
comp=N,57nm,1.1s
LZH smax
comp=E,80nm,1.0s
LZH LR LR
comp=N,280nm,7.3s
LZH LR LR
comp=Z,300nm,8.7s
ENH Enshi 5.45 100 *e*Pn **Pn 21 13 40.8 -0.5**
comp=Z,35nm,0.6s
ENH *e*Sn **Sn 21 14 44.4 +0.6**
XAN Xi'an 5.47 59 Pn **Pn 21 13 42.3 +0.7**
XAN Sn **Sn 21 14 42.9 -1.4**
XAN Sg **Sg 21 15 06.6 -10**
XAN smax
comp=N,79nm,0.9s
XAN smax
comp=E,38nm,0.9s
XAN LR LR
comp=N,310nm,10.5s
XAN LR LR
comp=E,61nm,10.6s
XAN LR LR
comp=Z,51nm,7.7s
GYA Guiyang 5.70 148 Pn **Pn 21 13 49.4 +4.7**
GYA Sn **Sn 21 14 52.4 +2.5**
GYA smax
comp=N,100nm,0.7s
GYA smax
comp=E,160nm,0.9s
KMI Kunming 6.21 184 Pn **Pn 21 13 53.6 +1.9**
KMI Sn **Sn 21 15 02.5 0.0**
KMI smax
comp=N,32nm,0.7s
KMI smax
comp=E,41nm,0.8s
KMI LR LR
comp=N,360nm,9.0s
KMI LR LR
comp=E,220nm,10.8s
KMI LR LR
comp=Z,360nm,9.0s
LSA Lhasa 10.58 264 *e*P **Pn 21 14 53.5 +1.8**
LSA pmax pmax
comp=Z,2.0nm,0.6s
LSA Lhasa 10.58 264 *e*Pn **Pn 21 14 53.5 +1.8**
comp=Z,2.0nm,0.6s
CHTO Chiang Mai 13.07 198 P **Pn 21 15 23.1 -2.7**
CHTO pmax pmax
comp=Z,2.0nm,0.8s
CHTO Chiang Mai 13.07 198 Pn **Pn 21 15 23.1 -2.6**
comp=Z,1.6nm,0.8s
CM31 Chiang Mai Arr 13.41 198 Pn **Pn 21 15 28.1 -2.3**
CMAR Chiang Mai Arr 13.41 198 Pn **Pn 21 15 30.5 +0.1**
comp=Z,0.0nm,0.3s,baz=11,slow=11,SNR=1.4
GUN Gumba 15.50 262 *e*P **Pn 21 16 00.2 +1.5**
comp=Z,28nm,0.9s
PKI Pulchoki 16.00 261 *e*P **Pn 21 16 05.6 +0.4**
comp=Z,12nm,0.5s
PKIN Phulchoki 16.01 261 *e*P **Pn 21 16 05.6 +0.3**
KKN Kakani 16.05 262 *e*P **Pn 21 16 07.1 +1.3**
comp=Z,28nm,0.8s
DMN Daman 16.25 261 *e*P **Pn 21 16 09.1 +0.8**
comp=Z,24nm,0.7s
SONM Songino Array 16.65 7 Pn **Pn 21 16 14.9 +1.6**
comp=Z,0.1nm,0.3s,baz=188,slow=10,SNR=14
SONM LR LR 21 23 19.8
comp=Z,48nm,18.5s,baz=84,slow=40
ULN Ulaanbaatar 16.76 9 *e*P **Pn 21 16 15.9 +1.2**
ULN pmax pmax
comp=Z,9.0nm,1.5s
ULN Ulaanbaatar 16.76 9 *e*Pn **Pn 21 16 15.9 +1.3**
comp=Z,9.0nm,1.5s
ZAK Zakamensk 19.03 0 *e*P **Pn 21 16 44.7 +2.1**
ZAK pmax pmax
comp=Z,2.0nm,1.4s
MOY Mondy 20.38 356 *e*P **P 21 16 57.2 +0.6**
KSRS Korea Array 21.21 67 P **P 21 17 06.7 +0.9**
comp=Z,2.2nm,0.6s,mb3.7,baz=257,slow=10,SNR=14
KSRS Korea Array 21.21 67 P **P 21 17 06.7 +1.0**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb3.6
MK31 Makanchi Array 22.34 320 *e*P **P 21 17 17.1 -0.6**
MKAR Makanchi Array 22.34 320 P **P 21 17 17.5 -0.2**
comp=Z,1.5nm,0.8s,mb3.5,baz=122,slow=12,SNR=15
MKAR Makanchi Array 22.34 320 P **P 21 17 17.5 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
UCH Uchtor 25.35 303 *e*P **P 21 17 47.3 +0.3**
comp=Z,3.4nm,0.9s,mb3.9
AML Almayashu 25.91 303 *e*P **P 21 17 51.9 -0.2**
comp=Z,3.6nm,1.0s,mb3.9
EKS2 Erkin-Say 26.00 304 *e*P **P 21 17 52.0 -0.8**
comp=Z,2.6nm,0.9s,mb3.8
ZAA0 Zalesovo Array 26.20 335 *e*P **P 21 17 54.3 -0.2**
ZALV Zalesovo Beam 26.20 335 P **P 21 17 55.0 +0.4**
comp=Z,2.6nm,0.8s,mb3.8,baz=144,slow=9.7,SNR=14
ZALV Zalesovo Beam 26.20 335 P **P 21 17 55.0 +0.5**
ZALV pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
KURK Kurchatov 26.63 324 P **P 21 17 58.9 +0.4**
comp=Z,1.6nm,0.8s,mb3.6,baz=127,slow=10,SNR=14
KURK PcP PcP 21 21 21.9 -0.3
comp=Z,0.5nm,0.6s,baz=119,slow=1.9,SNR=4.5
KURK Kurchatov 26.63 324 P **P 21 17 57.3 -1.2**
KURK 21 21 21.9
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KURK Kurchatov 26.63 324 P **P 21 17 57.3 -1.2**
comp=Z,1.5nm,0.7s,mb3.6
KURK PcP PcP 21 21 21.9 -0.3
KBL Kabul 28.82 286 *e*P **P 21 18 17.1 -1.1**
BVAR Borovoye Array 32.17 322 PcP PcP 21 21 36.2 +0.1
comp=Z,0.9nm,0.5s,baz=160,slow=4.6,SNR=6.2
YSS Yuzh-Sakhalins 33.96 51 P **P 21 19 03.9 +0.6**
ARU Arti 39.81 322 *e*P **P 21 19 52.8 -0.1**
ARU pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
ARU Arti 39.81 322 *e*P **P 21 19 52.8 -0.1**
comp=Z,2.3nm,0.8s,mb4.0
TIXI Tiksi 42.67 12 *e*P **P 21 20 15.0 -1.2**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
TIXI Tiksi 42.67 12 *e*P **P 21 20 16.1 -0.1**
comp=Z,1.7nm,0.6s,mb4.0
KIV Kislovodsk 48.59 303 *e*P **P 21 21 02.1 -1.3**
KIV Kislovodsk 48.59 303 *e*P **P 21 21 02.0 -1.4**
FITZ Fitzroy Crossi 53.65 153 P **P 21 21 40.9 -0.7**
AKASG Malin Array Be 56.70 313 P **P 21 22 02.8 -0.5**
comp=Z,0.3nm,0.3s,mb3.8,baz=69,slow=7.7,SNR=2.5
ARCES ARCESS Array B 56.75 336 P **P 21 22 03.5 +0.1**
comp=Z,3.2nm,0.9s,mb4.3,baz=92,slow=7.9,SNR=4.6
ARCES ARCESS Array B 56.75 336 P **P 21 22 03.5 0.0**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 56.98 326 P **P 21 22 05.4 +0.3**
comp=Z,2.6nm,0.8s,mb4.3,baz=87,slow=8.4,SNR=7.9
FINES FINESS Array B 56.98 326 P **P 21 22 05.4 +0.3**
FINES pmax pmax
comp=Z,3.0nm,0.8s
CSS Prodhromos 57.57 294 *e*P **P 21 22 07.9 -1.9**
comp=Z,7.3nm,0.7s,mb4.8
KWP Kalwaria Pacla 61.02 313 P **P 21 22 32.1 -1.3**
ASAR Alice Springs 62.06 148 P **P 21 22 40.2 -0.5**
comp=Z,0.5nm,0.7s,mb3.7,baz=338,slow=6.0,SNR=4.9
ASAR Alice Springs 62.06 148 P **P 21 22 40.2 -0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
HFS Hagfors 63.18 326 P **P 21 22 47.4 -0.3**
comp=Z,0.6nm,0.4s,mb4.0,baz=290,slow=4.3,SNR=1.9
HFS Hagfors 63.18 326 P **P 21 22 47.4 -0.3**
HFS pmax pmax
comp=Z,1.0nm,0.4s
PSZ Piszkesteto 63.30 312 P **P 21 22 48.2 -0.5**
NOA NORSAR Array B 64.08 327 P **P 21 22 52.7 -0.9**
comp=Z,0.5nm,0.6s,mb3.7,baz=63,slow=7.7,SNR=3.6
NOA NORSAR Array B 64.08 327 P **P 21 22 52.7 -0.9**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 64.08 327 P **P 21 22 52.7 -0.9**
INK Inuvik 72.17 19 P **P 21 23 44.5 +0.2**
comp=Z,2.0nm,0.9s,mb4.1,baz=354,slow=5.9,SNR=5.7
INK Inuvik 72.17 19 P **P 21 23 44.6 +0.3**
INK pmax pmax
comp=Z,2.0nm,0.9s
LPG La Plagne 72.57 313 *e*P **P 21 23 47.9 +0.8**
comp=Z,7.6nm,0.8s,mb4.4
LPL La Plagne 72.57 313 *e*P **P 21 23 47.9 +0.8**
comp=Z,3.3nm,0.4s,mb4.3
SMF Signal de Mont 73.83 315 *e*P **P 21 23 54.3 -0.2**
comp=Z,9.3nm,1.0s,mb4.4
AVF Avril sur Loir 74.05 315 *e*P **P 21 23 55.6 -0.2**
TCF Toulx Ste Croi 74.99 315 *e*P **P 21 24 01.3 0.0**
KEST Kesra 75.33 303 LR LR 22 00 58.2
comp=Z,20nm,18.6s,baz=234,slow=39
YKA Yellowknife Ar 81.68 17 P **P 21 24 37.2 -0.8**
comp=Z,0.3nm,0.5s,mb3.5,baz=331,slow=5.1,SNR=3.8
TORD Torodi Ar. Bea 92.88 287 P **P 21 25 33.3 -0.1**
comp=Z,0.5nm,0.9s,mb3.9,baz=166,slow=1.2,SNR=2.6

*ISCJB **22** 21:15:48.2±0.5, 28.°3S±0.°1×62.°79E±0.°09, h10km, mb4.0/16, MS3.5/2, Error ellipse: s-maj=16.8km s-min=12.0km az=179.3*
*IDC **22** 21:15:48.4±0.8, 28.°30S×62.°71E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.9/26, mbtmp3.9/12, MS3.4/2, Ms1 3.4/2, ms1mx3.0/23, Error ellipse: s-maj=25.8km s-min=24.0km az=39.0*
*NEIC **22** 21:15:50.4±0.6, 28.°20S×62.°76E, h10km, mb4.3/5, Error ellipse: s-maj=20.8km s-min=11.6km az=183.0*
ISC 22 21:15:50.3±0.5,**28.°3S**±0.°1×**62.°78E**±0.°09,**h10**km,**n31**,
σ0**96**/29,**mb4.0**/16,**MS3.5/2**,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo 17.24 301**			Pn	**Pn**	**21 19 53.6**	**+2.4**
0.1nm,0.3s,baz=106,slow=18,SNR=1.7
OPO Sn **Sn 21 22 53.5 -10**
0.5nm,0.3s,baz=219,slow=5.9,SNR=2.5
BOSA Boshof 32.91 260 P **P 21 22 24.8 -0.1**
LBTB Lobatse 33.31 267 P **P 21 22 28.8 +0.5**
MAW Mawson 39.37 180 LR LR 21 36 27.9
comp=Z,72nm,21.7s,MS3.5,baz=63,slow=32
TSUM Tsumeb 42.14 272 P **P 21 23 43.1 0.0**
2.3nm,0.9s,mb3.8,baz=53,slow=12,SNR=3.7
TSUM Tsumeb 42.14 272 P **P 21 23 42.2 -0.9**
MBWA Marble Bar 51.83 96 P **P 21 24 58.5 -0.3**
FITZ Fitzroy Crossi 58.12 95 *e*P **P 21 25 47.5 +3.1**
3.5nm,0.6s,mb4.6
CMAR Chiang Mai Arr 58.15 41 P **P 21 25 45.1 +0.7**
0.9nm,0.5s,mb4.0,baz=228,slow=7.4,SNR=6.2
QSPA South Pole Qui 61.89 180 P **P 21 26 08.6 -0.7**
2.6nm,0.9s,mb4.3,baz=275,slow=4.0,SNR=6.0
ASAR Alice Springs 63.28 104 P **P 21 26 20.0 +0.5**
1.5nm,0.6s,mb4.3,baz=248,slow=6.0,SNR=20
ASAR Alice Springs 63.28 104 P **P 21 26 20.0 +0.5**
WRAB Tennant Creek 65.04 100 *e*P **P 21 26 31.1 0.0**
2.2nm,0.7s,mb4.3
UCH Uchtor 70.97 9 *e*P **P 21 27 07.7 -0.1**
0.6nm,0.5s,mb3.8
EKS2 Erkin-Say 71.29 9 *e*P **P 21 27 11.9 +2.2**
3.2nm,1.1s,mb4.2
TKM2 Tokmak 2 71.81 10 P **P 21 27 12.2 -0.6**
TORD Torodi Ar. Bea 72.00 296 P **P 21 27 14.6 0.0**
1.2nm,1.0s,mb3.8,baz=111,slow=5.2,SNR=4.8
TORD Torodi Ar. Bea 72.00 296 P **P 21 27 14.6 0.0**
BRTR Keskin Array B 72.88 337 P **P 21 27 18.5 -0.8**
0.9nm,0.9s,mb3.7,baz=155,slow=3.5,SNR=4.0
ENH Enshi 73.32 41 P **P 21 27 21.6 -0.5**
KIV Kislovodsk 74.19 345 P **P 21 27 25.6 -1.3**
MK31 Makanchi Array 76.76 14 P **P 21 27 41.0 -0.6**
MKAR Makanchi Array 76.76 14 P **P 21 27 39.9 -1.7**
0.6nm,0.9s,mb3.5,baz=203,slow=12,SNR=5.6
KURK Kurchatov 79.87 10 P **P 21 27 58.9 +0.2**
0.6nm,0.9s,mb3.5,baz=210,slow=6.2,SNR=3.4
KURK Kurchatov 79.87 10 P **P 21 27 57.8 -0.9**
4.3nm,1.6s,mb4.1
BVAR Borovoye Array 81.21 5 P **P 21 28 05.4 -0.5**
0.5nm,0.5s,mb3.7,baz=281,slow=2.2,SNR=3.0
AKASG Malin Array Be 84.03 339 P **P 21 28 20.7 +0.1**
0.4nm,0.4s,mb3.9,baz=115,slow=4.3,SNR=3.6
ZALV Zalesovo Beam 84.06 13 P **P 21 28 21.5 +0.8**
1.8nm,0.8s,mb4.2,baz=212,slow=5.1,SNR=9.8
SONM Songino Array 85.28 28 P **P 21 28 27.7 +0.7**
0.6nm,0.7s,mb3.8,baz=212,slow=5.3,SNR=3.7
NOA NORSAR Array B 98.31 337 LR LR 22 14 26.1
comp=Z,14nm,19.2s,MS3.5,baz=90,slow=36
YKA Yellowknife Ar 145.72 358 PKPbc PKPbc 21 35 28.4 -0.3
1.9nm,0.9s,baz=352,slow=3.5,SNR=16

*CRAAG **22** 21:26:29.2, 36.°55N×4.°93E, Ml3.6*
*CSEM **22** 21:26:31.3±0.2, 36.°44N×4.°81E, h5km, ML3.6, Error ellipse: s-maj=10.7km s-min=4.8km az=14.0*
*ISCJB **22** 21:26:32.0±0.7, 36.°59N±0.°06×4.°77E±0.°04, h18km±9km, Error ellipse: s-maj=10.3km s-min=5.3km az=15.4*
*MDD **22** 21:26:32.5±0.5, 36.°54N×4.°81E, h0km, mb3.8/8, Error ellipse: s-maj=8.9km s-min=4.3km az=12.0, PRIMO*
*NEIC **22** 21:26:34.1, 36.°67N×4.°82E, h0km, ML3.1(ALG), After MDD.*
ISC 22 21:26:31.7±0.7,**36.°50N**±0.°06×**4.°81E**±0.°04,**h9**km±6km,**n86**,
σ1**26**/108,**3D**,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.24**	**305**	P	**Pg**	**21 26 36.4**	**-0.1**
AKF	**Akfadou**	**0.24**	**305**	P	**Pg**	**21 26 36.4**	**-0.1**
AKF	**Akfadou**	**0.24**	**305**	P	**Pg**	**21 26 36.4**	**-0.1**
AKF	**Akfadou**	**0.24**	**305**	P	**Pg**	**21 26 36.4**	**-0.1**
SET	**Setif**	**0.56**	**122**	P	**Pg**	**21 26 41.0**	**-1.6**
SET	**Setif**	**0.56**	**122**	P	**Pg**	**21 26 41.0**	**-1.6**
SET	**Setif**	**0.56**	**122**	P	**Pg**	**21 26 41.0**	**-1.6**
SET	**Setif**	**0.56**	**122**	P	**Pg**	**21 26 41.0**	**-1.6**
CKHR	**Kef el Ahmar**	**0.75**	**130**	P	**Pg**	**21 26 44.0**	**-2.1**

CKHR	**Kef el Ahmar**	**0.75 130**	P		**Pg**	**21 26 44.0**	**-2.1**
CKHR	**Kef el Ahmar**	**0.75 130**	P		**Pg**	**21 26 44.0**	**-2.1**
CKHR	**Kef el Ahmar**	**0.75 130**	P		**Pg**	**21 26 44.0**	**-2.1**
DFRA	**Djebel Bou Aff**	**0.86 87**	P		**Pg**	**21 26 48.4**	**+0.1**
DFRA	**Djebel Bou Aff**	**0.86 87**	P		**Pg**	**21 26 48.4**	**+0.1**
DFRA	**Djebel Bou Aff**	**0.86 87**	P		**Pg**	**21 26 48.4**	**+0.1**
DFRA	**Djebel Bou Aff**	**0.86 87**	P		**Pg**	**21 26 48.4**	**+0.1**
AKET	**Djebel Ketaf**	**0.87 239**	P		**Pg**	**21 26 48.8**	**+0.3**
AKET	**Djebel Ketaf**	**0.87 239**	P		**Pg**	**21 26 48.8**	**+0.4**
AKET	**Djebel Ketaf**	**0.87 239**	P		**Pg**	**21 26 48.8**	**+0.3**
AKET	**Djebel Ketaf**	**0.87 239**	P		**Pg**	**21 26 48.8**	**+0.3**
AKET	**Djebel Ketaf**	**0.87 239**	P		**Pg**	**21 26 48.8**	**+0.3**
ADJB	**Djebel Djouab**	**1.16 253**	P		**Pb**	**21 26 53.4**	**-0.5**
ADJB	**Djebel Djouab**	**1.16 253**	P		**Pb**	**21 26 53.5**	**-0.4**
ADJB	**Djebel Djouab**	**1.16 253**	P		**Pb**	**21 26 53.4**	**-0.5**
ADJB	**Djebel Djouab**	**1.16 253**	P		**Pb**	**21 26 53.4**	**-0.5**
ADJB	**Djebel Djouab**	**1.16 253**	P		**Pb**	**21 26 53.5**	**-0.4**
CTEI	**Djebel Teioual**	**1.36 108**	P		**Pn**	**21 26 58.0**	**+1.1**
CTEI	**Djebel Teioual**	**1.36 108**	P		**Pn**	**21 26 58.0**	**+1.1**
CTEI	**Djebel Teioual**	**1.36 108**	P		**Pn**	**21 26 58.0**	**+1.1**
CTEI	**Djebel Teioual**	**1.36 108**	P		**Pn**	**21 26 58.0**	**+1.1**
CASM	**Ain Smara**	**1.38 99**	P		**Pn**	**21 26 57.0**	**-0.1**
CASM	**Ain Smara**	**1.38 99**	P		**Pn**	**21 26 57.0**	**-0.1**
CASM	**Ain Smara**	**1.38 99**	P		**Pn**	**21 26 57.0**	**-0.1**
CASM	**Ain Smara**	**1.38 99**	P		**Pn**	**21 26 57.0**	**-0.1**
ABA	**Alger-Bouzarea**	**1.46 283**	P		**Pn**	**21 26 58.6**	**+0.4**
ABA	**Alger-Bouzarea**	**1.46 283**	P		**Pn**	**21 26 58.6**	**+0.4**
ABA	**Alger-Bouzarea**	**1.46 283**	P		**Pn**	**21 26 58.6**	**+0.4**
ABA	**Alger-Bouzarea**	**1.46 283**	P		**Pn**	**21 26 58.6**	**+0.4**
EMHD	**Djebel Mahouad**	**1.53 259**	P		**Pn**	**21 26 57.5**	**-1.6**
EMHD	**Djebel Mahouad**	**1.53 259**	P		**Pn**	**21 26 57.5**	**-1.6**
EMHD	**Djebel Mahouad**	**1.53 259**	P		**Pn**	**21 26 57.5**	**-1.6**
EMHD	**Djebel Mahouad**	**1.53 259**	P		**Pn**	**21 26 57.5**	**-1.6**
CKFL	**Kef-Lekhel**	**1.55 93**	P		**Pn**	**21 27 01.0**	**+1.6**
CKFL	**Kef-Lekhel**	**1.55 93**	P		**Pn**	**21 27 01.0**	**+1.6**
CKFL	**Kef-Lekhel**	**1.55 93**	P		**Pn**	**21 27 01.0**	**+1.6**
CKFL	**Kef-Lekhel**	**1.55 93**	P		**Pn**	**21 27 01.0**	**+1.6**
CMAH	**Djebel Manchou**	**2.11 86**	P		**Pn**	**21 27 06.0**	**-1.1**
CMAH	**Djebel Manchou**	**2.11 86**	P		**Pn**	**21 27 06.0**	**-1.1**
CMAH	**Djebel Manchou**	**2.11 86**	P		**Pn**	**21 27 06.0**	**-1.1**
CMAH	**Djebel Manchou**	**2.11 86**	P		**Pn**	**21 27 06.0**	**-1.1**
ETOS	**Mallorca**	**3.62 335**	⇓Pn		**Pn**	**21 27 28.4**	**+0.4**
ETOS			Sn		**Sn**	**21 28 08.0**	**-2.9**
ETOS	**Mallorca**	**3.62 335**	⇓P		**Pn**	**21 27 28.4**	**+0.4**
	2.7nm,0.1s,SNR=18						
ETOS			S		**Sn**	**21 28 08.0**	**-2.9**
	0.0nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.62 335**	⇓P		**Pn**	**21 27 28.4**	**+0.4**
	2.7nm,0.1s,SNR=18						
ETOS			S		**Sn**	**21 28 08.0**	**-2.9**
	0.0nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.62 335**	Pn		**Pn**	**21 27 28.4**	**+0.4**
	2.7nm,0.1s,SNR=18						
ETOS			Sn		**Sn**	**21 28 08.0**	**-2.8**
	SNR=7.9						
EIBI	**Ibiza**	**3.73 314**	Pn		**Pn**	**21 27 29.6**	**+0.2**
EIBI			Sn		**Sn**	**21 28 11.3**	**-2.1**
EIBI	**Ibiza**	**3.73 314**	P		**Pn**	**21 27 29.6**	**+0.2**
	1.0nm,0.2s,SNR=7.9						
EIBI			S		**Sn**	**21 28 11.3**	**-2.1**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.73 314**	P		**Pn**	**21 27 29.6**	**+0.2**
	1.0nm,0.2s,SNR=7.9						
EIBI			S		**Sn**	**21 28 11.3**	**-2.1**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.73 314**	Pn		**Pn**	**21 27 29.6**	**+0.2**
	1.0nm,0.2s,SNR=7.9						
EIBI			Sn		**Sn**	**21 28 11.3**	**-2.1**
	0.6nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.56 300**	Pn		**Pn**	**21 27 43.0**	**+2.1**
EBEN	**Beniarda**	**4.56 300**	P		**Pn**	**21 27 42.6**	**+1.8**
	0.6nm,0.4s,SNR=4.0						
EBEN	**Beniarda**	**4.56 300**	P		**Pn**	**21 27 42.6**	**+1.8**
	0.6nm,0.4s,SNR=4.0						
EBEN	**Beniarda**	**4.56 300**	Pn		**Pn**	**21 27 43.0**	**+2.1**
	0.6nm,0.4s,SNR=4.0						
ETOB	**Tobarra**	**5.48 295**	Pn		**Pn**	**21 27 54.9**	**+1.4**
ETOB			Sn		**Sn**	**21 28 56.1**	**-0.6**
ETOB	**Tobarra**	**5.48 295**	P		**Pn**	**21 27 54.9**	**+1.4**
	2.0nm,0.3s,SNR=7.2						
ETOB			S		**Sn**	**21 28 55.6**	**-1.1**
	0.1nm,0.3s,SNR=5.2						
ETOB	**Tobarra**	**5.48 295**	P		**Pn**	**21 27 54.9**	**+1.4**
	2.0nm,0.3s,SNR=7.2						
ETOB			S		**Sn**	**21 28 55.6**	**-1.1**
	0.1nm,0.3s,SNR=5.2						
ETOB	**Tobarra**	**5.48 295**	Pn		**Pn**	**21 27 54.9**	**+1.4**
	2.0nm,0.3s,SNR=7.2						
ETOB			Sn		**Sn**	**21 28 56.1**	**-0.6**
	0.1nm,0.3s,SNR=5.2						
ECHE	**Chera**	**5.50 306**	P		**Pn**	**21 27 55.3**	**+1.5**
	1.0nm,0.4s,SNR=7.9						
ECHE	**Chera**	**5.50 306**	P		**Pn**	**21 27 55.3**	**+1.5**
	1.0nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.65 330**	Pn		**Pn**	**21 27 56.0**	**+0.2**
EPOB			Sn		**Sn**	**21 28 56.0**	**-4.9**
EPOB	**Poblet**	**5.65 330**	P		**Pn**	**21 27 56.0**	**+0.2**
	1.8nm,0.3s,SNR=6.0						
EPOB			S		**Sn**	**21 28 56.0**	**-4.9**
	0.4nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.65 330**	P		**Pn**	**21 27 56.0**	**+0.2**
	1.8nm,0.3s,SNR=6.0						
EPOB			S		**Sn**	**21 28 56.0**	**-4.9**
	0.4nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.65 330**	Pn		**Pn**	**21 27 56.0**	**+0.2**
	1.8nm,0.3s,SNR=6.0						
EMOS	**Mosqueruela**	**5.66 315**	P		**Pn**	**21 27 55.6**	**-0.4**
	2.6nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**5.66 315**	P		**Pn**	**21 27 55.6**	**-0.4**
	2.6nm,0.6s,SNR=7.9						
EMIR	**Miracle**	**5.98 336**	Pn		**Pn**	**21 28 01.7**	**+1.4**
EMIR			Sn		**Sn**	**21 29 04.6**	**-4.2**
EMIR	**Miracle**	**5.98 336**	P		**Pn**	**21 28 01.7**	**+1.4**
	0.3nm,0.1s,SNR=4.7						
EMIR			S		**Sn**	**21 29 04.6**	**-4.2**
	1.0nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.98 336**	P		**Pn**	**21 28 01.7**	**+1.4**
	0.3nm,0.1s,SNR=4.7						
EMIR			S		**Sn**	**21 29 04.6**	**-4.2**
	1.0nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.98 336**	Pn		**Pn**	**21 28 01.7**	**+1.4**
	0.3nm,0.1s,SNR=4.7						
EJON	**La Jonquera**	**6.12 347**	P		**Pn**	**21 28 02.5**	**+0.2**
	1.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**6.12 347**	P		**Pn**	**21 28 02.5**	**+0.2**
	1.3nm,0.2s,SNR=7.9						
EQES	**Quesada**	**6.43 284**	Pn		**Pn**	**21 28 08.0**	**+1.5**
EQES			Sn		**Sn**	**21 29 18.1**	**-1.8**
EQES	**Quesada**	**6.43 284**	P		**Pn**	**21 28 08.0**	**+1.5**
	0.3nm,0.2s,SNR=7.9						
EQES			S		**Sn**	**21 29 18.1**	**-1.8**
	0.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.43 284**	P		**Pn**	**21 28 08.0**	**+1.5**
	0.3nm,0.2s,SNR=7.9						
EQES			S		**Sn**	**21 29 18.1**	**-1.8**
	0.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**6.43 284**	Pn		**Pn**	**21 28 08.0**	**+1.5**
	0.3nm,0.2s,SNR=7.9						
EQES			Sn		**Sn**	**21 29 18.1**	**-1.8**
	0.5nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**6.65 279**	P		**Pn**	**21 28 11.4**	**+1.9**
	1.9nm,0.5s,SNR=7.9						
EQUE	**Quentar**	**6.65 279**	P		**Pn**	**21 28 11.4**	**+1.9**
	1.9nm,0.5s,SNR=7.9						

IDC ***22*** *22:13:45.4±1.0, 31°.46N×103°.98E, h0km, mb4.1/13, mb1 4.1/15, mb1mx3.9/28, mbtmp4.0/15, ML3.5/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/28, Error ellipse: s-maj=29.7km s-min=20.1km az=45.0*

NEIC ***22*** *22:13:47.0±0.3, 31°.50N×104°.03E, h10km, mb4.1/11, Error ellipse: s-maj=6.4km s-min=4.9km az=216.0*

BJI ***22*** *22:13:47.4, 31°.41N×104°.12E, h14km, mB4.6/4, mb4.4/9, ML3.9/15, Ms3.8/7, Ms7 3.5/6*

MOS ***22*** *22:13:48.7±1.1, 31°.42N×103°.97E, h39km, mb4.5/16, Error ellipse: s-maj=13.1km s-min=7.7km az=106.0*

ISC 22 22:13:46.3±0.9, 31°.47N±0°.03×103°.98E±0°.04, h5km±6km, n80, σ0°.94/87, mb4.1/24, MS3.4/4, 2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.59**	**199**	Pg	**Pg**	**22 13 58.3**	**+0.8**
CD2				Sg	**Sg**	**22 14 06.4**	**+1.2**
CD2				smax			
	comp=N,6μm,0.6s						
LZH	**Lanzhou**	**4.61**	**359**	Pn	**Pn**	**22 14 59.4**	**+2.9**
LZH				Sg	**Sg**	**22 16 13.4**	**-0.9**
LZH				smax			
	comp=N,120nm,1.0s						
LZH				smax			
	comp=E,100nm,0.9s						
LZH				LR	LR		
	comp=E,470nm,8.0s						
LZH				LR	LR		
	comp=Z,510nm,8.6s						
ENH	**Enshi**	**4.88**	**103**	ePn	**Pn**	**22 15 00.2**	**-0.1**
ENH				eS	**Sg**	**22 16 21.5**	**-1.4**
XAN	**Xi'an**	**4.89**	**57**	Pn	**Pn**	**22 15 00.5**	**+0.1**
XAN				Sn	**Sn**	**22 15 58.3**	**+1.0**
XAN				Sg	**Sg**	**22 16 19.4**	**-3.8**
XAN				smax			
	comp=N,200nm,1.0s						
XAN				smax			
	comp=E,99nm,1.0s						
GYA	**Guiyang**	**5.51**	**154**	Pn	**Pn**	**22 15 08.0**	**-1.0**
GYA				Sn	**Sn**	**22 16 19.3**	**+6.5**
GYA				smax			
	comp=N,200nm,0.9s						
GYA				smax			
	comp=E,170nm,0.8s						
KMI	**Kunming**	**6.41**	**190**	Pn	**Pn**	**22 15 21.8**	**+0.4**
KMI				Sn	**Sn**	**22 16 34.9**	**-0.1**
KMI				smax			
	comp=N,46nm,0.7s						
KMI				smax			
	comp=E,36nm,1.0s						
KMI				LR	LR		
	comp=N,370nm,6.9s						
KMI				LR	LR		
	comp=E,430nm,6.9s						
KMI				LR	LR		
	comp=Z,320nm,8.2s						
GTA	**Gaotai**	**8.62**	**338**	eP	**Pn**	**22 16 00.0**	**+8.3**
GTA				pP		22 16 04.5	
GTA				sP		22 16 07.9	
WHN	**Wuhan**	**8.95**	**93**	P	**Pn**	**22 16 00.5**	**+4.4**
WHN				S	**Sn**	**22 17 32.5**	**-4.7**
WHN				LR	LR		
	comp=N,400nm,4.3s						
WHN				LR	LR		
	comp=E,1μm,7.3s						
WHN				LR	LR		
	comp=Z,1μm,9.8s						
LSA	**Lhasa**	**11.20**	**264**	eP	**Pn**	**22 16 28.0**	**+1.0**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	**Lhasa**	**11.20**	**264**	ePn	**Pn**	**22 16 28.0**	**+1.0**
	comp=Z,1.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.73**	**201**	Pn	**Pn**	**22 17 03.6**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=8.7,slow=9.2,SNR=1.7						
GUN	**Gumba**	**16.13**	**262**	eP	**Pn**	**22 17 32.7**	**-1.0**
	comp=Z,20nm,0.9s						
SONM	**Songino Array**	**16.45**	**6**	Pn	**Pn**	**22 17 38.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=8.0						
SONM				LR	LR	22 24 29.1	
	comp=Z,43nm,19.0s,baz=74,slow=39						
ULN	**Ulaanbaatar**	**16.55**	**7**	eP	**Pn**	**22 17 37.8**	**-1.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULN	**Ulaanbaatar**	**16.55**	**7**	ePn	**Pn**	**22 17 37.8**	**-1.1**
	comp=Z,4.3nm,1.3s						
PKI	**Pulchoki**	**16.63**	**261**	eP	**Pn**	**22 17 38.6**	**-1.5**
	comp=Z,19nm,0.8s						
PKIN	**Phulchoki**	**16.64**	**261**	eP	**Pn**	**22 17 38.5**	**-1.7**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**16.67**	**262**	eP	**Pn**	**22 17 39.1**	**-1.5**
	comp=Z,9.4nm,0.4s						
SSLB	**Suanglung**	**16.86**	**113**	Pn	**Pn**	**22 17 42.5**	**-0.5**
	comp=Z,20nm,0.9s						
DMN	**Daman**	**16.87**	**262**	eP	**Pn**	**22 17 41.8**	**-1.4**
	comp=Z,9.5nm,0.7s						
ZAK	**Zakamensk**	**18.91**	**359**	⇓eP	**Pn**	**22 18 11.2**	**+3.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MOY	**Mondy**	**20.30**	**355**	eP	**P**	**22 18 26.2**	**+3.4**
KSRS	**Korea Array**	**20.60**	**67**	P	**P**	**22 18 26.9**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=253,slow=9.4,SNR=8.8						
KSRS	**Korea Array**	**20.60**	**67**	P	**P**	**22 18 26.9**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CN2	**Changchun**	**20.92**	**48**	⇓P	**P**	**22 18 31.6**	**+2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MK31	**Makanchi Array**	**22.64**	**319**	eP	**P**	**22 18 48.0**	**0.0**
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**22 18 48.9**	**+1.0**
	comp=Z,8.7nm,1.0s,mb4.1,baz=116,slow=11,SNR=45						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**22 18 48.9**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TKM2	**Tokmak 2**	**25.22**	**305**	eP	**P**	**22 19 13.6**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
TKM2	**Tokmak 2**	**25.22**	**305**	eP	**P**	**22 19 13.6**	**+0.8**
	comp=Z,2.7nm,0.9s,mb3.8						
UCH	**Uchtor**	**25.79**	**303**	eP	**P**	**22 19 18.5**	**+0.4**
	comp=Z,5.0nm,1.1s,mb4.0						
ZAA0	**Zalesovo Array**	**26.35**	**334**	eP	**P**	**22 19 23.1**	**+0.2**
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	**P**	**22 19 23.7**	**+0.7**
	comp=Z,9.9nm,0.8s,mb4.4,baz=132,slow=9.4,SNR=40						
ZALV				LR	LR	22 30 47.3	
	comp=Z,28nm,21.5s,MS2.8,baz=77,slow=39						
ZALV	**Zalesovo Beam**	**26.35**	**334**	P	**P**	**22 19 23.7**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
ZALV				MLR	MLR		
	comp=Z,29nm,21.5s,MS2.8						
AML	**Almayashu**	**26.36**	**302**	eP	**P**	**22 19 23.6**	**+0.4**
	comp=Z,5.2nm,1.3s,mb3.9						
EKS2	**Erkin-Say**	**26.43**	**304**	P	**P**	**22 19 24.2**	**+0.4**
KURK	**Kurchatov**	**26.90**	**323**	P	**P**	**22 19 28.5**	**+0.6**
	comp=Z,5.6nm,0.9s,mb4.1,baz=126,slow=9.1,SNR=37						
KURK	**Kurchatov**	**26.90**	**323**	eP	**P**	**22 19 27.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
KURK	**Kurchatov**	**26.90**	**323**	eP	**P**	**22 19 27.5**	**-0.4**
	comp=Z,7.3nm,1.0s,mb4.2						
MAJO	**Matsushiro**	**28.72**	**70**	eP	**P**	**22 19 43.9**	**-0.6**
KBL	**Kabul**	**29.38**	**285**	eP	**P**	**22 19 51.0**	**+0.7**
KBL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
KBL	**Kabul**	**29.38**	**285**	eP	**P**	**22 19 51.0**	**+0.7**
	comp=Z,3.8nm,1.0s,mb4.1						
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**22 20 17.8**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.7,baz=72,slow=4.7,SNR=5.5						
BVAR				LR	LR	22 35 46.8	
	comp=Z,32nm,20.4s,MS3.0,baz=129,slow=41						
BVAR	**Borovoye Array**	**32.44**	**321**	P	**P**	**22 20 17.8**	**+0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,32nm,20.4s						
ABKAR	**Akbulak array**	**37.36**	**311**	eP	**P**	**22 20 59.7**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.8						
ARU	**Arti**	**40.08**	**322**	P	**P**	**22 21 23.1**	**+0.7**
ARU	**Arti**	**40.08**	**322**	eP	**P**	**22 21 22.0**	**-0.3**
	comp=Z,1.9nm,0.4s,mb4.2						
JOF	**Joensuu**	**54.67**	**328**	eP	**P**	**22 23 15.6**	**-0.2**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
JOF	**Joensuu**	**54.67**	**328**	ep	**P**	**22 23 15.6**	**-0.2**
	comp=Z,4.0nm,0.5s,mb4.7						
KEV	**Kevo**	**56.36**	**336**	eP	**P**	**22 23 27.1**	**-0.8**
KEV	**Kevo**	**56.36**	**336**	ep	**P**	**22 23 27.1**	**-0.8**
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	**22 23 30.6**	**-1.1**
	comp=Z,2.0nm,0.6s,mb4.3,baz=73,slow=9.0,SNR=14						
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	**22 23 30.6**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAF	**Kangasniemi**	**57.03**	**327**	eP	**P**	**22 23 32.3**	**-0.4**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**57.03**	**327**	ep	**P**	**22 23 32.3**	**-0.4**
	comp=Z,2.7nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**57.21**	**326**	P	**P**	**22 23 33.8**	**-0.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=82,slow=6.9,SNR=22						
FINES	**FINESS Array B**	**57.21**	**326**	P	**P**	**22 23 33.8**	**-0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRAB	**Tennant Creek**	**58.83**	**146**	eP	**P**	**22 23 45.4**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**58.83**	**146**	eP	**P**	**22 23 45.4**	**-0.4**
	comp=Z,7.7nm,1.0s,mb4.7						
KWP	**Kalwaria Pacla**	**61.39**	**313**	eP	**P**	**22 24 02.6**	**-0.5**
KWP				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
KWP	**Kalwaria Pacla**	**61.39**	**313**	eP	**P**	**22 24 02.6**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**22 24 06.4**	**-0.1**
	comp=Z,0.6nm,0.5s,mb4.0,baz=337,slow=6.4,SNR=4.3						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	**22 24 06.4**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**64.30**	**327**	P	**P**	**22 24 21.5**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.30**	**327**	P	**P**	**22 24 21.4**	**-0.9**
	comp=Z,1.3nm,0.5s,mb4.2,baz=74,slow=6.7,SNR=11						
NOA	**NORSAR Array B**	**64.30**	**327**	P	**P**	**22 24 21.4**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**22 24 41.5**	**+0.2**
	comp=Z,0.1nm,0.3s,mb3.3,baz=83,slow=8.0,SNR=4.1						
GERES				LR	LR	22 55 30.8	
	comp=Z,31nm,18.0s,MS3.6,baz=59,slow=37						
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**22 24 41.5**	**+0.1**
GERES				MLR	MLR		
	comp=Z,31nm,18.0s						
KMBO	**Kilima Mbogo**	**70.89**	**256**	P	**P**	**22 25 04.5**	**-0.2**
INK	**Inuvik**	**71.85**	**19**	P	**P**	**22 25 09.5**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.3,baz=303,slow=6.2,SNR=6.7						
INK	**Inuvik**	**71.85**	**19**	P	**P**	**22 25 09.5**	**-0.1**
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPG	**La Plagne**	**72.93**	**313**	eP	**P**	**22 25 16.3**	**-0.2**
	comp=Z,5.7nm,0.7s,mb4.3						
LPL	**La Plagne**	**72.93**	**313**	eP	**P**	**22 25 16.6**	**+0.1**
RES	**Resolute Bay**	**73.39**	**5**	P	**P**	**22 25 19.1**	**+0.5**
	comp=Z,2.2nm,0.9s,mb4.1,baz=255,slow=5.7,SNR=2.0						
RES	**Resolute Bay**	**73.39**	**5**	P	**P**	**22 25 19.2**	**+0.5**
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
SMF	**Signal de Mont**	**74.17**	**315**	eP	**P**	**22 25 22.5**	**-1.2**
	comp=Z,4.2nm,0.7s,mb4.2						
TCF	**Toulx Ste Croi**	**75.33**	**315**	eP	**P**	**22 25 30.0**	**-0.5**
YKA	**Yellowknife Ar**	**81.38**	**17**	P	**P**	**22 26 03.5**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=329,slow=5.1,SNR=8.9						
YKA	**Yellowknife Ar**	**81.38**	**17**	P	**P**	**22 26 03.5**	**-0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**99.97**	**24**	LR	LR	23 16 35.4	
	comp=Z,66nm,20.8s,MS4.1,baz=250,slow=38						

PRE 22 22:16:17.6±1.3, 22°.15S×33°.84E, h10km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.54**	**266**	eP	Pn	22 17 13.0	+0.3
MSNA				eS	Sn	22 17 54.5	-0.2
MSNA				AML	AML	22 18 07.2	
	comp=Z,75nm,0.6s						
POGA	**Pongola**	**5.58**	**201**	eP	Pn	22 17 40.5	-0.1
POGA				eS	Sn	22 18 41.7	-3.2
POGA				AML	AML	22 19 36.1	
	comp=Z,15nm,0.5s						
KLOF	**Kloof**	**7.06**	**232**	eP	Pn	22 18 02.1	+1.1
KLOF				eS	Sn	22 19 17.9	-3.5
KLOF				AML	AML	22 20 21.9	
	comp=Z,16nm,0.4s						
PRYS	**Parys**	**7.58**	**230**	eP	Pn	22 18 10.2	+2.0
PRYS				eS	Sn	22 19 30.6	-3.6
PRYS				AML	AML	22 20 41.1	
	comp=Z,11nm,0.6s						
LBTB	**Lobatse**	**8.08**	**248**	eP	Pn	22 18 15.9	+0.8
LBTB				eS	Sn	22 19 43.1	-3.5
LBTB				AML	AML	22 20 36.6	
	comp=Z,15nm,0.7s						
SEK	**Senekal**	**8.33**	**221**	eP	Pn	22 18 19.8	+1.3
SEK				eS	Sn	22 19 49.3	-3.4
SEK				AML	AML	22 21 01.7	
	comp=Z,14nm,0.8s						
SWZ	**Schweizer**	**9.22**	**235**	eP	Pn	22 18 32.6	+1.9
SWZ				eS	Sn	22 20 10.2	-4.3
SWZ				AML	AML	22 21 33.9	
	comp=Z,8.7nm,0.6s						
BOSA	**Boshof**	**10.08**	**229**	eP	Pn	22 18 43.3	+0.8
BOSA	

YKA	**Yellowknife Ar**	**18.38**	**66**	P	**P**	**22 23 09.6**	**+1.0**
YKA				pP		22 23 33.2	
YKA				PcP	PcP	22 27 34.4	+0.5
YKA				ScP	ScP	22 30 57.7	-0.2
ARCES	**ARCESS Array B**	**50.72**	**1**	P	**P**	**22 27 50.8**	**+0.7**
	1.1nm,0.7s,mb4.0,baz=12,slow=6.2,SNR=4.4						
SONM	**Songino Array**	**54.82**	**306**	P	**P**	**22 28 21.8**	**+1.3**
	0.5nm,0.7s,mb3.6,baz=53,slow=8.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**57.38**	**324**	P	**P**	**22 28 38.4**	**-0.1**
	1.4nm,0.4s,mb4.3,baz=20,slow=6.3,SNR=7.8						
KURK	**Kurchatov**	**62.03**	**326**	P	**P**	**22 29 10.7**	**+0.2**
	1.1nm,0.6s,mb4.0,baz=30,slow=6.8,SNR=8.2						
BVAR	**Borovoye Array**	**62.06**	**332**	P	**P**	**22 29 10.1**	**-0.5**
	1.9nm,0.5s,mb4.4,baz=28,slow=6.7,SNR=11						
MKAR	**Makanchi Array**	**64.44**	**321**	P	**P**	**22 29 25.5**	**-0.9**
	0.4nm,0.6s,mb3.5,baz=43,slow=7.8,SNR=5.1						
BOSA	**Boshof**	**148.56**	**3**	PKPbc	PKPbc	22 38 35.2	-0.4
	2.5nm,1.0s,baz=211,slow=12,SNR=3.2						

MAN 22 22:19:42,12°.82N×123°.68E,h56^{km},mb4.7,ML3.6,MS3.6,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.90**	**31**	*e*P	Pn	22 19 59.8	+1.2
PVCP				*e*S	Sn	22 20 13.2	+2.4
CNP	**Catarman**	**1.01**	**108**	*e*P	Pn	22 20 01.7	+1.6
CNP				*e*S	Sn	22 20 14.7	+1.3
AUQP	**San Andres**	**1.10**	**297**	*e*P	Pn	22 20 01.6	+0.4
AUQP				*e*S	Sn	22 20 17.7	+2.2
RCP	**Roxas**	**1.55**	**216⇑**	*e*P	Pn	22 20 07.7	+0.4
GUIM	**Jordan**	**2.43**	**206**	*e*P	Pn	22 20 21.3	+2.0

*ISCJB **22** 22:41:09.9±0.5,9°.83N±0°.04×84°.33W±0°.03,h6^{km}±4^{km},*
Error ellipse: s-maj=7.6km s-min=2.8km az=28.7
*NEIC **22** 22:41:09.7,9°.86N×84°.30W,h13^{km},After HDC.*
NEIC Felt at Puriscal and in the Valle Central.
*CASC **22** 22:41:10.4±2.2,9°.85N×84°.32W,h5^{km},MD3.6,ML3.3*
ISC 22 22:41:10.1±0.5,9°.87N±0°.04×84°.33W±0°.03,h2^{km}±4^{km},n42,σ0^{s}.90/55,8C,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRS1	**Puriscal**	**0.12**	**7⇑**	*i*P	**Pg**	**22 41 12.1**	**-0.2**
CGA2	**Cerro Gallo 2**	**0.20**	**317⇑**	*i*P	**Pg**	**22 41 14.9**	**+0.9**
LAJ	**Bijagual**	**0.20**	**91⇑**	*i*P	**Pg**	**22 41 16.9**	**+3.0**
SJS	**Escuela Geolog**	**0.28**	**75⇑**	*e*P	**Pg**	**22 41 16.0**	**+0.7**
SJS				*e*S	**Sg**	**22 41 22.8**	**+3.8**
QCR	**Quepos**	**0.47**	**160**	*e*P	**Pg**	**22 41 18.4**	**-0.7**
URSC	**Urasca**	**0.54**	**93⇑**	*i*P	**Pg**	**22 41 20.8**	**+0.4**
BUS	**Buena Vista**	**0.64**	**119**	*e*P	**Pg**	**22 41 21.9**	**-0.4**
FORC	**Fortuna**	**0.68**	**330⇑**	*e*P	**Pg**	**22 41 23.8**	**+0.6**
JCR	**Jicaral**	**0.78**	**269⇑**	*i*P	**Pg**	**22 41 25.0**	**+0.1**
JCR				*e*S	**Sg**	**22 41 36.7**	**+1.7**
AMAS	**Alto Masis**	**0.99**	**318**	*i*P	**Pg**	**22 41 28.9**	**-0.1**
PTEN	**Parque Tenorio**	**1.06**	**322**	*i*P	**Pg**	**22 41 30.2**	**-0.3**
CUI	**Cuipilapa**	**1.14**	**314**	*i*P	**Pg**	**22 41 31.4**	**-0.5**
COLC	**Colonia**	**1.17**	**313**	*i*P	**Pg**	**22 41 32.1**	**-0.5**
BAR1		**1.18**	**122**	*e*P	**Pg**	**22 41 31.1**	**-1.6**
MESS	**Mesas**	**1.22**	**316**	*i*P	**Pg**	**22 41 33.2**	**-0.2**
MESS				*i*S	**Sg**	**22 41 50.2**	**+0.9**
LIM1	**Limonal**	**1.23**	**312**	*i*P	**Pg**	**22 41 33.1**	**-0.6**
LIO	**Limon**	**1.28**	**84**	*e*P	**Pg**	**22 41 34.3**	**-0.3**
VCR	**Vista de Mar**	**1.31**	**281⇑**	*e*P	**Pg**	**22 41 34.0**	**-1.2**
VCR				*e*S	**Sg**	**22 41 52.1**	**-0.1**
GPS2	**Hotel Rinc^‡n**	**1.34**	**311**	*i*P	**Pn**	**22 41 35.5**	**-0.4**
GPS2				*i*S	**Sg**	**22 41 53.4**	**+0.3**
GPS3	**Bodega del ICE**	**1.35**	**311**	*i*P	**Pn**	**22 41 35.5**	**-0.5**
GPS3				*i*S	**Sg**	**22 41 53.2**	**-0.3**
GPS1	**Guardaparques**	**1.35**	**312**	*i*P	**Pn**	**22 41 35.5**	**-0.5**
GPS1				*i*S	**Sg**	**22 41 53.3**	**-0.2**
BUEV	**Buena Vista**	**1.41**	**311**	*i*P	**Pn**	**22 41 36.5**	**-0.3**
LAPC	**Finca la Perla**	**1.41**	**309**	*i*P	**Pn**	**22 41 35.9**	**-0.9**
LAPC				*i*S	**Sg**	**22 41 55.1**	**-0.3**
GB1A	**Borinquen Arri**	**1.42**	**312**	*i*P	**Pn**	**22 41 36.5**	**-0.4**
NY14	**Universidad de**	**1.42**	**303**	*i*P	**Pn**	**22 41 35.9**	**-1.0**
GBS3	**Finca Las lm¨¡**	**1.44**	**309**	*i*P	**Pn**	**22 41 36.2**	**-0.9**
GBS2	**Las Lilas**	**1.47**	**311**	*i*P	**Pn**	**22 41 37.3**	**-0.3**
CNI	**Changuinola**	**1.84**	**104**	*e*P	**Pn**	**22 41 42.7**	**0.0**
CNI				*e*S	**Sn**	**22 42 05.6**	**-1.0**
BRU2	**Volcan**	**1.93**	**123**	*e*P	**Pn**	**22 41 43.6**	**-0.5**
BRU2				*e*P		22 41 44.1	
BRU2				*e*S	**Sn**	**22 42 08.8**	**-0.1**
TBS2		**1.96**	**123**	*e*P	**Pn**	**22 41 44.8**	**+0.4**
TBS2				*e*S	**Sn**	**22 42 10.7**	**+1.0**
SSN	**San Juan del S**	**2.07**	**314**	*e*P	**Pn**	**22 41 47.0**	**+1.1**
CONN	**Concepcion**	**2.12**	**323**	*e*P	**Pn**	**22 41 48.1**	**+1.6**
BOAB	**BOACO BROADBAN**	**2.88**	**333**	AML	AML	22 42 38.1	
	comp=N,163nm,0.5s						
HUEN		**3.05**	**324**	*e*P	**Pn**	**22 42 00.6**	**+1.2**
CSAN		**3.09**	**318**	*e*P	**Pn**	**22 42 00.6**	**+0.7**
CNGN	**Cerro Negro**	**3.50**	**319**	*e*P	**Pn**	**22 42 06.8**	**+1.2**
CRIN	**San Cristobal**	**3.88**	**317**	*e*P	**Pn**	**22 42 12.2**	**+1.4**
BCIP	**Isla Barro Col**	**4.48**	**99**	*e*Pn	**Pn**	**22 42 18.5**	**-0.6**
BCIP				*e*Sn	**Sn**	**22 43 09.8**	**-2.1**
BCIP	**Isla Barro Col**	**4.48**	**99**	*e*P	**Pn**	**22 42 18.5**	**-0.6**
BCIP				*e*S	**Sn**	**22 43 08.9**	**-3.0**
TGUH	**Tegucigalpa,Un**	**5.06**	**326**	*e*Pg	**Pg**	**22 42 41.5**	**-5.7**
	comp=N,79nm,0.9s						
TGUH				*e*Sg	**Sg**	**22 43 50.9**	**-2.0**
OTAV	**Otavalo**	**11.21**	**148**	Pn	**Pn**	**22 43 52.6**	**+1.1**
SDV	**Santo Domingo**	**13.55**	**93**	*e*Pn	**Pn**	**22 44 24.5**	**+1.0**
	comp=N,3.2nm,0.6s						

*ISCJB **22** 22:45:25.5±1.8,7°.59N±0°.04×78°.04W±0°.04,h0^{km}±11^{km},*
mb4.3/39,MS3.7/6,Error ellipse: s-maj=7.1km
s-min=4.8km az=44.2
*CASC **22** 22:45:26.9±2.9,7°.61N×78°.14W,h0^{km}±8^{km},ML4.0,*
mb4.4(NEIC)
*IDC **22** 22:45:27.3±0.7,7°.34N×78°.42W,h0^{km},mb4.0/15,*
mb1 4.2/17,mb1mx4.2/20,mbtmp4.0/17,ML3.5/2,MS3.5/9,
Ms1 3.5/9,ms1mx3.3/28,Error ellipse: s-maj=28.4km
s-min=14.1km az=63.0
*NEIC **22** 22:45:29.5±3.1,7°.56N×78°.12W,h16^{km}±20^{km},mb4.4/25,*
Error ellipse: s-maj=10.5km s-min=5.8km az=61.0
ISC 22 22:45:28.5±1.2,7°.62N±0°.03×78°.08W±0°.04,h5^{km}±7^{km},n96,σ1^{s}.31/99,mb4.2/39,MS3.7/6,1C,Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD1	**Univ de Panama**	**0.93**	**4⇑**	*i*P	**Pg**	**22 45 45.0**	**-1.4**
UPD1				*e*S	**Sg**	**22 45 59.5**	**+1.0**
UPIG		**1.99**	**314**	*e*P	**Pn**	**22 45 59.9**	**-2.8**
UPIG				*e*S	**Sn**	**22 46 28.6**	**+0.6**
BCIP	**Isla Barro Col**	**2.33**	**312**	*e*Pn	**Pn**	**22 46 05.4**	**-2.0**
BCIP				*e*Sn	**Sn**	**22 46 37.6**	**+1.2**
BCIP	**Isla Barro Col**	**2.33**	**312**	*e*P	**Pn**	**22 46 04.9**	**-2.5**
BCIP				*e*S	**Sn**	**22 46 37.3**	**+0.9**
PINA	**Piqa, Costa Ab**	**2.55**	**310**	*e*P	**Pn**	**22 46 08.8**	**-1.8**
ROSC	**El Rosal**	**4.62**	**126**	Pn	**Pn**	**22 46 41.8**	**+2.8**
	12nm,0.3s,baz=360,slow=3.1,SNR=23						
ROSC				Sn	**Sn**	**22 47 33.9**	**+0.7**
	9.6nm,0.3s,baz=72,slow=23,SNR=1.5						
ROSC				Lg		22 47 52.5	
	10.0nm,0.3s,baz=97,slow=22,SNR=4.9						
ROSC	**El Rosal**	**4.62**	**126**	Pn	**Pn**	**22 46 39.9**	**+0.8**
ROSC				Sn	**Sn**	**22 47 22.7**	**-10**
ROSC	**El Rosal**	**4.62**	**126**	*e*P	**Pn**	**22 46 39.9**	**+0.8**
OCAC	**Ocana**	**4.75**	**82**	*e*P	**Pn**	**22 46 42.4**	**+1.6**
OCAC				AML	AML	22 47 02.2	
	comp=Z,615nm,0.4s						
BARC	**Barichara**	**4.96**	**101**	*e*P	**Pn**	**22 46 46.2**	**+2.5**
OTAV	**Otavalo**	**7.34**	**183**	*e*Pn	**Pn**	**22 47 16.3**	**-0.1**
OTAV	**Otavalo**	**7.34**	**183**	*e*P	**Pn**	**22 47 16.3**	**-0.1**
SDV	**Santo Domingo**	**7.47**	**80**	Pn	**Pn**	**22 47 19.3**	**+1.0**
	comp=Z,15nm,0.3s,baz=284,slow=4.5,SNR=85						
SDV				Sn	**Sn**	**22 48 44.6**	**+1.1**
	comp=Z,49nm,0.3s,baz=339,slow=16,SNR=9.5						
SDV				LR	LR	22 50 39.0	
	comp=Z,218nm,19.0s,baz=149,slow=40						
SDV	**Santo Domingo**	**7.47**	**80**	*e*Pn	**Pn**	**22 47 19.4**	**+1.1**
SDV				Sn	**Sn**	**22 48 39.6**	**-3.9**
SDV	**Santo Domingo**	**7.47**	**80**	*e*P	**Pn**	**22 47 19.4**	**+1.1**
MTDJ	**Mount Denham**	**10.56**	**3**	*e*Pn	**Pn**	**22 48 01.5**	**+0.9**
MTDJ				*e*Sn	**Sn**	**22 49 57.7**	**-1.6**
GTBY	**Guantanamo Bay**	**12.57**	**13**	*e*Pn	**Pn**	**22 48 29.3**	**+1.2**
SDDR	**Presa de Saban**	**13.08**	**30**	*e*Pn	**Pn**	**22 48 35.7**	**+0.6**
SDDR				*e*Sn	**Sn**	**22 50 53.9**	**-7.2**

PCRV	**Puerto La Cruz**	**13.52**	**78**	Pn	**Pn**	**22 48 41.6**	**+0.4**
	comp=Z,7.3nm,0.3s,baz=254,slow=6.7,SNR=12						
PCRV				Sn	**Sn**	**22 51 09.8**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=164,slow=21,SNR=1.6						
APG	**El Apazote**	**14.19**	**302**	LR	LR	22 54 27.4	
	comp=Z,116nm,21.7s,baz=36,slow=38						
ATAH	**Atahualpa**	**14.52**	**181**	Pn	**Pn**	**22 48 54.8**	**0.0**
	comp=Z,1.1nm,0.3s,baz=356,slow=9.6,SNR=7.6						
CRPR	**Cabo Rojo, PR**	**14.86**	**45**	Pn	**Pn**	**22 48 54.8**	**-4.5**
SJG	**San Juan**	**15.61**	**47**	Pn	**Pn**	**22 49 08.1**	**-1.3**
	comp=Z,18nm,0.3s,baz=206,slow=18,SNR=5.3						
SJG	**San Juan**	**15.61**	**47**	*e*Pn	**Pn**	**22 49 07.7**	**-1.7**
	comp=Z,57nm,0.5s						
SJG	**San Juan**	**15.61**	**47**	*e*P	**Pn**	**22 49 07.7**	**-1.7**
CBYP	**Canovanas**	**15.93**	**47**	*e*Pn	**Pn**	**22 49 09.5**	**-4.0**
	comp=Z,11nm,0.5s						
CBYP				*e*Sn	**Sn**	**22 52 03.5**	**-7.0**
TEIG	**Tepich**	**15.96**	**323**	LR	LR	22 55 24.5	
	comp=Z,167nm,19.2s,baz=312,slow=37						
MTP	**Monte Pirata**	**16.04**	**48**	*e*Pn	**Pn**	**22 49 11.5**	**-3.4**
	comp=Z,18nm,0.7s						
MTP				*e*Sn	**Sn**	**22 52 08.7**	**-4.6**
CMIG	**Matias Romero**	**18.91**	**301**	LR	LR	22 57 19.6	
	comp=Z,135nm,19.6s,baz=186,slow=38						
LPAZ	**La Paz**	**25.71**	**158**	P	**P**	**22 50 59.6**	**-0.2**
	comp=Z,1.7nm,0.9s,mb3.6,baz=327,slow=11,SNR=4.4						
LPAZ				LR	LR	23 01 56.4	
	comp=Z,144nm,18.7s,MS3.5,baz=267,slow=39						
LPAZ	**La Paz**	**25.71**	**158**	*e*P	**P**	**22 50 59.4**	**-0.4**
	comp=Z,5.7nm,1.0s,mb4.1						
GOGA	**Godfrey**	**26.15**	**350**	*e*P	**P**	**22 51 03.8**	**+0.1**
	comp=Z,6.3nm,0.8s,mb4.2						
LRAL	**Lakeview Retre**	**26.61**	**343**	*e*P	**P**	**22 51 08.2**	**+0.3**
	comp=Z,3.9nm,0.7s,mb4.0						
TKL	**Tuckaleechee C**	**28.39**	**350**	LR	LR	23 04 01.1	
	comp=Z,64nm,18.5s,MS3.2,baz=113,slow=39						
SIV	**San Ignacio**	**28.87**	**144**	P	**P**	**22 51 26.1**	**-2.2**
	comp=Z,1.3nm,0.5s,mb3.9,baz=327,slow=13,SNR=5.2						
MIAR	**Mount Ida**	**30.36**	**334**	P	**P**	**22 51 41.7**	**+0.3**
USIN	**University of**	**31.44**	**345**	P	**P**	**22 51 51.0**	**+0.3**
	comp=Z,68nm,0.8s						
FVM	**French Village**	**32.23**	**342**	*e*P	**P**	**22 51 57.8**	**0.0**
	comp=Z,12nm,0.7s,mb4.8						
OLIL	**Olney**	**32.27**	**345**	P	**P**	**22 51 57.2**	**-0.9**
TXAR	**Lajitas Array**	**32.34**	**315**	P	**P**	**22 51 59.1**	**+0.2**
	comp=Z,0.9nm,0.7s,mb3.7,baz=134,slow=11,SNR=5.4						
TXAR				LR	LR	23 08 30.9	
	comp=Z,56nm,19.5s,MS3.3,baz=185,slow=43						
CCM	**Cathedral Cave**	**32.56**	**340**	*e*P	**P**	**22 51 58.7**	**-2.0**
	comp=Z,10nm,0.7s,mb4.9						
WMOK	**Wichita Mounta**	**33.03**	**328**	*e*P	**P**	**22 52 01.0**	**-3.9**
	comp=Z,4.9nm,1.1s,mb4.3						
JFWS	**Jewell Farm**	**36.75**	**345**	*e*P	**P**	**22 52 36.3**	**-0.5**
	comp=Z,10nm,0.8s,mb4.7						
LCO	**Las Campanas**	**37.10**	**169**	P	**P**	**22 52 40.8**	**+0.8**
ANMO	**Albuquerque**	**37.67**	**320**	*e*P	**P**	**22 52 46.2**	**+1.4**
	comp=Z,2.8nm,0.9s,mb4.0						
CPUP	**Villa Florida**	**39.30**	**150**	P	**P**	**22 52 56.5**	**-2.0**
	comp=Z,0.5nm,0.5s,mb3.5,baz=318,slow=12,SNR=3.7						
CPUP				LR	LR	23 11 06.5	
	comp=Z,112nm,19.6s,MS3.7,baz=155,slow=39						
ECSD	**EROS Data Cent**	**39.47**	**339**	*e*P	**P**	**22 52 59.9**	**+0.2**
	comp=Z,42nm,2.5s,mb4.7						
COWI	**Conover**	**39.51**	**348**	*e*P	**P**	**22 53 00.5**	**+0.4**
	comp=Z,4.1nm,0.8s,mb4.2						
EYMN	**Ely**	**41.78**	**346**	*e*P	**P**	**22 53 19.3**	**+0.5**
RSSD	**Black Hills**	**42.84**	**332**	*e*P	**P**	**22 53 27.1**	**-0.4**
AGMN	**Agassiz Refuge**	**43.26**	**343**	*e*P	**P**	**22 53 29.1**	**-1.7**
	comp=Z,8.9nm,1.0s,mb4.5						
RCBR	**Riachuelo**	**44.14**	**106**	P	**P**	**22 53 36.6**	**-1.8**
PDAR	**Pinedale Array**	**44.63**	**327**	P	**P**	**22 53 42.1**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.0,baz=128,slow=9.7,SNR=12						
HWUT	**Hardware Ranch**	**45.00**	**324**	*e*P	**P**	**22 53 43.3**	**-1.6**
	comp=Z,2.3nm,0.6s,mb4.2						
REDW	**Red Top Meadow**	**45.74**	**327**	*e*P	**P**	**22 53 50.6**	**-0.1**
	comp=Z,11nm,1.2s,mb4.7						
LOHW	**Long Hollow**	**45.77**	**327**	*e*P	**P**	**22 53 53.9**	**+2.9**
	comp=Z,4.8nm,0.9s,mb4.4						
TPAW	**Teton Pass**	**45.88**	**327**	*e*P	**P**	**22 53 53.5**	**+1.7**
	comp=Z,3.5nm,0.9s,mb4.3						
IMW	**Indian Meadow**	**46.14**	**327**	*e*P	**P**	**22 53 53.6**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.3						
GCMT	**Greycliff**	**46.77**	**330**	*e*P	**P**	**22 53 56.2**	**-2.6**
	comp=Z,5.2nm,0.9s,mb4.5						
GCMT				*e*PcP	PcP	22 55 31.9	-0.3
NVAR	**Mina Array Bea**	**47.47**	**317**	P	**P**	**22 54 04.9**	**+0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=127,slow=7.1,SNR=5.4						
NVAR				ScP	ScP	22 59 25.0	-4.8
	comp=Z,0.4nm,0.3s,baz=69,slow=7.8,SNR=3.8						
NVAR	**Mina Array Bea**	**47.47**	**317**	P	**P**	**22 54 04.9**	**+0.4**
NVAR				ScP	ScP	22 59 25.0	-4.8
BOZ	**Bozeman (W)**	**47.67**	**328**	*e*P	**P**	**22 54 05.2**	**-0.7**
	comp=Z,3.0nm,0.9s,mb4.3						
MCMT	**McKenzie Canyo**	**47.78**	**327**	*e*P	**P**	**22 54 07.9**	**+1.2**
	comp=Z,1.3nm,0.7s,mb4.1						
HLID	**Hailey**	**47.86**	**324**	*e*P	**P**	**22 54 07.0**	**-0.4**
	comp=Z,1.5nm,0.8s,mb4.1						
SCHQ	**Schefferville**	**47.94**	**9**	P	**P**	**22 54 10.4**	**+2.6**
	comp=Z,4.4nm,0.9s,mb4.5,baz=40,slow=18,SNR=5.5						
SCHQ	**Schefferville**	**47.94**	**9**	*e*P	**P**	**22 54 06.1**	**-1.7**
LRM	**Limekiln Ridge**	**48.22**	**328**	*e*P	**P**	**22 54 12.0**	**+1.9**
HRY	**Holter Researc**	**48.50**	**329**	*e*P	**P**	**22 54 12.7**	**+0.5**
PLCA	**Paso Flores**	**48.60**	**172**	P	**P**	**22 54 12.3**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.2,baz=351,slow=13,SNR=3.0						
PLCA	**Paso Flores**	**48.60**	**172**	P	**P**	**22 54 12.8**	**-0.2**
CMB	**Columbia Colle**	**48.73**	**315**	P	**P**	**22 54 15.0**	**+0.9**
NEW	**Newport**	**52.24**	**328**	P	**P**	**22 54 41.2**	**+0.7**
FCC	**Fort Churchill**	**52.49**	**350**	*e*P	**P**	**22 54 41.6**	**-0.6**
	comp=Z,0.1nm,1.1s						
YKA	**Yellowknife Ar**	**60.89**	**342**	P	**P**	**22 55 40.6**	**-1.3**
	comp=Z,2.0nm,0.6s,mb4.4,baz=131,slow=7.1,SNR=42						
DLBC	**Dease Lake**	**64.32**	**333**	*e*P	**P**	**22 56 05.1**	**+0.2**
SUMG	**Summit**	**69.17**	**12**	*e*P	**P**	**22 56 36.0**	**+0.4**
INK	**Inuvik**	**70.65**	**341**	P	**P**	**22 56 46.2**	**+1.5**
	comp=Z,1.1nm,0.6s,mb3.9,baz=118,slow=4.2,SNR=1.4						
INK	**Inuvik**	**70.65**	**341**	*e*P	**P**	**22 56 45.2**	**+0.5**
	comp=Z,2.2nm,0.9s,mb4.1						
ESDC	**Sonseca Array**	**72.95**	**51**	P	**P**	**22 57 01.6**	**+2.4**
	comp=Z,1.3nm,0.8s,mb3.9,baz=270,slow=5.1,SNR=5.6						
SJPF	**Ste Jean**	**75.24**	**48**	*e*P	**P**	**22 57 16.0**	**+3.5**
	comp=Z,9.3nm,0.7s,mb4.5						
BPAW	**Bear Paw Mtn.**	**75.75**	**334**	*e*P	**P**	**22 57 14.9**	**0.0**
	comp=Z,3.4nm,1.0s,mb4.2						
GRR	**Gorron**	**75.86**	**42**	*e*P	**P**	**22 57 20.2**	**+4.3**
	comp=Z,9.3nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**76.22**	**44**	*e*P	**P**	**22 57 22.5**	**+4.5**
LFF	**La Frestale**	**76.75**	**46**	*e*P	**P**	**22 57 25.2**	**+4.1**
CAF	**Calviac**	**77.69**	**46**	*e*P	**P**	**22 57 30.6**	**+4.3**
	comp=Z,11nm,1.2s,mb4.3						
TORD	**Torodi Ar. Bea**	**78.39**	**78**	P	**P**	**22 57 29.1**	**-1.7**
	comp=Z,0.7nm,0.6s,mb3.8,baz=286,slow=6.4,SNR=15						
TORD				LR	LR	23 32 55.6	
	comp=Z,36nm,18.8s,MS3.7,baz=255,slow=36						
NOA	**NORSAR Array B**	**83.05**	**29**	P	**P**	**22 57 58.6**	**+3.8**
	comp=Z,0.7nm,0.8s,mb3.7,baz=274,slow=5.1,SNR=3.7						
KEST	**Kesra**	**83.52**	**55**	P	**P**	**22 58 00.6**	**+2.8**
	comp=Z,0.9nm,1.0s,mb3.9,baz=260,slow=11,SNR=3.0						
GERES	**GERESS Array B**	**85.50**	**41**	P	**P**	**22 58 11.1**	**+3.6**
	comp=Z,0.4nm,0.8s,mb3.6,baz=262,slow=6.8,SNR=3.0						
ARCES	**ARCESS Array B**	**87.63**	**20**	P	**P**	**22 58 19.2**	**+1.7**
	comp=Z,1.5nm,0.8s,mb4.3,baz=302,slow=8.4,SNR=2.4						
MKAR	**Makanchi Array**	**123.08**	**16**	PKP	PKPdf	23 04 25.1	-1.3
	comp=Z,0.1nm,0.3s,baz=354,slow=2.9,SNR=1.6						
WMQ	**Urumqi**	**127.21**	**13**	*e*PKP	PKPdf	23 04 34.3	-0.1
LZH	**Lanzhou**	**136.49**	**358**	*e*PKP	PKPdf	23 04 47.0	-5.1
LZH				sPKP		23 05 01.3	
LZH				LR	LR		
	comp=N,120nm,18.2s						
LZH				LR	LR		
	comp=Z,150nm,20.1s,MS4.7						
NJ2	**Nanjing**	**137.37**	**339**	*e*PKP	PKPdf	23 04 49.4	-4.5
CD2	**Chengdu**	**141.66**	**357**	PKP	PKPdf	23 05 02.1	+0.4
ASAR	**Alice Springs**	**145.44**	**239**	PKPbc	PKPbc	23 05 06.0	-2.5
	comp=Z,1.5nm,0.7s,baz=112,slow=3.0,SNR=9.3						

*ISCJB **22** 23:29:52.9±0.5,42°.42N±0°.02×19°.80E±0°.03,h10^{km},Error*
ellipse: s-maj=3.4km s-min=3.2km az=8.7
*CSEM **22** 23:29:53.2±0.3,42°.42N×19°.79E,h2^{km},ML1.6/10,Error*
ellipse: s-maj=4.9km s-min=3.7km az=159.0
*TIR **22** 23:29:53.0±0.6,42°.40N×19°.81E,h6^{km},ML2.6*
*PDG **22** 23:29:53.9±0.2,42°.44N×19°.76E,h5^{km}±4^{km},ML1.6/10,*
Error ellipse: s-maj=0.4km s-min=0.7km az=0.0
ISC 22 23:29:53.4±0.5,42°.41N±0°.02×19°.81E±0°.03,h10^{km},n30,σ0^{s}.87/60,8C-10D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	**Bajram Curri**	**0.19**	**103**	*e*PG	**Pg**	**23 29 57.1**	**-0.4**
BCI				*i*SG	**Sg**	**23 30 00.5**	**+0.2**
BCI	**Bajram Curri**	**0.19**	**103**	*e*Pg	**Pg**	**23 29 57.1**	**-0.4**
	SNR=99						
BCI				*i*Sg	**Sg**	**23 30 00.5**	**+0.2**
	SNR=99						
PVY	**Plav**	**0.22**	**33**	*e*PN	**Pg**	**23 29 57.9**	**-0.1**
PVY				*i*SN	**Sg**	**23 30 01.7**	**+0.7**
PVY	**Plav**	**0.22**	**33⇑**	*i*Pg	**Pg**	**23 29 57.9**	**-0.1**
PVY				*e*Sg	**Sg**	**23 30 01.7**	**+0.7**
PVY	**Plav**	**0.22**	**33⇑**	*i*Pg	**Pg**	**23 29 57.9**	**-0.1**
PVY				*e*Sg	**Sg**	**23 30 01.7**	**+0.7**
PUK	**Puka**	**0.37**	**171**	*e*PG	**Pg**	**23 30 00.7**	**0.0**
PUK				*i*SG	**Sg**	**23 30 05.9**	**+0.2**
PDG	**Podgorica**	**0.41**	**273**	*e*PN	**Pg**	**23 30 00.2**	**-1.2**
PDG				*i*SN	**Sg**	**23 30 06.5**	**-0.3**
PDG	**Podgorica**	**0.41**	**273⇑**	*i*Pg	**Pg**	**23 30 00.2**	**-1.2**
PDG				*e*Sg	**Sg**	**23 30 06.5**	**-0.3**
TTG	**Podgorica**	**0.41**	**273⇑**	*i*Pg	**Pg**	**23 30 00.2**	**-1.2**
TTG				*e*Sg	**Sg**	**23 30 06.5**	**-0.3**
BEY	**Berane**	**0.47**	**8**	*e*PN	**Pg**	**23 30 02.6**	**+0.1**
BEY				*i*SN	**Sg**	**23 30 09.2**	**+0.6**
BEY	**Berane**	**0.47**	**8**	*e*Pg	**Pg**	**23 30 02.6**	**+0.1**
BEY				*e*Sg	**Sg**	**23 30 09.2**	**+0.6**
IVA	**Berane**	**0.47**	**8**	*e*Pg	**Pg**	**23 30 02.6**	**+0.1**
IVA				*e*Sg	**Sg**	**23 30 09.2**	**+0.6**
ULC	**Ulcinj**	**0.61**	**223**	*e*PN	**Pg**	**23 30 05.3**	**0.0**
ULC				*i*SN	**Sg**	**23 30 14.8**	**+1.5**
ULC	**Ulcinj**	**0.61**	**223⇓**	*i*Pg	**Pg**	**23 30 05.3**	**0.0**
ULC				*e*Sg	**Sg**	**23 30 14.8**	**+1.5**
ULC	**Ulcinj**	**0.61**	**223⇓**	*i*Pg	**Pg**	**23 30 05.3**	**0.0**
ULC				*e*Sg	**Sg**	**23 30 14.8**	**+1.5**
BUM	**Brajici-Budva**	**0.69**	**261**	*e*PN	**Pg**	**23

YLYR			*e*			23 55 17.7
YLYR			pmax	pmax		
	comp=Z,144nm,0.4s					
YLYR			smax			
	comp=N,1μm,0.2s					
YLYR	**Ulyunkhan**	**1.02 143**	⇓*i*Pg	**Pg**		**23 55 02.6 +1.1**
	comp=N,130nm,0.5s					
YLYR			⇑*i*Pg	**Pg**		**23 55 02.6 +1.1**
	comp=N,88nm,0.5s					
YLYR			⇑*i*Pg	**Pg**		**23 55 02.6 +1.1**
	comp=N,158nm,0.5s					
YLYR			*e*Sg	**Sg**		**23 55 18.7 +3.9**
YLYR			*e*Sb	**Sb**		**23 55 22.3 +7.2**
YLYR			Pmax			
	comp=N,80nm,0.2s					
YLYR			max			
	comp=N,1μm,0.4s					
UKT	**Uakit**	**2.02 94**	⇓*i*Pn	**Pn**		**23 55 17.4 +1.5**
UKT			⇑*i*Pg	**Pg**		**23 55 18.6 -1.9**
UKT			*e*Sg	**Sg**		**23 55 45.9 -0.7**
UKT			Pmax			
	comp=N,126nm,0.4s					
UKT			Smax			
	comp=N,1μm,1.4s					
SYVR	**Suvo**	**2.04 182**	*e*PN	**Pn**		**23 55 18.9 +2.7**
SYVR			*e*			23 55 20.8
SYVR			*e*			23 55 50.6
SYVR			pmax	pmax		
	comp=Z,143nm,0.4s					
SYVR			smax			
	comp=E,2μm,0.6s					
SYVR	**Suvo**	**2.04 182**	*e*Pn	**Pn**		**23 55 19.0 +2.8**
SYVR			*e*Pg	**Pg**		**23 55 20.8 -0.1**
SYVR			*e*Sg	**Sg**		**23 55 50.7 +3.3**
SYVR			Pmax			
	comp=E,141nm,0.6s					
SYVR			Smax			
	comp=E,2μm,0.6s					
OGRR	**Ongureny**	**2.52 216**	*e*PN	**Pn**		**23 55 24.8 +2.1**
OGRR			*e*			23 55 28.3
OGRR			*e*			23 55 59.7
OGRR			pmax	pmax		
	comp=Z,56nm,0.2s					
OGRR			smax			
	comp=E,189nm,0.3s					
OGRR	**Ongureny**	**2.52 216**	⇓*i*Pn	**Pn**		**23 55 24.8 +2.1**
OGRR			*e*Pg	**Pg**		**23 55 29.0 -1.0**
OGRR			*e*Sn	**Sn**		**23 55 55.7 +2.3**
OGRR			*e*Sg	**Sg**		**23 56 02.4 -0.2**
OGRR			Pmax			
	comp=E,56nm,0.2s					
OGRR			Smax			
	comp=E,175nm,0.2s					
MXMB	**Maximikha**	**2.56 198**	*e*Pg	**Pg**		**23 55 29.4 -1.5**
MXMB			*e*Sg	**Sg**		**23 56 05.9 +1.9**
MXMB			Pmax			
	comp=E,48nm,0.3s					
MXMB			Smax			
	comp=E,462nm,0.9s					
BOD	**Bodaibo**	**3.03 44**	*e*PN	**Pn**		**23 55 28.5 -1.3**
BOD			*e*			23 55 33.7
BOD			*e*S	**Sn**		**23 56 03.9 -2.1**
BOD			*e*			23 56 11.7
BOD			pmax	pmax		
	comp=Z,39nm,0.5s					
BOD			smax			
	comp=N,157nm,0.4s					
BOD	**Bodaibo**	**3.03 44**	⇑*i*Pn	**Pn**		**23 55 29.0 -0.8**
BOD			⇑*i*Pg	**Pg**		**23 55 35.3 -4.5**
BOD			*e*Sn	**Sn**		**23 56 05.2 -0.8**
BOD			*e*Sg	**Sg**		**23 56 12.6 -6.4**
BOD			Pmax			
	comp=N,33nm,0.4s					
BOD			Smax			
	comp=N,157nm,0.5s					
ZRHB	**Zarechye**	**3.59 210**	*e*Sg	**Sg**		**23 56 35.6 -1.4**
ZRHB			Smax			
	comp=N,365nm,1.0s					
TRG	**Tyrgan**	**3.67 218**	*e*PN	**Pn**		**23 55 40.4 +1.8**
TRG			*e*			23 55 49.2
TRG			*e*S	**Sn**		**23 56 24.1 +2.3**
TRG			*e*			23 56 37.4
TRG			pmax	pmax		
	comp=Z,22nm,0.5s					
TRG			smax			
	comp=N,117nm,0.4s					
TRG	**Tyrgan**	**3.67 218**	⇓*i*Pn	**Pn**		**23 55 40.4 +1.8**
TRG			*e*Sn	**Sn**		**23 56 24.3 +2.5**
TRG			*e*Sg	**Sg**		**23 56 37.9 -1.7**
TRG			max			
	comp=N,38nm,0.5s					
TRG			Smax			
	comp=N,117nm,0.5s					
TRTB	**Turuntaevo**	**3.76 204**	⇑*i*Pn	**Pn**		**23 55 42.2 +2.3**
TRTB			*e*Pg	**Pg**		**23 55 51.2 -2.7**
TRTB			*e*Sg	**Sg**		**23 56 40.2 -2.4**
TRTB			Pmax			
	comp=N,19nm,0.4s					
TRTB			Smax			
	comp=N,85nm,1.0s					
UUDB	**Ulan-Yde**	**4.10 202**	*e*Pg	**Pg**		**23 55 58.0 -2.2**
UUDB			*e*Sg	**Sg**		**23 56 51.0 -2.3**
UUDB			Pmax			
	comp=N,25nm,1.2s					
UUDB			Smax			
	comp=N,99nm,1.1s					
FFNB	**Fofonovo**	**4.15 210**	*e*Pn	**Pn**		**23 55 46.4 +1.2**
FFNB			*e*Pg	**Pg**		**23 55 56.5 -4.8**
FFNB			*e*Sn	**Sn**		**23 56 35.4 +1.7**
FFNB			*e*Sg	**Sg**		**23 56 51.7 -3.3**
FFNB			max			
	comp=N,58nm,0.1s					
FFNB			Smax			
	comp=N,252nm,1.0s					
CIT	**Chita**	**4.21 149**	*e*Sg	**Sg**		**23 56 56.1 -0.9**
CIT			Smax			
	comp=N,172nm,0.5s					
CRS	**Chara**	**4.71 72**	*e*PN	**Pg**		**23 56 07.7 -4.3**
CRS			*e*			23 57 07.3
CRS			pmax	pmax		
	comp=Z,27nm,1.1s					
CRS			smax			
	comp=E,203nm,1.2s					
CRS	**Chara**	**4.71 72**	⇓*i*Pn	**Pn**		**23 55 54.3 +1.4**
CRS			*e*Sg	**Sg**		**23 57 07.8 -5.2**
CRS			max			
	comp=E,20nm,1.0s					
CRS			Smax			
	comp=E,203nm,1.9s					
LSTR	**Listvyanka**	**4.94 221**	*e*Pn	**Pn**		**23 55 57.4 +1.4**
LSTR			*e*Sn	**Sn**		**23 56 54.8 +1.6**
LSTR			*e*Sg	**Sg**		**23 57 16.1 -4.2**
LSTR			max			
	comp=E,9.0nm,0.5s					
LSTR			Smax			
	comp=E,166nm,1.7s					
TLY	**Talaya**	**5.55 226**	*e*PN	**Pn**		**23 56 04.4 0.0**
TLY			*e*			23 56 21.0
TLY			*e*S	**Sn**		**23 57 08.3 +0.1**
TLY			*e*			23 57 33.8
TLY			pmax	pmax		
	comp=Z,16nm,0.6s					
TLY			smax			
	comp=N,60nm,1.5s					
TLY	**Talaya**	**5.55 226**	*e*Pn	**Pn**		**23 56 04.6 +0.2**
TLY			*e*Sn	**Sn**		**23 57 08.8 +0.6**
TLY			*e*Sg	**Sg**		**23 57 35.2 -4.7**
TLY			max			
	comp=N,15nm,0.8s					
TLY			Smax			
	comp=N,62nm,1.5s					
TUP	**Tupik**	**5.81 99**	*e*PN	**Pn**		**23 56 09.7 +1.8**
TUP			*e*			23 56 27.1
TUP			*e*S	**Sn**		**23 57 15.7 +1.2**
TUP			*e*			23 57 43.5
TUP			pmax	pmax		
	comp=Z,7.0nm,0.4s					
TUP			smax			
	comp=N,70nm,0.8s					
TUP	**Tupik**	**5.81 99**	*e*Pn	**Pn**		**23 56 08.8 +0.9**
TUP			*e*Pg	**Pg**		**23 56 26.7 -6.3**
TUP			*e*Sn	**Sn**		**23 57 13.3 -1.2**
TUP			*e*Sg	**Sg**		**23 57 43.3 -4.9**
TUP			Pmax			
	comp=N,8.0nm,0.7s					
TUP			Smax			
	comp=N,71nm,1.5s					
ARS	**Arshan**	**5.91 233**	*e*PN	**Pn**		**23 56 09.6 +0.3**
ARS			*e*S	**Sn**		**23 57 15.6 -1.4**
ARS			*e*S	**Sg**		**23 57 43.9 -7.5**
ARS			smax			
	comp=E,175nm,0.5s					
ARS	**Arshan**	**5.91 233**	*e*Pn	**Pn**		**23 56 10.1 +0.8**
ARS			*e*Sn	**Sn**		**23 57 16.4 -0.6**
ARS			*e*Sg	**Sg**		**23 57 43.6 -7.8**
ARS			max			
	comp=E,14nm,0.3s					
ARS			Smax			
	comp=E,177nm,0.8s					
KPC	**Khapcheranga**	**6.16 166**	⇑*i*Pg	**Pg**		**23 56 36.0 -3.7**
KPC			*e*Sg	**Sg**		**23 57 57.7 -1.7**
KPC			Pmax			
	comp=E,22nm,1.5s					
KPC			Smax			
	comp=E,93nm,1.7s					
ZAK	**Zakamensk**	**6.72 220**	*e*PN	**Pn**		**23 56 21.6 +1.2**
ZAK			*e*			23 56 45.6
ZAK			*e*			23 58 13.9
ZAK			pmax	pmax		
	comp=Z,4.0nm,0.5s					
ZAK			smax			
	comp=E,31nm,1.1s					
ZAK	**Zakamensk**	**6.72 220**	*e*Sg	**Sg**		**23 58 13.7 -3.6**
ZAK			Smax			
	comp=E,31nm,1.3s					
MOY	**Mondy**	**6.74 237**	⇓*i*Pn	**Pn**		**23 56 22.5 +1.7**
MOY			*e*Sn	**Sn**		**23 57 37.1 -0.4**
MOY			*e*Sg	**Sg**		**23 58 10.9 -7.2**
MOY			Pmax			
	comp=E,11nm,0.5s					
MOY			Smax			
	comp=E,55nm,1.3s					
ORL	**Orlik**	**6.82 247**	*e*PN	**Pn**		**23 56 23.1 +1.3**
ORL			*e*S	**Sn**		**23 57 36.5 -2.9**
ORL			*e*S	**Sg**		**23 58 11.9 -8.6**
ORL			smax			
	comp=N,56nm,0.9s					
ORL	**Orlik**	**6.82 247**	⇑*i*Pn	**Pn**		**23 56 23.1 +1.3**
ORL			*e*Sn	**Sn**		**23 57 37.1 -2.3**
ORL			*e*Sg	**Sg**		**23 58 12.1 -8.4**
ORL			max			
	comp=N,7.0nm,0.5s					
ORL			Smax			
	comp=N,56nm,1.1s					
ULN	**Ulaanbaatar**	**8.06 195**	*e*Sg	Sx		23 58 57.3
SONM	**Songino Array**	**8.20 198**	Pn	**Pn**		**23 56 46.0 +5.2**
	comp=N,0.2nm,0.3s,baz=11,slow=12,SNR=5.8					
SONM			Pg	Pn		23 57 13.4 +33
	comp=N,0.4nm,0.3s,baz=9.4,slow=17,SNR=5.6					
SONM			Sn	**Sn**		**23 58 22.5 +9.2**
	comp=N,0.3nm,0.3s,baz=56,slow=39,SNR=2.5					
SONM			Lg			23 59 03.1
	comp=N,0.9nm,0.3s,baz=17,slow=31,SNR=6.7					
SONM	**Songino Array**	**8.20 198**	PN	**Pn**		**23 56 46.0 +5.3**
SONM						23 57 13.4
SONM						23 58 22.5
TDJR	**Todzha**	**8.87 254**	*e*Pn	**Pn**		**23 56 52.1 +2.2**
TDJR			*e*Pg	Pn		23 57 21.0 +31
TDJR			*e*Sg	Sn		23 59 14.9 +45
ZALV	**Zalesovo Beam**	**14.65 274**	Pn	**Pn**		**23 58 08.4 -0.4**
	comp=N,0.1nm,0.3s,baz=70,slow=12,SNR=3.5					
ZALV			Lg			00 02 24.9
	comp=N,0.1nm,0.3s,baz=78,slow=24,SNR=1.2					
KURK	**Kurchatov**	**19.39 268**	P	**Pn**		**23 59 07.4 -1.3**
	comp=N,0.1nm,0.3s,baz=65,slow=11,SNR=3.5					
MKAR	**Makanchi Array**	**19.43 254**	P	**Pn**		**23 59 07.6 -1.7**
	comp=N,0.2nm,0.3s,baz=61,slow=10.0,SNR=9.3					
BVAR	**Borovoye Array**	**23.07 280**	P	**P**		**23 59 49.1 +1.9**
	comp=N,0.9nm,0.5s,mb3.5,baz=75,slow=11,SNR=4.1					
BVAR	**Borovoye Array**	**23.07 280**	P	**P**		**23 59 49.1 +1.9**
BVAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
FINES	**FINESS Array B**	**41.30 314**	P	**P**		**00 02 27.6 +0.7**
	comp=Z,1.7nm,0.9s,mb3.7,baz=101,slow=9.9,SNR=3.4					
FINES	**FINESS Array B**	**41.30 314**	P	**P**		**00 02 27.6 +0.7**
FINES			pmax	pmax		
	comp=Z,2.0nm,0.9s					

IDC ***23*** *00:05:03.4±0.5,31°.11N×103°.71E,h0km,mb4.3/26, mb1 4.3/28,mb1mx4.3/32,mbtmp4.3/28,ML4.2/2,MS3.8/16, Ms1 3.8/16,ms1mx3.6/33,Error ellipse: s-maj=16.3km s-min=11.1km az=54.0*

BJI ***23*** *00:05:05.2,31°.15N×103°.84E,h12km,mB4.7/19,mb4.6/34, ML4.7/22,Ms4.7/48,Ms7 4.4/41*

NEIC ***23*** *00:05:05.9±0.3,31°.16N×103°.88E,h10km,mb4.6/37, MS4.5/3,Error ellipse: s-maj=7.7km s-min=5.4km az=213.0*

ISCJB ***23*** *00:05:05.9±0.7,31°.14N±0°.02×103°.94E±0°.02,h20km±5km, mb4.4/78,MS4.1/29,Error ellipse: s-maj=4.0km s-min=3.5km az=19.3*

MOS ***23*** *00:05:07.2±1.6,31°.06N×104°.00E,h35km,mb4.7/45, MS4.1/17,Error ellipse: s-maj=8.7km s-min=5.1km az=107.9*

SZGRF ***23*** *00:05:08.5,30°.46N×103°.65E,h33km,mb4.7,MS4.5, Sichuan, China*

ISC 23 00:05:06.9±0.7,31°.13N±0°.02×103°.90E±0°.02,h13km±4km, n243,σ1§38/255,mb4.4/78,MS4.1/29,10C-11D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**209**	Pg	**Pg**	**00 05 10.8**	**-1.5**
CD2				Sg	**Sg**	**00 05 17.0**	**+1.1**
CD2				smax			
	comp=N,340μm,0.6s						
ENH	**Enshi**	**4.89**	**99**	*e*Pn	**Pn**	**00 06 22.1**	**+2.0**
ENH				*e*Sn	**Sn**	**00 07 16.4**	**-0.1**
LZH	**Lanzhou**	**4.94**	**359**	Pn	**Pn**	**00 06 23.1**	**+2.3**
LZH				Sn	**Sn**	**00 07 18.1**	**+0.3**
LZH				Sg	**Sg**	**00 07 41.6**	**-3.9**
LZH				smax			
	comp=N,790nm,1.0s						
LZH				smax			
	comp=E,1μm,1.1s						
LZH				LR	LR		
	comp=E,11μm,7.8s						
LZH				LR	LR		
	comp=Z,11μm,9.3s						
XAN	**Xi'an**	**5.13**	**54**	Pn	**Pn**	**00 06 24.3**	**+0.8**
XAN				Sn	**Sn**	**00 07 22.5**	**-0.1**
XAN				Sg	**Sg**	**00 07 47.3**	**-4.4**
XAN				smax			
	comp=N,1μm,1.0s						
XAN				smax			
	comp=E,420nm,1.0s						
XAN				LR	LR		
	comp=N,4μm,11.0s						
XAN				LR	LR		
	comp=E,780nm,8.8s						
XAN				LR	LR		
	comp=Z,590nm,7.0s						
GYA	**Guiyang**	**5.25**	**152**	Pn	**Pn**	**00 06 26.1**	**+1.0**
GYA				Sn	**Sn**	**00 07 26.9**	**+1.4**
GYA				smax			
	comp=N,2μm,0.9s						
GYA				smax			
	comp=E,1μm,0.9s						
GYA				LR	LR		
	comp=N,12μm,6.8s						
GYA				LR	LR		
	comp=E,9μm,5.0s						
GYA				LR	LR		
	comp=Z,14μm,6.9s						
KMI	**Kunming**	**6.08**	**190**	⇑Pn	**Pn**	**00 06 36.3**	**-0.1**
KMI				Sn	**Sn**	**00 07 45.8**	**-0.1**
KMI				smax			
	comp=N,250nm,1.8s						
KMI				smax			
	comp=E,180nm,1.3s						
KMI				LR	LR		
	comp=N,4μm,9.0s						
KMI				LR	LR		
	comp=E,8μm,10.3s						
KMI				LR	LR		
	comp=Z,3μm,12.1s						
GTA	**Gaotai**	**8.91**	**339**	*e*P	**Pn**	**00 07 16.3**	**+1.1**
GTA				pP		00 07 23.3	
GTA				sP		00 07 26.8	
GTA				S	**Sn**	**00 08 58.9**	**+3.5**
GTA				sS		00 09 06.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.0s						
GTA				LR	LR		
	comp=N,2μm,9.5s						
GTA				LR	LR		
	comp=E,2μm,10.7s						
GTA				LR	LR		
	comp=Z,2μm,12.2s						
WHN	**Wuhan**	**9.00**	**91**	P	**Pn**	**00 07 18.8**	**+2.2**
WHN				S	**Sn**	**00 08 56.5**	**-1.4**
WHN				LR	LR		
	comp=N,8μm,6.0s						
WHN				LR	LR		
	comp=E,7μm,6.9s						
WHN				LR	LR		
	comp=Z,8μm,7.7s						
BTO	**Baotou**	**10.67**	**26**	*e*P	**Pn**	**00 07 48.3**	**+8.9**
BTO				S	Sn	00 09 59.8	+21
BTO				LR	LR		
	comp=N,800nm,9.4s						
BTO				LR	LR		
	comp=E,720nm,11.2s						
LSA	**Lhasa**	**11.10**	**266**	P	**Pn**	**00 07 44.6**	**-0.8**
LSA				LR	LR		
	comp=N,350nm,8.0s						
LSA				LR	LR		
	comp=E,2μm,8.0s						
LSA				LR	LR		
	comp=Z,3μm,8.0s						
HHC	**Hu-ho-hao-te**	**11.50**	**30**	*e*P	**Pn**	**00 07 50.3**	**-0.5**
HHC				pP		00 07 57.6	
HHC				sP		00 08 02.6	
HHC				S	**Sn**	**00 09 59.8**	**+0.7**
HHC				sS		00 10 11.0	
HHC				SS		00 10 14.3	
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC				LR	LR		
	comp=N,2μm,5.7s						
HHC				LR	LR		
	comp=E,1μm,5.0s						
HHC				LR	LR		
	comp=Z,1μm,6.6s						
GZH	**Guangzhou**	**11.61**	**131**	P	**Pn**	**00 07 47.1**	**-5.3**
GZH				S	**Sn**	**00 09 51.3**	**-11**
GZH				LR	LR		
	comp=N,4μm,8.3s						
GZH				LR	LR		
	comp=E,4μm,9.7s						
GZH				LR	LR		
	comp=Z,7μm,9.4s						
TIA	**Tai'an**	**12.12**	**62**	*e*P	**Pn**	**00 08 00.8**	**+1.5**
TIA				LR	LR		
	comp=N,630nm,8.0s						
TIA				LR	LR		
	comp=E,490nm,8.0s						
NJ2	**Nanjing**	**12.78**	**82**	*e*P	**Pn**	**00 08 09.1**	**+0.7**
NJ2				pP		00 08 12.4	
NJ2				sP		00 08 15.5	
NJ2				PP		00 08 19.4	
NJ2				S	**Sn**	**00 10 30.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				LR	LR		
	comp=N,1μm,11.8s						
NJ2				LR	LR		
	comp=E,3μm,10.5s						
NJ2				LR	LR		
	comp=Z,2μm,12.8s						
CHTO	**Chiang Mai**	**13.06**	**201**	*e*P	**Pn**	**00 08 12.9**	**+0.7**
QIZ	**Qiongzhong**	**13.20**	**155**	P	**Pn**	**00 08 14.1**	**0.0**
QIZ				S	**Sn**	**00 10 45.8**	**+5.1**
QIZ				sS		00 10 50.8	
QIZ				SS		00 11 00.4	
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,76nm,8.6s						
QIZ				LR	LR		
	comp=N,2μm,11.6s						
QIZ				LR	LR		
	comp=E,770nm,8.6s						
QIZ				LR	LR		
	comp=Z,3μm,10.8s						
BJT	**Baijiatuau**	**13.34**	**45**	*e*P	**Pn**	**00 08 13.3**	**-2.6**
BJI	**Beijing**	**13.36**	**45**	P	**Pn**	**00 08 15.9**	**-0.2**
BJI				pmax	pmax		
	comp=Z,18nm,0.5s						
BJI				LR	LR		
	comp=N,990nm,10.1s						
BJI				LR	LR		
	comp=E,630nm,8.5s						
CM31	**Chiang Mai Arr**	**13.40**	**201**	*e*Pn	**Pn**	**00 08 20.2**	**+3.4**
CMAR	**Chiang Mai Arr**	**13.40**	**201**	Pn	**Pn**	**00 08 14.1**	**-2.7**
	comp=E,0.4nm,0.3s,baz=13,slow=12,SNR=13						
CMAR				Lg		00 12 17.9	
	comp=E,0.5nm,0.3s,baz=1.9,slow=30,SNR=3.0						
CMAR				LR	LR	00 13 53.3	
	comp=E,367nm,18.0s,baz=7.1,slow=40						
QZH	**Quanzhou**	**14.36**	**112**	P	**Pn**	**00 08 38.3**	**+8.4**
QZH				S	**Sn**	**00 11 24.0**	**+15**
QZH				LR	LR		
	comp=N,4μm,7.8s						
QZH				LR	LR		
	comp=E,5μm,9.1s						
QZH				LR	LR		
	comp=Z,8μm,10.5s						
SSE	**Sheshan**	**14.81**	**86**	P	**Pn**	**00 08 34.3**	**-1.7**
SSE				S	**Sn**	**00 11 18.1**	**-1.9**
SSE				pmax	pmax		
	comp=Z,43nm,0.7s						
SSE				pmax	pmax		
	comp=Z,82nm,4.1s						
SSE				LR	LR		
	comp=N,1μm,9.1s						
SSE				LR	LR		
	comp=E,350nm,9.1s						
SSE				LR	LR		
	comp=Z,1μm,8.7s						
NST	**Nakhon Sawan**	**15.77**	**193**	P	**Pn**	**00 08 52.1**	**+3.3**
GUN	**Gumba**	**16.01**	**263**	*e*P	**Pn**	**00 08 48.1**	**-3.8**
	comp=Z,49nm,0.8s						
DL2	**Dalian**	**16.45**	**57**	P	**Pn**	**00 09 02.5**	**+5.2**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				pmax	pmax		
	comp=Z,200nm,6.8s						
DL2				LR	LR		
	comp=N,240nm,17.6s						
DL2				LR	LR		
	comp=E,270nm,16.5s						
DL2				LR	LR		
	comp=Z,240nm,13.1s						
PKI	**Pulchoki**	**16.51**	**262**	*e*P	**Pn**	**00 08 55.4**	**-2.8**
	comp=Z,58nm,0.7s						
KKN	**Kakani**	**16.56**	**263**	*e*P	**Pn**	**00 08 55.8**	**-3.0**
	comp=Z,75nm,0.8s						
YHNB	**Yeheng**	**16.73**	**108**	Pn	**Pn**	**00 09 02.2**	**+1.2**
DMN	**Daman**	**16.76**	**263**	*e*P	**Pn**	**00 08 57.9**	**-3.5**
	comp=Z,85nm,0.9s						
SONM	**Songino Array**	**16.79**	**6**	Pn	**Pn**	**00 09 00.8**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=187,slow=12,SNR=30						
SONM				Lg		00 13 59.2	
	comp=Z,1.3nm,0.3s,baz=199,slow=21,SNR=8.9						
SONM				LR	LR	00 15 22.8	
	comp=Z,44nm,20.3s,baz=7.5,slow=37						
TPUB	**Ta-pu**	**16.79**	**114**	Pn	**Pn**	**00 08 59.9**	**-1.9**
	comp=Z,39nm,1.1s						
SSLB	**Suanglung**	**16.80**	**112**	*e*Pn	**Pn**	**00 09 03.8**	**+1.9**
	comp=Z,78nm,1.4s						
ULN	**Ulaanbaatar**	**16.88**	**7**	*e*P	**Pn**	**00 09 02.1**	**-0.7**
ULN				*e*		00 12 07.2	
ULN				pmax	pmax		
	comp=Z,15nm,0.8s						
ULN	**Ulaanbaatar**	**16.88**	**7**	*e*Pn	**Pn**	**00 09 02.1**	**-0.7**
	comp=Z,16nm,0.8s						
ULN				*e*Sn	**Sn**	**00 12 07.2**	**-3.0**
NACB	**Ninganchiao**	**17.13**	**110**	Pn	**Pn**	**00 09 06.0**	**-0.1**
WMQ	**Urumqi**	**18.01**	**319**	P	**Pn**	**00 09 16.1**	**-0.8**

WMQ sP sP 00 09 22.3 -0.3
WMQ S **Sn** **00 12 32.4 -5.1**
WMQ sS sS 00 12 39.5 -10
WMQ SS 00 12 57.0
WMQ PcP PcP 00 13 54.0 +2.5
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ pmax pmax
comp=Z,79nm,3.8s
WMQ LR LR
comp=N,900nm,11.0s
WMQ LR LR
comp=E,1μm,8.0s
WMQ LR LR
comp=Z,440nm,14.0s
SNY Shenyang 19.04 50 ⇓P **Pn** **00 09 29.6 +0.2**
SNY S **Sn** **00 13 04.4 +1.9**
SNY pmax pmax
comp=Z,19nm,2.3s
SNY pmax pmax
comp=Z,200nm,3.5s
SNY LR LR
comp=N,350nm,15.7s
SNY LR LR
comp=E,340nm,16.5s
SNY LR LR
comp=Z,390nm,13.7s
ZAK Zakamensk 19.23 359 *e*P **Pn** **00 09 31.5 -0.2**
ZAK pmax pmax
comp=Z,9.0nm,1.5s
TLY Talaya 20.53 360 *e*P **P** **00 09 46.6 +1.8**
TLY *e*S **S** **00 13 23.1 -11**
TLY pmax pmax
comp=Z,10.0nm,0.8s
TLY MLR MLR
comp=Z,471nm,11.0s,MS4.1
TLY Talaya 20.53 360 *e*P **P** **00 09 43.2 -1.6**
MOY Mondy 20.63 355 *e*P **P** **00 09 48.2 +2.3**
MOY pmax pmax
comp=Z,61nm,1.7s
KSRS Korea Array 20.80 66 P **P** **00 09 48.3 +0.5**
comp=Z,51nm,0.6s,baz=264,slow=11,SNR=248
KSRS LR LR 00 18 50.8
comp=Z,54nm,18.6s,MS3.0,baz=260,slow=40
KSRS Korea Array 20.80 66 P **P** **00 09 48.3 +0.5**
KSRS pmax pmax
comp=Z,51nm,0.6s
KSRS MLR MLR
comp=Z,54nm,18.6s,MS3.0
IRK Irkutsk 21.09 1 *e*P **P** **00 09 52.2 +1.3**
IRK pmax pmax
comp=Z,92nm,1.0s,mb5.1
CN2 Changchun 21.20 47 ⇓*i*P **P** **00 09 53.4 +1.3**
CN2 *es*P sP 00 09 59.6 +2.2
CN2 pmax pmax
comp=Z,80nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,12.0s,MS4.1
CN2 LR LR
comp=E,400nm,12.0s,MS4.1
CN2 LR LR
comp=Z,400nm,12.0s,MS4.0
JOW Kunigami 21.73 95 P **P** **00 09 59.5 +1.4**
comp=Z,19nm,0.4s,mb4.9,baz=317,slow=5.6,SNR=5.9
JOW Kunigami 21.73 95 P **P** **00 09 59.5 +1.4**
DDI Dehra Dun 22.22 275 *ex* **P** **00 10 03.5 +0.3**
MK31 Makanchi Array 22.84 319 *e*P **P** **00 10 09.6 -0.1**
MKAR Makanchi Array 22.84 319 P **P** **00 10 08.3 -1.3**
comp=Z,26nm,1.2s,mb4.5,baz=125,slow=12,SNR=29
MKAR ScP ScP 00 17 35.6 -2.4
comp=Z,1.1nm,0.7s,baz=117,slow=4.2,SNR=7.6
MKAR LR LR 00 19 41.5
comp=Z,431nm,20.4s,MS3.9,baz=127,slow=39
MKAR Makanchi Array 22.84 319 P **P** **00 10 08.4 -1.3**
MKAR pmax pmax
comp=Z,26nm,1.2s
MKAR pmax pmax
comp=N,1.0nm,0.7s
MKAR MLR MLR
comp=Z,431nm,20.4s
KSH Kashi 24.20 298 *e*P **P** **00 10 25.1 +2.0**
KSH *e*pP 00 10 29.3
KSH *es*P sP 00 10 32.1 +3.4
KSH *e*PP 00 11 00.1
KSH *e*PcP PcP 00 14 05.3 +1.8
KSH *e*S **S** **00 14 40.3 -0.8**
KSH *es*S sS 00 14 48.1 +0.5
KSH *e*SS 00 15 35.0
KSH pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
KSH pmax pmax
comp=Z,84nm,3.3s
KSH LR LR
comp=N,470nm,9.1s
KSH LR LR
comp=E,440nm,9.5s
KSH LR LR
comp=Z,670nm,11.0s,MS4.4
MDJ Mudanjiang 24.22 49 P **P** **00 10 25.0 +1.8**
MDJ pmax pmax
comp=Z,32nm,1.4s,mb4.6
MDJ LR LR
comp=N,280nm,8.4s
MDJ LR LR
comp=E,160nm,8.4s
MDJ LR LR
comp=Z,270nm,9.8s
MDJ Mudanjiang 24.22 49 *e*P **P** **00 10 22.1 -1.1**
comp=Z,34nm,1.1s,mb4.7
ULHL Ulahol 24.69 304 P **P** **00 10 30.1 +2.5**
SNR=12
KZA Kyzart 25.35 304 P **P** **00 10 36.8 +3.2**
SNR=29
TKM2 Tokmak 2 25.35 306 P **P** **00 10 35.9 +2.3**
SNR=6.0
TKM2 Tokmak 2 25.35 306 *e*P **P** **00 10 33.4 -0.2**
TKM2 pmax pmax
comp=Z,16nm,1.2s,mb4.4
TKM2 Tokmak 2 25.35 306 *e*P **P** **00 10 33.4 -0.2**
comp=Z,16nm,1.2s,mb4.4
KBK Karagaybulak 25.73 305 P **P** **00 10 39.7 +2.7**
SNR=12
UCH Uchtor 25.92 303 P **P** **00 10 42.2 +3.6**
SNR=11
UCH Uchtor 25.92 303 *e*P **P** **00 10 38.8 +0.1**
comp=Z,19nm,1.1s,mb4.5
FRU Bishkek 26.01 305 P **P** **00 10 41.0 +1.4**
AML Almayashu 26.48 303 P **P** **00 10 46.7 +2.9**
SNR=7.0
AML Almayashu 26.48 303 *e*P **P** **00 10 42.9 -0.9**
comp=Z,14nm,1.2s,mb4.4
EKS2 Erkin-Say 26.56 304 *e*P **P** **00 10 45.2 +0.7**
comp=Z,10nm,1.1s,mb4.3
ZAA0 Zalesovo Array 26.62 334 *e*P **P** **00 10 43.0 -1.9**
ZALV Zalesovo Beam 26.62 334 P **P** **00 10 43.1 -1.8**
comp=Z,5.0nm,0.7s,mb4.1,baz=134,slow=9.0,SNR=15
ZALV LR LR 00 21 30.6
comp=Z,272nm,18.8s,MS3.8,baz=72,slow=37
ZALV Zalesovo Beam 26.62 334 P **P** **00 10 43.1 -1.8**
ZALV pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
ZALV MLR MLR
comp=Z,272nm,18.8s,MS3.8
KURK Kurchatov 27.12 323 P **P** **00 10 47.2 -2.2**
comp=Z,7.1nm,0.9s,mb4.2,baz=130,slow=9.5,SNR=25
KURK ScP ScP 00 17 47.0 -3.0
comp=Z,1.2nm,1.0s,baz=111,slow=3.0,SNR=4.9
KURK LR LR 00 22 10.7
comp=Z,373nm,18.4s,MS4.0,baz=120,slow=38
KURK Kurchatov 27.12 323 *e*P **P** **00 10 48.9 -0.5**
KURK *e* 00 14 08.5
KURK pmax pmax
comp=Z,28nm,1.3s,mb4.6
KURK Kurchatov 27.12 323 *e*P **P** **00 10 48.9 -0.5**
comp=Z,28nm,1.3s,mb4.6
KURK *e*PcP PcP 00 14 08.5 -1.4
BOD Bodaibo 27.57 12 *e*P **P** **00 10 53.9 +0.5**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
KLR Kul'dur 27.68 41 *e*P **P** **00 10 52.6 -1.9**
KLR MLR MLR
comp=N,900nm,15.0s,MS4.5
KLR MLR MLR
comp=E,500nm,15.0s,MS4.5

NVS Novosibirsk 27.90 334 *e*P **P** **00 10 56.2 -0.2**
NVS pmax pmax
comp=Z,20nm,2.1s,mb4.4
NVS pmax pmax
comp=N,12nm,1.8s
NVS pmax pmax
comp=E,14nm,2.0s
PSI Prapat 28.57 190 P **P** **00 11 00.4 -2.3**
comp=E,2.7nm,0.4s,mb4.3,baz=352,slow=14,SNR=3.4
PSI LR LR 00 23 07.1
comp=E,273nm,18.4s,MS3.9,baz=281,slow=38
PSI Prapat 28.57 190 P **P** **00 11 00.4 -2.3**
PSI pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
PSI MLR MLR
comp=Z,273nm,18.4s,MS3.9
MAJO Matsushiro 28.90 70 *e*P **P** **00 11 04.2 -1.3**
MJAR Matsushiro Arr 28.90 70 P **P** **00 11 04.1 -1.5**
comp=Z,3.1nm,0.8s,mb4.1,baz=270,slow=10,SNR=9.0
MJAR LR LR 00 22 36.0
comp=Z,113nm,19.2s,MS3.5,baz=280,slow=36
MJAR Matsushiro Arr 28.90 70 P **P** **00 11 04.1 -1.5**
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR MLR MLR
comp=Z,113nm,19.2s
KBL Kabul 29.40 286 *e*P **P** **00 11 11.5 +1.5**
KBL pmax pmax
comp=Z,11nm,1.2s,mb4.5
KBL Kabul 29.40 286 *e*P **P** **00 11 11.5 +1.5**
comp=Z,11nm,1.2s,mb4.5
BVAR Borovoye Array 32.66 322 P **P** **00 11 35.8 -2.7**
comp=Z,1.5nm,0.7s,mb4.0,baz=120,slow=8.5,SNR=8.9
BVAR PcP PcP 00 14 22.5 -1.6
comp=Z,2.0nm,0.7s,baz=128,slow=2.4,SNR=5.6
BVAR LR LR 00 25 52.5
comp=Z,323nm,19.5s,MS4.0,baz=111,slow=38
BVAR Borovoye Array 32.66 322 P **P** **00 11 35.8 -2.7**
BVAR 00 14 22.5
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR MLR MLR
comp=Z,323nm,19.5s
BVAR Borovoye Array 32.66 322 P **P** **00 11 35.8 -2.7**
BVAR PcP PcP 00 14 22.5 -1.6
BVAR LR LR 00 25 52.5
BRVK Borovoye 32.73 322 *ce*P **P** **00 11 41.8 +2.7**
BRVK pmax pmax
comp=Z,12nm,1.7s,mb4.5
BRVK Borovoye 32.73 322 P **P** **00 11 38.6 -0.5**
comp=Z,7.3nm,0.9s,mb4.6
ASAJ Asahikawa 32.97 56 LR LR 00 24 55.0
comp=Z,90nm,18.5s,MS3.5,baz=160,slow=36
YSS Yuzh-Sakhalins 33.67 51 *e*P **P** **00 11 48.6 +1.2**
YSS pmax pmax
comp=Z,33nm,2.5s,mb4.8
YAK Yakutsk 35.14 21 *e*P **P** **00 11 59.3 -0.6**
YAK pmax pmax
comp=Z,21nm,1.0s,mb5.0
ABKAR Akbulak array 37.52 312 *e*P **P** **00 12 19.4 -1.0**
comp=Z,2.4nm,0.8s,mb4.0
AKTK Aktyubinsk 38.99 313 P **P** **00 12 30.6 -2.2**
AKTO Aktyubinsk 38.99 313 P **P** **00 12 30.6 -2.2**
comp=Z,0.8nm,0.5s,mb3.8,baz=90,slow=20,SNR=2.4
AKTO Aktyubinsk 38.99 313 P **P** **00 12 30.6 -2.2**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KAPI Kappang 39.00 154 P **P** **00 12 31.3 -2.0**
comp=Z,10nm,0.7s,mb4.7,baz=325,slow=12,SNR=3.6
SVE Sverdlovsk 39.37 324 ⇓*e*P **P** **00 12 38.5 +2.6**
SVE pmax pmax
comp=Z,13nm,1.1s,mb4.6
ARU Arti 40.30 322 *d i*P **P** **00 12 45.0 +1.4**
ARU *e* 00 14 17.5
ARU S **S** **00 18 53.4 +2.7**
ARU SS SS 00 21 48.2 -0.8
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.5
ARU MLR MLR
comp=Z,193nm,18.0s,MS4.0
ARU Arti 40.30 322 *e*P **P** **00 12 42.7 -0.9**
comp=Z,36nm,1.7s,mb4.8
GUMO Guam 41.44 106 LR LR 00 27 09.9
comp=Z,76nm,21.5s,MS3.5,baz=343,slow=32
TIXI Tiksi 42.76 11 *e*P **P** **00 13 01.6 -2.0**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
TIXI MLR MLR
comp=Z,180nm,17.0s,MS4.0
TIXI Tiksi 42.76 11 *e*P **P** **00 13 02.5 -1.0**
comp=Z,8.4nm,0.8s,mb4.5
ZEI Tsey 48.41 301 *e*P **P** **00 13 46.2 -2.5**
ZEI pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KIV Kislovodsk 49.15 303⇑*e*P **P** **00 13 54.4 0.0**
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,100nm,13.0s,MS4.0
KIV Kislovodsk 49.15 303 *e*P **P** **00 13 54.9 +0.5**
VSR Storozhevoye 50.94 313 *e*P **P** **00 14 08.6 +0.8**
VSR pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR pmax pmax
comp=E,9.0nm,1.0s
BILL Bilibino 51.22 25⇑*e*P **P** **00 14 09.3 -0.4**
BILL pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BILL Bilibino 51.22 25 *e*P **P** **00 14 08.7 -1.0**
comp=Z,4.6nm,0.8s,mb4.5
OBN Obninsk 52.34 318⇑*e*P **P** **00 14 19.7 +1.5**
OBN pmax pmax
comp=Z,15nm,1.6s,mb4.7
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.4
OBN Obninsk 52.34 318 P **P** **00 14 18.5 +0.2**
FITZ Fitzroy Crossi 53.22 154 *e*P **P** **00 14 23.6 -1.5**
comp=Z,7.0nm,0.8s,mb4.6
FITZ Fitzroy Crossi 53.22 154 *e*P **P** **00 14 24.1 -1.0**
comp=Z,6.0nm,0.9s,mb4.5
BR131 Keskin Array S 56.58 300 *e*P **P** **00 14 50.5 +1.2**
BRTR Keskin Array B 56.58 300 P **P** **00 14 47.0 -2.3**
comp=Z,1.1nm,0.9s,mb3.9,baz=96,slow=10,SNR=5.9
BRTR LR LR 00 44 40.9
comp=Z,38nm,18.4s,MS3.5,baz=169,slow=42
KEV Kevo 56.63 336 P **P** **00 14 48.2 -1.0**
ARCES ARCESS Array B 57.16 336 P **P** **00 14 51.1 -1.9**
comp=Z,2.3nm,0.8s,mb4.3,baz=87,slow=8.1,SNR=6.6
ARCES PcP PcP 00 15 45.7 -1.7
comp=Z,1.3nm,0.5s,baz=87,slow=6.2,SNR=5.9
ARCES ARCESS Array B 57.16 336 P **P** **00 14 51.1 -1.9**
ARCES 00 15 45.7
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 57.24 313 P **P** **00 14 51.2 -2.6**
comp=Z,1.3nm,0.6s,mb4.2,baz=74,slow=6.0,SNR=10
AKASG LR LR 00 41 02.5
comp=Z,147nm,18.8s,MS4.1,baz=70,slow=38
AKASG Malin Array Be 57.24 313 P **P** **00 14 51.2 -2.6**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG MLR MLR
comp=Z,147nm,18.8s
FINES FINESS Array B 57.45 326 P **P** **00 14 53.2 -1.9**
comp=Z,1.2nm,0.4s,mb4.3,baz=94,slow=7.6,SNR=8.0
FINES FINESS Array B 57.45 326 P **P** **00 14 53.2 -1.9**
FINES pmax pmax
comp=Z,1.0nm,0.4s
COEN Coen 58.59 134 *e*P **P** **00 15 04.0 +0.3**
WRAB Tennant Creek 58.59 146 *e*P **P** **00 15 03.6 0.0**
VRI Vrincioaia 59.93 308 ⇓*i*P **P** **00 15 14.1 +1.4**
PLOR Plostina 59.99 308 ⇓*i*P **P** **00 15 15.0 +2.0**
BURAR Bucovina Array 60.48 310 ⇓*i*P **P** **00 15 15.4 -1.0**
MLR Muntele Rosu 60.56 308 ⇓*i*P **P** **00 15 20.1 +3.1**
KWP Kalwaria Pacla 61.56 313 *e*P **P** **00 15 23.4 -0.3**
KWP Kalwaria Pacla 61.56 313 *e*P **P** **00 15 23.0 -0.7**
KWP pmax pmax
comp=Z,19nm,1.1s,mb5.1
KWP Kalwaria Pacla 61.56 313 *e*P **P** **00 15 22.9 -0.7**
comp=Z,19nm,1.1s,mb5.1

KWP Kalwaria Pacla 61.56 313 ⇓*i*P **P** **00 15 23.3 -0.4**
ASAR Alice Springs 61.61 149 P **P** **00 15 24.0 -0.2**
comp=Z,4.3nm,0.5s,mb4.8,baz=340,slow=6.6,SNR=50
ASAR PcP PcP 00 16 04.8 -1.0
comp=Z,2.2nm,0.8s,baz=334,slow=5.8,SNR=4.6
ASAR Alice Springs 61.61 149 P **P** **00 15 24.0 -0.2**
ASAR 00 16 04.8
ASAR pmax pmax
comp=Z,4.0nm,0.5s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
KOLS Kolonicke sedl 62.02 312 *e*P **P** **00 15 26.4 -0.4**
KOLS pmax pmax
comp=Z,4.0nm,1.4s,mb4.4
KOLS Kolonicke sedl 62.02 312 *e*P **P** **00 15 26.4 -0.4**
comp=Z,4.0nm,1.4s,mb4.4
KOLS Kolonicke sedl 62.02 312 *e*P **P** **00 15 26.4 -0.4**
STHS Stebnicka Huta 62.54 313 *e*P **P** **00 15 29.7 -0.6**
STHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
STHS Stebnicka Huta 62.54 313 *e*P **P** **00 15 29.7 -0.6**
comp=Z,2.1nm,0.9s,mb4.3
STHS Stebnicka Huta 62.54 313 *e*P **P** **00 15 29.7 -0.6**
NIE Niedzica 63.12 313 *e*P **P** **00 15 36.0 +1.9**
OJC Ojcow 63.20 314 *e*P **P** **00 15 35.5 +0.9**
KECS Kecovo 63.29 312 *e*P **P** **00 15 36.0 +0.7**
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
KECS Kecovo 63.29 312 *e*P **P** **00 15 36.0 +0.7**
comp=Z,1.3nm,0.7s,mb4.2
KECS Kecovo 63.29 312 *e*P **P** **00 15 36.0 +0.7**
PSZ Piszkesteto 63.84 312 *e*P **P** **00 15 39.8 +0.9**
VYHS Vyhne 64.33 313 *e*P **P** **00 15 43.5 +1.4**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
VYHS Vyhne 64.33 313 *e*P **P** **00 15 43.5 +1.4**
comp=Z,3.8nm,1.4s,mb4.2
VYHS Vyhne 64.33 313 *e*P **P** **00 15 43.5 +1.4**
OKC Ostrava-Krasne 64.33 314 *e*P **P** **00 15 43.5 +1.4**
OKC MLR MLR
comp=Z,300nm,20.6s,MS4.5
OKC Ostrava-Krasne 64.33 314 *e*P **P** **00 15 43.5 +1.4**
OKC AMS AMS 00 44 40.0
comp=Z,300nm,20.6s
NB2 NORSAR Subarra 64.54 327 P **P** **00 15 40.9 -2.4**
comp=Z,2.4nm,0.6s,mb4.4,baz=73,slow=6.9
NOA NORSAR Array B 64.54 327 P **P** **00 15 40.8 -2.5**
comp=Z,1.3nm,0.8s,mb4.0,baz=74,slow=6.7,SNR=7.3
NOA LR LR 00 45 54.4
comp=Z,82nm,18.2s,MS4.0,baz=10.0,slow=38
NOA NORSAR Array B 64.54 327 P **P** **00 15 40.8 -2.5**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,83nm,18.2s
MORC Moravsky Berou 64.72 314 *e*P **P** **00 15 43.8 -0.9**
MORC Moravsky Berou 64.72 314⇑*i*P **P** **00 15 43.7 -1.0**
NAO01 NORSAR Array S 64.75 327 *e*P **P** **00 15 44.5 -0.2**
PKSM Moragy 65.20 310 ⇓*i*P **P** **00 15 43.0 -4.9**
DPC Dobruska-Polom 65.28 315 *e*P **P** **00 15 50.0 +1.7**
DPC MLR MLR
comp=Z,300nm,16.1s,MS4.6
DPC Dobruska-Polom 65.28 315 *e*P **P** **00 15 50.0 +1.7**
DPC AMS AMS 00 45 10.0
comp=Z,300nm,16.1s
TREC Trest 66.14 314 AMS AMS 00 45 40.0
comp=Z,300nm,16.9s
PVCC Panska Ves 66.27 316 *e*P **P** **00 15 55.4 +0.7**
PVCC MLR MLR
comp=Z,300nm,12.0s,MS4.7
PVCC Panska Ves 66.27 316 *e*P **P** **00 15 55.4 +0.7**
PVCC AMS AMS 00 46 00.0
comp=Z,300nm,12.0s
PRU Pruhonice 66.48 315 *e*P **P** **00 15 57.1 +1.1**
PRU MLR MLR
comp=Z,300nm,17.5s,MS4.6
PRU Pruhonice 66.48 315 *e*P **P** **00 15 57.1 +1.1**
PRU AMS AMS 00 46 00.0
comp=Z,300nm,17.5s
BRG Berggiesshubel 66.52 316 *e*(P) **P** **00 15 58.1 +1.8**
comp=Z,5.8nm,1.5s,mb4.4
ARSA Arzberg 66.85 312 ⇓*i*P **P** **00 15 59.1 +0.7**
comp=Z,4.6nm,1.4s,mb4.3
CLL Collm 66.92 317 *e*P **P** **00 16 00.2 +1.4**
comp=Z,4.0nm,1.0s,mb4.4
CLL Collm 66.92 317 *i* P **P** **00 16 00.0 +1.2**
CLL *i* 00 16 08.0
CLL pmax pmax
comp=Z,19nm,2.1s,mb4.8
CLL MLR MLR
comp=Z,200nm,20.9s,MS4.3
CLL Collm 66.92 317 *i* P **P** **00 16 00.0 +1.2**
comp=Z,19nm,2.1s,mb4.8
CLL *i* 00 16 08.0
CLL LR LR
comp=Z,200nm,20.9s,MS4.3
CLL Collm 66.92 317 *i* P **P** **00 16 00.0 +1.2**
comp=Z,19nm,2.1s,mb4.8
CLL *i* (pP) pP 00 16 08.0 +5.0
CLL *e*SS SS 00 29 18.0 +8.9
CLL *e*SSS 00 32 18.0
CLL Lm 00 46 00.0
comp=N,100nm,18.0s
CLL Lm 00 46 00.0
comp=E,100nm,21.7s
CLL Lm 00 46 00.0
comp=Z,200nm,20.9s
KHC Kasperske Hory 67.37 315 *e*P **P** **00 16 04.2 +2.5**
KHC MLR MLR
comp=Z,400nm,18.8s,MS4.7
KHC Kasperske Hory 67.37 315 *e*P **P** **00 16 04.2 +2.5**
KHC AMS AMS 00 46 30.0
comp=Z,400nm,18.8s
SOKA Soboth 67.37 312⇑*i*P **P** **00 16 00.3 -1.4**
comp=Z,6.4nm,1.3s,mb4.5
GEC2 GERESS Array S 67.40 314 *e*P **P** **00 16 02.5 +0.6**
comp=Z,3.0nm,1.0s,mb4.3
GEC2 GERESS Array S 67.40 314 *e*P **P** **00 16 02.5 +0.6**
GEC2 pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
GERES GERESS Array B 67.40 314 P **P** **00 16 00.4 -1.5**
comp=Z,0.8nm,0.6s,mb3.9,baz=77,slow=6.0,SNR=8.8
GERES LR LR 00 46 60.0
comp=Z,233nm,18.9s,MS4.4,baz=63,slow=37
GERES GERESS Array B 67.40 314 P **P** **00 16 00.4 -1.5**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,233nm,18.9s
MOA Molln 67.42 313⇑*i*P **P** **00 16 04.0 +1.9**
comp=Z,6.1nm,1.4s,mb4.4
BSEG Bad Segeberg 67.47 320 *e*P **P** **00 16 04.0 +1.8**
comp=Z,22nm,1.7s,mb4.9
BSEG Bad Segeberg 67.47 320 *e*P **P** **00 16 04.0 +1.8**
BSEG pmax pmax
comp=Z,22nm,1.7s,mb4.9
COLD Coldfoot 67.51 24 *e*P **P** **00 16 02.0 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
TANN Tannenbergstha 67.56 316 *e*P **P** **00 16 04.7 +1.8**
comp=Z,5.0nm,1.4s,mb4.3
NKC Novy Kostel 67.64 316 AMS AMS 00 46 50.0
comp=Z,200nm,17.7s
WET Wettzell 67.79 315 *e*P **P** **00 16 05.4 +1.0**
comp=Z,9.0nm,1.6s,mb4.5
WET Wettzell 67.79 315 *e*P **P** **00 16 05.4 +1.0**
WET pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
ROTZ Rotzenmuhle 67.96 316 *e*P **P** **00 16 06.8 +1.4**
comp=Z,4.0nm,1.0s,mb4.4
NRDL Niedersach Rie 68.14 319 *e*P **P** **00 16 07.5 +1.0**
comp=Z,11nm,1.4s,mb4.7
CLZ Clausthal 68.24 318 *e*P **P** **00 16 08.6 +1.5**
comp=Z,6.0nm,0.9s,mb4.6
CLZ Clausthal 68.24 318 *e*P **P** **00 16 08.6 +1.5**
CLZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
RJOB Jochberg 68.38 313 *e*P **P** **00 16 09.5 +1.4**
comp=Z,7.0nm,1.5s,mb4.5
GRA1 Grafenberg Arr 68.58 316 *e*P **P** **00 16 10.2 +0.9**
comp=Z,15nm,1.4s,mb4.7
GRA1 LR LR
comp=Z,300nm,19.0s,MS4.5
GRF Grafenberg Arr 68.58 316 *e*P **P** **00 16 10.2 +0.9**
comp=Z,15nm,1.4s,mb4.7
GRF *e*L 00 47 43.1
comp=Z,282nm,19.0s

GRF Grafenberg Arr 68.58 316 *eP* **P 00 16 10.2 +0.9**
GRF pmax pmax
comp=Z,15nm,1.4s,mb4.7
GRF MLR MLR
comp=Z,300nm,19.0s,MS4.5
GRF Grafenberg Arr 68.58 316 *eP* **P 00 16 10.2 +0.9**
GRF pmax pmax
comp=Z,15nm,1.4s,mb4.7
GRF MLR MLR
comp=Z,300nm,19.0s,MS4.5
BPAW Bear Paw Mtn. 68.65 27 *eP* **P 00 16 09.5 0.0**
comp=Z,4.2nm,0.8s,mb4.4
PPLA Purkeypile 68.72 28 *eP* **P 00 16 10.3 +0.4**
comp=Z,6.2nm,0.6s,mb4.7
KTH Kantishna Hill 68.93 28 *eP* **P 00 16 11.0 -0.2**
comp=Z,13nm,1.5s,mb4.7
COLA College 69.48 26 *eP* **P 00 16 13.9 -0.7**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
COLA College 69.48 26 *eP* **P 00 16 13.9 -0.7**
comp=Z,7.5nm,0.8s,mb4.7
FETA Feichten 69.95 313⇑ *iP* **P 00 16 17.5 -0.3**
comp=Z,5.4nm,1.0s,mb4.4
AQU L'Aquila 70.14 308 *eP* **P 00 16 19.1 0.0**
KMBO Kilima Mbogo 70.75 256 P **P 00 16 22.0 -1.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=0.0,slow=20,SNR=2.9
KMBO Kilima Mbogo 70.75 256 P **P 00 16 22.0 -1.2**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KDAK Kodiak Island 70.91 33 P **P 00 16 22.9 -0.5**
comp=Z,5.2nm,0.6s,mb4.6
KDAK Kodiak Island 70.91 33 P **P 00 16 23.0 -0.5**
KDAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CDF Champ du Feu 71.47 316 *eP* **P 00 16 23.7 -3.4**
comp=Z,3.1nm,0.6s,mb4.1
CDF Champ du Feu 71.47 316 *eP* **P 00 16 23.7 -3.4**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CDF Champ du Feu 71.47 316 *eP* **P 00 16 23.7 -3.4**
comp=Z,1.5nm,0.6s,mb4.1
RMQ Roma 71.54 138 *eP* **P 00 16 27.5 -0.2**
comp=Z,8.0nm,0.5s,mb4.9
WLF Walferdange 71.58 317 *eP* **P 00 16 28.0 +0.3**
STKA Stephens Creek 72.13 147 *eP* **P 00 16 30.5 -0.6**
comp=Z,6.4nm,0.5s,mb4.8
STKA Stephens Creek 72.13 147 P **P 00 16 30.5 -0.6**
comp=Z,7.4nm,0.5s,mb4.9,baz=334,slow=4.4,SNR=32
STKA Stephens Creek 72.13 147 *eP* **P 00 16 30.7 -0.4**
comp=Z,0.6nm,0.4s,mb3.9
INK Inuvik 72.19 19 P **P 00 16 30.4 -0.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=301,slow=4.9,SNR=17
INK Inuvik 72.19 19 P **P 00 16 30.4 -0.6**
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 72.19 19 *eP* **P 00 16 30.7 -0.4**
BMRM Bremner River 72.79 28 *eP* **P 00 16 34.7 0.0**
comp=Z,9.1nm,0.9s,mb4.7
DAWY Dawson 72.99 24 *eP* **P 00 16 35.5 -0.3**
LPG La Plagne 73.10 313 *eP* **P 00 16 35.1 -1.8**
comp=Z,7.3nm,0.7s,mb4.4
LPG La Plagne 73.10 313 *eP* **P 00 16 35.1 -1.8**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LPG La Plagne 73.10 313 *eP* **P 00 16 35.1 -1.8**
comp=Z,3.7nm,0.7s,mb4.4
LPL La Plagne 73.11 313 *eP* **P 00 16 35.0 -1.9**
comp=Z,9.5nm,0.7s,mb4.5
LPL La Plagne 73.11 313 *eP* **P 00 16 35.0 -1.9**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPL La Plagne 73.11 313 *eP* **P 00 16 35.0 -1.9**
comp=Z,4.8nm,0.7s,mb4.5
RES Resolute Bay 73.72 5 P **P 00 16 39.1 -0.9**
comp=Z,1.5nm,0.9s,mb3.9,baz=332,slow=5.5
RES Resolute Bay 73.72 5 P **P 00 16 39.2 -0.9**
RES pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
RES Resolute Bay 73.72 5 *eP* **P 00 16 39.4 -0.7**
CMSA Cobar Meteorol 73.85 144 *eP* **P 00 16 41.4 +0.1**
SMF Signal de Mont 74.35 315 *eP* **P 00 16 42.0 -2.2**
KEST Kesra 75.89 303 P **P 00 16 51.8 -1.5**
comp=Z,0.7nm,0.8s,mb3.6,baz=12,slow=16,SNR=3.0
YKA Yellowknife Ar 81.71 17 P **P 00 17 23.7 -1.0**
comp=Z,1.0nm,0.6s,mb3.9,baz=330,slow=5.2,SNR=17
YKA Yellowknife Ar 81.71 17 P **P 00 17 23.7 -1.1**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ESDC Sonseca Array 82.87 312 P **P 00 17 30.3 -1.0**
comp=Z,0.4nm,0.6s,mb3.6,baz=54,slow=6.4,SNR=3.1
ESDC LR LR 00 56 19.6
comp=Z,67nm,18.4s,MS4.0,baz=225,slow=37
SFS San Fernando 86.17 311 P **P 00 17 48.2 +0.1**
EDM Edmonton 89.96 21 *eP* **P 00 18 05.2 -0.6**
TOA0 Torodi Ar. Sit 93.46 287 P **P 00 18 23.7 +1.0**
TORD Torodi Ar. Bea 93.46 287 P **P 00 18 20.4 -2.3**
comp=Z,1.2nm,0.9s,mb4.3,baz=68,slow=3.0,SNR=6.4
TORD Torodi Ar. Bea 93.46 287 P **P 00 18 20.4 -2.3**
QSPA South Pole Qui 120.91 180 PKP PKPdf 00 23 56.0 -1.8
comp=Z,1.0nm,0.8s,baz=272,slow=3.0,SNR=4.4
ROSC El Rosal 144.17 357 PKP PKPdf 00 24 41.3 -1.9
comp=Z,5.2nm,0.5s,baz=89,slow=22,SNR=5.1
CAM4 Nova Friburgo 148.90 278⇑ *iP* PKPbc 00 24 56.0 +1.1
CAM4 *i* 00 25 03.9
CAM4 *i* 00 25 18.7
CAM4 *i* 00 25 18.9
CAM4 *i* 00 25 22.0
CAM4 *i* 00 25 42.7
USHA Ushuaia 155.69 191 PKP PKPdf 00 24 57.8 -2.1
comp=Z,8.9nm,1.0s,baz=180,slow=1.0,SNR=4.3
PLCA Paso Flores 169.42 204 PKP PKPdf 00 25 13.5 -0.5
comp=Z,5.5nm,1.1s,baz=310,slow=12,SNR=2.9
PLCA Paso Flores 169.42 204 PKIKP PKPdf 00 25 13.5 -0.4
PLCA pmax pmax
comp=Z,6.0nm,1.1s

ISCJB ***23*** *00:13:09.6±0.3, 7°.54N±0°.03×78°.11W±0°.03, h10km, mb4.2/31, MS3.7/7, Error ellipse: s-maj=5.1km s-min=4.1km az=32.5*
IDC ***23*** *00:13:09.2±0.6, 7°.40N×78°.18W, h0km, mb3.9/13, mb1 4.2/17, mb1mx4.1/24, mbtmp4.0/17, ML4.4/4, MS3.4/10, Ms1 3.4/10, ms1mx3.2/27, Error ellipse: s-maj=22.9km s-min=13.2km az=61.0*
NEIC ***23*** *00:13:11.6±0.3, 7°.57N×78°.07W, h10km, mb4.4/15, Error ellipse: s-maj=7.4km s-min=5.9km az=64.0*
ISC 23 00:13:11.7±0.3,**7°.52N**±0°.03×**78°.13W**±0°.03,**h10**km,**n85,**
σ1°**23**/85,**mb4.2**/31,**MS3.7**/7,**1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD1	**Univ de Panama**	**1.03**	**6**	*eP*	**Pg**	**00 13 27.6**	**-4.0**
UPD1				*eS*	**Sg**	**00 13 44.1**	**-0.9**
UPIG		**2.02**	**317**⇓	*eP*	**Pn**	**00 13 42.1**	**-3.8**
UPIG				*eS*	**Sn**	**00 14 10.1**	**-1.1**
BCIP	**Isla Barro Col**	**2.36**	**314**	*ePn*	**Pn**	**00 13 47.2**	**-3.3**
BCIP				*eSn*	**Sn**	**00 14 21.8**	**+2.2**
BCIP	**Isla Barro Col**	**2.36**	**314**	*eP*	**Pn**	**00 13 47.1**	**-3.4**
BCIP				*eS*	**Sn**	**00 14 20.6**	**+1.1**
PINA	**Piqa, Costa Ab**	**2.58**	**312**	*eP*	**Pn**	**00 13 50.4**	**-3.2**
ROSC	**El Rosal**	**4.61**	**125**	Pn	**Pn**	**00 14 21.7**	**+0.2**
	8.3nm,0.3s,baz=300,slow=0.9,SNR=18						
ROSC				LR	LR	00 15 50.3	
	comp=Z,80nm,18.7s,baz=164,slow=35						
ROSC	**El Rosal**	**4.61**	**125**	*ePn*	**Pn**	**00 14 23.3**	**+1.9**
ROSC				*eSn*	**Sn**	**00 15 23.0**	**+7.9**
ROSC	**El Rosal**	**4.61**	**125**	*eP*	**Pn**	**00 14 23.3**	**+1.9**
OCAC	**Ocana**	**4.81**	**81**	*eS*	**Sn**	**00 15 21.1**	**+0.8**
OCAC				AML	AML	00 15 28.5	
	comp=Z,747nm,0.4s						
BAR1		**5.41**	**289**	*eP*	**Pn**	**00 14 32.3**	**-0.3**
BUS	**Buena Vista**	**5.93**	**290**	*eP*	**Pn**	**00 14 38.2**	**-1.4**
URSC	**Urasca**	**6.04**	**293**	*eP*	**Pn**	**00 14 41.3**	**0.0**
QCR	**Quepos**	**6.27**	**288**	*eP*	**Pn**	**00 14 44.0**	**-0.4**
PRS1	**Puriscal**	**6.59**	**292**	*eP*	**Pn**	**00 14 48.9**	**+0.2**
OTAV	**Otavalo**	**7.24**	**183**	*ePn*	**Pn**	**00 14 58.0**	**+0.4**
OTAV	**Otavalo**	**7.24**	**183**	*eP*	**Pn**	**00 14 58.0**	**+0.4**
SDV	**Santo Domingo**	**7.54**	**79**	Pn	**Pn**	**00 15 01.3**	**-0.5**
	comp=Z,20nm,0.3s,baz=260,slow=9.7,SNR=97						
SDV				Sn	**Sn**	**00 16 26.4**	**-1.1**
	comp=Z,27nm,0.3s,baz=294,slow=21,SNR=8.5						
SDV				LR	LR	00 18 21.2	
	comp=Z,249nm,18.5s,baz=351,slow=41						
SDV	**Santo Domingo**	**7.54**	**79**	*ePn*	**Pn**	**00 15 01.3**	**-0.5**
SDV				*eSn*	**Sn**	**00 16 22.8**	**-4.7**
SDV	**Santo Domingo**	**7.54**	**79**	*eP*	**Pn**	**00 15 01.3**	**-0.5**
MTDJ	**Mount Denham**	**10.66**	**3**	*ePn*	**Pn**	**00 15 43.9**	**-0.7**
MTDJ				*eSn*	**Sn**	**00 17 45.4**	**+1.2**
GTBY	**Guantanamo Bay**	**12.68**	**13**	*ePn*	**Pn**	**00 16 13.1**	**+0.8**
SDDR	**Presa de Saban**	**13.19**	**30**	*ePn*	**Pn**	**00 16 18.9**	**-0.3**
PCRV	**Puerto La Cruz**	**13.59**	**78**	Pn	**Pn**	**00 16 23.2**	**-1.5**
	comp=Z,6.2nm,0.3s,baz=220,slow=3.9,SNR=12						
PCRV				Sn	**Sn**	**00 18 49.9**	**-6.0**
	comp=Z,0.6nm,0.3s,baz=141,slow=13,SNR=2.4						
APG	**El Apazote**	**14.20**	**303**	LR	LR	00 22 18.7	
	comp=Z,120nm,19.3s,baz=83,slow=39						
ATAH	**Atahualpa**	**14.42**	**181**	Pn	**Pn**	**00 16 34.2**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=13,slow=12,SNR=2.1						
ATAH				LR	LR	00 21 57.9	
	comp=Z,182nm,20.7s,baz=188,slow=37						
PAYG	**Puerto Ayora**	**14.60**	**237**	*ePn*	**Pn**	**00 16 40.5**	**+1.9**
AOPR	**Arecibo Observ**	**15.44**	**45**	*ePn*	**Pn**	**00 16 46.7**	**-3.1**
	comp=Z,9.9nm,0.6s						
SJG	**San Juan**	**15.71**	**47**	*ePn*	**Pn**	**00 16 51.9**	**-1.4**
TEIG	**Tepich**	**16.01**	**323**	LR	LR	00 22 45.3	
	comp=Z,152nm,18.0s,baz=312,slow=36						
CBYP	**Canovanas**	**16.03**	**47**	*ePn*	**Pn**	**00 16 53.7**	**-3.7**
CBYP				*eSn*	**Sn**	**00 19 49.2**	**-6.1**
MTP	**Monte Pirata**	**16.14**	**48**	*ePn*	**Pn**	**00 16 53.8**	**-5.1**
NNA	**Nana**	**19.42**	**176**	P	**Pn**	**00 17 37.5**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=336,slow=3.2,SNR=2.9						
NNA	**Nana**	**19.42**	**176**	P	**Pn**	**00 17 38.6**	**-0.8**
LPAZ	**La Paz**	**25.64**	**157**	P	**P**	**00 18 41.0**	**-0.8**
	comp=Z,1.3nm,0.7s,mb3.6,baz=337,slow=3.4,SNR=7.6						
LPAZ				LR	LR	00 29 28.9	
	comp=Z,112nm,18.4s,MS3.4,baz=189,slow=38						
LPAZ	**La Paz**	**25.64**	**157**	*eP*	**P**	**00 18 42.7**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.0						
GOGA	**Godfrey**	**26.24**	**350**	*eP*	**P**	**00 18 48.3**	**+1.2**
	comp=Z,5.4nm,0.8s,mb4.1						
TKL	**Tuckaleechee C**	**28.48**	**350**	LR	LR	00 31 31.2	
	comp=Z,72nm,20.6s,MS3.3,baz=41,slow=38						
SIV	**San Ignacio**	**28.82**	**144**	P	**P**	**00 19 08.0**	**-2.4**
	comp=Z,1.5nm,0.6s,mb3.9,baz=326,slow=8.3,SNR=8.3						
WVT	**Waverly**	**29.83**	**344**	P	**P**	**00 19 18.5**	**-0.6**
MIAR	**Mount Ida**	**30.43**	**334**	*eP*	**P**	**00 19 23.5**	**-0.9**
SIUC	**Southern Illin**	**31.70**	**343**	*eP*	**P**	**00 19 34.2**	**-1.4**
FVM	**French Village**	**32.31**	**342**	*eP*	**P**	**00 19 41.4**	**+0.4**
	comp=Z,34nm,1.6s,mb4.9						
TXAR	**Lajitas Array**	**32.38**	**315**	P	**P**	**00 19 41.2**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.6,baz=145,slow=7.2,SNR=5.3						
TXAR				LR	LR	00 34 52.3	
	comp=Z,55nm,20.7s,MS3.2,baz=180,slow=40						
CCM	**Cathedral Cave**	**32.64**	**341**	*eP*	**P**	**00 19 42.7**	**-1.2**
	comp=Z,9.1nm,0.7s,mb4.8						
KSU1	**Kansas State U**	**35.58**	**335**	*eP*	**P**	**00 20 09.9**	**+0.5**
JFWS	**Jewell Farm**	**36.84**	**345**	*eP*	**P**	**00 20 20.4**	**+0.3**
	comp=Z,7.4nm,0.7s,mb4.6						
ANMO	**Albuquerque**	**37.72**	**320**	*eP*	**P**	**00 20 28.9**	**+1.2**
	comp=Z,2.4nm,0.8s,mb4.0						
CPUP	**Villa Florida**	**39.24**	**150**	P	**P**	**00 20 38.3**	**-2.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=328,slow=9.5,SNR=2.3						
CPUP	**Villa Florida**	**39.24**	**150**	*eP*	**P**	**00 20 41.1**	**+0.5**
EYMN	**Ely**	**41.86**	**347**	*eP*	**P**	**00 21 01.7**	**-0.2**
	comp=Z,7.9nm,1.2s,mb4.2						
RCBR	**Riachuelo**	**44.16**	**106**	P	**P**	**00 21 21.6**	**+0.5**
BW06	**Boulder Array**	**44.69**	**327**	*eP*	**P**	**00 21 25.7**	**+0.8**
	comp=Z,18nm,2.0s,mb4.6						
PDAR	**Pinedale Array**	**44.69**	**327**	P	**P**	**00 21 24.1**	**-0.8**
	comp=Z,1.2nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=10.0						
PDAR				LR	LR	00 42 22.4	
	comp=Z,48nm,19.5s,MS3.4,baz=165,slow=39						
HWUT	**Hardware Ranch**	**45.05**	**324**	*eP*	**P**	**00 21 27.3**	**-0.6**
REDW	**Red Top Meadow**	**45.79**	**327**	*eP*	**P**	**00 21 34.6**	**+0.9**
	comp=Z,8.4nm,1.1s,mb4.6						
LOHW	**Long Hollow**	**45.83**	**327**	*eP*	**P**	**00 21 35.0**	**+1.1**
	comp=Z,57nm,2.7s,mb5.0						
TPAW	**Teton Pass**	**45.93**	**327**	*eP*	**P**	**00 21 35.7**	**+1.0**
	comp=Z,7.2nm,1.3s,mb4.4						
NVAR	**Mina Array Bea**	**47.51**	**317**	P	**P**	**00 21 48.2**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=171,slow=5.1,SNR=4.1						
BOZ	**Bozeman (W)**	**47.73**	**328**	*eP*	**P**	**00 21 48.2**	**-0.7**
	comp=Z,4.0nm,1.0s,mb4.4						
MCMT	**McKenzie Canyo**	**47.84**	**327**	*eP*	**P**	**00 21 49.6**	**-0.1**
	comp=Z,1.2nm,0.8s,mb4.0						
HLID	**Hailey**	**47.92**	**325**	*eP*	**P**	**00 21 50.9**	**+0.6**
SCHQ	**Schefferville**	**48.05**	**9**	P	**P**	**00 21 50.5**	**-0.6**
	comp=Z,4.7nm,0.9s,mb4.5,baz=193,slow=6.7,SNR=4.2						
SCHQ				LR	LR	00 39 11.7	
	comp=Z,54nm,20.6s,MS3.5,baz=158,slow=32						
PLCA	**Paso Flores**	**48.51**	**172**	P	**P**	**00 21 53.2**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.3,baz=0.0,slow=9.1,SNR=2.7						
PLCA	**Paso Flores**	**48.51**	**172**	*eP*	**P**	**00 21 55.8**	**+1.0**
NEW	**Newport**	**52.30**	**328**	P	**P**	**00 22 23.5**	**0.0**
YKA	**Yellowknife Ar**	**60.97**	**342**	P	**P**	**00 23 23.5**	**-1.5**
	comp=Z,1.9nm,0.7s,mb4.3,baz=131,slow=7.2,SNR=31						
SUMG	**Summit**	**69.28**	**12**	*eP*	**P**	**00 24 19.4**	**+0.7**
INK	**Inuvik**	**70.73**	**341**	P	**P**	**00 24 27.6**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=112,slow=10,SNR=3.4						
ESDC	**Sonseca Array**	**73.05**	**51**	P	**P**	**00 24 43.2**	**+1.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=282,slow=5.3,SNR=6.0						
SJPF	**Ste Jean**	**75.34**	**47**	*eP*	**P**	**00 24 57.7**	**+2.2**
	comp=Z,9.8nm,0.9s,mb4.4						
BPAW	**Bear Paw Mtn.**	**75.81**	**334**	*eP*	**P**	**00 24 57.8**	**0.0**
	comp=Z,2.6nm,1.0s,mb4.1						
ETSF	**Etsaut**	**75.82**	**48**	*eP*	**P**	**00 25 00.9**	**+2.6**
	comp=Z,5.1nm,0.9s,mb4.2						
GRR	**Gorron**	**75.96**	**42**	*eP*	**P**	**00 25 01.4**	**+2.4**
	comp=Z,16nm,1.1s,mb4.6						
MFF	**Saint Martin d**	**76.32**	**44**	*eP*	**P**	**00 25 04.4**	**+3.4**
	comp=Z,11nm,1.1s,mb4.4						
LDF	**La Druitiere**	**76.47**	**42**	*eP*	**P**	**00 25 04.5**	**+2.7**
	comp=Z,14nm,1.2s,mb4.5						
CAF	**Calviac**	**77.79**	**46**	*eP*	**P**	**00 25 12.1**	**+2.7**
TORD	**Torodi Ar. Bea**	**78.46**	**78**	P	**P**	**00 25 12.8**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=290,slow=6.4,SNR=19						
ARCES	**ARCESS Array B**	**87.74**	**20**	P	**P**	**00 26 01.8**	**+1.2**
	comp=Z,1.7nm,0.9s,mb4.3,baz=316,slow=6.3,SNR=2.8						
KURK	**Kurchatov**	**118.61**	**17**	PKP	PKPdf	00 32 00.2	+0.2
	comp=Z,0.1nm,0.4s,baz=338,slow=2.2,SNR=2.5						
CASY	**Casey**	**121.02**	**184**	PKPdf	PKPdf	00 32 04.6	+0.4
WMQ	**Urumqi**	**127.31**	**13**	*e*PKP	PKPdf	00 32 16.0	-1.0
HHC	**Hu-ho-hao-te**	**131.06**	**350**	*e*PKP	PKPdf	00 32 22.6	-1.6
HHC				PP	PP	00 34 49.0	+9.4
HHC				PKS		00 35 57.5	
HHC				SKS	SKSdf	00 39 29.0	-7.0
HHC				SKKS	SKKSac	00 41 36.0	-1.8
HHC				AMB	AMB		
	comp=Z,120nm,8.7s						
HHC				LR	LR		
	comp=N,65nm,22.5s,MS4.5						
HHC				LR	LR		
	comp=E,71nm,22.0s,MS4.5						
HHC				LR	LR		
	comp=Z,70nm,23.3s,MS4.3						
LZH	**Lanzhou**	**136.59**	**358**	*e*PKP	PKPdf	00 32 30.5	-4.2
LZH				sPKP		00 32 35.0	
LZH				LR	LR		
	comp=N,120nm,18.3s						
LZH				LR	LR		
	comp=Z,160nm,20.0s,MS4.8						
CD2	**Chengdu**	**141.75**	**357**	PKP	PKPdf	00 32 44.1	-0.2
ASAR	**Alice Springs**	**145.34**	**239**	PKPbc	PKPbc	00 32 48.0	-2.6
	comp=Z,2.0nm,0.8s,baz=117,slow=3.8,SNR=7.7						

IDC ***23*** *00:14:48.3±0.8, 51°.32N×178°.61W, h0km, mb3.9/18, mb1 4.1/19, mb1mx4.0/30, mbtmp4.0/19, MS3.1/1, Ms1 3.1/1, ms1mx2.5/37, Error ellipse: s-maj=26.6km s-min=14.8km az=173.0*
MOS ***23*** *00:14:53.9±0.9, 51°.35N×178°.41W, h51km, mb4.5/15, Error ellipse: s-maj=17.2km s-min=11.4km az=83.2*
NEIC ***23*** *00:14:54.4±1.3, 51°.24N×178°.54W, h44km±10km, mb4.2/10, Error ellipse: s-maj=15.4km s-min=8.7km az=174.0*
ISCJB ***23*** *00:14:55.2±1.3, 51°.3N±0°.1×178°.4W±0°.1, h62km±10km, mb4.1/26, Error ellipse: s-maj=21.7km s-min=9.5km az=167.1*
ISC 23 00:14:55.9±1.3,**51°.4N**±0°.1×**178°.5W**±0°.1,**h51**km±11km,**n77,**
σ0°**97**/74,**mb4.1**/26,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.23**	**64**	P	**Pn**	**00 15 15.6**	**-1.1**
ADK				S	**Sn**	**00 15 31.9**	**-0.3**
GSTR	**Great Sitkin T**	**1.67**	**63**	*ePn*	**Pn**	**00 15 23.0**	**+0.3**
GSTR				*eSn*	**Sn**	**00 15 43.9**	**+1.0**
NIKO	**Nikolski**	**6.13**	**71**	Pn	**Pn**	**00 16 23.4**	**-0.4**
	56nm,0.6s						
UNV	**Unalaska Valle**	**7.70**	**66**	P	**Pn**	**00 16 46.4**	**+1.2**
UNV				*e*Sn	**Sn**	**00 18 10.5**	**-0.5**
AKUT	**Akutan**	**8.19**	**65**	Pn	**Pn**	**00 16 50.9**	**-1.1**
SDPT	**Sand Point**	**11.46**	**63**	Pn	**Pn**	**00 17 36.6**	**-0.1**
PETK	**Petropavlovsk-**	**14.70**	**286**	LR	LR	00 23 13.0	
	comp=Z,87nm,21.9s,baz=280,slow=34						
OHAK	**Old Harbor**	**15.78**	**58**	*e*Pn	**Pn**	**00 18 33.7**	**-0.7**
	11nm,0.6s						
SVW2	**Sparrevohn**	**15.95**	**43**	*e*Pn	**Pn**	**00 18 38.0**	**+1.4**
KDAK	**Kodiak Island**	**16.26**	**57**	Pn	**Pn**	**00 18 38.4**	**-2.2**
RSO	**Redoubt South**	**16.95**	**48**	Pn	**Pn**	**00 18 50.1**	**+0.9**
RC01	**Rabbit Creek A**	**18.55**	**47**	*e*Pn	**Pn**	**00 19 08.9**	**+0.1**
	4.4nm,0.5s						
KTH	**Kantishna Hill**	**19.01**	**39**	*e*P	**Pn**	**00 19 14.4**	**+0.2**
	10nm,0.6s						
BPAW	**Bear Paw Mtn.**	**19.24**	**38**	*e*P	**Pn**	**00 19 16.9**	**-0.1**
	4μm,1.2s						
DIV	**Divide**	**20.41**	**49**	*e*P	**P**	**00 19 29.4**	**+1.0**
	3.7nm,0.4s						
COLA	**College**	**20.80**	**38**	P	**P**	**00 19 34.3**	**+1.7**
YSS	**Yuzh-Sakhalins**	**25.53**	**275**	*e*P	**P**	**00 20 20.0**	**+0.5**
YSS				*e*	pP	00 20 32.0	-0.4
INK	**Inuvik**	**27.36**	**35**	P	**P**	**00 20 35.6**	**-0.1**
	0.6nm,0.3s,mb3.6,baz=258,slow=7.3,SNR=8.9						
INK	**Inuvik**	**27.36**	**35**	P	**P**	**00 20 35.7**	**-0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	**Inuvik**	**27.36**	**35**	*e*P	**P**	**00 20 35.5**	**-0.3**
	comp=Z,0.8nm,0.3s,mb3.7						
DLBC	**Dease Lake**	**28.20**	**56**	P	**P**	**00 20 44.3**	**+1.0**
YKA	**Yellowknife Ar**	**35.10**	**46**	P	**P**	**00 21 43.2**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.8,baz=283,slow=7.4,SNR=10						
YKA				PcP	PcP	00 24 14.9	+0.7
	comp=Z,0.1nm,0.4s,baz=284,slow=3.1,SNR=4.7						
CN2	**Changchun**	**37.76**	**281**	*e*P	**P**	**00 22 10.8**	**+4.1**
RES	**Resolute Bay**	**39.68**	**24**	P	**P**	**00 22 23.1**	**+0.6**
	comp=Z,0.5nm,0.8s,mb3.3,baz=295,slow=15,SNR=5.3						
RES	**Resolute Bay**	**39.68**	**24**	P	**P**	**00 22 23.1**	**+0.7**
RES				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
PDAR	**Pinedale Array**	**46.12**	**72**	P	**P**	**00 23 15.3**	**+0.5**
	comp=Z,2.6nm,0.5s,mb4.4,baz=311,slow=3.6,SNR=17						
ULN	**Ulaanbaatar**	**46.46**	**296**	*e*P	**P**	**00 23 18.0**	**+0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	**46.46**	**296**	*e*P	**P**	**00 23 18.0**	**+0.5**
	comp=Z,1.8nm,0.5s,mb4.3						
SONM	**Songino Array**	**46.85**	**297**	P	**P**	**00 23 21.0**	**+0.5**
	comp=Z,1.2nm,0.5s,mb4.0,baz=68,slow=6.9,SNR=9.4						
SONM	**Songino Array**	**46.85**	**297**	P	**P**	**00 23 21.0**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PV01	**Paradox Valley**	**49.53**	**77**	*e*P	**P**	**00 23 41.7**	**+0.4**
ZALV	**Zalesovo Beam**	**54.20**	**314**	P	**P**	**00 24 12.9**	**-2.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=46,slow=10,SNR=2.5						
ZALV				PcP	PcP	00 25 20.1	+0.5
	comp=Z,1.5nm,0.7s,baz=50,slow=3.0,SNR=7.7						
ZALV	**Zalesovo Beam**	**54.20**	**314**	P	**P**	**00 24 12.9**	**-2.9**
ZALV						00 25 20.2	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ARCES	**ARCESS Array B**	**58.15**	**350**	P	**P**	**00 24 43.2**	**-0.6**
	comp=Z,0.9nm,0.4s,mb4.1,baz=24,slow=7.7,SNR=12						
ARCES	**ARCESS Array B**	**58.15**	**350**	P	**P**	**00 24 43.2**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**58.45**	**81**	P	**P**	**00 24 46.8**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=284,slow=5.6,SNR=4.0						
KURK	**Kurchatov**	**59.19**	**314**	P	**P**	**00 24 50.8**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.8,baz=42,slow=6.9,SNR=4.7						
KURK				PcP	PcP	00 25 39.5	+0.3
	comp=Z,0.7nm,0.8s,baz=51,slow=4.8,SNR=3.5						
KURK	**Kurchatov**	**59.19**	**314**	P	**P**	**00 24 50.8**	**-0.5**
KURK						00 25 39.5	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**59.19**	**314**	P	**P**	**00 24 50.8**	**-0.5**
MK31	**Makanchi Array**	**60.22**	**309**	*e*P	**P**	**00 24 57.7**	**-0.7**
MKAR	**Makanchi Array**	**60.22**	**309**	P	**P**	**00 24 57.5**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.7,baz=63,slow=7.6,SNR=6.2						
BVAR	**Borovoye Array**	**61.05**	**320**	P	**P**	**00 25 03.4**	**-0.6**
	comp=Z,0.9nm,0.4s,mb4.3,baz=52,slow=7.7,SNR=8.6						
BVAR				PcP	PcP	00 25 46.2	-0.4
	com

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOSA						00 34 50.5	
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.4s						

*ISCJB **23** 00:19:05.2±0.5, 17°.69S±0°.05×69°.59W±0°.07, h164^{km}±5^{km}, mb4.2/6, Error ellipse: s-maj=11.8km s-min=7.4km az=13.7*
*NEIC **23** 00:19:05.6±1.2, 17°.75S×69°.56W, h153^{km}±9^{km}, mb4.3/2, Error ellipse: s-maj=18.7km s-min=11.3km az=209.0*
*IDC **23** 00:19:06.0±4.4, 17°.64S×69°.58W, h150^{km}±28^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.5/17, mbtmp3.8/5, Error ellipse: s-maj=66.6km s-min=17.1km az=11.0*
*GUC **23** 00:19:08.1±0.7, 17°.98S×69°.74W, h177^{km}±5^{km}, ML4.0*
ISC 23 00:19:06.5±0.5**, 17°.70S**±0°.05×**69°.54W**±0°.09**, h159**^{km}±5^{km}**, n20,** σ0^s**.97**/29**, mb4.2**/6**, 2C-2D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**1.42**	**182**	⇑*i*P	**Pn**	**00 19 37.5**	**+1.5**
MNMC				*i* S	**Sn**	**00 20 00.2**	**+1.6**
MNMC				AML	AML	00 20 03.0	
	comp=E,2µm,0.3s						
LPAZ	**La Paz**	**1.95**	**44**	P	**Pn**	**00 19 43.0**	**+1.4**
	comp=E,83nm,0.3s,baz=220,slow=6.2,SNR=2868						
LPAZ				S	**Sn**	**00 20 07.9**	**-0.7**
	comp=E,6.4nm,0.3s,baz=62,slow=18,SNR=3.8						
LPAZ	**La Paz**	**1.95**	**44**	P	**Pn**	**00 19 43.0**	**+1.4**
LPAZ				S	**Sn**	**00 20 07.9**	**-0.7**
PSGC	**Pisagua**	**1.96**	**196**	⇑*i*P	**Pn**	**00 19 42.1**	**+0.4**
PSGC				*i* S	**Sn**	**00 20 07.8**	**-1.2**
PSGC				AML	AML	00 20 08.7	
	comp=E,604nm,0.2s						
HMBC	**Humberston**	**2.58**	**187**	⇓*i*P	**Pn**	**00 19 49.7**	**+0.6**
HMBC				*e*S	**Sn**	**00 20 20.8**	**-1.2**
HMBC				AML	AML	00 20 32.0	
	comp=N,381nm,0.4s						
PB01	**Plate Boundary**	**3.32**	**179**	⇓*i*P	**Pn**	**00 19 59.2**	**+0.9**
PB01				*i* S	**Sn**	**00 20 37.5**	**-1.0**
PB01				AML	AML	00 20 38.3	
	comp=E,545nm,0.3s						
SIV	**San Ignacio**	**8.28**	**79**	P	**Pn**	**00 21 01.8**	**-1.9**
	comp=E,1.5nm,0.3s,baz=269,slow=12,SNR=35						
SIV				S	**Sn**	**00 22 30.3**	**-5.7**
	comp=E,1.1nm,0.3s,baz=354,slow=18,SNR=6.0						
NNA	**Nana**	**9.06**	**308**	P	**Pn**	**00 21 12.8**	**-1.2**
	comp=E,5.6nm,0.3s,baz=129,slow=14,SNR=9.7						
NNA				S	**Sn**	**00 22 50.1**	**-4.7**
	comp=E,1.7nm,0.3s,baz=206,slow=17,SNR=3.1						
NNA	**Nana**	**9.06**	**308**	P	**Pn**	**00 21 12.8**	**-1.2**
NNA				S	**Sn**	**00 22 50.1**	**-4.7**
SDV	**Santo Domingo**	**26.44**	**358**	*e*P	**P**	**00 24 28.4**	**-0.4**
	comp=E,2.0nm,0.4s,mb4.1						
EFI	**East Falkland**	**35.09**	**168**	*e*P	**P**	**00 25 43.6**	**-0.7**
	comp=E,63nm,1.2s,mb5.1						
SJG	**San Juan**	**35.75**	**6**	P	**P**	**00 25 50.1**	**-0.1**
BBSR	**BB Station**	**50.01**	**5**	P	**P**	**00 27 44.4**	**-0.3**
ANMO	**Albuquerque**	**63.02**	**326**	*e*P	**P**	**00 29 16.1**	**-0.5**
SDCO	**Great Sand Dun**	**64.70**	**329**	*e*P	**P**	**00 29 28.3**	**+0.8**
	comp=E,6.3nm,1.1s,mb4.4						
DBIC	**Dimbokro**	**68.28**	**75**	P	**P**	**00 29 51.4**	**+0.6**
	comp=E,4.7nm,0.6s,mb4.4,baz=245,slow=7.1,SNR=12						
DBIC	**Dimbokro**	**68.28**	**75**	P	**P**	**00 29 51.4**	**+0.6**
TOA0	**Torodi Ar. Sit**	**76.68**	**71**	*e*P	**P**	**00 30 40.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.68**	**71**	P	**P**	**00 30 40.8**	**+0.3**
	comp=E,2.3nm,0.6s,mb4.0,baz=250,slow=5.6,SNR=41						
YKA	**Yellowknife Ar**	**87.43**	**341**	P	**P**	**00 31 36.7**	**+1.3**
	comp=E,0.1nm,0.4s,mb3.0,baz=131,slow=4.7,SNR=4.2						
YKA				pP	pP	00 32 16.5	+1.3
	comp=E,0.4nm,0.9s,baz=139,slow=4.8,SNR=4.0						

*IDC **23** 00:34:48.5±2.7, 51°.61N×178°.25W, h0^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.6/27, mbtmp3.8/8, Error ellipse: s-maj=66.4km s-min=25.9km az=12.0*
*ISCJB **23** 00:34:52.7±1.5, 51°.8N±0°.2×177°.6W±0°.1, h33^{km}, mb3.7/7, Error ellipse: s-maj=29.4km s-min=9.1km az=5.9*
*NEIC **23** 00:34:52.0, 51°.90N×177°.62W, h9^{km}, ML3.3(AEIC), After AEIC.*
ISC 23 00:34:54.4±1.8**, 51°.7N**±0°.3×**177°.5W**±0°.1**, h35**^{km}**, n13,** σ1^s**.49**/15**, mb3.7**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.49**	**73**	P	**Pn**	**00 35 02.9**	**-2.0**
ADK				S	**Sn**	**00 35 11.1**	**-1.2**
GSTR	**Great Sitkin T**	**0.93**	**67**	*e*P	**Pn**	**00 35 09.8**	**-1.1**
GSTR				*e*S	**Sn**	**00 35 23.6**	**+0.6**
KDAK	**Kodiak Island**	**15.52**	**57**	Pn	**Pn**	**00 38 34.7**	**+4.4**
KTH	**Kantishna Hill**	**18.31**	**40**	*e*P	**Pn**	**00 39 06.2**	**+1.1**
	5µm,1.1s						
BPAW	**Bear Paw Mtn.**	**18.55**	**38**	*e*P	**Pn**	**00 39 08.4**	**+0.3**
	2.3nm,0.8s						
INK	**Inuvik**	**26.68**	**35**	P	**P**	**00 40 33.6**	**+4.0**
	0.6nm,0.8s,mb3.2,baz=239,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**34.37**	**47**	P	**P**	**00 41 39.9**	**+2.4**
	0.3nm,0.8s,mb3.3,baz=281,slow=8.5,SNR=3.9						
PDAR	**Pinedale Array**	**45.40**	**73**	P	**P**	**00 43 12.0**	**+2.8**
	0.5nm,0.5s,mb3.6,baz=317,slow=9.1,SNR=4.0						
TXAR	**Lajitas Array**	**57.77**	**82**	P	**P**	**00 44 45.2**	**+3.4**
	0.6nm,0.9s,mb3.6,baz=331,slow=9.2,SNR=4.5						
TXAR	**Lajitas Array**	**57.77**	**82**	P	**P**	**00 44 45.2**	**+3.4**
ARCES	**ARCESS Array B**	**57.88**	**351**	P	**P**	**00 44 40.9**	**-1.1**
	2.3nm,0.9s,mb4.2,baz=23,slow=6.6,SNR=5.4						
BVAR	**Borovoye Array**	**61.16**	**320**	P	**P**	**00 45 04.3**	**-0.5**
	1.0nm,0.7s,mb4.1,baz=30,slow=4.1,SNR=5.0						
FINES	**FINESS Array B**	**65.62**	**348**	P	**P**	**00 45 32.8**	**-1.4**
	1.8nm,1.0s,mb4.1,baz=130,slow=4.3,SNR=2.7						

*ISCJB **23** 00:36:17.4±5.2, 5°.76S±0°.10×149°.5E±0°.1, h115^{km}±50^{km}, mb4.3/11, Error ellipse: s-maj=21.9km s-min=14.7km az=155.5*
*IDC **23** 00:36:19.9±1.1, 5°.80S×149°.44E, h121^{km}±9^{km}, mb4.1/8, mb1 4.2/9, mb1mx3.9/18, mbtmp4.1/9, MS3.2/1, Ms1 3.2/1, ms1mx2.6/22, Error ellipse: s-maj=25.9km s-min=13.8km az=94.0*
*NEIC **23** 00:36:21.7±2.2, 5°.79S×149°.41E, h139^{km}±20^{km}, mb4.5/6, Error ellipse: s-maj=11.8km s-min=9.4km az=63.0*
ISC 23 00:36:21.6±3.3**, 5°.82S**±0°.08×**149°.4E**±0°.1**, h138**^{km}±33^{km}**, n31,** σ0^s**.56**/27**, mb4.3**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**14.52**	**192**	*e*P	**Pn**	**00 39 42.9**	**+2.2**
	18nm,0.8s						
CTA	**Charters Tower**	**14.52**	**192**	P	**Pn**	**00 39 40.9**	**+0.2**
	0.4nm,0.3s,baz=55,slow=10,SNR=5.8						
CTAO	**Charters Tower**	**14.52**	**192**	*e*Pn	**Pn**	**00 39 45.8**	**+5.1**
KAKA	**Kakadu**	**18.12**	**247**	*e*P	**P**	**00 40 22.9**	**-0.2**
EIDS	**Eidsvold**	**19.51**	**176**	*e*P	**P**	**00 40 38.6**	**+0.4**
EIDS	**Eidsvold**	**19.51**	**176**	*e*P	**P**	**00 40 39.1**	**+0.9**
	35nm,1.0s						
WRAB	**Tennant Creek**	**20.30**	**225**	*e*P	**P**	**00 40 47.0**	**+0.2**
	22nm,0.6s						
WRAB				*e*S	**S**	**00 44 27.7**	**+0.6**
RMQ	**Roma**	**20.57**	**182**	*e*P	**P**	**00 40 48.4**	**-1.2**
	15nm,0.5s						
DZM	**Mont Dzumac**	**23.05**	**136**	*e*LR	LR	00 42 05.0	
	80nm,21.9s						
ASAR	**Alice Springs**	**23.21**	**219**	P	**P**	**00 41 17.0**	**+0.5**
	11nm,0.6s,mb4.5,baz=56,slow=8.5,SNR=176						
ASAR				pP		00 41 39.5	
	4.7nm,0.7s,baz=43,slow=14,SNR=5.5						
ASAR				ScP	ScP	00 48 27.3	+1.4
	1.7nm,0.8s,baz=56,slow=2.9,SNR=11						
ARMA	**Armidale**	**24.56**	**175**	*e*P	**P**	**00 41 28.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**26.25**	**240**	*e*P	**P**	**00 41 43.8**	**-0.3**
	18nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**26.25**	**240**	P	**P**	**00 41 43.9**	**-0.3**
	9.3nm,0.5s,mb4.7,baz=57,slow=6.7,SNR=27						
FITZ				pP	pP	00 42 09.5	-3.7
	7.5nm,0.9s,baz=69,slow=8.1,SNR=3.8						
FITZ	**Fitzroy Crossi**	**26.25**	**240**	*e*P	**P**	**00 41 43.7**	**-0.5**
	9.5nm,0.6s,mb4.6						
FITZ				pP	pP	00 42 09.5	-3.7
STKA	**Stephens Creek**	**26.95**	**195**	P	**P**	**00 41 50.4**	**+0.2**
	2.5nm,0.4s,mb4.2,baz=26,slow=13,SNR=4.8						
STKA				LR	LR	00 52 04.5	
	comp=Z,57nm,20.3s,baz=25,slow=35						
STKA	**Stephens Creek**	**26.95**	**195**	*e*P	**P**	**00 41 50.1**	**-0.2**
	2.3nm,1.1s,mb3.7						
STKA				LR	LR	00 52 04.5	
FORT	**Forrest**	**31.94**	**216**	*e*P	**P**	**00 42 33.6**	**-0.8**
	33nm,0.7s,mb5.2						
MBWA	**Marble Bar**	**32.58**	**239**	*e*P	**P**	**00 42 39.4**	**-0.7**
MBWA	**Marble Bar**	**32.58**	**239**	*e*P	**P**	**00 42 39.7**	**-0.4**
	4.7nm,0.4s,mb4.6						
URZ	**Urewera**	**40.91**	**146**	P	**P**	**00 43 49.9**	**-0.5**
	5.6nm,0.7s,mb4.3,baz=297,slow=12,SNR=3.2						
RPZ	**Rata Peaks**	**42.27**	**157**	P	**P**	**00 44 01.8**	**+0.4**
	8.0nm,0.6s,mb4.5,baz=332,slow=6.3,SNR=5.1						
KSRS	**Korea Array**	**47.50**	**337**	P	**P**	**00 44 43.1**	**+0.3**
	1.3nm,0.7s,mb3.7,baz=151,slow=8.2,SNR=6.4						
PEA0B	**Petropavlovsk-**	**59.11**	**6**	*e*P	**P**	**00 46 07.3**	**0.0**
PETK	**Petropavlovsk-**	**59.11**	**6**	P	**P**	**00 46 07.2**	**-0.2**
	8.0nm,0.5s,mb4.8,baz=157,slow=6.1,SNR=62						
ULN	**Ulaanbaatar**	**65.14**	**330**	P	**P**	**00 46 47.5**	**-0.2**
SONM	**Songino Array**	**65.45**	**330**	P	**P**	**00 46 50.1**	**+0.4**
	0.4nm,0.6s,mb3.4,baz=141,slow=5.9,SNR=3.5						
SONM				pP	pP	00 47 20.2	-2.8
	0.9nm,0.8s,baz=131,slow=4.4,SNR=3.8						
UCH	**Uchtor**	**82.83**	**314**	*e*P	**P**	**00 48 31.2**	**+0.5**
	0.4nm,0.4s,mb3.5						
LBTB	**Lobatse**	**117.42**	**238**	PKPdf	PKPdf	00 54 52.1	+0.4
ESLA	**Sonseca Array**	**138.65**	**328**	*e*PKPdf	PKPdf	00 55 31.7	+0.1
TOA0	**Torodi Ar. Sit**	**147.39**	**285**	PKP	PKPdf	00 55 48.4	+0.8
TORD	**Torodi Ar. Bea**	**147.39**	**285**	PKPbc	PKPbc	00 55 49.5	-0.8
	0.3nm,0.4s,baz=82,slow=2.5,SNR=11						

MEX 23 00:54:02.0±0.3**, 16°.78N**×**99°.40W, h11**^{km}±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.50**	**280**	*i* P	Pg	00 54 10.8	-1.0
ACX				*i* S	Sg	00 54 17.9	-0.6
CAIG	**El Cayaco**	**0.87**	**288**	*e*P	Pg	00 54 16.4	-2.5
CAIG				*i* S	Sg	00 54 26.7	-3.6
PNIG	**Pinotepa**	**1.28**	**107**	*i* P	Pn	00 54 22.1	-3.7
PNIG				*i* S	Sb	00 54 37.9	-4.6
UTMO	**Huajuapan**	**1.85**	**55**	*e*P	Pn	00 54 30.3	-3.3
UTMO				*i* S	Sn	00 54 52.6	-4.4

*CSEM **23** 01:02:41.8±0.2, 36°.97N×29°.18E, h15^{km}, MD2.9, Error ellipse: s-maj=4.5km s-min=3.7km az=128.0*
*ISK **23** 01:02:41.1, 37°.00N×29°.16E, h9^{km}, MD2.9*
*ISCJB **23** 01:02:42.0±0.6, 36°.98N±0°.03×29°.16E±0°.06, h5^{km}±13^{km}, Error ellipse: s-maj=7.7km s-min=5.4km az=21.1*
*DDA **23** 01:02:43.0, 37°.01N×29°.20E, h7^{km}±3^{km}, Md2.8*
ISC 23 01:02:42.3±0.7**, 36°.98N**±0°.03×**29°.18E**±0°.06**, h14**^{km}±12^{km}**, n16,** σ0^s**.85**/25**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**55**	*e*PG	**Pg**	**01 02 47.5**	**-1.3**
GLHS				*e*SG	**Sg**	**01 02 52.7**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.31**	**55**	*e*Pg	**Pg**	**01 02 47.5**	**-1.2**
GLHS				*e*Sg	**Sg**	**01 02 52.7**	**-0.4**
FETY	**Fethiye**	**0.35**	**193**	*e*PG	**Pg**	**01 02 48.5**	**-0.9**
FETY				*e*SG	**Sg**	**01 02 54.8**	**+0.7**
FETY	**Fethiye**	**0.35**	**193**	*e*Pg	**Pg**	**01 02 48.5**	**-0.9**
FETY				*e*Sg	**Sg**	**01 02 54.8**	**+0.6**
GOLH	**Golhisar**	**0.40**	**50**	⇑*i*P	**Pg**	**01 02 49.6**	**-0.7**
GOLH				*i* S	**Sg**	**01 02 56.4**	**+0.6**
GOLH	**Golhisar**	**0.40**	**50**	*i* P	**Pg**	**01 02 49.7**	**-0.6**
GOLH				*i* S	**Sg**	**01 02 56.4**	**+0.6**
ELL	**Elmali**	**0.63**	**111**	*e*PG	**Pg**	**01 02 54.5**	**-0.1**
ELL	**Elmali**	**0.63**	**111**	*e*Pg	**Pg**	**01 02 54.5**	**-0.1**
DNZL	**Cakiroluk**	**0.72**	**352**	*e*P	**Pg**	**01 02 56.4**	**+0.1**
DNZL				*e*S	**Sg**	**01 03 07.2**	**+1.4**
DNZL	**Cakiroluk**	**0.72**	**352**	*e*P	**Pg**	**01 02 56.4**	**+0.1**
DNZL				*e*S	**Sg**	**01 03 07.2**	**+1.4**
YER	**Yerkesik**	**0.73**	**283**	*e*PG	**Pg**	**01 02 55.8**	**-0.8**
YER	**Yerkesik**	**0.73**	**283**	*e*Pg	**Pg**	**01 02 55.8**	**-0.8**
AKAS	**Kas**	**0.82**	**155**	*e*P	**Pg**	**01 02 59.7**	**+1.5**
AKAS				*e*S	**Sg**	**01 03 14.5**	**+5.6**
AKAS	**Kas**	**0.82**	**155**	*e*P	**Pg**	**01 02 59.7**	**+1.6**
DAT	**Datca**	**1.31**	**260**	*e*PN	**Pn**	**01 03 06.0**	**-0.1**
DAT	**Datca**	**1.31**	**260**	*e*Pn	**Pn**	**01 03 06.0**	**-0.2**

*MOS **23** 01:07:43.9±1.0, 20°.54S×179°.17W, h640^{km}, mb4.8/27, Error ellipse: s-maj=13.3km s-min=9.2km az=57.3*
*IDC **23** 01:07:43.3±0.5, 20°.81S×179°.11W, h632^{km}±5^{km}, mb4.1/13, mb1 4.3/14, mb1mx4.3/15, mbtmp4.1/14, Error ellipse: s-maj=14.1km s-min=10.0km az=133.0*
*BJI **23** 01:07:44.9, 20°.91S×178°.99W, h684^{km}, mB4.8/14, mb4.6/20*
*SZGRF **23** 01:07:44.6, 20°.78S×178°.66W, h650^{km}, Fiji Islands region*
*ISCJB **23** 01:07:45.1±0.6, 20°.74S±0°.06×179°.28W±0°.05, h665^{km}±7^{km}, mb4.6/85, Error ellipse: s-maj=9.6km s-min=5.6km az=148.8*
*NEIC **23** 01:07:46.1±0.5, 20°.65S×179°.28W, h664^{km}±6^{km}, mb4.7/66, Error ellipse: s-maj=9.1km s-min=4.6km az=146.0*
*BGS **23** 01:07:48.1±4.8, 20°.65S×179°.28W, h664^{km}, mb4.7(NEIC)*
ISC 23 01:07:45.6±0.6**, 20°.72S**±0°.06×**179°.23W**±0°.05**, h653**^{km}±7^{km}**, h664**^{km}±7.7^{km}**:pP-P, n796,** σ0^s**.54**/543**, mb4.6**/84**, 224C-194D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.92**	**319**	⇑*i*P	**P**	**01 09 13.2**	**-1.3**
MSVF				*e*S	**S**	**01 10 27.1**	**+0.2**
AFI	**Afiamalu**	**9.82**	**48**	P	**P**	**01 09 58.2**	**-5.6**
	30nm,0.3s,baz=34,slow=4.6,SNR=21						
AFI				S	**S**	**01 11 46.2**	**-11**
	4.8nm,0.3s,baz=34,slow=23,SNR=2.6						
AFI	**Afiamalu**	**9.82**	**48**	P	**P**	**01 09 58.2**	**-5.6**
AFI				S	**S**	**01 11 46.2**	**-11**
AFI				pmax	pmax		
	comp=Z,30nm,0.3s						
AFI				smax			
	comp=N,5.0nm,0.3s						
AFI	**Afiamalu**	**9.82**	**48**	*e*P	**P**	**01 09 57.6**	**-6.2**
	comp=N,152nm,0.7s						
AFI				*e*S	**S**	**01 11 47.9**	**-9.2**
DZM	**Mont Dzumac**	**13.41**	**262**	*e*P	**P**	**01 10 37.2**	**0.0**
NOUC	**Port Laguerre**	**13.54**	**262**	*e*P	**P**	**01 10 38.4**	**0.0**
OUZ	**Omahuta**	**15.77**	**202**	*e*P	**P**	**01 11 00.2**	**+1.7**
	comp=N,89nm,0.6s						
URZ	**Urewera**	**17.77**	**189**	P	**P**	**01 11 13.0**	**-3.7**
	comp=N,6.4nm,0.3s,baz=359,slow=4.4,SNR=26						
URZ				S	**S**	**01 14 00.9**	**-6.9**
	baz=270,slow=20,SNR=2.6						
URZ	**Urewera**	**17.77**	**189**	*e*P	**P**	**01 11 12.9**	**-3.8**
	comp=N,60nm,0.8s						
URZ				*e*S	**S**	**01 14 07.4**	**-0.3**
RPZ	**Rata Peaks**	**24.33**	**197**	P	**P**	**01 12 13.5**	**-1.7**
	comp=N,16nm,0.6s,mb4.7,baz=14,slow=2.8,SNR=11						
EIDS	**Eidsvold**	**27.68**	**255**	*e*P	**P**	**01 12 45.3**	**+0.6**
	comp=N,31nm,0.6s,mb5.0						
ARMA	**Armidale**	**27.93**	**244**	*e*P	**P**	**01 12 47.9**	**+1.0**
ARMA	**Armidale**	**27.93**	**244**	⇓*i*P	**P**	**01 12 48.1**	**+1.2**
	comp=N,34nm,0.6s,mb5.0						
CNB	**Canberra Magne**	**31.15**	**235**	⇓*i*P	**P**	**01 13 15.1**	**+0.8**
CTA	**Charters Tower**	**32.32**	**265**	⇓*i*P	**P**	**01 13 25.0**	**+0.6**
	comp=N,36nm,0.5s,mb5.2						
CTAO	**Charters Tower**	**32.32**	**265**	⇓*i*P	**P**	**01 13 24.8**	**+0.4**
CTAO				*e*		01 15 47.6	
CTAO				pmax	pmax		
	comp=Z,52nm,0.6s,mb5.2						
CTAO	**Charters Tower**	**32.32**	**265**	⇓*i*P	**P**	**01 13 24.8**	**+0.4**
	comp=Z,52nm,0.6s,mb5.2						
CTAO				*e*PcP	PcP	01 15 47.6	-3.9
TOO	**Toolangi**	**34.84**	**233**	⇓*i*P	**P**	**01 13 45.5**	**+0.4**
COEN	**Coen**	**36.45**	**274**	*e*P	**P**	**01 13 59.1**	**+0.6**
	comp=Z,257nm,0.9s,mb5.8						
STKA	**Stephens Creek**	**36.66**	**244**	⇓*i*P	**P**	**01 14 00.8**	**+0.7**
	comp=Z,25nm,0.5s,mb5.0						
STKA	**Stephens Creek**	**36.66**	**244**	P	**P**	**01 14 00.2**	**+0.2**
	comp=Z,49nm,0.8s,mb5.1,baz=90,slow=9.5,SNR=99						
STKA				ScP	ScP	01 18 54.2	+3.8
	comp=Z,4.2nm,0.8s,baz=13,slow=2.4,SNR=4.3						
STKA	**Stephens Creek**	**36.66**	**244**	P	**P**	**01 14 00.2**	**+0.1**
STKA						01 18 54.2	
STKA				pmax	pmax		
	comp=Z,49nm,0.8s						
STKA				pmax	pmax		
	comp=N,4.0nm,0.8s						
STKA	**Stephens Creek**	**36.66**	**244**	⇓*i*P	**P**	**01 14 00.7**	**+0.7**
	comp=N,15nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**43.34**	**257**	P	**P**	**01 14 53.5**	**+0.4**
	comp=N,63nm,0.6s,mb5.2,baz=96,slow=7.6,SNR=782						
ASAR				PcP	PcP	01 16 27.0	+0.6
	comp=N,3.8nm,0.6s,baz=101,slow=3.4,SNR=5.0						
ASAR				ScP	ScP	01 19 21.1	+4.1
	comp=N,7.9nm,0.9s,baz=105,slow=3.9,SNR=14						
ASAR				S	**S**	**01 20 35.9**	**-0.1**
	comp=N,10nm,0.8s,baz=93,slow=15,SNR=33						
ASAR	**Alice Springs**	**43.34**	**257**	P	**P**	**01 14 53.5**	**+0.4**
ASAR						01 16 27.0	
ASAR				S	**S**	**01 20 35.9**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,63nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ASAR				pmax	pmax		
	comp=N,8.0nm,1.0s						
ASAR				smax			
	comp=N,10.0nm,0.8s						
WRAB	**Tennant Creek**	**43.42**	**263**	⇓*i*P	**P**	**01 14 53.4**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	**43.42**	**263**	⇓*i*P	**P**	**01 14 53.4**	**-0.4**
	comp=Z,80nm,1.1s,mb5.1						
KAKA	**Kakadu**	**46.83**	**272**	*e*P	**P**	**01 15 18.5**	**-1.1**
	comp=Z,29nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.83**	**272**	*e*P	**P**	**01 15 18.8**	**-0.8**
	comp=Z,71nm,0.6s,mb5.2						
FORT	**Forrest**	**48.15**	**247**	*e*P	**P**	**01 15 28.7**	**-0.5**
	comp=Z,52nm,0.6s,mb5.0						
FORT	**Forrest**	**48.15**	**247**	*e*P	**P**	**01 15 29.0**	**-0.2**
	comp=Z,68nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**51.85**	**263**	*e*P	**P**	**01 15 55.9**	**-0.3**
	comp=Z,17nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.85**	**263**	*e*P	**P**	**01 15 56.4**	**+0.2**
	comp=Z,5.5nm,0.4s,mb4.1						
MBWA	**Marble Bar**	**56.68**	**258**	*e*P	**P**	**01 16 29.4**	**-0.4**
	comp=Z,20nm,0.6s,mb4.4						
KLBR	**Kellerberrin**	**56.92**	**245**	*e*P	**P**	**01 16 30.5**	**-0.7**
	comp=Z,46nm,1.0s,mb4.6						
QSPA	**South Pole Qui**	**69.35**	**180**	*e*P	**P**	**01 17 49.5**	**+0.2**
	comp=Z,22nm,1.3s,mb4.3						
MJAR	**Matsushiro Arr**	**69.70**	**324**	P	**P**	**01 17 51.9**	**-0.2**
	comp=Z,3.5nm,0.5s,mb4.0,baz=162,slow=5.8,SNR=9.2						
MJAR	**Matsushiro Arr**	**69.70**	**324**	P	**P**	**01 17 51.9**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MAT	**Matsushiro**	**69.71**	**324**	P	**P**	**01 17 52.1**	**0.0**
ADK	**Adak**	**72.32**	**2**	*e*P	**P**	**01 18 05.7**	**-1.2**
ADK				pmax	pmax		
	comp=Z,32nm,0.5s,mb5.0						
ADK	**Adak**	**72.32**	**2**	*e*P	**P**	**01 18 05.7**	**-1.3**
	comp=Z,32nm,0.5s,mb5.0						
ASAJ	**Asahikawa**	**73.37**	**332**	P	**P**	**01 18 14.6**	**+1.5**
	comp=Z,7.1nm,0.7s,mb4.2,baz=225,slow=8.6,SNR=6.1						
ASAJ	**Asahikawa**	**73.37**	**332**	P	**P**	**01 18 14.6**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**75.58**	**334**	*i* P	**P**	**01 18 27.1**	**+1.7**
YSS				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.5						
PETK	**Petropavlovsk-**	**76.19**	**346**	P	**P**	**01 18 28.2**	**-0.3**
	comp=Z,11nm,0.7s,mb4.5,baz=135,slow=5.2,SNR=26						
PETK	**Petropavlovsk-**	**76.19**	**346**	P	**P**	**01 18 28.2**	**-0.4**
PETK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.5						
KSRS	**Korea Array**	**76.29**	**319**	P	**P**	**01 18 30.4**	**+0.8**
	comp=Z,0.9nm,0.4s,mb3.7,baz=129,slow=6.3,SNR=4.8						
KSRS	**Korea Array**	**76.29**	**319**	P	**P**	**01 18 30.4**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
NJ2	**Nanjing**	**79.13**	**310**	*e*P	**P**	**01 18 44.4**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
109C	**Camp Elliot, M**	**79.73**	**49**	⇓P	**P**	**01 18 48.0**	**+0.1**
	baz=80						
ARVC	**Arvin**	**79.77**	**46**	⇑P	**P**	**01 18 48.3**	**+0.2**
	baz=80						
VES	**Vestal, Richgr**	**80.00**	**46**	⇓P	**P**	**01 18 49.4**	**+0.2**
	baz=80						
MURC	**Murrieta**	**80.05**	**48**	⇑P	**P**	**01 18 49.9**	**+0.3**
	baz=80						
BFSC	**Mount Baldy St**	**80.08**	**48**	⇓P	**P**	**01 18 49.8**	**+0.1**
	baz=80						
EDW2	**Edwards Air Fo**	**80.21**	**47**	⇑P	**P**	**01 18 50.8**	**+0.4**
	baz=80						
MONP	**Monument Peak**	**80.22**	**49**	⇑P	**P**	**01 18 50.5**	**0.0**
	baz=80						
ISA	**Isabella**	**80.31**	**46**	⇓P	**P**	**01 18 51.0**	**+0.1**
	baz=80						
ISA	**Isabella**	**80.31**	**46**	*e*P	**P**	**01 18 51.2**	**+0.3**
DVTC	**Desert V Tower**	**80.33**	**50**	⇓P	**P**	**01 18 51.3**	**+0.2**
	baz=80						
CMB	**Columbia Colle**	**80.41**	**43**	*e*P	**P**	**01 18 50.7**	**-0.6**
CMB				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.5						
CMB	**Columbia Colle**	**80.41**	**43**	*e*P	**P**	**01 18 50.7**	**-0.6**
	comp=Z,22nm,1.1s,mb4.5						
OHCM	**Honcut**	**80.48**	**42**	*e*P	**P**	**01 18 51.9**	**+0.3**
WDC	**Whiskeytown Da**	**80.58**	**40**	*e*P	**P**	**01 18 52.1**	**0.0**
WDC				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.7						
WDC	**Whiskeytown Da**	**80.58**	**40**	*e*P	**P**	**01 18 52.1**	**0.0**
	comp=Z,32nm,1.0s,mb4.7						
PFO	**Pinyon Flat Ob**	**80.58**	**49**	⇓P	**P**	**01 18 52.3**	**0.0**
	baz=81						
SWSC	**Sam W. Stewart**	**80.69**	**50**	⇑P	**P**	**01 18 53.0**	**+0.1**
	baz=81						
LRMC	**Laurel Mountai**	**80.74**	**47**	⇑P	**P**	**01 18 53.2**	**+0.1**
	baz=81						
MAW	**Mawson**	**80.97**	**200**	P	**P**	**01 18 53.4**	**-0.3**
	comp=Z,1.8nm,0.7s,mb3.6,baz=59,slow=4.3,SNR=4.1						
MAW	**Mawson**	**80.97**	**200**	P	**P**	**01 18 53.4**	**-0.3**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BELC	**Belle Mtn.**	**81.11**	**49**	⇓P	**P**	**01 18 55.0**	**0.0**
	baz=81,SNR=6.4						
MLAC	**Mammoth Lakes**	**81.18**	**44**	⇓P	**P**	**01 18 56.0**	**+0.7**
	baz=81						
YBH	**Yreka Blue Hor**	**81.18**	**39**	*e*P	**P**	**01 18 55.9**	**+0.7**
YBH				pmax	pmax		
	comp=Z,23nm,0.7s						
YBH	**Yreka Blue Hor**	**81.18**	**39**	*e*P	**P**	**01 18 55.9**	**+0.7**
	comp=Z,23nm,0.7s,mb4.7						
MPMC	**Manual Prospec**	**81.20**	**46**	⇑P	**P**	**01 18 55.6**	**+0.2**
	baz=81						
GSC	**Goldstone**	**81.25**	**47**	⇑P	**P**	**01 18 55.8**	**+0.1**
	baz=81						
GSC	**Goldstone**	**81.25**	**47**	*e*P	**P**	**01 18 55.9**	**+0.2**
TIN	**Tinemaha**	**81.25**	**45**	⇓P	**P**	**01 18 56.3**	**+0.6**
	baz=81						
WAKR	**Walker**	**81.29**	**43**	*e*P	**P**	**01 18 56.3**	**+0.5**
KDAK	**Kodiak Island**	**81.30**	**14**	*i* P	**P**	**01 18 56.6**	**+1.2**
BC3	**Big Chuckw Mtn**	**81.31**	**49**	⇓P	**P**	**01 18 56.4**	**+0.3**
	baz=82						
HEC	**Hector,Ludlow**	**81.32**	**48**	⇓P	**P**	**01 18 56.1**	**0.0**
	baz=82						
112A	**Yuma**	**81.36**	**51**	⇓P	**P**	**01 18 56.9**	**+0.6**
	baz=82						
GLA	**Glamis**	**81.44**	**50**	⇓P	**P**	**01 18 57.0**	**+0.3**
	baz=82,SNR=6.4						
GLA	**Glamis**	**81.44**	**50**	*e*P	**P**	**01 18 57.7**	**+0.9**
BEKR	**Beckwourth**	**81.49**	**42**	⇑P	**P**	**01 18 57.1**	**+0.2**
	baz=82						
WCN	**Washoe City**	**81.54**	**43**	⇑P	**P**	**01 18 57.6**	**+0.5**
	baz=82						
HUMO	**Hull Mountain**	**81.57**	**38**	*e*P	**P**	**01 18 58.0**	**+0.8**
	comp=Z,31nm,1.0s,mb4.8						
GMRC	**Granite Mounta**	**81.76**	**48**	⇑P	**P**	**01 18 58.1**	**-0.2**
	baz=82,SNR=7.5						
CN2	**Changchun**	**81.77**	**323**	*e*P	**P**	**01 18 58.9**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
BUOR	**Burton Butte**	**81.79**	**39**	P	**P**	**01 18 59.0**	**+0.8**
IRM	**Iron Mountain**	**81.79**	**49**	⇓P	**P**	**01 18 58.6**	**+0.1**
	baz=82,SNR=6.2						
GRAC	**Grapevine Rang**	**81.80**	**46**	⇑P	**P**	**01 18 58.4**	**-0.1**
	baz=82						
FURC	**Furnace Creek,**	**81.85**	**46**	⇓P	**P**	**01 18 58.6**	**-0.1**
	baz=82						
TUQ	**Turquoise Moun**	**81.93**	**47**	⇑P	**P**	**01 18 59.0**	**-0.1**
	baz=82,SNR=9.2						
SHOC	**Shoshone**	**81.93**	**47**	⇓P	**P**	**01 18 58.6**	**-0.5**
	baz=82,SNR=5.6						
NVAR	**Mina Array Bea**	**81.98**	**44**	P	**P**	**01 18 59.2**	**-0.1**

comp=Z,20nm,0.8s,mb4.7,baz=223,slow=8.3,SNR=52
NVAR pP pP 01 21 12.3 -2.6
comp=Z,0.8nm,0.4s,baz=207,slow=9.0,SNR=1.8
PAHR Pah Rah Range 82.01 42 *eP* **P 01 18 59.7 +0.2**
Y12C Blythe 82.02 50 ⇑P **P 01 18 59.8 +0.2**
baz=82,SNR=5.8
113A Mohawk Valley, 82.06 51 ⇓P **P 01 19 00.2 +0.3**
baz=82
KLR Kul'dur 82.13 330 *eP* **P 01 18 56.0 -3.8**
U10A Ash Meadows, A 82.18 46 ⇓P **P 01 19 00.6 +0.3**
baz=82
LDFC Landfair 82.30 48 *eP* **P 01 19 01.8 +0.7**
comp=Z,79nm,1.0s,mb5.2
214A Organ Pipe Nat 82.35 52 ⇓P **P 01 19 01.8 +0.5**
baz=82
Z13A Yuma Proving G 82.36 50 ⇑P **P 01 19 01.4 +0.1**
baz=82,SNR=6.0
V11A Goodsprings 82.48 47 ⇑P **P 01 19 01.8 -0.1**
baz=83,SNR=9.0
Y13A Salome 82.55 50 ⇑P **P 01 19 02.5 +0.2**
baz=83,SNR=10
PDMCI Parker Dam,Lak 82.58 49 ⇓P **P 01 19 02.5 0.0**
baz=83,SNR=5.3
W12A Cal Nev Ari 82.59 48 ⇑P **P 01 19 02.8 +0.4**
baz=83
114A Black Gap (USA 82.70 51 ⇓P **P 01 19 03.1 0.0**
baz=83
MOD Modoc 82.72 40 *eP* **P 01 19 03.3 +0.3**
comp=Z,28nm,0.7s,mb4.9
S10A Tonopah Range, 82.82 45 ⇑P **P 01 19 03.6 0.0**
baz=83,SNR=45
V12A Nelson 82.82 48 ⇑P **P 01 19 03.7 +0.1**
baz=83,SNR=7.6
U11A Corn Creek 82.83 47 ⇑P **P 01 19 03.8 +0.2**
baz=83
K05A Summer Lake 82.86 39 ⇓P **P 01 19 04.4 +0.8**
baz=83
X13A Yucca 82.95 49 ⇑P **P 01 19 04.4 +0.1**
baz=83,SNR=7.7
Z14A Wintersburg 82.96 51 ⇑P **P 01 19 04.7 +0.4**
baz=83,SNR=8.3
SHPR Sheep Range 83.02 47 *eP* **P 01 19 04.8 +0.2**
115A Sonoran Desert 83.15 51 ⇓P **P 01 19 05.4 +0.1**
baz=83
W13A Hualapai Mount 83.17 49 ⇑P **P 01 19 05.5 +0.1**
baz=83,SNR=7.4
Y14A Wickenburg 83.20 50 ⇑P **P 01 19 05.3 -0.3**
baz=83,SNR=5.9
R10A Warm Springs 83.21 45 ⇑P **P 01 19 05.8 +0.3**
baz=83,SNR=7.4
S11A Rachel 83.23 46 ⇑P **P 01 19 05.6 0.0**
baz=83
H04A Detroit Lake 83.29 37 ⇑P **P 01 19 05.4 -0.3**
baz=83,SNR=5.9
T11A Corn Creek, Al 83.37 46 ⇓P **P 01 19 06.6 +0.3**
baz=84,SNR=16
U12A Valley of Fire 83.41 47 ⇓P **P 01 19 06.9 +0.4**
baz=84,SNR=9.5
Q10A Clear Creek Ra 83.44 44 ⇓P **P 01 19 07.3 +0.7**
baz=84,SNR=6.5
G04A Mulino 83.45 37 ⇑P **P 01 19 06.8 +0.3**
baz=84
116A Eloy 83.47 52 ⇑P **P 01 19 07.3 +0.4**
baz=84,SNR=7.6
V13A Grand Canyon W 83.49 48 ⇓P **P 01 19 07.0 +0.1**
baz=84,SNR=12
X14A Yava 83.55 50 ⇑P **P 01 19 07.6 +0.4**
baz=84,SNR=15
E03A Lebam 83.69 35 ⇓P **P 01 19 08.1 +0.5**
baz=84,SNR=5.2
Y15A Casa Rosa Ranc 83.69 50 ⇓P **P 01 19 08.2 +0.2**
baz=84,SNR=7.0
RSO Redoubt South 83.70 13 *eP* **P 01 19 06.4 -0.9**
R11A Troy Canyon, C 83.72 45 ⇑P **P 01 19 07.4 -0.6**
baz=84
SVW2 Sparrevohn 83.73 11 *eP* **P 01 19 06.2 -1.3**
217A Green Valley 83.74 53 ⇓P **P 01 19 09.0 +0.8**
baz=84,SNR=7.0
U13A Pakoon Wash 83.79 47 ⇑P **P 01 19 08.5 +0.1**
baz=84,SNR=14
W14A Seligman 83.79 49 ⇑P **P 01 19 08.9 +0.4**
baz=84,SNR=12
S12A Delamar Landin 83.81 46 ⇓P **P 01 19 08.7 +0.2**
baz=84,SNR=7.1
P10A Eureka 83.83 44 ⇓P **P 01 19 08.4 0.0**
baz=84
F04A Amboy 83.93 36 ⇓P **P 01 19 08.9 +0.1**
baz=84
Q11A Duckwater 83.94 45 ⇑P **P 01 19 09.0 -0.1**
baz=84,SNR=8.2
V14A Boquillas Ranc 83.99 49 ⇓P **P 01 19 09.6 +0.3**
baz=84,SNR=16
TUC Tucson 84.02 52 *eP* **P 01 19 09.9 +0.3**
TUC pmax pmax
comp=Z,15nm,0.9s,mb4.5
TUC Tucson 84.02 52 *eP* **P 01 19 09.8 +0.2**
comp=Z,15nm,0.9s,mb4.5
X15A Humboldt 84.03 50 ⇑P **P 01 19 09.6 0.0**
baz=84,SNR=7.8
WVOR Wild Horse Val 84.04 40 *eP* **P 01 19 09.0 -0.4**
WVOR pmax pmax
comp=Z,18nm,1.0s,mb4.6
WVOR Wild Horse Val 84.04 40 *eP* **P 01 19 09.0 -0.4**
comp=Z,18nm,1.0s,mb4.6
Z16A Peralta Trail, 84.05 51 ⇓P **P 01 19 09.6 -0.2**
baz=84,SNR=6.6
NLWA Neilton Lookou 84.06 34 ⇑P **P 01 19 09.7 +0.3**
baz=84
NLWA Neilton Lookou 84.06 34 *eP* **P 01 19 09.5 +0.1**
comp=Z,34nm,1.2s,mb4.8
FL2 Flat Top 2 84.13 36 P **P 01 19 10.5 +0.7**
T13A Saint George 84.15 47 ⇓P **P 01 19 10.3 +0.2**
baz=84
O10A Cortez Mining, 84.17 43 ⇓P **P 01 19 10.2 0.0**
baz=84
117A Oracle 84.18 52 ⇓P **P 01 19 10.8 +0.4**
baz=84,SNR=7.2
318A Bisbee 84.20 53 ⇑P **P 01 19 11.0 +0.5**
baz=84,SNR=7.4
P11A Circle Ranch, 84.25 44 ⇓P **P 01 19 10.5 -0.1**
baz=84
Y16A Circle Bar Ran 84.28 51 ⇓P **P 01 19 11.0 +0.2**
baz=84,SNR=7.8
U14A Mt Trumbull 84.34 48 ⇑P **P 01 19 11.2 +0.1**
baz=84,SNR=26
W15A Williams 84.35 49 ⇑P **P 01 19 11.3 +0.1**
baz=84
R12A Pony Springs, 84.36 46 ⇑P **P 01 19 10.8 -0.3**
baz=84,SNR=8.5
N10A Dunphy 84.40 43 ⇑P **P 01 19 11.6 +0.3**
baz=84
218A Dragoon 84.41 53 ⇑P **P 01 19 11.9 +0.4**
baz=84,SNR=7.8
OSD Olympics--Snow 84.42 34 P **P 01 19 11.9 +0.8**
S13A Holt Ranch, En 84.47 47 ⇑P **P 01 19 11.8 +0.1**
baz=85
I07A Izee 84.47 39 ⇓P **P 01 19 11.6 +0.1**
baz=85,SNR=19
G06A Carlson Farm, 84.50 37 ⇑P **P 01 19 11.7 +0.1**
baz=85
X16A Lo Mia Camp, P 84.57 50 ⇓P **P 01 19 12.5 +0.3**
baz=85,SNR=5.7
Q12A Willow Creek R 84.58 45 ⇑P **P 01 19 11.9 -0.3**
baz=85,SNR=5.4
O11A Cowboy Ranch, 84.63 44 ⇑P **P 01 19 12.3 -0.1**
baz=85,SNR=12
Y17A Roosevelt 84.65 51 ⇓P **P 01 19 12.6 0.0**
baz=85
J08A Circle Bar Ran 84.67 40 ⇑P **P 01 19 12.6 +0.1**
baz=85,SNR=12
319A Douglas 84.70 54 ⇑P **P 01 19 13.6 +0.7**
baz=85
R13A O'Grain Ranch, 84.71 46 ⇑P **P 01 19 13.0 +0.2**
baz=85
T14A Hurricane 84.73 47 ⇓P **P 01 19 13.2 +0.3**
baz=85
V15A Kaibab Nationa 84.74 49 ⇑P **P 01 19 13.2 +0.1**
baz=85,SNR=14
LON Longmire 84.76 36 *eP* **P 01 19 12.8 0.0**
P12A McGill 84.76 44 ⇓P **P 01 19 13.2 +0.2**
baz=85
118A Homack Ranch, 84.78 52 ⇑P **P 01 19 13.7 +0.4**
baz=85,SNR=7.4
CCUT Cedar City 84.79 47 *eP* **P 01 19 13.7 +0.5**
M10A I.L. Ranch, Tu 84.82 42 ⇓P **P 01 19 13.6 +0.3**
baz=85,SNR=12
W16A Flagstaff 84.83 50 ⇑P **P 01 19 13.8 +0.3**
baz=85,SNR=6.0

RC01 Rabbit Creek A 84.92 14 *eP* **P 01 19 12.1 -1.1**
comp=Z,35nm,1.2s,mb4.9
D05A Enumclaw 84.93 35 ⇑P **P 01 19 14.3 +0.6**
baz=85,SNR=5.1
U15A North Rim 84.96 48 ⇑P **P 01 19 14.6 +0.5**
baz=85,SNR=44
X17A Forest Lakes 84.99 51 ⇓P **P 01 19 14.8 +0.6**
baz=85,SNR=8.6
219A White Tail Can 85.01 53 ⇑P **P 01 19 14.5 +0.1**
baz=85,SNR=8.5
S14A Cedar City 85.03 47 ⇓P **P 01 19 14.5 +0.1**
baz=85
Q13A Wheeler Ranch, 85.08 45 ⇓P **P 01 19 14.4 -0.1**
baz=85,SNR=15
J09A Fry Pan Ranch, 85.09 40 ⇑P **P 01 19 14.5 0.0**
baz=85,SNR=16
WUAZ Wupatki 85.16 49 ⇓P **P 01 19 15.0 0.0**
baz=85,SNR=6.9
WUAZ Wupatki 85.16 49 *eP* **P 01 19 15.2 +0.2**
L10A Juniper Basin 85.17 42 ⇑P **P 01 19 15.1 +0.2**
baz=85,SNR=23
T15A Red Dirt Ranch 85.19 48 ⇑P **P 01 19 15.3 +0.1**
baz=85,SNR=6.8
RMW Rattlesnake Mo 85.20 35 P **P 01 19 15.2 +0.3**
ENH Enshi 85.21 305 *eP* **P 01 19 16.1 +0.7**
comp=Z,10nm,0.8s,mb4.5
H08A Prairie City 85.21 39 ⇓P **P 01 19 15.1 0.0**
baz=85,SNR=9.5
ELK Elko 85.22 43 *eP* **P 01 19 15.3 +0.1**
ELK pmax pmax
comp=Z,6.0nm,0.8s
ELK Elko 85.22 43 *eP* **P 01 19 15.3 +0.1**
comp=Z,6.0nm,0.8s,mb4.3
BJI Beijing 85.24 316 P **P 01 19 15.3 0.0**
BJI pP pP 01 21 35.8 +3.4
BJI S S 01 28 52.8 -0.1
BJI pmax pmax
comp=Z,18nm,0.6s,mb4.9
M11A Holland Ranch, 85.24 42 ⇓P **P 01 19 15.4 +0.1**
baz=85,SNR=9.5
320A Kipp Ranch, An 85.25 54 ⇓P **P 01 19 16.5 +0.9**
baz=85,SNR=5.9
O12A Currie 85.29 44 ⇓P **P 01 19 15.3 -0.3**
baz=85
F07A Phinny Hill Vi 85.29 37 ⇑P **P 01 19 15.5 +0.1**
baz=85
K10A MacKenzie Ranc 85.31 41 ⇑P **P 01 19 15.7 +0.1**
baz=86,SNR=15
P13A Bates Ranch, G 85.34 45 ⇓P **P 01 19 15.8 0.0**
baz=86,SNR=9.8
TTA Tatalina 85.36 10 *eP* **P 01 19 14.9 -0.4**
N12A Clover Valley, 85.41 43 ⇓P **P 01 19 16.3 +0.2**
baz=86,SNR=5.5
N12A Clover Valley, 85.41 43 *eP* **P 01 19 15.8 -0.3**
comp=Z,15nm,0.8s,mb4.7
I09A Lost Marbles R 85.45 40 ⇓P **P 01 19 16.5 +0.3**
baz=86
G08A Pilot Rock 85.49 38 ⇓P **P 01 19 16.7 +0.4**
baz=86,SNR=15
PMR Palmer 85.50 14 *eP* **P 01 19 14.5 -1.5**
PMR pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
PMR Palmer 85.50 14 *eP* **P 01 19 14.5 -1.5**
comp=Z,10nm,0.6s,mb4.6
220A Playas Peak, P 85.52 54 ⇑P **P 01 19 17.5 +0.7**
baz=86
S15A Panguitch 85.54 47 ⇓P **P 01 19 17.8 +1.0**
baz=86,SNR=6.8
JCW Jim Creek 85.58 34 *eP* **P 01 19 16.8 +0.1**
Q14A Sevier Lake (B 85.59 46 ⇑P **P 01 19 17.3 +0.3**
baz=86,SNR=15
Z19A T-Link Ranch, 85.61 52 ⇑P **P 01 19 17.2 -0.1**
baz=86
V17A Tonalea, Kykot 85.62 49 ⇓P **P 01 19 17.2 0.0**
baz=86,SNR=10
L11A Cat Creek Ranc 85.67 42 ⇓P **P 01 19 17.5 +0.2**
baz=86,SNR=12
X18A Snowflake 85.70 51 ⇑P **P 01 19 17.9 +0.2**
baz=86,SNR=6.4
E07A Sunnyside 85.72 37 ⇑P **P 01 19 18.2 +0.8**
baz=86
J10A Berg Farm, Mel 85.73 40 ⇑P **P 01 19 17.9 +0.3**
baz=86
120A U Bar Ranch, L 85.74 53 ⇓P **P 01 19 18.5 +0.7**
baz=86
GYA Guiyang 85.75 300 P **P 01 19 17.8 -0.3**
GYA pP pP 01 21 37.8 +2.4
GYA sP sP 01 22 42.6 +2.4
GYA PP PP 01 22 52.0 +1.4
GYA SKS 01 28 40.9
GYA S S 01 28 55.0 -3.4
GYA sS sS 01 33 02.9 0.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
GYA pmax pmax
comp=Z,90nm,6.8s
RSW Rattlesnake Hi 85.78 37 *eP* **P 01 19 17.9 +0.2**
T16A Glen Canyon Da 85.79 48 ⇓P **P 01 19 18.6 +0.6**
baz=86
M12A Wells 85.79 43 ⇑P **P 01 19 17.9 0.0**
baz=86,SNR=9.1
HAWA Hanford 85.81 37 *eP* **P 01 19 18.4 +0.5**
K11A Parker Ranch, 85.82 41 ⇑P **P 01 19 18.2 +0.2**
baz=86,SNR=6.4
H09A Durkee 85.89 39 ⇑P **P 01 19 18.3 0.0**
baz=86,SNR=7.6
F08A Pendleton 85.89 38 ⇑P **P 01 19 18.4 +0.2**
baz=86
DIV Divide 85.89 16 *eP* **P 01 19 17.3 -0.6**
comp=Z,24nm,1.1s,mb4.7
Y19A Nutrioso 85.93 52 ⇑P **P 01 19 19.6 +0.8**
baz=86,SNR=15
N13A Wendover, West 85.95 44 *eP* **P 01 19 19.0 +0.4**
RPW Rockport 85.96 34 P **P 01 19 18.2 -0.3**
A05A Maple Falls 86.00 34 ⇓P **P 01 19 18.7 0.0**
baz=86
B06A Marblemount 86.02 34 ⇓P **P 01 19 18.9 +0.2**
baz=86
Z20A Nine Sixteen R 86.03 53 ⇑P **P 01 19 20.0 +0.8**
baz=86
P14A Drum Mountains 86.04 45 ⇑P **P 01 19 19.3 +0.2**
baz=86
BMRM Bremner River 86.06 16 *eP* **P 01 19 17.6 -1.0**
comp=Z,428nm,0.6s
I10A Payette 86.08 40 ⇓P **P 01 19 19.4 +0.2**
baz=86,SNR=7.1
ETW Entiat 86.08 36 *eP* **P 01 19 19.2 +0.1**
MSU Marysvale 86.09 46 *eP* **P 01 19 20.3 +0.9**
L12A House Creek Ra 86.12 42 ⇑P **P 01 19 19.6 +0.2**
baz=86,SNR=10.0
X19A St. Johns 86.13 51 ⇑P **P 01 19 20.1 +0.5**
baz=86,SNR=7.7
E08A Dider Farm, El 86.13 37 ⇑P **P 01 19 19.7 +0.4**
baz=86
W18A Petrified Fore 86.13 50 ⇑P **P 01 19 19.9 +0.2**
baz=86
G09A Cove 86.17 38 ⇓P **P 01 19 19.5 -0.1**
baz=86,SNR=12
U17A Shonto 86.19 49 ⇑P **P 01 19 20.2 +0.3**
baz=86
Q15A Fillmore 86.20 46 ⇓P **P 01 19 20.1 +0.3**
baz=86
M13A Montello 86.24 43 ⇓P **P 01 19 20.0 0.0**
baz=86,SNR=11
M13A Montello 86.24 43 *eP* **P 01 19 19.9 -0.1**
comp=Z,14nm,1.0s,mb4.5
SYO Syowa Base 86.26 193 ⇓*eP* **P 01 19 14.8 -4.9**
SYO Syowa Base 86.26 193 ⇓*eP* **P 01 19 16.6 -3.1**
V18A Ganado 86.28 50 ⇑P **P 01 19 20.4 +0.1**
baz=86,SNR=6.0
T17A Navajo Res., N 86.28 48 ⇓P **P 01 19 20.8 +0.5**
baz=86,SNR=14
MFID Camas Ranch 86.30 41 ⇓P **P 01 19 20.3 0.0**
baz=86,SNR=7.2
SEY Seymchan 86.33 347 *cePP* **P 01 19 18.5 -1.4**
F09A S2 Ranch, Elgi 86.34 38 ⇑P **P 01 19 20.8 +0.5**
baz=86
WTV Waterville 86.34 36 P **P 01 19 20.4 +0.1**
121A Cookes Peak, D 86.36 53 ⇑P **P 01 19 21.3 +0.5**
baz=86
H10A Noah's Angus R 86.39 39 ⇑P **P 01 19 20.4 -0.2**
baz=86,SNR=26
TNA Tin City 86.44 5 *eP* **P 01 19 19.4 -0.9**
comp=Z,4.8nm,0.8s,mb4.2
R16A Teasdale 86.44 47 ⇓P **P 01 19 21.5 +0.4**
baz=87,SNR=9.1
K12A Draper Farm, C 86.45 42 ⇑P **P 01 19 21.0 0.0**

baz=87,SNR=12
I11A Placerville 86.49 40 ⇓P **P 01 19 21.1 0.0**
baz=87,SNR=18
DUG Dugway 86.51 45 *eP* **P 01 19 20.6 -0.7**
DUG pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
DUG Dugway 86.51 45 *eP* **P 01 19 20.6 -0.7**
comp=Z,5.1nm,1.2s,mb4.0
D08A Wollman Farm, 86.54 37 ⇓P **P 01 19 21.4 +0.1**
baz=87,SNR=5.0
P15A Leamington 86.55 45 ⇓P **P 01 19 22.8 +1.3**
baz=87
Y20A Horse Springs, 86.56 52 ⇓P **P 01 19 21.9 +0.2**
baz=87,SNR=5.7
G10A Bishop Farm, J 86.56 39 ⇓P **P 01 19 21.3 -0.1**
baz=87,SNR=21
S17A Black Ridge (B 86.59 48 ⇓P **P 01 19 21.5 -0.2**
baz=87
J12A Stokes Ranch, 86.66 41 ⇓P **P 01 19 22.3 +0.4**
baz=87,SNR=19
U18A Rough Rock, Ch 86.66 49 ⇑P **P 01 19 21.9 -0.2**
baz=87,SNR=7.2
X20A Quemado 86.76 51 ⇓P **P 01 19 22.9 +0.3**
baz=87,SNR=7.7
L13A Double Diamond 86.76 43 ⇓P **P 01 19 22.9 +0.5**
baz=87
Z21A St. Cloud Mine 86.80 53 ⇓P **P 01 19 23.5 +0.7**
baz=87,SNR=7.4
M14A Sheep Mountain 86.84 43 ⇓P **P 01 19 22.9 +0.1**
baz=87,SNR=10
OD2 Odessa Site #2 86.85 36 P **P 01 19 22.6 0.0**
KTH Kantishna Hill 86.87 12 *eP* **P 01 19 20.1 -2.3**
comp=Z,18nm,0.9s,mb4.7
F10A Beach Ranch, E 86.88 38 ⇑P **P 01 19 22.8 -0.1**
baz=87,SNR=15
D09A Jones Farm, Ri 86.88 37 ⇓P **P 01 19 22.8 0.0**
baz=87,SNR=6.6
H11A Donnelly 86.89 40 ⇓P **P 01 19 23.1 +0.2**
baz=87,SNR=30
CHUM Lake Minchumin 86.90 12 *eP* **P 01 19 20.9 -1.7**
comp=Z,17nm,0.9s,mb4.7
TRF Thorofare Moun 86.91 13 ⇑*iP* **P 01 19 20.9 -1.6**
comp=Z,39nm,0.7s,mb5.1
A07A Ashnola River, 86.92 34 ⇓P **P 01 19 22.9 -0.1**
baz=87,SNR=8.9
I12A Atlanta 86.93 41 ⇑P **P 01 19 23.5 +0.3**
baz=87,SNR=23
K13A Stover Farm, H 86.97 42 ⇑P **P 01 19 23.6 +0.3**
baz=87,SNR=13
Q16A Castle Valley 86.97 46 ⇓P **P 01 19 23.8 +0.3**
baz=87,SNR=7.5
T18A Mexican Hat 87.00 48 ⇑P **P 01 19 23.8 +0.1**
baz=87,SNR=30
W20A Ramah 87.03 51 ⇑P **P 01 19 24.1 +0.2**
baz=87,SNR=12
R17A Hanksville Air 87.04 47 ⇓P **P 01 19 23.7 -0.1**
baz=87,SNR=6.6
N15A Stansbury Isla 87.06 44 ⇑P **P 01 19 23.9 0.0**
baz=87
B08A Colville Reser 87.07 35 ⇑P **P 01 19 23.2 -0.5**
baz=87,SNR=16
U19A Dine' College, 87.07 49 ⇑P **P 01 19 24.0 0.0**
baz=87,SNR=11
G11A Walters Elk Ra 87.12 39 ⇑P **P 01 19 23.8 -0.3**
baz=87,SNR=30
Y21A Point of Rocks 87.12 52 ⇓P **P 01 19 24.8 +0.5**
baz=87,SNR=9.0
TMUT Trail Mountain 87.13 46 *eP* **P 01 19 25.3 +1.1**
S18A Hurst Farm, Bl 87.18 48 ⇑P **P 01 19 24.0 -0.5**
baz=87
L14A Malta 87.18 43 ⇑P **P 01 19 24.9 +0.5**
baz=87
E10A Myers Farm, Un 87.23 38 ⇑P **P 01 19 24.9 +0.4**
baz=87
X21A Alamocita Cree 87.24 52 ⇓P **P 01 19 25.0 +0.1**
baz=87,SNR=7.9
HLID Hailey 87.24 41 ⇑P **P 01 19 24.9 +0.3**
baz=87,SNR=26
HLID Hailey 87.24 41 *eP* **P 01 19 25.0 +0.4**
comp=Z,16nm,0.9s,mb4.7
J13A Cove Ranch, Pi 87.31 41 ⇓P **P 01 19 25.3 +0.4**
baz=87,SNR=26
Z22A Elephant Butte 87.31 53 ⇓P **P 01 19 25.6 +0.4**
baz=87
C09A Chrisman Ranch 87.33 36 ⇓P **P 01 19 24.8 -0.1**
baz=88,SNR=6.4
BPAW Bear Paw Mtn. 87.35 12 *eP* **P 01 19 22.2 -2.5**
comp=Z,2.3nm,0.6s,mb4.0
HVU Hansel Valley 87.35 43 *eP* **P 01 19 25.6 +0.4**
V20A Brimhall 87.37 50 ⇑P **P 01 19 25.2 -0.2**
baz=88
O16A Springville 87.39 45 ⇑P **P 01 19 25.8 +0.4**
baz=88
M15A Larsen Ranch, 87.40 44 ⇑P **P 01 19 25.5 0.0**
baz=88
MCK McKinley 87.44 13 *eP* **P 01 19 23.6 -1.4**
MCK pmax pmax
comp=Z,25nm,0.9s,mb4.8
MCK McKinley 87.44 13 *eP* **P 01 19 23.6 -1.5**
comp=Z,25nm,0.9s,mb4.8
T19A Beclabito 87.45 49 ⇑P **P 01 19 26.4 +0.6**
baz=88
F11A Grangeville 87.45 39 ⇑P **P 01 19 24.3 -1.3**
baz=88,SNR=12
D10A Wagner Farm, O 87.46 37 ⇓P **P 01 19 24.9 -0.7**
baz=88,SNR=10
K14A Jones Ranch, D 87.49 43 ⇓P **P 01 19 25.7 -0.1**
baz=88,SNR=12
H12A Diamond D Ranc 87.50 40 ⇓P **P 01 19 26.0 +0.1**
baz=88,SNR=33
SRU San Rafael 87.50 47 ⇓P **P 01 19 26.0 0.0**
baz=88,SNR=22
SRU San Rafael 87.50 47 *eP* **P 01 19 26.0 0.0**
SRU pmax pmax
comp=Z,18nm,0.8s,mb4.8
SRU San Rafael 87.50 47 *eP* **P 01 19 26.0 0.0**
comp=Z,18nm,0.8s,mb4.8
G12A Big Creek, Yel 87.53 40 ⇑P **P 01 19 25.9 0.0**
baz=88
P17A Butcher Ranch, 87.53 46 ⇑P **P 01 19 26.3 +0.2**
baz=88
R18A Canyonlands Na 87.58 47 ⇑P **P 01 19 26.2 -0.2**
baz=88,SNR=14
SKAG Skagway 87.59 21 *eP* **P 01 19 26.8 +0.9**
I13A Wildhorse Cree 87.61 41 ⇓P **P 01 19 26.6 +0.3**
baz=88,SNR=10
Y22A Socorro 87.61 52 ⇓P **P 01 19 26.6 0.0**
baz=88,SNR=8.9
JLU Jordanelle 87.62 45 *eP* **P 01 19 26.9 +0.4**
324A Moseley Ranch, 87.63 55 ⇓P **P 01 19 26.6 -0.2**
baz=88,SNR=16
DAU Daniels Canyon 87.65 45 *eP* **P 01 19 27.3 +0.7**
E11A Bogner Ranch, 87.68 38 ⇓P **P 01 19 25.6 -1.0**
baz=88,SNR=11
LENM Lemitar 87.71 52 *eP* **P 01 19 26.9 -0.2**
L15A Malad City 87.71 43 ⇓P **P 01 19 26.8 0.0**
baz=88,SNR=16
425A Indio Mountain 87.73 56 ⇑P **P 01 19 27.4 +0.2**
baz=88,SNR=15
B09A Rice 87.75 36 ⇓P **P 01 19 26.6 -0.3**
baz=88,SNR=14
Q18A Rafter H Ranch 87.77 47 ⇓P **P 01 19 26.9 -0.3**
baz=88,SNR=10
N16A Rees Ranch, Co 87.77 45 ⇓P **P 01 19 27.3 +0.1**
baz=88,SNR=5.5
S19A Harvey Farm, M 87.81 48 ⇑P **P 01 19 27.1 -0.3**
baz=88,SNR=6.1
MNTX Cornudas Mount 87.82 55 *eP* **P 01 19 27.3 -0.3**
comp=Z,39nm,1.6s,mb4.8
M16A Huntsville 87.86 44 ⇓P **P 01 19 27.3 -0.2**
baz=88,SNR=5.7
Z23A Rita Site, Whi 87.86 53 ⇑P **P 01 19 27.8 +0.1**
baz=88
626A Big Bend Ranch 87.87 57 ⇓P **P 01 19 28.2 +0.3**
baz=88,SNR=7.8
H13A Challis 87.87 40 ⇑P **P 01 19 27.9 +0.3**
baz=88,SNR=17
224A Corundas Mount 87.87 55 ⇓P **P 01 19 28.1 +0.2**
baz=88,SNR=11
O17A Robinson Place 87.89 45 ⇓P **P 01 19 28.2 +0.4**
baz=88,SNR=36
F12A Elk City 87.91 39 ⇑P **P 01 19 27.4 -0.3**
baz=88,SNR=43
P18A Preston Nutter 87.94 46 ⇓P **P 01 19 28.2 +0.1**
baz=88,SNR=11
BNM Barren Site 87.96 52 *eP* **P 01 19 27.7 -0.6**
comp=Z,9.8nm,1.3s,mb4.3
K15A Arbon 87.97 43 ⇓P **P 01 19 28.3 +0.2**

baz=88,SNR=10
V21A Milan 87.97 51 ⇑P P 01 19 28.0 -0.2
baz=88
R19A Curley Farm, L 87.98 48 ⇑P P 01 19 28.1 -0.1
baz=88
D11A Klaveano Farm, 87.99 38 ⇓P P 01 19 27.3 -0.8
baz=88,SNR=7.1
325A Bean Ranch, Si 87.99 55 ⇓P P 01 19 28.4 -0.1
baz=88,SNR=11
LPM Los Pinos Moun 88.03 52 eP P 01 19 28.8 +0.3
I14A Mackay 88.03 41 ⇓P P 01 19 28.7 +0.4
baz=88,SNR=16
HWUT Hardware Ranch 88.04 44 eP P 01 19 27.8 -0.6
comp=Z,8.2nm,0.7s,mb4.5
526A Mary Lane Ranc 88.12 57 ⇓P P 01 19 29.2 +0.1
baz=88,SNR=14
TXAR Lajitas Array 88.14 58 P P 01 19 29.5 +0.3
comp=Z,14nm,0.8s,mb4.7,baz=218,slow=6.0,SNR=81
TXAR pP pP 01 21 44.5 -3.0
comp=Z,0.8nm,1.0s,baz=119,slow=5.4,SNR=2.0
TXAR Lajitas Array 88.14 58 P P 01 19 29.5 +0.3
TXAR *PP pP 01 21 44.5 -3.0
TXAR pmax pmax
comp=Z,14nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR Lajitas Array 88.14 58 P P 01 19 29.5 +0.3
TXAR pP pP 01 21 44.5 -3.0
G13A Cobalt 88.16 40 ⇑P P 01 19 28.8 -0.1
baz=88,SNR=10
N17A Moffit Pass 88.19 45 ⇓P P 01 19 29.5 +0.4
baz=88
124A Stringfield Ra 88.20 54 ⇓P P 01 19 29.5 +0.1
baz=88,SNR=10
NEW Newport 88.22 36 eP P 01 19 28.5 -0.6
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW Newport 88.22 36 eP P 01 19 28.5 -0.6
comp=Z,7.8nm,0.8s,mb4.4
Y23A Lovelace Mesa, 88.29 53 ⇓P P 01 19 29.8 +0.1
baz=88,SNR=5.9
PV01 Paradox Valley 88.38 48 eP P 01 19 29.4 -0.7
comp=Z,866nm,1.2s
O18A Roosevelt 88.41 46 ⇑P P 01 19 30.4 +0.2
baz=88,SNR=6.2
627A Terlingua Ranc 88.42 58 ⇓P P 01 19 30.5 0.0
baz=88,SNR=17
KMI Kunming 88.42 297 P P 01 19 32.1 +1.5
KMI pmax pmax
comp=Z,11nm,0.8s,mb4.5
KMI pmax pmax
comp=Z,85nm,4.4s
426A McDonald Obser 88.42 56 ⇑P P 01 19 30.5 +0.1
baz=89,SNR=9.9
VNA2 Neumayer--Watz 88.43 177 eP P 01 19 28.1 -1.7
H14A Leadore 88.44 41 ⇓P P 01 19 30.4 +0.2
baz=89,SNR=9.4
ANMO Albuquerque 88.44 52 eP P 01 19 30.3 -0.1
ANMO pmax pmax
comp=Z,20nm,1.2s
ANMO Albuquerque 88.44 52 eP P 01 19 30.3 -0.1
comp=Z,20nm,1.2s,mb4.6
F13A Darby 88.47 39 ⇑P P 01 19 29.9 -0.4
baz=89,SNR=12
527A Woodward Ranch 88.53 57 ⇓P P 01 19 30.8 -0.2
baz=89
Z24A Sheeppen Canyo 88.54 54 ⇓P P 01 19 30.6 -0.4
baz=89,SNR=5.6
R20A Redvale 88.54 48 ⇑P P 01 19 30.3 -0.5
baz=89
V22A San Miguel Ran 88.54 51 ⇑P P 01 19 30.4 -0.5
baz=89
D12A Red Ives Fores 88.56 38 ⇑P P 01 19 30.2 -0.4
baz=89
M17A Scullys Gap (B 88.56 44 ⇑P P 01 19 30.6 -0.2
baz=89,SNR=7.3
K16A Soda Springs 88.64 43 ⇓P P 01 19 31.5 +0.3
baz=89,SNR=6.1
VNA1 Neumayer--Stat 88.66 177 eP P 01 19 29.4 -1.5
I15A Monteview 88.67 42 ⇑P P 01 19 31.7 +0.4
baz=89,SNR=6.4
COLA College 88.67 13 eP P 01 19 29.1 -1.7
COLA pmax pmax
comp=Z,28nm,0.9s,mb5.0
COLA College 88.67 13 eP P 01 19 29.1 -1.7
comp=Z,28nm,0.9s,mb5.0
HHC Hu-ho-hao-te 88.68 315 eP P 01 19 32.3 +0.9
HHC pP pP 01 21 53.0 +3.1
HHC sP sP 01 22 57.3 +2.9
HHC PP PP 01 23 17.3 +4.0
HHC SKS 01 28 58.5
HHC S S 01 29 23.3 -1.5
HHC SS SS 01 35 41.5 +3.3
HHC pmax pmax
comp=Z,17nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,89nm,5.0s
G14A Jackson 88.71 40 ⇑P P 01 19 31.5 0.0
baz=89
S21A Coal Bank Pass 88.71 49 ⇑P P 01 19 31.8 +0.2
baz=89,SNR=5.7
326A Caldwell Ranch 88.74 56 ⇑P P 01 19 31.4 -0.5
baz=89
L17A Cokeville 88.74 44 ⇑P P 01 19 31.1 -0.6
baz=89
B11A Sandpoint 88.74 36 ⇓P P 01 19 31.3 -0.2
baz=89,SNR=6.7
Y24A Capitan 88.75 53 ⇓P P 01 19 32.0 +0.1
baz=89,SNR=34
W23A Werner Place, 88.76 52 ⇑P P 01 19 32.5 +0.5
baz=89
P19A Cripple Cowboy 88.80 47 ⇑P P 01 19 32.1 +0.1
baz=89
GDL2 Guadalupe Moun 88.81 55 eP P 01 19 32.4 +0.2
628A Black Gap, Mar 88.83 58 ⇑P P 01 19 32.3 -0.1
baz=89
J16A Bone 88.85 42 ⇑P P 01 19 32.6 +0.5
baz=89,SNR=30
MCMT McKenzie Canyo 88.86 41 eP P 01 19 32.4 +0.2
comp=Z,11nm,1.1s,mb4.5
H15A Lima 88.88 41 ⇓P P 01 19 32.5 +0.3
baz=89,SNR=12
M18A Lyman 88.93 45 ⇑P P 01 19 32.6 0.0
baz=89,SNR=25
Q20A Ridgley Place, 88.96 47 ⇓P P 01 19 32.4 -0.3
baz=89,SNR=11
226A Malaga, Loving 88.96 55 ⇓P P 01 19 32.6 -0.3
baz=89,SNR=12
N18A Larsen Ranch, 88.98 45 ⇑P P 01 19 32.6 -0.2
baz=89,SNR=7.3
427A Hayter Ranch, 88.99 57 ⇑P P 01 19 33.1 0.0
baz=89,SNR=20
V23A Ortiz Mt. (NFS 89.00 51 ⇓P P 01 19 33.3 +0.3
baz=89,SNR=5.6
Z25A Roswell 89.01 54 ⇓P P 01 19 33.2 +0.1
baz=89,SNR=6.2
O19A Miners Draw (B 89.02 46 ⇑P P 01 19 32.9 -0.1
baz=89,SNR=16
K17A Gardner Place, 89.03 43 ⇓P P 01 19 33.2 +0.2
baz=89,SNR=8.0
A11A Hall Mountain, 89.03 36 ⇑P P 01 19 32.9 +0.1
baz=89,SNR=7.1
T22A Edith 89.05 50 ⇓P P 01 19 32.9 -0.3
baz=89
RRI2 Red Ridge 89.07 43 eP P 01 19 33.5 +0.3
comp=Z,21nm,0.8s,mb4.9
D13A Huson 89.09 38 ⇑P P 01 19 33.1 -0.1
baz=89
CMAR Chiang Mai Arr 89.10 290 P P 01 19 35.5 +1.7
comp=Z,4.1nm,0.8s,mb4.2,baz=132,slow=3.1,SNR=18
CMAR Chiang Mai Arr 89.10 290 P P 01 19 35.5 +1.6
CMAR pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 89.14 355⇑eP P 01 19 32.5 -0.4
BILL pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
BILL Bilibino 89.14 355 eP P 01 19 31.9 -1.0
comp=Z,5.8nm,0.9s,mb4.3
528A Cox Ranch, San 89.18 57 ⇓P P 01 19 34.1 +0.1
baz=89
B12A Libby 89.19 37 ⇑P P 01 19 33.8 +0.2
baz=89
L18A Fontenelle, Gr 89.19 44 ⇑P P 01 19 33.5 -0.2
baz=89,SNR=5.4
R21A Cimarron 89.20 48 ⇓P P 01 19 34.0 +0.1
baz=89,SNR=7.9
I16A Newdale 89.22 42 ⇑P P 01 19 34.3 +0.4
baz=89,SNR=13
CHTO Chiang Mai 89.23 290 eP P 01 19 35.3 +0.8
CHTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
CHTO Chiang Mai 89.23 290 eP P 01 19 35.3 +0.8
comp=Z,4.9nm,0.6s,mb4.4
G15A Dillon 89.26 41 ⇓P P 01 19 33.9 -0.1
baz=89,SNR=10
126A Clayton Basin, 89.27 55 ⇑P P 01 19 34.0 -0.3
baz=89
N19A John Jarvie Ra 89.27 45 ⇓P P 01 19 33.6 -0.5
baz=89,SNR=14
DLMT Dillon 89.29 40 eP P 01 19 34.7 +0.6
Y25A Mesa, Roswell 89.30 53 ⇑P P 01 19 34.1 -0.4
baz=89,SNR=12
BSMT Bassoo Peak 89.31 37 eP P 01 19 33.9 -0.2
W24A Lazy 6 Ranch, 89.33 52 ⇑P P 01 19 34.0 -0.6
baz=90,SNR=8.2
C13A Hot Springs 89.34 38 ⇓P P 01 19 33.7 -0.6
baz=90
REDW Red Top Meadow 89.37 43 eP P 01 19 34.6 0.0
TPAW Teton Pass 89.37 43 eP P 01 19 33.8 -0.8
comp=Z,12nm,0.9s,mb4.6
Q21A Lamborn Mesa, 89.40 48 ⇓P P 01 19 35.0 +0.2
baz=90
A12A Yaak River Ran 89.41 36 ⇓P P 01 19 34.7 +0.1
baz=90
J17A Brown Place, J 89.46 43 ⇓P P 01 19 34.9 0.0
baz=90,SNR=18
SNOW Snow King Moun 89.48 43 eP P 01 19 35.4 +0.3
comp=Z,22nm,1.0s,mb4.8
428A Kincaid Ranch, 89.50 57 ⇑P P 01 19 35.4 -0.1
baz=90
K18A Toltan Ranch, 89.54 44 ⇑P P 01 19 35.6 +0.3
baz=90,SNR=24
O20A White River Ci 89.54 46 ⇓P P 01 19 35.3 -0.1
baz=90,SNR=15
CPRX Cap Rock 89.55 54 eP P 01 19 34.9 -0.7
comp=Z,6.4nm,0.9s,mb4.5
Z26A Caprock 89.56 54 ⇑P P 01 19 35.1 -0.6
baz=90,SNR=9.8
M19A Rock Springs 89.57 45 ⇓P P 01 19 35.3 -0.3
baz=90,SNR=11
IMW Indian Meadow 89.58 42 eP P 01 19 35.8 +0.3
comp=Z,18nm,1.0s,mb4.8
X25A Clemmons Ranch 89.58 53 ⇓P P 01 19 35.1 -0.6
baz=90
F15A Butte 89.60 40 ⇑P P 01 19 35.3 -0.2
baz=90,SNR=8.1
LRM Limekiln Ridge 89.61 40 eP P 01 19 35.7 +0.1
D14A Greenough 89.64 39 ⇓P P 01 19 34.9 -0.8
baz=90,SNR=6.8
LOHW Long Hollow 89.65 43 eP P 01 19 35.8 -0.1
comp=Z,6.7nm,0.7s,mb4.6
328A Wristen Ranch, 89.67 56 ⇓P P 01 19 35.6 -0.6
baz=90,SNR=6.9
R22A Saguache, Gunn 89.70 49 ⇓P P 01 19 36.3 +0.2
baz=90,SNR=6.4
CHMT Chamberlain Mo 89.70 39 eP P 01 19 35.1 -0.9
G16A Moss Hill, Enn 89.71 41 ⇓P P 01 19 36.1 +0.1
baz=90,SNR=5.2
L19A Farson 89.72 44 ⇑P P 01 19 36.2 0.0
baz=90,SNR=32
QLMT Earthquake Lak 89.74 41 eP P 01 19 36.6 +0.4
B13A Whitefish 89.77 37 ⇑P P 01 19 35.4 -0.9
baz=90,SNR=5.1
127A Arkansas Junct 89.79 55 ⇓P P 01 19 36.3 -0.4
baz=90,SNR=6.3
H16A Russell Place, 89.79 41 ⇑P P 01 19 36.7 +0.2
baz=90,SNR=7.3
E15A Deer Lodge 89.81 39 ⇓P P 01 19 36.4 -0.1
baz=90
I17A Pilgrim Ck. 89.82 42 ⇑P P 01 19 37.2 +0.6
baz=90
J18A Kendall Valley 89.83 43 ⇓P P 01 19 36.5 -0.1
baz=90,SNR=37
N20A Spree Gulch, 89.85 46 ⇑P P 01 19 36.8 0.0
baz=90,SNR=25
C14A Swan Lake 89.86 38 ⇓P P 01 19 36.7 0.0
baz=90
Q22A Crested Butte, 89.88 48 ⇑P P 01 19 37.2 +0.2
baz=90,SNR=11
BW06 Boulder Array 89.91 44 ⇓P P 01 19 36.6 -0.4
baz=90,SNR=17
BW06 Boulder Array 89.91 44 eP P 01 19 36.3 -0.8
comp=Z,5.7nm,0.6s,mb4.6
PDAR Pinedale Array 89.91 44 P P 01 19 36.5 -0.6
comp=Z,7.8nm,0.7s,mb4.6,baz=204,slow=3.0,SNR=53
CD2 Chengdu 89.94 303 P P 01 19 37.5 0.0
CD2 pP pP 01 21 58.6 +2.3
CD2 sP sP 01 23 02.9 +2.3
CD2 PP PP 01 23 26.6 +3.3
CD2 S S 01 29 33.8 -2.8
CD2 sS sS 01 33 44.0 -0.4
CD2 SS SS 01 35 57.5 +1.0
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CD2 pmax pmax
comp=Z,90nm,7.1s
Y26A Elida 89.95 54 ⇓P P 01 19 37.2 -0.3
baz=90
PLCA Paso Flores 89.96 134 P P 01 19 37.4 -0.1
comp=Z,5.9nm,0.7s,mb4.5,baz=239,slow=4.7,SNR=9.7
PLCA Paso Flores 89.96 134 P P 01 19 37.4 -0.1
PLCA pmax pmax
comp=Z,6.0nm,0.7s
PLCA Paso Flores 89.96 134 eP P 01 19 37.2 -0.3
comp=Z,6.0nm,0.7s,mb4.5
SMCO Snowmass 89.97 48 eP P 01 19 37.5 +0.1
comp=Z,8.6nm,0.8s,mb4.6
BOZ Bozeman (W) 90.02 40 ⇑P P 01 19 37.3 -0.2
baz=90,SNR=14
BOZ Bozeman (W) 90.02 40 eP P 01 19 37.3 -0.2
BOZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
BOZ Bozeman (W) 90.02 40 eP P 01 19 37.3 -0.2
comp=Z,6.2nm,0.9s,mb4.4
W25A X Bar L Ranch, 90.03 52 ⇑P P 01 19 37.2 -0.6
baz=90,SNR=13
H17A Grant Village 90.05 42 ⇓P P 01 19 38.7 +1.0
baz=90,SNR=7.1
F16A Kennard Place, 90.09 40 ⇑P P 01 19 37.7 -0.2
baz=90,SNR=6.9
A13A Flathead Natio 90.10 37 ⇑P P 01 19 37.7 -0.1
baz=90
O21A Pagoda 90.10 47 ⇓P P 01 19 37.9 -0.2
baz=90
EGAK Eagle 90.11 15 eP P 01 19 36.6 -0.8
comp=Z,18nm,1.1s,mb4.8
Z27A Tatum 90.16 54 ⇑P P 01 19 38.0 -0.4
baz=90
I18A Diamond G Ranc 90.19 43 ⇓P P 01 19 38.4 0.0
baz=90
D15A Lincoln 90.20 39 ⇑P P 01 19 38.0 -0.3
baz=90,SNR=7.6
M20A Sweetwater, Wa 90.21 45 ⇓P P 01 19 38.4 0.0
baz=90,SNR=12
COLD Coldfoot 90.30 11 eP P 01 19 38.1 -0.2
comp=Z,14nm,1.2s,mb4.7
N21A Black Mountain 90.32 46 ⇓P P 01 19 39.0 0.0
baz=90,SNR=17
L20A Wamsutter 90.35 45 ⇑P P 01 19 39.2 +0.1
baz=90,SNR=20
SDCO Great Sand Dun 90.37 50 eP P 01 19 38.5 -0.8
K19A Abson Red Bu 90.40 44 ⇑P P 01 19 38.5 -0.8
baz=90,SNR=6.2
HRY Holter Researc 90.44 39 eP P 01 19 39.1 -0.2
Y27A Causey 90.44 54 ⇑P P 01 19 38.7 -1.0
baz=91,SNR=5.9
E16A East Helena 90.44 40 ⇑P P 01 19 39.3 -0.1
baz=91
C15A Salmond Ranch, 90.52 38 ⇓P P 01 19 39.2 -0.6
baz=91,SNR=5.3
K20A Yellowstone Ra 90.65 44 ⇑P P 01 19 39.7 -0.8
baz=91,SNR=5.9
A14A Double T Ranch 90.67 37 ⇓P P 01 19 40.0 -0.5
baz=91,SNR=14
F17A Fitzpatrick Pl 90.74 41 ⇑P P 01 19 41.1 +0.3
baz=91,SNR=6.9
D16A Dana Ranch, Ca 90.76 39 ⇓P P 01 19 40.7 -0.2
baz=91,SNR=8.8
MSTX Muleshoe 90.77 54 ⇓P P 01 19 40.3 -0.9
baz=91,SNR=6.8
V26A Tequesquite Ra 90.78 52 ⇑P P 01 19 40.5 -0.7
baz=91
X27A F and S Farms, 90.81 53 ⇑P P 01 19 41.0 -0.4
baz=91
M21A Separation Pea 90.81 45 ⇑P P 01 19 40.9 -0.3
baz=91,SNR=21
B15A Bradely Ranch, 90.82 38 ⇑P P 01 19 39.7 -1.4
baz=91,SNR=5.6
RWWY Rawlins 90.95 45 eP P 01 19 41.0 -0.8
comp=Z,15nm,0.9s,mb4.8
L21A Rawlins 90.97 45 ⇑P P 01 19 41.1 -0.8
baz=91,SNR=5.7
W27A Bowe Ranch, En 91.00 53 ⇑P P 01 19 41.8 -0.5
baz=91
C16A Fuhringer Ranc 91.03 39 ⇑P P 01 19 41.4 -0.7
baz=91
U26A Atchley Ranch, 91.06 51 ⇓P P 01 19 42.0 -0.5
baz=91,SNR=7.2
N22A Wattenberg Ran 91.06 46 ⇓P P 01 19 42.7 +0.3
baz=91,SNR=24
A15A Johnson Ranch, 91.06 37 ⇓P P 01 19 41.4 -0.8
baz=91,SNR=7.9
G18A Lazy EL Ranch, 91.13 41 ⇑P P 01 19 42.7 +0.1
baz=91
F18A Big Timber 91.32 41 ⇓P P 01 19 43.5 0.0
baz=91
B16A M & M Farms, S 91.36 38 ⇑P P 01 19 43.1 -0.5
baz=92
C17A Wharram Farm, 91.53 39 ⇑P P 01 19 44.0 -0.3
baz=92
L22A Ellis Ranch, M 91.62 45 ⇑P P 01 19 45.1 +0.1
baz=92
JCT Junction City 91.67 58 eP P 01 19 44.3 -1.2
JCT pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
JCT Junction City 91.67 58 eP P 01 19 44.3 -1.2
comp=Z,6.9nm,0.8s,mb4.6
B17A L&G Farms, Che 91.83 38 ⇑P P 01 19 45.2 -0.6
baz=92,SNR=5.9
AMTX Amarillo 91.97 53 eP P 01 19 45.9 -0.8
comp=Z,2.7nm,0.5s,mb4.4
LZH Lanzhou 91.98 308 P P 01 19 47.3 +0.5
LZH pP pP 01 22 08.9 +2.9
LZH sP sP 01 23 13.0 +2.9
LZH PP PP 01 23 42.8 +3.7
LZH pmax pmax
comp=Z,21nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,75nm,8.3s
A17A Triple J Farms 92.21 38 ⇑P P 01 19 47.1 -0.3
baz=92,SNR=9.9
B18A Beardsley Farm 92.47 39 ⇓P P 01 19 48.3 -0.5
baz=93,SNR=8.6
A18A Metzger Ranch, 92.69 38 ⇓P P 01 19 49.1 -0.5
baz=93,SNR=6.2
WMOK Wichita Mounta 94.10 55 eP P 01 19 52.8 -3.7
WMOK pmax pmax
comp=Z,13nm,0.8s,mb5.0
WMOK Wichita Mounta 94.10 55 eP P 01 19 52.8 -3.7
comp=Z,13nm,0.8s,mb5.0
RSSD Black Hills 94.11 44 eP P 01 19 55.3 -1.0
RSSD pmax pmax
comp=Z,1μm,3.8s
RSSD Black Hills 94.11 44 eP P 01 19 55.3 -1.0
comp=Z,1μm,3.8s
INK Inuvik 94.78 15 eP P 01 19 57.3 -1.5
INK pmax pmax
comp=Z,9.0nm,1.3s
INK Inuvik 94.78 15 eP P 01 19 57.3 -1.4
comp=Z,8.7nm,1.3s,mb4.7
SONM Songino Array 95.16 319 PKKPbc PKKPbc 01 36 50.2 -2.5
comp=Z,0.7nm,0.7s,baz=298,slow=3.2,SNR=4.8
YKA Yellowknife Ar 97.19 25 P Pdif 01 20 08.5 -1.7
comp=Z,1.6nm,0.7s,baz=246,slow=4.5,SNR=32
YKA pP pP 01 22 25.3 -4.2
comp=Z,0.1nm,0.3s,baz=245,slow=4.0,SNR=2.2
YKA PKiKP PKiKP 01 24 38.7 -1.8
comp=Z,0.2nm,0.5s,baz=233,slow=1.6,SNR=5.3
YKA Yellowknife Ar 97.19 25 P Pdif 01 20 08.5 -1.7
YKA pP pP 01 22 25.3 -4.2
LPAZ La Paz 103.04 113 P Pdif 01 20 38.1 +1.9
comp=Z,1.0nm,0.9s,baz=304,slow=2.9,SNR=6.2
LPAZ La Paz 103.04 113 P Pdif 01 20 38.1 +1.9
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
LPAZ La Paz 103.04 113 ePdif Pdif 01 20 38.1 +2.0
WMQ Urumqi 106.20 311 ePdif Pdif 01 20 50.3 +0.1
WMQ PP PP 01 25 27.4 +2.7
WMQ S Sdif 01 31 49.5 -4.3
WMQ SS SS 01 39 38.3 -1.8
ZALV Zalesovo Beam 109.94 321 PKiKP PKiKP 01 25 02.6 -1.6
comp=Z,2.8nm,0.5s,baz=167,slow=1.0,SNR=18
ZALV PKKPbc PKKPbc 01 36 08.0 -1.9
comp=Z,0.4nm,0.4s,baz=312,slow=29,SNR=2.7
ZALV Zalesovo Beam 109.94 321 eP Pdif 01 21 01.1 -5.7
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 110.51 313 ePKP PKiKP 01 25 03.8 -1.6
MKAR Makanchi Array 110.51 313 PKiKP PKiKP 01 25 04.2 -1.3
comp=Z,1.5nm,0.4s,baz=74,slow=1.4,SNR=13
MKAR PKKPbc PKKPbc 01 36 06.2 -1.7
comp=Z,1.6nm,0.8s,baz=266,slow=3.3,SNR=11
MKAR PKKPab PKKPab 01 36 18.4 -1.0
comp=Z,0.4nm,0.8s,baz=269,slow=6.8,SNR=2.6
KURK Kurchatov 113.37 317 PKiKP PKiKP 01 25 09.3 -1.5
comp=Z,3.6nm,0.7s,baz=94,slow=1.9,SNR=15
KURK PKKPbc PKKPbc 01 35 56.5 -2.2
comp=Z,1.3nm,0.8s,baz=274,slow=4.2,SNR=6.2
KURK PKKPab PKKPab 01 36 05.3 -1.3
comp=Z,0.8nm,0.7s,baz=271,slow=5.0,SNR=4.4
KURK Kurchatov 113.37 317 i PKiKP PKiKP 01 25 09.4 -1.4
KURK 01 35 56.5
KURK 01 36 05.3
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK pmax pmax
comp=Z,1.0nm,0.8s
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 113.37 317 ePKP PKiKP 01 25 08.4 -2.4
TKM2 Tokmak 2 114.74 309 ePKiKP PKPdf 01 25 12.4 -1.3
UCH Uchtor 115.47 308 ePKiKP PKPdf 01 25 14.9 -0.2
BVAR Borovoye Array 118.50 320 PKP PKPdf 01 25 19.4 -1.2
comp=Z,8.3nm,0.4s,baz=123,slow=2.3,SNR=48
BVAR Borovoye Array 118.50 320 PKiKP PKPdf 01 25 19.4 -1.2
BVAR pmax pmax
comp=Z,8.0nm,0.4s
BRVK Borovoye 118.56 320 ePKiKP PKPdf 01 25 19.8 -0.9
KBL Kabul 118.98 299 ePKiKP PKPdf 01 25 21.4 -0.7
SPITS Spitsbergen Ar 122.01 356 PKP PKPdf 01 25 25.5 -1.2
comp=Z,15nm,0.7s,baz=94,slow=4.3,SNR=21
SPITS Spitsbergen Ar 122.01 356 PKiKP PKPdf 01 25 25.5 -1.2
SPITS pmax pmax
comp=Z,15nm,0.7s
SUR Sutherland 123.83 200 ePKPdf PKPdf 01 25 31.7 +0.1
SOKR Solikamsk 124.68 329 d PKiKP PKPdf 01 25 31.5 -0.8
SOKR pmax pmax
comp=Z,20nm,0.9s
ARU Arti 124.72 325 i PKiKP PKPdf 01 25 31.8 -0.6
ARU 01 27 28.4
ARU 01 31 38.2
ARU SS SS 01 43 36.0 -1.3
ARU Arti 124.72 325 ePKPdf PKPdf 01 25 31.7 -0.7
ABKAR Akbulak array 125.45 316 ePKPdf PKPdf 01 25 33.2 -0.8
BOSA Boshof 125.56 207 PKP PKPdf 01 25 35.1 0.0
comp=Z,6.4nm,1.1s,baz=310,slow=1.5,SNR=6.3
BOSA PKKPbc PKKPbc 01 35 13.3 -2.2
comp=Z,1.2nm,0.6s,baz=155,slow=12,SNR=5.6
BOSA Boshof 125.56 207 PKiKP PKPdf 01 25 35.1 +0.1
BOSA pmax pmax
comp=Z,6.0nm,1.1s
BOSA pmax pmax
comp=Z,1.0nm,0.6s
BOSA Boshof 125.56 207 ePKPdf PKPdf 01 25 35.1 +0.1
AKTK Aktyubinsk 126.46 318 PKP PKPdf 01 25 35.4 -0.6
AKTO Aktyubinsk 126.46 318 PKP PKPdf 01 25 35.4 -0.6
comp=Z,5.4nm,0.7s,baz=77,slow=3.0,SNR=14
AKTO Aktyubinsk 126.46 318 PKiKP PKPdf 01 25 35.4 -0.6
AKTO pmax pmax
comp=Z,5.0nm,0.7s
KEV Kevo 128.46 349 ePKiKP PKPdf 01 25 37.6 -1.6
KEV pmax pmax
comp=Z,5.0nm,0.5s
KEV Kevo 128.46 349 epkp PKPdf 01 25 37.6 -1.6
comp=Z,4.9nm,0.5s
LBTB Lobatse 128.53 209 ePKiKP PKPdf 01 25 40.7 -0.1
ARCES ARCESS Array B 128.92 349 PKP PKPdf 01 25 39.2 -0.9
comp=Z,9.6nm,0.5s,baz=20,slow=1.1,SNR=59
ARCES ARCESS Array B 128.92 349 PKiKP PKPdf 01 25 39.2 -0.9
ARCES pmax pmax

comp=Z,10.0nm,0.5s
ARCES ARCESS Array B 128.92 349 PKP PKPdf 01 25 39.2 -0.9
JOF Joensuu 132.97 341 *e*PKIKP PKPdf 01 25 46.4 -1.5
JOF pmax pmax
comp=Z,13nm,0.6s
JOF Joensuu 132.97 341 *e*pkp PKPdf 01 25 46.4 -1.5
comp=Z,13nm,0.6s
KAF Kangasniemi 135.03 343 *e*PKIKP PKPdf 01 25 49.7 -2.1
KAF pmax pmax
comp=Z,10.0nm,0.8s
KAF Kangasniemi 135.03 343 *e*pkp PKPdf 01 25 49.7 -2.1
comp=Z,9.9nm,0.8s,baz=24,slow=1.7
LSZ Lusaka 135.23 219 *e*PKIKP PKPdf 01 25 54.9 +1.3
FINES FINESS Array B 135.65 343 PKhKP 01 25 39.5
comp=Z,1.1nm,0.4s,baz=105,slow=3.9,SNR=5.3
FINES PKP PKPdf 01 25 53.7 +0.8
comp=Z,5.6nm,0.6s,baz=40,slow=3.4,SNR=16
FINES SKPbc SKPbc 01 28 26.8 +2.2
comp=Z,7.0nm,0.8s,baz=85,slow=6.3,SNR=9.5
FINES FINESS Array B 135.65 343 PKHKP 01 25 39.5
FINES 01 25 53.7
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES pmax pmax
comp=N,7.0nm,0.8s
FINES FINESS Array B 135.65 343 PKP 01 25 39.5
FINES PKP PKPdf 01 25 53.7 +0.8
FINES SKPbc SKPbc 01 28 26.8 +2.2
TSUM Tsumeb 137.05 204 *e*PKPdf PKPdf 01 25 57.4 +0.5
KMBO Kilima Mbogo 138.22 243 PKP PKPdf 01 25 58.9 -0.3
comp=N,1.6nm,0.6s,baz=0.5,slow=24,SNR=5.4
NOA NORSAR Array B 139.05 352 PKhKP 01 25 49.6
comp=N,4.0nm,0.8s,baz=16,slow=4.6,SNR=16
NOA PKP PKPdf 01 26 00.6 +1.4
comp=N,0.5nm,0.5s,baz=24,slow=21,SNR=3.4
NOA NORSAR Array B 139.05 352 PKHKP 01 25 49.6
NOA 01 26 00.6
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA pmax pmax
comp=Z,1.0nm,0.5s
NAO01 NORSAR Array S 139.28 352 *e*PKPpre 01 25 52.3
NAO01 *e*PKPdf PKPdf 01 25 59.8 +0.1
HFS Hagfors 139.56 350 PKhKP 01 25 51.8
comp=Z,7.2nm,0.5s,baz=67,slow=3.9,SNR=43
HFS SKPbc SKPbc 01 28 38.0 +2.2
comp=Z,1.4nm,0.8s,baz=149,slow=3.1,SNR=3.3
HFS Hagfors 139.56 350 PKHKP 01 25 51.8
HFS pmax pmax
comp=Z,7.0nm,0.5s
HFS pmax pmax
comp=N,1.0nm,0.8s
SUW Suwalki 142.62 338 *e*PKP PKPdf 01 26 02.8 -3.0
SUW Suwalki 142.62 338 *e*PKPdf PKPdf 01 26 03.0 -2.9
AKASG Malin Array Be 142.63 330 PKhKP 01 26 02.5
comp=N,29nm,0.5s,baz=43,slow=4.2,SNR=142
AKASG SKPbc SKPbc 01 28 45.8 +2.0
comp=N,0.3nm,0.3s,baz=38,slow=1.6,SNR=4.9
AKBB Malin Array Si 142.63 330 *e*PKHKP 01 26 02.4
KIEV Kiev 142.65 330 *e*PKHKP 01 26 02.2
MVH1 Achvaich 142.66 4 *e*P PKPdf 01 26 04.6 -1.2
KAC Achnashellach 142.99 5 *e*P PKPdf 01 26 03.7 -2.6
MCD Coleburn Disti 143.06 4 *e*P PKPdf 01 26 03.4 -3.0
KPL Plockton 143.12 6 *e*P PKPdf 01 26 03.7 -2.9
MDO Dochfour 143.13 5 *e*P PKPdf 01 26 03.8 -2.9
KSB Sheil Bridge 143.27 6 *e*P PKPdf 01 26 04.2 -2.6
SIM Simferopol' 143.41 319 *i* PKIKP PKPdf 01 26 07.5 0.0
SIM pmax pmax
comp=Z,57nm,0.9s
MUD Monsted U'grnd 143.77 352⇑*i*PKIKP PKPdf 01 26 06.4 -1.3
MUD pmax pmax
comp=Z,35nm,0.9s
MUD Monsted U'grnd 143.77 352⇑*i*P PKPdf 01 26 06.4 -1.3
comp=Z,35nm,0.9s
COP Copenhagen 144.00 349 *i* PKIKP PKPdf 01 26 06.9 -1.3
COP pmax pmax
comp=Z,13nm,0.8s
COP Copenhagen 144.00 349 *i* P PKPdf 01 26 06.9 -1.3
comp=Z,13nm,0.8s
BSD Bornholm Skovb 144.03 346⇑*i*PKIKP PKPdf 01 26 07.0 -1.2
BSD pmax pmax
comp=Z,35nm,1.0s
BSD Bornholm Skovb 144.03 346⇑*i*P PKPdf 01 26 07.0 -1.2
comp=Z,35nm,1.0s
EAB Aberfoyle 144.37 5 *e*P PKPdf 01 26 08.0 -0.8
EBH Black Hill 144.38 4 *e*P PKPdf 01 26 08.0 -0.8
PGBU Glenifferbraes 144.74 5 *e*P PKPdf 01 26 07.8 -1.7
ESY Stoneypath 144.76 3 *e*P PKPdf 01 26 09.1 -0.4
EAU Auchinoon 144.78 4 *e*P PKPdf 01 26 09.4 -0.1
WAR Warsaw 144.82 338 *e*PKP PKPdf 01 26 10.7 +1.0
WAR Warsaw 144.82 338 *e*PKIKP PKPdf 01 26 10.6 +0.9
EBL Broad Law 144.88 4 *e*P PKPdf 01 26 09.7 0.0
GKP Gorka Klasztor 145.12 343 *e*PKP PKPdf 01 26 11.1 +0.9
EKA Eskdalemuir Ar 145.31 4 PKPbc PKPbc 01 26 10.7 -1.1
comp=Z,19nm,0.7s,baz=344,slow=2.8,SNR=47
EKA Eskdalemuir Ar 145.31 4 PKIKP PKPdf 01 26 10.7 +0.3
EKA pmax pmax
comp=Z,19nm,0.7s
ESK Eskdalemuir 145.32 4 *i* PKIKP PKPdf 01 26 11.8 +1.3
ESK Eskdalemuir 145.32 4 *e*PKPbc PKPbc 01 26 10.4 -1.4
ECK Cauldkaine Hil 145.46 4 *e*P PKPdf 01 26 11.1 +0.4
LVV L'vov 145.59 333 *e*PKIKP PKPdf 01 26 11.6 +0.5
GAL1 Galloway 145.65 6 *e*P PKPdf 01 26 11.7 +0.7
XAL Allendale 145.83 3 *e*P PKPdf 01 26 12.4 +1.1
ASF Jabal al Asfar 145.85 297 PKPbc PKPbc 01 26 14.6 +0.5
comp=Z,7.6nm,0.8s,baz=343,slow=2.5,SNR=19
LEOM Leova 145.91 325 ⇓PKIKP PKPbc 01 26 13.7 -0.1
LEOM Leova 145.91 325 ⇓*i*P PKPbc 01 26 13.7 -0.1
BSEG Bad Segeberg 146.04 350 *e*PKPbc PKPbc 01 26 13.6 -0.3
XDE Dent Fell 146.11 4 *e*P PKPdf 01 26 13.1 +1.3
BR131 Keskin Array S 146.12 311 *e*PKPbc PKPbc 01 26 13.9 -0.8
BRTR Keskin Array B 146.12 311 PKPbc PKPbc 01 26 14.3 -0.4
comp=Z,7.8nm,0.7s,baz=113,slow=2.3,SNR=48
BRTR pPKPbc 01 28 36.8
comp=Z,1.5nm,1.0s,baz=5.7,slow=1.4,SNR=4.2
BRTR Keskin Array B 146.12 311 PKIKP PKPbc 01 26 14.3 -0.4
BRTR 01 28 36.8
BRTR pmax pmax
comp=Z,8.0nm,0.7s
BRTR pmax pmax
comp=Z,2.0nm,1.0s
KWP Kalwaria Pacla 146.28 334 *e*PKP PKPbc 01 26 14.7 -0.1
KWP Kalwaria Pacla 146.28 334 *e*PKPbc PKPbc 01 26 14.1 -0.6
KWP Kalwaria Pacla 146.28 334 ⇓*i*P PKPbc 01 26 14.5 -0.2
TLCR 146.40 323 ⇑PKIKP PKPbc 01 26 14.9 -0.3
TLCR 146.40 323 ⇑*i*P PKPbc 01 26 14.9 -0.3
BUR08 Bucovina Ar. S 146.66 329 *e*PKPbc PKPbc 01 26 15.9 +0.1
BURAR Bucovina Array 146.67 329 ⇑PKP2 PKPbc 01 26 16.1 +0.2
BURAR Bucovina Array 146.67 329 ⇑*i*P PKPbc 01 26 16.0 +0.1
RUE Ruedersdorf 146.73 345 *e*PKPbc PKPbc 01 26 15.5 -0.4
HPK Haverah Park 146.76 3 *e*P PKPbc 01 26 15.2 -0.7
CFR Carcaliu 146.78 324 ⇑PKP2 PKPbc 01 26 16.2 0.0
CFR Carcaliu 146.78 324 ⇑*i*P PKPbc 01 26 16.2 0.0
MMAI Mount Meron Ar 146.91 299 PKPbc PKPbc 01 26 17.5 +0.5
comp=Z,19nm,0.6s,baz=65,slow=4.7,SNR=30
MMAI PKPab PKPab 01 26 21.8 +1.2
comp=Z,7.6nm,0.6s,baz=92,slow=6.8,SNR=7.6
MMAI pPKPbc pPKPbc 01 28 39.0 -4.4
comp=Z,3.0nm,0.8s,baz=48,slow=2.1,SNR=2.3
OJC Ojcow 146.93 337 *e*PKP PKPbc 01 26 15.6 -0.8
KOLS Kolonicke sedl 147.00 334 *e*PKP PKPdf 01 26 13.4 -0.1
KOLS *e* 01 26 17.1
KOLS *e* 01 26 20.5
KOLS Kolonicke sedl 147.00 334 *e*PKP PKPdf 01 26 13.4 -0.1
KOLS *e* 01 26 17.1
KOLS *e* 01 26 20.5
STHS Stebnicka Huta 147.04 335 *e*PKP PKPbc 01 26 17.3 +0.5
STHS *e* 01 26 21.6
STHS Stebnicka Huta 147.04 335 *e*PKP PKPbc 01 26 17.2 +0.4
STHS *e* 01 26 21.6
VRI Vrincioaia 147.11 326 PKP2 PKPbc 01 26 17.0 -0.1
VRI Vrincioaia 147.11 326 ⇑*i*P PKPbc 01 26 16.5 -0.6
PLOR Plostina 147.16 326 PKP2 PKPbc 01 26 17.3 +0.1
PLOR Plostina 147.16 326 ⇓*i*P PKPbc 01 26 16.8 -0.4
LHO Holmfirth 147.17 3 *e*P PKPbc 01 26 15.9 -1.0
HARR Harsova 147.20 323 ⇓PKP2 PKPbc 01 26 17.5 +0.2
HARR Harsova 147.20 323 ⇓*i*P PKPbc 01 26 17.5 +0.2
UZH Uzhgorod 147.23 333 ⇓*i*PKP2 PKPbc 01 26 17.3 0.0
WLF1 Llynfaes 147.24 6 *e*P PKPdf 01 26 15.6 +1.9
NIE Niedzica 147.40 336 *e*PKP2 PKPbc 01 26 17.8 +0.1
BMR Baia Mare 147.43 331 PKP2 PKPbc 01 26 18.2 +0.4

NRDL Niedersach Rie 147.46 349 *e*PKPbc PKPbc 01 26 17.2 -0.6
KSP Ksiaz 147.54 342 *e*PKP PKPbc 01 26 18.1 +0.1
KSP Ksiaz 147.54 342 *e*PKP2 PKPbc 01 26 17.8 -0.2
MLR Muntele Rosu 147.77 326 PKPbc PKPbc 01 26 18.4 -0.3
comp=Z,14nm,0.6s,baz=329,slow=1.3,SNR=41
MLR Muntele Rosu 147.77 326 PKIKP PKPbc 01 26 18.6 -0.2
MLR Muntele Rosu 147.77 326 ⇓*i*P PKPbc 01 26 18.3 -0.5
OKC Ostrava-Krasne 147.83 339⇑*e*PKP PKPbc 01 26 18.5 -0.3
OKC *e*PKPAB PKPab 01 26 23.4 -0.4
EIL Elat 147.90 293 PKPbc PKPbc 01 26 19.6 0.0
comp=Z,11nm,0.7s,baz=360,slow=2.2,SNR=9.8
UPC Upice 147.92 342⇑*e*PKP PKPbc 01 26 19.0 0.0
DPC Dobruska-Polom 147.97 341 *e*PKPDF PKPdf 01 26 14.9 -0.1
DPC ⇑*e*PKP PKPbc 01 26 19.3 +0.2
DPC *e*PKPAB PKPab 01 26 25.0 +0.6
CLL Collm 148.00 345 *e*PKPdf PKPdf 01 26 15.0 0.0
comp=Z,8.0nm,1.4s
CLL ⇑*i*PKPbc PKPbc 01 26 18.6 -0.5
comp=Z,45nm,1.0s
CLL *i* PKiKP PKiKP 01 26 21.2 +0.8
CLL ⇓*i*PKPab PKPab 01 26 23.7 -0.7
comp=Z,12nm,0.9s
CLL *e*(pPKPbc) 01 28 43.0
CLL *e*pPKPab pPKPab 01 28 49.0 +2.2
CLL *e*PKSbc 01 29 58.0
CWF Charnwood Fore 148.00 2 *e*P PKPbc 01 26 17.8 -1.3
IBBN Ibbenburen 148.00 352 *e*PKPbc PKPbc 01 26 18.7 -0.4
CLZ Clausthal 148.04 349 *e*PKPbc PKPbc 01 26 19.0 -0.2
CLZ *e*pPKPbc pPKPbc 01 28 44.1 -2.2
MORC Moravsky Berou 148.08 339 *e*PKPdf PKPdf 01 26 14.6 -0.6
MORC *e*PKPbc PKPbc 01 26 19.2 -0.2
MORC *e*PKPab PKPab 01 26 25.1 +0.2
MORC Moravsky Berou 148.08 339⇑*i*P PKPbc 01 26 19.0 -0.4
KECS Kecovo 148.09 335 *e*PKP PKPbc 01 26 20.0 +0.5
KECS *e* 01 26 25.4
KECS Kecovo 148.09 335 *e*PKP PKPbc 01 26 20.0 +0.5
KECS *e* 01 26 25.4
HLM1 Long Mynd 148.13 4 *e*P PKPbc 01 26 18.4 -1.0
BRG Berggiesshubel 148.16 344 *e*PKPbc PKPbc 01 26 19.4 -0.2
BRG Berggiesshubel 148.16 344 *e*PKP PKPdf 01 26 14.7 -0.6
comp=Z,4.2nm,1.1s
BRG *i* 01 26 19.3
comp=Z,20nm,0.7s
BRG *i* 01 26 24.6
comp=Z,7.2nm,0.8s
BRG *i* pPKP pPKPdf 01 28 44.9 +0.1
comp=Z,4.2nm,0.4s
BRG *e* 01 29 45.6
comp=Z,4.7nm,1.2s
PVCC Panska Ves 148.31 343 *e*PKPDF PKPdf 01 26 15.4 -0.2
PVCC ⇑*e*PKP PKPbc 01 26 19.9 0.0
DRGR 148.44 331 PKHKP PKPbc 01 26 20.3 -0.1
DRGR 148.44 331⇑*i*P PKPbc 01 26 20.1 -0.3
HTR Trewern Hill 148.54 5 *e*P PKPbc 01 26 19.1 -1.3
VYHS Vyhne 148.71 337 *e*PKP PKPdf 01 26 16.2 -0.1
VYHS *e* 01 26 21.0
VYHS *e* 01 26 28.0
VYHS Vyhne 148.71 337 *e*PKP PKPdf 01 26 16.2 -0.1
VYHS *e* 01 26 21.0
VYHS *e* 01 26 28.0
PSZ Piszkesteto 148.78 335 PKHKP PKPbc 01 26 21.2 0.0
PSZ Piszkesteto 148.78 335 *e*PKPbc PKPbc 01 26 21.0 -0.2
PSZ Piszkesteto 148.78 335⇑*e*PKP PKPbc 01 26 20.8 -0.4
PSZ Piszkesteto 148.78 335 ⇓*i*P PKPbc 01 26 20.5 -0.7
VRAC Vranov 148.80 340 PKPbc PKPbc 01 26 21.4 +0.2
comp=Z,10nm,0.8s,baz=18,slow=1.5,SNR=17
VRAC Vranov 148.80 340 PKHKP PKPbc 01 26 21.4 +0.2
VRAC pmax pmax
comp=Z,10.0nm,0.8s
VRAC Vranov 148.80 340⇑*i*P PKPbc 01 26 21.0 -0.2
KOLL Kolacno 148.80 337 *e*PKP PKPdf 01 26 16.5 +0.1
KOLL *e* 01 26 21.4
KOLL *e* 01 26 28.7
KOLL Kolacno 148.80 337 *e*PKP PKPdf 01 26 16.5 +0.1
KOLL *e* 01 26 21.4
KOLL *e* 01 26 28.7
PRU Pruhonice 148.81 343⇑*e*PKP PKPbc 01 26 21.3 +0.1
PRU *e*PKPAB PKPab 01 26 27.6 -0.2
BUG Bochum--Univer 148.91 352 *e*PKPbc PKPbc 01 26 20.8 -0.6
MOX Moxa 148.93 347 *e*PKP PKPbc 01 26 21.0 -0.4
comp=Z,28nm,1.3s
MOX Moxa 148.93 347 *e*PKPbc PKPbc 01 26 21.1 -0.3
TANN Tannenbergstha 148.95 345 *e*PKPbc PKPbc 01 26 21.3 -0.2
HGH Gray Hill 149.01 4 *e*P PKPbc 01 26 20.4 -1.2
UBBA Unterbreizbach 149.09 349 *e*PKPbc PKPbc 01 26 21.1 -0.7
NKC Novy Kostel 149.12 345⇑*e*PKP PKPbc 01 26 21.6 -0.3
NKC *e*PKPAB PKPab 01 26 29.2 +0.1
TREC Trest 149.16 341⇑*e*PKP PKPbc 01 26 21.6 -0.4
TREC *e*PKPAB PKPab 01 26 29.2 -0.1
SZH Strazhica 149.21 323 *i* P PKPbc 01 26 21.5 -0.9
GZR Gura Zlata 149.44 329 PKIKP PKPbc 01 26 22.6 -0.2
BUD Budapest 149.47 335⇑*e*PKP PKPbc 01 26 22.4 -0.4
HEX Exmoor 149.50 6 *e*P PKPbc 01 26 21.8 -1.0
ZST Bratislava 149.59 338 *e*PKHKP PKPbc 01 26 23.1 0.0
ZST *e* 01 26 30.1
ZST Bratislava 149.59 338 *e*PKP PKPbc 01 26 23.1 0.0
ZST *e* 01 26 30.1
ROTZ Rotzenmuhle 149.62 345 *e*PKPbc PKPbc 01 26 23.0 -0.1
ROTZ *e*PKPab PKPab 01 26 31.0 -0.2
BEBN Eben Emael 149.73 354 PKPbc PKPbc 01 26 23.0 -0.3
BEBN PKPab PKPab 01 26 30.8 -0.9
BZS Buzias 149.82 330 ⇑PHKKP PKPbc 01 26 23.3 -0.4
BZS Buzias 149.82 330⇑*i*P PKPbc 01 26 23.3 -0.4
UCC Uccle 149.84 355 PKPbc PKPbc 01 26 23.1 -0.5
KHC Kasperske Hory 149.85 343 *e*PKPdf PKPdf 01 26 17.6 -0.5
KHC *e*PKPbc PKPbc 01 26 23.4 -0.3
KHC *e*PKPab PKPab 01 26 31.9 -0.3
MEM Membach 149.88 353 PKPbc PKPbc 01 26 23.2 -0.5
GRA1 Grafenberg Arr 149.91 346 *e*PKPbc PKPbc 01 26 23.6 -0.2
GRA1 *e*PKPab PKPab 01 26 33.0 +0.6
GRA1 *e*pPKPbc pPKPbc 01 28 49.6 -1.9
GRF Grafenberg Arr 149.91 346 *e*PKPbc PKPbc 01 26 23.6 -0.2
GRF *e*PKPab PKPab 01 26 33.0 +0.6
GRF *e*pPKPbc pPKPbc 01 28 49.6 -1.9
GRF Grafenberg Arr 149.91 346 *e*PHKKP PKPbc 01 26 23.6 -0.2
GRF *e* 01 26 33.0
GRF Grafenberg Arr 149.91 346 *e*PHKKP PKPbc 01 26 23.6 -0.2
GRF *e* 01 26 33.0
TNS Taunus Mts 149.93 350 *e*PKPbc PKPbc 01 26 23.6 -0.2
TNS *e*PKPab PKPab 01 26 32.0 -0.5
WET Wettzell 150.03 344 *e*PKPbc PKPbc 01 26 23.6 -0.5
WET *e*PKPab PKPab 01 26 33.2 +0.3
GEC2 GERESS Array S 150.08 343 *e*PKPbc PKPbc 01 26 23.8 -0.4
GEC2 *e*PKPab PKPab 01 26 33.2 0.0
GEC2 GERESS Array S 150.08 343 *e*PKPdf PKPdf 01 26 17.9 -0.4
GEC2 *e*PKPbc PKPbc 01 26 23.7 -0.5
GEC2 *e*PKPbc PKPbc 01 26 23.8 -0.4
GEC2 *e*PKPab PKPab 01 26 33.2 0.0
GERES GERESS Array B 150.08 343 PKP PKPdf 01 26 17.7 -0.7
comp=Z,0.9nm,0.8s,baz=48,slow=2.0,SNR=11
GERES PKPbc PKPbc 01 26 23.8 -0.4
comp=Z,10nm,0.7s,baz=30,slow=2.1,SNR=82
GERES pPKPbc pPKPbc 01 28 47.8 -4.2
comp=Z,0.3nm,0.6s,baz=20,slow=3.1,SNR=3.0
DYA Yadsworthy 150.11 6 *e*P PKPbc 01 26 22.9 -1.3
SNF Seneffe 150.14 355 PKPbc PKPbc 01 26 23.5 -0.8
BCLA Clavier 150.14 354 PKPbc PKPbc 01 26 23.6 -0.7
BCLA PKPab PKPab 01 26 32.4 -1.0
DIM Dimitrovgrad 150.20 321 *i* P PKPbc 01 26 24.5 -0.2
CCA1 Carnmenellis 150.21 8 *e*P PKPbc 01 26 22.6 -1.9
CONA Conrad Observa 150.24 339⇑*i*PKiKP PKiKP 01 26 24.6 -0.5
comp=Z,22nm,0.6s
DOU Dourbes 150.53 355 PKPbc PKPbc 01 26 24.8 -0.4
DOU PKPab PKPab 01 26 33.9 -1.1
PKSM Moragy 150.66 334 PKIKP PKPbc 01 26 25.1 -0.5
PKSM Moragy 150.66 334⇑*i*P PKPbc 01 26 24.5 -1.1
WLF Walferdange 150.80 353 PKPbc PKPbc 01 26 25.8 0.0
WLF Walferdange 150.80 353 *e*PKPbc PKPbc 01 26 25.9 +0.1
WLF *e*PKPab PKPab 01 26 36.1 0.0
WLF Walferdange 150.80 353 *e*PKPbc PKPbc 01 26 25.5 -0.4
WLF *e*PKPab PKPab 01 26 35.4 -0.8
MOA Molln 150.81 341⇑*i*PKPdf PKPdf 01 26 19.1 -0.4
comp=Z,2.1nm,1.2s
MOA ⇑*i*PKiKP PKiKP 01 26 25.4 -0.9
comp=Z,7.4nm,0.5s
RZN Rozhen 150.90 321 *i* P PKPbc 01 26 25.3 -1.0
VTS Vitosha 151.17 324 *i* P PKPbc 01 26 26.5 -0.4
STU Stuttgart 151.20 348 *e*PKPbc PKPbc 01 26 26.4 -0.4
STU *e*PKPab PKPab 01 26 36.9 -1.0
STU Stuttgart 151.20 348 *e*PKPdf PKPdf 01 26 19.5 -0.6
STU *e*PKPbc PKPbc 01 26 26.1 -0.7

STU *e*PKPab PKPab 01 26 37.4 -0.5
FUR Furstenfeldbru 151.33 345 *e*PKPbc PKPbc 01 26 26.6 -0.5
FUR *e*PKPab PKPab 01 26 38.3 -0.2
RJOB Jochberg 151.34 343 *e*PKPbc PKPbc 01 26 26.3 -0.8
RJOB *e*PKPab PKPab 01 26 38.0 -0.5
KOGS Kog 151.38 337 *i* PKPbc PKPbc 01 26 26.3 -1.0
SOKA Soboth 151.61 339⇑*i*PKPdf PKPdf 01 26 19.9 -0.9
comp=Z,3.0nm,1.6s
SOKA ⇑*i*PKPbc PKPbc 01 26 26.7 -1.0
comp=Z,12nm,1.0s
PERS Pernice 151.62 339 *i* PKPbc PKPbc 01 26 26.7 -1.1
KKB Krupnik 151.72 323 *i* P PKPbc 01 26 27.3 -0.9
KBA Koelnbreinsper 151.78 342⇓⇓*i*PKPbc PKPbc 01 26 26.7 -1.4
comp=Z,9.1nm,0.6s
BFO Black Forest 151.78 349 *e*PKPbc PKPbc 01 26 27.2 -0.9
BFO *e*PKPab PKPab 01 26 39.4 -1.0
BFO Black Forest 151.78 349 *e*PKPdf PKPdf 01 26 20.7 -0.3
BFO *e*PKPbc PKPbc 01 26 27.3 -0.8
BFO *e*PKPab PKPab 01 26 39.3 -1.0
FLN La Foliniere 152.00 2 *e*PKIKP PKPdf 01 26 20.3 -1.0
comp=Z,20nm,0.9s
WATA Walderalm 152.03 344⇑*i*PKPdf PKPdf 01 26 20.2 -1.2
comp=Z,2.4nm,0.8s
WATA ⇑*i*PKPbc PKPbc 01 26 27.8 -0.8
comp=Z,7.8nm,0.4s
WTTA Wattenberg 152.08 344⇑*i*PKPdf PKPdf 01 26 20.5 -0.9
comp=Z,5.1nm,1.1s
WTTA ⇑*i*PKiKP PKiKP 01 26 28.3 -0.6
comp=Z,14nm,0.4s
ECH Echery 152.08 351 *e*PKIKP PKPbc 01 26 27.9 -0.8
ECH *e* 01 26 40.8
MYKA Terra Mystica 152.09 341⇑*i*PKPdf PKPdf 01 26 20.8 -0.7
comp=Z,1.6nm,0.8s
MYKA ⇓*i*PKPbc PKPbc 01 26 27.3 -1.6
comp=Z,9.1nm,0.5s
MOTA Moosalm 152.14 345⇑*i*PKPdf PKPdf 01 26 20.3 -1.2
comp=Z,2.2nm,0.7s
MOTA ⇑*i*PKPbc PKPbc 01 26 28.0 -0.9
comp=Z,12nm,1.0s
LDF La Druitiere 152.18 1 *e*PKIKP PKPdf 01 26 20.5 -1.1
comp=Z,9.4nm,0.9s
CRES Cresnjev 152.20 338 *e*PKPbc PKPbc 01 26 28.2 -0.9
ABTA Abfaltersbach 152.32 342⇑*i*PKPdf PKPdf 01 26 20.4 -1.5
comp=Z,6.8nm,1.0s
ABTA ⇑*i*PKPbc PKPbc 01 26 28.0 -1.3
comp=Z,15nm,0.6s
LJU Ljubljana 152.33 339 *i* PKPbc PKPbc 01 26 28.7 -0.7
GRR Gorron 152.36 2 *e*PKIKP PKPdf 01 26 20.8 -1.0
DAVA Damuels 152.48 347⇑*i*PKPdf PKPdf 01 26 21.9 -0.2
comp=Z,2.2nm,0.8s
DAVA ⇓⇓*i*PKiKP PKiKP 01 26 29.4 -0.4
comp=Z,13nm,1.1s
HINF Hinteralfeld 152.52 351 *e*PKIKP PKPdf 01 26 21.1 -1.0
VOY Vojsko 152.55 340 *e*PKPdf PKPdf 01 26 23.9 +1.7
VOY *e*PKPbc PKPbc 01 26 29.0 -0.8
VOY Vojsko 152.55 340 *e*PKPbc PKPbc 01 26 29.0 -0.8
BOJS Bojanci 152.55 338 *i* PKPbc PKPbc 01 26 29.5 -0.3
DAVOX Davos/Dischmat 152.96 346 PKP PKPdf 01 26 22.1 -0.7
comp=Z,2.7nm,0.8s,baz=47,slow=14,SNR=4.4
DAVOX PKPbc PKPbc 01 26 30.5 -0.1
comp=Z,16nm,0.6s,baz=271,slow=3.3,SNR=30
DAVOX PKPab PKPab 01 26 45.6 +0.2
comp=Z,9.5nm,0.9s,baz=72,slow=6.3,SNR=4.8
KRUS Krusevo 153.07 324 *e*PKP PKPbc 01 26 29.0 -2.2
LOR Lormes 153.39 355 *e*PKIKP PKPdf 01 26 23.6 +0.3
SSF Saint Saulge 153.62 356 *e*PKIKP PKPdf 01 26 23.9 +0.2
comp=Z,9.5nm,1.0s
CABF La Chapelle 153.81 352 *e*PKIKP PKPdf 01 26 23.9 0.0
comp=Z,22nm,1.1s
AVF Avril sur Loir 153.91 356 *e*PKIKP PKPdf 01 26 23.2 -0.9
SMF Signal de Mont 154.01 355 *e*PKIKP PKPdf 01 26 23.3 -0.9
MFF Saint Martin d 154.17 1 *e*PKIKP PKPdf 01 26 25.0 +0.6
TCF Toulx Ste Croi 154.47 358 *e*PKIKP PKPdf 01 26 24.1 -0.8
comp=Z,6.1nm,0.9s
BNI Bardonecchia 155.24 350 *e*PKIKP PKPdf 01 26 25.7 -0.2
BNI *e* 01 26 35.7
BNI *e* 01 26 55.2
RJF Les Rejaudoux 155.47 359 *e*PKIKP PKPdf 01 26 25.5 -0.7
VIVF Saint-Julien-l 155.71 353 *e*PKIKP PKPdf 01 26 26.3 -0.3
CAF Calviac 155.83 358 *e*PKIKP PKPdf 01 26 26.2 -0.5
LFF La Frestale 155.84 0 *e*PKIKP PKPdf 01 26 25.8 -0.9
AQU L'Aquila 155.94 337 *e*PKIKP PKPdf 01 26 25.2 -1.8
AQU *e* 01 26 58.5
LASF Ste Croix 156.56 354 *e*PKIKP PKPdf 01 26 27.3 -0.4
MTLF Montolieu 157.41 357 *e*PKIKP PKPdf 01 26 28.0 -0.8
comp=Z,12nm,1.2s
ESDC Sonseca Array 160.67 11 PKP PKPdf 01 26 32.5 -0.1
comp=Z,0.5nm,0.6s,baz=9.0,slow=4.1,SNR=3.3
ESDC PKPab PKPab 01 27 18.3 -0.8
comp=Z,1.7nm,0.6s,baz=346,slow=5.0,SNR=11
KEST Kesra 163.25 335 PKPab PKPab 01 27 30.8 +0.2
comp=Z,2.1nm,0.8s,baz=298,slow=3.1,SNR=8.4
LIC Lamto 164.54 158⇑*i*PKIKP PKPdf 01 26 35.7 -1.4
comp=Z,15nm,0.7s
LIC Lamto 164.54 158 *e*PKIKP PKPdf 01 26 35.4 -1.7
comp=Z,36nm,1.0s
KIC Kosan Boka 164.76 159 *e*PKIKP PKPdf 01 26 35.6 -1.7
comp=Z,22nm,0.8s
TIC Toumodi 164.93 157 *e*PKIKP PKPdf 01 26 35.9 -1.6
comp=Z,44nm,1.1s
TOA0 Torodi Ar. Sit 172.42 187 *e*PKPdf PKPdf 01 26 40.0 -2.1
TOA0 *e*PKPab PKPab 01 28 10.4 -1.0
TORD Torodi Ar. Bea 172.42 187 PKP PKPdf 01 26 40.3 -1.8
comp=Z,4.0nm,0.8s,baz=345,slow=1.0,SNR=25
TORD PKPab PKPab 01 28 10.3 -1.1
comp=Z,0.9nm,0.7s,baz=169,slow=3.6,SNR=5.9
TAM Tamanrasset 175.12 296 *e*PKIKP PKPdf 01 26 42.6 -0.2

NEIC ***23*** *01:15:18.7, 16°.67N×99°.73W, h8km, MD3.8(MEX), After MEX.*

MEX 23 01:15:18.7±0.6, 16°.67N×99°.73W, h8km±5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.27**	**319**	*i* P	Pg	01 15 23.9	-0.1
ACX				*i* S	Sg	01 15 27.4	-0.2
ACX	**Acapulco**	**0.27**	**319**	*i* P	Pg	01 15 23.9	-0.1
ACX				*i* S	Sg	01 15 27.4	-0.2
CAIG	**El Cayaco**	**0.64**	**307**	*i* P	Pg	01 15 30.0	-1.0
CAIG				*e*S	Sg	01 15 38.2	-1.1
CAIG	**El Cayaco**	**0.64**	**307**	*i* P	Pg	01 15 30.0	-1.0
CAIG				*e*S	Sg	01 15 38.2	-1.1
PNIG	**Pinotepa**	**1.56**	**100**	*e*P	Pn	01 15 43.4	-3.4
PNIG				*i* S	Sn	01 16 02.8	-4.5
PNIG	**Pinotepa**	**1.56**	**100**	*e*P	Pn	01 15 43.4	-3.4
PNIG				*i* S	Sn	01 16 02.8	-4.5
PLIG	**Platanillo**	**1.73**	**7**	*e*P	Pn	01 15 45.6	-3.6
PLIG				*i* S	Sn	01 16 06.9	-4.5
PLIG	**Platanillo**	**1.73**	**7**	*e*P	Pn	01 15 45.6	-3.6
PLIG				*i* S	Sn	01 16 06.9	-4.5
UTMO	**Huajuapan**	**2.18**	**58**	*e*P	Pn	01 15 51.8	-3.5
UTMO				*i* S	Sn	01 16 19.4	-3.1
VHO	**Vista Hermosa**	**2.90**	**82**	*i* P	Pn	01 16 01.2	-4.0
VHO				*i* S	Sn	01 16 36.3	-4.0
VHO	**Vista Hermosa**	**2.90**	**82**	*i* P	Pn	01 16 01.2	-4.0
VHO				*i* S	Sn	01 16 36.3	-4.0

IDC ***23*** *01:15:18.2±1.1, 43°.38N×47°.49E, h0km, mb3.8/13, mb1 3.9/18, mb1mx3.8/30, mbtmp3.8/18, ML3.9/4, MS3.6/2, Ms1 3.6/2, ms1mx2.5/40, Error ellipse: s-maj=25.0km s-min=11.9km az=162.0*

ISCJB ***23*** *01:15:19.3±0.6, 43°.76N±0°.02×47°.71E±0°.03, h1km±4km, mb3.8/18, MS3.6/2, Error ellipse: s-maj=4.5km s-min=2.8km az=146.0*

MOS ***23*** *01:15:20.3±1.2, 43°.75N×47°.69E, h10km, mb4.0/12, Error ellipse: s-maj=6.7km s-min=5.0km az=61.4*

NEIC ***23*** *01:15:20.9±3.5, 43°.43N×47°.55E, h16km±24km, mb3.9/6, Error ellipse: s-maj=12.5km s-min=5.4km az=171.0*

CSEM ***23*** *01:15:20.9±0.2, 43°.73N×47°.66E, h2km, mb4.0, mb3.9/13, Error ellipse: s-maj=5.1km s-min=3.7km az=144.0*

NNC ***23*** *01:15

MAK *i* 01 15 46.0
MAK pmax pmax
comp=E,302nm,0.2s
MAK pmax pmax
comp=Z,378nm,0.2s
MAK pmax pmax
comp=N,847nm,0.3s
MAK smax
comp=Z,810nm,0.3s
MAK smax
comp=E,6μm,0.6s
MAK smax
comp=N,4μm,0.5s
MAK Makhachkala 0.77 191 *i* Pg **Pg 01 15 36.3 +0.7**
comp=N,847nm,0.3s
MAK *i* Sg **Sg 01 15 46.0 +0.4**
comp=N,4μm,0.5s
DBC Dubki 0.94 223 PG **Pg 01 15 35.5 -3.4**
BUJR Buynaksk 0.99 206 ⇓*i*PG **Pg 01 15 39.0 -0.8**
BUJR *i* S **Sg 01 15 50.5 -2.2**
BUJR pmax pmax
comp=Z,282nm,0.1s
BUJR Buynaksk 0.99 206 *i* Pg **Pg 01 15 39.0 -0.8**
comp=Z,282nm,0.1s
BUJR *i* Sg **Sg 01 15 50.5 -2.2**
MNSR Manas 1.02 179 *i* PG **Pg 01 15 41.8 +1.5**
MNSR *i* S **Sg 01 15 54.5 +1.1**
MNSR pmax pmax
comp=Z,225nm,0.2s
MNSR Manas 1.02 179 *i* Pg **Pg 01 15 41.8 +1.5**
comp=Z,225nm,0.2s
MNSR *i* Sg **Sg 01 15 54.5 +1.1**
UNCR Uncukul 1.20 214 *i* PG **Pg 01 15 43.2 -0.7**
UNCR *i* S **Sg 01 15 57.0 -2.5**
UNCR Uncukul 1.20 214 *i* Pg **Pg 01 15 43.2 -0.7**
UNCR *i* Sg **Sg 01 15 57.0 -2.5**
XNZR Khunzakh 1.39 212 PG **Pn 01 15 46.0 -1.3**
XNZR Khunzakh 1.39 212 Pg **Pn 01 15 46.0 -1.3**
GNBR Gunib 1.44 202 PG **Pn 01 15 45.2 -2.8**
KMKR Kumukh 1.65 196 ⇓*i*PN **Pn 01 15 51.0 +0.1**
KMKR pmax pmax
comp=Z,209nm,0.2s
KMKR Kumukh 1.65 196 *i* Pn **Pn 01 15 51.0 +0.1**
comp=Z,209nm,0.2s
KSMR Kasumkent 2.14 171 *e*PN **Pn 01 15 58.5 +0.8**
KSMR pmax pmax
comp=Z,214nm,0.2s
KSMR Kasumkent 2.14 171 *e*Pn **Pn 01 15 58.5 +0.8**
comp=Z,214nm,0.2s
TRKR Terskaya 2.15 271⇑*i*PN **Pn 01 15 58.8 +0.9**
TRKR *e*S **Sn 01 16 26.2 +1.0**
TRKR Terskaya 2.15 271 *i* Pn **Pn 01 15 58.8 +0.9**
TRKR *e*Sb **Sn 01 16 26.2 +1.0**
SNJR Sundja 2.20 254⇑*i*PN **Pn 01 15 59.3 +0.7**
SNJR *e*S **Sn 01 16 27.1 +0.6**
SNJR Sundja 2.20 254 *i* Pn **Pn 01 15 59.3 +0.7**
SNJR *e*Sn **Sn 01 16 27.1 +0.6**
BTKR Batakoyurt 2.32 262 *e*PN **Pn 01 16 01.0 +0.8**
BTKR *e*S **Sn 01 16 30.2 +0.8**
BTKR Batakoyurt 2.32 262 *e*Pn **Pn 01 16 01.0 +0.8**
BTKR *e*Sn **Sn 01 16 30.2 +0.8**
PRTR Priterechnaya 2.48 272 *e*PN **Pn 01 16 03.3 +0.9**
PRTR *i* S **Sn 01 16 34.2 +0.9**
PRTR Priterechnaya 2.48 272 *e*Pn **Pn 01 16 03.3 +0.9**
KMSR Komsomolskaya 2.50 263 *e*PN **Pn 01 16 07.6 +4.9**
KMSR *e*S **Sb 01 16 38.3 +0.4**
KMSR Komsomolskaya 2.50 263 *e*Sb **Sb 01 16 38.3 +0.4**
ARNR Ardon 2.55 259 *e*PN **Pn 01 16 04.0 +0.7**
ARNR *e*S **Sn 01 16 35.3 +0.3**
ARNR Ardon 2.55 259 *e*Pn **Pn 01 16 04.0 +0.7**
ARNR *e*Sn **Sn 01 16 35.3 +0.3**
LACR Lac 2.64 251 *e*PN **Pn 01 16 03.3 -1.3**
LACR *e*S **Sn 01 16 35.6 -1.7**
LACR Lac 2.64 251 *e*Pn **Pn 01 16 03.3 -1.3**
LACR *e*Sn **Sn 01 16 35.6 -1.7**
KORR Kora 2.72 258 *e*PN **Pn 01 16 06.3 +0.6**
KORR *e*S **Sn 01 16 39.6 +0.3**
KORR Kora 2.72 258 *e*Pn **Pn 01 16 06.3 +0.6**
KORR *e*Sn **Sn 01 16 39.6 +0.3**
DGRG David-gareji 2.84 218 P **Pn 01 16 08.4 +1.0**
DGRG S **Sn 01 16 44.4 +2.1**
LSNR Lesken 2.86 262 *e*PN **Pn 01 16 08.4 +0.8**
LSNR *e*S **Sn 01 16 41.3 -1.4**
LSNR Lesken 2.86 262 *e*Pn **Pn 01 16 08.4 +0.8**
LSNR *e*Sn **Sn 01 16 41.3 -1.4**
ZEI Tsey 2.94 252 *e*PN **Pn 01 16 06.5 -2.1**
ZEI *e* 01 16 15.2
ZEI *e* 01 16 44.4
ZEI *e* 01 16 48.8
ZEI pmax pmax
comp=Z,23nm,0.4s
ZEI Tsey 2.94 252 *e*Pn **Pn 01 16 06.5 -2.1**
comp=Z,23nm,0.4s
ZEI Tsey 2.94 252 *e*Pb **Pb 01 16 15.2 +1.2**
ZEI *e*Sn **Sn 01 16 44.4 -0.1**
MTA Mtatsminda 2.95 228 P **Pn 01 16 09.2 +0.4**
MTA S **Sn 01 16 43.6 -1.2**
TBLG Delisi 2.95 229 *e*PN **Pn 01 16 09.1 +0.2**
TBLG *e*S **Sn 01 16 44.2 -0.8**
TBLG Delisi 2.95 229 P **Pn 01 16 09.2 +0.3**
TBLG S **Sn 01 16 44.3 -0.7**
TBLG Delisi 2.95 229 *e*Pn **Pn 01 16 09.1 +0.2**
TBLG *e*Sn **Sn 01 16 44.2 -0.8**
KEH Kehvi 3.10 244 P **Pn 01 16 10.9 -0.1**
KEH S **Sn 01 16 50.9 +2.3**
DIGR Digorskoe uzhe 3.12 256 *e*PN **Pn 01 16 10.3 -0.8**
DIGR *e*S **Sn 01 16 45.0 -4.0**
DIGR Digorskoe uzhe 3.12 256 *e*Pn **Pn 01 16 10.3 -0.8**
ONI Oni 3.31 251 P **Pn 01 16 13.8 0.0**
ONI S **Sg 01 17 01.1 -5.9**
GOF Gofitskoye 3.60 293 *e*PN **Pg 01 16 36.7 +6.9**
GOF *e*S **Sg 01 17 17.6 +1.1**
GOF pmax pmax
comp=Z,20nm,0.9s
GOF smax
comp=N,80nm,0.8s
GOF smax
comp=E,160nm,0.8s
KIV Kislovodsk 3.63 275⇑*e*PN **Pn 01 16 17.9 -0.4**
KIV *e* 01 16 25.5
KIV 01 17 15.9
KIV pmax pmax
comp=Z,11nm,0.5s
KIV pmax pmax
comp=Z,26nm,0.5s
KIV pmax pmax
comp=E,545nm,0.5s
KIV Kislovodsk 3.63 275 *e*Pn **Pn 01 16 17.5 -0.7**
KIV *e*Pg **Pg 01 16 30.6 +0.2**
KIV *e*Sg **Sg 01 17 15.6 -2.0**
KIV Kislovodsk 3.63 275 *e*Pn **Pn 01 16 17.5 -0.8**
KIV Kislovodsk 3.63 275 *e*Pg **Pg 01 16 30.6 +0.1**
KIV Sb **Sb 01 17 15.9 +5.4**
DOMR Dombai 4.44 267 *e*PN **Pn 01 16 30.1 +0.8**
DOMR Dombai 4.44 267 *e*Pn **Pn 01 16 30.1 +0.8**
SOC Sochi 5.79 271 *e*P **Pn 01 16 50.0 +2.1**
SOC *e* 01 17 47.2
SOC pmax pmax
comp=Z,9.0nm,1.0s
ANN Anapa 7.45 282 *e*P **Pn 01 17 10.9 +0.2**
ANN *e* 01 18 36.6
ANN pmax pmax
comp=Z,9.0nm,0.7s
ANN pmax pmax
comp=Z,9.0nm,0.7s
ANN smax
comp=N,10.0nm,0.8s
ANN smax
comp=E,8.0nm,0.4s
ANN Anapa 7.45 282 *e*P **Pn 01 17 10.9 +0.2**
comp=E,9.0nm,0.7s
AKTK Aktyubinsk 9.72 43 Pn **Pn 01 17 42.7 +1.0**
AKTK Sn **Sn 01 19 25.3 -6.3**
AKTK Aktyubinsk 9.72 43 P **Pn 01 17 42.7 +0.9**
comp=E,1.0nm,0.3s
AKTO Aktyubinsk 9.72 43 ⇓Pn **Pn 01 17 44.1 +2.3**
comp=E,0.7nm,0.7s
AKTO ⇑Sn **Sn 01 19 24.7 -6.9**
comp=E,1.1nm,0.5s
AKTO Aktyubinsk 9.72 43 Pn **Pn 01 17 42.7 +1.0**
comp=E,0.9nm,0.3s,baz=210,slow=9.9,SNR=6.5
AKTO Sn **Sn 01 19 25.3 -6.3**
comp=E,1.9nm,0.3s,baz=18,slow=23,SNR=9.8

AKTO Aktyubinsk 9.72 43 P **Pn 01 17 42.7 +0.9**
AKTO 01 19 25.3
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO smax
comp=N,2.0nm,0.3s
AKTO Aktyubinsk 9.72 43 Pn **Pn 01 17 44.1 +2.3**
comp=N,0.7nm,0.7s
AB31 Akbulak array 10.09 52 ⇑Pn **Pn 01 17 47.9 +1.1**
comp=N,1.7nm,0.5s,baz=239,slow=13,SNR=53
AB31 ⇓Sn **Sn 01 19 34.1 -6.6**
comp=N,4.5nm,0.5s,baz=246,slow=21,SNR=6.4
AB31 Akbulak array 10.09 52 Pn **Pn 01 17 47.9 +1.1**
comp=N,1.7nm,0.5s,baz=239,SNR=53
ABKAR Akbulak array 10.09 52 *e*Pn **Pn 01 17 47.6 +0.7**
comp=N,2.6nm,0.4s
ABKAR *e*Sn **Sn 01 19 37.2 -3.5**
ABKAR Akbulak array 10.09 52 *e*Pn **Pn 01 17 47.6 +0.8**
comp=N,2.6nm,0.4s
BRTR Keskin Array B 11.24 254 Pn **Pn 01 17 58.9 -3.6**
comp=N,0.0nm,0.3s,baz=63,slow=13,SNR=2.6
AKASG Malin Array Be 14.35 306 Pn **Pn 01 18 39.5 -5.4**
comp=N,0.4nm,0.3s,baz=108,slow=15,SNR=3.0
KIEV Kiev 14.35 306 *e*P **Pn 01 18 44.0 -1.1**
KIEV Kiev 14.35 306 *e*Pn **Pn 01 18 44.0 -1.1**
ARU Arti 14.48 25*d i*P **Pn 01 18 45.9 -0.9**
ARU S **Sn 01 21 28.7 +0.8**
ARU pmax pmax
comp=Z,11nm,2.5s
ARU Arti 14.48 25 *e*P **Pn 01 18 46.7 -0.1**
comp=Z,3.2nm,0.7s
VRI Vrincioaia 15.04 285⇑*i*P **Pn 01 19 00.2 +5.7**
VRI Vrincioaia 15.04 285⇑*i*P **Pn 01 19 00.2 +5.7**
PLOR Plostina 15.10 285⇓*i*P **Pn 01 19 01.0 +5.8**
PLOR Plostina 15.10 285⇓*i*P **Pn 01 19 01.0 +5.8**
MLR Muntele Rosu 15.59 284 Pn **Pn 01 19 04.1 +2.3**
comp=Z,0.3nm,0.3s,baz=94,slow=2.1,SNR=16
MLR Muntele Rosu 15.59 284⇑*i*P **Pn 01 19 06.9 +5.2**
MLR Muntele Rosu 15.59 284 P **Pn 01 19 04.1 +2.4**
BURAR Bucovina Array 16.18 292⇑*i*P **Pn 01 19 12.5 +3.2**
BURAR Bucovina Array 16.18 292⇑*i*P **Pn 01 19 12.5 +3.2**
BUR08 Bucovina Ar. S 16.19 292 *e*P **Pn 01 19 07.0 -2.5**
KK31 Karatay Array 16.58 84 ⇓P **Pn 01 19 11.7 -2.8**
comp=Z,2.6nm,0.7s,baz=276,slow=16,SNR=15
KK31 ⇑S **Sn 01 22 09.7 -9.4**
comp=Z,1.7nm,0.6s,baz=326,slow=28,SNR=3.7
BRVK Borovoye 17.60 50 *e*P **Pn 01 19 29.3 +2.0**
BRVK pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 17.60 50 *e*P **Pn 01 19 29.3 +2.0**
comp=Z,5.6nm,0.6s
BRVK Borovoye 17.60 50 *e*P **Pn 01 19 29.3 +2.0**
comp=Z,5.6nm,0.6s
BVA0 Borovoye Array 17.65 50 ⇑P **Pn 01 19 29.6 +1.7**
comp=Z,0.5nm,0.5s,baz=232,slow=15,SNR=8.0
BVA0 ⇑S **Sn 01 22 35.1 -10**
comp=Z,0.7nm,0.8s,baz=250,slow=31,SNR=3.7
BVAR Borovoye Array 17.65 50 Pn **Pn 01 19 25.7 -2.1**
comp=Z,0.2nm,0.3s,baz=246,slow=37,SNR=4.3
BVAR Sn **Sn 01 22 33.6 -11**
comp=Z,0.3nm,0.3s,baz=247,slow=42,SNR=3.5
BVAR Borovoye Array 17.65 50 P **Pn 01 19 29.6 +1.8**
comp=Z,0.5nm,0.5s,SNR=8.0
VOSK Vostochnaya 17.87 52 ⇑P **Pn 01 19 28.9 -1.6**
comp=Z,4.6nm,0.9s
KWP Kalwaria Pacla 18.10 298 *e*P **Pn 01 19 33.5 +0.1**
KWP pmax pmax
comp=Z,14nm,1.1s
KWP Kalwaria Pacla 18.10 298 *e*P **Pn 01 19 33.5 +0.1**
comp=Z,14nm,1.1s
KWP Kalwaria Pacla 18.10 298 *e*P **Pn 01 19 33.5 +0.1**
comp=Z,14nm,1.1s
IDI Anoyia 19.47 252 P **Pn 01 19 43.5 -6.7**
comp=Z,0.9nm,0.3s,baz=27,slow=15,SNR=15
UCH Uchtor 19.65 85 *e*P **Pn 01 19 50.1 -2.2**
comp=Z,3.6nm,1.1s
UCH Uchtor 19.65 85 *e*P **Pn 01 19 50.1 -2.2**
comp=Z,3.6nm,1.1s
TKM2 Tokmak 2 20.28 83 *e*P **P 01 19 58.4 +0.6**
TKM2 pmax pmax
comp=Z,7.0nm,1.3s
TKM2 Tokmak 2 20.28 83 *e*P **P 01 19 58.4 +0.6**
comp=Z,7.1nm,1.3s
TKM2 Tokmak 2 20.28 83 *e*P **P 01 19 58.4 +0.6**
comp=Z,7.1nm,1.3s
MORC Moravsky Berou 21.44 297 *e*P **P 01 20 05.8 -4.5**
MORC pmax pmax
comp=Z,6.0nm,1.1s,mb3.8
MORC Moravsky Berou 21.44 297 *e*P **P 01 20 05.8 -4.5**
comp=Z,6.2nm,1.1s,mb3.9
JOF Joensuu 21.46 339 *e*P **P 01 20 08.8 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.0
JOF Joensuu 21.46 339 *e*p **P 01 20 08.8 -1.5**
comp=Z,3.1nm,0.4s,mb4.0
JOF Joensuu 21.46 339 *e*P **P 01 20 08.8 -1.5**
comp=Z,3.0nm,0.4s,mb4.0
FINES FINESS Array B 21.90 332 P **P 01 20 14.2 -0.9**
comp=Z,1.9nm,0.4s,mb3.9,baz=133,slow=13,SNR=23
FINES FINESS Array B 21.90 332 P **P 01 20 14.2 -0.9**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 21.90 332 P **P 01 20 14.2 -0.9**
comp=Z,2.0nm,0.4s,mb3.9
KURBB Kurchatov Arra 21.95 61 ⇓P **P 01 20 15.9 +0.1**
comp=Z,0.4nm,0.5s,mb3.1
KURBB Kurchatov Arra 21.95 61 P **P 01 20 15.9 +0.1**
comp=Z,0.4nm,0.5s,mb3.1
KURK Kurchatov 22.02 61 ⇑P **P 01 20 16.7 +0.1**
comp=Z,3.8nm,1.0s,mb3.8
KURK Kurchatov 22.02 61 P **P 01 20 16.4 -0.1**
comp=Z,2.9nm,0.6s,mb3.9,baz=270,slow=12,SNR=26
KURK Kurchatov 22.02 61 P **P 01 20 16.4 -0.1**
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
KURK Kurchatov 22.02 61 *e*P **P 01 20 17.1 +0.6**
comp=Z,2.3nm,0.6s,mb3.8
KURK Kurchatov 22.02 61 *e*P **P 01 20 17.1 +0.6**
comp=Z,2.3nm,0.6s,mb3.8
KAF Kangasniemi 22.30 333 *e*P **P 01 20 17.8 -1.5**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
KAF Kangasniemi 22.30 333 *e*p **P 01 20 17.8 -1.5**
comp=Z,3.0nm,0.5s,mb4.0
KAF Kangasniemi 22.30 333 *e*P **P 01 20 17.8 -1.5**
comp=Z,3.0nm,0.5s,mb4.0
GERES GERESS Array B 23.92 294 P **P 01 20 34.0 -2.1**
comp=Z,0.1nm,0.2s,mb2.9,baz=41,slow=39,SNR=5.0
GERES GERESS Array B 23.92 294 P **P 01 20 34.0 -2.2**
MK31 Makanchi Array 24.43 71 ⇓P **P 01 20 40.5 -0.3**
comp=Z,2.8nm,0.8s,mb3.8,baz=278,slow=7.4,SNR=8.6
MK31 Makanchi Array 24.43 71 *e*P **P 01 20 41.3 +0.5**
MK31 Makanchi Array 24.43 71 *e*P **P 01 20 41.3 +0.5**
MKAR Makanchi Array 24.43 71 P **P 01 20 41.5 +0.7**
comp=Z,1.0nm,0.5s,mb3.6,baz=272,slow=10,SNR=10
MKAR Makanchi Array 24.43 71 P **P 01 20 41.5 +0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
CLL Collm 24.45 300 *e*P **P 01 20 42.0 +1.0**
CLL Collm 24.45 300 *e*(P) **P 01 20 42.0 +1.0**
CLL Collm 24.45 300 *e*P **P 01 20 42.0 +1.0**
ZALV Zalesovo Beam 26.20 54 P **P 01 20 57.4 +0.5**
comp=Z,0.6nm,0.5s,mb3.5,baz=271,slow=9.8,SNR=4.5
ZALV Zalesovo Beam 26.20 54 P **P 01 20 57.4 +0.5**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
HFS Hagfors 26.23 321 P **P 01 20 56.1 -0.9**
comp=Z,2.6nm,0.6s,mb4.1,baz=140,slow=12,SNR=11
HFS Hagfors 26.23 321 P **P 01 20 56.1 -0.9**
HFS pmax pmax
comp=Z,3.0nm,0.6s
HFS Hagfors 26.23 321 P **P 01 20 56.1 -0.9**
comp=Z,3.0nm,0.6s,mb4.1
NB2 NORSAR Subarra 27.71 322 P **P 01 21 09.0 -1.3**
comp=Z,0.8nm,0.6s,mb3.7,baz=116,slow=8.6
NB2 NORSAR Subarra 27.71 322 P **P 01 21 09.0 -1.3**
comp=Z,0.8nm,0.6s,mb3.7,SNR=5.3
NOA NORSAR Array B 27.71 322 P **P 01 21 09.3 -1.0**
comp=Z,0.9nm,0.6s,mb3.8,baz=117,slow=8.4,SNR=5.9
NOA NORSAR Array B 27.71 322 P **P 01 21 09.3 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 27.71 322 P **P 01 21 09.3 -1.0**
NOA NORSAR Array B 27.71 322 P **P 01 21 09.3 -1.0**
comp=Z,1.0nm,0.6s,mb3.8
ARCES ARCESS Array B 28.26 344 P **P 01 21 14.8 -0.4**
comp=Z,1.0nm,0.7s,mb3.8,baz=140,slow=7.8,SNR=4.5
ARCES ARCESS Array B 28.26 344 P **P 01 21 14.8 -0.4**
ARCES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 28.26 344 P **P 01 21 14.8 -0.4**
comp=Z,1.0nm,0.7s,mb3.8
KEST Kesra 30.34 268 P **P 01 21 28.3 -5.7**
comp=Z,0.6nm,0.7s,mb3.5,baz=130,slow=16,SNR=2.6
EKA Eskdalemuir Ar 34.24 308 P **P 01 22 06.8 -1.1**
comp=Z,1.5nm,0.5s,mb4.2,baz=93,slow=8.2,SNR=12
EKA Eskdalemuir Ar 34.24 308 P **P 01 22 06.8 -1.1**
EKA pmax pmax
comp=Z,2.0nm,0.5s
EKA Eskdalemuir Ar 34.24 308 P **P 01 22 06.8 -1.1**
comp=Z,2.0nm,0.5s,mb4.3
SPITS Spitsbergen Ar 36.72 350 P **P 01 22 29.5 +0.4**
comp=Z,8.4nm,1.0s,mb4.4,baz=153,slow=11,SNR=3.8
SPITS Spitsbergen Ar 36.72 350 P **P 01 22 29.5 +0.5**
SPITS pmax pmax
comp=Z,8.0nm,1.0s
SPITS Spitsbergen Ar 36.72 350 P **P 01 22 29.4 +0.4**
SPITS Spitsbergen Ar 36.72 350 P **P 01 22 29.5 +0.5**
comp=Z,8.0nm,1.0s,mb4.4
TOA0 Torodi Ar. Sit 49.74 247 *e*P **P 01 24 10.3 -4.6**
TORD Torodi Ar. Bea 49.74 247 P **P 01 24 10.4 -4.5**
comp=Z,1.0nm,0.4s,mb4.1,baz=34,slow=8.0,SNR=37
KSRS Korea Array 59.00 66 LR LR 01 53 51.9
comp=Z,25nm,19.1s,MS3.4,baz=200,slow=39
YKA Yellowknife Ar 73.19 352 P **P 01 26 52.2 -0.7**
comp=Z,0.2nm,0.5s,mb3.5,baz=8.7,slow=5.8,SNR=5.0
YKA Yellowknife Ar 73.19 352 P **P 01 26 52.2 -0.7**
YKA Yellowknife Ar 73.19 352 P **P 01 26 52.2 -0.7**
GUMO Guam 85.83 75 LR LR 02 07 45.9
comp=Z,48nm,18.5s,MS3.9,baz=100,slow=37

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*ISCJB **23** 01:23:26.6±0.9, 31.°16N±0.°03×103.°99E±0.°04, h1km±6km, mb4.2/28, MS3.4/11, Error ellipse: s-maj=5.4km s-min=5.0km az=12.3*
*IDC **23** 01:23:27.9±0.8, 31.°17N×103.°90E, h0km, mb4.1/14, mb1 4.1/16, mb1mx3.9/26, mbtmp4.1/16, ML4.0/2, MS3.4/10, Ms1 3.4/10, ms1mx3.0/41, Error ellipse: s-maj=26.1km s-min=16.2km az=52.0*
*NEIC **23** 01:23:29.4±0.3, 31.°14N×103.°96E, h10km, mb4.2/14, Error ellipse: s-maj=6.7km s-min=5.4km az=69.0*
*BJI **23** 01:23:29.7, 31.°15N×103.°73E, h14km, mB4.6/7, mb4.3/9, ML4.2/21, Ms4.3/16, Ms7 3.8/15*
*MOS **23** 01:23:30.8±1.3, 31.°06N×103.°85E, h33km, mb4.3/16, Error ellipse: s-maj=15.5km s-min=7.5km az=96.3*
ISC 23 01:23:29.7±0.7, 31.°18N±0.°03×103.°93E±0.°03, h7km±4km, n78, σt 1.°15/87, mb4.1/28, MS3.4/11, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**209**	Pg	**Pg**		**Pg**	**01 23 35.9**	**+0.3**
CD2				Sg	**Sg**		**Sg**	**01 23 41.4**	**+1.7**
CD2				smax					
	comp=N,64μm,1.0s								
ENH	**Enshi**	**4.87**	**99**	*e*Pn			**Pn**	**01 24 42.1**	**-1.3**
ENH				*e*Pg			**Pg**	**01 25 03.0**	**0.0**
ENH				*e*Sg			**Sg**	**01 26 05.7**	**-0.4**
LZH	**Lanzhou**	**4.90**	**359**	Pn			**Pn**	**01 24 46.8**	**+3.1**
LZH				Pg			**Pg**	**01 25 01.6**	**-1.9**
LZH				Sn			**Sn**	**01 25 42.4**	**+1.8**
LZH				Sg			**Sg**	**01 26 06.6**	**-0.3**
LZH				smax					
	comp=N,1μm,1.1s								
LZH				smax					
	comp=E,1μm,1.2s								
LZH				LR			LR		
	comp=E,3μm,5.2s								
LZH				LR			LR		
	comp=Z,3μm,9.4s								
XAN	**Xi'an**	**5.09**	**55**	Pn			**Pn**	**01 24 47.9**	**+1.6**
XAN				Pg			**Pg**	**01 25 07.1**	**-0.1**
XAN				Sn			**Sn**	**01 25 42.6**	**-2.8**
XAN				Sg			**Sg**	**01 26 09.4**	**-3.7**
XAN				smax					
	comp=N,300nm,0.9s								
XAN				smax					
	comp=E,120nm,0.8s								
GYA	**Guiyang**	**5.28**	**152**	Pn			**Pn**	**01 24 51.8**	**+2.8**
GYA				Sn			**Sn**	**01 25 59.8**	**+10**
GYA				smax					
	comp=N,240nm,0.8s								
GYA				smax					
	comp=E,390nm,0.9s								
GYA				LR			LR		
	comp=N,4μm,6.6s								
GYA				LR			LR		
	comp=E,3μm,5.4s								
GYA				LR			LR		
	comp=Z,5μm,6.1s								
KMI	**Kunming**	**6.12**	**190**	Pn			**Pn**	**01 25 00.1**	**-0.5**
KMI				Sn			**Sn**	**01 26 12.3**	**+1.4**
KMI				smax					
	comp=N,76nm,1.0s								
KMI				smax					
	comp=E,84nm,1.2s								
KMI				LR			LR		
	comp=N,910nm,9.3s								
KMI				LR			LR		
	comp=E,2μm,10.6s								
KMI				LR			LR		
	comp=Z,660nm,7.7s								
GTA	**Gaotai**	**8.87**	**339**	*e*P			**Pn**	**01 25 40.5**	**+2.2**
GTA				pP				01 25 47.8	
GTA				sP				01 25 51.1	
GTA				S			**Sn**	**01 27 18.8**	**+0.3**
GTA				sS				01 27 26.3	
GTA				pmax			pmax		
	comp=Z,5.0nm,1.3s								
GTA				pmax			pmax		
	comp=Z,49nm,5.9s								
GTA				LR			LR		
	comp=N,400nm,10.4s								
GTA				LR			LR		
	comp=E,300nm,11.4s								
GTA				LR			LR		
	comp=Z,450nm,10.4s								
WHN	**Wuhan**	**8.98**	**91**	*e*P			**Pn**	**01 25 47.5**	**+7.7**
WHN				S			**Sn**	**01 27 22.0**	**+0.8**
WHN				LR			LR		
	comp=N,2μm,5.8s								
WHN				LR			LR		
	comp=E,2μm,9.9s								
WHN				LR			LR		
	comp=Z,1μm,11.2s								
LSA	**Lhasa**	**11.13**	**266**	P			**Pn**	**01 26 07.0**	**-2.2**
LSA				LR			LR		
	comp=N,90nm,8.0s								
LSA				LR			LR		
	comp=E,190nm,9.0s								
LSA				LR			LR		
	comp=Z,210nm,8.0s								
HHC	**Hu-ho-hao-te**	**11.46**	**31**	*e*P			**Pn**	**01 26 15.3**	**+1.6**
HHC				pP				01 26 19.8	
HHC				PP				01 26 24.8	
HHC				S			**Sn**	**01 28 25.9**	**+4.1**
HHC				sS				01 28 32.3	
HHC				SS				01 28 39.8	
HHC				pmax			pmax		
	comp=Z,11nm,1.0s								
HHC				pmax			pmax		
	comp=Z,66nm,5.4s								
HHC				LR			LR		
	comp=N,510nm,5.9s								
HHC				LR			LR		
	comp=E,390nm,5.7s								
HHC				LR			LR		
	comp=Z,310nm,6.9s								
CHTO	**Chiang Mai**	**13.11**	**201**	*e*P			**Pn**	**01 26 34.4**	**-2.0**
CHTO				pmax			pmax		
	comp=Z,4.0nm,0.8s								
CHTO	**Chiang Mai**	**13.11**	**201**	*e*Pn			**Pn**	**01 26 34.4**	**-2.0**
	comp=Z,3.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**13.45**	**201**	Pn			**Pn**	**01 26 40.5**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=4.6								
SONM	**Songino Array**	**16.74**	**6**	Pn			**Pn**	**01 27 25.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=185,slow=12,SNR=12								
ULN	**Ulaanbaatar**	**16.84**	**7**	*e*P			**Pn**	**01 27 25.1**	**-0.7**
ULN				pmax			pmax		
	comp=Z,5.0nm,0.9s								
ULN	**Ulaanbaatar**	**16.84**	**7**	*e*P			**Pn**	**01 27 25.1**	**-0.7**

comp=Z,4.5nm,0.9s
ZAK Zakamensk 19.19 359⇑ *eP* **Pn 01 27 55.4 +0.7**
ZAK pmax pmax
comp=Z,3.0nm,0.9s
TLY Talaya 20.49 359 *eP* **P 01 28 12.1 +4.1**
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY MLR MLR
comp=Z,160nm,11.0s,MS3.6
MOY Mondy 20.59 355 *eP* **P 01 28 11.7 +2.7**
KSRS Korea Array 20.76 66 P **P 01 28 11.4 +0.3**
comp=Z,9.6nm,0.8s,baz=262,slow=10,SNR=33
KSRS LR LR 01 36 37.0
comp=Z,87nm,18.6s,MS3.1,baz=0.6,slow=38
KSRS Korea Array 20.76 66 P **P 01 28 11.4 +0.3**
KSRS pmax pmax
comp=Z,10.0nm,0.8s
KSRS MLR MLR
comp=Z,87nm,18.6s,MS3.2
CN2 Changchun 21.15 47 *eP* **P 01 28 16.9 +1.7**
CN2 pmax pmax
comp=Z,30nm,0.8s,mb4.7
MK31 Makanchi Array 22.82 319 *eP* **P 01 28 32.4 -0.7**
MKAR Makanchi Array 22.82 319 P **P 01 28 32.4 -0.7**
comp=Z,5.6nm,1.0s,mb4.0,baz=126,slow=12,SNR=14
MKAR Makanchi Array 22.82 319 P **P 01 28 32.4 -0.7**
MKAR pmax pmax
comp=Z,6.0nm,1.0s
TKM2 Tokmak 2 25.35 305 *eP* **P 01 28 57.4 +0.2**
TKM2 pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
TKM2 Tokmak 2 25.35 305 *eP* **P 01 28 57.4 +0.2**
comp=Z,3.6nm,1.0s,mb3.9
UCH Uchtor 25.91 303 *eP* **P 01 29 02.5 +0.2**
comp=Z,4.9nm,0.9s,mb4.0
AML Almayashu 26.48 303 *eP* **P 01 29 08.1 +0.7**
comp=Z,3.3nm,0.6s,mb4.0
EKS2 Erkin-Say 26.55 304 *eP* **P 01 29 07.7 -0.4**
comp=Z,3.6nm,1.0s,mb3.9
ZAA0 Zalesovo Array 26.59 334 *eP* **P 01 29 08.2 -0.1**
ZALV Zalesovo Beam 26.59 334 P **P 01 29 08.0 -0.3**
comp=Z,4.9nm,0.9s,mb4.0,baz=136,slow=9.3,SNR=13
ZALV LR LR 01 41 05.6
comp=Z,23nm,20.9s,MS2.7,baz=135,slow=40
ZALV Zalesovo Beam 26.59 334 P **P 01 29 08.0 -0.3**
ZALV pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
ZALV MLR MLR
comp=Z,23nm,20.9s,MS2.7
ZALV Zalesovo Beam 26.59 334 P **P 01 29 08.0 -0.3**
ZALV LR LR 01 41 05.6
KURK Kurchatov 27.10 323 P **P 01 29 11.1 -1.8**
comp=Z,6.0nm,0.8s,mb4.2,baz=129,slow=9.3,SNR=20
KURK LR LR 01 40 51.7
comp=Z,94nm,20.3s,MS3.3,baz=55,slow=38
KURK Kurchatov 27.10 323 P **P 01 29 11.1 -1.8**
KURK pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
KURK MLR MLR
comp=Z,94nm,20.3s,MS3.3
KURK Kurchatov 27.10 323 *eP* **P 01 29 12.9 -0.1**
comp=Z,5.2nm,1.0s,mb4.0
KURK LR LR 01 40 51.7
PSI Prapat 28.62 190 LR LR 01 42 25.5
comp=Z,221nm,18.5s,MS3.8,baz=119,slow=40
MJAR Matsushiro Arr 28.87 70 LR LR 01 40 29.9
comp=Z,79nm,22.0s,MS3.3,baz=235,slow=35
BVAR Borovoye Array 32.64 322 P **P 01 30 02.9 +0.9**
comp=Z,0.7nm,0.7s,mb3.7,baz=132,slow=11,SNR=4.9
BVAR LR LR 01 44 15.9
comp=Z,105nm,19.0s,MS3.5,baz=14,slow=38
BVAR Borovoye Array 32.64 322 P **P 01 30 02.9 +0.9**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR MLR MLR
comp=Z,105nm,19.0s
ABKAR Akbulak array 37.51 312 *eP* **P 01 30 44.0 -0.1**
comp=Z,1.4nm,0.9s,mb3.7
ARU Arti 40.28 322 *eP* **P 01 31 07.2 0.0**
ARU pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ARU Arti 40.28 322 *eP* **P 01 31 07.2 +0.1**
comp=Z,3.1nm,0.7s,mb4.2
PETK Petropavlovsk- 44.24 44 P **P 01 31 37.7 -1.8**
comp=Z,1.5nm,0.7s,mb3.8,baz=294,slow=9.3,SNR=3.7
PETK LR LR 01 49 58.3
comp=Z,38nm,18.6s,MS3.3,baz=74,slow=36
PETK Petropavlovsk- 44.24 44 P **P 01 31 37.7 -1.8**
PETK pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
PETK MLR MLR
comp=Z,38nm,18.6s,MS3.3
PETK Petropavlovsk- 44.24 44 P **P 01 31 37.7 -1.8**
PETK LR LR 01 49 58.4
ZEI Tsey 48.41 301 *eP* **P 01 32 13.6 +1.2**
ZEI pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
BILL Bilibino 51.17 25 P **P 01 32 35.7 +2.6**
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BILL Bilibino 51.17 25 *eP* **P 01 32 32.1 -0.9**
comp=Z,4.0nm,0.9s,mb4.3
AKASG Malin Array Be 57.22 313 P **P 01 33 16.0 -1.5**
comp=Z,0.3nm,0.3s,mb3.8,baz=73,slow=6.2,SNR=4.0
FINES FINESS Array B 57.42 326 P **P 01 33 17.2 -1.5**
comp=Z,1.7nm,0.8s,mb4.1,baz=114,slow=6.8,SNR=2.8
FINES FINESS Array B 57.42 326 P **P 01 33 17.2 -1.5**
FINES pmax pmax
comp=Z,2.0nm,0.8s
EIL Elat 58.58 288 LR LR 02 04 48.6
comp=Z,56nm,19.2s,MS3.7,baz=213,slow=42
WRAB Tennant Creek 58.62 146 *eP* **P 01 33 27.2 -0.3**
WRAB pmax pmax
comp=Z,11nm,1.0s,mb4.8
WRAB Tennant Creek 58.62 146 *eP* **P 01 33 27.2 -0.3**
comp=Z,11nm,1.0s,mb4.8
ASAR Alice Springs 61.63 149 P **P 01 33 47.5 -0.6**
comp=Z,1.4nm,0.7s,mb4.2,baz=338,slow=6.8,SNR=10
ASAR Alice Springs 61.63 149 P **P 01 33 47.6 -0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
HFS Hagfors 63.63 326 P **P 01 34 00.5 -0.6**
comp=Z,0.5nm,0.6s,mb3.7,baz=180,slow=33,SNR=3.7
HFS Hagfors 63.63 326 P **P 01 34 00.5 -0.5**
HFS pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 64.52 327 P **P 01 34 07.1 +0.2**
comp=Z,0.5nm,0.6s,mb3.7,baz=75,slow=6.7,SNR=2.8
NOA NORSAR Array B 64.52 327 P **P 01 34 07.1 +0.2**
NOA pmax pmax
comp=Z,1.0nm,0.6s
IDI Anoyia 64.56 297 LR LR 02 08 36.6
comp=Z,19nm,19.3s,MS3.3,baz=90,slow=42
COLD Coldfoot 67.46 24 *eP* **P 01 34 23.6 -2.2**
comp=Z,4.1nm,0.9s,mb4.5
JMIC Jan Mayen 67.70 341 LR LR 02 06 31.8
comp=Z,32nm,21.0s,MS3.5,baz=255,slow=38
BPAW Bear Paw Mtn. 68.60 27 *eP* **P 01 34 32.9 -0.1**
comp=Z,7.0nm,0.6s,mb4.8
PPLA Purkeypile 68.67 29 P **P 01 34 34.0 +0.6**
COLA College 69.43 26 *eP* **P 01 34 38.5 +0.4**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
COLA College 69.43 26 *eP* **P 01 34 38.5 +0.5**
comp=Z,5.8nm,0.8s,mb4.6
INK Inuvik 72.14 19 *eP* **P 01 34 54.2 -0.3**
INK pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 72.14 19 *eP* **P 01 34 54.2 -0.3**
comp=Z,2.7nm,0.7s,mb4.3
STKA Stephens Creek 72.15 147 P **P 01 34 54.4 -0.6**
comp=Z,1.8nm,0.7s,mb4.1,baz=330,slow=7.7,SNR=3.4
DAWY Dawson 72.94 24 *eP* **P 01 34 58.9 -0.5**
LPG La Plagne 73.09 313 *eP* **P 01 35 00.8 +0.2**
comp=Z,5.8nm,0.8s,mb4.2
LPL La Plagne 73.09 313 *eP* **P 01 35 00.8 +0.2**
YKA Yellowknife Ar 81.67 17 P **P 01 35 48.0 -0.3**
comp=Z,1.0nm,0.7s,mb3.9,baz=330,slow=5.3,SNR=16
YKA Yellowknife Ar 81.67 17 P **P 01 35 48.0 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 93.47 287 P **P 01 36 46.3 -0.2**
comp=Z,0.4nm,0.8s,mb3.9,baz=36,slow=3.4,SNR=2.3

*ISCJB **23** 01:59:08.5±0.3, 64°.24N±0°.06×40°.26W±0°.08, h10km, mb4.1/36, MS3.2/7, Error ellipse: s-maj=8.9km s-min=5.2km az=2.9*
*IDC **23** 01:59:08.9±0.6, 64°.14N×40°.17W, h0km, mb3.9/17, mb1 4.1/19, mb1mx3.9/33, mbtmp4.0/19, ML3.9/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/39, Error ellipse: s-maj=21.0km s-min=12.7km az=180.0*
*NEIC **23** 01:59:10.1±0.2, 64°.16N×40°.26W, h10km, mb4.2/23, Error ellipse: s-maj=7.9km s-min=4.4km az=178.0*
ISC 23 01:59:10.4±0.3, 64°.22N±0°.06×40°.24W±0°.08, h10km, n63, σ0§91/64, mb4.1/36, MS3.2/7, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**5.13**	**308**	Pn	**Pn**	**02 00 28.4**	**+1.3**
	16nm,0.3s,baz=101,slow=12,SNR=65						
SFJD				Pg	**Pg**	**02 00 39.6**	**-8.9**
	80nm,0.3s,baz=103,slow=14,SNR=57						
SFJD				Sn	**Sn**	**02 01 25.0**	**-1.2**
	17nm,0.3s,baz=151,slow=8.6,SNR=4.5						
SFJD				Lg		02 01 42.2	
	228nm,0.3s,baz=185,slow=21,SNR=17						
SFJD				LR	LR	02 02 31.5	
	comp=Z,320nm,19.0s,baz=63,slow=39						
SFJD	**Kangerlussuaq**	**5.13**	**308**	Pn	**Pn**	**02 00 28.4**	**+1.3**
SFJD				Pg	**Pg**	**02 00 39.6**	**-8.9**
SFJD				Sn	**Sn**	**02 01 25.0**	**-1.2**
SFJD				Lg		02 01 42.2	
SFJD				LR	LR	02 02 31.5	
SFJD	**Kangerlussuaq**	**5.13**	**308**	*i* P	**Pg**	**02 00 39.7**	**-8.8**
SFJD				*i* S	**Sn**	**02 01 26.0**	**-0.2**
SFJD				*i* LG		02 01 41.9	
SFJD							
	comp=Z,150nm,19.0s						
BORG	**Borgarnes**	**8.18**	**78**	Sn	**Sn**	**02 02 39.2**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=118,slow=14,SNR=2.1						
SUMG	**Summit**	**8.42**	**4**	*e*Pn	**Pn**	**02 01 10.7**	**-1.6**
	comp=Z,43nm,0.6s						
SUMG				*e*Sn	**Sn**	**02 02 42.1**	**-5.1**
FRB	**Frobisher Bay**	**12.39**	**281**	Pn	**Pn**	**02 02 05.1**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=36,slow=14,SNR=2.6						
FRB				Sn	**Sn**	**02 04 16.9**	**-7.6**
	comp=Z,0.5nm,0.3s,baz=164,slow=20,SNR=3.2						
DAG	**Danmarks Havn**	**14.35**	**20**	*i* P	**Pn**	**02 02 31.0**	**-2.2**
SCHQ	**Schefferville**	**16.31**	**247**	Pn	**Pn**	**02 02 59.4**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=55,slow=12,SNR=11						
SCHQ				Sn	**Sn**	**02 05 51.9**	**-8.0**
	comp=Z,0.7nm,0.3s,baz=276,slow=14,SNR=4.8						
SCHQ	**Schefferville**	**16.31**	**247**	Pn	**Pn**	**02 02 59.4**	**+0.1**
SCHQ				Sn	**Sn**	**02 05 51.9**	**-8.0**
EKA	**Eskdalemuir Ar**	**20.38**	**98**	P	**P**	**02 03 47.2**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=297,slow=9.3,SNR=8.3						
RES	**Resolute Bay**	**20.90**	**323**	P	**P**	**02 03 52.9**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=93,slow=13,SNR=5.7						
RES	**Resolute Bay**	**20.90**	**323**	*e*P	**P**	**02 03 51.1**	**-1.3**
	comp=Z,4.2nm,0.9s						
HFS	**Hagfors**	**24.85**	**74**	LR	LR	02 12 18.6	
	comp=Z,47nm,18.4s,MS3.0,baz=285,slow=32						
ARCES	**ARCESS Array B**	**25.17**	**49**	P	**P**	**02 04 35.4**	**+0.1**
	comp=Z,2.6nm,0.7s,mb3.9,baz=281,slow=8.5,SNR=14						
YKW3	**Yellowknife Ar**	**31.62**	**302**	*e*P	**P**	**02 05 32.8**	**-0.1**
YKA	**Yellowknife Ar**	**31.66**	**302**	P	**P**	**02 05 33.0**	**-0.2**
	comp=Z,1.4nm,0.8s,mb3.8,baz=54,slow=10.0,SNR=15						
YKA				PcP	PcP	02 08 24.3	-0.3
	comp=Z,0.4nm,0.6s,baz=40,slow=2.4,SNR=7.5						
YKA				LR	LR	02 17 42.6	
	comp=Z,8.3nm,18.3s,MS2.5,baz=310,slow=35						
YKA	**Yellowknife Ar**	**31.66**	**302**	P	**P**	**02 05 33.0**	**-0.2**
YKA				PcP	PcP	02 08 24.3	-0.3
YKA				LR	LR	02 17 42.6	
BNI	**Bardonecchia**	**32.21**	**104**	*e*P	**P**	**02 05 38.0**	**-0.2**
	comp=Z,5.1nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**32.31**	**92**	LR	LR	02 19 20.4	
	comp=Z,26nm,18.5s,MS3.0,baz=164,slow=38						
INK	**Inuvik**	**34.36**	**319**	LR	LR	02 19 36.5	
	comp=Z,49nm,20.5s,MS3.2,baz=308,slow=36						
INK	**Inuvik**	**34.36**	**319**	*e*P	**P**	**02 05 56.7**	**0.0**
	comp=Z,2.5nm,0.9s,mb4.1						
KWP	**Kalwaria Pacla**	**35.65**	**83**	*e*P	**P**	**02 06 09.0**	**+1.0**
	comp=Z,10nm,1.3s,mb4.6						
PSZ	**Piszkesteto**	**35.71**	**88**	*e*P	**P**	**02 06 06.9**	**-1.7**
	comp=Z,2.4nm,0.7s,mb4.2						
AKASG	**Malin Array Be**	**37.66**	**77**	P	**P**	**02 06 24.5**	**-0.7**
	comp=Z,5.6nm,1.2s,mb4.2,baz=322,slow=8.7,SNR=4.1						
COLD	**Coldfoot**	**39.62**	**325**	*e*P	**P**	**02 06 42.1**	**+0.7**
	comp=Z,1.8nm,0.7s,mb3.9						
WVT	**Waverly**	**39.95**	**249**	*e*P	**P**	**02 06 44.6**	**+0.1**
	comp=Z,1.1nm,0.5s,mb3.8						
DLBC	**Dease Lake**	**40.03**	**305**	LR	LR	02 25 13.5	
	comp=Z,66nm,19.3s,MS3.5,baz=109,slow=39						
SLMT	**Seeley Lake**	**41.92**	**282**	*e*P	**P**	**02 07 01.6**	**+1.0**
	comp=Z,3.9nm,0.8s,mb4.1						
BOZ	**Bozeman (W)**	**42.37**	**279**	*e*P	**P**	**02 07 04.0**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.5						
CBKS	**Cedar Bluff**	**42.71**	**263**	*e*P	**P**	**02 07 05.9**	**-1.2**
	comp=Z,17nm,0.6s,mb5.0						
BW06	**Boulder Array**	**43.77**	**275**	*e*P	**P**	**02 07 16.0**	**+0.3**
	comp=Z,1.3nm,0.4s,mb4.0						
PDAR	**Pinedale Array**	**43.77**	**275**	P	**P**	**02 07 15.9**	**+0.3**
	comp=Z,1.5nm,0.8s,mb3.8,baz=64,slow=6.8,SNR=5.4						
BBB	**Bella Bella**	**44.06**	**298**	LR	LR	02 26 10.2	
	comp=Z,51nm,21.9s,MS3.4,baz=93,slow=37						
ARU	**Arti**	**44.72**	**51**	*e*P	**P**	**02 07 23.4**	**+0.3**
	comp=Z,2.2nm,0.4s,mb4.3						
WMOK	**Wichita Mounta**	**45.73**	**259**	*e*P	**P**	**02 07 31.8**	**+0.5**
	comp=Z,7.2nm,0.7s,mb4.7						
SDCO	**Great Sand Dun**	**46.11**	**267**	*e*P	**P**	**02 07 34.7**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.8						
IDI	**Anoyia**	**48.11**	**94**	P	**P**	**02 07 50.1**	**+0.1**
	comp=Z,7.8nm,1.0s,mb4.7,baz=290,slow=6.4,SNR=2.8						
BRTR	**Keskin Array B**	**48.23**	**83**	P	**P**	**02 07 51.1**	**+0.2**
	comp=Z,1.0nm,0.9s,mb3.8,baz=319,slow=3.6,SNR=4.3						
KIV	**Kislovodsk**	**48.63**	**73**	*e*P	**P**	**02 07 55.1**	**+1.2**
	comp=Z,5.6nm,0.8s,mb4.7						
AKTK	**Aktyubinsk**	**49.37**	**57**	P	**P**	**02 07 59.7**	**+0.3**
AKTO	**Aktyubinsk**	**49.37**	**57**	P	**P**	**02 07 59.7**	**+0.3**
	comp=Z,1.2nm,0.5s,mb4.2,baz=324,slow=7.9,SNR=4.5						
JCT	**Junction City**	**49.83**	**257**	*e*P	**P**	**02 08 02.0**	**-1.2**
	comp=Z,3.7nm,0.6s,mb4.6						
ABKAR	**Akbulak array**	**51.04**	**56**	*e*P	**P**	**02 08 12.9**	**+0.8**
	comp=Z,3.0nm,0.9s,mb4.2						
TAM	**Tamanrasset**	**51.10**	**122**	*e*P	**P**	**02 08 12.6**	**-0.3**
	comp=Z,1.5nm,0.9s,mb3.9						
NVAR	**Mina Array Bea**	**51.12**	**279**	P	**P**	**02 08 13.6**	**+0.7**
	comp=Z,0.6nm,0.4s,mb3.8,baz=49,slow=6.5,SNR=4.7						
MNTX	**Cornudas Mount**	**51.18**	**263**	*e*P	**P**	**02 08 12.6**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9						
BVAR	**Borovoye Array**	**51.42**	**46**	P	**P**	**02 08 16.1**	**+1.2**
	comp=Z,1.1nm,0.8s,mb3.8,baz=238,slow=31,SNR=6.9						
TXAR	**Lajitas Array**	**52.48**	**260**	P	**P**	**02 08 23.5**	**+0.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=55,slow=6.6,SNR=5.0						
TXAR				PcP	PcP	02 09 35.9	+2.3
	comp=Z,0.4nm,0.8s,baz=186,slow=1.3,SNR=3.4						
TXAR				LR	LR	02 28 57.5	
	comp=Z,52nm,20.0s,MS3.6,baz=125,slow=34						
TXAR	**Lajitas Array**	**52.48**	**260**	P	**P**	**02 08 23.5**	**+0.4**
TXAR				PcP	PcP	02 09 35.9	+2.3
TXAR				LR	LR	02 28 57.5	
ZALV	**Zalesovo Beam**	**54.77**	**36**	P	**P**	**02 08 40.2**	**+0.7**
	comp=Z,0.6nm,0.3s,mb4.1,baz=324,slow=7.3,SNR=6.6						
KURK	**Kurchatov**	**55.94**	**42**	*e*P	**P**	**02 08 48.2**	**+0.2**
	comp=Z,2.0nm,0.9s,mb4.2						
TOA0	**Torodi Ar. Sit**	**58.66**	**130**	*e*P	**P**	**02 09 06.1**	**-1.5**
TORD	**Torodi Ar. Bea**	**58.66**	**130**	P	**P**	**02 09 06.5**	**-1.1**
	comp=Z,2.4nm,0.6s,mb4.4,baz=333,slow=8.1,SNR=48						
MK31	**Makanchi Array**	**60.54**	**42**	*e*P	**P**	**02 09 20.7**	**+0.4**
MKAR	**Makanchi Array**	**60.54**	**42**	P	**P**	**02 09 20.5**	**+0.2**
	comp=Z,1.0nm,0.6s,mb4.1,baz=328,slow=6.6,SNR=9.2						
EKS2	**Erkin-Say**	**61.58**	**50**	*e*P	**P**	**02 09 29.2**	**+1.8**
	comp=Z,1.8nm,0.8s,mb4.2						
UCH	**Uchtor**	**62.21**	**50**	*e*P	**P**	**02 09 33.1**	**+1.5**
	comp=Z,1.4nm,0.8s,mb4.1						
SONM	**Songino Array**	**65.26**	**24**	P	**P**	**02 09 52.1**	**+0.5**
	comp=Z,1.2nm,0.4s,mb4.3,baz=328,slow=5.4,SNR=6.7						
LPAZ	**La Paz**	**83.08**	**207**	P	**P**	**02 11 36.3**	**+0.5**
	comp=Z,0.6nm,0.9s,mb3.6,baz=55,slow=4.4,SNR=4.1						
LPAZ	**La Paz**	**83.08**	**207**	*e*P	**P**	**02 11 35.0**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**139.27**	**8**	PKhKP		02 18 27.7	
	comp=Z,0.2nm,0.3s,baz=25,slow=2.7,SNR=3.2						
STKA	**Stephens Creek**	**147.62**	**357**	PKPbc	PKPbc	02 18 53.3	-0.9
	comp=Z,3.6nm,1.0s,baz=309,slow=6.5,SNR=2.4						
MAW	**Mawson**	**150.30**	**131**	PKPbc	PKPbc	02 18 58.9	-1.0
	comp=Z,1.2nm,0.5s,baz=289,slow=9.2,SNR=3.7						

KRSC 23 02:15:19.5±1.3, 50°.81N×157°.50E, h101km±101km, ML3.6,

Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.74**	**21**	*e*P	Pn	02 15 51.6	+2.8
RUS				S	Sn	02 16 15.0	+4.0
AVH	**Avacha**	**2.58**	**17**	P	Pn	02 16 02.9	+3.4
NLC	**Nalytchevo**	**2.63**	**25**	S	Sn	02 16 34.5	+3.0
GNL	**Ganaly**	**2.90**	**5**	P	Pn	02 16 07.0	+3.1

*ISCJB **23** 02:15:51.1±2.3, 51°.7N±0°.2×177°.5W±0°.1, h9km±12km, mb3.7/7, Error ellipse: s-maj=30.0km s-min=11.5km az=168.6*
*NEIC **23** 02:15:52.7, 51°.78N×177°.53W, h7km, mb3.9/3, ML3.9(AEIC), After AEIC.*
*IDC **23** 02:16:02.7±6.8, 52°.17N×177°.52W, h89km±62km, mb3.4/6, mb1 3.8/8, mb1mx3.4/27, mbtmp3.5/8, ML3.1/1, Error ellipse: s-maj=49.5km s-min=23.4km az=170.0*
ISC 23 02:15:53.2±2.4, 51°.7N±0°.2×177°.4W±0°.1, h8km±13km, n18, σ1§06/19, mb3.7/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.95**	**62**	*e*Pg	**Pg**	**02 16 11.2**	**-0.2**
GSTR				*e*Sg	**Sg**	**02 16 23.4**	**-0.3**
FX1	**Attu Island--F**	**5.91**	**286**	P	**Pn**	**02 17 20.3**	**-0.7**
UNV	**Unalaska Valle**	**6.98**	**67**	P	**Pn**	**02 17 36.1**	**+0.6**
PETK	**Petropavlovsk-**	**15.25**	**285**	P	**Pn**	**02 19 31.2**	**+2.7**
	0.1nm,0.3s,baz=97,slow=18,SNR=2.6						
SVW2	**Sparrevohn**	**15.28**	**43**	*e*P	**Pn**	**02 19 35.5**	**+6.7**
KDAK	**Kodiak Island**	**15.55**	**57**	P	**Pn**	**02 19 32.4**	**0.0**
KTH	**Kantishna Hill**	**18.36**	**39**	*e*P	**Pn**	**02 20 09.0**	**+1.2**
	8.2nm,1.0s						
TRF	**Thorofare Moun**	**18.56**	**40**	*e*P	**Pn**	**02 20 11.4**	**+1.2**
	12nm,1.3s						
EGAK	**Eagle**	**22.77**	**41**	*e*P	**P**	**02 20 55.3**	**-0.3**
	3.8nm,0.9s,mb3.8						
DAWY	**Dawson**	**23.31**	**43**	*e*P	**P**	**02 21 00.8**	**-0.4**
YKA	**Yellowknife Ar**	**34.41**	**47**	P	**P**	**02 22 38.6**	**-1.8**
	0.3nm,0.6s,mb3.4,baz=280,slow=7.8,SNR=3.8						
CN2	**Changchun**	**38.34**	**281**	*e*P	**P**	**02 23 11.0**	**-3.2**
NVAR	**Mina Array Bea**	**42.66**	**84**	P	**P**	**02 23 50.2**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=294,slow=6.8,SNR=4.5						
NVAR	**Mina Array Bea**	**42.66**	**84**	P	**P**	**02 23 50.2**	**+0.2**
PDAR	**Pinedale Array**	**45.40**	**73**	P	**P**	**02 24 12.2**	**+0.3**
	1.6nm,0.7s,mb4.0,baz=293,slow=3.4,SNR=11						
TXAR	**Lajitas Array**	**57.76**	**82**	P	**P**	**02 25 44.2**	**-0.3**
	0.7nm,0.7s,mb3.8,baz=335,slow=8.7,SNR=3.7						
BRTR	**Keskin Array B**	**85.05**	**336**	P	**P**	**02 28 25.4**	**-3.6**
	0.7nm,0.9s,mb3.8,baz=23,slow=4.0,SNR=3.8						
ASAR	**Alice Springs**	**86.28**	**224**	P	**P**	**02 28 35.9**	**+0.7**
	0.2nm,0.3s,mb3.8,baz=22,slow=4.8,SNR=6.0						

*IDC **23** 02:28:28.2±2.0, 22°.86S×68°.73W, h0km, mb4.3/3, mb1 4.4/5, mb1mx4.0/16, mbtmp4.4/5, ML4.5/2, Error ellipse: s-maj=52.7km s-min=42.9km az=33.0*
*ISCJB **23** 02:28:46.3±1.0, 21°.75S±0°.05×68°.7W±0°.2, h132km±13km, mb3.9/3, Error ellipse: s-maj=28.8km s-min=6.9km az=7.2*
*GUC **23** 02:28:46.8±0.7, 21°.75S×68°.78W, h131km±6km, ML4.0*
ISC 23 02:28:47.3±0.9, 21°.74S±0°.05×68°.7W±0°.2, h127km±12km, n14, σ0§82/21, mb4.0/3, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.01**	**313⇑**	*i*P	**Pn**	**02 29 09.8**	**-0.4**
PB01				*i* S	**Sn**	**02 29 27.6**	**+0.1**
PB01				AML	AML	02 29 29.9	
	comp=E,2μm,0.2s						
MACH	**Maria Elena**	**1.08**	**245⇑**	*i*P	**Pn**	**02 29 10.7**	**-0.1**
MACH				*i* S	**Sn**	**02 29 29.2**	**+0.5**
PECH	**Pedro de Valdi**	**1.24**	**227⇑**	*i*P	**Pn**	**02 29 12.2**	**-0.2**
PECH				*i* S	**Sn**	**02 29 31.8**	**+0.2**
PECH				AML	AML	02 29 32.5	
	comp=E,3μm,0.2s						
HMBC	**Humberston**	**1.83**	**322⇓**	*i*P	**Pn**	**02 29 19.1**	**-0.1**
HMBC				*i* S	**Sn**	**02 29 43.9**	**+0.4**
HMBC				AML	AML	02 29 47.6	
	comp=E,4μm,0.7s						
MECH	**Mejillones**	**2.11**	**230**	*e*P	**Pn**	**02 29 22.6**	**+0.1**
MECH				*i* S	**Sn**	**02 29 48.9**	**-0.7**
MECH				AML	AML	02 30 09.2	
	comp=N,784nm,0.5s						
CEN1	**Los Morros**	**2.15**	**220**	*e*P	**Pn**	**02 29 25.9**	**+2.8**
CEN1				*i* S	**Sn**	**02 29 55.1**	**+4.7**
CEN1				AML	AML	02 30 04.9	
	comp=N,388nm,0.4s						
ANCH	**Antofagasta**	**2.50**	**219**	*e*P	**Pn**	**02 29 27.5**	**+0.1**
ANCH				*e*S	**Sn**	**02 29 57.5**	**-0.7**
PSGC	**Pisagua**	**2.52**	**328⇑**	*i*P	**Pn**	**02 29 26.7**	**-1.0**
PSGC				*e*S	**Sn**	**02 29 58.1**	**-0.6**
PSGC				AML	AML	02 29 59.3	
	comp=N,1μm,0.5s						
LPAZ	**La Paz**	**5.45**	**6**	Pn	**Pn**	**02 30 07.6**	**+1.1**
	comp=N,2.2nm,0.3s,baz=191,slow=7.3,SNR=79						
SIV	**San Ignacio**	**9.21**	**53**	Pn	**Pn**	**02 30 51.3**	**-5.9**
	comp=N,8.8nm,0.3s,baz=241,slow=11,SNR=155						
DBIC	**Dimbokro**	**68.61**	**73**	P	**P**	**02 39 36.1**	**-1.0**
	comp=N,2.0nm,0.5s,mb4.2,baz=221,slow=7.7,SNR=8.3						
TORD	**Torodi Ar. Bea**	**77.25**	**70**	P	**P**	**02 40 27.3**	**-0.7**
	comp=N,0.9nm,0.4s,mb3.8,baz=254,slow=5.3,SNR=36						
YKA	**Yellowknife Ar**	**91.48**	**341**	P	**P**	**02 41 40.4**	**+1.7**
	comp=N,0.7nm,0.5s,mb4.0,baz=132,slow=4.7,SNR=20						
MKAR	**Makanchi Array**	**145.71**	**36**	PKPbc	PKPbc	02 48 11.1	-0.1
	comp=N,0.2nm,0.3s,baz=323,slow=3.6,SNR=2.5						

IDC 23 02:54:10.5±13.0, 18°.58S×64°.54W, h0km, mb3.9/2, mb1 3.6/3, mb1mx3.5/17, mbtmp3.6/3, ML2.9/1, Error ellipse: s-maj=510.1km s-min=28.4km az=20.0, Central Bolivia

| Code | Station Name | Δ

GYA						smax					
	comp=N,230nm,1.1s										
GYA						smax					
	comp=E,230nm,0.9s										
GYA						LR	LR				
	comp=N,3μm,4.3s										
GYA						LR	LR				
	comp=E,1μm,5.2s										
GYA						LR	LR				
	comp=Z,1μm,4.3s										
XAN	**Xi'an**		**5.60**	**57**		Pn	**Pn**		**03 13 37.1**	**-0.8**	
XAN						Sg	**Sg**		**03 15 04.8**	**-10**	
XAN						smax					
	comp=N,170nm,0.7s										
XAN						smax					
	comp=E,120nm,0.8s										
KMI	**Kunming**		**6.00**	**184**		Pn	**Pn**		**03 13 45.9**	**+2.4**	
KMI						Sn	**Sn**		**03 14 53.5**	**+1.1**	
KMI						smax					
	comp=N,38nm,1.7s										
KMI						smax					
	comp=E,37nm,1.0s										
KMI						LR	LR				
	comp=N,370nm,9.6s										
KMI						LR	LR				
	comp=E,560nm,8.2s										
KMI						LR	LR				
	comp=Z,300nm,10.0s										
WHN	**Wuhan**		**9.57**	**91**	*e*P		**Pn**		**03 14 37.0**	**+4.6**	
WHN					S		**Sn**		**03 16 13.5**	**-6.5**	
WHN					LR		LR				
	comp=N,680nm,9.7s										
WHN					LR		LR				
	comp=E,450nm,4.6s										
WHN					LR		LR				
	comp=Z,400nm,8.6s										
HHC	**Hu-ho-hao-te**		**11.80**	**32**	*e*P		**Pn**		**03 15 03.8**	**+0.9**	
HHC					pP				03 15 08.3		
HHC					PP				03 15 13.5		
HHC					S		**Sn**		**03 17 15.9**	**+1.3**	
HHC					sS				03 17 23.3		
HHC					SS				03 17 30.5		
HHC					pmax		pmax				
	comp=Z,9.0nm,1.0s										
HHC					pmax		pmax				
	comp=Z,100nm,4.9s										
HHC					LR		LR				
	comp=N,240nm,5.2s										
HHC					LR		LR				
	comp=E,360nm,5.8s										
HHC					LR		LR				
	comp=Z,140nm,5.9s										
CHTO	**Chiang Mai**		**12.87**	**199**	*e*Pn		**Pn**		**03 15 14.6**	**-3.1**	
SONM	**Songino Array**		**16.85**	**7**	Pn		**Pn**		**03 16 11.0**	**+0.4**	
	baz=189,slow=12,SNR=9.3										
ULN	**Ulaanbaatar**		**16.96**	**9**	*e*P		**Pn**		**03 16 11.8**	**0.0**	
	comp=Z,1.7nm,0.7s										
KSRS	**Korea Array**		**21.31**	**66**	P		**P**		**03 17 01.1**	**-0.5**	
	comp=Z,1.1nm,0.4s,mb3.5,baz=262,slow=10,SNR=4.4										
MK31	**Makanchi Array**		**22.48**	**320**	*e*P		**P**		**03 17 14.7**	**+0.7**	
MKAR	**Makanchi Array**		**22.48**	**320**	P		**P**		**03 17 14.1**	**+0.1**	
	comp=Z,1.1nm,0.8s,mb3.4,baz=126,slow=14,SNR=7.4										
TKM2	**Tokmak 2**		**24.90**	**306**	*e*P		**P**		**03 17 38.0**	**+0.4**	
	comp=Z,1.6nm,0.7s,mb3.7										
UCH	**Uchtor**		**25.45**	**304**	*e*P		**P**		**03 17 41.4**	**-1.2**	
	comp=Z,8.4nm,1.6s,mb4.0										
EKS2	**Erkin-Say**		**26.09**	**304**	*e*P		**P**		**03 17 48.1**	**-0.3**	
	comp=Z,1.6nm,0.6s,mb3.7										
ZAA0	**Zalesovo Array**		**26.38**	**335**	*e*P		**P**		**03 17 49.9**	**-0.9**	
ZALV	**Zalesovo Beam**		**26.38**	**335**	P		**P**		**03 17 50.5**	**-0.4**	
	comp=Z,2.6nm,0.8s,mb3.8,baz=130,slow=8.8,SNR=8.7										
ZALV					LR		LR		03 29 14.0		
	comp=Z,13nm,21.7s,baz=159,slow=39										
KURK	**Kurchatov**		**26.79**	**324**	P		**P**		**03 17 54.5**	**-0.1**	
	comp=Z,0.3nm,0.3s,mb3.3,baz=126,slow=9.4,SNR=2.4										
KURK	**Kurchatov**		**26.79**	**324**	*e*P		**P**		**03 17 53.9**	**-0.7**	
	comp=Z,1.7nm,0.9s,mb3.6										
MBWA	**Marble Bar**		**54.35**	**161**	*e*P		**P**		**03 21 40.0**	**-1.5**	
	comp=Z,17nm,0.7s										
FINES	**FINESS Array B**		**57.13**	**326**	P		**P**		**03 22 00.2**	**-0.8**	
	comp=Z,1.5nm,0.8s,mb4.1,baz=86,slow=5.9,SNR=5.2										
YKA	**Yellowknife Ar**		**81.88**	**17**	P		**P**		**03 24 33.4**	**-0.4**	
	comp=Z,0.2nm,0.6s,mb3.2,baz=333,slow=5.6,SNR=3.3										
YKA	**Yellowknife Ar**		**81.88**	**17**	P		**P**		**03 24 33.4**	**-0.4**	

*IDC **23** 03:13:56.3±0.8, 56°.75S×146°.97E, h0km, mb4.5/8, mb1 4.6/8, mb1mx4.4/16, mbtmp4.5/8, MS4.0/6, Ms1 4.0/6, ms1mx3.6/21, Error ellipse: s-maj=28.5km s-min=23.2km az=81.0*

*NEIC **23** 03:13:57.3±0.4, 56°.80S×147°.04E, h10km, mb4.9/6, Error ellipse: s-maj=13.2km s-min=9.2km az=97.0*

*ISCJB **23** 03:13:58.1±3.4, 56°.72S±0°.07×147°.0E±0°.2, h24km±24km, mb4.7/13, MS4.0/6, Error ellipse: s-maj=19.3km s-min=11.7km az=15.3*

ISC 23 03:14:01.0±3.2, 56°.72S±0°.07×147°.0E±0°.2, h31km±23km, n46, σ0=85/24, mb4.7/13, MS4.0/6, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**13.82**	**1**	*e*Pn	**Pn**	**03 17 14.6**	**0.0**
	38nm,1.0s						
TOO	**Toolangi**	**19.18**	**356**	*e*P	**Pn**	**03 18 22.2**	**-0.7**
CASY	**Casey**	**19.53**	**226**	*e*P	**Pn**	**03 18 25.1**	**-1.8**
	48nm,1.4s						
RPZ	**Rata Peaks**	**20.04**	**60**	P	**P**	**03 18 30.3**	**-0.9**
	16nm,1.0s,baz=206,slow=5.2,SNR=3.5						
RPZ				LR	LR	03 24 36.4	
	comp=Z,776nm,21.6s,MS4.0,baz=228,slow=32						
CAN	**Canberra**	**21.45**	**5**	*e*P	**P**	**03 18 48.4**	**+1.9**
	98nm,1.6s,mb4.9						
STKA	**Stephens Creek**	**25.11**	**349**	*e*P	**P**	**03 19 23.4**	**+0.6**
	9.2nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**25.11**	**349**	P	**P**	**03 19 23.6**	**+0.8**
	10nm,0.7s,mb4.5,baz=169,slow=8.9,SNR=20						
STKA				LR	LR	03 27 36.0	
	comp=Z,224nm,19.9s,MS3.7,baz=196,slow=33						
URZ	**Urewera**	**27.16**	**60**	P	**P**	**03 19 41.6**	**+0.3**
	11nm,0.8s,mb4.4,baz=27,slow=3.2,SNR=4.5						
URZ				LR	LR	03 29 57.4	
	comp=Z,310nm,18.1s,MS3.9,baz=214,slow=35						
FORT	**Forrest**	**29.10**	**325**	*e*P	**P**	**03 19 57.6**	**-1.0**
	24nm,0.7s,mb5.0						
FORT	**Forrest**	**29.10**	**325**	*e*P	**P**	**03 19 58.3**	**-0.4**
	36nm,0.8s,mb5.2						
QSPA	**South Pole Qui**	**33.39**	**180**	P	**P**	**03 20 36.0**	**+0.1**
	4.4nm,1.0s,mb4.3,baz=327,slow=2.8,SNR=3.0						
ASAR	**Alice Springs**	**34.36**	**338**	P	**P**	**03 20 45.0**	**+0.2**
	5.2nm,0.9s,mb4.5,baz=163,slow=9.3,SNR=28						
ASAR				PcP	PcP	03 23 18.8	-1.4
	1.3nm,0.9s,baz=160,slow=3.7,SNR=4.7						
CTA	**Charters Tower**	**36.58**	**359**	*e*P	**P**	**03 21 03.6**	**-0.3**
	8.4nm,1.0s,mb4.5						
CTAO	**Charters Tower**	**36.58**	**359**	*e*P	**P**	**03 21 03.6**	**-0.3**
	13nm,0.9s,mb4.8						
DZM	**Mont Dzumac**	**37.46**	**31**	*e*S	**S**	**03 26 56.3**	**-1.5**
	110nm,24.2s						
DZM				*e*LR	LR	03 31 07.5	
	716nm,25.3s						
MAW	**Mawson**	**37.59**	**219**	LR	LR	03 36 17.5	
	comp=Z,211nm,18.1s,MS4.0,baz=91,slow=36						
WRAB	**Tennant Creek**	**37.91**	**340**	*e*P	**P**	**03 21 14.7**	**-0.6**
	29nm,1.3s,mb4.8						
MTSU	**Mount Surprise**	**38.57**	**356**	*e*P	**P**	**03 21 21.1**	**+0.3**
	54nm,1.2s,mb5.2						
FITZ	**Fitzroy Crossi**	**41.74**	**329**	*e*P	**P**	**03 21 47.6**	**+0.5**
	12nm,1.2s,mb4.4						
FITZ	**Fitzroy Crossi**	**41.74**	**329**	P	**P**	**03 21 46.8**	**-0.2**
	3.5nm,0.6s,mb4.2,baz=172,slow=12,SNR=5.9						
FITZ				LR	LR	03 37 34.8	
	comp=Z,174nm,20.4s,MS3.9,baz=333,slow=34						
COEN	**Coen**	**42.77**	**355**	*e*P	**P**	**03 21 55.3**	**-0.2**
	33nm,0.6s,mb5.2						
MAIT	**Maitri**	**48.89**	**198**	*e*P	**P**	**03 22 44.6**	**+1.4**
TBI	**Tubuai**	**56.35**	**81**	*e*LR	LR	03 39 57.9	
	161nm,31.5s						
PPT	**Papeete**	**60.98**	**77**	*e*LR	LR	03 42 15.2	
	101nm,26.0s						
PSI	**Prapat**	**70.86**	**308**	P	**P**	**03 25 15.1**	**+0.3**
	2.1nm,0.3s,mb4.5,baz=161,slow=8.2,SNR=4.1						
PSI	**Prapat**	**70.86**	**308**	P	**P**	**03 25 15.1**	**+0.3**
BOSA	**Boshof**	**81.79**	**229**	LR	LR	03 54 52.6	
	comp=Z,140nm,19.5s,MS4.3,baz=359,slow=30						
CMAR	**Chiang Mai Arr**	**84.97**	**315**	P	**P**	**03 26 33.6**	**+0.7**
	1.2nm,0.4s,mb4.4,baz=178,slow=4.0,SNR=7.8						
KURK	**Kurchatov**	**120.97**	**316**	PKP	PKPdf	03 32 48.8	-0.2
	0.2nm,0.3s,baz=125,slow=0.8,SNR=2.4						
BVAR	**Borovoye Array**	**125.98**	**313**	PKP	PKPdf	03 32 58.8	+0.3
	0.3nm,0.5s,baz=106,slow=2.1,SNR=2.6						
DUG	**Dugway**	**127.69**	**72**	*e*PKPdf	PKPdf	03 33 01.8	-0.5
TORD	**Torodi Ar. Bea**	**129.04**	**226**	PKP	PKPdf	03 33 06.1	+0.5
	0.7nm,1.0s,baz=90,slow=0.1,SNR=3.8						
SDCO	**Great Sand Dun**	**129.82**	**80**	*e*PKPdf	PKPdf	03 33 07.2	+0.8
RSSD	**Black Hills**	**135.08**	**75**	*e*PKPdf	PKPdf	03 33 16.3	+0.2
YKA	**Yellowknife Ar**	**140.94**	**47**	PKP	PKPdf	03 33 27.4	+1.2
	0.2nm,0.5s,baz=241,slow=2.0,SNR=5.5						
YKA	**Yellowknife Ar**	**140.94**	**47**	PKP	PKPdf	03 33 27.4	+1.2
AKASG	**Malin Array Be**	**143.80**	**288**	PKP	PKPdf	03 33 30.2	-1.5
	0.3nm,0.4s,baz=67,slow=1.5,SNR=3.8						
AKBB	**Malin Array Si**	**143.80**	**288**	*e*PKPdf	PKPdf	03 33 30.3	-1.5
COWI	**Conover**	**144.41**	**83**	*e*PKPdf	PKPdf	03 33 30.7	-2.3
KEST	**Kesra**	**144.72**	**252**	PKP	PKPdf	03 33 35.7	+1.8
	3.7nm,0.9s,baz=249,slow=3.2,SNR=13						
FCC	**Fort Churchill**	**148.34**	**60**	*e*PKPbc	PKPdf	03 33 40.1	+0.9
FINES	**FINESS Array B**	**150.18**	**304**	PKPbc	PKPbc	03 33 46.8	-0.4
	6.0nm,0.8s,baz=108,slow=6.2,SNR=11						
RES	**Resolute Bay**	**150.85**	**29**	*e*PKPbc	PKPbc	03 33 47.2	-1.2
GERES	**GERESS Array B**	**151.15**	**274**	PKPbc	PKPbc	03 33 50.3	+0.4
	0.7nm,0.8s,baz=117,slow=2.1,SNR=7.2						
ARCES	**ARCESS Array B**	**151.90**	**320**	PKPbc	PKPbc	03 33 50.6	-0.4
	2.2nm,0.6s,baz=119,slow=2.4,SNR=16						
CLL	**Collm**	**152.83**	**278**	*e*PKPab	PKPab	03 34 07.0	+2.2

*ISCJB **23** 03:21:07.4±0.6, 43°.75N±0°.06×138°.5E±0°.1, h277km±9km, mb3.1/6, Error ellipse: s-maj=13.4km s-min=7.5km az=26.0*

*NEIC **23** 03:21:07.9±0.9, 43°.83N×138°.40E, h265km±12km, mb3.5/2, Error ellipse: s-maj=19.3km s-min=11.9km az=119.0*

*JMA **23** 03:21:07.0±0.5, 43°.91N×138°.24E, h265km, M3.1*

*IDC **23** 03:21:07.4±1.4, 43°.86N×138°.45E, h258km±18km, mb2.9/4, mb1 3.2/7, mb1mx2.9/27, mbtmp2.9/7, Error ellipse: s-maj=38.0km s-min=16.5km az=149.0*

ISC 23 03:21:08.2±0.6, 43°.73N±0°.06×138°.5E±0°.1, h271km±9km, n25, σ1=00/32, mb3.1/6, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**2.92**	**56**	P	**Pn**	**03 22 01.1**	**+0.1**
JBT2	**Biratori 2**	**3.00**	**107**	*e*S	**S**	**03 22 46.1**	**+1.6**
ASAJ	**Asahikawa**	**3.00**	**81**	P	**Pn**	**03 22 01.1**	**-0.8**
	2.0nm,0.3s,baz=273,slow=18,SNR=11						
ASAJ				S	**S**	**03 22 42.5**	**-2.0**
	0.5nm,0.3s,baz=61,slow=26,SNR=2.6						
JKK2	**Kamakawa 2**	**3.10**	**86**	P	**Pn**	**03 22 03.2**	**+0.3**
JKK2				*e*S	**S**	**03 22 47.3**	**+0.9**
JSE	**Soyaes**	**3.19**	**66**	P	**Pn**	**03 22 04.0**	**+0.1**
JSE				*e*S	**S**	**03 22 48.9**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.46**	**113**	*e*S	**S**	**03 22 54.5**	**+1.1**
JCH	**Churui**	**3.74**	**106**	*e*S	**S**	**03 22 55.8**	**-3.4**
JAR	**Ashorobuto**	**3.87**	**95**	P	**Pn**	**03 22 11.8**	**+0.4**
JAR				*e*S	**S**	**03 23 02.5**	**+0.7**
JTKR	**Abashiri--Toko**	**3.94**	**85**	P	**Pn**	**03 22 12.4**	**+0.3**
JANG	**Nango**	**4.05**	**145**	P	**Pn**	**03 22 13.6**	**+0.1**
JANG				*e*S	**S**	**03 23 03.5**	**-2.0**
YSS	**Yuzh-Sakhalins**	**4.41**	**42**	*e*Pn	**Pn**	**03 22 16.8**	**-0.8**
JMK	**Ichinoseki**	**5.20**	**156**	P	**Pn**	**03 22 27.3**	**+0.2**
JMK				*e*S	**S**	**03 23 28.8**	**-1.4**
NEM2	**Nemuro 2**	**5.29**	**91**	P	**Pn**	**03 22 26.7**	**-1.4**
NEM2				*e*S	**S**	**03 23 26.5**	**-5.6**
MAJO	**Matsushiro**	**7.18**	**182**	*e*Pn	**Pn**	**03 22 52.4**	**+0.9**
MAT	**Matsushiro**	**7.18**	**182**	P	**Pn**	**03 22 52.3**	**+0.9**
MJAR	**Matsushiro Arr**	**7.18**	**182**	P	**Pn**	**03 22 52.2**	**+0.8**
	2.1nm,0.3s,baz=3.2,slow=11,SNR=14						
KSRS	**Korea Array**	**10.18**	**236**	P	**Pn**	**03 23 28.8**	**0.0**
	0.1nm,0.3s,baz=51,slow=11,SNR=6.4						
ULN	**Ulaanbaatar**	**22.21**	**292**	*e*P	**P**	**03 25 41.0**	**-1.1**
	0.7nm,0.5s,mb3.2						
KURK	**Kurchatov**	**40.26**	**302**	P	**P**	**03 28 19.3**	**+0.5**
	0.2nm,0.4s,mb2.8,baz=78,slow=8.6,SNR=3.3						
KURK	**Kurchatov**	**40.26**	**302**	P	**P**	**03 28 19.3**	**+0.5**
INK	**Inuvik**	**49.55**	**29**	*e*P	**P**	**03 29 31.1**	**-0.3**
	1.0nm,0.4s,mb3.5						
YKA	**Yellowknife Ar**	**59.19**	**31**	P	**P**	**03 30 39.2**	**-1.3**
	0.2nm,0.7s,mb2.7,baz=314,slow=6.6,SNR=4.5						
YKA	**Yellowknife Ar**	**59.19**	**31**	P	**P**	**03 30 39.2**	**-1.3**
NVAR	**Mina Array Bea**	**72.77**	**53**	P	**P**	**03 32 08.5**	**+1.4**
	0.3nm,0.4s,mb3.2,baz=297,slow=8.0,SNR=2.9						
PDAR	**Pinedale Array**	**74.55**	**45**	P	**P**	**03 32 17.8**	**+0.5**
	0.5nm,0.7s,mb3.3,baz=321,slow=1.9,SNR=4.2						

*ISCJB **23** 03:29:41.7±0.9, 31°.57N±0°.03×104°.12E±0°.03, h6km±6km, mb4.0/18, Error ellipse: s-maj=5.3km s-min=4.9km az=11.8*

*IDC **23** 03:29:43.0±1.1, 31°.48N×103°.91E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/26, mbtmp3.8/13, ML4.3/1, Error ellipse: s-maj=33.3km s-min=20.9km az=52.0*

*NEIC **23** 03:29:44.6±0.5, 31°.46N×103°.98E, h10km, mb4.1/7, Error ellipse: s-maj=12.1km s-min=7.8km az=71.0*

NEIC Felt at Chengdu.

*BJI **23** 03:29:45.8, 31°.49N×104°.10E, h11km, mB4.6/2, mb4.3/3, ML4.1/18, Ms3.9/4, Ms7 3.7/5*

ISC 23 03:29:44.0±0.8, 31°.57N±0°.03×104°.04E±0°.03, h6km±5km, n44, σ1=17/56, mb4.0/18, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.70**	**200**	Pg	**Pg**	**03 29 58.5**	**+1.0**
CD2				Sg	**Sg**	**03 30 08.9**	**+2.2**
CD2				smax			
	comp=N,10μm,0.7s						
LZH	**Lanzhou**	**4.50**	**358**	Pn	**Pn**	**03 30 57.0**	**+4.2**
LZH				Sn	**Sn**	**03 31 44.3**	**-1.2**
LZH				Sg	**Sg**	**03 32 07.9**	**-0.8**
LZH				smax			
	comp=N,150nm,0.9s						
LZH				smax			
	comp=E,190nm,0.9s						
LZH				LR	LR		
	comp=E,1μm,7.2s						
LZH				LR	LR		
	comp=Z,1μm,9.4s						
XAN	**Xi'an**	**4.79**	**58**	Pn	**Pn**	**03 30 58.1**	**+1.3**
XAN				Pg	**Pg**	**03 31 14.5**	**-1.4**
XAN				Sn	**Sn**	**03 31 48.8**	**-3.8**
XAN				Sg	**Sg**	**03 32 11.6**	**-6.4**
XAN				smax			
	comp=N,380nm,0.7s						
XAN				smax			
	comp=E,180nm,0.7s						
ENH	**Enshi**	**4.86**	**104**	*e*Pn	**Pn**	**03 30 59.2**	**+1.4**
ENH				*e*Pg	**Pg**	**03 31 15.2**	**-2.0**
ENH				*e*Sn	**Sn**	**03 31 53.6**	**-0.7**
ENH				*e*Sg	**Sg**	**03 32 20.1**	**-0.1**
GYA	**Guiyang**	**5.59**	**155**	Pn	**Pn**	**03 31 08.4**	**+0.6**
GYA				Sn	**Sn**	**03 32 11.0**	**-1.4**
GYA				smax			
	comp=N,190nm,0.4s						
GYA				smax			
	comp=E,300nm,0.8s						
KMI	**Kunming**	**6.53**	**190**	Pn	**Pn**	**03 31 24.0**	**+3.4**
KMI				Sn	**Sn**	**03 32 35.3**	**-0.1**
KMI				smax			
	comp=N,56nm,0.9s						
KMI				smax			
	comp=E,64nm,0.8s						
KMI				LR	LR		
	comp=N,390nm,9.6s						
KMI				LR	LR		
	comp=E,660nm,9.3s						
KMI				LR	LR		
	comp=Z,180nm,11.3s						
WHN	**Wuhan**	**8.91**	**94**	P	**Pn**	**03 31 55.4**	**+2.1**
WHN				S	**Sn**	**03 33 28.9**	**-5.1**
WHN				LR	LR		
	comp=N,1μm,13.7s						
WHN				LR	LR		
	comp=E,1μm,15.0s						
WHN				LR	LR		
	comp=Z,520nm,13.6s						
CHTO	**Chiang Mai**	**13.51**	**201**	*e*Pn	**Pn**	**03 32 53.7**	**-2.7**
CMAR	**Chiang Mai Arr**	**13.85**	**201**	Pn	**Pn**	**03 32 59.1**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=12,slow=13,SNR=2.9						
GUN	**Gumba**	**16.19**	**262**	*e*P	**Pn**	**03 33 31.4**	**-0.8**
SONM	**Songino Array**	**16.34**	**6**	Pn	**Pn**	**03 33 34.5**	**+0.5**
	baz=199,slow=8.5,SNR=2.7						
PKI	**Pulchoki**	**16.69**	**261**	*e*P	**Pn**	**03 33 37.7**	**-0.8**
	comp=Z,18nm,0.7s						
KKN	**Kakani**	**16.73**	**262**	*e*P	**Pn**	**03 33 38.3**	**-0.8**
DMN	**Daman**	**16.93**	**261**	*e*P	**Pn**	**03 33 40.6**	**-1.0**
GKN	**Gorkha**	**17.21**	**263**	*e*P	**Pn**	**03 33 44.7**	**-0.4**
	comp=Z,29nm,0.8s						
KOLN	**Koldanda**	**18.16**	**263**	*e*P	**Pn**	**03 33 55.2**	**-1.7**
	comp=Z,13nm,0.6s						
PYUN	**Piuthan**	**18.58**	**265**	*e*P	**Pn**	**03 34 00.6**	**-1.5**
KSRS	**Korea Array**	**20.52**	**67**	P	**P**	**03 34 24.1**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=254,slow=10,SNR=12						
MK31	**Makanchi Array**	**22.59**	**318**	*e*P	**P**	**03 34 46.3**	**+1.1**
MKAR	**Makanchi Array**	**22.59**	**318**	P	**P**	**03 34 45.9**	**+0.7**
	comp=Z,1.5nm,0.7s,mb3.6,baz=115,slow=11,SNR=12						
TKM2	**Tokmak 2**	**25.20**	**305**	*e*P	**P**	**03 35 12.2**	**+1.8**
	comp=Z,2.9nm,0.9s,mb3.8						
UCH	**Uchtor**	**25.77**	**303**	*e*P	**P**	**03 35 17.9**	**+2.3**
	comp=Z,4.4nm,1.0s,mb3.9						
ZAA0	**Zalesovo Array**	**26.28**	**334**	*e*P	**P**	**03 35 20.7**	**+0.7**
ZALV	**Zalesovo Beam**	**26.28**	**334**	P	**P**	**03 35 20.7**	**+0.7**
	comp=Z,1.5nm,0.4s,mb3.8,baz=128,slow=9.7,SNR=7.5						
AML	**Almayashu**	**26.34**	**302**	*e*P	**P**	**03 35 22.8**	**+2.1**
	comp=Z,1.6nm,0.6s,mb3.7						
KURK	**Kurchatov**	**26.84**	**323**	P	**P**	**03 35 25.5**	**+0.4**
	comp=Z,1.8nm,0.8s,mb3.7,baz=129,slow=9.2,SNR=11						
KURK	**Kurchatov**	**26.84**	**323**	*e*P	**P**	**03 35 25.5**	**+0.4**
	comp=Z,4.7nm,1.3s,mb3.9						
BVAR	**Borovoye Array**	**32.39**	**321**	P	**P**	**03 36 15.6**	**+1.3**
	comp=Z,0.6nm,0.5s,mb3.6,baz=123,slow=11,SNR=4.4						
BRVK	**Borovoye**	**32.46**	**321**	*e*P	**P**	**03 36 14.8**	**-0.2**
	comp=Z,4.7nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**37.32**	**311**	*e*P	**P**	**03 36 57.0**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.7						
ARCES	**ARCESS Array B**	**56.81**	**336**	P	**P**	**03 39 29.2**	**+0.5**
	comp=Z,1.5nm,0.6s,mb4.2,baz=74,slow=9.1,SNR=4.5						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**03 39 29.7**	**-0.9**
	comp=Z,0.9nm,0.4s,mb4.1,baz=70,slow=6.1,SNR=6.0						
AKBB	**Malin Array Si**	**57.02**	**313**	*e*P	**P**	**03 39 30.2**	**-0.3**
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**03 39 30.6**	**-0.7**
	comp=Z,2.5nm,0.8s,mb4.3,baz=104,slow=8.0,SNR=6.3						
KWP	**Kalwaria Pacla**	**61.35**	**313**	*e*P	**P**	**03 40 00.8**	**+0.2**
	comp=Z,4.4nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**61.92**	**149**	P	**P**	**03 40 04.7**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.7,baz=339,slow=7.0,SNR=3.9						
NB2	**NORSAR Subarra**	**64.23**	**327**	P	**P**	**03 40 18.8**	**-0.8**
	comp=Z,0.9nm,0.6s,mb4.0,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**03 40 18.2**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=6.9,SNR=4.6						
NOA	**NORSAR Array B**	**64.23**	**327**	P	**P**	**03 40 18.2**	**-1.4**
GERES	**GERESS Array B**	**67.18**	**314**	P	**P**	**03 40 38.5**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.8,baz=63,slow=6.1,SNR=6.2						
CDF	**Champ du Feu**	**71.24**	**316**	*e*P	**P**	**03 41 02.9**	**-1.1**
LPG	**La Plagne**	**72.89**	**313**	*e*P	**P**	**03 41 14.5**	**+0.6**
	comp=Z,10nm,0.9s,mb4.5						
LPL	**La Plagne**	**72.89**	**313**	*e*P	**P**	**03 41 14.4**	**+0.5**
SMF	**Signal de Mont**	**74.12**	**315**	*e*P	**P**	**03 41 21.2**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.4						

*MOS **23** 03:33:07.8±1.0, 51°.69N×177°.91E, h49km, mb5.5/142, MS4.4/43, Error ellipse: s-maj=6.0km s-min=3.7km az=94.5*

*ISCJB **23** 03:33:08.1±0.1, 51°.63N±0°.03×177°.95E±0°.02, h54km, mb5.3/390, MS4.5/74, Error ellipse: s-maj=4.0km s-min=1.5km az=5.6*

*SZGRF **23** 03:33:08.8, 51°.90N×176°.54E, h54km, mb5.1, MS4.5, Rat Islands, Aleutian Islands, United States*

*GCMT **23** 03:33:09.9±0.1, 51°.63N×177°.89E, h46km, MW5.4/96, Moment Tensor Solution. s85,c140; s96,c204; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.02±.02; $M_{\theta\theta}$=1.03±.02; $M_{\phi\phi}$1.05±.02; $M_{r\theta}$=0.08±.02; $M_{\theta\phi}$=0.88±.02; $M_{\phi r}$=0.66±.02; Best double couple: $M_0$1.50800×10^{17} NP1:ϕ_s113.00000°, δ66.00000°, λ175.00000°. NP2:ϕ_p206.00000°, δ85.00000°, λ24.00000°. Principal axes: T 1.5930, Plg21.0000°, Azm72.0000°; N -0.1670, Plg65.0000°, Azm216.0000°; P -1.4230, Plg13.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **23** 03:33:09.9±0.1, 51°.64N×177°.92E, mb5.3/260, ML5.6(AEIC), ML5.8(PMR) Error ellipse: s-maj=4.2km s-min=2.1km az=180.0*

*IDC **23** 03:33:10.8±0.4, 51°.83N×177°.77E, h60km±3km, mb4.9/38, mb1 5.0/40, mb1mx5.0/42, mbtmp4.9/40, MS4.4/

comp=Z,267nm,0.7s
FIB Fire Island 19.82 49 *e*P Pn **03 37 38.0 +0.1**
comp=Z,267nm,0.7s
SEW Seward 19.95 52 *e*P Pn **03 37 36.6 -2.7**
comp=Z,327nm,0.8s
SEW *e*S **S 03 41 23.4 +5.1**
RC01 Rabbit Creek A 20.01 49 *e*P **P 03 37 38.0 +0.1**
comp=Z,281nm,0.9s
RC01 *e*S **S 03 41 20.1 +0.5**
KTH Kantishna Hill 20.22 42 *e*P **P 03 37 41.7 +1.5**
comp=Z,504nm,0.9s
BPAW Bear Paw Mtn. 20.40 41 *e*P **P 03 37 43.8 +1.6**
comp=Z,266nm,0.9s
PMR Palmer 20.41 48 *e*P **P 03 37 42.5 +0.2**
PMR pmax pmax
comp=Z,63nm,0.7s
PMR Palmer 20.41 48 *e*P **P 03 37 42.5 +0.2**
comp=Z,63nm,0.7s
TRF Thorofare Moun 20.45 43 *e*P **P 03 37 43.6 +0.9**
comp=Z,2.6nm,0.7s
MCK McKinley 21.11 42 *e*P **P 03 37 50.6 +0.8**
MCK pmax pmax
comp=Z,187nm,0.9s,mb5.4
MCK McKinley 21.11 42 *e*P **P 03 37 50.6 +0.8**
comp=Z,187nm,0.9s,mb5.4
MCK *e*ScP ScP 03 45 24.5 -1.0
MID Middleton Isla 21.41 55 *e*P **P 03 37 54.0 +0.9**
MID pmax pmax
comp=Z,744nm,1.0s,mb6.0
MID Middleton Isla 21.41 55 *e*P **P 03 37 54.0 +0.9**
comp=Z,744nm,1.0s,mb6.0
DIV Divide 21.91 50 *e*P **P 03 37 58.0 -0.3**
comp=Z,438nm,1.2s,mb5.8
DIV *e*S **S 03 41 55.1 -1.7**
DIV *e*ScP ScP 03 45 27.4 -0.1
COLA College 21.95 40 *e*P **P 03 37 58.5 -0.2**
COLA pmax pmax
comp=Z,130nm,1.0s,mb5.3
COLA College 21.95 40 *e*P **P 03 37 58.5 -0.2**
comp=Z,130nm,1.0s,mb5.3
COLA *e*ScP ScP 03 45 25.3 -2.3
COLD Coldfoot 22.07 33 *e*P **P 03 38 00.8 +0.7**
comp=Z,41nm,1.0s,mb4.8
PAX Paxson 22.40 46 *e*P **P 03 38 03.6 0.0**
PAX *e*S **S 03 42 06.8 +0.7**
PAX pmax pmax
comp=Z,290nm,1.0s,mb5.7
PAX Paxson 22.40 46 *e*P **P 03 38 03.6 0.0**
comp=Z,290nm,1.0s,mb5.7
PAX *e*S **S 03 42 06.8 +0.7**
PAX *e*ScP ScP 03 45 27.9 -0.9
YUK Yuzh-Kuril'sk 22.70 263 *e*P **P 03 38 07.6 +0.8**
YUK 03 38 22.0
YUK pmax pmax
comp=Z,4μm,1.4s,mb6.6
YUK pmax pmax
comp=E,2μm,1.8s
YUK pmax pmax
comp=N,3μm,1.3s
YUK pmax pmax
comp=Z,2μm,1.3s,mb6.5
YUK MLR MLR
comp=Z,3μm,16.0s,MS4.8
MENT Mentasta 23.18 46 *e*P **P 03 38 12.7 +1.0**
YSS Yuzh-Sakhalins 23.26 272 *b i*P **P 03 38 13.2 +0.5**
YSS *e* 03 38 24.0
YSS *e* 03 38 28.5
YSS *e*S **S 03 42 20.0 -0.3**
YSS *e*SSS 03 43 25.0
YSS pmax pmax
comp=Z,160nm,1.0s,mb5.4
YSS MLR MLR
comp=Z,700nm,16.0s,MS4.2
YSS Yuzh-Sakhalins 23.26 272 *e*P **P 03 38 13.3 +0.6**
comp=Z,151nm,1.0s,mb5.4
EGAK Eagle 24.67 42 *e*P **P 03 38 25.3 0.0**
comp=Z,464nm,0.8s,mb6.1
EGAK *e*ScP ScP 03 45 33.9 -0.9
ASAJ Asahikawa 24.68 266 P **P 03 38 26.0 +0.4**
comp=Z,223nm,1.0s,mb5.6,baz=40,slow=6.6,SNR=73
ASAJ LR LR 03 46 26.1
comp=Z,851nm,21.4s,MS4.2,baz=328,slow=32
ASAJ Asahikawa 24.68 266 P **P 03 38 26.0 +0.4**
ASAJ pmax pmax
comp=Z,223nm,1.0s
ASAJ MLR MLR
comp=Z,851nm,21.4s
PNL Peninsula 24.95 55 *e*P **P 03 38 27.4 -0.6**
comp=Z,150nm,1.0s,mb5.5
PNL *e*ScP ScP 03 45 34.8 -0.8
DAWY Dawson 25.29 44 *e*P **P 03 38 31.5 +0.5**
DAWY *e*ScP ScP 03 45 35.8 -0.7
ERM Erimo 25.45 261 *e*P **P 03 38 33.9 +1.2**
ERM *e**PP pP 03 38 48.1 +1.6
ERM pmax pmax
comp=Z,126nm,1.1s,mb5.4
ERM Erimo 25.45 261 *e*P **P 03 38 33.9 +1.2**
comp=Z,126nm,1.1s,mb5.4
ERM *e*pP pP 03 38 48.1 +1.6
HYT Haines Junctio 25.90 52 *e*P **P 03 38 38.1 +1.6**
HYT *e*ScP ScP 03 45 39.6 +1.3
SKAG Skagway 27.03 55 *e*P **P 03 38 47.0 +0.3**
comp=Z,40nm,1.0s,mb4.9
SIT Sitka 27.31 60 *e*P **P 03 38 49.4 +0.2**
SIT pmax pmax
comp=Z,128nm,1.3s,mb5.3
SIT Sitka 27.31 60 *e*P **P 03 38 49.4 +0.2**
comp=Z,128nm,1.3s,mb5.3
HABR Khabarovsk 27.41 280 *e*P **P 03 38 49.3 -0.9**
HABR *e**PP pP 03 39 09.4 +5.3
HABR S **S 03 43 23.6 -2.7**
HABR *e*SS 03 44 43.7
HABR *e* 03 49 29.4
HABR pmax pmax
comp=Z,98nm,1.5s,mb5.1
HABR pmax pmax
comp=N,25nm,0.7s
HABR pmax pmax
comp=E,29nm,0.8s
HABR MLR MLR
comp=Z,269nm,17.0s,MS3.9
YAK Yakutsk 27.67 311 *d i*P **P 03 38 50.7 -1.7**
YAK *e**PP pP 03 39 06.1 -0.2
YAK *e*PPP 03 39 45.0
YAK *e* 03 42 10.1
YAK *e*S **S 03 43 23.9 -6.2**
YAK *e**SS sS 03 43 47.4 -6.3
YAK *e* 03 49 34.4
YAK pmax pmax
comp=Z,125nm,0.9s,mb5.5
YAK pmax pmax
comp=E,69nm,1.0s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=Z,194nm,1.2s,mb5.6
YAK pmax pmax
comp=N,65nm,1.0s
YAK pmax pmax
comp=E,101nm,1.4s
YAK smax
comp=E,509nm,6.3s
YAK smax
comp=N,348nm,4.9s
YAK MLR MLR
comp=Z,474nm,13.0s,MS4.3
YAK MLR MLR
comp=N,486nm,15.0s,MS4.4
YAK MLR MLR
comp=E,564nm,14.0s,MS4.4
YAK Yakutsk 27.67 311 *e*P **P 03 38 51.2 -1.2**
comp=E,147nm,0.9s,mb5.6
YAK *e* pP 03 39 07.1 +0.8
INK Inuvik 28.39 36 P **P 03 38 59.7 +0.9**
comp=E,28nm,0.4s,mb5.2,baz=249,slow=8.5,SNR=239
INK PcP PcP 03 42 08.8 -0.8
comp=E,3.1nm,0.4s,baz=323,slow=2.9,SNR=6.8
INK ScP ScP 03 45 43.7 -2.1
comp=E,29nm,1.2s,baz=249,slow=4.0,SNR=11
INK LR LR 03 50 30.2
comp=E,537nm,19.9s,MS4.1,baz=249,slow=37
INK Inuvik 28.39 36 P **P 03 38 59.7 +1.0**
INK 03 42 08.8
INK pmax pmax
comp=Z,28nm,0.4s
INK pmax pmax
comp=Z,3.0nm,0.4s
INK pmax pmax
comp=N,29nm,1.2s
INK MLR MLR
comp=Z,537nm,19.9s
INK Inuvik 28.39 36 *e*P **P 03 38 59.4 +0.7**
comp=Z,46nm,0.6s,mb5.3
INK *e*ScP ScP 03 45 44.0 -1.7
CRAG Craig 28.82 63 *e*P **P 03 39 03.5 +0.8**
comp=Z,75nm,1.2s,mb5.3
KLR Kul'dur 29.12 284⇑ *i*P **P 03 39 01.3 -4.2**
KLR pmax pmax
comp=E,130nm,1.2s
KLR pmax pmax
comp=Z,140nm,1.2s,mb5.6
KLR MLR MLR
comp=N,900nm,16.0s
TIXI Tiksi 29.36 331 *e*P **P 03 39 05.4 -1.9**
TIXI *e**PP pP 03 39 24.3 +3.0
TIXI *e*S **S 03 44 04.3 +7.8**
TIXI *e* 03 45 46.1
TIXI pmax pmax
comp=Z,12nm,1.1s,mb4.5
TIXI MLR MLR
comp=Z,850nm,15.0s,MS4.5
TIXI Tiksi 29.36 331 *e*ScP ScP 03 45 46.7 -2.1
DLBC Dease Lake 29.88 56 P **P 03 39 13.3 +1.2**
comp=Z,26nm,0.8s,mb5.0,baz=277,slow=8.0,SNR=40
DLBC ScP ScP 03 45 49.4 -1.2
comp=Z,5.1nm,0.8s,baz=308,slow=3.8,SNR=5.6
DLBC LR LR 03 51 00.1
comp=Z,2μm,21.3s,MS4.8,baz=275,slow=36
DLBC Dease Lake 29.88 56 *e*P **P 03 39 13.4 +1.3**
DLBC *e*ScP ScP 03 45 50.8 +0.1
CLNS Chul'man 30.73 301 *e*P **P 03 39 17.7 -1.9**
CLNS *e**PP pP 03 39 27.1 -6.4
CLNS *e* 03 40 20.4
CLNS *e* 03 42 13.1
CLNS *e*S **S 03 44 14.1 -4.2**
CLNS *e* 03 49 47.0
CLNS pmax pmax
comp=N,17nm,1.1s
CLNS pmax pmax
comp=Z,36nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,31nm,1.2s
CLNS pmax pmax
comp=N,31nm,1.2s
CLNS pmax pmax
comp=E,21nm,1.2s
CLNS pmax pmax
comp=Z,26nm,1.3s,mb4.9
CLNS smax
comp=N,65nm,11.8s
CLNS smax
comp=E,179nm,14.2s
CLNS MLR MLR
comp=N,399nm,15.0s,MS4.4
CLNS MLR MLR
comp=Z,652nm,17.0s,MS4.3
CLNS MLR MLR
comp=E,569nm,18.0s,MS4.4
NRGR Nerungri 30.86 300 *e*P **P 03 39 19.3 -1.5**
MAJO Matsushiro 31.84 257 *e*P **P 03 39 29.9 +0.3**
MAJO pmax pmax
comp=Z,46nm,1.0s,mb5.3
MAJO Matsushiro 31.84 257 *e*P **P 03 39 29.9 +0.3**
comp=Z,46nm,1.0s,mb5.3
MAT Matsushiro 31.84 257 P **P 03 39 29.7 +0.1**
MAT S **S 03 44 36.0 0.0**
MJAR Matsushiro Arr 31.84 257 P **P 03 39 30.0 +0.4**
comp=Z,9.7nm,0.7s,mb4.7,baz=50,slow=7.2,SNR=43
MJAR ScP ScP 03 45 57.0 -0.5
comp=Z,1.7nm,0.8s,baz=7.8,slow=0.9,SNR=4.5
MJAR LR LR 03 50 31.3
comp=Z,945nm,20.4s,MS4.5,baz=65,slow=33
VLA Vladivostok 31.85 273 *i* P **P 03 39 28.4 -1.2**
VLA *e**PP pP 03 39 47.7 +4.1
VLA S **S 03 44 36.0 0.0**
VLA pmax pmax
comp=Z,102nm,1.3s,mb5.5
MDJ Mudanjiang 32.51 277 P **P 03 39 34.1 -1.2**
MDJ pP pP 03 39 42.5 -6.8
MDJ sP sP 03 39 46.8 -9.1
MDJ S **S 03 44 47.9 +1.7**
MDJ ScP ScP 03 46 02.8 +3.1
MDJ PcS PcS 03 46 06.6 +0.8
MDJ pmax pmax
comp=Z,21nm,0.9s,mb5.1
MDJ pmax pmax
comp=Z,83nm,4.4s
MDJ LR LR
comp=N,220nm,17.5s,MS4.5
MDJ LR LR
comp=E,810nm,19.1s,MS4.5
MDJ LR LR
comp=Z,1μm,19.1s,MS4.6
MDJ Mudanjiang 32.51 277 *e*P **P 03 39 33.1 -2.2**
comp=Z,20nm,1.0s,mb5.0
CN2 Changchun 35.48 278 *e*P **P 03 39 59.8 -1.3**
CN2 *e*pP pP 03 40 12.5 -2.7
CN2 PP PP 03 41 20.0 -2.3
CN2 *e*S **S 03 45 30.8 -1.4**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,700nm,20.0s,MS4.6
CN2 LR LR
comp=E,800nm,20.0s,MS4.6
CN2 LR LR
comp=Z,1μm,22.0s,MS4.5
KIP Kipapa 35.54 139 *e*P **P 03 40 03.0 +1.2**
KIP *e* pP 03 40 17.3 +1.4
KIP pmax pmax
comp=Z,122nm,0.8s,mb5.9
KIP Kipapa 35.54 139 *e*P **P 03 40 03.0 +1.2**
comp=Z,122nm,0.8s,mb5.9
KIP *e* pP 03 40 17.3 +1.4
BOD Bodaibo 36.14 305⇑ *i*P **P 03 40 05.1 -1.5**
BOD pmax pmax
comp=Z,155nm,0.8s,mb6.0
HIA Hailar 36.26 290 *e*P **P 03 40 06.1 -1.6**
HIA pmax pmax
comp=Z,115nm,1.3s
HIA Hailar 36.26 290 *e*P **P 03 40 06.1 -1.7**
comp=Z,115nm,1.3s,mb5.7
CBIJ Chichi jima 36.40 241 P **P 03 40 08.3 -0.7**
comp=Z,34nm,0.7s,mb5.4,baz=108,slow=20,SNR=4.7
CBIJ LR LR 03 55 51.9
comp=Z,322nm,18.7s,MS4.1,baz=31,slow=37
YKA Yellowknife Ar 36.49 46 P **P 03 40 09.8 +0.3**
comp=Z,35nm,0.8s,mb5.4,baz=280,slow=7.9,SNR=280
YKA PcP PcP 03 42 32.0 0.0
comp=Z,4.6nm,0.5s,baz=288,slow=3.2,SNR=10.0
YKA ScP ScP 03 46 11.7 -1.9
comp=Z,2.2nm,0.6s,baz=290,slow=3.9,SNR=12
YKA LR LR 03 56 48.4
comp=Z,159nm,19.3s,MS3.8,baz=5.0,slow=39
YKA Yellowknife Ar 36.49 46 P **P 03 40 09.8 +0.3**
YKA 03 42 32.0
YKA pmax pmax
comp=Z,35nm,0.8s
YKA pmax pmax
comp=Z,5.0nm,0.5s
YKA pmax pmax
comp=N,2.0nm,0.6s
YKA MLR MLR
comp=Z,159nm,19.3s
PGC Sidney 36.80 71 *e*P **P 03 40 12.5 +0.2**
comp=Z,1.0nm,0.7s,mb3.8
NLWA Neilton Lookou 37.15 73⇑ P **P 03 40 15.8 +0.6**
baz=37,SNR=6.6
NLWA Neilton Lookou 37.15 73 *e*P **P 03 40 16.0 +0.8**
comp=Z,38nm,0.9s,mb5.2
NLWA *e*PcP PcP 03 42 34.7 +0.4
A05A Maple Falls 37.44 70⇑ P **P 03 40 17.4 -0.3**
baz=38,SNR=14
KSRS Korea Array 37.60 268 P **P 03 40 19.9 +0.7**
comp=Z,17nm,0.8s,mb4.8,baz=55,slow=8.5,SNR=69
KSRS PcP PcP 03 42 35.9 0.0
comp=Z,4.9nm,0.8s,baz=58,slow=3.3,SNR=6.8
KSRS pPcP 03 42 53.0
comp=Z,4.7nm,0.8s,baz=68,slow=3.3,SNR=5.6
KSRS LR LR 03 54 36.2
comp=Z,399nm,21.3s,MS4.2,baz=53,slow=34
KSRS Korea Array 37.60 268 P **P 03 40 20.0 +0.8**
KSRS 03 42 35.9
KSRS pmax pmax
comp=Z,17nm,0.8s,mb4.8
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KSRS MLR MLR
comp=Z,399nm,21.3s,MS4.2
GNW Green Mountain 37.68 72 *e*P **P 03 40 20.1 +0.3**
comp=Z,15nm,0.7s,mb4.8
GNW *e*PcP PcP 03 42 36.8 +0.8
SNY Shenyang 37.71 277⇓ P **P 03 40 19.8 -0.3**
SNY S **S 03 46 05.3 -0.9**
SNY pmax pmax
comp=Z,33nm,1.2s,mb4.9
SNY pmax pmax
comp=Z,300nm,5.4s
SNY LR LR
comp=N,570nm,16.2s
SNY LR LR
comp=E,600nm,21.6s
SNY LR LR
comp=Z,850nm,19.6s,MS4.5
E03A Lebam 37.74 74⇓ P **P 03 40 20.9 +0.6**
baz=38
JCW Jim Creek 37.91 71 *e*P **P 03 40 21.9 +0.2**
JCW *e*PcP PcP 03 42 37.4 +0.8
JCW *e*ScP ScP 03 46 18.8 -0.4
B06A Marblemount 38.01 70⇓ P **P 03 40 21.9 -0.7**
baz=38
RPW Rockport 38.03 70 P **P 03 40 22.3 -0.5**
POHA Pohakuloa 38.05 137 *e*P **P 03 40 24.8 +1.7**
comp=Z,73nm,0.9s,mb5.4
F03A Seaside 38.05 75⇑ P **P 03 40 23.5 +0.6**
baz=38
D05A Enumclaw 38.36 72⇓ P **P 03 40 25.9 +0.4**
baz=38,SNR=9.7
INCN Inchon 38.38 269 *e*P **P 03 40 26.3 +0.5**
comp=Z,78nm,0.9s,mb5.4
INCN Inchon 38.38 269 P **P 03 40 26.3 +0.5**
SNR=7.2
INCN P 03 40 26.3
SNR=7.2
A07A Ashnola River, 38.41 69⇓ P **P 03 40 25.8 -0.1**
baz=38,SNR=51
CIT Chita 38.58 297 *e*P **P 03 40 27.0 -0.3**
CIT *e* pP 03 40 45.3 +3.8
CIT pmax pmax
comp=Z,288nm,1.4s,mb5.8
LON Longmire 38.69 73 *e*P **P 03 40 28.8 +0.6**
LON pmax pmax
comp=Z,21nm,0.7s,mb5.0
LON Longmire 38.69 73 *e*P **P 03 40 28.8 +0.6**
comp=Z,21nm,0.7s,mb5.0
RCM Mount Rainier- 38.69 73 P **P 03 40 29.4 +1.1**
F04A Amboy 38.74 74⇑ P **P 03 40 28.9 +0.2**
baz=39,SNR=15
WPW White Pass 38.87 73 P **P 03 40 30.3 +0.5**
NLW Nelson Butte 38.90 70 P **P 03 40 30.3 +0.3**
COR Corvallis 38.91 77 *e*P **P 03 40 31.2 +1.1**
COR pmax pmax
comp=Z,74nm,0.9s,mb5.4
COR Corvallis 38.91 77 *e*P **P 03 40 31.2 +1.1**
comp=Z,74nm,0.9s,mb5.4
G04A Mulino 39.08 75⇑ P **P 03 40 31.8 +0.2**
baz=39,SNR=8.0
ETW Entiat 39.13 71 *e*P **P 03 40 31.8 -0.2**
ETW *e*PcP PcP 03 42 40.8 +0.3
ETW *e*ScP ScP 03 46 23.2 -0.7
B08A Colville Reser 39.35 69⇑ P **P 03 40 33.3 -0.4**
baz=39,SNR=32
VLL Laurance Lake 39.42 74 P **P 03 40 35.2 +0.8**
TDH Tom, Dick, Har 39.45 75 P **P 03 40 35.2 +0.6**
HOOD Mount Hood Mea 39.52 75 *e*P **P 03 40 36.0 +0.8**
comp=Z,92nm,0.8s,mb5.6
H04A Detroit Lake 39.53 76⇑ P **P 03 40 35.5 +0.2**
baz=40,SNR=20
E07A Sunnyside 39.94 72⇑ P **P 03 40 38.7 0.0**
baz=40
B09A Rice 40.00 69⇑ P **P 03 40 38.7 -0.5**
baz=40,SNR=28
A10A Northport 40.07 68⇓ P **P 03 40 39.5 -0.2**
baz=40
G06A Carlson Farm, 40.17 74⇓ P **P 03 40 40.4 -0.2**
baz=40
RSW Rattlesnake Hi 40.18 72 *e*P **P 03 40 40.9 +0.2**
OD2 Odessa Site #2 40.19 70 *e*P **P 03 40 40.1 -0.7**
HUMO Hull Mountain 40.20 79 *e*P **P 03 40 42.1 +1.2**
comp=Z,35nm,0.8s,mb5.1
HUMO *e*PcP PcP 03 42 44.8 +0.9
HAWA Hanford 40.22 72 *e*P **P 03 40 41.3 +0.3**
comp=Z,67nm,0.8s,mb5.4
HAWA *e*PcP PcP 03 42 43.1 -0.8
D08A Wollman Farm, 40.24 71⇓ P **P 03 40 40.5 -0.7**
baz=40,SNR=6.7
C09A Chrisman Ranch 40.24 69⇓ P **P 03 40 40.4 -0.8**
baz=40,SNR=14
F07A Phinny Hill Vi 40.24 73⇓ P **P 03 40 41.2 0.0**
baz=40,SNR=5.3
RES Resolute Bay 40.30 24 P **P 03 40 41.2 -0.1**
comp=Z,8.0nm,0.5s,mb4.7,baz=293,slow=9.1,SNR=39
RES PcP PcP 03 42 43.5 -0.3
comp=Z,5.3nm,0.8s,baz=329,slow=3.5,SNR=2.8
RES ScP ScP 03 46 25.8 -2.2
comp=Z,15nm,1.0s,baz=309,slow=5.4,SNR=9.5
RES Resolute Bay 40.30 24 P **P 03 40 41.2 -0.1**
RES 03 42 43.5
RES pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
RES pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
RES pmax pmax
comp=N,15nm,1.0s
RES Resolute Bay 40.30 24 *e*P **P 03 40 42.0 +0.7**
comp=N,20nm,0.9s,mb4.8
RES *e*ScP ScP 03 46 26.4 -1.6
EDM Edmonton 40.43 60 *e*P **P 03 40 41.5 -1.1**
EDM *e*ScP ScP 03 46 27.2 -1.6
E08A Dider Farm, El 40.45 72⇓ P **P 03 40 42.2 -0.7**
baz=40,SNR=5.1
D09A Jones Farm, Ri 40.59 70⇑ P **P 03 40 43.4 -0.8**
baz=41
B10A Chitwood Farm, 40.60 68⇑ P **P 03 40 43.5 -0.6**
baz=41
DL2 Dalian 40.62 274 P **P 03 40 44.1 -0.3**
DL2 sP sP 03 41 00.6 -4.6
DL2 PP PP 03 42 22.5 +3.8
DL2 S **S 03 46 48.9 -1.1**
DL2 sS sS 03 47 06.9 -7.3
DL2 SS SS 03 49 37.8 -14
DL2 pmax pmax
comp=Z,40nm,0.8s,mb5.1
DL2 pmax pmax
comp=Z,110nm,5.7s
DL2 LR LR
comp=N,280nm,21.7s,MS4.2
DL2 LR LR
comp=E,180nm,22.7s,MS4.2
DL2 LR LR
comp=Z,340nm,24.5s,MS4.1
NEW Newport 40.67 68 *e*P **P 03 40 44.1 -0.6**
NEW *e* 03 42 45.6
NEW pmax pmax
comp=Z,55nm,0.7s
NEW Newport 40.67 68 *e*P **P 03 40 44.1 -0.6**
comp=Z,55nm,0.7s,mb5.3
NEW *e*PcP PcP 03 42 45.6 +0.2
NEW *e*ScP ScP 03 46 28.7 -1.1
KHMM Horse Mountain 40.72 82 *e*P **P 03 40 47.4 +2.2**
comp=Z,103nm,0.9s,mb5.5
A11A Hall Mountain, 40.77 67⇑ P **P 03 40 45.3 -0.2**
baz=41,SNR=30
C10A Spilker Farm, 40.79 69⇑ P **P 03 40 45.1 -0.7**
baz=41
YBH Yreka Blue Hor 40.85 80 P **P 03 40 47.9 +1.6**
comp=Z,72nm,0.8s,mb5.3,baz=326,slow=4.0,SNR=92
YBH PcP PcP 03 42 46.1 +0.1
comp=Z,6.5nm,0.8s,baz=339,slow=4.4,SNR=2.7
YBH ScP ScP 03 46 30.8 +0.2
comp=Z,2.1nm,0.8s,baz=196,slow=5.3,SNR=3.1
YBH Yreka Blue Hor 40.85 80 P **P 03 40 47.9 +1.7**
YBH 03 42 46.1
YBH pmax pmax

comp=Z,72nm,0.8s
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH pmax pmax
comp=N,2.0nm,0.8s
YBH Yreka Blue Hor 40.85 80 *e*P **P 03 40 47.9 +1.7**
comp=N,71nm,0.8s,mb5.3
E09A Wood Farm, Sta 40.98 71 ⇑P **P 03 40 46.7 -0.6**
baz=41
F08A Pendleton 40.98 72 ⇑P **P 03 40 46.9 -0.4**
baz=41
B11A Sandpoint 41.02 68 ⇓P **P 03 40 47.0 -0.6**
baz=41,SNR=15
G08A Pilot Rock 41.14 73 ⇑P **P 03 40 48.1 -0.5**
baz=41,SNR=11
D10A Wagner Farm, O 41.20 70 ⇓P **P 03 40 48.1 -1.0**
baz=41,SNR=18
LNOR Lincton Mounta 41.23 72 *e*P **P 03 40 49.0 -0.4**
K05A Summer Lake 41.39 78 ⇑P **P 03 40 51.8 +1.1**
baz=42,SNR=22
B12A Libby 41.45 67 ⇑P **P 03 40 50.6 -0.6**
baz=42,SNR=6.8
I07A Izee 41.47 75 ⇓P **P 03 40 51.5 +0.1**
baz=42,SNR=39
KCPM Cahto Peak 41.51 83 *e*P **P 03 40 54.0 +2.3**
comp=N,156nm,1.0s,mb5.6
F09A S2 Ranch, Elgi 41.54 72 ⇑P **P 03 40 51.6 -0.3**
baz=42,SNR=7.3
E10A Myers Farm, Un 41.60 71 ⇓P **P 03 40 51.6 -0.8**
baz=42,SNR=24
WDC Whiskeytown Da 41.62 81 *e*P **P 03 40 53.8 +1.2**
WDC pmax pmax
comp=Z,63nm,0.9s,mb5.2
WDC Whiskeytown Da 41.62 81 *e*P **P 03 40 53.8 +1.2**
comp=Z,63nm,0.9s,mb5.2
H08A Prairie City 41.73 74 ⇓P **P 03 40 53.3 -0.2**
baz=42,SNR=13
D11A Klaveano Farm, 41.76 69 ⇑P **P 03 40 52.1 -1.5**
baz=42,SNR=35
F10A Beach Ranch, E 41.80 71 ⇑P **P 03 40 53.3 -0.7**
baz=42,SNR=12
G09A Cove 41.85 72 ⇑P **P 03 40 54.0 -0.4**
baz=42,SNR=28
A13A Flathead Natio 41.89 66 ⇓P **P 03 40 53.9 -0.8**
baz=42,SNR=7.6
C12B Naegeli Ranch, 41.91 68 ⇑P **P 03 40 54.2 -0.7**
baz=42,SNR=32
WALA Waterton Lakes 42.11 66 *e*P **P 03 40 56.1 -0.4**
comp=Z,2.7nm,0.8s,mb3.9
WALA *e*ScP ScP 03 46 35.5 -0.1
B13A Whitefish 42.15 67 ⇓P **P 03 40 56.1 -0.6**
baz=42,SNR=34
E11A Bogner Ranch, 42.20 70 ⇑P **P 03 40 55.9 -1.4**
baz=42,SNR=11
MOD Modoc 42.22 78 *e*P **P 03 40 58.4 +0.9**
comp=Z,63nm,0.8s,mb5.3
MOD *e*PcP PcP 03 42 51.1 +0.5
MOD *e*ScP ScP 03 46 36.0 -0.1
BSMT Bassoo Peak 42.23 68 *e*P **P 03 40 57.2 -0.3**
G10A Bishop Farm, J 42.23 72 ⇓P **P 03 40 57.1 -0.5**
baz=42,SNR=43
HOPS Hopland 42.24 84 *e*P **P 03 40 59.3 +1.6**
comp=Z,225nm,1.1s,mb5.7
H09A Durkee 42.25 73 ⇓P **P 03 40 57.7 -0.1**
baz=42,SNR=18
D12A Red Ives Fores 42.33 69 ⇑P **P 03 40 57.1 -1.2**
baz=42
A14A Double T Ranch 42.43 65 ⇓P **P 03 40 58.4 -0.7**
baz=42,SNR=90
C13A Hot Springs 42.45 68 ⇓P **P 03 40 58.5 -0.7**
baz=42,SNR=18
F11A Grangeville 42.48 71 ⇑P **P 03 40 58.4 -1.1**
baz=42,SNR=20
J08A Circle Bar Ran 42.50 75 ⇑P **P 03 40 59.9 +0.2**
baz=43,SNR=20
E12A Beaver Dam Sad 42.54 70 ⇓P **P 03 40 59.1 -0.9**
baz=43,SNR=50
JTMT Jette 42.58 67 *e*P **P 03 40 59.8 -0.5**
I09A Lost Marbles R 42.59 74 ⇑P **P 03 41 00.1 -0.3**
baz=43,SNR=20
ALE Alert 42.66 10 P **P 03 41 01.5 +0.9**
comp=Z,84nm,0.5s,mb5.7,SNR=14
YBMT Yellow Bay 42.67 67 *e*P **P 03 41 00.8 -0.3**
G11A Walters Elk Ra 42.68 71 ⇓P **P 03 41 00.3 -0.9**
baz=43,SNR=31
A15A Johnson Ranch, 42.82 65 ⇓P **P 03 41 00.9 -1.3**
baz=43,SNR=27
D13A Huson 42.82 68 ⇓P **P 03 41 01.1 -1.2**
baz=43,SNR=14
H10A Noah's Angus R 42.84 73 ⇓P **P 03 41 02.0 -0.5**
baz=43,SNR=24
SWMT Swartz Lake 42.87 68 *e*P **P 03 41 01.8 -0.9**
SWMT *e*ScP ScP 03 46 37.8 -0.8
C14A Swan Lake 42.87 67 ⇑P **P 03 41 01.9 -0.8**
baz=43,SNR=33
WVOR Wild Horse Val 42.92 76 *e*P **P 03 41 03.4 +0.2**
WVOR pmax pmax
comp=Z,42nm,0.9s,mb5.2
WVOR Wild Horse Val 42.92 76 *e*P **P 03 41 03.4 +0.2**
comp=Z,42nm,0.9s,mb5.2
J09A Fry Pan Ranch, 42.94 75 ⇓P **P 03 41 03.4 +0.2**
baz=43,SNR=34
OHCM Honcut 43.02 82 *e*P **P 03 41 02.4 -1.6**
F12A Elk City 43.08 70 ⇑P **P 03 41 04.0 -0.4**
baz=43,SNR=74
I10A Payette 43.09 73 ⇑P **P 03 41 04.7 +0.2**
baz=43,SNR=18
H11A Donnelly 43.21 72 ⇑P **P 03 41 04.8 -0.7**
baz=43,SNR=30
MSO Missoula 43.26 68 *e*P **P 03 41 04.9 -1.0**
comp=Z,36nm,0.9s,mb5.1
MSO *e*PcP PcP 03 42 54.1 +0.1
MSO *e*ScP ScP 03 46 38.9 -1.3
B15A Bradely Ranch, 43.26 66 ⇓P **P 03 41 04.6 -1.3**
baz=43,SNR=52
SLMT Seeley Lake 43.30 68 *e*P **P 03 41 05.2 -1.0**
SLMT *e*ScP ScP 03 46 39.4 -1.0
BJI Beijing 43.31 280 P **P 03 41 05.8 -0.5**
BJI sP sP 03 41 18.9 -8.3
BJI PP PP 03 42 46.4 -1.2
BJI S **S 03 47 30.6 +1.0**
BJI sS sS 03 47 46.1 -7.8
BJI pmax pmax
comp=Z,48nm,0.8s,mb5.3
BJI LR LR
comp=N,460nm,24.4s,MS4.5
BJI LR LR
comp=E,640nm,24.4s,MS4.5
BJI LR LR
comp=Z,700nm,23.2s,MS4.5
BJT Baijiatuau 43.33 280 *e*P **P 03 41 06.2 -0.2**
BJT pmax pmax
comp=Z,51nm,0.8s
BJT Baijiatuau 43.33 280 *e*P **P 03 41 06.2 -0.2**
comp=Z,51nm,0.8s,mb5.3
E13A Victor 43.33 69 ⇑P **P 03 41 05.4 -1.0**
baz=43,SNR=20
D14A Greenough 43.38 68 ⇓P **P 03 41 05.6 -1.2**
baz=44,SNR=69
G12A Big Creek, Yel 43.38 71 ⇓P **P 03 41 06.1 -0.8**
baz=44,SNR=54
BEKR Beckwourth 43.39 81 ⇓P **P 03 41 07.6 +0.6**
baz=43,SNR=35
J10A Berg Farm, Mel 43.48 74 ⇓P **P 03 41 07.2 -0.5**
baz=44,SNR=7.8
C15A Salmond Ranch, 43.52 67 ⇓P **P 03 41 07.5 -0.5**
baz=44,SNR=115
IRK Irkutsk 43.54 301 *e*P **P 03 41 06.2 -1.8**
IRK *e* pP 03 41 17.6 -4.8
IRK pmax pmax
comp=Z,89nm,1.4s,mb5.3
F13A Darby 43.60 70 ⇑P **P 03 41 07.8 -0.8**
baz=44,SNR=24
CHMT Chamberlain Mo 43.62 68 *e*P **P 03 41 07.5 -1.2**
CHMT *e*ScP ScP 03 46 40.7 -1.0
I11A Placerville 43.69 73 ⇓P **P 03 41 08.9 -0.5**
baz=44,SNR=39
B16A M & M Farms, S 43.70 65 ⇑P **P 03 41 07.8 -1.5**
baz=44,SNR=9.8
K10A MacKenzie Ranc 43.79 75 ⇓P **P 03 41 10.4 +0.2**
baz=44,SNR=64
D15A Lincoln 43.97 67 ⇓P **P 03 41 10.5 -1.0**
baz=44,SNR=41
A17A Triple J Farms 43.98 64 ⇑P **P 03 41 10.2 -1.4**
baz=44,SNR=59
H12A Diamond D Ranc 43.98 72 ⇓P **P 03 41 10.8 -0.9**
baz=44,SNR=16

C16A Fuhringer Ranc 44.00 66 ⇓P **P 03 41 10.7 -1.1**
baz=44
G13A Cobalt 44.05 71 ⇑P **P 03 41 11.6 -0.6**
baz=44,SNR=60
MFID Camas Ranch 44.05 74 ⇓P **P 03 41 12.0 -0.3**
baz=44,SNR=27
PAHR Pah Rah Range 44.08 80 *e*P **P 03 41 13.4 +0.8**
comp=Z,98nm,1.0s,mb5.5
WCN Washoe City 44.10 81 ⇑P **P 03 41 13.6 +1.0**
baz=44,SNR=27
F14A Wisdom 44.15 69 ⇑P **P 03 41 12.3 -0.7**
baz=44,SNR=8.4
TLY Talaya 44.16 301 P **P 03 41 12.2 -0.7**
comp=Z,297nm,0.8s,mb6.1,SNR=21
TLY Talaya 44.16 301 *e*P **P 03 41 12.7 -0.2**
TLY *e*S **S 03 47 49.1 +7.5**
TLY *e*SS SS 03 51 09.2 +8.8
TLY pmax pmax
comp=Z,46nm,0.9s,mb5.2
TLY MLR MLR
comp=Z,1μm,21.0s,MS4.8
TLY Talaya 44.16 301 *e*P **P 03 41 12.4 -0.5**
comp=Z,38nm,0.8s,mb5.2
TLY *e*ScP ScP 03 46 42.1 -1.7
TLY Talaya 44.16 301 P **P 03 41 12.8 -0.1**
SNR=25
TLY P 03 41 12.8
SNR=25
E15A Deer Lodge 44.23 68 ⇑P **P 03 41 12.6 -1.0**
baz=44,SNR=34
I12A Atlanta 44.25 73 ⇓P **P 03 41 13.5 -0.3**
baz=44,SNR=74
B17A L&G Farms, Che 44.27 65 ⇓P **P 03 41 12.7 -1.3**
baz=44,SNR=30
ULN Ulaanbaatar 44.28 294 *e*P **P 03 41 14.0 0.0**
ULN pmax pmax
comp=Z,82nm,0.8s,mb5.5
ULN Ulaanbaatar 44.28 294 *e*P **P 03 41 14.0 0.0**
comp=Z,82nm,0.8s,mb5.5
ULN Ulaanbaatar 44.28 294 P **P 03 41 14.3 +0.4**
SNR=31
ULN P 03 41 14.3
SNR=31
K11A Parker Ranch, 44.30 74 ⇓P **P 03 41 14.3 0.0**
baz=44,SNR=19
H13A Challis 44.33 71 ⇑P **P 03 41 13.6 -0.9**
baz=44,SNR=25
G14A Jackson 44.41 70 ⇓P **P 03 41 14.1 -1.0**
baz=44
L10A Juniper Basin 44.44 76 ⇑P **P 03 41 15.4 +0.1**
baz=44,SNR=47
A18A Metzger Ranch, 44.47 64 ⇓P **P 03 41 13.6 -1.9**
baz=44,SNR=9.9
CMB Columbia Colle 44.49 83 *e*P **P 03 41 16.9 +1.1**
CMB pmax pmax
comp=Z,116nm,1.1s,mb5.5
CMB Columbia Colle 44.49 83 *e*P **P 03 41 16.9 +1.0**
comp=Z,116nm,1.1s,mb5.5
CMB *e*ScP ScP 03 46 44.9 -0.5
D16A Dana Ranch, Ca 44.53 67 ⇑P **P 03 41 15.1 -1.0**
baz=45,SNR=11
HRY Holter Researc 44.54 67 *e*P **P 03 41 15.3 -0.8**
J12A Stokes Ranch, 44.58 73 ⇑P **P 03 41 16.5 0.0**
baz=45,SNR=45
SAO San Andreas Ge 44.63 85 *e*P **P 03 41 18.1 +1.1**
SAO pmax pmax
comp=Z,90nm,1.2s,mb5.5
SAO San Andreas Ge 44.63 85 *e*P **P 03 41 18.1 +1.1**
comp=Z,90nm,1.2s,mb5.5
F15A Butte 44.64 69 ⇑P **P 03 41 15.9 -1.0**
baz=45,SNR=27
JOW Kunigami 44.65 256 P **P 03 41 16.2 -1.0**
comp=Z,36nm,0.7s,mb5.3,baz=47,slow=19,SNR=4.6
C17A Wharram Farm, 44.65 66 ⇑P **P 03 41 15.9 -1.0**
baz=45
SONM Songino Array 44.67 295 P **P 03 41 17.4 +0.3**
comp=Z,69nm,0.7s,mb5.6,baz=61,slow=8.3,SNR=287
SONM ScP ScP 03 46 45.0 -1.0
comp=Z,6.2nm,0.9s,baz=83,slow=3.5,SNR=4.2
SONM LR LR 04 00 00.0
comp=Z,760nm,21.7s,MS4.6,baz=59,slow=36
SONM Songino Array 44.67 295 P **P 03 41 17.4 +0.3**
SONM pmax pmax
comp=Z,69nm,0.7s
SONM pmax pmax
comp=N,6.0nm,0.9s
SONM MLR MLR
comp=Z,760nm,21.7s
LRM Limekiln Ridge 44.68 69 *e*P **P 03 41 16.2 -1.0**
LRM *e*ScP ScP 03 46 45.7 -0.3
M10A I.L. Ranch, Tu 44.73 76 ⇓P **P 03 41 18.2 +0.5**
baz=45,SNR=36
E16A East Helena 44.73 68 ⇓P **P 03 41 16.7 -0.9**
baz=45,SNR=20
I13A Wildhorse Cree 44.78 72 ⇓P **P 03 41 17.8 -0.3**
baz=45,SNR=94
WAKR Walker 44.79 82 *e*P **P 03 41 19.5 +1.3**
B18A Beardsley Farm 44.79 64 ⇑P **P 03 41 16.9 -1.1**
baz=45,SNR=43
HLID Hailey 44.81 73 ⇓P **P 03 41 18.0 -0.3**
baz=45,SNR=85
HLID Hailey 44.81 73 *e*P **P 03 41 17.9 -0.3**
comp=Z,38nm,0.9s,mb5.2
HLID *e*PcP PcP 03 43 00.3 +1.1
HLID *e*ScP ScP 03 46 45.5 -1.1
L11A Cat Creek Ranc 44.82 75 ⇑P **P 03 41 18.6 +0.2**
baz=45,SNR=64
H14A Leadore 44.82 71 ⇓P **P 03 41 17.7 -0.7**
baz=45,SNR=36
DLMT Dillon 44.85 69 *e*P **P 03 41 17.5 -1.1**
comp=Z,26nm,0.8s,mb5.1
DLMT *e*PcP PcP 03 43 00.2 +0.8
DLMT *e*ScP ScP 03 46 45.7 -1.0
BMN Battle Mountai 44.97 78 *e*P **P 03 41 19.8 +0.2**
BMN pmax pmax
comp=Z,53nm,0.8s,mb5.4
BMN Battle Mountai 44.97 78 *e*P **P 03 41 19.8 +0.2**
comp=Z,53nm,0.8s,mb5.4
EGMT Eagleton 45.01 65 ⇑P **P 03 41 18.4 -1.4**
baz=45,SNR=9.7
EGMT Eagleton 45.01 65 *e*P **P 03 41 19.1 -0.7**
comp=Z,40nm,0.8s,mb5.3
EGMT *e*ScP ScP 03 46 52.3 +4.9
MCMT McKenzie Canyo 45.01 70 *e*P **P 03 41 18.9 -0.9**
comp=Z,24nm,0.8s,mb5.1
MCMT *e*PcP PcP 03 42 60.0 0.0
MCMT *e*ScP ScP 03 46 46.8 -0.6
G15A Dillon 45.02 70 ⇑P **P 03 41 18.8 -1.2**
baz=45,SNR=46
ZAK Zakamensk 45.03 299 ⇓*i*P **P 03 41 20.0 +0.1**
ZAK pmax pmax
comp=Z,50nm,1.4s,mb5.2
J13A Cove Ranch, Pi 45.05 73 ⇑P **P 03 41 20.0 -0.2**
baz=45,SNR=88
K12A Draper Farm, C 45.05 74 ⇑P **P 03 41 20.3 0.0**
baz=45,SNR=32
TIA Tai'an 45.10 275 *e*P **P 03 41 20.3 -0.4**
I14A Mackay 45.17 72 ⇓P **P 03 41 21.1 0.0**
baz=45,SNR=46
F16A Kennard Place, 45.18 68 ⇑P **P 03 41 19.9 -1.2**
baz=45,SNR=35
N10A Dunphy 45.23 77 ⇓P **P 03 41 22.2 +0.6**
baz=45
M11A Holland Ranch, 45.23 76 ⇑P **P 03 41 22.4 +0.7**
baz=45,SNR=35
E17A Martinsdale 45.24 67 ⇓P **P 03 41 21.1 -0.6**
baz=45,SNR=39
H15A Lima 45.25 70 ⇑P **P 03 41 20.9 -0.9**
baz=45,SNR=25
BOZ Bozeman (W) 45.25 69 ⇑P **P 03 41 21.2 -0.6**
baz=45,SNR=144
BOZ Bozeman (W) 45.25 69 *e*P **P 03 41 21.1 -0.7**
BOZ *e* 03 43 00.1
BOZ pmax pmax
comp=Z,47nm,0.8s,mb5.4
BOZ Bozeman (W) 45.25 69 *e*P **P 03 41 21.1 -0.6**
comp=Z,47nm,0.8s,mb5.4
BOZ *e*PcP PcP 03 43 00.1 -0.7
BOZ *e*ScP ScP 03 46 48.0 -0.5
L12A House Creek Ra 45.27 75 ⇑P **P 03 41 22.4 +0.4**
baz=45,SNR=107
G16A Moss Hill, Enn 45.39 69 ⇓P **P 03 41 21.9 -0.9**
baz=46,SNR=44
D18A Linhart Farms, 45.43 66 ⇑P **P 03 41 22.6 -0.6**
baz=46,SNR=11
O10A Cortez Mining, 45.49 78 ⇓P **P 03 41 24.6 +0.9**
baz=46,SNR=14

NVAR Mina Array Bea 45.53 81 P **P 03 41 25.0 +0.9**
comp=Z,49nm,0.8s,mb5.5,baz=293,slow=8.1,SNR=183
NVAR pP pP 03 41 39.5 +0.9
comp=Z,26nm,0.8s,baz=300,slow=7.1,SNR=7.7
NVAR PcP PcP 03 43 02.4 +0.5
comp=Z,15nm,0.8s,baz=292,slow=3.8,SNR=3.9
NVAR ScP ScP 03 46 48.8 -0.9
comp=Z,3.4nm,0.7s,baz=291,slow=4.4,SNR=7.3
K13A Stover Farm, H 45.54 73 ⇓P **P 03 41 23.9 -0.1**
baz=46,SNR=14
MOY Mondy 45.57 302 *e*P **P 03 41 23.7 -0.5**
MOY pmax pmax
comp=Z,65nm,1.5s,mb5.3
FFC Flin Flon 45.60 53 *e*P **P 03 41 23.5 -0.9**
FFC pmax pmax
comp=Z,28nm,1.1s,mb5.1
FFC Flin Flon 45.60 53 *e*P **P 03 41 23.5 -0.9**
comp=Z,28nm,1.1s,mb5.1
FFC *e*ScP ScP 03 46 47.7 -2.0
HHC Hu-ho-hao-te 45.63 284 ⇓P **P 03 41 25.5 +0.7**
HHC pP pP 03 41 41.3 +1.9
HHC PcP PcP 03 43 04.3 +2.1
HHC PP PP 03 43 13.3 +1.0
HHC ScP ScP 03 46 50.3 +0.2
HHC PcS PcS 03 46 56.4 +0.1
HHC S **S 03 48 03.1 -0.2**
HHC ScS ScS 03 51 13.4 -2.2
HHC pmax pmax
comp=Z,71nm,1.4s,mb5.4
HHC pmax pmax
comp=Z,290nm,5.4s
HHC LR LR
comp=N,550nm,15.5s,MS4.8
HHC LR LR
comp=E,860nm,17.1s,MS4.8
HHC LR LR
comp=Z,710nm,17.4s,MS4.7
N11A Elko Archery C 45.63 77 ⇓P **P 03 41 25.2 +0.3**
baz=46,SNR=23
F17A Fitzpatrick Pl 45.67 68 ⇓P **P 03 41 24.2 -0.8**
baz=46,SNR=34
I15A Monteview 45.70 71 ⇓P **P 03 41 24.7 -0.6**
baz=46,SNR=7.2
MLAC Mammoth Lakes 45.70 82 ⇓P **P 03 41 27.2 +1.8**
baz=46,SNR=8.1
E18A Harlowton 45.72 67 ⇑P **P 03 41 25.2 -0.3**
baz=46,SNR=14
M12A Wells 45.77 75 ⇓P **P 03 41 26.5 +0.5**
baz=46,SNR=37
QLMT Earthquake Lak 45.83 69 *e*P **P 03 41 25.8 -0.6**
QLMT *e*ScP ScP 03 46 51.2 +0.4
P10A Eureka 45.92 78 ⇓P **P 03 41 27.9 +0.7**
baz=46,SNR=22
L13A Double Diamond 45.95 74 ⇓P **P 03 41 27.5 +0.2**
baz=46,SNR=22
G17A Pierce Place, 45.95 68 ⇑P **P 03 41 26.8 -0.5**
baz=46,SNR=15
ELK Elko 45.98 76 *e*P **P 03 41 28.4 +0.8**
ELK pmax pmax
comp=Z,29nm,0.8s
ELK Elko 45.98 76 *e*P **P 03 41 28.4 +0.8**
comp=Z,28nm,0.8s,mb5.2
H16A Russell Place, 46.01 69 ⇓P **P 03 41 27.1 -0.7**
baz=46,SNR=64
N12A Clover Valley, 46.03 76 ⇑P **P 03 41 28.3 +0.3**
baz=46,SNR=20
N12A Clover Valley, 46.03 76 *e*P **P 03 41 28.5 +0.5**
comp=Z,44nm,0.9s,mb5.4
N12A *e*ScP ScP 03 46 51.8 +0.1
MTUM Tungsten Hills 46.04 82 *e*P **P 03 41 29.4 +1.3**
O11A Cowboy Ranch, 46.10 77 ⇑P **P 03 41 29.0 +0.5**
baz=46,SNR=26
K14A Jones Ranch, D 46.14 73 ⇑P **P 03 41 28.7 -0.1**
baz=46,SNR=18
YMR Madison River 46.20 69 *e*P **P 03 41 28.7 -0.6**
comp=Z,77nm,1.0s,mb5.6
YMR *e*PcP PcP 03 43 05.4 +1.3
F18A Big Timber 46.21 67 ⇑P **P 03 41 28.7 -0.6**
baz=46,SNR=20
M13A Montello 46.25 75 ⇑P **P 03 41 29.9 +0.2**
baz=46,SNR=36
M13A Montello 46.25 75 *e*P **P 03 41 29.9 +0.2**
comp=Z,31nm,0.8s,mb5.3
M13A *e*PcP PcP 03 43 05.3 +0.9
M13A *e*ScP ScP 03 46 52.6 0.0
RCTC Rector, Farmer 46.29 84 ⇓P **P 03 41 30.3 +0.3**
baz=46,SNR=17
GCMT Greycliff 46.30 67 *e*P **P 03 41 29.3 -0.7**
comp=Z,9.7nm,0.7s,mb4.8
YNR Norris Junctio 46.34 69 *e*P **P 03 41 30.9 +0.5**
comp=Z,52nm,0.9s,mb5.5
YNR *e*ScP ScP 03 46 54.2 +1.2
I16A Newdale 46.35 70 ⇑P **P 03 41 30.3 -0.2**
baz=46,SNR=18
GUMO Guam 46.37 227 LR LR 04 01 40.2
comp=Z,286nm,19.0s,MS4.2,baz=64,slow=37
P11A Circle Ranch, 46.39 78 ⇑P **P 03 41 31.5 +0.7**
baz=46,SNR=12
YFT Old Faithful 46.40 69 *e*P **P 03 41 31.9 +1.1**
comp=Z,63nm,0.8s,mb5.6
YFT *e*ScP ScP 03 46 55.2 +2.0
L14A Malta 46.41 74 ⇓P **P 03 41 31.0 +0.1**
baz=46,SNR=86
K15A Arbon 46.44 72 ⇓P **P 03 41 31.6 +0.4**
baz=46,SNR=50
TIN Tinemaha 46.44 82 ⇓P **P 03 41 32.5 +1.2**
baz=46,SNR=6.8
Q10A Clear Creek Ra 46.45 79 ⇑P **P 03 41 32.0 +0.7**
baz=46,SNR=22
SMMC Simmler 46.47 85 ⇓P **P 03 41 32.4 +1.0**
baz=46,SNR=6.6
N13A Wendover, West 46.54 75 ⇓P **P 03 41 32.2 +0.2**
baz=47,SNR=14
N13A Wendover, West 46.54 75 *e*P **P 03 41 32.6 +0.7**
comp=Z,49nm,0.9s,mb5.4
N13A *e*PcP PcP 03 43 05.6 +0.2
N13A *e*ScP ScP 03 46 53.7 -0.2
O12A Currie 46.57 76 ⇓P **P 03 41 32.4 +0.2**
baz=47,SNR=80
H17A Grant Village 46.58 69 ⇓P **P 03 41 33.1 +0.9**
baz=47,SNR=69
LKWY Lake 46.59 69 *e*P **P 03 41 33.2 +0.9**
LKWY pmax pmax
comp=Z,32nm,0.8s,mb5.3
LKWY Lake 46.59 69 *e*P **P 03 41 33.2 +0.9**
comp=Z,32nm,0.8s,mb5.3
LKWY *e*ScP ScP 03 46 55.0 +1.0
J16A Bone 46.63 71 ⇑P **P 03 41 32.7 0.0**
baz=47,SNR=47
G18A Lazy EL Ranch, 46.63 68 ⇑P **P 03 41 31.4 -1.3**
baz=47,SNR=12
M14A Sheep Mountain 46.66 74 ⇑P **P 03 41 33.0 +0.1**
baz=47,SNR=18
IMW Indian Meadow 46.66 70 *e*P **P 03 41 32.8 -0.1**
comp=Z,32nm,1.0s,mb5.2
IMW *e*ScP ScP 03 46 54.4 +0.1
VES Vestal, Richgr 46.69 84 ⇑P **P 03 41 33.4 +0.2**
baz=47,SNR=40
DCID1 Drake Creek 46.70 71 *e*P **P 03 41 33.2 +0.1**
comp=Z,24nm,0.9s,mb5.1
BTO Baotou 46.71 284 *e*P **P 03 41 33.9 +0.6**
RRI2 Red Ridge 46.76 71 *e*P **P 03 41 33.5 -0.2**
comp=Z,34nm,0.9s,mb5.3
RRI2 *e*ScP ScP 03 46 54.9 +0.1
NJ2 Nanjing 46.77 269 *e*P **P 03 41 33.8 0.0**
NJ2 pP pP 03 41 43.8 -4.6
NJ2 sP sP 03 41 47.8 -7.0
NJ2 PP PP 03 43 23.4 -1.0
NJ2 S **S 03 48 19.0 -0.7**
NJ2 pmax pmax
comp=Z,70nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,180nm,5.9s
NJ2 LR LR
comp=N,540nm,26.7s,MS4.5
NJ2 LR LR
comp=E,500nm,24.4s,MS4.5
NJ2 LR LR
comp=Z,690nm,26.8s,MS4.5
HVU Hansel Valley 46.84 74 *e*P **P 03 41 34.3 0.0**
HVU *e* 03 43 06.8
HVU pmax pmax
comp=Z,51nm,0.8s,mb5.5
HVU Hansel Valley 46.84 74 *e*P **P 03 41 34.3 +0.1**
comp=Z,51nm,0.8s,mb5.5
HVU *e*PcP PcP 03 43 06.8 +0.4

HVU eScP ScP 03 46 53.9 -1.2
R10A Warm Springs 46.84 80 ⇓P P 03 41 35.0 +0.6
baz=47,SNR=20
PKM Peak Mountain 46.85 86 ⇑P P 03 41 35.7 +1.3
baz=47,SNR=10.0
I17A Pilgrim Ck. 46.86 70 ⇑P P 03 41 34.6 +0.2
baz=47,SNR=7.4
Q11A Duckwater 46.89 79 ⇑P P 03 41 35.1 +0.3
baz=47,SNR=45
TPAW Teton Pass 46.90 71 eP **P 03 41 34.8 +0.1**
comp=Z,44nm,1.4s,mb5.2
TPAW eScP ScP 03 46 54.5 -0.8
S10A Tonopah Range, 46.90 80 ⇓P P 03 41 35.3 +0.5
baz=47,SNR=44
K16A Soda Springs 46.91 72 ⇓P P 03 41 35.3 +0.5
baz=47,SNR=29
L15A Malad City 46.93 73 ⇑P P 03 41 34.7 -0.3
baz=47,SNR=29
P12A McGill 46.96 77 ⇓P P 03 41 35.6 +0.3
baz=47,SNR=54
GRAC Grapevine Rang 47.00 82 ⇓P P 03 41 36.6 +0.9
baz=47,SNR=22
LOHW Long Hollow 47.03 70 eP **P 03 41 35.4 -0.3**
comp=Z,13nm,0.8s,mb4.9
SNOW Snow King Moun 47.03 71 eP **P 03 41 36.8 +1.0**
comp=Z,19nm,0.9s,mb5.0
REDW Red Top Meadow 47.03 71 eP **P 03 41 35.6 -0.1**
comp=Z,18nm,1.1s,mb4.9
REDW eScP ScP 03 46 55.4 -0.5
TIY Taiyuan 47.04 280 eP **P 03 41 36.6 +0.7**
TIY sP sP 03 41 50.3 -6.6
TIY S **S 03 48 23.4 -0.1**
TIY sS sS 03 48 44.3 -3.7
TIY pmax pmax
comp=Z,230nm,4.6s
TIY LR LR
comp=N,280nm,11.6s
TIY LR LR
comp=E,100nm,6.7s
TIY LR LR
comp=Z,320nm,18.3s
J17A Brown Place, J 47.11 71 ⇑P P 03 41 36.3 -0.1
baz=47,SNR=16
O13A Hicks Ranch, I 47.11 76 ⇑P P 03 41 36.5 +0.1
baz=47,SNR=6.4
N14A Grayback Hills 47.15 75 ⇑P P 03 41 36.7 0.0
baz=47,SNR=27
ISA Isabella 47.18 84 ⇓P P 03 41 36.9 -0.1
baz=47,SNR=28
ISA Isabella 47.18 84 eP **P 03 41 37.2 +0.1**
ISA e 03 43 29.2
ISA pmax pmax
comp=Z,100nm,1.3s,mb5.6
ISA Isabella 47.18 84 eP **P 03 41 37.2 +0.1**
comp=Z,100nm,1.3s,mb5.6
ISA ePP PP 03 43 29.2 +1.1
BGU Big Grassy Mou 47.20 75 eP **P 03 41 37.0 -0.2**
comp=Z,27nm,0.8s,mb5.2
BGU eScP ScP 03 46 55.4 -1.2
FCC Fort Churchill 47.20 45 eP **P 03 41 36.5 -0.4**
FCC pmax pmax
comp=Z,1.0nm,0.9s
FCC Fort Churchill 47.20 45 eP **P 03 41 36.5 -0.4**
comp=Z,1.3nm,0.9s,mb3.9
FCC eScP ScP 03 46 54.2 -2.1
M15A Larsen Ranch, 47.22 74 ⇓P P 03 41 37.1 -0.2
baz=47,SNR=9.6
AHID Auburn Hatcher 47.24 71 eP **P 03 41 37.6 +0.2**
comp=Z,33nm,0.9s,mb5.3
R11A Troy Canyon, C 47.25 79 ⇑P P 03 41 37.8 +0.3
baz=47,SNR=68
Q12A Willow Creek R 47.27 78 ⇓P P 03 41 38.2 +0.5
baz=47,SNR=20
ARVC Arvin 47.31 85 ⇑P P 03 41 38.1 0.0
baz=47,SNR=9.4
SPUT South Promonto 47.31 74 eP **P 03 41 38.4 +0.4**
comp=Z,31nm,0.9s,mb5.2
K17A Gardner Place, 47.35 71 ⇓P P 03 41 37.7 -0.6
baz=47,SNR=10
I18A Diamond G Ranc 47.43 70 ⇓P P 03 41 38.6 -0.3
baz=48,SNR=15
L16A Fish Haven 47.49 73 ⇓P P 03 41 39.2 -0.2
baz=48,SNR=43
P13A Bates Ranch, G 47.51 77 ⇑P P 03 41 39.6 0.0
baz=48,SNR=30
N15A Stansbury Isla 47.53 74 ⇓P P 03 41 39.5 -0.1
baz=48,SNR=66
MPMC Manual Prospec 47.53 83 ⇓P P 03 41 40.4 +0.6
baz=48,SNR=34
S11A Rachel 47.59 80 ⇓P P 03 41 40.8 +0.6
baz=48,SNR=19
J18A Kendall Valley 47.61 70 ⇑P P 03 41 39.7 -0.5
baz=48,SNR=35
FURC Furnace Creek, 47.66 82 ⇑P P 03 41 41.4 +0.6
baz=48,SNR=32
HWUT Hardware Ranch 47.66 73 eP **P 03 41 40.6 -0.1**
comp=Z,24nm,0.9s,mb5.2
HWUT ePcP PcP 03 43 09.6 +0.3
HWUT eScP ScP 03 46 58.1 -0.4
L17A Cokeville 47.77 72 ⇑P P 03 41 41.3 -0.3
baz=48,SNR=32
DUG Dugway 47.78 75 ⇓P P 03 41 41.8 +0.2
baz=48,SNR=60
DUG Dugway 47.78 75 eP **P 03 41 41.8 +0.2**
DUG e 03 43 10.1
DUG pmax pmax
comp=Z,47nm,0.8s,mb5.6
DUG Dugway 47.78 75 eP **P 03 41 41.8 +0.2**
comp=Z,47nm,0.8s,mb5.6
DUG ePcP PcP 03 43 10.1 +0.3
DUG eScP ScP 03 46 58.4 -0.7
LRMC Laurel Mountai 47.79 84 ⇓P P 03 41 42.0 +0.2
baz=48,SNR=11
M16A Huntsville 47.80 73 ⇓P P 03 41 41.5 -0.3
baz=48,SNR=54
Q13A Wheeler Ranch, 47.82 77 ⇑P P 03 41 42.2 +0.2
baz=48,SNR=148
BLG Laguna Peak 47.84 86 ⇑P P 03 41 42.2 +0.1
baz=48,SNR=5.8
DGMT Dagmar 47.84 61 ⇑P P 03 41 40.8 -1.1
baz=48
DGMT Dagmar 47.84 61 eP **P 03 41 41.3 -0.7**
comp=Z,42nm,1.1s,mb5.4
DGMT ePcP PcP 03 43 09.9 0.0
R12A Pony Springs, 47.86 78 ⇑P P 03 41 42.4 +0.2
baz=48,SNR=29
NOQ North Oquirrh 47.91 74 eP **P 03 41 43.1 +0.4**
comp=Z,45nm,0.8s,mb5.5
K18A Toltan Ranch, 47.94 71 ⇓P P 03 41 42.8 0.0
baz=48,SNR=12
EDW2 Edwards Air Fo 47.99 84 ⇑P P 03 41 43.7 +0.4
baz=48,SNR=17
P14A Drum Mountains 48.00 76 ⇓P P 03 41 43.5 +0.2
baz=48,SNR=56
U10A Ash Meadows, A 48.02 82 ⇑P P 03 41 44.3 +0.8
baz=48,SNR=18
BW06 Boulder Array 48.15 71 ⇓P P 03 41 43.8 -0.6
baz=48,SNR=82
BW06 Boulder Array 48.15 71 eP **P 03 41 43.8 -0.6**
comp=Z,51nm,0.9s,mb5.5
BW06 eScP ScP 03 46 59.2 -1.4
PDAR Pinedale Array 48.15 71 P **P 03 41 43.8 -0.6**
comp=Z,44nm,0.8s,mb5.5,baz=308,slow=3.6,SNR=238
PDAR ScP ScP 03 46 59.1 -1.5
comp=Z,8.0nm,1.1s,baz=288,slow=1.4,SNR=9.2
PDAR LR LR 03 59 52.7
comp=Z,465nm,20.0s,MS4.5,baz=311,slow=33
S12A Delamar Landin 48.16 79 ⇓P P 03 41 45.4 +0.8
baz=48,SNR=48
T11A Corn Creek, Al 48.17 80 ⇑P P 03 41 45.2 +0.5
baz=48,SNR=81
N16A Rees Ranch, Co 48.18 74 ⇑P P 03 41 44.4 -0.3
baz=48,SNR=13
DECC Green Verdugo 48.20 85 ⇑P P 03 41 45.4 +0.5
baz=48
Q14A Sevier Lake (B 48.25 77 ⇑P P 03 41 45.6 +0.3
baz=48,SNR=76
M17A Scullys Gap (B 48.28 73 ⇓P P 03 41 44.8 -0.7
baz=48,SNR=16
R13A O'Grain Ranch, 48.34 78 ⇓P P 03 41 46.3 +0.3
baz=48,SNR=26
PASC Pasadena Art C 48.34 85 eP **P 03 41 46.2 +0.2**
comp=Z,720nm,1.4s,mb6.5
JLU Jordanelle 48.34 74 eP **P 03 41 46.4 +0.4**
comp=Z,34nm,0.9s,mb5.4
JLU eScP ScP 03 47 01.4 -0.1
NLU North Lily Min 48.37 75 eP **P 03 41 46.6 +0.4**
comp=Z,23nm,0.8s,mb5.2
NLU ePcP PcP 03 43 12.5 +0.5
L18A Fontenelle, Gr 48.37 72 ⇑P P 03 41 45.7 -0.5
baz=48,SNR=35
MWC Mount Wilson 48.38 85 eP **P 03 41 47.0 +0.6**
MWC pmax pmax
comp=Z,287nm,1.2s,mb6.2
MWC Mount Wilson 48.38 85 eP **P 03 41 47.0 +0.6**
comp=Z,287nm,1.2s,mb6.2
SHOC Shoshone 48.38 82 ⇑P P 03 41 46.8 +0.4
baz=48,SNR=50
GSC Goldstone 48.45 83 ⇓P P 03 41 47.4 +0.6
baz=48,SNR=63
GSC Goldstone 48.45 83 eP **P 03 41 47.5 +0.6**
GSC pmax pmax
comp=Z,142nm,0.9s,mb6.0
GSC Goldstone 48.45 83 eP **P 03 41 47.5 +0.7**
comp=Z,142nm,0.9s,mb6.0
GSC eScP ScP 03 47 01.8 -0.2
P15A Leamington 48.49 76 ⇑P P 03 41 47.1 0.0
baz=48,SNR=30
N17A Moffit Pass 48.50 73 ⇑P P 03 41 46.6 -0.6
baz=49
K19A Absolon Red Bu 48.53 70 ⇑P P 03 41 46.1 -1.3
baz=49,SNR=55
O16A Springville 48.56 74 ⇑P P 03 41 47.9 +0.3
baz=49
FMP Fort Macarthur 48.58 86 ⇑P P 03 41 48.0 +0.2
baz=49
DAU Daniels Canyon 48.58 74 eP **P 03 41 48.2 +0.4**
U11A Corn Creek 48.60 81 ⇓P P 03 41 48.5 +0.5
baz=49,SNR=11
MPU Maple Canyon 48.60 75 eP **P 03 41 48.2 +0.3**
comp=Z,24nm,0.7s,mb5.3
RRX Edison Barstow 48.61 84 ⇑P P 03 41 48.8 +0.7
baz=49
BFSC Mount Baldy St 48.62 85 ⇑P P 03 41 48.9 +0.7
baz=49,SNR=24
M18A Lyman 48.66 72 ⇑P P 03 41 47.6 -0.8
baz=49,SNR=30
L19A Farson 48.67 71 ⇑P P 03 41 47.6 -0.8
baz=49,SNR=19
SHPR Sheep Range 48.68 81 eP **P 03 41 49.0 +0.4**
CIS Catalina Islan 48.71 86 ⇓P P 03 41 48.0 -0.9
baz=49
Q15A Fillmore 48.79 76 ⇓P P 03 41 49.5 +0.1
baz=49,SNR=35
S13A Holt Ranch, En 48.79 79 ⇓P P 03 41 49.7 +0.3
baz=49,SNR=48
T12A Moapa 48.81 80 ⇓P P 03 41 49.9 +0.3
baz=49,SNR=7.3
P16A Fountain Green 48.84 75 ⇑P P 03 41 49.8 0.0
baz=49,SNR=5.2
R14A James Farms, M 48.84 77 ⇑P P 03 41 49.9 +0.1
baz=49
TUQ Turquoise Moun 48.91 82 ⇑P P 03 41 50.7 +0.4
baz=49,SNR=40
SCI San Clemente I 48.91 87 ⇑P P 03 41 50.7 +0.3
baz=49
K20A Yellowstone Ra 48.92 70 ⇑P P 03 41 48.7 -1.6
baz=49,SNR=22
V11A Goodsprings 48.95 82 ⇓P P 03 41 51.1 +0.4
baz=49,SNR=49
O17A Robinson Place 49.02 74 ⇑P P 03 41 51.4 +0.2
baz=49,SNR=19
HEC Hector,Ludlow 49.05 83 ⇓P P 03 41 51.9 +0.4
baz=49,SNR=30
BBRC Big Bear Sol-O 49.06 84 ⇑P P 03 41 52.1 +0.5
baz=49,SNR=5.5
S14A Cedar City 49.09 78 ⇓P P 03 41 51.7 0.0
baz=49,SNR=16
CCUT Cedar City 49.11 78 eP **P 03 41 52.5 +0.6**
comp=Z,21nm,0.7s,mb5.3
U12A Valley of Fire 49.11 80 ⇓P P 03 41 52.4 +0.5
baz=49,SNR=16
T13A Saint George 49.12 79 ⇓P P 03 41 52.5 +0.5
baz=49,SNR=40
M19A Rock Springs 49.15 72 ⇑P P 03 41 51.1 -1.1
baz=49,SNR=6.1
N18A Larsen Ranch, 49.17 73 ⇓P P 03 41 51.5 -0.8
baz=49,SNR=19
MSU Marysvale 49.22 77 eP **P 03 41 53.3 +0.6**
MSU e 03 43 16.5
MSU Marysvale 49.22 77 eP **P 03 41 53.3 +0.6**
MSU ePcP PcP 03 43 16.5 +1.5
MSU eScP ScP 03 47 05.5 +0.3
TMUT Trail Mountain 49.30 75 eP **P 03 41 54.2 +0.8**
comp=Z,72nm,0.8s,mb5.8
L20A Wamsutter 49.32 71 ⇑P P 03 41 52.4 -1.0
baz=49,SNR=9.7
MURC Murrieta 49.33 85 ⇓P P 03 41 53.7 +0.1
baz=49,SNR=24
R15A Junction 49.35 77 ⇓P P 03 41 54.3 +0.6
baz=49,SNR=11
KBS Kingsbay 49.37 356 eP **P 03 41 54.0 +0.7**
KBS pmax pmax
comp=Z,23nm,0.8s,mb5.3
KBS Kingsbay 49.37 356 eP **P 03 41 54.0 +0.6**
comp=Z,23nm,0.8s,mb5.3
V12A Nelson 49.38 81 ⇓P P 03 41 54.5 +0.6
baz=49,SNR=25
U13A Pakoon Wash 49.47 80 ⇑P P 03 41 55.3 +0.6
baz=50,SNR=57
P17A Butcher Ranch, 49.48 75 ⇓P P 03 41 54.6 -0.1
baz=50,SNR=18
GMRC Granite Mounta 49.50 83 ⇓P P 03 41 55.2 +0.3
baz=50,SNR=56
N19A John Jarvie Ra 49.52 72 ⇓P P 03 41 54.1 -0.8
baz=50,SNR=24
Q16A Castle Valley 49.57 76 ⇓P P 03 41 55.6 +0.3
baz=50,SNR=36
T14A Hurricane 49.59 79 ⇑P P 03 41 56.2 +0.6
baz=50,SNR=36
S15A Panguitch 49.64 78 ⇑P P 03 41 56.7 +0.8
baz=50,SNR=48
LDFC Landfair 49.64 82 eP **P 03 41 56.1 +0.1**
comp=Z,243nm,1.1s,mb6.1
W12A Cal Nev Ari 49.64 82 ⇓P P 03 41 56.4 +0.4
baz=50,SNR=17
P18A Preston Nutter 49.67 74 ⇑P P 03 41 56.2 +0.1
baz=50,SNR=33
M20A Sweetwater, Wa 49.73 71 ⇓P P 03 41 56.1 -0.4
baz=50,SNR=15
R16A Teasdale 49.78 76 ⇓P P 03 41 57.8 +0.8
baz=50
PFO Pinyon Flat Ob 49.78 84 P **P 03 41 57.2 +0.1**
comp=Z,326nm,1.3s,mb6.2,SNR=7.5
PFO Pinyon Flat Ob 49.78 84 ⇑P P 03 41 57.3 +0.2
baz=50,SNR=13
PFO Pinyon Flat Ob 49.78 84 eP **P 03 41 57.4 +0.3**
PFO pmax pmax
comp=Z,139nm,1.2s,mb5.9
PFO Pinyon Flat Ob 49.78 84 eP **P 03 41 57.4 +0.3**
comp=Z,139nm,1.2s,mb5.9
BELC Belle Mtn. 49.81 84 ⇑P P 03 41 57.2 0.0
baz=50,SNR=21
V13A Grand Canyon W 49.83 81 ⇓P P 03 41 58.0 +0.6
baz=50,SNR=41
SRU San Rafael 49.83 75 ⇓P P 03 41 57.3 -0.1
baz=50,SNR=56
SRU San Rafael 49.83 75 eP **P 03 41 57.5 +0.1**
SRU pmax pmax
comp=Z,52nm,0.8s,mb5.6
SRU San Rafael 49.83 75 eP **P 03 41 57.5 +0.1**
comp=Z,52nm,0.8s,mb5.6
SRU eScP ScP 03 47 06.2 -1.7
109C Camp Elliot, M 49.87 86 ⇑P P 03 41 58.1 +0.5
baz=50,SNR=15
SPB4 Spitsbergen Ar 49.90 355 eP **P 03 41 57.3 0.0**
SPITS Spitsbergen Ar 49.90 355 P **P 03 41 56.6 -0.7**
comp=Z,47nm,0.4s,mb5.8,baz=38,slow=5.5,SNR=388
SPITS Spitsbergen Ar 49.90 355 P **P 03 41 56.6 -0.8**
SPITS pmax pmax
comp=Z,47nm,0.4s
L21A Rawlins 49.92 70 ⇑P P 03 41 57.1 -0.9
baz=50,SNR=30
O19A Miners Draw (B 49.92 73 ⇓P P 03 41 57.5 -0.5
baz=50,SNR=122
U14A Mt Trumbull 49.95 79 ⇓P P 03 41 58.9 +0.6
baz=50,SNR=25
T15A Red Dirt Ranch 50.05 78 ⇓P P 03 41 59.6 +0.6
baz=50,SNR=33
Q18A Rafter H Ranch 50.07 75 ⇓P P 03 41 58.7 -0.5
baz=50,SNR=25
N20A Spence Gulch, 50.10 72 ⇓P P 03 41 59.0 -0.3
baz=50,SNR=26
M21A Separation Pea 50.14 70 ⇑P P 03 41 58.5 -1.2
baz=50,SNR=20
R17A Hanksville Air 50.16 76 ⇓P P 03 41 59.7 -0.2
baz=50,SNR=52
RWWY Rawlins 50.18 70 eP **P 03 41 58.3 -1.7**
comp=Z,32nm,0.9s,mb5.3
RWWY eScP ScP 03 47 07.4 -1.9
IRM Iron Mountain 50.23 83 ⇑P P 03 42 00.6 +0.2
baz=50,SNR=40
BAR Barrett 50.27 86 eP **P 03 42 01.4 +0.6**
comp=Z,126nm,1.0s,mb5.9
MONP Monument Peak 50.29 85 ⇑P P 03 42 01.3 +0.4
baz=50,SNR=22
BC3 Big Chuckw Mtn 50.38 84 ⇑P P 03 42 01.4 -0.1
baz=50,SNR=17
W13A Hualapai Mount 50.38 81 ⇑P P 03 42 01.8 +0.2
baz=50,SNR=36
L22A Ellis Ranch, M 50.42 69 ⇓P P 03 42 01.4 -0.4
baz=50
P19A Cripple Cowboy 50.43 73 ⇑P P 03 42 01.6 -0.3
baz=50,SNR=67
U15A North Rim 50.49 79 ⇑P P 03 42 03.0 +0.7
baz=50,SNR=89
V14A Boquillas Ranc 50.51 80 ⇓P P 03 42 03.1 +0.6
baz=51,SNR=62
RSSD Black Hills 50.51 66 eP **P 03 42 01.3 -1.1**
RSSD e 03 43 19.8
RSSD pmax pmax
comp=Z,17nm,0.6s,mb5.2
RSSD Black Hills 50.51 66 eP **P 03 42 01.3 -1.2**
comp=Z,17nm,0.6s,mb5.2
RSSD ePcP PcP 03 43 19.8 +0.2
RSSD eScP ScP 03 47 08.7 -2.0
O20A White River Ci 50.55 72 ⇑P P 03 42 02.1 -0.6
baz=51,SNR=80
N21A Black Mountain 50.58 71 ⇓P P 03 42 02.2 -0.8
baz=51,SNR=21
WHN Wuhan 50.60 271 ⇓P P 03 42 02.5 -0.8
WHN pP pP 03 42 16.4 -1.6
WHN S **S 03 49 12.8 -0.9**
WHN sS sS 03 49 33.9 -4.6
WHN pmax pmax
comp=Z,73nm,0.6s,mb5.8
WHN LR LR
comp=N,870nm,16.3s,MS5.0
WHN LR LR
comp=E,580nm,15.1s,MS5.0
WHN LR LR
comp=Z,830nm,20.8s
T16A Glen Canyon Da 50.60 78 ⇓P P 03 42 02.7 -0.5
baz=51,SNR=6.7
S17A Black Ridge (B 50.61 77 ⇑P P 03 42 03.3 +0.1
baz=51,SNR=84
SWSC Sam W. Stewart 50.64 85 ⇑P P 03 42 03.6 0.0
baz=51
DVTC Desert V Tower 50.64 85 ⇑P P 03 42 03.5 -0.1
baz=51
R18A Canyonlands Na 50.67 75 ⇑P P 03 42 02.8 -1.0
baz=51,SNR=34
Q19A Hogan Spring (50.69 74 ⇓P P 03 42 03.1 -0.7
baz=51
X13A Yucca 50.75 82 ⇓P P 03 42 04.4 0.0
baz=51,SNR=27
PDMCI Parker Dam,Lak 50.76 82 ⇑P P 03 42 04.5 +0.1
baz=51,SNR=22
W14A Seligman 50.80 81 ⇑P P 03 42 05.2 +0.5
baz=51,SNR=33
Y12C Blythe 50.89 83 ⇑P P 03 42 05.4 +0.1
baz=51,SNR=25
O21A Pagoda 50.95 72 ⇑P P 03 42 05.1 -0.7
baz=51,SNR=17
V15A Kaibab Nationa 50.96 79 ⇓P P 03 42 06.7 +0.8
baz=51,SNR=63
T17A Navajo Res., N 51.02 77 ⇓P P 03 42 05.8 -0.6
baz=51,SNR=43
S18A Hurst Farm, Bl 51.06 76 ⇓P P 03 42 06.4 -0.3
baz=51,SNR=73
HSP Hornsund 51.08 355 eP **P 03 42 06.7 +0.4**
R19A Curley Farm, L 51.12 75 ⇑P P 03 42 06.6 -0.5
baz=51,SNR=34
GLA Glamis 51.17 84 ⇑P P 03 42 07.9 +0.4
baz=51,SNR=23
GLA Glamis 51.17 84 eP **P 03 42 07.8 +0.3**
GLA pmax pmax
comp=Z,108nm,0.8s,mb5.8
GLA Glamis 51.17 84 eP **P 03 42 07.8 +0.3**
comp=Z,108nm,0.8s,mb5.8
N22A Wattenberg Ran 51.18 71 ⇓P P 03 42 07.2 -0.3
baz=51,SNR=27
PV04 Paradox Valley 51.27 75 eP **P 03 42 08.3 +0.1**
PV04 eScP ScP 03 47 13.9 -0.1
Q20A Ridgley Place, 51.27 74 ⇓P P 03 42 07.2 -1.0
baz=51,SNR=27
Y13A Salome 51.27 82 ⇑P P 03 42 08.5 +0.2
baz=51,SNR=30
W15A Williams 51.32 80 ⇑P P 03 42 09.6 +0.9
baz=51,SNR=18
SSLB Suanglung 51.34 260 eP **P 03 42 08.6 -0.4**
comp=Z,53nm,0.9s,mb5.5
U17A Shonto 51.37 78 ⇑P P 03 42 08.8 -0.1
baz=51
DAG Danmarks Havn 51.37 5 eP **P 03 42 09.0 +0.6**
DAG Danmarks Havn 51.37 5 i P **P 03 42 09.0 +0.6**
X14A Yava 51.41 81 ⇑P P 03 42 10.0 +0.7
baz=52,SNR=34
YULB Yu-li 51.43 259 eP **P 03 42 08.7 -0.8**
comp=Z,90nm,1.4s,mb5.5
PHWY Pilot Hill 51.45 70 eP **P 03 42 08.9 -0.6**
comp=Z,13nm,1.2s,mb4.7
PHWY eScP ScP 03 47 13.8 -1.0
T18A Mexican Hat 51.50 76 ⇑P P 03 42 09.1 -0.8
baz=52,SNR=70
S19A Harvey Farm, M 51.55 75 ⇑P P 03 42 09.9 -0.4
baz=52,SNR=99
PV01 Paradox Valley 51.63 75 eP **P 03 42 10.4 -0.5**
comp=Z,3μm,0.9s
PV01 eScP ScP 03 47 14.6 -1.0
WUAZ Wupatki 51.65 79 ⇑P P 03 42 11.7 +0.6
baz=52,SNR=32
WUAZ Wupatki 51.65 79 eP **P 03 42 11.7 +0.7**
comp=Z,41nm,0.8s,mb5.4
WUAZ eScP ScP 03 47 14.5 -1.2
112A Yuma 51.67 84 ⇓P P 03 42 11.7 +0.4
baz=52
Y14A Wickenburg 51.70 82 ⇓P P 03 42 11.6 +0.2
baz=52,SNR=12
R20A Redvale 51.71 74 ⇑P P 03 42 11.2 -0.3
baz=52,SNR=26
Q21A Lamborn Mesa, 51.78 73 ⇓P P 03 42 11.6 -0.4
baz=52,SNR=22
Z13A Yuma Proving G 51.79 83 ⇑P P 03 42 12.5 +0.3
baz=52,SNR=21
X15A Humboldt 51.80 81 ⇑P P 03 42 12.9 +0.7
baz=52,SNR=29
W16A Flagstaff 51.83 80 ⇑P P 03 42 13.3 +0.8
baz=52,SNR=21
TPUB Ta-pu 51.90 259 eP **P 03 42 12.4 -0.7**
comp=Z,71nm,0.9s,mb5.6
SMCO Snowmass 51.91 73 eP **P 03 42 12.7 -0.3**
comp=Z,21nm,0.8s,mb5.1
SMCO eScP ScP 03 47 16.5 -0.3
V17A Tonalea, Kykot 51.93 79 ⇑P P 03 42 13.9 +0.7
baz=52,SNR=40
QZH Quanzhou 51.95 263 i P **P 03 42 14.3 +0.9**
QZH S **S 03 49 24.6 -7.7**
QZH pmax pmax
comp=Z,160nm,1.0s,mb5.9
QZH LR LR
comp=Z,740nm,21.8s,MS4.7
U18A Rough Rock, Ch 51.97 77 ⇑P P 03 42 13.4 -0.1
baz=52,SNR=27
R21A Cimarron 52.09 74 ⇓P P 03 42 14.3 -0.1
baz=52,SNR=22
Y15A Casa Rosa Ranc 52.10 81 ⇓P P 03 42 15.0 +0.6
baz=52,SNR=32
Z14A Wintersburg 52.12 82 ⇓P P 03 42 14.6 0.0
baz=52,SNR=11
Q22A Crested Butte, 52.15 73 ⇑P P 03 42 14.6 -0.2
baz=52,SNR=27
T19A Beclabito 52.21 76 ⇓P P 03 42 15.0 -0.2
baz=52,SNR=129
MVCO Mesa Verde 52.28 75 ⇑P P 03 42 15.5 -0.3
baz=52,SNR=27
MVCO Mesa Verde 52.28 75 eP **P 03 42 15.4 -0.3**
comp=Z,29nm,0.8s,mb5.2
ZAA0 Zalesovo Array 52.31 312 eP **P 03 42 14.5 -1.2**
ZALV Zalesovo Beam 52.31 312 P **P 03 42 13.9 -1.8**
comp=Z,8.8nm,0.6s,mb4.9,baz=51,slow=7.0,SNR=20
ZALV ScP ScP 03 47 16.5 -1.8

comp=Z,1.5nm,0.4s,baz=47,slow=2.8,SNR=3.6
ZALV LR LR 04 07 14.9
comp=Z,264nm,19.9s,MS4.3,baz=42,slow=39
ZALV Zalesovo Beam 52.31 312 P **P 03 42 13.9 -1.8**
ZALV pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
ZALV pmax pmax
comp=N,2.0nm,0.4s
ZALV MLR MLR
comp=Z,264nm,19.9s,MS4.3
ISCO Idaho Springs 52.32 71 *e*P **P 03 42 16.1 +0.1**
ISCO *e* 03 43 23.0
ISCO pmax pmax
comp=Z,27nm,0.8s,mb5.2
ISCO Idaho Springs 52.32 71 *e*P **P 03 42 16.1 +0.1**
comp=Z,27nm,0.8s,mb5.2
ISCO *e*PcP PcP 03 43 23.0 -3.5
ISCO *e*ScP ScP 03 47 18.3 -0.2
X16A Lo Mia Camp, P 52.34 80 ⇑P **P 03 42 17.0 +0.7**
baz=52,SNR=29
W17A Winslow 52.34 79 ⇑P **P 03 42 16.6 +0.4**
baz=52
AGMN Agassiz Refuge 52.40 57 *e*P **P 03 42 15.2 -1.3**
comp=Z,67nm,1.2s,mb5.5
S21A Coal Bank Pass 52.41 75 ⇑P **P 03 42 16.7 0.0**
baz=52,SNR=20
U19A Dine' College, 52.45 77 ⇓P **P 03 42 16.8 -0.2**
baz=52,SNR=36
NVS Novosibirsk 52.48 313 *i* P **P 03 42 15.8 -1.2**
NVS *e* pP 03 42 33.3 +1.5
NVS *i* S **S 03 49 37.0 -1.9**
NVS *i* 03 52 01.4
NVS pmax pmax
comp=Z,203nm,1.7s,mb5.8
NVS pmax pmax
comp=N,76nm,1.6s
NVS pmax pmax
comp=E,105nm,1.5s
NVS smax
comp=E,71nm,1.9s
114A Black Gap (USA 52.57 83 ⇑P **P 03 42 18.3 +0.3**
baz=53,SNR=17
Z15A Gila River Ind 52.66 82 ⇑P **P 03 42 18.8 +0.2**
baz=53,SNR=12
R22A Saguache, Gunn 52.66 73 ⇓P **P 03 42 19.1 +0.6**
baz=53,SNR=42
Y16A Circle Bar Ran 52.67 81 ⇑P **P 03 42 19.5 +0.7**
baz=53,SNR=16
X17A Forest Lakes 52.78 80 ⇓P **P 03 42 20.3 +0.9**
baz=53,SNR=14
U20A Newcomb 52.81 76 ⇑P **P 03 42 19.8 +0.1**
baz=53
W18A Petrified Fore 52.91 78 ⇑P **P 03 42 20.9 +0.4**
baz=53,SNR=8.8
V19A Window Rock 52.93 77 ⇑P **P 03 42 20.9 +0.3**
baz=53
115A Sonoran Desert 53.01 82 ⇓P **P 03 42 21.9 +0.7**
baz=53,SNR=18
Z16A Peralta Trail, 53.07 81 ⇑P **P 03 42 22.1 +0.4**
baz=53,SNR=20
W19A Sanders 53.13 78 ⇓P **P 03 42 22.7 +0.6**
baz=53,SNR=19
214A Organ Pipe Nat 53.16 83 ⇓P **P 03 42 22.6 +0.3**
baz=53,SNR=10
X18A Snowflake 53.17 79 ⇓P **P 03 42 23.1 +0.7**
baz=53,SNR=17
Y17A Roosevelt 53.19 80 ⇓P **P 03 42 23.0 +0.5**
baz=53,SNR=32
V20A Brimhall 53.23 77 ⇑P **P 03 42 22.8 0.0**
baz=53,SNR=19
BJO Bjornoya 53.27 353 *e*P **P 03 42 23.0 +0.4**
BJO AMB AMB 03 42 26.9
comp=Z,65nm,0.6s,mb5.8
LZH Lanzhou 53.33 284 ⇓P **P 03 42 24.3 +0.8**
LZH pP pP 03 42 34.3 -4.0
LZH sP sP 03 42 38.1 -6.6
LZH PP PP 03 44 25.8 +1.9
LZH S **S 03 49 51.3 +0.3**
LZH sS sS 03 50 08.0 -7.9
LZH pmax pmax
comp=Z,91nm,1.3s,mb5.5
LZH pmax pmax
comp=Z,280nm,7.2s
LZH LR LR
comp=N,1μm,15.2s
LZH LR LR
comp=Z,1μm,18.3s,MS5.0
T22A Edith 53.37 75 ⇑P **P 03 42 24.2 +0.4**
baz=53,SNR=34
116A Eloy 53.43 82 ⇓P **P 03 42 24.7 +0.4**
baz=54,SNR=14
SUMG Summit 53.46 13 *e*P **P 03 42 24.6 +0.6**
comp=Z,48nm,1.2s,mb5.3
SUMG *e*ScP ScP 03 47 22.0 -1.0
GTA Gaotai 53.54 290 ⇓P **P 03 42 25.1 +0.1**
GTA pP pP 03 42 35.5 -4.4
GTA sP sP 03 42 39.5 -6.7
GTA PP PP 03 44 27.0 +1.3
GTA S **S 03 49 54.6 +0.8**
GTA sS sS 03 50 10.9 -7.8
GTA ScS ScS 03 52 08.8 -0.4
GTA SS SS 03 53 30.6 -3.5
GTA pmax pmax
comp=Z,100nm,1.3s,mb5.6
GTA pmax pmax
comp=Z,380nm,6.2s
GTA LR LR
comp=N,470nm,20.2s,MS4.8
GTA LR LR
comp=E,620nm,18.7s,MS4.8
GTA LR LR
comp=Z,510nm,20.5s,MS4.6
X19A St. Johns 53.65 79 ⇑P **P 03 42 26.4 +0.6**
baz=54,SNR=20
OGNE Ogallala 53.66 68 *e*P **P 03 42 26.0 +0.1**
comp=Z,45nm,0.8s,mb5.5
Z17A San Carlos Hig 53.69 80 ⇑P **P 03 42 27.0 +0.9**
baz=54,SNR=10
SDCO Great Sand Dun 53.72 73 *e*P **P 03 42 26.0 -0.4**
comp=Z,39nm,1.0s,mb5.3
SDCO *e*ScP ScP 03 47 24.0 -0.7
V21A Milan 53.73 76 ⇓P **P 03 42 26.4 0.0**
baz=54,SNR=29
ENH Enshi 53.81 275 *e*P **P 03 42 26.1 -1.1**
comp=Z,60nm,0.6s,mb5.7
216A Three Points, 53.96 82 ⇑P **P 03 42 28.4 +0.3**
baz=54
Y19A Nutrioso 53.98 79 ⇓P **P 03 42 29.3 +1.0**
baz=54
117A Oracle 54.02 81 ⇑P **P 03 42 29.1 +0.6**
baz=54,SNR=18
V22A San Miguel Ran 54.09 76 ⇓P **P 03 42 29.2 +0.1**
baz=54
TUC Tucson 54.17 82 *e*P **P 03 42 30.3 +0.6**
TUC pmax pmax
comp=Z,84nm,1.0s,mb5.6
TUC Tucson 54.17 82 *e*P **P 03 42 30.3 +0.6**
comp=Z,84nm,1.0s,mb5.6
W21A San Fidel 54.18 77 ⇑P **P 03 42 29.7 -0.1**
baz=54,SNR=7.2
Z19A T-Link Ranch, 54.43 80 ⇓P **P 03 42 32.3 +0.7**
baz=54,SNR=6.4
118A Homack Ranch, 54.44 81 ⇑P **P 03 42 32.4 +0.7**
baz=54,SNR=33
217A Green Valley 54.52 82 ⇑P **P 03 42 32.7 +0.5**
baz=55,SNR=12
X21A Alamocita Cree 54.55 78 ⇓P **P 03 42 33.5 +1.0**
baz=55,SNR=62
Y20A Horse Springs, 54.55 78 ⇓P **P 03 42 33.5 +1.0**
baz=55,SNR=26
V23A Ortiz Mt. (NFS 54.64 75 ⇑P **P 03 42 34.0 +0.9**
baz=55,SNR=37
W22A Albuquerque 54.68 76 ⇓P **P 03 42 33.9 +0.5**
baz=55,SNR=8.9
218A Dragoon 54.85 81 ⇓P **P 03 42 35.4 +0.7**
baz=55,SNR=23
EYMN Ely 54.89 55 *e*P **P 03 42 33.7 -0.9**
comp=Z,57nm,1.0s,mb5.6
ECSD EROS Data Cent 54.91 62 *e*P **P 03 42 33.1 -1.8**
comp=Z,23nm,1.1s,mb5.1
ECSD *e*PcP PcP 03 43 35.8 -0.5
ECSD *e*ScP ScP 03 47 27.3 -2.5
Y21A Point of Rocks 54.91 78 ⇑P **P 03 42 36.0 +1.0**
baz=55,SNR=9.1
Z20A Nine Sixteen R 54.96 79 ⇑P **P 03 42 36.1 +0.7**
baz=55,SNR=11
LAZ Ladron 54.97 77 *e*P **P 03 42 35.9 +0.4**
comp=Z,15nm,0.8s,mb5.1
X22A Bernardo 54.98 77 ⇓P **P 03 42 36.6 +1.1**
baz=55,SNR=21
ANMO Albuquerque 55.01 76 *e*P **P 03 42 35.8 0.0**
ANMO pmax pmax
comp=Z,15nm,0.8s
ANMO Albuquerque 55.01 76 *e*P **P 03 42 35.8 +0.1**
comp=Z,15nm,0.8s,mb5.1
ANMO *e*ScP ScP 03 47 30.5 +0.1
W23A Werner Place, 55.06 76 ⇑P **P 03 42 36.3 +0.2**
baz=55,SNR=22
LENM Lemitar 55.23 77 *e*P **P 03 42 38.5 +1.1**
318A Bisbee 55.26 82 ⇓P **P 03 42 38.0 +0.5**
baz=55,SNR=23
219A White Tail Can 55.32 81 ⇑P **P 03 42 38.7 +0.7**
baz=55,SNR=15
120A U Bar Ranch, L 55.33 80 ⇓P **P 03 42 38.7 +0.7**
baz=55,SNR=28
Y22D IRIS PASSCAL I 55.33 77 ⇑P **P 03 42 38.7 +0.6**
baz=55
LPM Los Pinos Moun 55.34 77 *e*P **P 03 42 38.6 +0.5**
Z21A St. Cloud Mine 55.39 79 ⇓P **P 03 42 39.3 +0.8**
baz=55,SNR=14
Y22A Socorro 55.39 77 ⇓P **P 03 42 39.2 +0.7**
baz=55,SNR=7.2
BNM Barren Site 55.45 77 *e*P **P 03 42 39.2 +0.2**
comp=Z,14nm,0.7s,mb5.1
W24A Lazy 6 Ranch, 55.47 75 ⇓P **P 03 42 39.5 +0.4**
baz=56,SNR=69
U26A Atchley Ranch, 55.67 73 ⇓P **P 03 42 40.4 -0.1**
baz=56,SNR=64
319A Douglas 55.74 81 ⇑P **P 03 42 41.5 +0.5**
baz=56,SNR=25
220A Playas Peak, P 55.83 80 ⇓P **P 03 42 42.2 +0.5**
baz=56,SNR=39
121A Cookes Peak, D 55.85 79 ⇓P **P 03 42 42.5 +0.7**
baz=56,SNR=12
Z22A Elephant Butte 55.86 78 ⇑P **P 03 42 42.5 +0.6**
baz=56,SNR=14
X24A Lazy VL Ranch, 55.89 76 ⇓P **P 03 42 42.6 +0.5**
baz=56
Y23A Lovelace Mesa, 55.95 77 ⇑P **P 03 42 42.9 +0.4**
baz=56,SNR=58
W25A X Bar L Ranch, 56.04 75 ⇓P **P 03 42 43.2 0.0**
baz=56,SNR=52
V26A Tequesquite Ra 56.05 74 ⇑P **P 03 42 42.9 -0.3**
baz=56,SNR=55
SFJD Kangerlussuaq 56.10 21 P **P 03 42 42.2 -0.9**
comp=Z,4.4nm,0.5s,mb4.8,baz=256,slow=5.5,SNR=6.3
SFJD Kangerlussuaq 56.10 21 *e*P **P 03 42 45.7 +2.6**
SFJD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SFJD Kangerlussuaq 56.10 21 *i* P **P 03 42 45.7 +2.6**
comp=Z,6.4nm,0.8s,mb4.7
122A Conniff Cattle 56.22 79 ⇑P **P 03 42 45.3 +0.9**
baz=56,SNR=15
320A Kipp Ranch, An 56.23 81 ⇓P **P 03 42 44.9 +0.4**
baz=56,SNR=23
Z23A Rita Site, Whi 56.30 78 ⇓P **P 03 42 45.4 +0.4**
baz=56,SNR=8.4
Y24A Capitan 56.33 76 ⇑P **P 03 42 45.6 +0.4**
baz=56,SNR=98
X25A Clemmons Ranch 56.38 75 ⇑P **P 03 42 46.0 +0.4**
baz=56,SNR=18
CBKS Cedar Bluff 56.40 68 *e*P **P 03 42 45.6 0.0**
CBKS pmax pmax
comp=Z,97nm,0.9s,mb5.8
CBKS Cedar Bluff 56.40 68 *e*P **P 03 42 45.6 -0.1**
comp=Z,97nm,0.9s,mb5.8
W26A Owens Ranch, T 56.54 74 ⇓P **P 03 42 46.7 +0.1**
baz=57,SNR=13
222A Williams Famil 56.57 79 ⇓P **P 03 42 47.0 0.0**
baz=57
123A Bell Site, Whi 56.71 78 ⇑P **P 03 42 48.7 +0.7**
baz=57
Y25A Mesa, Roswell 56.78 76 ⇑P **P 03 42 48.6 +0.1**
baz=57,SNR=56
Z24A Sheeppen Canyo 56.78 77 ⇑P **P 03 42 48.6 +0.1**
baz=57,SNR=36
X26A CR and CF Fran 56.88 75 ⇓P **P 03 42 48.8 -0.3**
baz=57,SNR=38
CD2 Chengdu 56.91 279 P **P 03 42 50.4 +1.0**
CD2 pP pP 03 43 00.5 -3.8
CD2 sP sP 03 43 04.4 -6.2
CD2 PP PP 03 44 58.3 +2.3
CD2 S **S 03 50 39.5 +0.5**
CD2 sS sS 03 50 55.6 -8.5
CD2 pmax pmax
comp=Z,260nm,1.0s,mb6.2
CD2 pmax pmax
comp=Z,190nm,3.8s
CD2 LR LR
comp=N,580nm,21.4s
CD2 LR LR
comp=Z,510nm,19.6s,MS4.6
W27A Bowe Ranch, En 56.98 74 ⇑P **P 03 42 49.2 -0.6**
baz=57,SNR=9.2
KEV Kevo 57.01 348 *e*P **P 03 42 48.6 -0.9**
KEV pmax pmax
comp=Z,5.0nm,0.3s,mb5.0
KEV Kevo 57.01 348 *e*P **P 03 42 48.9 -0.7**
comp=Z,19nm,1.0s,mb5.1
KEV Kevo 57.01 348 *e*p **P 03 42 48.6 -0.9**
comp=Z,4.6nm,0.3s,mb5.0
223A Chaparral, Ant 57.05 79 ⇑P **P 03 42 50.6 +0.3**
baz=57
124A Stringfield Ra 57.16 77 ⇓P **P 03 42 51.3 +0.1**
baz=57,SNR=13
Z25A Roswell 57.21 76 ⇓P **P 03 42 51.5 +0.1**
baz=57,SNR=12
X27A F and S Farms, 57.24 74 ⇓P **P 03 42 51.7 +0.1**
baz=57
SCO Scoresbysund 57.28 8 *i* P **P 03 42 52.1 +0.7**
SCO pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SCO Scoresbysund 57.28 8 *i* P **P 03 42 52.1 +0.7**
comp=Z,10nm,1.0s,mb4.8
KURK Kurchatov 57.30 312 P **P 03 42 51.2 -0.7**
comp=Z,1μm,1.1s
KURK Kurchatov 57.30 312 P **P 03 42 52.4 +0.5**
comp=Z,104nm,0.7s,mb6.0,baz=44,slow=6.4,SNR=211
KURK pP pP 03 43 06.2 -0.7
comp=Z,26nm,0.6s,baz=43,slow=6.5,SNR=6.3
KURK S **S 03 50 39.1 -4.5**
comp=Z,0.8nm,0.8s,baz=48,slow=12,SNR=5.2
KURK LR LR 04 10 15.1
comp=Z,446nm,19.1s,MS4.6,baz=55,slow=39
KURK Kurchatov 57.30 312 P **P 03 42 52.4 +0.5**
KURK *PP pP 03 43 06.2 -0.6
KURK S **S 03 50 39.1 -4.5**
KURK pmax pmax
comp=Z,104nm,0.7s,mb6.0
KURK pmax pmax
comp=Z,26nm,0.6s,mb5.4
KURK smax
comp=N,1.0nm,0.8s
KURK MLR MLR
comp=Z,446nm,19.1s,MS4.6
KURK Kurchatov 57.30 312 *e*P **P 03 42 51.4 -0.4**
comp=Z,238nm,1.0s,mb6.2
KURK *e*S **S 03 50 42.4 -1.2**
KURK Kurchatov 57.30 312 P **P 03 42 51.7 -0.2**
SNR=108
KURK P 03 42 51.7
SNR=108
Y26A Elida 57.30 75 ⇑P **P 03 42 52.1 0.0**
baz=57,SNR=19
COWI Conover 57.32 56 *e*P **P 03 42 50.9 -1.1**
comp=Z,30nm,0.9s,mb5.3
ARCES ARCESS Array B 57.41 349 P **P 03 42 51.7 -0.6**
comp=Z,8.2nm,0.3s,mb5.2,baz=29,slow=8.5,SNR=266
ARCES ARCESS Array B 57.41 349 P **P 03 42 51.7 -0.6**
ARCES pmax pmax
comp=Z,8.0nm,0.3s
ARCES ARCESS Array B 57.41 349 P **P 03 42 51.7 -0.6**
WMQ Urumqi 57.44 301 P **P 03 42 53.1 +0.2**
WMQ sP sP 03 43 07.3 -6.9
WMQ PP PP 03 45 03.3 +2.9
WMQ S **S 03 50 45.8 +0.2**
WMQ sS sS 03 51 03.5 -7.3
WMQ ScS ScS 03 52 36.3 -0.8
WMQ pmax pmax
comp=Z,100nm,1.0s,mb5.8
WMQ pmax pmax
comp=Z,150nm,3.0s
WMQ LR LR
comp=N,2μm,28.0s,MS5.2
WMQ LR LR
comp=E,2μm,28.0s,MS5.2
WMQ LR LR
comp=Z,840nm,24.0s,MS4.8
224A Corundas Mount 57.55 78 ⇓P **P 03 42 53.9 0.0**
baz=58,SNR=16
LVZ Lovozero 57.61 344 P **P 03 42 53.0 -0.7**
comp=Z,392nm,0.9s,mb6.4,SNR=7.8
LVZ Lovozero 57.61 344 *e*P **P 03 42 53.4 -0.3**
LVZ pmax pmax
comp=Z,83nm,1.2s,mb5.6
Z26A Caprock 57.66 76 ⇑P **P 03 42 54.3 -0.3**
baz=58,SNR=36
125A Gardner Draw, 57.67 77 ⇓P **P 03 42 54.7 0.0**
baz=58,SNR=63
Y27A Causey 57.73 75 ⇑P **P 03 42 55.0 -0.1**
baz=58,SNR=63
CPRX Cap Rock 57.89 76 *e*P **P 03 42 55.8 -0.4**
comp=Z,16nm,0.8s,mb5.1
MNTX Cornudas Mount 57.90 78 *e*P **P 03 42 56.5 +0.2**
comp=Z,27nm,0.8s,mb5.3
MSTX Muleshoe 57.90 75 ⇑P **P 03 42 55.9 -0.4**
baz=58,SNR=23
AMTX Amarillo 57.93 73 *e*P **P 03 42 56.2 -0.2**
comp=Z,39nm,0.6s,mb5.6
AMTX *e*PcP PcP 03 43 48.7 +0.5
AMTX *e*ScP ScP 03 47 42.1 -1.1
SCIA State Center 57.99 62 *e*P **P 03 42 56.2 -0.6**
comp=Z,91nm,0.9s,mb5.8
KSU1 Kansas State U 58.00 66 *e*P **P 03 42 55.6 -1.3**
comp=Z,62nm,0.9s,mb5.6
KSU1 *e*PcP PcP 03 43 48.3 -0.1
KSU1 *e*ScP ScP 03 47 41.2 -2.2
TRO Tromso 58.01 351 *e*P **P 03 42 55.9 -0.7**
TRO AMB AMB 03 42 56.5
comp=Z,31nm,1.1s,mb5.2
324A Moseley Ranch, 58.02 79 ⇑P **P 03 42 57.1 0.0**
baz=58,SNR=14
126A Clayton Basin, 58.07 77 ⇓P **P 03 42 57.0 -0.5**
baz=58,SNR=12
Z27A Tatum 58.09 75 ⇓P **P 03 42 57.0 -0.6**
baz=58,SNR=27
APA Apatity 58.11 345 ⇑*i*P **P 03 42 56.9 -0.4**
APA *i* 03 43 48.0
APA *e*S **S 03 50 51.0 -2.7**
APA pmax pmax
comp=Z,54nm,1.4s,mb5.4
KTK1 Kautokeino 58.17 350 *e*P **P 03 42 58.0 +0.3**
GDL2 Guadalupe Moun 58.17 77 *e*P **P 03 42 58.6 +0.4**
GDL2 *e*ScP ScP 03 47 43.7 -0.7
MK31 Makanchi Array 58.22 306 *e*P **P 03 42 57.4 -0.9**
MKAR Makanchi Array 58.22 306 P **P 03 42 57.5 -0.8**
comp=Z,40nm,0.8s,mb5.5,baz=48,slow=7.3,SNR=133
MKAR S **S 03 50 50.4 -5.3**
comp=Z,0.3nm,0.7s,baz=35,slow=11,SNR=2.3
MKAR LR LR 04 09 07.9
comp=Z,707nm,21.2s,MS4.8,baz=212,slow=37
MKAR Makanchi Array 58.22 306 P **P 03 42 57.5 -0.8**
MKAR S **S 03 50 50.4 -5.3**
MKAR pmax pmax
comp=Z,40nm,0.8s
MKAR MLR MLR
comp=Z,707nm,21.2s
GYA Guiyang 58.26 273 P **P 03 43 01.0 +2.1**
GYA pP pP 03 43 11.3 -2.6
GYA sP sP 03 43 16.8 -3.4
GYA PcP PcP 03 43 51.0 +1.4
GYA PP PP 03 45 12.0 +3.9
GYA ScP ScP 03 47 50.8 +6.0
GYA S **S 03 50 57.8 +1.0**
GYA sS sS 03 51 09.6 -12
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,150nm,5.8s
GYA LR LR
comp=N,710nm,18.5s,MS5.0
GYA LR LR
comp=E,620nm,17.6s,MS5.0
GYA LR LR
comp=Z,730nm,18.2s,MS4.8
325A Bean Ranch, Si 58.38 78 ⇑P **P 03 42 59.7 0.0**
baz=58,SNR=24
226A Malaga, Loving 58.42 77 ⇑P **P 03 42 59.9 -0.1**
baz=58,SNR=32
127A Arkansas Junct 58.45 76 ⇑P **P 03 42 59.3 -0.8**
baz=58,SNR=14
TGY Tagaytay City 58.77 252 P **P 03 43 03.2 +0.7**
comp=Z,172nm,0.3s,mb6.5,baz=47,slow=18,SNR=7.4
TGY Tagaytay City 58.77 252 P **P 03 43 03.2 +0.6**
TGY pmax pmax
comp=Z,172nm,0.3s
425A Indio Mountain 58.78 79 ⇓P **P 03 43 02.8 +0.3**
baz=59,SNR=22
JFWS Jewell Farm 58.90 59 *e*P **P 03 43 01.3 -1.9**
JFWS pmax pmax
comp=Z,95nm,1.4s,mb5.6
JFWS Jewell Farm 58.90 59 *e*P **P 03 43 01.3 -1.9**
comp=Z,95nm,1.4s,mb5.6
326A Caldwell Ranch 59.02 78 ⇓P **P 03 43 04.0 -0.1**
baz=59,SNR=18
327A Balmorhea Ranc 59.28 77 ⇑P **P 03 43 05.9 -0.1**
baz=59
BVAR Borovoye Array 59.30 318 P **P 03 43 05.6 -0.2**
comp=Z,103nm,0.7s,mb6.0,baz=50,slow=6.4,SNR=423
BVAR LR LR 04 10 44.3
comp=Z,739nm,19.4s,MS4.8,baz=46,slow=38
BVAR Borovoye Array 59.30 318 P **P 03 43 05.6 -0.2**
BVAR pmax pmax
comp=Z,103nm,0.7s
BVAR MLR MLR
comp=Z,739nm,19.5s
BVAR Borovoye Array 59.30 318 P **P 03 43 05.6 -0.2**
BVAR LR LR 04 10 44.3
BRVK Borovoye 59.32 318 *e*P **P 03 43 05.7 -0.2**
BRVK pmax pmax
comp=Z,110nm,0.7s,mb6.0
BRVK Borovoye 59.32 318 *e*P **P 03 43 05.7 -0.2**
comp=Z,110nm,0.7s,mb6.0
BRVK Borovoye 59.32 318 P **P 03 43 05.9 0.0**
SNR=45
BRVK P 03 43 05.9
SNR=45
SOKR Solikamsk 59.34 330 *d* *i*P **P 03 43 05.0 -0.9**
SOKR S **S 03 51 11.7 +1.8**
SOKR pmax pmax
comp=Z,70nm,1.0s,mb5.7
426A McDonald Obser 59.45 78 ⇓P **P 03 43 06.9 -0.2**
baz=60,SNR=29
328A Wristen Ranch, 59.69 77 ⇓P **P 03 43 08.4 -0.3**
baz=60,SNR=65
427A Hayter Ranch, 59.70 78 ⇓P **P 03 43 08.7 -0.2**
baz=60,SNR=15
WMOK Wichita Mounta 59.74 71 *e*P **P 03 43 08.2 -0.9**
WMOK pmax pmax
comp=Z,38nm,0.7s,mb5.5
WMOK Wichita Mounta 59.74 71 *e*P **P 03 43 08.2 -0.9**
comp=Z,38nm,0.7s,mb5.5
526A Mary Lane Ranc 59.84 79 ⇓P **P 03 43 09.9 +0.1**
baz=60,SNR=11
LOF Lofoten 59.92 353 *e*P **P 03 43 12.0 +2.2**
527A Woodward Ranch 60.07 78 ⇓P **P 03 43 11.2 -0.2**
baz=60,SNR=14
626A Big Bend Ranch 60.17 79 ⇑P **P 03 43 12.2 +0.1**
baz=60,SNR=23
SVE Sverdlovsk 60.20 326 ⇑*e*P **P 03 43 12.6 +0.7**
SVE *e*S **S 03 51 27.9 +6.9**
SVE pmax pmax
comp=Z,89nm,1.4s,mb5.6
SVE MLR MLR
comp=Z,699nm,19.0s,MS4.8
428A Kincaid Ranch, 60.22 77 ⇓P **P 03 43 12.7 +0.3**
baz=60,SNR=41
GLMI Grayling 60.50 54 *e*P **P 03 43 12.6 -1.5**
comp=Z,73nm,1.1s,mb5.6
528A Cox Ranch, San 60.56 78 ⇓P **P 03 43 14.8 +0.1**
baz=61,SNR=39
TXAR Lajitas Array 60.61 79 P **P 03 43 15.2 +0.1**
comp=Z,20nm,0.6s,mb5.5,baz=305,slow=5.2,SNR=223
TXAR PcP PcP 03 43 59.6 +0.7
comp=Z,13nm,0.7s,baz=269,slow=2.4,SNR=5.6
TXAR ScP ScP 03 47 53.2 -2.0
comp=Z,4.3nm,0.9s,baz=292,slow=3.0,SNR=5.4
TXAR LR LR 04 06 27.5
comp=Z,260nm,21.4s,MS4.3,baz=5.0,slow=33
TXAR Lajitas Array 60.61 79 P **P 03 43 15.2 +0.1**

TXAR 03 43 59.7
TXAR pmax pmax
comp=Z,20nm,0.6s
TXAR pmax pmax
comp=Z,13nm,0.7s
TXAR pmax pmax
comp=N,4.0nm,1.0s
TXAR Lajitas Array 60.61 79 P **P 03 43 15.2 +0.1**
TXAR PcP PcP 03 43 59.6 +0.7
TXAR ScP ScP 03 47 53.2 -2.0
TXAR LR LR 04 06 27.6
627A Terlingua Ranc 60.70 79 ⇑P **P 03 43 15.7 0.0**
baz=61,SNR=32
628A Black Gap, Mar 60.98 78 ⇓P **P 03 43 17.6 0.0**
baz=61
SCHQ Schefferville 61.00 37 P **P 03 43 16.9 -0.4**
comp=N,14nm,0.4s,mb5.4,baz=330,slow=6.6,SNR=27
SCHQ LR LR 04 10 49.8
comp=N,434nm,18.9s,MS4.6,baz=322,slow=37
SCHQ Schefferville 61.00 37 *e*P **P 03 43 17.0 -0.3**
comp=N,36nm,0.9s,mb5.5
HDIL Hopedale 61.06 60 *e*P **P 03 43 17.0 -1.0**
comp=N,40nm,0.6s,mb5.7
ARU Arti 61.23 326 P **P 03 43 19.1 +0.2**
comp=N,635nm,0.7s,SNR=12
ARU Arti 61.23 326*d i*P **P 03 43 18.8 -0.1**
ARU *e**PP pP 03 43 41.2 +7.2
ARU *e* 03 44 00.5
ARU *e* 03 45 39.1
ARU S **S 03 51 33.0 -1.2**
ARU 03 52 59.1
ARU SS SS 03 55 33.0 -1.1
ARU SSS 03 58 22.7
ARU pmax pmax
comp=Z,128nm,1.2s,mb5.9
ARU MLR MLR
comp=Z,422nm,19.0s,MS4.6
ARU Arti 61.23 326 *e*P **P 03 43 18.2 -0.7**
comp=Z,74nm,0.7s,mb5.9
KMI Kunming 61.66 275 P **P 03 43 22.0 -0.2**
KMI pP pP 03 43 34.1 -3.3
KMI sP sP 03 43 38.6 -5.0
KMI PP PP 03 45 40.4 +2.2
KMI S **S 03 51 39.8 -0.6**
KMI sS sS 03 51 57.3 -8.6
KMI pmax pmax
comp=Z,38nm,0.8s,mb5.6
KMI pmax pmax
comp=Z,140nm,3.1s
KMI LR LR
comp=N,260nm,20.7s,MS4.5
KMI LR LR
comp=E,240nm,22.0s,MS4.5
KMI LR LR
comp=Z,380nm,27.2s
STOK Stokkvaagen 61.74 353 *e*P **P 03 43 21.8 -0.4**
STOK AMB AMB 03 43 23.2
comp=Z,55nm,1.1s,mb5.6
QIZ Qiongzhong 61.74 265 *e*P **P 03 43 23.2 +0.4**
comp=Z,69nm,1.5s,mb5.6
CCM Cathedral Cave 61.75 64 *e*P **P 03 43 20.2 -2.5**
CCM pmax pmax
comp=Z,15nm,1.0s,mb5.1
CCM Cathedral Cave 61.75 64 *e*P **P 03 43 20.2 -2.4**
comp=Z,15nm,1.0s,mb5.1
DAV Davao City (W) 61.77 243 LR LR 04 06 06.3
comp=Z,288nm,21.3s,MS4.4,baz=32,slow=32
MOR8 Moi Rana 61.79 352 *e*P **P 03 43 20.7 -1.8**
MOR8 AMB AMB 03 43 21.2
comp=Z,24nm,0.9s,mb5.3
JCT Junction City 62.14 75 *e*P **P 03 43 24.8 -0.6**
JCT *e* 03 44 04.8
JCT pmax pmax
comp=Z,49nm,0.7s,mb5.8
JCT Junction City 62.14 75 *e*P **P 03 43 24.8 -0.6**
comp=Z,48nm,0.7s,mb5.7
JCT *e*PcP PcP 03 44 04.8 -0.3
FVM French Village 62.25 63 *e*P **P 03 43 24.5 -1.5**
FVM pmax pmax
comp=Z,114nm,2.1s,mb5.6
FVM French Village 62.25 63 *e*P **P 03 43 24.4 -1.6**
comp=Z,114nm,2.1s,mb5.6
JOF Joensuu 62.74 344 *e*P **P 03 43 27.7 -1.2**
JOF pmax pmax
comp=Z,73nm,0.9s,mb5.8
JOF Joensuu 62.74 344 *e*p **P 03 43 27.7 -1.2**
comp=Z,73nm,0.9s,mb5.8
MIAR Mount Ida 62.92 68 *e*P **P 03 43 29.5 -1.0**
MIAR pmax pmax
comp=Z,54nm,0.9s,mb5.7
MIAR Mount Ida 62.92 68 *e*P **P 03 43 29.5 -1.0**
comp=Z,54nm,0.9s,mb5.7
OLIL Olney 63.00 61 *e*P **P 03 43 29.9 -1.1**
comp=Z,29nm,0.8s,mb5.5
SIUC Southern Illin 63.12 63 *e*P **P 03 43 30.7 -1.1**
comp=Z,17nm,0.9s,mb5.2
UALR University of 63.46 67 *e*P **P 03 43 32.0 -2.1**
comp=Z,16nm,0.9s,mb5.2
BLO Bloomington 63.54 60 *e*P **P 03 43 33.7 -0.9**
BLO pmax pmax
comp=Z,27nm,1.1s,mb5.2
BLO Bloomington 63.54 60 *e*P **P 03 43 33.7 -0.9**
comp=Z,27nm,1.1s,mb5.2
NSS Namsos 63.60 353 *e*P **P 03 43 33.0 -1.5**
USIN University of 63.79 61 *e*P **P 03 43 35.4 -0.8**
comp=Z,40nm,0.6s,mb5.6
GLAT Glass 64.11 64 *e*P **P 03 43 37.4 -1.0**
NATX Nacogdoches 64.28 71 *e*P **P 03 43 39.6 0.0**
UTMT University of 64.30 63 *e*P **P 03 43 39.2 -0.4**
comp=Z,75nm,0.9s,mb5.7
UTMT *e*pP pP 03 43 56.2 +1.4
TKM2 Tokmak 2 64.31 307 P **P 03 43 39.7 +0.2**
SNR=81
TKM2 Tokmak 2 64.31 307 *e*P **P 03 43 39.5 -0.1**
TKM2 *e**PP pP 03 43 53.9 -0.9
TKM2 pmax pmax
comp=Z,66nm,0.9s,mb5.7
TKM2 Tokmak 2 64.31 307 *e*P **P 03 43 39.5 -0.1**
comp=Z,66nm,0.9s,mb5.7
TKM2 *e*pP pP 03 43 53.9 -0.9
KAF Kangasniemi 64.32 346 *e*P **P 03 43 38.6 -0.7**
KAF pmax pmax
comp=Z,20nm,0.4s,mb5.5
KAF Kangasniemi 64.32 346 *e*p **P 03 43 38.6 -0.7**
comp=Z,20nm,0.4s,mb5.5
WCI Wyandotte Cave 64.34 60 *e*P **P 03 43 38.7 -1.2**
WCI pmax pmax
comp=Z,16nm,0.8s,mb5.1
WCI Wyandotte Cave 64.34 60 *e*P **P 03 43 38.7 -1.2**
comp=Z,16nm,0.8s,mb5.1
HALT Halls 64.34 64 *e*P **P 03 43 37.4 -2.5**
ULHL Ulahol 64.49 306 P **P 03 43 41.5 +0.8**
SNR=11
USP Ospenovka 64.60 308 P **P 03 43 41.6 +0.2**
SNR=110
ACSO Alum Creek Sta 64.64 57 *e*P **P 03 43 40.7 -1.1**
comp=Z,17nm,0.8s,mb5.1
ACSO *e*pP pP 03 43 57.0 -0.1
ACSO *e*PcP PcP 03 44 14.7 -0.6
CHMS Chumysh 64.67 308 P **P 03 43 42.3 +0.3**
SNR=10
ERPA Erie 64.78 54 *e*P **P 03 43 44.3 +1.7**
comp=Z,37nm,0.9s,mb5.4
KBK Karagaybulak 64.83 307 P **P 03 43 43.5 +0.5**
SNR=6.5
FRU Bishkek 64.86 308 ⇓*i*P **P 03 43 43.0 -0.2**
FRU pmax pmax
comp=Z,185nm,1.4s,mb5.9
HKT Hockley 64.90 73 *e*P **P 03 43 43.8 +0.2**
HKT pmax pmax
comp=Z,22nm,0.9s,mb5.2
HKT Hockley 64.90 73 *e*P **P 03 43 43.8 +0.2**
comp=Z,22nm,0.9s,mb5.2
FINES FINESS Array B 64.99 346 P **P 03 43 42.9 -0.8**
comp=Z,9.6nm,0.3s,mb5.2,baz=8.5,slow=7.2,SNR=112
FINES LR LR 04 15 31.9
comp=Z,197nm,18.7s,MS4.3,baz=9.6,slow=39
FINES FINESS Array B 64.99 346 P **P 03 43 42.9 -0.8**
FINES pmax pmax
comp=Z,10.0nm,0.3s
FINES MLR MLR
comp=Z,197nm,18.7s
FINES FINESS Array B 64.99 346 P **P 03 43 42.9 -0.8**
FINES LR LR 04 15 31.9
WVT Waverly 65.03 63 *e*P **P 03 43 43.3 -1.0**
WVT pmax pmax
comp=Z,14nm,0.8s,mb5.0
WVT Waverly 65.03 63 *e*P **P 03 43 43.3 -1.0**
comp=Z,14nm,0.8s,mb5.0
ALLY Alegheny Colle 65.05 54 *e*P **P 03 43 44.0 -0.4**
comp=Z,98nm,1.4s,mb5.6
ALLY *e*pP pP 03 44 02.6 +3.0
AAK Ala-Archa 65.07 308 P **P 03 43 44.9 +0.4**
SNR=51
KZA Kyzart 65.11 307 P **P 03 43 45.6 +0.8**
SNR=54
OXF Oxford 65.32 65 *e*P **P 03 43 45.3 -1.0**
OXF pmax pmax
comp=Z,125nm,1.0s,mb5.9
OXF Oxford 65.32 65 *e*P **P 03 43 45.3 -0.9**
comp=Z,125nm,1.0s,mb5.9
UCH Uchtor 65.36 307 P **P 03 43 47.1 +0.6**
SNR=40
UCH Uchtor 65.36 307 *e*P **P 03 43 46.8 +0.3**
comp=Z,37nm,1.1s,mb5.3
LSA Lhasa 65.40 287 *e*P **P 03 43 48.0 +1.1**
LSA pmax pmax
comp=Z,30nm,0.7s,mb5.4
LSA Lhasa 65.40 287 *e*P **P 03 43 48.0 +1.2**
comp=Z,30nm,0.7s,mb5.4
EKS2 Erkin-Say 65.40 308 P **P 03 43 47.2 +0.5**
SNR=47
EKS2 Erkin-Say 65.40 308 *e*P **P 03 43 47.0 +0.3**
comp=Z,81nm,0.8s,mb5.8
EKS2 *e*pP pP 03 44 01.6 -0.3
EKS2 *e*PP PP 03 46 06.8 -3.8
LONY Lake Ozonia 65.52 48 *e*P **P 03 43 45.1 -2.3**
comp=Z,9.5nm,0.8s,mb4.9
PLAL Pickwick Lake 65.73 64 *e*P **P 03 43 47.5 -1.4**
comp=Z,18nm,0.7s,mb5.2
FRNY Flat Rock 65.82 48 *e*P **P 03 43 47.3 -2.0**
comp=Z,119nm,2.4s,mb5.5
AML Almayashu 65.84 308 P **P 03 43 50.4 +0.9**
SNR=81
AML Almayashu 65.84 308 *e*P **P 03 43 50.2 +0.7**
comp=Z,70nm,0.8s,mb5.7
NCB Newcomb 66.18 49 *e*P **P 03 43 49.7 -2.0**
comp=Z,13nm,0.8s,mb5.0
AKTK Aktyubinsk 66.22 323 P **P 03 43 52.0 +0.2**
AKTO Aktyubinsk 66.22 323 P **P 03 43 52.0 +0.2**
comp=Z,58nm,0.7s,mb5.7,baz=52,slow=6.6,SNR=171
AKTO Aktyubinsk 66.22 323 P **P 03 43 52.0 +0.2**
AKTO pmax pmax
comp=Z,58nm,0.7s,mb5.7
VBMS Vicksburg 66.36 68 *e*P **P 03 43 52.8 -0.2**
comp=Z,50nm,1.1s,mb5.5
ABKAR Akbulak array 66.42 321 *e*P **P 03 43 53.1 -0.1**
comp=Z,11nm,0.4s,mb5.2
KSH Kashi 66.65 304 ⇓*i*P **P 03 43 58.4 +3.7**
KSH pmax pmax
comp=Z,67nm,0.8s,mb5.7
KSH LR LR
comp=N,190nm,6.8s
KSH LR LR
comp=E,170nm,7.8s
KSH LR LR
comp=Z,93nm,5.8s
BINY Binghamton 66.69 51 *e*P **P 03 43 53.9 -1.1**
comp=Z,32nm,1.0s,mb5.3
SWET Sewanee 66.75 62 *e*P **P 03 43 53.6 -1.8**
ACCN Adirondack Com 66.89 49 *e*P **P 03 43 53.3 -2.9**
comp=Z,22nm,0.8s,mb5.2
SSPA Standing Stone 66.94 53 *e*P **P 03 43 55.0 -1.5**
comp=Z,35nm,0.8s,mb5.4
LBNH Lisbon 67.04 47 *e*P **P 03 43 55.3 -1.8**
LBNH pmax pmax
comp=Z,17nm,0.8s,mb5.1
LBNH Lisbon 67.04 47 *e*P **P 03 43 55.3 -1.8**
comp=Z,17nm,0.8s,mb5.1
TZTN Tazewell 67.06 60 *e*P **P 03 43 56.4 -1.0**
comp=Z,20nm,1.0s,mb5.1
NB2 NORSAR Subarra 67.11 353 P **P 03 43 57.0 -0.3**
comp=Z,31nm,0.8s,mb5.4,baz=10,slow=6.5
NOA NORSAR Array B 67.11 353 P **P 03 43 57.1 -0.2**
comp=Z,21nm,0.7s,mb5.3,baz=9.8,slow=6.4,SNR=98
NOA LR LR 04 17 48.4
comp=Z,90nm,19.6s,MS4.0,baz=15,slow=40
NOA NORSAR Array B 67.11 353 P **P 03 43 57.1 -0.2**
NOA pmax pmax
comp=Z,21nm,0.7s
NOA MLR MLR
comp=Z,90nm,19.6s
HYA Hoyanger 67.29 356 *e*P **P 03 43 59.2 +0.8**
HYA AMB AMB 03 44 00.8
comp=Z,32nm,1.4s,mb5.2
IMP Imphal 67.33 282 *e*P **P 03 43 59.0 -0.2**
NAO01 NORSAR Array S 67.33 353 *e*P **P 03 43 58.6 -0.1**
CPCT Cooper Cave 67.35 61 *e*P **P 03 43 58.2 -1.0**
CHRT Chiangrai 67.37 274 P **P 03 44 00.0 +0.5**
comp=Z,105nm,1.0s,mb5.8
PKME Peaks-Kenny Pk 67.42 45 *e*P **P 03 43 58.6 -1.0**
comp=Z,42nm,1.4s,mb5.3
TKL Tuckaleechee C 67.60 61 *e*P **P 03 43 59.4 -1.4**
LRAL Lakeview Retre 67.76 65 *e*P **P 03 43 59.9 -2.0**
comp=Z,7.3nm,0.8s,mb4.8
KKM Kota Kinabalu 67.96 251 *e*P **P 03 44 03.5 +0.2**
comp=Z,17nm,1.0s,mb5.0
SHL Shillong 67.99 284 ⇓*i*P **P 03 44 02.5 -0.9**
SHL *e*x x 03 52 51.0
MOS Moscow 68.00 337 *e*P **P 03 44 01.4 -1.6**
MOS *e**PP pP 03 44 18.2 -0.1
MOS *e* 03 44 28.8
MOS *e*S S 03 52 55.8 -1.6
MOS *e**SS sS 03 53 22.0 -1.2
MOS *e* 03 53 53.5
MOS pmax pmax
comp=Z,126nm,1.3s,mb5.8
MOS pmax pmax
comp=Z,200nm,1.3s,mb6.0
MOS MLR MLR
comp=Z,900nm,20.0s,MS5.0
ELN Prospectdale 68.04 58 *e*P **P 03 44 02.1 -1.4**
KKTK Khon Kaen 68.14 269 P **P 03 44 04.5 +0.1**
MVL Millersville 68.19 53 *e*P **P 03 44 03.8 -0.7**
comp=Z,19nm,0.8s,mb5.2
BLA Blacksburg 68.22 57 *e*P **P 03 44 04.0 -0.7**
BLA pmax pmax
comp=Z,18nm,0.6s,mb5.3
BLA Blacksburg 68.22 57 *e*P **P 03 44 04.0 -0.7**
comp=Z,18nm,0.6s,mb5.3
OSL Oslo 68.24 353 *e*P **P 03 44 04.3 -0.1**
OSL AMB AMB 03 44 05.7
comp=Z,49nm,1.2s,mb5.4
SDMD Soldier's Deli 68.39 54 *e*P **P 03 44 04.9 -0.8**
comp=Z,28nm,0.8s,mb5.3
KONO Kongsberg 68.61 354 *e*P **P 03 44 06.8 +0.1**
KONO pmax pmax
comp=Z,31nm,0.8s,mb5.3
KONO Kongsberg 68.61 354 *e*P **P 03 44 06.8 +0.1**
comp=Z,31nm,0.8s,mb5.3
CHG Chiang Mai 68.68 274 ⇓P **P 03 44 06.7 -1.1**
comp=Z,30nm,0.7s,mb5.3
CHTO Chiang Mai 68.68 274 *e*P **P 03 44 07.3 -0.5**
CHTO *e**PP pP 03 44 19.9 -3.2
CHTO pmax pmax
comp=Z,34nm,1.1s,mb5.2
CHTO Chiang Mai 68.68 274 *e*P **P 03 44 07.3 -0.5**
comp=Z,34nm,1.1s,mb5.2
CHTO *e*pP pP 03 44 19.9 -3.2
CHTO Chiang Mai 68.68 274 P **P 03 44 07.5 -0.2**
SNR=14
CHTO P 03 44 07.5
SNR=14
OBN Obninsk 68.82 337*d i*P **P 03 44 07.6 -0.5**
OBN *i* pP 03 44 23.8 +0.3
OBN *i* 03 44 36.3
OBN *e*S S 03 52 59.5 -7.7
OBN pmax pmax
comp=Z,175nm,1.6s,mb5.7
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.7
OBN Obninsk 68.82 337 *e*P **P 03 44 08.2 +0.1**
comp=Z,112nm,1.1s,mb5.7
OBN *e*pP pP 03 44 23.2 -0.3
CM31 Chiang Mai Arr 68.95 273 *e*P **P 03 44 09.6 +0.1**
CMAR Chiang Mai Arr 68.95 273 P **P 03 44 09.2 -0.3**
comp=Z,17nm,0.7s,mb5.1,baz=26,slow=7.0,SNR=67
CMAR pP pP 03 44 24.9 +0.1
comp=Z,8.4nm,0.7s,baz=28,slow=6.5,SNR=5.1
CMAR PKPPKP 04 12 25.6
comp=Z,0.9nm,0.4s,baz=232,slow=5.0,SNR=4.5
CMAR LR LR 04 14 36.4
comp=Z,130nm,21.1s,MS4.1,baz=269,slow=36
MSVF Nonsavu 69.13 180 *e*P **P 03 44 11.6 +1.2**
comp=Z,39nm,1.5s,mb5.1
JSRW J. Sargeant Re 69.18 55 *e*P **P 03 44 09.7 -0.9**
GOGA Godfrey 69.45 62 *e*P **P 03 44 11.1 -1.3**
GOGA pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GOGA Godfrey 69.45 62 *e*P **P 03 44 11.1 -1.3**
comp=Z,9.7nm,0.7s,mb4.8
BDT Bhumibol Dam 69.83 272 P **P 03 44 15.0 +0.1**
GUN Gumba 69.83 290 *e*P **P 03 44 15.5 +0.7**
comp=Z,284nm,0.7s,mb6.3
JSC Jenkinsville 69.99 60 *e*P **P 03 44 14.8 -0.9**
TAOE Nuku Hiva Isla 70.25 135 *e*LR LR 04 05 36.6
comp=Z,543nm,22.8s,baz=346
KKN Kakani 70.27 290 *e*P **P 03 44 17.8 +0.3**
comp=Z,111nm,0.6s,mb6.0
PKI Pulchoki 70.36 290 *e*P **P 03 44 18.4 +0.3**
comp=Z,117nm,0.7s,mb6.0
PKIN Phulchoki 70.36 290 *e*P **P 03 44 18.4 +0.3**
comp=Z,95nm,0.6s,mb5.9
GKN Gorkha 70.49 291 *e*P **P 03 44 19.0 +0.2**
comp=Z,134nm,0.6s,mb6.0
DMN Daman 70.51 290 *e*P **P 03 44 19.5 +0.5**
comp=Z,136nm,0.9s,mb5.9
COW Cow Castle Cre 70.98 60 *e*P **P 03 44 21.7 0.0**
NACGM Naroch 71.09 343 *e* **P 03 44 19.0 -3.0**
VRHR Novokhopersk 71.11 333 *e*P **P 03 44 21.5 -0.7**
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=Z,40nm,0.5s,mb5.6
VRHR pmax pmax
comp=E,60nm,0.8s
MICGM Minsk 71.26 342 ⇑*e*P **P 03 44 21.0 -2.1**
KOLN Koldanda 71.27 291 *e*P **P 03 44 23.7 +0.1**
comp=E,116nm,0.8s,mb5.9
MNK Minsk 71.27 342 ⇑*e*P **P 03 44 21.0 -2.1**
MNK *e* pP 03 44 37.0 -1.6
PYUN Piuthan 71.37 292 *e*P **P 03 44 24.4 +0.2**
comp=E,261nm,1.0s,mb6.1
NHSC New Hope 71.47 60 *e*P **P 03 44 24.3 -0.4**
comp=E,33nm,1.0s,mb5.2
JOSI Joshimath 71.47 296 *e*P **P 03 44 24.8 0.0**
VSR Storozhevoye 71.69 334*d i*P **P 03 44 25.3 -0.4**
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.5
VSR pmax pmax
comp=N,50nm,0.9s
VSR pmax pmax
comp=E,30nm,1.0s
MUD Monsted U'grnd 71.81 353 *i* P **P 03 44 19.6 -6.8**
MUD pmax pmax
comp=Z,15nm,0.8s,mb5.0
MUD Monsted U'grnd 71.81 353 *i* P **P 03 44 19.6 -6.8**
comp=Z,15nm,0.8s,mb5.0
VORD Divnogorie 71.88 334*d i*P **P 03 44 26.6 -0.3**
VORD pmax pmax
comp=N,50nm,0.9s
VORD pmax pmax
comp=Z,50nm,0.9s,mb5.4
VORD pmax pmax
comp=E,10.0nm,0.7s
COEN Coen 72.01 216 *e*P **P 03 44 27.7 -0.2**
comp=E,136nm,1.3s,mb5.7
SDNR Sundarnagar 72.19 298 *e*x **P 03 44 30.1 +1.1**
COP Copenhagen 72.31 351 *i* P **P 03 44 29.6 +0.3**
COP pmax pmax
comp=Z,21nm,0.8s,mb5.1
COP Copenhagen 72.31 351 *i* P **P 03 44 29.6 +0.3**
comp=Z,21nm,0.8s,mb5.1
DDI Dehra Dun 72.49 297 *e*P **P 03 44 28.8 -2.0**
DDI *e*x x 03 46 03.0
BHK Bhakra 72.55 299 *e*x x 03 44 28.2
SUW Suwalki 72.56 345 *e*P **P 03 44 30.6 -0.3**
SUW Suwalki 72.56 345 *e*P **P 03 44 30.2 -0.7**
SUW pmax pmax
comp=Z,43nm,0.5s,mb5.6
SUW Suwalki 72.56 345 *e*P **P 03 44 30.2 -0.7**
comp=Z,43nm,0.5s,mb5.6
BSD Bornholm Skovb 72.62 350 *i* P **P 03 44 30.2 -1.0**
BSD pmax pmax
comp=Z,24nm,0.8s,mb5.2
BSD Bornholm Skovb 72.62 350 *i* P **P 03 44 30.2 -1.0**
comp=Z,24nm,0.8s,mb5.2
ESK Eskdalemuir 73.35 1 *e*P **P 03 44 35.0 -0.5**
KKR Kurukshetra 73.45 297 *e*P **P 03 44 36.5 -0.1**
KBL Kabul 74.01 306 *e*P **P 03 44 39.0 -0.7**
KBL pmax pmax
comp=Z,98nm,0.8s,mb5.8
KBL Kabul 74.01 306 *e*P **P 03 44 39.0 -0.8**
comp=Z,98nm,0.8s,mb5.8
DZM Mont Dzumac 74.14 191 *e*LR LR 04 07 27.0
comp=Z,348nm,21.8s
GKP Gorka Klasztor 74.16 348 *e*P **P 03 44 39.6 -0.6**
BISR Bishrakh 74.17 296 *e*x x 03 44 33.9
BSEG Bad Segeberg 74.23 352 *e*P **P 03 44 41.4 +0.7**
comp=Z,49nm,0.9s,mb5.4
BSEG *e*pP pP 03 44 56.8 +0.6
BSEG Bad Segeberg 74.23 352 *e*P **P 03 44 41.4 +0.7**
BSEG *e**PP pP 03 44 56.8 +0.6
BSEG pmax pmax
comp=Z,49nm,0.9s,mb5.4
AYAN Aya Nagar 74.42 296 *e*P **P 03 44 41.5 -0.7**
AYAN AMb AMB 03 44 44.0
comp=Z,39nm,1.5s,mb5.1
PPT Papeete 74.58 148 *e*S S 03 54 22.8 +8.6
comp=Z,216nm,29.2s
PPT *e*SS SS 03 59 10.2 +7.6
comp=Z,132nm,29.8s
PPT *e*LR LR 04 07 45.4
comp=Z,917nm,26.5s,baz=338
PPT Papeete 74.58 148 LR LR 04 10 25.8
comp=Z,368nm,19.5s,MS4.7,baz=329,slow=30
AKASG Malin Array Be 74.58 340 P **P 03 44 42.2 -0.6**
comp=Z,14nm,0.4s,mb5.3,baz=24,slow=5.9,SNR=121
AKASG pP pP 03 44 58.6 +0.3
comp=Z,5.8nm,0.4s,baz=23,slow=5.9,SNR=4.1
AKASG S S 03 54 10.8 -2.8
comp=Z,0.6nm,0.6s,baz=17,slow=12,SNR=4.4
AKASG LR LR 04 22 24.5
comp=Z,254nm,19.4s,MS4.5,baz=5.0,slow=40
AKASG Malin Array Be 74.58 340 P **P 03 44 42.2 -0.6**
AKASG *PP pP 03 44 58.6 +0.3
AKASG S S 03 54 10.8 -2.8
AKASG pmax pmax
comp=Z,14nm,0.4s
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKASG smax
comp=N,1.0nm,0.6s
AKASG MLR MLR
comp=Z,254nm,19.4s
AKASG Malin Array Be 74.58 340 P **P 03 44 42.2 -0.6**
AKASG pP pP 03 44 58.6 +0.3
AKASG S S 03 54 10.8 -2.8
AKASG LR LR 04 22 24.5
AKBB Malin Array Si 74.58 340 *e*P **P 03 44 42.3 -0.5**
KIEV Kiev 74.59 340 *e*P **P 03 44 42.1 -0.7**
KIEV pmax pmax
comp=Z,62nm,0.9s,mb5.5
KIEV Kiev 74.59 340 *e*P **P 03 44 42.1 -0.7**
comp=Z,62nm,0.9s,mb5.5
SONA Sohna 74.62 296 *e*P **P 03 44 42.7 -0.7**
SONA AMb AMB 03 44 43.9
comp=Z,54nm,1.2s,mb5.3
DMUB Kingscourt 74.70 3 *e*P **P 03 44 41.1 -2.3**
AGRA Agra 74.92 295 *e*P **P 03 44 44.5 -0.6**
AGRA AMb AMB 03 44 45.2
comp=Z,69nm,0.4s,mb6.0
KAPI Kappang 74.99 241 P **P 03 44 43.7 -1.9**
comp=Z,6.0nm,0.7s,mb4.6,baz=186,slow=4.7,SNR=4.5
KSM Kuching 75.11 253 *e*P **P 03 44 46.0 -0.3**
comp=Z,9.5nm,0.7s,mb4.8
DCN Croghan 75.24 3 *e*P **P 03 44 47.0 +0.5**
KAKA Kakadu 75.25 226 *e*P **P 03 44 45.6 -1.4**
comp=Z,24nm,0.6s,mb5.3
KHET Khetri 75.47 297 *e*P **P 03 44 48.0 -0.3**
KHET AMb AMB 03 44 49.7
comp=Z,52nm,1.6s,mb5.2
NRDL Niedersach Rie 75.68 352 *e*P **P 03 44 48.9 -0.1**
comp=Z,17nm,0.9s,mb5.0
IBBN Ibbenburen 76.04 354 *e*P **P 03 44 51.8 +0.7**
comp=Z,64nm,1.0s,mb5.5
IBBN *e*pP pP 03 45 07.3 +0.6
GOF Gofitskoye 76.07 329 ⇓*i*P pP 03 45 09.3 +2.3

GOF eS SKSac 03 54 49.0 -8.2
GOF pmax pmax
comp=Z,300nm,1.1s,mb6.1
CLZ Clausthal 76.30 352 eP **P 03 44 53.3 +0.7**
comp=Z,34nm,0.9s,mb5.3
CLZ Clausthal 76.30 352 eP **P 03 44 53.3 +0.7**
CLZ pmax pmax
comp=Z,34nm,0.9s,mb5.3
MAK Makhachkala 76.39 325 eP **P 03 44 53.4 +0.1**
MAK eS S 03 54 34.1 +0.1
MAK pmax pmax
comp=Z,172nm,1.6s,mb5.7
MAK MLR MLR
comp=Z,617nm,19.0s,MS4.9
ABKT Ailbek 76.44 315 P **P 03 44 54.9 +1.2**
comp=Z,245nm,1.0s,mb6.1,SNR=9.0
LVV L'vov 76.45 343 eP **P 03 44 52.6 -0.9**
LVV MLR MLR
comp=Z,200nm,21.0s,MS4.4
CLL Collm 76.58 350 eP **P 03 44 53.7 -0.5**
comp=Z,13nm,1.3s,mb4.7
CLL Collm 76.58 350⇓iP **P 03 44 53.1 -1.1**
CLL e pP 03 45 08.0 -1.8
CLL eS S 03 54 34.0 -1.7
CLL pmax pmax
comp=Z,13nm,1.3s,mb4.7
CLL MLR MLR
comp=Z,200nm,18.1s,MS4.5
CLL Collm 76.58 350⇓iP **P 03 44 53.1 -1.1**
comp=Z,13nm,1.3s,mb4.7
CLL epP pP 03 45 08.0 -1.8
CLL e pP 03 45 08.0 -1.8
CLL i sP sP 03 45 27.0 +11
CLL eS S 03 54 34.0 -1.7
CLL LR LR
comp=Z,200nm,18.1s,MS4.5
CLL Collm 76.58 350⇓iP **P 03 44 53.1 -1.1**
comp=Z,13nm,1.3s,mb4.7
CLL epP pP 03 45 08.0 -1.8
CLL i sPcP 03 45 27.0
CLL i 03 45 50.5
CLL e(PP) 03 47 36.0
CLL eS S 03 54 34.0 -1.7
CLL ePS 03 55 22.0
CLL e(SS) 03 59 26.0
CLL eSSSS 04 05 12.0
CLL LmH 04 22 00.0
comp=N,100nm,20.1s
CLL LmH 04 22 00.0
comp=E,200nm,19.3s
CLL LmV 04 27 00.0
comp=Z,200nm,18.1s
KSP Ksiaz 76.66 348 eP **P 03 44 54.5 -0.1**
CTA Charters Tower 76.67 210 LR LR 04 16 21.5
comp=Z,200nm,20.6s,MS4.4,baz=35,slow=34
CTAO Charters Tower 76.67 210 eP **P 03 44 54.8 -0.1**
CTAO pmax pmax
comp=Z,20nm,1.0s,mb5.0
CTAO Charters Tower 76.67 210 eP **P 03 44 54.8 -0.2**
comp=Z,20nm,1.0s,mb5.0
OJC Ojcow 76.77 346 eP **P 03 44 54.9 -0.4**
OJC eS S 03 54 30.5 -7.3
OJC eSS SS 03 59 23.1 -10
OJC L 04 21 43.4
comp=Z,0.3nm,20.0s
OJC Ojcow 76.77 346 eP **P 03 44 54.9 -0.4**
OJC eS S 03 54 30.5 -7.3
OJC MLR MLR
comp=Z,300nm,20.0s,MS4.6
KWP Kalwaria Pacla 76.87 344 eP **P 03 44 56.4 +0.6**
KWP Kalwaria Pacla 76.87 344 eP **P 03 44 56.1 +0.3**
KWP pmax pmax
comp=Z,89nm,0.4s,mb6.0
KWP Kalwaria Pacla 76.87 344 eP **P 03 44 56.1 +0.3**
comp=Z,89nm,0.4s,mb6.0
KWP Kalwaria Pacla 76.87 344⇓iP **P 03 44 56.2 +0.4**
BRG Berggiesshubel 76.91 350 eP **P 03 44 55.8 -0.2**
comp=Z,10.0nm,0.8s,mb4.8
BRG Berggiesshubel 76.91 350 i P **P 03 44 55.7 -0.4**
comp=Z,10nm,0.8s,mb4.8
BRG i PCP PcP 03 45 11.8 +4.9
comp=Z,7.0nm,1.0s
BRG S S 03 54 37.0 -2.3
BRG SP 03 55 10.0
BRG SS SS 03 59 31.0 -4.2
BRG e 04 11 05.0
comp=Z,3.0nm,1.0s
BRG
comp=N,162nm,22.0s
BRG
comp=E,94nm,25.9s
BRG
comp=Z,291nm,26.1s
BUG Bochum--Univer 76.93 354 eP **P 03 44 56.4 +0.2**
comp=Z,20nm,1.0s,mb5.0
DPC Dobruska-Polom 77.14 348 eP **P 03 44 57.5 +0.2**
DPC e*PP pP 03 45 13.1 +0.2
DPC eS S 03 54 38.6 -3.2
DPC e 03 55 26.3
DPC MLR MLR
comp=Z,200nm,17.7s,MS4.5
DPC Dobruska-Polom 77.14 348 eP **P 03 44 57.5 +0.2**
DPC epP pP 03 45 13.1 +0.2
DPC eS S 03 54 38.6 -3.2
DPC ex x 03 55 26.3
DPC AMS AMS 04 22 50.0
comp=Z,200nm,17.7s
KIV Kislovodsk 77.16 329 P **P 03 44 58.1 +0.5**
comp=Z,346nm,0.9s,mb6.3,SNR=9.0
KIV Kislovodsk 77.16 329d iP **P 03 44 58.2 +0.6**
KIV i 03 45 04.9
KIV eS S 03 54 42.8 +0.5
KIV pmax pmax
comp=Z,60nm,0.8s,mb5.6
KIV MLR MLR
comp=Z,300nm,18.0s,MS4.7
KIV Kislovodsk 77.16 329 eP **P 03 44 58.4 +0.8**
comp=Z,64nm,1.0s,mb5.5
KIV Kislovodsk 77.16 329 P **P 03 44 58.5 +0.9**
SNR=21
KIV P 03 44 58.5
SNR=21
PVCC Panska Ves 77.18 349 eP **P 03 44 57.7 +0.1**
PVCC e*PP pP 03 45 12.6 -0.6
PVCC MLR MLR
comp=Z,300nm,23.7s,MS4.5
PVCC Panska Ves 77.18 349 eP **P 03 44 57.7 +0.1**
PVCC epP pP 03 45 12.6 -0.6
PVCC AMS AMS 04 16 10.0
comp=Z,300nm,23.7s
STHS Stebnicka Huta 77.32 345 eP **P 03 44 59.9 +1.5**
STHS e pP 03 45 13.8 -0.2
STHS pmax pmax
comp=Z,28nm,1.5s,mb5.0
STHS Stebnicka Huta 77.32 345 eP **P 03 44 59.9 +1.5**
comp=Z,28nm,1.5s,mb5.0
STHS e pP 03 45 13.8 -0.2
STHS Stebnicka Huta 77.32 345 eP **P 03 44 59.9 +1.5**
STHS epP pP 03 45 13.8 -0.2
UBBA Unterbreizbach 77.35 352 eP **P 03 44 58.6 +0.1**
comp=Z,20nm,1.5s,mb4.8
AJM Ajmer 77.35 297 eP **P 03 44 58.6 -0.3**
AJM AMb AMB 03 44 59.6
comp=Z,55nm,0.8s,mb5.6
MOX Moxa 77.38 351 eP **P 03 44 58.6 -0.1**
comp=Z,19nm,1.2s,mb4.9
MOX
comp=Z,100nm,21.0s
MOX Moxa 77.38 351 eP **P 03 44 58.8 +0.1**
comp=Z,15nm,0.9s,mb4.9
MOX Moxa 77.38 351 eP **P 03 44 58.6 -0.1**
MOX pmax pmax
comp=Z,19nm,1.2s,mb4.9
MOX MLR MLR
comp=Z,100nm,21.0s,MS4.1
OKC Ostrava-Krasne 77.39 347 eP **P 03 44 59.0 +0.2**
OKC e*PP pP 03 45 14.5 +0.1
OKC eS S 03 54 39.5 -5.0
OKC e 03 55 31.4
OKC MLR MLR
comp=Z,300nm,20.8s,MS4.6
OKC Ostrava-Krasne 77.39 347 eP **P 03 44 59.0 +0.2**
OKC epP pP 03 45 14.5 +0.1
OKC eS S 03 54 39.5 -5.0
OKC ex x 03 55 31.4
OKC AMS AMS 04 19 10.0

comp=Z,300nm,20.8s
NIE Niedzica 77.47 345 eP **P 03 45 00.1 +0.9**
TANN Tannenbergstha 77.52 351 eP **P 03 44 59.6 +0.1**
comp=Z,18nm,1.6s,mb4.8
MORC Moravsky Berou 77.53 347 eP **P 03 44 59.7 +0.1**
MORC e*PP pP 03 45 14.8 -0.4
MORC pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MORC Moravsky Berou 77.53 347 eP **P 03 44 59.7 +0.1**
comp=Z,9.0nm,0.9s,mb4.7
MORC epP pP 03 45 14.8 -0.4
MORC Moravsky Berou 77.53 347⇑iP **P 03 44 59.4 -0.2**
KOLS Kolonicke sedl 77.62 344 eP **P 03 45 00.8 +0.8**
comp=Z,21nm,0.7s,mb5.2
KOLS e pP 03 45 16.8 +1.1
KOLS eS S 03 54 52.7 +5.7
KOLS eSS SS 03 59 49.3 +3.4
KOLS LR LR
comp=Z,200nm,28.1s,MS4.3
KOLS Kolonicke sedl 77.62 344 eP **P 03 45 00.8 +0.8**
KOLS epP pP 03 45 16.8 +1.1
KOLS eS S 03 54 52.7 +5.7
KOLS eSS SS 03 59 49.3 +3.4
PRU Pruhonice 77.71 349 eP **P 03 45 00.7 +0.1**
PRU eS S 03 54 40.8 -7.2
PRU e 03 55 31.9
PRU MLR MLR
comp=Z,200nm,26.4s,MS4.3
PRU Pruhonice 77.71 349 eP **P 03 45 00.7 +0.1**
PRU eS S 03 54 40.8 -7.2
PRU ex x 03 55 31.9
PRU AMS AMS 04 16 40.0
comp=Z,200nm,26.4s
ZEI Tsey 77.82 327 eP **P 03 45 00.2 -1.1**
ZEI eS S 03 54 46.7 -2.7
ZEI pmax pmax
comp=Z,77nm,0.9s,mb5.6
MEM Membach 77.84 355 P **P 03 45 01.5 +0.2**
comp=Z,12nm,1.2s,mb4.7
UZH Uzhgorod 77.90 344⇑iP **P 03 45 01.5 -0.2**
UZH e 03 45 24.5
KULM Kulim 77.98 263 eP **P 03 45 01.9 -0.8**
comp=Z,42nm,1.4s,mb5.2
ANN Anapa 78.01 332 eP **P 03 45 01.5 -0.8**
ANN e 03 48 01.5
ANN eS S 03 54 48.3 -3.1
ANN pmax pmax
comp=Z,70nm,1.1s,mb5.5
LIKS Likavka 78.02 346 eP **P 03 45 03.4 +1.1**
LIKS pmax pmax
comp=Z,31nm,0.5s,mb5.5
LIKS Likavka 78.02 346 eP **P 03 45 03.4 +1.1**
comp=Z,30nm,0.5s,mb5.5
LIKS Likavka 78.02 346 eP **P 03 45 03.4 +1.1**
SNF Seneffe 78.03 356 P **P 03 45 02.3 0.0**
comp=Z,11nm,1.9s,mb4.5
MENF Mencas 78.06 357 eP **P 03 45 03.0 +0.5**
TNS Taunus Mts 78.06 353 eP **P 03 45 02.9 +0.4**
comp=Z,24nm,0.9s,mb5.1
TNS epP pP 03 45 17.9 -0.2
TNS Taunus Mts 78.06 353 eP **P 03 45 02.9 +0.4**
TNS e*PP pP 03 45 17.9 -0.2
TNS pmax pmax
comp=Z,24nm,0.9s,mb5.1
BCLA Clavier 78.07 355 P **P 03 45 03.2 +0.7**
comp=Z,12nm,1.3s,mb4.7
VRAC Vranov 78.12 348⇑P **P 03 45 02.8 0.0**
VRAC Vranov 78.12 348⇑iP **P 03 45 02.8 0.0**
ONI Oni 78.13 327 P **P 03 45 03.4 +0.4**
KIS Kishinev 78.17 339 eP **P 03 45 01.0 -2.1**
KIS eS S 03 54 45.0 -8.0
KIS eScS ScS 03 55 16.0 -2.2
KIS esS sS 03 55 29.0 +10
KIS eSS SS 03 59 40.0 -14
KIS eL 04 14 32.0
KIS LRM 04 23 40.0
comp=Z,400nm,18.0s
KIS Kishinev 78.17 339 eP **P 03 45 01.0 -2.1**
KIS i pP 03 45 18.5 -0.3
KIS e 03 45 25.0
KIS eS S 03 54 45.0 -8.0
KIS e 03 55 16.0
KIS e*SS sS 03 55 29.0 +10
KIS MLR MLR
comp=N,400nm,18.0s
KIS MLR MLR
comp=Z,400nm,18.0s,MS4.8
KIS MLR MLR
comp=Z,400nm,18.0s
ROTZ Rotzenmuhle 78.19 351 eP **P 03 45 03.6 +0.4**
comp=Z,15nm,1.2s,mb4.8
KEH Kehvi 78.22 327 P **P 03 45 03.3 -0.2**
TREC Trest 78.28 348 eP **P 03 45 04.0 +0.3**
TREC e*PP pP 03 45 19.3 0.0
TREC MLR MLR
comp=Z,300nm,23.0s,MS4.6
TREC Trest 78.28 348 eP **P 03 45 04.0 +0.3**
TREC epP pP 03 45 19.3 0.0
TREC AMS AMS 04 17 30.0
comp=Z,300nm,23.0s
BHPL Bhopal 78.30 293 eP **P 03 45 03.5 -0.7**
BHPL AMb AMB 03 45 06.4
comp=Z,89nm,1.7s,mb5.4
BUR08 Bucovina Ar. S 78.31 342 eP **P 03 45 04.2 +0.3**
BURAR Bucovina Array 78.34 342⇓P **P 03 45 04.3 +0.2**
KECS Kecovo 78.35 345 eP **P 03 45 04.9 +0.8**
KECS e pP 03 45 20.5 +0.7
KECS pmax pmax
comp=Z,13nm,0.8s,mb4.9
KECS Kecovo 78.35 345 eP **P 03 45 04.9 +0.8**
comp=Z,13nm,0.8s,mb4.9
KECS e pP 03 45 20.5 +0.7
KECS Kecovo 78.35 345 eP **P 03 45 04.9 +0.8**
KECS epP pP 03 45 20.5 +0.7
GRA1 Grafenberg Arr 78.36 351 eP **P 03 45 04.8 +0.7**
comp=Z,25nm,0.8s,mb5.2
GRA1 eS S 03 54 53.9 -1.1
GRA1 LR LR
comp=Z,200nm,20.8s,MS4.4
GRF Grafenberg Arr 78.36 351 eP **P 03 45 04.8 +0.7**
comp=Z,25nm,0.8s,mb5.2
GRF eS S 03 54 53.9 -1.1
GRF eL 04 26 39.4
comp=Z,217nm,20.8s
GRF Grafenberg Arr 78.36 351 eP **P 03 45 04.8 +0.7**
GRF eS S 03 54 53.9 -1.1
GRF pmax pmax
comp=Z,25nm,0.8s,mb5.2
GRF MLR MLR
comp=Z,200nm,20.8s,MS4.4
GIVF Givet 78.41 355 eP **P 03 45 04.6 +0.2**
DOU Dourbes 78.43 356 P **P 03 45 04.8 +0.3**
comp=Z,8.9nm,1.6s,mb4.5
TBLG Delisi 78.45 326 eP **P 03 45 05.7 +0.9**
TBLG Delisi 78.45 326 P **P 03 45 05.7 +0.9**
MTA Mtatsminda 78.47 326 P **P 03 45 05.3 +0.4**
ABH Alteburg 78.47 354 eP **P 03 45 05.0 +0.2**
DGRG David-gareji 78.48 326 P **P 03 45 01.5 -3.4**
BAIF Baives 78.48 356 eP **P 03 45 05.2 +0.4**
comp=Z,8.5nm,0.5s,mb4.6
BAIF Baives 78.48 356 eP **P 03 45 05.2 +0.4**
BAIF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
BAIF Baives 78.48 356 eP **P 03 45 05.2 +0.4**
comp=Z,4.3nm,0.5s,mb4.6
KOLL Kolacno 78.58 346 eP **P 03 45 06.2 +0.8**
KOLL Kolacno 78.58 346 eP **P 03 45 06.2 +0.8**
VYHS Vyhne 78.60 346 eP **P 03 45 05.9 +0.4**
VYHS e pP 03 45 21.3 +0.2
VYHS eS S 03 54 54.3 -3.3
VYHS eSS SS 04 00 09.4 +8.7
VYHS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VYHS Vyhne 78.60 346 eP **P 03 45 05.9 +0.4**
comp=Z,9.5nm,0.9s,mb4.7
VYHS e pP 03 45 21.3 +0.2
VYHS eS S 03 54 54.3 -3.3
VYHS eSS SS 04 00 09.4 +8.7
VYHS Vyhne 78.60 346 eP **P 03 45 05.9 +0.4**
VYHS epP pP 03 45 21.3 +0.2
VYHS eS S 03 54 54.3 -3.3
VYHS eSS SS 04 00 09.4 +8.7
BMR Baia Mare 78.61 343 P **P 03 45 06.9 +1.3**
TOD Tromm 78.65 353 eP **P 03 45 05.9 +0.1**

KHC Kasperske Hory 78.67 350 eP **P 03 45 06.3 +0.4**
KHC e 03 45 10.0
KHC eS S 03 54 57.2 -1.1
KHC e 03 55 42.2
KHC MLR MLR
comp=Z,200nm,18.6s,MS4.5
KHC Kasperske Hory 78.67 350 eP **P 03 45 06.3 +0.4**
comp=Z,12nm,0.9s,mb4.8
KHC Kasperske Hory 78.67 350 eP **P 03 45 06.3 +0.4**
KHC ex x 03 45 10.0
KHC eS S 03 54 57.2 -1.1
KHC ex x 03 55 42.2
KHC AMS AMS 04 16 50.0
comp=Z,200nm,18.6s
WET Wettzell 78.73 350 eP **P 03 45 06.3 +0.1**
comp=Z,6.0nm,1.0s,mb4.5
WET epP pP 03 45 21.1 -0.7
WET Wettzell 78.73 350 eP **P 03 45 06.3 +0.1**
WET e*PP pP 03 45 21.1 -0.7
WET pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WLF Walferdange 78.77 355 P **P 03 45 07.1 +0.7**
WLF Walferdange 78.77 355 eP **P 03 45 06.9 +0.5**
comp=Z,16nm,1.1s,mb4.9
WLF Walferdange 78.77 355 eP **P 03 45 06.7 +0.3**
WLF pmax pmax
comp=Z,11nm,0.9s,mb4.8
WLF Walferdange 78.77 355 eP **P 03 45 06.7 +0.3**
comp=Z,11nm,0.9s,mb4.8
SIM Simferopol' 78.79 335 eP **P 03 45 07.7 +1.1**
SIM eS S 03 54 58.0 -1.8
SIM pmax pmax
comp=Z,29nm,1.0s,mb5.2
LEOM Leova 78.79 339⇓P **P 03 45 07.2 +0.6**
LEOM Leova 78.79 339⇓iP **P 03 45 07.2 +0.6**
GEC2 GERESS Array S 78.93 349 eP **P 03 45 07.4 +0.1**
comp=Z,18nm,1.6s,mb4.8
GEC2 GERESS Array S 78.93 349 eP **P 03 45 07.4 +0.1**
GEC2 pmax pmax
comp=Z,18nm,1.6s,mb4.8
GERES GERESS Array B 78.93 349 P **P 03 45 06.4 -0.9**
comp=Z,4.2nm,0.8s,mb4.5,baz=21,slow=4.4,SNR=41
GERES LR LR 04 22 21.0
comp=Z,193nm,20.1s,MS4.4,baz=133,slow=37
GERES GERESS Array B 78.93 349 P **P 03 45 06.4 -0.9**
GERES pmax pmax
comp=Z,4.0nm,0.8s
GERES MLR MLR
comp=Z,193nm,20.1s
KTD Kalmit 78.99 353 eP **P 03 45 07.8 +0.2**
PSZ Piszkesteto 79.00 345 eP **P 03 45 08.9 +1.2**
PSZ e*PP pP 03 45 24.5 +1.2
PSZ pmax pmax
comp=Z,26nm,1.1s,mb5.1
PSZ Piszkesteto 79.00 345 eP **P 03 45 08.9 +1.2**
comp=Z,26nm,1.1s,mb5.1
PSZ epP pP 03 45 24.5 +1.1
PSZ Piszkesteto 79.00 345⇓eP **P 03 45 08.1 +0.4**
PSZ Piszkesteto 79.00 345⇑iP **P 03 45 08.6 +0.9**
JASL Jaisalmer 79.06 300 eP **P 03 45 08.1 -0.3**
JASL AMb AMB 03 45 09.1
comp=Z,61nm,0.9s,mb5.5
ZST Bratislava 79.14 347 eP **P 03 45 09.9 +1.4**
comp=Z,23nm,0.8s,mb5.2
ZST ePP pP 03 45 21.0 -3.1
ZST eSP 03 45 25.7
ZST eS S 03 55 04.6 +1.2
ZST LR LR
comp=Z,200nm,19.1s,MS4.5
ZST Bratislava 79.14 347 eP **P 03 45 09.9 +1.4**
ZST epP pP 03 45 21.0 -3.1
ZST esP sP 03 45 25.7 -4.6
ZST eS S 03 55 04.6 +1.2
LANF Langenberg 79.35 353 eP **P 03 45 09.9 +0.3**
STU Stuttgart 79.45 352 eP **P 03 45 10.4 +0.3**
comp=Z,23nm,1.1s,mb5.0
STU Stuttgart 79.45 352 eP **P 03 45 10.4 +0.3**
STU pmax pmax
comp=Z,16nm,0.7s,mb5.1
STU Stuttgart 79.45 352 eP **P 03 45 10.4 +0.2**
comp=Z,16nm,0.7s,mb5.1
BUD Budapest 79.56 346⇑eP **P 03 45 12.3 +1.6**
CONA Conrad Observa 79.57 348 i P **P 03 45 11.5 +0.7**
comp=Z,26nm,1.0s,mb5.1,SNR=18
DRGR 79.61 343⇓P **P 03 45 11.3 +0.3**
DRGR 79.61 343⇓iP **P 03 45 11.3 +0.3**
VRI Vrincioaia 79.70 340⇑⇑P **P 03 45 12.2 +0.7**
VRI Vrincioaia 79.70 340⇑iP **P 03 45 12.2 +0.7**
PLOR Plostina 79.73 340⇓P **P 03 45 12.3 +0.6**
PLOR Plostina 79.73 340⇓iP **P 03 45 12.3 +0.6**
DBOC Borcka 79.83 328⇓iP **P 03 45 12.3 -0.1**
MOA Molln 79.85 349⇓iP **P 03 45 12.6 +0.2**
comp=Z,6.3nm,1.0s,mb4.5
FUR Furstenfeldbru 79.86 351 eP **P 03 45 12.7 +0.3**
comp=Z,34nm,1.1s,mb5.2
FUR Furstenfeldbru 79.86 351 eP **P 03 45 12.7 +0.3**
FUR pmax pmax
comp=Z,34nm,1.1s,mb5.2
TLCR 79.88 338⇓P **P 03 45 12.7 +0.1**
TLCR 79.88 338⇓iP **P 03 45 12.7 +0.1**
FLN La Foliniere 79.91 359 eP **P 03 45 12.6 0.0**
comp=Z,15nm,0.5s,mb4.9
FLN eMLR MLR
comp=Z,185nm,20.5s,MS4.1
FLN La Foliniere 79.91 359 eP **P 03 45 12.6 0.0**
FLN pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
FLN MLR MLR
comp=Z,180nm,20.5s,MS4.4
FLN La Foliniere 79.91 359 eP **P 03 45 12.6 0.0**
comp=Z,7.7nm,0.5s,mb4.9
FLN LR LR
comp=Z,180nm,20.5s,MS4.4
CDF Champ du Feu 79.95 354 eP **P 03 45 12.8 -0.1**
comp=Z,12nm,0.5s,mb4.8
CDF Champ du Feu 79.95 354 eP **P 03 45 12.8 -0.1**
CDF pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
CDF Champ du Feu 79.95 354 eP **P 03 45 12.8 -0.1**
comp=Z,6.2nm,0.4s,mb4.9
BFO Black Forest 79.95 353 eP **P 03 45 12.8 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
BFO epP pP 03 45 28.7 +0.1
BFO Black Forest 79.95 353 eP **P 03 45 12.8 -0.1**
BFO e*PP pP 03 45 28.7 +0.1
BFO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MEZF Maizieres J'vi 79.99 355 eP **P 03 45 13.5 +0.4**
TBI Tubuai 80.02 150 eLR LR 04 10 04.6
comp=Z,635nm,29.8s,baz=341
CFR Carcaliu 80.04 339⇑⇑P **P 03 45 14.2 +0.8**
CFR Carcaliu 80.04 339⇑iP **P 03 45 14.2 +0.8**
LDF La Druitiere 80.07 359 eP **P 03 45 13.4 -0.1**
comp=Z,16nm,0.6s,mb4.8
LDF La Druitiere 80.07 359 eP **P 03 45 13.4 -0.1**
LDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LDF La Druitiere 80.07 359 eP **P 03 45 13.4 -0.1**
comp=Z,7.9nm,0.6s,mb4.8
DIGO Kars 80.09 326⇓iP **P 03 45 14.9 +1.1**
RJOB Jochberg 80.13 350 eP **P 03 45 14.3 +0.5**
comp=Z,10.0nm,0.8s,mb4.8
RJOB epP pP 03 45 29.7 +0.2
ECH Echery 80.15 354 eP **P 03 45 14.0 0.0**
ECH Echery 80.15 354 eP **P 03 45 13.6 -0.4**
ECH pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ECH Echery 80.15 354 eP **P 03 45 13.6 -0.3**
comp=Z,5.1nm,1.0s,mb4.4
DDEM Demirkent 80.21 328⇓iP **P 03 45 15.1 +0.6**
THEF They Montfort 80.22 355 eP **P 03 45 14.7 +0.4**
MLR Muntele Rosu 80.22 340⇓P **P 03 45 14.7 +0.3**
MLR Muntele Rosu 80.22 340⇓iP **P 03 45 14.7 +0.3**
ARSA Arzberg 80.28 348 i P **P 03 45 15.4 +0.8**
comp=Z,23nm,1.1s,mb5.0,SNR=12
GRR Gorron 80.29 359 eP **P 03 45 13.8 -0.9**
comp=Z,21nm,0.6s,mb4.9
GRR Gorron 80.29 359 eP **P 03 45 13.8 -0.9**
GRR pmax pmax
comp=Z,11nm,0.6s,mb5.0
GRR Gorron 80.29 359 eP **P 03 45 13.8 -0.9**
comp=Z,11nm,0.6s,mb5.0
ROSF Rostrenen 80.34 1 eP **P 03 45 15.4 +0.4**
comp=Z,8.5nm,0.6s,mb4.6
ROSF Rostrenen 80.34 1 eP **P 03 45 15.4 +0.4**

ROSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ROSF Rostrenen 80.34 1 *e*P **P 03 45 15.4 +0.4**
comp=Z,4.3nm,0.6s,mb4.6
HAU Haudompre 80.42 354 *e*P **P 03 45 15.4 0.0**
comp=Z,14nm,0.6s,mb4.8
HAU *e*MLR MLR
comp=Z,192nm,21.5s,MS4.1
HAU Haudompre 80.42 354 *e*P **P 03 45 15.4 0.0**
HAU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
HAU MLR MLR
comp=Z,190nm,21.5s,MS4.4
HAU Haudompre 80.42 354 *e*P **P 03 45 15.4 0.0**
comp=Z,6.8nm,0.6s,mb4.8
HAU LR LR
comp=Z,190nm,21.5s,MS4.4
SGMF Saint Gilles 80.43 0 *e*P **P 03 45 15.0 -0.4**
comp=Z,12nm,0.5s,mb4.8
SGMF Saint Gilles 80.43 0 *e*P **P 03 45 15.0 -0.4**
SGMF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
SGMF Saint Gilles 80.43 0 *e*P **P 03 45 15.0 -0.4**
comp=Z,6.1nm,0.5s,mb4.8
FELD Feldberg im Sc 80.43 353 *e*P **P 03 45 15.6 +0.1**
MOF Molkenrain 80.52 354 *e*P **P 03 45 16.1 +0.2**
HARR Harsova 80.55 339 ⇑*i*P **P 03 45 16.2 0.0**
HARR Harsova 80.55 339 ⇑*i*P **P 03 45 16.2 0.0**
HINF Hinteralfeld 80.57 354 *e*P **P 03 45 16.1 -0.1**
comp=Z,4.1nm,0.5s,mb4.3
HINF Hinteralfeld 80.57 354 *e*P **P 03 45 16.1 -0.1**
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
HINF Hinteralfeld 80.57 354 *e*P **P 03 45 16.1 -0.1**
comp=Z,2.0nm,0.5s,mb4.3
WATA Walderalm 80.65 351 ⇓*i*P **P 03 45 17.1 +0.5**
comp=Z,15nm,0.5s,mb5.2,SNR=9.9
MOTA Moosalm 80.69 351 ⇑*i*P **P 03 45 17.3 +0.4**
comp=Z,50nm,1.5s,mb5.2,SNR=9.8
KBA Koelnbreinsper 80.72 349 *i*P **P 03 45 18.2 +1.1**
comp=Z,51nm,0.5s,mb5.7,SNR=30
WTTA Wattenberg 80.72 351 ⇓*i*P **P 03 45 17.5 +0.5**
comp=Z,25nm,0.6s,mb5.3,SNR=15
QUIF Quistinic 80.76 1 *e*P **P 03 45 17.7 +0.5**
comp=Z,7.9nm,0.6s,mb4.5
QUIF Quistinic 80.76 1 *e*P **P 03 45 17.7 +0.5**
QUIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
QUIF Quistinic 80.76 1 *e*P **P 03 45 17.7 +0.5**
comp=Z,4.0nm,0.6s,mb4.5
WRAB Tennant Creek 80.86 221 P **P 03 45 17.6 -0.3**
comp=Z,110nm,0.5s,mb6.0,SNR=6.2
WRAB Tennant Creek 80.86 221 *e*P **P 03 45 17.1 -0.8**
WRAB *e**PP pP 03 45 31.9 -1.7
WRAB pmax pmax
comp=Z,17nm,0.9s,mb5.0
WRAB Tennant Creek 80.86 221 *e*P **P 03 45 17.1 -0.8**
comp=Z,17nm,0.9s,mb5.0
WRAB *e*pP pP 03 45 31.9 -1.7
DAVA Damuels 80.86 352 ⇑*i*P **P 03 45 17.9 +0.1**
comp=Z,13nm,1.2s,mb4.7
SOKA Soboth 80.91 348 ⇓*i*P **P 03 45 18.4 +0.4**
comp=Z,25nm,0.6s,mb5.3
HOMI Horasan 80.92 327 ⇓*i*P **P 03 45 19.3 +1.0**
BZS Buzias 80.94 343 ⇑*i*P **P 03 45 18.1 -0.1**
BZS Buzias 80.94 343 ⇑*i*P **P 03 45 18.1 -0.1**
PERS Pernice 80.94 348 *i*P **P 03 45 18.8 +0.6**
GZR Gura Zlata 80.94 343 P **P 03 45 18.9 +0.7**
GZR Gura Zlata 80.94 343 ⇓*i*P **P 03 45 19.0 +0.8**
KOGS Kog 80.97 347 *i*P **P 03 45 18.7 +0.3**
PSI Prapat 80.99 263 P **P 03 45 18.2 -0.8**
comp=Z,19nm,0.8s,mb5.1,baz=13,slow=1.8,SNR=14
PSI Prapat 80.99 263 P **P 03 45 18.2 -0.8**
PSI pmax pmax
comp=Z,19nm,0.8s,mb5.1
LOMF Lomont 81.04 354 *e*P **P 03 45 19.1 +0.4**
FETA Feichten 81.05 351 ⇓*i*P **P 03 45 19.1 +0.3**
comp=Z,24nm,1.2s,mb5.0,SNR=15
MYKA Terra Mystica 81.12 349 ⇓*i*P **P 03 45 19.2 0.0**
comp=Z,11nm,0.9s,mb4.8
OBKA Obir 81.13 348 ⇓*i*P **P 03 45 19.9 +0.6**
comp=Z,27nm,0.5s,mb5.5,SNR=28
ABTA Abfaltersbach 81.14 350 ⇓*i*P **P 03 45 19.4 +0.1**
comp=Z,27nm,1.2s,mb5.1,SNR=15
ERZM Erzurum 81.23 328 *i*P **P 03 45 21.4 +1.5**
LOR Lormes 81.28 356 *e*P **P 03 45 20.3 +0.3**
comp=Z,4.3nm,0.4s,mb4.4
LOR *e*MLR MLR
comp=Z,262nm,19.5s,MS4.3
LOR Lormes 81.28 356 *e*P **P 03 45 20.3 +0.3**
LOR pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
LOR MLR MLR
comp=Z,260nm,19.5s,MS4.6
LOR Lormes 81.28 356 *e*P **P 03 45 20.3 +0.3**
comp=Z,2.2nm,0.4s,mb4.4
LOR LR LR
comp=Z,260nm,19.5s,MS4.6
KOPT Kop Dagi 81.41 328 ⇓*i*P **P 03 45 22.1 +1.3**
SSF Saint Saulge 81.50 356 *e*P **P 03 45 21.4 +0.2**
comp=Z,5.5nm,0.4s,mb4.5
SSF Saint Saulge 81.50 356 *e*P **P 03 45 21.4 +0.2**
SSF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
SSF Saint Saulge 81.50 356 *e*P **P 03 45 21.4 +0.2**
comp=Z,2.8nm,0.4s,mb4.5
GMNA Gemona 81.52 349 P **P 03 45 21.4 +0.1**
comp=Z,56nm,0.4s,mb5.8
BRMO Bormio 81.62 351 P **P 03 45 22.9 +1.1**
VOY Vojsko 81.68 349 *e*P **P 03 45 21.8 -0.4**
VOY *e* 03 45 29.2
KELT Kelkit 81.69 329 ⇓*i*P **P 03 45 23.1 +0.8**
AVF Avril sur Loir 81.78 356 *e*P **P 03 45 22.9 +0.2**
CABF La Chapelle 81.82 354 *e*P **P 03 45 23.2 +0.3**
comp=Z,8.2nm,0.6s,mb4.6
CABF La Chapelle 81.82 354 *e*P **P 03 45 23.2 +0.3**
CABF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CABF La Chapelle 81.82 354 *e*P **P 03 45 23.2 +0.3**
comp=Z,4.1nm,0.6s,mb4.5
SMF Signal de Mont 81.91 356 *e*P **P 03 45 23.5 +0.2**
comp=Z,7.9nm,0.5s,mb4.6
SMF Signal de Mont 81.91 356 *e*P **P 03 45 23.5 +0.2**
SMF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
SMF Signal de Mont 81.91 356 *e*P **P 03 45 23.5 +0.2**
comp=Z,4.0nm,0.5s,mb4.6
ERBA Erbaa 81.98 331 ⇓*i*P **P 03 45 24.5 +0.7**
BOJS Bojanci 82.03 348 *i*P **P 03 45 24.1 +0.1**
BGF Bois d'Agland 82.03 357 *e*P **P 03 45 24.3 +0.3**
TGUH Tegucigalpa,Un 82.05 78 *e*P **P 03 45 26.0 +1.5**
comp=Z,126nm,1.0s,mb5.8
MFF Saint Martin d 82.07 359 *e*P **P 03 45 24.5 +0.3**
KNDS Knezji Dol 82.12 348 *i*P **P 03 45 24.3 -0.2**
HYB Hyderabad 82.18 288 *i*P **P 03 45 24.0 -1.2**
comp=Z,75nm,1.0s,mb5.6
HYB *e* pP 03 45 40.5 -0.4
TCF Toulx Ste Croi 82.33 357 *e*P **P 03 45 25.7 +0.2**
comp=Z,2.9nm,0.4s,mb4.2
TCF Toulx Ste Croi 82.33 357 *e*P **P 03 45 25.7 +0.2**
TCF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
TCF Toulx Ste Croi 82.33 357 *e*P **P 03 45 25.7 +0.2**
comp=Z,1.5nm,0.4s,mb4.3
VAI Varese 82.37 352 P **P 03 45 26.0 +0.3**
VAI pmax pmax
comp=Z,28nm,1.0s,mb5.2
VAI Varese 82.37 352 P **P 03 45 26.0 +0.3**
comp=Z,28nm,1.0s,mb5.2
HAKT HAKKARI 82.52 325 ⇓*i*P **P 03 45 27.6 +0.9**
AGO Saint Agoulin 82.53 356 *e*P **P 03 45 28.5 +1.9**
PLDF La Plantade 82.59 356 *e*P **P 03 45 28.8 +1.9**
CTKT Corum 82.61 333 ⇓*i*P **P 03 45 27.4 +0.2**
KEMA Kemaliye 82.74 329 ⇓*i*P **P 03 45 28.2 +0.4**
PYM Petit Puy Mans 82.83 356 *e*P **P 03 45 30.1 +1.9**
LPL La Plagne 82.87 354 *e*P **P 03 45 29.6 +1.2**
comp=Z,13nm,0.8s,mb4.7
LPL La Plagne 82.87 354 *e*P **P 03 45 29.6 +1.2**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LPL La Plagne 82.87 354 *e*P **P 03 45 29.6 +1.2**
comp=Z,6.7nm,0.8s,mb4.7
LPG La Plagne 82.89 354 *e*P **P 03 45 30.0 +1.6**
comp=Z,24nm,0.9s,mb4.9
LPG La Plagne 82.89 354 *e*P **P 03 45 30.0 +1.6**
LPG pmax pmax
comp=Z,12nm,0.9s,mb4.9
LPG La Plagne 82.89 354 *e*P **P 03 45 30.0 +1.6**
comp=Z,12nm,0.9s,mb4.9
NVLJ Novalja 83.01 348 P **P 03 45 28.6 -0.5**
NVLJ Novalja 83.01 348 *i*P **P 03 45 28.6 -0.5**
BEST Besiri 83.08 327 ⇓*i*P **P 03 45 30.4 +0.8**
FITZ Fitzroy Crossi 83.09 229 *e*P **P 03 45 28.2 -1.5**
comp=Z,28nm,0.8s,mb5.3
FITZ Fitzroy Crossi 83.09 229 P **P 03 45 29.6 -0.1**
comp=Z,15nm,0.8s,mb5.1,baz=26,slow=4.9,SNR=14
FITZ Fitzroy Crossi 83.09 229 *e*P **P 03 45 29.4 -0.3**
comp=Z,18nm,0.9s,mb5.1
ELDT Eldivan 83.12 334 ⇓*i*P **P 03 45 30.7 +1.0**
SSB Saint Sauveur 83.24 355 *e*P **P 03 45 30.5 +0.2**
SSB pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
SSB Saint Sauveur 83.24 355 *e*P **P 03 45 30.5 +0.3**
comp=Z,8.8nm,0.9s,mb4.8
RJF Les Rejaudoux 83.33 357 *e*P **P 03 45 30.5 -0.2**
comp=Z,3.2nm,0.4s,mb4.4
RJF *e*MLR MLR
comp=Z,214nm,22.2s,MS4.2
RJF Les Rejaudoux 83.33 357 *e*P **P 03 45 30.5 -0.2**
RJF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
RJF MLR MLR
comp=Z,210nm,22.3s,MS4.5
RJF Les Rejaudoux 83.33 357 *e*P **P 03 45 30.5 -0.2**
comp=Z,1.6nm,0.4s,mb4.4
RJF LR LR
comp=Z,210nm,22.3s,MS4.5
BNI Bardonecchia 83.33 354 *e*P **P 03 45 31.7 +0.9**
BNI pmax pmax
comp=Z,22nm,0.9s,mb5.2
BNI Bardonecchia 83.33 354 *e*P **P 03 45 31.7 +0.9**
comp=Z,22nm,0.9s,mb5.2
LBL Lubilhac 83.34 356 *e*P **P 03 45 32.5 +1.7**
DIYA Diyarbakir 83.43 328 ⇓*i*P **P 03 45 31.9 +0.5**
ORIF Oris-en-Rattie 83.52 354 *e*P **P 03 45 32.8 +1.1**
comp=Z,18nm,0.9s,mb4.9
ORIF *e*MLR MLR
comp=Z,154nm,21.5s,MS4.0
ORIF Oris-en-Rattie 83.52 354 *e*P **P 03 45 32.8 +1.1**
ORIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
ORIF Oris-en-Rattie 83.52 354 *e*P **P 03 45 32.8 +1.1**
comp=Z,9.0nm,0.9s,mb4.9
VIVF Saint-Julien-l 83.65 355 *e*P **P 03 45 32.9 +0.5**
MBDF Montbardon 83.65 354 *e*P **P 03 45 33.4 +1.0**
comp=Z,24nm,0.9s,mb5.0
MBDF Montbardon 83.65 354 *e*P **P 03 45 33.4 +1.0**
MBDF pmax pmax
comp=Z,12nm,0.9s,mb5.0
MBDF Montbardon 83.65 354 *e*P **P 03 45 33.4 +1.0**
comp=Z,12nm,0.9s,mb5.0
CDAG Cicekdag 83.66 333 ⇓*i*P **P 03 45 32.8 +0.3**
CAF Calviac 83.69 357 *e*P **P 03 45 31.9 -0.7**
GSCL Gusciola 83.71 351 P **P 03 45 34.2 +1.5**
comp=Z,6.4nm,0.5s,mb5.0
LFF La Frestale 83.71 358 *e*P **P 03 45 32.5 -0.2**
comp=Z,11nm,0.5s,mb4.9
LFF La Frestale 83.71 358 *e*P **P 03 45 32.5 -0.2**
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
LFF La Frestale 83.71 358 *e*P **P 03 45 32.5 -0.2**
comp=Z,5.4nm,0.5s,mb4.9
BR131 Keskin Array S 83.77 333 *e*P **P 03 45 33.6 +0.5**
comp=Z,14nm,0.7s,mb5.2
BRTR Keskin Array B 83.77 333 P **P 03 45 33.3 +0.2**
comp=Z,21nm,0.8s,mb5.3,baz=52,slow=3.0,SNR=100
BRTR Keskin Array B 83.77 333 P **P 03 45 33.3 +0.2**
BRTR pmax pmax
comp=Z,21nm,0.8s
PINB Pinarbasi 83.93 331 ⇓*i*P **P 03 45 34.5 +0.5**
SFI Santa Sofia 84.02 350 P **P 03 45 35.9 +1.6**
POO Poona 84.05 292 *e*P **P 03 45 34.5 -0.3**
POO AMb AMB 03 45 35.5
comp=Z,70nm,0.8s,mb5.8
FSSB Fossombrone 84.12 349 P **P 03 45 35.5 +0.7**
comp=Z,30nm,1.0s,mb5.4
STON Ston 84.26 346 P **P 03 45 34.8 -0.7**
STON Ston 84.26 346 *i*P **P 03 45 34.8 -0.7**
PIEI Pieia 84.31 349 P **P 03 45 36.3 +0.5**
PII Pisa 84.34 351 P **P 03 45 35.9 0.0**
PII pmax pmax
comp=Z,7.0nm,0.3s,mb5.3
PII Pisa 84.34 351 P **P 03 45 35.9 0.0**
comp=Z,7.4nm,0.3s,mb5.3
ASAR Alice Springs 84.38 220 P **P 03 45 36.0 -0.2**
comp=Z,5.8nm,0.8s,mb4.8,baz=25,slow=5.0,SNR=30
ASAR pP pP 03 45 52.7 +0.7
comp=Z,4.4nm,0.8s,baz=25,slow=5.0,SNR=6.3
ASAR PKKPbc PKKPbc 04 03 48.4 +1.6
comp=Z,0.1nm,0.3s,baz=194,slow=1.9,SNR=7.4
ASAR Alice Springs 84.38 220 P **P 03 45 36.0 -0.2**
ASAR *PP pP 03 45 52.7 +0.7
ASAR pmax pmax
comp=Z,6.0nm,0.8s
ASAR pmax pmax
comp=Z,4.0nm,0.8s
SBF Sospel 84.46 353 *e*P **P 03 45 37.0 +0.4**
LASF Ste Croix 84.47 356 *e*P **P 03 45 36.3 -0.3**
SMRF Simiane la Rot 84.48 354 *e*P **P 03 45 38.0 +1.4**
BORA Eskisehir 84.49 335 ⇓*i*P **P 03 45 36.4 -0.4**
SKO Skopje 84.50 343 *e*P **P 03 45 37.8 +1.0**
SNTG Esanatoglia 84.53 349 P **P 03 45 38.0 +1.1**
comp=Z,21nm,0.5s,mb5.5
MURB Monte Urbino 84.58 349 P **P 03 45 37.8 +0.7**
ESKT Eskisehir 84.72 335 ⇓*i*P **P 03 45 37.5 -0.4**
ASS Assisi 84.76 349 P **P 03 45 38.7 +0.7**
ASS pmax pmax
comp=Z,25nm,0.1s,mb6.3
ASS Assisi 84.76 349 P **P 03 45 38.7 +0.7**
comp=Z,25nm,0.1s,mb6.3
GZT Gaziantep 84.78 329 ⇓*i*P **P 03 45 39.0 +0.7**
FRF La Foret Royal 84.82 354 *e*P **P 03 45 38.7 +0.3**
comp=Z,11nm,0.6s,mb4.8
FRF La Foret Royal 84.82 354 *e*P **P 03 45 38.7 +0.3**
FRF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
FRF La Foret Royal 84.82 354 *e*P **P 03 45 38.7 +0.3**
comp=Z,5.3nm,0.6s,mb4.8
KAD Karad 84.83 291 *e*P **P 03 45 38.2 -0.5**
KAD AMb AMB 03 45 39.1
comp=Z,42nm,0.8s,mb5.6
NRCA Norcia 84.93 349 P **P 03 45 40.0 +1.1**
comp=Z,54nm,0.9s,mb5.7
ANDN Andirin 84.96 330 ⇓*i*P **P 03 45 39.8 +0.7**
MGAB Montegabbione 84.97 350 P **P 03 45 38.7 -0.4**
LMR La Mourre 85.06 354 *e*P **P 03 45 39.4 -0.1**
TERO Teramo 85.08 348 P **P 03 45 39.9 +0.2**
KRUS Krusevo 85.11 343 *e*P **P 03 45 38.9 -1.0**
RKT Rikitea 85.16 137 *e*LR LR 04 12 19.2
comp=Z,406nm,33.8s,baz=328
MTLF Montolieu 85.27 357 *e*P **P 03 45 40.4 -0.2**
comp=Z,8.6nm,0.4s,mb4.9
MTLF Montolieu 85.27 357 *e*P **P 03 45 40.4 -0.2**
MTLF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
MTLF Montolieu 85.27 357 *e*P **P 03 45 40.4 -0.2**
comp=Z,4.3nm,0.4s,mb4.9
AQU L'Aquila 85.37 349 *e*P **P 03 45 42.1 +1.0**
AQU *e**PP pP 03 45 57.2 +0.3
AQU pmax pmax
comp=Z,41nm,1.1s,mb5.5
AQU L'Aquila 85.37 349 *e*P **P 03 45 42.1 +1.0**
comp=Z,42nm,1.1s,mb5.5
AQU *e*pP pP 03 45 57.2 +0.3
AQU L'Aquila 85.37 349 ⇓*i*P **P 03 45 41.9 +0.8**
BOLV Bolvadin 85.45 335 ⇓*i*P **P 03 45 41.5 -0.1**
GDZ Gediz 85.48 336 ⇓*i*P **P 03 45 41.2 -0.5**
SJPF Ste Jean 85.57 359 *e*P **P 03 45 41.5 -0.6**
EPF Esparros 85.63 358 *e*P **P 03 45 42.1 -0.3**
PGF Pioggiola 85.64 352 *e*P **P 03 45 42.4 -0.1**
comp=Z,34nm,0.6s,mb5.4
PGF Pioggiola 85.64 352 *e*P **P 03 45 42.4 -0.1**
PGF pmax pmax
comp=Z,17nm,0.6s,mb5.5
PGF Pioggiola 85.64 352 *e*P **P 03 45 42.4 -0.1**
comp=Z,17nm,0.6s,mb5.5
MLS Moulis 85.69 358 *e*P **P 03 45 40.4 -2.3**
GULE Gulek 85.71 331 ⇓*i*P **P 03 45 43.2 +0.3**
ETSF Etsaut 85.78 359 *e*P **P 03 45 42.9 -0.2**
SDI San Donato 85.95 348 P **P 03 45 43.9 -0.1**
SDI pmax pmax
comp=Z,8.0nm,0.4s,mb5.3
SDI San Donato 85.95 348 P **P 03 45 43.9 -0.1**
comp=Z,7.8nm,0.4s,mb5.3
JTS JuntasAbangare 86.39 78 P **P 03 45 46.6 0.0**
comp=Z,96nm,0.4s,mb6.4,SNR=5.2
PBRG Braganca 86.79 3 *e*P pP 03 45 58.5 -5.5
PVRL Vila Real 87.28 4 *e*P **P 03 45 52.0 +1.5**
comp=Z,31nm,2.4s,mb5.1
CMSA Cobar Meteorol 87.59 207 *e*P **P 03 45 52.8 +1.0**
PVIS Viseu 87.83 4 *e*P **P 03 45 52.7 -0.4**
comp=Z,27nm,2.0s,mb5.1
MIB Mutribah 87.99 319 *e*P **P 03 45 53.1 -1.0**
MIB AMb AMB 03 45 55.8
comp=Z,72nm,0.9s,mb5.9
TIP Timpagrande 88.02 345 *e*P **P 03 45 53.9 -0.2**
comp=Z,8.6nm,0.8s,mb5.0
UMR Umm Al-Rimmam 88.05 318 *e*P **P 03 45 53.3 -1.1**
UMR AMb AMB 03 45 55.4
comp=Z,82nm,1.4s,mb5.8
NAY Al-Naaiem 88.52 318 *e*P **P 03 45 55.4 -1.2**
NAY AMb AMB 03 45 58.5
comp=Z,21nm,1.1s,mb5.4
MBWA Marble Bar 88.55 233 *e*P **P 03 45 55.4 -1.3**
comp=Z,67nm,1.8s,mb5.7
RDF Al-Radifah 88.67 318 *e*P **P 03 45 56.8 -0.6**
RDF AMb AMB 03 45 58.5
comp=Z,76nm,0.7s,mb6.1
PALK Pallekele 88.81 280 P **P 03 45 58.0 -0.2**
comp=Z,20nm,1.0s,mb5.4,baz=21,slow=5.3,SNR=4.3
PALK Pallekele 88.81 280 P **P 03 45 58.0 -0.2**
PALK pmax pmax
comp=Z,20nm,1.0s,mb5.4
PALK Pallekele 88.81 280 *e*P **P 03 45 58.1 -0.1**
comp=Z,37nm,1.1s,mb5.6
ESDC Sonseca Array 88.99 1 P **P 03 45 57.5 -1.1**
comp=Z,0.5nm,0.6s,mb4.1,baz=348,slow=4.1,SNR=4.4
STKA Stephens Creek 89.13 210 *e*P **P 03 45 59.7 +0.6**
comp=Z,8.9nm,0.8s,mb5.2
STKA Stephens Creek 89.13 210 P **P 03 45 59.6 +0.5**
comp=Z,7.3nm,0.8s,mb5.0,baz=7.1,slow=5.7,SNR=6.5
STKA LR LR 04 22 34.6
comp=Z,252nm,18.3s,MS4.7,baz=20,slow=33
STKA Stephens Creek 89.13 210 *e*P **P 03 45 59.4 +0.3**
comp=Z,3.2nm,1.0s,mb4.6
MMAI Mount Meron Ar 89.46 329 P **P 03 46 00.8 -0.1**
comp=Z,3.3nm,0.5s,mb4.9,baz=38,slow=9.7,SNR=7.5
MMAI LR LR 04 31 21.1
comp=Z,151nm,20.4s,MS4.4,baz=310,slow=39
ASF Jabal al Asfar 89.75 328 P **P 03 46 01.9 -0.5**
comp=Z,6.8nm,0.8s,mb5.0,baz=314,slow=1.5,SNR=7.7
ASF Jabal al Asfar 89.75 328 P **P 03 46 01.9 -0.5**
ASF pmax pmax
comp=Z,7.0nm,0.8s
KEST Kesra 92.37 351 P **P 03 46 13.9 -0.5**
comp=Z,2.4nm,0.9s,mb4.5,baz=298,slow=4.4,SNR=9.7
KEST PP PP 03 49 54.7 0.0
comp=Z,2.3nm,1.1s,baz=326,slow=0.3,SNR=4.0
MEEK Meekatharra 93.71 230 *e*P **P 03 46 19.4 -1.1**
ROSC El Rosal 97.08 73 LR LR 04 29 35.4
comp=Z,95nm,18.8s,MS4.3,baz=0.5,slow=35
OTAV Otavalo 98.24 79 *e*P **P 03 46 42.3 +0.7**
comp=Z,2.4nm,0.9s,mb4.7
TOA0 Torodi Ar. Sit 115.34 356 *e*PKPdf PKPdf 03 51 44.3 -1.4
TORD Torodi Ar. Bea 115.34 356 PKP PKPdf 03 51 44.4 -1.3
comp=Z,2.3nm,0.5s,baz=354,slow=2.1,SNR=49
TORD pPKP 03 52 01.4
comp=Z,0.8nm,0.5s,baz=343,slow=2.4,SNR=4.2
TORD PP PP 03 52 39.8 -6.2
comp=Z,1.4nm,0.8s,baz=12,slow=5.9,SNR=4.0
TORD PKKPbc PKKPbc 04 02 18.4 +0.7
comp=Z,0.7nm,0.6s,baz=178,slow=2.6,SNR=12
TORD Torodi Ar. Bea 115.34 356 PKP PKPdf 03 51 44.4 -1.3
TORD pPKP 03 52 01.4
TORD PP PP 03 52 39.8 -6.2
TORD PKKPbc PKKPbc 04 02 18.4 +0.7
LPAZ La Paz 117.43 81 PKP PKPdf 03 51 50.2 +0.7
comp=Z,0.4nm,0.5s,baz=324,slow=4.1,SNR=6.1
LPAZ pPKP pPKPdf 03 52 07.1 +1.1
comp=Z,1.0nm,0.7s,baz=330,slow=5.0,SNR=4.2
LPAZ La Paz 117.43 81 PKIKP PKPdf 03 51 50.2 +0.7
LPAZ 03 52 07.1
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
LPAZ La Paz 117.43 81 *e*PKPdf PKPdf 03 51 50.4 +0.9
DBIC Dimbokro 121.81 3 PKP PKPdf 03 51 57.0 -1.2
comp=Z,3.1nm,0.3s,baz=311,slow=1.6,SNR=21
DBIC pPKP pPKPdf 03 52 14.1 -0.6
comp=Z,3.7nm,0.4s,baz=327,slow=3.7,SNR=4.6
DBIC Dimbokro 121.81 3 PKIKP PKPdf 03 51 57.0 -1.2
DBIC 03 52 14.1
DBIC pmax pmax
comp=Z,3.0nm,0.3s
DBIC pmax pmax
comp=Z,4.0nm,0.4s
DBIC Dimbokro 121.81 3 *e*PKPdf PKPdf 03 51 56.8 -1.3
DBIC *e*pPKPdf pPKPdf 03 52 13.8 -0.9
TIC Toumodi 121.83 3 *e*P PKPdf 03 51 59.1 +0.9
comp=Z,6.0nm,0.2s
KIC Kosan Boka 122.13 3 *e*P PKPdf 03 51 58.2 -0.6
comp=Z,18nm,0.9s
LIC Lamto 122.25 3 *e*P PKPdf 03 52 00.2 +1.2
comp=Z,67nm,1.7s
LCO Las Campanas 125.19 94 *e*PKPdf PKPdf 03 52 03.8 -0.3
CPUP Villa Florida 131.58 80 PKP PKPdf 03 52 15.8 -0.5
comp=Z,1.2nm,0.4s,baz=310,slow=3.4,SNR=9.4
CPUP pPKP pPKPdf 03 52 32.6 -0.2
comp=Z,3.0nm,0.8s,baz=291,slow=3.0,SNR=5.1
CPUP SKPbc SKPbc 03 55 35.4 -1.4
comp=Z,5.9nm,0.7s,baz=290,slow=4.4,SNR=16
CPUP Villa Florida 131.58 80 PKIKP PKPdf 03 52 15.8 -0.5
CPUP 03 52 32.6
CPUP pmax pmax
comp=Z,1.0nm,0.4s
CPUP pmax pmax
comp=Z,3.0nm,0.8s
CPUP pmax pmax
comp=N,6.0nm,0.7s
CPUP Villa Florida 131.58 80 PKP PKPdf 03 52 15.8 -0.5
CPUP pPKP pPKPdf 03 52 32.6 -0.2
CPUP SKPbc SKPbc 03 55 35.4 -1.4
PLCA Paso Flores 133.02 105 PKP PKPdf 03 52 19.0 +0.4
comp=N,10nm,0.7s,baz=179,slow=1.1,SNR=28
PLCA SKPbc SKPbc 03 55 40.6 -0.8
comp=N,17nm,1.0s,baz=308,slow=4.4,SNR=11
PLCA Paso Flores 133.02 105 PKIKP PKPdf 03 52 19.0 +0.4
PLCA pmax pmax
comp=Z,11nm,0.7s
PLCA pmax pmax
comp=N,17nm,1.0s
PLCA Paso Flores 133.02 105 *e*PKPdf PKPdf 03 52 19.0 +0.4
TRQA Tornquist 136.62 96 *e*PKPdf PKPdf 03 52 25.1 -0.3
TRQA *e*SKP 03 55 52.5
QSPA South Pole Qui 141.45 180 *e*PKPpre 03 52 27.9
QSPA *e*PKPdf PKPdf 03 52 32.4 -0.6
TSUM Tsumeb 144.08 327 *e*PKPdf PKPdf 03 52 39.0 -0.4
TSUM *e*SKP 03 56 11.8
MAW Mawson 145.49 218 PKPbc PKPbc 03 52 40.4 -0.2
comp=N,3.5nm,0.3s,baz=89,slow=4.7,SNR=10.0
MAW pPKPbc pPKPbc 03 52 57.6 +0.7
comp=N,26nm,1.1s,baz=144,slow=2.8,SNR=7.2
MAW Mawson 145.49 218 PKIKP PKPdf 03 52 40.4 0.0
MAW 03 52 57.6
MAW pmax pmax
comp=Z,4.0nm,0.3s
MAW pmax pmax
comp=Z,26nm,1.1s
MAW Mawson 145.49 218 *e*PKPbc PKPbc 03 52 40.0 -0.6
EFI East Falkland 146.02 113 *e*PKP2 PKPab 03 52 42.2 -1.2
LBTB Lobatse 146.02 311 *e*PKPbc PKPbc 03 52 43.8 +0.3
LBTB *e* 03 53 00.5
BOSA Boshof 149.21 308 PKPbc PKPbc 03 52 52.1 0.0
comp=Z,8.7nm,0.5s,baz=61,slow=1.7,SNR=28
BOSA pPKPbc pPKPbc 03 53 08.9 +0.4
comp=Z,24nm,0.8s,baz=56,slow=0.2,SNR=11
BOSA Boshof 149.21 308 PKP2 PKPbc 03 52 52.2 +0.1
BOSA pmax pmax
comp=Z,9.0nm,0.5s
BOSA pmax pmax
comp=Z,24nm,0.8s
BOSA Boshof 149.21 308 *e*PKPbc PKPbc 03 52 52.0 -0.1
BOSA *e* 03 53 08.3
SYO Syowa Base 153.85 213⇑*e*PKPbc PKPbc 03 53 04.3 +2.8

IDC ***23*** *03:35:05.2±0.6, 7°91S×106°99E, h0km, mb4.6/22,*

mb1 4.5/23, mb1mx4.5/26, mbtmp4.5/23, ML3.5/1, MS3.7/3, Ms1 3.7/3, ms1mx3.2/31, Error ellipse: s-maj=21.7km s-min=14.1km az=58.0
*BJI **23** 03:35:05.5, 8.00S×107.00E, h10km, mB5.1/12, mb4.9/18, Ms4.7/13, Ms7 4.5/13*
*NEIC **23** 03:35:10.6±0.2, 7.98S×106.95E, h35km, mb4.9/21, Error ellipse: s-maj=10.7km s-min=5.7km az=50.0*
*ISCJB **23** 03:35:12.6±0.7, 8.08S±0.05×106.89E±0.04, h72km±5km, mb4.6/45, Error ellipse: s-maj=9.8km s-min=5.1km az=28.9*
*DJA **23** 03:35:13, 8.22S×106.81E, h51km, Mw5.5/8*
ISC 23 03:35:13.9±0.6, 8.07S±0.05×106.90E±0.04, h67km±5km, h12km±6.7km:pP-P, n113, σ1§15/100, mb4.6/45, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.43**	**30**	P	**Pn**	**03 35 37.5**	**-0.3**
DBJI	**Dramaga**	**1.51**	**354**	P	**Pn**	**03 35 38.9**	**-0.1**
CGJI	**Cibinong**	**1.88**	**320**	P	**Pn**	**03 35 42.4**	**-1.5**
TNG	**Tangerang**	**1.90**	**352**	P	**Pn**	**03 35 44.9**	**+0.7**
TNG	**Tangerang**	**1.90**	**352**	P	**Pn**	**03 35 45.0**	**+0.8**
JCJI	**Jatiwangi**	**2.08**	**41**	P	**Pn**	**03 35 45.0**	**-1.6**
JCJI				S	**Sn**	**03 36 11.9**	**+0.4**
SBJI	**Serang**	**2.08**	**339**	P	**Pn**	**03 35 47.2**	**+0.6**
RBSI	**Rajabasa**	**2.49**	**333**	P	**Pn**	**03 35 51.9**	**-0.3**
BLSI	**Bandar Lampung**	**3.15**	**328**	P	**Pn**	**03 36 01.3**	**+0.2**
KASI	**Kota Agung**	**3.48**	**317**	P	**Pn**	**03 36 04.6**	**-1.0**
UGM	**Wanagama**	**3.59**	**88**	P	**Pn**	**03 36 05.6**	**-1.6**
SMRI	**Semarang**	**3.66**	**74**	P	**Pn**	**03 36 08.2**	**+0.1**
KLI	**Kotabumi**	**3.78**	**327**	P	**Pn**	**03 36 11.5**	**+1.8**
LWLI	**Liwa**	**4.14**	**317**	P	**Pn**	**03 36 14.5**	**-0.2**
MDSI	**Maura Dua**	**4.47**	**323**	P	**Pn**	**03 36 18.5**	**-0.7**
NGJI	**Ngawi**	**4.58**	**82**	P	**Pn**	**03 36 23.3**	**+2.6**
PWJI	**Pagerwojo**	**4.86**	**90**	P	**Pn**	**03 36 25.5**	**+1.0**
TPI	**Tanjungpandan** 86nm,0.7s,1μm0.5nm	**5.33**	**8**	P	**Pn**	**03 36 32.9**	**+1.9**
PPBI	**Pangkal Pinang** 69nm,0.8s,4μm0.7nm	**5.92**	**353**	P	**Pn**	**03 36 40.7**	**+1.6**
KSI	**Kapahiang** 385nm,0.6s,1.9nm	**6.13**	**315**	P	**Pn**	**03 36 41.5**	**-0.5**
SRBI	**Singaraja** 142nm,0.8s	**8.23**	**91**	P	**Pn**	**03 37 10.6**	**-0.1**
PDSI	**Padang** 63nm,0.5s	**9.57**	**318**	P	**Pn**	**03 37 28.9**	**-0.2**
PPI	**Padang Panjang** 40nm,0.7s,7μm	**9.96**	**319**	P	**Pn**	**03 37 34.0**	**-0.3**
KAPI	**Kappang**	**13.13**	**77**	LR	LR	03 44 03.4	
	comp=Z,303nm,18.5s,baz=271,slow=41						
GSI	**Gunungsitoli**	**13.16**	**315**	P	**Pn**	**03 38 12.1**	**-5.9**
PSI	**Prapat** 0.2nm,0.3s,baz=177,slow=17,SNR=2.7	**13.41**	**323**	Pn	**Pn**	**03 38 13.3**	**-8.1**
PSI				LR	LR	03 44 19.0	
	comp=Z,317nm,21.0s,baz=46,slow=42						
TTSI	**Tana Toraja**	**13.79**	**69**	P	**Pn**	**03 38 30.4**	**+4.0**
MRSI	**Marisa** 38nm,0.3s,5μm	**17.23**	**61**	P	**Pn**	**03 39 09.8**	**-0.5**
MBWA	**Marble Bar** 8.0nm,0.6s	**17.97**	**138**	*e*P	**Pn**	**03 39 16.9**	**-2.4**
NLAI	**Namlea** 65nm,0.8s,1μm	**20.66**	**78**	P	**P**	**03 39 49.4**	**+0.9**
FITZ	**Fitzroy Crossi** 31nm,0.8s	**20.78**	**121**	*e*P	**P**	**03 39 49.5**	**-0.2**
FITZ	**Fitzroy Crossi** 17nm,0.8s,baz=261,slow=6.3,SNR=16	**20.78**	**121**	P	**P**	**03 39 47.8**	**-1.9**
FITZ	**Fitzroy Crossi** 18nm,0.8s	**20.78**	**121**	*e*P	**P**	**03 39 49.6**	**-0.1**
FITZ	**Fitzroy Crossi** 52nm,0.9s	**20.78**	**121**	P	**P**	**03 39 50.0**	**+0.3**
LBMI	**Labuha**	**21.82**	**71**	P	**P**	**03 40 01.1**	**+0.2**
KAKA	**Kakadu** 16nm,0.7s,mb4.6	**25.54**	**103**	*e*P	**P**	**03 40 32.0**	**-4.6**
KAKA	**Kakadu** 44nm,0.7s,mb5.0	**25.54**	**103**	*e*P	**P**	**03 40 35.0**	**-1.7**
QIZ	**Qiongzhong** 11nm,0.5s,mb4.7	**27.08**	**6**	*e*P	**P**	**03 40 50.8**	**+0.4**
CMAR	**Chiang Mai Arr** 3.8nm,0.7s,mb4.0,baz=176,slow=8.4,SNR=15	**27.50**	**343**	P	**P**	**03 40 52.4**	**-1.9**
WRAB	**Tennant Creek** 5.2nm,0.5s,mb4.4	**29.07**	**117**	*e*P	**P**	**03 41 08.0**	**-0.3**
ASAR	**Alice Springs** 2.0nm,0.4s,mb4.1,baz=295,slow=8.0,SNR=23	**30.16**	**124**	P	**P**	**03 41 17.8**	**-0.1**
KMI	**Kunming**	**33.24**	**353**	P	**P**	**03 41 47.1**	**+2.3**
KMI				pP	pP	03 41 50.5	-11
KMI				sP	sP	03 41 51.9	-17
KMI				PP	PP	03 42 59.8	-1.4
KMI				S	**S**	**03 47 09.0**	**+8.8**
KMI				sS	sS	03 47 13.8	-14
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
KMI				pmax	pmax		
	comp=Z,51nm,3.2s						
KMI				LR	LR		
	comp=N,240nm,15.2s						
KMI				LR	LR		
	comp=E,120nm,16.7s						
KMI				LR	LR		
	comp=Z,280nm,12.7s						
GYA	**Guiyang**	**34.32**	**360**	P	**P**	**03 41 57.0**	**+2.8**
GYA				PP	PP	03 43 13.8	+0.6
GYA				PcP	PcP	03 44 32.9	+3.8
GYA				S	**S**	**03 47 24.3**	**+7.4**
GYA				ScP	ScP	03 48 15.0	+6.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,5.8s						
GYA				LR	LR		
	comp=N,610nm,15.5s						
GYA				LR	LR		
	comp=E,520nm,17.6s						
GYA				LR	LR		
	comp=Z,630nm,15.2s						
COEN	**Coen**	**36.06**	**103**	*e*P	**P**	**03 42 08.8**	**-0.5**
COEN	**Coen**	**36.06**	**103**	*e*P	**P**	**03 42 08.9**	**-0.4**
CD2	**Chengdu**	**38.87**	**356**	P	**P**	**03 42 34.4**	**+1.5**
CD2				pP	pP	03 42 38.9	-10
CD2				sP	sP	03 42 41.4	-16
CD2				PP	PP	03 44 08.0	+4.8
CD2				S	**S**	**03 48 33.4**	**+7.2**
CD2				sS	sS	03 48 40.3	-14
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1						
CD2				pmax	pmax		
	comp=Z,120nm,3.6s						
CD2				LR	LR		
	comp=N,230nm,8.9s						
CD2				LR	LR		
	comp=Z,190nm,11.9s						
CTAO	**Charters Tower**	**39.89**	**112**	*e*P	**P**	**03 42 42.0**	**+0.4**
	comp=Z,11nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**40.01**	**131**	*e*P	**P**	**03 42 43.2**	**+0.8**
	comp=Z,5.7nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**40.01**	**131**	P	**P**	**03 42 43.3**	**+0.9**
	comp=Z,5.5nm,0.5s,mb4.7,baz=309,slow=8.0,SNR=22						
STKA				LR	LR	04 00 01.5	
	comp=Z,121nm,19.4s,baz=210,slow=37						
STKA	**Stephens Creek**	**40.01**	**131**	*e*P	**P**	**03 42 43.4**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.0						
GUN	**Gumba**	**41.14**	**331**	*e*P	**P**	**03 42 50.4**	**-1.3**
DMN	**Daman**	**41.27**	**330**	*e*P	**P**	**03 42 53.2**	**+0.4**
NJ2	**Nanjing**	**41.50**	**15**	*e*P	**P**	**03 42 57.8**	**+3.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
GKN	**Gorkha**	**41.82**	**330**	*e*P	**P**	**03 42 55.1**	**-2.2**
KOLN	**Koldanda**	**42.16**	**329**	*e*P	**P**	**03 42 58.8**	**-1.3**
	comp=Z,20nm,0.5s,mb5.1						
PYUN	**Piuthan**	**42.74**	**328**	*e*P	**P**	**03 43 02.9**	**-1.9**
	comp=Z,12nm,0.4s,mb4.9						
CMSA	**Cobar Meteorol**	**42.98**	**128**	*e*P	**P**	**03 43 08.2**	**+1.5**
LZH	**Lanzhou**	**44.01**	**356**	*e*P	**P**	**03 43 16.0**	**+1.1**
LZH				pP	pP	03 43 19.3	-12
LZH				sP	sP	03 43 20.8	-19
LZH				PP	PP	03 45 01.3	+2.6
LZH				*e*S	**S**	**03 49 48.5**	**+6.3**
LZH				sS	sS	03 49 56.0	-15
LZH				*e*SS	SS	03 52 58.3	-3.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,160nm,5.6s						
LZH				LR	LR		
	comp=N,650nm,14.3s						
LZH				LR	LR		
	comp=Z,890nm,17.6s						
HHC	**Hu-ho-hao-te**	**48.87**	**5**	*e*P	**P**	**03 43 55.4**	**+2.6**
HHC				PcP	PcP	03 45 18.5	+2.0
HHC				PP	PP	03 45 49.9	+3.1
HHC				ScP	ScP	03 49 10.3	+4.5
HHC				S	**S**	**03 50 57.0**	**+5.6**
HHC				ScS	ScS	03 53 41.5	+2.6
HHC				SS	SS	03 54 24.9	+1.8
HHC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,150nm,5.3s						
HHC				LR	LR		
	comp=N,440nm,15.5s						
HHC				LR	LR		
	comp=E,480nm,15.7s						
HHC				LR	LR		
	comp=Z,710nm,17.7s						
KSRS	**Korea Array**	**49.37**	**22**	P	**P**	**03 43 56.4**	**-0.4**
	comp=Z,3.7nm,0.7s,mb4.4,baz=203,slow=8.7,SNR=14						
MJAR	**Matsushiro Arr**	**53.23**	**32**	P	**P**	**03 44 23.4**	**-2.2**
	comp=Z,1.1nm,0.6s,mb4.1,baz=219,slow=7.2,SNR=4.8						
CN2	**Changchun**	**54.30**	**16**	*e*P	**P**	**03 44 31.8**	**-1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
WMQ	**Urumqi**	**54.50**	**343**	P	**P**	**03 44 36.6**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
WMQ				LR	LR		
	comp=N,1μm,20.0s						
WMQ				LR	LR		
	comp=Z,910nm,24.0s						
SONM	**Songino Array**	**55.66**	**360**	P	**P**	**03 44 42.6**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.4,baz=175,slow=8.0,SNR=5.0						
SONM				PcP	PcP	03 45 42.7	+0.9
	comp=Z,4.5nm,0.7s,baz=173,slow=3.7,SNR=6.4						
SONM	**Songino Array**	**55.66**	**360**	P	**P**	**03 44 42.6**	**-0.5**
SONM				PcP	PcP	03 45 42.7	+0.9
ULN	**Ulaanbaatar**	**55.69**	**0**	*e*P	**P**	**03 44 43.3**	**0.0**
	comp=Z,6.0nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**58.20**	**333**	*e*P	**P**	**03 45 01.2**	**+0.1**
	comp=Z,11nm,0.5s,mb5.1						
EKS2	**Erkin-Say**	**58.83**	**332**	*e*P	**P**	**03 45 05.7**	**+0.2**
	comp=Z,26nm,1.0s,mb5.2						
MK31	**Makanchi Array**	**58.85**	**340**	*e*P	**P**	**03 45 05.0**	**-0.5**
MKAR	**Makanchi Array**	**58.85**	**340**	P	**P**	**03 45 04.4**	**-1.2**
	comp=Z,6.3nm,0.6s,mb4.9,baz=148,slow=7.6,SNR=5.3						
ASAJ	**Asahikawa**	**61.15**	**29**	P	**P**	**03 45 20.1**	**-1.3**
	comp=Z,2.9nm,0.5s,mb4.6,baz=270,slow=19,SNR=4.2						
YSS	**Yuzh-Sakhalins**	**63.37**	**27**	*e*P	**P**	**03 45 35.4**	**-0.8**
	comp=Z,1.1nm,0.4s,mb5.2						
KURK	**Kurchatov**	**63.47**	**340**	P	**P**	**03 45 35.6**	**-1.1**
	comp=Z,2.5nm,0.4s,mb4.5,baz=198,slow=6.0,SNR=5.5						
KURK	**Kurchatov**	**63.47**	**340**	P	**P**	**03 45 37.2**	**+0.5**
	comp=Z,14nm,0.8s,mb4.9						
ZALV	**Zalesovo Beam**	**64.54**	**346**	P	**P**	**03 45 41.9**	**-1.8**
	comp=Z,1.7nm,0.3s,mb4.3,baz=168,slow=6.1,SNR=4.5						
MAW	**Mawson**	**66.32**	**197**	P	**P**	**03 45 55.8**	**+0.8**
	comp=Z,2.8nm,0.6s,mb4.2,baz=17,slow=6.1,SNR=6.6						
MAW	**Mawson**	**66.32**	**197**	*e*P	**P**	**03 45 55.5**	**+0.5**
	comp=Z,0.5nm,0.6s,mb3.5						
BVAR	**Borovoye Array**	**68.31**	**337**	P	**P**	**03 46 08.0**	**+0.2**
	comp=Z,23nm,0.5s,mb5.2,baz=142,slow=9.0,SNR=26						
BRVK	**Borovoye**	**68.37**	**337**	*e*P	**P**	**03 46 08.0**	**-0.2**
	comp=Z,17nm,0.5s,mb5.1						
ABKAR	**Akbulak array**	**70.28**	**329**	*e*P	**P**	**03 46 20.2**	**+0.1**
	comp=Z,12nm,0.4s,mb5.1						
PETK	**Petropavlovsk-**	**74.57**	**29**	P	**P**	**03 46 43.5**	**-2.0**
	comp=Z,1.9nm,0.4s,mb4.1,baz=192,slow=13,SNR=5.4						
ASF	**Jabal al Asfar**	**77.68**	**305**	P	**P**	**03 47 05.3**	**+1.6**
	comp=Z,3.2nm,0.7s,mb4.2,baz=347,slow=5.2,SNR=3.7						
BOSA	**Boshof**	**78.87**	**242**	P	**P**	**03 47 11.2**	**+0.8**
	comp=Z,2.7nm,0.8s,mb4.1,baz=229,slow=6.2,SNR=3.3						
MMAI	**Mount Meron Ar**	**79.14**	**306**	P	**P**	**03 47 13.6**	**+1.9**
	comp=Z,3.2nm,0.5s,mb4.4,baz=103,slow=6.4,SNR=5.8						
QSPA	**South Pole Qui**	**81.93**	**180**	*e*P	**P**	**03 47 26.5**	**+0.7**
	comp=Z,2.7nm,0.6s,mb4.2						
BR131	**Keskin Array S**	**82.46**	**312**	*e*P	**P**	**03 47 29.6**	**+0.4**
	comp=Z,5.4nm,0.7s,mb4.5						
BRTR	**Keskin Array B**	**82.46**	**312**	P	**P**	**03 47 29.9**	**+0.6**
	comp=Z,7.0nm,0.7s,mb4.6,baz=144,slow=7.4,SNR=11						
BILL	**Bilibino**	**86.53**	**19**	*e*P	**P**	**03 47 48.2**	**-1.0**
	comp=Z,2.1nm,0.7s,mb4.2						
TSUM	**Tsumeb**	**86.74**	**251**	*e*P	**P**	**03 47 52.1**	**+0.8**
	comp=Z,4.5nm,1.0s,mb4.3						
AKASG	**Malin Array Be**	**88.46**	**322**	P	**P**	**03 47 58.6**	**-0.2**
	comp=Z,0.9nm,0.4s,mb4.1,baz=86,slow=5.2,SNR=4.8						
FINES	**FINESS Array B**	**92.66**	**332**	P	**P**	**03 48 18.7**	**+0.6**
	comp=Z,2.8nm,0.8s,mb4.6,baz=94,slow=5.9,SNR=3.8						
PSZ	**Piszkesteto**	**93.92**	**318**	*e*P	**P**	**03 48 25.1**	**+0.8**
	comp=Z,9.6nm,1.2s,mb5.0						
ARCES	**ARCESS Array B**	**94.50**	**340**	P	**P**	**03 48 26.4**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.6,baz=118,slow=3.7,SNR=12						
SPITS	**Spitsbergen Ar**	**97.95**	**348**	P	**P**	**03 48 41.4**	**-0.6**
	comp=Z,3.9nm,0.7s,mb5.0,baz=138,slow=9.0,SNR=6.3						
CLL	**Collm**	**98.67**	**321**	*e*P	**P**	**03 48 46.0**	**+0.3**
CLL				e(pP)	pP	03 48 55.0	-9.4
BPAW	**Bear Paw Mtn.**	**102.51**	**26**	*e*Pdif	Pdif	03 49 05.2	+2.4
	comp=Z,20nm,1.7s						
TRF	**Thorofare Moun**	**102.90**	**27**	*e*Pdif	Pdif	03 49 05.8	+1.2
	comp=Z,45nm,1.5s						
MCK	**McKinley**	**103.46**	**26**	*e*Pdif	Pdif	03 49 06.7	-0.3
	comp=Z,23nm,1.1s						
DAWY	**Dawson**	**107.48**	**25**	*e*Pdif	Pdif	03 49 25.9	+1.0
YKA	**Yellowknife Ar**	**117.89**	**20**	PKP	PKPdf	03 53 53.0	+0.5
	comp=Z,0.2nm,0.6s,baz=309,slow=1.6,SNR=4.5						
YKA	**Yellowknife Ar**	**117.89**	**20**	PKP	PKPdf	03 53 53.0	+0.5
PDAR	**Pinedale Array**	**132.91**	**37**	PKP	PKPdf	03 54 20.1	-1.7
	comp=Z,0.3nm,0.5s,baz=151,slow=2.1,SNR=2.9						
TXAR	**Lajitas Array**	**144.34**	**50**	PKP	PKPdf	03 54 43.0	-0.1
	comp=Z,1.3nm,0.7s,baz=221,slow=1.4,SNR=10						
BINY	**Binghamton**	**145.91**	**4**	*e*PKPbc	PKPbc	03 54 46.9	+0.7
BINY				*e*		03 55 01.8	
JCT	**Junction City**	**146.52**	**45**	*e*PKPbc	PKPbc	03 54 49.6	+1.3
OLIL	**Olney**	**146.62**	**22**	*e*PKPbc	PKPbc	03 54 49.2	+0.8
ACSO	**Alum Creek Sta**	**146.78**	**14**	*e*PKPbc	PKPbc	03 54 49.4	+0.6
WCI	**Wyandotte Cave**	**147.70**	**20**	*e*PKPbc	PKPbc	03 54 51.6	+0.2
MCWV	**Mont Chateau**	**147.97**	**10**	*e*PKPbc	PKPab	03 54 55.6	+0.9
MCWV				*e*		03 55 09.8	
WVT	**Waverly**	**149.00**	**24**	*e*PKPbc	PKPbc	03 54 55.7	+0.8
TZTN	**Tazewell**	**150.10**	**17**	*e*PKPbc	PKPbc	03 54 58.5	+1.0
SWET	**Sewanee**	**150.53**	**22**	*e*PKPbc	PKPbc	03 54 58.5	-0.1
CPCT	**Cooper Cave**	**150.81**	**19**	*e*PKPbc	PKPbc	03 55 00.1	+0.8
CPCT				*e*PKPab	PKPab	03 55 06.9	+0.4
TKL	**Tuckaleechee C**	**150.86**	**18**	*e*PKPbc	PKPbc	03 55 00.1	+0.8

*NNC **23** 03:56:16.4±13.0, 37.15N×70.22E, h244km±166km, mb2.6, mpv3.8, Error ellipse: s-maj=128.7km s-min=75.7km az=15.0*
ISC 23 03:56:14.6±2.7, 37.1N±0.2×70.4E±0.2, h301km±25km, n8, σ0§37/11, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.64**	**26**	P	**Pn**	**03 57 39.1**	**-0.4**
SNR=55							
KK31	**Karatay Array**	**6.00**	**1**	P	**Pn**	**03 57 43.9**	**+0.1**
	1.4nm,0.3s,baz=182,slow=12,SNR=28						
KK31				⇑S	**S**	**03 58 55.6**	**0.0**
	0.7nm,0.3s,baz=187,slow=22,SNR=4.2						
UCH	**Uchtor**	**6.04**	**31**	P	**Pn**	**03 57 44.2**	**-0.1**
SNR=31							
EKS2	**Erkin-Say**	**6.14**	**24**	P	**Pn**	**03 57 46.0**	**+0.5**
SNR=6.8							
KZA	**Kyzart**	**6.24**	**36**	P	**Pn**	**03 57 46.0**	**-0.6**
SNR=7.6							
TKM2	**Tokmak 2**	**7.06**	**33**	⇓P	**Pn**	**03 57 56.7**	**+0.1**
	5.7nm,0.5s						
TKM2				⇓S	**S**	**03 59 19.1**	**0.0**
	2.0nm,0.7s						
TKM2	**Tokmak 2**	**7.06**	**33**	P	**Pn**	**03 57 57.4**	**+0.8**
SNR=5.2							
AB31	**Akbulak array**	**14.32**	**331**	⇓P	**P**	**03 59 31.0**	**+7.1**
	0.5nm,0.3s,baz=162,slow=12,SNR=9.5						
AB31				⇑S	**S**	**04 02 00.9**	**-0.1**
	0.2nm,0.3s,baz=123,slow=6.7,SNR=5.3						

*ISCJB **23** 04:02:41.7±1.0, 19.00N±0.05×145.1E±0.2, h235km±9km, mb3.8/14, Error ellipse: s-maj=24.8km s-min=7.5km az=175.7*
*IDC **23** 04:02:41.5±1.8, 19.06N×145.09E, h220km±17km, mb3.4/7, mb1 3.6/9, mb1mx3.4/23, mbtmp3.5/9, Error ellipse: s-maj=37.6km s-min=11.8km az=85.0*

*NEIC **23** 04:02:44.2±1.4, 18.97N×145.12E, h245km±14km, mb3.9/7, Error ellipse: s-maj=19.9km s-min=9.5km az=95.0*
ISC 23 04:02:41.9±0.9, 19.02N±0.05×145.0E±0.2, h221km±9km, n21, σ1§01/22, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.41**	**182**	P	**Pn**	**04 04 03.7**	**+1.7**
	12nm,0.3s,baz=342,slow=19,SNR=4.3						
GUMO				S	**S**	**04 05 04.5**	**-1.2**
	9.0nm,0.3s,baz=74,slow=15,SNR=2.5						
CBIJ	**Chichi jima**	**8.46**	**342**	P	**Pn**	**04 04 40.8**	**-0.2**
	7.7nm,0.3s,baz=285,slow=22,SNR=8.3						
CBIJ				S	**S**	**04 06 16.0**	**-0.6**
	11nm,0.3s,baz=284,slow=23,SNR=6.3						
MJAR	**Matsushiro Arr**	**18.46**	**342**	P	**P**	**04 06 44.0**	**+2.7**
	0.6nm,0.3s,baz=172,slow=11,SNR=3.2						
KSRS	**Korea Array**	**23.69**	**324**	pP	pP	04 08 16.2	+2.0
	0.7nm,0.4s,baz=146,slow=8.8,SNR=2.3						
COEN	**Coen**	**32.82**	**183**	*e*P	**P**	**04 08 54.3**	**-0.6**
	22nm,0.5s,mb4.9						
WRAB	**Tennant Creek**	**40.11**	**196**	*e*P	**P**	**04 09 57.2**	**+0.9**
	6.5nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**41.52**	**208**	*e*P	**P**	**04 10 09.1**	**+1.2**
	7.9nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**43.80**	**195**	P	**P**	**04 10 26.9**	**+0.8**
	2.4nm,0.6s,mb3.7,baz=16,slow=7.9,SNR=36						
KULM	**Kulim**	**45.34**	**258**	*e*P	**P**	**04 10 37.8**	**-0.7**
	9.0nm,1.0s,mb4.0						
MBWA	**Marble Bar**	**47.00**	**213**	*e*P	**P**	**04 10 50.3**	**-0.9**
	3.6nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**50.72**	**184**	P	**P**	**04 11 18.4**	**-0.8**
	1.2nm,0.4s,mb3.7,baz=353,slow=14,SNR=5.7						
BILL	**Bilibino**	**50.81**	**10**	*e*P	**P**	**04 11 19.1**	**-0.4**
	1.8nm,0.4s,mb3.9						
KURK	**Kurchatov**	**60.62**	**318**	P	**P**	**04 12 27.7**	**-1.7**
	0.3nm,0.6s,mb3.1,baz=98,slow=4.9,SNR=1.8						
KURK	**Kurchatov**	**60.62**	**318**	*e*P	**P**	**04 12 29.3**	**-0.1**
	1.1nm,0.7s,mb3.6						
KTH	**Kantishna Hill**	**61.63**	**27**	*e*P	**P**	**04 12 36.4**	**+0.4**
BVAR	**Borovoye Array**	**65.83**	**320**	P	**P**	**04 13 04.8**	**+1.3**
	0.7nm,0.6s,mb3.5,baz=32,slow=14,SNR=3.4						
ABKAR	**Akbulak array**	**72.68**	**317**	*e*P	**P**	**04 13 46.2**	**+0.6**
	0.5nm,0.5s,mb3.4						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**04 14 15.0**	**-0.5**
	0.3nm,0.7s,mb3.1,baz=288,slow=5.7,SNR=4.9						
YKA				pP	pP	04 15 07.6	-0.6
	0.3nm,0.6s,baz=291,slow=5.6,SNR=3.4						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**04 14 15.0**	**-0.6**
YKA				pP	pP	04 15 07.6	-0.6
NVAR	**Mina Array Bea**	**83.43**	**52**	P	**P**	**04 14 44.7**	**-0.1**
	0.5nm,0.6s,mb3.4,baz=270,slow=5.4,SNR=3.5						
FINES	**FINESS Array B**	**86.33**	**335**	P	**P**	**04 14 57.3**	**-1.5**
	2.0nm,0.8s,mb3.9,baz=46,slow=4.0,SNR=3.1						

*ISCJB **23** 04:07:38.0±0.4, 32.26N±0.03×105.18E±0.05, h10km, mb3.7/9, Error ellipse: s-maj=6.3km s-min=4.7km az=164.1*
*IDC **23** 04:07:38.7±1.1, 32.23N×105.03E, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/27, mbtmp3.7/11, ML4.0/2, Error ellipse: s-maj=36.6km s-min=21.9km az=61.0*
*BJI **23** 04:07:39.4, 32.29N×105.35E, h14km, mb3.7/1, ML3.7/14, Ms3.6/3, Ms7 3.6/3*
*NEIC **23** 04:07:40.6±0.5, 32.27N×104.99E, h10km, mb3.8/1, Error ellipse: s-maj=13.3km s-min=8.6km az=62.0*
ISC 23 04:07:40.3±0.4, 32.29N±0.03×105.11E±0.05, h10km, n21, σ1§11/29, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.80**	**220**	Pg	**Pg**	**04 08 13.1**	**-1.7**
CD2				Sg	**Sg**	**04 08 38.3**	**+0.3**
CD2				smax			
	comp=N,7μm,0.7s						
XAN	**Xi'an**	**3.64**	**60**	Pg	**Pn**	**04 08 41.4**	**+4.7**
XAN				Sg	**Sg**	**04 09 32.3**	**-5.0**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,56nm,0.8s						
LZH	**Lanzhou**	**3.92**	**345**	Pn	**Pn**	**04 08 41.5**	**+0.9**
LZH				Pg	**Pg**	**04 08 53.8**	**-1.7**
LZH				Sn	**Sn**	**04 09 25.4**	**-1.3**
LZH				Sg	**Sg**	**04 09 42.3**	**-4.1**
LZH				smax			
	comp=N,310nm,1.0s						
LZH				smax			
	comp=E,470nm,1.1s						
LZH				LR	LR		
	comp=N,770nm,6.5s						
LZH				LR	LR		
	comp=Z,930nm,8.0s						
ENH	**Enshi**	**4.26**	**117**	*e*Pn	**Pn**	**04 08 47.0**	**+1.7**
ENH				*e*Pg	**Pg**	**04 08 59.4**	**-2.5**
ENH				*e*Sg	**Sg**	**04 09 56.5**	**-0.5**
GYA	**Guiyang**

LCO	Las Campanas	39.70	294	eP	P	04 17 57.1	-0.3
	6.4nm,0.9s,mb4.3						
SUR	Sutherland	41.31	78	eP	P	04 18 11.6	+0.9
	29nm,1.3s,mb4.8						
MAW	Mawson	41.43	145	P	P	04 18 10.2	-0.9
	0.9nm,0.5s,mb3.7,baz=258,slow=9.3,SNR=2.3						
SIV	San Ignacio	46.28	315	P	P	04 18 49.8	-1.0
	1.2nm,0.7s,mb3.9,baz=149,slow=7.6,SNR=9.3						
BOSA	Boshof	46.66	78	P	P	04 18 52.9	-0.7
	2.0nm,0.6s,mb4.2,baz=207,slow=7.9,SNR=6.1						
BOSA	Boshof	46.66	78	eP	P	04 18 53.1	-0.5
	3.3nm,0.6s,mb4.4						
LPAZ	La Paz	49.10	306	P	P	04 19 13.7	+1.1
	3.2nm,0.6s,mb4.5,baz=125,slow=8.8,SNR=12						
LPAZ	La Paz	49.10	306	eP	P	04 19 13.5	+0.9
	8.3nm,0.7s,mb4.9						
LBTB	Lobatse	49.65	75	P	P	04 19 16.4	-0.3
	2.9nm,0.7s,mb4.4,baz=218,slow=8.6,SNR=4.8						
TSUM	Tsumeb	50.06	63	eP	P	04 19 20.1	+0.2
	7.0nm,0.9s,mb4.7						
CASY	Casey	55.07	161	eP	P	04 19 56.8	+0.3
	12nm,0.9s,mb4.9						
OTAV	Otavalo	68.38	305	eP	P	04 21 28.5	+1.7
	1.0nm,0.6s,mb4.0						
TOA0	Torodi Ar. Sit	72.73	31	eP	P	04 21 52.9	-0.4
TORD	Torodi Ar. Bea	72.73	31	P	P	04 21 52.5	-0.7
	5.8nm,0.8s,mb4.6,baz=202,slow=5.7,SNR=28						
TORD				LR	LR	04 49 17.6	
	comp=Z,250nm,18.2s,MS4.5,baz=215,slow=32						
TAM	Tamanrasset	82.98	32	eP	P	04 22 52.0	+1.9
	7.2nm,1.4s,mb4.5						
STKA	Stephens Creek	92.94	172	LR	LR	05 05 03.7	
	comp=Z,156nm,18.6s,MS4.5,baz=206,slow=35						
KEST	Kesra	96.24	30	LR	LR	05 04 53.3	
	comp=Z,96nm,18.1s,MS4.3,baz=96,slow=34						
ESDC	Sonseca Array	96.81	19	LR	LR	05 02 57.3	
	comp=Z,83nm,19.1s,MS4.2,baz=200,slow=33						
ASAR	Alice Springs	100.13	164	P	Pdif	04 24 08.9	-2.1
	0.5nm,0.8s,baz=188,slow=4.2,SNR=3.9						
HWUT	Hardware Ranch	119.17	302	ePKPdf	PKPdf	04 29 12.4	-1.0
WVOR	Wild Horse Val	123.31	298	ePKPdf	PKPdf	04 29 21.5	+0.2
FINES	FINESS Array B	124.01	28	PKP	PKPdf	04 29 21.2	-0.8
	1.7nm,0.7s,baz=152,slow=6.3,SNR=3.6						
ABKAR	Akbulak array	127.61	56	ePKPdf	PKPdf	04 29 28.6	-0.8
UCH	Uchtor	130.28	71	ePKPdf	PKPdf	04 29 35.5	+0.9
ARCES	ARCESS Array B	130.44	22	PKP	PKPdf	04 29 33.1	-1.0
	2.1nm,0.8s,baz=45,slow=7.0,SNR=6.8						
YKA	Yellowknife Ar	134.88	319	PKP	PKPdf	04 29 42.2	-0.5
	0.4nm,0.5s,baz=127,slow=2.2,SNR=9.5						
BVAR	Borovoye Array	135.07	58	PKP	PKPdf	04 29 44.2	+0.9
	1.1nm,0.7s,baz=111,slow=3.2,SNR=4.8						
MKAR	Makanchi Array	137.47	71	PKP	PKPdf	04 29 46.8	-1.2
	0.3nm,0.8s,baz=86,slow=2.0,SNR=3.0						
KURK	Kurchatov	137.84	65	PKP	PKPdf	04 29 48.9	+0.4
	0.9nm,0.7s,baz=232,slow=1.8,SNR=3.1						
KURK	Kurchatov	137.84	65	ePKPdf	PKPdf	04 29 48.5	-0.1
KURK				PKP	PKPdf	04 29 48.9	+0.4
INK	Inuvik	144.52	322	PKP	PKPdf	04 29 57.7	-2.3
	3.9nm,0.9s,baz=105,slow=4.2,SNR=11						
INK	Inuvik	144.52	322	PKP	PKPdf	04 29 57.7	-2.3
INK				ePKPdf	PKPdf	04 29 59.5	-0.5
DAWY	Dawson	145.50	313	ePKPbc	PKPbc	04 30 01.9	-0.1
EGAK	Eagle	146.44	314	ePKPbc	PKPbc	04 30 04.5	-0.4
PAX	Paxson	147.78	310	ePKPbc	PKPbc	04 30 07.8	-0.8
COLA	College	149.25	313	ePKPbc	PKPbc	04 30 12.5	+0.2
MCK	McKinley	149.48	311	ePKPbc	PKPbc	04 30 13.2	+0.2
TRF	Thorofare Moun	150.02	310	ePKPbc	PKPbc	04 30 14.5	+0.3
KTH	Kantishna Hill	150.31	310	ePKPbc	PKPbc	04 30 14.9	-0.1
BPAW	Bear Paw Mtn.	150.44	311	ePKPbc	PKPbc	04 30 15.1	-0.2
COLD	Coldfoot	150.53	318	ePKPbc	PKPbc	04 30 15.7	+0.3
CHUM	Lake Minchumin	150.98	310	ePKPbc	PKPbc	04 30 16.0	-0.6
SONM	Songino Array	151.58	86	PKPbc	PKPbc	04 30 18.1	-0.3
	2.2nm,0.7s,baz=217,slow=3.7,SNR=12						
ULN	Ulaanbaatar	151.98	86	ePKPbc	PKPbc	04 30 19.4	0.0

*ISCJB **23** 04:43:18.3±1.1, 35°.80N±0°.04×137°.96E±0°.09, h11km±6km, Error ellipse: s-maj=12.9km s-min=6.7km az=14.1*
*JMA **23** 04:43:18.9, 35°.79N×137°.97E, h10km, M2.6*
ISC 23 04:43:18.5±1.4, 35°.81N±0°.04×138°.0E±0°.1, h10km±21km, n4, σ0s12/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNT	Takato	0.17	67	P	Pg	04 43 22.3	+0.1
JNT				S	Sg	04 43 24.6	-0.1
JNY	Yasuok	0.46	189	P	Pg	04 43 27.3	-0.2
JNY				eS	Sg	04 43 33.6	+0.1
JYN	Shimob	0.58	123	P	Pg	04 43 29.7	0.0
JYN				eS	Sg	04 43 37.3	0.0
MAT	Matsushiro	0.76	16	P	Pg	04 43 33.2	0.0
MAT				S	Sg	04 43 43.2	0.0

KRSC 23 05:18:28.2±2.0, 52°.06N×158°.82E, h53km±42km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.42	333	i P	Pn	05 18 38.7	0.0
RUS				i S	Sn	05 18 46.7	+0.4
PET	Petropavlovsk	0.97	354	S	Sn	05 18 59.2	+0.8
AVH	Avacha	1.21	358	P	Pn	05 18 49.8	+1.1
SPN	Mys Shipunski	1.27	35	S	Sn	05 19 06.7	+1.1
MIPR	Malaya Ipel'ka	1.29	280	eP	Pn	05 18 48.8	-1.0
GNL	Ganaly	1.72	342	P	Pn	05 18 56.3	+0.6
MKZ	Mys Kozlova	3.05	34	P	Pn	05 19 13.9	+0.1

*ISCJB **23** 05:24:06.1±1.3, 39°.36N±0°.06×40°.53E±0°.09, h9km±14km, Error ellipse: s-maj=11.6km s-min=10.2km az=154.1*
*CSEM **23** 05:24:08.6, 39°.24N×40°.41E, h13km, MD2.8, After ISK*
*ISK **23** 05:24:08.6, 39°.24N×40°.41E, h13km, MD2.8*
ISC 23 05:24:06.3±1.0, 39°.36N±0°.06×40°.56E±0°.08, h6km±12km, n9, σ0s85/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.49	187	ePG	Pg	05 24 16.9	+1.2
BINT				eSG	Sg	05 24 22.0	-0.1
BINT	Bingol	0.49	187	ePg	Pg	05 24 16.9	+1.1
BINT				eSg	Sg	05 24 22.0	-0.1
ERZM	Erzurum	0.82	49	i P	Pg	05 24 21.2	-0.9
EZC	Erzincan	1.01	293	ePG	Pg	05 24 27.3	+1.5
PTK	Pertek	1.02	243	ePG	Pg	05 24 25.4	-0.6
PTK				eSG	Sg	05 24 38.3	-1.0
PTK	Pertek	1.02	243	ePg	Pg	05 24 25.4	-0.6
PTK				eSg	Sg	05 24 38.3	-1.0
SVRC	Sivrice-ELAZID	1.39	225	ePN	Pn	05 24 32.0	-0.2
SVRC	Sivrice-ELAZID	1.39	225	ePn	Pn	05 24 32.0	-0.2
BEST	Besiri	1.57	159	i P	Pn	05 24 35.0	+0.2

*ISCJB **23** 05:39:04.3±6.4, 4°.37S±0°.09×76°.4W±0°.2, h4km±41km, mb3.3/3, Error ellipse: s-maj=27.5km s-min=12.4km az=17.0.*
*IDC **23** 05:39:06.4±1.3, 4°.32S×76°.21W, h0km, mb3.5/3, mb1 3.8/8, mb1mx3.7/22, mbtmp3.7/8, ML3.8/5, Error ellipse: s-maj=35.0km s-min=23.5km az=85.0*
ISC 23 05:39:09.6±4.2, 4°.35S±0°.09×76°.2W±0°.1, h23km±33km, n8, σ0s95/10, mb3.3/3, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.40	219	Pn	Pn	05 40 04.0	+2.6
	8.0nm,0.3s,baz=27,slow=11,SNR=40						
ATAH				Sn	Sn	05 40 39.9	-1.0
	8.4nm,0.3s,baz=202,slow=20,SNR=6.8						
NNA	Nana	7.61	185	Pn	Pn	05 40 59.0	-0.2
	1.5nm,0.3s,baz=4.1,slow=14,SNR=2.8						
NNA				Sn	Sn	05 42 18.1	-6.7
	4.2nm,0.3s,baz=287,slow=22,SNR=7.7						
LPAZ	La Paz	14.28	147	Pn	Pn	05 42 30.4	-0.1
	0.4nm,0.3s,baz=329,slow=9.6,SNR=16						
SDV	Santo Domingo	14.28	23	Pn	Pn	05 42 29.6	-1.0
	0.1nm,0.3s,baz=207,slow=16,SNR=1.9						
SIV	San Ignacio	18.86	129	P	Pn	05 43 28.9	0.0
	0.2nm,0.3s,baz=296,slow=18,SNR=6.8						
CPUP	Villa Florida	28.37	142	P	P	05 45 01.8	-0.5
	0.6nm,0.5s,mb3.5,baz=304,slow=14,SNR=4.3						
YKA	Yellowknife Ar	72.77	342	P	P	05 50 35.9	+0.1
	0.1nm,0.5s,mb3.0,baz=142,slow=5.3,SNR=4.6						
TORD	Torodi Ar. Bea	79.27	76	P	P	05 51 15.0	+1.1
	0.5nm,0.9s,mb3.4,baz=281,slow=7.1,SNR=3.0						

*ISCJB **23** 05:51:43.9±0.8, 24°.76S±0°.07×179°.78E±0°.09, h502km±10km, mb4.2/15, Error ellipse: s-maj=12.7km s-min=10.8km az=8.9*
*NEIC **23** 05:51:44.8±0.8, 24°.77S×179°.82E, h511km±9km, mb4.6/11, Error ellipse: s-maj=12.9km s-min=12.2km az=190.0*
*IDC **23** 05:51:44.8±1.7, 24°.76S×179°.89E, h507km±19km, mb3.7/8, mb1 3.9/10, mb1mx3.7/17, mbtmp3.8/10, Error ellipse: s-maj=24.2km s-min=13.4km az=162.0*
ISC 23 05:51:44.7±0.8, 24°.82S±0°.07×179°.81E±0°.09, h500km±10km, n43, σ0s85/35, mb4.2/15, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.86	156	P	P	05 53 10.9	+0.6
	58nm,0.3s,baz=72,slow=22,SNR=3.1						
MSVF	Nonsavu	7.24	347	ePn	P	05 53 33.3	-0.1
	39nm,0.7s						
DZM	Mont Dzumac	12.57	280	eS	P	05 54 28.8	-0.6
DZM	Mont Dzumac	12.57	280	ePn	P	05 54 28.9	-0.5
	39nm,0.9s						
AFI	Afiamalu	13.43	38	P	P	05 54 34.3	-4.3
	6.7nm,0.3s,baz=207,slow=2.7,SNR=11						
AFI	Afiamalu	13.43	38	ePn	P	05 54 33.4	-5.2
URZ	Urewera	13.60	189	P	P	05 54 40.3	+0.3
	5.1nm,0.3s,baz=333,slow=4.5,SNR=31						
URZ				S	S	05 57 02.9	-1.7
	0.5nm,0.3s,baz=302,slow=17,SNR=4.1						
URZ	Urewera	13.60	189	ePn	P	05 54 40.2	+0.2
URZ				eSn	S	05 57 03.0	-1.6
RPZ	Rata Peaks	20.17	199	P	P	05 55 45.0	+0.4
	16nm,0.6s,baz=20,slow=3.6,SNR=12						
RPZ	Rata Peaks	20.17	199	eP	P	05 55 44.8	+0.2
	12nm,0.5s						
CMSA	Cobar Meteorol	30.73	250	eP	P	05 57 19.2	+0.9
CTA	Charters Tower	31.32	272	∥iP	P	05 57 24.2	+0.6
	17nm,0.6s,mb4.6						
CTA	Charters Tower	31.32	272	P	P	05 57 24.4	+0.8
	23nm,0.5s,mb4.8,baz=99,slow=9.6,SNR=27						
CTA	Charters Tower	31.32	272	P	P	05 57 24.4	+0.8
CTAO	Charters Tower	31.32	272	eP	P	05 57 24.2	+0.6
	20nm,0.6s,mb4.7						
MTSU	Mount Surprise	33.63	274	eP	P	05 57 44.1	+0.9
	52nm,0.7s,mb5.1						
STKA	Stephens Creek	34.23	249	P	P	05 57 48.7	+0.5
	1.9nm,0.6s,mb3.7,baz=100,slow=7.5,SNR=5.8						
COEN	Coen	36.10	280	eP	P	05 58 04.6	+0.6
	53nm,0.9s,mb5.0						
ASAR	Alice Springs	41.73	262	P	P	05 58 49.5	0.0
	5.8nm,1.0s,mb4.0,baz=97,slow=8.3,SNR=25						
ASAR				ScP	ScP	06 03 37.7	+0.8
	0.7nm,0.9s,baz=101,slow=4.9,SNR=4.5						
ASAR				S	S	06 04 30.9	+0.8
	1.5nm,0.8s,baz=102,slow=16,SNR=7.7						
WRAB	Tennant Creek	42.18	267	eP	P	05 58 52.0	-1.1
	18nm,1.0s,mb4.5						
KAKA	Kakadu	46.23	276	eP	P	05 59 22.5	-2.1
	7.3nm,0.6s,mb4.3						
KAKA	Kakadu	46.23	276	eP	P	05 59 22.4	-2.2
	25nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	50.60	266	eP	P	05 59 56.3	-0.8
	12nm,0.7s,mb4.3						
FITZ	Fitzroy Crossi	50.60	266	eP	P	05 59 56.9	-0.2
	6.0nm,0.7s,mb4.0						
QSPA	South Pole Qui	65.27	180	eP	P	06 01 37.0	+1.1
	3.8nm,0.9s,mb4.0						
ISA	Isabella	83.78	46	eP	P	06 03 21.3	+0.4
	7.5nm,0.8s,mb4.3						
NVAR	Mina Array Bea	85.53	44	P	P	06 03 29.5	+0.1
	1.5nm,0.6s,mb3.8,baz=224,slow=8.4,SNR=10						
PMR	Palmer	89.67	14	eP	P	06 03 47.1	-1.1
	1.1nm,0.5s,mb3.9						
TXAR	Lajitas Array	91.06	58	P	P	06 03 56.0	+0.5
	2.1nm,0.8s,mb4.1,baz=213,slow=6.2,SNR=18						
TXAR	Lajitas Array	91.06	58	P	P	06 03 56.0	+0.5
PDAR	Pinedale Array	93.46	44	P	P	06 04 05.3	-1.0
	0.5nm,0.7s,mb3.6,baz=193,slow=4.6,SNR=4.0						
SONM	Songino Array	97.68	319	P	P	06 04 25.5	+0.3
	0.2nm,0.4s,mb3.8,baz=98,slow=10,SNR=2.7						
MKAR	Makanchi Array	112.64	312	PKiKP	PKiKP	06 09 22.3	-1.4
	0.2nm,0.6s,baz=64,slow=3.4,SNR=3.0						
BVAR	Borovoye Array	121.01	318	PKP	PKPdf	06 09 38.6	-1.0
	0.9nm,0.6s,baz=84,slow=6.1,SNR=4.3						
ARCES	ARCESS Array B	132.74	348	PKP	PKPdf	06 10 00.7	-0.9
	1.1nm,0.6s,baz=48,slow=1.8,SNR=6.2						
NOA	NORSAR Array B	142.96	351	PKP	PKPdf	06 10 16.9	-3.6
	3.0nm,0.9s,baz=16,slow=5.0,SNR=6.6						
AKASG	Malin Array Be	145.64	326	PKPbc	PKPbc	06 10 25.0	-1.8
	2.1nm,0.6s,baz=43,slow=3.8,SNR=6.8						
BRTR	Keskin Array B	147.99	306	PKPbc	PKPbc	06 10 32.1	-1.3
	0.8nm,0.7s,baz=145,slow=2.6,SNR=4.4						
CLL	Collm	151.68	342	i PKPbc	PKPbc	06 10 41.2	-0.6
	comp=Z,6.0nm,0.9s						
CLL	Collm	151.68	342	i PKPbc	PKPbc	06 10 41.3	-0.5
	comp=Z,6.0nm,0.9s						
CLL				ePKPab	PKPab	06 10 52.0	-0.9
CLL				ePKPab	PKPab	06 10 52.0	-0.9
BRG	Berggiesshubel	151.79	341	i P	PKPbc	06 10 41.7	-0.4
	comp=Z,4.2nm,0.6s						
GERES	GERESS Array B	153.65	339	PKPbc	PKPbc	06 10 43.6	-2.6
	comp=Z,0.4nm,0.9s,baz=219,slow=1.3,SNR=4.0						
TORD	Torodi Ar. Bea	168.26	189	PKP	PKPdf	06 10 52.7	-1.6
	comp=Z,0.5nm,0.9s,baz=11,slow=1.5,SNR=3.2						
TORD				PKPab	PKPab	06 12 05.3	-0.7
	comp=Z,0.9nm,0.9s,baz=189,slow=3.2,SNR=4.3						

BJI 23 06:19:34.7, 32°.91N×105°.73E, h12km, ML3.6/8, Ms3.2/1, Ms7 3.1/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	2.90	66	Pn	Pn	06 20 18.6	-2.0
XAN				Pg	Pg	06 20 24.3	-5.9
XAN				Sn	Sn	06 20 51.0	-4.3
XAN				Sg	Sg	06 21 00.3	-7.4
XAN				smax			
	comp=N,220nm,0.5s						
XAN				smax			
	comp=E,100nm,0.6s						
LZH	Lanzhou	3.53	334	ePn	Pn	06 20 28.8	-0.5
LZH				Pg	Pg	06 20 38.8	-3.6
LZH				Sg	Sg	06 21 24.8	-3.3
LZH				smax			
	comp=N,230nm,0.8s						
LZH				smax			
	comp=E,300nm,0.8s						
LZH				LR	LR		
	comp=E,180nm,4.6s						
LZH				LR	LR		
	comp=Z,230nm,7.0s						

MEX 23 06:41:09.7±0.6, 15°.81N×96°.39W, h16km±70km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.30	345	eP	Pn	06 41 29.5	-3.6
VHO				i S	Sb	06 41 45.4	-4.7
PNIG	Pinotepa	1.77	289	i P	Pn	06 41 36.8	-2.8
PNIG				i S	Sn	06 41 56.8	-5.0
UTMO	Huajuapan	2.42	326	i P	Pn	06 41 45.2	-3.5
UTMO				i S	Sn	06 42 14.6	-3.3

*NEIC **23** 06:43:22.3±0.8, 59°.00S×149°.05E, h10km, mb4.4/6, Error ellipse: s-maj=57.0km s-min=14.3km az=74.0*
*GCMT **23** 06:43:22.3±0.3, 59°.01S×149°.02E, h18km±1km, MW5.0/61, Moment Tensor Solution. s22,c24; s61,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.09±.17; $M_{\theta\theta}$1.70±.12; $M_{\phi\phi}$-1.79±.15; $M_{r\theta}$-0.73±.32; $M_{\theta\phi}$-3.26±.13; $M_{\phi r}$0.55±.36; Best double couple: $M_0$3.80900×10^{16} NP1:ϕ_s255.00000°, δ79.00000°, λ171.00000°. NP2: ϕ_s347.00000°, δ82.00000°, λ11.00000°. Principal axes: T 3.8720, Plg14.0000°, Azm211.0000°; N -0.1300, Plg76.0000°, Azm25.0000°; P -3.7450, Plg1.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **23** 06:43:22.4±2.1, 58°.47S×149°.62E, h0km, mb4.2/4, mb1 4.3/4, mb1mx4.1/11, mbtmp4.2/4, MS4.1/10, Ms1 4.1/10, ms1mx3.9/16 Error ellipse: s-maj=94.7km s-min=27.6km az=94.0*
ISC 23 06:43:21.2±0.7, 59°.04S±0°.08×149°.5E±0°.5, h10km, n35, σ1s11/17, mb4.4/9, MS4.1/10, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	Tasmania Unive	16.21	354	eP	Pn	06 47 12.3	+3.5
	108nm,1.2s						
MOO	Moorlands	16.68	354	eP	Pn	06 47 17.8	+3.0
SBA	Scott Base	19.75	169	eP	Pn	06 47 51.5	-0.7
	6.3nm,1.1s						
RPZ	Rata Peaks	20.25	50	LR	LR	06 54 18.8	
	comp=Z,798nm,20.6s,MS4.1,baz=195,slow=33						
TOO	Toolangi	21.64	351	eP	P	06 48 11.3	-0.1
CNB	Canberra Magne	23.73	360	eP	P	06 48 33.7	+0.4
YNG	Young	24.76	358	eP	P	06 48 43.3	+0.6
	11nm,0.9s,mb4.4						
URZ	Urewera	27.30	53	LR	LR	06 59 32.2	
	comp=Z,407nm,18.6s,MS4.0,baz=210,slow=36						
CMSA	Cobar Meteorol	27.62	353	eP	P	06 49 08.8	+0.2
STKA	Stephens Creek	27.69	345	P	P	06 49 07.5	-1.7
	3.2nm,0.9s,mb4.0,baz=107,slow=2.3,SNR=3.6						
STKA				LR	LR	06 57 25.8	
	comp=Z,225nm,19.6s,MS3.8,baz=0.9,slow=31						
STKA	Stephens Creek	27.69	345	eP	P	06 49 08.8	-0.4
	1.4nm,1.1s,mb3.5						
QSPA	South Pole Qui	31.06	180	eP	P	06 49 39.4	+0.8
	4.0nm,1.1s,mb4.2						
FORT	Forrest	31.79	323	eP	P	06 49 44.9	-0.7
	33nm,0.9s,mb5.2						
RMQ	Roma	32.54	359	eP	P	06 49 52.3	+0.2
	36nm,1.4s,mb5.1						
MAW	Mawson	36.66	220	P	P	06 50 34.2	+6.8
	3.4nm,0.9s,mb4.2,baz=28,slow=7.6,SNR=3.8						
MAW				LR	LR	07 05 57.8	
	comp=Z,352nm,18.6s,MS4.2,baz=104,slow=36						
ASAR	Alice Springs	37.04	336	P	P	06 50 29.8	-1.2
	2.0nm,0.7s,mb4.0,baz=165,slow=10,SNR=16						
ASAR				PcP	PcP	06 52 53.0	+1.4
	0.4nm,0.6s,baz=150,slow=2.8,SNR=4.4						
DZM	Mont Dzumac	38.87	25	eS	S	06 56 40.5	-3.7
	105nm,26.1s						
DZM				eLR	LR	07 01 34.8	
	1μm,25.9s						
WRAB	Tennant Creek	40.58	338	eP	P	06 50 59.5	-1.1
	14nm,1.2s,mb4.5						
PPT	Papeete	60.22	74	eLR	LR	07 11 52.3	
	150nm,25.5s						
PPT	Papeete	60.22	74	LR	LR	07 17 22.6	
	comp=Z,154nm,18.0s,MS4.2,baz=176,slow=34						
RKT	Rikitea	63.04	90	eT		08 02 16.2	
	4.9nm,0.2s						
BOSA	Boshof	81.27	227	LR	LR	07 27 01.9	
	comp=Z,157nm,18.1s,MS4.4,baz=158,slow=32						
CMAR	Chiang Mai Arr	87.58	313	P	P	06 56 10.8	+1.7
	0.5nm,0.4s,mb4.1,baz=170,slow=5.5,SNR=2.6						
CMAR				LR	LR	07 33 06.2	
	comp=Z,86nm,18.1s,MS4.2,baz=309,slow=34						
MJAR	Matsushiro Arr	95.69	351	LR	LR	07 37 21.8	
	comp=Z,48nm,20.7s,MS4.0,baz=225,slow=34						
KSRS	Korea Array	97.80	343	LR	LR	07 40 13.2	
	comp=Z,48nm,18.4s,MS4.0,baz=13,slow=35						
LPAZ	La Paz	98.89	144	LR	LR	07 34 52.7	
	comp=Z,43nm,18.4s,MS4.0,baz=162,slow=31						
TORD	Torodi Ar. Bea	128.30	221	PKP	PKPdf	07 02 31.9	+4.2
	0.3nm,0.8s,baz=210,slow=1.2,SNR=2.1						
TORD	Torodi Ar. Bea	128.30	221	PKP	PKPdf	07 02 31.9	+4.1
YKA	Yellowknife Ar	141.50	48	PKP	PKPdf	07 02 53.3	+2.6
	0.2nm,0.6s,baz=234,slow=3.0,SNR=3.7						
KEST	Kesra	145.16	246	PKPbc	PKPbc	07 03 01.7	+3.9
	0.5nm,0.5s,baz=315,slow=5.7,SNR=3.0						
AKASG	Malin Array Be	145.74	283	PKPbc	PKPbc	07 03 00.6	+1.5
	0.3nm,0.3s,baz=110,slow=2.2,SNR=2.9						
FCC	Fort Churchill	148.24	63	ePKPdf	PKPdf	07 03 04.4	+1.9
GERES	GERESS Array B	152.57	268	PKPbc	PKPbc	07 03 18.7	+2.1
	0.3nm,0.4s,baz=163,slow=3.7,SNR=2.9						
FINES	FINESS Array B	152.57	299	PKPbc	PKPbc	07 03 18.1	+1.8
	1.7nm,0.7s,baz=98,slow=4.2,SNR=3.3						
ARCES	ARCESS Array B	154.56	317	PKPab	PKPab	07 03 33.6	-1.5
	1.0nm,0.7s,baz=83,slow=4.0,SNR=4.0						

MAN 23 06:47:45, 9°.32N×122°.46E, h20km, mb4.4, ML3.3, MS3.1, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.76	88⇑	eP	Pb	06 47 59.5	-0.1
SNPH				i S	Sb	06 48 12.4	+2.8
GUIM	Jordan	1.30	5	eP	Pn	06 48 04.9	-3.2
GUIM				eS	Sn	06 48 15.3	-10
TBP	Tagbilaran	1.43	75	eP	Pn	06 48 09.7	-0.1
PAGZ	Pagadian	1.72	148	eP	Pn	06 48 15.8	+2.0
PAGZ				eS	Sn	06 48 36.2	+0.9
RCP	Roxas	2.24	7⇑	eP	Pn	06 48 21.5	+0.5
RCP				eS	Sn	06 48 49.4	+1.2

*ISCJB **23** 07:20:38.8±0.4, 50°.01N±0°.02×78°.57E±0°.06, h10km, Error ellipse: s-maj=5.3km s-min=2.6km az=169.8*
*NNC **23** 07:20:38.5±0.3, 50°.02N×78°.77E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=5.7km s-min=1.8km az=74.0*
*IDC **23** 07:20:40.1±0.8, 50°.07N×78°.75E, h0km, mb1 3.1/3, mb1mx3.0/25, mbtmp3.1/3, ML3.2/3, Error ellipse: s-maj=11.9km s-min=5.7km az=59.0*
**

0.2nm,0.2s,baz=331,slow=16,SNR=7.7
MK31 Pg **Pb** **07 21 50.7 -0.7**
1.8nm,0.3s,baz=322,slow=14,SNR=20
MK31 ⇑Lg 07 22 44.9
10nm,0.5s,baz=336,slow=28,SNR=9.3
MKAR Makanchi Array 4.04 142 Pn **Pn** **07 21 43.2 +1.2**
0.7nm,0.3s,baz=323,slow=10,SNR=29
MKAR Pg **Pb** **07 21 50.5 -0.8**
1.7nm,0.3s,baz=328,slow=16,SNR=24
MKAR Sn **Sn** **07 22 32.1 +2.8**
1.4nm,0.3s,baz=318,slow=19,SNR=5.5
MKAR Lg 07 22 44.8
4.4nm,0.3s,baz=326,slow=28,SNR=14
ZALV Zalesovo Beam 5.45 42 Pn **Pn** **07 22 03.3 +2.0**
2.0nm,0.3s,baz=230,slow=15,SNR=12
ZALV Sn **Sn** **07 23 06.2 +2.3**
0.6nm,0.3s,baz=230,slow=20,SNR=2.6
ZALV Lg 07 23 29.7
1.1nm,0.3s,baz=227,slow=27,SNR=4.0
VOSK Vostochnaya 5.52 302 ⇓Pn **Pn** **07 21 59.9 -2.4**
1.0nm,0.5s
VOSK ⇓Sn **Sn** **07 23 07.4 +1.7**
4.5nm,0.6s
VOSK ⇓Lg 07 23 34.0
3.6nm,0.6s
BVA0 Borovoye Array 5.97 303 ⇓Pn **Pn** **07 22 09.2 +0.7**
0.2nm,0.5s,baz=118,slow=16,SNR=5.4
BVA0 ⇓Sn **Sn** **07 23 18.5 +1.6**
0.3nm,0.4s,baz=112,slow=22,SNR=4.3
BVA0 ⇓Lg 07 23 50.3
1.3nm,0.7s,baz=119,slow=28,SNR=5.4
BVAR Borovoye Array 5.97 303 Pn **Pn** **07 22 10.2 +1.7**
0.4nm,0.3s,baz=115,slow=14,SNR=5.2
BVAR Pg **Pb** **07 22 19.2 -5.1**
0.7nm,0.3s,baz=107,slow=15,SNR=7.8
BVAR Sn **Sn** **07 23 16.1 -0.9**
1.1nm,0.3s,baz=111,slow=22,SNR=8.6
BVAR Lg 07 23 50.3
0.7nm,0.3s,baz=112,slow=27,SNR=4.2
TKM2 Tokmak 2 7.43 198 ⇑Pn **Pn** **07 22 28.7 +0.1**
0.9nm,0.6s
TKM2 ⇓Lg 07 24 30.8
4.3nm,0.6s

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*NEIC **23** 07:39:57.9, 55°.47N×158°.51W, h11km, ML3.9(AEIC), ML4.3(PMR), After AEIC.*
NEIC Felt [III] at Chignik and Perryville.
*ISCJB **23** 07:39:58.5±0.6, 55°.75N±0°.07×158°.72W±0°.08, h67km±5km, mb3.9/19, Error ellipse: s-maj=12.9km s-min=4.9km az=149.0*
*IDC **23** 07:39:59.1±0.6, 55°.80N×158°.84W, h55km±5km, mb3.8/18, mb1 3.9/20, mb1mx3.9/28, mbtmp3.8/20, MS3.3/5, Ms1 3.3/5, ms1mx2.9/39, Error ellipse: s-maj=20.1km s-min=12.0km az=9.0*
ISC 23 07:39:59.9±0.6, 55°.68N±0°.07×158°.72W±0°.08, h65km±5km, h57km±1.1km: pP-P, n54, σ0s93/53, mb3.9/19, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**0.64**	**16**	*e*P	**Pn**	**07 40 12.1**	**-1.6**
SDPT	**Sand Point**	**1.05**	**252**	P	**Pn**	**07 40 17.8**	**-0.9**
SDPT				S	**Sn**	**07 40 32.3**	**-0.4**
FALS	**False Pass**	**2.81**	**255**	P	**Pn**	**07 40 42.8**	**+0.4**
FALS				S	**Sn**	**07 41 16.7**	**+1.7**
OHAK	**Old Harbor**	**3.39**	**61**	*e*P	**Pn**	**07 40 48.2**	**-2.0**
KDAK	**Kodiak Island**	**3.98**	**56**	P	**Pn**	**07 40 57.1**	**-1.1**
KDAK	**Kodiak Island**	**3.98**	**56**	P	**Pn**	**07 40 58.2**	**-0.1**
AKUT	**Akutan**	**4.35**	**252**	*e*Pn	**Pn**	**07 41 02.9**	**-0.5**
RSO	**Redoubt South**	**5.74**	**31**	*e*Pn	**Pn**	**07 41 24.3**	**+2.0**
SLKM	**Skilak Lake**	**6.61**	**39**	P	**Pn**	**07 41 34.2**	**0.0**
SEW	**Seward**	**6.64**	**44**	P	**Pn**	**07 41 33.3**	**-1.3**
SKT	**Skwentna**	**7.33**	**28**	P	**Pn**	**07 41 45.5**	**+1.5**
TT01	**Tatalina**	**7.38**	**10**	P	**Pn**	**07 41 45.0**	**+0.4**
TTA	**Tatalina**	**7.40**	**10**	*e*P	**Pn**	**07 41 45.3**	**+0.3**
PMR	**Palmer**	**7.75**	**36**	*e*P	**Pn**	**07 41 50.0**	**+0.3**
PPLA	**Purkeypile**	**7.97**	**22**	P	**Pn**	**07 41 54.9**	**+2.1**
SML	**Sawmill**	**8.17**	**37**	P	**Pn**	**07 41 55.1**	**-0.4**
EYAK	**Cordova Ski Ar**	**8.42**	**49**	P	**Pn**	**07 41 57.5**	**-1.3**
DIV	**Divide**	**8.71**	**46**	P	**Pn**	**07 42 01.8**	**-1.0**
KTH	**Kantishna Hill**	**8.82**	**23**	P	**Pn**	**07 42 05.0**	**+0.6**
CHUM	**Lake Minchumin**	**8.83**	**19**	P	**Pn**	**07 42 05.1**	**+0.6**
TRF	**Thorofare Moun**	**8.88**	**25**	P	**Pn**	**07 42 04.7**	**-0.5**
GCSA	**Galena City Sc**	**9.14**	**5**	P	**Pn**	**07 42 09.6**	**+0.9**
BPAW	**Bear Paw Mtn.**	**9.29**	**21**	P	**Pn**	**07 42 10.9**	**+0.2**
MCK	**McKinley**	**9.46**	**27**	*e*Pn	**Pn**	**07 42 13.8**	**+0.8**
MENT	**Mentasta**	**10.54**	**40**	*e*P	**Pn**	**07 42 29.2**	**+1.3**
DAWY	**Dawson**	**12.79**	**41**	*e*Pn	**Pn**	**07 42 57.7**	**-0.7**
SKAG	**Skagway**	**13.08**	**64**	*e*P	**Pn**	**07 43 03.2**	**+0.7**
	2.9nm,0.7s						
INK	**Inuvik**	**17.14**	**32**	P	**Pn**	**07 43 53.5**	**-1.1**
	0.6nm,0.3s,baz=233,slow=13,SNR=19						
INK	**Inuvik**	**17.14**	**32**	P	**Pn**	**07 43 53.5**	**-1.1**
BBB	**Bella Bella**	**18.28**	**88**	LR	LR	07 50 52.2	
	comp=Z,55nm,20.5s,baz=261,slow=36						
YKA	**Yellowknife Ar**	**23.26**	**55**	P	**P**	**07 45 00.6**	**-0.6**
	0.6nm,0.6s,mb3.1,baz=272,slow=9.3,SNR=12						
YKA	**Yellowknife Ar**	**23.26**	**55**	P	**P**	**07 45 00.6**	**-0.6**
PETK	**Petropavlovsk-**	**25.19**	**282**	P	**P**	**07 45 18.5**	**-0.4**
	6.8nm,0.5s,mb4.3,baz=82,slow=14,SNR=7.9						
YBH	**Yreka Blue Hor**	**27.20**	**106**	LR	LR	07 55 09.5	
	comp=Z,60nm,19.8s,baz=310,slow=33						
RES	**Resolute Bay**	**30.58**	**28**	P	**P**	**07 46 06.0**	**-0.8**
	0.4nm,0.6s,mb3.4,baz=279,slow=11,SNR=4.7						
RES	**Resolute Bay**	**30.58**	**28**	P	**P**	**07 46 06.0**	**-0.8**
NVAR	**Mina Array Bea**	**31.92**	**106**	P	**P**	**07 46 20.8**	**+1.9**
	0.7nm,0.7s,mb3.5,baz=284,slow=7.2,SNR=4.3						
NVAR				pP	pP	07 46 34.6	-0.1
	1.4nm,0.7s,baz=293,slow=8.5,SNR=7.6						
PDAR	**Pinedale Array**	**33.87**	**91**	P	**P**	**07 46 37.1**	**+1.2**
	0.3nm,0.4s,mb3.5,baz=279,slow=7.2,SNR=2.9						
PDAR				pP	pP	07 46 51.0	-0.8
	1.9nm,0.7s,baz=316,slow=4.5,SNR=12						
TXAR	**Lajitas Array**	**46.77**	**101**	P	**P**	**07 48 23.4**	**+0.9**
	0.4nm,0.6s,mb3.4,baz=318,slow=5.9,SNR=5.3						
TXAR				pP	pP	07 48 38.5	-0.4
	1.2nm,0.6s,baz=309,slow=5.7,SNR=11						
TXAR				LR	LR	08 07 22.3	
	comp=Z,44nm,19.1s,baz=20,slow=35						
KSRS	**Korea Array**	**51.09**	**281**	P	**P**	**07 48 55.4**	**-0.1**
	1.5nm,0.7s,mb4.1,baz=46,slow=6.7,SNR=7.5						
SONM	**Songino Array**	**54.79**	**305**	P	**P**	**07 49 22.4**	**-0.1**
	2.8nm,0.8s,mb4.4,baz=43,slow=8.0,SNR=10						
ARCES	**ARCESS Array B**	**55.05**	**358**	P	**P**	**07 49 23.3**	**-0.8**
	2.7nm,1.1s,mb4.2,baz=20,slow=7.9,SNR=9.7						
ZALV	**Zalesovo Beam**	**58.96**	**322**	P	**P**	**07 49 52.0**	**0.0**
	1.1nm,0.5s,mb4.2,baz=28,slow=6.7,SNR=4.6						
ZALV				LR	LR	08 17 57.5	
	comp=Z,29nm,18.5s,baz=87,slow=39						
FINES	**FINESS Array B**	**63.15**	**357**	P	**P**	**07 50 19.4**	**-0.8**
	1.8nm,0.6s,mb4.2,baz=1.1,slow=9.5,SNR=5.0						
NB2	**NORSAR Subarra**	**63.35**	**5**	P	**P**	**07 50 21.3**	**-0.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=354,slow=6.9						
NOA	**NORSAR Array B**	**63.35**	**5**	P	**P**	**07 50 21.5**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.2,baz=354,slow=6.7,SNR=9.0						
GTA	**Gaotai**	**64.28**	**303**	*e*P	**P**	**07 50 27.5**	**-0.5**
GTA				pP	pP	07 50 34.6	-11
GTA				sP	sP	07 50 37.6	-15
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**64.35**	**330**	P	**P**	**07 50 28.0**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.3,baz=42,slow=6.8,SNR=23						
MKAR	**Makanchi Array**	**65.78**	**319**	P	**P**	**07 50 36.8**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.1,baz=45,slow=7.0,SNR=24						
MKAR				pP	pP	07 50 52.6	-2.2
	comp=Z,1.0nm,0.8s,baz=33,slow=5.4,SNR=4.4						
MKAR				LR	LR	08 24 32.5	
	comp=Z,36nm,20.4s,baz=169,slow=41						
AKASG	**Malin Array Be**	**73.78**	**355**	P	**P**	**07 51 26.6**	**0.0**
	comp=Z,1.1nm,0.4s,mb3.9,baz=5.6,slow=5.5,SNR=4.6						
GERES	**GERESS Array B**	**75.65**	**5**	P	**P**	**07 51 37.6**	**+0.1**
	comp=Z,1.1nm,0.6s,mb3.8,baz=0.0,slow=4.4,SNR=8.5						
CMAR	**Chiang Mai Arr**	**81.69**	**290**	P	**P**	**07 52 10.7**	**-0.4**
	comp=Z,1.2nm,0.3s,mb4.2,baz=12,slow=5.8,SNR=8.8						
CMAR				pP	pP	07 52 26.0	-3.0
	comp=Z,1.8nm,0.4s,baz=8.9,slow=6.4,SNR=1.7						
BRTR	**Keskin Array B**	**84.38**	**350**	P	**P**	**07 52 25.5**	**+0.8**
	comp=Z,1.8nm,0.8s,mb3.9,baz=78,slow=1.6,SNR=7.6						
QSPA	**South Pole Qui**	**145.46**	**180**	PKPbc	PKPbc	07 59 28.6	-0.1
	comp=Z,2.7nm,0.7s,baz=49,slow=2.8,SNR=21						
QSPA				pPKPbc	pPKPbc	07 59 44.9	-2.3
	comp=Z,3.0nm,0.8s,baz=9.5,slow=2.0,SNR=5.2						

IDC 23 07:59:38.1±1.6, 34°.16S×179°.49E, h0km, mb4.1/4, mb1 4.2/5, mb1mx4.0/15, mbtmp4.1/5, ML4.1/1, MS3.8/3, Ms1 3.7/3, ms1mx3.1/21, Error ellipse: s-maj=33.8km s-min=30.7km az=80.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.53**	**204**	Pn	Pn	08 00 47.7	-0.2
	8.8nm,0.3s,baz=56,slow=7.8,SNR=36						
URZ				Sn	Sn	08 01 42.1	+0.9
	6.4nm,0.3s,baz=167,slow=18,SNR=3.3						
RPZ	**Rata Peaks**	**11.58**	**212**	Pn	Pn	08 02 19.4	-5.3
	0.3nm,0.3s,baz=17,slow=12,SNR=2.5						
RPZ				Sn	Sn	08 04 27.1	-7.6
	0.4nm,0.3s,baz=196,slow=18,SNR=3.0						
STKA	**Stephens Creek**	**31.74**	**263**	P	P	08 06 04.5	+0.6
	1.9nm,0.9s,baz=124,slow=11,SNR=2.2						
STKA				LR	LR	08 16 38.6	
	comp=Z,111nm,18.7s,baz=210,slow=32						
ASAR	**Alice Springs**	**40.96**	**272**	P	P	08 07 22.2	-0.4
	2.6nm,0.9s,baz=111,slow=7.6,SNR=19						
QSPA	**South Pole Qui**	**55.96**	**180**	P	P	08 09 17.9	+0.3
	2.1nm,0.7s,baz=318,slow=0.8,SNR=17						
QSPA				LR	LR	08 32 09.6	
	comp=Z,62nm,20.0s,baz=33,slow=35						
NVAR	**Mina Array Bea**	**92.42**	**44**	P	P	08 12 51.0	+0.4
	0.4nm,0.7s,baz=201,slow=7.4,SNR=3.0						
CPUP	**Villa Florida**	**99.25**	**130**	LR	LR	08 51 21.7	
	comp=Z,57nm,18.2s,baz=354,slow=31						

IDC 23 08:00:56.3±1.0, 47°.73N×33°.14E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/24, mbtmp3.4/7, ML3.4/4, Error ellipse: s-maj=17.9km s-min=13.0km az=25.0, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.93**	**321**	Pn	Pn	08 01 56.1	-1.6
	0.6nm,0.3s,baz=143,slow=15,SNR=2.9						
AKASG				Pg	Pg	08 02 06.5	-5.0
	1.9nm,0.3s,baz=130,slow=18,SNR=5.7						
AKASG				Lg		08 02 58.4	
	4.7nm,0.3s,baz=136,slow=31,SNR=5.6						
AKASG				Pg		08 03 18.9	
	1.6nm,0.4s,baz=138,slow=35,SNR=9.9						
MLR	**Muntele Rosu**	**5.44**	**248**	Pn	Pn	08 02 20.1	+1.5
	0.5nm,0.3s,baz=108,slow=13,SNR=2.7						
MLR				Lg		08 03 42.4	
	0.4nm,0.3s,baz=128,slow=19,SNR=2.9						
AKTO	**Aktyubinsk**	**16.50**	**71**	Pn	Pn	08 04 45.0	-3.9
	0.3nm,0.3s,baz=270,slow=11,SNR=2.5						
NOA	**NORSAR Array B**	**18.33**	**325**	P	Pn	08 05 12.2	+0.5
	0.1nm,0.3s,baz=128,slow=11,SNR=2.8						
BVAR	**Borovoye Array**	**24.14**	**63**	P	P	08 06 13.5	-0.1
	0.2nm,0.3s,baz=260,slow=16,SNR=2.8						
TORD	**Torodi Ar. Bea**	**43.30**	**228**	P	P	08 08 59.9	+0.1
	0.8nm,1.1s,baz=21,slow=10,SNR=2.8						
CMAR	**Chiang Mai Arr**	**60.34**	**95**	P	P	08 11 05.5	-1.6
	0.6nm,0.3s,baz=309,slow=4.5,SNR=4.9						
YKA	**Yellowknife Ar**	**67.15**	**344**	P	P	08 11 52.2	+0.9
	0.1nm,0.6s,baz=21,slow=6.5,SNR=3.9						

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*ISCJB **23** 08:13:02.8±0.5, 27°.50N±0°.04×140°.27E±0°.10, h451km±4km, mb3.6/18, Error ellipse: s-maj=13.5km s-min=6.5km az=170.6*
*IDC **23** 08:13:03.1±0.5, 27°.48N×140°.23E, h440km±5km, mb3.3/17, mb1 3.5/20, mb1mx3.4/28, mbtmp3.4/20, Error ellipse: s-maj=14.6km s-min=11.3km az=63.0*
*NEIC **23** 08:13:04.2±1.1, 27°.51N×140°.21E, h452km±10km, mb3.9/3, Error ellipse: s-maj=13.0km s-min=10.2km az=138.0*
*JMA **23** 08:13:04.2±0.3, 27°.65N×140°.61E, h454km±4km, M4.3*
ISC 23 08:13:04.0±0.5, 27°.53N±0°.04×140°.33E±0°.10, h447km±4km, n47, σ1s11/59, mb3.6/18, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.71**	**104**	P	**P**	**08 14 02.8**	**+0.1**
CBIJ				S	**S**	**08 14 48.5**	**-1.7**
CBIJ	**Chichi jima**	**1.71**	**104**	P	**P**	**08 14 02.9**	**+0.2**
	74nm,0.3s,baz=284,slow=3.2,SNR=162						
CBIJ				S	**S**	**08 14 48.9**	**-1.4**
	148nm,0.3s,baz=283,slow=22,SNR=15						
JHHJ	**Haha-jima-NKT**	**1.88**	**118**	P	**P**	**08 14 04.3**	**+0.7**
JHHJ				S	**S**	**08 14 51.7**	**-0.1**
JHJ	**Hachijo jima 2**	**5.59**	**355**	P	**P**	**08 14 34.3**	**+0.4**
	22nm,0.3s,baz=240,slow=20,SNR=6.4						
JHJ				S	**S**	**08 15 46.6**	**-0.8**
	24nm,0.3s,baz=80,slow=23,SNR=6.4						
BSO1	**Boso 1**	**7.12**	**4**	P	**P**	**08 14 50.3**	**+0.5**
BSO1				S	**S**	**08 16 16.2**	**-0.3**
BSO3	**Boso 3**	**7.25**	**1**	P	**P**	**08 14 51.8**	**+0.7**
BSO3				S	**S**	**08 16 16.3**	**-2.7**
BSO4	**Boso 4**	**7.44**	**0**	P	**P**	**08 14 54.0**	**+0.9**
BSO4				S	**S**	**08 16 20.5**	**-2.2**
JOD2	**Odawara 2**	**7.78**	**352**	P	**P**	**08 14 58.3**	**+1.5**
JOD2				S	**S**	**08 16 29.2**	**-0.3**
JHU	**Hanno**	**8.35**	**354**	P	**P**	**08 15 03.6**	**+0.7**
JHU				S	**S**	**08 16 37.5**	**-3.1**
JTO	**Tosashimizu**	**8.40**	**311**	P	**P**	**08 15 05.6**	**+2.0**
JRY	**Ryogami san**	**8.55**	**352**	P	**P**	**08 15 05.0**	**-0.1**
JRY				S	**S**	**08 16 42.0**	**-2.7**
JAG	**Ashikaga**	**8.90**	**355**	P	**P**	**08 15 08.1**	**-0.8**
JAG				S	**S**	**08 16 50.0**	**-1.7**
MJAR	**Matsushiro Arr**	**9.16**	**349**	P	**P**	**08 15 11.5**	**-0.3**
	2.4nm,0.3s,baz=166,slow=9.8,SNR=13						
MJAR				S	**S**	**08 16 58.3**	**+1.3**
	0.3nm,0.3s,baz=175,slow=15,SNR=3.6						
MAJO	**Matsushiro**	**9.17**	**349**	*e*Pn	**P**	**08 15 12.5**	**+0.7**
	11nm,0.3s						
MAT	**Matsushiro**	**9.17**	**349**	P	**P**	**08 15 11.9**	**+0.1**
MAT	**Matsushiro**	**9.17**	**349**	P	**P**	**08 15 13.0**	**+1.2**
MAT				S	**S**	**08 16 58.6**	**+1.6**
JHS	**Saijyo**	**9.67**	**322**	P	**P**	**08 15 19.4**	**+2.1**
JOW	**Kunigami**	**10.76**	**269**	P	**P**	**08 15 30.4**	**+1.0**
JOW	**Kunigami**	**10.76**	**269**	P	**P**	**08 15 28.9**	**-0.4**
	2.0nm,0.3s,baz=76,slow=12,SNR=4.6						
JOW	**Kunigami**	**10.76**	**269**	P	**P**	**08 15 28.9**	**-0.4**
JMK	**Ichinoseki**	**11.42**	**4**	P	**P**	**08 15 37.9**	**+1.6**
JMK				S	**S**	**08 17 44.3**	**+2.3**
SONM	**Songino Array**	**33.27**	**317**	P	**P**	**08 19 02.0**	**-0.4**
	0.6nm,0.6s,mb3.2,baz=139,slow=8.4,SNR=2.8						
CMAR	**Chiang Mai Arr**	**39.01**	**266**	P	**P**	**08 19 50.2**	**-0.4**
	0.6nm,0.3s,mb3.5,baz=64,slow=6.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**48.08**	**319**	P	**P**	**08 21 00.2**	**-1.0**
	1.0nm,0.4s,mb3.5,baz=90,slow=5.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**48.08**	**319**	P	**P**	**08 21 00.2**	**-1.0**
MKAR	**Makanchi Array**	**48.93**	**309**	P	**P**	**08 21 07.3**	**-0.4**
	0.8nm,0.3s,mb3.5,baz=88,slow=10,SNR=9.8						
MKAR				PcP	PcP	08 22 22.7	-1.2
	0.5nm,0.6s,baz=81,slow=5.9,SNR=4.9						
ASAR	**Alice Springs**	**51.27**	**188**	P	**P**	**08 21 24.0**	**-1.1**
	0.3nm,0.5s,mb2.9,baz=357,slow=4.3,SNR=12						
KURK	**Kurchatov**	**51.51**	**314**	P	**P**	**08 21 26.4**	**-0.2**
	5.4nm,0.6s,mb4.1,baz=91,slow=8.2,SNR=20						
KURK	**Kurchatov**	**51.51**	**314**	*e*P	**P**	**08 21 25.6**	**-1.0**
	4.8nm,0.8s,mb3.9						
UCH	**Uchtor**	**54.69**	**304**	*e*P	**P**	**08 21 50.6**	**+1.1**
	1.2nm,0.6s,mb3.4						
BVAR	**Borovoye Array**	**56.61**	**317**	P	**P**	**08 22 02.5**	**-0.3**
	2.9nm,0.4s,mb4.0,baz=92,slow=8.2,SNR=16						
INK	**Inuvik**	**63.32**	**25**	P	**P**	**08 22 47.6**	**+0.2**
	0.7nm,0.6s,mb3.4,baz=308,slow=8.9,SNR=5.0						
AKTK	**Aktyubinsk**	**64.57**	**315**	P	**P**	**08 22 54.8**	**-0.9**
AKTO	**Aktyubinsk**	**64.57**	**315**	P	**P**	**08 22 54.8**	**-0.9**
	1.1nm,0.5s,mb3.7,baz=90,slow=12,SNR=6.1						
SPITS	**Spitsbergen Ar**	**69.66**	**349**	P	**P**	**08 23 27.3**	**+0.5**
	4.4nm,0.8s,mb4.0,baz=97,slow=6.8,SNR=6.7						
YKA	**Yellowknife Ar**	**72.54**	**28**	P	**P**	**08 23 44.3**	**+0.3**
	0.9nm,0.4s,mb3.6,baz=297,slow=6.1,SNR=29						
ARCES	**ARCESS Array B**	**72.59**	**340**	P	**P**	**08 23 43.9**	**-0.2**
	2.2nm,0.9s,mb3.7,baz=74,slow=8.9,SNR=10						
ARCES	**ARCESS Array B**	**72.59**	**340**	P	**P**	**08 23 43.9**	**-0.2**
FINES	**FINESS Array B**	**76.83**	**333**	P	**P**	**08 24 07.3**	**-0.9**
	4.0nm,0.4s,mb4.3,baz=71,slow=5.2,SNR=33						
NVAR	**Mina Array Bea**	**81.54**	**51**	P	**P**	**08 24 34.9**	**+1.1**
	0.5nm,0.6s,mb3.2,baz=289,slow=5.8,SNR=5.4						
NB2	**NORSAR Subarra**	**82.59**	**338**	P	**P**	**08 24 37.4**	**-1.3**
	comp=Z,1.5nm,0.8s,mb3.6,baz=45,slow=4.8						
NOA	**NORSAR Array B**	**82.59**	**338**	P	**P**	**08 24 37.7**	**-1.1**
	comp=Z,1.6nm,0.6s,mb3.7,baz=46,slow=4.9,SNR=6.4						
NOA	**NORSAR Array B**	**82.59**	**338**	P	**P**	**08 24 37.7**	**-1.1**
BRTR	**Keskin Array B**	**84.50**	**312**	P	**P**	**08 24 48.1**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.1,baz=94,slow=4.3,SNR=2.5						
TXAR	**Lajitas Array**	**96.66**	**52**	P	**P**	**08 25 46.5**	**+1.0**
	comp=Z,0.2nm,0.6s,mb3.5,baz=304,slow=2.1,SNR=3.1						
LPAZ	**La Paz**	**151.39**	**73**	PKPbc	PKPbc	08 32 08.2	+1.3
	comp=Z,1.0nm,0.6s,baz=254,slow=1.8,SNR=7.1						
LPAZ	**La Paz**	**151.39**	**73**	*e*PKPbc	PKPbc	08 32 08.2	+1.3

IDC 23 08:14:52.0±1.4, 29°.00S×178°.17W, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.5/14, mbtmp3.5/2, Error ellipse: s-maj=64.7km s-min=41.5km az=73.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.06**	**266**	P	P	08 22 53.6	-0.2
	0.2nm,0.4s,baz=102,slow=7.8,SNR=2.7						
QSPA	**South Pole Qui**	**61.10**	**180**	P	P	08 25 07.9	+0.5
	0.9nm,0.7s,baz=350,slow=2.7,SNR=4.9						
FINES	**FINESS Array B**	**143.78**	**340**	PKP	PKPdf	08 34 26.4	-2.1
	1.7nm,0.4s,baz=31,slow=3.2,SNR=9.0						
AKASG	**Malin Array Be**	**150.09**	**324**	PKPbc	PKPbc	08 34 43.9	-0.5
	0.7nm,0.3s,baz=49,slow=3.5,SNR=6.3						
AKASG				PKPab	PKPab	08 34 50.5	+0.3
	0.4nm,0.3s,baz=53,slow=4.5,SNR=4.6						
MMAI	**Mount Meron Ar**	**151.02**	**286**	PKPbc	PKPbc	08 34 46.9	-0.3
	1.9nm,0.4s,baz=65,slow=8.1,SNR=3.8						
BRTR	**Keskin Array B**	**151.78**	**301**	PKPbc	PKPbc	08 34 48.8	+0.1
	0.4nm,0.5s,baz=106,slow=4.7,SNR=2.8						

NEIC 23 08:26:19.0, 19°.37N×155°.23W, h2km, MD3.6(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.01**	**57**	*e*Pg	Pg	08 26 20.6	+1.2
STCH	**Steam Cracks**	**0.10**	**79**	*e*Pg	Pg	08 26 22.3	+1.4
KHU	**Kahuku**	**0.39**	**252**	*e*Pg	Pg	08 26 27.4	+1.0
POHA	**Pohakuloa**	**0.48**	**324**	*e*Pg	Pg	08 26 29.4	+1.2
POHA				*e*Sg	Sg	08 26 34.2	-0.3
KIP	**Kipapa**	**3.31**	**309**	*e*Pn	Pn	08 27 14.7	+2.8

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*IDC **23** 08:27:54.0±1.3, 37°.58N×102°.83E, h0km, mb3.3/4, mb1 3.7/7, mb1mx3.5/27, mbtmp3.5/7, ML4.2/2, Error ellipse: s-maj=38.2km s-min=21.0km az=79.0*
*BJI **23** 08:27:56.0, 37°.61N×102°.75E, h13km, ML3.8/7*
ISC 23 08:27:54.9±1.5, 37°.56N±0°.08×102°.8E±0°.1, h7km±13km, n10, σ0s80/12, mb3.4/3, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.68**	**151**	Pg	**Pg**	**08 28 27.0**	**-0.2**
LZH				Sg	**Sg**	**08 28 50.6**	**+1.6**
LZH				smax			
	comp=N,1μm,0.7s						
LZH				smax			
	comp=E,870nm,0.6s						
GTA	**Gaotai**	**3.00**	**309**	Pg	**Pb**	**08 28 48.3**	**-0.5**
GTA				Sg	**Sb**	**08 29 25.5**	**-0.2**
GTA				smax			
	comp=N,570nm,0.7s						
GTA				smax			
	comp=E,520nm,0.6s						
XAN	**Xi'an**	**6.07**	**124**	Sg	**Sg**	**08 31 08.1**	**-1.6**
XAN				smax			
	comp=N,27nm,0.8s						
XAN				smax			
	comp=E,11nm,0.9s						
SONM	**Songino Array**	**10.59**	**13**	Pn	**Pn**	**08 30 28.4**	**+1.3**
	comp=E,1.1nm,0.3s,baz=194,slow=14,SNR=13						
SONM				Lg		08 33 28.3	
	comp=E,0.7nm,0.3s,baz=196,slow=30,SNR=7.0						
MKAR	**Makanchi Array**	**17.76**	**308**	P	**Pn**	**08 32 02.7**	**+0.1**
	baz=110,slow=14,SNR=3.9						
CMAR	**Chiang Mai Arr**	**19.34**	**191**	P	**Pn**	**08 32 21.4**	**-0.6**
	comp=E,0.4nm,0.3s,baz=1.7,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**20.55**	**329**	P	**P**	**08 32 33.9**	**0.0**
	comp=E,0.6nm,0.3s,baz=127,slow=9.2,SNR=2.8						
KURK	**Kurchatov**	**21.67**	**315**	P	**P**	**08 32 45.8**	**-0.2**

TIR	Tirane	8.69	355	*e*Pn		Pn	08 44 37.9	-0.7
	comp=E,21nm,0.6s							
TIR	Tirane	8.69	355	*e*Pn		Pn	08 44 37.9	-0.6
	comp=E,21nm,0.6s							
HNAT	Natroun	8.88	107	P		Pn	08 44 41.0	-0.2
	baz=105							
HNAT	Natroun	8.88	107	P		Pn	08 44 41.0	-0.2
HDK1	Dakhla	10.30	131	P		Pn	08 44 59.3	-1.3
	baz=129							
HDK1	Dakhla	10.30	131	P		Pn	08 44 59.3	-1.3
STON	Ston	10.48	347	*e*Pn		Pn	08 45 01.3	-1.8
STON				Sn		Sn	08 46 52.5	-8.6
STON	Ston	10.48	347	*e*Pn		Pn	08 45 01.3	-1.8
MMAI	Mount Meron Ar	12.23	84	Pn		Pn	08 45 23.1	-3.9
	comp=E,1.8nm,0.3s,baz=284,slow=12,SNR=4.8							
BR131	Keskin Array S	12.47	52	*e*Pn		Pn	08 45 30.5	+0.2
	comp=E,0.5nm,0.3s							
BR131	Keskin Array S	12.47	52	*e*Pn		Pn	08 45 30.5	+0.2
	comp=E,0.5nm,0.3s							
BRTR	Keskin Array B	12.47	52	Pn		Pn	08 45 28.8	-1.5
	comp=E,0.2nm,0.3s,baz=223,slow=13,SNR=8.2							
BRTR	Keskin Array B	12.47	52	Pn		Pn	08 45 28.8	-1.5
ASF	Jabal al Asfar	13.55	88	Pn		Pn	08 45 44.4	-0.6
	comp=E,0.2nm,0.3s,baz=320,slow=7.9,SNR=2.1							
AKASG	Malin Array Be	19.04	16	P		Pn	08 46 53.8	-1.9
	comp=E,1.1nm,0.3s,baz=203,slow=9.0,SNR=4.1							
AKASG	Malin Array Be	19.04	16	P		Pn	08 46 53.8	-1.9
TORD	Torodi Ar. Bea	26.18	226	P		P	08 48 09.6	+1.7
	comp=E,0.7nm,0.8s,mb3.2,baz=40,slow=7.1,SNR=3.3							
TORD	Torodi Ar. Bea	26.18	226	P		P	08 48 09.6	+1.7
ARCES	ARCESS Array B	37.00	3	P		P	08 49 42.7	+0.4
	comp=E,2.3nm,1.0s,mb4.0,baz=182,slow=6.9,SNR=3.1							
ARCES	ARCESS Array B	37.00	3	P		P	08 49 42.7	+0.4
KURK	Kurchatov	45.50	49	P		P	08 50 51.8	-0.7
	comp=E,0.5nm,0.3s,mb4.0,baz=277,slow=7.4,SNR=3.4							
KURK	Kurchatov	45.50	49	*e*P		P	08 50 54.2	+1.7
	comp=E,0.9nm,0.7s,mb3.8							
KURK	Kurchatov	45.50	49	*e*P		P	08 50 54.2	+1.7
	comp=E,0.9nm,0.7s,mb3.8							
MK31	Makanchi Array	48.12	54	*e*P		P	08 51 14.6	+1.6
MK31	Makanchi Array	48.12	54	*e*P		P	08 51 14.6	+1.6
MKAR	Makanchi Array	48.12	54	P		P	08 51 14.8	+1.8
	comp=E,0.7nm,0.6s,mb3.9,baz=276,slow=6.8,SNR=10							
MKAR	Makanchi Array	48.12	54	P		P	08 51 14.8	+1.8
ZALV	Zalesovo Beam	49.28	44	P		P	08 51 23.6	+1.8
	comp=E,0.8nm,0.4s,mb4.2,baz=264,slow=8.5,SNR=2.6							
ZALV	Zalesovo Beam	49.28	44	P		P	08 51 23.6	+1.8

*CSEM **23** 08:43:29.4, 36°.73N×21°.24E, h28km, After THE*
THE 23 08:43:29.4, 36°.73N±21°.24E, h28km±2km, Error ellipse: s-maj=6.1km s-min=1.4km az=172.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.43	67	*e*P	Pb	08 43 38.4	-0.3
PYL	PYLOS	0.43	67	P	Pb	08 43 38.0	-0.7
PYL				S	Sb	08 43 45.8	+0.8
PYL	PYLOS	0.43	67	P	Pb	08 43 38.0	-0.7
PYL				S	Sb	08 43 45.8	+0.8
ITM	Ithomi	0.71	50	*e*P	Pb	08 43 43.1	-0.1
ITM	Ithomi	0.71	50	P	Pb	08 43 42.5	-0.7
ITM				S	Sb	08 43 53.4	+0.8
ITM	Ithomi	0.71	50	P	Pb	08 43 42.5	-0.7
ITM				S	Sb	08 43 53.4	+0.8
KFL	Anninata	1.43	345	P	Pn	08 43 53.3	-0.1
GUR	Goura	1.49	36	*e*P	Pn	08 43 54.8	+0.5
GUR	Goura	1.49	36	P	Pn	08 43 53.9	-0.4
GUR				S	Sn	08 44 12.2	-0.6
GUR	Goura	1.49	36	P	Pn	08 43 53.9	-0.4
GUR				S	Sn	08 44 12.2	-0.6
VLS	Valsamata	1.54	340	P	Pn	08 43 54.0	-0.9
VLS	Valsamata	1.54	340	P	Pn	08 43 54.0	-0.9
EFP	Efpalio	1.78	17	*e*P	Pn	08 44 03.3	+5.1
LTK	Loutraki	1.89	46	*e*P	Pn	08 43 56.4	-3.3
AGG	Agios Georgios	2.45	20	P	Pn	08 44 07.4	0.0
AGG	Agios Georgios	2.45	20	P	Pn	08 44 07.4	0.0
KEK	Kerkira	3.19	340	*e*P	Pn	08 44 17.4	-0.2

*CSEM **23** 08:47:29.9±0.1, 37°.29N×28°.24E, h2km, MD2.9, Error ellipse: s-maj=2.6km s-min=1.6km az=34.0*
*DDA **23** 08:47:29.6, 37°.19N×28°.15E, h7km±3km, Md3.0*
*ISK **23** 08:47:29.8, 37°.26N×28°.21E, h6km, MD2.9*
*ISCJB **23** 08:47:30.2±0.6, 37°.22N±0°.08×28°.19E±0°.05, h9km±10km, Error ellipse: s-maj=13.9km s-min=5.0km az=20.5*
ISC 23 08:47:30.5±0.6, 37°.22N±0°.05×28°.19E±0°.04, h11km±8km, n20,σ0°92/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	139	PG	Pg	08 47 33.0	-0.5
YER	Yerkesik	0.12	139	*i* Pg	Pg	08 47 33.0	-0.4
MLSB	Milas	0.34	283	*e*PG	Pg	08 47 36.9	-0.3
MLSB				*e*SG	Sg	08 47 42.7	+1.0
MLSB	Milas	0.34	283	*e*Pg	Pg	08 47 36.9	-0.3
MLSB				*e*Sg	Sg	08 47 42.7	+1.0
TURN	Turunc	0.48	136	*i* P	Pg	08 47 39.4	-0.6
TURN				*i* S	Sg	08 47 46.3	-0.1
TURN	Turunc	0.48	136	*i* P	Pg	08 47 39.4	-0.5
TURN				*i* S	Sg	08 47 46.3	0.0
DAT	Datca	0.69	225	*e*PG	Pg	08 47 44.6	+0.7
DAT	Datca	0.69	225	*e*Pg	Pg	08 47 44.6	+0.7
DNZL	Cakiroluk	0.83	55	*i* P	Pg	08 47 44.0	-2.5
DNZL				*i* S	Sg	08 47 59.5	+2.2
DNZL	Cakiroluk	0.83	55	*i* P	Pg	08 47 44.0	-2.5
GCAM	G?zelcaml?	0.90	302	*i* P	Pg	08 47 47.1	-0.6
GCAM				*i* S	Sg	08 47 59.3	-0.2
GCAM	G?zelcaml?	0.90	302	*i* P	Pg	08 47 47.2	-0.6
GCAM				*i* S	Sg	08 47 59.3	-0.2
FETY	Fethiye	0.93	129	*e*PG	Pg	08 47 48.8	+0.4
FETY	Fethiye	0.93	129	*e*Pg	Pg	08 47 48.8	+0.4
KULA	Kula-Manisa	1.34	16	*e*PN	Pn	08 47 54.6	-0.6
KULA	Kula-Manisa	1.34	16	*e*Pn	Pn	08 47 54.6	-0.6
ELL	Elmali	1.46	108	*e*PN	Pn	08 47 57.2	+0.5
ELL	Elmali	1.46	108	*e*Pn	Pn	08 47 57.3	+0.5
KHL	Karahalli	1.53	44	*e*PN	Pn	08 47 57.9	+0.2
KHL	Karahalli	1.53	44	*e*Pn	Pn	08 47 57.9	+0.2

*IDC **23** 08:51:59.2±2.9, 6°.72S×107°.33E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.9/6, Error ellipse: s-maj=234.6km s-min=19.5km az=52.0*
*DJA **23** 08:52:02, 7°.76S×106°.40E, h14km, MLv4.2/13*
*ISCJB **23** 08:52:03.3±1.2, 7°.8S±0°.1×106°.39E±0°.07, h74km±11km, mb3.8/6, Error ellipse: s-maj=19.3km s-min=8.5km az=27.2*
ISC 23 08:52:04.8±1.1, 7°.72S±0°.10×106°.40E±0°.07, h65km±11km, n19,σ1°05/21, mb3.8/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	Dramaga	1.21	17	P	Pn	08 52 24.0	-1.8
DBJI				S	Sn	08 52 41.6	+0.2
CGJI	Cibinong	1.30	328	P	Pn	08 52 25.9	-1.1
LEM	Lembang	1.50	54	P	Pn	08 52 28.8	-0.8
LEM				S	Sn	08 52 49.9	+1.5
TNG	Tangerang	1.56	9	P	Pn	08 52 29.7	-0.7
TNG	Tangerang	1.56	9	P	Pn	08 52 30.0	-0.4
SBJI	Serang	1.61	351	P	Pn	08 52 30.8	-0.3
RBSI	Rajabasa	1.97	341	P	Pn	08 52 36.0	0.0
RBSI				S	Sn	08 53 00.9	+1.2
KASI	Kota Agung	2.88	319	P	Pn	08 52 49.5	+1.1
MDSI	Maura Dua	3.89	325	P	Pn	08 53 03.3	+1.1
UGM	Wanagama	4.09	93	P	Pn	08 53 04.7	-0.2
MNAI	Manna	4.78	314	P	Pn	08 53 14.2	-0.1
PWJI	Pagerwojo	5.37	94	P	Pn	08 53 21.6	-0.8
ASAR	Alice Springs	30.77	124	P	P	08 58 15.0	+0.7
	0.2nm,0.4s,mb3.2,baz=305,slow=8.3,SNR=5.2						
STKA	Stephens Creek	40.62	131	P	P	08 59 40.5	+2.1
	2.6nm,0.4s,mb4.4,baz=308,slow=7.0,SNR=17						
MKAR	Makanchi Array	58.36	341	P	P	09 01 51.5	-1.7
	0.3nm,0.5s,mb3.6,baz=142,slow=7.0,SNR=3.8						
KURK	Kurchatov	62.97	341	P	P	09 02 22.9	-1.6
	0.5nm,0.4s,mb3.8,baz=148,slow=5.5,SNR=3.4						
BVAR	Borovoye Array	67.79	337	P	P	09 02 55.8	+0.2
	1.1nm,0.4s,mb4.1,baz=132,slow=8.8,SNR=5.7						
AKTO	Aktyubinsk	71.43	330	P	P	09 03 18.8	+0.7
	0.7nm,0.3s,mb4.0,baz=108,slow=13,SNR=3.4						
YKA	Yellowknife Ar	117.74	20	PKP	PKPdf	09 10 45.8	+2.4
	0.1nm,0.7s,baz=332,slow=1.5,SNR=2.9						
TXAR	Lajitas Array	144.49	49	PKP	PKPdf	09 11 35.7	+1.2
	0.1nm,0.4s,baz=256,slow=3.6,SNR=4.4						

IDC 23 09:00:49.2±2.8, 51°.06N×38°.18E, h0km, mb1 3.5/5, mb1mx3.3/22, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=33.6km s-min=21.5km az=129.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	5.68	270	Pn	Pn	09 02 13.4	-1.3
	1.3nm,0.3s,baz=79,slow=15,SNR=4.7						
AKASG				Sn	Sn	09 03 16.2	-4.3
	1.1nm,0.3s,baz=78,slow=27,SNR=3.1						
AKASG				Lg		09 03 41.6	
	2.0nm,0.3s,baz=80,slow=29,SNR=5.1						
FINES	FINESS Array B	12.36	332	Pn	Pn	09 03 40.7	-5.5
	0.5nm,0.3s,baz=140,slow=16,SNR=3.6						
HFS	Hagfors	16.46	313	Pn	Pn	09 04 32.6	-8.5
	0.1nm,0.3s,baz=108,slow=9.3,SNR=3.4						
NOA	NORSAR Array B	17.93	314	Pn	Pn	09 04 53.1	-6.5
	0.3nm,0.3s,baz=113,slow=9.7,SNR=5.0						
ARCES	ARCESS Array B	19.49	347	Pn	Pn	09 05 13.2	-5.3
	0.1nm,0.3s,baz=157,slow=9.6,SNR=4.2						
TORD	Torodi Ar. Bea	47.97	231	P	P	09 09 28.9	-0.6
	0.6nm,0.9s,baz=23,slow=7.9,SNR=2.9						

*CSEM **23** 09:08:38.9, 39°.45N×21°.70E, h18km, MD3.1, After ATH*
ATH 23 09:08:38.9, 39°.45N±21°.70E, h18km±1km, MD3.1/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	Klokotos Trika	0.27	65	*e*PB	Pg	09 08 44.8	-0.1
THL				*e*SB	Sg	09 08 49.4	+0.4
THL	Klokotos Trika	0.27	65	*e*Pb	Pg	09 08 44.8	-0.1
THL				*e*Sb	Sg	09 08 49.4	+0.4
EVR	Evrytania	0.54	171	*e*PN	Pg	09 08 48.4	-1.3
EVR				*e*SN	Sg	09 08 57.6	+0.7
EVR	Evrytania	0.54	171	*e*Pn	Pg	09 08 48.4	-1.3
EVR				*e*Sn	Sg	09 08 57.6	+0.7
AGG	Agios Georgios	0.65	131	*e*PN	Pn	09 08 51.7	-1.5
AGG				*e*SN	Sg	09 09 00.7	+0.3
AGG	Agios Georgios	0.65	131	*e*Pn	Pn	09 08 51.7	-1.5
AGG				*e*Sn	Sg	09 09 00.7	+0.3
EFP	Efpalio	1.03	171	*e*PN	Pn	09 08 58.4	-0.1
EFP	Efpalio	1.03	171	*e*Pn	Pn	09 08 58.4	-0.1
KEK	Kerkira	1.49	281	*e*PN	Pn	09 09 06.9	+2.1
KEK	Kerkira	1.49	281	*e*Pn	Pn	09 09 06.9	+2.1
GUR	Goura	1.59	161	*e*PN	Pn	09 09 08.4	+2.2
GUR	Goura	1.59	161	*e*Pn	Pn	09 09 08.4	+2.2

*CSEM **23** 09:09:36.2±1.3, 27°.67N×56°.83E, h10km, ML3.0/1, Error ellipse: s-maj=67.7km s-min=30.9km az=101.0*
*OMAN **23** 09:10:02.3±3.0, 25°.86N×56°.07E, h7km, Error ellipse: s-maj=49.9km s-min=11.8km az=136.0*
IDC 23 09:10:48.2±3.1, 27°.66N×56°.53E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/25, mbtmp3.8/5, Error ellipse: s-maj=64.7km s-min=35.0km az=147.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	Banah	1.75	187	P	Pn	09 11 06.6	-13
	SNR=61						
BANOM				P		09 11 06.6	
	SNR=61						
BANOM	Banah	1.75	187	Pn	Pn	09 11 06.6	-13
	SNR=61						
BANOM				Sn	Sn	09 11 30.1	-13
HATD	Hatta, Dubai	2.85	187	Pn	Pn	09 11 22.5	-12
ASHO	Ashiyiah	3.00	188	P	Pn	09 11 24.8	-12
	SNR=17						
ASHO				P		09 11 24.8	
	SNR=17						
ASHO	Ashiyiah	3.00	188	Pn	Pn	09 11 24.8	-12
	SNR=17						
FAQ	Al Faqa, Dubai	3.02	196	P	Pn	09 11 25.2	-12
	SNR=14						
FAQ	Al Faqa, Dubai	3.02	196	Pn	Pn	09 11 25.2	-12
	SNR=14						
ASUD	Al Ashush, Dub	3.21	200	P	Pn	09 11 28.3	-12
	SNR=38						
ASUD	Al Ashush, Dub	3.21	200	Pn	Pn	09 11 28.3	-12
	SNR=38						
BRTR	Keskin Array B	22.46	308	P	P	09 15 50.1	+1.4
	0.7nm,0.7s,baz=121,slow=13,SNR=4.0						
AKASG	Malin Array Be	30.95	325	P	P	09 17 05.8	-0.9
	0.3nm,0.4s,baz=135,slow=8.4,SNR=4.2						
ZALV	Zalesovo Beam	33.47	31	P	P	09 17 29.1	+0.3
	1.5nm,0.3s,baz=247,slow=8.5,SNR=3.8						
HFS	Hagfors	43.50	330	P	P	09 18 52.8	-0.2
	0.7nm,0.4s,baz=116,slow=9.8,SNR=4.2						
TORD	Torodi Ar. Bea	52.98	266	P	P	09 20 06.8	-0.1
	0.5nm,0.4s,baz=64,slow=7.3,SNR=8.5						

CASC 23 09:27:44.2±0.7, 13°.26N×89°.80W, h34km±2km, MD3.5, ML3.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.60	17	*e*P	Pn	09 27 56.7	+0.3
SBLS				*e*S	Sb	09 28 06.3	+1.4
SBLS				AML	AML	09 28 10.7	
	comp=Z,491nm,0.2s						
SNJE	San Jose	0.64	17	*e*P	Pn	09 27 57.0	+0.2
RTR	El Retiro	0.65	13	*e*P	Pn	09 27 57.5	+0.4
BOQS	Boqueron	0.69	47	*e*P	Pn	09 27 57.8	+0.1
BOQS				*e*S	Sn	09 28 09.3	+2.1
SNET	Serv Nac Est T	0.70	52	*e*P	Pn	09 27 57.4	-0.3
SNET				*e*S	Sn	09 28 08.3	+0.9
LFRS	El Faro	0.81	63	*e*P	Pn	09 27 59.0	-0.2
LFU	La Fuente	0.83	54	*e*P	Pn	09 27 59.4	-0.1
RBDL	Robledal	0.86	7	*e*P	Pn	09 28 00.3	+0.4
LBRS	Las Brisas	0.88	57	*e*P	Pn	09 28 00.3	+0.1
LBRS				*e*S	Sn	09 28 12.7	+0.9
SNVI	San Vicente	1.00	69	*e*P	Pn	09 28 02.1	+0.2
SNVI				*e*S	Sn	09 28 15.9	+1.1
MTO2	Montecristo 2	1.21	20	*e*P	Pn	09 28 04.8	0.0
VSM	San Miguel	1.50	83	*e*P	Pn	09 28 09.4	+0.7
BLLM	Bellamira	1.53	83	*e*P	Pn	09 28 09.1	-0.1
CAHU	Cacacuatique	1.63	72	*e*P	Pn	09 28 10.6	+0.1
CNCH	Conchagua	1.92	89	*e*P	Pn	09 28 14.6	+0.2
CNCH				*e*S	Sn	09 28 38.8	+1.4

MAN 23 09:43:12, 11°.19N×124°.65E, h29km, mb4.1, ML2.9, MS2.6, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.14	197	*e*P	Pb	09 43 19.5	+2.0
OCLP				*e*S	Sb	09 43 24.4	+3.2
PLP	Palo	0.32	93	*i* P	Pb	09 43 21.2	+1.5
MSLP	Maasin	1.06	169	*e*P	Pn	09 43 32.7	+1.7
MSLP				*e*S	Sn	09 43 46.6	+1.8
TBP	Tagbilaran	1.68	208	*e*P	Pn	09 43 44.2	+4.8

*ISCJB **23** 09:47:29.6±0.6, 38°.49N±0°.04×39°.44E±0°.04, h10km, Error ellipse: s-maj=6.9km s-min=4.1km az=31.1*
*CSEM **23** 09:47:29.6±0.2, 38°.47N×39°.43E, h15km, MD2.9, Error ellipse: s-maj=5.6km s-min=3.8km az=43.0*
*DDA **23** 09:47:29.3, 38°.51N×39°.50E, h7km±3km, Md2.9*
ISC 23 09:47:30.0±0.8, 38°.50N±0°.04×39°.47E±0°.06, h1km±12km, n13,σ0°68/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.18	228	*e*PG	Pg	09 47 33.1	-0.3
SVRC				*e*SG	Sg	09 47 35.5	-0.2
SVRC	Sivrice-ELAZID	0.18	228	*e*Pg	Pg	09 47 33.1	-0.3
SVRC				*e*Sg	Sg	09 47 35.5	-0.2
ELZG	Elazig	0.38	270	*i* P	Pg	09 47 37.1	-0.2
ELZG				*i* S	Sg	09 47 44.0	+1.8
ELZG	Elazig	0.38	270	*i* P	Pg	09 47 37.1	-0.2
ELZG				*i* S	Sg	09 47 44.0	+1.7
PTK	Pertek	0.40	351	*e*PG	Pg	09 47 38.3	+0.6
PTK	Pertek	0.40	351	*e*Pg	Pg	09 47 38.3	+0.7
DIYA	Diyarbakir	0.77	138	*i* P	Pg	09 47 45.2	+0.5
DIYA				*i* S	Sg	09 47 54.6	-0.1
DIYA	Diyarbakir	0.77	138	*i* P	Pg	09 47 45.2	+0.5
DIYA				*i* S	Sg	09 47 54.6	-0.1
MYA	Malataya	0.84	259	*e*PG	Pg	09 47 45.2	-0.9
MYA	Malataya	0.84	259	*e*Pg	Pg	09 47 45.2	-0.9
KEMA	Kemaliye	1.08	316	*i* P	Pg	09 47 50.0	-0.8
KEMA				*i* S	Sg	09 48 04.6	-0.2
KEMA	Kemaliye	1.08	316	*i* P	Pg	09 47 50.0	-0.8
KEMA				*i* S	Sg	09 48 04.6	-0.2
BEST	Besiri	1.54	113	*i* P	Pn	09 47 58.1	-0.5
BEST				*i* S	Sn	09 48 19.6	+0.4

*ISCJB **23** 10:27:23.3±2.4, 30°.25S±0°.05×72°.3W±0°.1, h20km±15km, mb4.1/2, Error ellipse: s-maj=17.4km s-min=8.3km az=10.0*
*GUC **23** 10:27:23.7±0.6, 30°.25S×72°.20W, h42km±4km, ML3.7*
*NEIC **23** 10:27:23.0, 30°.25S×72°.20W, h42km, MG3.7(GUC), After GUC.*
*IDC **23** 10:27:23.6±2.7, 30°.24S×71°.92W, h0km, mb4.2/2, mb1 4.1/5, mb1mx3.8/15, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=94.6km s-min=34.1km az=100.0*
ISC 23 10:27:24.3±1.9, 30°.23S±0°.05×72°.15W±0°.09, h11km±10km, n12,σ0°63/16, mb4.1/2, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.90	115	*e*P	Pg	10 27 40.9	-0.7
OVCH				*e*S	Sg	10 27 53.8	+0.5
OVCH				AML	AML	10 27 56.6	
	comp=N,3μm,0.5s						
TLL	Tololo Astrono	1.16	87	||*i* P	Pb	10 27 45.7	-0.7
TLL				*i* S	Sb	10 28 02.5	+1.0
TLL				AML	AML	10 28 05.0	
	comp=N,1μm,0.6s						
LCO	Las Campanas	1.75	46	*e*Pn	Pn	10 27 53.9	-0.7
LCO				*e*Sn	Sn	10 28 16.2	-0.7
LCO	Las Campanas	1.75	46	||*i* P	Pn	10 27 54.0	-0.6
LCO				*e*S	Sn	10 28 16.5	-0.4
LCO				AML	AML	10 28 25.7	
	comp=N,1μm,0.7s						
PEL	Peldehue	3.16	157	*e*P	Pn	10 28 14.0	+0.1
PEL				*e*S	Sn	10 28 51.0	-0.6
PEL				AML	AML	10 29 11.9	
	comp=E,436nm,0.3s						
PLCA	Paso Flores	10.56	173	Pn	Pn	10 29 56.2	+0.7
	comp=E,0.1nm,0.3s,baz=353,slow=9.5,SNR=2.9						
LPAZ	La Paz	14.36	16	Pn	Pn	10 30 48.7	+1.1
	comp=E,0.2nm,0.3s,baz=194,slow=8.5,SNR=8.8						
LPAZ	La Paz	14.36	16	Pn	Pn	10 30 48.7	+1.1
SIV	San Ignacio	17.44	38	P	Pn	10 31 27.4	-0.2
	baz=227,slow=14						
DBIC	Dimbokro	74.09	72	P	P	10 39 01.2	+0.3
	comp=E,1.9nm,0.7s,mb4.1,baz=221,slow=11,SNR=2.5						
TORD	Torodi Ar. Bea	83.03	70	P	P	10 39 50.0	-0.1
	comp=E,1.6nm,0.7s,mb4.2,baz=256,slow=3.8,SNR=9.9						
ZALV	Zalesovo Beam	151.03	29	PKPbc	PKPbc	10 47 17.6	+0.8
	comp=E,0.9nm,0.4s,baz=325,slow=2.3,SNR=5.0						

*IDC **23** 10:33:40.7±1.5, 31°.79N×104°.08E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/36, Error ellipse: s-maj=44.9km s-min=24.2km az=45.0*
*BJI **23** 10:33:40.3, 31°.77N×104°.51E, h10km, ML3.4/8*
*NEIC **23** 10:33:41.7±0.6, 31°.76N×104°.02E, h10km, mb3.7/3, Error ellipse: s-maj=19.5km s-min=8.7km az=45.0*
*ISCJB **23** 10:33:42.5±1.9, 31°.78N±0°.08×104°.14E±0°.08, h29km±17km, mb3.5/7, Error ellipse: s-maj=12.8km s-min=11.8km az=172.6*
ISC 23 10:33:41.9±1.9, 31°.80N±0°.08×104°.11E±0°.08, h11km±15km, n17,σ0°88/19, mb3.5/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.93	199	Pg	Pg	10 33 59.8	-0.1
CD2				Sg	Sg	10 34 11.8	-0.3
CD2				smax			
	comp=N,2μm,0.7s						
LZH	Lanzhou	4.28	357	Pg	Pg	10 35 09.0	+5.0
LZH				Sg	Sg	10 36 04.5	+5.0
LZH				smax			
	comp=N,69nm,1.0s						
LZH				smax			
	comp=E,72nm,1.0s						
XAN	Xi'an	4.62	60	Pn	Pn	10 34 49.0	-2.8
XAN				Sn	Sn	10 35 44.6	-0.9
XAN				Sg	Sg	10 36 05.8	-4.6
XAN				smax			
	comp=N,60nm,0.9s						
XAN				smax			
	comp=E,23nm,0.8s						
ENH	Enshi	4.86	107	*e*Pn	Pn	10 34 56.0	+1.0
GYA	Guiyang	5.77	157	Pg	Pn	10 35 15.0	+7.5
GYA				smax			
	comp=N,20nm,0.8s						
GYA				smax			
	comp=E,20nm,0.8s						
SONM	Songino Array	16.11	6	Pn	Pn	10 37 29.1	+0.7
	comp=E,0.2nm,0.3s,baz=180,slow=11,SNR=2.5						
KSRS	Korea Array	20.37	67	P	P	10 38 19.8	+1.2
	comp=E,0.7nm,0.6s,baz=257,slow=10,SNR=3.6						
MK31	Makanchi Array	22.46	318	*e*P	P	10 38 41.3	+0.3
MKAR	Makanchi Array	22.46	318	P	P	10 38 41.4	+0.3
	comp=E,1.0nm,0.6s,mb3.4,baz=113,slow=12,SNR=8.9						
ZALV	Zalesovo Beam	26.10	334	P	P	10 39 15.8	+0.2
	comp=E,0.4nm,0.3s,mb3.5,baz=156,slow=11,SNR=3.1						
KURK	Kurchatov	26.70	322	P	P	10 39 21.8	+0.8
	comp=E,0.4nm,0.3s,mb3.5,baz=103,slow=8.0,SNR=1.8						
KURK	Kurchatov	26.70	322	*e*P	P	10 39 20.4	-0.6
	comp=E,0.9nm,0.8s,mb3.4						
ABKAR	Akb

CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**10 40 23.4**	**+1.2**
	comp=E,0.2nm,0.3s,baz=13,slow=8.4,SNR=3.0						
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**10 41 03.5**	**-1.8**
	comp=E,0.1nm,0.3s,baz=162,slow=15,SNR=2.1						
SONM	**Songino Array**	**16.71**	**6**	Pn	**Pn**	**10 41 03.5**	**-1.8**
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**10 41 52.4**	**-0.7**
	comp=E,1.3nm,0.7s,baz=258,slow=9.7,SNR=8.4						
MKAR	**Makanchi Array**	**22.70**	**319**	P	**P**	**10 42 14.6**	**+1.8**
	comp=E,0.3nm,0.5s,mb3.0,baz=116,slow=9.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.49**	**335**	P	**P**	**10 42 47.2**	**-1.1**
	comp=E,0.9nm,0.4s,mb3.6,baz=128,slow=9.6,SNR=3.6						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**10 42 53.6**	**+0.8**
	comp=E,0.4nm,0.4s,mb3.3,baz=129,slow=9.7,SNR=3.8						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**10 42 51.5**	**-1.3**
	comp=E,0.8nm,0.4s,mb3.6						
KURK				P		10 42 53.6	
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**10 46 56.7**	**+0.1**
	comp=E,0.4nm,0.4s,mb3.8,baz=89,slow=7.2,SNR=7.5						
ARCES	**ARCESS Array B**	**57.03**	**336**	P	**P**	**10 46 56.7**	**+0.1**
WRAB	**Tennant Creek**	**58.73**	**146**	*eP*	**P**	**10 47 08.7**	**-0.3**
	comp=E,4.9nm,1.3s,mb4.4						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**10 47 30.7**	**+1.0**
	comp=E,0.3nm,0.7s,mb3.5,baz=352,slow=6.9,SNR=4.5						
NOA	**NORSAR Array B**	**64.41**	**327**	P	**P**	**10 47 46.0**	**-0.9**
	comp=E,0.3nm,0.6s,mb3.5,baz=74,slow=7.0,SNR=2.8						
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**10 49 29.1**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.5,baz=329,slow=5.2,SNR=8.4						

*ISCJB **23** 10:42:25.8±0.5, 24°.74N±0°.04×122°.55E±0°.02, h108km±5km, Error ellipse: s-maj=6.3km s-min=2.9km az=168.4*
*TAP **23** 10:42:25.5, 24°.75N×122°.50E, h116km, ML3.6, C*
*JMA **23** 10:42:26.3±0.2, 24°.92N×122°.58E, h102km±3km, M2.5*

ISC 23 10:42:26.4±0.6, 24°.74N±0°.04×122°.55E±0°.02, h107km±5km, n40, σ0°69/79, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**123**	P	**Pn**	**10 42 43.0**	**0.0**
YOJ				*e*S	**Sn**	**10 42 55.9**	**+0.5**
TWB1	**Santiao Chiao**	**0.57**	**298**	⇓*i*P	**Pn**	**10 42 43.6**	**+0.2**
	baz=291						
TWB1				*e*S	**Sn**	**10 42 56.0**	**-0.2**
	baz=291						
TWC	**Suao**	**0.65**	**258**	*i* P	**Pn**	**10 42 43.6**	**-0.4**
	baz=254						
TWC				*i* S	**Sn**	**10 42 56.8**	**-0.4**
	baz=254						
NWF	**Wu-fen Shan**	**0.77**	**295**	P	**Pn**	**10 42 45.2**	**+0.2**
	baz=289						
NWF				S	**Sn**	**10 42 59.5**	**+0.4**
	baz=289						
ENA	**Nanau**	**0.80**	**247**	*i* P	**Pn**	**10 42 45.2**	**-0.1**
	baz=243						
ENA				*i* S	**Sn**	**10 43 00.1**	**+0.5**
	baz=243						
TWE	**Neicheng**	**0.80**	**269**	⇓*i*P	**Pn**	**10 42 45.3**	**-0.1**
	baz=273						
TWE				S	**Sn**	**10 42 59.7**	**+0.1**
	baz=273						
ENTT	**Nioudou**	**0.90**	**264**	*i* P	**Pn**	**10 42 46.4**	**+0.1**
	baz=266						
ENTT				*e*S	**Sn**	**10 43 02.3**	**+1.0**
	baz=266						
TWA	**Mucha**	**0.91**	**285**	*e*P	**Pn**	**10 42 46.1**	**-0.3**
	baz=278						
TWA				S	**Sn**	**10 43 00.8**	**-0.6**
	baz=278						
NSK	**Sanguang**	**1.08**	**267**	⇓*i*P	**Pn**	**10 42 48.2**	**0.0**
	baz=274						
NSK				*i* S	**Sn**	**10 43 04.6**	**-0.1**
	baz=274						
TWS1	**Kuangyinshan**	**1.08**	**289**	P	**Pn**	**10 42 48.1**	**-0.1**
	baz=283						
TWS1				*e*S	**Sn**	**10 43 04.7**	**0.0**
	baz=283						
TWD	**Chiawan**	**1.09**	**233**	*e*P	**Pn**	**10 42 48.3**	**0.0**
	baz=228						
TWD				*e*S	**Sn**	**10 43 04.6**	**-0.2**
	baz=228						
NNS	**Nan Shan**	**1.11**	**254**	*i* P	**Pn**	**10 42 48.5**	**0.0**
	baz=249						
NNS				S	**Sn**	**10 43 05.3**	**+0.1**
	baz=249						
IRIF	**Iriomote-Funau**	**1.15**	**110**	P	**Pn**	**10 42 49.3**	**+0.3**
IRIF				*e*S	**Sn**	**10 43 06.3**	**+0.2**
WHF	**Hehuan Shan**	**1.31**	**243**	⇓*i*P	**Pn**	**10 42 50.9**	**+0.2**
	baz=242						
WHF				*i* S	**Sn**	**10 43 09.0**	**-0.2**
	baz=242						
HATJ	**Hateruma jima**	**1.34**	**120**	P	**Pn**	**10 42 52.0**	**+0.9**
HATJ				*e*S	**Sn**	**10 43 10.4**	**+0.6**
TWT	**Tachien**	**1.34**	**249**	*e*P	**Pn**	**10 42 51.7**	**+0.6**
	baz=248						
TWT				S	**Sn**	**10 43 10.0**	**+0.2**
	baz=248						
ESL	**Shilin**	**1.37**	**228**	P	**Pn**	**10 42 50.4**	**-1.1**
	baz=235						
ESL				S	**Sn**	**10 43 08.7**	**-1.9**
	baz=235						
NSTT	**Nanjuang**	**1.41**	**266**	P	**Pn**	**10 42 51.5**	**-0.4**
	baz=265						
NSTT				S	**Sn**	**10 43 10.6**	**-0.7**
	baz=265						
JKRS	**Kuro-shima**	**1.43**	**110**	P	**Pn**	**10 42 52.3**	**+0.2**
JKRS				*e*S	**Sn**	**10 43 12.1**	**+0.4**
JIJ	**Ishigaki jima**	**1.50**	**104**	P	**Pn**	**10 42 52.9**	**-0.1**
JIJ				*e*S	**Sn**	**10 43 12.7**	**-0.6**
NSY	**Sanyi**	**1.66**	**259**	*e*P	**Pn**	**10 42 55.1**	**+0.2**
	baz=258						
NSY				S	**Sn**	**10 43 16.9**	**+0.2**
	baz=258						
TWQ1	**Liyutan**	**1.66**	**257**	*e*P	**Pn**	**10 42 55.2**	**+0.3**
	baz=256						
TWQ1				S	**Sn**	**10 43 16.1**	**-0.7**
	baz=256						
EHY	**Hungye**	**1.66**	**222**	*e*P	**Pn**	**10 42 55.0**	**-0.1**
	baz=228						
EHY				*e*S	**Sn**	**10 43 14.3**	**-2.5**
	baz=228						
SMLT	**Sun Moon Lake**	**1.73**	**241**	P	**Pn**	**10 42 56.4**	**+0.6**
	baz=237						
SMLT				*e*S	**Sn**	**10 43 18.6**	**+0.4**
	baz=237						
TYC	**Yuchr**	**1.75**	**242**	*i* P	**Pn**	**10 42 56.7**	**+0.6**
	baz=239						
TYC				*i* S	**Sn**	**10 43 19.4**	**+0.7**
	baz=239						
TWF1	**Yuli**	**1.79**	**220**	*e*P	**Pn**	**10 42 55.7**	**-1.0**
	baz=225						
TWF1				S	**Sn**	**10 43 17.8**	**-1.9**
	baz=225						
YUS	**Yu-Shan**	**1.92**	**230**	P	**Pn**	**10 42 58.9**	**+0.6**
	baz=223						
YUS				S	**Sn**	**10 43 22.2**	**-0.3**
	baz=223						
CHKT	**Chengkung**	**1.96**	**214**	*e*P	**Pn**	**10 42 58.9**	**+0.1**
	baz=207						
CHKT				*e*S	**Sn**	**10 43 20.9**	**-2.6**
	baz=207						
JTJ	**Tarama**	**1.96**	**93**	P	**Pn**	**10 42 58.9**	**+0.1**
JTJ				*e*S	**Sn**	**10 43 23.2**	**-0.3**
ALS	**Alishan**	**2.01**	**233**	P	**Pn**	**10 42 59.9**	**+0.5**
	baz=226						
ALS				*e*S	**Sn**	**10 43 25.7**	**+1.2**
	baz=226						
CHN5	**Tsauling**	**2.05**	**237**	P	**Pn**	**10 43 00.1**	**+0.2**
	baz=244						
CHN5				*i* S	**Sn**	**10 43 26.3**	**+0.8**
	baz=244						
ELDTW	**Lidau**	**2.08**	**222**	*e*P	**Pn**	**10 43 00.2**	**-0.2**
	baz=221						
CHN4	**Tsaushan**	**2.26**	**233**	*e*P	**Pn**	**10 43 02.8**	**+0.2**
	baz=232						
CHN4				*e*S	**Sn**	**10 43 30.4**	**+0.1**
	baz=232						
WTP	**Ta-pu**	**2.31**	**230**	*e*P	**Pn**	**10 43 03.5**	**+0.3**
	baz=240						
WTP				*e*S	**Sn**	**10 43 32.7**	**+1.2**
	baz=240						
TWK	**Hsinying**	**2.39**	**232**	*e*P	**Pn**	**10 43 04.4**	**+0.1**
	baz=232						
TWK				*e*S	**Sn**	**10 43 33.7**	**+0.4**
	baz=232						
CHN1	**Nanshi**	**2.41**	**230**	*e*P	**Pn**	**10 43 04.8**	**+0.2**
	baz=239						
CHN1				*e*S	**Sn**	**10 43 33.8**	**0.0**
	baz=239						
SGST	**Jiashian**	**2.44**	**228**	*e*P	**Pn**	**10 43 05.8**	**+0.9**
	baz=227						
SGST				*e*S	**Sn**	**10 43 34.3**	**-0.3**
	baz=227						
JOGS	**Gusukube**	**2.60**	**89**	P	**Pn**	**10 43 07.7**	**+0.7**
JOGS				*e*S	**Sn**	**10 43 39.0**	**+0.7**
JKE	**Kume jima 2**	**4.14**	**67**	P	**Pn**	**10 43 27.2**	**-0.4**
JKE				*e*S	**Sn**	**10 44 14.6**	**-0.5**
JOW	**Kunigami**	**5.57**	**67**	P	**Pn**	**10 43 44.9**	**-1.9**
JOW				*e*S	**Sn**	**10 44 46.0**	**-3.5**

DJA 23 10:43:48, 1°.76N×99°.15E, h10km, MLv3.6/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.33**	**324**	P	Pg	10 43 53.5	-1.0
SBSI	**Sibolga**	**0.33**	**231**	P	Pg	10 43 55.1	+0.5
SBSI				S	Sg	10 44 02.0	+2.9
MNSI	**Mandailing Nat**	**1.05**	**156**	P	Pg	10 44 06.3	-1.9
MNSI				S	Sg	10 44 22.0	+0.1
GSI	**Gunungsitoli**	**1.64**	**254**	P	Pn	10 44 15.3	-1.6
GSI				S	Sn	10 44 38.7	+0.7
BKNI	**Bangkinang**	**2.37**	**127**	P	Pn	10 44 27.6	+0.7
BKNI				S	Sn	10 44 57.4	+1.4
PPI	**Padang Panjang**	**2.53**	**150**	P	Pn	10 44 33.1	+3.9
IPM	**Ipoh**	**3.29**	**35**	P	Pn	10 44 40.4	+0.8
KULM	**Kulim**	**3.81**	**23**	P	Pn	10 44 46.6	-0.2

*ISK **23** 10:45:01.8, 39°.30N×26°.13E, h5km, MD3.2*
*ISCJB **23** 10:45:02.8±0.5, 39°.32N±0°.02×26°.11E±0°.03, h6km±3km, Error ellipse: s-maj=3.9km s-min=3.2km az=151.3*
*CSEM **23** 10:45:02.8±0.2, 39°.31N×26°.09E, h8km, ML3.3/5, Error ellipse: s-maj=3.7km s-min=2.9km az=65.0*
*DDA **23** 10:45:02.5, 39°.34N×26°.12E, h5km±6km, Md3.1*
*THE **23** 10:45:03.0, 39°.31N×26°.08E, h0km, ML3.3/5, Error ellipse: s-maj=0.9km s-min=0.4km az=211.0*

ISC 23 10:45:03.3±0.4, 39°.32N±0°.02×26°.10E±0°.03, h9km±3km, n52, σ0°77/80, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.15**	**118**	P	**Pg**	**10 45 06.2**	**-0.4**
PRK				S	**Sg**	**10 45 09.3**	**+0.5**
PRK	**Paraskevi**	**0.15**	**118**	P	**Pg**	**10 45 06.2**	**-0.4**
PRK				S	**Sg**	**10 45 09.3**	**+0.5**
SIGR	**SIGRI**	**0.22**	**241**	P	**Pg**	**10 45 07.5**	**-0.2**
SIGR				S	**Sg**	**10 45 10.8**	**+0.1**
SIGR	**SIGRI**	**0.22**	**241**	P	**Pg**	**10 45 07.5**	**-0.2**
SIGR				S	**Sg**	**10 45 10.8**	**+0.1**
AYVA	**Ayvalik**	**0.46**	**91**	*i* P	**Pg**	**10 45 11.5**	**-0.7**
AYVA				*i* S	**Sg**	**10 45 19.2**	**+0.9**
AYVA	**Ayvalik**	**0.46**	**91**	*i* P	**Pg**	**10 45 11.5**	**-0.7**
AYVA				*i* S	**Sg**	**10 45 19.2**	**+1.0**
BOZC	**Bozcaada**	**0.53**	**356**	*i* P	**Pg**	**10 45 13.3**	**-0.3**
BOZC				*i* S	**Sg**	**10 45 20.7**	**+0.3**
EZN	**Ezine**	**0.54**	**19**	*e*PG	**Pg**	**10 45 13.1**	**-0.6**
EZN				*e*SG	**Sg**	**10 45 21.2**	**+0.4**
EZN	**Ezine**	**0.54**	**19**	*e*Pg	**Pg**	**10 45 13.1**	**-0.6**
EZN				*e*Sg	**Sg**	**10 45 21.2**	**+0.4**
GADA	**Gvkgeada**	**0.89**	**350**	*e*PG	**Pg**	**10 45 20.1**	**-0.3**
GADA				*e*SG	**Sg**	**10 45 32.0**	**+0.1**
GADA	**Gvkgeada**	**0.89**	**350**	*e*Pg	**Pg**	**10 45 20.1**	**-0.3**
GADA				*e*Sg	**Sg**	**10 45 32.0**	**+0.1**
LIA	**Limnos Island**	**0.92**	**310**	P	**Pg**	**10 45 20.6**	**-0.3**
LIA				S	**Sg**	**10 45 34.0**	**+1.1**
LIA	**Limnos Island**	**0.92**	**310**	P	**Pg**	**10 45 20.6**	**-0.3**
LIA				S	**Sg**	**10 45 34.0**	**+1.1**
CHOS	**Chios island**	**0.93**	**182**	P	**Pg**	**10 45 20.9**	**-0.2**
CHOS				S	**Sg**	**10 45 34.4**	**+1.2**
CHOS	**Chios island**	**0.93**	**182**	P	**Pg**	**10 45 20.9**	**-0.2**
CHOS				S	**Sg**	**10 45 34.4**	**+1.2**
LOS	**Limnos**	**1.00**	**308**	P	**Pg**	**10 45 21.9**	**-0.6**
LOS	**Limnos**	**1.00**	**308**	P	**Pg**	**10 45 21.9**	**-0.6**
URLA	**Izmir**	**1.03**	**158**	*i* P	**Pg**	**10 45 22.5**	**-0.5**
URLA				*i* S	**Sg**	**10 45 37.5**	**+1.0**
URLA	**Izmir**	**1.03**	**158**	*i* P	**Pg**	**10 45 22.5**	**-0.6**
URLA				*i* S	**Sg**	**10 45 37.5**	**+1.1**
LPK	**Lapseki**	**1.17**	**25**	*e*PN	**Pn**	**10 45 24.4**	**-1.4**
LPK	**Lapseki**	**1.17**	**25**	*e*Pn	**Pn**	**10 45 24.4**	**-1.4**
BLCB	**Balcova**	**1.19**	**141**	*e*PN	**Pn**	**10 45 23.8**	**-2.2**
BLCB	**Balcova**	**1.19**	**141**	*e*Pn	**Pn**	**10 45 23.8**	**-2.2**
BALY	**Balya**	**1.25**	**70**	*i* P	**Pn**	**10 45 26.6**	**-0.3**
BALY				*i* S	**Sb**	**10 45 43.3**	**+0.1**
BALY	**Balya**	**1.25**	**70**	*i* P	**Pn**	**10 45 26.6**	**-0.3**
BALY				*i* S	**Sb**	**10 45 43.3**	**+0.1**
AKHS	**Akhisar**	**1.40**	**108**	*i* P	**Pn**	**10 45 29.7**	**+0.7**
AKHS				*i* S	**Sn**	**10 45 48.4**	**+0.8**
AKHS	**Akhisar**	**1.40**	**108**	*i* P	**Pn**	**10 45 29.7**	**+0.7**
AKHS				*i* S	**Sn**	**10 45 48.4**	**+0.8**
ENEZ	**Enez**	**1.42**	**2**	*e*PN	**Pn**	**10 45 28.7**	**-0.5**
ENEZ	**Enez**	**1.42**	**2**	*e*Pn	**Pn**	**10 45 28.7**	**-0.5**
ALN	**Alexandroupoli**	**1.58**	**358**	P	**Pn**	**10 45 31.0**	**-0.4**
ALN				S	**Sn**	**10 45 53.3**	**+1.3**
ALN	**Alexandroupoli**	**1.58**	**358**	P	**Pn**	**10 45 31.0**	**-0.4**
ALN				S	**Sn**	**10 45 53.3**	**+1.3**
RKY	**Sarkoy-Tekirda**	**1.60**	**31**	*e*PN	**Pn**	**10 45 31.3**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.60**	**31**	*e*Pn	**Pn**	**10 45 31.3**	**-0.4**
SART	**Tekirdag**	**1.60**	**31**	*i* P	**Pn**	**10 45 31.4**	**-0.3**
SART				*i* S	**Sn**	**10 45 54.5**	**+2.0**
SART	**Tekirdag**	**1.60**	**31**	*i* P	**Pn**	**10 45 31.4**	**-0.3**
SART				*i* S	**Sn**	**10 45 54.5**	**+2.0**
EDC	**Edincik**	**1.70**	**52**	*e*PN	**Pn**	**10 45 32.6**	**-0.6**
EDC	**Edincik**	**1.70**	**52**	*e*Pn	**Pn**	**10 45 32.6**	**-0.5**
MFT	**Murefte**	**1.73**	**31**	*e*PN	**Pn**	**10 45 33.9**	**+0.5**
MFT	**Murefte**	**1.73**	**31**	*e*Pn	**Pn**	**10 45 33.9**	**+0.5**
BNT	**Bandirma**	**1.74**	**53**	*e*PN	**Pn**	**10 45 32.3**	**-1.3**
DURS	**Dursunbey**	**1.86**	**80**	*i* P	**Pn**	**10 45 35.4**	**+0.2**
DURS				*i* S	**Sn**	**10 45 58.1**	**-0.8**
DURS	**Dursunbey**	**1.86**	**80**	*i* P	**Pn**	**10 45 35.4**	**+0.1**
DURS				*i* S	**Sn**	**10 45 58.1**	**-0.7**
DST	**Dursunbey**	**1.98**	**81**	*e*PN	**Pn**	**10 45 37.2**	**+0.4**
DST	**Dursunbey**	**1.98**	**81**	*e*Pn	**Pn**	**10 45 37.2**	**+0.3**
KCT	**Karacabey**	**1.98**	**61**	*e*PN	**Pn**	**10 45 36.7**	**-0.3**
KCT	**Karacabey**	**1.98**	**61**	*e*Pn	**Pn**	**10 45 36.7**	**-0.2**
DEMI	**Demirci**	**2.05**	**97**	*i* P	**Pg**	**10 45 42.5**	**-0.1**
DEMI				*i* S	**Sg**	**10 46 08.6**	**-0.6**
DEMI	**Demirci**	**2.05**	**97**	*i* P	**Pg**	**10 45 42.5**	**-0.1**
EDRB	**Edirne**	**2.58**	**11**	*e*PN	**Pn**	**10 45 46.0**	**+0.9**
EDRB	**Edirne**	**2.58**	**11**	*e*Pn	**Pn**	**10 45 46.0**	**+0.9**
YLV	**Yalova**	**2.81**	**63**	*e*PN	**Pn**	**10 45 48.9**	**+0.6**
YLV	**Yalova**	**2.81**	**63**	*e*Pn	**Pn**	**10 45 48.9**	**+0.6**

*ISCJB **23** 10:51:18.4±0.3, 46°.39N±0°.02×13°.07E±0°.02, h10km, Error ellipse: s-maj=3.0km s-min=2.2km az=33.8*
*CSEM **23** 10:51:18.0±0.1, 46°.38N×13°.07E, h15km, ML2.2/6, Error ellipse: s-maj=2.0km s-min=1.5km az=23.0*
*VIE **23** 10:51:18.2±0.2, 46°.40N×13°.07E, h10km, mb1.0/4, ML2.0/4, Error ellipse: s-maj=1.4km s-min=0.9km az=31.0 4 km ESE of Tolmezzo*

ISC 23 10:51:18.2±0.6, 46°.38N±0°.02×13°.06E±0°.03, h16km±5km, n48, σ0°59/85, 9C-9D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSE	**Fusea**	**0.05**	**309**	⇓*i*Pg	**Pg**	**10 51 20.8**	**-0.4**
FUSE				*i* Sg	**Sg**	**10 51 22.6**	**-0.7**
FUSE	**Fusea**	**0.05**	**309**	*i* Pg	**Pg**	**10 51 20.8**	**-0.4**
FUSE				*i* Sg	**Sg**	**10 51 22.5**	**-0.7**
BOO	**Bordano**	**0.07**	**155**	⇑*i*Pg	**Pg**	**10 51 21.5**	**+0.2**
BOO	**Bordano**	**0.07**	**155**	*i* Pg	**Pg**	**10 51 21.5**	**+0.2**
MPRI	**Monte Prat**	**0.15**	**199**	⇑*i*Pg	**Pg**	**10 51 22.1**	**-0.1**
MPRI				*i* Sg	**Sg**	**10 51 24.9**	**0.0**
MPRI	**Monte Prat**	**0.15**	**199**	*i* Pg	**Pg**	**10 51 22.1**	**-0.1**
MPRI				*i* Sg	**Sg**	**10 51 24.9**	**0.0**
BUA	**Buia**	**0.17**	**164**	*e*Pg	**Pg**	**10 51 22.4**	**-0.1**
BUA	**Buia**	**0.17**	**164**	*e*Pg	**Pg**	**10 51 22.4**	**-0.1**
PLRO	**Paularo**	**0.18**	**21**	⇑*i*Pg	**Pg**	**10 51 22.5**	**-0.1**
PLRO				*i* Sg	**Sg**	**10 51 25.6**	**-0.1**
PLRO	**Paularo**	**0.18**	**21**	*i* Pg	**Pg**	**10 51 22.5**	**-0.2**
PLRO				*i* Sg	**Sg**	**10 51 26.0**	**+0.3**
ZOU	**Zoufplan**	**0.18**	**342**	⇓*i*Pg	**Pg**	**10 51 22.8**	**0.0**
ZOU				*i* Sg	**Sg**	**10 51 26.0**	**+0.2**
BAD	**Bernadia**	**0.20**	**139**	⇓*i*Pg	**Pg**	**10 51 22.5**	**-0.4**
BAD				*i* Sg	**Sg**	**10 51 25.9**	**-0.1**
BAD	**Bernadia**	**0.20**	**139**	*i* Pg	**Pg**	**10 51 22.5**	**-0.4**
BAD				*i* Sg	**Sg**	**10 51 25.9**	**-0.2**
VINO	**Villanova**	**0.20**	**129**	⇓*i*Pg	**Pg**	**10 51 22.5**	**-0.5**
VINO				*i* Sg	**Sg**	**10 51 25.8**	**-0.4**
VINO	**Villanova**	**0.20**	**129**	*i* Pg	**Pg**	**10 51 22.5**	**-0.5**
VINO				*i* Sg	**Sg**	**10 51 25.8**	**-0.4**
CSMI	**Casera Mimoias**	**0.31**	**295**	*e*Pg	**Pg**	**10 51 24.8**	**0.0**
CSMI				*e*Sg	**Sg**	**10 51 30.1**	**+0.9**
CSMI	**Casera Mimoias**	**0.31**	**295**	*e*Pg	**Pg**	**10 51 24.8**	**0.0**
CSMI				*e*Sg	**Sg**	**10 51 30.1**	**+0.9**
COLI	**Coloredo**	**0.34**	**138**	⇓*e*Pg	**Pg**	**10 51 25.0**	**-0.2**
COLI				*e*Sg	**Sg**	**10 51 30.5**	**+0.6**
COLI	**Coloredo**	**0.34**	**138**	*e*Pg	**Pg**	**10 51 25.0**	**-0.2**
COLI				*e*Sg	**Sg**	**10 51 30.5**	**+0.6**
LSR	**Lussari**	**0.34**	**74**	⇓*i*Pg	**Pg**	**10 51 25.1**	**-0.3**
LSR				*i* Sg	**Sg**	**10 51 30.5**	**+0.4**
LSR	**Lussari**	**0.34**	**74**	*i* Pg	**Pg**	**10 51 25.0**	**-0.3**
LSR				*i* Sg	**Sg**	**10 51 30.5**	**+0.4**
ROBS	**Robic**	**0.34**	**114**	*i* Pg	**Pg**	**10 51 24.8**	**-0.6**
ROBS				*i* Sg	**Sg**	**10 51 30.1**	**-0.1**
ROBS							
	comp=Z,13nm,0.1s						
ROBS	**Robic**	**0.34**	**114**	*i* Pg	**Pg**	**10 51 24.8**	**-0.6**
ROBS				*i* Sg	**Sg**	**10 51 30.1**	**-0.1**
	comp=Z,13nm,0.1s						
ACOM	**Acomizza, Ital**	**0.36**	**62**	⇑*i*Pg	**Pg**	**10 51 25.6**	**0.0**
ACOM				*i* Sg	**Sg**	**10 51 31.2**	**+0.7**
ACOM	**Acomizza, Ital**	**0.36**	**62**	*i* Pg	**Pg**	**10 51 25.6**	**0.0**
ACOM				*i* Sg	**Sg**	**10 51 31.2**	**+0.6**
MLNI	**Malnisio**	**0.39**	**233**	*e*Pg	**Pg**	**10 51 26.6**	**+0.4**
MLNI	**Malnisio**	**0.39**	**233**	*e*Pg	**Pg**	**10 51 26.6**	**+0.4**
CIMO	**Cimolais**	**0.43**	**260**	⇑*i*Pg	**Pg**	**10 51 26.6**	**-0.4**
CIMO				*i* Sg	**Sg**	**10 51 33.4**	**+0.5**
CIMO	**Cimolais**	**0.43**	**260**	*i* Pg	**Pg**	**10 51 26.6**	**-0.4**
CIMO				*i* Sg	**Sg**	**10 51 33.4**	**+0.5**
DRE	**Drenchia**	**0.46**	**117**	⇓*i*Pg	**Pg**	**10 51 26.7**	**-0.7**
DRE				*i* Sg	**Sg**	**10 51 33.8**	**+0.2**
DRE	**Drenchia**	**0.46**	**117**	*i* Pg	**Pg**	**10 51 26.7**	**-0.7**
DRE				*i* Sg	**Sg**	**10 51 33.8**	**+0.2**
MYKA	**Terra Mystica**	**0.47**	**58**	⇑*i*Pg	**Pg**	**10 51 27.6**	**-0.1**
MYKA				⇑*i*Sg	**Sg**	**10 51 34.0**	**-0.1**
	comp=Z,12nm,0.1s						
MYKA	**Terra Mystica**	**0.47**	**58**	Pg	**Pg**	**10 51 27.6**	**-0.1**
MYKA				Sg	**Sg**	**10 51 34.0**	**-0.1**
	comp=Z,12nm,0.1s						
CADS	**Cadrg**	**0.50**	**108**	*i* Pg	**Pg**	**10 51 27.5**	**-0.7**
CADS				*i* Sg	**Sg**	**10 51 35.5**	**+0.6**
CADS							
	comp=Z,13nm,0.1s						
CADS	**Cadrg**	**0.50**	**108**	*i* Pg	**Pg**	**10 51 27.5**	**-0.6**
CADS				*i* Sg	**Sg**	**10 51 35.5**	**+0.7**
	comp=Z,13nm,0.1s						
ABTA	**Abfaltersbach**	**0.52**	**314**	⇑*e*Pg	**Pg**	**10 51 28.8**	**+0.2**
	SNR=12						
ABTA				⇑*i*Sg	**Sg**	**10 51 36.0**	**+0.3**
	comp=Z,19nm,0.1s						
ABTA	**Abfaltersbach**	**0.52**	**314**	Pg	**Pg**	**10 51 28.8**	**+0.2**
	SNR=12						
ABTA				Sg	**Sg**	**10 51 36.0**	**+0.3**
	comp=Z,19nm,0.1s						
SABO	**M.te Sabotino**	**0.55**	**137**	*e*Pg	**Pg**	**10 51 29.0**	**-0.2**
SABO				*e*Sg	**Sg**	**10 51 38.4**	**+1.9**
SABO	**M.te Sabotino**	**0.55**	**137**	*e*Pg	**Pg**	**10 51 29.0**	**-0.2**
SABO				*e*Sg	**Sg**	**10 51 38.4**	**+1.9**
GORS	**Gorjuse**	**0.65**	**95**	*i* Pg	**Pg**	**10 51 30.2**	**-0.9**
GORS				*i* Sg	**Sg**	**10 51 41.2**	**+1.4**
GORS							
	comp=Z,10.0nm,0.1s						
GORS	**Gorjuse**	**0.65**	**95**	*i* Pg	**Pg**	**10 51 30.2**	**-0.8**
GORS				*i* Sg	**Sg**	**10 51 41.2**	**+1.5**
	comp=Z,10.0nm,0.1s						
VOJS	**Vojsko**	**0.67**	**121**	*i* Pg	**Pg**	**10 51 30.4**	**-1.0**
VOJS	**Vojsko**	**0.67**	**121**	*i* Pg	**Pg**	**10 51 30.4**	**-1.0**
VOY	**Vojsko**	**0.68**	**121**	*e*Sg	**Sg**	**10 51 41.2**	**+0.7**
KBA	**Koelnbreinsper**	**0.72**	**16**	⇓*e*Pg	**Pg**	**10 51 32.5**	**+0.1**
	SNR=7.6						
KBA				⇓*i*Sg	**Sg**	**10 51 41.8**	**-0.2**
	comp=Z,5.9nm,0.1s						
KBA	**Koelnbreinsper**	**0.72**	**16**	Pg	**Pg**	**10 51 32.5**

comp=N,1μm,0.5s
YUK smax
comp=E,730nm,0.5s
YSS Yuzh-Sakhalins 5.13 4⇑ *eP* **Pn 10 57 42.0 +0.4**
YSS pmax pmax
comp=Z,50nm,0.9s
YSS Yuzh-Sakhalins 5.13 4 *eP*n **Pn 10 57 41.9 +0.3**
comp=Z,55nm,0.9s
KUR Kuril'sk 5.31 48 *eP* **Pn 10 57 45.0 +0.8**
KUR *eS* **Sn 10 58 43.3 -0.7**
KUR smax
comp=N,120nm,0.3s
KUR smax
comp=E,160nm,0.3s
MAJO Matsushiro 6.15 212 *eP* **Pn 10 57 56.4 +0.8**
MAJO pmax pmax
comp=Z,9.0nm,0.4s
MAJO Matsushiro 6.15 212 *eP*n **Pn 10 57 56.4 +0.7**
comp=Z,8.7nm,0.4s
MAT Matsushiro 6.15 212 P **Pn 10 57 56.2 +0.6**
MAT S **Sn 10 59 05.4 +0.9**
MJAR Matsushiro Arr 6.15 212 P **Pn 10 57 55.4 -0.2**
comp=Z,1.3nm,0.3s,baz=22,slow=16,SNR=11
MJAR Matsushiro Arr 6.15 212 P **Pn 10 57 55.4 -0.2**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
JHJ Hachijo jima 2 8.92 193 P **Pn 10 58 29.6 -3.8**
comp=Z,5.5nm,0.3s,baz=78,slow=21,SNR=10
JHJ S **Sn 11 00 03.5 -8.7**
comp=Z,11nm,0.3s,baz=73,slow=19,SNR=4.4
KLR Kul'dur 10.42 319 *eP* **Pn 10 58 56.4 +2.6**
KSRS Korea Array 11.88 253 P **Pn 10 59 17.4 +3.9**
comp=Z,0.6nm,0.3s,baz=63,slow=14,SNR=8.4
KSRS S **Sn 11 01 30.5 +6.5**
comp=Z,0.3nm,0.3s,baz=67,slow=24,SNR=5.6
KSRS Korea Array 11.88 253 P **Pn 10 59 17.5 +3.9**
KSRS S **Sn 11 01 30.5 +6.5**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
CBIJ Chichi jima 14.71 180 P **Pn 10 59 47.6 -3.3**
comp=Z,3.6nm,0.3s,baz=73,slow=18,SNR=6.1
ZALV Zalesovo Beam 39.30 308 P **P 11 03 49.1 +1.8**
comp=Z,2.4nm,0.6s,mb4.2,baz=89,slow=7.7,SNR=5.9
ZALV Zalesovo Beam 39.30 308 P **P 11 03 49.1 +1.8**
ZALV pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
MKAR Makanchi Array 42.28 298 P **P 11 04 11.8 -0.1**
comp=Z,0.3nm,0.5s,mb3.3,baz=77,slow=12,SNR=2.8
KURK Kurchatov 43.61 304 P **P 11 04 22.7 +0.1**
comp=Z,1.7nm,0.3s,mb4.2,baz=76,slow=9.1,SNR=6.4
KURK Kurchatov 43.61 304 P **P 11 04 22.7 +0.1**
KURK pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
BVAR Borovoye Array 47.92 309 P **P 11 04 56.4 0.0**
comp=Z,1.6nm,0.4s,mb4.2,baz=72,slow=11,SNR=5.6
BVAR Borovoye Array 47.92 309 P **P 11 04 56.4 -0.1**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
INK Inuvik 49.85 29 P **P 11 05 10.1 -0.9**
comp=Z,0.7nm,0.4s,mb4.0,baz=292,slow=5.4,SNR=16
INK Inuvik 49.85 29 P **P 11 05 10.1 -0.9**
INK pmax pmax
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 55.41 308 *eP* **P 11 05 52.4 +0.1**
comp=Z,0.8nm,0.4s,mb4.1
YKA Yellowknife Ar 59.36 32 P **P 11 06 19.6 -0.2**
comp=Z,0.3nm,0.5s,mb3.6,baz=305,slow=6.1,SNR=7.2
FINES FINESS Array B 64.88 332 P **P 11 06 58.2 +1.4**
comp=Z,1.6nm,0.4s,mb4.2,baz=56,slow=6.9,SNR=6.5
FINES FINESS Array B 64.88 332 P **P 11 06 58.2 +1.5**
FINES pmax pmax
comp=Z,2.0nm,0.4s
HFS Hagfors 69.99 335 P **P 11 07 27.7 -1.2**
comp=Z,1.2nm,0.7s,mb3.9,baz=60,slow=8.5,SNR=3.0
HFS Hagfors 69.99 335 P **P 11 07 27.7 -1.2**
HFS pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 70.01 337 P **P 11 07 28.5 -0.5**
comp=Z,0.4nm,0.6s,mb3.4,baz=36,slow=6.2,SNR=2.5
NVAR Mina Array Bea 71.64 55 P **P 11 07 39.7 +0.4**
comp=Z,0.3nm,0.6s,mb3.3,baz=284,slow=4.5,SNR=2.8
PDAR Pinedale Array 73.87 47 P **P 11 07 52.5 0.0**
comp=Z,0.5nm,0.6s,mb3.4,baz=135,slow=0.4,SNR=4.0
TXAR Lajitas Array 86.70 53 P **P 11 09 02.3 +0.8**
comp=Z,0.4nm,0.8s,mb3.4,baz=316,slow=3.5,SNR=3.5

*ISCJB **23** 11:00:12.1±0.6,59°.31N±0°.03×26°.99E±0°.08,h0km, Error ellipse: s-maj=6.0km s-min=3.9km az=10.9*
*CSEM **23** 11:00:13.3±0.3,59°.30N×27°.09E,h2km,ML2.1,Error ellipse: s-maj=7.9km s-min=4.8km az=106.0,Mining explosion.*
*NAO **23** 11:00:13.3±1.0,59°.29N×27°.05E,ML2.1*
*IDC **23** 11:00:14.8±2.1,59°.39N×26°.98E,h0km,mb1 3.2/4, mb1mx3.0/26,mbtmp3.1/4,ML2.6/4,Error ellipse: s-maj=18.4km s-min=10.8km az=133.0*
*BER **23** 11:00:14.0±4.1,59°.29N×27°.09E,h0km±18km, ML2.1(NAO)*

ISC 23 11:00:13.0±0.6,59°.34N±0°.03×26°.96E±0°.08,h0km,n25, σ1§47/44,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.88**	**188**	Pg	**Pg**	**11 00 29.2**	**-0.7**
VSU				Lg		11 00 40.5	
VSU	**Vasula**	**0.88**	**188**	Pg	**Pg**	**11 00 29.2**	**-0.7**
VSU				*eS*	**Sg**	**11 00 40.1**	**-1.2**
	38nm,0.4s,SNR=90						
VSU				Lg		11 00 40.5	
	SNR=91						
VJF	**Virojoki**	**1.24**	**14**	Pg	**Pg**	**11 00 36.1**	**-0.7**
VJF				Sg	**Sg**	**11 00 53.3**	**+0.4**
PVF	**Pernaja**	**1.33**	**336**	Pg	**Pg**	**11 00 38.7**	**+0.2**
PVF				Sg	**Sg**	**11 00 56.4**	**+0.6**
MEF	**Metsahovi**	**1.57**	**305**	*eP*	**Pn**	**11 00 43.3**	**+1.2**
	SNR=50						
MEF				*eS*	**Sn**	**11 01 03.9**	**+0.8**
	SNR=50						
MEF				Sg	**Sg**	**11 01 04.5**	**+1.1**
MTSE	**Matsula**	**1.74**	**250**	Pn	**Pn**	**11 00 45.7**	**+1.3**
MTSE				Sg	**Sg**	**11 01 08.7**	**-0.2**
FIA0	**FINESS Array S**	**2.16**	**349**	Pn	**Pn**	**11 00 51.1**	**+0.9**
	baz=163,slow=18						
FIA0				Pg	**Pg**	**11 00 52.5**	**-1.8**
	baz=165,slow=16						
FIA0				Sn	**Sn**	**11 01 19.4**	**+1.8**
	baz=172,slow=22						
FIA0				Lg		11 01 22.5	
	baz=170,slow=37						
FIA0	**FINESS Array S**	**2.16**	**349**	Pn	**Pn**	**11 00 51.1**	**+0.9**
	baz=163,slow=17,SNR=6.8						
FIA0	**FINESS Array S**	**2.16**	**349**	Pg	**Pg**	**11 00 52.5**	**-1.9**
	baz=165,slow=16,SNR=90						
FIA0				Sn	**Sn**	**11 01 19.4**	**+1.8**
	baz=172,slow=20						
FIA0				Sg	**Sg**	**11 01 19.9**	**-2.4**
FIA0				Lg		11 01 22.5	
	baz=170,slow=33,SNR=29						
FINES	**FINESS Array B**	**2.16**	**349**	Pn	**Pn**	**11 00 51.1**	**+0.9**
	2.0nm,0.3s,baz=164,slow=15,SNR=26						
FINES				Pg	**Pg**	**11 00 52.5**	**-1.9**
	2.0nm,0.3s,baz=164,slow=16,SNR=27						
FINES				Lg		11 01 21.5	
	4.8nm,0.3s,baz=171,slow=30,SNR=33						
FIA1	**FINESS Array S**	**2.16**	**349**	Pn	**Pn**	**11 00 51.3**	**+1.1**
FIA1				Sg	**Sg**	**11 01 20.1**	**-2.3**
KAF	**Kangasniemi**	**2.81**	**354**	Pn	**Pn**	**11 00 59.6**	**+0.6**
SLIT	**Slitere, Latvi**	**2.99**	**237**	*eP*	**Pn**	**11 01 06.0**	**+4.4**
	SNR=50						
KEF	**Keuruu**	**3.02**	**341**	Pn	**Pn**	**11 01 03.6**	**+1.6**
KEF				Sg	**Sg**	**11 01 47.4**	**-2.6**
RAF	**Rauma**	**3.10**	**305**	Pn	**Pn**	**11 01 05.7**	**+2.6**
RAF	**Rauma**	**3.10**	**305**	*eP*	**Pn**	**11 01 06.0**	**+2.9**
	SNR=50						
RAF				*eS*	**Sn**	**11 01 44.0**	**+3.2**
	SNR=50						
RAF				Sg	**Sg**	**11 01 49.2**	**-3.3**
SUF	**Sumiainen**	**3.42**	**354**	Pn	**Pn**	**11 01 09.1**	**+1.6**
JOF	**Joensuu**	**4.17**	**29**	Pn	**Pn**	**11 01 18.8**	**+1.1**
HFS	**Hagfors**	**6.76**	**282**	Pn	**Pn**	**11 01 53.7**	**+0.4**
	baz=115,slow=14						
HFS				Sn	**Sn**	**11 03 08.4**	**-2.4**
	baz=102,slow=28						
HFS				Lg		11 03 43.9	
	baz=86,slow=28						
HFS	**Hagfors**	**6.76**	**282**	Pn	**Pn**	**11 01 53.3**	**0.0**
	0.1nm,0.3s,baz=101,slow=24,SNR=3.1						
HFS				Sn	**Sn**	**11 03 08.2**	**-2.6**
	0.2nm,0.3s,baz=107,slow=18,SNR=3.6						
HFS				Lg		11 03 44.0	
	0.6nm,0.3s,baz=90,slow=28,SNR=6.3						
HFS	**Hagfors**	**6.76**	**282**	Pn	**Pn**	**11 01 53.7**	**+0.4**
	baz=115,slow=13,SNR=5.0						
NOA	**NORSAR Array B**	**8.03**	**289**	Pn	**Pn**	**11 02 09.2**	**-1.6**
	0.2nm,0.3s,baz=106,slow=15,SNR=2.9						
NOA				Lg		11 04 25.0	
	0.3nm,0.3s,baz=145,slow=21,SNR=3.6						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**11 02 40.0**	**-1.3**
	baz=172,slow=16						
ARA0				Sn	**Sn**	**11 04 30.3**	**-6.5**
	baz=172,slow=37						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**11 02 40.0**	**-1.2**
	baz=172,slow=14,SNR=8.5						
ARCES	**ARCESS Array B**	**10.26**	**357**	Pn	**Pn**	**11 02 39.0**	**-2.2**
	0.1nm,0.3s,baz=171,slow=12,SNR=10						
ARCES				Sn	**Sn**	**11 04 29.0**	**-7.8**
	0.1nm,0.3s,baz=175,slow=21,SNR=2.7						

MAN 23 11:01:51,11°.81N×125°.56E,h31km,mb4.3,ML3.2,MS2.9, 1C,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.24**	**208**	*eP*	Pb	11 01 59.2	+1.4
PLP	**Palo**	**0.86**	**221⇑**	*eP*	Pn	11 02 08.5	+1.5
CNP	**Cataraman**	**1.11**	**309**	*eP*	Pn	11 02 10.8	+0.3
PVCP	**Virac**	**2.24**	**322**	*eP*	Pn	11 02 28.3	+2.4
PVCP				*eS*	Sn	11 02 52.6	+0.1

*BJI **23** 11:42:11.3,65°.20N×134°.10W,h11km,mB4.8/4,mb4.8/4, Ms4.5/2,Ms7 4.2/2*
*ISCJB **23** 11:42:12.9±0.3,65°.17N±0°.03×133°.94W±0°.06,h10km, mb3.9/14,MS3.8/3,Error ellipse: s-maj=4.2km s-min=3.7km az=165.9*
*IDC **23** 11:42:14.9±0.8,65°.22N×134°.00W,h0km,mb3.7/9, mb1 4.0/12,mb1mx3.8/30,mbtmp3.8/12,ML4.7/2,MS3.0/3, Ms1 3.0/3,ms1mx2.5/39,Error ellipse: s-maj=15.4km s-min=8.8km az=69.0*
*NEIC **23** 11:42:15.4,65°.19N×134°.10W,h1km,mb4.1/5, MW3.9(PGC),MW3.9(SLM),After PGC.*
*PGC **23** 11:42:15.4±1.4,65°.19N×134°.10W,h1km,ML4.5/4,Mw3.9, 250km south of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 23 11:42:15.3±0.3,65°.17N±0°.03×134°.00W±0°.06,h10km,n76, σ1§27/94,mb3.9/14,MS3.8/3,12D,Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAWY	**Dawson**	**2.57**	**247**	P	**Pn**	**11 42 56.4**	**-0.5**
DAWY				S	**Sn**	**11 43 28.5**	**+0.3**
DAWY	**Dawson**	**2.57**	**247**	⇑Pn	**Pn**	**11 42 57.1**	**+0.2**
DAWY				⇑Sg	**Sg**	**11 43 31.4**	**-6.5**
DAWY	**Dawson**	**2.57**	**247**	⇑Pn	**Pn**	**11 42 57.1**	**+0.2**
DAWY				⇑Sg	**Sg**	**11 43 31.4**	**-6.5**
EGAK	**Eagle**	**3.07**	**266**	P	**Pn**	**11 43 02.3**	**-1.4**
EGAK				S	**Sn**	**11 43 40.1**	**-0.3**
INK	**Inuvik**	**3.15**	**3**	Pn	**Pn**	**11 43 05.8**	**+0.9**
	1.7nm,0.3s,baz=188,slow=13,SNR=200						
INK				Pg	**Pg**	**11 43 12.4**	**-3.2**
	16nm,0.3s,baz=197,slow=14,SNR=50						
INK				Lg		11 43 54.7	
	36nm,0.3s,baz=258,slow=13,SNR=8.5						
INK	**Inuvik**	**3.15**	**3**	*e*Pn	**Pn**	**11 43 05.4**	**+0.6**
INK				*e*Sg	**Sg**	**11 43 57.1**	**+0.7**
INK	**Inuvik**	**3.15**	**3**	⇑Pn	**Pn**	**11 43 05.8**	**+0.9**
INK	**Inuvik**	**3.15**	**3**	⇑Pn	**Pn**	**11 43 05.8**	**+0.9**
WHY	**Whitehorse**	**4.55**	**185**	P	**Pn**	**11 43 23.4**	**-0.6**
WHY				*e*Pg	**Pg**	**11 43 38.1**	**-4.2**
WHY	**Whitehorse**	**4.55**	**185**	⇑Pn	**Pn**	**11 43 23.4**	**-0.7**
WHY				⇑Pg	**Pg**	**11 43 38.1**	**-4.2**
WHY	**Whitehorse**	**4.55**	**185**	⇑Pn	**Pn**	**11 43 23.4**	**-0.7**
WHY				⇑Pg	**Pg**	**11 43 38.1**	**-4.2**
DOT	**Dot Lake**	**4.62**	**255**	P	**Pn**	**11 43 23.9**	**-1.2**
HYT	**Haines Junctio**	**4.65**	**202**	*e*Pn	**Pn**	**11 43 26.2**	**+0.8**
HYT	**Haines Junctio**	**4.65**	**202**	⇓Pn	**Pn**	**11 43 26.2**	**+0.8**
HYT	**Haines Junctio**	**4.65**	**202**	⇓Pn	**Pn**	**11 43 26.2**	**+0.8**
MENT	**Mentasta**	**4.82**	**247**	*e*P	**Pn**	**11 43 26.6**	**-1.2**
BM3	**Burnt Mountain**	**4.83**	**303**	P	**Pn**	**11 43 26.8**	**-1.2**
IL1	**Eielson Array**	**5.49**	**272**	P	**Pn**	**11 43 36.0**	**-0.9**
PAX	**Paxson**	**5.49**	**252**	*e*Pn	**Pn**	**11 43 36.7**	**-0.3**
	44nm,0.8s						
SKAG	**Skagway**	**5.77**	**187**	*e*P	**Pn**	**11 43 40.3**	**-0.5**
SKAG				P		11 43 40.6	
PLBC	**Pleasant Camp**	**5.84**	**192**	*e*Pn	**Pn**	**11 43 42.5**	**+0.7**
PLBC				*e*Sg	**Sg**	**11 45 13.0**	**-10**
PLBC	**Pleasant Camp**	**5.84**	**192**	⇑Pn	**Pn**	**11 43 42.5**	**+0.7**
PLBC				⇓Sg	**Sg**	**11 45 13.0**	**-10**
PLBC	**Pleasant Camp**	**5.84**	**192**	⇑Pn	**Pn**	**11 43 42.5**	**+0.7**
PLBC				⇓Sg	**Sg**	**11 45 13.0**	**-10**
COLA	**College**	**5.88**	**273**	*e*Pn	**Pn**	**11 43 40.7**	**-1.5**
	45nm,0.9s						
PNL	**Peninsula**	**6.07**	**207**	P	**Pn**	**11 43 44.3**	**-0.6**
MCK	**McKinley**	**6.62**	**264**	*e*Pn	**Pn**	**11 43 52.9**	**+0.4**
	26nm,0.8s						
BESE	**Bessie Mountai**	**6.63**	**184**	P	**Pn**	**11 43 52.4**	**-0.2**
DIV	**Divide**	**6.69**	**238**	*e*Pn	**Pn**	**11 43 55.5**	**+2.0**
	29nm,0.8s						
COLD	**Coldfoot**	**6.87**	**295**	P	**Pn**	**11 43 55.1**	**-0.7**
ROMN	**Roman Lake**	**6.89**	**90**	⇓Pn	**Pn**	**11 43 55.8**	**-0.4**
ROMN	**Roman Lake**	**6.89**	**90**	⇓Pn	**Pn**	**11 43 55.8**	**-0.4**
DLBC	**Dease Lake**	**7.02**	**163**	Pn	**Pn**	**11 43 57.4**	**-0.5**
	12nm,0.3s,baz=1.8,slow=10,SNR=75						
DLBC				Sn	**Sn**	**11 45 16.9**	**-0.7**
	5.2nm,0.3s,baz=292,slow=22,SNR=2.9						
DLBC				Lg		11 45 51.4	
	14nm,0.3s,baz=164,slow=18,SNR=9.1						
DLBC				LR	LR	11 47 00.5	
	comp=Z,79nm,20.5s,baz=122,slow=40						
DLBC	**Dease Lake**	**7.02**	**163**	*e*Pn	**Pn**	**11 43 58.0**	**+0.1**
DLBC	**Dease Lake**	**7.02**	**163**	⇓Pn	**Pn**	**11 43 58.4**	**+0.5**
DLBC	**Dease Lake**	**7.02**	**163**	⇓Pn	**Pn**	**11 43 58.4**	**+0.5**
EYAK	**Cordova Ski Ar**	**7.09**	**235**	P	**Pn**	**11 44 00.1**	**+1.2**
SML	**Sawmill**	**7.24**	**249**	P	**Pn**	**11 43 59.7**	**-1.3**
TRF	**Thorofare Moun**	**7.28**	**264**	*e*Pn	**Pn**	**11 44 03.2**	**+1.7**
	32nm,0.6s						
BPAW	**Bear Paw Mtn.**	**7.37**	**269**	*e*Pn	**Pn**	**11 44 00.8**	**-1.9**
	26nm,0.9s						
KTH	**Kantishna Hill**	**7.51**	**265**	P	**Pn**	**11 44 02.9**	**-1.8**
PMR	**Palmer**	**7.68**	**249**	*e*Pn	**Pn**	**11 44 08.4**	**+1.4**
	12nm,0.9s						
CTLN	**Castor Lake**	**7.71**	**87**	⇑Pn	**Pn**	**11 44 07.2**	**-0.1**
CTLN				⇓Sn	**Sn**	**11 45 29.3**	**-5.3**
CTLN	**Castor Lake**	**7.71**	**87**	⇑Pn	**Pn**	**11 44 07.2**	**-0.1**
CTLN				⇓Sn	**Sn**	**11 45 29.3**	**-5.3**
CHUM	**Lake Minchumin**	**7.99**	**269**	*e*Pn	**Pn**	**11 44 12.5**	**+1.2**
	14nm,0.8s						
FNBB	**Fort Nelson**	**8.14**	**136**	⇓Pn	**Pn**	**11 44 14.4**	**+1.1**
FNBB	**Fort Nelson**	**8.14**	**136**	⇓Pn	**Pn**	**11 44 14.4**	**+1.1**
IM3	**Indian Mountai**	**8.21**	**285**	P	**Pn**	**11 44 11.8**	**-2.5**
PPLA	**Purkeypile**	**8.29**	**262**	*e*Pn	**Pn**	**11 44 17.8**	**+2.5**
	12nm,0.7s						
YKW3	**Yellowknife Ar**	**8.94**	**98**	⇑Pn	**Pn**	**11 44 23.8**	**-0.4**
YKW3				⇑Sn	**Sn**	**11 45 58.8**	**-5.9**
YKW3	**Yellowknife Ar**	**8.94**	**98**	⇑Pn	**Pn**	**11 44 23.8**	**-0.4**
YKW3				⇑Sn	**Sn**	**11 45 58.8**	**-5.9**
YKA	**Yellowknife Ar**	**8.97**	**99**	Pn	**Pn**	**11 44 23.5**	**-1.1**
	5.9nm,0.3s,baz=292,slow=13,SNR=204						
YKA				Sn	**Sn**	**11 45 59.6**	**-5.9**
	5.3nm,0.3s,baz=293,slow=23,SNR=10						
BBB	**Bella Bella**	**13.37**	**164**	LR	LR	11 50 39.1	
	comp=Z,67nm,19.4s,baz=22,slow=38						
RES	**Resolute Bay**	**16.06**	**37**	Pn	**Pn**	**11 45 58.1**	**-2.6**
	0.3nm,0.3s,baz=245,slow=11,SNR=16						
RES				Sn	**Sn**	**11 48 51.0**	**-7.5**
	0.5nm,0.3s,baz=324,slow=23,SNR=5.7						
RES	**Resolute Bay**	**16.06**	**37**	*e*Pn	**Pn**	**11 45 58.2**	**-2.5**
	6.2nm,0.6s						
FFC	**Flin Flon**	**18.91**	**108**	*e*P	**Pn**	**11 46 34.6**	**-1.6**
	11nm,0.8s						
FCC	**Fort Churchill**	**19.54**	**90**	*e*P	**Pn**	**11 46 42.0**	**-1.8**
	0.1nm,0.6s						
BILL	**Bilibino**	**23.07**	**304**	*e*P	**P**	**11 47 21.0**	**+0.5**
	7.8nm,1.1s,mb4.0						
GCMT	**Greycliff**	**23.54**	**134**	*e*P	**P**	**11 47 29.1**	**+3.7**
	3.0nm,1.2s,mb3.6						
YBH	**Yreka Blue Hor**	**24.35**	**159**	LR	LR	11 56 52.5	
	comp=Z,43nm,19.7s,MS2.9,baz=328,slow=36						
PDAR	**Pinedale Array**	**26.32**	**137**	P	**P**	**11 47 52.7**	**+1.9**
	0.2nm,0.3s,mb3.1,baz=238,slow=8.4,SNR=2.3						
FRB	**Frobisher Bay**	**27.14**	**62**	P	**P**	**11 47 58.8**	**+0.8**
	1.2nm,0.5s,mb3.7,baz=296,slow=7.1,SNR=3.7						
NVAR	**Mina Array Bea**	**28.32**	**153**	P	**P**	**11 48 12.1**	**+3.4**
	0.4nm,0.5s,mb3.3,baz=322,slow=8.5,SNR=4.4						
TXAR	**Lajitas Array**	**40.54**	**137**	P	**P**	**11 49 55.5**	**+1.2**
	0.9nm,1.2s,mb3.3,baz=264,slow=8.1,SNR=2.7						
FINES	**FINESS Array B**	**52.83**	**12**	P	**P**	**11 51 29.6**	**-0.5**
	1.4nm,0.7s,mb4.0,baz=15,slow=10,SNR=5.3						
CN2	**Changchun**	**55.30**	**300**	*e*P	**P**	**11 51 46.0**	**-2.4**
ZALV	**Zalesovo Beam**	**57.54**	**334**	P	**P**	**11 52 04.7**	**+0.5**
	1.3nm,0.6s,mb4.1,baz=4.6,slow=7.2,SNR=2.5						
BVAR	**Borovoye Array**	**60.65**	**343**	P	**P**	**11 52 26.4**	**+0.6**
	0.3nm,0.4s,mb3.8,baz=34,slow=5.6,SNR=4.7						
HHC	**Hu-ho-hao-te**	**62.73**	**309**	*e*P	**P**	**11 52 42.3**	**+2.3**
HHC				PP	PP	11 55 01.8	+4.4
HHC				S	**S**	**12 01 09.0**	**+0.7**
HHC				ScS	ScS	12 02 31.8	-0.4
HHC				SS	SS	12 05 13.0	+0.9
HHC				pmax	pmax		
	comp=Z,72nm,5.1s						
HHC				LR	LR		
	comp=N,93nm,17.1s,MS4.2						
HHC				LR	LR		
	comp=E,130nm,18.8s,MS4.2						
HHC				LR	LR		
	comp=Z,67nm,18.2s,MS3.9						
AKASG	**Malin Array Be**	**63.73**	**12**	P	**P**	**11 52 46.4**	**-0.1**
	comp=Z,0.2nm,0.2s,mb3.7,baz=353,slow=6.6,SNR=2.3						
MKAR	**Makanchi Array**	**64.86**	**333**	P	**P**	**11 52 55.8**	**+1.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=5.7,slow=4.3,SNR=5.8						
ABKAR	**Akbulak array**	**65.40**	**350**	*e*P	**P**	**11 52 58.8**	**+1.5**
	comp=Z,3.2nm,0.9s,mb4.3						
WMQ	**Urumqi**	**66.59**	**328**	*e*P	**P**	**11 53 07.5**	**+2.4**
BCIP	**Isla Barro Col**	**67.20**	**120**	*e*P	**P**	**11 53 03.2**	**-6.2**
	comp=Z,225nm,0.6s						
LZH	**Lanzhou**	**69.54**	**313**	*e*P	**P**	**11 53 23.5**	**-0.3**
LZH				pP	pP	11 53 26.8	-0.2
LZH				sP	sP	11 53 28.3	+0.1
LZH				*e*PP	PP	11 55 58.6	+1.7
LZH				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,48nm,6.2s						
LZH				LR	LR		
	comp=N,200nm,15.2s						
LZH				LR	LR		
	comp=Z,260nm,18.6s,MS4.5						
CD2	**Chengdu**	**74.35**	**311**	P	**P**	**11 53 53.8**	**+1.1**
CD2				pmax	pmax		
	comp=Z,90nm,5.4s						
GYA	**Guiyang**	**77.51**	**307**	P	**P**	**11 54 11.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						

DJA 23 11:53:25,3°.73N×125°.51E,h0km,MLv4.0/8,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.05**	**157**	P	Pg	11 53 26.1	+0.2
DAV	**Davao City (W)**	**3.32**	**1**	P	Pn	11 54 18.7	+0.5
TNTI	**Ternate**	**3.48**	**148**	P	Pn	11 54 20.5	+0.1
LBMI	**Labuha**	**4.77**	**155**	P	Pn	11 54 39.7	+1.5
MRSI	**Marisa**	**4.81**	**228**	P	Pn	11 54 39.9	+1.1
LUWI	**Luwuk**	**5.47**	**210**	P	Pn	11 54 46.8	-1.1
	26nm,0.8s,0.1nm						
APSI	**Ampana**	**6.01**	**220**	P	Pn	11 54 55.1	-0.2
	32nm,1.0s,0.2nm						
NLAI	**Namlea**	**7.10**	**167**	P	Pn	11 55 11.4	+1.1

*IDC **23** 12:08:16.5±1.1,51°.44N×75°.55E,h0km,mb1 2.6/4, mb1mx2.5/28,mbtmp2.6/4,ML2.5/4,Error ellipse: s-maj=36.4km s-min=9.7km az=31.0*
*ISCJB **23** 12:08:17.2±0.6,52°.02N±0°.08×75°.82E±0°.07,h10km,Error ellipse: s-maj=12.3km s-min=5.1km az=19.8*
*NNC **23** 12:08:18.0±1.7,51°.84N×75°.82E,h0km,mb2.7,mpv2.3, Error ellipse: s-maj=36.7km s-min=11.8km az=25.0*

ISC 23 12:08:18.5±0.6,51°.93N±0°.09×75°.76E±0°.07,h10km,n10, σ1§02/16,4C-7D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.17**	**123**	⇓Pn	**Pn**	**12 08 54.1**	**-0.5**
	1.3nm,0.5s						
KURK				⇑Sn	**Sn**	**12 09 20.5**	**-1.0**
	8.4nm,0.6s						
KURK	**Kurchatov**	**2.17**	**123**	Pn	**Pn**	**12 08 52.5**	**-2.2**
	0.2nm,0.3s,baz=308,slow=20,SNR=5.9						
KURK				Lg		12 09 23.2	
	0.4nm,0.3s,baz=308,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**2.18**	**126**	⇑Pn	**Pn**	**12 08 56.0**	**+1.2**
	0.3nm,0.3s,baz=301,slow=14						
KURBB				⇓Sn	**Sn**	**12 09 22.4**	**+0.7**
	3.7nm,0.6s,baz=308,slow=28						
VOSK	**Vostochnaya**	**3.04**	**287**	⇓Pn	**Pn**	**12 09 06.1**	**-0.5**
	1.2nm,0.6s						
VOSK				⇑Sn	**Sn**	**12 09 42.2**	**-0.8**
	17nm,0.8s						
BVA0	**Borovoye Array**	**3.46**	**291**	⇓Pn	**Pn**	**12 09 13.1**	**+0.7**
	0.2nm,0.5s,baz=119,slow=18,SNR=3.6						
BVA0				⇑Sn	**Sn**	**12 09 58.1**	**+4.7**
	1.2nm,0.8s,baz=117,slow=25,SNR=7.2						
BVAR	**Borovoye Array**	**3.46**	**291**	Pn	**Pn**	**12 09 12.6**	**+0.2**
	0.3nm,0.3s,baz=116,slow=16,SNR=9.8						
BVAR				Lg		12 09 58.0	
	0.8nm,0.3s,baz=115,slow=28,SNR=9.3						
ZRNK	**

ENH *e*Sn **Sn** **12 16 49.1 -1.8**
GYA Guiyang 5.33 147 Pn **Pn** **12 15 50.4 -0.6**
GYA Sn **Sn** **12 16 54.8 +2.3**
GYA smax
comp=N,350nm,0.8s
GYA smax
comp=E,440nm,0.8s
XAN Xi'an 5.55 55 Pn **Pn** **12 15 53.3 -0.6**
XAN Pg **Pg** **12 16 13.3 -4.2**
XAN Sn **Sn** **12 16 58.5 +0.8**
XAN Sg **Sg** **12 17 24.6 -4.7**
XAN smax
comp=N,250nm,0.9s
XAN smax
comp=E,130nm,1.0s
XAN LR LR
comp=N,690nm,9.0s
XAN LR LR
comp=E,180nm,7.2s
XAN LR LR
comp=Z,97nm,4.7s
KMI Kunming 5.88 186 Pn **Pn** **12 15 59.0 +0.5**
KMI Sn **Sn** **12 17 06.4 +0.5**
KMI smax
comp=N,63nm,1.4s
KMI smax
comp=E,68nm,1.1s
KMI LR LR
comp=N,610nm,9.3s
KMI LR LR
comp=E,700nm,7.2s
KMI LR LR
comp=Z,500nm,9.6s
GTA Gaotai 8.90 342 *e*P **Pn** **12 16 49.3 +9.3**
GTA pP 12 16 53.5
GTA sP 12 16 56.8
GTA pmax pmax
comp=Z,5.0nm,1.0s
WHN Wuhan 9.41 90 P **Pn** **12 16 56.3 +9.4**
WHN S **Sn** **12 18 26.5 -6.2**
WHN LR LR
comp=N,900nm,5.4s
WHN LR LR
comp=Z,1μm,5.8s
WHN LR LR
comp=Z,2μm,6.6s
LSA Lhasa 10.69 266 S **Sn** **12 18 58.6 -5.6**
LSA pmax pmax
comp=Z,20nm,0.9s
LSA LR LR
comp=N,20nm,8.0s
LSA LR LR
comp=E,30nm,9.0s
LSA LR LR
comp=Z,290nm,10.0s
CHTO Chiang Mai 12.79 200 *e*P **Pn** **12 17 33.0 -0.2**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 12.79 200 *e*Pn **Pn** **12 17 33.0 -0.3**
comp=Z,3.7nm,0.7s
CMAR Chiang Mai Arr 13.12 199 Pn **Pn** **12 17 38.9 +1.0**
comp=Z,0.3nm,0.3s,baz=8.7,slow=12,SNR=18
QZH Quanzhou 14.69 110 *e*P **Pn** **12 17 59.4 +0.3**
QZH S **Sn** **12 20 36.5 -5.5**
QZH LR LR
comp=N,400nm,7.3s
QZH LR LR
comp=E,650nm,5.8s
QZH LR LR
comp=Z,660nm,6.7s
SONM Songino Array 16.97 7 Pn **Pn** **12 18 29.4 +0.7**
comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=11
ULN Ulaanbaatar 17.08 8 *e*P **Pn** **12 18 32.2 +2.2**
ULN pmax pmax
comp=Z,2.0nm,0.8s
ULN Ulaanbaatar 17.08 8 *e*P **Pn** **12 18 32.2 +2.2**
comp=Z,1.8nm,0.8s
ZAK Zakamensk 19.37 360 *e*P **Pn** **12 18 58.7 +0.6**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
MOY Mondy 20.74 356 *e*P **P** **12 19 14.8 +3.0**
KSRS Korea Array 21.22 66 P **P** **12 19 16.5 -0.8**
comp=Z,5.0nm,0.8s,mb3.9,baz=242,slow=8.8,SNR=22
KSRS LR LR 12 27 31.2
comp=Z,56nm,19.9s,baz=260,slow=37
KSRS Korea Array 21.22 66 P **P** **12 19 16.5 -0.8**
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
KSRS MLR MLR
comp=Z,57nm,19.9s
CN2 Changchun 21.59 48 *e*P **P** **12 19 21.5 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
MK31 Makanchi Array 22.69 320 *e*P **P** **12 19 33.7 +0.9**
MKAR Makanchi Array 22.69 320 P **P** **12 19 31.9 -0.9**
comp=Z,1.1nm,0.6s,mb3.5,baz=122,slow=9.1,SNR=12
MKAR Makanchi Array 22.69 320 P **P** **12 19 31.9 -0.9**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
KSH Kashi 23.91 298 P **P** **12 19 48.4 +3.1**
KSH pmax pmax
comp=Z,35nm,4.0s
TKM2 Tokmak 2 25.11 306 *e*P **P** **12 19 56.6 +0.4**
TKM2 pmax pmax
comp=Z,4.0nm,0.2s,mb4.6
TKM2 Tokmak 2 25.11 306 *e*P **P** **12 19 56.5 +0.4**
comp=Z,4.4nm,0.2s,mb4.6
UCH Uchtor 25.66 304 *e*P **P** **12 20 01.3 +0.1**
comp=Z,4.4nm,1.0s,mb3.9
EKS2 Erkin-Say 26.30 305 *e*P **P** **12 20 08.1 +1.1**
comp=Z,3.2nm,0.8s,mb3.9
ZAA0 Zalesovo Array 26.57 335 *e*P **P** **12 20 09.5 +0.2**
ZALV Zalesovo Beam 26.57 335 P **P** **12 20 07.9 -1.4**
comp=Z,2.3nm,0.5s,mb3.9,baz=140,slow=9.3,SNR=13
ZALV Zalesovo Beam 26.57 335 P **P** **12 20 07.9 -1.4**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
KURK Kurchatov 26.99 324 P **P** **12 20 12.5 -0.6**
comp=Z,1.9nm,0.8s,mb3.7,baz=130,slow=9.9,SNR=3.2
KURK Kurchatov 26.99 324 P **P** **12 20 12.5 -0.6**
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
ABKAR Akbulak array 37.32 312 *e*P **P** **12 21 43.9 +0.4**
comp=Z,0.8nm,0.6s,mb3.7
ARU Arti 40.17 323 *e*P **P** **12 22 07.4 0.0**
ARU pmax pmax
comp=Z,2.0nm,0.3s,mb4.3
ARU Arti 40.17 323 *e*P **P** **12 22 07.4 0.0**
comp=Z,2.4nm,0.3s,mb4.4
TIXI Tiksi 42.98 12 *e*P **P** **12 22 28.0 -2.2**
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
AKASG Malin Array Be 57.04 313 P **P** **12 24 16.1 -1.2**
comp=Z,1.1nm,0.5s,mb4.1,baz=71,slow=6.5,SNR=4.3
AKASG Malin Array Be 57.04 313 P **P** **12 24 16.1 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 57.12 336 P **P** **12 24 16.4 -1.1**
comp=Z,1.3nm,0.8s,mb4.0,baz=61,slow=9.4,SNR=3.5
ARCES ARCESS Array B 57.12 336 P **P** **12 24 16.4 -1.2**
ARCES pmax pmax
comp=Z,1.0nm,0.8s
WRAB Tennant Creek 58.70 146 *e*P **P** **12 24 28.5 -0.7**
WRAB pmax pmax
comp=Z,14nm,0.9s,mb5.0
WRAB Tennant Creek 58.70 146 *e*P **P** **12 24 28.5 -0.8**
comp=Z,14nm,0.9s,mb5.0
ASAR Alice Springs 61.70 148 P **P** **12 24 49.0 -0.7**
comp=Z,2.1nm,0.7s,mb4.4,baz=336,slow=6.5,SNR=36
ASAR Alice Springs 61.70 148 P **P** **12 24 49.0 -0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 64.44 327 P **P** **12 25 06.1 -1.4**
comp=Z,0.8nm,0.6s,mb3.9,baz=73,slow=6.8,SNR=4.3
NOA NORSAR Array B 64.44 327 P **P** **12 25 06.1 -1.4**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 64.44 327 P **P** **12 25 06.1 -1.4**
GERES GERESS Array B 67.21 314 P **P** **12 25 25.5 -0.1**
comp=Z,0.2nm,0.3s,mb3.7,baz=108,slow=9.7,SNR=3.6
COLD Coldfoot 67.81 24 *e*P **P** **12 25 29.2 +0.1**
comp=Z,4.3nm,1.0s,mb4.4
COLA College 69.78 26 *e*P **P** **12 25 41.3 0.0**
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
COLA College 69.78 26 *e*P **P** **12 25 41.3 -0.1**
comp=Z,5.9nm,0.9s,mb4.5
STKA Stephens Creek 72.23 146 P **P** **12 25 55.7 -0.9**
comp=Z,3.2nm,0.6s,mb4.4,baz=334,slow=4.3,SNR=10
STKA Stephens Creek 72.23 146 P **P** **12 25 55.7 -0.9**
YKA Yellowknife Ar 81.97 17 P **P** **12 26 50.4 -0.6**
comp=Z,0.7nm,0.6s,mb3.8,baz=328,slow=5.1,SNR=16
YKA Yellowknife Ar 81.97 17 P **P** **12 26 50.4 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
EDM Edmonton 90.24 21 *e*P **P** **12 27 31.9 -0.1**

MOS ***23*** *12:27:13.5±1.3,23°.43S×178°.93E,h509km,mb4.6/18, Error ellipse: s-maj=14.4km s-min=10.3km az=139.4*
BJI ***23*** *12:27:15.0,23°.60S×179°.36E,h541km,mB4.8/14, mb4.7/20*
ISCJB ***23*** *12:27:16.3±0.8,23°.63S±0°.05×178°.89E±0°.05,h538km±9km, mb4.5/55, Error ellipse: s-maj=8.2km s-min=5.6km az=143.5*
IDC ***23*** *12:27:16.1±1.5,23°.52S×178°.96E,h534km±16km, mb3.8/15,mb1 4.0/17,mb1mx4.0/18,mbtmp3.9/17, Error ellipse: s-maj=13.5km s-min=11.1km az=138.0*
NEIC ***23*** *12:27:17.5±0.6,23°.52S×178°.87E,h549km±7km,mb4.7/36, Error ellipse: s-maj=8.9km s-min=6.2km az=137.0*
SZGRF ***23*** *12:27:20.3,23°.33S×179°.13E,h547km,South of Fiji Islands*
ISC 23 12:27:17.3±0.8,23°.60S±0°.05×178°.91E±0°.05,h537km±9km, h536km±2.0km;pP-P,n417,σ0°61/315,mb4.5/55, 105C-103D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.89**	**352**	P	**P**	**12 28 55.0**	**+0.6**
	434nm,0.5s,SNR=42						
MSVF	**Nonsavu**	**5.89**	**352**	*e*P	**P**	**12 28 55.0**	**+0.6**
	59nm,0.8s						
OUZ	**Omahuta**	**12.47**	**201**	*e*P	**P**	**12 30 03.8**	**+3.3**
	113nm,1.0s						
AFI	**Afiamalu**	**13.06**	**44**	P	**P**	**12 30 03.0**	**-3.9**
	4.5nm,0.3s,baz=33,slow=4.9,SNR=13						
AFI				S	**S**	**12 32 16.3**	**-10**
	1.2nm,0.3s,baz=196,slow=23,SNR=3.7						
AFI	**Afiamalu**	**13.06**	**44**	P	**P**	**12 30 03.0**	**-3.9**
AFI				S	**S**	**12 32 16.3**	**-10**
AFI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AFI				smax			
	comp=N,1.0nm,0.3s						
AFI	**Afiamalu**	**13.06**	**44**	*e*P	**P**	**12 30 03.3**	**-3.7**
	comp=N,68nm,0.9s						
URZ	**Urewera**	**14.69**	**186**	P	**P**	**12 30 21.3**	**-2.2**
	comp=N,16nm,0.3s,baz=13,slow=4.2,SNR=54						
URZ				S	**S**	**12 32 51.6**	**-5.4**
	comp=N,5.5nm,0.3s,baz=266,slow=23,SNR=16						
URZ	**Urewera**	**14.69**	**186**	*e*P	**P**	**12 30 20.9**	**-2.6**
	comp=N,156nm,0.7s						
FUNA	**Funafuti**	**14.99**	**1**	*e*P	**P**	**12 30 26.9**	**-0.1**
	comp=N,28nm,0.7s						
SNZO	**South Karori**	**18.01**	**190**	*e*P	**P**	**12 30 55.8**	**+0.2**
	comp=N,76nm,0.8s						
KHZ	**Kahutara**	**19.29**	**192**	*e*P	**P**	**12 31 06.1**	**-1.2**
	comp=N,66nm,0.6s						
RPZ	**Rata Peaks**	**21.08**	**196**	P	**P**	**12 31 22.4**	**-1.1**
	comp=N,22nm,0.5s,mb5.0,baz=290,slow=1.9,SNR=14						
RPZ	**Rata Peaks**	**21.08**	**196**	*e*P	**P**	**12 31 23.1**	**-0.5**
	comp=N,21nm,0.5s,mb5.0						
EIDS	**Eidsvold**	**25.37**	**260**	*e*P	**P**	**12 32 02.9**	**+0.8**
MGCD	**Mangrove Creek**	**26.20**	**242**	*e*P	**P**	**12 32 10.9**	**+1.7**
	comp=N,48nm,0.5s,mb5.4						
CNB	**Canberra Magne**	**28.15**	**239**	*e*P	**P**	**12 32 27.7**	**+1.4**
CAN	**Canberra**	**28.43**	**239**	*e*P	**P**	**12 32 28.9**	**+0.1**
CAN				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.2						
CAN	**Canberra**	**28.43**	**239**	*e*P	**P**	**12 32 28.9**	**+0.1**
	comp=Z,49nm,0.7s,mb5.2						
YNG	**Young**	**28.65**	**241**	*e*P	**P**	**12 32 31.8**	**+1.1**
	comp=Z,10nm,0.5s,mb4.7						
PAE	**Paea**	**30.03**	**85**	*e*P	**P**	**12 32 42.4**	**-0.5**
	comp=Z,8.9nm,1.1s,mb4.2						
PAE	**Paea**	**30.03**	**85**	*e*P	**P**	**12 32 42.4**	**-0.5**
PAE				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
PPT	**Papeete**	**30.06**	**84**	*e*P	**P**	**12 32 43.0**	**-0.2**
	comp=Z,31nm,1.1s,mb4.7						
PPT	**Papeete**	**30.06**	**84**	P	**P**	**12 32 40.5**	**-2.7**
	comp=Z,24nm,0.9s,mb4.7,baz=230,slow=4.8,SNR=3.6						
PPT	**Papeete**	**30.06**	**84**	P	**P**	**12 32 40.5**	**-2.7**
PPT				pmax	pmax		
	comp=Z,24nm,1.0s						
PPT	**Papeete**	**30.06**	**84**	*e*P	**P**	**12 32 43.2**	**+0.1**
TIAR	**Tiarei**	**30.28**	**85**	*e*P	**P**	**12 32 44.7**	**-0.3**
	comp=Z,72nm,1.0s,mb5.2						
CMSA	**Cobar Meteorol**	**30.40**	**248**	*e*P	**P**	**12 32 46.5**	**+0.6**
CTA	**Charters Tower**	**30.48**	**270**	*e*P	**P**	**12 32 47.2**	**+0.5**
	comp=Z,20nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**30.48**	**270**	*e*P	**P**	**12 32 47.3**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,25nm,0.6s,mb4.9						
CTAO	**Charters Tower**	**30.48**	**270**	*e*P	**P**	**12 32 47.3**	**+0.6**
	comp=Z,25nm,0.6s,mb4.9						
TOO	**Toolangi**	**31.78**	**236**	*e*P	**P**	**12 32 58.5**	**+0.9**
PMOR	**Pomariorio Ree**	**32.41**	**81**	*e*P	**P**	**12 33 02.9**	**-0.4**
	comp=Z,60nm,1.1s,mb5.0						
TAU	**Tasmania Unive**	**32.42**	**226**	P	**P**	**12 33 03.5**	**+0.5**
	comp=Z,202nm,0.7s,SNR=8.2						
TAU	**Tasmania Unive**	**32.42**	**226**	*e*P	**P**	**12 33 04.0**	**+1.0**
TAU				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.8						
TAU	**Tasmania Unive**	**32.42**	**226**	*e*P	**P**	**12 33 04.0**	**+1.1**
	comp=Z,19nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**33.91**	**248**	*e*P	**P**	**12 33 16.4**	**+0.6**
	comp=Z,16nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**33.91**	**248**	P	**P**	**12 33 16.5**	**+0.7**
	comp=Z,23nm,0.5s,mb4.9,baz=92,slow=9.5,SNR=71						
STKA				ScP	ScP	12 38 33.2	+0.5
	comp=Z,3.2nm,0.8s,baz=68,slow=2.6,SNR=4.9						
STKA	**Stephens Creek**	**33.91**	**248**	P	**P**	**12 33 16.5**	**+0.7**
STKA				pmax	pmax		
	comp=Z,23nm,0.5s						
STKA				pmax	pmax		
	comp=N,3.0nm,0.8s						
STKA	**Stephens Creek**	**33.91**	**248**	*e*P	**P**	**12 33 16.3**	**+0.6**
	comp=N,5.7nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**41.10**	**261**	P	**P**	**12 34 14.3**	**-0.3**
	comp=N,21nm,1.0s,mb4.7,baz=92,slow=7.4,SNR=119						
ASAR				ScP	ScP	12 39 00.2	0.0
	comp=N,2.6nm,0.8s,baz=107,slow=4.3,SNR=13						
ASAR				S	**S**	**12 39 46.4**	**-2.7**
	comp=N,1.2nm,0.8s,baz=99,slow=15,SNR=6.7						
ASAR	**Alice Springs**	**41.10**	**261**	P	**P**	**12 34 14.4**	**-0.2**
ASAR				S	**S**	**12 39 46.4**	**-2.6**
ASAR				pmax	pmax		
	comp=Z,21nm,1.0s						
ASAR				pmax	pmax		
	comp=N,3.0nm,0.8s						
ASAR				smax			
	comp=N,1.0nm,0.8s						
WRAB	**Tennant Creek**	**41.42**	**266**	P	**P**	**12 34 16.0**	**-1.2**
	comp=N,157nm,0.9s,mb5.5,SNR=20						
WRAB	**Tennant Creek**	**41.42**	**266**	*e*P	**P**	**12 34 16.3**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**41.42**	**266**	*e*P	**P**	**12 34 16.3**	**-0.9**
	comp=Z,22nm,1.0s,mb4.6						
TAOE	**Nuku Hiva Isla**	**41.78**	**76**	*e*P	**P**	**12 34 20.2**	**+0.1**
	comp=Z,225nm,1.4s,mb5.5						
KAKA	**Kakadu**	**45.29**	**275**	*e*P	**P**	**12 34 45.6**	**-1.8**
	comp=Z,5.4nm,0.4s,mb4.4						
FORT	**Forrest**	**45.48**	**249**	*e*P	**P**	**12 34 47.4**	**-1.3**
	comp=Z,58nm,0.6s,mb5.3						
FORT	**Forrest**	**45.48**	**249**	*e*P	**P**	**12 34 47.6**	**-1.1**
	comp=Z,64nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**49.86**	**266**	*e*P	**P**	**12 35 20.9**	**-0.7**
	comp=Z,11nm,0.9s,mb4.3						
MBWA	**Marble Bar**	**54.44**	**260**	*e*P	**P**	**12 35 53.2**	**-1.2**
	comp=Z,6.1nm,0.5s,mb4.2						
SBA	**Scott Base**	**54.62**	**183**	*e*P	**P**	**12 35 56.9**	**+2.1**
SBA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.1						
SBA	**Scott Base**	**54.62**	**183**	*e*P	**P**	**12 35 56.9**	**+2.1**
	comp=Z,12nm,0.9s,mb4.1						
CASY	**Casey**	**59.94**	**206**	*e*P	**P**	**12 36 30.3**	**-1.0**
	comp=Z,9.4nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**66.48**	**180**	P	**P**	**12 37 13.9**	**+0.9**
	comp=Z,5.1nm,0.6s,mb4.2,baz=38,slow=2.0,SNR=38						
JOW	**Kunigami**	**70.06**	**313**	P	**P**	**12 37 34.0**	**-1.5**
	comp=Z,10nm,0.6s,mb4.5,baz=110,slow=24,SNR=5.5						
MJAR	**Matsushiro Arr**	**71.09**	**326**	P	**P**	**12 37 39.8**	**-1.6**
	comp=Z,2.2nm,0.7s,mb3.8,baz=169,slow=5.6,SNR=7.9						
MJAR	**Matsushiro Arr**	**71.09**	**326**	P	**P**	**12 37 39.8**	**-1.6**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAJO	**Matsushiro**	**71.09**	**326**	*e*P	**P**	**12 37 40.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
MAJO	**Matsushiro**	**71.09**	**326**	*e*P	**P**	**12 37 40.8**	**-0.6**
	comp=Z,3.7nm,0.7s,mb4.0						
MAT	**Matsushiro**	**71.09**	**326**	P	**P**	**12 37 40.4**	**-1.0**
KSRS	**Korea Array**	**77.38**	**321**	P	**P**	**12 38 16.8**	**-0.1**
	comp=Z,1.7nm,0.8s,mb3.5,baz=134,slow=6.0,SNR=9.5						
KSRS	**Korea Array**	**77.38**	**321**	P	**P**	**12 38 16.8**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
MAW	**Mawson**	**77.68**	**201**	P	**P**	**12 38 18.6**	**+0.6**
	comp=Z,4.0nm,0.8s,mb3.8,baz=101,slow=6.8,SNR=6.3						
MAW	**Mawson**	**77.68**	**201**	*e*P	**P**	**12 38 18.0**	**-0.1**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAW	**Mawson**	**77.68**	**201**	*e*P	**P**	**12 38 18.0**	**0.0**
	comp=Z,0.7nm,0.6s						
PETK	**Petropavlovsk-**	**78.58**	**347**	P	**P**	**12 38 22.4**	**-0.6**
	comp=Z,9.4nm,1.0s,mb4.1,baz=130,slow=8.2,SNR=5.1						
PETK	**Petropavlovsk-**	**78.58**	**347**	P	**P**	**12 38 22.4**	**-0.6**
PETK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.0						
NJ2	**Nanjing**	**79.72**	**312**	*e*P	**P**	**12 38 29.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
MDJ	**Mudanjiang**	**81.47**	**327**	P	**P**	**12 38 40.1**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,48nm,3.4s						
HABR	**Khabarovsk**	**81.78**	**332**	*e*P	**P**	**12 38 38.8**	**-1.0**
HABR				*e*		12 41 55.4	
HABR				*i*		12 43 56.8	
HABR				S	S	12 48 05.1	-3.2
HABR				pmax	pmax		
	comp=N,8.0nm,1.1s						
HABR				pmax	pmax		
	comp=E,10.0nm,0.9s						
HABR				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.0						
HABR				MLR	MLR		
	comp=Z,30nm,19.0s						
CN2	**Changchun**	**83.06**	**324**	*e*P	**P**	**12 38 46.3**	**-0.1**
CN2				*e*pP	pP	12 40 43.0	+0.5
CN2				*e*S	S	12 48 21.8	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
MURC	**Murrieta**	**83.24**	**49**	⇓P	**P**	**12 38 47.7**	**+0.2**
	baz=83						
MONP	**Monument Peak**	**83.39**	**50**	⇓P	**P**	**12 38 48.7**	**+0.4**
	baz=84						
EDW2	**Edwards Air Fo**	**83.42**	**48**	⇓P	**P**	**12 38 48.6**	**+0.3**
	baz=84						
ISA	**Isabella**	**83.54**	**47**	⇑P	**P**	**12 38 48.8**	**-0.1**
	baz=84						
ISA	**Isabella**	**83.54**	**47**	*e*P	**P**	**12 38 48.6**	**-0.3**
ISA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
ISA	**Isabella**	**83.54**	**47**	*e*P	**P**	**12 38 48.6**	**-0.4**
	comp=Z,11nm,0.9s,mb4.4						
CMB	**Columbia Colle**	**83.67**	**44**	*e*P	**P**	**12 38 49.5**	**-0.1**
LRMC	**Laurel Mountai**	**83.96**	**47**	⇓P	**P**	**12 38 51.5**	**+0.4**
	baz=84						
BELC	**Belle Mtn.**	**84.30**	**49**	⇓P	**P**	**12 38 52.8**	**+0.1**
	baz=84						
MPMC	**Manual Prospec**	**84.42**	**47**	⇓P	**P**	**12 38 53.0**	**-0.3**
	baz=85						
GSC	**Goldstone**	**84.46**	**48**	⇑P	**P**	**12 38 53.5**	**0.0**
	baz=85						
GSC	**Goldstone**	**84.46**	**48**	*e*P	**P**	**12 38 53.5**	**0.0**
YBH	**Yreka Blue Hor**	**84.49**	**40**	*e*P	**P**	**12 38 53.0**	**-0.5**
YBH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YBH	**Yreka Blue Hor**	**84.49**	**40**	*e*P	**P**	**12 38 53.0**	**-0.5**
	comp=Z,6.3nm,0.9s,mb4.2						
HEC	**Hector,Ludlow**	**84.52**	**48**	⇓P	**P**	**12 38 53.8**	**0.0**
	baz=85						
GLA	**Glamis**	**84.60**	**51**	⇑P	**P**	**12 38 54.4**	**+0.1**
	baz=85						
GLA	**Glamis**	**84.60**	**51**	*e*P	**P**	**12 38 55.0**	**+0.7**
BEKR	**Beckwourth**	**84.78**	**42**	⇑P	**P**	**12 38 55.3**	**+0.4**
	baz=85						
WCN	**Washoe City**	**84.82**	**43**	⇓P	**P**	**12 38 55.6**	**+0.4**
	baz=85						
GMRC	**Granite Mounta**	**84.95**	**49**	⇑P	**P**	**12 38 56.0**	**+0.1**
	baz=85						
IRM	**Iron Mountain**	**84.97**	**49**	⇑P	**P**	**12 38 56.1**	**0.0**
	baz=85						
GRAC	**Grapevine Rang**	**85.03**	**46**	⇓P	**P**	**12 38 56.2**	**-0.1**
	baz=85						
FURC	**Furnace Creek,**	**85.07**	**47**	⇓P	**P**	**12 38 56.7**	**+0.3**
	baz=85						
TUQ	**Turquoise Moun**	**85.13**	**48**	⇑P	**P**	**12 38 56.9**	**+0.1**
	baz=85						
NVAR	**Mina Array Bea**	**85.23**	**44**	P	**P**	**12 38 57.1**	**-0.1**
	comp=Z,3.8nm,0.8s,mb4.0,baz=224,slow=8.9,SNR=21						
Z13A	**Yuma Proving G**	**85.51**	**51**	⇑P	**P**	**12 38 58.9**	**+0.2**
	baz=86						
VNA2	**Neumayer--Watz**	**85.63**	**178**	*e*P	**P**	**12 38 56.3**	**-2.3**
VNA2				*e*		12 52 10.5	
Y13A	**Salome**	**85.72**	**50**	⇓P	**P**	**12 38 59.9**	**+0.2**
	baz=86						
GYA	**Guiyang**	**85.74**	**301**	P	**P**	**12 39 01.0**	**+1.1**
GYA				pP	pP	12 40 58.6	+1.6
GYA				sP	sP	12 41 49.8	-1.6
GYA				PP	PP	12 42 32.1	+2.7
GYA				S	S	12 48 49.8	+1.8
GYA				sS	sS	12 52 13.9	-2.8
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,6.8s						
PDMCI	**Parker Dam,Lak**	**85.75**	**50**	⇑P	**P**	**12 38 59.6**	**-0.2**
	baz=86						
114A	**Black Gap (USA**	**85.83**	**52**	⇑P	**P**	**12 39 00.5**	**+0.3**
	baz=86						
VNA1	**Neumayer--Stat**	**85.87**	**178**	*e*P	**P**	**12 38 58.0**	**-1.8**
S10A	**Tonopah Range,**	**86.06**	**46**	⇑P	**P**	**12 39 00.9**	**-0.2**
	baz=86						
Z14A	**Wintersburg**	**86.11**	**51**	⇓P	**P**	**12 39 02.1**	**+0.6**
	baz=86						
K05A	**Summer Lake**	**86.17**	**40**	⇓P	**P**	**12 39 02.0**	**+0.4**
	baz=86						
W13A	**Hualapai Mount**	**86.35**	**49**	⇓P	**P**	**12 39 02.7**	**0.0**
	baz=86						
Y14A	**Wickenburg**	**86.36**	**51**	⇑P	**P**	**12 39 02.5**	**-0.2**
	baz=86						
R10A	**Warm Springs**	**86.45**	**46**	⇑P	**P**	**12 39 03.2**	**+0.2**
	baz=87						
T11A	**Corn Creek, Al**	**86.59**	**47**	⇑P	**P**	**12 39 03.6**	**-0.1**
	baz=87,SNR=7.8						
U12A	**Valley of Fire**	**86.62**	**48**	⇑P	**P**	**12 39 04.2**	**+0.3**
	baz=87						
V13A	**Grand Canyon W**	**86.69**	**49**	⇑P	**P**	**12 39 04.2**	**+0.1**
	baz=87						
Q10A	**Clear Creek Ra**	**86.69**	**45**	⇓P	**P**	**12 39 04.2**	**+0.1**
	baz=87						
X14A	**Yava**	**86.72**	**50**	⇓P	**P**	**12 39 04.5**	**+0.1**
	baz=87						
Y15A	**Casa Rosa Ranc**	**86.85**	**51**	⇑P	**P**	**12 39 05.2**	**+0.2**
	baz=87						
R11A	**Troy Canyon, C**	**86.96**	**46**	⇓P	**P**	**12 39 05.4**	**0.0**
	baz=87						
W14A	**Seligman**	**86.97**	**49**	⇓P	**P**	**12 39 05.9**	**+0.4**
	baz=87						
U13A	**Pakoon Wash**	**87.00**	**48**	⇑P	**P**	**12 39 05.6**	**0.0**
	baz=87,SNR=6.0						
V14A	**Boquillas Ranc**	**87.18**	**49**	⇑P	**P**	**12 39 06.5**	**0.0**
	baz=87,SNR=8.2						
Q11A	**Duckwater**	**87.18**	**45**	⇑P	**P**	**12 39 06.1**	**-0.3**
	baz=87						
318A	**Bisbee**	**87.28**	**54**	⇓P	**P**	**12 39 07.7**	**+0.6**
	baz=87						
Y16A	**Circle Bar Ran**	**87.42**	**51**	⇑P	**P**	**12 39

U14A	Mt Trumbull	87.54	48	⇓P		P	12 39 08.3	+0.2
	baz=88,SNR=9.1							
R12A	Pony Springs,	87.59	46	⇓P		P	12 39 08.4	0.0
	baz=88							
S13A	Holt Ranch, En	87.69	47	⇓P		P	12 39 09.1	+0.2
	baz=88							
X16A	Lo Mia Camp, P	87.72	51	⇑P		P	12 39 08.9	-0.2
	baz=88,SNR=5.6							
319A	Douglas	87.78	54	⇓P		P	12 39 10.2	+0.8
	baz=88							
Y17A	Roosevelt	87.78	52	⇓P		P	12 39 10.0	+0.7
	baz=88							
I07A	Izee	87.79	39	⇑P		P	12 39 09.2	0.0
	baz=88,SNR=9.6							
G06A	Carlson Farm,	87.83	38	⇑P		P	12 39 09.4	+0.1
	baz=88							
Q12A	Willow Creek R	87.83	46	⇑P		P	12 39 09.4	-0.1
	baz=88							
O11A	Cowboy Ranch,	87.89	44	⇑P		P	12 39 09.6	-0.1
	baz=88,SNR=7.6							
118A	Homack Ranch,	87.89	53	⇓P		P	12 39 10.0	+0.1
	baz=88							
V15A	Kaibab Nationa	87.92	49	⇑P		P	12 39 10.2	+0.3
	baz=88							
R13A	O'Grain Ranch,	87.94	47	⇓P		P	12 39 11.0	+1.0
	baz=88							
T14A	Hurricane	87.94	48	⇑P		P	12 39 10.1	+0.1
	baz=88							
J08A	Circle Bar Ran	87.97	40	⇓P		P	12 39 10.0	0.0
	baz=88,SNR=9.1							
W16A	Flagstaff	88.00	50	⇓P		P	12 39 10.8	+0.5
	baz=88							
CCUT	Cedar City	88.01	47	eP		P	12 39 10.8	+0.5
P12A	McGill	88.01	45	⇓P		P	12 39 10.0	-0.3
	baz=88							
M10A	I.L. Ranch, Tu	88.10	43	⇑P		P	12 39 10.9	+0.2
	baz=88,SNR=12							
U15A	North Rim	88.15	49	⇓P		P	12 39 11.4	+0.3
	baz=88,SNR=12							
KMI	Kunming	88.24	298	P		P	12 39 13.4	+1.7
KMI				pP		pP	12 41 11.8	+2.2
KMI				sP		sP	12 42 01.5	-2.4
KMI				S		S	12 49 11.4	-0.2
KMI				sS		sS	12 52 38.8	-2.9
KMI				SS		SS	12 55 22.3	+4.8
KMI				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.5							
KMI				pmax		pmax		
	comp=Z,73nm,7.8s							
D05A	Enumclaw	88.27	36	⇓P		P	12 39 12.1	+0.8
	baz=88							
Q13A	Wheeler Ranch,	88.31	46	⇑P		P	12 39 11.8	0.0
	baz=88							
320A	Kipp Ranch, An	88.33	55	⇓P		P	12 39 12.7	+0.8
	baz=88							
WUAZ	Wupatki	88.33	50	⇑P		P	12 39 12.1	+0.2
	baz=88							
WUAZ	Wupatki	88.33	50	eP		P	12 39 11.8	-0.1
J09A	Fry Pan Ranch,	88.39	41	⇑P		P	12 39 12.0	0.0
	baz=89,SNR=16							
T15A	Red Dirt Ranch	88.40	48	⇑P		P	12 39 12.2	0.0
	baz=88,SNR=5.1							
L10A	Juniper Basin	88.45	42	⇑P		P	12 39 12.3	0.0
	baz=89,SNR=19							
CMAR	Chiang Mai Arr	88.49	291	P		P	12 39 13.8	+0.8
	comp=Z,0.5nm,0.5s,mb3.5,baz=132,slow=2.8,SNR=4.9							
CMAR	Chiang Mai Arr	88.49	291	P		P	12 39 13.9	+0.9
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
M11A	Holland Ranch,	88.52	43	⇓P		P	12 39 12.8	+0.1
	baz=89,SNR=15							
H08A	Prairie City	88.53	39	⇓P		P	12 39 12.8	+0.2
	baz=89							
O12A	Currie	88.55	45	⇑P		P	12 39 12.4	-0.4
	baz=89							
P13A	Bates Ranch, G	88.58	46	⇓P		P	12 39 13.1	+0.2
	baz=89,SNR=8.2							
K10A	MacKenzie Ranc	88.60	42	⇑P		P	12 39 13.1	+0.1
	baz=89,SNR=9.0							
PMR	Palmer	88.71	15	eP		P	12 39 11.8	-1.2
PMR				pmax		pmax		
	comp=Z,30nm,1.8s,mb4.8							
PMR	Palmer	88.71	15	eP		P	12 39 11.8	-1.2
	comp=Z,30nm,1.8s,mb4.8							
Z19A	T-Link Ranch,	88.73	53	⇑P		P	12 39 14.4	+0.6
	baz=89							
S15A	Panguitch	88.75	48	⇑P		P	12 39 15.1	+1.3
	baz=89							
I09A	Lost Marbles R	88.76	40	⇓P		P	12 39 13.1	-0.6
	baz=89							
SEY	Seymchan	88.77	348	⇑eP		P	12 39 12.8	-0.5
V17A	Tonalea, Kykot	88.79	50	⇓P		P	12 39 14.0	0.0
	baz=89,SNR=7.0							
G08A	Pilot Rock	88.81	39	⇓P		P	12 39 13.9	0.0
	baz=89,SNR=5.4							
Q14A	Sevier Lake (B	88.82	46	⇑P		P	12 39 14.0	-0.1
	baz=89,SNR=14							
120A	U Bar Ranch, L	88.83	54	⇑P		P	12 39 14.7	+0.4
	baz=89							
X18A	Snowflake	88.84	51	⇓P		P	12 39 15.0	+0.7
	baz=89							
L11A	Cat Creek Ranc	88.95	43	⇑P		P	12 39 14.8	+0.2
	baz=89,SNR=9.3							
T16A	Glen Canyon Da	88.98	49	⇓P		P	12 39 15.0	+0.2
	baz=89							
J10A	Berg Farm, Mel	89.03	41	⇓P		P	12 39 14.8	-0.1
	baz=89							
Y19A	Nutrioso	89.06	52	⇑P		P	12 39 15.6	+0.3
	baz=89							
M12A	Wells	89.06	43	⇓P		P	12 39 14.9	-0.2
	baz=89,SNR=7.6							
R15A	Junction	89.08	47	⇓P		P	12 39 15.7	+0.3
	baz=89							
K11A	Parker Ranch,	89.11	42	⇑P		P	12 39 15.3	0.0
	baz=89,SNR=9.2							
Z20A	Nine Sixteen R	89.13	53	⇓P		P	12 39 16.3	+0.6
	baz=89							
PLCA	Paso Flores	89.19	135	P		P	12 39 15.5	-0.4
	comp=Z,2.6nm,0.9s,mb4.1,baz=323,slow=4.1,SNR=3.4							
PLCA	Paso Flores	89.19	135	P		P	12 39 15.5	-0.4
PLCA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
H09A	Durkee	89.20	40	⇓P		P	12 39 15.6	-0.1
	baz=89							
N13A	Wendover, West	89.21	44	⇓P		P	12 39 16.1	+0.2
	baz=89							
MSU	Marysvale	89.31	47	eP		P	12 39 17.3	+0.9
U17A	Shonto	89.37	49	⇑P		P	12 39 17.1	+0.4
	baz=90							
L12A	House Creek Ra	89.39	43	⇑P		P	12 39 16.9	+0.3
	baz=90,SNR=9.5							
Q15A	Fillmore	89.42	47	⇑P		P	12 39 17.8	+0.9
	baz=90							
121A	Cookes Peak, D	89.45	54	⇓P		P	12 39 17.5	+0.3
	baz=90							
T17A	Navajo Res., N	89.47	49	⇓P		P	12 39 17.3	+0.2
	baz=90,SNR=6.0							
G09A	Cove	89.48	39	⇓P		P	12 39 16.8	-0.2
	baz=90							
HHC	Hu-ho-hao-te	89.51	316	eP		P	12 39 19.0	+1.8
HHC				pP		pP	12 41 18.0	+2.5
HHC				sP		sP	12 42 11.5	+2.0
HHC				PP		PP	12 43 03.1	+4.3
HHC				S		S	12 49 22.1	-0.3
HHC				sS		sS	12 52 55.3	+1.9
HHC				SS		SS	12 55 41.3	+6.3
HHC				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.7							
HHC				pmax		pmax		
	comp=Z,85nm,5.0s							
M13A	Montello	89.51	44	⇑P		P	12 39 17.2	0.0
	baz=90,SNR=12							
M13A	Montello	89.51	44	eP		P	12 39 17.0	-0.2
	comp=Z,20nm,1.0s,mb4.9							
MFID	Camas Ranch	89.59	41	⇑P		P	12 39 17.5	0.0
	baz=90,SNR=6.7							
R16A	Teasdale	89.66	48	⇓P		P	12 39 18.6	+0.6
	baz=90,SNR=5.6							
Y20A	Horse Springs,	89.67	53	⇓P		P	12 39 18.5	+0.4
	baz=90							
H10A	Noah's Angus R	89.70	40	⇓P		P	12 39 17.4	-0.6
	baz=90							
K12A	Draper Farm, C	89.73	42	⇑P		P	12 39 18.2	0.0
	baz=90,SNR=6.6							
DUG	Dugway	89.76	45	⇓P		P	12 39 18.2	-0.2
	baz=90							
P15A	Leamington	89.79	46	⇑P		P	12 39 18.8	+0.3
	baz=90							
I11A	Placerville	89.79	41	⇓P		P	12 39 18.2	-0.3
	baz=90,SNR=5.1							
S17A	Black Ridge (B	89.79	48	⇓P		P	12 39 18.3	-0.3
	baz=90							
U18A	Rough Rock, Ch	89.83	50	⇓P		P	12 39 18.8	0.0
	baz=90							
N14A	Grayback Hills	89.86	45	⇓P		P	12 39 18.8	0.0
	baz=90							
G10A	Bishop Farm, J	89.87	39	⇑P		P	12 39 18.7	-0.1
	baz=90							
Z21A	St. Cloud Mine	89.91	53	⇓P		P	12 39 19.6	+0.3
	baz=90							
J12A	Stokes Ranch,	89.95	42	⇓P		P	12 39 19.3	+0.1
	baz=90,SNR=8.4							
L13A	Double Diamond	90.04	43	⇑P		P	12 39 20.0	+0.4
	baz=90							
CD2	Chengdu	90.08	304	P		P	12 39 21.5	+1.3
CD2				pP		pP	12 41 18.3	-0.2
CD2				sP		sP	12 42 10.1	-2.4
CD2				PP		PP	12 43 06.5	+2.9
CD2				SKS			12 49 00.5	
CD2				S		S	12 49 29.4	+1.3
CD2				sS		sS	12 52 56.1	-3.3
CD2				SS		SS	12 55 48.5	+4.8
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb4.9							
CD2				pmax		pmax		
	comp=Z,50nm,4.0s							
M14A	Sheep Mountain	90.10	44	⇑P		P	12 39 19.8	-0.2
	baz=90,SNR=10							
T18A	Mexican Hat	90.19	49	⇓P		P	12 39 20.3	-0.1
	baz=90,SNR=11							
H11A	Donnelly	90.19	40	⇓P		P	12 39 20.0	-0.3
	baz=90,SNR=6.4							
F10A	Beach Ranch, E	90.20	39	⇓P		P	12 39 20.0	-0.3
	baz=90							
I12A	Atlanta	90.22	41	⇑P		P	12 39 20.3	-0.2
	baz=90							
Y21A	Point of Rocks	90.23	53	⇓P		P	12 39 21.1	+0.3
	baz=90							
U19A	Dine' College,	90.24	50	⇑P		P	12 39 20.7	0.0
	baz=90							
K13A	Stover Farm, H	90.25	43	⇓P		P	12 39 20.6	0.0
	baz=90,SNR=5.0							
R17A	Hanksville Air	90.25	48	⇓P		P	12 39 20.5	-0.3
	baz=90,SNR=6.2							
A07A	Ashnola River,	90.26	35	⇓P		P	12 39 20.2	-0.3
	baz=90							
TMUT	Trail Mountain	90.36	47	eP		P	12 39 21.7	+0.5
	comp=Z,16nm,0.7s,mb5.0							
X21A	Alamocita Cree	90.36	52	⇓P		P	12 39 21.6	+0.2
	baz=90							
B08A	Colville Reser	90.41	36	⇓P		P	12 39 20.4	-0.8
	baz=91							
G11A	Walters Elk Ra	90.43	40	⇑P		P	12 39 20.8	-0.6
	baz=91,SNR=5.8							
MPU	Maple Canyon	90.44	46	eP		P	12 39 22.0	+0.5
L14A	Malta	90.45	44	⇑P		P	12 39 21.4	-0.1
	baz=91							
HLID	Hailey	90.53	42	⇓P		P	12 39 21.7	-0.2
	baz=91							
J13A	Cove Ranch, Pi	90.59	42	⇓P		P	12 39 22.2	+0.1
	baz=91							
HVU	Hansel Valley	90.61	44	eP		P	12 39 22.1	-0.2
O16A	Springville	90.63	46	⇑P		P	12 39 22.8	+0.4
	baz=91							
T19A	Beclabito	90.63	50	⇓P		P	12 39 23.0	+0.5
	baz=91							
MCK	McKinley	90.63	14	eP		P	12 39 20.8	-1.0
MCK				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
MCK	McKinley	90.63	14	eP		P	12 39 20.8	-1.0
	comp=Z,2.7nm,0.8s,mb4.2							
M15A	Larsen Ranch,	90.66	44	⇑P		P	12 39 22.5	0.0
	baz=91							
324A	Moseley Ranch,	90.67	56	⇑P		P	12 39 22.6	-0.3
	baz=91							
Y22A	Socorro	90.72	53	⇓P		P	12 39 22.9	-0.2
	baz=91							
SRU	San Rafael	90.72	47	⇑P		P	12 39 22.8	-0.1
	baz=91,SNR=8.3							
SRU	San Rafael	90.72	47	eP		P	12 39 22.4	-0.5
SRU				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.8							
SRU	San Rafael	90.72	47	eP		P	12 39 22.4	-0.5
	comp=Z,11nm,0.8s,mb4.8							
425A	Indio Mountain	90.75	57	⇓P		P	12 39 23.2	-0.1
	baz=91							
K14A	Jones Ranch, D	90.76	43	⇓P		P	12 39 23.1	+0.1
	baz=91							
R18A	Canyonlands Na	90.79	48	⇓P		P	12 39 23.1	-0.1
	baz=91,SNR=7.4							
H12A	Diamond D Ranc	90.80	41	⇓P		P	12 39 22.5	-0.6
	baz=91							
626A	Big Bend Ranch	90.86	58	⇑P		P	12 39 23.7	0.0
	baz=91							
JLU	Jordanelle	90.86	46	eP		P	12 39 23.7	+0.2
DAU	Daniels Canyon	90.89	46	eP		P	12 39 24.1	+0.4
224A	Corundas Mount	90.93	55	⇑P		P	12 39 24.3	+0.2
	baz=91							
L15A	Malad City	90.98	44	⇑P		P	12 39 23.7	-0.3
	baz=91,SNR=6.4							
Q18A	Rafter H Ranch	90.98	47	⇑P		P	12 39 24.2	+0.1
	baz=91							
S19A	Harvey Farm, M	91.00	49	⇓P		P	12 39 23.8	-0.4
	baz=91							
N16A	Rees Ranch, Co	91.02	45	⇓P		P	12 39 24.5	+0.3
	baz=91							
325A	Bean Ranch, Si	91.03	56	⇓P		P	12 39 23.8	-0.7
	baz=91							
M16A	Huntsville	91.11	45	⇑P		P	12 39 24.8	+0.2
	baz=91							
TXAR	Lajitas Array	91.12	58	P		P	12 39 24.2	-0.7
	comp=Z,3.2nm,0.9s,mb4.3,baz=214,slow=6.1,SNR=28							
TXAR	Lajitas Array	91.12	58	P		P	12 39 24.3	-0.7
TXAR				pmax		pmax		
	comp=Z,3.0nm,0.9s							
O17A	Robinson Place	91.12	46	⇓P		P	12 39 25.0	+0.2
	baz=91,SNR=20							
P18A	Preston Nutter	91.17	47	⇓P		P	12 39 24.9	-0.1
	baz=91							
H13A	Challis	91.17	41	⇑P		P	12 39 25.2	+0.3
	baz=91							
K15A	Arbon	91.24	43	⇑P		P	12 39 25.0	-0.2
	baz=91							
124A	Stringfield Ra	91.27	55	⇑P		P	12 39 25.5	-0.1
	baz=91							
HWUT	Hardware Ranch	91.30	45	eP		P	12 39 25.0	-0.5
	comp=Z,2.1nm,0.8s,mb4.1							
I14A	Mackay	91.32	42	⇓P		P	12 39 25.9	+0.4
	baz=92							
Y23A	Lovelace Mesa,	91.39	53	⇓P		P	12 39 25.8	-0.3
	baz=92							
627A	Teringua Ranc	91.39	58	⇑P		P	12 39 26.2	0.0
	baz=92							
ANMO	Albuquerque	91.56	52	eP		P	12 39 26.7	-0.2
ANMO				pmax		pmax		
	comp=Z,9.0nm,1.5s							
ANMO	Albuquerque	91.56	52	eP		P	12 39 26.7	-0.2
	comp=Z,9.3nm,1.5s,mb4.6							
L16A	Fish Haven	91.59	44	⇑P		P	12 39 26.3	-0.5
	baz=92							
Z24A	Sheeppen Canyo	91.62	54	⇓P		P	12 39 27.3	+0.1
	baz=92							
H14A	Leadore	91.73	41	⇓P		P	12 39 27.5	+0.1
	baz=92							
628A	Black Gap, Mar	91.80	59	⇑P		P	12 39 27.7	-0.4
	baz=92							
Y24A	Capitan	91.84	54	⇓P		P	12 39 27.9	-0.3
	baz=92							
BILL	Bilibino	91.84	355	⇓eP		P	12 39 26.4	-1.0
BILL				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.5							
BILL	Bilibino	91.84	355	eP		P	12 39 26.7	-0.6
	comp=Z,1.0nm,0.3s,mb4.3							
125A	Gardner Draw,	91.85	55	⇑P		P	12 39 28.1	-0.2
	baz=92							
COLA	College	91.86	14	eP		P	12 39 25.5	-2.0
COLA				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.2							
COLA	College	91.86	14	eP		P	12 39 25.5	-2.0
	comp=Z,2.4nm,0.9s,mb4.2							
GDL2	Guadalupe Moun	91.86	56	eP		P	12 39 28.7	+0.4
	comp=Z,3.3nm,1.0s,mb4.3							
D12A	Red Ives Fores	91.88	39	⇑P		P	12 39 28.2	+0.2
	baz=92							
S21A	Coal Bank Pass	91.89	50	⇑P		P	12 39 28.5	+0.2
	baz=92							
K16A	Soda Springs	91.91	44	⇓P		P	12 39 28.6	+0.3
	baz=92							
427A	Hayter Ranch,	92.00	57	⇑P		P	12 39 28.6	-0.4
	baz=92							
Z25A	Roswell	92.08	55	⇓P		P	12 39 29.6	+0.2
	baz=92							
Q20A	Ridgley Place,	92.16	48	⇑P		P	12 39 29.7	+0.1
	baz=92							
MCMT	McKenzie Canyo	92.16	41	eP		P	12 39 29.3	-0.1
	comp=Z,1.1nm,0.8s,mb3.9							
528A	Cox Ranch, San	92.17	58	⇑P		P	12 39 29.5	-0.3
	baz=92							
H15A	Lima	92.17	42	⇑P		P	12 39 29.7	+0.3
	baz=92							
M18A	Lyman	92.18	45	⇓P		P	12 39 29.8	+0.3
	baz=92							
T22A	Edith	92.21	50	⇑P		P	12 39 29.8	0.0
	baz=92							
Y25A	Mesa, Roswell	92.39	54	⇓P		P	12 39 30.2	-0.5
	baz=92							
R21A	Cimarron	92.39	49	⇓P		P	12 39 30.7	+0.1
	baz=92							
LZH	Lanzhou	92.41	308	P		P	12 39 30.0	-0.7
LZH				pP		pP	12 41 29.8	+0.5
LZH				sP		sP	12 42 23.1	-0.1
LZH				PP		PP	12 43 24.3	+2.8
LZH				pmax		pmax		
	comp=Z,21nm,1.0s,mb5.1							
LZH				pmax		pmax		
	comp=Z,150nm,8.7s							
G15A	Dillon	92.56	41	⇑P		P	12 39 31.2	0.0
	baz=93							
J17A	Brown Place, J	92.73	43	⇓P		P	12 39 32.0	-0.1
	baz=93							
O20A	White River Ci	92.76	47	⇑P		P	12 39 32.2	-0.1
	baz=93							
F15A	Butte	92.90	41	⇓P		P	12 39 32.8	+0.1
	baz=93							
L19A	Farson	92.97	45	⇓P		P	12 39 33.1	-0.1
	baz=93							
CHMT	Chamberlain Mo	93.01	39	eP		P	12 39 34.3	+1.1
Y26A	Elida	93.04	54	⇑P		P	12 39 33.3	-0.4
	baz=93							
Q22A	Crested Butte,	93.07	49	⇑P		P	12 39 33.5	-0.2
	baz=93							
H16A	Russell Place,	93.07	42	⇑P		P	12 39 33.6	0.0
	baz=93							
N20A	Spence Gulch,	93.08	47	⇓P		P	12 39 33.4	-0.3
	baz=93							
W25A	X Bar L Ranch,	93.14	53	⇑P		P	12 39 33.9	-0.2
	baz=93							
BW06	Boulder Array	93.17	44	⇑P		P	12 39 33.6	-0.5
	baz=93							
PDAR	Pinedale Array	93.17	44	P		P	12 39 33.1	-0.9
	comp=Z,1.0nm,0.7s,mb4.0,baz=203,slow=3.1,SNR=8.8							
DAWY	Dawson	93.23	17	eP		P	12 39 32.8	-1.0
SDCO	Great Sand Dun	93.53	50	eP		P	12 39 35.4	-0.5
	comp=Z,2.5nm,0.9s,mb4.3							
N21A	Black Mountain	93.54	47	⇑P		P	12 39 35.6	-0.2
	baz=94							
F17A	Fitzpatrick Pl	94.04	41	⇓P		P	12 39 38.1	+0.1
	baz=94							
D16A	Dana Ranch, Ca	94.07	40	⇓P		P	12 39 37.7	-0.3
	baz=94							
W27A	Bowe Ranch, En	94.10	54	⇑P		P	12 39 38.1	-0.4
	baz=94							
EGMT	Eagleton	95.62	40	eP		P	12 39 44.7	-0.4
	comp=Z,41nm,0.6s							
YKA	Yellowknife Ar	100.52	26	P		Pdif	12 40 03.6	-3.6
	comp=Z,0.2nm,0.7s,baz=254,slow=4.4,SNR=3.8							
YKA				PKKPbc		PKKPbc	12 56 18.1	-3.2
	comp=Z,0.1nm,0.7s,baz=45,slow=2.7,SNR=4.1							
YKA	Yellowknife Ar	100.52	26	P		Pdif	12 40 03.6	-3.5
YKA				PKKPbc		PKKPbc	12 56 18.1	-3.2
JSC	Jenkinsville	110.66	61	ePKIKP		PKiKP	12 44 50.0	+0.8
ZALV	Zalesovo Beam	111.09	321	PKiKP		PKiKP	12 44 46.9	-2.5
	comp=Z,0.6nm,0.4s,baz=125,slow=3.7,SNR=2.8							
ZALV	Zalesovo Beam	111.09	321	i PKIKP		PKiKP	12 44 46.9	-2.5
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s							
MK31	Makanchi Array	111.22	313	ePKIKP		PKiKP	12 44 47.7	-2.2
MKAR	Makanchi Array	111.22	313	PKiKP		PKiKP	12 44 47.5	-2.4
	comp=Z,0.5nm,0.5s,baz=32,slow=2.3,SNR=4.0							
MKAR	Makanchi Array	111.22	313	i PKIKP		PKiKP	12 44 47.5	-2.4
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
KURK	Kurchatov	114.30	317	⇑i PKIKP		PKiKP	12 44 53.6	-2.0
KURK				pmax		pmax		
	comp=Z,5.0nm,2.5s							
KURK	Kurchatov	114.30	317	ePKPdf		PKiKP	12 44 53.7	-2.0
BVAR	Borovoye Array	119.56	319	PKP		PKPdf	12 45 03.4	-2.3
	comp=Z,2.2nm,0.4s,baz=113,slow=2.0,SNR=13							
BVAR	Borovoye Array	119.56	319	PKIKP		PKPdf	12 45 03.4	-2.3
BVAR				pmax		pmax		
	comp=Z,2.0nm,0.4s							
BRVK	Borovoye	119.62	319	⇑i PKIKP		PKPdf	12 45 04.2	-1.6
BRVK				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ARU	Arti	126.05	324	i PKIKP		PKPdf	12 45 16.8	-1.2
ARU							12 47 15.8	
ARU	Arti	126.05	324	ePKPdf		PKPdf	12 45 17.2	-0.9
AKTK	Aktyubinsk	127.39	316	PKP		PKPdf	12 45 19.6	-1.2
AKTO	Aktyubinsk	127.39	316	PKP		PKPdf	12 45 19.6	-1.2
	comp=Z,2.3nm,0.6s,baz=107,slow=3.6,SNR=8.9							
AKTO	Aktyubinsk	127.39	316	PKIKP		PKPdf	12 45 19.6	-1.2
AKTO				pmax		pmax		
	comp=Z,2.0nm,0.6s							
LVZ	Lovozero	130.56	343	i PKIKP		PKPdf	12 45 26.3	0.0
ARCES	ARCESS Array B	131.39	348	PKP		PKPdf	12 45 26.3	-1.5
	comp=Z,3.3nm,0.8s,baz=90,slow=1.2,SNR=8.3							
ARCES	ARCESS Array B	131.39	348	PKIKP		PKPdf	12 45 26.3	-1.5
ARCES				pmax		pmax		
	comp=Z,3.0nm,0.8s							
FINES	FINESS Array B	137.84	341	PKhKP			12 45 29.2	
	comp=Z,4.4nm,1.0s,baz=175,slow=26,SNR=3.3							
FINES				PKP		PKPdf	12 45 37.5	-2.5
	comp=Z,2.5nm,0.8s,baz=96,slow=2.8,SNR=5.1							
FINES	FINESS Array B	137.84	341	PKHKP			12 45 29.2	
FINES							12 45 37.5	
FINES				pmax		pmax		

KOLS	**Kolonicke sedl**	**148.72 330**	*e*PKP	PKPbc	12 46 03.6	-0.3
KOLS			*e*		12 46 10.2	
KOLS	**Kolonicke sedl**	**148.72 330**	*e*PKP	PKPbc	12 46 03.6	-0.3
KOLS			*e*		12 46 10.2	
STHS	**Stebnicka Huta**	**148.83 331**	*e*PKP2	PKPbc	12 46 04.0	-0.2
STHS	**Stebnicka Huta**	**148.83 331**	*e*PKP	PKPbc	12 46 04.0	-0.2
OJC	**Ojcow**	**148.83 334**	*e*PKP	PKPbc	12 46 02.7	-1.4
NIE	**Niedzica**	**149.23 332**	*e*PKHKP	PKPbc	12 46 04.9	-0.2
KSP	**Ksiaz**	**149.65 338**	*e*PKP	PKPbc	12 46 05.5	-0.6
KSP	**Ksiaz**	**149.65 338**	*e*PKHKP	PKPbc	12 46 05.4	-0.7
OKC	**Ostrava-Krasne**	**149.79 335⇑**	*e*PKP	PKPbc	12 46 05.4	-1.1
KECS	**Kecovo**	**149.86 331**	*e*PKHKP	PKPbc	12 46 06.4	-0.3
KECS			*e*		12 46 12.6	
KECS	**Kecovo**	**149.86 331**	*e*PKP	PKPbc	12 46 06.4	-0.3
KECS			*e*		12 46 12.6	
NRDL	**Niedersach Rie**	**149.91 346**	*e*PKPbc	PKPbc	12 46 05.5	-1.1
UPC	**Upice**	**150.03 338⇑**	*e*PKP	PKPbc	12 46 05.4	-1.6
UPC			*e*PKPAB	PKPab	12 46 14.8	-0.3
DPC	**Dobruska-Polom**	**150.05 337⇑**	*e*PKP	PKPbc	12 46 06.3	-0.7
DPC			*e*PKPAB	PKPab	12 46 13.8	-1.4
MORC	**Moravsky Berou**	**150.07 335**	*e*PKPdf	PKPdf	12 46 01.3	-0.2
MORC			*e*PKPbc	PKPbc	12 46 06.5	-0.6
MORC			*e*PKPab	PKPab	12 46 13.4	-1.9
CLL	**Collm**	**150.27 342**	*e*PKPbc	PKPbc	12 46 06.6	-0.9
CLL			*e*PKPab	PKPab	12 46 15.1	-1.0
CLL	**Collm**	**150.27 342**	⇓*i*PKIKP	PKPbc	12 46 06.4	-1.1
CLL			*i*		12 46 15.1	
CLL	**Collm**	**150.27 342**	⇓*i*PKP	PKPbc	12 46 06.4	-1.1
CLL			⇑*i*PKP	PKPab	12 46 15.1	-1.0
CLL			*ep*PKP	pPKPab	12 48 13.0	-3.6
CLL	**Collm**	**150.27 342**	⇓*i*PKPbc	PKPbc	12 46 06.4	-1.1
	comp=Z,33nm,0.8s					
CLL			⇑*i*PKPab	PKPab	12 46 15.1	-1.0
	comp=Z,6.0nm,0.7s					
CLL			*ep*PKPbc	pPKPbc	12 48 13.0	+0.3
BRG	**Berggiesshubel**	**150.38 341**	*e*PKPbc	PKPbc	12 46 06.8	-1.0
BRG	**Berggiesshubel**	**150.38 341**	*i* PKP	PKPbc	12 46 06.8	-1.0
	comp=Z,20nm,0.8s					
BRG			*e*		12 46 13.6	
	comp=Z,5.7nm,0.8s					
BRG						
	comp=N,65nm,11.1s					
BRG						
	comp=E,114nm,17.7s					
BRG						
	comp=Z,150nm,19.0s					
CLZ	**Clausthal**	**150.46 346**	*e*PKPbc	PKPbc	12 46 07.2	-0.7
PVCC	**Panska Ves**	**150.49 340⇑**	*e*PKP	PKPbc	12 46 07.2	-0.9
IBBN	**Ibbenburen**	**150.55 349**	*e*PKPbc	PKPbc	12 46 07.3	-0.8
IBBN			*e*PKPab	PKPab	12 46 16.4	-0.9
VYHS	**Vyhne**	**150.57 333**	*e*PKIKP	PKPbc	12 46 07.5	-0.8
VYHS			*e*		12 46 17.1	
VYHS	**Vyhne**	**150.57 333**	*e*PKP	PKPbc	12 46 07.5	-0.8
VYHS			*e*		12 46 17.1	
PRU	**Pruhonice**	**150.96 339⇑**	*e*PKP	PKPbc	12 46 08.3	-0.9
TANN	**Tannenbergstha**	**151.23 342**	*e*PKPbc	PKPbc	12 46 08.5	-1.2
TREC	**Trest**	**151.23 337⇑**	*e*PKP	PKPbc	12 46 08.5	-1.3
MOX	**Moxa**	**151.25 343**	*e*PKP	PKPbc	12 46 08.5	-1.3
	comp=Z,8.0nm,0.9s					
MOX	**Moxa**	**151.25 343**	*e*PKPbc	PKPbc	12 46 08.2	-1.6
MOX			*e*PKPab	PKPab	12 46 19.1	-1.2
NKC	**Novy Kostel**	**151.39 342⇑**	*e*PKP	PKPbc	12 46 09.5	-0.6
UBBA	**Unterbreizbach**	**151.50 345**	*e*PKPbc	PKPbc	12 46 08.8	-1.5
ROTZ	**Rotzenmuhle**	**151.88 342**	*e*PKPbc	PKPbc	12 46 09.9	-1.3
ROTZ			*e*PKPab	PKPab	12 46 22.5	-0.4
ROTZ			*ep*PKPab	pPKPab	12 48 24.1	+0.9
KHC	**Kasperske Hory**	**152.02 339**	*e*PKPdf	PKPdf	12 46 02.6	-1.8
KHC			*e*PKPbc	PKPbc	12 46 10.7	-0.9
KHC			*e*PKPab	PKPab	12 46 23.3	-0.2
GRA1	**Grafenberg Arr**	**152.22 343**	*e*PKPbc	PKPbc	12 46 10.6	-1.4
GRF	**Grafenberg Arr**	**152.22 343**	*e*PKPbc	PKPbc	12 46 10.6	-1.4
GEC2	**GERESS Array S**	**152.23 339**	*e*PKPbc	PKPbc	12 46 11.0	-1.0
GEC2			*e*PKPab	PKPab	12 46 23.6	-0.9
GEC2			*ep*PKPab	pPKPab	12 48 25.6	+0.9
GEC2	**GERESS Array S**	**152.23 339**	*e*PKIKP	PKPbc	12 46 11.0	-1.0
GEC2			*e*		12 46 23.6	
GERES	**GERESS Array B**	**152.23 339**	PKP	PKPdf	12 46 02.2	-2.5
	comp=Z,0.3nm,0.2s,baz=11,slow=2.0,SNR=3.5					
GERES			PKPbc	PKPbc	12 46 11.0	-1.0
	comp=Z,2.8nm,0.8s,baz=47,slow=2.4,SNR=18					
GERES			PKPab	PKPab	12 46 23.7	-0.7
	comp=Z,0.8nm,0.6s,baz=44,slow=5.9,SNR=5.0					
GERES	**GERESS Array B**	**152.23 339**	PKIKP	PKPdf	12 46 02.2	-2.6
GERES					12 46 11.0	
GERES					12 46 23.7	
GERES			pmax	pmax		
	comp=Z,3.0nm,0.8s					
GERES			pmax	pmax		
	comp=Z,1.0nm,0.6s					
WET	**Wettzell**	**152.23 340**	*ep*PKPab	pPKPab	12 48 26.4	+1.7
TNS	**Taunus Mts**	**152.40 347**	*e*PKPbc	PKPbc	12 46 11.0	-1.4
BAIF	**Baives**	**153.27 352**	*e*PKP2	PKPab	12 46 26.6	-2.2
	comp=Z,7.1nm,0.6s					
RJOB	**Jochberg**	**153.49 339**	*e*PKPab	PKPab	12 46 29.4	-0.5
BFO	**Black Forest**	**154.21 345**	*e*PKPbc	PKPbc	12 46 15.1	-1.2
MEZF	**Maizieres J'vi**	**154.68 350**	*e*PKP2	PKPab	12 46 33.8	-1.1
	comp=Z,19nm,0.7s					
FLN	**La Foliniere**	**154.88 359**	*e*PKP2	PKPab	12 46 33.9	-1.9
HAU	**Haudompre**	**154.94 348**	*e*PKP2	PKPab	12 46 34.0	-2.0
HINF	**Hinteralfeld**	**155.02 347**	*e*PKP2	PKPab	12 46 34.3	-2.1
LDF	**La Druitiere**	**155.05 358**	*e*PKP2	PKPab	12 46 34.3	-2.2
LOR	**Lormes**	**156.05 352**	*e*PKP2	PKPab	12 46 39.6	-1.3
SSF	**Saint Saulge**	**156.30 352⇑**	*i*PKP2	PKPab	12 46 40.8	-1.1
	comp=Z,10nm,0.6s					
AVF	**Avril sur Loir**	**156.59 352⇑**	*i*PKP2	PKPab	12 46 41.9	-1.3
	comp=Z,7.6nm,0.8s					
SMF	**Signal de Mont**	**156.67 351⇑**	*i*PKP2	PKPab	12 46 42.3	-1.2
	comp=Z,24nm,0.9s					
BGF	**Bois d'Agland**	**156.88 353**	*e*PKP2	PKPab	12 46 43.2	-1.2
TCF	**Toulx Ste Croi**	**157.21 354**	*e*PKP2	PKPab	12 46 44.5	-1.4
LPL	**La Plagne**	**157.23 346**	*e*PKP2	PKPab	12 46 45.8	-0.2
LPG	**La Plagne**	**157.25 346**	*e*PKP2	PKPab	12 46 46.0	-0.1
MTLF	**Montolieu**	**160.12 353**	*e*PKP2	PKPab	12 46 56.2	-2.5
	comp=Z,5.4nm,0.7s					
DBIC	**Dimbokro**	**162.78 167**	PKP	PKPdf	12 46 16.6	-2.1
	comp=Z,1.6nm,0.8s,baz=205,slow=14,SNR=4.2					
DBIC	**Dimbokro**	**162.78 167**	PKIKP	PKPdf	12 46 16.6	-2.1
DBIC			pmax	pmax		
	comp=Z,2.0nm,0.8s					
TORD	**Torodi Ar. Bea**	**169.27 195**	PKP	PKPdf	12 46 20.8	-3.0
	comp=Z,2.3nm,1.1s,baz=346,slow=3.0,SNR=8.1					
TORD			PKPab	PKPab	12 47 38.6	-1.1
	comp=Z,1.5nm,0.9s,baz=188,slow=8.7,SNR=7.0					

*ISCJB **23** 12:29:40.9±1.5, 53°.7N±0°.1×91°.1E±0°.1, h10km, Error ellipse: s-maj=19.6km s-min=9.7km az=175.3*
*IDC **23** 12:29:42.1±2.2, 53°.58N×91°.16E, h0km, mb1 3.0/4, mb1mx2.9/28, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=25.0km s-min=16.6km az=8.0*
*NNC **23** 12:29:57.4±6.6, 53°.20N×90°.25E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=46.9km s-min=39.1km az=70.0*
ISC 23 12:29:43.0±1.5, 53°.8N±0°.1×91°.1E±0°.1, h10km, n7, σ0§92/12, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**3.74**	**275**	Pn	**Pn**	**12 30 41.7**	**+1.0**
	0.6nm,0.3s,baz=90,slow=14,SNR=3.3						
ZALV				Pg	**Pg**	**12 30 48.2**	**-6.4**
	1.1nm,0.3s,baz=95,slow=16,SNR=12						
ZALV				Lg		12 31 40.9	
	1.0nm,0.3s,baz=98,slow=28,SNR=4.3						
KURK	**Kurchatov**	**8.27**	**253**	⇑Pn	**Pn**	**12 31 51.7**	**+8.8**
	1.2nm,0.7s						
KURK				⇓Sn	**Sn**	**12 33 16.2**	**-0.1**
	3.0nm,1.0s						
KURK				⇓Lg		12 34 02.4	
	15nm,1.0s						
KURK	**Kurchatov**	**8.27**	**253**	Pn	**Pn**	**12 31 43.8**	**+0.9**
	0.1nm,0.3s,baz=67,slow=14,SNR=7.8						
KURK				Sn	**Sn**	**12 33 16.4**	**+0.1**
	0.0nm,0.3s,baz=70,slow=25,SNR=3.1						
KURK				Lg		12 34 08.1	
	0.1nm,0.3s,baz=69,slow=32,SNR=6.4						
KURBB	**Kurchatov Arra**	**8.36**	**253**	⇓Pn	**Pn**	**12 31 51.1**	**+7.0**
	0.2nm,0.5s,baz=64,slow=14						
KURBB				⇑Sn	**Sn**	**12 33 16.7**	**-1.9**
	1.4nm,0.9s,baz=68,slow=25						
KURBB				⇑Lg		12 34 02.8	
	2.2nm,0.8s,baz=66,slow=30						
MK31	**Makanchi Array**	**8.99**	**222**	⇑Pn	**Pn**	**12 31 53.4**	**+0.6**
	0.7nm,0.8s,baz=39,slow=14,SNR=3.9						
MK31				⇑Sn	**Sn**	**12 33 35.0**	**+0.9**
	0.6nm,0.7s						
MK31				⇑Lg		12 34 21.7	
	1.7nm,0.7s,baz=48,slow=27,SNR=3.6						
MKAR	**Makanchi Array**	**8.99**	**222**	Pn	**Pn**	**12 31 52.2**	**-0.7**
	0.0nm,0.3s,baz=41,slow=14,SNR=2.8						
MKAR				Lg		12 34 24.1	
	0.1nm,0.3s,baz=36,slow=20,SNR=3.7						
SONM	**Songino Array**	**11.34**	**116**	Pn	**Pn**	**12 32 24.4**	**-0.5**
	0.1nm,0.3s,baz=320,slow=5.6,SNR=2.0						
SONM				Lg		12 35 37.0	
	0.1nm,0.3s,baz=305,slow=22,SNR=5.6						

*IDC **23** 12:50:54.2±0.8, 35°.28N×81°.34E, h0km, mb3.8/17, mb1 4.0/21, mb1mx3.9/30, mbtmp3.8/21, ML3.5/4, MS3.4/11, Ms1 3.4/11, ms1mx3.2/31, Error ellipse: s-maj=19.7km s-min=15.1km az=42.0*
*ISCJB **23** 12:50:55.1±0.3, 35°.49N±0°.03×81°.45E±0°.05, h10km, mb3.9/21, MS3.4/8, Error ellipse: s-maj=5.9km s-min=4.3km az=163.5*
*NEIC **23** 12:50:56.2±0.6, 35°.31N×81°.41E, h10km, mb4.1/4, Error ellipse: s-maj=12.2km s-min=9.5km az=35.0*
*BJI **23** 12:50:57.0, 35°.47N×81°.50E, h9km, mb4.6/5, ML4.3/6, Ms4.1/2, Ms7 4.0/1*
*MOS **23** 12:50:58.7±1.2, 35°.46N×81°.40E, h41km, mb4.1/12, Error ellipse: s-maj=14.0km s-min=7.8km az=106.6*
ISC 23 12:50:57.5±0.3, 35°.53N±0°.03×81°.50E±0°.05, h10km, n70, σ1§41/70, mb3.9/21, MS3.4/8, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.92**	**314**	Pn	**Pn**	**12 52 27.3**	**+2.1**
KSH				*e*Sn	**Sn**	**12 53 37.5**	**+4.4**
KSH				smax			
	comp=N,2μm,1.6s						
KSH				smax			
	comp=E,530nm,0.9s						
DDI	**Dehra Dun**	**5.95**	**210**	*e*P	**Pn**	**12 52 27.0**	**+1.4**
DDI				*e*S	**Sg**	**12 54 08.8**	**+0.3**
KKN	**Kakani**	**8.36**	**156**	*e*P	**Pn**	**12 53 00.3**	**+1.5**
	comp=E,21nm,0.5s						
GUN	**Gumba**	**8.46**	**153**	*e*P	**Pn**	**12 53 00.9**	**+0.7**
	comp=E,41nm,0.5s						
DMN	**Daman**	**8.48**	**158**	*e*P	**Pn**	**12 53 01.9**	**+1.6**
	comp=E,22nm,0.5s						
PKIN	**Phulchoki**	**8.60**	**156**	*e*P	**Pn**	**12 53 03.4**	**+1.4**
	comp=E,41nm,0.5s						
PKI	**Pulchoki**	**8.61**	**156**	*e*P	**Pn**	**12 53 02.6**	**+0.5**
	comp=E,41nm,0.7s						
UCH	**Uchtor**	**8.62**	**323**	*e*Pn	**Pn**	**12 53 05.0**	**+2.8**
	comp=E,38nm,0.9s						
AML	**Almayashu**	**8.97**	**320**	*e*Pn	**Pn**	**12 53 09.4**	**+2.4**
	comp=E,35nm,0.8s						
FRU	**Bishkek**	**9.04**	**326**	*e*P	**Pn**	**12 53 12.0**	**+4.1**
FRU				pmax	pmax		
	comp=Z,30nm,1.8s						
EKS2	**Erkin-Say**	**9.31**	**322**	*e*Pn	**Pn**	**12 53 14.3**	**+2.7**
	comp=Z,17nm,0.8s						
EKS2				*e*Sn	**Sn**	**12 54 51.0**	**-5.4**
KBL	**Kabul**	**10.26**	**268**	*e*P	**Pn**	**12 53 25.6**	**+0.8**
KBL				*e*		12 55 20.0	
KBL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KBL	**Kabul**	**10.26**	**268**	*e*Pn	**Pn**	**12 53 25.6**	**+0.8**
	comp=Z,8.3nm,0.6s						
KBL				*e*Sn	**Sn**	**12 55 20.0**	**+0.1**
MK31	**Makanchi Array**	**11.27**	**3**	*e*P	**Pn**	**12 53 39.5**	**+1.1**
MKAR	**Makanchi Array**	**11.27**	**3**	Pn	**Pn**	**12 53 39.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=179,slow=13,SNR=14						
MKAR				Sn	**Sn**	**12 55 45.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=180,slow=23,SNR=3.2						
MKAR				Lg		12 57 09.7	
	comp=Z,0.1nm,0.3s,baz=169,slow=26,SNR=3.5						
MKAR				LR	LR	12 58 58.7	
	comp=Z,104nm,19.1s,baz=179,slow=42						
MKAR	**Makanchi Array**	**11.27**	**3**	P	**Pn**	**12 53 39.6**	**+1.2**
MKAR						12 55 45.4	
MKAR				MLR	MLR		
	comp=Z,104nm,19.1s						
GTA	**Gaotai**	**15.05**	**70**	*e*P	**Pn**	**12 54 38.6**	**+8.5**
GTA				pP	pP	12 54 43.3	+5.0
GTA				sP	sP	12 54 46.1	+6.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KURK	**Kurchatov**	**15.32**	**353**	Pn	**Pn**	**12 54 30.7**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=10						
KURK				Lg		12 59 12.8	
	comp=Z,0.0nm,0.3s,baz=169,slow=30,SNR=3.3						
ZALV	**Zalesovo Beam**	**18.56**	**6**	P	**Pn**	**12 55 14.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=191,slow=15,SNR=2.1						
ZALV				LR	LR	13 03 23.7	
	comp=Z,55nm,21.0s,baz=128,slow=40						
BVAR	**Borovoye Array**	**19.17**	**339**	P	**Pn**	**12 55 20.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=139,slow=12,SNR=7.0						
BVAR				LR	LR	13 03 19.8	
	comp=Z,194nm,18.2s,baz=336,slow=38						
CD2	**Chengdu**	**19.17**	**98**	Pg	**Pn**	**12 55 20.3**	**-1.8**
CD2				smax			
	comp=N,730nm,0.5s						
BRVK	**Borovoye**	**19.23**	**339**	*e*P	**Pn**	**12 55 21.4**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
BRVK	**Borovoye**	**19.23**	**339**	*e*P	**Pn**	**12 55 21.4**	**-1.1**
	comp=Z,11nm,1.1s						
NVS	**Novosibirsk**	**19.34**	**3**	*e*P	**Pn**	**12 55 23.8**	**-0.1**
ABKAR	**Akbulak array**	**20.91**	**318**	*e*P	**P**	**12 55 40.4**	**+0.5**
	comp=Z,13nm,1.0s						
KMI	**Kunming**	**21.02**	**114**	P	**P**	**12 55 41.3**	**-0.1**
KMI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**21.66**	**40**	*e*P	**P**	**12 55 49.4**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
SONM	**Songino Array**	**22.18**	**49**	P	**P**	**12 55 56.5**	**+2.9**
	comp=Z,0.9nm,0.7s,mb3.3,baz=245,slow=7.5,SNR=11						
SONM	**Songino Array**	**22.18**	**49**	P	**P**	**12 55 56.5**	**+2.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	**Ulaanbaatar**	**22.59**	**49**	*e*P	**P**	**12 56 01.8**	**+3.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**22.59**	**49**	*e*P	**P**	**12 56 01.8**	**+3.8**
	comp=Z,3.8nm,0.9s,mb3.8						
AKTK	**Aktyubinsk**	**22.60**	**318**	P	**P**	**12 55 57.2**	**-0.8**
AKTK				LR	LR	13 06 53.3	
AKTO	**Aktyubinsk**	**22.60**	**318**	P	**P**	**12 55 57.2**	**-0.8**
	comp=Z,0.8nm,0.5s,mb3.5,baz=121,slow=13,SNR=5.7						
AKTO				LR	LR	13 06 53.3	
	comp=Z,38nm,21.9s,MS2.8,baz=303,slow=42						
AKTO	**Aktyubinsk**	**22.60**	**318**	P	**P**	**12 55 57.2**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
AKTO				MLR	MLR		
	comp=Z,38nm,21.9s,MS2.8						
CMAR	**Chiang Mai Arr**	**22.98**	**133**	P	**P**	**12 56 00.0**	**-2.2**
	comp=Z,2.1nm,0.9s,mb3.6,baz=316,slow=11,SNR=7.6						
CMAR	**Chiang Mai Arr**	**22.98**	**133**	P	**P**	**12 56 00.0**	**-2.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASF	**Jabal al Asfar**	**36.96**	**278**	LR	LR	13 15 12.8	
	comp=Z,68nm,18.4s,MS3.5,baz=73,slow=40						
KSRS	**Korea Array**	**37.08**	**73**	LR	LR	13 14 01.2	
	comp=Z,32nm,20.9s,MS3.1,baz=225,slow=37						
BRTR	**Keskin Array B**	**37.78**	**291**	P	**P**	**12 58 12.1**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.2,baz=107,slow=9.3,SNR=2.2						
MMAI	**Mount Meron Ar**	**37.91**	**280**	LR	LR	13 15 34.1	
	comp=Z,53nm,22.0s,MS3.3,baz=130,slow=39						
EIL	**Elat**	**39.36**	**275**	LR	LR	13 18 37.8	
	comp=Z,75nm,18.7s,MS3.5,baz=228,slow=42						
AKASG	**Malin Array Be**	**40.19**	**309**	P	**P**	**12 58 32.5**	**-1.3**
	comp=Z,0.5nm,0.4s,mb3.6,baz=86,slow=6.8,SNR=4.6						
AKASG	**Malin Array Be**	**40.19**	**309**	P	**P**	**12 58 32.5**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MLR	**Muntele Rosu**	**42.63**	**301**	P	**P**	**12 58 53.8**	**-0.1**
	comp=Z,4.0nm,0.7s,mb4.3,baz=175,slow=4.5,SNR=5.5						
MLR	**Muntele Rosu**	**42.63**	**301**	P	**P**	**12 58 53.8**	**-0.1**
MLR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**12 58 58.1**	**+0.5**
	comp=Z,1.7nm,0.6s,mb3.9,baz=115,slow=8.6,SNR=5.0						
FINES				LR	LR	13 18 00.7	
	comp=Z,133nm,19.2s,MS3.9,baz=128,slow=38						
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**12 58 58.2**	**+0.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,133nm,19.2s						
FINES	**FINESS Array B**	**43.13**	**325**	P	**P**	**12 58 58.1**	**+0.5**
FINES				LR	LR	13 18 00.7	
MJAR	**Matsushiro Arr**	**45.29**	**71**	P	**P**	**12 59 15.6**	**+0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=295,slow=10,SNR=4.8						
MJAR	**Matsushiro Arr**	**45.29**	**71**	P	**P**	**12 59 15.6**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**45.41**	**336**	P	**P**	**12 59 14.1**	**-1.7**
	comp=Z,1.6nm,0.8s,mb3.9,baz=103,slow=10,SNR=3.8						
ARCES	**ARCESS Array B**	**45.41**	**336**	P	**P**	**12 59 14.1**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VRAC	**Vranov**	**48.41**	**308**	P	**P**	**12 59 37.2**	**-2.3**
	comp=Z,3.3nm,0.5s,mb4.6,baz=36,slow=14,SNR=2.7						
VRAC	**Vranov**	**48.41**	**308**	P	**P**	**12 59 37.2**	**-2.4**
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HFS	**Hagfors**	**49.07**	**322**	P	**P**	**12 59 43.5**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.2,baz=75,slow=11,SNR=3.9						
HFS	**Hagfors**	**49.07**	**322**	P	**P**	**12 59 43.5**	**-1.0**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**50.26**	**323**	P	**P**	**12 59 53.3**	**-0.2**
	comp=Z,0.2nm,0.6s,mb3.3,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**50.26**	**323**	P	**P**	**12 59 52.6**	**-0.9**
	comp=Z,1.3nm,0.7s,mb4.1,baz=89,slow=7.4,SNR=6.1						
NOA				LR	LR	13 21 59.8	
	comp=Z,93nm,19.9s,MS3.8,baz=90,slow=37						
NOA	**NORSAR Array B**	**50.26**	**323**	P	**P**	**12 59 52.7**	**-0.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,93nm,19.9s						
GERES	**GERESS Array B**	**50.36**	**307**	P	**P**	**12 59 54.0**	**-0.5**
	comp=Z,0.4nm,0.2s,mb4.0,baz=60,slow=5.3,SNR=4.3						
JMIC	**Jan Mayen**	**56.87**	**337**	LR	LR	13 24 40.0	
	comp=Z,24nm,20.7s,MS3.3,baz=57,slow=36						
TORD	**Torodi Ar. Bea**	**74.25**	**275**	P	**P**	**13 02 32.9**	**-2.2**
	comp=Z,1.6nm,1.0s,mb3.9,baz=37,slow=4.9,SNR=6.8						
WRAB	**Tennant Creek**	**74.50**	**129**	P	**P**	**13 02 35.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**74.50**	**129**	P	**P**	**13 02 35.5**	**-0.8**
	comp=Z,2.7nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**76.98**	**132**	P	**P**	**13 02 47.9**	**-2.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=312,slow=6.4,SNR=5.4						
ASAR	**Alice Springs**	**76.98**	**132**	P	**P**	**13 02 47.9**	**-2.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**81.45**	**7**	P	**P**	**13 03 13.6**	**-0.8**
	comp=Z,0.7nm,0.9s,mb3.6,baz=339,slow=4.8,SNR=5.5						
YKA	**Yellowknife Ar**	**81.45**	**7**	P	**P**	**13 03 13.6**	**-0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BOSA	**Boshof**	**82.94**	**227**	P	**P**	**13 03 19.4**	**-3.2**
	comp=Z,2.9nm,0.8s,mb4.4,baz=48,slow=7.1,SNR=6.4						
BOSA	**Boshof**	**82.94**	**227**	P	**P**	**13 03 19.4**	**-3.2**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						

*ISK **23** 12:58:46.7, 40°.22N×36°.53E, h5km, MD2.8*
*ISCJB **23** 12:58:47.6±0.5, 40°.22N±0°.03×36°.54E±0°.04, h7km±6km, Error ellipse: s-maj=6.7km s-min=4.0km az=42.4*
*CSEM **23** 12:58:48.5±0.4, 40°.26N×36°.50E, h2km, MD2.8, Error ellipse: s-maj=11.6km s-min=8.7km az=42.0*
*DDA **23** 12:58:48.1, 40°.23N×36°.56E, h4km×3km, Md3.0*
ISC 23 12:58:48.2±0.6, 40°.26N±0°.04×36°.55E±0°.05, h8km±5km, n27, σ1§20/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKT	**Tokat**	**0.06**	**356**	PG	**Pg**	**12 58 49.2**	**-0.8**
TOKT				*e*SG	**Sg**	**12 58 50.9**	**-0.4**
TOKT	**Tokat**	**0.06**	**356**	*i* Pg	**Pg**	**12 58 49.2**	**-0.8**
TOKT				*e*Sg	**Sg**	**12 58 50.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.36**	**50**	P	**Pn**	**13 39 06.4**	**0.0**
	36nm,0.3s,baz=217,slow=10,SNR=87						
AFI				S	**Sn**	**13 39 40.0**	**-5.8**
	213nm,0.3s,baz=230,slow=17,SNR=28						
URZ	**Urewera**	**23.29**	**197**	P	**P**	**13 43 12.3**	**-0.1**
	11nm,1.0s,mb4.2,baz=46,slow=6.2,SNR=14						
WRAB	**Tennant Creek**	**48.73**	**257**	*e*P	**P**	**13 46 47.2**	**-0.9**
	1.5nm,1.0s,mb3.9						
ASAR	**Alice Springs**	**48.97**	**252**	P	**P**	**13 46 50.9**	**+1.0**
	1.1nm,0.4s,mb4.2,baz=89,slow=7.5,SNR=34						
NVAR	**Mina Array Bea**	**75.51**	**42**	P	**P**	**13 49 46.9**	**+0.3**
	0.7nm,0.6s,mb3.6,baz=226,slow=8.3,SNR=6.1						
PDAR	**Pinedale Array**	**83.44**	**42**	P	**P**	**13 50 29.6**	**+0.1**
	1.1nm,0.5s,mb3.9,baz=199,slow=3.3,SNR=10.0						
YKA	**Yellowknife Ar**	**91.14**	**24**	P	**P**	**13 51 05.6**	**-0.5**
	0.1nm,0.7s,mb3.1,baz=239,slow=4.2,SNR=3.7						
YKA	**Yellowknife Ar**	**91.14**	**24**	P	**P**	**13 51 05.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**91.92**	**289**	P	**P**	**13 51 10.9**	**+0.1**
	0.3nm,0.6s,mb3.7,baz=131,slow=3.7,SNR=2.8						
CLL	**Collm**	**144.40**	**352**	*i* PKPdf	PKPdf	13 57 36.2	-1.0
BRTR	**Keskin Array B**	**146.09**	**319**	PKPbc	PKPbc	13 57 43.1	+1.5
	0.7nm,0.8s,baz=64,slow=3.4,SNR=3.8						
GERES	**GERESS Array B**	**146.69**	**350**	PKPbc	PKPbc	13 57 43.8	+0.7
	0.2nm,0.3s,baz=4.0,slow=4.2,SNR=2.8						

*NEIC **23** 13:38:28.8±0.7, 32°.07N×105°.24E, h10km, Error ellipse: s-maj=15.7km s-min=10.5km az=63.0*
*ISCJB **23** 13:38:29.2±0.9, 32°.10N±0°.04×104°.88E±0°.05, h12km±7km, mb3.8/10, Error ellipse: s-maj=9.0km s-min=6.1km az=42.5*
*IDC **23** 13:38:29.9±1.0, 32°.11N×104°.61E, h0km, mb3.8/10, mb1 3.8/13, mb1mx3.7/28, mbtmp3.7/13, ML3.3/3, Error ellipse: s-maj=32.4km s-min=20.1km az=51.0*
*BJI **23** 13:38:30.3, 32°.00N×105°.02E, h10km, ML3.6/10, Ms3.4/2, Ms7 3.4/3*
ISC 23 13:38:31.1±0.9, 32°.18N±0°.04×104°.72E±0°.06, h6km±6km, n22, σ0s90/28, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.51**	**213**	Pg	**Pg**	**13 38 59.3**	**-0.7**
CD2				Sg	**Sg**	**13 39 21.3**	**+1.7**
CD2				smax			
	comp=N,5μm,0.7s						
LZH	**Lanzhou**	**3.97**	**350**	Pn	**Pn**	**13 39 37.8**	**+5.3**
LZH				Pg	**Pg**	**13 39 47.6**	**+0.5**
LZH				Sn	**Sn**	**13 40 21.5**	**+2.2**
LZH				Sg	**Sg**	**13 40 37.1**	**-1.4**
LZH				smax			
	comp=N,320nm,0.7s						
LZH				smax			
	comp=E,320nm,0.8s						
LZH				LR	LR		
	comp=E,620nm,6.6s						
LZH				LR	LR		
	comp=Z,800nm,8.3s						
LZH	**Lanzhou**	**3.97**	**350**	*e*P	**Pn**	**13 39 33.5**	**+1.0**
LZH				pP		13 39 38.3	
LZH				sP		13 39 40.6	
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
XAN	**Xi'an**	**3.99**	**61**	Pn	**Pn**	**13 39 33.8**	**+1.1**
XAN				Sg	**Sg**	**13 40 39.4**	**+0.2**
XAN				smax			
	comp=N,150nm,0.7s						
XAN				smax			
	comp=E,84nm,0.9s						
ENH	**Enshi**	**4.51**	**114**	*e*Pn	**Pn**	**13 39 30.4**	**-9.5**
ENH				*e*Sn	**Sn**	**13 40 24.8**	**-7.8**
GYA	**Guiyang**	**5.95**	**163**	Pg	**Pn**	**13 40 06.8**	**+7.1**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
GTA	**Gaotai**	**8.24**	**332**	*e*P	**Pb**	**13 40 54.1**	**-0.1**
GTA				pP		13 40 58.9	
GTA				sP		13 41 01.6	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**14.62**	**202**	Pn	**Pn**	**13 41 57.4**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=17,slow=13,SNR=3.1						
SONM	**Songino Array**	**15.69**	**4**	Pn	**Pn**	**13 42 12.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=188,slow=6.0,SNR=3.7						
KSRS	**Korea Array**	**19.75**	**68**	P	**Pn**	**13 43 02.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=258,slow=11,SNR=4.0						
MK31	**Makanchi Array**	**22.53**	**317**	*e*P	**P**	**13 43 31.9**	**+0.3**
MKAR	**Makanchi Array**	**22.53**	**317**	P	**P**	**13 43 32.0**	**+0.5**
	comp=Z,0.5nm,0.3s,mb3.4,baz=119,slow=10.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**26.00**	**333**	P	**P**	**13 44 05.0**	**+0.5**
	comp=Z,3.7nm,0.6s,mb4.1,baz=131,slow=9.7,SNR=16						
KURK	**Kurchatov**	**26.72**	**322**	P	**P**	**13 44 11.6**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.2,baz=122,slow=12,SNR=6.0						
AKTK	**Aktyubinsk**	**38.80**	**312**	P	**P**	**13 45 56.5**	**+0.1**
AKTO	**Aktyubinsk**	**38.80**	**312**	P	**P**	**13 45 56.5**	**+0.1**
	comp=Z,1.1nm,0.5s,mb3.8,baz=99,slow=12,SNR=4.6						
ARCES	**ARCESS Array B**	**56.50**	**336**	P	**P**	**13 48 13.4**	**-0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=72,slow=7.9,SNR=7.1						
BRTR	**Keskin Array B**	**56.67**	**299**	P	**P**	**13 48 13.8**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=116,slow=3.4,SNR=2.6						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**13 48 16.5**	**-0.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=78,slow=7.1,SNR=5.6						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**13 48 53.0**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.8,baz=333,slow=6.7,SNR=6.6						
NOA	**NORSAR Array B**	**64.04**	**327**	P	**P**	**13 49 03.8**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=74,slow=6.3,SNR=2.7						
YKA	**Yellowknife Ar**	**80.52**	**17**	P	**P**	**13 50 44.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=328,slow=5.0,SNR=5.9						

*NIED **23** 13:41:00, 24°.30N×125°.20E, h20km, Mw4.3 Best double couple: M0=2.82000×10^15 NP1:φs=48.00000°, δ=74.00000°, λ=85.00000°. NP2:φs=246.00000°, δ=16.00000°, λ=107.00000°.*
*ISCJB **23** 13:41:50.7±0.6, 24°.26N±0°.06×125°.22E±0°.04, h42km±3km, mb4.4/40, MS3.6/10, Error ellipse: s-maj=10.6km s-min=4.0km az=151.8*
*BJI **23** 13:41:51.0, 24°.20N×125°.20E, h35km, mB4.6/5, mb4.3/8, Ms4.0/3, Ms7 3.9/3*
*NEIC **23** 13:41:51.6±0.6, 24°.22N×125°.21E, h35km, mb4.6/12, MW4.2(NIED), Error ellipse: s-maj=13.2km s-min=5.7km az=153.0*
NEIC Recorded [1 JMA] on Miyako-jima.
*JMA **23** 13:41:51.5±0.2, 24°.26N×125°.19E, h26km, M4.4*
JMA Felt I J1.
*MOS **23** 13:41:52.9±0.9, 24°.71N×124°.99E, h36km, mb4.7/29, Error ellipse: s-maj=10.8km s-min=7.4km az=107.1*
*IDC **23** 13:41:53.8±1.0, 24°.71N×125°.04E, h31km±4km, mb4.1/19, mb1 4.1/22, mb1mx4.0/29, mbtmp4.0/22, ML3.5/3, MS3.5/11, Ms1 3.5/11, ms1mx3.2/35, Error ellipse: s-maj=23.3km s-min=17.0km az=161.0*
ISC 23 13:41:51.1±1.0, 24°.25N±0°.07×125°.20E±0°.04, h30km±5km, h33km±2.5km: pP-P, n124, σ1s01/129, mb4.4/40, MS3.6/10, 6C-4D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.54**	**20**	P	**Pb**	**13 42 02.3**	**+0.1**
JOGS				*e*S	**Sb**	**13 42 10.3**	**+0.6**
JMJ	**Miyako jima 2**	**0.56**	**8**	P	**Pb**	**13 42 02.4**	**-0.2**
JMJ				*e*S	**Sb**	**13 42 10.2**	**-0.3**
JTJ	**Tarama**	**0.60**	**310**	P	**Pb**	**13 42 02.8**	**-0.4**
JTJ				*e*S	**Sb**	**13 42 11.0**	**-0.4**
JIJ	**Ishigaki jima**	**0.97**	**277**	P	**Pn**	**13 42 08.7**	**0.0**
JIJ				*e*S	**Sn**	**13 42 21.7**	**+0.2**
JKRS	**Kuro-shima**	**1.09**	**269**	P	**Pn**	**13 42 11.4**	**+1.1**
JKRS				*e*S	**Sn**	**13 42 26.1**	**+1.7**
HATJ	**Hateruma jima**	**1.29**	**262**	P	**Pn**	**13 42 13.8**	**+0.7**
HATJ				*e*S	**Sn**	**13 42 30.6**	**+1.2**
IRIF	**Iriomote-Funau**	**1.35**	**274**	P	**Pn**	**13 42 14.6**	**+0.7**
YOJ	**Yonaguni jima**	**2.01**	**276**	P	**Pn**	**13 42 22.8**	**-0.2**
JKE	**Kume jima 2**	**2.51**	**34**	P	**Pn**	**13 42 29.8**	**-0.1**
JAGN	**Aguni-jima**	**2.97**	**38**	P	**Pn**	**13 42 36.8**	**+0.6**
JJT2	**Tamagusuku 2**	**2.97**	**50**	P	**Pn**	**13 42 37.4**	**+1.2**
NACB	**Ninganchiao**	**3.30**	**269**	*e*Pn	**Pn**	**13 42 39.7**	**-1.0**
TATO	**Taipei**	**3.46**	**283**	*e*Pn	**Pn**	**13 42 46.0**	**+3.1**
YHNB	**Yeheng**	**3.51**	**278**	*e*Pn	**Pn**	**13 42 45.0**	**+1.4**
YULB	**Yu-li**	**3.68**	**257**	*e*Pn	**Pn**	**13 42 44.4**	**-1.5**
YULB				*e*Sn	**Sn**	**13 43 25.9**	**-2.4**
JIH	**Iheya**	**3.73**	**41**	P	**Pn**	**13 42 46.9**	**+0.3**
JOW	**Kunigami**	**3.78**	**47**	P	**Pn**	**13 42 47.5**	**+0.2**
JOW	**Kunigami**	**3.78**	**47**	Pn	**Pn**	**13 42 46.1**	**-1.2**
	6.8nm,0.3s,baz=147,slow=12,SNR=34						
SSLB	**Suanglung**	**3.91**	**264**	*e*Pn	**Pn**	**13 42 48.8**	**-0.4**
TWG	**Pinlang**	**4.05**	**250**	*e*Pn	**Pn**	**13 42 49.6**	**-1.5**
TPUB	**Ta-pu**	**4.30**	**258**	*e*Pn	**Pn**	**13 42 54.9**	**+0.5**
TPUB				*e*Sn	**Sn**	**13 43 42.2**	**-1.4**
JTK	**Tokunoshima**	**4.87**	**43**	P	**Pn**	**13 43 01.0**	**-1.3**
JMZ	**Minamidaito 2**	**5.68**	**73**	P	**Pn**	**13 43 10.5**	**-2.9**
JMZ				*e*S	**Sn**	**13 44 10.1**	**-7.5**
JAM	**Amami Oshima**	**5.72**	**43**	P	**Pn**	**13 43 12.9**	**-1.1**
KS15	**Wonju Array Si**	**13.35**	**9**	*e*Pn	**Pn**	**13 44 58.8**	**+0.3**
KSRS	**Korea Array**	**13.36**	**9**	Pn	**Pn**	**13 44 54.7**	**-4.0**
	0.2nm,0.3s,baz=190,slow=13,SNR=4.2						
KSRS				LR	LR	13 50 25.5	
	comp=Z,113nm,20.0s,baz=176,slow=40						
JHJ	**Hachijo jima 2**	**15.53**	**52**	LR	LR	13 51 03.9	
	comp=Z,94nm,19.3s,baz=316,slow=36						
CBIJ	**Chichi jima**	**15.57**	**76**	LR	LR	13 50 31.9	
	comp=Z,84nm,18.5s,baz=280,slow=33						
MAJO	**Matsushiro**	**16.59**	**39**	*e*P	**Pn**	**13 45 42.2**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAJO	**Matsushiro**	**16.59**	**39**	*e*Pn	**Pn**	**13 45 42.2**	**+0.7**
	comp=Z,7.0nm,0.9s						
MAT	**Matsushiro**	**16.59**	**39**	P	**Pn**	**13 45 44.5**	**+3.0**
MJAR	**Matsushiro Arr**	**16.59**	**39**	Pn	**Pn**	**13 45 42.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=232,slow=11,SNR=16						
KMI	**Kunming**	**20.43**	**277**	P	**P**	**13 46 32.4**	**+6.4**
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
GUMO	**Guam**	**21.39**	**116**	LR	LR	13 53 25.3	
	comp=Z,79nm,18.7s,MS3.1,baz=87,slow=32						
ERM	**Erimo**	**23.15**	**36**	*i* P	**P**	**13 47 01.9**	**+6.9**
ASAJ	**Asahikawa**	**24.39**	**31**	P	**P**	**13 47 05.1**	**-1.6**
	comp=Z,1.5nm,0.4s,mb3.8,baz=238,slow=17,SNR=5.2						
ASAJ	**Asahikawa**	**24.39**	**31**	P	**P**	**13 47 05.1**	**-1.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHTO	**Chiang Mai**	**25.00**	**263**	*e*P	**P**	**13 47 13.3**	**+0.9**
CHTO				*e*		13 47 22.9	
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
CHTO	**Chiang Mai**	**25.00**	**263**	*e*P	**P**	**13 47 13.3**	**+0.8**
	comp=Z,8.4nm,0.6s,mb4.5						
CHTO				*e*		13 47 22.9	
CMAR	**Chiang Mai Arr**	**25.11**	**262**	P	**P**	**13 47 13.9**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.5,baz=65,slow=8.0,SNR=8.1						
CMAR	**Chiang Mai Arr**	**25.11**	**262**	P	**P**	**13 47 14.0**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HABR	**Khabarovsk**	**25.40**	**15**	P	**P**	**13 47 15.4**	**-0.3**
HABR				*e**SP	sP	13 47 29.2	+1.1
HABR				*e*S	**S**	**13 51 38.0**	**-2.4**
HABR				*e**SS	sS	13 51 54.6	-0.2
HABR				*e*		13 58 14.1	
HABR				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.2						
HABR				pmax	pmax		
	comp=N,5.0nm,0.7s						
HABR				pmax	pmax		
	comp=E,6.0nm,0.8s						
HABR				MLR	MLR		
	comp=Z,44nm,16.0s,MS3.1						
GTA	**Gaotai**	**26.22**	**311**	*e*P	**P**	**13 47 22.9**	**-0.4**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
SONM	**Songino Array**	**27.87**	**332**	P	**P**	**13 47 37.1**	**-1.0**
	comp=Z,0.9nm,0.3s,mb3.8,baz=146,slow=11,SNR=7.6						
SONM				LR	LR	14 00 10.7	
	comp=Z,165nm,19.5s,MS3.6,baz=181,slow=40						
SONM	**Songino Array**	**27.87**	**332**	P	**P**	**13 47 37.1**	**-1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,165nm,19.5s						
SHL	**Shillong**	**30.21**	**280**	*e*P	**P**	**13 48 00.0**	**+0.9**
PETK	**Petropavlovsk-**	**37.81**	**32**	P	**P**	**13 49 04.9**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.1,baz=186,slow=4.6,SNR=6.5						
PETK				LR	LR	14 05 03.2	
	comp=Z,40nm,18.1s,MS3.3,baz=5.0,slow=37						
PETK	**Petropavlovsk-**	**37.81**	**32**	P	**P**	**13 49 04.9**	**+0.3**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
PETK				MLR	MLR		
	comp=Z,40nm,18.1s,MS3.3						
MK31	**Makanchi Array**	**40.88**	**314**	*e*P	**P**	**13 49 29.9**	**-0.4**
MKAR	**Makanchi Array**	**40.88**	**314**	P	**P**	**13 49 30.3**	**-0.1**
	comp=Z,4.9nm,0.4s,mb4.5,baz=100,slow=11,SNR=39						
MKAR				LR	LR	14 07 57.6	
	comp=Z,93nm,18.0s,MS3.7,baz=146,slow=39						
MKAR	**Makanchi Array**	**40.88**	**314**	P	**P**	**13 49 30.3**	**0.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,93nm,18.0s						
MKAR	**Makanchi Array**	**40.88**	**314**	P	**P**	**13 49 30.3**	**-0.1**
MKAR				LR	LR	14 07 57.6	
ZALV	**Zalesovo Beam**	**42.23**	**325**	P	**P**	**13 49 40.0**	**-1.3**
	comp=Z,3.3nm,0.4s,mb4.3,baz=111,slow=8.2,SNR=19						
ZALV				LR	LR	14 08 38.9	
	comp=Z,55nm,19.0s,MS3.5,baz=93,slow=38						
ZALV	**Zalesovo Beam**	**42.23**	**325**	P	**P**	**13 49 40.1**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,55nm,19.0s,MS3.5						
SEY	**Seymchan**	**42.72**	**18**	‖*e*P	**P**	**13 49 45.9**	**+0.8**
KURK	**Kurchatov**	**44.43**	**319**	P	**P**	**13 49 57.4**	**-1.7**
	comp=Z,2.9nm,0.5s,mb4.3,baz=108,slow=9.5,SNR=12						
KURK	**Kurchatov**	**44.43**	**319**	*c i* P	**P**	**13 49 58.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.4						
KURK				MLR	MLR		
	comp=Z,54nm,16.0s,MS3.6						
KURK	**Kurchatov**	**44.43**	**319**	P	**P**	**13 49 57.4**	**-1.7**
TKM2	**Tokmak 2**	**44.63**	**307**	*e*P	**P**	**13 50 01.7**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**44.63**	**307**	*e*P	**P**	**13 50 01.7**	**+0.8**
	comp=Z,3.9nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**44.81**	**168**	*e*P	**P**	**13 50 01.8**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**44.81**	**168**	*e*P	**P**	**13 50 01.8**	**-0.6**
	comp=Z,12nm,1.1s,mb4.6						
UCH	**Uchtor**	**45.33**	**306**	*e*P	**P**	**13 50 07.8**	**+1.4**
UCH				*e*		13 50 18.6	
UCH				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
UCH	**Uchtor**	**45.33**	**306**	*e*P	**P**	**13 50 07.8**	**+1.4**
	comp=Z,8.2nm,0.9s,mb4.6						
UCH				*e*		13 50 18.6	
AML	**Almayashu**	**45.93**	**306**	*e*P	**P**	**13 50 10.5**	**-0.6**
AML				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
AML	**Almayashu**	**45.93**	**306**	*e*P	**P**	**13 50 10.4**	**-0.7**
	comp=Z,5.7nm,0.8s,mb4.5						
KBL	**Kabul**	**49.45**	**296**	*e*P	**P**	**13 50 38.7**	**+0.1**
KBL				*e*		13 50 49.6	
KBL				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
KBL	**Kabul**	**49.45**	**296**	*e*P	**P**	**13 50 38.7**	**+0.1**
	comp=Z,7.8nm,0.7s,mb4.8						
KBL				*e*		13 50 49.6	
BVAR	**Borovoye Array**	**49.97**	**320**	P	**P**	**13 50 42.2**	**0.0**
	comp=Z,1.0nm,0.3s,mb4.3,baz=134,slow=8.5,SNR=5.6						
BVAR				PcP	PcP	13 52 02.3	+0.3
	comp=Z,1.0nm,0.6s,baz=128,slow=4.0,SNR=3.3						
BVAR	**Borovoye Array**	**49.97**	**320**	P	**P**	**13 50 42.2**	**0.0**
BVAR						13 52 02.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	**50.41**	**19**	‖*e*P	**P**	**13 50 45.7**	**+0.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ABKAR	**Akbulak array**	**56.02**	**314**	*e*P	**P**	**13 51 27.3**	**+0.4**
	comp=Z,8.3nm,0.4s,mb5.1						
SVE	**Sverdlovsk**	**56.17**	**323**	*e*P	**P**	**13 51 28.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ARU	**Arti**	**57.27**	**323**	*d i* P	**P**	**13 51 34.9**	**-0.8**
ARU				*e*		13 53 37.3	
ARU				S	**S**	**13 59 25.7**	**-3.9**
ARU				SS	SS	14 03 13.3	-5.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AKTK	**Aktyubinsk**	**57.29**	**316**	P	**P**	**13 51 35.8**	**-0.1**
AKTO	**Aktyubinsk**	**57.29**	**316**	P	**P**	**13 51 35.8**	**-0.1**
	comp=Z,2.0nm,0.5s,mb4.4,baz=121,slow=16,SNR=10						
AKTO	**Aktyubinsk**	**57.29**	**316**	P	**P**	**13 51 35.8**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**57.97**	**164**	P	**P**	**13 51 47.5**	**+6.6**
	comp=Z,2.2nm,0.7s,mb4.3,baz=46,slow=3.1,SNR=3.6						
STKA	**Stephens Creek**	**57.97**	**164**	P	**P**	**13 51 47.5**	**+6.7**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZEI	**Tsey**	**67.79**	**308**	*e*P	**P**	**13 52 44.8**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
KIV	**Kislovodsk**	**68.39**	**310**	⇑*e*P	**P**	**13 52 51.7**	**+1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
OBN	**Obninsk**	**69.71**	**322**	‖*e*P	**P**	**13 52 57.9**	**0.0**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
EGAK	**Eagle**	**69.86**	**27**	*e*P	**P**	**13 53 00.3**	**+1.6**
	comp=Z,3.4nm,0.8s,mb4.3						
KEV	**Kevo**	**70.27**	**339**	*e*P	**P**	**13 53 00.2**	**-0.9**
KEV	**Kevo**	**70.27**	**339**	*ep*	**P**	**13 53 00.2**	**-0.9**
JOF	**Joensuu**	**70.44**	**331**	*e*P	**P**	**13 53 01.4**	**-0.8**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
JOF	**Joensuu**	**70.44**	**331**	*ep*	**P**	**13 53 01.4**	**-0.8**
	comp=Z,8.4nm,0.6s,mb4.8						
SOC	**Sochi**	**70.56**	**310**	*e*P	**P**	**13 53 02.1**	**-1.3**
SOC				*e*PPP		13 57 21.6	
SOC				*e*S	S	14 02 07.0	-8.0
DAWY	**Dawson**	**70.79**	**28**	*e*P	**P**	**13 53 05.1**	**+0.7**
ARCES	**ARCESS Array B**	**70.83**	**338**	P	**P**	**13 53 04.1**	**-0.5**
	comp=Z,3.6nm,1.0s,mb4.3,baz=74,slow=7.7,SNR=8.5						
ARCES	**ARCESS Array B**	**70.83**	**338**	P	**P**	**13 53 04.1**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	**ARCESS Array B**	**70.83**	**338**	P	**P**	**13 53 04.1**	**-0.5**
INK	**Inuvik**	**71.77**	**23**	*e*P	**P**	**13 53 09.7**	**-0.5**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
INK	**Inuvik**	**71.77**	**23**	*e*P	**P**	**13 53 09.7**	**-0.5**
	comp=Z,5.0nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**72.90**	**331**	*e*P	**P**	**13 53 16.0**	**-1.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**72.90**	**331**	*ep*	**P**	**13 53 16.0**	**-1.0**
	comp=Z,3.3nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**13 53 19.1**	**+0.1**
	comp=Z,7.2nm,0.6s,mb4.8,baz=56,slow=6.0,SNR=25						
FINES				LR	LR	14 29 32.8	
	comp=Z,88nm,18.3s,MS4.1,baz=177,slow=39						
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**13 53 19.1**	**+0.1**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,88nm,18.3s						
AKASG	**Malin Array Be**	**75.24**	**319**	P	**P**	**13 53 30.2**	**-0.7**
	comp=Z,0.8nm,0.4s,mb4.0,baz=67,slow=5.7,SNR=4.3						
AKASG				pP	pP	13 53 40.3	-0.2
	comp=Z,0.9nm,0.5s,baz=57,slow=5.2,SNR=2.6						
AKASG	**Malin Array Be**	**75.24**	**319**	P	**P**	**13 53 30.3**	**-0.6**
AKASG				*PP	pP	13 53 40.3	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**76.07**	**307**	P	**P**	**13 53 36.5**	**+0.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=102,slow=6.0,SNR=5.0						
BRTR				pP	pP	13 53 46.1	+0.7
	comp=Z,5.1nm,0.9s,baz=97,slow=5.1,SNR=12						
BRTR	**Keskin Array B**	**76.07**	**307**	P	**P**	**13 53 36.5**	**+0.6**
BRTR				*PP	pP	13 53 46.2	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ASF	**Jabal al Asfar**	**76.15**	**299**	P	**P**	**13 53 37.6**	**+1.0**
	comp=Z,1.1nm,0.5s,mb4.0,baz=337,slow=13,SNR=2.4						
ASF	**Jabal al Asfar**	**76.15**	**299**	P	**P**	**13 53 37.6**	**+1.1**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MLR	**Muntele Rosu**	**79.22**	**315**	P	**P**	**13 53 53.9**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.0,baz=2.3,slow=13,SNR=4.7						
MLR	**Muntele Rosu**	**79.22**	**315**	P	**P**	**13 53 53.9**	**+0.5**
MLR				pmax

UGM	**Wanagama**	**1.11**	**323**	P	Pn	13 52 19.3	-1.0
SJI	**Sawahan**	**1.20**	**28**	P	Pn	13 52 20.2	-1.3
SJI				S	Sb	13 52 36.7	-0.4
SJI	**Sawahan**	**1.20**	**28**	P	Pn	13 52 18.9	-2.6
SJI				S	Sb	13 52 36.6	-0.5
GMJI	**Gumukmas**	**2.28**	**77**	P	Pn	13 52 34.2	-2.2

GUC 23 14:01:55.6±0.7, 20°46S×69°37W, h114km±4km, ML3.7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.52**	**290**	⇓*i*P	Pn	14 02 13.8	+0.7
HMBC				*i* S	Sn	14 02 26.9	+0.8
HMBC				AML	AML	14 02 27.2	
	comp=N,4μm,0.2s						
PB01	**Plate Boundary**	**0.59**	**191**	⇑*i*P	Pn	14 02 14.3	+0.7
PB01				*i* S	Sn	14 02 27.7	+0.6
PB01				AML	AML	14 02 28.6	
	comp=E,5μm,0.2s						
PSGC	**Pisagua**	**1.11**	**320**	⇓*i*P	Pn	14 02 18.8	+0.5
PSGC				*i* S	Sn	14 02 36.1	+0.6
PSGC				AML	AML	14 02 39.0	
	comp=N,535nm,0.7s						
MNMC	**Miæe Miæ**	**1.34**	**351**	⇑*i*P	Pn	14 02 21.3	+0.5
MNMC				*i* S	Sn	14 02 41.4	+1.6
MNMC				AML	AML	14 02 42.5	
	comp=E,4μm,0.5s						
PECH	**Pedro de Valdi**	**2.15**	**188**	⇑*i*P	Pn	14 02 32.0	+1.3
PECH				*i* S	Sn	14 02 59.2	+1.7
PECH				AML	AML	14 03 07.3	
	comp=E,536nm,0.2s						
CEN1	**Los Morros**	**3.02**	**195**	*i* S	Sn	14 03 24.7	+7.0

GUC 23 14:09:12.6±0.5, 22°75S×68°84W, h97km±7km, MD3.4, ML3.7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**0.79**	**281**	⇑*i*P	Pn	14 09 31.2	+0.7
PECH				*i* S	Sn	14 09 45.3	+1.4
PECH				AML	AML	14 09 46.8	
	comp=E,3μm,0.2s						
MACH	**Maria Elena**	**1.01**	**303**	⇓*i*P	Pn	14 09 33.6	+0.7
MACH				*i* S	Sn	14 09 49.5	+1.3
CEN1	**Los Morros**	**1.41**	**243**	AML	AML	14 10 05.3	
	comp=N,585nm,0.8s						
MECH	**Mejillones**	**1.53**	**256**	⇑*i*P	Pn	14 09 39.4	+0.4
MECH				*i* S	Sn	14 09 60.0	+1.0
MECH				AML	AML	14 10 06.0	
	comp=N,2μm,0.3s						
ANCH	**Antofagasta**	**1.72**	**237**	⇑*i*P	Pn	14 09 42.0	+0.6
ANCH				*i* S	Sn	14 10 03.9	+0.6
ANCH				AML	AML	14 10 10.6	
	comp=E,1μm,0.3s						
PB01	**Plate Boundary**	**1.80**	**340**	⇓*i*P	Pn	14 09 43.0	+0.5
PB01				*i* S	Sn	14 10 06.4	+1.2
PB01				AML	AML	14 10 07.0	
	comp=E,2μm,0.2s						

*NEIC **23** 14:33:50.5, 18°79N×69°60W, h108km, MD4.0(RSPR), After RSPR.*

RSPR 23 14:33:50.5, 18°79N×69°60W, h108km±2km, MD4.0/11, MD4.0/11, 10C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.21**	**91**	⇑*e*P	Pn	14 34 04.9	-0.7
DR12				*e*S	Sn	14 34 16.3	-0.6
PCDR	**Punta Cana, DR**	**1.19**	**103**	⇑*e*P	Pn	14 34 14.9	+1.4
PCDR	**Punta Cana, DR**	**1.19**	**103**	*e*S	Sn	14 34 33.7	+2.7
SDDR	**Presa de Saban**	**1.61**	**277**	⇑*e*P	Pn	14 34 18.5	0.0
SDDR				*e*S	Sn	14 34 39.4	-0.3
AGPR	**Aguadilla, PR**	**2.38**	**97**	⇑*e*P	Pn	14 34 30.5	+2.2
AGPR				*e*S	Sn	14 34 58.1	+0.8
CRPR	**Cabo Rojo, PR**	**2.49**	**108**	⇓*e*P	Pn	14 34 31.6	+1.9
CRPR				*e*S	Sn	14 34 59.9	0.0
AOPR	**Arecibo Observ**	**2.74**	**99**	⇑*e*P	Pn	14 34 35.8	+2.9
AOPR				*e*S	Sn	14 35 05.8	+0.2
CELP	**Cerrillos**	**2.96**	**103**	⇑*e*P	Pn	14 34 37.4	+1.5
CELP				*e*S	Sn	14 35 09.9	-0.9
GRTK	**Grand Turk**	**3.06**	**332**	*e*Pn	Pn	14 34 35.5	-1.8
GRTK				*e*Sn	Sn	14 35 09.1	-4.3
CPD	**Cerro la Pandu**	**3.58**	**102**	*e*Pn	Pn	14 34 44.3	+0.1
CPD				*e*Sn	Sn	14 35 25.2	-0.4
CBYP	**Canovanas**	**3.59**	**98**	⇑*e*P	Pn	14 34 44.0	-0.3
CBYP				*e*S	Sn	14 35 25.1	-0.8
HUMP	**Col San Antoni**	**3.62**	**100**	⇑*e*P	Pn	14 34 44.4	-0.3
MTP	**Monte Pirata**	**3.90**	**100**	⇑*e*P	Pn	14 34 48.3	-0.2
STVI	**Saint Thomas**	**4.43**	**95**	⇑*e*P	Pn	14 34 55.8	+0.2

*PGC **23** 14:43:24.7±13.0, 63°12N×143°24W, h15km, ML3.0/3, 215km Wsw of Dawson, Yt Central Alaska*

NEIC 23 14:43:21.6, 63°11N×143°60W, h5km, ML2.5(AEIC), 5D, After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MENT	**Mentasta**	**0.18**	**197**	*e*P	Pg	14 43 24.6	-0.6
MENT				P		14 43 25.1	
DOT	**Dot Lake**	**0.57**	**339**	P	Pg	14 43 33.0	+0.4
DOT				S	Sg	14 43 41.6	+1.5
PAX	**Paxson**	**0.86**	**261**	P	Pg	14 43 38.1	-0.1
PAX				S	Sg	14 43 50.0	+0.7
EGAK	**Eagle**	**1.99**	**32**	P	Pn	14 43 55.8	-0.1
DAWY	**Dawson**	**2.11**	**61**	P	Pn	14 43 57.2	-0.3
DAWY	**Dawson**	**2.11**	**61**	⇑Pn	Pn	14 43 58.0	+0.5
DAWY				⇓Sg	Sg	14 44 25.7	-3.7
BMRM	**Bremner River**	**2.21**	**193**	P	Pn	14 43 59.5	+0.6
IL1	**Eielson Array**	**2.21**	**320**	P	Pn	14 43 58.4	-0.5
DIV	**Divide**	**2.24**	**208**	P	Pn	14 44 00.1	+0.8
MCK	**McKinley**	**2.48**	**287**	P	Pn	14 44 03.6	+1.0
SML	**Sawmill**	**2.56**	**241**	P	Pn	14 44 04.6	+0.9
COLA	**College**	**2.57**	**315**	*e*Pn	Pn	14 44 02.1	-1.8
COLA				*e*S	Sn	14 44 36.8	+1.3
EYAK	**Cordova Ski Ar**	**2.77**	**203**	P	Pn	14 44 06.7	+0.2
PMR	**Palmer**	**3.00**	**242**	*e*Pn	Pn	14 44 09.7	0.0
TRF	**Thorofare Moun**	**3.04**	**279**	*e*Pn	Pn	14 44 12.8	+2.5
TRF				*e*S	Sn	14 44 56.2	+9.2
HYT	**Haines Junctio**	**3.68**	**126**	⇑Pn	Pn	14 44 19.5	+0.4
HYT				⇓Pg	Pg	14 44 28.0	-4.0
HYT				⇑Sg	Sg	14 45 15.1	-4.6
PPLA	**Purkeypile**	**3.92**	**271**	P	Pn	14 44 23.8	+1.4
BM3	**Burnt Mountain**	**4.34**	**355**	P	Pn	14 44 28.8	+0.6
WHY	**Whitehorse**	**4.80**	**117**	⇓Pn	Pn	14 44 34.2	-0.3
WHY				⇓Sg	Sg	14 45 48.2	-7.5
COLD	**Coldfoot**	**4.98**	**329**	P	Pn	14 44 37.5	+0.7
IM3	**Indian Mountai**	**5.24**	**308**	P	Pn	14 44 42.1	+1.7
TT01	**Tatalina**	**5.66**	**273**	P	Pn	14 44 47.9	+1.6
INK	**Inuvik**	**6.66**	**34**	⇑Pn	Pn	14 44 56.8	-3.2
INK				⇓Sn	Sn	14 46 09.8	-6.3

GUC 23 14:55:32.3±0.4, 21°20S×68°34W, h198km±13km, MD3.5, ML3.5, 1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**1.71**	**302**	*i* P	Pn	14 56 09.1	+1.3
HMBC				*i* S	Sn	14 56 36.9	+1.6
HMBC				AML	AML	14 56 39.0	
	comp=E,343nm,0.4s						
PSGC	**Pisagua**	**2.31**	**313**	*e*P	Pn	14 56 15.0	+1.1
PSGC				*i* S	Sn	14 56 47.7	+1.3
PSGC				AML	AML	14 56 50.0	
	comp=E,69nm,0.5s						
MNMC	**Miæe Miæ**	**2.37**	**330**	⇑*i*P	Pn	14 56 16.4	+1.8
MNMC				*i* S	Sn	14 56 49.6	+2.0
MNMC				AML	AML	14 56 51.1	
	comp=N,261nm,0.2s						
CEN1	**Los Morros**	**2.78**	**218**	*i* P	Pn	14 56 23.6	+4.4
CEN1				*i* S	Sn	14 57 02.6	+6.6

*ISK **23** 15:03:33.7, 37°30N×28°24E, h5km, MD2.7*
*DDA **23** 15:03:34.8, 37°25N×28°26E, h7km±5km, Md2.7*
*ISCJB **23** 15:03:35.1±0.5, 37°25N±0°03×28°25E±0°03, h10km±5km, Error ellipse: s-maj=5.7km s-min=4.4km az=17.1*

*CSEM **23** 15:03:35.0±0.1, 37°22N×28°22E, h14km±1km, MD2.7, Error ellipse: s-maj=3.8km s-min=2.4km az=24.0*

ISC 23 15:03:35.1±0.5, 37°23N±0°04×28°24E±0°04, h16km±5km, n27, σ1§03/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**160**	*e*PG	**Pg**	**15 03 38.0**	**-0.5**
YER				*e*SG	**Sg**	**15 03 40.6**	**-0.2**
YER	**Yerkesik**	**0.10**	**160**	*e*Pg	**Pg**	**15 03 38.0**	**-0.5**
YER				*e*Sg	**Sg**	**15 03 40.6**	**-0.2**
MLSB	**Milas**	**0.38**	**281**	*e*PG	**Pg**	**15 03 41.9**	**-1.0**
MLSB				*e*SG	**Sg**	**15 03 47.9**	**-0.2**
MLSB	**Milas**	**0.38**	**281**	*e*Pg	**Pg**	**15 03 41.9**	**-1.0**
MLSB				*e*Sg	**Sg**	**15 03 47.9**	**-0.3**
TURN	**Turunc**	**0.46**	**141**	*i* P	**Pg**	**15 03 44.1**	**-0.2**
TURN				*i* S	**Sg**	**15 03 51.6**	**+1.1**
TURN	**Turunc**	**0.46**	**141**	*i* P	**Pg**	**15 03 44.1**	**-0.2**
TURN				*i* S	**Sg**	**15 03 51.6**	**+1.1**
AYDN	**Tasoluk**	**0.52**	**326**	*i* P	**Pg**	**15 03 45.3**	**-0.2**
AYDN				*i* S	**Sg**	**15 03 52.7**	**+0.1**
AYDN	**Tasoluk**	**0.52**	**326**	*i* P	**Pg**	**15 03 45.3**	**-0.2**
AYDN				*i* S	**Sg**	**15 03 52.7**	**+0.1**
BDRM	**Kayabasi**	**0.66**	**256**	*i* P	**Pg**	**15 03 48.0**	**0.0**
BDRM				*i* S	**Sg**	**15 03 57.7**	**+0.9**
BDRM	**Kayabasi**	**0.66**	**256**	*i* P	**Pg**	**15 03 48.0**	**-0.1**
BDRM				*i* S	**Sg**	**15 03 57.7**	**+0.9**
DAT	**Datca**	**0.73**	**227**	*e*PG	**Pg**	**15 03 48.7**	**-0.6**
DAT				*e*SG	**Sg**	**15 04 01.9**	**+2.9**
DAT	**Datca**	**0.73**	**227**	*e*Pg	**Pg**	**15 03 48.7**	**-0.7**
DNZL	**Cakiroluk**	**0.79**	**54**	*i* P	**Pb**	**15 03 46.5**	**-4.0**
DNZL				*i* S	**Sb**	**15 04 01.6**	**+0.7**
DNZL	**Cakiroluk**	**0.79**	**54**	*i* P	**Pb**	**15 03 46.5**	**-4.0**
DNZL				*i* S	**Sb**	**15 04 01.5**	**+0.6**
FETY	**Fethiye**	**0.90**	**131**	*e*PG	**Pg**	**15 03 52.8**	**+0.3**
FETY	**Fethiye**	**0.90**	**131**	*e*Pg	**Pg**	**15 03 52.8**	**+0.3**
GCAM	**G?zelcaml?**	**0.93**	**301**	*i* P	**Pb**	**15 03 52.2**	**-0.7**
GCAM				*i* S	**Sb**	**15 04 05.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.93**	**301**	*i* P	**Pb**	**15 03 52.2**	**-0.7**
GCAM				*i* S	**Sb**	**15 04 05.4**	**+0.4**
MANT	**Manisa**	**1.29**	**11**	*i* P	**Pn**	**15 03 56.1**	**-2.3**
MANT				*i* S	**Sb**	**15 04 16.9**	**+1.6**
MANT	**Manisa**	**1.29**	**11**	*i* P	**Pn**	**15 03 56.1**	**-2.3**
MANT				*i* S	**Sb**	**15 04 16.9**	**+1.7**
KULA	**Kula-Manisa**	**1.33**	**14**	*e*PN	**Pn**	**15 03 59.2**	**+0.3**
KULA	**Kula-Manisa**	**1.33**	**14**	*e*Pn	**Pn**	**15 03 59.2**	**+0.2**
AKAS	**Kas**	**1.48**	**132**	*i* P	**Pn**	**15 03 58.4**	**-2.5**
AKAS				*i* S	**Sn**	**15 04 25.7**	**+5.8**
AKAS	**Kas**	**1.48**	**132**	*i* P	**Pn**	**15 03 58.4**	**-2.6**
AKAS				*i* S	**Sn**	**15 04 25.7**	**+5.8**
KHAL	**Karahalli**	**1.51**	**41**	*i* P	**Pn**	**15 04 02.1**	**+0.6**
KHAL	**Karahalli**	**1.51**	**41**	*i* P	**Pn**	**15 04 02.1**	**+0.6**
BORA	**Eskisehir**	**3.17**	**33**	*i* P	**Pn**	**15 04 17.6**	**-6.6**

*ISCJB **23** 15:50:59.7±0.5, 31°49N±0°03×103°94E±0°06, h10km, mb3.3/5, Error ellipse: s-maj=7.0km s-min=4.8km az=15.6*
*IDC **23** 15:51:00.2±1.2, 31°37N×103°97E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.4/26, mbtmp3.4/8, ML3.1/2, Error ellipse: s-maj=34.9km s-min=22.0km az=59.0*
*BJI **23** 15:51:01.5, 31°52N×104°02E, h11km, mB4.3/1, mb4.1/2, ML3.7/12, Ms3.3/1, Ms7 2.9/1*
*NEIC **23** 15:51:02.0±0.7, 31°41N×103°97E, h10km, Error ellipse: s-maj=11.4km s-min=10.8km az=70.0*

ISC 23 15:51:01.8±0.5, 31°43N±0°03×103°95E±0°06, h10km, n15, σ1§06/22, mb3.3/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**198**	Pg	**Pg**	**15 51 11.1**	**-1.3**
CD2				Sg	**Sg**	**15 51 18.8**	**-0.7**
CD2				smax			
	comp=N,5μm,0.7s						
LZH	**Lanzhou**	**4.64**	**359**	*e*Pn	**Pn**	**15 52 17.8**	**+5.8**
LZH				Pg	**Pg**	**15 52 29.5**	**-1.3**
LZH				Sg	**Sg**	**15 53 30.5**	**-0.5**
LZH				smax			
	comp=N,55nm,0.9s						
LZH				smax			
	comp=E,79nm,1.0s						
LZH				LR	LR		
	comp=N,340nm,5.6s						
LZH				LR	LR		
	comp=Z,350nm,5.9s						
ENH	**Enshi**	**4.90**	**102**	*e*Pn	**Pn**	**15 52 15.3**	**-0.2**
ENH				*e*Sn	**Sn**	**15 53 14.6**	**+2.3**
XAN	**Xi'an**	**4.93**	**57**	Pn	**Pn**	**15 52 15.1**	**-0.9**
XAN				Sn	**Sn**	**15 53 10.8**	**-2.3**
XAN				Sg	**Sg**	**15 53 31.6**	**-8.6**
XAN				smax			
	comp=N,54nm,0.9s						
XAN				smax			
	comp=E,140nm,0.9s						
GYA	**Guiyang**	**5.50**	**154**	Pn	**Pn**	**15 52 28.6**	**+4.9**
GYA				Sn	**Sn**	**15 53 37.5**	**+11**
GYA				smax			
	comp=N,100nm,0.9s						
GYA				smax			
	comp=E,100nm,0.9s						
LSA	**Lhasa**	**11.17**	**264**	P	**Pn**	**15 53 42.1**	**+0.6**
	comp=E,16nm,2.3s						
CMAR	**Chiang Mai Arr**	**13.69**	**200**	Pn	**Pn**	**15 54 16.4**	**+0.4**
	comp=E,0.0nm,0.3s,baz=214,slow=28,SNR=2.3						
SONM	**Songino Array**	**16.49**	**6**	Pn	**Pn**	**15 54 54.1**	**+1.0**
	comp=E,0.1nm,0.3s,baz=184,slow=13,SNR=5.5						
KSRS	**Korea Array**	**20.64**	**67**	P	**P**	**15 55 41.8**	**+0.3**
	comp=E,0.9nm,0.7s,baz=265,slow=11,SNR=6.7						
CN2	**Changchun**	**20.97**	**48**	*e*P	**P**	**15 55 46.6**	**+1.7**
CN2				*ep*P		15 55 56.5	
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**15 56 04.4**	**+1.5**
	comp=Z,0.4nm,0.6s,mb3.0,baz=124,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.37**	**334**	P	**P**	**15 56 38.0**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.5,baz=120,slow=8.8,SNR=5.2						
KURK	**Kurchatov**	**26.91**	**323**	P	**P**	**15 56 43.1**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.2,baz=127,slow=8.8,SNR=4.9						
ASAR	**Alice Springs**	**61.84**	**149**	P	**P**	**16 01 20.5**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.6,baz=335,slow=6.9,SNR=6.2						
YKA	**Yellowknife Ar**	**81.42**	**17**	P	**P**	**16 03 18.7**	**+0.1**
	comp=Z,0.1nm,0.5s,mb3.0,baz=332,slow=5.0,SNR=2.9						

*ISCJB **23** 15:53:44.6±2.6, 50°59N±0°08×170°2W±0°1, h12km±17km, mb3.8/12, Error ellipse: s-maj=15.7km s-min=8.4km az=136.7*
*IDC **23** 15:53:44.3±1.2, 50°40N×170°35W, h0km, mb3.6/9, mb1 3.9/10, mb1mx3.7/29, mbtmp3.6/10, ML3.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=36.2km s-min=19.7km az=0.0*
*NEIC **23** 15:53:45.9±0.8, 50°53N×170°21W, h10km, mb4.4/5, Error ellipse: s-maj=16.8km s-min=9.8km az=162.0*
*MOS **23** 15:53:47.2±1.5, 50°55N×170°19W, h33km, mb4.4/4, Error ellipse: s-maj=23.7km s-min=17.0km az=87.1*

ISC 23 15:53:46.6±3.0, 50°63N±0°08×170°2W±0°1, h11km±20km, n30, σ1§09/32, mb3.8/12, 1D, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**2.50**	**20**	*e*Pn	**Pn**	**15 54 26.1**	**-1.0**
NIKO				*e*Sn	**Sn**	**15 54 56.6**	**-1.0**
OKFG	**Magazine Ridge**	**3.14**	**26**	P	**Pn**	**15 54 36.7**	**+0.8**
OKFG				S	**Sn**	**15 55 13.3**	**+0.1**
UNV	**Unalaska Valle**	**3.96**	**34**	P	**Pn**	**15 54 47.9**	**+0.8**
UNV				S	**Sn**	**15 55 33.1**	**-0.4**
SDPT	**Sand Point**	**7.55**	**47**	P	**Pn**	**15 55 36.0**	**-0.4**
OHAK	**Old Harbor**	**11.96**	**50**	*e*Pn	**Pn**	**15 56 36.9**	**+0.1**
	12nm,0.5s						
KDAK	**Kodiak Island**	**12.55**	**48**	Pn	**Pn**	**15 56 43.8**	**-1.0**
PET	**Petropavlovsk**	**19.30**	**289**	*e*P	**Pn**	**15 58 07.1**	**-5.1**
PET				pmax	pmax		
	comp=Z,6.0nm,0.3s						
PET	**Petropavlovsk**	**19.30**	**289**	*e*P	**Pn**	**15 58 07.1**	**-5.1**
	comp=Z,5.7nm,0.3s						
PETK	**Petropavlovsk-**	**19.86**	**290**	P	**Pn**	**15 58 16.4**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=87,slow=16,SNR=6.3						
PETK				LR	LR	16 04 51.6	
	comp=Z,61nm,18.3s,baz=302,slow=34						
PETK	**Petropavlovsk-**	**19.86**	**290**	P	**Pn**	**15 58 16.4**	**-2.5**
PETK				LR	LR	16 04 51.6	
BILL	**Bilibino**	**20.92**	**335**	⇓*i*P	**P**	**15 58 29.9**	**+1.2**
BILL				pmax	pmax		
	comp=Z,13nm,1.2s						
BILL	**Bilibino**	**20.92**	**335**	*e*P	**P**	**15 58 29.8**	**+1.0**
	comp=Z,35nm,1.5s						
SKAG	**Skagway**	**21.64**	**52**	*e*P	**P**	**15 58 46.1**	**+10**
	comp=Z,5.8nm,0.4s,mb4.4						
INK	**Inuvik**	**25.11**	**32**	P	**P**	**15 59 12.7**	**+1.8**
	comp=Z,4.2nm,0.7s,mb4.1,baz=239,slow=11,SNR=13						
INK	**Inuvik**	**25.11**	**32**	P	**P**	**15 59 12.7**	**+1.8**
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BBB	**Bella Bella**	**26.06**	**70**	LR	LR	16 07 54.1	
	comp=Z,31nm,18.7s,baz=30,slow=32						
YKA	**Yellowknife Ar**	**31.82**	**47**	P	**P**	**16 00 12.3**	**+1.6**
	comp=Z,0.2nm,0.4s,mb3.3,baz=274,slow=8.0,SNR=3.3						
MAJO	**Matsushiro**	**39.10**	**269**	*e*P	**P**	**16 01 04.9**	**-8.7**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
MAJO	**Matsushiro**	**39.10**	**269**	*e*P	**P**	**16 01 04.9**	**-8.7**
	comp=Z,2.8nm,0.5s,mb4.2						
LKWY	**Lake**	**39.84**	**75**	*e*P	**P**	**16 01 17.7**	**-2.0**
LKWY				pmax	pmax		
	comp=Z,8.0nm,0.3s,mb4.9						
LKWY	**Lake**	**39.84**	**75**	*e*P	**P**	**16 01 17.7**	**-2.0**
	comp=Z,7.9nm,0.3s,mb4.9						
PDAR	**Pinedale Array**	**41.30**	**77**	P	**P**	**16 01 33.1**	**+1.4**
	comp=Z,0.9nm,0.8s,mb3.5,baz=308,slow=3.6,SNR=6.9						
BOD	**Bodaibo**	**42.68**	**310**	*e*P	**P**	**16 01 42.9**	**+0.1**
SONM	**Songino Array**	**51.73**	**302**	P	**P**	**16 02 53.4**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=64,slow=3.4,SNR=2.8						
TXAR	**Lajitas Array**	**53.36**	**87**	P	**P**	**16 03 04.9**	**-0.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=339,slow=9.7,SNR=3.4						
ARCES	**ARCESS Array B**	**59.60**	**354**	P	**P**	**16 03 49.8**	**+0.2**
	comp=Z,1.7nm,0.9s,mb4.1,baz=2.3,slow=9.0,SNR=3.9						
ARCES	**ARCESS Array B**	**59.60**	**354**	P	**P**	**16 03 49.8**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**63.31**	**318**	P	**P**	**16 04 16.8**	**+1.8**
	comp=Z,0.3nm,0.5s,mb3.7,baz=46,slow=6.7,SNR=4.7						
MKAR	**Makanchi Array**	**64.61**	**313**	P	**P**	**16 04 23.7**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=57,slow=8.8,SNR=2.7						
ASAR	**Alice Springs**	**88.85**	**229**	P	**P**	**16 06 39.5**	**-0.9**
	comp=Z,0.1nm,0.6s,mb3.3,baz=35,slow=5.1,SNR=5.2						

*IDC **23** 16:10:20.9±0.6, 32°24N×105°01E, h0km, mb4.3/18, mb1 4.3/21, mb1mx4.2/31, mbtmp4.2/21, ML3.6/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/29, Error ellipse: s-maj=17.7km s-min=13.2km az=45.0*
*BJI **23** 16:10:21.6, 32°24N×105°07E, h11km, mB4.5/17, mb4.3/24, ML4.2/21, Ms4.1/32, Ms7 3.9/32*
*ISCJB **23** 16:10:22.1±0.9, 32°21N±0°02×105°06E±0°03, h15km±5km, mb4.4/41, MS3.4/4, Error ellipse: s-maj=4.4km s-min=3.8km az=157.5*
*NEIC **23** 16:10:22.6±0.2, 32°26N×105°07E, h10km, mb4.5/19, Error ellipse: s-maj=5.2km s-min=4.3km az=79.0*
*MOS **23** 16:10:24.1±1.0, 32°19N×105°08E, h35km, mb4.6/34, Error ellipse: s-maj=10.5km s-min=5.9km az=99.4*

ISC 23 16:10:23.8±0.8, 32°22N±0°02×105°04E±0°03, h16km±5km, n123, σ1§11/140, mb4.4/41, MS3.4/4, 6C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.70**	**220**	Pn	**Pn**	**16 10 53.3**	**+0.5**
CD2				Pg	**Pg**	**16 10 57.3**	**+0.8**
CD2				Sg	**Sg**	**16 11 18.3**	**-0.3**
CD2				smax			
	comp=N,12μm,0.7s						
XAN	**Xi'an**	**3.73**	**60**	Pg	**Pg**	**16 11 32.9**	**-2.3**
XAN				Sg	**Sb**	**16 12 16.6**	**+2.4**
XAN				smax			
	comp=N,560nm,0.8s						
XAN				smax			
	comp=E,220nm,1.2s						
XAN				LR	LR		
	comp=N,700nm,7.1s						
XAN				LR	LR		
	comp=E,400nm,9.6s						
XAN				LR	LR		
	comp=Z,510nm,7.7s						
LZH	**Lanzhou**	**3.99**	**346**	⇑Pn	**Pn**	**16 11 26.0**	**+1.8**
LZH				Pg	**Pg**	**16 11 36.3**	**-3.9**
LZH				Sn	**Sn**	**16 12 10.8**	**+0.2**
LZH				Sg	**Sg**	**16 12 27.8**	**-4.0**
LZH				smax			
	comp=N,710nm,1.0s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,3μm,6.3s						
LZH				LR	LR		
	comp=Z,4μm,9.1s						
ENH	**Enshi**	**4.27**	**116**	*e*Pn	**Pn**	**16 11 28.1**	**0.0**
ENH				*e*Sn	**Sn**	**16 12 17.2**	**-0.5**
GYA	**Guiyang**	**5.91**	**166**	Pn	**Pn**	**16 11 53.3**	**+2.6**
GYA				Sn	**Sn**	**16 12 56.5**	**-1.5**
GYA				smax			
	comp=N,340nm,0.7s						
GYA				smax			
	comp=E,500nm,0.9s						
KMI	**Kunming**	**7.35**	**197**	Pn	**Pn**	**16 12 11.1**	**+0.7**
KMI				Sn	**Sn**	**16 13 32.9**	**-0.6**
KMI				smax			
	comp=N,64nm,0.7s						
KMI				smax			
	comp=E,68nm,0.7s						
KMI				LR	LR		
	comp=N,570nm,8.4s						
KMI				LR	LR		
	comp=E,450nm,7.1s						
KMI				LR	LR		
	comp=Z,320nm,8.1s						
WHN	**Wuhan**	**8.13**	**99**	P	**Pn**	**16 12 21.3**	**+0.1**
WHN				S	**Sn**	**16 13 49.5**	**-3.2**
WHN				LR	LR		
	comp=N,3μm,6.5s						
WHN				LR	LR		
	comp=

NJ2				pmax	pmax		
	comp=Z,50nm,4.0s						
NJ2				LR	LR		
	comp=N,310nm,11.6s						
NJ2				LR	LR		
	comp=E,350nm,12.5s						
NJ2				LR	LR		
	comp=Z,480nm,11.1s						
BJI	**Beijing**	**11.91**	**46**	P	**Pn**	**16 13 12.5**	**-0.3**
BJI				pmax	pmax		
	comp=Z,15nm,0.5s						
BJI				LR	LR		
	comp=N,180nm,12.0s						
BJI				LR	LR		
	comp=E,260nm,11.5s						
BJI				LR	LR		
	comp=Z,52nm,11.5s						
LSA	**Lhasa**	**12.19**	**262**	P	**Pn**	**16 13 13.8**	**-2.9**
LSA				S	Sx	16 16 16.8	
LSA				pmax	pmax		
	comp=Z,20nm,0.9s						
LSA				LR	LR		
	comp=N,80nm,9.0s						
LSA				LR	LR		
	comp=E,110nm,9.0s						
LSA				LR	LR		
	comp=Z,240nm,9.0s						
LSA	**Lhasa**	**12.19**	**262**	*e*Pn	**Pn**	**16 13 17.1**	**+0.5**
QIZ	**Qiongzhong**	**13.82**	**161**	P	**Pn**	**16 13 39.0**	**-0.1**
QIZ				*e*S	**Sn**	**16 16 15.8**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,16nm,1.8s						
QIZ				LR	LR		
	comp=N,560nm,7.9s						
QIZ				LR	LR		
	comp=E,94nm,8.4s						
QIZ				LR	LR		
	comp=Z,720nm,8.9s						
QZH	**Quanzhou**	**13.93**	**118**	P	**Pn**	**16 13 41.5**	**+1.0**
QZH				S	**Sn**	**16 16 19.1**	**+4.2**
QZH				LR	LR		
	comp=N,1μm,10.4s						
QZH				LR	LR		
	comp=E,2μm,7.4s						
QZH				LR	LR		
	comp=Z,2μm,9.2s						
CHTO	**Chiang Mai**	**14.43**	**204**	*e*P	**Pn**	**16 13 47.7**	**+0.3**
CM31	**Chiang Mai Arr**	**14.76**	**203**	*e*Pn	**Pn**	**16 13 52.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**14.76**	**203**	Pn	**Pn**	**16 13 52.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=16,slow=12,SNR=14						
SONM	**Songino Array**	**15.63**	**3**	Pn	**Pn**	**16 14 03.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=13						
ULN	**Ulaanbaatar**	**15.71**	**5**	*e*P	**Pn**	**16 14 04.0**	**-0.2**
ULN				pmax	pmax		
	comp=Z,14nm,1.2s						
ULN	**Ulaanbaatar**	**15.71**	**5**	*e*Pn	**Pn**	**16 14 04.0**	**-0.3**
	comp=Z,14nm,1.2s						
WMQ	**Urumqi**	**17.88**	**315**	*e*P	**Pn**	**16 14 31.1**	**-0.6**
WMQ				S	**Sn**	**16 17 48.9**	**-1.7**
WMQ				sS	sS	16 17 54.6	-10
WMQ				SS		16 18 10.8	
WMQ				PcP	PcP	16 19 06.9	-0.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,50nm,3.0s						
WMQ				LR	LR		
	comp=N,240nm,11.0s						
WMQ				LR	LR		
	comp=E,300nm,10.0s						
WMQ				LR	LR		
	comp=Z,95nm,22.0s						
ZAK	**Zakamensk**	**18.20**	**356**	*e*P	**Pn**	**16 14 37.0**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY	**Talaya**	**19.48**	**357**	*e*P	**Pn**	**16 14 52.7**	**+1.7**
TLY				*e*S	**Sn**	**16 18 32.4**	**+3.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,52nm,10.0s						
KSRS	**Korea Array**	**19.48**	**68**	P	**Pn**	**16 14 50.1**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=255,slow=10,SNR=23						
MOY	**Mondy**	**19.66**	**352**	*e*P	**Pn**	**16 14 54.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,29nm,1.9s						
CN2	**Changchun**	**19.75**	**48**	*e*P	**Pn**	**16 14 54.8**	**+0.4**
CN2				*ep*P	pP	16 14 57.8	+0.4
CN2				*e*S	**Sn**	**16 18 30.8**	**-5.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
IRK	**Irkutsk**	**20.02**	**359⇓**	*i*P	**P**	**16 14 58.0**	**+2.3**
IRK				pmax	pmax		
	comp=Z,42nm,1.5s						
JOW	**Kunigami**	**20.90**	**99**	P	**P**	**16 15 06.6**	**+1.1**
	comp=Z,5.7nm,0.3s,baz=139,slow=28,SNR=18						
MK31	**Makanchi Array**	**22.69**	**316**	*e*P	**P**	**16 15 24.5**	**0.0**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**16 15 24.8**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.1,baz=107,slow=12,SNR=34						
MKAR				LR	LR	16 25 10.5	
	comp=Z,82nm,18.8s,MS3.2,baz=151,slow=39						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**16 15 24.8**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,82nm,18.8s						
DDI	**Dehra Dun**	**23.12**	**272**	*ex*	**P**	**16 15 30.0**	**+0.8**
KSH	**Kashi**	**24.59**	**295**	*e*P	**P**	**16 15 46.8**	**+3.8**
KSH				*ep*P		16 15 50.5	
KSH				*es*P	sP	16 15 53.6	+3.6
KSH				*e*PP		16 16 22.6	
KSH				*e*S	**S**	**16 20 06.3**	**+2.9**
KSH				*es*S	sS	16 20 12.5	+1.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
KSH				LR	LR		
	comp=N,90nm,5.3s						
KSH				LR	LR		
	comp=E,48nm,4.9s						
KSH				LR	LR		
	comp=Z,170nm,4.9s						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**16 15 52.4**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
TKM2	**Tokmak 2**	**25.55**	**303**	*e*P	**P**	**16 15 52.4**	**+0.6**
	comp=Z,5.5nm,0.7s,mb4.2						
ZAA0	**Zalesovo Array**	**26.09**	**332**	*e*P	**P**	**16 15 55.8**	**-0.7**
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**16 15 56.3**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.0,baz=127,slow=9.5,SNR=16						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**16 15 56.3**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
UCH	**Uchtor**	**26.16**	**301**	*e*P	**P**	**16 15 58.8**	**+1.5**
	comp=Z,12nm,1.0s,mb4.4						
BOD	**Bodaibo**	**26.33**	**11**	*e*P	**P**	**16 15 58.2**	**-0.4**
EKS2	**Erkin-Say**	**26.79**	**302**	*e*P	**P**	**16 16 02.8**	**-0.2**
	comp=Z,2.9nm,0.9s,mb3.8						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**16 16 03.5**	**0.0**
	comp=Z,7.0nm,1.0s,mb4.2,baz=124,slow=10,SNR=21						
KURK				PcP	PcP	16 19 24.0	-1.6
	comp=Z,1.3nm,0.5s,baz=113,slow=2.4,SNR=6.5						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**16 16 03.5**	**0.0**
KURK						16 19 24.0	
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**16 16 02.9**	**-0.5**
	comp=Z,12nm,1.0s,mb4.4						
MAT	**Matsushiro**	**27.63**	**72**	P	**P**	**16 16 09.6**	**-1.0**
MJAR	**Matsushiro Arr**	**27.63**	**72**	P	**P**	**16 16 09.7**	**-0.9**
	comp=Z,1.2nm,0.8s,mb3.6,baz=269,slow=11,SNR=6.3						
MJAR	**Matsushiro Arr**	**27.63**	**72**	P	**P**	**16 16 09.7**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HABR	**Khabarovsk**	**27.81**	**46**	*e*P	**P**	**16 16 19.1**	**+7.0**
HABR				*e*PPP		16 17 04.8	
HABR				*e*		16 19 25.1	
HABR				*e*S	**S**	**16 20 50.4**	**-3.9**
HABR				*e**SS	sS	16 21 06.7	+4.3
HABR				SS		16 22 05.7	
HABR				*e*		16 26 55.2	
HABR				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
HABR				pmax	pmax		
	comp=E,14nm,1.5s						
HABR				pmax	pmax		
	comp=N,6.0nm,1.3s						
HABR				MLR	MLR		
	comp=Z,62nm,17.0s,MS3.3						
PSI	**Prapat**	**29.82**	**192**	P	**P**	**16 16 30.4**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.2,baz=355,slow=11,SNR=5.0						
PSI	**Prapat**	**29.82**	**192**	P	**P**	**16 16 30.4**	**+0.2**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**16 16 53.0**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.1,baz=116,slow=10,SNR=8.7						
BVAR				PcP	PcP	16 19 39.2	-0.6
	comp=Z,1.4nm,0.7s,baz=101,slow=1.5,SNR=6.7						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**16 16 53.0**	**+0.1**
BVAR						16 19 39.2	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	**Borovoye**	**32.51**	**320⇑**	*e*P	**P**	**16 16 54.4**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK				MLR	MLR		
	comp=Z,51nm,21.0s,MS3.2						
BRVK	**Borovoye**	**32.51**	**320**	*e*P	**P**	**16 16 54.1**	**+0.6**
	comp=Z,4.0nm,0.7s,mb4.5						
ABKAR	**Akbulak array**	**37.55**	**310**	*e*P	**P**	**16 17 36.5**	**-0.5**
	comp=Z,4.1nm,0.8s,mb4.2						
SVE	**Sverdlovsk**	**39.09**	**322⇑**	*e*P	**P**	**16 17 50.8**	**+0.9**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
ARU	**Arti**	**40.06**	**321**	*c i*P	**P**	**16 17 58.0**	**0.0**
ARU				S	**S**	**16 24 02.2**	**-0.8**
ARU				SS	SS	16 26 57.9	-2.3
ARU				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
ARU	**Arti**	**40.06**	**321**	*e*P	**P**	**16 17 58.2**	**+0.2**
	comp=Z,27nm,1.3s,mb4.8						
TIXI	**Tiksi**	**41.51**	**11**	*e*P	**P**	**16 18 08.1**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TIXI	**Tiksi**	**41.51**	**11**	*e*P	**P**	**16 18 07.0**	**-2.8**
	comp=Z,2.3nm,0.8s,mb3.9						
SOKR	**Solikamsk**	**41.93**	**325**	*e*P	**P**	**16 18 11.3**	**-2.0**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
SEY	**Seymchan**	**42.73**	**30**	*i*P	**P**	**16 18 20.0**	**+0.2**
PETK	**Petropavlovsk-**	**42.84**	**45**	P	**P**	**16 18 20.4**	**-0.4**
	comp=Z,6.1nm,0.8s,mb4.4,baz=302,slow=3.1,SNR=8.5						
PETK	**Petropavlovsk-**	**42.84**	**45**	P	**P**	**16 18 20.4**	**-0.4**
PETK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
PETK	**Petropavlovsk-**	**42.84**	**45**	P	**P**	**16 18 20.4**	**-0.4**
ZEI	**Tsey**	**48.69**	**301**	*e*P	**P**	**16 19 06.9**	**-0.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KIV	**Kislovodsk**	**49.38**	**303⇑**	*e*P	**P**	**16 19 13.6**	**+1.1**
KIV				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.7						
BILL	**Bilibino**	**49.83**	**26**	*e*P	**P**	**16 19 15.0**	**-0.6**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
BILL	**Bilibino**	**49.83**	**26**	*e*P	**P**	**16 19 15.0**	**-0.6**
	comp=Z,3.5nm,0.9s,mb4.4						
OBN	**Obninsk**	**52.20**	**317**	*e*P	**P**	**16 19 29.6**	**-3.9**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
JOF	**Joensuu**	**54.52**	**327**	*e*P	**P**	**16 19 49.7**	**-0.8**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
JOF	**Joensuu**	**54.52**	**327**	*ep*	**P**	**16 19 49.7**	**-0.8**
	comp=Z,5.3nm,0.8s,mb4.6						
KEV	**Kevo**	**56.05**	**336**	*e*P	**P**	**16 20 02.9**	**+1.5**
KEV	**Kevo**	**56.05**	**336**	*ep*	**P**	**16 20 02.9**	**+1.5**
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**16 20 04.1**	**-1.1**
	comp=Z,4.0nm,0.9s,mb4.5,baz=70,slow=7.9,SNR=9.3						
ARCES	**ARCESS Array B**	**56.58**	**336**	P	**P**	**16 20 04.1**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**16 20 07.7**	**-0.3**
	comp=Z,1.4nm,0.8s,mb4.1,baz=98,slow=6.3,SNR=7.7						
BRTR	**Keskin Array B**	**56.89**	**299**	P	**P**	**16 20 07.7**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KAF	**Kangasniemi**	**56.90**	**327**	*e*P	**P**	**16 20 06.2**	**-1.4**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**56.90**	**327**	*ep*	**P**	**16 20 06.2**	**-1.4**
	comp=Z,4.6nm,0.9s,mb4.5						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**16 20 07.9**	**-1.1**
	comp=Z,3.4nm,0.7s,mb4.5,baz=83,slow=6.9,SNR=10						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**16 20 07.9**	**-1.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRAB	**Tennant Creek**	**58.96**	**147**	*e*P	**P**	**16 20 22.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
WRAB	**Tennant Creek**	**58.96**	**147**	*e*P	**P**	**16 20 22.4**	**-0.1**
	comp=Z,15nm,1.1s,mb4.9						
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	**16 20 43.5**	**+0.1**
	comp=Z,3.7nm,0.8s,mb4.6,baz=337,slow=7.1,SNR=32						
ASAR	**Alice Springs**	**62.04**	**150**	P	**P**	**16 20 43.6**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NB2	**NORSAR Subarra**	**64.16**	**327**	P	**P**	**16 20 55.6**	**-1.5**
	comp=Z,3.9nm,0.8s,mb4.5,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**16 20 55.8**	**-1.4**
	comp=Z,2.6nm,0.7s,mb4.3,baz=71,slow=6.7,SNR=10						
NOA	**NORSAR Array B**	**64.16**	**327**	P	**P**	**16 20 55.8**	**-1.3**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BPAW	**Bear Paw Mtn.**	**67.25**	**28**	*e*P	**P**	**16 21 16.3**	**-0.7**
	comp=Z,10.0nm,1.1s,mb4.8						
GERES	**GERESS Array B**	**67.34**	**314**	P	**P**	**16 21 17.1**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.7,baz=67,slow=7.4,SNR=5.9						
GERES	**GERESS Array B**	**67.34**	**314**	P	**P**	**16 21 17.1**	**-0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PMR	**Palmer**	**69.18**	**29**	*e*P	**P**	**16 21 27.9**	**-1.3**
PMR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
PMR	**Palmer**	**69.18**	**29**	*e*P	**P**	**16 21 27.9**	**-1.3**
	comp=Z,6.4nm,0.8s,mb4.6						
INK	**Inuvik**	**70.84**	**20**	P	**P**	**16 21 38.7**	**-0.6**
	comp=Z,4.0nm,0.8s,mb4.4,baz=327,slow=7.5,SNR=10						
INK	**Inuvik**	**70.84**	**20**	*e*P	**P**	**16 21 38.4**	**-0.9**
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
INK	**Inuvik**	**70.84**	**20**	*e*P	**P**	**16 21 38.4**	**-0.9**
	comp=Z,8.6nm,1.3s,mb4.5						
DAWY	**Dawson**	**71.60**	**25**	*e*P	**P**	**16 21 43.0**	**-0.9**
KMBO	**Kilima Mbogo**	**71.94**	**257**	P	**P**	**16 21 47.1**	**+0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=3.0,slow=24,SNR=3.9						
KMBO	**Kilima Mbogo**	**71.94**	**257**	*ce*P	**P**	**16 21 48.5**	**+1.7**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**72.51**	**148**	P	**P**	**16 21 50.0**	**+0.2**
	comp=Z,4.1nm,1.0s,mb4.3,baz=11,slow=8.4,SNR=3.9						
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.1**	**0.0**
	comp=Z,7.9nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.1**	**0.0**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.1**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.0**	**-0.1**
	comp=Z,9.3nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.0**	**-0.1**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**73.07**	**313**	*e*P	**P**	**16 21 53.0**	**-0.1**
	comp=Z,4.7nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**74.27**	**315**	*e*P	**P**	**16 21 59.7**	**-0.4**
HYT	**Haines Junctio**	**74.28**	**27**	*e*P	**P**	**16 22 01.6**	**+1.8**
SKAG	**Skagway**	**75.99**	**27**	*e*P	**P**	**16 22 09.7**	**-0.1**
	comp=Z,9.1nm,0.8s,mb4.8						
YKA	**Yellowknife Ar**	**80.40**	**17**	P	**P**	**16 22 33.6**	**-0.5**
	comp=Z,1.9nm,0.5s,mb4.2,baz=329,slow=5.1,SNR=34						
YKA	**Yellowknife Ar**	**80.40**	**17**	P	**P**	**16 22 33.6**	**-0.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FCC	**Fort Churchill**	**87.97**	**10**	*e*P	**P**	**16 23 12.4**	**-0.3**
FCC				pmax	pmax		
	comp=Z,3.0nm,3.0s						
FCC	**Fort Churchill**	**87.97**	**10**	*e*P	**P**	**16 23 12.3**	**-0.3**
	comp=Z,2.9nm,3.0s						
FFC	**Flin Flon**	**90.34**	**15**	*e*P	**P**	**16 23 23.1**	**-0.8**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
FFC	**Flin Flon**	**90.34**	**15**	*e*P	**P**	**16 23 23.1**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.8						
WCI	**Wyandotte Cave**	**109.12**	**9**	*e*PKKPab	PKKPab	16 40 15.0	-0.2
WMOK	**Wichita Mounta**	**109.74**	**21**	*e*P	Pdif	16 24 48.5	-2.9
WVT	**Waverly**	**110.95**	**11**	*e*PKKPab	PKKPab	16 40 03.1	-4.0
SWET	**Sewanee**	**112.14**	**10**	*e*PKKPbc	PKKPbc	16 39 49.6	-0.1
VNA2	**Neumayer--Watz**	**127.40**	**202**	*e*PKPdf	PKPdf	16 29 26.6	-0.1
	baz=61,slow=1.2						

ISCJB ***23*** *16:35:43.9±1.0, 31°.84N±0°.03×104°.55E±0°.04, h9km±6km, mb4.2/24, MS3.5/10, Error ellipse: s-maj=5.3km s-min=4.5km az=164.6*

IDC ***23*** *16:35:44.1±0.7, 31°.87N×104°.51E, h0km, mb4.1/14, mb1 4.2/17, mb1mx4.1/29, mbtmp4.1/17, ML3.5/3, MS3.5/9, Ms1 3.5/9, ms1mx3.1/38, Error ellipse: s-maj=23.9km s-min=13.6km az=44.0*

NEIC ***23*** *16:35:45.8±0.3, 31°.89N×104°.50E, h10km, mb4.3/9, Error ellipse: s-maj=8.8km s-min=6.6km az=46.0*

MOS ***23*** *16:35:46.2±1.1, 31°.83N×104°.55E, h29km, mb4.4/17, Error ellipse: s-maj=12.4km s-min=7.2km az=96.8*

BJI ***23*** *16:35:46.0, 31°.82N×104°.59E, h13km, mB4.6/11, mb4.3/16, ML4.3/19, Ms4.2/18, Ms7 4.0/18*

ISC 23 16:35:45.9±0.9, 31°.84N±0°.02×104°.49E±0°.04, h9km±5km, n83, σ1°.15/94, mb4.2/24, MS3.5/10, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.12**	**214**	Pg	**Pg**	**16 36 07.6**	**+0.2**
CD2				Sg	**Sg**	**16 36 25.8**	**+3.8**
CD2				smax			
	comp=N,24μm,0.7s						
LZH	**Lanzhou**	**4.27**	**353**	Pn	**Pn**	**16 36 53.8**	**+2.7**
LZH				Sn	**Sn**	**16 37 43.1**	**+2.1**
LZH				Sg	**Sg**	**16 38 01.4**	**-1.6**
LZH				smax			
	comp=N,560nm,1.0s						
LZH				smax			
	comp=E,2μm,1.1s						
LZH				LR	LR		
	comp=E,2μm,4.5s						
LZH				LR	LR		
	comp=Z,2μm,6.6s						
XAN	**Xi'an**	**4.32**	**58**	Pn	**Pn**	**16 36 51.5**	**-0.3**
XAN				Pg	**Pg**	**16 37 04.9**	**-3.8**
XAN				Sn	**Sn**	**16 37 43.3**	**+1.0**
XAN				Sg	**Sg**	**16 38 04.0**	**-0.7**
XAN				smax			
	comp=N,1μm,0.7s						
XAN				smax			
	comp=E,690nm,0.9s						
XAN				LR	LR		
	comp=N,700nm,7.1s						
XAN				LR	LR		
	comp=E,400nm,9.6s						
XAN				LR	LR		
	comp=Z,510nm,7.7s						
ENH	**Enshi**	**4.56**	**109**	*e*Pn	**Pn**	**16 36 57.2**	**+2.1**
ENH				*e*Sn	**Sn**	**16 37 49.7**	**+1.4**
GYA	**Guiyang**	**5.69**	**160**	Pn	**Pn**	**16 37 11.8**	**+1.2**
GYA				Sn	**Sn**	**16 38 15.6**	**-0.5**
GYA				smax			
	comp=N,300nm,1.0s						
GYA				smax			
	comp=E,260nm,1.0s						
KMI	**Kunming**	**6.87**	**193**	Pn	**Pn**	**16 37 32.6**	**+5.8**
KMI				Sn	**Sn**	**16 38 43.3**	**-1.8**
KMI				smax			
	comp=N,58nm,1.3s						
KMI				smax			
	comp=E,79nm,1.3s						
KMI				LR	LR		
	comp=N,650nm,12.7s						
KMI				LR	LR		
	comp=E,910nm,7.9s						
KMI				LR	LR		
	comp=Z,580nm,10.4s						
GTA	**Gaotai**	**8.46**	**335**	*e*P	**Pn**	**16 37 49.8**	**+1.2**
GTA				pP		16 37 53.9	
GTA				sP		16 37 57.0	
GTA				S	**Sn**	**16 39 26.8**	**+2.7**
GTA				sS		16 39 32.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,39nm,4.2s						
GTA				LR	LR		
	comp=N,560nm,10.7s						
GTA				LR	LR		
	comp=E,380nm,11.3s						
GTA				LR	LR		
	comp=Z,550nm,12.8s						
WHN	**Wuhan**	**8.54**	**96**	P	**Pn**	**16 37 49.8**	**0.0**
WHN				S	**Sn**	**16 39 21.3**	**-5.0**
WHN				LR	LR		
	comp=N,3μm,3.7s						
WHN				LR	LR		
	comp=E,2μm,3.4s						
WHN				LR	LR		
	comp=Z,2μm,9.8s						
BTO	**Baotou**	**9.82**	**25**	*e*P	**Pn**	**16 38 14.1**	**+6.9**
BTO				LR	LR		
	comp=N,370nm,9.0s						
LSA	**Lhasa**	**11.67**	**263**	P	**Pn**	**16 38 25.8**	**-6.9**
LSA				S	**Sn**	**16 40 49.8**	**+6.7**
LSA				SS		16 41 55.0	
LSA				pmax	pmax		
	comp=Z,200nm,5.0s						
LSA				LR	LR		
	comp=N,170nm,8.0s						
LSA				LR	LR		
	comp=E,320nm,10.0s						
LSA				LR	LR		
	comp=Z,510nm,10.0s						
LSA	**Lhasa**	**11.67**	**263**	*e*P	**Pn**	**16 38 34.0**	**+1.3**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	**Lhasa**	**11.67**	**263**	*e*Pn	**Pn**	**16 38 34.0**	**+1.4**
	comp=Z,3.9nm,0.8s						
NJ2	**Nanjing**	**12.20**	**85**	*e*P	**Pn**	**16 38 43.6**	**+3.7**
NJ2				pP		16 38 46.8	
NJ2				sP		16 38 50.3	
NJ2				PP		16 38 54.1	
NJ2				S	**Sn**	**16 41 00.1**	**+4.0**
NJ2				sS		16 41 05.3	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				LR	LR		
	comp=N,290nm,11.4s						
NJ2				LR	LR		
	comp=E,790nm,10.0s						
NJ2				LR	LR		
	comp=Z,810nm,10.7s						
QIZ	**Qiongzhong**	**13.64**	**158**

comp=Z,118nm,18.4s,baz=7.5,slow=40
ULN Ulaanbaatar 16.12 6 *e*P **Pn 16 39 32.5 -0.2**
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 16.12 6 *e*Pn **Pn 16 39 32.5 -0.2**
comp=Z,5.1nm,0.9s
ZAK Zakamensk 18.55 358 *e*P **Pn 16 40 01.3 -1.6**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
TLY Talaya 19.83 358 *e*P **Pn 16 40 18.8 +0.4**
TLY pmax pmax
comp=Z,4.0nm,1.0s
TLY MLR MLR
comp=Z,125nm,11.0s
KSRS Korea Array 20.05 67 P **P 16 40 19.9 +0.6**
comp=Z,0.4nm,0.3s,baz=256,slow=10.0,SNR=43
KSRS LR LR 16 49 21.1
comp=Z,77nm,18.6s,MS3.1,baz=220,slow=41
CN2 Changchun 20.35 48 *e*P **P 16 40 23.8 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
IRK Irkutsk 20.39 360 *e*P **P 16 40 24.2 +1.4**
IRK pmax pmax
comp=Z,22nm,1.1s
JOW Kunigami 21.31 97 P **P 16 40 32.9 -0.1**
comp=Z,6.0nm,0.3s,mb4.4,baz=344,slow=6.9,SNR=15
JOW LR LR 16 49 21.7
comp=Z,138nm,20.8s,MS3.3,baz=348,slow=38
MK31 Makanchi Array 22.65 318 *e*P **P 16 40 47.3 +0.1**
MKAR Makanchi Array 22.65 318 P **P 16 40 47.6 +0.4**
comp=Z,1.4nm,0.7s,mb3.5,baz=115,slow=11,SNR=15
MKAR LR LR 16 50 28.5
comp=Z,238nm,18.6s,MS3.7,baz=114,slow=39
MKAR Makanchi Array 22.65 318 P **P 16 40 47.6 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,238nm,18.6s
ZAA0 Zalesovo Array 26.21 333 *e*P **P 16 41 20.2 -0.5**
ZALV Zalesovo Beam 26.21 333 P **P 16 41 20.6 -0.2**
comp=Z,2.4nm,0.4s,mb4.1,baz=130,slow=9.7,SNR=16
ZALV LR LR 16 52 14.6
comp=Z,39nm,19.7s,MS3.0,baz=84,slow=38
ZALV Zalesovo Beam 26.21 333 P **P 16 41 20.6 -0.2**
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
ZALV MLR MLR
comp=Z,39nm,19.7s,MS3.0
KLR Kul'dur 26.82 42 *e*P **P 16 41 23.0 -3.4**
KLR MLR MLR
comp=Z,700nm,12.0s,MS4.4
KURK Kurchatov 26.86 322 P **P 16 41 26.9 +0.2**
comp=Z,1.8nm,0.6s,mb3.8,baz=130,slow=7.7,SNR=15
KURK LR LR 16 52 44.9
comp=Z,126nm,20.4s,MS3.5,baz=120,slow=38
KURK Kurchatov 26.86 322 P **P 16 41 26.9 +0.2**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
KURK MLR MLR
comp=Z,127nm,20.4s,MS3.5
KURK Kurchatov 26.86 322 P **P 16 41 26.9 +0.2**
KURK LR LR 16 52 44.9
MJAR Matsushiro Arr 28.19 71 P **P 16 41 37.3 -1.5**
comp=Z,0.8nm,0.6s,mb3.6,baz=273,slow=9.9,SNR=3.9
MJAR Matsushiro Arr 28.19 71 P **P 16 41 37.3 -1.5**
MJAR pmax pmax
comp=Z,1.0nm,0.6s
JHJ Hachijo jima 2 29.72 78 LR LR 16 56 02.4
comp=Z,69nm,18.4s,MS3.3,baz=78,slow=41
BVAR Borovoye Array 32.42 321 P **P 16 42 15.6 -0.4**
comp=Z,0.6nm,0.4s,mb3.8,baz=117,slow=8.5,SNR=4.3
BVAR Borovoye Array 32.42 321 P **P 16 42 15.6 -0.4**
BVAR pmax pmax
comp=Z,1.0nm,0.4s
PALK Pallekele 33.01 227 LR LR 16 57 18.7
comp=Z,96nm,20.3s,MS3.5,baz=88,slow=39
YAK Yakutsk 34.30 21 *e*P **P 16 42 32.2 -0.1**
YAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
ABKAR Akbulak array 37.44 311 *e*P **P 16 42 59.2 -0.1**
comp=Z,0.6nm,0.3s,mb3.9
ARU Arti 40.06 322 *d i*P **P 16 43 21.4 +0.2**
ARU *e* 16 44 53.3
ARU S **S 16 49 27.9 +0.9**
ARU SS SS 16 52 22.9 -1.1
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.5
ARU Arti 40.06 322 *e*P **P 16 43 20.8 -0.4**
comp=Z,11nm,1.0s,mb4.5
TIXI Tiksi 41.97 11 *e*P **P 16 43 34.2 -2.5**
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
TIXI Tiksi 41.97 11 *e*P **P 16 43 40.2 +3.5**
comp=Z,1.4nm,0.4s,mb3.9
SEY Seymchan 43.29 30 *i*P **P 16 43 48.1 +0.5**
BILL Bilibino 50.37 25⇑ *e*P **P 16 44 42.1 -0.8**
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
BILL Bilibino 50.37 25 *e*P **P 16 44 42.2 -0.7**
comp=Z,4.4nm,0.9s,mb4.5
OBN Obninsk 52.16 318 *e*P **P 16 44 56.9 +0.4**
OBN pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
OBN MLR MLR
comp=Z,100nm,25.0s,MS3.8
BRTR Keskin Array B 56.67 299 P **P 16 45 30.2 +0.7**
comp=Z,0.3nm,0.4s,mb3.7,baz=101,slow=5.2,SNR=3.5
ARCES ARCESS Array B 56.73 336 P **P 16 45 28.5 -1.0**
comp=Z,2.3nm,0.9s,mb4.2,baz=82,slow=8.8,SNR=4.5
ARCES ARCESS Array B 56.73 336 P **P 16 45 28.5 -1.0**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 57.14 326 P **P 16 45 31.0 -1.6**
comp=Z,1.8nm,0.5s,mb4.3,baz=96,slow=8.6,SNR=12
FINES FINESS Array B 57.14 326 P **P 16 45 31.0 -1.6**
FINES pmax pmax
comp=Z,2.0nm,0.5s
WRAB Tennant Creek 58.90 147 *e*P **P 16 45 44.8 -0.6**
WRAB pmax pmax
comp=Z,18nm,0.7s,mb5.2
WRAB Tennant Creek 58.90 147 *e*P **P 16 45 44.8 -0.5**
comp=Z,18nm,0.7s,mb5.2
ASAR Alice Springs 61.95 149 P **P 16 46 06.2 0.0**
comp=Z,3.2nm,0.5s,mb4.7,baz=333,slow=6.6,SNR=67
ASAR Alice Springs 61.95 149 P **P 16 46 06.2 0.0**
ASAR pmax pmax
comp=Z,3.0nm,0.5s
NB2 NORSAR Subarra 64.22 327 P **P 16 46 19.0 -1.8**
comp=Z,1.2nm,0.8s,mb4.0,baz=71,slow=6.5
NOA NORSAR Array B 64.22 327 P **P 16 46 19.5 -1.3**
comp=Z,2.1nm,0.8s,mb4.2,baz=72,slow=6.7,SNR=4.9
NOA NORSAR Array B 64.22 327 P **P 16 46 19.5 -1.3**
NOA pmax pmax
comp=Z,2.0nm,0.9s
CLL Collm 66.75 317 *e*P **P 16 46 38.0 +0.7**
CLL *e* pP 16 46 41.0 +0.7
CLL Collm 66.75 317 *e*P **P 16 46 38.0 +0.7**
CLL *ep*P pP 16 46 41.0 +0.7
comp=Z,3.0nm,0.9s
CLL *e*PP PP 16 49 11.0 +7.0
GERES GERESS Array B 67.27 314 P **P 16 46 40.2 -0.5**
comp=Z,0.4nm,0.5s,mb3.7,baz=76,slow=5.6,SNR=4.0
GERES LR LR 17 17 47.3
comp=Z,89nm,18.8s,MS4.0,baz=214,slow=38
INK Inuvik 71.35 19 *e*P **P 16 47 04.3 -1.4**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 71.35 19 *e*P **P 16 47 04.3 -1.3**
comp=Z,2.6nm,0.9s,mb4.2
STKA Stephens Creek 72.45 147 P **P 16 47 12.5 -0.1**
comp=Z,4.0nm,0.7s,mb4.4,baz=312,slow=5.7,SNR=7.0
LPG La Plagne 72.99 313 *e*P **P 16 47 15.3 -0.6**
comp=Z,4.8nm,0.6s,mb4.3
LPG La Plagne 72.99 313 *e*P **P 16 47 15.3 -0.6**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LPG La Plagne 72.99 313 *e*P **P 16 47 15.3 -0.6**
comp=Z,2.4nm,0.6s,mb4.3
LPL La Plagne 72.99 313 *e*P **P 16 47 15.2 -0.7**
comp=Z,5.5nm,0.6s,mb4.4
LPL La Plagne 72.99 313 *e*P **P 16 47 15.2 -0.7**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LPL La Plagne 72.99 313 *e*P **P 16 47 15.2 -0.7**
comp=Z,2.8nm,0.6s,mb4.4
SMF Signal de Mont 74.21 315 *e*P **P 16 47 20.1 -2.9**

YKA Yellowknife Ar 80.89 17 P **P 16 47 59.5 -0.6**
comp=Z,1.0nm,0.6s,mb3.9,baz=332,slow=5.2,SNR=16
YKA Yellowknife Ar 80.89 17 P **P 16 47 59.5 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 80.89 17 P **P 16 47 59.5 -0.6**
QSPA South Pole Qui 121.61 180 PKP PKPdf 16 54 38.1 -0.7
comp=Z,1.0nm,0.6s,baz=265,slow=1.8,SNR=9.3
QSPA South Pole Qui 121.61 180 PKP PKPdf 16 54 38.1 -0.7

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*IDC **23** 16:48:02.0±0.8, 31°.75N×104°.22E, h0km, mb3.9/15, mb1 4.0/17, mb1mx3.9/29, mbtmp3.9/17, ML3.5/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/39, Error ellipse: s-maj=28.6km s-min=15.3km az=53.0*
*NEIC **23** 16:48:04.8±0.7, 31°.74N×104°.06E, h10km, mb3.9/3, Error ellipse: s-maj=15.3km s-min=11.6km az=70.0*
*MOS **23** 16:48:04.8±0.9, 31°.73N×104°.21E, h33km, mb4.2/11, Error ellipse: s-maj=20.6km s-min=9.7km az=107.0*
*BJI **23** 16:48:04.8, 31°.83N×104°.27E, h14km, mB4.2/2, mb3.9/2, ML3.8/19, Ms3.5/6, Ms7 3.3/7*
ISC 23 16:48:02.8±1.8, 31°.76N±0°.04×104°.17E±0°.05, h1km±11km, n54, σ0°99/64, mb4.1/19, MS2.6/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.32**	**357**	Pg	**Pb**	**16 49 16.6**	**-2.9**
LZH				Sn	**Sn**	**16 50 02.1**	**+1.5**
LZH				Sg	**Sg**	**16 50 21.0**	**-0.6**
LZH				smax			
	comp=N,240nm,1.1s						
LZH				smax			
	comp=E,480nm,1.1s						
LZH				LR	LR		
	comp=N,610nm,5.2s						
LZH				LR	LR		
	comp=Z,750nm,8.2s						
XAN	**Xi'an**	**4.60**	**59**	Pn	**Pn**	**16 49 13.3**	**-0.1**
XAN				Pg	**Pg**	**16 49 26.8**	**-4.1**
XAN				Sn	**Sn**	**16 50 09.8**	**+2.4**
XAN				Sg	**Sg**	**16 50 25.3**	**-5.2**
XAN				smax			
	comp=N,280nm,0.8s						
XAN				smax			
	comp=E,120nm,1.1s						
XAN				LR	LR		
	comp=N,240nm,7.7s						
XAN				LR	LR		
	comp=E,100nm,10.5s						
XAN				LR	LR		
	comp=Z,130nm,9.8s						
ENH	**Enshi**	**4.80**	**107**	*e*Pn	**Pn**	**16 49 17.6**	**+1.4**
ENH				*e*Sn	**Sn**	**16 50 11.4**	**-1.1**
GYA	**Guiyang**	**5.72**	**157**	Pn	**Pn**	**16 49 29.9**	**+1.1**
GYA				Sn	**Sn**	**16 50 33.9**	**-1.2**
GYA				smax			
	comp=N,120nm,1.0s						
GYA				smax			
	comp=E,150nm,0.7s						
KMI	**Kunming**	**6.73**	**191**	Pn	**Pn**	**16 49 47.9**	**+5.2**
KMI				Sn	**Sn**	**16 51 00.6**	**+0.6**
KMI				smax			
	comp=N,39nm,1.0s						
KMI				smax			
	comp=E,52nm,0.7s						
KMI				LR	LR		
	comp=N,270nm,12.6s						
KMI				LR	LR		
	comp=E,130nm,9.7s						
KMI				LR	LR		
	comp=Z,280nm,13.1s						
GTA	**Gaotai**	**8.41**	**336**	*e*P	**Pn**	**16 50 10.9**	**+5.2**
GTA				pP		16 50 15.0	
GTA				sP		16 50 17.9	
GTA				S	**Sn**	**16 51 49.4**	**+8.1**
GTA				sS		16 51 57.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,33nm,5.1s						
GTA				LR	LR		
	comp=N,220nm,8.9s						
GTA				LR	LR		
	comp=E,260nm,12.8s						
GTA				LR	LR		
	comp=Z,210nm,12.8s						
WHN	**Wuhan**	**8.81**	**95**	P	**Pn**	**16 50 12.8**	**+1.6**
WHN				sP		16 50 17.9	
WHN				S	**Sn**	**16 51 43.4**	**-7.8**
WHN				LR	LR		
	comp=N,800nm,3.9s						
WHN				LR	LR		
	comp=E,350nm,3.4s						
WHN				LR	LR		
	comp=Z,500nm,7.8s						
CM31	**Chiang Mai Arr**	**14.06**	**201**	*e*Pn	**Pn**	**16 51 32.2**	**+9.1**
	comp=Z,8.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.06**	**201**	Pn	**Pn**	**16 51 24.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=10,slow=11,SNR=8.2						
SONM	**Songino Array**	**16.14**	**5**	Pn	**Pn**	**16 51 52.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=9.5						
ULN	**Ulaanbaatar**	**16.23**	**7**	*e*P	**Pn**	**16 51 56.3**	**+4.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.23**	**7**	*e*Pn	**Pn**	**16 51 56.3**	**+4.4**
	comp=Z,2.4nm,0.8s						
ZAK	**Zakamensk**	**18.61**	**358**	*e*P	**Pn**	**16 52 23.3**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
KSRS	**Korea Array**	**20.34**	**67**	P	**P**	**16 52 39.2**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=258,slow=10.0,SNR=7.2						
KSRS				LR	LR	17 00 36.2	
	comp=Z,35nm,21.4s,MS2.7,baz=215,slow=37						
KSRS	**Korea Array**	**20.34**	**67**	P	**P**	**16 52 39.3**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,35nm,21.4s,MS2.7						
MKAR	**Makanchi Array**	**22.52**	**318**	P	**P**	**16 53 04.8**	**+1.0**
	comp=Z,1.6nm,0.8s,mb3.6,baz=114,slow=12,SNR=12						
MKAR	**Makanchi Array**	**22.52**	**318**	P	**P**	**16 53 04.8**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	**Kashi**	**24.11**	**297**	P	**P**	**16 53 24.0**	**+4.1**
KSH				pmax	pmax		
	comp=Z,77nm,4.6s						
ZAA0	**Zalesovo Array**	**26.16**	**334**	*e*P	**P**	**16 53 37.5**	**-0.8**
ZALV	**Zalesovo Beam**	**26.16**	**334**	P	**P**	**16 53 38.5**	**+0.2**
	comp=Z,1.6nm,0.5s,mb3.9,baz=134,slow=10,SNR=11						
ZALV				LR	LR	17 05 01.0	
	comp=Z,18nm,20.1s,MS2.6,baz=298,slow=39						
ZALV	**Zalesovo Beam**	**26.16**	**334**	P	**P**	**16 53 38.5**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,18nm,20.1s,MS2.6						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**16 53 43.8**	**+0.1**
	comp=Z,1.3nm,0.6s,mb3.8,baz=128,slow=7.7,SNR=5.6						
KURK	**Kurchatov**	**26.75**	**322**	P	**P**	**16 53 43.8**	**0.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**16 54 33.0**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=119,slow=9.7,SNR=6.5						
BVAR	**Borovoye Array**	**32.31**	**321**	P	**P**	**16 54 33.0**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**37.28**	**311**	*e*P	**P**	**16 55 16.4**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.7						
AKTK	**Aktyubinsk**	**38.73**	**313**	P	**P**	**16 55 28.6**	**+0.3**
AKTO	**Aktyubinsk**	**38.73**	**313**	P	**P**	**16 55 28.6**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.7,baz=112,slow=12,SNR=4.2						
AKTO	**Aktyubinsk**	**38.73**	**313**	P	**P**	**16 55 28.6**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ARU	**Arti**	**39.95**	**322**	*e*P	**P**	**16 55 38.6**	**+0.3**
ARU				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
ARU	**Arti**	**39.95**	**322**	*e*P	**P**	**16 55 38.6**	**+0.2**
	comp=Z,16nm,1.4s,mb4.5						
JOF	**Joensuu**	**54.50**	**328**	*e*P	**P**	**16 57 31.1**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
JOF	**Joensuu**	**54.50**	**328**	*ep*	**P**	**16 57 31.1**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.4						
BRTR	**Keskin Array B**	**56.46**	**299**	P	**P**	**16 57 45.7**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=116,slow=8.6,SNR=4.6						
BRTR	**Keskin Array B**	**56.46**	**299**	P	**P**	**16 57 45.7**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**56.68**	**336**	P	**P**	**16 57 46.8**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.1,baz=81,slow=8.7,SNR=12						
ARCES	**ARCESS Array B**	**56.68**	**336**	P	**P**	**16 57 46.8**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	**Kangasniemi**	**56.87**	**327**	*e*P	**P**	**16 57 47.4**	**-1.3**
KAF	**Kangasniemi**	**56.87**	**327**	*ep*	**P**	**16 57 47.4**	**-1.3**
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**16 57 49.7**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.4,baz=81,slow=6.8,SNR=28						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**16 57 49.7**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**16 58 24.4**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.4,baz=334,slow=6.6,SNR=50						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**16 58 24.4**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**64.13**	**327**	P	**P**	**16 58 37.0**	**-1.4**
	comp=Z,0.9nm,0.4s,mb4.3,baz=77,slow=6.9						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**16 58 37.4**	**-1.0**
	comp=Z,0.6nm,0.4s,mb4.2,baz=75,slow=5.4,SNR=6.7						
NOA	**NORSAR Array B**	**64.13**	**327**	P	**P**	**16 58 37.4**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	**GERESS Array B**	**67.13**	**314**	P	**P**	**16 58 57.2**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.9,baz=46,slow=8.4,SNR=5.3						
STKA	**Stephens Creek**	**72.53**	**147**	P	**P**	**16 59 30.4**	**-0.9**
	comp=Z,1.2nm,0.5s,mb4.3,baz=295,slow=14,SNR=5.0						
LPG	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 59 33.5**	**+0.4**
	comp=Z,5.1nm,0.5s,mb4.6						
LPL	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 59 33.4**	**+0.3**
	comp=Z,6.0nm,0.5s,mb4.7						
SMF	**Signal de Mont**	**74.07**	**315**	*e*P	**P**	**16 59 40.5**	**+0.2**
YKA	**Yellowknife Ar**	**81.05**	**17**	P	**P**	**17 00 18.3**	**-0.7**
	comp=Z,1.4nm,0.7s,mb4.1,baz=330,slow=5.2,SNR=16						
YKA	**Yellowknife Ar**	**81.05**	**17**	P	**P**	**17 00 18.3**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**93.48**	**288**	P	**P**	**17 01 19.7**	**-0.9**
	comp=Z,0.9nm,1.2s,mb4.1,baz=180,slow=8.7,SNR=3.6						

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*CSEM **23** 16:59:40.2, 34°.83N×28°.37E, h71km, After ATH*
ATH 23 16:59:56.3, 35°.53N×26°.91E, h27km, MD3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.21**	**85**	*e*PB	Pb	17 00 02.4	+0.2
KARP	**Karpathos**	**0.21**	**85**	*e*P	Pb	17 00 02.4	+0.2
KARP				*e*S	Sb	17 00 18.7	+12
ZKR	**Zakros**	**0.70**	**234**	*e*PN	Pn	17 00 10.3	-0.1
ZKR	**Zakros**	**0.70**	**234**	*e*P	Pb	17 00 10.3	+0.4
NPS	**Neapolis**	**1.09**	**256**	*e*PN	Pn	17 00 17.2	+1.4
NPS	**Neapolis**	**1.09**	**256**	*e*P	Pn	17 00 17.2	+1.4
XRY	**Khrisi**	**1.19**	**237**	*e*P	Pn	17 00 15.8	-1.4
LAST	**Lasithi**	**1.23**	**253**	*e*PB	Pb	17 00 18.5	-0.3
LAST	**Lasithi**	**1.23**	**253**	*e*P	Pn	17 00 18.5	+0.8
KARN	**Karanos**	**2.45**	**268**	*e*PN	Pn	17 00 36.7	+2.3
KARN	**Karanos**	**2.45**	**268**	*e*P	Pn	17 00 36.7	+2.3

DJA 23 17:18:55, 0°.05N×122°.01E, h10km, MLv3.7/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.43**	**351**	P	Pg	17 18 59.7	-3.7
APSI	**Ampana**	**1.02**	**201**	P	Pg	17 19 16.3	+1.6
LUWI	**Luwuk**	**1.32**	**145**	P	Pn	17 19 12.5	-7.1
TTSI	**Tana Toraja**	**3.77**	**215**	P	Pn	17 19 53.4	+0.1
SGSI	**Sangihe**	**5.04**	**44**	P	Pn	17 20 16.1	+5.4

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*IDC **23** 17:19:07.2±1.1, 24°.96N×122°.70E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.7/24, mbtmp3.7/11, MS3.4/2, Ms1 3.4/2, ms1mx2.5/40, Error ellipse: s-maj=35.6km s-min=22.1km az=68.0*
*NEIC **23** 17:19:08.8±0.5, 24°.87N×122°.53E, h10km, mb4.5/2, Error ellipse: s-maj=9.7km s-min=6.7km az=116.0*
*ISCJB **23** 17:19:08.0±0.5, 24°.95N±0°.02×122°.56E±0°.02, h8km±3km, mb3.7/14, Error ellipse: s-maj=4.2km s-min=2.9km az=3.7*
*TAP **23** 17:19:10.1, 24°.92N×122°.44E, h17km, ML4.1, C*
*JMA **23** 17:19:12.1±0.3, 24°.79N×122°.61E, h41km, M3.3*
*BJI **23** 17:19:16.2, 25°.21N×121°.81E, h10km, mB4.3/2, mb3.8/3, ML3.6/3, Ms4.0/3, Ms7 3.8/2*
ISC 23 17:19:08.3±0.5, 24°.91N±0°.02×122°.56E±0°.02, h2km±3km, n89, σ1°06/116, mb3.7/14, 9C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.53**	**281**	⇓*i*P	**Pg**	**17 19 19.2**	**+0.8**
	baz=282						
TWB1				*i* S	**Sg**	**17 19 25.1**	**-0.1**
	baz=282						
YOJ	**Yonaguni jima**	**0.61**	**137**	P	**Pg**	**17 19 22.6**	**+2.7**
YOJ				S	**Sg**	**17 19 30.1**	**+2.3**
TWC	**Suao**	**0.71**	**245**	⇓*i*P	**Pg**	**17 19 21.9**	**0.0**
	baz=239						
TWC				S	**Sg**	**17 19 30.9**	**-0.2**
	baz=239						
NWF	**Wu-fen Shan**	**0.72**	**283**	*e*S	**Sg**	**17 19 33.4**	**+1.8**
	baz=284						
ILA	**Ilan**	**0.75**	**259**	*e*P	**Pg**	**17 19 23.0**	**+0.3**
	baz=255						
ILA				*e*S	**Sg**	**17 19 33.4**	**+1.0**
	baz=255						
TWE	**Neicheng**	**0.83**	**257**	P	**Pg**	**17 19 24.2**	**0.0**
	baz=245						
TWE				*i* S	**Sg**	**17 19 34.6**	**-0.4**
	baz=245						
ENA	**Nanau**	**0.89**	**237**	P	**Pg**	**17 19 25.3**	**+0.1**
	baz=231						
ENA				*e*S	**Sg**	**17 19 36.8**	**+0.1**
	baz=231						
TWA	**Mucha**	**0.89**	**275**	⇑*i*P	**Pg**	**17 19 25.9**	**+0.6**
	baz=274						
TWA				*i* S	**Sg**	**17 19 36.5**	**-0.3**
	baz=274						
ENTT	**Nioudou**	**0.94**	**254**	P	**Pg**	**17 19 26.2**	**-0.1**
	baz=236						
ENTT				*e*S	**Sg**	**17 19 38.6**	**0.0**
	baz=236						
TWY	**Chenhua**	**0.94**	**293**	⇓*i*P	**Pg**	**17 19 26.8**	**+0.5**
	baz=294						
TWY				S	**Sg**	**17 19 38.8**	**+0.3**
	baz=294						
TAP1	**Taipei**	**0.95**	**278**	P	**Pg**	**17 19 26.9**	**+0.5**
	baz=277						
TAP1				S	**Sg**	**17 19 38.1**	**-0.7**
	baz=277						
TATO	**Taipei**	**0.97**	**274**	*e*Pg	**Pg**	**17 19 26.1**	**-0.8**
TWS1	**Kuangyinshan**	**1.05**	**281**	P	**Pg**	**17 19 28.5**	**0.0**
	baz=280						
TWS1				*e*S	**Sg**	**17 19 42.1**	**0.0**
	baz=280						
YHNB	**Yeheng**	**1.10**	**258**	*e*Pg	**Pg**	**17 19 28.7**	**-0.7**
NSK	**Sanguang**	**1.12**	**258**	P	**Pg**	**17 19 29.2**	**-0.5**
	baz=269						
NSK				S	**Sg**	**17 19 43.3**	**-0.8**
	baz=269						
NACB	**Ninganchiao**	**1.14**	**230**	*e*Pg	**Pg**	**17 19 29.2**	**-1.0**
NACB				*e*Sg	**Sg**	**17 19 44.0**	**-1.0**
NNS	**Nan Shan**	**1.18**	**247**	⇓*i*P	**Pg**	**17 19 30.6**	**-0.2**
	baz=243						
NNS				*i* S	**Sg**	**17 19 44.8**	**-1.2**
	baz=243						
TWD	**Chiawan**	**1.21**	**227**	P	**Pg**	**17 19 31.4**	**0.0**
	baz=231						
TWD				*e*S	**Sg**	**17 19 47.7**	**+0.7**
	baz=231						
IRIF	**Iriomote-Funau**	**1.21**	**118**	P	**Pg**	**17 19 31.4**	**-0.1**
IRIF				*e*S	**Sg**	**17 19 45.5**	**-1.7**
NCU	**National Centr**	**1.25**	**273**	*e*P	**Pg**	**17 19 30.9**	**-1.2**
	baz=272						
HWA	**Hwalien**	**1.27**	**223**	*e*P	**Pg**	**17 19 33.4**	**+0.8**
	baz=218						
WHF	**Hehuan Shan**	**1.40**	**237**	⇑P	**Pn**	**17 19 34.2**	**-0.6**
	baz=233						
WHF				*e*S	**Sg**	**17 19 51.8**	**-1.6**
	baz=233						
HATJ	**Hateruma jima**	**1.42**	**127**	P	**Pn**	**17 19 34.8**	**-0.3**

TWT	Tachien	1.42	243	P	Pn	17 19 35.0	-0.1
	baz=230						
TWT				eS	Sg	17 19 53.6	-0.3
	baz=230						
NSTT	Nanjuang	1.44	259	⇑iP	Pn	17 19 34.4	-1.1
	baz=257						
HSN	Hsinchu	1.45	266	eP	Pn	17 19 34.1	-1.4
	baz=265						
JKRS	Kuro-shima	1.48	117	P	Pn	17 19 35.7	-0.3
ESL	Shilin	1.50	223	P	Pn	17 19 35.3	-0.9
	baz=219						
JIJ	Ishigaki jima	1.54	110	P	Pn	17 19 36.1	-0.7
NSY	Sanyi	1.71	254	eP	Pn	17 19 40.9	+1.8
	baz=265						
TWQ1	Liyutan	1.72	251	eP	Pn	17 19 39.2	-0.1
	baz=263						
EHY	Hungye	1.80	219	eP	Pn	17 19 38.9	-1.4
	baz=215						
SMLT	Sun Moon Lake	1.82	236	⇑iP	Pn	17 19 41.5	+0.8
	baz=232						
SMLT				eS	Sn	17 20 05.0	+0.6
	baz=232						
SSLB	Suanglung	1.84	233	ePn	Pn	17 19 40.7	-0.2
SSLB				eSn	Sn	17 20 03.5	-1.3
TYC	Yuchr	1.85	238	⇑iP	Pn	17 19 41.9	+0.9
	baz=234						
TCU	Taichung	1.88	247	eP	Pn	17 19 42.7	+1.3
	baz=243						
YULB	Yu-li	1.90	218	ePn	Pn	17 19 40.0	-1.7
YULB				eSn	Sn	17 20 03.8	-2.4
TWF1	Yuli	1.93	217	eP	Pn	17 19 41.0	-1.1
	baz=213						
JTJ	Tarama	1.97	97	P	Pn	17 19 44.5	+1.8
WNT	Mingjian	1.99	239	eP	Pn	17 19 44.0	+0.9
	baz=254						
YUS	Yu-Shan	2.04	226	⇑iP	Pn	17 19 44.4	+0.8
	baz=223						
CHKT	Chengkung	2.11	211	eP	Pn	17 19 43.0	-1.5
	baz=193						
ALS	Alishan	2.12	229	⇑iP	Pn	17 19 45.9	+1.1
	baz=209						
CHN5	Tsauling	2.16	233	⇑P	Pn	17 19 46.7	+1.4
	baz=213						
WGK	Gukeng	2.19	237	eP	Pn	17 19 46.9	+1.2
	baz=250						
ELDTW	Lidau	2.22	220	eP	Pn	17 19 45.1	-1.0
	baz=203						
CHN2	Minshiung	2.34	235	eP	Pn	17 19 49.0	+1.2
	baz=249						
CHN2				eS	Sn	17 20 19.5	+2.2
	baz=249						
CHN4	Tsaushan	2.37	230	eP	Pn	17 19 49.4	+1.2
	baz=211						
CHN4				eS	Sn	17 20 21.2	+3.2
	baz=211						
TPUB	Ta-pu	2.38	228	ePn	Pn	17 19 49.3	+0.9
TPUB				eSg	Sg	17 20 20.6	-4.3
CHY	Chiayi	2.40	235	eP	Pn	17 19 49.0	+0.3
	baz=248						
CHY				eS	Sn	17 20 19.7	+1.0
	baz=248						
WTP	Ta-pu	2.43	227	P	Pn	17 19 50.2	+1.2
	baz=209						
WSF	Szhu	2.48	240	eP	Pn	17 19 49.6	-0.1
	baz=237						
TWG	Pinlang	2.48	214	ePn	Pn	17 19 49.0	-0.8
TWG	Pinlang	2.48	214	eP	Pn	17 19 49.3	-0.5
	baz=210						
TWK	Hsinying	2.50	230	P	Pn	17 19 51.3	+1.3
	baz=211						
CHN1	Nanshi	2.53	228	P	Pn	17 19 51.4	+1.0
	baz=225						
SGST	Jiashian	2.56	225	⇑P	Pn	17 19 52.2	+1.3
	baz=207						
CHN3	Shinhua	2.71	228	eP	Pn	17 19 53.2	+0.3
	baz=226						
ECL	Taimali	2.73	213	eP	Pn	17 19 52.0	-1.2
	baz=210						
SSD	Sandimen	2.78	220	eP	Pn	17 19 55.0	+1.1
	baz=203						
TWM1	Shoushan	2.85	224	eP	Pn	17 19 55.7	+0.9
	baz=221						
EAST	Anshuo	2.96	212	eP	Pn	17 19 55.6	-0.8
	baz=209						
LAY	Lan-yu	3.00	198	eP	Pn	17 19 55.3	-1.6
	baz=195						
PNG	Penghu	3.05	245	eP	Pn	17 19 54.7	-2.9
	baz=242						
SCZT	Fangliau	3.09	216	eP	Pn	17 19 59.7	+1.6
	baz=200						
TWP	Hsiaoliuchiu	3.25	219	eP	Pn	17 20 02.1	+1.8
	baz=217						
TSEB	Hengchuen, Pin	3.36	207	eP	Pn	17 20 02.1	+0.2
	baz=205						
TWK1	Hengchun	3.36	209	eP	Pn	17 20 00.5	-1.4
	baz=196						
QZH	Quanzhou	3.60	271	Pn	Pn	17 20 04.3	-0.8
QZH				Sn	Sn	17 20 48.1	-0.2
QZH				smax			
	comp=N,340nm,1.0s						
QZH				smax			
	comp=E,110nm,0.6s						
WHN	Wuhan	9.18	309	eP	Pn	17 21 29.6	+7.8
WHN				S	Sn	17 22 56.3	-10
WHN				LR	LR		
	comp=N,840nm,3.2s						
WHN				LR	LR		
	comp=E,560nm,2.2s						
WHN				LR	LR		
	comp=Z,530nm,8.6s						
KSRS	Korea Array	13.32	19	Pn	Pn	17 22 19.3	+0.9
	comp=Z,0.0nm,0.3s,baz=198,slow=8.5,SNR=2.4						
KSRS				LR	LR	17 27 57.7	
	comp=Z,130nm,18.5s,baz=172,slow=40						
CMAR	Chiang Mai Arr	22.85	258	P	P	17 24 14.3	+1.3
	comp=Z,0.3nm,0.6s,mb2.9,baz=49,slow=9.7,SNR=3.2						
CMAR				PcP	PcP	17 28 04.0	-0.3
	comp=Z,1.0nm,0.7s,baz=64,slow=0.9,SNR=11						
GTA	Gaotai	23.99	313	eP	P	17 24 25.9	+1.6
GTA				pP		17 24 30.3	
GTA				sP	sP	17 24 33.3	+8.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
SONM	Songino Array	26.22	335	P	P	17 24 45.0	+0.5
	comp=Z,1.0nm,0.8s,mb3.4,baz=148,slow=9.2,SNR=8.1						
SONM				LR	LR	17 35 26.6	
	comp=Z,84nm,19.2s,baz=221,slow=37						
MK31	Makanchi Array	38.70	315	eP	P	17 26 33.4	-0.2
MKAR	Makanchi Array	38.70	315	P	P	17 26 33.5	-0.1
	comp=Z,1.1nm,0.5s,mb3.8,baz=98,slow=11,SNR=22						
MKAR	Makanchi Array	38.70	315	P	P	17 26 33.5	-0.1
ZALV	Zalesovo Beam	40.33	326	P	P	17 26 46.3	-0.8
	comp=Z,0.8nm,0.5s,mb3.7,baz=103,slow=7.5,SNR=6.6						
KURK	Kurchatov	42.35	319	P	P	17 27 02.6	-1.1
	comp=Z,0.5nm,0.3s,mb3.6,baz=109,slow=26,SNR=4.6						
WRAB	Tennant Creek	46.03	165	eP	P	17 27 31.0	-2.4
	comp=Z,11nm,1.3s,mb4.6						
KBL	Kabul	46.99	295	P	P	17 27 42.1	+1.1
BVAR	Borovoye Array	47.92	320	P	P	17 27 47.1	-0.8
	comp=Z,1.3nm,0.6s,mb4.2,baz=95,slow=8.3,SNR=10						
BRVK	Borovoye	47.99	320	P	P	17 27 47.2	-1.3
	comp=Z,3.1nm,0.9s,mb4.3						
ASAR	Alice Springs	49.52	166	P	P	17 27 59.6	-0.9
	comp=Z,0.5nm,0.8s,mb3.6,baz=344,slow=8.2,SNR=8.2						
FINES	FINESS Array B	71.45	330	P	P	17 30 29.2	-0.8
	comp=Z,1.7nm,0.9s,mb4.0,baz=72,slow=6.2,SNR=3.6						
BRTR	Keskin Array B	73.75	307	P	P	17 30 43.6	-0.5
	comp=Z,0.2nm,0.4s,mb3.4,baz=112,slow=6.4,SNR=2.7						
NOA	NORSAR Array B	78.17	332	P	P	17 31 07.6	-1.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=58,slow=7.6,SNR=3.0						
YKA	Yellowknife Ar	81.82	23	P	P	17 31 27.9	-0.7
	comp=Z,0.4nm,0.8s,mb3.4,baz=317,slow=5.1,SNR=5.2						
YKA	Yellowknife Ar	81.82	23	P	P	17 31 27.9	-0.7

*NNC **23** 17:24:25.8±3.4, 35°.28N×81°.71E, h0km, mb3.9, mpv4.2, Error ellipse: s-maj=38.4km s-min=30.8km az=112.0*
*IDC **23** 17:24:26.7±0.7, 35°.27N×81°.36E, h0km, mb3.9/14, mb1 4.1/18, mb1mx3.9/30, mbtmp3.9/18, ML3.5/4, MS3.6/13, Ms1 3.6/13, ms1mx3.3/45, Error ellipse: s-maj=19.8km s-min=14.4km az=67.0*
*ISCJB **23** 17:24:27.2±0.3, 35°.39N±0°.02×81°.44E±0°.05, h10km, mb3.9/17, MS3.6/10, Error ellipse: s-maj=5.3km s-min=3.2km az=179.8*
*NEIC **23** 17:24:28.2±0.4, 35°.30N×81°.47E, h10km, mb4.0/5, Error ellipse: s-maj=8.2km s-min=7.1km az=45.0*
*MOS **23** 17:24:30.1±1.6, 35°.41N×81°.40E, h33km, mb4.1/13, Error ellipse: s-maj=11.8km s-min=6.9km az=107.0*
*BJI **23** 17:24:35.3, 35°.96N×81°.43E, h7km, mB4.5/2, mb4.0/4, ML4.4/5, Ms4.0/5, Ms7 3.8/3*
ISC 23 17:24:29.5±0.3, 35°.40N±0°.02×81°.47E±0°.05, h10km, n97, σ1§45/99, mb3.9/17, MS3.6/10, 9C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLP	Kalpa	4.70	216	eP	Pn	17 25 42.2	+1.7
KLP				eS	Sn	17 26 34.2	-0.8
JOSI	Joshimath	5.09	199	eP	Pn	17 25 48.9	+3.0
JOSI				eS	Sn	17 26 43.2	-1.4
SDNR	Sundarnagar	5.41	225	eP	Pn	17 25 53.1	+2.9
SMLA	Simla	5.58	221	i x	Pn	17 25 50.2	-2.4
SMLA				i S	Sn	17 26 56.3	-0.4
SMLA				i S	Sn	17 26 56.7	0.0
SMLA				ex	x	17 27 00.8	
	comp=N,179nm,0.3s						
SMLA				ex	x	17 27 01.5	
	comp=E,126nm,0.5s						
THN	Thein Dam	5.62	240	eP	Pn	17 25 53.1	-0.1
DDI	Dehra Dun	5.82	211	eP	Pn	17 25 57.8	+1.9
DDI				ex	x	17 28 04.0	
KSH	Kashi	6.00	315	ePn	Pn	17 26 00.3	+2.0
KSH				eSn	Sn	17 27 09.1	+2.0
KSH				smax			
	comp=N,4μm,1.6s						
KSH				smax			
	comp=E,1μm,1.1s						
NIL	Nilore	7.00	258	eP	Pn	17 26 11.7	-0.4
NDI	New Delhi	7.61	209	eP	Pn	17 26 20.0	-0.4
SONA	Sohna	8.04	209	eP	Pn	17 26 27.4	+1.0
KZA	Kyzart	8.25	326	P	Pn	17 26 30.4	+1.2
	SNR=11						
KKN	Kakani	8.25	156	eP	Pn	17 26 30.8	+1.5
	comp=E,19nm,0.5s						
GUN	Gumba	8.36	152	eP	Pn	17 26 32.4	+1.7
	comp=E,19nm,0.4s						
DMN	Daman	8.36	157	eP	Pn	17 26 32.0	+1.2
	comp=E,24nm,0.6s						
PKI	Pulchoki	8.50	156	eP	Pn	17 26 34.2	+1.6
	comp=E,31nm,0.6s						
AGRA	Agra	8.68	201	eP	Pn	17 26 35.5	+0.3
UCH	Uchtor	8.71	324	P	Pn	17 26 36.6	+1.1
	SNR=34						
UCH	Uchtor	8.71	324	ePn	Pn	17 26 36.4	+0.9
TKM2	Tokmak 2	8.79	331	⇑Pn	Pn	17 26 39.3	+2.7
	comp=E,5.9nm,1.0s						
TKM2				⇑Pg	Px	17 27 08.1	
	comp=E,21nm,1.3s						
TKM2				⇑Lg		17 29 11.5	
	comp=E,66nm,1.2s						
TKM2	Tokmak 2	8.79	331	ePn	Pn	17 26 38.0	+1.4
KBK	Karagaybulak	8.85	327	P	Pn	17 26 39.4	+2.0
	SNR=7.5						
AML	Almayashu	9.06	320	P	Pn	17 26 41.3	+1.1
	SNR=6.8						
AML	Almayashu	9.06	320	ePn	Pn	17 26 41.0	+0.8
FRU	Bishkek	9.13	326	eP	Pn	17 26 44.0	+2.7
FRU				pmax	pmax		
	comp=Z,25nm,1.6s						
CHMS	Chumysh	9.21	328	P	Pn	17 26 44.2	+1.9
	SNR=5.7						
EKS2	Erkin-Say	9.40	323	P	Pn	17 26 47.1	+2.1
	SNR=11						
EKS2	Erkin-Say	9.40	323	ePn	Pn	17 26 45.9	+0.9
WMQ	Urumqi	9.68	28	P	Pn	17 26 52.3	+3.5
WMQ				pmax	pmax		
	comp=Z,19nm,1.4s						
WMQ				smax			
	comp=N,52nm,1.4s						
WMQ				smax			
	comp=E,44nm,1.2s						
LSA	Lhasa	9.95	122	P	Pn	17 26 54.0	+1.5
KBL	Kabul	10.23	269	eP	Pn	17 26 55.8	-0.6
MK31	Makanchi Array	11.40	3	⇓Pn	Pn	17 27 12.0	-0.4
	comp=E,5.0nm,0.8s,baz=187,slow=13,SNR=18						
MK31				⇓Sn	Sn	17 29 22.2	+2.5
	comp=E,42nm,1.4s,baz=180,slow=20,SNR=3.5						
MK31				⇑Lg		17 30 34.3	
	comp=E,13nm,0.9s,baz=61,slow=36,SNR=3.7						
MK31	Makanchi Array	11.40	3	ePn	Pn	17 27 11.8	-0.6
MK31				eSn	Sn	17 29 10.8	-8.9
MKAR	Makanchi Array	11.40	3	Pn	Pn	17 27 11.5	-0.8
	comp=E,0.3nm,0.3s,baz=185,slow=12,SNR=17						
MKAR				Sn	Sn	17 29 19.2	-0.5
	comp=E,0.3nm,0.3s,baz=183,slow=19,SNR=3.6						
MKAR				Lg		17 30 33.6	
	comp=E,0.0nm,0.3s,baz=190,slow=24,SNR=2.6						
MKAR				LR	LR	17 32 34.3	
	comp=E,113nm,18.4s,baz=181,slow=42						
MKAR	Makanchi Array	11.40	3	P	Pn	17 27 11.5	-0.8
MKAR						17 29 19.3	
MKAR				MLR	MLR		
	comp=Z,113nm,18.4s						
MKAR	Makanchi Array	11.40	3	Pn	Pn	17 27 11.5	-0.8
MKAR				Sn	Sn	17 29 19.2	-0.5
MKAR				Lg		17 30 33.6	
MKAR				LR	LR	17 32 34.3	
KK31	Karatay Array	11.45	315	Pn	Pn	17 27 14.2	+1.1
	comp=Z,2.7nm,0.7s,baz=146,slow=14,SNR=14						
KK31				⇑Lg		17 30 31.8	
	comp=Z,17nm,1.3s,baz=140,slow=25						
KURBB	Kurchatov Arra	15.37	353	⇓Pn	Pn	17 28 03.1	-3.2
	comp=Z,1.3nm,1.2s						
KURBB				⇑Lg		17 32 35.5	
	comp=Z,1.9nm,1.2s						
KURK	Kurchatov	15.45	353	⇓Pn	Pn	17 28 04.0	-3.3
	comp=Z,11nm,1.3s						
KURK				⇓Lg		17 32 44.4	
	comp=Z,9.0nm,1.0s						
KURK	Kurchatov	15.45	353	Pn	Pn	17 28 03.5	-3.9
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=19						
KURK				Lg		17 32 38.0	
	comp=Z,0.1nm,0.3s,baz=0.3,slow=16,SNR=3.9						
KURK				LR	LR	17 35 00.6	
	comp=Z,139nm,18.5s,baz=175,slow=41						
KURK	Kurchatov	15.45	353	eP	Pn	17 28 03.7	-3.7
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	Kurchatov	15.45	353	ePn	Pn	17 28 03.6	-3.7
	comp=Z,8.8nm,1.0s						
HYB	Hyderabad	18.10	189	i P	Pn	17 28 41.0	-0.1
POO	Poona	18.11	204	ex	Pn	17 28 38.0	-3.2
ZAA0	Zalesovo Array	18.70	6	eP	Pn	17 28 46.2	-2.0
ZALV	Zalesovo Beam	18.70	6	P	Pn	17 28 47.3	-0.8
	comp=Z,0.1nm,0.3s,baz=196,slow=9.2,SNR=11						
ZALV				LR	LR	17 36 20.6	
	comp=Z,67nm,18.7s,baz=271,slow=38						
VOSK	Vostochnaya	18.85	340	⇓P	Pn	17 28 48.9	-1.2
	comp=Z,5.6nm,0.9s						
BVA0	Borovoye Array	19.29	339	⇑P	Pn	17 28 54.9	-0.4
	comp=Z,1.1nm,0.9s,baz=136,slow=12,SNR=6.5						
BVAR	Borovoye Array	19.29	339	P	Pn	17 28 54.0	-1.3
	comp=Z,0.2nm,0.3s,baz=140,slow=9.4,SNR=10.0						
BRVK	Borovoye	19.35	339	eP	Pn	17 28 54.8	-1.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRVK	Borovoye	19.35	339	eP	Pn	17 28 54.8	-1.2
	comp=Z,6.5nm,0.9s						
NVS	Novosibirsk	19.48	3	i P	Pn	17 28 54.4	-3.2
ZRNK	Zerenda	19.64	337	⇓P	Pn	17 28 54.5	-5.0
	comp=Z,3.2nm,0.8s						
AB31	Akbulak array	21.00	318	⇑P	Pn	17 29 11.7	-1.2
	comp=Z,6.7nm,0.9s,baz=122,slow=11,SNR=7.9						
ABKAR	Akbulak array	21.00	318	eP	P	17 29 11.2	-1.7
	comp=Z,8.7nm,1.0s						
ZAK	Zakamensk	21.78	40	eP	P	17 29 24.3	+2.9
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.0						
SONM	Songino Array	22.29	48	P	Pn	17 29 28.0	+1.3
	comp=Z,2.0nm,0.8s,mb3.6,baz=248,slow=8.5,SNR=16						
SONM	Songino Array	22.29	48	P	P	17 29 28.0	+1.2
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHTO	Chiang Mai	22.63	132	P	P	17 29 28.5	-2.1
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
CHTO	Chiang Mai	22.63	132	P	P	17 29 28.5	-2.1
	comp=Z,3.5nm,0.9s,mb3.8						
AKTK	Aktyubinsk	22.69	319	P	P	17 29 31.5	+0.5
AKTK				LR	LR	17 39 14.0	
AKTO	Aktyubinsk	22.69	319	⇑P	P	17 29 31.0	0.0
	comp=Z,1.1nm,1.1s,mb3.2						
AKTO	Aktyubinsk	22.69	319	P	P	17 29 31.5	+0.5
	comp=Z,1.5nm,0.7s,mb3.6,baz=98,slow=8.8,SNR=6.8						
AKTO				LR	LR	17 39 14.0	
	comp=Z,289nm,20.1s,MS3.7,baz=293,slow=39						
AKTO	Aktyubinsk	22.69	319	P	P	17 29 31.5	+0.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
AKTO				MLR	MLR		
	comp=Z,289nm,20.1s,MS3.7						
ULN	Ulaanbaatar	22.70	49	eP	P	17 29 31.9	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.0						
ULN	Ulaanbaatar	22.70	49	eP	P	17 29 31.9	+0.7
	comp=Z,8.5nm,1.3s,mb4.0						
CMAR	Chiang Mai Arr	22.90	133	P	P	17 29 32.2	-1.3
	comp=Z,0.8nm,0.8s,mb3.2,baz=314,slow=9.8,SNR=5.0						
CMAR				PcP	PcP	17 33 23.3	-0.8
	comp=Z,0.8nm,0.9s,baz=298,slow=3.1,SNR=4.8						
CMAR	Chiang Mai Arr	22.90	133	P	P	17 29 32.2	-1.3
CMAR						17 33 23.3	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PALK	Pallekele	28.00	182	LR	LR	17 42 07.8	
	comp=Z,154nm,18.2s,MS3.6,baz=208,slow=38						
KSRS	Korea Array	37.14	73	LR	LR	17 48 34.8	
	comp=Z,83nm,20.4s,MS3.5,baz=283,slow=39						
BRTR	Keskin Array B	37.81	291	P	P	17 31 45.8	-0.3
	comp=Z,0.5nm,0.8s,mb3.3,baz=82,slow=10,SNR=2.8						
BRTR	Keskin Array B	37.81	291	P	P	17 31 45.8	-0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JOW	Kunigami	40.66	89	LR	LR	17 53 05.0	
	comp=Z,80nm,18.8s,MS3.6,baz=95,slow=42						
ATD	Arta Tunnel	42.26	245	LR	LR	17 50 21.3	
	comp=Z,71nm,20.3s,MS3.5,baz=298,slow=37						
MLR	Muntele Rosu	42.68	301	P	P	17 32 26.0	-0.3
	comp=Z,2.8nm,0.7s,mb4.1,baz=98,slow=2.2,SNR=6.4						
MLR	Muntele Rosu	42.68	301	P	P	17 32 26.0	-0.3
MLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	43.22	325	P	P	17 32 30.3	-0.2
	comp=Z,3.5nm,0.8s,mb4.2,baz=108,slow=10,SNR=6.4						
FINES	FINESS Array B	43.22	325	P	P	17 32 30.3	-0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	43.22	325	P	P	17 32 30.3	-0.2
ARCES	ARCESS Array B	45.52	336	P	P	17 32 48.9	+0.1
	comp=Z,2.0nm,0.7s,mb4.1,baz=91,slow=4.9,SNR=4.7						
ARCES	ARCESS Array B	45.52	336	P	P	17 32 48.9	+0.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JHJ	Hachijo jima 2	47.64	75	LR	LR	17 55 11.0	
	comp=Z,58nm,20.6s,MS3.5,baz=136,slow=39						
HFS	Hagfors	49.16	322	P	P	17 33 16.8	-0.5
	comp=Z,2.9nm,0.8s,mb4.4,baz=59,slow=7.1,SNR=5.4						
HFS	Hagfors	49.16	322	P	P	17 33 16.8	-0.5
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	50.35	323	P	P	17 33 25.6	-0.7
	comp=Z,1.3nm,0.8s,mb4.0,baz=88,slow=7.9						
NOA	NORSAR Array B	50.35	323	P	P	17 33 24.6	-1.7
	comp=Z,1.9nm,0.8s,mb4.2,baz=88,slow=7.5,SNR=4.9						
NOA				LR	LR	17 55 40.9	
	comp=Z,93nm,20.6s,MS3.8,baz=90,slow=37						
NOA	NORSAR Array B	50.35	323	P	P	17 33 24.6	-1.7
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,93nm,20.6s						
GERES	GERESS Array B	50.42	307	P	P	17 33 25.4	-1.6
	comp=Z,0.4nm,0.6s,mb3.6,baz=72,slow=8.6,SNR=5.1						
GERES				LR	LR	17 58 36.4	
	comp=Z,56nm,18.1s,MS3.6,baz=74,slow=41						
PETK	Petropavlovsk-	54.74	46	LR	LR	18 00 04.7	
	comp=Z,48nm,18.7s,MS3.6,baz=13,slow=39						
TOA0	Torodi Ar. Sit	74.24	275	eP	P	17 36 04.3	-2.8
TORD	Torodi Ar. Bea	74.24	275	P	P	17 36 04.2	-2.9
	comp=Z,1.9nm,0.7s,mb4.1,baz=43,slow=5.1,SNR=12						
ASAR	Alice Springs	76.91	132	P	P	17 36 21.0	-1.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=322,slow=6.2,SNR=8.5						
ASAR	Alice Springs	76.91	132	P	P	17 36 21.0	-1.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FRB	Frobisher Bay	78.36	347	LR	LR	18 16 30.8	
	comp=Z,36nm,19.3s,MS3.7,baz=355,slow=40						
YKA	Yellowknife Ar	81.59	7	P	P	17 36 46.1	-1.1
	comp=Z,0.5nm,0.7s,mb3.5,baz=342,slow=5.3,SNR=7.8						
YKA	Yellowknife Ar	81.59	7	P	P	17 36 46.1	-1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	82.84	227	P	P	17 36 52.4	-1.7
	comp=Z,7.7nm,0.9s,mb4.8,baz=51,slow=4.8,SNR=11						
BOSA	Boshof	82.84	227	P	P	17 36 52.4	-1.7
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						

IDC 23 17:39:42.7±1.6, 14°.28N×95°.94E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.2/24, mbtmp3.5/3, Error ellipse: s-maj=32.6km s-min=22.6km az=80.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.06	34	Pn	Pn	17 40 55.3	-4.6
	0.6nm,0.3s,baz=222,slow=14,SNR=15						
CMAR				Pg	Pg	17 41 15.3	-4.4
	0.8nm,0.3s,baz=224,slow=19,SNR=15						
CMAR				Lg		17 42 23.2	
	0.4nm,0.3s,baz=214,slow=32,SNR=4.9						
MKAR	Makanchi Array	34.38	343	P	P	17 46 31.0	-0.4
	0.2nm,0.4s,baz=174,slow=9.1,SNR=3.9						
ZALV	Zalesovo Beam	40.54	350	P	P	17 47 23.6	+0.1
	1.4nm,0.5s,baz=176,slow=8.5,SNR=8.0						
ASAR	Alice Springs	52.91	135	P	P	17 49 01.0	+0.1
	0.4nm,0.9s,baz=306,slow=8.4,SNR=8.2						

DJA 23 17:42:03, 2°.51S×102°.07E, h14km, MLv3.8/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDSI	Sungai Dareh	1.69	338

comp=Z,4.0nm,0.3s
PSI smax
comp=N,3.0nm,0.3s
KULM Kulim 7.56 86 P **Pn 17 48 13.1 +0.1**
KULM Kulim 7.56 86 *e*Pn **Pn 17 48 13.0 0.0**
comp=N,45nm,1.0s
KULM *e*Sn **Sn 17 49 27.4 -11**
IPM Ipoh 7.93 92 P **Pn 17 48 17.7 -0.4**
FRIM Kepong 8.67 100 P **Pn 17 48 28.5 +0.3**
KTGM Kuala Trenggan 10.04 87 P **Pn 17 48 46.6 -0.3**
KGM Kluang 10.60 105 P **Pn 17 48 53.4 -1.2**
MYKOM Kota Tinggi 11.17 105 P **Pn 17 49 01.7 -0.7**
PALK Pallekele 12.54 282 Pn **Pn 17 49 20.7 -0.6**
comp=N,1.6nm,0.3s,baz=83,slow=17,SNR=8.8
PALK Sn **Sn 17 51 26.4 -14**
comp=N,3.7nm,0.3s,baz=199,slow=12,SNR=8.4
PALK LR LR 17 53 17.4
comp=N,186nm,20.3s,baz=98,slow=34
CM31 Chiang Mai Arr 14.73 22 *e*Pn **Pn 17 49 50.6 -0.4**
comp=N,22nm,0.8s
CMAR Chiang Mai Arr 14.73 22 Pn **Pn 17 49 51.2 +0.1**
comp=N,0.7nm,0.3s,baz=218,slow=14,SNR=138
CMAR Chiang Mai Arr 14.73 22 P **Pn 17 49 51.2 +0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KKTK Khon Kaen 14.93 39 P **Pn 17 49 55.0 +1.2**
CHG Chiang Mai 15.05 22 ⇑P **Pn 17 49 54.8 -0.6**
comp=Z,27nm,1.2s
CHTO Chiang Mai 15.05 22 *e*P **Pn 17 49 54.5 -0.9**
CHTO pmax pmax
comp=Z,20nm,0.9s
CHTO Chiang Mai 15.05 22 *e*Pn **Pn 17 49 54.5 -0.9**
comp=Z,20nm,0.9s
KSM Kuching 17.52 100 *e*Pn **Pn 17 50 29.5 +2.5**
comp=Z,15nm,0.9s
HYB Hyderabad 18.95 313 *i* P **Pn 17 50 45.0 +0.6**
SBUM Sibu 19.25 96 P **Pn 17 50 47.2 -0.9**
BTM Bintulu 20.02 94 P **P 17 50 55.3 -0.2**
QIZ Qiongzhong 21.62 48 P **P 17 51 10.9 -1.8**
QIZ S **S 17 55 11.0 0.0**
QIZ pmax pmax
comp=Z,15nm,1.9s,mb4.1
QIZ pmax pmax
comp=Z,160nm,3.2s
QIZ LR LR
comp=N,390nm,11.3s
QIZ LR LR
comp=Z,450nm,11.7s,MS4.1
QIZ Qiongzhong 21.62 48 *e*P **P 17 51 12.8 +0.2**
comp=Z,33nm,1.1s,mb4.7
KMI Kunming 22.23 24 P **P 17 51 20.8 +1.7**
KMI pmax pmax
comp=Z,23nm,1.0s,mb4.6
KKM Kota Kinabalu 23.07 86 P **P 17 51 27.6 -0.5**
KKM Kota Kinabalu 23.07 86 P **P 17 51 29.3 +1.1**
KDM Kudat 23.73 84 P **P 17 51 35.0 +0.3**
PKI Pulchoki 23.79 343 *e*P **P 17 51 35.6 +0.6**
PKIN Phulchoki 23.80 343 *e*P **P 17 51 36.0 +0.9**
comp=Z,111nm,0.5s,mb5.6
DMN Daman 23.91 342 *e*P **P 17 51 36.7 +0.5**
comp=Z,108nm,0.6s,mb5.5
GUN Gumba 23.97 344 *e*P **P 17 51 37.3 +0.5**
comp=Z,34nm,0.5s,mb5.1
KKN Kakani 24.03 343 *e*P **P 17 51 37.4 +0.1**
comp=Z,41nm,0.5s,mb5.1
SDKM Sandakan 24.04 87 P **P 17 51 37.8 +0.2**
TSM Tawau 24.73 90 P **P 17 51 43.7 -0.1**
LSA Lhasa 24.82 356 *e*P **P 17 51 45.5 +1.0**
LSA pmax pmax
comp=Z,20nm,0.7s,mb4.8
LSA Lhasa 24.82 356 *e*P **P 17 51 45.5 +0.9**
comp=Z,20nm,0.7s,mb4.8
MYLDM Lahad Datu 25.33 88 P **P 17 51 50.2 +0.9**
ENH Enshi 29.69 30 *e*P **P 17 52 26.3 -1.9**
comp=Z,5.7nm,0.7s,mb4.4
WHN Wuhan 32.52 36 *e*P **P 17 52 52.6 -0.5**
LZH Lanzhou 32.67 16 *e*P **P 17 52 54.5 +0.1**
LZH pP pP 17 52 59.3 -2.9
LZH sP sP 17 53 01.5 -3.9
LZH pmax pmax
comp=Z,21nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,49nm,5.2s
LZH LR LR
comp=N,310nm,14.6s
LZH LR LR
comp=Z,370nm,17.7s,MS4.1
GTA Gaotai 34.98 9 *e*P **P 17 53 15.0 +0.6**
GTA pP pP 17 53 19.6 -2.7
GTA sP sP 17 53 22.6 -2.9
GTA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MBWA Marble Bar 36.74 136 P **P 17 53 28.4 -1.3**
KBL Kabul 37.03 326 P **P 17 53 30.1 -2.0**
KBL pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
KBL Kabul 37.03 326 P **P 17 53 30.1 -1.9**
comp=Z,6.6nm,1.2s,mb4.3
WMQ Urumqi 39.14 354 P **P 17 53 51.0 +1.3**
WMQ pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
WMQ LR LR
comp=N,90nm,22.0s,MS3.6
WMQ LR LR
comp=E,58nm,23.0s,MS3.6
WMQ LR LR
comp=Z,92nm,24.0s,MS3.5
UCH Uchtor 40.76 339 P **P 17 54 04.3 +1.1**
SNR=8.9
UCH Uchtor 40.76 339 *e*P **P 17 54 03.4 +0.2**
UCH pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
UCH Uchtor 40.76 339 *e*P **P 17 54 03.4 +0.2**
comp=Z,2.8nm,0.6s,mb4.1
KBK Karagaybulak 40.98 340 P **P 17 54 06.4 +1.3**
SNR=9.9
TKM2 Tokmak 2 41.00 340 P **P 17 54 05.9 +0.7**
SNR=5.4
TKM2 Tokmak 2 41.00 340 *e*P **P 17 54 05.4 +0.3**
TKM2 pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
TKM2 Tokmak 2 41.00 340 *e*P **P 17 54 05.4 +0.3**
comp=Z,2.4nm,0.5s,mb4.1
EKS2 Erkin-Say 41.41 338 P **P 17 54 09.6 +1.1**
SNR=6.8
EKS2 Erkin-Say 41.41 338 *e*P **P 17 54 09.0 +0.5**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
EKS2 Erkin-Say 41.41 338 *e*P **P 17 54 09.0 +0.4**
comp=Z,3.0nm,0.8s,mb4.0
USP Ospenovka 41.68 340 P **P 17 54 11.2 +0.5**
SNR=7.2
MK31 Makanchi Array 42.85 349 *e*P **P 17 54 19.7 -0.5**
MKAR Makanchi Array 42.85 349 P **P 17 54 20.2 0.0**
comp=Z,3.4nm,0.6s,mb4.2,baz=166,slow=9.0,SNR=51
MKAR PcP PcP 17 56 10.5 -0.5
comp=Z,2.0nm,0.8s,baz=184,slow=4.3,SNR=3.6
MKAR Makanchi Array 42.85 349 P **P 17 54 20.3 +0.1**
MKAR 17 56 10.5
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 42.85 349 P **P 17 54 20.2 0.0**
MKAR PcP PcP 17 56 10.5 -0.5
SONM Songino Array 44.37 13 P **P 17 54 32.6 +0.2**
comp=Z,3.9nm,0.6s,mb4.3,baz=193,slow=8.3,SNR=33
SONM PcP PcP 17 56 16.4 +0.3
comp=Z,2.3nm,0.6s,baz=204,slow=3.4,SNR=6.1
SONM Songino Array 44.37 13 P **P 17 54 32.6 +0.2**
SONM 17 56 16.4
SONM pmax pmax
comp=Z,4.0nm,0.6s
SONM pmax pmax
comp=Z,2.0nm,0.6s
ULN Ulaanbaatar 44.54 13 *e*P **P 17 54 33.8 0.0**
ULN pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
ULN Ulaanbaatar 44.54 13 *e*P **P 17 54 33.8 -0.1**
comp=Z,2.4nm,0.7s,mb4.1
KS15 Wonju Array Si 45.44 40 *e*P **P 17 54 41.2 0.0**
KSRS Korea Array 45.47 40 P **P 17 54 41.3 -0.1**
comp=Z,1.9nm,1.0s,mb3.9,baz=226,slow=7.3,SNR=7.6
KSRS LR LR 18 15 41.9
comp=Z,57nm,18.0s,MS3.5,baz=78,slow=39
KSRS Korea Array 45.47 40 P **P 17 54 41.3 -0.1**
KSRS pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
KSRS MLR MLR
comp=Z,57nm,18.0s,MS3.5
ZAK Zakamensk 46.22 9 *e*P **P 17 54 46.0 -1.1**
ZAK *e* 17 56 23.6
ZAK pmax pmax
comp=Z,2.0nm,1.5s,mb3.8
KURK Kurchatov 47.33 348 P **P 17 54 55.0 -0.8**
comp=Z,4.8nm,0.6s,mb4.6,baz=169,slow=6.9,SNR=14
KURK PcP PcP 17 56 26.4 +0.1
comp=Z,2.5nm,0.5s,baz=166,slow=2.5,SNR=5.1
KURK Kurchatov 47.33 348 *c i*P **P 17 54 55.9 +0.1**
KURK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
WRAB Tennant Creek 47.44 123 *e*P **P 17 54 56.6 -0.5**
WRAB pmax pmax
comp=Z,38nm,1.4s,mb5.1
WRAB Tennant Creek 47.44 123 *e*P **P 17 54 56.6 -0.5**
comp=Z,38nm,1.4s,mb5.1
ASAR Alice Springs 48.84 127 P **P 17 55 07.6 -0.3**
comp=Z,2.7nm,0.8s,mb4.3,baz=296,slow=7.9,SNR=27
ASAR PcP PcP 17 56 32.9 +0.5
comp=Z,1.3nm,0.7s,baz=296,slow=3.0,SNR=7.0
ASAR Alice Springs 48.84 127 P **P 17 55 07.6 -0.3**
ASAR 17 56 32.9
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,0.7s
QRN Al-Qurain 48.93 304 *e*P **P 17 55 09.0 +0.5**
QRN AMb AMB 17 55 09.6
comp=Z,42nm,0.5s
KBD Kabd 49.27 305 *e*P **P 17 55 11.7 +0.5**
KBD AMb AMB 17 55 25.5
comp=Z,20nm,1.6s,mb4.9
RDF Al-Radifah 49.30 304 *e*P **P 17 55 12.1 +0.8**
RDF AMb AMB 17 55 13.4
comp=Z,38nm,0.6s,mb5.6
ZAA0 Zalesovo Array 49.45 354 *e*P **P 17 55 12.3 +0.2**
ZALV Zalesovo Beam 49.45 354 P **P 17 55 12.6 +0.5**
comp=Z,8.1nm,0.5s,mb5.0,baz=174,slow=6.8,SNR=67
ZALV Zalesovo Beam 49.45 354 P **P 17 55 12.6 +0.6**
ZALV pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
NAY Al-Naaiem 49.66 305 *e*P **P 17 55 14.5 +0.3**
NAY AMb AMB 17 55 15.2
comp=Z,21nm,0.5s,mb5.5
HIA Hailar 49.74 23 *e*P **P 17 55 14.7 +0.4**
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 49.74 23 *e*P **P 17 55 14.7 +0.4**
comp=Z,19nm,0.8s,mb5.2
NVS Novosibirsk 50.51 353 *e*P **P 17 55 20.7 +0.6**
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.8
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,5.0nm,1.2s
BVAR Borovoye Array 51.56 343 P **P 17 55 27.5 -0.4**
comp=E,3.4nm,0.7s,mb4.4,baz=145,slow=8.7,SNR=27
BRVK Borovoye 51.62 343 *c e*P **P 17 55 27.9 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BRVK Borovoye 51.62 343 *e*P **P 17 55 27.5 -0.9**
comp=Z,4.3nm,0.6s,mb4.6
MAJO Matsushiro 52.01 46 P **P 17 55 29.8 -1.9**
MAJO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MAJO Matsushiro 52.01 46 P **P 17 55 29.8 -1.9**
comp=Z,3.8nm,0.8s,mb4.4
MJAR Matsushiro Arr 52.01 46 P **P 17 55 32.8 +1.1**
comp=Z,0.9nm,0.6s,mb3.9,baz=242,slow=5.4,SNR=3.9
MJAR PcP PcP 17 56 44.5 +0.6
comp=Z,1.5nm,0.7s,baz=251,slow=3.7,SNR=3.5
MJAR Matsushiro Arr 52.01 46 P **P 17 55 32.8 +1.1**
MJAR 17 56 44.5
MJAR pmax pmax
comp=Z,1.0nm,0.6s
MJAR pmax pmax
comp=Z,2.0nm,0.7s
ABKAR Akbulak array 52.43 333 *e*P **P 17 55 34.0 -0.6**
comp=Z,3.5nm,0.6s,mb4.5
KLR Kul'dur 55.05 30 *e*P **P 17 55 49.8 -3.9**
BOD Bodaibo 55.36 13 *e*P **P 17 55 55.8 0.0**
HABR Khabarovsk 56.28 32 *e*P **P 17 56 00.6 -2.0**
HABR *e**SP sP 17 56 14.8 +0.9
HABR *e* 17 56 57.5
HABR *e* 17 58 06.3
HABR *e*S **S 18 03 49.2 -1.8**
HABR *e* 18 05 48.2
HABR *e*SS SS 18 07 37.7 -0.3
HABR pmax pmax
comp=Z,19nm,1.2s,mb5.0
HABR pmax pmax
comp=E,21nm,2.1s
HABR pmax pmax
comp=N,22nm,2.1s
HABR MLR MLR
comp=Z,49nm,18.0s,MS3.6
ZEI Tsey 57.58 319 *e*P **P 17 56 09.4 -2.6**
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
SVE Sverdlovsk 57.86 340 ⇑*e*P **P 17 56 13.9 +0.3**
SVE pmax pmax
comp=Z,17nm,1.0s,mb5.0
ARU Arti 58.30 338 *d i*P **P 17 56 16.4 -0.3**
ARU *e* 17 58 24.3
ARU S **S 18 04 19.1 +1.8**
ARU SS SS 18 08 09.3 -0.3
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ARU Arti 58.30 338 *e*P **P 17 56 15.2 -1.5**
comp=Z,7.2nm,1.0s,mb4.7
STKA Stephens Creek 58.82 132 P **P 17 56 21.1 +0.3**
comp=Z,5.2nm,0.6s,mb4.8,baz=324,slow=6.2,SNR=17
STKA Stephens Creek 58.82 132 *e*P **P 17 56 20.6 -0.2**
STKA pmax pmax
comp=Z,1.0nm,0.6s
STKA Stephens Creek 58.82 132 *e*P **P 17 56 20.6 -0.2**
comp=Z,1.3nm,0.6s,mb4.1
YSS Yuzh-Sakhalins 59.84 37 *e*P **P 17 56 27.0 -0.6**
YSS Yuzh-Sakhalins 59.84 37 *e*P **P 17 56 27.5 -0.1**
comp=Z,15nm,1.1s,mb4.9
YAK Yakutsk 63.22 18 *e*P **P 17 56 48.8 -1.3**
YAK pmax pmax
comp=Z,21nm,1.3s,mb5.1
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.4s
BR131 Keskin Array S 63.65 312 *e*P **P 17 56 52.5 -0.9**
comp=E,2.6nm,0.6s,mb4.4
BRTR Keskin Array B 63.65 312 P **P 17 56 52.9 -0.6**
comp=E,3.6nm,0.7s,mb4.5,baz=124,slow=7.5,SNR=32
BRTR Keskin Array B 63.65 312 P **P 17 56 52.9 -0.5**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
VRI Vrincioaia 70.19 317 ⇓*i*P **P 17 57 35.6 +0.7**
TIXI Tiksi 70.43 11 *c i*P **P 17 57 35.4 -0.5**
TIXI pmax pmax
comp=Z,19nm,0.6s,mb5.2
TIXI Tiksi 70.43 11 *e*P **P 17 57 35.0 -0.9**
comp=Z,18nm,0.6s,mb5.2
MLR Muntele Rosu 70.63 317 ⇑*i*P **P 17 57 38.5 +0.9**
PETK Petropavlovsk- 71.10 35 P **P 17 57 40.0 -0.3**
comp=Z,3.1nm,1.0s,mb4.2,baz=207,slow=6.1,SNR=4.2
PETK Petropavlovsk- 71.10 35 P **P 17 57 40.0 -0.3**
PETK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
LBTB Lobatse 71.86 242 *e*P **P 17 57 45.3 -0.1**
LBTB pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LBTB Lobatse 71.86 242 *e*P **P 17 57 45.3 -0.2**
comp=Z,4.6nm,1.0s,mb4.4
CASY Casey 72.04 173 *e*P **P 17 57 46.7 +1.1**
comp=Z,4.3nm,0.9s,mb4.4
SEY Seymchan 72.14 24 ⇑*e*P **P 17 57 46.9 +0.5**
BOSA Boshof 73.07 238 P **P 17 57 52.0 -0.6**
comp=Z,1.0nm,0.6s,mb3.9,baz=90,slow=8.1,SNR=4.8
BOSA Boshof 73.07 238 P **P 17 57 52.0 -0.6**
BOSA pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
FINES FINESS Array B 74.92 333 P **P 17 58 01.7 -1.1**
comp=Z,0.8nm,0.6s,mb3.8,baz=126,slow=4.9,SNR=4.3
FINES FINESS Array B 74.92 333 P **P 17 58 01.7 -1.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
VRAC Vranov 77.56 319 LR LR 18 37 53.2
comp=Z,26nm,19.4s,MS3.6,baz=62,slow=40
ARCES ARCESS Array B 77.78 341 P **P 17 58 18.9 +0.1**
comp=Z,3.2nm,0.9s,mb4.2,baz=87,slow=6.7,SNR=10
ARCES ARCESS Array B 77.78 341 P **P 17 58 18.9 +0.1**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
BILL Bilibino 79.31 21 *d i*P **P 17 58 27.6 +0.3**
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BILL Bilibino 79.31 21 *e*P **P 17 58 27.2 -0.1**
comp=Z,12μm,2.3s
GEC2 GERESS Array S 79.40 319 *e*P **P 17 58 27.8 -0.4**
GEC2 pmax pmax
comp=Z,1μm,1.2s
GEC2 GERESS Array S 79.40 319 *e*P **P 17 58 27.8 -0.4**
comp=Z,1μm,1.2s
GERES GERESS Array B 79.40 319 P **P 17 58 28.6 +0.4**
comp=Z,1.7nm,0.6s,mb4.2,baz=100,slow=5.5,SNR=22
GERES GERESS Array B 79.40 319 P **P 17 58 28.6 +0.4**
GERES pmax pmax
comp=Z,2.0nm,0.6s
GRA1 Grafenberg Arr 81.08 319 *e*P **P 17 58 37.3 +0.1**
comp=Z,4.0nm,1.2s,mb4.2
GRA1 *e*pP pP 17 58 43.8 -1.9
GRF Grafenberg Arr 81.08 319 *e*P **P 17 58 37.3 +0.1**
comp=Z,4.0nm,1.2s,mb4.2
GRF *e*pP pP 17 58 43.8 -1.9
GRF Grafenberg Arr 81.08 319 *e*P **P 17 58 37.3 +0.1**
GRF *e**PP pP 17 58 43.8 -1.9
GRF pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
GRF Grafenberg Arr 81.08 319 *e*P **P 17 58 37.3 +0.1**
GRF *e**PP pP 17 58 43.8 -1.9
GRF pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
DAVOX Davos/Dischmat 81.86 316 LR LR 18 38 15.1
comp=Z,34nm,19.8s,MS3.7,baz=262,slow=38
NOA NORSAR Array B 81.87 331 P **P 17 58 40.0 -1.2**
comp=Z,1.0nm,1.0s,mb3.7,baz=93,slow=6.0,SNR=2.9
NOA LR LR 18 41 44.7
comp=Z,23nm,18.0s,MS3.6,baz=265,slow=41
NOA NORSAR Array B 81.87 331 P **P 17 58 40.0 -1.1**
NOA pmax pmax
comp=Z,1.0nm,1.0s
NOA MLR MLR
comp=Z,23nm,18.0s
LPG La Plagne 84.02 315 *e*P **P 17 58 52.7 +0.1**
comp=Z,5.4nm,0.7s,mb4.5
LPL La Plagne 84.03 315 *e*P **P 17 58 52.7 0.0**
comp=Z,4.3nm,0.6s,mb4.5
TORD Torodi Ar. Bea 90.26 283 P **P 17 59 23.1 -0.5**
comp=Z,0.5nm,0.8s,mb3.9,baz=101,slow=5.3,SNR=2.6
SBA Scott Base 91.27 168 P **P 17 59 28.2 +1.3**
comp=Z,0.4nm,0.5s,mb4.0
ESDC Sonseca Array 92.36 310 P **P 17 59 33.3 +0.5**
comp=Z,0.4nm,0.5s,mb4.0,baz=70,slow=3.8,SNR=3.8
NVAR Mina Array Bea 128.07 31 PKP PKPdf 18 05 29.9 +1.3
comp=Z,0.8nm,0.6s,baz=308,slow=2.2,SNR=6.6
PDAR Pinedale Array 128.39 21 PKP PKPdf 18 05 29.4 +0.4
comp=Z,0.7nm,0.6s,baz=20,slow=4.7,SNR=3.3
CPUP Villa Florida 144.52 230 PKP PKPdf 18 05 58.2 -1.0
comp=Z,1.9nm,0.5s,baz=86,slow=4.0,SNR=11
CPUP Villa Florida 144.52 230 PKIKP PKPdf 18 05 58.3 -0.9
CPUP pmax pmax
comp=Z,2.0nm,0.5s

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*IDC **23** 17:47:19.6±1.5, 10°.06N×125°.52E, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.4/21, mbtmp3.6/2, Error ellipse: s-maj=122.3km s-min=39.2km az=83.0*
*ISCJB **23** 17:47:26.6±0.9, 10°.16N±0°.04×126°.27E±0°.07, h51km±14km, mb3.7/2, Error ellipse: s-maj=12.1km s-min=7.2km az=178.1*
*MAN **23** 17:47:27, 10°.20N×126°.21E, h40km, mb4.7, ML3.6, MS3.6*
ISC 23 17:47:27.6±1.0, 10°.15N±0°.04×126°.28E±0°.08, h45km±16km, n23, σ1°.02/26, mb3.7/2, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.34**	**209**	*e*P	**Pn**	**17 47 49.0**	**-1.0**
BUTP				*e*S	**Sn**	**17 48 04.2**	**-2.5**
MSLP	**Maasin**	**1.40**	**269**	*e*P	**Pn**	**17 47 49.2**	**-1.5**
MSLP				*e*S	**Sn**	**17 48 03.3**	**-4.7**
PLP	**Palo**	**1.63**	**308**	⇓*e*P	**Pn**	**17 47 52.6**	**-1.2**
BESP	**Borongan**	**1.66**	**330**	*e*P	**Pn**	**17 47 54.1**	**-0.2**
OCLP	**Ormoc**	**1.87**	**299**	*e*P	**Pn**	**17 47 57.6**	**+0.5**
LLP	**Lapu-Lapu**	**2.29**	**274**	⇓*i*P	**Pn**	**17 48 02.4**	**-0.5**
LLP				*i* S	**Sn**	**17 48 30.4**	**+0.6**
CGP	**Cagayan de Oro**	**2.30**	**223**	⇓*i*P	**Pn**	**17 48 02.8**	**-0.3**
CGP				*i* S	**Sn**	**17 48 30.2**	**0.0**
TBP	**Tagbilaran**	**2.43**	**259**	*e*P	**Pn**	**17 48 04.7**	**-0.1**
TBP				*e*S	**Sn**	**17 48 33.4**	**0.0**
BUKP	**Musuan**	**2.56**	**208**	*e*P	**Pn**	**17 48 07.8**	**+1.2**
CNP	**Cataman**	**2.83**	**326**	*e*P	**Pn**	**17 48 09.8**	**-0.5**
DAV	**Davao City (W)**	**3.14**	**193**	Lg		17 48 50.4	
	40nm,0.3s,baz=303,slow=16,SNR=3.3						
MATI	**Mati**	**3.19**	**180**	*e*P	**Pn**	**17 48 18.0**	**+2.7**
GUIM	**Jordan**	**3.66**	**278**	*e*P	**Pn**	**17 48 22.0**	**+0.2**
PAGZ	**Pagadian**	**3.67**	**232**	*e*P	**Pn**	**17 48 22.7**	**+0.9**
RCP	**Roxas**	**3.75**	**292**	⇓*e*P	**Pn**	**17 48 23.8**	**+0.9**
PVCP	**Virac**	**4.00**	**329**	*e*P	**Pn**	**17 48 27.6**	**+1.1**
IPIL	**Ipil**	**4.35**	**238**	*e*P	**Pn**	**17 48 33.2**	**+1.9**
CUYO	**Cuyo Island**	**5.22**	**278**	*e*P	**Pn**	**17 48 43.1**	**-0.1**
ENPP	**El Nido**	**6.82**	**279**	*e*P	**Pn**	**17 49 05.5**	**+0.3**
CAUP	**Cauayan**	**8.02**	**328**	*e*P	**Pn**	**17 49 20.5**	**-1.1**
ASAR	**Alice Springs**	**34.43**	**168**	P	**P**	**17 54 09.6**	**-1.3**
	0.2nm,0.3s,mb3.5,baz=347,slow=7.1,SNR=6.8						
YKA	**Yellowknife Ar**	**93.86**	**24**	P	**P**	**18 00 40.4**	**+0.5**
	0.3nm,0.7s,mb3.9,baz=301,slow=4.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**120.32**	**292**	PKP	PKPdf	18 06 12.4	-2.6
	0.1nm,0.3s,baz=72,slow=1.7,SNR=4.0						

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*ISCJB **23** 17:48:33.8±0.6, 24°.15S±0°.04×67°.14W±0°.06, h178km±7km, mb3.8/9, Error ellipse: s-maj=9.1km s-min=7.2km az=0.2*
*NEIC **23** 17:48:34.7±0.8, 24°.11S×66°.97W, h177km±8km, mb4.3/5, Error ellipse: s-maj=13.5km s-min=7.9km az=88.0*
*IDC **23** 17:48:34.2±1.8, 24°.14S×67°.03W, h170km±16km, mb3.5/5, mb1 3.5/9, mb1mx3.5/18, mbtmp3.3/9, Error ellipse: s-maj=23.3km s-min=14.9km az=80.0*
*GUC **23** 17:48:37.3±0.7, 24°.09S×67°.65W, h210km±22km, ML4.5*
ISC 23 17:48:34.5±0.5, 24°.13S±0°.04×67°.10W±0°.06, h172km±7km, n33, σ1°.07/42, mb3.8/9, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.81**	**302**	⇑*i*P	**Pn**	**17 49 22.0**	**+1.5**
PECH				*i* S	**Sn**	**17 49 56.7**	**+0.5**
PECH				AML	AML	17 49 59.3	
	comp=E,1μm,0.2s						
CEN1	**Los Morros**	**2.93**	**284**	⇓*i*P	**Pn**	**17 49 22.9**	**+0.9**
CEN1				*i* S	**Sn**	**17 49 57.7**	**-1.0**
CEN1				AML	AML	17 50 00.6	
	comp=N,546nm,0.2s						
ANCH	**Antofagasta**	**3.06**	**278**	*e*P	**Pn**	**17 49 24.0**	**+0.5**
ANCH				*i* S	**Sn**	**17 49 59.0**	**-2.5**
MACH	**Maria Elena**	**3.11**	**308**	⇑*i*P	**Pn**	**17 49 26.2**	**+2.0**
MACH				*i* S	**Sn**	**17 50 03.3**	**+0.6**
MECH	**Mejillones**	**3.23**	**288**	⇑*i*P	**Pn**	**17 49 27.0**	**+1.3**
MECH				*i* S	**Sn**	**17 50 04.2**	**-1.3**
MECH				AML	AML	17 50 10.2	
	comp=N,730nm,0.2s						
TOCH	**Tocopilla**	**3.50**	**305**	*i* P	**Pn**	**17 49 30.1**	**+1.0**
TOCH				*i* S	**Sn**	**17 50 10.4**	**-1.0**
TOCH				AML	AML	17 50 12.9	
	comp=N,749nm,0.1s						
PB01	**Plate Boundary**	**3.78**	**324**	*e*P	**Pn**	**17 49 33.5**	**+0.9**
PB01				*i* S	**Sn**	**17 50 17.4**	**-0.5**
HMBC	**Humberston**	**4.62**	**326**	*e*P	**Pn**	**17 49 42.9**	**-0.6**
HMBC				*i* S	**Sn**	**17 50 34.8**	**-2.5**
CFAA	**Coronel Fontan**	**7.51**	**187**	P	**Pn**	**17 50 21.1**	**-0.2**
	comp=N,0.1nm,0.3s,baz=38,slow=13,SNR=6.9						
CFAA				S	**Sn**	**17 51 38.7**	**-6.9**
	comp=N,0.2nm,0.3s,baz=299,slow=23,SNR=7.4						
CFAA	**Coronel Fontan**	**7.51**	**187**	P	**Pn**	**17 50 21.1**	**-0.2**
CFAA				S	**Sn**	**17 51 38.7**	**-6.9**
LPAZ	**La Paz**	**7.86**	**353**	P	**Pn**	**17 50 27.4**	**+1.3**
	comp=N,1.3nm,0.3s,baz=178,slow=8.3,SNR=27						

LPAZ S **Sn** **17 51 54.6 +0.4**
comp=N,0.4nm,0.3s,baz=332,slow=20,SNR=9.8
LPAZ La Paz 7.86 353 *e*Pn **Pn** **17 50 27.1 +1.0**
LPAZ *e*Sn **Sn** **17 51 54.5 +0.2**
LPAZ S **Sn** **17 51 54.6 +0.4**
CPUP Villa Florida 9.12 106 P **Pn** **17 50 41.7 -0.9**
comp=N,0.1nm,0.3s,baz=290,slow=13,SNR=3.5
CPUP Villa Florida 9.12 106 P **Pn** **17 50 41.7 -0.9**
SIV San Ignacio 9.88 36 P **Pn** **17 50 51.1 -1.6**
comp=N,0.4nm,0.3s,baz=229,slow=12,SNR=7.4
SIV S **Sn** **17 52 42.9 +0.3**
comp=N,0.3nm,0.3s,baz=253,slow=22,SNR=2.8
TRQA Tornquist 14.55 164 *e*Pn **Pn** **17 51 53.1 +0.8**
comp=N,8.2nm,0.6s
PLCA Paso Flores 16.80 189 P **Pn** **17 52 19.7 0.0**
comp=N,0.2nm,0.3s,baz=277,slow=8.9,SNR=3.9
EFI East Falkland 28.36 168 P **P** **17 54 06.9 -5.4**
comp=N,146nm,1.2s
WVT Waverly 63.06 341 P **P** **17 58 39.5 -3.9**
comp=N,3.8nm,0.8s,mb4.3
ANMO Albuquerque 69.61 326 *e*P **P** **17 59 19.5 -5.5**
comp=N,6.9nm,1.0s,mb4.3
TORD Torodi Ar. Bea 76.70 69 P **P** **18 00 06.4 -0.7**
comp=N,0.5nm,0.6s,mb3.4,baz=234,slow=6.2,SNR=3.5
PDAR Pinedale Array 77.21 329 P **P** **18 00 09.2 -0.1**
comp=N,0.4nm,0.5s,mb3.3,baz=172,slow=11,SNR=4.0
NVAR Mina Array Bea 78.58 321 P **P** **18 00 17.1 +0.1**
comp=N,0.6nm,0.7s,mb3.4,baz=141,slow=3.5,SNR=4.3
HLID Hailey 80.15 327 *e*P **P** **18 00 26.6 +1.3**
comp=N,1.9nm,0.8s,mb3.8
BOSA Boshof 80.76 117 P **P** **18 00 28.2 -0.9**
comp=N,2.0nm,1.0s,mb3.7,baz=256,slow=4.2,SNR=3.7
LBTB Lobatse 82.42 114 P **P** **18 00 36.8 -1.0**
comp=N,10nm,1.3s,mb4.3
YKA Yellowknife Ar 94.21 340 P **P** **18 01 33.8 +0.5**
comp=N,0.6nm,0.6s,mb3.9,baz=130,slow=4.5,SNR=12
YKA Yellowknife Ar 94.21 340 P **P** **18 01 33.8 +0.5**
ASAR Alice Springs 128.30 205 PKP PKPdf 18 07 20.5 -0.6
comp=N,0.2nm,0.3s,baz=126,slow=1.7,SNR=3.3
ZAA0 Zalesovo Array 143.56 28 *e*PKPdf PKPdf 18 07 46.4 -2.0
ZALV Zalesovo Beam 143.56 28 PKP PKPdf 18 07 46.5 -1.8
comp=N,1.0nm,0.6s,baz=306,slow=5.0,SNR=7.2
MK31 Makanchi Array 146.69 40 *e*PKPdf PKPdf 18 07 54.1 +0.2
MK31 *e*PKPbc PKPbc 18 07 56.0 +0.2
MKAR Makanchi Array 146.69 40 PKPbc PKPbc 18 07 56.2 +0.4
comp=N,1.5nm,0.7s,baz=299,slow=3.6,SNR=13

*IDC **23** 17:50:53.5±8.2, 3°.59S×101°.27E, h128km±71km, mb3.6/9, mb1 3.7/9, mb1mx3.5/22, mbtmp3.6/9, Error ellipse: s-maj=55.6km s-min=22.0km az=53.0*
*NEIC **23** 17:50:54.5±6.9, 3°.61S×101°.39E, h146km±61km, mb3.8/2, Error ellipse: s-maj=45.9km s-min=16.3km az=55.0*
ISC 23 17:50:50.5±6.7, 3°.7S±0°.2×101°.3E±0°.3, h108km±59km**, n15,** σ1**9**07/14**, mb4.0**/11, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.14**	**354**	P	**P**	**17 55 37.5**	**+0.1**
	1.5nm,0.5s,mb3.5,baz=182,slow=8.4,SNR=14						
CHTO	**Chiang Mai**	**22.49**	**354**	*e*P	**P**	**17 55 40.2**	**-1.0**
	2.0nm,0.9s,mb3.5						
ASAR	**Alice Springs**	**37.23**	**125**	P	**P**	**17 57 53.9**	**+2.0**
	0.7nm,0.6s,mb3.8,baz=300,slow=7.9,SNR=4.5						
STKA	**Stephens Creek**	**47.08**	**131**	P	**P**	**17 59 09.8**	**-1.8**
KSRS	**Korea Array**	**47.85**	**29**	P	**P**	**17 59 18.3**	**+0.8**
	2.5nm,0.9s,mb4.0,baz=229,slow=8.0,SNR=5.2						
SONM	**Songino Array**	**51.51**	**4**	P	**P**	**17 59 46.7**	**+1.7**
	2.5nm,0.7s,mb4.3,baz=188,slow=9.9,SNR=5.3						
SONM				PcP	PcP	18 00 57.2	-0.5
	0.6nm,0.4s,baz=193,slow=3.4,SNR=5.1						
MJAR	**Matsushiro Arr**	**52.81**	**37**	P	**P**	**17 59 53.8**	**-1.1**
	0.8nm,0.8s,mb3.8,baz=207,slow=7.9,SNR=4.0						
MK31	**Makanchi Array**	**53.00**	**344**	P	**P**	**17 59 56.2**	**+0.2**
MKAR	**Makanchi Array**	**53.00**	**344**	P	**P**	**17 59 56.9**	**+0.8**
	1.9nm,0.7s,mb4.2,baz=150,slow=8.3,SNR=3.3						
KURK	**Kurchatov**	**57.59**	**343**	P	**P**	**18 00 28.6**	**-0.3**
	1.1nm,0.2s,mb4.4,baz=159,slow=8.0,SNR=2.3						
ZAA0	**Zalesovo Array**	**59.07**	**349**	P	**P**	**18 00 39.1**	**0.0**
ZALV	**Zalesovo Beam**	**59.07**	**349**	P	**P**	**18 00 39.9**	**+0.8**
	1.1nm,0.5s,mb4.1,baz=188,slow=8.3,SNR=3.4						
BVAR	**Borovoye Array**	**62.21**	**339**	P	**P**	**18 00 59.9**	**-0.5**
	1.1nm,0.6s,mb4.1,baz=142,slow=9.3,SNR=5.5						
TIXI	**Tiksi**	**77.33**	**9**	*e*P	**P**	**18 02 31.4**	**-1.4**
	1.5nm,0.5s,mb4.0						
TXAR	**Lajitas Array**	**145.22**	**40**	PKPbc	PKPbc	18 10 15.7	-0.3
	0.7nm,0.4s,baz=216,slow=1.0,SNR=4.5						

*ISCJB **23** 17:53:29.5±1.0, 32°.43N±0°.03×105°.27E±0°.04, h9km±6km, mb4.1/19, Error ellipse: s-maj=5.8km s-min=5.0km az=163.2*
*IDC **23** 17:53:30.0±0.9, 32°.47N×105°.21E, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/37, Error ellipse: s-maj=30.2km s-min=16.9km az=40.0*
*NEIC **23** 17:53:31.6±0.4, 32°.49N×105°.24E, h10km, mb4.2/7, Error ellipse: s-maj=10.6km s-min=6.1km az=52.0*
*BJI **23** 17:53:31.9, 32°.45N×105°.30E, h12km, mB4.1/6, mb4.2/9, ML4.1/23, Ms3.9/14, Ms7 3.7/11*
ISC 23 17:53:32.2±0.9, 32°.46N±0°.03×105°.25E±0°.04, h13km±6km**, n50,** σ1**9**02/62**, mb4.1**/19**, 3C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.00**	**220**	Pn	**Pn**	**17 54 07.1**	**+1.4**
CD2				Sg	**Sg**	**17 54 36.8**	**+0.2**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**3.46**	**62**	Pn	**Pn**	**17 54 26.5**	**+0.7**
XAN				Sn	**Sn**	**17 55 00.8**	**-5.8**
XAN				Sg	**Sg**	**17 55 17.0**	**-6.3**
XAN				smax			
	comp=N,920nm,0.7s						
XAN				smax			
	comp=E,360nm,0.7s						
LZH	**Lanzhou**	**3.80**	**343**	Pn	**Pn**	**17 54 32.6**	**+2.1**
LZH				Pg	**Pg**	**17 54 42.8**	**-2.2**
LZH				Sn	**Sn**	**17 55 15.8**	**+0.8**
LZH				Sg	**Sg**	**17 55 29.8**	**-4.5**
LZH				smax			
	comp=N,2μm,1.0s						
LZH				smax			
	comp=E,2μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,5.7s						
LZH				LR	LR		
	comp=Z,3μm,8.0s						
ENH	**Enshi**	**4.23**	**120**	*e*Pn	**Pn**	**17 54 38.1**	**+1.7**
ENH				*e*Pg	**Pg**	**17 54 52.5**	**-0.8**
ENH				*e*Sg	**Sg**	**17 55 48.2**	**0.0**
GYA	**Guiyang**	**6.11**	**168**	Pn	**Pn**	**17 55 03.5**	**+1.3**
GYA				Sn	**Sn**	**17 56 11.0**	**-0.9**
GYA				smax			
	comp=N,180nm,0.8s						
GYA				smax			
	comp=E,170nm,0.8s						
KMI	**Kunming**	**7.63**	**197**	Pn	**Pn**	**17 55 24.3**	**+1.1**
KMI				Sn	**Sn**	**17 56 48.1**	**-1.4**
KMI				smax			
	comp=N,30nm,0.8s						
KMI				smax			
	comp=E,29nm,0.8s						
KMI				LR	LR		
	comp=N,280nm,8.3s						
KMI				LR	LR		
	comp=E,300nm,9.6s						
KMI				LR	LR		
	comp=Z,130nm,14.1s						
WHN	**Wuhan**	**8.00**	**101**	⇑P	**Pn**	**17 55 25.0**	**-3.2**
WHN				S	**Sn**	**17 56 52.3**	**-6.3**
WHN				LR	LR		
	comp=N,1μm,5.4s						
WHN				LR	LR		
	comp=E,1μm,3.6s						
WHN				LR	LR		
	comp=Z,760nm,4.0s						
GTA	**Gaotai**	**8.21**	**329**	*e*P	**Pn**	**17 55 31.3**	**+0.2**
GTA				pP		17 55 35.3	
GTA				sP		17 55 38.5	
GTA				S	**Sn**	**17 57 10.9**	**+7.2**
GTA				sS		17 57 16.8	
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,48nm,5.3s						
GTA				LR	LR		
	comp=N,600nm,10.7s						
GTA				LR	LR		
	comp=E,310nm,8.9s						
GTA				LR	LR		
	comp=Z,810nm,11.3s						
BTO	**Baotou**	**8.99**	**24**	*e*P	Px	17 55 54.8	
BTO				S	Sx	17 57 46.8	
BTO				LR	LR		
	comp=N,96nm,2.7s						
BTO				LR	LR		
	comp=E,95nm,2.2s						
HHC	**Hu-ho-hao-te**	**9.79**	**29**	*e*P	**Pn**	**17 55 56.1**	**+3.5**
HHC				pP		17 56 03.3	
HHC				sP		17 56 08.1	
HHC				S	**Sn**	**17 57 47.0**	**+4.6**
HHC				sS		17 57 57.4	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,5.0s						
HHC				LR	LR		
	comp=N,210nm,4.6s						
HHC				LR	LR		
	comp=E,380nm,3.7s						
HHC				LR	LR		
	comp=Z,140nm,5.0s						
LSA	**Lhasa**	**12.39**	**261**	*e*Pn	**Pn**	**17 56 29.6**	**+1.2**
QIZ	**Qiongzhong**	**14.00**	**162**	Pn	**Pn**	**17 56 48.7**	**-1.6**
CMAR	**Chiang Mai Arr**	**15.05**	**204**	Pn	**Pn**	**17 57 04.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=326,slow=45,SNR=4.9						
SONM	**Songino Array**	**15.38**	**3**	Pn	**Pn**	**17 57 08.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=160,slow=36,SNR=2.1						
SONM				LR	LR	18 03 34.8	
	comp=Z,89nm,18.3s,baz=28,slow=39						
YHNB	**Yeheng**	**16.14**	**115**	*e*P	**Pn**	**17 57 20.1**	**+1.2**
	comp=Z,13nm,0.8s						
KS15	**Wonju Array Si**	**19.20**	**69**	P	**Pn**	**17 57 58.6**	**+1.9**
KSRS	**Korea Array**	**19.23**	**69**	P	**Pn**	**17 57 56.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=255,slow=10,SNR=10						
CN2	**Changchun**	**19.46**	**49**	*e*P	**Pn**	**17 58 07.1**	**+7.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JOW	**Kunigami**	**20.77**	**100**	P	**P**	**17 58 13.0**	**+0.1**
	comp=Z,11nm,0.8s,baz=224,slow=17,SNR=5.4						
JOW	**Kunigami**	**20.77**	**100**	P	**P**	**17 58 13.0**	**+0.1**
MK31	**Makanchi Array**	**22.64**	**316**	*e*P	**P**	**17 58 32.2**	**-0.6**
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**17 58 33.0**	**+0.2**
	comp=Z,4.6nm,0.8s,mb4.0,baz=117,slow=13,SNR=21						
MKAR	**Makanchi Array**	**22.64**	**316**	P	**P**	**17 58 33.0**	**+0.1**
TKM2	**Tokmak 2**	**25.56**	**303**	*e*P	**P**	**17 59 01.6**	**+0.9**
	comp=Z,2.6nm,0.6s,mb3.9						
ZAA0	**Zalesovo Array**	**25.96**	**332**	*e*P	**P**	**17 59 03.3**	**-0.9**
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**17 59 03.6**	**-0.6**
	comp=Z,1.7nm,0.5s,mb3.8,baz=135,slow=10,SNR=6.5						
UCH	**Uchtor**	**26.19**	**301**	*e*P	**P**	**17 59 08.1**	**+1.7**
KURK	**Kurchatov**	**26.78**	**321**	P	**P**	**17 59 11.9**	**+0.2**
	comp=Z,4.2nm,0.3s,mb4.5,baz=112,slow=33,SNR=9.6						
KURK	**Kurchatov**	**26.78**	**321**	*e*P	**P**	**17 59 11.4**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.1						
EKS2	**Erkin-Say**	**26.81**	**301**	*e*P	**P**	**17 59 12.2**	**+0.2**
	comp=Z,1.6nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**32.36**	**320**	P	**P**	**18 00 01.1**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.8,baz=111,slow=9.9,SNR=6.9						
BRVK	**Borovoye**	**32.43**	**320**	*e*P	**P**	**17 59 59.3**	**-2.5**
	comp=Z,2.6nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**37.52**	**310**	*e*P	**P**	**18 00 45.9**	**+0.2**
ABKAR				*e*		18 01 09.7	
ARU	**Arti**	**39.98**	**321**	*e*P	**P**	**18 01 05.8**	**-0.4**
	comp=Z,8.3nm,1.1s,mb4.4						
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**18 03 13.1**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=78,slow=7.8,SNR=7.7						
BRTR	**Keskin Array B**	**56.93**	**299**	P	**P**	**18 03 16.8**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.8,baz=102,slow=5.5,SNR=5.0						
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**18 03 16.8**	**-0.4**
	comp=Z,0.8nm,0.4s,mb4.2,baz=98,slow=7.0,SNR=13						
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**18 03 16.8**	**-0.4**
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**18 03 17.9**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.5,baz=70,slow=7.7,SNR=4.2						
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	**18 03 17.9**	**-0.7**
WRAB	**Tennant Creek**	**59.07**	**148**	*e*P	**P**	**18 03 31.6**	**-0.6**
	comp=Z,4.4nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**18 03 53.4**	**+0.1**
	comp=Z,0.9nm,0.7s,mb4.0,baz=338,slow=7.0,SNR=7.4						
NB2	**NORSAR Subarra**	**64.05**	**327**	P	**P**	**18 04 04.0**	**-1.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=71,slow=6.5						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**18 04 03.6**	**-1.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.6,SNR=6.1						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**18 04 26.3**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=69,slow=7.3,SNR=3.6						
LPG	**La Plagne**	**73.03**	**313**	⇑*i*P	**P**	**18 05 02.3**	**+0.5**
	comp=Z,7.5nm,0.5s,mb4.6						
LPL	**La Plagne**	**73.03**	**313**	⇑*i*P	**P**	**18 05 02.2**	**+0.4**
	comp=Z,7.7nm,0.5s,mb4.6						
ORIF	**Oris-en-Rattie**	**73.85**	**313**	*e*P	**P**	**18 05 06.5**	**-0.1**
AVF	**Avril sur Loir**	**74.43**	**316**	*e*P	**P**	**18 05 09.4**	**-0.6**
YKA	**Yellowknife Ar**	**80.11**	**18**	P	**P**	**18 05 40.9**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.4,baz=326,slow=5.1,SNR=3.6						

IDC 23 17:54:17.8±14.0, 17°.69S×179°.04W, h610km±141km**, mb3.4/4, mb1 3.5/4, mb1mx3.1/17, mbtmp3.4/4, Error ellipse: s-maj=114.9km s-min=74.8km az=104.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.89**	**260**	P	P	18 00 03.5	-0.1
	3.9nm,0.8s,baz=105,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**38.21**	**241**	P	P	18 00 47.5	+0.1
	4.0nm,0.4s,baz=90,slow=9.7,SNR=20						
ASAR	**Alice Springs**	**44.27**	**254**	P	P	18 01 35.0	-0.2
	15nm,0.5s,baz=88,slow=8.4,SNR=267						
ASAR				PcP	PcP	18 03 05.5	-0.3
	0.4nm,0.4s,baz=102,slow=4.0,SNR=4.5						
FITZ	**Fitzroy Crossi**	**52.47**	**260**	P	P	18 02 36.0	+0.2
	0.6nm,0.3s,baz=96,slow=10,SNR=8.4						
BRTR	**Keskin Array B**	**144.20**	**315**	PKP	PKPdf	18 12 45.0	-0.5
	0.3nm,0.5s,baz=15,slow=6.0,SNR=3.6						
GERES	**GERESS Array B**	**147.24**	**344**	PKPbc	PKPbc	18 12 53.3	-0.3
	0.5nm,0.5s,baz=29,slow=3.0,SNR=6.0						

*HLW **23** 18:25:50.2, 33°.61N×35°.66E, h0km±2km, Ml3.4*
*ISCJB **23** 18:25:54.4±0.4, 33°.35N±0°.01×35°.34E±0°.02, h8km±3km, Error ellipse: s-maj=3.3km s-min=2.1km az=23.1*
*NEIC **23** 18:25:55.1, 33°.29N×35°.45E, h1km, MD3.6(GII), After GII.*
*GII **23** 18:25:55.1±0.5, 33°.29N×35°.45E, h1km, Md3.6/9, Mm3.1/4*
*CSEM **23** 18:25:55.2±0.1, 33°.36N×35°.37E, h5km, ML4.2, Error ellipse: s-maj=2.9km s-min=2.1km az=100.0*
*IDC **23** 18:25:56.1±1.5, 33°.31N×35°.51E, h0km, mb2.9/1, mb1 3.2/3, mb1mx2.9/24, mbtmp3.0/3, ML3.0/2, Error ellipse: s-maj=9.2km s-min=6.3km az=18.0*
*GRAL **23** 18:25:56.7±0.5, 33°.34N×35°.45E, h0km±84km, MD4.2*
*NSSC **23** 18:25:56, 33°.27N×35°.45E, h10km±2km*
ISC 23 18:25:55.3±0.4, 33°.35N±0°.01×35°.39E±0°.03, h5km±3km**, n156,** σ0**9**93/198**, 4C-22D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.14**	**341**	*e*P	**Pg**	**18 25 59.9**	**+1.7**
MATL	**Matirih**	**0.14**	**341**	*e*P	**Pg**	**18 25 59.9**	**+1.7**
KSDI	**Kefar Szold**	**0.28**	**125**	⇑Pg	**Pg**	**18 26 00.3**	**-0.4**
KSDI	**Kefar Szold**	**0.28**	**125**	⇑Pg	**Pg**	**18 26 00.3**	**-0.4**
HRI	**Mount Hermon**	**0.30**	**106**	Pg	**Pg**	**18 26 00.3**	**-0.9**
HRI	**Mount Hermon**	**0.30**	**106**	Pg	**Pg**	**18 26 00.3**	**-0.9**
HNTI	**Hanita**	**0.32**	**214**	Pg	**Pg**	**18 26 02.0**	**+0.5**
HNTI	**Hanita**	**0.32**	**214**	Pg	**Pg**	**18 26 02.0**	**+0.5**
MMAI	**Mount Meron Ar**	**0.34**	**178**	Pg	**Pg**	**18 26 01.4**	**-0.3**
	469nm,0.3s,baz=16,slow=18,SNR=3453						
MMAI				Lg		18 26 06.9	
	2μm,0.3s,baz=18,slow=41,SNR=93						
RCY	**Rachaya**	**0.39**	**70**	*e*P	**Pg**	**18 26 03.2**	**+0.4**
RCY				*e*S	**Sg**	**18 26 07.8**	**0.0**
RCY	**Rachaya**	**0.39**	**70**	*e*P	**Pg**	**18 26 03.2**	**+0.4**
RCY				*e*S	**Sg**	**18 26 07.8**	**0.0**
KSHT	**Keshet**	**0.51**	**136**	Pg	**Pg**	**18 26 04.6**	**-0.6**
KSHT	**Keshet**	**0.51**	**136**	Pg	**Pg**	**18 26 04.6**	**-0.6**
BEYL	**Beyrouth**	**0.53**	**10**	*e*P	**Pg**	**18 26 06.3**	**+0.8**
BEYL	**Beyrouth**	**0.53**	**10**	*e*P	**Pg**	**18 26 06.3**	**+0.8**
BHL	**Bhannes**	**0.59**	**22**	*e*P	**Pg**	**18 26 07.0**	**+0.3**
BHL				*e*S	**Sg**	**18 26 15.0**	**+0.5**
BHL	**Bhannes**	**0.59**	**22**	*e*P	**Pg**	**18 26 07.0**	**+0.2**
BHL				*e*S	**Sg**	**18 26 15.0**	**+0.5**
QASN	**Qassioun**	**0.77**	**76**	⇑P	**Pg**	**18 26 10.0**	**0.0**
QASN				⇑S	**Sg**	**18 26 20.0**	**0.0**
QASN	**Qassioun**	**0.77**	**76**	⇑*i*P	**Pg**	**18 26 10.7**	**+0.7**
QASN				⇑*i*S	**Sg**	**18 26 20.8**	**+0.8**
OFRI	**'Ofer**	**0.80**	**205**	⇑Pg	**Pg**	**18 26 10.9**	**+0.2**
OFRI	**'Ofer**	**0.80**	**205**	⇑Pg	**Pg**	**18 26 10.9**	**+0.2**
TCHB	**Talchebab**	**0.84**	**144**	⇓P	**Pg**	**18 26 11.0**	**-0.4**
TCHB				⇓S	**Sg**	**18 26 20.0**	**-2.2**
TCHB	**Talchebab**	**0.84**	**144**	⇓*i*P	**Pg**	**18 26 11.1**	**-0.3**
TCHB				⇓*i*S	**Sg**	**18 26 20.5**	**-1.7**
TOTH	**TOTAH**	**0.87**	**89**	⇓P	**Pg**	**18 26 11.0**	**-1.0**
TOTH				⇓S	**Sg**	**18 26 23.0**	**-0.4**
TOTH	**TOTAH**	**0.87**	**89**	⇓*i*P	**Pg**	**18 26 12.0**	**0.0**
TOTH				⇓*i*S	**Sg**	**18 26 23.7**	**+0.3**
MMLI	**Mount Malkishu**	**0.91**	**178**	⇓Pg	**Pg**	**18 26 11.8**	**-1.0**
MMLI				Sg	**Sg**	**18 26 25.2**	**+0.6**
MMLI	**Mount Malkishu**	**0.91**	**178**	⇓Pg	**Pg**	**18 26 11.8**	**-1.0**
MMLI				Sg	**Sg**	**18 26 25.2**	**+0.6**
HWQ	**Hawqa**	**1.04**	**27**	*e*P	**Pg**	**18 26 15.3**	**+0.2**
HWQ				*e*S	**Sg**	**18 26 28.4**	**-0.2**
HWQ	**Hawqa**	**1.04**	**27**	*e*P	**Pg**	**18 26 15.3**	**+0.1**
HWQ				*e*S	**Sg**	**18 26 28.4**	**-0.2**
HMDT	**Nahal Hemdat**	**1.10**	**174**	Pg	**Pg**	**18 26 15.6**	**-0.8**
HMDT				Sg	**Sg**	**18 26 31.6**	**+0.9**
HMDT	**Nahal Hemdat**	**1.10**	**174**	Pg	**Pg**	**18 26 15.6**	**-0.8**
HMDT				Sg	**Sg**	**18 26 31.6**	**+0.9**
MARH	**Ras Al Marh**	**1.14**	**53**	⇑P	**Pg**	**18 26 17.0**	**-0.1**
MARH				⇑S	**Sg**	**18 26 33.0**	**+1.2**
MARH	**Ras Al Marh**	**1.14**	**53**	⇑*i*P	**Pg**	**18 26 17.4**	**+0.3**
MARH				⇑*i*S	**Sg**	**18 26 33.9**	**+2.1**
SLTI	**Sal'it**	**1.15**	**195**	Pg	**Pg**	**18 26 16.7**	**-0.6**
SLTI				Sg	**Sg**	**18 26 32.9**	**+0.8**
SLTI	**Sal'it**	**1.15**	**195**	Pg	**Pg**	**18 26 16.7**	**-0.6**
SLTI				Sg	**Sg**	**18 26 32.9**	**+0.8**
FKH	**Fakeheh**	**1.22**	**44**	*e*P	**Pg**	**18 26 18.6**	**-0.1**
SALA	**Sala**	**1.30**	**119**	⇓P	**Pn**	**18 26 19.0**	**-1.1**
SALA				⇓S	**Sg**	**18 26 35.0**	**-2.1**
SALA	**Sala**	**1.30**	**119**	⇓*i*P	**Pn**	**18 26 19.1**	**-1.0**
SALA				⇓*i*S	**Sg**	**18 26 35.3**	**-1.8**
HAWK	**Haweek**	**1.44**	**36**	⇑P	**Pn**	**18 26 23.0**	**+0.9**
HAWK				⇑S	**Sb**	**18 26 42.0**	**+0.7**
HAWK	**Haweek**	**1.44**	**36**	⇑*i*P	**Pn**	**18 26 23.3**	**+1.2**
HAWK				⇑*i*S	**Sb**	**18 26 42.9**	**+1.6**
ZALF	**Zalf**	**1.69**	**104**	⇓P	**Pn**	**18 26 25.0**	**-0.5**
ZALF				⇓S	**Sn**	**18 26 45.0**	**-2.5**
ZALF	**Zalf**	**1.69**	**104**	⇓*i*P	**Pn**	**18 26 25.4**	**-0.1**
ZALF				⇓*i*S	**Sn**	**18 26 45.6**	**-1.9**
ASF	**Jabal al Asfar**	**1.73**	**132**	Pn	**Pn**	**18 26 26.3**	**+0.2**
	29nm,0.3s,baz=195,slow=7.7,SNR=209						
ASF				Lg		18 26 49.3	
	168nm,0.3s,baz=8.3,slow=19,SNR=99						
DSI	**Dead Sea**	**1.78**	**180**	Pn	**Pn**	**18 26 26.3**	**-0.4**
DSI				S	**Sn**	**18 26 49.8**	**+0.2**
DSI	**Dead Sea**	**1.78**	**180**	Pn	**Pn**	**18 26 26.3**	**-0.4**
DSI				S	**Sn**	**18 26 49.8**	**+0.2**
ROOS	**tl_alroos**	**1.78**	**62**	⇓P	**Pn**	**18 26 27.0**	**+0.2**
ROOS				⇓S	**Sn**	**18 26 49.0**	**-0.8**
ROOS	**tl_alroos**	**1.78**	**62**	⇓*i*P	**Pn**	**18 26 27.7**	**+0.9**
ROOS				⇓*i*S	**Sn**	**18 26 49.6**	**-0.2**
BIDA	**Albida**	**1.83**	**25**	⇑P	**Pn**	**18 26 28.0**	**+0.6**
BIDA				⇑S	**Sn**	**18 26 52.0**	**+1.0**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**18 26 30.3**	**+0.6**
YTIR	**Yattir**	**2.00**	**187**	Pn	**Pn**	**18 26 30.3**	**+0.6**
MZDA	**Masada**	**2.04**	**181**	Pn	**Pn**	**18 26 30.6**	**+0.4**
MZDA	**Masada**	**2.04**	**181**	Pn	**Pn**	**18 26 30.6**	**+0.4**
CSS	**Prodhromos**	**2.34**	**314**	*e*PN	**Pn**	**18 26 31.8**	**-2.7**
CSS				*e*SN	**Sn**	**18 26 55.5**	**-8.1**
CSS	**Prodhromos**	**2.34**	**314**	*e*Pn	**Pn**	**18 26 28.0**	**-6.4**
CSS				*e*Sn	**Sn**	**18 26 59.0**	**-4.6**
CSS	**Prodhromos**	**2.34**	**314**	*e*Pn	**Pn**	**18 26 31.8**	**-2.7**
CSS				*e*Sn	**Sn**	**18 26 59.0**	**-4.6**
RTMI	**Retamim**	**2.36**	**195**	Pn	**Pn**	**18 26 35.5**	**+0.8**
EREN	**Erenkoy**	**2.40**	**336**	*e*PN	**Pn**	**18 26 32.6**	**-2.6**
EREN	**Erenkoy**	**2.40**	**336**	*e*Pn	**Pn**	**18 26 32.6**	**-2.6**
LFK	**Lefkose**	**2.46**	**322**	*e*PN	**Pn**	**18 26 34.3**	**-1.8**
LFK	**Lefkose**	**2.46**	**322**	*e*Pn	**Pn**	**18 26 34.3**	**-1.8**
KZIT	**Kziot**	**2.58**	**

	baz=223				
HSAF	As Saff	4.96 222	P	Pn	18 27 10.6 +0.2
HKAT	Jabal Katrina	4.96 194	P	Pn	18 27 10.5 +0.1
	baz=197				
HKAT	Jabal Katrina	4.96 194	P	Pn	18 27 10.5 +0.1
SULT	Sultanhani-AKS	5.07 343	*e*PN	Pn	18 27 11.2 -0.8
SULT	Sultanhani-AKS	5.07 343	*e*Pn	Pn	18 27 11.2 -0.8
AYT	Al 'Ayyat	5.13 226	P	Pn	18 27 12.9 +0.1
	baz=226				
AYT	Al 'Ayyat	5.13 226	P	Pn	18 27 12.9 +0.2
TR2		5.15 197	P	Pn	18 27 12.8 -0.3
	baz=199				
TR2		5.15 197	P	Pn	18 27 12.8 -0.3
FYM	Al Fayyum	5.20 227	P	Pn	18 27 15.1 +1.3
	baz=227				
FYM	Al Fayyum	5.20 227	P	Pn	18 27 15.1 +1.3
KONT	Konya--Tatoy	5.20 333	*e*PN	Pn	18 27 12.6 -1.2
KONT	Konya--Tatoy	5.20 333	*e*Pn	Pn	18 27 12.6 -1.2
SUTC	Sutluce-Ispart	5.46 320	*e*PN	Pn	18 27 16.0 -1.2
SUTC	Sutluce-Ispart	5.46 320	*e*Pn	Pn	18 27 16.0 -1.2
TR1		5.47 193	P	Pn	18 27 17.3 -0.1
	baz=196				
TR1		5.47 193	P	Pn	18 27 17.3 -0.1
GRB	Gharib	5.54 205	P	Pn	18 27 18.3 -0.1
	baz=206				
GRB	Gharib	5.54 205	P	Pn	18 27 18.3 -0.1
SHRM		5.55 192	P	Pn	18 27 18.2 -0.3
	baz=194				
SHRM		5.55 192	P	Pn	18 27 18.2 -0.3
ELL	Elmali	5.63 309	*e*PN	Pn	18 27 17.9 -1.7
ELL	Elmali	5.63 309	*e*Pn	Pn	18 27 17.9 -1.7
FETY	Fethiye	6.12 304	*e*PN	Pn	18 27 26.1 -0.3
FETY	Fethiye	6.12 304	*e*Pn	Pn	18 27 26.1 -0.3
HHRG	Al Ghardaqah	6.31 195	P	Pn	18 27 28.7 -0.3
	baz=197				
HHRG	Al Ghardaqah	6.31 195	P	Pn	18 27 28.7 -0.3
BR131	Keskin Array S	6.51 348	*e*Pn	Pn	18 27 29.9 -1.9
	comp=N,0.9nm,0.6s				
BR131	Keskin Array S	6.51 348	*e*Pn	Pn	18 27 29.9 -1.9
	comp=N,0.9nm,0.6s				
BRTR	Keskin Array B	6.51 348	Pn	Pn	18 27 33.9 +2.1
	comp=N,0.3nm,0.3s,baz=162,slow=15,SNR=8.7				
BRTR	Keskin Array B	6.51 348	Pn	Pn	18 27 33.8 +2.0
MSL	Mosul	7.04 62	*e*P	Pg	18 28 19.0 +8.9
MSL			*e*S	Sg	18 29 48.0 +6.7
HMAT	Matruh	7.38 254	P	Pn	18 27 44.3 +0.7
	baz=254				
HMAT	Matruh	7.38 254	P	Pn	18 27 44.3 +0.7
AWBH		7.50 230	P	Pn	18 27 44.9 -0.4
	baz=230				
AWBH		7.50 230	P	Pn	18 27 44.9 -0.4
IDI	Anoyia	8.89 285	Pn	Pn	18 28 05.1 +0.6
	comp=N,0.3nm,0.3s,baz=119,slow=19,SNR=2.8				
IDI			Sn	Sn	18 29 41.8 -3.2
	comp=N,0.7nm,0.3s,baz=5.8,slow=18,SNR=3.8				
IDI	Anoyia	8.89 285	Pn	Pn	18 28 05.1 +0.6
GERES	GERESS Array B	22.39 320	P	P	18 30 58.9 +4.5
	comp=N,0.3nm,0.7s,baz=116,slow=12,SNR=4.0				

*IDC **23** 18:37:59.9±2.1, 4°.47S×101°.04E, h0km, mb3.7/7, mb1 3.7/7, mb1mx3.6/21, mbtmp3.7/7, MS3.5/1, Ms1 3.5/1, ms1mx2.5/28, Error ellipse: s-maj=75.8km s-min=25.7km az=56.0*
*DJA **23** 18:38:01, 4°.60S×101°.04E, h10km, MLv3.9/3*
*ISCJB **23** 18:38:02.6±1.9, 4°.6S±0°.2×101°.1E±0°.1, h39km±13km, mb3.7/7, Error ellipse: s-maj=33.9km s-min=9.7km az=44.2*

ISC 23 18:38:03.7±4.1, 4°.5S±0°.1×101°.1E±0°.1, h28km±28km, n18, σ0°54/16, mb3.7/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.72	60	P	Pn	18 38 31.3	-0.5
MNAI	Manna	1.85	85	P	Pn	18 38 33.5	-0.1
PPSI	Pulau Pagai	2.07	328	P	Pn	18 38 36.1	-0.5
MDSI	Maura Dua	3.06	89	P	Pn	18 38 50.8	+0.5
KASI	Kota Agung	3.52	106	P	Pn	18 38 56.7	+0.2
SDSI	Sungai Dareh	3.59	5	P	Pn	18 38 57.9	+0.4
PDSI	Padang	3.65	350	P	Pn	18 38 58.6	+0.2
PPI	Padang Panjang	4.11	350	P	Pn	18 39 05.1	+0.5
CGJI	Cibinong	5.01	115	P	Pn	18 39 16.2	-0.9
CMAR	Chiang Mai Arr	22.94	355	P	P	18 43 05.7	-0.1
	0.7nm,0.5s,mb3.3,baz=185,slow=8.6,SNR=9.0						
FITZ	Fitzroy Crossi	27.52	121	LR	LR	18 53 49.7	
	comp=Z,94nm,19.1s,baz=50,slow=34						
ASAR	Alice Springs	36.90	124	P	P	18 45 11.2	+1.0
	0.2nm,0.6s,mb3.1,baz=299,slow=7.1,SNR=4.6						
KSRS	Korea Array	48.66	29	P	P	18 46 44.5	-0.8
	1.1nm,0.9s,mb3.9,baz=210,slow=7.2,SNR=4.2						
SONM	Songino Array	52.35	4	P	P	18 47 13.8	+0.8
	1.1nm,0.6s,mb4.0,baz=192,slow=9.6,SNR=9.6						
SONM				PcP	PcP	18 48 24.5	+0.6
	0.5nm,0.4s,baz=203,slow=3.2,SNR=4.8						
MKAR	Makanchi Array	53.75	344	P	P	18 47 23.5	+0.1
	0.7nm,0.6s,mb3.8,baz=142,slow=8.1,SNR=13						
ZALV	Zalesovo Beam	59.84	349	P	P	18 48 06.1	-0.4
	0.7nm,0.5s,mb3.9,baz=191,slow=6.8,SNR=4.0						
BVAR	Borovoye Array	62.92	340	P	P	18 48 26.8	-0.5
	0.8nm,0.6s,mb4.0,baz=150,slow=10,SNR=5.5						
TXAR	Lajitas Array	145.96	41	PKPbc	PKPbc	18 57 42.3	+0.9
	0.5nm,0.5s,baz=204,slow=2.5,SNR=5.9						

*NEIC **23** 18:41:14.8, 16°.02N×99°.20W, h10km, MD3.8(MEX), After MEX.*

MEX 23 18:41:15.1±0.4, 15°.97N×99°.21W, h19km±22km, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	1.12	68	*i* P	Pn	18 41 32.4	-3.3
PNIG				*i* S	Sb	18 41 45.8	-4.3
PNIG	Pinotepa	1.12	68	*i* P	Pn	18 41 32.4	-3.3
PNIG				*i* S	Sb	18 41 45.8	-4.3
ACX	Acapulco	1.12	323	*i* P	Pn	18 41 32.5	-3.3
ACX				*i* S	Sb	18 41 45.7	-4.4
ACX	Acapulco	1.12	323	*i* P	Pn	18 41 32.5	-3.3
ACX				*i* S	Sb	18 41 45.7	-4.4
CAIG	El Cayaco	1.48	317	*i* P	Pn	18 41 37.6	-3.1
CAIG				*i* S	Sn	18 41 55.6	-3.9
CAIG	El Cayaco	1.48	317	*i* P	Pn	18 41 37.6	-3.1
CAIG				*i* S	Sn	18 41 55.6	-3.9
UTMO	Huajuapan	2.29	36	*i* P	Pn	18 41 49.3	-2.5
UTMO				*i* S	Sn	18 42 16.4	-3.1
PLIG	Platanillo	2.42	353	*e*P	Pn	18 41 51.9	-1.9
PLIG				*i* S	Sn	18 42 20.7	-2.2
PLIG	Platanillo	2.42	353	*e*P	Pn	18 41 51.9	-1.9
PLIG				*i* S	Sn	18 42 20.7	-2.2
VHO	Vista Hermosa	2.61	65	*e*P	Pn	18 41 54.5	-1.8
VHO				*i* S	Sn	18 42 31.1	+3.6
VHO	Vista Hermosa	2.61	65	*e*P	Pn	18 41 54.5	-1.8
VHO				*i* S	Sn	18 42 31.1	+3.6
ZIIG	Zihuatanejo	2.71	307	*e*P	Pn	18 41 54.8	-2.9
ZIIG				*i* S	Sn	18 42 33.5	+3.6
ZIIG	Zihuatanejo	2.71	307	*e*P	Pn	18 41 54.8	-2.9
ZIIG				*i* S	Sn	18 42 33.5	+3.6
MZVM		3.20	360	*e*P	Pn	18 42 01.7	-2.7
MZVM				*i* S	Sn	18 42 38.6	-3.5
IIO	Organos	3.63	7	*e*P	Pn	18 42 09.0	-1.3
IIO				*i* S	Sn	18 42 50.0	-2.7
IIO	Organos	3.63	7	*e*P	Pn	18 42 09.0	-1.3
IIO				*i* S	Sn	18 42 50.0	-2.7

*ISCJB **23** 18:44:29.7±0.4, 33°.33N±0°.02×35°.39E±0°.03, h6km±3km, Error ellipse: s-maj=4.5km s-min=3.0km az=12.9*
*NEIC **23** 18:44:30.4, 33°.29N×35°.44E, h3km, MD2.8(GII), After GII.*
*CSEM **23** 18:44:30.0±0.1, 33°.34N×35°.39E, h5km, Mc1.8, Error ellipse: s-maj=2.2km s-min=1.6km az=96.0*
*NSSC **23** 18:44:31, 33°.30N×35°.51E, h11km±2km*
*GRAL **23** 18:44:31.2±0.4, 33°.33N×35°.43E, h1km±6km, MD3.7*
*ISK **23** 18:44:42.6, 34°.35N×34°.87E, h5km, MD3.6*

ISC 23 18:44:30.3±0.4, 33°.34N±0°.02×35°.41E±0°.03, h6km±4km, n61, σ0°68/92, 6D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.17	337	*e*P	Pg	18 44 34.4	+0.7
MATL	Matirih	0.17	337	*e*P	Pg	18 44 34.3	+0.6
KSDI	Kefar Szold	0.25	124	Pg	Pg	18 44 35.2	-0.1
KSDI	Kefar Szold	0.25	124	Pg	Pg	18 44 35.2	-0.1
HRI	Mount Hermon	0.28	104	Pg	Pg	18 44 35.6	-0.2
HRI	Mount Hermon	0.28	104	Pg	Pg	18 44 35.6	-0.2
RCY	Rachaya	0.37	66	*e*P	Pg	18 44 37.9	+0.3
RCY				*e*S	Sg	18 44 42.9	+0.4
RCY	Rachaya	0.37	66	*e*P	Pg	18 44 37.9	+0.3
RCY				*e*S	Sg	18 44 42.9	+0.4
BEYL	Beyrouth	0.54	8	*e*P	Pg	18 44 41.2	+0.5
BEYL	Beyrouth	0.54	8	*e*P	Pg	18 44 41.2	+0.5
BHL	Bhannes	0.60	20	*e*P	Pg	18 44 41.8	-0.1
BHL				*e*S	Sg	18 44 50.1	+0.3
BHL	Bhannes	0.60	20	*e*P	Pg	18 44 41.8	-0.1
BHL				*e*S	Sg	18 44 50.1	+0.3
QASN	Qassioun	0.75	75	⇑P	Pg	18 44 45.0	+0.2
QASN				⇑S	Sg	18 44 54.0	-0.5
QASN	Qassioun	0.75	75	⇑*i*P	Pg	18 44 45.3	+0.5
QASN				⇑*i*S	Sg	18 44 54.6	+0.1
OFRI	'Ofer	0.80	207	Pg	Pg	18 44 45.5	-0.1
OFRI	'Ofer	0.80	207	Pg	Pg	18 44 45.5	-0.1
TCHB	Talchebab	0.81	145	⇑P	Pg	18 44 45.0	-0.9
TCHB				⇑S	Sg	18 44 56.0	-0.5
TCHB	Talchebab	0.81	145	⇑*i*P	Pg	18 44 45.8	-0.1
TCHB				⇑*i*S	Sg	18 44 56.5	0.0
TOTH	TOTAH	0.85	88	⇑P	Pg	18 44 46.0	-0.7
TOTH				⇓S	Sg	18 44 58.0	+0.2
TOTH	TOTAH	0.85	88	⇑*i*P	Pg	18 44 46.8	+0.1
TOTH				⇓*i*S	Sg	18 44 58.6	+0.8
MMLI	Mount Malkishu	0.90	179	Pg	Pg	18 44 47.0	-0.5
MMLI				Sg	Sg	18 44 59.6	+0.5
MMLI	Mount Malkishu	0.90	179	Pg	Pg	18 44 47.0	-0.5
MMLI				Sg	Sg	18 44 59.6	+0.5
HWQ	Hawqa	1.04	25	*e*P	Pg	18 44 49.8	-0.5
HWQ				*e*S	Sg	18 45 03.5	-0.3
HWQ	Hawqa	1.04	25	*e*P	Pg	18 44 49.8	-0.5
HWQ				*e*S	Sg	18 45 03.5	-0.3
HMDT	Nahal Hemdat	1.08	175	Pg	Pg	18 44 50.2	-0.9
HMDT				Sg	Sg	18 45 05.9	+0.7
HMDT	Nahal Hemdat	1.08	175	Pg	Pg	18 44 50.2	-0.9
HMDT				Sg	Sg	18 45 05.9	+0.7
MARH	Ras Al Marh	1.13	52	⇑P	Pg	18 44 52.0	0.0
MARH				⇑S	Sg	18 45 08.0	+1.4
MARH	Ras Al Marh	1.13	52	⇑*i*P	Pg	18 44 52.1	+0.1
MARH				⇑*i*S	Sg	18 45 08.4	+1.8
SLTI	Sal'it	1.14	196	Pg	Pg	18 44 51.8	-0.3
SLTI				Sg	Sg	18 45 07.3	+0.5
SLTI	Sal'it	1.14	196	Pg	Pg	18 44 51.8	-0.3
SLTI				Sg	Sg	18 45 07.3	+0.5
FKH	Fakeheh	1.22	42	*e*P	Pg	18 44 53.1	-0.6
FKH	Fakeheh	1.22	42	*e*P	Pg	18 44 53.1	-0.6
SALA	Sala	1.27	119	⇑P	Pn	18 44 54.0	-0.7
SALA				⇓S	Sg	18 45 09.0	-2.3
SALA	Sala	1.27	119	⇑*i*P	Pn	18 44 54.0	-0.7
SALA				⇓*i*S	Sg	18 45 10.0	-1.3
ZALF	Zalf	1.67	104	⇑P	Pn	18 45 00.0	-0.1
ZALF				⇓S	Sn	18 45 21.0	-0.8
ZALF	Zalf	1.67	104	⇑*i*P	Pn	18 45 00.3	+0.2
ZALF				⇓*i*S	Sn	18 45 21.6	-0.2
DSI	Dead Sea	1.76	181	Pn	Pn	18 45 01.1	-0.2
DSI	Dead Sea	1.76	181	Pn	Pn	18 45 01.1	-0.2
ROOS	tl_alroos	1.77	62	⇑P	Pn	18 45 02.0	+0.5
ROOS				⇑S	Sn	18 45 24.0	-0.4
ROOS	tl_alroos	1.77	62	⇑*i*P	Pn	18 45 02.4	+0.9
ROOS				⇑*i*S	Sn	18 45 24.7	+0.3
BIDA	Albida	1.84	24	⇑P	Pn	18 45 03.0	+0.6
BIDA	Albida	1.84	24	⇑*i*P	Pn	18 45 03.3	+0.9
YTIR	Yattir	1.98	187	Pn	Pn	18 45 05.0	+0.6
YTIR	Yattir	1.98	187	Pn	Pn	18 45 05.0	+0.6
MZDA	Masada	2.02	181	Pn	Pn	18 45 04.9	0.0
MZDA				S	Sn	18 45 32.5	+2.0
MZDA	Masada	2.02	181	Pn	Pn	18 45 04.9	0.0
MZDA				S	Sn	18 45 32.5	+2.0
SLNF	Slenfeh	2.35	16	⇑P	Pn	18 45 09.0	-0.5
SLNF	Slenfeh	2.35	16	⇑*i*P	Pn	18 45 09.7	+0.2
CSS	Prodhromos	2.37	314	*e*PN	Pn	18 45 09.9	+0.3
CSS				*e*SN	Sn	18 45 31.2	-7.8
CSS	Prodhromos	2.37	314	*e*Pn	Pn	18 45 09.6	-0.1
CSS				*e*Sn	Sn	18 45 34.0	-5.1
CSS	Prodhromos	2.37	314	*e*Pn	Pn	18 45 09.6	-0.1
CSS				*e*Sn	Sn	18 45 34.0	-5.0
LFK	Lefkose	2.48	322	*e*PN	Pn	18 45 10.1	-1.2
LFK	Lefkose	2.48	322	*e*Pn	Pn	18 45 10.1	-1.2
HTY	Hatay	2.84	12	*e*PN	Pn	18 45 20.3	+4.0
HTY	Hatay	2.84	12	*e*Pn	Pn	18 45 20.3	+4.1
IKL	Isikli	3.22	334	*e*PN	Pn	18 45 20.5	-1.0
IKL	Isikli	3.22	334	*e*Pn	Pn	18 45 20.5	-1.0
KARA	Karaisali	3.93	356	*e*PN	Pn	18 45 31.0	-0.1
KARA	Karaisali	3.93	356	*e*Pn	Pn	18 45 31.0	-0.1
HDMB	Hadim	4.34	327	*e*PN	Pn	18 45 36.5	-0.3
HDMB	Hadim	4.34	327	*e*Pn	Pn	18 45 36.5	-0.3

*ISCJB **23** 18:55:25.6±0.6, 24°.88N±0°.03×122°.48E±0°.02, h6km±4km, Error ellipse: s-maj=5.4km s-min=3.1km az=14.3*
*JMA **23** 18:55:25.6±0.4, 24°.13N×122°.39E, h6km, M2.7*
*TAP **23** 18:55:26.4, 24°.90N×122°.39E, h10km, ML3.3, C*

ISC 23 18:55:25.7±0.5, 24°.86N±0°.03×122°.49E±0°.02, h2km±4km, n37, σ0°72/54, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	288	P	Pg	18 55 35.0	+0.1
	baz=287						
TWB1				S	Sg	18 55 40.8	-0.3
	baz=287						
YOJ	Yonaguni jima	0.62	130	P	Pg	18 55 38.5	+0.9
YOJ				*e*S	Sg	18 55 47.5	+1.8
TWC	Suao	0.63	247	*i* P	Pg	18 55 37.7	-0.1
	baz=238						
TWC				*e*S	Sg	18 55 46.2	+0.2
	baz=238						
NWF	Wu-fen Shan	0.67	288	⇓*i*P	Pg	18 55 39.1	+0.5
	baz=287						
NWF				S	Sg	18 55 48.1	+0.7
	baz=287						
TWE	Neicheng	0.76	260	P	Pg	18 55 40.2	-0.1
	baz=243						
TWE				*e*S	Sg	18 55 50.3	+0.2
	baz=243						
ENA	Nanau	0.80	238	P	Pg	18 55 41.2	0.0
	baz=230						
ENA				*e*S	Sg	18 55 52.6	+1.0
	baz=230						
TWA	Mucha	0.83	279	P	Pg	18 55 41.7	+0.1
	baz=276						
TWA				S	Sg	18 55 52.7	+0.3
	baz=276						
PCYT	Pengchaiyu	0.85	334	*e*P	Pg	18 55 41.2	-0.9
	baz=339						
PCYT				*e*S	Sg	18 55 54.3	+1.1
	baz=339						
ENTT	Nioudou	0.86	256	P	Pg	18 55 42.4	+0.1
	baz=250						
ENTT				*e*S	Sg	18 55 54.1	+0.6
	baz=250						
TAP1	Taipei	0.89	282	*e*P	Pg	18 55 43.4	+0.5
	baz=280						
TWY	Chenhua	0.91	297	P	Pg	18 55 43.3	+0.3
	baz=298						
TWY				*e*S	Sg	18 55 54.2	-0.7
	baz=298						
TWS1	Kuangyinshan	1.00	284	*e*P	Pg	18 55 44.6	-0.3
	baz=283						
NSK	Sanguang	1.04	260	P	Pg	18 55 45.3	-0.4
	baz=256						
NSK				*e*S	Sg	18 55 58.5	-0.7
	baz=256						
NNS	Nan Shan	1.09	248	*i* P	Pg	18 55 46.2	-0.5
	baz=231						
NNS				*e*S	Sg	18 56 00.6	-0.4
	baz=231						
TWD	Chiawan	1.12	226	*e*P	Pg	18 55 46.8	-0.5
	baz=220						
IRIF	Iriomote-Funau	1.25	114	P	Pg	18 55 49.4	-0.2
IRIF				*e*S	Sg	18 56 05.1	-0.7
WHF	Hehuan Shan	1.32	238	P	Pg	18 55 50.5	-0.6
	baz=232						
WHF				*e*S	Sg	18 56 07.0	-1.1
	baz=232						
TWT	Tachien	1.34	243	*e*P	Pg	18 55 50.6	-0.8
	baz=228						
TWT				*e*S	Sg	18 56 08.5	-0.2
	baz=228						
NSTT	Nanjuang	1.37	261	*e*P	Pn	18 55 50.7	-1.2
	baz=258						
ESL	Shilin	1.42	223	*e*P	Pn	18 55 51.5	-1.0
	baz=199						
HATJ	Hateruma jima	1.44	123	*e*S	Sg	18 56 06.4	-5.7
JKRS	Kuro-shima	1.52	114	P	Pn	18 55 52.0	-1.9
JIJ	Ishigaki jima	1.59	108	P	Pn	18 55 54.4	-0.4
JIJ				*e*S	Sn	18 56 15.8	-0.1
TWQ1	Liyutan	1.64	252	*e*P	Pn	18 55 56.2	+0.7
	baz=267						
EHY	Hungye	1.72	219	*e*P	Pn	18 55 55.5	-1.1
	baz=214						
SMLT	Sun Moon Lake	1.74	236	*e*P	Pn	18 55 57.2	+0.2
	baz=217						
TYC	Yuchr	1.76	238	*e*P	Pn	18 55 56.9	-0.4
	baz=234						
TWF1	Yuli	1.85	216	*e*P	Pn	18 55 58.1	-0.4
	baz=212						
YUS	Yu-Shan	1.96	226	*e*P	Pn	18 56 00.0	+0.1
	baz=222						
ALS	Alishan	2.04	229	*e*P	Pn	18 56 01.8	+0.8
	baz=207						
CHN5	Tsauling	2.07	233	*e*P	Pn	18 56 02.2	+0.7
	baz=230						
ELDTW	Lidau	2.14	219	*e*P	Pn	18 56 01.9	-0.5
	baz=201						
CHN4	Tsaushan	2.29	229	*e*P	Pn	18 56 05.6	+1.1
	baz=207						
CHN4				*e*S	Sn	18 56 38.5	+5.2
	baz=207						
WTP	Ta-pu	2.35	227	*e*P	Pn	18 56 05.7	+0.4
	baz=207						
CHN1	Nanshi	2.45	227	*e*P	Pn	18 56 08.0	+1.4
	baz=224						
SGST	Jiashian	2.48	225	*e*P	Pn	18 56 07.8	+0.7
	baz=204						
SSD	Sandimen	2.70	219	*e*P	Pn	18 56 11.2	+1.0
	baz=200						

*CSEM **23** 19:03:59.1±0.2, 33°.30N×35°.37E, h10km, ML3.1, Error ellipse: s-maj=5.3km s-min=2.0km az=98.0*
*GRAL **23** 19:04:00.1±0.6, 33°.29N×35°.42E, h0km±9km, MD3.1*

GII 23 19:03:58.2±0.7, 33°.30N×35°.41E, h1km±2km, Md2.3/5, Jordan - Syria region

ISC 23 19:03:59.7±2.4, 33°.30N±0°.1×35°.4E±0°.1, h12km±10km, n10, σ0°23/14, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.18	342	*e*P	Pg	19 04 04.0	+0.2
MATL	Matirih	0.18	342	*e*P	Pg	19 04 04.0	+0.2
RCY	Rachaya	0.39	64	*e*P	Pg	19 04 07.3	-0.2
RCY				*e*S	Sg	19 04 12.9	+0.1
RCY	Rachaya	0.39	64	*e*P	Pg	19 04 07.3	-0.2
RCY				*e*S	Sg	19 04 12.9	+0.2
BHL	Bhannes	0.62	20	*e*P	Pg	19 04 11.4	-0.5
BHL				*e*S	Sg	19 04 20.2	+0.1
BHL	Bhannes	0.62	20	*e*P	Pg	19 04 11.4	-0.4
BHL				*e*S	Sg	19 04 20.2	+0.1
HWQ	Hawqa	1.06	25	*e*P	Pb	19 04 19.9	0.0
HWQ	Hawqa	1.06	25	*e*P	Pb	19 04 19.9	-0.1
FKH	Fakeheh	1.24	42	*e*P	Pn	19 04 23.0	+0.2
FKH	Fakeheh	1.24	42	*e*P	Pn	19 04 23.0	+0.2

SKHL 23 19:20:04.7±1.1, 56°.18N×131°.98E, h15km±6km, mb4.2/6, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMKR	Bomnak	2.32	232	*e*Pn	Pn	19 20 43.5	+1.3
BMKR				⇓*i*Pg	Pg	19 20 46.4	-2.7
BMKR				AMB	AMB	19 20 47.5	
	240nm,0.5s						
BMKR				AMB	AMB	19 20 47.5	
	310nm,0.5s						
BMKR				AMB	AMB	19 20 47.5	
	350nm,0.5s						
BMKR				sPg		19 20 52.7	
BMKR				*e*Sn	Sn	19 21 10.0	-0.4
BMKR				*e*Sg	Sg	19 21 17.0	-2.1
BMKR				A		19 21 20.6	
	380nm,0.5s						
KROS	Kirovskiy	3.36	241	*e*Pn	Pn	19 20 56.7	+0.2
KROS				*e*Pg	Pg	19 21 03.5	-5.4
KROS				AMB	AMB	19 21 05.0	
	28nm,0.6s						
KROS				AMB	AMB	19 21 05.0	
	22nm,0.6s						
KROS				sPg		19 21 12.1	
KROS				*e*Sn	Sn	19 21 35.5	-0.5
KROS				*i* Sg	Sg	19 21 47.5	-4.9
KROS				A		19 21 49.9	
	200nm,0.6s						
KROS				A		19 21 49.9	
	140nm,0.6s						
KROS				A		19 21 49.9	
	82nm,0.6s						
ZEA	Zeya	3.66	230	*e*Pn	Pn	19 21 02.5	+1.8
ZEA				*e*Pg	Pg	19 21 11.0	-3.8
ZEA				AMB	AMB	19 21 13.3	
	76nm,0.9s						
ZEA				AMB	AMB	19 21 13.3	
	52nm,0.9s						
ZEA				AMB	AMB	19 21 13.3	
	72nm,0.9s						
ZEA				*e*Sg	Sg	19 21 59.1	-3.1
ZEA				A		19 22 04.4	
	170nm,1.0s						
CLNS	Chul'man	3.98	282	*e*Pg	Pg	19 21 17.0	-3.9
CLNS				AMB	AMB	19 21 19.2	
	12nm,0.3s						
CLNS				*e*Sg	Sg	19 22 08.9	-3.5
CLNS				A		19 22 11.1	
	233nm,0.4s						
CLNS				A		19 22 11.1	
	158nm,0.4s						
NKL	Nikolayevsk	5.89	117	*e*Pn	Pn	19 21 32.0	+0.7
NKL				AMB	AMB	19 21 39.0	
	23nm,0.9s						
NKL				*e*Sg	Sg	19 23 09.0	-4.6
NKL				A		19 23 16.5	
	95nm,0.9s						
GRNR	Gornyy	6.03	152	*e*rx	rx	19 21 41.5	
GRNR				*e*Pg	Pg	19 21 55.0	-5.1
GRNR				AMB	AMB	19 21 59.4	
	10.0nm,0.8s						
GRNR				*e*Sg	Sg	19 23 13.0	-5.2
GRNR				A		19 23 18.1

baz=274
PCYT Pengchaiyu 0.82 333 *e*P **Pg 19 23 36.4 -0.3**
baz=321
ENTT Nioudou 0.87 253 P **Pg 19 23 37.5 -0.1**
baz=237
ENTT S **Sg 19 23 48.8 -0.2**
baz=237
TAP1 Taipei 0.88 280 *e*P **Pg 19 23 37.9 0.0**
baz=278
TAP1 *e*S **Sg 19 23 48.5 -0.9**
baz=278
TWY Chenhua 0.89 296 *e*P **Pg 19 23 37.9 0.0**
baz=295
TWY *e*S **Sg 19 23 49.6 +0.1**
baz=295
TWS1 Kuangyinshan 0.99 282 *e*P **Pg 19 23 39.5 -0.3**
baz=281
NSK Sanguang 1.05 258 P **Pg 19 23 40.1 -0.8**
baz=265
NSK *e*S **Sg 19 23 53.9 -0.6**
baz=265
NNS Nan Shan 1.11 246 P **Pg 19 23 41.6 -0.5**
baz=242
NNS *e*S **Sg 19 23 55.8 -0.7**
baz=242
IRIF Iriomote-Funau 1.26 116 P **Pn 19 23 43.7 -0.9**
IRIF *e*S **Sb 19 23 59.6 -1.5**
WHF Hehuan Shan 1.34 236 P **Pn 19 23 45.8 +0.2**
baz=233
WHF *e*S **Sb 19 24 02.7 -0.6**
baz=233
TWT Tachien 1.35 242 *e*P **Pn 19 23 45.6 -0.2**
baz=239
NSTT Nanjuang 1.37 259 *e*P **Pn 19 23 45.2 -0.9**
baz=257
ESL Shilin 1.44 222 *e*P **Pn 19 23 46.4 -0.6**
baz=219
HATJ Hateruma jima 1.46 124 *e*S **Sn 19 23 59.7 -7.0**
JKRS Kuro-shima 1.54 115 P **Pn 19 23 46.7 -1.7**
JIJ Ishigaki jima 1.60 109 P **Pn 19 23 49.4 +0.2**
JIJ *e*S **Sn 19 24 11.1 +1.1**
TWQ1 Liyutan 1.65 251 *e*P **Pn 19 23 50.9 +1.0**
baz=263
EHY Hungye 1.74 218 *e*P **Pn 19 23 50.8 -0.4**
baz=215
SMLT Sun Moon Lake 1.76 235 *e*P **Pn 19 23 52.2 +0.8**
baz=216
TYC Yuchr 1.78 237 *e*P **Pn 19 23 52.4 +0.7**
baz=218
TWF1 Yuli 1.88 215 *e*P **Pn 19 23 52.8 -0.3**
baz=213
YUS Yu-Shan 1.98 225 *e*P **Pn 19 23 55.0 +0.6**
baz=223
ALS Alishan 2.06 228 *e*P **Pn 19 23 56.5 +1.0**
baz=210
CHN5 Tsauling 2.09 232 *e*P **Pn 19 23 57.5 +1.5**
baz=231

BGS ***23*** *19:35:17.3±1.4, 6°.12N×35°.77W, h10km, mb5.9, MS6.4*
MOS ***23*** *19:35:33.8±0.9, 7°.47N×34°.91W, h9km, mb6.1/176, MS6.3/125, Error ellipse: s-maj=5.4km s-min=2.8km az=55.2*
SZGRF ***23*** *19:35:33.9, 6°.80N×35°.14W, h33km, mb6.1, MS6.3, Central Mid-Atlantic Ridge*
IDC ***23*** *19:35:33.8±0.3, 7°.48N×34°.93W, h0km, mb5.5/39, mb1 5.6/40, mb1mx5.6/41, mbtmp5.5/40, ML5.2/1, MS6.4/38, Ms1 6.4/38, ms1mx6.4/39, Error ellipse: s-maj=10.5km s-min=6.6km az=150.0*
ISCJB ***23*** *19:35:33.8±0.1, 7°.40N±0°.03×34°.88W±0°.01, h10km, mb5.9/466, MS6.4/302, Error ellipse: s-maj=3.8km s-min=1.5km az=167.8*
NEIC ***23*** *19:35:34.8±0.1, 7°.31N×34°.90W, h8km, mb6.0/296, ME7.0, MS6.4/214, MW6.4, MW6.5, Error ellipse: s-maj=4.0km s-min=1.8km az=166.0, Moment Tensor Solution. s162 Moment tensor: Scale 10^18Nm; Mrr0.22; Mθθ-0.17; Mφφ-0.04; Mrθ0.18; Mθφ-4.17; Mφr-1.73; Best double couple: M0=4.50000×10^18 NP1:φs=90.00000°, δ67.00000°, λ177.00000°. NP2:φs=181.00000°, δ87.00000°, λ23.00000°. Principal axes: T 4.5100, Plg18.0000°, Azm47.0000°; N 0.0300, Plg67.0000°, Azm188.0000°; P -4.5400, Plg13.0000°, Azm313.0000°; Broadband fault plane solution: P waves. NP1:φs=90.00000°, δ85.00000°, λ175.00000°. NP2:φs=180.00000°, δ85.00000°, λ5.00000°. Principal axes: T Plg7.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm135.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
GCMT ***23*** *19:35:34.9±0.0, 7°.51N×35°.01W, h13km, MW6.5/105, Moment Tensor Solution. s105,c251; s103,c455; Duration: 42s2 Moment tensor: Scale 10^18Nm; Mrr-0.12±.02; Mθθ0.02±.03; Mφφ0.10±.03; Mrθ-0.19±.06; Mθφ-6.39±.03; Mφr-0.75±.07; Best double couple: M0=6.43800×10^18 NP1:φs=90.00000°, δ83.00000°, λ-178.00000°. NP2:φs=0.00000°, δ88.00000°, λ-7.00000°. Principal axes: T 6.4740, Plg4.0000°, Azm45.0000°; N -0.0740, Plg83.0000°, Azm165.0000°; P -6.4010, Plg6.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
TEH ***23*** *19:35:35.0, 7°.26N×34°.88W, h10km*
DJA ***23*** *19:36:15, 7°.05N×32°.46W, h235km, Mw6.1/5*
ISC 23 19:35:35.5±0.1, 7°.36N±0°.02×34°.89W±0°.01, h10km, (h17km±1.0km: pP-P), n1999, σ0°.81/1878, mb5.9/466, MS6.4/302, 358C-239D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**13.14**	**184**	*e*Pn	**Pn**	**19 38 40.4**	**-1.9**
RCBR				*e*Sn	**Sn**	**19 41 01.0**	**-7.7**
BBTS	**Babate**	**19.41**	**66**	P	**Pn**	**19 40 01.9**	**-1.3**
	7.2nm,0.3s,baz=252,slow=3.3,SNR=70						
BBTS				S	**Sn**	**19 43 39.2**	**-2.0**
	14nm,0.3s,baz=258,slow=19,SNR=4.5						
BBTS				LR	LR	19 45 37.3	
	comp=Z,143μm,20.1s,baz=244,slow=31						
BBTS	**Babate**	**19.41**	**66**	P	**Pn**	**19 40 01.9**	**-1.3**
BBTS				S	**Sn**	**19 43 39.2**	**-2.0**
BBTS				LR	LR	19 45 37.3	
BBGH	**Gun Hill**	**24.93**	**285**	*e*P	**P**	**19 41 01.2**	**+2.1**
	1μm,1.3s,mb6.3						
BBGH				LR	LR		
	comp=Z,113μm,20.0s,MS6.4						
TOSP	**Speyside**	**25.60**	**281**	*e*P	**P**	**19 41 05.9**	**+0.7**
BOT	**Bacolet**	**25.76**	**280**	*e*P	**P**	**19 41 09.0**	**+2.2**
BOT	**Bacolet**	**25.76**	**280**	*e*P	**P**	**19 41 09.0**	**+2.2**
TPR	**Prospect**	**25.82**	**280**	*e*P	**P**	**19 41 07.3**	**+0.1**
TPR	**Prospect**	**25.82**	**280**	*e*P	**P**	**19 41 07.3**	**+0.1**
TBH	**Brigand Hill**	**26.04**	**279**	*e*P	**P**	**19 41 10.7**	**+1.5**
TBH	**Brigand Hill**	**26.04**	**279**	*e*P	**P**	**19 41 10.7**	**+1.5**
MCLT	**Moule a Chique**	**26.36**	**286**	*e*P	**P**	**19 41 13.6**	**+1.5**
MCLT	**Moule a Chique**	**26.36**	**286**	*e*P	**P**	**19 41 13.6**	**+1.5**
TRN	**Trinidad (W)**	**26.38**	**279**	*e*P	**P**	**19 41 13.8**	**+1.5**
TRN	**Trinidad (W)**	**26.38**	**279**	*e*P	**P**	**19 41 13.8**	**+1.5**
TPP	**Pointe-a-Pierr**	**26.40**	**278**	*e*P	**P**	**19 41 14.9**	**+2.4**
TPP	**Pointe-a-Pierr**	**26.40**	**278**	*e*P	**P**	**19 41 14.8**	**+2.3**
SVB	**Belmont**	**26.58**	**285**	*e*P	**P**	**19 41 16.1**	**+2.0**
SVB	**Belmont**	**26.58**	**285**	*e*P	**P**	**19 41 16.1**	**+2.0**
TCE	**Chacachacare**	**26.73**	**279**	*e*P	**P**	**19 41 17.0**	**+1.5**
TCE	**Chacachacare**	**26.73**	**279**	*e*P	**P**	**19 41 17.0**	**+1.5**
FDF	**Fort de France**	**26.77**	**288**	*e*P	**P**	**19 41 15.6**	**-0.2**
FDF				pmax	pmax		
	comp=Z,352nm,1.0s,mb5.8						
FDF				MLR	MLR		
	comp=Z,46μm,21.0s,MS6.0						
FDF	**Fort de France**	**26.77**	**288**	*e*P	**P**	**19 41 15.6**	**-0.3**
	comp=Z,352nm,1.0s,mb5.8						
FDF				LR	LR		
	comp=Z,46μm,21.0s,MS6.0						
GRGR	**Grenville**	**26.79**	**282**	*e*P	**P**	**19 41 16.1**	**+0.1**
	comp=Z,2μm,1.6s,mb6.3						
GRGR				LR	LR		
	comp=Z,44μm,22.0s,MS6.0						
DLPL	**La Plaine**	**27.00**	**289**	*e*P	**P**	**19 41 21.4**	**+3.4**
BPA	**Boggy Peak**	**28.02**	**293**	*e*P	**P**	**19 41 23.5**	**-3.5**
BPA	**Boggy Peak**	**28.02**	**293**	*e*P	**P**	**19 41 23.5**	**-3.5**
ANWB	**Willy Bob**	**28.14**	**294**	*e*P	**P**	**19 41 26.7**	**-1.4**
	comp=Z,103nm,0.7s,mb5.6						
ANWB				LR	LR		
	comp=Z,39μm,21.0s,MS6.0						
SKI	**Saint Kitts**	**28.91**	**293**	*e*P	**P**	**19 41 35.9**	**+0.9**
SKI	**Saint Kitts**	**28.91**	**293**	*e*P	**P**	**19 41 35.9**	**+0.9**
PCRV	**Puerto La Cruz**	**29.52**	**278**	P	**P**	**19 41 39.3**	**-1.1**
	comp=Z,15nm,0.6s,mb4.9,baz=117,slow=2.6,SNR=5.7						
PCRV				LR	LR	19 51 37.2	
	comp=Z,47μm,21.6s,MS6.1,baz=73,slow=33						
TIC	**Toumodi**	**29.65**	**89**	*e*P	**P**	**19 41 40.4**	**-1.2**
	comp=Z,481nm,1.0s,mb6.2						
LIC	**Lamto**	**29.67**	**90⇑**	*i*P	**P**	**19 41 40.9**	**-0.9**
	comp=Z,1μm,1.1s,mb6.2,baz=273						
LIC				*e*MLR	MLR		
	comp=Z,65μm,20.0s,MS6.0						
LIC	**Lamto**	**29.67**	**90**	*e*P	**P**	**19 41 40.8**	**-1.0**
	comp=Z,1μm,1.1s,mb6.6						
LIC	**Lamto**	**29.67**	**90⇑**	*i*P	**P**	**19 41 40.9**	**-0.9**
	comp=Z,527nm,1.1s,mb6.2						
LIC				LR	LR		
	comp=Z,33μm,20.0s,MS6.0						
DBIC	**Dimbokro**	**29.82**	**89**	P	**P**	**19 41 42.1**	**-1.0**
	comp=Z,485nm,0.9s,mb6.2,baz=260,slow=10,SNR=103						
DBIC				LR	LR	19 50 50.0	
	comp=Z,27μm,19.0s,MS5.9,baz=252,slow=31						
DBIC	**Dimbokro**	**29.82**	**89**	P	**P**	**19 41 42.1**	**-1.0**
DBIC				pmax	pmax		
	comp=Z,485nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,27μm,19.0s						
DBIC	**Dimbokro**	**29.82**	**89⇑**	*i*P	**P**	**19 41 42.1**	**-1.0**
	comp=Z,509nm,0.9s,mb6.2						
DBIC				LR	LR		
	comp=Z,32μm,20.0s,MS6.0						
KIC	**Kosan Boka**	**29.95**	**90**	*e*P	**P**	**19 41 43.2**	**-1.0**
	comp=Z,718nm,1.1s,mb6.3						
PMAR	**Madeira**	**30.26**	**31**	*e*P	**P**	**19 41 47.2**	**+0.4**
	comp=Z,370nm,1.6s,mb5.9						
PMAR				*i*P		20 12 52.1	
CAM4	**Nova Friburgo**	**30.47**	**194⇓**	*i*P	**P**	**19 41 49.3**	**+0.6**
CAM4				*i*	pP	19 41 52.9	+1.2
CAM4				*i*		19 41 57.9	
CAM4				*i*		19 42 00.2	
CAM4				*i*		19 42 06.8	
CAM4				*i*		19 42 12.0	
CAM4				*i*		19 42 17.8	
CAM4				*i*		19 42 22.2	
PSMA	**Santa Maria**	**30.81**	**15**	*e*P	**P**	**19 41 51.3**	**-0.2**
	comp=Z,350nm,1.5s,mb6.0						
PMPS	**Porto Santo**	**30.82**	**31**	*e*P	**P**	**19 41 48.7**	**-3.0**
	comp=Z,526nm,1.5s,mb6.2						
PSMN	**Pico do Norte,**	**30.84**	**15**	*e*P	**P**	**19 41 54.8**	**+3.0**
CDVI	**St. Croix**	**30.89**	**292**	*e*P	**P**	**19 41 53.6**	**+1.1**
	comp=Z,374nm,1.0s,mb6.2						
PDA	**Ponta Delgada**	**31.39**	**14**	*e*P	**P**	**19 41 56.9**	**+0.3**
PDA				*e*LR	LR	19 50 00.0	
CMLA	**Cha da Macela**	**31.44**	**14**	*e*P	**P**	**19 41 57.0**	**-0.1**
	comp=Z,125nm,0.9s,mb5.7						
CMLA	**Cha da Macela**	**31.44**	**14**	*e*P	**P**	**19 41 57.3**	**+0.2**
CMLA				pmax	pmax		
	comp=Z,254nm,1.1s,mb6.0						
CMLA				MLR	MLR		
	comp=Z,59μm,19.0s,MS6.3						
CMLA	**Cha da Macela**	**31.44**	**14**	*e*P	**P**	**19 41 57.3**	**+0.2**
	comp=Z,254nm,1.1s,mb6.0						
CMLA				LR	LR		
	comp=Z,59μm,19.0s,MS6.3						
GRON	**Grota Negra**	**31.44**	**14**	*e*P	**P**	**19 41 57.8**	**+0.7**
	comp=Z,47nm,0.8s,mb5.4						
PSET	**Sete Cidades**	**31.45**	**14**	*e*P	**P**	**19 41 57.6**	**+0.5**
	comp=Z,100nm,1.8s,mb5.3						
PCAN	**Candelaria**	**31.50**	**10**	*e*P	**P**	**19 41 58.6**	**+1.0**
PID	**Ribeirinha**	**31.54**	**10**	*e*P	**P**	**19 41 59.5**	**+1.5**
PICO	**Pico**	**31.55**	**10**	*e*P	**P**	**19 42 02.4**	**+4.4**
CALA	**Caldeira**	**31.58**	**9**	*e*P	**P**	**19 42 00.2**	**+1.9**
PCED	**Cedros**	**31.63**	**9**	*e*P	**P**	**19 41 59.5**	**+0.8**
	comp=Z,234nm,0.9s,mb6.0						
MTP	**Monte Pirata**	**31.70**	**293**	*e*P	**P**	**19 41 59.0**	**-0.6**
	comp=Z,261nm,1.0s,mb6.0						
PMAN	**Manadas**	**31.73**	**10**	*e*P	**P**	**19 41 59.5**	**-0.2**
	comp=Z,150nm,0.9s,mb5.8						
ROSA	**Rosais**	**31.79**	**10**	*e*P	**P**	**19 41 59.2**	**-1.0**
HUMP	**Col San Antoni**	**31.98**	**293**	*e*P	**P**	**19 42 02.0**	**-0.1**
	comp=Z,202nm,0.9s,mb6.0						
CBYP	**Canovanas**	**32.03**	**293**	*e*P	**P**	**19 41 59.2**	**-3.3**
	comp=Z,143nm,1.1s,mb5.7						
SJG	**San Juan**	**32.25**	**292**	LR	LR	19 52 21.7	
	comp=Z,330μm,21.5s,MS7.0,baz=113,slow=31						
SJG	**San Juan**	**32.25**	**292**	*e*P	**P**	**19 42 03.9**	**-0.6**
SJG				pmax	pmax		
	comp=Z,814nm,1.2s						
SJG				MLR	MLR		
	comp=Z,279μm,21.0s						
SJG	**San Juan**	**32.25**	**292**	*e*P	**P**	**19 42 03.9**	**-0.6**
	comp=Z,814nm,1.2s,mb6.4						
SJG				LR	LR		
	comp=Z,279μm,21.0s,MS6.9						
ICM	**Isla Caja Muer**	**32.54**	**292**	*e*P	**P**	**19 42 07.1**	**+0.1**
CELP	**Cerrillos**	**32.64**	**292**	*e*P	**P**	**19 42 07.1**	**-0.8**
OBIP	**Obispado Ponce**	**32.65**	**292**	*e*P	**P**	**19 42 07.5**	**-0.6**
	comp=Z,222nm,0.9s,mb6.1						
AOPR	**Arecibo Observ**	**32.87**	**292**	*e*P	**P**	**19 42 08.7**	**-1.2**
	comp=Z,71nm,0.8s,mb5.7						
LRS	**Lares**	**32.94**	**292**	*e*P	**P**	**19 42 10.0**	**-0.5**
CRPR	**Cabo Rojo, PR**	**33.11**	**292**	*e*P	**P**	**19 42 11.2**	**-0.8**
	comp=Z,80nm,1.0s,mb5.6						
LSP	**Las Mesas**	**33.13**	**292**	*e*P	**P**	**19 42 12.5**	**+0.3**
MPR	**Mayaguez**	**33.19**	**292**	*e*P	**P**	**19 42 12.3**	**-0.4**
AGPR	**Aguadilla, PR**	**33.23**	**293**	*e*P	**P**	**19 42 12.2**	**-0.8**
	comp=Z,338nm,1.3s,mb6.1						
AGP	**Aguadilla**	**33.24**	**292**	*e*P	**P**	**19 42 12.7**	**-0.4**
SIV	**San Ignacio**	**34.79**	**228**	P	**P**	**19 42 26.9**	**+0.3**
	comp=Z,316nm,1.0s,mb6.2,baz=74,slow=9.4,SNR=338						
SDV	**Santo Domingo**	**35.41**	**275**	*e*P	**P**	**19 42 31.0**	**-1.0**
	comp=Z,119nm,0.9s,mb5.8						
SDV				LR	LR		
	comp=Z,11μm,20.0s,MS5.6						
TOA0	**Torodi Ar. Sit**	**36.43**	**78**	*e*P	**P**	**19 42 39.1**	**-1.6**
TORD	**Torodi Ar. Bea**	**36.43**	**78**	P	**P**	**19 42 40.0**	**-0.7**
	comp=Z,292nm,0.9s,mb6.2,baz=270,slow=8.1,SNR=896						
TORD				S	**S**	**19 48 21.6**	**-1.1**
	comp=Z,11nm,1.2s,baz=235,slow=16,SNR=3.2						
TORD				LR	LR	19 55 56.8	
	comp=Z,69μm,18.6s,MS6.5,baz=245,slow=34						
SHEL	**Horse Pasture**	**37.01**	**129**	P	**P**	**19 42 47.0**	**+1.4**
SHEL				MLR	MLR		
	comp=Z,59μm,21.0s,MS6.4						
RTC	**Rabat Centre**	**37.04**	**40**	*e*P	**P**	**19 42 46.1**	**+0.4**
	comp=Z,616nm,1.1s,mb6.3						
RTC				LR	LR		
	comp=Z,67μm,21.0s,MS6.4						
SDDR	**Presa de Saban**	**37.19**	**292**	*e*P	**P**	**19 42 47.3**	**+0.2**
	comp=Z,370nm,1.1s,mb6.1						
SDDR				LR	LR		
	comp=Z,67μm,22.0s,MS6.4						
BBSR	**BB Station**	**37.24**	**316**	*e*P	**P**	**19 42 46.7**	**-0.8**
BBSR				LR	LR		
	comp=Z,39μm,19.0s,MS6.2						
GRTK	**Grand Turk**	**37.69**	**296**	*e*P	**P**	**19 42 49.4**	**-2.0**
	comp=Z,518nm,1.5s,mb6.0						
GRTK				LR	LR		
	comp=Z,24μm,19.0s,MS6.0						
MDT	**Midelt**	**37.82**	**44**	LR	LR	19 55 46.6	
	comp=Z,59μm,20.9s,MS6.4,baz=243,slow=32						
PFVI	**Vila Bisbo**	**37.95**	**35**	*e*P	**P**	**19 42 53.6**	**+0.2**
	comp=Z,491nm,0.9s,mb6.2						
PFVI				*i*S	**S**	**19 48 48.0**	**+2.7**
PFVI				*e*LQ		19 50 57.4	
PFVI				*e*LR	LR	19 52 59.3	
	comp=Z,52μm,19.3s						
MORF	**Marmelete**	**38.17**	**35**	*e*P	**P**	**19 42 55.4**	**+0.2**
	comp=Z,490nm,1.4s,mb6.0						
MORF				*e*S	**S**	**19 48 46.7**	**-2.0**
MORF				*e*LQ		19 51 31.1	
MORF				*e*LR	LR	19 53 03.7	
	comp=Z,52μm,24.1s						
MORF	**Marmelete**	**38.17**	**35**	*e*P	**P**	**19 42 55.2**	**0.0**
MORF				*e*S	**S**	**19 48 49.8**	**+1.1**
PTEO	**Sao Teotonio**	**38.30**	**34**	*e*P	**P**	**19 42 56.6**	**+0.3**
	comp=Z,491nm,0.9s,mb6.2						
PBDV	**Barranco-do-Ve**	**38.54**	**36**	*e*P	**P**	**19 42 58.4**	**+0.1**
	comp=Z,670nm,1.2s,mb6.2						
PBDV	**Barranco-do-Ve**	**38.54**	**36**	*e*PP	PP	19 44 30.9	+4.3
PBDV				*i*S	**S**	**19 48 52.1**	**-2.1**
PBDV				*e*LQ		19 51 23.9	
PBDV				*e*LR	LR	19 53 12.6	
	comp=Z,54μm,19.8s						
PCVE	**Castro Verde**	**38.74**	**35**	*i*P	**P**	**19 43 01.4**	**+1.3**
	comp=Z,178nm,1.5s,mb5.6						
PCVE	**Castro Verde**	**38.74**	**35**	*e*PP	PP	19 44 30.7	+1.8
PCVE				*i*S	**S**	**19 49 00.3**	**+3.0**
PCVE				*e*LQ		19 51 54.7	
PCVE				*e*LR	LR	19 53 16.0	
PVAQ	**Vaqueiros**	**38.77**	**36**	*i*P	**P**	**19 43 00.6**	**+0.3**
	comp=Z,552nm,1.3s,mb6.1						
PVAQ	**Vaqueiros**	**38.77**	**36**	*e*PP	PP	19 44 28.1	-1.0
PVAQ				*i*S	**S**	**19 48 59.5**	**+1.8**
PVAQ				*e*LQ		19 51 28.0	
PVAQ				*e*LR	LR	19 53 13.1	
	comp=Z,49μm,18.2s						
LIS	**Lisbon**	**38.90**	**33**	*e*P	**P**	**19 43 01.2**	**-0.1**
LIS				AMb	AMB	19 43 16.3	
	comp=Z,347nm,1.5s,mb5.8						
LIS				*e*S	**S**	**19 49 00.8**	**+1.1**
LIS				*e*S	**S**	**19 49 00.8**	**+1.1**
EGRO	**El Granado**	**39.00**	**36**	P	**P**	**19 43 03.1**	**+0.9**
	comp=Z,357nm,1.5s,mb5.9						
PMAFR	**Mafra**	**39.01**	**32**	*i*P	**P**	**19 43 02.0**	**-0.2**
	comp=Z,431nm,1.1s,mb6.1						
PMAFR	**Mafra**	**39.01**	**32**	*e*PP	PP	19 44 36.8	+5.1
PMAFR				*i*S	**S**	**19 49 03.1**	**+1.9**
PMAFR				*e*LQ		19 51 42.0	
PMAFR				*e*LR	LR	19 53 09.4	
	comp=Z,59μm,18.6s						
SFS	**San Fernando**	**39.04**	**38⇑**	*e*P	**P**	**19 43 03.3**	**+0.8**
SFS				pmax	pmax		
	comp=Z,776nm,1.2s,mb6.3						
SFS				MLR	MLR		
	comp=Z,21μm,19.0s,MS6.0						
SFS	**San Fernando**	**39.04**	**38⇑**	*e*P	**P**	**19 43 03.3**	**+0.7**
	comp=Z,776nm,1.2s,mb6.3						
SFS				LR	LR		
	comp=Z,21μm,19.0s,MS6.0						
PBEJ	**Beja**	**39.12**	**35**	*e*P	**P**	**19 43 03.6**	**+0.4**
	comp=Z,288nm,1.5s,mb5.8						
ROSC	**El Rosal**	**39.28**	**269**	P	**P**	**19 43 05.4**	**+0.5**
	comp=Z,338nm,0.7s,mb6.2,baz=100,slow=6.0,SNR=112						
ROSC				S	**S**	**19 49 07.0**	**+0.9**
	comp=Z,3.8nm,0.4s,baz=270,slow=20,SNR=1.7						
ROSC				LR	LR	19 57 59.4	
	comp=Z,41μm,21.5s,MS6.2,baz=241,slow=34						
ROSC	**El Rosal**	**39.28**	**269**	*e*P	**P**	**19 43 05.6**	**+0.7**
EVOP	**Sao Brissos**	**39.33**	**34**	*e*P	**P**	**19 43 05.0**	**+0.1**
EVOP				AMb	AMB	19 43 11.9	
	comp=Z,297nm,2.0s,mb5.7						
EVOP				*e*S	**S**	**19 49 06.7**	**+0.6**
EVOP				*e*S	**S**	**19 49 06.8**	**+0.7**
EVO	**Evora**	**39.39**	**34⇑**	*i*P	**P**	**19 43 05.3**	**-0.2**
	comp=Z,308nm,1.0s,mb5.7						
EVO				*e*MLR	MLR		
	comp=Z,95μm,23.0s,MS6.3						
EVO	**Evora**	**39.39**	**34**	*i*P	**P**	**19 43 05.3**	**-0.2**
	comp=Z,331nm,1.5s,mb5.8						
EVO	**Evora**	**39.39**	**34**	*e*PP	PP	19 44 35.6	-0.3
EJIF	**Jimena Fronter**	**39.48**	**39**	P	**P**	**19 43 06.8**	**+0.6**
EJIF				pmax	pmax		
	comp=Z,292nm,1.2s,mb5.9						
EJIF	**Jimena Fronter**	**39.48**	**39**	P	**P**	**19 43 06.8**	**+0.6**
	comp=Z,292nm,1.2s,mb5.9						
ESPR	**Espera**	**39.51**	**38**	P	**P**	**19 43 06.7**	**+0.1**
	comp=Z,218nm,1.2s,mb5.8						
ALMR	**Almeirim**	**39.53**	**33**	*e*P	**P**	**19 43 06.8**	**+0.2**
EMIN	**Mina Concepcio**	**39.62**	**36**	P	**P**	**19 43 06.5**	**-0.9**
	comp=Z,352nm,2.1s,mb5.7						
PBAR	**Barrancos**	**39.69**	**35**	*i*P	**P**	**19 43 07.9**	**-0.1**
	comp=Z,401nm,1.1s,mb6.1						
PBAR	**Barrancos**	**39.69**	**35**	*e*PP	PP	19 44 44.6	+5.4
PBAR				*i*S	**S**	**19 49 06.1**	**-5.5**
PBAR				*e*LQ		19 52 14.1	
PBAR				*e*LR	LR	19 53 46.5	
	comp=Z,49μm,23.6s						
PESTR	**Estremoz**	**39.86**	**34**	*i*P	**P**	**19 43 09.5**	**+0.1**
	comp=Z,234nm,1.3s,mb5.8						
PESTR	**Estremoz**	**39.86**	**34**	*e*PP	PP	19 44 39.0	-2.0
PESTR				*i*S	**S**	**19 49 16.3**	**+2.2**
PESTR				*e*LQ		19 52 08.0	
PESTR				*e*LR	LR	19 53 29.9	
	comp=Z,54μm,13.8s						
CPUP	**Villa Florida**	**39.95**	**212**	P	**P**	**19 43 10.1**	**-0.1**
	comp=Z,49nm,0.9s,mb5.2,baz=14,slow=8.5,SNR=41						
CPUP				S	**S**	**19 49 17.4**	**+1.8**
	comp=Z,4.0nm,0.8s,baz=180,slow=20,SNR=2.2						
CPUP				LR	LR	19 59 26.3	
	comp=Z,106μm,18.2s,MS6.7,baz=22,slow=36						
CPUP	**Villa Florida**	**39.95**	**212**	P	**P**	**19 43 10.1**	**-0.1**
CPUP				S	**S**	**19 49 17.4**	**+1.8**
CPUP				pmax	pmax		
	comp=Z,49nm,0.9s						
CPUP				smax			
	comp=N,4.0nm,0.8s						
CPUP				MLR	MLR		
	comp=Z,106μm,18.2s						
CPUP	**Villa Florida**	**39.95**	**212⇑**	*i*P	**P**	**19 43 09.7**	**-0.6**
	comp=Z,260nm,1.0s,mb5.9						
CPUP				LR	LR		
	comp=Z,8μm,22.0s,MS5.5						
EMIJ	**Mijas**	**39.98**	**39**	P	**P**	**19 43 09.6**	**-0.8**
	comp=Z,229nm,1.3s,mb5.8						
EBAD	**Badajoz**	**40.11**	**35**	P	**P**	**19 43 12.5**	**+1.1**
	comp=Z,344nm,1.6s,mb5.8						
PMRV	**Marv??o**	**40.37**	**34**	*i*P	**P**	**19 43 13.8**	**+0.2**
	comp=Z,782nm,1.4s,mb6.2						
PMRV	**Marv??o**	**40.37**	**34**	*e*PP	PP	19 44 50.7	+4.2
PMRV				*i*S	**S**	**19 49 19.3**	**-2.3**
PMRV				*e*LQ		19 52 19.8	
PMRV				*e*LR	LR	19 53 30.1	
	comp=Z,36μm,21.6s						
LPAZ	**La Paz**	**40.43**	**234**	P	**P**	**19 43 15.1**	**+0.8**
	comp=Z,343nm,0.9s,mb6.1,baz=56,slow=7.2,SNR=289						
LPAZ				S	**S**	**19 49 25.5**	**+2.4**
	comp=Z,7.1nm,0.9s,baz=16,slow=18,SNR=2.1						
LPAZ				LR	LR	19 59 30.9	
	comp=Z,69μm,19.3s,MS6.5,baz=64,slow=36						
LPAZ	**La Paz**	**40.43**	**234**	P	**P**	**19 43 15.1**	**+0.8**
LPAZ				S	**S**	**19 49 25.5**	**+2.5**
LPAZ				pmax	pmax		
	comp=Z,343nm,0.9s						
LPAZ				smax			
	comp=N,7.0nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,69μm,19.3s						
LPAZ	**La Paz**	**40.43**	**234**	*e*P

comp=Z,274nm,2.2s,mb5.5
EBAN Banos Encina 41.60 38 P **P 19 43 23.3 -0.5**
EBAN pmax pmax
comp=Z,98nm,1.0s,mb5.4
EBAN Banos Encina 41.60 38 P **P 19 43 23.3 -0.5**
comp=Z,98nm,1.0s,mb5.4
EZAM Zamans 41.68 30 P **P 19 43 23.8 -0.5**
EZAM pmax pmax
comp=Z,161nm,1.2s,mb5.5
EZAM Zamans 41.68 30 P **P 19 43 23.8 -0.5**
comp=Z,161nm,1.2s,mb5.5
PCAB Cabril 41.68 31 *eP* **P 19 43 23.6 -0.8**
comp=Z,266nm,1.9s,mb5.5
CMJ Castle Mountai 41.76 289⇑ *eP* **P 19 43 25.9 +0.6**
TAM Tamanrasset 41.76 64⇑ *iP* **P 19 43 26.0 +0.7**
TAM pmax pmax
comp=Z,326nm,1.4s,mb5.8
TAM MLR MLR
comp=Z,66μm,19.0s,MS6.5
TAM Tamanrasset 41.76 64⇑ *iP* **P 19 43 26.0 +0.7**
comp=Z,326nm,1.4s,mb5.8
TAM LR LR
comp=Z,66μm,19.0s,MS6.5
ELOB Lobios 41.78 30 P **P 19 43 24.7 -0.5**
comp=Z,223nm,1.6s,mb5.5
MVO Moncorvo 41.80 32 *i* P **P 19 43 24.7 -0.6**
comp=Z,350nm,0.9s,mb6.0
MVO Moncorvo 41.80 32 *e*PP PP 19 45 00.8 -1.2
MVO *i* S **S 19 49 35.4 -7.5**
MVO *e*LQ 19 52 42.7
MVO *e*LR LR 19 54 41.8
comp=Z,49μm,19.3s
EQES Quesada 41.82 39 P **P 19 43 25.4 -0.2**
comp=Z,415nm,1.4s,mb5.9
ENIJ Nijar 41.86 40 P **P 19 43 26.3 +0.4**
ENIJ pmax pmax
comp=Z,297nm,0.8s,mb6.0
ENIJ Nijar 41.86 40 P **P 19 43 26.3 +0.4**
comp=Z,297nm,0.8s,mb6.0
GWJ Greenwich 42.08 289⇑ *iP* **P 19 43 28.8 +0.8**
HOJ Hope 42.09 289⇑ *eP* **P 19 43 29.2 +1.2**
EHUE Huescar 42.12 39 P **P 19 43 28.3 +0.3**
EHUE pmax pmax
comp=Z,183nm,1.4s,mb5.5
EHUE Huescar 42.12 39 P **P 19 43 28.3 +0.2**
comp=Z,183nm,1.4s,mb5.5
EMAZ Mazaricos 42.15 29 P **P 19 43 25.9 -2.2**
comp=Z,208nm,1.6s,mb5.5
STH Stony Hill 42.16 289⇑ *iP* **P 19 43 29.2 +0.6**
PAB San Pablo 42.16 36 *eP* **P 19 43 28.5 +0.1**
PAB pmax pmax
comp=Z,101nm,1.2s,mb5.3
PAB MLR MLR
comp=Z,55μm,20.0s,MS6.4
PAB San Pablo 42.16 36 *eP* **P 19 43 28.5 +0.1**
comp=Z,101nm,1.2s,mb5.3
PAB LR LR
comp=Z,55μm,20.0s,MS6.4
USTO Oran 42.24 43 P **P 19 43 31.0 +1.9**
ODJA Bouhanifia 42.29 44 P **P 19 43 32.0 +2.5**
STS Santiago 42.30 29 P **P 19 43 28.2 -1.2**
STS pmax pmax
comp=Z,154nm,1.1s,mb5.5
STS Santiago 42.30 29 P **P 19 43 28.2 -1.2**
comp=Z,154nm,1.1s,mb5.5
PBRG Braganca 42.41 32 *i* P **P 19 43 30.6 +0.3**
comp=Z,364nm,1.9s,mb5.7
ESDC Sonseca Array 42.47 36 P **P 19 43 30.7 -0.2**
comp=Z,42nm,1.0s,mb5.0,baz=235,slow=8.2,SNR=54
ESDC LR LR 19 58 04.2
comp=Z,39μm,19.6s,MS6.3,baz=235,slow=32
ESDC Sonseca Array 42.47 36 P **P 19 43 30.8 -0.1**
comp=Z,87nm,1.1s,mb5.3
ESLA Sonseca Array 42.47 36 *eP* **P 19 43 30.8 -0.1**
comp=Z,119nm,1.6s,mb5.3
ESLA LR LR
comp=Z,267μm,20.0s,MS7.1
ECAL Calabor 42.51 31 P **P 19 43 31.9 +0.8**
comp=Z,346nm,1.2s,mb6.0
ERUA La Rua 42.63 31 P **P 19 43 32.1 0.0**
ERUA pmax pmax
comp=Z,70nm,1.0s,mb5.3
ERUA La Rua 42.63 31 P **P 19 43 32.1 0.0**
comp=Z,70nm,1.0s,mb5.3
MTDJ Mount Denham 42.86 289 *eP* **P 19 43 34.8 +0.4**
MTDJ LR LR
comp=Z,42μm,22.0s,MS6.3
MCJ Malvern 42.96 288⇓ *eP* **P 19 43 35.4 +0.2**
EMUR La Murta 42.99 40 P **P 19 43 34.5 -0.7**
comp=Z,64nm,1.1s,mb5.3
CART Cartagena 43.00 41 *eP* **P 19 43 35.2 +0.1**
comp=Z,270nm,1.0s,mb5.9
GUD Guadarrama 43.01 35 P **P 19 43 35.3 +0.1**
GUD pmax pmax
comp=Z,143nm,1.1s,mb5.6
GUD Guadarrama 43.01 35 P **P 19 43 35.3 +0.2**
comp=Z,143nm,1.1s,mb5.6
ETOB Tobarra 43.28 39 P **P 19 43 38.2 +0.8**
comp=Z,78nm,1.0s,mb5.4
EPON Pontenova 43.31 30 P **P 19 43 36.9 -0.7**
comp=Z,224nm,1.6s,mb5.7
ETRT Tiaret 43.33 45 P **P 19 43 39.0 +1.1**
EANR 'Ain N'Sour 43.48 44 P **P 19 43 40.6 +1.5**
ECHA Ech Chlef 43.77 44 P **P 19 43 43.5 +2.0**
EBNR Beni Rached 43.96 44 P **P 19 43 45.6 +2.6**
OTAV Otavalo 44.01 263⇑ *eP* **P 19 43 43.1 -0.6**
comp=Z,116nm,1.0s,mb5.6
OTAV LR LR
comp=Z,21μm,19.0s,MS6.1
EBEN Beniarda 44.15 40 P **P 19 43 44.6 +0.2**
comp=Z,175nm,1.6s,mb5.5
ECHE Chera 44.21 38 P **P 19 43 45.5 +0.6**
ECHE pmax pmax
comp=Z,54nm,1.0s,mb5.2
ECHE Chera 44.21 38 P **P 19 43 45.5 +0.6**
comp=Z,54nm,1.0s,mb5.2
EARI Arriondas 44.27 31 P **P 19 43 45.6 +0.3**
comp=Z,328nm,1.4s,mb5.9
ETOR Torete 44.33 36 P **P 19 43 46.5 +0.7**
ETOR pmax pmax
comp=Z,85nm,1.3s,mb5.3
ETOR Torete 44.33 36 P **P 19 43 46.5 +0.7**
comp=Z,85nm,1.3s,mb5.3
BCIP Isla Barro Col 44.49 276 *eP* **P 19 43 47.8 +0.2**
comp=Z,539nm,1.5s,mb6.1
BCIP LR LR
comp=Z,12μm,20.0s,MS5.8
EMHD Djebel Mahouad 44.90 45 P **P 19 43 51.0 +0.5**
EMOS Mosqueruela 44.98 38 P **P 19 43 49.9 -1.2**
comp=Z,324nm,1.6s,mb5.9
ELAN Lanestosa 45.15 33 P **P 19 43 52.1 -0.2**
comp=Z,244nm,1.1s,mb6.0
ADJB Djebel Djouab 45.22 45 P **P 19 43 54.6 +1.6**
ECRI Cripan 45.23 34 P **P 19 43 51.8 -1.2**
ECRI pmax pmax
comp=Z,38nm,1.0s,mb5.2
ECRI Cripan 45.23 34 P **P 19 43 51.8 -1.3**
comp=Z,38nm,1.0s,mb5.2
ABA Alger-Bouzarea 45.26 44 P **P 19 43 55.2 +1.9**
EIBI Ibiza 45.33 40 P **P 19 43 54.2 +0.3**
comp=Z,293nm,1.2s,mb6.0
AKET Djebel Ketaf 45.47 45 P **P 19 43 57.2 +2.2**
ATAF Djebel Tarf 45.67 46 P **P 19 43 56.7 +0.1**
ATAH Atahualpa 45.71 253 LR LR 20 04 23.0
comp=Z,93μm,18.0s,MS6.8,baz=296,slow=38
ESAC San Caprasio 45.82 36 P **P 19 43 57.9 +0.1**
comp=Z,337nm,1.5s,mb6.0
ERTA Horta de San J 45.83 38 P **P 19 43 58.7 +0.9**
comp=Z,251nm,1.4s,mb6.0
NNA Nana 45.93 246 P **P 19 43 57.0 -1.9**
comp=Z,293nm,1.0s,mb6.2,SNR=5.5
NNA Nana 45.93 246 LR LR 20 02 46.2
comp=Z,66μm,20.6s,MS6.6,baz=67,slow=36
NNA Nana 45.93 246 *eP* **P 19 43 57.3 -1.7**
comp=Z,196nm,1.5s,mb5.8
NNA LR LR
comp=Z,66μm,20.0s,MS6.6
CEN1 Los Morros 46.09 227⇑ *iP* **P 19 44 01.3 +1.2**
ELIZ Elizondo 46.14 34 P **P 19 43 59.2 -1.0**
ELIZ pmax pmax
comp=Z,42nm,0.9s,mb5.4
ELIZ Elizondo 46.14 34 P **P 19 43 59.2 -1.0**
comp=Z,42nm,0.9s,mb5.4
EALK Alkurruntz 46.19 34 P **P 19 43 60.0 -0.6**
comp=Z,111nm,1.5s,mb5.6
AKF Akfadou 46.24 45 P **P 19 44 03.4 +2.3**

SJPF Ste Jean 46.28 34 *eP* **P 19 44 01.9 +0.6**
comp=Z,1μm,1.8s,mb6.2
SJPF Ste Jean 46.28 34 *eP* **P 19 44 01.9 +0.6**
SJPF pmax pmax
comp=Z,521nm,1.8s,mb6.2
SJPF Ste Jean 46.28 34 *eP* **P 19 44 01.9 +0.6**
comp=Z,521nm,1.8s,mb6.2
OSSF Osses 46.35 34 *eP* **P 19 44 02.1 +0.3**
ORDF Ordiarp 46.50 34 *eP* **P 19 44 03.9 +0.9**
ETSF Etsaut 46.51 35 *eP* **P 19 44 04.1 +1.0**
comp=Z,661nm,1.3s,mb6.1
ETSF Etsaut 46.51 35 *eP* **P 19 44 04.1 +1.0**
ETSF pmax pmax
comp=Z,330nm,1.3s,mb6.1
ETSF Etsaut 46.51 35 *eP* **P 19 44 04.1 +1.0**
comp=Z,330nm,1.3s,mb6.1
EPOB Poblet 46.52 38 P **P 19 44 03.1 -0.1**
comp=Z,193nm,1.2s,mb5.9
SET Setif 46.62 46 P **P 19 44 06.0 +1.9**
ETOS Mallorca 46.69 40 P **P 19 44 04.6 0.0**
comp=Z,240nm,1.2s,mb6.0
REYF Montagne du Re 46.72 35 *eP* **P 19 44 06.0 +1.3**
EBIE Bielsa 46.78 36 P **P 19 44 06.4 +1.1**
comp=Z,343nm,1.4s,mb6.1
VIEF Viey 46.84 35 *eP* **P 19 44 06.6 +1.0**
LABF Labassere 46.97 35 *eP* **P 19 44 07.7 +1.0**
RESF Ens 46.97 36 *eP* **P 19 44 07.7 +1.0**
EPF Esparros 47.11 35 *eP* **P 19 44 09.0 +1.2**
comp=Z,1μm,1.5s,mb6.4
EPF Esparros 47.11 35 *eP* **P 19 44 09.0 +1.2**
EPF pmax pmax
comp=Z,719nm,1.5s,mb6.4
EPF Esparros 47.11 35 *eP* **P 19 44 09.0 +1.2**
comp=Z,720nm,1.5s,mb6.4
EMIR Miracle 47.12 37 P **P 19 44 06.6 -1.3**
comp=Z,20nm,0.8s,mb5.1
DFRA Djebel Bou Aff 47.13 46 P **P 19 44 09.6 +1.6**
MELF Melles 47.25 36 *eP* **P 19 44 10.0 +1.1**
CTEI Djebel Teioual 47.28 47 P **P 19 44 10.0 +0.7**
LPA La Plata 47.34 206 *ceP* **P 19 44 09.0 -0.6**
LPA *es*P sP 19 44 13.0 -1.0
LPA *e*PP PP 19 45 57.0 -4.0
LPA *e*S **S 19 51 03.0 -0.5**
LPA *ep*S 19 51 06.0
LPA *es*S sS 19 51 10.0 +1.4
LPA
comp=Z,118μm,20.0s
SALF Salau 47.43 36 *eP* **P 19 44 11.3 +1.0**
CASM Ain Smara 47.43 47 P **P 19 44 11.3 +0.9**
MLS Moulis 47.50 36 *eP* **P 19 44 09.5 -1.3**
CKFL Kef-Lekhel 47.66 46 P **P 19 44 13.3 +1.1**
VALF Valcebollere 47.71 37 *eP* **P 19 44 13.1 +0.7**
CARF Carcanieres 47.95 37 *eP* **P 19 44 14.9 +0.6**
PKME Peaks-Kenny Pk 48.08 328 *eP* **P 19 44 15.0 -0.3**
comp=Z,388nm,1.4s,mb6.2
PKME LR LR
comp=Z,41μm,20.0s,MS6.4
FILF Fillols 48.12 37 *eP* **P 19 44 15.3 -0.4**
ABSA Djebel Ababsia 48.15 47 P **P 19 44 16.3 +0.3**
CNNC Cliffs of the 48.17 311 P **P 19 44 15.6 -0.6**
CNNC *es*S **S 19 51 17.5 +2.0**
CNNC LR LR
comp=Z,39μm,21.0s,MS6.4
EJON La Jonquera 48.26 37 P **P 19 44 16.6 -0.1**
comp=Z,138nm,1.2s,mb5.9
CMAH Djebel Manchou 48.27 47 P **P 19 44 17.2 +0.3**
LRDF Laroque-de-Fa 48.33 37 *eP* **P 19 44 17.6 +0.3**
MTLF Montolieu 48.38 36 *eP* **P 19 44 17.8 +0.1**
comp=Z,814nm,1.5s,mb6.2
MTLF Montolieu 48.38 36 *eP* **P 19 44 17.8 +0.1**
MTLF pmax pmax
comp=Z,407nm,1.5s,mb6.2
MTLF Montolieu 48.38 36 *eP* **P 19 44 17.8 +0.1**
comp=Z,407nm,1.5s,mb6.2
BST Brest 48.44 27 *eP* **P 19 44 19.5 +1.5**
DWPF Disney 48.52 301 *eP* **P 19 44 18.5 -0.5**
comp=Z,194nm,1.0s,mb6.1
DWPF LR LR
comp=Z,69μm,22.0s,MS6.6
LFF La Frestale 48.54 34 *eP* **P 19 44 19.3 +0.5**
comp=Z,1μm,1.6s,mb6.5
LFF La Frestale 48.54 34 *eP* **P 19 44 19.3 +0.5**
LFF pmax pmax
comp=Z,732nm,1.6s,mb6.5
LFF La Frestale 48.54 34 *eP* **P 19 44 19.3 +0.5**
comp=Z,732nm,1.6s,mb6.5
QUIF Quistinic 48.57 28 *eP* **P 19 44 18.7 -0.3**
comp=Z,842nm,1.7s,mb6.2
QUIF Quistinic 48.57 28 *eP* **P 19 44 18.7 -0.3**
QUIF pmax pmax
comp=Z,421nm,1.7s,mb6.2
QUIF Quistinic 48.57 28 *eP* **P 19 44 18.7 -0.3**
comp=Z,421nm,1.7s,mb6.2
ROSF Rostrenen 48.82 28 *eP* **P 19 44 21.0 0.0**
comp=Z,459nm,1.1s,mb6.1
ROSF Rostrenen 48.82 28 *eP* **P 19 44 21.0 0.0**
ROSF pmax pmax
comp=Z,230nm,1.1s,mb6.1
ROSF Rostrenen 48.82 28 *eP* **P 19 44 21.0 0.0**
comp=Z,230nm,1.1s,mb6.1
LBNH Lisbon 48.88 325 *eP* **P 19 44 21.4 -0.1**
LBNH pmax pmax
comp=Z,253nm,1.3s,mb6.1
LBNH MLR MLR
comp=Z,49μm,21.0s,MS6.5
LBNH Lisbon 48.88 325 *eP* **P 19 44 21.4 -0.1**
comp=Z,253nm,1.3s,mb6.1
LBNH LR LR
comp=Z,49μm,21.0s,MS6.5
NHSC New Hope 49.09 308 *eP* **P 19 44 23.4 +0.1**
comp=Z,502nm,1.3s,mb6.4
NHSC LR LR
comp=Z,55μm,22.0s,MS6.5
SGMF Saint Gilles 49.10 28 *eP* **P 19 44 23.3 +0.2**
comp=Z,766nm,1.1s,mb6.3
SGMF Saint Gilles 49.10 28 *eP* **P 19 44 23.3 +0.2**
SGMF pmax pmax
comp=Z,383nm,1.1s,mb6.3
SGMF Saint Gilles 49.10 28 *eP* **P 19 44 23.3 +0.2**
comp=Z,383nm,1.1s,mb6.3
CBN Corbin 49.11 315 *eP* **P 19 44 23.9 +0.5**
comp=Z,72nm,0.3s,mb6.2
CBN LR LR
comp=Z,30μm,21.0s,MS6.3
MFF Saint Martin d 49.15 31 *eP* **P 19 44 23.3 -0.2**
comp=Z,908nm,1.7s,mb6.2
MFF Saint Martin d 49.15 31 *eP* **P 19 44 23.3 -0.2**
MFF pmax pmax
comp=Z,454nm,1.7s,mb6.2
MFF Saint Martin d 49.15 31 *eP* **P 19 44 23.3 -0.2**
comp=Z,454nm,1.7s,mb6.2
RJF Les Rejaudoux 49.19 34 *eP* **P 19 44 23.7 -0.2**
comp=Z,698nm,1.7s,mb6.1
RJF *e*MLR MLR
comp=Z,83μm,21.5s,MS6.4
RJF Les Rejaudoux 49.19 34 *eP* **P 19 44 23.7 -0.2**
RJF pmax pmax
comp=Z,349nm,1.7s,mb6.1
RJF MLR MLR
comp=Z,83μm,21.5s,MS6.7
RJF Les Rejaudoux 49.19 34 *eP* **P 19 44 23.7 -0.2**
comp=Z,349nm,1.7s,mb6.1
RJF LR LR
comp=Z,83μm,21.5s,MS6.7
CAF Calviac 49.26 34 *eP* **P 19 44 24.6 +0.2**
comp=Z,554nm,1.1s,mb6.2
CAF Calviac 49.26 34 *eP* **P 19 44 24.6 +0.2**
CAF pmax pmax
comp=Z,277nm,1.1s,mb6.2
CAF Calviac 49.26 34 *eP* **P 19 44 24.6 +0.2**
comp=Z,277nm,1.1s,mb6.2
KEST Kesra 49.30 48 P **P 19 44 24.6 -0.2**
comp=Z,85nm,0.8s,mb5.8,baz=175,slow=2.1,SNR=70
KEST LR LR 20 04 27.3
comp=Z,40μm,20.3s,MS6.4,baz=207,slow=35
CCA1 Carnmenellis 49.34 25⇑ *eP* **P 19 44 24.8 -0.1**
CCA1 AMb AMB 19 44 30.8
comp=Z,217nm,1.1s,mb6.1
JTS JuntasAbangare 49.52 277 P **P 19 44 26.2 -0.6**
comp=Z,231nm,1.2s,mb6.1,SNR=6.8
COW Cow Castle Cre 49.59 308 *eP* **P 19 44 26.9 -0.2**
LASF Ste Croix 49.78 36 *eP* **P 19 44 28.8 +0.5**
comp=Z,726nm,1.5s,mb6.2
JSA Saint Aubin 49.94 28⇑ *eP* **P 19 44 29.1 -0.5**
JSA *eP* 19 44 29.9
JSA AMb AMB 19 44 32.4

comp=Z,184nm,2.0s,mb5.8
JSA Saint Aubin 49.94 28 P **P 19 44 29.9 +0.4**
JSA AMb AMB 19 44 32.4
comp=Z,184nm,2.0s,mb5.8
LCO Las Campanas 49.97 222 *eP* **P 19 44 29.0 -1.1**
comp=Z,157nm,1.0s,mb6.0
LCO LR LR
comp=Z,41μm,22.0s,MS6.4
JRS Jersey 49.98 28⇑ *eP* **P 19 44 29.9 0.0**
GRR Gorron 50.00 29 *eP* **P 19 44 29.8 -0.2**
comp=Z,293nm,1.1s,mb5.9
GRR Gorron 50.00 29 *eP* **P 19 44 29.8 -0.2**
GRR pmax pmax
comp=Z,147nm,1.1s,mb5.9
GRR Gorron 50.00 29 *eP* **P 19 44 29.8 -0.2**
comp=Z,147nm,1.1s,mb5.9
VERF Verneugheol 50.00 34 *eP* **P 19 44 30.5 +0.5**
JLP Les Platons 50.01 28⇑ *eP* **P 19 44 30.3 +0.3**
JQE Queens East 50.01 28⇑ *eP* **P 19 44 30.4 +0.4**
NCB Newcomb 50.06 323 *eP* **P 19 44 31.0 +0.5**
comp=Z,311nm,1.4s,mb6.2
NCB LR LR
comp=Z,33μm,21.0s,MS6.3
DYA Yadsworthy 50.08 25⇑ *eP* **P 19 44 30.1 -0.4**
DYA AMb AMB 19 44 42.8
comp=Z,216nm,1.7s,mb5.9
DYA *e* 19 51 30.0
DYA AMS AMS 20 01 32.6
comp=Z,45μm,15.5s,MS6.6
LBL Lubilhac 50.11 35 *eP* **P 19 44 32.8 +1.9**
CFAA Coronel Fontan 50.16 218 LR LR 20 05 04.0
comp=Z,6μm,22.0s,MS5.5,baz=42,slow=35
BINY Binghamton 50.16 321 *eP* **P 19 44 32.2 +0.9**
comp=Z,132nm,1.1s,mb5.9
BINY LR LR
comp=Z,33μm,20.0s,MS6.3
TCF Toulx Ste Croi 50.19 33 *eP* **P 19 44 31.5 +0.1**
comp=Z,1μm,1.9s,mb6.3
TCF Toulx Ste Croi 50.19 33 *eP* **P 19 44 31.5 +0.1**
TCF pmax pmax
comp=Z,600nm,1.9s,mb6.3
TCF Toulx Ste Croi 50.19 33 *eP* **P 19 44 31.5 +0.1**
comp=Z,600nm,1.9s,mb6.3
HTL Hartland 50.27 25⇑ *eP* **P 19 44 31.9 0.0**
HTL AMb AMB 19 44 44.4
comp=Z,186nm,1.6s,mb5.8
HTL *e* 19 51 24.3
HTL AMS AMS 20 01 25.9
comp=Z,53μm,21.2s,MS6.5
PYM Petit Puy Mans 50.29 34 *eP* **P 19 44 33.8 +1.6**
JSC Jenkinsville 50.35 309 *eP* **P 19 44 32.9 0.0**
FLN La Foliniere 50.44 29 *eP* **P 19 44 33.0 -0.3**
comp=Z,430nm,1.0s,mb6.1
FLN *e*MLR MLR
comp=Z,40μm,20.0s,MS6.1
FLN La Foliniere 50.44 29 *eP* **P 19 44 33.0 -0.3**
FLN pmax pmax
comp=Z,215nm,1.0s,mb6.1
FLN MLR MLR
comp=Z,40μm,20.0s,MS6.4
FLN La Foliniere 50.44 29 *eP* **P 19 44 33.0 -0.3**
comp=Z,215nm,1.0s,mb6.1
FLN LR LR
comp=Z,40μm,20.0s,MS6.4
LDF La Druitiere 50.50 29 *eP* **P 19 44 33.6 -0.1**
comp=Z,343nm,1.0s,mb6.0
LDF La Druitiere 50.50 29 *eP* **P 19 44 33.6 -0.1**
LDF pmax pmax
comp=Z,172nm,1.0s,mb6.0
LDF La Druitiere 50.50 29 *eP* **P 19 44 33.6 -0.1**
comp=Z,172nm,1.0s,mb6.0
COLF Collangettes 50.53 35 *eP* **P 19 44 35.0 +0.9**
AGO Saint Agoulin 50.55 34 *eP* **P 19 44 35.4 +1.3**
SSPA Standing Stone 50.61 318 *eP* **P 19 44 35.2 +0.4**
comp=Z,91nm,1.1s,mb5.6
SSPA LR LR
comp=Z,24μm,21.0s,MS6.2
LONY Lake Ozonia 50.64 324 *eP* **P 19 44 35.3 +0.4**
comp=Z,340nm,2.1s,mb5.9
LONY LR LR
comp=Z,37μm,21.0s,MS6.4
BGF Bois d'Agland 50.70 33 *eP* **P 19 44 35.5 +0.2**
comp=Z,461nm,1.1s,mb6.0
BGF Bois d'Agland 50.70 33 *eP* **P 19 44 35.5 +0.2**
BGF pmax pmax
comp=Z,231nm,1.1s,mb6.0
BGF Bois d'Agland 50.70 33 *eP* **P 19 44 35.5 +0.2**
comp=Z,231nm,1.1s,mb6.0
VIVF Saint-Julien-I 50.71 36 *eP* **P 19 44 36.2 +0.8**
comp=Z,607nm,1.1s,mb6.1
VIVF Saint-Julien-I 50.71 36 *eP* **P 19 44 36.2 +0.8**
VIVF pmax pmax
comp=Z,303nm,1.1s,mb6.1
VIVF Saint-Julien-I 50.71 36 *eP* **P 19 44 36.2 +0.8**
comp=Z,303nm,1.1s,mb6.1
SMRF Simiane la Rot 50.74 37 *eP* **P 19 44 36.4 +0.8**
comp=Z,364nm,1.2s,mb5.9
SMRF Simiane la Rot 50.74 37 *eP* **P 19 44 36.4 +0.8**
comp=Z,364nm,1.2s,mb6.2
PLDF La Plantade 50.77 34 *eP* **P 19 44 37.5 +1.7**
BLA Blacksburg 50.85 313 *eP* **P 19 44 36.7 +0.1**
BLA pmax pmax
comp=Z,273nm,1.0s,mb6.1
BLA MLR MLR
comp=Z,34μm,22.0s,MS6.3
BLA Blacksburg 50.85 313 *eP* **P 19 44 36.7 +0.1**
comp=Z,273nm,1.0s,mb6.1
BLA LR LR
comp=Z,34μm,22.0s,MS6.3
SSB Saint Sauveur 50.88 35 *eP* **P 19 44 37.6 +1.0**
SSB Saint Sauveur 50.88 35⇑ *eP* **P 19 44 37.2 +0.6**
SSB pmax pmax
comp=Z,210nm,1.1s,mb6.0
SSB MLR MLR
comp=Z,40μm,20.0s,MS6.4
SSB Saint Sauveur 50.88 35⇑ *eP* **P 19 44 37.2 +0.5**
comp=Z,210nm,1.1s,mb6.0
SSB LR LR
comp=Z,40μm,20.0s,MS6.4
OCF Saint Nazaire 50.91 36 *eP* **P 19 44 37.8 +0.8**
OG26 St.-Nazaire-De 50.91 36 *eP* **P 19 44 37.8 +0.8**
VSL Villasalto 50.94 44 *eP* **P 19 44 37.0 -0.2**
comp=Z,181nm,1.1s,mb5.9
VSL LR LR
comp=Z,31μm,22.0s,MS6.3
LMR La Mourre 50.96 38 *eP* **P 19 44 37.1 -0.2**
comp=Z,219nm,1.2s,mb5.7
LMR La Mourre 50.96 38 *eP* **P 19 44 37.1 -0.2**
LMR pmax pmax
comp=Z,109nm,1.2s,mb5.7
LMR La Mourre 50.96 38 *eP* **P 19 44 37.1 -0.2**
comp=Z,109nm,1.2s,mb5.7
HYF Humbligny 51.03 32 *eP* **P 19 44 38.2 +0.4**
ELN Prospectdale 51.10 313 *eP* **P 19 44 39.1 +0.6**
AVF Avril sur Loir 51.12 33 *eP* **P 19 44 38.4 0.0**
comp=Z,906nm,1.8s,mb6.1
AVF Avril sur Loir 51.12 33 *eP* **P 19 44 38.4 0.0**
AVF pmax pmax
comp=Z,453nm,1.8s,mb6.1
AVF Avril sur Loir 51.12 33 *eP* **P 19 44 38.4 0.0**
comp=Z,453nm,1.8s,mb6.1
FRF La Foret Royal 51.16 38 *eP* **P 19 44 38.6 -0.2**
comp=Z,246nm,1.2s,mb5.7
FRF La Foret Royal 51.16 38 *eP* **P 19 44 38.6 -0.2**
FRF pmax pmax
comp=Z,123nm,1.2s,mb5.7
FRF La Foret Royal 51.16 38 *eP* **P 19 44 38.6 -0.2**
comp=Z,123nm,1.2s,mb5.7
DSB Dublin 51.28 22 *eP* **P 19 44 39.6 0.0**
comp=Z,47nm,0.9s,mb5.4
SMF Signal de Mont 51.30 34 *eP* **P 19 44 39.8 0.0**
comp=Z,755nm,1.9s,mb6.0
SMF Signal de Mont 51.30 34 *eP* **P 19 44 39.8 0.0**
SMF pmax pmax
comp=Z,378nm,1.9s,mb6.0
SMF Signal de Mont 51.30 34 *eP* **P 19 44 39.8 0.0**
comp=Z,378nm,1.9s,mb6.0
SSF Saint Saulge 51.37 33 *eP* **P 19 44 40.2 -0.1**
comp=Z,868nm,1.9s,mb6.1
SSF Saint Saulge 51.37 33 *eP* **P 19 44 40.2 -0.1**
SSF pmax pmax
comp=Z,434nm,1.9s,mb6.1
SSF Saint Saulge 51.37 33 *eP* **P 19 44 40.2 -0.1**
comp=Z,434nm,1.9s,mb6.1
CALN Calern 51.41 38 *eP* **P 19 44 41.2 +0.5**
HGH Gray Hill 51.45 25⇑ *eP* **P 19 44 40.8 0.0**

ORIF Oris-en-Rattie 51.45 36 eP P 19 44 41.7 +0.8
ORIF eMLR MLR
comp=Z,30µm,18.5s,MS6.0
DGI Dorgali Grotta 51.47 43 P P 19 44 41.0 -0.2
MCWV Mont Chateau 51.48 316 eP P 19 44 41.1 -0.3
comp=Z,49nm,0.9s,mb5.4
MCWV LR LR
comp=Z,39µm,21.0s,MS6.4
GRN Grenoble 51.55 36 eP P 19 44 43.3 +1.6
HTR Trewern Hill 51.58 24⇑ eP P 19 44 41.3 -0.5
DMUB Kingscourt 51.62 21 eP P 19 44 40.6 -1.4
MVIF Mont Vial 51.65 38 eP P 19 44 43.1 +0.6
LOR Lormes 51.69 33 eP P 19 44 42.6 -0.1
comp=Z,288nm,1.1s,mb5.8
LOR eMLR MLR
comp=Z,59µm,22.2s,MS6.3
LOR Lormes 51.69 33 eP P 19 44 42.6 -0.1
LOR pmax pmax
comp=Z,144nm,1.1s,mb5.8
LOR MLR MLR
comp=Z,59µm,22.3s,MS6.6
LOR Lormes 51.69 33 eP P 19 44 42.6 -0.1
comp=Z,144nm,1.1s,mb5.8
LOR LR LR
comp=Z,59µm,22.3s,MS6.6
PTS Pantelleria 51.69 48 P P 19 44 44.9 +2.0
PTS pmax pmax
comp=Z,391nm,0.8s,mb6.4
PTS Pantelleria 51.69 48 P P 19 44 44.9 +2.0
comp=Z,391nm,0.8s,mb6.4
REVF Revere 51.70 38 eP P 19 44 42.7 -0.2
GDM Grand'Maison 51.74 36 eP P 19 44 43.9 +0.7
TRQA Tornquist 51.76 207 eP P 19 44 42.5 -0.8
comp=Z,78nm,0.9s,mb5.6
TRQA LR LR
comp=Z,109µm,20.0s,MS6.9
SURF Saint Ours 51.76 37 eP P 19 44 44.1 +0.8
LUCF Luceram 51.77 38 eP P 19 44 43.6 +0.2
TOUF Mont Tournerai 51.77 38 eP P 19 44 43.8 +0.4
GOGA Godfrey 51.78 307 eP P 19 44 43.1 -0.6
GOGA pmax pmax
comp=Z,118nm,1.3s,mb5.7
GOGA MLR MLR
comp=Z,54µm,21.0s,MS6.6
GOGA Godfrey 51.78 307 eP P 19 44 43.1 -0.6
comp=Z,118nm,1.3s,mb5.7
GOGA LR LR
comp=Z,54µm,21.0s,MS6.6
SWN1 Swindon 51.78 26⇑ eP P 19 44 42.9 -0.5
SWN1 AMb AMB 19 44 49.2
comp=Z,477nm,1.1s,mb6.3
SWN1 e 19 52 05.3
SWN1 AMS AMS 20 01 33.8
comp=Z,47µm,17.4s,MS6.6
SWN1 Swindon 51.78 26 P P 19 44 42.9 -0.5
SWN1 AMb AMB 19 44 49.2
comp=Z,477nm,1.1s,mb6.3
SWN1 19 52 05.3
SWN1 AMS AMS 20 01 33.8
comp=Z,47µm,17.4s
SBF Sospel 51.81 38 eP P 19 44 44.0 +0.3
comp=Z,1µm,1.2s,mb6.4
SBF Sospel 51.81 38 eP P 19 44 44.0 +0.3
SBF pmax pmax
comp=Z,555nm,1.2s,mb6.4
SBF Sospel 51.81 38 eP P 19 44 44.0 +0.3
comp=Z,555nm,1.2s,mb6.4
TGUH Tegucigalpa,Un 51.81 282 eP P 19 44 44.3 +0.1
comp=Z,517nm,1.3s,mb6.3
TGUH LR LR
comp=Z,27µm,20.0s,MS6.3
MBDF Montbardon 51.87 37 eP P 19 44 44.9 +0.8
comp=Z,401nm,1.1s,mb6.0
MBDF Montbardon 51.87 37 eP P 19 44 44.9 +0.8
MBDF pmax pmax
comp=Z,200nm,1.1s,mb6.0
MBDF Montbardon 51.87 37 eP P 19 44 44.9 +0.8
comp=Z,200nm,1.1s,mb6.0
AUTN L'Aution 51.87 38 eP P 19 44 46.2 +2.0
WOL Wolverton 51.89 26⇑ eP P 19 44 43.7 -0.4
WOL AMb AMB 19 44 52.2
comp=Z,527nm,1.4s,mb6.3
SAOF Saorge 51.95 38 eP P 19 44 44.6 -0.1
BNI Bardonecchia 51.99 37 eP P 19 44 45.5 +0.5
BNI pmax pmax
comp=Z,279nm,1.1s,mb6.1
BNI MLR MLR
comp=Z,49µm,20.0s,MS6.5
BNI Bardonecchia 51.99 37 eP P 19 44 45.5 +0.5
comp=Z,279nm,1.1s,mb6.1
BNI LR LR
comp=Z,49µm,20.0s,MS6.5
DOI San Damiano 52.03 38 P P 19 44 45.9 +0.6
WLF1 Llynfaes 52.06 23⇑ eP P 19 44 44.6 -0.8
WLF1 AMb AMB 19 44 50.8
comp=Z,772nm,1.2s,mb6.5
PGF Pioggiola 52.12 40 eP P 19 44 46.0 0.0
comp=Z,552nm,1.1s,mb6.1
PGF Pioggiola 52.12 40 eP P 19 44 46.0 0.0
PGF pmax pmax
comp=Z,276nm,1.1s,mb6.1
PGF Pioggiola 52.12 40 eP P 19 44 46.0 0.0
comp=Z,276nm,1.1s,mb6.1
GMM Mts of Mourne 52.23 21⇑ eP P 19 44 46.3 -0.3
LPL La Plagne 52.28 36 eP P 19 44 48.0 +0.8
comp=Z,637nm,1.6s,mb6.0
LPL La Plagne 52.28 36 eP P 19 44 48.0 +0.8
LPL pmax pmax
comp=Z,318nm,1.6s,mb6.0
LPL La Plagne 52.28 36 eP P 19 44 48.0 +0.8
comp=Z,318nm,1.6s,mb6.0
LPG La Plagne 52.28 36 eP P 19 44 48.2 +1.0
comp=Z,347nm,1.2s,mb5.9
LPG La Plagne 52.28 36 eP P 19 44 48.2 +1.0
LPG pmax pmax
comp=Z,173nm,1.2s,mb5.9
LPG La Plagne 52.28 36 eP P 19 44 48.2 +1.0
comp=Z,173nm,1.2s,mb5.9
RSL Roselend 52.31 36 eP P 19 44 47.7 +0.3
CABF La Chapelle 52.53 35 eP P 19 44 49.2 +0.2
comp=Z,276nm,1.2s,mb5.8
CABF La Chapelle 52.53 35 eP P 19 44 49.2 +0.2
CABF pmax pmax
comp=Z,138nm,1.2s,mb5.8
CABF La Chapelle 52.53 35 eP P 19 44 49.2 +0.2
comp=Z,138nm,1.2s,mb5.8
QLNO Quiliano 52.61 38 P P 19 44 49.6 0.0
ERPA Erie 52.70 319 eP P 19 44 50.1 -0.2
comp=Z,328nm,1.4s,mb6.1
ERPA LR LR
comp=Z,26µm,22.0s,MS6.2
OG01 Vacheresse 52.70 35 eP P 19 44 50.6 +0.3
TKL Tuckaleechee C 52.77 310 eP P 19 44 50.3 -0.7
STNC Stoke 52.77 24⇑ eP P 19 44 50.2 -0.4
TFO1 Folkestone 52.81 28⇑ eP P 19 44 50.7 -0.3
TFO1 AMb AMB 19 45 03.9
comp=Z,408nm,2.1s,mb6.0
TFO1 Folkestone 52.81 28 P P 19 44 50.7 -0.3
TFO1 AMb AMB 19 45 03.9
comp=Z,408nm,2.1s,mb6.0
CWF Charnwood Fore 52.88 25⇑ eP P 19 44 50.0 -1.5
CWF AMb AMB 19 44 53.7
comp=Z,252nm,1.0s,mb6.1
CWF e 19 52 13.6
CWF AMS AMS 20 03 56.2
comp=Z,41µm,19.8s,MS6.5
TZTN Tazewell 52.91 311 eP P 19 44 51.9 -0.1
comp=Z,413nm,1.5s,mb6.1
MENF Mencas 52.92 29 eP P 19 44 51.7 -0.1
MEZF Maizieres J'vi 53.07 32 eP P 19 44 52.8 -0.2
comp=Z,1µm,1.9s,mb6.3
MEZF Maizieres J'vi 53.07 32 eP P 19 44 52.8 -0.2
comp=Z,1µm,1.9s,mb6.6
GAL1 Galloway 53.17 21 eP P 19 44 53.0 -0.5
GAL1 AMb AMB 19 45 00.8
comp=Z,149nm,2.1s,mb5.5
GAL1 e 19 52 19.2
GAL1 AMS AMS 20 00 26.9
comp=Z,29µm,32.4s,MS6.1
TCR Colchester 53.21 27 eP P 19 44 53.3 -0.5
WDD Wield Dalam 53.25 50 eP P 19 44 54.1 -0.4
WDD Wield Dalam 53.25 50 eP P 19 44 55.0 +0.5
comp=Z,657nm,1.3s,mb6.4
WDD LR LR
comp=Z,32µm,19.0s,MS6.4
LHO Holmfirth 53.25 24⇑ eP P 19 44 53.4 -0.8

CPCT Cooper Cave 53.27 309 eP P 19 44 54.2 -0.5
USI Ustica 53.29 47 P P 19 44 55.2 +0.5
XDE Dent Fell 53.34 22⇑ eP P 19 44 53.9 -0.9
LOMF Lomont 53.36 34 eP P 19 44 55.2 +0.1
THEF They Montfort 53.41 33 eP P 19 44 55.0 -0.4
GCD Castle Douglas 53.44 22⇑ eP P 19 44 55.4 -0.2
MAON Monte Argentar 53.45 42 P P 19 44 56.1 +0.2
HAU Haudompre 53.48 33 eP P 19 44 55.8 -0.1
comp=Z,1µm,1.9s,mb6.2
HAU eMLR MLR
comp=Z,42µm,19.8s,MS6.2
HAU Haudompre 53.48 33 eP P 19 44 55.8 -0.1
HAU pmax pmax
comp=Z,616nm,1.9s,mb6.2
HAU MLR MLR
comp=Z,42µm,19.8s,MS6.5
HAU Haudompre 53.48 33 eP P 19 44 55.8 -0.1
comp=Z,616nm,1.9s,mb6.2
HAU LR LR
comp=Z,42µm,19.8s,MS6.5
BOB Bobbio (Coli) 53.51 38 P P 19 44 56.6 +0.3
BAIF Baives 53.60 30 eP P 19 44 56.4 -0.4
comp=Z,613nm,1.2s,mb6.1
BAIF Baives 53.60 30 eP P 19 44 56.4 -0.4
BAIF pmax pmax
comp=Z,307nm,1.2s,mb6.1
BAIF Baives 53.60 30 eP P 19 44 56.4 -0.4
comp=Z,307nm,1.2s,mb6.1
GIB Gibilmanna 53.63 48 P P 19 44 58.3 +1.0
HINF Hinteralfeld 53.65 34 eP P 19 44 57.0 -0.2
comp=Z,805nm,1.8s,mb6.1
HINF Hinteralfeld 53.65 34 eP P 19 44 57.0 -0.2
HINF pmax pmax
comp=Z,403nm,1.8s,mb6.0
HINF Hinteralfeld 53.65 34 eP P 19 44 57.0 -0.2
comp=Z,403nm,1.8s,mb6.0
HPK Haverah Park 53.65 24⇑ eP P 19 44 56.5 -0.6
HPK AMb AMB 19 45 02.5
comp=Z,233nm,1.2s,mb6.0
HPK e 19 52 26.0
HPK AMS AMS 20 04 48.4
comp=Z,41µm,19.1s,MS6.5
SCHQ Schefferville 53.79 338 P P 19 44 57.5 -0.7
comp=Z,116nm,0.9s,mb5.8,baz=130,slow=6.6,SNR=47
SCHQ S S 19 52 28.7 -3.9
comp=Z,2.3nm,0.8s,baz=241,slow=19,SNR=1.6
SCHQ LR LR 20 03 21.0
comp=Z,29µm,20.4s,MS6.3,baz=140,slow=31
SCHQ Schefferville 53.79 338 eP P 19 44 57.2 -0.9
comp=Z,484nm,1.5s,mb6.2
SCHQ LR LR
comp=Z,39µm,19.0s,MS6.5
VLC Villacollemand 53.79 39 eP P 19 44 59.0 +0.7
comp=Z,201nm,1.2s,mb5.9
VLC LR LR
comp=Z,17µm,19.0s,MS6.1
BBS Basel-Blauen 53.81 35 eP P 19 44 57.8 -0.6
HMDC Modica 53.82 49 P P 19 44 59.4 +0.7
MOF Molkenrain 53.82 34 eP P 19 44 58.0 -0.5
AEU East Anglia Un 53.89 26 eP P 19 44 57.3 -1.6
ACSO Alum Creek Sta 53.91 315 eP P 19 44 59.0 -0.2
comp=Z,236nm,1.0s,mb6.1
ACSO LR LR
comp=Z,32µm,21.0s,MS6.3
SNF Seneffe 53.92 30 P P 19 44 58.9 -0.3
comp=Z,130nm,1.9s,mb5.5
GIVF Givet 53.94 31 eP P 19 44 58.8 -0.5
comp=Z,1µm,1.6s,mb6.3
GIVF Givet 53.94 31 eP P 19 44 58.8 -0.5
GIVF pmax pmax
comp=Z,589nm,1.6s,mb6.3
GIVF Givet 53.94 31 eP P 19 44 58.8 -0.5
comp=Z,589nm,1.6s,mb6.3
ECK Cauldkaine Hil 53.99 22⇑ eP P 19 44 58.6 -0.9
PGBU Glenifferbraes 53.99 21⇑ eP P 19 44 59.1 -0.5
PGBU AMb AMB 19 45 11.8
comp=Z,283nm,1.9s,mb5.9
PGBU e 19 52 16.2
PGBU AMS AMS 20 00 48.8
comp=Z,30µm,34.1s,MS6.1
BRAL Brewton 54.01 303 eP P 19 45 01.3 +1.1
comp=Z,432nm,1.0s,mb6.3
BRAL LR LR
comp=Z,74µm,21.0s,MS6.7
ECH Echery 54.04 34 eP P 19 44 59.3 -0.8
ECH Echery 54.04 34⇑ eP P 19 44 59.4 -0.7
ECH eS S 19 52 36.3 +0.1
ECH pmax pmax
comp=Z,108nm,1.0s,mb5.7
ECH MLR MLR
comp=Z,31µm,21.0s,MS6.3
ECH Echery 54.04 34⇑ eP P 19 44 59.4 -0.7
comp=Z,108nm,1.0s,mb5.7
ECH eS S 19 52 36.3 +0.1
ECH LR LR
comp=Z,31µm,21.0s,MS6.3
CSNT Castellina Chi 54.04 40 P P 19 45 00.4 +0.2
ESK Eskdalemuir 54.06 22⇑ eP P 19 44 58.6 -1.5
ESK e 19 52 27.4
ESK AMS AMS 20 02 01.7
comp=Z,35µm,27.6s,MS6.3
ESK Eskdalemuir 54.06 22 eP P 19 44 59.3 -0.8
ESK pmax pmax
comp=Z,203nm,1.5s,mb5.8
ESK MLR MLR
comp=Z,32µm,20.0s,MS6.4
ESK Eskdalemuir 54.06 22 eP P 19 44 59.3 -0.8
comp=Z,203nm,1.5s,mb5.8
ESK LR LR
comp=Z,32µm,20.0s,MS6.4
XAL Allendale 54.09 23 eP P 19 44 59.1 -1.2
EKA Eskdalemuir Ar 54.09 22 P P 19 44 59.3 -1.0
comp=Z,17nm,0.7s,mb5.1,baz=213,slow=5.8,SNR=53
EKA Eskdalemuir Ar 54.09 22 P P 19 44 59.3 -1.0
EKA pmax pmax
comp=Z,17nm,0.7s
UCC Uccle 54.14 30 P P 19 45 00.7 -0.1
comp=Z,283nm,2.1s,mb5.8
CDF Champ du Feu 54.22 33 eP P 19 45 01.0 -0.4
comp=Z,946nm,1.9s,mb6.1
CDF Champ du Feu 54.22 33 eP P 19 45 01.0 -0.4
CDF pmax pmax
comp=Z,473nm,1.9s,mb6.1
CDF Champ du Feu 54.22 33 eP P 19 45 01.0 -0.4
comp=Z,473nm,1.9s,mb6.1
LIBD Limburg 54.25 34 eP P 19 45 02.4 +0.8
FNVD Fontana Vidola 54.26 40 P P 19 45 01.7 -0.1
SWET Sewanee 54.29 308 eP P 19 45 01.7 -0.4
comp=Z,520nm,1.6s,mb6.2
VENT Ventotene 54.29 44 P P 19 45 01.5 -0.6
FELD Feldberg im Sc 54.32 34 eP P 19 45 01.3 -0.8
NICH Los Niches 54.32 217⇑ iP P 19 44 59.9 -2.4
EAB Aberfoyle 54.34 20⇑ eP P 19 45 02.1 0.0
WLF Walferdange 54.35 32 P P 19 45 02.5 +0.1
comp=Z,120nm,1.8s,mb5.5
WLF Walferdange 54.35 32 eP P 19 45 01.6 -0.7
comp=Z,248nm,1.4s,mb6.0
WLF eS S 19 52 43.4 +3.0
WLF Walferdange 54.35 32 eP P 19 45 01.6 -0.7
WLF pmax pmax
comp=Z,112nm,1.1s,mb5.7
WLF MLR MLR
comp=Z,40µm,21.0s,MS6.5
WLF Walferdange 54.35 32 eP P 19 45 01.6 -0.7
comp=Z,112nm,1.1s,mb5.7
WLF LR LR
comp=Z,40µm,21.0s,MS6.5
BCLA Clavier 54.38 31 P P 19 45 02.5 0.0
comp=Z,114nm,1.2s,mb5.7
EAU Auchinoon 54.38 21⇑ eP P 19 45 01.5 -0.9
KAR1 Arisaig 54.42 19⇑ eP P 19 45 01.5 -1.2
CERT Cerreto 54.48 43 P P 19 45 03.2 -0.2
LRAL Lakeview Retre 54.49 305 eP P 19 45 03.3 -0.4
comp=Z,133nm,1.0s,mb5.8
LRAL LR LR
comp=Z,52µm,21.0s,MS6.6
EDI Edinburgh 54.54 21⇑ eP P 19 45 02.1 -1.4
EDI e 19 52 36.2
EDI AMS AMS 20 02 17.7
comp=Z,30µm,17.8s,MS6.4
RAVA Ravarino 54.54 39 P P 19 45 04.8 +1.0
KSK Scoval 54.59 18 eP P 19 45 03.5 -0.3
EBH Black Hill 54.67 21⇑ eP P 19 45 03.0 -1.5
MURB Monte Urbino 54.75 41 P P 19 45 04.8 -0.5
BFO Black Forest 54.75 34 P P 19 45 05.3 0.0
comp=Z,539nm,1.0s,mb6.5,SNR=33

BFO Black Forest 54.75 34 eP P 19 45 05.1 -0.2
comp=Z,549nm,2.0s,mb6.2
BFO eS S 19 52 47.8 +2.0
BFO Black Forest 54.75 34 eP P 19 45 05.1 -0.2
BFO eS S 19 52 47.8 +2.0
BFO pmax pmax
comp=Z,549nm,2.0s,mb6.2
KSB Sheil Bridge 54.78 19 eP P 19 45 04.6 -0.7
BEBN Eben Emael 54.80 30 P P 19 45 05.5 0.0
DAVOX Davos/Dischmat 54.80 36 P P 19 45 05.6 0.0
comp=Z,71nm,0.8s,mb5.8,baz=233,slow=6.7,SNR=96
DAVOX S S 19 52 47.5 +0.9
comp=Z,0.8nm,0.5s,baz=281,slow=16,SNR=2.0
DAVOX LR LR 20 05 09.5
comp=Z,64µm,21.1s,MS6.7,baz=251,slow=32
DAVOX Davos/Dischmat 54.80 36 P P 19 45 05.6 -0.1
DAVOX S S 19 52 47.5 +0.9
KPL Plockton 54.81 19⇑ eP P 19 45 04.7 -0.9
KPL AMb AMB 19 45 16.7
comp=Z,156nm,1.7s,mb5.8
KPL e 19 52 42.2
KPL AMS AMS 20 02 43.1
comp=Z,25µm,21.0s,MS6.2
LANF Langenberg 54.83 33 eP P 19 45 05.4 -0.4
MEM Membach 54.85 31 P P 19 45 06.3 +0.5
comp=Z,135nm,1.3s,mb5.8
SPAK Spaichingen-Ko 54.88 34 eP P 19 45 05.8 -0.4
AQU L'Aquila 54.93 43 eP P 19 45 06.6 -0.1
AQU L'Aquila 54.93 43 eP P 19 45 07.0 +0.3
AQU pmax pmax
comp=Z,280nm,1.1s,mb6.2
AQU MLR MLR
comp=Z,30µm,20.0s,MS6.4
AQU L'Aquila 54.93 43 eP P 19 45 07.0 +0.3
comp=Z,280nm,1.1s,mb6.2
AQU LR LR
comp=Z,30µm,20.0s,MS6.4
AQU L'Aquila 54.93 43⇑ iP P 19 45 07.9 +1.2
BRMO Bormio 54.94 37 P P 19 45 06.2 -0.5
RRH Rhenigidale 54.96 18 eP P 19 45 05.7 -0.9
KAC Achnashellach 55.06 19⇑ eP P 19 45 07.4 +0.1
DAVA Damuels 55.07 36 ⇓ iP P 19 45 06.9 -0.7
comp=Z,179nm,1.0s,mb6.0,SNR=45
CEL Celeste 55.10 48 eP P 19 45 06.9 -1.1
CEL Celeste 55.10 48 eP P 19 45 07.2 -0.8
comp=Z,84nm,0.9s,mb5.8
CEL LR LR
comp=Z,76µm,22.0s,MS6.7
KTD Kalmit 55.17 33 eP P 19 45 08.0 -0.3
RRR Rubha Reidh 55.19 18 eP P 19 45 07.4 -0.8
ABH Alteburg 55.21 32 eP P 19 45 08.0 -0.5
MIDA Miranda 55.21 44 P P 19 45 09.1 +0.4
AAM Ann Arbor 55.23 317 eP P 19 45 08.9 +0.1
AAM pmax pmax
comp=Z,272nm,0.9s,mb6.3
AAM MLR MLR
comp=Z,29µm,20.0s,MS6.3
AAM Ann Arbor 55.23 317 eP P 19 45 08.9 +0.1
comp=Z,272nm,0.9s,mb6.3
AAM LR LR
comp=Z,29µm,20.0s,MS6.3
CING Cingoli 55.23 41 P P 19 45 07.8 -1.0
MDO Dochfour 55.32 20⇑ eP P 19 45 08.4 -0.7
FETA Feichten 55.43 36 ⇑ iP P 19 45 09.4 -0.8
comp=Z,124nm,1.1s,mb5.9,SNR=69
APPI Appiano 55.45 37 P P 19 45 09.0 -1.3
STU Stuttgart 55.48 34 eP P 19 45 09.8 -0.7
comp=Z,764nm,2.5s,mb6.3
STU eS S 19 52 57.0 +1.5
STU Stuttgart 55.48 34 eP P 19 45 10.3 -0.2
STU pmax pmax
comp=Z,106nm,1.3s,mb5.7
STU Stuttgart 55.48 34 eP P 19 45 10.3 -0.2
comp=Z,106nm,1.3s,mb5.7
MGR Morigerati 55.53 46 P P 19 45 10.4 -0.7
WCI Wyandotte Cave 55.55 312 eP P 19 45 08.9 -2.3
WCI pmax pmax
comp=Z,132nm,0.8s,mb6.0
WCI MLR MLR
comp=Z,33µm,20.0s,MS6.4
WCI Wyandotte Cave 55.55 312 eP P 19 45 08.9 -2.3
comp=Z,132nm,0.8s,mb6.0
WCI LR LR
comp=Z,33µm,20.0s,MS6.4
RETA Reutte 55.69 36 ⇓ iP P 19 45 11.3 -0.7
comp=Z,139nm,1.1s,mb5.9,SNR=41
MME1 Meikle Cairn 55.69 20⇑ eP P 19 45 10.8 -1.1
TOD Tromm 55.72 33 eP P 19 45 11.0 -1.2
MVH1 Achvaich 55.76 19⇑ eP P 19 45 10.9 -1.5
RSC Scourie 55.78 18⇑ eP P 19 45 11.6 -0.9
MCD Coleburn Disti 55.80 20⇑ eP P 19 45 11.8 -0.9
MOTA Moosalm 55.81 36 ⇓ iP P 19 45 12.2 -0.7
comp=Z,63nm,0.9s,mb5.7,SNR=47
PAYG Puerto Ayora 55.82 264 eP P 19 45 12.2 -1.4
comp=Z,75nm,1.1s,mb5.6
PAYG LR LR
comp=Z,13µm,19.0s,MS6.0
TNS Taunus Mts 55.88 32 eP P 19 45 13.1 -0.3
comp=Z,284nm,1.0s,mb6.2
TNS eS S 19 53 03.8 +2.9
TNS Taunus Mts 55.88 32 eP P 19 45 13.1 -0.3
TNS eS S 19 53 03.8 +2.9
TNS pmax pmax
comp=Z,284nm,1.0s,mb6.2
PLAL Pickwick Lake 55.90 307 eP P 19 45 12.4 -1.3
comp=Z,202nm,1.2s,mb6.0
PLAL LR LR
comp=Z,38µm,21.0s,MS6.5
CCHI Chillan 55.92 216⇑ iP P 19 45 12.2 -1.6
BUG Bochum--Univer 55.98 30 eP P 19 45 13.6 -0.5
comp=Z,263nm,1.2s,mb6.1
BUG eS S 19 53 04.4 +2.2
BLO Bloomington 56.04 313 eP P 19 45 15.0 +0.3
BLO pmax pmax
comp=Z,237nm,1.3s,mb6.1
BLO Bloomington 56.04 313 eP P 19 45 15.0 +0.3
comp=Z,237nm,1.3s,mb6.1
WVT Waverly 56.04 309 eP P 19 45 13.9 -0.9
WVT pmax pmax
comp=Z,95nm,0.8s,mb5.9
WVT MLR MLR
comp=Z,28µm,20.0s,MS6.3
WVT Waverly 56.04 309 eP P 19 45 13.9 -0.8
comp=Z,95nm,0.8s,mb5.9
WVT LR LR
comp=Z,28µm,20.0s,MS6.3
TIP Timpagrande 56.05 47 eP P 19 45 13.4 -1.4
comp=Z,127nm,1.1s,mb5.9
TIP LR LR
comp=Z,56µm,20.0s,MS6.7
WATA Walderalm 56.09 36 ⇑ iP P 19 45 13.6 -1.3
comp=Z,94nm,0.9s,mb5.8,SNR=12
WTTA Wattenberg 56.09 37 ⇑ iP P 19 45 13.7 -1.2
comp=Z,134nm,0.9s,mb6.0,SNR=55
RGNG Rignano Grg 56.14 44 P P 19 45 14.7 -0.7
FUR Furstenfeldbru 56.33 35 eP P 19 45 16.0 -0.6
comp=Z,199nm,1.1s,mb6.1
FUR eS S 19 53 07.2 +0.3
FUR Furstenfeldbru 56.33 35 eP P 19 45 16.0 -0.6
FUR eS S 19 53 07.2 +0.3
FUR pmax pmax
comp=Z,199nm,1.1s,mb6.1
ABTA Abfaltersbach 56.36 37 ⇑ iP P 19 45 16.1 -0.7
comp=Z,307nm,1.5s,mb6.1,SNR=99
ORE Reay 56.39 19⇑ eP P 19 45 15.7 -1.1
USIN University of 56.48 311 eP P 19 45 18.0 +0.1
comp=Z,570nm,1.5s,mb6.4
CCIG Comitan 56.58 285 iP P 19 45 16.4 -2.5
TRI Trieste 56.64 39 eP P 19 45 18.6 -0.3
TRI pmax pmax
comp=Z,276nm,1.2s,mb6.2
TRI MLR MLR
comp=Z,19µm,19.0s,MS6.2
TRI Trieste 56.64 39 eP P 19 45 18.6 -0.2
comp=Z,276nm,1.2s,mb6.2
TRI LR LR
comp=Z,19µm,19.0s,MS6.2
PTCC Patocco-Chiusa 56.70 38 P P 19 45 18.8 -0.5
IBBN Ibbenburen 56.74 30 eP P 19 45 19.1 -0.4
comp=Z,259nm,1.1s,mb6.2
IBBN eS S 19 53 13.2 +0.9
OXF Oxford 56.83 307 eP P 19 45 18.0 -2.4
OXF pmax pmax
comp=Z,186nm,0.8s,mb6.2
OXF MLR MLR

comp=Z,40µm,21.0s,MS6.5
OXF Oxford 56.83 307 *e*P **P 19 45 18.0 -2.4**
comp=Z,186nm,0.8s,mb6.2
OXF LR LR
comp=Z,40µm,21.0s,MS6.5
NVLJ Novalja 56.84 41 P **P 19 45 19.7 -0.6**
NVLJ Novalja 56.84 41 *i* P **P 19 45 19.7 -0.6**
NOCI Noci 56.84 46 *e*P **P 19 45 18.4 -2.0**
CADS Cadrg 56.86 38 *e*P **P 19 45 19.8 -0.6**
VOY Vojsko 56.87 39⇑ *e*P **P 19 45 20.5 0.0**
VOY *e* 19 45 41.9
VOY *e* 19 46 00.2
VOY *e* 19 46 20.2
UTMT University of 56.90 309 *e*P **P 19 45 21.1 +0.2**
comp=Z,163nm,0.6s,mb6.2
GLMI Grayling 56.93 320 *e*P **P 19 45 21.3 +0.4**
comp=Z,160nm,0.9s,mb6.0
GLMI LR LR
comp=Z,31µm,21.0s,MS6.4
KNDS Knezji Dol 56.95 39 *e*P **P 19 45 20.7 -0.3**
MYKA Terra Mystica 56.99 38⇑ *i*P **P 19 45 21.0 -0.4**
comp=Z,335nm,1.1s,mb6.3
RJOB Jochberg 57.00 37 *e*P **P 19 45 20.3 -1.1**
comp=Z,118nm,1.0s,mb5.9
RJOB *e*S **S 19 53 16.3 +0.5**
KBA Koelnbreinsper 57.02 37⇑ *i*P **P 19 45 20.5 -1.0**
comp=Z,204nm,1.2s,mb6.0,SNR=50
UBBA Unterbreizbach 57.04 32 *e*P **P 19 45 21.3 -0.3**
comp=Z,793nm,2.6s,mb6.3
UBBA *e*S **S 19 53 18.3 +2.1**
OLIL Olney 57.05 312 *e*P **P 19 45 21.6 -0.3**
comp=Z,325nm,1.0s,mb6.3
SCX San Cristobal 57.07 285 *i* P **P 19 45 21.0 -1.4**
GRA1 Grafenberg Arr 57.09 34 *e*P **P 19 45 21.5 -0.5**
comp=Z,471nm,1.2s,mb6.4
GRA1 *e*S **S 19 53 17.4 +0.5**
GRA1 ⇑*e* 20 15 16.2
GRA1 LR LR
comp=Z,25µm,19.7s,MS6.3
GRF Grafenberg Arr 57.09 34 *e*P **P 19 45 21.5 -0.5**
comp=Z,471nm,1.2s,mb6.4
GRF *e*S **S 19 53 17.4 +0.5**
GRF *e*L 20 06 23.2
comp=Z,25µm,19.7s
GRF *e*PKPPKPbc 20 15 16.2
GRF Grafenberg Arr 57.09 34 *e*P **P 19 45 21.5 -0.5**
GRF *e*S **S 19 53 17.4 +0.5**
GRF pmax pmax
comp=Z,471nm,1.2s,mb6.4
GRF MLR MLR
comp=Z,25µm,19.7s,MS6.3
GRF Grafenberg Arr 57.09 34 *e*P **P 19 45 21.5 -0.5**
GRF *e*S **S 19 53 17.4 +0.5**
GRF pmax pmax
comp=Z,471nm,1.2s,mb6.4
GRF MLR MLR
comp=Z,25µm,19.7s,MS6.3
GRF Grafenberg Arr 57.09 34 *e*P **P 19 45 21.5 -0.5**
comp=Z,471nm,1.2s,mb6.4
GRF *e*S **S 19 53 17.4 +0.5**
GRF LR LR
comp=Z,25µm,19.7s,MS6.3
HALT Halls 57.15 308 *e*P **P 19 45 22.2 -0.5**
VBMS Vicksburg 57.17 304 *e*P **P 19 45 23.6 +0.8**
comp=Z,778nm,1.4s,mb6.5
VBMS LR LR
comp=Z,56µm,20.0s,MS6.7
GLAT Glass 57.21 309 P **P 19 45 22.4 -0.7**
LJU Ljubljana 57.27 39 *e*P **P 19 45 23.1 -0.2**
LJU *e*S **S 19 53 22.1 +2.8**
BOJS Bojanci 57.49 40 *e*P **P 19 45 24.5 -0.4**
BOJS *e*S **S 19 53 25.3 +3.0**
OBKA Obir 57.49 38⇑ *i*P **P 19 45 24.7 -0.2**
comp=Z,414nm,1.2s,mb6.3,SNR=145
PDKS Podkum 57.57 39 *e*P **P 19 45 24.9 -0.5**
SIUC Southern Illin 57.57 310 *e*P **P 19 45 25.5 -0.2**
comp=Z,185nm,0.8s,mb6.2
SCTE Santa Cesarea 57.60 47 *e*P **P 19 45 23.7 -2.1**
ROTZ Rotzenmuhle 57.68 34 *e*P **P 19 45 25.6 -0.5**
comp=Z,144nm,1.2s,mb5.9
ROTZ *e*S **S 19 53 26.3 +1.7**
GNAR Gosnell 57.69 308 *e*P **P 19 45 26.0 -0.5**
WET Wettzell 57.74 35 *e*P **P 19 45 25.6 -1.0**
comp=Z,72nm,1.3s,mb5.5
WET *e*S **S 19 53 27.9 +2.4**
WET Wettzell 57.74 35 *e*P **P 19 45 25.6 -1.0**
WET *e*S **S 19 53 27.9 +2.4**
WET pmax pmax
comp=Z,72nm,1.3s,mb5.5
CLZ Clausthal 57.80 31 *e*P **P 19 45 26.5 -0.4**
comp=Z,94nm,1.2s,mb5.7
CLZ *e*S **S 19 53 28.0 +1.9**
CLZ Clausthal 57.80 31 *e*P **P 19 45 26.5 -0.4**
CLZ *e*S **S 19 53 28.0 +1.9**
CLZ pmax pmax
comp=Z,94nm,1.2s,mb5.7
MOX Moxa 57.81 33*ce*P **P 19 45 27.1 +0.1**
comp=Z,377nm,2.1s,mb6.0
MOX *e*S **S 19 53 28.0 +1.7**
MOX
comp=Z,26µm,23.0s
MOX Moxa 57.81 33 *e*P **P 19 45 26.7 -0.3**
comp=Z,424nm,2.0s,mb6.1
MOX Moxa 57.81 33*ce*P **P 19 45 27.1 +0.1**
MOX *e*S **S 19 53 28.0 +1.7**
MOX pmax pmax
comp=Z,377nm,2.1s,mb6.0
MOX MLR MLR
comp=Z,26µm,23.0s,MS6.3
SOKA Soboth 57.86 38⇑ *i*P **P 19 45 27.0 -0.5**
comp=Z,350nm,1.0s,mb6.3
PERS Pernice 57.90 39 *i* P **P 19 45 27.2 -0.5**
PERS *e*S **S 19 53 30.2 +2.6**
PERS *e* 19 57 32.5
MOA Molln 57.93 37⇑ *i*P **P 19 45 26.6 -1.3**
comp=Z,233nm,1.2s,mb6.1,SNR=88
PLCA Paso Flores 58.01 211 P **P 19 45 28.8 +0.2**
comp=Z,27nm,1.0s,mb5.2,baz=34,slow=9.4,SNR=15
PLCA LR LR 20 10 57.7
comp=Z,227µm,18.6s,MS7.3,baz=51,slow=37
PLCA Paso Flores 58.01 211 *e*P **P 19 45 28.6 0.0**
PLCA pmax pmax
comp=Z,184nm,1.5s
PLCA MLR MLR
comp=Z,197µm,19.0s
PLCA Paso Flores 58.01 211 *e*P **P 19 45 28.6 0.0**
comp=Z,184nm,1.5s,mb5.9
PLCA LR LR
comp=Z,197µm,19.0s,MS7.2
NRDL Niedersach Rie 58.03 31 *e*P **P 19 45 28.5 0.0**
comp=Z,538nm,1.9s,mb6.2
NRDL *e*S **S 19 53 30.7 +1.6**
TSUM Tsumeb 58.04 118 LR LR 20 04 44.8
comp=Z,45µm,21.6s,MS6.5,baz=280,slow=30
TSUM Tsumeb 58.04 118 *e*P **P 19 45 29.0 -0.1**
comp=Z,13nm,1.0s,mb4.9
TSUM LR LR
comp=Z,43µm,21.0s,MS6.5
STON Ston 58.05 43 P **P 19 45 28.2 -0.7**
STON Ston 58.05 43 *i* P **P 19 45 28.2 -0.7**
NKC Novy Kostel 58.05 34 *e*P **P 19 45 28.8 +0.1**
NKC *e* 19 47 45.1
NKC MLR MLR
comp=Z,28µm,17.5s,MS6.4
NKC Novy Kostel 58.05 34 *e*P **P 19 45 28.8 +0.1**
NKC *e*PP PP 19 47 45.1 +7.8
NKC AMS AMS 20 07 00.0
comp=Z,28µm,17.5s
GEC2 GERESS Array S 58.07 36 *e*P **P 19 45 28.2 -0.7**
comp=Z,553nm,2.4s,mb6.2
GEC2 *e*S **S 19 53 31.0 +1.2**
GEC2 GERESS Array S 58.07 36 *e*P **P 19 45 28.2 -0.7**
GEC2 *e*S **S 19 53 31.0 +1.2**
GEC2 pmax pmax
comp=Z,553nm,2.4s,mb6.2
GERES GERESS Array B 58.07 36 P **P 19 45 27.9 -1.0**
comp=Z,9.4nm,0.8s,mb4.9,baz=235,slow=6.3,SNR=96
GERES LR LR 20 07 05.0
comp=Z,48µm,21.4s,MS6.6,baz=251,slow=33
GERES GERESS Array B 58.07 36 P **P 19 45 27.9 -1.0**
GERES pmax pmax
comp=Z,9.0nm,0.8s
GERES MLR MLR
comp=Z,48µm,21.4s
HBAR Harrisburg 58.09 307 *e*P **P 19 45 29.5 +0.2**

BORG Borgarnes 58.09 7 P **P 19 45 29.3 +0.6**
comp=Z,51nm,0.8s,mb5.6,baz=189,slow=6.1,SNR=9.9
BORG Borgarnes 58.09 7 *e*P **P 19 45 30.5 +1.7**
BORG pmax pmax
comp=Z,191nm,1.3s
BORG MLR MLR
comp=Z,31µm,19.0s
BORG Borgarnes 58.09 7 *e*P **P 19 45 30.5 +1.7**
comp=Z,191nm,1.3s,mb6.0
BORG LR LR
comp=Z,31µm,19.0s,MS6.5
KHC Kasperske Hory 58.13 35 *e*P **P 19 45 28.9 -0.5**
KHC *e* 19 47 39.3
KHC *e* 19 49 05.3
KHC *e*S **S 19 53 29.8 -0.9**
KHC MLR MLR
comp=Z,36µm,22.6s,MS6.4
KHC Kasperske Hory 58.13 35 *e*P **P 19 45 29.0 -0.3**
comp=Z,42nm,1.0s,mb5.4
KHC Kasperske Hory 58.13 35 *e*P **P 19 45 28.9 -0.5**
KHC *e*PP PP 19 47 39.3 +1.2
KHC *ex* x 19 47 48.5
KHC *ex* x 19 49 05.3
KHC *e*S **S 19 53 29.8 -0.9**
KHC AMS AMS 20 05 30.0
comp=Z,36µm,22.6s
KHC *e*PKPPKP 20 15 07.1
KHC *ex* x 20 15 18.9
TANN Tannenbergstha 58.15 34 *e*P **P 19 45 29.2 -0.2**
comp=Z,716nm,2.2s,mb6.3
TANN *e*S **S 19 53 35.5 +4.7**
SISC Sisak 58.19 40 P **P 19 45 28.9 -0.9**
SISC Sisak 58.19 40 *i* P **P 19 45 28.9 -0.9**
WAL1 Walls 58.41 19 *e*P **P 19 45 30.1 -0.9**
ARSA Arzberg 58.42 38⇑ *i*P **P 19 45 29.9 -1.4**
comp=Z,110nm,1.1s,mb5.8,SNR=53
HCY Herceg Novi 58.44 44⇓ *i*P **P 19 45 31.7 +0.1**
HCY Herceg Novi 58.44 44⇓ *i*P **P 19 45 31.8 +0.1**
KEK Kerkira 58.45 48 *e*P **P 19 45 32.0 +0.2**
KEK Kerkira 58.45 48 P **P 19 45 31.6 -0.2**
LRW Lerwick 58.46 19 *e*P **P 19 45 30.6 -0.8**
LRW AMb AMB 19 45 35.1
comp=Z,211nm,1.1s,mb6.1
LRW *e* 19 53 28.6
LRW AMS AMS 20 04 50.9
comp=Z,26µm,21.4s,MS6.3
HDIL Hopedale 58.51 313 *e*P **P 19 45 31.5 -0.7**
comp=Z,196nm,0.9s,mb6.1
HDIL LR LR
comp=Z,32µm,21.0s,MS6.4
KOGS Kog 58.52 39 *e*P **P 19 45 31.6 -0.4**
KOGS *e*S **S 19 53 37.9 +2.2**
FVM French Village 58.57 310 *e*P **P 19 45 31.3 -1.3**
FVM pmax pmax
comp=Z,130nm,0.9s,mb6.0
FVM French Village 58.57 310 *e*P **P 19 45 31.3 -1.3**
comp=Z,130nm,0.9s,mb6.0
VLS Valsamata 58.58 50 *e*P **P 19 45 32.4 -0.3**
VLS Valsamata 58.58 50 P **P 19 45 32.1 -0.6**
SLM Saint Louis 58.61 311 *e*P **P 19 45 31.9 -1.0**
SLM pmax pmax
comp=Z,179nm,0.9s,mb6.1
SLM Saint Louis 58.61 311 *e*P **P 19 45 31.9 -1.0**
comp=Z,179nm,0.9s,mb6.1
BRY Bratogost 58.63 44⇓ *i*P **P 19 45 31.8 -1.2**
BRY Bratogost 58.63 44⇓ *i*P **P 19 45 31.8 -1.2**
BUM Brajici-Budva 58.67 44⇓ *i*P **P 19 45 33.6 +0.4**
BUM Brajici-Budva 58.67 44⇓ *i*P **P 19 45 33.6 +0.4**
IGT Igoumenitsa 58.79 48 P **P 19 45 34.3 +0.2**
ULC Ulcinj 58.80 45⇓ *i*P **P 19 45 34.4 +0.3**
CLL Collm 58.90 33 *e*P **P 19 45 34.1 -0.6**
comp=Z,112nm,1.3s,mb5.7
CLL *e*S **S 19 53 42.5 +1.9**
CLL Collm 58.90 33⇑ *i*P **P 19 45 34.3 -0.4**
CLL *i* 19 45 39.4
CLL *e*S **S 19 53 43.0 +2.4**
CLL pmax pmax
comp=Z,112nm,1.9s,mb5.6
CLL MLR MLR
comp=Z,32µm,21.5s,MS6.4
CLL Collm 58.90 33⇑ *i*P **P 19 45 34.3 -0.4**
comp=Z,112nm,1.9s,mb5.6
CLL *i* 19 45 39.4
CLL *e*S **S 19 53 43.0 +2.4**
CLL *e*P'P' 20 15 08.0
CLL LR LR
comp=Z,32µm,21.5s,MS6.4
CLL Collm 58.90 33⇑ *i*P **P 19 45 34.3 -0.4**
comp=Z,112nm,1.9s,mb5.6
CLL *i* (sP) sP 19 45 39.4 +0.3
comp=Z,111nm,1.3s
CLL *i* 19 45 46.6
CLL *e*S **S 19 53 43.0 +2.4**
comp=N,15µm,26.6s
CLL *e*S **S 19 53 43.0 +2.4**
comp=E,19µm,25.5s
CLL *e*SS SS 19 57 54.0 +20
CLL *e*SSS 20 00 21.0
CLL Lm 20 07 00.0
comp=N,14µm,19.1s
CLL Lm 20 07 00.0
comp=E,27µm,21.7s
CLL Lm 20 07 00.0
comp=Z,32µm,21.5s
CLL *e*PKPPKPdf 20 15 08.0
CLL *e* 20 15 36.0
CLL Lm 20 25 00.0
comp=N,600nm,20.7s
CLL Lm 20 25 00.0
comp=E,500nm,20.2s
CLL Lm 20 25 00.0
comp=Z,1µm,20.7s
NKY Niksic 58.91 44⇓ *i*P **P 19 45 35.1 +0.2**
NKY Niksic 58.91 44⇓ *i*P **P 19 45 35.1 +0.2**
CONA Conrad Observa 58.92 37⇑ *i*P **P 19 45 33.9 -1.0**
comp=Z,124nm,1.0s,mb5.9,SNR=37
BSEG Bad Segeberg 58.95 29 *e*P **P 19 45 34.2 -0.7**
comp=Z,533nm,1.1s,mb6.5
BSEG *e*S **S 19 53 40.8 -0.3**
BSEG Bad Segeberg 58.95 29 *e*P **P 19 45 34.2 -0.7**
BSEG *e*S **S 19 53 40.8 -0.3**
BSEG pmax pmax
comp=Z,533nm,1.1s,mb6.5
TTG Podgorica 58.96 44⇓ *i*P **P 19 45 35.3 0.0**
TTG Podgorica 58.96 44⇓ *i*P **P 19 45 35.3 +0.1**
UPM Unac-Piva 58.99 44⇓ *i*P **P 19 45 34.6 -0.9**
UPM Unac-Piva 58.99 44⇓ *i*P **P 19 45 34.7 -0.8**
TIR Tirane 59.02 46 *e*P **P 19 45 36.5 +0.8**
TIR Tirane 59.02 46 *e*P **P 19 45 36.6 +0.9**
TIR pmax pmax
comp=Z,213nm,1.0s,mb6.1
TIR MLR MLR
comp=Z,27µm,20.0s,MS6.4
TIR Tirane 59.02 46 *e*P **P 19 45 36.6 +0.9**
comp=Z,213nm,1.0s,mb6.1
TIR LR LR
comp=Z,27µm,20.0s,MS6.4
TIR Tirane 59.02 46 P **P 19 45 35.4 -0.3**
PRA Prague 59.08 35 ⇑P **P 19 45 36.0 +0.1**
PRA PP PP 19 47 54.0 +7.5
PRA S **S 19 53 44.0 +1.1**
PRA AMS AMS 20 06 00.0
PRU Pruhonice 59.10 35 *e*P **P 19 45 35.9 -0.2**
PRU *e*PP PP 19 47 53.9 +7.2
PRU *ex* x 19 49 17.9
PRU *e*S **S 19 53 43.6 +0.4**
PRU AMS AMS 20 06 00.0
comp=Z,24µm,20.2s
PRU *e*PKPPKP 20 15 03.8
PRU *ex* x 20 15 13.5
PYL PYLOS 59.11 51 *e*P **P 19 45 36.4 0.0**
PYL PYLOS 59.11 51 P **P 19 45 36.3 -0.1**
BRG Berggiesshubel 59.20 34 *e*P **P 19 45 36.4 -0.3**
comp=Z,142nm,1.2s,mb5.9
BRG *e*S **S 19 53 45.5 +1.1**
BRG Berggiesshubel 59.20 34 *i* P **P 19 45 36.0 -0.7**
comp=Z,142nm,1.2s,mb5.9
BRG *i* 19 46 27.5
comp=Z,160nm,1.6s
BRG PP PP 19 47 49.0 +1.5
BRG S **S 19 53 51.0 +6.6**
BRG SS SS 19 57 43.0 +4.2
BRG *e*PKPPKP 20 15 05.0
comp=Z,7.2nm,1.4s

BRG
comp=N,18µm,27.0s
BRG
comp=E,14µm,16.4s
BRG
comp=Z,28µm,16.8s
CCM Cathedral Cave 59.21 310 *e*P **P 19 45 35.5 -1.5**
CCM pmax pmax
comp=Z,178nm,0.9s,mb6.1
CCM MLR MLR
comp=Z,25µm,20.0s,MS6.3
CCM Cathedral Cave 59.21 310 *e*P **P 19 45 35.5 -1.5**
comp=Z,178nm,0.9s,mb6.1
CCM LR LR
comp=Z,25µm,20.0s,MS6.3
JAN Janina 59.21 48 *e*P **P 19 45 37.6 +0.6**
RLS Riolos of Patr 59.21 50 *e*P **P 19 45 37.5 +0.4**
UALR University of 59.23 306 *e*P **P 19 45 35.4 -1.9**
comp=Z,214nm,0.9s,mb6.2
TREC Trest 59.32 36 *e*P **P 19 45 36.5 -1.1**
TREC *e*S **S 19 53 48.1 +2.1**
TREC MLR MLR
comp=Z,39µm,21.1s,MS6.5
TREC Trest 59.32 36 *e*P **P 19 45 36.5 -1.1**
TREC *e*S **S 19 53 48.1 +2.1**
TREC AMS AMS 20 07 00.0
comp=Z,39µm,21.1s
ITM Ithomi 59.33 51 *e*P **P 19 45 38.4 +0.5**
ITM Ithomi 59.33 51 P **P 19 45 38.0 +0.1**
PLE Pljevlja 59.37 44⇓ *i*P **P 19 45 38.4 +0.3**
PLE Pljevlja 59.37 44⇓ *i*P **P 19 45 38.5 +0.4**
PVCC Panska Ves 59.37 34 *e*P **P 19 45 37.9 -0.1**
PVCC *e*S **S 19 53 51.0 +4.3**
PVCC MLR MLR
comp=Z,20µm,20.9s,MS6.2
PVCC Panska Ves 59.37 34 *e*P **P 19 45 37.9 -0.1**
PVCC *e*S **S 19 53 51.0 +4.3**
PVCC AMS AMS 20 06 30.0
comp=Z,20µm,20.9s
PVY Plav 59.51 44⇓ *i*P **P 19 45 39.6 +0.5**
PVY Plav 59.51 44⇓ *i*P **P 19 45 39.6 +0.5**
UPR University Cam 59.51 50 *e*P **P 19 45 38.9 -0.3**
IVA Berane 59.56 44⇓ *i*P **P 19 45 39.8 +0.4**
IVA Berane 59.56 44⇓ *i*P **P 19 45 39.9 +0.5**
OHR Ohrid 59.62 46 *e*P **P 19 45 39.9 +0.1**
EFP Efpalio 59.64 50 *e*P **P 19 45 40.5 +0.4**
EFP Efpalio 59.64 50 P **P 19 45 40.6 +0.5**
LAKA Lakka 59.65 50 P **P 19 45 40.8 +0.7**
EVR Evrytania 59.71 49 *e*P **P 19 45 42.2 +1.7**
VLX Vlachokerasia 59.73 51 *e*P **P 19 45 41.6 +1.0**
VLX Vlachokerasia 59.73 51 P **P 19 45 41.5 +0.9**
TRIZ Trizonia 59.75 50 P **P 19 45 41.4 +0.6**
ZST Bratislava 59.79 38 *e*P **P 19 45 40.5 -0.4**
comp=Z,108nm,1.0s,mb5.8
ZST *e* 19 45 45.9
ZST *e*S **S 19 53 52.1 -0.1**
ZST LR LR
comp=Z,24µm,17.2s,MS6.4
ZST Bratislava 59.79 38 *e*P **P 19 45 40.5 -0.4**
ZST *ep*P pP 19 45 45.9 +1.8
ZST *e*S **S 19 53 52.1 -0.1**
KALE Kalithea 59.81 50 P **P 19 45 41.9 +0.7**
GUR Goura 59.84 50 *e*P **P 19 45 42.1 +0.6**
GUR Goura 59.84 50 P **P 19 45 42.2 +0.7**
MUD Monsted U'grnd 59.90 27⇑ *i*P **P 19 45 40.9 -0.6**
MUD *i* S **S 19 53 53.5 +0.2**
MUD pmax pmax
comp=Z,160nm,1.0s,mb6.0
MUD MLR MLR
comp=Z,35µm,21.0s,MS6.5
MUD Monsted U'grnd 59.90 27⇑ *i*P **P 19 45 40.9 -0.6**
comp=Z,156nm,1.0s,mb6.0
MUD *i* S **S 19 53 53.5 +0.2**
MUD
comp=Z,35µm,21.0s
RUE Ruedersdorf 59.91 32⇑ *i*P **P 19 45 41.2 -0.4**
comp=Z,302nm,1.1s,mb6.2
FNA Florina 59.93 47 P **P 19 45 41.2 -0.8**
PKSM Moragy 59.94 40⇑ P **P 19 45 41.4 -0.5**
PKSM Moragy 59.94 40⇑ *i*P **P 19 45 41.4 -0.5**
JFWS Jewell Farm 59.96 316 *e*P **P 19 45 41.0 -1.2**
JFWS pmax pmax
comp=Z,148nm,0.8s,mb6.1
JFWS MLR MLR
comp=Z,27µm,19.0s,MS6.4
JFWS Jewell Farm 59.96 316 *e*P **P 19 45 41.0 -1.2**
comp=Z,148nm,0.8s,mb6.1
JFWS LR LR
comp=Z,27µm,19.0s,MS6.4
BIA Bitola 59.96 47 *e*P **P 19 45 42.2 0.0**
BIA Bitola 59.96 47 P **P 19 45 42.2 0.0**
KYTH Kithira 59.97 52 *e*P **P 19 45 43.8 +1.5**
VRAC Vranov 59.97 36 P **P 19 45 41.0 -1.1**
comp=Z,45nm,0.8s,mb5.5,baz=256,slow=7.3,SNR=50
VRAC Vranov 59.97 36 P **P 19 45 41.0 -1.1**
VRAC pmax pmax
comp=Z,45nm,0.8s
VRAC Vranov 59.97 36⇓ *i*P **P 19 45 42.5 +0.4**
VLI Veliai 59.99 52 *e*P **P 19 45 43.6 +1.1**
KRUS Krusevo 60.02 46 *e*P **P 19 45 41.5 -1.1**
STAV Stavanger 60.04 23 *e*P **P 19 45 41.7 -0.7**
THL Klokotos Trika 60.04 48 *e*P **P 19 45 42.4 -0.4**
THL Klokotos Trika 60.04 48 P **P 19 45 42.4 -0.4**
DIVS Divibare 60.04 43 P **P 19 45 42.4 -0.3**
KZN Kozani 60.08 47 *e*P **P 19 45 43.0 0.0**
KZN Kozani 60.08 47 P **P 19 45 43.0 0.0**
DSF Desfina 60.11 50 P **P 19 45 42.7 -0.6**
SMOL Smolenice 60.12 37 *e*P **P 19 45 43.0 -0.1**
SMOL *e* 19 45 48.4
SMOL Smolenice 60.12 37 *e*P **P 19 45 43.0 -0.1**
SMOL *ep*P pP 19 45 48.4 +2.0
AGG Agios Georgios 60.13 49 *e*P **P 19 45 43.7 +0.3**
AGG Agios Georgios 60.13 49 P **P 19 45 43.2 -0.2**
MIAR Mount Ida 60.17 306 *e*P **P 19 45 42.7 -1.1**
MIAR pmax pmax
comp=Z,102nm,1.1s,mb5.8
MIAR MLR MLR
comp=Z,40µm,22.0s,MS6.5
MIAR Mount Ida 60.17 306 *e*P **P 19 45 42.7 -1.0**
comp=Z,102nm,1.1s,mb5.8
MIAR LR LR
comp=Z,40µm,22.0s,MS6.5
DPC Dobruska-Polom 60.28 35 *e*P **P 19 45 43.5 -0.7**
DPC *ex* x 19 45 53.4
DPC *e*PP PP 19 47 49.9 -7.2
DPC *e*S **S 19 53 59.1 +0.7**
DPC AMS AMS 20 06 30.0
comp=Z,26µm,25.1s
DPC *e*PKPPKP 20 15 04.9
DPC *ex* x 20 15 17.0
SKO Skopje 60.34 46 *e*P **P 19 45 45.0 +0.2**
LTK Loutraki 60.34 50 *e*P **P 19 45 45.2 +0.3**
LTK Loutraki 60.34 50 P **P 19 45 44.8 -0.1**
COWI Conover 60.35 319 *e*P **P 19 45 43.6 -1.2**
comp=Z,402nm,1.6s,mb6.2
COWI LR LR
comp=Z,25µm,19.0s,MS6.4
KARN Karanos 60.46 53 *e*P **P 19 45 46.3 +0.6**
KARN Karanos 60.46 53 P **P 19 45 45.9 +0.2**
GVD Gavdhos 60.47 54 *e*P **P 19 45 46.1 +0.2**
comp=Z,585nm,1.0s,mb6.6
KSP Ksiaz 60.49 35 *e*P **P 19 45 45.6 0.0**
KSP *e*S **S 19 54 04.9 +3.9**
KSP LMZ 20 04 23.4
comp=Z,63µm,33.6s
KSP Ksiaz 60.49 35⇑ *e*P **P 19 45 45.3 -0.3**
KSP *e*'PP pP 19 45 50.9 +2.1
KSP *e*S **S 19 54 03.0 +1.9**
KSP MLR MLR
comp=Z,73µm,33.6s,MS6.6
SFJD Kangerlussuaq 60.51 353 P **P 19 45 44.5 -1.0**
comp=Z,66nm,0.9s,mb5.8,baz=141,slow=7.8,SNR=20
SFJD Kangerlussuaq 60.51 353⇑ *i*P **P 19 45 43.7 -1.8**
SFJD *i* S **S 19 53 57.9 -2.9**
SFJD *i* 20 00 32.9
SFJD pmax pmax
comp=Z,55nm,1.0s,mb5.6
SFJD MLR MLR
comp=Z,12µm,18.0s,MS6.1
SFJD Kangerlussuaq 60.51 353 *e*P **P 19 45 44.5 -0.9**
comp=Z,38nm,1.1s,mb5.4
SFJD LR LR
comp=Z,13µm,20.0s,MS6.1
SFJD Kangerlussuaq 60.51 353⇑ *i*P **P 19 45 43.7 -1.8**

comp=Z,55nm,1.0s,mb5.6
SFJD *i* S **S** **19 53 57.9 -2.9**
SFJD *i* 20 00 32.9
SFJD
comp=Z,12μm,18.0s
NATX Nacogdoches 60.52 302 *e*P **P** **19 45 45.9 -0.3**
comp=Z,889nm,1.1s,mb6.8
NATX LR LR
comp=Z,58μm,20.0s,MS6.7
LKR Lokris 60.53 50 *e*P **P** **19 45 45.7 -0.4**
LKR Lokris 60.53 50 P **P** **19 45 45.7 -0.4**
LIT Litokhoron 60.54 48 *e*P **P** **19 45 45.5 -0.7**
LIT Litokhoron 60.54 48 P **P** **19 45 45.2 -1.0**
ATAL Atalanti 60.56 50 P **P** **19 45 46.1 -0.2**
NAIG Nisos Aigina 60.67 51 *e*P **P** **19 45 47.7 +0.5**
BUD Budapest 60.68 39⇑*e*P **P** **19 45 46.8 -0.2**
VAM Vamos 60.69 53 *e*P **P** **19 45 47.7 +0.4**
MORC Moravsky Berou 60.73 36 *e*P **P** **19 45 46.8 -0.5**
MORC pmax pmax
comp=Z,334nm,1.8s,mb6.2
MORC Moravsky Berou 60.73 36 *e*P **P** **19 45 46.8 -0.5**
comp=Z,334nm,1.8s,mb6.2
MORC Moravsky Berou 60.73 36⇑*i*P **P** **19 45 47.1 -0.2**
KOLL Kolacno 60.73 38 *e*P **P** **19 45 47.0 -0.3**
KOLL *e* 19 45 52.4
KOLL Kolacno 60.73 38 *e*P **P** **19 45 47.0 -0.3**
KOLL *e*pP pP 19 45 52.4 +1.8
RGN Rugen 60.76 30 *e*P **P** **19 45 46.9 -0.5**
comp=Z,291nm,1.1s,mb6.3
LVIG Laguna Verde 60.78 288 *i* P **P** **19 45 45.8 -2.3**
STIP Stip 60.79 46 *e*P **P** **19 45 47.7 -0.2**
XOR Xorichti 60.86 49 P **P** **19 45 47.7 -0.7**
NEO Neokhori 60.87 49 *e*P **P** **19 45 48.4 -0.1**
BER Bergen 60.88 22⇑*i*P **P** **19 45 46.2 -1.9**
BER AMB AMB 19 45 59.8
comp=Z,161nm,3.9s
BER *e*S **S** **19 54 04.2 -1.6**
BER AMS AMS 20 05 58.1
comp=Z,26μm,21.5s,MS6.3
ATH Athens Observa 60.90 51 *e*P **P** **19 45 49.2 +0.5**
VLY Voula,Athens 60.93 51 *e*P **P** **19 45 48.2 -0.7**
COP Copenhagen 60.95 28⇑*i*P **P** **19 45 48.1 -0.5**
COP *i* S **S** **19 54 07.6 +0.9**
COP pmax pmax
comp=Z,70nm,1.0s,mb5.8
COP MLR MLR
comp=Z,7μm,19.0s,MS5.8
COP Copenhagen 60.95 28⇑*i*P **P** **19 45 48.1 -0.5**
comp=Z,70nm,1.0s,mb5.8
COP *i* S **S** **19 54 07.6 +0.9**
COP *i* 19 55 52.9
COP
comp=Z,7μm,19.0s
VAY Valandovo 60.95 47 *e*P **P** **19 45 48.2 -0.8**
VAY Valandovo 60.95 47 P **P** **19 45 48.0 -1.0**
ATHU Athens Univers 60.95 51 P **P** **19 45 49.0 0.0**
VYHS Vyhne 60.96 38 *e*P **P** **19 45 48.5 -0.4**
comp=Z,28nm,1.1s,mb5.3
VYHS *e* pP 19 45 53.0 +0.9
VYHS *e*PcP PcP 19 46 31.5 -0.7
VYHS *e*S **S** **19 54 02.5 -4.7**
VYHS LR LR
comp=Z,20μm,34.3s,MS6.0
VYHS Vyhne 60.96 38 *e*P **P** **19 45 48.5 -0.4**
VYHS *e*pP pP 19 45 53.0 +0.9
VYHS *e*PCP PcP 19 46 31.5 -0.7
VYHS *e*S **S** **19 54 02.5 -4.7**
OXX Oaxaca 60.99 285 *i* P **P** **19 45 49.0 -0.6**
VHO Vista Hermosa 61.00 285 *i* P **P** **19 45 49.9 +0.2**
PTL Penteli 61.03 50 *e*P **P** **19 45 49.2 -0.4**
SIVA Sivas 61.09 54 *e*P **P** **19 45 50.2 +0.2**
SIVA Sivas 61.09 54 P **P** **19 45 47.5 -2.5**
OKC Ostrava-Krasne 61.11 36 *e*P **P** **19 45 50.1 +0.2**
OKC *e*S **S** **19 54 08.7 -0.3**
OKC MLR MLR
comp=Z,23μm,19.7s,MS6.3
OKC Ostrava-Krasne 61.11 36 *e*P **P** **19 45 50.1 +0.2**
OKC *e*S **S** **19 54 08.7 -0.3**
OKC AMS AMS 20 08 20.0
comp=Z,23μm,19.7s
HORT Hortiatis 61.13 48 P **P** **19 45 49.5 -0.7**
KNT Kendrikon 61.14 47 P **P** **19 45 50.1 -0.2**
IDI Anoyia 61.21 54 LR LR 20 11 25.3
comp=Z,21μm,21.9s,MS6.2,baz=239,slow=35
IDI Anoyia 61.21 54 *e*P **P** **19 45 51.6 +0.8**
HKT Hockley 61.23 300 *e*P **P** **19 45 50.1 -1.0**
HKT pmax pmax
comp=Z,334nm,1.6s,mb6.2
HKT MLR MLR
comp=Z,44μm,22.0s,MS6.6
HKT Hockley 61.23 300 *e*P **P** **19 45 50.1 -1.0**
comp=Z,334nm,1.6s,mb6.2
HKT LR LR
comp=Z,44μm,22.0s,MS6.6
RAC Raciborz 61.24 36 *e*P **P** **19 45 50.7 -0.1**
RAC *e*S **S** **19 54 09.7 -1.0**
RAC MLR MLR
comp=N,25μm,16.0s,MS6.5
RAC MLR MLR
comp=Z,25μm,20.0s,MS6.4
RAC MLR MLR
comp=E,19μm,20.0s,MS6.5
PLG Polygyros 61.32 48 *e*P **P** **19 45 51.0 -0.5**
PLG Polygyros 61.32 48 P **P** **19 45 51.2 -0.3**
AOS Alonnisos 61.33 49 P **P** **19 45 50.9 -0.7**
LIKS Likavka 61.35 37 *e*P **P** **19 45 53.3 +1.8**
LIKS *e* 19 45 58.6
LIKS pmax pmax
comp=Z,57nm,0.9s,mb5.7
LIKS Likavka 61.35 37 *e*P **P** **19 45 53.3 +1.8**
comp=Z,56nm,0.9s,mb5.7
LIKS *e* 19 45 58.6
LIKS Likavka 61.35 37 *e*P **P** **19 45 53.3 +1.8**
LIKS *e*pP pP 19 45 58.6 +3.9
PAIG Paliouri 61.38 48 P **P** **19 45 50.6 -1.3**
SOH Sokhos 61.38 47 *e*P **P** **19 45 51.6 -0.3**
SOH Sokhos 61.38 47 P **P** **19 45 51.7 -0.2**
PSZ Piszkesteto 61.39 39 *e*P **P** **19 45 52.2 +0.4**
PSZ pmax pmax
comp=Z,122nm,1.0s,mb6.0
PSZ MLR MLR
comp=Z,20μm,20.0s,MS6.3
PSZ Piszkesteto 61.39 39⇑*e*P **P** **19 45 51.9 +0.1**
PSZ Piszkesteto 61.39 39⇑*i*P **P** **19 45 52.9 +1.1**
KKB Krupnik 61.48 46 *i* P **P** **19 45 52.4 -0.1**
FOO Floro 61.62 20⇑*i*P **P** **19 45 50.9 -2.1**
FOO AMB AMB 19 46 04.5
comp=Z,190nm,3.1s
FOO *e*S **S** **19 54 13.6 -1.4**
FOO AMS AMS 20 05 51.0
comp=Z,27μm,19.5s,MS6.4
SRS Serrai 61.63 47 P **P** **19 45 53.1 -0.5**
BZS Buzias 61.65 42⇑P **P** **19 45 53.8 +0.2**
BZS Buzias 61.65 42⇑*i*P **P** **19 45 53.8 +0.2**
LAST Lasithi 61.66 54 *e*P **P** **19 45 53.8 -0.1**
LAST Lasithi 61.66 54 P **P** **19 45 53.8 -0.1**
OUR Ouranopolis 61.71 48 P **P** **19 45 53.4 -0.7**
SCIA State Center 61.74 314 *e*P **P** **19 45 53.7 -0.6**
comp=Z,247nm,1.3s,mb6.2
SCIA LR LR
comp=Z,28μm,22.0s,MS6.4
VTS Vitosha 61.78 45 P **P** **19 45 54.8 +0.3**
VTS Vitosha 61.78 45 *i* P **P** **19 45 55.0 +0.5**
NPS Neapolis 61.78 54 *e*P **P** **19 45 55.2 +0.5**
BSD Bornholm Skovb 61.84 30⇑*i*P **P** **19 45 53.7 -1.0**
BSD *i* S **S** **19 54 18.6 +0.5**
BSD pmax pmax
comp=Z,100nm,1.0s,mb5.9
BSD MLR MLR
comp=Z,30μm,20.0s,MS6.5
BSD Bornholm Skovb 61.84 30⇑*i*P **P** **19 45 53.7 -1.0**
comp=Z,105nm,1.0s,mb5.9
BSD *i* S **S** **19 54 18.6 +0.5**
BSD
comp=Z,30μm,20.0s
MMB Musomiste 61.86 47 *i* P **P** **19 45 55.6 +0.5**
THR1 Thera Island 61.89 53 P **P** **19 45 55.3 -0.1**
NVR Nevrokopi 61.89 47 *e*P **P** **19 45 55.5 +0.2**
KECS Kecovo 61.97 38 *e*P **P** **19 45 55.9 +0.2**
KECS *e* pP 19 46 00.5 +1.6
KECS pmax pmax
comp=Z,14nm,1.1s,mb5.0
KECS Kecovo 61.97 38 *e*P **P** **19 45 55.9 +0.2**
comp=Z,14nm,1.1s,mb5.0
KECS *e* pP 19 46 00.5 +1.6
KECS *e* 19 46 09.5
KECS Kecovo 61.97 38 *e*P **P** **19 45 55.9 +0.2**
KECS *e*pP pP 19 46 00.5 +1.6
KECS *e* 19 46 09.5
KONO Kongsberg 62.03 24⇑*i*P **P** **19 45 53.7 -2.2**
KONO AMB AMB 19 46 08.0
comp=Z,99nm,2.2s,mb5.5
KONO *e*PP PP 19 48 12.0 -0.4
KONO *e*S **S** **19 54 21.2 +0.8**
KONO AMS AMS 20 10 06.7
comp=Z,31μm,20.1s,MS6.5
KONO Kongsberg 62.03 24 *e*P **P** **19 45 55.2 -0.7**
KONO pmax pmax
comp=Z,144nm,1.4s,mb5.9
KONO MLR MLR
comp=Z,39μm,19.0s,MS6.6
KONO Kongsberg 62.03 24 *e*P **P** **19 45 55.2 -0.7**
comp=Z,144nm,1.4s,mb5.9
KONO LR LR
comp=Z,39μm,19.0s,MS6.6
EFI East Falkland 62.08 196 PFAKE 19 46 10.0 +14
EFI LR LR
comp=Z,29μm,19.0s,MS6.5
APE Apeiranthos 62.10 52 *e*P **P** **19 45 55.8 -1.0**
APE Apeiranthos 62.10 52⇑*i*P **P** **19 45 57.0 +0.2**
APE Apeiranthos 62.10 52 P **P** **19 45 55.7 -1.1**
GKP Gorka Klasztor 62.13 32 *e*P **P** **19 45 56.8 +0.2**
GKP *e*S **S** **19 54 22.2 +0.4**
GKP *e*ScS ScS 19 56 02.0 +13
GKP LMZ 20 07 16.7
comp=Z,37μm,23.7s
GKP Gorka Klasztor 62.13 32 *e*P **P** **19 45 56.8 +0.1**
GKP *e*S **S** **19 54 22.2 +0.3**
GKP MLR MLR
comp=Z,37μm,23.7s,MS6.5
NIE Niedzica 62.23 37 *e*P **P** **19 45 58.3 +0.9**
OJC Ojcow 62.24 36 *e*P **P** **19 45 57.0 -0.5**
OJC *e*S **S** **19 54 23.5 +0.2**
OJC *e*SS SS 19 58 26.0 -0.5
OJC L 20 08 47.2
comp=Z,26nm,21.8s
ZKR Zakros 62.24 54 *e*P **P** **19 45 57.3 -0.5**
ZKR Zakros 62.24 54 P **P** **19 45 57.3 -0.5**
KAVA Kavala 62.27 47 P **P** **19 45 57.6 -0.3**
PNIG Pinotepa 62.33 285 *i* P **P** **19 45 58.8 +0.1**
GZR Gura Zlata 62.35 42 P **P** **19 45 59.1 +0.8**
GZR Gura Zlata 62.35 42⇑*i*P **P** **19 45 59.4 +1.1**
LOS Limnos 62.42 49 P **P** **19 45 58.8 -0.1**
PGB Panagyurishte 62.45 46 *i* P **P** **19 45 59.5 +0.5**
LIA Limnos Island 62.49 49 *e*P **P** **19 45 58.9 -0.4**
LIA Limnos Island 62.49 49 P **P** **19 45 59.3 0.0**
EYMN Ely 62.53 321 *e*P **P** **19 45 57.8 -1.7**
comp=Z,91nm,1.3s,mb5.7
EYMN LR LR
comp=Z,24μm,20.0s,MS6.4
RZN Rozhen 62.60 47 *i* P **P** **19 46 00.4 +0.3**
PLD Plovdiv 62.70 46 P **P** **19 46 01.1 +0.3**
PLD Plovdiv 62.70 46 *i* P **P** **19 46 01.1 +0.3**
KVTX Kingsville 62.72 297 *e*P **P** **19 46 02.4 +1.2**
comp=Z,585nm,1.0s,mb6.7
KVTX LR LR
comp=Z,21μm,20.0s,MS6.3
DRGR 62.77 41 P **P** **19 46 01.2 +0.1**
DRGR 62.77 41⇑*i*P **P** **19 46 01.5 +0.4**
STHS Stebnicka Huta 62.78 38 *e*P **P** **19 46 01.8 +0.7**
STHS pmax pmax
comp=Z,25nm,0.8s,mb5.4
STHS Stebnicka Huta 62.78 38 *e*P **P** **19 46 01.8 +0.7**
comp=Z,25nm,0.8s,mb5.4
STHS *e* 19 46 11.8
STHS Stebnicka Huta 62.78 38 *e*P **P** **19 46 01.8 +0.7**
STHS *e* 19 46 11.8
CHOS Chios island 62.79 51 *e*P **P** **19 46 01.5 +0.1**
CHOS Chios island 62.79 51 P **P** **19 46 01.4 0.0**
SIGR SIGRI 62.83 50 P **P** **19 46 01.6 0.0**
IIO Organos 62.95 288 *i* P **P** **19 46 03.2 +0.5**
RDO Rodhopi 63.06 47 *e*P **P** **19 46 03.0 -0.1**
RDO Rodhopi 63.06 47 P **P** **19 46 02.6 -0.5**
KARP Karpathos 63.08 54 *e*P **P** **19 46 02.9 -0.5**
GADA Gvkgeada 63.09 49 *e*P **P** **19 46 03.8 +0.5**
KDZ Kurdzhali 63.10 47 *i* P **P** **19 46 03.4 0.0**
BOZC Bozcaada 63.12 49⇑*i*P **P** **19 46 04.3 +0.8**
UZH Uzhgorod 63.14 39⇑*i*P **P** **19 46 03.3 -0.2**
UZH *e* 19 46 08.7
UZH *e* 19 46 39.1
UZH *e* 19 49 54.9
UZH *e*S **S** **19 54 30.9 -3.8**
UZH *e* 19 54 51.3
UZH *e* 19 55 49.9
UZH MLR MLR
comp=N,6μm,15.0s,MS6.2
UZH MLR MLR
comp=E,11μm,15.0s,MS6.2
UZH MLR MLR
comp=Z,7μm,15.0s,MS6.0
MOL Molde 63.14 21⇑*i*P **P** **19 46 02.8 -0.5**
MOL AMB AMB 19 46 16.0
comp=Z,190nm,1.7s,mb5.9
MOL *e*S **S** **19 54 35.0 +0.7**
MOL AMS AMS 20 06 38.5
comp=Z,25μm,23.6s,MS6.3
PRK Paraskevi 63.15 50 *e*P **P** **19 46 03.9 +0.1**
PRK Paraskevi 63.15 50 P **P** **19 46 03.2 -0.6**
URLA Izmir 63.20 51⇑*i*P **P** **19 46 04.9 +0.7**
KOLS Kolonicke sedl 63.23 38 *e*P **P** **19 46 03.9 -0.2**
KOLS *e* 19 46 10.1
KOLS *e*S **S** **19 54 35.5 -0.4**
KOLS pmax pmax
comp=Z,38nm,1.1s,mb5.4
KOLS Kolonicke sedl 63.23 38 *e*P **P** **19 46 03.9 -0.2**
comp=Z,38nm,1.1s,mb5.4
KOLS *e* 19 46 10.1
KOLS *e*S **S** **19 54 35.5 -0.4**
KOLS *e*SS SS 19 58 31.9 -10
KOLS LR LR
comp=Z,16μm,34.6s,MS6.0
KOLS Kolonicke sedl 63.23 38 *e*P **P** **19 46 03.8 -0.3**
KOLS *e*pP pP 19 46 10.1 +2.7
KOLS *e*S **S** **19 54 35.5 -0.4**
KOLS *e*SS SS 19 58 31.9 -10
SMG Samos 63.25 51 *e*P **P** **19 46 04.2 -0.3**
NAO01 NORSAR Array S 63.27 23 *e*P **P** **19 46 03.6 -0.6**
comp=Z,94nm,1.0s,mb5.9
NAO01 LR LR
comp=Z,36μm,19.0s,MS6.6
PBVM Pinon 63.28 288 *i* P **P** **19 46 06.0 +1.0**
PTVM Pico Tres Padr 63.31 288 *i* P **P** **19 46 05.6 +0.4**
EZN Ezine 63.32 49 *e*P **P** **19 46 04.0 -0.9**
ALN Alexandroupoli 63.37 48 *e*P **P** **19 46 05.0 -0.2**
ALN Alexandroupoli 63.37 48 P **P** **19 46 04.7 -0.5**
ENEZ Enez 63.41 48 *e*P **P** **19 46 06.0 +0.6**
AYVA Ayvalik 63.48 50⇑*i*P **P** **19 46 07.4 +1.5**
NB2 NORSAR Subarra 63.52 23 P **P** **19 46 05.4 -0.4**
comp=Z,6.4nm,0.7s,mb4.8,baz=227,slow=6.9
NOA NORSAR Array B 63.52 23 P **P** **19 46 05.2 -0.6**
comp=Z,45nm,0.8s,mb5.6,baz=233,slow=6.7,SNR=124
NOA LR LR 20 09 39.2
comp=Z,33μm,20.3s,MS6.5,baz=225,slow=32
NOA NORSAR Array B 63.52 23 P **P** **19 46 05.2 -0.6**
NOA pmax pmax
comp=Z,45nm,0.8s
NOA MLR MLR
comp=Z,33μm,20.3s
KSU1 Kansas State U 63.54 310 *e*P **P** **19 46 04.7 -1.7**
comp=Z,108nm,0.8s,mb5.9
KSU1 LR LR
comp=Z,22μm,19.0s,MS6.4
BLCB Balcova 63.55 51 *e*P **P** **19 46 07.4 +0.9**
BMR Baia Mare 63.57 40 P **P** **19 46 06.9 +0.5**
BMR Baia Mare 63.57 40⇓*i*P **P** **19 46 07.4 +1.0**
BDRM Kayabasi 63.59 52 *i* P **P** **19 46 06.4 -0.3**
SCO Scoresbysund 63.59 5 *i* P **P** **19 46 06.4 +0.3**
SCO *i* S **S** **19 54 42.9 +3.2**
SCO *i* 19 56 01.2
SCO pmax pmax
comp=Z,56nm,1.0s,mb5.5
SCO MLR MLR
comp=Z,12μm,22.0s,MS6.0
SCO Scoresbysund 63.59 5 *i* P **P** **19 46 06.4 +0.3**
comp=Z,56nm,1.0s,mb5.5
SCO *i* S **S** **19 54 42.9 +3.2**
SCO *i* 19 56 01.2
SCO
comp=Z,12μm,22.0s
DAT Datca 63.63 53 *e*P **P** **19 46 04.5 -2.6**
MDB Medias 63.65 42 P **P** **19 46 07.9 +0.9**
PLIG Platanillo 63.66 287 *i* P **P** **19 46 08.1 +0.6**
IZM Izmir 63.72 51 *e*P **P** **19 46 10.0 +2.4**
KWP Kalwaria Pacla 63.75 38 *e*P **P** **19 46 07.7 +0.1**
KWP *e*S **S** **19 54 45.1 +2.8**
KWP LMZ 20 10 37.2
comp=Z,32μm,22.6s
KWP Kalwaria Pacla 63.75 38 *e*P **P** **19 46 07.0 -0.5**
comp=Z,172nm,1.1s,mb6.0
KWP LR LR
comp=Z,33μm,21.0s,MS6.5
KWP Kalwaria Pacla 63.75 38⇑*i*P **P** **19 46 08.7 +1.2**
WAR Warsaw 63.76 35 *e*P **P** **19 46 07.6 0.0**
WAR LMZ 20 06 17.0
comp=Z,35μm,31.0s
LPK Lapseki 63.77 49 *e*P **P** **19 46 07.0 -0.9**
MLSB Milas 63.90 52 *e*P **P** **19 46 08.1 -0.7**
ARG Arkhangelos 63.97 53 *e*P **P** **19 46 08.4 -0.9**
ARG Arkhangelos 63.97 53 P **P** **19 46 08.4 -0.9**
HFS Hagfors 63.99 25 P **P** **19 46 08.2 -0.7**
comp=Z,34nm,0.7s,mb5.5,baz=188,slow=4.5,SNR=60
HFS Hagfors 63.99 25 P **P** **19 46 08.2 -0.7**
HFS pmax pmax
comp=Z,34nm,0.7s
AYDN Tasoluk 64.05 52⇑*i*P **P** **19 46 10.5 +0.7**
EDRB Edirne 64.11 47 *e*P **P** **19 46 10.0 -0.1**
JMB Yambol 64.15 46 P **P** **19 46 10.2 -0.1**
RKY Sarkoy-Tekirda 64.16 48 *e*P **P** **19 46 10.0 -0.4**
AKHS Akhisar 64.24 50⇑*i*P **P** **19 46 11.5 +0.5**
AKS Akhisar 64.24 50 *e*P **P** **19 46 11.0 0.0**
YER Yerkesik 64.27 52 *e*P **P** **19 46 09.2 -2.0**
BALY Balya 64.28 49⇑*i*P **P** **19 46 11.3 +0.1**
CAIG El Cayaco 64.38 285 *i* P **P** **19 46 11.8 -0.5**
WMOK Wichita Mounta 64.43 305 *e*P **P** **19 46 10.2 -2.1**
WMOK pmax pmax
comp=Z,65nm,1.0s,mb5.6
WMOK MLR MLR
comp=Z,53μm,20.0s,MS6.7
WMOK Wichita Mounta 64.43 305 *e*P **P** **19 46 10.2 -2.0**
comp=Z,65nm,1.0s,mb5.6
WMOK LR LR
comp=Z,53μm,20.0s,MS6.7
BALB Balikesir 64.45 50 *e*P **P** **19 46 10.6 -1.8**
TURN Turunc 64.47 53⇑*i*P **P** **19 46 10.1 -2.4**
MLR Muntele Rosu 64.50 43 P **P** **19 46 12.5 -0.1**
comp=Z,142nm,0.8s,mb6.1,baz=187,slow=3.6,SNR=198
MLR LR LR 20 14 09.0
comp=Z,39μm,19.5s,MS6.6,baz=264,slow=36
MLR Muntele Rosu 64.50 43 P **P** **19 46 12.5 -0.1**
MLR pmax pmax
comp=Z,142nm,0.8s
MLR MLR MLR
comp=Z,39μm,19.5s
MLR Muntele Rosu 64.50 43⇓*i*P **P** **19 46 13.0 +0.4**
LVV L'vov 64.62 38 *e*P **P** **19 46 11.8 -1.5**
LVV *e*S **S** **19 54 52.8 -0.3**
LVV MLR MLR
comp=Z,18μm,22.0s,MS6.2
LVV MLR MLR
comp=N,5μm,20.0s,MS6.1
LVV MLR MLR
comp=E,12μm,20.0s,MS6.1
BNT Bandirma 64.63 49 *e*P **P** **19 46 14.1 +0.5**
ECSD EROS Data Cent 64.64 315 *e*P **P** **19 46 12.1 -1.5**
comp=E,234nm,1.5s,mb6.0
ECSD LR LR
comp=Z,22μm,19.0s,MS6.4
BUR08 Bucovina Ar. S 64.65 40 *e*P **P** **19 46 13.5 0.0**
BURAR Bucovina Array 64.65 40⇓P **P** **19 46 14.0 +0.5**
BURAR Bucovina Array 64.65 40⇓*i*P **P** **19 46 14.0 +0.5**
CRLT Corlu 64.67 48 *e*P **P** **19 46 14.0 +0.3**
JCT Junction City 64.70 300 *e*P **P** **19 46 13.3 -0.9**
JCT pmax pmax
comp=Z,470nm,1.3s,mb6.4
JCT MLR MLR
comp=Z,26μm,22.0s,MS6.4
JCT Junction City 64.70 300 *e*P **P** **19 46 13.2 -0.9**
comp=Z,470nm,1.3s,mb6.4
JCT LR LR
comp=Z,26μm,22.0s,MS6.4
MANT Manisa 64.74 51⇓*i*P **P** **19 46 15.0 +0.8**
FETY Fethiye 64.81 53 *e*P **P** **19 46 14.0 -0.7**
KULA Kula-Manisa 64.82 51 *e*P **P** **19 46 14.5 -0.3**
DURS Dursunbey 64.89 50⇑*i*P **P** **19 46 14.9 -0.3**
DENT Denizli 64.97 52 *e*P **P** **19 46 21.8 +6.1**
PLOR Plostina 65.08 43⇑P **P** **19 46 16.1 -0.2**
PLOR Plostina 65.08 43⇑*i*P **P** **19 46 16.1 -0.2**
VRI Vrincioaia 65.14 43 P **P** **19 46 16.6 -0.1**
VRI Vrincioaia 65.14 43⇓*i*P **P** **19 46 16.8 +0.1**
CTYL Yal??k??y-??at 65.15 48 *e*P **P** **19 46 16.8 -0.1**
AKAS Kas 65.16 54⇓*i*P **P** **19 46 17.7 +0.7**
ELBA Catalca 65.18 48⇑*i*P **P** **19 46 16.7 -0.4**
SUMG Summit 65.19 359 *e*P **P** **19 46 16.8 +0.3**
comp=Z,390nm,1.2s,mb6.3
GLHS Glhisar (BURDU 65.22 53 *e*P **P** **19 46 16.7 -0.8**
CTKS Kestanelik-??a 65.26 48 *e*P **P** **19 46 16.1 -1.5**
MOIG Morelia 65.27 288 *e*P **P** **19 46 15.4 -2.7**
GOLH Golhisar 65.29 52⇑*i*P **P** **19 46 18.9 +1.0**
AGMN Agassiz Refuge 65.41 320 *e*P **P** **19 46 16.3 -2.1**
comp=Z,105nm,1.2s,mb5.7
AGMN LR LR
comp=Z,25μm,19.0s,MS6.4
KHAL Karahalli 65.43 51⇑*i*P **P** **19 46 19.1 +0.3**
BGKT Bogazkoy 65.44 48 *e*P **P** **19 46 17.4 -1.3**
ELL Elmali 65.48 53 *e*P **P** **19 46 20.5 +1.4**
ZIIG Zihuatanejo 65.52 286 *i* P **P** **19 46 19.8 +0.1**
GEMT Gemlik 65.60 49 *e*P **P** **19 46 18.1 -1.7**
ISK Istanbul-Kandi 65.63 48 *e*P **P** **19 46 18.5 -1.5**
HARR Harsova 65.65 44⇑P **P** **19 46 19.9 -0.1**
HARR Harsova 65.65 44⇑*i*P **P** **19 46 19.9 -0.1**
SUW Suwalki 65.65 33 *e*P **P** **19 46 19.1 -0.8**
SUW *e*pP pP 19 46 25.0 +1.9
SUW *e*S S 19 55 05.2 -0.4
SUW LMZ 20 07 54.9
comp=Z,31μm,30.0s
SUW Suwalki 65.65 33 *e*P **P** **19 46 19.4 -0.5**
comp=Z,1μm,1.1s,mb6.8
KLYT Kilyos 65.66 48 *e*P **P** **19 46 18.9 -1.3**
JMIC Jan Mayen 65.70 9 *e*P **P** **19 46 20.4 +0.5**
JMIC AMB AMB 19 46 33.0
comp=Z,208nm,2.6s,mb5.7
JMIC *e*S S 19 55 09.1 +3.4
JMIC Jan Mayen 65.70 9 P **P** **19 46 20.0 +0.1**
comp=Z,14nm,0.7s,mb5.1,baz=153,slow=6.8,SNR=2.6
CBKS Cedar Bluff 65.87 309 *e*P **P** **19 46 20.7 -0.9**
CBKS pmax pmax
comp=Z,389nm,1.3s,mb6.3
CBKS MLR MLR
comp=Z,27μm,20.0s,MS6.5
CBKS Cedar Bluff 65.87 309 *e*P **P** **19 46 20.7 -0.9**
comp=Z,389nm,1.3s,mb6.3
CBKS LR LR
comp=Z,27μm,20.0s,MS6.5
NSS Namsos 65.92 20⇑*i*P **P** **19 46 19.8 -1.6**
NSS AMB AMB 19 46 33.0
comp=Z,235nm,2.6s,mb5.8
NSS *e*S S 19 55 08.3 -0.2
NSS *e*SS SS 19 59 22.4 -1.0
NSS AMS AMS 20 08 01.0
comp=Z,19μm,21.5s,MS6.3
TIRR Tirgusor 65.93 44⇑*e*P **P** **19 46 21.3 -0.5**
TIRR pmax pmax
comp=Z,160nm,1.3s,mb5.9
TIRR Tirgusor 65.93 44⇑*e*P **P** **19 46 21.3 -0.5**
comp=Z,160nm,1.3s,mb5.9
TIRR Tirgusor 65.93 44⇑*i*P **P** **19 46 21.2 -0.6**
ADVT Abdulvahap 66.01 49 *e*P **P** **19 46 19.9 -2.5**
ULM Lac du Bonnet 66.02 322 P **P** **19 46 20.7 -1.6**
comp=Z,91nm,1.0s,mb5.8,baz=111,slow=6.8,SNR=62
ULM LR LR 20 10 24.6
comp=Z,33μm,21.1s,MS6.5,baz=107,slow=32
ULM PKP2bc 20 15 00.2
comp=Z,2.6nm,0.6s,baz=319,slow=1.4,SNR=3.4
ULM Lac du Bonnet 66.02 322 *e*P **P** **19 46 19.9 -2.4**
comp=Z,125nm,1.1s,mb5.8
ULM LR LR
comp=Z,41μm,20.0s,MS6.6
ALT Altintas 66.03 51 *e*P **P** **19 46 22.9 +0.2**
CAVI Cavuskoy 66.04 49 *e*P **P** **19 46 20.9 -1.8**
IAS Iasi 66.05 41 P **P** **19 46 22.3 -0.3**

ANTB Antalya 66.09 53 *e*P **P 19 46 22.9 -0.2**
SUR Sutherland 66.10 130 *e*P **P 19 46 23.6 +0.5**
comp=Z,259nm,1.4s,mb6.1
SUR LR LR
comp=Z,36µm,20.0s,MS6.6
SUR Sutherland 66.10 130 P **P 19 46 24.7 +1.6**
SNR=6.6
SUR P 19 46 24.7
SNR=6.6
BCK Bucak 66.13 52 *e*P **P 19 46 22.2 -1.1**
ISP Isparta 66.14 52 *e*P **P 19 46 23.1 -0.2**
ISP Isparta 66.14 52 *e*P **P 19 46 22.7 -0.6**
ISP pmax pmax
comp=Z,92nm,1.1s,mb5.7
ISP MLR MLR
comp=Z,22µm,20.0s,MS6.4
ISP Isparta 66.14 52 *e*P **P 19 46 22.7 -0.6**
comp=Z,92nm,1.1s,mb5.7
ISP LR LR
comp=Z,22µm,20.0s,MS6.4
ISP Isparta 66.14 52⇑*i*P **P 19 46 23.1 -0.2**
SHUT Suhut-Afyon 66.28 51 *e*P **P 19 46 24.3 0.0**
TLCR 66.38 44 ⇑P **P 19 46 24.7 0.0**
TLCR 66.38 44⇑*i*P **P 19 46 24.7 0.0**
LSZ Lusaka 66.42 110 *e*P **P 19 46 26.2 +0.7**
LSZ pmax pmax
comp=Z,134nm,1.4s,mb5.8
LSZ MLR MLR
comp=Z,13µm,22.0s,MS6.1
LSZ Lusaka 66.42 110 *e*P **P 19 46 26.2 +0.7**
comp=Z,33nm,1.4s,mb5.2
LSZ LR LR
comp=Z,13µm,22.0s,MS6.1
BORA Eskisehir 66.44 50⇑*i*P **P 19 46 24.8 -0.4**
SUTC Sutluce-Ispart 66.46 52 *e*P **P 19 46 24.3 -1.1**
GULT Gulveren 66.59 49 *e*P **P 19 46 25.9 -0.3**
BOLV Bolvadin 66.62 51⇑*i*P **P 19 46 26.9 +0.4**
ESKT Eskisehir 66.68 50 *e*P **P 19 46 26.8 0.0**
ESKT Eskisehir 66.68 50⇓*i*P **P 19 46 27.2 +0.4**
AMTX Amarillo 66.81 305 *e*P **P 19 46 27.2 -0.4**
comp=Z,169nm,1.2s,mb6.0
AMTX LR LR
comp=Z,53µm,21.0s,MS6.7
KIS Kishinev 66.83 42 *i*P **P 19 46 24.0 -3.6**
comp=Z,600nm,2.5s,mb6.2
KIS Kishinev 66.83 42 *e*PcP PcP 19 46 44.0 -12
KIS Kishinev 66.83 42 *e*PP PP 19 48 54.0 -0.8
KIS Kishinev 66.83 42α*i*P **P 19 46 24.0 -3.6**
KIS *e* 19 48 54.0
KIS *e*S S 19 55 13.0 -7.2
KIS *e*PS 19 55 34.0
KIS *e*SSS 20 02 30.0
KIS pmax pmax
comp=Z,600nm,2.5s,mb6.2
KIS pmax pmax
comp=N,4µm,10.0s
KIS pmax pmax
comp=Z,4µm,12.0s
KIS MLR MLR
comp=N,11µm,18.0s,MS6.4
KIS MLR MLR
comp=Z,17µm,18.0s,MS6.3
KIS MLR MLR
comp=E,18µm,20.0s,MS6.4
KIS MLR MLR
comp=Z,22µm,22.0s
SFJM Santa Fe 67.02 289 *i*P **P 19 46 28.7 -0.6**
LBTB Lobatse 67.06 121 *e*P **P 19 46 29.0 -0.4**
LBTB pmax pmax
comp=Z,185nm,1.4s,mb5.9
LBTB MLR MLR
comp=Z,29µm,21.0s,MS6.5
LBTB Lobatse 67.06 121 *e*P **P 19 46 29.0 -0.4**
comp=Z,185nm,1.4s,mb5.9
LBTB LR LR
comp=Z,29µm,21.0s,MS6.5
MDU Mudurnu 67.12 49 *e*P **P 19 46 28.3 -1.2**
PPCY Paphos 67.17 55 P **P 19 46 29.2 -0.8**
SVRH Sivrihisar-ESK 67.18 50 *e*P **P 19 46 29.1 -0.9**
428A Kincaid Ranch, 67.20 300 ⇓P **P 19 46 30.2 -0.1**
baz=67,SNR=142
428A ⇓S S 19 55 23.0 -2.3
baz=67
528A Cox Ranch, San 67.24 300 ⇓P **P 19 46 29.9 -0.6**
baz=67,SNR=27
528A ⇑S S 19 55 23.7 -2.1
baz=67
628A Black Gap, Mar 67.28 299 ⇑P **P 19 46 30.5 -0.2**
baz=67,SNR=167
628A ⇓S S 19 55 22.6 -3.6
baz=67
KIZT Kizilcal 67.36 51 *e*P **P 19 46 31.3 +0.2**
328A Wristen Ranch, 67.37 301 ⇓P **P 19 46 30.1 -1.2**
baz=67,SNR=31
STOK Stokkvaagen 67.37 19 *e*P **P 19 46 30.8 +0.2**
STOK *e*S S 19 55 26.8 +0.8
ALFC Alevga 67.41 55 P **P 19 46 31.6 +0.1**
comp=Z,3.1nm,1.1s
KDZE Karadeniz Ereo 67.44 48 *e*P **P 19 46 29.8 -1.8**
HDMB Hadim 67.56 53 *e*P **P 19 46 29.8 -2.6**
KONT Konya--Tatoy 67.59 52 *e*P **P 19 46 32.0 -0.7**
MSTX Muleshoe 67.59 304 ⇑P **P 19 46 32.1 -0.6**
baz=68,SNR=20
LADK Ladik-KONYA 67.64 52 *e*P **P 19 46 31.8 -1.1**
LEF Lefka 67.64 55 *e*P **P 19 46 31.1 -1.9**
627A Terlingua Ranc 67.71 299 ⇓P **P 19 46 33.0 -0.5**
baz=68
MOR8 Moi Rana 67.73 19 *e*P **P 19 46 33.5 +0.6**
SGKT Sivrigoynuk 67.77 49⇓*i*P **P 19 46 33.6 -0.1**
IIGN Ignalina 67.78 33 *e*P **P 19 46 33.4 0.0**
ISAL Salakas 67.81 32 *e*P **P 19 46 33.3 -0.3**
427A Hayter Ranch, 67.83 300 ⇑P **P 19 46 33.5 -0.7**
baz=68,SNR=79
Z27A Tatum 67.89 303 ⇑P **P 19 46 34.1 -0.5**
baz=68,SNR=102
Y27A Causey 67.91 303 ⇓P **P 19 46 34.3 -0.4**
baz=68,SNR=54
MAMC Mammari 67.92 55 P **P 19 46 37.4 +2.7**
NACGM Naroch 67.93 33 *e*P **P 19 46 32.0 -2.4**
IZAR Zarasai 67.94 32 *e*P **P 19 46 33.9 -0.5**
X27A F and S Farms, 67.94 304 ⇑P **P 19 46 34.1 -0.7**
baz=68,SNR=17
TXAR Lajitas Array 67.94 299 P **P 19 46 34.6 -0.4**
comp=Z,27nm,0.6s,mb5.5,baz=104,slow=6.7,SNR=169
TXAR LR LR 20 13 31.7
comp=Z,28µm,21.7s,MS6.5,baz=0.0,slow=34
TXAR PKP2bc 20 14 58.9
comp=Z,1.2nm,0.9s,baz=260,slow=3.6,SNR=5.0
TXAR Lajitas Array 67.94 299 P **P 19 46 34.6 -0.4**
TXAR LR LR 20 13 31.7
TXAR ⇑*e* 20 14 58.9
327A Balmorhea Ranc 67.95 301 ⇑P **P 19 46 34.2 -0.8**
baz=68
127A Arkansas Junct 67.95 302 ⇓P **P 19 46 34.3 -0.7**
baz=68,SNR=10
527A Woodward Ranch 67.95 299 ⇓P **P 19 46 34.5 -0.5**
baz=68,SNR=32
W27A Bowe Ranch, En 67.96 305 ⇑P **P 19 46 34.1 -0.8**
baz=68,SNR=57
OGNE Ogallala 67.98 311 *e*P **P 19 46 35.7 +0.7**
comp=Z,764nm,1.6s,mb6.5
OGNE LR LR
comp=Z,30µm,19.0s,MS6.5
CSS Prodhromos 67.99 55 P **P 19 46 35.2 +0.1**
comp=Z,2.8nm,1.2s
CSS Prodhromos 67.99 55 *e*P **P 19 46 33.4 -1.8**
CSS Prodhromos 67.99 55 P **P 19 46 34.5 -0.6**
IDID Didziasalis 68.05 33 *e*P **P 19 46 35.3 +0.2**
KIEV Kiev 68.05 38 *e*P **P 19 46 33.9 -1.3**
KIEV pmax pmax
comp=Z,398nm,1.6s,mb6.2
KIEV MLR MLR
comp=Z,13µm,20.0s,MS6.2
KIEV Kiev 68.05 38 *e*P **P 19 46 33.9 -1.3**
comp=Z,398nm,1.6s,mb6.2
KIEV LR LR
comp=Z,13µm,20.0s,MS6.2
AKASG Malin Array Be 68.06 38 P **P 19 46 34.3 -1.0**
comp=Z,64nm,0.7s,mb5.7,baz=256,slow=6.3,SNR=178
AKASG LR LR 20 16 22.8
comp=Z,10µm,19.0s,MS6.1,baz=260,slow=36
AKASG Malin Array Be 68.06 38 P **P 19 46 34.3 -1.0**
AKASG pmax pmax
comp=Z,64nm,0.7s
AKASG MLR MLR
comp=Z,10µm,19.0s

AKBB Malin Array Si 68.06 38 *e*P **P 19 46 33.9 -1.4**
BOSA Boshof 68.07 125 P **P 19 46 35.3 -0.4**
comp=Z,112nm,0.9s,mb5.9,baz=297,slow=6.1,SNR=137
BOSA LR LR 20 10 20.5
comp=Z,35µm,21.2s,MS6.6,baz=285,slow=31
BOSA Boshof 68.07 125 P **P 19 46 35.3 -0.4**
BOSA pmax pmax
comp=Z,112nm,0.9s,mb5.9
BOSA MLR MLR
comp=Z,35µm,21.2s,MS6.6
BOSA Boshof 68.07 125 *e*P **P 19 46 35.3 -0.4**
comp=Z,368nm,1.4s,mb6.2
BOSA LR LR
comp=Z,35µm,21.0s,MS6.6
FCC Fort Churchill 68.08 331 *e*P **P 19 46 33.8 -1.4**
FCC pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
FCC Fort Churchill 68.08 331 *e*P **P 19 46 33.8 -1.4**
comp=Z,4.8nm,0.9s,mb4.5
LFK Lefkose 68.19 55 *e*P **P 19 46 33.2 -3.2**
LOD Lodumlu 68.20 50 *e*P **P 19 46 35.2 -1.2**
426A McDonald Obser 68.35 300 ⇑P **P 19 46 37.9 +0.4**
baz=68,SNR=51
CLNB Carlsbad 68.35 302 *e*P **P 19 46 37.6 +0.1**
comp=Z,69nm,1.4s,mb5.5
SAFT Safranbolu 68.35 49 *e*P **P 19 46 37.0 -0.4**
326A Caldwell Ranch 68.36 301 ⇑P **P 19 46 37.1 -0.5**
baz=68,SNR=30
526A Mary Lane Ranc 68.36 299 ⇓P **P 19 46 37.6 0.0**
baz=68,SNR=18
626A Big Bend Ranch 68.36 299 ⇑P **P 19 46 37.1 -0.5**
baz=68,SNR=19
MNK Minsk 68.38 34 *e*P **P 19 46 34.0 -3.2**
MNK *i* 19 46 34.0
MNK *e* 19 49 06.0
MNK *e*S S 19 55 30.0 -8.5
MNK *e*SS SS 19 59 59.0 -2.9
MNK pmax pmax
comp=Z,380nm,0.8s,mb6.5
MICGM Minsk 68.40 34⇓*i*P **P 19 46 34.0 -3.4**
CPRX Cap Rock 68.41 303 *e*P **P 19 46 37.8 -0.1**
comp=Z,117nm,1.0s,mb5.9
BBAL Bala 68.42 50⇑*i*P **P 19 46 38.2 +0.5**
IKL Isikli 68.42 54 *e*P **P 19 46 37.1 -0.7**
Y26A Elida 68.46 303 ⇑P **P 19 46 37.8 -0.4**
baz=68,SNR=16
126A Clayton Basin, 68.50 302 ⇑P **P 19 46 37.7 -0.8**
baz=69,SNR=28
X26A CR and CF Fran 68.51 304 ⇑P **P 19 46 38.5 0.0**
baz=69,SNR=6.6
226A Malaga, Loving 68.52 301 ⇓P **P 19 46 38.8 +0.2**
baz=69,SNR=57
Z26A Caprock 68.53 303 ⇓P **P 19 46 38.3 -0.3**
baz=69,SNR=24
W26A Owens Ranch, T 68.53 305 ⇑P **P 19 46 38.2 -0.3**
baz=69,SNR=23
SULT Sultanhani-AKS 68.53 52 *e*P **P 19 46 36.6 -1.9**
PHNC Paralimni 68.56 55 P **P 19 46 44.7 +5.9**
comp=Z,3.3nm,1.1s
V26A Tequesquite Ra 68.63 305 ⇑P **P 19 46 39.1 -0.1**
baz=69,SNR=11
U26A Atchley Ranch, 68.66 306 ⇓P **P 19 46 39.2 -0.2**
baz=69,SNR=57
EREN Erenkoy 68.73 55 *e*P **P 19 46 38.3 -1.5**
GDL2 Guadalupe Moun 68.76 302 *e*P **P 19 46 40.1 +0.1**
comp=Z,254nm,1.5s,mb5.9
ELDT Eldivan 68.79 49⇑*i*P **P 19 46 40.6 +0.5**
BR131 Keskin Array S 68.84 50 *e*P **P 19 46 40.5 +0.1**
comp=Z,40nm,0.8s,mb5.4
BR131 LR LR
comp=Z,20µm,22.0s,MS6.3
BRTR Keskin Array B 68.84 50 P **P 19 46 40.3 -0.1**
comp=Z,38nm,0.8s,mb5.4,baz=247,slow=5.1,SNR=168
BRTR LR LR 20 18 57.9
comp=Z,13µm,20.7s,MS6.1,baz=68,slow=38
BRTR Keskin Array B 68.84 50 P **P 19 46 40.3 -0.1**
BRTR pmax pmax
comp=Z,39nm,0.8s
BRTR MLR MLR
comp=Z,13µm,20.7s
EIL Elat 68.89 61 *e*P **P 19 46 41.1 +0.2**
CJM Chamela 68.91 288 *i*P **P 19 46 41.0 -0.1**
BALT Daday 68.92 48⇑*i*P **P 19 46 40.6 -0.2**
CANT Cankiri 68.95 49 *e*P **P 19 46 40.0 -1.1**
125A Gardner Draw, 69.04 302 ⇑P **P 19 46 41.5 -0.3**
baz=69,SNR=107
ILGA Ilgaz 69.09 49⇑*i*P **P 19 46 41.8 -0.1**
W25A X Bar L Ranch, 69.11 305 ⇓P **P 19 46 42.2 0.0**
baz=69,SNR=23
Z25A Roswell 69.14 303 ⇑P **P 19 46 42.6 +0.2**
baz=69,SNR=42
VSU Vasula 69.14 30*c i*P **P 19 46 41.4 -0.5**
VSU pmax pmax
comp=Z,78nm,0.7s,mb5.8
VSU MLR MLR
comp=Z,10µm,16.0s,MS6.1
MERS Mersin 69.16 53 *e*P **P 19 46 41.4 -1.1**
Y25A Mesa, Roswell 69.18 303 ⇑P **P 19 46 43.0 +0.4**
baz=69,SNR=29
425A Indio Mountain 69.18 300 ⇑P **P 19 46 42.8 +0.1**
baz=69,SNR=79
325A Bean Ranch, Si 69.21 301 ⇓P **P 19 46 42.9 0.0**
baz=69,SNR=16
X25A Clemmons Ranch 69.21 304 ⇑P **P 19 46 42.7 -0.1**
baz=69,SNR=51
TOS Tosya 69.32 49 *e*P **P 19 46 43.1 -0.3**
CDAG Cicekdag 69.39 51⇑*i*P **P 19 46 43.8 0.0**
GULE Gulek 69.41 53⇑*i*P **P 19 46 44.1 +0.1**
BZK Bozkurt 69.44 48 *e*P **P 19 46 43.4 -0.7**
MMAI Mount Meron Ar 69.51 58 P **P 19 46 45.5 +0.8**
comp=Z,40nm,0.9s,mb5.4,baz=302,slow=4.7,SNR=30
MMAI PP PP 19 49 20.4 +2.0
comp=Z,8.0nm,1.0s,baz=292,slow=9.6,SNR=3.5
MMAI LR LR 20 20 30.6
comp=Z,11µm,18.4s,MS6.1,baz=255,slow=39
MNTX Cornudas Mount 69.58 301 *e*P **P 19 46 43.9 -1.3**
comp=Z,75nm,1.0s,mb5.6
MNTX LR LR
comp=Z,25µm,19.0s,MS6.5
KARA Karaisali 69.63 53 *e*P **P 19 46 42.7 -2.6**
324A Moseley Ranch, 69.65 301 ⇑P **P 19 46 44.9 -0.7**
baz=70,SNR=79
CORM Corum 69.66 50 *e*P **P 19 46 46.2 +0.7**
Z24A Sheeppen Canyo 69.69 303 ⇑P **P 19 46 46.1 +0.3**
baz=70,SNR=26
124A Stringfield Ra 69.71 302 ⇑P **P 19 46 45.9 -0.1**
baz=70,SNR=53
224A Corundas Mount 69.73 301 ⇓P **P 19 46 45.7 -0.3**
baz=70,SNR=69
KSDI Kefar Szold 69.74 57 *e*P **P 19 46 46.9 +0.8**
BHL Bhannes 69.79 57 *e*P **P 19 46 46.5 0.0**
Y24A Capitan 69.80 303 ⇑P **P 19 46 46.9 +0.5**
baz=70,SNR=143
KRTS Karatas 69.81 54 *e*P **P 19 46 50.9 +4.4**
CTKT Corum 69.84 50⇑*i*P **P 19 46 45.9 -0.6**
X24A Lazy VL Ranch, 69.85 304 ⇓P **P 19 46 47.1 +0.4**
baz=70,SNR=8.5
W24A Lazy 6 Ranch, 69.88 305 ⇓P **P 19 46 47.2 +0.3**
baz=70,SNR=75
DAG Danmarks Havn 69.93 4⇑*i*P **P 19 46 46.2 -0.3**
DAG pmax pmax
comp=Z,510nm,1.9s,mb6.1
DAG Danmarks Havn 69.93 4⇑*i*P **P 19 46 46.2 -0.3**
comp=Z,505nm,1.9s,mb6.1
BYBT Boyabat 69.94 49 *e*P **P 19 46 47.2 +0.1**
FINES FINESS Array B 69.95 27 P **P 19 46 46.3 -0.5**
comp=Z,50nm,0.8s,mb5.5,baz=256,slow=3.9,SNR=110
FINES LR LR 20 15 47.0
comp=Z,34µm,18.8s,MS6.6,baz=253,slow=34
FINES FINESS Array B 69.95 27 P **P 19 46 46.3 -0.5**
FINES pmax pmax
comp=Z,50nm,0.8s
FINES MLR MLR
comp=Z,34µm,18.8s
RSSD Black Hills 69.97 314 *e*P **P 19 46 46.9 -0.4**
RSSD pmax pmax
comp=Z,16nm,0.8s,mb5.0
RSSD MLR MLR
comp=Z,20µm,19.0s,MS6.4
RSSD Black Hills 69.97 314 *e*P **P 19 46 46.9 -0.3**
comp=Z,16nm,0.8s,mb5.0
RSSD LR LR
comp=Z,20µm,19.0s,MS6.4
SIM Simferopol' 70.01 45 *e*P **P 19 46 47.5 0.0**
SIM *e* 19 49 30.0
SIM *e*S S 19 56 01.0 +2.9

SIM pmax pmax
comp=Z,47nm,0.9s,mb5.4
HWQ Hawqa 70.07 56 *e*P **P 19 46 48.3 +0.2**
CEYT Ceyhan 70.16 53 *e*P **P 19 46 46.8 -1.7**
MAIG Mazatlaan 70.19 292 *i*P **P 19 46 49.7 +0.6**
SDCO Great Sand Dun 70.21 307 *e*P **P 19 46 48.8 -0.1**
comp=Z,223nm,2.0s,mb5.8
SDCO LR LR
comp=Z,29µm,22.0s,MS6.5
KOZT Kozan 70.27 53 *e*P **P 19 46 47.7 -1.6**
KAF Kangasniemi 70.31 26 *e*P **P 19 46 47.9 -1.1**
KAF pmax pmax
comp=Z,158nm,1.1s,mb5.9
KAF Kangasniemi 70.31 26 *e*p **P 19 46 47.9 -1.1**
comp=Z,158nm,1.1s,mb5.9,baz=249,slow=6.0
Y23A Lovelace Mesa, 70.31 303 ⇑P **P 19 46 49.8 +0.2**
baz=70,SNR=61
DIKM Dikmen 70.33 48 *e*P **P 19 46 49.6 0.0**
123A Bell Site, Whi 70.39 302 ⇑P **P 19 46 50.2 +0.1**
baz=70
Z23A Rita Site, Whi 70.41 303 ⇓P **P 19 46 50.3 +0.1**
baz=70,SNR=7.1
BNN Bunyan 70.43 51 *e*P **P 19 46 50.5 +0.3**
W23A Werner Place, 70.48 305 ⇓P **P 19 46 51.0 +0.4**
baz=70,SNR=23
223A Chaparral, Ant 70.49 301 ⇑P **P 19 46 51.0 +0.3**
baz=70
COBT Iskenderun 70.51 54⇑*i*P **P 19 46 51.1 +0.3**
ISCO Idaho Springs 70.53 310 *e*P **P 19 46 50.8 0.0**
ISCO pmax pmax
comp=Z,310nm,1.6s,mb6.0
ISCO MLR MLR
comp=Z,29µm,20.0s,MS6.5
ISCO Idaho Springs 70.53 310 *e*P **P 19 46 50.8 0.0**
comp=Z,310nm,1.6s,mb6.0
ISCO LR LR
comp=Z,29µm,20.0s,MS6.5
V23A Ortiz Mt. (NFS 70.56 305 ⇓P **P 19 46 52.0 +0.9**
baz=71,SNR=15
PHWY Pilot Hill 70.59 311 *e*P **P 19 46 52.0 +0.8**
comp=Z,8.7nm,0.8s,mb4.7
ANDN Andirin 70.69 53⇑*i*P **P 19 46 52.5 +0.7**
ASF Jabal al Asfar 70.71 59 P **P 19 46 53.0 +0.9**
comp=Z,34nm,1.0s,mb5.2,baz=140,slow=4.8,SNR=3.5
ASF Jabal al Asfar 70.71 59 P **P 19 46 53.0 +0.9**
ASF pmax pmax
comp=Z,34nm,1.0s
ANMO Albuquerque 70.72 304 *e*P **P 19 46 51.9 -0.2**
ANMO pmax pmax
comp=Z,106nm,1.4s
ANMO MLR MLR
comp=Z,65µm,22.0s
ANMO Albuquerque 70.72 304 *e*P **P 19 46 51.9 -0.2**
comp=Z,27nm,1.4s,mb5.0
ANMO LR LR
comp=Z,65µm,22.0s,MS6.8
BNM Barren Site 70.80 303 *e*P **P 19 46 52.8 +0.3**
comp=Z,191nm,1.6s,mb5.8
DGMT Dagmar 70.84 319 ⇑P **P 19 46 53.1 +0.6**
baz=71,SNR=20
DGMT Dagmar 70.84 319 *e*P **P 19 46 52.5 -0.1**
comp=Z,384nm,1.3s,mb6.2
DGMT LR LR
comp=Z,20µm,19.0s,MS6.4
KVT Kavak 70.84 49 *e*P **P 19 46 50.3 -2.4**
PINB Pinarbasi 70.84 52⇑*i*P **P 19 46 53.8 +1.1**
FFC Flin Flon 70.87 326 *e*P **P 19 46 51.4 -1.2**
FFC pmax pmax
comp=Z,216nm,1.1s,mb6.0
FFC MLR MLR
comp=Z,43µm,22.0s,MS6.7
FFC Flin Flon 70.87 326 *e*P **P 19 46 51.4 -1.2**
comp=Z,216nm,1.1s,mb6.0
FFC LR LR
comp=Z,43µm,22.0s,MS6.7
122A Conniff Cattle 71.02 302 ⇑P **P 19 46 54.2 +0.3**
baz=71,SNR=6.5
Z22A Elephant Butte 71.02 303 ⇑P **P 19 46 53.9 -0.1**
baz=71,SNR=18
Y22D IRIS PASSCAL I 71.04 303 ⇑P **P 19 46 54.1 +0.1**
baz=71
W22A Albuquerque 71.06 304 ⇓P **P 19 46 54.5 +0.4**
baz=71
Y22A Socorro 71.06 303 ⇑P **P 19 46 54.7 +0.5**
baz=71,SNR=18
222A Williams Famil 71.07 301 ⇓P **P 19 46 54.4 +0.2**
baz=71,SNR=13
SARI SarD1z-Kayseri 71.07 52 *e*P **P 19 46 50.3 -3.9**
TRO Tromso 71.08 17⇑*i*P **P 19 46 52.8 -0.8**
TRO *e*S S 19 56 10.7 +0.9
TRO AMS AMS 20 08 50.9
comp=Z,14µm,38.5s,MS5.9
LENM Lemitar 71.09 303 *e*P **P 19 46 54.8 +0.5**
comp=Z,167nm,1.7s,mb5.7
X22A Bernardo 71.14 304 ⇓P **P 19 46 54.9 +0.2**
baz=71,SNR=29
V22A San Miguel Ran 71.16 305 ⇓P **P 19 46 55.3 +0.5**
baz=71,SNR=28
LAZ Ladron 71.24 304 *e*P **P 19 46 56.2 +0.9**
comp=Z,254nm,1.5s,mb5.9
T22A Edith 71.25 306 ⇑P **P 19 46 55.9 +0.7**
baz=71,SNR=72
N22A Wattenberg Ran 71.28 310 ⇓P **P 19 46 56.4 +1.1**
baz=71,SNR=11
PUL Pulkovo 71.32 29⇑*e*P **P 19 46 56.1 +0.9**
PUL pmax pmax
comp=Z,383nm,1.2s,mb6.2
GAZ Gaziantep 71.33 53 *e*P **P 19 46 55.8 0.0**
L22A Ellis Ranch, M 71.41 312 ⇑P **P 19 46 57.2 +1.1**
baz=72,SNR=12
Q22A Crested Butte, 71.42 308 ⇑P **P 19 46 56.6 +0.4**
baz=72,SNR=10
SVSK Karacayir 71.43 50 *e*P **P 19 46 53.0 -3.3**
SMCO Snowmass 71.50 309 *e*P **P 19 46 58.8 +2.0**
comp=Z,369nm,1.7s,mb6.0
Z21A St. Cloud Mine 71.61 303 ⇓P **P 19 46 58.0 +0.4**
baz=72,SNR=21
GZT Gaziantep 71.63 53⇑*i*P **P 19 46 58.6 +1.1**
Y21A Point of Rocks 71.66 303 ⇑P **P 19 46 58.5 +0.7**
baz=72,SNR=61
121A Cookes Peak, D 71.67 302 ⇓P **P 19 46 58.6 +0.8**
baz=72,SNR=39
W21A San Fidel 71.70 304 ⇑P **P 19 46 58.7 +0.6**
baz=72,SNR=41
V21A Milan 71.75 305 ⇑P **P 19 46 58.8 +0.5**
baz=72,SNR=11
X21A Alamocita Cree 71.78 304 ⇑P **P 19 46 59.0 +0.5**
baz=72,SNR=106
R21A Cimarron 71.88 308 ⇑P **P 19 46 59.4 +0.3**
baz=72,SNR=19
LAO LASA Array 71.89 317 *e*P **P 19 46 59.6 +0.7**
comp=Z,430nm,1.3s,mb6.2
LAO LR LR
comp=Z,24µm,19.0s,MS6.5
Q21A Lamborn Mesa, 71.94 308 ⇑P **P 19 46 59.7 +0.4**
baz=72,SNR=34
RWWY Rawlins 71.94 311 *e*P **P 19 47 00.2 +0.8**
comp=Z,403nm,1.8s,mb6.0
DARE Darende-Malaty 71.96 52 *e*P **P 19 46 57.8 -1.7**
O21A Pagoda 71.99 310 ⇑P **P 19 47 00.9 +1.3**
baz=72,SNR=5.9
AKCD Akcadag 71.99 52⇓*i*P **P 19 47 00.5 +0.8**
S21A Coal Bank Pass 72.01 307 ⇓P **P 19 47 00.4 +0.6**
baz=72,SNR=23
M21A Separation Pea 72.05 311 ⇑P **P 19 47 00.6 +0.6**
baz=72,SNR=17
N21A Black Mountain 72.08 310 ⇑P **P 19 47 00.7 +0.5**
baz=72,SNR=64
KTK1 Kautokeino 72.10 19 *e*S S 19 56 20.3 -1.2
Y20A Horse Springs, 72.23 303 ⇓P **P 19 47 01.8 +0.6**
baz=72,SNR=46
320A Kipp Ranch, An 72.25 300 ⇓P **P 19 47 01.9 +0.5**
baz=72,SNR=35
ANN Anapa 72.32 45*c i*P **P 19 46 59.6 -1.9**
ANN *i* 19 47 20.4
ANN *i* 19 49 36.1
ANN *i*S S 19 56 21.5 -3.4
ANN *i*SS SS 20 01 08.6 +5.7
ANN pmax pmax
comp=N,61nm,1.1s
ANN pmax pmax
comp=E,48nm,1.1s
ANN pmax pmax
comp=Z,213nm,1.1s,mb6.0
ANN MLR MLR
comp=N,23µm,23.0s,MS6.5
ANN MLR MLR

comp=E,23µm,23.0s,MS6.5
ANN MLR MLR
X20A Quemado 72.37 304 ⇑P **P 19 47 02.5 +0.5**
baz=72,SNR=47
Z20A Nine Sixteen R 72.37 302 ⇓P **P 19 47 02.6 +0.5**
baz=72,SNR=45
120A U Bar Ranch, L 72.38 302 ⇓P **P 19 47 02.7 +0.5**
baz=72,SNR=50
V20A Brimhall 72.42 305 ⇑P **P 19 47 02.7 +0.4**
baz=72,SNR=17
KMBO Kilima Mbogo 72.45 94 P **P 19 47 05.0 +2.1**
comp=Z,18nm,1.0s,mb5.0,baz=43,slow=24,SNR=26
KMBO LR LR 20 16 58.2
comp=Z,15µm,18.8s,MS6.3,baz=266,slow=34
KMBO Kilima Mbogo 72.45 94 P **P 19 47 05.0 +2.1**
KMBO pmax pmax
comp=Z,18nm,1.0s
KMBO MLR MLR
comp=Z,15µm,18.8s
KMBO Kilima Mbogo 72.45 94 *e*P **P 19 47 05.9 +3.0**
comp=Z,78nm,1.4s,mb5.4
KMBO LR LR
comp=Z,15µm,20.0s,MS6.2
KMBO Kilima Mbogo 72.45 94 P **P 19 47 06.1 +3.2**
SNR=18
KMBO P 19 47 06.1
SNR=18
GRSN GIRESUNGRSN 72.50 50 ⇑*i*P **P 19 47 03.3 +0.6**
U20A Newcomb 72.50 306 ⇓P **P 19 47 03.3 +0.5**
baz=72,SNR=9.7
Q20A Ridgley Place, 72.51 308 ⇓P **P 19 47 03.1 +0.3**
baz=73,SNR=16
R20A Redvale 72.51 308 ⇓P **P 19 47 03.3 +0.4**
baz=73,SNR=41
KEMA Kemaliye 72.52 51 ⇓*i*P **P 19 47 03.5 +0.6**
MVCO Mesa Verde 72.54 307 ⇓P **P 19 47 03.2 +0.2**
baz=73,SNR=16
MVCO Mesa Verde 72.54 307 *e*P **P 19 47 04.1 +1.1**
comp=Z,634nm,1.8s,mb6.2
MVCO LR LR
comp=Z,24µm,20.0s,MS6.5
O20A White River Ci 72.57 310 ⇓P **P 19 47 03.3 +0.1**
baz=73,SNR=42
P20A De Beque 72.63 309 ⇓P **P 19 47 04.0 +0.5**
baz=73,SNR=66
N20A Spence Gulch, 72.65 310 ⇓P **P 19 47 03.9 +0.3**
baz=73,SNR=40
PV01 Paradox Valley 72.66 308 *e*P **P 19 47 04.8 +1.1**
comp=Z,8µm,1.1s
JOF Joensuu 72.76 26 *e*P **P 19 47 02.6 -1.2**
JOF pmax pmax
comp=Z,173nm,1.2s,mb5.9
JOF Joensuu 72.76 26 *e*p **P 19 47 02.6 -1.2**
comp=Z,173nm,1.2s,mb5.9
ESPY Espiye-Giresun 72.84 50 *e*P **P 19 47 02.6 -2.2**
WNDE Wendo Genet 72.86 85 *e*P **P 19 47 08.9 +3.5**
V19A Window Rock 72.88 305 ⇓P **P 19 47 04.9 -0.1**
baz=73
K20A Yellowstone Ra 72.88 312 ⇓P **P 19 47 04.5 -0.4**
baz=73,SNR=28
319A Douglas 72.89 300 ⇓P **P 19 47 05.3 +0.1**
baz=73,SNR=15
219A White Tail Can 72.89 301 ⇓P **P 19 47 05.5 +0.2**
baz=73,SNR=45
T19A Beclabito 72.93 306 ⇑P **P 19 47 05.4 0.0**
baz=73,SNR=21
PV04 Paradox Valley 72.94 308 *e*P **P 19 47 06.0 +0.7**
Z19A T-Link Ranch, 72.95 302 ⇑P **P 19 47 06.0 +0.5**
baz=73,SNR=20
Y19A Nutrioso 72.97 303 ⇑P **P 19 47 06.0 +0.4**
baz=73,SNR=55
X19A St. Johns 73.02 304 ⇑P **P 19 47 06.1 +0.2**
baz=73,SNR=48
U19A Dine' College, 73.05 306 ⇑P **P 19 47 06.3 +0.2**
baz=73,SNR=9.5
ARCES ARCESS Array B 73.06 19 P **P 19 47 04.3 -1.1**
comp=Z,22nm,0.7s,mb5.2,baz=242,slow=4.2,SNR=72
ARCES ARCESS Array B 73.06 19 P **P 19 47 04.3 -1.1**
ARCES pmax pmax
comp=Z,22nm,0.7s
S19A Harvey Farm, M 73.08 307 ⇑P **P 19 47 06.0 -0.2**
baz=73,SNR=34
SVRC Sivrice-ELAZID 73.08 52 *e*P **P 19 47 04.6 -1.6**
P19A Cripple Cowboy 73.09 309 ⇑P **P 19 47 06.2 0.0**
baz=73,SNR=62
W19A Sanders 73.13 304 ⇓P **P 19 47 06.8 +0.2**
baz=73,SNR=12
KELT Kelkit 73.18 50 ⇑*i*P **P 19 47 07.9 +1.2**
PTK Pertek 73.19 52 *e*P **P 19 47 05.3 -1.5**
R19A Curley Farm, L 73.21 308 ⇑P **P 19 47 07.2 +0.2**
baz=73,SNR=39
EZC Erzincan 73.22 51 *e*P **P 19 47 08.5 +1.5**
O19A Miners Draw (B 73.25 310 ⇑P **P 19 47 07.2 0.0**
baz=73,SNR=35
Q19A Hogan Spring (73.26 308 ⇑P **P 19 47 07.5 +0.2**
baz=73,SNR=281
K19A Absolon Red Bu 73.27 312 ⇑P **P 19 47 06.9 -0.3**
baz=73,SNR=52
N19A John Jarvie Ra 73.34 310 ⇑P **P 19 47 07.3 -0.3**
baz=73,SNR=44
OBN Obninsk 73.42 35 P **P 19 47 07.8 0.0**
comp=Z,525nm,1.3s,mb6.3,SNR=15
OBN Obninsk 73.42 35*c i*P **P 19 47 07.2 -0.6**
OBN *i* 19 47 23.3
OBN *i* 19 49 49.5
OBN *i* PPP 19 51 42.5
OBN *i* S S 19 56 35.1 -2.0
OBN pmax pmax
comp=Z,128nm,1.2s,mb5.7
OBN MLR MLR
comp=Z,12µm,17.0s,MS6.2
OBN Obninsk 73.42 35 *e*P **P 19 47 07.1 -0.7**
comp=Z,180nm,1.4s,mb5.8
OBN LR LR
comp=Z,22µm,22.0s,MS6.4
318A Bisbee 73.50 301 ⇓P **P 19 47 09.2 +0.3**
baz=74,SNR=18
118A Homack Ranch, 73.51 302 ⇑P **P 19 47 09.1 +0.3**
baz=74,SNR=64
218A Dragoon 73.56 301 ⇓P **P 19 47 09.5 +0.4**
baz=74,SNR=18
X18A Snowflake 73.56 304 ⇑P **P 19 47 09.3 +0.2**
baz=74,SNR=23
L19A Farson 73.58 312 ⇓P **P 19 47 09.2 +0.2**
baz=74,SNR=66
U18A Rough Rock, Ch 73.59 306 ⇓P **P 19 47 09.6 +0.4**
baz=74,SNR=30
KEV Kevo 73.62 19 *e*P **P 19 47 08.2 -0.6**
KEV pmax pmax
comp=Z,274nm,1.1s,mb6.1
KEV MLR MLR
comp=Z,13µm,21.0s,MS6.2
KEV Kevo 73.62 19 *e*P **P 19 47 08.2 -0.6**
comp=Z,68nm,1.1s,mb5.5
KEV LR LR
comp=Z,13µm,21.0s,MS6.2
KEV Kevo 73.62 19 *e*p **P 19 47 07.8 -1.0**
comp=Z,230nm,1.0s,mb6.1
T18A Mexican Hat 73.63 306 ⇑P **P 19 47 09.4 -0.1**
baz=74,SNR=42
KTUT Trabzon 73.63 50 *e*P **P 19 47 08.0 -1.4**
DIYA Diyarbakir 73.70 53 ⇑*i*P **P 19 47 10.9 +1.1**
R18A Canyonlands Na 73.72 308 ⇑P **P 19 47 09.6 -0.3**
baz=74,SNR=131
N18A Larsen Ranch, 73.72 310 ⇑P **P 19 47 09.6 -0.4**
baz=74,SNR=53
S18A Hurst Farm, Bl 73.75 307 ⇑P **P 19 47 10.0 -0.2**
baz=74,SNR=67
BW06 Boulder Array 73.79 312 PFAKE 19 47 20.0 +10
BW06 LR LR
comp=Z,31µm,21.0s,MS6.6
PDAR Pinedale Array 73.79 312 P **P 19 47 09.5 -0.8**
comp=Z,34nm,0.8s,mb5.3,baz=104,slow=6.2,SNR=108
PDAR LR LR 20 15 53.5
comp=Z,25µm,19.4s,MS6.5,baz=119,slow=33
BJO Bjornoya 73.80 13 *e*P **P 19 47 10.8 +1.1**
BJO *e*S S 19 56 41.0 +0.3
BJO AMS AMS 20 10 56.3
comp=Z,13µm,20.5s,MS6.2
SOC Sochi 73.82 47*c i*P **P 19 47 09.6 -0.8**
SOC *e* 19 47 26.1
SOC *e* 19 49 51.1
SOC *e*PPP 19 51 34.0
SOC *e*S S 19 56 39.9 -2.1
SOC *e* 19 57 17.4
SOC *e*SS SS 20 01 30.1 +4.3
SOC pmax pmax
comp=Z,185nm,1.0s,mb6.0
SOC pmax pmax
comp=Z,3µm,6.5s
SOC MLR MLR
comp=Z,17µm,20.0s,MS6.3
O18A Roosevelt 73.93 310 ⇓P **P 19 47 10.9 -0.3**
baz=74,SNR=66
Q18A Rafter H Ranch 73.95 308 ⇑P **P 19 47 11.2 0.0**
baz=74,SNR=44
Z17A San Carlos Hig 73.96 302 ⇑P **P 19 47 11.5 0.0**
baz=74,SNR=7.7
G18A Lazy EL Ranch, 74.03 315 ⇓P **P 19 47 11.4 -0.2**
baz=74,SNR=21
BINT Bingol 74.04 52 *e*P **P 19 47 16.1 +4.2**
M18A Lyman 74.06 311 ⇑P **P 19 47 11.9 0.0**
baz=74,SNR=31
I18A Diamond G Ranc 74.06 313 ⇑P **P 19 47 11.7 -0.1**
baz=74,SNR=115
P18A Preston Nutter 74.07 309 ⇓P **P 19 47 11.8 -0.2**
baz=74,SNR=88
KOPT Kop Dagi 74.12 51 ⇑*i*P **P 19 47 13.6 +1.3**
MOS Moscow 74.13 34 *e*P **P 19 47 08.8 -3.2**
MOS *i* 19 47 22.4
MOS *e* 19 49 52.9
MOS *e*PPP 19 51 36.6
MOS *e*S S 19 56 41.8 -3.2
MOS *e* 19 57 11.6
MOS pmax pmax
comp=Z,158nm,0.7s,mb6.0
MOS MLR MLR
comp=E,15µm,16.0s
MOS MLR MLR
comp=Z,17µm,16.0s,MS6.4
K18A Toltan Ranch, 74.13 312 ⇑P **P 19 47 12.3 +0.1**
baz=74,SNR=56
GCMT Greycliff 74.15 315 *e*P **P 19 47 12.5 +0.2**
comp=Z,465nm,2.1s,mb6.0
117A Oracle 74.16 302 ⇓P **P 19 47 12.8 +0.1**
baz=74,SNR=16
F18A Big Timber 74.19 316 ⇓P **P 19 47 12.9 +0.3**
baz=74,SNR=71
TUC Tucson 74.19 301 *e*P **P 19 47 13.3 +0.4**
TUC pmax pmax
comp=Z,264nm,1.4s,mb6.0
TUC MLR MLR
comp=Z,19µm,20.0s,MS6.4
TUC Tucson 74.19 301 *e*P **P 19 47 13.2 +0.4**
comp=Z,264nm,1.4s,mb6.0
TUC LR LR
comp=Z,19µm,20.0s,MS6.4
217A Green Valley 74.21 301 ⇓P **P 19 47 12.8 -0.2**
baz=74,SNR=33
W17A Winslow 74.21 304 ⇑P **P 19 47 13.6 +0.7**
baz=74,SNR=12
U17A Shonto 74.23 306 ⇑P **P 19 47 13.5 +0.5**
baz=74,SNR=23
SRU San Rafael 74.25 308 ⇑P **P 19 47 13.5 +0.4**
baz=74,SNR=38
SRU San Rafael 74.25 308 *e*P **P 19 47 13.6 +0.5**
SRU pmax pmax
comp=Z,380nm,1.5s,mb6.1
SRU San Rafael 74.25 308 *e*P **P 19 47 13.6 +0.6**
comp=Z,380nm,1.5s,mb6.1
X17A Forest Lakes 74.27 304 ⇓P **P 19 47 14.0 +0.8**
baz=74,SNR=29
Y17A Roosevelt 74.28 303 ⇑P **P 19 47 13.6 +0.3**
baz=74,SNR=42
V17A Tonalea, Kykot 74.30 305 ⇑P **P 19 47 14.0 +0.6**
baz=74,SNR=106
VSR Storozhevoye 74.32 39 *e*P **P 19 47 12.3 -0.9**
VSR *e**SP sP 19 47 27.2 +10
VSR *e* 19 50 04.1
VSR *i* PPP 19 51 52.6
VSR *e*S S 19 56 46.9 -0.5
VSR pmax pmax
comp=Z,130nm,0.8s,mb5.9
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,50nm,0.6s
VSR pmax pmax
comp=Z,1µm,6.7s
VSR pmax pmax
comp=N,650nm,9.0s
VSR pmax pmax
comp=E,1µm,7.3s
VSR smax
comp=E,5µm,14.1s
VSR smax
comp=Z,2µm,10.7s
VSR smax
comp=N,2µm,6.8s
R17A Hanksville Air 74.36 308 ⇑P **P 19 47 13.9 +0.2**
baz=74,SNR=35
T17A Navajo Res., N 74.36 306 ⇑P **P 19 47 14.8 +1.0**
baz=74,SNR=86
D18A Linhart Farms, 74.39 317 ⇓P **P 19 47 14.1 +0.5**
baz=74,SNR=19
S17A Black Ridge (B 74.39 307 ⇑P **P 19 47 14.6 +0.6**
baz=74,SNR=44
E18A Harlowton 74.40 316 ⇓P **P 19 47 13.9 +0.2**
baz=74,SNR=50
P17A Butcher Ranch, 74.44 309 ⇓P **P 19 47 14.6 +0.5**
baz=74,SNR=21
EGMT Eagleton 74.44 318 ⇓P **P 19 47 14.2 +0.2**
baz=74
O17A Robinson Place 74.48 310 ⇑P **P 19 47 15.0 +0.6**
baz=74,SNR=118
PZAR Pazar-Rize 74.50 49 *e*P **P 19 47 15.6 +1.1**
B18A Beardsley Farm 74.50 318 ⇑P **P 19 47 14.2 -0.1**
baz=75
HSP Hornsund 74.52 10 *e*P **P 19 47 15.2 +1.3**
LKWY Lake 74.55 314 *e*P **P 19 47 15.7 +1.0**
LKWY pmax pmax
comp=Z,431nm,1.6s,mb6.1
LKWY MLR MLR
comp=Z,37µm,21.0s,MS6.7
LKWY Lake 74.55 314 *e*P **P 19 47 15.7 +1.0**
comp=Z,431nm,1.6s,mb6.1
LKWY LR LR
comp=Z,37µm,21.0s,MS6.7
BEST Besiri 74.60 53 ⇑*i*P **P 19 47 16.5 +1.3**
A18A Metzger Ranch, 74.61 319 ⇓P **P 19 47 14.9 0.0**
baz=75,SNR=18
LOHW Long Hollow 74.62 313 *e*P **P 19 47 14.7 -0.4**
comp=Z,226nm,1.3s,mb5.9
I17A Pilgrim Ck. 74.62 313 ⇓P **P 19 47 15.7 +0.6**
baz=75,SNR=26
H17A Grant Village 74.66 314 ⇓P **P 19 47 16.2 +0.9**
baz=75,SNR=11
J17A Brown Place, J 74.68 313 ⇓P **P 19 47 15.8 +0.3**
baz=75,SNR=17
L17A Cokeville 74.70 312 ⇓P **P 19 47 15.7 0.0**
baz=75,SNR=8.9
SNOW Snow King Moun 74.72 313 *e*P **P 19 47 16.6 +0.9**
comp=Z,344nm,1.4s,mb6.1
Z16A Peralta Trail, 74.76 302 ⇓P **P 19 47 16.1 0.0**
baz=75,SNR=5.4
216A Three Points, 74.76 301 ⇓P **P 19 47 16.1 0.0**
baz=75,SNR=11
YNR Norris Junctio 74.76 314 *e*P **P 19 47 17.2 +1.3**
comp=Z,228nm,1.5s,mb5.9
WUAZ Wupatki 74.77 305 ⇓P **P 19 47 17.0 +0.8**
baz=75,SNR=72
WUAZ Wupatki 74.77 305 *e*P **P 19 47 16.8 +0.7**
comp=Z,115nm,0.8s,mb5.9
WUAZ LR LR
comp=Z,38µm,22.0s,MS6.7
EZM Erzurum 74.78 51 *e*P **P 19 47 17.8 +1.7**
ERZM Erzurum 74.78 51 ⇑*i*P **P 19 47 17.8 +1.6**
K17A Gardner Place, 74.78 312 ⇓P **P 19 47 16.4 +0.3**
baz=75,SNR=14
BTMT Batman 74.79 53 *e*P **P 19 47 16.8 +0.6**
TMUT Trail Mountain 74.79 309 *e*P **P 19 47 16.3 +0.1**
comp=Z,70nm,0.4s,mb5.9
X16A Lo Mia Camp, P 74.79 304 ⇓P **P 19 47 16.8 +0.5**
baz=75,SNR=35
Y16A Circle Bar Ran 74.81 303 ⇓P **P 19 47 16.9 +0.5**
baz=75,SNR=19
F17A Fitzpatrick Pl 74.85 315 ⇑P **P 19 47 16.3 -0.1**
baz=75,SNR=33
YFT Old Faithful 74.85 314 *e*P **P 19 47 18.2 +1.7**
comp=Z,509nm,1.5s,mb6.2
G17A Pierce Place, 74.86 315 ⇓P **P 19 47 16.9 +0.5**
baz=75,SNR=8.7
TPAW Teton Pass 74.86 313 *e*P **P 19 47 15.9 -0.6**
comp=Z,471nm,1.6s,mb6.2
IMW Indian Meadow 74.88 313 *e*P **P 19 47 16.7 +0.1**
comp=Z,485nm,1.5s,mb6.2
W16A Flagstaff 74.89 304 ⇓P **P 19 47 17.4 +0.6**
baz=75,SNR=37
DAU Daniels Canyon 74.89 310 *e*P **P 19 47 17.1 +0.4**
DAU pmax pmax
comp=Z,645nm,1.6s,mb6.3
DAU Daniels Canyon 74.89 310 *e*P **P 19 47 17.1 +0.4**
comp=Z,645nm,1.6s,mb6.3
AHID Auburn Hatcher 74.92 312 *e*P **P 19 47 17.1 +0.2**
comp=Z,348nm,1.5s,mb6.1
AHID LR LR
comp=Z,40µm,20.0s,MS6.7
T16A Glen Canyon Da 74.92 306 ⇑P **P 19 47 17.8 +0.7**
baz=75
R16A Teasdale 74.96 308 ⇓P **P 19 47 17.6 +0.4**
baz=75,SNR=36
YMR Madison River 74.96 314 *e*P **P 19 47 17.8 +0.7**
comp=Z,232nm,1.0s,mb6.1
116A Eloy 74.98 302 ⇓P **P 19 47 17.8 +0.4**
baz=75,SNR=22
APA Apatity 75.03 22 ⇑*i*P **P 19 47 17.0 0.0**
APA *i* S S 19 56 53.0 -1.8
APA *i* PS 19 57 25.0
APA *i* SS SS 20 01 45.0 +1.7
APA pmax pmax
comp=Z,4µm,7.0s
APA pmax pmax
comp=Z,140nm,1.0s,mb5.8
E17A Martinsdale 75.04 316 ⇓P **P 19 47 17.4 -0.1**
baz=75,SNR=111
DCID1 Drake Creek 75.04 313 *e*P **P 19 47 17.7 +0.1**
comp=Z,432nm,1.5s,mb6.2
JLU Jordanelle 75.05 310 *e*P **P 19 47 18.4 +0.8**
comp=Z,2µm,2.3s,mb6.6
N16A Rees Ranch, Co 75.05 310 ⇑P **P 19 47 17.4 -0.3**
baz=75,SNR=6
C17A Wharram Farm, 75.08 317 ⇓P **P 19 47 17.5 -0.2**
baz=75,SNR=30
L16A Fish Haven 75.11 311 ⇑P **P 19 47 17.8 -0.2**
baz=75,SNR=40
RRI2 Red Ridge 75.12 313 *e*P **P 19 47 17.8 -0.2**
comp=Z,457nm,1.6s,mb6.2
DDEM Demirkent 75.12 50 ⇑*i*P **P 19 47 18.7 +0.6**
PMSA Palmer Station 75.15 192 PFAKE 19 47 30.0 +12
PMSA LR LR
comp=Z,11µm,19.0s,MS6.2
MPU Maple Canyon 75.16 309 *e*P **P 19 47 19.1 +0.8**
comp=Z,594nm,2.1s,mb6.2
P16A Fountain Green 75.16 309 ⇓P **P 19 47 18.2 -0.1**
baz=75,SNR=6.7
H16A Russell Place, 75.17 314 ⇑P **P 19 47 18.6 +0.4**
baz=75,SNR=13
KBS Kingsbay 75.17 8 ⇑*i*P **P 19 47 18.7 +1.1**
KBS *e*S S 19 56 59.0 +3.0
KBS AMS AMS 20 14 19.2
comp=Z,11µm,18.2s,MS6.2
KBS Kingsbay 75.17 8 *e*P **P 19 47 18.8 +1.2**
KBS pmax pmax
comp=Z,59nm,0.8s,mb5.6
KBS MLR MLR
comp=Z,12µm,19.0s,MS6.2
KBS Kingsbay 75.17 8 *e*P **P 19 47 18.8 +1.2**
comp=Z,59nm,0.8s,mb5.6
KBS LR LR
comp=Z,12µm,19.0s,MS6.2
A17A Triple J Farms 75.17 319 ⇓P **P 19 47 17.9 -0.3**
baz=75,SNR=18
B17A L&G Farms, Che 75.17 318 ⇓P **P 19 47 17.9 -0.3**
baz=75,SNR=33
HWUT Hardware Ranch 75.19 311 *e*P **P 19 47 17.9 -0.5**
comp=Z,132nm,0.9s,mb5.9
HWUT LR LR
comp=Z,30µm,20.0s,MS6.6
M16A Huntsville 75.22 311 ⇑P **P 19 47 18.3 -0.4**
baz=75,SNR=21
RES Resolute Bay 75.26 346 *e*P **P 19 47 17.7 -0.5**
RES pmax pmax
comp=Z,384nm,1.5s,mb6.1
RES Resolute Bay 75.26 346 *e*P **P 19 47 17.7 -0.5**
comp=Z,384nm,1.5s,mb6.1
ARTV Artvin 75.28 49 ⇑*i*P **P 19 47 19.6 +0.6**
I16A Newdale 75.28 313 ⇑P **P 19 47 19.0 +0.1**
baz=75,SNR=29
K16A Soda Springs 75.28 312 ⇓P **P 19 47 19.1 +0.2**
baz=75,SNR=13
QLMT Earthquake Lak 75.30 314 *e*P **P 19 47 20.7 +1.7**
comp=Z,368nm,2.0s,mb6.0
Z15A Gila River Ind 75.37 302 ⇓P **P 19 47 19.8 +0.1**
baz=75
SPB4 Spitsbergen Ar 75.37 10 *e*P **P 19 47 19.6 +0.7**
SPITS Spitsbergen Ar 75.38 10 P **P 19 47 19.3 +0.5**
comp=Z,17nm,0.8s,mb5.1,baz=172,slow=6.7,SNR=11
SPITS LR LR 20 13 17.6
comp=Z,15µm,20.6s,MS6.3,baz=235,slow=30
SPITS Spitsbergen Ar 75.38 10 P **P 19 47 19.3 +0.5**
SPITS pmax pmax
comp=Z,17nm,0.8s
SPITS MLR MLR
comp=Z,15µm,20.6s
115A Sonoran Desert 75.42 302 ⇓P **P 19 47 20.1 +0.1**
baz=76,SNR=11
V15A Kaibab Nationa 75.43 305 ⇓P **P 19 47 20.0 +0.1**
baz=76,SNR=73
W15A Williams 75.49 304 ⇓P **P 19 47 20.9 +0.5**
baz=76,SNR=12
NLU North Lily Min 75.49 309 *e*P **P 19 47 20.7 +0.4**
comp=Z,272nm,1.4s,mb6.0
BOZ Bozeman (W) 75.50 315 ⇓P **P 19 47 19.3 -0.9**
baz=76
BOZ Bozeman (W) 75.50 315 *e*P **P 19 47 19.4 -0.8**
BOZ pmax pmax
comp=Z,37nm,1.0s,mb5.3
BOZ MLR MLR
comp=Z,16µm,20.0s,MS6.3
BOZ Bozeman (W) 75.50 315 *e*P **P 19 47 19.4 -0.7**
comp=Z,38nm,1.0s,mb5.3
BOZ LR LR
comp=Z,16µm,20.0s,MS6.3
F16A Kennard Place, 75.51 315 ⇑P **P 19 47 19.7 -0.5**
baz=76,SNR=9.1
MSU Marysvale 75.51 308 *e*P **P 19 47 21.2 +0.8**
MSU pmax pmax
comp=Z,117nm,1.1s,mb5.7
MSU Marysvale 75.51 308 *e*P **P 19 47 21.2 +0.8**
comp=Z,117nm,1.1s,mb5.7
Y15A Casa Rosa Ranc 75.52 303 ⇓P **P 19 47 20.5 0.0**
baz=76,SNR=19
U15A North Rim 75.54 306 ⇓P **P 19 47 20.5 0.0**
baz=76,SNR=57
MVU Marysvale 75.54 308 PFAKE 19 47 30.0 +9.5
MVU LR LR
comp=Z,28µm,21.0s,MS6.5
NOQ North Oquirrh 75.56 310 *e*P **P 19 47 21.1 +0.5**
comp=Z,474nm,1.6s,mb6.2
D16A Dana Ranch, Ca 75.56 317 ⇓P **P 19 47 20.1 -0.3**
baz=76,SNR=53
R15A Junction 75.58 307 ⇑P **P 19 47 20.9 +0.1**
baz=76,SNR=30
LVZ Lovozero 75.58 21 P **P 19 47 20.7 +0.5**
comp=Z,994nm,1.2s,mb6.6,SNR=12
LVZ Lovozero 75.58 21*d i*P **P 19 47 20.8 +0.6**
LVZ pmax pmax
comp=Z,217nm,1.7s,mb5.8
LVZ MLR MLR
comp=Z,7µm,16.0s,MS6.0
LVZ Lovozero 75.58 21 PFAKE 19 47 30.0 +10
LVZ LR LR
comp=Z,32µm,21.0s,MS6.6
G16A Moss Hill, Enn 75.60 315 ⇓P **P 19 47 20.8 +0.1**
baz=76,SNR=26
E16A East Helena 75.61 316 ⇓P **P 19 47 20.6 -0.1**
baz=76,SNR=56
T15A Red Dirt Ranch 75.63 306 ⇓P **P 19 47 21.0 0.0**
baz=76,SNR=27
S15A Panguitch 75.63 307 ⇑P **P 19 47 21.4 +0.4**
baz=76,SNR=9.3
P15A Leamington 75.63 309 ⇑P **P 19 47 21.1 +0.1**
baz=76,SNR=24
Q15A Fillmore 75.69 308 ⇓P **P 19 47 21.2 -0.2**
baz=76,SNR=9.3
HRY Holter Researc 75.73 316 *e*P **P 19 47 21.2 -0.2**
comp=Z,136nm,1.0s,mb5.8
C16A Fuhringer Ranc 75.76 317 ⇓P **P 19 47 21.4 -0.2**
baz=76,SNR=38
B16A M & M Farms, S 75.78 318 ⇑P **P 19 47 21.9 +0.2**

baz=76,SNR=8.3
O15A The Old Anders 75.81 310 ⇑P P 19 47 21.6 -0.4
baz=76,SNR=6.7
L15A Malad City 75.82 311 ⇑P P 19 47 21.7 -0.4
baz=76,SNR=67
SPUT South Promonto 75.84 311 eP P 19 47 22.5 +0.3
comp=Z,666nm,1.9s,mb6.2
VRHR Novokhopersk 75.84 39 eP P 19 47 21.5 -0.5
VRHR e*SP sP 19 47 33.9 +7.4
VRHR i PPP 19 52 04.8
VRHR eS S 19 57 03.9 -0.4
VRHR pmax pmax
comp=Z,60nm,0.6s,mb5.7
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,110nm,1.4s
VRHR smax
comp=E,4μm,13.9s
VRHR smax
comp=Z,2μm,12.5s
VRHR smax
comp=N,2μm,10.7s
VRHR MLR MLR
comp=Z,15μm,18.0s,MS6.3
VRHR MLR MLR
comp=N,7μm,17.0s,MS6.3
VRHR MLR MLR
comp=E,10μm,17.0s,MS6.3
M15A Larsen Ranch, 75.84 311 ⇓P P 19 47 22.4 +0.2
baz=76,SNR=32
N15A Stansbury Isla 75.87 310 ⇓P P 19 47 22.4 0.0
baz=76,SNR=17
214A Organ Pipe Nat 75.91 301 ⇓P P 19 47 22.7 -0.1
baz=76,SNR=15
K15A Arbon 75.97 312 ⇓P P 19 47 22.9 0.0
baz=76,SNR=16
114A Black Gap (USA 75.97 302 ⇑P P 19 47 23.1 0.0
baz=76,SNR=16
KIV Kislovodsk 75.99 47 P P 19 47 23.1 +0.1
comp=E,751nm,1.3s,mb6.5,SNR=23
KIV Kislovodsk 75.99 47c iP P 19 47 22.5 -0.5
KIV i 19 47 29.3
KIV i S S 19 57 05.8 -0.4
KIV pmax pmax
comp=Z,120nm,1.6s,mb5.6
KIV MLR MLR
comp=Z,9μm,17.0s,MS6.2
KIV Kislovodsk 75.99 47 eP P 19 47 23.5 +0.5
comp=Z,272nm,1.4s,mb6.0
KIV LR LR
comp=Z,14μm,21.0s,MS6.2
KIV Kislovodsk 75.99 47 P P 19 47 23.5 +0.5
SNR=60
KIV P 19 47 23.5
SNR=60
X14A Yava 75.99 304 ⇓P P 19 47 23.5 +0.3
baz=76,SNR=41
I15A Monteview 76.00 313 ⇑P P 19 47 23.6 +0.6
baz=76,SNR=27
ALE Alert 76.01 356 P P 19 47 21.0 -1.5
comp=Z,830nm,0.8s,mb6.7,SNR=31
AGRB Hanur-Agry 76.02 51 eP P 19 47 24.3 +1.0
MSL Mosul 76.02 54 eP P 19 47 30.0 +6.7
MSL eS S 19 57 22.0 +15
Z14A Wintersburg 76.03 302 ⇓P P 19 47 23.4 0.0
baz=76,SNR=15
DUG Dugway 76.07 309 ⇑P P 19 47 23.5 -0.1
baz=76,SNR=54
DUG Dugway 76.07 309 eP P 19 47 24.1 +0.6
DUG pmax pmax
comp=Z,888nm,2.0s,mb6.3
DUG MLR MLR
comp=Z,33μm,19.0s,MS6.7
DUG Dugway 76.07 309 eP P 19 47 24.1 +0.6
comp=Z,888nm,2.0s,mb6.3
DUG LR LR
comp=Z,33μm,19.0s,MS6.7
G15A Dillon 76.08 315 ⇑P P 19 47 23.8 +0.3
baz=76,SNR=32
Y14A Wickenburg 76.08 303 ⇑P P 19 47 24.0 +0.3
baz=76,SNR=23
LRM Limekiln Ridge 76.09 315 eP P 19 47 24.1 +0.6
comp=Z,882nm,1.4s,mb6.5
HVU Hansel Valley 76.10 311 eP P 19 47 23.6 -0.1
HVU pmax pmax
comp=Z,213nm,1.6s,mb5.8
HVU Hansel Valley 76.10 311 eP P 19 47 23.6 -0.1
comp=Z,213nm,1.6s,mb5.8
KARS Kars 76.12 50 eP P 19 47 23.1 -0.7
F15A Butte 76.12 315 ⇓P P 19 47 24.2 +0.5
baz=76,SNR=45
H15A Lima 76.15 314 ⇑P P 19 47 24.7 +0.8
baz=76,SNR=17
W14A Seligman 76.16 304 ⇓P P 19 47 24.8 +0.7
baz=76,SNR=34
DLMT Dillon 76.16 315 eP P 19 47 24.0 0.0
comp=Z,394nm,1.6s,mb6.1
V14A Boquillas Ranc 76.18 305 ⇓P P 19 47 25.1 +0.8
baz=76,SNR=25
T14A Hurricane 76.19 306 ⇓P P 19 47 24.9 +0.6
baz=76,SNR=12
D15A Lincoln 76.22 317 ⇓P P 19 47 23.9 -0.3
baz=76,SNR=38
P14A Drum Mountains 76.24 309 ⇓P P 19 47 24.7 +0.2
baz=76,SNR=82
U14A Mt Trumbull 76.25 306 ⇑P P 19 47 25.0 +0.3
baz=76,SNR=51
BGU Big Grassy Mou 76.26 310 eP P 19 47 24.8 +0.2
comp=Z,401nm,1.6s,mb6.1
E15A Deer Lodge 76.26 316 ⇑P P 19 47 25.0 +0.5
baz=76,SNR=16
S14A Cedar City 76.27 307 ⇑P P 19 47 24.8 +0.1
baz=76,SNR=16
VANB Van 76.30 52 eP P 19 47 22.4 -2.4
GOF Gofitskoye 76.30 46 ⇓iP P 19 47 31.3 +6.6
GOF eS S 19 57 23.7 +14
GOF pmax pmax
comp=Z,230nm,1.2s,mb6.0
MCMT McKenzie Canyo 76.31 314 eP P 19 47 25.6 +0.8
comp=Z,38nm,1.4s,mb5.1
DIGO Kars 76.34 50 ⇑iP P 19 47 25.9 +0.8
B15A Bradely Ranch, 76.34 318 ⇓P P 19 47 25.0 +0.1
baz=76,SNR=48
N14A Grayback Hills 76.38 310 ⇓P P 19 47 25.2 0.0
baz=76,SNR=16
Q14A Sevier Lake (B 76.39 308 ⇑P P 19 47 25.5 +0.1
baz=76,SNR=83
CCUT Cedar City 76.42 307 eP P 19 47 26.6 +1.0
comp=Z,137nm,1.1s,mb5.8
K14A Jones Ranch, D 76.44 312 ⇓P P 19 47 25.6 0.0
baz=76,SNR=25
CUKT Cukurca 76.44 54 eP P 19 47 26.2 +0.6
L14A Malta 76.46 311 ⇑P P 19 47 25.3 -0.4
baz=76,SNR=49
ONI Oni 76.48 48 P P 19 47 25.3 -0.5
A15A Johnson Ranch, 76.50 319 ⇑P P 19 47 25.8 0.0
baz=77,SNR=43
M14A Sheep Mountain 76.52 311 ⇑P P 19 47 25.7 -0.4
baz=77,SNR=11
HAKT HAKKARI 76.52 53 ⇑iP P 19 47 26.8 +0.6
ATD Arta Tunnel 76.60 80 P P 19 47 27.6 +0.6
comp=Z,20nm,0.9s,mb5.0,baz=283,slow=4.9,SNR=18
Z13A Yuma Proving G 76.62 302 ⇑P P 19 47 26.4 -0.4
baz=77,SNR=26
H14A Leadore 76.67 314 ⇓P P 19 47 27.0 +0.2
baz=77,SNR=10.0
I14A Mackay 76.70 313 ⇓P P 19 47 27.1 0.0
baz=77,SNR=23
CHMT Chamberlain Mo 76.71 316 eP P 19 47 27.2 +0.2
comp=Z,280nm,1.9s,mb5.9
113A Mohawk Valley, 76.72 302 ⇑P P 19 47 27.1 -0.3
baz=77,SNR=10
CLDR Caldiran 76.72 52 eP P 19 47 27.8 +0.6
F14A Wisdom 76.73 315 ⇑P P 19 47 27.5 +0.4
baz=77,SNR=13
G14A Jackson 76.77 315 ⇑P P 19 47 27.6 +0.2
baz=77
Y13A Salome 76.77 303 ⇓P P 19 47 28.0 +0.4
baz=77,SNR=8.7
X13A Yucca 76.77 304 ⇓P P 19 47 28.1 +0.5
baz=77,SNR=31
W13A Hualapai Mount 76.81 304 ⇑P P 19 47 28.3 +0.4
baz=77,SNR=22
ZEI Tsey 76.81 48 eP P 19 47 28.2 +0.5
ZEI eS S 19 57 16.7 +1.3
ZEI pmax pmax
comp=Z,204nm,1.7s,mb5.8
ZEI pmax pmax
comp=E,77nm,1.0s
ZEI pmax pmax
comp=N,64nm,0.8s
S13A Holt Ranch, En 76.82 307 ⇓P P 19 47 28.8 +1.0
baz=77,SNR=53
T13A Saint George 76.85 306 ⇑P P 19 47 28.6 +0.6
baz=77,SNR=58
U13A Pakoon Wash 76.89 306 ⇓P P 19 47 28.9 +0.7
baz=77,SNR=23
D14A Greenough 76.90 317 ⇓P P 19 47 28.4 +0.4
baz=77,SNR=33
SLMT Seeley Lake 76.90 317 eP P 19 47 29.1 +1.0
comp=N,255nm,1.5s,mb5.9
V13A Grand Canyon W 76.90 305 ⇓P P 19 47 29.0 +0.7
baz=77,SNR=7.9
R13A O'Grain Ranch, 76.91 307 ⇓P P 19 47 28.8 +0.5
baz=77,SNR=44
A14A Double T Ranch 76.96 318 ⇑P P 19 47 28.6 +0.2
baz=77,SNR=28
O13A Hicks Ranch, I 76.96 309 ⇑P P 19 47 28.5 -0.1
baz=77,SNR=8.6
Q13A Wheeler Ranch, 76.97 308 ⇓P P 19 47 28.5 -0.1
baz=77,SNR=62
P13A Bates Ranch, G 76.97 309 ⇓P P 19 47 28.3 -0.3
baz=77,SNR=30
L13A Double Diamond 76.99 311 ⇑P P 19 47 28.9 +0.2
baz=77,SNR=18
PDMCI Parker Dam,Lak 77.02 303 ⇓P P 19 47 29.2 +0.1
baz=77
BHD Baghdad 77.05 58 eP P 19 47 28.0 -1.2
BHD eS S 19 57 20.0 +1.8
K13A Stover Farm, H 77.11 312 ⇓P P 19 47 29.8 +0.5
baz=77,SNR=9.7
M13A Montello 77.13 311 ⇓P P 19 47 29.6 +0.1
baz=77,SNR=74
M13A Montello 77.13 311 eP P 19 47 29.1 -0.4
comp=N,116nm,1.1s,mb5.7
N13A Wendover, West 77.15 310 eP P 19 47 29.7 +0.1
comp=N,789nm,1.7s,mb6.4
I13A Wildhorse Cree 77.18 313 ⇑P P 19 47 29.9 +0.2
baz=77,SNR=55
MSO Missoula 77.18 316 eP P 19 47 29.5 -0.1
comp=N,72nm,1.5s,mb5.4
MSO LR LR
comp=Z,20μm,20.0s,MS6.4
J13A Cove Ranch, Pi 77.20 313 ⇓P P 19 47 30.0 +0.1
baz=77,SNR=65
EDM Edmonton 77.23 323 eP P 19 47 28.7 -1.1
SWMT Swartz Lake 77.26 317 eP P 19 47 29.2 -0.8
comp=Z,54nm,0.9s,mb5.5
YBMT Yellow Bay 77.28 317 eP P 19 47 30.3 +0.1
comp=Z,110nm,1.4s,mb5.6
WALA Waterton Lakes 77.28 319 ⇑eP P 19 47 29.8 -0.4
H13A Challis 77.30 314 ⇑P P 19 47 30.6 +0.2
baz=77,SNR=27
G13A Cobalt 77.31 314 ⇓P P 19 47 31.2 +0.8
baz=77,SNR=65
E13A Victor 77.33 316 ⇓P P 19 47 31.0 +0.5
baz=77,SNR=28
Y12C Blythe 77.34 303 ⇑P P 19 47 31.2 +0.3
baz=77,SNR=22
U12A Valley of Fire 77.35 306 ⇓P P 19 47 31.2 +0.3
baz=77,SNR=25
HLID Hailey 77.38 313 ⇓P P 19 47 30.6 -0.2
baz=77
HLID Hailey 77.38 313 eP P 19 47 30.8 0.0
comp=Z,223nm,1.5s,mb5.9
F13A Darby 77.40 315 ⇑P P 19 47 31.4 +0.5
baz=78,SNR=32
112A Yuma 77.41 302 ⇑P P 19 47 30.8 -0.4
baz=77
TBLG Delisi 77.41 49 eP P 19 47 31.5 +0.5
TBLG Delisi 77.41 49 P P 19 47 31.6 +0.5
NEE2 Needles Airpor 77.42 304 ⇓P P 19 47 31.4 +0.1
baz=78
R12A Pony Springs, 77.42 308 ⇑P P 19 47 31.8 +0.6
baz=78,SNR=47
JTMT Jette 77.46 317 eP P 19 47 31.2 0.0
comp=Z,46nm,1.0s,mb5.4
T12A Moapa 77.49 306 ⇓P P 19 47 31.3 -0.3
baz=78
D13A Huson 77.55 317 ⇓P P 19 47 31.7 0.0
baz=78,SNR=21
O12A Currie 77.55 310 ⇑P P 19 47 32.0 +0.2
baz=78,SNR=40
Q12A Willow Creek R 77.60 308 ⇑P P 19 47 32.4 +0.2
baz=78,SNR=37
S12A Delamar Landin 77.60 307 ⇓P P 19 47 33.1 +0.8
baz=78,SNR=35
V12A Nelson 77.60 305 ⇑P P 19 47 32.6 +0.3
baz=78,SNR=11
GLA Glamis 77.61 302 ⇑P P 19 47 33.3 +0.9
baz=78,SNR=7.1
GLA Glamis 77.61 302 eP P 19 47 33.1 +0.7
GLA pmax pmax
comp=Z,1μm,2.3s,mb6.4
GLA Glamis 77.61 302 eP P 19 47 33.0 +0.7
comp=Z,1μm,2.3s,mb6.4
A13A Flathead Natio 77.61 318 ⇓P P 19 47 32.1 0.0
baz=78,SNR=21
B13A Whitefish 77.61 318 ⇓P P 19 47 32.2 +0.2
baz=78,SNR=28
W12A Cal Nev Ari 77.62 304 ⇑P P 19 47 32.3 -0.1
baz=78
C13A Hot Springs 77.65 317 ⇑P P 19 47 31.9 -0.4
baz=78,SNR=19
P12A McGill 77.66 309 ⇓P P 19 47 32.7 +0.1
baz=78,SNR=53
M12A Wells 77.70 311 ⇓P P 19 47 32.6 -0.1
baz=78,SNR=27
K12A Draper Farm, C 77.71 312 ⇓P P 19 47 33.0 +0.2
baz=78,SNR=44
H12A Diamond D Ranc 77.73 314 ⇓P P 19 47 33.1 +0.3
baz=78,SNR=75
N12A Clover Valley, 77.78 310 ⇑P P 19 47 33.5 +0.3
baz=78,SNR=72
N12A Clover Valley, 77.78 310 eP P 19 47 33.4 +0.2
comp=Z,239nm,1.3s,mb6.0
L12A House Creek Ra 77.79 311 ⇑P P 19 47 33.7 +0.6
baz=78,SNR=31
BSMT Bassoo Peak 77.80 317 eP P 19 47 33.2 +0.1
comp=Z,136nm,1.6s,mb5.6
LDFC Landfair 77.82 304 eP P 19 47 35.0 +1.5
comp=Z,142nm,1.0s,mb5.8
IRM Iron Mountain 77.86 303 ⇑P P 19 47 34.3 +0.6
baz=78,SNR=16
J12A Stokes Ranch, 77.87 313 ⇑P P 19 47 34.0 +0.4
baz=78,SNR=52
DGRG David-gareji 77.88 49 P P 19 47 33.9 +0.2
I12A Atlanta 77.91 313 ⇓P P 19 47 34.1 +0.3
baz=78,SNR=24
ELK Elko 77.93 310 eP P 19 47 34.7 +0.7
ELK pmax pmax
comp=Z,233nm,1.5s
ELK MLR MLR
comp=Z,31μm,20.0s
ELK Elko 77.93 310 eP P 19 47 34.7 +0.7
comp=Z,233nm,1.5s,mb5.9
ELK LR LR
comp=Z,31μm,20.0s,MS6.6
U11A Corn Creek 78.03 306 ⇓P P 19 47 35.8 +1.2
baz=78,SNR=6.5
ISHB Shabestar 78.04 53 eP P 19 47 34.3 -0.4
F12A Elk City 78.05 315 ⇓P P 19 47 34.8 +0.3
baz=78,SNR=36
V11A Goodsprings 78.07 305 ⇓P P 19 47 35.8 +0.9
baz=78,SNR=17
G12A Big Creek, Yel 78.08 314 ⇑P P 19 47 34.2 -0.6
baz=78
IMRD Marand 78.11 52 eP P 19 47 34.6 -0.4
BC3 Big Chuckw Mtn 78.12 303 ⇓P P 19 47 35.0 -0.2
baz=78,SNR=9.9
D12A Red Ives Fores 78.16 316 ⇑P P 19 47 34.5 -0.6
baz=78
R11A Troy Canyon, C 78.19 308 ⇓P P 19 47 35.4 0.0
baz=78,SNR=71
Q11A Duckwater 78.24 308 ⇓P P 19 47 35.9 +0.1
baz=78,SNR=55
O11A Cowboy Ranch, 78.25 309 ⇓P P 19 47 35.8 0.0
baz=78,SNR=77
C12B Naegeli Ranch, 78.26 317 ⇑P P 19 47 34.8 -0.9
baz=78
GMRC Granite Mounta 78.27 304 ⇓P P 19 47 36.1 +0.1
baz=78,SNR=29
N11A Elko Archery C 78.31 310 ⇑P P 19 47 35.8 -0.3
baz=78
S11A Rachel 78.32 307 ⇑P P 19 47 36.8 +0.6
baz=78,SNR=21
P11A Circle Ranch, 78.32 309 ⇓P P 19 47 36.8 +0.6
baz=78,SNR=12
IAZR Azarshahr 78.33 53 eP P 19 47 36.0 -0.3
L11A Cat Creek Ranc 78.33 311 ⇑P P 19 47 36.7 +0.4
baz=78,SNR=76
M11A Holland Ranch, 78.36 311 ⇑P P 19 47 36.8 +0.4
baz=78,SNR=48
B12A Libby 78.36 318 ⇓P P 19 47 36.9 +0.6
baz=78,SNR=6.2
MFID Camas Ranch 78.41 313 ⇓P P 19 47 36.4 -0.1
baz=78,SNR=18
SWSC Sam W. Stewart 78.42 302 ⇑P P 19 47 36.7 -0.2
baz=78,SNR=5.9
A12A Yaak River Ran 78.42 318 ⇑P P 19 47 36.1 -0.5
baz=78
ITBZ Tabriz 78.46 53 eP P 19 47 36.4 -0.6
TUQ Turquoise Moun 78.48 305 ⇑P P 19 47 36.9 -0.3
baz=78,SNR=23
I11A Placerville 78.51 313 ⇑P P 19 47 36.5 -0.6
baz=78
K11A Parker Ranch, 78.55 312 ⇓P P 19 47 37.3 0.0
baz=79,SNR=53
H11A Donnelly 78.56 314 ⇑P P 19 47 37.2 -0.2
baz=79,SNR=37
BELC Belle Mtn. 78.57 303 ⇑P P 19 47 38.3 +0.6
baz=79,SNR=12
F11A Grangeville 78.68 315 ⇑P P 19 47 38.0 -0.1
baz=79,SNR=17
DVTC Desert V Tower 78.69 302 ⇓P P 19 47 38.3 -0.1
baz=79,SNR=5.1
IDHR Dehrash 78.69 56 eP P 19 47 39.3 +0.9
E11A Bogner Ranch, 78.73 316 ⇑P P 19 47 38.2 -0.1
baz=79,SNR=38
R10A Warm Springs 78.75 308 ⇓P P 19 47 38.9 +0.3
baz=79,SNR=20
G11A Walters Elk Ra 78.75 315 ⇓P P 19 47 38.2 -0.2
baz=79,SNR=6.4
YKA Yellowknife Ar 78.76 332 P P 19 47 36.9 -1.2
comp=Z,43nm,0.9s,mb5.4,baz=94,slow=5.5,SNR=232
YKA LR LR 20 19 25.7
comp=Z,3μm,18.1s,MS5.7,baz=125,slow=34
YKA Yellowknife Ar 78.76 332 P P 19 47 36.9 -1.2
YKA pmax pmax
comp=Z,43nm,0.9s
YKA MLR MLR
comp=Z,3μm,18.1s
YKA Yellowknife Ar 78.76 332 P P 19 47 36.9 -1.2
YKA LR LR 20 19 25.7
SHOC Shoshone 78.76 305 ⇓P P 19 47 38.6 -0.1
baz=79,SNR=9.0
U10A Ash Meadows, A 78.80 306 ⇓P P 19 47 39.5 +0.6
baz=79,SNR=6.5
Q10A Clear Creek Ra 78.82 308 ⇓P P 19 47 38.9 0.0
baz=79,SNR=19
HEC Hector,Ludlow 78.83 304 ⇑P P 19 47 38.8 -0.3
baz=79,SNR=26
D11A Klaveano Farm, 78.83 316 ⇓P P 19 47 38.5 -0.3
baz=79,SNR=14
IGHG Ghaleghazi 78.85 57 eP P 19 47 40.2 +1.0
L10A Juniper Basin 78.87 311 ⇓P P 19 47 39.1 -0.1
baz=79,SNR=27
P10A Eureka 78.87 309 ⇓P P 19 47 39.3 +0.1
baz=79,SNR=40
B11A Sandpoint 78.88 318 ⇑P P 19 47 39.5 +0.4
baz=79,SNR=5.6
O10A Cortez Mining, 78.89 310 ⇓P P 19 47 39.2 -0.1
baz=79,SNR=8.2
A11A Hall Mountain, 78.89 318 ⇓P P 19 47 39.0 -0.1
baz=79,SNR=20
N10A Dunphy 78.90 310 ⇑P P 19 47 39.6 +0.3
baz=79
M10A I.L. Ranch, Tu 78.92 311 ⇓P P 19 47 39.6 +0.2
baz=79,SNR=22
MONP Monument Peak 78.95 302 ⇑P P 19 47 40.2 +0.4
baz=79,SNR=10
PFO Pinyon Flat Ob 78.96 303 P P 19 47 41.0 +1.2
comp=Z,269nm,2.1s,mb5.8,SNR=5.6
PFO Pinyon Flat Ob 78.96 303 ⇓P P 19 47 40.5 +0.7
baz=79,SNR=5.6
PFO Pinyon Flat Ob 78.96 303 eP P 19 47 40.8 +1.0
PFO pmax pmax
comp=Z,639nm,2.1s,mb6.2
PFO MLR MLR
comp=Z,10μm,20.0s,MS6.2
PFO Pinyon Flat Ob 78.96 303 eP P 19 47 40.8 +0.9
comp=Z,402nm,2.1s,mb6.0
PFO LR LR
comp=Z,25μm,20.0s,MS6.5
S10A Tonopah Range, 78.98 307 ⇑P P 19 47 40.1 +0.2
baz=79,SNR=93
IBST Bostanabad 79.05 53 eP P 19 47 39.9 -0.4
H10A Noah's Angus R 79.08 314 ⇓P P 19 47 40.1 -0.1
baz=79,SNR=21
J10A Berg Farm, Mel 79.09 313 ⇑P P 19 47 39.9 -0.4
baz=79
I10A Payette 79.12 313 ⇑P P 19 47 40.3 -0.1
baz=79
IHRS Heris 79.16 52 eP P 19 47 40.7 -0.1
ILIN Lien 79.16 56 eP P 19 47 41.5 +0.6
K10A MacKenzie Ranc 79.16 312 ⇓P P 19 47 40.6 -0.2
baz=79
BAR Barrett 79.17 302 eP P 19 47 41.5 +0.5
comp=Z,39nm,1.0s,mb5.3
GSC Goldstone 79.20 304 ⇓P P 19 47 41.2 +0.1
baz=79,SNR=18
GSC Goldstone 79.20 304 eP P 19 47 42.1 +1.0
GSC pmax pmax
comp=Z,64nm,1.0s,mb5.5
GSC Goldstone 79.20 304 eP P 19 47 42.1 +1.0
comp=Z,64nm,1.0s,mb5.5
FURC Furnace Creek, 79.22 306 ⇓P P 19 47 41.4 +0.1
baz=79,SNR=15
BBRC Big Bear Sol-O 79.33 303 ⇑P P 19 47 41.7 -0.2
baz=79
G10A Bishop Farm, J 79.35 315 ⇑P P 19 47 41.5 -0.2
baz=79,SNR=19
E10A Myers Farm, Un 79.35 316 ⇑P P 19 47 41.6 -0.1
baz=79,SNR=7.9
RRX Edison Barstow 79.37 304 ⇑P P 19 47 41.3 -0.8
baz=79
NEW Newport 79.38 318 eP P 19 47 40.8 -1.0
NEW pmax pmax
comp=Z,198nm,1.8s
NEW MLR MLR
comp=Z,29μm,22.0s
NEW Newport 79.38 318 eP P 19 47 40.8 -1.1
comp=Z,198nm,1.8s,mb5.7
NEW LR LR
comp=Z,29μm,22.0s,MS6.6
F10A Beach Ranch, E 79.43 315 ⇓P P 19 47 41.2 -1.0
baz=80,SNR=6.3
BMN Battle Mountai 79.44 310 eP P 19 47 42.7 +0.4
BMN pmax pmax
comp=Z,575nm,1.8s,mb6.2
BMN MLR MLR
comp=Z,24μm,19.0s,MS6.5
BMN Battle Mountai 79.44 310 eP P 19 47 42.7 +0.4
comp=Z,575nm,1.8s,mb6.2
BMN LR LR
comp=Z,24μm,19.0s,MS6.5
B10A Chitwood Farm, 79.45 318 ⇓P P 19 47 41.9 -0.3
baz=80
MAK Makhachkala 79.47 48c iP P 19 47 42.2 -0.2
MAK ePPP 19 52 27.1
MAK i S S 19 57 44.4 +0.5
MAK e 19 58 05.8
MAK pmax pmax
comp=E,71nm,0.8s
MAK pmax pmax
comp=Z,482nm,1.7s,mb6.2
MAK pmax pmax
comp=N,161nm,1.1s
MAK pmax pmax
comp=Z,6μm,8.3s
MAK smax
comp=E,6μm,9.3s
MAK smax
comp=N,5μm,10.4s
D10A Wagner Farm, O 79.47 316 ⇓P P 19 47 42.0 -0.3
baz=80
TPH Tonopah 79.48 307 PFAKE 19 47 50.0 +7.4
TPH LR LR
comp=Z,24μm,19.0s,MS6.5
C10A Spilker Farm, 79.50 317 ⇑P P 19 47 41.6 -0.9
baz=80

109C Camp Elliot, M 79.52 302 ⇓P **P 19 47 42.2 -0.7**
baz=80
MURC Murrieta 79.58 303 ⇑P **P 19 47 43.3 0.0**
baz=80,SNR=6.9
NAY Al-Naaiem 79.60 62 *e*P **P 19 47 43.5 +0.1**
NAY AMb AMB 19 47 55.8
comp=Z,157nm,1.2s,mb5.8
GRAC Grapevine Rang 79.62 306 ⇑P **P 19 47 43.4 0.0**
baz=80,SNR=22
IKOM Komasi 79.64 57 *e*P **P 19 47 43.8 +0.3**
MIB Mutribah 79.66 61 *e*P **P 19 47 43.3 -0.5**
MIB AMb AMB 19 47 51.5
comp=Z,370nm,1.3s,mb6.2
RPN Rapa Nui 79.67 241 LR LR 20 21 34.0
comp=Z,15μm,18.7s,MS6.4,baz=244,slow=35
RPN Rapa Nui 79.67 241 PFAKE 19 47 50.0 +6.2
RPN LR LR
comp=Z,15μm,19.0s,MS6.4
A10A Northport 79.68 318 ⇓P **P 19 47 43.2 -0.3**
baz=80
MPMC Manual Prospec 79.74 305 ⇓P **P 19 47 43.7 -0.4**
baz=80,SNR=25
I09A Lost Marbles R 79.80 313 ⇑P **P 19 47 44.3 +0.1**
baz=80,SNR=16
J09A Fry Pan Ranch, 79.81 313 ⇑P **P 19 47 44.1 -0.2**
baz=80,SNR=29
G09A Cove 79.82 315 ⇑P **P 19 47 44.4 +0.1**
baz=80,SNR=33
DAC Darwin (Calif) 79.82 305 PFAKE 19 47 50.0 +5.5
DAC LR LR
comp=Z,25μm,20.0s,MS6.5
RDF Al-Radifah 79.89 62 *e*P **P 19 47 45.0 +0.1**
RDF AMb AMB 19 47 48.8
comp=Z,181nm,1.1s,mb5.9
VNA1 Neumayer--Stat 79.89 171 *e*P **P 19 47 44.0 0.0**
VNA1 *e* 19 47 49.6
VNA1 *e* 19 47 51.1
VNA1 *e* 19 47 53.6
F09A S2 Ranch, Elgi 79.91 315 ⇓P **P 19 47 44.5 -0.2**
baz=80
LRMC Laurel Mountai 79.92 305 ⇓P **P 19 47 43.7 -1.3**
baz=80
BFSC Mount Baldy St 79.94 303 ⇓P **P 19 47 45.2 +0.1**
baz=80,SNR=8.6
KBD Kabd 80.00 62 *e*P **P 19 47 45.3 -0.3**
KBD AMb AMB 19 47 53.7
comp=Z,234nm,1.2s,mb6.0
UMR Umm Al-Rimmam 80.00 61 *e*P **P 19 47 45.4 -0.2**
UMR AMb AMB 19 47 49.4
comp=Z,362nm,1.2s,mb6.2
B09A Rice 80.07 318 ⇑P **P 19 47 45.1 -0.4**
baz=80,SNR=9.4
C09A Chrisman Ranch 80.15 317 ⇑P **P 19 47 44.8 -1.2**
baz=80
LNOR Lincton Mounta 80.17 315 *e*P **P 19 47 46.3 +0.2**
LNOR pmax pmax
comp=Z,123nm,2.0s,mb5.5
LNOR Lincton Mounta 80.17 315 *e*P **P 19 47 46.3 +0.2**
comp=Z,244nm,2.0s,mb5.8
D09A Jones Farm, Ri 80.18 316 ⇓P **P 19 47 44.8 -1.3**
baz=80
EDW2 Edwards Air Fo 80.19 304 ⇑P **P 19 47 46.2 -0.3**
baz=80,SNR=23
QRN Al-Qurain 80.22 62 *e*P **P 19 47 46.6 -0.2**
QRN AMb AMB 19 47 49.9
comp=Z,236nm,0.9s,mb6.1
VNA2 Neumayer--Watz 80.27 171 *e*P **P 19 47 45.6 -0.5**
VNA2 *e* pP 19 47 48.6 -0.8
VNA2 *e* pP 19 47 50.1 +0.7
VNA2 *e* 19 47 52.3
VNA2 *e* 20 56 34.5
MWC Mount Wilson 80.27 303 *e*P **P 19 47 46.2 -0.8**
MWC pmax pmax
comp=Z,194nm,1.8s,mb5.7
MWC Mount Wilson 80.27 303 *e*P **P 19 47 46.2 -0.8**
comp=Z,194nm,1.8s,mb5.7
TIN Tinemaha 80.30 306 ⇑P **P 19 47 47.3 +0.3**
baz=80
NVAR Mina Array Bea 80.32 308 P **P 19 47 47.8 +0.6**
comp=Z,25nm,0.9s,mb5.1,baz=92,slow=5.8,SNR=81
J08A Circle Bar Ran 80.33 313 ⇑P **P 19 47 47.2 +0.1**
baz=80,SNR=16
OD2 Odessa Site #2 80.45 317 P **P 19 47 47.1 -0.5**
H08A Prairie City 80.46 314 ⇓P **P 19 47 47.8 +0.1**
baz=80,SNR=24
WVOR Wild Horse Val 80.47 312 *e*P **P 19 47 48.5 +0.6**
WVOR pmax pmax
comp=Z,304nm,1.7s,mb6.0
WVOR MLR MLR
comp=Z,25μm,20.0s,MS6.6
WVOR Wild Horse Val 80.47 312 *e*P **P 19 47 48.5 +0.6**
comp=Z,304nm,1.7s,mb6.0
WVOR LR LR
comp=Z,25μm,20.0s,MS6.6
FMP Fort Macarthur 80.49 303 ⇓P **P 19 47 47.3 -0.8**
baz=80
DECC Green Verdugo 80.49 303 ⇑P **P 19 47 47.7 -0.4**
baz=80
F08A Pendleton 80.51 315 ⇓P **P 19 47 47.1 -0.9**
baz=81
ISA Isabella 80.55 305 ⇓P **P 19 47 48.4 0.0**
baz=81,SNR=38
ISA Isabella 80.55 305 *e*P **P 19 47 49.6 +1.1**
ISA pmax pmax
comp=Z,1μm,2.1s,mb6.5
ISA Isabella 80.55 305 *e*P **P 19 47 49.6 +1.1**
comp=Z,1μm,2.1s,mb6.5
CIS Catalina Islan 80.59 303 ⇓P **P 19 47 48.4 -0.3**
baz=81
D08A Wollman Farm, 80.60 316 ⇑P **P 19 47 48.3 -0.1**
baz=81
G08A Pilot Rock 80.65 315 ⇑P **P 19 47 47.6 -1.1**
baz=81,SNR=7.8
E08A Dider Farm, El 80.70 316 ⇑P **P 19 47 48.6 -0.4**
baz=81
SCI San Clemente I 80.73 302 ⇓P **P 19 47 49.3 -0.1**
baz=81
OSI Osito Adit 80.80 304 ⇓P **P 19 47 48.9 -0.9**
baz=81
B08A Colville Reser 80.86 318 ⇑P **P 19 47 48.6 -1.2**
baz=81,SNR=6.9
WIW Wooded Island 80.86 316 P **P 19 47 50.8 +0.9**
HAWA Hanford 81.03 316 *e*P **P 19 47 50.7 0.0**
comp=Z,231nm,1.8s,mb5.8
HAWA LR LR
comp=Z,22μm,19.0s,MS6.5
VES Vestal, Richgr 81.04 305 ⇑P **P 19 47 50.4 -0.7**
baz=81
I07A Izee 81.06 313 ⇓P **P 19 47 50.1 -0.9**
baz=81
RSW Rattlesnake Hi 81.07 316 *e*P **P 19 47 52.0 +1.0**
comp=Z,342nm,1.9s,mb6.0
RCTC Rector, Farmer 81.15 306 ⇓P **P 19 47 51.1 -0.5**
baz=81
E07A Sunnyside 81.25 316 ⇓P **P 19 47 51.4 -0.5**
baz=81
WCN Washoe City 81.42 309 ⇓P **P 19 47 52.5 -0.5**
baz=82,SNR=7.8
A07A Ashnola River, 81.54 318 ⇑P **P 19 47 53.3 -0.1**
baz=82,SNR=37
ETW Entiat 81.54 317 P **P 19 47 53.6 +0.2**
IRAZ Razeghan 81.57 55 *e*P **P 19 47 54.5 +0.6**
BSC Santa Cruz Isl 81.59 303 ⇑P **P 19 47 53.3 -0.7**
baz=82
PKM Peak Mountain 81.69 304 ⇑P **P 19 47 54.2 -0.4**
baz=82,SNR=10
MOD Modoc 81.73 311 *e*P **P 19 47 55.5 +0.9**
comp=Z,186nm,1.4s,mb5.8
MOD LR LR
comp=Z,16μm,20.0s,MS6.4
SMMC Simmler 81.81 305 ⇓P **P 19 47 55.3 +0.1**
baz=82,SNR=9.3
G06A Carlson Farm, 81.83 315 ⇑P **P 19 47 55.1 +0.1**
baz=82,SNR=11
VIPM Ingram Point 81.85 314 P **P 19 47 56.9 +1.7**
CMB Columbia Colle 81.98 307 *e*P **P 19 47 56.5 +0.5**
CMB pmax pmax
comp=Z,684nm,2.3s,mb6.2
CMB MLR MLR
comp=Z,17μm,22.0s,MS6.4
CMB Columbia Colle 81.98 307 *e*P **P 19 47 56.5 +0.5**
comp=Z,684nm,2.3s,mb6.2
CMB LR LR
comp=Z,17μm,22.0s,MS6.4
IR5 Iran Long-Peri 82.12 55 *e*P **P 19 47 56.2 -0.6**
K05A Summer Lake 82.13 312 ⇑P **P 19 47 56.1 -0.5**
baz=82,SNR=15

B06A Marblemount 82.29 318 ⇑P **P 19 47 56.7 -0.6**
baz=82
RPW Rockport 82.31 318 P **P 19 47 56.9 -0.6**
IR3 Iran Long-Peri 82.46 55 *e*P **P 19 47 58.8 +0.2**
IPIR Pirpir 82.54 58 *e*P **P 19 48 00.6 +1.6**
HOOD Mount Hood Mea 82.55 315 *e*P **P 19 47 59.6 +0.8**
comp=Z,541nm,1.8s,mb6.3
LON Longmire 82.59 316 *e*P **P 19 47 59.0 0.0**
LON pmax pmax
comp=Z,79nm,1.5s,mb5.5
LON Longmire 82.59 316 *e*P **P 19 47 59.0 0.0**
comp=Z,79nm,1.5s,mb5.5
JCW Jim Creek 82.60 318 P **P 19 47 57.9 -1.1**
A05A Maple Falls 82.66 318 ⇑P **P 19 47 59.1 -0.2**
baz=83
D05A Enumclaw 82.69 317 ⇓P **P 19 47 58.8 -0.7**
baz=83
CMW Cultus Mountai 82.71 318 P **P 19 47 59.0 -0.5**
SAO San Andreas Ge 82.90 306 PFAKE 19 48 10.0 +9.2
SAO LR LR
comp=Z,24μm,22.0s,MS6.5
H04A Detroit Lake 82.96 314 ⇓P **P 19 48 00.8 -0.1**
baz=83,SNR=8.1
F04A Amboy 83.05 315 ⇓P **P 19 48 01.1 -0.3**
baz=83
IKLH Kolahrood 83.07 57 *e*P **P 19 48 02.5 +0.7**
IVRN Varamin 83.07 56 *e*P **P 19 48 01.4 -0.3**
G04A Mulino 83.14 315 ⇓P **P 19 48 01.5 -0.4**
baz=83,SNR=5.1
IDMV Damavand 83.28 55 *e*P **P 19 48 04.0 +1.2**
IPRN Peran 83.47 54 *e*P **P 19 48 03.9 +0.1**
WDC Whiskeytown Da 83.49 310 *e*P **P 19 48 02.1 -1.7**
WDC pmax pmax
comp=Z,55nm,1.4s,mb5.4
WDC MLR MLR
comp=Z,21μm,20.0s,MS6.5
WDC Whiskeytown Da 83.49 310 *e*P **P 19 48 02.1 -1.6**
comp=Z,55nm,1.4s,mb5.4
WDC LR LR
comp=Z,21μm,20.0s,MS6.5
IGAR Gharneh 83.53 58 *e*P **P 19 48 05.5 +1.4**
YBH Yreka Blue Hor 83.53 311 *e*P **P 19 48 03.0 -1.0**
YBH pmax pmax
comp=Z,64nm,1.5s
YBH MLR MLR
comp=Z,19μm,20.0s
YBH Yreka Blue Hor 83.53 311 *e*P **P 19 48 03.0 -1.0**
comp=Z,64nm,1.5s,mb5.5
YBH LR LR
comp=Z,19μm,20.0s,MS6.5
ISFB Sefidab 83.54 56 *e*P **P 19 48 04.7 +0.5**
PGC Sidney 83.58 318 *e*P **P 19 48 04.5 +0.4**
comp=Z,23nm,1.6s,mb5.0
HUMO Hull Mountain 83.65 312 *e*P **P 19 48 02.7 -1.8**
comp=Z,99nm,1.7s,mb5.7
HUMO LR LR
comp=Z,27μm,20.0s,MS6.6
IZEF Zefreh 83.73 58 *e*P **P 19 48 04.7 -0.5**
COR Corvallis 83.76 314 P **P 19 48 05.9 +0.8**
COR pmax pmax
comp=Z,861nm,2.0s,mb6.5
COR MLR MLR
comp=Z,15μm,19.0s,MS6.4
COR Corvallis 83.76 314 P **P 19 48 05.9 +0.9**
comp=Z,861nm,2.0s,mb6.5
COR LR LR
comp=Z,15μm,19.0s,MS6.4
E03A Lebam 83.80 316 ⇑P **P 19 48 05.2 -0.1**
baz=84,SNR=10
F03A Seaside 83.84 315 ⇑P **P 19 48 05.2 -0.2**
baz=84
IALA Alasht 83.87 54 *e*P **P 19 48 05.2 -0.6**
MCCM Marconi Confer 83.93 308 PFAKE 19 48 20.0 +14
MCCM LR LR
comp=Z,18μm,22.0s,MS6.4
MAIT Maitri 83.94 166 *e*P **P 19 48 06.3 +1.0**
MAIT *e*E 19 48 11.6
MAIT *e*S S 19 58 28.2 -0.7
NLWA Neilton Lookou 83.95 317 ⇑P **P 19 48 06.5 +0.6**
baz=84,SNR=8.1
NLWA Neilton Lookou 83.95 317 *e*P **P 19 48 07.2 +1.2**
comp=Z,321nm,1.5s,mb6.2
NLWA LR LR
comp=Z,32μm,19.0s,MS6.7
NVL N'lazarevskaya 83.96 166 ⇑*i*P **P 19 48 05.5 +0.1**
NVL *e* pP 19 48 10.3 +1.5
NVL *i*S S 19 58 26.8 -2.3
NVL *e*SS SS 20 04 06.4 +9.1
NVL pmax pmax
comp=Z,95nm,1.0s,mb5.9
NVL MLR MLR
comp=Z,6μm,22.0s,MS5.9
HOPS Hopland 84.02 308 PFAKE 19 48 20.0 +13
HOPS LR LR
comp=Z,30μm,21.0s,MS6.7
ILAS Lasjerd 84.05 55 *e*P **P 19 48 07.5 +0.8**
ISHM Shahmirzad 84.28 55 *e*P **P 19 48 08.6 +0.7**
IMOK Mouk 84.39 62 *e*P **P 19 48 09.5 +0.9**
IKIA Kiasar 84.56 54 *e*P **P 19 48 11.0 +1.7**
SOKR Solikamsk 84.57 31*c i*P **P 19 48 09.3 +0.5**
SOKR 19 51 25.8
SOKR S S 19 58 37.7 +2.0
SOKR pmax pmax
comp=Z,80nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,26μm,20.0s,MS6.6
IPAR Pars 84.61 61 *e*P **P 19 48 10.9 +1.2**
IGLO Ghaloghah 84.65 54 *e*P **P 19 48 11.1 +1.3**
ISRV Sarvestan 84.71 61 *e*P **P 19 48 11.0 +0.8**
IANJ Anjilo 84.81 55 *e*P **P 19 48 12.2 +1.6**
ISAD Sadrabad 84.96 59 *e*P **P 19 48 12.9 +1.5**
ABPO Ambohimpanom 84.98 110 *e*P **P 19 48 14.2 +2.4**
ABPO pmax pmax
comp=Z,130nm,1.4s,mb5.9
ABPO MLR MLR
comp=Z,6μm,20.0s,MS6.0
ABPO Ambohimpanom 84.98 110 *e*P **P 19 48 14.2 +2.5**
comp=Z,130nm,1.4s,mb5.9
ABPO LR LR
comp=Z,6μm,20.0s,MS6.0
IMEH Mehriz 85.80 59 *e*P **P 19 48 16.5 +0.9**
ARU Arti 85.84 34 P **P 19 48 16.3 +1.0**
comp=Z,631nm,1.0s,mb6.8,SNR=26
ARU Arti 85.84 34*c i*P **P 19 48 15.2 -0.1**
ARU *e* 19 51 35.9
ARU S SKSac 19 58 37.8 -3.2
ARU PS 19 59 42.1
ARU SSS 20 07 48.8
ARU pmax pmax
comp=Z,112nm,1.7s,mb5.8
ARU pmax pmax
comp=Z,2μm,9.4s
ARU smax
comp=N,3μm,13.8s
ARU Arti 85.84 34 *e*P **P 19 48 15.2 0.0**
comp=N,136nm,1.1s,mb6.1
ARU LR LR
comp=Z,20μm,20.0s,MS6.5
ABTO Aybut 86.12 73 P **P 19 48 18.7 +1.2**
SNR=30
AKTK Aktyubinsk 86.24 40 P **P 19 48 17.4 0.0**
AKTK LR LR 20 28 29.6
AKTO Aktyubinsk 86.24 40 P **P 19 48 17.4 0.0**
comp=Z,15nm,0.9s,mb5.2,baz=283,slow=5.3,SNR=38
AKTO LR LR 20 28 29.6
comp=Z,14μm,20.0s,MS6.4,baz=104,slow=37
AKTO Aktyubinsk 86.24 40 P **P 19 48 17.4 0.0**
AKTO pmax pmax
comp=Z,15nm,0.9s,mb5.2
AKTO MLR MLR
comp=Z,14μm,20.0s,MS6.4
INK Inuvik 86.40 338 *e*P **P 19 48 17.4 -0.4**
INK pmax pmax
comp=Z,269nm,1.4s
INK Inuvik 86.40 338 *e*P **P 19 48 17.4 -0.4**
comp=Z,269nm,1.4s,mb6.3
DLBC Dease Lake 86.47 328 *e*P **P 19 48 19.4 +1.0**
WHFO Wadi Hawf 86.50 72 P **P 19 48 20.2 +0.8**
SNR=23
IBAF Bafgh 86.59 59 *e*P **P 19 48 20.3 +0.8**
SVE Sverdlovsk 86.92 33⇑*e*P **P 19 48 21.7 +1.1**
SVE *e*S SKSac 19 58 46.0 -1.7
SVE *e*SSS 20 08 18.1
SVE pmax pmax
comp=Z,107nm,1.2s,mb6.0

SVE MLR MLR
comp=Z,14μm,18.0s,MS6.4
RBK Rabkut 86.96 73 P **P 19 48 22.9 +1.3**
SNR=12
ASUD Al Ashush, Dub 87.18 66 P **P 19 48 21.4 -1.1**
SNR=14
FAQ Al Faqa, Dubai 87.40 66 P **P 19 48 24.3 +0.7**
SNR=20
NAZ Nazwa, Dubai 87.43 65 P **P 19 48 24.6 +0.8**
SNR=46
ISHV Shirvan 87.62 53 *e*P **P 19 48 26.2 +1.8**
ABKAR Akbulak array 87.63 41 *e*P **P 19 48 23.8 -0.4**
comp=Z,116nm,1.4s,mb5.9
ASHO Ashiyiah 87.83 66 P **P 19 48 26.1 +0.4**
SNR=52
HATD Hatta, Dubai 87.88 65 P **P 19 48 26.4 +0.5**
SNR=72
VAN Vannovskaya 87.89 52⇓*i*P **P 19 48 25.0 -0.7**
BANOM Banah 87.89 64 P **P 19 48 26.5 +0.5**
SNR=15
ABKT Ailbek 87.90 52 P **P 19 48 26.9 +1.2**
comp=Z,133nm,1.1s,mb6.1,SNR=8.7
ISFR Sfrayin 87.92 53 *e*P **P 19 48 27.7 +1.8**
IKRD Kardeh 88.36 53 *e*P **P 19 48 33.5 +5.5**
IEMG Emamgholi 88.39 53 *e*P **P 19 48 29.6 +1.5**
ARQ Araqi 88.42 67 P **P 19 48 29.1 +0.6**
SNR=21
IAKL Akhelmad 88.58 53 *e*P **P 19 48 29.9 +0.9**
IPAY Payeh 88.79 54 *e*P **P 19 48 30.8 +0.8**
SKAG Skagway 88.99 330 *e*P **P 19 48 32.0 +1.6**
comp=Z,14nm,0.8s,mb5.3
ITEG Tejag 89.09 57 *e*P **P 19 48 32.7 +1.2**
BSY Bisya 89.11 67 P **P 19 48 31.4 -0.4**
SNR=8.0
IMOG Moghan 89.12 54 *e*P **P 19 48 32.2 +0.6**
ISRO Mashad 89.19 54 *e*P **P 19 48 32.0 +0.1**
IKOO Kooshah 89.38 58 *e*P **P 19 48 35.3 +2.5**
IMYA Miami 89.69 54 *e*P **P 19 48 36.0 +1.8**
DAWY Dawson 89.71 335 *e*P **P 19 48 33.3 -0.4**
SMDO Samad 89.85 67 P **P 19 48 36.9 +1.6**
SNR=9.4
IDAH Dahanechah 90.05 57 *e*P **P 19 48 37.4 +1.4**
EGAK Eagle 90.23 336 *e*P **P 19 48 36.1 -0.1**
comp=Z,27nm,1.1s,mb5.5
EGAK LR LR
comp=Z,34μm,19.0s,MS6.8
PNL Peninsula 90.94 331 *e*P **P 19 48 39.7 +0.1**
comp=Z,3μm,0.8s
MSEY Mahe Island 90.96 95 PFAKE 19 48 50.0 +9.4
MSEY LR LR
comp=Z,12μm,20.0s,MS6.3
SYO Syowa Base 91.32 160⇑*e*P **P 19 48 40.5 -0.5**
SYO Syowa Base 91.32 160⇑*e*pP pP 19 48 43.2 -1.2
PAX Paxson 92.64 335 *e*P **P 19 48 47.9 +0.6**
PAX pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
PAX Paxson 92.64 335 *e*P **P 19 48 47.9 +0.6**
comp=Z,7.9nm,0.8s,mb5.2
COLD Coldfoot 92.74 339 *e*P **P 19 48 46.8 -0.9**
comp=Z,69nm,1.6s,mb5.8
COLA College 92.87 337 *e*P **P 19 48 48.0 -0.4**
COLA pmax pmax
comp=Z,79nm,1.4s,mb6.0
COLA MLR MLR
comp=Z,31μm,19.0s,MS6.8
COLA College 92.87 337 *e*P **P 19 48 48.0 -0.4**
comp=Z,79nm,1.4s,mb6.0
COLA LR LR
comp=Z,31μm,19.0s,MS6.8
BMRM Bremner River 92.99 333 *e*P **P 19 48 48.6 -0.4**
comp=Z,852nm,0.9s,mb7.2
BRVK Borovoye 93.17 36 *e*P **P 19 48 50.4 +0.4**
BRVK pmax pmax
comp=Z,53nm,1.4s,mb5.8
BRVK MLR MLR
comp=Z,21μm,22.0s,MS6.5
BRVK Borovoye 93.17 36 *e*P **P 19 48 50.4 +0.4**
comp=Z,53nm,1.4s,mb5.8
BRVK LR LR
comp=Z,21μm,22.0s,MS6.5
BRVK Borovoye 93.17 36 P **P 19 48 50.5 +0.5**
SNR=18
BRVK P 19 48 50.5
SNR=18
RER Riviere de l'E 93.21 111 PFAKE 19 49 00.0 +9.2
RER LR LR
comp=Z,8μm,20.0s,MS6.2
BVAR Borovoye Array 93.24 36 P **P 19 48 50.8 +0.5**
comp=Z,6.5nm,0.9s,mb5.1,baz=264,slow=4.5,SNR=27
BVAR PKKPbc PKKPbc 20 05 59.7 -0.4
comp=Z,1.9nm,0.8s,baz=90,slow=5.0,SNR=4.0
BVAR LR LR 20 27 56.0
comp=Z,19μm,21.2s,MS6.5,baz=290,slow=34
BVAR Borovoye Array 93.24 36 P **P 19 48 50.8 +0.5**
BVAR pmax pmax
comp=Z,7.0nm,0.9s
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR MLR MLR
comp=Z,19μm,21.2s
BVAR Borovoye Array 93.24 36 P **P 19 48 50.8 +0.5**
BVAR PKKPbc PKKPbc 20 05 59.7 -0.4
BVAR LR LR 20 27 56.0
DIV Divide 93.46 333 P **P 19 48 49.7 -1.5**
comp=Z,25nm,1.2s,mb5.5
BPAW Bear Paw Mtn. 94.43 337 *e*P **P 19 48 55.0 -0.5**
comp=Z,2μm,0.6s
BPAW *e*PP PP 19 52 43.1 +0.5
KTH Kantishna Hill 94.65 336 P **P 19 48 55.4 -1.2**
comp=Z,2μm,0.6s
PPLA Purkeypile 95.47 336 P **P 19 48 59.5 -0.8**
comp=Z,176nm,1.6s,mb6.2
QUE Quetta 96.46 59 *e*P **P 19 48 56.0 -10**
QUE *e*S SKSac 19 59 54.0 +11
KBL Kabul 97.20 54 *e*P **P 19 49 09.2 +0.3**
KBL pmax pmax
comp=Z,17nm,1.4s,mb5.3
KBL Kabul 97.20 54 *e*P **P 19 49 09.2 +0.3**
comp=Z,17nm,1.4s,mb5.3
QSPA South Pole Qui 97.38 180 PFAKE 19 49 20.0 +11
QSPA LR LR
comp=Z,5μm,20.0s,MS6.0
EKS2 Erkin-Say 98.53 45 PFAKE 19 49 20.0 +5.4
EKS2 LR LR
comp=Z,14μm,20.0s,MS6.5
AML Almayashu 98.63 45 *e*P **P 19 49 15.4 +0.3**
comp=Z,13nm,1.0s,mb5.4
AML LR LR
comp=Z,14μm,20.0s,MS6.5
KURK Kurchatov 98.82 36 P **P 19 49 15.7 -0.1**
comp=Z,5.2nm,0.8s,mb5.1,baz=288,slow=5.2,SNR=8.8
KURK PKKPbc PKKPbc 20 05 43.2 -1.7
comp=Z,1.1nm,1.1s,baz=110,slow=2.8,SNR=4.5
KURK LR LR 20 34 58.6
comp=Z,14μm,19.3s,MS6.5,baz=310,slow=36
KURK Kurchatov 98.82 36 P **P 19 49 15.7 0.0**
KURK pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
KURK pmax pmax
comp=Z,1.0nm,1.1s
KURK MLR MLR
comp=Z,14μm,19.3s,MS6.5
KURK Kurchatov 98.82 36 P **P 19 49 15.7 -0.1**
KURK PKKPbc PKKPbc 20 05 43.2 -1.7
KURK LR LR 20 34 58.6
FRU Bishkek 99.06 45 *e*P **P 19 49 19.0 +2.0**
FRU pmax pmax
comp=Z,50nm,2.2s,mb5.7
FRU MLR MLR
comp=Z,10μm,22.0s,MS6.3
UCH Uchtor 99.18 45 *e*P **P 19 49 18.3 +0.7**
UCH LR LR
comp=Z,11μm,19.0s,MS6.4
TKM2 Tokmak 2 99.71 44 *e*P Pdif 19 49 20.3 +0.7
TKM2 pmax pmax
comp=Z,46nm,1.7s,mb5.6
TKM2 MLR MLR
comp=Z,13μm,22.0s,MS6.4
TKM2 Tokmak 2 99.71 44 *e*Pdif Pdif 19 49 20.3 +0.7
comp=Z,46nm,1.7s
TKM2 LR LR
comp=Z,13μm,22.0s,MS6.4
MAW Mawson 99.72 157 LR LR 20 26 17.1
comp=Z,11μm,21.3s,MS6.3,baz=267,slow=30
MAW Mawson 99.72 157 PFAKE 19 49 30.0 +10
MAW LR LR

comp=Z,19μm,22.0s,MS6.6
TIXI Tiksi 100.42 5 *e*P Pdif 19 49 21.2 -1.6
TIXI *e* 19 53 25.8
TIXI *e*SP SP 20 02 22.5 -4.1
TIXI *e*PS PS 20 02 29.4 +0.8
TIXI *e*SS SS 20 07 50.1 -2.6
TIXI *e*SSS 20 11 38.4
TIXI pmax pmax
comp=Z,25nm,2.3s
TIXI Tiksi 100.42 5 *e*P Pdif 19 49 22.0 -0.8
comp=Z,16nm,1.3s
TIXI LR LR
comp=Z,5μm,19.0s,MS6.1
AAA Alma-Ata 100.52 44 *e*P Pdif 19 49 28.2 +5.0
AAA pmax pmax
comp=Z,900nm,7.7s
AAA MLR MLR
comp=Z,13μm,22.0s,MS6.4
ZAA0 Zalesovo Array 100.83 32 *e*P Pdif 19 49 26.8 +2.2
ZALV Zalesovo Beam 100.83 32 P Pdif 19 49 25.9 +1.4
comp=Z,1.6nm,0.8s,baz=302,slow=7.2,SNR=4.4
ZALV PP PP 19 53 29.9 -2.0
comp=Z,7.2nm,1.0s,baz=302,slow=8.5,SNR=4.0
ZALV Zalesovo Beam 100.83 32 P Pdif 19 49 25.9 +1.3
ZALV 19 53 29.9
ZALV pmax pmax
comp=Z,2.0nm,0.8s
ZALV pmax pmax
comp=Z,7.0nm,1.0s
ZALV Zalesovo Beam 100.83 32 P Pdif 19 49 25.9 +1.3
ZALV PP PP 19 53 29.9 -2.0
KSH Kashi 101.11 47 P Pdif 19 49 28.1 +2.3
KSH pmax pmax
comp=Z,530nm,6.8s
RKT Rikitea 102.09 248 *e*SS SS 20 08 16.1 -3.3
comp=Z,6μm,27.2s
RKT *e*LQ 20 18 19.4
comp=Z,28μm,33.8s
RKT *e*LR LR 20 24 31.6
comp=Z,25μm,26.2s
MK31 Makanchi Array 102.64 39 *e*P Pdif 19 49 34.0 +1.4
MKAR Makanchi Array 102.64 39 P Pdif 19 49 33.8 +1.2
comp=Z,2.1nm,0.9s,baz=296,slow=3.9,SNR=6.9
MKAR PP PP 19 53 43.4 -2.4
comp=Z,2.5nm,0.7s,baz=316,slow=5.1,SNR=4.4
MKAR PKKP PKKPbc 20 05 40.1 +6.2
comp=Z,1.0nm,0.8s,baz=89,slow=5.3,SNR=4.7
MKAR Makanchi Array 102.64 39 P Pdif 19 49 33.8 +1.2
MKAR 19 53 43.4
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
BILL Bilibino 103.30 352 *e*P Pdif 19 49 35.2 -0.3
BILL *i* S SKSac 20 00 15.2 +0.1
BILL *e*SS SS 20 08 36.7 +4.2
BILL pmax pmax
comp=Z,6.0nm,1.7s
BILL Bilibino 103.30 352 PFAKE 19 49 50.0 +14
BILL LR LR
comp=Z,9μm,20.0s,MS6.3
PAF Port-aux-Franc 105.38 139 PFAKE 19 54 10.0 +11
PAF LR LR
comp=Z,9μm,20.0s,MS6.3
TAOE Nuku Hiva Isla 106.11 263 *e*PP PP 19 54 09.6 -3.3
comp=Z,214nm,27.7s
TAOE *e*Sdif Sdif 20 01 42.5 -4.0
comp=Z,1μm,26.9s
TAOE Nuku Hiva Isla 106.11 263 *e*PS PS 20 03 29.6 -1.5
comp=Z,2μm,23.6s
TAOE *e*SS SS 20 09 07.7 -7.2
comp=Z,8μm,27.5s
TAOE *e*LQ 20 19 57.8
comp=Z,22μm,29.0s
TAOE *e*LR LR 20 24 55.2
comp=Z,7μm,24.5s
TAOE Nuku Hiva Isla 106.11 263 *e*PP PP 19 54 09.6 -3.3
TAOE *e*Sdif Sdif 20 01 42.5 -4.0
TAOE *e*PS PS 20 03 29.6 -1.5
TAOE *e*SS SS 20 09 07.7 -7.2
TAOE *e*LQ 20 19 57.8
WMQ Urumqi 107.39 40 *e*Pdif Pdif 19 49 55.1 +1.4
WMQ PP PP 19 54 25.1 +4.1
WMQ S Sdif 20 01 55.5 -1.7
WMQ SS SS 20 09 32.5 +2.6
WMQ AMB AMB
comp=Z,2μm,10.0s
WMQ LR LR
comp=N,15μm,28.0s
WMQ LR LR
comp=E,19μm,22.0s
WMQ LR LR
comp=Z,20μm,24.0s,MS6.6
DGAR Diego Garcia 108.03 95 PFAKE 19 54 10.0 +5.3
DGAR LR LR
comp=Z,7μm,20.0s,MS6.2
SBA Scott Base 108.64 185 PFAKE 19 54 10.0 +5.9
SBA LR LR
comp=Z,5μm,19.0s,MS6.1
YAK Yakutsk 109.79 8 PFAKE 19 54 20.0 +13
YAK LR LR
comp=Z,9μm,22.0s,MS6.3
HYB Hyderabad 109.81 69 *i* PKP PP 19 54 42.5 +2.8
HYB *e*SKS SKSac 20 00 48.0 +2.2
HYB *e*PS PS 20 04 08.0 -0.7
HYB *e*SS SS 20 10 04.0 -0.5
TLY Talaya 111.30 26 *i* PKIKP PKiKP 19 54 03.2 -6.6
TLY *e*PPP 19 57 16.9
TLY *e*PS PS 20 04 20.7 -0.2
TLY *e*PPS 20 05 23.9
TLY *e*SS SS 20 10 15.1 -6.5
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY Talaya 111.30 26 PFAKE 19 54 20.0 +10
TLY LR LR
comp=Z,19μm,22.0s,MS6.6
ZAK Zakamensk 112.05 27 *e*PKIKP PKiKP 19 54 19.6 +8.4
ZAK pmax pmax
comp=Z,17nm,1.5s
PALK Pallekele 114.15 79 *i* PKIKP PKiKP 19 54 12.6 -3.7
CIT Chita 114.98 21 *e*PKIKP PKiKP 19 54 17.3 +0.5
SONM Songino Array 115.30 28 PKP PKPdf 19 54 17.8 +0.2
comp=Z,2.3nm,1.0s,baz=301,slow=2.1,SNR=5.9
SONM PP PP 19 55 14.4 -3.0
comp=Z,5.1nm,0.9s,baz=303,slow=9.4,SNR=6.4
SONM PKKPbc PKKPbc 20 04 51.2 -2.3
comp=Z,2.3nm,0.9s,baz=154,slow=5.3,SNR=6.9
SONM Songino Array 115.30 28 PKIKP PKPdf 19 54 17.8 +0.2
SONM 19 55 14.4
SONM 20 04 51.2
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM pmax pmax
comp=Z,5.0nm,0.9s
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 115.30 28 PKP PKPdf 19 54 17.8 +0.2
SONM PP PP 19 55 14.4 -3.0
SONM PKKPbc PKKPbc 20 04 51.2 -2.3
ULN Ulaanbaatar 115.58 27 *e*PKIKP PKPdf 19 54 17.6 -0.5
ULN MLR MLR
comp=Z,15μm,20.0s,MS6.6
PPT Papeete 115.68 254 *e*PP PP 19 55 15.4 -6.4
comp=Z,578nm,25.0s
PPT *e*Sdif Sdif 20 03 04.7 -1.6
comp=Z,3μm,27.8s
PPT Papeete 115.68 254 *e*PS PS 20 05 03.6 +0.6
comp=Z,2μm,25.0s
PPT *e*SS SS 20 11 16.6 -6.2
comp=Z,11μm,28.5s
PPT *e*LR LR 20 29 14.3
comp=Z,14μm,25.5s
POHA Pohakuloa 115.68 296 PFAKE 19 54 30.0 +11
POHA LR LR
comp=Z,6μm,20.0s,MS6.2
LSA Lhasa 116.42 52 *e*PKIKP PKPdf 19 54 20.2 -0.1
LSA MLR MLR
comp=Z,14μm,22.0s,MS6.5
CASY Casey 116.54 165 PFAKE 19 54 30.0 +11
CASY LR LR
comp=Z,9μm,19.0s,MS6.4
KIP Kipapa 117.31 299 PFAKE 19 54 30.0 +7.8
KIP LR LR
comp=Z,6μm,20.0s,MS6.2
GTA Gaotai 117.39 38 *e*PKP PKPdf 19 54 21.0 -0.8
GTA PP PP 19 55 34.3 +1.8
GTA PKS 19 57 56.1
GTA SKS SKSdf 20 01 33.1 -1.2
GTA SKKS SKKSac 20 02 27.0 -7.3
GTA AMB AMB
comp=Z,2μm,9.5s
GTA LR LR
comp=N,8μm,19.0s,MS6.5
GTA LR LR
comp=E,9μm,19.9s,MS6.5
GTA LR LR
comp=Z,12μm,22.6s,MS6.5
PET Petropavlovsk 118.76 351 *e*PKIKP PKPdf 19 54 20.6 -3.4
PET *e* 20 01 23.8
PET *e*PS PS 20 05 21.8 -7.0
PET *e*PPS 20 06 46.7
PET *e*SSS 20 16 19.2
PET pmax pmax
comp=Z,400nm,9.8s
PET MLR MLR
comp=Z,6μm,19.0s,MS6.3
PET MLR MLR
comp=Z,9μm,19.0s
PET Petropavlovsk 118.76 351 PFAKE 19 54 30.0 +6.0
PET LR LR
comp=Z,8μm,21.0s,MS6.3
PETK Petropavlovsk- 118.82 351 PKP PKPdf 19 54 24.0 -0.2
comp=Z,1.6nm,0.8s,baz=42,slow=3.3,SNR=3.3
PETK PP PP 19 55 43.1 +1.6
comp=Z,4.3nm,0.8s,baz=70,slow=13,SNR=5.1
PETK PKKPbc PKKPbc 20 04 40.8 -0.5
comp=Z,3.2nm,0.7s,baz=171,slow=5.4,SNR=4.6
PETK Petropavlovsk- 118.82 351 PKIKP PKPdf 19 54 24.0 -0.2
PETK 19 55 43.1
PETK pmax pmax
comp=Z,2.0nm,0.8s
PETK pmax pmax
comp=Z,4.0nm,0.8s
PETK pmax pmax
comp=Z,3.0nm,0.7s
HIA Hailar 119.40 19 PFAKE 19 54 40.0 +15
HIA LR LR
comp=Z,14μm,22.0s,MS6.5
XMAS Kiritimati 121.93 277 PFAKE 19 54 40.0 +8.7
XMAS LR LR
comp=Z,8μm,19.0s,MS6.4
LZH Lanzhou 121.96 39 *e*PKP PKPdf 19 54 24.5 -6.2
LZH sPKP 19 54 29.0
LZH PP PP 19 56 03.1 -0.8
LZH SKKS SKKSac 20 02 55.8 -8.6
LZH AMB AMB
comp=Z,2μm,9.2s
LZH LR LR
comp=E,14μm,18.1s
LZH LR LR
comp=Z,18μm,20.3s,MS6.7
BTO Baotou 122.37 31 *e*PKP PKPdf 19 54 29.6 -1.8
KLR Kul'dur 122.45 10 *e*PKIKP PKPdf 19 54 29.7 -1.6
HABR Khabarovsk 123.71 8 *e*PKIKP PKPdf 19 54 29.9 -3.8
HABR *i* 19 54 31.2
HABR *e* 19 56 14.0
HABR *e* 20 01 40.0
HABR *e*SS SS 20 13 02.1 -0.1
HABR *e*SSS 20 17 37.1
HABR pmax pmax
comp=N,9.0nm,1.2s
HABR pmax pmax
comp=E,18nm,1.5s
HABR pmax pmax
comp=Z,20nm,1.4s
HABR MLR MLR
comp=Z,6μm,21.0s,MS6.2
CD2 Chengdu 125.09 44 PKP PKPdf 19 54 37.4 +0.5
CD2 PP PP 19 56 30.0 +4.7
CD2 PKS 19 58 12.8
CD2 SKS SKSdf 20 01 48.0 -1.2
CD2 SKKS SKKSac 20 03 22.0 -2.8
CD2 SS SS 20 13 24.0 +2.2
CD2 AMB AMB
comp=Z,2μm,8.9s
CD2 LR LR
comp=N,13μm,22.6s
CD2 LR LR
comp=Z,14μm,26.5s,MS6.5
RAR Rarotonga 125.10 249 PFAKE 19 54 50.0 +13
RAR LR LR
comp=Z,9μm,19.0s,MS6.5
TIY Taiyuan 125.78 32 *e*PKP PKPdf 19 54 48.3 +10
TIY PP PP 19 56 33.3 +4.0
TIY AMB AMB
comp=Z,1μm,8.6s
TIY LR LR
comp=N,16μm,19.2s,MS6.8
TIY LR LR
comp=E,9μm,17.8s,MS6.8
TIY LR LR
comp=Z,22μm,18.6s,MS6.8
BJI Beijing 125.80 27 PKP PKPdf 19 54 39.4 +1.4
BJI PP PP 19 56 31.8 +2.5
BJI PKS 19 58 13.1
BJI SKS SKSdf 20 01 48.3 -1.9
BJI SS SS 20 13 32.6 +3.2
BJI AMB AMB
comp=Z,2μm,10.5s
BJI LR LR
comp=N,16μm,21.3s,MS6.7
BJI LR LR
comp=E,8μm,20.5s,MS6.7
BJI LR LR
comp=Z,17μm,21.2s,MS6.7
BJT Baijiatuau 125.81 27 PFAKE 19 54 50.0 +12
BJT LR LR
comp=Z,22μm,22.0s,MS6.8
YSS Yuzh-Sakhalins 125.89 2 *i* PKIKP PKPdf 19 54 38.0 +0.1
YSS *e* 19 54 46.0
YSS *e* 19 56 30.0
YSS *e*PPP 19 59 18.0
YSS *e*PPS 20 07 54.0
YSS Yuzh-Sakhalins 125.89 2 *e*PKPdf PKPdf 19 54 38.7 +0.7
YSS *e*PP PP 19 56 29.7 +0.3
YSS LR LR
comp=Z,3μm,20.0s,MS6.0
CN2 Changchun 126.05 18 *e*PKP PKPdf 19 54 34.3 -4.1
CN2 AMB AMB
comp=Z,700nm,11.0s
CN2 LR LR
comp=N,8μm,20.0s,MS6.5
CN2 LR LR
comp=E,5μm,20.0s,MS6.5
CN2 LR LR
comp=Z,11μm,22.0s,MS6.5
MDJ Mudanjiang 126.41 14 PKP PKPdf 19 54 38.8 -0.2
MDJ PKS 19 58 14.0
MDJ SKS SKSdf 20 01 49.3 -1.8
MDJ SS SS 20 13 36.5 +0.2
MDJ AMB AMB
comp=Z,860nm,6.9s
MDJ LR LR
comp=N,7μm,24.7s
MDJ LR LR
comp=E,3μm,18.6s
MDJ LR LR
comp=Z,10μm,20.6s,MS6.5
MDJ Mudanjiang 126.41 14 PKPdf PKPdf 19 54 38.0 -1.0
MDJ LR LR
comp=Z,8μm,20.0s,MS6.4
XAN Xi'an 126.43 38 PKP PKPdf 19 54 38.0 -1.4
XAN PP PP 19 56 33.4 -0.5
XAN PKS 19 58 12.8
XAN SKS SKSdf 20 01 46.6 -5.0
XAN LR LR
comp=N,11μm,21.3s,MS6.5
XAN LR LR
comp=E,2μm,20.0s,MS6.5
XAN LR LR
comp=Z,4μm,24.3s,MS6.0
SNY Shenyang 127.23 20 ⇓PKP PKPdf 19 54 42.4 +1.7
SNY AMB AMB
comp=Z,1μm,9.3s
SNY LR LR
comp=N,7μm,19.1s,MS6.5
SNY LR LR
comp=E,7μm,18.6s,MS6.5
SNY LR LR
comp=Z,7μm,25.2s
JWK2 Keihoku 127.49 3 P PKPdf 19 54 40.0 -1.0
CHTO Chiang Mai 127.58 60 *e*PKIKP PKPdf 19 54 41.7 -0.2
CHTO MLR MLR
comp=Z,6μm,22.0s,MS6.2
CHTO Chiang Mai 127.58 60 *e*PKPdf PKPdf 19 54 41.6 -0.3
CHTO LR LR
comp=Z,6μm,22.0s,MS6.2
CHTO Chiang Mai 127.58 60 PKPdf PKPdf 19 54 42.7 +0.8
SNR=16
CHTO PKPdf PKPdf 19 54 42.7 +0.8
SNR=16
KMI Kunming 127.63 50 PKP PKPdf 19 54 41.8 -0.1
KMI PP PP 19 56 44.3 +1.9
KMI SS SS 20 13 53.4 -0.6
KMI AMB AMB
comp=Z,1μm,10.6s
KMI LR LR
comp=N,6μm,19.8s,MS6.4
KMI LR LR
comp=E,5μm,19.8s,MS6.4
KMI LR LR
comp=Z,9μm,19.8s,MS6.5
KMI Kunming 127.63 50 Pdif Pdif 19 51 11.5 -12
KMI PKP PKPdf 19 54 43.3 +1.4
KMI pPKP pPKPdf 19 54 52.3 +7.0
KMI sPKP 19 54 56.3
KMI PP PP 19 56 31.8 -11
KMI SKKS SKKSac 20 03 20.3 -21
KMI SS SS 20 13 16.8 -37
KMI AMB AMB
comp=Z,15μm,1.7s
KMI AMB AMB
comp=Z,1μm,9.5s
KMI LR LR
comp=N,6μm,21.1s,MS6.4
KMI LR LR
comp=E,5μm,19.2s,MS6.4
KMI LR LR
comp=Z,9μm,20.0s,MS6.4
CM31 Chiang Mai Arr 127.73 60 *e*PKPdf PKPdf 19 54 42.1 -0.1
CM31 LR LR
comp=Z,5μm,20.0s,MS6.2
CMAR Chiang Mai Arr 127.73 60 PKP PKPdf 19 54 42.3 +0.1
comp=Z,13nm,1.2s,baz=289,slow=3.0,SNR=27
CMAR PP PP 19 56 45.3 +1.8
comp=Z,4.4nm,1.1s,baz=289,slow=8.0,SNR=4.3
CMAR Chiang Mai Arr 127.73 60 PKIKP PKPdf 19 54 42.3 +0.1
CMAR 19 56 45.3
CMAR pmax pmax
comp=Z,13nm,1.2s
CMAR pmax pmax
comp=Z,4.0nm,1.1s
VLA Vladivostok 128.34 12 *i* PKIKP PKPdf 19 54 45.9 +3.2
ASAJ Asahikawa 128.72 2 P PKPdf 19 54 40.3 -3.1
JMP Maruseppu 128.85 2 P PKPdf 19 54 40.4 -3.3
DL2 Dalian 129.07 24 PKP PKPdf 19 54 48.4 +4.1
DL2 AMB AMB
comp=Z,900nm,10.5s
DL2 LR LR
comp=N,4μm,20.4s,MS6.2
DL2 LR LR
comp=E,4μm,20.0s,MS6.2
DL2 LR LR
comp=Z,8μm,20.2s,MS6.4
JOHN Johnston Islan 129.15 298 PFAKE 19 54 50.0 +5.0
JOHN LR LR
comp=Z,7μm,19.0s,MS6.4
TIA Tai'an 129.31 29 PKP PKPdf 19 54 45.0 +0.2
TIA LR LR
comp=N,4μm,18.0s,MS6.2
TIA LR LR
comp=E,3μm,18.0s,MS6.2
ENH Enshi 129.32 41 *e*PKPdf PKPdf 19 54 44.4 -0.6
ENH LR LR
comp=Z,12μm,22.0s,MS6.5
MIDW Midway 129.38 316 PFAKE 19 54 50.0 +4.9
MIDW LR LR
comp=Z,8μm,20.0s,MS6.4
GYA Guiyang 129.79 47 Pdif Pdif 19 51 31.8 -1.5
GYA PKP PKPdf 19 54 44.0 -2.0
GYA PP PP 19 56 59.8 +3.4
GYA PKS 19 58 21.0
GYA SKKS SKKSac 20 03 50.5 -4.0
GYA SS SS 20 14 18.9 -1.6
GYA AMB AMB
comp=Z,15μm,8.6s
GYA LR LR
comp=N,19μm,22.9s,MS6.8
GYA LR LR
comp=E,15μm,23.0s,MS6.8
GYA LR LR
comp=Z,20μm,22.8s,MS6.8
ERM Erimo 130.83 2 PFAKE 19 55 00.0 +12
ERM LR LR
comp=Z,7μm,22.0s,MS6.3
JEM Erimo 130.83 2 P PKPdf 19 54 47.9 +0.4
JOT Ohata 131.36 4 P PKPdf 19 54 46.8 -1.7
WHN Wuhan 132.15 37 PKP PKPdf 19 54 50.4 +0.1
WHN PP PP 19 57 10.3 -0.9
WHN PKS 19 58 20.3
WHN SS SS 20 14 49.8 +1.3
WHN LR LR
comp=N,7μm,16.7s,MS6.8
WHN LR LR
comp=E,14μm,17.2s,MS6.8
WHN LR LR
comp=Z,23μm,19.2s,MS6.9
INCN Inchon 132.16 20 PFAKE 19 55 00.0 +10
INCN LR LR
comp=Z,8μm,20.0s,MS6.4
COCO West Island 132.23 100 PFAKE 19 55 00.0 +9.1
COCO LR LR
comp=Z,4μm,20.0s,MS6.2
KSRS Korea Array 132.61 19 PKP PKPdf 19 54 50.5 -0.5
comp=Z,1.6nm,0.8s,baz=23,slow=2.4,SNR=7.6
KSRS PP PP 19 57 12.6 -1.1
comp=Z,1.6nm,0.7s,baz=338,slow=5.7,SNR=4.8
KSRS Korea Array 132.61 19 PKIKP PKPdf 19 54 50.6 -0.4
KSRS 19 57 12.6
KSRS pmax pmax
comp=Z,2.0nm,0.8s
KSRS pmax pmax
comp=Z,2.0nm,0.7s
PSI Prapat 132.82 79 PKP PKPdf 19 54 52.7 +0.6
comp=Z,4.3nm,0.6s,baz=240,slow=4.9,SNR=11
PSI Prapat 132.82 79 PKIKP PKPdf 19 54 52.7 +0.6
PSI pmax pmax
comp=Z,4.0nm,0.6s
PSI Prapat 132.82 79 PKP PKPdf 19 54 52.7 +0.6
JOM Ohasama 133.27 4 P PKPdf 19 54 56.8 +4.6
NJ2 Nanjing 133.49 31 *e*PKP PKPdf 19 54 45.3 -7.5
NJ2 sPKP 19 55 22.4
NJ2 PP PP 19 57 20.5 +0.9
NJ2 PKS 19 58 22.5
NJ2 SKS SKSdf 20 01 43.5 -21
NJ2 SKKS SKKSac 20 04 00.0 -17
NJ2 SS SS 20 14 51.0 -13
NJ2 AMB AMB
comp=Z,2μm,9.4s
NJ2 LR LR
comp=N,8μm,21.7s,MS6.5
NJ2 LR LR
comp=E,8μm,22.1s,MS6.5
NJ2 LR LR
comp=Z,16μm,21.3s,MS6.7
KULM Kulim 133.89 75 P PKPdf 19 54 53.1 -1.0
KULM Kulim 133.89 75 *e*PKPdf PKPdf 19 54 51.3 -2.8
KULM LR LR
comp=Z,5μm,22.0s,MS6.2
JYA Atsumi 134.01 6 P PKPdf 19 54 53.9 +0.3
JSD Sado 134.39 8 P PKPdf 19 54 57.2 +2.9
IPM Ipoh 134.47 76 P PKPdf 19 54 53.4 -1.7
JMM Marumori 134.83 5 P PKPdf 19 54 58.6 +3.4
FRIM Kepong 135.35 78 P PKPdf 19 54 56.3 -0.5
SSE Sheshan 135.43 30 PKP PKPdf 19 54 56.5 0.0
SSE PP PP 19 57 32.1 +0.2
SSE SS SS 20 15 28.8 +1.1
SSE AMB AMB
comp=Z,1μm,11.4s
SSE LR LR
comp=N,7μm,26.2s,MS6.4
SSE LR LR
comp=E,7μm,26.2s,MS6.4

SSE LR LR
comp=Z,11μm,20.0s
JTU Tsushima 135.77 19 P PKPdf 19 54 57.3 +0.3
MAJO Matsushiro 135.85 8 PKHKP 19 54 47.1
MAJO MLR MLR
comp=Z,9μm,21.0s,MS6.5
MAT Matsushiro 135.85 8 PKP PKPdf 19 54 55.3 -1.8
MAT Matsushiro 135.85 8 P PKPdf 19 54 57.2 +0.1
MJAR Matsushiro Arr 135.85 8 PKP PKPdf 19 54 55.0 -2.1
comp=Z,1.5nm,0.7s,baz=340,slow=1.7,SNR=6.1
MJAR PP PP 19 57 36.2 +2.2
comp=Z,10nm,1.1s,baz=345,slow=6.2,SNR=7.2
MJAR Matsushiro Arr 135.85 8 PKIKP PKPdf 19 54 55.0 -2.1
MJAR 19 57 36.2
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR pmax pmax
comp=Z,10.0nm,1.1s
QIZ Qiongzhong 136.46 52 PKP PKPdf 19 54 53.0 -5.7
QIZ PP PP 19 57 41.6 +2.3
QIZ SS SS 20 15 43.0 +1.2
QIZ AMB AMB
comp=Z,1μm,16.0s
QIZ LR LR
comp=N,4μm,21.8s,MS6.1
QIZ LR LR
comp=E,1μm,23.2s,MS6.1
QIZ LR LR
comp=Z,9μm,21.6s,MS6.5
QIZ Qiongzhong 136.46 52 PFAKE 19 55 10.0 +11
QIZ LR LR
comp=Z,10μm,21.0s,MS6.5
JRY Ryogami san 136.46 7 P PKPdf 19 54 55.8 -2.5
JWT Wachi 136.61 12 P PKPdf 19 54 55.1 -3.5
GZH Guangzhou 136.63 45 PKP PKPdf 19 55 07.8 +8.9
GZH PP PP 19 57 34.9 -5.2
GZH LR LR
comp=N,5μm,30.3s
GZH LR LR
comp=E,6μm,22.9s
GZH LR LR
comp=Z,19μm,20.2s
JGF Kuroka 136.65 9 P PKPdf 19 55 02.4 +3.8
JAD Aida 136.68 13 P PKPdf 19 55 04.5 +5.8
SNZO South Karori 137.17 213 PFAKE 19 55 10.0 +11
SNZO LR LR
comp=Z,16μm,19.0s,MS6.8
AFI Afiamalu 137.18 258 PFAKE 19 55 10.0 +10
AFI LR LR
comp=Z,8μm,21.0s,MS6.4
JOD2 Odawara 2 137.23 7 P PKPdf 19 55 01.0 +1.3
KGM Kluang 137.28 79 P PKPdf 19 55 03.5 +3.1
JNU Nakatsue 137.53 18 P PKPdf 19 55 00.2 -0.1
MYKOM Kota Tinggi 137.84 79 P PKPdf 19 55 03.3 +1.9
QZH Quanzhou 138.79 38 ∥ *i*PKP PKPdf 19 54 52.3 -11
QZH PP PP 19 57 53.0 -0.3
QZH SS SS 20 16 01.5 -6.9
QZH AMB AMB
comp=Z,3μm,11.5s
QZH LR LR
comp=N,7μm,16.6s,MS6.6
QZH LR LR
comp=E,5μm,15.8s,MS6.6
QZH LR LR
comp=Z,12μm,18.6s,MS6.7
TATO Taipei 140.47 35 PFAKE 19 55 20.0 +14
TATO LR LR
comp=Z,16μm,21.0s,MS6.7
YHNB Yeheng 140.65 35 PFAKE 19 55 20.0 +14
YHNB LR LR
comp=Z,16μm,22.0s,MS6.7
SSLB Suanglung 141.08 37 *e*PKPdf PKPdf 19 55 03.8 -3.3
SSLB *e*PP PP 19 58 07.7 +0.5
TPUB Ta-pu 141.25 37 *e*PKP PKPdf 19 55 05.3 -2.1
JOW Kunigami 142.30 25 P PKPdf 19 55 05.3 -3.9
NWAO Narrogin (SRO) 143.73 138 PKP PKPdf 19 55 10.2 -1.2
comp=Z,20nm,1.1s,baz=203,slow=5.5,SNR=2.0
NWAO Narrogin (SRO) 143.73 138 PKP PKPdf 19 55 10.2 -1.2
NWAO LR LR
comp=Z,7μm,22.0s,MS6.3
KSM Kuching 144.19 77 P PKPdf 19 55 11.8 -1.1
KSM Kuching 144.19 77 *e*PKPdf PKPdf 19 55 10.7 -2.1
KSM LR LR
comp=Z,7μm,22.0s,MS6.4
BBP Basco 144.21 39 *e*P PKPdf 19 55 14.2 +1.5
JMZ Minamidaito 2 144.37 22 P PKPdf 19 55 07.1 -5.7
TAU Tasmania Unive 144.54 183 *e*PKIKP PKPdf 19 55 08.8 -3.8
TAU *e* 19 55 11.9
TAU MLR MLR
comp=Z,6μm,20.0s,MS6.3
PIP Pasuquin 144.85 43 ∥ *e*P PKPdf 19 55 13.0 -0.8
KLBR Kellerberrin 144.90 137 *e*PKP PKPdf 19 55 12.2 -1.4
comp=Z,175nm,1.1s
MOO Moorlands 145.01 183 *e*P PKPab 19 55 13.7 +1.0
ABRA Dolores 145.38 44 *e*P PKPbc 19 55 15.8 +1.1
APYP Conner 145.60 43 *e*P PKPdf 19 55 14.8 -0.3
CBIJ Chichi jima 145.63 5 P PKPdf 19 55 13.3 -1.7
BOLP Bolinao 145.68 46 *e*P PKPdf 19 55 15.6 +0.3
SBUM Sibu 145.77 75 P PKPdf 19 55 16.7 +1.1
WAKE Wake Island 146.07 322 PFAKE 19 55 30.0 +14
WAKE LR LR
comp=Z,8μm,22.0s,MS6.5
FUNA Funafuti 146.23 266 PFAKE 19 55 30.0 +14
FUNA LR LR
comp=Z,15μm,19.0s,MS6.8
MSVF Nonsavu 146.29 249 *e*PKPdf PKPdf 19 55 17.0 +0.7
MSVF LR LR
comp=Z,6μm,19.0s,MS6.4
BTM Bintulu 146.36 73 P PKPdf 19 55 19.4 +2.9
CAUP Cauayan 146.63 43 *e*P PKPab 19 55 20.5 +1.0
PALP Palanan 146.96 43 *e*P PKPab 19 55 20.7 0.0
BALP Baler 147.29 45 *e*P PKPab 19 55 20.3 -1.8
LUBP Lubang 147.62 50 *e*P PKPab 19 55 22.0 -1.4
TGY Tagaytay City 147.91 48 PKPbc PKPab 19 55 23.4 -1.1
comp=Z,63nm,0.2s,baz=347,slow=12,SNR=3.7
TGY Tagaytay City 147.91 48 PKP2 PKPab 19 55 23.4 -1.1
TGY pmax pmax
comp=Z,63nm,0.3s
KKM Kota Kinabalu 148.25 66 P PKPbc 19 55 22.2 -0.9
KKM Kota Kinabalu 148.25 66 *e*PKPdf PKPdf 19 55 19.6 -0.1
KKM LR LR
comp=Z,8μm,21.0s,MS6.5
BATP Bataraza 148.40 60 *e*P PKPbc 19 55 24.1 +0.7
KDM Kudat 148.43 64 P PKPbc 19 55 24.6 +1.0
ENPP El Nido 148.48 54 *e*P PKPbc 19 55 24.1 +0.5
BUSP Coron 148.64 52 *e*P PKPbc 19 55 24.7 +0.7
SJMP San Jose 149.07 51 *e*P PKPab 19 55 31.1 +1.8
SDKM Sandakan 149.30 66 P PKPbc 19 55 25.7 0.0
AUQP San Andres 149.69 47 *e*P PKPbc 19 55 29.0 +2.4
TOO Toolangi 149.92 181 *e*PKP PKPbc 19 55 27.0 +0.4
CUYO Cuyo Island 149.96 53 *e*P PKPbc 19 55 28.2 +0.9
PVCP Virac 150.57 45 *e*P PKPbc 19 55 29.3 +0.6
ARPS Mount Arapiles 150.57 175 *e*PKP PKPbc 19 55 28.9 +0.7
comp=Z,660nm,1.3s
MYLDM Lahad Datu 150.67 66 P PKPdf 19 55 25.2 +1.6
RCP Roxas 150.88 50 ∥ *e*P PKPab 19 55 36.4 -0.3
TARA Tarawa 150.93 286 PFAKE 19 55 30.0 +6.0
TARA LR LR
comp=Z,6μm,20.0s,MS6.4
GUIM Jordan 151.33 52 *e*P PKPbc 19 55 29.6 -1.0
FORT Forrest 151.75 148 *e*PKP PKPbc 19 55 31.1 0.0
comp=Z,88nm,0.8s
FORT Forrest 151.75 148 *e*PKPbc PKPbc 19 55 31.2 +0.1
MBWA Marble Bar 151.90 122 *e*PKPbc PKPbc 19 55 31.2 -0.5
MBWA LR LR
comp=Z,14μm,22.0s,MS6.7
MBWA Marble Bar 151.90 122 PKPdf PKPbc 19 55 32.5 +0.8
SNR=10
MBWA PKPdf PKPbc 19 55 32.5 +0.8
SNR=10
CNB Canberra Magne 151.90 187 *e*P PKPbc 19 55 31.5 +0.2
CAN Canberra 151.94 187 *e*PKIKP PKPbc 19 55 30.6 -0.8
CAN MLR MLR
comp=Z,6μm,20.0s,MS6.4
MSLP Maasin 153.38 50 *e*P PKPab 19 55 45.7 -1.4
KAPI Kappang 154.69 86 *e*PKPdf PKPdf 19 55 29.4 -0.1
KAPI *e*PKPbc PKPbc 19 55 37.1 -1.0
KAPI LR LR
comp=Z,7μm,22.0s,MS6.4
DZM Mont Dzumac 154.76 232 *e*PP PP 19 59 22.0 -6.1
comp=Z,1μm,26.8s
DZM *e*SS SS 20 19 08.4 -2.2
comp=Z,5μm,27.4s
DZM *e*LR LR 20 47 18.6
comp=Z,23μm,24.8s
STKA Stephens Creek 155.39 173 *e*PKP PKPdf 19 55 32.2 +2.3
comp=Z,14nm,1.2s
STKA Stephens Creek 155.39 173 PKP PKPdf 19 55 31.3 +1.4
comp=Z,8.1nm,1.0s,baz=67,slow=3.2,SNR=6.8
STKA Stephens Creek 155.39 173 *e*PKPdf PKPdf 19 55 29.2 -0.8
DAV Davao City (W) 155.82 54 PFAKE 19 55 40.0 +9.0
DAV LR LR
comp=Z,7μm,21.0s,MS6.4
ARMA Armidale 156.26 194 *e*PKP PKPdf 19 55 36.5 +5.4
FITZ Fitzroy Crossi 158.24 121 *e*P PKPdf 19 55 33.7 -0.2
comp=Z,19nm,1.1s
FITZ Fitzroy Crossi 158.24 121 *e*PKP PKPab 19 56 09.0 +1.1
FITZ Fitzroy Crossi 158.24 121 PKP PKPdf 19 55 34.0 0.0
comp=Z,16nm,1.2s,baz=357,slow=0.6,SNR=4.9
FITZ PKPab PKPab 19 56 08.8 +0.9
comp=Z,19nm,0.9s,baz=217,slow=4.1,SNR=10
FITZ Fitzroy Crossi 158.24 121 *e*PKPdf PKPdf 19 55 34.0 +0.1
GUMO Guam 159.19 1 PFAKE 19 55 40.0 +4.8
GUMO LR LR
comp=Z,6μm,21.0s,MS6.4
ASAR Alice Springs 160.54 148 PKP PKPdf 19 55 36.2 -0.2
comp=Z,7.6nm,1.1s,baz=220,slow=1.1,SNR=25
ASAR PKPab PKPab 19 56 17.4 -0.3
comp=Z,9.8nm,0.9s,baz=197,slow=2.9,SNR=9.3
ASAR Alice Springs 160.54 148 PKIKP PKPdf 19 55 36.3 -0.2
ASAR 19 56 17.4
ASAR pmax pmax
comp=Z,8.0nm,1.1s
ASAR pmax pmax
comp=Z,10.0nm,0.9s
WRAB Tennant Creek 163.72 141 *e*PKIKP PKPdf 19 55 40.5 +0.7
WRAB MLR MLR
comp=Z,13μm,20.0s
KAKA Kakadu 166.44 114 *e*PKP PKPdf 19 55 40.9 -1.3
comp=Z,63nm,1.4s
KAKA Kakadu 166.44 114 PKPdf PKPdf 19 55 41.0 -1.2
CTA Charters Tower 167.30 185 *e*PKP PKPdf 19 55 44.2 +1.5
comp=Z,17nm,1.3s
CTAO Charters Tower 167.30 185 PFAKE 19 55 50.0 +7.3
CTAO LR LR
comp=Z,9μm,22.0s
COEN Coen 173.17 164 PKPdf PKPdf 19 55 47.3 +1.2
COEN *e*PKPab PKPab 19 57 12.9 -0.4

BJI ***23*** *19:43:22.8, 29°.93N×88°.57E, h8km, mB4.5/7, mb4.2/11, ML4.0/1, Ms4.2/4, Ms7 4.1/4*
IDC ***23*** *19:43:22.3±0.7, 29°.76N×88°.52E, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.1/29, mbtmp4.0/18, ML3.5/2, Error ellipse: s-maj=20.1km s-min=16.1km az=36.0*
NEIC ***23*** *19:43:23.3±0.3, 29°.68N×88°.53E, h10km, mb3.7/7, Error ellipse: s-maj=9.9km s-min=5.5km az=45.0*
ISCJB ***23*** *19:43:23.8±0.9, 29°.66N±0°.05×88°.48E±0°.04, h26km±8km, mb4.1/23, Error ellipse: s-maj=7.9km s-min=5.0km az=11.2*
MOS ***23*** *19:43:24.6±1.2, 29°.64N×88°.46E, h33km, mb4.3/16, Error ellipse: s-maj=12.5km s-min=7.5km az=113.1*
NDI ***23*** *19:43:25.7±2.6, 30°.03N×88°.71E, h10km, ML3.8, mb3.7(NEIC)*
ISC 23 19:43:24.3±1.3, 29°.66N±0°.04×88°.49E±0°.03, h15km±9km, n78, σ1§17/84, mb4.1/23, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**2.31**	**88**	Pg	**Pn**	**19 44 02.8**	**+1.0**
LSA				Sg	**Sn**	**19 44 28.9**	**-1.0**
LSA	**Lhasa**	**2.31**	**88**	*e*Pn	**Pn**	**19 44 02.4**	**+0.6**
LSA				*e*Sn	**Sn**	**19 44 32.0**	**+2.1**
GTK	**Gangtok**	**2.32**	**177**	*e*P	**Pg**	**19 44 10.0**	**+1.2**
GTK				*e*x	**Sg**	**19 44 46.5**	**+7.6**
GUN	**Gumba**	**2.88**	**233**	*e*P	**Pb**	**19 44 16.4**	**+1.1**
	221nm,0.5s						
KKN	**Kakani**	**3.38**	**237**	*e*P	**Pb**	**19 44 22.2**	**-1.6**
	106nm,0.6s						
PKI	**Pulchoki**	**3.42**	**233**	*e*P	**Pb**	**19 44 23.5**	**-1.0**
	108nm,0.7s						
PKIN	**Phulchoki**	**3.42**	**233**	*e*P	**Pb**	**19 44 23.4**	**-1.2**
DMN	**Daman**	**3.61**	**236**	*e*P	**Pb**	**19 44 25.6**	**-2.2**
	110nm,0.6s						
SHL	**Shillong**	**5.07**	**143**	↑ *i*P	**Pn**	**19 44 43.5**	**+3.9**
SHL				*i*x	x	19 46 01.0	
JOSI	**Joshimath**	**7.79**	**279**	*e*P	**Pn**	**19 45 21.3**	**+4.3**
JOSI				*e*S	**Sn**	**19 46 45.9**	**+0.9**
JOSI				AML	AML	19 46 59.3	
	comp=E,94nm,0.8s						
JOSI				AML	AML	19 46 59.7	
	comp=N,104nm,0.6s						
KLP	**Kalpa**	**9.02**	**284**	*e*x	**Pn**	**19 45 37.3**	**+3.4**
KLP				*e*S	**Sn**	**19 47 11.8**	**-3.4**
KLP				AML	AML	19 47 31.4	
	comp=E,30nm,0.7s						
KLP				AML	AML	19 47 32.2	
	comp=N,34nm,0.9s						
DDI	**Dehra Dun**	**9.07**	**277**	*e*x	**Pn**	**19 45 35.5**	**+0.9**
SONA	**Sohna**	**10.09**	**265**	*e*x	**Pn**	**19 45 49.5**	**+0.9**
SONA				*e*S	**Sn**	**19 47 40.4**	**-1.2**
KHET	**Khetri**	**11.23**	**265**	*e*x	**Pn**	**19 46 06.0**	**+1.8**
KHET				*e*S	**Sn**	**19 48 07.0**	**-2.5**
BHPL	**Bhopal**	**11.79**	**240**	*e*x	**Pn**	**19 46 13.6**	**+1.7**
KMI	**Kunming**	**13.44**	**106**	P	**Pn**	**19 46 35.1**	**+0.7**
KMI				pP		19 46 46.6	
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,51nm,4.4s						
GTA	**Gaotai**	**13.47**	**41**	*e*P	**Pn**	**19 46 33.5**	**-1.2**
GTA				pP		19 46 38.0	
GTA				sP		19 46 41.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	**Kashi**	**14.23**	**317**	P	**Pn**	**19 46 46.6**	**+1.5**
KSH				*e*pP	pP	19 46 50.5	-6.3
KSH				*e*sP	sP	19 46 53.6	-5.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH				LR	LR		
	comp=N,1μm,10.7s						
KSH				LR	LR		
	comp=E,3μm,9.7s						
KSH				LR	LR		
	comp=Z,2μm,14.8s						
CHTO	**Chiang Mai**	**14.39**	**136**	*e*P	**Pn**	**19 46 45.9**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**14.39**	**136**	*e*Pn	**Pn**	**19 46 45.9**	**-1.6**
	comp=Z,2.7nm,0.8s						
CM31	**Chiang Mai Arr**	**14.67**	**137**	*e*Pn	**Pn**	**19 46 49.9**	**-1.3**
CMAR	**Chiang Mai Arr**	**14.67**	**137**	Pn	**Pn**	**19 46 50.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=309,slow=12,SNR=5.5						
TKM2	**Tokmak 2**	**16.80**	**325**	*e*P	**Pn**	**19 47 20.9**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TKM2	**Tokmak 2**	**16.80**	**325**	*e*Pn	**Pn**	**19 47 20.9**	**+2.0**
	comp=Z,4.5nm,0.8s						
UCH	**Uchtor**	**16.86**	**322**	*e*Pn	**Pn**	**19 47 20.2**	**+0.5**
	comp=Z,3.3nm,0.7s						
KBL	**Kabul**	**17.18**	**291**	*e*P	**Pn**	**19 47 21.7**	**-1.9**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBL	**Kabul**	**17.18**	**291**	*e*Pn	**Pn**	**19 47 21.7**	**-1.9**
	comp=Z,8.2nm,0.8s						
EKS2	**Erkin-Say**	**17.56**	**322**	*e*Pn	**Pn**	**19 47 29.0**	**+0.7**
	comp=Z,3.3nm,0.8s						
MK31	**Makanchi Array**	**17.77**	**346**	*e*P	**Pn**	**19 47 30.2**	**-0.7**
MKAR	**Makanchi Array**	**17.77**	**346**	P	**Pn**	**19 47 30.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=26						
ENH	**Enshi**	**18.20**	**83**	*e*Pn	**Pn**	**19 47 34.0**	**-2.4**
	comp=Z,3.5nm,0.6s						
KURK	**Kurchatov**	**22.30**	**343**	P	**P**	**19 48 19.1**	**-1.7**
	comp=Z,4.4nm,0.7s,mb4.0,baz=158,slow=11,SNR=31						
KURK	**Kurchatov**	**22.30**	**343**	P	**P**	**19 48 19.2**	**-1.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
SONM	**Songino Array**	**22.80**	**32**	P	**P**	**19 48 26.2**	**0.0**
	comp=Z,3.0nm,0.9s,mb3.7,baz=221,slow=10,SNR=19						
SONM	**Songino Array**	**22.80**	**32**	P	**P**	**19 48 26.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**23.13**	**33**	*e*P	**P**	**19 48 29.2**	**-0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
ULN	**Ulaanbaatar**	**23.13**	**33**	*e*P	**P**	**19 48 29.2**	**-0.5**
	comp=Z,1.8nm,0.7s,mb3.6						
ZAK	**Zakamensk**	**23.51**	**24**	*e*P	**P**	**19 48 33.4**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
MOY	**Mondy**	**23.87**	**19**	*e*P	**P**	**19 48 31.4**	**-5.5**
ZAA0	**Zalesovo Array**	**24.42**	**355**	*e*P	**P**	**19 48 41.8**	**-0.1**
ZALV	**Zalesovo Beam**	**24.42**	**355**	P	**P**	**19 48 41.8**	**-0.1**
	comp=Z,3.4nm,0.7s,mb3.9,baz=177,slow=9.4,SNR=23						
ZALV	**Zalesovo Beam**	**24.42**	**355**	P	**P**	**19 48 41.8**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
NVS	**Novosibirsk**	**25.45**	**353**	*e*P	**P**	**19 48 50.2**	**-1.0**
NVS				pmax	pmax		
	comp=N,10.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
KULM	**Kulim**	**26.82**	**152**	P	**P**	**19 49 05.6**	**+1.5**
BOD	**Bodaibo**	**33.25**	**25**	*e*P	**P**	**19 50 00.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KSRS	**Korea Array**	**33.58**	**66**	P	**P**	**19 50 03.4**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.1,baz=273,slow=8.8,SNR=10						
KSRS	**Korea Array**	**33.58**	**66**	P	**P**	**19 50 03.4**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MJAR	**Matsushiro Arr**	**41.83**	**67**	P	**P**	**19 51 13.4**	**0.0**
	comp=Z,1.9nm,1.0s,mb3.7,baz=281,slow=8.6,SNR=5.3						
MJAR	**Matsushiro Arr**	**41.83**	**67**	P	**P**	**19 51 13.5**	**0.0**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	**Malin Array Be**	**48.48**	**313**	P	**P**	**19 52 06.2**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.2,baz=83,slow=6.8,SNR=4.9						
AKASG	**Malin Array Be**	**48.48**	**313**	P	**P**	**19 52 06.2**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**49.18**	**329**	*e*P	**P**	**19 52 11.5**	**+0.2**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
JOF	**Joensuu**	**49.18**	**329**	*e*p	**P**	**19 52 11.5**	**+0.2**
	comp=Z,4.6nm,0.4s,mb4.9						
KAF	**Kangasniemi**	**51.28**	**328**	*e*P	**P**	**19 52 27.9**	**+0.7**
KAF	**Kangasniemi**	**51.28**	**328**	*e*p	**P**	**19 52 27.9**	**+0.7**
FINES	**FINESS Array B**	**51.28**	**327**	P	**P**	**19 52 27.8**	**+0.6**
	comp=Z,1.9nm,0.5s,mb4.3,baz=108,slow=8.9,SNR=19						
FINES	**FINESS Array B**	**51.28**	**327**	P	**P**	**19 52 27.8**	**+0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**53.13**	**337**	P	**P**	**19 52 41.1**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.5,baz=103,slow=8.0,SNR=13						
ARCES	**ARCESS Array B**	**53.13**	**337**	P	**P**	**19 52 41.2**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HFS	**Hagfors**	**57.28**	**325**	P	**P**	**19 53 10.9**	**0.0**
	comp=Z,7.3nm,0.9s,mb4.7,baz=96,slow=11,SNR=11						
HFS	**Hagfors**	**57.28**	**325**	P	**P**	**19 53 10.9**	**0.0**
HFS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMBO	**Kilima Mbogo**	**57.64**	**247**	P	**P**	**19 53 16.0**	**+1.8**
	comp=Z,4.0nm,1.0s,mb4.4,baz=360,slow=23,SNR=6.1						
KMBO	**Kilima Mbogo**	**57.64**	**247**	P	**P**	**19 53 16.0**	**+1.9**
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB2	**NORSAR Subarra**	**58.44**	**326**	P	**P**	**19 53 18.5**	**-0.5**
	comp=Z,1.8nm,0.5s,mb4.4,baz=85,slow=6.5						
NOA	**NORSAR Array B**	**58.44**	**326**	P	**P**	**19 53 18.5**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.3,baz=86,slow=6.8,SNR=6.4						
NOA	**NORSAR Array B**	**58.44**	**326**	P	**P**	**19 53 18.5**	**-0.5**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	**GERESS Array B**	**58.64**	**312**	P	**P**	**19 53 20.8**	**+0.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=78,slow=6.6,SNR=7.9						
GERES	**GERESS Array B**	**58.64**	**312**	P	**P**	**19 53 20.8**	**+0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRAB	**Tennant Creek**	**66.21**	**132**	*e*P	**P**	**19 54 12.7**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**66.21**	**132**	*e*P	**P**	**19 54 12.7**	**+1.2**
	comp=Z,13nm,1.0s,mb4.9						
EKA	**Eskdalemuir Ar**	**67.06**	**322**	P	**P**	**19 54 16.8**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=61,slow=8.7,SNR=4.1						
EKA	**Eskdalemuir Ar**	**67.06**	**322**	P	**P**	**19 54 16.8**	**+0.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**68.67**	**135**	P	**P**	**19 54 28.4**	**+1.3**
	comp=Z,2.0nm,0.9s,mb4.1,baz=321,slow=6.2,SNR=18						
ASAR	**Alice Springs**	**68.67**	**135**	P	**P**	**19 54 28.4**	**+1.3**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LSZ	**Lusaka**	**73.31**	**241**	*e*P	**P**	**19 54 53.9**	**-1.6**
	comp=Z,1.4nm,0.6s,mb4.1						
ESDC	**Sonseca Array**	**73.48**	**306**	P	**P**	**19 54 56.1**	**-0.1**
	comp=Z,0.1nm,0.3s,mb3.3,baz=47,slow=6.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**80.87**	**280**	P	**P**	**19 55 38.7**	**+0.6**
	comp=Z,1.0nm,0.8s,mb3.8,baz=59,slow=4.8,SNR=5.2						
CPUP	**Villa Florida**	**149.70**	**268**	PKPbc	PKPbc	20 03 13.8	+0.1
	comp=Z,3.2nm,0.6s,baz=69,slow=2.9,SNR=13						

JMA ***23*** *19:49:59.6±0.1, 24°.71N×122°.39E, h0km, M2.7*
TAP 23 19:49:59.5, 24°.88N×122°.39E, h4km±1km, ML3.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.39**	**290**	P	Pg	19 50 08.2	+1.1
	baz=289						
TWB1				S	Sg	19 50 14.9	+2.7
	baz=289						
TWC	**Suao**	**0.56**	**242**	P	Pg	19 50 11.5	+1.1
	baz=241						
TWC				*e*S	Sg	19 50 20.2	+2.6
	baz=241						
NWF	**Wu-fen Shan**	**0.59**	**289**	P	Pg	19 50 12.4	+1.6
	baz=289						
NWF				S	Sg	19 50 21.6	+3.1
	baz=289						
TWE	**Neicheng**	**0.68**	**257**	P	Pg	19 50 13.8	+1.2
	baz=256						
TWE				S	Sg	19 50 24.1	+2.7
	baz=256						
YOJ	**Yonaguni jima**	**0.70**	**126**	P	Pg	19 50 12.0	-0.9
YOJ				*e*S	Sg	19 50 20.7	-1.3
TWA	**Mucha**	**0.74**	**278**	*e*P	Pg	19 50 15.2	+1.4
	baz=277						
TWA				*e*S	Sg	19 50 26.1	+2.7
	baz=277						
ENA	**Nanau**	**0.74**	**233**	*e*P	Pg	19 50 15.1	+1.3
	baz=232						
ENA				*e*S	Sg	19 50 27.1	+3.7
	baz=232						
ENTT	**Nioudou**	**0.79**	**253**	*e*P	Pg	19 50 15.8	+1.2
	baz=252						
ENTT				*e*S	Sg	19 50 28.1	+3.2
	baz=252						
PCYT	**Pengchaiyu**	**0.80**	**339**	*e*P	Pg	19 50 15.5	+0.6
	baz=339						
TAP1	**Taipei**	**0.81**	**282**	*e*P	Pg	19 50 17.8	+2.8
	baz=281						
TWY	**Chenhua**	**0.82**	**299**	*e*P	Pg	19 50 16.9	+1.6
	baz=298						
TWY				*e*S	Sg	19 50 28.2	+2.3
	baz=298						
TWS1	**Kuangyinshan**	**0.91**	**284**	*e*P	Pg	19 50 18.4	+1.3
	baz=284						
NSK	**Sanguang**	**0.96**	**258**	P	Pg	19 50 18.9	+0.9
	baz=257						
NSK				*e*S	Sg	19 50 32.6	+2.1
	baz=257						
NNS	**Nan Shan**	**1.02**	**245**	*e*P	Pg	19 50 19.3	+0.1
	baz=244						
NNS				S	Sg	19 50 34.6	+2.1
	baz=244						
TWD	**Chiawan**	**1.08**	**223**	P	Pg	19 50 20.2	+0.1
	baz=222						
WHF	**Hehuan Shan**	**1.26**	**235**	P	Pg	19 50 24.0	+0.3
	baz=234						
WHF				*e*S	Sg	19 50 40.8	+0.8
	baz=234						
TWT	**Tachien**	**1.27**	**241**	*e*P	Pg	19 50 24.4	+0.5
	baz=240						
TWT				*e*S	Sg	19 50 44.3	+3.9
	baz=240						
NSTT	**Nanjuang**	**1.29**	**259**	*e*P	Pg	19 50 23.9	-0.4
	baz=258						

IRIF	**Iriomote-Funau**	**1.33 114**	P	Pn	19 50 23.8	-1.0
IRIF			eS	Sg	19 50 40.7	-1.6
HATJ	**Hateruma jima**	**1.52 122**	P	Pn	19 50 26.9	-0.6
HATJ			eS	Sn	19 50 47.0	-0.7
NSY	**Sanyi**	**1.56 253**	eP	Pn	19 50 31.1	+3.2
	baz=252					
TWQ1	**Liyutan**	**1.57 251**	eP	Pn	19 50 30.0	+1.9
	baz=250					
JKRS	**Kuro-shima**	**1.60 113**	P	Pn	19 50 28.6	0.0
JKRS			eS	Sn	19 50 49.2	-0.5
JIJ	**Ishigaki jima**	**1.67 107**	P	Pn	19 50 30.2	+0.7
JIJ			eS	Sn	19 50 51.7	+0.3
EHY	**Hungye**	**1.68 216**	eP	Pn	19 50 32.4	+2.8
	baz=215					
SMLT	**Sun Moon Lake**	**1.68 234**	eP	Pn	19 50 30.6	+0.9
	baz=233					
TYC	**Yuchr**	**1.70 236**	eP	Pn	19 50 31.1	+1.1
	baz=235					
TWF1	**Yuli**	**1.82 214**	eP	Pn	19 50 32.1	+0.5
	baz=213					
WNT	**Mingjian**	**1.85 238**	eP	Pn	19 50 34.9	+2.9
	baz=237					
YUS	**Yu-Shan**	**1.91 224**	eP	Pn	19 50 33.6	+0.8
	baz=223					
ALS	**Alishan**	**1.99 227**	eP	Pn	19 50 35.2	+1.3
	baz=226					
CHN5	**Tsauling**	**2.02 231**	eP	Pn	19 50 36.1	+1.8
	baz=230					
ELDTW	**Lidau**	**2.10 217**	eP	Pn	19 50 36.1	+0.7
	baz=216					
JTJ	**Tarama**	**2.11 96**	P	Pn	19 50 37.6	+2.0
WTP	**Ta-pu**	**2.30 225**	eP	Pn	19 50 38.1	0.0
	baz=224					
CHN1	**Nanshi**	**2.40 226**	eP	Pn	19 50 41.8	+2.3
	baz=225					
SGST	**Jiashian**	**2.44 223**	eP	Pn	19 50 40.5	+0.5
	baz=222					
SSD	**Sandimen**	**2.67 218**	eP	Pn	19 50 45.5	+2.4
	baz=217					
EAST	**Anshuo**	**2.86 210**	eP	Pn	19 50 48.1	+2.3
	baz=209					

*IDC **23** 20:04:37.8±1.1, 30.°78N×103.°41E, h0km, mb3.6/8, mb1 3.6/10, mb1mx3.5/26, mbtmp3.5/10, ML3.4/2, Error ellipse: s-maj=33.1km s-min=21.6km az=57.0*
*ISCJB **23** 20:04:38.1±0.4, 30.°75N±0.°04×103.°36E±0.°05, h10km, mb3.5/9, Error ellipse: s-maj=6.3km s-min=5.5km az=19.1*
*NEIC **23** 20:04:39.6±0.5, 30.°79N×103.°51E, h10km, mb3.5/1, Error ellipse: s-maj=10.3km s-min=9.4km az=77.0*
*BJI **23** 20:04:40.2, 30.°73N×103.°62E, h12km, ML3.5/15*
ISC 23 20:04:40.0±0.4, 30.°80N±0.°04×103.°42E±0.°05, h10km, n20, σ0.99/24, mb3.5/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**69**	Pg	**Pg**	**20 04 46.5**	**+0.3**
CD2				Sg	**Sg**	**20 04 52.1**	**+1.7**
CD2				smax			
	comp=N,22μm,0.8s						
GYA	**Guiyang**	**5.18**	**146**	Pn	**Pn**	**20 05 57.4**	**-0.1**
GYA				Sn	**Sn**	**20 06 57.6**	**+0.3**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,140nm,1.0s						
ENH	**Enshi**	**5.26**	**94**	ePn	**Pn**	**20 05 57.0**	**-1.6**
	comp=E,77nm,0.8s						
XAN	**Xi'an**	**5.66**	**54**	Pn	**Pg**	**20 06 35.3**	**+6.8**
XAN				Pg	x	20 06 46.5	
XAN				Sg	**Sb**	**20 07 34.1**	**+7.3**
XAN				smax			
	comp=N,150nm,0.9s						
XAN				smax			
	comp=E,46nm,0.9s						
KMI	**Kunming**	**5.69**	**186**	Pn	**Pn**	**20 06 05.8**	**+1.3**
KMI				Sn	**Sn**	**20 07 09.6**	**-0.2**
KMI				smax			
	comp=N,24nm,1.8s						
KMI				smax			
	comp=E,27nm,1.6s						
WHN	**Wuhan**	**9.42**	**89**	P	**Pn**	**20 06 52.5**	**-3.2**
LSA	**Lhasa**	**10.67**	**267**	eP	**Pn**	**20 07 14.7**	**+1.9**
CMAR	**Chiang Mai Arr**	**12.94**	**199**	Pn	**Pn**	**20 07 44.5**	**+0.6**
	comp=E,0.1nm,0.3s,baz=13,slow=11,SNR=4.3						
SONM	**Songino Array**	**17.17**	**7**	P	**Pn**	**20 08 41.1**	**+1.3**
	comp=E,0.1nm,0.3s,baz=189,slow=11,SNR=3.1						
ULN	**Ulaanbaatar**	**17.27**	**8**	P	**Pn**	**20 08 41.5**	**+0.4**
KSRS	**Korea Array**	**21.31**	**65**	P	**P**	**20 09 26.2**	**-0.7**
	comp=E,2.0nm,0.7s,mb3.5,baz=244,slow=9.2,SNR=8.9						
MKAR	**Makanchi Array**	**22.83**	**320**	P	**P**	**20 09 42.7**	**-0.4**
	comp=E,0.6nm,0.7s,mb3.1,baz=146,slow=10,SNR=3.2						
EKS2	**Erkin-Say**	**26.41**	**305**	P	**P**	**20 10 16.8**	**+0.2**
	comp=E,0.8nm,0.6s,mb3.4						
ZALV	**Zalesovo Beam**	**26.75**	**335**	P	**P**	**20 10 20.0**	**+0.4**
	comp=E,0.4nm,0.5s,mb3.2,baz=146,slow=8.5,SNR=3.1						
KURK	**Kurchatov**	**27.14**	**324**	P	**P**	**20 10 22.6**	**-0.5**
	comp=E,1.2nm,0.7s,mb3.5,baz=130,slow=9.6,SNR=8.7						
FINES	**FINESS Array B**	**57.49**	**326**	P	**P**	**20 14 27.8**	**-1.1**
	comp=E,1.1nm,0.7s,mb4.0,baz=146,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**61.54**	**148**	P	**P**	**20 14 56.6**	**-0.7**
	comp=E,0.2nm,0.6s,mb3.5,baz=342,slow=6.9,SNR=4.8						
NOA	**NORSAR Array B**	**64.60**	**327**	P	**P**	**20 15 16.1**	**-1.1**
	comp=E,0.4nm,0.6s,mb3.6,baz=73,slow=6.0,SNR=2.6						
NOA	**NORSAR Array B**	**64.60**	**327**	P	**P**	**20 15 16.1**	**-1.1**
YKA	**Yellowknife Ar**	**82.16**	**17**	P	**P**	**20 16 59.9**	**-0.7**
	comp=E,0.2nm,0.4s,mb3.4,baz=329,slow=4.9,SNR=4.0						

*DJA **23** 20:05:37, 0.°39S×119.°76E, h18km, MLv4.2/3*
*NEIC **23** 20:05:37.7±0.5, 0.°54S×120.°22E, h10km, mb4.3/3, Error ellipse: s-maj=31.8km s-min=7.7km az=71.0*
*IDC **23** 20:05:37.0±0.8, 0.°65S×119.°80E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/24, mbtmp3.8/10, ML3.7/2, MS4.5/1, Ms1 4.5/1, ms1mx3.4/27, Error ellipse: s-maj=70.7km s-min=15.0km az=69.0*
ISC 23 20:05:41.1±4.1, 0.°66S±0.°06×119.°78E±0.°07, h29km±30km, n22, σ1.04/22, mb4.0/11, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.88**	**98**	P	**Pn**	**20 06 10.7**	**-0.6**
TTSI	**Tana Toraja**	**2.37**	**179**	P	**Pn**	**20 06 19.1**	**+1.0**
MRSI	**Marisa**	**2.43**	**62**	P	**Pn**	**20 06 15.0**	**-3.9**
LUWI	**Luwuk**	**3.01**	**97**	S	**Sn**	**20 07 03.1**	**+1.1**
KAPI	**Kappang**	**4.33**	**180**	Pn	**Pn**	**20 06 46.0**	**+1.0**
	5.3nm,0.3s,baz=0.4,slow=8.3,SNR=12						
KAPI				Sn	**Sn**	**20 07 34.3**	**-0.2**
	1.4nm,0.3s,baz=336,slow=23,SNR=5.8						
FITZ	**Fitzroy Crossi**	**18.27**	**162**	P	**Pn**	**20 09 51.6**	**-0.9**
	0.2nm,0.3s,baz=355,slow=5.7,SNR=6.5						
PSI	**Prapat**	**21.13**	**279**	LR	LR	20 18 30.5	
	comp=Z,1μm,18.0s,baz=4.5,slow=37						
WRAB	**Tennant Creek**	**23.88**	**144**	eP	**P**	**20 10 49.7**	**-2.6**
	9.5nm,1.1s,mb4.1						
ASAR	**Alice Springs**	**26.66**	**150**	P	**P**	**20 11 19.1**	**+1.5**
	1.1nm,0.6s,mb3.6,baz=345,slow=16,SNR=16						
STKA	**Stephens Creek**	**37.27**	**149**	P	**P**	**20 12 49.0**	**-1.4**
	1.7nm,0.6s,mb4.0,baz=184,slow=21,SNR=4.0						
STKA	**Stephens Creek**	**37.27**	**149**	eP	**P**	**20 12 48.7**	**-1.8**
	0.2nm,0.5s,mb3.2						
SONM	**Songino Array**	**49.69**	**348**	P	**P**	**20 14 31.5**	**+1.2**
	0.4nm,0.5s,mb3.7,baz=165,slow=11,SNR=4.9						
MK31	**Makanchi Array**	**57.53**	**330**	eP	**P**	**20 15 27.7**	**-0.1**
MKAR	**Makanchi Array**	**57.53**	**330**	P	**P**	**20 15 28.6**	**+0.8**
	1.7nm,0.8s,mb4.1,baz=128,slow=9.3,SNR=6.7						
KBL	**Kabul**	**58.94**	**312**	P	**P**	**20 15 35.9**	**-2.0**
	1.7nm,0.5s,mb4.3						
ZAA0	**Zalesovo Array**	**61.63**	**337**	P	**P**	**20 15 55.5**	**-0.4**
ZALV	**Zalesovo Beam**	**61.63**	**337**	P	**P**	**20 15 55.8**	**-0.1**
	0.4nm,0.3s,mb4.0,baz=126,slow=7.5,SNR=4.6						
KURK	**Kurchatov**	**61.98**	**332**	P	**P**	**20 15 58.7**	**+0.4**
	1.0nm,0.6s,mb4.1,baz=134,slow=6.4,SNR=7.5						
BVAR	**Borovoye Array**	**67.42**	**330**	P	**P**	**20 16 34.6**	**+0.8**
	1.1nm,0.9s,mb3.9,baz=222,slow=26,SNR=3.8						
ABKAR	**Akbulak array**	**71.30**	**323**	eP	**P**	**20 16 57.4**	**-0.5**
	1.6nm,0.7s,mb4.1						
AKTK	**Aktyubinsk**	**72.92**	**324**	P	**P**	**20 17 07.8**	**+0.3**
AKTO	**Aktyubinsk**	**72.92**	**324**	P	**P**	**20 17 07.8**	**+0.3**
	0.9nm,0.5s,mb3.9,baz=92,slow=5.2,SNR=4.8						

IDC 23 20:13:45.9±5.0, 31.°31N×103.°68E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/25, mbtmp3.4/5, ML3.3/1, MS4.3/1, Ms1 4.5/1, ms1mx3.4/25, Error ellipse: s-maj=112.7km s-min=32.0km az=13.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.50**	**200**	LR	LR	20 22 53.9	
	comp=Z,1μm,18.1s,baz=213,slow=41						
SONM	**Songino Array**	**16.63**	**6**	Pn	Pn	20 17 40.9	+0.5
	0.1nm,0.3s,baz=185,slow=13,SNR=2.9						
KSRS	**Korea Array**	**20.90**	**66**	P	P	20 18 29.1	-0.8
	1.1nm,0.5s,baz=260,slow=11,SNR=7.2						
MKAR	**Makanchi Array**	**22.59**	**319**	P	P	20 18 47.4	-0.5
	1.2nm,1.0s,baz=122,slow=12,SNR=7.7						
KURK	**Kurchatov**	**26.86**	**323**	P	P	20 19 28.3	+0.2
	0.4nm,0.8s,baz=127,slow=10.0,SNR=4.9						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	P	20 26 05.7	+0.3
	0.1nm,0.7s,baz=336,slow=4.1,SNR=3.1						

*ISCJB **23** 20:22:06.9±0.8, 32.°21N±0.°03×105.°13E±0.°04, h8km±5km, mb4.2/28, Error ellipse: s-maj=5.4km s-min=4.4km az=5.2*
*IDC **23** 20:22:07.8±0.6, 32.°30N×105.°02E, h0km, mb4.1/17, mb1 4.1/20, mb1mx4.0/31, mbtmp4.0/20, ML3.6/3, Error ellipse: s-maj=23.8km s-min=13.2km az=55.0*
*BJI **23** 20:22:08.8, 32.°21N×105.°09E, h12km, mB4.8/4, mb4.0/9, ML4.0/20, Ms4.2/7, Ms7 3.9/5*
*NEIC **23** 20:22:09.2±0.3, 32.°25N×105.°08E, h10km, mb4.3/10, Error ellipse: s-maj=7.2km s-min=4.9km az=73.0*
*MOS **23** 20:22:10.5±0.8, 32.°21N×105.°07E, h34km, mb4.4/19, Error ellipse: s-maj=12.5km s-min=7.9km az=104.7*
ISC 23 20:22:08.3±0.7, 32.°25N±0.°02×105.°09E±0.°03, h2km±5km, n83, σ1.03/95, mb4.2/28, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.75**	**221**	Pn	**Pn**	**20 22 37.8**	**-1.9**
CD2				Pg	**Pg**	**20 22 41.3**	**-0.6**
CD2				Sg	**Sg**	**20 23 05.3**	**+0.6**
CD2				smax			
	comp=N,8μm,0.7s						
XAN	**Xi'an**	**3.68**	**60**	Pn	**Pn**	**20 23 07.3**	**+1.2**
XAN				Pg	**Pg**	**20 23 18.6**	**-0.2**
XAN				Sg	**Sg**	**20 24 05.0**	**-1.4**
XAN				smax			
	comp=N,560nm,0.8s						
XAN				smax			
	comp=E,270nm,0.8s						
LZH	**Lanzhou**	**3.96**	**345**	Pn	**Pn**	**20 23 12.9**	**+2.9**
LZH				Pg	**Pg**	**20 23 23.3**	**-0.9**
LZH				Sn	**Sn**	**20 23 58.3**	**+1.3**
LZH				Sg	**Sg**	**20 24 13.8**	**-1.7**
LZH				smax			
	comp=N,880nm,1.0s						
LZH				smax			
	comp=E,1μm,1.0s						
LZH				LR	LR		
	comp=E,2μm,5.5s						
LZH				LR	LR		
	comp=Z,3μm,8.1s						
ENH	**Enshi**	**4.25**	**117**	ePn	**Pn**	**20 23 15.7**	**+1.6**
ENH				ePg	**Pg**	**20 23 32.5**	**+2.7**
ENH				eSg	**Sg**	**20 24 24.8**	**-0.2**
GYA	**Guiyang**	**5.94**	**166**	Pn	**Pn**	**20 23 37.8**	**+0.6**
GYA				Sn	**Sn**	**20 24 44.4**	**-1.4**
GYA				smax			
	comp=N,290nm,0.8s						
GYA				smax			
	comp=E,290nm,0.9s						
KMI	**Kunming**	**7.40**	**197**	Pn	**Pn**	**20 23 58.0**	**+0.8**
KMI				Sn	**Sn**	**20 25 21.5**	**-0.2**
KMI				smax			
	comp=N,28nm,1.3s						
KMI				smax			
	comp=E,43nm,1.7s						
KMI				LR	LR		
	comp=N,890nm,19.4s						
KMI				LR	LR		
	comp=E,670nm,15.7s						
KMI				LR	LR		
	comp=Z,1μm,21.0s						
WHN	**Wuhan**	**8.10**	**100**	eP	**Pn**	**20 24 07.3**	**+0.4**
WHN				S	**Sn**	**20 25 33.8**	**-5.2**
WHN				LR	LR		
	comp=N,2μm,4.0s						
WHN				LR	LR		
	comp=E,440nm,1.7s						
GTA	**Gaotai**	**8.32**	**331**	eP	**Pn**	**20 24 10.8**	**+0.9**
GTA				pP		20 24 15.1	
GTA				sP		20 24 18.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BTO	**Baotou**	**9.23**	**24**	eP	**Pn**	**20 24 26.9**	**+4.5**
BTO				S	Sn	20 26 35.9	+29
BTO				LR	LR		
	comp=N,100nm,7.7s						
BTO				LR	LR		
	comp=E,85nm,6.3s						
LSA	**Lhasa**	**12.23**	**262**	eP	**Pn**	**20 25 04.8**	**+1.4**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**12.23**	**262**	eP	**Pn**	**20 25 04.8**	**+1.3**
	comp=Z,5.2nm,0.8s						
QIZ	**Qiongzhong**	**13.85**	**161**	eP	**Pn**	**20 25 24.4**	**-1.2**
	comp=Z,1.3nm,1.1s						
CHTO	**Chiang Mai**	**14.48**	**204**	eP	**Pn**	**20 25 33.2**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**14.48**	**204**	eP	**Pn**	**20 25 33.2**	**-1.1**
	comp=Z,4.0nm,0.8s						
CM31	**Chiang Mai Arr**	**14.81**	**203**	eP	**Pn**	**20 25 39.5**	**+0.7**
	comp=Z,6.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.81**	**203**	Pn	**Pn**	**20 25 39.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=334,slow=21,SNR=4.4						
SONM	**Songino Array**	**15.59**	**3**	Pn	**Pn**	**20 25 49.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=12						
SONM				Lg		20 30 19.9	
	comp=Z,0.1nm,0.3s,baz=189,slow=26,SNR=3.1						
ULN	**Ulaanbaatar**	**15.66**	**5**	eP	**Pn**	**20 25 51.7**	**+1.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.66**	**5**	eP	**Pn**	**20 25 51.7**	**+1.8**
	comp=Z,6.2nm,1.0s						
ZAK	**Zakamensk**	**18.16**	**356**	eP	**Pn**	**20 26 21.5**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KSRS	**Korea Array**	**19.43**	**68**	P	**Pn**	**20 26 36.7**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=253,slow=9.9,SNR=10						
MOY	**Mondy**	**19.63**	**352**	eP	**Pn**	**20 26 44.8**	**+5.6**
IRK	**Irkutsk**	**19.98**	**359**	eP	**Pn**	**20 26 46.0**	**+2.6**
IRK				pmax	pmax		
	comp=Z,30nm,1.7s						
MK31	**Makanchi Array**	**22.69**	**316**	eP	**P**	**20 27 11.3**	**+0.3**
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**20 27 10.8**	**-0.2**
	comp=Z,6.8nm,0.9s,mb4.1,baz=110,slow=11,SNR=30						
MKAR	**Makanchi Array**	**22.69**	**316**	P	**P**	**20 27 10.8**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSH	**Kashi**	**24.60**	**295**	P	**P**	**20 27 33.5**	**+3.7**
KSH				pmax	pmax		
	comp=Z,130nm,5.3s						
TKM2	**Tokmak 2**	**25.56**	**303**	eP	**P**	**20 27 39.5**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**25.56**	**303**	eP	**P**	**20 27 39.5**	**+1.1**
	comp=Z,6.5nm,0.8s,mb4.2						
ZAA0	**Zalesovo Array**	**26.07**	**332**	eP	**P**	**20 27 42.2**	**-0.7**
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**20 27 42.4**	**-0.5**
	comp=Z,2.2nm,0.6s,mb3.9,baz=125,slow=9.3,SNR=11						
ZALV	**Zalesovo Beam**	**26.07**	**332**	P	**P**	**20 27 42.4**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
UCH	**Uchtor**	**26.17**	**301**	eP	**P**	**20 27 45.3**	**+1.3**
	comp=Z,10nm,1.1s,mb4.3						
KLR	**Kul'dur**	**26.18**	**42**	eP	**P**	**20 27 40.2**	**-3.7**
EKS2	**Erkin-Say**	**26.80**	**302**	eP	**P**	**20 27 49.0**	**-0.6**
	comp=Z,3.6nm,1.1s,mb3.8						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**20 27 49.8**	**-0.3**
	comp=Z,5.9nm,0.9s,mb4.1,baz=128,slow=9.0,SNR=22						
KURK				PcP	PcP	20 31 11.3	-1.2
	comp=Z,1.0nm,0.5s,baz=117,slow=2.2,SNR=5.3						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**20 27 49.8**	**-0.2**
KURK						20 31 11.3	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KURK	**Kurchatov**	**26.85**	**321**	P	**P**	**20 27 49.8**	**-0.3**
KURK				PcP	PcP	20 31 11.3	-1.2
KBL	**Kabul**	**30.08**	**284**	P	**P**	**20 28 19.0**	**0.0**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KBL	**Kabul**	**30.08**	**284**	P	**P**	**20 28 18.9**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**20 28 39.2**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=116,slow=9.8,SNR=5.7						
BVAR				PcP	PcP	20 31 25.9	-0.8
	comp=Z,0.9nm,0.7s,baz=169,slow=6.4,SNR=5.0						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**20 28 39.2**	**-0.3**
BVAR						20 31 25.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**37.55**	**310**	eP	**P**	**20 29 23.9**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.1						
AKTK	**Aktyubinsk**	**38.98**	**312**	P	**P**	**20 29 36.2**	**+0.5**
AKTO	**Aktyubinsk**	**38.98**	**312**	P	**P**	**20 29 36.2**	**+0.5**
	comp=Z,1.0nm,0.5s,mb3.8,baz=110,slow=15,SNR=4.1						
AKTO	**Aktyubinsk**	**38.98**	**312**	P	**P**	**20 29 36.2**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARU	**Arti**	**40.05**	**321**	eP	**P**	**20 29 44.7**	**+0.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
ARU	**Arti**	**40.05**	**321**	eP	**P**	**20 29 44.7**	**+0.1**
	comp=Z,10nm,0.8s,mb4.6						
TIXI	**Tiksi**	**41.47**	**11**	eP	**P**	**20 29 51.6**	**-4.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.9s,mb4.0						
PETK	**Petropavlovsk-**	**42.78**	**45**	P	**P**	**20 30 07.0**	**-0.1**
	comp=Z,2.9nm,0.9s,mb4.0,baz=123,slow=16,SNR=3.8						
PETK	**Petropavlovsk-**	**42.78**	**45**	P	**P**	**20 30 07.0**	**-0.1**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KIV	**Kislovodsk**	**49.39**	**303**	eP	**P**	**20 31 00.1**	**+0.8**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**49.39**	**303**	eP	**P**	**20 30 59.9**	**+0.6**
	comp=Z,9.2nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.80**	**156**	P	**P**	**20 31 34.1**	**+1.6**
	comp=Z,3.3nm,1.0s,mb4.2,baz=316,slow=9.4,SNR=5.2						
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**20 31 51.4**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.5,baz=90,slow=9.7,SNR=6.4						
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**20 31 51.4**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**56.91**	**299**	P	**P**	**20 31 51.0**	**-3.7**
BRTR	**Keskin Array B**	**56.91**	**299**	P	**P**	**20 31 53.3**	**-1.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=128,slow=8.0,SNR=6.6						
BRTR	**Keskin Array B**	**56.91**	**299**	P	**P**	**20 31 53.3**	**-1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**20 31 55.3**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.3,baz=108,slow=6.2,SNR=6.9						
FINES	**FINESS Array B**	**57.09**	**326**	P	**P**	**20 31 55.3**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**20 31 55.9**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.9,baz=67,slow=7.5,SNR=3.7						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**20 31 55.9**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**20 31 55.9**	**-0.8**
WRAB	**Tennant Creek**	**58.97**	**148**	eP	**P**	**20 32 09.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**58.97**	**148**	eP	**P**	**20 32 09.0**	**-0.3**
	comp=Z,7.5nm,0.8s,mb4.8						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**20 32 30.3**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.3,baz=333,slow=6.7,SNR=26						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**20 32 30.3**	**0.0**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**63.29**	**326**	P	**P**	**20 32 37.3**	**-0.9**
	comp=Z,1.0nm,0.6s,mb4.1,baz=62,slow=6.7,SNR=3.6						
HFS	**Hagfors**	**63.29**	**326**	P	**P**	**20 32 37.3**	**-0.8**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**63.29**	**326**	P	**P**	**20 32 37.3**	**-0.9**
NB2	**NORSAR Subarra**	**64.14**	**327**	P	**P**	**20 32 42.3**	**-1.5**
	comp=Z,2.5nm,0.6s,mb4.4,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**20 32 41.8**	**-2.0**
	comp=Z,2.1nm,0.9s,mb4.2,baz=70,slow=6.7,SNR=4.2						
NOA	**NORSAR Array B**	**64.14**	**327**	P	**P**	**20 32 41.8**	**-2.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**67.34**	**314**	P	**P**	**20 33 04.7**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=63,slow=7.6,SNR=3.0						
MCK	**McKinley**	**68.17**	**27**	P	**P**	**20 33 08.7**	**-0.9**
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**20 33 36.2**	**-0.4**
	comp=Z,3.3nm,0.8s,mb4.3,baz=333,slow=4.9,SNR=3.9						
STKA	**Stephens Creek**	**72.53**	**148**	P	**P**	**20 33 35.6**	**-1.0**
	comp=Z,1.5nm,1.2s,mb3.8						
LPG	**La Plagne**	**73.07**	**313**	eP	**P**	**20 33 39.4**	**-0.4**
	comp=Z,5.9nm,0.6s,mb4.4						
LPL	**La Plagne**	**73.08**	**313**	eP	**P**	**20 33 39.3**	**-0.5**
	comp=Z,8.

NEIC ***23*** *20:46:16.0, 22°.85S×68°.82W, h100km, mb5.2/134, After GUC.*
NEIC Felt [III] at Calama, Maria Elena and San Pedro de Atacama; [II] at Antofagasta, Mejillones, Sierra Gorda and Tocopilla.
ISCJB ***23*** *20:46:17.1±0.2, 22°.76S±0°.04×68°.76W±0°.03, h99km, mb5.1/158, Error ellipse: s-maj=5.7km s-min=3.4km az=27.3*
IDC ***23*** *20:46:18.0±0.4, 22°.81S×68°.70W, h99km±2km, mb4.7/12, mb1 4.8/17, mb1mx4.8/18, mbtmp4.6/17, MS3.4/1, Ms1 3.4/1, ms1mx3.3/24, Error ellipse: s-maj=16.8km s-min=10.5km az=54.0*
DJA ***23*** *20:46:17, 24°.57S×67°.66W, h10km, mb5.8/7*
MOS ***23*** *20:46:19.7±1.1, 22°.53S×68°.76W, h117km, mb5.5/51, Error ellipse: s-maj=11.0km s-min=6.7km az=77.7*
BJI ***23*** *20:46:20.0, 22°.90S×68°.80W, h100km, MB5.8/9*
LDG ***23*** *20:46:23.9±0.2, 21°.74S×68°.64W, h130km, Mb5.2/33, Error ellipse: s-maj=24.8km s-min=10.9km az=153.0*

ISC 23 20:46:19.2±0.2, 22°.68S±0°.04×68°.64W±0°.03, h101km, h101km±.6km; pP-P, n745, σ0°78/636, mb5.1/158, 169C-145D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.15**	**295**	*eP*		**Pn**		**20 46 38.4**	**-2.9**
MACH				*i*		S	**Sn**	**20 46 55.2**	**-2.8**
MECH	**Mejillones**	**1.72**	**256**	⇑*iP*		**Pn**		**20 46 43.6**	**-4.6**
MECH				*eS*		**Sn**		**20 47 03.7**	**-6.7**
MECH						AML	AML	20 47 09.9	
	comp=E,123μm,0.6s								
PB01	**Plate Boundary**	**1.81**	**334**	⇑*iP*		**Pn**		**20 46 48.5**	**-0.9**
PB01				*eS*		**Sn**		**20 47 12.4**	**0.0**
PB01						AML	AML	20 47 13.8	
	comp=E,60μm,0.4s								
PSGC	**Pisagua**	**3.37**	**335**	*eP*		**Pn**		**20 47 06.5**	**-3.4**
PSGC				*eS*		**Sn**		**20 47 47.3**	**-1.8**
PSGC						AML	AML	20 48 13.0	
	comp=N,9μm,0.8s								
MNMC	**Miæe Miæ**	**3.65**	**346**	*eP*		**Pn**		**20 47 12.0**	**-1.7**
MNMC				*eS*		**Sn**		**20 47 56.6**	**+0.9**
LPAZ	**La Paz**	**6.38**	**4**	P		**Pn**		**20 47 52.8**	**+2.1**
	comp=N,5.1nm,0.3s,baz=194,slow=8.9,SNR=78								
LPAZ	**La Paz**	**6.38**	**4**	*eP*		**Pn**		**20 47 51.9**	**+1.2**
LPAZ						pmax	pmax		
	comp=Z,128nm,1.1s								
LPAZ	**La Paz**	**6.38**	**4**	*eP*		**Pn**		**20 47 51.9**	**+1.2**
	comp=Z,128nm,1.1s								
LCO	**Las Campanas**	**6.57**	**196**	*eP*		**Pn**		**20 47 45.1**	**-8.1**
	comp=Z,685nm,0.8s								
CFAA	**Coronel Fontan**	**8.89**	**178**	P		**Pn**		**20 48 18.4**	**-6.4**
	comp=Z,0.9nm,0.3s,baz=351,slow=13,SNR=73								
CFAA				S			**Sn**	**20 49 50.5**	**-13**
	comp=Z,1.0nm,0.3s,baz=354,slow=19,SNR=3.2								
CFAA				LR			LR	20 52 13.0	
	comp=Z,251nm,20.9s,baz=0.8,slow=40								
SIV	**San Ignacio**	**9.76**	**48**	P		**Pn**		**20 48 33.8**	**-2.9**
	comp=Z,14nm,0.3s,baz=241,slow=12,SNR=288								
SIV				S			**Sn**	**20 50 18.8**	**-5.7**
	comp=Z,10nm,0.3s,baz=301,slow=19,SNR=4.9								
CPUP	**Villa Florida**	**10.92**	**112**	P		**Pn**		**20 48 49.5**	**-2.9**
	comp=Z,0.9nm,0.3s,baz=275,slow=12,SNR=59								
CPUP	**Villa Florida**	**10.92**	**112**	*eP*		**Pn**		**20 48 49.3**	**-3.0**
CPUP						pmax	pmax		
	comp=Z,524nm,1.1s								
CPUP	**Villa Florida**	**10.92**	**112**	*eP*		**Pn**		**20 48 49.3**	**-3.0**
	comp=Z,524nm,1.1s								
NNA	**Nana**	**13.20**	**322**	P		**Pn**		**20 49 23.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=165,slow=7.9,SNR=6.4								
NNA				S			**Sn**	**20 51 41.4**	**-6.7**
	comp=Z,2.7nm,0.3s,baz=273,slow=17,SNR=3.1								
NNA	**Nana**	**13.20**	**322**	P		**Pn**		**20 49 22.4**	**-0.4**
	comp=Z,44nm,0.8s								
TRQA	**Tornquist**	**16.36**	**161**	*eP*		**Pn**		**20 49 57.1**	**-5.6**
	comp=Z,237nm,1.3s								
PLCA	**Paso Flores**	**18.07**	**185**	P		**P**		**20 50 19.6**	**-3.0**
	comp=Z,1.3nm,0.3s,baz=17,slow=13,SNR=26								
ATAH	**Atahualpa**	**18.09**	**327**	P		**P**		**20 50 25.1**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=113,slow=3.3,SNR=9.7								
CAM4	**Nova Friburgo**	**24.08**	**94**	⇑*iP*		**P**		**20 51 22.9**	**-2.5**
CAM4				*i*				20 51 23.8	
CAM4				*i*				20 51 26.4	
CAM4				*i*				20 51 28.1	
CAM4				*i*				20 51 31.3	
CAM4				*i*				20 51 34.6	
CAM4				*i*				20 51 42.0	
CAM4				*i*				20 51 47.6	
CAM4				*i*				20 51 54.7	
CAM4				*i*				20 52 03.7	
CAM4				*i*				20 52 08.1	
CAM4				*i*				20 52 15.3	
CAM4				*i*				20 52 23.7	
OTAV	**Otavalo**	**24.70**	**336**	*eP*		**P**		**20 51 32.5**	**+1.4**
	comp=Z,166nm,1.6s,mb5.2								
ROSC	**El Rosal**	**27.93**	**348**	P		**P**		**20 52 02.2**	**+2.1**
	comp=Z,4.4nm,0.4s,mb4.4,baz=102,slow=20,SNR=2.0								
USHA	**Ushuaia**	**32.10**	**180**	P		**P**		**20 52 33.8**	**-2.7**
	comp=Z,14nm,0.8s,mb4.8,baz=319,slow=6.9,SNR=4.6								
RCBR	**Riachuelo**	**35.75**	**67**	*eP*		**P**		**20 53 08.4**	**-0.2**
	comp=Z,214nm,1.1s,mb6.0								
FDF	**Fort de France**	**37.90**	**12**	*eP*		**P**		**20 53 24.3**	**-2.4**
FDF						pmax	pmax		
	comp=Z,102nm,0.7s,mb5.8								
FDF	**Fort de France**	**37.90**	**12**	*eP*		**P**		**20 53 24.2**	**-2.4**
	comp=Z,102nm,0.7s,mb5.8								
CRPR	**Cabo Rojo, PR**	**40.47**	**2**	*eP*		**P**		**20 53 45.9**	**-2.1**
	comp=Z,15nm,0.7s,mb4.9								
SJG	**San Juan**	**40.62**	**4**	*eP*		**P**		**20 53 46.8**	**-2.4**
SJG						pmax	pmax		
	comp=Z,97nm,0.7s								
SJG	**San Juan**	**40.62**	**4**	*eP*		**P**		**20 53 46.8**	**-2.4**
	comp=Z,96nm,0.7s,mb5.7								
NHSC	**New Hope**	**56.56**	**348**	*eP*		**P**		**20 55 51.5**	**+0.3**
	comp=Z,106nm,1.4s,mb5.7								
LRAL	**Lakeview Retre**	**58.11**	**342**	*eP*		**P**		**20 56 00.1**	**-1.9**
	comp=Z,13nm,1.0s,mb4.9								
CPCT	**Cooper Cave**	**59.74**	**345**	*eP*		**P**		**20 56 11.8**	**-1.5**
TKL	**Tuckaleechee C**	**59.77**	**346**	*eP*		**P**		**20 56 12.0**	**-1.5**
OXF	**Oxford**	**60.21**	**340**	*eP*		**P**		**20 56 14.7**	**-1.8**
OXF				*e*PP*		pP		20 56 38.2	-3.3
OXF						pmax	pmax		
	comp=Z,71nm,1.0s,mb5.7								
OXF	**Oxford**	**60.21**	**340**	*eP*		**P**		**20 56 14.7**	**-1.8**
	comp=Z,71nm,1.0s,mb5.7								
OXF				*epP*		pP		20 56 38.2	-3.3
PLAL	**Pickwick Lake**	**60.24**	**342**	*eP*		**P**		**20 56 14.6**	**-2.1**
	comp=Z,25nm,0.9s,mb5.2								
PLAL				*epP*		pP		20 56 38.8	-2.9
BLA	**Blacksburg**	**60.60**	**349**	*eP*		**P**		**20 56 18.9**	**-0.2**
BLA				*e*PP*		pP		20 56 44.2	+0.1
BLA						pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1								
BLA	**Blacksburg**	**60.60**	**349**	*eP*		**P**		**20 56 18.9**	**-0.2**
	comp=Z,20nm,1.1s,mb5.1								
BLA				*epP*		pP		20 56 44.2	+0.1
ELN	**Prospectdale**	**60.67**	**349**	*eP*		**P**		**20 56 19.7**	**0.0**
JCT	**Junction City**	**60.74**	**329**	*eP*		**P**		**20 56 19.3**	**-1.0**
JCT						pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3								
JCT	**Junction City**	**60.74**	**329**	*eP*		**P**		**20 56 19.3**	**-1.0**
	comp=Z,23nm,0.8s,mb5.3								
WVT	**Waverly**	**61.25**	**342**	*eP*		**P**		**20 56 21.5**	**-2.0**
WVT				*e*PP*		pP		20 56 45.6	-3.0
WVT						pmax	pmax		
	comp=Z,53nm,1.0s,mb5.5								
WVT	**Waverly**	**61.25**	**342**	*eP*		**P**		**20 56 21.4**	**-2.1**
	comp=Z,53nm,1.0s,mb5.5								
WVT				*epP*		pP		20 56 45.6	-2.9
UALR	**University of**	**61.42**	**338**	*eP*		**P**		**20 56 23.2**	**-1.5**
	comp=Z,26nm,1.0s,mb5.2								
UALR				*epP*		pP		20 56 48.6	-1.2
628A	**Black Gap, Mar**	**61.46**	**326**	⇑P		**P**		**20 56 24.8**	**-0.3**
	baz=62,SNR=13								
MIAR	**Mount Ida**	**61.65**	**337**	*eP*		**P**		**20 56 25.0**	**-1.3**
MIAR				*e*PP*		pP		20 56 49.4	-1.9
MIAR						pmax	pmax		
	comp=Z,41nm,0.9s,mb5.5								
MIAR	**Mount Ida**	**61.65**	**337**	*eP*		**P**		**20 56 25.0**	**-1.3**
	comp=Z,41nm,0.9s,mb5.5								
MIAR				*epP*		pP		20 56 49.4	-2.0
627A	**Terlingua Ranc**	**61.69**	**326**	⇓P		**P**		**20 56 26.1**	**-0.5**
	baz=62,SNR=8.4								
TXAR	**Lajitas Array**	**61.74**	**325**	P		**P**		**20 56 25.9**	**-1.2**
	comp=Z,1.4nm,0.7s,mb4.1,baz=147,slow=7.5,SNR=16								
TXAR				P		pP		20 56 51.0	-1.1
	comp=Z,6.0nm,1.0s,baz=152,slow=5.5,SNR=8.0								
TXAR	**Lajitas Array**	**61.74**	**325**	P		**P**		**20 56 25.9**	**-1.2**
TXAR				P		pP		20 56 51.0	-1.1
528A	**Cox Ranch, San**	**61.95**	**327**	⇑P		**P**		**20 56 27.6**	**-0.7**
	baz=62,SNR=7.9								
626A	**Big Bend Ranch**	**62.16**	**325**	⇓P		**P**		**20 56 29.5**	**-0.3**
	baz=62,SNR=10.0								
428A	**Kincaid Ranch,**	**62.35**	**327**	⇓P		**P**		**20 56 30.4**	**-0.7**
	baz=63								
527A	**Woodward Ranch**	**62.36**	**326**	⇓P		**P**		**20 56 30.4**	**-0.8**
	baz=63								
526A	**Mary Lane Ranc**	**62.54**	**325**	⇓P		**P**		**20 56 31.9**	**-0.5**
	baz=63,SNR=10								
427A	**Hayter Ranch,**	**62.81**	**327**	⇑P		**P**		**20 56 33.1**	**-1.1**
	baz=63								
MCWV	**Mont Chateau**	**62.89**	**350**	*eP*		**P**		**20 56 33.3**	**-1.2**
	comp=Z,11nm,0.8s,mb4.8								
MCWV				*epP*		pP		20 56 59.2	-0.4
328A	**Wristen Ranch,**	**62.95**	**327**	⇓P		**P**		**20 56 34.2**	**-0.8**
	baz=63,SNR=8.1								
SIUC	**Southern Illin**	**63.12**	**342**	*eP*		**P**		**20 56 33.5**	**-2.6**
	comp=Z,22nm,0.9s,mb5.1								
SIUC				*epP*		pP		20 56 59.7	-1.5
326A	**Caldwell Ranch**	**63.48**	**326**	⇑P		**P**		**20 56 37.8**	**-0.8**
	baz=64,SNR=5.3								
425A	**Indio Mountain**	**63.58**	**325**	⇑P		**P**		**20 56 38.6**	**-0.6**
	baz=64,SNR=18								
FVM	**French Village**	**63.73**	**341**	*eP*		**P**		**20 56 38.3**	**-1.7**
FVM				*e*PP*		pP		20 57 03.5	-1.7
FVM						pmax	pmax		
	comp=Z,162nm,1.1s,mb5.8								
FVM	**French Village**	**63.73**	**341**	*eP*		**P**		**20 56 38.3**	**-1.7**
	comp=Z,162nm,1.1s,mb5.8								
FVM				*epP*		pP		20 57 03.5	-1.7
ACSO	**Alum Creek Sta**	**64.00**	**348**	*eP*		**P**		**20 56 39.4**	**-2.4**
	comp=Z,18nm,0.8s,mb5.0								
ACSO				*epP*		pP		20 57 05.8	-1.1
ACSO				*eS*		PcP		20 57 17.5	+1.2
325A	**Bean Ranch, Si**	**64.04**	**326**	⇓P		**P**		**20 56 41.7**	**-0.5**
	baz=64,SNR=26								
CCM	**Cathedral Cave**	**64.04**	**340**	*eP*		**P**		**20 56 40.2**	**-1.9**
CCM				*e*PP*		pP		20 57 05.2	-2.1
CCM						pmax	pmax		
	comp=Z,39nm,0.8s,mb5.3								
CCM	**Cathedral Cave**	**64.04**	**340**	*eP*		**P**		**20 56 40.2**	**-1.9**
	comp=Z,39nm,0.8s,mb5.3								
CCM				*epP*		pP		20 57 05.2	-2.0
226A	**Malaga, Loving**	**64.14**	**327**	⇑P		**P**		**20 56 42.6**	**-0.3**
	baz=64								
127A	**Arkansas Junct**	**64.27**	**328**	⇓P		**P**		**20 56 43.1**	**-0.5**
	baz=65								
324A	**Moseley Ranch,**	**64.36**	**325**	⇑P		**P**		**20 56 43.7**	**-0.6**
	baz=65,SNR=12								
GDL2	**Guadalupe Moun**	**64.39**	**327**	*eP*		**P**		**20 56 43.7**	**-0.8**
	comp=Z,11nm,1.2s,mb4.6								
GDL2				*epP*		pP		20 57 09.1	-0.5
MNTX	**Cornudas Mount**	**64.51**	**326**	*eP*		**P**		**20 56 42.6**	**-2.7**
	comp=Z,14nm,1.2s,mb4.7								
126A	**Clayton Basin,**	**64.57**	**327**	⇑P		**P**		**20 56 45.0**	**-0.7**
	baz=65								
Z27A	**Tatum**	**64.71**	**328**	⇑P		**P**		**20 56 45.3**	**-1.3**
	baz=65,SNR=6.9								
CPRX	**Cap Rock**	**64.80**	**328**	*eP*		**P**		**20 56 46.6**	**-0.5**
	comp=Z,8.4nm,0.9s,mb4.6								
224A	**Corundas Mount**	**64.88**	**326**	⇑P		**P**		**20 56 46.8**	**-0.9**
	baz=65,SNR=11								
125A	**Gardner Draw,**	**64.90**	**327**	⇑P		**P**		**20 56 46.5**	**-1.3**
	baz=65								
MSTX	**Muleshoe**	**65.03**	**329**	⇑P		**P**		**20 56 47.1**	**-1.5**
	baz=65,SNR=8.4								
Z26A	**Caprock**	**65.05**	**328**	⇑P		**P**		**20 56 47.9**	**-0.9**
	baz=65,SNR=7.0								
Y27A	**Causey**	**65.15**	**329**	⇑P		**P**		**20 56 48.1**	**-1.3**
	baz=66,SNR=6.0								
124A	**Stringfield Ra**	**65.34**	**326**	⇑P		**P**		**20 56 50.5**	**-0.2**
	baz=66,SNR=11								
Z25A	**Roswell**	**65.43**	**327**	⇓P		**P**		**20 56 50.2**	**-1.0**
	baz=66								
MAIT	**Maitri**	**65.61**	**159**	*eP*		**P**		**20 56 51.6**	**-0.3**
MAIT				*eE*		pP		20 57 16.7	-0.5
NVL	**N'lazarevskaya**	**65.64**	**159**	*eP*		**P**		**20 56 52.8**	**+0.7**
NVL						pmax	pmax		
	comp=Z,66nm,1.3s,mb5.3								
222A	**Williams Famil**	**65.74**	**325**	⇑P		**P**		**20 56 52.5**	**-0.7**
	baz=66								
Z24A	**Sheeppen Canyo**	**65.79**	**327**	⇑P		**P**		**20 56 52.3**	**-1.2**
	baz=66,SNR=13								
320A	**Kipp Ranch, An**	**65.93**	**323**	⇑P		**P**		**20 56 54.3**	**-0.1**
	baz=66,SNR=5.5								
Y25A	**Mesa, Roswell**	**65.93**	**328**	⇓P		**P**		**20 56 53.4**	**-1.0**
	baz=66,SNR=7.9								
X26A	**CR and CF Fran**	**66.00**	**329**	⇓P		**P**		**20 56 54.0**	**-0.9**
	baz=66,SNR=6.1								
Z23A	**Rita Site, Whi**	**66.18**	**326**	⇓P		**P**		**20 56 55.8**	**-0.2**
	baz=66								
Y24A	**Capitan**	**66.30**	**327**	⇓P		**P**		**20 56 56.7**	**-0.1**
	baz=67								
319A	**Douglas**	**66.38**	**323**	⇓P		**P**		**20 56 57.9**	**+0.6**
	baz=67								
X25A	**Clemmons Ranch**	**66.40**	**328**	⇑P		**P**		**20 56 56.1**	**-1.3**
	baz=67								
W26A	**Owens Ranch, T**	**66.42**	**329**	⇑P		**P**		**20 56 57.2**	**-0.3**
	baz=67,SNR=6.0								
121A	**Cookes Peak, D**	**66.43**	**324**	⇓P		**P**		**20 56 58.0**	**+0.3**
	baz=67,SNR=6.0								
Z22A	**Elephant Butte**	**66.56**	**326**	⇓P		**P**		**20 56 59.0**	**+0.6**
	baz=67,SNR=8.1								
Y23A	**Lovelace Mesa,**	**66.62**	**327**	⇑P		**P**		**20 56 58.9**	**+0.1**
	baz=67								
318A	**Bisbee**	**66.82**	**322**	⇓P		**P**		**20 57 00.4**	**+0.3**
	baz=67,SNR=13								
219A	**White Tail Can**	**66.83**	**323**	⇑P		**P**		**20 57 00.6**	**+0.4**
	baz=67,SNR=6.3								
W25A	**X Bar L Ranch,**	**66.86**	**329**	⇑P		**P**		**20 56 59.6**	**-0.7**
	baz=67,SNR=9.0								
120A	**U Bar Ranch, L**	**66.90**	**324**	⇓P		**P**		**20 57 01.0**	**+0.3**
	baz=67								
Z21A	**St. Cloud Mine**	**66.97**	**325**	⇑P		**P**		**20 57 01.2**	**+0.2**
	baz=67								
V26A	**Tequesquite Ra**	**67.00**	**329**	⇓P		**P**		**20 57 00.5**	**-0.7**
	baz=67								
BNM	**Barren Site**	**67.08**	**326**	*eP*		**P**		**20 57 01.7**	**-0.1**
	comp=Z,3.6nm,0.7s,mb4.3								
BNM				*epP*		pP		20 57 26.2	-1.0
Y22A	**Socorro**	**67.09**	**326**	⇓P		**P**		**20 57 01.9**	**+0.1**
	baz=67,SNR=5.2								
LONY	**Lake Ozonia**	**67.19**	**355**	*eP*		**P**		**20 57 01.8**	**-0.4**
	comp=Z,12nm,0.8s,mb4.8								
218A	**Dragoon**	**67.25**	**322**	⇓P		**P**		**20 57 03.5**	**+0.6**
	baz=68,SNR=12								
W24A	**Lazy 6 Ranch,**	**67.31**	**328**	⇑P		**P**		**20 57 02.7**	**-0.5**
	baz=68								
Z20A	**Nine Sixteen R**	**67.31**	**324**	⇑P		**P**		**20 57 03.9**	**+0.6**
	baz=68,SNR=17								
U26A	**Atchley Ranch,**	**67.47**	**330**	⇓P		**P**		**20 57 03.5**	**-0.7**
	baz=68								
Y21A	**Point of Rocks**	**67.51**	**326**	⇓P		**P**		**20 57 05.0**	**+0.5**
	baz=68,SNR=5.3								
217A	**Green Valley**	**67.54**	**322**	⇑P		**P**		**20 57 04.8**	**+0.1**
	baz=68,SNR=13								
LAZ	**Ladron**	**67.54**	**326**	*eP*		**P**		**20 57 04.5**	**-0.1**
	comp=Z,16nm,1.5s,mb4.6								
LAZ				*epP*		pP		20 57 30.3	+0.2
X22A	**Bernardo**	**67.56**	**326**	⇑P		**P**		**20 57 05.0**	**+0.3**
	baz=68								
PKME	**Peaks-Kenny Pk**	**67.62**	**360**	*eP*		**P**		**20 57 05.0**	**+0.2**
	comp=Z,23nm,0.8s,mb5.0								
W23A	**Werner Place,**	**67.64**	**327**	⇓P		**P**		**20 57 05.1**	**-0.2**
	baz=68								
118A	**Homack Ranch,**	**67.71**	**323**	⇑P		**P**		**20 57 06.2**	**+0.4**
	baz=68,SNR=9.7								
Y20A	**Horse Springs,**	**67.81**	**325**	⇓P		**P**		**20 57 06.5**	**+0.2**
	baz=68,SNR=9.1								
Z19A	**T-Link Ranch,**	**67.81**	**324**	⇓P		**P**		**20 57 07.0**	**+0.6**
	baz=68								
TUC	**Tucson**	**67.92**	**322**	*eP*		**P**		**20 57 07.0**	**-0.1**
TUC				*e*PP*		pP		20 57 32.5	0.0
TUC						pmax	pmax		
	comp=Z,39nm,1.4s,mb5.0								
TUC	**Tucson**	**67.92**	**322**	*eP*		**P**		**20 57 07.0**	**-0.1**
	comp=Z,39nm,1.4s,mb5.0								
TUC				*epP*		pP		20 57 32.5	-0.1
W22A	**Albuquerque**	**67.93**	**327**	⇑P		**P**		**20 57 07.4**	**+0.4**
	baz=68								
216A	**Three Points,**	**68.08**	**322**	⇑P		**P**		**20 57 08.6**	**+0.5**
	baz=68,SNR=8.8								
117A	**Oracle**	**68.09**	**322**	⇑P		**P**		**20 57 08.7**	**+0.5**
	baz=68,SNR=12								
V23A	**Ortiz Mt. (NFS**	**68.12**	**328**	⇓P		**P**		**20 57 08.0**	**-0.2**
	baz=68,SNR=6.2								
JFWS	**Jewell Farm**	**68.24**	**343**	*eP*		**P**		**20 57 07.7**	**-1.1**
JFWS				*e*PP*		pP		20 57 33.4	-0.9
JFWS						pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9								
JFWS	**Jewell Farm**	**68.24**	**343**	*eP*		**P**		**20 57 07.7**	**-1.2**
	comp=Z,20nm,1.0s,mb4.9								
JFWS				*epP*		pP		20 57 33.4	-0.9
Y19A	**Nutrioso**	**68.31**	**324**	⇓P		**P**		**20 57 09.8**	**+0.3**
	baz=69,SNR=20								
X20A	**Quemado**	**68.36**	**325**	⇓P		**P**		**20 57 10.1**	**+0.3**
	baz=69								
W21A	**San Fidel**	**68.36**	**326**	⇓P		**P**		**20 57 10.1**	**+0.3**
	baz=69								
LIC	**Lamto**	**68.48**	**73**	*eP*		**P**		**20 57 10.3**	**-0.7**
	comp=Z,60nm,0.8s,mb5.2								
LIC	**Lamto**	**68.48**	**73**	*eP*		**P**		**20 57 09.8**	**-1.2**
	comp=Z,121nm,1.1s,mb5.7								
LIC	**Lamto**	**68.48**	**73**	*eP*		**P**		**20 57 10.3**	**-0.7**
	comp=Z,30nm,0.8s,mb5.2								
Z17A	**San Carlos Hig**	**68.48**	**323**	⇑P		**P**		**20 57 10.8**	**+0.2**
	baz=69								
V22A	**San Miguel Ran**	**68.61**	**327**	⇓P		**P**		**20 57 11.4**	**+0.1**
	baz=69								
116A	**Eloy**	**68.63**	**322**	⇑P		**P**		**20 57 12.0**	**+0.5**
	baz=69								
TIC	**Toumodi**	**68.68**	**73**	*eP*		**P**		**20 57 11.1**	**-1.1**
	comp=Z,255nm,1.2s,mb5.9								
X19A	**St. Johns**	**68.69**	**325**	⇓P		**P**		**20 57 11.7**	**-0.1**
	baz=69								
KIC	**Kosan Boka**	**68.80**	**73**	*eP*		**P**		**20 57 11.8**	**-1.2**
	comp=Z,234nm,0.9s,mb6.0								
214A	**Organ Pipe Nat**	**68.83**	**321**	⇑P		**P**		**20 57 13.2**	**+0.4**
	baz=69,SNR=5.2								
DBIC	**Dimbokro**	**68.83**	**73**	P		**P**		**20 57 12.8**	**-0.5**
	comp=Z,85nm,0.8s,mb5.6,baz=216,slow=6.4,SNR=60								
DBIC				P		pP		20 57 37.9	-0.8
	comp=Z,18nm,0.7s,baz=208,slow=6.1,SNR=3.1								
DBIC				sP		sP		20 57 48.2	-1.5
	comp=Z,32nm,0.9s,baz=226,slow=4.6,SNR=3.6								
DBIC	**Dimbokro**	**68.83**	**73**	*eP*		**P**		**20 57 12.6**	**-0.6**
DBIC				*e*PP*		pP		20 57 37.6	-1.1
DBIC						pmax	pmax		
	comp=Z,129nm,1.0s								
DBIC	**Dimbokro**	**68.83**	**73**	*eP*		**P**		**20 57 12.6**	**-0.6**
	comp=Z,129nm,1.0s,mb5.7								
DBIC				*epP*		pP		20 57 37.6	-1.1
V21A	**Milan**	**68.89**	**327**	⇑P		**P**		**20 57 13.6**	**+0.6**
	baz=69								
Y17A	**Roosevelt**	**68.98**	**323**	⇓P		**P**		**20 57 14.0**	**+0.4**
	baz=69,SNR=16								
115A	**Sonoran Desert**	**69.03**	**321**	⇓P		**P**		**20 57 15.8**	**+1.8**
	baz=69								
Z16A	**Peralta Trail,**	**69.05**	**322**	⇓P		**P**		**20 57 14.6**	**+0.6**
	baz=69								
X18A	**Snowflake**	**69.12**	**324**	⇑P		**P**		**20 57 15.3**	**+0.8**
	baz=70								
W19A	**Sanders**	**69.26**	**325**	⇑P		**P**		**20 57 15.4**	**0.0**
	baz=70								
V20A	**Brimhall**	**69.31**	**326**	⇑P		**P**		**20 57 15.9**	**+0.3**
	baz=70,SNR=6.0								
X17A	**Forest Lakes**	**69.44**	**324**	⇑P		**P**		**20 57 17.2**	**+0.7**
	baz=70								
114A	**Black Gap (USA**	**69.45**	**321**	⇓P		**P**		**20 57 16.8**	**+0.3**
	baz=70								
Y16A	**Circle Bar Ran**	**69.47**	**323**	⇓P		**P**		**20 57 17.0**	**+0.3**
	baz=70								
T22A	**Edith**	**69.48**	**328**	⇑P		**P**		**20 57 16.6**	**0.0**
	baz=70,SNR=9.5								

Q20A **Ridgley Place,** 71.68 328 ⇑P P 20 57 29.8 -0.2
baz=72
W13A **Hualapai Mount** 71.72 322 ⇑P P 20 57 31.1 +0.8
baz=72
IRM **Iron Mountain** 71.78 321 ⇓P P 20 57 31.7 +1.0
baz=72
T16A **Glen Canyon Da** 71.80 325 ⇑P P 20 57 31.6 +0.9
baz=72
U15A **North Rim** 71.81 324 ⇓P P 20 57 31.3 +0.5
baz=72,SNR=20
S17A **Black Ridge (B** 71.92 326 ⇑P P 20 57 31.9 +0.4
baz=72
R18A **Canyonlands Na** 72.03 327 ⇓P P 20 57 32.3 +0.2
baz=72
Q19A **Hogan Spring (** 72.15 328 ⇓P P 20 57 33.1 +0.2
baz=72,SNR=9.9
BELC **Belle Mtn.** 72.16 320 ⇑P P 20 57 33.6 +0.6
baz=72
U14A **Mt Trumbull** 72.28 324 ⇑P P 20 57 34.3 +0.7
baz=73,SNR=16
N22A **Wattenberg Ran** 72.28 331 ⇑P P 20 57 33.9 +0.3
baz=73,SNR=9.8
T15A **Red Dirt Ranch** 72.29 324 ⇑P P 20 57 34.5 +0.8
baz=73,SNR=7.6
V13A **Grand Canyon W** 72.32 323 ⇓P P 20 57 33.9 +0.1
baz=73,SNR=6.8
W12A **Cal Nev Ari** 72.42 322 ⇓P P 20 57 34.8 +0.3
baz=73
R17A **Hanksville Air** 72.47 326 ⇓P P 20 57 34.7 0.0
baz=73,SNR=16
GMRC **Granite Mounta** 72.51 321 ⇑P P 20 57 35.6 +0.5
baz=73,SNR=12
P19A **Cripple Cowboy** 72.54 328 ⇑P P 20 57 35.2 +0.1
baz=73,SNR=23
O20A **White River Ci** 72.58 329 ⇑P P 20 57 35.5 +0.1
baz=73,SNR=8.2
MURC **Murrieta** 72.61 319 ⇓P P 20 57 36.4 +0.7
baz=73
Q18A **Rafter H Ranch** 72.70 327 ⇑P P 20 57 35.9 -0.2
baz=73,SNR=6.6
T14A **Hurricane** 72.70 324 ⇑P P 20 57 36.4 +0.3
baz=73
U13A **Pakoon Wash** 72.71 323 ⇑P P 20 57 37.2 +1.0
baz=73
V12A **Nelson** 72.72 322 ⇓P P 20 57 36.4 +0.1
baz=73
N21A **Black Mountain** 72.74 330 ⇑P P 20 57 36.3 +0.1
baz=73
R16A **Teasdale** 72.76 326 ⇑P P 20 57 36.2 -0.3
baz=73
SRU **San Rafael** 72.90 327 ⇓P P 20 57 37.1 -0.1
baz=73
SRU **San Rafael** 72.90 327 *eP* P 20 57 37.1 -0.1
SRU *e*PP pP 20 58 03.5 +0.5
SRU pmax pmax
comp=Z,31nm,0.9s,mb5.1
SRU **San Rafael** 72.90 327 *eP* P 20 57 37.0 -0.2
comp=Z,31nm,0.9s,mb5.1
SRU *ep*P pP 20 58 03.5 +0.5
HEC **Hector,Ludlow** 72.94 320 ⇓P P 20 57 38.4 +0.9
baz=73,SNR=6.3
SCI **San Clemente I** 73.01 318 P P 20 57 39.8 +1.8
baz=73
U12A **Valley of Fire** 73.05 323 ⇓P P 20 57 38.9 +0.7
baz=73
T13A **Saint George** 73.12 324 ⇑P P 20 57 39.0 +0.4
baz=74,SNR=6.6
R15A **Junction** 73.12 325 ⇑P P 20 57 39.2 +0.7
baz=74
TUQ **Turquoise Moun** 73.12 321 ⇑P P 20 57 39.7 +1.0
baz=73
V11A **Goodsprings** 73.13 322 ⇑P P 20 57 39.6 +0.9
baz=73
O19A **Miners Draw (B** 73.13 329 ⇓P P 20 57 38.9 +0.3
baz=74
N20A **Spence Gulch,** 73.14 330 ⇓P P 20 57 38.7 +0.1
baz=74,SNR=11
P18A **Preston Nutter** 73.16 328 ⇑P P 20 57 38.9 +0.2
baz=74,SNR=10
CCUT **Cedar City** 73.21 324 *eP* P 20 57 40.1 +1.0
comp=Z,42nm,0.9s,mb5.3
CCUT *ep*P pP 20 58 06.0 +1.2
EYMN **Ely** 73.24 344 *eP* P 20 57 37.3 -1.7
comp=Z,20nm,0.9s,mb4.9
EYMN *ep*P pP 20 58 03.6 -1.2
L22A **Ellis Ranch, M** 73.26 332 ⇓P P 20 57 39.5 +0.2
baz=74
P17A **Butcher Ranch,** 73.28 327 ⇓P P 20 57 39.6 +0.1
baz=74
MSU **Marysvale** 73.29 326 *eP* P 20 57 40.1 +0.5
MSU *e*PP pP 20 58 06.0 +0.7
MSU pmax pmax
comp=Z,29nm,0.9s,mb5.1
MSU **Marysvale** 73.29 326 *eP* P 20 57 40.1 +0.5
comp=Z,29nm,0.9s,mb5.1
MSU *ep*P pP 20 58 06.0 +0.6
BFSC **Mount Baldy St** 73.32 319 ⇑P P 20 57 40.7 +0.9
baz=74
M21A **Separation Pea** 73.34 331 ⇓P P 20 57 39.7 -0.1
baz=74,SNR=7.6
S13A **Holt Ranch, En** 73.50 324 ⇓P P 20 57 41.3 +0.5
baz=74,SNR=15
O18A **Roosevelt** 73.53 328 ⇑P P 20 57 41.1 +0.2
baz=74
N19A **John Jarvie Ra** 73.62 329 ⇓P P 20 57 41.6 +0.2
baz=74,SNR=11
SHOC **Shoshone** 73.66 321 ⇑P P 20 57 42.6 +0.9
baz=74
Q15A **Fillmore** 73.76 326 ⇑P P 20 57 42.5 +0.1
baz=74
O17A **Robinson Place** 73.83 328 ⇓P P 20 57 43.4 +0.7
baz=74,SNR=19
N18A **Larsen Ranch,** 73.92 329 ⇑P P 20 57 44.1 +1.0
baz=74
EDW2 **Edwards Air Fo** 73.96 320 ⇑P P 20 57 43.8 +0.3
baz=74
RSSD **Black Hills** 73.97 334 *eP* P 20 57 43.5 +0.1
RSSD pmax pmax
comp=Z,14nm,0.9s,mb4.7
RSSD **Black Hills** 73.97 334 *eP* P 20 57 43.5 +0.1
comp=Z,14nm,0.9s,mb4.7
R13A **O'Grain Ranch,** 74.00 324 ⇓P P 20 57 44.9 +1.2
baz=74
U10A **Ash Meadows, A** 74.05 322 ⇓P P 20 57 45.2 +1.1
baz=74
P15A **Leamington** 74.14 326 ⇓P P 20 57 44.7 +0.2
baz=74
Q14A **Sevier Lake (B** 74.22 325 ⇑P P 20 57 45.3 +0.4
baz=75,SNR=12
DAU **Daniels Canyon** 74.26 328 *eP* P 20 57 45.8 +0.6
DAU *e*PP pP 20 58 12.0 +1.0
DAU pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
DAU **Daniels Canyon** 74.26 328 *eP* P 20 57 45.8 +0.6
comp=Z,10.0nm,0.8s,mb4.6
DAU *ep*P pP 20 58 12.0 +1.0
FURC **Furnace Creek,** 74.39 321 ⇓P P 20 57 46.4 +0.4
baz=75
R12A **Pony Springs,** 74.45 324 ⇓P P 20 57 47.0 +0.6
baz=75,SNR=7.2
M18A **Lyman** 74.45 329 ⇑P P 20 57 45.9 -0.4
baz=75
MPMC **Manual Prospec** 74.47 321 ⇓P P 20 57 46.8 +0.2
baz=75,SNR=5.2
P14A **Drum Mountains** 74.56 326 ⇑P P 20 57 47.1 +0.2
baz=75,SNR=16
S11A **Rachel** 74.59 323 ⇑P P 20 57 48.1 +1.0
baz=75
Q13A **Wheeler Ranch,** 74.59 325 ⇑P P 20 57 47.5 +0.4
baz=75,SNR=7.1
K20A **Yellowstone Ra** 74.62 331 ⇑P P 20 57 46.4 -0.8
baz=75,SNR=6.4
PMOR **Pomariorio Ree** 74.63 260 *eP* P 20 57 47.3 -0.7
comp=Z,96nm,1.3s,mb5.4
L19A **Farson** 74.64 330 ⇑P P 20 57 47.3 -0.1
baz=75,SNR=11
N16A **Rees Ranch, Co** 74.71 328 ⇓P P 20 57 47.9 +0.1
baz=75
AGMN **Agassiz Refuge** 74.75 342 *eP* P 20 57 47.0 -0.8
comp=Z,18nm,1.1s,mb4.7
AGMN *ep*P pP 20 58 12.3 -1.3
AGMN *es*P sP 20 58 23.4 -1.2
ISA **Isabella** 74.78 320 ⇓P P 20 57 48.5 +0.2
baz=75,SNR=6.4
ISA **Isabella** 74.78 320 *eP* P 20 57 48.1 -0.2
ISA *e*PP pP 20 58 13.7 -0.5
ISA *e*SP sP 20 58 25.6 +0.5
ISA pmax pmax
comp=Z,27nm,1.3s,mb4.8
ISA **Isabella** 74.78 320 *eP* P 20 57 48.1 -0.2
comp=Z,27nm,1.3s,mb4.8
ISA *ep*P pP 20 58 13.7 -0.4
ISA *es*P sP 20 58 25.6 +0.6
DUG **Dugway** 74.88 326 ⇓P P 20 57 48.6 -0.1
baz=75,SNR=12
DUG **Dugway** 74.88 326 *eP* P 20 57 48.4 -0.3
DUG *e*SP pP 20 58 15.2 +0.6
DUG pmax pmax
comp=Z,26nm,1.1s,mb4.9
DUG **Dugway** 74.88 326 *eP* P 20 57 48.4 -0.4
comp=Z,26nm,1.1s,mb4.9
DUG *es*P pP 20 58 15.2 +0.6
P13A **Bates Ranch, G** 74.95 325 ⇑P P 20 57 49.5 +0.3
baz=75,SNR=9.7
K19A **Absolon Red Bu** 74.98 331 ⇑P P 20 57 48.4 -0.9
baz=75,SNR=9.4
R11A **Troy Canyon, C** 75.00 324 ⇓P P 20 57 50.1 +0.6
baz=75,SNR=12
PKM **Peak Mountain** 75.08 318 ⇓P P 20 57 50.6 +0.6
baz=75
Q12A **Willow Creek R** 75.09 324 ⇓P P 20 57 50.6 +0.6
baz=75
M16A **Huntsville** 75.12 328 ⇑P P 20 57 50.4 +0.3
baz=76
N15A **Stansbury Isla** 75.25 327 ⇓P P 20 57 51.0 +0.1
baz=76
BW06 **Boulder Array** 75.26 330 ⇓P P 20 57 50.6 -0.3
baz=76
PDAR **Pinedale Array** 75.26 330 P P 20 57 50.0 -0.8
comp=Z,1.8nm,0.6s,mb4.0,baz=147,slow=6.9,SNR=15
PDAR pP pP 20 58 16.1 -0.6
comp=Z,3.3nm,0.6s,baz=132,slow=7.3,SNR=8.0
S10A **Tonopah Range,** 75.26 323 ⇓P P 20 57 51.1 +0.1
baz=76,SNR=11
VES **Vestal, Richgr** 75.27 320 ⇑P P 20 57 51.1 0.0
baz=76,SNR=6.0
HWUT **Hardware Ranch** 75.31 328 *eP* P 20 57 50.8 -0.4
comp=Z,40nm,1.3s,mb5.0
L17A **Cokeville** 75.36 329 ⇑P P 20 57 50.9 -0.6
baz=76,SNR=6.2
K18A **Toltan Ranch,** 75.38 330 ⇑P P 20 57 51.8 +0.2
baz=76,SNR=15
Q11A **Duckwater** 75.39 324 ⇓P P 20 57 51.8 +0.1
baz=76,SNR=5.8
P12A **McGill** 75.44 325 ⇑P P 20 57 52.5 +0.5
baz=76,SNR=8.1
SMMC **Simmler** 75.46 319 ⇑P P 20 57 52.5 +0.3
baz=76
N14A **Grayback Hills** 75.56 327 ⇑P P 20 57 52.0 -0.6
baz=76
L16A **Fish Haven** 75.56 328 ⇓P P 20 57 52.4 -0.3
baz=76,SNR=10.0
M15A **Larsen Ranch,** 75.64 328 ⇑P P 20 57 52.8 -0.3
baz=76,SNR=9.8
Q10A **Clear Creek Ra** 75.79 323 ⇓P P 20 57 54.5 +0.5
baz=76
K17A **Gardner Place,** 75.88 329 ⇑P P 20 57 54.3 -0.1
baz=76
O12A **Currie** 75.93 325 ⇑P P 20 57 55.0 +0.2
baz=76,SNR=9.1
AHID **Auburn Hatcher** 75.97 329 *eP* P 20 57 54.8 -0.2
comp=Z,17nm,1.1s,mb4.7
AHID *ep*P pP 20 58 21.2 +0.3
L15A **Malad City** 76.02 328 ⇓P P 20 57 55.0 -0.2
baz=76,SNR=20
HVU **Hansel Valley** 76.04 328 *eP* P 20 57 55.4 0.0
HVU *e*PP pP 20 58 20.1 -1.2
HVU pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
HVU **Hansel Valley** 76.04 328 *eP* P 20 57 55.4 0.0
comp=Z,4.5nm,0.9s,mb4.2
HVU *ep*P pP 20 58 20.1 -1.2
I18A **Diamond G Ranc** 76.10 331 ⇑P P 20 57 55.9 +0.2
baz=76,SNR=6.8
M14A **Sheep Mountain** 76.12 327 ⇑P P 20 57 55.7 -0.1
baz=76,SNR=16
J17A **Brown Place, J** 76.25 330 ⇑P P 20 57 56.5 0.0
baz=77,SNR=6.8
K16A **Soda Springs** 76.26 329 ⇓P P 20 57 57.0 +0.5
baz=77,SNR=19
O11A **Cowboy Ranch,** 76.31 325 ⇑P P 20 57 57.2 +0.3
baz=77
REDW **Red Top Meadow** 76.32 330 *eP* P 20 57 56.8 -0.1
comp=Z,26nm,1.0s,mb4.9
P10A **Eureka** 76.39 324 ⇑P P 20 57 58.2 +0.9
baz=77
M13A **Montello** 76.43 326 ⇑P P 20 57 57.8 +0.2
baz=77
L14A **Malta** 76.46 327 ⇓P P 20 57 58.0 +0.3
baz=77
TPAW **Teton Pass** 76.46 330 *eP* P 20 57 58.2 +0.5
comp=Z,24nm,1.0s,mb4.9
TPAW *ep*P pP 20 58 24.2 +0.5
N12A **Clover Valley,** 76.51 326 ⇓P P 20 57 58.0 -0.1
baz=77
ULM **Lac du Bonnet** 76.52 342 P P 20 57 56.5 -1.3
comp=Z,7.8nm,0.6s,mb4.6,baz=160,slow=4.7,SNR=10.0
ULM pP pP 20 58 22.7 -1.0
comp=Z,14nm,0.7s,baz=159,slow=4.9,SNR=7.0
ULM sP sP 20 58 33.8 -0.8
comp=Z,8.4nm,0.5s,baz=157,slow=5.6,SNR=3.5
ULM **Lac du Bonnet** 76.52 342 *eP* P 20 57 56.5 -1.4
comp=Z,14nm,0.7s,mb4.8
ULM *ep*P pP 20 58 22.4 -1.4
RRI2 **Red Ridge** 76.52 329 *eP* P 20 57 58.3 +0.3
comp=Z,47nm,1.3s,mb5.1
RRI2 *ep*P pP 20 58 24.5 +0.5
NVAR **Mina Array Bea** 76.58 322 P P 20 57 58.4 -0.1
comp=Z,2.9nm,0.7s,mb4.1,baz=151,slow=6.5,SNR=22
NVAR pP pP 20 58 24.3 -0.1
comp=Z,5.1nm,0.9s,baz=154,slow=6.5,SNR=6.0
NVAR sP sP 20 58 35.0 -0.3
comp=Z,9.0nm,0.8s,baz=155,slow=6.1,SNR=9.4
K15A **Arbon** 76.60 328 ⇓P P 20 57 58.3 -0.2
baz=77,SNR=7.4
I17A **Pilgrim Ck.** 76.62 330 ⇑P P 20 57 59.0 +0.4
baz=77,SNR=5.8
IMW **Indian Meadow** 76.77 330 *eP* P 20 57 59.6 +0.2
comp=Z,13nm,0.8s,mb4.7
IMW *ep*P pP 20 58 25.3 -0.1
K14A **Jones Ranch, D** 76.81 328 ⇓P P 20 57 59.1 -0.6
baz=77,SNR=6.2
L13A **Double Diamond** 76.85 327 ⇑P P 20 58 00.0 +0.1
baz=77,SNR=12
M12A **Wells** 76.85 326 ⇓P P 20 57 60.0 0.0
baz=77,SNR=9.6
O10A **Cortez Mining,** 76.88 324 ⇑P P 20 58 00.6 +0.5
baz=77
I16A **Newdale** 77.01 330 ⇓P P 20 58 00.7 0.0
baz=77
SCHQ **Schefferville** 77.21 1 P P 20 58 01.4 -0.3
comp=Z,20nm,0.8s,mb4.9,baz=178,slow=3.8,SNR=22
SCHQ **Schefferville** 77.21 1 *eP* P 20 58 01.4 -0.3
comp=Z,26nm,0.8s,mb5.0
G18A **Lazy EL Ranch,** 77.25 332 ⇓P P 20 58 02.0 -0.1
baz=78,SNR=20
M11A **Holland Ranch,** 77.32 326 ⇑P P 20 58 03.2 +0.6
baz=78,SNR=16
K13A **Stover Farm, H** 77.34 327 ⇑P P 20 58 02.9 +0.3
baz=78
L12A **House Creek Ra** 77.44 327 ⇑P P 20 58 03.9 +0.6
baz=78,SNR=16
TOA0 **Torodi Ar. Sit** 77.52 70 *eP* P 20 58 03.5 -0.8
TORD **Torodi Ar. Bea** 77.52 70 P P 20 58 03.6 -0.7
comp=Z,148nm,0.8s,mb5.8,baz=252,slow=5.2,SNR=427
TORD pP pP 20 58 29.4 -0.8
comp=Z,45nm,0.8s,baz=254,slow=4.7,SNR=4.6
H16A **Russell Place,** 77.53 330 ⇓P P 20 58 04.1 +0.4
baz=78,SNR=6.1
I15A **Monteview** 77.57 329 ⇓P P 20 58 04.4 +0.5
baz=78,SNR=8.7
DGMT **Dagmar** 77.65 337 ⇑P P 20 58 04.1 -0.2
baz=78
GCMT **Greycliff** 77.67 332 *eP* P 20 58 04.0 -0.4
comp=Z,32nm,1.3s,mb4.9
QLMT **Earthquake Lak** 77.71 330 *eP* P 20 58 05.9 +1.2
comp=Z,2.2nm,0.3s,mb4.4
K12A **Draper Farm, C** 77.74 327 ⇓P P 20 58 05.6 +0.7
baz=78,SNR=18
SUR **Sutherland** 77.77 120 P P 20 58 06.9 +1.4
comp=Z,393nm,0.9s,mb6.1,SNR=12
SUR **Sutherland** 77.77 120 *eP* P 20 58 06.1 +0.7
comp=Z,161nm,1.4s,mb5.6
G17A **Pierce Place,** 77.78 331 ⇓P P 20 58 05.1 +0.1
baz=78
M10A **I.L. Ranch, Tu** 77.78 325 ⇓P P 20 58 05.0 -0.1
baz=78
F18A **Big Timber** 77.78 332 ⇑P P 20 58 05.1 +0.1
baz=78,SNR=30
L11A **Cat Creek Ranc** 77.83 326 ⇑P P 20 58 05.7 +0.3
baz=78,SNR=11
J13A **Cove Ranch, Pi** 77.93 328 ⇓P P 20 58 06.2 +0.3
baz=78,SNR=7.4
I14A **Mackay** 77.98 329 ⇑P P 20 58 06.6 +0.5
baz=78,SNR=10
WCN **Washoe City** 78.00 322 ⇑P P 20 58 07.4 +1.0
baz=78
H15A **Lima** 78.11 330 ⇑P P 20 58 07.5 +0.7
baz=78
L10A **Juniper Basin** 78.14 326 ⇓P P 20 58 07.2 +0.1
baz=78,SNR=22
HLID **Hailey** 78.17 328 ⇑P P 20 58 07.6 +0.3
baz=78,SNR=35
HLID **Hailey** 78.17 328 *eP* P 20 58 07.4 +0.2
comp=Z,18nm,0.9s,mb4.8
HLID *ep*P pP 20 58 34.4 +1.1
G16A **Moss Hill, Enn** 78.19 330 ⇓P P 20 58 07.6 +0.3
baz=79
F17A **Fitzpatrick Pl** 78.19 331 ⇓P P 20 58 07.4 +0.1
baz=79,SNR=19
J12A **Stokes Ranch,** 78.28 327 ⇑P P 20 58 08.1 +0.2
baz=79,SNR=18
I13A **Wildhorse Cree** 78.29 328 ⇑P P 20 58 08.4 +0.5
baz=79,SNR=18
MCMT **McKenzie Canyo** 78.36 330 *eP* P 20 58 08.8 +0.5
comp=Z,12nm,1.2s,mb4.5
MCMT *ep*P pP 20 58 34.0 -0.4
E18A **Harlowton** 78.38 332 ⇓P P 20 58 08.4 +0.1
baz=79,SNR=13
K11A **Parker Ranch,** 78.41 326 ⇑P P 20 58 08.7 +0.1
baz=79,SNR=15
BOZ **Bozeman (W)** 78.43 331 ⇓P P 20 58 08.0 -0.6
baz=79
BOZ **Bozeman (W)** 78.43 331 *eP* P 20 58 07.6 -1.0
BOZ pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
BOZ **Bozeman (W)** 78.43 331 *eP* P 20 58 07.6 -1.0
comp=Z,2.4nm,0.4s,mb4.3
H14A **Leadore** 78.45 329 ⇑P P 20 58 09.0 +0.2
baz=79,SNR=9.7
G15A **Dillon** 78.45 330 ⇓P P 20 58 09.1 +0.4
baz=79,SNR=9.3
DLMT **Dillon** 78.65 330 *eP* P 20 58 09.7 -0.1
comp=Z,25nm,1.1s,mb5.0
I12A **Atlanta** 78.70 328 ⇑P P 20 58 10.1 0.0
baz=79
E17A **Martinsdale** 78.71 332 ⇑P P 20 58 09.9 -0.2
baz=79,SNR=14
MFID **Camas Ranch** 78.77 327 ⇓P P 20 58 10.7 +0.2
baz=79,SNR=11
D18A **Linhart Farms,** 78.83 333 ⇑P P 20 58 10.8 +0.1
baz=79,SNR=5.2
H13A **Challis** 78.83 329 ⇑P P 20 58 11.6 +0.8
baz=79,SNR=25
K10A **MacKenzie Ranc** 78.84 326 ⇓P P 20 58 11.1 +0.1
baz=79,SNR=13
LRM **Limekiln Ridge** 78.93 330 *eP* P 20 58 11.6 +0.2
comp=Z,100nm,1.2s,mb5.5
F15A **Butte** 78.97 330 ⇓P P 20 58 11.9 +0.4
baz=79,SNR=18
H12A **Diamond D Ranc** 79.11 328 ⇑P P 20 58 12.7 +0.3
baz=80,SNR=12
E16A **East Helena** 79.13 331 ⇑P P 20 58 12.5 +0.1
baz=80,SNR=9.7
I11A **Placerville** 79.19 327 ⇓P P 20 58 12.8 -0.1
baz=80
G13A **Cobalt** 79.22 329 ⇓P P 20 58 13.6 +0.6
baz=80,SNR=44
HRY **Holter Researc** 79.33 331 *eP* P 20 58 14.1 +0.6
comp=Z,15nm,1.0s,mb4.8
F14A **Wisdom** 79.35 330 ⇑P P 20 58 13.8 +0.2
baz=80,SNR=8.4
D16A **Dana Ranch, Ca** 79.45 332 ⇓P P 20 58 14.1 -0.1
baz=80,SNR=10.0
TSUM **Tsumeb** 79.46 106 *eP* P 20 58 15.1 +0.1
comp=Z,155nm,1.1s,mb5.8
E15A **Deer Lodge** 79.48 331 ⇓P P 20 58 14.2 -0.1
baz=80,SNR=10.0
C17A **Wharram Farm,** 79.58 333 ⇓P P 20 58 14.5 -0.4
baz=80,SNR=13
J09A **Fry Pan Ranch,** 79.70 326 ⇑P P 20 58 15.9 +0.3
baz=80,SNR=5.9
B18A **Beardsley Farm** 79.76 334 ⇑P P 20 58 15.4 -0.4
baz=80,SNR=8.7
G12A **Big Creek, Yel** 79.77 328 ⇓P P 20 58 16.0 +0.1
baz=80,SNR=11
F13A **Darby** 79.78 329 ⇑P P 20 58 16.0 0.0
baz=80,SNR=22
H11A **Donnelly** 79.79 328 ⇑P P 20 58 15.8 -0.2
baz=80,SNR=7.4
D15A **Lincoln** 79.89 331 ⇓P P 20 58 16.5 0.0
baz=80,SNR=10
MOD **Modoc** 80.07 324 *eP* P 20 58 17.3 -0.3
comp=Z,31nm,1.1s,mb5.0
MOD *ep*P pP 20 58 43.4 -0.3
H10A **Noah's Angus R** 80.07 327 ⇑P P 20 58 17.5 -0.1
baz=80
J08A **Circle Bar Ran** 80.09 326 ⇑P P 20 58 17.7 0.0
baz=80,SNR=7.4
B17A **L&G Farms, Che** 80.11 333 ⇓P P 20 58 17.0 -0.6
baz=80,SNR=5.6
CHMT **Chamberlain Mo** 80.12 331 *eP* P 20 58 18.0 +0.2
comp=Z,6.3nm,1.1s,mb4.4
C16A **Fuhringer Ranc** 80.13 332 ⇑P P 20 58 18.1 +0.3
baz=80,SNR=18
F12A **Elk City** 80.19 329 ⇓P P 20 58 17.9 -0.3
baz=81,SNR=8.1
E13A **Victor** 80.20 330 ⇑P P 20 58 18.1 -0.1
baz=81,SNR=12
A18A **Metzger Ranch,** 80.20 334 ⇓P P 20 58 17.9 -0.3
baz=81,SNR=11
D14A **Greenough** 80.36 331 ⇓P P 20 58 19.1 +0.1
baz=81,SNR=5.2
G11A **Walters Elk Ra** 80.42 328 ⇓P P 20 58 19.3 -0.1
baz=81,SNR=16
SLMT **Seeley Lake** 80.48 331 *eP* P 20 58 19.7 0.0
comp=Z,23nm,1.2s,mb4.9
A17A **Triple J Farms** 80.57 333 ⇑P P 20 58 19.5 -0.6
baz=81,SNR=31
B16A **M & M Farms, S** 80.58 333 ⇑P P 20 58 19.8 -0.4
baz=81
F11A **Grangeville** 80.72 329 ⇓P P 20 58 20.8 -0.2
baz=81,SNR=13
G10A **Bishop Farm, J** 80.76 328 ⇑P P 20 58 21.6 +0.3
baz=81,SNR=16
D13A **Huson** 80.81 330 ⇓P P 20 58 21.6 +0.1
baz=81,SNR=14
B15A **Bradely Ranch,** 80.88 332 ⇓P P 20 58 21.3 -0.5
baz=81,SNR=19
SWMT **Swartz Lake** 80.91 331 *eP* P 20 58 22.1 +0.2
comp=Z,16nm,1.2s,mb4.7
SWMT *ep*P pP 20 58 48.0 -0.2
K05A **Summer Lake** 80.94 324 ⇑P P 20 58 22.7 +0.4
baz=81,SNR=8.5
H08A **Prairie City** 81.00 326 ⇑P P 20 58 22.4 -0.2
baz=81
G09A **Cove** 81.08 327 ⇑P P 20 58 23.3 +0.4
baz=81,SNR=27
E11A **Bogner Ranch,** 81.08 329 ⇓P P 20 58 22.4 -0.5
baz=81
I07A **Izee** 81.13 326 ⇑P P 20 58 23.4 +0.2
baz=82,SNR=8.2
D12A **Red Ives Fores** 81.19 330 ⇑P P 20 58 23.5 0.0
baz=82,SNR=23
C13A **Hot Springs** 81.29 331 ⇓P P 20 58 24.2 +0.2
baz=82,SNR=16
F10A **Beach Ranch, E** 81.30 328 ⇓P P 20 58 23.9 -0.2
baz=82,SNR=5.6
F09A **S2 Ranch, Elgi** 81.45 328 ⇓P P 20 58 25.0 +0.1
baz=82
A15A **Johnson Ranch,** 81.45 332 ⇓P P 20 58 24.0 -0.9
baz=82,SNR=7.2
BSMT **Bassoo Peak** 81.52 331 *eP* P 20 58 25.2 0.0
comp=Z,30nm,1.2s,mb5.0
E10A **Myers Farm, Un** 81.61 328 ⇑P P 20 58 25.8 +0.1
baz=82,SNR=7.0
D11A **Klaveano Farm,** 81.64 329 ⇓P P 20 58 25.8 -0.1
baz=82
G08A **Pilot Rock** 81.68 327 ⇓P P 20 58 26.1 0.0
baz=82
C12B **Naegeli Ranch,** 81.72 330 ⇑P P 20 58 26.7 +0.4
baz=82
A14A **Double T Ranch** 81.75 332 ⇓P P 20 58 26.0 -0.3

baz=82,SNR=7.9
B13A Whitefish 81.76 331 ⇑P P 20 58 26.4 0.0
baz=82,SNR=14
MORF Marmelete 82.13 44 eP P 20 58 30.4 +1.7
comp=Z,112nm,1.5s,mb5.5
PTEO Sao Teotonio 82.22 44 eP P 20 58 30.8 +1.6
comp=Z,106nm,1.2s,mb5.5
FFC Flin Flon 82.23 341 i P P 20 58 28.1 -0.6
B12A Libby 82.33 331 ⇓P P 20 58 29.4 -0.1
baz=83,SNR=6.4
PBDV Barranco-do-Ve 82.56 45 eP P 20 58 32.1 +1.2
comp=Z,53nm,1.9s,mb5.0
D09A Jones Farm, Ri 82.60 328 ⇑P P 20 58 30.6 -0.3
baz=83
B11A Sandpoint 82.67 330 ⇑P P 20 58 30.7 -0.5
baz=83
BOSA Boshof 82.67 118 P P 20 58 31.2 -0.7
comp=Z,63nm,0.8s,mb5.5,baz=245,slow=4.1,SNR=84
BOSA pP pP 20 58 57.0 -1.1
comp=Z,20nm,0.9s,baz=258,slow=3.9,SNR=3.0
BOSA Boshof 82.67 118 eP P 20 58 31.0 -0.9
BOSA pmax pmax
comp=Z,100nm,1.0s,mb5.6
BOSA Boshof 82.67 118 eP P 20 58 31.0 -0.9
comp=Z,100nm,1.0s,mb5.6
PCVE Castro Verde 82.71 44 eP P 20 58 33.5 +1.8
comp=Z,50nm,1.9s,mb5.0
PVAQ Vaqueiros 82.79 45 eP P 20 58 33.1 +1.0
comp=Z,48nm,2.0s,mb5.0
EGRO El Granado 83.02 45 P P 20 58 34.6 +1.3
comp=Z,40nm,0.8s,mb5.3
A11A Hall Mountain, 83.04 331 ⇓P P 20 58 33.1 0.0
baz=83,SNR=12
PBEJ Beja 83.05 44 eP P 20 58 34.7 +1.2
comp=Z,32nm,2.0s,mb4.8
C09A Chrisman Ranch 83.10 329 ⇓P P 20 58 33.2 -0.3
baz=84,SNR=5.6
MAW Mawson 83.13 163 P P 20 58 32.7 -0.7
comp=Z,23nm,0.7s,mb5.1,baz=220,slow=6.5,SNR=39
MAW pP pP 20 58 58.1 -1.7
comp=Z,30nm,0.6s,baz=212,slow=5.2,SNR=10.0
MAW sP sP 20 59 09.4 -1.2
comp=Z,13nm,0.6s,baz=215,slow=7.1,SNR=3.1
MAW Mawson 83.13 163 eP P 20 58 32.4 -1.1
MAW e*PP pP 20 58 58.3 -1.4
MAW pmax pmax
comp=Z,7.0nm,0.6s
MAW Mawson 83.13 163 eP P 20 58 32.4 -1.1
comp=Z,7.3nm,0.6s,mb4.7
MAW epP pP 20 58 58.3 -1.4
EVO Evora 83.25 43 eP P 20 58 33.9 -0.6
comp=Z,44nm,1.0s,mb4.9
EVO Evora 83.25 43 eP P 20 58 35.4 +0.9
comp=Z,33nm,2.0s,mb4.8
B09A Rice 83.48 329 ⇑P P 20 58 35.2 -0.2
baz=84
PBAR Barrancos 83.67 44 eP P 20 58 37.3 +0.7
comp=Z,36nm,1.2s,mb5.1
EMIN Mina Concepcio 83.67 45 P P 20 58 37.6 +0.9
comp=Z,31nm,0.7s,mb5.2
ESPR Espera 83.70 46 P P 20 58 38.2 +1.3
comp=Z,21nm,0.7s,mb5.1
PESTR Estremoz 83.72 43 eP P 20 58 37.9 +1.0
comp=Z,50nm,2.1s,mb5.0
FCC Fort Churchill 83.84 347 eP P 20 58 36.0 -0.9
FCC e*PP pP 20 59 01.9 -1.4
FCC pmax pmax
comp=Z,1.0nm,1.1s
FCC Fort Churchill 83.84 347 eP P 20 58 36.0 -0.9
comp=Z,1.2nm,1.1s
FCC epP pP 20 59 01.9 -1.4
ETW Entiat 83.97 328 eP P 20 58 37.8 -0.1
comp=Z,26nm,1.3s,mb4.9
ETW epP pP 20 59 04.3 +0.1
B08A Colville Reser 84.00 329 ⇓P P 20 58 37.8 -0.2
baz=84
EBAD Badajoz 84.02 44 P P 20 58 39.6 +1.2
comp=Z,25nm,1.0s,mb5.0
PMRV Marv??o 84.17 43 eP P 20 58 39.4 +0.3
comp=Z,28nm,1.5s,mb4.9
EMIJ Mijas 84.25 47 P P 20 58 41.2 +1.6
comp=Z,145nm,4.8s
LBTB Lobatse 84.30 115 eP P 20 58 39.6 -0.7
LBTB pmax pmax
comp=Z,114nm,1.1s,mb5.6
LBTB Lobatse 84.30 115 eP P 20 58 39.6 -0.7
comp=Z,114nm,1.1s,mb5.6
PCBR Castelo Branco 84.36 43 eP P 20 58 40.5 +0.4
comp=Z,25nm,1.7s,mb4.8
MTE Manteigas 84.64 42 eP P 20 58 42.1 +0.6
comp=Z,60nm,1.9s,mb5.2
EDM Edmonton 84.94 335 eP P 20 58 40.0 -2.6
EDM e*PP pP 20 59 07.4 -1.6
A07A Ashnola River, 84.98 329 ⇑P P 20 58 42.7 -0.3
baz=85,SNR=11
ELOJ Sierra Loja 84.99 46 P P 20 58 44.6 +1.3
ELOJ pmax pmax
comp=Z,30nm,0.9s,mb5.2
ELOJ Sierra Loja 84.99 46 P P 20 58 44.6 +1.3
comp=Z,30nm,0.9s,mb5.2
PVRL Vila Real 85.05 41 eP P 20 58 44.2 +0.7
comp=Z,49nm,1.5s,mb5.2
PCAB Cabril 85.11 41 eP P 20 58 44.4 +0.6
RPW Rockport 85.12 328 eP P 20 58 42.4 -1.3
comp=Z,4.3nm,1.0s,mb4.3
RPW epP pP 20 59 08.8 -1.3
ERON Agron 85.15 47 P P 20 58 43.5 -0.6
comp=Z,8.4nm,1.3s,mb4.5
JCW Jim Creek 85.16 327 eP P 20 58 42.8 -1.1
JCW epP pP 20 59 08.9 -1.3
ELOB Lobios 85.19 41 P P 20 58 44.8 +0.6
comp=Z,14nm,0.7s,mb5.0
EADA Adamuz 85.27 45 P P 20 58 45.4 +0.7
comp=Z,40nm,0.8s,mb5.4
MVO Moncorvo 85.40 42 eP P 20 58 45.9 +0.6
comp=Z,49nm,1.7s,mb5.2
ECOG Cogollos-Vega 85.45 47 P P 20 58 46.2 +0.6
ECOG pmax pmax
comp=Z,23nm,1.1s,mb5.0
ECOG Cogollos-Vega 85.45 47 P P 20 58 46.2 +0.5
comp=Z,23nm,1.1s,mb5.0
EBER Berja 85.70 47 P P 20 58 47.5 +0.6
comp=Z,24nm,0.9s,mb5.1
EBAN Banos Encina 85.79 46 P P 20 58 48.3 +1.0
EBAN pmax pmax
comp=Z,83nm,0.8s,mb5.7
EBAN Banos Encina 85.79 46 P P 20 58 48.3 +1.0
comp=Z,83nm,0.8s,mb5.7
ERUA La Rua 86.05 41 P P 20 58 49.5 +1.1
ERUA pmax pmax
comp=Z,59nm,2.8s,mb5.0
ERUA La Rua 86.05 41 P P 20 58 49.5 +1.0
comp=Z,59nm,2.8s,mb5.0
EQES Quesada 86.07 46 P P 20 58 48.8 +0.1
comp=Z,47nm,1.1s,mb5.3
PAB San Pablo 86.18 44 eP P 20 58 49.2 +0.1
PAB pmax pmax
comp=Z,61nm,1.1s,mb5.4
PAB San Pablo 86.18 44 eP P 20 58 49.2 +0.1
comp=Z,61nm,1.1s,mb5.5
ENIJ Nijar 86.21 47 P P 20 58 49.1 -0.3
ENIJ pmax pmax
comp=Z,12nm,0.6s,mb5.0
ENIJ Nijar 86.21 47 P P 20 58 49.1 -0.2
comp=Z,12nm,0.6s,mb5.0
EHUE Huescar 86.39 46 P P 20 58 51.0 +0.7
EHUE pmax pmax
comp=Z,203nm,3.6s
EHUE Huescar 86.39 46 P P 20 58 51.0 +0.8
comp=Z,203nm,3.6s
ESDC Sonseca Array 86.50 44 P P 20 58 50.8 +0.1
comp=Z,8.6nm,0.8s,mb4.7,baz=237,slow=4.9,SNR=43
ESDC pP pP 20 59 16.3 -0.9
comp=Z,4.1nm,0.9s,baz=250,slow=3.8,SNR=2.3
ESDC Sonseca Array 86.50 44 P P 20 58 51.6 +0.9
comp=Z,6.5nm,0.8s,mb4.6
EVIA Vianos 86.89 46 P P 20 58 53.4 +0.7
EVIA pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
EVIA Vianos 86.89 46 P P 20 58 53.4 +0.8
comp=Z,9.4nm,0.7s,mb4.8
GUD Guadarrama 86.91 43 P P 20 58 54.0 +1.3
GUD pmax pmax
comp=Z,39nm,2.4s,mb4.9
GUD Guadarrama 86.91 43 P P 20 58 54.0 +1.4
comp=Z,39nm,2.4s,mb4.9
ETOB Tobarra 87.53 46 P P 20 58 56.2 +0.5
comp=Z,34nm,0.9s,mb5.4
ETOR Torete 88.34 44 P P 20 59 00.6 +1.1
ETOR pmax pmax
comp=Z,29nm,0.7s,mb5.4
ETOR Torete 88.34 44 P P 20 59 00.6 +1.0
comp=Z,29nm,0.7s,mb5.4
ECHE Chera 88.41 46 P P 20 59 00.5 +0.6
ECHE pmax pmax
comp=Z,11nm,0.8s,mb4.9
ECHE Chera 88.41 46 P P 20 59 00.5 +0.6
comp=Z,11nm,0.8s,mb5.0
ESAC San Caprasio 89.83 44 P P 20 59 06.3 -0.2
comp=Z,41nm,1.0s,mb5.5
ERTA Horta de San J 89.96 45 P P 20 59 06.1 -1.1
comp=Z,36nm,1.0s,mb5.5
MIR Mirnyy 89.97 173 eP P 20 59 05.0 -1.8
MIR pmax pmax
comp=Z,29nm,1.4s,mb5.2
SJPF Ste Jean 90.08 43 eP P 20 59 07.8 +0.2
comp=Z,26nm,1.0s,mb5.0
SJPF Ste Jean 90.08 43 eP P 20 59 07.8 +0.2
SJPF pmax pmax
comp=Z,13nm,1.0s,mb5.0
SJPF Ste Jean 90.08 43 eP P 20 59 07.8 +0.2
comp=Z,13nm,1.0s,mb5.0
LSZ Lusaka 90.32 107 eP P 20 59 11.0 +1.6
LSZ pmax pmax
comp=Z,37nm,1.4s,mb5.3
LSZ Lusaka 90.32 107 eP P 20 59 11.0 +1.6
comp=Z,37nm,1.4s,mb5.3
ETSF Etsaut 90.38 43 eP P 20 59 09.4 +0.4
EPOB Poblet 90.65 45 P P 20 59 10.5 +0.2
comp=Z,14nm,1.0s,mb5.0
EBIE Bielsa 90.72 43 P P 20 59 10.2 -0.4
comp=Z,6.4nm,0.8s,mb4.8
EPF Esparros 91.02 43 eP P 20 59 12.3 +0.3
MELF Melles 91.20 43 eP P 20 59 14.0 +1.2
CASY Casey 91.31 180 eP P 20 59 12.2 -0.9
comp=Z,42nm,1.0s,mb5.5
CASY epP pP 20 59 36.8 -2.9
SALF Salau 91.42 44 eP P 20 59 15.2 +1.3
MLS Moulis 91.46 44 eP P 20 59 12.3 -1.7
QUIF Quistinic 91.48 38 eP P 20 59 12.8 -1.2
comp=Z,68nm,1.3s,mb5.3
QUIF Quistinic 91.48 38 eP P 20 59 12.8 -1.2
QUIF pmax pmax
comp=Z,34nm,1.3s,mb5.3
QUIF Quistinic 91.48 38 eP P 20 59 12.8 -1.2
comp=Z,34nm,1.3s,mb5.3
ROSF Rostrenen 91.64 37 eP P 20 59 13.9 -0.8
DFRA Djebel Bou Aff 91.65 51 P P 20 59 16.6 +1.5
CASM Ain Smara 91.96 51 P P 20 59 17.2 +0.7
CARF Carcanieres 91.99 44 eP P 20 59 17.4 +0.9
SGMF Saint Gilles 92.00 38 eP P 20 59 15.2 -1.2
CKFL Kef-Lekhel 92.19 51 P P 20 59 18.5 +0.9
FILF Fillols 92.20 44 eP P 20 59 17.9 +0.4
LFF La Frestale 92.23 42 eP P 20 59 17.1 -0.4
comp=Z,39nm,0.9s,mb5.4
LFF La Frestale 92.23 42 eP P 20 59 17.1 -0.4
LFF pmax pmax
comp=Z,20nm,0.9s,mb5.3
LFF La Frestale 92.23 42 eP P 20 59 17.1 -0.4
comp=Z,20nm,0.9s,mb5.3
MTLF Montolieu 92.36 44 eP P 20 59 17.6 -0.6
comp=Z,47nm,1.3s,mb5.2
MTLF Montolieu 92.36 44 eP P 20 59 17.6 -0.6
MTLF pmax pmax
comp=Z,23nm,1.3s,mb5.2
MTLF Montolieu 92.36 44 eP P 20 59 17.6 -0.6
comp=Z,23nm,1.3s,mb5.2
YKA Yellowknife Ar 92.38 340 P P 20 59 16.8 -1.0
comp=Z,12nm,0.9s,mb5.2,baz=135,slow=4.6,SNR=140
YKA pP pP 20 59 43.0 -1.4
comp=Z,13nm,0.6s,baz=138,slow=4.4,SNR=16
YKA sP sP 20 59 54.2 -1.0
comp=Z,8.9nm,0.8s,baz=137,slow=4.1,SNR=4.3
YKA Yellowknife Ar 92.38 340 P P 20 59 16.8 -1.0
YKA *PP pP 20 59 43.0 -1.5
YKA Yellowknife Ar 92.38 340 P P 20 59 16.8 -1.0
YKA pP pP 20 59 43.0 -1.4
YKA sP sP 20 59 54.2 -1.0
MFF Saint Martin d 92.53 40 eP P 20 59 18.4 -0.5
comp=Z,45nm,1.2s,mb5.4
MFF Saint Martin d 92.53 40 eP P 20 59 18.4 -0.5
MFF pmax pmax
comp=Z,23nm,1.2s,mb5.4
MFF Saint Martin d 92.53 40 eP P 20 59 18.4 -0.5
comp=Z,23nm,1.2s,mb5.4
ABSA Djebel Ababsia 92.68 52 P P 20 59 20.7 +0.9
CMAH Djebel Manchou 92.79 51 P P 20 59 21.0 +0.6
RJF Les Rejaudoux 92.89 42 eP P 20 59 19.9 -0.7
comp=Z,35nm,1.3s,mb5.2
RJF Les Rejaudoux 92.89 42 eP P 20 59 19.9 -0.7
RJF pmax pmax
comp=Z,18nm,1.3s,mb5.2
RJF Les Rejaudoux 92.89 42 eP P 20 59 19.9 -0.7
comp=Z,18nm,1.3s,mb5.2
GRR Gorron 93.04 38 eP P 20 59 20.1 -1.1
comp=Z,37nm,1.1s,mb5.3
GRR Gorron 93.04 38 eP P 20 59 20.1 -1.1
GRR pmax pmax
comp=Z,19nm,1.1s,mb5.3
GRR Gorron 93.04 38 eP P 20 59 20.1 -1.1
comp=Z,18nm,1.1s,mb5.3
CAF Calviac 93.04 42 eP P 20 59 19.8 -1.5
FLN La Foliniere 93.44 38 eP P 20 59 22.1 -0.9
comp=Z,34nm,1.2s,mb5.2
FLN La Foliniere 93.44 38 eP P 20 59 22.1 -0.9
FLN pmax pmax
comp=Z,17nm,1.3s,mb5.2
FLN La Foliniere 93.44 38 eP P 20 59 22.1 -0.9
comp=Z,17nm,1.3s,mb5.2
LDF La Druitiere 93.56 38 eP P 20 59 22.7 -0.9
comp=Z,18nm,1.0s,mb5.1
LDF La Druitiere 93.56 38 eP P 20 59 22.7 -0.9
LDF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LDF La Druitiere 93.56 38 eP P 20 59 22.7 -0.9
comp=Z,9.1nm,1.0s,mb5.1
LASF Ste Croix 93.76 44 eP P 20 59 23.1 -1.5
comp=Z,57nm,1.4s,mb5.4
TCF Toulx Ste Croi 93.79 41 eP P 20 59 23.9 -0.8
comp=Z,9.9nm,0.9s,mb4.8
TCF Toulx Ste Croi 93.79 41 eP P 20 59 23.9 -0.8
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 93.79 41 eP P 20 59 23.9 -0.8
comp=Z,4.9nm,0.9s,mb4.8
KEST Kesra 93.81 53 P P 20 59 25.5 +0.4
comp=Z,3.2nm,0.9s,mb4.6,baz=327,slow=1.7,SNR=8.1
LBL Lubilhac 93.92 42 eP P 20 59 25.8 +0.5
AGO Saint Agoulin 94.24 42 eP P 20 59 26.4 -0.4
BGF Bois d'Agland 94.31 41 eP P 20 59 26.4 -0.7
comp=Z,32nm,1.1s,mb5.3
BGF Bois d'Agland 94.31 41 eP P 20 59 26.4 -0.7
BGF pmax pmax
comp=Z,16nm,1.0s,mb5.3
BGF Bois d'Agland 94.31 41 eP P 20 59 26.4 -0.7
comp=Z,16nm,1.0s,mb5.3
PLDF La Plantade 94.50 42 eP P 20 59 28.1 +0.1
VIVF Saint-Julien-l 94.64 43 eP P 20 59 28.4 -0.2
comp=Z,59nm,1.6s,mb5.5
VIVF Saint-Julien-l 94.64 43 eP P 20 59 28.4 -0.2
VIVF pmax pmax
comp=Z,29nm,1.6s,mb5.5
VIVF Saint-Julien-l 94.64 43 eP P 20 59 28.4 -0.2
comp=Z,29nm,1.6s,mb5.5
AVF Avril sur Loir 94.72 41 eP P 20 59 28.0 -1.0
comp=Z,23nm,1.2s,mb5.2
AVF Avril sur Loir 94.72 41 eP P 20 59 28.0 -1.0
AVF pmax pmax
comp=Z,11nm,1.2s,mb5.2
AVF Avril sur Loir 94.72 41 eP P 20 59 28.0 -1.0
comp=Z,11nm,1.2s,mb5.2
SMRF Simiane la Rot 94.81 44 eP P 20 59 29.8 +0.3
comp=Z,25nm,1.2s,mb5.2
SMRF Simiane la Rot 94.81 44 eP P 20 59 29.8 +0.3
comp=Z,25nm,1.2s,mb5.5
SSF Saint Saulge 94.94 41 eP P 20 59 28.9 -1.1
comp=Z,9.3nm,0.9s,mb4.9
SSF Saint Saulge 94.94 41 eP P 20 59 28.9 -1.1
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
SSF Saint Saulge 94.94 41 eP P 20 59 28.9 -1.1
comp=Z,4.7nm,0.9s,mb4.9
SMF Signal de Mont 94.95 41 eP P 20 59 29.4 -0.6
comp=Z,48nm,1.2s,mb5.5
SMF Signal de Mont 94.95 41 eP P 20 59 29.4 -0.6
SMF pmax pmax
comp=Z,24nm,1.2s,mb5.5
SMF Signal de Mont 94.95 41 eP P 20 59 29.4 -0.6
comp=Z,24nm,1.2s,mb5.5
LMR La Mourre 95.13 45 eP P 20 59 30.8 -0.1
comp=Z,62nm,1.1s,mb5.6
LMR La Mourre 95.13 45 eP P 20 59 30.8 -0.1
LMR pmax pmax
comp=Z,31nm,1.1s,mb5.7
LMR La Mourre 95.13 45 eP P 20 59 30.8 -0.1
comp=Z,31nm,1.1s,mb5.7
LOR Lormes 95.25 41 eP P 20 59 30.3 -1.1
comp=Z,7.4nm,0.8s,mb4.8
LOR Lormes 95.25 41 eP P 20 59 30.3 -1.1
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
LOR Lormes 95.25 41 eP P 20 59 30.3 -1.1
comp=Z,3.7nm,0.8s,mb4.9
FRF La Foret Royal 95.32 45 eP P 20 59 31.6 -0.2
comp=Z,84nm,1.4s,mb5.7
FRF La Foret Royal 95.32 45 eP P 20 59 31.6 -0.2
FRF pmax pmax
comp=Z,42nm,1.4s,mb5.7
FRF La Foret Royal 95.32 45 eP P 20 59 31.6 -0.2
comp=Z,42nm,1.4s,mb5.7
ORIF Oris-en-Rattie 95.43 43 eP P 20 59 32.6 +0.3
comp=Z,31nm,1.1s,mb5.3
ORIF Oris-en-Rattie 95.43 43 eP P 20 59 32.6 +0.3
ORIF pmax pmax
comp=Z,16nm,1.1s,mb5.4
ORIF Oris-en-Rattie 95.43 43 eP P 20 59 32.6 +0.3
comp=Z,16nm,1.1s,mb5.3
CALN Calern 95.56 45 eP P 20 59 34.2 +1.3
REVF Revere 95.87 45 eP P 20 59 35.0 +0.7
TOUF Mont Tournerai 95.91 45 eP P 20 59 35.3 +0.8
MBDF Montbardon 95.92 44 eP P 20 59 34.7 +0.2
comp=Z,14nm,1.0s,mb5.0
MBDF Montbardon 95.92 44 eP P 20 59 34.7 +0.2
MBDF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
MBDF Montbardon 95.92 44 eP P 20 59 34.7 +0.2
comp=Z,6.8nm,1.0s,mb5.0
LUCF Luceram 95.92 45 eP P 20 59 35.5 +1.0
SBF Sospel 95.97 45 eP P 20 59 34.6 -0.1
comp=Z,82nm,1.3s,mb5.7
SBF Sospel 95.97 45 eP P 20 59 34.6 -0.1
SBF pmax pmax
comp=Z,41nm,1.3s,mb5.7
SBF Sospel 95.97 45 eP P 20 59 34.6 -0.1
comp=Z,41nm,1.3s,mb5.7
AUTN L'Aution 96.02 45 eP P 20 59 35.3 +0.3
SAOF Saorge 96.10 45 eP P 20 59 36.0 +0.7
LPL La Plagne 96.24 43 eP P 20 59 36.4 +0.5
comp=Z,24nm,1.1s,mb5.2
LPL La Plagne 96.24 43 eP P 20 59 36.4 +0.5
LPL pmax pmax
comp=Z,12nm,1.1s,mb5.2
LPL La Plagne 96.24 43 eP P 20 59 36.4 +0.5
comp=Z,12nm,1.1s,mb5.2
LPG La Plagne 96.24 43 eP P 20 59 36.6 +0.7
comp=Z,30nm,1.1s,mb5.3
LPG La Plagne 96.24 43 eP P 20 59 36.6 +0.7
LPG pmax pmax
comp=Z,15nm,1.1s,mb5.3
LPG La Plagne 96.24 43 eP P 20 59 36.6 +0.7
comp=Z,15nm,1.1s,mb5.3
CABF La Chapelle 96.32 42 eP P 20 59 35.8 -0.4
PGF Pioggiola 96.44 47 eP P 20 59 36.7 -0.2
comp=Z,44nm,1.5s,mb5.4
PGF Pioggiola 96.44 47 eP P 20 59 36.7 -0.2
PGF pmax pmax
comp=Z,22nm,1.5s,mb5.4
PGF Pioggiola 96.44 47 eP P 20 59 36.7 -0.2
comp=Z,22nm,1.5s,mb5.4
MEZF Maizieres J'vi 96.53 40 eP P 20 59 36.3 -0.9
comp=Z,16nm,0.9s,mb5.2
MEZF Maizieres J'vi 96.53 40 eP P 20 59 36.3 -0.9
comp=Z,16nm,0.9s,mb5.4
BAIF Baives 96.75 38 eP P 20 59 37.2 -0.9
DOU Dourbes 96.99 38 P P 20 59 39.0 -0.2
HAU Haudompre 97.09 41 eP P 20 59 38.7 -1.0
GIVF Givet 97.12 38 eP P 20 59 39.0 -0.8
comp=Z,28nm,1.0s,mb5.3
GIVF Givet 97.12 38 eP P 20 59 39.0 -0.8
GIVF pmax pmax
comp=Z,14nm,1.0s,mb5.3
GIVF Givet 97.12 38 eP P 20 59 39.0 -0.8
comp=Z,14nm,1.0s,mb5.3
HINF Hinteralfeld 97.31 41 eP P 20 59 39.8 -0.9
WLF Walferdange 97.70 39 P P 20 59 42.6 +0.2
comp=Z,13nm,1.3s,mb5.3
CDF Champ du Feu 97.83 41 eP P 20 59 42.1 -0.9
comp=Z,21nm,1.2s,mb5.2
CDF Champ du Feu 97.83 41 eP P 20 59 42.1 -0.9
CDF pmax pmax
comp=Z,11nm,1.2s,mb5.3
CDF Champ du Feu 97.83 41 eP P 20 59 42.1 -0.9
comp=Z,10nm,1.2s,mb5.2
ROBS Robic 100.86 44 ePdiff Pdif 20 59 57.1 +0.4
ROBS ePP PP 21 04 02.1 -3.9
SKDS Skadanscina 100.94 45 i Pdiff Pdif 20 59 57.4 +0.4
NKC Novy Kostel 101.65 40 ePP PP 21 04 01.1 -11
NKC AMS AMS 22 18 20.0
comp=Z,900nm,21.1s
GERES GERESS Array B 101.92 42 P Pdif 21 00 00.2 -1.2
comp=Z,1.0nm,0.9s,baz=224,slow=3.7,SNR=6.6
KHC Kasperske Hory 101.94 42 ePP PP 21 04 08.8 -5.3
KHC AMS AMS 22 17 40.0
comp=Z,800nm,20.9s
CLL Collm 102.37 39 eP Pdif 21 00 03.0 -0.4
CLL e 21 04 14.0
CLL Collm 102.37 39 ePdif Pdif 21 00 03.0 -0.4
CLL ePP PP 21 04 14.0 -3.2
PRU Pruhonice 102.83 41 ePP PP 21 04 11.3 -9.4
PRU AMS AMS 22 18 20.0
comp=Z,1μm,24.0s
PVCC Panska Ves 103.03 41 AMS AMS 22 18 20.0
comp=Z,1μm,25.3s
TREC Trest 103.18 42 ePP PP 21 04 20.6 -2.7
TREC AMS AMS 22 13 50.0
comp=Z,1μm,20.8s
UPC Upice 103.89 41 ePP PP 21 04 25.5 -3.1
DPC Dobruska-Polom 104.03 41 ePP PP 21 04 23.2 -6.5
DPC AMS AMS 22 15 40.0
comp=Z,500nm,18.9s
OKC Ostrava-Krasne 104.99 42 ePP PP 21 04 31.7 -5.1
OKC AMS AMS 22 21 00.0
comp=Z,800nm,22.0s
VYHS Vyhne 105.02 43 eP PKiKP 21 04 31.4 +2.1
VYHS Vyhne 105.02 43 ePP PP 21 04 31.4 -5.7
KOLS Kolonicke sedl 107.33 44 ePP PP 21 04 52.0 -2.1
CHGN Chignik 108.44 324 ePKiKP PKiKP 21 04 29.4 -6.0
AKASG Malin Array Be 112.10 43 PKiKP PKiKP 21 04 41.2 -1.3
comp=Z,0.3nm,0.3s,baz=259,slow=4.1,SNR=7.4
ARCES ARCESS Array B 112.48 22 PKKPbc PKKPbc 21 15 31.3 -3.6
comp=Z,2.7nm,0.8s,baz=80,slow=3.0,SNR=12
BRTR Keskin Array B 113.30 55 PKiKP PKiKP 21 04 44.6 -0.5
comp=Z,1.9nm,0.7s,baz=184,slow=1.3,SNR=16
MMAI Mount Meron Ar 113.34 63 PKiKP PKiKP 21 04 45.4 0.0
comp=Z,1.7nm,0.6s,baz=28,slow=3.9,SNR=3.9
APA Apatity 115.34 25 ⇑ i PKIKP PKPdf 21 04 58.6 +10
APA MLR MLR
comp=Z,600nm,23.0s
APA MLR MLR
comp=Z,1μm,23.0s
ANN Anapa 116.83 50 i PKIKP PKPdf 21 04 56.2 +4.5
ANN e 21 11 42.7
ANN pmax pmax
comp=Z,21nm,1.7s
OBN Obninsk 116.94 38 ⇑ i PKIKP PKPdf 21 04 51.0 -0.6
OBN pmax pmax
comp=Z,12nm,0.9s
SOC Sochi 118.34 52 i PKIKP PKPdf 21 04 54.2 -0.5
SOC e 21 06 13.9
SOC ePPP 21 08 42.9
SOC pmax pmax
comp=Z,20nm,0.9s
KIV Kislovodsk 120.52 51 ⇑ i PKIKP PKPdf 21 04 58.4 -0.5
KIV pmax pmax
comp=Z,11nm,0.8s
KIV Kislovodsk 120.52 51 ePKPdf PKPdf 21 04 58.5 -0.4
GOF Gofitskoye 120.81 50 ePKIKP PKPdf 21 05 06.1 +6.7
GOF e 21 06 39.2

ZEI	**Tsey**	**121.34**	**53**	*i* PKIKP	PKPdf	21 05 00.3	-0.2
ZEI				pmax	pmax		
comp=Z,8.0nm,0.9s							
NAY	**Al-Naaiem**	**122.59**	**69**	*e*P	PKPdf	21 05 02.4	-0.9
NAY				AMb	AMB	21 05 09.0	
comp=Z,9.6nm,1.4s							
MIB	**Mutribah**	**122.77**	**68**	*e*P	PKPdf	21 05 03.1	-0.6
MIB				AMb	AMB	21 05 04.8	
comp=Z,19nm,1.2s							
UMR	**Umm Al-Rimmam**	**123.05**	**69**	*e*P	PKPdf	21 05 03.0	-1.2
UMR				AMb	AMB	21 05 05.0	
comp=Z,32nm,0.9s							
BILL	**Bilibino**	**123.71**	**338**	↑*i* PKIKP	PKPdf	21 05 03.5	-0.8
BILL				pmax	pmax		
comp=Z,2.0nm,0.8s							
SOKR	**Solikamsk**	**127.05**	**31**	*e*PKIKP	PKPdf	21 05 10.2	-0.7
SOKR				pmax	pmax		
comp=Z,10.0nm,0.9s							
ARU	**Arti**	**128.98**	**35**	*i* PKIKP	PKPdf	21 05 14.8	+0.1
ARU						21 07 25.2	
ARU						21 12 12.9	
ARU				SS	SS	21 24 29.9	-4.5
ARU	**Arti**	**128.98**	**35**	*e*PKPdf	PKPdf	21 05 14.8	+0.1
ASAR	**Alice Springs**	**128.98**	**207**	PKP	PKPdf	21 05 14.2	-1.7
comp=Z,9.4nm,0.9s,baz=146,slow=2.3,SNR=64							
ASAR				pPKP	pPKPdf	21 05 41.6	-1.9
comp=Z,5.8nm,0.8s,baz=136,slow=1.8,SNR=7.6							
SVE	**Sverdlovsk**	**129.92**	**34**	*e*PKIKP	PKPdf	21 05 17.2	+0.8
SVE				pmax	pmax		
comp=Z,12nm,1.2s							
TIXI	**Tiksi**	**129.99**	**353**	*i* PKIKP	PKPdf	21 05 11.6	-4.6
TIXI				pmax	pmax		
comp=Z,5.0nm,0.8s							
SEY	**Seymchan**	**131.28**	**336**	↑*i* PKIKP	PKPdf	21 05 18.8	0.0
ABKAR	**Akbulak array**	**131.84**	**43**	*e*PKPdf	PKPdf	21 05 20.2	-0.1
BRVK	**Borovoye**	**136.54**	**35**	↓*i* PKIKP	PKPdf	21 05 30.1	+1.1
BRVK				pmax	pmax		
comp=Z,5.0nm,1.2s							
BVAR	**Borovoye Array**	**136.62**	**35**	PKP	PKPdf	21 05 29.3	+0.2
comp=Z,6.7nm,0.9s,baz=270,slow=1.5,SNR=19							
BVAR				pPKP	pPKPdf	21 05 54.7	-2.2
comp=Z,2.6nm,0.9s,baz=142,slow=3.4,SNR=2.5							
YAK	**Yakutsk**	**138.72**	**347**	*e*PKIKP	PKPdf	21 05 31.3	-1.5
YAK				pmax	pmax		
comp=Z,12nm,1.1s							
NVS	**Novosibirsk**	**141.62**	**26**	*e*PKIKP	PKPdf	21 05 34.0	-4.2
NVS				pmax	pmax		
comp=Z,25nm,1.4s							
NVS				pmax	pmax		
comp=N,2.0nm,1.0s							
NVS				pmax	pmax		
comp=E,7.0nm,1.0s							
KURK	**Kurchatov**	**142.17**	**34**	*e*PKIKP	PKPdf	21 05 35.1	-4.2
ZAA0	**Zalesovo Array**	**142.91**	**26**	*e*PKPpre		21 05 36.7	
ZALV	**Zalesovo Beam**	**142.91**	**26**	PKhKP		21 05 36.8	
comp=E,16nm,0.8s,baz=314,slow=3.8,SNR=43							
ZALV				SKPbc	SKPbc	21 09 11.2	+1.7
comp=E,1.9nm,0.9s,baz=298,slow=3.2,SNR=3.9							
EKS2	**Erkin-Say**	**143.01**	**48**	P	PKPdf	21 05 39.0	-2.1
SNR=22							
EKS2	**Erkin-Say**	**143.01**	**48**	*e*PKPpre		21 05 38.4	
USP	**Ospenovka**	**143.28**	**47**	P	PKPdf	21 05 39.4	-2.2
SNR=6.0							
AAK	**Ala-Archa**	**143.52**	**48**	P	PKPdf	21 05 41.0	-1.0
SNR=18							
FRU	**Bishkek**	**143.53**	**48**	*e*PKIKP	PKPdf	21 05 41.0	-1.0
FRU				pmax	pmax		
comp=Z,55nm,1.4s							
CHMS	**Chumysh**	**143.56**	**47**	P	PKPdf	21 05 40.6	-1.5
SNR=8.3							
UCH	**Uchtor**	**143.67**	**49**	P	PKPdf	21 05 42.0	-0.2
SNR=31							
UCH	**Uchtor**	**143.67**	**49**	*e*PKPdf	PKPdf	21 05 41.7	-0.6
KBK	**Karagaybulak**	**143.82**	**48**	P	PKPdf	21 05 41.6	-0.9
SNR=28							
TKM2	**Tokmak 2**	**144.16**	**47**	P	PKPdf	21 05 42.5	-0.7
SNR=31							
TKM2	**Tokmak 2**	**144.16**	**47**	*e*PKPdf	PKPdf	21 05 42.3	-0.8
KZA	**Kyzart**	**144.24**	**49**	P	PKPdf	21 05 43.3	0.0
SNR=55							
CLNS	**Chul'man**	**144.47**	**347**	*e*PKIKP	PKPdf	21 05 40.1	-3.1
CLNS				pmax	pmax		
comp=Z,28nm,1.1s							
CLNS				pmax	pmax		
comp=N,11nm,1.1s							
CLNS				pmax	pmax		
comp=E,6.0nm,1.1s							
POO	**Poona**	**144.71**	**90**	*e*P	PKPdf	21 05 40.9	-3.8
KAD	**Karad**	**144.72**	**92**	*e*P	PKPdf	21 05 40.5	-4.4
BOD	**Bodaibo**	**144.85**	**358**	↑*i* PKIKP	PKPdf	21 05 41.4	-2.4
BOD				pmax	pmax		
comp=Z,75nm,0.9s							
ULHL	**Ulahol**	**144.86**	**48**	P	PKPdf	21 05 45.4	+1.0
SNR=49							
YSS	**Yuzh-Sakhalins**	**145.03**	**322**	*e*PKIKP	PKPdf	21 05 42.9	-1.6
YSS				pmax	pmax		
comp=Z,50nm,1.0s							
YSS				MLR	MLR		
comp=Z,600nm,16.0s							
YSS	**Yuzh-Sakhalins**	**145.03**	**322**	*e*PKPbc	PKPbc	21 05 43.5	-0.6
KSH	**Kashi**	**145.63**	**53**	*e*PKPbc	PKPbc	21 05 46.6	+0.4
KSH				*ep*PKP	pPKPdf	21 06 12.5	-1.1
KSH				*es*PKP		21 06 23.6	
KSH				*e*PKS		21 09 20.5	
KSH				*e*SKS	SKSdf	21 12 43.1	-2.6
KSH				*e*SKKS	SKKSac	21 15 50.1	-0.1
KSH				*e*SS	SS	21 27 55.6	+2.6
KSH				LR	LR		
comp=N,480nm,13.6s							
KSH				LR	LR		
comp=E,360nm,13.2s							
KSH				LR	LR		
comp=Z,1μm,18.9s							
MK31	**Makanchi Array**	**146.43**	**37**	*e*PKP2	PKPbc	21 05 46.9	-1.5
MKAR	**Makanchi Array**	**146.43**	**37**	PKPbc	PKPbc	21 05 46.7	-1.6
comp=Z,20nm,0.8s,baz=332,slow=1.8,SNR=142							
MKAR				pPKPbc	pPKPbc	21 06 14.2	-1.7
comp=Z,15nm,0.7s,baz=324,slow=2.9,SNR=4.0							
MKAR	**Makanchi Array**	**146.43**	**37**	PKPbc	PKPbc	21 05 46.7	-1.7
MKAR				pPKPbc	pPKPbc	21 06 14.2	-1.7
PALK	**Pallekele**	**146.76**	**113**	*i* PKP2	PKPab	21 05 50.9	-0.8
THN	**Thein Dam**	**147.07**	**65**	*e*P	PKPdf	21 05 47.1	-1.3
ERM	**Erimo**	**147.21**	**314**	*e*PKP2	PKPbc	21 05 49.7	-1.1
KHET	**Khetri**	**147.51**	**73**	*e*P	PKPdf	21 05 45.2	-4.1
HABR	**Khabarovsk**	**148.11**	**330**	*e*PKP2	PKPbc	21 05 51.3	-1.6
HABR				*e*		21 09 23.0	
HABR				*e*		21 12 47.2	
HABR				*e*SS	SS	21 28 20.6	+1.1
HABR				*e*SSS		21 33 56.4	
KKR	**Kurukshetra**	**148.29**	**69**	*e*P	PKPdf	21 05 47.2	-3.4
SMLA	**Simla**	**148.47**	**67**	*e*P	PKPdf	21 05 47.1	-3.7
SONA	**Sohna**	**148.63**	**73**	*e*P	PKPdf	21 05 47.1	-4.0
AYAN	**Aya Nagar**	**148.66**	**72**	*e*P	PKPdf	21 05 47.9	-3.3
NDI	**New Delhi**	**148.72**	**72**	*e*P	PKPdf	21 05 50.0	-1.3
HYB	**Hyderabad**	**148.78**	**94**	*i* PKP	PKPbc	21 05 55.5	-0.1
HYB				*e*		21 06 22.0	
HYB				*e*		21 06 29.0	
BHPL	**Bhopal**	**148.78**	**82**	*e*P	PKPdf	21 05 48.6	-2.9
BISR	**Bishrakh**	**148.93**	**72**	*e*P	PKPdf	21 05 48.0	-3.6
BISR				AMS	AMS	21 13 37.7	
comp=Z,534nm,16.0s							
KLR	**Kul'dur**	**148.99**	**334**	*e*PKHKP		21 05 47.7	
DDI	**Dehra Dun**	**149.32**	**69**	*e*x	x	21 05 52.0	
KLP	**Kalpa**	**149.33**	**66**	*e*P	PKPdf	21 05 50.2	-2.0
AGRA	**Agra**	**149.42**	**75**	*e*P	PKPdf	21 05 49.4	-3.0
AGRA				AMS	AMS	21 14 22.1	
comp=Z,446nm,15.3s							
MOY	**Mondy**	**149.97**	**13**	*e*PKP2	PKPbc	21 05 58.2	+0.7
MOY				pmax	pmax		
comp=Z,41nm,1.4s							
IRK	**Irkutsk**	**149.99**	**9**	↓*i* PKP2	PKPbc	21 05 56.4	-1.1
IRK				pmax	pmax		
comp=Z,35nm,1.5s							
NGP	**Nagpur**	**150.01**	**87**	*e*P	PKPdf	21 05 48.9	-4.7
TLY	**Talaya**	**150.44**	**10**	*e*PKIKP	PKPdf	21 05 54.0	+0.7
TLY				*e*		21 06 35.1	
TLY				pmax	pmax		
comp=Z,14nm,1.0s							
TLY	**Talaya**	**150.44**	**10**	*e*PKPdf	PKPdf	21 05 53.9	+0.6
JOSI	**Joshimath**	**150.58**	**68**	*e*P	PKPdf	21 05 51.1	-3.0
CIT	**Chita**	**150.66**	**357**	*e*PKIKP	PKPbc	21 05 59.7	+0.6
WMQ	**Urumqi**	**151.26**	**37**	*e*PKPbc	PKPdf	21 05 53.9	-0.9
WMQ	**Urumqi**	**151.26**	**37**	P	PKPbc	21 06 01.3	+0.5
WMQ				pmax	pmax		
comp=Z,32nm,1.0s							
KAPI	**Kappang**	**151.28**	**198**	*e*PKPbc	PKPbc	21 05 59.1	-2.7
ZAK	**Zakamensk**	**151.64**	**11**	*e*PKIKP	PKPdf	21 05 54.8	-0.3
ZAK				pmax	pmax		
comp=Z,9.0nm,1.0s							
MJAR	**Matsushiro Arr**	**152.99**	**307**	PKP	PKPdf	21 05 57.0	-0.6
comp=Z,0.5nm,0.4s,baz=271,slow=3.0,SNR=5.0							
MJAR				PKPbc	PKPbc	21 06 03.5	-1.5
comp=Z,7.5nm,0.8s,baz=100,slow=0.6,SNR=22							
MJAR				PKPab	PKPab	21 06 15.6	-1.1
comp=Z,6.5nm,0.9s,baz=87,slow=2.4,SNR=8.0							
MJAR				pPKPbc	pPKPbc	21 06 31.1	-1.5
comp=Z,12nm,0.9s,baz=67,slow=1.4,SNR=8.2							
MJAR				pPKPab	pPKPab	21 06 42.4	-1.2
comp=Z,8.8nm,0.8s,baz=71,slow=2.5,SNR=5.0							
MJAR				PP	PP	21 09 49.4	-0.9
comp=Z,0.4nm,0.3s,baz=90,slow=4.9,SNR=4.2							
MAJO	**Matsushiro**	**152.99**	**307**	*e*PKIKP	PKPdf	21 05 59.0	+1.4
MAT	**Matsushiro**	**152.99**	**307**	PKP	PKPbc	21 06 03.6	-1.4
SONM	**Songino Array**	**154.59**	**8**	PKP	PKPdf	21 05 59.1	-0.4
comp=Z,4.3nm,0.9s,baz=313,slow=1.5,SNR=31							
SONM				PKPbc	PKPbc	21 06 07.5	-0.5
comp=Z,5.5nm,1.0s,baz=269,slow=1.1,SNR=12							
SONM				PKPab	PKPab	21 06 23.5	+0.5
comp=Z,5.1nm,0.9s,baz=305,slow=2.7,SNR=8.3							
ULN	**Ulaanbaatar**	**154.64**	**7**	*e*PKIKP	PKPdf	21 06 00.0	+0.4
CN2	**Changchun**	**155.94**	**334**	*e*PKP	PKPdf	21 06 01.3	-0.1
CN2				pPKP	pPKPdf	21 06 26.8	-2.5
CN2				*e*PP	PP	21 10 09.5	+3.7
CN2				LR	LR		
comp=Z,200nm,18.0s							
KSRS	**Korea Array**	**159.50**	**320**	PKP	PKPdf	21 06 05.0	-1.1
comp=Z,6.3nm,1.0s,baz=60,slow=0.9,SNR=30							
KSRS				pPKP	pPKPdf	21 06 33.0	-1.0
comp=Z,6.8nm,1.1s,baz=71,slow=0.9,SNR=5.6							
KSRS				PKPab	PKPab	21 06 43.8	-0.8
comp=Z,3.5nm,0.9s,baz=49,slow=2.3,SNR=5.0							
KSRS				pPKPab	pPKPab	21 07 10.2	-1.2
comp=Z,4.2nm,0.8s,baz=47,slow=4.4,SNR=3.4							
GTA	**Gaotai**	**160.64**	**28**	PKP	PKPdf	21 06 07.8	+0.5
GTA				pPKP	pPKPdf	21 06 34.0	-1.2
GTA				sPKP		21 06 45.5	
GTA				PKS		21 09 40.3	
GTA				PP	PP	21 10 37.5	+5.9
GTA				SKS	SKSdf	21 13 01.0	-2.3
GTA				SKKS	SKKSac	21 17 14.3	+3.1
GTA				SS	SS	21 30 40.3	+4.9
GTA				AMB	AMB		
comp=Z,1μm,10.7s							
GTA				LR	LR		
comp=N,370nm,19.0s							
GTA				LR	LR		
comp=E,250nm,17.5s							
GTA				LR	LR		
comp=Z,350nm,17.0s							
HHC	**Hu-ho-hao-te**	**161.89**	**360**	*e*PKP	PKPdf	21 06 07.8	-0.7
HHC				pPKP	pPKPdf	21 06 34.6	-1.9
HHC				sPKP		21 06 45.3	
HHC				PKS		21 09 40.5	
HHC				PP	PP	21 10 39.8	+2.1
HHC				SKS	SKSdf	21 13 01.0	-3.3
HHC				SKKS	SKKSac	21 17 17.4	0.0
HHC				SS	SS	21 30 48.0	+0.5
HHC				AMB	AMB		
comp=Z,1μm,10.0s							
HHC				LR	LR		
comp=N,200nm,21.8s							
HHC				LR	LR		
comp=E,190nm,20.2s							
HHC				LR	LR		
comp=Z,210nm,20.0s							
BJI	**Beijing**	**162.22**	**348**	PKP	PKPdf	21 06 09.3	+0.4
BJI				LR	LR		
comp=N,250nm,16.6s							
BJI				LR	LR		
comp=E,120nm,16.6s							
BJI				LR	LR		
comp=Z,280nm,22.1s							
LZH	**Lanzhou**	**165.13**	**24**	*e*PKP	PKPdf	21 06 09.3	-2.4
LZH				pPKP	pPKPdf	21 06 36.3	-3.4
LZH				sPKP		21 06 46.5	
LZH				PKPab	PKPab	21 07 08.5	-0.6
LZH				*e*PP	PP	21 10 56.0	+0.8
LZH				SKKS	SKKSac	21 17 31.8	-2.4
LZH				AMB	AMB		
comp=Z,120nm,9.5s							
LZH				LR	LR		
comp=E,160nm,18.5s							
LZH				LR	LR		
comp=Z,200nm,20.3s							
CMAR	**Chiang Mai Arr**	**167.63**	**108**	PKP	PKPdf	21 06 13.4	-0.8
comp=Z,3.4nm,1.0s,baz=266,slow=1.9,SNR=21							
CMAR				pPKP	pPKPdf	21 06 40.6	-1.5
comp=Z,2.6nm,1.0s,baz=281,slow=1.1,SNR=4.6							
CMAR				PKPab	PKPab	21 07 20.3	-0.6
comp=Z,3.8nm,0.9s,baz=254,slow=4.7,SNR=10.0							
CMAR				pPKPab	pPKPab	21 07 46.3	-1.3
comp=Z,3.2nm,0.9s,baz=258,slow=4.8,SNR=3.9							
CMAR				PP	PP	21 11 09.7	-0.1
comp=Z,7.4nm,1.2s,baz=247,slow=5.7,SNR=13							
CMAR	**Chiang Mai Arr**	**167.63**	**108**	PKIKP	PKPdf	21 06 13.4	-0.8
CMAR						21 07 20.3	
CMAR						21 11 09.7	
CHTO	**Chiang Mai**	**167.76**	**106**	*e*PKIKP	PKPdf	21 06 13.3	-1.0
CD2	**Chengdu**	**169.36**	**38**	PKPbc	PKPdf	21 06 03.3	-12
CD2				pPKP	pPKPdf	21 06 30.3	-13
CD2				sPKP		21 06 40.8	
CD2				PKPab	PKPab	21 07 17.9	-10
CD2				PKS		21 09 34.5	
CD2				PP	PP	21 11 08.0	-9.3
CD2				SKS	SKSdf	21 12 55.5	-14
CD2				SKKS	SKKSac	21 17 43.9	-12
CD2				SS	SS	21 31 53.0	-12
CD2				LR	LR		
comp=N,650nm,17.8s							
CD2				LR	LR		
comp=Z,940nm,19.0s							
WHN	**Wuhan**	**171.73**	**342**	PKP	PKPdf	21 06 16.5	+0.2
KMI	**Kunming**	**171.75**	**71**	PKP	PKPdf	21 06 15.6	-0.8
KMI				sPKP		21 06 54.8	
KMI				PP	PP	21 11 30.6	+0.2
KMI				SS	SS	21 32 26.8	-4.0
KMI				LR	LR		
comp=Z,210nm,17.4s							
GYA	**Guiyang**	**174.31**	**48**	PKP	PKPdf	21 06 16.0	-1.4
GYA				pPKP	pPKPdf	21 06 44.8	-0.6
GYA				PKPab	PKPab	21 07 50.3	+0.1
GYA				PKS		21 09 46.8	
GYA				PP	PP	21 11 42.5	+0.3
GYA				SKKS	SKKSac	21 18 18.0	-1.7
GYA				SS	SS	21 32 51.0	-3.2
GYA				AMB	AMB		
comp=Z,120nm,7.9s							
GYA				LR	LR		
comp=N,180nm,24.9s							
GYA				LR	LR		
comp=E,120nm,25.3s							
GYA				LR	LR		
comp=Z,110nm,13.6s							

IDC ***23*** *21:09:42.1±1.2,28°.03N×56°.87E,h0km,mb4.1/19, mb1 4.1/22,mb1mx4.1/30,mbtmp4.0/22,ML3.7/3,Error ellipse: s-maj=26.9km s-min=14.2km az=171.0*
ISCJB ***23*** *21:09:43.4±0.2,28°.24N±0°.02×56°.83E±0°.03,h10km, mb4.2/49,MS4.6/2,Error ellipse: s-maj=4.1km s-min=2.9km az=19.8*
CSEM ***23*** *21:09:44.7±0.2,28°.20N×56°.87E,h10km,mb4.2/38,Error ellipse: s-maj=5.8km s-min=4.4km az=99.0*
NEIC ***23*** *21:09:47.5,28°.23N×56°.66E,h14km,mb4.2/24, ML3.9(THR),MN3.9(TEH),After THR.*
THR ***23*** *21:09:47.4±1.8,28°.26N×56°.68E,h15km±10km,ML3.9*
TEH ***23*** *21:09:48.1,28°.21N×56°.59E,h3km*
MOS ***23*** *21:09:49.1±0.8,28°.16N×56°.77E,h65km,mb4.5/32,Error ellipse: s-maj=10.6km s-min=5.8km az=117.0*
OMAN ***23*** *21:10:04.7,26°.90N×56°.42E,h50km*
ISC 23 21:09:45.1±0.2,28°.21N±0°.02×56°.85E±0°.03,h10km,n263,
σ1§13/272,mb4.2/49,MS4.6/2,2C-1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
BNDS	**Bandar-Abbas**	**1.00**	**217**	Pg	**Pg**	**21 10 04.0**		**-0.4**
BNDS	**Bandar-Abbas**	**1.00**	**217**	*e*Pg	**Pg**	**21 10 05.0**		**+0.6**
BNDS				*e*Sg	**Sg**	**21 10 19.3**		**+1.9**
BNDS				AML	AML	21 10 23.2		
comp=N,3μm,0.5s								
BNDS	**Bandar-Abbas**	**1.00**	**217**	Pg	**Pg**	**21 10 04.0**		**-0.4**
KRBR	**Kerman**	**1.77**	**358**	*e*Pg	**Pg**	**21 10 18.0**		**-1.1**
KRBR				*e*Sg	**Sg**	**21 10 42.6**		**+0.6**
KRBR				AML	AML	21 10 48.4		
comp=N,2μm,0.6s								
KRBR				AML	AML	21 10 51.8		
comp=E,1μm,0.4s								
KRBR	**Kerman**	**1.77**	**358**	*e*Sg	**Sg**	**21 10 43.2**		**+1.2**
BANOM	**Banah**	**2.33**	**192**	Pn	**Pn**	**21 10 23.4**		**0.0**
SNR=52								
BANOM				Sn	**Sn**	**21 10 52.6**		**+0.5**
NAZ	**Nazwa, Dubai**	**3.38**	**199**	Pn	**Pn**	**21 10 38.9**		**+1.0**
GHIR	**Ghir-Karzin**	**3.41**	**272**	Pn	**Pn**	**21 10 40.0**		**+1.7**
GHIR	**Ghir-Karzin**	**3.41**	**272**	*e*Pn	**Pn**	**21 10 40.7**		**+2.4**
GHIR				AML	AML	21 11 47.2		
comp=E,159nm,0.6s								
GHIR	**Ghir-Karzin**	**3.41**	**272**	Pn	**Pn**	**21 10 40.0**		**+1.7**
HATD	**Hatta, Dubai**	**3.43**	**191**	Pn	**Pn**	**21 10 39.5**		**+0.9**
ISRV	**Sarvestan**	**3.48**	**291**	*e*Pn	**Pn**	**21 10 41.0**		**+1.7**
ISRV				*e*		21 11 51.7		
comp=Z,2μm,0.3s								
ISRV	**Sarvestan**	**3.48**	**291**	*e*Pn	**Pn**	**21 10 41.0**		**+1.7**
IBAF	**Bafgh**	**3.55**	**342**	*e*Pn	**Pn**	**21 10 42.9**		**+2.7**
IBAF				*e*		21 10 57.0		
comp=Z,2μm,0.2s								
IBAF				*e*Sg	**Sg**	**21 11 35.7**		**-3.4**
IBAF	**Bafgh**	**3.55**	**342**	*e*Pn	**Pn**	**21 10 42.9**		**+2.7**
IBAF				*e*Sg	**Sg**	**21 11 35.7**		**-3.4**
ASHO	**Ashiyiah**	**3.58**	**192**	Pn	**Pn**	**21 10 41.0**		**+0.3**
SNR=35								
FAQ	**Al Faqa, Dubai**	**3.63**	**198**	Pn	**Pn**	**21 10 42.1**		**+0.8**
SNR=77								
IPAR	**Pars**	**3.70**	**297**	*e*Pn	**Pn**	**21 10 43.8**		**+1.5**
IPAR				*e*		21 12 03.2		
comp=Z,2μm,0.3s								
IPAR	**Pars**	**3.70**	**297**	*e*Pn	**Pn**	**21 10 43.8**		**+1.5**
IMEH	**Mehriz**	**3.72**	**329**	*e*Pn	**Pn**	**21 10 44.6**		**+2.0**
IMEH				*e*		21 11 01.7		
comp=Z,1μm,0.3s								
IMEH	**Mehriz**	**3.72**	**329**	*e*Pn	**Pn**	**21 10 44.6**		**+2.0**
ZHSF	**Zahedan**	**3.72**	**67**	Pn	**Pn**	**21 10 48.0**		**+5.4**
ZHSF	**Zahedan**	**3.72**	**67**	*e*Pn	**Pn**	**21 10 48.8**		**+6.2**
ZHSF	**Zahedan**	**3.72**	**67**	*e*Pn	**Pn**	**21 10 48.8**		**+6.2**
IMOK	**Mouk**	**3.73**	**284**	*e*Pn	**Pn**	**21 10 43.6**		**+0.9**
IMOK				*e*		21 11 37.5		
comp=Z,2μm,0.1s								
IMOK	**Mouk**	**3.73**	**284**	*e*Pn	**Pn**	**21 10 43.6**		**+0.9**
ASUD	**Al Ashush, Dub**	**3.82**	**201**	Pn	**Pn**	**21 10 45.3**		**+1.4**
SNR=166								
ICHK	**Chekchek**	**4.54**	**333**	*e*Pn	**Pn**	**21 10 55.6**		**+1.7**
ICHK				*e*		21 11 12.6		
comp=Z,883nm,0.3s								
ICHK	**Chekchek**	**4.54**	**333**	*e*Pn	**Pn**	**21 10 55.6**		**+1.7**
IKOO	**Kooshah**	**4.60**	**23**	*e*Pn	**Pn**	**21 10 58.7**		**+4.0**
IKOO				*e*		21 11 00.7		
comp=Z,2μm,0.2s								
IKOO	**Kooshah**	**4.60**	**23**	*e*Pn	**Pn**	**21 10 58.7**		**+4.0**
ISAD	**Sadrabad**	**4.60**	**324**	*e*Pn	**Pn**	**21 10 56.3**		**+1.6**
ISAD	**Sadrabad**	**4.60**	**324**	*e*Pn	**Pn**	**21 10 56.3**		**+1.6**
HOQ	**Hoqain**	**4.62**	**175**	P	**Pn**	**21 10 55.3**		**+0.3**
SNR=5.4								
HOQ	**Hoqain**	**4.62**	**175**	P	**Pn**	**21 10 55.3**		**+0.3**
SNR=5.4								
ITEG	**Tejag**	**4.95**	**19**	*e*Pn	**Pn**	**21 11 03.9**		**+4.4**
ITEG				*e*		21 12 31.9		
comp=Z,1μm,0.4s								
ITEG	**Tejag**	**4.95**	**19**	*e*Pn	**Pn**	**21 11 03.9**		**+4.4**
IDAH	**Dahanechah**	**5.22**	**29**	*e*	**Pg**	**21 11 29.3**		**+4.3**
comp=Z,1μm,0.2s								
IDAH				*e*Pn	**Pn**	**21 11 08.0**		**+4.9**
IDAH				*e*Sg	**Sg**	**21 12 35.4**		**+2.8**
SMDO	**Samad**	**5.24**	**168**	P	**Pn**	**21 11 04.9**		**+1.4**
SNR=6.5								
SMDO	**Samad**	**5.24**	**168**	P	**Pn**	**21 11 04.9**		**+1.4**
SNR=6.5								
NASN	**Na'in**	**5.75**	**324**	Pn	**Pn**	**21 11 13.0**		**+2.5**
NASN	**Na'in**	**5.75**	**324**	*e*Pn	**Pn**	**21 11 13.4**		**+2.9**
NASN	**Na'in**	**5.75**	**324**	*e*Pn	**Pn**	**21 11 13.4**		**+2.9**
IZEF	**Zefreh**	**6.08**	**321**	*e*Pn	**Pn**	**21 11 16.4**		**+1.3**
IZEF				*e*		21 11 26.3		
comp=Z,222nm,0.2s								
IZEF	**Zefreh**	**6.08**	**321**	*e*Pn	**Pn**	**21 11 16.4**		**+1.3**
SLWS		**6.51**	**240**	P	**Pn**	**21 11 21.0**		**0.0**
SLWS		**6.51**	**240**	P	**Pn**	**21 11 21.0**		**0.0**
BTHS		**6.80**	**234**	S	**Sn**	**21 12 35.6**		**-6.9**
BTHS		**6.80**	**234**	P	**Pn**	**21 11 24.2**		**-0.7**
BTHS		**6.80**	**234**	P	**Pn**	**21 11 24.2**		**-0.7**
IPIR	**Pirpir**	**6.81**	**312**	*e*Pn	**Pn**	**21 11 26.2**		**+1.2**
IPIR				*e*		21 12 46.3		
comp=Z,372nm,0.3s								
IPIR	**Pirpir**	**6.81**	**312**	*e*Pn	**Pn**	**21 11 26.2**		**+1.2**
QRN	**Al-Qurain**	**7.88**	**276**	*e*P	**Pn**	**21 11 39.9**		**+0.2**
QRN				AML	AML	21 13 07.4		
comp=Z,66nm,0.3s								
KBD	**Kabd**	**8.10**	**279**	*e*P

comp=Z,4.1nm,1.1s
UCH Uchtor 20.05 41 *e*P **P 21 14 19.1 +0.9**
comp=Z,4.1nm,1.1s
GOF Gofitskoye 20.09 330 *e*P **P 21 14 26.3 +7.6**
TKM2 Tokmak 2 21.10 41 *e*P **P 21 14 30.3 +0.6**
TKM2 pmax pmax
comp=Z,4.0nm,0.9s,mb3.8
TKM2 Tokmak 2 21.10 41 *e*P **P 21 14 30.3 +0.6**
comp=Z,4.1nm,0.9s,mb3.8
TKM2 Tokmak 2 21.10 41 *e*P **P 21 14 30.3 +0.6**
comp=Z,4.0nm,0.9s,mb3.8
CSS Prodhromos 21.11 294 *e*P **P 21 14 29.3 -0.5**
comp=Z,14nm,1.0s,mb4.2
CSS Prodhromos 21.11 294 *e*P **P 21 14 29.3 -0.6**
comp=Z,14nm,1.0s,mb4.2
ABKAR Akbulak array 21.15 6 *e*P **P 21 14 30.6 +0.4**
comp=Z,4.4nm,0.6s,mb4.0
ABKAR Akbulak array 21.15 6 *e*P **P 21 14 30.6 +0.4**
comp=Z,4.4nm,0.6s,mb4.0
AKTK Aktyubinsk 22.22 2 P **P 21 14 42.2 +0.7**
AKTK Aktyubinsk 22.22 2 P **P 21 14 42.2 +0.6**
comp=Z,4.0nm,0.4s,mb4.2
AKTO Aktyubinsk 22.22 2 P **P 21 14 42.2 +0.7**
comp=Z,4.0nm,0.4s,mb4.2,baz=170,slow=11,SNR=19
AKTO Aktyubinsk 22.22 2 P **P 21 14 42.2 +0.6**
AKTO pmax pmax
comp=Z,4.0nm,0.4s,mb4.2
BR131 Keskin Array S 22.35 307 *e*P **P 21 14 43.5 +0.4**
comp=Z,6.5nm,0.8s,mb4.1
BR131 Keskin Array S 22.35 307 *e*P **P 21 14 43.5 +0.4**
comp=Z,6.5nm,0.8s,mb4.1
BRTR Keskin Array B 22.35 307 P **P 21 14 43.4 +0.3**
comp=Z,5.0nm,0.8s,mb4.0,baz=117,slow=10,SNR=29
BRTR Keskin Array B 22.35 307 P **P 21 14 43.4 +0.3**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 22.35 307 P **P 21 14 43.4 +0.3**
comp=Z,5.0nm,0.8s,mb4.0
DMN Daman 24.96 85 *e*P **P 21 15 09.3 +0.5**
KKN Kakani 25.09 84 *e*P **P 21 15 10.3 +0.3**
comp=Z,7.7nm,0.4s,mb4.6
PKIN Phulchoki 25.22 85 *e*P **P 21 15 11.4 +0.2**
comp=Z,18nm,0.6s,mb4.8
PKI Pulchoki 25.23 85 *e*P **P 21 15 13.3 +2.0**
GUN Gumba 25.60 84 *e*P **P 21 15 15.2 +0.6**
comp=Z,22nm,0.8s,mb4.8
BRVK Borovoye 26.75 18⇓*e*P **P 21 15 25.0 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.7s,mb3.9
BRVK Borovoye 26.75 18 *e*P **P 21 15 24.7 0.0**
comp=Z,4.3nm,0.7s,mb4.1
BRVK Borovoye 26.75 18 *e*P **P 21 15 24.7 0.0**
comp=Z,4.3nm,0.7s,mb4.1
BVAR Borovoye Array 26.75 18 P **P 21 15 25.0 +0.3**
comp=Z,6.3nm,0.7s,mb4.2,baz=198,slow=9.0,SNR=26
BVAR Borovoye Array 26.75 18 P **P 21 15 25.0 +0.3**
BVAR pmax pmax
comp=Z,6.0nm,0.7s
BVAR Borovoye Array 26.75 18 P **P 21 15 25.0 +0.3**
comp=Z,6.0nm,0.7s,mb4.2
MK31 Makanchi Array 27.23 40 *e*P **P 21 15 29.4 +0.3**
MK31 Makanchi Array 27.23 40 *e*P **P 21 15 29.4 +0.3**
MKAR Makanchi Array 27.23 40 P **P 21 15 29.3 +0.2**
comp=Z,1.3nm,0.5s,mb3.7,baz=227,slow=7.9,SNR=18
MKAR Makanchi Array 27.23 40 P **P 21 15 29.3 +0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 27.87 30 P **P 21 15 33.9 -0.9**
comp=Z,2.4nm,0.8s,mb3.9,baz=230,slow=8.6,SNR=12
KURK Kurchatov 27.87 30 *e*P **P 21 15 35.1 +0.3**
KURK pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
KURK Kurchatov 27.87 30 *e*P **P 21 15 35.0 +0.2**
comp=Z,3.2nm,1.0s,mb3.9
KURK Kurchatov 27.87 30 *e*P **P 21 15 35.0 +0.2**
comp=Z,3.2nm,1.0s,mb3.9
MLR Muntele Rosu 29.90 314 P **P 21 15 54.1 +1.2**
comp=Z,1.8nm,0.6s,mb4.0,baz=101,slow=16,SNR=4.3
MLR Muntele Rosu 29.90 314 P **P 21 15 54.1 +1.2**
MLR pmax pmax
comp=Z,2.0nm,0.6s
MLR Muntele Rosu 29.90 314 P **P 21 15 54.1 +1.2**
comp=Z,2.0nm,0.6s,mb4.0
OBN Obninsk 30.63 337⇑*e*P **P 21 15 59.1 -0.1**
OBN pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
OBN MLR MLR
comp=Z,1μm,18.0s,MS4.5
OBN Obninsk 30.63 337 *e*P **P 21 15 59.1 -0.1**
comp=Z,1μm,18.0s
AKASG Malin Array Be 30.67 325 P **P 21 15 58.6 -1.0**
comp=Z,1.2nm,0.6s,mb3.9,baz=128,slow=7.9,SNR=6.3
AKASG Malin Array Be 30.67 325 P **P 21 15 58.6 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 30.67 325 P **P 21 15 58.6 -1.0**
comp=Z,1.0nm,0.6s,mb3.8
AKBB Malin Array Si 30.67 325 *e*P **P 21 15 57.9 -1.7**
AKBB Malin Array Si 30.67 325 *e*P **P 21 15 57.9 -1.7**
KIEV Kiev 30.67 325 *e*P **P 21 15 58.7 -1.0**
KIEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
KIEV Kiev 30.67 325 *e*P **P 21 15 58.7 -1.0**
comp=Z,2.9nm,0.7s,mb4.2
KIEV Kiev 30.67 325 *e*P **P 21 15 58.7 -1.0**
comp=Z,3.0nm,0.7s,mb4.2
NVS Novosibirsk 32.77 28 *i* P **P 21 16 17.2 -0.8**
NVS Novosibirsk 32.77 28 *i* P **P 21 16 17.2 -0.8**
ZAA0 Zalesovo Array 32.86 31 *e*P **P 21 16 18.4 -0.5**
ZAA0 Zalesovo Array 32.86 31 *e*P **P 21 16 18.4 -0.5**
ZALV Zalesovo Beam 32.86 31 P **P 21 16 18.7 -0.2**
comp=Z,3.8nm,0.3s,mb4.8,baz=240,slow=9.3,SNR=34
ZALV Zalesovo Beam 32.86 31 P **P 21 16 18.7 -0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
KOLS Kolonicke sedl 33.62 317 *e*P **P 21 16 26.4 +0.8**
KOLS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KOLS Kolonicke sedl 33.62 317 *e*P **P 21 16 26.4 +0.8**
comp=Z,6.3nm,0.9s,mb4.5
KOLS *e* 21 16 32.1
KOLS Kolonicke sedl 33.62 317 *e*P **P 21 16 26.4 +0.8**
KOLS *ep*P pP 21 16 32.1 +3.4
KOLS Kolonicke sedl 33.62 317 *e*P **P 21 16 26.4 +0.8**
comp=Z,6.0nm,0.9s,mb4.5
KECS Kecovo 34.52 316 *e*P **P 21 16 36.2 +2.8**
KECS Kecovo 34.52 316 *e*P **P 21 16 36.2 +2.8**
TIP Timpagrande 34.85 299 *e*P **P 21 16 35.1 -1.3**
comp=Z,4.7nm,1.0s,mb4.4
TIP Timpagrande 34.85 299 *e*P **P 21 16 35.1 -1.3**
comp=Z,4.7nm,1.0s,mb4.4
VYHS Vyhne 35.55 315 *e*P **P 21 16 42.4 +0.2**
VYHS Vyhne 35.55 315 *e*P **P 21 16 42.3 +0.1**
VYHS Vyhne 35.55 315 *e*P **P 21 16 42.4 +0.2**
OJC Ojcow 35.62 318 *e*P **P 21 16 42.4 -0.5**
OJC Ojcow 35.62 318 *e*P **P 21 16 42.4 -0.5**
VSU Vasula 36.75 334 *i* P **P 21 16 52.2 -0.2**
VSU pmax pmax
comp=Z,14nm,0.9s,mb4.8
VSU MLR MLR
comp=Z,927nm,20.0s,MS4.6
VSU Vasula 36.75 334 *i* P **P 21 16 52.2 -0.2**
comp=Z,927nm,20.0s
MORC Moravsky Berou 36.80 317 *e*P **P 21 16 49.9 -3.0**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
MORC Moravsky Berou 36.80 317 *e*P **P 21 16 49.9 -3.0**
comp=Z,2.5nm,0.7s,mb4.2
JOF Joensuu 38.51 342 *e*P **P 21 17 06.4 -0.8**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
JOF Joensuu 38.51 342 *ep* **P 21 17 06.4 -0.8**
comp=Z,5.3nm,0.4s,mb4.6
JOF Joensuu 38.51 342 *e*P **P 21 17 06.4 -0.8**
comp=Z,5.0nm,0.4s,mb4.6
GERES GERESS Array B 38.89 314 P **P 21 17 09.5 -1.1**
comp=Z,1.4nm,0.8s,mb3.7,baz=108,slow=8.6,SNR=11
GERES GERESS Array B 38.89 314 P **P 21 17 09.5 -1.1**
GERES pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 38.89 314 P **P 21 17 09.5 -1.1**
comp=Z,1.0nm,0.8s,mb3.6
FINES FINESS Array B 39.04 337 P **P 21 17 11.3 -0.3**
comp=Z,6.4nm,0.4s,mb4.7,baz=129,slow=8.8,SNR=60
FINES FINESS Array B 39.04 337 P **P 21 17 11.3 -0.4**
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 39.04 337 P **P 21 17 11.3 -0.3**
FINES FINESS Array B 39.04 337 P **P 21 17 11.3 -0.4**
comp=Z,6.0nm,0.4s,mb4.7
KHC Kasperske Hory 39.04 314 *e*P **P 21 17 11.2 -0.7**
KHC pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KHC Kasperske Hory 39.04 314 *e*P **P 21 17 11.2 -0.7**
comp=Z,3.6nm,0.8s,mb4.2
KHC Kasperske Hory 39.04 314 *e*P **P 21 17 11.0 -0.9**
KHC *ep*P pP 21 17 20.0 +5.0
KHC Kasperske Hory 39.04 314 P **P 21 17 11.0 -0.9**
KAF Kangasniemi 39.43 338 *e*P **P 21 17 14.5 -0.5**
KAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KAF Kangasniemi 39.43 338 *ep* **P 21 17 14.5 -0.5**
comp=Z,5.7nm,0.9s,mb4.3
KAF Kangasniemi 39.43 338 *e*P **P 21 17 14.5 -0.5**
comp=Z,6.0nm,0.9s,mb4.3
CLL Collm 40.04 317 *e*P **P 21 17 20.0 -0.2**
CLL pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
CLL Collm 40.04 317 *e*P **P 21 17 20.0 -0.2**
comp=Z,8.0nm,1.5s,mb4.2
CLL Collm 40.04 317 *e*P **P 21 17 20.0 -0.2**
comp=Z,8.0nm,1.5s,mb4.2
CLL *e*PP PP 21 18 48.0 -4.1
CLL Collm 40.04 317 *e*P **P 21 17 20.0 -0.2**
comp=Z,8.0nm,1.5s,mb4.2
KEST Kesra 40.67 293 P **P 21 17 26.4 +0.8**
comp=Z,0.5nm,0.5s,mb3.4,baz=283,slow=11,SNR=5.2
MBDF Montbardon 42.82 306 *e*P **P 21 17 41.6 -1.5**
comp=Z,12nm,0.9s,mb4.3
MBDF Montbardon 42.82 306 *e*P **P 21 17 41.6 -1.5**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
MBDF Montbardon 42.82 306 *e*P **P 21 17 41.6 -1.5**
comp=Z,5.9nm,0.9s,mb4.3
MBDF Montbardon 42.82 306 *e*P **P 21 17 41.6 -1.5**
comp=Z,5.9nm,0.9s,mb4.3
SONM Songino Array 42.84 49 P **P 21 17 43.4 +0.1**
comp=Z,0.5nm,0.6s,mb3.4,baz=258,slow=7.4,SNR=4.3
SONM Songino Array 42.84 49 P **P 21 17 43.4 +0.2**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM Songino Array 42.84 49 P **P 21 17 43.4 +0.2**
comp=Z,1.0nm,0.6s,mb3.7
LPG La Plagne 42.91 308 *e*P **P 21 17 42.7 -1.1**
LPG La Plagne 42.91 308 *e*P **P 21 17 42.7 -1.1**
BNI Bardonecchia 42.91 307 *e*P **P 21 17 42.4 -1.5**
BNI pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
BNI Bardonecchia 42.91 307 *e*P **P 21 17 42.4 -1.5**
comp=Z,3.5nm,0.8s,mb4.1
BNI Bardonecchia 42.91 307 *e*P **P 21 17 42.3 -1.6**
comp=Z,3.5nm,0.8s,mb4.1
LPL La Plagne 42.92 308 *e*P **P 21 17 42.5 -1.4**
comp=Z,5.2nm,0.8s,mb4.0
LPL La Plagne 42.92 308 *e*P **P 21 17 42.5 -1.4**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
LPL La Plagne 42.92 308 *e*P **P 21 17 42.5 -1.4**
comp=Z,2.6nm,0.8s,mb4.0
LPL La Plagne 42.92 308 *e*P **P 21 17 42.5 -1.4**
comp=Z,2.6nm,0.8s,mb4.0
NB2 NORSAR Subarra 44.67 330 P **P 21 17 56.0 -1.8**
comp=Z,1.0nm,0.6s,mb3.8,baz=115,slow=7.9
NB2 NORSAR Subarra 44.67 330 P **P 21 17 56.0 -1.8**
comp=Z,1.0nm,0.6s,mb3.8,baz=115,slow=7.9,SNR=6.5
NOA NORSAR Array B 44.67 330 P **P 21 17 56.4 -1.4**
comp=Z,1.4nm,0.7s,mb3.9,baz=116,slow=7.9,SNR=5.8
NOA NORSAR Array B 44.67 330 P **P 21 17 56.4 -1.4**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 44.67 330 P **P 21 17 56.4 -1.4**
comp=Z,1.0nm,0.7s,mb3.8
KEV Kevo 44.99 346 *e*P **P 21 17 58.8 -1.3**
KEV Kevo 44.99 346 *ep* **P 21 17 58.8 -1.3**
KEV Kevo 44.99 346 *e*P **P 21 17 58.8 -1.3**
SMF Signal de Mont 45.03 309 *e*P **P 21 17 59.6 -1.3**
comp=Z,17nm,1.0s,mb4.5
SMF Signal de Mont 45.03 309 *e*P **P 21 17 59.6 -1.3**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
SMF Signal de Mont 45.03 309 *e*P **P 21 17 59.6 -1.3**
comp=Z,8.5nm,1.0s,mb4.5
SMF Signal de Mont 45.03 309 *e*P **P 21 17 59.6 -1.3**
comp=Z,8.5nm,1.0s,mb4.5
LOR Lormes 45.08 310 *e*P **P 21 17 59.5 -1.7**
comp=Z,7.3nm,0.8s,mb4.2
LOR Lormes 45.08 310 *e*P **P 21 17 59.5 -1.7**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LOR Lormes 45.08 310 *e*P **P 21 17 59.5 -1.7**
comp=Z,3.7nm,0.8s,mb4.3
LOR Lormes 45.08 310 *e*P **P 21 17 59.5 -1.7**
comp=Z,3.7nm,0.8s,mb4.3
ARCES ARCESS Array B 45.15 345 P **P 21 18 01.1 -0.3**
comp=Z,1.4nm,0.4s,mb4.1,baz=138,slow=7.7,SNR=21
ARCES ARCESS Array B 45.15 345 P **P 21 18 01.2 -0.2**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 45.15 345 P **P 21 18 01.1 -0.3**
SSF Saint Saulge 45.30 310 *e*P **P 21 18 01.7 -1.3**
comp=Z,18nm,1.1s,mb4.5
SSF Saint Saulge 45.30 310 *e*P **P 21 18 01.7 -1.3**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
SSF Saint Saulge 45.30 310 *e*P **P 21 18 01.7 -1.3**
comp=Z,8.9nm,1.1s,mb4.5
SSF Saint Saulge 45.30 310 *e*P **P 21 18 01.7 -1.3**
comp=Z,8.9nm,1.1s,mb4.5
AVF Avril sur Loir 45.38 309 *e*P **P 21 18 02.0 -1.6**
comp=Z,4.8nm,0.8s,mb4.1
AVF Avril sur Loir 45.38 309 *e*P **P 21 18 02.0 -1.6**
AVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
AVF Avril sur Loir 45.38 309 *e*P **P 21 18 02.0 -1.6**
comp=Z,2.4nm,0.8s,mb4.1
AVF Avril sur Loir 45.38 309 *e*P **P 21 18 02.0 -1.6**
comp=Z,2.4nm,0.8s,mb4.1
BGF Bois d'Agland 45.71 309 *e*P **P 21 18 04.8 -1.4**
BGF Bois d'Agland 45.71 309 *e*P **P 21 18 04.8 -1.4**
TCF Toulx Ste Croi 46.13 308 *e*P **P 21 18 08.4 -1.2**
TCF Toulx Ste Croi 46.13 308 *e*P **P 21 18 08.4 -1.2**
CAF Calviac 46.17 306 *e*P **P 21 18 08.8 -1.1**
comp=Z,12nm,1.0s,mb4.5
CAF Calviac 46.17 306 *e*P **P 21 18 08.8 -1.1**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CAF Calviac 46.17 306 *e*P **P 21 18 08.8 -1.1**
comp=Z,6.1nm,1.0s,mb4.5
CAF Calviac 46.17 306 *e*P **P 21 18 08.8 -1.1**
comp=Z,6.1nm,1.0s,mb4.5
RJF Les Rejaudoux 46.57 307 *e*P **P 21 18 12.4 -0.6**
RJF Les Rejaudoux 46.57 307 *e*P **P 21 18 12.4 -0.6**
LFF La Frestale 47.11 306 *e*P **P 21 18 16.3 -1.0**
comp=Z,16nm,0.9s,mb4.7
LFF La Frestale 47.11 306 *e*P **P 21 18 16.3 -1.0**
LFF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
LFF La Frestale 47.11 306 *e*P **P 21 18 16.3 -1.0**
comp=Z,8.1nm,0.9s,mb4.7
LFF La Frestale 47.11 306 *e*P **P 21 18 16.3 -1.0**
comp=Z,8.1nm,0.9s,mb4.7
BOD Bodaibo 49.21 36 *e*P **P 21 18 32.3 -0.9**
BOD pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BOD Bodaibo 49.21 36 *e*P **P 21 18 32.3 -0.9**
comp=Z,5.0nm,1.0s,mb4.5
ESDC Sonseca Array 50.86 300 P **P 21 18 45.3 -0.8**
comp=Z,0.2nm,0.4s,mb3.4,baz=59,slow=7.6,SNR=2.8
ESDC Sonseca Array 50.86 300 P **P 21 18 45.3 -0.8**
TOA0 Torodi Ar. Sit 53.31 266 *e*P **P 21 19 02.7 -2.0**
TOA0 Torodi Ar. Sit 53.31 266 *e*P **P 21 19 02.7 -1.9**
TORD Torodi Ar. Bea 53.31 266 P **P 21 19 02.7 -1.9**
comp=Z,2.0nm,0.5s,mb4.3,baz=65,slow=7.2,SNR=26
TORD Torodi Ar. Bea 53.31 266 P **P 21 19 02.7 -1.9**
TIXI Tiksi 57.84 21 *e*P **P 21 19 36.2 -0.2**
TIXI pmax pmax
comp=Z,3.0nm,1.5s,mb4.1
TIXI Tiksi 57.84 21 *e*P **P 21 19 36.2 -0.2**
comp=Z,3.0nm,1.5s,mb4.1
KSRS Korea Array 59.17 61 P **P 21 19 44.5 -1.8**
comp=Z,0.6nm,0.3s,mb4.0,baz=272,slow=8.6,SNR=5.0
KSRS Korea Array 59.17 61 P **P 21 19 44.5 -1.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KSRS Korea Array 59.17 61 P **P 21 19 44.5 -1.7**
comp=Z,1.0nm,0.3s,mb4.3
SEY Seymchan 67.72 29⇑*e*P **P 21 20 41.6 -0.8**
SEY Seymchan 67.72 29 *e*P **P 21 20 41.6 -0.8**
YKA Yellowknife Ar 89.36 356 P **P 21 22 40.9 -0.6**
comp=Z,1.1nm,0.7s,mb4.3,baz=0.7,slow=5.2,SNR=20
YKA Yellowknife Ar 89.36 356 P **P 21 22 40.9 -0.6**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 89.36 356 P **P 21 22 40.9 -0.6**
comp=Z,1.0nm,0.7s,mb4.2
ASAR Alice Springs 90.37 117 P **P 21 22 45.2 -1.6**
comp=Z,0.3nm,0.6s,mb3.8,baz=305,slow=4.5,SNR=4.2
ASAR Alice Springs 90.37 117 P **P 21 22 45.2 -1.7**
ULM Lac du Bonnet 98.23 343 P **P 21 23 21.4 -1.0**
comp=Z,1.2nm,0.4s,mb4.8,baz=205,slow=4.5,SNR=3.2
ULM Lac du Bonnet 98.23 343 P **P 21 23 21.5 -1.0**

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*IDC **23** 21:17:22.9±1.0, 33°.33N×75°.81E, h0km, mb3.5/8, mb1 3.6/10, mb1mx3.4/28, mbtmp3.5/10, ML3.1/2, Error ellipse: s-maj=27.6km s-min=20.5km az=50.0*
*NEIC **23** 21:17:25.2±6.0, 33°.44N×75°.96E, h12km±38km, mb3.4/2, Error ellipse: s-maj=16.0km s-min=12.3km az=172.0*
*NDI **23** 21:17:33.6±3.3, 33°.31N×75°.98E, h12km, ML3.4, mb3.4(NEIC)*
*NNC **23** 21:17:44.5±9.4, 34°.45N×75°.60E, h110km±82km, mb2.9, mpv3.5, Error ellipse: s-maj=70.9km s-min=53.3km az=161.0*
ISC 23 21:17:26.5±0.9, 33°.49N±0°.03×75°.86E±0°.06, h15km±6km, n36, σ1.9±14/51, mb3.4/8, 5C-3D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**0.95**	**174**	*ex*	**Pg**	**21 17 44.0**	**-1.0**
DLH				*eS*	**Sg**	**21 17 59.0**	**+1.6**
THN	**Thein Dam**	**1.06**	**186**	*eP*	**Pg**	**21 17 45.8**	**-1.2**
THN				*eS*	**Sg**	**21 18 00.7**	**-0.2**
JMU	**Jammu**	**1.11**	**226**	*eP*	**Pg**	**21 17 55.0**	**+7.0**
JMU				*eS*	**Sg**	**21 18 09.5**	**+6.9**
BHK	**Bhakra**	**2.12**	**167**	*ex*	**Pn**	**21 18 02.4**	**+1.0**
BHK				*eS*	**Sn**	**21 18 32.1**	**+4.5**
SDNR	**Sundarnagar**	**2.20**	**154**	*eP*	**Pn**	**21 18 06.1**	**+3.6**
SDNR				*ex*	**Sn**	**21 18 36.1**	**+6.7**
SMLA	**Simla**	**2.61**	**154**	*i x*	**Pn**	**21 18 07.7**	**-0.4**
SMLA				⇓*i S*	**Sn**	**21 18 42.6**	**+3.2**
KLP	**Kalpa**	**2.81**	**133**	*eP*	**Pn**	**21 18 15.9**	**+5.0**
KLP				*eS*	**Sn**	**21 18 48.0**	**+3.5**
KLP				AML	AML	21 18 56.1	
	comp=E,848nm,0.5s						
KLP				AML	AML	21 18 56.4	
	comp=N,722nm,0.7s						
DDI	**Dehra Dun**	**3.67**	**149**	*ex*	**Pn**	**21 18 21.0**	**-1.7**
DDI				*ex*	**Sn**	**21 19 14.5**	**+8.7**
JOSI	**Joshimath**	**4.30**	**132**	*eP*	**Pn**	**21 18 36.6**	**+5.3**
JOSI				*ex*	x	21 19 44.8	
NDI	**New Delhi**	**4.94**	**166**	*eS*	**Sn**	**21 19 35.0**	**-1.9**
SONA	**Sohna**	**5.33**	**168**	*eS*	**Sn**	**21 19 46.1**	**-0.6**
KHET	**Khetri**	**5.40**	**180**	*ex*	**Pn**	**21 18 48.1**	**+1.5**
KHET				*eS*	**Sn**	**21 19 48.8**	**+0.3**
KHET				AML	AML	21 20 24.1	
	comp=N,24nm,0.4s						
KHET				AML	AML	21 20 25.3	
	comp=E,23nm,0.3s						
KBL	**Kabul**	**5.75**	**282**	*ePn*	**Pn**	**21 18 53.1**	**+1.8**
	comp=E,8.6nm,0.7s						
KBL				*eSn*	**Sn**	**21 19 57.0**	**0.0**
KSH	**Kashi**	**6.01**	**1**	*ePn*	**Pn**	**21 18 55.4**	**+0.5**
KSH				*eSn*	**Sn**	**21 19 47.1**	**-16**
KSH				smax			
	comp=N,34nm,0.7s						
KSH				smax			
	comp=E,40nm,0.7s						
UCH	**Uchtor**	**8.78**	**353**	*ePn*	**Pn**	**21 19 34.0**	**+1.1**
	comp=E,3.9nm,0.6s						
EKS2	**Erkin-Say**	**9.30**	**350**	*ePn*	**Pn**	**21 19 39.8**	**-0.2**
TKM2	**Tokmak 2**	**9.41**	**359**	⇑*Pn*	**Pn**	**21 19 46.6**	**+5.1**
	comp=E,1.1nm,0.5s						
TKM2				⇑*Sn*	**Sn**	**21 21 16.5**	**-11**
	comp=E,0.9nm,0.7s						
TKM2	**Tokmak 2**	**9.41**	**359**	*ePn*	**Pn**	**21 19 40.5**	**-1.0**
	comp=E,1.6nm,0.5s						
KK31	**Karatay Array**	**10.47**	**338**	⇓*Pn*	**Pn**	**21 19 56.8**	**+0.8**
	comp=E,1.3nm,0.6s,baz=151,slow=14						
KK31				⇑*Sn*	**Sn**	**21 21 45.7**	**-7.2**
	comp=E,1.0nm,0.4s,baz=159,slow=24						
MKAR	**Makanchi Array**	**14.16**	**18**	*Pn*	**Pn**	**21 20 45.8**	**-0.6**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=4.4						
MKAR				*Sn*	**Sn**	**21 23 16.9**	**-6.2**
	comp=E,0.1nm,0.3s,baz=201,slow=20,SNR=3.5						
MK31	**Makanchi Array**	**14.16**	**18**	⇑*Pn*	**Pn**	**21 20 47.5**	**+1.1**
	comp=E,0.3nm,0.6s,baz=208,slow=14,SNR=4.2						
MK31				⇑*Sn*	**Sn**	**21 23 15.0**	**-8.1**
	comp=E,0.3nm,0.6s						
KURK	**Kurchatov**	**17.33**	**6**	*Pn*	**Pn**	**21 21 23.6**	**-4.1**
	comp=E,0.0nm,0.3s,baz=192,slow=11,SNR=4.7						
KURK	**Kurchatov**	**17.33**	**6**	*eP*	**Pn**	**21 21 27.1**	**-0.5**
	comp=E,2.4nm,0.8s						
AB31	**Akbulak array**	**19.70**	**328**	*eP*	**Pn**	**21 21 55.5**	**-1.0**
	comp=E,0.8nm,0.6s,baz=130,slow=13,SNR=13						
ABKAR	**Akbulak array**	**19.70**	**328**	*eP*	**Pn**	**21 21 55.6**	**-1.0**
	comp=E,1.7nm,0.7s						
AKTK	**Aktyubinsk**	**21.41**	**328**	*P*	**P**	**21 22 13.6**	**0.0**
AKTO	**Aktyubinsk**	**21.41**	**328**	⇓*P*	**P**	**21 22 13.6**	**0.0**
	comp=E,0.7nm,0.9s,mb3.0						
AKTO	**Aktyubinsk**	**21.41**	**328**	*P*	**P**	**21 22 13.6**	**0.0**
	comp=E,2.3nm,0.6s,mb3.7,baz=117,slow=8.8,SNR=7.9						
ZALV	**Zalesovo Beam**	**21.41**	**15**	*P*	**P**	**21 22 13.4**	**-0.2**
	comp=E,0.5nm,0.3s,mb3.3,baz=203,slow=8.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	**25.51**	**120**	*P*	**P**	**21 22 52.8**	**-1.7**
	comp=E,1.5nm,0.9s,mb3.5,baz=309,slow=9.2,SNR=8.7						
SONM	**Songino Array**	**27.03**	**49**	*P*	**P**	**21 23 08.2**	**+0.3**
	comp=E,0.3nm,0.5s,mb3.1,baz=251,slow=10,SNR=3.1						
FINES	**FINESS Array B**	**42.19**	**327**	*P*	**P**	**21 25 19.2**	**+0.9**
	comp=E,0.8nm,0.6s,mb3.5,baz=107,slow=9.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**69.74**	**273**	*P*	**P**	**21 28 34.3**	**-2.0**
	comp=E,0.4nm,0.8s,mb3.4,baz=42,slow=5.1,SNR=8.6						
ASAR	**Alice Springs**	**79.27**	**128**	*P*	**P**	**21 29 30.1**	**-1.3**
	comp=E,0.6nm,0.7s,mb3.6,baz=320,slow=6.3,SNR=5.8						
YKA	**Yellowknife Ar**	**83.98**	**5**	*P*	**P**	**21 29 56.3**	**+0.6**
	comp=E,0.1nm,0.5s,mb3.2,baz=356,slow=5.4,SNR=2.9						
YKA	**Yellowknife Ar**	**83.98**	**5**	*P*	**P**	**21 29 56.3**	**+0.6**

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*ISCJB **23** 21:25:48.1±0.5, 32°.12N±0°.04×105°.14E±0°.04, h10km, mb3.4/6, Error ellipse: s-maj=5.6km s-min=5.0km az=43.8*
*IDC **23** 21:25:48.8±1.4, 32°.31N×105°.22E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/27, mbtmp3.4/7, ML3.4/2, Error ellipse: s-maj=49.8km s-min=25.1km az=66.0*
*NEIC **23** 21:25:50.7±0.6, 32°.33N×105°.15E, h10km, mb3.9/1, Error ellipse: s-maj=15.3km s-min=9.3km az=63.0*
*BJI **23** 21:25:50.3, 32°.20N×105°.04E, h11km, ML3.2/9*
ISC 23 21:25:49.8±0.4, 32°.12N±0°.03×105°.02E±0°.04, h10km, n15, σ0.98/25, mb3.4/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.62**	**222**	*Pn*	**Pn**	**21 26 18.3**	**0.0**
CD2				*Pg*	**Pg**	**21 26 21.6**	**+0.8**
CD2				*Sg*	**Sg**	**21 26 39.9**	**-1.8**
CD2				smax			
	comp=N,990nm,0.7s						
XAN	**Xi'an**	**3.79**	**59**	*Pn*	**Pn**	**21 26 47.8**	**-0.5**
XAN				*Pg*	**Pg**	**21 27 00.5**	**-2.0**
XAN				*Sg*	**Sg**	**21 27 52.1**	**+0.5**
XAN				smax			
	comp=N,85nm,0.6s						
XAN				smax			
	comp=E,45nm,0.6s						
LZH	**Lanzhou**	**4.08**	**346**	*Pn*	**Pn**	**21 26 53.0**	**+0.8**
LZH				*Pg*	**Pg**	**21 27 04.3**	**-3.6**
LZH				*Sn*	**Sn**	**21 27 41.8**	**+1.8**
LZH				*Sg*	**Sg**	**21 27 54.8**	**-6.0**
LZH				smax			
	comp=N,180nm,1.0s						
LZH				smax			
	comp=E,150nm,1.0s						
ENH	**Enshi**	**4.25**	**115**	*ePn*	**Pn**	**21 26 55.5**	**+1.0**
ENH				*ePg*	**Pg**	**21 27 10.7**	**-0.5**
ENH

GYA				Sg	Sn	21 28 24.3	+1.4
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,30nm,0.8s						
CMAR	Chiang Mai Arr	14.66	203	Pn	Pn	21 29 22.5	+5.2
	comp=E,0.2nm,0.3s,baz=10,slow=8.7,SNR=3.5						
SONM	Songino Array	15.73	3	Pn	Pn	21 29 31.1	-0.2
	comp=E,0.0nm,0.3s,baz=178,slow=8.7,SNR=2.4						
MK31	Makanchi Array	22.75	317	eP	P	21 30 52.5	+0.5
MKAR	Makanchi Array	22.75	317	P	P	21 30 52.3	+0.3
	comp=E,0.3nm,0.6s,mb2.9,baz=119,slow=12,SNR=3.5						
ZALV	Zalesovo Beam	26.17	332	P	P	21 31 23.3	-0.8
	comp=E,0.5nm,0.4s,mb3.4,baz=143,slow=10,SNR=3.6						
KURK	Kurchatov	26.93	321	P	P	21 31 31.1	+0.1
	comp=E,0.5nm,0.8s,mb3.1,baz=137,slow=7.5,SNR=3.6						
ARU	Arti	40.12	321	eP	P	21 33 24.6	-0.8
	comp=E,1.4nm,0.5s,mb4.0						
ASAR	Alice Springs	61.96	150	P	P	21 36 10.8	+0.9
	comp=E,0.2nm,0.4s,mb3.6,baz=343,slow=5.9,SNR=2.9						
ASAR	Alice Springs	61.96	150	P	P	21 36 10.8	+0.9
YKA	Yellowknife Ar	80.50	17	P	P	21 38 01.2	-0.4
	comp=E,0.2nm,0.5s,mb3.3,baz=328,slow=5.2,SNR=5.6						

MAN 23 21:30:35,16.°47N×122.°54E,h21km,mb4.4,ML3.3,MS3.1, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.60	349	eP	Pb	21 30 47.4	+0.6
PALP				eS	Sb	21 30 58.5	+3.7
CAUP	Cauayan	0.83	304	eP	Pb	21 30 50.0	-0.8
CAUP				eS	Sb	21 30 59.7	-1.8
BALP	Baler	1.18	232	eP	Pn	21 30 55.6	-0.7
BALP				eS	Sb	21 31 08.1	-3.4
PCPH	Palayan	1.66	237	eP	Pn	21 31 03.4	+0.6
PCPH				i S	Sn	21 31 24.5	+1.0
POLP	Polilio Island	1.83	199	eP	Sn	21 31 29.1	+1.4
APYP	Conner	1.86	318	eP	Pn	21 31 05.8	+0.2
BOLP	Bolinao	2.52	268	eP	Pn	21 31 17.6	+2.8
PVCP	Virac	3.26	151	eP	Pn	21 31 26.0	+1.1

*ISCJB **23** 21:35:14.6±0.8,31.°91N±0.°03×104.°56E±0.°04,h3km±6km, mb3.7/11,Error ellipse: s-maj=6.1km s-min=5.0km az=14.7*
*BJI **23** 21:35:16.8,31.°90N×104.°55E,h10km,ML3.5/15,Ms3.5/2*
*IDC **23** 21:35:16.1±1.0,31.°90N×104.°44E,h0km,mb3.6/10, mb1 3.7/12,mb1mx3.6/28,mbtmp3.6/12,ML3.4/2,Error ellipse: s-maj=31.5km s-min=19.8km az=53.0*
*NEIC **23** 21:35:17.8±0.5,31.°95N×104.°49E,h10km,mb3.8/3,Error ellipse: s-maj=11.6km s-min=8.0km az=65.0*
ISC 23 21:35:17.3±0.8,31.°91N±0.°03×104.°47E±0.°04,h8km±5km, n25,σ1s11/38,mb3.7/11,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.16	212	Pn	Pn	21 35 37.9	-2.0
CD2				Pg	Pg	21 35 40.1	+0.5
CD2				Sn	Sn	21 35 54.1	-1.8
CD2				Sg	Sg	21 35 57.1	+2.4
CD2				smax			
	comp=N,4μm,0.8s						
LZH	Lanzhou	4.20	353	Pn	Pn	21 36 25.8	+4.1
LZH				Pg	Pg	21 36 37.0	-0.8
LZH				Sn	Sn	21 37 14.5	+3.5
LZH				Sg	Sg	21 37 31.0	-1.3
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,120nm,0.7s						
LZH				LR	LR		
	comp=N,520nm,7.2s						
XAN	Xi'an	4.31	59	Pn	Pn	21 36 24.9	+1.8
XAN				Pg	Pg	21 36 35.6	-4.2
XAN				Sn	Sn	21 37 14.3	+0.8
XAN				Sg	Sg	21 37 28.8	-6.8
XAN				smax			
	comp=N,150nm,0.7s						
XAN				smax			
	comp=E,42nm,0.7s						
ENH	Enshi	4.60	109	ePn	Pn	21 36 28.1	+0.9
ENH				ePg	Pg	21 36 44.7	-0.8
ENH				eSg	Sg	21 37 44.3	-0.9
GYA	Guiyang	5.76	160	Pn	Pn	21 36 43.0	-0.1
GYA				Sn	Sn	21 37 49.1	-0.2
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,60nm,0.7s						
KMI	Kunming	6.92	193	Pn	Pn	21 37 00.1	+1.0
KMI				Sn	Sn	21 38 15.4	-2.7
KMI				smax			
	comp=N,10.0nm,0.9s						
KMI				smax			
	comp=E,11nm,0.9s						
CMAR	Chiang Mai Arr	14.29	202	Pn	Pn	21 38 40.9	+0.9
	comp=E,0.1nm,0.3s,baz=311,slow=42,SNR=3.5						
SONM	Songino Array	15.98	5	Pn	Pn	21 39 02.1	-0.2
	comp=E,0.1nm,0.3s,baz=152,slow=40,SNR=5.4						
ULN	Ulaanbaatar	16.06	6	ePn	Pn	21 39 02.9	-0.5
KSRS	Korea Array	20.05	68	P	P	21 39 52.0	+1.1
	comp=E,2.1nm,0.9s,baz=253,slow=10,SNR=7.7						
MK31	Makanchi Array	22.59	318	eP	P	21 40 19.5	+1.4
MKAR	Makanchi Array	22.59	318	P	P	21 40 19.3	+1.2
	comp=E,0.5nm,0.5s,mb3.2,baz=118,slow=12,SNR=7.6						
ZAA0	Zalesovo Array	26.14	333	eP	P	21 40 52.1	+0.4
ZALV	Zalesovo Beam	26.14	333	P	P	21 40 52.4	+0.7
	comp=E,2.1nm,0.5s,mb3.9,baz=131,slow=10,SNR=10						
EKS2	Erkin-Say	26.54	303	eP	P	21 40 55.9	+0.4
	comp=E,0.8nm,0.7s,mb3.4						
KURK	Kurchatov	26.80	322	P	P	21 40 58.8	+1.1
	comp=E,0.7nm,0.6s,mb3.4,baz=132,slow=8.0,SNR=5.8						
KURK	Kurchatov	26.80	322	eP	P	21 40 56.7	-1.0
	comp=E,1.2nm,0.7s,mb3.5						
ARU	Arti	39.99	322	eP	P	21 42 52.4	+0.1
	comp=E,3.0nm,0.5s,mb4.3						
BRTR	Keskin Array B	56.62	299	P	P	21 45 00.9	+0.1
	comp=E,0.6nm,0.8s,mb3.7,baz=104,slow=5.2,SNR=3.7						
ARCES	ARCESS Array B	56.66	336	P	P	21 44 59.1	-1.5
	comp=E,1.9nm,0.9s,mb4.1,baz=27,slow=11,SNR=3.6						
FINES	FINESS Array B	57.08	326	P	P	21 45 03.1	-0.6
	comp=E,0.8nm,0.5s,mb4.0,baz=72,slow=6.2,SNR=11						
ASAR	Alice Springs	62.02	149	P	P	21 45 38.2	0.0
	comp=E,1.3nm,1.1s,mb4.0,baz=12,slow=35,SNR=3.0						
NOA	NORSAR Array B	64.15	327	P	P	21 45 51.3	-0.7
	comp=E,0.6nm,0.6s,mb3.8,baz=69,slow=8.5,SNR=2.8						
CLL	Collm	66.69	317	eP	P	21 46 07.0	-1.5
YKA	Yellowknife Ar	80.84	17	P	P	21 47 31.4	0.0
	comp=E,0.2nm,0.4s,mb3.4,baz=330,slow=5.1,SNR=5.0						

MAN 23 22:14:46,16.°48N×122.°54E,h23km,mb4.7,ML3.5,MS3.5, 1C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.59	349	eP	Pb	22 14 59.0	+1.3
PALP				eS	Sb	22 15 08.8	+3.1
CAUP	Cauayan	0.83	304	eP	Pb	22 15 00.9	-0.8
CAUP				eS	Sb	22 15 07.7	-4.7
BALP	Baler	1.18	232	eP	Pn	22 15 06.5	-0.6
BALP				eS	Sn	22 15 19.9	-2.6
PCPH	Palayan	1.66	237	eP	Pn	22 15 14.5	+0.8
PCPH				eS	Sn	22 15 36.0	+1.7
APYP	Conner	1.85	318	eP	Pn	22 15 17.6	+1.2
BCPH	Baguio City Da	1.88	267	eP	Pn	22 15 18.5	+1.7
BCPH				eS	Sn	22 15 41.3	+1.5
ABRA	Dolores	2.10	304	eP	Pn	22 15 20.3	+0.6
BOLP	Bolinao	2.52	268	eP	Pn	22 15 28.7	+3.1
GQP	Guinayangan	2.56	182	eP	Pn	22 15 28.7	+2.6
GQP				eS	Sn	22 15 57.6	+1.0
LUBP	Lubang	3.51	219	eP	Pn	22 15 43.4	+4.2
BBP	Basco	3.98	352	eP	Pn	22 15 47.8	+2.2

*BJI **23** 22:50:28.4,7.°60S×129.°88E,h107km,mB5.8/42,mb5.9/64*
*ISCJB **23** 22:50:32.5±0.1,7.°07S±0.°02×129.°62E±0.°02,h99km, mb5.9/198,Error ellipse: s-maj=3.4km s-min=2.8km az=147.0*
*TEH **23** 22:50:34.0,7.°05S×129.°54E,h98km*
*MOS **23** 22:50:34.5±1.0,6.°92S×129.°42E,h109km,mb6.0/65,Error ellipse: s-maj=9.2km s-min=5.2km az=110.5*
*BGS **23** 22:50:36.8±2.0,7.°03S×129.°50E,h125km±999km, mb5.8(NEIC)*
*GCMT **23** 22:50:37.0±0.1,7.°18S×129.°64E,h133km±1km,MW5.8/99, Moment Tensor Solution. s81,c138; s99,c241; Duration: 1s8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.34±.07; $M_{\theta\theta}$3.37±.07; $M_{\phi\phi}$-3.70±.07; $M_{r\theta}$1.87±.05; $M_{\theta\phi}$2.08±.06; $M_{\phi r}$2.79±.05; Best double couple: $M_0$5.30800×10^{17} NP1:ϕs121.00000°,δ51.00000°, λ4.00000°. NP2:ϕs29.00000°,δ87.00000°,λ141.00000°. Principal axes: T 5.3610, Plg29.0000°, Azm337.0000°; N -0.0980, Plg51.0000°, Azm205.0000°; P -5.2560, Plg24.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **23** 22:50:37.0±0.7,7.°06S×129.°48E,h125km±6km,mb5.8/97, MW5.6,MW5.7 Error ellipse: s-maj=4.5km s-min=3.2km az=54.0,Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}1.82; $M_{\theta\theta}$-0.59; $M_{\phi\phi}$-1.23; $M_{r\theta}$1.65; $M_{\theta\phi}$1.33; $M_{\phi r}$1.42; Best double couple: $M_0$3.00000×10^{17} NP1:ϕs112.00000°,δ53.00000°,λ42.00000°. NP2: ϕs354.00000°,δ57.00000°,λ135.00000°. Principal axes: T 3.4200, Plg53.0000°, Azm320.0000°; N -1.1400, Plg36.0000°, Azm145.0000°; P -2.2800, Plg2.0000°, Azm53.0000°;*
NEIC Felt at Darwin, Australia.
*IDC **23** 22:50:38.1±0.8,7.°05S×129.°52E,h132km±6km,mb5.5/37, mb1 5.4/39,mb1mx5.4/39,mbtmp5.5/39,MS4.7/14, Ms1 4.7/14,ms1mx4.4/29 Error ellipse: s-maj=9.6km s-min=6.5km az=59.0*
*DJA **23** 22:50:38.3±0.2,7.°S±2.°×13.°0E±.°,h142km±3km,mb6.0/66, mB6.3/58,MLv6.3/9,Mw(mB)6.0/58*
ISC 23 22:50:34.3±0.1,7.°10S±0.°02×129.°58E±0.°02,h101km, h101km±2.0km:pP-P,n1212,σ1s18/592,mb5.9/198, 228C-166D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	3.45	65	P	Pn	22 51 30.4	+4.2
AAI	Ambon	3.66	338	P	Pn	22 51 35.3	+6.3
MSAI	Masohi	3.78	350	P	Pn	22 51 37.0	+6.4
NLAI	Namlea	4.56	327	P	Pn	22 51 48.5	+7.3
KAKA	Kakadu	6.25	153	eP	Pn	22 52 03.5	-0.6
KAKA	Kakadu	6.25	153	ePn	Pn	22 52 03.4	-0.7
	6μm,0.6s						
KAKA	Kakadu	6.25	153	P	Pn	22 52 04.0	-0.1
	5μm,0.8s,17nm						
LBMI	Labuha	6.74	342	P	Pn	22 52 17.5	+6.7
	8μm,1.5s,30nm						
MMRI	Maumere	7.44	258	P	Pn	22 52 23.5	+3.3
	4μm,1.0s,14nm						
KDI	Kendari	7.60	294	P	Pn	22 52 28.8	+6.3
	2μm,1.0s,7.6nm						
TNTI	Ternate	8.12	344	P	Pn	22 52 34.7	+5.1
	5μm,1.2s						
KNA	Kununurra	8.64	185	eP	Pn	22 52 35.4	-1.2
	6μm,0.5s						
KNA				eS	Sn	22 54 04.0	-8.3
LUWI	Luwuk	9.07	311	P	Pn	22 52 50.0	+7.5
	4μm,1.2s						
WSI	Waingapu	9.54	254	P	Pn	22 52 49.3	+0.5
KAPI	Kappang	9.99	281	Pn	Pn	22 52 58.7	+3.7
	3μm,0.9s,SNR=70						
KAPI	Kappang	9.99	281	P	Pn	22 52 58.5	+3.5
	5.3nm,0.3s,baz=129,slow=6.6,SNR=58						
KAPI				S	Sn	22 54 49.2	+3.9
	7.3nm,0.3s,baz=144,slow=14,SNR=2.0						
KAPI				LR	LR	22 56 30.5	
	comp=Z,4μm,21.2s,baz=110,slow=36						
APSI	Ampana	10.02	307	P	Pn	22 53 01.6	+6.2
	3μm,0.9s						
SMPI	Sarmi	10.41	61	P	Pn	22 53 03.2	+2.5
	2μm,1.3s						
TTSI	Tana Toraja	10.53	292	P	Pn	22 53 08.0	+5.7
	2μm,1.0s						
MRSI	Marisa	10.71	314	P	Pn	22 53 11.9	+7.1
	6μm,1.4s						
MMPI	Merauke	10.79	98	P	Pn	22 53 06.7	+0.9
	6μm,0.9s						
SGSI	Sangihe	11.45	339	P	Pn	22 53 18.7	+3.9
	10μm,1.8s						
PCI	Palu	11.50	302	P	Pn	22 53 22.2	+6.7
	20nm,0.9s,147nm						
FITZ	Fitzroy Crossi	11.60	199	eP	Pn	22 53 12.8	-3.9
	2μm,0.5s						
FITZ				eS	Sn	22 55 11.8	-12
FITZ	Fitzroy Crossi	11.60	199	P	Pn	22 53 13.3	-3.4
	126nm,0.3s,baz=30,slow=12,SNR=433						
FITZ				S	Sn	22 55 12.3	-12
	475nm,0.3s,baz=79,slow=19,SNR=12						
FITZ				LR	LR	22 58 04.8	
	comp=Z,2μm,21.1s,baz=20,slow=38						
FITZ	Fitzroy Crossi	11.60	199	ePn	Pn	22 53 13.4	-3.3
	29nm,0.5s						
FITZ				eSn	Sn	22 55 12.9	-11
FITZ	Fitzroy Crossi	11.60	199	P	Pn	22 53 12.9	-3.8
	3μm,0.8s						
WRAB	Tennant Creek	13.57	161	Pn	Pn	22 53 38.0	-4.8
	25μm,1.0s						
WRAB	Tennant Creek	13.57	161	ePn	Pn	22 53 39.0	-3.8
WRAB				eSn	Sn	22 55 58.9	-13
WRAB	Tennant Creek	13.57	161	P	Pn	22 53 39.2	-3.6
	5μm,1.1s						
KBKI	Kotabaru	13.88	285	P	Pn	22 53 52.5	+5.7
	1μm,0.8s						
GSPH	General Santos	13.89	340	eP	Pn	22 53 48.7	+1.8
GSPH				i S		22 53 53.8	
KHKI	Kahang-Kahang	13.91	264	P	Pn	22 53 47.3	+0.1
	350nm,0.8s,4μm						
SRBI	Singaraja	14.28	265	P	Pn	22 53 50.7	-1.3
	265nm,0.9s,4μm						
DNP	Denpasar	14.32	263	P	Pn	22 53 56.8	+4.2
	1μm,0.8s						
IGBI	Denpasar	14.40	262	P	Pn	22 53 55.3	+1.8
	1μm,0.9s						
DAV	Davao City (W)	14.63	344	P	Pn	22 53 58.8	+2.4
	39nm,0.3s,baz=68,slow=6.4,SNR=31						
DAV	Davao City (W)	14.63	344	ePn	Pn	22 53 59.1	+2.7
DAV	Davao City (W)	14.63	344	Pn	Pn	22 53 59.4	+3.0
	SNR=85						
DAV				Pn	Pn	22 53 59.4	+3.0
	SNR=85						
DAV	Davao City (W)	14.63	344	eP	Pn	22 53 56.2	-0.2
DAV	Davao City (W)	14.63	344	P	Pn	22 54 01.7	+5.3
	3μm,1.1s						
DMPH	Davao City--Mi	14.66	344	eP	Pn	22 53 60.0	+3.2
KCP	Kidapawan	14.71	342	iP	Pn	22 54 09.5	+12
NBBI	Negara	14.88	264	P	Pn	22 54 04.5	+4.8
	510nm,0.8s,7μm						
COEN	Coen	15.00	118	ePn	Pn	22 54 01.0	-0.1
	823nm,1.1s						
COEN				eSn	Sn	22 56 32.1	-15
COEN	Coen	15.00	118	P	Pn	22 54 02.4	+1.3
	8μm,1.0s						
BBKI	Banjar Baru	15.12	283	P	Pn	22 54 08.2	+5.6
CTBH	Cotabato--PC H	15.19	339	eP	Pn	22 54 05.5	+2.0
ABJI	Asem Bagus	15.24	266	P	Pn	22 54 06.5	+2.3
	465nm,0.9s						
KMMI	Kalianget	15.50	269	P	Pn	22 54 12.6	+5.1
	962nm,1.1s,9μm						
BUKP	Musuan	15.54	343	eP	Pn	22 54 11.3	+3.3
ZMPH	Zamboanga City	15.84	332	i P	Pn	22 54 15.3	+3.5
GMJI	Gumukmas	16.04	265	P	Pn	22 54 15.0	+0.8
	237nm,1.0s,4μm						
PAGZ	Pagadian	16.08	337	eP	Pn	22 54 17.3	+2.6
CGP	Cagayan de Oro	16.20	342	eP	Pn	22 54 18.7	+2.5
TSM	Tawau	16.27	314	P	Pn	22 54 20.6	+3.6
IPIL	Ipil	16.36	335	eP	Pn	22 54 23.3	+5.2
MYLDM	Lahad Datu	16.46	317	P	Pn	22 54 24.5	+5.1
MYLDM	Lahad Datu	16.46	317	P	Pn	22 54 24.6	+5.2
	2μm,1.4s						
MBWA	Marble Bar	16.92	213	ePn	Pn	22 54 23.9	-1.2
	557nm,1.1s						
MBWA				eSn	Sn	22 57 11.3	-22
MBWA	Marble Bar	16.92	213	Pn	Pn	22 54 27.3	+2.3
	SNR=40						
MBWA				Pn	Pn	22 54 27.3	+2.3
	SNR=40						
MBWA	Marble Bar	16.92	213	P	Pn	22 54 25.2	+0.2
	663nm,1.1s,6μm						
GRJI	Gresik	16.98	270	P	Pn	22 54 28.1	+2.3
	869nm,1.4s						
ASAR	Alice Springs	16.99	166	P	Pn	22 54 23.1	-2.8
	50nm,0.3s,baz=331,slow=8.7,SNR=1688						
ASAR				S	S	22 57 17.8	-18
	25nm,0.3s,baz=324,slow=17,SNR=5.9						
ASAR				ScP	ScP	23 02 27.6	-4.6
	2.5nm,0.3s,baz=324,slow=2.0,SNR=7.6						
KRKI	Karangkates	17.01	265	P	Pn	22 54 27.6	+1.4
	951nm,0.5s						
TBP	Tagbilaran	17.62	341	eP	Pn	22 54 35.9	+2.3
PWJI	Pagerwojo	17.65	266	P	Pn	22 54 33.7	-0.3
	554nm,0.5s,6μm						
SDKM	Sandakan	17.69	315	P	Pn	22 54 36.6	+2.2
MSLP	Maasin	17.75	345	eP	Pn	22 54 38.1	+3.0
NGJI	Ngawi	17.98	268	P	Pn	22 54 39.2	+1.2
	415nm,1.0s,7μm						
LLP	Lapu-Lapu	18.18	342	eP	P	22 54 41.7	+2.4
PCJI	Pacitan	18.28	265	P	P	22 54 39.8	-0.6
	551nm,0.8s,7μm						
KKM	Kota Kinabalu	18.66	314	P	P	22 54 47.0	+2.4
KKM	Kota Kinabalu	18.66	314	eP	P	22 54 46.4	+1.8
	5μm,1.4s						
KKM				eS	S	22 58 10.5	-1.6
KKM				eScP	ScP	23 02 31.1	-4.9
KKM	Kota Kinabalu	18.66	314	P	P	22 54 47.0	+2.4
	3μm,1.4s						
OCLP	Ormoc	18.69	345	eP	P	22 54 47.9	+3.0
KDM	Kudat	18.85	317	P	P	22 54 49.2	+2.5
UGM	Wanagama	18.92	266	P	P	22 54 48.9	+1.5
	511nm,1.2s,6μm						
GUIM	Jordan	18.93	338	eP	P	22 54 49.9	+2.4
SMRI	Semarang	19.00	269	P	P	22 54 51.1	+2.8
	563nm,0.9s,9μm						
BTM	Bintulu	19.39	301	P	P	22 54 55.8	+3.3
STKI	Sintang	19.41	291	P	P	22 54 54.1	+1.3
	1μm,1.0s						
BATP	Bataraza	19.68	323	eP	P	22 54 58.5	+2.9
RCP	Roxas	19.74	340	eP	P	22 54 56.9	+0.6
SBUM	Sibu	19.75	298	P	P	22 54 59.0	+2.5
SBUM	Sibu	19.75	298	P	P	22 54 59.6	+3.1
	3μm,1.0s						
CUYO	Cuyo Island	19.76	334	eP	P	22 54 59.2	+2.6
PPR	Puerto Princes	19.94	327	iP	pP	22 55 19.6	+2.0
CTA	Charters Tower	20.69	130	eP	P	22 55 07.6	+1.1
	465nm,0.9s						
CTA				eS	S	22 58 52.7	+0.5
CTA	Charters Tower	20.69	130	P	P	22 55 08.1	+1.5
	510nm,0.8s,baz=308,slow=13						
CTA				S	S	22 58 53.8	+1.5
	99nm,0.7s,baz=48,slow=20,SNR=6.9						
CTA	Charters Tower	20.69	130	P	P	22 55 08.1	+1.6
CTA				S	S	22 58 53.8	+1.6
CTA				pmax	pmax		
	comp=Z,510nm,0.9s						
CTA				smax			
	comp=N,99nm,0.7s						
CTA	Charters Tower	20.69	130	P	P	22 55 08.1	+1.5
CTA				S	S	22 58 53.8	+1.5
CTAO	Charters Tower	20.69	130	eP	P	22 55 07.7	+1.2
CTAO				eS	S	22 58 43.4	-8.8
CTAO				pmax	pmax		
	comp=Z,599nm,0.9s						
CTAO	Charters Tower	20.69	130	eP	P	22 55 07.7	+1.2
	comp=Z,599nm,0.9s						
CTAO				eS	S	22 58 43.4	-8.8
CTAO	Charters Tower	20.69	130	P	P	22 55 08.0	+1.5
	comp=Z,715nm,0.9s,comp=Z,6μm						
OTRP	Odiongan	20.74	339	eP	P	22 55 08.7	+1.7
ENPP	El Nido	20.80	331	eP	P	22 55 09.9	+2.1
KSM	Kuching	21.03	293	eP	P	22 55 10.3	+0.1
	comp=Z,908nm,1.0s,mb6.1						
KSM				eS	S	22 58 55.8	-3.3
KSM				eScP	ScP	23 02 36.3	-5.1
KSM	Kuching	21.03	293	P	P	22 55 10.3	0.0
	comp=Z,1μm,1.0s,comp=Z,10μm,mb6.1						
BUSP	Coron	21.14	334	eP	P	22 55 13.5	+2.1
SJMP	San Jose	21.17	337	eP	P	22 55 14.3	+2.6
JCJI	Jatiwangi	21.17	270	P	P	22 55 13.5	+1.7
	comp=Z,483nm,1.3s,comp=Z,9μm,mb5.7						
PVCP	Virac	21.25	345	eP	P	22 55 13.9	+1.3
AUQP	San Andres	21.41	341	eP	P	22 55 18.3	+4.0
LEM	Lembang	21.81	269	P	P	22 55 18.7	+0.2
	comp=Z,605nm,1.1s,comp=Z,6μm,mb5.9						
GQP	Guinayangan	22.03	341	eP	P	22 55 21.8	+1.0
TPI	Tanjungpandan	22.27	280	P	P	22 55 23.6	+0.2
	comp=Z,984nm,1.0s,comp=Z,9μm,mb6.1						
LUBP	Lubang	22.68	336	eP	P	22 55 28.6	+1.0
TGY	Tagaytay City	22.74	338	P	P	22 55 29.1	+0.8
	comp=Z,8μm,0.9s,baz=200,slow=2.2,SNR=294						
TGY				ScP	ScP	23 02 42.0	-3.7
	comp=Z,90nm,0.3s,baz=192,slow=11,SNR=3.6						
TGY	Tagaytay City	22.74	338	eP	P	22 55 30.4	+2.1
POLP	Polilio Island	22.97	341	eP	P	22 55 30.9	+0.5
FORT	Forrest	23.61	183	eP	P	22 55 36.2	+0.1
	comp=Z,1μm,0.7s,mb6.3						
FORT	Forrest	23.61	183	eP	P	22 55 36.3	+0.2
	comp=Z,1μm,0.8s,mb6.3						
FORT				eS	S	22 59 53.0	+10
RBSI	Rajabasa	23.72	272	P	P	22 55 38.0	+0.6
	comp=Z,148nm,1.2s,comp=Z,4μm,mb5.2						
CGJI	Cibinong	23.73	270	P	P	22 55 35.7	-1.7
	comp=Z,333nm,1.4s,comp=Z,3μm,mb5.5						
PCPH	Palayan	24.03	340	eP	P	22 55 39.7	-0.5
BALP	Baler	24.04	341	eP	P	22 55 39.5	-0.7
KLI	Kotabumi	24.69	274	P	P	22 55 47.5	+1.2
	comp=Z,345nm,0.9s,mb5.8						
KASI	Kota Agung	24.98	272	P	P	22 55 47.0	-1.9
	comp=Z,184nm,0.9s,comp=Z,2μm,mb5.5						
PALP	Palanan	25.02	344	eP	P	22 55 49.4	+0.2
PMBI	Palembang	25.06	278	P	P	22 55 51.7	+2.1
	comp=Z,1μm,1.1s,mb6.2						
CAUP	Cauayan	25.09	342	eP	P	22 55 50.5	+0.7
BOLP	Bolinao	25.21	338	eP	P	22 55 50.0	-0.8
MDSI	Maura Dua	25.41	274	P	P	22 55 52.0	-0.7
	comp=Z,109nm,1.1s,comp=Z,1μm,mb5.2						
GUMO	Guam	25.55	36	P	P	22 55 54.3	+0.4
	comp=Z,56nm,0.4s,mb5.4,baz=195,slow=22,SNR=6.6						
GUMO				S	S	23 00 08.4	-6.0
	comp=Z,94nm,0.9s,baz=357,slow=24,SNR=1.7						
GUMO	Guam	25.55	36	P	P	22 55 54.3	+0.4
GUMO				S	S	23 00 08.4	-6.0
GUMO				pmax	pmax		
	comp=Z,56nm,0.4s,mb5.3						
GUMO

SDSI	**Sungai Dareh**	**28.73 281**	P	**P**	**22 56 21.9**	**-0.7**
	comp=Z,323nm,1.2s,comp=Z,4μm,mb5.8					
KTGM	**Kuala Trenggan**	**29.14 294**	P	**P**	**22 56 26.7**	**+0.6**
BKNI	**Bangkinang**	**29.41 283**	P	**P**	**22 56 30.0**	**+1.4**
	comp=Z,467nm,1.1s,comp=Z,5μm,mb6.0					
PDSI	**Padang**	**29.68 281**	P	**P**	**22 56 29.6**	**-1.4**
	comp=Z,240nm,1.2s,comp=Z,2μm,mb5.7					
FRIM	**Kepong**	**29.73 289**	P	**P**	**22 56 31.4**	**-0.1**
PPI	**Padang Panjang**	**29.84 282**	P	**P**	**22 56 31.1**	**-1.3**
	comp=Z,449nm,1.2s,comp=Z,9μm,mb6.0					
IPM	**Ipoh**	**30.73 291**	P	**P**	**22 56 40.2**	**-0.1**
IPM	**Ipoh**	**30.73 291**	P	**P**	**22 56 39.6**	**-0.7**
	comp=Z,328nm,1.0s,comp=Z,3μm,mb6.0					
TWG	**Pinlang**	**30.88 345**	*e*P	**P**	**22 56 38.5**	**-2.9**
	comp=Z,31nm,0.6s,mb5.2					
MNSI	**Mandailing Nat**	**30.94 283**	P	**P**	**22 56 43.0**	**+0.9**
	comp=Z,583nm,1.0s,comp=Z,5μm,mb6.3					
ARMA	**Armidale**	**31.08 141**	*e*P	**P**	**22 56 44.0**	**+0.9**
ARMA			*e*		22 57 37.1	
ARMA			*e*S	ScP	23 02 57.3	-13
ARMA	**Armidale**	**31.08 141**	*e*P	**P**	**22 56 44.1**	**+1.1**
	comp=Z,180nm,0.9s,mb5.8					
YULB	**Yu-li**	**31.36 345**	*e*P	**P**	**22 56 43.7**	**-1.9**
	comp=Z,20nm,0.6s,mb5.0					
YULB			*e*ScP	ScP	23 03 05.3	-6.1
KULM	**Kulim**	**31.39 292**	P	**P**	**22 56 45.2**	**-0.8**
KULM	**Kulim**	**31.39 292**	*e*P	**P**	**22 56 44.8**	**-1.2**
	comp=Z,229nm,1.0s,mb5.9					
KULM			*e*PcP	PcP	22 59 37.7	+0.1
KULM			*e*ScP	ScP	23 03 07.2	-4.6
KULM	**Kulim**	**31.39 292**	P	**P**	**22 56 45.3**	**-0.7**
	comp=Z,235nm,1.2s,comp=Z,3μm,mb5.8					
TPUB	**Ta-pu**	**31.45 344**	*e*P	**P**	**22 56 44.5**	**-1.9**
	comp=Z,58nm,0.4s,mb5.7					
TPUB			*e*ScP	ScP	23 03 06.7	-5.0
ARPS	**Mount Arapiles**	**31.58 161**	*e*P	**P**	**22 56 47.7**	**+0.3**
	comp=Z,487nm,0.6s,mb6.4					
SSLB	**Suanglung**	**31.83 345**	*e*P	**P**	**22 56 47.1**	**-2.6**
	comp=Z,48nm,0.8s,mb5.3					
SSLB			*e*PcP	PcP	22 59 37.6	-0.9
SSLB			*e*ScP	ScP	23 03 07.6	-5.3
TRSI	**Tarutung**	**31.88 285**	P	**P**	**22 56 52.2**	**+1.9**
	comp=Z,622nm,1.0s,mb6.3					
NACB	**Ninganchiao**	**32.04 346**	*e*P	**P**	**22 56 49.5**	**-2.0**
	comp=Z,88nm,1.2s,mb5.4					
PSI	**Prapat**	**32.14 287**	P	**P**	**22 56 51.2**	**-1.4**
	comp=Z,351nm,0.8s,mb6.1,baz=128,slow=4.1,SNR=109					
PSI			S	**S**	**23 01 50.6**	**-7.5**
	comp=Z,22nm,1.1s,baz=256,slow=22,SNR=10					
PSI			ScP	ScP	23 03 07.8	-6.5
	comp=Z,42nm,1.0s,baz=183,slow=4.2,SNR=7.3					
PSI	**Prapat**	**32.14 287**	P	**P**	**22 56 51.3**	**-1.3**
PSI			S	**S**	**23 01 50.6**	**-7.6**
PSI			pmax	pmax		
	comp=Z,351nm,0.9s,mb6.1					
PSI			smax			
	comp=N,22nm,1.1s					
PSI			pmax	pmax		
	comp=N,42nm,1.0s					
YNG	**Young**	**32.16 150**	*e*P	**P**	**22 56 53.2**	**+0.7**
	comp=N,298nm,0.9s,mb6.0					
YNG			*e*		22 57 22.9	
QIZ	**Qiongzhong**	**32.44 323**	P	**P**	**22 56 53.8**	**-1.3**
QIZ			pP	pP	22 57 19.3	+1.5
QIZ			sP	sP	22 57 34.8	+5.4
QIZ			PP	PP	22 58 08.4	-2.0
QIZ			S	**S**	**23 01 59.4**	**-3.2**
QIZ			sS	sS	23 02 47.4	+5.5
QIZ			SS	SS	23 04 09.4	-17
QIZ			pmax	pmax		
	comp=Z,160nm,1.2s,mb5.6					
QIZ			pmax	pmax		
	comp=Z,480nm,12.9s					
QIZ	**Qiongzhong**	**32.44 323**	*e*P	**P**	**22 56 54.5**	**-0.7**
	comp=Z,229nm,1.3s,mb5.8					
YHNB	**Yeheng**	**32.57 346**	*e*P	**P**	**22 56 54.6**	**-1.6**
	comp=Z,94nm,0.8s,mb5.7					
RIV	**Riverview**	**33.25 146**	*e*P	**P**	**22 57 03.9**	**+1.8**
CAN	**Canberra**	**33.27 150**	*e*P	**P**	**22 57 03.2**	**+1.0**
CAN			pmax	pmax		
	comp=Z,271nm,1.0s,mb6.0					
CAN	**Canberra**	**33.27 150**	*e*P	**P**	**22 57 03.1**	**+0.9**
	comp=Z,271nm,1.0s,mb6.0					
CNB	**Canberra Magne**	**33.45 150**	*e*P	**P**	**22 57 04.6**	**+0.8**
CNB			*e*		22 57 35.0	
QZH	**Quanzhou**	**33.60 342**	⇑*i*P	**P**	**22 57 05.3**	**+0.2**
QZH			S	**S**	**23 02 13.8**	**-6.5**
QZH			ScP	ScP	23 03 12.0	-7.0
QZH			pmax	pmax		
	comp=Z,670nm,0.9s,mb6.5					
QZH			pmax	pmax		
	comp=Z,2μm,6.7s					
QZH			LR	LR		
	comp=N,410nm,9.5s					
QZH			LR	LR		
	comp=E,1μm,12.9s					
QZH			LR	LR		
	comp=Z,2μm,29.0s					
TOO	**Toolangi**	**33.60 157**	*e*P	**P**	**22 57 06.4**	**+1.3**
TOO			*e*		22 57 36.4	
JOW	**Kunigami**	**33.75 358**	P	**P**	**22 57 05.9**	**-0.5**
	comp=Z,342nm,0.8s,mb6.2,baz=186,slow=7.3,SNR=71					
JOW			S	**S**	**23 02 15.3**	**-7.4**
	comp=Z,9.5nm,0.5s,baz=56,slow=20,SNR=2.5					
JOW			ScP	ScP	23 03 14.9	-4.6
	comp=Z,23nm,0.8s,baz=139,slow=8.3,SNR=4.5					
JOW			LR	LR	23 11 09.8	
	comp=Z,878nm,20.5s,baz=145,slow=36					
GZH	**Guangzhou**	**33.94 333**	P	**P**	**22 57 10.3**	**+2.2**
GZH			S	**S**	**23 02 22.8**	**-3.0**
GZH			LR	LR		
	comp=N,910nm,14.9s					
GZH			LR	LR		
	comp=E,630nm,16.4s					
KKTK	**Khon Kaen**	**35.26 312**	⇑P	**P**	**22 57 19.5**	**-0.1**
	comp=E,3μm,1.0s,mb7.0					
NNT	**Nongplab**	**35.53 303**	P	**P**	**22 57 22.1**	**+0.1**
CBIJ	**Chichi jima**	**36.11 19**	P	**P**	**22 57 25.8**	**-0.9**
	comp=E,119nm,0.4s,mb6.2,baz=184,slow=2.0,SNR=30					
CBIJ			S	**S**	**23 02 51.2**	**-7.8**
	comp=E,94nm,1.0s,baz=259,slow=22,SNR=7.6					
BSI	**Banda Aceh**	**36.43 289**	P	**P**	**22 57 27.9**	**-1.8**
	comp=E,237nm,1.4s,comp=E,2μm,mb5.9					
NST	**Nakhon Sawan**	**36.91 308**	⇓P	**P**	**22 57 34.1**	**+0.4**
	comp=E,175nm,0.9s,mb6.0					
NOUC	**Port Laguerre**	**38.40 117**	*e*P	**P**	**22 57 46.1**	**-0.2**
MOO	**Moorlands**	**38.49 159**	*e*P	**P**	**22 57 48.0**	**+1.3**
DZM	**Mont Dzumac**	**38.52 117**	*e*P	**P**	**22 57 47.4**	**+0.2**
	comp=E,379nm,1.2s,mb6.1					
DZM	**Mont Dzumac**	**38.52 117**	*e*P	**P**	**22 57 46.7**	**-0.5**
DZM	**Mont Dzumac**	**38.52 117**	*e*P	**P**	**22 57 47.7**	**+0.4**
	comp=E,103nm,1.8s,mb5.4					
BDT	**Bhumibol Dam**	**38.71 309**	P	**P**	**22 57 49.0**	**+0.2**
	comp=E,267nm,0.9s,mb6.1					
SSE	**Sheshan**	**38.81 348**	P	**P**	**22 57 49.5**	**0.0**
SSE			S	**S**	**23 03 43.6**	**+3.8**
SSE			SS	SS	23 06 38.1	+3.0
SSE			pmax	pmax		
	comp=Z,150nm,1.1s,mb5.7					
SSE			pmax	pmax		
	comp=Z,550nm,6.0s					
SSE			LR	LR		
	comp=N,440nm,18.2s					
SSE			LR	LR		
	comp=E,250nm,18.2s					
SSE			LR	LR		
	comp=Z,550nm,16.2s					
TAU	**Tasmania Unive**	**38.95 159**	*e*P	**P**	**22 57 51.8**	**+1.3**
TAU			pmax	pmax		
	comp=Z,93nm,1.1s,mb5.5					
TAU	**Tasmania Unive**	**38.95 159**	*e*P	**P**	**22 57 51.8**	**+1.3**
	comp=Z,93nm,1.1s,mb5.5					
CM31	**Chiang Mai Arr**	**39.48 310**	*e*P	**P**	**22 57 55.7**	**+0.5**
	comp=Z,470nm,1.0s,mb6.3					
CM31			*e*PcP	PcP	23 00 01.6	+0.3
CM31			*e*ScP	ScP	23 03 37.4	-3.6
CMAR	**Chiang Mai Arr**	**39.48 310**	P	**P**	**22 57 55.3**	**+0.1**
	comp=Z,305nm,0.9s,mb6.1,baz=142,slow=7.4,SNR=900					
CMAR			PcP	PcP	23 00 01.1	-0.2
	comp=Z,19nm,0.8s,baz=151,slow=1.9,SNR=4.2					
CMAR			ScP	ScP	23 03 36.5	-4.5
	comp=Z,25nm,1.1s,baz=164,slow=2.5,SNR=11					
CMAR			LR	LR	23 13 10.4	
	comp=Z,1μm,19.7s,baz=138,slow=34					
CMAR	**Chiang Mai Arr**	**39.48 310**	P	**P**	**22 57 55.3**	**+0.1**
CMAR					23 00 01.1	
CMAR			pmax	pmax		
	comp=Z,305nm,1.0s					
CMAR			pmax	pmax		
	comp=Z,19nm,0.8s					
CMAR			pmax	pmax		
	comp=N,25nm,1.1s					
CMAR			MLR	MLR		
	comp=Z,1μm,19.7s					
CHG	**Chiang Mai**	**39.69 311**	⇑P	**P**	**22 57 57.5**	**+0.5**
	comp=Z,744nm,0.9s,mb6.5					
CHTO	**Chiang Mai**	**39.69 311**	*e*P	**P**	**22 57 57.0**	**0.0**
CHTO			pmax	pmax		
	comp=Z,606nm,0.9s,mb6.4					
CHTO	**Chiang Mai**	**39.69 311**	*e*P	**P**	**22 57 57.0**	**0.0**
	comp=Z,606nm,0.9s,mb6.4					
CHTO			*e*ScP	ScP	23 03 38.4	-3.4
CHTO	**Chiang Mai**	**39.69 311**	P	**P**	**22 57 57.1**	**+0.1**
	SNR=246					
CHTO			P		22 57 57.1	
	SNR=246					
CHTO	**Chiang Mai**	**39.69 311**	P	**P**	**22 57 57.5**	**+0.5**
	comp=Z,824nm,1.2s,comp=Z,7μm,mb6.4					
GYA	**Guiyang**	**40.09 327**	⇑*i*P	**P**	**22 58 01.8**	**+1.7**
GYA			pP	pP	22 58 25.3	+1.9
GYA			sP	sP	22 58 38.0	+3.1
GYA			PP	PP	22 59 39.6	+5.2
GYA			PcP	PcP	23 00 04.3	+1.2
GYA			PcS	PcS	23 03 54.3	+0.7
GYA			S	**S**	**23 04 00.0**	**+1.0**
GYA			sS	sS	23 04 41.8	+2.6
GYA			pmax	pmax		
	comp=Z,60nm,1.0s,mb5.4					
GYA			pmax	pmax		
	comp=Z,180nm,4.9s					
GYA			LR	LR		
	comp=N,13μm,17.9s					
GYA			LR	LR		
	comp=E,9μm,16.3s					
GYA			LR	LR		
	comp=Z,10μm,18.6s					
WHN	**Wuhan**	**40.17 339**	⇑*i*P	**P**	**22 58 01.5**	**+0.7**
WHN			pP	pP	22 58 23.5	-0.6
WHN			PP	PP	22 59 36.8	+1.5
WHN			ScP	ScP	23 03 39.8	-3.6
WHN			S	**S**	**23 03 54.4**	**-5.8**
WHN			SS	SS	23 07 00.6	-1.6
WHN			pmax	pmax		
	comp=Z,410nm,0.8s,mb6.3					
WHN			pmax	pmax		
	comp=Z,2μm,7.6s					
WHN			LR	LR		
	comp=N,1μm,14.6s					
WHN			LR	LR		
	comp=E,230nm,9.5s					
WHN			LR	LR		
	comp=Z,950nm,16.8s					
NJ2	**Nanjing**	**40.25 346**	*e*P	**P**	**22 58 02.1**	**+0.7**
NJ2			pP	pP	22 58 25.0	+0.3
NJ2			sP	sP	22 58 36.8	+0.6
NJ2			PP	PP	22 59 39.9	+3.8
NJ2			S	**S**	**23 03 58.0**	**-3.3**
NJ2			SS	SS	23 07 01.0	-2.7
NJ2			pmax	pmax		
	comp=Z,290nm,1.0s,mb6.1					
NJ2			pmax	pmax		
	comp=Z,780nm,7.6s					
NJ2			LR	LR		
	comp=N,11μm,24.5s					
NJ2			LR	LR		
	comp=E,10μm,23.9s					
NJ2			LR	LR		
	comp=Z,11μm,26.5s					
JHJ	**Hachijo jima 2**	**41.15 13**	P	**P**	**22 58 07.2**	**-1.5**
	comp=Z,90nm,0.7s,mb5.7,baz=57,slow=22,SNR=3.7					
JHJ			LR	LR	23 13 30.7	
	comp=Z,1μm,21.0s,baz=173,slow=33					
KMI	**Kunming**	**41.33 322**	P	**P**	**22 58 11.4**	**+1.0**
KMI			pP	pP	22 58 34.3	+0.5
KMI			sP	sP	22 58 46.3	+1.1
KMI			PP	PP	22 59 48.8	+0.9
KMI			ScP	ScP	23 03 46.5	-1.6
KMI			S	**S**	**23 04 13.1**	**-4.5**
KMI			pmax	pmax		
	comp=Z,200nm,1.3s,mb5.8					
KMI			pmax	pmax		
	comp=Z,870nm,4.5s					
KMI			LR	LR		
	comp=N,640nm,20.3s					
KMI			LR	LR		
	comp=E,540nm,23.2s					
KMI			LR	LR		
	comp=Z,1μm,40.2s					
ENH	**Enshi**	**41.86 334**	*e*P	**P**	**22 58 13.6**	**-1.1**
	comp=Z,63nm,0.7s,mb5.5					
ENH			*e*ScP	ScP	23 03 45.7	-4.4
MJAR	**Matsushiro Arr**	**44.15 10**	P	**P**	**22 58 31.9**	**-1.1**
	comp=Z,159nm,0.9s,mb5.7,baz=190,slow=9.6,SNR=340					
MJAR			PcP	PcP	23 00 15.3	-1.0
	comp=Z,24nm,1.1s,baz=200,slow=5.3,SNR=3.8					
MJAR			ScP	ScP	23 03 54.2	-5.0
	comp=Z,6.7nm,0.8s,baz=186,slow=5.1,SNR=5.8					
MJAR			S	**S**	**23 04 52.1**	**-6.4**
	comp=Z,1.2nm,0.3s,baz=165,slow=10,SNR=5.7					
MJAR	**Matsushiro Arr**	**44.15 10**	P	**P**	**22 58 32.0**	**-1.0**
MJAR					23 00 15.3	
MJAR			S	**S**	**23 04 52.2**	**-6.4**
MJAR			pmax	pmax		
	comp=Z,159nm,0.9s					
MJAR			pmax	pmax		
	comp=Z,24nm,1.1s					
MJAR			pmax	pmax		
	comp=N,7.0nm,0.8s					
MJAR			smax			
	comp=N,1.0nm,0.3s					
MAJO	**Matsushiro**	**44.15 10**	*e*P	**P**	**22 58 32.1**	**-0.9**
MAJO			pmax	pmax		
	comp=Z,285nm,1.0s,mb6.0					
MAJO	**Matsushiro**	**44.15 10**	*e*P	**P**	**22 58 32.1**	**-1.0**
	comp=Z,285nm,1.0s,mb6.0					
MAJO			*e*ScP	ScP	23 03 54.9	-4.4
MAT	**Matsushiro**	**44.15 10**	P	**P**	**22 58 32.0**	**-1.0**
MAT			S	**S**	**23 04 51.6**	**-7.0**
KSRS	**Korea Array**	**44.34 358**	P	**P**	**22 58 35.1**	**+0.6**
	comp=Z,168nm,1.1s,mb5.7,baz=176,slow=11,SNR=254					
KSRS			PcP	PcP	23 00 15.9	-1.0
	comp=Z,15nm,1.0s,baz=166,slow=3.6,SNR=4.0					
KSRS			ScP	ScP	23 03 56.1	-3.8
	comp=Z,11nm,0.9s,baz=177,slow=4.4,SNR=11					
KSRS			LR	LR	23 17 30.3	
	comp=Z,648nm,19.2s,baz=261,slow=36					
KSRS	**Korea Array**	**44.34 358**	P	**P**	**22 58 35.1**	**+0.6**
KSRS					23 00 15.9	
KSRS			pmax	pmax		
	comp=Z,168nm,1.1s,mb5.7					
KSRS			pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7					
KSRS			pmax	pmax		
	comp=N,11nm,0.9s					
KSRS			MLR	MLR		
	comp=Z,648nm,19.3s					
INCN	**Inchon**	**44.43 357**	*e*P	**P**	**22 58 36.0**	**+0.8**
	comp=Z,244nm,1.3s,mb5.8					
INCN	**Inchon**	**44.43 357**	P	**P**	**22 58 36.1**	**+0.9**
	SNR=9.1					
INCN			P		22 58 36.1	
	SNR=9.1					
TIA	**Tai'an**	**44.64 346**	⇑P	**P**	**22 58 36.0**	**-0.9**
TIA			pmax	pmax		
	comp=Z,82nm,1.0s,mb5.4					
CD2	**Chengdu**	**45.16 328**	P	**P**	**22 58 39.9**	**-1.3**
CD2			PP	PP	23 00 27.4	-1.4
CD2			S	**S**	**23 05 15.1**	**+1.7**
CD2			SS	SS	23 08 30.0	-8.2
CD2			pmax	pmax		
	comp=Z,110nm,1.4s,mb5.4					
CD2			pmax	pmax		
	comp=Z,760nm,7.3s					
CD2			LR	LR		
	comp=N,1μm,17.2s					
CD2			LR	LR		
	comp=Z,1μm,21.4s					
XAN	**Xi'an**	**45.35 336**	P	**P**	**22 58 41.6**	**-1.0**
XAN			pmax	pmax		
	comp=Z,44nm,1.1s,mb5.1					
XAN			pmax	pmax		
	comp=Z,160nm,9.8s					
XAN			LR	LR		
	comp=N,620nm,48.4s					
XAN			LR	LR		
	comp=E,190nm,22.4s					
XAN			LR	LR		
	comp=Z,310nm,49.0s					
DL2	**Dalian**	**46.36 351**	P	**P**	**22 58 47.3**	**-3.1**
DL2			S	**S**	**23 05 26.5**	**-3.8**
DL2			ScS	ScS	23 08 30.5	-5.1
DL2			SS	SS	23 08 58.0	+0.6
DL2			pmax	pmax		
	comp=Z,80nm,1.0s,mb5.4					
DL2			pmax	pmax		
	comp=Z,520nm,2.8s,mb5.8					
IMP	**Imphal**	**47.01 314**	*i* P	**P**	**22 58 55.0**	**-0.7**
IMP			*ex*	x	23 04 07.0	
MSVF	**Nonsavu**	**48.37 107**	P	**P**	**22 59 07.0**	**+0.6**
	comp=Z,868nm,0.9s,mb6.6,SNR=26					
MSVF	**Nonsavu**	**48.37 107**	*e*P	**P**	**22 59 07.6**	**+1.2**
	comp=Z,150nm,1.0s,mb5.8					
BJT	**Baijiatuau**	**48.49 346**	*e*P	**P**	**22 59 06.6**	**-0.3**
BJT			pmax	pmax		
	comp=Z,541nm,1.0s					
BJT	**Baijiatuau**	**48.49 346**	*e*P	**P**	**22 59 06.5**	**-0.3**
	comp=Z,541nm,1.0s,mb6.3					
BJI	**Beijing**	**48.51 346**	P	**P**	**22 59 06.9**	**-0.1**
BJI			PP	PP	23 01 02.3	+1.5
BJI			S	**S**	**23 05 53.8**	**-6.9**
BJI			pmax	pmax		
	comp=Z,410nm,0.9s,mb6.4					
BJI			pmax	pmax		
	comp=Z,1μm,6.0s					
BJI			LR	LR		
	comp=N,250nm,25.7s					
BJI			LR	LR		
	comp=E,430nm,22.1s					
BJI			LR	LR		
	comp=Z,370nm,44.1s					
SHL	**Shillong**	**48.96 313**	⇑*i*P	**P**	**22 59 11.0**	**+0.2**
SHL			*ex*	x	23 06 01.0	
SNY	**Shenyang**	**48.99 354**	⇑P	**P**	**22 59 10.6**	**-0.1**
SNY			S	**S**	**23 06 02.8**	**-4.7**
SNY			pmax	pmax		
	comp=Z,160nm,1.1s,mb5.9					
SNY			pmax	pmax		
	comp=Z,1μm,3.5s					
SNY			LR	LR		
	comp=N,650nm,13.5s					
SNY			LR	LR		
	comp=E,810nm,16.9s					
SNY			LR	LR		
	comp=Z,820nm,23.0s					
FUNA	**Funafuti**	**49.15 95**	*e*P	**P**	**22 59 13.0**	**+0.5**
	comp=Z,2μm,2.1s,mb6.7					
LZH	**Lanzhou**	**49.29 332**	⇑P	**P**	**22 59 13.6**	**+0.5**
LZH			pP	pP	22 59 37.5	+0.3
LZH			sP	sP	22 59 48.8	+0.3
LZH			PcP	PcP	23 00 36.5	+2.0
LZH			PP	PP	23 01 08.8	+0.7
LZH			S	**S**	**23 06 07.3**	**-4.6**
LZH			ScS	ScS	23 08 51.0	-4.3
LZH			SS	SS	23 09 38.5	-6.5
LZH			pmax	pmax		
	comp=Z,78nm,1.1s,mb5.5					
LZH			pmax	pmax		
	comp=Z,640nm,4.0s					
LZH			LR	LR		
	comp=N,800nm,14.6s					
LZH			LR	LR		
	comp=Z,1μm,18.0s					
CAL	**Calcutta**	**49.98 307**	*e*P	**P**	**22 59 17.6**	**-1.0**
CAL			*ex*	x	23 06 53.6	
VLA	**Vladivostok**	**50.02 2**	*e*P	**P**	**22 59 16.5**	**-2.0**
VLA			*e**PP	pP	22 59 38.3	-4.3
VLA			*e*S	**S**	**23 06 18.5**	**-3.2**
VLA			pmax	pmax		
	comp=Z,481nm,1.2s,mb6.3					
ERM	**Erimo**	**50.42 13**	*e*P	**P**	**22 59 22.3**	**+0.7**
ERM			pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4					
ERM	**Erimo**	**50.42 13**	*e*P	**P**	**22 59 22.3**	**+0.7**
	comp=Z,44nm,0.8s,mb5.4					
HHC	**Hu-ho-hao-te**	**50.51 342**	⇑*i*P	**P**	**22 59 22.8**	**+0.6**
HHC			pP	pP	22 59 51.9	+5.6
HHC			PcP	PcP	23 00 38.3	-0.6
HHC			PP	PP	23 01 19.9	+0.9
HHC			ScP	ScP	23 04 21.0	-4.8
HHC			PcS	PcS	23 04 33.9	-2.2
HHC			S	**S**	**23 06 25.0**	**-3.6**
HHC			sS	sS	23 07 17.9	+7.9
HHC			ScS	ScS	23 08 57.4	-5.9
HHC			SS	SS	23 10 01.4	-2.7
HHC			pmax	pmax		
	comp=Z,160nm,1.1s,mb6.0					
HHC			pmax	pmax		
	comp=Z,300nm,5.9s					
HHC			LR	LR		
	comp=N,410nm,16.5s					
HHC			LR	LR		
	comp=E,420nm,17.3s					
HHC			LR	LR		
	comp=Z,670nm,15.8s					
BTO	**Baotou**	**50.77 341**	*e*P	**P**	**22 59 22.9**	**-1.3**
CN2	**Changchun**	**50.80 356**	⇑*i*P	**P**	**22 59 23.9**	**-0.4**
CN2			*e*ScP	ScP	23 04 23.0	-4.0
CN2			*e*S	**S**	**23 06 31.0**	**-1.5**
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=N,400nm,18.0s					
CN2			LR	LR		
	comp=E,500nm,18.0s					
CN2			LR	LR		
	comp=Z,500nm,22.0s					
PALK	**Pallekele**	**50.80 285**	P	**P**	**22 59 25.7**	**+0.8**
	comp=Z,458nm,1.1s,mb6.4,SNR=6.4					
PALK	**Pallekele**	**50.80 285**	P	**P**	**22 59 25.3**	**+0.4**
	comp=Z,56nm,1.0s,mb5.5,baz=107,slow=7.3,SNR=12					
PALK			PcP	PcP	23 00 40.5	-0.1
	comp=Z,35nm,0.8s,baz=120,slow=8.3,SNR=4.6					
PALK			PP	PP	23 01 24.2	+2.0
	comp=Z,48nm,1.2s,baz=99,slow=8.6,SNR=3.7					
PALK			ScP	ScP	23 04 23.9	-3.9
	comp=Z,39nm,1.0s,baz=121,slow=2.2,SNR=6.3					
PALK	**Pallekele**	**50.80 285**	*e*P	**P**	**22 59 24.8**	**-0.1**
PALK			*e*		23 00 40.8	
PALK			pmax	pmax		
	comp=Z,236nm,1.4s,mb6.0					
PALK	**Pallekele**	**50.80 285**	*e*P	**P**	**22 59 24.8**	**-0.2**
	comp=Z,236nm,1.4s,mb6.0					
PALK			*e*PcP	PcP	23 00 40.8	+0.2
PALK			*e*ScP	ScP	23 04 23.7	-4.1
PALK	**Pallekele**	**50.80 285**	P	**P**	**22 59 25.6**	**+0.6**
	SNR=6.7					
PALK			P		22 59 25.6	
	SNR=6.7					
PALK	**Pallekele**	**50.80 285**	P	**P**	**22 59 25.5**	**+0.6**
	comp=Z,55nm,1.6s,comp=Z,946nm,mb5.3					
RPZ	**Rata Peaks**	**51.41 142**	P	**P**	**22 59 29.6**	**+0.5**
	comp=Z,272nm,0.9s,mb6.3,baz=284,slow=2.7,SNR=66					
RPZ	**Rata Peaks**	**51.41 142**	*e*P	**P**	**22 59 30.1**	**+1.1**
	comp=Z,414nm,1.1s,mb6.4					
MDJ	**Mudanjiang**	**51.47 0**	P	**P**	**22 59 29.8**	**+0.4**
MDJ			pP	pP	22 59 51.6	-2.0
MDJ			sP	sP	23 00 02.0	-2.8
MDJ			PcP	PcP	23 00 42.3	0.0
MDJ			PP	PP	23 01 27.9	+0.2
MDJ			ScP	ScP	23 04 26.3	-3.6
MDJ			PcS	PcS	23 04 38.6	-1.5
MDJ			S	**S**	**23 06 39.4**	**-2.4**
MDJ			pmax	pmax		
	comp=Z,200nm,1.3s,mb6.0					
MDJ			pmax	pmax		
	comp=Z,470nm,4.7s					
MDJ			LR	LR		
	comp=N,250nm,18.5s					
MDJ			LR	LR		
	comp=E,330nm,22.5s					
MDJ			LR	LR		
	comp=Z,340nm,19.8s					
MDJ	**Mudanjiang**	**51.47 0**	*e*P	**P**	**22 59 29.4**	**0.0**
	comp=Z,209nm,1.0s,mb6.1					
LSA	**Lhasa**	**51.98 317**	P	**P**	**22 59 34.5**	**+1.0**
LSA			sS	sS	23 07 32.9	+2.0
LSA			pmax	pmax		

comp=Z,370nm,1.0s,mb6.4
LSA pmax pmax
comp=Z,280nm,6.0s
LSA LR LR
comp=N,350nm,22.0s
LSA LR LR
comp=E,600nm,25.0s
LSA LR LR
comp=Z,1μm,30.0s
LSA Lhasa 51.98 317 *e*P **P 22 59 34.5 +1.0**
LSA pmax pmax
comp=Z,96nm,0.8s,mb5.9
LSA Lhasa 51.98 317 *e*P **P 22 59 34.5 +1.0**
comp=Z,96nm,0.8s,mb5.9
KHZ Kahutara 52.30 139 *e*P **P 22 59 35.7 0.0**
comp=Z,183nm,1.0s,mb6.1
ASAJ Asahikawa 52.31 12 P **P 22 59 36.0 +0.4**
comp=Z,91nm,0.8s,mb5.9,baz=229,slow=11,SNR=58
ASAJ S **S 23 06 49.8 -3.6**
comp=Z,3.0nm,0.4s,baz=86,slow=23,SNR=6.4
ASAJ Asahikawa 52.31 12 P **P 22 59 36.0 +0.4**
ASAJ S **S 23 06 49.8 -3.5**
ASAJ pmax pmax
comp=Z,91nm,0.8s
ASAJ smax
comp=N,3.0nm,0.4s
MCQ Macquarie Isla 52.83 159 *e*P **P 22 59 40.5 +1.2**
URZ Urewera 52.90 133 P **P 22 59 40.1 0.0**
comp=N,81nm,1.1s,mb5.7,baz=356,slow=1.6,SNR=12
URZ Urewera 52.90 133 *e*P **P 22 59 39.7 -0.5**
comp=N,116nm,1.2s,mb5.8
YUK Yuzh-Kuril'sk 52.98 15 *e*P **P 22 59 40.0 -0.5**
YUK *e* 23 00 44.0
YUK pmax pmax
comp=Z,2μm,1.2s,mb7.0
RAMN Ramite 53.65 311 *e*P **P 22 59 46.1 +0.3**
GTA Gaotai 53.86 332 ⇑P **P 22 59 47.4 +0.3**
GTA pP pP 23 00 11.1 -0.3
GTA sP sP 23 00 21.8 -0.8
GTA PP PP 23 01 54.3 +5.0
GTA ScP ScP 23 04 37.0 -3.4
GTA S **S 23 07 15.4 +0.9**
GTA sS sS 23 07 56.3 0.0
GTA ScS ScS 23 09 22.1 -4.7
GTA SS SS 23 10 57.6 +0.5
GTA pmax pmax
comp=Z,120nm,0.8s,mb6.0
GTA pmax pmax
comp=Z,510nm,7.7s
GTA LR LR
comp=N,330nm,17.8s
GTA LR LR
comp=E,520nm,22.6s
GTA LR LR
comp=Z,370nm,15.2s
GUN Gumba 54.70 311 *e*P **P 22 59 53.5 +0.1**
comp=Z,364nm,0.4s,mb6.7
PKI Pulchoki 54.87 311 *e*P **P 22 59 54.3 -0.4**
comp=Z,252nm,0.8s,mb6.3
PKIN Phulchoki 54.89 311 *e*P **P 22 59 54.2 -0.6**
comp=Z,156nm,0.6s,mb6.2
YSS Yuzh-Sakhalins 55.07 11α *i*P **P 22 59 55.5 -0.2**
YSS *e**SP sP 23 00 29.0 -2.3
YSS *e* 23 00 56.5
YSS *e*S **S 23 07 25.0 -5.4**
YSS *e* 23 09 29.0
YSS *e*SSS 23 11 06.0
YSS pmax pmax
comp=N,90nm,1.2s
YSS pmax pmax
comp=E,90nm,1.2s
YSS pmax pmax
comp=Z,160nm,1.2s,mb5.9
YSS pmax pmax
comp=Z,300nm,6.0s
YSS smax
comp=E,1μm,14.0s
YSS Yuzh-Sakhalins 55.07 11 *e*P **P 22 59 55.5 -0.2**
comp=E,141nm,1.0s,mb6.0
KKN Kakani 55.09 311 *e*P **P 22 59 56.0 -0.2**
comp=E,257nm,0.7s,mb6.3
DMN Daman 55.12 311 *e*P **P 22 59 56.4 -0.1**
comp=E,458nm,0.9s,mb6.5
HABR Khabarovsk 55.54 4*c i*P **P 22 59 59.5 +0.5**
HABR *e**PP pP 23 00 21.7 -1.8
HABR *e* 23 00 56.0
HABR *e* 23 02 02.0
HABR *e*S **S 23 07 39.1 +2.5**
HABR *e* 23 09 35.0
HABR *e*SS SS 23 11 23.1 -0.2
HABR pmax pmax
comp=Z,540nm,1.6s,mb6.3
HABR pmax pmax
comp=N,177nm,1.5s
HABR pmax pmax
comp=E,217nm,1.4s
HABR pmax pmax
comp=Z,664nm,1.4s,mb6.5
HABR MLR MLR
comp=Z,238nm,19.0s
HYB Hyderabad 55.99 296⇑*i*P **P 23 00 01.0 -1.8**
comp=Z,155nm,1.0s,mb6.0
HYB *e*pP pP 23 00 32.0 +4.7
HYB *e*PcP PcP 23 01 01.0 +0.8
KLR Kul'dur 56.12 2 *e*P **P 23 00 00.0 -3.1**
KLR *e*S **S 23 07 37.5 -6.8**
KLR pmax pmax
comp=Z,170nm,1.4s,mb5.9
KLR smax
comp=N,700nm,6.0s
KLR smax
comp=E,1μm,6.0s
HIA Hailar 56.78 352 *e*P **P 23 00 07.9 +0.1**
HIA pmax pmax
comp=Z,43nm,0.9s
HIA Hailar 56.78 352 *e*P **P 23 00 07.9 +0.1**
comp=Z,43nm,0.9s,mb5.5
NGP Nagpur 56.99 301 *e*x **P 23 00 10.9 +1.0**
comp=Z,156nm,1.5s,mb5.8
AFI Afiamalu 57.94 102 P **P 23 00 18.2 +1.5**
comp=Z,326nm,1.0s,mb6.3,baz=94,slow=0.2,SNR=13
AFI Afiamalu 57.94 102 P **P 23 00 18.2 +1.5**
AFI pmax pmax
comp=Z,326nm,1.0s,mb6.3
AFI Afiamalu 57.94 102 *e*P **P 23 00 18.0 +1.3**
comp=Z,696nm,1.3s,mb6.5
LATR Latur 58.12 297 *e*P **P 23 00 15.0 -2.8**
ULN Ulaanbaatar 58.23 342 *e*P **P 23 00 18.6 +0.6**
ULN pmax pmax
comp=Z,215nm,1.0s,mb6.1
ULN Ulaanbaatar 58.23 342 *e*P **P 23 00 18.6 +0.6**
comp=Z,215nm,1.0s,mb6.1
ULN *e*ScP ScP 23 04 56.1 -3.4
ULN Ulaanbaatar 58.23 342 P **P 23 00 18.9 +0.9**
SNR=144
ULN P 23 00 18.9
SNR=144
ULN Ulaanbaatar 58.23 342 P **P 23 00 19.2 +1.2**
comp=Z,223nm,1.3s,comp=Z,3μm,mb6.0
SONM Songino Array 58.40 342 P **P 23 00 19.9 +0.7**
comp=Z,126nm,1.0s,mb5.9,baz=157,slow=6.3,SNR=345
SONM ScP ScP 23 04 56.9 -3.3
comp=Z,11nm,1.1s,baz=166,slow=3.9,SNR=4.9
SONM S **S 23 08 12.2 -2.1**
comp=Z,1.4nm,0.9s,baz=132,slow=4.2,SNR=3.4
SONM PKP2bc 23 30 07.2
comp=Z,0.4nm,0.3s,baz=244,slow=0.9,SNR=3.6
SONM Songino Array 58.40 342 P **P 23 00 19.9 +0.7**
SONM S **S 23 08 12.2 -2.1**
SONM pmax pmax
comp=Z,126nm,1.0s
SONM pmax pmax
comp=N,11nm,1.1s
SONM smax
comp=N,1.0nm,0.9s
SONM Songino Array 58.40 342 P **P 23 00 19.9 +0.7**
SONM ScP ScP 23 04 56.9 -3.3
SONM S **S 23 08 12.2 -2.1**
SONM ⇑*e* 23 30 07.2
BHPL Bhopal 59.21 302 *e*P **P 23 00 23.7 -1.7**
BHPL AMb AMB 23 00 27.1
comp=Z,124nm,1.0s,mb5.9
PTH Pithoragarh 59.81 310 *e*P **P 23 00 28.2 -1.1**
PTH *e*x x 23 02 28.2
KAD Karad 59.86 295 *e*P **P 23 00 27.9 -2.1**
DRV Dumont d'Urvil 59.91 175 S **S 23 08 36.0 +2.7**

DRV L 23 15 00.0
DRV R 23 19 00.0
CIT Chita 60.47 349 *e*P **P 23 00 34.2 +0.9**
CIT *e* 23 01 05.3
CIT *e* 23 01 16.5
CIT *e* 23 10 10.2
CIT pmax pmax
comp=Z,402nm,1.6s,mb6.2
CASY Casey 60.55 189 *e*P **P 23 00 33.6 -0.1**
comp=Z,114nm,1.1s,mb5.8
CASY *e*pP pP 23 01 09.2 +11
POO Poona 60.57 296 *e*P **P 23 00 32.5 -2.2**
ZAK Zakamensk 61.62 341⇓ *e*P **P 23 00 41.7 +0.5**
ZAK *e* 23 08 50.1
ZAK pmax pmax
comp=Z,109nm,1.2s,mb5.8
NDI New Delhi 61.72 308⇑*i*P **P 23 00 39.0 -3.3**
NDI *e*x x 23 08 46.0
DDI Dehra Dun 61.82 310⇑*i*P **P 23 00 40.5 -2.5**
DDI *e*x x 23 03 05.0
TLY Talaya 62.64 342 P **P 23 00 48.0 0.0**
comp=Z,775nm,1.0s,mb6.6,SNR=60
TLY Talaya 62.64 342*c i*P **P 23 00 48.7 +0.7**
TLY *e* 23 03 05.1
TLY *e*S **S 23 09 07.6 -0.6**
TLY *e* 23 10 25.6
TLY pmax pmax
comp=Z,232nm,1.3s,mb6.0
TLY Talaya 62.64 342 *e*P **P 23 00 48.6 +0.7**
comp=Z,177nm,1.1s,mb5.9
TLY Talaya 62.64 342 P **P 23 00 49.1 +1.1**
SNR=60
TLY P 23 00 49.1
SNR=60
AJM Ajmer 62.84 304 *i*P **P 23 00 48.0 -1.8**
SMLA Simla 62.87 310 *e*x **P 23 00 47.5 -2.5**
comp=Z,1μm,0.9s,mb6.9
SMLA *i*x x 23 08 59.7
IRK Irkutsk 62.94 343⇑*i*P **P 23 00 50.3 +0.3**
IRK *e*S **S 23 09 08.9 -3.1**
IRK pmax pmax
comp=Z,593nm,1.1s,mb6.4
SDNR Sundarnagar 63.20 310 *e*P **P 23 00 52.1 0.0**
WMQ Urumqi 63.25 327 P **P 23 00 52.4 +0.2**
WMQ PcP PcP 23 01 27.9 -0.7
WMQ PP PP 23 03 12.0 -0.6
WMQ S **S 23 09 17.5 +1.3**
WMQ SS SS 23 13 27.0 +2.5
WMQ pmax pmax
comp=Z,170nm,1.0s,mb5.9
WMQ pmax pmax
comp=Z,470nm,3.0s
WMQ LR LR
comp=N,380nm,21.0s
WMQ LR LR
comp=E,290nm,24.0s
WMQ LR LR
comp=Z,550nm,27.0s
MOY Mondy 63.47 341 *e*P **P 23 00 54.7 +1.3**
MOY pmax pmax
comp=Z,534nm,1.6s,mb6.2
BHK Bhakra 63.58 310 *e*x **P 23 00 51.0 -3.6**
NRGR Nerungri 63.65 357 *i*P **P 23 00 55.3 +0.7**
NRGR S **S 23 09 21.0 +0.3**
NRGR smax
comp=N,92nm,1.0s
CLNS Chul'man 63.82 357*c i*P **P 23 00 56.4 +0.7**
CLNS pmax pmax
comp=Z,204nm,1.2s,mb5.8
CLNS pmax pmax
comp=N,118nm,1.1s
CLNS pmax pmax
comp=E,59nm,1.2s
CLNS pmax pmax
comp=Z,22nm,1.1s,mb4.9
CLNS pmax pmax
comp=N,32nm,1.2s
CLNS pmax pmax
comp=E,15nm,0.9s
MIR Mirnyy 64.44 195 *e*P **P 23 01 00.0 +0.3**
MIR *i* 23 01 35.0
MIR *e* 23 01 35.0
MIR pmax pmax
comp=Z,46nm,1.6s,mb5.1
MIR MLR MLR
comp=N,600nm,15.0s
MIR MLR MLR
comp=E,500nm,15.0s
MIR MLR MLR
comp=Z,1μm,15.0s
PEA0B Petropavlovsk- 64.54 18 *e*P **P 23 01 01.0 +0.6**
PETK Petropavlovsk- 64.54 18 P **P 23 01 01.1 +0.7**
comp=Z,125nm,1.0s,mb5.7,baz=197,slow=3.1,SNR=67
PETK LR LR 23 24 52.7
comp=Z,365nm,21.4s,baz=203,slow=32
PETK Petropavlovsk- 64.54 18 P **P 23 01 01.1 +0.6**
PETK pmax pmax
comp=Z,125nm,1.0s,mb5.7
PETK MLR MLR
comp=Z,365nm,21.4s
THN Thein Dam 64.57 311 *e*P **P 23 00 58.6 -2.5**
THN *e*x x 23 09 24.1
PET Petropavlovsk 64.77 19 *e*P **P 23 01 02.5 +0.5**
PET *e*S **S 23 09 31.8 -2.8**
PET *e**SS sS 23 10 14.5 -3.2
PET pmax pmax
comp=Z,178nm,1.1s,mb5.8
PET MLR MLR
comp=Z,500nm,15.0s
PET MLR MLR
comp=Z,900nm,14.0s
PET Petropavlovsk 64.77 19 *e*P **P 23 01 02.5 +0.5**
comp=Z,228nm,1.2s,mb5.9
BHJ Bhuj 65.85 299 *e*P **P 23 01 09.1 -0.4**
BHJ AMb AMB 23 01 11.8
comp=Z,140nm,1.4s,mb5.6
BOD Bodaibo 65.92 351⇑*i*P **P 23 01 08.9 -0.4**
BOD *e* 23 10 49.6
BOD pmax pmax
comp=Z,165nm,1.2s,mb5.7
KSH Kashi 67.81 318⇑*i*P **P 23 01 22.3 +0.6**
KSH pP pP 23 01 46.1 -0.9
KSH PcP PcP 23 01 48.3 +0.7
KSH sP sP 23 01 57.3 -0.7
KSH PP PP 23 03 54.1 +1.5
KSH ScP 23 05 41.0
KSH PcS 23 05 51.0
KSH S S 23 10 07.3 -4.7
KSH ScS ScS 23 11 07.1 -4.2
KSH pmax pmax
comp=Z,48nm,1.1s,mb5.2
KSH LR LR
comp=N,160nm,9.0s
KSH LR LR
comp=E,140nm,7.6s
KSH LR LR
comp=Z,120nm,6.7s
MK31 Makanchi Array 68.08 327 *e*P **P 23 01 22.9 -0.3**
MKAR Makanchi Array 68.08 327 P **P 23 01 23.4 +0.2**
comp=Z,124nm,0.7s,mb5.9,baz=120,slow=7.4,SNR=631
MKAR S S 23 10 08.8 -6.0
comp=Z,1.8nm,0.8s,baz=116,slow=8.5,SNR=2.2
MKAR LR LR 23 29 30.4
comp=Z,451nm,21.6s,baz=234,slow=34
MKAR PKP2bc 23 29 34.7
comp=Z,0.8nm,0.9s,baz=306,slow=4.1,SNR=6.4
MKAR Makanchi Array 68.08 327 P **P 23 01 23.4 +0.2**
MKAR S S 23 10 08.8 -6.1
MKAR pmax pmax
comp=Z,124nm,0.7s
MKAR smax
comp=N,2.0nm,0.8s
MKAR MLR MLR
comp=Z,451nm,21.6s
MKAR Makanchi Array 68.08 327 P **P 23 01 23.4 +0.2**
MKAR S S 23 10 08.8 -6.0
MKAR LR LR 23 29 30.4
MKAR ⇑*e* 23 29 34.7
YAK Yakutsk 68.92 0*c i*P **P 23 01 28.0 -0.1**
YAK *e**PP pP 23 02 06.7 +13
YAK *e* 23 04 03.6
YAK *e*PPP 23 05 47.9
YAK *e*S S 23 10 20.7 -3.5
YAK *e* 23 11 10.1

YAK pmax pmax
comp=N,1μm,0.2s
YAK pmax pmax
comp=Z,658nm,1.0s,mb6.4
YAK pmax pmax
comp=E,9.0nm,0.7s
YAK pmax pmax
comp=Z,17nm,0.9s,mb4.9
YAK pmax pmax
comp=N,76nm,1.3s
YAK pmax pmax
comp=E,23nm,1.2s
YAK smax
comp=N,222nm,1.1s
YAK smax
comp=E,918nm,1.9s
YAK Yakutsk 68.92 0 *e*P **P 23 01 27.5 -0.6**
comp=E,658nm,0.9s,mb6.5
ULHL Ulahol 69.04 320 P **P 23 01 29.8 +0.6**
SNR=18
KZA Kyzart 69.58 320 P **P 23 01 33.6 +1.0**
SNR=109
TKM2 Tokmak 2 69.79 321 P **P 23 01 34.5 +0.6**
SNR=120
TKM2 Tokmak 2 69.79 321 *e*P **P 23 01 34.1 +0.2**
TKM2 pmax pmax
comp=Z,114nm,0.9s,mb5.7
TKM2 Tokmak 2 69.79 321 *e*P **P 23 01 34.1 +0.2**
comp=Z,114nm,0.9s,mb5.7
KBK Karagaybulak 70.07 320 P **P 23 01 36.4 +0.8**
SNR=53
UCH Uchtor 70.13 320 P **P 23 01 36.9 +0.9**
SNR=151
UCH Uchtor 70.13 320 *e*P **P 23 01 36.9 +1.0**
AAK Ala-Archa 70.34 320 P **P 23 01 38.1 +0.9**
SNR=115
CHMS Chumysh 70.37 320 P **P 23 01 37.4 0.0**
SNR=20
FRU Bishkek 70.37 320⇑*i*P **P 23 01 37.0 -0.4**
FRU pmax pmax
comp=Z,190nm,1.8s,mb5.6
KBL Kabul 70.51 310 *e*P **P 23 01 37.8 -0.7**
KBL *e*S S 23 10 36.9 -7.1
KBL pmax pmax
comp=Z,172nm,1.0s,mb5.8
KBL Kabul 70.51 310 *e*P **P 23 01 37.8 -0.6**
comp=Z,172nm,1.0s,mb5.8
KBL *e*S S 23 10 36.9 -7.1
AML Almayashu 70.61 319 P **P 23 01 40.1 +1.2**
SNR=68
AML Almayashu 70.61 319 *e*P **P 23 01 39.6 +0.7**
comp=Z,223nm,1.0s,mb6.0
USP Ospenovka 70.66 321 P **P 23 01 39.4 +0.2**
SNR=242
EKS2 Erkin-Say 70.82 320 P **P 23 01 41.1 +1.0**
SNR=164
EKS2 Erkin-Say 70.82 320 *e*P **P 23 01 41.0 +0.8**
comp=Z,221nm,1.0s,mb5.9
ZAA0 Zalesovo Array 71.48 334 *e*P **P 23 01 42.9 -1.0**
ZAA0 *e*S S 23 10 44.7 -10
ZALV Zalesovo Beam 71.48 334 P **P 23 01 43.2 -0.7**
comp=Z,415nm,1.0s,mb6.2,baz=114,slow=3.7,SNR=549
ZALV S S 23 10 46.2 -8.3
comp=Z,2.2nm,0.8s,baz=140,slow=7.8,SNR=3.6
ZALV PKP2bc 23 29 31.7
comp=Z,0.7nm,0.6s,baz=309,slow=4.7,SNR=3.7
ZALV LR LR 23 32 45.6
comp=Z,114nm,20.1s,baz=342,slow=35
ZALV Zalesovo Beam 71.48 334 P **P 23 01 43.2 -0.7**
ZALV S S 23 10 46.2 -8.3
ZALV pmax pmax
comp=Z,415nm,1.0s,mb6.2
ZALV smax
comp=N,2.0nm,0.8s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV MLR MLR
comp=Z,114nm,20.1s
ZALV Zalesovo Beam 71.48 334 P **P 23 01 43.2 -0.8**
ZALV S S 23 10 46.2 -8.3
ZALV ⇑*e* 23 29 31.7
ZALV LR LR 23 32 45.6
SEY Seymchan 71.97 11*c i*P **P 23 01 47.3 +0.6**
KURK Kurchatov 72.38 329 P **P 23 01 49.5 +0.1**
comp=Z,3μm,1.1s
KURK Kurchatov 72.38 329 P **P 23 01 48.5 -0.9**
comp=Z,430nm,1.0s,mb6.2,baz=130,slow=5.0,SNR=501
KURK S S 23 11 04.3 -0.6
comp=Z,0.6nm,0.4s,baz=313,slow=13,SNR=3.6
KURK Kurchatov 72.38 329 *e*P **P 23 01 48.9 -0.5**
KURK *e*S S 23 10 59.6 -5.3
KURK pmax pmax
comp=Z,665nm,1.1s,mb6.4
KURK Kurchatov 72.38 329 *e*P **P 23 01 48.9 -0.4**
comp=Z,666nm,1.1s,mb6.4
KURK *e*S S 23 10 59.6 -5.3
KURK Kurchatov 72.38 329 P **P 23 01 49.3 -0.1**
SNR=306
KURK P 23 01 49.3
SNR=306
RER Riviere de l'E 72.43 250 *e*P **P 23 01 51.0 +0.7**
comp=Z,94nm,0.8s,mb5.7
NVS Novosibirsk 72.77 334⇑*i*P **P 23 01 50.8 -0.8**
NVS *e*S S 23 11 02.4 -6.7
NVS pmax pmax
comp=N,325nm,1.2s
NVS pmax pmax
comp=E,343nm,1.2s
NVS pmax pmax
comp=Z,559nm,1.2s,mb6.3
NVS smax
comp=N,268nm,2.2s
NVS smax
comp=E,190nm,1.6s
SBA Scott Base 73.30 172 *e*P **P 23 01 55.1 +0.7**
SBA pmax pmax
comp=Z,48nm,1.0s,mb5.3
SBA Scott Base 73.30 172 *e*P **P 23 01 55.1 +0.7**
comp=Z,48nm,1.0s,mb5.3
SBA *e*pP pP 23 02 28.7 +8.7
MAW Mawson 74.71 201 *e*P **P 23 02 02.9 +0.1**
comp=Z,26nm,0.9s,mb5.0
MAW Mawson 74.71 201 P **P 23 02 03.3 +0.6**
comp=Z,20nm,0.8s,mb4.9,baz=71,slow=6.1,SNR=30
MAW LR LR 23 32 20.5
comp=Z,756nm,20.6s,baz=47,slow=34
MAW Mawson 74.71 201 *e*P **P 23 02 03.1 +0.3**
MAW pmax pmax
comp=Z,14nm,1.1s
MAW Mawson 74.71 201 *e*P **P 23 02 03.1 +0.4**
comp=Z,14nm,1.1s,mb4.6
MAW *e*pP pP 23 02 36.0 +7.6
WBK Wadi Bani Khal 75.08 296 P **P 23 02 05.9 +0.2**
SNR=13
JMDO Jabal Madar 75.80 295 P **P 23 02 09.8 -0.1**
SNR=13
KIP Kipapa 76.41 66*c i*P **P 23 02 15.6 +2.3**
BSY Bisya 76.70 295 P **P 23 02 14.7 -0.2**
SNR=22
HOQ Hoqain 76.80 296 P **P 23 02 15.4 -0.1**
SNR=57
IDAH Dahanechah 77.06 306 *e*P **P 23 02 18.0 +1.2**
ARQ Araqi 77.44 296 P **P 23 02 19.1 0.0**
SNR=26
IKOO Kooshah 77.67 305 *e*P **P 23 02 20.9 +0.7**
BVAR Borovoye Array 77.92 328 P **P 23 02 20.8 -0.3**
comp=Z,195nm,0.9s,mb5.8,baz=123,slow=5.5,SNR=671
BVAR S S 23 11 59.7 -6.4
comp=Z,0.7nm,0.8s,baz=260,slow=5.3,SNR=2.3
BVAR Borovoye Array 77.92 328 P **P 23 02 20.8 -0.3**
BVAR S S 23 11 59.7 -6.4
BVAR pmax pmax
comp=Z,195nm,0.9s
BVAR smax
comp=N,1.0nm,0.8s
IMYA Miami 77.97 309 *e*P **P 23 02 22.2 +0.4**
BRVK Borovoye 78.00 328 *e*P **P 23 02 21.0 -0.5**
BRVK *e*S S 23 12 02.0 -4.9
BRVK pmax pmax
comp=Z,516nm,1.2s,mb6.1
BRVK Borovoye 78.00 328 *e*P **P 23 02 21.0 -0.5**
comp=Z,516nm,1.2s,mb6.1
BRVK *e*S S 23 12 01.9 -5.0
BRVK Borovoye 78.00 328 P **P 23 02 21.3 -0.2**
SNR=212
BRVK P 23 02 21.3
SNR=212

ITEG	**Tejag**	**78.01 306**	*e*P	**P**	**23 02 22.8**	**+0.7**
HATD	**Hatta, Dubai**	**78.13 297**	P	**P**	**23 02 22.8**	**-0.1**
	SNR=41					
BANOM	**Banah**	**78.25 298**	P	**P**	**23 02 24.0**	**+0.5**
	SNR=56					
ISRO	**Mashad**	**78.44 309**	*e*P	**P**	**23 02 24.4**	**0.0**
IMOG	**Moghan**	**78.48 309**	*e*P	**P**	**23 02 24.8**	**+0.2**
TIXI	**Tiksi**	**78.58 360***c*	*i*P	**P**	**23 02 23.2**	**-1.2**
TIXI			*e*S	S	23 12 05.2	-7.3
TIXI			*e**SS	sS	23 12 50.0	-7.1
TIXI			pmax	pmax		
	comp=Z,130nm,0.9s,mb5.8					
TIXI			MLR	MLR		
	comp=Z,372nm,19.0s					
TIXI	**Tiksi**	**78.58 360**	*e*P	**P**	**23 02 22.9**	**-1.5**
	comp=Z,101nm,0.9s,mb5.7					
NAZ	**Nazwa, Dubai**	**78.59 297**	P	**P**	**23 02 25.1**	**-0.3**
	SNR=32					
FAQ	**Al Faqa, Dubai**	**78.59 297**	P	**P**	**23 02 25.1**	**-0.3**
	SNR=29					
ASUD	**Al Ashush, Dub**	**78.80 297**	P	**P**	**23 02 26.8**	**+0.2**
	SNR=19					
IPAY	**Payeh**	**78.85 309**	*e*P	**P**	**23 02 26.6**	**0.0**
IAKL	**Akhelmad**	**79.08 309**	*e*P	**P**	**23 02 28.0**	**+0.1**
ABTO	**Aybut**	**79.15 289**	P	**P**	**23 02 28.1**	**-0.5**
	SNR=15					
NIKO	**Nikolski**	**79.16 33**	*e*P	**P**	**23 02 27.7**	**-0.2**
	comp=Z,63nm,0.5s,mb5.7					
PPT	**Papeete**	**79.19 107**	*e*P	**P**	**23 02 30.9**	**+2.0**
	comp=Z,116nm,1.1s,mb5.6					
PPT	**Papeete**	**79.19 107**	P	**P**	**23 02 30.7**	**+1.8**
	comp=Z,47nm,0.4s,mb5.7,baz=215,slow=19,SNR=6.2					
PPT			LR	LR	23 34 20.0	
	comp=Z,472nm,18.4s,baz=159,slow=33					
PPT	**Papeete**	**79.19 107**	P	**P**	**23 02 30.7**	**+1.8**
PPT			pmax	pmax		
	comp=Z,47nm,0.4s					
PPT			MLR	MLR		
	comp=Z,472nm,18.4s					
BILL	**Bilibino**	**79.30 13***c*	*i*P	**P**	**23 02 28.0**	**-0.4**
BILL			*i*		23 02 36.6	
BILL			*i* S	S	23 12 17.7	-2.6
BILL			pmax	pmax		
	comp=Z,37nm,1.1s,mb5.1					
BILL			MLR	MLR		
	comp=Z,200nm,19.0s					
BILL	**Bilibino**	**79.30 13**	*e*P	**P**	**23 02 28.0**	**-0.4**
	comp=Z,41nm,1.1s,mb5.2					
IKRD	**Kardeh**	**79.32 309**	*e*P	**P**	**23 02 25.7**	**-3.5**
IEMG	**Emamgholi**	**79.40 310**	*e*P	**P**	**23 02 30.1**	**+0.5**
TIAR	**Tiarei**	**79.41 107**	*e*P	**P**	**23 02 32.2**	**+2.1**
	comp=Z,188nm,1.2s,mb5.8					
ISFR	**Sfrayin**	**79.79 310**	*e*P	**P**	**23 02 31.9**	**+0.2**
ABKT	**Ailbek**	**79.96 310**	P	**P**	**23 02 32.4**	**-0.2**
	comp=Z,831nm,1.5s,mb6.3,SNR=59					
VAN	**Vannovskaya**	**79.97 310**⇑	*i*P	**P**	**23 02 32.4**	**-0.3**
VAN			*e*S	S	23 12 36.4	+7.8
ISHV	**Shirvan**	**80.16 310**	*e*P	**P**	**23 02 34.3**	**+0.6**
IBAF	**Bafgh**	**80.26 304**	*e*P	**P**	**23 02 33.9**	**-0.5**
ABPO	**Ambohimpanom**	**80.52 252**	*e*P	**P**	**23 02 36.4**	**+0.3**
ABPO			pmax	pmax		
	comp=Z,60nm,1.4s,mb5.2					
ABPO	**Ambohimpanom**	**80.52 252**	*e*P	**P**	**23 02 36.4**	**+0.3**
	comp=Z,60nm,1.4s,mb5.2					
OPO	**Ambohidratompo**	**80.59 252**	P	**P**	**23 02 36.4**	**-0.1**
	comp=Z,25nm,0.7s,mb5.2,baz=81,slow=4.6,SNR=28					
MEH	**Mehetia**	**80.60 107**	*e*P	**P**	**23 02 38.1**	**+1.6**
	comp=Z,328nm,1.3s,mb6.0					
UNV	**Unalaska Valle**	**80.81 33**	*e*P	**P**	**23 02 36.8**	**0.0**
	comp=Z,106nm,0.9s,mb5.7					
IMEH	**Mehriz**	**81.00 303**	*e*P	**P**	**23 02 37.1**	**-1.2**
PMOR	**Pomariorio Ree**	**81.00 104**	*e*P	**P**	**23 02 40.6**	**+1.9**
	comp=Z,315nm,1.0s,mb6.1					
ISRV	**Sarvestan**	**81.79 301**	*e*P	**P**	**23 02 41.6**	**-1.0**
IPAR	**Pars**	**81.95 301**	*e*P	**P**	**23 02 42.8**	**-0.6**
IMOK	**Mouk**	**82.06 301**	*e*P	**P**	**23 02 43.1**	**-0.9**
ABKAR	**Akbulak array**	**82.33 322**	*e*P	**P**	**23 02 43.7**	**-1.2**
	comp=Z,292nm,0.9s,mb6.1					
IANJ	**Anjilo**	**82.55 307**	*e*P	**P**	**23 02 45.9**	**-0.5**
MUKL	**Al Mukalla**	**82.68 286**⇑	*e*P	**P**	**23 02 47.8**	**+0.3**
MUKL			AMb	AMB	23 02 49.0	
	comp=Z,243nm,0.7s,mb6.1					
IGLO	**Ghaloghah**	**82.87 308**	*e*P	**P**	**23 02 47.5**	**-0.5**
QSPA	**South Pole Qui**	**82.88 180**	P	**P**	**23 02 46.9**	**-0.3**
	comp=Z,46nm,0.7s,mb5.4,baz=316,slow=1.7,SNR=184					
QSPA			S	S	23 12 52.5	-4.7
	comp=Z,2.8nm,0.9s,baz=110,slow=23,SNR=13					
QSPA			PKKPbc	PKKPbc	23 21 09.6	-3.6
	comp=Z,5.3nm,1.0s,baz=172,slow=2.1,SNR=6.3					
QSPA	**South Pole Qui**	**82.88 180**	P	**P**	**23 02 46.9**	**-0.3**
QSPA			S	S	23 12 52.5	-4.7
QSPA			PKKPbc	PKKPbc	23 21 09.6	-3.6
IKIA	**Kiasar**	**82.91 308**	*e*P	**P**	**23 02 47.3**	**-0.9**
ISHM	**Shahmirzad**	**83.12 307**	*e*P	**P**	**23 02 49.5**	**+0.2**
GAMB	**Gambell**	**83.16 22**	*e*P	**P**	**23 02 50.2**	**+1.3**
	comp=Z,141nm,1.2s,mb5.7					
IZEF	**Zefreh**	**83.23 304**	*e*P	**P**	**23 02 48.6**	**-1.4**
ILAS	**Lasjerd**	**83.29 307**	*e*P	**P**	**23 02 49.6**	**-0.6**
IGAR	**Gharneh**	**83.36 304**	*e*P	**P**	**23 02 49.8**	**-0.8**
SYO	**Syowa Base**	**83.42 201**⇑	*e*P	**P**	**23 02 49.0**	**-1.2**
SYO	**Syowa Base**	**83.42 201**⇓	*e*X	**P**	**23 02 50.4**	**+0.2**
IFIR	**Firoozkooh**	**83.51 307**	*e*P	**P**	**23 02 51.2**	**-0.1**
ISFB	**Sefidab**	**83.63 306**	*e*P	**P**	**23 02 51.3**	**-0.7**
AKTK	**Aktyubinsk**	**83.89 322**	P	**P**	**23 02 52.6**	**-0.3**
AKTK			S	S	23 13 01.9	-6.4
AKTK			PKKPbc	PKKPbc	23 21 08.6	-1.8
AKTO	**Aktyubinsk**	**83.89 322**	P	**P**	**23 02 52.6**	**-0.3**
	comp=Z,155nm,1.1s,mb5.8,baz=108,slow=6.5,SNR=226					
AKTO			S	S	23 13 01.9	-6.4
	comp=Z,2.1nm,0.9s,baz=265,slow=23,SNR=10.0					
AKTO			PKKPbc	PKKPbc	23 21 08.6	-1.8
	comp=Z,0.6nm,0.3s,baz=273,slow=2.8,SNR=4.9					
AKTO	**Aktyubinsk**	**83.89 322**	P	**P**	**23 02 52.6**	**-0.3**
AKTO			S	S	23 13 01.9	-6.4
AKTO			pmax	pmax		
	comp=Z,155nm,1.1s,mb5.8					
AKTO			smax			
	comp=N,2.0nm,0.9s					
AKTO			pmax	pmax		
	comp=Z,1.0nm,0.3s					
IKLH	**Kolahrood**	**83.94 305**	*e*P	**P**	**23 02 53.5**	**-0.1**
IPRN	**Peran**	**83.98 308**	*e*P	**P**	**23 02 52.9**	**-0.8**
IDMV	**Damavand**	**84.07 307**	*e*P	**P**	**23 02 53.7**	**-0.5**
IVRN	**Varamin**	**84.18 306**	*e*P	**P**	**23 02 53.8**	**-1.0**
IVRN			*e*P		23 02 54.6	
IPIR	**Pirpir**	**84.37 304**	*e*P	**P**	**23 02 55.9**	**+0.1**
SDPT	**Sand Point**	**84.62 33**	*e*P	**P**	**23 02 56.7**	**+0.2**
	comp=Z,486nm,1.3s,mb6.3					
SVE	**Sverdlovsk**	**84.64 329**⇓	*e*P	**P**	**23 02 55.9**	**-0.6**
SVE			*e*	pP	23 03 25.6	+2.8
SVE			*e*		23 06 08.7	
SVE			*e*S	S	23 13 03.4	-12
SVE			pmax	pmax		
	comp=Z,760nm,1.4s,mb6.4					
SVE			pmax	pmax		
	comp=Z,205nm,11.6s					
IR3	**Iran Long-Peri**	**84.85 307**	*e*P	**P**	**23 02 58.1**	**0.0**
IR5	**Iran Long-Peri**	**85.15 306**	*e*P	**P**	**23 02 59.8**	**+0.2**
TNA	**Tin City**	**85.46 22**	*e*P	**P**	**23 02 59.6**	**-0.9**
	comp=Z,45nm,1.0s,mb5.4					
ARU	**Arti**	**85.57 328**	P	**P**	**23 02 59.0**	**-2.2**
	comp=Z,2μm,1.0s,mb7.0					
ARU	**Arti**	**85.57 328***c*	*i*P	**P**	**23 02 59.6**	**-1.6**
ARU			*e*		23 06 18.2	
ARU			PPP		23 08 12.0	
ARU			S	S	23 13 15.0	-10
ARU			SS	SS	23 19 04.3	+1.5
ARU			pmax	pmax		
	comp=Z,503nm,1.2s,mb6.3					
ARU	**Arti**	**85.57 328**	*e*P	**P**	**23 02 59.5**	**-1.7**
	comp=Z,427nm,1.0s,mb6.3					
IRAZ	**Razeghan**	**85.71 306**	*e*P	**P**	**23 03 02.6**	**+0.2**
QRN	**Al-Qurain**	**86.12 299**	*e*P	**P**	**23 03 03.6**	**-1.0**
QRN			AMb	AMB	23 03 07.0	
	comp=Z,491nm,1.4s,mb6.2					
LBOS		**86.22 284**	*e*P	**P**	**23 03 06.1**	**+0.7**
LBOS			AMb	AMB	23 03 07.0	
	comp=Z,9.1nm,0.6s,mb4.9					
KBD	**Kabd**	**86.39 300**	*e*P	**P**	**23 03 04.7**	**-1.2**
KBD			AMb	AMB	23 03 08.3	
	comp=Z,206nm,1.2s,mb5.9					
UMR	**Umm Al-Rimmam**	**86.44 300**	*e*P	**P**	**23 03 05.0**	**-1.1**
UMR			AMb	AMB	23 03 08.6	
	comp=Z,485nm,1.1s,mb6.3					
RDF	**Al-Radifah**	**86.47 300**	*e*P	**P**	**23 03 05.7**	**-0.7**
RDF			AMb	AMB	23 03 10.1	
	comp=Z,420nm,1.4s,mb6.2					
NAY	**Al-Naaiem**	**86.79 300**	*e*P	**P**	**23 03 06.8**	**-1.1**
NAY			AMb	AMB	23 03 10.2	
	comp=Z,356nm,0.9s,mb6.3					
MIB	**Mutribah**	**86.81 300**	*e*P	**P**	**23 03 07.1**	**-0.8**
MIB			AMb	AMB	23 03 10.9	
	comp=Z,568nm,1.3s,mb6.3					
DHBB	**Dhamar BB**	**87.14 285**⇑	*e*P	**P**	**23 03 10.6**	**+0.8**
IKOM	**Komasi**	**87.43 305**	*e*P	**P**	**23 03 09.0**	**-1.8**
SOKR	**Solikamsk**	**87.49 331***c*	*i*P	**P**	**23 03 08.9**	**-1.6**
SOKR			pmax	pmax		
	comp=Z,240nm,1.2s,mb6.0					
ISRB	**Sarab**	**87.96 308**	*e*P	**P**	**23 03 13.5**	**+0.2**
ILIN	**Lien**	**88.00 305**	*e*P	**P**	**23 03 12.1**	**-1.4**
ATD	**Arta Tunnel**	**88.22 282**	P	**P**	**23 03 15.9**	**+0.9**
	comp=Z,72nm,0.8s,mb5.7,baz=120,slow=1.7,SNR=33					
ATD			S	SKSac	23 13 33.3	-2.0
	comp=Z,3.7nm,0.8s,baz=93,slow=24,SNR=2.6					
IGHG	**Ghaleghazi**	**88.22 305**	*e*P	**P**	**23 03 13.0**	**-1.6**
IDHR	**Dehrash**	**88.43 305**	*e*P	**P**	**23 03 13.4**	**-2.2**
IHRS	**Heris**	**88.53 309**	*e*P	**P**	**23 03 15.3**	**-0.7**
IBST	**Bostanabad**	**88.54 308**	*e*P	**P**	**23 03 14.9**	**-1.1**
SVW2	**Sparrevohn**	**88.92 28**	*e*P	**P**	**23 03 18.9**	**+1.7**
IFTB	**Fath-abad**	**88.99 308**	*e*P	**P**	**23 03 17.8**	**-0.3**
MAK	**Makhachkala**	**89.02 313**	*e*P	**P**	**23 03 18.2**	**+0.1**
MAK			*e**SP	pP	23 03 44.9	+0.3
MAK			*i* S	SKSac	23 13 33.5	-5.3
MAK			*e*		23 13 56.0	
MAK			*e*SSS		23 23 32.2	
MAK			pmax	pmax		
	comp=Z,396nm,1.5s,mb6.2					
TAOE	**Nuku Hiva Isla**	**89.19 99**	*e*P	**P**	**23 03 21.4**	**+1.8**
	comp=Z,140nm,1.1s,mb5.9					
ITBZ	**Tabriz**	**89.21 309**	*e*P	**P**	**23 03 18.6**	**-0.6**
IAZR	**Azarshahr**	**89.25 308**	*e*P	**P**	**23 03 19.2**	**-0.2**
TTA	**Tatalina**	**89.26 26**	*e*P	**P**	**23 03 19.0**	**+0.2**
KDAK	**Kodiak Island**	**89.52 32**	*i* P	**P**	**23 03 20.7**	**+0.6**
ISHB	**Shabestar**	**89.63 308**	*e*P	**P**	**23 03 21.1**	**0.0**
IMRD	**Marand**	**89.64 309**	*e*P	**P**	**23 03 20.8**	**-0.3**
BHD	**Baghdad**	**89.86 303**	*e*P	**P**	**23 03 18.0**	**-4.3**
BHD			*e*S	SKSac	23 13 37.0	-7.1
RSO	**Redoubt South**	**90.09 29**	*e*P	**P**	**23 03 22.3**	**-0.4**
PPLA	**Purkeypile**	**90.94 27**	*e*P	**P**	**23 03 26.4**	**-0.2**
	comp=Z,122nm,1.4s,mb5.8					
CHUM	**Lake Minchumin**	**91.11 26**	*e*P	**P**	**23 03 27.3**	**-0.1**
	comp=Z,347nm,1.4s,mb6.3					
MSL	**Mosul**	**91.33 306**	*e*P	**P**	**23 03 34.0**	**+4.9**
MSL			*e*S	S	23 14 05.0	-15
ZEI	**Tsey**	**91.61 313**	*e*P	**P**	**23 03 27.8**	**-2.4**
ZEI			*e*S	SKSac	23 13 49.7	-4.1
ZEI			pmax	pmax		
	comp=Z,117nm,1.4s,mb5.9					
ZEI			pmax	pmax		
	comp=N,50nm,0.8s					
ZEI			pmax	pmax		
	comp=E,117nm,0.9s					
KTH	**Kantishna Hill**	**91.64 26**	*e*P	**P**	**23 03 28.9**	**-0.9**
	comp=E,106nm,1.1s,mb6.0					
BPAW	**Bear Paw Mtn.**	**91.73 26**	*e*P	**P**	**23 03 29.8**	**-0.5**
	comp=E,36nm,1.0s,mb5.5					
TRF	**Thorofare Moun**	**91.90 26**	*e*P	**P**	**23 03 30.4**	**-0.7**
	comp=E,36nm,1.0s,mb5.6					
PMR	**Palmer**	**92.05 28**	*e*P	**P**	**23 03 31.4**	**-0.4**
PMR			pmax	pmax		
	comp=Z,45nm,1.0s,mb5.7					
PMR	**Palmer**	**92.05 28**	*e*P	**P**	**23 03 31.4**	**-0.4**
	comp=Z,45nm,1.0s,mb5.7					
NVL	**N'lazarevskaya**	**92.14 197**	*e*P	**P**	**23 03 32.0**	**-0.1**
NVL			pmax	pmax		
	comp=Z,11nm,0.8s,mb5.1					
KMBO	**Kilima Mbogo**	**92.18 269**	P	**P**	**23 03 33.7**	**+0.2**
	comp=Z,24nm,1.0s,mb5.4,baz=180,slow=24,SNR=30					
KMBO			LR	LR	23 42 43.0	
	comp=Z,294nm,18.9s,baz=88,slow=34					
KMBO	**Kilima Mbogo**	**92.18 269**	P	**P**	**23 03 33.7**	**+0.2**
KMBO			pmax	pmax		
	comp=Z,24nm,1.0s					
KMBO			MLR	MLR		
	comp=Z,294nm,18.9s					
KMBO	**Kilima Mbogo**	**92.18 269**	*e*P	**P**	**23 03 33.7**	**+0.1**
	comp=Z,35nm,1.0s,mb5.5					
KMBO	**Kilima Mbogo**	**92.18 269**	P	**P**	**23 03 34.2**	**+0.7**
	SNR=12					
KMBO			P		23 03 34.2	
	SNR=12					
GOF	**Gofitskoye**	**92.53 315**	*e*P	**P**	**23 03 39.1**	**+4.7**
GOF			*e*S	SKSac	23 13 59.6	+0.7
GOF			pmax	pmax		
	comp=Z,110nm,1.5s,mb6.0					
GOF			smax			
	comp=N,60nm,1.4s					
GOF			smax			
	comp=E,50nm,1.4s					
MCK	**McKinley**	**92.55 26**	*e*P	**P**	**23 03 32.7**	**-1.3**
MCK			pmax	pmax		
	comp=Z,191nm,1.3s,mb6.3					
MCK	**McKinley**	**92.55 26**	*e*P	**P**	**23 03 32.7**	**-1.3**
	comp=Z,191nm,1.3s,mb6.3					
KIV	**Kislovodsk**	**92.64 314**	*i*P	**P**	**23 03 34.1**	**-0.8**
	comp=Z,114nm,0.9s,mb6.2,SNR=6.5					
KIV	**Kislovodsk**	**92.64 314**⇑	*i*P	**P**	**23 03 33.9**	**-1.0**
KIV			*i*		23 07 16.9	
KIV			*i* S	SKSac	23 13 56.5	-3.0
KIV			*e*SS	SS	23 20 44.9	-1.1
KIV			pmax	pmax		
	comp=Z,29nm,1.1s,mb5.5					
KIV			MLR	MLR		
	comp=Z,100nm,16.0s					
KIV	**Kislovodsk**	**92.64 314**	*e*P	**P**	**23 03 34.1**	**-0.9**
	comp=Z,22nm,0.9s,mb5.5					
KIV			*e*PP	PP	23 07 15.8	-2.1
KIV	**Kislovodsk**	**92.64 314**	P	**P**	**23 03 34.1**	**-0.8**
	SNR=12					
KIV			P		23 03 34.1	
	SNR=12					
COLD	**Coldfoot**	**92.71 23**	*e*P	**P**	**23 03 34.6**	**-0.2**
	comp=Z,85nm,1.1s,mb6.0					
COLA	**College**	**93.22 25**	*e*P	**P**	**23 03 35.3**	**-1.8**
COLA			pmax	pmax		
	comp=Z,48nm,1.1s,mb5.7					
COLA	**College**	**93.22 25**	*e*P	**P**	**23 03 35.3**	**-1.8**
	comp=Z,48nm,1.1s,mb5.7					
DIV	**Divide**	**93.57 29**	*e*P	**P**	**23 03 39.1**	**+0.3**
	comp=Z,100nm,1.1s,mb6.1					
PAX	**Paxson**	**93.97 27**	*e*P	**P**	**23 03 40.6**	**0.0**
PAX			pmax	pmax		
	comp=Z,246nm,1.6s,mb6.3					
PAX	**Paxson**	**93.97 27**	*e*P	**P**	**23 03 40.6**	**0.0**
	comp=Z,246nm,1.6s,mb6.3					
BMRM	**Bremner River**	**94.11 29**	*e*P	**P**	**23 03 41.0**	**-0.3**
	comp=Z,69nm,1.1s,mb5.9					
VRHR	**Novokhopersk**	**94.18 321**	*e*P	**P**	**23 03 39.6**	**-2.3**
VRHR			*i* *PP	pP	23 04 05.7	-2.7
VRHR			*e*S	SKSac	23 14 02.1	-5.5
VRHR			*e**SS	S	23 14 41.5	-3.0
VRHR			pmax	pmax		
	comp=Z,120nm,1.2s,mb6.1					
VRHR			pmax	pmax		
	comp=N,20nm,0.8s					
VRHR			pmax	pmax		
	comp=E,20nm,0.5s					
VRHR			smax			
	comp=E,300nm,1.6s					
VRHR			smax			
	comp=Z,110nm,2.2s					
VRHR			smax			
	comp=N,240nm,1.8s					
SOC	**Sochi**	**94.74 313**	*e*P	**P**	**23 03 41.5**	**-3.1**
SOC			*e*		23 07 29.3	
SOC			*e*S	SKSac	23 14 06.6	-4.4
SOC			pmax	pmax		
	comp=Z,18nm,0.9s,mb5.5					
VORD	**Divnogorie**	**95.64 321**	*e*P	**P**	**23 03 46.2**	**-2.3**
VORD			*i* *PP	pP	23 04 13.2	-1.9
VORD			*i* *SP	sP	23 04 24.1	-1.7
VORD			*e*S	SKSac	23 14 09.4	-6.0
VORD			pmax	pmax		
	comp=Z,120nm,0.9s,mb6.3					
VORD			pmax	pmax		
	comp=N,110nm,0.8s					
VORD			pmax	pmax		
	comp=E,350nm,0.7s					
VORD			smax			
	comp=E,330nm,2.6s					
VORD			smax			
	comp=Z,130nm,2.8s					
VORD			smax			
	comp=N,120nm,1.1s					
VSR	**Storozhevoye**	**95.74 321**	*e*P	**P**	**23 03 46.5**	**-2.5**
VSR			*e**PP	pP	23 04 13.6	-1.9
VSR			*i* *SP	sP	23 04 24.5	-1.7
VSR			*e*S	SKSac	23 14 09.1	-6.8
VSR			*e**SS	S	23 14 55.4	-2.6
VSR			*e*SS	SS	23 21 36.8	+7.2
VSR			pmax	pmax		
	comp=Z,110nm,1.1s,mb6.2					
VSR			pmax	pmax		
	comp=N,20nm,1.4s					
VSR			pmax	pmax		
	comp=E,70nm,0.9s					
VSR			smax			
	comp=E,210nm,2.1s					
VSR			smax			
	comp=Z,120nm,3.4s					
VSR			smax			
	comp=N,190nm,1.9s					
ASF	**Jabal al Asfar**	**96.00 302**	P	**P**	**23 03 50.1**	**-0.5**
	comp=N,16nm,0.9s,mb5.5,baz=284,slow=1.0,SNR=30					
ASF			S	SKSac	23 14 17.4	-0.8
	comp=N,0.7nm,0.6s,baz=312,slow=23,SNR=6.5					
ASF	**Jabal al Asfar**	**96.00 302**	P	**P**	**23 03 50.1**	**-0.5**
ASF			S	SKSac	23 14 17.4	-0.7
ASF			pmax	pmax		
	comp=Z,16nm,0.9s					
ASF			smax			
	comp=N,1.0nm,0.6s					
EGAK	**Eagle**	**96.05 26**	*e*P	**P**	**23 03 49.6**	**-0.5**
	comp=N,22nm,0.8s,mb5.7					
ANN	**Anapa**	**96.47 314**⇑	*i*P	**P**	**23 03 50.3**	**-2.2**
ANN			*e*		23 14 13.2	
ANN			pmax	pmax		
	comp=Z,62nm,1.0s,mb6.0					
PNL	**Peninsula**	**96.58 31**	*e*P	**P**	**23 03 52.5**	**-0.1**
	comp=Z,23nm,1.1s,mb5.5					
DAWY	**Dawson**	**96.78 26**	*e*P	**P**	**23 03 53.4**	**+0.1**
DAWY			*e*PP	PP	23 07 46.6	-2.9
MOS	**Moscow**	**96.91 325**	*e*P	**P**	**23 03 50.1**	**-4.1**
MOS			*e*		23 04 25.9	
MOS			*e*S	SKSac	23 14 16.9	-4.9
MOS			*e*		23 14 54.6	
MOS			pmax	pmax		
	comp=Z,127nm,1.3s,mb6.2					
MOS			pmax	pmax		
	comp=Z,300nm,1.8s,mb6.4					
VNA2	**Neumayer--Watz**	**97.05 193**	*e*P	**P**	**23 03 54.0**	**-0.6**
MMAI	**Mount Meron Ar**	**97.31 302**	P	**P**	**23 03 56.7**	**+0.2**
	comp=Z,25nm,0.9s,mb5.6,baz=96,slow=7.6,SNR=16					
MMAI			S	SKSac	23 14 22.4	-2.6
	comp=Z,0.2nm,0.3s,baz=169,slow=35,SNR=2.6					
MMAI			LR	LR	23 54 55.2	
	comp=Z,255nm,19.1s,baz=95,slow=40					
VNA1	**Neumayer--Stat**	**97.44 193**	*e*P	**P**	**23 03 55.8**	**-0.6**
EIL	**Elat**	**97.48 299**	P	**P**	**23 03 57.0**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.9,baz=4.5,slow=3.2,SNR=7.6					
EIL			S	SKSac	23 14 25.2	-0.8
	comp=Z,1.5nm,0.5s,baz=107,slow=20,SNR=3.7					
EIL			PKKPbc	PKKPbc	23 20 35.2	+0.2
	comp=Z,1.6nm,0.6s,baz=25,slow=3.7,SNR=4.1					
EIL	**Elat**	**97.48 299**	P	**P**	**23 03 57.0**	**-0.3**
EIL			S	SKSac	23 14 25.2	-0.8
EIL			PKKPbc	PKKPbc	23 20 35.2	+0.2
OBN	**Obninsk**	**97.49 325**	P	**P**	**23 03 54.9**	**-1.9**
	comp=Z,337nm,0.5s,mb7.0,SNR=6.7					
OBN	**Obninsk**	**97.49 325***c*	*i*P	**P**	**23 03 54.6**	**-2.2**
OBN			*i* S	SKSac	23 14 20.9	-3.9
OBN			pmax	pmax		
	comp=Z,166nm,1.6s,mb6.2					
OBN	**Obninsk**	**97.49 325**	*e*P	**P**	**23 03 54.5**	**-2.3**
	comp=Z,209nm,1.4s,mb6.4					
LVZ	**Lovozero**	**98.39 338***c*	*i*P	**P**	**23 03 58.2**	**-2.4**
LVZ			pmax	pmax		
	comp=Z,41nm,1.4s,mb5.8					
SKAG	**Skagway**	**98.65 31**	*e*P	**P**	**23 04 02.4**	**+0.5**
	comp=Z,44nm,1.1s,mb5.9					
SIM	**Simferopol'**	**98.83 314**	*e*P	**P**	**23 04 02.6**	**-0.5**
SIM			*e*		23 14 28.0	
SIM			pmax	pmax		
	comp=Z,18nm,0.9s,mb5.6					
SIM			MLR	MLR		
	comp=Z,100nm,17.0s					
APA	**Apatity**	**98.88 337**⇓	*e*P	**P**	**23 04 00.0**	**-2.7**
APA			pmax	pmax		
	comp=Z,26nm,1.0s,mb5.7					
APA			MLR	MLR		
	comp=Z,400nm,20.0s					
LSZ	**Lusaka**	**99.04 253**	P	**P**	**23 04 04.0**	**-0.7**
	comp=Z,12nm,0.7s,mb5.5,baz=107,slow=4.3,SNR=26					
LSZ			PP	PP	23 08 09.0	+0.9
	comp=Z,4.7nm,1.1s,baz=34,slow=8.5,SNR=3.8					
LSZ	**Lusaka**	**99.04 253**	P	**P**	**23 04 04.0**	**-0.7**
LSZ					23 08 09.0	
LSZ			pmax	pmax		
	comp=Z,12nm,0.7s,mb5.5					
LSZ			pmax	pmax		
	comp=Z,5.0nm,1.1s,mb5.0					
LSZ	**Lusaka**	**99.04 253**	*e*P	**P**	**23 04 03.5**	**-1.2**
	comp=Z,10nm,0.8s,mb5.4					
BR131	**Keskin Array S**	**99.06 309**	*e*P	**P**	**23 04 02.7**	**-1.5**
	comp=Z,6.1nm,0.8s,mb5.2					
BRTR	**Keskin Array B**	**99.06 309**	P	**P**	**23 04 02.4**	**-1.8**
	comp=Z,5.3nm,0.8s,mb5.1,baz=127,slow=5.4,SNR=27					
BRTR			PP	PP	23 08 07.0	-0.7
	comp=Z,15nm,1.2s,baz=123,slow=4.6,SNR=5.5					
BRTR			S	SKSac	23 14 37.6	+4.2
	comp=Z,1.1nm,1.1s,baz=59,slow=27,SNR=5.6					
BRTR			PKKPbc	PKKPbc	23 20 30.6	-0.5
	comp=Z,0.6nm,0.7s,baz=184,slow=2.0,SNR=4.8					
BRTR	**Keskin Array B**	**99.06 309**	P	**P**	**23 04 02.4**	**-1.8**
BRTR					23 08 07.0	
BRTR			pmax	p

JOF	**Joensuu**	100.05	333	*e*p	Pdif	23 04 05.5	-2.8
	comp=Z,60nm,1.1s						
KEV	**Kevo**	100.97	340	*e*P	Pdif	23 04 10.2	-2.2
KEV				pmax	pmax		
	comp=Z,24nm,1.1s						
KEV	**Kevo**	100.97	340	*e*Pdif	Pdif	23 04 10.2	-2.2
	comp=Z,24nm,1.1s						
KEV	**Kevo**	100.97	340	*e*p	Pdif	23 04 14.1	+1.7
	comp=Z,13nm,1.2s						
DLBC	**Dease Lake**	101.45	32	P	Pdif	23 04 14.4	-0.1
	comp=Z,14nm,1.2s,baz=230,slow=2.6,SNR=8.4						
DLBC				PP	PP	23 08 26.2	+1.0
	comp=Z,1.7nm,0.7s,baz=337,slow=12,SNR=3.7						
DLBC	**Dease Lake**	101.45	32	*e*Pdif	Pdif	23 04 14.5	0.0
ARCES	**ARCESS Array B**	101.52	340	P	Pdif	23 04 12.9	-1.9
	comp=Z,27nm,0.9s,baz=76,slow=5.1,SNR=28						
ARCES				PKiKP	PKiKP	23 08 37.4	-0.4
	comp=Z,6.0nm,1.1s,baz=93,slow=1.0,SNR=11						
ARCES				S	SKSac	23 14 41.6	-2.7
	comp=Z,0.9nm,0.6s,baz=34,slow=8.8,SNR=4.1						
ARCES				PKKPbc	PKKPbc	23 20 21.3	-3.8
	comp=Z,2.3nm,0.9s,baz=298,slow=2.6,SNR=8.0						
ARCES	**ARCESS Array B**	101.52	340	P	Pdif	23 04 13.0	-1.9
ARCES				S	SKSac	23 14 41.6	-2.6
ARCES				pmax	pmax		
	comp=Z,27nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARCES				smax			
	comp=N,1.0nm,0.6s						
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SPITS	**Spitsbergen Ar**	101.58	349	P	Pdif	23 04 12.7	-2.4
	comp=Z,12nm,0.8s,baz=161,slow=21,SNR=6.1						
SPITS	**Spitsbergen Ar**	101.58	349	P	Pdif	23 04 12.7	-2.4
SPITS				pmax	pmax		
	comp=Z,12nm,0.9s						
SPB4	**Spitsbergen Ar**	101.58	349	*e*Pdif	Pdif	23 04 13.5	-1.6
AKASG	**Malin Array Be**	102.02	320	P	Pdif	23 04 15.2	-1.8
	comp=Z,8.5nm,0.8s,baz=79,slow=3.9,SNR=40						
AKASG				PP	PP	23 08 30.4	+0.7
	comp=Z,2.2nm,0.6s,baz=76,slow=6.9,SNR=4.8						
AKASG				S	SKSac	23 14 42.7	-4.6
	comp=Z,0.2nm,0.3s,baz=359,slow=20,SNR=3.1						
AKASG	**Malin Array Be**	102.02	320	P	Pdif	23 04 15.3	-1.8
AKASG						23 08 30.4	
AKASG				S	SKSac	23 14 42.7	-4.6
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	102.02	320	P	Pdif	23 04 15.2	-1.8
AKASG				PP	PP	23 08 30.4	+0.7
AKASG				S	SKSac	23 14 42.7	-4.6
AKBB	**Malin Array Si**	102.02	320	*e*P	Pdif	23 04 15.0	-2.1
KIEV	**Kiev**	102.03	320	*e*P	Pdif	23 04 15.0	-2.1
KIEV				pmax	pmax		
	comp=Z,30nm,1.4s						
KIEV	**Kiev**	102.03	320	*e*Pdif	Pdif	23 04 15.0	-2.1
	comp=Z,30nm,1.4s						
KBS	**Kingsbay**	102.09	350	*i* P	Pdif	23 04 15.9	-1.5
KAF	**Kangasniemi**	102.44	332	*e*P	Pdif	23 04 16.9	-2.1
KAF				pmax	pmax		
	comp=Z,26nm,1.0s						
KAF	**Kangasniemi**	102.44	332	*e*p	Pdif	23 04 16.9	-2.1
	comp=Z,26nm,1.0s,baz=78,slow=4.0						
KIS	**Kishinev**	102.49	316	*e*P	Pdif	23 04 14.0	-5.2
KIS				*e*SKS		23 14 42.0	
KIS				*e*SKKS	SKKSac	23 15 20.0	-9.3
KIS				*e*L		23 43 30.0	
KIS				LRM		23 54 00.0	
	comp=Z,300nm,20.0s						
KIS	**Kishinev**	102.49	316	*e*P	Pdif	23 04 14.0	-5.2
KIS				*e*		23 08 33.0	
KIS				*e*		23 14 42.0	
KIS				MLR	MLR		
	comp=Z,300nm,20.0s						
KIS				MLR	MLR		
	comp=Z,300nm,20.0s						
MICGM	**Minsk**	102.54	324	*e*	Pdif	23 04 17.0	-2.4
MNK	**Minsk**	102.56	324	*e*P	Pdif	23 04 17.0	-2.5
TLCR		102.58	315 ⇓	*i* P	Pdif	23 04 18.6	-1.0
FINES	**FINESS Array B**	102.65	331	Pdiff	Pdif	23 04 17.7	-2.2
	comp=Z,5.7nm,0.8s,baz=106,slow=4.2,SNR=13						
FINES				PP	PP	23 08 37.1	+3.0
	comp=Z,3.0nm,0.7s,baz=76,slow=2.4,SNR=7.3						
FINES	**FINESS Array B**	102.65	331	P	Pdif	23 04 17.7	-2.2
FINES						23 08 37.1	
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VSU	**Vasula**	102.73	328	*i* P	Pdif	23 04 19.0	-1.2
TIRR	**Tirgusor**	102.91	314	*e*P	Pdif	23 04 19.3	-1.7
TIRR				pmax	pmax		
	comp=Z,12nm,1.1s						
TIRR	**Tirgusor**	102.91	314	*e*Pdif	Pdif	23 04 19.3	-1.7
	comp=Z,12nm,1.1s						
TIRR	**Tirgusor**	102.91	314 ⇑	*i*P	Pdif	23 04 19.8	-1.2
IDID	**Didziasalis**	103.11	325	*e*P	Pdif	23 04 20.2	-1.8
NACGM	**Naroch**	103.13	325	*e*P	Pdif	23 04 19.0	-3.0
HARR	**Harsova**	103.24	314 ⇑	P	Pdif	23 04 22.3	-0.2
HARR	**Harsova**	103.24	314 ⇑	*i*P	Pdif	23 04 22.3	-0.2
IZAR	**Zarasai**	103.34	326	*e*P	Pdif	23 04 20.9	-2.0
IIGN	**Ignalina**	103.40	325	*e*P	Pdif	23 04 21.3	-1.9
VRI	**Vrincioaia**	104.01	315 ⇓	P	Pdif	23 04 26.1	+0.2
VRI	**Vrincioaia**	104.01	315 ⇓	*i*P	Pdif	23 04 26.0	+0.1
VRI	**Vrincioaia**	104.01	315 ⇓	*i*P	PKiKP	23 08 36.3	-6.7
PLOR	**Plostina**	104.06	315 ⇓	P	Pdif	23 04 26.1	-0.1
PLOR	**Plostina**	104.06	315 ⇓	*i*P	Pdif	23 04 26.1	-0.1
PLOR	**Plostina**	104.06	315 ⇑	*i*P	PKiKP	23 08 41.9	-1.2
MLR	**Muntele Rosu**	104.59	315	Pdiff	Pdif	23 04 27.9	-0.5
	comp=Z,12nm,1.1s,baz=64,slow=5.6,SNR=17						
MLR				PKiKP	PKiKP	23 08 44.6	+0.5
	comp=Z,18nm,1.1s,baz=172,slow=3.7,SNR=4.0						
MLR				PKKPbc	PKKPbc	23 20 13.8	-1.4
	comp=Z,1.7nm,0.6s,baz=205,slow=6.6,SNR=4.2						
MLR	**Muntele Rosu**	104.59	315	P	Pdif	23 04 27.9	-0.6
MLR				*i*		23 08 44.6	
MLR				pmax	pmax		
	comp=Z,12nm,1.1s						
MLR				pmax	pmax		
	comp=Z,18nm,1.1s						
MLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MLR	**Muntele Rosu**	104.59	315 ⇓	*i*P	Pdif	23 04 28.4	-0.1
MLR	**Muntele Rosu**	104.59	315 ⇑	*i*P	PKiKP	23 08 42.4	-1.7
BURAR	**Bucovina Array**	104.89	317 ⇑	P	Pdif	23 04 29.8	0.0
BURAR	**Bucovina Array**	104.89	317 ⇑	*i*P	Pdif	23 04 29.8	0.0
BUR08	**Bucovina Ar. S**	104.90	317	*e*Pdif	Pdif	23 04 29.2	-0.6
SUW	**Suwalki**	105.33	324	*e*P	Pdif	23 04 31.0	-0.8
SUW	**Suwalki**	105.33	324	*e*P	Pdif	23 04 30.5	-1.3
SUW				pmax	pmax		
	comp=Z,182nm,1.7s						
SUW	**Suwalki**	105.33	324	*e*Pdif	Pdif	23 04 30.5	-1.3
	comp=Z,182nm,1.7s						
LVV	**L'vov**	105.42	320	*e*P	Pdif	23 04 30.6	-1.6
IDI	**Anoyia**	106.05	305	Pdiff	Pdif	23 04 37.0	+2.0
	comp=Z,21nm,1.2s,baz=15,slow=6.0,SNR=4.2						
IDI				PKiKP	PKiKP	23 08 47.5	+0.3
	comp=Z,4.5nm,0.7s,baz=22,slow=12,SNR=6.4						
KWP	**Kalwaria Pacla**	106.29	320	*e*P	Pdif	23 04 36.1	0.0
KWP	**Kalwaria Pacla**	106.29	320	*e*P	Pdif	23 04 35.1	-1.0
KWP				*e*		23 08 58.9	
KWP				pmax	pmax		
	comp=Z,51nm,1.3s						
KWP	**Kalwaria Pacla**	106.29	320	*e*Pdif	Pdif	23 04 35.1	-1.0
	comp=Z,50nm,1.3s						
KWP				*e*PP	PP	23 08 58.9	-2.6
KWP	**Kalwaria Pacla**	106.29	320 ⇑	*i*P	Pdif	23 04 36.3	+0.2
KOLS	**Kolonicke sedl**	106.68	319	*e*Pdif	Pdif	23 04 37.7	-0.1
KOLS				*e*		23 07 19.4	
KOLS	**Kolonicke sedl**	106.68	319	PDIF	Pdif	23 04 37.7	-0.1
KOLS				*e*		23 07 19.4	
UZH	**Uzhgorod**	106.71	319 ⇓	*e*P	Pdif	23 04 36.9	-1.0
STHS	**Stebnicka Huta**	107.27	320	*e*Pdif	Pdif	23 04 41.2	+0.8
STHS				*e*		23 07 37.0	
STHS	**Stebnicka Huta**	107.27	320	PDIF	Pdif	23 04 41.2	+0.8
STHS				*e*		23 07 37.0	
RES	**Resolute Bay**	107.85	11	PKiKP	PKiKP	23 08 48.6	-0.7
	comp=Z,4.7nm,1.0s,baz=235,slow=2.0,SNR=7.5						
RES				SKKPbc		23 23 31.9	
	comp=Z,3.3nm,1.0s,baz=148,slow=5.6,SNR=6.0						
RES	**Resolute Bay**	107.85	11	*e*P	Pdif	23 04 42.3	-0.7
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	**Resolute Bay**	107.85	11	*e*Pdif	Pdif	23 04 42.3	-0.6
	comp=Z,8.7nm,1.1s						
RES				PKPdf	PKiKP	23 08 48.6	-0.7
RES				SKKPbc		23 23 31.9	
NIE	**Niedzica**	107.87	320	*e*P	Pdif	23 04 43.6	+0.5
KECS	**Kecovo**	107.92	319	*e*P	Pdif	23 04 42.6	-0.7
KECS				*e*		23 09 10.6	
KECS	**Kecovo**	107.92	319	PDIF	Pdif	23 04 42.6	-0.7
KECS				*e*PP	PP	23 09 10.6	-2.8
YKA	**Yellowknife Ar**	108.02	26	Pdiff	Pdif	23 04 43.1	-0.6
	comp=Z,1.4nm,0.7s,baz=293,slow=4.8,SNR=22						
YKA				PKiKP	PKiKP	23 08 49.1	-0.8
	comp=Z,4.5nm,0.8s,baz=298,slow=1.9,SNR=24						
YKA				PP	PP	23 09 11.9	-1.7
	comp=Z,2.6nm,1.1s,baz=285,slow=7.7,SNR=5.1						
YKA				PKKPbc	PKKPbc	23 20 01.5	-3.7
	comp=Z,1.7nm,0.7s,baz=106,slow=3.0,SNR=18						
YKA				SKKPbc		23 23 30.9	
	comp=Z,2.8nm,0.9s,baz=103,slow=2.8,SNR=10						
YKA	**Yellowknife Ar**	108.02	26	P	Pdif	23 04 43.1	-0.6
YKA						23 09 11.9	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA				pmax	pmax		
	comp=N,3.0nm,1.0s						
OJC	**Ojcow**	108.05	321	*e*Pdiff	Pdif	23 04 42.9	-1.0
OJC				*e*PP	PP	23 09 16.1	+1.8
OJC				*e*SKSac	SKSac	23 15 10.2	-4.4
OJC				*e*S	Sdif	23 16 58.9	+18
OJC				L		23 59 48.8	
	comp=N,0.2nm,23.5s						
OJC	**Ojcow**	108.05	321	*e*P	Pdif	23 04 42.9	-1.0
OJC				*e*		23 09 16.1	
OJC				*e*		23 15 10.2	
OJC				MLR	MLR		
	comp=Z,200nm,23.5s						
TSUM	**Tsumeb**	108.13	247	*e*PKP	PKiKP	23 08 51.4	0.0
DAG	**Danmarks Havn**	108.28	353	*i* P	PKiKP	23 08 48.0	-2.1
PSZ	**Piszkesteto**	108.40	318	*e*P	Pdif	23 04 45.0	-0.5
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	**Piszkesteto**	108.40	318	*e*Pdif	Pdif	23 04 45.0	-0.5
	comp=Z,2.6nm,0.8s						
PSZ	**Piszkesteto**	108.40	318 ⇑	*e*PP	PP	23 09 20.4	+3.5
A07A	**Ashnola River,**	108.43	41	⇓P	PKiKP	23 08 51.5	+0.4
	baz=108						
VYHS	**Vyhne**	109.00	319	*e*P	Pdif	23 04 47.5	-0.6
VYHS				*e*		23 09 24.2	
VYHS	**Vyhne**	109.00	319	*e*Pdif	Pdif	23 04 47.5	-0.6
VYHS				*e*		23 07 52.3	
VYHS				*e*PP	PP	23 09 24.2	+3.0
VYHS				*e*		23 20 13.4	
VYHS				*e*		23 20 18.6	
VYHS				*e*		23 20 24.7	
VYHS	**Vyhne**	109.00	319	PDIF	Pdif	23 04 47.5	-0.6
VYHS				*e*PP	PP	23 09 24.2	+3.0
VYHS				*e*		23 20 13.4	
VYHS				*e*		23 20 18.6	
VYHS				*e*		23 20 24.7	
BUD	**Budapest**	109.06	318 ⇑	*e*PP	PP	23 09 24.3	+2.6
OKC	**Ostrava-Krasne**	109.17	320	*e*PKP	PKiKP	23 08 52.5	0.0
OKC				*e*x	x	23 18 27.8	
OKC				AMS	AMS	00 00 10.0	
	comp=Z,100nm,22.6s						
KOLL	**Kolacno**	109.26	319	*e*P	Pdif	23 04 49.5	+0.2
KOLL	**Kolacno**	109.26	319	PDIF	Pdif	23 04 49.5	+0.2
MORC	**Moravsky Berou**	109.56	320	*e*PKP	PKiKP	23 08 53.0	-0.3
MORC	**Moravsky Berou**	109.56	320 ⇓	*i*P	PKiKP	23 08 53.2	0.0
NB2	**NORSAR Subarra**	109.68	333	P	Pdif	23 04 48.9	-2.2
	comp=Z,18nm,1.1s,baz=68,slow=4.6						
NOA	**NORSAR Array B**	109.68	333	Pdiff	Pdif	23 04 49.3	-1.8
	comp=Z,8.2nm,1.0s,baz=69,slow=4.5,SNR=14						
NOA				PKiKP	PKiKP	23 08 52.5	-0.6
	comp=Z,5.9nm,0.9s,baz=260,slow=3.3,SNR=11						
NOA				PKKPbc	PKKPbc	23 19 57.5	-2.3
	comp=Z,1.2nm,0.7s,baz=66,slow=3.1,SNR=6.1						
NOA	**NORSAR Array B**	109.68	333	P	Pdif	23 04 49.3	-1.8
NOA						23 19 57.5	
NOA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NOA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
I07A	**Izee**	109.90	46	⇓P	PKiKP	23 08 54.7	+0.6
	baz=110						
KSP	**Ksiaz**	110.10	322	*e*P	Pdif	23 04 52.8	-0.2
KSP				*e*		23 09 31.0	
D09A	**Jones Farm, Ri**	110.17	42	⇑P	PKiKP	23 08 55.2	+0.7
	baz=110						
DPC	**Dobruska-Polom**	110.20	321	*e*PKP	PKiKP	23 08 54.1	-0.3
DPC				*e*x	x	23 36 21.0	
DPC				AMS	AMS	00 06 30.0	
	comp=Z,100nm,23.3s						
UPC	**Upice**	110.36	321	*e*PKP	PKiKP	23 08 54.5	-0.2
NEW	**Newport**	110.70	41	*e*PKIKP	PKiKP	23 08 55.7	+0.3
J08A	**Circle Bar Ran**	110.76	46	⇑P	PKiKP	23 08 56.1	+0.4
	baz=111						
WVOR	**Wild Horse Val**	110.80	47	*e*PKIKP	PKiKP	23 08 56.4	+0.6
G09A	**Cove**	110.89	44	⇑P	PKiKP	23 08 56.4	+0.5
	baz=111						
PKM	**Peak Mountain**	110.91	55	⇓P	PKiKP	23 08 55.9	-0.4
	baz=111						
A11A	**Hall Mountain,**	111.03	40	⇑P	PKiKP	23 08 55.9	-0.1
	baz=111						
E10A	**Myers Farm, Un**	111.10	43	⇓P	PKiKP	23 08 56.3	+0.1
	baz=111						
F10A	**Beach Ranch, E**	111.13	43	⇓P	PKiKP	23 08 55.9	-0.4
	baz=111						
B11A	**Sandpoint**	111.15	41	⇑P	PKiKP	23 08 56.3	0.0
	baz=111						
PVCC	**Panska Ves**	111.24	322	*e*PKP	PKiKP	23 08 56.1	-0.3
PVCC				AMS	AMS	00 00 20.0	
	comp=Z,200nm,17.4s						
J09A	**Fry Pan Ranch,**	111.28	46	⇓P	PKiKP	23 08 56.8	+0.1
	baz=111						
G10A	**Bishop Farm, J**	111.34	44	⇓P	PKiKP	23 08 57.4	+0.7
	baz=111						
PRU	**Pruhonice**	111.40	321	*e*PKP	PKiKP	23 08 56.0	-0.7
PRU				*e*x	x	23 19 04.5	
PRU				AMS	AMS	00 07 00.0	
	comp=Z,200nm,19.6s						
BRG	**Berggiesshubel**	111.53	322	*e*Pdiff	Pdif	23 04 58.7	-0.7
BRG				*e*PKPdf	PKiKP	23 08 56.4	-0.5
BRG				*e*SKPdf	SKPdf	23 12 19.6	-3.8
BRG	**Berggiesshubel**	111.53	322	*e*P	Pdif	23 04 58.9	-0.4
	comp=Z,20nm,1.6s						
BRG				*e*PP	PKiKP	23 08 37.4	-20
	comp=Z,15nm,1.6s						
BRG				*e*		23 09 33.2	
	comp=Z,6.5nm,1.1s						
BRG				*e*		23 20 01.9	
	comp=Z,6.8nm,1.2s						
NVAR	**Mina Array Bea**	111.68	52	Pdiff	Pdif	23 05 03.2	+3.2
	comp=Z,0.8nm,0.7s,baz=256,slow=5.9,SNR=5.1						
NVAR				PKiKP	PKiKP	23 08 57.1	-0.5
	comp=Z,2.3nm,0.8s,baz=246,slow=1.5,SNR=8.8						
NVAR				PKKPbc	PKKPbc	23 19 52.4	-0.1
	comp=Z,1.4nm,0.7s,baz=121,slow=3.5,SNR=6.8						
EDM	**Edmonton**	111.69	35	*e*PKIKP	PKiKP	23 08 56.5	-0.6
E11A	**Bogner Ranch,**	111.74	43	⇑P	PKiKP	23 08 57.5	+0.1
	baz=112						
H10A	**Noah's Angus R**	111.75	45	⇓P	PKiKP	23 08 57.7	+0.1
	baz=112						
PERS	**Pernice**	111.85	317	*e*PKiKP	PKiKP	23 08 56.8	-0.9
PERS				*e*PP	PP	23 09 42.7	+0.9
LEGS	**Legarje**	111.87	317	*e*PKiKP	PKiKP	23 08 57.1	-0.6
LEGS				*e*PP	PP	23 09 44.5	+2.5
F11A	**Grangeville**	111.88	43	⇑P	PKiKP	23 08 58.0	+0.3
	baz=112						
G11A	**Walters Elk Ra**	111.91	44	⇓P	PKiKP	23 08 57.5	-0.3
	baz=112,SNR=6.8						
CLL	**Collm**	111.98	323	*e*Pdiff	Pdif	23 05 00.7	-0.6
CLL				*e*PKPdf	PKiKP	23 08 57.0	-0.8
CLL				*e*SKPdf	SKPdf	23 12 20.5	-3.7
CLL	**Collm**	111.98	323	*e*P	Pdif	23 05 01.0	-0.3
CLL				*e*		23 08 57.0	
CLL				*e*		23 09 23.0	
CLL				*e*		23 20 05.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	**Collm**	111.98	323	*e*Pdif	Pdif	23 05 01.0	-0.3
CLL				*i*		23 08 08.6	
CLL				*e*PKP	PKiKP	23 08 57.0	-0.8
CLL				*e*pPKP		23 09 23.0	
CLL				*e*SKP		23 12 21.0	
CLL				*e*		23 20 00.0	
CLL				*e*PKKP	PKKPbc	23 20 05.0	+13
CLL	**Collm**	111.98	323	*e*Pdif	Pdif	23 05 01.0	-0.3
	comp=Z,10.0nm,1.4s						
CLL				*i*		23 08 08.6	
CLL				*e*		23 08 48.0	
CLL				*e*PKiKP	PKiKP	23 08 57.0	-0.8
	comp=Z,9.0nm,0.9s						
CLL				*e*		23 09 23.0	
CLL				*i* pPKiKP		23 09 30.6	
CLL				*e*PP	PP	23 09 44.0	+1.5
CLL				*e*(pPP)		23 10 07.0	
CLL				*e*		23 10 16.0	
CLL				*e*SKPdf	SKPdf	23 12 21.0	-3.2
CLL				*e*SP	SP	23 19 00.0	-4.5
CLL				*e*PKKPab	PKKPab	23 20 00.0	+0.8
	comp=Z,11nm,1.4s						
CLL				*e*PKKPdf	PKKPdf	23 20 05.0	-5.9
CLL				*e*PPS		23 20 24.0	
CLL				LmV		00 00 00.0	
	comp=Z,200nm,19.3s						
BOJS	**Bojanci**	112.01	316	*e*PKiKP	PKiKP	23 08 57.5	-0.5
BOJS				*e*PP	PP	23 09 45.9	+2.9
BOJS				*e*		23 10 16.4	
K10A	**MacKenzie Ranc**	112.02	47	⇑P	PKiKP	23 08 58.8	+0.7
	baz=112						
TIP	**Timpagrande**	112.11	309	*e*PKP	PKiKP	23 08 58.4	0.0
GEC2	**GERESS Array S**	112.23	320	*e*Pdiff	Pdif	23 05 01.4	-1.1
GEC2				*e*PKPdf	PKiKP	23 08 57.6	-0.7
GEC2				*e*SKPdf	SKPdf	23 12 21.1	-3.7
GEC2	**GERESS Array S**	112.23	320	*e*PKIKP	PKiKP	23 08 57.6	-0.7
GERES	**GERESS Array B**	112.23	320	Pdiff	Pdif	23 05 02.4	0.0
	comp=Z,1.3nm,1.0s,baz=72,slow=4.3,SNR=12						
GERES				PKiKP	PKiKP	23 08 57.8	-0.5
	comp=Z,3.4nm,0.5s,baz=78,slow=1.4,SNR=37						
GERES				PP	PP	23 09 45.9	+1.4
	comp=Z,2.5nm,0.8s,baz=85,slow=5.6,SNR=4.7						
GERES				PKKPbc	PKKPbc	23 19 51.0	0.0
	comp=Z,0.2nm,0.5s,baz=270,slow=2.7,SNR=3.6						
GERES	**GERESS Array B**	112.23	320	P	Pdif	23 05 02.4	-0.1
GERES				*i*		23 08 57.8	
GERES						23 09 45.9	
GERES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GERES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GERES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KHC	**Kasperske Hory**	112.23	320	*e*PKP	PKiKP	23 08 57.1	-1.2
KHC				*e*SP	SP	23 19 05.6	-1.4
KHC				*e*x	x	23 37 08.1	
KHC				AMS	AMS	00 02 40.0	
	comp=Z,200nm,13.4s						
H11A	**Donnelly**	112.24	45	⇓P	PKiKP	23 08 58.3	-0.1
	baz=112,SNR=12						
BSMT	**Bassoo Peak**	112.32	41	*e*PKP	PKiKP	23 08 58.0	-0.5
LJU	**Ljubljana**	112.38	317	*i* PKiKP	PKiKP	23 08 58.4	-0.3
LJU				*e*PP	PP	23 09 48.6	+2.9
B13A	**Whitefish**	112.39	40	⇑P	PKiKP	23 08 59.0	+0.4
	baz=112						
EDW2	**Edwards Air Fo**	112.40	55	⇑P	PKiKP	23 08 59.9	+0.9
	baz=112						
C13A	**Hot Springs**	112.51	41	⇑P	PKiKP	23 08 58.6	-0.3
	baz=112						
F12A	**Elk City**	112.52	43	⇑P	PKiKP	23 08 59.3	+0.3
	baz=112						
TANN	**Tannenbergstha**	112.57	322	*e*Pdiff	Pdif	23 05 02.8	-1.2
MFID	**Camas Ranch**	112.64	46	⇓P	PKiKP	23 08 59.6	+0.3
	baz=113,SNR=5.9						
MPMC	**Manual Prospec**	112.65	54	⇑P	PKiKP	23 08 59.9	+0.4
	baz=113						
WET	**Wettzell**	112.67	321	*e*Pdiff	Pdif	23 05 03.8	-0.6
WET				*e*PKPdf	PKiKP	23 08 58.5	-0.6
WET				*e*SKPdf	SKPdf	23 12 21.3	-4.3
WET	**Wettzell**	112.67	321	*e*PKIKP	PKiKP	23 08 58.5	-0.6
BSEG	**Bad Segeberg**	112.70	326	*e*Pdiff	Pdif	23 05 04.3	-0.2
BSEG				*e*PKPdf	PKiKP	23 08 58.9	-0.1
BSEG				*e*SKPdf	SKPdf	23 12 22.1	-3.4
BSEG	**Bad Segeberg**	112.70	326	*e*PKIKP	PKiKP	23 08 58.9	-0.1
D13A	**Huson**	112.73	42	⇓P	PKiKP	23 08 59.1	-0.2
	baz=113						
ROTZ	**Rotzenmuhle**	112.91	321	*e*Pdiff	Pdif	23 05 04.5	-1.0
ROTZ				*e*PKPdf	PKiKP	23 08 59.3	-0.3
SWMT	**Swartz Lake**	112.93	41	*e*PKP	PKiKP	23 08 59.5	-0.2
CEL	**Celeste**	112.93	308	*e*PKP	PKiKP	23 08 59.5	-0

J13A	Cove Ranch, Pi	113.82	46	⇓P	PKiKP	23 09 02.1	+0.6
	baz=114,SNR=15						
UBBA	Unterbreizbach	113.93	323	ePKPdf	PKiKP	23 09 00.8	-0.7
UBBA				eSKPdf	SKPdf	23 12 25.2	-2.8
FUR	Furstenfeldbru	113.97	320	ePKPdf	PKiKP	23 09 00.9	-0.8
WTTA	Wattenberg	113.99	319	⇑iPKPdf	PKiKP	23 09 01.3	-0.5
	comp=Z,25nm,0.7s,SNR=20						
TUQ	Turquoise Moun	114.00	54	⇑P	PKiKP	23 09 02.6	+0.5
	baz=114						
WATA	Walderalm	114.01	319	⇑iPKPdf	PKiKP	23 09 01.0	-0.8
	comp=Z,9.0nm,0.5s						
D15A	Lincoln	114.02	41	⇑P	PKiKP	23 09 01.9	+0.1
	baz=114						
K13A	Stover Farm, H	114.06	46	⇓P	PKiKP	23 09 02.9	+0.9
	baz=114,SNR=5.4						
O12A	Currie	114.08	49	⇓P	PKiKP	23 09 02.4	+0.3
	baz=114						
H14A	Leadore	114.09	44	⇓P	PKiKP	23 09 02.3	+0.2
	baz=114,SNR=5.3						
P12A	McGill	114.11	50	⇓P	PKiKP	23 09 02.4	+0.2
	baz=114						
E15A	Deer Lodge	114.11	42	⇑P	PKiKP	23 09 02.2	+0.2
	baz=114						
SCO	Scoresbysund	114.13	350	i PKIKP	PKiKP	23 09 01.8	+0.5
SCO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SCO	Scoresbysund	114.13	350	i P	PKiKP	23 09 01.8	+0.5
	comp=Z,7.0nm,1.0s						
B16A	M & M Farms, S	114.15	40	⇓P	PKiKP	23 09 01.8	-0.1
	baz=114						
BELC	Belle Mtn.	114.15	56	⇓P	PKiKP	23 09 03.3	+0.8
	baz=114						
SUMG	Summit	114.17	356	ePKP	PKiKP	23 09 02.0	+0.6
SUMG				ePP	PP	23 09 49.4	-7.9
I14A	Mackay	114.20	45	⇑P	PKiKP	23 09 02.8	+0.6
	baz=114						
M13A	Montello	114.28	48	ePKP	PKiKP	23 09 03.2	+0.8
L13A	Double Diamond	114.28	47	⇑P	PKiKP	23 09 03.3	+0.8
	baz=114						
C16A	Fuhringer Ranc	114.31	40	⇓P	PKiKP	23 09 01.8	-0.5
	baz=114						
GMRC	Granite Mounta	114.32	55	⇑P	PKiKP	23 09 03.2	+0.5
	baz=114						
MOTA	Moosalm	114.32	319	⇑iPKPdf	PKiKP	23 09 01.6	-0.8
	comp=Z,13nm,0.7s,SNR=10						
F15A	Butte	114.37	43	⇓P	PKiKP	23 09 03.1	+0.7
	baz=114						
MCMT	McKenzie Canyo	114.40	44	ePKP	PKiKP	23 09 03.1	+0.5
LRM	Limekiln Ridge	114.40	43	ePKP	PKiKP	23 09 02.8	+0.3
S12A	Delamar Landin	114.50	52	⇓P	PKiKP	23 09 04.1	+1.1
	baz=114						
G15A	Dillon	114.55	43	⇑P	PKiKP	23 09 03.4	+0.5
	baz=114						
R12A	Pony Springs,	114.56	51	⇓P	PKiKP	23 09 03.5	+0.4
	baz=114						
H15A	Lima	114.59	44	⇓P	PKiKP	23 09 04.2	+1.2
	baz=114						
A17A	Triple J Farms	114.62	39	⇓P	PKiKP	23 09 03.0	+0.1
	baz=115,SNR=27						
BC3	Big Chuckw Mtn	114.65	56	⇓P	PKiKP	23 09 04.6	+1.2
	baz=115						
FETA	Feichten	114.66	319	⇑iPKPdf	PKiKP	23 09 02.4	-0.6
	comp=Z,14nm,1.1s						
D16A	Dana Ranch, Ca	114.66	41	⇑P	PKiKP	23 09 03.3	+0.3
	baz=115,SNR=10						
E16A	East Helena	114.72	42	⇑P	PKiKP	23 09 03.1	-0.1
	baz=115						
K14A	Jones Ranch, D	114.73	46	⇑P	PKiKP	23 09 04.0	+0.7
	baz=115,SNR=6.1						
B17A	L&G Farms, Che	114.76	40	⇑P	PKiKP	23 09 03.0	-0.2
	baz=115,SNR=9.8						
P13A	Bates Ranch, G	114.79	50	⇑P	PKiKP	23 09 03.6	+0.1
	baz=115						
P13A				⇓P		23 09 03.7	
	baz=115						
L14A	Malta	114.81	47	⇑P	PKiKP	23 09 04.4	+0.9
	baz=115,SNR=6.1						
V12A	Nelson	114.82	54	⇑P	PKiKP	23 09 04.1	+0.4
	baz=115						
IRM	Iron Mountain	114.82	56	⇑P	PKiKP	23 09 04.6	+0.8
	baz=115						
M14A	Sheep Mountain	114.85	47	⇓P	PKiKP	23 09 03.8	+0.3
	baz=115,SNR=8.6						
I15A	Monteview	114.86	45	⇑P	PKiKP	23 09 04.6	+1.1
	baz=115						
Q13A	Wheeler Ranch,	114.89	50	⇓P	PKiKP	23 09 04.1	+0.3
	baz=115						
F16A	Kennard Place,	114.97	43	⇑P	PKiKP	23 09 04.2	+0.5
	baz=115						
C17A	Wharram Farm,	114.99	40	⇑P	PKiKP	23 09 03.3	-0.3
	baz=115,SNR=7.9						
G16A	Moss Hill, Enn	115.00	43	⇑P	PKiKP	23 09 04.5	+0.7
	baz=115						
BOZ	Bozeman (W)	115.00	43	⇓P	PKiKP	23 09 04.7	+1.0
	baz=115						
BOZ	Bozeman (W)	115.00	43	ePKPdf	PKiKP	23 09 04.4	+0.7
TNS	Taunus Mts	115.07	323	ePdiff	Pdif	23 05 13.0	-2.1
TNS				ePKPdf	PKiKP	23 09 03.0	-0.7
TNS	Taunus Mts	115.07	323	ePKIKP	PKiKP	23 09 03.0	-0.7
R13A	O'Grain Ranch,	115.08	51	⇓P	PKiKP	23 09 04.9	+0.8
	baz=115						
STU	Stuttgart	115.10	321	ePKPdf	PKiKP	23 09 03.5	-0.3
STU				eSKPdf	SKPdf	23 12 25.9	-4.4
STU	Stuttgart	115.10	321	ePKP	PKiKP	23 09 03.2	-0.6
N14A	Grayback Hills	115.11	48	⇓P	PKiKP	23 09 04.5	+0.4
	baz=115,SNR=8.9						
DAVA	Damuels	115.13	319	⇑iPKPdf	PKiKP	23 09 03.2	-0.7
	comp=Z,18nm,0.5s,SNR=8.3						
K15A	Arbon	115.16	46	⇑P	PKiKP	23 09 04.5	+0.4
	baz=115,SNR=8.5						
A18A	Metzger Ranch,	115.16	39	⇑P	PKiKP	23 09 03.8	-0.2
	baz=115,SNR=13						
HVU	Hansel Valley	115.20	47	ePKIKP	PKPdf	23 09 04.9	+0.7
BGU	Big Grassy Mou	115.21	48	ePKPdf	PKPdf	23 09 04.4	+0.1
S13A	Holt Ranch, En	115.28	52	⇓P	PKiKP	23 09 05.7	+1.2
	baz=115						
E17A	Martinsdale	115.28	42	⇑P	PKiKP	23 09 04.8	+0.5
	baz=115,SNR=8.8						
BUG	Bochum--Univer	115.33	324	ePKPdf	PKPdf	23 09 03.2	-1.0
T13A	Saint George	115.35	52	⇑P	PKiKP	23 09 05.2	+0.5
	baz=115						
B18A	Beardsley Farm	115.38	39	⇓P	PKiKP	23 09 04.6	+0.2
	baz=115,SNR=9.7						
Y12C	Blythe	115.40	56	⇑P	PKPdf	23 09 05.7	+0.8
	baz=115						
U13A	Pakoon Wash	115.41	53	⇑P	PKiKP	23 09 05.3	+0.5
	baz=115						
L15A	Malad City	115.43	47	⇑P	PKiKP	23 09 05.1	+0.4
	baz=115,SNR=5.6						
Q14A	Sevier Lake (B	115.45	50	⇓P	PKiKP	23 09 05.4	+0.6
	baz=115						
P14A	Drum Mountains	115.48	49	⇑P	PKiKP	23 09 05.3	+0.5
	baz=115						
V13A	Grand Canyon W	115.50	54	⇓P	PKPdf	23 09 05.9	+0.9
	baz=116						
LRW	Lerwick	115.50	335	⇓eP	PKiKP	23 09 03.7	-0.5
LRW	Lerwick	115.50	335	P	PKiKP	23 09 03.7	-0.5
EGMT	Eagleton	115.51	40	⇑P	PKiKP	23 09 04.9	+0.3
	baz=115,SNR=10.0						
EGMT	Eagleton	115.51	40	ePKPdf	PKPdf	23 09 04.7	0.0
M15A	Larsen Ranch,	115.52	47	⇑P	PKiKP	23 09 05.1	+0.3
	baz=116						
DUG	Dugway	115.54	49	⇓P	PKiKP	23 09 05.2	+0.2
	baz=116,SNR=8.6						
DUG	Dugway	115.54	49	ePKPdf	PKPdf	23 09 05.5	+0.5
SPUT	South Promonto	115.55	48	ePKPdf	PKPdf	23 09 05.6	+0.7
SPAK	Spaichingen-Ko	115.57	320	eP	PKiKP	23 09 04.0	-0.7
F17A	Fitzpatrick Pl	115.58	42	⇓P	PKiKP	23 09 05.6	+0.8
	baz=116,SNR=25						
I16A	Newdale	115.59	45	⇓P	PKiKP	23 09 06.0	+1.1
	baz=116						
N15A	Stansbury Isla	115.60	48	⇑P	PKiKP	23 09 05.5	+0.5
	baz=116						
PDMCI	Parker Dam,Lak	115.63	55	⇓P	PKPdf	23 09 06.2	+0.9
	baz=116						
G17A	Pierce Place,	115.70	43	⇓P	PKiKP	23 09 06.4	+1.4
	baz=116						
W13A	Hualapai Mount	115.70	55	⇓P	PKPdf	23 09 06.5	+1.1
	baz=116						
D18A	Linhart Farms,	115.75	41	⇑P	PKiKP	23 09 05.3	+0.2
	baz=116,SNR=6.4						
S14A	Cedar City	115.78	51	⇓P	PKPdf	23 09 06.6	+1.2
	baz=116						
BFO	Black Forest	115.79	321	ePKPdf	PKPdf	23 09 03.6	-1.5
K16A	Soda Springs	115.79	46	⇑P	PKPdf	23 09 05.8	+0.4
	baz=116,SNR=9.2						
X13A	Yucca	115.83	55	⇓P	PKPdf	23 09 06.3	+0.6
	baz=116						
RRI2	Red Ridge	115.85	45	ePKPdf	PKPdf	23 09 06.2	+0.8
E18A	Harlowton	115.87	41	⇓P	PKPdf	23 09 05.4	0.0
	baz=116,SNR=7.2						
YFT	Old Faithful	115.88	44	ePKPdf	PKPdf	23 09 07.6	+2.2
LANF	Langenberg	115.89	321	eP	PKPdf	23 09 05.3	0.0
Y13A	Salome	115.96	56	⇓P	PKPdf	23 09 06.8	+0.8
	baz=116						
IMW	Indian Meadow	115.97	44	ePKPdf	PKPdf	23 09 07.0	+1.3
IMW				eSKPdf	SKPdf	23 12 29.6	-2.5
T14A	Hurricane	115.98	52	⇑P	PKPdf	23 09 07.2	+1.3
	baz=116						
U14A	Mt Trumbull	116.03	53	⇑P	PKPdf	23 09 06.9	+0.9
	baz=116						
TPAW	Teton Pass	116.07	45	ePKPdf	PKPdf	23 09 06.9	+1.1
TPAW				eSKPdf	SKPdf	23 12 29.3	-3.0
H17A	Grant Village	116.08	44	⇑P	PKPdf	23 09 07.7	+1.8
	baz=116						
P15A	Leamington	116.08	49	⇓P	PKPdf	23 09 06.7	+0.7
	baz=116						
L16A	Fish Haven	116.12	47	⇓P	PKPdf	23 09 06.1	+0.1
	baz=116,SNR=6.8						
HWUT	Hardware Ranch	116.12	47	ePKPdf	PKPdf	23 09 06.3	+0.3
Q15A	Fillmore	116.13	50	⇓P	PKPdf	23 09 07.4	+1.3
	baz=116						
FELD	Feldberg im Sc	116.14	320	eP	PKPdf	23 09 05.3	-0.5
NLU	North Lily Min	116.14	49	ePKPdf	PKPdf	23 09 07.4	+1.3
REDW	Red Top Meadow	116.17	45	ePKPdf	PKPdf	23 09 06.7	+0.7
REDW				eSKPdf	SKPdf	23 12 29.6	-3.0
113A	Mohawk Valley,	116.18	57	⇑P	PKPdf	23 09 07.3	+0.9
	baz=116						
Z13A	Yuma Proving G	116.20	57	⇑P	PKPdf	23 09 07.3	+0.9
	baz=116						
F18A	Big Timber	116.21	42	⇑P	PKPdf	23 09 06.4	+0.4
	baz=116,SNR=14						
I17A	Pilgrim Ck.	116.21	44	⇓P	PKPdf	23 09 07.4	+1.3
	baz=116						
SNOW	Snow King Moun	116.21	45	ePKPdf	PKPdf	23 09 07.1	+1.0
SNOW				eSKPdf	SKPdf	23 12 29.5	-3.1
V14A	Boquillas Ranc	116.24	54	⇓P	PKPdf	23 09 07.8	+1.3
	baz=116						
J17A	Brown Place, J	116.27	45	⇑P	PKPdf	23 09 07.0	+0.8
	baz=116,SNR=8.1						
GCMT	Greycliff	116.28	42	ePKPdf	PKPdf	23 09 06.7	+0.5
LOHW	Long Hollow	116.28	45	ePKPdf	PKPdf	23 09 06.8	+0.5
LOHW				eSKPdf	SKPdf	23 12 29.2	-3.6
W14A	Seligman	116.33	54	⇓P	PKPdf	23 09 07.8	+1.2
	baz=116						
MEM	Membach	116.38	324	PKP	PKPdf	23 09 06.2	0.0
MSU	Marysvale	116.39	50	ePKIKP	PKPdf	23 09 08.1	+1.5
CDF	Champ du Feu	116.42	321	⇑iPKIKP	PKPdf	23 09 04.9	-1.5
	comp=Z,14nm,1.0s						
S15A	Panguitch	116.42	51	⇑P	PKPdf	23 09 07.7	+1.0
	baz=116						
JLU	Jordanelle	116.45	48	ePKPdf	PKPdf	23 09 07.1	+0.4
MPU	Maple Canyon	116.46	49	ePKPdf	PKPdf	23 09 07.1	+0.4
P16A	Fountain Green	116.54	49	⇓P	PKPdf	23 09 07.2	+0.3
	baz=116						
T15A	Red Dirt Ranch	116.54	52	⇑P	PKPdf	23 09 07.6	+0.6
	baz=116						
BBS	Basel-Blauen	116.60	320	ePKIKP	PKPdf	23 09 05.7	-1.0
Y14A	Wickenburg	116.62	56	⇓P	PKPdf	23 09 07.9	+0.7
	baz=117						
X14A	Yava	116.62	55	⇓P	PKPdf	23 09 07.6	+0.4
	baz=117						
DAU	Daniels Canyon	116.64	48	ePKIKP	PKPdf	23 09 07.9	+0.8
WLF	Walferdange	116.65	323	PKP	PKPdf	23 09 07.2	+0.5
U15A	North Rim	116.73	53	⇓P	PKPdf	23 09 08.2	+0.9
	baz=117						
Z14A	Wintersburg	116.76	56	⇓P	PKPdf	23 09 08.0	+0.5
	baz=117						
I18A	Diamond G Ranc	116.80	44	⇑P	PKPdf	23 09 07.7	+0.4
	baz=117						
BCLA	Clavier	116.87	324	PKP	PKPdf	23 09 06.8	-0.3
HINF	Hinteralfeld	116.89	321	⇑iPKIKP	PKPdf	23 09 06.0	-1.3
	comp=Z,32nm,0.9s						
114A	Black Gap (USA	116.91	57	⇓P	PKPdf	23 09 08.7	+0.9
	baz=117						
K18A	Toltan Ranch,	116.94	46	⇓P	PKPdf	23 09 08.3	+0.8
	baz=117,SNR=13						
TMUT	Trail Mountain	116.95	49	ePKPdf	PKPdf	23 09 08.2	+0.6
V15A	Kaibab Nationa	116.95	53	⇑P	PKPdf	23 09 08.7	+1.0
	baz=117						
R16A	Teasdale	116.97	51	⇑P	PKPdf	23 09 08.3	+0.5
	baz=117,SNR=7.4						
Q16A	Castle Valley	117.06	50	⇓P	PKPdf	23 09 08.3	+0.4
	baz=117,SNR=8.0						
O17A	Robinson Place	117.08	48	⇑P	PKPdf	23 09 08.1	+0.2
	baz=117,SNR=14						
PGF	Pioggiola	117.12	314	⇑iPKIKP	PKPdf	23 09 07.0	-0.9
	comp=Z,38nm,1.0s						
HAU	Haudompre	117.14	321	⇑iPKIKP	PKPdf	23 09 06.8	-1.0
	comp=Z,39nm,1.0s						
HAU				eMLR	MLR		
	comp=Z,162nm,20.5s						
HAU	Haudompre	117.14	321	⇑iPKPdf	PKPdf	23 09 06.8	-1.0
HAU				LR	LR		
	comp=Z,160nm,20.5s						
Y15A	Casa Rosa Ranc	117.17	56	⇓P	PKPdf	23 09 08.3	0.0
	baz=117						
T16A	Glen Canyon Da	117.24	52	⇑P	PKPdf	23 09 08.8	+0.5
	baz=117						
FFC	Flin Flon	117.25	31	i PKIKP	PKPdf	23 09 07.5	-0.3
FFC	Flin Flon	117.25	31	ePKPdf	PKPdf	23 09 06.8	-1.0
BW06	Boulder Array	117.25	45	⇓P	PKPdf	23 09 08.0	-0.1
	baz=117,SNR=9.6						
BW06	Boulder Array	117.25	45	ePKPdf	PKPdf	23 09 08.3	+0.2
PDAR	Pinedale Array	117.25	45	PKP	PKPdf	23 09 08.4	+0.3
	comp=Z,6.3nm,0.9s,baz=210,slow=1.9,SNR=24						
PDAR				PKKPbc	PKKPbc	23 19 32.0	-1.6
	comp=Z,1.6nm,0.8s,baz=111,slow=4.9,SNR=6.7						
PDAR				SKKPbc		23 23 06.5	
	comp=Z,1.1nm,1.0s,baz=116,slow=3.4,SNR=4.1						
P17A	Butcher Ranch,	117.26	49	⇓P	PKPdf	23 09 08.8	+0.6
	baz=117						
UCC	Uccle	117.26	324	PKP	PKPdf	23 09 08.2	+0.2
GIVF	Givet	117.27	323	⇑iPKIKP	PKPdf	23 09 07.5	-0.5
	comp=Z,37nm,1.1s						
THEF	They Montfort	117.29	321	eP	PKPdf	23 09 07.6	-0.4
DOU	Dourbes	117.41	324	PKP	PKPdf	23 09 08.2	-0.1
SNF	Seneffe	117.43	324	PKP	PKPdf	23 09 07.4	-0.8
SRU	San Rafael	117.51	50	⇑P	PKPdf	23 09 09.3	+0.5
	baz=118,SNR=13						
R17A	Hanksville Air	117.53	50	⇑P	PKPdf	23 09 09.2	+0.4
	baz=118,SNR=15						
L19A	Parson	117.58	46	⇓P	PKPdf	23 09 09.2	+0.4
	baz=118,SNR=8.9						
O18A	Roosevelt	117.61	48	⇓P	PKPdf	23 09 09.2	+0.3
	baz=118						
S17A	Black Ridge (B	117.64	51	⇑P	PKPdf	23 09 09.2	+0.1
	baz=118,SNR=5.1						
WUAZ	Wupatki	117.64	54	⇓P	PKPdf	23 09 09.8	+0.7
	baz=118						
BAIF	Baives	117.66	324	⇑iPKIKP	PKPdf	23 09 08.2	-0.5
	comp=Z,32nm,1.2s						
SAOF	Saorge	117.70	316	eP	PKPdf	23 09 10.5	+1.5
K19A	Absolon Red Bu	117.73	45	⇓P	PKPdf	23 09 09.5	+0.4
	baz=118,SNR=14						
LPG	La Plagne	117.75	318	⇑iPKIKP	PKPdf	23 09 08.6	-0.4
	comp=Z,28nm,0.8s						
LPL	La Plagne	117.76	318	⇑iPKIKP	PKPdf	23 09 08.5	-0.5
	comp=Z,18nm,0.6s						
MEZF	Maizieres J'vi	117.76	322	ePKIKP	PKPdf	23 09 08.2	-0.7
T17A	Navajo Res., N	117.78	52	⇓P	PKPdf	23 09 10.3	+1.0
	baz=116,SNR=24						
AUTN	L'Aution	117.78	316	eP	PKPdf	23 09 09.2	+0.1
CABF	La Chapelle	117.81	319	⇑iPKIKP	PKPdf	23 09 08.6	-0.5
	comp=Z,36nm,0.8s						
Q18A	Rafter H Ranch	117.81	49	⇓P	PKPdf	23 09 09.7	+0.4
	baz=118,SNR=9.1						
X16A	Lo Mia Camp, P	117.81	55	⇓P	PKPdf	23 09 10.3	+0.8
	baz=118						
SBF	Sospel	117.82	316	ePKIKP	PKPdf	23 09 08.2	-1.0
	comp=Z,39nm,0.9s						
MCD	Coleburn Disti	117.83	333	⇓eP	PKPdf	23 09 07.0	-1.8
LUCF	Luceram	117.87	316	eP	PKPdf	23 09 08.7	-0.6
TOUF	Mont Tournerai	117.90	316	eP	PKPdf	23 09 09.4	0.0
REVF	Revere	117.91	316	eP	PKPdf	23 09 08.7	-0.7
116A	Eloy	117.93	57	⇑P	PKPdf	23 09 10.6	+0.9
	baz=118						
BNI	Bardonecchia	117.95	318	ePKIKP	PKPdf	23 09 08.7	-0.7
U17A	Shonto	117.98	52	⇓P	PKPdf	23 09 10.7	+1.0
	baz=118						
MBDF	Montbardon	118.00	317	ePKIKP	PKPdf	23 09 08.4	-1.1
	comp=Z,17nm,0.8s						
MVIF	Mont Vial	118.00	316	eP	PKPdf	23 09 09.2	-0.4
	baz=118						
Z16A	Peralta Trail,	118.02	56	⇓P	PKPdf	23 09 10.6	+0.6
	baz=118						
MVH1	Achvaich	118.04	334	eP	PKPdf	23 09 06.9	-2.3
N19A	John Jarvie Ra	118.05	47	⇓P	PKPdf	23 09 10.3	+0.6
	baz=118						
V17A	Tonalea, Kykot	118.09	53	⇑P	PKPdf	23 09 10.1	+0.1
	baz=118,SNR=9.8						
K20A	Yellowstone Ra	118.14	45	⇑P	PKPdf	23 09 10.0	+0.1
	baz=118,SNR=7.2						
R18A	Canyonlands Na	118.16	50	⇑P	PKPdf	23 09 10.3	+0.3
	baz=118,SNR=11						
216A	Three Points,	118.23	58	⇑P	PKPdf	23 09 11.1	+0.7
	baz=118						
CALN	Calern	118.23	316	eP	PKPdf	23 09 10.0	0.0
O19A	Miners Draw (B	118.25	48	⇑P	PKPdf	23 09 10.5	+0.3
	baz=118,SNR=6.0						
S18A	Hurst Farm, Bl	118.25	51	⇑P	PKPdf	23 09 10.9	+0.6
	baz=118,SNR=12						
X17A	Forest Lakes	118.34	55	⇑P	PKPdf	23 09 11.2	+0.7
	baz=118						
MDO	Dochfour	118.40	334	eP	PKPdf	23 09 07.8	-2.1
Y17A	Roosevelt	118.43	56	⇑P	PKPdf	23 09 11.3	+0.6
	baz=118,SNR=6.2						
FRF	La Foret Royal	118.46	316	⇑iPKIKP	PKPdf	23 09 09.5	-0.9
	comp=Z,75nm,1.3s						
ESY	Stoneypath	118.47	332	⇓eP	PKPdf	23 09 09.4	-0.7
T18A	Mexican Hat	118.48	52	⇓P	PKPdf	23 09 11.4	+0.7
	baz=118,SNR=16						
Q19A	Hogan Spring (	118.50	49	⇑P	PKPdf	23 09 11.2	+0.5
	baz=118,SNR=10						
ORIF	Oris-en-Rattie	118.53	318	⇑iPKIKP	PKPdf	23 09 09.7	-0.8
	comp=Z,19nm,0.8s						
ORIF				eMLR	MLR		
	comp=Z,320nm,22.5s						
P19A	Cripple Cowboy	118.53	49	⇓P	PKPdf	23 09 11.4	+0.7
	baz=118,SNR=7.5						
KEST	Kesra	118.55	307	PKP	PKPdf	23 09 10.9	0.0
	comp=Z,6.9nm,0.8s,baz=275,slow=2.5,SNR=20						
KEST				PP	PP	23 10 25.1	-4.2
	comp=Z,18nm,0.8s,baz=316,slow=3.1,SNR=12						
FCC	Fort Churchill	118.61	24	ePKIKP	PKPdf	23 09 08.9	-1.4
LMR	La Mourre	118.63	316	ePKIKP	PKPdf	23 09 10.0	-0.8
	comp=Z,78nm,1.4s						
MENF	Mencas	118.64	325	eP	PKPdf	23 09 04.7	-5.9
U18A	Rough Rock, Ch	118.64	52	⇓P	PKPdf	23 09 12.0	+1.0
	baz=119,SNR=6.6						
EBH	Black Hill	118.70	332	⇓eP	PKPdf	23 09 09.9	-0.6
117A	Oracle	118.73	57	⇓P	PKPdf	23 09 12.2	+0.9
	baz=119						
N20A	Spence Gulch,	118.73	47	⇑P	PKPdf	23 09 11.9	+0.8
	baz=119,SNR=18						
TUC	Tucson	118.74	57	ePKIKP	PKPdf	23 09 11.7	+0.4
217A	Green Valley	118.80	58	⇓P	PKPdf	23 09 12.2	+0.7
	baz=119,SNR=6.3						
DGMT	Dagmar	118.81	38	⇓P	PKPdf	23 09 12.1	+1.1
	baz=119						
Z17A	San Carlos Hig	118.81	56	⇑P	PKPdf	23 09 12.4	+1.0
	baz=119						
XAL	Allendale	118.85	331	eP	PKPdf	23 09 09.7	-1.1
S19A	Harvey Farm, M	118.90	51	⇑P	PKPdf	23 09 12.1	+0.6
	baz=119						
EAU	Auchinoon	118.90	332	⇓eP	PKPdf	23 09 10.5	-0.4
O20A	White River Ci	118.94	48	⇓P	PKPdf	23 09 11.9	+0.4
	baz=119,SNR=22						
LOR	Lormes	118.98	321	⇑iPKIKP	PKPdf	23 09 10.5	-0.8
	comp=Z,20nm,0.9s						
LOR				eMLR	MLR		
	comp=Z,185nm,21.2s						
LOR	Lormes	118.98	321	⇑iPKPdf	PKPdf	23 09 10.5	-0.8
LOR				LR	LR		
	comp=Z,180nm,21.3s						
X18A	Snowflake	118.99	54	⇑P	PKPdf	23 09 12.7	+0.9
	baz=119						
P20A	De Beque	119.01	49	⇑P	PKPdf	23 09 12.9	+1.3
	baz=119						
KPL	Plockton	119.03	334	⇓eP	PKPdf	23 09 10.4	-0.7
KPL	Plockton	119.03	334	P	PKPdf	23 09 10.4	-0.7
HPK	Haverah Park	119.04	329	eP	PKPdf	23 09 10.1	-1.1
SMRF	Simiane la Rot	119.06	317	⇑iPKIKP	PKPdf	23 09 11.2	-0.4
	comp=Z,52nm,1.0s						
EAB	Aberfoyle	119.12	333	eP	PKPdf	23 09 10.7	-0.6
M21A	Separation Pea	119.15	46	⇑P	PKPdf	23 09 12.4	+0.6
	baz=119						
U19A	Dine' College,	119.19	52	⇓P	PKPdf	23 09

baz=120,SNR=9.2
Y20A Horse Springs, 120.40 55 ⇓P PKPdf 23 09 15.6 +1.1
baz=120,SNR=5.2
TCF Toulx Ste Croi 120.41 320 ⇑iPKIKP PKPdf 23 09 13.5 -0.6
comp=Z,47nm,1.0s
HLM1 Long Mynd 120.44 328 ⇓eP PKPdf 23 09 13.4 -0.6
CKFL Kef-Lekhel 120.46 308 P PKPdf 23 09 16.2 +1.7
120A U Bar Ranch, L 120.48 56 ⇓P PKPdf 23 09 15.9 +1.2
baz=120,SNR=13
V21A Milan 120.55 53 ⇓P PKPdf 23 09 16.1 +1.4
baz=120
RSSD Black Hills 120.60 42 ePKPdf PKPdf 23 09 14.3 -0.3
RSSD eSKPdf SKPdf 23 12 37.3 -3.7
CASM Ain Smara 120.68 308 P PKPdf 23 09 16.2 +1.2
220A Playas Peak, P 120.69 57 ⇑P PKPdf 23 09 16.3 +1.2
baz=121,SNR=10.0
W21A San Fidel 120.70 53 ⇑P PKPdf 23 09 16.5 +1.5
baz=121
X21A Alamocita Cree 120.75 54 ⇓P PKPdf 23 09 16.4 +1.2
baz=121,SNR=14
WLF1 Llynfaes 120.79 330 ⇓eP PKPdf 23 09 13.8 -0.8
CTEI Djebel Teioual 120.80 308 P PKPdf 23 09 17.0 +1.8
320A Kipp Ranch, An 120.80 58 ⇑P PKPdf 23 09 16.3 +0.9
baz=121,SNR=10
T22A Edith 120.81 51 ⇑P PKPdf 23 09 16.5 +1.3
baz=121,SNR=14
LDF La Druitiere 120.84 323 ePKIKP PKPdf 23 09 14.1 -0.8
comp=Z,42nm,1.2s
HGH Gray Hill 120.86 328 ⇓eP PKPdf 23 09 14.0 -0.8
HTR Trewern Hill 120.87 328 ⇓eP PKPdf 23 09 14.3 -0.5
Y21A Point of Rocks 120.94 55 ⇑P PKPdf 23 09 16.6 +1.1
baz=121,SNR=6.4
ISCO Idaho Springs 120.97 48 ePKIKP PKPdf 23 09 16.0 +0.6
FLN La Foliniere 120.98 324 ⇑iPKIKP PKPdf 23 09 14.3 -0.8
comp=Z,51nm,1.1s
FLN eMLR MLR
comp=Z,271nm,21.0s
FLN La Foliniere 120.98 324 ⇑iPKPdf PKPdf 23 09 14.3 -0.8
FLN LR LR
comp=Z,270nm,21.0s
CAF Calviac 121.05 319 ⇑iPKIKP PKPdf 23 09 15.1 -0.3
comp=Z,32nm,0.9s
DFRA Djebel Bou Aff 121.08 309 P PKPdf 23 09 17.8 +2.1
V22A San Miguel Ran 121.09 52 ⇓P PKPdf 23 09 17.0 +1.3
baz=121,SNR=18
Z21A St. Cloud Mine 121.10 55 ⇑P PKPdf 23 09 17.1 +1.2
baz=121
121A Cookes Peak, D 121.18 56 ⇑P PKPdf 23 09 17.1 +1.1
baz=121,SNR=9.0
RJF Les Rejaudoux 121.25 319 ePKIKP PKPdf 23 09 15.4 -0.4
RJF eMLR MLR
comp=Z,204nm,22.0s
RJF Les Rejaudoux 121.25 319 ePKPdf PKPdf 23 09 15.4 -0.4
RJF LR LR
comp=Z,200nm,22.0s
LAZ Ladron 121.28 54 ePKPdf PKPdf 23 09 16.9 +0.8
X22A Bernardo 121.36 54 ⇑P PKPdf 23 09 17.5 +1.2
baz=121
GRR Gorron 121.37 324 ⇑iPKIKP PKPdf 23 09 15.2 -0.7
comp=Z,60nm,1.2s
LENM Lemitar 121.47 54 ePKPdf PKPdf 23 09 17.4 +0.8
Y22A Socorro 121.53 54 ⇓P PKPdf 23 09 18.3 +1.6
baz=122
SET Setif 121.55 308 P PKPdf 23 09 17.0 +0.4
MTLF Montolieu 121.56 317 ⇑iPKIKP PKPdf 23 09 15.6 -0.8
comp=Z,32nm,1.0s
SDCO Great Sand Dun 121.67 50 ePKPdf PKPdf 23 09 17.9 +1.1
ANMO Albuquerque 121.69 53 PKP PKPdf 23 09 17.9 +0.9
comp=Z,18nm,1.0s,baz=217,slow=3.5,SNR=29
ANMO Albuquerque 121.69 53 PKIKP PKPdf 23 09 17.9 +1.0
ANMO pmax pmax
comp=Z,18nm,1.0s
ANMO Albuquerque 121.69 53 ePKPdf PKPdf 23 09 17.5 +0.6
Z22A Elephant Butte 121.69 55 ⇑P PKPdf 23 09 17.7 +0.7
baz=122
V23A Ortiz Mt. (NFS 121.70 52 ⇑P PKPdf 23 09 18.1 +1.1
baz=122,SNR=5.7
MFF Saint Martin d 121.75 321 ePKIKP PKPdf 23 09 15.9 -0.8
comp=Z,66nm,0.9s
BNM Barren Site 121.75 54 ePKPdf PKPdf 23 09 17.9 +0.8
122A Conniff Cattle 121.79 56 ⇑P PKPdf 23 09 18.6 +1.4
baz=122
222A Williams Famil 121.84 57 ⇑P PKPdf 23 09 18.6 +1.3
baz=122
W23A Werner Place, 121.88 53 ⇓P PKPdf 23 09 18.0 +0.7
baz=122,SNR=9.5
LFF La Frestale 121.90 319 ⇑iPKIKP PKPdf 23 09 16.7 -0.3
comp=Z,41nm,1.0s
FRB Frobisher Bay 121.96 9 PP PP 23 10 50.7 -0.5
comp=Z,10nm,1.0s,baz=349,slow=7.9,SNR=3.9
VALF Valcebollere 122.05 316 eP PKPdf 23 09 17.7 +0.3
HTL Hartland 122.09 328 eP PKPdf 23 09 16.1 -1.0
HTL Hartland 122.09 328 P PKPdf 23 09 16.1 -1.0
DYA Yadsworthy 122.09 327 eP PKPdf 23 09 15.3 -1.9
DYA Yadsworthy 122.09 327 P PKPdf 23 09 15.3 -1.9
Y23A Lovelace Mesa, 122.27 54 ⇑P PKPdf 23 09 19.0 +1.0
baz=122,SNR=9.0
Z23A Rita Site, Whi 122.29 55 ⇓P PKPdf 23 09 18.7 +0.6
baz=122
SGMF Saint Gilles 122.43 324 ⇑iPKIKP PKPdf 23 09 17.0 -0.9
comp=Z,66nm,1.0s
W24A Lazy 6 Ranch, 122.46 53 ⇓P PKPdf 23 09 19.4 +1.0
baz=122,SNR=20
X24A Lazy VL Ranch, 122.61 53 ⇑P PKPdf 23 09 19.7 +1.0
baz=123
ULM Lac du Bonnet 122.75 33 PKP PKPdf 23 09 17.5 -1.0
comp=Z,15nm,0.6s,baz=291,slow=2.4,SNR=18
ULM SKKPbc 23 22 47.3
comp=Z,8.3nm,1.3s,baz=74,slow=5.7,SNR=3.8
ULM Lac du Bonnet 122.75 33 ePKPdf PKPdf 23 09 17.3 -1.2
Y24A Capitan 122.77 54 ⇓P PKPdf 23 09 19.9 +0.8
baz=123,SNR=47
ROSF Rostrenen 122.81 324 ePKIKP PKPdf 23 09 17.7 -1.0
comp=Z,42nm,1.1s
CCA1 Carnmenellis 122.93 327 ⇓eP PKPdf 23 09 18.2 -0.6
EPF Esparros 122.94 317 ⇑iPKIKP PKPdf 23 09 18.5 -0.6
comp=Z,22nm,0.8s
QUIF Quistinic 122.95 324 ⇑iPKIKP PKPdf 23 09 18.1 -0.8
comp=Z,43nm,1.0s
Z24A Sheeppen Canyo 122.98 55 ⇓P PKPdf 23 09 20.5 +1.0
baz=123,SNR=25
124A Stringfield Ra 123.06 56 ⇓P PKPdf 23 09 20.9 +1.3
baz=123,SNR=18
224A Corundas Mount 123.15 56 ⇑P PKPdf 23 09 20.8 +1.0
baz=123,SNR=11
W25A X Bar L Ranch, 123.20 52 ⇑P PKPdf 23 09 20.4 +0.6
baz=123
324A Moseley Ranch, 123.33 57 ⇓P PKPdf 23 09 20.6 +0.4
baz=123
MNTX Cornudas Mount 123.35 57 ePKPdf PKPdf 23 09 20.6 +0.3
Y25A Mesa, Roswell 123.37 54 ⇑P PKPdf 23 09 20.7 +0.6
baz=123,SNR=14
U26A Atchley Ranch, 123.42 51 ⇓P PKPdf 23 09 21.1 +0.9
baz=123
REYF Montagne du Re 123.42 318 eP PKPdf 23 09 20.7 +0.7
Z25A Roswell 123.51 55 ⇑P PKPdf 23 09 21.6 +1.2
baz=124
V26A Tequesquite Ra 123.56 52 ⇑P PKPdf 23 09 20.7 +0.2
baz=124
ETSF Etsaut 123.60 318 ePKIKP PKPdf 23 09 20.5 +0.1
comp=Z,50nm,1.1s
125A Gardner Draw, 123.72 55 ⇓P PKPdf 23 09 21.7 +0.8
baz=124,SNR=6.3
325A Bean Ranch, Si 123.77 57 ⇑P PKPdf 23 09 21.3 +0.2
baz=124,SNR=14
W26A Owens Ranch, T 123.78 52 ⇓P PKPdf 23 09 21.0 +0.1
baz=124
AGMN Agassiz Refuge 123.80 35 ePKPdf PKPdf 23 09 19.4 -1.1
425A Indio Mountain 123.89 58 ⇑P PKPdf 23 09 21.5 +0.2
baz=124
X26A CR and CF Fran 123.90 53 ⇑P PKPdf 23 09 21.3 +0.1
baz=124
SJPF Ste Jean 123.95 318 ePKIKP PKPdf 23 09 21.0 0.0
comp=Z,47nm,1.2s
TAM Tamanrasset 124.07 293 ePKPdf PKPdf 23 09 22.1 +0.2
TAM eSKPdf SKPdf 23 12 46.3 -2.0
TAM ePKKP PKKPbc 23 19 09.0 +1.5
GDL2 Guadalupe Moun 124.07 56 ePKPdf PKPdf 23 09 21.7 +0.1
Z26A Caprock 124.11 54 ⇑P PKPdf 23 09 21.8 +0.2
baz=124
126A Clayton Basin, 124.24 55 ⇓P PKPdf 23 09 22.7 +0.8
baz=124
226A Malaga, Loving 124.32 56 ⇓P PKPdf 23 09 22.6 +0.5
baz=124,SNR=19
W27A Bowe Ranch, En 124.34 52 ⇓P PKPdf 23 09 22.5 +0.4
baz=124

Y27A Causey 124.60 54 ⇑P PKPdf 23 09 22.7 +0.2
baz=125
326A Caldwell Ranch 124.61 57 ⇓P PKPdf 23 09 22.7 +0.1
baz=125,SNR=6.3
Z27A Tatum 124.72 54 ⇑P PKPdf 23 09 22.7 -0.1
baz=125
426A McDonald Obser 124.72 58 ⇑P PKPdf 23 09 23.6 +0.7
baz=125
127A Arkansas Junct 124.77 55 ⇑P PKPdf 23 09 23.8 +0.9
baz=125
526A Mary Lane Ranc 124.81 58 ⇓P PKPdf 23 09 23.5 +0.4
baz=125,SNR=15
626A Big Bend Ranch 124.89 59 ⇑P PKPdf 23 09 23.7 +0.4
baz=125
MSTX Muleshoe 124.89 53 ⇑P PKPdf 23 09 23.8 +0.7
baz=125
527A Woodward Ranch 125.19 58 ⇑P PKPdf 23 09 24.2 +0.4
baz=125,SNR=19
427A Hayter Ranch, 125.20 57 ⇓P PKPdf 23 09 24.2 +0.5
baz=125,SNR=17
TXAR Lajitas Array 125.33 59 PKP PKPdf 23 09 24.7 +0.6
comp=Z,5.7nm,0.7s,baz=193,slow=1.6,SNR=39
TXAR SKPbc 23 12 28.4
comp=Z,9.3nm,1.2s,baz=304,slow=2.9,SNR=5.8
TXAR PKKPbc 23 19 02.3
comp=Z,1.4nm,0.8s,baz=120,slow=7.4,SNR=7.6
TXAR Lajitas Array 125.33 59 PKIKP PKPdf 23 09 24.7 +0.6
TXAR pmax pmax
comp=Z,6.0nm,0.7s
TXAR pmax pmax
comp=N,9.0nm,1.2s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
AMTX Amarillo 125.48 52 ePKPdf PKPdf 23 09 24.8 +0.6
627A Terlingua Ranc 125.54 59 ⇑P PKPdf 23 09 24.8 +0.3
baz=126,SNR=17
328A Wristen Ranch, 125.56 56 ⇑P PKPdf 23 09 24.7 +0.2
baz=126,SNR=20
CBKS Cedar Bluff 125.59 47 ePKIKP PKPdf 23 09 23.8 -0.5
ECSD EROS Data Cent 125.62 40 ePKPdf PKPdf 23 09 23.8 -0.4
428A Kincaid Ranch, 125.83 57 ⇓P PKPdf 23 09 25.6 +0.6
baz=126,SNR=15
528A Cox Ranch, San 125.88 58 ⇓P PKPdf 23 09 25.9 +0.8
baz=126
628A Black Gap, Mar 125.96 59 ⇑P PKPdf 23 09 25.8 +0.5
baz=126,SNR=10
EYMN Ely 126.43 33 ePKPdf PKPdf 23 09 24.8 -0.8
ESDC Sonseca Array 127.28 315 PKP PKPdf 23 09 26.7 -0.8
comp=Z,8.5nm,1.0s,baz=18,slow=3.4,SNR=20
ESDC PP PP 23 11 28.1 +0.2
comp=Z,7.9nm,0.8s,baz=63,slow=6.8,SNR=12
PAB San Pablo 127.61 315 ePKIKP PKPdf 23 09 27.8 -0.3
PAB e 23 11 29.8
KSU1 Kansas State U 127.71 45 ePKPdf PKPdf 23 09 28.4 +0.1
WMOK Wichita Mounta 127.78 51 ePKPpre 23 09 21.5
WMOK ePKPdf PKPdf 23 09 28.9 +0.2
JCT Junction City 128.29 57 ePKPdf PKPdf 23 09 29.9 +0.2
JCT eSKP 23 12 37.5
TOA0 Torodi Ar. Sit 128.42 281 ePKPdf PKPdf 23 09 30.1 -0.3
TOA0 eSKP 23 12 36.6
TORD Torodi Ar. Bea 128.42 281 PKP PKPdf 23 09 29.3 -1.0
comp=Z,31nm,0.8s,baz=53,slow=2.2,SNR=10
TORD SKPbc 23 12 36.0
comp=Z,57nm,1.0s,baz=82,slow=2.9,SNR=27
TORD PKKPbc 23 18 49.6
comp=Z,3.6nm,1.2s,baz=298,slow=3.9,SNR=4.0
MVO Moncorvo 128.68 318 ePKPdf PKPdf 23 09 31.0 +0.9
COWI Conover 128.82 34 ePKPdf PKPdf 23 09 30.1 -0.2
COWI eSKP 23 12 38.2
PLCA Paso Flores 128.93 160 PKP PKPdf 23 09 32.1 +1.5
comp=Z,4.0nm,0.7s,baz=144,slow=4.8,SNR=14
PLCA SKPbc 23 12 38.4
comp=Z,12nm,0.9s,baz=212,slow=5.1,SNR=8.2
PLCA Paso Flores 128.93 160 PKIKP PKPdf 23 09 32.1 +1.4
PLCA pmax pmax
comp=Z,4.0nm,0.7s
PLCA pmax pmax
comp=N,12nm,0.9s
PLCA Paso Flores 128.93 160 ePKPdf PKPdf 23 09 31.5 +0.9
PCAB Cabril 129.06 319 ePKPdf PKPdf 23 09 31.8 +1.0
PVRL Vila Real 129.08 319 ePKPdf PKPdf 23 09 31.8 +0.9
MTE Manteigas 129.40 318 ePKPdf PKPdf 23 09 32.3 +0.8
PCBR Castelo Branco 129.62 317 ePKPdf PKPdf 23 09 32.5 +0.5
PMRV Marv??o 129.76 317 ePKPdf PKPdf 23 09 33.2 +1.0
JFWS Jewell Farm 130.03 38 ePKPdf PKPdf 23 09 31.9 -0.8
JFWS e 23 12 42.2
PBAR Barrancos 130.09 315 ePKPdf PKPdf 23 09 34.1 +1.2
PBAR Barrancos 130.09 315 ePP PP 23 11 44.3 -2.0
SCHQ Schefferville 130.61 12 PKP PKPdf 23 09 33.9 +0.6
comp=N,10.0nm,0.9s,baz=357,slow=3.3,SNR=8.4
SCHQ SKPbc SKPbc 23 12 43.7 -4.4
comp=N,55nm,0.9s,baz=0.1,slow=4.0,SNR=25
SCHQ Schefferville 130.61 12 ePKPdf PKPdf 23 09 33.6 +0.3
SCHQ eSKP 23 12 43.2
EVO Evora 130.61 316 ⇑iPKIKP PKPdf 23 09 33.9 0.0
comp=N,110nm,1.6s
EVO eMLR MLR
comp=Z,297nm,21.2s
EVO Evora 130.61 316 ePKPdf PKPdf 23 09 33.9 0.0
PCVE Castro Verde 131.05 315 ePKPdf PKPdf 23 09 37.4 +2.7
MORF Marmelete 131.63 315 ePKPdf PKPdf 23 09 36.1 +0.3
HKT Hockley 131.72 56 ePKIKP PKPdf 23 09 36.4 +0.1
MIAR Mount Ida 131.82 49 ePKPdf PKPdf 23 09 37.2 +0.9
MIAR eSKP 23 12 50.4
CCM Cathedral Cave 131.92 44 ePKPdf PKPdf 23 09 35.7 -0.7
CCM e 23 12 49.5
HDIL Hopedale 131.92 40 ePKPdf PKPdf 23 09 35.7 -0.6
HDIL eSKP 23 12 49.2
GLMI Grayling 132.09 33 ePKPdf PKPdf 23 09 36.5 0.0
GLMI eSKP 23 12 50.3
GLMI eSKPdf SKPdf 23 12 58.9 -3.9
FVM French Village 132.52 44 ePKPdf PKPdf 23 09 36.9 -0.6
FVM eSKP 23 12 51.8
UALR University of 132.65 48 ePKPdf PKPdf 23 09 38.0 +0.2
UALR eSKP 23 12 53.1
SIUC Southern Illin 133.48 43 ePKPdf PKPdf 23 09 38.9 -0.5
SIUC eSKP 23 12 54.9
OLIL Olney 133.69 41 ePKPdf PKPdf 23 09 39.6 0.0
OLIL eSKP 23 12 55.8
TRQA Tornquist 133.81 167 ePKPdf PKPdf 23 09 40.2 +0.3
TRQA eSKP 23 12 54.8
AAM Ann Arbor 134.27 35 ePKPdf PKPdf 23 09 39.4 -1.3
AAM eSKP 23 12 57.7
USIN University of 134.39 42 ePKPdf PKPdf 23 09 40.9 -0.1
USIN eSKPbc SKPbc 23 12 57.4 -4.5
USIN eSKPab 23 13 01.9
BLO Bloomington 134.47 40 ePKPdf PKPdf 23 09 41.2 +0.1
BLO eSKPbc SKPbc 23 12 58.2 -3.8
BLO eSKPab 23 13 01.5
KIC Kosan Boka 134.65 272 eP 23 09 30.4
comp=Z,111nm,0.9s
DBIC Dimbokro 134.78 272 PKhKP 23 09 28.4
comp=Z,7.2nm,0.7s,baz=68,slow=1.8,SNR=7.5
DBIC PKP PKPdf 23 09 42.1 -0.3
comp=Z,48nm,0.8s,baz=79,slow=2.1,SNR=23
DBIC SKPbc SKPbc 23 12 58.5 -5.3
comp=Z,81nm,1.0s,baz=85,slow=4.2,SNR=25
DBIC Dimbokro 134.78 272 PKHKP 23 09 28.4
DBIC 23 09 42.1
DBIC pmax pmax
comp=Z,7.0nm,0.7s
DBIC pmax pmax
comp=Z,48nm,0.8s
DBIC pmax pmax
comp=N,81nm,1.0s
DBIC Dimbokro 134.78 272 PKP 23 09 28.4
DBIC ePKPpre 23 09 31.9
DBIC ePKPdf PKPdf 23 09 41.9 -0.6
DBIC PKP PKPdf 23 09 42.1 -0.3
DBIC eSKP 23 12 58.5
SADO Sadowa 134.91 29 PKP PKPdf 23 09 42.6 +0.8
comp=N,13nm,0.6s,baz=345,slow=3.5,SNR=8.8
SADO SKPbc SKPbc 23 12 59.2 -4.1
comp=N,30nm,1.0s,baz=310,slow=5.1,SNR=10
SADO Sadowa 134.91 29 PKP PKPdf 23 09 42.6 +0.8
SADO SKPbc SKPbc 23 12 59.2 -4.1
LIC Lamto 134.92 272 ePKIKP PKPdf 23 09 41.8 -0.9
comp=N,124nm,0.9s
LIC eMLR MLR
comp=Z,392nm,21.0s
LIC Lamto 134.92 272 eP 23 09 31.6
comp=Z,172nm,0.9s
LIC Lamto 134.92 272 ePKPdf PKPdf 23 09 41.8 -0.9
LIC LR LR

comp=Z,200nm,21.0s
OXF Oxford 134.92 47 ePKPdf PKPdf 23 09 41.5 -0.7
OXF eSKPbc SKPbc 23 12 59.8 -3.8
OXF eSKPab 23 13 04.7
TIC Toumodi 134.94 272 eP 23 09 32.0
comp=Z,116nm,0.9s
WCI Wyandotte Cave 135.15 41 ePKHKP 23 09 34.0
WCI e 23 09 42.2
WCI e 23 12 16.1
WCI Wyandotte Cave 135.15 41 ePKPpre 23 09 34.0
WCI ePKPdf PKPdf 23 09 42.2 -0.3
WCI ePP PP 23 12 16.1 -2.4
WCI eSKPbc SKPbc 23 13 00.1 -4.2
WCI eSKP 23 13 05.4
WVT Waverly 135.25 44 ePKIKP PKPdf 23 09 41.0 -1.7
WVT e 23 12 17.3
WVT Waverly 135.25 44 ePKPdf PKPdf 23 09 41.0 -1.7
WVT ePP PP 23 12 17.3 -2.0
WVT eSKPbc SKPbc 23 13 00.7 -4.0
WVT eSKP 23 13 06.1
CMIG Matias Romero 135.50 73 PKP PKPdf 23 09 44.2 +0.5
comp=Z,3.1nm,0.5s,baz=353,slow=7.0,SNR=4.3
CMIG SKPbc SKPbc 23 13 02.9 -3.1
comp=Z,46nm,1.1s,baz=290,slow=2.7,SNR=17
CMIG Matias Romero 135.50 73 PKP PKPdf 23 09 44.2 +0.5
CMIG SKPbc SKPbc 23 13 02.9 -3.1
ACSO Alum Creek Sta 135.99 36 ePKPpre 23 09 35.9
ACSO ePKPdf PKPdf 23 09 43.9 0.0
ACSO eSKPbc SKPbc 23 13 02.0 -4.9
ACSO eSKP 23 13 08.7
LRAL Lakeview Retre 137.39 48 ePKPpre 23 09 35.8
LRAL ePKPdf PKPdf 23 09 46.5 -0.3
LRAL eSKPbc SKPbc 23 13 06.8 -4.4
LRAL eSKPab 23 13 14.7
NCB Newcomb 137.77 26 ePKPpre 23 09 41.5
NCB ePKPdf PKPdf 23 09 46.9 -0.3
NCB eSKP 23 13 07.5
CPCT Cooper Cave 137.88 43 ePKPpre 23 09 38.9
CPCT ePKPdf PKPdf 23 09 47.3 -0.3
CPCT eSKP 23 13 08.2
CPCT eSKPab 23 13 15.4
TZTN Tazewell 137.90 41 ePKPdf PKPdf 23 09 47.9 +0.3
TZTN eSKP 23 13 08.6
CFAA Coronel Fontan 137.92 157 PKhKP 23 09 39.9
comp=Z,0.7nm,0.5s,baz=222,slow=3.4,SNR=6.6
CFAA PKP PKPdf 23 09 49.0 +1.2
comp=Z,1.8nm,0.7s,baz=217,slow=2.8,SNR=8.8
CFAA SKPbc SKPbc 23 13 07.9 -4.9
comp=Z,4.9nm,0.8s,baz=240,slow=2.7,SNR=14
CFAA Coronel Fontan 137.92 157 PKP 23 09 39.9
CFAA PKP PKPdf 23 09 49.0 +1.1
CFAA SKPbc SKPbc 23 13 07.9 -4.9
MCWV Mont Chateau 138.18 35 ePKPdf PKPdf 23 09 47.8 -0.2
MCWV eSKP 23 13 09.4
MCWV eSKPab 23 13 18.2
TKL Tuckaleechee C 138.27 42 PKhKP 23 09 37.8
comp=Z,3.2nm,0.7s,baz=141,slow=3.0,SNR=5.3
TKL PKP PKPdf 23 09 47.9 -0.4
comp=Z,14nm,0.8s,baz=169,slow=3.7,SNR=5.7
TKL SKPbc SKPbc 23 13 09.9 -3.8
comp=Z,32nm,1.0s,baz=184,slow=1.5,SNR=9.3
TKL Tuckaleechee C 138.27 42 ePKHKP 23 09 38.2
TKL 23 09 47.9
TKL Tuckaleechee C 138.27 42 ePKPpre 23 09 38.2
TKL PKP PKPdf 23 09 47.9 -0.4
TKL ePKPdf PKPdf 23 09 48.1 -0.2
TKL eSKP 23 13 09.6
TKL SKPbc SKPbc 23 13 09.9 -3.8
TKL eSKPab 23 13 18.8
BINY Binghamton 138.36 29 ePKPdf PKPdf 23 09 47.0 -1.3
BINY eSKPbc SKPbc 23 13 09.2 -4.5
BINY eSKPab 23 13 17.0
SSPA Standing Stone 138.56 32 ePKPpre 23 09 38.5
SSPA ePKPdf PKPdf 23 09 48.5 -0.1
SSPA eSKP 23 13 09.8
SSPA eSKPab 23 13 19.4
LCO Las Campanas 139.13 152 ePKPpre 23 09 42.0
LCO eSKP 23 13 11.7
ELN Prospectdale 139.25 38 ePKPpre 23 09 39.8
ELN ePKPdf PKPdf 23 09 49.7 -0.4
ELN eSKP 23 13 11.6
ELN eSKPab 23 13 22.7
BLA Blacksburg 139.47 38 ePKHKP 23 09 40.5
BLA e 23 09 49.8
BLA Blacksburg 139.47 38 ePKPpre 23 09 40.5
BLA ePKPdf PKPdf 23 09 49.8 -0.7
BLA eSKP 23 13 12.6
BLA eSKPab 23 13 23.9
GOGA Godfrey 139.73 45 ePKHKP 23 09 42.9
GOGA e 23 09 50.3
GOGA Godfrey 139.73 45 ePKPpre 23 09 42.9
GOGA ePKPdf PKPdf 23 09 50.3 -0.7
GOGA eSKP 23 13 13.7
APG El Apazote 139.97 75 PKhKP 23 09 44.0
comp=Z,12nm,1.1s,baz=70,slow=1.7,SNR=5.0
APG SKPbc SKPbc 23 13 16.3 -2.6
comp=Z,95nm,1.2s,baz=303,slow=2.8,SNR=20
JSC Jenkinsville 140.75 42 ePKPpre 23 09 46.5
JSC eSKP 23 13 16.6
COW Cow Castle Cre 141.65 43 ePKPpre 23 09 49.2
COW ePKPdf PKPdf 23 09 55.0 +0.5
COW eSKP 23 13 19.4
NHSC New Hope 142.17 43 ePKPdf PKPdf 23 09 50.9 -4.5
NHSC eSKP 23 13 20.8
DWPF Disney 143.98 51 ePKPdf PKPdf 23 09 57.0 -1.8
CPUP Villa Florida 146.10 169 PKPbc PKPbc 23 10 03.5 0.0
comp=Z,74nm,0.9s,baz=176,slow=2.2,SNR=155
CPUP SKPbc SKPbc 23 13 29.7 -4.0
comp=Z,93nm,0.9s,baz=153,slow=1.3,SNR=21
CPUP Villa Florida 146.10 169 PKP2 PKPab 23 10 03.5 -0.7
CPUP 23 13 29.7
CPUP pmax pmax
comp=Z,74nm,0.9s
CPUP pmax pmax
comp=N,93nm,0.9s
CPUP Villa Florida 146.10 169 ePKPbc PKPbc 23 10 03.2 -0.4
NNA Nana 147.60 126 PKPbc PKPbc 23 10 07.7 -0.4
comp=N,102nm,0.8s,baz=256,slow=6.7,SNR=46
NNA SKPbc SKPbc 23 13 34.4 -2.9
comp=N,28nm,1.0s,baz=265,slow=4.6,SNR=3.7
NNA Nana 147.60 126 ePKPbc PKPbc 23 10 08.1 0.0
NNA eP PP 23 13 33.9 -0.8
ATAH Atahualpa 148.72 116 PKPbc PKPbc 23 10 11.2 +0.2
comp=N,81nm,1.0s,baz=201,slow=2.6,SNR=28
CAM4 Nova Friburgo 149.74 195 ⇑iP PKPbc 23 10 14.1 +0.8
CAM4 i 23 10 16.7
CAM4 i 23 10 20.7
CAM4 i 23 10 26.0
CAM4 i 23 10 28.9
CAM4 i 23 10 33.5
CAM4 i 23 10 36.5
CAM4 i 23 10 41.0
CAM4 i 23 10 41.0
CAM4 i 23 10 43.5
BCIP Isla Barro Col 150.81 84 ePKPdf PKPdf 23 10 10.0 -0.5
BCIP ePKPbc PKPbc 23 10 16.1 0.0
LPAZ La Paz 150.89 143 PKP PKPdf 23 10 12.4 +1.9
comp=N,8.1nm,0.9s,baz=193,slow=1.7,SNR=30
LPAZ PKPbc PKPbc 23 10 18.1 +1.8
comp=N,45nm,0.8s,baz=160,slow=1.9,SNR=73
LPAZ La Paz 150.89 143 PKIKP PKPdf 23 10 12.5 +2.0
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
LPAZ pmax pmax
comp=Z,45nm,0.8s
LPAZ La Paz 150.89 143 ePKPdf PKPdf 23 10 12.4 +1.9
LPAZ ePKPbc PKPbc 23 10 17.5 +1.3
LPAZ ePKPab PKPab 23 10 25.4 +1.7
OTAV Otavalo 151.22 103 ePKPdf PKPdf 23 10 12.3 +1.1
OTAV ePKPbc PKPbc 23 10 18.2 +1.0
OTAV ePKPab PKPab 23 10 25.6 +0.2
BBSR BB Station 151.55 26 ePKPbc PKPbc 23 10 17.0 -0.4
SIV San Ignacio 154.75 155 PKP PKPdf 23 10 16.9 +0.7
comp=Z,3.9nm,0.7s,baz=207,slow=1.0,SNR=28
SIV PKPab PKPab 23 10 40.3 +0.4
comp=Z,26nm,0.7s,baz=210,slow=3.7,SNR=28
ROSC El Rosal 156.11 94 PKP PKPdf 23 10 18.6 +0.5
comp=Z,6.3nm,0.4s,baz=91,slow=18,SNR=3.6
ROSC PKPab PKPab 23 10 48.6 +2.5
comp=Z,68nm,0.7s,baz=164,slow=2.4,SNR=27
ROSC El Rosal 156.11 94 ePKPdf PKPdf 23 10 18.8 +0.7
SDDR Presa de Saban 156.52 58 ePKPdf PKPdf 23 10 18.5 +0.1

SDDR ePKPab PKPab 23 10 48.3 +0.7
SDV Santo Domingo 159.90 84 PKP PKPdf 23 10 22.2 -0.5
comp=Z,28nm,1.1s,baz=316,slow=1.3,SNR=24
SDV PKPab PKPab 23 11 04.6 +2.1
comp=Z,19nm,0.9s,baz=210,slow=4.9,SNR=3.2
SDV Santo Domingo 159.90 84 ePKPdf PKPdf 23 10 22.1 -0.6
SDV ePKPab PKPab 23 11 04.5 +2.0
RCBR Riachuelo 160.65 229 ePKPdf PKPdf 23 10 23.4 -0.2
RCBR ePKPab PKPab 23 11 05.9 +0.3

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*ISCJB **23** 23:04:04.5±4.1,23°.1S±0°.2×115°.1W±0°.2, h4km±25km, mb4.2/9, MS4.4/12, Error ellipse: s-maj=31.9km s-min=18.7km az=146.3*
*IDC **23** 23:04:05.3±0.8,23°.05S×114°.49W, h0km, mb4.3/5, mb1 4.6/5, mb1mx4.3/16, mbtmp4.3/5, MS4.4/13, Ms1 4.4/13, ms1mx4.3/20, Error ellipse: s-maj=69.8km s-min=28.1km az=89.0*
*NEIC **23** 23:04:06.5±0.6,23°.20S×115°.09W, h10km, mb4.4/4, Error ellipse: s-maj=24.3km s-min=17.8km az=132.0*
*GCMT **23** 23:04:06.5±0.3,23°.10S×114°.60W, h15km±1km, MW5.3/83, Moment Tensor Solution. s17,c19; s83,c118; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.18±.04; $M_{\theta\theta}$-0.21±.03; $M_{\phi\phi}$0.39±.04; $M_{r\theta}$-0.36±.12; $M_{\theta\phi}$0.77±.03; $M_{r\phi}$0.25±.12; Best double couple: $M_0$0.95000×10^{17} NP1:ϕ_s76.00000°, δ70.00000°, λ-21.00000°. NP2: ϕ_s173.00000°, δ70.00000°, λ-159.00000°. Principal axes: T 0.9220, Plg0.0000°, Azm304.0000°; N 0.0570, Plg61.0000°, Azm214.0000°; P -0.9780, Plg29.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 23:04:07.7±4.7,23°.1S±0°.2×115°.2W±0°.2, h12km±28km, n46, σ1s25/11, mb4.2/9, MS4.4/12, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.66**	**128**	LR	LR	23 07 24.7	
	comp=Z,5μm,19.4s,baz=359,slow=32						
RKT	**Rikitea**	**18.21**	**266**	*e*P	**Pn**	**23 08 20.3**	**-0.1**
	364nm,25.2s						
RKT				*e*LR	LR	23 12 44.8	
	3μm,26.5s						
TAOE	**Nuku Hiva Isla**	**27.79**	**297**	*e*LR	LR	23 17 08.7	
	4μm,25.9s,baz=127						
PPT	**Papeete**	**32.66**	**273**	*e*S	**S**	**23 15 56.1**	**+0.1**
	201nm,26.5s						
PPT				*e*LQ		23 18 17.6	
	2μm,24.2s						
PPT				*e*LR	LR	23 19 16.8	
	1μm,25.5s,baz=95						
PPT	**Papeete**	**32.66**	**273**	LR	LR	23 19 44.3	
	comp=Z,769nm,21.3s,MS4.4,baz=220,slow=28						
NNA	**Nana**	**38.08**	**80**	LR	LR	23 22 29.8	
	comp=Z,668nm,20.1s,MS4.5,baz=162,slow=30						
ATAH	**Atahualpa**	**38.81**	**72**	LR	LR	23 21 49.2	
	comp=Z,263nm,20.6s,MS4.0,baz=238,slow=28						
PLCA	**Paso Flores**	**41.29**	**126**	LR	LR	23 24 23.1	
	comp=Z,966nm,21.3s,MS4.6,baz=60,slow=30						
CFAA	**Coronel Fontan**	**42.29**	**112**	LR	LR	23 25 00.6	
	comp=Z,229nm,20.0s,MS4.1,baz=274,slow=30						
LPAZ	**La Paz**	**44.67**	**90**	LR	LR	23 26 20.9	
	comp=Z,403nm,19.8s,MS4.3,baz=68,slow=30						
USHA	**Ushuaia**	**46.92**	**145**	LR	LR	23 27 42.5	
	comp=Z,2μm,18.9s,MS5.0,baz=281,slow=30						
CPUP	**Villa Florida**	**52.29**	**106**	LR	LR	23 32 31.8	
	comp=Z,375nm,18.2s,MS4.5,baz=251,slow=33						
PMSA	**Palmer Station**	**53.14**	**155**	LR	LR	23 30 28.4	
	comp=Z,599nm,18.1s,MS4.7,baz=74,slow=30						
SDV	**Santo Domingo**	**53.94**	**59**	LR	LR	23 30 35.8	
	comp=Z,298nm,21.9s,MS4.3,baz=234,slow=30						
JCT	**Junction City**	**55.27**	**16**	*e*P	**P**	**23 13 39.8**	**-1.0**
	5.9nm,0.6s,mb4.8						
HKT	**Hockley**	**55.92**	**20**	*e*P	**P**	**23 13 47.6**	**+2.1**
	4.7nm,0.8s,mb4.6						
NVAR	**Mina Array Bea**	**61.26**	**357**	P	**P**	**23 14 24.2**	**+1.6**
	2.1nm,0.8s,mb4.3,baz=192,slow=9.0,SNR=6.7						
PDAR	**Pinedale Array**	**65.73**	**5**	P	**P**	**23 14 50.2**	**-1.8**
	1.1nm,0.7s,mb4.0,baz=167,slow=6.5,SNR=4.2						
QSPA	**South Pole Qui**	**67.06**	**180**	P	**P**	**23 15 00.5**	**+0.2**
	6.4nm,1.0s,mb4.6,baz=85,slow=7.7,SNR=4.0						
DLBC	**Dease Lake**	**82.15**	**352**	P	**P**	**23 16 29.6**	**+1.7**
	1.9nm,0.5s,mb4.3,baz=177,slow=25,SNR=5.9						
FCC	**Fort Churchill**	**83.40**	**11**	*e*P	**P**	**23 16 34.1**	**-0.2**
	0.6nm,1.4s,mb3.4						
YKA	**Yellowknife Ar**	**85.28**	**0**	P	**P**	**23 16 43.1**	**-0.7**
	1.4nm,0.9s,mb4.1,baz=174,slow=5.4,SNR=10						
YKA				LR	LR	23 50 57.9	
	comp=Z,26nm,18.6s,MS3.7,baz=15,slow=33						
STKA	**Stephens Creek**	**88.53**	**236**	LR	LR	23 49 04.8	
	comp=Z,264nm,18.5s,MS4.7,baz=297,slow=30						
INK	**Inuvik**	**92.12**	**353**	*e*P	**P**	**23 17 14.7**	**-1.5**
	0.8nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**133.40**	**24**	PKP	PKPdf	23 23 21.9	-1.3
	1.2nm,0.7s,baz=294,slow=1.9,SNR=3.4						
BUR08	**Bucovina Ar. S**	**140.08**	**42**	*e*PKPdf	PKPdf	23 23 35.0	-1.0
AKASG	**Malin Array Be**	**141.00**	**36**	PKP	PKPdf	23 23 36.1	-1.4
	0.3nm,0.3s,baz=282,slow=2.8,SNR=4.7						
ZAA0	**Zalesovo Array**	**145.69**	**339**	*e*PKPbc	PKPbc	23 23 46.8	+0.8
ZALV	**Zalesovo Beam**	**145.69**	**339**	PKPbc	PKPbc	23 23 47.6	+1.6
	1.2nm,0.6s,baz=31,slow=3.7,SNR=7.1						
GTA	**Gaotai**	**146.19**	**307**	*e*P	PKPab	23 23 49.5	+0.7
GTA				pP		23 23 54.4	
GTA				sP		23 23 56.9	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**146.38**	**6**	*e*PKPbc	PKPbc	23 23 46.3	-1.7
CMAR	**Chiang Mai Arr**	**147.81**	**268**	PKPbc	PKPab	23 23 55.7	0.0
	comp=Z,1.2nm,0.3s,baz=72,slow=0.7,SNR=12						
CHTO	**Chiang Mai**	**147.89**	**269**	*e*PKPbc	PKPbc	23 23 52.3	-1.1
BR131	**Keskin Array S**	**148.85**	**51**	*e*PKPbc	PKPbc	23 23 55.0	-0.3
BRTR	**Keskin Array B**	**148.85**	**51**	PKPbc	PKPbc	23 23 54.2	-1.1
	comp=Z,3.2nm,1.0s,baz=241,slow=1.3,SNR=7.8						
BRTR	**Keskin Array B**	**148.85**	**51**	PKPbc	PKPbc	23 23 54.2	-1.1
BRVK	**Borovoye**	**149.79**	**353**	*e*PKPbc	PKPbc	23 23 57.9	+0.6
BVAR	**Borovoye Array**	**149.81**	**353**	PKPbc	PKPbc	23 23 55.9	-1.4
	comp=Z,1.1nm,0.5s,baz=321,slow=1.7,SNR=9.8						
BVAR				PKPab	PKPab	23 24 02.4	-0.3
	comp=Z,3.3nm,0.7s,baz=313,slow=1.5,SNR=12						
KURK	**Kurchatov**	**150.40**	**342**	PKPbc	PKPbc	23 23 58.1	-0.6
	comp=Z,2.0nm,0.8s,baz=19,slow=1.9,SNR=11						
KURK				PKPab	PKPab	23 24 03.8	-1.4
	comp=Z,3.7nm,0.8s,baz=28,slow=2.1,SNR=8.4						
KURK	**Kurchatov**	**150.40**	**342**	*e*PKPdf	PKPdf	23 23 53.4	-0.2
KURK				*e*PKPbc	PKPbc	23 23 57.9	-0.9
KURK				PKPbc	PKPbc	23 23 58.1	-0.6
KURK				PKPab	PKPab	23 24 03.8	-1.4
AKTK	**Aktyubinsk**	**152.19**	**9**	PKPbc	PKPbc	23 24 01.8	-1.2
AKTO	**Aktyubinsk**	**152.19**	**9**	PKPbc	PKPbc	23 24 01.8	-1.2
	comp=Z,2.1nm,0.7s,baz=324,slow=3.3,SNR=5.6						
MK31	**Makanchi Array**	**152.47**	**333**	*e*PKPbc	PKPbc	23 24 02.2	-1.5
MKAR	**Makanchi Array**	**152.47**	**333**	PKPbc	PKPbc	23 24 02.7	-1.0
	comp=Z,0.7nm,0.7s,baz=44,slow=2.8,SNR=8.1						
MKAR				PKPab	PKPab	23 24 12.2	-1.7
	comp=Z,2.0nm,0.7s,baz=14,slow=1.4,SNR=7.5						
MKAR	**Makanchi Array**	**152.47**	**333**	PKPbc	PKPbc	23 24 02.7	-1.0
MKAR				PKPab	PKPab	23 24 12.2	-1.7
ASF	**Jabal al Asfar**	**153.72**	**64**	PKPbc	PKPbc	23 24 05.9	-1.1
	comp=Z,1.5nm,0.8s,baz=39,slow=3.8,SNR=4.3						

MEX 23 23:21:21.0±0.8, 14°.56N×94°.24W, h14km±20km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.50**	**41**	*i* P	Pn	23 21 43.4	-4.2
PCIG				*i* S	Sn	23 22 01.9	-5.2
THIG		**1.94**	**80**	*e*P	Pn	23 21 50.7	-2.9
THIG				*i* S	Sn	23 22 13.2	-4.6
TGIG		**2.45**	**26**	*i* P	Pn	23 21 58.4	-2.2
TGIG				*i* S	Sn	23 22 26.6	-3.9
CCIG	**Comitan**	**2.65**	**50**	*i* P	Pn	23 22 01.7	-1.7
CCIG				*i* S	Sn	23 22 31.2	-4.2
SCX	**San Cristobal**	**2.66**	**35**	*e*P	Pn	23 22 01.0	-2.4
SCX				*i* S	Sn	23 22 33.5	-2.1
VHO	**Vista Hermosa**	**3.46**	**316**	*e*P	Pn	23 22 11.9	-2.6
VHO				*i* S	Sn	23 22 52.0	-3.4
UTMO	**Huajuapan**	**4.72**	**314**	*e*P	Pn	23 22 29.4	-2.4
UTMO				*i* S	Sn	23 23 22.7	-3.7

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*ISCJB **23** 23:23:47.9±0.5, 37°.11N±0°.04×139°.27E±0°.05, h33km, Error ellipse: s-maj=5.9km s-min=5.4km az=15.5*
*JMA **23** 23:23:48.4, 37°.12N×139°.23E, h6km±4km, M3.2*
JMA Felt II J1.

ISC 23 23:23:48.2±0.6, 37°.11N±0°.03×139°.23E±0°.04, h15km±8km, n8, σ0s66/15, 1C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.22**	**310**	⇓P	**Pg**	**23 23 52.7**	**-0.4**
JHK				S	**Sg**	**23 23 55.7**	**-0.8**
JKT	**Katashina**	**0.34**	**177**	⇓P	**Pg**	**23 23 55.1**	**-0.2**
JKT				S	**Sg**	**23 24 00.0**	**0.0**
JFY	**Yanaizu**	**0.48**	**52**	⇑P	**Pg**	**23 23 57.7**	**-0.1**
JFY				S	**Sg**	**23 24 03.9**	**-0.4**
JSB	**Shiboa**	**0.57**	**104**	⇓P	**Pg**	**23 24 00.0**	**+0.5**
JSB				S	**Sg**	**23 24 07.7**	**+0.6**
JIZZ	**Izumozaki**	**0.59**	**316**	P	**Pg**	**23 24 00.7**	**+0.9**
JIZZ				S	**Sg**	**23 24 09.6**	**+1.9**
JAG	**Ashikaga**	**0.71**	**165**	⇓P	**Pg**	**23 24 02.2**	**+0.2**
JNS	**Sasagawa**	**0.71**	**6**	P	**Pg**	**23 24 01.7**	**-0.4**
JNS				S	**Sg**	**23 24 10.9**	**-0.6**
MAT	**Matsushiro**	**0.99**	**236**	P	**Pb**	**23 24 06.8**	**-0.4**
MAT				S	**Sb**	**23 24 19.7**	**-0.4**

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*ISCJB **23** 23:32:35.6±0.4, 41°.72N±0°.02×23°.86E±0°.03, h1km±5km, Error ellipse: s-maj=3.6km s-min=3.3km az=40.6*
*SOF **23** 23:32:36.1, 41°.72N×23°.90E, h5km, MD3.2*
*CSEM **23** 23:32:36.0±0.1, 41°.72N×23°.86E, h5km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.5km az=160.0*
*THE **23** 23:32:36.6, 41°.70N×23°.87E, h6km±1km, ML2.6/6, Error ellipse: s-maj=1.1km s-min=0.5km az=314.0*
*SKO **23** 23:32:37.0, 41°.76N×23°.84E, h3km*
*BEO **23** 23:32:41.9±2.0, 41°.94N×23°.79E, h12km, ML1.8/3*

ISC 23 23:32:36.3±0.4, 41°.72N±0°.02×23°.86E±0°.03, h6km±4km, n52, σ0s94/85, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMB	**Musomiste**	**0.16**	**217**	*i* P	**Pg**	**23 32 40.4**	**+0.8**
MMB	**Musomiste**	**0.16**	**217**	*i* P	**Pg**	**23 32 40.4**	**+0.8**
KKB	**Krupnik**	**0.60**	**284**	*i* P	**Pg**	**23 32 47.3**	**-0.5**
KKB	**Krupnik**	**0.60**	**284**	*i* P	**Pg**	**23 32 47.3**	**-0.5**
SRS	**Serrai**	**0.64**	**199**	P	**Pg**	**23 32 48.7**	**+0.2**
SRS				S	**Sg**	**23 32 57.6**	**+0.9**
SRS	**Serrai**	**0.64**	**199**	P	**Pg**	**23 32 48.7**	**+0.2**
SRS				S	**Sg**	**23 32 57.6**	**+0.9**
RZN	**Rozhen**	**0.64**	**93**	*i* P	**Pg**	**23 32 48.7**	**+0.1**
RZN	**Rozhen**	**0.64**	**93**	*i* P	**Pg**	**23 32 48.7**	**+0.1**
PLD	**Plovdiv**	**0.74**	**58**	P	**Pg**	**23 32 50.8**	**+0.3**
PLD				S	**Sg**	**23 33 01.1**	**+1.1**
PLD	**Plovdiv**	**0.74**	**58**	*i* P	**Pg**	**23 32 51.1**	**+0.6**
PLD	**Plovdiv**	**0.74**	**58**	P	**Pg**	**23 32 50.8**	**+0.3**
PLD				S	**Sg**	**23 33 01.1**	**+1.1**
PGB	**Panagyurishte**	**0.86**	**15**	*i* P	**Pg**	**23 32 52.2**	**-0.6**
PGB	**Panagyurishte**	**0.86**	**15**	*i* P	**Pg**	**23 32 52.2**	**-0.6**
KAVA	**Kavala**	**0.87**	**146**	P	**Pg**	**23 32 52.2**	**-0.9**
KAVA				S	**Sg**	**23 33 04.7**	**+0.3**
KAVA	**Kavala**	**0.87**	**146**	P	**Pg**	**23 32 52.2**	**-0.9**
KAVA				S	**Sg**	**23 33 04.7**	**+0.3**
KNT	**Kendrikon**	**0.91**	**233**	P	**Pg**	**23 32 53.6**	**-0.2**
KNT				S	**Sg**	**23 33 06.3**	**+0.6**
KNT	**Kendrikon**	**0.91**	**233**	P	**Pg**	**23 32 53.6**	**-0.2**
KNT				S	**Sg**	**23 33 06.3**	**+0.6**
SOH	**Sokhos**	**0.97**	**203**	P	**Pg**	**23 32 54.7**	**-0.3**
SOH				S	**Sg**	**23 33 08.8**	**+1.2**
SOH	**Sokhos**	**0.97**	**203**	P	**Pg**	**23 32 54.7**	**-0.3**
SOH				S	**Sg**	**23 33 08.8**	**+1.2**
VTS	**Vitosha**	**1.00**	**331**	*i* Pg	**Pg**	**23 32 55.1**	**-0.3**
VTS				*i* Sg	**Sg**	**23 33 08.7**	**+0.3**
VTS	**Vitosha**	**1.00**	**331**	P	**Pg**	**23 32 55.2**	**-0.2**
VTS				S	**Sg**	**23 33 11.0**	**+2.6**
VTS	**Vitosha**	**1.00**	**331**	*i* P	**Pg**	**23 32 57.3**	**+1.9**
VTS	**Vitosha**	**1.00**	**331**	P	**Pg**	**23 32 55.2**	**-0.2**
VTS				*i* Sg	**Sg**	**23 33 08.7**	**+0.3**
VTS				S	**Sg**	**23 33 11.0**	**+2.6**
VAY	**Valandovo**	**1.05**	**248**	*e*Pg	**Pg**	**23 32 55.9**	**-0.5**
VAY				*e*Sg	**Sg**	**23 33 10.3**	**+0.3**
VAY	**Valandovo**	**1.05**	**248**	P	**Pg**	**23 32 56.0**	**-0.4**
VAY	**Valandovo**	**1.05**	**248**	P	**Pg**	**23 32 56.0**	**-0.4**
VAY				*e*Sg	**Sg**	**23 33 10.3**	**+0.3**
KDZ	**Kurdzhali**	**1.17**	**93**	*i* P	**Pg**	**23 32 57.3**	**-1.4**
KDZ	**Kurdzhali**	**1.17**	**93**	*i* P	**Pg**	**23 32 57.3**	**-1.4**
STIP	**Stip**	**1.25**	**269**	*e*Pg	**Pg**	**23 32 59.0**	**-1.3**
STIP				*e*Sg	**Sg**	**23 33 16.4**	**-0.2**
STIP	**Stip**	**1.25**	**269**	*e*Pg	**Pg**	**23 32 59.0**	**-1.3**
STIP				*e*Sg	**Sg**	**23 33 16.3**	**-0.3**
HORT	**Hortiatis**	**1.26**	**207**	P	**Pn**	**23 32 59.8**	**-0.6**
HORT				S	**Sg**	**23 33 17.1**	**+0.3**
HORT	**Hortiatis**	**1.26**	**207**	P	**Pn**	**23 32 59.8**	**-0.6**
HORT				S	**Sg**	**23 33 17.1**	**+0.3**
PLG	**Polygyros**	**1.38**	**193**	P	**Pn**	**23 33 01.8**	**-0.2**
PLG				S	**Sb**	**23 33 21.3**	**+1.0**
PLG	**Polygyros**	**1.38**	**193**	P	**Pn**	**23 33 01.8**	**-0.2**
PLG				S	**Sb**	**23 33 21.3**	**+1.0**
RDO	**Rodhopi**	**1.39**	**114**	P	**Pn**	**23 33 01.9**	**-0.2**
RDO				S	**Sb**	**23 33 20.6**	**+0.1**
RDO	**Rodhopi**	**1.39**	**114**	P	**Pn**	**23 33 01.9**	**-0.2**
RDO				S	**Sb**	**23 33 20.6**	**+0.1**
OUR	**Ouranopolis**	**1.39**	**176**	P	**Pn**	**23 33 01.1**	**-1.0**
OUR				S	**Sb**	**23 33 20.2**	**-0.3**
OUR	**Ouranopolis**	**1.39**	**176**	P	**Pn**	**23 33 01.1**	**-1.0**
OUR				S	**Sb**	**23 33 20.2**	**-0.3**
MPEP	**Malo Peshtene**	**1.64**	**357**	*i* P	**Pn**	**23 33 07.8**	**+2.2**
PAIG	**Paliouri**	**1.80**	**184**	P	**Pn**	**23 33 06.9**	**-0.8**
PAIG				S	**Sn**	**23 33 30.2**	**-0.6**
PAIG	**Paliouri**	**1.80**	**184**	P	**Pn**	**23 33 06.9**	**-0.8**
PAIG				S	**Sn**	**23 33 30.2**	**-0.6**
ZAPS	**Zavoj**	**1.80**	**330**	⇑*i* Pn	**Pn**	**23 33 10.0**	**+2.2**
ZAPS				*i* Sg	**Sg**	**23 33 31.6**	**-2.5**
ALN	**Alexandroupoli**	**1.84**	**116**	P	**Pn**	**23 33 08.4**	**0.0**
ALN				S	**Sn**	**23 33 32.6**	**+0.7**
ALN	**Alexandroupoli**	**1.84**	**116**	P	**Pn**	**23 33 08.4**	**0.0**
ALN				S	**Sn**	**23 33 32.6**	**+0.7**
BARS	**Barje**	**1.87**	**307**	*e*Pn	**Pn**	**23 33 11.7**	**+2.9**
BARS				*i* Sg	**Sg**	**23 33 35.9**	**-0.5**
BARS	**Barje**	**1.87**	**307**	*e*Pn	**Pn**	**23 33 11.7**	**+2.9**
BARS				*i* Sg	**Sg**	**23 33 35.9**	**-0.5**
LOS	**Limnos**	**2.01**	**152**	P	**Pn**	**23 33 09.6**	**-1.1**
LOS	**Limnos**	**2.01**	**152**	P	**Pn**	**23 33 09.6**	**-1.1**
LIA	**Limnos Island**	**2.08**	**151**	P	**Pn**	**23 33 11.2**	**-0.4**
LIA	**Limnos Island**	**2.08**	**151**	P	**Pn**	**23 33 11.2**	**-0.4**
XOR	**Xorichti**	**2.41**	**192**	P	**Pn**	**23 33 15.6**	**-0.5**
XOR	**Xorichti**	**2.41**	**192**	P	**Pn**	**23 33 15.6**	**-0.5**

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*NEIC **23** 23:53:33.8±0.8, 23°.19S×114°.54W, h10km, Error ellipse: s-maj=31.4km s-min=20.4km az=218.0*
*IDC **23** 23:53:33.1±1.1, 23°.08S×114°.40W, h0km, mb3.7/6, mb1 4.1/6, mb1mx4.0/14, mbtmp3.7/6, MS4.3/4, Ms1 4.2/4, ms1mx3.9/11, Error ellipse: s-maj=43.2km s-min=27.9km az=37.0*

ISC 23 23:53:33.1±3.9, 23°.4S±0°.6×114°.7W±0°.6, h10km, n20, σ0s65/8, mb3.7/6, MS4.3/4, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**40.79**	**126**	LR	LR	00 14 41.4	
	comp=Z,300nm,18.4s,MS4.2,baz=218,slow=31						
LPAZ	**La Paz**	**44.25**	**90**	P	**P**	**00 01 42.9**	**-0.1**
	0.8nm,0.7s,mb3.5,baz=240,slow=3.6,SNR=2.7						
LPAZ	**La Paz**	**44.25**	**90**	P	**P**	**00 01 42.9**	**-0.1**
ROSC	**El Rosal**	**48.38**	**60**	LR	LR	00 17 52.0	
	comp=Z,277nm,21.6s,MS4.2,baz=281,slow=30						
CPUP	**Villa Florida**	**51.81**	**106**	P	**P**	**00 02 41.8**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=270,slow=11,SNR=3.1						
TXAR	**Lajitas Array**	**53.46**	**12**	P	**P**	**00 02 53.6**	**+0.1**
	0.2nm,0.8s,mb3.1,baz=255,slow=28,SNR=3.2						
NVAR	**Mina Array Bea**	**61.55**	**357**	P	**P**	**00 03 51.5**	**+1.2**
	1.2nm,0.9s,mb4.0,baz=185,slow=9.6,SNR=7.0						
PDAR	**Pinedale Array**	**65.96**	**4**	P	**P**	**00 04 18.4**	**-0.9**
	0.7nm,0.9s,mb3.7,baz=197,slow=3.1,SNR=5.6						
YKA	**Yellowknife Ar**	**85.55**	**0**	P	**P**	**00 06 10.4**	**-0.5**
	1.7nm,1.1s,mb4.2,baz=174,slow=4.8,SNR=14						
YKA	**Yellowknife Ar**	**85.55**	**0**	P	**P**	**00 06 10.4**	**-0.5**
SCHQ	**Schefferville**	**88.00**	**25**	LR	LR	00 43 32.6	
	comp=Z,146nm,19.5s,MS4.4,baz=110,slow=34						
STKA	**Stephens Creek**	**88.72**	**236**	LR	LR	00 40 07.9	
	comp=Z,203nm,20.0s,MS4.5,baz=296,slow=31						
ZALV	**Zalesovo Beam**	**146.09**	**339**	PKPbc	PKPbc	00 13 13.0	-0.1
	1.0nm,0.7s,baz=54,slow=2.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	**148.21**	**268**	PKPbc	PKPbc	00 13 21.7	+1.6
	1.0nm,0.4s,baz=83,slow=0.6,SNR=10						
BRTR	**Keskin Array B**	**148.70**	**51**	PKPbc	PKPbc	00 13 20.4	-0.3
	0.9nm,1.0s,baz=264,slow=1.2,SNR=4.9						
BVAR	**Borovoye Array**	**150.12**	**354**	PKPbc	PKPbc	00 13 23.8	0.0
	2.3nm,0.6s,baz=357,slow=0.2,SNR=7.5						
BVAR				PKPab	PKPab	00 13 29.3	-0.4
	1.8nm,0.8s,baz=315,slow=0.6,SNR=5.0						
MK31	**Makanchi Array**	**152.90**	**334**	*e*PKPbc	PKPbc	00 13 30.2	-0.2
MKAR	**Makanchi Array**	**152.90**	**334**	PKP	PKPdf	00 13 26.0	+2.8
	0.4nm,0.8s,baz=0.0,slow=0.6,SNR=4.7						
MKAR				PKPbc	PKPbc	00 13 32.9	+2.5
	0.9nm,0.7s,baz=8.1,slow=1.7,SNR=5.1						
MKAR				PKPab	PKPab	00 13 44.0	+2.4
	0.6nm,0.6s,baz=44,slow=2.4,SNR=4.1						
MKAR	**Makanchi Array**	**152.90**	**334**	PKP	PKPdf	00 13 26.0	+2.8
MKAR				PKPbc	PKPbc	00 13 32.9	+2.5
MKAR				PKPab	PKPab	00 13 44.0	+2.4
ABKAR	**Akbulak array**	**153.81**	**8**	*e*PKPbc	PKPbc	00 13 32.1	-0.2

BUC 24 00:24:31.0±2.5, 43°.57N×28°.71E, h10km, MD2.7/3, 7C-3D, Error ellipse: s-maj=25.6km s-min=13.5km az=22.0, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVD	**Cernavoda**	**0.89**	**327**	⇑*i* P	Pg	00 24 49.3	+1.1
CVD				*i* S	Sg	00 25 01.7	+1.9
CVD	**Cernavoda**	**0.89**	**327**	⇑*i* P	Pg	00 24 49.3	+1.1
TIRR	**Tirgusor**	**0.92**	**347**	⇑*i* P	Pg	00 24 49.1	+0.5
TIRR				*i* S	Sg	00 25 01.6	+1.0
TIRR	**Tirgusor**	**0.92**	**347**	⇑*i* P	Pg	00 24 49.1	+0.5
HARR	**Harsova**	**1.25**	**334**	⇑*i* P	Pn	00 24 54.4	-0.2
HARR				*i* S	Sb	00 25 12.3	+1.4
HARR	**Harsova**	**1.25**	**334**	⇑*i* P	Pn	00 24 54.4	-0.2
TLCR		**1.62**	**3**	⇓*i* P	Pn	00 25 00.6	+1.0
TLCR				*i* S	Sn	00 25 23.4	+2.9
TLCR		**1.62**	**3**	⇑*i* P	Pn	00 25 00.6	+1.0
TLCR		**1.62**	**3**	S	Sn	00 25 23.4	+2.9
CFR	**Carcaliu**	**1.66**	**346**	⇓*i* P	Pn	00 25 01.5	+1.3
CFR				*i* S	Sn	00 25 23.3	+1.8
CFR	**Carcaliu**	**1.66**	**346**	⇓*i* P	Pn	00 25 01.5	+1.3

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*NEIC **24** 00:49:45.2, 18°.28N×94°.58W, h35km, MD3.8(MEX), After MEX.*

MEX 24 00:49:45.2±0.8, 18°.28N×94°.58W, h35km±11km, MD3.8, 2C, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.28**	**149**	⇑*i* P	Pb	00 49 51.3	-1.6
TUIG				*i* S	Sb	00 49 56.5	-1.6
TUIG	**Tuzandepetl**	**0.28**	**149**	⇑*i* P	Pb	00 49 51.3	-1.6
TUIG				*i* S	Sb	00 49 56.5	-1.6
TGIG		**2.04**	**137**	*e*P	Pn	00 50 16.4	-0.6
TGIG				*i* S	Sn	00 50 38.6	-2.7
VHO	**Vista Hermosa**	**2.38**	**240**	*i* P	Pn	00 50 21.3	-0.5
VHO				*i* S	Sn	00 50 47.7	-2.1
VHO	**Vista Hermosa**	**2.38**	**240**	*i* P	Pn	00 50 21.3	-0.5
VHO				*i* S	Sn	00 50 47.7	-2.1
TPIG	**Tehuac#an**	**2.65**	**274**	*e*P	Pn	00 50 23.1	-2.3
TPIG				*i* S	Sn	00 50 53.7	-2.7
PCIG		**2.87**	**153**	*i* P	Pn	00 50 27.2	-1.2
PCIG				*i* S	Sn	00 51 00.2	-1.6
CCIG	**Comitan**	**3.06**	**130**	*e*P	Pn	00 50 30.2	-0.9
CCIG				*i* S	Sn	00 51 05.5	-1.1
CCIG	**Comitan**	**3.06**	**130**	*e*P	Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK02	**Makanchi Array**	**0.46**	**143**	⇑P	**Pg**	**01 33 29.8**	**-0.2**
MK02				⇓S	**Sg**	**01 33 36.2**	**+0.2**
MK03	**Makanchi Array**	**0.46**	**143**	⇑P	**Pg**	**01 33 29.8**	**-0.2**
MK03				⇑S	**Sg**	**01 33 36.1**	**+0.1**
MK08	**Makanchi Array**	**0.46**	**145**	⇓P	**Pg**	**01 33 30.1**	**0.0**
MK08				S	**Sg**	**01 33 36.2**	**+0.1**
MK07	**Makanchi Array**	**0.48**	**143**	⇑P	**Pg**	**01 33 30.0**	**-0.4**
MK07				⇑S	**Sg**	**01 33 36.3**	**-0.3**
KURBB	**Kurchatov Arra**	**4.14**	**329**	⇑Pn	**Pn**	**01 34 25.1**	**+0.1**
	0.2nm,0.3s						
KURBB				⇓Pg	**Pb**	**01 34 35.3**	**+0.9**
	0.4nm,0.4s						
KURBB				⇓Lg		01 35 30.4	
	11nm,0.5s						
KURK	**Kurchatov**	**4.18**	**330**	⇓Pn	**Pn**	**01 34 25.2**	**-0.4**
	1.1nm,0.7s						
KURK				⇓Pg	**Pb**	**01 34 35.6**	**+0.3**
	3.1nm,0.6s						
KURK				⇑Lg		01 35 30.5	
	49nm,0.9s						
KURK	**Kurchatov**	**4.18**	**330**	Pn	**Pn**	**01 34 25.7**	**+0.1**
	0.3nm,0.3s,baz=147,slow=12,SNR=14						
KURK				Pg	**Pb**	**01 34 35.2**	**0.0**
	0.5nm,0.3s,baz=144,slow=18,SNR=28						
KURK				Sn	**Sn**	**01 35 14.3**	**-0.5**
	0.5nm,0.3s,baz=150,slow=18,SNR=4.1						
KURK				Lg		01 35 29.2	
	1.7nm,0.3s,baz=140,slow=30,SNR=9.9						
TKM2	**Tokmak 2**	**6.14**	**229**	⇓Lg		01 36 35.1	
	7.0nm,1.1s						
ZALV	**Zalesovo Beam**	**7.07**	**14**	Pn	**Pn**	**01 35 05.3**	**+0.1**
	0.5nm,0.3s,baz=193,slow=15,SNR=9.7						
ZALV				Lg		01 37 02.5	
	0.5nm,0.3s,baz=198,slow=27,SNR=4.5						
BVAR	**Borovoye Array**	**9.45**	**313**	Pn	**Pn**	**01 35 38.1**	**+0.2**
	0.2nm,0.3s,baz=142,slow=14,SNR=2.7						
BVAR				Lg		01 38 19.2	
	0.2nm,0.3s,baz=126,slow=27,SNR=3.8						

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*NEIC **24** 01:38:12.2±3.8, 23°.76S×179°.00E, h518km±42km, mb4.1/3, Error ellipse: s-maj=38.2km s-min=16.6km az=197.0*

*IDC **24** 01:38:12.2±5.6, 23°.70S×179°.00E, h513km±58km, mb3.4/6, mb1 3.5/7, mb1mx3.4/16, mbtmp3.4/7, Error ellipse: s-maj=42.9km s-min=23.6km az=29.0*

ISC 24 01:38:17.3±4.2**, 24°.3S**±0°.2×**179°.0E**±0°.2**, h578**km±56km**, n23,** σ**0s.69**/15**, mb3.9**/7**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.96**	**186**	P	**P**	**01 41 16.0**	**+0.2**
	2.7nm,0.3s,baz=345,slow=5.2,SNR=15						
URZ				S	**S**	**01 43 42.0**	**-0.5**
	0.3nm,0.3s,baz=13,slow=18,SNR=4.4						
RPZ	**Rata Peaks**	**20.39**	**197**	P	**P**	**01 42 19.8**	**+4.5**
	8.2nm,0.7s,baz=340,slow=16,SNR=5.4						
CMSA	**Cobar Meteorol**	**30.17**	**249**	*e*P	**P**	**01 43 42.9**	**+1.2**
CTA	**Charters Tower**	**30.53**	**271**	*e*P	**P**	**01 43 44.7**	**-0.2**
	4.7nm,0.3s,mb4.6						
CTA	**Charters Tower**	**30.53**	**271**	P	**P**	**01 43 43.4**	**-1.5**
	6.9nm,0.4s,mb4.6,baz=91,slow=9.5,SNR=14						
CTA	**Charters Tower**	**30.53**	**271**	P	**P**	**01 43 43.4**	**-1.5**
CTAO	**Charters Tower**	**30.53**	**271**	*e*P	**P**	**01 43 44.4**	**-0.5**
	3.0nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**33.68**	**249**	*e*P	**P**	**01 44 12.1**	**+0.7**
	3.4nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**33.68**	**249**	P	**P**	**01 44 12.4**	**+1.0**
	3.4nm,0.5s,mb4.2,baz=96,slow=11,SNR=17						
ASAR	**Alice Springs**	**41.03**	**261**	P	**P**	**01 45 11.6**	**+0.2**
	2.5nm,0.6s,mb3.9,baz=92,slow=8.2,SNR=24						
WRAB	**Tennant Creek**	**41.42**	**267**	*e*P	**P**	**01 45 13.7**	**-1.0**
	2.2nm,0.6s,mb3.9						
FORT	**Forrest**	**45.27**	**250**	*e*P	**P**	**01 45 44.3**	**0.0**
	2.6nm,0.4s,mb4.1						
FITZ	**Fitzroy Crossi**	**49.85**	**266**	P	**P**	**01 46 18.5**	**-0.2**
	2.0nm,1.0s,mb3.5,baz=90,slow=7.1,SNR=3.7						
TXAR	**Lajitas Array**	**91.47**	**58**	P	**P**	**01 50 22.9**	**0.0**
	0.4nm,0.8s,mb3.4,baz=217,slow=6.1,SNR=4.3						
BVAR	**Borovoye Array**	**120.14**	**319**	PKP	PKPdf	01 56 02.2	-0.6
	0.5nm,0.4s,baz=0.0,slow=2.9,SNR=3.8						
ARCES	**ARCESS Array B**	**132.12**	**348**	PKP	PKPdf	01 56 25.4	+0.3
	2.6nm,0.9s,baz=35,slow=4.4,SNR=4.3						
ARCES	**ARCESS Array B**	**132.12**	**348**	PKP	PKPdf	01 56 25.4	+0.3
AKASG	**Malin Array Be**	**144.82**	**326**	PKP	PKPdf	01 56 48.0	-0.7
	0.9nm,0.4s,baz=46,slow=4.2,SNR=8.3						
MMAI	**Mount Meron Ar**	**147.01**	**294**	PKPbc	PKPbc	01 56 57.1	+1.0
	1.2nm,0.5s,baz=90,slow=5.0,SNR=8.0						
BRTR	**Keskin Array B**	**147.08**	**306**	PKPbc	PKPbc	01 56 55.7	-0.4
	0.6nm,0.6s,baz=152,slow=5.7,SNR=4.5						
CLL	**Collm**	**150.99**	**342**	⇓*i*PKPbc	PKPbc	01 57 04.8	-0.4
	comp=Z,4.0nm,0.8s						
CLL				*e*PKPab	PKPab	01 57 14.0	-1.4
GERES	**GERESS Array B**	**152.93**	**338**	PKPbc	PKPbc	01 57 08.8	-0.7
	comp=Z,0.2nm,0.5s,baz=14,slow=1.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**168.57**	**194**	PKPab	PKPab	01 58 35.1	+2.3
	comp=Z,0.6nm,0.8s,baz=145,slow=3.9,SNR=3.5						

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*IDC **24** 01:38:18.7±0.8, 10°.41N×145°.55E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.1/22, mbtmp4.0/13, ML4.6/1, Error ellipse: s-maj=27.6km s-min=18.3km az=78.0*

*NEIC **24** 01:38:20.1±0.4, 10°.44N×145°.55E, h10km, mb4.3/6, Error ellipse: s-maj=15.3km s-min=9.1km az=83.0*

*ISCJB **24** 01:38:21.9±0.6, 10°.47N±0°.06×145°.5E±0°.1, h33km, mb4.1/19, Error ellipse: s-maj=19.8km s-min=8.0km az=174.5*

ISC 24 01:38:23.9±0.6**, 10°.47N**±0°.06×**145°.5E**±0°.1**, h35**km**, n24,** σ**0s.99**/22**, mb4.1**/19**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.17**	**348**	Pn	**Pn**	**01 39 09.2**	**-2.1**
	62nm,0.3s,baz=180,slow=12,SNR=34						
GUMO				Sn	**Sn**	**01 39 46.1**	**-1.8**
	168nm,0.3s,baz=180,slow=23,SNR=21						
COEN	**Coen**	**24.38**	**186**	*e*P	**P**	**01 43 38.4**	**-0.6**
	25nm,0.7s,mb4.8						
MJAR	**Matsushiro Arr**	**26.79**	**347**	P	**P**	**01 44 01.4**	**+0.7**
	0.9nm,0.6s,mb3.5,baz=160,slow=9.2,SNR=4.5						
KSRS	**Korea Array**	**31.19**	**332**	P	**P**	**01 44 40.6**	**+0.8**
	1.0nm,0.4s,mb4.0,baz=142,slow=9.1,SNR=6.7						
ASAR	**Alice Springs**	**35.78**	**198**	P	**P**	**01 45 19.4**	**-0.4**
	1.3nm,0.8s,mb3.9,baz=26,slow=6.6,SNR=8.0						
ASAR	**Alice Springs**	**35.78**	**198**	P	**P**	**01 45 19.4**	**-0.4**
STKA	**Stephens Creek**	**42.27**	**185**	P	**P**	**01 46 12.9**	**-1.1**
	1.5nm,0.6s,mb3.8,baz=50,slow=7.9,SNR=3.1						
BBOO	**Buckleboo**	**43.97**	**192**	*e*P	**P**	**01 46 27.1**	**-0.6**
	6.6nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**45.69**	**286**	P	**P**	**01 46 40.9**	**-0.9**
	1.5nm,0.5s,mb4.2,baz=83,slow=5.8,SNR=6.7						
CHTO	**Chiang Mai**	**45.71**	**286**	*e*P	**P**	**01 46 41.6**	**-0.3**
	1.9nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**49.31**	**326**	*e*P	**P**	**01 47 10.6**	**+1.2**
	1.2nm,0.7s,mb4.0						
SONM	**Songino Array**	**49.65**	**326**	P	**P**	**01 47 13.9**	**+1.9**
	1.0nm,0.6s,mb4.0,baz=150,slow=7.9,SNR=7.1						
MKAR	**Makanchi Array**	**64.18**	**317**	P	**P**	**01 48 56.4**	**+1.3**
	0.7nm,0.6s,mb3.8,baz=91,slow=7.5,SNR=6.8						
ZALV	**Zalesovo Beam**	**64.53**	**325**	P	**P**	**01 48 56.2**	**-0.9**
	0.7nm,0.6s,mb3.9,baz=91,slow=6.9,SNR=3.4						
KURK	**Kurchatov**	**67.38**	**321**	*e*P	**P**	**01 49 15.9**	**+0.4**
	3.3nm,0.9s,mb4.4						
MCK	**McKinley**	**69.95**	**26**	*e*P	**P**	**01 49 30.9**	**-0.5**
	3.8nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**72.77**	**322**	P	**P**	**01 49 49.7**	**+1.2**
	1.3nm,0.5s,mb4.1,baz=108,slow=9.5,SNR=9.5						
ABKAR	**Akbulak array**	**79.28**	**318**	*e*P	**P**	**01 50 26.2**	**+0.5**
	1.0nm,0.8s,mb3.8						
YKA	**Yellowknife Ar**	**85.32**	**27**	P	**P**	**01 50 56.8**	**-0.2**
	0.4nm,0.7s,mb3.7,baz=293,slow=5.0,SNR=5.2						
NVAR	**Mina Array Bea**	**88.36**	**51**	P	**P**	**01 51 13.0**	**+0.6**
	1.4nm,0.7s,mb4.3,baz=269,slow=5.5,SNR=8.6						
ELK	**Elko**	**90.15**	**49**	P	**P**	**01 51 21.2**	**+0.5**
	1.8nm,0.9s,mb4.4,baz=277,slow=5.2,SNR=6.7						
TORD	**Torodi Ar. Bea**	**137.11**	**302**	PKP	PKPdf	01 57 46.5	+2.2
	0.2nm,0.6s,baz=40,slow=2.9,SNR=4.2						
DBIC	**Dimbokro**	**145.94**	**299**	PKPbc	PKPbc	01 58 00.9	0.0
	1.7nm,0.5s,baz=90,slow=2.0,SNR=3.3						
LPAZ	**La Paz**	**146.78**	**104**	PKPbc	PKPbc	01 58 04.3	+1.1
	1.7nm,0.5s,baz=311,slow=1.6,SNR=7.7						

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*IDC **24** 01:46:18.8±8.4, 31°.04N×105°.01E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, Error ellipse: s-maj=223.2km s-min=54.1km az=17.0*

*ISCJB **24** 01:46:27.1±1.4, 32°.30N±0°.07×105°.1E±0°.2, h10km, mb3.6/6, Error ellipse: s-maj=24.4km s-min=6.4km az=18.9*

ISC 24 01:46:28.4±1.4**, 32°.28N**±0°.07×**105°.2E**±0°.2**, h10**km**, n8,** σ**1s.19**/13**, mb3.6**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.83**	**222**	Pn	**Pn**	**01 47 00.5**	**+0.7**
CD2				Pg	**Pg**	**01 47 04.9**	**+1.5**
CD2				Sg	**Sg**	**01 47 25.5**	**-1.6**
CD2				smax			
	comp=N,660nm,0.6s						
LZH	**Lanzhou**	**3.95**	**344**	*e*Pn	**Pn**	**01 47 30.5**	**+1.5**
LZH				Pg	**Pg**	**01 47 39.8**	**-4.3**
LZH				Sn	**Sn**	**01 48 15.0**	**-0.5**
LZH				Sg	**Sg**	**01 48 29.6**	**-5.7**
LZH				smax			
	comp=N,140nm,0.5s						
LZH				smax			
	comp=E,280nm,0.5s						
LZH				LR	LR		
	comp=E,450nm,4.4s						
LZH				LR	LR		
	comp=Z,550nm,5.5s						
MKAR	**Makanchi Array**	**22.73**	**316**	P	**P**	**01 51 31.7**	**+1.4**
	comp=Z,0.3nm,0.3s,mb3.1,baz=122,slow=9.9,SNR=6.0						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**01 52 03.3**	**+1.3**
	comp=Z,0.5nm,0.3s,mb3.5,baz=101,slow=7.5,SNR=2.6						
BVAR	**Borovoye Array**	**32.46**	**320**	P	**P**	**01 52 58.2**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=98,slow=10,SNR=2.9						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**01 56 09.4**	**-1.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=93,slow=9.0,SNR=2.4						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**01 56 13.1**	**-1.5**
	comp=Z,1.7nm,0.9s,mb4.1,baz=48,slow=9.8,SNR=3.3						
YKA	**Yellowknife Ar**	**80.30**	**18**	P	**P**	**01 58 38.4**	**-0.8**
	comp=Z,0.2nm,0.5s,mb3.3,baz=322,slow=4.7,SNR=4.6						

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*BJI **24** 01:59:32.9, 53°.22N×172°.81E, h79km, mB4.8/9, mb4.8/14, Ms4.6/9, Ms7 4.2/9*

*ISCJB **24** 01:59:33.8±0.6, 53°.12N±0°.06×172°.73E±0°.05, h77km±5km, mb4.5/87, Error ellipse: s-maj=9.2km s-min=5.0km az=175.0*

*MOS **24** 01:59:33.3±0.9, 53°.08N×172°.73E, h75km, mb4.7/46, Error ellipse: s-maj=12.0km s-min=5.9km az=97.4*

*NEIC **24** 01:59:35.3±0.6, 53°.14N×172°.72E, h77km±5km, mb4.4/53, Error ellipse: s-maj=7.7km s-min=4.0km az=178.0*

*IDC **24** 01:59:37.2±0.6, 53°.20N×172°.65E, h95km±3km, mb4.1/23, mb1 4.2/24, mb1mx4.1/31, mbtmp4.1/24, MS3.4/1, Ms1 3.4/1, ms1mx2.4/27, Error ellipse: s-maj=16.0km s-min=9.2km az=174.0*

ISC 24 01:59:35.0±0.6**, 53°.17N**±0°.06×**172°.71E**±0°.04**, h71**km±5km**, h88**km±2.5km**:pP-P, n210,** σ**0s.92**/219**, mb4.5**/87**, 6C-7D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.95**	**117**	*e*Pn	**Pn**	**01 59 51.8**	**-1.0**
SMY				*e*Sn	**Sn**	**02 00 05.8**	**-0.3**
PET	**Petropavlovsk**	**8.46**	**275**	*e*P	**Pn**	**02 01 36.6**	**+2.0**
PET				*e*S	**Sn**	**02 03 05.8**	**-2.6**
PET				pmax	pmax		
	comp=Z,25nm,0.3s						
PET				smax			
	comp=E,114nm,0.5s						
PET				smax			
	comp=N,70nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PEA0B	**Petropavlovsk-**	**9.03**	**276**	*e*Pn	**Pn**	**02 01 43.7**	**+1.4**
PETK	**Petropavlovsk-**	**9.03**	**276**	P	**Pn**	**02 01 44.5**	**+2.2**
	comp=Z,3.6nm,0.3s,baz=94,slow=20,SNR=80						
PETK				S	**Sn**	**02 03 21.2**	**-1.0**
	comp=Z,6.5nm,0.3s,baz=39,slow=9.6,SNR=12						
PETK	**Petropavlovsk-**	**9.03**	**276**	P	**Pn**	**02 01 44.5**	**+2.2**
PETK				S	**Sn**	**02 03 21.2**	**-1.0**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				smax			
	comp=N,7.0nm,0.3s						
FALS	**False Pass**	**14.13**	**74**	*e*Pn	**Pn**	**02 02 56.8**	**+5.5**
SEY	**Seymchan**	**14.47**	**321**	⇑*e*P	**Pn**	**02 03 00.6**	**+4.9**
BILL	**Bilibino**	**15.24**	**351**	⇓*e*P	**Pn**	**02 03 08.0**	**+2.4**
BILL				*e*S	**S**	**02 05 55.4**	**-10**
BILL				pmax	pmax		
	comp=Z,25nm,1.7s						
BILL	**Bilibino**	**15.24**	**351**	*e*P	**Pn**	**02 03 07.5**	**+1.9**
	comp=Z,6.6nm,0.6s						
KDAK	**Kodiak Island**	**20.06**	**63**	P	**P**	**02 04 00.9**	**-1.2**
	comp=Z,5.7nm,0.4s						
KDAK	**Kodiak Island**	**20.06**	**63**	P	**P**	**02 04 00.9**	**-1.2**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
RSO	**Redoubt South**	**20.07**	**55**	*e*P	**P**	**02 04 06.7**	**+4.5**
CHUM	**Lake Minchumin**	**20.88**	**45**	*e*P	**P**	**02 04 08.5**	**-2.4**
	comp=Z,6.2nm,0.5s						
KTH	**Kantishna Hill**	**21.41**	**47**	*e*P	**P**	**02 04 17.1**	**+0.6**
	comp=Z,3μm,0.9s						
BPAW	**Bear Paw Mtn.**	**21.50**	**45**	*e*P	**P**	**02 04 18.0**	**+0.5**
	comp=Z,17nm,1.1s,mb4.3						
RC01	**Rabbit Creek A**	**21.60**	**54**	*e*P	**P**	**02 04 20.3**	**+1.7**
	comp=Z,11nm,0.5s,mb4.5						
ASAJ	**Asahikawa**	**21.72**	**258**	P	**P**	**02 04 18.8**	**-1.2**
	comp=Z,4.2nm,0.3s,mb4.2,baz=69,slow=17,SNR=4.0						
ASAJ	**Asahikawa**	**21.72**	**258**	P	**P**	**02 04 18.8**	**-1.2**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MCK	**McKinley**	**22.32**	**47**	*e*P	**P**	**02 04 26.4**	**+0.2**
MCK				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.5						
MCK	**McKinley**	**22.32**	**47**	*e*P	**P**	**02 04 26.4**	**+0.2**
	comp=Z,22nm,0.9s,mb4.5						
COLA	**College**	**23.00**	**44**	*e*P	**P**	**02 04 33.1**	**-0.2**
COLA				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.6						
COLA	**College**	**23.00**	**44**	*e*P	**P**	**02 04 33.1**	**-0.3**
	comp=Z,31nm,0.9s,mb4.6						
BMRM	**Bremner River**	**24.09**	**54**	*e*P	**P**	**02 04 43.4**	**0.0**
	comp=Z,10nm,0.9s,mb4.2						
YAK	**Yakutsk**	**24.27**	**308**	*e*P	**P**	**02 04 44.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
EGAK	**Eagle**	**25.82**	**45**	*e*P	**P**	**02 04 58.0**	**-1.0**
	comp=E,22nm,0.7s,mb4.7						
TIXI	**Tiksi**	**26.51**	**331**	*e*P	**P**	**02 05 05.1**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
TIXI	**Tiksi**	**26.51**	**331**	*e*P	**P**	**02 05 04.6**	**-0.6**
	comp=Z,11nm,0.8s,mb4.4						
DAWY	**Dawson**	**26.55**	**47**	*e*P	**P**	**02 05 05.5**	**-0.1**
HYT	**Haines Junctio**	**27.57**	**54**	*e*P	**P**	**02 05 17.0**	**+2.2**
INK	**Inuvik**	**29.13**	**38**	P	**P**	**02 05 28.6**	**-0.1**
	comp=Z,3.3nm,0.3s,mb4.5,baz=265,slow=7.5,SNR=63						
INK				LR	LR	02 19 12.7	
	comp=Z,72nm,18.2s,baz=29,slow=40						
INK	**Inuvik**	**29.13**	**38**	P	**P**	**02 05 28.6**	**-0.1**
INK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
INK				MLR	MLR		
	comp=Z,72nm,18.2s						
INK	**Inuvik**	**29.13**	**38**	*e*P	**P**	**02 05 28.4**	**-0.3**
	comp=Z,15nm,1.4s,mb4.4						
CN2	**Changchun**	**32.16**	**272**	*e*P	**P**	**02 05 57.4**	**+1.8**
YKA	**Yellowknife Ar**	**37.78**	**46**	P	**P**	**02 06 43.6**	**-0.1**
	comp=Z,6.4nm,0.5s,mb4.7,baz=290,slow=8.0,SNR=76						
YKA				pP	pP	02 07 06.3	+5.5
	comp=Z,3.0nm,0.8s,baz=288,slow=8.4,SNR=5.0						
YKA	**Yellowknife Ar**	**37.78**	**46**	P	**P**	**02 06 43.6**	**-0.1**
YKA				*PP	pP	02 07 06.3	+5.5
YKA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RES	**Resolute Bay**	**40.27**	**24**	*e*P	**P**	**02 07 04.1**	**-0.2**
RES				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
RES	**Resolute Bay**	**40.27**	**24**	*e*P	**P**	**02 07 04.0**	**-0.2**
	comp=Z,5.2nm,1.1s,mb4.3						
SONM	**Songino Array**	**41.15**	**290**	P	**P**	**02 07 12.7**	**+0.8**
	comp=Z,2.5nm,0.5s,mb4.3,baz=60,slow=7.5,SNR=16						
SONM	**Songino Array**	**41.15**	**290**	P	**P**	**02 07 12.7**	**+0.8**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**42.21**	**279**	*e*P	**P**	**02 07 21.3**	**+0.7**
HHC				pP	pP	02 07 39.8	+1.8
HHC				sP	sP	02 07 48.8	+2.7
HHC				PP	PP	02 09 02.5	+3.1
HHC				PcP	PcP	02 09 14.9	+1.5
HHC				ScP	ScP	02 12 58.3	+0.8
HHC				S	**S**	**02 13 34.9**	**-0.6**
HHC				sS	sS	02 14 07.9	+2.8
HHC				SS	SS	02 16 39.8	-5.7
HHC				ScS	ScS	02 17 14.0	-1.4
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,82nm,7.0s						
HHC				LR	LR		
	comp=N,95nm,13.7s						
HHC				LR	LR		
	comp=E,110nm,13.9s						
HHC				LR	LR		
	comp=Z,73nm,14.2s						
EDM	**Edmonton**	**42.43**	**59**	*e*P	**P**	**02 07 22.5**	**+0.3**
FFC	**Flin Flon**	**47.24**	**52**	*e*P	**P**	**02 08 00.0**	**-0.4**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
FFC	**Flin Flon**	**47.24**	**52**	*e*P	**P**	**02 07 60.0**	**-0.5**
	comp=Z,1.5nm,0.7s,mb3.8						
HLID	**Hailey**	**47.38**	**71**	*e*P	**P**	**02 08 00.6**	**-1.0**
	comp=Z,0.7nm,0.4s,mb3.7						
BOZ	**Bozeman (W)**	**47.65**	**67**	*e*P	**P**	**02 08 03.7**	**0.0**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BOZ	**Bozeman (W)**	**47.65**	**67**	*e*P	**P**	**02 08 03.7**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.0						
FCC	**Fort Churchill**	**48.40**	**44**	*e*P	**P**	**02 08 08.9**	**-0.5**
	comp=Z,0.3nm,1.0s						
FCC				*e*		02 08 33.1	
NVAR	**Mina Array Bea**	**48.41**	**79**	P	**P**	**02 08 10.1**	**+0.4**
	comp=Z,0.7nm,0.8s,mb3.6,baz=313,slow=6.3,SNR=4.2						
ZALV	**Zalesovo Beam**	**48.92**	**308**	P	**P**	**02 08 11.3**	**-2.0**
	comp=Z,0.9nm,0.4s,mb4.0,baz=29,slow=3.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**48.92**	**308**	P	**P**	**02 08 11.3**	**-2.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
LZH	**Lanzhou**	**49.90**	**279**	*e*P	**P**	**02 08 21.4**	**+0.3**
LZH				pP	pP	02 08 40.3	+1.4
LZH				sP	sP	02 08 49.0	+2.1
LZH				PP	PP	02 10 18.3	+2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,53nm,6.2s						
LZH				LR	LR		
	comp=E,310nm,15.0s						
LZH				LR	LR		
	comp=Z,370nm,18.6s						
GTA	**Gaotai**	**50.05**	**285**	*e*P	**P**	**02 08 22.0**	**-0.2**
GTA				pP	pP	02 08 40.8	+0.8
GTA				sP	sP	02 08 49.6	+1.6
GTA				S	**S**	**02 15 29.1**	**+1.3**
GTA				sS	sS	02 16 02.1	+4.0
GTA				SS	SS	02 19 01.8	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
GTA				pmax	pmax		
	comp=Z,44nm,5.1s						
GTA				LR	LR		
	comp=N,73nm,15.0s						
GTA				LR	LR		
	comp=E,76nm,16.8s						
GTA				LR	LR		
	comp=Z,68nm,15.6s						
DUG	**Dugway**	**50.46**	**73**	*e*P	**P**	**02 08 25.7**	**+0.5**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
DUG	**Dugway**	**50.46**	**73**	*e*P	**P**	**02 08 25.7**	**+0.5**
	comp=Z,1.4nm,0.6s,mb4.1						
BW06	**Boulder Array**	**50.63**	**69**	*e*P	**P**	**02 08 26.1**	**-0.4**
	comp=Z,1.3nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**50.63**	**69**	P	**P**	**02 08 26.2**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.1,baz=314,slow=3.1,SNR=13						
PDAR				pP	pP	02 08 48.1	+3.8
	comp=Z,0.8nm,0.7s,baz=318,slow=2.0,SNR=3.8						
PDAR				sP	sP	02 09 00.4	+8.1
	comp=Z,0.9nm,0.8s,baz=320,slow=4.4,SNR=3.1						
SRU	**San Rafael**	**52.50**	**73**	*e*P	**P**	**02 08 41.0**	**+0.6**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
SRU	**San Rafael**	**52.50**	**73**	*e*P	**P**	**02 08 41.0**	**+0.5**
	comp=Z,5.8nm,1.1s,mb4.5						
SUMG	**Summit**	**52.69**	**11**	*e*P	**P**	**02 08 41.7**	**+0.3**
	comp=Z,15nm,1.0s,mb5.0						
SUMG				*e*		02 09 06.1	
RSSD	**Black Hills**	**52.78**	**64**	*e*P	**P**	**02 08 42.4**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
RSSD	**Black Hills**	**52.78**	**64**	*e*P	**P**	**02 08 42.4**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.2						
ULM	**Lac du Bonnet**	**52.94**	**54**	P	**P**	**02 08 43.0**	**-0.6**
	comp=Z,3.2nm,0.6s,mb4.5,baz=326,slow=5.7,SNR=6.0						
ULM				pP	pP	02 09 06.5	+4.9
	comp=Z,2.4nm,0.5s,baz=320,slow=6.9,SNR=3.2						
ULM	**Lac du Bonnet**	**52.94**	**54**	*e*P	**P**	**02 08 42.6**	**-1.0**
	comp=Z,2.0nm,0.5s,mb4.4						
CD2	**Chengdu**	**53.56**	**274**	P	**P**	**02 08 49.3**	**+0.9**
CD2				pP	pP	02 09 08.3	+1.9
CD2				sP	sP	02 09 17.0	+2.7
CD2				PP	PP	02 10 52.1	+2.7
CD2				S	**S**	**02 16 13.9**	**-2.2**
CD2				sS	sS	02 16 46.8	+0.2
CD2				SS	SS	02 19 54.3	-2.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=N,170nm,6.5s						
CD2				LR	LR		
	comp=Z,110nm,9.5s						
KURK	**Kurchatov**	**53.91**	**308**	*e*P	**P**	**02 08 50.2**	**-0.5**
KURK				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
KURK	**Kurchatov**	**53.91**	**308**	*e*P	**P**	**02 08 50.2**	**-0.5**
	comp=Z,16nm,0.7s,mb5.2						
WMQ	**Urumqi**	**53.93**	**297**	*e*P	**P**	**02 08 53.5**	**+2.6**
MK31	**Makanchi Array**	**54.75**	**303**	*e*P	**P**	**02 08 56.1**	**-0.7**
MKAR	**Makanchi Array**	**54.75**	**303**	P	**P**	**02 08 55.8**	**-1.0**
	comp=Z,2.7nm,0.7s,mb4.4,baz=52,slow=6.8,SNR=22						
MKAR				pP	pP	02 09 17.9	+3.1
	comp=Z,0.5nm,0.4s,baz=53,slow=8.3,SNR=2.1						
MKAR	**Makanchi Array**	**54.75**	**303**	P	**P**	**02 08 55.8**	**-1.0**
MKAR				*PP	pP	02 09 17.9	+3.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KEV	**Kevo**	**54.87**	**346**	*e*P	**P**	**02 08 56.1**	**-1.3**
KEV				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
KEV	**Kevo**	**54.87**	**346**	*e*p	**P**	**02 08 56.1**	**-1.3**
	comp=Z,15nm,1.2s,mb4.9						
GYA	**Guiyang**	**55.04**	**268**	P	**P**	**02 09 00.8**	**+1.6**
GYA				pP	pP	02 09 18.9	+1.7
GYA				sP	sP	02 09 28.0	+2.8
GYA				PcP	PcP	02 10 01.3	+1.4
GYA				PP	PP	02 11 04.8	+2.0
GYA				ScP	ScP	02 13 51.4	-0.6
GYA				PcS	PcS	02 13 59.8	-0.2
GYA				S	**S**	**02 16 34.5**	**-1.6**
GYA				sS	sS	02 17 06.8	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
ARCES	**ARCESS Array B**	**55.29**	**347**	P	**P**	**02 08 59.4**	**-0.9**
	comp=Z,3.4nm,0.7s,mb4.5,baz=36,slow=7.4,SNR=27						
ARCES	**ARCESS Array B**	**55.29**	**347**	P	**P**	**02 08 59.4**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**55.29**	**347**	P	**P**	**02 08 59.4**	**-0.9**
OGNE	**Ogallala**	**56.02**	**66**	*e*P	**P**	**02 09 07.5**	**+1.5**
	comp=Z,27nm,0.6s,mb5.5						
BVAR	**Borovoye Array**	**56.03**	**315**	P	**P**	**02 09 05.4**	**-0.5**
	comp=Z,2.9nm,0.3s,mb4.7,baz=48,slow=6.7,SNR=22						
BVAR				pP	pP	02 09 27.9	+3.9
	comp=Z,1.5nm,0.4s,baz=50,slow=8.0,SNR=4.9						

BVAR Borovoye Array 56.03 315 P P 02 09 05.4 -0.5
BVAR *PP pP 02 09 27.9 +3.9
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 56.05 315 eP P 02 09 05.8 -0.3
BRVK pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
BRVK Borovoye 56.05 315 eP P 02 09 05.8 -0.3
comp=Z,6.3nm,0.5s,mb4.9
SDCO Great Sand Dun 56.30 71 eP P 02 09 09.2 +1.1
comp=Z,0.8nm,0.6s,mb3.9
EYMN Ely 56.62 53 eP P 02 09 10.1 -0.1
comp=Z,6.6nm,0.9s,mb4.7
ANMO Albuquerque 57.72 74 eP P 02 09 18.7 +0.6
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO Albuquerque 57.72 74 eP P 02 09 18.7 +0.6
comp=Z,1.5nm,0.9s,mb4.0
ARU Arti 58.19 323 d iP P 02 09 20.6 -0.5
ARU S S 02 17 20.0 +3.1
ARU SS SS 02 21 04.1 -4.5
ARU pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ARU Arti 58.19 323 eP P 02 09 20.5 -0.6
comp=Z,5.6nm,0.5s,mb4.8
KMI Kunming 58.39 270 P P 02 09 23.1 +0.2
KMI PP PP 02 11 36.0 +3.4
KMI S S 02 17 23.0 +2.6
KMI SS SS 02 21 14.4 +1.3
KMI pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KMI pmax pmax
comp=Z,67nm,5.8s
KMI LR LR
comp=N,82nm,18.3s
KMI LR LR
comp=E,70nm,14.5s
KMI LR LR
comp=Z,87nm,17.5s
JOF Joensuu 60.36 341 eP P 02 09 34.8 -1.1
JOF pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
JOF Joensuu 60.36 341 ep P 02 09 34.8 -1.1
comp=Z,9.8nm,0.4s,mb5.2
MNTX Cornudas Mount 60.68 75 eP P 02 09 39.3 +0.7
comp=Z,2.4nm,0.8s,mb4.3
TKM2 Tokmak 2 60.85 303 eP P 02 09 39.5 -0.1
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TKM2 Tokmak 2 60.85 303 eP P 02 09 39.5 -0.1
comp=Z,2.7nm,0.8s,mb4.3
SCHQ Schefferville 61.66 35 P P 02 09 44.0 -0.9
comp=Z,14nm,0.7s,mb5.1,baz=335,slow=6.1,SNR=19
SCHQ pP pP 02 10 08.3 +5.1
comp=Z,11nm,0.8s,baz=283,slow=7.1,SNR=6.1
SCHQ Schefferville 61.66 35 eP P 02 09 44.2 -0.7
comp=Z,16nm,0.8s,mb5.1
SCHQ e pP 02 10 04.1 +0.8
SCHQ e 02 10 09.0
UCH Uchtor 61.91 304 eP P 02 09 46.3 -0.4
comp=Z,1.6nm,0.9s,mb4.0
EKS2 Erkin-Say 61.95 304 eP P 02 09 46.9 -0.2
comp=Z,5.5nm,0.8s,mb4.6
EKS2 e pP 02 10 09.1 +3.7
KAF Kangasniemi 62.04 343 eP P 02 09 46.1 -1.2
KAF pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
KAF Kangasniemi 62.04 343 ep P 02 09 46.1 -1.2
comp=Z,9.7nm,0.4s,mb5.2,baz=18,slow=6.0
FINES FINESS Array B 62.70 343 P P 02 09 51.0 -0.7
comp=Z,26nm,1.1s,mb5.1,baz=22,slow=7.3,SNR=49
FINES pP pP 02 10 13.4 +3.3
comp=Z,1.3nm,0.6s,baz=32,slow=7.5,SNR=1.9
FINES FINESS Array B 62.70 343 P P 02 09 51.0 -0.7
FINES *PP pP 02 10 13.4 +3.3
FINES pmax pmax
comp=Z,26nm,1.1s
FINES pmax pmax
comp=Z,1.0nm,0.6s
KSH Kashi 63.17 301 eP P 02 09 58.9 +3.7
KSH epP pP 02 10 18.0 +4.4
KSH esP sP 02 10 27.0 +5.5
KSH ePcP PcP 02 10 34.9 +2.8
KSH ePP PP 02 12 19.9 +5.6
KSH eS S 02 18 22.0 +1.2
KSH esS sS 02 18 56.1 +4.0
KSH eScS ScS 02 19 40.0 -1.5
KSH eSS SS 02 22 32.3 +5.1
KSH pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,55nm,4.0s
KSH LR LR
comp=N,66nm,5.3s
KSH LR LR
comp=E,68nm,5.1s
KSH LR LR
comp=Z,110nm,5.4s
ABKAR Akbulak array 63.22 317 eP P 02 09 55.0 -0.4
comp=Z,6.7nm,0.6s,mb4.8
TXAR Lajitas Array 63.42 76 P P 02 09 56.8 -0.2
comp=Z,1.0nm,0.4s,mb4.1,baz=302,slow=5.4,SNR=24
TXAR pP pP 02 10 20.5 +5.1
comp=Z,0.6nm,0.6s,baz=309,slow=4.2,SNR=3.3
TXAR sP sP 02 10 32.6 +9.3
comp=Z,1.1nm,0.8s,baz=303,slow=4.9,SNR=3.9
TXAR Lajitas Array 63.42 76 P P 02 09 56.8 -0.2
TXAR *PP pP 02 10 20.5 +5.1
TXAR *SP sP 02 10 32.6 +9.3
TXAR pmax pmax
comp=Z,1.0nm,0.4s
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
NB2 NORSAR Subarra 65.19 350 P P 02 10 07.1 -0.9
comp=Z,11nm,1.0s,mb4.6,baz=12,slow=6.5
NOA NORSAR Array B 65.19 350 P P 02 10 07.5 -0.6
comp=Z,6.1nm,0.8s,mb4.5,baz=12,slow=6.5,SNR=18
NOA pP pP 02 10 32.4 +5.8
comp=Z,1.9nm,0.6s,baz=12,slow=6.5,SNR=4.8
NOA NORSAR Array B 65.19 350 P P 02 10 07.5 -0.5
NOA *PP pP 02 10 32.4 +5.8
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 65.19 350 P P 02 10 07.5 -0.6
NOA pP pP 02 10 32.4 +5.8
OBN Obninsk 66.17 334 ⇑ eP P 02 10 13.4 -1.0
OBN eS S 02 18 58.4 +1.2
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.4
OBN MLR MLR
comp=Z,100nm,21.0s
SDMD Soldier's Deli 70.01 51 eP P 02 10 38.3 -0.5
comp=Z,12nm,1.0s,mb4.7
KBL Kabul 70.53 302 eP P 02 10 40.4 -1.6
KBL pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
KBL Kabul 70.53 302 eP P 02 10 40.4 -1.6
comp=Z,6.1nm,0.6s,mb4.6
AKASG Malin Array Be 72.03 337 P P 02 10 50.3 -0.5
comp=Z,4.0nm,0.4s,mb4.6,baz=24,slow=6.2,SNR=12
AKASG pP pP 02 11 15.5 +5.9
comp=Z,2.1nm,0.3s,baz=24,slow=6.3,SNR=7.9
AKASG Malin Array Be 72.03 337 P P 02 10 50.3 -0.5
AKASG *PP pP 02 11 15.5 +5.9
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 72.03 337 eP P 02 10 49.8 -1.0
KIEV Kiev 72.04 337 eP P 02 10 50.1 -0.7
KIEV pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KIEV Kiev 72.04 337 eP P 02 10 50.1 -0.8
comp=Z,2.4nm,0.6s,mb4.2
KWP Kalwaria Pacla 74.48 340 eP P 02 11 05.6 +0.4
KWP e 02 11 29.8
KWP pmax pmax
comp=Z,36nm,1.0s,mb5.1
KWP Kalwaria Pacla 74.48 340 eP P 02 11 05.6 +0.4
comp=Z,36nm,1.0s,mb5.1
KWP e 02 11 29.8
KWP Kalwaria Pacla 74.48 340 ⇓ iP P 02 11 06.1 +0.9
OJC Ojcow 74.48 342 eP P 02 11 05.1 -0.1
CLL Collm 74.51 347 eP P 02 11 10.0 +4.7
CLL Collm 74.51 347 ePcP PcP 02 11 10.0 -10
ZEI Tsey 74.79 324 eP P 02 11 06.5 -0.6
ZEI e pP 02 11 29.4 +3.4
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
STHS Stebnicka Huta 74.98 341 eP P 02 11 09.5 +1.4
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
STHS Stebnicka Huta 74.98 341 eP P 02 11 09.5 +1.4
comp=Z,3.9nm,0.7s,mb4.2
STHS Stebnicka Huta 74.98 341 eP P 02 11 09.5 +1.4
NIE Niedzica 75.15 342 eP P 02 11 10.1 +1.0
KOLS Kolonicke sedl 75.23 340 eP P 02 11 10.2 +0.6
KOLS pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KOLS Kolonicke sedl 75.23 340 eP P 02 11 10.2 +0.6
comp=Z,5.3nm,0.8s,mb4.3
KOLS Kolonicke sedl 75.23 340 eP P 02 11 10.2 +0.6
MORC Moravsky Berou 75.30 344 eP P 02 11 10.0 0.0
MORC pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
MORC Moravsky Berou 75.30 344 eP P 02 11 10.0 +0.1
comp=Z,1.8nm,0.6s,mb4.0
BUR08 Bucovina Ar. S 75.83 338 eP P 02 11 13.1 +0.1
BUR08 e 02 11 38.1
BURAR Bucovina Array 75.85 338 ⇑ iP P 02 11 13.4 +0.3
VRAC Vranov 75.92 344 ⇑ iP P 02 11 13.8 +0.3
TRPA Tarpa 75.94 340 ⇓ iP P 02 11 14.4 +0.8
MEM Membach 75.99 351 P P 02 11 13.6 -0.3
comp=Z,5.6nm,1.2s,mb4.2
KECS Kecovo 76.02 341 eP P 02 11 14.9 +0.9
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KECS Kecovo 76.02 341 eP P 02 11 14.9 +0.9
comp=Z,3.5nm,0.7s,mb4.2
KECS Kecovo 76.02 341 eP P 02 11 14.9 +0.9
BCLA Clavier 76.24 352 P P 02 11 17.6 +2.3
KOLL Kolacno 76.31 343 eP P 02 11 16.5 +0.8
KOLL Kolacno 76.31 343 eP P 02 11 16.5 +0.8
VYHS Vyhne 76.31 342 eP P 02 11 16.3 +0.6
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
VYHS Vyhne 76.31 342 eP P 02 11 16.3 +0.6
comp=Z,2.1nm,0.8s,mb3.9
VYHS Vyhne 76.31 342 eP P 02 11 16.3 +0.6
SMOL Smolenice 76.54 343 eP P 02 11 18.3 +1.3
SMOL Smolenice 76.54 343 eP P 02 11 18.3 +1.3
KHC Kasperske Hory 76.56 346 eP P 02 11 15.9 -1.2
KHC pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
KHC Kasperske Hory 76.56 346 eP P 02 11 15.9 -1.2
comp=Z,4.0nm,1.0s,mb4.1
KHC Kasperske Hory 76.56 346 eP P 02 11 16.9 -0.2
KHC epP pP 02 11 37.7 +1.6
GIVF Givet 76.60 352 eP P 02 11 16.7 -0.6
BAIF Baives 76.69 352 eP P 02 11 17.5 -0.3
comp=Z,4.0nm,0.5s,mb4.1
BAIF Baives 76.69 352 eP P 02 11 17.5 -0.3
BAIF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
BAIF Baives 76.69 352 eP P 02 11 17.5 -0.3
comp=Z,2.0nm,0.5s,mb4.1
GERES GERESS Array B 76.82 346 P P 02 11 18.7 +0.1
comp=Z,1.1nm,0.5s,mb3.9,baz=28,slow=6.0,SNR=19
GERES pP pP 02 11 42.4 +4.9
comp=Z,1.1nm,0.5s,baz=30,slow=5.9,SNR=6.8
GERES GERESS Array B 76.82 346 P P 02 11 18.7 +0.1
GERES *PP pP 02 11 42.4 +4.9
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES pmax pmax
comp=Z,1.0nm,0.5s
ZST Bratislava 76.91 344 eP P 02 11 19.8 +0.7
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ZST Bratislava 76.91 344 eP P 02 11 19.8 +0.7
comp=Z,5.8nm,0.7s,mb4.4
ZST Bratislava 76.91 344 eP P 02 11 19.8 +0.7
DRGR 77.18 339 ⇑ iP P 02 11 21.0 +0.4
MLR Muntele Rosu 77.69 337 ⇓ iP P 02 11 24.9 +1.4
CDF Champ du Feu 78.04 350 eP P 02 11 26.0 +0.6
FLN La Foliniere 78.28 355 eP P 02 11 26.7 0.0
LDF La Druitiere 78.43 355 eP P 02 11 27.5 -0.1
BZS Buzias 78.53 340 ⇓ iP P 02 11 28.2 0.0
PKSM Moragy 78.55 342 ⇓ iP P 02 11 27.7 -0.5
GRR Gorron 78.67 356 eP P 02 11 28.3 -0.6
comp=Z,11nm,0.6s,mb4.6
GRR Gorron 78.67 356 eP P 02 11 28.3 -0.6
GRR pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
GRR Gorron 78.67 356 eP P 02 11 28.3 -0.6
comp=Z,5.3nm,0.6s,mb4.5
HINF Hinteralfeld 78.68 350 eP P 02 11 29.2 +0.3
SGMF Saint Gilles 78.88 357 eP P 02 11 29.5 -0.5
comp=Z,15nm,0.7s,mb4.7
SGMF Saint Gilles 78.88 357 eP P 02 11 29.5 -0.5
SGMF pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
SGMF Saint Gilles 78.88 357 eP P 02 11 29.5 -0.5
comp=Z,7.5nm,0.7s,mb4.6
LOR Lormes 79.49 352 eP P 02 11 32.8 -0.6
SSF Saint Saulge 79.73 353 eP P 02 11 34.2 -0.5
comp=Z,6.4nm,0.9s,mb4.2
SSF Saint Saulge 79.73 353 eP P 02 11 34.2 -0.5
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
SSF Saint Saulge 79.73 353 eP P 02 11 34.2 -0.5
comp=Z,3.2nm,0.9s,mb4.2
AVF Avril sur Loir 80.01 353 eP P 02 11 35.6 -0.6
SMF Signal de Mont 80.11 352 eP P 02 11 36.2 -0.5
MFF Saint Martin d 80.42 355 eP P 02 11 38.4 0.0
TCF Toulx Ste Croi 80.59 353 eP P 02 11 38.9 -0.4
BR131 Keskin Array S 80.94 329 eP P 02 11 41.8 +0.5
comp=Z,2.0nm,0.7s,mb4.1
BRTR Keskin Array B 80.94 329 P P 02 11 41.5 +0.2
comp=Z,1.5nm,0.7s,mb4.0,baz=56,slow=3.0,SNR=17
BRTR pP pP 02 12 05.8 +5.4
comp=Z,0.7nm,0.6s,baz=34,slow=4.3,SNR=3.0
BRTR Keskin Array B 80.94 329 P P 02 11 41.5 +0.2
BRTR *PP pP 02 12 05.9 +5.5
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,0.6s
LPL La Plagne 80.96 350 eP P 02 11 42.0 +0.7
LPG La Plagne 80.98 350 eP P 02 11 42.2 +0.8
comp=Z,20nm,1.3s,mb4.5
LPG La Plagne 80.98 350 eP P 02 11 42.2 +0.8
LPG pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
LPG La Plagne 80.98 350 eP P 02 11 42.2 +0.8
comp=Z,9.9nm,1.3s,mb4.5
BNI Bardonecchia 81.43 350 eP P 02 11 45.1 +1.3
BNI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BNI Bardonecchia 81.43 350 eP P 02 11 45.1 +1.3
comp=Z,4.3nm,0.9s,mb4.3
MBDF Montbardon 81.74 350 eP P 02 11 45.8 +0.4
FITZ Fitzroy Crossi 81.75 225 P P 02 11 45.3 -0.4
comp=Z,2.8nm,0.5s,mb4.3,baz=4.9,slow=6.2,SNR=12
CAF Calviac 81.96 353 eP P 02 11 47.4 +0.8
AQU L'Aquila 83.20 345 eP P 02 11 53.7 +0.6
AQU pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
AQU L'Aquila 83.20 345 eP P 02 11 53.7 +0.6
comp=Z,7.9nm,0.8s,mb4.6
AQU L'Aquila 83.20 345 ⇑ iP P 02 11 54.1 +1.0
ASAR Alice Springs 83.60 215 P P 02 11 54.7 -0.4
comp=Z,1.7nm,0.6s,mb4.1,baz=20,slow=5.0,SNR=20
ASAR Alice Springs 83.60 215 P P 02 11 54.7 -0.4
ASAR pmax pmax
comp=Z,2.0nm,0.6s
MIB Mutribah 84.72 315 eP P 02 12 00.1 -0.9
MIB AMb AMB 02 12 00.8
comp=Z,11nm,0.6s,mb5.0
NAY Al-Naaiem 85.25 314 eP P 02 12 02.5 -1.2
NAY AMb AMB 02 12 03.3
comp=Z,6.3nm,0.8s,mb4.6
RDF Al-Radifah 85.39 314 eP P 02 12 04.0 -0.5
RDF AMb AMB 02 12 05.3
comp=Z,11nm,0.4s,mb5.1
TIP Timpagrande 85.70 341 eP P 02 12 05.3 -0.5
comp=Z,1.7nm,0.7s,mb4.1
STKA Stephens Creek 88.91 206 P P 02 12 21.1 +0.1
comp=Z,1.6nm,0.5s,mb4.3,baz=338,slow=5.4,SNR=2.9
KEST Kesra 90.29 347 P P 02 12 27.1 -0.6
comp=Z,0.6nm,0.6s,mb3.9,baz=349,slow=4.6,SNR=5.0
FORT Forrest 92.17 217 eP P 02 12 36.5 +0.3
comp=Z,23nm,0.9s,mb5.4
MAW Mawson 144.66 219 PKP PKPdf 02 18 60.0 -1.8
comp=Z,8.7nm,0.7s,baz=75,slow=4.7,SNR=25
MAW Mawson 144.66 219 PKIKP PKPdf 02 19 00.0 -1.8
MAW pmax pmax
comp=Z,9.0nm,0.7s

*CRAAG **24** 02:03:24.7, 35°.05N×0°.56W, Ml3.0*
*ISCJB **24** 02:03:25.9±0.7, 35°.51N±0°.04×0°.89W±0°.05, h10km, Error ellipse: s-maj=7.1km s-min=5.0km az=39.7*
*CSEM **24** 02:03:26.8±0.4, 35°.30N×0°.90W, h30km, mb3.5/8, Error ellipse: s-maj=10.2km s-min=6.6km az=4.0*
*NEIC **24** 02:03:26.2, 35°.44N×0°.89W, h0km, MG3.5(MDD), After MDD.*
*MDD **24** 02:03:27.0±0.5, 35°.50N×0°.89W, h0km, mb3.5/8, Error ellipse: s-maj=10.7km s-min=4.2km az=55.0, PRIMO*
ISC 24 02:03:26.5±0.6, 35°.49N±0°.04×0°.89W±0°.05, h10km, n59, σ0°91/101, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTSS	Djebel Tessala	0.22	159	P	Pg	02 03 31.5	+0.4
OTSS	Djebel Tessala	0.22	159	P	Pg	02 03 31.5	+0.4
OTSS	Djebel Tessala	0.22	159	P	Pg	02 03 31.5	+0.4
OTSS	Djebel Tessala	0.22	159	P	Pg	02 03 31.5	+0.4
USTO	Oran	0.37	48	P	Pg	02 03 38.5	+4.7
USTO	Oran	0.37	48	P	Pg	02 03 38.5	+4.7
USTO	Oran	0.37	48	P	Pg	02 03 38.5	+4.7
ODJA	Bouhanifia	0.62	104	P	Pg	02 03 38.0	-0.6
ODJA	Bouhanifia	0.62	104	P	Pg	02 03 38.0	-0.6
ODJA	Bouhanifia	0.62	104	P	Pg	02 03 38.0	-0.6
ENIJ	Nijar	1.82	325	P	Pn	02 03 57.2	-0.8
ENIJ				S	Sn	02 04 21.5	+0.3
ENIJ	Nijar 4.3nm,0.4s	1.82	325	P	Pn	02 03 57.2	-0.8
ENIJ	4.8nm,0.4s,SNR=6.3			S	Sn	02 04 21.5	+0.3
ENIJ	Nijar 4.3nm,0.4s	1.82	325	P	Pn	02 03 57.2	-0.8
ENIJ	4.8nm,0.4s,SNR=6.3			S	Sn	02 04 21.5	+0.3
ENIJ	Nijar 4.3nm,0.4s	1.82	325	P	Pn	02 03 57.2	-0.8
ENIJ	4.8nm,0.4s,SNR=6.3			S	Sn	02 04 21.5	+0.4
EBER	Berja	2.15	312	P	Pn	02 04 01.9	-0.5
EBER				S	Sn	02 04 29.0	0.0
EBER	Berja 6.1nm,0.8s,SNR=7.9	2.15	312	P	Pn	02 04 01.9	-0.5
EBER	17nm,1.3s,SNR=7.9			S	Sn	02 04 29.0	0.0
EBER	Berja 6.1nm,0.8s,SNR=7.9	2.15	312	P	Pn	02 04 01.9	-0.5
EBER	17nm,1.3s,SNR=7.9			S	Sn	02 04 29.0	0.0
EBER	Berja 6.1nm,0.8s,SNR=7.9	2.15	312	P	Pn	02 04 01.9	-0.5
EBER	17nm,1.3s,SNR=7.9			S	Sn	02 04 29.0	0.0
EMUR	La Murta	2.37	353	P	Pn	02 04 05.6	+0.2
EMUR				S	Sn	02 04 30.8	-3.7
EMUR	La Murta 10.0nm,1.1s,SNR=7.9	2.37	353	P	Pn	02 04 05.6	+0.2
EMUR	3.7nm,2.0s,SNR=7.9			S	Sn	02 04 30.8	-3.7
EMUR	La Murta 10.0nm,1.1s,SNR=7.9	2.37	353	P	Pn	02 04 05.6	+0.2
EMUR	3.7nm,2.0s,SNR=7.9			S	Sn	02 04 30.8	-3.7
EMUR	La Murta 10.0nm,1.1s,SNR=7.9	2.37	353	P	Pn	02 04 05.6	+0.2
EGUA	Guajares	2.55	303	P	Pn	02 04 07.5	-0.4
EGUA				S	Sn	02 04 38.5	-0.5
EGUA	Guajares 47nm,0.8s,SNR=7.9	2.55	303	P	Pn	02 04 07.5	-0.4
EGUA	61nm,0.9s,SNR=7.9			S	Sn	02 04 38.5	-0.5
EGUA	Guajares 47nm,0.8s,SNR=7.9	2.55	303	P	Pn	02 04 07.5	-0.4
EGUA	61nm,0.9s,SNR=7.9			S	Sn	02 04 38.5	-0.5
EGUA	Guajares 47nm,0.8s,SNR=7.9	2.55	303	P	Pn	02 04 07.5	-0.4
EGUA	61nm,0.9s,SNR=7.9			S	Sn	02 04 38.5	-0.5
EQUE	Quentar 2.9nm,0.4s,SNR=11	2.68	311	P	Pn	02 04 09.9	+0.2
EQUE	2.9nm,0.4s,SNR=5.6			S	Sn	02 04 42.7	+0.5
EQUE	Quentar 2.9nm,0.4s,SNR=11	2.68	311	P	Pn	02 04 09.9	+0.2
EQUE	2.9nm,0.4s,SNR=5.6			S	Sn	02 04 42.7	+0.5
EQUE	Quentar 2.9nm,0.4s,SNR=11	2.68	311	P	Pn	02 04 09.9	+0.2
EQUE	2.9nm,0.4s,SNR=5.6			S	Sn	02 04 42.7	+0.5
EHUE	Huescar	2.70	330	P	Pn	02 04 10.7	+0.7
EHUE				S	Sn	02 04 42.9	+0.3
EHUE	Huescar 0.4nm,0.8s,SNR=7.9	2.70	330	P	Pn	02 04 10.7	+0.7
EHUE	5.6nm,1.3s,SNR=7.9			S	Sn	02 04 42.9	+0.3
EHUE	Huescar 0.4nm,0.8s,SNR=7.9	2.70	330	P	Pn	02 04 10.7	+0.7
EHUE	5.6nm,1.3s,SNR=7.9			S	Sn	02 04 42.9	+0.3
EHUE	Huescar 0.4nm,0.8s,SNR=7.9	2.70	330	P	Pn	02 04 10.7	+0.8
EHUE	5.6nm,1.3s,SNR=7.9			S	Sn	02 04 42.9	+0.3
ECOG	Cogollos-Vega	2.80	310	P	Pn	02 04 11.7	+0.3
ECOG	Cogollos-Vega	2.80	310	P	Pn	02 04 11.7	+0.3
ERON	Agron	2.81	304	P	Pn	02 04 11.5	+0.1
ERON				S	Sn	02 04 44.9	-0.5
ERON	Agron	2.81	304	P	Pn	02 04 11.5	0.0
ERON				S	Sn	02 04 44.9	-0.5
EQES	Quesada	2.90	323	P	Pn	02 04 14.8	+2.1
EQES				S	Sn	02 04 48.9	+1.2
EQES	Quesada 2.2nm,0.3s,SNR=16	2.90	323	P	Pn	02 04 13.8	+1.0
EQES	2.4nm,0.6s			S	Sn	02 04 48.9	+1.2
EQES	Quesada 2.2nm,0.3s,SNR=16	2.90	323	P	Pn	02 04 13.8	+1.0
EQES	2.4nm,0.6s			S	Sn	02 04 48.9	+1.2
EQES	Quesada 2.2nm,0.3s,SNR=16	2.90	323	P	Pn	02 04 14.8	+2.0
EQES	2.4nm,0.6s			S	Sn	02 04 48.9	+1.2
ETOB	Tobarra	3.20	351	P	Pn	02 04 18.3	+1.5
ETOB				S	Sn	02 04 54.4	-0.5
ETOB	Tobarra 2.6nm,0.8s,SNR=13	3.20	351	P	Pn	02 04 18.3	+1.5
ETOB	22nm,1.4s			S	Sn	02 04 54.4	-0.5
ETOB	Tobarra 2.6nm,0.8s,SNR=13	3.20	351	P	Pn	02 04 18.3	+1.5
ETOB	22nm,1.4s			S	Sn	02 04 54.4	-0.5
ETOB	Tobarra 2.6nm,0.8s,SNR=13	3.20	351	P	Pn	02 04 18.3	+1.5
ETOB	22nm,1.4s			S	Sn	02 04 54.4	-0.5
EBEN	Beniarda	3.25	9	P	Pn	02 04 18.0	+0.4
EBEN				S	Sn	02 04 55.4	-1.0
EBEN	Beniarda	3.25	9	P	Pn	02 04 18.0	+0.4
EBEN				S	Sn	02 04 55.4	-1.0
EMIJ	Mijas	3.33	290	P	Pn	02 04 18.0	-0.6
EMIJ				S	Sn	02 04 55.6	-2.6
EMIJ	Mijas	3.33	290	P	Pn	02 04 18.0	-0.6
EMIJ				S	Sn	02 04 55.6	-2.6
EVIA	Vianos	3.40	338	P	Pn	02 04 20.2	+0.6
EVIA				S	Sn	02 05 00.9	+0.9
EVIA	Vianos 22nm,1.6s,SNR=7.9	3.40	338	S	Sn	02 05 00.9	+0.9

EVIA Vianos 3.40 338 S Sn 02 05 00.9 +0.9
22nm,1.6s,SNR=7.9
EVIA Vianos 3.40 338 P Pn 02 04 20.2 +0.6
EVIA S Sn 02 05 00.9 +0.9
22nm,1.6s,SNR=7.9
EIBI Ibiza 3.96 26 P Pn 02 04 27.3 +0.1
EIBI S Sn 02 05 10.8 -2.9
EIBI Ibiza 3.96 26 P Pn 02 04 27.3 +0.1
1.2nm,0.3s,SNR=4.0
EIBI S Sn 02 05 10.8 -2.9
5.0nm,1.4s,SNR=7.9
EIBI Ibiza 3.96 26 P Pn 02 04 27.3 +0.1
1.2nm,0.3s,SNR=4.0
EIBI S Sn 02 05 10.8 -2.9
5.0nm,1.4s,SNR=7.9
EIBI Ibiza 3.96 26 P Pn 02 04 27.3 0.0
1.2nm,0.3s,SNR=4.0
EBAD Badajoz 5.88 305 P Pn 02 04 53.8 +0.1
EBAD S Sn 02 05 57.5 -3.6
EBAD Badajoz 5.88 305 P Pn 02 04 53.8 +0.1

*ISK **24** 02:15:32.8, 36.°99N×29.°19E, h9km, MD3.0*
*DDA **24** 02:15:32.2, 36.°92N×29.°23E, h7km±7km, Md2.7*
*ISCJB **24** 02:15:33.5±0.5, 36.°94N±0.°03×29.°24E±0.°04, h12km±5km, Error ellipse: s-maj=7.0km s-min=4.5km az=41.0*
*CSEM **24** 02:15:33.3±0.2, 36.°97N×29.°21E, h8km, MD3.0, Error ellipse: s-maj=5.6km s-min=4.3km az=168.0*
ISC 24 02:15:33.8±0.5, 36.°97N±0.°03×29.°21E±0.°04, h9km±5km, n30, σ0°92/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*e*PG	**Pg**	**02 15 38.8**	**-0.9**
GLHS				*e*SG	**Sg**	**02 15 44.4**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**51**	*e*Pg	**Pg**	**02 15 38.8**	**-0.9**
GLHS				*e*Sg	**Sg**	**02 15 44.4**	**+0.6**
FETY	**Fethiye**	**0.34**	**197**	*e*PG	**Pg**	**02 15 39.5**	**-1.1**
FETY				*e*SG	**Sg**	**02 15 46.5**	**+1.3**
FETY	**Fethiye**	**0.34**	**197**	*e*Pg	**Pg**	**02 15 39.5**	**-1.1**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**02 15 41.2**	**-0.2**
GOLH				*i* S	**Sg**	**02 15 47.8**	**+1.2**
GOLH	**Golhisar**	**0.39**	**46**	*i* P	**Pg**	**02 15 41.2**	**-0.2**
GOLH				*i* S	**Sg**	**02 15 47.8**	**+1.2**
TURN	**Turunc**	**0.49**	**259**	*i* P	**Pg**	**02 15 47.4**	**+4.0**
TURN				*i* S	**Sg**	**02 16 00.5**	**+11**
TURN	**Turunc**	**0.49**	**259**	*i* P	**Pg**	**02 15 47.4**	**+4.1**
ELL	**Elmali**	**0.60**	**111**	*e*PG	**Pg**	**02 15 45.3**	**-0.1**
ELL	**Elmali**	**0.60**	**111**	*e*Pg	**Pg**	**02 15 45.3**	**-0.1**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**02 15 45.8**	**-2.1**
DNZL				*i* S	**Sg**	**02 15 57.8**	**+0.4**
DNZL	**Cakiroluk**	**0.73**	**350**	*i* P	**Pg**	**02 15 45.8**	**-2.1**
DNZL				*i* S	**Sg**	**02 15 57.8**	**+0.3**
YER	**Yerkesik**	**0.76**	**283**	*e*PG	**Pg**	**02 15 48.4**	**0.0**
YER	**Yerkesik**	**0.76**	**283**	*e*Pg	**Pg**	**02 15 48.4**	**0.0**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**02 15 45.8**	**-3.4**
AKAS				*i* S	**Sg**	**02 16 10.4**	**+11**
AKAS	**Kas**	**0.80**	**156**	*i* P	**Pg**	**02 15 45.8**	**-3.3**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**02 15 57.6**	**0.0**
AYDN				*i* S	**Sb**	**02 16 15.3**	**+1.2**
AYDN	**Tasoluk**	**1.27**	**304**	*i* P	**Pn**	**02 15 57.6**	**0.0**
AYDN				*i* S	**Sb**	**02 16 15.3**	**+1.2**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**02 15 58.0**	**-0.5**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**02 15 58.0**	**-0.4**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**02 16 00.8**	**+1.2**
BDRM				*i* S	**Sn**	**02 16 17.6**	**-0.7**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P	**Pn**	**02 16 00.8**	**+1.2**
BDRM				*i* S	**Sn**	**02 16 17.6**	**-0.7**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**02 15 60.0**	**+0.2**
KHAL				*i* S	**Sn**	**02 16 18.4**	**-0.1**
KHAL	**Karahalli**	**1.42**	**9**	*i* P	**Pn**	**02 16 00.0**	**+0.3**
KHAL				*i* S	**Sn**	**02 16 18.4**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**02 16 01.1**	**0.0**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**02 16 01.1**	**0.0**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*PN	**Pn**	**02 16 01.3**	**-0.9**
KULA	**Kula-Manisa**	**1.60**	**345**	*e*Pn	**Pn**	**02 16 01.3**	**-1.0**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**02 16 16.8**	**+0.5**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**02 16 16.8**	**+0.5**

*BJI **24** 02:43:34.7, 42.°39S×72.°83W, h9km, mB5.0/12, Ms5.3/19, Ms7 5.1/17*
*NEIC **24** 02:43:36.0, 41.°96S×72.°19W, h9km, mb5.3/90, ML5.3(GUC), After GUC.*
NEIC Felt [IV] at Futaleufu and Puerto Cardenas; [III] at Castro, Lago Ranco, Osorno, Puerto Montt and Puerto Varas; [II] at Palena. Also felt [III] in the Esquel area and [II] at San Carlos de Bariloche, Argentina.
*GUC **24** 02:43:36.2±0.8, 41.°96S×72.°19W, h9km±35km, ML5.3*
*GCMT **24** 02:43:36.0±0.1, 42.°17S×72.°46W, h12km, MW5.4/80, Moment Tensor Solution. s72,c118; s80,c138; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.70±.03; $M_{\theta\theta}$0.04±.03; $M_{\phi\phi}$0.65±.03; $M_{r\theta}$0.30±.06; $M_{\theta\phi}$1.57±.02; $M_{\phi r}$0.83±.07; Best double couple: $M_0$1.80700×10^{17} NP1:φs84.00000°, δ57.00000°, λ-11.00000°. NP2:θs180.00000°, δ81.00000°, λ-146.00000°. Principal axes: T 2.1930, Plg16.0000°, Azm308.0000°; N -0.7720, Plg55.0000°, Azm193.0000°; P -1.4210, Plg30.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **24** 02:43:39.7±0.2, 41.°97S±0.°04×71.°95W±0.°06, h33km, mb5.2/110, MS5.1/22 Error ellipse: s-maj=7.7km s-min=4.0km az=146.2*
*MOS **24** 02:43:40.4±0.9, 41.°86S×72.°06W, h33km, mb5.4/43, MS5.2/11, Error ellipse: s-maj=18.0km s-min=8.2km az=99.3*
*IDC **24** 02:43:42.9±2.7, 42.°04S×72.°03W, h49km±23km, mb4.8/12, mb1 4.9/15, mb1mx4.8/16, mbtmp4.8/15, ML4.3/3, MS4.9/14, Ms1 4.9/14, ms1mx4.8/19, Error ellipse: s-maj=18.6km s-min=13.6km az=87.0*
ISC 24 02:43:42.5±0.8, 41.°97S±0.°04×71.°97W±0.°07, h43km±6km, n668, σ0°68/486, mb5.2/110, MS5.1/22, 143C-132D, Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.33**	**280**	⇑*i*P	**Pn**	**02 43 40.7**	**-11**
HOCH				*i* S	**Sn**	**02 43 43.2**	**-14**
HOCH				AML	AML	02 43 46.4	
comp=N,599μm,0.5s
PMCH **Puerto Montt** **0.84** **304** ⇑*i*P **Pn** **02 43 50.5** **-7.4**
PMCH *i* S **Sn** **02 44 00.4** **-8.8**
PMCH AML AML 02 44 02.4
comp=N,2877μm,0.1s
OSCH **Osorno** **1.64** **327** *e*P **Pn** **02 44 04.8** **-4.1**
OSCH *i* S **Sn** **02 44 26.2** **-2.5**
OSCH AML AML 02 44 31.8
comp=N,16μm,0.5s
VLCH **Valdivia** **2.37** **335** ⇑*i*P **Pn** **02 44 16.7** **-2.1**
VLCH *e*S **Sn** **02 44 48.0** **+1.4**
VLCH AML AML 02 44 55.2
comp=N,84μm,0.6s
TMU **Temuco** **3.27** **351** *e*P **Pn** **02 44 32.5** **+1.4**
TMU *i* S **Sn** **02 45 14.9** **+6.2**
TMU AML AML 02 45 21.1
comp=N,635nm,0.6s
TRQA **Tornquist** **8.60** **66** *e*Pn **Pn** **02 45 47.4** **+3.1**
CFAA **Coronel Fontan** **10.76** **17** P **Pn** **02 46 13.7** **-0.3**
comp=N,0.8nm,0.3s,baz=204,slow=12,SNR=38
CFAA LR LR 02 50 20.0
comp=N,2μm,20.9s,baz=198,slow=37
LCO **Las Campanas** **12.97** **5** *e*Pn **Pn** **02 46 42.9** **-1.2**
LPA **La Plata** **13.06** **62** *de*P **Pn** **02 46 50.0** **+4.7**
comp=N,309nm,0.9s
LPA *es*P 02 47 08.0
USHA **Ushuaia** **13.08** **171** P **Pn** **02 46 46.0** **+0.5**
comp=N,0.5nm,0.3s,baz=323,slow=12,SNR=11
USHA LR LR 02 51 47.5
comp=N,12μm,19.6s,baz=332,slow=37
EFI **East Falkland** **13.57** **140** P **Pn** **02 46 53.5** **+1.3**
CPUP **Villa Florida** **19.70** **42** P **Pn** **02 48 08.0** **-1.9**
comp=N,0.8nm,0.3s,baz=206,slow=11,SNR=29
CPUP LR LR 02 56 40.2
comp=N,7μm,19.2s,baz=67,slow=39
CPUP **Villa Florida** **19.70** **42** *e*P **Pn** **02 48 07.5** **-2.4**
CPUP pmax pmax
comp=Z,95nm,0.5s

CPUP **Villa Florida** **19.70** **42** *e*P **Pn** **02 48 07.5** **-2.4**
comp=Z,95nm,0.5s
PMSA **Palmer Station** **23.30** **171** LR LR 02 57 14.5
comp=Z,5μm,19.1s,MS5.0,baz=338,slow=35
LPAZ **La Paz** **25.80** **8** P **P** **02 49 10.7** **+1.2**
comp=Z,82nm,1.1s,mb5.2,baz=171,slow=7.3,SNR=54
LPAZ PcP PcP 02 52 38.8 +0.6
comp=Z,7.2nm,0.9s,baz=119,slow=3.9,SNR=5.5
LPAZ **La Paz** **25.80** **8** *e*P **P** **02 49 10.5** **+1.0**
LPAZ pmax pmax
comp=Z,121nm,1.1s
LPAZ **La Paz** **25.80** **8** *e*P **P** **02 49 10.5** **+1.0**
comp=Z,121nm,1.1s,mb5.3
NNA **Nana** **30.17** **350** *e*P **P** **02 49 47.9** **-0.7**
comp=Z,22nm,0.9s,mb4.9
ATAH **Atahualpa** **35.15** **349** LR LR 03 02 21.6
comp=Z,259nm,21.1s,MS4.0,baz=305,slow=32
OTAV **Otavalo** **42.42** **350** *e*P **P** **02 51 34.4** **+1.5**
comp=Z,58nm,1.4s,mb5.0
OTAV *e*PcP PcP 02 53 26.4 +0.9
VNA1 **Neumayer--Stat** **42.42** **154** *e*P **P** **02 51 34.4** **+2.0**
VNA1 *e* 02 53 23.6
VNA2 **Neumayer--Watz** **42.74** **154** *e*P **P** **02 51 35.6** **+0.6**
VNA2 *e* 02 53 24.4
ROSC **El Rosal** **46.65** **357** P **P** **02 52 09.0** **+2.3**
comp=Z,9.2nm,0.8s,mb4.8,baz=110,slow=8.6,SNR=13
ROSC LR LR 03 11 13.2
comp=Z,2μm,18.2s,MS5.1,baz=188,slow=35
ROSC **El Rosal** **46.65** **357** *e*P **P** **02 52 09.4** **+2.7**
RCBR **Riachuelo** **48.17** **52** *e*P **P** **02 52 20.3** **+1.8**
comp=Z,81nm,0.9s,mb5.8
QSPA **South Pole Qui** **48.28** **180** P **P** **02 52 18.9** **+0.2**
comp=Z,58nm,0.9s,mb5.6,baz=150,slow=5.9,SNR=39
QSPA PcP PcP 02 53 44.6 -0.2
comp=Z,31nm,1.1s,baz=214,slow=2.0,SNR=3.4
QSPA **South Pole Qui** **48.28** **180** *e*P **P** **02 52 18.3** **-0.4**
comp=Z,87nm,1.1s,mb5.7
QSPA *e*PcP PcP 02 53 45.3 +0.4
MAIT **Maitri** **49.03** **154** *e*P **P** **02 52 23.9** **-0.6**
NVL **N'lazarevskaya** **49.06** **154** *e*P **P** **02 52 31.0** **+6.3**
NVL *e**PP pP 02 52 47.0 +10
NVL *e* 02 53 43.3
NVL *e* 02 54 25.4
NVL *e*PPP 02 55 15.6
NVL *e**SS sS 02 59 37.7 -8.5
NVL pmax pmax
comp=Z,23nm,0.9s,mb5.2
SDV **Santo Domingo** **50.62** **2** *e*P **P** **02 52 36.0** **-1.2**
comp=Z,26nm,0.8s,mb5.2
BCIP **Isla Barro Col** **51.39** **350** *e*P **P** **02 52 42.8** **-0.1**
comp=Z,12nm,0.7s,mb4.9
RKT **Rikitea** **55.13** **269** *e*S **S** **03 00 44.1** **-6.3**
comp=Z,917nm,29.8s
RKT *e*LQ 03 06 48.0
comp=Z,1μm,30.8s
RKT *e*LR LR 03 09 05.5
comp=Z,2μm,29.0s,baz=131
SBA **Scott Base** **55.31** **193** *e*P **P** **02 53 11.9** **+0.8**
SBA pmax pmax
comp=Z,398nm,2.8s,mb6.0
SBA **Scott Base** **55.31** **193** *e*P **P** **02 53 11.8** **+0.8**
comp=Z,398nm,2.8s,mb6.0
TGUH **Tegucigalpa,Un** **57.50** **342** *e*P **P** **02 53 27.4** **+0.1**
comp=Z,183nm,1.8s,mb5.8
OBIP **Obispado Ponce** **59.91** **6** *e*P **P** **02 53 43.1** **-0.9**
comp=Z,74nm,1.0s,mb5.7
CELP **Cerrillos** **59.94** **6** *e*P **P** **02 53 43.3** **-1.0**
CBYP **Canovanas** **60.20** **7** *e*P **P** **02 53 44.2** **-1.7**
comp=Z,43nm,1.0s,mb5.4
GTBY **Guantanamo Bay** **61.65** **357** *e*P **P** **02 53 55.5** **-0.3**
comp=Z,73nm,1.0s,mb5.8
MAW **Mawson** **65.55** **163** *e*P **P** **02 54 20.3** **-0.7**
comp=Z,15nm,1.0s,mb5.0
MAW **Mawson** **65.55** **163** P **P** **02 54 20.4** **-0.6**
comp=Z,26nm,1.1s,mb5.2,baz=215,slow=6.2,SNR=14
MAW LR LR 03 23 36.6
comp=Z,1μm,18.0s,MS5.2,baz=218,slow=36
MAW **Mawson** **65.55** **163** *e*P **P** **02 54 20.5** **-0.5**
MAW pmax pmax
comp=Z,8.0nm,1.1s
MAW **Mawson** **65.55** **163** *e*P **P** **02 54 20.5** **-0.6**
comp=Z,7.6nm,1.1s,mb4.6
TAOE **Nuku Hiva Isla** **67.93** **278** *e*P **P** **02 54 35.6** **-1.3**
comp=Z,218nm,1.2s,mb6.1
TAOE *e*S S 03 03 29.4 -3.3
comp=Z,2μm,27.2s
TAOE *e*LQ 03 12 11.6
comp=Z,1μm,30.3s
TAOE *e*LR LR 03 15 00.8
comp=Z,2μm,26.7s,baz=140
TAOE **Nuku Hiva Isla** **67.93** **278** *e*P **P** **02 54 35.6** **-1.3**
comp=Z,218nm,1.2s,mb6.1
TAOE *e*S S 03 03 29.4 -3.3
TAOE *e*LQ 03 12 11.6
TIAR **Tiarei** **69.19** **265** *e*P **P** **02 54 43.8** **-1.0**
comp=Z,220nm,1.2s,mb6.0
PPT **Papeete** **69.36** **265** *e*P **P** **02 54 45.1** **-0.7**
comp=Z,94nm,1.5s,mb5.5
PPT *e*S S 03 03 46.3 -3.4
comp=Z,729nm,26.0s
PPT *e*LQ 03 12 46.9
comp=Z,900nm,25.2s
PPT *e*LR LR 03 15 45.2
comp=Z,2μm,26.8s,baz=136
PPT **Papeete** **69.36** **265** P **P** **02 54 46.1** **+0.2**
comp=Z,13nm,0.3s,mb5.3,baz=126,slow=13,SNR=3.5
PPT LR LR 03 16 38.7
comp=Z,739nm,21.3s,MS4.9,baz=119,slow=28
PPT **Papeete** **69.36** **265** *e*P **P** **02 54 45.1** **-0.7**
PPT *e*S S 03 03 46.3 -3.4
PPT pmax pmax
comp=Z,95nm,1.5s
PPT **Papeete** **69.36** **265** *e*P **P** **02 54 45.1** **-0.7**
comp=Z,94nm,1.5s,mb5.5
PPT *e*S S 03 03 46.3 -3.4
PPT *e*LQ 03 12 46.9
PMOR **Pomariorio Ree** **69.72** **268** *e*P **P** **02 54 46.9** **-1.2**
comp=Z,108nm,1.4s,mb5.6
CVNA **Calvinia** **70.91** **115** *e*P **P** **02 54 55.1** **-0.1**
CVNA AMb AMB 02 56 41.2
comp=Z,49nm,1.6s,mb5.2
SUR **Sutherland** **71.07** **117** *e*P **P** **02 54 56.6** **+0.5**
comp=Z,23nm,1.0s,mb5.1
MIR **Mirnyy** **71.20** **174** *e*P **P** **02 54 54.0** **-2.3**
MIR pmax pmax
comp=Z,34nm,1.2s,mb5.2
CASY **Casey** **72.07** **181** *e*P **P** **02 54 59.5** **-2.1**
CASY **Casey** **72.07** **181** *e*P **P** **02 55 00.5** **-1.0**
comp=Z,35nm,1.0s,mb5.2
UPI **Upington** **73.86** **114** ⇓*i*P **P** **02 55 11.8** **-1.1**
UPI AMb AMB 02 55 17.4
comp=Z,34nm,2.1s,mb4.9
BRAL **Brewton** **73.94** **347** *e*P **P** **02 55 13.0** **+0.1**
comp=Z,75nm,1.0s,mb5.6
SOE **Somerset East** **73.98** **120** ⇓*i*P **P** **02 55 13.5** **0.0**
SOE AMb AMB 02 56 50.7
comp=Z,45nm,1.6s,mb5.2
PKA **Prieska** **74.06** **116** ⇓*i*P **P** **02 55 13.2** **-0.8**
PKA AMb AMB 02 55 19.1
comp=Z,12nm,2.3s,mb4.4
HKT **Hockley** **74.87** **339** *e*P **P** **02 55 18.4** **0.0**
HKT pmax pmax
comp=Z,44nm,1.6s,mb5.1
HKT **Hockley** **74.87** **339** *e*P **P** **02 55 18.4** **+0.1**
comp=Z,44nm,1.6s,mb5.1
NHSC **New Hope** **75.09** **353** *e*P **P** **02 55 19.8** **+0.2**
comp=Z,102nm,1.1s,mb5.7
HVD **Gariep Dam** **75.29** **118** *e*P **P** **02 55 21.1** **0.0**
HVD *e* 02 55 21.3
HVD AMb AMB 02 56 16.2
comp=Z,35nm,1.4s,mb5.1
COW **Cow Castle Cre** **75.41** **352** *e*P **P** **02 55 21.3** **-0.1**
GOGA **Godfrey** **75.75** **350** *e*P **P** **02 55 22.9** **-0.4**
GOGA pmax pmax
comp=Z,29nm,0.9s,mb5.2
GOGA **Godfrey** **75.75** **350** *e*P **P** **02 55 22.9** **-0.5**
comp=Z,29nm,0.9s,mb5.2
LRAL **Lakeview Retre** **75.90** **347** *e*P **P** **02 55 24.2** **0.0**
comp=Z,42nm,0.9s,mb5.4
NATX **Nacogdoches** **76.28** **340** *e*P **P** **02 55 27.0** **+0.6**
comp=Z,50nm,0.7s,mb5.5
JSC **Jenkinsville** **76.36** **352** *e*P **P** **02 55 26.2** **-0.6**
BOSA **Boshof** **76.41** **116** P **P** **02 55 27.4** **-0.2**
comp=Z,22nm,0.9s,mb5.1,baz=217,slow=5.6,SNR=28
BOSA LR LR 03 24 10.3
comp=Z,532nm,20.6s,MS4.8,baz=224,slow=32

BOSA **Boshof** **76.41** **116** *e*P **P** **02 55 27.4** **-0.1**
BOSA pmax pmax
comp=Z,25nm,0.9s,mb5.1
BOSA **Boshof** **76.41** **116** *e*P **P** **02 55 27.4** **-0.1**
comp=Z,25nm,0.9s,mb5.1
BOSA **Boshof** **76.41** **116** ⇓*i*P **P** **02 55 27.2** **-0.3**
BOSA AMb AMB 02 55 31.2
comp=Z,36nm,1.1s,mb5.2
JCT **Junction City** **76.52** **336** *e*P **P** **02 55 27.8** **0.0**
JCT pmax pmax
comp=Z,44nm,0.8s,mb5.4
JCT **Junction City** **76.52** **336** *e*P **P** **02 55 27.8** **0.0**
comp=Z,44nm,0.8s,mb5.4
628A **Black Gap, Mar** **76.61** **333** ⇑P **P** **02 55 28.3** **0.0**
baz=77,SNR=40
TXAR **Lajitas Array** **76.74** **332** P **P** **02 55 29.2** **+0.2**
comp=Z,9.4nm,0.8s,mb4.8,baz=153,slow=8.3,SNR=98
TXAR LR LR 03 23 27.9
comp=Z,829nm,20.9s,MS5.0,baz=75,slow=31
627A **Terlingua Ranc** **76.75** **332** ⇑P **P** **02 55 29.1** **-0.1**
baz=77,SNR=17
CNNC **Cliffs of the** **77.02** **355** *e*P **P** **02 55 31.0** **+0.5**
TSUM **Tsumeb** **77.10** **104** *e*P **P** **02 55 31.6** **+0.1**
comp=Z,12nm,1.2s,mb4.7
TSUM **Tsumeb** **77.10** **104** *e*P **P** **02 55 33.0** **+1.5**
626A **Big Bend Ranch** **77.11** **332** ⇑P **P** **02 55 31.3** **+0.2**
baz=77,SNR=18
528A **Cox Ranch, San** **77.19** **333** ⇑P **P** **02 55 31.5** **-0.1**
baz=77
LIC **Lamto** **77.37** **70** *e*P **P** **02 55 33.6** **+0.6**
comp=Z,152nm,1.1s,mb5.8
SWZ **Schweizer** **77.39** **115** *e*P **P** **02 55 32.5** **-0.6**
SWZ AMb AMB 02 55 38.0
comp=Z,17nm,1.5s,mb4.8
527A **Woodward Ranch** **77.46** **332** ⇑P **P** **02 55 33.1** **0.0**
baz=78,SNR=40
526A **Mary Lane Ranc** **77.55** **332** ⇓P **P** **02 55 34.0** **+0.4**
baz=78,SNR=40
KIC **Kosan Boka** **77.67** **70** *e*P **P** **02 55 35.3** **+0.6**
comp=Z,126nm,1.1s,mb5.7
TIC **Toumodi** **77.67** **69** *e*P **P** **02 55 35.4** **+0.7**
comp=Z,127nm,1.2s,mb5.7
428A **Kincaid Ranch,** **77.68** **333** ⇓P **P** **02 55 33.7** **-0.6**
baz=78,SNR=6.2
OXF **Oxford** **77.77** **345** *e*P **P** **02 55 34.0** **-0.7**
OXF pmax pmax
comp=Z,53nm,1.0s,mb5.4
OXF **Oxford** **77.77** **345** *e*P **P** **02 55 34.0** **-0.7**
comp=Z,53nm,1.0s,mb5.4
DBIC **Dimbokro** **77.80** **69** P **P** **02 55 36.2** **+0.8**
comp=Z,28nm,1.0s,mb5.2,baz=180,slow=4.1,SNR=14
DBIC LR LR 03 23 39.6
comp=Z,824nm,21.5s,MS5.0,baz=203,slow=31
DBIC **Dimbokro** **77.80** **69** *e*P **P** **02 55 36.7** **+1.3**
DBIC pmax pmax
comp=Z,54nm,1.1s
DBIC **Dimbokro** **77.80** **69** *e*P **P** **02 55 36.7** **+1.3**
comp=Z,54nm,1.1s,mb5.4
DBIC **Dimbokro** **77.80** **69** ⇓*i*P **P** **02 55 36.1** **+0.6**
SWET **Sewanee** **77.87** **348** *e*P **P** **02 55 35.0** **-0.3**
CPCT **Cooper Cave** **77.90** **350** *e*P **P** **02 55 34.9** **-0.5**
PLAL **Pickwick Lake** **77.99** **347** *e*P **P** **02 55 34.4** **-1.5**
TKL **Tuckaleechee C** **78.00** **350** *e*P **P** **02 55 34.6** **-1.4**
427A **Hayter Ranch,** **78.03** **333** ⇑P **P** **02 55 36.1** **-0.2**
baz=78,SNR=14
426A **McDonald Obser** **78.09** **332** ⇓P **P** **02 55 36.6** **+0.1**
baz=78,SNR=18
SEK **Senekal** **78.18** **117** ⇓*i*P **P** **02 55 36.4** **-1.1**
SEK AMb AMB 02 55 43.3
comp=Z,35nm,1.4s,mb5.1
328A **Wristen Ranch,** **78.32** **333** ⇑P **P** **02 55 37.5** **-0.3**
baz=79,SNR=13
425A **Indio Mountain** **78.53** **331** ⇓P **P** **02 55 38.8** **-0.2**
baz=79,SNR=11
UALR **University of** **78.62** **343** *e*P **P** **02 55 39.1** **-0.3**
326A **Caldwell Ranch** **78.66** **332** ⇑P **P** **02 55 39.6** **-0.1**
baz=79,SNR=13
MIAR **Mount Ida** **78.68** **342** *e*P **P** **02 55 39.4** **-0.3**
MIAR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MIAR **Mount Ida** **78.68** **342** *e*P **P** **02 55 39.4** **-0.3**
comp=Z,8.5nm,0.9s,mb4.7
TZTN **Tazewell** **78.85** **351** *e*P **P** **02 55 39.9** **-0.8**
comp=Z,41nm,1.1s,mb5.3
PRYS **Parys** **78.92** **116** *e*P **P** **02 55 40.5** **-1.0**
PRYS AMb AMB 02 55 54.0
comp=Z,25nm,1.5s,mb4.9
LBTB **Lobatse** **78.98** **114** *e*P **P** **02 55 41.5** **-0.4**
LBTB pmax pmax
comp=Z,24nm,1.0s,mb5.1
LBTB **Lobatse** **78.98** **114** *e*P **P** **02 55 41.5** **-0.4**
comp=Z,24nm,1.0s,mb5.1
LBTB **Lobatse** **78.98** **114** ⇓*i*P **P** **02 55 41.3** **-0.6**
LBTB AMb AMB 02 56 45.8
comp=Z,31nm,1.8s,mb5.0
325A **Bean Ranch, Si** **79.06** **332** ⇑P **P** **02 55 41.2** **-0.7**
baz=79,SNR=14
WVT **Waverly** **79.07** **347** *e*P **P** **02 55 40.4** **-1.4**
WVT pmax pmax
comp=Z,26nm,0.9s,mb5.2
WVT **Waverly** **79.07** **347** *e*P **P** **02 55 40.4** **-1.5**
comp=Z,26nm,0.9s,mb5.2
VWCC **Virginia Weste** **79.17** **353** *e*P **P** **02 55 42.5** **+0.2**
BLA **Blacksburg** **79.18** **353** *e*P **P** **02 55 41.9** **-0.5**
BLA pmax pmax
comp=Z,28nm,1.1s,mb5.1
BLA **Blacksburg** **79.18** **353** *e*P **P** **02 55 41.9** **-0.5**
comp=Z,28nm,1.1s,mb5.1
ELN **Prospectdale** **79.22** **353** *e*P **P** **02 55 42.5** **-0.2**
324A **Moseley Ranch,** **79.30** **331** ⇓P **P** **02 55 42.5** **-0.7**
baz=80,SNR=12
226A **Malaga, Loving** **79.38** **333** ⇑P **P** **02 55 43.0** **-0.7**
baz=80,SNR=9.0
UTMT **University of** **79.45** **346** *e*P **P** **02 55 43.9** **0.0**
JSRW **J. Sargeant Re** **79.47** **355** *e*P **P** **02 55 44.1** **+0.2**
MNTX **Cornudas Mount** **79.50** **331** *e*P **P** **02 55 43.0** **-1.3**
comp=Z,8.9nm,1.0s,mb4.7
GDL2 **Guadalupe Moun** **79.60** **332** *e*P **P** **02 55 44.9** **+0.1**
127A **Arkansas Junct** **79.69** **333** ⇑P **P** **02 55 45.1** **-0.2**
baz=80,SNR=5.8
126A **Clayton Basin,** **79.89** **333** ⇑P **P** **02 55 45.9** **-0.4**
baz=80
224A **Corundas Mount** **79.89** **332** ⇓P **P** **02 55 45.9** **-0.5**
baz=80,SNR=18
ERPM **east rand prop** **79.90** **116** *e*P **P** **02 55 45.1** **-1.7**
PARMO **Parma** **79.93** **346** *e*P **P** **02 55 46.5** **+0.1**
125A **Gardner Draw,** **80.12** **332** ⇑P **P** **02 55 47.1** **-0.5**
baz=80,SNR=12
223A **Chaparral, Ant** **80.15** **331** ⇓P **P** **02 55 47.8** **-0.1**
baz=80
CPRX **Cap Rock** **80.19** **333** *e*P **P** **02 55 48.5** **+0.5**
comp=Z,40nm,1.0s,mb5.3
WMOK **Wichita Mounta** **80.20** **338** *e*P **P** **02 55 47.3** **-0.7**
WMOK pmax pmax
comp=Z,21nm,1.1s,mb5.0
WMOK **Wichita Mounta** **80.20** **338** *e*P **P** **02 55 47.3** **-0.7**
comp=Z,21nm,1.1s,mb5.0
Z27A **Tatum** **80.23** **334** P **P** **02 55 48.1** **-0.1**
baz=80,SNR=9.5
SLR **Silverton** **80.33** **116** *e*P **P** **02 55 48.2** **-1.0**
SLR AMb AMB 02 55 53.2
comp=Z,34nm,1.4s,mb5.1
320A **Kipp Ranch, An** **80.34** **329** ⇓P **P** **02 55 48.8** **0.0**
baz=81,SNR=6.8
124A **Stringfield Ra** **80.43** **332** ⇑P **P** **02 55 49.8** **+0.5**
baz=81,SNR=15
Z26A **Caprock** **80.44** **333** ⇑P **P** **02 55 49.1** **-0.3**
baz=81,SNR=22
222A **Williams Famil** **80.49** **330** ⇑P **P** **02 55 50.3** **+0.7**
baz=81,SNR=7.3
319A **Douglas** **80.67** **328** ⇓P **P** **02 55 50.6** **0.0**
baz=81,SNR=7.5
MSTX **Muleshoe** **80.69** **334** ⇑P **P** **02 55 50.5** **-0.2**
baz=81,SNR=20
Z25A **Roswell** **80.70** **333** ⇓P **P** **02 55 50.5** **-0.2**
baz=81,SNR=6.8
Y27A **Causey** **80.73** **334** ⇑P **P** **02 55 50.3** **-0.6**
baz=81,SNR=7.7
USIN **University of** **80.83** **347** *e*P **P** **02 55 50.4** **-0.9**
comp=Z,66nm,1.0s,mb5.5
220A **Playas Peak, P** **80.84** **329** ⇑P **P** **02 55 51.2** **-0.3**
baz=81
SIUC **Southern Illin** **80.85** **346** *e*P **P** **02 55 50.8** **-0.6**
comp=Z,38nm,0.9s,mb5.3
WCI **Wyandotte Cave** **80.88** **349** *e*P **P** **02 55 49.8** **-1.7**
WCI pmax pmax
comp=Z,12nm,0.9s,mb4.8

WCI **Wyandotte Cave** 80.88 349 eP P 02 55 49.8 -1.7
comp=Z,12nm,0.9s,mb4.8
Z24A **Sheeppen Canyo** 80.97 332 ⇓P P 02 55 52.0 -0.1
baz=81,SNR=19
Y26A **Elida** 80.99 334 ⇓P P 02 55 51.4 -0.8
baz=81
318A **Bisbee** 81.00 328 ⇓P P 02 55 52.0 -0.4
baz=81,SNR=10.0
SDMD **Soldier's Deli** 81.12 356 eP P 02 55 53.2 +0.4
AMTX **Amarillo** 81.19 336 eP P 02 55 53.4 +0.1
comp=Z,32nm,0.8s,mb5.3
Z23A **Rita Site, Whi** 81.22 331 ⇑P P 02 55 52.8 -0.6
baz=82
Y25A **Mesa, Roswell** 81.28 333 ⇑P P 02 55 53.1 -0.7
baz=82
FVM **French Village** 81.33 345 eP P 02 55 53.4 -0.6
X27A **F and S Farms,** 81.41 334 ⇑P P 02 55 53.3 -1.2
baz=82
POGA **Pongola** 81.44 119 eP P 02 55 53.3 -1.7
POGA AMb AMB 02 56 24.3
comp=Z,28nm,1.4s,mb5.0
120A **U Bar Ranch, L** 81.46 329 ⇑P P 02 55 55.0 +0.2
baz=82,SNR=12
Z22A **Elephant Butte** 81.47 331 ⇑P P 02 55 55.4 +0.6
baz=82,SNR=6.9
218A **Dragoon** 81.50 328 ⇑P P 02 55 55.3 +0.3
baz=82,SNR=6.8
Y24A **Capitan** 81.54 332 ⇑P P 02 55 55.5 +0.3
baz=82,SNR=18
MCWV **Mont Chateau** 81.56 354 eP P 02 55 54.3 -0.8
comp=Z,22nm,1.0s,mb5.0
X26A **CR and CF Fran** 81.56 334 ⇓P P 02 55 55.5 +0.2
baz=82,SNR=10
CCM **Cathedral Cave** 81.56 345 eP P 02 55 54.8 -0.4
217A **Green Valley** 81.63 327 ⇑P P 02 55 55.8 +0.1
baz=82
OLIL **Olney** 81.65 347 eP P 02 55 54.5 -1.1
comp=Z,25nm,1.0s,mb5.1
MVL **Millersville** 81.68 357 eP P 02 55 56.6 +0.8
Y23A **Lovelace Mesa,** 81.76 332 ⇓P P 02 55 56.3 0.0
baz=82,SNR=15
Z21A **St. Cloud Mine** 81.78 330 ⇑P P 02 55 56.5 +0.1
baz=82,SNR=10
W27A **Bowe Ranch, En** 81.79 335 P P 02 55 56.6 +0.1
baz=82,SNR=11
X25A **Clemmons Ranch** 81.82 333 ⇑P P 02 55 56.4 -0.2
baz=82
SLM **Saint Louis** 81.93 346 eP P 02 55 55.4 -1.7
SLM pmax pmax
comp=Z,40nm,1.0s,mb5.3
SLM **Saint Louis** 81.93 346 eP P 02 55 55.4 -1.7
comp=Z,40nm,1.0s,mb5.3
Z20A **Nine Sixteen R** 81.95 330 ⇑P P 02 55 57.3 0.0
baz=82,SNR=17
W26A **Owens Ranch, T** 82.04 334 ⇓P P 02 55 58.0 +0.2
baz=82,SNR=8.6
118A **Homack Ranch,** 82.06 328 ⇑P P 02 55 58.3 +0.3
baz=82,SNR=8.7
TUC **Tucson** 82.09 328 eP P 02 55 58.5 +0.4
TUC pmax pmax
comp=Z,20nm,1.5s,mb4.8
TUC **Tucson** 82.09 328 eP P 02 55 58.5 +0.4
comp=Z,20nm,1.5s,mb4.8
216A **Three Points,** 82.09 327 ⇓P P 02 55 58.0 -0.1
baz=82
BNM **Barren Site** 82.16 332 eP P 02 55 59.4 +1.0
comp=Z,37nm,1.7s,mb5.0
LENM **Lemitar** 82.29 331 eP P 02 55 60.0 +0.9
LPM **Los Pinos Moun** 82.30 332 eP P 02 56 00.4 +1.2
W25A **X Bar L Ranch,** 82.38 334 P P 02 55 59.4 -0.1
baz=83,SNR=19
SSPA **Standing Stone** 82.39 355 eP P 02 55 59.4 -0.1
comp=Z,17nm,1.0s,mb4.9
Y21A **Point of Rocks** 82.41 331 ⇓P P 02 55 59.6 -0.1
baz=83
ACSO **Alum Creek Sta** 82.42 352 eP P 02 55 59.0 -0.6
comp=Z,43nm,1.0s,mb5.3
LAZ **Ladron** 82.57 331 eP P 02 56 01.7 +1.1
comp=Z,18nm,1.4s,mb4.9
Y20A **Horse Springs,** 82.58 330 ⇑P P 02 56 01.4 +0.8
baz=83,SNR=12
V26A **Tequesquite Ra** 82.69 334 ⇓P P 02 56 00.6 -0.6
baz=83
W24A **Lazy 6 Ranch,** 82.69 333 ⇓P P 02 56 00.7 -0.5
baz=83,SNR=19
ANMO **Albuquerque** 82.82 332 eP P 02 56 02.5 +0.7
ANMO pmax pmax
comp=Z,19nm,0.9s
ANMO **Albuquerque** 82.82 332 eP P 02 56 02.5 +0.7
comp=Z,19nm,0.9s,mb5.1
X21A **Alamocita Cree** 82.84 331 ⇓P P 02 56 01.7 -0.2
baz=83,SNR=23
W23A **Werner Place,** 82.90 332 ⇓P P 02 56 02.3 0.0
baz=83,SNR=9.8
Y19A **Nutrioso** 82.95 330 ⇑P P 02 56 02.8 +0.2
baz=83,SNR=20
V25A **Rancho No Teng** 83.00 334 ⇑P P 02 56 02.5 -0.2
baz=83
X20A **Quemado** 83.19 330 ⇓P P 02 56 04.1 +0.4
baz=83,SNR=10
U26A **Atchley Ranch,** 83.22 335 ⇓P P 02 56 03.5 -0.4
baz=84
Y17A **Roosevelt** 83.33 328 ⇓P P 02 56 04.8 +0.3
baz=84,SNR=7.0
W21A **San Fidel** 83.39 331 ⇓P P 02 56 05.5 +0.7
baz=84
V23A **Ortiz Mt. (NFS** 83.44 333 ⇓P P 02 56 05.4 +0.3
baz=84
U25A **Circle Dot Ran** 83.44 334 ⇑P P 02 56 04.9 -0.1
baz=84
ALLY **Alegheny Colle** 83.56 354 eP P 02 56 05.5 0.0
HDIL **Hopedale** 83.63 347 eP P 02 56 05.3 -0.6
comp=Z,69nm,0.9s,mb5.8
X18A **Snowflake** 83.72 329 ⇑P P 02 56 07.0 +0.5
baz=84
Y16A **Circle Bar Ran** 83.74 328 ⇓P P 02 56 06.8 +0.2
baz=84
KSU1 **Kansas State U** 83.74 341 eP P 02 56 06.2 -0.3
comp=Z,28nm,0.8s,mb5.4
MSNA **Messina** 83.78 114 eP P 02 56 07.1 -0.3
MSNA AMb AMB 02 56 11.8
comp=Z,26nm,1.4s,mb5.2
V22A **San Miguel Ran** 83.84 332 ⇑P P 02 56 07.5 +0.4
baz=84,SNR=13
BINY **Binghamton** 83.86 357 eP P 02 56 07.5 +0.5
comp=Z,23nm,1.0s,mb5.3
Z13A **Yuma Proving G** 84.04 326 ⇑P P 02 56 08.0 -0.1
baz=84
X16A **Lo Mia Camp, P** 84.20 328 ⇑P P 02 56 08.8 -0.2
baz=84,SNR=11
V20A **Brimhall** 84.30 331 ⇓P P 02 56 09.6 +0.1
baz=84,SNR=8.1
TRY **Troy** 84.33 359 eP P 02 56 10.2 +0.9
Y14A **Wickenburg** 84.41 327 ⇑P P 02 56 09.8 -0.2
baz=85
AAM **Ann Arbor** 84.55 351 eP P 02 56 09.5 -1.0
X15A **Humboldt** 84.57 328 ⇑P P 02 56 10.7 -0.2
baz=85,SNR=11
Y13A **Salome** 84.64 326 ⇑P P 02 56 11.2 0.0
baz=85
X14A **Yava** 84.82 327 ⇓P P 02 56 12.0 -0.1
baz=85
W16A **Flagstaff** 84.83 328 ⇑P P 02 56 12.3 +0.1
baz=85,SNR=8.6
T22A **Edith** 84.83 333 ⇑P P 02 56 12.8 +0.7
baz=85,SNR=24
ACCN **Adirondack Com** 84.98 359 eP P 02 56 13.2 +0.6
V17A **Tonalea, Kykot** 85.00 329 ⇓P P 02 56 12.8 -0.2
baz=85,SNR=10
U19A **Dine' College,** 85.01 331 ⇑P P 02 56 12.9 -0.1
baz=85,SNR=15
SDCO **Great Sand Dun** 85.03 334 eP P 02 56 13.4 +0.3
comp=Z,13nm,1.1s,mb5.0
WUAZ **Wupatki** 85.14 329 ⇓P P 02 56 14.0 +0.3
baz=85,SNR=7.4
WUAZ **Wupatki** 85.14 329 eP P 02 56 15.1 +1.4
HNH **Hanover** 85.29 360 eP P 02 56 15.3 +1.1
X13A **Yucca** 85.31 326 ⇑P P 02 56 14.6 0.0
baz=86,SNR=15
U18A **Rough Rock, Ch** 85.36 330 ⇓P P 02 56 14.9 +0.2
baz=86,SNR=12
T19A **Beclabito** 85.42 331 ⇓P P 02 56 15.2 +0.2
baz=86,SNR=17
IRM **Iron Mountain** 85.49 325 ⇑P P 02 56 15.2 -0.2
baz=86
W14A **Seligman** 85.55 327 ⇓P P 02 56 15.7 -0.1
baz=86,SNR=7.1

MVCO **Mesa Verde** 85.57 332 ⇓P P 02 56 15.8 0.0
baz=86,SNR=8.5
NCB **Newcomb** 85.58 358 eP P 02 56 15.3 -0.3
comp=Z,5.4nm,0.8s,mb4.8
PFO **Pinyon Flat Ob** 85.59 324 eP P 02 56 16.2 +0.3
PFO pmax pmax
comp=Z,58nm,1.3s,mb5.7
PFO **Pinyon Flat Ob** 85.59 324 eP P 02 56 16.2 +0.3
comp=Z,58nm,1.3s,mb5.7
SCIA **State Center** 85.67 344 eP P 02 56 16.2 0.0
comp=Z,28nm,0.8s,mb5.5
V15A **Kaibab Nationa** 85.71 328 ⇓P P 02 56 16.8 +0.3
baz=86,SNR=22
BELC **Belle Mtn.** 85.72 325 ⇓P P 02 56 16.3 -0.3
baz=86
S21A **Coal Bank Pass** 85.72 332 ⇑P P 02 56 16.5 0.0
baz=86,SNR=9.9
W13A **Hualapai Mount** 85.77 327 ⇓P P 02 56 17.2 +0.4
baz=86,SNR=12
LBNH **Lisbon** 85.82 0 eP P 02 56 17.1 +0.3
LBNH pmax pmax
comp=Z,19nm,1.0s,mb5.3
LBNH **Lisbon** 85.82 0 eP P 02 56 17.1 +0.3
comp=Z,19nm,1.0s,mb5.3
R22A **Saguache, Gunn** 85.88 333 ⇓P P 02 56 17.6 +0.3
baz=86,SNR=12
V14A **Boquillas Ranc** 85.92 328 ⇓P P 02 56 17.6 +0.1
baz=86,SNR=15
T18A **Mexican Hat** 86.00 331 ⇑P P 02 56 17.9 0.0
baz=86,SNR=10.0
JFWS **Jewell Farm** 86.09 347 eP P 02 56 17.8 -0.4
JFWS pmax pmax
comp=Z,30nm,1.0s,mb5.5
JFWS **Jewell Farm** 86.09 347 eP P 02 56 17.8 -0.4
comp=Z,30nm,1.0s,mb5.5
T17A **Navajo Res., N** 86.22 330 ⇑P P 02 56 18.4 -0.6
baz=86,SNR=14
LONY **Lake Ozonia** 86.23 358 eP P 02 56 18.7 -0.1
comp=Z,15nm,1.0s,mb5.2
GMRC **Granite Mounta** 86.24 325 ⇓P P 02 56 18.8 -0.4
baz=86
LDFC **Landfair** 86.26 326 eP P 02 56 21.6 +2.4
S19A **Harvey Farm, M** 86.27 331 ⇓P P 02 56 19.4 +0.2
baz=86,SNR=16
R21A **Cimarron** 86.28 333 ⇓P P 02 56 19.8 +0.6
baz=86
U15A **North Rim** 86.29 328 ⇑P P 02 56 19.4 +0.1
baz=86,SNR=17
R20A **Redvale** 86.40 332 ⇑P P 02 56 20.4 +0.6
baz=87,SNR=12
PV01 **Paradox Valley** 86.42 332 eP P 02 56 20.7 +0.7
comp=Z,2μm,1.4s
FRNY **Flat Rock** 86.43 359 eP P 02 56 19.8 0.0
V13A **Grand Canyon W** 86.47 327 ⇓P P 02 56 20.8 +0.6
baz=87,SNR=6.9
T16A **Glen Canyon Da** 86.47 329 ⇑P P 02 56 20.5 +0.3
baz=87,SNR=6.8
Q22A **Crested Butte,** 86.50 333 ⇑P P 02 56 20.9 +0.6
baz=87,SNR=12
S18A **Hurst Farm, Bl** 86.53 331 ⇓P P 02 56 21.0 +0.5
baz=87,SNR=30
HEC **Hector,Ludlow** 86.57 325 ⇓P P 02 56 21.5 +0.7
baz=87
U14A **Mt Trumbull** 86.63 328 ⇓P P 02 56 21.4 +0.3
baz=87,SNR=16
BFSC **Mount Baldy St** 86.65 324 ⇓P P 02 56 21.1 -0.1
baz=87
Q21A **Lamborn Mesa,** 86.70 333 ⇓P P 02 56 21.6 +0.2
baz=87,SNR=5.4
V12A **Nelson** 86.71 326 ⇓P P 02 56 21.9 +0.5
baz=87
PV04 **Paradox Valley** 86.77 332 eP P 02 56 22.8 +1.2
S17A **Black Ridge (B** 86.78 330 ⇓P P 02 56 22.0 +0.2
baz=87,SNR=12
R19A **Curley Farm, L** 86.80 331 ⇑P P 02 56 21.9 +0.1
baz=87,SNR=15
SMCO **Snowmass** 86.81 333 eP P 02 56 23.3 +1.5
T15A **Red Dirt Ranch** 86.84 329 ⇓P P 02 56 22.2 +0.1
baz=87,SNR=29
TUQ **Turquoise Moun** 86.91 325 ⇑P P 02 56 22.7 +0.3
baz=87,SNR=12
TOA0 **Torodi Ar. Sit** 86.92 69 eP P 02 56 22.8 -0.1
TORD **Torodi Ar. Bea** 86.92 69 P P 02 56 22.7 -0.2
comp=Z,12nm,1.0s,mb5.1,baz=235,slow=3.9,SNR=46
TORD LR LR 03 33 14.8
comp=Z,650nm,18.3s,MS5.1,baz=215,slow=34
ISCO **Idaho Springs** 86.93 335 eP P 02 56 23.3 +0.9
U13A **Pakoon Wash** 86.94 327 ⇑P P 02 56 22.4 -0.1
baz=87,SNR=6.0
Q20A **Ridgley Place,** 87.06 332 ⇑P P 02 56 23.4 +0.3
baz=87
R18A **Canyonlands Na** 87.11 331 ⇓P P 02 56 23.2 -0.1
baz=87,SNR=19
T14A **Hurricane** 87.15 328 ⇑P P 02 56 23.7 +0.1
baz=87
GSC **Goldstone** 87.17 325 ⇓P P 02 56 24.1 +0.4
baz=87,SNR=6.4
GSC **Goldstone** 87.17 325 eP P 02 56 25.0 +1.3
U12A **Valley of Fire** 87.19 327 ⇑P P 02 56 24.1 +0.3
baz=87
LSZ **Lusaka** 87.28 108 LR LR 03 30 25.5
comp=Z,756nm,22.0s,MS5.1,baz=234,slow=32
LSZ **Lusaka** 87.28 108 eP P 02 56 25.8 +1.0
LSZ pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
LSZ **Lusaka** 87.28 108 eP P 02 56 25.8 +0.9
comp=Z,9.7nm,1.0s,mb5.0
LSZ **Lusaka** 87.28 108 eP P 02 56 26.0 +1.2
P21A **Newcastle** 87.28 333 ⇓P P 02 56 24.7 +0.6
baz=88
Q19A **Hogan Spring (** 87.40 332 ⇑P P 02 56 24.8 +0.1
baz=88,SNR=9.3
S15A **Panguitch** 87.41 329 ⇑P P 02 56 24.3 -0.5
baz=88
R17A **Hanksville Air** 87.44 331 ⇓P P 02 56 24.6 -0.3
baz=88,SNR=16
T13A **Saint George** 87.44 328 ⇓P P 02 56 24.9 -0.1
baz=88,SNR=12
SHPR **Sheep Range** 87.51 326 eP P 02 56 26.1 +0.8
P20A **De Beque** 87.58 333 ⇓P P 02 56 25.8 +0.2
baz=88
R16A **Teasdale** 87.61 330 ⇓P P 02 56 25.6 -0.2
baz=88
CCUT **Cedar City** 87.69 328 eP P 02 56 27.9 +1.8
S14A **Cedar City** 87.79 329 ⇓P P 02 56 26.1 -0.5
baz=88,SNR=15
Q18A **Rafter H Ranch** 87.84 331 ⇓P P 02 56 27.0 +0.3
baz=88,SNR=21
R15A **Junction** 87.84 329 ⇑P P 02 56 26.4 -0.4
baz=88,SNR=9.6
P19A **Cripple Cowboy** 87.90 332 ⇓P P 02 56 27.5 +0.4
baz=88,SNR=28
S13A **Holt Ranch, En** 87.91 328 ⇑P P 02 56 27.9 +0.8
baz=88,SNR=14
SRU **San Rafael** 87.98 331 ⇑P P 02 56 27.5 0.0
baz=88,SNR=19
SRU **San Rafael** 87.98 331 eP P 02 56 27.8 +0.3
SRU pmax pmax
comp=Z,43nm,1.4s,mb5.5
SRU **San Rafael** 87.98 331 eP P 02 56 27.8 +0.3
comp=Z,43nm,1.4s,mb5.5
Q16A **Castle Valley** 88.05 330 ⇓P P 02 56 28.3 +0.5
baz=88,SNR=22
MSU **Marysvale** 88.07 330 eP P 02 56 28.8 +0.9
O20A **White River Ci** 88.10 333 ⇓P P 02 56 28.4 +0.4
baz=88,SNR=8.7
N22A **Wattenberg Ran** 88.11 335 ⇓P P 02 56 28.7 +0.7
baz=88
MPMC **Manual Prospec** 88.11 325 ⇓P P 02 56 28.2 +0.1
baz=88
ECSD **EROS Data Cent** 88.14 342 eP P 02 56 27.8 -0.3
T11A **Corn Creek, Al** 88.16 327 ⇑P P 02 56 29.5 +1.1
baz=88
PKM **Peak Mountain** 88.17 322 ⇑P P 02 56 29.0 +0.5
baz=88,SNR=12
FURC **Furnace Creek,** 88.19 325 ⇑P P 02 56 28.8 +0.3
baz=88
ISA **Isabella** 88.21 324 ⇑P P 02 56 29.5 +0.9
baz=88,SNR=14
ISA **Isabella** 88.21 324 eP P 02 56 30.1 +1.5
PHWY **Pilot Hill** 88.25 335 eP P 02 56 29.2 +0.6
comp=Z,22nm,1.1s,mb5.3
P18A **Preston Nutter** 88.34 331 ⇑P P 02 56 29.8 +0.6
baz=89
P17A **Butcher Ranch,** 88.38 331 ⇓P P 02 56 29.9 +0.5
baz=89,SNR=10
TMUT **Trail Mountain** 88.40 331 eP P 02 56 30.6 +1.2

N21A **Black Mountain** 88.42 334 ⇑P P 02 56 30.4 +0.9
baz=89,SNR=12
R13A **O'Grain Ranch,** 88.47 328 ⇑P P 02 56 30.7 +0.9
baz=89,SNR=11
O19A **Miners Draw (B** 88.54 332 ⇓P P 02 56 30.4 +0.3
baz=89,SNR=16
Q15A **Fillmore** 88.57 330 ⇑P P 02 56 30.7 +0.4
baz=89
SMMC **Simmler** 88.59 323 ⇑P P 02 56 30.4 0.0
baz=89
VES **Vestal, Richgr** 88.62 323 ⇑P P 02 56 31.2 +0.6
baz=89,SNR=16
N20A **Spence Gulch,** 88.73 333 ⇑P P 02 56 31.5 +0.6
baz=89,SNR=15
O18A **Roosevelt** 88.82 332 ⇑P P 02 56 31.8 +0.4
baz=89,SNR=19
R12A **Pony Springs,** 88.85 328 ⇓P P 02 56 32.3 +0.7
baz=89,SNR=12
Q14A **Sevier Lake (B** 88.90 329 ⇑P P 02 56 32.4 +0.6
baz=89,SNR=16
COWI **Conover** 89.01 348 eP P 02 56 31.9 -0.3
comp=Z,36nm,1.0s,mb5.7
O17A **Robinson Place** 89.02 331 P P 02 56 33.0 +0.6
baz=89,SNR=12
N19A **John Jarvie Ra** 89.09 333 ⇓P P 02 56 32.9 +0.3
baz=89,SNR=9.2
M21A **Separation Pea** 89.13 334 ⇑P P 02 56 33.0 +0.2
baz=89,SNR=12
RWWY **Rawlins** 89.15 334 eP P 02 56 33.6 +0.7
comp=Z,43nm,1.2s,mb5.7
Q13A **Wheeler Ranch,** 89.16 329 ⇑P P 02 56 33.4 +0.3
baz=89,SNR=12
MPU **Maple Canyon** 89.19 331 eP P 02 56 34.0 +0.9
comp=Z,36nm,1.4s,mb5.5
L22A **Ellis Ranch, M** 89.22 335 ⇑P P 02 56 33.2 0.0
baz=90
R11A **Troy Canyon, C** 89.26 327 ⇓P P 02 56 33.9 +0.4
baz=90
M20A **Sweetwater, Wa** 89.29 334 ⇑P P 02 56 33.5 0.0
baz=90
NLU **North Lily Min** 89.29 330 eP P 02 56 34.9 +1.3
O16A **Springville** 89.31 331 ⇓P P 02 56 33.6 0.0
baz=90
S10A **Tonopah Range,** 89.31 326 ⇑P P 02 56 33.8 0.0
baz=90
N18A **Larsen Ranch,** 89.34 332 ⇓P P 02 56 34.1 +0.3
baz=90
P14A **Drum Mountains** 89.35 329 ⇑P P 02 56 34.9 +1.0
baz=90,SNR=17
DAU **Daniels Canyon** 89.40 331 eP P 02 56 35.0 +0.9
L21A **Rawlins** 89.45 334 ⇓P P 02 56 34.4 +0.1
baz=90
P13A **Bates Ranch, G** 89.59 329 ⇑P P 02 56 35.6 +0.5
baz=90,SNR=8.1
M19A **Rock Springs** 89.63 333 ⇑P P 02 56 34.8 -0.3
baz=90
JLU **Jordanelle** 89.63 331 eP P 02 56 36.0 +0.8
MTUM **Tungsten Hills** 89.66 325 eP P 02 56 37.5 +2.0
N17A **Moffit Pass** 89.71 332 ⇑P P 02 56 35.3 -0.2
baz=90
Q11A **Duckwater** 89.72 327 ⇑P P 02 56 35.4 -0.2
baz=90
DUG **Dugway** 89.78 330 ⇓P P 02 56 36.2 +0.3
baz=90,SNR=14
DUG **Dugway** 89.78 330 eP P 02 56 35.9 0.0
DUG pmax pmax
comp=Z,13nm,1.2s,mb5.1
DUG **Dugway** 89.78 330 eP P 02 56 35.9 0.0
comp=Z,13nm,1.2s,mb5.2
L20A **Wamsutter** 89.81 334 ⇑P P 02 56 36.4 +0.4
baz=90
M18A **Lyman** 89.87 332 ⇓P P 02 56 36.3 0.0
baz=90
N16A **Rees Ranch, Co** 89.88 331 ⇑P P 02 56 36.5 +0.1
baz=90
M17A **Scullys Gap (B** 90.12 332 ⇑P P 02 56 37.2 -0.3
baz=90
L19A **Farson** 90.23 333 P P 02 56 38.5 +0.6
baz=90,SNR=35
N15A **Stansbury Isla** 90.28 330 ⇑P P 02 56 37.6 -0.6
baz=90
L18A **Fontenelle, Gr** 90.30 333 ⇓P P 02 56 37.7 -0.6
baz=91
M16A **Huntsville** 90.33 331 ⇑P P 02 56 38.5 +0.1
baz=91
K20A **Yellowstone Ra** 90.39 334 ⇑P P 02 56 38.6 -0.1
baz=91,SNR=15
RSSD **Black Hills** 90.40 338 eP P 02 56 38.0 -0.7
RSSD pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
RSSD **Black Hills** 90.40 338 eP P 02 56 38.0 -0.7
comp=Z,6.9nm,0.9s,mb5.0
NVAR **Mina Array Bea** 90.46 325 P P 02 56 40.1 +1.0
comp=Z,3.1nm,0.8s,mb4.7,baz=163,slow=6.4,SNR=17
NVAR PKKP PKKPbc 03 14 07.6 +0.4
comp=Z,0.8nm,0.7s,baz=273,slow=1.3,SNR=6.5
NVAR **Mina Array Bea** 90.46 325 P P 02 56 40.1 +1.0
NVAR PKKP PKKPbc 03 14 07.6 +0.4
N14A **Grayback Hills** 90.49 330 ⇑P P 02 56 39.1 -0.1
baz=91,SNR=11
HWUT **Hardware Ranch** 90.56 331 eP P 02 56 39.7 +0.2
comp=Z,51nm,1.2s,mb5.7
O12A **Currie** 90.58 329 ⇑P P 02 56 39.6 0.0
baz=91
SPUT **South Promonto** 90.62 331 eP P 02 56 40.3 +0.5
P10A **Eureka** 90.70 327 ⇓P P 02 56 39.6 -0.7
baz=91
K19A **Absolon Red Bu** 90.71 334 ⇓P P 02 56 39.7 -0.5
baz=91,SNR=24
L17A **Cokeville** 90.75 332 ⇑P P 02 56 39.9 -0.5
baz=91
M15A **Larsen Ranch,** 90.75 331 ⇓P P 02 56 39.5 -0.9
baz=91,SNR=13
O11A **Cowboy Ranch,** 90.82 328 ⇓P P 02 56 41.2 +0.4
baz=91,SNR=8.6
L16A **Fish Haven** 90.87 332 ⇓P P 02 56 40.7 -0.2
baz=91
N13A **Wendover, West** 90.88 329 ⇑P P 02 56 40.4 -0.6
baz=91
BW06 **Boulder Array** 90.89 333 P P 02 56 40.6 -0.4
baz=91,SNR=22
BW06 **Boulder Array** 90.89 333 eP P 02 56 40.4 -0.6
comp=Z,16nm,1.1s,mb5.3
PDAR **Pinedale Array** 90.89 333 P P 02 56 41.0 -0.1
comp=Z,10nm,0.9s,mb5.1,baz=145,slow=5.4,SNR=58
PDAR LR LR 03 32 53.8
comp=Z,677nm,19.4s,MS5.1,baz=139,slow=32
K18A **Toltan Ranch,** 90.94 333 ⇓P P 02 56 41.4 +0.2
baz=91,SNR=31
WAKR **Walker** 91.00 325 eP P 02 56 43.5 +1.8
M14A **Sheep Mountain** 91.12 330 ⇑P P 02 56 42.2 +0.1
baz=91,SNR=22
HVU **Hansel Valley** 91.15 331 eP P 02 56 42.4 +0.2
EYMN **Ely** 91.18 347 eP P 02 56 41.4 -0.8
comp=Z,9.1nm,1.1s,mb5.0
L15A **Malad City** 91.20 331 ⇓P P 02 56 42.1 -0.3
baz=92,SNR=16
M13A **Montello** 91.30 330 ⇑P P 02 56 42.6 -0.3
baz=92,SNR=9.6
J18A **Kendall Valley** 91.44 333 ⇑P P 02 56 42.9 -0.6
baz=92
L14A **Malta** 91.54 331 ⇑P P 02 56 43.5 -0.5
baz=92
M12A **Wells** 91.63 329 ⇓P P 02 56 44.6 +0.2
baz=92
K16A **Soda Springs** 91.64 332 ⇓P P 02 56 44.7 +0.2
baz=92
I18A **Diamond G Ranc** 91.81 334 P P 02 56 45.5 +0.3
baz=92,SNR=23
J17A **Brown Place, J** 91.81 333 ⇑P P 02 56 45.6 +0.3
baz=92
L13A **Double Diamond** 91.84 330 ⇑P P 02 56 45.3 -0.2
baz=92
K15A **Arbon** 91.85 331 ⇓P P 02 56 45.1 -0.4
baz=92
REDW **Red Top Meadow** 91.86 333 eP P 02 56 45.1 -0.4
comp=Z,32nm,1.3s,mb5.5
SNOW **Snow King Moun** 91.91 333 eP P 02 56 46.1 +0.3
comp=Z,20nm,1.1s,mb5.4
K14A **Jones Ranch, D** 91.96 331 ⇑P P 02 56 45.5 -0.5
baz=92,SNR=13
M11A **Holland Ranch,** 91.98 329 ⇑P P 02 56 45.9 -0.2
baz=92,SNR=12
LOHW **Long Hollow** 91.99 333 eP P 02 56 46.1 0.0
comp=Z,8.2nm,0.9s,mb5.1
TPAW **Teton Pass** 92.00 333 eP P 02 56 46.5 +0.4
RRI2 **Red Ridge** 92.00 332 eP P 02 56 46.6 +0.5
J16A **Bone** 92.04 332 ⇑P P 02 56 46.4 +0.1

baz=92
DCID1 **Drake Creek** 92.17 333 *e*P P 02 56 47.9 +0.9
I17A **Pilgrim Ck.** 92.26 333 ⇓P P 02 56 47.3 0.0
baz=92
AGMN **Agassiz Refuge** 92.33 344 *e*P P 02 56 46.6 -0.9
comp=Z,9.4nm,1.0s,mb5.1
IMW **Indian Meadow** 92.36 333 *e*P P 02 56 47.8 0.0
comp=Z,31nm,1.2s,mb5.5
I16A **Newdale** 92.53 333 ⇑P P 02 56 48.7 +0.1
baz=93
L11A **Cat Creek Ranc** 92.60 329 ⇑P P 02 56 48.5 -0.5
baz=93,SNR=12
H17A **Grant Village** 92.68 333 ⇑P P 02 56 48.6 -0.6
baz=93
L10A **Juniper Basin** 92.80 329 ⇑P P 02 56 49.5 -0.3
baz=93,SNR=6.5
YFT **Old Faithful** 92.81 333 *e*P P 02 56 51.1 +1.2
comp=Z,30nm,1.1s,mb5.6
YMR **Madison River** 93.05 333 *e*P P 02 56 51.1 +0.1
comp=Z,29nm,1.0s,mb5.7
J13A **Cove Ranch, Pi** 93.06 331 ⇓P P 02 56 51.1 0.0
baz=93,SNR=19
G18A **Lazy EL Ranch,** 93.16 334 ⇓P P 02 56 51.1 -0.4
baz=93
H16A **Russell Place,** 93.17 333 ⇑P P 02 56 51.5 0.0
baz=93
K11A **Parker Ranch,** 93.22 329 ⇑P P 02 56 51.0 -0.8
baz=94
I14A **Mackay** 93.26 331 ⇓P P 02 56 51.9 0.0
baz=94,SNR=11
J12A **Stokes Ranch,** 93.28 330 ⇓P P 02 56 50.8 -1.2
baz=94,SNR=10
HLID **Hailey** 93.29 331 ⇓P P 02 56 52.6 +0.5
baz=94,SNR=14
HLID **Hailey** 93.29 331 *e*P P 02 56 52.6 +0.5
comp=Z,12nm,1.3s,mb5.2
QLMT **Earthquake Lak** 93.35 333 *e*P P 02 56 53.6 +1.3
I13A **Wildhorse Cree** 93.49 331 ⇓P P 02 56 53.5 +0.5
baz=94,SNR=11
K10A **MacKenzie Ranc** 93.55 329 ⇓P P 02 56 52.8 -0.5
baz=94
H15A **Lima** 93.58 332 ⇓P P 02 56 53.9 +0.5
baz=94,SNR=13
MFID **Camas Ranch** 93.69 330 ⇑P P 02 56 53.7 -0.2
baz=94
F18A **Big Timber** 93.73 335 P P 02 56 53.6 -0.5
baz=94,SNR=9.0
I12A **Atlanta** 93.76 330 ⇓P P 02 56 54.2 0.0
baz=94,SNR=14
G16A **Moss Hill, Enn** 93.82 333 ⇑P P 02 56 53.7 -0.8
baz=94
H14A **Leadore** 93.83 332 ⇑P P 02 56 54.0 -0.6
baz=94
MCMT **McKenzie Canyo** 93.83 332 *e*P P 02 56 55.3 +0.8
comp=Z,12nm,1.5s,mb5.1
WVOR **Wild Horse Val** 93.96 327 *e*P P 02 56 55.5 +0.3
WVOR pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
WVOR **Wild Horse Val** 93.96 327 *e*P P 02 56 55.5 +0.3
comp=Z,9.4nm,1.4s,mb5.0
G15A **Dillon** 94.00 333 ⇓P P 02 56 55.4 0.0
baz=94,SNR=11
F17A **Fitzpatrick Pl** 94.04 334 ⇓P P 02 56 55.2 -0.3
baz=94,SNR=6.0
H13A **Challis** 94.10 331 ⇓P P 02 56 55.9 +0.1
baz=94,SNR=12
BOZ **Bozeman (W)** 94.13 333 ⇑P P 02 56 55.2 -0.7
baz=94,SNR=7.0
BOZ **Bozeman (W)** 94.13 333 *e*P P 02 56 54.9 -1.0
BOZ pmax pmax
comp=Z,8.0nm,1.4s,mb5.0
BOZ **Bozeman (W)** 94.13 333 *e*P P 02 56 54.9 -1.0
comp=Z,8.4nm,1.4s,mb5.0
ULM **Lac du Bonnet** 94.19 345 P P 02 56 54.8 -1.3
comp=Z,3.0nm,0.8s,mb4.8,baz=165,slow=4.2,SNR=4.3
ULM **Lac du Bonnet** 94.19 345 *e*P P 02 56 54.3 -1.8
comp=Z,3.9nm,1.0s,mb4.8
DLMT **Dillon** 94.21 333 *e*P P 02 56 56.9 +0.6
comp=Z,14nm,1.2s,mb5.3
F16A **Kennard Place,** 94.25 333 ⇑P P 02 56 56.2 -0.2
baz=94
H12A **Diamond D Ranc** 94.31 331 ⇑P P 02 56 56.9 +0.1
baz=95
J09A **Fry Pan Ranch,** 94.38 328 ⇑P P 02 56 57.3 +0.2
baz=95,SNR=11
DGMT **Dagmar** 94.44 339 ⇑P P 02 56 56.7 -0.6
baz=95
DGMT **Dagmar** 94.44 339 *e*P P 02 56 56.8 -0.4
comp=Z,11nm,0.6s,mb5.5
G13A **Cobalt** 94.55 331 ⇑P P 02 56 57.8 0.0
baz=95,SNR=10
LRM **Limekiln Ridge** 94.56 333 *e*P P 02 56 58.6 +0.7
F15A **Butte** 94.59 333 ⇓P P 02 56 58.4 +0.4
baz=95,SNR=7.8
I10A **Payette** 94.63 329 ⇑P P 02 56 58.2 -0.1
baz=95
H11A **Donnelly** 94.86 330 ⇑P P 02 56 59.2 -0.1
baz=95,SNR=7.5
D18A **Linhart Farms,** 94.91 335 ⇑P P 02 56 59.2 -0.2
baz=95
E16A **East Helena** 94.93 334 ⇑P P 02 56 59.3 -0.2
baz=95
G12A **Big Creek, Yel** 94.97 331 ⇑P P 02 56 59.5 -0.3
baz=95,SNR=13
K05A **Summer Lake** 95.12 326 ⇓P P 02 56 59.9 -0.6
baz=95
F13A **Darby** 95.19 332 ⇓P P 02 57 00.2 -0.5
baz=95,SNR=7.1
D16A **Dana Ranch, Ca** 95.32 334 ⇓P P 02 57 01.1 -0.2
baz=96,SNR=7.7
F12A **Elk City** 95.49 331 ⇑P P 02 57 01.6 -0.6
baz=96
G11A **Walters Elk Ra** 95.55 330 ⇑P P 02 57 01.4 -1.1
baz=96
C17A **Wharram Farm,** 95.60 335 ⇓P P 02 57 01.8 -0.7
baz=96
D15A **Lincoln** 95.65 333 ⇓P P 02 57 02.2 -0.6
baz=96,SNR=7.5
I07A **Izee** 95.68 328 ⇓P P 02 57 02.5 -0.6
baz=96
E13A **Victor** 95.70 332 ⇑P P 02 57 02.8 -0.2
baz=96,SNR=11
CHMT **Chamberlain Mo** 95.79 333 *e*P P 02 57 03.5 +0.1
comp=Z,9.0nm,1.5s,mb5.0
D14A **Greenough** 96.02 333 ⇓P P 02 57 04.6 +0.1
baz=96
SLMT **Seeley Lake** 96.15 333 *e*P P 02 57 05.3 +0.2
comp=Z,12nm,1.5s,mb5.1
E12A **Beaver Dam Sad** 96.17 331 ⇑P P 02 57 04.1 -1.0
baz=96
TAM **Tamanrasset** 96.17 65 *e*P P 02 57 06.8 +1.0
TAM pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
TAM **Tamanrasset** 96.17 65 *e*P P 02 57 06.8 +0.9
comp=Z,4.5nm,1.1s,mb4.8
B17A **L&G Farms, Che** 96.19 335 ⇓P P 02 57 04.5 -0.8
baz=96
A18A **Metzger Ranch,** 96.45 336 ⇑P P 02 57 05.4 -1.0
baz=97
DZM **Mont Dzumac** 96.52 233 *e*LR LR 03 28 16.2
comp=Z,364nm,21.9s
A17A **Triple J Farms** 96.74 335 ⇓P P 02 57 06.5 -1.2
baz=97
B15A **Bradely Ranch,** 96.78 334 ⇓P P 02 57 06.6 -1.3
baz=97
ESDC **Sonseca Array** 102.01 47 P Pdif 02 57 32.1 +0.2
comp=Z,1.4nm,0.9s,baz=258,slow=5.6,SNR=4.3
FCC **Fort Churchill** 102.04 348 *e*P Pdif 02 57 30.2 -1.9
YKA **Yellowknife Ar** 109.59 340 Pdiff Pdif 02 58 03.3 -2.3
comp=Z,0.3nm,0.8s,baz=141,slow=4.1,SNR=5.4
YKA PKiKP PKiKP 03 02 06.8 -0.4
comp=Z,0.6nm,0.8s,baz=133,slow=2.5,SNR=6.1
YKA PKKPbc PKKPbc 03 13 13.2 +0.4
comp=Z,0.4nm,0.8s,baz=327,slow=4.0,SNR=4.0
YKA **Yellowknife Ar** 109.59 340 Pdif Pdif 02 58 03.4 -2.3
YKA PKDf PKiKP 03 02 06.8 -0.4
YKA PKKPbc PKKPbc 03 13 13.2 +0.4
ASAR **Alice Springs** 110.45 205 Pdiff Pdif 02 58 07.8 -1.6
comp=Z,0.5nm,1.0s,baz=162,slow=3.9,SNR=2.9
ASAR PKiKP PKiKP 03 02 08.2 -2.0
comp=Z,1.2nm,1.0s,baz=130,slow=1.4,SNR=6.0
ASAR PKKPbc PKKPbc 03 13 09.3 +0.4
comp=Z,0.7nm,0.8s,baz=333,slow=3.1,SNR=6.2
ASAR **Alice Springs** 110.45 205 PKIKP PKiKP 03 02 08.3 -1.9
WRAB **Tennant Creek** 113.77 207 *e*PKIKP PKiKP 03 02 15.9 -0.7
GRA1 **Grafenberg Arr** 116.69 46 *e*PKP PKDf 03 02 21.8 +0.6
GRF **Grafenberg Arr** 116.69 46 *e*PKIKP PKDf 03 02 21.8 +0.6
RES **Resolute Bay** 117.37 353 *e*PKIKP PKDf 03 02 20.8 -1.0

MOX **Moxa** 117.43 45 *e*PKP PKDf 03 02 22.7 +0.1
comp=Z,11nm,1.1s
MOX pmax pmax
comp=Z,700nm,19.0s
MOX **Moxa** 117.43 45 *e*PKIKP PKDf 03 02 22.7 +0.1
MOX pmax pmax
comp=Z,11nm,1.1s
MOX MLR MLR
comp=Z,700nm,19.0s,MS5.3
CLZ **Clausthal** 117.44 44 *e*PKIKP PKDf 03 02 23.3 +0.8
GEC2 **GERESS Array S** 117.58 48 *e*PKIKP PKDf 03 02 22.9 0.0
GERES **GERESS Array B** 117.58 48 PKP PKDf 03 02 22.7 -0.2
comp=Z,2.8nm,0.8s,baz=202,slow=1.4,SNR=31
GERES PKKPab PKKPab 03 12 49.5 +3.2
comp=Z,0.4nm,0.7s,baz=108,slow=3.0,SNR=4.9
NKC **Novy Kostel** 117.65 46 *e*PKIKP PKDf 03 02 22.8 -0.2
NKC MLR MLR
comp=Z,700nm,17.9s,MS5.3
NKC **Novy Kostel** 117.65 46 *e*PKP PKDf 03 02 22.8 -0.2
NKC AMS AMS 03 52 00.0
comp=Z,700nm,17.9s
KHC **Kasperske Hory** 117.66 48 *e*PKIKP PKDf 03 02 22.6 -0.5
KHC MLR MLR
comp=Z,700nm,22.2s,MS5.2
KHC **Kasperske Hory** 117.66 48 *e*PKP PKDf 03 02 22.6 -0.5
KHC AMS AMS 03 50 50.0
comp=Z,700nm,22.2s
CLL **Collm** 118.53 45 ⇓*i*PKIKP PKDf 03 02 24.2 -0.4
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL MLR MLR
comp=Z,700nm,18.8s,MS5.3
CLL **Collm** 118.53 45 ⇓*i*PKiKP PKiKP 03 02 24.2 -0.5
comp=Z,6.0nm,1.0s
CLL *e* 03 04 12.0
CLL *e*SKSac SKSac 03 09 18.0 +2.9
CLL *e*SKKSac SKKSac 03 10 48.0 +9.5
CLL *e*(Sdif) 03 11 42.0
CLL *e*PS PS 03 13 36.0 +6.6
CLL *e* 03 20 42.0
CLL *e* 03 25 24.0
CLL Lm 03 53 00.0
comp=N,200nm,18.6s
CLL Lm 03 53 00.0
comp=E,500nm,19.9s
CLL Lm 03 53 00.0
comp=Z,700nm,18.8s
BSEG **Bad Segeberg** 118.56 42 *e*PKIKP PKDf 03 02 23.3 -1.3
BSEG **Bad Segeberg** 118.56 42 *e*PKP PKDf 03 02 25.1 +0.5
PRU **Pruhonice** 118.65 47 *e*PKIKP PKDf 03 02 24.8 -0.1
PRU MLR MLR
comp=Z,400nm,13.2s,MS5.2
PRU **Pruhonice** 118.65 47 *e*PKP PKDf 03 02 24.8 -0.1
PRU AMS AMS 03 56 00.0
comp=Z,400nm,13.2s
BRG **Berggiesshubel** 118.80 46 *e*P PKDf 03 02 25.1 -0.1
comp=Z,4.5nm,1.0s
BRG
comp=N,499nm,19.1s
BRG
comp=E,471nm,20.4s
BRG
comp=Z,785nm,19.1s
TREC **Trest** 118.81 48 *e*PKIKP PKDf 03 02 25.3 0.0
TREC MLR MLR
comp=Z,800nm,20.9s,MS5.3
TREC **Trest** 118.81 48 *e*PKP PKDf 03 02 25.3 0.0
TREC AMS AMS 03 51 20.0
comp=Z,800nm,20.9s
PVCC **Panska Ves** 118.95 47 *e*PKIKP PKDf 03 02 25.7 +0.2
PVCC MLR MLR
comp=Z,900nm,21.5s,MS5.4
PVCC **Panska Ves** 118.95 47 *e*PKP PKDf 03 02 25.7 +0.2
PVCC AMS AMS 03 50 20.0
comp=Z,900nm,21.5s
PKSM **Moragy** 119.00 53 ⇓*i*P PKDf 03 02 25.1 -0.6
INK **Inuvik** 119.10 338 *e*PKIKP PKDf 03 02 24.0 -1.3
EGAK **Eagle** 119.24 333 *e*PKPdf PKDf 03 02 24.7 -0.9
DPC **Dobruska-Polom** 119.82 48 *e*PKIKP PKDf 03 02 27.5 +0.3
DPC *e* 03 02 41.8
DPC MLR MLR
comp=Z,400nm,20.7s,MS5.0
DPC **Dobruska-Polom** 119.82 48 *e*PKP PKDf 03 02 27.5 +0.3
DPC *ex* x 03 02 41.8
DPC AMS AMS 03 54 20.0
comp=Z,400nm,20.7s
KOLL **Kolacno** 120.08 50 *e*PKIKP PKDf 03 02 28.1 +0.4
KOLL **Kolacno** 120.08 50 *e*PKP PKDf 03 02 28.1 +0.4
MORC **Moravsky Berou** 120.20 49 *e*PKIKP PKDf 03 02 28.0 +0.1
MORC **Moravsky Berou** 120.20 49 ⇑*i*P PKDf 03 02 28.2 +0.3
VYHS **Vyhne** 120.29 50 *e*PKIKP PKDf 03 02 28.2 +0.1
VYHS *e* 03 02 38.2
VYHS **Vyhne** 120.29 50 *e*PKP PKDf 03 02 28.2 +0.1
VYHS *e* 03 02 38.2
BZS **Buzias** 120.48 54 ⇓*i*P PKDf 03 02 28.2 -0.4
OKC **Ostrava-Krasne** 120.58 49 *e*PKIKP PKDf 03 02 29.0 +0.4
OKC MLR MLR
comp=Z,600nm,24.5s,MS5.1
OKC **Ostrava-Krasne** 120.58 49 *e*PKP PKDf 03 02 29.0 +0.4
OKC AMS AMS 03 52 30.0
comp=Z,600nm,24.5s
EIL **Elat** 121.13 77 PKP PKDf 03 02 30.2 -0.1
comp=Z,4.4nm,0.8s,baz=191,slow=10
KONO **Kongsberg** 121.22 36 *e*PKIKP PKDf 03 02 29.5 -0.1
KECS **Kecovo** 121.24 51 *e*PKIKP PKDf 03 02 30.5 +0.5
KECS **Kecovo** 121.24 51 *e*PKP PKDf 03 02 30.5 +0.5
MCK **McKinley** 121.45 329 *e*PKIKP PKDf 03 02 29.7 -0.2
COLA **College** 121.65 331 *e*PKIKP PKDf 03 02 29.1 -1.1
OJC **Ojcow** 121.69 49 *e*P PKDf 03 02 30.1 -0.7
DRGR 121.72 54 ⇓*i*P PKDf 03 02 31.5 +0.6
KTH **Kantishna Hill** 122.12 329 *e*PKPdf PKDf 03 02 30.7 -0.5
STHS **Stebnicka Huta** 122.13 50 *e*PKIKP PKDf 03 02 31.7 +0.1
STHS **Stebnicka Huta** 122.13 50 *e*PKP PKDf 03 02 31.7 +0.1
TRPA **Tarpa** 122.27 52 ⇓*i*P PKDf 03 02 31.6 -0.3
NAO01 **NORSAR Array S** 122.37 35 *e*PKPdf PKDf 03 02 30.8 -1.0
BPAW **Bear Paw Mtn.** 122.42 329 *e*PKPdf PKDf 03 02 30.8 -0.9
KOLS **Kolonicke sedl** 122.49 51 *e*PKIKP PKDf 03 02 34.7 +2.3
KOLS **Kolonicke sedl** 122.49 51 *e*PKP PKDf 03 02 34.7 +2.3
NB2 **NORSAR Subarra** 122.61 35 PKPdf PKDf 03 02 31.4 -0.8
comp=Z,11nm,1.1s,baz=248,slow=1.9
NB2 **NORSAR Subarra** 122.61 35 PKPdf PKDf 03 02 31.4 -0.8
baz=248,slow=1.9
NOA **NORSAR Array B** 122.61 35 PKP PKDf 03 02 31.8 -0.4
comp=Z,6.1nm,0.9s,baz=243,slow=2.0,SNR=14
NOA **NORSAR Array B** 122.61 35 PKP PKDf 03 02 31.8 -0.4
CSS **Prodhromos** 122.80 70 *e*PKPdf PKDf 03 02 32.9 -0.5
KWP **Kalwaria Pacla** 123.07 51 *e*PKIKP PKDf 03 02 33.4 0.0
KWP **Kalwaria Pacla** 123.07 51 ⇓*i*P PKDf 03 02 33.6 +0.2
MLR **Muntele Rosu** 123.08 56 ⇓*i*P PKDf 03 02 32.9 -0.7
MMAI **Mount Meron Ar** 123.25 74 PKP PKDf 03 02 32.8 -1.6
comp=Z,19nm,1.2s,baz=270,slow=39,SNR=4.2
BURAR **Bucovina Array** 123.62 54 ⇑*i*P PKDf 03 02 34.7 +0.1
BUR08 **Bucovina Ar. S** 123.62 54 *e*PKPdf PKDf 03 02 34.7 +0.1
COLD **Coldfoot** 123.67 333 *e*PKPdf PKDf 03 02 34.2 +0.1
COLD *e* 03 02 51.1
PLOR **Plostina** 123.68 56 ⇑*i*P PKDf 03 02 35.2 +0.5
VRI **Vrincioaia** 123.74 56 ⇓*i*P PKDf 03 02 30.5 -4.3
TIRR **Tirgusor** 124.14 58 ⇑*i*P PKDf 03 02 35.2 -0.5
SUW **Suwalki** 125.26 46 *e*PKIKP PKDf 03 02 37.2 -0.3
BR131 **Keskin Array S** 125.37 66 *e*PKPdf PKDf 03 02 38.2 0.0
BRTR **Keskin Array B** 125.37 66 PKP PKDf 03 02 38.2 +0.1
comp=Z,4.8nm,0.9s,baz=189,slow=3.5,SNR=27
KIEV **Kiev** 127.30 52 *e*PKIKP PKDf 03 02 40.3 -1.2
AKASG **Malin Array Be** 127.31 52 PKP PKDf 03 02 40.4 -1.1
comp=Z,4.1nm,0.8s,baz=262,slow=2.7,SNR=15
AKASG PP PP 03 04 43.1 +0.7
comp=Z,0.5nm,0.4s,baz=241,slow=6.8,SNR=5.9
AKBB **Malin Array Si** 127.31 52 *e*PKIKP PKDf 03 02 40.4 -1.1
IIGN **Ignalina** 127.41 45 *e*P PKDf 03 02 41.3 -0.2
ISAL **Salakas** 127.44 45 *e*P PKDf 03 02 41.6 -0.1
NACGM **Naroch** 127.54 46 *e* PKDf 03 02 39.0 -2.8
IZAR **Zarasai** 127.57 45 *e*P PKDf 03 02 41.5 -0.3
IDID **Didziasalis** 127.67 46 *e*P PKDf 03 02 41.9 -0.2
VSU **Vasula** 128.76 42 *i*PKIKP PKDf 03 02 44.2 +0.2
FINES **FINESS Array B** 129.38 38 PKP PKDf 03 02 43.3 -1.8
comp=Z,3.6nm,0.9s,baz=225,slow=1.1,SNR=8.5
TNA **Tin City** 129.64 327 *e*PKPdf PKDf 03 02 46.3 +0.8
KBS **Kingsbay** 129.67 14*c*i*PKIKP PKDf 03 02 46.2 +0.9
KBS pmax pmax
comp=Z,22nm,1.7s
KAF **Kangasniemi** 129.68 37 *e*PKIKP PKDf 03 02 44.5 -1.2
KAF pmax pmax
comp=Z,5.0nm,0.8s
KAF **Kangasniemi** 129.68 37 *e*p PKDf 03 02 44.5 -1.2

comp=Z,4.7nm,0.8s
ANN **Anapa** 130.11 61 *i*PKIKP PKPdf 03 02 46.4 -0.6
ANN pmax pmax
comp=Z,26nm,1.0s
ARCES **ARCESS Array B** 131.13 28 PKP PKDf 03 02 48.2 0.0
comp=Z,10nm,1.0s,baz=241,slow=2.9,SNR=11
KEV **Kevo** 131.69 27 *e*PKIKP PKDf 03 02 48.2 -1.1
KEV pmax pmax
comp=Z,8.0nm,0.9s
KEV **Kevo** 131.69 27 *e*p PKDf 03 02 48.2 -1.1
comp=Z,8.2nm,0.9s
JOF **Joensuu** 132.12 37 *e*PKIKP PKDf 03 02 46.9 -3.4
JOF pmax pmax
comp=Z,11nm,1.1s
JOF **Joensuu** 132.12 37 *e*p PKDf 03 02 46.9 -3.4
comp=Z,10nm,1.1s
OBN **Obninsk** 132.96 48 ⇑*i*PKIKP PKDf 03 02 51.7 -0.4
OBN *e* 03 05 20.1
OBN *e*SS SS 03 22 55.0 -2.9
OBN pmax pmax
comp=Z,39nm,1.7s
KIV **Kislovodsk** 133.27 64 ⇑*i*PKIKP PKDf 03 02 53.4 +0.3
KIV *e* 03 05 18.6
KIV *e* 03 10 00.0
KIV *e*SS SS 03 23 07.5 +5.2
KIV pmax pmax
comp=Z,10.0nm,1.2s
KIV **Kislovodsk** 133.27 64 *e*PKPdf PKDf 03 02 53.1 0.0
ZEI **Tsey** 133.66 66 *i*PKHKP 03 02 40.5
ZEI pmax pmax
comp=Z,6.0nm,0.9s
APA **Apatity** 133.71 31 ⇓*i*PKIKP PKDf 03 02 53.0 -0.2
APA pmax pmax
comp=Z,16nm,1.0s
APA MLR MLR
comp=Z,500nm,19.0s,MS5.2
BILL **Bilibino** 139.90 330 ⇑*i*PKIKP PKDf 03 03 07.4 +2.8
BILL pmax pmax
comp=Z,15nm,1.4s
BILL **Bilibino** 139.90 330 *e*PKPdf PKDf 03 03 01.8 -2.8
POO **Poona** 142.73 118 *e*P PKDf 03 03 09.4 -1.8
KKM **Kota Kinabalu** 143.50 194 *e*PKPdf PKDf 03 03 11.8 -1.0
SOKR **Solikamsk** 144.20 43*d*i*PKIKP PKDf 03 03 10.8 -1.7
SOKR pmax pmax
comp=Z,30nm,0.9s
SNG **Songkhla** 144.74 167 P PKDf 03 03 14.0 -0.9
comp=Z,280nm,0.9s
PET **Petropavlovsk** 144.76 306 *i*PKIKP PKDf 03 03 13.6 -0.1
PET *e*SSS 03 30 44.9
PET pmax pmax
comp=Z,93nm,1.4s
PET **Petropavlovsk** 144.76 306 *e*PKPdf PKDf 03 03 13.1 -0.6
HYB **Hyderabad** 144.89 125 *i*PKP PKDf 03 03 13.5 -1.5
AKTK **Aktyubinsk** 144.95 59 PKPbc PKDf 03 03 13.5 -0.6
AKTO **Aktyubinsk** 144.95 59 PKPbc PKDf 03 03 13.5 -0.6
comp=Z,36nm,0.9s,baz=243,slow=2.4,SNR=98
TBP **Tagbilaran** 144.96 208 *e*P PKDf 03 03 12.3 -3.0
PEA0B **Petropavlovsk-** 145.34 306 *e*PKPbc PKPbc 03 03 13.6 -1.1
PETK **Petropavlovsk-** 145.34 306 PKPbc PKPbc 03 03 14.0 -0.6
comp=Z,90nm,1.1s,baz=103,slow=6.5,SNR=38
PETK **Petropavlovsk-** 145.34 306 PKPbc PKPbc 03 03 14.0 -0.6
ARU **Arti** 145.40 48 *i*PKIKP PKDf 03 03 14.4 -0.3
ARU **Arti** 145.40 48 *e*PKPbc PKPbc 03 03 14.8 0.0
ABKAR **Akbulak array** 146.06 61 *e*PKPbc PKPbc 03 03 16.5 -0.5
JASL **Jaisalmer** 146.19 104 *e*P PKDf 03 03 16.8 -0.2
SVE **Sverdlovsk** 146.51 47 *e*PKIKP PKDf 03 03 16.6 0.0
SVE pmax pmax
comp=Z,57nm,1.2s
SEY **Seymchan** 146.76 324 ⇓*i*PKP2 PKPab 03 03 18.1 -1.8
NGP **Nagpur** 147.99 121 *e*P PKDf 03 03 18.6 -1.6
BHPL **Bhopal** 148.41 117 *e*P PKDf 03 03 19.5 -1.3
TIXI **Tiksi** 148.50 348 *i*PKIKP PKPbc 03 03 21.5 -1.6
TIXI pmax pmax
comp=Z,87nm,1.2s
TIXI MLR MLR
comp=Z,247nm,23.0s,MS4.9
TIXI **Tiksi** 148.50 348 *e*PKPdf PKDf 03 03 17.6 -1.9
TIXI *e*PKPbc PKPbc 03 03 21.6 -1.6
TIXI *e*PKPab PKPab 03 03 25.9 -0.8
AJM **Ajmer** 148.60 109 *e*P PKDf 03 03 20.8 -0.3
KHET **Khetri** 150.38 108 *e*P PKDf 03 03 23.0 -0.8
AGRA **Agra** 151.38 111 *e*P PKDf 03 03 23.3 -2.1
SONA **Sohna** 151.39 109 *e*P PKDf 03 03 25.2 -0.1
AYAN **Aya Nagar** 151.56 108 *e*P PKDf 03 03 25.0 -0.6
NDI **New Delhi** 151.75 108 *ex* x 03 03 30.0
BRVK **Borovoye** 152.51 53 *e*PKIKP PKDf 03 03 24.0 -2.2
BVAR **Borovoye Array** 152.58 53 PKP PKDf 03 03 26.4 +0.1
comp=Z,4.4nm,0.9s,baz=270,slow=1.5,SNR=17
BVAR PKPbc PKPbc 03 03 32.9 -0.4
comp=Z,3.8nm,0.8s,baz=302,slow=2.7,SNR=13
NST **Nakhon Sawan** 152.93 163 P PKDf 03 03 20.0 -8.0
SMLA **Simla** 153.08 104 *ex* PKPbc 03 03 32.5 -2.7
DDI **Dehra Dun** 153.28 106 *ex* PKPbc 03 03 33.5 -2.2
KLP **Kalpa** 154.08 104 *e*P PKDf 03 03 30.0 +0.8
KLP AMb AMB 03 03 41.4
comp=Z,31nm,1.1s
JOSI **Joshimath** 154.49 107 *e*P PKDf 03 03 30.3 +0.5
EKS2 **Erkin-Say** 154.76 77 *e*PKPdf PKDf 03 03 30.0 +0.2
YSS **Yuzh-Sakhalins** 154.85 293 *i*PKIKP PKPbc 03 03 37.0 -1.5
YSS **Yuzh-Sakhalins** 154.85 293 *e*PKPab PKPab 03 03 55.6 +1.7
UCH **Uchtor** 155.21 78 *e*PKPdf PKDf 03 03 30.4 -0.1
UCH *e*PKPbc PKDf 03 03 39.1 +8.7
CMAR **Chiang Mai Arr** 155.32 159 PKP PKDf 03 03 31.1 -0.1
comp=Z,4.9nm,0.7s,baz=228,slow=3.9,SNR=22
CMAR PKPab PKPab 03 03 55.6 -0.8
comp=Z,8.4nm,0.9s,baz=225,slow=4.3,SNR=7.9
FRU **Bishkek** 155.40 77 *e*PKIKP PKDf 03 03 30.0 -0.7
FRU *e* 03 03 38.0
FRU *i* 03 03 57.0
CHTO **Chiang Mai** 155.66 159 *e*PKIKP PKDf 03 03 28.5 -3.2
CHTO *e* 03 03 56.3
KSH **Kashi** 155.66 85 *e*PKP PKDf 03 03 31.6 +0.5
KSH *e*PKS 03 07 04.6
KSH *e*SKS SKSdf 03 10 27.5 -6.3
KSH AMB AMB
comp=Z,62nm,5.2s
KSH LR LR
comp=N,62nm,4.8s
KSH LR LR
comp=E,74nm,4.1s
KSH LR LR
comp=Z,77nm,5.6s
MJAR **Matsushiro Arr** 156.08 267 PKP PKDf 03 03 30.9 -0.9
comp=Z,1.8nm,0.9s,baz=34,slow=0.4,SNR=4.2
MJAR PKPab PKPab 03 03 58.7 -0.9
comp=Z,4.8nm,1.0s,baz=158,slow=3.5,SNR=9.6
MJAR **Matsushiro Arr** 156.08 267 PKP PKDf 03 03 30.9 -0.9
MJAR PKPab PKPab 03 03 58.7 -0.9
MAJO **Matsushiro** 156.09 267 *e*PKP2 PKPab 03 03 59.4 -0.1
MAT **Matsushiro** 156.09 267 PKP2 PKPab 03 03 58.5 -1.0
YAK **Yakutsk** 156.11 335 *e*PKP2 PKPab 03 03 57.3 -1.5
YAK pmax pmax
comp=Z,25nm,0.9s
TKM2 **Tokmak 2** 156.12 77 *e*PKIKP PKDf 03 03 30.9 -0.7
TKM2 *e* 03 03 59.4
KURK **Kurchatov** 158.01 56 PKP PKDf 03 03 34.0 +0.3
comp=Z,8.0nm,1.0s,baz=272,slow=1.6,SNR=34
KURK PKPab PKPab 03 04 06.2 -1.2
comp=Z,7.5nm,0.9s,baz=274,slow=5.1,SNR=6.0
KURK PP PP 03 07 47.4 -0.4
comp=Z,4.8nm,0.9s,baz=273,slow=6.1,SNR=8.8
KURK **Kurchatov** 158.01 56 *e*PKPdf PKPdf 03 03 33.8 0.0
KURK *e*PKPab PKPab 03 04 07.1 -0.3
KURK *e*PP PP 03 07 47.8 0.0
NVS **Novosibirsk** 159.24 43 *e*PKIKP PKDf 03 03 34.3 -0.8
NVS *i*SP 03 07 56.8
NVS pmax pmax
comp=Z,56nm,2.5s
NVS pmax pmax
comp=N,13nm,1.8s
NVS pmax pmax
comp=E,5.0nm,0.9s
HABR **Khabarovsk** 159.95 298 *e*PKP2 PKPab 03 04 15.6 -0.3
HABR *e* 03 07 57.3
HABR *e* 03 10 32.3
HABR *e*SS SS 03 27 56.9 -7.4
ZAA0 **Zalesovo Array** 160.47 44 *e*PKPdf PKPdf 03 03 35.1 -1.4
ZAA0 *e*PKPab PKPab 03 04 15.8 -2.2
ZALV **Zalesovo Beam** 160.47 44 PKP PKDf 03 03 35.6 -0.9
comp=E,9.6nm,1.0s,baz=263,slow=2.4,SNR=13
ZALV PKPab PKPab 03 04 17.9 -0.1
comp=E,11nm,1.0s,baz=288,slow=5.9,SNR=6.1
MK31 **Makanchi Array** 161.01 67 *e*PKIKP PKDf 03 03 36.7 -0.6
MK31 *e* 03 04 20.5

MK31			*e*			03 08 04.0	
MKAR	**Makanchi Array**	**161.01**	**67**	PKP	PKPdf	03 03 36.8	-0.6
	comp=E,3.3nm,0.9s,baz=285,slow=2.4,SNR=23						
MKAR				PKPab	PKPab	03 04 20.6	0.0
	comp=E,12nm,0.9s,baz=282,slow=3.6,SNR=17						
MKAR				PP	PP	03 08 03.8	-0.5
	comp=E,2.5nm,0.9s,baz=278,slow=4.6,SNR=6.6						
LSA	**Lhasa**	**161.68**	**127**	PKP	PKPdf	03 03 39.1	+0.5
LSA				LR	LR		
	comp=N,50nm,8.0s						
LSA				LR	LR		
	comp=E,230nm,8.0s						
LSA				LR	LR		
	comp=Z,280nm,9.0s						
LSA	**Lhasa**	**161.68**	**127**	*e*PKPdf	PKPdf	03 03 38.8	+0.2
LSA				*e*PKPab	PKPab	03 04 23.9	0.0
KLR	**Kul'dur**	**161.93**	**302**	*e*PKIKP	PKPdf	03 03 33.7	-4.5
KMI	**Kunming**	**162.64**	**164**	PKP	PKPdf	03 03 40.3	+0.6
KMI				PP	PP	03 08 14.8	+3.0
KMI				SS	SS	03 28 29.0	-1.5
KMI				AMB	AMB		
	comp=Z,74nm,5.2s						
KMI				LR	LR		
	comp=N,190nm,22.6s						
KMI				LR	LR		
	comp=E,190nm,26.1s						
KMI				LR	LR		
	comp=Z,320nm,23.8s						
BOD	**Bodaibo**	**163.68**	**349**	*e*PKIKP	PKPdf	03 03 33.7	-5.9
BOD				*e*		03 04 29.6	
BOD				*e*		03 08 14.8	
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSRS	**Korea Array**	**164.05**	**260**	PKP	PKPdf	03 03 39.7	-1.0
	comp=Z,2.0nm,0.7s,baz=133,slow=4.1,SNR=4.1						
KSRS				PKPab	PKPab	03 04 31.1	-3.1
	comp=Z,1.3nm,0.6s,baz=113,slow=1.6,SNR=10						
MDJ	**Mudanjiang**	**164.09**	**287**	PKP	PKPdf	03 03 41.1	+0.7
MDJ				PKS		03 07 11.8	
MDJ				PP	PP	03 08 21.1	+0.4
MDJ				SKS	SKSdf	03 10 38.9	-2.2
MDJ				AMB	AMB		
	comp=Z,52nm,7.9s						
MDJ				LR	LR		
	comp=N,150nm,49.7s						
MDJ				LR	LR		
	comp=E,110nm,32.2s						
MDJ				LR	LR		
	comp=Z,170nm,26.3s						
GYA	**Guiyang**	**164.49**	**175**	PKP	PKPdf	03 03 40.8	-0.6
GYA				PKPab	PKPab	03 04 38.9	+2.8
GYA				PKS		03 07 12.3	
GYA				PP	PP	03 08 23.4	+2.0
GYA				SS	SS	03 28 47.6	-1.8
GYA				AMB	AMB		
	comp=Z,140nm,8.0s						
GYA				LR	LR		
	comp=N,210nm,25.3s						
GYA				LR	LR		
	comp=E,140nm,23.2s						
GYA				LR	LR		
	comp=Z,160nm,25.4s						
NJ2	**Nanjing**	**166.87**	**225**	*e*PKP	PKPdf	03 03 38.3	-4.9
CN2	**Changchun**	**167.09**	**284**	*e*PKP	PKPdf	03 03 41.0	-1.9
CD2	**Chengdu**	**168.44**	**161**	PKP	PKPdf	03 03 40.8	-3.5
CD2				PKPab	PKPab	03 04 52.3	-1.2
CD2				PKS		03 07 12.0	
CD2				PP	PP	03 08 42.0	0.0
CD2				AMB	AMB		
	comp=Z,70nm,7.7s						
CD2				LR	LR		
	comp=N,350nm,20.8s						
CD2				LR	LR		
	comp=Z,350nm,26.2s						
MOY	**Mondy**	**169.17**	**24**	*e*PKIKP	PKPdf	03 03 43.9	-0.2
MOY				pmax	pmax		
	comp=Z,32nm,3.3s						
TLY	**Talaya**	**169.83**	**16**	*i* PKIKP	PKPdf	03 03 45.6	+1.1
TLY				pmax	pmax		
	comp=Z,13nm,1.2s						
ZAK	**Zakamensk**	**170.96**	**20**	*e*PKIKP	PKPdf	03 03 41.2	-4.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA	**Gaotai**	**173.25**	**110**	PKP	PKPdf	03 03 46.9	+0.3
GTA				PKPab	PKPab	03 05 16.9	+2.0
GTA				PP	PP	03 09 09.4	+2.3
GTA				SKS	SKSdf	03 10 43.8	-2.3
GTA				SKKS	SKKSac	03 15 48.5	-1.0
GTA				AMB	AMB		
	comp=Z,120nm,7.8s						
GTA				LR	LR		
	comp=N,240nm,21.0s						
GTA				LR	LR		
	comp=E,230nm,20.4s						
GTA				LR	LR		
	comp=Z,340nm,20.4s						
LZH	**Lanzhou**	**173.28**	**150**	*e*PKP	PKPdf	03 03 44.5	-2.2
LZH				PKPab	PKPab	03 05 16.0	+1.1
LZH				LR	LR		
	comp=E,330nm,18.9s						
LZH				LR	LR		
	comp=Z,560nm,20.1s						
BJI	**Beijing**	**173.55**	**255**	PKP	PKPdf	03 03 46.0	-0.7
BJI				PP	PP	03 09 08.3	-0.4
BJI				AMB	AMB		
	comp=Z,79nm,4.5s						
BJI				LR	LR		
	comp=N,280nm,21.1s						
BJI				LR	LR		
	comp=E,170nm,20.2s						
BJI				LR	LR		
	comp=Z,280nm,25.8s						
SONM	**Songino Array**	**174.02**	**11**	PKP	PKPdf	03 03 45.2	-1.4
	comp=Z,5.5nm,1.2s,baz=215,slow=1.8,SNR=16						
SONM				PKPab	PKPab	03 05 18.5	+0.7
	comp=Z,3.7nm,0.9s,baz=316,slow=6.2,SNR=7.5						
SONM				PP	PP	03 09 14.4	+4.9
	comp=Z,1.3nm,0.9s,baz=48,slow=2.2,SNR=3.6						
ULN	**Ulaanbaatar**	**174.06**	**6**	*e*PKIKP	PKPdf	03 03 45.4	-1.2
ULN				*e*		03 05 18.4	
HHC	**Hu-ho-hao-te**	**177.12**	**248**	*e*PKP	PKPdf	03 03 48.1	+0.5
HHC				PKS		03 07 18.3	
HHC				SKS	SKSdf	03 10 49.1	+2.3
HHC				AMB	AMB		
	comp=Z,130nm,8.8s						
HHC				LR	LR		
	comp=N,410nm,21.4s						
HHC				LR	LR		
	comp=E,190nm,20.4s						
HHC				LR	LR		
	comp=Z,440nm,23.1s						

CASC 24 02:47:37.6±2.3, 7°.99N×83°.37W, h13km±16km, MD3.7, 2C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.69**	**17**	⇓*iP*	Pg	02 47 50.0	-1.1
ACR				*eS*	Sg	02 48 01.6	+1.4
BRU2	**Volcan**	**1.05**	**40**	⇓*iP*	Pb	02 47 56.4	-1.2
BRU2				*eS*	Sb	02 48 11.5	+0.3
TBS2		**1.07**	**41**	*eP*	Pb	02 47 58.0	+0.1
TBS2				*eS*	Sb	02 48 13.0	+1.2
BAR1		**1.25**	**3**	⇑*eP*	Pn	02 47 59.1	-1.7
BAR1				*eS*	Sb	02 48 15.9	-1.1
BUS	**Buena Vista**	**1.60**	**346**	*eP*	Pn	02 48 05.6	-0.1
QCR	**Quepos**	**1.63**	**331**	⇑*eP*	Pn	02 48 05.2	-0.8
QCR				*eS*	Sn	02 48 26.4	-0.4
CNI	**Changuinola**	**1.65**	**31**	*eP*	Pn	02 48 06.2	-0.1
CNI				*eS*	Sn	02 48 28.6	+1.2
URSC	**Urasca**	**1.88**	**348**	*eP*	Pn	02 48 08.6	-0.8
URSC				*eS*	Sn	02 48 33.5	+0.5
PRS1	**Puriscal**	**2.19**	**335**	*eP*	Pn	02 48 12.6	-1.1
CGA2	**Cerro Gallo 2**	**2.29**	**332**	*eP*	Pn	02 48 17.5	+2.4

*IDC **24** 03:00:10.9±1.2, 31°.02N×103°.39E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/30, Error ellipse: s-maj=40.0km s-min=21.3km az=50.0*
*NEIC **24** 03:00:12.4±0.6, 30°.97N×103°.38E, h10km, mb4.3/3, Error ellipse: s-maj=18.4km s-min=9.9km az=215.0*
*ISCJB **24** 03:00:13.2±1.1, 31°.05N±0°.04×103°.46E±0°.08, h23km±9km, mb3.9/10, Error ellipse: s-maj=11.9km s-min=6.6km az=12.7*
*BJI **24** 03:00:13.0, 31°.11N×103°.66E, h12km, mB4.4/3, mb4.0/5, ML3.9/15, Ms3.9/6, Ms7 3.7/7*
ISC 24 03:00:14.3±0.7, 31°.12N±0°.03×103°.58E±0°.05, h17km±4km, n28, σ1°13/38, mb3.9/10, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**144**	Pg	**Pg**	**03 00 19.3**	**-0.7**
CD2				Sg	**Sg**	**03 00 24.1**	**+0.2**
CD2				smax			
	comp=N,52μm,0.9s						
LZH	**Lanzhou**	**4.96**	**2**	*e*Pn	**Pb**	**03 01 36.3**	**-4.3**
LZH				Pg	**Pg**	**03 01 49.3**	**0.0**
LZH				Sn	**Sn**	**03 02 33.6**	**+8.7**
LZH				Sg	**Sg**	**03 02 53.8**	**+0.3**
LZH				smax			
	comp=N,63nm,0.9s						
LZH				smax			
	comp=E,87nm,0.8s						
LZH				LR	LR		
	comp=N,1μm,7.2s						
LZH				LR	LR		
	comp=Z,2μm,8.7s						
ENH	**Enshi**	**5.16**	**98**	*e*Pn	**Pn**	**03 01 31.6**	**+1.0**
	comp=Z,67nm,0.6s						
ENH				*e*Pg	**Pg**	**03 01 53.0**	**0.0**
ENH				*e*Sg	**Sg**	**03 02 57.3**	**-2.4**
XAN	**Xi'an**	**5.37**	**56**	Pn	**Pn**	**03 01 35.3**	**+1.8**
XAN				Sn	**Sn**	**03 02 30.8**	**-4.1**
XAN				Sg	**Sb**	**03 02 54.5**	**+2.9**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,39nm,0.8s						
GYA	**Guiyang**	**5.37**	**149**	Pn	**Pn**	**03 01 34.8**	**+1.2**
GYA				smax			
	comp=N,220nm,0.9s						
GYA				smax			
	comp=E,200nm,0.9s						
KMI	**Kunming**	**6.02**	**187**	Pn	**Pn**	**03 01 43.1**	**+0.6**
KMI				Sn	**Sn**	**03 02 51.8**	**+0.8**
KMI				smax			
	comp=N,42nm,1.1s						
KMI				smax			
	comp=E,41nm,1.1s						
KMI				LR	LR		
	comp=N,370nm,9.8s						
KMI				LR	LR		
	comp=E,310nm,8.9s						
KMI				LR	LR		
	comp=Z,180nm,15.0s						
GTA	**Gaotai**	**8.83**	**341**	*e*P	**Pn**	**03 02 25.1**	**+4.1**
GTA				pP		03 02 28.8	
GTA				sP		03 02 31.1	
GTA				S	**Sn**	**03 03 56.6**	**-3.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,43nm,5.1s						
GTA				LR	LR		
	comp=N,180nm,11.7s						
GTA				LR	LR		
	comp=E,150nm,9.9s						
GTA				LR	LR		
	comp=Z,120nm,10.8s						
WHN	**Wuhan**	**9.28**	**91**	P	**Pn**	**03 02 22.0**	**-5.2**
WHN				S	**Sn**	**03 04 09.5**	**-1.6**
WHN				LR	LR		
	comp=N,770nm,4.6s						
WHN				LR	LR		
	comp=E,820nm,4.9s						
WHN				LR	LR		
	comp=Z,700nm,9.7s						
HHC	**Hu-ho-hao-te**	**11.66**	**31**	*e*P	**Pn**	**03 03 03.9**	**+4.1**
HHC				pP		03 03 07.3	
HHC				PP		03 03 13.5	
HHC				S	**Sn**	**03 05 16.8**	**+7.3**
HHC				sS		03 05 22.0	
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,85nm,5.1s						
HHC				LR	LR		
	comp=N,180nm,5.4s						
HHC				LR	LR		
	comp=E,250nm,3.1s						
HHC				LR	LR		
	comp=Z,130nm,5.8s						
CHG	**Chiang Mai**	**12.95**	**200**	⇓P	Px	03 03 28.6	
	comp=Z,21nm,0.8s						
BDT	**Bhumibol Dam**	**14.43**	**198**	P	**Pn**	**03 03 32.0**	**-5.7**
SONM	**Songino Array**	**16.83**	**7**	Pn	**Pn**	**03 04 11.3**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=190,slow=12,SNR=4.5						
KSRS	**Korea Array**	**21.05**	**66**	P	**P**	**03 04 58.0**	**+0.6**
	comp=Z,3.3nm,0.6s,mb3.8,baz=261,slow=10,SNR=9.3						
MKAR	**Makanchi Array**	**22.68**	**320**	P	**P**	**03 05 14.9**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.4,baz=136,slow=8.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**26.52**	**335**	P	**P**	**03 05 50.1**	**-0.6**
	comp=Z,1.7nm,0.6s,mb3.7,baz=121,slow=5.6,SNR=3.3						
KURK	**Kurchatov**	**26.97**	**324**	*e*P	**P**	**03 05 53.5**	**-1.3**
	comp=Z,1.9nm,0.5s,mb3.9,baz=130,slow=9.6,SNR=3.8						
KURK	**Kurchatov**	**26.97**	**324**	*e*P	**P**	**03 05 53.5**	**-1.3**
	comp=Z,3.5nm,1.0s,mb3.8						
BVAR	**Borovoye Array**	**32.50**	**322**	LR	LR	03 20 51.3	
	comp=Z,66nm,20.2s,baz=190,slow=38						
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**03 09 58.0**	**-1.0**
	comp=Z,2.0nm,0.9s,mb4.2,baz=60,slow=5.9,SNR=3.3						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**03 09 59.9**	**-0.9**
	comp=Z,0.5nm,0.5s,mb3.8,baz=104,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**61.74**	**148**	P	**P**	**03 10 31.4**	**-0.3**
	comp=Z,0.7nm,0.6s,mb4.0,baz=335,slow=6.7,SNR=9.3						
CDF	**Champ du Feu**	**71.29**	**316**	*e*P	**P**	**03 11 32.0**	**-0.7**
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**03 11 42.7**	**+0.3**
	comp=Z,5.6nm,0.7s,mb4.3						
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**03 11 42.7**	**+0.3**
	comp=Z,2.8nm,0.7s,mb4.3						
LPL	**La Plagne**	**72.92**	**313**	*e*P	**P**	**03 11 42.6**	**+0.1**
	comp=Z,3.7nm,0.6s,mb4.2						
LPL	**La Plagne**	**72.92**	**313**	*e*P	**P**	**03 11 42.6**	**+0.1**
	comp=Z,1.9nm,0.6s,mb4.2						
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**03 11 48.8**	**-1.0**
YKA	**Yellowknife Ar**	**81.81**	**17**	P	**P**	**03 12 32.1**	**+0.2**
	comp=Z,0.4nm,0.8s,mb3.4,baz=331,slow=5.2,SNR=5.4						

MAN 24 03:10:36, 16°.46N×122°.40E, h30km, mb4.4, ML3.3, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.60**	**2**	*eP*	Pb	03 10 48.7	+0.5
PALP				*eS*	Sb	03 10 59.2	+2.8
CAUP	**Cauayan**	**0.73**	**312**	*eP*	Pb	03 10 50.9	+0.6
CAUP				*eS*	Sb	03 11 01.1	+1.1
BALP	**Baler**	**1.06**	**228**	*eP*	Pn	03 10 56.8	+1.9
BALP				*eS*	Sn	03 11 08.7	0.0
APYP	**Conner**	**1.78**	**322**	*eP*	Pn	03 11 07.6	+2.8

*IDC **24** 03:15:47.8±1.4, 2°.58S×98°.84E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, Error ellipse: s-maj=49.0km s-min=24.3km az=56.0*
*ISCJB **24** 03:15:53.9±1.4, 2°.27S±0°.08×99°.4E±0°.1, h45km±10km, mb4.0/11, Error ellipse: s-maj=18.4km s-min=11.4km az=154.3*
*NEIC **24** 03:15:53.1±0.7, 2°.58S×98°.91E, h35km, mb4.1/4, Error ellipse: s-maj=22.9km s-min=11.6km az=65.0*
*DJA **24** 03:15:54, 2°.20S×99°.46E, h17km, MLv3.8/5*
ISC 24 03:15:54.7±3.1, 2°.29S±0°.07×99°.39E±0°.09, h33km±22km, n22, σ0°81/21, mb4.0/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.78**	**127**	P	**Pn**	**03 16 09.0**	**-0.3**
SISI	**Saibi**	**1.00**	**343**	P	**Pn**	**03 16 11.5**	**-0.9**
PDSI	**Padang**	**1.74**	**38**	P	**Pn**	**03 16 21.5**	**-1.1**
PDSI				S	**Sn**	**03 16 43.3**	**-0.3**
PPI	**Padang Panjang**	**2.08**	**29**	P	**Pn**	**03 16 26.6**	**-0.7**
SDSI	**Sungai Dareh**	**2.44**	**57**	P	**Pn**	**03 16 32.6**	**+0.3**
MNSI	**Mandailing Nat**	**3.07**	**4**	P	**Pn**	**03 16 41.3**	**+0.4**
KULM	**Kulim**	**7.63**	**9**	*e*Pn	**Pn**	**03 17 46.4**	**+2.8**
CMAR	**Chiang Mai Arr**	**20.62**	**359**	P	**P**	**03 20 32.8**	**+1.5**
	2.0nm,0.3s,baz=192,slow=8.3,SNR=4.4						
WRAB	**Tennant Creek**	**38.38**	**120**	*eP*	**P**	**03 23 13.5**	**+0.4**
	1.3nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**39.58**	**125**	P	**P**	**03 23 23.4**	**+0.4**
	0.4nm,0.5s,mb3.4,baz=303,slow=7.9,SNR=7.0						
KSRS	**Korea Array**	**47.58**	**31**	P	**P**	**03 24 27.2**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=222,slow=5.4,SNR=5.1						
SONM	**Songino Array**	**50.29**	**6**	P	**P**	**03 24 48.4**	**+0.5**
	2.3nm,0.7s,mb4.3,baz=192,slow=8.6,SNR=14						
ULN	**Ulaanbaatar**	**50.40**	**7**	*eP*	**P**	**03 24 48.9**	**+0.2**
	2.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**51.15**	**345**	*eP*	**P**	**03 24 55.0**	**+0.6**
MKAR	**Makanchi Array**	**51.15**	**345**	P	**P**	**03 24 54.8**	**+0.4**
	1.6nm,0.6s,mb4.1,baz=150,slow=8.1,SNR=21						
KURK	**Kurchatov**	**55.72**	**344**	*eP*	**P**	**03 25 27.5**	**-0.4**
	2.1nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**57.34**	**350**	P	**P**	**03 25 39.0**	**-0.3**
	2.3nm,0.6s,mb4.4,baz=163,slow=5.4,SNR=9.0						
BVAR	**Borovoye Array**	**60.25**	**340**	P	**P**	**03 25 58.4**	**-1.2**
	0.5nm,0.4s,mb3.9,baz=167,slow=13,SNR=2.4						
ABKAR	**Akbulak array**	**61.60**	**332**	*eP*	**P**	**03 26 08.1**	**-0.8**
	1.1nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**73.07**	**313**	P	**P**	**03 27 17.3**	**-4.4**
	0.4nm,0.7s,mb3.5,baz=119,slow=1.8,SNR=3.8						
CPUP	**Villa Florida**	**143.73**	**217**	PKP	PKPdf	03 35 24.0	-3.2
	0.4nm,0.4s,baz=80,slow=6.1,SNR=2.9						
TXAR	**Lajitas Array**	**145.30**	**37**	PKPbc	PKPbc	03 35 30.6	+1.1
	1.5nm,0.7s,baz=272,slow=1.0,SNR=20						

IDC 24 03:40:24.0±3.2, 18°.17N×145°.46E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.6/6, ML3.8/1, MS4.7/1, Ms1 4.7/1, ms1mx2.8/23, Error ellipse: s-maj=95.4km s-min=40.0km az=12.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**18.05**	**302**	LR	LR	03 49 46.9	
	comp=Z,2μm,21.8s,baz=126,slow=31						
MJAR	**Matsushiro Arr**	**19.38**	**342**	P	Pn	03 44 51.8	-0.7
	0.3nm,0.3s,baz=158,slow=9.0,SNR=4.2						
MKAR	**Makanchi Array**	**58.66**	**314**	P	P	03 50 24.4	+1.2
	0.1nm,0.4s,baz=107,slow=5.0,SNR=2.7						
BVAR	**Borovoye Array**	**66.73**	**321**	P	P	03 51 17.0	0.0
	0.9nm,0.8s,baz=95,slow=9.8,SNR=3.2						
YKA	**Yellowknife Ar**	**78.56**	**28**	P	P	03 52 26.6	-0.5
	0.3nm,0.6s,baz=288,slow=5.2,SNR=6.5						
NVAR	**Mina Array Bea**	**83.64**	**52**	P	P	03 52 56.5	+1.7
	0.3nm,0.5s,baz=272,slow=5.5,SNR=4.3						
FINES	**FINESS Array B**	**87.26**	**335**	P	P	03 53 10.4	-1.9
	0.6nm,0.4s,baz=76,slow=4.3,SNR=9.3						

*ISK **24** 04:01:14.8, 36°.99N×29°.19E, h5km, MD3.1*
*ISCJB **24** 04:01:16.2±0.5, 36°.97N±0°.03×29°.22E±0°.03, h5km±5km, Error ellipse: s-maj=4.8km s-min=4.1km az=42.4*
*CSEM **24** 04:01:16.3±0.1, 37°.00N×29°.21E, h5km, MD3.1, Error ellipse: s-maj=2.3km s-min=1.9km az=37.0*
*DDA **24** 04:01:16.2, 36°.98N×29°.21E, h7km±5km, Md2.9*
ISC 24 04:01:16.6±0.5, 36°.97N±0°.03×29°.22E±0°.03, h8km±4km, n47, σ0°91/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**51**	PG	**Pg**	**04 01 21.6**	**-0.8**
GLHS				*e*SG	**Sg**	**04 01 26.9**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.29**	**51**	*i* Pg	**Pg**	**04 01 21.6**	**-0.7**
GLHS				*e*Sg	**Sg**	**04 01 26.9**	**+0.7**
FETY	**Fethiye**	**0.35**	**198**	*e*PG	**Pg**	**04 01 22.6**	**-1.0**
FETY				*e*SG	**Sg**	**04 01 28.9**	**+0.7**
FETY	**Fethiye**	**0.35**	**198**	*e*Pg	**Pg**	**04 01 22.6**	**-0.9**
FETY				*e*Sg	**Sg**	**04 01 29.0**	**+0.8**
GOLH	**Golhisar**	**0.38**	**46**	*i* P	**Pg**	**04 01 23.6**	**-0.5**
GOLH				*i* S	**Sg**	**04 01 30.4**	**+1.4**
GOLH	**Golhisar**	**0.38**	**46**	*i* P	**Pg**	**04 01 23.6**	**-0.5**
GOLH				*i* S	**Sg**	**04 01 30.5**	**+1.4**
TURN	**Turunc**	**0.50**	**259**	*i* P	**Pg**	**04 01 31.2**	**+4.8**
TURN				*i* S	**Sg**	**04 01 43.5**	**+11**
ELL	**Elmali**	**0.60**	**112**	*e*PG	**Pg**	**04 01 28.1**	**0.0**
ELL	**Elmali**	**0.60**	**112**	*e*Pg	**Pg**	**04 01 28.1**	**-0.1**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P	**Pg**	**04 01 29.5**	**-1.2**
DNZL				*i* S	**Sg**	**04 01 41.8**	**+1.7**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P	**Pg**	**04 01 29.5**	**-1.2**
DNZL				*i* S	**Sg**	**04 01 41.8**	**+1.6**
YER	**Yerkesik**	**0.77**	**282**	*e*PG	**Pg**	**04 01 30.7**	**-0.7**
YER	**Yerkesik**	**0.77**	**282**	*e*Pg	**Pg**	**04 01 30.7**	**-0.7**
DENT	**Denizli**	**0.79**	**349**	*e*PG	**Pg**	**04 01 30.8**	**-1.1**
DENT	**Denizli**	**0.79**	**349**	*e*Pg	**Pg**	**04 01 30.8**	**-1.1**
AKAS	**Kas**	**0.80**	**157**	*i* P	**Pg**	**04 01 32.1**	**+0.1**
AKAS				*i* S	**Sg**	**04 01 50.2**	**+7.7**
AKAS	**Kas**	**0.80**	**157**	*i* P	**Pg**	**04 01 32.1**	**+0.1**
ANTB	**Antalya**	**1.15**	**93**	*e*PN	**Pn**	**04 01 38.6**	**-0.5**
ANTB	**Antalya**	**1.15**	**93**	*e*Pn	**Pn**	**04 01 38.6**	**-0.5**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**	**04 01 39.4**	**-0.4**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**	**04 01 39.4**	**-0.3**
MLSB	**Milas**	**1.20**	**286**	*e*PN	**Pn**	**04 01 37.8**	**-1.9**
MLSB	**Milas**	**1.20**	**286**	*e*Pn	**Pn**	**04 01 37.8**	**-1.9**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P	**Pn**	**04 01 40.4**	**-0.3**
AYDN				*i* S	**Sb**	**04 01 58.7**	**+1.4**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P	**Pn**	**04 01 40.4**	**-0.3**
AYDN				*i* S	**Sb**	**04 01 58.7**	**+1.4**
DAT	**Datca**	**1.34**	**260**	*e*PN	**Pn**	**04 01 40.6**	**-1.1**
DAT	**Datca**	**1.34**	**260**	*e*Pn	**Pn**	**04 01 40.6**	**-1.1**
ISP	**Isparta**	**1.35**	**49**	*e*PN	**Pn**	**04 01 42.1**	**+0.4**
ISP	**Isparta**	**1.35**	**49**	*e*Pn	**Pn**	**04 01 42.2**	**+0.4**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**04 01 42.8**	**+0.1**
KHAL				*i* S	**Sb**	**04 01 59.7**	**-1.7**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**	**04 01 42.8**	**+0.1**
KHAL				*i* S	**Sb**	**04 01 59.7**	**-1.7**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**04 01 44.1**	**+1.3**
BDRM				*i* S	**Sb**	**04 02 03.5**	**+1.7**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**04 01 44.1**	**+1.3**
BDRM				*i* S	**Sb**	**04 02 03.5**	**+1.7**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*PN	**Pn**	**04 01 44.5**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*Pn	**Pn**	**04 01 44.5**	**+0.5**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*PN	**Pn**	**04 01 45.2**	**-0.1**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*Pn	**Pn**	**04 01 45.2**	**-0.1**
MANT	**Manisa**	**1.60**	**341**	*i* P	**Pn**	**04 01 45.2**	**-0.2**
MANT				*i* S	**Sn**	**04 02 06.2**	**0.0**
MANT	**Manisa**	**1.60**	**341**	*i* P	**Pn**	**04 01 45.2**	**-0.1**
MANT				*i* S	**Sn**	**04 02 06.2**	**0.0**
**GCA

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**1.89**	**62**	⇓P	Pn	04 28 06.9	+0.8
OTAV	**Otavalo**	**1.89**	**62**	⇓S	Sn	04 28 34.8	+4.8
ANTI	**Antisana**	**1.97**	**84**	⇑S	Sn	04 28 39.8	+7.9
ANTI	**Antisana**	**1.97**	**84**	⇑P	Pn	04 28 10.6	+3.4
COTA	**Cotacachi**	**2.04**	**61**	P	Pn	04 28 10.8	+2.6
CAYA	**Cayambe**	**2.25**	**71**	⇓P	Pn	04 28 15.1	+4.0
MACE	**Macas**	**2.49**	**129**	P	Pn	04 28 19.8	+5.5

ISCJB ***24*** *04:29:48.4±0.9, 48°.1N±0°.1×152°.5E±0°.1, h139km±8km, mb3.6/19, Error ellipse: s-maj=21.5km s-min=7.6km az=146.5*
MOS ***24*** *04:29:49.1±1.2, 48°.09N×152°.47E, h148km, mb3.9/11, Error ellipse: s-maj=19.9km s-min=10.2km az=58.1*
NEIC ***24*** *04:29:50.4±1.7, 48°.01N×152°.44E, h145km±13km, mb3.9/9, Error ellipse: s-maj=17.3km s-min=8.4km az=170.0*
IDC ***24*** *04:29:50.8±2.3, 48°.02N×152°.45E, h149km±21km, mb3.2/13, mb1 3.5/15, mb1mx3.4/28, mbtmp3.3/15, MS2.7/1, Ms1 2.7/1, ms1mx2.5/18, Error ellipse: s-maj=21.8km s-min=12.6km az=155.0*

ISC 24 04:29:49.9±0.9, 48°.1N±0°.1×152°.5E±0°.1, h135km±8km, n41, σ0°92/42, mb3.6/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.50**	**41**	*e*PN	**Pn**	**04 30 40.5**	**-2.6**
SKR				*e*S	**Sn**	**04 31 22.5**	**-1.9**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,170nm,0.3s						
SKR				smax			
	comp=E,110nm,0.3s						
PETK	**Petropavlovsk-**	**6.01**	**31**	P	**Pn**	**04 31 18.1**	**+1.6**
	comp=E,1.2nm,0.3s,baz=200,slow=11,SNR=14						
PETK				LR	LR	04 33 46.6	
	comp=E,79nm,21.2s,baz=315,slow=39						
PETK	**Petropavlovsk-**	**6.01**	**31**	*e*PN	**Pn**	**04 31 18.8**	**+2.4**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.70**	**264**	*e*PN	**Pn**	**04 31 27.0**	**+1.2**
ASAJ	**Asahikawa**	**7.95**	**244**	P	**Pn**	**04 31 42.9**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=82,slow=14,SNR=14						
ASAJ	**Asahikawa**	**7.95**	**244**	PN	**Pn**	**04 31 42.9**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**8.98**	**231**	*i* PN	**Pn**	**04 31 56.3**	**-0.1**
KSRS	**Korea Array**	**20.86**	**248**	P	**P**	**04 34 20.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=50,slow=9.1,SNR=6.5						
SONM	**Songino Array**	**30.52**	**287**	P	**P**	**04 35 50.4**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.3,baz=149,slow=6.4,SNR=2.1						
COLA	**College**	**35.35**	**40**	*e*P	**P**	**04 36 32.7**	**+0.9**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
COLA	**College**	**35.35**	**40**	*e*P	**P**	**04 36 32.7**	**+0.9**
	comp=Z,5.4nm,0.8s,mb4.2						
INK	**Inuvik**	**40.75**	**33**	P	**P**	**04 37 17.9**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.6,baz=292,slow=1.4,SNR=6.0						
INK	**Inuvik**	**40.75**	**33**	P	**P**	**04 37 17.9**	**+1.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**40.75**	**33**	*e*P	**P**	**04 37 17.8**	**+0.8**
	comp=Z,1.5nm,0.8s,mb3.7						
MKAR	**Makanchi Array**	**45.97**	**296**	P	**P**	**04 37 58.5**	**-0.6**
	comp=Z,0.1nm,0.4s,mb2.8,baz=45,slow=4.3,SNR=2.5						
KURK	**Kurchatov**	**46.29**	**302**	P	**P**	**04 38 00.5**	**-1.1**
	comp=Z,0.5nm,0.3s,mb3.6,baz=67,slow=8.1,SNR=1.6						
KURK	**Kurchatov**	**46.29**	**302**	*e*P	**P**	**04 38 00.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
KURK	**Kurchatov**	**46.29**	**302**	*e*P	**P**	**04 38 00.7**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.6						
RES	**Resolute Bay**	**49.70**	**19**	*e*P	**P**	**04 38 27.7**	**+0.3**
RES				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
RES	**Resolute Bay**	**49.70**	**19**	*e*P	**P**	**04 38 27.7**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.5						
YKA	**Yellowknife Ar**	**50.10**	**37**	P	**P**	**04 38 31.0**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.6,baz=299,slow=7.1,SNR=16						
YKA				PcP	PcP	04 39 47.6	-0.4
	comp=Z,0.2nm,0.5s,baz=301,slow=3.6,SNR=4.6						
YKA	**Yellowknife Ar**	**50.10**	**37**	P	**P**	**04 38 31.0**	**+0.4**
YKA						04 39 47.6	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NEW	**Newport**	**56.69**	**53**	*e*P	**P**	**04 39 18.8**	**-0.1**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEW	**Newport**	**56.69**	**53**	*e*P	**P**	**04 39 18.8**	**-0.1**
	comp=Z,3.8nm,0.9s,mb4.2						
FCC	**Fort Churchill**	**60.37**	**33**	*e*P	**P**	**04 39 43.9**	**-0.3**
BOZ	**Bozeman (W)**	**61.27**	**53**	*e*P	**P**	**04 39 50.9**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
BOZ	**Bozeman (W)**	**61.27**	**53**	*e*P	**P**	**04 39 50.9**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**62.18**	**63**	P	**P**	**04 39 56.9**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.6,baz=285,slow=7.6,SNR=5.3						
FINES	**FINESS Array B**	**62.65**	**334**	P	**P**	**04 39 58.4**	**-1.1**
	comp=Z,1.2nm,0.7s,mb3.8,baz=25,slow=7.2,SNR=9.0						
FINES	**FINESS Array B**	**62.65**	**334**	P	**P**	**04 39 58.4**	**-1.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TPAW	**Teton Pass**	**63.05**	**54**	*e*P	**P**	**04 40 03.9**	**+1.5**
	comp=Z,1.1nm,0.7s,mb3.8						
BW06	**Boulder Array**	**64.29**	**54**	*e*P	**P**	**04 40 10.7**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.7						
PDAR	**Pinedale Array**	**64.29**	**54**	P	**P**	**04 40 10.2**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.6,baz=322,slow=2.7,SNR=7.2						
RSSD	**Black Hills**	**66.27**	**50**	*e*P	**P**	**04 40 23.2**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
RSSD	**Black Hills**	**66.27**	**50**	*e*P	**P**	**04 40 23.2**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.1						
NOA	**NORSAR Array B**	**66.83**	**341**	P	**P**	**04 40 25.7**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=27,slow=5.5,SNR=2.9						
ASAR	**Alice Springs**	**73.36**	**198**	P	**P**	**04 41 05.5**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.5,baz=10,slow=5.3,SNR=7.4						
ASAR	**Alice Springs**	**73.36**	**198**	P	**P**	**04 41 05.5**	**-1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**77.13**	**316**	P	**P**	**04 41 28.9**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.1,baz=57,slow=5.3,SNR=2.5						
TXAR	**Lajitas Array**	**77.19**	**60**	P	**P**	**04 41 28.3**	**-0.5**
	comp=Z,1.1nm,0.5s,mb3.7,baz=298,slow=4.6,SNR=21						
TXAR	**Lajitas Array**	**77.19**	**60**	P	**P**	**04 41 28.3**	**-0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

GUC 24 04:51:43.9±0.5, 32°.19S×70°.96W, h56km±6km, MD4.0, ML4.2, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.53**	**229**	⇓*i*P	Pn	04 51 56.2	+0.3
PACH				*i* S	Sn	04 52 05.6	+1.0
PEL	**Peldehue**	**0.98**	**166**	⇓*i*P	Pn	04 52 01.9	+0.4
PEL				*i* S	Sn	04 52 15.4	+0.9
PEL				AML	AML	04 52 16.7	
	comp=E,13μm,0.4s						
IHA	**Instituto Hidr**	**1.01**	**214**	*i* P	Pn	04 52 01.3	-0.7
IHA				*i* S	Sn	04 52 15.2	-0.1
CLCH	**Cerro Calan**	**1.25**	**164**	*i* P	Pn	04 52 05.9	+0.7
CLCH				*e*S	Sn	04 52 22.4	+1.3
CLCH				AML	AML	04 52 25.8	
	comp=E,8μm,0.5s						
FCH	**Farellones**	**1.27**	**154**	⇑*i*P	Pn	04 52 06.9	+1.5
FCH				*i* S	Sn	04 52 24.1	+2.7
FCH				AML	AML	04 52 27.2	
	comp=E,4μm,0.2s						
SAN	**Santiago**	**1.28**	**169**	*i* P	Pn	04 52 11.1	+5.6
SAN				*i* S	Sn	04 52 28.1	+6.3
SAN				AML	AML	04 52 29.3	
	comp=E,8μm,0.5s						
FSR	**Penalolen**	**1.34**	**164**	⇓*i*P	Pn	04 52 06.9	+0.6
FSR				*i* S	Sn	04 52 24.7	+1.6
ANTU	**Antumapu**	**1.40**	**169**	⇑*i*P	Pn	04 52 07.5	+0.3
ANTU				*i* S	Sn	04 52 25.6	+0.9
ANTU				AML	AML	04 52 26.8	
	comp=E,7μm,0.4s						
SJCH	**San Jose de Ma**	**1.54**	**161**	*i* P	Pn	04 52 09.7	+0.8
SJCH				*i* S	Sn	04 52 29.4	+1.6
SJCH				AML	AML	04 52 31.8	
	comp=E,2μm,0.6s						
CHCH	**Chadas Angostu**	**1.76**	**172**	*i* P	Pn	04 52 12.5	+0.5
CHCH				*i* S	Sn	04 52 34.3	+1.0
LMEL	**Las Melosas**	**1.77**	**159**	*e*P	Pn	04 52 12.9	+0.8
LMEL				*i* S	Sn	04 52 35.1	+1.5
LMEL				AML	AML	04 52 40.3	
	comp=N,6μm,0.1s						
TLL	**Tololo Astrono**	**2.02**	**4**	*e*P	Pn	04 52 16.6	+1.1
TLL				*i* S	Sn	04 52 41.5	+1.8
TLL				AML	AML	04 52 49.4	
	comp=N,2μm,0.5s						
TALC	**Talca**	**3.25**	**190**	*i* P	Pn	04 52 32.8	+0.4
TALC				*i* S	Sn	04 53 10.3	+0.5

BGS ***24*** *04:58:02.0±1.5, 41°.34N×32°.17W, h10km, mb5.2, MS4.9*
SFS ***24*** *04:58:13.0, 42°.70N×31°.20W, h0km, ML5.4*
ISCJB ***24*** *04:58:16.9±0.1, 42°.39N±0°.02×30°.57W±0°.01, h10km, mb5.3/377, MS4.8/255, Error ellipse: s-maj=2.9km s-min=1.1km az=1.9*
IGIL ***24*** *04:58:17.4, 42°.44N×30°.55W, h10km, mb5.4*
MOS ***24*** *04:58:17.0±0.8, 42°.38N×30°.54W, h10km, mb5.4/127, MS4.8/91, Error ellipse: s-maj=5.1km s-min=3.1km az=148.5*
IDC ***24*** *04:58:17.0±0.3, 42°.39N×30°.61W, h0km, mb4.8/47, mb1 4.9/47, mb1mx4.9/47, mbtmp4.8/47, MS4.6/33, Ms1 4.6/33, ms1mx4.6/39, Error ellipse: s-maj=9.6km s-min=8.3km az=168.0*
BJI ***24*** *04:58:18.6, 43°.23N×30°.96W, h10km, mB5.5/26, mb5.2/37, Ms5.4/29, Ms7 5.1/27*
GCMT ***24*** *04:58:18.9±0.2, 42°.44N×30°.47W, h18km, MW5.5/100, Moment Tensor Solution. s81,c152; s100,c196; Duration: 1s3 Moment tensor: Scale 10^17^Nm; M_{rr}-1.33±.04; $M_{\theta\theta}$2.34±.03; $M_{\phi\phi}$-1.01±.03; $M_{r\theta}$-0.30±.07; $M_{\theta\phi}$-0.67±.03; $M_{\phi r}$-0.14±.07; Best double couple: $M_0$1.97700×10^17^ NP1:ϕ_s309.00000°, δ49.00000°, λ-47.00000°. NP2:ϕ_s75.00000°, δ56.00000°, λ-128.00000°. Principal axes: T 2.4870, Plg4.0000°, Azm191.0000°; N -1.0210, Plg31.0000°, Azm98.0000°; P -1.4660, Plg59.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***24*** *04:58:18.9±0.1, 42°.39N×30°.52W, h10km, mb5.4/288, MS4.8/181, MW5.4 Error ellipse: s-maj=2.5km s-min=1.1km az=183.0, Moment Tensor Solution. s61 Moment tensor: Scale 10^17^Nm; M_{rr}-0.90; $M_{\theta\theta}$1.46; $M_{\phi\phi}$-0.56; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.53; $M_{\phi r}$0.11; Best double couple: $M_0$1.40000×10^17^ NP1:ϕ_s261.00000°, δ53.00000°, λ-123.00000°. NP2:ϕ_s128.00000°, δ48.00000°, λ-54.00000°. Principal axes: T 1.6000, Plg2.0000°, Azm13.0000°; N -0.6200, Plg25.0000°, Azm282.0000°; P -0.9700, Plg63.0000°, Azm108.0000°;*
CSEM ***24*** *04:58:18.7±0.0, 42°.38N×30°.51W, h10km, mb5.4/99, Ms4.7, Mw5.5 Error ellipse: s-maj=2.5km s-min=1.3km az=2.0*
TEH ***24*** *04:58:19.0, 42°.44N×30°.55W, h10km*
SZGRF ***24*** *04:58:20.1, 42°.05N×30°.56W, h33km, mb5.2, MS4.9, Azores Islands region*

ISC 24 04:58:18.9±0.1, 42°.38N±0°.02×30°.53W±0°.01, h10km, (h15km±6km:pP-P), n2040, σ0°76/1991, mb5.3/377, MS4.8/255, 201C-347D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**4.00**	**159**	*e*P	**Pn**	**04 59 19.0**	**-1.2**
PCED	**Cedros**	**4.00**	**159**	*e*P	**Pn**	**04 59 18.8**	**-1.4**
PCED	**Cedros**	**4.00**	**159**	*e*P	**Pn**	**04 59 18.8**	**-1.4**
CALA	**Caldeira**	**4.04**	**159**	*e*P	**Pn**	**04 59 19.8**	**-1.0**
CALA	**Caldeira**	**4.04**	**159**	*e*P	**Pn**	**04 59 19.8**	**-1.0**
CALA	**Caldeira**	**4.04**	**159**	*e*P	**Pn**	**04 59 19.8**	**-1.0**
ROSA	**Rosais**	**4.05**	**154**	*e*P	**Pn**	**04 59 19.2**	**-1.7**
ROSA	**Rosais**	**4.05**	**154**	*e*P	**Pn**	**04 59 19.0**	**-1.9**
ROSA	**Rosais**	**4.05**	**154**	*e*P	**Pn**	**04 59 19.0**	**-1.9**
HOR	**Horta**	**4.12**	**159**	*e*P	**Pn**	**04 59 20.6**	**-1.2**
HOR	**Horta**	**4.12**	**159**	*e*P	**Pn**	**04 59 20.6**	**-1.1**
HOR	**Horta**	**4.12**	**159**	*e*P	**Pn**	**04 59 20.6**	**-1.2**
PMAN	**Manadas**	**4.18**	**153**	*e*P	**Pn**	**04 59 20.7**	**-2.0**
PMAN	**Manadas**	**4.18**	**153**	*e*P	**Pn**	**04 59 20.7**	**-2.0**
PICO	**Pico**	**4.20**	**157**	*e*P	**Pn**	**04 59 21.6**	**-1.3**
PICO	**Pico**	**4.20**	**157**	*e*P	**Pn**	**04 59 22.6**	**-0.3**
PICO	**Pico**	**4.20**	**157**	*e*P	**Pn**	**04 59 22.6**	**-0.3**
PCAN	**Candelaria**	**4.21**	**158**	*e*P	**Pn**	**04 59 21.9**	**-1.2**
PCAN	**Candelaria**	**4.21**	**158**	*e*P	**Pn**	**04 59 21.9**	**-1.2**
PID	**Ribeirinha**	**4.34**	**154**	*e*P	**Pn**	**04 59 23.2**	**-1.7**
PID	**Ribeirinha**	**4.34**	**154**	*e*P	**Pn**	**04 59 23.2**	**-1.7**
ADH	**Angra Heroismo**	**4.49**	**145**	*e*P	**Pn**	**04 59 24.4**	**-2.5**
ADH	**Angra Heroismo**	**4.49**	**145**	*e*P	**Pn**	**04 59 24.4**	**-2.5**
PSET	**Sete Cidades**	**5.86**	**139**	*e*P	**Pn**	**04 59 44.4**	**-1.3**
PSET	**Sete Cidades**	**5.86**	**139**	*e*P	**Pn**	**04 59 44.4**	**-1.3**
PDA	**Ponta Delgada**	**5.95**	**140**	*e*P	**Pn**	**04 59 45.6**	**-1.3**
PDA				*e*LQ		05 00 50.0	
PDA				*e*LR	LR	05 01 10.0	
PDA	**Ponta Delgada**	**5.95**	**140**	*e*P	**Pn**	**04 59 45.6**	**-1.3**
PDA	**Ponta Delgada**	**5.95**	**140**	*e*P	**Pn**	**04 59 45.6**	**-1.3**
GRON	**Grota Negra**	**5.99**	**139**	*e*P	**Pn**	**04 59 47.4**	**-0.2**
CMLA	**Cha da Macela**	**6.00**	**139**	*e*P	**Pn**	**04 59 46.0**	**-1.7**
CMLA	**Cha da Macela**	**6.00**	**139**	Pn	**Pn**	**04 59 46.0**	**-1.7**
	3μm,0.5s,SNR=9.7						
CMLA	**Cha da Macela**	**6.00**	**139**	*e*P	**Pn**	**04 59 45.5**	**-2.2**
CMLA				pmax	pmax		
	comp=Z,280nm,0.6s						
CMLA	**Cha da Macela**	**6.00**	**139**	*e*Pn	**Pn**	**04 59 45.5**	**-2.1**
	comp=Z,280nm,0.6s						
CMLA	**Cha da Macela**	**6.00**	**139**	*e*P	**Pn**	**04 59 45.5**	**-2.2**
	comp=Z,280nm,0.6s						
PSMA	**Santa Maria**	**6.80**	**140**	*e*P	**Pn**	**04 59 57.4**	**-1.3**
EMAZ	**Mazaricos**	**15.87**	**81**	P	**Pn**	**05 02 00.7**	**-1.4**
	comp=Z,664nm,3.3s						
EZAM	**Zamans**	**16.17**	**83**	P	**Pn**	**05 02 09.8**	**+3.8**
EZAM				pmax	pmax		
	comp=Z,111nm,1.3s						
EZAM	**Zamans**	**16.17**	**83**	P	**Pn**	**05 02 09.8**	**+3.8**
	comp=Z,111nm,1.3s						
EZAM	**Zamans**	**16.17**	**83**	P	**Pn**	**05 02 09.8**	**+3.8**
	comp=Z,111nm,1.3s						
STS	**Santiago**	**16.18**	**81**	P	**Pn**	**05 02 05.5**	**-0.7**
STS				pmax	pmax		
	comp=Z,48nm,1.8s						
STS	**Santiago**	**16.18**	**81**	P	**Pn**	**05 02 05.5**	**-0.7**
	comp=Z,48nm,1.8s						
PMAFR	**Mafra**	**16.48**	**95**	*e*P	**Pn**	**05 02 08.6**	**-1.4**
	comp=Z,237nm,1.4s						
PMAFR				*e*LQ		05 05 15.7	
PMAFR				*e*S	**Sn**	**05 05 24.4**	**+12**
PMAFR				*e*LR	LR	05 06 02.3	
	comp=Z,3μm,18.0s						
LIS	**Lisbon**	**16.65**	**96**	*e*P	**Pn**	**05 02 11.2**	**-1.0**
LIS				AMb	AMB	05 02 19.9	
	comp=Z,495nm,2.5s						
ELOB	**Lobios**	**16.68**	**84**	P	**Pn**	**05 02 14.8**	**+2.3**
	comp=Z,277nm,2.0s						
ELOB	**Lobios**	**16.68**	**84**	P	**Pn**	**05 02 14.8**	**+2.3**
	comp=Z,277nm,2.0s						
PCAB	**Cabril**	**16.73**	**85**	*e*P	**Pn**	**05 02 14.9**	**+1.7**
	comp=Z,143nm,1.8s						
PCAB	**Cabril**	**16.73**	**85**	*e*P	**Pn**	**05 02 14.9**	**+1.7**
	comp=Z,143nm,1.8s						
PVRL	**Vila Real**	**17.04**	**86**	*e*P	**Pn**	**05 02 19.4**	**+2.3**
	comp=Z,75nm,1.7s						
PVRL	**Vila Real**	**17.04**	**86**	*e*P	**Pn**	**05 02 19.4**	**+2.3**
	comp=Z,75nm,1.7s						
EPON	**Pontenova**	**17.16**	**79**	P	**Pn**	**05 02 21.7**	**+3.0**
	comp=Z,839nm,3.5s						
EPON	**Pontenova**	**17.16**	**79**	P	**Pn**	**05 02 21.7**	**+3.1**
	comp=Z,839nm,3.5s						
EHIG	**Higuera**	**17.23**	**139**	P	**Pn**	**05 02 22.9**	**+3.3**
	comp=Z,369nm,1.5s						
EHIG	**Higuera**	**17.23**	**139**	P	**Pn**	**05 02 22.9**	**+3.4**
	comp=Z,369nm,1.5s						
ERUA	**La Rua**	**17.27**	**82**	P	**Pn**	**05 02 21.0**	**+1.0**
ERUA				pmax	pmax		
	comp=Z,199nm,1.6s						
ERUA	**La Rua**	**17.27**	**82**	P	**Pn**	**05 02 21.0**	**+0.9**
	comp=Z,199nm,1.6s						
ERUA	**La Rua**	**17.27**	**82**	P	**Pn**	**05 02 21.0**	**+1.0**
	comp=Z,199nm,1.6s						
MTE	**Manteigas**	**17.36**	**89**	*e*P	**Pn**	**05 02 22.2**	**+1.1**
	comp=Z,175nm,2.1s						
MTE				*e*LQ		05 05 30.9	
MTE				*e*S	**Sn**	**05 05 39.2**	**+5.1**
MTE				*e*LR	LR	05 06 27.9	
	comp=Z,1μm,19.1s						
MTE	**Manteigas**	**17.36**	**89**	*e*Pn	**Pn**	**05 02 22.5**	**+1.5**
	comp=Z,145nm,1.4s						
MTE	**Manteigas**	**17.36**	**89**	*e*P	**Pn**	**05 02 22.2**	**+1.1**
	comp=Z,175nm,2.1s						
MTE	**Manteigas**	**17.36**	**89**	*e*Pn	**Pn**	**05 02 22.5**	**+1.4**
	comp=Z,145nm,1.4s						
PTEO	**Sao Teotonio**	**17.39**	**99**	*e*P	**Pn**	**05 02 21.4**	**-0.1**
	comp=Z,254nm,1.4s						
PTEO	**Sao Teotonio**	**17.39**	**99**	*e*P	**Pn**	**05 02 21.4**	**-0.1**
	comp=Z,254nm,1.4s						
EVOP	**Sao Brissos**	**17.47**	**95**	*e*P	**Pn**	**05 02 21.1**	**-1.4**
EVOP				AMb	AMB	05 02 27.2	
	comp=Z,178nm,2.0s						
EVOP	**Sao Brissos**	**17.47**	**95**	*e*P	**Pn**	**05 02 22.0**	**-0.5**
	comp=Z,330nm,1.9s						
MORF	**Marmelete**	**17.54**	**100**	*e*P	**Pn**	**05 02 22.8**	**-0.5**
	comp=Z,194nm,1.3s						
MORF				*e*LQ		05 05 50.3	
MORF				*e*LR	LR	05 06 38.2	
	comp=Z,3μm,19.9s						
MORF	**Marmelete**	**17.54**	**100**	*e*P	**Pn**	**05 02 22.8**	**-0.5**
	comp=Z,194nm,1.3s						
PCBR	**Castelo Branco**	**17.55**	**91**	*e*P	**Pn**	**05 02 23.8**	**+0.3**
	comp=Z,101nm,0.9s						
PCBR	**Castelo Branco**	**17.55**	**91**	*e*P	**Pn**	**05 02 23.8**	**+0.3**
	comp=Z,101nm,0.9s						
EVO	**Evora**	**17.55**	**95**	*e*P	**Pn**	**05 02 22.0**	**-1.5**
	comp=Z,659nm,1.9s						
EVO				*e*MLR	MLR		
	comp=Z,5μm,22.5s						
EVO	**Evora**	**17.55**	**95**	*e*P	**Pn**	**05 02 21.9**	**-1.6**
	comp=Z,163nm,1.8s						
EVO				*e*S	**Sn**	**05 05 55.2**	**+16**
EVO	**Evora**	**17.55**	**95**	*e*P	**Pn**	**05 02 21.9**	**-1.6**
	comp=Z,163nm,1.8s						
MVO	**Moncorvo**	**17.57**	**86**	*e*P	**Pn**	**05 02 23.8**	**+0.1**
	comp=Z,99nm,2.1s						
MVO				*e*LQ		05 05 45.0	
MVO				*e*S	**Sn**	**05 05 52.1**	**+13**
MVO				*e*LR	LR	05 06 34.3	
	comp=Z,724nm,20.5s						
MVO	**Moncorvo**	**17.57**	**86**	*e*P	**Pn**	**05 02 23.8**	**+0.1**
	comp=Z,99nm,2.1s						
ECAL	**Calabor**	**17.64**	**83**	P	**Pn**	**05 02 24.9**	**+0.4**
	comp=Z,910nm,3.2s						
ECAL	**Calabor**	**17.64**	**83**	P	**Pn**	**05 02 24.9**	**+0.3**
	comp=Z,910nm,3.2s						
PBRG	**Braganca**	**17.66**	**84**	*e*P	**Pn**	**05 02 26.9**	**+2.1**
	comp=Z,101nm,1.1s						
PBRG	**Braganca**	**17.66**	**84**	*e*P	**Pn**	**05 02 26.9**	**+2.1**
	comp=Z,101nm,1.1s						
PMRV	**Marv??o**	**17.73**	**92**	*e*P	**Pn**	**05 02 24.4**	**-1.3**
	comp=Z,143nm,1.8s						
PMRV				*e*S	**Sn**	**05 05 55.2**	**+12**
PMRV				*e*LQ		05 06 04.8	
PMRV				*e*LR	LR	05 06 42.4	
	comp=Z,2μm,13.2s						
PMRV	**Marv??o**	**17.73**	**92**	*e*P	**Pn**	**05 02 24.4**	**-1.3**
	comp=Z,143nm,1.8s						
PESTR	**Estremoz**	**17.75**	**94**	*e*P	**Pn**	**05 02 24.6**	**-1.4**
	comp=Z,141nm,2.4s						
PESTR				*e*LQ		05 05 52.2	
PESTR				*e*S	**Sn**	**05 05 55.8**	**+12**
PESTR				*e*LR	LR	05 06 48.7	
	comp=Z,2μm,20.6s						
PESTR	**Estremoz**	**17.75**	**94**	*e*P	**Pn**	**05 02 24.6**	**-1.4**
	comp=Z,141nm,2.4s						
PBEJ	**Beja**	**17.84**	**97**	*e*P	**Pn**	**05 02 27.2**	**+0.2**
	comp=Z,178nm,1.8s						
PBEJ	**Beja**	**17.84**	**97**	*e*P	**Pn**	**05 02 27.2**	**+0.2**
	comp=Z,178nm,1.8s						
CHIE	**El Hierro**	**17.85**	**141**	P	**Pn**	**05 02 28.3**	**+1.1**
	comp=Z,29nm,0.9s						
CHIE	**El Hierro**	**17.85**	**141**	P	**Pn**	**05 02 28.3**	**+1.1**
	comp=Z,29nm,0.9s						
PCVE	**Castro Verde**	**17.86**	**98**	*e*P	**Pn**	**05 02 27.9**	**+0.6**
	comp=Z,28nm,6.8s						
PCVE				*e*LQ		05 05 58.0	
PCVE				*e*LR	LR	05 06 48.0	
	comp=Z,2μm,15.7s						
PCVE	**Castro Verde**	**17.86**	**98**	*e*P	**Pn**	**05 02 27.9**	**+0.6**
	comp=Z,28nm,6.8s						
PBDV	**Barranco-do-Ve**	**18.09**	**99**	*e*P	**Pn**	**05 02 31.1**	**+1.0**
	comp=Z,225nm,1.0s						
PBDV				*e*LQ		05 05 47.0	
PBDV				*e*LR	LR	05 06 48.7	
	comp=Z,3μm,17.4s						
PBDV	**Barranco-do-Ve**	**18.09**	**99**	*e*P	**Pn**	**05 02 31.1**	**+1.0**
	comp=Z,225nm,1.0s						
PVAQ	**Vaqueiros**	**18.18**	**98**	*e*P	**Pn**	**05 02 31.1**	**-0.2**
	comp=Z,138nm,1.8s						
PVAQ				*e*S	**Sn**	**05 06 04.1**	**+10**

QUIF	Quistinic	20.02	65	eP	P	05 02 51.5	-0.1
	comp=Z,78nm,1.0s						
QUIF	Quistinic	20.02	65	eP	P	05 02 51.5	-0.1
QUIF				pmax	pmax		
	comp=Z,39nm,1.0s						
QUIF	Quistinic	20.02	65	eP	P	05 02 51.5	-0.1
	comp=Z,39nm,1.0s						
QUIF	Quistinic	20.02	65	eP	P	05 02 51.5	-0.1
	comp=Z,39nm,1.0s						
GMM	Mts of Mourne	20.08	45	eP	P	05 02 52.2	0.0
GMM	Mts of Mourne	20.08	45	eP	P	05 02 52.2	0.0
ESDC	Sonseca Array	20.20	89	P	P	05 02 54.4	+0.8
	comp=Z,11nm,0.6s,baz=290,slow=10,SNR=70						
ESDC				LR	LR	05 09 02.1	
	comp=Z,835nm,21.0s,MS4.1,baz=285,slow=32						
ESDC	Sonseca Array	20.20	89	P	P	05 02 54.0	+0.4
	comp=Z,44nm,1.9s						
ESDC	Sonseca Array	20.20	89	P	P	05 02 54.0	+0.4
	comp=Z,44nm,1.9s						
ESLA	Sonseca Array	20.20	89	eP	P	05 02 53.7	+0.1
	comp=Z,280nm,2.1s						
ESLA				LR	LR		
	comp=Z,6μm,20.0s,MS5.0						
ESLA	Sonseca Array	20.20	89	eP	P	05 02 53.7	+0.1
	comp=Z,280nm,2.1s						
EJIF	Jimena Fronter	20.21	99	P	P	05 02 55.1	+1.3
EJIF				pmax	pmax		
	comp=Z,78nm,1.1s						
EJIF	Jimena Fronter	20.21	99	P	P	05 02 55.1	+1.3
	comp=Z,78nm,1.1s						
EJIF	Jimena Fronter	20.21	99	P	P	05 02 55.1	+1.3
	comp=Z,78nm,1.1s						
EADA	Adamuz	20.21	93	P	P	05 02 53.8	0.0
	comp=Z,512nm,2.9s						
EADA	Adamuz	20.21	93	P	P	05 02 53.8	0.0
	comp=Z,512nm,2.9s						
RTC	Rabat Centre	20.36	106	PFAKE		05 03 10.0	+15
RTC				LR	LR		
	comp=Z,1μm,21.0s,MS4.3						
CIA	Chichaoua	20.42	115	iP	P	05 02 57.5	+1.4
SGMF	Saint Gilles	20.46	64	⇓iP	P	05 02 56.7	+0.3
	comp=Z,322nm,1.1s						
SGMF	Saint Gilles	20.46	64	⇓iP	P	05 02 56.7	+0.3
SGMF				pmax	pmax		
	comp=Z,161nm,1.1s						
SGMF	Saint Gilles	20.46	64	⇓iP	P	05 02 56.7	+0.3
	comp=Z,161nm,1.1s						
SGMF	Saint Gilles	20.46	64	⇓iP	P	05 02 56.7	+0.3
	comp=Z,161nm,1.1s						
WLF1	Llynfaes	20.54	49	eP	P	05 02 57.8	+0.6
WLF1	Llynfaes	20.54	49	eP	P	05 02 57.8	+0.6
ECRI	Cripan	20.63	80	P	P	05 02 58.8	+0.5
ECRI				pmax	pmax		
	comp=Z,69nm,1.5s						
ECRI	Cripan	20.63	80	P	P	05 02 58.8	+0.5
	comp=Z,69nm,1.5s						
ECRI	Cripan	20.63	80	P	P	05 02 58.8	+0.5
	comp=Z,69nm,1.5s						
EMIJ	Mijas	20.68	98	P	P	05 02 56.8	-2.1
	comp=Z,886nm,2.3s						
EMIJ	Mijas	20.68	98	P	P	05 02 56.8	-2.0
	comp=Z,886nm,2.3s						
HTR	Trewern Hill	20.79	53	eP	P	05 03 00.3	+0.4
HTR	Trewern Hill	20.79	53	eP	P	05 03 00.3	+0.4
EBAN	Banos Encina	20.80	93	P	P	05 03 00.4	+0.2
EBAN				pmax	pmax		
	comp=Z,125nm,1.4s						
EBAN	Banos Encina	20.80	93	P	P	05 03 00.4	+0.2
	comp=Z,125nm,1.4s						
EBAN	Banos Encina	20.80	93	P	P	05 03 00.4	+0.2
	comp=Z,125nm,1.4s						
EMAL	Malaga-Limoner	20.85	97	iP	P	05 03 00.4	-0.3
JRS	Jersey	20.89	61	eP	P	05 03 00.6	-0.4
JRS	Jersey	20.89	61	eP	P	05 03 00.6	-0.4
GIM	North Isle of	20.89	46	eP	P	05 03 01.8	+0.8
GIM	North Isle of	20.89	46	eP	P	05 03 01.8	+0.8
ELOJ	Sierra Loja	20.90	96	P	P	05 03 02.5	+1.2
ELOJ				pmax	pmax		
	comp=Z,496nm,1.8s						
ELOJ	Sierra Loja	20.90	96	P	P	05 03 02.5	+1.2
	comp=Z,496nm,1.8s						
ELOJ	Sierra Loja	20.90	96	P	P	05 03 02.5	+1.2
	comp=Z,496nm,1.8s						
HGH	Gray Hill	20.94	54	eP	P	05 03 01.4	-0.2
HGH	Gray Hill	20.94	54	eP	P	05 03 01.4	-0.2
GAL1	Galloway	21.00	45	eP	P	05 03 03.0	+0.8
GAL1				AMb	AMB	05 03 07.0	
	comp=Z,240nm,2.9s,mb5.0						
GAL1				AMS	AMS	05 09 35.7	
	comp=Z,4μm,14.7s,MS4.9						
GAL1	Galloway	21.00	45	eP	P	05 03 03.0	+0.8
HLM1	Long Mynd	21.14	52	eP	P	05 03 04.3	+0.6
HLM1	Long Mynd	21.14	52	eP	P	05 03 04.3	+0.5
ERON	Agron	21.21	96	P	P	05 03 05.8	+1.3
	comp=Z,60nm,1.2s,mb4.8						
ERON	Agron	21.21	96	P	P	05 03 05.8	+1.2
	comp=Z,60nm,1.2s,mb4.8						
OUK	Oukaimeden	21.23	114	iP	P	05 03 06.5	+1.6
ELIZ	Elizondo	21.26	78	P	P	05 03 04.8	-0.3
ELIZ				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.4						
ELIZ	Elizondo	21.26	78	P	P	05 03 04.8	-0.4
	comp=Z,28nm,1.5s,mb4.4						
ELIZ	Elizondo	21.26	78	P	P	05 03 04.8	-0.3
	comp=Z,28nm,1.5s,mb4.4						
EALK	Alkurruntz	21.27	78	P	P	05 03 04.8	-0.5
	comp=Z,318nm,2.5s,mb5.2						
EALK	Alkurruntz	21.27	78	P	P	05 03 04.8	-0.4
	comp=Z,318nm,2.5s,mb5.2						
ECOG	Cogollos-Vega	21.28	95	P	P	05 03 06.9	+1.5
ECOG				pmax	pmax		
	comp=Z,72nm,1.3s,mb4.8						
ECOG	Cogollos-Vega	21.28	95	P	P	05 03 06.9	+1.5
	comp=Z,72nm,1.3s,mb4.8						
ECOG	Cogollos-Vega	21.28	95	P	P	05 03 06.9	+1.5
	comp=Z,72nm,1.3s,mb4.8						
ETOR	Torete	21.31	85	P	P	05 03 05.4	-0.3
ETOR				pmax	pmax		
	comp=Z,67nm,1.4s,mb4.8						
ETOR	Torete	21.31	85	P	P	05 03 05.4	-0.3
	comp=Z,67nm,1.4s,mb4.8						
ETOR	Torete	21.31	85	P	P	05 03 05.4	-0.3
	comp=Z,67nm,1.4s,mb4.8						
KSK	Scoval	21.36	37	eP	P	05 03 05.3	-0.7
KSK	Scoval	21.36	37	eP	P	05 03 05.3	-0.7
GCD	Castle Douglas	21.41	45	eP	P	05 03 07.1	+0.5
GCD	Castle Douglas	21.41	45	eP	P	05 03 07.1	+0.6
KAR1	Arisaig	21.45	39	eP	P	05 03 07.4	+0.4
KAR1	Arisaig	21.45	39	eP	P	05 03 07.4	+0.4
EGUA	Guajares	21.46	96	P	P	05 03 08.9	+1.6
EGUA				pmax	pmax		
	comp=Z,2μm,1.6s,mb6.2						
EGUA	Guajares	21.46	96	P	P	05 03 08.9	+1.7
	comp=Z,2μm,1.6s,mb6.2						
EGUA	Guajares	21.46	96	P	P	05 03 08.9	+1.6
	comp=Z,2μm,1.6s,mb6.2						
EQES	Quesada	21.46	93	P	P	05 03 08.0	+0.8
	comp=Z,1μm,3.6s						
EQES	Quesada	21.46	93	P	P	05 03 08.0	+0.7
	comp=Z,1μm,3.6s						
SJPF	Ste Jean	21.49	78	eP	P	05 03 07.6	0.0
SJPF	Ste Jean	21.49	78	eP	P	05 03 07.6	0.0
XDE	Dent Fell	21.50	46	eP	P	05 03 07.0	-0.5
XDE	Dent Fell	21.50	46	eP	P	05 03 07.0	-0.6
PGBU	Glenifferbraes	21.55	42	eP	P	05 03 08.3	+0.3
PGBU				AMb	AMB	05 03 14.3	
	comp=Z,219nm,1.6s,mb5.3						
PGBU				AMS	AMS	05 09 33.2	
	comp=Z,3μm,15.5s,MS4.8						
EVIA	Vianos	21.59	91	P	P	05 03 08.8	+0.1
EVIA				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.8						
EVIA	Vianos	21.59	91	P	P	05 03 08.8	0.0
	comp=Z,43nm,1.1s,mb4.8						
EVIA	Vianos	21.59	91	P	P	05 03 08.8	+0.1
	comp=Z,43nm,1.1s,mb4.8						
GRR	Gorron	21.61	64	⇓iP	P	05 03 09.0	+0.2
	comp=Z,42nm,0.7s,mb4.7						
GRR	Gorron	21.61	64	⇓iP	P	05 03 09.0	+0.2
GRR				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.7						
GRR	Gorron	21.61	64	⇓iP	P	05 03 09.0	+0.2
	comp=Z,21nm,0.7s,mb4.7						
GRR	Gorron	21.61	64	⇓iP	P	05 03 09.0	+0.2
	comp=Z,21nm,0.7s,mb4.7						
TZC	Tazercounte	21.62	110	iP	P	05 03 10.0	+0.9
RRH	Rhenigidale	21.62	36	eP	P	05 03 08.6	-0.2
RRH	Rhenigidale	21.62	36	eP	P	05 03 08.6	-0.3
KIB	El Ksiba	21.70	109	iP	P	05 03 11.0	+1.1
KPL	Plockton	21.76	38	AMS	AMS	05 08 53.3	
	comp=Z,3μm,22.1s,MS4.6						
EAB	Aberfoyle	21.79	42	eP	P	05 03 10.4	-0.3
EAB	Aberfoyle	21.79	42	eP	P	05 03 10.4	-0.3
EHUE	Huescar	21.81	93	P	P	05 03 11.2	+0.2
EHUE				pmax	pmax		
	comp=Z,376nm,1.7s,mb5.5						
EHUE	Huescar	21.81	93	P	P	05 03 11.2	+0.2
	comp=Z,376nm,1.7s,mb5.5						
EHUE	Huescar	21.81	93	P	P	05 03 11.2	+0.2
	comp=Z,376nm,1.7s,mb5.5						
MIF	Mishlifen	21.82	106	iP	P	05 03 13.0	+1.8
FLN	La Foliniere	21.89	63	⇓iP	P	05 03 11.4	-0.4
	comp=Z,98nm,0.8s,mb5.0						
FLN				eMLR	MLR		
	comp=Z,3μm,19.8s,MS4.4						
FLN	La Foliniere	21.89	63	⇓iP	P	05 03 11.4	-0.4
FLN				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.0						
FLN				MLR	MLR		
	comp=Z,3μm,19.8s,MS4.7						
FLN	La Foliniere	21.89	63	⇓iP	P	05 03 11.4	-0.4
	comp=Z,49nm,0.8s,mb5.0						
FLN				LR	LR		
	comp=Z,3μm,19.8s,MS4.7						
FLN	La Foliniere	21.89	63	⇓iP	P	05 03 11.4	-0.4
	comp=Z,49nm,0.8s,mb5.0						
EBER	Berja	21.93	95	P	P	05 03 12.8	+0.5
	comp=Z,674nm,3.1s						
EBER	Berja	21.93	95	P	P	05 03 12.8	+0.5
	comp=Z,674nm,3.1s						
ECK	Cauldkaine Hil	21.96	45	eP	P	05 03 12.5	0.0
ECK	Cauldkaine Hil	21.96	45	eP	P	05 03 12.5	0.0
RRR	Rubha Reidh	21.97	37	eP	P	05 03 12.9	+0.3
RRR	Rubha Reidh	21.97	37	eP	P	05 03 12.9	+0.3
ESK	Eskdalemuir	21.98	45	P	P	05 03 15.6	+2.9
	comp=Z,473nm,1.5s,mb5.7,SNR=7.3						
ESK	Eskdalemuir	21.98	45	eP	P	05 03 12.4	-0.3
ESK				AMb	AMB	05 03 18.4	
	comp=Z,133nm,1.6s,mb5.1						
ESK				AMS	AMS	05 11 02.8	
	comp=Z,4μm,11.9s,MS5.0						
ESK	Eskdalemuir	21.98	45	eP	P	05 03 12.9	+0.2
ESK				pmax	pmax		
	comp=Z,292nm,1.6s,mb5.5						
ESK				MLR	MLR		
	comp=Z,3μm,21.0s,MS4.7						
ESK	Eskdalemuir	21.98	45	eP	P	05 03 12.8	+0.2
	comp=Z,292nm,1.6s,mb5.5						
ESK				LR	LR		
	comp=Z,3μm,21.0s,MS4.7						
ESK	Eskdalemuir	21.98	45	eP	P	05 03 12.9	+0.2
	comp=Z,3μm,21.0s						
ETSF	Etsaut	22.00	78	⇓iP	P	05 03 14.3	+1.2
	comp=Z,22nm,0.8s,mb4.4						
ETSF	Etsaut	22.00	78	⇓iP	P	05 03 14.3	+1.2
ETSF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
ETSF	Etsaut	22.00	78	⇓iP	P	05 03 14.3	+1.2
	comp=Z,11nm,0.8s,mb4.3						
ETSF	Etsaut	22.00	78	⇓iP	P	05 03 14.3	+1.2
	comp=Z,11nm,0.8s,mb4.4						
KAC	Achnashellach	22.01	38	eP	P	05 03 13.1	+0.1
KAC	Achnashellach	22.01	38	eP	P	05 03 13.1	+0.1
EKA	Eskdalemuir Ar	22.01	45	P	P	05 03 12.8	-0.2
	comp=Z,32nm,0.9s,mb4.8,baz=239,slow=8.3,SNR=25						
EKA	Eskdalemuir Ar	22.01	45	P	P	05 03 12.9	-0.1
MFF	Saint Martin d	22.01	69	⇓iP	P	05 03 12.9	-0.2
	comp=Z,165nm,1.1s,mb5.1						
MFF	Saint Martin d	22.01	69	⇓iP	P	05 03 12.9	-0.2
MFF				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.1						
MFF	Saint Martin d	22.01	69	⇓iP	P	05 03 12.9	-0.2
	comp=Z,82nm,1.1s,mb5.1						
MFF	Saint Martin d	22.01	69	⇓iP	P	05 03 12.9	-0.2
	comp=Z,82nm,1.1s,mb5.1						
LHO	Holmfirth	22.05	50	eP	P	05 03 13.8	+0.3
LHO	Holmfirth	22.05	50	eP	P	05 03 13.8	+0.3
EAU	Auchinoon	22.08	43	eP	P	05 03 13.3	-0.5
EAU	Auchinoon	22.08	43	eP	P	05 03 13.3	-0.5
REYF	Montagne du Re	22.10	78	eP	P	05 03 13.7	-0.4
REYF	Montagne du Re	22.10	78	eP	P	05 03 13.7	-0.4
LDF	La Druitiere	22.11	63	⇓iP	P	05 03 13.5	-0.7
	comp=Z,92nm,1.1s,mb4.8						
LDF	La Druitiere	22.11	63	⇓iP	P	05 03 13.5	-0.7
LDF				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.9						
LDF	La Druitiere	22.11	63	⇓iP	P	05 03 13.5	-0.7
	comp=Z,46nm,1.0s,mb4.9						
LDF	La Druitiere	22.11	63	⇓iP	P	05 03 13.5	-0.7
	comp=Z,46nm,1.1s,mb4.8						
CWF	Charnwood Fore	22.13	52	eP	P	05 03 13.8	-0.5
CWF				AMb	AMB	05 03 21.7	
	comp=Z,94nm,2.1s,mb4.9						
CWF				AMS	AMS	05 10 04.7	
	comp=Z,4μm,18.4s,MS4.9						
CWF	Charnwood Fore	22.13	52	eP	P	05 03 13.8	-0.5
CZD	Col de Zad	22.15	107	iP	P	05 03 17.0	+2.3
TZK	Tazeka	22.23	103	iP	P	05 03 16.0	+0.5
EBH	Black Hill	22.23	42	eP	P	05 03 15.3	0.0
EBH	Black Hill	22.23	42	eP	P	05 03 15.4	0.0
EDI	Edinburgh	22.25	43	eP	P	05 03 14.8	-0.8
EDI				AMb	AMB	05 03 26.2	
	comp=Z,101nm,2.4s,mb4.8						
EDI				AMS	AMS	05 10 13.2	
	comp=Z,4μm,16.8s,MS4.9						
EDI	Edinburgh	22.25	43	eP	P	05 03 14.8	-0.8
EBL	Broad Law	22.26	44	eP	P	05 03 15.9	+0.2
EBL	Broad Law	22.26	44	eP	P	05 03 15.9	+0.3
ESAC	San Caprasio	22.28	81	P	P	05 03 15.7	-0.3
	comp=Z,483nm,3.4s						
ESAC	San Caprasio	22.28	81	P	P	05 03 15.7	-0.4
	comp=Z,483nm,3.4s						
ETOB	Tobarra	22.30	90	P	P	05 03 15.3	-1.0
	comp=Z,858nm,4.2s						
ETOB	Tobarra	22.30	90	P	P	05 03 15.3	-1.0
	comp=Z,858nm,4.2s						
HPK	Haverah Park	22.32	49	eP	P	05 03 16.1	-0.2
HPK				AMb	AMB	05 03 23.9	
	comp=Z,123nm,2.3s,mb4.9						
HPK				AMS	AMS	05 10 26.0	
	comp=Z,3μm,13.1s,MS4.9						
HPK	Haverah Park	22.32	49	eP	P	05 03 16.1	-0.2
XAL	Allendale	22.32	46	eP	P	05 03 16.1	-0.2
XAL	Allendale	22.32	46	eP	P	05 03 16.1	-0.2
ENIJ	Nijar	22.40	94	P	P	05 03 17.0	-0.4
ENIJ				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
ENIJ	Nijar	22.40	94	P	P	05 03 17.0	-0.4
	comp=Z,16nm,0.8s,mb4.5						
ENIJ	Nijar	22.40	94	P	P	05 03 17.0	-0.4
	comp=Z,16nm,0.8s,mb4.5						
MDO	Dochfour	22.40	39	eP	P	05 03 15.6	-1.6
MDO	Dochfour	22.40	39	eP	P	05 03 15.6	-1.6
VIEF	Viey	22.43	78	eP	P	05 03 17.8	+0.2
VIEF	Viey	22.43	78	eP	P	05 03 17.8	+0.2
ECHE	Chera	22.44	87	P	P	05 03 17.6	-0.2
ECHE				pmax	pmax		
	comp=Z,82nm,2.1s,mb4.8						
ECHE	Chera	22.44	87	P	P	05 03 17.6	-0.2
	comp=Z,82nm,2.1s,mb4.8						
ECHE	Chera	22.44	87	P	P	05 03 17.6	-0.2
	comp=Z,82nm,2.1s,mb4.8						
RSC	Scourie	22.53	36	eP	P	05 03 17.1	-1.5
RSC	Scourie	22.53	36	eP	P	05 03 17.1	-1.4
ESY	Stoneypath	22.54	43	eP	P	05 03 18.2	-0.4
ESY	Stoneypath	22.54	43	eP	P	05 03 18.2	-0.4
EBIE	Bielsa	22.55	79	P	P	05 03 18.3	-0.6
	comp=Z,212nm,2.8s,mb5.1						
EBIE	Bielsa	22.55	79	P	P	05 03 18.3	-0.6
	comp=Z,212nm,2.8s,mb5.1						
MDT	Midelt	22.57	106	P	P	05 03 20.2	+1.0
	comp=Z,19nm,1.0s,mb4.5,baz=298,slow=9.0,SNR=39						
MDT				LR	LR	05 10 14.3	
	comp=Z,866nm,21.4s,MS4.2,baz=309,slow=32						
MDT	Midelt	22.57	106	P	P	05 03 20.2	+1.0
EMOS	Mosqueruela	22.59	85	P	P	05 03 19.1	-0.3
	comp=Z,539nm,3.0s						
EMOS	Mosqueruela	22.59	85	P	P	05 03 19.1	-0.3
	comp=Z,539nm,3.0s						
EPF	Esparros	22.64	78	⇓iP	P	05 03 20.6	+0.8
EPF	Esparros	22.64	78	⇓iP	P	05 03 20.6	+0.8
RESF	Ens	22.67	78	eP	P	05 03 20.1	-0.1
RESF	Ens	22.67	78	eP	P	05 03 20.1	-0.1
LFF	La Frestale	22.70	73	⇓iP	P	05 03 19.6	-0.8
	comp=Z,46nm,0.8s,mb4.7						
LFF	La Frestale	22.70	73	⇓iP	P	05 03 19.6	-0.8
LFF				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.7						
LFF	La Frestale	22.70	73	⇓iP	P	05 03 19.6	-0.8
	comp=Z,23nm,0.8s,mb4.7						
LFF	La Frestale	22.70	73	⇓iP	P	05 03 19.6	-0.8
	comp=Z,23nm,0.8s,mb4.7						
MVH1	Achvaich	22.74	38	eP	P	05 03 19.1	-1.6
MVH1	Achvaich	22.74	38	eP	P	05 03 19.1	-1.7
EMUR	La Murta	22.80	92	P	P	05 03 21.7	+0.2
	comp=Z,747nm,3.4s						
EMUR	La Murta	22.80	92	P	P	05 03 21.7	+0.1
	comp=Z,747nm,3.4s						
MELF	Melles	22.97	78	eP	P	05 03 22.9	-0.4
MELF	Melles	22.97	78	eP	P	05 03 22.9	-0.4
MCD	Coleburn Disti	22.99	39	eP	P	05 03 21.8	-1.6
MCD	Coleburn Disti	22.99	39	eP	P	05 03 21.8	-1.6
MME1	Meikle Cairn	23.00	40	eP	P	05 03 22.7	-0.8
MME1	Meikle Cairn	23.00	40	eP	P	05 03 22.7	-0.8
BORG	Borgarnes	23.02	10	P	P	05 03 26.1	+2.5
	comp=Z,39nm,1.1s,mb4.7,baz=183,slow=7.4,SNR=4.8						
BORG	Borgarnes	23.02	10	eP	P	05 03 24.5	+0.9
BORG				pmax	pmax		
	comp=Z,101nm,1.3s						
BORG				MLR	MLR		
	comp=Z,3μm,22.0s						
BORG	Borgarnes	23.02	10	eP	P	05 03 24.5	+0.9
	comp=Z,101nm,1.3s,mb5.1						
BORG				LR	LR		
	comp=Z,3μm,22.0s,MS4.8						
BORG	Borgarnes	23.02	10	eP	P	05 03 24.5	+0.9
	comp=Z,3μm,22.0s						
ERTA	Horta de San J	23.04	83	P	P	05 03 23.1	-1.0
	comp=Z,495nm,2.7s,mb5.5						
ERTA	Horta de San J	23.04	83	P	P	05 03 23.1	-1.0
	comp=Z,495nm,2.7s,mb5.5						
CART	Cartagena	23.07	92	eP	P	05 03 23.8	-0.6
	comp=Z,68nm,1.1s,mb5.0						
CART	Cartagena	23.07	92	eP	P	05 03 23.8	-0.6
	comp=Z,68nm,1.1s,mb5.0						
ZFT	Errachidia	23.18	108	iP	P	05 03 25.0	-0.7
MLS	Moulis	23.20	78	eP	P	05 03 22.3	-3.4
RJF	Les Rejaudoux	23.22	72	⇓iP	P	05 03 25.2	-0.7
RJF				eMLR	MLR		
	comp=Z,1μm,20.0s,MS4.1						
RJF	Les Rejaudoux	23.22	72	⇓iP	P	05 03 25.2	-0.7
RJF				LR	LR		
	comp=Z,1μm,20.0s,MS4.4						
RJF	Les Rejaudoux	23.22	72	⇓iP	P	05 03 25.2	-0.7
TFO1	Folkestone	23.24	57	AMS	AMS	05 11 18.2	
	comp=Z,3μm,13.2s,MS5.0						
EBEN	Beniarda	23.26	89	P	P	05 03 25.4	-1.0
	comp=Z,422nm,3.7s						
EBEN	Beniarda	23.26	89	P	P	05 03 25.5	-0.9
	comp=Z,422nm,3.7s						
SALF	Salau	23.30	78	eP	P	05 03 26.5	-0.3
SALF	Salau	23.30	78	eP	P	05 03 26.5	-0.3
EPOB	Poblet	23.50	82	P	P	05 03 28.1	-0.8
	comp=Z,385nm,2.5s,mb5.4						
EPOB	Poblet	23.50	82	P	P	05 03 28.1	-0.8
	comp=Z,385nm,2.5s,mb5.4						
CAF	Calviac	23.64	73	⇓iP	P	05 03 29.3	-0.9
	comp=Z,41nm,0.7s,mb4.7						
CAF	Calviac	23.64	73	⇓iP	P	05 03 29.3	-0.9
CAF				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.7						
CAF	Calviac	23.64	73	⇓iP	P	05 03 29.3	-0.9
	comp=Z,20nm,0.7s,mb4.7						
CAF	Calviac	23.64	73	⇓iP	P	05 03 29.3	-0.9
	comp=Z,20nm,0.7s,mb4.7						
TCF	Toulx Ste Croi	23.64	69	⇓iP	P	05 03 29.9	-0.4
	comp=Z,97nm,0.8s,mb5.0						
TCF	Toulx Ste Croi	23.64	69	⇓iP	P	05 03 29.9	-0.4
TCF				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.0						
TCF	Toulx Ste Croi	23.64	69	⇓iP	P	05 03 29.9	-0.4
	comp=Z,48nm,0.8s,mb5.0						
TCF	Toulx Ste Croi	23.64	69	⇓iP	P	05 03 29.9	-0.4
	comp=Z,48nm,0.8s,mb5.0						
MENF	Mencas	23.80	59	eP	P	05 03 31.4	-0.2
MENF	Mencas	23.80	59	eP	P	05 03 31.4	-0.2
HYF	Humbligny	23.92	67	eP	P	05 03 32.5	-0.2
HYF	Humbligny	23.92	67	eP	P	05 03 32.5	-0.2
MTLF	Montolieu	23.94	77	⇓iP	P	05 03 32.5	-0.5
MTLF	Montolieu	23.94	77	⇓iP	P	05 03 32.5	-0.5
FRNF	Fournols	23.95	71	eP	P	05 03 33.2	+0.2
FRNF	Fournols	23.95	71	eP	P	05 03 33.2	+0.2
VALF	Valcebollere	23.96	79	eP	P	05 03 33.2	0.0
VALF	Valcebollere	23.96	79	eP	P	05 03 33.2	0.0
BGF	Bois d'Agland	24.07	69	⇓iP	P	05 03 33.8	-0.4
	comp=Z,321nm,0.6s,mb5.6						
BGF	Bois d'Agland	24.07	69	⇓iP	P	05 03 33.8	-0.4
BGF				pmax	pmax		
	comp=Z,160nm,0.6s,mb5.6						
BGF	Bois d'Agland	24.07	69	⇓iP	P	05 03 33.8	-0.4
	comp=Z,160nm,0.6s,mb5.6						
BGF	Bois d'Agland	24.07	69	⇓iP	P	05 03 33.8	-0.4
	comp=Z,160nm,0.6s,mb5.6						
PYM	Petit Puy Mans	24.23	70	e

BAIF Baives 25.05 60⇓*i*P P 05 03 42.4 -0.7
comp=Z,123nm,1.0s,mb5.1
BAIF Baives 25.05 60⇓*i*P P 05 03 42.4 -0.7
BAIF pmax pmax
comp=Z,61nm,1.0s,mb5.1
BAIF Baives 25.05 60⇓*i*P P 05 03 42.4 -0.7
comp=Z,61nm,1.0s,mb5.1
BAIF Baives 25.05 60⇓*i*P P 05 03 42.4 -0.7
comp=Z,61nm,1.0s,mb5.1
SNF Seneffe 25.14 59 P **P 05 03 43.7 -0.1**
comp=Z,49nm,2.5s,mb4.6
ETOS Mallorca 25.18 85 P **P 05 03 43.6 -0.7**
comp=Z,199nm,1.8s,mb5.3
ETOS Mallorca 25.18 85 P **P 05 03 43.6 -0.8**
comp=Z,199nm,1.8s,mb5.3
UCC Uccle 25.22 58 P **P 05 03 44.1 -0.4**
LRW Lerwick 25.23 35 AMS AMS 05 10 28.1
comp=Z,2μm,32.7s,MS4.4
EANR 'Ain N'Sour 25.26 94 P **P 05 03 45.5 +0.4**
EANR 'Ain N'Sour 25.26 94 P **P 05 03 45.5 +0.4**
DOU Dourbes 25.30 60 P **P 05 03 45.2 -0.2**
comp=Z,46nm,1.7s,mb4.7
SSB Saint Sauveur 25.35 71 *e*P **P 05 03 45.8 0.0**
SSB Saint Sauveur 25.35 71 *e*P **P 05 03 46.2 +0.4**
SSB pmax pmax
comp=Z,16nm,0.8s,mb4.6
SSB MLR MLR
comp=Z,922nm,21.0s,MS4.3
SSB Saint Sauveur 25.35 71 *e*P **P 05 03 46.2 +0.4**
comp=Z,16nm,0.8s,mb4.6
SSB LR LR
comp=Z,922nm,21.0s,MS4.3
SSB Saint Sauveur 25.35 71 *e*P **P 05 03 45.8 0.0**
ECHA Ech Chlef 25.37 94 P **P 05 03 51.0 +4.9**
EBNR Beni Rached 25.43 93 P **P 05 03 52.0 +5.3**
GIVF Givet 25.45 60⇓*i*P P 05 03 45.9 -0.8
comp=Z,73nm,0.8s,mb5.0
GIVF Givet 25.45 60⇓*i*P P 05 03 45.9 -0.8
GIVF pmax pmax
comp=Z,36nm,0.8s,mb5.0
GIVF Givet 25.45 60⇓*i*P P 05 03 45.9 -0.8
comp=Z,36nm,0.8s,mb5.0
GIVF Givet 25.45 60⇓*i*P P 05 03 45.9 -0.8
comp=Z,36nm,0.8s,mb5.0
VIVF Saint-Julien-I 25.49 72⇓*i*P P 05 03 47.1 0.0
VIVF Saint-Julien-I 25.49 72⇓*i*P P 05 03 47.1 0.0
MEZF Maizieres J'vi 25.54 64⇓*i*P P 05 03 47.1 -0.4
comp=Z,189nm,0.8s,mb5.4
MEZF Maizieres J'vi 25.54 64⇓*i*P P 05 03 47.1 -0.4
comp=Z,189nm,0.8s,mb5.7
MEZF Maizieres J'vi 25.54 64⇓*i*P P 05 03 47.1 -0.4
comp=Z,95nm,0.8s,mb5.4
ETRT Tiaret 25.64 95 P **P 05 03 49.0 +0.5**
ETRT Tiaret 25.64 95 P **P 05 03 49.0 +0.5**
BCLA Clavier 25.78 59 P **P 05 03 49.6 -0.1**
BCLA XP sP 05 03 54.5 +0.5
comp=Z,80nm,1.6s
BEBN Eben Emael 26.05 59 P **P 05 03 51.9 -0.2**
comp=Z,26nm,1.7s,mb4.5
THEF They Montfort 26.16 64 *e*P **P 05 03 52.9 -0.3**
THEF They Montfort 26.16 64 *e*P **P 05 03 52.9 -0.3**
MAHO Mahon 26.22 84 *i*P **P 05 03 51.5 -2.2**
MEM Membach 26.24 59 P **P 05 03 53.5 -0.4**
comp=Z,23nm,1.4s,mb4.5
SMRF Simiane la Rot 26.25 74⇓*i*P P 05 03 54.4 +0.4
SMRF Simiane la Rot 26.25 74⇓*i*P P 05 03 54.4 +0.4
WLF Walferdange 26.29 61 P **P 05 03 54.1 -0.1**
comp=Z,47nm,2.2s,mb4.6
WLF Walferdange 26.29 61 *e*P **P 05 03 54.0 -0.3**
WLF pmax pmax
comp=Z,35nm,1.0s,mb4.8
WLF MLR MLR
comp=Z,3μm,21.0s,MS4.8
WLF Walferdange 26.29 61 *e*P **P 05 03 54.0 -0.2**
comp=Z,35nm,1.0s,mb4.8
WLF LR LR
comp=Z,3μm,21.0s,MS4.8
WLF Walferdange 26.29 61 *e*P **P 05 03 54.0 -0.3**
comp=Z,3μm,21.0s
CABF La Chapelle 26.30 68⇓*i*P P 05 03 54.3 -0.1
comp=Z,148nm,1.2s,mb5.1
CABF La Chapelle 26.30 68⇓*i*P P 05 03 54.3 -0.1
CABF pmax pmax
comp=Z,74nm,1.2s,mb5.1
CABF La Chapelle 26.30 68⇓*i*P P 05 03 54.3 -0.1
comp=Z,74nm,1.2s,mb5.1
CABF La Chapelle 26.30 68⇓*i*P P 05 03 54.3 -0.1
comp=Z,74nm,1.2s,mb5.1
ORIF Oris-en-Rattie 26.33 72⇓*i*P P 05 03 55.2 +0.5
ORIF *e*MLR MLR
comp=Z,1μm,21.0s,MS4.2
ORIF Oris-en-Rattie 26.33 72⇓*i*P P 05 03 55.2 +0.5
HAU Haudompre 26.41 65⇓*i*P P 05 03 54.7 -0.7
comp=Z,62nm,0.8s,mb4.9
HAU *e*MLR MLR
comp=Z,2μm,21.5s,MS4.3
HAU Haudompre 26.41 65⇓*i*P P 05 03 54.7 -0.7
HAU pmax pmax
comp=Z,31nm,0.8s,mb4.9
HAU MLR MLR
comp=Z,2μm,21.5s,MS4.6
HAU Haudompre 26.41 65⇓*i*P P 05 03 54.7 -0.7
comp=Z,31nm,0.8s,mb4.9
HAU LR LR
comp=Z,2μm,21.5s,MS4.6
HAU Haudompre 26.41 65⇓*i*P P 05 03 54.7 -0.7
comp=Z,31nm,0.8s,mb4.9
EMHD Djebel Mahouad 26.52 92 P **P 05 03 56.5 0.0**
EMHD Djebel Mahouad 26.52 92 P **P 05 03 56.5 0.0**
SCHQ Schefferville 26.72 310 P **P 05 03 56.8 -1.3**
comp=Z,56nm,1.1s,mb5.0,baz=104,slow=8.2,SNR=24
SCHQ LR LR 05 12 18.6
comp=Z,2μm,19.6s,MS4.6,baz=98,slow=32
SCHQ Schefferville 26.72 310 *e*P **P 05 03 57.7 -0.4**
comp=Z,109nm,1.2s,mb5.3
SCHQ LR LR
comp=Z,2μm,20.0s,MS4.7
SCHQ Schefferville 26.72 310 *e*P **P 05 03 57.7 -0.4**
comp=Z,109nm,1.2s,mb5.3
HINF Hinteralfeld 26.76 65⇓*i*P P 05 03 57.8 -0.7
comp=Z,40nm,0.7s,mb4.7
HINF Hinteralfeld 26.76 65⇓*i*P P 05 03 57.8 -0.7
HINF pmax pmax
comp=Z,20nm,0.7s,mb4.8
HINF Hinteralfeld 26.76 65⇓*i*P P 05 03 57.8 -0.7
comp=Z,20nm,0.7s,mb4.8
HINF Hinteralfeld 26.76 65⇓*i*P P 05 03 57.8 -0.7
comp=Z,20nm,0.7s,mb4.7
LOMF Lomont 26.76 66 *e*P **P 05 03 58.3 -0.3**
LOMF Lomont 26.76 66 *e*P **P 05 03 58.3 -0.3**
LPL La Plagne 26.85 70⇓*i*P P 05 03 59.8 +0.4
comp=Z,24nm,0.9s,mb4.4
LPL La Plagne 26.85 70⇓*i*P P 05 03 59.8 +0.4
LPL pmax pmax
comp=Z,12nm,0.9s,mb4.4
LPL La Plagne 26.85 70⇓*i*P P 05 03 59.8 +0.4
comp=Z,12nm,0.9s,mb4.4
LPL La Plagne 26.85 70⇓*i*P P 05 03 59.8 +0.4
comp=Z,12nm,0.9s,mb4.4
LPG La Plagne 26.87 71⇓*i*P P 05 04 00.1 +0.5
LPG La Plagne 26.87 71⇓*i*P P 05 04 00.1 +0.5
BNI Bardonecchia 26.87 71 *e*P **P 05 04 00.7 +1.1**
BNI pmax pmax
comp=Z,168nm,1.8s,mb5.3
BNI MLR MLR
comp=Z,1μm,20.0s,MS4.5
BNI Bardonecchia 26.87 71 *e*P **P 05 04 00.7 +1.1**
comp=Z,168nm,1.8s,mb5.3
BNI LR LR
comp=Z,1μm,20.0s,MS4.5
BNI Bardonecchia 26.87 71 *e*P **P 05 04 00.7 +1.1**
comp=Z,1μm,20.0s
MOF Molkenrain 26.94 65 *e*P **P 05 03 59.6 -0.6**
MOF Molkenrain 26.94 65 *e*P **P 05 03 59.6 -0.6**
ECH Echery 26.95 64 *e*P **P 05 04 00.5 +0.3**
ECH Echery 26.95 64 *e*P **P 05 04 00.0 -0.2**
ECH pmax pmax
comp=Z,81nm,1.4s,mb5.1
ECH MLR MLR
comp=Z,2μm,20.0s,MS4.7
ECH Echery 26.95 64 *e*P **P 05 04 00.0 -0.2**
comp=Z,81nm,1.4s,mb5.1
ECH LR LR
comp=Z,2μm,20.0s,MS4.7
ECH Echery 26.95 64 *e*P **P 05 04 00.0 -0.2**
comp=Z,2μm,20.0s

MBDF Montbardon 26.98 72⇓*i*P P 05 04 01.1 +0.5
comp=Z,16nm,0.6s,mb4.4
MBDF Montbardon 26.98 72⇓*i*P P 05 04 01.1 +0.5
MBDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
MBDF Montbardon 26.98 72⇓*i*P P 05 04 01.1 +0.5
comp=Z,8.3nm,0.6s,mb4.4
MBDF Montbardon 26.98 72⇓*i*P P 05 04 01.1 +0.5
comp=Z,8.2nm,0.6s,mb4.4
SFJD Kangerlussuaq 27.00 343 P **P 05 03 59.6 -0.9**
comp=Z,10nm,1.0s,mb4.3,baz=131,slow=10.0,SNR=5.5
SFJD LR LR 05 13 20.2
comp=Z,161nm,18.7s,MS3.6,baz=125,slow=34
SFJD Kangerlussuaq 27.00 343 *i*P **P 05 03 59.3 -1.2**
SFJD *e*S **S 05 08 37.9 +0.3**
SFJD pmax pmax
comp=Z,16nm,0.9s,mb4.5
SFJD MLR MLR
comp=Z,1μm,16.0s,MS4.5
SFJD Kangerlussuaq 27.00 343 *e*P **P 05 03 59.4 -1.1**
comp=Z,64nm,1.4s,mb5.0
SFJD *e*PcP PcP 05 07 21.4 -0.2
SFJD LR LR
comp=Z,757nm,20.0s,MS4.2
SFJD Kangerlussuaq 27.00 343 *i*P **P 05 03 59.3 -1.2**
comp=Z,16nm,0.9s,mb4.5
SFJD *e*S **S 05 08 37.9 +0.3**
SFJD
SNR=50
comp=Z,1μm,16.0s
SFJD Kangerlussuaq 27.00 343 *i*P **P 05 03 59.3 -1.2**
comp=Z,16nm,0.9s,mb4.5
SFJD Kangerlussuaq 27.00 343 *e*PcP PcP 05 07 21.4 -0.2
SFJD *e*S **S 05 08 37.9 +0.3**
SNR=50
CDF Champ du Feu 27.02 64⇓*i*P P 05 04 00.4 -0.5
comp=Z,68nm,0.6s,mb5.0
CDF Champ du Feu 27.02 64⇓*i*P P 05 04 00.4 -0.5
CDF pmax pmax
comp=Z,34nm,0.6s,mb5.0
CDF Champ du Feu 27.02 64⇓*i*P P 05 04 00.4 -0.5
comp=Z,34nm,0.6s,mb5.0
CDF Champ du Feu 27.02 64⇓*i*P P 05 04 00.4 -0.5
comp=Z,34nm,0.6s,mb5.0
BUG Bochum--Univer 27.10 57 *e*P **P 05 04 01.6 0.0**
ABH Alteburg 27.20 61 *e*P **P 05 04 02.9 +0.4**
ABH Alteburg 27.20 61 *e*P **P 05 04 02.9 +0.4**
BBS Basel-Blauen 27.22 66 *e*P **P 05 04 02.7 0.0**
BBS Basel-Blauen 27.22 66 *e*P **P 05 04 02.7 0.0**
LIBD Limburg 27.25 65 *e*P **P 05 04 02.7 -0.2**
LIBD Limburg 27.25 65 *e*P **P 05 04 02.7 -0.2**
LANF Langenberg 27.36 63 *e*P **P 05 04 04.0 +0.1**
LANF Langenberg 27.36 63 *e*P **P 05 04 04.0 +0.1**
TOUF Mont Tournerai 27.43 74 *e*P **P 05 04 04.2 -0.5**
TOUF Mont Tournerai 27.43 74 *e*P **P 05 04 04.2 -0.5**
FELD Feldberg im Sc 27.53 65 *e*P **P 05 04 05.1 -0.4**
FELD Feldberg im Sc 27.53 65 *e*P **P 05 04 05.1 -0.4**
AUTN L'Aution 27.57 74 *e*P **P 05 04 07.0 +1.2**
AUTN L'Aution 27.57 74 *e*P **P 05 04 07.0 +1.2**
SBF Sospel 27.59 74 *e*P **P 05 04 06.5 +0.4**
SBF Sospel 27.59 74 *e*P **P 05 04 06.5 +0.4**
SAOF Saorge 27.66 74 *e*P **P 05 04 07.6 +0.9**
SAOF Saorge 27.66 74 *e*P **P 05 04 07.6 +0.9**
ORO Oropa 27.71 70 P **P 05 04 08.3 +1.2**
ORO pmax pmax
comp=Z,141nm,2.0s,mb5.2
ORO Oropa 27.71 70 P **P 05 04 08.3 +1.2**
comp=Z,141nm,2.0s,mb5.2
ORO Oropa 27.71 70 P **P 05 04 08.3 +1.2**
comp=Z,141nm,2.0s,mb5.2
BFO Black Forest 27.73 64 *e*P **P 05 04 06.3 -0.9**
comp=Z,50nm,1.5s,mb4.9
BFO Black Forest 27.73 64 *e*P **P 05 04 06.3 -0.9**
BFO pmax pmax
comp=Z,50nm,1.5s,mb4.9
BFO Black Forest 27.73 64 *e*P **P 05 04 06.3 -0.9**
comp=Z,50nm,1.5s,mb4.9
TNS Taunus Mts 27.79 60 *e*P **P 05 04 08.4 +0.7**
comp=Z,87nm,1.9s,mb5.1
TNS Taunus Mts 27.79 60 *e*P **P 05 04 08.4 +0.7**
TNS pmax pmax
comp=Z,87nm,1.9s,mb5.1
TNS Taunus Mts 27.79 60 *e*P **P 05 04 08.4 +0.7**
comp=Z,87nm,1.9s,mb5.1
PKME Peaks-Kenny Pk 27.93 289 *e*P **P 05 04 09.0 -0.1**
comp=Z,100nm,0.9s,mb5.4
PKME LR LR
comp=Z,2μm,20.0s,MS4.7
PKME Peaks-Kenny Pk 27.93 289 *e*P **P 05 04 09.0 -0.1**
comp=Z,100nm,0.9s,mb5.4
TOD Tromm 28.01 61 *e*P **P 05 04 08.7 -1.0**
TOD Tromm 28.01 61 *e*P **P 05 04 08.7 -1.0**
SPAK Spaichingen-Ko 28.04 65 *e*P **P 05 04 10.0 0.0**
SPAK Spaichingen-Ko 28.04 65 *e*P **P 05 04 10.0 0.0**
BER Bergen 28.22 38 *e* **P 05 04 11.7 +0.2**
BER *e*S **S 05 08 56.6 -0.3**
STU Stuttgart 28.28 63 *e*P **P 05 04 12.2 0.0**
STU Stuttgart 28.28 63 *e*P **P 05 04 13.6 +1.4**
STU pmax pmax
comp=Z,46nm,1.1s,mb5.0
STU Stuttgart 28.28 63 *e*P **P 05 04 13.6 +1.4**
comp=Z,46nm,1.1s,mb5.0
STU Stuttgart 28.28 63 *e*P **P 05 04 13.6 +1.4**
comp=Z,46nm,1.1s,mb5.0
SCO Scoresbysund 28.51 6 *i*P **P 05 04 16.0 +2.0**
SCO pmax pmax
comp=Z,16nm,1.0s,mb4.7
SCO MLR MLR
comp=Z,2μm,19.0s,MS4.7
SCO Scoresbysund 28.51 6 *i*P **P 05 04 16.0 +2.0**
comp=Z,16nm,1.0s,mb4.7
SCO
comp=Z,2μm,19.0s
SCO Scoresbysund 28.51 6 *i*P **P 05 04 16.1 +2.1**
comp=Z,16nm,1.0s,mb4.7,SNR=51
FOO Floro 28.60 36 *e* **P 05 04 08.7 -6.2**
FOO *e*S **S 05 09 02.6 -0.3**
FOO AMS AMS 05 14 57.5
comp=Z,1μm,13.4s,MS4.7
BBSR BB Station 28.76 261 PFAKE 05 04 30.0 +13
BBSR LR LR
comp=Z,2μm,20.0s,MS4.6
UBBA Unterbreizbach 28.79 59 *e*P **P 05 04 16.7 0.0**
DAVA Damuels 28.84 66⇓*i*P P 05 04 17.6 +0.5
comp=Z,26nm,1.1s,mb4.8,SNR=8.9
BOB Bobbio (Coli) 28.86 71 P **P 05 04 18.4 +1.0**
BOB Bobbio (Coli) 28.86 71 P **P 05 04 18.4 +1.0**
DAVOX Davos/Dischmat 28.89 67 P **P 05 04 17.8 +0.2**
comp=Z,10nm,0.7s,mb4.7,baz=289,slow=9.9,SNR=17
DAVOX LR LR 05 13 50.4
comp=Z,1μm,19.6s,MS4.6,baz=277,slow=32
DAVOX Davos/Dischmat 28.89 67 P **P 05 04 17.8 +0.2**
NRDL Niedersach Rie 28.93 55 *e*P **P 05 04 17.7 -0.2**
MUD Monsted U'grnd 28.95 47⇑*i*P P 05 04 19.2 +1.2
MUD pmax pmax
comp=Z,11nm,1.2s,mb4.5
MUD MLR MLR
comp=Z,2μm,16.0s,MS4.7
MUD Monsted U'grnd 28.95 47⇑*i*P P 05 04 19.2 +1.2
comp=Z,11nm,1.2s,mb4.5
MUD *e*S **S 05 09 11.2 +2.7**
MUD
comp=Z,2μm,16.0s
MUD Monsted U'grnd 28.95 47⇑*i*P P 05 04 19.2 +1.2
comp=Z,11nm,1.2s,mb4.5
MUD *e*S **S 05 09 11.2 +2.7**
PGF Pioggiola 28.98 76⇓*i*P P 05 04 17.9 -0.6
comp=Z,32nm,0.9s,mb4.8
PGF Pioggiola 28.98 76⇓*i*P P 05 04 17.9 -0.6
PGF pmax pmax
comp=Z,16nm,0.9s,mb4.8
PGF Pioggiola 28.98 76⇓*i*P P 05 04 17.9 -0.6
comp=Z,16nm,0.9s,mb4.8
PGF Pioggiola 28.98 76⇓*i*P P 05 04 17.9 -0.6
comp=Z,16nm,0.9s,mb4.8
CLZ Clausthal 29.06 57 *e*P **P 05 04 19.6 +0.6**
comp=Z,37nm,1.2s,mb5.0
CLZ Clausthal 29.06 57 *e*P **P 05 04 19.6 +0.6**
CLZ pmax pmax
comp=Z,37nm,1.2s,mb5.0
CLZ Clausthal 29.06 57 *e*P **P 05 04 19.6 +0.6**
comp=Z,37nm,1.2s,mb5.0
BSEG Bad Segeberg 29.19 52 *e*P **P 05 04 20.1 -0.1**
comp=Z,89nm,1.1s,mb5.4
BSEG Bad Segeberg 29.19 52 *e*P **P 05 04 20.1 -0.1**
BSEG pmax pmax
comp=Z,89nm,1.1s,mb5.4
BSEG Bad Segeberg 29.19 52 *e*P **P 05 04 20.1 -0.1**
comp=Z,89nm,1.1s,mb5.4
BRMO Bormio 29.26 68 P **P 05 04 22.0 +1.1**
BRMO Bormio 29.26 68 P **P 05 04 22.0 +1.1**
MABI Malga Bissina 29.41 69 P **P 05 04 22.4 +0.2**
MABI Malga Bissina 29.41 69 P **P 05 04 22.4 +0.2**
RETA Reutte 29.42 66⇑*i*P P 05 04 22.5 +0.3
comp=Z,12nm,0.8s,mb4.6,SNR=10.0
FETA Feichten 29.44 67 *i*P **P 05 04 23.3 +0.9**
comp=Z,32nm,1.0s,mb5.0,SNR=29
GRA1 Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
comp=Z,62nm,1.4s,mb5.2
GRA1 *e*S **S 05 09 21.5 +3.0**
GRA1 LR LR
comp=Z,3μm,18.2s,MS4.9
GRA1 Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
comp=Z,62nm,1.4s,mb5.2
GRA1 *e*S **S 05 09 21.5 +3.0**
GRF Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
comp=Z,62nm,1.4s,mb5.2
GRF *e*S **S 05 09 21.5 +3.0**
GRF *e*L 05 15 15.6
comp=Z,3μm,18.2s
GRF Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
GRF *e*S **S 05 09 21.5 +3.0**
GRF pmax pmax
comp=Z,62nm,1.4s,mb5.2
GRF MLR MLR
comp=Z,3μm,18.2s,MS4.9
GRF Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
GRF *e*S **S 05 09 21.5 +3.0**
GRF pmax pmax
comp=Z,62nm,1.4s,mb5.2
GRF MLR MLR
comp=Z,3μm,18.2s,MS4.9
GRF Grafenberg Arr 29.58 61 *e*P **P 05 04 23.3 -0.4**
comp=Z,62nm,1.4s,mb5.2
GRF *e*S **S 05 09 21.5 +3.0**
VLC Villacollemand 29.63 72 PFAKE 05 04 40.0 +16
VLC LR LR
comp=Z,602nm,19.0s,MS4.2
MOTA Moosalm 29.66 66⇓*i*P P 05 04 25.0 +0.6
comp=Z,10nm,0.6s,mb4.7,SNR=12
FUR Furstenfeldbru 29.70 64 *e*P **P 05 04 24.8 0.0**
comp=Z,118nm,1.5s,mb5.4
FUR Furstenfeldbru 29.70 64 *e*P **P 05 04 24.8 0.0**
FUR pmax pmax
comp=Z,118nm,1.5s,mb5.4
FUR Furstenfeldbru 29.70 64 *e*P **P 05 04 24.8 0.0**
comp=Z,118nm,1.5s,mb5.4
MOX Moxa 29.82 59 *e*P **P 05 04 26.1 +0.3**
comp=Z,83nm,2.2s,mb5.1
MOX pmax pmax
comp=Z,2μm,19.0s
MOX Moxa 29.82 59 *e*P **P 05 04 25.8 0.0**
comp=Z,49nm,1.7s,mb5.0
MOX Moxa 29.82 59 *e*P **P 05 04 26.1 +0.3**
MOX pmax pmax
comp=Z,83nm,2.2s,mb5.1
MOX MLR MLR
comp=Z,2μm,19.0s,MS4.8
MOX Moxa 29.82 59 *e*P **P 05 04 26.1 +0.3**
comp=Z,2μm,19.0s
LBNH Lisbon 29.95 288 *e*P **P 05 04 27.2 +0.1**
LBNH pmax pmax
comp=Z,101nm,0.9s,mb5.5
LBNH MLR MLR
comp=Z,2μm,20.0s,MS4.7
LBNH Lisbon 29.95 288 *e*P **P 05 04 27.2 +0.1**
comp=Z,101nm,0.9s,mb5.5
LBNH LR LR
comp=Z,2μm,20.0s,MS4.7
LBNH Lisbon 29.95 288 *e*P **P 05 04 27.2 +0.1**
comp=Z,2μm,20.0s
KONO Kongsberg 29.98 41 *e* **P 05 04 24.0 -3.1**
KONO *e*S **S 05 09 27.0 +2.4**
KONO *e*ScP ScP 05 11 11.4 +0.3
KONO Kongsberg 29.98 41 PFAKE 05 04 40.0 +13
KONO LR LR
comp=Z,2μm,22.0s,MS4.7
KONO Kongsberg 29.98 41 *e*S **S 05 09 27.0 +2.5**
SNR=28
KONO *e*ScP ScP 05 11 11.4 +0.2
SNR=6.0
WATA Walderalm 29.98 66⇓*i*P P 05 04 27.8 +0.5
comp=Z,9.9nm,0.5s,mb4.8
WTTA Wattenberg 30.03 66 *i*P **P 05 04 28.5 +0.8**
comp=Z,31nm,0.6s,mb5.2,SNR=27
VSL Villasalto 30.09 82 PFAKE 05 04 40.0 +12
VSL LR LR
comp=Z,609nm,19.0s,MS4.3
BBTS Babate 30.15 152 LR LR 05 13 27.3
comp=Z,1μm,21.5s,MS4.5,baz=340,slow=30
FNVD Fontana Vidola 30.15 72 P **P 05 04 28.8 0.0**
FNVD Fontana Vidola 30.15 72 P **P 05 04 28.8 0.0**
ROTZ Rotzenmuhle 30.22 61 *e*P **P 05 04 29.5 +0.2**
HNH Hanover 30.32 287 *e*P **P 05 04 30.8 +0.6**
HNH Hanover 30.32 287 *e*P **P 05 04 30.8 +0.5**
NKC Novy Kostel 30.36 60 *e*P **P 05 04 30.3 -0.2**
NKC *e*S **S 05 09 33.8 +3.1**
NKC MLR MLR
comp=Z,2μm,14.7s,MS5.0
NKC Novy Kostel 30.36 60 *e*P **P 05 04 30.3 -0.2**
NKC *e*S **S 05 09 33.8 +3.1**
NKC AMS AMS 05 15 10.0
comp=Z,2μm,14.7s
NKC Novy Kostel 30.36 60 *e*P **P 05 04 30.3 -0.2**
comp=Z,2μm,14.7s
TANN Tannenbergstha 30.36 60 *e*P **P 05 04 30.8 +0.2**
SUMG Summit 30.52 355 *e*P **P 05 04 32.4 +0.7**
comp=Z,490nm,2.6s,mb5.9
SUMG *e*PcP PcP 05 07 31.0 +0.6
SUMG Summit 30.52 355 *e*P **P 05 04 32.4 +0.7**
comp=Z,490nm,2.6s,mb5.9
SUMG Summit 30.52 355 *e*PcP PcP 05 07 31.0 +0.7
FRB Frobisher Bay 30.56 327 P **P 05 04 32.0 -0.2**
comp=Z,36nm,1.0s,mb5.1,baz=116,slow=8.7,SNR=32
FRB PcP PcP 05 07 30.0 -0.6
comp=Z,11nm,0.8s,baz=122,slow=6.7,SNR=6.5
FRB Frobisher Bay 30.56 327 P **P 05 04 32.0 -0.2**
FRB Frobisher Bay 30.56 327 PcP PcP 05 07 30.0 -0.6
COP Copenhagen 30.62 49 *i*P **P 05 04 34.2 +1.4**
COP *e*S **S 05 09 38.1 +3.4**
COP pmax pmax
comp=Z,19nm,0.9s,mb4.9
COP MLR MLR
comp=Z,730nm,20.0s,MS4.3
COP Copenhagen 30.62 49 *i*P **P 05 04 34.2 +1.4**
comp=Z,19nm,0.9s,mb4.9
COP *e*S **S 05 09 38.1 +3.4**
COP
comp=Z,720nm,20.0s
COP Copenhagen 30.62 49 *i*P **P 05 04 34.2 +1.4**
comp=Z,19nm,0.9s,mb4.9
CLL Collm 30.69 58 *e*P **P 05 04 33.8 +0.3**
comp=Z,36nm,1.6s,mb5.0
CLL Collm 30.69 58⇓*i*P P 05 04 33.4 -0.1
CLL *e*S **S 05 09 31.0 -4.9**
CLL pmax pmax
comp=Z,35nm,1.5s,mb5.0
CLL MLR MLR
comp=Z,100nm,18.8s,MS3.5
CLL Collm 30.69 58⇓*i*P P 05 04 33.4 -0.1
comp=Z,35nm,1.5s,mb5.0
CLL *e* 05 04 47.0
CLL *e* 05 05 22.0
CLL *e*PP PP 05 05 34.0 -8.6
CLL *e*PPP 05 05 42.0
CLL *e* 05 06 44.0
CLL *e*S **S 05 09 31.0 -4.9**
comp=N,300nm,22.1s
CLL *e*S **S 05 09 31.0 -4.9**
comp=E,800nm,22.4s
CLL *e*SS SS 05 11 00.0 -46
CLL Collm 30.69 58 *i*P **P 05 04 33.4 -0.1**
comp=E,100nm,18.8s
ABTA Abfaltersbach 30.69 67 *i*P **P 05 04 34.0 +0.4**
comp=E,35nm,0.9s,mb5.2,SNR=24
WET Wettzell 30.69 62 *e*P **P 05 04 33.3 -0.2**

comp=Z,32nm,1.2s,mb5.0
WET Wettzell 30.69 62 *e*P **P 05 04 33.3 -0.2**
WET pmax pmax
comp=Z,32nm,1.2s,mb5.0
WET Wettzell 30.69 62 *e*P **P 05 04 33.3 -0.2**
comp=Z,32nm,1.2s,mb5.0
JMIC Jan Mayen 30.73 14 *e* **P 05 04 33.2 -0.4**
JMIC *e*S **S 05 09 37.3 +1.2**
RJOB Jochberg 30.76 65 *e*P **P 05 04 33.7 -0.4**
NAO01 NORSAR Array S 30.95 39 PFAKE 05 04 50.0 +14
NAO01 LR LR
comp=Z,1µm,20.0s,MS4.6
FRNY Flat Rock 31.01 289 *e*P **P 05 04 36.3 -0.1**
comp=Z,54nm,1.3s,mb5.2
FRNY Flat Rock 31.01 289 *e*P **P 05 04 36.3 -0.1**
comp=Z,54nm,1.3s,mb5.2
KHC Kasperske Hory 31.15 62 *e*P **P 05 04 37.7 +0.1**
KHC *e*S **S 05 09 45.3 +2.2**
KHC MLR MLR
comp=Z,2µm,12.4s,MS5.0
KHC Kasperske Hory 31.15 62 *e*P **P 05 04 37.8 +0.2**
comp=Z,35nm,1.1s,mb5.1
KHC Kasperske Hory 31.15 62 *e*P **P 05 04 37.7 +0.1**
KHC *e*x x 05 04 54.5
KHC *e*S **S 05 09 45.3 +2.2**
KHC AMS AMS 05 16 00.0
comp=Z,2µm,12.4s
KHC Kasperske Hory 31.15 62 *e*P **P 05 04 37.7 +0.1**
KHC *e*S **S 05 09 45.3 +2.2**
comp=Z,2µm,12.4s
NB2 NORSAR Subarra 31.16 39 P **P 05 04 37.6 +0.1**
comp=Z,49nm,1.7s,mb5.1,baz=250,slow=9.3
NB2 NORSAR Subarra 31.16 39 P **P 05 04 37.6 +0.1**
comp=Z,49nm,1.7s,mb5.1,baz=250,slow=8.8,SNR=6.3
NOA NORSAR Array B 31.16 39 P **P 05 04 37.8 +0.3**
comp=Z,4.2nm,0.8s,mb4.3,baz=254,slow=9.5,SNR=3.8
NOA LR LR 05 15 25.7
comp=Z,1µm,18.0s,MS4.5,baz=250,slow=33
NOA NORSAR Array B 31.16 39 P **P 05 04 37.8 +0.3**
KBA Koelnbreinsper 31.21 66⇓*i*P **P 05 04 38.8 +0.6**
comp=Z,128nm,1.4s,mb5.6,SNR=36
GMNA Gemona 31.25 68 P **P 05 04 37.5 -1.0**
comp=Z,285nm,0.7s,mb6.2
GMNA Gemona 31.25 68 P **P 05 04 37.5 -1.0**
comp=Z,285nm,0.7s,mb6.2
GEC2 GERESS Array S 31.25 63 *e*P **P 05 04 38.1 -0.4**
comp=Z,67nm,1.7s,mb5.2
GEC2 GERESS Array S 31.25 63 *e*P **P 05 04 38.1 -0.4**
GEC2 pmax pmax
comp=Z,67nm,1.7s,mb5.2
GEC2 GERESS Array S 31.25 63 *e*P **P 05 04 38.1 -0.4**
comp=Z,67nm,1.7s,mb5.2
GERES GERESS Array B 31.25 63 P **P 05 04 38.6 +0.1**
comp=Z,10.0nm,0.6s,mb4.8,baz=277,slow=8.5,SNR=110
GERES LR LR 05 16 03.2
comp=Z,1µm,18.0s,MS4.6,baz=273,slow=34
GERES GERESS Array B 31.25 63 P **P 05 04 38.6 +0.1**
BRG Berggiesshubel 31.29 59 *e*P **P 05 04 38.8 0.0**
comp=Z,41nm,1.6s,mb5.0
BRG Berggiesshubel 31.29 59 *e*P **P 05 04 39.4 +0.7**
comp=Z,41nm,1.6s,mb5.0
BRG PP PP 05 05 38.0 -11
BRG S **S 05 09 46.0 +0.7**
BRG SS SS 05 11 07.0 -52
BRG
comp=N,3µm,11.8s
BRG
comp=E,2µm,13.4s
BRG
comp=Z,2µm,13.3s
PTCC Patocco-Chiusa 31.31 67 P **P 05 04 38.8 -0.2**
PTCC Patocco-Chiusa 31.31 67 P **P 05 04 38.8 -0.2**
ACCN Adirondack Cm 31.37 287 *e*P **P 05 04 40.0 +0.4**
comp=Z,47nm,1.0s,mb5.3
ACCN Adirondack Cm 31.37 287 *e*P **P 05 04 40.0 +0.4**
comp=Z,47nm,1.0s,mb5.3
YLE Yale 31.37 283 *e*P **P 05 04 40.4 +0.7**
YLE Yale 31.37 283 *e*P **P 05 04 40.4 +0.8**
KEST Kesra 31.45 89 P **P 05 04 40.0 -0.3**
comp=Z,9.0nm,0.9s,mb4.6,baz=248,slow=3.5,SNR=20
KEST LR LR 05 14 43.3
comp=Z,270nm,21.3s,MS3.9,baz=95,slow=31
MYKA Terra Mystica 31.47 67⇓*i*P **P 05 04 40.5 +0.1**
comp=Z,33nm,1.1s,mb5.1
TRY Troy 31.52 286 *e*P **P 05 04 42.2 +1.2**
TRY Troy 31.52 286 *e*P **P 05 04 42.2 +1.3**
NCB Newcomb 31.63 288 *e*P **P 05 04 42.5 +0.6**
comp=Z,65nm,0.9s,mb5.5
NCB LR LR
comp=Z,2µm,19.0s,MS4.7
NCB Newcomb 31.63 288 *e*P **P 05 04 42.5 +0.6**
comp=Z,65nm,0.9s,mb5.5
SNTG Esanatoglia 31.64 73 P **P 05 04 41.6 -0.3**
comp=Z,22nm,1.3s,mb4.8
SNTG Esanatoglia 31.64 73 P **P 05 04 41.6 -0.3**
comp=Z,22nm,1.3s,mb4.8
PRA Prague 31.64 60⇓P **P 05 04 42.0 +0.1**
PRA AMS AMS 05 16 15.0
PVCC Panska Ves 31.70 59 *e*P **P 05 04 42.8 +0.4**
PVCC *e*S **S 05 09 53.6 +1.9**
PVCC MLR MLR
comp=Z,3µm,14.7s,MS5.1
PVCC Panska Ves 31.70 59 *e*P **P 05 04 42.8 +0.4**
PVCC *e*S **S 05 09 53.6 +1.9**
PVCC AMS AMS 05 16 10.0
comp=Z,3µm,14.7s
PVCC Panska Ves 31.70 59 *e*P **P 05 04 42.8 +0.4**
comp=Z,3µm,14.7s
PVCC *e*S **S 05 09 53.6 +1.9**
TRI Trieste 31.71 69 *e*P **P 05 04 42.1 -0.4**
TRI pmax pmax
comp=Z,49nm,1.4s,mb5.1
TRI MLR MLR
comp=Z,909nm,22.0s,MS4.4
TRI Trieste 31.71 69 *e*P **P 05 04 42.1 -0.4**
comp=Z,49nm,1.4s,mb5.1
TRI LR LR
comp=Z,909nm,22.0s,MS4.4
TRI Trieste 31.71 69 *e*P **P 05 04 42.1 -0.4**
comp=Z,909nm,22.0s
PRU Pruhonice 31.71 60 *e*P **P 05 04 42.9 +0.4**
PRU *e*S **S 05 09 56.3 +4.4**
PRU MLR MLR
comp=Z,2µm,14.2s,MS5.0
PRU Pruhonice 31.71 60 *e*P **P 05 04 42.9 +0.4**
PRU *e*S **S 05 09 56.3 +4.4**
PRU AMS AMS 05 16 10.0
comp=Z,2µm,14.2s
PRU Pruhonice 31.71 60 *e*P **P 05 04 42.9 +0.4**
comp=Z,2µm,14.2s
MOA Molln 31.73 64⇓*i*P **P 05 04 42.6 -0.1**
comp=Z,33nm,1.4s,mb5.0,SNR=16
VOY Vojsko 31.74 68 *e*P **P 05 04 42.9 +0.1**
VOY *e* 05 05 00.3
VOY Vojsko 31.74 68 *e*P **P 05 04 42.9 +0.1**
LONY Lake Ozonia 31.75 289 *e*P **P 05 04 42.9 0.0**
comp=Z,77nm,0.9s,mb5.5
LONY LR LR
comp=Z,2µm,20.0s,MS4.7
LONY Lake Ozonia 31.75 289 *e*P **P 05 04 42.9 0.0**
comp=Z,77nm,0.9s,mb5.5
GORS Gorjuse 31.76 67 *e*P **P 05 04 42.7 -0.3**
GORS Gorjuse 31.76 67 *e*P **P 05 04 42.7 -0.3**
MTCE Montecelio 31.80 76 P **P 05 04 42.9 -0.5**
MTCE Montecelio 31.80 76 P **P 05 04 42.9 -0.5**
JAVS Javornik 31.88 68 *i*P **P 05 04 43.9 -0.2**
JAVS *i* pP 05 04 47.7 +0.6
JAVS *e* 05 05 11.0
JAVS Javornik 31.88 68 *i*P **P 05 04 43.9 -0.2**
BSD Bornholm Skovb 31.97 51 *i*P **P 05 04 45.7 +1.0**
BSD *e*S S 05 09 21.2 -35
BSD
comp=Z,2µm,20.0s
BSD Bornholm Skovb 31.97 51 *i*P **P 05 04 45.7 +1.0**
CRNS Crni Vrh 31.98 68 *e*P **P 05 04 44.8 -0.1**
HFS Hagfors 32.10 41 P **P 05 04 45.6 -0.2**
comp=Z,3.4nm,0.7s,mb4.3,baz=241,slow=12,SNR=6.3
HFS PcP PcP 05 07 34.6 -0.1
comp=Z,2.2nm,0.6s,baz=201,slow=2.8,SNR=4.8
HFS LR LR 05 15 59.3
comp=Z,2µm,19.0s,MS4.7,baz=262,slow=33
HFS Hagfors 32.10 41 P **P 05 04 45.6 -0.2**
HFS 05 07 34.6
HFS Hagfors 32.10 41 P **P 05 04 45.6 -0.2**
HFS Hagfors 32.10 41 PcP PcP 05 07 34.6 -0.1

OBKA Obir 32.11 67 *i*P **P 05 04 45.9 -0.2**
comp=Z,81nm,0.7s,mb5.7,SNR=69
PAL Palisades 32.16 282 *e*P **P 05 04 46.6 0.0**
PAL pmax pmax
comp=Z,99nm,1.5s,mb5.4
PAL Palisades 32.16 282 *e*P **P 05 04 46.6 0.0**
comp=Z,99nm,1.5s,mb5.4
PAL Palisades 32.16 282 *e*P **P 05 04 46.6 0.0**
comp=Z,99nm,1.5s,mb5.4
LJU Ljubljana 32.17 68 *e*P **P 05 04 46.6 0.0**
LJU Ljubljana 32.17 68 *e*P **P 05 04 46.6 0.0**
AQU L'Aquila 32.19 75 *e*P **P 05 04 46.5 -0.3**
AQU pmax pmax
comp=Z,31nm,0.8s,mb5.2
AQU MLR MLR
comp=Z,1µm,20.0s,MS4.5
AQU L'Aquila 32.19 75 *e*P **P 05 04 46.5 -0.3**
comp=Z,31nm,0.8s,mb5.2
AQU LR LR
comp=Z,1µm,20.0s,MS4.5
AQU L'Aquila 32.19 75⇑*i*P **P 05 04 47.0 +0.2**
AQU L'Aquila 32.19 75 *e*P **P 05 04 46.5 -0.3**
comp=Z,1µm,20.0s
VNDS Vrh nad Dolski 32.28 68 *e*P **P 05 04 47.5 -0.1**
TREC Trest 32.38 62 *e*P **P 05 04 48.4 0.0**
TREC MLR MLR
comp=Z,2µm,12.4s,MS5.1
TREC Trest 32.38 62 *e*P **P 05 04 48.4 0.0**
TREC AMS AMS 05 16 30.0
comp=Z,2µm,12.4s
TREC Trest 32.38 62 *e*P **P 05 04 48.4 0.0**
comp=Z,2µm,12.4s
SOKA Soboth 32.41 67⇓*i*P **P 05 04 47.8 -0.9**
comp=Z,19nm,1.1s,mb4.8
VISS Visnje 32.43 68 *e*P **P 05 04 48.6 -0.2**
VISS *e* 05 05 49.2
VISS Visnje 32.43 68 *e*P **P 05 04 48.7 -0.2**
PERS Pernice 32.48 67 *i*P **P 05 04 48.2 -1.1**
PERS *i* pP 05 04 51.5 -0.9
PERS Pernice 32.48 67 *i*P **P 05 04 48.2 -1.1**
UPC Upice 32.62 59 *e*P **P 05 04 50.8 +0.3**
ARSA Arzberg 32.66 65⇓*i*P **P 05 04 50.0 -0.8**
comp=Z,23nm,1.0s,mb5.1,SNR=14
BOJS Bojanci 32.77 69 *i*P **P 05 04 51.9 0.0**
BOJS *i* pP 05 04 56.0 +1.0
BOJS *e*S **S 05 10 13.4 +4.9**
BOJS Bojanci 32.77 69 *i*P **P 05 04 51.9 0.0**
KSP Ksiaz 32.78 59 *e*P **P 05 04 52.1 +0.3**
KSP LMZ 05 16 20.8
comp=Z,4µm,18.6s
KSP Ksiaz 32.78 59⇓*e*P **P 05 04 52.1 +0.3**
KSP *e*S **S 05 10 06.5 -2.0**
KSP Ksiaz 32.78 59 *e*P **P 05 04 52.1 +0.3**
CONA Conrad Observa 32.79 64⇓*i*P **P 05 04 51.8 -0.2**
comp=Z,18nm,0.7s,mb5.1,SNR=19
DPC Dobruska-Polom 32.83 60 *e*P **P 05 04 52.6 +0.3**
DPC *e*S **S 05 10 11.2 +1.9**
DPC MLR MLR
comp=Z,2µm,17.0s,MS5.0
DPC Dobruska-Polom 32.83 60 *e*P **P 05 04 52.6 +0.3**
DPC *e*S **S 05 10 11.2 +1.9**
DPC AMS AMS 05 17 00.0
comp=Z,2µm,17.0s
DPC Dobruska-Polom 32.83 60 *e*P **P 05 04 52.6 +0.3**
comp=Z,2µm,17.0s
DPC *e*S **S 05 10 11.2 +1.9**
RFI Roccamonfina 32.90 77 P **P 05 04 49.6 -3.4**
comp=Z,11nm,1.3s,mb4.6
MIDA Miranda 32.99 76 P **P 05 04 53.6 -0.2**
MIDA Miranda 32.99 76 P **P 05 04 53.6 -0.2**
VRAC Vranov 33.10 61 P **P 05 04 54.8 +0.1**
comp=Z,4.2nm,0.4s,mb4.7,baz=265,slow=8.0,SNR=16
VRAC LR LR 05 16 54.6
comp=Z,1µm,18.6s,MS4.6,baz=272,slow=34
VRAC Vranov 33.10 61⇓*i*P **P 05 04 55.0 +0.3**
VRAC Vranov 33.10 61 P **P 05 04 54.8 +0.1**
GKP Gorka Klasztor 33.27 54 *e*P **P 05 04 57.3 +1.2**
GKP LMZ 05 17 54.9
comp=Z,4µm,16.6s
GKP Gorka Klasztor 33.27 54 *e*P **P 05 04 57.3 +1.2**
comp=Z,4µm,16.6s
BINY Binghamton 33.32 285 *e*P **P 05 04 57.1 +0.4**
comp=Z,83nm,1.3s,mb5.5
BINY LR LR
comp=Z,707nm,20.0s,MS4.4
BINY Binghamton 33.32 285 *e*P **P 05 04 57.1 +0.4**
comp=Z,83nm,1.3s,mb5.5
ZST Bratislava 33.57 63 *e*P **P 05 04 59.4 +0.6**
comp=Z,6.8nm,0.6s,mb4.8
ZST LR LR
comp=Z,1µm,16.4s,MS4.7
ZST Bratislava 33.57 63 *e*P **P 05 04 59.4 +0.6**
ZST Bratislava 33.57 63 *e*P **P 05 04 59.4 +0.6**
comp=Z,7.0nm,0.6s,mb4.8
BEHE Becsehely 33.63 67⇓*e*P **P 05 04 58.4 -1.0**
MORC Moravsky Berou 33.66 60 *e*P **P 05 04 58.7 -0.9**
MORC Moravsky Berou 33.66 60⇑*i*P **P 05 04 59.4 -0.2**
MORC Moravsky Berou 33.66 60 *e*P **P 05 04 58.7 -0.9**
MORC *e*S **S 05 10 24.9 +2.6**
SMOL Smolenice 33.74 63 *e*P **P 05 05 00.8 +0.5**
SMOL Smolenice 33.74 63 *e*P **P 05 05 00.8 +0.5**
SMOL Smolenice 33.74 63 *e*P **P 05 05 00.8 +0.5**
CSSN Cassano Irpino 33.78 77 P **P 05 05 01.3 +0.6**
CSSN Cassano Irpino 33.78 77 P **P 05 05 01.3 +0.6**
OKC Ostrava-Krasne 34.05 60 *e*P **P 05 05 02.4 -0.5**
OKC *e*S **S 05 10 30.4 +2.2**
OKC MLR MLR
comp=Z,2µm,12.7s,MS5.1
OKC Ostrava-Krasne 34.05 60 *e*P **P 05 05 02.4 -0.5**
OKC *e*S **S 05 10 30.4 +2.2**
OKC AMS AMS 05 18 40.0
comp=Z,2µm,12.7s
OKC Ostrava-Krasne 34.05 60 *e*P **P 05 05 02.4 -0.5**
comp=Z,2µm,12.7s
OKC *e*S **S 05 10 30.4 +2.2**
RAC Raciborz 34.05 60 *e*P **P 05 05 03.7 +0.7**
RAC *e*S **S 05 10 30.6 +2.3**
RAC MLR MLR
comp=Z,2µm,15.0s,MS5.0
RAC Raciborz 34.05 60 *e*P **P 05 05 03.7 +0.7**
comp=Z,2µm,15.0s
RAC *e*S **S 05 10 30.6 +2.3**
MVL Millersville 34.25 282 *e*P **P 05 05 04.0 -0.7**
comp=Z,123nm,1.6s,mb5.6
MVL Millersville 34.25 282 *e*P **P 05 05 04.0 -0.8**
comp=Z,123nm,1.6s,mb5.6
KOLL Kolacno 34.38 62 *e*P **P 05 05 06.3 +0.5**
KOLL Kolacno 34.38 62 *e*P **P 05 05 06.3 +0.5**
KOLL Kolacno 34.38 62 *e*P **P 05 05 06.3 +0.5**
MGR Morigerati 34.39 78 P **P 05 05 05.6 -0.4**
MGR Morigerati 34.39 78 P **P 05 05 05.6 -0.4**
VAE Valguarnera 34.50 83 P **P 05 05 06.7 -0.3**
comp=Z,15nm,0.5s,mb5.2,baz=122,slow=20,SNR=6.9
VAE Valguarnera 34.50 83 P **P 05 05 06.7 -0.3**
PKSG 34.56 65⇓*e*P **P 05 05 06.9 -0.5**
VYHS Vyhne 34.67 63 *e*P **P 05 05 08.0 -0.4**
comp=Z,35nm,2.1s,mb4.9
VYHS *e*S **S 05 10 44.2 +6.3**
VYHS *e*SS SS 05 13 16.2 +8.3
VYHS LR LR
comp=Z,700nm,16.2s,MS4.5
VYHS Vyhne 34.67 63 *e*P **P 05 05 08.0 -0.4**
VYHS *e*S **S 05 10 44.2 +6.3**
VYHS *e*SS SS 05 13 16.2 +8.3
VYHS Vyhne 34.67 63 *e*P **P 05 05 08.0 -0.4**
comp=Z,35nm,2.1s,mb4.9
RHK3 Tenkes 34.75 67⇓*e*P **P 05 05 08.5 -0.6**
LIKS Likavka 34.77 62 *e*P **P 05 05 13.0 +3.8**
LIKS pmax pmax
comp=Z,40nm,1.2s,mb5.2
LIKS Likavka 34.77 62 *e*P **P 05 05 13.0 +3.8**
comp=Z,40nm,1.2s,mb5.2
LIKS Likavka 34.77 62 *e*P **P 05 05 13.0 +3.8**
SDMD Soldier's Deli 34.80 281 *e*P **P 05 05 10.0 +0.4**
comp=Z,25nm,1.0s,mb5.1
SDMD Soldier's Deli 34.80 281 *e*P **P 05 05 10.0 +0.4**
comp=Z,25nm,1.0s,mb5.1
DAG Danmarks Havn 34.86 5⇓*e*P **P 05 05 10.0 +0.3**
DAG pmax pmax
comp=Z,32nm,1.1s,mb5.2
DAG Danmarks Havn 34.86 5⇓*i*P **P 05 05 10.0 +0.3**
comp=Z,32nm,1.1s,mb5.2
PKSM Moragy 34.95 67⇓*i*P **P 05 05 10.4 -0.4**
PKSM Moragy 34.95 67⇓*e*P **P 05 05 10.3 -0.5**

BUD Budapest 34.97 64⇓*e*P **P 05 05 10.4 -0.5**
BUD Budapest 34.97 64⇓*e*P **P 05 05 10.4 -0.5**
OJC Ojcow 35.06 59 *e*P **P 05 05 11.6 -0.1**
OJC *e*PP PP 05 06 30.8 -0.3
OJC *e*S **S 05 10 45.1 +1.3**
OJC L 05 18 35.6
comp=Z,3.2nm,17.0s
OJC Ojcow 35.06 59 *e*P **P 05 05 11.6 -0.1**
OJC *e*S **S 05 10 45.1 +1.3**
comp=Z,3µm,17.0s
SSPA Standing Stone 35.15 284 *e*P **P 05 05 13.0 +0.4**
comp=Z,138nm,1.4s,mb5.7
SSPA LR LR
comp=Z,661nm,20.0s,MS4.4
SSPA Standing Stone 35.15 284 *e*P **P 05 05 13.0 +0.4**
comp=Z,138nm,1.4s,mb5.7
LTRZ Laterza 35.16 77 P **P 05 05 11.8 -0.8**
LTRZ Laterza 35.16 77 P **P 05 05 11.8 -0.8**
WDD Wield Dalam 35.23 85 PFAKE 05 05 30.0 +17
WDD LR LR
comp=Z,473nm,20.0s,MS4.2
CEL Celeste 35.29 81 *e*P **P 05 05 13.1 -0.7**
comp=Z,32nm,0.8s,mb5.3
CEL LR LR
comp=Z,852nm,21.0s,MS4.5
CEL Celeste 35.29 81 *e*P **P 05 05 13.1 -0.7**
comp=Z,32nm,0.8s,mb5.3
PSZ Piszkesteto 35.47 63 *e*P **P 05 05 15.5 +0.3**
PSZ MLR MLR
comp=Z,639nm,19.0s,MS4.4
PSZ Piszkesteto 35.47 63 *e*P **P 05 05 15.5 +0.3**
PSZ LR LR
comp=Z,639nm,19.0s,MS4.4
PSZ Piszkesteto 35.47 63⇓*e*P **P 05 05 15.4 +0.2**
PSZ Piszkesteto 35.47 63⇑*i*P **P 05 05 17.0 +1.8**
PSZ Piszkesteto 35.47 63 *e*P **P 05 05 15.5 +0.3**
comp=Z,639nm,19.0s
NIE Niedzica 35.50 61 *e*P **P 05 05 16.5 +1.0**
NIE Niedzica 35.50 61 *e*P **P 05 05 16.5 +1.0**
TIP Timpagrande 35.59 79 *e*P **P 05 05 16.1 -0.3**
comp=Z,71nm,1.7s,mb5.3
TIP LR LR
comp=Z,1µm,20.0s,MS4.6
TIP Timpagrande 35.59 79 *e*P **P 05 05 16.1 -0.3**
comp=Z,71nm,1.7s,mb5.3
CBN Corbin 35.62 279 PFAKE 05 05 30.0 +13
CBN LR LR
comp=Z,617nm,20.0s,MS4.4
KECS Kecovo 35.76 62 *e*P **P 05 05 18.5 +0.8**
KECS pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KECS Kecovo 35.76 62 *e*P **P 05 05 18.5 +0.8**
comp=Z,5.8nm,0.7s,mb4.6
KECS Kecovo 35.76 62 *e*P **P 05 05 18.5 +0.8**
TAM Tamanrasset 35.76 112 *e*P **P 05 05 19.0 +1.0**
TAM pmax pmax
comp=Z,30nm,1.1s,mb5.1
TAM MLR MLR
comp=Z,1µm,20.0s,MS4.6
TAM Tamanrasset 35.76 112 *e*P **P 05 05 18.9 +1.0**
comp=Z,30nm,1.1s,mb5.1
TAM LR LR
comp=Z,1µm,20.0s,MS4.6
TAM Tamanrasset 35.76 112 *e*P **P 05 05 19.0 +1.0**
comp=Z,1µm,20.0s
BBLS Lazići 36.03 70⇓*i*P **P 05 05 17.7 -2.4**
STHS Stebnicka Huta 36.10 61 *e*P **P 05 05 22.4 +1.8**
STHS pmax pmax
comp=Z,13nm,0.8s,mb4.9
STHS Stebnicka Huta 36.10 61 *e*P **P 05 05 22.4 +1.8**
comp=Z,13nm,0.8s,mb4.9
STHS Stebnicka Huta 36.10 61 *e*P **P 05 05 22.4 +1.8**
STHS Stebnicka Huta 36.10 61 *e*P **P 05 05 22.4 +1.8**
comp=Z,13nm,0.8s,mb4.9
JSRW J. Sargeant Re 36.18 279 *e*P **P 05 05 21.9 +0.4**
JSRW J. Sargeant Re 36.18 279 *e*P **P 05 05 21.9 +0.4**
ERPA Erie 36.19 287 *e*P **P 05 05 22.3 +0.8**
comp=Z,192nm,1.7s,mb5.8
ERPA LR LR
comp=Z,734nm,19.0s,MS4.5
ERPA Erie 36.19 287 *e*P **P 05 05 22.3 +0.8**
comp=Z,192nm,1.7s,mb5.8
ANWB Willy Bob 36.25 237 PFAKE 05 05 30.0 +7.8
ANWB LR LR
comp=Z,1µm,20.0s,MS4.6
DIVS Divibare 36.38 70 P **P 05 05 22.6 -0.5**
DIVS Divibare 36.38 70⇓*i*P **P 05 05 22.2 -0.9**
ALLY Alegheny Colle 36.45 286 *e*P **P 05 05 24.6 +0.9**
comp=Z,167nm,1.1s,mb5.9
ALLY Alegheny Colle 36.45 286 *e*P **P 05 05 24.6 +0.9**
comp=Z,167nm,1.1s,mb5.9
TRUS Trudelj 36.63 69⇓*i*P **P 05 05 23.8 -1.4**
SUW Suwalki 36.78 53 *e*P **P 05 05 26.6 +0.3**
SUW LMZ 05 20 10.0
comp=Z,4µm,17.5s
SUW Suwalki 36.78 53 *e*P **P 05 05 26.9 +0.5**
SUW pmax pmax
comp=Z,46nm,0.9s,mb5.3
SUW Suwalki 36.78 53 *e*P **P 05 05 26.9 +0.5**
comp=Z,46nm,0.9s,mb5.3
SUW Suwalki 36.78 53 *e*P **P 05 05 26.9 +0.5**
comp=Z,46nm,0.9s,mb5.3
KOLS Kolonicke sedl 36.85 61 *e*P **P 05 05 28.1 +1.1**
comp=Z,43nm,1.9s,mb5.0
KOLS *e*S **S 05 11 15.3 +4.1**
KOLS *e*SS SS 05 13 59.9 +7.9
KOLS LR LR
comp=Z,800nm,16.5s,MS4.6
KOLS Kolonicke sedl 36.85 61 *e*P **P 05 05 28.1 +1.1**
KOLS *e*S **S 05 11 15.3 +4.1**
KOLS *e*SS SS 05 13 59.9 +7.9
KOLS Kolonicke sedl 36.85 61 *e*P **P 05 05 28.1 +1.1**
comp=Z,43nm,1.9s,mb5.0
MCWV Mont Chateau 36.89 283 *e*P **P 05 05 28.3 +0.8**
comp=Z,174nm,1.4s,mb5.7
MCWV LR LR
comp=Z,1µm,21.0s,MS4.7
MCWV Mont Chateau 36.89 283 *e*P **P 05 05 28.3 +0.8**
comp=Z,174nm,1.4s,mb5.7
UZH Uzhgorod 36.91 62⇑*i*P **P 05 05 27.0 -0.6**
UZH *i* 05 05 32.7
UZH *e* 05 06 46.7
UZH *e* 05 07 51.0
UZH *i* S **S 05 11 10.0 -2.2**
UZH *e* 05 13 37.0
UZH *e* 05 14 06.0
UZH MLR MLR
comp=N,700nm,14.0s,MS4.9
UZH MLR MLR
comp=E,1µm,14.0s,MS4.9
UZH MLR MLR
comp=Z,570nm,14.0s,MS4.5
UZH Uzhgorod 36.91 62 *i*P **P 05 05 27.0 -0.6**
GRUS Gruza 36.94 70⇓*i*P **P 05 05 27.0 -0.8**
KWP Kalwaria Pacla 37.01 60 *e*P **P 05 05 29.4 +1.0**
KWP LMZ 05 17 27.0
comp=Z,1µm,21.0s
KWP Kalwaria Pacla 37.01 60 PFAKE 05 05 40.0 +12
KWP LR LR
comp=Z,1µm,22.0s,MS4.6
KWP Kalwaria Pacla 37.01 60⇓*i*P **P 05 05 29.4 +1.0**
KWP Kalwaria Pacla 37.01 60 *e*P **P 05 05 29.4 +1.0**
TRO Tromso 37.09 26 *e* **P 05 05 28.9 +0.1**
TIR Tirane 37.10 74 PFAKE 05 05 40.0 +11
TIR LR LR
comp=Z,790nm,21.0s,MS4.5
BZS Buzias 37.11 67⇑*i*P **P 05 05 29.4 +0.1**
BZS Buzias 37.11 67⇑*i*P **P 05 05 29.4 +0.1**
TRPA Tarpa 37.17 62⇑*i*P **P 05 05 30.8 +1.0**
TRPA Tarpa 37.17 62⇓*e*P **P 05 05 30.0 +0.2**
SVIS Svilajnac 37.18 69⇓*i*P **P 05 05 29.2 -0.7**
CNNC Cliffs of the 37.19 275 *e*P **P 05 05 30.7 +0.6**
comp=Z,42nm,0.8s,mb5.3
CNNC LR LR
comp=Z,1µm,21.0s,MS4.6
CNNC Cliffs of the 37.19 275 *e*P **P 05 05 30.7 +0.6**
comp=Z,42nm,0.8s,mb5.3
DRGR 37.57 65⇑*i*P **P 05 05 33.0 -0.2**
KEK Kerkira 37.60 77 P **P 05 05 33.1 -0.5**
LVV L'vov 37.82 59⇓*i*P **P 05 05 35.2 -0.1**
LVV *e* 05 07 09.4
LVV *e* 05 07 51.6
LVV *e*S **S 05 11 28.4 +2.4**
LVV MLR MLR
comp=N,1µm,14.0s,MS4.9

LVV MLR MLR
comp=E,700nm,14.0s,MS4.9
LVV MLR MLR
comp=Z,1μm,14.0s,MS4.8
OHR Ohrid 37.84 74 *e*P **P 05 05 34.5 -1.0**
VWCC Virginia Weste 37.90 279 *e*P **P 05 05 37.3 +1.3**
VWCC Virginia Weste 37.90 279 *e*P **P 05 05 37.3 +1.3**
SKO Skopje 38.02 73 *e*P **P 05 05 36.6 -0.4**
BARS Barje 38.02 71⇓*i*P **P 05 05 36.4 -0.6**
IGT Igoumenitsa 38.05 77 P **P 05 05 38.4 +1.0**
KRUS Krusevo 38.08 74 *e*P **P 05 05 36.9 -0.6**
FDF Fort de France 38.13 233 PFAKE 05 05 50.0 +12
FDF LR LR
comp=Z,919nm,19.0s,MS4.6
BLA Blacksburg 38.23 279 *e*P **P 05 05 39.5 +0.6**
BLA *e* 05 07 53.0
BLA pmax pmax
comp=Z,85nm,1.1s,mb5.4
BLA MLR MLR
comp=Z,577nm,19.0s,MS4.4
BLA Blacksburg 38.23 279 *e*P **P 05 05 39.5 +0.6**
comp=Z,85nm,1.1s,mb5.4
BLA *e*PcP PcP 05 07 53.0 -0.1
BLA LR LR
comp=Z,577nm,19.0s,MS4.4
BLA Blacksburg 38.23 279 *e*P **P 05 05 39.5 +0.6**
comp=Z,85nm,1.1s,mb5.4
BLA Blacksburg 38.23 279 *e*PcP PcP 05 07 53.0 -0.1
FINES FINESS Array B 38.29 40 P **P 05 05 39.0 0.0**
comp=Z,12nm,0.7s,mb4.8,baz=266,slow=5.7,SNR=39
FINES LR LR 05 20 32.5
comp=Z,2μm,18.0s,MS4.8,baz=269,slow=35
FINES FINESS Array B 38.29 40 P **P 05 05 39.0 0.0**
FNA Florina 38.36 74 P **P 05 05 40.0 +0.1**
ISAL Salakas 38.37 50 *e*P **P 05 05 39.7 -0.1**
ISAL Salakas 38.37 50 *e*P **P 05 05 39.7 -0.1**
IZAR Zarasai 38.42 50 *e*P **P 05 05 40.1 -0.1**
IZAR Zarasai 38.42 50 *e*P **P 05 05 40.1 -0.1**
KAF Kangasniemi 38.44 39 *e*P **P 05 05 39.8 -0.5**
KAF pmax pmax
comp=Z,31nm,0.7s,mb5.2
KAF Kangasniemi 38.44 39 *e*p **P 05 05 39.8 -0.5**
comp=Z,30nm,0.7s,mb5.1
KAF Kangasniemi 38.44 39 *e*P **P 05 05 39.8 -0.5**
comp=Z,30nm,0.7s,mb5.1
IIGN Ignalina 38.44 50 *e*P **P 05 05 40.9 +0.5**
IIGN Ignalina 38.44 50 *e*P **P 05 05 40.9 +0.5**
ELN Prospectdale 38.47 280 *e*P **P 05 05 41.3 +0.4**
ELN Prospectdale 38.47 280 *e*P **P 05 05 41.3 +0.4**
BBGH Gun Hill 38.48 229 PFAKE 05 05 50.0 +8.9
BBGH LR LR
comp=Z,3μm,19.0s,MS5.1
VSU Vasula 38.56 45 *i*P **P 05 05 41.0 -0.4**
VSU pmax pmax
comp=Z,30nm,0.9s,mb5.0
VSU MLR MLR
comp=Z,2μm,14.0s,MS5.0
STIP Stip 38.63 73 *e*P **P 05 05 41.4 -0.8**
GLMI Grayling 38.64 293 *e*P **P 05 05 43.3 +1.1**
comp=Z,277nm,0.9s,mb6.0
GLMI LR LR
comp=Z,2μm,20.0s,MS4.9
GLMI Grayling 38.64 293 *e*P **P 05 05 43.3 +1.1**
comp=Z,277nm,0.9s,mb6.0
SJG San Juan 38.71 242 LR LR 05 17 46.8
comp=Z,2μm,20.9s,MS5.0,baz=87,slow=30
SJG San Juan 38.71 242 PFAKE 05 05 50.0 +7.0
SJG LR LR
comp=Z,2μm,20.0s,MS5.0
AAM Ann Arbor 38.73 288 *e*P **P 05 05 43.6 +0.6**
AAM pmax pmax
comp=Z,319nm,1.8s,mb5.8
AAM MLR MLR
comp=Z,835nm,20.0s,MS4.6
AAM Ann Arbor 38.73 288 *e*P **P 05 05 43.6 +0.7**
comp=Z,319nm,1.8s,mb5.8
AAM LR LR
comp=Z,835nm,20.0s,MS4.6
AAM Ann Arbor 38.73 288 *e*P **P 05 05 43.6 +0.6**
comp=Z,319nm,1.8s,mb5.8
IDID Didziasalis 38.74 50 *e*P **P 05 05 42.1 -0.8**
IDID Didziasalis 38.74 50 *e*P **P 05 05 42.1 -0.8**
NACGM Naroch 38.80 51 *e*P **P 05 05 42.0 -1.4**
NACGM Naroch 38.80 51 *e*P **P 05 05 42.5 -0.9**
ACSO Alum Creek Sta 38.95 285 *e*P **P 05 05 45.6 +0.7**
comp=Z,160nm,1.3s,mb5.6
ACSO LR LR
comp=Z,937nm,19.0s,MS4.6
ACSO Alum Creek Sta 38.95 285 *e*P **P 05 05 45.6 +0.8**
comp=Z,160nm,1.3s,mb5.6
BUR08 Bucovina Ar. S 39.02 63 *e*P **P 05 05 46.3 +0.9**
BUR08 Bucovina Ar. S 39.02 63 *e*P **P 05 05 46.3 +0.9**
VAY Valandovo 39.03 73 *e*P **P 05 05 44.3 -1.2**
VAY Valandovo 39.03 73 P **P 05 05 45.1 -0.4**
VAY Valandovo 39.03 73 P **P 05 05 45.1 -0.4**
BURAR Bucovina Array 39.04 63⇓*i*P **P 05 05 46.4 +0.9**
VTS Vitosha 39.06 71 P **P 05 05 45.9 +0.1**
VTS Vitosha 39.06 71 *i*P **P 05 05 45.2 -0.6**
VTS Vitosha 39.06 71 P **P 05 05 45.9 +0.1**
KKB Krupnik 39.21 72 *i*P **P 05 05 47.1 +0.1**
THL Klokotos Trika 39.25 76 P **P 05 05 47.2 -0.2**
ARCES ARCESS Array B 39.26 27 P **P 05 05 45.6 -1.5**
comp=Z,34nm,1.1s,mb5.0,baz=251,slow=5.4,SNR=25
ARCES ARCESS Array B 39.26 27 P **P 05 05 45.6 -1.5**
MPR Mayaguez 39.29 244 *e*P **P 05 05 49.1 +1.1**
MPR Mayaguez 39.29 244 *e*P **P 05 05 49.1 +1.2**
LIT Litokhoron 39.40 75 P **P 05 05 48.1 -0.5**
MNK Minsk 39.45 51⇑*e*P **P 05 05 48.0 -0.9**
MNK *e* 05 07 24.0
MNK *e*S **S 05 11 44.0 -6.4**
MNK MLR MLR
comp=E,3μm,10.0s
MNK MLR MLR
comp=Z,4μm,10.0s,MS5.5
MICGM Minsk 39.48 51⇑*e*P **P 05 05 48.0 -1.1**
AGG Agios Georgios 39.68 77 P **P 05 05 52.0 +1.0**
LAKA Lakka 39.73 78 P **P 05 05 52.5 +1.1**
PGB Panagyurishte 39.75 71 *i*P **P 05 05 51.8 +0.3**
TRIZ Trizonia 39.75 78 P **P 05 05 53.0 +1.4**
MMB Musomiste 39.76 72 *i*P **P 05 05 52.1 +0.5**
SOH Sokhos 39.76 73 P **P 05 05 52.0 +0.4**
GRTK Grand Turk 39.77 251 PFAKE 05 06 00.0 +8.1
GRTK LR LR
comp=Z,2μm,19.0s,MS4.9
KALE Kalithea 39.79 78 P **P 05 05 47.2 -4.7**
SRS Serrai 39.82 73 P **P 05 05 52.3 +0.1**
KEV Kevo 39.82 27 *e*P **P 05 05 50.7 -1.1**
KEV pmax pmax
comp=Z,19nm,1.0s,mb4.8
KEV Kevo 39.82 27 PFAKE 05 06 00.0 +8.2
KEV LR LR
comp=Z,889nm,20.0s,MS4.6
KEV Kevo 39.82 27 *e*p **P 05 05 50.7 -1.1**
comp=Z,19nm,1.0s,mb4.8
KEV Kevo 39.82 27 *e*P **P 05 05 50.7 -1.1**
comp=Z,19nm,1.0s,mb4.8
NHSC New Hope 39.85 273 *e*P **P 05 05 53.5 +1.0**
comp=Z,191nm,0.9s,mb5.8
NHSC LR LR
comp=Z,931nm,21.0s,MS4.6
NHSC New Hope 39.85 273 *e*P **P 05 05 53.5 +1.1**
comp=Z,191nm,0.9s,mb5.8
PLG Polygyros 39.98 74 P **P 05 05 53.9 +0.4**
MLR Muntele Rosu 40.08 66 P **P 05 05 54.1 -0.1**
comp=Z,7.4nm,0.7s,mb4.5,baz=304,slow=2.8,SNR=13
MLR Muntele Rosu 40.08 66⇑*i*P **P 05 05 55.2 +1.0**
MLR Muntele Rosu 40.08 66 P **P 05 05 54.1 -0.1**
PYL PYLOS 40.10 80 P **P 05 05 54.4 -0.1**
COW Cow Castle Cre 40.10 274 *e*P **P 05 05 55.3 +0.7**
COW *e*PcP PcP 05 07 59.2 +0.1
COW Cow Castle Cre 40.10 274 *e*P **P 05 05 55.3 +0.7**
JSC Jenkinsville 40.10 276 *e*P **P 05 05 54.9 +0.3**
JSC Jenkinsville 40.10 276 *e*P **P 05 05 54.9 +0.3**
GUR Goura 40.12 78 P **P 05 05 55.4 +0.8**
ITM Ithomi 40.12 79 P **P 05 05 54.9 +0.2**
KBS Kingsbay 40.13 12 *e*P **P 05 05 54.0 -0.3**
KBS *e*S **S 05 12 01.0 +0.8**
KBS Kingsbay 40.13 12 *e*P **P 05 05 55.7 +1.4**
KBS pmax pmax
comp=Z,23nm,1.0s,mb4.9
KBS MLR MLR
comp=Z,457nm,22.0s,MS4.3
KBS Kingsbay 40.13 12 *e*P **P 05 05 55.7 +1.4**
comp=Z,23nm,1.0s,mb4.8
KBS LR LR
comp=Z,457nm,22.0s,MS4.3
KBS Kingsbay 40.13 12 *e*S **S 05 12 01.0 +0.8**
SNR=27
XOR Xorichti 40.17 76 P **P 05 05 54.5 -0.6**
PLD Plovdiv 40.27 71 P **P 05 05 56.1 +0.3**
PLD Plovdiv 40.27 71 *i*P **P 05 05 55.6 -0.2**
PLD Plovdiv 40.27 71 P **P 05 05 56.1 +0.3**
LKR Lokris 40.31 77 P **P 05 05 56.3 +0.1**
PAIG Paliouri 40.31 75 P **P 05 05 56.5 +0.3**
TOA0 Torodi Ar. Sit 40.33 127 *e*P **P 05 05 56.7 +0.1**
TOA0 Torodi Ar. Sit 40.33 127 *e*P **P 05 05 56.7 +0.1**
TORD Torodi Ar. Bea 40.33 127 P **P 05 05 56.5 -0.1**
comp=Z,22nm,0.8s,mb5.0,baz=322,slow=6.1,SNR=66
VLX Vlachokerasia 40.37 79 P **P 05 05 57.0 +0.3**
OUR Ouranopolis 40.38 74 P **P 05 05 56.9 +0.1**
SPB4 Spitsbergen Ar 40.40 13 *e*P **P 05 05 56.8 +0.3**
SPB4 Spitsbergen Ar 40.40 13 *e*P **P 05 05 56.8 +0.3**
SPITS Spitsbergen Ar 40.40 13 P **P 05 05 57.3 +0.8**
comp=Z,9.3nm,0.7s,mb4.6,baz=244,slow=8.4,SNR=8.7
SPITS LR LR 05 18 54.9
comp=Z,657nm,19.7s,MS4.5,baz=230,slow=31
SPITS Spitsbergen Ar 40.40 13 P **P 05 05 57.3 +0.8**
SPITS LR LR 05 18 54.9
SPITS Spitsbergen Ar 40.40 13 P **P 05 05 57.3 +0.8**
RZN Rozhen 40.42 72 *i*P **P 05 05 56.7 -0.4**
GRGR Grenville 40.49 231 PFAKE 05 06 10.0 +12
GRGR LR LR
comp=Z,703nm,22.0s,MS4.5
VRI Vrincioaia 40.50 65⇓*i*P **P 05 05 57.2 -0.5**
KAVA Kavala 40.52 73 P **P 05 05 58.1 +0.2**
LTK Loutraki 40.53 78 P **P 05 05 58.2 +0.1**
AOS Alonnisos 40.74 76 P **P 05 05 59.4 -0.4**
SZH Strazhica 40.74 69 *i*P **P 05 05 58.2 -1.5**
JOF Joensuu 40.79 38 *e*P **P 05 05 58.8 -1.0**
JOF pmax pmax
comp=Z,17nm,0.7s,mb4.8
JOF Joensuu 40.79 38 *e*p **P 05 05 58.8 -1.0**
comp=Z,16nm,0.7s,mb4.8
JOF Joensuu 40.79 38 *e*P **P 05 05 58.8 -1.0**
comp=Z,16nm,0.7s,mb4.8
TZTN Tazewell 40.79 280 *e*P **P 05 06 00.4 +0.2**
comp=Z,59nm,1.2s,mb5.1
TZTN *e*PcP PcP 05 08 01.0 -0.2
TZTN Tazewell 40.79 280 *e*P **P 05 06 00.4 +0.2**
comp=Z,59nm,1.2s,mb5.1
KIEV Kiev 40.91 57 *e*P **P 05 06 00.5 -0.5**
KIEV pmax pmax
comp=Z,24nm,0.9s,mb4.8
KIEV MLR MLR
comp=Z,2μm,19.0s,MS4.9
KIEV Kiev 40.91 57 *e*P **P 05 06 00.5 -0.5**
comp=Z,24nm,0.9s,mb4.8
KIEV LR LR
comp=Z,2μm,19.0s,MS4.9
KIEV Kiev 40.91 57 *e*P **P 05 06 00.5 -0.5**
comp=Z,24nm,0.9s,mb4.8
AKASG Malin Array Be 40.92 57 P **P 05 06 00.6 -0.5**
comp=Z,14nm,0.6s,mb4.8,baz=278,slow=8.4,SNR=17
AKASG LR LR 05 22 34.6
comp=Z,2μm,18.5s,MS5.0,baz=285,slow=36
AKASG Malin Array Be 40.92 57 P **P 05 06 00.6 -0.5**
AKASG LR LR 05 22 34.6
AKASG Malin Array Be 40.92 57 P **P 05 06 00.6 -0.5**
AKBB Malin Array Si 40.92 57 *e*P **P 05 06 00.3 -0.8**
AKBB Malin Array Si 40.92 57 *e*P **P 05 06 00.3 -0.8**
KDZ Kurdzhali 40.92 71 *i*P **P 05 06 00.5 -0.8**
RDO Rodhopi 41.19 72 P **P 05 06 03.9 +0.5**
LOS Limnos 41.31 74 P **P 05 06 04.9 +0.4**
COWI Conover 41.33 296 *e*P **P 05 06 04.5 0.0**
comp=Z,67nm,1.0s,mb5.2
COWI *e*PcP PcP 05 08 01.9 -1.0
COWI LR LR
comp=Z,1μm,21.0s,MS4.8
COWI Conover 41.33 296 *e*P **P 05 06 04.5 0.0**
comp=Z,67nm,1.0s,mb5.2
TKL Tuckaleechee C 41.34 279 *e*P **P 05 06 05.1 +0.4**
TKL *e* 05 07 47.1
TKL Tuckaleechee C 41.34 279 *e*P **P 05 06 05.1 +0.4**
LIA Limnos Island 41.40 74 P **P 05 06 05.8 +0.6**
JMB Yambol 41.46 70 P **P 05 06 05.7 +0.1**
ALE Alert 41.54 354 P **P 05 06 05.0 -0.9**
comp=Z,74nm,1.4s,mb5.1,SNR=9.6
SDDR Presa de Saban 41.56 249 *e*P **P 05 06 08.3 +1.6**
comp=Z,63nm,0.9s,mb5.2
SDDR *e*PcP PcP 05 08 04.3 +0.3
SDDR LR LR
comp=Z,1μm,20.0s,MS4.8
SDDR Presa de Saban 41.56 249 *e*P **P 05 06 08.3 +1.6**
comp=Z,63nm,0.9s,mb5.2
KIS Kishinev 41.57 63 *e*P **P 05 06 02.0 -4.5**
KIS *e*S **S 05 12 12.0 -10**
KIS LRM 05 25 20.0
comp=Z,2μm,16.0s
KIS Kishinev 41.57 63 *e*P **P 05 06 02.0 -4.5**
KIS *e* 05 07 42.0
KIS *e* 05 08 03.0
KIS *e* 05 12 23.0
KIS MLR MLR
comp=Z,2μm,14.0s,MS5.1
KIS MLR MLR
comp=Z,2μm,16.0s
KIS Kishinev 41.57 63 *e*S **S 05 12 23.0 +0.7**
comp=Z,2μm,16.0s
ALN Alexandroupoli 41.64 72 P **P 05 06 07.3 +0.2**
HARR Harsova 41.66 66⇑*i*P **P 05 06 05.8 -1.4**
FCC Fort Churchill 41.83 316 *e*P **P 05 06 09.0 +0.5**
FCC *e* 05 08 03.7
FCC pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
FCC Fort Churchill 41.83 316 *e*P **P 05 06 09.0 +0.6**
comp=Z,3.0nm,1.0s,mb3.9
FCC *e*PcP PcP 05 08 03.6 -0.6
FCC Fort Churchill 41.83 316 *e*P **P 05 06 09.0 +0.5**
comp=Z,3.0nm,1.0s,mb3.9
APA Apatity 41.83 31⇓*i*P **P 05 06 09.0 +0.6**
APA *e*S **S 05 12 26.0 +0.3**
APA pmax pmax
comp=Z,39nm,1.0s,mb5.0
BLO Bloomington 41.87 285 *e*P **P 05 06 09.5 +0.4**
BLO pmax pmax
comp=Z,147nm,1.1s,mb5.5
BLO Bloomington 41.87 285 *e*P **P 05 06 09.5 +0.4**
comp=Z,147nm,1.1s,mb5.5
BLO Bloomington 41.87 285 *e*P **P 05 06 09.5 +0.4**
comp=Z,147nm,1.1s,mb5.5
CPCT Cooper Cave 41.98 279 *e*P **P 05 06 10.6 +0.6**
CPCT *e*PcP PcP 05 08 04.1 -1.0
CPCT Cooper Cave 41.98 279 *e*P **P 05 06 10.6 +0.6**
TIRR Tirgusor 42.06 66 *e*P **P 05 06 09.0 -1.5**
TIRR *e* 05 08 05.1
TIRR pmax pmax
comp=Z,32nm,1.0s,mb4.9
TIRR Tirgusor 42.06 66 *e*P **P 05 06 09.0 -1.5**
comp=Z,32nm,1.0s,mb4.9
TIRR *e*PcP PcP 05 08 05.1 -0.1
TIRR Tirgusor 42.06 66⇓*i*P **P 05 06 09.3 -1.2**
TIRR Tirgusor 42.06 66 *e*P **P 05 06 09.0 -1.5**
comp=Z,32nm,1.0s,mb4.9
TIRR Tirgusor 42.06 66 *e*PcP PcP 05 08 05.1 -0.1
WCI Wyandotte Cave 42.09 284 *e*P **P 05 06 11.2 +0.4**
WCI *e* 05 08 04.4
WCI pmax pmax
comp=Z,89nm,1.2s,mb5.3
WCI MLR MLR
comp=Z,696nm,21.0s,MS4.5
WCI Wyandotte Cave 42.09 284 *e*P **P 05 06 11.2 +0.4**
comp=Z,89nm,1.2s,mb5.3
WCI *e*PcP PcP 05 08 04.4 -1.1
WCI LR LR
comp=Z,696nm,21.0s,MS4.5
WCI Wyandotte Cave 42.09 284 *e*P **P 05 06 11.2 +0.4**
comp=Z,89nm,1.2s,mb5.3
GOGA Godfrey 42.13 276 *e*P **P 05 06 12.1 +0.8**
GOGA pmax pmax
comp=Z,73nm,1.0s,mb5.3
GOGA MLR MLR
comp=Z,862nm,19.0s,MS4.7
GOGA Godfrey 42.13 276 *e*P **P 05 06 12.1 +0.8**
comp=Z,73nm,1.0s,mb5.3
GOGA LR LR
comp=Z,862nm,19.0s,MS4.7
GOGA Godfrey 42.13 276 *e*P **P 05 06 12.1 +0.8**
comp=Z,73nm,1.0s,mb5.3
TIC Toumodi 42.15 140 *e*P **P 05 06 12.6 +1.1**
comp=Z,108nm,1.1s,mb5.4
PSN Preselentsi 42.15 67 *i*P **P 05 06 09.5 -1.8**
DBIC Dimbokro 42.20 140 P **P 05 06 11.8 -0.2**
comp=Z,11nm,0.7s,mb4.6,baz=322,slow=9.8,SNR=14
DBIC LR LR 05 21 22.4
comp=Z,885nm,19.6s,MS4.7,baz=312,slow=33
DBIC Dimbokro 42.20 140 *e*P **P 05 06 13.2 +1.2**
DBIC pmax pmax
comp=Z,37nm,1.0s
DBIC MLR MLR
comp=Z,984nm,20.0s
DBIC Dimbokro 42.20 140 *e*P **P 05 06 13.2 +1.3**
comp=Z,37nm,1.0s,mb5.0
DBIC LR LR
comp=Z,984nm,20.0s,MS4.7
DBIC Dimbokro 42.20 140 *e*P **P 05 06 13.2 +1.2**
comp=Z,37nm,1.0s,mb5.0
LVZ Lovozero 42.33 31 *i*P **P 05 06 13.4 +1.0**
LVZ Lovozero 42.33 31 PFAKE 05 06 20.0 +7.6
LVZ LR LR
comp=Z,2μm,20.0s,MS4.9
EYMN Ely 42.36 299 *e*P **P 05 06 12.8 -0.1**
comp=Z,117nm,1.0s,mb5.5
EYMN *e*PcP PcP 05 08 05.1 -1.1
EYMN LR LR
comp=Z,1μm,19.0s,MS4.8
EYMN Ely 42.36 299 *e*P **P 05 06 12.8 -0.1**
comp=Z,117nm,1.0s,mb5.5
LIC Lamto 42.51 141 *e*P **P 05 06 15.3 +0.8**
comp=Z,101nm,1.3s,mb5.1,baz=336
LIC *e*MLR MLR
comp=Z,2μm,18.5s,MS4.7
LIC Lamto 42.51 141 *e*P **P 05 06 15.4 +0.9**
comp=Z,98nm,1.3s,mb5.4
LIC Lamto 42.51 141 *e*P **P 05 06 15.3 +0.8**
comp=Z,50nm,1.3s,mb5.1
LIC LR LR
comp=Z,820nm,18.5s,MS4.7
KIC Kosan Boka 42.52 140 *e*P **P 05 06 15.6 +1.0**
comp=Z,106nm,1.4s,mb5.4
CHOS Chios island 42.61 76 P **P 05 06 16.1 +1.0**
GVD Gavdhos 42.71 81 *e*P **P 05 06 16.9 +1.0**
comp=Z,206nm,0.7s,mb6.0
GVD Gavdhos 42.71 81 *e*P **P 05 06 16.9 +1.0**
comp=Z,206nm,0.7s,mb6.0
APE Apeiranthos 42.78 78⇑*i*P **P 05 06 16.6 +0.1**
APE Apeiranthos 42.78 78 P **P 05 06 16.7 +0.2**
APE Apeiranthos 42.78 78 P **P 05 06 16.7 +0.2**
RES Resolute Bay 42.89 339 P **P 05 06 17.1 +0.1**
comp=Z,25nm,1.0s,mb4.9,baz=100,slow=7.1,SNR=61
RES PcP PcP 05 08 08.0 +0.5
comp=Z,10nm,1.0s,baz=70,slow=1.6,SNR=4.1
RES Resolute Bay 42.89 339 *e*P **P 05 06 17.3 +0.4**
RES *e* 05 08 07.5
RES pmax pmax
comp=Z,25nm,0.9s,mb4.9
RES Resolute Bay 42.89 339 *e*P **P 05 06 17.3 +0.4**
comp=Z,25nm,0.9s,mb5.0
RES *e*PcP PcP 05 08 07.5 0.0
RES Resolute Bay 42.89 339 *e*P **P 05 06 17.3 +0.4**
comp=Z,25nm,0.9s,mb5.0
RES Resolute Bay 42.89 339 *e*PcP PcP 05 08 07.5 0.0
IDI Anoyia 43.09 80 P **P 05 06 20.0 +0.9**
comp=Z,28nm,0.7s,mb5.1,baz=294,slow=7.4,SNR=17
IDI PcP PcP 05 08 09.1 +0.2
comp=Z,19nm,0.8s,baz=260,slow=3.2,SNR=3.8
IDI Anoyia 43.09 80 P **P 05 06 20.0 +0.9**
IDI Anoyia 43.09 80 PcP PcP 05 08 09.1 +0.2
JFWS Jewell Farm 43.10 292 *e*P **P 05 06 19.3 +0.3**
JFWS pmax pmax
comp=Z,92nm,1.0s,mb5.5
JFWS MLR MLR
comp=Z,2μm,19.0s,MS5.0
JFWS Jewell Farm 43.10 292 *e*P **P 05 06 19.3 +0.3**
comp=Z,92nm,1.0s,mb5.5
JFWS LR LR
comp=Z,2μm,19.0s,MS5.0
JFWS Jewell Farm 43.10 292 *e*P **P 05 06 19.3 +0.3**
comp=Z,92nm,1.0s,mb5.5
SWET Sewanee 43.11 280 *e*P **P 05 06 19.6 +0.3**
SWET *e*PcP PcP 05 08 08.3 -0.6
SWET Sewanee 43.11 280 *e*P **P 05 06 19.5 +0.3**
OLIL Olney 43.17 285 *e*P **P 05 06 19.9 +0.2**
comp=Z,162nm,1.0s,mb5.7
OLIL *e*PcP PcP 05 08 08.0 -1.1
OLIL Olney 43.17 285 *e*P **P 05 06 19.9 +0.2**
comp=Z,162nm,1.0s,mb5.7
OLIL Olney 43.17 285 *e*PcP PcP 05 08 08.0 -1.1
USIN University of 43.18 284 *e*P **P 05 06 19.9 +0.2**
comp=Z,113nm,1.3s,mb5.4
USIN University of 43.18 284 *e*P **P 05 06 19.9 +0.2**
comp=Z,113nm,1.3s,mb5.4
HDIL Hopedale 43.30 288 *e*P **P 05 06 21.2 +0.5**
HDIL LR LR
comp=Z,1μm,22.0s,MS4.7
HDIL Hopedale 43.30 288 *e*P **P 05 06 21.2 +0.5**
DWPF Disney 43.32 268 PFAKE 05 06 30.0 +9.0
DWPF LR LR
comp=Z,476nm,20.0s,MS4.4
GTBY Guantanamo Bay 43.61 253 *e*P **P 05 06 24.3 +0.9**
comp=Z,46nm,0.8s,mb5.3
GTBY LR LR
comp=Z,2μm,20.0s,MS4.9
GTBY Guantanamo Bay 43.61 253 *e*P **P 05 06 24.3 +0.9**
comp=Z,46nm,0.8s,mb5.3
WVT Waverly 44.09 282 *e*P **P 05 06 27.3 +0.3**
WVT pmax pmax
comp=Z,63nm,1.0s,mb5.3
WVT MLR MLR
comp=Z,823nm,22.0s,MS4.6
WVT Waverly 44.09 282 *e*P **P 05 06 27.2 +0.2**
comp=Z,63nm,1.0s,mb5.3
WVT LR LR
comp=Z,823nm,22.0s,MS4.6
WVT Waverly 44.09 282 *e*P **P 05 06 27.2 +0.2**
comp=Z,63nm,1.0s,mb5.3
OBN Obninsk 44.33 49⇑*e*P **P 05 06 28.9 +0.2**
OBN *e* 05 08 12.9
OBN *i*S **S 05 13 00.3 -2.3**
OBN *e*SS SS 05 16 22.3 +1.7
OBN pmax pmax
comp=Z,148nm,2.5s,mb5.3
OBN MLR MLR
comp=Z,2μm,16.0s,MS5.2
OBN Obninsk 44.33 49 PFAKE 05 06 40.0 +11
OBN LR LR
comp=Z,2μm,19.0s,MS5.1
SIUC Southern Illin 44.40 284 *e*P **P 05 06 29.8 +0.2**
comp=Z,134nm,1.2s,mb5.5
SIUC Southern Illin 44.40 284 *e*P **P 05 06 29.8 +0.3**
comp=Z,134nm,1.2s,mb5.5
ULM Lac du Bonnet 44.49 304 P **P 05 06 28.4 -1.8**
comp=Z,28nm,1.1s,mb4.9,baz=78,slow=8.3,SNR=21
ULM PcP PcP 05 08 12.2 -1.1
comp=Z,10nm,1.0s,baz=135,slow=2.9,SNR=4.2
ULM LR LR 05 23 04.2
comp=Z,1μm,18.2s,MS4.8,baz=72,slow=34
ULM Lac du Bonnet 44.49 304 *e*P **P 05 06 28.6 -1.5**
comp=Z,14nm,0.7s,mb4.8
ULM *e*PcP PcP 05 08 11.8 -1.6
ULM LR LR
comp=Z,1μm,19.0s,MS4.9
ULM Lac du Bonnet 44.49 304 *e*P **P 05 06 28.6 -1.5**
comp=Z,14nm,0.7s,mb4.8
ULM Lac du Bonnet 44.49 304 *e*PcP PcP 05 08 11.8 -1.5
SLM Saint Louis 44.74 286 *e*P **P 05 06 32.5 +0.3**
SLM pmax pmax
comp=Z,107nm,1.0s,mb5.6
SLM Saint Louis 44.74 286 *e*P **P 05 06 32.5 +0.3**
comp=Z,107nm,1.0s,mb5.6
SLM Saint Louis 44.74 286 *e*P **P 05 06 32.5 +0.3**
comp=Z,107nm,1.0s,mb5.6
UTMT University of 44.74 283 *e*P **P 05 06 32.7 +0.4**
comp=Z,359nm,1.1s,mb6.1
UTMT University of 44.74 283 *e*P **P 05 06 32.7 +0.4**
comp=Z,359nm,1.1s,mb6.1
PLAL Pickwick Lake 44.78 280 *e*P **P 05 06 32.5 -0.1**
comp=Z,65nm,0.9s,mb5.5
PLAL *e*PcP PcP 05 08 12.5 -2.1
PLAL LR LR
comp=Z,486nm,21.0s,MS4.4
PLAL Pickwick Lake 44.78 280 *e*P **P 05 06 32.5 -0.1**
comp=Z,65nm,0.9s,mb5.5
MOS Moscow 44.78 48 *e*P **P 05 06 29.3 -3.0**
MOS *e* 05 08 12.4
MOS *e*PPP 05 08 53.5

MOS eS S 05 13 06.9 -2.2
MOS pmax pmax
comp=Z,51nm,1.0s,mb5.3
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.1
LRAL Lakeview Retre 44.91 277 eP P **05 06 34.1 +0.4**
comp=Z,29nm,0.9s,mb5.1
LRAL ePcP PcP 05 08 14.4 -0.6
LRAL LR LR
comp=Z,791nm,20.0s,MS4.6
LRAL Lakeview Retre 44.91 277 eP P **05 06 34.1 +0.4**
comp=Z,29nm,0.9s,mb5.1
AGMN Agassiz Refuge 45.06 301 eP P **05 06 34.9 +0.3**
comp=Z,107nm,1.0s,mb5.6
AGMN ePcP PcP 05 08 14.7 -0.6
AGMN LR LR
comp=Z,962nm,21.0s,MS4.7
AGMN Agassiz Refuge 45.06 301 eP P **05 06 34.9 +0.3**
comp=Z,107nm,1.0s,mb5.6
GLAT Glass 45.08 283 eP P **05 06 35.0 +0.1**
GLAT Glass 45.08 283 eP P **05 06 35.0 0.0**
FVM French Village 45.15 285 eP P **05 06 35.2 -0.3**
FVM pmax pmax
comp=Z,106nm,0.9s,mb5.7
FVM French Village 45.15 285 eP P **05 06 35.2 -0.3**
comp=Z,106nm,0.9s,mb5.7
FVM French Village 45.15 285 eP P **05 06 35.2 -0.3**
comp=Z,106nm,0.9s,mb5.7
PARMO Parma 45.24 283 eP P **05 06 36.2 -0.1**
PARMO ePcP PcP 05 08 15.1 -1.0
PARMO Parma 45.24 283 eP P **05 06 36.2 -0.1**
HALT Halls 45.28 282 eP P **05 06 36.5 -0.1**
HALT Halls 45.28 282 eP P **05 06 36.5 -0.1**
SCIA State Center 45.52 292 eP P **05 06 38.9 +0.5**
comp=Z,87nm,0.7s,mb5.8
SCIA ePcP PcP 05 08 16.8 -0.3
SCIA LR LR
comp=Z,2μm,19.0s,MS5.1
SCIA State Center 45.52 292 eP P **05 06 38.9 +0.5**
comp=Z,87nm,0.7s,mb5.8
CCM Cathedral Cave 45.70 286 eP P **05 06 39.3 -0.6**
CCM pmax pmax
comp=Z,138nm,1.1s,mb5.8
CCM MLR MLR
comp=Z,1μm,19.0s,MS4.8
CCM Cathedral Cave 45.70 286 eP P **05 06 39.3 -0.6**
comp=Z,138nm,1.1s,mb5.8
CCM LR LR
comp=Z,1μm,19.0s,MS4.8
CCM Cathedral Cave 45.70 286 eP P **05 06 39.3 -0.6**
comp=Z,138nm,1.1s,mb5.8
SIM Simferopol' 45.72 64 deP P **05 06 41.5 +1.6**
SIM eS S **05 13 32.8 +10**
SIM pmax pmax
comp=Z,160nm,13.0s
SIM MLR MLR
comp=Z,1μm,14.0s,MS5.0
GNAR Gosnell 45.74 283 eP P **05 06 40.5 +0.2**
comp=Z,3μm,1.2s
GNAR Gosnell 45.74 283 eP P **05 06 40.5 +0.2**
comp=Z,3μm,1.2s
BRAL Brewton 45.96 275 eP P **05 06 42.6 +0.5**
comp=Z,95nm,0.9s,mb5.7
BRAL LR LR
comp=Z,850nm,21.0s,MS4.7
BRAL Brewton 45.96 275 eP P **05 06 42.6 +0.6**
comp=Z,95nm,0.9s,mb5.7
OXF Oxford 45.97 281 eP P **05 06 41.7 -0.4**
OXF e 05 08 17.6
OXF pmax pmax
comp=Z,495nm,1.0s,mb6.4
OXF MLR MLR
comp=Z,556nm,19.0s,MS4.5
OXF Oxford 45.97 281 eP P **05 06 41.6 -0.4**
comp=Z,495nm,1.0s,mb6.4
OXF ePcP PcP 05 08 17.6 -1.2
OXF LR LR
comp=Z,556nm,19.0s,MS4.5
OXF Oxford 45.97 281 eP P **05 06 41.7 -0.4**
comp=Z,495nm,1.0s,mb6.4
ISP Isparta 46.03 74 PFAKE 05 06 50.0 +7.5
ISP LR LR
comp=Z,463nm,19.0s,MS4.5
HBAR Harrisburg 46.39 282 eP P **05 06 45.0 -0.4**
HBAR Harrisburg 46.39 282 eP P **05 06 45.0 -0.4**
MTDJ Mount Denham 46.45 254 eP P **05 06 47.1 +1.1**
comp=Z,137nm,0.9s,mb5.9
MTDJ LR LR
comp=Z,784nm,20.0s,MS4.7
MTDJ Mount Denham 46.45 254 eP P **05 06 47.1 +1.1**
comp=Z,137nm,0.9s,mb5.9
VSR Storozhevoye 46.86 54 eP P **05 06 48.3 -0.5**
VSR i *PP pP 05 06 53.5 +1.6
VSR e 05 08 37.6
VSR eS S **05 13 37.8 -1.3**
VSR eSS SS 05 17 00.8 -4.4
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=Z,110nm,8.2s
VSR pmax pmax
comp=N,80nm,11.5s
VSR pmax pmax
comp=E,70nm,7.2s
VSR smax
comp=N,250nm,6.6s
VSR smax
comp=Z,110nm,3.1s
VSR MLR MLR
comp=Z,2μm,16.0s,MS5.2
VSR MLR MLR
comp=N,360nm,13.0s,MS5.0
VSR MLR MLR
comp=E,1μm,16.0s,MS5.0
FFC Flin Flon 46.86 311 P P **05 06 49.4 +0.7**
comp=E,353nm,1.0s,mb6.2,SNR=31
FFC Flin Flon 46.86 311 eP P **05 06 49.3 +0.6**
FFC pmax pmax
comp=Z,74nm,1.1s,mb5.5
FFC MLR MLR
comp=Z,1μm,20.0s,MS4.9
FFC Flin Flon 46.86 311 eP P **05 06 49.3 +0.6**
comp=Z,74nm,1.1s,mb5.5
FFC LR LR
comp=Z,1μm,20.0s,MS4.9
FFC Flin Flon 46.86 311 eP P **05 06 49.3 +0.6**
comp=Z,74nm,1.1s,mb5.5
VORD Divnogorie 47.01 54 eP P **05 06 49.6 -0.4**
VORD i *PP pP 05 06 53.8 +0.7
VORD pmax pmax
comp=Z,20nm,0.8s,mb5.1
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD MLR MLR
comp=Z,2μm,17.0s,MS5.2
VORD MLR MLR
comp=N,700nm,10.0s
VORD MLR MLR
comp=E,1μm,18.0s
ECSD EROS Data Cent 47.13 295 eP P **05 06 51.0 0.0**
comp=E,204nm,1.0s,mb6.0
ECSD LR LR
comp=Z,861nm,20.0s,MS4.7
ECSD EROS Data Cent 47.13 295 eP P **05 06 51.0 0.0**
comp=Z,204nm,1.0s,mb6.0
BR131 Keskin Array S 47.43 70 eP P **05 06 54.3 +0.9**
comp=Z,9.4nm,0.9s,mb4.7
BR131 ePcP PcP 05 08 24.2 +0.4
BR131 LR LR
comp=Z,248nm,19.0s,MS4.2
BR131 Keskin Array S 47.43 70 eP P **05 06 54.3 +0.9**
comp=Z,9.4nm,0.9s,mb4.7
BRTR Keskin Array B 47.43 70 P P **05 06 53.9 +0.4**
comp=Z,8.0nm,0.8s,mb4.7,baz=276,slow=5.4,SNR=43
BRTR PcP PcP 05 08 23.8 0.0
comp=Z,7.0nm,0.9s,baz=251,slow=2.1,SNR=8.6
BRTR Keskin Array B 47.43 70 P P **05 06 53.8 +0.4**
BRTR Keskin Array B 47.43 70 PcP PcP 05 08 23.8 0.0
VBMS Vicksburg 47.90 278 eP P **05 06 57.4 +0.2**
comp=Z,261nm,1.1s,mb6.2
VBMS LR LR
comp=Z,895nm,21.0s,MS4.7
VBMS Vicksburg 47.90 278 eP P **05 06 57.3 +0.2**
comp=Z,261nm,1.1s,mb6.2
ANN Anapa 47.97 63 eP P **05 06 53.4 -4.1**
ANN eS S **05 13 50.0 -5.1**
ANN pmax pmax
comp=Z,44nm,1.1s,mb5.4
ANN MLR MLR
comp=Z,1μm,18.0s,MS5.0
UALR University of 47.98 282 eP P **05 06 56.9 -0.9**
comp=Z,46nm,0.9s,mb5.5
UALR University of 47.98 282 eP P **05 06 56.9 -0.9**
comp=Z,46nm,0.9s,mb5.5
RCBR Riachuelo 48.23 187 eP P **05 07 00.8 +1.0**
comp=Z,30nm,1.3s,mb5.2
RCBR LR LR
comp=Z,775nm,21.0s,MS4.7
RCBR Riachuelo 48.23 187 eP P **05 07 00.8 +1.0**
comp=Z,30nm,1.3s,mb5.2
VRHR Novokhopersk 48.36 53 eP P **05 07 00.6 +0.1**
VRHR i *SP sP 05 07 05.9 +1.0
VRHR e 05 08 54.3
VRHR eS S **05 14 02.7 +2.2**
VRHR eSS SS 05 17 23.8 -5.8
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,1.2s
VRHR pmax pmax
comp=Z,150nm,7.7s
VRHR pmax pmax
comp=N,320nm,14.1s
VRHR pmax pmax
comp=E,90nm,6.8s
VRHR smax
comp=N,190nm,2.9s
VRHR smax
comp=Z,300nm,6.9s
SDV Santo Domingo 48.47 238 eP P **05 07 03.0 +1.3**
comp=Z,40nm,0.9s,mb5.5
SDV ePcP PcP 05 08 27.9 +0.1
SDV LR LR
comp=Z,206nm,21.0s,MS4.1
SDV Santo Domingo 48.47 238 eP P **05 07 03.0 +1.3**
comp=Z,40nm,0.9s,mb5.5
MIAR Mount Ida 48.98 283 eP P **05 07 04.9 -0.6**
MIAR e 05 08 29.3
MIAR pmax pmax
comp=Z,181nm,1.0s,mb6.1
MIAR MLR MLR
comp=Z,757nm,22.0s,MS4.6
MIAR Mount Ida 48.98 283 eP P **05 07 04.9 -0.5**
comp=Z,181nm,1.0s,mb6.1
MIAR ePcP PcP 05 08 29.3 -0.2
MIAR LR LR
comp=Z,757nm,22.0s,MS4.6
MIAR Mount Ida 48.98 283 eP P **05 07 04.9 -0.6**
comp=Z,181nm,1.0s,mb6.1
KSU1 Kansas State U 49.03 290 eP P **05 07 05.5 -0.3**
comp=Z,217nm,0.9s,mb6.2
KSU1 LR LR
comp=Z,1μm,19.0s,MS4.8
KSU1 Kansas State U 49.03 290 eP P **05 07 05.5 -0.3**
comp=Z,217nm,0.9s,mb6.2
CSS Prodhromos 49.37 76 eP P **05 07 06.5 -2.0**
comp=Z,21nm,0.9s,mb5.2
CSS Prodhromos 49.37 76 eP P **05 07 06.5 -1.9**
comp=Z,21nm,0.9s,mb5.2
SOC Sochi 49.96 63 deP P **05 07 13.3 +0.5**
SOC e*PP pP 05 07 16.8 +0.8
SOC ePPP 05 10 10.3
SOC eS S **05 14 23.4 +0.2**
SOC e 05 17 02.1
SOC eSS SS 05 17 50.4 -5.2
SOC pmax pmax
comp=Z,58nm,2.0s,mb5.3
SOC pmax pmax
comp=Z,252nm,6.1s
SOC MLR MLR
comp=Z,972nm,17.0s,MS4.9
DGMT Dagmar 50.21 304 ⇓P P **05 07 14.1 -0.6**
baz=50,SNR=18
DGMT Dagmar 50.21 304 eP P **05 07 15.4 +0.7**
comp=Z,111nm,1.1s,mb5.8
DGMT ePcP PcP 05 08 34.1 +0.4
DGMT LR LR
comp=Z,896nm,20.0s,MS4.8
DGMT Dagmar 50.21 304 eP P **05 07 15.4 +0.7**
comp=Z,111nm,1.1s,mb5.8
DGMT Dagmar 50.21 304 ePcP PcP 05 08 34.1 +0.4
YKA Yellowknife Ar 50.93 323 P P **05 07 19.4 -0.4**
comp=Z,14nm,0.9s,mb4.9,baz=69,slow=7.2,SNR=117
YKA PcP PcP 05 08 35.5 -0.5
comp=Z,8.2nm,0.9s,baz=68,slow=3.9,SNR=14
YKA LR LR 05 25 29.3
comp=Z,39nm,20.5s,MS3.4,baz=115,slow=32
YKA Yellowknife Ar 50.93 323 P P **05 07 19.4 -0.4**
YKA 05 08 35.5
YKA Yellowknife Ar 50.93 323 P P **05 07 19.4 -0.4**
YKA PcP PcP 05 08 35.5 -0.5
YKA LR LR 05 25 29.3
YKA Yellowknife Ar 50.93 323 P P **05 07 19.4 -0.4**
YKA Yellowknife Ar 50.93 323 PcP PcP 05 08 35.5 -0.6
NATX Nacogdoches 51.16 280 eP P **05 07 22.1 0.0**
comp=Z,182nm,1.3s,mb5.8
NATX LR LR
comp=Z,1μm,20.0s,MS4.9
NATX Nacogdoches 51.16 280 eP P **05 07 22.0 0.0**
comp=Z,182nm,1.3s,mb5.8
KIV Kislovodsk 51.76 62 ⇓eP P **05 07 27.5 +1.2**
KIV e 05 09 32.3
KIV eS S **05 14 48.9 +0.9**
KIV pmax pmax
comp=Z,47nm,2.5s,mb5.0
KIV MLR MLR
comp=Z,800nm,21.0s,MS4.7
KIV Kislovodsk 51.76 62 PFAKE 05 07 40.0 +14
KIV LR LR
comp=Z,650nm,20.0s,MS4.7
KIV Kislovodsk 51.76 62 P P **05 07 27.9 +1.6**
SNR=5.5
KIV P 05 07 27.9
SNR=5.5
MMAI Mount Meron Ar 51.83 77 P P **05 07 27.1 +0.1**
comp=Z,7.0nm,0.8s,mb4.6,baz=316,slow=6.0,SNR=7.9
MMAI LR LR 05 28 48.7
comp=Z,168nm,20.8s,MS4.0,baz=325,slow=35
RSSD Black Hills 51.87 299 eP P **05 07 26.8 -0.4**
RSSD pmax pmax
comp=Z,24nm,1.3s,mb5.0
RSSD MLR MLR
comp=Z,1μm,20.0s,MS4.9
RSSD Black Hills 51.87 299 eP P **05 07 26.8 -0.4**
comp=Z,24nm,1.3s,mb5.0
RSSD LR LR
comp=Z,1μm,20.0s,MS4.9
RSSD Black Hills 51.87 299 eP P **05 07 26.8 -0.4**
comp=Z,24nm,1.3s,mb5.0
OGNE Ogallala 51.94 294 eP P **05 07 27.4 -0.4**
comp=Z,329nm,1.3s,mb6.1
OGNE LR LR
comp=Z,1μm,20.0s,MS5.0
OGNE Ogallala 51.94 294 eP P **05 07 27.4 -0.4**
comp=Z,329nm,1.3s,mb6.1
LAO LASA Array 52.18 302 eP P **05 07 30.1 +0.7**
comp=Z,107nm,0.9s,mb5.8
LAO LR LR
comp=Z,932nm,19.0s,MS4.8
LAO LASA Array 52.18 302 eP P **05 07 30.1 +0.6**
comp=Z,107nm,0.9s,mb5.8
WMOK Wichita Mounta 52.62 286 eP P **05 07 31.8 -1.1**
WMOK pmax pmax
comp=Z,70nm,1.0s,mb5.5
WMOK MLR MLR
comp=Z,1μm,20.0s,MS4.9
WMOK Wichita Mounta 52.62 286 eP P **05 07 31.8 -1.1**
comp=Z,70nm,1.0s,mb5.5
WMOK LR LR
comp=Z,1μm,20.0s,MS4.9
WMOK Wichita Mounta 52.62 286 eP P **05 07 31.8 -1.1**
comp=Z,70nm,1.0s,mb5.5
ONI Oni 52.86 63 P P **05 07 35.9 +1.4**
HKT Hockley 52.97 279 eP P **05 07 35.1 -0.4**
HKT pmax pmax
comp=Z,76nm,1.4s,mb5.4
HKT MLR MLR
comp=Z,972nm,19.0s,MS4.9
HKT Hockley 52.97 279 eP P **05 07 35.1 -0.4**
comp=Z,76nm,1.4s,mb5.4
HKT LR LR
comp=Z,972nm,19.0s,MS4.9
HKT Hockley 52.97 279 eP P **05 07 35.1 -0.4**
comp=Z,76nm,1.4s,mb5.4
ZEI Tsey 53.07 63 eP P **05 07 35.4 -0.7**
ZEI e 05 07 41.8
ZEI pmax pmax
comp=Z,35nm,0.8s,mb5.3
EIL Elat 53.25 81 P P **05 07 36.5 -1.1**
comp=Z,4.3nm,0.7s,mb4.5,baz=310,slow=12,SNR=8.2
EIL Elat 53.25 81 P P **05 07 36.5 -1.1**
SOKR Solikamsk 53.44 39 d iP P **05 07 38.6 0.0**
SOKR S S **05 15 13.4 +2.8**
SOKR SS SS 05 18 43.9 -6.1
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,770nm,12.0s,MS5.0
A18A Metzger Ranch, 53.46 306 ⇓P P **05 07 38.4 -0.5**
baz=53,SNR=7.5
B18A Beardsley Farm 53.64 306 ⇓P P **05 07 40.0 -0.2**
baz=54,SNR=15
EDM Edmonton 53.68 312 eP P **05 07 40.5 +0.1**
EDM e 05 08 46.3
EDM e 05 09 37.5
EDM Edmonton 53.68 312 eP P **05 07 40.5 +0.1**
EDM Edmonton 53.68 312 ePcP PcP 05 08 46.3 -0.3
EGMT Eagleton 53.79 305 ⇓P P **05 07 40.5 -0.8**
baz=54,SNR=18
EGMT Eagleton 53.79 305 eP P **05 07 41.3 0.0**
comp=Z,116nm,1.3s,mb5.7
EGMT LR LR
comp=Z,1μm,20.0s,MS4.9
EGMT Eagleton 53.79 305 eP P **05 07 41.3 0.0**
comp=Z,116nm,1.3s,mb5.7
ROSC El Rosal 53.89 239 P P **05 07 41.8 -0.7**
comp=Z,18nm,0.8s,mb5.0,baz=92,slow=8.8,SNR=13
ROSC LR LR 05 27 31.4
comp=Z,601nm,20.4s,MS4.6,baz=13,slow=33
ROSC El Rosal 53.89 239 eP P **05 07 43.5 +1.1**
ROSC ePcP PcP 05 08 49.0 +1.0
ROSC El Rosal 53.89 239 eP P **05 07 43.5 +1.1**
ROSC El Rosal 53.89 239 ePcP PcP 05 08 49.0 +1.0
A17A Triple J Farms 53.96 307 ⇑P P **05 07 41.9 -0.6**
baz=54,SNR=54
PHWY Pilot Hill 54.07 296 eP P **05 07 43.7 +0.2**
comp=Z,70nm,0.9s,mb5.6
PHWY Pilot Hill 54.07 296 eP P **05 07 43.7 +0.2**
comp=Z,70nm,0.9s,mb5.6
TBLG Delisi 54.10 63 P P **05 07 44.4 +0.8**
MTA Mtatsminda 54.15 63 P P **05 07 44.5 +0.4**
D18A Linhart Farms, 54.18 304 ⇑P P **05 07 43.0 -1.2**
baz=54,SNR=8.9
B17A L&G Farms, Che 54.30 306 ⇓P P **05 07 43.7 -1.3**
baz=54,SNR=39
BCIP Isla Barro Col 54.32 247 eP P **05 07 45.3 -0.3**
comp=Z,11nm,0.6s,mb5.0
BCIP LR LR
comp=Z,436nm,20.0s,MS4.5
BCIP Isla Barro Col 54.32 247 eP P **05 07 45.3 -0.3**
comp=Z,11nm,0.6s,mb5.0
L22A Ellis Ranch, M 54.38 297 ⇑P P **05 07 45.2 -0.6**
baz=54
E18A Harlowton 54.53 304 ⇓P P **05 07 46.4 -0.4**
baz=54,SNR=38
C17A Wharram Farm, 54.57 305 ⇑P P **05 07 45.9 -1.1**
baz=54,SNR=29
AMTX Amarillo 54.61 287 eP P **05 07 47.8 +0.3**
comp=Z,227nm,1.1s,mb6.1
AMTX LR LR
comp=Z,2μm,19.0s,MS5.1
AMTX Amarillo 54.61 287 eP P **05 07 47.8 +0.3**
comp=Z,227nm,1.1s,mb6.1
DGRG David-gareji 54.65 63 P P **05 07 49.2 +1.5**
F18A Big Timber 54.70 303 ⇓P P **05 07 46.9 -1.1**
baz=54,SNR=30
GCMT Greycliff 54.72 303 eP P **05 07 48.3 +0.1**
comp=Z,82nm,1.3s,mb5.6
GCMT Greycliff 54.72 303 eP P **05 07 48.3 +0.1**
comp=Z,82nm,1.3s,mb5.6
B16A M & M Farms, S 54.79 306 ⇓P P **05 07 47.8 -0.8**
baz=55,SNR=7.1
G18A Lazy EL Ranch, 54.87 302 ⇓P P **05 07 48.4 -0.9**
baz=55,SNR=9.7
ISCO Idaho Springs 54.89 294 eP P **05 07 49.9 +0.4**
ISCO pmax pmax
comp=Z,84nm,1.3s,mb5.6
ISCO MLR MLR
comp=Z,1μm,21.0s,MS5.0
ISCO Idaho Springs 54.89 294 eP P **05 07 49.9 +0.4**
comp=Z,84nm,1.3s,mb5.6
ISCO LR LR
comp=Z,1μm,21.0s,MS5.0
ISCO Idaho Springs 54.89 294 eP P **05 07 49.9 +0.4**
comp=Z,84nm,1.3s,mb5.6
N22A Wattenberg Ran 54.97 296 ⇓P P **05 07 50.6 +0.6**
baz=55,SNR=45
L21A Rawlins 55.03 298 ⇑P P **05 07 50.0 -0.4**
baz=55
RWWY Rawlins 55.05 297 eP P **05 07 51.2 +0.6**
comp=Z,54nm,1.1s,mb5.5
RWWY Rawlins 55.05 297 eP P **05 07 51.2 +0.6**
comp=Z,54nm,1.1s,mb5.5
C16A Fuhringer Ranc 55.09 306 ⇑P P **05 07 50.5 -0.2**
baz=55,SNR=67
A15A Johnson Ranch, 55.15 307 ⇓P P **05 07 50.3 -0.9**
baz=55,SNR=38
E17A Martinsdale 55.16 304 ⇓P P **05 07 50.3 -0.9**
baz=55,SNR=39
M21A Separation Pea 55.19 297 ⇑P P **05 07 51.8 +0.2**
baz=55,SNR=29
F17A Fitzpatrick Pl 55.29 303 ⇓P P **05 07 52.3 +0.1**
baz=55,SNR=46
U26A Atchley Ranch, 55.29 290 ⇓P P **05 07 52.6 +0.2**
baz=55,SNR=53
D16A Dana Ranch, Ca 55.32 305 ⇓P P **05 07 52.3 -0.2**
baz=55,SNR=48
K20A Yellowstone Ra 55.33 299 ⇓P P **05 07 52.3 -0.3**
baz=55,SNR=80
MAK Makhachkala 55.33 61 eP P **05 07 53.1 +0.5**
MAK e 05 08 47.5
MAK i 05 09 56.9
MAK ePPP 05 11 12.8
MAK eS S **05 15 38.9 +2.3**
MAK eSS SS 05 19 24.0 +3.5
MAK pmax pmax
comp=Z,166nm,1.4s,mb5.9
MAK MLR MLR
comp=Z,1μm,15.0s,MS5.0
B15A Bradely Ranch, 55.35 307 ⇑P P **05 07 52.1 -0.5**
baz=55,SNR=42
W27A Bowe Ranch, En 55.49 288 ⇑P P **05 07 54.1 +0.2**
baz=55,SNR=108
A14A Double T Ranch 55.56 308 ⇑P P **05 07 54.0 -0.1**
baz=55,SNR=44
JCT Junction City 55.57 282 eP P **05 07 53.5 -1.0**
JCT pmax pmax
comp=Z,113nm,1.2s,mb5.8
JCT MLR MLR
comp=Z,887nm,21.0s,MS4.8
JCT Junction City 55.57 282 eP P **05 07 53.5 -1.0**
comp=Z,113nm,1.2s,mb5.8
JCT LR LR
comp=Z,887nm,21.0s,MS4.8
JCT Junction City 55.57 282 eP P **05 07 53.5 -1.0**
comp=Z,113nm,1.2s,mb5.8
K19A Absolon Red Bu 55.58 299 ⇑P P **05 07 53.7 -0.7**
baz=55,SNR=75
ARU Arti 55.60 42 P P **05 07 54.1 -0.2**
comp=Z,195nm,0.7s,mb6.2,SNR=11
ARU Arti 55.60 42 d iP P **05 07 54.4 +0.1**
ARU 05 08 51.0
ARU 05 09 56.2
ARU ePPP 05 11 11.9
ARU S S **05 15 42.2 +2.4**
ARU SS SS 05 19 27.7 +3.5
ARU pmax pmax
comp=Z,24nm,1.0s,mb5.2
ARU MLR MLR
comp=Z,1μm,17.0s,MS5.1
ARU Arti 55.60 42 eP P **05 07 54.4 0.0**
comp=Z,67nm,1.3s,mb5.5
ARU LR LR

comp=Z,1µm,19.0s,MS5.0
ARU Arti 55.60 42 *e*P **P 05 07 54.4 +0.1**
comp=Z,67nm,1.3s,mb5.5
ARU S **S 05 15 42.2 +2.4**
G17A Pierce Place, 55.61 303 ⇓P **P 05 07 54.4 -0.1**
baz=55,SNR=16
C15A Salmond Ranch, 55.62 306 ⇓P **P 05 07 53.9 -0.7**
baz=55
V26A Tequesquite Ra 55.62 289 ⇑P **P 05 07 54.5 -0.3**
baz=56,SNR=97
E16A East Helena 55.63 304 ⇓P **P 05 07 54.3 -0.3**
baz=55,SNR=20
HRY Holter Researc 55.64 305 *e*P **P 05 07 54.4 -0.3**
comp=Z,61nm,1.2s,mb5.5
HRY Holter Researc 55.64 305 *e*P **P 05 07 54.4 -0.3**
comp=Z,61nm,1.2s,mb5.5
L20A Wamsutter 55.64 298 ⇓P **P 05 07 55.1 +0.3**
baz=56
N21A Black Mountain 55.70 296 ⇓P **P 05 07 56.0 +0.7**
baz=56,SNR=108
X27A F and S Farms, 55.73 288 ⇓P **P 05 07 55.6 0.0**
baz=56,SNR=77
LKWY Lake 55.75 302 *e*P **P 05 07 57.0 +1.4**
LKWY pmax pmax
comp=Z,34nm,1.0s,mb5.3
LKWY MLR MLR
comp=Z,2µm,19.0s,MS5.2
LKWY Lake 55.75 302 *e*P **P 05 07 57.0 +1.4**
comp=Z,34nm,1.0s,mb5.3
LKWY LR LR
comp=Z,2µm,19.0s,MS5.2
LKWY Lake 55.75 302 *e*P **P 05 07 57.0 +1.4**
comp=Z,34nm,1.0s,mb5.3
U25A Circle Dot Ran 55.75 290 ⇓P **P 05 07 56.7 +1.0**
baz=56
I18A Diamond G Ranc 55.79 300 ⇓P **P 05 07 56.1 +0.2**
baz=56,SNR=23
M20A Sweetwater, Wa 55.79 297 ⇑P **P 05 07 56.6 +0.7**
baz=56
KVTX Kingsville 55.80 278 PFAKE 05 08 10.0 +14
KVTX LR LR
comp=Z,495nm,22.0s,MS4.5
WALA Waterton Lakes 55.80 308 *e*P **P 05 07 55.8 -0.1**
comp=Z,2.9nm,1.0s,mb4.3
WALA Waterton Lakes 55.80 308 *e*P **P 05 07 55.8 -0.1**
comp=Z,2.9nm,1.0s,mb4.3
SDCO Great Sand Dun 55.83 292 *e*P **P 05 07 56.4 +0.2**
comp=Z,30nm,0.9s,mb5.3
SDCO *e*PcP PcP 05 08 55.1 0.0
SDCO LR LR
comp=Z,2µm,19.0s,MS5.2
SDCO Great Sand Dun 55.83 292 *e*P **P 05 07 56.4 +0.2**
comp=Z,30nm,0.9s,mb5.3
INK Inuvik 55.84 334 LR LR 05 28 20.5
comp=Z,326nm,20.5s,MS4.4,baz=60,slow=32
INK Inuvik 55.84 334 *e*P **P 05 07 54.7 -1.1**
INK pmax pmax
comp=Z,73nm,1.5s
INK Inuvik 55.84 334 *e*P **P 05 07 54.7 -1.1**
comp=Z,73nm,1.5s,mb5.5
INK Inuvik 55.84 334 *e*P **P 05 07 54.7 -1.1**
comp=Z,73nm,1.5s,mb5.5
MSTX Muleshoe 55.85 287 ⇓P **P 05 07 56.1 -0.4**
baz=56,SNR=98
YNR Norris Junctio 55.85 302 *e*P **P 05 07 57.3 +1.0**
comp=Z,34nm,1.3s,mb5.2
YNR Norris Junctio 55.85 302 *e*P **P 05 07 57.3 +1.0**
comp=Z,34nm,1.3s,mb5.2
D15A Lincoln 55.91 305 ⇑P **P 05 07 56.2 -0.4**
baz=56,SNR=35
O21A Pagoda 55.94 296 ⇓P **P 05 07 57.5 +0.6**
baz=56,SNR=8.6
H17A Grant Village 55.94 302 ⇓P **P 05 07 58.4 +1.4**
baz=56,SNR=33
F16A Kennard Place, 55.94 303 ⇓P **P 05 07 56.8 -0.1**
baz=56,SNR=14
W26A Owens Ranch, T 55.97 289 ⇓P **P 05 07 57.8 +0.5**
baz=56,SNR=19
BOZ Bozeman (W) 56.01 303 ⇓P **P 05 07 57.4 0.0**
baz=56,SNR=72
BOZ Bozeman (W) 56.01 303 *e*P **P 05 07 57.5 +0.1**
BOZ pmax pmax
comp=Z,44nm,1.1s,mb5.4
BOZ MLR MLR
comp=Z,794nm,19.0s,MS4.8
BOZ Bozeman (W) 56.01 303 *e*P **P 05 07 57.5 0.0**
comp=Z,44nm,1.1s,mb5.4
BOZ LR LR
comp=Z,794nm,19.0s,MS4.8
BOZ Bozeman (W) 56.01 303 *e*P **P 05 07 57.5 +0.1**
comp=Z,44nm,1.1s,mb5.4
YMR Madison River 56.06 302 *e*P **P 05 07 58.8 +1.0**
comp=Z,96nm,1.3s,mb5.7
YMR Madison River 56.06 302 *e*P **P 05 07 58.8 +1.0**
comp=Z,96nm,1.3s,mb5.7
BW06 Boulder Array 56.07 299 ⇑P **P 05 07 56.9 -1.0**
baz=56,SNR=84
BW06 Boulder Array 56.07 299 *e*P **P 05 07 56.8 -1.0**
comp=Z,82nm,1.1s,mb5.7
BW06 LR LR
comp=Z,1µm,19.0s,MS5.0
BW06 Boulder Array 56.07 299 *e*P **P 05 07 56.8 -1.1**
comp=Z,82nm,1.1s,mb5.7
PDAR Pinedale Array 56.07 299 P **P 05 07 57.2 -0.7**
comp=Z,46nm,1.0s,mb5.5,baz=64,slow=6.8,SNR=188
PDAR LR LR 05 31 54.3
comp=Z,878nm,18.3s,MS4.9,baz=62,slow=36
PDAR Pinedale Array 56.07 299 P **P 05 07 57.2 -0.7**
YFT Old Faithful 56.08 302 *e*P **P 05 07 59.7 +1.8**
comp=Z,99nm,1.2s,mb5.7
YFT Old Faithful 56.08 302 *e*P **P 05 07 59.7 +1.8**
comp=Z,99nm,1.2s,mb5.7
SMCO Snowmass 56.11 294 *e*P **P 05 07 58.8 +0.5**
comp=Z,63nm,1.0s,mb5.6
SMCO Snowmass 56.11 294 *e*P **P 05 07 58.8 +0.5**
comp=Z,63nm,1.0s,mb5.6
J18A Kendall Valley 56.15 300 ⇑P **P 05 07 57.9 -0.6**
baz=56
A13A Flathead Natio 56.16 308 ⇓P **P 05 07 57.6 -0.9**
baz=56
N20A Spence Gulch, 56.16 297 ⇓P **P 05 07 59.0 +0.4**
baz=56,SNR=96
I17A Pilgrim Ck. 56.17 301 ⇓P **P 05 07 59.0 +0.4**
baz=56,SNR=15
Y27A Causey 56.17 287 ⇑P **P 05 07 58.0 -0.8**
baz=56,SNR=56
V25A Rancho No Teng 56.18 290 ⇑P **P 05 07 58.7 -0.1**
baz=56
TGUH Tegucigalpa,Un 56.19 258 *e*P **P 05 08 00.6 +1.5**
comp=Z,44nm,0.8s,mb5.5
TGUH LR LR
comp=Z,1µm,20.0s,MS4.9
TGUH Tegucigalpa,Un 56.19 258 *e*P **P 05 08 00.6 +1.5**
comp=Z,44nm,0.8s,mb5.5
H16A Russell Place, 56.22 302 ⇑P **P 05 07 58.5 -0.4**
baz=56,SNR=52
Q22A Crested Butte, 56.23 294 ⇓P **P 05 07 59.7 +0.6**
baz=56,SNR=87
L19A Farson 56.26 299 P **P 05 07 59.3 0.0**
baz=56,SNR=111
P21A Newcastle 56.26 295 ⇑P **P 05 07 59.3 0.0**
baz=56
E15A Deer Lodge 56.27 305 ⇓P **P 05 07 58.4 -0.8**
baz=56,SNR=16
QLMT Earthquake Lak 56.27 302 *e*P **P 05 07 59.5 +0.2**
comp=Z,1.8nm,0.4s,mb4.5
QLMT Earthquake Lak 56.27 302 *e*P **P 05 07 59.5 +0.2**
comp=Z,1.8nm,0.4s,mb4.5
X26A CR and CF Fran 56.28 288 ⇓P **P 05 07 58.7 -0.8**
baz=56,SNR=21
C14A Swan Lake 56.30 306 ⇓P **P 05 07 58.9 -0.6**
baz=56
G16A Moss Hill, Enn 56.32 303 ⇑P **P 05 07 59.4 -0.3**
baz=56,SNR=30
LOHW Long Hollow 56.33 301 *e*P **P 05 07 59.7 -0.1**
comp=Z,48nm,1.1s,mb5.4
LOHW Long Hollow 56.33 301 *e*P **P 05 07 59.7 -0.1**
comp=Z,48nm,1.1s,mb5.4
ISHB Shabestar 56.36 67 *e*P **P 05 07 59.6 -0.5**
W25A X Bar L Ranch, 56.39 289 ⇑P **P 05 08 00.7 +0.3**
baz=56,SNR=52
SLMT Seeley Lake 56.40 306 *e*P **P 05 07 59.8 -0.4**
comp=Z,47nm,1.2s,mb5.4
SLMT Seeley Lake 56.40 306 *e*P **P 05 07 59.8 -0.4**
comp=Z,47nm,1.2s,mb5.4
CHMT Chamberlain Mo 56.41 305 *e*P **P 05 08 00.6 +0.3**
comp=Z,53nm,1.5s,mb5.3
CHMT Chamberlain Mo 56.41 305 *e*P **P 05 08 00.6 +0.4**
comp=Z,53nm,1.5s,mb5.3
IMW Indian Meadow 56.41 301 *e*P **P 05 08 00.5 +0.2**
comp=Z,68nm,1.0s,mb5.6
IMW Indian Meadow 56.41 301 *e*P **P 05 08 00.5 +0.2**
comp=Z,68nm,1.0s,mb5.6
YBMT Yellow Bay 56.42 307 *e*P **P 05 07 59.9 -0.4**
comp=Z,16nm,0.9s,mb5.0
YBMT Yellow Bay 56.42 307 *e*P **P 05 07 59.9 -0.4**
comp=Z,16nm,0.9s,mb5.0
M19A Rock Springs 56.42 298 ⇑P **P 05 07 60.0 -0.4**
baz=56
LRM Limekiln Ridge 56.43 304 *e*P **P 05 08 00.4 -0.1**
comp=Z,181nm,1.3s,mb5.9
LRM *e*PP PP 05 10 04.0 -1.7
LRM Limekiln Ridge 56.43 304 *e*P **P 05 08 00.4 -0.1**
comp=Z,181nm,1.3s,mb5.9
R22A Saguache, Gunn 56.44 293 ⇑P **P 05 08 01.8 +1.2**
baz=56
K18A Toltan Ranch, 56.44 299 ⇓P **P 05 07 59.3 -1.3**
baz=56,SNR=34
B13A Whitefish 56.45 307 ⇑P **P 05 07 59.5 -1.0**
baz=56,SNR=18
SVE Sverdlovsk 56.45 41 ⇓*e*P **P 05 08 00.9 +0.5**
SVE *e*S **S 05 15 56.0 +5.0**
SVE pmax pmax
comp=Z,36nm,1.4s,mb5.2
SVE MLR MLR
comp=Z,1µm,14.0s,MS5.1
F15A Butte 56.45 304 ⇑P **P 05 08 00.3 -0.3**
baz=56,SNR=19
D14A Greenough 56.48 306 ⇓P **P 05 07 59.8 -0.9**
baz=56,SNR=28
O20A White River Ci 56.49 296 ⇑P **P 05 08 00.9 -0.1**
baz=56,SNR=34
SNOW Snow King Moun 56.50 301 *e*P **P 05 08 01.2 +0.3**
comp=Z,113nm,1.2s,mb5.8
SNOW Snow King Moun 56.50 301 *e*P **P 05 08 01.2 +0.2**
comp=Z,113nm,1.2s,mb5.8
Z27A Tatum 56.51 287 P **P 05 08 00.9 -0.3**
baz=56,SNR=64
J17A Brown Place, J 56.52 301 ⇓P **P 05 08 00.3 -0.8**
baz=56,SNR=92
SWMT Swartz Lake 56.58 306 *e*P **P 05 08 01.1 -0.4**
comp=Z,42nm,1.3s,mb5.3
SWMT Swartz Lake 56.58 306 *e*P **P 05 08 01.1 -0.3**
comp=Z,42nm,1.3s,mb5.3
REDW Red Top Meadow 56.61 301 *e*P **P 05 08 01.6 -0.2**
comp=Z,138nm,1.3s,mb5.8
REDW Red Top Meadow 56.61 301 *e*P **P 05 08 01.5 -0.2**
comp=Z,138nm,1.3s,mb5.8
TPAW Teton Pass 56.61 301 *e*P **P 05 08 01.8 0.0**
comp=Z,69nm,1.1s,mb5.6
TPAW Teton Pass 56.61 301 *e*P **P 05 08 01.8 0.0**
comp=Z,69nm,1.1s,mb5.6
Y26A Elida 56.62 287 ⇑P **P 05 08 02.2 +0.2**
baz=56
JTMT Jette 56.63 307 *e*P **P 05 08 01.5 -0.3**
comp=Z,20nm,1.4s,mb5.0
JTMT Jette 56.63 307 *e*P **P 05 08 01.5 -0.3**
comp=Z,20nm,1.4s,mb4.9
Q21A Lamborn Mesa, 56.69 294 ⇑P **P 05 08 03.0 +0.7**
baz=56,SNR=61
N19A John Jarvie Ra 56.73 297 ⇑P **P 05 08 02.0 -0.7**
baz=57,SNR=32
DLMT Dillon 56.74 303 *e*P **P 05 08 03.0 +0.4**
comp=Z,84nm,1.2s,mb5.7
DLMT Dillon 56.74 303 *e*P **P 05 08 03.0 +0.3**
comp=Z,84nm,1.2s,mb5.7
I16A Newdale 56.77 301 ⇓P **P 05 08 03.6 +0.7**
baz=57,SNR=15
G15A Dillon 56.77 303 ⇓P **P 05 08 02.7 -0.2**
baz=57,SNR=47
L18A Fontenelle, Gr 56.79 299 ⇑P **P 05 08 02.5 -0.6**
baz=57
E14A Clinton 56.79 305 ⇑P **P 05 08 02.8 -0.1**
baz=57,SNR=22
C13A Hot Springs 56.84 307 ⇓P **P 05 08 02.0 -1.3**
baz=57,SNR=20
MSO Missoula 56.86 305 *e*P **P 05 08 03.1 -0.4**
comp=Z,42nm,1.3s,mb5.3
MSO LR LR
comp=Z,714nm,19.0s,MS4.8
MSO Missoula 56.86 305 *e*P **P 05 08 03.1 -0.4**
comp=Z,42nm,1.3s,mb5.3
A12A Yaak River Ran 56.88 308 ⇓P **P 05 08 03.3 -0.3**
baz=57
BSMT Bassoo Peak 56.88 307 *e*P **P 05 08 03.7 +0.1**
comp=Z,29nm,1.3s,mb5.2
BSMT Bassoo Peak 56.88 307 *e*P **P 05 08 03.7 +0.1**
comp=Z,29nm,1.3s,mb5.2
X25A Clemmons Ranch 56.90 289 ⇑P **P 05 08 04.2 +0.3**
baz=57,SNR=10.0
P20A De Beque 56.91 295 P **P 05 08 04.0 +0.1**
baz=57,SNR=87
R21A Cimarron 56.91 294 ⇓P **P 05 08 04.9 +0.9**
baz=57,SNR=13
RRI2 Red Ridge 56.92 301 *e*P **P 05 08 03.9 0.0**
comp=Z,132nm,1.4s,mb5.8
RRI2 Red Ridge 56.92 301 *e*P **P 05 08 03.9 0.0**
comp=Z,132nm,1.4s,mb5.8
127A Arkansas Junct 56.95 286 ⇑P **P 05 08 03.2 -1.1**
baz=57,SNR=24
K17A Gardner Place, 56.95 300 ⇑P **P 05 08 03.8 -0.4**
baz=57,SNR=19
O19A Miners Draw (B 56.99 297 ⇓P **P 05 08 04.2 -0.3**
baz=57,SNR=49
F14A Wisdom 57.00 304 ⇓P **P 05 08 02.9 -1.6**
baz=57
N18A Larsen Ranch, 57.02 298 ⇑P **P 05 08 04.6 -0.1**
baz=57,SNR=44
D13A Huson 57.05 306 ⇑P **P 05 08 04.1 -0.7**
baz=57,SNR=54
M18A Lyman 57.05 298 ⇓P **P 05 08 04.7 -0.2**
baz=57
W24A Lazy 6 Ranch, 57.06 290 ⇑P **P 05 08 05.8 +0.8**
baz=57,SNR=108
AHID Auburn Hatcher 57.06 300 *e*P **P 05 08 05.0 0.0**
comp=Z,60nm,1.2s,mb5.5
AHID LR LR
comp=Z,1µm,19.0s,MS4.9
AHID Auburn Hatcher 57.06 300 *e*P **P 05 08 05.0 0.0**
comp=Z,60nm,1.2s,mb5.5
B12A Libby 57.06 308 ⇑P **P 05 08 04.7 -0.1**
baz=57,SNR=8.1
Z26A Caprock 57.08 287 ⇑P **P 05 08 04.8 -0.4**
baz=57,SNR=32
Q20A Ridgley Place, 57.12 295 ⇑P **P 05 08 05.5 +0.1**
baz=57,SNR=82
CPRX Cap Rock 57.12 287 *e*P **P 05 08 05.2 -0.3**
comp=Z,48nm,1.1s,mb5.4
CPRX Cap Rock 57.12 287 *e*P **P 05 08 05.2 -0.3**
comp=Z,48nm,1.1s,mb5.4
H15A Lima 57.13 303 ⇑P **P 05 08 05.5 +0.1**
baz=57,SNR=13
J16A Bone 57.14 301 ⇓P **P 05 08 05.2 -0.3**
baz=57
MCMT McKenzie Canyo 57.16 303 *e*P **P 05 08 06.2 +0.6**
comp=Z,8.2nm,1.0s,mb4.7
MCMT McKenzie Canyo 57.16 303 *e*P **P 05 08 06.2 +0.6**
comp=Z,8.2nm,1.0s,mb4.7
T22A Edith 57.16 292 ⇑P **P 05 08 06.9 +1.2**
baz=57,SNR=115
E13A Victor 57.20 305 ⇓P **P 05 08 04.7 -1.1**
baz=57,SNR=13
P19A Cripple Cowboy 57.23 296 ⇓P **P 05 08 05.9 -0.3**
baz=57,SNR=36
Y25A Mesa, Roswell 57.23 288 ⇑P **P 05 08 06.6 +0.2**
baz=57,SNR=74
L17A Cokeville 57.24 299 ⇑P **P 05 08 05.4 -0.9**
baz=57
328A Wristen Ranch, 57.26 284 ⇓P **P 05 08 05.6 -0.9**
baz=57,SNR=20
A11A Hall Mountain, 57.28 309 ⇓P **P 05 08 06.1 -0.3**
baz=57,SNR=22
V23A Ortiz Mt. (NFS 57.32 291 ⇓P **P 05 08 07.3 +0.4**
baz=57,SNR=16
I15A Monteview 57.34 302 ⇓P **P 05 08 07.3 +0.5**
baz=57,SNR=45
K16A Soda Springs 57.34 300 ⇑P **P 05 08 06.3 -0.7**
baz=57,SNR=15
C12B Naegeli Ranch, 57.36 307 ⇑P **P 05 08 06.9 -0.1**
baz=57,SNR=14
X24A Lazy VL Ranch, 57.42 289 ⇓P **P 05 08 07.8 +0.2**
baz=57,SNR=6.5
M17A Scullys Gap (B 57.42 299 ⇑P **P 05 08 07.6 +0.1**
baz=57
S21A Coal Bank Pass 57.43 293 ⇓P **P 05 08 08.1 +0.4**
baz=57,SNR=85
126A Clayton Basin, 57.44 286 ⇑P **P 05 08 07.5 -0.3**
baz=57,SNR=17
428A Kincaid Ranch, 57.52 284 ⇑P **P 05 08 07.1 -1.3**
baz=57,SNR=43
B11A Sandpoint 57.53 308 ⇓P **P 05 08 07.5 -0.7**
baz=57,SNR=5.2
R20A Redvale 57.56 294 ⇑P **P 05 08 08.2 -0.4**
baz=57,SNR=55
H14A Leadore 57.58 303 ⇓P **P 05 08 08.9 +0.3**
baz=57,SNR=24
Z25A Roswell 57.59 287 ⇑P **P 05 08 08.8 0.0**
baz=58,SNR=101
O18A Roosevelt 57.59 297 ⇑P **P 05 08 08.7 -0.1**
baz=57,SNR=38
F13A Darby 57.60 305 ⇓P **P 05 08 07.4 -1.3**
baz=57,SNR=23
W23A Werner Place, 57.60 290 ⇑P **P 05 08 08.7 -0.2**
baz=58,SNR=31
D12A Red Ives Fores 57.60 306 ⇓P **P 05 08 08.3 -0.4**
baz=57
L16A Fish Haven 57.65 299 ⇑P **P 05 08 08.6 -0.5**
baz=58,SNR=65
PV01 Paradox Valley 57.72 294 *e*P **P 05 08 09.7 0.0**
comp=Z,2µm,1.3s
PV01 Paradox Valley 57.72 294 *e*P **P 05 08 09.7 0.0**
comp=Z,2µm,1.3s
V22A San Miguel Ran 57.73 291 ⇑P **P 05 08 10.4 +0.6**
baz=58,SNR=38
327A Balmorhea Ranc 57.75 285 ⇓P **P 05 08 09.0 -1.0**
baz=58
Y24A Capitan 57.76 288 ⇑P **P 05 08 09.0 -1.0**
baz=58,SNR=58
Q19A Hogan Spring (57.77 295 ⇑P **P 05 08 08.8 -1.2**
baz=58,SNR=25
226A Malaga, Loving 57.81 286 ⇑P **P 05 08 10.4 0.0**
baz=58,SNR=61
PV04 Paradox Valley 57.81 295 *e*P **P 05 08 10.9 +0.5**
PV04 Paradox Valley 57.81 295 *e*P **P 05 08 10.9 +0.6**
125A Gardner Draw, 57.88 287 ⇓P **P 05 08 09.8 -1.2**
baz=58,SNR=65
G13A Cobalt 57.88 304 ⇓P **P 05 08 10.5 -0.3**
baz=58,SNR=24
528A Cox Ranch, San 57.91 283 ⇓P **P 05 08 10.2 -0.9**
baz=58,SNR=14
GDL2 Guadalupe Moun 57.92 286 *e*P **P 05 08 11.4 +0.2**
comp=Z,124nm,1.2s,mb5.8
GDL2 Guadalupe Moun 57.92 286 *e*P **P 05 08 11.4 +0.2**
comp=Z,124nm,1.2s,mb5.8
ANMO Albuquerque 57.93 290 *e*P **P 05 08 11.9 +0.7**
ANMO pmax pmax
comp=Z,44nm,1.1s
ANMO MLR MLR
comp=Z,388nm,19.0s
ANMO Albuquerque 57.93 290 *e*P **P 05 08 11.9 +0.7**
comp=Z,44nm,1.1s,mb5.4
ANMO LR LR
comp=Z,388nm,19.0s,MS4.5
ANMO Albuquerque 57.93 290 *e*P **P 05 08 11.9 +0.7**
comp=Z,44nm,1.1s,mb5.4
HWUT Hardware Ranch 57.94 299 *e*P **P 05 08 10.7 -0.4**
comp=Z,135nm,1.0s,mb5.9
HWUT LR LR
comp=Z,743nm,19.0s,MS4.8
HWUT Hardware Ranch 57.94 299 *e*P **P 05 08 10.7 -0.4**
comp=Z,135nm,1.0s,mb5.9
427A Hayter Ranch, 57.97 284 ⇑P **P 05 08 10.6 -1.0**
baz=58,SNR=70
I14A Mackay 57.98 302 ⇑P **P 05 08 11.9 +0.6**
baz=58,SNR=27
ISRB Sarab 57.99 66 *e*P **P 05 08 11.4 -0.1**
Z24A Sheeppen Canyo 58.02 288 ⇑P **P 05 08 12.9 +1.0**
baz=58,SNR=67
E12A Beaver Dam Sad 58.05 306 ⇓P **P 05 08 10.7 -1.2**
baz=58
NEW Newport 58.06 308 *e*P **P 05 08 11.4 -0.5**
NEW *e* 05 10 19.0
NEW pmax pmax
comp=Z,56nm,0.9s
NEW MLR MLR
comp=Z,390nm,20.0s
NEW Newport 58.06 308 *e*P **P 05 08 11.3 -0.5**
comp=Z,56nm,0.9s,mb5.6
NEW *e*PP PP 05 10 19.0 -1.1
NEW LR LR
comp=Z,390nm,20.0s,MS4.5
NEW Newport 58.06 308 *e*P **P 05 08 11.4 -0.5**
comp=Z,56nm,0.9s,mb5.6
P18A Preston Nutter 58.08 296 ⇑P **P 05 08 11.0 -1.2**
baz=58
R19A Curley Farm, L 58.10 295 ⇓P **P 05 08 12.1 -0.3**
baz=58,SNR=107
AKTK Aktyubinsk 58.11 49 P **P 05 08 12.9 +0.7**
AKTK LR LR 05 32 17.4
AKTK Aktyubinsk 58.11 49 P **P 05 08 12.9 +0.7**
AKTO Aktyubinsk 58.11 49 P **P 05 08 12.9 +0.7**
comp=Z,16nm,0.7s,mb5.1,baz=299,slow=6.7,SNR=35
AKTO LR LR 05 32 17.4
comp=Z,1µm,20.8s,MS5.0,baz=304,slow=35
O17A Robinson Place 58.11 297 ⇓P **P 05 08 12.4 0.0**
baz=58,SNR=43
M16A Huntsville 58.13 299 ⇓P **P 05 08 11.8 -0.6**
baz=58,SNR=24
326A Caldwell Ranch 58.13 285 ⇑P **P 05 08 12.5 -0.1**
baz=58,SNR=95
MVCO Mesa Verde 58.15 293 ⇑P **P 05 08 13.3 +0.6**
baz=58,SNR=53
MVCO Mesa Verde 58.15 293 *e*P **P 05 08 13.9 +1.2**
comp=Z,125nm,1.1s,mb5.9
MVCO LR LR
comp=Z,2µm,21.0s,MS5.2
MVCO Mesa Verde 58.15 293 *e*P **P 05 08 13.9 +1.2**
comp=Z,125nm,1.1s,mb5.9
W22A Albuquerque 58.15 290 ⇓P **P 05 08 13.2 +0.5**
baz=58,SNR=6.1
H13A Challis 58.16 303 ⇓P **P 05 08 12.8 +0.2**
baz=58,SNR=33
F12A Elk City 58.18 305 ⇑P **P 05 08 12.2 -0.6**
baz=58,SNR=84
Y23A Lovelace Mesa, 58.19 289 ⇑P **P 05 08 13.2 +0.2**
baz=58,SNR=52
D11A Klaveano Farm, 58.19 307 ⇓P **P 05 08 11.5 -1.4**
baz=58,SNR=21
N16A Rees Ranch, Co 58.22 298 ⇓P **P 05 08 12.2 -0.9**
baz=58,SNR=22
L15A Malad City 58.27 300 ⇓P **P 05 08 13.0 -0.5**
baz=58,SNR=27
Q18A Rafter H Ranch 58.27 296 ⇓P **P 05 08 13.2 -0.4**
baz=58,SNR=25
V21A Milan 58.30 291 ⇑P **P 05 08 13.3 -0.5**
baz=58,SNR=10
S19A Harvey Farm, M 58.30 294 ⇓P **P 05 08 13.9 +0.1**
baz=58,SNR=112
DAU Daniels Canyon 58.34 298 *e*P **P 05 08 14.5 +0.5**
DAU pmax pmax
comp=Z,93nm,1.0s,mb5.8
DAU Daniels Canyon 58.34 298 *e*P **P 05 08 14.5 +0.5**
comp=Z,93nm,1.0s,mb5.8
DAU Daniels Canyon 58.34 298 *e*P **P 05 08 14.5 +0.5**
comp=Z,93nm,1.0s,mb5.8
628A Black Gap, Mar 58.35 283 ⇑P **P 05 08 13.7 -0.6**
baz=58,SNR=67
JLU Jordanelle 58.37 298 *e*P **P 05 08 14.1 -0.1**
comp=Z,14nm,0.8s,mb5.0
JLU Jordanelle 58.37 298 *e*P **P 05 08 14.1 -0.1**
comp=Z,14nm,0.8s,mb5.0
C10A Spilker Farm, 58.38 308 ⇑P **P 05 08 13.4 -0.8**
baz=58
I13A Wildhorse Cree 58.40 303 ⇑P **P 05 08 14.8 +0.4**
baz=58,SNR=56
124A Stringfield Ra 58.43 287 ⇑P **P 05 08 15.3 +0.6**
baz=58,SNR=210
E11A Bogner Ranch, 58.46 306 ⇑P **P 05 08 13.3 -1.4**
baz=58,SNR=49
BNM Barren Site 58.47 289 *e*P **P 05 08 16.0 +1.0**
comp=Z,58nm,1.0s,mb5.6
BNM Barren Site 58.47 289 *e*P **P 05 08 16.0 +1.0**
comp=Z,58nm,1.0s,mb5.6
R18A Canyonlands Na 58.48 295 ⇑P **P 05 08 14.9 -0.1**
baz=58,SNR=57
P17A Butcher Ranch, 58.48 297 ⇓P **P 05 08 14.6 -0.4**
baz=58,SNR=16
K14A Jones Ranch, D 58.50 301 ⇑P **P 05 08 14.4 -0.6**
baz=58,SNR=38
527A Woodward Ranch 58.51 284 ⇓P **P 05 08 15.0 -0.4**
baz=58,SNR=48
426A McDonald Obser 58.52 284 ⇑P **P 05 08 15.5 +0.1**
baz=58,SNR=113
SRU San Rafael 58.53 296 ⇓P **P 05 08 14.9 -0.4**

baz=58,SNR=24
SRU **San Rafael** 58.53 296 eP P 05 08 15.1 -0.2
SRU pmax pmax
comp=Z,19nm,1.0s,mb5.1
SRU **San Rafael** 58.53 296 eP P 05 08 15.1 -0.2
comp=Z,19nm,1.0s,mb5.1
SRU **San Rafael** 58.53 296 eP P 05 08 15.1 -0.2
comp=Z,19nm,1.0s,mb5.1
G12A **Big Creek, Yel** 58.54 304 ⇓P P 05 08 14.9 -0.4
baz=58
H12A **Diamond D Ranc** 58.54 303 ⇓P P 05 08 15.6 +0.3
baz=58,SNR=38
X22A **Bernardo** 58.55 290 ⇑P P 05 08 16.4 +0.9
baz=58,SNR=13
B09A **Rice** 58.57 309 ⇓P P 05 08 14.8 -0.7
baz=58,SNR=25
M15A **Larsen Ranch,** 58.58 299 ⇑P P 05 08 15.2 -0.4
baz=58,SNR=20
U20A **Newcomb** 58.60 292 ⇓P P 05 08 16.3 +0.4
baz=58,SNR=136
O16A **Springville** 58.61 298 ⇑P P 05 08 15.4 -0.4
baz=58
HVU **Hansel Valley** 58.63 300 eP P 05 08 16.1 +0.1
HVU pmax pmax
comp=Z,62nm,1.0s,mb5.6
HVU **Hansel Valley** 58.63 300 eP P 05 08 16.1 +0.1
comp=Z,62nm,1.0s,mb5.6
HVU **Hansel Valley** 58.63 300 eP P 05 08 16.1 +0.1
comp=Z,62nm,1.0s,mb5.6
F11A **Grangeville** 58.66 305 ⇓P P 05 08 15.3 -0.8
baz=58,SNR=26
SPUT **South Promonto** 58.66 299 eP P 05 08 16.4 +0.2
comp=Z,41nm,1.1s,mb5.4
SPUT **South Promonto** 58.66 299 eP P 05 08 16.4 +0.2
comp=Z,41nm,1.1s,mb5.4
W21A **San Fidel** 58.67 291 ⇓P P 05 08 16.5 +0.1
baz=58,SNR=5.3
Z23A **Rita Site, Whi** 58.67 288 ⇓P P 05 08 16.0 -0.5
baz=58,SNR=29
LAZ **Ladron** 58.70 290 eP P 05 08 17.6 +1.0
comp=Z,39nm,1.3s,mb5.3
LAZ ePP PP 05 10 24.2 -1.9
LAZ **Ladron** 58.70 290 eP P 05 08 17.6 +1.0
comp=Z,39nm,1.3s,mb5.3
J13A **Cove Ranch, Pi** 58.70 302 ⇑P P 05 08 15.6 -0.9
baz=58,SNR=28
LENM **Lemitar** 58.71 289 eP P 05 08 17.6 +0.9
comp=Z,65nm,1.1s,mb5.6
LENM **Lemitar** 58.71 289 eP P 05 08 17.6 +1.0
comp=Z,65nm,1.1s,mb5.6
T19A **Beclabito** 58.71 293 ⇑P P 05 08 15.7 -0.9
baz=58,SNR=102
Y22D **IRIS PASSCAL I** 58.72 289 ⇓P P 05 08 17.4 +0.6
baz=59,SNR=6.7
627A **Terlingua Ranc** 58.73 283 ⇓P P 05 08 16.6 -0.3
baz=59,SNR=126
D10A **Wagner Farm, O** 58.75 307 ⇓P P 05 08 15.4 -1.3
baz=58
HLID **Hailey** 58.76 302 ⇓P P 05 08 16.6 -0.3
baz=59,SNR=65
HLID **Hailey** 58.76 302 eP P 05 08 17.3 +0.4
comp=Z,35nm,1.0s,mb5.3
HLID ePcP PcP 05 09 06.6 0.0
HLID LR LR
comp=Z,931nm,20.0s,MS4.9
HLID **Hailey** 58.76 302 eP P 05 08 17.3 +0.4
comp=Z,35nm,1.0s,mb5.3
HLID **Hailey** 58.76 302 ePcP PcP 05 09 06.6 +0.1
NOQ **North Oquirrh** 58.78 298 eP P 05 08 16.6 -0.4
comp=Z,165nm,1.2s,mb5.9
NOQ **North Oquirrh** 58.78 298 eP P 05 08 16.6 -0.5
comp=Z,165nm,1.2s,mb5.9
MPU **Maple Canyon** 58.79 297 eP P 05 08 17.6 +0.4
comp=Z,63nm,1.2s,mb5.5
MPU **Maple Canyon** 58.79 297 eP P 05 08 17.6 +0.4
comp=Z,63nm,1.2s,mb5.5
L14A **Malta** 58.80 300 ⇑P P 05 08 16.3 -0.8
baz=59,SNR=14
325A **Bean Ranch, Si** 58.81 286 ⇓P P 05 08 16.5 -0.9
baz=59,SNR=46
224A **Corundas Mount** 58.81 287 ⇓P P 05 08 16.5 -1.0
baz=59,SNR=46
Y22A **Socorro** 58.82 289 ⇑P P 05 08 18.4 +0.9
baz=59,SNR=47
V20A **Brimhall** 58.87 292 ⇓P P 05 08 16.8 -0.9
baz=59,SNR=17
TMUT **Trail Mountain** 58.88 297 eP P 05 08 18.2 +0.4
comp=Z,157nm,1.1s,mb6.0
TMUT **Trail Mountain** 58.88 297 eP P 05 08 18.2 +0.4
comp=Z,157nm,1.1s,mb6.0
526A **Mary Lane Ranc** 58.90 284 ⇓P P 05 08 18.4 +0.3
baz=59,SNR=102
S18A **Hurst Farm, Bl** 58.91 294 ⇓P P 05 08 17.1 -0.9
baz=59,SNR=92
N15A **Stansbury Isla** 58.92 299 ⇑P P 05 08 17.1 -1.0
baz=59,SNR=12
MNTX **Cornudas Mount** 58.92 286 eP P 05 08 17.4 -0.8
comp=Z,30nm,1.1s,mb5.2
MNTX LR LR
comp=Z,921nm,20.0s,MS4.9
MNTX **Cornudas Mount** 58.92 286 eP P 05 08 17.4 -0.8
comp=Z,30nm,1.1s,mb5.2
E10A **Myers Farm, Un** 58.94 306 ⇑P P 05 08 17.6 -0.5
baz=59,SNR=6.0
G11A **Walters Elk Ra** 58.98 305 ⇓P P 05 08 17.6 -0.7
baz=59,SNR=35
TXAR **Lajitas Array** 59.00 283 P P 05 08 18.8 0.0
comp=Z,37nm,0.9s,mb5.4,baz=73,slow=6.8,SNR=313
TXAR PP PP 05 10 28.2 -0.8
comp=Z,4.1nm,1.0s,baz=69,slow=4.2,SNR=3.6
TXAR LR LR 05 34 50.2
comp=Z,661nm,18.2s,MS4.8,baz=15,slow=37
TXAR **Lajitas Array** 59.00 283 P P 05 08 18.8 0.0
TXAR 05 10 28.2
TXAR **Lajitas Array** 59.00 283 P P 05 08 18.8 0.0
TXAR PP PP 05 10 28.2 -0.8
TXAR LR LR 05 34 50.2
TXAR **Lajitas Array** 59.00 283 P P 05 08 18.8 0.0
TXAR **Lajitas Array** 59.00 283 PP PP 05 10 28.2 -0.8
K13A **Stover Farm, H** 59.02 301 ⇑P P 05 08 17.5 -1.2
baz=59,SNR=22
P16A **Fountain Green** 59.02 297 ⇑P P 05 08 18.2 -0.6
baz=59,SNR=30
ILIN **Lien** 59.03 69 eP P 05 08 17.9 -1.0
123A **Bell Site, Whi** 59.03 288 ⇑P P 05 08 19.6 +0.7
baz=59,SNR=5.6
Q16A **Castle Valley** 59.06 296 ⇓P P 05 08 18.4 -0.6
baz=59,SNR=42
I12A **Atlanta** 59.09 303 ⇓P P 05 08 19.3 +0.1
baz=59,SNR=56
NLU **North Lily Min** 59.12 298 eP P 05 08 19.6 +0.2
comp=Z,54nm,1.1s,mb5.5
NLU ePP PP 05 10 25.3 -4.4
NLU **North Lily Min** 59.12 298 eP P 05 08 19.6 +0.2
comp=Z,54nm,1.1s,mb5.5
U19A **Dine' College,** 59.12 293 ⇑P P 05 08 20.0 +0.6
baz=59,SNR=134
X21A **Alamocita Cree** 59.12 290 ⇓P P 05 08 20.0 +0.5
baz=59,SNR=64
T18A **Mexican Hat** 59.12 294 ⇓P P 05 08 19.7 +0.2
baz=59,SNR=25
324A **Moseley Ranch,** 59.13 286 ⇑P P 05 08 18.9 -0.8
baz=59,SNR=64
M14A **Sheep Mountain** 59.14 300 ⇑P P 05 08 18.6 -0.9
baz=59,SNR=35
425A **Indio Mountain** 59.14 285 ⇑P P 05 08 19.7 0.0
baz=59,SNR=124
IVIS **Veis** 59.17 70 eP P 05 08 19.2 -0.6
H11A **Donnelly** 59.17 304 ⇓P P 05 08 19.5 -0.2
baz=59,SNR=85
Z22A **Elephant Butte** 59.19 288 ⇑P P 05 08 20.8 +0.8
baz=59,SNR=9.9
O15A **The Old Anders** 59.20 298 ⇓P P 05 08 19.7 -0.3
baz=59,SNR=21
626A **Big Bend Ranch** 59.22 283 ⇓P P 05 08 19.9 -0.3
baz=59,SNR=77
L13A **Double Diamond** 59.22 301 ⇓P P 05 08 20.1 0.0
baz=59,SNR=16
BGU **Big Grassy Mou** 59.23 299 eP P 05 08 19.9 -0.3
comp=Z,85nm,1.4s,mb5.6
BGU **Big Grassy Mou** 59.23 299 eP P 05 08 19.9 -0.3
comp=Z,85nm,1.4s,mb5.6
F10A **Beach Ranch, E** 59.26 306 ⇓P P 05 08 19.9 -0.5
baz=59,SNR=9.4
Y21A **Point of Rocks** 59.28 290 ⇓P P 05 08 21.7 +1.1
baz=59,SNR=50
B08A **Colville Reser** 59.29 309 ⇓P P 05 08 19.3 -1.2
baz=59,SNR=9.6

V19A **Window Rock** 59.31 292 ⇑P P 05 08 21.3 +0.5
baz=59,SNR=18
J12A **Stokes Ranch,** 59.35 302 ⇓P P 05 08 21.1 +0.1
baz=59,SNR=105
D09A **Jones Farm, Ri** 59.35 307 ⇓P P 05 08 20.1 -0.8
baz=59
N14A **Grayback Hills** 59.37 299 ⇓P P 05 08 20.8 -0.4
baz=59,SNR=42
DUG **Dugway** 59.47 298 ⇓P P 05 08 21.3 -0.6
baz=59,SNR=118
DUG **Dugway** 59.47 298 eP P 05 08 22.1 +0.2
DUG e 05 10 30.1
DUG pmax pmax
comp=Z,93nm,1.0s,mb5.8
DUG MLR MLR
comp=Z,1µm,19.0s,MS5.0
DUG **Dugway** 59.47 298 eP P 05 08 22.1 +0.2
comp=Z,93nm,1.0s,mb5.8
DUG ePP PP 05 10 30.1 -2.8
DUG LR LR
comp=Z,1µm,19.0s,MS5.0
DUG **Dugway** 59.47 298 eP P 05 08 22.1 +0.2
comp=Z,93nm,1.0s,mb5.8
S17A **Black Ridge (B** 59.48 295 ⇑P P 05 08 21.9 -0.1
baz=59,SNR=7.9
U18A **Rough Rock, Ch** 59.50 293 ⇑P P 05 08 22.4 +0.3
baz=59,SNR=90
122A **Conniff Cattle** 59.52 288 ⇓P P 05 08 23.3 +1.0
baz=59,SNR=18
A07A **Ashnola River,** 59.54 310 ⇓P P 05 08 21.7 -0.5
baz=59,SNR=34
DLBC **Dease Lake** 59.54 323 eP P 05 08 22.6 +0.5
DLBC ePcP PcP 05 09 10.0 +0.6
DLBC ePP PP 05 10 31.5 -1.6
DLBC **Dease Lake** 59.54 323 eP P 05 08 22.6 +0.6
DLBC **Dease Lake** 59.54 323 ePcP PcP 05 09 10.0 +0.6
I11A **Placerville** 59.55 303 ⇑P P 05 08 22.3 0.0
baz=59
K12A **Draper Farm, C** 59.55 302 ⇑P P 05 08 22.7 +0.4
baz=59,SNR=15
G10A **Bishop Farm, J** 59.55 305 ⇓P P 05 08 21.1 -1.2
baz=59,SNR=31
X20A **Quemado** 59.56 291 ⇑P P 05 08 24.1 +1.5
baz=59,SNR=95
R16A **Teasdale** 59.60 296 ⇓P P 05 08 22.3 -0.5
baz=59,SNR=24
Z21A **St. Cloud Mine** 59.66 289 ⇑P P 05 08 24.4 +1.1
baz=60,SNR=70
H10A **Noah's Angus R** 59.68 304 ⇑P P 05 08 22.1 -1.1
baz=60,SNR=24
MFID **Camas Ranch** 59.72 303 ⇑P P 05 08 22.7 -0.8
baz=60,SNR=21
M13A **Montello** 59.74 300 ⇓P P 05 08 23.4 -0.3
baz=60,SNR=48
M13A **Montello** 59.74 300 eP P 05 08 23.6 0.0
comp=Z,54nm,1.2s,mb5.5
M13A ePcP PcP 05 09 10.9 +0.4
M13A **Montello** 59.74 300 eP P 05 08 23.6 -0.1
comp=Z,54nm,1.2s,mb5.5
M13A **Montello** 59.74 300 ePcP PcP 05 09 10.9 +0.4
ABKAR **Akbulak array** 59.78 49 eP P 05 08 24.2 +0.4
comp=Z,21nm,1.2s,mb5.0
ABKAR **Akbulak array** 59.78 49 eP P 05 08 24.2 +0.4
comp=Z,21nm,1.2s,mb5.0
F09A **S2 Ranch, Elgi** 59.81 306 ⇓P P 05 08 23.9 -0.2
baz=60,SNR=10
Q15A **Fillmore** 59.82 297 ⇑P P 05 08 24.1 -0.2
baz=60,SNR=43
Y20A **Horse Springs,** 59.83 290 ⇑P P 05 08 25.3 +0.9
baz=60,SNR=48
T17A **Navajo Res., N** 59.83 294 ⇑P P 05 08 24.9 +0.6
baz=60,SNR=49
L12A **House Creek Ra** 59.87 301 ⇓P P 05 08 25.2 +0.7
baz=60,SNR=70
W19A **Sanders** 59.87 292 ⇑P P 05 08 25.0 +0.3
baz=60,SNR=7.2
V18A **Ganado** 59.92 292 ⇑P P 05 08 25.2 +0.1
baz=60,SNR=51
MSU **Marysvale** 59.94 296 eP P 05 08 25.7 +0.6
MSU pmax pmax
comp=Z,60nm,1.1s,mb5.5
MSU **Marysvale** 59.94 296 eP P 05 08 25.7 +0.6
comp=Z,60nm,1.1s,mb5.5
MSU **Marysvale** 59.94 296 eP P 05 08 25.7 +0.6
comp=Z,60nm,1.1s,mb5.5
U17A **Shonto** 59.94 294 ⇑P P 05 08 25.9 +0.7
baz=60,SNR=35
LNOR **Lincton Mounta** 59.95 306 P P 05 08 24.9 -0.1
LNOR **Lincton Mounta** 59.95 306 P P 05 08 24.9 -0.1
G09A **Cove** 59.95 305 ⇑P P 05 08 24.5 -0.6
baz=60,SNR=20
P14A **Drum Mountains** 59.96 298 ⇓P P 05 08 25.3 +0.1
baz=60,SNR=48
MVU **Marysvale** 59.97 296 PFAKE 05 08 40.0 +15
MVU LR LR
comp=Z,1µm,20.0s,MS5.0
I10A **Payette** 59.98 304 ⇓P P 05 08 24.1 -1.1
baz=60,SNR=12
CBSW **Chelan Butte S** 59.98 309 P P 05 08 24.6 -0.6
CBSW **Chelan Butte S** 59.98 309 P P 05 08 24.6 -0.6
WTV **Waterville** 59.98 309 P P 05 08 24.6 -0.6
WTV **Waterville** 59.98 309 P P 05 08 24.6 -0.7
N13A **Wendover, West** 60.03 300 ⇑P P 05 08 25.4 -0.3
baz=60,SNR=24
N13A **Wendover, West** 60.03 300 eP P 05 08 26.1 +0.4
comp=Z,97nm,1.0s,mb5.8
N13A **Wendover, West** 60.03 300 eP P 05 08 26.1 +0.4
comp=Z,97nm,1.0s,mb5.8
OTAV **Otavalo** 60.05 239 eP P 05 08 26.8 +0.7
comp=Z,18nm,1.0s,mb5.1
OTAV LR LR
comp=Z,602nm,22.0s,MS4.7
OTAV **Otavalo** 60.05 239 eP P 05 08 26.8 +0.7
comp=Z,18nm,1.0s,mb5.1
E08A **Dider Farm, El** 60.09 307 ⇓P P 05 08 25.0 -1.0
baz=60
DAWY **Dawson** 60.14 331 eP P 05 08 26.2 +0.1
DAWY **Dawson** 60.14 331 eP P 05 08 26.2 +0.1
121A **Cookes Peak, D** 60.16 288 ⇓P P 05 08 27.7 +1.0
baz=60,SNR=67
R15A **Junction** 60.17 296 ⇓P P 05 08 27.2 +0.5
baz=60,SNR=5.2
X19A **St. Johns** 60.18 291 ⇓P P 05 08 27.8 +1.0
baz=60,SNR=68
K11A **Parker Ranch,** 60.19 302 ⇓P P 05 08 26.8 +0.1
baz=60,SNR=30
M12A **Wells** 60.19 300 ⇑P P 05 08 26.8 0.0
baz=60,SNR=28
H09A **Durkee** 60.20 305 ⇑P P 05 08 26.6 -0.2
baz=60
ETW **Entiat** 60.25 309 eP P 05 08 26.0 -1.1
comp=Z,19nm,0.9s,mb5.1
ETW **Entiat** 60.25 309 eP P 05 08 26.0 -1.1
comp=Z,19nm,0.9s,mb5.1
O13A **Hicks Ranch, I** 60.27 299 ⇑P P 05 08 26.3 -1.0
baz=60,SNR=13
F08A **Pendleton** 60.28 306 ⇑P P 05 08 26.5 -0.8
baz=60
J10A **Berg Farm, Mel** 60.30 303 ⇑P P 05 08 27.2 -0.3
baz=60
T16A **Glen Canyon Da** 60.31 294 ⇑P P 05 08 27.3 -0.4
baz=60,SNR=19
L11A **Cat Creek Ranc** 60.33 301 ⇓P P 05 08 28.3 +0.5
baz=60,SNR=58
EGAK **Eagle** 60.33 333 eP P 05 08 26.8 -0.5
comp=Z,35nm,1.2s,mb5.3
EGAK LR LR
comp=Z,462nm,22.0s,MS4.6
EGAK **Eagle** 60.33 333 eP P 05 08 26.8 -0.6
comp=Z,35nm,1.2s,mb5.3
GBB **Gable Butte** 60.36 308 P P 05 08 27.3 -0.5
GBB **Gable Butte** 60.36 308 P P 05 08 27.3 -0.6
Y19A **Nutrioso** 60.41 290 ⇑P P 05 08 28.7 +0.3
baz=60,SNR=108
Z20A **Nine Sixteen R** 60.41 289 ⇑P P 05 08 28.8 +0.4
baz=60,SNR=26
Q14A **Sevier Lake (B** 60.41 297 P P 05 08 28.5 +0.2
baz=60,SNR=82
HAWA **Hanford** 60.42 307 PFAKE 05 08 40.0 +12
HAWA LR LR
comp=Z,903nm,21.0s,MS4.9
221A **Mesquite Ranch** 60.45 288 ⇓P P 05 08 30.0 +1.3
baz=60,SNR=8.7
RSW **Rattlesnake Hi** 60.45 307 eP P 05 08 27.8 -0.7
comp=Z,21nm,1.2s,mb5.0
RSW **Rattlesnake Hi** 60.45 307 eP P 05 08 27.8 -0.7
comp=Z,21nm,1.2s,mb5.0

RPW **Rockport** 60.49 310 eP P 05 08 26.6 -2.1
comp=Z,2.8nm,0.7s,mb4.4
RPW **Rockport** 60.49 310 eP P 05 08 26.6 -2.1
comp=Z,2.8nm,0.7s,mb4.4
S15A **Panguitch** 60.51 296 ⇑P P 05 08 29.6 +0.6
baz=60,SNR=16
V17A **Tonalea, Kykot** 60.56 293 ⇑P P 05 08 30.3 +0.9
baz=60,SNR=60
N12A **Clover Valley,** 60.57 300 ⇓P P 05 08 29.8 +0.4
baz=60,SNR=14
N12A **Clover Valley,** 60.57 300 eP P 05 08 29.9 +0.6
comp=Z,87nm,1.4s,mb5.7
N12A ePP PP 05 10 42.2 -0.4
N12A **Clover Valley,** 60.57 300 eP P 05 08 29.9 +0.5
comp=Z,87nm,1.4s,mb5.7
N12A **Clover Valley,** 60.57 300 ePP PP 05 10 42.2 -0.3
X18A **Snowflake** 60.58 291 ⇑P P 05 08 29.6 +0.1
baz=60,SNR=31
I09A **Lost Marbles R** 60.61 304 ⇑P P 05 08 29.6 -0.1
baz=60,SNR=23
R14A **James Farms, M** 60.62 296 ⇓P P 05 08 29.4 -0.3
baz=60,SNR=8.3
TBM **Table Mountain** 60.63 308 P P 05 08 29.2 -0.5
TBM **Table Mountain** 60.63 308 P P 05 08 29.2 -0.5
P13A **Bates Ranch, G** 60.65 298 ⇓P P 05 08 29.7 -0.3
baz=60,SNR=85
G08A **Pilot Rock** 60.66 306 ⇑P P 05 08 29.0 -0.9
baz=60,SNR=8.3
O12A **Currie** 60.69 299 ⇑P P 05 08 30.1 -0.1
baz=60,SNR=12
K10A **MacKenzie Ranc** 60.71 303 ⇓P P 05 08 29.9 -0.4
baz=60,SNR=16
M11A **Holland Ranch,** 60.74 301 ⇑P P 05 08 31.3 +0.7
baz=60,SNR=55
120A **U Bar Ranch, L** 60.75 289 ⇓P P 05 08 31.3 +0.5
baz=61,SNR=22
ELK **Elko** 60.75 300 eP P 05 08 31.5 +0.9
ELK pmax pmax
comp=Z,52nm,0.9s
ELK **Elko** 60.75 300 eP P 05 08 31.5 +0.8
comp=Z,52nm,0.9s,mb5.7
ELK **Elko** 60.75 300 eP P 05 08 31.5 +0.9
comp=Z,52nm,0.9s,mb5.7
Z19A **T-Link Ranch,** 60.78 290 ⇓P P 05 08 31.9 +0.9
baz=61,SNR=10
W17A **Winslow** 60.80 292 ⇓P P 05 08 31.3 +0.2
baz=61,SNR=5.9
IRAZ **Razeghian** 60.81 67 eP P 05 08 31.2 +0.1
L10A **Juniper Basin** 60.83 302 ⇓P P 05 08 31.6 +0.5
baz=61,SNR=25
JCW **Jim Creek** 60.86 310 eP P 05 08 28.8 -2.4
T15A **Red Dirt Ranch** 60.88 295 ⇓P P 05 08 31.2 -0.4
baz=61,SNR=56
H08A **Prairie City** 60.89 305 ⇑P P 05 08 30.5 -1.0
baz=61,SNR=16
F07A **Phinny Hill Vi** 60.91 307 ⇑P P 05 08 30.7 -0.9
baz=61
Q13A **Wheeler Ranch,** 60.92 298 ⇑P P 05 08 31.6 -0.2
baz=61,SNR=45
J09A **Fry Pan Ranch,** 60.95 304 ⇓P P 05 08 33.0 +1.0
baz=61,SNR=84
S14A **Cedar City** 61.00 296 ⇓P P 05 08 32.9 +0.5
baz=61,SNR=63
WUAZ **Wupatki** 61.01 293 ⇓P P 05 08 33.0 +0.5
baz=61,SNR=27
WUAZ **Wupatki** 61.01 293 eP P 05 08 33.4 +0.9
comp=Z,84nm,1.1s,mb5.8
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.1
WUAZ **Wupatki** 61.01 293 eP P 05 08 33.4 +0.9
comp=Z,84nm,1.1s,mb5.8
N11A **Elko Archery C** 61.03 300 ⇑P P 05 08 33.0 +0.4
baz=61,SNR=17
220A **Playas Peak, P** 61.03 288 ⇓P P 05 08 32.2 -0.5
baz=61
U15A **North Rim** 61.14 294 ⇑P P 05 08 33.3 0.0
baz=61,SNR=38
M10A **I.L. Ranch, Tu** 61.17 301 ⇓P P 05 08 33.6 +0.2
baz=61,SNR=18
P12A **McGill** 61.22 298 ⇓P P 05 08 33.6 -0.3
baz=61,SNR=26
CCUT **Cedar City** 61.25 296 eP P 05 08 34.6 +0.6
comp=Z,74nm,1.0s,mb5.8
CCUT **Cedar City** 61.25 296 eP P 05 08 34.7 +0.7
comp=Z,74nm,1.0s,mb5.8
SKAG **Skagway** 61.26 326 eP P 05 08 34.5 +0.7
comp=Z,19nm,1.0s,mb5.2
SKAG **Skagway** 61.26 326 eP P 05 08 34.5 +0.7
comp=Z,19nm,1.0s,mb5.2
R13A **O'Grain Ranch,** 61.31 297 ⇑P P 05 08 34.8 +0.3
baz=61,SNR=23
T14A **Hurricane** 61.33 295 ⇑P P 05 08 34.0 -0.6
baz=61,SNR=39
O11A **Cowboy Ranch,** 61.35 299 ⇓P P 05 08 34.7 0.0
baz=61,SNR=109
W16A **Flagstaff** 61.35 293 ⇓P P 05 08 35.2 +0.4
baz=61,SNR=21
320A **Kipp Ranch, An** 61.35 288 ⇓P P 05 08 35.0 +0.2
baz=61,SNR=26
J08A **Circle Bar Ran** 61.39 304 ⇓P P 05 08 34.6 -0.4
baz=61,SNR=164
V15A **Kaibab Nationa** 61.39 294 ⇑P P 05 08 35.7 +0.7
baz=61,SNR=90
Q12A **Willow Creek R** 61.41 298 ⇓P P 05 08 35.1 0.0
baz=61,SNR=47
219A **White Tail Can** 61.50 289 ⇓P P 05 08 36.3 +0.5
baz=61,SNR=29
S13A **Holt Ranch, En** 61.56 296 ⇑P P 05 08 36.6 +0.4
baz=61,SNR=89
COLD **Coldfoot** 61.59 337 eP P 05 08 36.1 +0.3
comp=Z,40nm,1.0s,mb5.5
COLD **Coldfoot** 61.59 337 eP P 05 08 36.2 +0.3
comp=Z,40nm,1.0s,mb5.5
Z17A **San Carlos Hig** 61.62 290 ⇑P P 05 08 37.0 +0.4
baz=62,SNR=38
I07A **Izee** 61.63 305 ⇑P P 05 08 36.0 -0.5
baz=61
118A **Homack Ranch,** 61.64 290 ⇑P P 05 08 37.0 +0.2
baz=62,SNR=43
R12A **Pony Springs,** 61.65 297 ⇑P P 05 08 36.4 -0.3
baz=62,SNR=34
Y17A **Roosevelt** 61.66 291 ⇑P P 05 08 37.5 +0.6
baz=62,SNR=40
X16A **Lo Mia Camp, P** 61.66 292 ⇑P P 05 08 37.1 +0.2
baz=62,SNR=38
G06A **Carlson Farm,** 61.69 307 ⇑P P 05 08 36.4 -0.4
baz=62,SNR=6.9
P11A **Circle Ranch,** 61.73 299 ⇑P P 05 08 37.0 -0.2
baz=62,SNR=15
U14A **Mt Trumbull** 61.74 295 ⇑P P 05 08 37.3 -0.1
baz=62,SNR=31
O10A **Cortez Mining,** 61.81 300 ⇑P P 05 08 37.4 -0.4
baz=62
W15A **Williams** 61.81 293 ⇑P P 05 08 37.8 -0.1
baz=62,SNR=11
319A **Douglas** 61.86 288 ⇑P P 05 08 38.3 +0.1
baz=62,SNR=26
T13A **Saint George** 61.90 296 ⇓P P 05 08 38.8 +0.3
baz=62,SNR=62
Y16A **Circle Bar Ran** 61.99 291 ⇓P P 05 08 39.4 +0.3
baz=62,SNR=18
WVOR **Wild Horse Val** 61.99 303 eP P 05 08 39.3 +0.3
WVOR pmax pmax
comp=Z,111nm,1.2s,mb5.9
WVOR MLR MLR
comp=Z,1µm,21.0s,MS5.0
WVOR **Wild Horse Val** 61.99 303 eP P 05 08 39.3 +0.3
comp=Z,111nm,1.2s,mb5.9
WVOR LR LR
comp=Z,1µm,21.0s,MS5.0
WVOR **Wild Horse Val** 61.99 303 eP P 05 08 39.3 +0.3
comp=Z,111nm,1.2s,mb5.9
Q11A **Duckwater** 62.05 298 ⇑P P 05 08 39.4 -0.1
baz=62,SNR=18
218A **Dragoon** 62.06 289 ⇓P P 05 08 40.3 +0.7
baz=62,SNR=51
VIPM **Ingram Point** 62.07 306 P P 05 08 39.8 +0.3
VIPM **Ingram Point** 62.07 306 P P 05 08 39.8 +0.3
V14A **Boquillas Ranc** 62.13 294 ⇓P P 05 08 40.1 +0.1
baz=62,SNR=25
MIB **Mutribah** 62.13 74 eP P 05 08 40.0 -0.2
MIB AMb AMB 05 08 41.8
comp=Z,97nm,0.9s,mb5.9
VFP **Flag Point** 62.13 307 P P 05 08 39.6 -0.3
VFP **Flag Point** 62.13 307 P P 05 08 39.6 -0.3
P10A **Eureka** 62.15 299 ⇑P P 05 08 40.8 +0.7
baz=62,SNR=29
OBC **Olympics--Boni** 62.16 311 P P 05 08 40.7 +0.8

OBC	Olympics--Boni	62.16	311	P	P	05 08 40.7 +0.7
X15A	Humboldt	62.17	292	⇓P	P	05 08 41.1 +0.8
	baz=62,SNR=45					
BMN	Battle Mountai	62.19	301	eP	P	05 08 40.8 +0.4
BMN				e		05 09 20.7
BMN				pmax	pmax	
	comp=Z,56nm,1.1s,mb5.6					
BMN				MLR	MLR	
	comp=Z,1µm,19.0s,MS5.0					
BMN	Battle Mountai	62.19	301	eP	P	05 08 40.8 +0.4
	comp=Z,56nm,1.1s,mb5.6					
BMN				ePcP	PcP	05 09 20.7 +0.3
BMN				LR	LR	
	comp=Z,1µm,19.0s,MS5.0					
BMN	Battle Mountai	62.19	301	eP	P	05 08 40.8 +0.4
	comp=Z,56nm,1.1s,mb5.6					
S12A	Delamar Landin	62.20	297	⇑P	P	05 08 41.3 +0.8
	baz=62,SNR=26					
117A	Oracle	62.21	290	⇓P	P	05 08 41.1 +0.5
	baz=62,SNR=35					
Z16A	Peralta Trail,	62.26	291	⇑P	P	05 08 41.4 +0.5
	baz=62,SNR=19					
IVRN	Varamin	62.27	67	eP	P	05 08 40.9 0.0
IVRN				eP		05 08 41.7
U13A	Pakoon Wash	62.27	295	⇑P	P	05 08 41.4 +0.4
	baz=62,SNR=50					
R11A	Troy Canyon, C	62.28	298	⇑P	P	05 08 40.4 -0.6
	baz=62,SNR=36					
318A	Bisbee	62.33	288	⇑P	P	05 08 41.7 +0.3
	baz=62,SNR=22					
W14A	Seligman	62.34	294	⇓P	P	05 08 42.2 +0.7
	baz=62,SNR=78					
MENT	Mentasta	62.37	332	eP	P	05 08 42.0 +0.8
MENT	Mentasta	62.37	332	eP	P	05 08 42.0 +0.8
NLWA	Neilton Lookou	62.39	310	⇓P	P	05 08 41.1 -0.4
	baz=62					
NLWA	Neilton Lookou	62.39	310	eP	P	05 08 42.2 +0.6
	comp=Z,49nm,0.9s,mb5.6					
NLWA				LR	LR	
	comp=Z,2µm,19.0s,MS5.2					
NLWA	Neilton Lookou	62.39	310	eP	P	05 08 42.2 +0.6
	comp=Z,49nm,0.9s,mb5.6					
TUC	Tucson	62.39	290	eP	P	05 08 42.6 +0.8
TUC				pmax	pmax	
	comp=Z,54nm,1.0s,mb5.6					
TUC				MLR	MLR	
	comp=Z,1µm,20.0s,MS5.0					
TUC	Tucson	62.39	290	eP	P	05 08 42.6 +0.8
	comp=Z,54nm,1.0s,mb5.6					
TUC				LR	LR	
	comp=Z,1µm,20.0s,MS5.0					
TUC	Tucson	62.39	290	eP	P	05 08 42.6 +0.8
	comp=Z,54nm,1.0s,mb5.6					
COLA	College	62.48	335	eP	P	05 08 41.9 0.0
COLA				pmax	pmax	
	comp=Z,13nm,1.0s,mb5.0					
COLA				MLR	MLR	
	comp=Z,333nm,20.0s,MS4.5					
COLA	College	62.48	335	eP	P	05 08 41.9 0.0
	comp=Z,13nm,1.0s,mb5.0					
COLA				LR	LR	
	comp=Z,333nm,20.0s,MS4.5					
COLA	College	62.48	335	eP	P	05 08 41.9 0.0
	comp=Z,13nm,1.0s,mb5.0					
Y15A	Casa Rosa Ranc	62.54	292	⇑P	P	05 08 42.8 0.0
	baz=62,SNR=17					
Q10A	Clear Creek Ra	62.55	299	⇑P	P	05 08 41.9 -0.9
	baz=62,SNR=23					
V13A	Grand Canyon W	62.60	295	⇓P	P	05 08 43.4 +0.3
	baz=62,SNR=75					
T12A	Moapa	62.60	296	⇑P	P	05 08 43.8 +0.6
	baz=62,SNR=5.4					
X14A	Yava	62.63	293	⇑P	P	05 08 44.0 +0.6
	baz=62,SNR=29					
U12A	Valley of Fire	62.65	295	⇑P	P	05 08 42.9 -0.6
	baz=62,SNR=17					
T11A	Corn Creek, Al	62.65	297	⇑P	P	05 08 43.7 +0.2
	baz=62					
E03A	Lebam	62.68	309	⇑P	P	05 08 43.2 -0.4
	baz=62,SNR=6.5					
217A	Green Valley	62.72	289	⇓P	P	05 08 44.1 +0.1
	baz=63,SNR=23					
KBD	Kabd	62.74	74	eP	P	05 08 44.5 +0.2
KBD				AMb	AMB	05 08 46.2
	comp=Z,83nm,1.1s,mb5.8					
S11A	Rachel	62.77	297	⇓P	P	05 08 43.9 -0.4
	baz=63,SNR=23					
R10A	Warm Springs	62.78	298	⇑P	P	05 08 43.1 -1.3
	baz=63,SNR=17					
RDF	Al-Radifah	62.79	75	eP	P	05 08 45.1 +0.6
RDF				AMb	AMB	05 08 47.7
	comp=Z,131nm,1.4s,mb5.9					
BKCOR	Black Crater	62.83	306	P	P	05 08 45.5 +0.9
BKCOR	Black Crater	62.83	306	P	P	05 08 45.5 +0.9
116A	Eloy	62.89	290	⇑P	P	05 08 44.5 -0.7
	baz=63,SNR=7.6					
H04A	Detroit Lake	62.91	307	⇓P	P	05 08 43.9 -1.2
	baz=63,SNR=9.6					
W13A	Hualapai Mount	62.95	294	⇑P	P	05 08 44.9 -0.6
	baz=63,SNR=23					
PAX	Paxson	62.96	332	eP	P	05 08 45.1 0.0
PAX				pmax	pmax	
	comp=Z,38nm,1.2s,mb5.4					
PAX	Paxson	62.96	332	eP	P	05 08 45.1 0.0
	comp=Z,38nm,1.2s,mb5.4					
PAX	Paxson	62.96	332	eP	P	05 08 45.1 0.0
	comp=Z,38nm,1.2s,mb5.4					
Y14A	Wickenburg	63.01	292	⇑P	P	05 08 45.4 -0.5
	baz=63,SNR=19					
216A	Three Points,	63.03	290	⇑P	P	05 08 46.3 +0.2
	baz=63,SNR=55					
QRN	Al-Qurain	63.16	75	eP	P	05 08 46.7 -0.2
QRN				AMb	AMB	05 08 48.9
	comp=Z,110nm,1.1s,mb5.9					
BRVK	Borovoye	63.16	42	P	P	05 08 47.1 +0.5
	comp=Z,97nm,1.1s,mb5.8,SNR=7.0					
BRVK	Borovoye	63.16	42	d iP	P	05 08 47.0 +0.4
BRVK				pmax	pmax	
	comp=Z,35nm,2.5s,mb5.0					
BRVK				MLR	MLR	
	comp=Z,837nm,15.0s,MS5.0					
BRVK	Borovoye	63.16	42	eP	P	05 08 46.4 -0.2
	comp=Z,25nm,1.1s,mb5.2					
BRVK				LR	LR	
	comp=Z,820nm,21.0s,MS4.9					
BRVK	Borovoye	63.16	42	P	P	05 08 47.5 +0.9
	SNR=13					
BRVK				P		05 08 47.5
	SNR=13					
BRVK	Borovoye	63.16	42	eP	P	05 08 46.4 -0.2
	comp=Z,25nm,1.1s,mb5.2					
115A	Sonoran Desert	63.17	291	⇑P	P	05 08 47.1 0.0
	baz=63,SNR=9.3					
S10A	Tonopah Range,	63.18	298	⇓P	P	05 08 46.7 -0.2
	baz=63,SNR=62					
X13A	Yucca	63.20	293	⇑P	P	05 08 47.6 +0.4
	baz=63,SNR=33					
U11A	Corn Creek	63.22	296	⇓P	P	05 08 47.7 +0.4
	baz=63,SNR=10					
K05A	Summer Lake	63.22	304	⇑P	P	05 08 47.3 +0.1
	baz=63,SNR=36					
BVAR	Borovoye Array	63.23	42	P	P	05 08 47.1 +0.1
	comp=Z,6.0nm,0.8s,mb4.8,baz=296,slow=4.8,SNR=14					
BVAR				LR	LR	05 34 49.5
	comp=Z,857nm,20.8s,MS4.9,baz=308,slow=35					
BVAR	Borovoye Array	63.23	42	P	P	05 08 47.1 0.0
V12A	Nelson	63.25	295	⇓P	P	05 08 47.0 -0.5
	baz=63,SNR=24					
Z14A	Wintersburg	63.29	292	⇓P	P	05 08 47.9 +0.1
	baz=63,SNR=11					
MOD	Modoc	63.32	303	eP	P	05 08 48.5 +0.6
	comp=Z,76nm,1.0s,mb5.8					
MOD				LR	LR	
	comp=Z,834nm,20.0s,MS4.9					
MOD	Modoc	63.32	303	eP	P	05 08 48.5 +0.7
	comp=Z,76nm,1.0s,mb5.8					
TPH	Tonopah	63.50	298	PFAKE		05 09 00.0 +11
TPH				LR	LR	
	comp=Z,519nm,19.0s,MS4.7					
W12A	Cal Nev Ari	63.51	295	⇓P	P	05 08 49.3 +0.1
	baz=63,SNR=13					
HEBO	Mount Hebo	63.54	308	eP	P	05 08 49.7 +0.4
	comp=Z,231nm,1.2s,mb6.1					
HEBO	Mount Hebo	63.54	308	eP	P	05 08 49.7 +0.5
	comp=Z,231nm,1.2s,mb6.1					
V11A	Goodsprings	63.58	295	⇓P	P	05 08 49.8 +0.1
	baz=63					
114A	Black Gap (USA	63.60	291	⇓P	P	05 08 50.1 +0.3
	baz=63,SNR=18					
MCK	McKinley	63.60	334	eP	P	05 08 49.3 0.0
MCK				pmax	pmax	
	comp=Z,31nm,0.9s,mb5.3					
MCK	McKinley	63.60	334	eP	P	05 08 49.3 0.0
	comp=Z,31nm,0.9s,mb5.3					
MCK	McKinley	63.60	334	eP	P	05 08 49.3 0.0
	comp=Z,31nm,0.9s,mb5.3					
NEE2	Needles Airpor	63.64	294	⇑P	P	05 08 49.9 -0.2
	baz=64,SNR=5.8					
Y13A	Salome	63.64	293	⇑P	P	05 08 50.1 0.0
	baz=64,SNR=11					
LDFC	Landfair	63.79	294	eP	P	05 08 51.9 +0.8
	comp=Z,110nm,0.9s,mb5.9					
LDFC	Landfair	63.79	294	eP	P	05 08 51.9 +0.8
	comp=Z,110nm,0.9s,mb5.9					
U10A	Ash Meadows, A	63.85	296	⇓P	P	05 08 51.6 +0.2
	baz=64,SNR=18					
Z13A	Yuma Proving G	63.87	292	⇓P	P	05 08 51.1 -0.5
	baz=64,SNR=19					
BMRM	Bremner River	63.97	330	eP	P	05 08 51.9 +0.1
	comp=Z,430nm,0.6s,mb6.7					
BMRM	Bremner River	63.97	330	eP	P	05 08 51.9 +0.1
	comp=Z,430nm,0.6s,mb6.7					
BPAW	Bear Paw Mtn.	64.00	335	eP	P	05 08 51.4 -0.5
	comp=Z,25nm,0.9s,mb5.2					
BPAW	Bear Paw Mtn.	64.00	335	eP	P	05 08 51.4 -0.5
	comp=Z,25nm,0.9s,mb5.2					
214A	Organ Pipe Nat	64.00	290	⇓P	P	05 08 52.9 +0.4
	baz=64,SNR=8.1					
NVAR	Mina Array Bea	64.00	299	P	P	05 08 52.5 +0.1
	comp=Z,14nm,1.0s,mb5.0,baz=66,slow=5.8,SNR=81					
NVAR	Mina Array Bea	64.00	299	P	P	05 08 52.5 +0.1
SHOC	Shoshone	64.11	296	P	P	05 08 53.8 +0.7
	baz=64,SNR=16					
TUQ	Turquoise Moun	64.14	295	⇑P	P	05 08 53.6 +0.2
	baz=64,SNR=15					
Y12C	Blythe	64.15	293	⇑P	P	05 08 53.1 -0.4
	baz=64,SNR=16					
FURC	Furnace Creek,	64.17	297	⇑P	P	05 08 54.2 +0.7
	baz=64,SNR=9.6					
113A	Mohawk Valley,	64.20	292	⇓P	P	05 08 53.9 +0.1
	baz=64,SNR=9.1					
GRAC	Grapevine Rang	64.21	297	⇑P	P	05 08 53.9 +0.1
	baz=64,SNR=16					
TRF	Thorofare Moun	64.23	334	eP	P	05 08 53.0 -0.5
	comp=Z,46nm,1.0s,mb5.5					
TRF	Thorofare Moun	64.23	334	eP	P	05 08 53.0 -0.5
	comp=Z,46nm,1.0s,mb5.5					
DIV	Divide	64.29	331	eP	P	05 08 53.8 -0.1
	comp=Z,76nm,1.4s,mb5.5					
DIV	Divide	64.29	331	eP	P	05 08 53.8 -0.1
	comp=Z,76nm,1.4s,mb5.5					
GMRC	Granite Mounta	64.33	295	⇑P	P	05 08 54.8 +0.2
	baz=64,SNR=24					
IRM	Iron Mountain	64.34	294	⇑P	P	05 08 54.9 +0.2
	baz=64,SNR=20					
KTH	Kantishna Hill	64.36	335	eP	P	05 08 53.8 -0.6
	comp=Z,59nm,1.1s,mb5.5					
KTH	Kantishna Hill	64.36	335	eP	P	05 08 53.8 -0.6
	comp=Z,59nm,1.1s,mb5.5					
WCN	Washoe City	64.44	301	⇓P	P	05 08 54.8 -0.5
	baz=64,SNR=9.3					
BEKR	Beckwourth	64.50	301	⇓P	P	05 08 55.5 -0.2
	baz=64,SNR=42					
SIV	San Ignacio	64.54	213	P	P	05 08 56.0 0.0
	comp=Z,3.7nm,0.7s,mb4.5,baz=53,slow=6.5,SNR=26					
SIV	San Ignacio	64.54	213	P	P	05 08 56.0 0.0
HUMO	Hull Mountain	64.54	305	PFAKE		05 09 10.0 +14
HUMO				LR	LR	
	comp=Z,666nm,19.0s,MS4.8					
CHUM	Lake Minchumin	64.56	335	eP	P	05 08 55.6 -0.1
	comp=Z,82nm,1.5s,mb5.5					
CHUM	Lake Minchumin	64.56	335	eP	P	05 08 55.6 -0.1
	comp=Z,82nm,1.5s,mb5.5					
HEC	Hector,Ludlow	64.76	295	⇑P	P	05 08 57.5 +0.1
	baz=65,SNR=13					
GLA	Glamis	64.76	292	⇑P	P	05 08 57.4 -0.1
	baz=65,SNR=12					
GLA	Glamis	64.76	292	eP	P	05 08 58.4 +0.9
GLA				pmax	pmax	
	comp=Z,301nm,1.8s,mb6.0					
GLA	Glamis	64.76	292	eP	P	05 08 58.4 +0.9
	comp=Z,301nm,1.8s,mb6.0					
GLA	Glamis	64.76	292	eP	P	05 08 58.4 +0.9
	comp=Z,301nm,1.8s,mb6.0					
GSC	Goldstone	64.80	296	⇓P	P	05 08 57.8 +0.1
	baz=65,SNR=50					
GSC	Goldstone	64.80	296	eP	P	05 08 58.5 +0.8
GSC				pmax	pmax	
	comp=Z,88nm,1.0s,mb5.7					
GSC	Goldstone	64.80	296	eP	P	05 08 58.5 +0.8
	comp=Z,88nm,1.0s,mb5.7					
GSC	Goldstone	64.80	296	eP	P	05 08 58.5 +0.8
	comp=Z,88nm,1.0s,mb5.7					
MLAC	Mammoth Lakes	64.81	299	⇑P	P	05 08 56.4 -1.2
	baz=65,SNR=12					
MPMC	Manual Prospec	64.82	297	⇓P	P	05 08 58.0 +0.2
	baz=65,SNR=75					
BC3	Big Chuckw Mtn	64.84	293	⇑P	P	05 08 58.2 +0.3
	baz=65,SNR=18					
ABKT	Aibek	64.86	61	P	P	05 08 59.6 +1.6
	comp=Z,153nm,1.1s,mb5.9,SNR=12					
YBH	Yreka Blue Hor	64.90	304	eP	P	05 08 57.2 -1.0
YBH				pmax	pmax	
	comp=Z,15nm,1.1s					
YBH				MLR	MLR	
	comp=Z,473nm,20.0s					
YBH	Yreka Blue Hor	64.90	304	eP	P	05 08 57.1 -1.1
	comp=Z,14nm,1.1s,mb4.9					
YBH				LR	LR	
	comp=Z,473nm,20.0s,MS4.7					
YBH	Yreka Blue Hor	64.90	304	eP	P	05 08 57.2 -1.0
	comp=Z,14nm,1.1s,mb4.9					
BELC	Belle Mtn.	65.01	294	⇓P	P	05 08 59.2 +0.2
	baz=65,SNR=21					
PMR	Palmer	65.15	332	eP	P	05 09 00.2 +0.7
PMR				pmax	pmax	
	comp=Z,77nm,1.0s,mb5.7					
PMR	Palmer	65.15	332	eP	P	05 09 00.2 +0.7
	comp=Z,77nm,1.0s,mb5.7					
PMR	Palmer	65.15	332	eP	P	05 09 00.2 +0.7
	comp=Z,77nm,1.0s,mb5.7					
ISFR	Sfrayin	65.28	62	eP	P	05 09 00.0 -0.8
TIXI	Tiksi	65.33	7	d iP	P	05 09 01.2 +0.6
TIXI				e		05 11 24.7
TIXI				eS	S	05 17 47.0 +3.0
TIXI				eSS	SS	05 22 01.0 +5.1
TIXI				pmax	pmax	
	comp=Z,48nm,1.2s,mb5.4					
TIXI				MLR	MLR	
	comp=Z,236nm,18.0s,MS4.4					
TIXI	Tiksi	65.33	7	eP	P	05 09 01.3 +0.7
	comp=Z,33nm,0.9s,mb5.4					
TIXI				LR	LR	
	comp=Z,177nm,19.0s,MS4.3					
TIXI	Tiksi	65.33	7	eP	P	05 09 01.3 +0.7
	comp=Z,33nm,0.9s,mb5.4					
WDC	Whiskeytown Da	65.46	303	PFAKE		05 09 10.0 +8.1
WDC				LR	LR	
	comp=Z,761nm,19.0s,MS4.9					
SWSC	Sam W. Stewart	65.49	293	⇓P	P	05 09 02.5 +0.3
	baz=65,SNR=5.1					
PFO	Pinyon Flat Ob	65.55	294	P	P	05 09 03.2 +0.6
	comp=Z,332nm,0.9s,mb6.4,SNR=10					
PFO	Pinyon Flat Ob	65.55	294	⇑P	P	05 09 03.4 +0.9
	baz=65,SNR=21					
PFO	Pinyon Flat Ob	65.55	294	eP	P	05 09 03.4 +0.8
PFO				pmax	pmax	
	comp=Z,87nm,1.0s,mb5.7					
PFO				MLR	MLR	
	comp=Z,816nm,19.0s,MS5.0					
PFO	Pinyon Flat Ob	65.55	294	eP	P	05 09 03.4 +0.8
	comp=Z,87nm,1.0s,mb5.7					
PFO				LR	LR	
	comp=Z,816nm,19.0s,MS5.0					
PFO	Pinyon Flat Ob	65.55	294	eP	P	05 09 03.4 +0.8
	comp=Z,87nm,1.0s,mb5.7					
CMB	Columbia Colle	65.57	300	eP	P	05 09 03.3 +0.6
CMB				pmax	pmax	
	comp=Z,81nm,1.4s,mb5.6					
CMB				MLR	MLR	
	comp=Z,1µm,19.0s,MS5.1					
CMB	Columbia Colle	65.57	300	eP	P	05 09 03.3 +0.6
	comp=Z,81nm,1.4s,mb5.6					
CMB				LR	LR	
	comp=Z,1µm,19.0s,MS5.1					
CMB	Columbia Colle	65.57	300	eP	P	05 09 03.3 +0.6
	comp=Z,81nm,1.4s,mb5.6					
ATAH	Atahualpa	65.66	234	P	P	05 09 05.3 +1.9
	comp=Z,6.8nm,0.8s,mb4.7,baz=36,slow=3.1,SNR=4.3					
ISA	Isabella	65.70	297	⇓P	P	05 09 03.0 -0.5
	baz=66,SNR=25					
ISA	Isabella	65.70	297	eP	P	05 09 04.2 +0.7
ISA				pmax	pmax	
	comp=Z,60nm,1.3s,mb5.5					
ISA	Isabella	65.70	297	eP	P	05 09 04.2 +0.7
	comp=Z,60nm,1.3s,mb5.5					
ISA	Isabella	65.70	297	eP	P	05 09 04.2 +0.7
	comp=Z,60nm,1.3s,mb5.5					
RCTC	Rector, Farmer	65.83	298	P	P	05 09 04.6 +0.2
	baz=66,SNR=6.7					
EDW2	Edwards Air Fo	65.84	296	⇓P	P	05 09 04.9 +0.5
	baz=66,SNR=14					
MONP	Monument Peak	65.94	293	⇑P	P	05 09 05.0 -0.1
	baz=66,SNR=17					
BFSC	Mount Baldy St	65.99	295	⇑P	P	05 09 05.7 +0.2
	baz=66,SNR=20					
MURC	Murrieta	66.06	294	⇓P	P	05 09 05.4 -0.4
	baz=66,SNR=16					
IPAR	Pars	66.14	71	eP	P	05 09 06.9 +0.4
BAR	Barrett	66.24	293	eP	P	05 09 07.8 +0.7
	comp=Z,155nm,1.6s,mb5.8					
BAR	Barrett	66.24	293	eP	P	05 09 07.8 +0.8
	comp=Z,155nm,1.6s,mb5.8					
IMOK	Mouk	66.38	72	eP	P	05 09 07.4 -0.6
109C	Camp Elliot, M	66.41	294	⇓P	P	05 09 08.2 +0.1
	baz=66,SNR=8.3					
ISRV	Sarvestan	66.46	71	eP	P	05 09 08.4 -0.1
ISRO	Mashad	66.68	62	eP	P	05 09 09.3 -0.5
IMOG	Moghan	66.71	62	eP	P	05 09 11.5 +1.5
IMOG	Moghan	66.71	62	eP	P	05 09 11.5 +1.5
HOPS	Hopland	66.72	302	eP	P	05 09 11.1 +1.0
	comp=Z,142nm,1.4s,mb5.8					
HOPS				LR	LR	
	comp=Z,1µm,19.0s,MS5.2					
HOPS	Hopland	66.72	302	eP	P	05 09 11.1 +1.1
	comp=Z,142nm,1.4s,mb5.8					
PKM	Peak Mountain	67.04	297	⇑P	P	05 09 11.3 -0.9
	baz=67,SNR=12					
IMYA	Miami	67.07	61	eP	P	05 09 13.1 +0.8
IMYA	Miami	67.07	61	eP	P	05 09 13.1 +0.8
RSO	Redoubt South	67.20	333	eP	P	05 09 12.4 -0.3
RSO	Redoubt South	67.20	333	eP	P	05 09 12.4 -0.3
TNA	Tin City	67.43	342	eP	P	05 09 14.8 +0.7
	comp=Z,16nm,0.8s,mb5.1					
TNA	Tin City	67.43	342	eP	P	05 09 14.8 +0.7
	comp=Z,16nm,0.8s,mb5.1					
LPAZ	La Paz	67.88	219	P	P	05 09 17.5 0.0
	comp=Z,7.7nm,0.9s,mb4.8,baz=20,slow=6.3,SNR=30					
LPAZ				LR	LR	05 36 49.7
	comp=Z,514nm,20.1s,MS4.8,baz=216,slow=34					
LPAZ	La Paz	67.88	219	eP	P	05 09 18.0 +0.5
LPAZ				pmax	pmax	
	comp=Z,43nm,1.4s					
LPAZ				MLR	MLR	
	comp=Z,642nm,19.0s					
LPAZ	La Paz	67.88	219	eP	P	05 09 18.0 +0.5
	comp=Z,43nm,1.4s,mb5.3					
LPAZ				LR	LR	
	comp=Z,642nm,19.0s,MS4.9					
LPAZ	La Paz	67.88	219	eP	P	05 09 18.0 +0.5
	comp=Z,642nm,19.0s					
NVS	Novosibirsk	67.97	35	i P	P	05 09 17.9 +0.3
NVS				pmax	pmax	
	comp=N,21nm,1.4s					
NVS				pmax	pmax	
	comp=Z,63nm,1.4s,mb5.5					
NVS				pmax	pmax	
	comp=E,10.0nm,0.9s					
NVS	Novosibirsk	67.97	35	i P	P	05 09 17.9 +0.3
ITEG	Tejag	68.23	65	eP	P	05 09 19.2 -0.5
ITEG	Tejag	68.23	65	eP	P	05 09 19.2 -0.5
KURK	Kurchatov	68.66	40	P	P	05 09 22.6 +0.5
	comp=E,140nm,1.3s,mb5.7,SNR=18					
KURK	Kurchatov	68.66	40	d iP	P	05 09 22.1 0.0
KURK				pmax	pmax	
	comp=Z,31nm,1.4s,mb5.0					
KURK				MLR	MLR	
	comp=Z,534nm,14.0s,MS4.9					
KURK	Kurchatov	68.66	40	eP	P	05 09 21.7 -0.4
	comp=Z,31nm,1.0s,mb5.2					
KURK				LR	LR	
	comp=Z,984nm,20.0s,MS5.0					
KURK	Kurchatov	68.66	40	P	P	05 09 22.1 0.0
	SNR=19					
KURK				P		05 09 22.1
	SNR=19					
KURK	Kurchatov	68.66	40	i P	P	05 09 22.1 0.0
	comp=Z,534nm,14.0s					
NNA	Nana	68.77	229	PFAKE		05 09 40.0 +17
NNA				LR	LR	
	comp=Z,211nm,19.0s,MS4.4					
BILL	Bilibino	69.18	353	d iP	P	05 09 25.0 0.0
BILL				e		05 11 59.9
BILL				eS	S	05 18 38.5 +8.2
BILL				pmax	pmax	
	comp=Z,63nm,2.5s,mb5.1					
BILL	Bilibino	69.18	353	eP	P	05 09 25.2 +0.2
	comp=Z,11nm,0.6s,mb5.0					
BILL				LR	LR	
	comp=Z,869nm,19.0s,MS5.0					
BILL	Bilibino	69.18	353	eP	P	05 09 25.2 +0.2
	comp=Z,11nm,0.6s,mb5.0					
ZAA0	Zalesovo Array	69.26	35	eP	P	05 09 25.5 -0.2
ZAA0	Zalesovo Array	69.26	35	eP	P	05 09 25.5 -0.2
ZALV	Zalesovo Beam	69.26	35	P	P	05 09 25.6 -0.1
	comp=Z,7.8nm,0.7s,mb4.8,baz=304,slow=7.6,SNR=27					
ZALV				LR	LR	05 39 33.7
	comp=Z,635nm,18.9s,MS4.9,baz=309,slow=36					
BANOM	Banah	70.80	72	P	P	05 09 35.3 -0.3
	SNR=5.5					
BANOM	Banah	70.80	72	P	P	05 09 35.3 -0.3
	SNR=5.5					
ASUD	Al Ashush, Dub	70.92	74	P	P	05 09 35.5 -0.9
NAZ	Nazwa, Dubai	70.93	73	P	P	05 09 35.5 -0.9
FAQ	Al Faqa, Dubai	71.03	74	P	P	05 09 36.2 -0.8
HATD	Hatta, Dubai	71.36	73	P	P	05 09 39.1 0.0
	SNR=9.3					
HATD	Hatta, Dubai	71.36	73	P	P	05 09 39.1 0.0
	SNR=9.3					
ASHO	Ashiyiah	71.40	73	P	P	05 09 38.7 -0.6
	SNR=5.3					
ASHO	Ashiyiah	71.40	73	P	P	05 09 38.7 -0.6
	SNR=5.3					
EKS2	Erkin-Say	71.44	49	P	P	05 09 40.9 +1.7
	SNR=24					
EKS2	Erkin-Say	71.44	49	eP	P	05 09 40.5 +1.3
	comp=Z,69nm,1.4s,mb5.4					
EKS2				LR	LR	
	comp=Z,1µm,22.0s,MS5.0					
EKS2	Erkin-Say	71.44	49	eP	P	05 09 40.5 +1.3
	comp=Z,69nm,1.4s,mb5.4					
AML	Almayashu	71.73	49	eP	P	05 09 42.8 +1.8
	comp=Z,44nm,1.2s,mb5.3					
AML	Almayashu	71.73	49	P	P	05 09 43.2 +2.2
	SNR=11					
AAK	Ala-Archa	71.85	49	P	P	05 09 43.4 +1.7
	comp=Z,86nm,1.6s,mb5.4,SNR=8.6					
AAK	Ala-Archa	71.85	49	P	P	05 09 43.9 +2.2
	SNR=7.0					
AAK	Ala-

TKM2	**Tokmak 2**	**72.27**	**48**	*e*P	**P**	**05 09 45.4**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.4						
TKM2				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.2						
TKM2	**Tokmak 2**	**72.27**	**48**	*e*P	**P**	**05 09 45.4**	**+1.2**
	comp=Z,70nm,1.4s,mb5.4						
TKM2				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
TKM2	**Tokmak 2**	**72.27**	**48**	*e*P	**P**	**05 09 45.4**	**+1.1**
	comp=Z,1μm,22.0s						
KZA	**Kyzart**	**72.64**	**49**	P	**P**	**05 09 48.7**	**+2.2**
	SNR=16						
CPUP	**Villa Florida**	**72.71**	**205**	P	**P**	**05 09 46.2**	**-0.6**
	comp=Z,5.2nm,0.6s,mb4.6,baz=4.4,slow=5.8,SNR=23						
CPUP				LR	LR	05 38 17.0	
	comp=Z,433nm,20.7s,MS4.7,baz=178,slow=33						
CPUP	**Villa Florida**	**72.71**	**205**	*e*P	**P**	**05 09 46.2**	**-0.6**
CPUP				pmax	pmax		
	comp=Z,40nm,0.7s						
CPUP	**Villa Florida**	**72.71**	**205**	*e*P	**P**	**05 09 46.2**	**-0.6**
	comp=Z,40nm,0.7s,mb5.5						
CPUP	**Villa Florida**	**72.71**	**205**	*e*P	**P**	**05 09 46.2**	**-0.6**
	comp=Z,40nm,0.7s,mb5.5						
MK31	**Makanchi Array**	**73.11**	**41**	*e*P	**P**	**05 09 49.2**	**0.0**
MK31	**Makanchi Array**	**73.11**	**41**	*e*P	**P**	**05 09 49.2**	**0.0**
MKAR	**Makanchi Array**	**73.11**	**41**	P	**P**	**05 09 49.3**	**+0.1**
	comp=Z,11nm,0.6s,mb5.0,baz=328,slow=5.7,SNR=144						
MKAR				LR	LR	05 40 22.5	
	comp=Z,409nm,21.0s,MS4.7,baz=316,slow=34						
KBL	**Kabul**	**73.90**	**58**	*e*P	**P**	**05 09 54.5**	**+0.5**
KBL				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KBL	**Kabul**	**73.90**	**58**	*e*P	**P**	**05 09 54.5**	**+0.4**
	comp=Z,15nm,0.8s,mb5.0						
KBL	**Kabul**	**73.90**	**58**	*e*P	**P**	**05 09 54.5**	**+0.5**
	comp=Z,15nm,0.8s,mb5.0						
KMBO	**Kilima Mbogo**	**74.52**	**106**	P	**P**	**05 09 59.0**	**+1.2**
	comp=Z,4.0nm,0.8s,mb4.4,baz=359,slow=24,SNR=6.7						
KMBO				LR	LR	05 44 31.5	
	comp=Z,446nm,18.7s,MS4.8,baz=92,slow=37						
KMBO	**Kilima Mbogo**	**74.52**	**106**	*e*P	**P**	**05 09 58.9**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KMBO				MLR	MLR		
	comp=Z,375nm,20.0s						
KMBO	**Kilima Mbogo**	**74.52**	**106**	*e*P	**P**	**05 09 58.9**	**+1.1**
	comp=Z,3.4nm,0.3s,mb4.8						
KMBO				LR	LR		
	comp=Z,375nm,20.0s,MS4.7						
KMBO	**Kilima Mbogo**	**74.52**	**106**	*e*P	**P**	**05 09 58.9**	**+1.0**
	comp=Z,375nm,20.0s						
YAK	**Yakutsk**	**74.72**	**10**	*e*P	**P**	**05 09 57.1**	**-1.2**
YAK				*e*		05 10 12.5	
YAK				*e*		05 12 41.4	
YAK				*e*S	S	05 19 28.7	-5.4
YAK				*e**SS	SKSac	05 20 05.4	-1.0
YAK				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
YAK	**Yakutsk**	**74.72**	**10**	*e*P	**P**	**05 09 58.4**	**+0.1**
	comp=Z,41nm,0.6s,mb5.5						
YAK				LR	LR		
	comp=Z,225nm,21.0s,MS4.4						
YAK	**Yakutsk**	**74.72**	**10**	*e*P	**P**	**05 09 58.4**	**+0.1**
	comp=Z,41nm,0.6s,mb5.5						
YAK	**Yakutsk**	**74.72**	**10**	*e*PcP	PcP	05 10 12.5	0.0
KSH	**Kashi**	**74.76**	**50**	||*i*P	**P**	**05 10 00.8**	**+1.8**
KSH				*e*pP	pP	05 10 04.8	+2.5
KSH				*e*sP	sP	05 10 07.8	+4.3
KSH				*e*PcP	PcP	05 10 14.8	+1.7
KSH				*e*PP	PP	05 12 49.8	+4.2
KSH				*e*S	S	05 19 35.3	-0.1
KSH				*e*sS	sS	05 19 42.8	+2.0
KSH				*e*SKS		05 20 03.8	
KSH				*e*ScS	ScS	05 20 07.8	-3.0
KSH				*e*SS	SS	05 24 24.8	+2.7
KSH				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
KSH				pmax	pmax		
	comp=Z,390nm,3.3s						
KSH				LR	LR		
	comp=N,730nm,14.0s,MS5.3						
KSH				LR	LR		
	comp=E,750nm,15.8s,MS5.3						
KSH				LR	LR		
	comp=Z,1μm,16.8s,MS5.2						
SEY	**Seymchan**	**75.01**	**359**	||*e*P	**P**	**05 10 00.4**	**+0.4**
SEY	**Seymchan**	**75.01**	**359**	*e*P	**P**	**05 10 00.4**	**+0.4**
TSUM	**Tsumeb**	**75.64**	**133**	P	**P**	**05 10 05.0**	**+0.9**
	comp=Z,8.8nm,0.9s,mb4.7,baz=344,slow=6.5,SNR=9.9						
TSUM	**Tsumeb**	**75.64**	**133**	*e*P	**P**	**05 10 04.9**	**+0.8**
	comp=Z,7.4nm,0.9s,mb4.6						
TSUM				LR	LR		
	comp=Z,919nm,19.0s,MS5.1						
TSUM	**Tsumeb**	**75.64**	**133**	*e*P	**P**	**05 10 04.9**	**+0.8**
	comp=Z,7.4nm,0.9s,mb4.6						
BOD	**Bodaibo**	**75.86**	**19**	*e*P	**P**	**05 10 03.8**	**-1.1**
BOD				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
BOD	**Bodaibo**	**75.86**	**19**	*e*P	**P**	**05 10 03.8**	**-1.1**
	comp=Z,25nm,1.3s,mb5.0						
NIL	**Nilore**	**77.11**	**56**	PFAKE		05 10 20.0	+7.6
NIL				LR	LR		
	comp=Z,117nm,20.0s,MS4.2						
MOY	**Mondy**	**77.32**	**29**	*e*P	**P**	**05 10 13.7**	**+0.4**
MOY				pmax	pmax		
	comp=Z,67nm,2.4s,mb5.2						
MOY	**Mondy**	**77.32**	**29**	*e*P	**P**	**05 10 13.7**	**+0.4**
	comp=Z,67nm,2.4s,mb5.2						
WMQ	**Urumqi**	**77.89**	**41**	P	**P**	**05 10 17.3**	**+0.6**
WMQ				sP	sP	05 10 22.9	+1.7
WMQ				PP	PP	05 13 15.0	+3.2
WMQ				S	S	05 20 08.3	-1.3
WMQ				sS	sS	05 20 15.8	+0.8
WMQ				SKS		05 20 25.6	
WMQ				ScS	ScS	05 20 32.4	-3.5
WMQ				SS	SS	05 25 12.6	+3.5
WMQ				pmax	pmax		
	comp=Z,24nm,2.0s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,300nm,4.0s						
WMQ				LR	LR		
	comp=N,790nm,16.0s,MS5.3						
WMQ				LR	LR		
	comp=E,950nm,21.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,660nm,22.0s,MS4.9						
IRK	**Irkutsk**	**77.96**	**26**	*e*P	**P**	**05 10 15.6**	**-1.3**
IRK				pmax	pmax		
	comp=Z,42nm,2.2s,mb5.0						
IRK	**Irkutsk**	**77.96**	**26**	*e*P	**P**	**05 10 15.6**	**-1.3**
	comp=Z,42nm,2.2s,mb5.0						
TLY	**Talaya**	**78.22**	**27**	*e*P	**P**	**05 10 18.7**	**+0.3**
TLY				*e*S	S	05 20 18.3	+5.4
TLY				*e*PS		05 21 07.5	
TLY				*e*SS	SS	05 25 23.4	+10
TLY				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
TLY	**Talaya**	**78.22**	**27**	PFAKE		05 10 30.0	+12
TLY				LR	LR		
	comp=Z,295nm,19.0s,MS4.6						
TLY	**Talaya**	**78.22**	**27**	*e*P	**P**	**05 10 18.7**	**+0.3**
	comp=Z,13nm,1.2s,mb4.7						
LSZ	**Lusaka**	**78.73**	**123**	P	**P**	**05 10 21.7**	**+0.2**
	comp=Z,6.5nm,0.7s,mb4.7,baz=324,slow=4.6,SNR=12						
LSZ	**Lusaka**	**78.73**	**123**	*e*P	**P**	**05 10 22.7**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,43nm,1.6s,mb5.1						
LSZ				MLR	MLR		
	comp=Z,828nm,19.0s,MS5.1						
LSZ	**Lusaka**	**78.73**	**123**	*e*P	**P**	**05 10 22.7**	**+1.1**
	comp=Z,43nm,1.6s,mb5.1						
LSZ				LR	LR		
	comp=Z,828nm,19.0s,MS5.1						
LSZ	**Lusaka**	**78.73**	**123**	P	**P**	**05 10 23.6**	**+2.0**
	SNR=6.2						
LSZ				P		05 10 23.6	
	SNR=6.2						
LSZ	**Lusaka**	**78.73**	**123**	*e*P	**P**	**05 10 22.7**	**+1.2**
	comp=Z,828nm,19.0s						
ZAK	**Zakamensk**	**79.19**	**28**	*e*P	**P**	**05 10 23.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
ZAK	**Zakamensk**	**79.19**	**28**	*e*P	**P**	**05 10 23.7**	**0.0**
	comp=Z,7.0nm,1.3s,mb4.4						
LCO	**Las Campanas**	**80.10**	**215**	*e*P	**P**	**05 10 29.9**	**+1.2**
	comp=Z,64nm,1.2s,mb5.4						
LCO				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
LCO	**Las Campanas**	**80.10**	**215**	*e*P	**P**	**05 10 30.0**	**+1.2**
	comp=Z,64nm,1.2s,mb5.4						
DDI	**Dehra Dun**	**82.35**	**56**	*ex*	**P**	**05 10 40.0**	**-1.0**
SONM	**Songino Array**	**82.44**	**28**	P	**P**	**05 10 41.3**	**+0.2**
	comp=Z,5.4nm,0.9s,mb4.5,baz=321,slow=5.4,SNR=24						
SONM				LR	LR	05 47 23.0	
	comp=Z,455nm,20.7s,MS4.8,baz=162,slow=36						
SONM	**Songino Array**	**82.44**	**28**	P	**P**	**05 10 41.3**	**+0.2**
ULN	**Ulaanbaatar**	**82.64**	**27**	*e*P	**P**	**05 10 42.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ULN				MLR	MLR		
	comp=Z,343nm,22.0s,MS4.7						
ULN	**Ulaanbaatar**	**82.64**	**27**	*e*P	**P**	**05 10 42.6**	**+0.5**
	comp=Z,11nm,0.9s,mb4.9						
ULN				LR	LR		
	comp=Z,343nm,22.0s,MS4.7						
ULN	**Ulaanbaatar**	**82.64**	**27**	P	**P**	**05 10 42.8**	**+0.7**
	SNR=14						
ULN				P		05 10 42.8	
	SNR=14						
ULN	**Ulaanbaatar**	**82.64**	**27**	*e*P	**P**	**05 10 42.7**	**+0.6**
	comp=Z,343nm,22.0s						
PETK	**Petropavlovsk-**	**84.62**	**355**	P	**P**	**05 10 51.4**	**-0.8**
	comp=Z,4.9nm,0.6s,mb4.8,baz=54,slow=8.6,SNR=14						
PETK				LR	LR	05 49 08.2	
	comp=Z,303nm,18.0s,MS4.7,baz=359,slow=36						
PETK	**Petropavlovsk-**	**84.62**	**355**	P	**P**	**05 10 51.4**	**-0.8**
PETK				LR	LR	05 49 08.2	
PETK	**Petropavlovsk-**	**84.62**	**355**	P	**P**	**05 10 51.4**	**-0.8**
PET	**Petropavlovsk**	**84.64**	**354**	*e*P	**P**	**05 10 54.2**	**+1.9**
PET				*e*S	S	05 21 16.8	-2.5
PET				*e*PS		05 22 13.0	
PET				*e*PPS		05 22 33.6	
PET				*e*SS	SS	05 26 50.9	+2.1
PET				pmax	pmax		
	comp=Z,400nm,15.7s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s,MS5.0						
PET	**Petropavlovsk**	**84.64**	**354**	PFAKE		05 11 00.0	+7.7
PET				LR	LR		
	comp=Z,553nm,20.0s,MS4.9						
PET	**Petropavlovsk**	**84.64**	**354**	*e*P	**P**	**05 10 54.2**	**+1.9**
	comp=Z,400nm,15.7s						
LBTB	**Lobatse**	**84.71**	**131**	P	**P**	**05 10 52.7**	**-0.2**
	comp=Z,7.1nm,0.9s,mb4.8,baz=325,slow=8.0,SNR=10						
LBTB	**Lobatse**	**84.71**	**131**	*e*P	**P**	**05 10 54.1**	**+1.2**
LBTB				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.2						
LBTB				MLR	MLR		
	comp=Z,790nm,20.0s,MS5.1						
LBTB	**Lobatse**	**84.71**	**131**	*e*P	**P**	**05 10 54.1**	**+1.2**
	comp=Z,25nm,1.2s,mb5.2						
LBTB				LR	LR		
	comp=Z,790nm,20.0s,MS5.1						
LBTB	**Lobatse**	**84.71**	**131**	*e*P	**P**	**05 10 54.1**	**+1.2**
	comp=Z,790nm,20.0s						
TRQA	**Tornquist**	**85.03**	**204**	*e*P	**P**	**05 10 54.5**	**+0.3**
	comp=Z,22nm,0.9s,mb5.3						
TRQA				LR	LR		
	comp=Z,837nm,20.0s,MS5.1						
TRQA	**Tornquist**	**85.03**	**204**	*e*P	**P**	**05 10 54.5**	**+0.3**
	comp=Z,22nm,0.9s,mb5.3						
HIA	**Hailar**	**85.07**	**19**	*e*P	**P**	**05 10 54.8**	**+0.2**
HIA				MLR	MLR		
	comp=Z,422nm,21.0s						
HIA	**Hailar**	**85.07**	**19**	*e*P	**P**	**05 10 54.8**	**+0.2**
	comp=Z,422nm,21.0s						
PYUN	**Piuthan**	**86.94**	**54**	*e*P	**P**	**05 11 04.1**	**-0.1**
	comp=Z,50nm,0.8s,mb5.8						
GTA	**Gaotai**	**86.96**	**36**	||P	**P**	**05 11 03.6**	**-0.5**
GTA				pP	pP	05 11 08.5	+1.1
GTA				sP	sP	05 11 10.8	+2.2
GTA				PP	PP	05 14 30.9	+4.6
GTA				SKS		05 21 28.3	
GTA				S	S	05 21 41.6	-1.0
GTA				sS	sS	05 21 49.8	+1.7
GTA				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.8						
GTA				pmax	pmax		
	comp=Z,210nm,7.2s						
GTA				LR	LR		
	comp=N,440nm,19.8s,MS5.0						
GTA				LR	LR		
	comp=E,450nm,19.2s,MS5.0						
GTA				LR	LR		
	comp=Z,720nm,22.2s,MS5.0						
BOSA	**Boshof**	**87.34**	**133**	P	**P**	**05 11 07.2**	**+1.4**
	comp=Z,5.7nm,1.1s,mb4.7,baz=338,slow=3.9,SNR=5.6						
BOSA				LR	LR	05 46 46.4	
	comp=Z,834nm,20.0s,MS5.1,baz=316,slow=33						
BOSA	**Boshof**	**87.34**	**133**	*e*P	**P**	**05 11 06.9**	**+1.0**
BOSA				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.0						
BOSA				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
BOSA	**Boshof**	**87.34**	**133**	*e*P	**P**	**05 11 06.8**	**+1.0**
	comp=Z,11nm,1.2s,mb5.0						
BOSA				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
BOSA	**Boshof**	**87.34**	**133**	*e*P	**P**	**05 11 06.8**	**+0.9**
	comp=Z,11nm,1.2s,mb5.0						
KLR	**Kul'dur**	**87.45**	**12**	*e*P	**P**	**05 11 00.0**	**-6.3**
KOLN	**Koldanda**	**87.54**	**54**	*e*P	**P**	**05 11 06.7**	**-0.4**
	comp=Z,49nm,1.3s,mb5.6						
GKN	**Gorkha**	**87.99**	**53**	*e*P	**P**	**05 11 09.2**	**-0.1**
SUR	**Sutherland**	**88.07**	**139**	PFAKE		05 11 20.0	+11
SUR				LR	LR		
	comp=Z,275nm,19.0s,MS4.7						
KKN	**Kakani**	**88.53**	**53**	*e*P	**P**	**05 11 12.2**	**+0.4**
DMN	**Daman**	**88.56**	**53**	*e*P	**P**	**05 11 12.6**	**+0.6**
PKI	**Pulchoki**	**88.77**	**53**	*e*P	**P**	**05 11 13.2**	**+0.2**
GUN	**Gumba**	**88.79**	**52**	*e*P	**P**	**05 11 13.7**	**+0.6**
	comp=Z,88nm,1.0s,mb6.1						
JIRN	**Jiri**	**89.16**	**52**	*e*P	**P**	**05 11 15.1**	**+0.3**
	comp=Z,37nm,0.9s,mb5.7						
MSEY	**Mahe Island**	**90.17**	**96**	PFAKE		05 11 30.0	+10
MSEY				LR	LR		
	comp=Z,271nm,19.0s,MS4.7						
TAPN	**Taplejung**	**90.28**	**52**	*e*P	**P**	**05 11 20.5**	**+0.4**
	comp=Z,88nm,1.1s,mb6.0						
HHC	**Hu-ho-hao-te**	**90.34**	**28**	*e*P	**P**	**05 11 20.6**	**+0.5**
HHC				pP	pP	05 11 25.5	+2.1
HHC				sP	sP	05 11 27.8	+3.2
HHC				PP	PP	05 14 56.6	+3.4
HHC				SKS		05 21 49.4	
HHC				S	S	05 22 12.8	-1.7
HHC				sS	sS	05 22 19.4	-0.6
HHC				SS	SS	05 28 13.3	+0.7
HHC				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.8						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
HHC				LR	LR		
	comp=N,460nm,15.6s,MS5.2						
HHC				LR	LR		
	comp=E,510nm,15.9s,MS5.2						
HHC				LR	LR		
	comp=Z,550nm,17.6s,MS5.0						
LSA	**Lhasa**	**90.43**	**48**	*e*P	**P**	**05 11 23.5**	**+2.8**
LSA	**Lhasa**	**90.43**	**48**	PFAKE		05 11 30.0	+9.3
LSA				LR	LR		
	comp=Z,572nm,20.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**90.85**	**5**	*e*P	**P**	**05 11 20.0**	**-2.3**
YSS	**Yuzh-Sakhalins**	**90.85**	**5**	PFAKE		05 11 30.0	+7.7
YSS				LR	LR		
	comp=Z,101nm,19.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	**90.85**	**5**	*e*P	**P**	**05 11 20.0**	**-2.3**
LZH	**Lanzhou**	**91.48**	**35**	*e*P	**P**	**05 11 26.3**	**+0.8**
LZH				pP	pP	05 11 31.6	+2.8
LZH				sP	sP	05 11 33.3	+3.3
LZH				PP	PP	05 15 03.3	+0.8
LZH				SKS		05 21 57.3	
LZH				S	S	05 22 25.4	+0.3
LZH				sS	sS	05 22 28.8	-1.8
LZH				SS	SS	05 28 28.0	-1.4
LZH				pmax	pmax		
	comp=Z,47nm,1.3s,mb5.7						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=N,830nm,17.7s						
LZH				LR	LR		
	comp=Z,950nm,19.0s,MS5.2						
CN2	**Changchun**	**91.54**	**17**	*e*P	**P**	**05 11 24.4**	**-1.2**
CN2				*es*P	sP	05 11 31.5	+1.4
CN2				PP	PP	05 15 01.9	-0.6
CN2				*e*S	S	05 22 18.8	-6.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.3						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=Z,300nm,20.0s,MS4.7						
MDJ	**Mudanjiang**	**91.58**	**14**	P	**P**	**05 11 24.3**	**-1.4**
MDJ				pP	pP	05 11 27.8	-1.3
MDJ				sP	sP	05 11 29.0	-1.3
MDJ				PP	PP	05 14 58.5	-4.3
MDJ				S	S	05 22 20.5	-5.1
MDJ				SS	SS	05 28 25.4	-4.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,75nm,6.9s						
MDJ				LR	LR		
	comp=N,310nm,27.1s,MS4.7						
MDJ				LR	LR		
	comp=E,170nm,27.1s,MS4.7						
MDJ				LR	LR		
	comp=Z,250nm,34.5s						
MDJ	**Mudanjiang**	**91.58**	**14**	PFAKE		05 11 40.0	+14
MDJ				LR	LR		
	comp=Z,227nm,20.0s,MS4.6						
HYB	**Hyderabad**	**91.80**	**65**	*i*P	**P**	**05 11 27.0**	**-0.2**
BJI	**Beijing**	**92.59**	**25**	P	**P**	**05 11 23.0**	**-7.5**
BJI				S	SKSac	05 22 11.3	+7.1
BJI				SKS		05 23 45.4	
BJI				SS	SS	05 28 55.4	+10
BJI				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.5						
BJI				LR	LR		
	comp=N,380nm,14.4s,MS5.1						
BJI				LR	LR		
	comp=E,280nm,13.9s,MS5.1						
BJI				LR	LR		
	comp=Z,380nm,32.6s						
BJT	**Baijiatuau**	**92.60**	**25**	PFAKE		05 11 40.0	+9.4
BJT				LR	LR		
	comp=Z,304nm,20.0s,MS4.8						
VLA	**Vladivostok**	**93.43**	**13**	||*e*P	**P**	**05 11 31.9**	**-2.4**
VLA				pmax	pmax		
	comp=Z,74nm,1.0s,mb6.1						
VLA	**Vladivostok**	**93.43**	**13**	*e*P	**P**	**05 11 31.9**	**-2.4**
	comp=Z,74nm,1.0s,mb6.1						
ABPO	**Ambohimpanom**	**93.95**	**112**	PFAKE		05 11 50.0	+13
ABPO				LR	LR		
	comp=Z,561nm,20.0s,MS5.0						
SHL	**Shillong**	**94.04**	**50**	*ex*	x	05 11 38.0	
ERM	**Erimo**	**95.80**	**5**	PFAKE		05 12 00.0	+15
ERM				LR	LR		
	comp=Z,296nm,20.0s,MS4.8						
CD2	**Chengdu**	**95.82**	**38**	P	**P**	**05 11 44.6**	**-0.9**
CD2				pP	pP	05 11 49.4	+0.5
CD2				sP	sP	05 11 51.6	+1.6
CD2				PP	PP	05 15 38.1	+1.6
CD2				SKS		05 22 18.8	
CD2				S	S	05 22 57.4	-6.1
CD2				sS	sS	05 23 05.6	-3.5
CD2				SS	SS	05 29 30.3	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.5						
CD2				pmax	pmax		
	comp=Z,90nm,6.1s						
CD2				LR	LR		
	comp=N,700nm,17.8s						
CD2				LR	LR		
	comp=Z,730nm,20.2s,MS5.2						
INCN	**Inchon**	**97.83**	**18**	PFAKE		05 12 10.0	+16
INCN				LR	LR		
	comp=Z,373nm,21.0s,MS4.8						
KSRS	**Korea Array**	**98.15**	**17**	P	**P**	**05 11 54.8**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.7,baz=347,slow=5.5,SNR=8.8						
KSRS				LR	LR	05 57 12.7	
	comp=Z,178nm,18.7s,MS4.6,baz=152,slow=36						
ENH	**Enshi**	**98.88**	**34**	PFAKE		05 12 10.0	+11
ENH				LR	LR		
	comp=Z,676nm,21.0s,MS5.1						
KMI	**Kunming**	**100.18**	**42**	P	Pdif	05 12 05.1	+0.1
KMI				pP		05 12 08.3	
KMI				sP		05 12 09.6	
KMI				PP	PP	05 16 11.9	+1.8
KMI				S	Sdif	05 23 34.8	-5.7
KMI				SS	SS	05 30 31.8	-1.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,84nm,5.6s						
KMI				LR	LR		
	comp=N,310nm,23.3s						
KMI				LR	LR		
	comp=E,240nm,17.8s						
KMI				LR	LR		
	comp=Z,620nm,21.9s,MS5.1						
NJ2	**Nanjing**	**100.77**	**26**	*e*P	Pdif	05 12 09.0	+1.4
NJ2				pP		05 12 12.6	
NJ2				S	Sdif	05 23 42.0	-3.3
NJ2				sS		05 23 51.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,60nm,5.2s						
NJ2				LR	LR		
	comp=N,340nm,18.2s,MS5.0						
NJ2				LR	LR		
	comp=E,350nm,21.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,430nm,25.2s,MS4.9						
MAJO	**Matsushiro**	**100.78**	**9**	PFAKE		05 12 20.0	+12
MAJO				LR	LR		
	comp=Z,186nm,20.0s,MS4.6						
GYA	**Guiyang**	**100.94**	**38**	P	Pdif	05 12 08.0	-0.4
GYA				PP	PP	05 16 17.8	+2.1
GYA				SKS		05 22 46.5	
GYA				S	Sdif	05 23 41.0	-5.7
GYA				SS	SS	05 30 42.5	-1.0
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,170nm,5.6s						
GYA				LR	LR		
	comp=N,810nm,20.3s,MS5.3						
GYA				LR	LR		
	comp=E,740nm,21.2s,MS5.3						
GYA				LR	LR		
	comp=Z,960nm,19.4s,MS5.3						
CHTO	**Chiang Mai**	**103.35**	**49**	PFAKE		05 12 30.0	+11
CHTO				LR	LR		
	comp=Z,250nm,19.0s,MS4.8						
MIDW	**Midway**	**103.39**	**330**	PFAKE		05 12 30.0	+11
MIDW				LR	LR		
	comp=Z,686nm,19.0s,MS5.2						
CM31	**Chiang Mai Arr**	**103.64**	**49**	PFAKE		05 12 30.0	+10
CM31				LR	LR		
	comp=Z,284nm,20.0s,MS4.8						
TATO	**Taipei**	**108.17**	**27**	PFAKE		05 17 00.0	+13
TAT

QIZ LR LR
comp=Z,350nm,17.4s,MS5.0
QIZ Qiongzhong 108.80 40 PFAKE 05 17 00.0 +11
QIZ LR LR
comp=Z,315nm,22.0s,MS4.8
TAOE Nuku Hiva Isla 110.40 277 *e*SS SS 05 32 58.1 +3.4
comp=Z,127nm,24.0s
TAOE *e*LR LR 05 49 32.3
comp=Z,372nm,23.3s
KULM Kulim 115.11 56 *e*PKP PKiKP 05 17 00.2 -0.5
WAKE Wake Island 116.63 342 PFAKE 05 17 10.0 +6.5
WAKE LR LR
comp=Z,701nm,21.0s,MS5.2
PPT Papeete 123.00 276 *e*LR LR 05 55 23.1
comp=Z,308nm,26.0s
KKM Kota Kinabalu 123.09 41 *e*PKPdf PKPdf 05 17 16.6 +0.5
KKM Kota Kinabalu 123.09 41 *e*PKIKP PKPdf 05 17 16.6 +0.5
KSM Kuching 123.86 49 PFAKE 05 17 30.0 +12
KSM LR LR
comp=Z,181nm,21.0s,MS4.7
DAV Davao City (W) 126.17 30 PFAKE 05 17 30.0 +8.0
DAV LR LR
comp=Z,305nm,21.0s,MS5.0
MAW Mawson 129.58 150 *e*P PKPdf 05 17 27.2 +0.5
comp=Z,8.3nm,0.9s
MAW Mawson 129.58 150 PKP PKPdf 05 17 26.8 +0.1
comp=Z,8.7nm,0.8s,baz=303,slow=4.1,SNR=9.3
MAW Mawson 129.58 150 *e*PKPdf PKPdf 05 17 27.3 +0.6
MAW Mawson 129.58 150 *e*PKIKP PKPdf 05 17 27.3 +0.6
QSPA South Pole Qui 132.26 180 PKP PKPdf 05 17 31.7 +0.2
comp=Z,12nm,0.9s,baz=228,slow=1.5,SNR=22
QSPA South Pole Qui 132.26 180 *e*PKPdf PKPdf 05 17 32.4 +0.9
QSPA LR LR
comp=Z,344nm,21.0s,MS5.0
QSPA South Pole Qui 132.26 180 *e*PKIKP PKPdf 05 17 32.4 +0.9
MSVF Nonsavu 145.43 307 *e*PKPdf PKPdf 05 17 58.1 +0.8
MSVF Nonsavu 145.43 307 *e*PKIKP PKPdf 05 17 58.1 +0.8
KAKA Kakadu 146.94 32 *e*PKP PKPdf 05 18 00.4 +0.4
comp=Z,42nm,0.8s
KAKA Kakadu 146.94 32 *e*PKPdf PKPdf 05 17 59.6 -0.4
KAKA *e*PKPbc PKPbc 05 18 01.1 -0.7
MBWA Marble Bar 147.30 59 *e*P PKPbc 05 18 02.4 -0.3
MBWA Marble Bar 147.30 59 *e*PKPdf PKPdf 05 18 01.1 +0.7
MBWA *e*PKPbc PKPbc 05 18 02.4 -0.3
MBWA *e*PKPab PKPab 05 18 04.8 +0.2
CASY Casey 147.92 151 *e*P PKPbc 05 18 04.0 +0.9
CASY Casey 147.92 151 *e*PKPbc PKPbc 05 18 03.8 +0.8
CASY LR LR
comp=Z,437nm,20.0s,MS5.2
CASY Casey 147.92 151 *e*PKPbc PKPbc 05 18 03.8 +0.7
KNA Kununurra 148.05 40 *e*P PKPbc 05 18 05.0 +0.1
comp=Z,48nm,1.0s
FITZ Fitzroy Crossi 148.43 47 *e*PKP PKPbc 05 18 05.2 -0.7
comp=Z,35nm,1.1s
FITZ Fitzroy Crossi 148.43 47 PKPbc PKPbc 05 18 05.3 -0.6
comp=Z,20nm,1.0s,baz=357,slow=5.7,SNR=14
FITZ Fitzroy Crossi 148.43 47 *e*PKPbc PKPbc 05 18 05.5 -0.3
FITZ Fitzroy Crossi 148.43 47 *e*PKPbc PKPbc 05 18 05.6 -0.3
MORW Morawa 149.99 75 *e*P PKPbc 05 18 08.9 -0.6
COEN Coen 151.16 13 *e*PKP PKPbc 05 18 12.3 -0.3
COEN Coen 151.16 13 *e*PKPbc PKPbc 05 18 12.2 -0.4
COEN *e*PKPab PKPab 05 18 19.9 -0.4
WRAB Tennant Creek 154.23 34 *e*PKIKP PKPdf 05 18 11.9 +0.8
WRAB *e* 05 18 18.9
WRAB *e* 05 18 32.7
WRAB MLR MLR
comp=Z,261nm,19.0s,MS5.1
DZM Mont Dzumac 155.26 320 *e*LR LR 06 10 24.8
comp=Z,211nm,28.1s
ASAR Alice Springs 157.29 40 PKP PKPdf 05 18 14.3 -0.8
comp=Z,1.4nm,1.2s,baz=338,slow=2.0,SNR=6.7
ASAR PKPab PKPab 05 18 46.0 -0.2
comp=Z,3.7nm,0.8s,baz=329,slow=4.0,SNR=9.4
ASAR Alice Springs 157.29 40 PKIKP PKPdf 05 18 14.3 -0.8
CTA Charters Tower 157.61 8 PKP PKPdf 05 18 15.3 -0.3
comp=Z,15nm,0.5s,baz=35,slow=19,SNR=12
CTA Charters Tower 157.61 8 PKP PKPdf 05 18 15.3 -0.3
CTA Charters Tower 157.61 8 PKIKP PKPdf 05 18 15.3 -0.3
CTAO Charters Tower 157.61 8 *e*PKPdf PKPdf 05 18 16.2 +0.6
CTAO *e*PKPab PKPab 05 18 48.0 +0.5
CTAO LR LR
comp=Z,388nm,20.0s,MS5.2
URZ Urewera 158.57 272 PKP PKPdf 05 18 15.7 -0.5
comp=Z,15nm,0.8s,baz=1.0,slow=3.8,SNR=6.2
URZ Urewera 158.57 272 PKIKP PKPdf 05 18 15.7 -0.5

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*ISCJB **24** 05:05:28.4±1.6, 17°.7S±0°.4×178°.9W±0°.3, h570km±15km, mb3.5/7, Error ellipse: s-maj=68.7km s-min=21.6km az=147.9*
*NEIC **24** 05:05:28.9±1.2, 17°.67S×178°.81W, h568km±10km, mb3.6/2, Error ellipse: s-maj=48.6km s-min=15.7km az=148.0*
*IDC **24** 05:05:29.8±6.2, 17°.81S×178°.76W, h578km±73km, mb3.1/6, mb1 3.4/6, mb1mx3.2/14, mbtmp3.1/6, Error ellipse: s-maj=58.1km s-min=27.1km az=149.0*
ISC 24 05:05:29.0±1.7, 17.7S±0.4×178.8W±0.3, h565km±15km, n14, σ0.42/10, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.02**	**270**	*e*Pn	**P**	**05 06 45.3**	**0.0**
STKA	**Stephens Creek**	**38.40**	**241**	P	**P**	**05 12 02.5**	**-0.3**
	2.1nm,0.6s,mb3.8,baz=92,slow=10,SNR=6.9						
STKA	**Stephens Creek**	**38.40**	**241**	*e*P	**P**	**05 12 03.4**	**+0.6**
	0.4nm,0.6s,mb3.1						
WRAB	**Tennant Creek**	**44.30**	**259**	*e*P	**P**	**05 12 49.4**	**-0.1**
	5.5nm,1.2s,mb4.0						
ASAR	**Alice Springs**	**44.49**	**254**	P	**P**	**05 12 51.0**	**-0.1**
	5.7nm,0.5s,mb4.3,baz=89,slow=8.2,SNR=80						
PETK	**Petropavlovsk-**	**73.42**	**345**	P	**P**	**05 16 03.6**	**-0.3**
	1.4nm,0.8s,mb3.5,baz=113,slow=8.1,SNR=4.3						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**05 16 37.8**	**0.0**
	0.6nm,0.7s,mb3.0,baz=226,slow=8.8,SNR=4.5						
TXAR	**Lajitas Array**	**86.20**	**58**	P	**P**	**05 17 11.4**	**+0.1**
	0.4nm,0.7s,mb3.2,baz=230,slow=5.3,SNR=6.5						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**05 17 16.4**	**-0.6**
	0.4nm,0.6s,mb3.2,baz=163,slow=1.5,SNR=3.7						
INK	**Inuvik**	**91.81**	**15**	P	**P**	**05 17 37.4**	**+0.9**
	baz=233,slow=9.7						
BVAR	**Borovoye Array**	**116.48**	**321**	PKP	PKPdf	05 23 07.4	-1.4
	0.5nm,0.3s,baz=60,slow=5.7,SNR=4.2						
BRTR	**Keskin Array B**	**144.41**	**315**	PKP	PKPdf	05 24 00.0	-1.5
	0.5nm,0.6s,baz=109,slow=3.0,SNR=4.6						
GERES	**GERESS Array B**	**147.35**	**345**	PKPbc	PKPbc	05 24 09.5	0.0
	0.8nm,0.5s,baz=27,slow=3.6,SNR=9.5						
DAVOX	**Davos/Dischmat**	**150.16**	**348**	PKPbc	PKPbc	05 24 16.1	-0.3
	2.2nm,0.5s,baz=358,slow=11,SNR=4.0						

IDC 24 05:06:24.0±4.4, 0°.26S×12°.81E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.6/24, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=101.3km s-min=37.9km az=5.0, Gabon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**17.28**	**321**	P	Pn	05 10 27.2	+0.3
	0.2nm,0.3s,baz=146,slow=13,SNR=16						
KIC	**Kosan Boka**	**18.70**	**291**	*e*P	Pn	05 10 45.0	+0.5
	16nm,0.8s						
DBIC	**Dimbokro**	**18.92**	**292**	P	Pn	05 10 46.7	-0.4
	0.2nm,0.3s,baz=121,slow=15,SNR=10.0						
LIC	**Lamto**	**18.93**	**290**	*e*P	Pn	05 10 47.4	+0.2
	60nm,1.7s						
TIC	**Toumodi**	**19.06**	**291**	*e*P	Pn	05 10 49.0	+0.2
	5.2nm,0.2s						
GERES	**GERESS Array B**	**48.91**	**1**	P	P	05 15 12.9	+1.3
	0.1nm,0.3s,baz=174,slow=11,SNR=3.4						
HFS	**Hagfors**	**60.22**	**1**	P	P	05 16 33.8	+0.1
	0.4nm,0.3s,baz=180,slow=6.9,SNR=5.5						
FINES	**FINESS Array B**	**62.37**	**7**	P	P	05 16 47.4	-0.8
	1.7nm,0.9s,baz=193,slow=5.9,SNR=4.9						
ARCES	**ARCESS Array B**	**70.19**	**5**	P	P	05 17 37.5	-0.7
	3.0nm,1.1s,baz=207,slow=5.8,SNR=5.1						
MKAR	**Makanchi Array**	**76.26**	**41**	P	P	05 18 15.2	+0.6
	0.3nm,0.4s,baz=239,slow=5.2,SNR=6.0						

IDC 24 05:11:06.9±3.1, 23°.07S×114°.73W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/13, mbtmp3.5/4, Error ellipse: s-maj=102.9km s-min=38.8km az=35.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**44.24**	**90**	P	P	05 19 19.1	+0.7
	0.7nm,0.6s,baz=275,slow=11,SNR=7.8						
NVAR	**Mina Array Bea**	**61.27**	**357**	P	P	05 21 25.4	+1.6
	0.2nm,0.5s,baz=186,slow=10.0,SNR=3.6						
PDAR	**Pinedale Array**	**65.68**	**4**	P	P	05 21 52.4	-0.5
	0.2nm,0.5s,baz=156,slow=9.4,SNR=3.7						
YKA	**Yellowknife Ar**	**85.27**	**0**	P	P	05 23 44.5	-0.4
	0.4nm,0.9s,baz=181,slow=3.9,SNR=5.3						
KURK	**Kurchatov**	**150.51**	**343**	PKPbc	PKPbc	05 31 00.3	0.0
	0.2nm,0.4s,baz=37,slow=2.4,SNR=2.4						

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*ISCJB **24** 06:01:14.0±2.1, 19°.2S±0°.2×175°.8W±0°.2, h185km±23km, mb3.9/6, Error ellipse: s-maj=35.6km s-min=18.7km az=138.6*
*NEIC **24** 06:01:15.3±1.5, 19°.17S×175°.75W, h189km±14km, mb4.5/4, Error ellipse: s-maj=24.6km s-min=12.0km az=134.0*
*IDC **24** 06:01:15.7±2.7, 19°.14S×175°.73W, h189km±25km, mb3.6/6, mb1 3.8/7, mb1mx3.5/17, mbtmp3.6/7, Error ellipse: s-maj=31.2km s-min=16.0km az=138.0*
ISC 24 06:01:15.1±1.9, 19.2S±0.2×175.8W±0.2, h182km±21km, n17, σ0.45/14, mb3.9/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.04**	**283**	*e*Pn	**Pn**	**06 02 52.4**	**+10**
	16nm,0.4s						
AFI	**Afiamalu**	**6.48**	**37**	P	**Pn**	**06 02 48.4**	**-0.2**
	2.1nm,0.3s,baz=135,slow=17,SNR=3.8						
AFI				S	**Sn**	**06 03 55.4**	**-6.9**
	7.2nm,0.3s,baz=51,slow=22,SNR=9.7						
AFI	**Afiamalu**	**6.48**	**37**	*e*Pn	**Pn**	**06 02 48.5**	**0.0**
AFI				S	**Sn**	**06 03 55.4**	**-6.9**
URZ	**Urewera**	**20.00**	**197**	P	**P**	**06 05 34.4**	**+0.7**
	5.6nm,0.4s,baz=30,slow=5.8,SNR=9.2						
URZ	**Urewera**	**20.00**	**197**	*e*P	**P**	**06 05 33.3**	**-0.3**
	7.3nm,0.6s						
CTA	**Charters Tower**	**35.73**	**262**	P	**P**	**06 07 57.5**	**+0.8**
	3.3nm,0.4s,mb4.4,baz=78,slow=8.5,SNR=1.8						
WRAB	**Tennant Creek**	**46.87**	**260**	*e*P	**P**	**06 09 26.6**	**-0.7**
	53nm,2.0s,mb4.8						
ASAR	**Alice Springs**	**46.88**	**255**	P	**P**	**06 09 27.1**	**-0.2**
	3.9nm,0.6s,mb4.2,baz=88,slow=8.3,SNR=50						
NVAR	**Mina Array Bea**	**78.63**	**42**	P	**P**	**06 12 57.0**	**+0.3**
	0.7nm,0.7s,mb3.4,baz=224,slow=9.1,SNR=6.4						
MAW	**Mawson**	**83.51**	**199**	P	**P**	**06 13 21.9**	**-0.2**
	2.2nm,0.8s,mb4.0,baz=117,slow=4.5,SNR=3.1						
MAW	**Mawson**	**83.51**	**199**	*e*P	**P**	**06 13 21.7**	**-0.4**
	1.0nm,1.1s,mb3.5						
TXAR	**Lajitas Array**	**84.57**	**57**	P	**P**	**06 13 28.2**	**0.0**
	0.2nm,0.6s,mb3.0,baz=248,slow=9.6,SNR=3.4						
ARCES	**ARCESS Array B**	**127.98**	**351**	PKP	PKPdf	06 19 57.3	-1.2
	4.6nm,1.1s,baz=22,slow=1.3,SNR=7.4						
FINES	**FINESS Array B**	**135.06**	**345**	PKP	PKPdf	06 20 12.2	0.0
	2.5nm,1.0s,baz=333,slow=11,SNR=3.9						
CLL	**Collm**	**147.20**	**350**	*i* PKPbc	PKPbc	06 20 35.9	-0.7
CLL				*i* PKPab	PKPab	06 20 38.0	-0.7
CLL				Lm		06 35 00.0	
	comp=Z,100nm,18.9s						
BRTR	**Keskin Array B**	**147.45**	**315**	PKPbc	PKPbc	06 20 36.0	-1.7
	comp=Z,0.5nm,0.6s,baz=116,slow=3.4,SNR=3.2						
MMAI	**Mount Meron Ar**	**148.93**	**303**	PKPbc	PKPbc	06 20 41.9	+0.1
	comp=Z,0.9nm,0.4s,baz=62,slow=8.8,SNR=4.3						

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*BJI **24** 06:26:20.8, 42°.00S×72°.35W, h10km, mB5.0/7, Ms5.2/9, Ms7 5.0/10*
*IDC **24** 06:26:21.9±0.6, 42°.06S×72°.06W, h0km, mb4.8/17, mb1 4.8/19, mb1mx4.7/23, mbtmp4.7/19, ML4.1/2, MS4.0/10, Ms1 4.0/10, ms1mx3.9/22, Error ellipse: s-maj=24.8km s-min=14.7km az=78.0*
*ISCJB **24** 06:26:22.8±0.2, 41°.96S±0°.05×72°.07W±0°.05, h10km, mb4.9/72, MS4.0/7, Error ellipse: s-maj=7.5km s-min=4.7km az=34.0*
*GUC **24** 06:26:23.3±0.6, 41°.98S×72°.22W, h14km±16km, ML4.6*
*NEIC **24** 06:26:23.6±0.2, 42°.03S×72°.21W, h10km, mb5.0/60, Error ellipse: s-maj=9.0km s-min=6.8km az=66.0*
NEIC Felt [III] in the Esquel area, Argentina.
*MOS **24** 06:26:26.9±1.0, 41°.83S×71°.86W, h37km, mb5.1/18, Error ellipse: s-maj=26.3km s-min=10.5km az=98.5*
ISC 24 06:26:24.6±0.2, 41.96S±0°.05×72°.16W±0°.06, h10km, n309, σ0.75/268, mb4.9/72, MS4.0/7, 75C-64D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.19**	**284**	↑*i* P	**Pg**	**06 26 27.3**	**-1.3**
HOCH				*i* S	**Sg**	**06 26 30.1**	**-1.2**
HOCH				AML	AML	06 26 36.4	
	comp=N,337μm,0.7s						
PMCH	**Puerto Montt**	**0.72**	**310**	↑*i* P	**Pg**	**06 26 37.0**	**-1.4**
PMCH				*i* S	**Sg**	**06 26 47.3**	**-0.6**
PMCH				AML	AML	06 26 48.8	
	comp=N,1190μm,0.0s						
OSCH	**Osorno**	**1.56**	**332**	↓*i* P	**Pn**	**06 26 51.7**	**-0.6**
OSCH				*i* S	**Sn**	**06 27 12.6**	**+0.1**
OSCH				AML	AML	06 27 24.5	
	comp=N,2μm,0.5s						
VLCH	**Valdivia**	**2.30**	**339**	*e*P	**Pn**	**06 27 03.2**	**+0.7**
VLCH				*e*S	**Sn**	**06 27 34.5**	**+3.7**
TMU	**Temuco**	**3.23**	**354**	↓*i* P	**Pn**	**06 27 20.1**	**+4.7**
TMU				*e*S	**Sn**	**06 28 02.6**	**+8.7**
TMU				AML	AML	06 28 07.8	
	comp=N,137nm,0.5s						
TRQA	**Tornquist**	**8.73**	**67**	*e*Pn	**Pn**	**06 28 33.7**	**+2.9**
CFAA	**Coronel Fontan**	**10.80**	**18**	Pn	**Pn**	**06 29 00.2**	**+1.1**
	comp=N,0.3nm,0.3s,baz=206,slow=13,SNR=54						
CFAA				Lg		06 32 21.8	
	comp=N,0.0nm,0.3s,baz=303,slow=13,SNR=3.6						
CFAA				LR	LR	06 32 55.7	
	comp=N,134nm,21.8s,baz=206,slow=36						
USHA	**Ushuaia**	**13.12**	**170**	LR	LR	06 34 33.8	
	comp=N,2μm,18.6s,baz=330,slow=38						
EFI	**East Falkland**	**13.68**	**140**	*i* P	**Pn**	**06 29 39.1**	**+0.7**
EFI	**East Falkland**	**13.68**	**140**	*e*Pn	**Pn**	**06 29 39.5**	**+1.1**
CPUP	**Villa Florida**	**19.79**	**43**	P	**Pn**	**06 30 54.3**	**-2.2**
	comp=N,0.3nm,0.3s,baz=210,slow=11,SNR=13						
CPUP				LR	LR	06 39 26.8	
	comp=N,1μm,18.6s,baz=201,slow=40						
CPUP	**Villa Florida**	**19.79**	**43**	*e*P	**Pn**	**06 30 54.3**	**-2.2**
CPUP				pmax	pmax		
	comp=Z,51nm,0.8s						
CPUP	**Villa Florida**	**19.79**	**43**	*e*P	**Pn**	**06 30 54.3**	**-2.2**
	comp=Z,51nm,0.8s						
PMSA	**Palmer Station**	**23.33**	**171**	LR	LR	06 40 01.6	
	comp=Z,745nm,21.3s,MS4.1,baz=156,slow=35						
LPAZ	**La Paz**	**25.81**	**9**	P	**P**	**06 31 57.0**	**+1.2**
	comp=Z,46nm,0.8s,mb5.0,baz=176,slow=8.3,SNR=68						
LPAZ	**La Paz**	**25.81**	**9**	*e*P	**P**	**06 31 56.4**	**+0.5**
LPAZ				pmax	pmax		
	comp=Z,55nm,0.9s						
LPAZ	**La Paz**	**25.81**	**9**	*e*P	**P**	**06 31 56.4**	**+0.5**
	comp=Z,55nm,0.9s,mb5.1						
SIV	**San Ignacio**	**27.58**	**24**	P	**P**	**06 32 11.5**	**-0.4**
	comp=Z,15nm,0.8s,mb4.7,baz=209,slow=9.0,SNR=89						
NNA	**Nana**	**30.13**	**351**	P	**P**	**06 32 33.6**	**-0.9**
	comp=Z,2.3nm,0.3s,mb4.4,baz=184,slow=9.9,SNR=4.1						
NNA	**Nana**	**30.13**	**351**	*e*P	**P**	**06 32 33.8**	**-0.7**
	comp=Z,12nm,0.8s,mb4.7						
ATAH	**Atahualpa**	**35.24**	**349**	P	**P**	**06 33 20.3**	**+1.0**
	comp=Z,3.2nm,0.9s,mb4.7,baz=146,slow=7.3,SNR=4.5						
OTAV	**Otavalo**	**42.38**	**351**	*e*P	**P**	**06 34 20.5**	**+1.4**
	comp=Z,10nm,1.1s,mb4.4						
OTAV				*e*PcP	PcP	06 36 13.0	+0.6
VNA2	**Neumayer--Watz**	**42.81**	**154**	*e*P	**P**	**06 34 20.9**	**-1.1**
ROSC	**El Rosal**	**46.63**	**357**	P	**P**	**06 34 53.7**	**+0.7**
	comp=Z,5.3nm,0.8s,mb4.5,baz=146,slow=7.3,SNR=4.4						
ROSC	**El Rosal**	**46.63**	**357**	*e*P	**P**	**06 34 54.8**	**+1.8**
RCBR	**Riachuelo**	**48.27**	**52**	*e*P	**P**	**06 35 06.4**	**+0.5**
	comp=Z,20nm,0.9s,mb5.2						
QSPA	**South Pole Qui**	**48.30**	**180**	P	**P**	**06 35 04.0**	**-1.3**
	comp=Z,8.5nm,0.9s,mb4.8,baz=159,slow=4.2,SNR=18						
QSPA	**South Pole Qui**	**48.30**	**180**	*e*P	**P**	**06 35 03.9**	**-1.4**
	comp=Z,13nm,0.9s,mb5.0						
MAIT	**Maitri**	**49.10**	**154**	*e*P	**P**	**06 35 10.9**	**-0.7**
MAIT				*e*E		06 35 19.8	
SDV	**Santo Domingo**	**50.61**	**2**	P	**P**	**06 35 22.4**	**-1.3**
	comp=Z,9.9nm,0.8s,mb4.8,baz=239,slow=2.7,SNR=16						
SDV	**Santo Domingo**	**50.61**	**2**	*e*P	**P**	**06 35 22.6**	**-1.0**
	comp=Z,13nm,0.9s,mb4.8						
PCRV	**Puerto La Cruz**	**52.33**	**9**	P	**P**	**06 35 36.6**	**+0.1**
	comp=Z,28nm,1.0s,mb5.2,baz=164,slow=2.9,SNR=7.9						
RKT	**Rikitea**	**54.98**	**269**	*e*LR	LR	06 51 59.6	
	comp=Z,341nm,40.0s						
SBA	**Scott Base**	**55.30**	**193**	*e*P	**P**	**06 35 58.2**	**+0.7**
SBA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
SBA	**Scott Base**	**55.30**	**193**	*e*P	**P**	**06 35 58.2**	**+0.7**
	comp=Z,3.0nm,0.7s,mb4.4						
TGUH	**Tegucigalpa,Un**	**57.45**	**343**	*e*P	**P**	**06 36 12.9**	**-0.6**
	comp=Z,26nm,0.7s,mb5.4						
APG	**El Apazote**	**59.14**	**339**	P	**P**	**06 36 24.3**	**-1.1**
	comp=Z,13nm,0.9s,mb5.0,baz=155,slow=6.7,SNR=12						
APG				LR	LR	06 56 19.7	
	comp=Z,56nm,21.0s,MS3.7,baz=240,slow=30						
OBIP	**Obispado Ponce**	**59.91**	**6**	*e*P	**P**	**06 36 29.9**	**-0.8**
	comp=Z,42nm,1.0s,mb5.4						
CELP	**Cerrillos**	**59.95**	**6**	*e*P	**P**	**06 36 29.9**	**-1.0**
SJG	**San Juan**	**60.02**	**7**	P	**P**	**06 36 30.6**	**-0.8**
	comp=Z,28nm,0.4s,mb5.7,baz=108,slow=3.2,SNR=3.4						
GTBY	**Guantanamo Bay**	**61.63**	**357**	*e*P	**P**	**06 36 41.5**	**-0.8**
	comp=Z,28nm,0.6s,mb5.6						
CMIG	**Matias Romero**	**62.39**	**335**	P	**P**	**06 36 46.9**	**-0.6**
	comp=Z,4.8nm,0.7s,mb4.7,baz=122,slow=15,SNR=5.8						
CMIG				LR	LR	06 57 06.0	
	comp=Z,129nm,21.3s,MS4.1,baz=9.7,slow=30						
TEIG	**Tepich**	**63.64**	**343**	LR	LR	06 57 57.0	
	comp=Z,99nm,21.5s,MS4.0,baz=133,slow=30						
MAW	**Mawson**	**65.61**	**163**	LR	LR	07 05 43.6	
	comp=Z,212nm,19.9s,MS4.3,baz=224,slow=36						
PPT	**Papeete**	**69.22**	**265**	*e*LR	LR	06 58 28.9	
	comp=Z,302nm,26.2s						
PPT	**Papeete**	**69.22**	**265**	LR	LR	06 58 41.8	
	comp=Z,60nm,18.6s,MS3.9,baz=147,slow=28						
NHSC	**New Hope**	**75.06**	**353**	*e*P	**P**	**06 38 05.6**	**-0.5**
	comp=Z,44nm,1.0s,mb5.3						
GOGA	**Godfrey**	**75.71**	**350**	*e*P	**P**	**06 38 08.9**	**-1.0**
GOGA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
GOGA	**Godfrey**	**75.71**	**350**	*e*P	**P**	**06 38 08.9**	**-1.0**
	comp=Z,12nm,0.8s,mb4.9						
LRAL	**Lakeview Retre**	**75.86**	**347**	*e*P	**P**	**06 38 10.6**	**-0.2**
	comp=Z,14nm,0.6s,mb5.1						
LRAL				*e*		06 38 36.6	
NATX	**Nacogdoches**	**76.22**	**340**	*e*P	**P**	**06 38 13.2**	**+0.3**
	comp=Z,30nm,0.6s,mb5.4						
JSC	**Jenkinsville**	**76.32**	**352**	*e*P	**P**	**06 38 12.5**	**-0.9**
JCT	**Junction City**	**76.45**	**336**	*e*P	**P**	**06 38 14.2**	**0.0**
JCT				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
JCT	**Junction City**	**76.45**	**336**	*e*P	**P**	**06 38 14.2**	**0.0**
	comp=Z,29nm,0.8s,mb5.3						
628A	**Black Gap, Mar**	**76.53**	**333**	⇑P	**P**	**06 38 14.8**	**+0.1**
	baz=77,SNR=16						
BOSA	**Boshof**	**76.55**	**116**	P	**P**	**06 38 13.4**	**-1.7**
	comp=Z,5.8nm,0.8s,mb4.5,baz=200,slow=4.9,SNR=7.6						
BOSA	**Boshof**	**76.55**	**116**	*e*P	**P**	**06 38 12.8**	**-2.3**
BOSA				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
BOSA	**Boshof**	**76.55**	**116**	*e*P	**P**	**06 38 12.8**	**-2.2**
	comp=Z,20nm,1.4s,mb4.8						
TXAR	**Lajitas Array**	**76.66**	**332**	P	**P**	**06 38 15.5**	**+0.1**
	comp=Z,6.0nm,0.9s,mb4.5,baz=153,slow=8.3,SNR=62						
TXAR	**Lajitas Array**	**76.66**	**332**	P	**P**	**06 38 15.5**	**+0.1**
627A	**Terlingua Ranc**	**76.67**	**332**	P	**P**	**06 38 15.3**	**-0.1**
	baz=77,SNR=9.0						
CNNC	**Cliffs of the**	**77.00**	**355**	*e*P	**P**	**06 38 17.0**	**-0.2**
	comp=Z,10.0nm,0.7s,mb4.8						
626A	**Big Bend Ranch**	**77.03**	**332**	⇓P	**P**	**06 38 17.9**	**+0.5**
	baz=77,SNR=7.2						
528A	**Cox Ranch, San**	**77.12**	**333**	⇓P	**P**	**06 38 17.6**	**-0.3**
	baz=78,SNR=11						
TSUM	**Tsumeb**	**77.24**	**104**	LR	LR	07 09 49.2	
	comp=Z,98nm,18.7s,MS4.2,baz=140,slow=34						
527A	**Woodward Ranch**	**77.39**	**332**	⇓P	**P**	**06 38 19.4**	**-0.1**
	baz=78,SNR=13						
526A	**Mary Lane Ranc**	**77.47**	**332**	⇑P	**P**	**06 38 20.1**	**+0.1**
	baz=78,SNR=8.5						
428A	**Kincaid Ranch,**	**77.60**	**333**	⇓P	**P**	**06 38 20.6**	**-0.1**
	baz=78						
OXF	**Oxford**	**77.72**	**345**	*e*P	**P**	**06 38 19.8**	**-1.5**
OXF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
OXF	**Oxford**	**77.72**	**345**	*e*P	**P**	**06 38 19.8**	**-1.4**
	comp=Z,21nm,1.0s,mb5.0						
SWET	**Sewanee**	**77.83**	**348**	*e*P	**P**	**06 38 21.2**	**-0.6**
CPCT	**Cooper Cave**	**77.86**	**350**	*e*P	**P**	**06 38 21.2**	**-0.8**
DBIC	**Dimbokro**	**77.94**	**70**	P	**P**	**06 38 20.5**	**-2.5**
	comp=Z,3.4nm,0.7s,mb4.4,baz=184,slow=4.0,SNR=3.8						
DBIC	**Dimbokro**	**77.94**	**70**	P	**P**	**06 38 20.5**	**-2.5**
PLAL	**Pickwick Lake**	**77.94**	**347**	*e*P	**P**	**06 38 21.3**	**-1.2**
	comp=Z,12nm,0.8s,mb4.9						
427A	**Hayter Ranch,**	**77.96**	**333**	⇑P	**P**	**06 38 22.5**	**-0.1**
	baz=78,SNR=6.9						
426A	**McDonald Obser**	**78.01**	**332**	⇓P	**P**	**06 38 22.9**	**-0.1**
	baz=78,SNR=9.4						
328A	**Wristen Ranch,**	**78.25**	**334**	⇑P	**P**	**06 38 23.9**	**-0.4**
	baz=79						

baz=82,SNR=5.2
Y24A Capitan 81.46 333 ⇓P **P 06 38 42.3 +0.7**
baz=82
X26A CR and CF Fran 81.48 334 ⇓P **P 06 38 41.9 +0.2**
baz=82
CCM Cathedral Cave 81.51 345 *e*P **P 06 38 40.9 -0.9**
CCM pmax pmax
comp=Z,21nm,0.7s,mb5.2
CCM Cathedral Cave 81.51 345 *e*P **P 06 38 40.9 -0.9**
comp=Z,21nm,0.7s,mb5.2
MCWV Mont Chateau 81.53 354 *e*P **P 06 38 40.8 -1.1**
comp=Z,7.6nm,0.9s,mb4.6
MVL Millersville 81.66 357 *e*P **P 06 38 42.9 +0.4**
Y23A Lovelace Mesa, 81.68 332 ⇑P **P 06 38 43.7 +0.9**
baz=82,SNR=7.0
W27A Bowe Ranch, En 81.71 335 ⇑P **P 06 38 42.6 -0.3**
baz=82
BLO Bloomington 81.80 349 *e*P **P 06 38 41.3 -1.9**
BLO *e* 06 38 58.3
BLO pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BLO Bloomington 81.80 349 *e*P **P 06 38 41.3 -1.9**
comp=Z,7.4nm,0.6s,mb4.8
BLO *e* 06 38 58.2
Z20A Nine Sixteen R 81.86 330 ⇓P **P 06 38 44.3 +0.6**
baz=82
W26A Owens Ranch, T 81.96 334 ⇑P **P 06 38 44.5 +0.3**
baz=82
118A Homack Ranch, 81.97 329 ⇑P **P 06 38 44.8 +0.5**
baz=82
216A Three Points, 82.00 327 ⇓P **P 06 38 44.8 +0.3**
baz=82
Y22A Socorro 82.00 331 ⇑P **P 06 38 45.0 +0.6**
baz=82
X24A Lazy VL Ranch, 82.04 333 ⇓P **P 06 38 45.6 +1.0**
baz=82,SNR=6.3
BNM Barren Site 82.08 332 *e*P **P 06 38 45.8 +1.0**
comp=Z,2.7nm,0.9s,mb4.2
117A Oracle 82.21 328 ⇑P **P 06 38 46.0 +0.4**
baz=83
Z19A T-Link Ranch, 82.28 329 ⇑P **P 06 38 46.1 +0.2**
baz=83
W25A X Bar L Ranch, 82.31 334 ⇓P **P 06 38 45.9 -0.1**
baz=83,SNR=9.9
Y21A Point of Rocks 82.33 331 ⇓P **P 06 38 47.0 +0.9**
baz=83
ACSO Alum Creek Sta 82.39 352 *e*P **P 06 38 45.6 -0.7**
comp=Z,24nm,1.0s,mb5.1
LAZ Ladron 82.49 331 *e*P **P 06 38 48.0 +1.0**
comp=Z,3.9nm,1.2s,mb4.2
Y20A Horse Springs, 82.49 330 ⇓P **P 06 38 47.8 +0.7**
baz=83
214A Organ Pipe Nat 82.52 326 ⇑P **P 06 38 47.9 +0.7**
baz=83
116A Eloy 82.59 327 ⇓P **P 06 38 48.2 +0.6**
baz=83
W24A Lazy 6 Ranch, 82.62 333 P **P 06 38 48.0 +0.4**
baz=83,SNR=6.0
V26A Tequesquite Ra 82.62 335 ⇑P **P 06 38 47.6 -0.1**
baz=83
ANMO Albuquerque 82.74 332 *e*P **P 06 38 48.6 +0.3**
ANMO pmax pmax
comp=Z,10.0nm,1.0s
ANMO Albuquerque 82.74 332 *e*P **P 06 38 48.6 +0.3**
comp=Z,9.8nm,1.0s,mb4.8
X21A Alamocita Cree 82.76 331 ⇑P **P 06 38 49.3 +0.9**
baz=83,SNR=8.2
W23A Werner Place, 82.82 333 ⇑P **P 06 38 49.6 +0.8**
baz=83,SNR=5.1
Y19A Nutrioso 82.86 330 ⇑P **P 06 38 49.9 +0.9**
baz=83
V25A Rancho No Teng 82.92 334 ⇓P **P 06 38 49.2 0.0**
baz=83
W22A Albuquerque 82.99 332 ⇑P **P 06 38 49.4 -0.2**
baz=83
U26A Atchley Ranch, 83.15 335 ⇑P **P 06 38 50.3 -0.1**
baz=84
114A Black Gap (USA 83.24 326 ⇑P **P 06 38 51.2 +0.3**
baz=84
U25A Circle Dot Ran 83.37 334 ⇑P **P 06 38 52.0 +0.5**
baz=84
ALLY Alegheny Colle 83.53 354 *e*P **P 06 38 51.0 -1.2**
HDIL Hopedale 83.58 347 *e*P **P 06 38 51.5 -1.0**
comp=Z,22nm,0.7s,mb5.4
KSU1 Kansas State U 83.69 341 *e*P **P 06 38 52.4 -0.6**
comp=Z,8.9nm,0.6s,mb5.1
V22A San Miguel Ran 83.77 332 ⇓P **P 06 38 54.8 +1.2**
baz=84,SNR=14
X17A Forest Lakes 83.79 329 ⇑P **P 06 38 55.0 +1.2**
baz=84
W19A Sanders 83.94 330 ⇓P **P 06 38 54.8 +0.3**
baz=84
V20A Brimhall 84.22 331 ⇑P **P 06 38 56.7 +0.8**
baz=85
V19A Window Rock 84.35 331 ⇓P **P 06 38 57.2 +0.6**
baz=85
X15A Humboldt 84.49 328 ⇓P **P 06 38 58.3 +1.1**
baz=85
T22A Edith 84.76 333 ⇓P **P 06 38 59.6 +1.1**
baz=85,SNR=10
V17A Tonalea, Kykot 84.92 329 ⇑P **P 06 38 59.4 0.0**
baz=85
U19A Dine' College, 84.92 331 ⇑P **P 06 38 59.5 +0.1**
baz=85,SNR=7.1
SDCO Great Sand Dun 84.95 334 *e*P **P 06 38 59.8 +0.3**
comp=Z,3.6nm,1.0s,mb4.5
X13A Yucca 85.22 327 ⇑P **P 06 39 01.3 +0.3**
baz=86
U18A Rough Rock, Ch 85.28 330 ⇑P **P 06 39 01.5 +0.3**
baz=86
T19A Beclabito 85.34 331 ⇑P **P 06 39 01.7 +0.2**
baz=86,SNR=5.9
W14A Seligman 85.46 327 ⇓P **P 06 39 03.4 +1.3**
baz=86
MVCO Mesa Verde 85.49 332 ⇑P **P 06 39 02.9 +0.7**
baz=86
PFO Pinyon Flat Ob 85.49 324 ⇓P **P 06 39 03.3 +0.9**
baz=86
BELC Belle Mtn. 85.63 325 ⇑P **P 06 39 03.9 +0.9**
baz=86
V15A Kaibab Nationa 85.63 328 ⇓P **P 06 39 03.8 +0.8**
baz=86
S21A Coal Bank Pass 85.65 332 ⇑P **P 06 39 03.9 +0.9**
baz=86
U17A Shonto 85.73 330 ⇑P **P 06 39 03.7 +0.2**
baz=86
R22A Saguache, Gunn 85.81 333 ⇓P **P 06 39 04.7 +0.9**
baz=86
V14A Boquillas Ranc 85.83 328 ⇑P **P 06 39 05.0 +1.1**
baz=86
JFWS Jewell Farm 86.04 347 *e*P **P 06 39 03.7 -1.1**
JFWS pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
JFWS Jewell Farm 86.04 347 *e*P **P 06 39 03.7 -1.2**
comp=Z,3.5nm,0.6s,mb4.8
T17A Navajo Res., N 86.14 330 ⇑P **P 06 39 06.9 +1.5**
baz=87
S19A Harvey Farm, M 86.19 331 ⇓P **P 06 39 06.2 +0.4**
baz=87
U15A North Rim 86.21 329 ⇓P **P 06 39 06.8 +1.0**
baz=87
R20A Redvale 86.32 332 ⇓P **P 06 39 07.3 +0.9**
baz=87
PV01 Paradox Valley 86.34 332 *e*P **P 06 39 06.6 +0.2**
comp=Z,478nm,1.1s
V13A Grand Canyon W 86.38 327 ⇓P **P 06 39 07.6 +1.0**
baz=87
FRNY Flat Rock 86.41 359 *e*P **P 06 39 06.4 -0.2**
S18A Hurst Farm, Bl 86.45 331 P **P 06 39 07.8 +0.8**
baz=87,SNR=7.0
HEC Hector,Ludlow 86.48 325 ⇑P **P 06 39 07.4 +0.2**
baz=87
U14A Mt Trumbull 86.55 328 ⇓P **P 06 39 08.1 +0.6**
baz=87
V12A Nelson 86.62 326 ⇑P **P 06 39 08.1 +0.3**
baz=87
PV04 Paradox Valley 86.69 332 *e*P **P 06 39 08.4 +0.2**
PV10 Paradox Valley 86.72 332 *e*P **P 06 39 08.0 -0.3**
comp=Z,93nm,0.9s,mb6.0
SMCO Snowmass 86.73 334 *e*P **P 06 39 09.5 +1.1**
comp=Z,7.5nm,1.0s,mb4.9
T15A Red Dirt Ranch 86.76 329 ⇑P **P 06 39 09.6 +1.1**
baz=87
ISCO Idaho Springs 86.86 335 *e*P **P 06 39 09.7 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
ISCO Idaho Springs 86.86 335 *e*P **P 06 39 09.7 +0.8**
comp=Z,3.6nm,1.0s,mb4.6

R18A Canyonlands Na 87.03 331 ⇑P **P 06 39 10.2 +0.3**
baz=88
TORD Torodi Ar. Bea 87.05 70 P **P 06 39 09.2 -1.3**
comp=Z,2.0nm,0.9s,mb4.3,baz=231,slow=4.0,SNR=8.8
EDW2 Edwards Air Fo 87.24 324 ⇓P **P 06 39 11.3 +0.4**
baz=88
Q19A Hogan Spring (87.32 332 ⇓P **P 06 39 12.0 +0.8**
baz=88
R17A Hanksville Air 87.36 331 ⇑P **P 06 39 11.6 +0.2**
baz=88,SNR=5.4
R16A Teasdale 87.53 330 ⇓P **P 06 39 12.7 +0.5**
baz=88
CCUT Cedar City 87.60 328 *e*P **P 06 39 13.6 +1.0**
comp=Z,6.2nm,1.1s,mb4.8
S14A Cedar City 87.71 329 ⇑P **P 06 39 14.0 +0.9**
baz=88
Q18A Rafter H Ranch 87.76 331 ⇓P **P 06 39 13.6 +0.4**
baz=88,SNR=6.2
R15A Junction 87.76 329 ⇑P **P 06 39 14.0 +0.7**
baz=88,SNR=5.3
P19A Cripple Cowboy 87.82 332 ⇑P **P 06 39 14.0 +0.4**
baz=88
SRU San Rafael 87.90 331 ⇑P **P 06 39 13.8 -0.2**
baz=88,SNR=8.5
SRU San Rafael 87.90 331 *e*P **P 06 39 14.2 +0.2**
SRU *e* 06 39 31.1
SRU pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SRU San Rafael 87.90 331 *e*P **P 06 39 14.2 +0.2**
comp=Z,7.5nm,1.0s,mb4.9
SRU *e* 06 39 31.1
Q16A Castle Valley 87.97 331 ⇓P **P 06 39 14.7 +0.4**
baz=88,SNR=9.6
MSU Marysvale 87.99 330 *e*P **P 06 39 15.1 +0.7**
O20A White River Ci 88.02 333 ⇓P **P 06 39 14.7 +0.2**
baz=88
ECSD EROS Data Cent 88.09 343 *e*P **P 06 39 14.0 -0.7**
comp=Z,17nm,0.7s,mb5.4
PHWY Pilot Hill 88.18 336 *e*P **P 06 39 15.3 +0.1**
comp=Z,4.3nm,0.8s,mb4.7
P18A Preston Nutter 88.26 332 ⇑P **P 06 39 16.4 +0.7**
baz=89
P17A Butcher Ranch, 88.30 331 ⇑P **P 06 39 16.0 +0.1**
baz=89,SNR=5.2
TMUT Trail Mountain 88.32 331 *e*P **P 06 39 16.4 +0.5**
comp=Z,6.8nm,0.8s,mb4.9
O19A Miners Draw (B 88.47 333 ⇓P **P 06 39 16.6 -0.1**
baz=89
Q15A Fillmore 88.49 330 ⇑P **P 06 39 16.7 -0.1**
baz=89
VES Vestal, Richgr 88.53 324 ⇓P **P 06 39 16.9 -0.2**
baz=89
N20A Spence Gulch, 88.66 333 ⇓P **P 06 39 18.0 +0.5**
baz=89
O18A Roosevelt 88.74 332 ⇓P **P 06 39 18.7 +0.7**
baz=89,SNR=8.2
O17A Robinson Place 88.94 331 ⇑P **P 06 39 18.9 0.0**
baz=89
P15A Leamington 88.95 330 ⇑P **P 06 39 19.1 +0.1**
baz=89
COWI Conover 88.97 348 *e*P **P 06 39 18.1 -0.7**
comp=Z,15nm,0.9s,mb5.3
M21A Separation Pea 89.06 334 ⇑P **P 06 39 19.4 0.0**
baz=90
MPU Maple Canyon 89.10 331 *e*P **P 06 39 19.2 -0.4**
comp=Z,8.8nm,1.3s,mb4.9
MPU *e* 06 39 35.8
M20A Sweetwater, Wa 89.22 334 ⇓P **P 06 39 20.1 0.0**
baz=90
DAU Daniels Canyon 89.32 331 *e*P **P 06 39 21.3 +0.7**
L21A Rawlins 89.38 335 ⇓P **P 06 39 20.6 -0.3**
baz=90
M19A Rock Springs 89.56 333 ⇓P **P 06 39 21.8 +0.1**
baz=90
L20A Wamsutter 89.73 334 ⇑P **P 06 39 22.8 +0.3**
baz=90
M18A Lyman 89.80 332 ⇓P **P 06 39 22.9 0.0**
baz=90
N16A Rees Ranch, Co 89.80 331 ⇑P **P 06 39 23.1 +0.2**
baz=90
M17A Scullys Gap (B 90.05 332 ⇓P **P 06 39 24.0 0.0**
baz=90
L19A Farson 90.16 333 ⇑P **P 06 39 24.5 0.0**
baz=91
L18A Fontenelle, Gr 90.23 333 ⇓P **P 06 39 24.5 -0.3**
baz=91
K20A Yellowstone Ra 90.32 334 ⇑P **P 06 39 24.9 -0.3**
baz=91
RSSD Black Hills 90.34 338 *e*P **P 06 39 24.0 -1.3**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
RSSD Black Hills 90.34 338 *e*P **P 06 39 24.0 -1.3**
comp=Z,3.1nm,0.9s,mb4.6
NVAR Mina Array Bea 90.36 326 P **P 06 39 25.6 0.0**
comp=Z,0.4nm,0.4s,mb4.1,baz=156,slow=5.2,SNR=4.1
HWUT Hardware Ranch 90.48 332 *e*P **P 06 39 25.7 -0.4**
comp=Z,12nm,1.0s,mb5.2
K19A Absolon Red Bu 90.63 334 ⇑P **P 06 39 26.3 -0.4**
baz=91
L16A Fish Haven 90.79 332 ⇓P **P 06 39 27.4 -0.1**
baz=91
BW06 Boulder Array 90.81 333 ⇑P **P 06 39 27.2 -0.4**
baz=91
PDAR Pinedale Array 90.81 333 P **P 06 39 27.2 -0.4**
comp=Z,3.9nm,0.9s,mb4.7,baz=142,slow=5.7,SNR=28
K18A Toltan Ranch, 90.86 333 ⇑P **P 06 39 28.2 +0.4**
baz=91
J18A Kendall Valley 91.36 333 ⇓P **P 06 39 29.7 -0.4**
baz=92
K16A Soda Springs 91.57 332 ⇑P **P 06 39 31.5 +0.5**
baz=92
J17A Brown Place, J 91.73 333 ⇑P **P 06 39 31.5 -0.3**
baz=92
I18A Diamond G Ranc 91.73 334 ⇑P **P 06 39 31.4 -0.4**
baz=92
SNOW Snow King Moun 91.84 333 *e*P **P 06 39 31.6 -0.7**
comp=Z,7.7nm,1.1s,mb5.0
LOHW Long Hollow 91.92 333 *e*P **P 06 39 32.1 -0.5**
comp=Z,2.2nm,0.8s,mb4.5
TPAW Teton Pass 91.93 333 *e*P **P 06 39 32.2 -0.5**
comp=Z,7.3nm,0.9s,mb5.0
J16A Bone 91.96 332 ⇓P **P 06 39 33.2 +0.3**
baz=92
AGMN Agassiz Refuge 92.28 344 *e*P **P 06 39 32.6 -1.5**
comp=Z,4.0nm,1.0s,mb4.7
IMW Indian Meadow 92.28 333 *e*P **P 06 39 34.5 +0.2**
comp=Z,8.6nm,1.0s,mb5.0
I14A Mackay 93.18 331 ⇑P **P 06 39 39.4 +0.9**
baz=94
J12A Stokes Ranch, 93.19 330 ⇑P **P 06 39 39.0 +0.5**
baz=94
F18A Big Timber 93.66 335 ⇑P **P 06 39 40.2 -0.4**
baz=94
MCMT McKenzie Canyo 93.75 332 *e*P **P 06 39 41.2 +0.1**
comp=Z,2.2nm,1.2s,mb4.5
H13A Challis 94.02 331 ⇓P **P 06 39 41.8 -0.6**
baz=94
BOZ Bozeman (W) 94.06 333 ⇑P **P 06 39 42.0 -0.5**
baz=94
DLMT Dillon 94.13 333 *e*P **P 06 39 42.2 -0.7**
comp=Z,6.8nm,1.3s,mb4.9
LRM Limekiln Ridge 94.49 333 *e*P **P 06 39 43.0 -1.5**
comp=Z,24nm,1.4s,mb5.4
D18A Linhart Farms, 94.84 335 ⇑P **P 06 39 45.8 -0.3**
baz=95
K05A Summer Lake 95.03 326 ⇑P **P 06 39 46.9 -0.1**
baz=96
D16A Dana Ranch, Ca 95.25 334 ⇓P **P 06 39 47.8 -0.1**
baz=96
H08A Prairie City 95.63 329 ⇓P **P 06 39 48.5 -1.2**
baz=96
C16A Fuhringer Ranc 95.99 334 ⇓P **P 06 39 50.4 -0.8**
baz=96
GERES GERESS Array B 117.68 48 PKP PKPdf 06 45 08.9 -1.2
comp=Z,1.1nm,0.9s,baz=222,slow=1.8,SNR=7.7
NB2 NORSAR Subarra 122.68 35 PKPdf PKPdf 06 45 17.9 -1.5
comp=Z,1.0nm,0.7s,baz=248,slow=1.9
NOA NORSAR Array B 122.68 35 PKP PKPdf 06 45 17.7 -1.7
comp=Z,0.8nm,0.6s,baz=246,slow=2.3,SNR=4.9
BRTR Keskin Array B 125.49 66 PKP PKPdf 06 45 24.4 -1.1
comp=Z,1.4nm,0.8s,baz=208,slow=4.3,SNR=8.5
AKASG Malin Array Be 127.42 52 PKP PKPdf 06 45 26.9 -1.9
comp=Z,0.6nm,0.5s,baz=254,slow=2.7,SNR=4.3
FINES FINESS Array B 129.46 38 PKP PKPdf 06 45 30.2 -2.1
comp=Z,0.8nm,0.7s,baz=140,slow=6.4,SNR=4.0
ANN Anapa 130.23 61 *i* PKIKP PKPdf 06 45 28.8 -5.5
ANN pmax pmax
comp=Z,117nm,7.6s

ARCES ARCESS Array B 131.19 28 PKP PKPdf 06 45 33.8 -1.6
comp=Z,3.1nm,1.0s,baz=221,slow=9.0,SNR=4.1
HYB Hyderabad 145.01 125 *i* PKP PKPdf 06 46 00.0 -2.3
PETK Petropavlovsk- 145.22 306 PKPbc PKPbc 06 46 00.2 -1.1
comp=Z,14nm,0.9s,baz=96,slow=7.0,SNR=14
ARU Arti 145.50 48 *i* PKIKP PKPdf 06 46 00.9 -1.0
ARU Arti 145.50 48 *e*PKPdf PKPdf 06 46 01.2 -0.7
ABKAR Akbulak array 146.19 61 *e*PKPdf PKPdf 06 46 02.4 -0.9
SVE Sverdlovsk 146.61 47 *e*PKP2 PKPdf 06 46 03.6 -0.2
SVE pmax pmax
comp=Z,19nm,1.5s
SEY Seymchan 146.66 324 *c i* PKP2 PKPdf 06 46 04.3 +0.6
TIXI Tiksi 148.46 347 *i* PKP2 PKPdf 06 46 07.7 +1.2
TIXI pmax pmax
comp=Z,28nm,1.1s
TIXI Tiksi 148.46 347 *e*PKPbc PKPdf 06 46 07.8 +1.4
TIXI *e*PKPab PKPab 06 46 11.9 -1.6
BVAR Borovoye Array 152.69 53 PKP PKPdf 06 46 12.3 -1.2
comp=Z,0.6nm,0.6s,baz=339,slow=1.7,SNR=7.1
BVAR PKPbc PKPbc 06 46 20.0 -0.6
comp=Z,1.3nm,0.7s,baz=259,slow=3.0,SNR=5.6
BVAR PKPab PKPab 06 46 30.4 -1.0
comp=Z,0.8nm,0.6s,baz=267,slow=2.8,SNR=4.3
EKS2 Erkin-Say 154.89 77 *e*PKPdf PKPdf 06 46 16.5 -0.5
CMAR Chiang Mai Arr 155.38 159 PKP PKPdf 06 46 17.3 -1.2
comp=Z,0.6nm,0.3s,baz=228,slow=3.0,SNR=5.2
CMAR PKPab PKPab 06 46 43.4 -0.3
comp=Z,1.3nm,0.5s,baz=224,slow=4.1,SNR=4.2
KSH Kashi 155.80 85 *e*PKP PKPdf 06 46 17.3 -1.1
KSH *e*PKS 06 49 50.3
KSH LR LR
comp=N,150nm,8.6s
KSH LR LR
comp=E,120nm,6.9s
KSH LR LR
comp=Z,91nm,6.1s
YAK Yakutsk 156.04 334 *e*PKP2 PKPab 06 46 42.7 -2.7
YAK pmax pmax
comp=Z,14nm,0.8s
NVS Novosibirsk 159.33 43 *e*PKIKP PKPdf 06 46 18.9 -3.4
HABR Khabarovsk 159.82 298 *e*PKIKP PKPdf 06 46 20.9 -2.1
HABR *e* 06 46 32.8
HABR *e* 06 47 02.5
HABR *e* 06 50 44.9
HABR *e*SS SS 07 10 53.1 +0.2
HABR pmax pmax
comp=E,13nm,1.2s
HABR pmax pmax
comp=N,18nm,1.4s
HABR pmax pmax
comp=Z,35nm,2.7s
ZALV Zalesovo Beam 160.57 44 PKP PKPdf 06 46 21.6 -2.1
comp=Z,1.4nm,0.6s,baz=274,slow=2.3,SNR=5.4
ZALV PKPab PKPab 06 47 04.2 -1.1
comp=Z,0.9nm,0.5s,baz=292,slow=7.8,SNR=3.9
MK31 Makanchi Array 161.14 66 *e*PKIKP PKPdf 06 46 22.7 -1.9
MK31 *e* 06 47 06.4
MKAR Makanchi Array 161.14 66 PKP PKPdf 06 46 23.0 -1.6
comp=Z,0.7nm,0.8s,baz=270,slow=1.3,SNR=7.3
MKAR PKPab PKPab 06 47 06.8 -1.2
comp=Z,1.9nm,0.8s,baz=298,slow=3.4,SNR=9.1
KMI Kunming 162.69 164 PKP PKPdf 06 46 25.5 -1.4
KMI PKPab PKPab 06 47 16.6 +1.4
KMI PP PP 06 51 02.0 +3.1
KMI SKKS SKKSac 06 57 42.3 -5.6
KMI SS SS 07 11 16.3 -4.8
KMI AMB AMB
comp=Z,89nm,5.6s
KMI LR LR
comp=N,84nm,18.0s
KMI LR LR
comp=E,110nm,16.8s
KMI LR LR
comp=Z,120nm,21.6s
BOD Bodaibo 163.64 348 *e*PKP2 PKPab 06 47 16.4 -2.2
BOD pmax pmax
comp=Z,6.0nm,0.9s
MDJ Mudanjiang 163.94 287 PKP PKPdf 06 46 26.3 -1.1
GYA Guiyang 164.51 176 PKP PKPdf 06 46 26.8 -1.7
GYA PKPab PKPab 06 47 23.0 -0.2
GYA PKS 06 49 58.3
GYA PP PP 06 51 11.3 +2.9
GYA SS SS 07 11 34.9 -4.8
GYA AMB AMB
comp=Z,120nm,8.7s
GYA LR LR
comp=N,220nm,22.7s
GYA LR LR
comp=E,180nm,21.9s
GYA LR LR
comp=Z,150nm,23.6s
NJ2 Nanjing 166.78 225 *e*PKP PKPdf 06 46 26.4 -3.8
CN2 Changchun 166.95 284 *e*PKP PKPdf 06 46 26.0 -3.9
CD2 Chengdu 168.50 162 PKP PKPdf 06 46 25.8 -5.7
CD2 PKPab PKPab 06 47 37.8 -2.9
CD2 PKS 06 49 57.1
CD2 PP PP 06 51 27.5 -1.6
CD2 AMB AMB
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,220nm,19.0s
CD2 LR LR
comp=Z,210nm,20.2s
LZH Lanzhou 173.37 151 *e*PKP PKPdf 06 46 28.5 -5.3
LZH *e*PP PP 06 51 51.6 -2.0
LZH AMB AMB
comp=Z,120nm,9.5s
LZH LR LR
comp=N,260nm,18.3s
LZH LR LR
comp=Z,320nm,20.5s
BJI Beijing 173.41 256 PKP PKPdf 06 46 34.1 +0.4
SONM Songino Array 174.03 9 PKPab PKPab 06 48 04.5 -0.2
comp=Z,0.5nm,0.4s,baz=342,slow=3.8,SNR=5.9
HHC Hu-ho-hao-te 176.99 250 *e*PKP PKPdf 06 46 35.9 +1.2
HHC PKS 06 50 06.8
HHC AMB AMB
comp=Z,54nm,6.8s
HHC LR LR
comp=N,110nm,22.2s
HHC LR LR
comp=E,170nm,23.4s
HHC LR LR
comp=Z,200nm,23.2s

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*NEIC **24** 06:52:48.6, 15.72°N×94.06°W, h16km, MD3.7(MEX), After MEX.*

MEX 24 06:52:48.6±1.0, 15.72°N×94.06°W, h16km±94km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.81**	**91**	*i* P	Pb	06 53 01.8	-2.5
PCIG				*i* S	Sb	06 53 12.3	-2.8
TGIG		**1.39**	**40**	*i* P	Pn	06 53 09.7	-3.7
TGIG				*i* S	Sn	06 53 25.5	-5.8
THIG		**1.91**	**115**	*e*P	Pn	06 53 16.0	-4.5
THIG				*i* S	Sn	06 53 37.8	-6.5
CCIG	**Comitan**	**1.94**	**73**	*i* P	Pn	06 53 18.1	-2.7
CCIG				*i* S	Sn	06 53 40.4	-4.5
CCIG	**Comitan**	**1.94**	**73**	*i* P	Pn	06 53 18.1	-2.7
CCIG				*i* S	Sn	06 53 40.4	-4.5
HUIG	**Huatulco**	**1.97**	**272**	*i* P	Pn	06 53 18.3	-3.0
HUIG				*i* S	Sn	06 53 39.6	-6.0
HUIG	**Huatulco**	**1.97**	**272**	*i* P	Pn	06 53 18.3	-3.0
HUIG				*i* S	Sn	06 53 39.6	-6.0
VHO	**Vista Hermosa**	**2.90**	**298**	*i* P	Pn	06 53 31.7	-2.4
VHO				*i* S	Sn	06 54 06.6	-1.9
VHO	**Vista Hermosa**	**2.90**	**298**	*i* P	Pn	06 53 31.7	-2.4
VHO				*i* S	Sn	06 54 06.6	-1.9
PNIG	**Pinotepa**	**3.96**	**280**	*e*P	Pn	06 53 48.1	-0.6
PNIG				*i* S	Sn	06 54 30.8	-4.2
PNIG	**Pinotepa**	**3.96**	**280**	*e*P	Pn	06 53 48.1	-0.6
PNIG				*i* S	Sn	06 54 30.8	-4.2
UTMO	**Huajuapan**	**4.15**	**301**	*i* P	Pn	06 53 49.2	-2.2
UTMO				*i* S	Sn	06 54 36.3	-3.2

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*BJI **24** 06:53:19.9, 42.25S×72.09W, h10km, mB4.9/4, Ms4.9/5, Ms7 4.8/5*

*ISCJB **24** 06:53:21.6±1.0, 42.03S±0.05×72.14W±0.07, h11km±5km, mb4.8/56, MS4.3/8, Error ellipse: s-maj=10.8km*

s-min=5.9km az=143.3
IDC ***24*** *06:53:21.4±0.6, 42.°06S×72.°02W, h0km, mb4.6/14, mb1 4.6/16, mb1mx4.5/19, mbtmp4.5/16, ML4.1/2, MS4.2/11, Ms1 4.2/11, ms1mx4.1/17, Error ellipse: s-maj=27.2km s-min=13.6km az=84.0*
GUC ***24*** *06:53:21.9±0.8, 41.°96S×72.°16W, h9km±27km, ML5.3*
NEIC ***24*** *06:53:22.7±0.2, 42.°05S×72.°01W, h10km, mb4.9/46, Error ellipse: s-maj=10.7km s-min=6.7km az=81.0*
NEIC Felt [III] in the Esquel area, Argentina.
MOS ***24*** *06:53:25.1±1.4, 41.°94S×72.°03W, h33km, mb4.8/22, Error ellipse: s-maj=26.4km s-min=10.4km az=99.2*
ISC 24 06:53:22.3±1.1, **42.°03S**±0.°05×**72.°17W**±0.°09, **h5**km±6km, **n240**, σ0°**81**/197, **mb4.8**/56, **MS4.3**/8, **54C-37D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.21**	**304**	⇑*i*P		**Pg**	**06 53 26.5**	**0.0**
HOCH				*i* S		**Sg**	**06 53 29.6**	**+0.4**
HOCH				AML		AML	06 53 31.9	
	comp=N,484μm,0.7s							
PMCH	**Puerto Montt**	**0.76**	**314**	⇑*i*P		**Pg**	**06 53 36.1**	**-0.8**
PMCH				*i* S		**Sg**	**06 53 46.2**	**-0.6**
OSCH	**Osorno**	**1.62**	**333**	⇑*i*P		**Pn**	**06 53 50.8**	**-0.7**
OSCH				*i* S		**Sn**	**06 54 12.1**	**-0.5**
VLCH	**Valdivia**	**2.36**	**339**	*e*P		**Pn**	**06 54 02.3**	**+0.7**
VLCH				*i* S		**Sn**	**06 54 33.9**	**+2.9**
VLCH				AML		AML	06 54 43.2	
	comp=N,38μm,0.8s							
TMU	**Temuco**	**3.30**	**354**	*e*P		**Pn**	**06 54 18.4**	**+3.8**
TMU				*i* S		**Sn**	**06 55 01.3**	**+7.1**
TRQA	**Tornquist**	**8.76**	**66**	*e*Pn		**Pn**	**06 55 33.0**	**+3.5**
CFAA	**Coronel Fontan**	**10.87**	**18**	Pn		**Pn**	**06 55 58.8**	**+0.3**
	comp=N,0.3nm,0.3s,baz=203,slow=11,SNR=42							
CFAA				Lg			06 59 15.3	
	comp=N,0.0nm,0.3s,baz=264,slow=3.9,SNR=3.6							
CFAA				LR		LR	07 00 05.2	
	comp=N,230nm,21.0s,baz=204,slow=37							
CFAA	**Coronel Fontan**	**10.87**	**18**	Pn		**Pn**	**06 55 58.8**	**+0.3**
CFAA				Lg			06 59 15.3	
CFAA				LR		LR	07 00 05.2	
LCO	**Las Campanas**	**13.04**	**6**	*e*Pn		**Pn**	**06 56 33.3**	**+5.2**
USHA	**Ushuaia**	**13.05**	**170**	LR		LR	07 01 32.0	
	comp=N,1μm,20.4s,baz=332,slow=38							
EFI	**East Falkland**	**13.63**	**140**	*e*P		**Pn**	**06 56 38.7**	**+2.7**
CPUP	**Villa Florida**	**19.85**	**43**	P		**Pn**	**06 57 53.9**	**-1.6**
	comp=N,0.3nm,0.3s,baz=196,slow=12,SNR=8.1							
CPUP				LR		LR	07 06 26.5	
	comp=N,1μm,19.1s,baz=200,slow=40							
CPUP	**Villa Florida**	**19.85**	**43**	*e*P		**Pn**	**06 57 53.8**	**-1.8**
	comp=N,44nm,0.8s							
PMSA	**Palmer Station**	**23.26**	**171**	P		**P**	**06 58 30.3**	**0.0**
	comp=N,26nm,0.4s,mb5.0,baz=43,slow=18,SNR=14							
PMSA				LR		LR	07 07 09.7	
	comp=N,612nm,19.4s,MS4.1,baz=194,slow=36							
PMSA	**Palmer Station**	**23.26**	**171**	*e*P		**P**	**06 58 30.4**	**+0.1**
	comp=N,33nm,0.5s,mb5.0							
LPAZ	**La Paz**	**25.88**	**9**	P		**P**	**06 58 56.2**	**+1.2**
	comp=N,28nm,0.9s,mb4.8,baz=170,slow=7.8,SNR=57							
LPAZ	**La Paz**	**25.88**	**9**	P		**P**	**06 58 56.2**	**+1.2**
LPAZ				pmax		pmax		
	comp=Z,28nm,0.9s							
LPAZ	**La Paz**	**25.88**	**9**	*e*P		**P**	**06 58 56.2**	**+1.2**
	comp=Z,33nm,0.9s,mb4.9							
SIV	**San Ignacio**	**27.65**	**24**	P		**P**	**06 59 10.5**	**-0.4**
	comp=Z,11nm,0.9s,mb4.5,baz=207,slow=8.4,SNR=28							
NNA	**Nana**	**30.20**	**351**	P		**P**	**06 59 35.6**	**+2.0**
	comp=Z,9.4nm,0.8s,mb4.6,baz=204,slow=7.3,SNR=4.0							
NNA	**Nana**	**30.20**	**351**	*e*P		**P**	**06 59 34.9**	**+1.3**
NNA				pmax		pmax		
	comp=Z,8.0nm,0.7s							
NNA	**Nana**	**30.20**	**351**	*e*P		**P**	**06 59 34.9**	**+1.3**
	comp=Z,8.0nm,0.7s,mb4.6							
ATAH	**Atahualpa**	**35.31**	**349**	P		**P**	**07 00 19.1**	**+0.8**
	comp=Z,3.3nm,0.7s,mb4.4,baz=106,slow=20,SNR=2.1							
OTAV	**Otavalo**	**42.45**	**351**	*e*P		**P**	**07 01 19.8**	**+1.7**
	comp=Z,18nm,1.2s,mb4.6							
VNA2	**Neumayer--Watz**	**42.75**	**154**	*e*P		**P**	**07 01 21.0**	**+1.0**
VNA2				*e*			07 01 38.6	
VNA2				*e*			07 01 49.8	
ROSC	**El Rosal**	**46.70**	**357**	P		**P**	**07 01 53.3**	**+1.3**
	comp=Z,2.4nm,0.5s,mb4.4,baz=106,slow=17,SNR=4.0							
ROSC	**El Rosal**	**46.70**	**357**	*e*P		**P**	**07 01 54.0**	**+1.9**
QSPA	**South Pole Qui**	**48.22**	**180**	P		**P**	**07 02 03.2**	**0.0**
	comp=Z,6.4nm,0.7s,mb4.8,baz=139,slow=3.0,SNR=25							
QSPA	**South Pole Qui**	**48.22**	**180**	*e*P		**P**	**07 02 03.0**	**-0.2**
	comp=Z,21nm,1.1s,mb5.1							
RCBR	**Riachuelo**	**48.32**	**52**	*e*P		**P**	**07 02 04.7**	**-0.1**
	comp=Z,13nm,0.9s,mb5.0							
MAIT	**Maitri**	**49.04**	**154**	*e*P		**P**	**07 02 09.3**	**-0.3**
MAIT				*e*E			07 02 20.3	
SDV	**Santo Domingo**	**50.68**	**2**	*e*P		**P**	**07 02 22.0**	**-0.7**
	comp=Z,11nm,0.9s,mb4.8							
RKT	**Rikitea**	**54.98**	**269**	*e*LR		LR	07 19 05.7	
	comp=Z,282nm,27.2s							
SBA	**Scott Base**	**55.22**	**193**	*e*P		**P**	**07 02 56.1**	**+0.6**
SBA				pmax		pmax		
	comp=Z,100nm,2.7s,mb5.4							
SBA	**Scott Base**	**55.22**	**193**	*e*P		**P**	**07 02 56.1**	**+0.6**
	comp=Z,100nm,2.7s,mb5.4							
GTBY	**Guantanamo Bay**	**61.70**	**357**	*e*P		**P**	**07 03 41.0**	**-0.3**
	comp=Z,37nm,1.0s,mb5.5							
MAW	**Mawson**	**65.54**	**163**	P		**P**	**07 04 05.9**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.2,baz=221,slow=11,SNR=3.3							
MAW				LR		LR	07 33 02.5	
	comp=Z,252nm,21.3s,MS4.4,baz=221,slow=36							
MAW	**Mawson**	**65.54**	**163**	P		**P**	**07 04 05.9**	**-0.3**
MAW				pmax		pmax		
	comp=Z,2.0nm,0.7s							
MAW				MLR		MLR		
	comp=Z,252nm,21.3s							
TAOE	**Nuku Hiva Isla**	**67.78**	**278**	*e*LR		LR	07 24 59.4	
	comp=Z,355nm,27.5s							
PPT	**Papeete**	**69.20**	**265**	*e*LR		LR	07 25 42.5	
	comp=Z,270nm,26.5s							
PPT	**Papeete**	**69.20**	**265**	LR		LR	07 29 26.2	
	comp=Z,305nm,18.4s,MS4.6,baz=152,slow=31							
GOGA	**Godfrey**	**75.78**	**350**	*e*P		**P**	**07 05 08.1**	**-0.7**
GOGA				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.6							
GOGA	**Godfrey**	**75.78**	**350**	*e*P		**P**	**07 05 08.1**	**-0.8**
	comp=Z,6.9nm,0.9s,mb4.6							
LRAL	**Lakeview Retre**	**75.93**	**347**	*e*P		**P**	**07 05 09.6**	**-0.1**
	comp=Z,6.7nm,0.7s,mb4.7							
JCT	**Junction City**	**76.51**	**336**	*e*P		**P**	**07 05 13.0**	**-0.1**
JCT				pmax		pmax		
	comp=Z,16nm,0.9s,mb5.0							
JCT	**Junction City**	**76.51**	**336**	*e*P		**P**	**07 05 13.0**	**-0.1**
	comp=Z,16nm,0.9s,mb5.0							
BOSA	**Boshof**	**76.52**	**116**	P		**P**	**07 05 12.2**	**-1.3**
	comp=Z,9.3nm,1.2s,mb4.6,baz=190,slow=6.3,SNR=5.2							
BOSA				LR		LR	07 31 29.1	
	comp=Z,123nm,20.9s,MS4.2,baz=58,slow=30							
628A	**Black Gap, Mar**	**76.59**	**333**	P		**P**	**07 05 13.8**	**+0.3**
	baz=77,SNR=11							
TXAR	**Lajitas Array**	**76.72**	**332**	P		**P**	**07 05 14.6**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.4,baz=154,slow=7.6,SNR=35							
TXAR				LR		LR	07 32 51.7	
	comp=Z,155nm,20.4s,MS4.3,baz=305,slow=31							
TXAR	**Lajitas Array**	**76.72**	**332**	P		**P**	**07 05 14.6**	**+0.3**
TXAR				LR		LR	07 32 51.7	
627A	**Terlingua Ranc**	**76.73**	**332**	⇓P		**P**	**07 05 14.6**	**+0.3**
	baz=77							
626A	**Big Bend Ranch**	**77.09**	**332**	⇑P		**P**	**07 05 16.4**	**0.0**
	baz=77							
528A	**Cox Ranch, San**	**77.18**	**333**	P		**P**	**07 05 16.8**	**0.0**
	baz=78,SNR=11							
527A	**Woodward Ranch**	**77.44**	**332**	P		**P**	**07 05 18.5**	**+0.2**
	baz=78,SNR=13							
526A	**Mary Lane Ranc**	**77.53**	**332**	⇓P		**P**	**07 05 19.0**	**+0.2**
	baz=78,SNR=9.3							
428A	**Kincaid Ranch,**	**77.66**	**333**	⇓P		**P**	**07 05 19.3**	**-0.2**
	baz=78							
OXF	**Oxford**	**77.79**	**346**	*e*P		**P**	**07 05 18.2**	**-1.9**
OXF				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.9							
OXF	**Oxford**	**77.79**	**346**	*e*P		**P**	**07 05 18.2**	**-1.9**
	comp=Z,12nm,0.8s,mb4.9							
SWET	**Sewanee**	**77.90**	**349**	*e*P		**P**	**07 05 20.7**	**0.0**
CPCT	**Cooper Cave**	**77.93**	**350**	*e*P		**P**	**07 05 19.9**	**-1.0**
DBIC	**Dimbokro**	**77.97**	**70**	P		**P**	**07 05 21.0**	**-0.6**
	comp=Z,3.1nm,0.8s,mb4.3,baz=219,slow=7.9,SNR=3.9							
DBIC				LR		LR	07 36 22.9	
	comp=Z,172nm,18.1s,MS4.4,baz=191,slow=33							
DBIC	**Dimbokro**	**77.97**	**70**	P		**P**	**07 05 21.0**	**-0.7**
DBIC				LR		LR	07 36 22.9	
PLAL	**Pickwick Lake**	**78.01**	**347**	*e*P		**P**	**07 05 20.6**	**-0.7**
	comp=Z,8.9nm,0.9s,mb4.7							
427A	**Hayter Ranch,**	**78.02**	**333**	⇓P		**P**	**07 05 21.6**	**+0.1**
	baz=78							
TKL	**Tuckaleechee C**	**78.04**	**350**	*e*P		**P**	**07 05 20.9**	**-0.6**
426A	**McDonald Obser**	**78.07**	**332**	⇑P		**P**	**07 05 22.2**	**+0.4**
	baz=78,SNR=11							
328A	**Wristen Ranch,**	**78.31**	**334**	⇓P		**P**	**07 05 23.0**	**0.0**
	baz=79							
425A	**Indio Mountain**	**78.51**	**332**	⇑P		**P**	**07 05 23.6**	**-0.6**
	baz=79							
326A	**Caldwell Ranch**	**78.64**	**333**	⇑P		**P**	**07 05 24.6**	**-0.4**
	baz=79,SNR=7.2							
TZTN	**Tazewell**	**78.88**	**351**	*e*P		**P**	**07 05 25.2**	**-0.9**
	comp=Z,14nm,1.1s,mb4.8							
325A	**Bean Ranch, Si**	**79.03**	**332**	⇑P		**P**	**07 05 26.2**	**-0.9**
	baz=79							
WVT	**Waverly**	**79.09**	**347**	*e*P		**P**	**07 05 26.1**	**-1.2**
WVT				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.6							
WVT	**Waverly**	**79.09**	**347**	*e*P		**P**	**07 05 26.1**	**-1.2**
	comp=Z,6.3nm,0.8s,mb4.6							
324A	**Moseley Ranch,**	**79.28**	**331**	⇓P		**P**	**07 05 27.3**	**-1.1**
	baz=80							
226A	**Malaga, Loving**	**79.36**	**333**	⇑P		**P**	**07 05 29.4**	**+0.5**
	baz=80							
CLNB	**Carlsbad**	**79.47**	**333**	*e*P		**P**	**07 05 29.9**	**+0.4**
	comp=Z,0.9nm,0.4s,mb4.0							
GDL2	**Guadalupe Moun**	**79.58**	**333**	*e*P		**P**	**07 05 30.2**	**+0.2**
224A	**Corundas Mount**	**79.87**	**332**	⇑P		**P**	**07 05 31.5**	**-0.2**
	baz=80,SNR=11							
PARMO	**Parma**	**79.94**	**346**	*e*P		**P**	**07 05 32.0**	**+0.1**
125A	**Gardner Draw,**	**80.10**	**333**	⇓P		**P**	**07 05 32.3**	**-0.5**
	baz=80							
CPRX	**Cap Rock**	**80.17**	**333**	*e*P		**P**	**07 05 34.0**	**+0.7**
	comp=Z,8.2nm,1.0s,mb4.6							
WMOK	**Wichita Mounta**	**80.19**	**338**	*e*P		**P**	**07 05 31.3**	**-2.0**
WMOK				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.7							
WMOK	**Wichita Mounta**	**80.19**	**338**	*e*P		**P**	**07 05 31.3**	**-2.0**
	comp=Z,10nm,1.1s,mb4.7							
Z26A	**Caprock**	**80.43**	**333**	⇑P		**P**	**07 05 34.0**	**-0.6**
	baz=81							
319A	**Douglas**	**80.64**	**328**	⇑P		**P**	**07 05 35.0**	**-0.8**
	baz=81							
MSTX	**Muleshoe**	**80.67**	**335**	⇑P		**P**	**07 05 35.1**	**-0.8**
	baz=81							
Z24A	**Sheeppen Canyo**	**80.95**	**332**	⇑P		**P**	**07 05 38.4**	**+1.0**
	baz=81							
AMTX	**Amarillo**	**81.18**	**336**	*e*P		**P**	**07 05 38.9**	**+0.3**
	comp=Z,11nm,0.9s,mb4.8							
FVM	**French Village**	**81.35**	**346**	*e*P		**P**	**07 05 40.2**	**+0.8**
FVM				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.8							
FVM	**French Village**	**81.35**	**346**	*e*P		**P**	**07 05 40.2**	**+0.7**
	comp=Z,13nm,1.1s,mb4.8							
120A	**U Bar Ranch, L**	**81.43**	**329**	⇑P		**P**	**07 05 39.8**	**-0.2**
	baz=82							
Z22A	**Elephant Butte**	**81.45**	**331**	⇓P		**P**	**07 05 40.3**	**+0.2**
	baz=82							
218A	**Dragoon**	**81.47**	**328**	⇓P		**P**	**07 05 40.4**	**+0.2**
	baz=82							
Y24A	**Capitan**	**81.52**	**333**	⇓P		**P**	**07 05 40.3**	**-0.1**
	baz=82							
CCM	**Cathedral Cave**	**81.58**	**345**	*e*P		**P**	**07 05 40.0**	**-0.6**
CCM				pmax		pmax		
	comp=Z,19nm,1.0s,mb5.0							
CCM	**Cathedral Cave**	**81.58**	**345**	*e*P		**P**	**07 05 40.0**	**-0.6**
	comp=Z,19nm,1.0s,mb5.0							
Y23A	**Lovelace Mesa,**	**81.74**	**332**	⇓P		**P**	**07 05 41.9**	**+0.3**
	baz=82							
W27A	**Bowe Ranch, En**	**81.77**	**335**	⇑P		**P**	**07 05 41.8**	**0.0**
	baz=82							
Z20A	**Nine Sixteen R**	**81.92**	**330**	⇓P		**P**	**07 05 42.9**	**+0.3**
	baz=82							
118A	**Homack Ranch,**	**82.03**	**329**	⇓P		**P**	**07 05 43.5**	**+0.4**
	baz=82							
Y22A	**Socorro**	**82.06**	**331**	⇑P		**P**	**07 05 43.7**	**+0.4**
	baz=82							
BNM	**Barren Site**	**82.14**	**332**	*e*P		**P**	**07 05 44.7**	**+1.0**
	comp=Z,8.7nm,1.2s,mb4.6							
W25A	**X Bar L Ranch,**	**82.37**	**334**	⇓P		**P**	**07 05 45.1**	**+0.2**
	baz=83							
ACSO	**Alum Creek Sta**	**82.46**	**352**	*e*P		**P**	**07 05 44.5**	**-0.8**
	comp=Z,8.6nm,0.9s,mb4.7							
LAZ	**Ladron**	**82.54**	**331**	*e*P		**P**	**07 05 46.7**	**+0.9**
	comp=Z,4.2nm,1.2s,mb4.3							
Y20A	**Horse Springs,**	**82.55**	**330**	⇑P		**P**	**07 05 46.6**	**+0.8**
	baz=83							
V26A	**Tequesquite Ra**	**82.68**	**335**	⇑P		**P**	**07 05 46.8**	**+0.3**
	baz=83							
ANMO	**Albuquerque**	**82.80**	**332**	*e*P		**P**	**07 05 47.8**	**+0.7**
ANMO				pmax		pmax		
	comp=Z,7.0nm,0.9s							
ANMO	**Albuquerque**	**82.80**	**332**	*e*P		**P**	**07 05 47.8**	**+0.7**
	comp=Z,6.8nm,0.9s,mb4.7							
X21A	**Alamocita Cree**	**82.82**	**331**	⇓P		**P**	**07 05 48.6**	**+1.3**
	baz=83							
W23A	**Werner Place,**	**82.88**	**333**	⇑P		**P**	**07 05 47.4**	**-0.2**
	baz=83							
V25A	**Rancho No Teng**	**82.98**	**334**	⇓P		**P**	**07 05 47.6**	**-0.5**
	baz=83							
U26A	**Atchley Ranch,**	**83.21**	**335**	⇓P		**P**	**07 05 49.8**	**+0.6**
	baz=84							
Y17A	**Roosevelt**	**83.30**	**328**	⇓P		**P**	**07 05 50.3**	**+0.6**
	baz=84							
U25A	**Circle Dot Ran**	**83.43**	**334**	⇑P		**P**	**07 05 50.9**	**+0.6**
	baz=84							
HDIL	**Hopedale**	**83.65**	**347**	*e*P		**P**	**07 05 51.1**	**-0.3**
	comp=Z,22nm,1.1s,mb5.2							
V22A	**San Miguel Ran**	**83.83**	**332**	⇑P		**P**	**07 05 53.5**	**+1.1**
	baz=84							
V20A	**Brimhall**	**84.27**	**331**	⇓P		**P**	**07 05 55.1**	**+0.4**
	baz=85							
X15A	**Humboldt**	**84.54**	**328**	⇑P		**P**	**07 05 56.1**	**0.0**
	baz=85							
T22A	**Edith**	**84.82**	**333**	⇑P		**P**	**07 05 57.3**	**-0.1**
	baz=85,SNR=5.2							
U19A	**Dine' College,**	**84.98**	**331**	⇓P		**P**	**07 05 58.4**	**+0.1**
	baz=85							
SDCO	**Great Sand Dun**	**85.01**	**334**	*e*P		**P**	**07 05 58.8**	**+0.4**
	comp=Z,3.8nm,0.9s,mb4.5							
WUAZ	**Wupatki**	**85.11**	**329**	*e*P		**P**	**07 06 01.7**	**+2.8**
	comp=Z,8.2nm,1.2s,mb4.7							
U18A	**Rough Rock, Ch**	**85.34**	**330**	⇑P		**P**	**07 05 59.8**	**-0.2**
	baz=86							
T19A	**Beclabito**	**85.40**	**331**	⇓P		**P**	**07 06 00.0**	**-0.3**
	baz=86							
V15A	**Kaibab Nationa**	**85.68**	**328**	⇑P		**P**	**07 06 02.2**	**+0.4**
	baz=86							
S21A	**Coal Bank Pass**	**85.71**	**332**	⇓P		**P**	**07 06 03.0**	**+1.2**
	baz=86							
R22A	**Saguache, Gunn**	**85.86**	**333**	⇑P		**P**	**07 06 03.0**	**+0.4**
	baz=86							
V14A	**Boquillas Ranc**	**85.89**	**328**	⇓P		**P**	**07 06 03.6**	**+0.8**
	baz=86							
JFWS	**Jewell Farm**	**86.11**	**347**	*e*P		**P**	**07 06 02.5**	**-1.2**
JFWS				pmax		pmax		
	comp=Z,4.0nm,0.5s,mb4.9							
JFWS	**Jewell Farm**	**86.11**	**347**	*e*P		**P**	**07 06 02.5**	**-1.2**
	comp=Z,4.0nm,0.5s,mb4.9							
PV01	**Paradox Valley**	**86.40**	**332**	*e*P		**P**	**07 06 06.1**	**+0.9**
	comp=Z,650nm,1.3s							
FRNY	**Flat Rock**	**86.48**	**359**	*e*P		**P**	**07 06 09.2**	**+3.7**
S18A	**Hurst Farm, Bl**	**86.51**	**331**	⇑P		**P**	**07 06 06.3**	**+0.5**
	baz=87,SNR=6.4							
PV04	**Paradox Valley**	**86.75**	**332**	*e*P		**P**	**07 06 08.6**	**+1.7**
PV10	**Paradox Valley**	**86.78**	**332**	*e*P		**P**	**07 06 09.1**	**+1.9**
	comp=Z,70nm,0.8s,mb5.9							
R19A	**Curley Farm, L**	**86.78**	**332**	⇑P		**P**	**07 06 07.6**	**+0.5**
	baz=87							
SMCO	**Snowmass**	**86.80**	**334**	*e*P		**P**	**07 06 08.4**	**+1.2**
	comp=Z,6.5nm,0.9s,mb4.9							
T15A	**Red Dirt Ranch**	**86.81**	**329**	⇑P		**P**	**07 06 08.2**	**+0.9**
	baz=87							
ISCO	**Idaho Springs**	**86.92**	**335**	*e*P		**P**	**07 06 08.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**87.08**	**70**	P		**P**	**07 06 07.9**	**-1.2**
	comp=Z,1.4nm,0.8s,mb4.2,baz=218,slow=4.2,SNR=6.6							
TORD				LR		LR	07 37 52.2	
	comp=Z,140nm,20.9s,MS4.3,baz=210,slow=31							
R18A	**Canyonlands Na**	**87.09**	**331**	⇓P		**P**	**07 06 08.5**	**-0.1**
	baz=87							
R17A	**Hanksville Air**	**87.42**	**331**	⇓P		**P**	**07 06 10.1**	**-0.2**
	baz=88,SNR=5.6							
CCUT	**Cedar City**	**87.66**	**328**	*e*P		**P**	**07 06 11.8**	**+0.4**
	comp=Z,9.7nm,1.3s,mb4.9							
P19A	**Cripple Cowboy**	**87.88**	**332**	⇑P		**P**	**07 06 12.2**	**-0.2**
	baz=88,SNR=7.1							
SRU	**San Rafael**	**87.96**	**331**	⇓P		**P**	**07 06 12.1**	**-0.7**
	baz=88,SNR=5.3							
SRU	**San Rafael**	**87.96**	**331**	*e*P		**P**	**07 06 12.9**	**+0.1**
SRU				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.9							
SRU	**San Rafael**	**87.96**	**331**	*e*P		**P**	**07 06 12.9**	**+0.1**
	comp=Z,7.6nm,1.0s,mb4.9							
Q16A	**Castle Valley**	**88.03**	**331**	⇓P		**P**	**07 06 13.2**	**+0.1**
	baz=88,SNR=6.0							
MSU	**Marysvale**	**88.04**	**330**	*e*P		**P**	**07 06 14.3**	**+1.1**
O20A	**White River Ci**	**88.08**	**333**	⇑P		**P**	**07 06 12.4**	**-0.9**
	baz=88							
P18A	**Preston Nutter**	**88.32**	**332**	⇑P		**P**	**07 06 13.8**	**-0.7**
	baz=89							
TMUT	**Trail Mountain**	**88.37**	**331**	*e*P		**P**	**07 06 15.5**	**+0.8**
	comp=Z,5.6nm,0.9s,mb4.8							
O19A	**Miners Draw (B**	**88.53**	**333**	⇑P		**P**	**07 06 15.1**	**-0.4**
	baz=89							
P16A	**Fountain Green**	**88.81**	**331**	⇑P		**P**	**07 06 15.6**	**-1.2**
	baz=89							
O17A	**Robinson Place**	**89.00**	**331**	⇑P		**P**	**07 06 17.5**	**-0.1**
	baz=89							
COWI	**Conover**	**89.03**	**348**	*e*P		**P**	**07 06 17.4**	**-0.3**
	comp=Z,11nm,1.1s,mb5.1							
M21A	**Separation Pea**	**89.12**	**334**	⇓P		**P**	**07 06 17.8**	**-0.4**
	baz=89							
RWWY	**Rawlins**	**89.14**	**335**	*e*P		**P**	**07 06 18.8**	**+0.5**
	comp=Z,13nm,1.2s,mb5.1							
L21A	**Rawlins**	**89.44**	**335**	⇑P		**P**	**07 06 18.8**	**-0.9**
	baz=90							
DUG	**Dugway**	**89.75**	**330**	*e*P		**P**	**07 06 20.2**	**-1.0**
DUG				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.7							
DUG	**Dugway**	**89.75**	**330**	*e*P		**P**	**07 06 20.2**	**-1.0**
	comp=Z,4.0nm,1.1s,mb4.7							
L19A	**Farson**	**90.22**	**333**	⇑P		**P**	**07 06 23.2**	**-0.1**
	baz=90,SNR=15							
L18A	**Fontenelle, Gr**	**90.29**	**333**	⇑P		**P**	**07 06 23.0**	**-0.6**
	baz=91							
K20A	**Yellowstone Ra**	**90.38**	**334**	⇓P		**P**	**07 06 23.4**	**-0.7**
	baz=91,SNR=6.0							
RSSD	**Black Hills**	**90.40**	**338**	*e*P		**P**	**07 06 24.9**	**+0.8**
RSSD				pmax		pmax		
	comp=Z,1.0nm,0.6s,mb4.3							
RSSD	**Black Hills**	**90.40**	**338**	*e*P		**P**	**07 06 24.9**	**+0.8**
	comp=Z,1.1nm,0.6s,mb4.4							
NVAR	**Mina Array Bea**	**90.42**	**326**	P		**P**	**07 06 24.9**	**+0.6**
	comp=Z,1.2nm,0.9s,mb4.2,baz=166,slow=5.1,SNR=7.4							
HWUT	**Hardware Ranch**	**90.54**	**332**	*e*P		**P**	**07 06 25.5**	**+0.7**
	comp=Z,9.5nm,0.9s,mb5.1							
K19A	**Absolon Red Bu**	**90.69**	**334**	⇓P		**P**	**07 06 25.1**	**-0.4**
	baz=91,SNR=6.4							
L16A	**Fish Haven**	**90.85**	**332**	⇓P		**P**	**07 06 25.8**	**-0.4**
	baz=91							
BW06	**Boulder Array**	**90.88**	**333**	⇑P		**P**	**07 06 25.3**	**-1.0**
	baz=91							
BW06	**Boulder Array**	**90.88**	**333**	*e*P		**P**	**07 06 26.0**	**-0.4**
	comp=Z,5.7nm,1.1s,mb4.8							
PDAR	**Pinedale Array**	**90.88**	**333**	P		**P**	**07 06 26.2**	**-0.1**
	comp=Z,3.4nm,0.9s,mb4.7,baz=146,slow=3.5,SNR=14							
PDAR				LR		LR	07 43 37.4	
	comp=Z,124nm,19.9s,MS4.3,baz=355,slow=33							
K18A	**Toltan Ranch,**	**90.92**	**333**	⇑P		**P**	**07 06 25.4**	**-1.2**
	baz=91,SNR=6.9							
M14A	**Sheep Mountain**	**91.09**	**330**	⇓P		**P**	**07 06 26.7**	**-0.7**
	baz=91							
L15A	**

CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
UCH	**Uchtor**	**155.37**	**78**	*e*PKIKP	PKPdf	07 13 16.7	+0.4
NVS	**Novosibirsk**	**159.38**	**43**	*e*PKIKP	PKPdf	07 13 22.6	+1.7
MKAR	**Makanchi Array**	**161.18**	**67**	PKP	PKPdf	07 13 20.4	-2.7
	comp=Z,0.1nm,0.4s,baz=216,slow=1.2,SNR=2.1						
MKAR				PKPab	PKPab	07 14 06.0	-0.7
	comp=Z,1.3nm,0.7s,baz=280,slow=3.7,SNR=8.4						
MKAR	**Makanchi Array**	**161.18**	**67**	PKIKP	PKPdf	07 13 20.4	-2.8
MKAR						07 14 06.1	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**161.18**	**67**	PKP	PKPdf	07 13 20.4	-2.7
MKAR				PKPab	PKPab	07 14 06.0	-0.7
KMI	**Kunming**	**162.62**	**164**	PKP	PKPdf	07 13 23.4	-1.9
BOD	**Bodaibo**	**163.71**	**348**	*e*PKP2	PKPab	07 14 14.9	-2.5
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDJ	**Mudanjiang**	**163.96**	**287**	PKP	PKPdf	07 13 25.6	-0.4
GYA	**Guiyang**	**164.44**	**176**	PKP	PKPdf	07 13 24.8	-2.2
GYA				PKPab	PKPab	07 14 22.8	+1.4
GYA				SKKS	SKKSac	07 24 45.6	-10
GYA				SS	SS	07 38 30.3	-7.8
GYA				AMB	AMB		
	comp=Z,80nm,8.4s						
GYA				LR	LR		
	comp=N,120nm,23.7s						
GYA				LR	LR		
	comp=E,110nm,24.9s						
GYA				LR	LR		
	comp=Z,110nm,24.6s						
WMQ	**Urumqi**	**165.14**	**76**	*e*PKP	PKPdf	07 13 26.3	-0.7
NJ2	**Nanjing**	**166.72**	**225**	*e*PKP	PKPdf	07 13 26.4	-2.3
CN2	**Changchun**	**166.96**	**284**	*e*PKP	PKPdf	07 13 26.0	-2.5
CD2	**Chengdu**	**168.44**	**162**	PKP	PKPdf	07 13 26.6	-3.4
LZH	**Lanzhou**	**173.31**	**151**	*e*PKP	PKPdf	07 13 29.5	-2.9
LZH				PKPab	PKPab	07 14 58.8	-1.7
LZH				LR	LR		
	comp=N,210nm,18.3s						
LZH				LR	LR		
	comp=Z,350nm,19.5s						
HHC	**Hu-ho-hao-te**	**176.96**	**249**	*e*PKP	PKPdf	07 13 35.3	+2.1
HHC				PKS		07 17 06.0	
HHC				AMB	AMB		
	comp=Z,31nm,7.0s						
HHC				LR	LR		
	comp=N,110nm,21.7s						
HHC				LR	LR		
	comp=E,160nm,23.0s						
HHC				LR	LR		
	comp=Z,130nm,22.2s						

*IDC **24** 07:01:00.0±1.3, 31°.96N×104°.86E, h0km, mb3.2/3, mb1 3.6/4, mb1mx3.4/25, mbtmp3.3/4, Error ellipse: s-maj=53.9km s-min=27.9km az=68.0*
*NEIC **24** 07:01:01.7±0.8, 32°.03N×104°.88E, h10km, mb3.6/1, Error ellipse: s-maj=17.8km s-min=12.5km az=215.0*
*BJI **24** 07:01:02.8, 31°.64N×104°.46E, h12km, ML3.3/8*
ISC 24 07:00:59.8±0.8, 31°.73N±0°.04×104°.57E±0°.06, h1km±7km, n10, σ0°82/14, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.07**	**220**	Pg	**Pg**	**07 01 20.1**	**-0.3**
CD2				Sg	**Sg**	**07 01 34.3**	**0.0**
CD2				smax			
	comp=N,2μm,0.7s						
XAN	**Xi'an**	**4.33**	**57**	Pg	**Pg**	**07 02 22.8**	**0.0**
XAN				Sg	**Sg**	**07 03 19.1**	**+0.2**
XAN				smax			
	comp=N,55nm,0.7s						
XAN				smax			
	comp=E,20nm,0.9s						
LZH	**Lanzhou**	**4.38**	**352**	*e*Pg	**Pg**	**07 02 24.9**	**+1.0**
LZH				Sg	**Sg**	**07 03 19.8**	**-0.9**
LZH				smax			
	comp=N,45nm,0.5s						
LZH				smax			
	comp=E,48nm,0.5s						
ENH	**Enshi**	**4.47**	**108**	*e*Pg	**Pg**	**07 02 24.7**	**-0.8**
GYA	**Guiyang**	**5.57**	**160**	Pn	**Pn**	**07 02 25.8**	**+2.0**
GYA				Sn	**Sn**	**07 03 27.1**	**-1.3**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,30nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.16**	**202**	Pn	**Pn**	**07 04 28.2**	**+6.7**
	baz=12,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**22.77**	**318**	P	**P**	**07 06 03.2**	**-0.3**
	comp=E,0.2nm,0.5s,mb2.9,baz=103,slow=12,SNR=3.3						
WRAB	**Tennant Creek**	**58.77**	**147**	*e*P	**P**	**07 11 00.3**	**+0.6**
	comp=E,0.3nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**61.83**	**149**	P	**P**	**07 11 20.8**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.9,baz=333,slow=6.8,SNR=5.7						
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**07 13 15.3**	**-0.5**
	comp=E,0.1nm,0.5s,mb3.1,baz=322,slow=5.4,SNR=3.0						

*ISCJB **24** 07:01:30.5±0.4, 24°.69N±0°.03×121°.75E±0°.02, h79km±3km, Error ellipse: s-maj=4.7km s-min=2.8km az=147.9*
*TAP **24** 07:01:30.9, 24°.68N×121°.72E, h76km, ML3.7, B*
*JMA **24** 07:01:30.7±0.2, 24°.79N×121°.82E, h82km, M3.1*
ISC 24 07:01:30.9±0.5, 24°.69N±0°.03×121°.75E±0°.02, h78km±3km, n55, σ0°74/103, 7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.07**	**2**	*e*P	**Pn**	**07 01 41.5**	**-0.6**
ILA				*e*S	**Sn**	**07 01 52.2**	**+2.0**
	baz=11						
TWE	**Neicheng**	**0.08**	**292**	⇓*i*P	**Pn**	**07 01 42.3**	**+0.2**
	baz=298						
TWE				S	**Sn**	**07 01 50.4**	**+0.1**
	baz=298						
TWC	**Suao**	**0.12**	**131**	⇓*i*P	**Pn**	**07 01 42.7**	**+0.5**
	baz=121						
TWC				S	**Sn**	**07 01 51.7**	**+1.3**
	baz=121						
ENTT	**Nioudou**	**0.17**	**252**	*i* P	**Pn**	**07 01 42.4**	**+0.1**
	baz=262						
ENTT				S	**Sn**	**07 01 50.5**	**-0.2**
	baz=262						
ENA	**Nanau**	**0.26**	**181**	*e*P	**Pn**	**07 01 42.9**	**+0.1**
	baz=184						
ENA				*e*S	**Sn**	**07 01 52.1**	**+0.7**
	baz=184						
TWA	**Mucha**	**0.32**	**333**	*i* P	**Pn**	**07 01 43.1**	**0.0**
	baz=333						
TWA				*e*S	**Sn**	**07 01 51.5**	**-0.6**
	baz=333						
NSK	**Sanguang**	**0.35**	**268**	*i* P	**Pn**	**07 01 42.8**	**-0.5**
	baz=268						
NSK				S	**Sn**	**07 01 51.4**	**-1.0**
	baz=268						
NWF	**Wu-fen Shan**	**0.38**	**5**	⇓*i*P	**Pn**	**07 01 43.8**	**+0.3**
	baz=359						
NWF				S	**Sn**	**07 01 53.4**	**+0.6**
	baz=359						
TWB1	**Santiao Chiao**	**0.39**	**35**	⇓*i*P	**Pn**	**07 01 44.0**	**+0.4**
	baz=46						
TWB1				*i* S	**Sn**	**07 01 53.0**	**+0.2**
	baz=46						
TAP1	**Taipei**	**0.40**	**330**	P	**Pn**	**07 01 43.6**	**-0.1**
	baz=325						
TAP1				*e*S	**Sn**	**07 01 52.3**	**-0.7**
	baz=325						
NNS	**Nan Shan**	**0.42**	**234**	P	**Pn**	**07 01 44.0**	**+0.2**
	baz=233						
NNS				*e*S	**Sn**	**07 01 53.3**	**0.0**
	baz=233						
TWS1	**Kuangyinshan**	**0.50**	**324**	⇓P	**Pn**	**07 01 44.6**	**+0.1**
	baz=315						
TWS1				S	**Sn**	**07 01 54.6**	**+0.1**
	baz=315						
NCU	**National Centr**	**0.58**	**299**	*e*P	**Pn**	**07 01 44.9**	**-0.2**
	baz=293						
NCU				*e*S	**Sn**	**07 01 55.5**	**-0.2**
	baz=293						
TWY	**Chenhua**	**0.60**	**347**	⇓P	**Pn**	**07 01 45.4**	**0.0**
	baz=340						
TWY				*e*S	**Sn**	**07 01 55.9**	**-0.1**
	baz=340						
TWD	**Chiawan**	**0.62**	**193**	P	**Pn**	**07 01 44.9**	**-0.7**
	baz=201						
TWD				*e*S	**Sn**	**07 01 55.0**	**-1.5**
	baz=201						
TWT	**Tachien**	**0.68**	**230**	P	**Pn**	**07 01 47.2**	**+1.0**
	baz=228						
TWT				S	**Sn**	**07 01 58.2**	**+0.7**
	baz=228						
NSTT	**Nanjuang**	**0.68**	**265**	P	**Pn**	**07 01 46.0**	**-0.2**
	baz=265						
NSTT				*e*S	**Sn**	**07 01 56.6**	**-0.9**
	baz=265						
WHF	**Hehuan Shan**	**0.70**	**219**	P	**Pn**	**07 01 47.0**	**+0.6**
	baz=214						
WHF				*e*S	**Sn**	**07 01 58.2**	**+0.4**
	baz=214						
HSN	**Hsinchu**	**0.71**	**279**	*e*P	**Pn**	**07 01 45.3**	**-1.2**
	baz=282						
HSN				*e*S	**Sn**	**07 01 57.1**	**-1.0**
	baz=282						
HWA	**Hwalien**	**0.72**	**190**	*e*P	**Pn**	**07 01 46.5**	**-0.1**
	baz=199						
HWA				*e*S	**Sn**	**07 01 57.8**	**-0.6**
	baz=199						
ESL	**Shilin**	**0.92**	**198**	*e*P	**Pn**	**07 01 48.2**	**-0.7**
	baz=194						
ESL				*e*S	**Sn**	**07 02 00.3**	**-1.9**
	baz=194						
NSY	**Sanyi**	**0.94**	**253**	*e*P	**Pn**	**07 01 49.3**	**+0.2**
	baz=254						
NSY				*e*S	**Sn**	**07 02 02.5**	**-0.1**
	baz=254						
TWQ1	**Liyutan**	**0.95**	**249**	*e*P	**Pn**	**07 01 48.9**	**-0.3**
	baz=250						
TWQ1				*e*S	**Sn**	**07 02 02.2**	**-0.7**
	baz=250						
PCYT	**Pengchaiyu**	**0.98**	**17**	⇓*i*P	**Pn**	**07 01 49.9**	**+0.3**
	baz=15						
PCYT				S	**Sn**	**07 02 03.9**	**+0.4**
	baz=15						
SMLT	**Sun Moon Lake**	**1.11**	**224**	P	**Pn**	**07 01 51.8**	**+0.6**
	baz=233						
SMLT				*e*S	**Sn**	**07 02 07.6**	**+1.1**
	baz=233						
TCU	**Taichung**	**1.11**	**241**	P	**Pn**	**07 01 51.4**	**+0.2**
	baz=242						
TCU				*e*S	**Sn**	**07 02 05.8**	**-0.7**
	baz=242						
TYC	**Yuchr**	**1.13**	**226**	*i* P	**Pn**	**07 01 51.7**	**+0.3**
	baz=228						
TYC				*e*S	**Sn**	**07 02 06.9**	**+0.2**
	baz=228						
YOJ	**Yonaguni jima**	**1.18**	**101**	P	**Pn**	**07 01 51.7**	**-0.3**
YOJ				*e*S	**Sn**	**07 02 07.3**	**-0.5**
EHY	**Hungye**	**1.24**	**198**	*e*P	**Pn**	**07 01 52.1**	**-0.8**
	baz=192						
WNT	**Mingjian**	**1.26**	**230**	*e*P	**Pn**	**07 01 53.3**	**+0.2**
	baz=231						
TWF1	**Yuli**	**1.40**	**197**	*e*P	**Pn**	**07 01 53.5**	**-1.3**
	baz=200						
TWF1				*e*S	**Sn**	**07 02 11.3**	**-1.5**
	baz=200						
YUS	**Yu-Shan**	**1.40**	**211**	*e*P	**Pn**	**07 01 56.3**	**+1.4**
	baz=226						
YUS				*e*S	**Sn**	**07 02 14.9**	**+2.0**
	baz=226						
ALS	**Alishan**	**1.46**	**216**	P	**Pn**	**07 01 56.5**	**+0.9**
	baz=228						
ALS				*e*S	**Sn**	**07 02 15.8**	**+1.7**
	baz=228						
CHN5	**Tsauling**	**1.46**	**222**	*i* P	**Pn**	**07 01 56.2**	**+0.5**
	baz=225						
CHN5				*e*S	**Sn**	**07 02 14.4**	**+0.1**
	baz=225						
WGK	**Gukeng**	**1.47**	**227**	*e*P	**Pn**	**07 01 56.2**	**+0.4**
	baz=239						
WGK				*e*S	**Sn**	**07 02 14.8**	**+0.2**
	baz=239						
WTCT	**Ta-ch'eng**	**1.57**	**239**	*e*P	**Pn**	**07 01 56.9**	**-0.2**
	baz=240						
WTCT				*e*S	**Sn**	**07 02 16.1**	**-0.8**
	baz=240						
ELDTW	**Lidau**	**1.64**	**204**	*e*P	**Pn**	**07 01 58.0**	**0.0**
	baz=200						
CHY	**Chiayi**	**1.69**	**226**	*e*P	**Pn**	**07 01 59.0**	**+0.3**
	baz=236						
CHY				*e*S	**Sn**	**07 02 19.6**	**-0.1**
	baz=236						
CHN4	**Tsaushan**	**1.70**	**219**	*e*P	**Pn**	**07 01 59.5**	**+0.7**
	baz=222						
CHN4				*e*S	**Sn**	**07 02 20.9**	**+1.0**
	baz=222						
WSF	**Szhu**	**1.74**	**233**	*e*P	**Pn**	**07 02 00.7**	**+1.3**
	baz=235						
WSF				*e*S	**Sn**	**07 02 20.7**	**-0.2**
	baz=235						
WTP	**Ta-pu**	**1.77**	**216**	*i* P	**Pn**	**07 02 00.2**	**+0.5**
	baz=216						
WTP				*e*S	**Sn**	**07 02 22.4**	**+0.8**
	baz=216						
TWK	**Hsinying**	**1.83**	**219**	*e*P	**Pn**	**07 02 00.5**	**0.0**
	baz=221						
IRIF	**Iriomote-Funau**	**1.84**	**101**	P	**Pn**	**07 02 00.2**	**-0.5**
IRIF				S	**Sn**	**07 02 22.6**	**-0.7**
CHN1	**Nanshi**	**1.87**	**217**	P	**Pn**	**07 02 01.2**	**+0.2**
	baz=221						
CHN1				*e*S	**Sn**	**07 02 23.9**	**+0.1**
	baz=221						
SGST	**Jiashian**	**1.92**	**214**	*e*P	**Pn**	**07 02 02.0**	**+0.3**
	baz=226						
SGST				S	**Sn**	**07 02 25.7**	**+0.5**
	baz=226						
CHN8	**Yiju**	**1.94**	**227**	*e*P	**Pn**	**07 02 01.8**	**-0.2**
	baz=237						
CHN8				*e*S	**Sn**	**07 02 25.6**	**+0.1**
	baz=237						
TWG	**Pinlang**	**1.96**	**198**	*e*P	**Pn**	**07 02 02.1**	**-0.2**
	baz=192						
HATJ	**Hateruma jima**	**1.98**	**108**	P	**Pn**	**07 02 02.7**	**+0.2**
JKRS	**Kuro-shima**	**2.11**	**102**	P	**Pn**	**07 02 04.1**	**-0.2**
JKRS				S	**Sn**	**07 02 29.6**	**-0.1**
SSD	**Sandimen**	**2.19**	**208**	*e*P	**Pn**	**07 02 06.5**	**+1.2**
	baz=220						
ECL	**Taimali**	**2.21**	**199**	*e*P	**Pn**	**07 02 05.3**	**-0.2**
	baz=198						
ECL				*e*S	**Sn**	**07 02 30.6**	**-1.4**
	baz=198						
JIJ	**Ishigaki jima**	**2.21**	**98**	P	**Pn**	**07 02 05.1**	**-0.4**
JIJ				S	**Sn**	**07 02 30.9**	**-1.1**
PNG	**Penghu**	**2.29**	**241**	*e*P	**Pn**	**07 02 05.4**	**-1.3**
	baz=242						
PNG				*e*S	**Sn**	**07 02 31.6**	**-2.5**
	baz=242						
SCZT	**Fangliau**	**2.53**	**204**	*e*P	**Pn**	**07 02 10.4**	**+0.5**
	baz=211						
SCZT				*e*S	**Sn**	**07 02 39.3**	**-0.5**
	baz=211						
JTJ	**Tarama**	**2.69**	**90**	P	**Pn**	**07 02 12.4**	**+0.4**
JTJ				*e*S	**Sn**	**07 02 44.3**	**+0.7**

NNC 24 07:12:40.4±2.4, 52°.17N×80°.40E, h0km, mb2.9, mpv2.5, 3C-3D, Error ellipse: s-maj=46.8km s-min=15.1km az=134.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**1.83**	**218**	⇓Pn	Pn	07 13 15.0	+2.0
	2.4nm,0.7s						
KURK				⇑Sn	Sn	07 13 41.3	+4.5
	3.0nm,0.4s						
KURK	**Kurchatov**	**1.83**	**218**	*e*PKIKP	Pn	07 13 14.9	+1.9
KURK	**Kurchatov**	**1.83**	**218**	*e*PKPdf	Pn	07 13 14.9	+1.9
KUR01	**Kurchatov Arra**	**1.85**	**219**	Pn	Pn	07 13 14.6	+1.4
KUR01				Sn	Sn	07 13 40.7	+3.4
KUR02	**Kurchatov Arra**	**1.86**	**219**	Pn	Pn	07 13 14.8	+1.3
KUR02				Sn	Sn	07 13 40.7	+3.0
KUR03	**Kurchatov Arra**	**1.88**	**219**	Pn	Pn	07 13 14.6	+0.8
KUR03				Sn	Sn	07 13 40.0	+1.8
KUR11	**Kurchatov Arra**	**1.90**	**215**	Pn	Pn	07 13 15.4	+1.4
KUR11				Sn	Sn	07 13 42.4	+3.9
KUR04	**Kurchatov Arra**	**1.90**	**218**	Pn	Pn	07 13 14.6	+0.6
KUR04				Sn	Sn	07 13 40.6	+2.0
KUR12	**Kurchatov Arra**	**1.91**	**216**	Pn	Pn	07 13 15.4	+1.4
KUR12				Sn	Sn	07 13 42.0	+3.3
KUR13	**Kurchatov Arra**	**1.91**	**216**	Pn	Pn	07 13 15.5	+1.4
KUR13				Sn	Sn	07 13 41.2	+2.3
KUR05	**Kurchatov Arra**	**1.92**	**218**	Pn	Pn	07 13 14.3	+0.1
KUR05				Sn	Sn	07 13 40.4	+1.3
KUR14	**Kurchatov Arra**	**1.92**	**217**	Pn	Pn	07 13 15.4	+1.1
KUR14				Sn	Sn	07 13 39.7	+0.6
KUR15	**Kurchatov Arra**	**1.93**	**217**	Pn	Pn	07 13 14.9	+0.5
KUR15				Sn	Sn	07 13 40.8	+1.5
KURBB	**Kurchatov Arra**	**1.94**	**218**	⇑Pn	Pn	07 13 14.6	+0.1
	0.6nm,0.3s						
KURBB				⇓Sn	Sn	07 13 41.2	+1.7
	3.9nm,0.8s						
KUR16	**Kurchatov Arra**	**1.95**	**218**	Pn	Pn	07 13 14.1	-0.5
KUR16				Sn	Sn	07 13 38.1	-1.6
KUR17	**Kurchatov Arra**	**1.96**	**219**	Pn	Pn	07 13 13.7	-1.0
KUR17				Sn	Sn	07 13 39.0	-0.9
KUR06	**Kurchatov Arra**	**1.96**	**218**	Pn	Pn	07 13 14.2	-0.6
KUR06				Sn	Sn	07 13 40.3	+0.3
KUR18	**Kurchatov Arra**	**1.96**	**219**	Pn	Pn	07 13 13.4	-1.4
KUR18				Sn	Sn	07 13 37.8	-2.4
KUR19	**Kurchatov Arra**	**1.97**	**220**	Pn	Pn	07 13 13.1	-1.8
KUR19				Sn	Sn	07 13 37.5	-2.9
KUR07	**Kurchatov Arra**	**1.98**	**217**	Pn	Pn	07 13 14.1	-0.9
KUR07				Sn	Sn	07 13 39.5	-0.9
KUR20	**Kurchatov Arra**	**1.98**	**221**	Pn	Pn	07 13 12.8	-2.3
KUR20				Sn	Sn	07 13 36.4	-4.2
KUR08	**Kurchatov Arra**	**1.99**	**217**	Pn	Pn	07 13 14.2	-1.0
KUR08				Sn	Sn	07 13 40.3	-0.6
KUR09	**Kurchatov Arra**	**2.01**	**217**	Pn	Pn	07 13 14.3	-1.2
KUR09				Sn	Sn	07 13 39.8	-1.5
KUR10	**Kurchatov Arra**	**2.03**	**217**	Pn	Pn	07 13 14.4	-1.4
KUR10				Sn	Sn	07 13 39.8	-1.9
MK31	**Makanchi Array**	**5.52**	**166**	⇓Pn	Pn	07 14 05.3	+1.6
	1.7nm,0.8s,baz=275,slow=3.3,SNR=5.8						
MK31				⇑Lg		07 15 33.1	
	1.1nm,0.7s						

*MOS **24** 07:22:23.0±1.1, 44°.41N×148°.08E, h87km, mb3.9/2, Error ellipse: s-maj=34.8km s-min=24.5km az=55.1*
*IDC **24** 07:22:25.5±3.6, 44°.59N×147°.85E, h92km±40km, mb3.4/3, mb1 3.6/6, mb1mx3.2/26, mbtmp3.3/6, Error ellipse: s-maj=80.6km s-min=28.9km az=134.0*
*JMA **24** 07:22:28.4±0.7, 44°.55N×147°.56E, h108km, M3.4*
ISC 24 07:22:26.3±1.1, 44°.5N±0°.1×147°.9E±0°.2, h102km±16km, n23, σ0°87/26, mb3.6/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.91**	**234**	P	**Pn**	**07 22 58.6**	**+0.8**
NEM2				*e*S	**Sn**	**07 23 22.1**	**+0.3**
JRA	**Rausu**	**2.05**	**255**	P	**Pn**	**07 22 59.8**	**+0.2**
JNK	**Nakash**	**2.45**	**249**	P	**Pn**	**07 23 05.4**	**+0.7**
JAK	**Akkeshi**	**2.75**	**238**	P	**Pn**	**07 23 09.3**	**+0.6**
JTKR	**Abashiri--Toko**	**2.89**	**261**	P	**Pn**	**07 23 09.9**	**-0.7**
JAR	**Ashorobuto**	**3.20**	**249**	P	**Pn**	**07 23 15.6**	**+0.9**
JMP	**Maruseppu**	**3.27**	**263**	P	**Pn**	**07 23 15.1**	**-0.6**
JKK2	**Kamakawa 2**	**3.73**	**262**	P	**Pn**	**07 23 21.5**	**-0.4**
JCH	**Churui**	**3.78**	**242**	P	**Pn**	**07 23 22.9**	**+0.4**
JCH				*e*S	**Sn**	**07 24 03.9**	**-2.1**
ASAJ	**Asahikawa**	**3.80**	**266**	P	**Pn**	**07 23 22.3**	**-0.5**
	4.3nm,0.3s,baz=90,slow=19,SNR=18						
ASAJ	**Asahikawa**	**3.80**	**266**	PN	**Pn**	**07 23 22.3**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JFR	**Furan**	**4.04**	**252**	P	**Pn**	**07 23 27.3**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.33**	**306**	*e*PN	**Pn**	**07 23 31.0**	**+1.1**
JNBK	**Urakawa-nobuka**	**4.34**	**241**	P	**Pn**	**07 23 29.5**	**-0.6**
JEW	**Eniwo**	**4.94**	**253**	P	**Pn**	**07 23 39.0**	**+0.8**
JKB	**Kayabe**	**5.64**	**245**	P	**Pn**	**07 23 46.8**	**-0.8**
JKB				*e*S	**Sn**	**07 24 46.3**	**-4.7**
PETK	**Petropavlovsk-**	**10.77**	**33**	P	**Pn**	**07 24 55.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=4.5						
MJAR	**Matsushiro Arr**	**10.82**	**226**	P	**Pn**	**07 24 57.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=37,slow=14,SNR=3.9						
YKA	**Yellowknife Ar**	**54.89**	**34**	P	**P**	**07 31 44.8**	**-0.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=299,slow=6.9,SNR=8.6						
YKA	**Yellowknife Ar**	**54.89**	**34**	P	**P**	**07 31 44.8**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**66.74**	**59**	P	**P**	**07 33 07.3**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.5,baz=296,slow=7.3,SNR=5.1						
TXAR	**Lajitas Array**	**81.80**	**57**	P	**P**	**07 34 34.6**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=294,slow=4.1,SNR=9.9						
TXAR	**Lajitas Array**	**81.80**	**57**	P	**P**	**07 34 34.6**	**+0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*NEIC **24** 07:24:25.2, 16°.67N×100°.12W, h16km, MD3.5(MEX), After MEX.*
MEX 24 07:24:25.2±0.5, 16°.67N×100°.12W, h16km±3km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.28**	**44**	*i* P	Pg	07 24 30.1	-1.1
ACX				*i* S	Sg	07 24 34.6	-0.7
ACX	**Acapulco**	**0.28**	**44**	*i* P	Pg	07 24 30.1	-1.1
ACX				*i* S	Sg	07 24 34.6	-0.7
CAIG	**El Cayaco**	**0.40**	**339**	*i* P	Pg	07 24 32.2	-1.3
CAIG				*i* S	Sg	07 24 38.0	-1.0
CAIG	**El Cayaco**	**0.40**	**339**	*i* P	Pg	07 24 32.2	-1.3
CAIG				*i* S	Sg	07 24 38.0	-1.0
PNIG	**Pinotepa**	**1.93**	**98**	*i* P	Pn	07 24 54.8	-2.5
PNIG				*i* S	Sn	07 25 16.7	-4.6
PNIG	**Pinotepa**	**1.93**	**98**	*i* P	Pn	07 24 54.8	-2.5
PNIG				*i* S	Sn	07 25 16.7	-4.6
UTMO	**Huajuapan**	**2.50**	**62**	*e*P	Pn	07 25 03.1	-2.1
UTMO				*i* S	Sn	07 25 30.9	-4.4
MZVM		**2.65**	**19**	*e*P	Pn	07 25 04.4	-2.8
MZVM				*i* S	Sn	07 25 34.6	-4.4
IIO	**Organos**	**3.20**	**24**	*e*P	Pn	07 25 13.2	-1.6
IIO				*i* S	Sn	07 25 49.3	-3.3
IIO	**Organos**	**3.20**	**24**	*e*P	Pn	07 25 13.2	-1.6
IIO				*i* S	Sn	07 25 49.3	-3.3

*ISCJB **24** 07:32:10.8±0.3, 38°.85N±0°.02×27°.18E±0°.02, h8km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=26.1*
*ISK **24** 07:32:10.4, 38°.86N×27°.17E, h8km, MD3.2*
*NEIC **24** 07:32:10.0, 38°.90N×27°.22E, h8km, MD3.1(ISK), MD3.2(ATH), After ISK.*
*DDA **24** 07:32:11.3, 38°.89N×27°.20E, h16km, Md3.0*
*ATH **24** 07:32:11.4, 38°.83N×27°.16E, h27km±1km, MD3.2/5*
*CSEM **24** 07:32:11.3±0.1, 38°.84N×27°.16E, h12km, ML3.2/4, Error ellipse: s-maj=1.9km s-min=1.7km az=82.0*
*THE **24** 07:32:12.2, 38°.79N×27°.16E, h13km±2km, ML3.2/4, Error ellipse: s-maj=3.2km s-min=0.9km az=114.0*
ISC 24 07:32:11.4±0.3, 38°.84N±0°.02×27°.18E±0°.02, h11km±3km, n81, σ0°75/128, Turkey

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

PRK				*e*SN	**Sg**	**07 32 38.8**	**+1.1**
PRK	**Paraskevi**	**0.81**	**300**	P	**Pg**	**07 32 26.9**	**-0.2**
PRK				S	**Sg**	**07 32 40.5**	**+2.8**
PRK	**Paraskevi**	**0.81**	**300**	P	**Pg**	**07 32 26.9**	**-0.2**
PRK	**Paraskevi**	**0.81**	**300**	*e*Pn	**Pg**	**07 32 27.3**	**+0.2**
PRK				*e*Sn	**Sg**	**07 32 38.8**	**+1.1**
BALY	**Balya**	**0.96**	**21**	*i* P	**Pg**	**07 32 29.0**	**-0.9**
BALY				*i* S	**Sg**	**07 32 44.2**	**+1.7**
BALY	**Balya**	**0.96**	**21**	*i* P	**Pg**	**07 32 29.0**	**-0.9**
BALY				*i* S	**Sg**	**07 32 44.2**	**+1.7**
BALB	**Balikesir**	**0.97**	**34**	*e*PG	**Pg**	**07 32 29.1**	**-0.9**
BALB				*e*SG	**Sg**	**07 32 42.5**	**-0.1**
BALB	**Balikesir**	**0.97**	**34**	*e*Pg	**Pg**	**07 32 29.1**	**-0.9**
BALB				*e*Sg	**Sg**	**07 32 42.5**	**-0.1**
CHOS	**Chios island**	**0.99**	**243**	*e*PN	**Pg**	**07 32 30.2**	**-0.2**
CHOS				*e*SN	**Sg**	**07 32 44.0**	**+0.7**
CHOS	**Chios island**	**0.99**	**243**	P	**Pg**	**07 32 30.0**	**-0.4**
CHOS				S	**Sg**	**07 32 43.8**	**+0.5**
CHOS	**Chios island**	**0.99**	**243**	P	**Pg**	**07 32 30.0**	**-0.4**
CHOS				*e*Sn	**Sg**	**07 32 44.0**	**+0.7**
SIGR	**SIGRI**	**1.09**	**290**	P	**Pg**	**07 32 32.0**	**-0.4**
SIGR				S	**Sg**	**07 32 46.9**	**+0.3**
SIGR	**SIGRI**	**1.09**	**290**	P	**Pg**	**07 32 32.0**	**-0.4**
SIGR				S	**Sg**	**07 32 46.9**	**+0.3**
MANT	**Manisa**	**1.14**	**108**	*i* P	**Pg**	**07 32 33.0**	**-0.2**
MANT				*i* S	**Sg**	**07 32 48.3**	**+0.2**
MANT	**Manisa**	**1.14**	**108**	*i* P	**Pg**	**07 32 33.0**	**-0.3**
MANT				*i* S	**Sg**	**07 32 48.3**	**+0.2**
GCAM	**G?zelcaml?**	**1.14**	**178**	*i* P	**Pg**	**07 32 32.2**	**-1.1**
GCAM				*i* S	**Sg**	**07 32 47.5**	**-0.6**
GCAM	**G?zelcaml?**	**1.14**	**178**	*i* P	**Pg**	**07 32 32.2**	**-1.1**
GCAM				*i* S	**Sg**	**07 32 47.5**	**-0.6**
SMG	**Samos**	**1.16**	**193**	*e*PN	**Pn**	**07 32 33.4**	**-0.1**
SMG				*e*SN	**Sn**	**07 32 49.1**	**-0.3**
SMG	**Samos**	**1.16**	**193**	*e*Pn	**Pn**	**07 32 33.4**	**-0.1**
SMG				*e*Sn	**Sn**	**07 32 49.1**	**-0.3**
EZN	**Ezine**	**1.18**	**326**	*e*PN	**Pn**	**07 32 33.2**	**-0.6**
EZN	**Ezine**	**1.18**	**326**	*e*Pn	**Pn**	**07 32 33.3**	**-0.5**
KULA	**Kula-Manisa**	**1.21**	**105**	*e*PN	**Pn**	**07 32 33.4**	**-0.7**
KULA	**Kula-Manisa**	**1.21**	**105**	*e*Pn	**Pn**	**07 32 33.4**	**-0.8**
DEMI	**Demirci**	**1.22**	**80**	*i* P	**Pn**	**07 32 33.9**	**-0.4**
DEMI				*i* S	**Sb**	**07 32 50.2**	**0.0**
DEMI	**Demirci**	**1.22**	**80**	*i* P	**Pn**	**07 32 33.9**	**-0.4**
DEMI				*i* S	**Sb**	**07 32 50.2**	**+0.1**
DURS	**Dursunbey**	**1.26**	**53**	*i* P	**Pn**	**07 32 34.6**	**-0.3**
DURS				*i* S	**Sb**	**07 32 51.1**	**-0.3**
DURS	**Dursunbey**	**1.26**	**53**	*i* P	**Pn**	**07 32 34.6**	**-0.3**
DURS				*i* S	**Sb**	**07 32 51.1**	**-0.3**
AYDN	**Tasoluk**	**1.30**	**155**	*i* P	**Pn**	**07 32 36.1**	**+0.6**
AYDN				*i* S	**Sb**	**07 32 52.0**	**-0.5**
AYDN	**Tasoluk**	**1.30**	**155**	*i* P	**Pn**	**07 32 36.1**	**+0.6**
AYDN				*i* S	**Sb**	**07 32 52.0**	**-0.5**
BOZC	**Bozcaada**	**1.32**	**319**	*i* P	**Pn**	**07 32 35.1**	**-0.7**
BOZC				*i* S	**Sb**	**07 32 52.9**	**-0.3**
DST	**Dursunbey**	**1.36**	**55**	*e*PN	**Pn**	**07 32 36.4**	**+0.1**
LPK	**Lapseki**	**1.56**	**348**	*e*PN	**Pn**	**07 32 38.9**	**-0.2**
LPK	**Lapseki**	**1.56**	**348**	*e*Pn	**Pn**	**07 32 38.9**	**-0.2**
EDC	**Edincik**	**1.59**	**19**	*e*PN	**Pn**	**07 32 39.8**	**+0.3**
EDC	**Edincik**	**1.59**	**19**	*e*Pn	**Pn**	**07 32 39.8**	**+0.3**
BNT	**Bandirma**	**1.62**	**21**	*e*PN	**Pn**	**07 32 38.8**	**-1.0**
GADA	**Gvkgeada**	**1.67**	**324**	*e*PN	**Pn**	**07 32 40.2**	**-0.4**
GADA	**Gvkgeada**	**1.67**	**324**	*e*Pn	**Pn**	**07 32 40.2**	**-0.3**
BDRM	**Kayabasi**	**1.79**	**173**	*i* P	**Pn**	**07 32 44.5**	**+2.4**
BDRM	**Kayabasi**	**1.79**	**173**	*i* P	**Pn**	**07 32 44.5**	**+2.4**
RKY	**Sarkoy-Tekirda**	**1.84**	**0**	*e*PN	**Pn**	**07 32 42.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.84**	**0**	*e*Pn	**Pn**	**07 32 42.5**	**-0.4**
SART	**Tekirdag**	**1.84**	**0**	*i* P	**Pn**	**07 32 42.8**	**-0.1**
SART				*i* S	**Sn**	**07 33 06.5**	**+0.3**
SART	**Tekirdag**	**1.84**	**0**	*i* P	**Pn**	**07 32 42.8**	**-0.1**
SART				*i* S	**Sn**	**07 33 06.5**	**+0.3**
LIA	**Limnos Island**	**1.87**	**305**	*e*PB	**Pb**	**07 32 43.6**	**-1.9**
LIA	**Limnos Island**	**1.87**	**305**	P	**Pn**	**07 32 43.7**	**+0.4**
LIA				S	**Sn**	**07 33 06.5**	**-0.4**
LIA	**Limnos Island**	**1.87**	**305**	P	**Pn**	**07 32 43.7**	**+0.4**
LIA				S	**Sn**	**07 33 06.5**	**-0.4**
KHAL	**Karahalli**	**1.88**	**104**	*i* P	**Pn**	**07 32 43.2**	**-0.1**
KHAL				*i* S	**Sn**	**07 33 07.6**	**+0.7**
KHAL	**Karahalli**	**1.88**	**104**	*i* P	**Pn**	**07 32 43.2**	**-0.1**
KHAL				*i* S	**Sn**	**07 33 07.6**	**+0.6**
MFT	**Murefte**	**1.94**	**2**	*e*PN	**Pn**	**07 32 45.0**	**+0.7**
MFT	**Murefte**	**1.94**	**2**	*e*Pn	**Pn**	**07 32 45.0**	**+0.7**
ENEZ	**Enez**	**2.05**	**338**	*e*PN	**Pn**	**07 32 46.0**	**+0.2**
ENEZ	**Enez**	**2.05**	**338**	*e*Pn	**Pn**	**07 32 46.0**	**+0.2**
DAT	**Datca**	**2.13**	**171**	*e*PN	**Pn**	**07 32 48.0**	**+1.1**
DAT	**Datca**	**2.13**	**171**	*e*PN	**Pn**	**07 32 48.0**	**+1.1**
ALN	**Alexandroupoli**	**2.23**	**337**	*e*PN	**Pn**	**07 32 48.3**	**+0.1**
ALN				*e*SN	**Sn**	**07 33 16.2**	**+0.5**
ALN	**Alexandroupoli**	**2.23**	**337**	P	**Pn**	**07 32 48.4**	**+0.2**
ALN				S	**Sn**	**07 33 16.2**	**+0.5**
ALN	**Alexandroupoli**	**2.23**	**337**	*e*Pn	**Pn**	**07 32 48.3**	**+0.1**
ALN				S	**Sn**	**07 33 16.2**	**+0.5**
ALT	**Altintas**	**2.30**	**84**	*e*PN	**Pn**	**07 32 49.0**	**-0.2**
ALT	**Altintas**	**2.30**	**84**	*e*Pn	**Pn**	**07 32 49.0**	**-0.2**
YLV	**Yalova**	**2.42**	**44**	*e*PN	**Pn**	**07 32 51.6**	**+0.8**
YLV	**Yalova**	**2.42**	**44**	*e*Pn	**Pn**	**07 32 51.6**	**+0.8**
BORA	**Eskisehir**	**2.75**	**67**	*i* P	**Pg**	**07 33 01.9**	**-2.1**
BORA				*i* S	**Sg**	**07 33 39.3**	**-0.3**
EDRB	**Edirne**	**3.02**	**354**	*e*PN	**Pn**	**07 32 59.5**	**+0.5**
EDRB	**Edirne**	**3.02**	**354**	*e*Pn	**Pn**	**07 32 59.5**	**+0.4**
GULT	**Gulveren**	**3.03**	**57**	*e*PN	**Pn**	**07 33 00.5**	**+1.2**
GULT	**Gulveren**	**3.03**	**57**	*e*Pn	**Pn**	**07 33 00.5**	**+1.3**

BJI ***24*** *07:40:31.2, 9.°69S×124.°63E, h61km, mB5.0/23, mb5.3/44, Ms4.8/26, Ms7 4.2/28*

MOS ***24*** *07:40:37.7±0.8, 8.°69S×124.°10E, h50km, mb5.6/39, Error ellipse: s-maj=12.5km s-min=6.3km az=112.6*

TEH ***24*** *07:40:39.0, 8.°78S×124.°00E, h5km*

ISCJB ***24*** *07:40:41.3±1.0, 8.°83S±0.°03×124.°13E±0.°04, h86km±9km, mb5.3/119, Error ellipse: s-maj=7.3km s-min=4.9km az=154.7*

NEIC ***24*** *07:40:42.3±0.9, 8.°84S×124.°10E, h81km±8km, mb5.2/51, Error ellipse: s-maj=7.0km s-min=4.2km az=67.0*

GCMT ***24*** *07:40:42.3±0.2, 9.°05S×124.°24E, h110km±3km, MW5.0/74, Moment Tensor Solution. s40,c44; s74,c109; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.51±.19; Mθθ-0.55±.24; Mφφ0.04±.28; Mrθ2.83±.11; Mrφ0.12±.21; Mθφ3.32±.13; Best double couple: M0=4.38200×10^16 NP1:φs=283.00000°, δ4.00000°, λ152.00000°. NP2: φs=41.00000°, δ88.00000°, λ86.00000°. Principal axes: T 4.5870, Plg47.0000°, Azm307.0000°; N -0.4100, Plg4.0000°, Azm41.0000°; P -4.1770, Plg43.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***24*** *07:40:45.7±1.1, 8.°95S×124.°07E, h114km±8km, mb4.9/23, mb1 4.9/26, mb1mx4.9/28, mbtmp4.9/26, MS3.9/12, Ms1 3.9/12, ms1mx3.6/25 Error ellipse: s-maj=14.3km s-min=8.3km az=70.0*

DJA ***24*** *07:40:46, 9.°14S×124.°10E, h110km, Mw5.4/25*

ISC 24 07:40:43.8±0.7, 8.°90S±0.°03×124.°14E±0.°04, h96km±7km, h60km±2.4km:pP-P, n338, σ1§13/295, mb5.3/118, 12C-12D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
KAPI	**Kappang**	**5.83**	**311**	Pn	**Pn**	**07 42 11.2**	**+3.5**	
	2μm,0.5s,SNR=37							
KAPI	**Kappang**	**5.83**	**311**	P	**Pn**	**07 42 10.5**	**+2.8**	
	33nm,0.3s,baz=155,slow=7.8,SNR=119							
KAPI				S	**Sn**	**07 43 18.2**	**+5.0**	
	baz=53,slow=20,SNR=3.0							
KAPI				LR	LR	07 45 01.3		
	comp=Z,361nm,19.5s,baz=151,slow=44							
KAKA	**Kakadu**	**8.98**	**116**	*e*P	**Pn**	**07 42 47.8**	**-2.9**	
	230nm,0.4s							
KAKA				*e*S	**Sn**	**07 44 11.0**	**-19**	
KAKA	**Kakadu**	**8.98**	**116**	*e*Pn	**Pn**	**07 42 48.1**	**-2.6**	
FITZ	**Fitzroy Crossi**	**9.26**	**171**	*e*P	**Sn**	**07 44 27.0**	**-10**	
	2μm,0.9s							
FITZ	**Fitzroy Crossi**	**9.26**	**171**	P	**Pn**	**07 42 51.2**	**-3.2**	
	8.7nm,0.3s,baz=6.7,slow=7.5,SNR=133							
FITZ				S	**Sn**	**07 44 27.7**	**-9.1**	
	67nm,0.3s,baz=133,slow=5.3,SNR=12							
FITZ				LR	LR	07 47 19.2		
	comp=Z,740nm,18.6s,baz=359,slow=43							
FITZ	**Fitzroy Crossi**	**9.26**	**171**	*e*Pn	**Pn**	**07 42 50.6**	**-3.9**	
FITZ				*e*Sn	**Sn**	**07 44 27.2**	**-10**	
MBWA	**Marble Bar**	**12.91**	**199**	*e*Pn	**Pn**	**07 43 41.6**	**-2.1**	
MBWA				*e*Sn	**Sn**	**07 45 59.0**	**-6.6**	
TSM	**Tawau**	**14.52**	**334**	P	**Pn**	**07 44 08.0**	**+3.3**	
WRAB	**Tennant Creek**	**14.75**	**139**	Pn	**Pn**	**07 44 03.0**	**-4.6**	
	3μm,0.6s,SNR=53							
WRAB	**Tennant Creek**	**14.75**	**139**	*e*Pn	**Pn**	**07 44 03.2**	**-4.5**	
WRAB				*e*P		07 44 12.0		
WRAB				*e*Sn	**Sn**	**07 46 35.0**	**-15**	
MYLDM	**Lahad Datu**	**15.08**	**338**	P	**Pn**	**07 44 18.3**	**+6.5**	
DAV	**Davao City (W)**	**15.93**	**5**	P	**Pn**	**07 44 23.3**	**+0.8**	
	24nm,0.3s,baz=279,slow=19,SNR=4.3							
DAV				LR	LR	07 50 18.1		
	comp=Z,392nm,21.9s,baz=177,slow=36							
SDKM	**Sandakan**	**16.02**	**334**	P	**Pn**	**07 44 27.7**	**+4.0**	
BTM	**Bintulu**	**16.31**	**317**	P	**Pn**	**07 44 32.6**	**+5.3**	
BTM	**Bintulu**	**16.31**	**317**	P	**Pn**	**07 44 32.7**	**+5.4**	
KKM	**Kota Kinabalu**	**16.82**	**332**	P	**Pn**	**07 44 37.4**	**+3.9**	
KKM	**Kota Kinabalu**	**16.82**	**332**	*e*P	**Pn**	**07 44 36.8**	**+3.2**	
	219nm,1.0s							
KSM	**Kuching**	**17.21**	**306**	P	**Pn**	**07 44 40.9**	**+2.5**	
KSM	**Kuching**	**17.21**	**306**	*e*P	**Pn**	**07 44 39.8**	**+1.4**	
	96nm,0.8s							
KDM	**Kudat**	**17.32**	**335**	P	**Pn**	**07 44 43.4**	**+3.7**	
DCPH	**Dipolog City**	**17.39**	**357**	⇑*i*P	**Pn**	**07 44 47.0**	**+6.5**	
ASAR	**Alice Springs**	**17.40**	**149**	P	**Pn**	**07 44 39.4**	**-1.2**	
	3.2nm,0.3s,baz=317,slow=10,SNR=362							
ASAR				S	**S**	**07 47 40.5**	**-14**	
	6.1nm,0.3s,baz=318,slow=20,SNR=12							
TBP	**Tagbilaran**	**18.47**	**359**	*e*P	**Pn**	**07 44 55.5**	**+2.0**	
COEN	**Coen**	**19.31**	**107**	*e*P	**Pn**	**07 45 02.1**	**-1.4**	
	44nm,0.3s							
COEN				*e*S	**S**	**07 48 22.2**	**-13**	
GUIM	**Jordan**	**19.46**	**355**	*e*P	**Pn**	**07 45 05.0**	**-0.2**	
SJMP	**San Jose**	**21.43**	**352**	*e*P	**P**	**07 45 26.6**	**+2.3**	
FORT	**Forrest**	**22.07**	**171**	⇓*i*P	**P**	**07 45 30.5**	**-0.5**	
	162nm,0.8s,mb5.4							
FORT				*e*S	**S**	**07 49 28.7**	**+0.2**	
FORT	**Forrest**	**22.07**	**171**	*e*P	**P**	**07 45 30.7**	**-0.2**	
	313nm,1.0s,mb5.6							
FORT				*e*S	**S**	**07 49 32.0**	**+3.6**	
PVCP	**Virac**	**22.35**	**0**	*e*P	**P**	**07 45 35.4**	**+1.4**	
LUBP	**Lubang**	**22.82**	**350**	*e*P	**P**	**07 45 40.5**	**+1.6**	
MYKOM	**Kota Tinggi**	**22.84**	**297**	P	**P**	**07 45 39.9**	**+0.6**	
TGY	**Tagaytay City**	**23.07**	**352**	P	**P**	**07 45 42.7**	**+1.4**	
	209nm,0.4s,mb5.8,baz=168,slow=9.0,SNR=9.3							
KLBR	**Kellerberrin**	**23.34**	**194**	*e*P	**P**	**07 45 43.1**	**-0.6**	
	31nm,0.7s,mb4.7							
KLBR				*e*S	**S**	**07 49 59.0**	**+10**	
KGM	**Kluang**	**23.42**	**297**	P	**P**	**07 45 45.5**	**+0.9**	
POLP	**Polilio Island**	**23.58**	**355**	*e*P	**P**	**07 45 46.5**	**+0.6**	
CTA	**Charters Tower**	**24.09**	**120**	*e*P	**P**	**07 45 51.9**	**+1.3**	
	90nm,0.6s,mb5.3							
CTA	**Charters Tower**	**24.09**	**120**	P	**P**	**07 45 50.0**	**-0.5**	
	166nm,0.8s,mb5.4,baz=296,slow=12,SNR=82							
CTAO	**Charters Tower**	**24.09**	**120**	*e*P	**P**	**07 45 52.1**	**+1.5**	
CTAO				pmax	pmax			
	comp=Z,149nm,0.7s,mb5.4							
CTAO	**Charters Tower**	**24.09**	**120**	*e*P	**P**	**07 45 52.1**	**+1.5**	
	comp=Z,149nm,0.7s,mb5.4							
NWAO	**Narrogin (SRO)**	**24.75**	**194**	P	**P**	**07 45 55.1**	**-1.3**	
	comp=Z,15nm,0.7s,mb4.5,baz=13,slow=14,SNR=12							
NWAO	**Narrogin (SRO)**	**24.75**	**194**	*e*P	**P**	**07 45 56.7**	**+0.3**	
NWAO				pmax	pmax			
	comp=Z,133nm,1.7s							
NWAO	**Narrogin (SRO)**	**24.75**	**194**	*e*P	**P**	**07 45 56.7**	**+0.3**	
	comp=Z,133nm,1.7s,mb5.1							
KTGM	**Kuala Trenggan**	**25.27**	**303**	P	**P**	**07 46 02.7**	**+1.3**	
FRIM	**Kepong**	**25.48**	**297**	P	**P**	**07 46 04.3**	**+0.9**	
IPM	**Ipoh**	**26.61**	**299**	P	**P**	**07 46 13.9**	**+0.4**	
KULM	**Kulim**	**27.34**	**300**	P	**P**	**07 46 19.7**	**-0.4**	
KULM	**Kulim**	**27.34**	**300**	*e*P	**P**	**07 46 19.4**	**-0.7**	
	comp=Z,18nm,0.8s,mb4.6							
PSI	**Prapat**	**27.70**	**294**	P	**P**	**07 46 22.5**	**-0.8**	
	comp=Z,42nm,0.9s,mb5.0,baz=151,slow=5.9,SNR=21							
PSI				LR	LR	07 58 49.8		
	comp=Z,314nm,20.0s,baz=105,slow=39							
STKA	**Stephens Creek**	**28.02**	**147**	*e*P	**P**	**07 46 26.9**	**+1.0**	
	comp=Z,38nm,0.7s,mb5.0							
STKA				*e*S	S	07 51 41.6	+38	
STKA	**Stephens Creek**	**28.02**	**147**	P	**P**	**07 46 27.1**	**+1.1**	
	comp=Z,58nm,0.8s,mb5.2,baz=316,slow=8.9,SNR=76							
STKA				LR	LR	07 58 37.9		
	comp=Z,405nm,19.8s,baz=277,slow=38							
STKA	**Stephens Creek**	**28.02**	**147**	*e*P	**P**	**07 46 27.0**	**+1.1**	
	comp=Z,13nm,0.8s,mb4.5							
EIDS	**Eidsvold**	**30.41**	**126**	*e*P	**P**	**07 46 47.1**	**0.0**	
	comp=Z,10.0nm,0.8s,mb4.5							
QIZ	**Qiongzhong**	**31.13**	**333**	P	**P**	**07 46 53.4**	**-0.1**	
QIZ				pP	pP	07 47 06.4	-8.8	
QIZ				sP	sP	07 47 13.6	-13	
QIZ				S	**S**	**07 51 57.0**	**+4.6**	
QIZ				pmax	pmax			
	comp=Z,22nm,1.1s,mb4.8							
QIZ				LR	LR			
	comp=Z,330nm,35.6s							
QIZ	**Qiongzhong**	**31.13**	**333**	*e*P	**P**	**07 46 52.6**	**-0.9**	
	comp=Z,31nm,1.1s,mb5.0							
TPUB	**Ta-pu**	**32.19**	**354**	*e*P	**P**	**07 47 02.3**	**-0.5**	
	comp=Z,71nm,0.9s,mb5.4							
TPUB				*e*S	**S**	**07 52 04.1**	**-4.7**	
YULB	**Yu-li**	**32.22**	**355**	*e*P	**P**	**07 47 01.3**	**-1.7**	
	comp=Z,19nm,0.8s,mb4.9							
NNT	**Nongplab**	**32.31**	**311**	P	**P**	**07 47 05.3**	**+1.3**	
SSLB	**Suanglung**	**32.64**	**355**	*e*P	**P**	**07 47 05.0**	**-1.7**	
	comp=Z,32nm,0.8s,mb5.2							
ARMA	**Armidale**	**33.42**	**134**	*e*P	**P**	**07 47 16.1**	**+2.6**	
ARMA	**Armidale**	**33.42**	**134**	*e*P	**P**	**07 47 16.3**	**+2.9**	
	comp=Z,58nm,0.8s,mb5.5							
YHNB	**Yeheng**	**33.48**	**355**	*e*P	**P**	**07 47 12.3**	**-1.7**	
	comp=Z,75nm,1.1s,mb5.4							
NST	**Nakhon Sawan**	**34.09**	**316**	⇓*i*P	**P**	**07 47 20.6**	**+1.2**	
	comp=Z,83nm,0.8s,mb5.6							
TOO	**Toolangi**	**34.45**	**149**	⇓*i*P	**P**	**07 47 24.9**	**+2.6**	
CAN	**Canberra**	**34.75**	**143**	*e*P	**P**	**07 47 26.9**	**+2.0**	
CAN				pmax	pmax			
	comp=Z,79nm,1.1s,mb5.5							
CAN	**Canberra**	**34.75**	**143**	*e*P	**P**	**07 47 26.9**	**+1.9**	
	comp=Z,79nm,1.1s,mb5.5							
CNB	**Canberra Magne**	**34.96**	**143**	*e*P	**P**	**07 47 28.7**	**+2.0**	
RIV	**Riverview**	**35.12**	**139**	*e*P	**P**	**07 47 29.9**	**+1.8**	
JOW	**Kunigami**	**35.75**	**6**	P	**P**	**07 47 33.2**	**-0.3**	
	27nm,0.8s,mb5.2,baz=180,slow=12,SNR=4.7							
BDT	**Bhimibol Dam**	**35.95**	**316**	P	**P**	**07 47 36.0**	**+0.6**	
	comp=Z,113nm,0.8s,mb5.8							
CM31	**Chiang Mai Arr**	**36.84**	**318**	*e*P	**P**	**07 47 44.7**	**+1.7**	
CM31				*e*		07 47 56.1		
CMAR	**Chiang Mai Arr**	**36.84**	**318**	P	**P**	**07 47 43.6**	**+0.6**	
	comp=Z,24nm,0.5s,mb5.4,baz=143,slow=6.4,SNR=127							
CMAR				PcP	PcP	07 50 04.0	+0.8	
	comp=Z,3.3nm,0.9s,baz=179,slow=2.1,SNR=4.3							
CMAR				ScP	ScP	07 53 40.6	-0.8	
	comp=Z,4.9nm,1.0s,baz=167,slow=3.3,SNR=16							
CMAR				LR	LR	08 05 30.2		
	comp=Z,146nm,18.1s,baz=158,slow=40							
CMAR	**Chiang Mai Arr**	**36.84**	**318**	P	**P**	**07 47 43.6**	**+0.6**	
CMAR						07 50 04.0		
CHG	**Chiang Mai**	**37.10**	**318**	⇑P	**P**	**07 47 46.4**	**+1.3**	
	comp=Z,56nm,0.8s,mb5.5							
CHTO	**Chiang Mai**	**37.10**	**318**	*e*P	**P**	**07 47 46.5**	**+1.4**	
CHTO				pmax	pmax			
	comp=Z,44nm,0.8s,mb5.4							
CHTO	**Chiang Mai**	**37.10**	**318**	*e*P	**P**	**07 47 46.5**	**+1.4**	
	comp=Z,44nm,0.8s,mb5.4							
CHTO	**Chiang Mai**	**37.10**	**318**	P	**P**	**07 47 46.7**	**+1.6**	
	SNR=21							
CHTO				P		07 47 46.7		
	SNR=21							
CHRT	**Chiangrai**	**37.32**	**320**	⇑P	**P**	**07 47 46.0**	**-1.0**	
	comp=Z,658nm,0.7s							
GYA	**Guiyang**	**39.03**	**335**	⇑*i*P	**P**	**07 48 02.8**	**+1.5**	
GYA				pP	pP	07 48 18.3	-5.2	
GYA				PP	PP	07 49 35.4	+2.7	
GYA				S	**S**	**07 53 57.9**	**+4.3**	
GYA				sS	sS	07 54 23.8	-8.0	
GYA				pmax	pmax			
	comp=Z,40nm,0.8s,mb5.3							
GYA				pmax	pmax			
	comp=Z,160nm,4.8s							
GYA				LR	LR			
	comp=N,920nm,17.7s							
GYA				LR	LR			
	comp=E,710nm,18.9s							
GYA				LR	LR			
	comp=Z,790nm,16.6s							
MOO	**Moorlands**	**39.07**	**153**	*e*P	**P**	**07 48 03.5**	**+2.1**	
TAU	**Tasmania Unive**	**39.49**	**153**	*e*P	**P**	**07 48 07.4**	**+2.4**	
TAU				pmax	pmax			
	comp=Z,47nm,1.0s,mb5.3							
TAU	**Tasmania Unive**	**39.49**	**153**	*e*P	**P**	**07 48 07.4**	**+2.4**	
	comp=Z,47nm,1.0s,mb5.3							
KMI	**Kunming**	**39.73**	**329**	P	**P**	**07 48 08.8**	**+1.7**	
KMI				pP	pP	07 48 21.8	-7.6	
KMI				sP	sP	07 48 27.8	-13	
KMI				PP	PP	07 49 45.3	+4.9	
KMI				S	**S**	**07 54 08.9**	**+4.8**	
KMI				sS	sS	07 54 34.8	-7.6	
KMI				pmax	pmax			
	comp=Z,22nm,0.7s,mb5.1							
KMI				pmax	pmax			
	comp=Z,91nm,3.6s							
KMI				LR	LR			
	comp=N,82nm,23.0s							
KMI				LR	LR			
	comp=E,120nm,17.8s							
KMI				LR	LR			
	comp=Z,230nm,31.2s							
WHN	**Wuhan**	**40.33**	**347**	⇑P	**P**	**07 48 12.5**	**+0.5**	
NJ2	**Nanjing**	**41.03**	**353**	*e*P	**P**	**07 48 18.3**	**+0.5**	
NJ2				pP	pP	07 48 34.0	-6.1	
NJ2				sP	sP	07 48 39.3	-12	
NJ2				PP	PP	07 49 55.3	+0.9	
NJ2				S	**S**	**07 54 25.5**	**+2.3**	
NJ2				pmax	pmax			
	comp=Z,70nm,0.7s,mb5.6							
NJ2				pmax	pmax			
	comp=Z,110nm,7.7s							
NJ2				LR	LR			
	comp=N,140nm,16.4s							
NJ2				LR	LR			
	comp=E,220nm,20.8s							
NJ2				LR	LR			
	comp=Z,90nm,15.8s							
ENH	**Enshi**	**41.42**	**341**	*e*P	**P**	**07 48 20.8**	**-0.1**	
	comp=Z,35nm,0.8s,mb5.2							
DZM	**Mont Dzumac**	**42.66**	**113**	*e*LR	LR	08 00 33.5		
	comp=Z,519nm,36.5s							
CD2	**Chengdu**	**44.15**	**335**	P	**P**	**07 48 43.1**	**+0.1**	
CD2				pP	pP	07 48 57.8	-7.8	
CD2				sP	sP	07 49 03.1	-13	
CD2				S	**S**	**07 55 15.0**	**+6.0**	
CD2				pmax	pmax			
	comp=Z,80nm,0.6s,mb5.6							
CD2				pmax	pmax			
	comp=Z,120nm,9.5s							
CD2				LR	LR			
	comp=N,170nm,8.4s							
CD2				LR	LR			
	comp=Z,140nm,11.3s							
XAN	**Xi'an**	**45.08**	**342**	P	**P**	**07 48 49.3**	**-1.1**	
XAN				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.5							
XAN				pmax	pmax			
	comp=Z,23nm,5.3s							
PALK	**Pallekele**	**46.18**	**289**	LR	LR	08 07 58.3		
	comp=Z,116nm,21.9s,baz=105,slow=35							
PALK	**Pallekele**	**46.18**	**289**	*e*P	**P**	**07 48 57.6**	**-1.8**	
PALK				pmax	pmax			
	comp=Z,34nm,1.2s,mb5.0							
PALK	**Pallekele**	**46.18**	**289**	*e*P	**P**	**07 48 57.6**	**-1.8**	
	comp=Z,34nm,1.2s,mb5.0							
KSRS	**Korea Array**	**46.25**	**4**	P	**P**	**07 48 59.5**	**0.0**	
	comp=Z,5.0nm,0.5s,mb4.5,baz=184,slow=9.0,SNR=24							
KSRS				PcP	PcP	07 50 33.8	+0.2	
	comp=Z,3.4nm,0.7s,baz=183,slow=4.6,SNR=7.7							
KSRS				LR	LR

CN2 *e*S **S** **07 57 07.6 +1.9**
CN2 SS SS 08 00 45.3 0.0
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,500nm,18.0s
GKN Gorkha 52.96 315 *e*P **P** **07 49 50.9 +0.2**
comp=Z,317nm,0.6s,mb6.5
MSVF Nonsavu 53.03 105 P **P** **07 49 54.3 +2.9**
comp=Z,129nm,0.6s,mb6.1,SNR=5.9
MSVF Nonsavu 53.03 105 *e*P **P** **07 49 53.8 +2.4**
comp=Z,18nm,0.8s,mb5.1
GTA Gaotai 53.11 336 P **P** **07 49 51.8 +0.3**
GTA pP pP 07 50 07.5 -7.3
GTA sP sP 07 50 14.4 -11
GTA PP PP 07 51 53.8 +1.3
GTA S **S** **07 57 17.3 +2.7**
GTA sS sS 07 57 43.8 -11
GTA SS SS 08 00 56.0 +0.4
GTA pmax pmax
comp=Z,32nm,1.4s,mb5.2
GTA pmax pmax
comp=Z,96nm,6.0s
GTA LR LR
comp=N,100nm,20.4s
GTA LR LR
comp=E,110nm,20.4s
GTA LR LR
comp=Z,110nm,18.6s
RPZ Rata Peaks 53.46 139 *e*P **P** **07 49 55.1 +1.0**
comp=Z,90nm,0.9s,mb5.8
MDJ Mudanjiang 53.49 5 P **P** **07 49 54.6 +0.4**
MDJ pP pP 07 50 08.3 -9.3
MDJ sP sP 07 50 14.4 -14
MDJ PcP PcP 07 51 01.0 +1.0
MDJ PP PP 07 51 53.3 -2.6
MDJ S **S** **07 57 15.0 -4.7**
MDJ SS SS 08 01 05.3 +3.8
MDJ pmax pmax
comp=Z,35nm,1.1s,mb5.3
MDJ LR LR
comp=Z,62nm,32.9s
MDJ Mudanjiang 53.49 5 *e*P **P** **07 49 54.3 0.0**
comp=Z,181nm,0.9s,mb6.1
KOLN Koldanda 53.55 314 *e*P **P** **07 49 55.2 +0.2**
comp=Z,502nm,0.7s,mb6.6
ERM Erimo 53.58 18 *e*P **P** **07 49 55.0 +0.1**
ERM pmax pmax
comp=Z,21nm,0.7s,mb5.3
ERM Erimo 53.58 18 *e*P **P** **07 49 55.0 +0.1**
comp=Z,21nm,0.7s,mb5.3
PYUN Piuthan 54.18 314 *e*P **P** **07 49 59.8 +0.2**
comp=Z,450nm,0.8s,mb6.5
BHPL Bhopal 55.75 306 *e*P **P** **07 50 09.3 -1.7**
BHPL AMb AMB 07 50 11.0
comp=Z,36nm,0.7s,mb5.5
KAD Karad 55.82 298 *e*P **P** **07 50 09.5 -2.1**
KAD AMb AMB 07 50 12.1
comp=Z,32nm,1.2s,mb5.2
AGRA Agra 57.38 310 *e*P **P** **07 50 20.5 -2.0**
HABR Khabarovsk 57.93 9 *e*P **P** **07 50 25.0 -0.9**
HABR *e* 07 51 13.6
HABR *e*S **S** **07 58 18.4 -0.1**
HABR *e* 08 00 02.9
HABR pmax pmax
comp=Z,54nm,1.2s,mb5.5
HABR pmax pmax
comp=N,14nm,1.0s
HABR pmax pmax
comp=E,36nm,2.2s
YSS Yuzh-Sakhalins 58.03 15⇓ *i*P **P** **07 50 26.4 -0.2**
YSS pmax pmax
comp=Z,20nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 58.03 15 *e*P **P** **07 50 26.9 +0.3**
comp=Z,20nm,0.9s,mb5.2
JOSI Joshimath 58.04 314 *e*P **P** **07 50 26.4 -0.7**
HIA Hailar 58.05 357 *e*P **P** **07 50 25.8 -0.9**
HIA pmax pmax
comp=Z,38nm,1.0s
HIA Hailar 58.05 357 *e*P **P** **07 50 25.8 -0.9**
comp=Z,38nm,1.0s,mb5.4
KLR Kul'dur 58.27 6 *e*P **P** **07 50 24.2 -4.0**
BISR Bishrakh 58.48 311 *e*P **P** **07 50 28.4 -1.8**
ULN Ulaanbaatar 58.51 347 *e*P **P** **07 50 30.0 0.0**
ULN pmax pmax
comp=Z,25nm,0.9s,mb5.2
ULN Ulaanbaatar 58.51 347 *e*P **P** **07 50 30.0 0.0**
comp=Z,25nm,0.9s,mb5.2
ULN Ulaanbaatar 58.51 347 P **P** **07 50 30.1 +0.2**
SNR=16
ULN P 07 50 30.1
SNR=16
SONA Sohna 58.57 311 *e*P **P** **07 50 29.0 -1.8**
SONM Songino Array 58.64 346 P **P** **07 50 30.6 -0.2**
comp=Z,15nm,0.7s,mb5.2,baz=163,slow=8.4,SNR=64
SONM ScP ScP 07 55 08.6 -3.2
comp=Z,1.8nm,0.8s,baz=177,slow=6.0,SNR=4.3
SONM S **S** **07 58 25.7 -2.0**
comp=Z,0.3nm,0.3s,baz=188,slow=14,SNR=3.1
AYAN Aya Nagar 58.66 311 *e*P **P** **07 50 29.6 -1.8**
AYAN AMb AMB 07 50 30.9
comp=Z,79nm,0.8s,mb5.8
NDI New Delhi 58.70 311 *e*x x 07 50 28.0
DDI Dehra Dun 58.98 313 *e*x x 07 50 29.5
KHET Khetri 59.44 310 *e*P **P** **07 50 34.8 -2.0**
KHET AMb AMB 07 50 36.4
comp=Z,78nm,0.6s,mb5.9
KLP Kalpa 59.52 315 *e*P **P** **07 50 37.4 +0.1**
AJM Ajmer 59.54 308 *e*P **P** **07 50 35.8 -1.7**
KKR Kurukshetra 59.68 312 *e*P **P** **07 50 37.7 -0.7**
SDNR Sundarnagar 60.41 314 *e*P **P** **07 50 44.5 +1.1**
ZAK Zakamensk 61.77 345 *e*P **P** **07 50 50.8 -1.3**
ZAK pmax pmax
comp=Z,15nm,1.0s,mb5.0
THN Thein Dam 61.81 314 *e*P **P** **07 50 50.7 -2.1**
WMQ Urumqi 62.02 331 P **P** **07 50 54.3 +0.4**
WMQ pmax pmax
comp=Z,16nm,1.0s,mb5.0
WMQ LR LR
comp=N,110nm,31.0s
WMQ LR LR
comp=E,180nm,37.0s
WMQ LR LR
comp=Z,92nm,30.0s
JASL Jaisalmer 62.70 306 *e*P **P** **07 50 57.4 -1.5**
JASL AMb AMB 07 51 00.2
comp=Z,58nm,0.7s,mb5.7
TLY Talaya 62.87 346 *e*P **P** **07 51 00.1 +0.6**
TLY pmax pmax
comp=Z,21nm,1.0s,mb5.0
TLY Talaya 62.87 346 *e*P **P** **07 50 59.5 0.0**
comp=Z,19nm,1.0s,mb5.0
MOY Mondy 63.54 344 *e*P **P** **07 51 04.8 +0.9**
MOY pmax pmax
comp=Z,40nm,1.7s,mb5.0
NRGR Nerungri 65.32 0 *e*P **P** **07 51 15.4 0.0**
CLNS Chul'man 65.51 0 *e*P **P** **07 51 09.9 -6.7**
CLNS pmax pmax
comp=Z,17nm,1.1s,mb4.8
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS pmax pmax
comp=N,13nm,0.9s
KSH Kashi 65.65 321 P **P** **07 51 18.1 +0.2**
KSH *e*pP pP 07 51 34.1 -7.9
KSH *e*sP sP 07 51 41.1 -11
KSH *e*PcP PcP 07 51 49.1 +0.5
KSH *e*PP PP 07 53 44.1 +0.4
KSH *e*ScP 07 55 45.1
KSH *e*PcS 07 55 52.3
KSH *e*S S 07 59 54.0 -2.3
KSH *e*ScS ScS 08 01 04.0 -0.9
KSH pmax pmax
comp=Z,24nm,0.9s,mb5.0
KSH LR LR
comp=N,110nm,7.2s
KSH LR LR
comp=E,130nm,8.2s
KSH LR LR
comp=Z,130nm,6.1s
RER Riviere de l'E 66.75 251 *e*P **P** **07 51 27.5 +2.1**
comp=Z,159nm,0.8s,mb5.9
MK31 Makanchi Array 66.80 330 *e*P **P** **07 51 24.7 -0.4**
MKAR Makanchi Array 66.80 330 P **P** **07 51 24.9 -0.2**
comp=Z,52nm,0.8s,mb5.4,baz=132,slow=7.8,SNR=350
MKAR S S 08 00 07.2 -2.7
comp=Z,0.2nm,0.6s,baz=160,slow=4.6,SNR=2.3
BOD Bodaibo 67.00 354⇓ *i*P **P** **07 51 25.7 -0.4**
BOD pmax pmax
comp=Z,35nm,1.0s,mb5.1
KZA Kyzart 67.61 323 P **P** **07 51 31.2 +1.0**
SNR=32
KBL Kabul 67.67 313 *e*P **P** **07 51 30.8 -0.1**
KBL *e* pP 07 51 56.9 +1.8
KBL pmax pmax
comp=Z,89nm,0.9s,mb5.6
KBL Kabul 67.67 313 *e*P **P** **07 51 30.8 -0.1**
comp=Z,89nm,0.9s,mb5.6
KBL *e*PcP PcP 07 51 56.9 -0.3
TKM2 Tokmak 2 67.90 324 P **P** **07 51 32.4 +0.3**
SNR=18
TKM2 Tokmak 2 67.90 324 *e*P **P** **07 51 32.0 -0.1**
TKM2 pmax pmax
comp=Z,21nm,0.8s,mb5.0
TKM2 Tokmak 2 67.90 324 *e*P **P** **07 51 32.0 -0.1**
comp=Z,21nm,0.8s,mb5.0
PEA0B Petropavlovsk- 68.05 21 *e*P **P** **07 51 33.4 +0.6**
PETK Petropavlovsk- 68.05 21 P **P** **07 51 33.3 +0.5**
comp=Z,14nm,0.6s,mb5.0,baz=199,slow=1.7,SNR=70
KBK Karagaybulak 68.13 323 P **P** **07 51 34.4 +0.9**
SNR=11
UCH Uchtor 68.14 322 P **P** **07 51 34.2 +0.6**
SNR=35
UCH Uchtor 68.14 322 *e*P **P** **07 51 33.7 +0.1**
comp=Z,22nm,0.9s,mb5.0
PET Petropavlovsk 68.33 22 *e*P **P** **07 51 34.9 +0.4**
PET pmax pmax
comp=Z,48nm,1.2s,mb5.2
AAK Ala-Archa 68.38 323 P **P** **07 51 35.1 -0.1**
comp=Z,394nm,0.6s,mb6.4,SNR=22
AAK Ala-Archa 68.38 323 P **P** **07 51 35.7 +0.6**
SNR=36
AAK Ala-Archa 68.38 323 P **P** **07 51 35.6 +0.5**
comp=Z,26nm,0.5s,mb5.3,baz=123,slow=4.9,SNR=91
AAK LR LR 08 24 12.6
comp=Z,91nm,20.9s,baz=117,slow=38
AAK Ala-Archa 68.38 323 *e*P **P** **07 51 35.7 +0.5**
AAK pmax pmax
comp=Z,46nm,0.7s,mb5.4
AAK Ala-Archa 68.38 323 *e*P **P** **07 51 35.6 +0.5**
comp=Z,46nm,0.7s,mb5.4
AAK Ala-Archa 68.38 323 P **P** **07 51 35.8 +0.7**
SNR=23
AAK P 07 51 35.8
SNR=23
FRU Bishkek 68.43 323 *e*P **P** **07 51 35.0 -0.4**
FRU pmax pmax
comp=Z,20nm,2.0s,mb4.6
CHMS Chumysh 68.45 323 P **P** **07 51 35.2 -0.4**
SNR=5.7
USP Ospenovka 68.75 323 P **P** **07 51 37.4 -0.1**
SNR=30
EKS2 Erkin-Say 68.83 322 P **P** **07 51 38.4 +0.4**
SNR=33
EKS2 Erkin-Say 68.83 322 *e*P **P** **07 51 37.9 0.0**
comp=Z,43nm,0.9s,mb5.3
YAK Yakutsk 70.85 3 *e*P **P** **07 51 49.5 -0.4**
YAK *e* pP 07 52 09.6 -4.7
YAK *e*PPP 07 56 08.7
YAK *e*S S 08 00 52.5 -4.6
YAK *e* 08 01 35.0
YAK *e*SS SS 08 05 27.0 -4.8
YAK pmax pmax
comp=Z,76nm,1.0s,mb5.5
YAK pmax pmax
comp=N,33nm,1.0s
YAK pmax pmax
comp=E,11nm,0.9s
YAK smax
comp=N,19nm,1.3s
YAK smax
comp=E,46nm,1.6s
YAK Yakutsk 70.85 3 *e*P **P** **07 51 49.8 0.0**
comp=E,56nm,0.7s,mb5.5
ZAA0 Zalesovo Array 70.86 337 *e*P **P** **07 51 48.4 -1.7**
ZALV Zalesovo Beam 70.86 337 P **P** **07 51 48.8 -1.4**
comp=E,30nm,0.7s,mb5.3,baz=130,slow=4.4,SNR=132
ZALV S S 08 00 52.6 -5.1
comp=E,0.4nm,0.3s,baz=139,slow=13,SNR=3.0
MAW Mawson 71.10 201 P **P** **07 51 50.5 -0.9**
comp=E,8.9nm,0.7s,mb4.7,baz=65,slow=9.3,SNR=15
MAW S S 08 00 54.1 -6.0
comp=E,1.1nm,0.8s,baz=249,slow=22,SNR=4.2
MAW LR LR 08 18 24.1
comp=E,91nm,20.5s,baz=207,slow=32
MAW Mawson 71.10 201 *e*P **P** **07 51 52.7 +1.3**
MAW pmax pmax
comp=Z,2.0nm,0.8s
MAW Mawson 71.10 201 *e*P **P** **07 51 52.7 +1.3**
comp=Z,2.5nm,0.8s,mb4.1
KURK Kurchatov 71.25 331 P **P** **07 51 52.3 -0.3**
comp=Z,498nm,0.8s,mb6.4,SNR=58
KURK Kurchatov 71.25 331 P **P** **07 51 51.8 -0.7**
comp=Z,46nm,0.8s,mb5.4,baz=145,slow=3.9,SNR=134
KURK Kurchatov 71.25 331 *c i*P **P** **07 51 51.9 -0.7**
KURK pmax pmax
comp=Z,84nm,0.9s,mb5.6
KURK Kurchatov 71.25 331 *e*P **P** **07 51 51.8 -0.8**
comp=Z,79nm,0.9s,mb5.5
KURK Kurchatov 71.25 331 P **P** **07 51 52.2 -0.3**
SNR=29
KURK P 07 51 52.2
SNR=29
JMDO Jabal Madar 71.75 297 P **P** **07 51 57.3 +1.1**
SNR=5.5
SMDO Samad 72.01 298 P **P** **07 51 57.6 -0.1**
SNR=6.1
BIDO Bidbid 72.08 298 P **P** **07 51 58.4 +0.2**
SNR=8.8
NVS Novosibirsk 72.15 337 *e*P **P** **07 51 55.8 -2.0**
NVS *i* S SKSac 08 01 46.6 -6.6
NVS pmax pmax
comp=Z,39nm,1.0s,mb5.2
NVS pmax pmax
comp=N,24nm,1.4s
NVS pmax pmax
comp=E,21nm,1.1s
NVS smax
comp=N,10.0nm,1.6s
NVS smax
comp=E,19nm,1.6s
SBA Scott Base 72.28 171 *e*P **P** **07 52 00.3 +1.9**
SBA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SBA Scott Base 72.28 171 *e*P **P** **07 52 00.3 +1.9**
comp=Z,6.4nm,0.8s,mb4.5
HOQ Hoqain 72.81 298 P **P** **07 52 02.7 +0.2**
SNR=6.3
HATD Hatta, Dubai 74.22 299 P **P** **07 52 10.6 -0.1**
SNR=6.5
ASHO Ashiyiah 74.24 299 P **P** **07 52 10.9 0.0**
SNR=6.2
WHFO Wadi Hawf 74.40 291 P **P** **07 52 11.2 -0.7**
SNR=9.4
FAQ Al Faqa, Dubai 74.66 299 P **P** **07 52 13.1 -0.2**
SNR=9.0
NAZ Nazwa, Dubai 74.67 299 P **P** **07 52 12.3 -1.0**
SNR=6.1
SEY Seymchan 74.84 13 *c e*P **P** **07 52 13.8 +0.4**
ASUD Al Ashush, Dub 74.85 298 P **P** **07 52 14.7 +0.3**
SNR=5.8
IMOG Moghan 75.50 311 *e*P **P** **07 52 17.3 -0.5**
BVAR Borovoye Array 76.68 330 P **P** **07 52 23.9 -0.3**
comp=Z,6.1nm,0.7s,mb4.4,baz=132,slow=8.2,SNR=41
BVAR LR LR 08 28 46.3
comp=Z,162nm,18.7s,baz=108,slow=38
BRVK Borovoye 76.75 330 P **P** **07 52 24.6 0.0**
comp=Z,96nm,1.5s,mb5.3,SNR=7.2
BRVK Borovoye 76.75 330 *e*P **P** **07 52 23.9 -0.7**
BRVK pmax pmax
comp=Z,43nm,1.4s,mb5.0
BRVK Borovoye 76.75 330 *e*P **P** **07 52 23.9 -0.6**
comp=Z,43nm,1.4s,mb5.0
BRVK Borovoye 76.75 330 P **P** **07 52 24.7 +0.2**
SNR=12
BRVK P 07 52 24.7
SNR=12
ISFR Sfrayin 76.85 311 *e*P **P** **07 52 25.4 -0.1**
ABKT Ailbek 77.09 312 P **P** **07 52 27.8 +1.0**
comp=Z,126nm,1.0s,mb5.6,SNR=6.0
ISRV Sarvestan 78.15 303 *e*P **P** **07 52 32.8 -0.1**
IPAR Pars 78.34 303 *e*P **P** **07 52 32.8 -1.2**
SYO Syowa Base 79.79 201⇑ *e*P **P** **07 52 43.6 +2.5**
TIXI Tiksi 80.44 2 *d i*P **P** **07 52 43.8 -0.6**
TIXI *e*S S 08 02 37.7 -4.8
TIXI *e**SS sS 08 03 22.8 -2.5
TIXI pmax pmax
comp=Z,21nm,1.0s,mb4.9
TIXI Tiksi 80.44 2 *e*P **P** **07 52 43.0 -1.4**
comp=Z,11nm,0.4s,mb5.0
ABKAR Akbulak array 80.47 323 *e*P **P** **07 52 44.2 -0.9**
comp=Z,16nm,0.6s,mb5.0
QSPA South Pole Qui 81.09 180 *e*P **P** **07 52 49.2 +1.3**
comp=Z,18nm,1.0s,mb4.8
IR3 Iran Long-Peri 81.64 308 *e*P **P** **07 52 50.3 -1.3**
AKTK Aktyubinsk 82.09 324 P **P** **07 52 53.0 -0.6**
AKTO Aktyubinsk 82.09 324 P **P** **07 52 53.0 -0.6**
comp=Z,44nm,0.6s,mb5.5,baz=109,slow=7.0,SNR=78
BILL Bilibino 82.34 15⇓ *e*P **P** **07 52 53.9 -0.7**
BILL *e**PP pP 07 53 12.5 -7.1
BILL *i* 07 56 03.2
BILL *e*S S 08 03 01.1 -1.2
BILL pmax pmax
comp=Z,9.0nm,1.6s,mb4.3
QRN Al-Qurain 82.36 301 *e*P **P** **07 52 55.0 -0.5**
QRN AMb AMB 07 52 57.1
comp=Z,144nm,0.6s,mb6.0
RDF Al-Radifah 82.71 301 *e*P **P** **07 52 57.5 +0.1**
RDF AMb AMB 07 52 59.7
comp=Z,112nm,1.0s,mb5.7
NAY Al-Naaiem 83.05 301 *e*P **P** **07 52 58.4 -0.7**
NAY AMb AMB 07 53 00.6
comp=Z,68nm,0.9s,mb5.5
MIB Mutribah 83.11 302 *e*P **P** **07 52 58.8 -0.6**
MIB AMb AMB 07 53 00.9
comp=Z,101nm,1.1s,mb5.6
ATD Arta Tunnel 83.34 283 P **P** **07 53 01.6 +0.7**
comp=Z,15nm,0.7s,mb4.9,baz=189,slow=21,SNR=6.4
SVE Sverdlovsk 83.46 330⇑ *e*P **P** **07 53 00.3 -0.2**
SVE *e*S S 08 03 10.1 -4.0
SVE pmax pmax
comp=Z,56nm,1.1s,mb5.3
PPT Papeete 83.84 107 *e*LR LR 08 19 39.1
comp=Z,344nm,39.8s
PPT Papeete 83.84 107 LR LR 08 27 59.9
comp=Z,36nm,20.9s,baz=303,slow=34
ARU Arti 84.31 329 P **P** **07 53 04.2 -0.7**
comp=Z,138nm,0.7s,mb5.9,SNR=7.0
ARU Arti 84.31 329 *d i*P **P** **07 53 03.4 -1.5**
ARU *e* 07 56 19.2
ARU S S 08 03 17.4 -5.2
ARU pmax pmax
comp=Z,26nm,1.0s,mb5.0
ARU Arti 84.31 329 *e*P **P** **07 53 03.5 -1.3**
comp=Z,27nm,1.0s,mb5.0
ISRB Sarab 84.89 309 *e*P **P** **07 53 08.2 -0.1**
SOKR Solikamsk 86.48 332 *d i*P **P** **07 53 15.9 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SOKR MLR MLR
comp=Z,230nm,13.0s
ISHB Shabestar 86.57 309 *e*P **P** **07 53 16.3 -0.3**
KMBO Kilima Mbogo 86.76 269 *i*P **P** **07 53 19.2 +1.1**
KMBO pmax pmax
comp=Z,23nm,0.3s
KMBO Kilima Mbogo 86.76 269 *e*P **P** **07 53 18.9 +0.8**
comp=Z,9.3nm,1.0s,mb4.7
FALS False Pass 87.31 33 *e*P **P** **07 53 21.4 +1.6**
comp=Z,586nm,1.0s,mb6.5
DGRG David-gareji 87.52 312 P **P** **07 53 22.4 +1.3**
MTA Mtatsminda 88.00 313 P **P** **07 53 24.1 +0.8**
TBLG Delisi 88.05 313 *e*P **P** **07 53 24.3 +0.7**
TBLG Delisi 88.05 313 P **P** **07 53 24.4 +0.8**
ZEI Tsey 88.90 313 *e*P **P** **07 53 25.7 -1.9**
ZEI pmax pmax
comp=Z,20nm,0.8s,mb5.2
ONI Oni 89.18 313 P **P** **07 53 22.9 -5.9**
KIV Kislovodsk 90.02 314⇑ *i*P **P** **07 53 33.7 +0.9**
KIV *e**PP pP 07 53 50.1 -8.0
KIV *e* 07 57 06.7
KIV *i* S SKSac 08 03 53.3 -1.8
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
VRHR Novokhopersk 92.19 321 *e*P **P** **07 53 41.5 -1.2**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.8
VRHR pmax pmax
comp=E,10.0nm,0.8s
LSZ Lusaka 93.36 254 *e*P **P** **07 53 50.2 +1.3**
LSZ pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
LSZ Lusaka 93.36 254 *e*P **P** **07 53 50.2 +1.2**
comp=Z,10nm,0.7s,mb5.3
BOSA Boshof 93.50 240 P **P** **07 53 49.9 +0.6**
comp=Z,3.2nm,0.8s,mb4.7,baz=112,slow=3.9,SNR=6.7
BOSA Boshof 93.50 240 *e*P **P** **07 53 50.3 +1.0**
BOSA pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
BOSA Boshof 93.50 240 *e*P **P** **07 53 50.3 +1.0**
comp=Z,7.7nm,1.1s,mb5.0
VORD Divnogorie 93.61 321 *e*P **P** **07 53 47.0 -2.2**
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=E,3.0nm,0.5s
VSR Storozhevoye 93.73 321 *e*P **P** **07 53 48.3 -1.5**
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.6
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.8s
MMAI Mount Meron Ar 93.73 303 P **P** **07 53 49.8 -0.5**
comp=E,2.2nm,0.6s,mb4.7,baz=108,slow=4.7,SNR=4.9
LBTB Lobatse 93.93 244 *e*P **P** **07 53 52.6 +1.2**
LBTB pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
LBTB Lobatse 93.93 244 *e*P **P** **07 53 52.6 +1.2**
comp=Z,6.3nm,0.9s,mb5.0
VNA2 Neumayer--Watz 94.03 194 *e*P **P** **07 53 51.6 +0.8**
VNA2 *e* 07 53 52.0
VNA2 *e* 07 54 05.1
VNA1 Neumayer--Stat 94.43 194 *e*P **P** **07 53 53.3 +0.6**
OBN Obninsk 95.84 325⇓ *i*P **P** **07 53 58.4 -1.0**
OBN *e**PP pP 07 54 19.3 -5.5
OBN *e* 07 57 49.8
OBN *e*S SKSac 08 04 25.2 -1.6
OBN pmax pmax
comp=Z,23nm,1.0s,mb5.6
BR131 Keskin Array S 96.00 309 *e*P **P** **07 53 57.4 -3.1**
comp=Z,1.8nm,0.7s,mb4.6
BRTR Keskin Array B 96.00 309 P **P** **07 53 59.2 -1.3**
comp=Z,1.6nm,0.7s,mb4.6,baz=124,slow=5.1,SNR=10
BRTR PP PP 07 57 54.5 +0.2
comp=Z,0.9nm,0.6s,baz=110,slow=8.9,SNR=4.2
COLD Coldfoot 96.46 23 *e*P **P** **07 54 01.0 -0.9**
comp=Z,2.3nm,0.8s,mb4.7
AKASG Malin Array Be 99.94 320 P Pdif 07 54 16.4 -1.4
comp=Z,2.8nm,0.6s,baz=79,slow=4.4,SNR=17
AKASG PP PP 07 58 24.3 +0.3
comp=Z,3.7nm,0.7s,baz=81,slow=6.7,SNR=15
AKASG Malin Array Be 99.94 320 *c e*P Pdif 07 54 16.3 -1.5
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 99.94 320 P Pdif 07 54 16.4 -1.4
AKASG PP PP 07 58 24.3 +0.3
ARCES ARCESS Array B 101.31 339 P Pdif 07 54 22.3 -1.6
comp=Z,2.4nm,0.8s,baz=62,slow=5.1,SNR=5.4
CLL Collm 110.08 321 *e*PP PP 07 59 43.0 +4.0
GERES GERESS Array B 110.08 319 PKiKP PKiKP 07 59 04.3 +0.1
comp=Z,0.7nm,0.6s,baz=67,slow=3.5,SNR=5.0
YKA Yellowknife Ar 111.97 25 PKiKP PKiKP 07 59 06.2 -1.2
comp=Z,0.3nm,0.4s,baz=292,slow=2.1,SNR=11
YKA PKKPbc PKKPbc 08 10 02.7 +0.4
comp=Z,0.2nm,0.7s,baz=115,slow=2.9,SNR=3.6
YKA Yellowknife Ar 111.97 25 PKPdf PKiKP 07 59 06.2 -1.2
YKA PKKPbc PKKPbc 08 10 02.7 +0.4

CDF	Champ du Feu	114.34	319	*e*PKIKP	PKiKP	07 59 12.3	-0.1
PGF	Pioggiola	114.45	313	*e*PKIKP	PKiKP	07 59 12.7	-0.1
HINF	Hinteralfeld	114.77	319	*e*PKIKP	PKiKP	07 59 12.8	-0.4
	comp=Z,7.7nm,0.5s						
HAU	Haudompre	115.05	319	*e*PKIKP	PKiKP	07 59 13.4	-0.4
	comp=Z,7.7nm,0.8s						
SBF	Sospel	115.30	314	*e*PKIKP	PKPdf	07 59 14.1	-0.3
LPG	La Plagne	115.41	316	*e*PKIKP	PKPdf	07 59 14.7	+0.2
LPL	La Plagne	115.42	316	*e*PKIKP	PKPdf	07 59 14.7	+0.2
	comp=Z,4.2nm,0.6s						
GIVF	Givet	115.42	322	*e*PKIKP	PKPdf	07 59 14.6	+0.2
	comp=Z,7.6nm,0.5s						
MBDF	Montbardon	115.57	315	*e*PKIKP	PKPdf	07 59 15.0	+0.1
	comp=Z,11nm,0.8s						
CABF	La Chapelle	115.58	318	*e*PKIKP	PKPdf	07 59 15.1	+0.3
	comp=Z,10nm,0.6s						
BAIF	Baives	115.81	322	*e*PKIKP	PKPdf	07 59 16.0	+0.8
	comp=Z,15nm,0.9s						
FRF	La Foret Royal	115.93	314	*e*PKIKP	PKPdf	07 59 15.5	-0.1
LMR	La Mourre	116.08	314	*e*PKIKP	PKPdf	07 59 15.7	-0.2
ORIF	Oris-en-Rattie	116.14	316	*e*PKIKP	PKPdf	07 59 15.8	-0.2
	comp=Z,8.2nm,0.7s						
SMRF	Simiane la Rot	116.58	315	*e*PKIKP	PKPdf	07 59 17.2	+0.3
	comp=Z,7.0nm,0.7s						
LOR	Lormes	116.87	319	*e*PKIKP	PKPdf	07 59 17.1	-0.2
	comp=Z,5.4nm,0.6s						
NVAR	Mina Array Bea	117.01	51	PKP	PKPdf	07 59 19.9	+2.1
	comp=Z,0.4nm,0.5s,baz=285,slow=2.6,SNR=5.0						
SMF	Signal de Mont	117.06	318	*e*PKIKP	PKPdf	07 59 17.3	-0.4
	comp=Z,1.9nm,0.4s						
SSF	Saint Saulge	117.16	319	*e*PKIKP	PKPdf	07 59 17.9	0.0
	comp=Z,10nm,0.6s						
AVF	Avril sur Loir	117.34	318	*e*PKIKP	PKPdf	07 59 17.9	-0.3
	comp=Z,4.4nm,0.6s						
BGF	Bois d'Agland	117.74	318	*e*PKIKP	PKPdf	07 59 19.3	+0.3
	comp=Z,24nm,0.6s						
TCF	Toulx Ste Croi	118.24	318	*e*PKIKP	PKPdf	07 59 19.5	-0.5
	comp=Z,5.5nm,0.6s						
CAF	Calviac	118.75	317	*e*PKIKP	PKPdf	07 59 21.4	+0.4
GRR	Gorron	119.50	321	*e*PKIKP	PKPdf	07 59 22.1	-0.2
LFF	La Frestale	119.64	317	*e*PKIKP	PKPdf	07 59 23.2	+0.5
	comp=Z,16nm,0.6s						
MFF	Saint Martin d	119.68	319	*e*PKIKP	PKPdf	07 59 22.6	-0.1
	comp=Z,17nm,0.8s						
QUIF	Quistinic	121.11	321	*e*PKIKP	PKPdf	07 59 25.6	+0.2
ETSF	Etsaut	121.18	315	*e*PKIKP	PKPdf	07 59 26.4	+0.7
	comp=Z,8.8nm,0.7s						
FFC	Flin Flon	121.50	29	*i* PKIKP	PKPdf	07 59 30.1	+4.1
SJPF	Ste Jean	121.57	316	*e*PKIKP	PKPdf	07 59 27.2	+0.7
	comp=Z,9.3nm,0.8s						
PDAR	Pinedale Array	122.33	45	PKP	PKPdf	07 59 28.5	+0.6
	comp=Z,0.4nm,0.5s,baz=79,slow=3.7,SNR=5.8						
PDAR				PKKPbc	PKKPbc	08 09 25.6	+0.8
	comp=Z,0.3nm,0.6s,baz=114,slow=6.6,SNR=3.7						
FCC	Fort Churchill	122.39	22	*e*PKIKP	PKPdf	07 59 26.2	-1.4
TORD	Torodi Ar. Bea	123.45	280	PKP	PKPdf	07 59 31.2	+0.3
	comp=Z,4.9nm,0.7s,baz=66,slow=2.0,SNR=33						
TORD	Torodi Ar. Bea	123.45	280	PKP	PKPdf	07 59 31.2	+0.3
PV01	Paradox Valley	124.51	50	*e*PKPdf	PKPdf	07 59 33.0	+0.7
ESDC	Sonseca Array	124.64	312	PKP	PKPdf	07 59 32.7	+0.2
	comp=Z,2.0nm,0.7s,baz=15,slow=3.3,SNR=7.8						
ESDC	Sonseca Array	124.64	312	PKP	PKPdf	07 59 32.7	+0.2
ULM	Lac du Bonnet	127.13	31	PKP	PKPdf	07 59 36.1	-0.8
	comp=Z,2.4nm,0.5s,baz=358,slow=4.3,SNR=4.1						
DBIC	Dimbokro	129.45	271	PKP	PKPdf	07 59 42.0	-0.4
	comp=Z,3.3nm,0.7s,baz=156,slow=3.8,SNR=4.7						
DBIC				SKPbc		08 02 56.2	
	comp=Z,8.4nm,0.8s,baz=85,slow=1.6,SNR=7.4						
DBIC	Dimbokro	129.45	271	PKP	PKPdf	07 59 42.0	-0.4
DBIC				SKPbc		08 02 56.2	
TXAR	Lajitas Array	130.87	59	PKP	PKPdf	07 59 45.3	+0.6
	comp=Z,0.6nm,0.7s,baz=253,slow=1.6,SNR=9.6						
TXAR				SKPbc	SKPbc	08 03 00.4	0.0
	comp=Z,12nm,0.8s,baz=267,slow=3.5,SNR=78						
SCHQ	Schefferville	133.36	9	PKP	PKPdf	07 59 49.0	+0.5
	comp=Z,2.1nm,0.5s,baz=251,slow=14,SNR=11						
SCHQ				SKPbc	SKPbc	08 03 06.3	-2.1
	comp=Z,11nm,0.9s,baz=341,slow=2.8,SNR=9.1						
SCHQ	Schefferville	133.36	9	PKP	PKPdf	07 59 49.0	+0.5
SCHQ				SKPbc	SKPbc	08 03 06.3	-2.1
JCT	Junction City	133.77	56	*e*PKIKP	PKPdf	07 59 50.7	+0.6
LRAL	Lakeview Retre	142.54	46	*e*PKPdf	PKPdf	08 00 01.6	-4.5
TKL	Tuckaleechee C	143.15	39	*e*PKHKP		08 00 02.8	
GOGA	Godfrey	144.75	42	*e*PKIKP	PKPdf	08 00 08.7	-1.3
CPUP	Villa Florida	144.95	178	PKP	PKPdf	08 00 11.4	+0.8
	comp=Z,18nm,0.6s,baz=169,slow=2.0,SNR=62						
CPUP				SKPbc	SKPbc	08 03 41.7	+0.2
	comp=Z,3.4nm,0.8s,baz=130,slow=1.2,SNR=3.5						
JSC	Jenkinsville	145.62	39	*e*PKIKP	PKPdf	08 00 11.9	+0.4
COW	Cow Castle Cre	146.56	40	*e*PKPdf	PKPdf	08 00 14.5	+1.4
CNNC	Cliffs of the	146.94	34	*e*PKPdf	PKPdf	08 00 14.8	+1.1
LPAZ	La Paz	152.18	154	PKPbc	PKPbc	08 00 29.0	-0.2
	comp=Z,7.7nm,0.9s,baz=135,slow=2.5,SNR=27						
LPAZ	La Paz	152.18	154	*e*PKPbc	PKPbc	08 00 31.1	+1.9
SDV	Santo Domingo	165.40	89	*e*PKPdf	PKPdf	08 00 38.7	+0.6

IDC ***24*** *08:11:18.2±1.2, 39°.03N×22°.51E, h0km, mb3.4/3, mb1 3.6/7, mb1mx3.4/29, mbtmp3.5/7, ML3.2/4, MS3.1/1, Ms1 3.1/1, ms1mx2.1/37, Error ellipse: s-maj=22.4km s-min=19.1km az=134.0*
THE ***24*** *08:11:20.8, 39°.06N×22°.47E, h14km±1km, ML4.0/7, Error ellipse: s-maj=1.1km s-min=0.6km az=255.0*
CSEM ***24*** *08:11:20.7±0.1, 39°.09N×22°.52E, h10km, ML4.0/7, Error ellipse: s-maj=3.5km s-min=2.8km az=90.0*
ATH ***24*** *08:11:20.5, 39°.07N×22°.48E, h20km±1km, MD3.6/11, ML3.4*
ISCJB ***24*** *08:11:20.2±0.3, 39°.08N±0°.01×22°.50E±0°.02, h11km±2km, mb3.5/3, Error ellipse: s-maj=2.9km s-min=2.4km az=175.3*
NEIC ***24*** *08:11:20.5, 39°.07N×22°.48E, h20km, ML3.4(ATH), After ATH.*
SOF ***24*** *08:11:26.2, 39°.64N×22°.92E, h2km, MD3.1*
ROM ***24*** *08:11:51.7±0.2, 39°.29N×19°.62E, h10km, Ml2.6/10, Error ellipse: s-maj=8.2km s-min=0.0km az=5.0*

ISC 24 08:11:21.1±0.3, 39°.08N±0°.02×22°.51E±0°.02, h11km±2km, n158, σ1§07/197, mb3.5/3, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.15	249	*e*PB	Pg	08 11 24.3	-0.2
AGG				*e*SB	Sg	08 11 27.2	+0.3
AGG	Agios Georgios	0.15	249	P	Pg	08 11 24.3	-0.2
AGG				S	Sg	08 11 27.1	+0.2
AGG	Agios Georgios	0.15	249	P	Pg	08 11 24.3	-0.2
AGG				S	Sg	08 11 27.1	+0.2
ATAL	Atalanti	0.55	134	P	Pg	08 11 32.3	+0.5
ATAL				S	Sg	08 11 40.5	+1.5
ATAL	Atalanti	0.55	134	P	Pg	08 11 32.3	+0.5
ATAL				S	Sg	08 11 40.5	+1.5
LKR	Lokris	0.57	138	P	Pg	08 11 32.6	+0.5
LKR	Lokris	0.57	138	P	Pg	08 11 32.1	0.0
LKR				S	Sg	08 11 40.9	+1.3
LKR	Lokris	0.57	138	P	Pg	08 11 32.6	+0.5
LKR				S	Sg	08 11 40.9	+1.3
EVR	Evrytania	0.57	254	*e*PN	Pg	08 11 31.7	-0.5
EVR				*e*SN	Sg	08 11 39.5	-0.2
EVR	Evrytania	0.57	254	*e*Pn	Pg	08 11 31.7	-0.5
NEO	Neokhori	0.60	67	*e*PN	Pg	08 11 33.0	+0.3
NEO				*e*SN	Sg	08 11 42.1	+1.6
NEO	Neokhori	0.60	67	*e*Pn	Pg	08 11 33.0	+0.3
XOR	Xorichti	0.60	61	P	Pg	08 11 33.4	+0.7
XOR				S	Sg	08 11 42.5	+1.9
XOR	Xorichti	0.60	61	P	Pg	08 11 33.4	+0.7
XOR				S	Sg	08 11 42.5	+1.9
THL	Klokotos Trika	0.62	322	*e*PB	Pg	08 11 32.3	-0.8
THL				*e*SN	Sg	08 11 42.3	+1.0
THL	Klokotos Trika	0.62	322	P	Pg	08 11 32.2	-0.9
THL				S	Sg	08 11 42.1	+0.8
THL	Klokotos Trika	0.62	322	*e*Pb	Pg	08 11 32.3	-0.8
THL				S	Sg	08 11 42.1	+0.8
DSF	Desfina	0.66	179	P	Pg	08 11 32.7	-1.2
DSF				S	Sg	08 11 42.2	-0.4
DSF	Desfina	0.66	179	P	Pg	08 11 32.7	-1.2
DSF				S	Sg	08 11 42.2	-0.4
KALE	Kalithea	0.74	203	P	Pg	08 11 33.9	-1.5
KALE				S	Sg	08 11 44.8	-0.3
KALE	Kalithea	0.74	203	P	Pg	08 11 33.9	-1.5
KALE				S	Sg	08 11 44.8	-0.3
EFP	Efpalio	0.80	216	*e*PN	Pg	08 11 35.4	-1.2
EFP				*e*SN	Sg	08 11 46.2	-0.8
EFP	Efpalio	0.80	216	P	Pg	08 11 35.5	-1.1
EFP				S	Sg	08 11 46.0	-1.0
EFP	Efpalio	0.80	216	P	Pg	08 11 35.5	-1.1
EFP				S	Sg	08 11 46.0	-1.0
LAKA	Lakka	0.93	207	P	Pg	08 11 37.8	-1.2
LAKA				S	Sg	08 11 51.4	+0.2
LAKA	Lakka	0.93	207	P	Pg	08 11 37.8	-1.2
LAKA				S	Sg	08 11 51.4	+0.2
UPR	University Cam	0.97	216	*e*PN	Pg	08 11 39.2	-0.6
UPR	University Cam	0.97	216	*e*Pn	Pg	08 11 39.2	-0.6
LIT	Litokhoron	1.02	359	*e*PN	Pg	08 11 39.8	-0.9
LIT	Litokhoron	1.02	359	P	Pg	08 11 39.7	-1.1
LIT	Litokhoron	1.02	359	P	Pg	08 11 39.7	-1.1
LTK	Loutraki	1.11	161	*e*PN	Pg	08 11 41.5	-0.9
LTK				*e*SN	Sg	08 11 57.1	+0.3
LTK	Loutraki	1.11	161	P	Pb	08 11 41.4	-0.9
LTK				S	Sg	08 11 57.1	+0.3
LTK	Loutraki	1.11	161	P	Pb	08 11 41.4	-0.9
LTK				S	Sg	08 11 57.1	+0.3
GUR	Goura	1.15	187	*e*PN	Pg	08 11 41.9	-1.2
GUR	Goura	1.15	187	P	Pb	08 11 41.8	-1.1
GUR	Goura	1.15	187	P	Pb	08 11 41.8	-1.1
PAIG	Paliouri	1.24	46	P	Pn	08 11 43.0	-1.3
PAIG	Paliouri	1.24	46	P	Pn	08 11 43.0	-1.3
RLS	Riolos of Patr	1.31	219	P	Pn	08 11 45.8	+0.6
RLS	Riolos of Patr	1.31	219	P	Pn	08 11 45.8	+0.6
KZN	Kozani	1.36	335	*e*PN	Pn	08 11 45.6	-0.3
KZN				*e*SN	Sn	08 12 04.6	+0.7
KZN	Kozani	1.36	335	P	Pn	08 11 45.3	-0.6
KZN	Kozani	1.36	335	P	Pn	08 11 45.3	-0.6
KZN	Kozani	1.36	335	*e*Pn	Pn	08 11 45.6	-0.3
KZN				*e*Sn	Sn	08 12 04.6	+0.7
JAN	Janina	1.41	295	*e*PN	Pn	08 11 47.3	+0.6
JAN	Janina	1.41	295	*e*Pn	Pn	08 11 47.3	+0.6
ATH	Athens Observa	1.45	139	*e*PN	Pn	08 11 48.0	+0.8
ATH	Athens Observa	1.45	139	*e*Pn	Pn	08 11 48.0	+0.8
PLG	Polygyros	1.48	29	*e*PN	Pn	08 11 47.6	-0.1
PLG	Polygyros	1.48	29	*e*Pn	Pn	08 11 47.6	-0.1
NAIG	Nisos Aigina	1.52	149	*e*PN	Pn	08 11 48.5	+0.3
NAIG	Nisos Aigina	1.52	149	*e*Pn	Pn	08 11 48.5	+0.3
VLY	Voula,Athens	1.58	140	*e*PN	Pn	08 11 49.2	+0.2
VLY	Voula,Athens	1.58	140	*e*Pn	Pn	08 11 49.2	+0.2
OUR	Ouranopolis	1.69	42	P	Pn	08 11 49.3	-1.3
OUR	Ouranopolis	1.69	42	P	Pn	08 11 49.3	-1.3
VLX	Vlachokerasia	1.71	184	*e*PN	Pn	08 11 51.3	+0.5
VLX	Vlachokerasia	1.71	184	P	Pn	08 11 51.2	+0.4
VLX	Vlachokerasia	1.71	184	P	Pn	08 11 51.2	+0.4
VLS	Valsamata	1.75	240	P	Pn	08 11 53.0	+1.6
VLS	Valsamata	1.75	240	P	Pn	08 11 51.9	+0.5
VLS	Valsamata	1.75	240	P	Pn	08 11 51.9	+0.5
SOH	Sokhos	1.86	20	*e*PB	Pn	08 11 52.8	-0.1
SOH	Sokhos	1.86	20	*e*Pb	Pn	08 11 52.8	-0.1
ITM	Ithomi	1.95	194	*e*PN	Pn	08 11 55.8	+1.7
ITM	Ithomi	1.95	194	*e*Pn	Pn	08 11 55.8	+1.7
KBN	Korca	2.04	320	*e*PN	Pn	08 11 55.3	0.0
KBN	Korca	2.04	320	*e*Pn	Pn	08 11 55.3	0.0
SRN	Sarande	2.10	293	*e*PN	Pg	08 12 00.4	-1.0
BIA	Bitola	2.15	335	*e*Pn	Pn	08 11 57.5	+0.7
BIA				*e*Sg	Sg	08 12 26.2	-3.7
BIA	Bitola	2.15	335	*e*Pn	Pn	08 11 57.5	+0.7
BIA				*e*Sg	Sg	08 12 26.2	-3.8
KEK	Kerkira	2.20	288	*e*PN	Pn	08 11 58.5	+1.0
KEK	Kerkira	2.20	288	*e*Pn	Pn	08 11 58.5	+1.0
VAY	Valandovo	2.24	1	*e*Pn	Pn	08 11 57.2	-1.0
VAY				*e*Sg	Sn	08 12 25.1	-0.7
VAY	Valandovo	2.24	1	*e*Pn	Pn	08 11 57.1	-1.0
PYL	PYLOS	2.26	196	*e*PN	Pn	08 11 59.5	+1.1
PYL	PYLOS	2.26	196	*e*Pn	Pn	08 11 59.5	+1.1
OHR	Ohrid	2.42	328	*e*Pn	Pn	08 12 00.8	+0.2
OHR				*e*Sg	Sn	08 12 29.0	-1.2
OHR	Ohrid	2.42	328	*e*Pn	Pn	08 12 00.7	+0.1
KAVA	Kavala	2.46	38	P	Pn	08 11 59.7	-1.4
KAVA	Kavala	2.46	38	P	Pn	08 11 59.7	-1.4
KRUS	Krusevo	2.49	337	*e*Pn	Pn	08 12 01.0	-0.5
KRUS				*e*Sg	Sn	08 12 29.4	-2.4
KRUS	Krusevo	2.49	337	*e*Pn	Pn	08 12 00.9	-0.6
NVR	Nevrokopi	2.50	24	P	Pn	08 12 02.7	+1.1
NVR	Nevrokopi	2.50	24	P	Pn	08 12 02.7	+1.1
STIP	Stip	2.63	355	*e*Pn	Pn	08 12 00.6	-2.8
STIP	Stip	2.63	355	*e*Pn	Pn	08 12 00.6	-2.8
MMB	Musomiste	2.68	20	*i* P	Pn	08 12 03.3	-0.8
MMB	Musomiste	2.68	20	*i* P	Pn	08 12 03.3	-0.8
KKB	Krupnik	2.82	9	*i* P	Pn	08 12 05.7	-0.4
KKB	Krupnik	2.82	9	*i* P	Pn	08 12 05.7	-0.4
KYTH	Kithira	2.82	171	*e*PN	Pn	08 12 06.9	+0.8
KYTH	Kithira	2.82	171	*e*Pn	Pn	08 12 06.9	+0.8
CHOS	Chios island	2.85	103	*e*PN	Pn	08 12 06.8	+0.3
CHOS	Chios island	2.85	103	*e*Pn	Pn	08 12 06.8	+0.3
SKO	Skopje	3.01	345	*e*Pn	Pn	08 12 06.1	-2.5
SKO	Skopje	3.01	345	*e*Pn	Pn	08 12 06.0	-2.6
RZN	Rozhen	3.10	32	*i* P	Pn	08 12 09.9	-0.1
RZN	Rozhen	3.10	32	*i* P	Pn	08 12 09.9	-0.1
SCTE	Santa Cesarea	3.28	289	Pn	Pn	08 12 13.8	+1.4
SCTE	Santa Cesarea	3.28	289	Pn	Pn	08 12 13.8	+1.4
KDZ	Kurdzhali	3.40	40	*i* P	Pn	08 12 12.2	-1.8
KDZ	Kurdzhali	3.40	40	*i* P	Pn	08 12 12.2	-1.8
VTS	Vitosha	3.55	8	P	Pn	08 12 17.5	+1.4
VTS	Vitosha	3.55	8	*i* P	Pn	08 12 15.8	-0.3
VTS	Vitosha	3.55	8	*i* P	Pn	08 12 15.8	-0.3
PUK	Puka	3.57	327	*e*PN	Pn	08 12 18.0	+1.6
PUK	Puka	3.57	327	*e*Pn	Pn	08 12 18.0	+1.6
BARS	Barje	3.77	352	*i* iPn	Pn	08 12 18.9	-0.3
IDI	Anoyia	4.23	153	P	Pn	08 12 24.1	-1.3
	0.5nm,0.3s,baz=29,slow=19,SNR=2.2						
IDI				Sn	Sn	08 13 13.5	-1.4
	1.2nm,0.3s,baz=233,slow=23,SNR=2.2						
IDI	Anoyia	4.23	153	Pn	Pn	08 12 24.1	-1.4
IDI				Sn	Sn	08 13 13.5	-1.4
MPEP	Malo Peshtene	4.38	12	*i* P	Pn	08 12 27.1	-0.3
TIP	Timpagrande	4.48	273	Pn	Pn	08 12 29.1	+0.3
TIP	Timpagrande	4.48	273	Pn	Pn	08 12 29.1	+0.3
	17nm,1.1s						
TIP	Timpagrande	4.48	273	Pn	Pn	08 12 29.1	+0.3
	17nm,1.1s						
NOCI	Noci	4.52	294	Pn	Pn	08 12 31.1	+1.6
NOCI	Noci	4.52	294	Pn	Pn	08 12 31.1	+1.6
SERS	Sersale	4.54	271	Pn	Pn	08 12 29.9	+0.3
	7.0nm,0.4s						
SERS	Sersale	4.54	271	Pn	Pn	08 12 29.9	+0.3
	7.0nm,0.4s						
PLAC	Placanica	4.79	264	Pn	Pn	08 12 34.4	+1.3
	7.0nm,0.7s						
PLAC	Placanica	4.79	264	Pn	Pn	08 12 34.4	+1.3
	7.0nm,0.7s						
SG1	Sgolgore (BA)	4.82	293	*e*Pn	Pn	08 12 33.7	+0.2
SG1				*e*Sn	Sn	08 13 25.2	-4.1
CARO	Carolei	4.89	274	Pn	Pn	08 12 36.8	+2.2
CARO	Carolei	4.89	274	Pn	Pn	08 12 36.8	+2.2
SZH	Strazhica	4.92	31	*i* P	Pn	08 12 35.1	+0.2
SZH	Strazhica	4.92	31	*i* P	Pn	08 12 35.1	+0.2
GRUS	Gruza	4.99	345	*e*Pn	Pn	08 12 38.8	+2.9
JOPP	Joppolo	5.20	267	Pn	Pn	08 12 40.0	+1.3
	10.0nm,0.5s						
JOPP	Joppolo	5.20	267	Pn	Pn	08 12 40.0	+1.3
	10.0nm,0.5s						
MRVN	Minervino Murg	5.24	294	Pn	Pn	08 12 40.3	+1.0
MRVN	Minervino Murg	5.24	294	Pn	Pn	08 12 40.3	+1.0
SIRI	Monte Sirino -	5.25	284	Pn	Pn	08 12 41.3	+1.9
	18nm,0.5s						
SIRI	Monte Sirino -	5.25	284	Pn	Pn	08 12 41.3	+1.9
	18nm,0.5s						
STON	Ston	5.26	318	*e*Pn	Pn	08 12 37.8	-1.8
STON				Sn	Sn	08 13 35.2	-5.0
STON	Ston	5.26	318	*e*Pn	Pn	08 12 37.8	-1.8
STON				Sn	Sn	08 13 35.1	-5.0
BBLS	Lazići	5.32	335	*e*Pn	Pn	08 12 40.4	-0.1
MCEL	Monticello	5.32	286	Pn	Pn	08 12 42.0	+1.5
	29nm,0.4s						
MCEL	Monticello	5.32	286	Pn	Pn	08 12 42.0	+1.5
	29nm,0.4s						
DIVS	Divibare	5.36	340	*i* iPn	Pn	08 12 40.5	-0.5
MGR	Morigerati	5.48	283	Pn	Pn	08 12 43.9	+1.3
MGR	Morigerati	5.48	283	Pn	Pn	08 12 43.9	+1.3
	14nm,0.5s						
BULG	Bulgheria - Ca	5.60	283	Pn	Pn	08 12 45.3	+1.0
	27nm,0.4s						
CDRU	Civita di Ruta	5.73	287	Pn	Pn	08 12 47.2	+1.2
	11nm,0.6s						
MCRV	Calabrutti - M	5.90	289	Pn	Pn	08 12 49.5	+1.2
	101nm,0.7s						
VAE	Valguarnera	6.57	258	Pn	Pn	08 12 56.9	-0.7
	2.3nm,0.3s,baz=90,slow=19,SNR=2.2						
VAE				Sn	Sn	08 14 12.3	-0.2
	3.0nm,0.3s,baz=117,slow=5.9,SNR=2.3						
VAE	Valguarnera	6.57	258	Pn	Pn	08 12 56.9	-0.7
VAE				Sn	Sn	08 14 12.3	-0.2
MLR	Muntele Rosu	6.90	21	Pn	Pn	08 13 02.6	+0.6
	0.2nm,0.3s,baz=139,slow=19,SNR=3.2						
MLR	Muntele Rosu	6.90	21	Pn	Pn	08 13 02.7	+0.7
BRTR	Keskin Array B	8.64	82	Pn	Pn	08 13 26.3	+0.3
	0.1nm,0.3s,baz=265,slow=12,SNR=5.4						
BRTR	Keskin Array B	8.64	82	Pn	Pn	08 13 26.3	+0.3
GERES	GERESS Array B	11.64	330	Pn	Pn	08 14 12.4	+5.4
	0.1nm,0.3s,baz=153,slow=13,SNR=3.2						
DAVOX	Davos/Dischmat	12.03	314	LR	LR	08 18 07.4	
	comp=Z,90nm,22.0s,baz=264,slow=34						
EKA	Eskdalemuir Ar	23.64	322	P	P	08 16 31.4	-0.9
	2.0nm,0.6s,mb3.7,baz=122,slow=9.9,SNR=8.9						
EKA	Eskdalemuir Ar	23.64	322	P	P	08 16 31.4	-0.9
TORD	Torodi Ar. Bea	31.72	221	P	P	08 17 43.8	-1.2
	0.9nm,1.1s,mb3.5,baz=33,slow=9.5,SNR=2.0						
MKAR	Makanchi Array	43.50	60	P	P	08 19 21.9	-2.5
	0.2nm,0.3s,mb3.3,baz=281,slow=8.1,SNR=6.3						
MKAR	Makanchi Array	43.50	60	P	P	08 19 21.9	-2.4

BUC ***24*** *08:17:53.3±0.6, 44°.38N×28°.66E, h16km±1km, MD2.3/3, Error ellipse: s-maj=4.8km s-min=4.2km az=9.0*
BGS ***24*** *08:18:04.9±2.2, 72°.30N×3°.97W, h10km, mb4.7, mb4.6(NEIC)*
NAO ***24*** *08:18:14.3±1.5, 71°.34N×3°.92W, ML3.0*
BJI ***24*** *08:18:14.8, 71°.50N×3°.50W, h10km, mB4.7/8, mb4.8/15, Ms4.8/6, Ms7.4 2/6*
MOS ***24*** *08:18:16.6±1.3, 71°.51N×3°.26W, h10km, mb4.6/54, Error ellipse: s-maj=15.8km s-min=3.6km az=98.2*
CSEM ***24*** *08:18:16.3±0.1, 71°.45N×3°.47W, h2km, mb4.5/37, Ms3.7, Mw4.9, Error ellipse: s-maj=4.1km s-min=3.6km az=178.0*
ISCJB ***24*** *08:18:16.0±0.2, 71°.45N±0°.02×3°.62W±0°.06, h10km, mb4.4/95, MS3.9/45, Error ellipse: s-maj=3.4km s-min=2.9km az=0.3*
BER ***24*** *08:18:16.5±3.0, 71°.40N×3°.96W, h10km, MD2.3, ML2.9, ML3.0(NAO)*
IDC ***24*** *08:18:16.5±0.5, 71°.47N×3°.63W, h0km, mb3.9/26, mb1 4.1/32, mb1mx4.1/39, mbtmp4.0/32, ML3.8/6, MS3.9/37, Ms1 3.9/37, ms1mx3.8/47, Error ellipse: s-maj=14.2km s-min=9.6km az=37.0*
GCMT ***24*** *08:18:17.9±0.2, 71°.51N×3°.50W, h12km, MW4.9/76, Moment Tensor Solution. s14,c17; s76,c113; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.25±.07; Mθθ1.11±.07; Mφφ1.14±.07; Mrθ-1.03±.31; Mrφ1.13±.06; Mθφ-1.14±.27; Best double couple: M=2.72700×10^16 NP1:φ=226.00000°, δ28.00000°, λ-87.00000°. NP2: φ=43.00000°, δ62.00000°, λ-91.00000°. Principal axes: T 2.7280, Plg17.0000°, Azm134.0000°; N -0.0040, Plg1.0000°, Azm44.0000°; P -2.7250, Plg73.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***24*** *08:18:17.9±0.3, 71°.46N×3°.50W, h10km, mb4.6/50 Error ellipse: s-maj=5.2km s-min=4.3km az=54.0*
SZGRF ***24*** *08:18:21.9, 71°.35N×3°.35W, h33km, mb4.7, MS3.5, Jan Mayen Island region*
REY ***24*** *08:18:27.4, 70°.94N×5°.57W, h10km, ML4.1, ML3.1*
UPP ***24*

MASU Masugnsbyn 9.76 102 P Pn 08 20 37.1 -1.1
ARA0 ARCESS Array S 9.83 87 Pn Pn 08 20 36.9 -2.2
baz=289,slow=12
ARA0 ARCESS Array S 9.83 87 Pn Pn 08 20 36.9 -2.2
baz=289,slow=11,SNR=50
ARCES ARCESS Array B 9.83 87 Pn Pn 08 20 37.5 -1.7
comp=Z,1.4nm,0.3s,baz=292,slow=11,SNR=47
ARCES ARCESS Array B 9.83 87 P Pn 08 20 37.5 -1.6
ARCES pmax pmax
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 9.83 87 Pn Pn 08 20 37.5 -1.7
ARCES ARCESS Array B 9.83 87 P Pn 08 20 37.5 -1.6
comp=Z,1.0nm,0.3s
MOL Molde 9.88 149 *e*Pn **Pn 08 20 37.1 -2.7**
MOL Molde 9.88 149 *e*Pn **Pn 08 20 37.2 -2.7**
SNR=50
KEV Kevo 10.22 85 *e*P **Pn 08 20 42.3 -2.2**
KEV pmax pmax
comp=Z,11nm,0.8s
KEV Kevo 10.22 85 *e*Pn **Pn 08 20 42.1 -2.3**
KEV Kevo 10.22 85 *e*p **Pn 08 20 42.3 -2.2**
comp=Z,11nm,0.8s
KEV Kevo 10.22 85 *e*P **Pn 08 20 42.3 -2.2**
comp=Z,11nm,0.8s
PAJU Pajala 10.37 102 P Pn 08 20 45.1 -1.4
ERTU Ertsjaerv 10.37 106 P Pn 08 20 44.9 -1.7
FOO Floro 10.45 157 *e*Pn **Pn 08 20 44.0 -3.6**
LILU Lilltraesk 10.53 114 P Pn 08 20 48.3 -0.5
SUMG Summit 10.76 292 *e*Pn **Pn 08 20 50.1 -1.8**
comp=Z,150nm,1.8s
SJUU Sjulsmark 10.90 111 P Pn 08 20 52.4 -1.3
HYA Hoyanger 11.01 155 *e*Pn **Pn 08 20 55.8 +0.5**
HYA Hoyanger 11.01 155 *e*P **Pn 08 20 55.0 -0.4**
HYA Hoyanger 11.01 155 *e*P **Pn 08 20 55.0 -0.3**
HYA Hoyanger 11.01 155 *e*Pn **Pn 08 20 55.8 +0.5**
SNR=50
SVAU Svanoeiden 11.04 118 P Pn 08 20 54.5 -1.2
KALU Kalix 11.19 107 P Pn 08 20 55.6 -2.1
BREU Bredtraesk 11.23 121 P Pn 08 20 57.7 -0.6
WAL1 Walls 11.27 175 *e*P **Pn 08 20 57.0 -1.7**
WAL1 Walls 11.27 175 *e*P **Pn 08 20 57.0 -1.8**
LRW Lerwick 11.40 174 *e*P **Pn 08 21 00.0 -0.6**
LRW AML AML 08 21 01.1
comp=Z,22nm,1.0s
LRW Lerwick 11.40 174 *e*P **Pn 08 21 00.0 -0.6**
comp=Z,22nm,1.0s
UMAU Umeaa 11.82 118 P Pn 08 21 05.2 -1.2
NB2 NORSAR Subarra 11.96 143 Pn **Pn 08 21 07.6 -0.7**
comp=Z,11nm,1.1s,baz=338,slow=14
NB2 NORSAR Subarra 11.96 143 Pn **Pn 08 21 07.1 -1.2**
baz=329,slow=14
NB2 NORSAR Subarra 11.96 143 P Pn 08 21 07.1 -1.2
NB2 NORSAR Subarra 11.96 143 Pn **Pn 08 21 07.6 -0.7**
comp=Z,11nm,1.1s,baz=338,slow=14,SNR=0.7
NOA NORSAR Array B 11.96 143 Pn **Pn 08 21 07.8 -0.4**
comp=Z,0.7nm,0.3s,baz=336,slow=13,SNR=9.0
NOA LR LR 08 24 11.1
comp=Z,169nm,21.8s,baz=335,slow=30
NOA NORSAR Array B 11.96 143 P Pn 08 21 07.9 -0.4
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA MLR MLR
comp=Z,169nm,21.8s
NOA NORSAR Array B 11.96 143 Pn **Pn 08 21 07.8 -0.5**
NAO01 NORSAR Array S 12.08 144 *e*Pn **Pn 08 21 08.6 -1.3**
NAO01 NORSAR Array S 12.08 144 *e*Pn **Pn 08 21 08.6 -1.3**
BLS5 Blasjo 12.73 156 *e*Pn **Pn 08 21 17.9 -1.0**
BLS5 Blasjo 12.73 156 *e*P **Pn 08 21 16.9 -2.0**
BLS5 Blasjo 12.73 156 *e*P **Pn 08 21 16.9 -1.9**
BLS5 Blasjo 12.73 156 *e*Pn **Pn 08 21 17.9 -0.9**
SNR=50
ORE Reay 12.95 181 *e*P **Pn 08 21 21.1 -0.8**
ORE Reay 12.95 181 *e*P **Pn 08 21 21.0 -0.8**
KONO Kongsberg 12.98 149 *e*P **Pn 08 21 21.7 -0.4**
KONO pmax pmax
comp=Z,46nm,1.0s
KONO Kongsberg 12.98 149 *e*Pn **Pn 08 21 21.7 -0.5**
comp=Z,46nm,1.0s
KONO Kongsberg 12.98 149 *e*P **Pn 08 21 21.7 -0.4**
comp=Z,46nm,1.0s
RSC Scourie 13.17 184 *e*P **Pn 08 21 22.9 -1.9**
RSC Scourie 13.17 184 *e*P **Pn 08 21 22.9 -1.9**
HFS Hagfors 13.29 140 Pn **Pn 08 21 25.6 -0.8**
baz=333,slow=22
HFS Hagfors 13.29 140 Pn **Pn 08 21 25.3 -1.1**
comp=Z,1.2nm,0.3s,baz=349,slow=12,SNR=32
HFS LR LR 08 26 15.1
comp=Z,1μm,21.8s,baz=314,slow=36
HFS Hagfors 13.29 140 Pn **Pn 08 21 25.5 -0.9**
baz=333,slow=20,SNR=50
APA Apatity 13.33 89 *e*P Px 08 21 36.7
APA MLR MLR
comp=Z,600nm,20.0s
LVZ Lovozero 13.55 86 *ce*P **Pn 08 21 31.0 +1.1**
LVZ pmax pmax
comp=Z,66nm,2.5s
LVZ Lovozero 13.55 86 *e*P **Pn 08 21 31.0 +1.1**
comp=Z,66nm,2.5s
MVH1 Achvaich 13.58 182 *e*P **Pn 08 21 29.2 -1.2**
MVH1 Achvaich 13.58 182 *e*P **Pn 08 21 29.2 -1.2**
RRH Rhenigidale 13.65 187 *e*P **Pn 08 21 29.4 -1.9**
RRH Rhenigidale 13.65 187 *e*P **Pn 08 21 29.4 -1.9**
MCD Coleburn Disti 13.92 179 *e*P **Pn 08 21 34.5 -0.5**
MCD Coleburn Disti 13.92 179 *e*P **Pn 08 21 34.5 -0.5**
KAC Achnashellach 14.03 184 *e*P **Pn 08 21 34.7 -1.7**
KAC Achnashellach 14.03 184 *e*P **Pn 08 21 34.7 -1.7**
MDO Dochfour 14.07 182 *e*P **Pn 08 21 36.5 -0.5**
MDO Dochfour 14.07 182 *e*P **Pn 08 21 36.5 -0.5**
MME1 Meikle Cairn 14.19 179 *e*P **Pn 08 21 37.5 -1.2**
KPL Plockton 14.20 185 *e*P **Pn 08 21 37.2 -1.5**
KPL AMb AMB 08 21 48.5
comp=Z,30nm,1.8s
KAF Kangasniemi 14.82 114 *e*P **Pn 08 21 45.1 -2.2**
KAF pmax pmax
comp=Z,18nm,0.9s
KAF Kangasniemi 14.82 114 *e*p **Pn 08 21 45.1 -2.2**
comp=Z,18nm,0.9s
FIA0 FINESS Array S 15.29 116 Pn **Pn 08 21 51.3 -2.2**
baz=337,slow=14
FIA0 FINESS Array S 15.29 116 Pn **Pn 08 21 51.3 -2.2**
baz=337,slow=14,SNR=50
FINES FINESS Array B 15.29 116 Pn **Pn 08 21 52.3 -1.2**
comp=Z,0.5nm,0.3s,baz=339,slow=10,SNR=15
FINES LR LR 08 27 12.6
comp=Z,1μm,19.3s,baz=358,slow=35
FINES FINESS Array B 15.29 116 Pn **Pn 08 21 52.3 -1.2**
JOF Joensuu 15.72 105 *e*P **Pn 08 21 55.8 -3.3**
JOF pmax pmax
comp=Z,13nm,0.8s
JOF Joensuu 15.72 105 *e*p **Pn 08 21 55.8 -3.3**
comp=Z,13nm,0.8s
MUD Monsted U'grnd 15.98 154 *i* P **Pn 08 22 01.5 -1.0**
MUD
comp=Z,320nm,22.0s
EKA Eskdalemuir Ar 16.18 179 Pn **Pn 08 22 04.8 -0.2**
baz=357,slow=13,SNR=13
EKA Eskdalemuir Ar 16.18 179 Pn **Pn 08 22 04.8 -0.3**
ESK Eskdalemuir 16.19 179 *e*P **Pn 08 22 05.7 +0.4**
ESK pmax pmax
comp=Z,39nm,1.0s
ESK Eskdalemuir 16.19 179 *e*P **Pn 08 22 05.7 +0.4**
comp=Z,39nm,1.0s
ESK Eskdalemuir 16.19 179 *e*P **Pn 08 22 05.7 +0.4**
comp=Z,39nm,1.0s
SFJD Kangerlussuaq 16.91 278 Pn **Pn 08 22 13.4 -1.0**
comp=Z,0.1nm,0.3s,baz=21,slow=8.5,SNR=2.5
SFJD LR LR 08 27 57.1
comp=Z,572nm,18.5s,baz=20,slow=34
SFJD Kangerlussuaq 16.91 278 *e*P **Pn 08 22 15.4 +1.1**
SFJD MLR MLR
comp=Z,410nm,18.0s
SFJD Kangerlussuaq 16.91 278 *i* P **Pn 08 22 15.4 +1.1**
SFJD
comp=Z,400nm,18.0s
SFJD Kangerlussuaq 16.91 278 Pn **Pn 08 22 13.4 -0.9**
COP Copenhagen 17.23 148 *i* P **Pn 08 22 20.8 +2.5**
COP
comp=Z,200nm,20.0s
COP Copenhagen 17.23 148 *i* P **Pn 08 22 20.8 +2.5**
VSU Vasula 17.95 121 *d i*P **Pn 08 22 26.0 -1.3**
VSU pmax pmax
comp=Z,117nm,2.0s
VSU Vasula 17.95 121 *i* P **Pn 08 22 26.0 -1.3**
comp=Z,117nm,2.0s
BSD Bornholm Skovb 18.21 144 *i* P **Pn 08 22 29.1 -1.4**
BSD
comp=Z,700nm,18.0s
BSD Bornholm Skovb 18.21 144 *i* P **Pn 08 22 29.1 -1.4**
BSEG Bad Segeberg 18.59 154 *e*P **Pn 08 22 36.2 +1.1**
comp=Z,58nm,1.3s
BSEG Bad Segeberg 18.59 154 *e*P **Pn 08 22 36.2 +1.1**
BSEG pmax pmax
comp=Z,58nm,1.3s
BSEG Bad Segeberg 18.59 154 *e*P **Pn 08 22 36.2 +1.1**
IBBN Ibbenburen 19.86 159 *e*P **Pn 08 22 49.7 -0.7**
NRDL Niedersach Rie 19.96 155 *e*P **Pn 08 22 51.0 -0.6**
IZAR Zarasai 20.19 126 *e*P **P 08 22 51.9 -0.4**
IZAR Zarasai 20.19 126 *e*P **P 08 22 51.9 -0.5**
ISAL Salakas 20.32 126 *e*P **P 08 22 53.4 -0.4**
ISAL Salakas 20.32 126 *e*P **P 08 22 53.3 -0.4**
GKP Gorka Klasztor 20.40 142 *e*P **P 08 22 55.5 +0.8**
GKP Gorka Klasztor 20.40 142 *e*P **P 08 22 55.5 +0.8**
IIGN Ignalina 20.54 126 *e*P **P 08 22 56.2 0.0**
IIGN Ignalina 20.54 126 *e*P **P 08 22 56.2 0.0**
CLZ Clausthal 20.64 155 *e*P **P 08 22 58.5 +1.2**
comp=Z,36nm,1.1s
CLZ Clausthal 20.64 155 *e*P **P 08 22 58.5 +1.2**
CLZ pmax pmax
comp=Z,36nm,1.1s
CLZ Clausthal 20.64 155 *e*P **P 08 22 58.5 +1.2**
comp=Z,36nm,1.1s
BUG Bochum--Univer 20.66 161 *e*P **P 08 22 58.1 +0.6**
comp=Z,49nm,1.4s
IDID Didziasalis 20.70 125 *e*P **P 08 22 57.8 -0.2**
IDID Didziasalis 20.70 125 *e*P **P 08 22 57.8 -0.2**
SUW Suwalki 21.00 132 *e*P **P 08 23 01.5 +0.3**
SUW *e* 08 23 03.9
SUW Suwalki 21.00 132 *e*P **P 08 23 01.2 +0.1**
SUW pmax pmax
comp=Z,175nm,1.2s
SUW Suwalki 21.00 132 *e*P **P 08 23 01.2 0.0**
comp=Z,174nm,1.2s
SUW Suwalki 21.00 132 *e*P **P 08 23 01.2 +0.1**
comp=Z,174nm,1.2s
UCC Uccle 21.03 166 P **P 08 23 02.2 +0.8**
UCC Uccle 21.03 166 P **P 08 23 02.2 +0.7**
BEBN Eben Emael 21.14 164 P **P 08 23 03.6 +1.0**
comp=Z,14nm,1.7s,mb4.0
BEBN Eben Emael 21.14 164 P **P 08 23 03.6 +0.9**
comp=Z,14nm,1.7s,mb4.0
SNF Seneffe 21.31 166 P **P 08 23 04.5 0.0**
SNF Seneffe 21.31 166 P **P 08 23 04.4 -0.1**
MEM Membach 21.36 163 P **P 08 23 08.2 +3.2**
BCLA Clavier 21.48 164 P **P 08 23 07.1 +0.8**
comp=Z,14nm,1.6s,mb4.0
BCLA Clavier 21.48 164 P **P 08 23 07.1 +0.8**
comp=Z,14nm,1.6s,mb4.0
CLL Collm 21.54 151 *e*P **P 08 23 07.1 +0.1**
comp=Z,52nm,1.2s,mb4.8
CLL Collm 21.54 151⇑ *i*P **P 08 23 07.6 +0.6**
CLL *i* 08 23 11.6
CLL *e*S **S 08 27 09.0 +3.7**
CLL pmax pmax
comp=Z,35nm,1.3s,mb4.6
CLL MLR MLR
comp=Z,400nm,22.2s,MS3.8
CLL Collm 21.54 151⇑ *i*P **P 08 23 07.6 +0.6**
comp=Z,35nm,1.3s,mb4.6
CLL *i* 08 23 11.6
CLL *e*S **S 08 27 09.0 +3.7**
CLL LR LR
comp=Z,400nm,22.2s,MS3.8
CLL Collm 21.54 151⇑ *i*P **P 08 23 07.6 +0.6**
comp=Z,35nm,1.3s,mb4.6
CLL *i* (sP) sP 08 23 11.6 +0.5
comp=Z,52nm,1.2s
CLL *e* 08 24 36.0
CLL *e*S **S 08 27 09.0 +3.7**
CLL Lm 08 30 36.0
comp=N,300nm,21.6s
CLL Lm 08 30 36.0
comp=E,200nm,18.8s
CLL Collm 21.54 151⇑ *i*P **P 08 23 07.6 +0.6**
UBBA Unterbreizbach 21.59 156 *e*P **P 08 23 08.5 +1.0**
MNK Minsk 21.72 125⇑ *e*P **P 08 23 07.0 -1.9**
MNK pmax pmax
comp=Z,150nm,2.0s,mb5.1
MNK pmax pmax
comp=N,140nm,2.0s
MNK pmax pmax
comp=E,120nm,2.0s
MNK Minsk 21.72 125 *e*P **P 08 23 07.0 -1.9**
comp=E,150nm,2.0s,mb5.1
MICGM Minsk 21.73 125⇑ *e*P **P 08 23 07.0 -2.0**
DOU Dourbes 21.74 166 P **P 08 23 10.5 +1.4**
comp=Z,8.8nm,1.3s,mb4.0
DOU Dourbes 21.74 166 P **P 08 23 10.5 +1.3**
comp=Z,8.8nm,1.3s,mb4.0
BAIF Baives 21.75 167 *e*P **P 08 23 08.0 -1.2**
comp=Z,50nm,1.2s,mb4.5
BAIF Baives 21.75 167 *e*P **P 08 23 08.0 -1.2**
BAIF pmax pmax
comp=Z,25nm,1.2s,mb4.5
BAIF Baives 21.75 167 *e*P **P 08 23 08.0 -1.2**
comp=Z,25nm,1.2s,mb4.5
BAIF Baives 21.75 167 *e*P **P 08 23 08.0 -1.2**
comp=Z,25nm,1.2s,mb4.5
GIVF Givet 21.76 165 *e*P **P 08 23 08.7 -0.6**
comp=Z,102nm,1.3s,mb4.8
GIVF Givet 21.76 165 *e*P **P 08 23 08.7 -0.6**
GIVF pmax pmax
comp=Z,51nm,1.3s,mb4.8
GIVF Givet 21.76 165 *e*P **P 08 23 08.7 -0.6**
comp=Z,51nm,1.3s,mb4.8
GIVF Givet 21.76 165 *e*P **P 08 23 08.7 -0.6**
comp=Z,51nm,1.3s,mb4.8
MOX Moxa 21.98 154 *e*P **P 08 23 12.8 +1.1**
comp=Z,81nm,1.6s,mb4.9
MOX
comp=Z,200nm,22.0s
MOX Moxa 21.98 154 *e*P **P 08 23 12.5 +0.8**
comp=Z,63nm,1.4s,mb4.8
MOX Moxa 21.98 154 *e*P **P 08 23 12.8 +1.1**
MOX pmax pmax
comp=Z,81nm,1.6s,mb4.9
MOX MLR MLR
comp=Z,200nm,22.0s,MS3.5
MOX Moxa 21.98 154 *e*P **P 08 23 12.8 +1.1**
comp=Z,81nm,1.6s,mb4.9
TNS Taunus Mts 21.99 159 *e*P **P 08 23 12.9 +1.1**
comp=Z,21nm,1.0s,mb4.5
TNS Taunus Mts 21.99 159 *e*P **P 08 23 12.9 +1.1**
TNS pmax pmax
comp=Z,21nm,1.0s,mb4.5
TNS Taunus Mts 21.99 159 *e*P **P 08 23 12.9 +1.1**
comp=Z,21nm,1.0s,mb4.5
BRG Berggiesshubel 22.11 150 *e*P **P 08 23 13.0 -0.1**
comp=Z,39nm,1.1s,mb4.8
BRG Berggiesshubel 22.11 150 *e*P **P 08 23 13.3 +0.2**
comp=Z,22nm,1.1s,mb4.5
BRG S **S 08 27 21.0 +4.5**
BRG
comp=N,391nm,23.0s
BRG
comp=E,304nm,18.0s
BRG
comp=Z,449nm,21.3s
WLF Walferdange 22.30 163 P **P 08 23 16.0 +0.9**
comp=Z,23nm,2.1s,mb4.2
WLF Walferdange 22.30 163 *e*P **P 08 23 15.3 +0.1**
TANN Tannenbergstha 22.33 152 *e*P **P 08 23 16.1 +0.7**
NKC Novy Kostel 22.50 153 P **P 08 23 18.4 +1.1**
KSP Ksiaz 22.54 146 *e*P **P 08 23 18.4 +0.8**
KSP *e* 08 23 24.4
KSP Ksiaz 22.54 146⇑ *e*P **P 08 23 18.1 +0.4**
KSP *e**PP 08 23 23.6
KSP *e*S **S 08 27 29.0 +4.2**
KSP Ksiaz 22.54 146⇑ *e*P **P 08 23 18.1 +0.4**
PVCC Panska Ves 22.55 149 *e*P **P 08 23 18.9 +1.2**
PVCC *e*pP 08 23 24.4
PVCC AMS AMS 08 32 10.0
comp=Z,300nm,19.3s
PVCC Panska Ves 22.55 149 P **P 08 23 18.9 +1.2**
FLN La Foliniere 22.80 175 *e*P **P 08 23 20.4 0.0**
comp=Z,90nm,1.4s,mb4.7
FLN *e*MLR MLR
comp=Z,462nm,22.0s,MS3.6
FLN La Foliniere 22.80 175 *e*P **P 08 23 20.4 0.0**
FLN pmax pmax
comp=Z,45nm,1.4s,mb4.7
FLN MLR MLR
comp=Z,460nm,22.0s,MS3.9
FLN La Foliniere 22.80 175 *e*P **P 08 23 20.4 0.0**
comp=Z,45nm,1.4s,mb4.7
FLN LR LR
comp=Z,460nm,22.0s,MS3.9
UPC Upice 22.81 147 *e*P **P 08 23 21.2 +0.6**
UPC *e*pP 08 23 24.3
UPC Upice 22.81 147 P **P 08 23 21.2 +0.6**
GRA1 Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
comp=Z,72nm,1.5s,mb4.9
GRA1 LR LR
comp=Z,200nm,21.8s,MS3.5
GRA1 Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
comp=Z,72nm,1.5s,mb4.9
GRF Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
comp=Z,72nm,1.5s,mb4.9
GRF *e*L 08 31 45.0
comp=Z,204nm,21.8s
GRF Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
GRF pmax pmax
comp=Z,72nm,1.5s,mb4.9
GRF MLR MLR
comp=Z,200nm,21.8s,MS3.5
GRF Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
GRF pmax pmax
comp=Z,72nm,1.5s,mb4.9
GRF MLR MLR
comp=Z,200nm,21.8s,MS3.5
GRF Grafenberg Arr 22.86 155 *e*P **P 08 23 21.9 +0.9**
comp=Z,72nm,1.5s,mb4.9
ROTZ Rotzenmuhle 22.92 153 *e*P **P 08 23 22.5 +0.8**
PRA Prague 22.97 149 P **P 08 23 23.0 +0.8**
LDF La Druitiere 22.98 174 *e*P **P 08 23 21.8 -0.5**
comp=Z,64nm,1.3s,mb4.6
LDF La Druitiere 22.98 174 *e*P **P 08 23 21.8 -0.5**
LDF pmax pmax
comp=Z,32nm,1.3s,mb4.6
LDF La Druitiere 22.98 174 *e*P **P 08 23 21.8 -0.5**
comp=Z,32nm,1.3s,mb4.6
DPC Dobruska-Polom 23.02 146 *e*P **P 08 23 23.4 +0.7**
DPC *e*pP 08 23 27.3
DPC *e*S **S 08 27 38.4 +5.4**
DPC AMS AMS 08 33 30.0
comp=Z,400nm,15.1s
DPC Dobruska-Polom 23.02 146 P **P 08 23 23.4 +0.7**
PRU Pruhonice 23.07 149 *e*P **P 08 23 24.0 +0.8**
PRU *e*S **S 08 27 37.9 +4.2**
PRU MLR MLR
comp=Z,400nm,23.9s,MS3.8
PRU Pruhonice 23.07 149 *e*P **P 08 23 24.0 +0.8**
PRU *e*S **S 08 27 37.9 +4.2**
PRU AMS AMS 08 31 10.0
comp=Z,400nm,23.9s
PRU Pruhonice 23.07 149 P **P 08 23 24.0 +0.8**
MOS Moscow 23.41 111 *e*P **P 08 23 26.4 -0.4**
MOS *e* 08 23 53.6
MOS *e*S **S 08 27 38.9 -0.4**
MOS pmax pmax
comp=Z,43nm,1.0s,mb4.8
WET Wettzell 23.63 152 *e*P **P 08 23 30.1 +1.1**
comp=Z,66nm,2.0s,mb4.7
WET Wettzell 23.63 152 *e*P **P 08 23 30.1 +1.1**
WET pmax pmax
comp=Z,66nm,2.0s,mb4.7
WET Wettzell 23.63 152 *e*P **P 08 23 30.1 +1.1**
comp=Z,66nm,2.0s,mb4.7
OBN Obninsk 23.63 113⇑ *e*P **P 08 23 27.7 -1.3**
OBN *e* 08 23 57.3
OBN *e*S **S 08 27 45.5 +2.7**
OBN pmax pmax
comp=Z,79nm,1.9s,mb4.8
OBN MLR MLR
comp=Z,700nm,17.0s,MS4.2
CDF Champ du Feu 23.65 162 *e*P **P 08 23 30.4 +1.2**
KHC Kasperske Hory 23.75 151 *e*P **P 08 23 31.0 +0.9**
comp=Z,34nm,1.8s,mb4.5
KHC Kasperske Hory 23.75 151 *e*P **P 08 23 30.9 +0.8**
KHC *e*pP 08 23 36.8
KHC *e*S **S 08 27 48.4 +3.6**
KHC AMS AMS 08 31 40.0
comp=Z,300nm,20.5s
KHC Kasperske Hory 23.75 151 *e*P **P 08 23 31.0 +0.9**
comp=Z,34nm,1.8s,mb4.5
MORC Moravsky Berou 23.79 145 *e*P **P 08 23 31.1 +0.6**
MORC pmax pmax
comp=Z,27nm,1.6s,mb4.4
MORC Moravsky Berou 23.79 145 *e*P **P 08 23 31.1 +0.6**
comp=Z,28nm,1.6s,mb4.4
MORC Moravsky Berou 23.79 145 *e*P **P 08 23 31.1 +0.6**
comp=Z,28nm,1.6s,mb4.4
ECH Echery 23.84 162 *e*P **P 08 23 30.3 -0.6**
ECH pmax pmax
comp=Z,11nm,1.1s,mb4.2
ECH Echery 23.84 162 *e*P **P 08 23 30.3 -0.6**
comp=Z,11nm,1.1s,mb4.2
ECH Echery 23.84 162 *e*P **P 08 23 30.3 -0.6**
comp=Z,11nm,1.1s,mb4.2
BFO Black Forest 23.84 160 *e*P **P 08 23 31.8 +0.8**
comp=Z,38nm,1.4s,mb4.6
BFO Black Forest 23.84 160 *e*P **P 08 23 31.8 +0.8**
BFO pmax pmax
comp=Z,38nm,1.4s,mb4.6
BFO Black Forest 23.84 160 *e*P **P 08 23 31.8 +0.8**
comp=Z,38nm,1.4s,mb4.6
OKC Ostrava-Krasne 23.85 144 *e*P **P 08 23 32.6 +1.6**
OKC *e*pP 08 23 37.5
OKC *e*S **S 08 27 47.9 +1.5**
OKC AMS AMS 08 33 50.0
comp=Z,600nm,13.8s
OKC Ostrava-Krasne 23.85 144 P **P 08 23 32.6 +1.6**
TREC Trest 23.89 148 AMS AMS 08 31 50.0
comp=Z,400nm,18.1s
HAU Haudompre 23.97 164 *e*P **P 08 23 32.6 +0.5**
HAU *e*MLR MLR
comp=Z,490nm,21.2s,MS3.6
HAU Haudompre 23.97 164 *e*P **P 08 23 32.6 +0.5**
HAU LR LR
comp=Z,490nm,21.3s,MS4.0
GEC2 GERESS Array S 24.04 151 *e*P **P 08 23 34.2 +1.4**
comp=Z,28nm,1.4s,mb4.5
GEC2 GERESS Array S 24.04 151 *e*P **P 08 23 34.2 +1.4**
GEC2 pmax pmax
comp=Z,28nm,1.4s,mb4.5
GEC2 GERESS Array S 24.04 151 *e*P **P 08 23 34.2 +1.4**
comp=Z,28nm,1.4s,mb4.5
GERES GERESS Array B 24.04 151 P **P 08 23 33.8 +1.0**
comp=Z,4.1nm,0.9s,mb3.9,baz=345,slow=9.0,SNR=32
GERES LR LR 08 32 29.6
comp=Z,346nm,21.6s,MS3.8,baz=355,slow=35
GERES GERESS Array B 24.04 151 P **P 08 23 33.8 +1.0**
GERES pmax pmax
comp=Z,4.0nm,0.9s
GERES MLR MLR
comp=Z,346nm,21.6s
GERES GERESS Array B 24.04 151 P **P 08 23 33.8 +1.0**
VRAC Vranov 24.07 147 P **P 08 23 33.6 +0.5**
comp=Z,3.9nm,0.4s,mb4.2,baz=2.0,slow=8.0,SNR=11
VRAC LR LR 08 32 44.3
comp=Z,411nm,21.3s,MS3.9,baz=357,slow=36
VRAC Vranov 24.07 147 P **P 08 23 33.6 +0.5**
VRAC pmax pmax
comp=Z,4.0nm,0.4s
VRAC MLR MLR
comp=Z,411nm,21.3s
VRAC Vranov 24.07 147 P **P 08 23 33.6 +0.5**
HINF Hinteralfeld 24.20 163 *e*P **P 08 23 35.0 +0.8**
comp=Z,27nm,1.3s,mb4.2
HINF Hinteralfeld 24.20 163 *e*P **P 08 23 35.0 +0.8**
HINF pmax pmax
comp=Z,13nm,1.3s,mb4.2
HINF Hinteralfeld 24.20 163 *e*P **P 08 23 35.0 +0.8**
comp=Z,13nm,1.3s,mb4.2
RES Resolute Bay 24.32 320 P **P 08 23 33.9 -1.3**
comp=Z,1.0nm,1.1s,baz=52,slow=11,SNR=4.4
RES LR LR 08 32 39.2
comp=Z,724nm,19.6s,baz=173,slow=36
RES Resolute Bay 24.32 320 *e*P **P 08 23 34.5 -0.7**
RES pmax pmax
comp=Z,16nm,1.4s,mb4.3
RES Resolute Bay 24.32 320 *e*P **P 08 23 34.5 -0.7**
comp=Z,16nm,1.4s,mb4.3
RES Resolute Bay 24.32 320 *e*P **P 08 23 34.5 -0.7**
comp=Z,16nm,1.4s,mb4.3
LOR Lormes 24.50 168 *e*P **P 08 23 35.1 -1.9**
comp=Z,27nm,1.0s,mb4.4

LOR *e*MLR MLR
comp=Z,240nm,18.8s,MS3.4
LOR Lormes 24.50 168 *e*P **P 08 23 35.1 -1.9**
LOR pmax pmax
comp=Z,14nm,1.0s,mb4.5
LOR MLR MLR
comp=Z,240nm,18.8s,MS3.7
LOR Lormes 24.50 168 *e*P **P 08 23 35.1 -1.9**
comp=Z,14nm,1.0s,mb4.4
LOR LR LR
comp=Z,240nm,18.8s,MS3.7
SSF Saint Saulge 24.69 168 *e*P **P 08 23 38.7 0.0**
comp=Z,12nm,0.9s,mb4.1
SSF Saint Saulge 24.69 168 *e*P **P 08 23 38.7 0.0**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
SSF Saint Saulge 24.69 168 *e*P **P 08 23 38.7 0.0**
comp=Z,6.2nm,0.9s,mb4.1
FRB Frobisher Bay 24.69 285 P **P 08 23 38.5 0.0**
comp=Z,2.6nm,0.9s,mb3.8,baz=46,slow=7.8,SNR=4.5
FRB LR LR 08 32 43.2
comp=Z,420nm,18.9s,MS4.0,baz=228,slow=35
FRB Frobisher Bay 24.69 285 P **P 08 23 38.6 0.0**
FRB pmax pmax
comp=Z,3.0nm,0.9s
FRB MLR MLR
comp=Z,420nm,18.9s
FRB Frobisher Bay 24.69 285 P **P 08 23 38.5 -0.1**
STHS Stebnicka Huta 24.86 139 *e*P **P 08 23 43.5 +3.2**
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
STHS Stebnicka Huta 24.86 139 *e*P **P 08 23 43.5 +3.2**
comp=Z,7.0nm,1.1s,mb4.1
STHS Stebnicka Huta 24.86 139 *e*P **P 08 23 43.5 +3.2**
AVF Avril sur Loir 24.95 169 *e*P **P 08 23 41.3 +0.3**
comp=Z,50nm,1.5s,mb4.5
AVF Avril sur Loir 24.95 169 *e*P **P 08 23 41.3 +0.3**
AVF pmax pmax
comp=Z,25nm,1.5s,mb4.5
AVF Avril sur Loir 24.95 169 *e*P **P 08 23 41.3 +0.3**
comp=Z,25nm,1.5s,mb4.5
MFF Saint Martin d 24.97 175 *e*P **P 08 23 40.5 -0.8**
comp=Z,5.7nm,0.6s,mb4.0
MFF Saint Martin d 24.97 175 *e*P **P 08 23 40.5 -0.8**
MFF pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
MFF Saint Martin d 24.97 175 *e*P **P 08 23 40.5 -0.8**
comp=Z,2.8nm,0.6s,mb4.0
KWP Kalwaria Pacla 24.97 137 *e*P **P 08 23 44.5 +3.3**
LVV L'vov 25.09 135 *e*P **P 08 23 44.2 +1.9**
LVV MLR MLR
comp=N,400nm,14.0s,MS4.1
LVV MLR MLR
comp=E,100nm,14.0s,MS4.1
LVV MLR MLR
comp=Z,400nm,14.0s,MS4.1
MOA Molln 25.10 151⇑ *i*P **P 08 23 44.9 +2.5**
comp=Z,25nm,1.5s,mb4.5
KOLL Kolacno 25.10 144 *e*P **P 08 23 44.6 +2.2**
KOLL Kolacno 25.10 144 *e*P **P 08 23 44.6 +2.2**
KOLL Kolacno 25.10 144 *e*P **P 08 23 44.6 +2.2**
SMF Signal de Mont 25.12 168 *e*P **P 08 23 41.9 -0.7**
comp=Z,53nm,1.2s,mb4.6
SMF Signal de Mont 25.12 168 *e*P **P 08 23 41.9 -0.7**
SMF pmax pmax
comp=Z,26nm,1.2s,mb4.6
SMF Signal de Mont 25.12 168 *e*P **P 08 23 41.9 -0.7**
comp=Z,26nm,1.2s,mb4.6
MOTA Moosalm 25.14 156⇑ *i*P **P 08 23 44.8 +2.0**
comp=Z,30nm,1.2s,mb4.7
MOTA Moosalm 25.14 156 P **P 08 23 44.8 +2.0**
comp=Z,30nm,1.2s,mb4.7
BGF Bois d'Agland 25.15 170 *e*P **P 08 23 43.0 +0.1**
comp=Z,14nm,0.7s,mb4.3
BGF Bois d'Agland 25.15 170 *e*P **P 08 23 43.0 +0.1**
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
BGF Bois d'Agland 25.15 170 *e*P **P 08 23 43.0 +0.1**
comp=Z,7.1nm,0.7s,mb4.3
ZST Bratislava 25.23 146 *e*P **P 08 23 45.2 +1.6**
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
ZST Bratislava 25.23 146 *e*P **P 08 23 45.2 +1.6**
comp=Z,6.3nm,0.8s,mb4.2
ZST Bratislava 25.23 146 *e*P **P 08 23 45.2 +1.6**
ZST Bratislava 25.23 146 *e*P **P 08 23 45.2 +1.6**
comp=Z,6.3nm,0.8s,mb4.2
VYHS Vyhne 25.27 144 *e*P **P 08 23 45.4 +1.5**
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
VYHS Vyhne 25.27 144 *e*P **P 08 23 45.4 +1.5**
comp=Z,7.4nm,1.1s,mb4.1
VYHS Vyhne 25.27 144 *e*P **P 08 23 45.4 +1.5**
VYHS Vyhne 25.27 144 *e*P **P 08 23 45.4 +1.5**
comp=Z,7.4nm,1.1s,mb4.1
CSNA Conrad Observa 25.28 149⇑ *i*P **P 08 23 46.8 +2.7**
comp=Z,47nm,1.4s,mb4.8
WTTA Wattenberg 25.29 155⇑ *i*P **P 08 23 45.9 +1.7**
comp=Z,43nm,1.1s,mb4.9
WTTA Wattenberg 25.29 155 P **P 08 23 45.9 +1.7**
comp=Z,43nm,1.1s,mb4.9
CABF La Chapelle 25.33 164 *e*P **P 08 23 45.8 +1.3**
comp=Z,118nm,1.7s,mb4.8
CABF La Chapelle 25.33 164 *e*P **P 08 23 45.8 +1.3**
CABF pmax pmax
comp=Z,59nm,1.7s,mb4.8
CABF La Chapelle 25.33 164 *e*P **P 08 23 45.8 +1.3**
comp=Z,59nm,1.7s,mb4.8
TCF Toulx Ste Croi 25.38 171 *e*P **P 08 23 45.5 +0.5**
comp=Z,31nm,1.0s,mb4.5
TCF Toulx Ste Croi 25.38 171 *e*P **P 08 23 45.5 +0.5**
TCF pmax pmax
comp=Z,16nm,1.0s,mb4.5
TCF Toulx Ste Croi 25.38 171 *e*P **P 08 23 45.5 +0.5**
comp=Z,16nm,1.0s,mb4.5
FETA Feichten 25.41 157⇑ *i*P **P 08 23 47.9 +2.6**
comp=Z,15nm,1.2s,mb4.4
AKASG Malin Array Be 25.52 127 P **P 08 23 45.4 -0.8**
comp=Z,4.6nm,0.6s,mb4.2,baz=334,slow=10.0,SNR=20
AKASG LR LR 08 33 32.7
comp=Z,655nm,19.0s,MS4.2,baz=330,slow=36
AKASG Malin Array Be 25.52 127 P **P 08 23 45.4 -0.9**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG MLR MLR
comp=Z,655nm,19.0s
AKASG Malin Array Be 25.52 127 P **P 08 23 45.4 -0.9**
AKBB Malin Array Si 25.52 127 *e*P **P 08 23 46.0 -0.3**
AKBB Malin Array Si 25.52 127 *e*P **P 08 23 46.0 -0.3**
KIEV Kiev 25.53 127 *e*P **P 08 23 46.2 -0.1**
KIEV pmax pmax
comp=Z,19nm,1.1s,mb4.5
KIEV Kiev 25.53 127 *e*P **P 08 23 46.2 -0.1**
comp=Z,19nm,1.1s,mb4.5
KIEV Kiev 25.53 127 *e*P **P 08 23 46.2 -0.1**
comp=Z,19nm,1.1s,mb4.5
KOLS Kolonicke sedl 25.54 138 *e*P **P 08 23 48.2 +1.8**
KOLS pmax pmax
comp=Z,22nm,1.3s,mb4.5
KOLS Kolonicke sedl 25.54 138 *e*P **P 08 23 48.2 +1.8**
comp=Z,22nm,1.3s,mb4.5
KOLS Kolonicke sedl 25.54 138 *e*P **P 08 23 48.2 +1.8**
KOLS Kolonicke sedl 25.54 138 *e*P **P 08 23 48.2 +1.8**
comp=Z,22nm,1.3s,mb4.5
DAVOX Davos/Dischmat 25.55 158 P **P 08 23 48.3 +1.9**
comp=Z,1.2nm,0.4s,mb3.8,baz=339,slow=12,SNR=5.1
DAVOX LR LR 08 34 55.0
comp=Z,142nm,19.3s,MS3.5,baz=263,slow=39
DAVOX Davos/Dischmat 25.55 158 P **P 08 23 48.3 +1.8**
KECS Kecovo 25.60 141 *e*P **P 08 23 48.5 +1.6**
KECS pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
KECS Kecovo 25.60 141 *e*P **P 08 23 48.5 +1.6**
comp=Z,6.4nm,1.1s,mb4.1
KECS Kecovo 25.60 141 *e*P **P 08 23 48.5 +1.6**
KBA Koelnbreinsper 25.71 153⇑ *i*P **P 08 23 49.8 +1.8**
comp=Z,22nm,1.2s,mb4.5
KBA Koelnbreinsper 25.71 153 P **P 08 23 49.8 +1.8**
comp=Z,22nm,1.2s,mb4.5
UZH Uzhgorod 25.83 139 *e*P **P 08 23 51.0 +2.0**
UZH *e* 08 24 35.0
UZH *e* 08 27 23.0
UZH *i* S **S 08 28 17.0 -1.2**
UZH *e* 08 29 20.7
PSZ Piszkesteto 26.02 142 *e*P **P 08 23 52.4 +1.6**
PSZ pmax pmax
comp=Z,30nm,1.5s,mb4.6
PSZ Piszkesteto 26.02 142 *e*P **P 08 23 52.4 +1.6**
comp=Z,30nm,1.5s,mb4.6
PSZ Piszkesteto 26.02 142 *e*P **P 08 23 52.4 +1.6**
comp=Z,30nm,1.5s,mb4.6
RJF Les Rejaudoux 26.33 172 *e*P **P 08 23 53.6 0.0**
RJF *e*MLR MLR
comp=Z,379nm,20.8s,MS3.6
RJF Les Rejaudoux 26.33 172 *e*P **P 08 23 53.6 0.0**
RJF LR LR
comp=Z,380nm,20.8s,MS3.9
LPL La Plagne 26.47 164 *e*P **P 08 23 56.0 +1.1**
LPG La Plagne 26.49 164 *e*P **P 08 23 56.0 +1.0**
comp=Z,38nm,1.4s,mb4.4
LPG La Plagne 26.49 164 *e*P **P 08 23 56.0 +1.0**
LPG pmax pmax
comp=Z,19nm,1.4s,mb4.4
LPG La Plagne 26.49 164 *e*P **P 08 23 56.0 +1.0**
comp=Z,19nm,1.4s,mb4.4
LFF La Frestale 26.66 173 *e*P **P 08 23 56.3 -0.3**
BUR08 Bucovina Ar. S 27.40 135 *e*P **P 08 24 07.2 +3.9**
VSR Storozhevoye 27.80 114 *e*P **P 08 24 07.1 +0.4**
VSR *e**PP pP 08 24 14.6 +4.8
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR MLR MLR
comp=Z,660nm,16.0s,MS4.3
VSR MLR MLR
comp=N,430nm,17.0s,MS4.2
VSR MLR MLR
comp=E,410nm,19.0s,MS4.2
EPF Esparros 28.55 174 *e*P **P 08 24 13.6 +0.1**
comp=E,18nm,1.0s,mb4.5
EPF Esparros 28.55 174 *e*P **P 08 24 13.6 +0.1**
EPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
EPF Esparros 28.55 174 *e*P **P 08 24 13.6 +0.1**
comp=Z,9.2nm,1.0s,mb4.5
ETSF Etsaut 28.66 175 *e*P **P 08 24 14.4 -0.1**
ARU Arti 29.42 88*c i*P **P 08 24 23.9 +2.8**
ARU *e* 08 25 20.7
ARU S **S 08 29 21.6 +7.0**
ARU SS SS 08 30 47.6 -31
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MLR Muntele Rosu 29.60 136 P **P 08 24 23.7 +0.9**
comp=Z,1.7nm,0.6s,mb3.9,baz=135,slow=21,SNR=4.2
MLR LR LR 08 36 47.7
comp=Z,719nm,19.6s,MS4.3,baz=320,slow=38
MLR Muntele Rosu 29.60 136 P **P 08 24 23.7 +0.9**
MLR pmax pmax
comp=Z,2.0nm,0.6s
MLR MLR MLR
comp=Z,719nm,19.6s
MLR Muntele Rosu 29.60 136 P **P 08 24 23.8 +1.0**
SCHQ Schefferville 31.15 272 LR LR 08 35 47.2
comp=Z,387nm,21.1s,MS4.0,baz=90,slow=34
ESDC Sonseca Array 31.85 181 P **P 08 24 43.0 +0.4**
comp=Z,1.1nm,0.6s,mb3.8,baz=8.4,slow=8.7,SNR=5.0
ESDC LR LR 08 36 51.2
comp=Z,114nm,20.1s,MS3.5,baz=345,slow=35
ESDC Sonseca Array 31.85 181 P **P 08 24 43.0 +0.4**
ESDC LR LR 08 36 51.1
ESDC Sonseca Array 31.85 181 P **P 08 24 43.0 +0.4**
TIXI Tiksi 33.88 25 *e*P **P 08 25 01.8 +1.7**
TIXI pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
TIXI Tiksi 33.88 25 *e*P **P 08 25 00.8 +0.7**
comp=Z,10nm,1.4s,mb4.6
TIXI Tiksi 33.88 25 *e*P **P 08 25 00.8 +0.7**
comp=Z,10nm,1.4s,mb4.6
AKTK Aktyubinsk 34.31 94 P **P 08 25 04.5 +0.4**
AKTK LR LR 08 38 44.7
AKTK Aktyubinsk 34.31 94 P **P 08 25 04.5 +0.4**
AKTO Aktyubinsk 34.31 94 P **P 08 25 04.5 +0.4**
comp=Z,3.4nm,1.1s,mb4.2,baz=340,slow=8.4,SNR=9.0
AKTO LR LR 08 38 44.7
comp=Z,243nm,19.9s,MS3.9,baz=188,slow=36
AKTO Aktyubinsk 34.31 94 P **P 08 25 04.5 +0.4**
AKTO pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
AKTO MLR MLR
comp=Z,243nm,19.9s,MS3.9
ABKAR Akbulak array 35.96 93 *e*P **P 08 25 19.0 +0.8**
comp=Z,3.8nm,1.0s,mb4.3
ABKAR Akbulak array 35.96 93 *e*P **P 08 25 19.0 +0.8**
comp=Z,3.8nm,1.0s,mb4.3
BVAR Borovoye Array 36.03 81 P **P 08 25 19.5 +0.7**
comp=Z,0.7nm,0.6s,mb3.8,baz=348,slow=6.4,SNR=6.2
BVAR PcP PcP 08 27 44.8 0.0
comp=Z,1.5nm,0.9s,baz=291,slow=4.5,SNR=3.3
BVAR LR LR 08 40 46.1
comp=Z,112nm,18.1s,MS3.7,baz=210,slow=37
BVAR Borovoye Array 36.03 81 P **P 08 25 19.5 +0.6**
BVAR 08 27 44.8
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR MLR MLR
comp=Z,112nm,18.1s
BVAR Borovoye Array 36.03 81 P **P 08 25 19.5 +0.6**
BVAR Borovoye Array 36.03 81 PcP PcP 08 27 44.8 0.0
KEST Kesra 36.41 162 P **P 08 25 22.1 -0.2**
comp=Z,2.4nm,1.2s,mb4.0,baz=310,slow=20,SNR=2.8
KEST LR LR 08 40 03.8
comp=Z,108nm,20.4s,MS3.6,baz=143,slow=36
INK Inuvik 36.59 331 *e*P **P 08 25 22.9 -0.6**
INK pmax pmax
comp=Z,6.0nm,1.4s
INK Inuvik 36.59 331 *e*P **P 08 25 22.9 -0.6**
comp=Z,6.0nm,1.4s,mb4.2
INK Inuvik 36.59 331 *e*P **P 08 25 22.9 -0.6**
comp=Z,6.0nm,1.4s,mb4.2
BR131 Keskin Array S 36.88 129 *e*P **P 08 25 27.9 +1.6**
comp=Z,3.8nm,0.9s,mb4.2
BR131 Keskin Array S 36.88 129 *e*P **P 08 25 27.9 +1.7**
comp=Z,3.8nm,0.9s,mb4.2
BRTR Keskin Array B 36.88 129 P **P 08 25 27.6 +1.4**
comp=Z,2.2nm,1.0s,mb4.0,baz=339,slow=6.6,SNR=9.8
BRTR LR LR 08 42 23.9
comp=Z,142nm,19.1s,MS3.8,baz=163,slow=39
BRTR Keskin Array B 36.88 129 P **P 08 25 27.7 +1.5**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR MLR MLR
comp=Z,143nm,19.1s
BRTR Keskin Array B 36.88 129 P **P 08 25 27.6 +1.4**
YKA Yellowknife Ar 38.23 316 P **P 08 25 36.2 -1.1**
comp=Z,1.4nm,0.9s,mb3.7,baz=28,slow=8.8,SNR=16
YKA PcP PcP 08 27 51.1 -0.2
comp=Z,1.9nm,0.9s,baz=28,slow=2.7,SNR=19
YKA LR LR 08 41 12.3
comp=Z,31nm,18.2s,MS3.2,baz=50,slow=36
YKA Yellowknife Ar 38.23 316 P **P 08 25 36.2 -1.2**
YKA 08 27 51.1
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA MLR MLR
comp=Z,31nm,18.2s
YKA Yellowknife Ar 38.23 316 P **P 08 25 36.2 -1.1**
YKA PcP PcP 08 27 51.1 -0.2
YKA LR LR 08 41 12.3
YKA Yellowknife Ar 38.23 316 P **P 08 25 36.2 -1.2**
YKA Yellowknife Ar 38.23 316 PcP PcP 08 27 51.1 -0.2
ZALV Zalesovo Beam 39.67 68 PcP PcP 08 27 55.8 -0.2
comp=Z,0.5nm,0.3s,baz=351,slow=28,SNR=2.7
ZALV LR LR 08 43 19.0
comp=Z,82nm,21.9s,MS3.5,baz=259,slow=38
BILL Bilibino 40.60 6⇓ *e*P **P 08 25 57.8 +0.7**
BILL *e* 08 27 28.7
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.0
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.0
KURK Kurchatov 40.61 75 P **P 08 25 57.0 -0.4**
comp=Z,2.2nm,1.0s,mb3.7,baz=337,slow=7.2,SNR=7.3
KURK PcP PcP 08 27 59.2 +0.1
comp=Z,0.1nm,0.3s,baz=315,slow=3.0,SNR=3.6
KURK LR LR 08 43 41.6
comp=Z,82nm,19.8s,MS3.6,baz=245,slow=38
KURK Kurchatov 40.61 75 P **P 08 25 57.0 -0.4**
KURK 08 27 59.2
KURK pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
KURK MLR MLR
comp=Z,82nm,19.8s,MS3.6
KURK Kurchatov 40.61 75*ce*P **P 08 25 58.0 +0.6**
KURK pmax pmax
comp=Z,5.0nm,1.7s,mb3.9
KURK Kurchatov 40.61 75 *e*P **P 08 25 57.3 0.0**
comp=Z,1.9nm,0.9s,mb3.7
KURK Kurchatov 40.61 75 *e*P **P 08 25 57.3 -0.1**
comp=Z,1.9nm,0.9s,mb3.7
FFC Flin Flon 41.90 301 *e*P **P 08 26 08.4 +0.5**
FFC pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
FFC Flin Flon 41.90 301 *e*P **P 08 26 08.4 +0.5**
comp=Z,4.9nm,1.2s,mb4.0
FFC Flin Flon 41.90 301 *e*P **P 08 26 08.4 +0.5**
comp=Z,4.9nm,1.2s,mb4.0
MMAI Mount Meron Ar 43.69 130 LR LR 08 48 16.5
comp=Z,171nm,18.8s,MS4.0,baz=240,slow=41
BOD Bodaibo 43.85 43 *e*P **P 08 26 19.2 -4.5**
BOD pmax pmax
comp=Z,5.0nm,1.5s,mb4.0
ULM Lac du Bonnet 44.12 293 P **P 08 26 25.9 -0.1**
comp=Z,1.3nm,0.6s,mb3.9,baz=343,slow=2.9,SNR=2.1
ULM LR LR 08 44 01.9
comp=Z,207nm,18.9s,MS4.1,baz=60,slow=35
ULM Lac du Bonnet 44.12 293 P **P 08 26 25.9 -0.1**
ASF Jabal al Asfar 44.87 129 P **P 08 26 33.3 +1.2**
comp=Z,1.7nm,0.5s,mb4.1,baz=269,slow=2.6,SNR=3.1
ASF Jabal al Asfar 44.87 129 P **P 08 26 33.3 +1.2**
ASF pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 45.21 75 P **P 08 26 35.5 +0.8**
comp=Z,0.4nm,0.6s,mb3.4,baz=1.1,slow=6.1,SNR=4.3
MKAR LR LR 08 47 35.9
comp=Z,74nm,18.6s,MS3.6,baz=352,slow=39
AAK Ala-Archa 46.49 84 P **P 08 26 46.4 +1.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=307,slow=8.6,SNR=4.8
AAK LR LR 08 46 10.7
comp=Z,156nm,19.9s,MS4.0,baz=328,slow=36
AAK Ala-Archa 46.49 84 P **P 08 26 46.4 +1.6**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
AAK MLR MLR
comp=Z,156nm,19.9s,MS4.0
AAK Ala-Archa 46.49 84 P **P 08 26 46.4 +1.5**
AAK LR LR 08 46 10.7
AAK Ala-Archa 46.49 84 P **P 08 26 46.3 +1.5**
UCH Uchtor 46.87 85 *e*P **P 08 26 50.6 +2.8**
comp=Z,23nm,2.0s,mb4.8
UCH Uchtor 46.87 85 *e*P **P 08 26 50.6 +2.8**
comp=Z,23nm,2.0s,mb4.8
ALLY Alegheny Colle 46.95 274 *e*P **P 08 26 52.0 +3.6**
comp=Z,28nm,1.4s,mb5.0
WMQ Urumqi 49.55 72 *e*P **P 08 27 09.0 +0.6**
EGMT Eagleton 50.06 303 *e*P **P 08 27 14.5 +2.3**
comp=Z,5.8nm,1.0s,mb4.6
EGMT Eagleton 50.06 303 *e*P **P 08 27 14.5 +2.2**
comp=Z,5.8nm,1.0s,mb4.6
SONM Songino Array 51.20 54 P **P 08 27 21.6 +0.7**
comp=Z,0.3nm,0.3s,mb3.7,baz=344,slow=4.7,SNR=2.3
SONM Songino Array 51.20 54 P **P 08 27 21.6 +0.7**
SLMT Seeley Lake 51.77 305 *e*P **P 08 27 26.9 +1.7**
comp=Z,9.1nm,1.5s,mb4.5
SLMT Seeley Lake 51.77 305 *e*P **P 08 27 26.9 +1.8**
comp=Z,9.1nm,1.5s,mb4.5
CCM Cathedral Cave 53.74 282 *e*P **P 08 27 43.2 +3.4**
CCM pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CCM Cathedral Cave 53.74 282 *e*P **P 08 27 43.1 +3.3**
comp=Z,4.4nm,0.8s,mb4.4
KSU1 Kansas State U 54.44 287 *e*P **P 08 27 48.8 +3.8**
comp=Z,19nm,0.7s,mb5.1
PDAR Pinedale Array 54.85 300 P **P 08 27 49.5 +1.7**
comp=Z,0.3nm,0.7s,mb3.4,baz=38,slow=7.5,SNR=4.0
PDAR LR LR 08 51 17.9
comp=Z,290nm,18.1s,MS4.4,baz=31,slow=36
PDAR Pinedale Array 54.85 300 P **P 08 27 49.5 +1.6**
PETK Petropavlovsk- 55.03 14 LR LR 08 51 19.0
comp=Z,56nm,20.1s,MS3.6,baz=190,slow=36
HABR Khabarovsk 56.81 32 *e*P **P 08 28 01.5 -0.3**
HABR *e**PP pP 08 28 04.6 -0.4
HABR 08 28 57.7
HABR *e*S **S 08 35 54.6 +0.2**
HABR *e* 08 37 50.2
HABR *e*SS SS 08 39 43.5 +2.0
HABR pmax pmax
comp=E,10.0nm,1.5s
HABR pmax pmax
comp=Z,36nm,1.5s,mb5.2
HABR pmax pmax
comp=N,12nm,1.5s
HABR MLR MLR
comp=Z,43nm,19.0s,MS3.6
ELK Elko 58.27 304 LR LR 08 53 00.7
comp=Z,200nm,20.3s,MS4.2,baz=38,slow=36
TORD Torodi Ar. Bea 58.35 174 P **P 08 28 12.8 -0.3**
comp=Z,2.0nm,1.0s,mb4.1,baz=352,slow=6.9,SNR=8.1
TORD LR LR 08 53 17.9
comp=Z,173nm,18.0s,MS4.2,baz=50,slow=36
HHC Hu-ho-hao-te 59.04 53 *e*P **P 08 28 19.4 +1.8**
HHC pP pP 08 28 24.0 +3.2
HHC sP sP 08 28 26.8 +4.8
HHC PP PP 08 30 30.5 +2.9
HHC ScP ScP 08 33 07.3 +0.8
HHC S **S 08 36 23.0 -0.9**
HHC sS sS 08 36 31.3 +2.1
HHC ScS ScS 08 38 04.8 -2.3
HHC SS SS 08 40 18.4 +1.4
HHC pmax pmax
comp=Z,12nm,1.0s,mb4.9
HHC pmax pmax
comp=Z,65nm,5.2s
HHC LR LR
comp=N,150nm,18.6s,MS4.5
HHC LR LR
comp=E,330nm,18.8s,MS4.5
HHC LR LR
comp=Z,200nm,17.7s,MS4.3
YBH Yreka Blue Hor 59.25 311 LR LR 08 53 54.7
comp=Z,301nm,19.0s,MS4.4,baz=12,slow=36
MDJ Mudanjiang 59.54 37 P **P 08 28 20.1 -0.9**
MDJ pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
MDJ pmax pmax
comp=Z,31nm,4.4s
ANMO Albuquerque 61.23 294 LR LR 08 54 26.1
comp=Z,151nm,20.5s,MS4.1,baz=12,slow=36
NVAR Mina Array Bea 61.25 306 P **P 08 28 32.0 -0.8**
comp=Z,0.1nm,0.4s,mb3.3,baz=270,slow=1.5,SNR=3.5
NVAR Mina Array Bea 61.25 306 P **P 08 28 32.0 -0.8**
LZH Lanzhou 61.43 62 *e*P **P 08 28 34.0 0.0**
LZH pP pP 08 28 39.3 +2.1
LZH sP sP 08 28 41.5 +3.1
LZH PP PP 08 30 50.8 +2.0
LZH pmax pmax
comp=Z,17nm,1.3s,mb5.0
DBIC Dimbokro 64.71 181 LR LR 08 58 11.5
comp=Z,15nm,21.5s,MS3.1,baz=178,slow=37
TXAR Lajitas Array 65.64 289 P **P 08 29 01.5 -0.5**
comp=Z,0.2nm,0.6s,mb3.4,baz=45,slow=5.7,SNR=5.8
TXAR LR LR 08 57 09.3
comp=Z,176nm,21.4s,MS4.2,baz=5.0,slow=36
TXAR Lajitas Array 65.64 289 P **P 08 29 01.5 -0.4**
CD2 Chengdu 66.26 64 P **P 08 29 05.4 -0.5**
CD2 pP pP 08 29 10.1 +1.0
CD2 sP sP 08 29 12.4 +2.1
CD2 PP PP 08 31 33.0 +1.7
CD2 S S 08 37 50.6 -4.1
CD2 SS SS 08 42 07.8 -2.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,90nm,9.3s
CD2 LR LR
comp=N,160nm,5.7s
CD2 LR LR
comp=Z,140nm,10.1s,MS4.5
MJAR Matsushiro Arr 68.94 32 P **P 08 29 22.7 -0.1**
comp=Z,2.7nm,1.1s,mb4.1,baz=337,slow=6.0,SNR=6.3
MJAR Matsushiro Arr 68.94 32 P **P 08 29 22.7 -0.1**
MJAR pmax pmax

comp=Z,3.0nm,1.1s
MJAR Matsushiro Arr 68.94 32 P **P 08 29 22.7 -0.1**
MJAR Matsushiro Arr 68.94 32 P **P 08 29 22.7 -0.1**
NJ2 Nanjing 69.22 50 *e*P **P 08 29 28.3 +3.8**
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb5.3
GYA Guiyang 71.28 63 P **P 08 29 37.8 +0.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KMI Kunming 71.41 67 P **P 08 29 39.3 +1.3**
KMI pP pP 08 29 42.4 +1.1
KMI sP sP 08 29 43.8 +1.4
KMI PP PP 08 32 18.8 +2.9
KMI S S 08 38 54.6 -1.3
KMI SS SS 08 43 29.3 -0.3
KMI pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KMI pmax pmax
comp=Z,85nm,5.4s
KMI LR LR
comp=N,110nm,18.2s
KMI LR LR
comp=E,120nm,24.2s
KMI LR LR
comp=Z,67nm,27.9s
CMIG Matias Romero 74.38 277 LR LR 09 00 53.0
comp=Z,69nm,20.9s,MS3.9,baz=33,slow=34
SDV Santo Domingo 74.44 251 *e*P **P 08 29 56.6 +0.6**
comp=Z,3.4nm,0.8s,mb4.3
SDV Santo Domingo 74.44 251 *e*P **P 08 29 56.6 +0.6**
comp=Z,3.3nm,0.8s,mb4.3
CMAR Chiang Mai Arr 76.55 72 P **P 08 30 08.1 -0.1**
comp=Z,0.9nm,0.3s,mb4.1,baz=324,slow=7.6,SNR=4.1
CMAR Chiang Mai Arr 76.55 72 P **P 08 30 08.1 0.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 76.55 72 P **P 08 30 08.1 0.0**
KMBO Kilima Mbogo 77.06 138 LR LR 09 03 34.4
comp=Z,47nm,18.1s,MS3.8,baz=263,slow=35
ROSC El Rosal 79.37 253 P **P 08 30 25.3 +1.5**
comp=Z,3.4nm,0.7s,mb4.4,baz=105,slow=13,SNR=3.6
ROSC LR LR 09 06 01.7
comp=Z,40nm,18.0s,MS3.8,baz=48,slow=36
ROSC El Rosal 79.37 253 P **P 08 30 25.3 +1.5**
ASAR Alice Springs 126.46 50 PKP PKPdf 08 37 19.1 -1.3
comp=Z,0.8nm,1.1s,baz=334,slow=2.2,SNR=4.3
ASAR Alice Springs 126.46 50 PKIKP PKPdf 08 37 19.1 -1.4
ASAR pmax pmax
comp=Z,1.0nm,1.1s
ASAR Alice Springs 126.46 50 PKIKP PKPdf 08 37 19.1 -1.4

GUC 24 08:20:32.3±0.4,41°.94S×72°.33W,h20km,MD3.7,ML3.7, 2C,Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.07**	**298**	⇑*i*P	Pb	08 20 35.7	-0.3
HOCH				*i* S	Sb	08 20 38.5	0.0
HOCH				AML	AML	08 20 40.4	
	comp=N,26μm,0.4s						
PMCH	**Puerto Montt**	**0.62**	**316**	⇑*i*P	Pb	08 20 45.4	+1.1
PMCH				*i* S	Sb	08 20 54.4	+1.9
VLCH	**Valdivia**	**2.24**	**342**	*i* P	Pn	08 21 11.6	+3.4
VLCH				*i* S	Sn	08 21 41.2	+6.0
VLCH				AML	AML	08 21 53.1	
	comp=N,625nm,0.5s						

*ISCJB **24** 08:24:18.2±0.7,51°.53N±0°.03×6°.45E±0°.04,h0km,Error ellipse: s-maj=5.0km s-min=3.1km az=156.3*
*CSEM **24** 08:24:19.2±0.4,51°.53N×6°.48E,h1km,ML3.1/10,Error ellipse: s-maj=6.2km s-min=3.8km az=162.0*
*NEIC **24** 08:24:19.2,51°.52N×6°.52E,h1km,ML2.4(SZGRF), ML2.9(LDG),After SZGRF.*
*BGR **24** 08:24:19.2±0.9,51°.52N×6°.52E,h1km,ML2.4,Error ellipse: s-maj=13.3km s-min=5.6km az=126.0*
*BNS **24** 08:24:21.0±0.8,51°.51N×6°.58E,h1km,ML2.3*
*BUG **24** 08:24:21.1,51°.49N×6°.62E,h1km,ML2.1*
*LDG **24** 08:24:21.0±99.0,51°.51N×6°.58E,h1km,Ml2.9/9,Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0, Suspected Mining induced.*
ISC 24 08:24:19.5±0.6,51°.52N±0°.03×6°.47E±0°.04,h0km,n56, σ1§21/91,1C-1D,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.34**	**119**	*e*Pg	**Pg**	**08 24 25.9**	**-0.1**
LAUG				*e*Sg	**Sg**	**08 24 30.5**	**+0.1**
LAUG	**Laupendahl**	**0.34**	**119**	Pg	**Pg**	**08 24 25.9**	**-0.2**
LAUG				Sg	**Sg**	**08 24 30.5**	**0.0**
BUG	**Bochum--Univer**	**0.51**	**98**	⇓*e*Pg	**Pg**	**08 24 29.7**	**+0.5**
BUG				Sg	**Sg**	**08 24 36.0**	**+0.2**
BUG	**Bochum--Univer**	**0.51**	**98**	*e*Pg	**Pg**	**08 24 28.7**	**-0.5**
BUG				*e*Sg	**Sg**	**08 24 35.3**	**-0.5**
BUG	**Bochum--Univer**	**0.51**	**98**	*e*Pg	**Pg**	**08 24 28.7**	**-0.5**
BUG				*e*Sg	**Sg**	**08 24 35.3**	**-0.5**
HOBG	**Hohbusch**	**0.76**	**134**	*e*Pg	**Pg**	**08 24 34.5**	**+0.4**
HOBG				*e*Sg	**Sg**	**08 24 44.7**	**+0.7**
HOBG	**Hohbusch**	**0.76**	**134**	Pg	**Pg**	**08 24 34.5**	**+0.4**
HOBG				Sg	**Sg**	**08 24 44.7**	**+0.7**
KLL	**Kalltalsperre**	**0.88**	**186**	*e*Pg	**Pg**	**08 24 37.6**	**+1.3**
KLL				*e*Sg	**Sg**	**08 24 49.6**	**+1.9**
	100nm,0.2s						
KLL	**Kalltalsperre**	**0.88**	**186**	Pg	**Pg**	**08 24 37.6**	**+1.3**
KLL				Sg	**Sg**	**08 24 49.6**	**+1.9**
	100nm,0.2s						
MEM	**Membach**	**0.95**	**198**	P	**Pg**	**08 24 39.3**	**+1.5**
MEM	**Membach**	**0.95**	**198**	P	**Pg**	**08 24 39.3**	**+1.5**
STB	**Steinbach**	**0.95**	**166**	⇑*e*Pg	**Pg**	**08 24 39.0**	**+1.2**
STB				*e*Sg	**Sg**	**08 24 51.6**	**+1.5**
	52nm,0.3s						
STB	**Steinbach**	**0.95**	**166**	Pg	**Pg**	**08 24 39.0**	**+1.2**
STB				Sg	**Sg**	**08 24 51.7**	**+1.6**
	52nm,0.3s						
IBBN	**Ibbenburen**	**1.12**	**45**	*e*Sg	**Sg**	**08 24 55.3**	**-0.3**
IBBN	**Ibbenburen**	**1.12**	**45**	Sg	**Sg**	**08 24 55.3**	**-0.3**
HILG	**Hillesheim**	**1.23**	**174**	*e*Pg	**Pg**	**08 24 43.7**	**+0.5**
HILG				*e*Sg	**Sg**	**08 25 00.4**	**+1.2**
	66nm,0.4s						
HILG	**Hillesheim**	**1.23**	**174**	Pg	**Pg**	**08 24 43.7**	**+0.5**
HILG				Sg	**Sg**	**08 25 00.4**	**+1.3**
	66nm,0.4s						
BCLA	**Clavier**	**1.32**	**214**	P	**Pg**	**08 24 45.7**	**+0.8**
BCLA	**Clavier**	**1.32**	**214**	P	**Pg**	**08 24 45.6**	**+0.7**
KOE	**Koeppel**	**1.35**	**143**	*e*Pg	**Pg**	**08 24 44.9**	**-0.6**
KOE				*e*Sg	**Sg**	**08 25 02.6**	**-0.4**
KOE	**Koeppel**	**1.35**	**143**	Pg	**Pg**	**08 24 44.9**	**-0.6**
KOE				Sg	**Sg**	**08 25 02.6**	**-0.4**
BGG	**Burgeitz**	**1.43**	**157**	*e*Pg	**Pg**	**08 24 46.4**	**-0.4**
BGG	**Burgeitz**	**1.43**	**157**	Pg	**Pg**	**08 24 46.4**	**-0.4**
SNF	**Seneffe**	**1.71**	**235**	P	**Pn**	**08 24 53.4**	**+2.9**
SNF	**Seneffe**	**1.71**	**235**	P	**Pn**	**08 24 53.4**	**+2.9**
GIVF	**Givet**	**1.76**	**217**	*e*Pg	**Pg**	**08 24 54.2**	**+1.0**
GIVF				*e*Sn	**Sn**	**08 25 13.7**	**-0.6**
GIVF				*e*Sg	**Sg**	**08 25 17.6**	**+1.6**
	24nm,0.3s						
TNS	**Taunus Mts**	**1.81**	**135**	*e*Pg	**Pg**	**08 24 53.1**	**-1.0**
TNS	**Taunus Mts**	**1.81**	**135**	*e*Pg	**Pg**	**08 24 53.1**	**-1.0**
TNS	**Taunus Mts**	**1.81**	**135**	Pg	**Pg**	**08 24 53.1**	**-1.0**
DOU	**Dourbes**	**1.85**	**221**	P	**Pn**	**08 24 55.2**	**+2.7**
WLF	**Walferdange**	**1.87**	**186**	P	**Pn**	**08 24 55.5**	**+2.8**
WLF	**Walferdange**	**1.87**	**186**	*e*Pg	**Pg**	**08 24 55.3**	**0.0**
WLF				*e*Sg	**Sg**	**08 25 18.7**	**-0.8**
WLF	**Walferdange**	**1.87**	**186**	Pg	**Pg**	**08 24 55.3**	**0.0**
WLF	**Walferdange**	**1.87**	**186**	P	**Pn**	**08 24 55.4**	**+2.7**
WLF				Sg	**Sg**	**08 25 18.7**	**-0.7**
BAIF	**Baives**	**2.05**	**225**	*e*Pg	**Pg**	**08 24 59.5**	**+0.8**
BAIF				*e*Sn	**Sn**	**08 25 20.3**	**-1.1**
BAIF				*e*Sg	**Sg**	**08 25 26.9**	**+1.7**
	14nm,0.4s						
BAIF	**Baives**	**2.05**	**225**	*e*Pg	**Pg**	**08 24 59.5**	**+0.8**
BAIF				*e*Sn	**Sn**	**08 25 20.3**	**-1.1**
BAIF				*e*Sg	**Sg**	**08 25 26.9**	**+1.7**
	6.8nm,0.4s						
CDF	**Champ du Feu**	**3.15**	**170**	*e*Pn	**Pn**	**08 25 09.3**	**-1.0**
CDF				*e*Sg	**Sg**	**08 25 59.5**	**-1.2**
	5.9nm,0.4s						
CDF	**Champ du Feu**	**3.15**	**170**	*e*Pn	**Pn**	**08 25 09.3**	**-1.0**
CDF				*e*Sg	**Sg**	**08 25 59.5**	**-1.2**
	3.0nm,0.4s						
MEZF	**Maizieres J'vi**	**3.15**	**197**	*e*Pn	**Pn**	**08 25 09.5**	**-0.9**
MEZF				*e*Sg	**Sg**	**08 26 00.8**	**0.0**
	7.9nm,0.3s,baz=16						
MEZF	**Maizieres J'vi**	**3.15**	**197**	*e*Pn	**Pn**	**08 25 09.5**	**-0.9**
MEZF				*e*Sg	**Sg**	**08 26 00.8**	**0.0**
	4.0nm,0.3s,baz=16						
SFTF	**Sexfontaines**	**3.44**	**196**	*e*Pn	**Pn**	**08 25 13.9**	**-0.4**
SFTF				*e*Sg	**Sg**	**08 26 09.2**	**-0.9**
	5.0nm,0.2s						
SFTF	**Sexfontaines**	**3.44**	**196**	*e*Pn	**Pn**	**08 25 13.9**	**-0.4**
SFTF				*e*Sg	**Sg**	**08 26 09.2**	**-0.9**
	2.5nm,0.2s						
HAU	**Haudompre**	**3.52**	**181**	*e*Sg	**Sg**	**08 26 10.7**	**-1.7**
	13nm,0.5s						
HAU	**Haudompre**	**3.52**	**181**	*e*Sg	**Sg**	**08 26 10.7**	**-1.7**
	6.3nm,0.5s						
CLL	**Collm**	**4.10**	**90**	*e*Sg	**Sg**	**08 26 25.0**	**-6.0**
CLL	**Collm**	**4.10**	**90**	*e*Sg	**Sg**	**08 26 25.0**	**-6.0**
LOR	**Lormes**	**4.58**	**203**	*e*Pn	**Pn**	**08 25 29.4**	**-0.6**
	baz=23						
LOR				*e*Sn	**Sn**	**08 26 20.5**	**-3.4**
LOR				*e*Sg	**Sg**	**08 26 45.0**	**-1.6**
	5.8nm,0.3s,baz=26						
LOR	**Lormes**	**4.58**	**203**	*e*Pn	**Pn**	**08 25 29.4**	**-0.6**
	baz=23						
LOR				*e*Sn	**Sn**	**08 26 20.5**	**-3.4**
LOR				*e*Sg	**Sg**	**08 26 45.0**	**-1.6**
	2.9nm,0.3s,baz=26						
SSF	**Saint Saulge**	**4.86**	**205**	*e*Pn	**Pn**	**08 25 33.1**	**-0.7**
SSF				*e*Sg	**Sg**	**08 26 53.8**	**-1.8**
	4.7nm,0.4s						
SSF	**Saint Saulge**	**4.86**	**205**	*e*Pn	**Pn**	**08 25 33.1**	**-0.7**
SSF				*e*Sg	**Sg**	**08 26 53.8**	**-1.8**
	2.3nm,0.4s						
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**08 25 37.7**	**-0.2**
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**08 25 37.7**	**-0.2**
FLN	**La Foliniere**	**5.25**	**241**	*e*Sn	**Sn**	**08 26 37.5**	**-2.8**
FLN	**La Foliniere**	**5.25**	**241**	*e*Sn	**Sn**	**08 26 37.5**	**-2.8**
BGF	**Bois d'Agland**	**5.50**	**207**	*e*Sn	**Sn**	**08 26 42.2**	**-4.4**
	6.2nm,0.4s						
GRR	**Gorron**	**5.67**	**239**	*e*Sn	**Sn**	**08 26 47.4**	**-3.3**

IDC 24 08:35:40.8±2.8,24°.03S×176°.09W,h0km,mb4.2/3, mb1 4.3/3,mb1mx3.8/15,mbtmp4.2/3,Error ellipse: s-maj=135.2km s-min=41.7km az=151.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.05**	**269**	P	P	08 42 35.9	+0.3
	3.3nm,0.4s,baz=101,slow=12,SNR=11						
STKA	**Stephens Creek**	**38.00**	**248**	P	P	08 42 59.8	-1.0
	1.3nm,0.5s,baz=96,slow=9.7,SNR=6.4						
ASAR	**Alice Springs**	**45.54**	**260**	P	P	08 44 02.8	+0.3
	0.9nm,0.3s,baz=94,slow=7.4,SNR=42						
ASAR				PcP	PcP	08 45 42.0	+0.6
	0.4nm,0.5s,baz=105,slow=3.8,SNR=7.4						
AKASG	**Malin Array Be**	**146.94**	**330**	PKPbc	PKPbc	08 55 23.9	-1.2
	1.9nm,0.4s,baz=43,slow=4.2,SNR=6.8						
BRTR	**Keskin Array B**	**150.47**	**309**	PKPbc	PKPbc	08 55 34.4	-0.2
	0.7nm,0.6s,baz=106,slow=3.4,SNR=5.5						

*IDC **24** 08:36:31.8±1.3,31°.14N×103°.78E,h0km,mb3.2/4, mb1 3.4/5,mb1mx3.3/24,mbtmp3.3/5,ML3.6/1,Error ellipse: s-maj=40.5km s-min=23.4km az=51.0*
*NEIC **24** 08:36:32.4±1.1,31°.08N×103°.40E,h10km,Error ellipse: s-maj=27.5km s-min=15.2km az=56.0*
*BJI **24** 08:36:35.0,31°.07N×103°.67E,h13km,ML3.4/12,Ms3.4/1*
ISC 24 08:36:33.8±0.7,31°.25N±0°.03×103°.84E±0°.05,h10km±5km, n14,σ1§09/23,mb3.3/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**192**	Pg	**Pg**	**08 36 40.5**	**-0.3**
CD2				Sg	**Sg**	**08 36 46.1**	**+0.6**
CD2				smax			
	comp=N,6μm,0.8s						
LZH	**Lanzhou**	**4.82**	**0**	*e*Pg	**Pg**	**08 38 05.3**	**-0.9**
LZH				Sg	**Sg**	**08 39 09.4**	**+0.8**
LZH				smax			
	comp=N,48nm,0.8s						
LZH				smax			
	comp=E,49nm,0.7s						
LZH				LR	LR		
	comp=N,300nm,6.4s						
ENH	**Enshi**	**4.96**	**100**	*e*Pn	**Pn**	**08 37 52.7**	**+4.4**
	comp=N,19nm,0.5s						
ENH				*e*Pg	**Pg**	**08 38 08.6**	**-0.2**
ENH				*e*Sn	**Sn**	**08 38 47.1**	**+1.4**
ENH				*e*Sg	**Sg**	**08 39 12.4**	**-0.6**
XAN	**Xi'an**	**5.11**	**56**	Pn	**Pn**	**08 37 51.6**	**+1.3**
XAN				Pg	**Pg**	**08 38 11.5**	**-0.1**
XAN				Sn	**Sn**	**08 38 58.8**	**+9.5**
XAN				Sg	**Sg**	**08 39 16.0**	**-1.8**
XAN				smax			
	comp=N,130nm,0.7s						
XAN				smax			
	comp=E,57nm,0.7s						
GYA	**Guiyang**	**5.38**	**152**	Pg	**Pg**	**08 38 16.5**	**-0.4**
GYA				Sg	**Sg**	**08 39 28.5**	**+1.9**
GYA				smax			
	comp=N,130nm,0.8s						
GYA				smax			
	comp=E,90nm,0.8s						
KMI	**Kunming**	**6.18**	**189**	Sn	**Sn**	**08 39 14.3**	**-1.6**
KMI				smax			
	comp=N,24nm,0.7s						
KMI				smax			
	comp=E,23nm,0.9s						
KMI				LR	LR		
	comp=N,170nm,8.4s						
KMI				LR	LR		
	comp=E,130nm,7.6s						
KMI				LR	LR		
	comp=Z,160nm,11.1s						
SONM	**Songino Array**	**16.67**	**6**	Pn	**Pn**	**08 40 28.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=174,slow=17,SNR=2.9						
KSRS	**Korea Array**	**20.79**	**66**	P	**P**	**08 41 16.1**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=258,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**08 41 37.4**	**+1.7**
	comp=Z,0.6nm,0.8s,mb3.0,baz=125,slow=15,SNR=4.2						
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**08 42 14.9**	**-0.8**
	comp=Z,0.5nm,0.2s,mb3.6,baz=132,slow=9.7,SNR=3.3						
WRAB	**Tennant Creek**	**58.72**	**146**	*e*P	**P**	**08 46 29.9**	**-1.9**
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**08 46 51.8**	**-0.7**
	comp=Z,0.3nm,0.8s,mb3.5,baz=327,slow=6.6,SNR=3.4						
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**08 48 51.2**	**-0.4**
	comp=Z,0.1nm,0.6s,mb2.9,baz=334,slow=5.0,SNR=2.6						
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**08 48 51.2**	**-0.4**

GUC 24 08:47:42.9±0.6,20°.49S×69°.54W,h64km±4km,MD3.4, ML3.5,1C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.39**	**302**	⇓*i*P	Pn	08 47 54.5	+0.4
HMBC				*i* S	Sn	08 48 03.1	+0.8
HMBC				AML	AML	08 48 03.6	
	comp=E,3μm,0.1s						
PB01	**Plate Boundary**	**0.55**	**175**	*e*P	Pn	08 47 56.0	+0.3
PB01				*i* S	Sn	08 48 05.6	+0.5
PB01				AML	AML	08 48 05.9	
	comp=E,14μm,0.2s						
PSGC	**Pisagua**	**1.04**	**328**	*e*P	Pn	08 48 02.2	+0.5
PSGC				*i* S	Sn	08 48 16.1	+0.5
PSGC				AML	AML	08 48 16.9	
	comp=N,2μm,0.3s						
MNMC	**Miæe Miæ**	**1.35**	**358**	⇓*i*P	Pn	08 48 06.7	+1.0
MNMC				*i* S	Sn	08 48 24.4	+1.6
MNMC				AML	AML	08 48 30.3	
	comp=E,2μm,0.1s						
PB04	**Plate Boundary**	**1.77**	**178**	⇑*i*P	Pn	08 48 14.8	+3.5
PB04				*i* S	Sn	08 48 38.0	+5.2
PB04				AML	AML	08 48 43.3	
	comp=E,283nm,0.1s						
PECH	**Pedro de Valdi**	**2.10**	**183**	*i* P	Pn	08 48 16.9	+1.0
PECH				*i* S	Sn	08 48 42.9	+2.0
PECH				AML	AML	08 48 43.4	
	comp=E,476nm,0.3s						

*IDC **24** 08:51:21.9±0.9,41°.26N×114°.94W,h0km,mb2.7/1, mb1 3.2/3,mb1mx3.1/23,mbtmp2.8/3,ML3.1/2,Error ellipse: s-maj=16.9km s-min=5.0km az=130.0*
*ISCJB **24** 08:51:22.1±0.1,41°.175N±0°.009×114°.87W±0°.01,h10km, Error ellipse: s-maj=1.5km s-min=1.3km az=175.4*
*NEIC **24** 08:51:22.2,41°.23N×114°.89W,h12km,ML2.7,After REN.*
ISC 24 08:51:21.8±0.3,41°.206N±0°.009×114°.86W±0°.01, h2km±2km,n115,σ1§03/191,61C-60D,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M12A	**Wells**	**0.21**	**349**	⇓P	**Pg**	**08 51 26.3**	**+0.4**
	baz=0.2,SNR=1000						
M12A				⇓S	**Sg**	**08 51 29.4**	**+0.7**
	baz=0.2						
N12A	**Clover Valley,**	**0.38**	**201**	P	**Pg**	**08 51 30.2**	**+1.2**
	baz=0.4,SNR=315						
N12A				⇑S	**Sg**	**08 51 35.2**	**+1.3**
	baz=0.4						
N12A	**Clover Valley,**	**0.38**	**201**	*e*Pg	**Pg**	**08 51 30.0**	**+1.0**
N12A				*e*Sg	**Sg**	**08 51 35.3**	**+1.4**
ELK	**Elko**	**0.54**	**212**	Pg	**Pg**	**08 51 32.9**	**+0.7**
	14nm,0.3s,baz=27,slow=16,SNR=249						
ELK				Lg		08 51 40.2	
	76nm,0.3s,baz=204,slow=6.4,SNR=96						
ELK	**Elko**	**0.54**	**212**	*e*Pg	**Pg**	**08 51 32.6**	**+0.5**
ELK				*e*Sg	**Sg**	**08 51 39.8**	**+0.6**
M13A	**Montello**	**0.55**	**73**	⇑P	**Pg**	**08 51 32.6**	**+0.3**
	baz=0.6,SNR=1000						
M13A	**Montello**	**0.55**	**73**	*e*Pg	**Pg**	**08 51 32.5**	**+0.2**
M13A				*e*Sg	**Sg**	**08 51 42.4**	**+3.1**
N13A	**Wendover, West**	**0.61**	**125**	⇑P	**Pg**	**08 51 34.2**	**+0.8**
	baz=0.6,SNR=1000						
N13A				⇑S	**Sg**	**08 51 42.4**	**+1.2**
	baz=0.6						
N13A	**Wendover, West**	**0.61**	**125**	*e*Pg	**Pg**	**08 51 34.0**	**+0.6**
M11A	**Holland Ranch,**	**0.74**	**288**	⇓P	**Pg**	**08 51 35.9**	**-0.1**
	baz=0.7,SNR=90						
M11A				⇑S	**Sg**	**08 51 46.0**	**+0.5**
	baz=0.7						
N11A	**Elko Archery C**	**0.77**	**240**	⇓P	**Pg**	**08 51 36.8**	**+0.3**
	baz=0.8,SNR=903						
N11A				⇑S	**Sg**	**08 51 47.2**	**+0.7**
	baz=0.8						
O12A	**Currie**	**0.94**	**175**	⇓P	**Pg**	**08 51 40.4**	**+0.6**
	baz=1.0,SNR=357						
O12A				⇓S	**Sg**	**08 51 53.0**	**+1.0**
	baz=1.0						
L12A	**House Creek Ra**	**0.95**	**353**	⇓P	**Pg**	**08 51 40.0**	**0.0**
	baz=0.9,SNR=184						
L13A	**Double Diamond**	**1.12**	**38**	⇑P	**Pg**	**08 51 43.1**	**-0.1**
	baz=1.1,SNR=23						
L13A				⇑S	**Sg**	**08 51 57.8**	**+0.1**
	baz=1.1						
L11A	**Cat Creek Ranc**	**1.17**	**325**	⇓P	**Pg**	**08 51 43.8**	**-0.5**
	baz=1.1,SNR=531						
M14A	**Sheep Mountain**	**1.18**	**75**	P	**Pg**	**08 51 44.1**	**-0.2**
	baz=1.2,SNR=939						
M14A				⇑S	**Sg**	**08 52 00.1**	**+0.5**
	baz=1.2						
O11A	**Cowboy Ranch,**	**1.23**	**210**	⇑Pg	**Pg**	**08 51 45.8**	**+0.4**
	baz=1.2,SNR=577						
O11A				⇑S	**Sg**	**08 52 01.7**	**+0.3**
	baz=1.2						
O13A	**Hicks Ranch, I**	**1.26**	**148**	⇓Pg	**Pg**	**08 51 46.3**	**+0.3**
	baz=1.3,SNR=149						
O13A				⇑S	**Sg**	**08 52 03.0**	**+0.7**
	baz=1.3						
M10A	**I.L. Ranch, Tu**	**1.30**	**285**	⇓Pg	**Pg**	**08 51 46.7**	**-0.1**
	baz=1.3,SNR=442						
M10A				⇑Sg	**Sg**	**08 52 04.6**	**+0.9**
	baz=1.3						
N14A	**Grayback Hills**	**1.31**	**105**	⇑Pn	**Pn**	**08 51 46.0**	**-1.1**
	baz=1.3,SNR=911						
N14A				⇓Pb	**Pb**	**08 51 46.5**	**-0.7**
	baz=1.3						
N10A	**Dunphy**	**1.34**	**249**	⇑Pn	**Pn**	**08 51 46.3**	**-1.2**
	baz=1.3,SNR=7.7						
N10A				⇓Pg	**Pg**	**08 51 47.5**	**+0.1**
	baz=1.3						
N10A				⇓Sg	**Sg**	**08 52 06.0**	**+1.2**
	baz=1.3						
BGU	**Big Grassy Mou**	**1.41**	**101**	*e*Pn	**Pn**	**08 51 47.8**	**-0.7**
K12A	**Draper Farm, C**	**1.43**	**359**	⇓Pb	**Pb**	**08 51 48.1**	**-1.0**
	baz=1.4,SNR=33						
K12A				⇓Sn	**Sn**	**08 52 06.4**	**-1.7**
	baz=1.4						
L14A	**Malta**	**1.47**	**55**	⇑Pb	**Pb**	**08 51 49.0**	**-0.8**
	baz=1.5,SNR=182						
L14A				⇓Sb	**Sb**	**08 52 08.7**	**-0.3**
	baz=1.5						
L10A	**Juniper Basin**	**1.49**	**306**	⇑Pb	**Pb**	**08 51 49.0**	**-1.2**
	baz=1.5,SNR=811						
L10A				⇓Pg	**Pg**	**08 51 50.1**	**-0.2**
	baz=1.5						
L10A				⇓Sb	**Sb**	**08 52 09.0**	**-0.5**
	baz=1.5						
O10A	**Cortez Mining,**	**1.54**	**234**	⇑Pb	**Pb**	**08 51 50.3**	**-0.8**
	baz=1.5,SNR=20						
O10A				⇑Sb	**Sb**	**08 52 11.4**	**+0.3**
	baz=1.5						
K13A	**Stover Farm, H**	**1.55**	**22**	⇓Pb	**Pb**	**08 51 50.4**	**-0.9**
	baz=1.5,SNR=20						
K13A				⇑Pg	**Pg**	**08 51 51.3**	**-0.3**
	baz=1.5						
K13A				⇑Sb	**Sb**	**08 52 11.0**	**-0.4**
	baz=1.5						
HVU	**Hansel Valley**	**1.67**	**69**	*e*Pn	**Pn**	**08 51 51.7**	**-0.3**
HVU				*e*Sg	**Sg**	**08 52 15.0**	**-0.4**
P12A	**McGill**	**1.73**	**181**	⇓Pb	**Pb**	**08 51 53.7**	**-0.6**
	baz=1.8,SNR=249						
P12A				⇑Sn	**Sn**	**08 52 14.7**	**-0.8**
	baz=1.8						
P11A	**Circle Ranch,**	**1.79**	**203**	⇓Sb	**Sb**	**08 52 18.4**	**+0.4**
	baz=1.8						
K11A	**Parker Ranch,**	**1.79**	**331**	⇑Pb	**Pb**	**08 51 54.1**	**-1.2**
	baz=1.8						
K11A				⇓Sb	**Sb**	**08 52 18.0**	**-0.2**
	baz=1.8						
N15A	**Stansbury Isla**	**1.80**	**99**	⇓Pb	**Pb**	**08 51 54.6**	**-0.8**
	baz=1.8,SNR=235						
N15A				⇓Sb	**Sb**	**08 52 18.5**	**+0.2**
	baz=1.8						
SPUT	**South Promonto**	**1.82**	**86**	*e*Pn	**Pn**	**08 51 53.7**	**-0.4**
SPUT				*e*Sg	**Sg**	**08 52 19.1**	**-1.2**
M15A	**Larsen Ranch,**	**1.83**	**81**	⇑Pb	**Pb**	**08 51 54.9**	**-1.1**
	baz=1.9,SNR=163						
M15A				⇑Sb	**Sb**	**08 52 19.5**	**+0.1**
	baz=1.9						
K14A	**Jones Ranch, D**	**1.84**	**43**	⇓Pb	**Pb**	**08 51

baz=2.2
Q12A ⇑Sb **Sb** 08 52 30.1 +1.2
baz=2.2
K10A MacKenzie Ranc 2.17 317 ⇑Pb **Pb** 08 52 00.7 -1.1
baz=2.1
K10A ⇑Sb **Sb** 08 52 28.8 -0.4
baz=2.1
J13A Cove Ranch, Pi 2.25 13 ⇓Sb **Sb** 08 52 31.3 0.0
baz=2.2
K15A Arbon 2.28 49 ⇑P **Pn** 08 52 01.2 +0.8
baz=2.3,SNR=38
K15A ⇑Sb **Sb** 08 52 32.4 +0.1
baz=2.3
MFID Camas Ranch 2.32 342 ⇓Sb **Sb** 08 52 33.4 -0.1
baz=2.3
Q13A Wheeler Ranch, 2.34 164 ⇑Pn **Pn** 08 52 00.6 -0.6
baz=2.4,SNR=18
HLID Hailey 2.38 8 ⇓Sb **Sb** 08 52 35.1 0.0
baz=2.4
HLID Hailey 2.38 8 *e*Pn **Pn** 08 52 02.9 +1.1
HLID *e*Sg **Sg** 08 52 35.1 -3.1
Q11A Duckwater 2.44 195 ⇑Pn **Pn** 08 52 02.3 -0.2
baz=2.4,SNR=51
Q11A ⇓Sn **Sn** 08 52 32.2 -0.7
baz=2.4
NLU North Lily Min 2.46 120 *e*Pn **Pn** 08 52 01.5 -1.4
HWUT Hardware Ranch 2.51 80 *e*Pn **Pn** 08 52 03.7 +0.1
Q14A Sevier Lake (B 2.53 151 ⇓Pn **Pn** 08 52 03.0 -0.8
baz=2.6,SNR=33
Q14A ⇓Sb **Sb** 08 52 40.6 +1.3
baz=2.6
P15A Leamington 2.56 129 ⇑Pn **Pn** 08 52 03.4 -0.8
baz=2.6,SNR=13
I12A Atlanta 2.59 356 ⇓Sb **Sb** 08 52 41.5 +0.2
baz=2.6
J10A Berg Farm, Mel 2.63 328 ⇑Sb **Sb** 08 52 43.1 +0.7
baz=2.6
JLU Jordanelle 2.65 102 *e*Pn **Pn** 08 52 08.3 +2.7
L16A Fish Haven 2.69 71 ⇓Sb **Sb** 08 52 44.9 +0.8
baz=2.7
MPU Maple Canyon 2.73 115 *e*Pn **Pn** 08 52 06.3 -0.3
MPU *e*Pg **Pg** 08 52 14.5 +0.4
MPU *e*Sg **Sg** 08 52 50.7 +1.2
O16A Springville 2.74 110 ⇑Pn **Pn** 08 52 06.0 -0.8
baz=2.8,SNR=9.7
I13A Wildhorse Cree 2.76 11 ⇑Sb **Sb** 08 52 45.8 -0.3
baz=2.8
I11A Placerville 2.82 344 ⇑Pb **Pb** 08 52 11.2 -1.7
baz=2.8
I11A ⇓Sb **Sb** 08 52 48.6 +0.7
baz=2.8
DAU Daniels Canyon 2.85 105 *e*Pn **Pn** 08 52 09.1 +0.9
DAU *e*Pg **Pg** 08 52 17.5 +1.1
DAU *e*Sg **Sg** 08 52 53.6 +0.4
R11A Troy Canyon, C 2.91 191 ⇓Pn **Pn** 08 52 08.5 -0.5
baz=2.9,SNR=43
R11A ⇑Sn **Sn** 08 52 44.1 -0.5
baz=2.9
Q15A Fillmore 2.91 138 ⇓Pn **Pn** 08 52 08.4 -0.7
baz=2.9,SNR=15
K16A Soda Springs 2.93 55 ⇑Sb **Sb** 08 52 51.7 +0.8
baz=2.9
J09A Fry Pan Ranch, 3.03 316 ⇓Sb **Sb** 08 52 54.6 +0.7
baz=3.0
WVOR Wild Horse Val 3.08 295 *e*Pn **Pn** 08 52 13.1 +1.7
WVOR *e*Sg **Sg** 08 52 58.4 -2.3
R13A O'Grain Ranch, 3.10 167 ⇑P **Pn** 08 52 12.3 +0.6
baz=3.1,SNR=71
AHID Auburn Hatcher 3.21 60 *e*Pn **Pn** 08 52 16.5 +3.4
AHID *e*Sg **Sg** 08 53 00.8 -3.9
I10A Payette 3.22 334 ⇓Pb **Pb** 08 52 17.9 -1.7
baz=3.2
I10A ⇓Sb **Sb** 08 53 00.2 +1.1
baz=3.2
I15A Monteview 3.30 31 ⇓Sb **Sb** 08 53 02.7 +1.2
baz=3.3
H13A Challis 3.39 7 ⇓Pb **Pb** 08 52 21.2 -1.3
baz=3.4
H13A ⇑Sb **Sb** 08 53 04.9 +0.8
baz=3.4
RRI2 Red Ridge 3.39 50 *e*Pn **Pn** 08 52 19.0 +3.3
RRI2 *e*Sg **Sg** 08 53 07.6 -3.0
MSU Marysvale 3.39 142 *e*Pn **Pn** 08 52 15.7 0.0
MSU *e*Pg **Pg** 08 52 26.2 -0.5
MSU *e*Sg **Sg** 08 53 13.0 +2.3
J08A Circle Bar Ran 3.44 310 ⇑Pb **Pb** 08 52 22.1 -1.3
baz=3.4
J08A ⇓Sb **Sb** 08 53 06.6 +1.0
baz=3.4
I09A Lost Marbles R 3.49 323 ⇑Pb **Pb** 08 52 22.7 -1.5
baz=3.5
I09A ⇑Sb **Sb** 08 53 07.9 +0.9
baz=3.5
H14A Leadore 3.58 17 ⇓Sb **Sb** 08 53 10.9 +1.2
baz=3.6
H11A Donnelly 3.60 347 ⇑Sb **Sb** 08 53 11.8 +1.6
baz=3.6
DCID1 Drake Creek 3.62 48 *e*Pn **Pn** 08 52 17.8 -1.0
DCID1 *e*Pg **Pg** 08 52 25.0 -6.1
H10A Noah's Angus R 3.66 338 ⇓Sb **Sb** 08 53 12.8 +1.0
baz=3.6
REDW Red Top Meadow 3.67 53 *e*Pn **Pn** 08 52 21.3 +1.8
REDW *e*Sg **Sg** 08 53 19.0 -0.7
S14A Cedar City 3.68 159 ⇓Pn **Pn** 08 52 18.9 -0.8
baz=3.7,SNR=6.1
TPAW Teton Pass 3.69 50 *e*Pg **Pg** 08 52 24.4 -8.1
TPAW *e*Sg **Sg** 08 53 16.5 -3.8
S13A Holt Ranch, En 3.70 168 ⇓Pn **Pn** 08 52 19.7 -0.3
baz=3.7,SNR=46
H15A Lima 3.78 25 ⇓Pb **Pb** 08 52 28.2 -1.0
baz=3.8
H15A ⇓Sb **Sb** 08 53 16.7 +1.4
baz=3.8
SNOW Snow King Moun 3.79 52 *e*Pg **Pg** 08 52 27.3 -7.0
CCUT Cedar City 3.83 162 *e*Pn **Pn** 08 52 21.9 +0.2
CCUT *e*Pg **Pg** 08 52 34.4 -0.8
CCUT *e*Sg **Sg** 08 53 22.6 -2.2
NVAR Mina Array Bea 3.84 225 Pn **Pn** 08 52 22.2 +0.4
0.9nm,0.3s,baz=40,slow=13,SNR=26
NVAR Pg **Pg** 08 52 30.0 -5.3
2.1nm,0.3s,baz=40,slow=17,SNR=18
NVAR Lg 08 53 21.2
2.4nm,0.3s,baz=319,slow=30,SNR=3.6
NVAR Mina Array Bea 3.84 225 Pn **Pn** 08 52 22.2 +0.4
NVAR Pg **Pg** 08 52 30.0 -5.3
NVAR Lg 08 53 21.2
MCMT McKenzie Canyo 3.91 21 *e*Pn **Pn** 08 52 27.0 +4.2
SRU San Rafael 3.93 121 *e*Pn **Pn** 08 52 26.5 +3.4
IMW Indian Meadow 3.95 46 *e*Pn **Pn** 08 52 25.7 +2.3
IMW *e*Sg **Sg** 08 53 24.4 -4.3
LOHW Long Hollow 3.96 51 *e*Pn **Pn** 08 52 29.8 +6.3
T11A Corn Creek, Al 3.97 184 ⇑P **Pn** 08 52 24.1 +0.4
baz=4.0,SNR=43
H09A Durkee 4.02 330 ⇓Pb **Pb** 08 52 32.2 -1.1
baz=4.0
H09A ⇑Sb **Sb** 08 53 22.8 +0.4
baz=4.0
L19A Farson 4.22 76 ⇓Pb **Pb** 08 52 35.6 -1.1
baz=4.2
T13A Saint George 4.25 170 ⇑Pn **Pn** 08 52 26.9 -0.5
baz=4.3,SNR=7.9
PDAR Pinedale Array 4.25 67 Pn **Pn** 08 52 30.0 +2.5
0.2nm,0.3s,baz=238,slow=12,SNR=6.4
PDAR Pg **Pg** 08 52 38.9 -4.2
0.4nm,0.3s,baz=249,slow=14,SNR=8.4
PDAR Lg 08 53 35.3
0.5nm,0.3s,baz=236,slow=27,SNR=4.5
G15A Dillon 4.32 23 ⇓Sb **Sb** 08 53 32.3 +1.3
baz=4.3
T14A Hurricane 4.36 161 ⇑Pn **Pn** 08 52 28.9 -0.1
baz=4.4,SNR=5.1
BEKR Beckwourth 4.40 254 ⇓Pn **Pn** 08 52 28.7 -0.9
baz=4.4,SNR=12
QLMT Earthquake Lak 4.41 34 *e*Pg **Pg** 08 52 38.4 -7.9
DLMT Dillon 4.47 21 Pn **Pn** 08 52 35.1 +4.6
DLMT *e*Sg **Sg** 08 53 53.4 +8.0
YMR Madison River 4.49 38 *e*Pg **Pg** 08 52 39.7 -8.0
G09A Cove 4.60 333 ⇓Sb **Sb** 08 53 41.3 +2.5
baz=4.6
G16A Moss Hill, Enn 4.60 28 ⇑Pb **Pb** 08 52 41.8 -1.4
baz=4.6
G16A ⇓Sb **Sb** 08 53 40.9 +2.0
baz=4.6
F14A Wisdom 4.73 13 ⇑Sb **Sb** 08 53 44.8 +2.0
baz=4.7
PV04 Paradox Valley 5.38 120 *e*Pg **Pg** 08 53 02.6 -2.2
PV04 *e*Sg **Sg** 08 54 11.7 -2.7
LDFC Landfair 6.12 182 *e*Pn **Pn** 08 52 53.0 -0.2
2.9nm,0.3s
YKA Yellowknife Ar 21.32 0 P **P** 08 56 10.4 +0.8
0.3nm,0.7s,baz=182,slow=10,SNR=7.8

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*IDC **24** 08:53:32.5±4.4, 6°.52S×129°.68E, h114km±41km, mb3.7/10, mb1 3.8/12, mb1mx3.8/19, mbtmp3.7/12, Error ellipse: s-maj=38.2km s-min=17.1km az=77.0*
*NEIC **24** 08:53:33.5±1.8, 6°.56S×129°.68E, h125km±18km, mb4.1/6, Error ellipse: s-maj=20.4km s-min=12.5km az=83.0*
ISC 24 08:53:37.5±1.4, 6°.86S±0°.06×129°.8E±0°.1, h175km±15km, n25, σ1§04/28, mb3.8/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.39**	**156**	*e*Pn	**Pn**	**08 55 10.1**	**+0.5**
	77nm,0.5s						
KAKA				*e*Sn	**Sn**	**08 56 21.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.88**	**199**	P	**Pn**	**08 56 21.2**	**-0.3**
	2.3nm,0.3s,baz=39,slow=9.6,SNR=52						
FITZ				S	**Sn**	**08 58 26.1**	**-7.3**
	2.9nm,0.3s,baz=253,slow=16,SNR=7.4						
FITZ	**Fitzroy Crossi**	**11.88**	**199**	*e*Pn	**Pn**	**08 56 21.2**	**-0.4**
FITZ				*e*Sn	**Sn**	**08 58 28.4**	**-5.1**
WRAB	**Tennant Creek**	**13.74**	**162**	*e*Pn	**Pn**	**08 56 45.0**	**-0.2**
	5.5nm,0.4s						
WRAB				*e*Sn	**Sn**	**08 59 13.7**	**-4.5**
ASAR	**Alice Springs**	**17.18**	**167**	P	**Pn**	**08 57 30.8**	**+3.5**
	1.6nm,0.3s,baz=344,slow=9.3,SNR=133						
ASAR				S	**S**	**09 00 36.5**	**+0.4**
	0.8nm,0.3s,baz=328,slow=15,SNR=8.9						
MBWA	**Marble Bar**	**17.22**	**213**	*e*P	**Pn**	**08 57 29.2**	**+1.5**
	3.8nm,0.6s						
MBWA				*e*S	**S**	**09 00 34.5**	**-2.4**
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**08 59 09.0**	**+3.8**
	1.5nm,0.6s,mb3.8,baz=336,slow=10,SNR=3.3						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**08 59 09.0**	**+3.8**
MJAR	**Matsushiro Arr**	**43.89**	**10**	P	**P**	**09 01 23.8**	**-2.8**
	0.8nm,0.6s,mb3.5,baz=186,slow=10,SNR=4.3						
KSRS	**Korea Array**	**44.11**	**358**	P	**P**	**09 01 26.7**	**-1.7**
	1.5nm,0.7s,mb3.7,baz=154,slow=9.6,SNR=4.8						
ULN	**Ulaanbaatar**	**58.05**	**342**	*e*P	**P**	**09 03 12.5**	**+0.4**
	2.4nm,0.6s,mb4.2						
SONM	**Songino Array**	**58.23**	**342**	P	**P**	**09 03 13.4**	**+0.1**
	0.6nm,0.4s,mb3.8,baz=148,slow=3.2,SNR=3.8						
PETK	**Petropavlovsk-**	**64.26**	**18**	P	**P**	**09 03 54.1**	**+0.4**
	1.0nm,0.6s,mb3.8,baz=156,slow=3.3,SNR=4.6						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**09 04 17.9**	**+0.3**
	0.7nm,0.3s,mb3.9,baz=113,slow=7.6,SNR=18						
MKAR				PcP	PcP	09 04 42.8	+0.2
	0.4nm,0.6s,baz=125,slow=4.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**09 04 37.4**	**-0.7**
	1.5nm,0.6s,mb3.9,baz=136,slow=6.0,SNR=5.6						
KURK	**Kurchatov**	**72.27**	**329**	P	**P**	**09 04 43.7**	**+0.1**
	2.8nm,0.6s,mb4.2,baz=123,slow=5.2,SNR=12						
KURK	**Kurchatov**	**72.27**	**329**	*e*P	**P**	**09 04 43.4**	**-0.2**
	2.6nm,1.0s,mb3.9						
BVAR	**Borovoye Array**	**77.81**	**328**	P	**P**	**09 05 15.3**	**0.0**
	0.7nm,0.6s,mb3.5,baz=124,slow=4.5,SNR=5.4						
ABKAR	**Akbulak array**	**82.25**	**322**	*e*P	**P**	**09 05 39.3**	**+0.1**
	1.0nm,0.6s,mb3.6						
AKTK	**Aktyubinsk**	**83.81**	**322**	P	**P**	**09 05 47.7**	**+0.5**
AKTO	**Aktyubinsk**	**83.81**	**322**	P	**P**	**09 05 47.7**	**+0.6**
	0.9nm,0.5s,mb3.7,baz=98,slow=6.8,SNR=4.3						
KMBO	**Kilima Mbogo**	**92.36**	**269**	*e*P	**P**	**09 06 30.3**	**+1.4**
	1.5nm,0.5s,mb4.3						
TORD	**Torodi Ar. Bea**	**128.55**	**281**	PKP	PKPdf	09 12 25.6	+0.9
	0.1nm,0.6s,baz=57,slow=2.2,SNR=2.3						
CPUP	**Villa Florida**	**146.30**	**168**	PKPbc	PKPbc	09 13 00.9	+2.6
	0.7nm,0.6s,baz=90,slow=3.0,SNR=3.0						
LPAZ	**La Paz**	**150.98**	**143**	PKPbc	PKPbc	09 13 14.3	+3.7
	0.5nm,0.3s,baz=218,slow=3.3,SNR=7.0						

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*ISCJB **24** 08:57:29.7±0.5, 37°.22N±0°.04×28°.21E±0°.04, h9km±6km, Error ellipse: s-maj=7.2km s-min=4.4km az=29.7*
*CSEM **24** 08:57:29.8±0.1, 37°.21N×28°.21E, h10km, MD2.9, Error ellipse: s-maj=3.2km s-min=1.8km az=40.0*
*ISK **24** 08:57:29.7, 37°.16N×28°.18E, h12km, MD2.9*
*DDA **24** 08:57:29.7, 37°.21N×28°.22E, h7km±5km, Md2.7*
ISC 24 08:57:29.9±0.5, 37°.23N±0°.04×28°.22E±0°.04, h12km±6km, n22, σ0§89/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**150**	*e*PG	**Pg**	**08 57 32.4**	**-0.3**
YER				*e*SG	**Sg**	**08 57 34.6**	**-0.1**
YER	**Yerkesik**	**0.10**	**150**	*e*Pg	**Pg**	**08 57 32.4**	**-0.3**
YER				*e*Sg	**Sg**	**08 57 34.6**	**-0.2**
MLSB	**Milas**	**0.36**	**281**	*e*PG	**Pg**	**08 57 36.9**	**-0.2**
MLSB				*e*SG	**Sg**	**08 57 42.5**	**+0.5**
MLSB	**Milas**	**0.36**	**281**	*e*Pg	**Pg**	**08 57 36.9**	**-0.2**
MLSB				*e*Sg	**Sg**	**08 57 42.5**	**+0.6**
TURN	**Turunc**	**0.47**	**139**	*i* P	**Pg**	**08 57 38.3**	**-0.8**
TURN				*i* S	**Sg**	**08 57 45.8**	**+0.5**
TURN	**Turunc**	**0.47**	**139**	*i* P	**Pg**	**08 57 38.3**	**-0.8**
TURN				*i* S	**Sg**	**08 57 45.8**	**+0.5**
AYDN	**Tasoluk**	**0.51**	**328**	*i* P	**Pg**	**08 57 39.9**	**-0.1**
AYDN				*i* S	**Sg**	**08 57 46.3**	**-0.5**
AYDN	**Tasoluk**	**0.51**	**328**	*i* P	**Pg**	**08 57 39.9**	**-0.1**
AYDN				*i* S	**Sg**	**08 57 46.3**	**-0.4**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**08 57 41.9**	**-0.5**
BDRM				*i* S	**Sg**	**08 57 52.5**	**+1.7**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**08 57 41.9**	**-0.4**
BDRM				*i* S	**Sg**	**08 57 52.5**	**+1.8**
DAT	**Datca**	**0.71**	**226**	*e*PG	**Pg**	**08 57 42.4**	**-1.4**
DAT	**Datca**	**0.71**	**226**	*e*Pg	**Pg**	**08 57 42.4**	**-1.3**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**08 57 44.9**	**-0.6**
DNZL				*i* S	**Sg**	**08 57 57.9**	**+1.8**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**08 57 44.9**	**-0.6**
DNZL				*i* S	**Sg**	**08 57 57.9**	**+1.9**
FETY	**Fethiye**	**0.91**	**130**	*e*PG	**Pg**	**08 57 47.3**	**-0.2**
FETY	**Fethiye**	**0.91**	**130**	*e*Pg	**Pg**	**08 57 47.3**	**-0.2**
MANT	**Manisa**	**1.29**	**12**	*i* P	**Pn**	**08 57 54.8**	**+1.0**
MANT				*i* S	**Sb**	**08 58 09.0**	**-1.8**
MANT	**Manisa**	**1.29**	**12**	*i* P	**Pn**	**08 57 54.8**	**+1.0**
MANT				*i* S	**Sb**	**08 58 09.0**	**-1.8**
KULA	**Kula-Manisa**	**1.33**	**15**	*e*PN	**Pn**	**08 57 54.9**	**+0.5**
KULA	**Kula-Manisa**	**1.33**	**15**	*e*Pn	**Pn**	**08 57 54.9**	**+0.5**
ELL	**Elmali**	**1.43**	**109**	*e*PN	**Pn**	**08 57 56.1**	**+0.3**
ELL	**Elmali**	**1.43**	**109**	*e*Pn	**Pn**	**08 57 56.1**	**+0.3**

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*ISCJB **24** 09:10:36.7±0.5, 66°.50N±0°.04×141°.90W±0°.08, h10km, mb3.5/3, Error ellipse: s-maj=5.2km s-min=4.7km az=30.0*
*NEIC **24** 09:10:39.5, 66°.50N×141°.97W, h23km, mb3.5/2, ML3.7(AEIC), After AEIC.*
*PGC **24** 09:10:40.2±12.0, 66°.59N×141°.56W, h5km, ML3.8/2*
*IDC **24** 09:10:40.2±4.1, 66°.76N×141°.78W, h0km, mb3.5/2, mb1 4.1/5, mb1mx3.5/29, mbtmp3.8/5, ML3.8/2, Error ellipse: s-maj=50.4km s-min=19.7km az=128.0*
ISC 24 09:10:37.5±0.4, 66°.53N±0°.03×141°.83W±0°.07, h10km, n28, σ1§02/38, mb3.5/3, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM3	**Burnt Mountain**	**1.41**	**311**	P	**Pn**	**09 11 03.4**	**+0.2**
BM3				S	**Sn**	**09 11 21.3**	**-0.6**
EGAK	**Eagle**	**1.78**	**171**	P	**Pn**	**09 11 07.1**	**-1.1**
DAWY	**Dawson**	**2.67**	**156**	P	**Pn**	**09 11 20.3**	**-0.2**
DAWY				S	**Sn**	**09 11 53.2**	**+0.3**
COLA	**College**	**2.99**	**239**	P	**Pn**	**09 11 24.8**	**-0.2**
COLA				S	**Sn**	**09 12 00.7**	**-0.1**
DOT	**Dot Lake**	**3.04**	**199**	P	**Pn**	**09 11 25.8**	**+0.2**
DOT				S	**Sn**	**09 12 02.6**	**+0.6**
COLD	**Coldfoot**	**3.38**	**286**	P	**Pn**	**09 11 31.3**	**+1.1**
COLD				S	**Sn**	**09 12 11.1**	**+0.8**
INK	**Inuvik**	**3.67**	**57**	Pn	**Pn**	**09 11 36.8**	**+2.6**
	3.1nm,0.3s,baz=243,slow=13,SNR=134						
INK				Sn	**Sn**	**09 12 18.5**	**+1.1**
	9.0nm,0.3s,baz=224,slow=15,SNR=5.7						
INK				Lg		09 12 33.0	
	8.9nm,0.3s,baz=184,slow=24,SNR=4.7						
INK	**Inuvik**	**3.67**	**57**	*e*Pn	**Pn**	**09 11 35.6**	**+1.4**
INK				*e*Sn	**Sg**	**09 12 33.8**	**-1.4**
MENT	**Mentasta**	**3.69**	**194**	*e*P	**Pn**	**09 11 36.1**	**+1.5**
PAX	**Paxson**	**3.90**	**205**	P	**Pn**	**09 11 37.8**	**+0.4**
MCK	**McKinley**	**4.11**	**230**	P	**Pn**	**09 11 40.5**	**+0.3**
BPAW	**Bear Paw Mtn.**	**4.55**	**242**	P	**Pn**	**09 11 45.2**	**-1.0**
TRF	**Thorofare Moun**	**4.73**	**233**	P	**Pn**	**09 11 49.1**	**+0.3**
IM3	**Indian Mountai**	**4.85**	**269**	P	**Pn**	**09 11 50.1**	**-0.3**
KTH	**Kantishna Hill**	**4.87**	**236**	P	**Pn**	**09 11 50.6**	**-0.1**
CHUM	**Lake Minchumin**	**5.15**	**244**	*e*Pg	**Pg**	**09 12 15.1**	**-0.9**
DIV	**Divide**	**5.69**	**200**	*e*Pn	**Pn**	**09 12 01.6**	**-0.4**
	16nm,0.5s						
DIV				*e*Sg	**Sg**	**09 13 39.0**	**-1.1**
BMRM	**Bremner River**	**5.71**	**194**	*e*Pn	**Pn**	**09 12 02.0**	**-0.2**
PPLA	**Purkeypile**	**5.74**	**235**	*e*Pn	**Pn**	**09 12 02.3**	**-0.3**
	19nm,0.6s						
SKAG	**Skagway**	**7.68**	**154**	*e*P	**Pn**	**09 12 33.0**	**+3.7**
RSO	**Redoubt South**	**7.79**	**224**	*e*Pn	**Pn**	**09 12 34.2**	**+3.4**
RSO				*e*Sg	Sn	09 15 02.2	+63
DLBC	**Dease Lake**	**9.76**	**141**	Pn	**Pn**	**09 13 03.4**	**+5.6**
	0.5nm,0.3s,baz=325,slow=10.0,SNR=8.4						
YKA	**Yellowknife Ar**	**12.34**	**96**	Pn	**Pn**	**09 13 31.7**	**-1.3**
	0.8nm,0.3s,baz=300,slow=13,SNR=74						
YKA				Sn	**Sn**	**09 15 43.6**	**-6.7**
	0.4nm,0.3s,baz=305,slow=22,SNR=6.9						
YKA	**Yellowknife Ar**	**12.34**	**96**	Pn	**Pn**	**09 13 31.7**	**-1.3**
YKA				Sn	**Sn**	**09 15 43.6**	**-6.7**
RES	**Resolute Bay**	**17.06**	**41**	*e*Pn	**Pn**	**09 14 33.4**	**-2.3**
	2.0nm,0.7s						
FFC	**Flin Flon**	**22.37**	**102**	*e*P	**P**	**09 15 37.7**	**+2.4**
	2.0nm,0.9s,mb3.5						
PDAR	**Pinedale Array**	**29.62**	**127**	P	**P**	**09 16 48.7**	**+6.2**
	0.6nm,0.9s,mb3.3,baz=14,slow=6.7,SNR=3.8						
NVAR	**Mina Array Bea**	**31.17**	**143**	P	**P**	**09 17 01.2**	**+4.9**
	0.5nm,0.7s,mb3.5,baz=335,slow=8.3,SNR=1.9						

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*IDC **24** 09:23:06.4±1.4, 1°.64N×126°.66E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, ML3.9/2, Error ellipse: s-maj=61.0km s-min=21.4km az=78.0*
*DJA **24** 09:23:13, 1°.21N×126°.74E, h135km, MLv4.3/8*
ISC 24 09:23:14.3±0.8, 1°.21N±0°.07×126°.69E±0°.06, h84km±14km, n16, σ1§24/19, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.81**	**123**	P	**Pn**	**09 23 37.1**	**+5.6**
LBMI	**Labuha**	**2.01**	**156**	P	**Pn**	**09 23 47.5**	**+1.0**
SGSI	**Sangihe**	**2.72**	**335**	P	**Pn**	**09 23 57.0**	**+1.0**
SGSI				S	**Sn**	**09 24 32.3**	**+4.4**
LUWI	**Luwuk**	**4.51**	**240**	P	**Pn**	**09 24 20.8**	**+0.5**
LUWI				S	**Sn**	**09 25 12.8**	**+1.2**
MRSI	**Marisa**	**4.80**	**261**	P	**Pn**	**09 24 23.0**	**-1.3**
SWI	**Sorong**	**5.01**	**114**	P	**Pn**	**09 24 26.0**	**-1.1**
MSAI	**Masohi**	**5.05**	**154**	P	**Pn**	**09 24 28.2**	**+0.6**
	195nm,0.9s,1.2nm						
APSI	**Ampana**	**5.46**	**247**	P	**Pn**	**09 24 33.2**	**-0.1**
	185nm,1.2s,2μm0.7nm						
APSI				S	**Sn**	**09 25 39.5**	**+4.7**
	185nm,1.2s,2μm0.7nm						
TTSI	**Tana Toraja**	**8.06**	**238**	P	**Pn**	**09 25 07.1**	**-1.7**
	41nm,0.7s,4μm						
MYLDM	**Lahad Datu**	**9.07**	**296**	P	**Pn**	**09 25 22.7**	**+0.1**
	40nm,1.0s						
KAPI	**Kappang**	**9.29**	**228**	Pn	**Pn**	**09 25 25.1**	**-0.3**
	0.9nm,0.3s,baz=85,slow=12,SNR=3.5						
MMRI	**Maumere**	**10.74**	**204**	P	**Pn**	**09 25 42.8**	**-2.5**
FITZ	**Fitzroy Crossi**	**19.22**	**183**	P	**Pn**	**09 27 35.4**	**+1.8**
	0.3nm,0.3s,baz=27,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**25.70**	**165**	P	**P**	**09 28 43.0**	**+6.2**
	0.4nm,0.5s,mb3.1,baz=344,slow=7.5,SNR=14						
SONM	**Songino Array**	**49.66**	**342**	P	**P**	**09 31 55.5**	**-1.9**
	0.2nm,0.4s,mb3.4,baz=152,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	**59.60**	**326**	P	**P**	**09 33 10.7**	**+1.3**
	0.3nm,0.3s,mb3.8,baz=117,slow=7.7,SNR=7.6						

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*ISCJB **24** 09:23:32.9±0.4, 23°.32N±0°.01×120°.18E±0°.02, h10km±2km, Error ellipse: s-maj=3.5km s-min=2.2km az=2.4*
*TAP **24** 09:23:32.3, 23°.29N×120°.23E, h11km, ML3.6, B*
*NEIC **24** 09:23:33.7±3.3, 23°.33N×120°.30E, h10km, Error ellipse: s-maj=32.5km s-min=11.9km az=73.0*
ISC 24 09:23:33.1±0.4, 23°.31N±0°.01×120°.18E±0°.02, h14km±1km, n57, σ0§92/101, 2C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN8	**Yiju**	**0.05**	**36**	⇓*i* P	**Pg**	**09 23 35.0**	**-0.7**
	baz=343						
CHN8				S	**Sg**	**09 23 37.6**	**0.0**
	baz=343						
SCLT	**Jiali**	**0.13**	**175**	*i* P	**Pg**	**09 23 36.0**	**-0.6**
	baz=187						
SCLT				*i* S	**Sg**	**09 23 39.4**	**+0.3**
	baz=187						
TAI1	**Yung-k'ang**	**0.27**	**171**	P	**Pg**	**09 23 38.5**	**-0.4**
	baz=180						
TAI1				S	**Sg**	**09 23 43.7**	**+1.1**
	baz=180						
TWK	**Hsinying**	**0.28**	**98**	⇑*i* P	**Pg**	**09 23 38.6**	**-0.5**
	baz=96						
TWK				*e*S	**Sg**	**09 23 43.3**	**+0.2**
	baz=96						
CHN3	**Shinhua**	**0.29**	**144**	P	**Pg**	**09 23 38.7**	**-0.4**
	baz=150						
CHN3				*e*S	**Sg**	**09 23 44.1**	**+1.0**
	baz=150						
CHY	**Chiayi**	**0.29**	**50**	*i* P	**Pg**	**09 23 38.9**	**-0.3**
	baz=41						
CHY				*i* S	**Sg**	**09 23 44.2**	**+0.8**
	baz=41						
WSF	**Szhu**	**0.33**	**6**	*i* P	**Pg**	**09 23 40.3**	**+0.4**
	baz=359						
WSF				S	**Sg**	**09 23 46.6**	**+2.2**
	baz=359						
CHN1	**Nanshi**	**0.34**	**111**	⇑*i* P	**Pg**	**09 23 39.2**	**-0.9**
	baz=99						
CHN1				*i* S	**Sg**	**09 23 45.2**	**+0.4**
	baz=99						
CHN2	**Minshiung**	**0.35**	**50**	*e*P	**Pg**	**09 23 39.8**	**-0.4**
	baz=44						
CHN2				*e*S	**Sg**	**09 23 45.9**	**+0.9**
	baz=44						
CHN4	**Tsaushan**	**0.38**	**84**	P	**Pg**	**09 23 40.2**	**-0.6**
	baz=80						
CHN4				S	**Sg**	**09 23 45.8**	**-0.1**
	baz=80						
WTP	**Ta-pu**	**0.40**	**99**	*e*P	**Pg**	**09 23 39.9**	**-1.3**
	baz=83						
WTP				*e*S	**Sg**	**09 23 46.3**	**-0.4**
	baz=83						
TPUB	**Ta-pu**	**0.41**	**91**	*e*Pg	**Pg**	**09 23 40.0**	**-1.3**
TPUB				*e*Sg	**Sg**	**09 23 43.4**	**-3.5**
SGST	**Jiashian**	**0.43**	**121**	⇓*i* P	**Pg**	**09 23 41.4**	**-0.3**

KAU *e*S **Sg** **09 24 00.3 +2.9**
baz=174
ELDTW Lidau 0.78 99 P **Pg** **09 23 47.1 -1.2**
baz=98
ELDTW S **Sg** **09 23 58.5 +0.1**
baz=98
SSLB Suanglung 0.85 56 *e*Pg **Pg** **09 23 48.2 -1.5**
SSLB *e*Sg **Sg** **09 24 00.5 -0.4**
TYC Yuchr 0.86 46 ⇓*i*P **Pg** **09 23 48.9 -0.9**
baz=30
TYC S **Sg** **09 24 01.2 +0.2**
baz=30
SMLT Sun Moon Lake 0.87 49 ⇓*i*P **Pg** **09 23 49.3 -0.8**
baz=31
SMLT *e*S **Sg** **09 24 01.7 +0.2**
baz=31
TCU Taichung 0.95 28 *e*P **Pb** **09 23 51.2 -0.2**
baz=26
TCU *e*S **Sb** **09 24 04.6 +0.8**
baz=26
TWG Pinlang 0.95 120 *e*Pg **Pg** **09 23 50.4 -1.2**
TWG *e*Sg **Sg** **09 24 04.6 +0.6**
TWG Pinlang 0.95 120 P **Pb** **09 23 50.7 -0.7**
baz=108
TWG S **Sb** **09 24 04.2 +0.3**
baz=108
TWP Hsiaoliuchiu 0.97 170 *e*P **Pb** **09 23 52.4 +0.7**
baz=187
TWP *e*S **Sb** **09 24 07.5 +3.0**
baz=187
ECL Taimali 1.00 135 *i*P **Pb** **09 23 51.3 -1.0**
baz=149
ECL S **Sb** **09 24 05.5 +0.2**
baz=149
SCZT Fangliau 1.02 156 *e*P **Pb** **09 23 51.6 -0.9**
baz=143
SCZT *e*S **Sb** **09 24 06.6 +0.9**
baz=143
TWF1 Yuli 1.03 87 *i*P **Pb** **09 23 51.6 -1.1**
baz=86
TWF1 S **Sb** **09 24 05.3 -0.7**
baz=86
YULB Yu-li 1.03 85 *e*Pg **Pg** **09 23 51.2 -1.8**
YULB *e*Sg **Sg** **09 24 05.1 -1.4**
TTN Taitung 1.05 122 *e*P **Pb** **09 23 52.8 -0.2**
baz=123
TTN *e*S **Sb** **09 24 08.3 +1.7**
baz=123
EHY Hungye 1.07 79 *e*P **Pb** **09 23 52.4 -0.9**
baz=77
EHY S **Sb** **09 24 06.8 -0.4**
baz=77
EAST Anshuo 1.11 146 P **Pb** **09 23 52.8 -1.3**
baz=149
EAST *e*S **Sb** **09 24 09.3 +0.9**
baz=149
TAW Tawu 1.15 145 *e*P **Pb** **09 23 54.0 -0.8**
baz=136
TWQ1 Liyutan 1.17 28 P **Pn** **09 23 54.5 -0.6**
baz=26
TWQ1 *e*S **Sb** **09 24 11.1 +1.0**
baz=26
NSY Sanyi 1.22 26 *e*P **Pn** **09 23 55.6 -0.2**
baz=35
NSY *e*S **Sb** **09 24 13.5 +1.8**
baz=35
ESL Shilin 1.25 66 *e*P **Pn** **09 23 55.8 -0.4**
baz=64
ESL *e*S **Sb** **09 24 12.3 -0.3**
baz=64
TWT Tachien 1.31 44 *e*P **Pn** **09 23 56.4 -0.6**
baz=30
TWK1 Hengchun 1.48 157 *e*P **Pn** **09 23 59.0 -0.3**
baz=157
TWD Chiawan 1.51 59 *e*P **Pn** **09 23 59.8 +0.1**
baz=56
TWD *e*S **Sn** **09 24 19.8 +0.6**
baz=56
NSTT Nanjuang 1.52 29 *e*P **Pn** **09 23 59.2 -0.6**
baz=28
NSTT *e*S **Sn** **09 24 19.8 +0.4**
baz=28
TSEB Hengchuen, Pin 1.55 155 *e*P **Pn** **09 24 00.0 -0.3**
baz=156
NACB Ninganchiao 1.56 56 *e*Pn **Pn** **09 24 00.9 +0.5**
NACB *e*Sn **Sn** **09 24 21.4 +1.0**
NNS Nan Shan 1.57 44 *e*P **Pn** **09 24 00.9 +0.3**
baz=44
NSK Sanguang 1.74 38 *e*P **Pn** **09 24 02.3 -0.6**
baz=38
YHNB Yeheng 1.74 39 *e*Pn **Pn** **09 24 02.5 -0.5**
YHNB *e*Sn **Sn** **09 24 24.8 -0.1**
ENA Nanau 1.81 52 *e*P **Pn** **09 24 03.4 -0.5**
baz=38
ENTT Nioudou 1.83 43 *e*P **Pn** **09 24 03.9 -0.3**
baz=30
TWE Neicheng 1.96 44 *e*P **Pn** **09 24 06.3 +0.4**
baz=31
TWC Suao 2.00 49 *e*P **Pn** **09 24 08.0 +1.5**
baz=36
QZH Quanzhou 2.18 319 Pn **Pn** **09 24 11.4 +2.4**
QZH Sn **Sn** **09 24 34.4 -1.4**
QZH smax
comp=N,230nm,0.6s
QZH smax
comp=E,210nm,0.6s

MOS ***24*** *09:24:03.0±0.9, 22°.03S×179°.57W, h579km, mb5.0/47, Error ellipse: s-maj=11.3km s-min=8.1km az=48.7*
BJI ***24*** *09:24:03.7, 22°.11S×178°.95W, h612km, mB4.8/14, mb5.0/22*
ISCJB ***24*** *09:24:04.6±0.5, 22°.17S±0°.05×179°.57W±0°.04, h601km±6km, mb4.8/133, Error ellipse: s-maj=7.5km s-min=4.5km az=154.6*
NEIC ***24*** *09:24:06.7±0.1, 22°.18S×179°.57W, mb4.9/108, Error ellipse: s-maj=6.9km s-min=3.7km az=155.0*
GCMT ***24*** *09:24:06.7±0.7, 22°.36S×179°.38W, h630km±5km, MW5.3/38, Moment Tensor Solution. s38,c45; Duration: 1s0 Moment tensor: Scale 10^17^Nm; Mrr0.17±.04; Mθθ0.71±.05; Mφφ-0.88±.07; Mrθ-0.56±.06; Mφθ0.22±.06; Mφr-0.08±.06; Best double couple: M0 1.00100×10^17^ NP1:φs312.00000°, δ68.00000°, λ23.00000°. NP2: φs213.00000°, δ68.00000°, λ156.00000°. Principal axes: T 1.0910, Plg32.0000°, Azm172.0000°; N -0.1800, Plg58.0000°, Azm353.0000°; P -0.9110, Plg0.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s.*
BGS ***24*** *09:24:06.6±4.6, 22°.18S×179°.57W, h615km, mb4.9(NEIC)*
IDC ***24*** *09:24:06.6±0.5, 22°.20S×179°.49W, h613km±5km, mb4.2/22, mb1 4.3/22, mb1mx4.3/22, mbtmp4.2/22, Error ellipse: s-maj=11.0km s-min=9.8km az=132.0*
SZGRF ***24*** *09:24:08.5, 22°.07S×179°.21W, h632km, South of Fiji Islands*
ISC 24 09:24:05.1±0.5, **22°.14S**±0°.05×**179°.55W**±0°.04, **h592**km±6km, **h602**km±3.1km:**pP-P, n823,** σ0**66**/613, **mb4.8**/133, **220C-185D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.93**	**332**	⇑*i*Pn	**P**	**09 25 39.3**	**+2.2**
MSVF				*e*Sn	**S**	**09 26 51.8**	**-0.1**
AFI	**Afiamalu**	**11.03**	**43**	P	**P**	**09 26 31.1**	**-3.0**
42nm,0.3s,baz=37,slow=1.7,SNR=39							
AFI				S	**S**	**09 28 26.3**	**-10**
24nm,0.3s,baz=221,slow=23,SNR=8.5							
AFI	**Afiamalu**	**11.03**	**43**	P	**P**	**09 26 31.1**	**-3.0**
AFI				S	**S**	**09 28 26.3**	**-10**
AFI				pmax	pmax		
comp=Z,42nm,0.3s							
AFI				smax			
comp=N,24nm,0.3s							
AFI	**Afiamalu**	**11.03**	**43**	*e*Pn	**P**	**09 26 30.9**	**-3.2**
comp=N,167nm,0.6s							
AFI				*e*Sn	**S**	**09 28 25.8**	**-11**
DZM	**Mont Dzumac**	**12.98**	**268**	*e*P	**P**	**09 26 54.4**	**+0.6**
comp=N,94nm,0.8s							
DZM	**Mont Dzumac**	**12.98**	**268**	*e*P	**P**	**09 26 52.9**	**-0.9**
NOUC	**Port Laguerre**	**13.12**	**268**	*e*P	**P**	**09 26 54.9**	**-0.2**
FUNA	**Funafuti**	**13.59**	**355**	*e*Pn	**P**	**09 26 58.6**	**-1.5**
comp=N,107nm,0.8s							
OUZ	**Omahuta**	**14.35**	**203**	*e*Pn	**P**	**09 27 08.0**	**+0.6**
comp=N,96nm,0.7s							
URZ	**Urewera**	**16.32**	**189**	P	**P**	**09 27 22.2**	**-3.4**
comp=N,36nm,0.3s,baz=321,slow=3.2,SNR=167							
URZ				S	**S**	**09 30 01.0**	**-7.9**
comp=N,2.2nm,0.3s,baz=343,slow=23,SNR=8.5							
URZ				ScP	ScP	09 34 17.3	-2.8
comp=N,0.9nm,0.3s,baz=308,slow=3.2,SNR=5.9							
URZ	**Urewera**	**16.32**	**189**	*e*Pn	**P**	**09 27 22.9**	**-2.7**
comp=N,166nm,0.7s							
RAR	**Rarotonga**	**18.41**	**91**	*e*P	**P**	**09 27 44.1**	**-0.8**
RAR				pmax	pmax		
comp=Z,78nm,1.1s							
RAR	**Rarotonga**	**18.41**	**91**	*e*P	**P**	**09 27 44.0**	**-0.8**
comp=Z,78nm,1.1s							
KHZ	**Kahutara**	**21.03**	**194**	*e*P	**P**	**09 28 06.2**	**-2.1**
comp=Z,96nm,0.8s,mb5.5							
RPZ	**Rata Peaks**	**22.89**	**198**	P	**P**	**09 28 23.0**	**-1.8**
comp=Z,28nm,0.6s,mb5.1,baz=309,slow=1.8,SNR=21							
RPZ				ScP	ScP	09 34 33.4	-2.1
comp=Z,17nm,0.9s,baz=179,slow=22,SNR=4.5							
RPZ	**Rata Peaks**	**22.89**	**198**	*e*P	**P**	**09 28 23.9**	**-0.9**
comp=Z,32nm,0.7s,mb5.0							
EIDS	**Eidsvold**	**27.05**	**257**	*e*P	**P**	**09 29 02.0**	**+0.2**
comp=Z,18nm,0.8s,mb4.7							
EIDS				*e*S	**S**	**09 32 58.2**	**-1.1**
ARMA	**Armidale**	**27.07**	**246**	*e*P	**P**	**09 29 03.9**	**+2.0**
ARMA	**Armidale**	**27.07**	**246**	*e*P	**P**	**09 29 04.1**	**+2.2**
comp=Z,33nm,0.6s,mb5.1							
MGCD	**Mangrove Creek**	**28.14**	**241**	*e*P	**P**	**09 29 12.8**	**+1.6**
comp=Z,64nm,0.6s,mb5.4							
PPT	**Papeete**	**28.53**	**86**	*e*P	**P**	**09 29 14.3**	**-0.5**
comp=Z,48nm,1.2s,mb5.0							
PPT	**Papeete**	**28.53**	**86**	P	**P**	**09 29 13.4**	**-1.4**
comp=Z,29nm,0.6s,mb5.1,baz=231,slow=3.7,SNR=7.7							
PPT	**Papeete**	**28.53**	**86**	*e*P	**P**	**09 29 14.3**	**-0.5**
PPT				pmax	pmax		
comp=Z,48nm,1.2s							
TIAR	**Tiarei**	**28.75**	**86**	*e*P	**P**	**09 29 16.2**	**-0.4**
comp=Z,69nm,0.8s,mb5.3							
MEH	**Mehetia**	**29.86**	**88**	*e*P	**P**	**09 29 25.4**	**-0.8**
comp=Z,100nm,1.1s,mb5.3							
CNB	**Canberra Magne**	**30.12**	**237**	*e*P	**P**	**09 29 29.6**	**+1.3**
CAN	**Canberra**	**30.41**	**237**	*e*P	**P**	**09 29 30.7**	**0.0**
CAN				pmax	pmax		
comp=Z,54nm,1.1s,mb5.1							
CAN	**Canberra**	**30.41**	**237**	*e*P	**P**	**09 29 30.7**	**-0.1**
comp=Z,54nm,1.1s,mb5.1							
YNG	**Young**	**30.60**	**240**	*e*P	**P**	**09 29 33.6**	**+1.2**
comp=Z,9.5nm,0.7s,mb4.5							
PMOR	**Pomariorio Ree**	**30.79**	**82**	*e*P	**P**	**09 29 33.8**	**-0.4**
comp=Z,146nm,0.9s,mb5.6							
CTA	**Charters Tower**	**31.93**	**267**	*e*P	**P**	**09 29 44.4**	**+0.5**
comp=Z,24nm,0.4s,mb5.2							
CTA	**Charters Tower**	**31.93**	**267**	P	**P**	**09 29 44.5**	**+0.6**
comp=Z,28nm,0.4s,mb5.3,baz=91,slow=11,SNR=51							
CTA	**Charters Tower**	**31.93**	**267**	P	**P**	**09 29 44.5**	**+0.6**
CTA				pmax	pmax		
comp=Z,28nm,0.4s							
CTAO	**Charters Tower**	**31.93**	**267**	*e*P	**P**	**09 29 44.5**	**+0.6**
CTAO				pmax	pmax		
comp=Z,37nm,0.6s,mb5.2							
CTAO	**Charters Tower**	**31.93**	**267**	*e*P	**P**	**09 29 44.5**	**+0.6**
comp=Z,37nm,0.6s,mb5.2							
TOO	**Toolangi**	**33.77**	**235**	*e*P	**P**	**09 29 59.8**	**+0.6**
TAU	**Tasmania Unive**	**34.45**	**225**	*e*P	**P**	**09 30 05.1**	**+0.4**
TAU				pmax	pmax		
comp=Z,30nm,0.8s,mb5.0							
TAU	**Tasmania Unive**	**34.45**	**225**	*e*P	**P**	**09 30 05.1**	**+0.4**
comp=Z,30nm,0.8s,mb5.0							
STKA	**Stephens Creek**	**35.79**	**246**	*e*P	**P**	**09 30 16.7**	**+0.7**
comp=Z,19nm,0.6s,mb4.8							
STKA	**Stephens Creek**	**35.79**	**246**	P	**P**	**09 30 16.8**	**+0.8**
comp=Z,25nm,0.7s,mb4.9,baz=93,slow=10.0,SNR=61							
STKA				S	**S**	**09 35 09.4**	**-3.0**
comp=Z,3.0nm,0.9s,baz=233,slow=15,SNR=3.2							
STKA	**Stephens Creek**	**35.79**	**246**	P	**P**	**09 30 16.8**	**+0.8**
STKA				S	**S**	**09 35 09.5**	**-2.9**
STKA				pmax	pmax		
comp=Z,25nm,0.7s							
STKA				smax			
comp=N,3.0nm,0.9s							
STKA	**Stephens Creek**	**35.79**	**246**	*e*P	**P**	**09 30 16.5**	**+0.5**
comp=N,5.6nm,0.8s,mb4.2							
COEN	**Coen**	**36.29**	**277**	*e*P	**P**	**09 30 21.1**	**+0.8**
comp=N,349nm,1.0s,mb5.8							
TAOE	**Nuku Hiva Isla**	**40.07**	**77**	*e*P	**P**	**09 30 50.7**	**-0.2**
comp=N,258nm,1.0s,mb5.7							
ASAR	**Alice Springs**	**42.76**	**259**	P	**P**	**09 31 12.0**	**0.0**
comp=N,64nm,0.9s,mb5.2,baz=92,slow=8.2,SNR=352							
ASAR				PcP	PcP	09 32 49.5	-0.1
comp=N,2.5nm,0.6s,baz=119,slow=2.6,SNR=4.1							
ASAR				ScP	ScP	09 35 45.6	+0.8
comp=N,1.7nm,0.7s,baz=99,slow=3.8,SNR=5.0							
ASAR				S	**S**	**09 36 50.9**	**-3.2**
comp=N,7.7nm,0.9s,baz=95,slow=16,SNR=22							
ASAR	**Alice Springs**	**42.76**	**259**	P	**P**	**09 31 12.0**	**0.0**
ASAR						09 32 49.5	
ASAR				S	**S**	**09 36 50.9**	**-3.3**
ASAR				pmax	pmax		
comp=Z,64nm,0.9s							
ASAR				pmax	pmax		
comp=Z,3.0nm,0.6s							
ASAR				pmax	pmax		
comp=N,2.0nm,0.7s							
ASAR				smax			
comp=N,8.0nm,0.9s							
WRAB	**Tennant Creek**	**42.96**	**264**	*e*P	**P**	**09 31 12.5**	**-1.1**
WRAB				pmax	pmax		
comp=Z,53nm,0.7s,mb5.2							
WRAB	**Tennant Creek**	**42.96**	**264**	*e*P	**P**	**09 31 12.5**	**-1.1**
comp=Z,53nm,0.7s,mb5.2							
KAKA	**Kakadu**	**46.59**	**273**	*e*P	**P**	**09 31 40.3**	**-1.1**
comp=Z,35nm,0.3s,mb5.4							
KAKA	**Kakadu**	**46.59**	**273**	*e*P	**P**	**09 31 40.3**	**-1.1**
comp=Z,193nm,0.6s,mb5.8							
FORT	**Forrest**	**47.33**	**248**	*e*P	**P**	**09 31 46.3**	**-0.4**
comp=Z,58nm,0.7s,mb5.2							
FORT	**Forrest**	**47.33**	**248**	*e*P	**P**	**09 31 45.9**	**-0.9**
comp=Z,75nm,0.8s,mb5.3							
POHA	**Pohakuloa**	**47.80**	**31**	*e*P	**P**	**09 31 49.0**	**-1.2**
comp=Z,51nm,0.8s,mb5.1							
KIP	**Kipapa**	**48.12**	**27**	*e*P	**P**	**09 31 52.6**	**0.0**
KIP				pmax	pmax		
comp=Z,811nm,2.7s,mb5.8							
KIP	**Kipapa**	**48.12**	**27**	*e*P	**P**	**09 31 52.5**	**-0.1**
comp=Z,811nm,2.7s,mb5.8							
GUMO	**Guam**	**49.78**	**312**	P	**P**	**09 32 05.2**	**+0.2**
comp=Z,74nm,1.0s,mb5.1,baz=176,slow=13,SNR=3.6							
GUMO	**Guam**	**49.78**	**312**	P	**P**	**09 32 05.2**	**+0.2**
GUMO				pmax	pmax		
comp=Z,74nm,1.0s,mb5.1							
FITZ	**Fitzroy Crossi**	**51.40**	**264**	*e*P	**P**	**09 32 17.0**	**+0.2**
comp=Z,26nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**51.40**	**264**	P	**P**	**09 32 17.1**	**+0.3**
comp=Z,11nm,0.6s,mb4.5,baz=93,slow=4.6,SNR=39							
FITZ	**Fitzroy Crossi**	**51.40**	**264**	*e*P	**P**	**09 32 16.5**	**-0.2**
comp=Z,32nm,1.0s,mb4.7							
KLBR	**Kellerberrin**	**56.06**	**246**	*e*P	**P**	**09 32 48.7**	**-0.7**
comp=Z,26nm,0.7s,mb4.6							
MBWA	**Marble Bar**	**56.10**	**259**	*e*P	**P**	**09 32 49.4**	**-0.4**
MBWA	**Marble Bar**	**56.10**	**259**	*e*P	**P**	**09 32 49.4**	**-0.4**
comp=Z,39nm,0.7s,mb4.8							
MBWA				*e*pP	pP	09 34 42.5	+0.4
SBA	**Scott Base**	**56.15**	**183**	*e*P	**P**	**09 32 51.2**	**+2.0**
SBA				pmax	pmax		
comp=Z,87nm,1.1s,mb4.9							
SBA	**Scott Base**	**56.15**	**183**	*e*P	**P**	**09 32 51.1**	**+2.0**
comp=Z,87nm,1.1s,mb4.9							
KAPI	**Kappang**	**61.02**	**277**	P	**P**	**09 33 23.5**	**+0.6**
comp=Z,9.7nm,0.8s,mb4.1,baz=104,slow=4.2,SNR=3.5							
CBIJ	**Chichi jima**	**61.37**	**321**	P	**P**	**09 33 24.7**	**-0.1**
comp=Z,47nm,0.6s,mb4.9,baz=115,slow=19,SNR=5.8							
QSPA	**South Pole Qui**	**67.94**	**180**	P	**P**	**09 34 06.1**	**+0.8**
comp=Z,72nm,0.9s,mb5.1,baz=24,slow=1.3,SNR=210							
QSPA	**South Pole Qui**	**67.94**	**180**	*e*P	**P**	**09 34 06.0**	**+0.7**
comp=Z,86nm,0.9s,mb5.2							
MIR	**Mirnyy**	**68.90**	**205**	*i*P	**P**	**09 34 11.4**	**+0.1**
MIR				pmax	pmax		
comp=Z,86nm,1.4s,mb5.0							
JOW	**Kunigami**	**70.13**	**311**	P	**P**	**09 34 19.9**	**+0.6**
comp=Z,33nm,0.7s,mb4.9,baz=143,slow=9.8							
MJAR	**Matsushiro Arr**	**70.69**	**325**	P	**P**	**09 34 21.9**	**-0.5**
comp=Z,12nm,0.8s,mb4.5,baz=161,slow=5.8,SNR=43							
MJAR				pP	pP	09 36 26.7	+4.1
comp=Z,1.9nm,0.9s,baz=162,slow=4.8,SNR=3.4							
MJAR	**Matsushiro Arr**	**70.69**	**325**	P	**P**	**09 34 21.9**	**-0.5**
MJAR				pmax	pmax		
comp=Z,12nm,0.8s							
MJAR				pmax	pmax		
comp=Z,2.0nm,0.9s							
MAJO	**Matsushiro**	**70.69**	**325**	*e*P	**P**	**09 34 22.1**	**-0.3**
MAJO				pmax	pmax		
comp=Z,18nm,0.7s,mb4.7							
MAJO	**Matsushiro**	**70.69**	**325**	*e*P	**P**	**09 34 22.1**	**-0.3**
comp=Z,18nm,0.7s,mb4.7							
MAT	**Matsushiro**	**70.69**	**325**	P	**P**	**09 34 21.9**	**-0.5**
KSM	**Kuching**	**72.23**	**279**	*e*P	**P**	**09 34 31.4**	**-0.4**
comp=Z,31nm,0.8s,mb4.9							
TPUB	**Ta-pu**	**73.67**	**304**	*e*P	**P**	**09 34 38.8**	**-1.1**
comp=Z,81nm,0.9s,mb5.3							
SSLB	**Suanglung**	**73.69**	**305**	*e*P	**P**	**09 34 38.3**	**-1.6**
comp=Z,38nm,0.8s,mb5.0							
ADK	**Adak**	**73.74**	**2**	*e*P	**P**	**09 34 38.6**	**-1.0**
ADK				pmax	pmax		
comp=Z,55nm,0.8s,mb5.1							
ADK	**Adak**	**73.74**	**2**	*e*P	**P**	**09 34 38.6**	**-1.0**
comp=Z,55nm,0.8s,mb5.1							
YSS	**Yuzh-Sakhalins**	**76.72**	**335**	*e*P	**P**	**09 34 56.1**	**-0.2**
YSS				pmax	pmax		
comp=Z,40nm,0.9s,mb4.8							
YSS	**Yuzh-Sakhalins**	**76.72**	**335**	*e*P	**P**	**09 34 56.4**	**+0.1**
comp=Z,27nm,0.8s,mb4.7							
KSRS	**Korea Array**	**77.17**	**320**	P	**P**	**09 34 59.5**	**+0.5**
comp=Z,5.9nm,0.9s,mb4.0,baz=141,slow=5.8,SNR=18							
KSRS	**Korea Array**	**77.17**	**320**	P	**P**	**09 34 59.5**	**+0.6**
KSRS				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.0							
PET	**Petropavlovsk**	**77.21**	**347**	*i*P	**P**	**09 34 58.1**	**-0.6**
PET				pmax	pmax		
comp=Z,28nm,0.5s,mb5.0							
PEA0B	**Petropavlovsk-**	**77.49**	**346**	*e*P	**P**	**09 34 60.0**	**-0.3**
PETK	**Petropavlovsk-**	**77.49**	**346**	P	**P**	**09 35 00.1**	**-0.2**
comp=Z,37nm,0.7s,mb5.0,baz=119,slow=6.3,SNR=100							
PETK	**Petropavlovsk-**	**77.49**	**346**	P	**P**	**09 35 00.1**	**-0.2**
PETK				pmax	pmax		
comp=Z,37nm,0.7s,mb4.9							
MAW	**Mawson**	**79.54**	**200**	P	**P**	**09 35 10.9**	**-0.2**
comp=Z,11nm,0.7s,mb4.3,baz=122,slow=7.1,SNR=29							
MAW	**Mawson**	**79.54**	**200**	P	**P**	**09 35 10.9**	**-0.2**
MAW				pmax	pmax		
comp=Z,11nm,0.7s							
MAW	**Mawson**	**79.54**	**200**	*e*P	**P**	**09 35 11.0**	**-0.1**
comp=Z,2.9nm,0.8s,mb3.7							
BSC	**Santa Cruz Isl**	**79.77**	**47**	⇑P	**P**	**09 35 13.0**	**+0.2**
baz=80							
NJ2	**Nanjing**	**79.83**	**311**	*e*P	**P**	**09 35 13.6**	**+0.4**
NJ2				pmax	pmax		
comp=Z,30nm,0.5s,mb4.9							
PKM	**Peak Mountain**	**80.17**	**46**	⇓P	**P**	**09 35 15.7**	**+0.9**
baz=80							
DECC	**Green Verdugo**	**80.80**	**47**	⇓P	**P**	**09 35 17.9**	**-0.2**
baz=81							
PASC	**Pasadena Art C**	**80.86**	**47**	*e*P	**P**	**09 35 18.1**	**-0.3**
comp=Z,82nm,0.9s,mb5.2							
109C	**Camp Elliot, M**	**80.89**	**49**	⇑P	**P**	**09 35 18.5**	**-0.2**
baz=81							
ARVC	**Arvin**	**80.96**	**46**	⇓P	**P**	**09 35 19.2**	**+0.2**
baz=81,SNR=5.2							
MWC	**Mount Wilson**	**80.97**	**47**	*e*P	**P**	**09 35 18.5**	**-0.6**
MWC				pmax	pmax		
comp=Z,21nm,1.0s,mb4.5							
MWC	**Mount Wilson**	**80.97**	**47**	*e*P	**P**	**09 35 18.5**	**-0.6**
comp=Z,21nm,1.0s,mb4.5							
MDJ	**Mudanjiang**	**81.04**	**326**	P	**P**	**09 35 20.0**	**+0.8**
MDJ				pP	pP	09 37 24.3	+0.3
MDJ				sP	sP	09 38 24.4	+0.5
MDJ				S	S	09 44 46.0	+5.5
MDJ				ScS	ScS	09 44 54.9	+1.2
MDJ				sS	sS	09 48 24.8	+1.8
MDJ				pmax	pmax		
comp=Z,24nm,0.8s,mb4.7							
MDJ				pmax	pmax		
comp=Z,100nm,4.4s							
MDJ	**Mudanjiang**	**81.04**	**326**	*e*P	**P**	**09 35 20.3**	**+1.2**
comp=Z,16nm,0.8s,mb4.5							
HABR	**Khabarovsk**	**81.17**	**331**	*e*P	**P**	**09 35 19.9**	**+0.2**
HABR				*e*PP	pP	09 37 24.4	-0.2
HABR				*e*		09 38 33.4	
HABR				*i*		09 40 38.3	
HABR				S	S	09 44 41.1	-0.4
HABR				*e*SS	SS	09 50 11.5	-3.8
HABR				pmax	pmax		
comp=E,12nm,0.8s							
HABR				pmax	pmax		
comp=N,19nm,1.9s							
HABR				pmax	pmax		
comp=Z,104nm,2.2s,mb4.9							
HABR				MLR	MLR		
comp=Z,42nm,21.0s							
VES	**Vestal, Richgr**	**81.20**	**46**	P	**P**	**09 35 20.3**	**+0.1**
baz=81,SNR=8.9							
MURC	**Murrieta**	**81.21**	**48**	⇑P	**P**	**09 35 20.6**	**+0.3**
baz=81,SNR=5.9							
BFSC	**Mount Baldy St**	**81.25**	**48**	⇓P	**P**	**09 35 20.4**	**-0.1**
baz=82,SNR=7.5							
KHMM	**Horse Mountain**	**81.33**	**39**	*e*P	**P**	**09 35 22.5**	**+1.8**
comp=Z,42nm,0.9s,mb4.9							
MONP	**Monument Peak**	**81.37**	**49**	⇑P	**P**	**09 35 21.9**	**+0.8**
baz=82,SNR=12							
RCTC	**Rector, Farmer**	**81.37**	**45**	⇑P	**P**	**09 35 20.8**	**-0.2**
baz=82							
EDW2	**Edwards Air Fo**	**81.39**	**47**	⇑P	**P**	**09 35 21.2**	**+0.1**
baz=82,SNR=15							
DVTC	**Desert V Tower**	**81.47**	**50**	⇑P	**P**	**09 35 21.3**	**-0.4**
baz=82							
ISA	**Isabella**	**81.51**	**46**	⇑P	**P**	**09 35 21.7**	**-0.1**
baz=82,SNR=19							
ISA	**Isabella**	**81.51**	**46**	*e*P	**P**	**09 35 22.3**	**+0.5**
ISA				pmax	pmax		
comp=Z,29nm,0.8s,mb4.9							
ISA	**Isabella**	**81.51**	**46**	*e*P	**P**	**09 35 22.3**	**+0.6**
comp=Z,29nm,0.8s,mb4.9							
CMB	**Columbia Colle**	**81.64**	**43**	*e*P	**P**	**09 35 22.6**	**+0.2**
CMB				pmax	pmax		
comp=Z,32nm,0.9s,mb4.8							
CMB	**Columbia Colle**	**81.64**	**43**	*e*P	**P**	**09 35 22.6**	**+0.2**
comp=Z,32nm,0.9s,mb4.8							
PFO	**Pinyon Flat Ob**	**81.74**	**49**	⇑P	**P**	**09 35 22.9**	**-0.1**
baz=82							
PFO	**Pinyon Flat Ob**	**81.74**	**49**	*e*P	**P**	**09 35 21.5**	**-1.5**
PFO				pmax	pmax		
comp=Z,36nm,1.5s,mb4.7							
PFO	**Pinyon Flat Ob**	**81.74**	**49**	*e*P	**P**	**09 35 21.5**	**-1.5**
comp=Z,36nm,1.5s,mb4.7							
SWSC	**Sam W. Stewart**	**81.83**	**50**	⇑P	**P**	**09 35 24.0**	**+0.5**
baz=82							
WDC	**Whiskeytown Da**	**81.85**	**40**	*e*P	**P**	**09 35 24.0**	**+0.6**
WDC				pmax	pmax		
comp=Z,34nm,1.0s,mb4.8							
WDC	**Whiskeytown Da**	**81.85**	**40**	*e*P	**P**	**09 35 24.0**	**+0.6**
comp=Z,34nm,1.0s,mb4.8							
LRMC	**Laurel Mountai**	**81.93**	**47**	⇓P	**P**	**09 35 23.6**	**-0.3**
baz=82,SNR=5.8							
RRX	**Edison Barstow**	**82.06**	**47**	⇑P	**P**	**09 35 24.5**	**-0.1**
baz=82							
BELC	**Belle Mtn.**	**82.27**	**49**	⇓P	**P**	**09 35 26.0**	**+0.3**
baz=82,SNR=17							
MPMC	**Manual Prospec**	**82.39**	**46**	⇓P	**P**	**09 35 26.6**	**+0.4**
baz

GLA **Glamis** 82.58 50 *e*P P 09 35 24.1 -3.2
comp=Z,38nm,0.9s,mb4.9
CN2 **Changchun** 82.73 323 ⇓P P 09 35 28.3 +0.6
CN2 *e*pP pP 09 37 36.6 +3.3
CN2 *e*S S 09 44 58.3 +1.0
CN2 pmax pmax
comp=Z,30nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,6.0s
KDAK **Kodiak Island** 82.74 14 *i*P P 09 35 27.2 -0.2
BEKR **Beckwourth** 82.75 42 ⇓P P 09 35 28.0 +0.1
baz=83,SNR=12
WCN **Washoe City** 82.78 43 ⇑P P 09 35 28.8 +0.6
baz=83,SNR=13
HUMO **Hull Mountain** 82.87 38 *e*P P 09 35 29.5 +1.1
comp=Z,68nm,1.4s,mb5.0
GMRC **Granite Mounta** 82.93 48 ⇑P P 09 35 29.3 +0.4
baz=83,SNR=10.0
IRM **Iron Mountain** 82.95 49 ⇓P P 09 35 29.7 +0.7
baz=83,SNR=10
GRAC **Grapevine Rang** 83.00 46 ⇑P P 09 35 30.0 +0.8
baz=83
FURC **Furnace Creek,** 83.04 46 ⇑P P 09 35 29.3 -0.2
baz=83,SNR=8.3
TUQ **Turquoise Moun** 83.10 47 ⇑P P 09 35 30.1 +0.3
baz=83,SNR=12
SHOC **Shoshone** 83.11 47 ⇑P P 09 35 29.8 -0.1
baz=83,SNR=10
Y12C **Blythe** 83.17 50 ⇑P P 09 35 30.4 +0.2
baz=83,SNR=5.9
113A **Mohawk Valley,** 83.19 51 ⇓P P 09 35 30.6 +0.3
baz=83
NVAR **Mina Array Bea** 83.20 44 P P 09 35 30.6 +0.4
comp=Z,19nm,0.9s,mb4.6,baz=225,slow=8.1,SNR=90
NVAR pP pP 09 37 40.5 +4.6
comp=Z,0.8nm,0.7s,baz=228,slow=7.5,SNR=3.0
PSI **Prapat** 83.21 276 P P 09 35 29.6 -1.3
comp=Z,8.5nm,0.8s,mb4.3,baz=73,slow=5.6,SNR=7.6
PSI **Prapat** 83.21 276 P P 09 35 29.6 -1.3
PSI pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
KLR **Kul'dur** 83.21 330 *e*P P 09 35 26.8 -3.2
PAHR **Pah Rah Range** 83.26 42 *e*P P 09 35 30.6 +0.1
comp=Z,25nm,0.9s,mb4.8
U10A **Ash Meadows, A** 83.37 46 ⇓P P 09 35 31.5 +0.4
baz=84,SNR=9.2
LDFC **Landfair** 83.47 48 *e*P P 09 35 32.1 +0.4
Z13A **Yuma Proving G** 83.49 50 ⇑P P 09 35 32.5 +0.7
baz=84,SNR=9.1
V11A **Goodsprings** 83.66 47 ⇑P P 09 35 33.0 +0.4
baz=84,SNR=7.3
Y13A **Salome** 83.69 50 ⇑P P 09 35 33.5 +0.7
baz=84,SNR=16
PDMCI **Parker Dam,Lak** 83.73 49 ⇓P P 09 35 33.0 +0.1
baz=84,SNR=7.8
114A **Black Gap (USA** 83.81 51 ⇓P P 09 35 33.5 0.0
baz=84,SNR=5.3
MOD **Modoc** 83.99 40 *e*P P 09 35 34.0 -0.1
comp=Z,2.6nm,0.6s,mb3.9
V12A **Nelson** 83.99 48 ⇓P P 09 35 34.4 +0.2
baz=84,SNR=7.8
U11A **Corn Creek** 84.01 47 ⇑P P 09 35 34.0 -0.3
baz=84,SNR=5.5
S10A **Tonopah Range,** 84.03 45 ⇑P P 09 35 34.5 +0.2
baz=84,SNR=31
Z14A **Wintersburg** 84.08 51 P P 09 35 35.7 +1.0
baz=84,SNR=8.9
X13A **Yucca** 84.10 49 ⇑P P 09 35 35.1 +0.4
baz=84,SNR=10
K05A **Summer Lake** 84.14 39 ⇑P P 09 35 35.3 +0.6
baz=84,SNR=16
W13A **Hualapai Mount** 84.33 49 ⇓P P 09 35 36.2 +0.3
baz=85,SNR=11
R10A **Warm Springs** 84.42 45 ⇑P P 09 35 36.6 +0.4
baz=85,SNR=11
S11A **Rachel** 84.43 46 ⇓P P 09 35 36.3 0.0
baz=85,SNR=6.7
216A **Three Points,** 84.47 52 ⇑P P 09 35 36.3 -0.4
baz=85,SNR=7.2
T11A **Corn Creek, Al** 84.56 46 ⇑P P 09 35 36.9 0.0
baz=85,SNR=23
116A **Eloy** 84.57 52 ⇓P P 09 35 36.9 -0.2
baz=85,SNR=6.6
U12A **Valley of Fire** 84.59 47 ⇓P P 09 35 37.2 +0.1
baz=85,SNR=17
H04A **Detroit Lake** 84.60 37 ⇑P P 09 35 37.3 +0.3
baz=85,SNR=5.4
Z15A **Gila River Ind** 84.61 51 ⇓P P 09 35 37.6 +0.3
baz=85
F03A **Seaside** 84.63 36 ⇑P P 09 35 37.2 +0.2
baz=85
Q10A **Clear Creek Ra** 84.65 44 ⇑P P 09 35 37.3 -0.1
baz=85,SNR=9.5
V13A **Grand Canyon W** 84.66 48 ⇑P P 09 35 37.3 -0.1
baz=85,SNR=15
X14A **Yava** 84.70 50 ⇓P P 09 35 38.4 +0.8
baz=85,SNR=8.3
G04A **Mulino** 84.76 37 ⇑P P 09 35 38.3 +0.6
baz=85
SYO **Syowa Base** 84.81 193⇓*e*P P 09 35 35.0 -2.7
Y15A **Casa Rosa Ranc** 84.83 50 ⇓P P 09 35 38.8 +0.5
baz=85,SNR=9.4
217A **Green Valley** 84.83 53 ⇑P P 09 35 39.4 +1.0
baz=85,SNR=10
R11A **Troy Canyon, C** 84.92 45 ⇑P P 09 35 38.4 -0.3
baz=85,SNR=6.1
W14A **Seligman** 84.95 49 ⇓P P 09 35 39.0 +0.1
baz=85
U13A **Pakoon Wash** 84.97 48 ⇑P P 09 35 39.3 +0.4
baz=85,SNR=21
S12A **Delamar Landin** 85.01 46 P P 09 35 40.0 +0.9
baz=85,SNR=23
E03A **Lebam** 85.02 35 ⇑P P 09 35 39.6 +0.7
baz=85,SNR=5.1
BMN **Battle Mountai** 85.03 43 *e*P P 09 35 39.2 +0.1
BMN pmax pmax
comp=Z,16nm,0.9s,mb4.7
BMN **Battle Mountai** 85.03 43 *e*P P 09 35 39.2 +0.1
comp=Z,16nm,0.9s,mb4.7
P10A **Eureka** 85.06 44 ⇓P P 09 35 39.4 +0.1
baz=85
TUC **Tucson** 85.12 52 *e*P P 09 35 40.9 +1.1
TUC pmax pmax
comp=Z,20nm,0.9s,mb4.8
TUC **Tucson** 85.12 52 *e*P P 09 35 40.9 +1.1
comp=Z,20nm,0.9s,mb4.8
RSO **Redoubt South** 85.14 13 *e*P P 09 35 38.5 -0.7
Q11A **Duckwater** 85.15 45 ⇑P P 09 35 39.3 -0.5
baz=85,SNR=7.7
V14A **Boquillas Ranc** 85.15 49 ⇑P P 09 35 40.4 +0.6
baz=85,SNR=19
Z16A **Peralta Trail,** 85.17 51 ⇑P P 09 35 40.1 +0.2
baz=85,SNR=8.7
X15A **Humboldt** 85.17 50 ⇓P P 09 35 39.7 -0.3
baz=85,SNR=8.4
SVW2 **Sparrevohn** 85.17 11 *e*P P 09 35 38.4 -0.9
F04A **Amboy** 85.25 36 ⇓P P 09 35 39.9 -0.2
baz=86,SNR=5.3
318A **Bisbee** 85.28 53 ⇑P P 09 35 40.2 -0.4
baz=86,SNR=17
117A **Oracle** 85.28 52 ⇑P P 09 35 40.8 +0.2
baz=86,SNR=8.4
WVOR **Wild Horse Val** 85.31 40 *e*P P 09 35 40.3 -0.1
WVOR pmax pmax
comp=Z,16nm,0.9s,mb4.7
WVOR **Wild Horse Val** 85.31 40 *e*P P 09 35 40.3 -0.1
comp=Z,16nm,0.9s,mb4.7
T13A **Saint George** 85.33 47 ⇓P P 09 35 40.7 0.0
baz=86,SNR=15
VIPM **Ingram Point** 85.38 38 P P 09 35 41.3 +0.6
NLWA **Neilton Lookou** 85.39 34 ⇑P P 09 35 41.3 +0.6
baz=86,SNR=6.1
NLWA **Neilton Lookou** 85.39 34 *e*P P 09 35 40.8 0.0
comp=Z,18nm,0.7s,mb4.8
Y16A **Circle Bar Ran** 85.40 51 ⇓P P 09 35 41.6 +0.5
baz=86,SNR=9.9
OOW **Octopus West** 85.45 34 P P 09 35 42.2 +1.3
P11A **Circle Ranch,** 85.47 44 ⇓P P 09 35 41.7 +0.4
baz=86
218A **Dragoon** 85.50 53 ⇓P P 09 35 42.9 +1.3
baz=86,SNR=12
U14A **Mt Trumbull** 85.51 48 ⇓P P 09 35 42.1 +0.5
baz=86,SNR=25
R12A **Pony Springs,** 85.56 46 P P 09 35 42.2 +0.5
baz=86,SNR=12
S13A **Holt Ranch, En** 85.66 47 ⇑P P 09 35 42.4 +0.2
baz=86,SNR=13
X16A **Lo Mia Camp, P** 85.70 50 ⇓P P 09 35 42.8 +0.3
baz=86,SNR=11
I07A **Izee** 85.76 39 ⇓P P 09 35 43.1 +0.6
baz=86,SNR=22
Y17A **Roosevelt** 85.77 51 ⇑P P 09 35 43.5 +0.6
baz=86
ENH **Enshi** 85.77 305 *e*P P 09 35 43.6 +0.7
comp=Z,39nm,1.0s,mb5.0
319A **Douglas** 85.78 54 ⇑P P 09 35 44.0 +1.0
baz=86,SNR=21
Q12A **Willow Creek R** 85.80 45 ⇑P P 09 35 42.4 -0.5
baz=86,SNR=10
G06A **Carlson Farm,** 85.81 37 ⇑P P 09 35 42.5 -0.2
baz=86
Z17A **San Carlos Hig** 85.84 52 ⇑P P 09 35 42.9 -0.3
baz=86
O11A **Cowboy Ranch,** 85.85 44 ⇓P P 09 35 43.1 0.0
baz=86,SNR=16
118A **Homack Ranch,** 85.88 52 ⇓P P 09 35 44.2 +0.7
baz=86,SNR=11
V15A **Kaibab Nationa** 85.89 49 ⇓P P 09 35 43.8 +0.4
baz=86,SNR=15
R13A **O'Grain Ranch,** 85.90 46 P P 09 35 43.2 -0.1
baz=86,SNR=6.1
J08A **Circle Bar Ran** 85.94 40 ⇑P P 09 35 43.0 -0.4
baz=86
CCUT **Cedar City** 85.98 47 *e*P P 09 35 44.6 +0.9
comp=Z,12nm,1.0s,mb4.5
W16A **Flagstaff** 85.98 50 ⇑P P 09 35 44.3 +0.5
baz=86,SNR=6.8
P12A **McGill** 85.98 45 ⇑P P 09 35 43.8 +0.1
baz=86,SNR=9.3
BJI **Beijing** 86.05 316 P P 09 35 44.8 +0.8
BJI pP pP 09 37 51.5 +0.6
BJI sP sP 09 38 51.1 +0.8
BJI PP PP 09 39 16.8 +0.9
BJI S S 09 45 30.8 +1.2
BJI sS sS 09 49 18.0 +2.3
BJI pmax pmax
comp=Z,25nm,0.7s,mb5.0
M10A **I.L. Ranch, Tu** 86.07 42 ⇓P P 09 35 44.5 +0.4
baz=86,SNR=19
LON **Longmire** 86.08 36 *e*P P 09 35 44.0 0.0
LON pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LON **Longmire** 86.08 36 *e*P P 09 35 44.0 0.0
comp=Z,9.3nm,0.8s,mb4.5
219A **White Tail Can** 86.09 53 ⇑P P 09 35 45.2 +0.8
baz=86,SNR=11
X17A **Forest Lakes** 86.11 51 ⇓P P 09 35 45.4 +0.9
baz=86,SNR=6.8
U15A **North Rim** 86.13 48 ⇑P P 09 35 45.3 +0.8
baz=86,SNR=37
WPW **White Pass** 86.19 36 P P 09 35 45.0 +0.5
GYA **Guiyang** 86.21 300 P P 09 35 44.8 -0.3
GYA pP pP 09 37 52.9 +0.8
GYA sP sP 09 38 52.5 +1.1
GYA PP PP 09 39 20.0 +2.5
GYA SKS 09 45 14.8
GYA S S 09 45 39.6 +7.9
GYA sS sS 09 49 18.0 +0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
GYA pmax pmax
comp=Z,110nm,5.8s
S14A **Cedar City** 86.22 47 ⇑P P 09 35 45.6 +0.7
baz=86,SNR=5.9
D05A **Enumclaw** 86.26 35 ⇓P P 09 35 45.9 +1.1
baz=86,SNR=11
Q13A **Wheeler Ranch,** 86.28 45 ⇓P P 09 35 45.1 -0.1
baz=86,SNR=9.8
WUAZ **Wupatki** 86.30 49 ⇓P P 09 35 45.7 +0.4
baz=86,SNR=7.6
WUAZ **Wupatki** 86.30 49 *e*P P 09 35 46.0 +0.7
comp=Z,16nm,1.0s,mb4.6
320A **Kipp Ranch, An** 86.32 54 ⇑P P 09 35 46.7 +1.2
baz=86,SNR=15
J09A **Fry Pan Ranch,** 86.36 40 ⇑P P 09 35 45.4 0.0
baz=87,SNR=33
T15A **Red Dirt Ranch** 86.37 48 ⇓P P 09 35 45.7 +0.1
baz=87,SNR=21
PGC **Sidney** 86.42 33 *e*P P 09 35 45.7 +0.2
comp=Z,2.9nm,1.2s,mb3.8
L10A **Juniper Basin** 86.42 42 ⇑P P 09 35 46.0 +0.3
baz=87,SNR=33
ELK **Elko** 86.46 43 *e*P P 09 35 46.1 +0.2
ELK pmax pmax
comp=Z,24nm,0.3s
ELK **Elko** 86.46 43 *e*P P 09 35 46.1 +0.2
comp=Z,24nm,0.3s,mb5.3
M11A **Holland Ranch,** 86.49 43 ⇓P P 09 35 46.4 +0.4
baz=87,SNR=16
H08A **Prairie City** 86.50 39 ⇑P P 09 35 46.3 +0.3
baz=87,SNR=10
O12A **Currie** 86.51 44 ⇑P P 09 35 45.5 -0.7
baz=87,SNR=11
P13A **Bates Ranch, G** 86.55 45 ⇑P P 09 35 46.6 +0.2
baz=87,SNR=9.8
K10A **MacKenzie Ranc** 86.57 41 ⇑P P 09 35 46.7 +0.3
baz=87,SNR=30
220A **Playas Peak, P** 86.59 54 ⇓P P 09 35 47.5 +0.7
baz=87,SNR=9.0
N12A **Clover Valley,** 86.64 43 ⇓P P 09 35 46.5 -0.3
baz=87,SNR=18
N12A **Clover Valley,** 86.64 43 *e*P P 09 35 47.1 +0.3
comp=Z,28nm,0.5s,mb5.2
S15A **Panguitch** 86.72 47 ⇓P P 09 35 48.5 +1.3
baz=87,SNR=9.6
I09A **Lost Marbles R** 86.73 40 ⇓P P 09 35 47.1 0.0
baz=87,SNR=14
V17A **Tonalea, Kykot** 86.76 50 ⇓P P 09 35 47.0 -0.5
baz=87,SNR=14
G08A **Pilot Rock** 86.79 38 ⇓P P 09 35 47.8 +0.4
baz=87,SNR=19
Q14A **Sevier Lake (B** 86.79 46 ⇓P P 09 35 46.1 -1.4
baz=87,SNR=19
120A **U Bar Ranch, L** 86.82 53 P P 09 35 49.1 +1.2
baz=87,SNR=7.2
X18A **Snowflake** 86.82 51 ⇓P P 09 35 48.1 +0.3
baz=87,SNR=11
JCW **Jim Creek** 86.92 34 *e*P P 09 35 48.3 +0.4
L11A **Cat Creek Ranc** 86.92 42 ⇓P P 09 35 48.5 +0.4
baz=87,SNR=23
PMR **Palmer** 86.94 14 *e*P P 09 35 47.3 -0.4
PMR pmax pmax
comp=Z,17nm,0.4s,mb5.1
PMR **Palmer** 86.94 14 *e*P P 09 35 47.3 -0.4
comp=Z,17nm,0.4s,mb5.1
T16A **Glen Canyon Da** 86.95 48 ⇑P P 09 35 48.7 +0.3
baz=87,SNR=8.9
TBM **Table Mountain** 87.00 36 P P 09 35 48.8 +0.5
J10A **Berg Farm, Mel** 87.00 40 ⇑P P 09 35 48.5 +0.1
baz=87,SNR=8.3
VNA2 **Neumayer--Watz** 87.03 177 *e*P P 09 35 46.2 -2.0
M12A **Wells** 87.03 43 ⇑P P 09 35 48.5 -0.1
baz=87,SNR=13
Y19A **Nutrioso** 87.05 52 ⇑P P 09 35 49.3 +0.5
baz=87,SNR=13
R15A **Junction** 87.05 47 ⇓P P 09 35 49.1 +0.3
baz=87,SNR=6.8
K11A **Parker Ranch,** 87.08 41 ⇓P P 09 35 49.1 +0.3
baz=87,SNR=24
RSW **Rattlesnake Hi** 87.09 37 *e*P P 09 35 49.5 +0.8
HAWA **Hanford** 87.12 37 *e*P P 09 35 49.5 +0.6
comp=Z,44nm,0.9s,mb5.2
Z20A **Nine Sixteen R** 87.12 53 ⇑P P 09 35 49.8 +0.6
baz=87,SNR=5.9
H09A **Durkee** 87.17 39 ⇑P P 09 35 49.5 +0.3
baz=87,SNR=42
F08A **Pendleton** 87.19 38 ⇑P P 09 35 49.5 +0.3
baz=88
X19A **St. Johns** 87.25 51 ⇑P P 09 35 50.1 +0.3
baz=88,SNR=6.5
VNA1 **Neumayer--Stat** 87.26 177 *e*P P 09 35 47.9 -1.4
MSU **Marysvale** 87.28 46 *e*P P 09 35 50.8 +1.0
WIW **Wooded Island** 87.28 37 P P 09 35 50.4 +0.7
RPW **Rockport** 87.29 34 *e*P P 09 35 49.7 0.0
A05A **Maple Falls** 87.34 34 ⇓P P 09 35 49.8 -0.1
baz=88
DIV **Divide** 87.34 16 *e*P P 09 35 48.7 -0.8
comp=Z,61nm,1.1s,mb5.2
B06A **Marblemount** 87.35 34 ⇓P P 09 35 49.5 -0.4
baz=88,SNR=5.2
I10A **Payette** 87.35 40 ⇓P P 09 35 50.6 +0.6
baz=88,SNR=11
L12A **House Creek Ra** 87.36 42 ⇓P P 09 35 50.4 +0.2
baz=88,SNR=20
Q15A **Fillmore** 87.39 46 ⇑P P 09 35 50.1 -0.3
baz=88
ETW **Entiat** 87.41 36 *e*P P 09 35 50.9 +0.7
V18A **Ganado** 87.42 50 ⇑P P 09 35 50.8 +0.2
baz=88,SNR=11
T17A **Navajo Res., N** 87.44 48 ⇓P P 09 35 49.8 -0.9
baz=88,SNR=16
121A **Cookes Peak, D** 87.45 53 ⇑P P 09 35 51.2 +0.4
baz=88,SNR=7.5
G09A **Cove** 87.46 39 ⇓P P 09 35 49.7 -0.8
baz=88,SNR=19
M13A **Montello** 87.47 43 ⇓P P 09 35 50.0 -0.7
baz=88,SNR=32
M13A **Montello** 87.47 43 *e*P P 09 35 50.9 +0.2
comp=Z,41nm,1.3s,mb5.0
BMRM **Bremner River** 87.50 16 *e*P P 09 35 49.9 -0.4
comp=Z,36nm,0.8s,mb5.2
MFID **Camas Ranch** 87.56 41 ⇓P P 09 35 51.2 +0.1
baz=88,SNR=15
R16A **Teasdale** 87.63 47 ⇓P P 09 35 52.2 +0.7
baz=88,SNR=14
F09A **S2 Ranch, Elgi** 87.63 38 ⇑P P 09 35 51.2 -0.1
baz=88,SNR=5.6
SEY **Seymchan** 87.64 348*d i*P P 09 35 50.8 -0.1
Y20A **Horse Springs,** 87.66 52 ⇓P P 09 35 52.2 +0.5
baz=88,SNR=8.4
WTV **Waterville** 87.67 36 P P 09 35 51.7 +0.3
H10A **Noah's Angus R** 87.67 39 ⇑P P 09 35 50.9 -0.6
baz=88,SNR=30
K12A **Draper Farm, C** 87.70 42 ⇓P P 09 35 51.9 +0.2
baz=88,SNR=7.2
DUG **Dugway** 87.73 45 ⇑P P 09 35 51.6 -0.3
baz=88
DUG **Dugway** 87.73 45 *e*P P 09 35 51.9 0.0
DUG pmax pmax
comp=Z,17nm,1.6s,mb4.5
DUG **Dugway** 87.73 45 *e*P P 09 35 51.9 0.0
comp=Z,17nm,1.6s,mb4.5
P15A **Leamington** 87.75 46 ⇓P P 09 35 51.9 -0.1
baz=88,SNR=5.2
I11A **Placerville** 87.76 40 ⇑P P 09 35 52.0 0.0
baz=88,SNR=42
S17A **Black Ridge (B** 87.77 48 ⇑P P 09 35 51.8 -0.3
baz=88,SNR=5.5
G10A **Bishop Farm, J** 87.85 39 ⇓P P 09 35 51.8 -0.5
baz=88,SNR=18
D08A **Wollman Farm,** 87.85 37 ⇓P P 09 35 52.4 +0.1
baz=88,SNR=5.3
PNL **Peninsula** 87.89 19 *e*P P 09 35 51.9 -0.2
comp=Z,44nm,0.9s,mb5.2
J12A **Stokes Ranch,** 87.92 41 ⇓P P 09 35 53.1 +0.4
baz=88,SNR=58
L13A **Double Diamond** 88.00 43 ⇓P P 09 35 53.4 +0.3
baz=88,SNR=8.5
M14A **Sheep Mountain** 88.07 43 ⇑P P 09 35 53.4 0.0
baz=88,SNR=22
NLU **North Lily Min** 88.09 45 *e*P P 09 35 53.4 -0.2
comp=Z,23nm,1.6s,mb4.7
122A **Conniff Cattle** 88.11 54 ⇑P P 09 35 55.4 +1.5
baz=88,SNR=6.7
T18A **Mexican Hat** 88.16 49 ⇑P P 09 35 54.1 +0.1
baz=88
Q16A **Castle Valley** 88.16 47 ⇓P P 09 35 54.5 +0.5
baz=88,SNR=20
OD2 **Odessa Site #2** 88.16 36 *e*P P 09 35 53.6 -0.1
H11A **Donnelly** 88.17 40 ⇑P P 09 35 53.9 +0.1
baz=88,SNR=61
F10A **Beach Ranch, E** 88.17 38 P P 09 35 53.8 0.0
baz=88,SNR=19
P16A **Fountain Green** 88.18 46 ⇓P P 09 35 53.9 -0.1
baz=88
D09A **Jones Farm, Ri** 88.19 37 ⇑P P 09 35 54.4 +0.5
baz=88
I12A **Atlanta** 88.19 41 ⇓P P 09 35 54.4 +0.4
baz=88,SNR=29
U19A **Dine' College,** 88.21 50 ⇓P P 09 35 54.5 +0.2
baz=88,SNR=14
K13A **Stover Farm, H** 88.22 42 ⇓P P 09 35 54.7 +0.6
baz=88,SNR=30
R17A **Hanksville Air** 88.22 47 ⇓P P 09 35 54.1 -0.2
baz=88,SNR=14
Y21A **Point of Rocks** 88.22 52 ⇑P P 09 35 55.0 +0.7
baz=88,SNR=23
A07A **Ashnola River,** 88.25 34 ⇑P P 09 35 54.3 +0.2
baz=88,SNR=15
KTH **Kantishna Hill** 88.31 12 *e*P P 09 35 52.2 -1.8
comp=Z,38nm,0.9s,mb5.1
TMUT **Trail Mountain** 88.33 46 *e*P P 09 35 55.7 +0.9
comp=Z,33nm,1.0s,mb5.0
X21A **Alamocita Cree** 88.35 52 ⇑P P 09 35 55.2 +0.2
baz=89,SNR=13
TRF **Thorofare Moun** 88.35 13 *e*P P 09 35 53.1 -1.2
comp=Z,63nm,0.7s,mb5.5
B08A **Colville Reser** 88.39 35 ⇑P P 09 35 54.2 -0.6
baz=89,SNR=12
Z22A **Elephant Butte** 88.39 53 ⇑P P 09 35 55.3 +0.1
baz=89,SNR=27
G11A **Walters Elk Ra** 88.41 39 ⇑P P 09 35 54.6 -0.4
baz=89,SNR=32
MPU **Maple Canyon** 88.41 45 *e*P P 09 35 56.0 +0.9
comp=Z,16nm,1.0s,mb4.7
L14A **Malta** 88.42 43 ⇑P P 09 35 55.3 +0.2
baz=89,SNR=11
V20A **Brimhall** 88.50 50 ⇓P P 09 35 54.4 -1.2
baz=89
HLID **Hailey** 88.50 41 ⇑P P 09 35 55.6 +0.1
baz=89,SNR=39
HLID **Hailey** 88.50 41 *e*P P 09 35 56.2 +0.7
comp=Z,17nm,0.8s,mb4.9
E10A **Myers Farm, Un** 88.53 38 ⇓P P 09 35 55.9 +0.4
baz=89
J13A **Cove Ranch, Pi** 88.56 42 ⇑P P 09 35 56.5 +0.8
baz=89,SNR=65
HVU **Hansel Valley** 88.58 43 *e*P P 09 35 56.0 +0.2
HVU pmax pmax
comp=Z,21nm,0.8s,mb5.0
HVU **Hansel Valley** 88.58 43 *e*P P 09 35 56.0 +0.1
comp=Z,21nm,0.8s,mb5.0
O16A **Springville** 88.59 45 ⇑P P 09 35 55.9 0.0
baz=89,SNR=30
T19A **Beclabito** 88.60 49 ⇑P P 09 35 56.8 +0.8
baz=89,SNR=5.7
C09A **Chrisman Ranch** 88.64 36 ⇓P P 09 35 55.9 0.0
baz=89
324A **Moseley Ranch,** 88.68 55 P P 09 35 57.0 +0.5
baz=89,SNR=25
SRU **San Rafael** 88.69 47 ⇓P P 09 35 56.4 0.0
baz=89,SNR=32
SRU **San Rafael** 88.69 47 *e*P P 09 35 56.4 0.0
SRU pmax pmax
comp=Z,28nm,0.9s,mb5.1
SRU **San Rafael** 88.69 47 *e*P P 09 35 56.4 0.0
comp=Z,28nm,0.9s,mb5.1
Y22A **Socorro** 88.71 53 ⇓P P 09 35 56.7 +0.1
baz=89,SNR=19
K14A **Jones Ranch, D** 88.73 43 P P 09 35 57.1 +0.6
baz=89,SNR=30
P17A **Butcher Ranch,** 88.73 46 ⇓P P 09 35 55.4 -1.2
baz=89
U20A **Newcomb** 88.74 50 ⇓P P 09 35 56.0 -0.7
baz=89
F11A **Grangeville** 88.75 39 ⇑P P 09 35 54.8 -1.7
baz=89,SNR=8.0
R18A **Canyonlands Na** 88.76 47 ⇑P P 09 35 56.3 -0.4
baz=89,SNR=15
425A **Indio Mountain** 88.76 56 ⇓P P 09 35 57.5 +0.5
baz=89,SNR=15
D10A **Wagner Farm, O** 88.77 37 ⇑P P 09 35 56.0 -0.5
baz=89,SNR=6.5
H12A **Diamond D Ranc** 88.77 40 ⇑P P 09 35 56.7 +0.1
baz=89,SNR=36
BPAW **Bear Paw Mtn.** 88.80 12 *e*P P 09 35 54.2 -2.0
comp=Z,6.2nm,0.7s,mb4.5
LAZ **Ladron** 88.80 52 *e*P P 09 35 57.4 +0.3
comp=Z,7.7nm,1.2s,mb4.4
G12A **Big Creek, Yel** 88.81 40 ⇓P P 09 35 56.8 0.0
baz=89
LENM **Lemitar** 88.81 52 *e*P P 09 35 57.5 +0.4
KMI **Kunming** 88.81 298 P P 09 35 58.5 +1.2
KMI pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
JLU **Jordanelle** 88.83 45 *e*P P 09 35 57.4 +0.4
comp=Z,21nm,1.3s,mb4.8
DAU **Daniels Canyon** 88.86 45 *e*P P 09 35 57.5 +0.3
MNTX **Cornudas Mount** 88.87 55 *e*P P 09 35 57.7 +0.2
comp=Z,18nm,0.8s,mb4.9
MNTX *e*pP pP 09 38 09.2 +3.9
I13A **Wildhorse Cree** 88.87 41 ⇓P P 09 35 57.8 +0.7
baz=89,SNR=9.3

626A Big Bend Ranch 88.88 58 ⇓P P 09 35 58.1 +0.6
baz=89,SNR=16
MCK McKinley 88.88 13 eP P 09 35 54.9 -1.8
MCK pmax pmax
comp=Z,10μm,1.2s
MCK McKinley 88.88 13 eP P 09 35 54.9 -1.8
comp=Z,18μm,1.2s
224A Corundas Mount 88.93 55 ⇓P P 09 35 58.1 +0.4
baz=89,SNR=24
X22A Bernardo 88.94 52 ⇑P P 09 35 58.5 +0.8
baz=89
Z23A Rita Site, Whi 88.94 53 ⇑P P 09 35 58.0 +0.3
baz=89,SNR=8.4
L15A Malad City 88.94 43 ⇓P P 09 35 57.5 0.0
baz=89,SNR=23
Q18A Rafter H Ranch 88.95 47 ⇑P P 09 35 57.3 -0.4
baz=89,SNR=12
S19A Harvey Farm, M 88.97 48 ⇑P P 09 35 57.8 0.0
baz=89,SNR=9.4
E11A Bogner Ranch, 88.97 38 ⇑P P 09 35 57.3 -0.3
baz=89,SNR=5.5
N16A Rees Ranch, Co 88.98 45 ⇓P P 09 35 58.3 +0.5
baz=89,SNR=15
PAX Paxson 88.99 15 eP P 09 35 56.0 -1.2
PAX pmax pmax
comp=Z,13nm,1.2s,mb4.6
PAX Paxson 88.99 15 eP P 09 35 56.0 -1.2
comp=Z,13nm,1.2s,mb4.6
SKAG Skagway 89.01 21 eP P 09 35 58.3 +0.9
comp=Z,15nm,1.0s,mb4.8
325A Bean Ranch, Si 89.04 56 ⇑P P 09 35 57.8 -0.4
baz=89,SNR=14
BNM Barren Site 89.06 52 eP P 09 35 58.4 +0.2
comp=Z,12nm,1.2s,mb4.6
B09A Rice 89.07 36 ⇑P P 09 35 57.5 -0.4
baz=89,SNR=6.6
M16A Huntsville 89.08 44 ⇑P P 09 35 57.9 -0.2
baz=89,SNR=9.6
O17A Robinson Place 89.09 46 ⇓P P 09 35 58.9 +0.6
baz=89,SNR=82
LPM Los Pinos Moun 89.13 52 eP P 09 35 58.9 +0.4
526A Mary Lane Ranc 89.14 57 ⇑P P 09 35 59.2 +0.5
baz=89,SNR=15
P18A Preston Nutter 89.14 46 ⇓P P 09 35 58.6 +0.1
baz=89
H13A Challis 89.14 41 ⇑P P 09 35 58.6 +0.2
baz=89,SNR=27
R19A Curley Farm, L 89.15 48 P P 09 35 58.5 -0.1
baz=89,SNR=16
TXAR Lajitas Array 89.15 58 P P 09 35 59.5 +0.7
comp=Z,14nm,0.9s,mb4.8,baz=214,slow=5.9,SNR=112
TXAR pP pP 09 38 09.3 +2.6
comp=Z,0.9nm,1.0s,baz=215,slow=5.3,SNR=3.1
TXAR Lajitas Array 89.15 58 P P 09 35 59.5 +0.7
TXAR *PP pP 09 38 09.4 +2.7
TXAR pmax pmax
comp=Z,14nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
MVCO Mesa Verde 89.15 49 ⇑P P 09 35 57.7 -0.9
baz=89
F12A Elk City 89.20 39 ⇓P P 09 35 58.1 -0.5
baz=89,SNR=22
K15A Arbon 89.21 43 ⇑P P 09 35 58.7 -0.1
baz=89,SNR=27
HWUT Hardware Ranch 89.27 44 eP P 09 35 58.9 -0.1
comp=Z,15nm,0.8s,mb4.9
124A Stringfield Ra 89.27 54 ⇓P P 09 35 59.1 -0.1
baz=90,SNR=11
I14A Mackay 89.29 41 ⇓P P 09 35 59.7 +0.6
baz=90,SNR=32
D11A Klaveano Farm, 89.29 38 ⇑P P 09 35 57.8 -1.2
baz=90
W22A Albuquerque 89.31 52 ⇑P P 09 36 00.2 +0.9
baz=90
CM31 Chiang Mai Arr 89.31 290 eP P 09 35 59.4 -0.3
CMAR Chiang Mai Arr 89.31 290 P P 09 36 01.4 +1.6
comp=Z,13nm,0.8s,mb4.8,baz=134,slow=3.2,SNR=69
CMAR PP PP 09 39 37.4 -4.6
comp=Z,0.6nm,0.3s,baz=122,slow=8.6,SNR=3.1
CMAR Chiang Mai Arr 89.31 290 P P 09 36 01.4 +1.7
CMAR 09 39 37.4
CMAR pmax pmax
comp=Z,13nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.4s
E12A Beaver Dam Sad 89.38 38 ⇑P P 09 35 58.9 -0.5
baz=90
U21A Nageezi 89.38 50 ⇓P P 09 35 59.6 -0.1
baz=90
Y23A Lovelace Mesa, 89.38 53 ⇑P P 09 35 59.6 -0.1
baz=90,SNR=13
HYT Haines Junctio 89.38 19 eP P 09 36 00.5 +1.4
MENT Mentasta 89.39 16 eP P 09 35 58.7 -0.4
N17A Moffit Pass 89.41 45 ⇓P P 09 35 59.7 0.0
baz=90
627A Terlingua Ranc 89.42 58 ⇑P P 09 35 59.7 -0.4
baz=90,SNR=19
G13A Cobalt 89.44 40 ⇑P P 09 35 59.8 +0.1
baz=90,SNR=9.3
PV04 Paradox Valley 89.44 48 eP P 09 35 59.7 -0.2
426A McDonald Obser 89.45 57 ⇑P P 09 36 00.6 +0.5
baz=90,SNR=19
CHTO Chiang Mai 89.45 290 eP P 09 36 01.7 +1.3
CHTO pmax pmax
comp=Z,20nm,0.8s,mb5.0
CHTO Chiang Mai 89.45 290 eP P 09 36 01.7 +1.3
comp=Z,20nm,0.8s,mb5.0
Q19A Hogan Spring (89.47 47 ⇑P P 09 35 59.8 -0.2
baz=90,SNR=18
HHC Hu-ho-hao-te 89.47 315 ⇑P P 09 36 01.8 +1.8
HHC pP pP 09 38 12.5 +4.4
HHC sP sP 09 39 11.1 +4.1
HHC PP PP 09 39 45.8 +3.0
HHC SKS 09 45 34.8
HHC S S 09 45 59.3 -1.8
HHC sS sS 09 49 51.8 +2.2
HHC SS SS 09 52 20.5 +4.7
HHC pmax pmax
comp=Z,27nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,86nm,6.1s
527A Woodward Ranch 89.55 57 ⇑P P 09 36 00.4 -0.2
baz=90,SNR=18
PV01 Paradox Valley 89.55 48 eP P 09 36 00.2 -0.2
comp=Z,690nm,0.9s
ANMO Albuquerque 89.55 52 eP P 09 36 00.1 -0.4
ANMO pmax pmax
comp=Z,13nm,0.9s
ANMO Albuquerque 89.55 52 eP P 09 36 00.1 -0.4
comp=Z,13nm,0.9s,mb4.8
L16A Fish Haven 89.56 44 P P 09 36 00.6 +0.2
baz=90,SNR=40
O18A Roosevelt 89.61 46 ⇑P P 09 36 01.0 +0.3
baz=90,SNR=11
Z24A Sheppen Canyo 89.62 54 ⇓P P 09 36 00.6 -0.3
baz=90
V22A San Miguel Ran 89.67 51 ⇑P P 09 36 01.2 +0.1
baz=90
H14A Leadore 89.70 41 ⇓P P 09 36 01.2 +0.3
baz=90,SNR=19
R20A Redvale 89.70 48 ⇓P P 09 36 00.6 -0.6
baz=90
F13A Darby 89.75 39 ⇓P P 09 36 00.6 -0.6
baz=90,SNR=13
326A Caldwell Ranch 89.77 56 ⇓P P 09 36 01.3 -0.3
baz=90,SNR=5.5
M17A Scullys Gap (B 89.78 45 ⇓P P 09 36 01.1 -0.3
baz=90,SNR=10.0
628A Black Gap, Mar 89.83 58 ⇑P P 09 36 01.8 -0.2
baz=90
Y24A Capitan 89.83 53 ⇑P P 09 36 01.9 0.0
baz=90,SNR=39
125A Gardner Draw, 89.85 55 ⇓P P 09 36 01.5 -0.5
baz=90,SNR=12
D12A Red Ives Fores 89.85 38 ⇓P P 09 36 01.0 -0.6
baz=90
S21A Coal Bank Pass 89.86 49 ⇓P P 09 36 00.7 -1.2
baz=90,SNR=6.6
GDL2 Guadalupe Moun 89.87 55 eP P 09 36 02.6 +0.6
W23A Werner Place, 89.87 52 ⇑P P 09 36 01.2 -0.8
baz=90,SNR=5.1
K16A Soda Springs 89.88 43 ⇓P P 09 36 02.0 +0.2
baz=90,SNR=26
I15A Monteview 89.92 42 ⇑P P 09 36 01.4 -0.6
baz=90,SNR=11
U22A Llaves 89.92 50 ⇓P P 09 36 01.0 -1.2
baz=90
L17A Cokeville 89.96 44 ⇑P P 09 36 01.9 -0.4
baz=90,SNR=7.8
G14A Jackson 89.98 40 ⇓P P 09 36 02.8 +0.5
baz=90
P19A Cripple Cowboy 89.99 47 ⇑P P 09 36 02.7 +0.3
baz=90,SNR=15
226A Malaga, Loving 90.01 55 ⇑P P 09 36 01.9 -0.8
baz=90,SNR=16
427A Hayter Ranch, 90.01 57 ⇑P P 09 36 03.1 +0.4
baz=90,SNR=48
B11A Sandpoint 90.05 36 ⇓P P 09 36 02.6 +0.2
baz=90
Z25A Roswell 90.08 54 ⇑P P 09 36 03.1 +0.1
baz=90,SNR=12
J16A Bone 90.09 43 ⇑P P 09 36 03.3 +0.5
baz=90
COLA College 90.11 13 eP P 09 36 00.4 -2.0
COLA pmax pmax
comp=Z,13nm,0.6s,mb4.9
COLA College 90.11 13 eP P 09 36 00.3 -2.0
comp=Z,13nm,0.6s,mb4.9
COLA epP pP 09 38 12.2 +1.6
V23A Ortiz Mt. (NFS 90.11 51 ⇓P P 09 36 03.6 +0.5
baz=90
DLBC Dease Lake 90.12 24 eP P 09 36 02.5 0.0
Q20A Ridgley Place, 90.13 48 ⇓P P 09 36 02.5 -0.6
baz=90,SNR=8.3
MCMT McKenzie Canyo 90.13 41 eP P 09 36 03.5 +0.5
comp=Z,7.8nm,1.1s,mb4.5
H15A Lima 90.14 41 ⇑P P 09 36 02.9 -0.1
baz=90,SNR=18
M18A Lyman 90.15 45 ⇑P P 09 36 03.1 -0.1
baz=90,SNR=31
AHID Auburn Hatcher 90.15 43 eP P 09 36 03.5 +0.4
comp=Z,20nm,0.8s,mb5.0
N18A Larsen Ranch, 90.18 45 P P 09 36 03.4 +0.1
baz=90,SNR=17
T22A Edith 90.19 50 ⇓P P 09 36 02.6 -0.7
baz=90
E13A Victor 90.19 39 ⇓P P 09 36 02.3 -0.9
baz=90
528A Cox Ranch, San 90.19 57 ⇓P P 09 36 02.1 -1.5
baz=90,SNR=10.0
O19A Miners Draw (B 90.22 46 ⇓P P 09 36 03.2 -0.3
baz=90,SNR=15
K17A Gardner Place, 90.26 43 ⇑P P 09 36 03.8 +0.2
baz=90,SNR=18
CLNB Carlsbad 90.27 55 eP P 09 36 03.8 -0.1
comp=Z,2.1nm,0.8s,mb4.0
RRI2 Red Ridge 90.31 43 eP P 09 36 04.4 +0.6
comp=Z,23nm,0.8s,mb5.1
126A Clayton Basin, 90.33 55 ⇑P P 09 36 03.7 -0.4
baz=90
F14A Wisdom 90.34 40 ⇑P P 09 36 03.4 -0.5
baz=91,SNR=6.4
A11A Hall Mountain, 90.35 36 ⇑P P 09 36 03.6 -0.2
baz=91
R21A Cimarron 90.36 48 ⇓P P 09 36 04.9 +0.7
baz=91,SNR=9.1
U23A El Rito 90.38 51 ⇓P P 09 36 04.2 -0.1
baz=91
Y25A Mesa, Roswell 90.39 53 ⇓P P 09 36 04.0 -0.4
baz=91,SNR=13
L18A Fontenelle, Gr 90.41 44 ⇑P P 09 36 04.0 -0.3
baz=91,SNR=8.0
W24A Lazy 6 Ranch, 90.44 52 ⇑P P 09 36 03.9 -0.6
baz=91,SNR=11
CD2 Chengdu 90.46 303 P P 09 36 05.1 +0.3
CD2 pP pP 09 38 15.8 +2.7
CD2 sP sP 09 39 14.6 +2.6
CD2 PP PP 09 39 53.8 +3.0
CD2 SKS 09 45 39.3
CD2 S S 09 46 08.5 -1.9
CD2 sS sS 09 50 00.3 +0.7
CD2 SS SS 09 52 33.3 +2.9
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,80nm,6.4s
N19A John Jarvie Ra 90.47 46 ⇑P P 09 36 04.3 -0.3
baz=91,SNR=9.8
I16A Newdale 90.47 42 ⇓P P 09 36 05.4 +0.8
baz=91,SNR=17
B12A Libby 90.50 37 ⇓P P 09 36 04.4 -0.2
baz=91
BILL Bilibino 90.52 355 eP P 09 36 04.0 -0.2
BILL e*PP pP 09 38 12.3 -0.2
BILL eS SKSac 09 45 38.5 -0.4
BILL pmax pmax
comp=Z,19nm,0.8s,mb5.1
BILL Bilibino 90.52 355 eP P 09 36 03.8 -0.4
comp=Z,19nm,0.9s,mb5.0
428A Kincaid Ranch, 90.52 57 ⇓P P 09 36 05.3 +0.2
baz=91,SNR=6.9
DCID1 Drake Creek 90.52 42 eP P 09 36 05.2 +0.5
comp=Z,16nm,1.0s,mb4.9
G15A Dillon 90.52 41 ⇑P P 09 36 04.6 -0.1
baz=91,SNR=15
MSO Missoula 90.54 39 eP P 09 36 04.7 -0.1
comp=Z,2.3nm,1.0s,mb4.1
DLMT Dillon 90.56 40 eP P 09 36 05.2 +0.2
comp=Z,5.2nm,0.8s,mb4.5
Q21A Lamborn Mesa, 90.57 48 ⇑P P 09 36 04.8 -0.3
baz=91
E14A Clinton 90.58 39 ⇑P P 09 36 04.5 -0.5
baz=91
CPRX Cap Rock 90.61 54 eP P 09 36 05.5 +0.1
comp=Z,8.8nm,0.9s,mb4.7
BSMT Bassoo Peak 90.61 38 eP P 09 36 04.1 -1.0
REDW Red Top Meadow 90.61 43 eP P 09 36 05.6 +0.4
comp=Z,17nm,0.9s,mb5.0
Z26A Caprock 90.63 54 ⇑P P 09 36 04.5 -1.1
baz=91,SNR=20
X25A Clemmons Ranch 90.68 53 ⇓P P 09 36 05.7 0.0
baz=91
J17A Brown Place, J 90.70 43 ⇑P P 09 36 06.0 +0.4
baz=91,SNR=23
328A Wristen Ranch, 90.70 56 P P 09 36 05.7 -0.2
baz=91,SNR=7.3
SNOW Snow King Moun 90.72 43 eP P 09 36 05.5 -0.2
comp=Z,19nm,0.9s,mb5.0
O20A White River Ci 90.73 47 ⇑P P 09 36 05.4 -0.4
baz=91,SNR=12
K18A Toltan Ranch, 90.76 44 ⇑P P 09 36 05.4 -0.6
baz=91
M19A Rock Springs 90.78 45 ⇑P P 09 36 06.0 0.0
baz=91,SNR=9.8
IMW Indian Meadow 90.83 42 eP P 09 36 06.7 +0.5
comp=Z,12nm,0.9s,mb4.8
127A Arkansas Junct 90.84 55 ⇓P P 09 36 05.8 -0.8
baz=91,SNR=6.4
R22A Saguache, Gunn 90.85 49 ⇑P P 09 36 06.9 +0.4
baz=91
F15A Butte 90.87 40 P P 09 36 06.2 -0.1
baz=91,SNR=5.2
LRM Limekiln Ridge 90.89 40 eP P 09 36 06.7 +0.2
LOHW Long Hollow 90.89 43 eP P 09 36 06.8 +0.3
comp=Z,16nm,1.4s,mb4.8
D14A Greenough 90.93 39 ⇑P P 09 36 04.7 -1.8
baz=91,SNR=7.1
L19A Farson 90.94 44 ⇓P P 09 36 06.5 -0.2
baz=91,SNR=26
G16A Moss Hill, Enn 90.97 41 ⇑P P 09 36 06.5 -0.3
baz=91,SNR=9.1
P21A Newcastle 90.98 47 ⇑P P 09 36 06.5 -0.5
baz=91
CHMT Chamberlain Mo 90.99 39 eP P 09 36 06.7 -0.2
QLMT Earthquake Lak 91.00 41 eP P 09 36 07.5 +0.5
Q22A Crested Butte, 91.04 48 ⇑P P 09 36 07.5 +0.2
baz=91,SNR=13
H16A Russell Place, 91.04 42 ⇓P P 09 36 07.5 +0.4
baz=91,SNR=19
N20A Spence Gulch, 91.05 46 ⇑P P 09 36 07.3 0.0
baz=91,SNR=20
J18A Kendall Valley 91.06 43 ⇓P P 09 36 07.1 -0.2
baz=91,SNR=34
B13A Whitefish 91.08 37 ⇓P P 09 36 06.5 -0.7
baz=91
E15A Deer Lodge 91.09 40 ⇓P P 09 36 06.6 -0.7
baz=91
W25A X Bar L Ranch, 91.13 52 ⇑P P 09 36 07.0 -0.8
baz=91,SNR=14
BW06 Boulder Array 91.14 44 ⇓P P 09 36 07.0 -0.7
baz=91,SNR=16
BW06 Boulder Array 91.14 44 eP P 09 36 07.3 -0.3
comp=Z,10nm,1.0s,mb4.7
PDAR Pinedale Array 91.14 44 P P 09 36 07.3 -0.3
comp=Z,6.5nm,0.8s,mb4.6,baz=219,slow=3.8,SNR=47
C14A Swan Lake 91.16 38 ⇑P P 09 36 06.6 -0.9
baz=91
YMR Madison River 91.20 42 eP P 09 36 08.7 +0.8
comp=Z,4.1nm,0.7s,mb4.5
Z27A Tatum 91.23 54 ⇑P P 09 36 07.6 -0.7
baz=91,SNR=5.5
BOZ Bozeman (W) 91.29 41 ⇑P P 09 36 08.3 0.0
baz=92,SNR=11
BOZ Bozeman (W) 91.29 41 eP P 09 36 08.3 0.0
BOZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BOZ Bozeman (W) 91.29 41 eP P 09 36 08.3 0.0
comp=Z,5.6nm,0.8s,mb4.5
V25A Rancho No Teng 91.29 52 ⇑P P 09 36 07.8 -0.7
baz=92
H17A Grant Village 91.30 42 ⇓P P 09 36 08.6 +0.3
baz=92,SNR=7.2
F16A Kennard Place, 91.36 40 ⇑P P 09 36 08.4 -0.2
baz=92,SNR=9.7
M20A Sweetwater, Wa 91.41 45 ⇓P P 09 36 08.2 -0.8
baz=92
DAWY Dawson 91.43 16 eP P 09 36 08.1 -0.3
D15A Lincoln 91.48 39 ⇑P P 09 36 08.9 -0.2
baz=92,SNR=6.9
LKWY Lake 91.50 42 eP P 09 36 11.2 +2.0
LKWY pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LKWY Lake 91.50 42 eP P 09 36 11.2 +2.0
comp=Z,4.6nm,0.8s,mb4.5
Y27A Causey 91.51 54 ⇑P P 09 36 08.5 -1.1
baz=92,SNR=8.4
N21A Black Mountain 91.51 46 ⇑P P 09 36 09.4 0.0
baz=92,SNR=14
SDCO Great Sand Dun 91.51 50 eP P 09 36 09.5 0.0
comp=Z,7.1nm,0.8s,mb4.8
EGAK Eagle 91.56 15 eP P 09 36 08.3 -0.7
comp=Z,15nm,0.7s,mb5.1
L20A Wamsutter 91.56 45 ⇑P P 09 36 09.8 +0.2
baz=92,SNR=16
K19A Absolon Red Bu 91.62 44 ⇑P P 09 36 08.7 -1.2
baz=92,SNR=6.0
G17A Pierce Place, 91.67 41 ⇓P P 09 36 10.0 0.0
baz=92
U25A Circle Dot Ran 91.69 51 ⇓P P 09 36 09.8 -0.6
baz=92
HRY Holter Researc 91.72 40 eP P 09 36 10.1 -0.1
COLD Coldfoot 91.75 11 eP P 09 36 09.7 -0.2
comp=Z,2.9nm,0.8s,mb4.4
WALA Waterton Lakes 91.75 37 eP P 09 36 10.4 +0.1
comp=Z,0.2nm,0.6s
C15A Salmond Ranch, 91.81 38 ⇑P P 09 36 09.6 -1.0
baz=92
MSTX Muleshoe 91.84 54 ⇑P P 09 36 10.3 -0.8
baz=92,SNR=9.4
K20A Yellowstone Ra 91.87 44 ⇓P P 09 36 10.5 -0.5
baz=92,SNR=7.0
V26A Tequesquite Ra 91.88 52 ⇑P P 09 36 10.2 -1.0
baz=92
X27A F and S Farms, 91.89 53 ⇑P P 09 36 11.0 -0.3
baz=92
A14A Double T Ranch 91.98 37 ⇓P P 09 36 10.5 -0.9
baz=92,SNR=9.6
F17A Fitzpatrick Pl 92.01 41 ⇑P P 09 36 11.3 -0.2
baz=92,SNR=8.6
M21A Separation Pea 92.01 46 ⇓P P 09 36 11.7 0.0
baz=92,SNR=9.7
D16A Dana Ranch, Ca 92.05 39 ⇑P P 09 36 11.3 -0.4
baz=92,SNR=7.7
B15A Bradely Ranch, 92.12 38 ⇓P P 09 36 11.1 -0.9
baz=92,SNR=6.5
E17A Martinsdale 92.17 40 ⇓P P 09 36 12.5 +0.2
baz=92
U26A Atchley Ranch, 92.17 52 ⇑P P 09 36 12.2 -0.3
baz=92,SNR=6.1
L21A Rawlins 92.18 45 ⇓P P 09 36 11.5 -1.0
baz=92
N22A Wattenberg Ran 92.25 47 ⇓P P 09 36 12.4 -0.4
baz=92,SNR=7.9
C16A Fuhringer Ranc 92.33 39 ⇑P P 09 36 12.0 -1.0
baz=93,SNR=7.1
ISCO Idaho Springs 92.36 48 eP P 09 36 13.6 +0.2
ISCO pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
ISCO Idaho Springs 92.36 48 eP P 09 36 13.6 +0.3
comp=Z,3.0nm,0.8s,mb4.4
A15A Johnson Ranch, 92.37 37 ⇑P P 09 36 12.3 -0.9
baz=93,SNR=8.0
G18A Lazy EL Ranch, 92.38 42 ⇓P P 09 36 13.2 -0.1
baz=93
GCMT Greycliff 92.55 41 eP P 09 36 14.2 +0.1
comp=Z,3.4nm,1.2s,mb4.2
F18A Big Timber 92.58 41 ⇑P P 09 36 13.7 -0.5
baz=93
D17A Six Diamond Ra 92.61 40 ⇑P P 09 36 14.1 -0.2
baz=93
LZH Lanzhou 92.62 308 ⇑P P 09 36 15.0 +0.4
LZH pP pP 09 38 23.0 -0.1
LZH sP sP 09 39 22.0 +0.1
LZH PP PP 09 40 08.5 +1.1
LZH SKS 09 45 51.5
LZH S S 09 46 27.6 -1.5
LZH sS sS 09 50 20.1 +0.4
LZH pmax pmax
comp=Z,22nm,1.2s,mb5.1
LZH pmax pmax
comp=Z,89nm,4.5s
JCT Junction City 92.67 58 eP P 09 36 14.6 -0.4
JCT pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
JCT Junction City 92.67 58 eP P 09 36 14.6 -0.5
comp=Z,8.4nm,1.0s,mb4.7
E18A Harlowton 92.78 40 ⇓P P 09 36 14.8 -0.3
baz=93,SNR=5.6
C17A Wharram Farm, 92.81 39 ⇓P P 09 36 14.9 -0.3
baz=93,SNR=21
L22A Ellis Ranch, M 92.83 46 ⇑P P 09 36 15.0 -0.4
baz=93
YAK Yakutsk 93.09 339 eP P 09 36 14.7 -1.4
YAK pmax pmax
comp=Z,24nm,0.8s,mb5.3
YAK Yakutsk 93.09 339 eP P 09 36 15.5 -0.7
comp=Z,37nm,0.7s,mb5.5
B17A L&G Farms, Che 93.12 39 ⇑P P 09 36 15.6 -1.0
baz=93,SNR=8.1
D18A Linhart Farms, 93.16 40 ⇑P P 09 36 16.4 -0.4
baz=93
A17A Triple J Farms 93.50 38 P P 09 36 18.2 -0.1
baz=94,SNR=17
EGMT Eagleton 93.60 39 ⇓P P 09 36 18.4 -0.3
baz=94
B18A Beardsley Farm 93.76 39 ⇑P P 09 36 19.2 -0.3
baz=94,SNR=9.8
A18A Metzger Ranch, 93.98 38 ⇓P P 09 36 19.4 -1.1
baz=94
EDM Edmonton 94.27 33 eP P 09 36 21.0 -0.7
RSSD Black Hills 95.33 44 eP P 09 36 26.2 -0.5
SONM Songino Array 96.04 319 P P 09 36 29.0 -0.8
comp=Z,0.4nm,0.4s,mb4.0,baz=134,slow=6.4,SNR=3.9
SONM pP pP 09 38 43.2 +4.5
comp=Z,0.3nm,0.3s,baz=119,slow=5.8,SNR=2.0
YKA Yellowknife Ar 98.60 25 P Pdif 09 36 39.9 -1.5
comp=Z,1.1nm,0.7s,baz=243,slow=4.4,SNR=22
YKA pP pP 09 38 53.8 +3.9
comp=Z,0.5nm,0.9s,baz=247,slow=4.7,SNR=4.9
YKA PP PP 09 40 43.0 -9.1
comp=Z,0.2nm,0.6s,baz=244,slow=7.5,SNR=5.8
YKA PKKPbc PKKPbc 09 53 05.4 -3.8
comp=Z,0.1nm,0.4s,baz=32,slow=2.6,SNR=5.4
YKA Yellowknife Ar 98.60 25 P Pdif 09 36 39.9 -1.5
YKA pP pP 09 38 53.9 +3.9
YKA PP PP 09 40 43.0 -9.1
YKA PKKPbc PKKPbc 09 53 05.5 -3.8
ECSD EROS Data Cent 100.10 47 ePdif Pdif 09 36 48.2 +0.1
LPAZ La Paz 102.75 114 P Pdif 09 36 59.7 -0.2
comp=Z,0.5nm,0.3s,baz=269,slow=4.6,SNR=9.5
LPAZ La Paz 102.75 114 P Pdif 09 36 59.7 -0.2
LPAZ pmax pmax
comp=Z,1.0nm,0.3s
ZAA0 Zalesovo Array 110.85 321 ePKPdf PKiKP 09 41 31.0 -0.4
ZALV Zalesovo Beam 110.85 321 PKiKP PKiKP 09 41 29.1 -2.3
comp=Z,1.7nm,0.5s,baz=102,slow=28,SNR=6.6
ZALV Zalesovo Beam 110.85 321 i PKiKP PKiKP 09 41 29.1 -2.3
ZALV pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 111.26 313 PKiKP PKiKP 09 41 30.9 -1.5

comp=Z,1.1nm,0.5s,baz=190,slow=0.8,SNR=14
MKAR Makanchi Array 111.26 313 *i* PKIKP PKiKP 09 41 30.9 -1.5
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 114.21 317 *c i* PKIKP PKiKP 09 41 35.6 -2.3
KURK pmax pmax
comp=Z,7.0nm,2.5s
AAK Ala-Archa 116.16 308 *d i* PKIKP PKPdf 09 41 40.7 -1.2
AAK pmax pmax
comp=Z,1.0nm,1.7s
BVAR Borovoye Array 119.39 319 PKP PKPdf 09 41 46.4 -1.4
comp=Z,4.5nm,0.4s,baz=126,slow=1.2,SNR=26
BVAR PP PP 09 43 19.3 -1.0
comp=Z,1.0nm,0.8s,baz=104,slow=6.3,SNR=4.6
BVAR SKP 09 44 26.5
comp=Z,1.3nm,0.7s,baz=52,slow=5.8,SNR=5.0
BVAR Borovoye Array 119.39 319 PKIKP PKPdf 09 41 46.4 -1.4
BVAR 09 43 19.3
BVAR pmax pmax
comp=Z,5.0nm,0.4s
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR pmax pmax
comp=N,1.0nm,0.7s
KBL Kabul 119.39 298 *e* PKIKP PKPdf 09 41 48.3 -0.1
BRVK Borovoye 119.45 319 *c i* PKIKP PKPdf 09 41 46.3 -1.6
BRVK pmax pmax
comp=Z,3.0nm,0.8s
SPB4 Spitsbergen Ar 123.40 356 *e* PKPdf PKPdf 09 41 53.7 -1.2
SFJD Kangerlussuaq 124.99 22 *i* PKIKP PKPdf 09 41 55.3 -2.9
SFJD pmax pmax
comp=Z,5.0nm,0.8s
SFJD Kangerlussuaq 124.99 22 *i* P PKPdf 09 41 55.3 -2.9
comp=Z,5.3nm,0.8s
SUMG Summit 125.07 13 *e* PKIKP PKPdf 09 41 57.9 -0.3
ARU Arti 125.71 324 *i* PKIKP PKPdf 09 41 59.0 -0.8
SOKR Solikamsk 125.74 329 *e* PKIKP PKPdf 09 41 52.0 -7.8
SOKR pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 126.26 316 *e* PKPdf PKPdf 09 41 59.5 -1.5
KEV Kevo 129.79 348 *e* PKIKP PKPdf 09 42 05.0 -2.2
KEV pmax pmax
comp=Z,11nm,1.0s
KEV Kevo 129.79 348 *e p* PKPdf 09 42 05.0 -2.2
comp=Z,11nm,1.0s
SCO Scoresbysund 129.86 10 *i* PKIKP PKPdf 09 42 07.4 0.0
SCO pmax pmax
comp=Z,6.0nm,0.9s
SCO Scoresbysund 129.86 10 *i* P PKPdf 09 42 07.4 0.0
comp=Z,5.6nm,0.9s
ARCES ARCESS Array B 130.25 349 PKhKP 09 41 55.3
comp=Z,1.5nm,0.8s,baz=107,slow=1.3,SNR=5.0
ARCES PKP PKPdf 09 42 06.8 -1.3
comp=Z,8.5nm,0.7s,baz=41,slow=1.0,SNR=28
ARCES pPKP pPKPdf 09 44 29.9 +4.8
comp=Z,3.2nm,0.9s,baz=350,slow=14,SNR=1.8
ARCES ARCESS Array B 130.25 349 PKHKP 09 41 55.3
ARCES 09 42 06.8
ARCES 09 44 29.9
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES pmax pmax
comp=Z,9.0nm,0.7s
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 130.25 349 PKP PKPdf 09 42 06.8 -1.3
ARCES pPKP pPKPdf 09 44 29.9 +4.8
JOF Joensuu 134.22 341 *e* PKIKP PKPdf 09 42 13.9 -1.8
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF Joensuu 134.22 341 *e p* PKPdf 09 42 13.9 -1.8
comp=Z,7.2nm,0.6s
KAF Kangasniemi 136.30 343 *e* PKIKP PKPdf 09 42 18.4 -1.2
KAF pmax pmax
comp=Z,8.0nm,0.7s
KAF Kangasniemi 136.30 343 *e p* PKPdf 09 42 18.4 -1.2
comp=Z,7.9nm,0.7s
FINES FINESS Array B 136.91 342 PKhKP 09 42 07.1
comp=Z,1.0nm,0.3s,baz=24,slow=3.8,SNR=11
FINES PKP PKPdf 09 42 19.2 -1.6
comp=Z,6.0nm,0.7s,baz=98,slow=2.6,SNR=9.8
FINES SKP 09 44 57.5
comp=Z,3.8nm,0.9s,baz=235,slow=6.7,SNR=6.8
FINES FINESS Array B 136.91 342 PKHKP 09 42 07.1
FINES 09 42 19.2
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES pmax pmax
comp=Z,6.0nm,0.7s
FINES pmax pmax
comp=N,4.0nm,0.9s
FINES FINESS Array B 136.91 342 PKP PKPdf 09 42 19.2 -1.6
FINES SKP 09 44 57.5
KMBO Kilima Mbogo 137.30 242 SKP 09 45 01.2
comp=N,5.1nm,1.0s,baz=183,slow=24,SNR=6.6
ZEI Tsey 138.52 310 *e* PKIKP PKPdf 09 42 25.7 +1.4
ZEI pmax pmax
comp=Z,3.0nm,0.5s
NOA NORSAR Array B 140.41 352 PKhKP 09 42 20.1
comp=Z,1.2nm,0.6s,baz=0.0,slow=3.1,SNR=15
NOA PKP PKPdf 09 42 28.7 +1.5
comp=Z,2.0nm,0.5s,baz=14,slow=4.0,SNR=6.8
NOA SKPbc SKPbc 09 45 07.0 -1.4
comp=Z,9.0nm,0.9s,baz=14,slow=4.3,SNR=15
NOA SKPab 09 45 21.2
comp=Z,2.7nm,0.8s,baz=16,slow=3.2,SNR=4.8
NOA NORSAR Array B 140.41 352 PKHKP 09 42 20.1
NOA 09 42 28.7
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA pmax pmax
comp=N,9.0nm,0.9s
NOA pmax pmax
comp=N,3.0nm,0.8s
NOA NORSAR Array B 140.41 352 PKP PKPdf 09 42 28.7 +1.5
NOA SKPbc SKPbc 09 45 07.0 -1.4
NOA SKPab 09 45 21.2
NAO01 NORSAR Array S 140.64 352 *e* PKPdf 09 42 21.4
IZAR Zarasai 141.35 337 *e P* PKPdf 09 42 24.2 -4.8
IDID Didziasalis 141.50 336 *e P* PKPdf 09 42 24.8 -4.5
ISAL Salakas 141.53 337 *e P* PKPdf 09 42 24.9 -4.4
IIGN Ignalina 141.67 336 *e P* PKPdf 09 42 25.0 -4.6
KONO Kongsberg 141.96 352 *e* PKHKP 09 42 25.1
ANN Anapa 142.22 316 *i* PKIKP PKPdf 09 42 36.1 +5.2
ANN pmax pmax
comp=Z,142nm,7.7s
ORE Reay 143.50 4⇓ *e P* PKPdf 09 42 30.0 -2.7
RSC Scourie 143.60 5⇓ *e P* PKPdf 09 42 30.7 -2.2
AKASG Malin Array Be 143.70 329 PKP PKPdf 09 42 31.1 -2.3
comp=Z,21nm,0.5s,baz=42,slow=3.9,SNR=80
AKASG SKPbc SKPbc 09 45 15.0 -1.9
comp=Z,6.3nm,0.9s,baz=45,slow=2.4,SNR=16
AKASG Malin Array Be 143.70 329 PKIKP PKPdf 09 42 31.1 -2.2
AKASG pmax pmax
comp=Z,21nm,0.5s
AKASG pmax pmax
comp=N,6.0nm,0.9s
AKBB Malin Array Si 143.70 329 *e* PKIKP PKPdf 09 42 30.8 -2.5
KIEV Kiev 143.72 329 *e* PKIKP PKPdf 09 42 30.9 -2.4
SUW Suwalki 143.82 337 *e* PKIKP PKPdf 09 42 32.0 -1.4
SUW Suwalki 143.82 337 *e* PKPbc PKPdf 09 42 32.2 -1.3
RRH Rhenigidale 143.88 6⇓ *e P* PKPdf 09 42 31.6 -1.8
RRR Rubha Reidh 144.03 6⇓ *e P* PKPdf 09 42 31.8 -1.9
SIM Simferopol' 144.27 318 *i* PKIKP PKPdf 09 42 35.2 +0.7
SIM pmax pmax
comp=Z,38nm,0.9s
KSK Scoval 144.33 7⇓ *e P* PKPdf 09 42 33.3 -0.9
KAC Achnashellach 144.43 5⇓ *e P* PKPdf 09 42 33.7 -0.7
MCD Coleburn Disti 144.49 3⇓ *e P* PKPdf 09 42 33.2 -1.3
KPL Plockton 144.56 6⇓ *e P* PKPdf 09 42 33.8 -0.8
MDO Dochfour 144.56 4⇓ *e P* PKPdf 09 42 33.5 -1.1
KSB Sheil Bridge 144.71 6⇓ *e P* PKPdf 09 42 34.0 -0.9
KAR1 Arisaig 144.96 6⇓ *e P* PKPdf 09 42 35.0 -0.3
MUD Monsted U'grnd 145.13 352 *i* PKIKP PKPdf 09 42 35.6 0.0
MUD pmax pmax
comp=Z,30nm,0.9s
MUD Monsted U'grnd 145.13 352 *i P* PKPdf 09 42 35.6 0.0
comp=Z,30nm,0.9s
COP Copenhagen 145.33 348 *i* PKIKP PKPdf 09 42 35.8 -0.2
COP pmax pmax
comp=Z,24nm,0.8s
COP Copenhagen 145.33 348 *i P* PKPdf 09 42 35.8 -0.2
comp=Z,24nm,0.8s
BSD Bornholm Skovb 145.33 345 *i* PKIKP PKPdf 09 42 35.7 -0.3
BSD pmax pmax
comp=Z,42nm,1.0s
BSD Bornholm Skovb 145.33 345 *i* P PKPdf 09 42 35.7 -0.3
comp=Z,42nm,1.0s
EBH Black Hill 145.81 4⇓ *e P* PKPdf 09 42 37.6 +0.9
EAB Aberfoyle 145.81 5⇓ *e P* PKPdf 09 42 37.5 +0.7
ESY Stoneypath 146.19 3⇓ *e P* PKPdf 09 42 38.4 +1.0
EAU Auchinoon 146.21 4 *e P* PKPdf 09 42 38.9 +1.4
EBL Broad Law 146.31 4⇓ *e P* PKPdf 09 42 39.0 +1.4
GKP Gorka Klasztor 146.38 342 *e* PKP PKPbc 09 42 40.2 -0.1
LVV L'vov 146.71 332 *e* PKIKP PKPdf 09 42 39.4 +0.9
ESK Eskdalemuir 146.75 4 *e P* PKPdf 09 42 39.3 +0.9
ESK Eskdalemuir 146.75 4 *i* PKP2 PKPdf 09 42 40.7 +2.3
BR131 Keskin Array S 146.81 310 *e* PKPbc PKPbc 09 42 41.3 -0.6
BR131 *e* PKPab PKPab 09 42 45.4 +0.3
BRTR Keskin Array B 146.81 310 PKP PKPdf 09 42 37.4 -1.5
comp=Z,9.1nm,0.7s,baz=116,slow=2.9,SNR=25
BRTR PKPbc PKPbc 09 42 41.1 -0.8
comp=Z,9.1nm,0.7s,baz=134,slow=4.1,SNR=53
BRTR pPKPbc pPKPbc 09 45 00.9 +4.3
comp=Z,0.8nm,0.8s,baz=59,slow=3.6,SNR=3.0
BRTR Keskin Array B 146.81 310 PKIKP PKPdf 09 42 37.4 -1.6
BRTR pmax pmax
comp=Z,9.0nm,0.7s
BRTR pmax pmax
comp=Z,9.0nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
LEOM Leova 146.89 324 ⇑ PKP2 PKPbc 09 42 41.6 -0.3
LEOM Leova 146.89 324 ⇑ *i P* PKPbc 09 42 41.6 -0.3
ECK Cauldkaine Hil 146.90 4⇓ *e P* PKPdf 09 42 40.3 +1.7
GAL1 Galloway 147.09 5⇓ *e P* PKPbc 09 42 41.0 -1.1
XAL Allendale 147.26 3⇓ *e P* PKPbc 09 42 41.5 -1.1
MMAI Mount Meron Ar 147.32 297 PKPbc PKPbc 09 42 43.5 0.0
comp=Z,14nm,0.5s,baz=66,slow=4.7,SNR=23
TLCR 147.34 322 ⇑ PKP2 PKPbc 09 42 42.6 -0.5
TLCR 147.34 322 ⇑ *i P* PKPbc 09 42 42.6 -0.5
BSEG Bad Segeberg 147.38 349 *e* PKPbc PKPbc 09 42 42.1 -0.8
BSEG *e* PKPab PKPab 09 42 46.1 -0.8
BSEG *ep* PKPbc pPKPbc 09 45 03.6 +5.6
BSEG Bad Segeberg 147.38 349 *e* PKP2 PKPab 09 42 47.6 +0.7
KWP Kalwaria Pacla 147.42 333 *e* PKP PKPbc 09 42 42.9 -0.3
KWP *e* 09 42 47.7
KWP Kalwaria Pacla 147.42 333 *e* PKPbc PKPbc 09 42 43.0 -0.1
KWP *e* PKPab PKPab 09 42 47.5 +0.3
BUR08 Bucovina Ar. S 147.71 328 *e* PKPbc PKPbc 09 42 44.7 +0.8
BUR08 *e* PKPab PKPab 09 42 49.1 +0.6
BURAR Bucovina Array 147.73 328 ⇑ PKP2 PKPbc 09 42 44.4 +0.4
BURAR Bucovina Array 147.73 328 ⇑ *i P* PKPbc 09 42 44.4 +0.4
CFR Carcaliu 147.73 322 ⇑ PKP2 PKPbc 09 42 43.7 -0.4
CFR Carcaliu 147.73 322 ⇑ *i P* PKPbc 09 42 43.7 -0.4
TIRR Tirgusor 147.99 321 *e* PKPbc PKPbc 09 42 44.3 -0.4
TIRR *e* PKPab PKPab 09 42 50.0 +0.2
TIRR Tirgusor 147.99 321 ⇓ *i P* PKPbc 09 42 44.0 -0.8
VRI Vrincioaia 148.10 324 ⇑ PKP2 PKPbc 09 42 44.5 -0.5
VRI Vrincioaia 148.10 324 ⇑ *i P* PKPbc 09 42 44.5 -0.5
OJC Ojcow 148.11 336 *e* PKP PKPbc 09 42 43.7 -1.2
KOLS Kolonicke sedl 148.13 332 *e* PKP PKPdf 09 42 40.5 -0.3
KOLS *e* 09 42 45.3
KOLS Kolonicke sedl 148.13 332 *e* PKP PKPdf 09 42 40.5 -0.3
KOLS *e* 09 42 45.3
HARR Harsova 148.14 321 ⇑ PKP2 PKPbc 09 42 44.8 -0.3
HARR Harsova 148.14 321 ⇑ *i P* PKPbc 09 42 44.8 -0.3
HPK Haverah Park 148.19 2 *e P* PKPbc 09 42 43.7 -1.2
STHS Stebnicka Huta 148.19 334 *e* PKP2 PKPbc 09 42 45.4 +0.3
STHS Stebnicka Huta 148.19 334 *e* PKP PKPbc 09 42 45.4 +0.3
UZH Uzhgorod 148.35 332 ⇓ *i* PKP2 PKPbc 09 42 45.0 -0.5
NIE Niedzica 148.56 335 *e* PKP2 PKPbc 09 42 46.3 +0.3
CSS Prodhromos 148.57 301 *e* PKPbc PKPbc 09 42 45.2 -1.3
CSS *e* PKPab PKPab 09 42 52.2 -0.2
LHO Holmfirth 148.59 3⇓ *e P* PKPbc 09 42 44.9 -1.1
TRPA Tarpa 148.62 331 ⇑ *i P* PKPbc 09 42 45.8 -0.4
WLF1 Llynfaes 148.68 6 *e P* PKPbc 09 42 44.8 -1.3
MLR Muntele Rosu 148.76 324 PKHKP PKPbc 09 42 46.5 -0.1
MLR Muntele Rosu 148.76 324 ⇓ *i P* PKPbc 09 42 45.8 -0.8
KSP Ksiaz 148.79 340 *e* PKP PKPbc 09 42 46.7 +0.2
KSP *e* 09 42 53.4
KSP Ksiaz 148.79 340 ⇓ *i* PKP2 PKPbc 09 42 46.5 0.0
NRDL Niedersach Rie 148.80 349 *e* PKPbc PKPbc 09 42 45.7 -0.8
OKC Ostrava-Krasne 149.03 338 ⇑ *e* PKP PKPbc 09 42 46.8 -0.3
UPC Upice 149.17 340 *e* PKHKP PKPbc 09 42 47.3 -0.1
UPC *e* 09 42 54.7
UPC Upice 149.17 340 ⇑ *e* PKP PKPbc 09 42 47.3 -0.1
UPC *e* PKPAB PKPab 09 42 54.7 +0.3
UPC *ep* PKP pPKPdf 09 45 12.3 +12
DPC Dobruska-Polom 149.21 340 ⇑ *e* PKP PKPbc 09 42 47.7 +0.2
DPC *e* PKPAB PKPab 09 42 55.0 +0.5
DPC *ep* PKP pPKPdf 09 45 09.3 +9.3
KECS Kecovo 149.23 334 *e* PKHKP PKPbc 09 42 47.9 +0.2
KECS *e* 09 42 54.8
KECS Kecovo 149.23 334 *e* PKP PKPbc 09 42 47.9 +0.2
KECS *e* 09 42 54.8
CLL Collm 149.29 345 *e* PKPbc PKPbc 09 42 47.0 -0.7
CLL *e* PKPab PKPab 09 42 53.9 -0.9
CLL *ep* PKPbc pPKPbc 09 45 08.5 +5.0
CLL Collm 149.29 345 *e* PKP PKPdf 09 42 42.0 -0.6
CLL Collm 149.29 345 *e* PKPdf PKPdf 09 42 42.0 -0.6
CLL ⇓ *i* PKPbc PKPbc 09 42 47.2 -0.5
comp=Z,67nm,0.8s
CLL ⇑ *i* PKPab PKPab 09 42 54.4 -0.4
comp=Z,38nm,0.7s
CLL *i* 09 43 01.9
CLL *ep* PKPbc pPKPbc 09 45 08.0 +4.5
CLL *e* (SKPdf) 09 45 13.0
CLL *e* PP PP 09 46 23.0 -2.6
MORC Moravsky Berou 149.29 338 *e* PKHKP PKPbc 09 42 47.4 -0.4
MORC *e* 09 42 54.9
MORC Moravsky Berou 149.29 338 ⇓ *i P* PKPbc 09 42 47.4 -0.4
IBBN Ibbenburen 149.36 351 *e* PKPbc PKPbc 09 42 47.3 -0.5
CLZ Clausthal 149.37 348 *e* PKPbc PKPbc 09 42 47.6 -0.3
CLZ *ep* PKPbc pPKPbc 09 45 09.2 +5.5
CWF Charnwood Fore 149.42 2 *e P* PKPbc 09 42 46.4 -1.6
BRG Berggiesshubel 149.44 343 *e* PKPbc PKPbc 09 42 47.6 -0.5
BRG Berggiesshubel 149.44 343 *e* PKP PKPdf 09 42 42.2 -0.6
BRG *i* 09 42 47.7
BRG *i* 09 42 55.3
comp=Z,19nm,0.7s
BRG *ep* PKP pPKPdf 09 45 03.3 +3.0
comp=Z,3.2nm,0.9s
BRG *e* 09 45 10.3
comp=Z,5.3nm,1.0s
BRG *e* SKP 09 45 30.6
comp=Z,5.7nm,1.3s
BRG *e* PP PP 09 46 25.2 -1.3
comp=Z,2.2nm,0.8s
BRG *e* 09 51 05.4
comp=Z,3.3nm,0.6s
DRGR 149.52 329 PKHKP PKPbc 09 42 48.0 -0.4
DRGR 149.52 329 ⇓ *i P* PKPbc 09 42 47.7 -0.7
PVCC Panska Ves 149.58 342 *e* PKHKP PKPbc 09 42 48.3 -0.1
PVCC *e* 09 42 56.3
PVCC Panska Ves 149.58 342 ⇑ *e* PKP PKPbc 09 42 48.3 -0.1
PVCC *e* PKPAB PKPab 09 42 56.3 +0.2
PVCC *ep* PKP pPKPdf 09 45 14.1 +14
VYHS Vyhne 149.88 335 *e* PKP PKPdf 09 42 42.9 -0.7
VYHS *e* 09 42 48.8
VYHS *e* 09 42 57.8
VYHS Vyhne 149.88 335 *e* PKP PKPdf 09 42 42.9 -0.7
VYHS *e* 09 42 48.8
VYHS *e* 09 42 57.8
PSZ Piszkesteto 149.92 333 ⇓ *e* PKP PKPbc 09 42 48.5 -0.8
HTR Trewern Hill 149.97 5⇓ *e P* PKPbc 09 42 48.0 -1.3
KOLL Kolacno 149.98 336 *e* PKHKP PKPbc 09 42 49.3 -0.1
KOLL Kolacno 149.98 336 *e* PKP PKPbc 09 42 49.3 -0.1
VRAC Vranov 150.02 339 ⇑ PKHKP PKPbc 09 42 49.4 -0.1
VRAC Vranov 150.02 339 ⇑ *i P* PKPbc 09 42 49.3 -0.2
PRU Pruhonice 150.07 342 *e* PKHKP PKPbc 09 42 49.5 -0.1
PRU *e* 09 42 58.7
PRU Pruhonice 150.07 342 ⇑ *e* PKP PKPbc 09 42 49.5 -0.1
PRU *e* PKPAB PKPab 09 42 58.7 +0.6
PRU *ep* PKP pPKPdf 09 45 15.7 +14
SZH Strazhica 150.14 321 *i P* PKPbc 09 42 49.0 -1.0
MOX Moxa 150.23 346 *e* PKP PKPbc 09 42 49.3 -0.6
comp=Z,32nm,1.0s
MOX *e* 09 42 58.3
MOX Moxa 150.23 346 *e* PKPbc PKPbc 09 42 49.3 -0.6
MOX *ep* PKPbc pPKPbc 09 45 12.9 +7.0
MOX Moxa 150.23 346 *e* PKIKP PKPbc 09 42 49.3 -0.6
MOX *e* 09 42 58.3
MOX pmax pmax
comp=Z,32nm,1.0s
TANN Tannenbergstha 150.24 344 *e* PKPbc PKPbc 09 42 49.5 -0.5
BUG Bochum--Univer 150.27 351 *e* PKPbc PKPbc 09 42 49.0 -1.0
TREC Trest 150.39 340 ⇑ *e* PKP PKPbc 09 42 49.8 -0.6
SMOL Smolenice 150.40 337 *e* PKIKP PKPbc 09 42 50.5 +0.1
SMOL *e* 09 43 00.0
SMOL Smolenice 150.40 337 *e* PKP PKPbc 09 42 50.5 +0.1
SMOL *e* 09 43 00.0
UBBA Unterbreizbach 150.41 348 *e* PKPbc PKPbc 09 42 49.5 -0.9
NKC Novy Kostel 150.41 344 *e* PKIKP PKPbc 09 42 50.2 -0.2
NKC *e* 09 42 59.5
NKC Novy Kostel 150.41 344 ⇑ *e* PKP PKPbc 09 42 50.2 -0.2
NKC *e* PKPAB PKPab 09 42 59.5 -0.1
NKC *ep* PKP pPKPdf 09 45 17.3 +15
GZR Gura Zlata 150.48 327 PKIKP PKPbc 09 42 50.0 -0.7
GZR Gura Zlata 150.48 327 ⇓ *i P* PKPbc 09 42 49.6 -1.1
ZST Bratislava 150.78 337 *e* PKIKP PKPbc 09 42 51.4 +0.1
ZST Bratislava 150.78 337 *e* PKP PKPbc 09 42 51.4 +0.1
WOL Wolverton 150.85 2 *e P* PKPbc 09 42 49.6 -1.7
BZS Buzias 150.89 329 PKIKP PKPbc 09 42 50.9 -0.7
BZS Buzias 150.89 329 ⇑ *i P* PKPbc 09 42 50.8 -0.8
ROTZ Rotzenmuhle 150.91 344 *e* PKPbc PKPbc 09 42 51.0 -0.5
BEBN Eben Emael 151.10 353 PKPab PKPab 09 43 01.6 -0.8
KHC Kasperske Hory 151.12 342 *e* PKIKP PKPdf 09 42 45.1 -0.4
KHC *e* 09 43 02.6
KHC Kasperske Hory 151.12 342 *e* PKPbc PKPbc 09 42 51.5 -0.5
KHC *e* PKPab PKPab 09 43 02.9 +0.3
KHC Kasperske Hory 151.12 342 *e* PKPDF PKPdf 09 42 45.1 -0.4
KHC ⇑ *e* PKP PKPbc 09 42 51.5 -0.5
KHC *e* PKPAB PKPab 09 43 02.6 0.0
KHC *ex* x 09 43 55.0
KHC *ep* PKP pPKPdf 09 45 17.3 +14
GRF Grafenberg Arr 151.21 345 *e* PKPbc PKPbc 09 42 51.7 -0.5
GRF *e* PKPab PKPab 09 43 02.6 -0.3
GRF *ep* PKPbc pPKPbc 09 45 17.9 +10
UCC Uccle 151.23 355 PKPbc PKPbc 09 42 51.4 -0.9
UCC PKPab PKPab 09 43 01.8 -1.2
MEM Membach 151.25 353 PKPbc PKPbc 09 42 51.5 -0.8
MEM PKPab PKPab 09 43 01.4 -1.6
TNS Taunus Mts 151.27 349 *e* PKPbc PKPbc 09 42 51.7 -0.6
TNS *e* PKPab PKPab 09 43 02.4 -0.8
WET Wettzell 151.30 343 *e* PKPbc PKPbc 09 42 51.7 -0.7
WET *ep* PKPbc pPKPbc 09 45 18.6 +10
GEC2 GERESS Array S 151.34 342 *e* PKPbc PKPbc 09 42 51.7 -0.8
GERES GERESS Array B 151.34 342 PKP PKPdf 09 42 45.0 -0.8
comp=Z,0.5nm,0.7s,baz=150,slow=1.1,SNR=5.0
GERES PKPbc PKPbc 09 42 51.9 -0.7
comp=Z,9.7nm,0.8s,baz=48,slow=2.0,SNR=43
GERES PKPab PKPab 09 43 03.1 -0.4
comp=Z,3.5nm,0.6s,baz=20,slow=4.3,SNR=12
GERES pPKP pPKPdf 09 45 08.1 +4.7
comp=Z,0.4nm,0.5s,baz=51,slow=2.8,SNR=1.4
GERES GERESS Array B 151.34 342 PKIKP PKPdf 09 42 45.0 -0.8
GERES 09 43 03.1
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,10.0nm,0.8s
GERES pmax pmax
comp=Z,4.0nm,0.6s
KDZ Kurdzhali 151.40 319 *i P* PKPbc 09 42 50.5 -2.4
CONA Conrad Observa 151.45 338 ⇑ *i* PKPdf PKPdf 09 42 45.1 -0.9
comp=Z,2.3nm,0.9s
CONA ⇓ *i* PKiKP PKiKP 09 42 52.5 -0.6
comp=Z,15nm,0.7s
CONA ⇑ *i* PKPab PKPab 09 43 04.8 +0.8
comp=Z,14nm,0.9s
BCLA Clavier 151.52 353 PKPbc PKPbc 09 42 52.2 -0.6
BCLA PKPab PKPab 09 43 03.3 -0.9
SNF Seneffe 151.53 355 PKPbc PKPbc 09 42 52.3 -0.6
SNF PKPab PKPab 09 43 03.6 -0.6
PKSM Moragy 151.79 333 PKIKP PKPbc 09 42 53.0 -0.6
PKSM Moragy 151.79 333 ⇓ *i P* PKPbc 09 42 52.6 -1.0
GIVF Givet 151.88 354 *e* PKP1 PKPbc 09 42 52.9 -0.8
comp=Z,36nm,0.8s
DOU Dourbes 151.91 354 PKPbc PKPbc 09 42 53.0 -0.7
DOU PKPab PKPab 09 43 05.0 -0.9
BAIF Baives 151.98 355 *e* PKP1 PKPbc 09 42 53.1 -0.8
comp=Z,29nm,0.9s
VTS Vitosha 152.13 322 *i P* PKPab 09 43 06.8 -0.3
WLF Walferdange 152.16 352 PKPbc PKPbc 09 42 54.5 +0.2
WLF PKPab PKPab 09 43 06.7 -0.2
MMB Musomiste 152.46 320 *i P* PKPbc 09 42 51.7 -3.5
RJOB Jochberg 152.60 342 *e* PKPab PKPab 09 43 09.2 +0.3
FUR Furstenfeldbru 152.62 344 *e* PKPab PKPab 09 43 08.8 -0.2
CDF Champ du Feu 153.22 350 *e* PKP1 PKPbc 09 42 55.8 -0.9
comp=Z,8.8nm,0.8s
WTTA Wattenberg 153.36 343 ⇑ *i* PKPdf PKPdf 09 42 48.2 -0.7
comp=Z,3.2nm,0.7s
WTTA ⇑ *i* PKiKP PKiKP 09 42 56.6 -0.5
comp=Z,7.2nm,0.5s
WTTA ⇑ *i* PKPab PKPab 09 43 12.6 +0.4
comp=Z,20nm,0.5s
FLN La Foliniere 153.42 1 *e* PKP1 PKPbc 09 42 55.9 -1.2
comp=Z,9.7nm,0.5s
ABTA Abfaltersbach 153.57 341 ⇑ *i* PKPdf PKPdf 09 42 47.6 -1.5
comp=Z,5.2nm,0.9s
ABTA ⇑ *i* PKPbc PKPbc 09 42 56.3 -1.1
comp=Z,6.4nm,0.6s
ABTA ⇑ *i* PKPab PKPab 09 43 12.1 -1.0
comp=Z,14nm,0.6s
LDF La Druitiere 153.60 1 *e* PKP1 PKPbc 09 42 56.1 -1.4
comp=Z,6.3nm,0.6s
GRR Gorron 153.79 2 *e* PKP1 PKPbc 09 42 56.7 -1.2
SGMF Saint Gilles 153.83 5 *e* PKP1 PKPbc 09 42 56.5 -1.5
LOR Lormes 154.78 355 *e* PKP1 PKPdf 09 42 59.1 +8.3
comp=Z,3.2nm,0.5s
SSF Saint Saulge 155.01 355 *e* PKP1 PKPdf 09 42 59.5 +8.4
CABF La Chapelle 155.16 351 *e* PKP1 PKPdf 09 42 59.0 +7.7
CEL Celeste 159.16 324 *e* PKPdf PKPdf 09 42 55.3 -1.3
CEL *e* PKPab PKPab 09 43 37.0 -0.6
EVO Evora 162.12 22 *e* PKP2 PKPab 09 43 49.1 -1.4
comp=Z,33nm,1.0s
ESDC Sonseca Array 162.12 11 PKPab PKPab 09 43 49.6 -0.7
comp=Z,1.5nm,0.5s,baz=346,slow=4.3,SNR=12
LIC Lamto 163.32 161 *e* PKP2 PKPab 09 43 55.9 -0.4
comp=Z,41nm,1.1s
LIC Lamto 163.32 161 *e P* PKPab 09 43 55.6 -0.7
comp=Z,93nm,1.6s
DBIC Dimbokro 163.79 161 PKPab PKPab 09 43 57.7 -0.7
comp=Z,4.7nm,0.9s,baz=42,slow=5.3,SNR=3.6
DBIC Dimbokro 163.79 161 PKP2 PKPab 09 43 57.7 -0.7
DBIC pmax pmax
comp=Z,5.0nm,0.9s
KEST Kesra 164.39 332 PKPab PKPab 09 44 00.1 -0.5
comp=Z,1.7nm,0.8s,baz=281,slow=7.1,SNR=5.2
TORD Torodi Ar. Bea 170.98 188 PKP PKPdf 09 43 05.3 -1.7
comp=Z,0.9nm,0.8s,baz=248,slow=1.6,SNR=5.2
TORD PKPab PKPab 09 44 29.2 -0.9
comp=Z,4.7nm,0.8s,baz=180,slow=3.8,SNR=19
TORD SKP 09 45 37.6
comp=Z,0.4nm,0.6s,baz=305,slow=34,SNR=2.4
TORD PP PP 09 48 18.5 -1.7
comp=Z,2.4nm,1.1s,baz=174,slow=4.5,SNR=5.8

ISCJB ***24*** *09:32:22.9±0.5, 37°.32N±0°.04×28°.04E±0°.04, h5km±8km,*
Error ellipse: s-maj=6.9km s-min=4.1km az=34.2
CSEM ***24*** *09:32:22.7±0.1, 37°.31N×28°.04E, h10km, MD2.8, Error*
ellipse: s-maj=3.4km s-min=2.9km az=21.0
ISK ***24*** *09:32:22.4, 37°.29N×28°.02E, h16km, MD2.8*
ISC 24 09:32:23.2±0.5, 37°.32N±0°.03×28°.04E±0°.04, h9km±6km,
n24, σ0°90/35, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.21**	**263**	*e* PG			**Pg**	**09 32 27.2**	**-0.3**
MLSB				*e* SG			**Sg**	**09 32 31.0**	**+0.6**
MLSB	**Milas**	**0.21**	**263**	*e* Pg			**Pg**	**09 32 27.2**	**-0.3**
MLSB				*e* Sg			**Sg**	**09 32 31.0**	**+0.6**
YER	**Yerkesik**	**0.27**	**134**	*e* PG			**Pg**	**09 32 28.6**	**0.0**
YER				*e* SG			**Sg**	**09 32 33.0**	**+0.8**
YER	**Yerkesik**	**0.27**	**134**	*e* Pg			**Pg**	**09 32 28.6**	**0.0**
YER				*e* Sg			**Sg**	**09 32 33.0**	**+0.8**
AYDN	**Tasoluk**	**0.36**	**340**	*i P*			**Pg**	**09 32 30.0**	**-0.4**
AYDN	**Tasoluk**	**0.36**	**340**	*i P*			**Pg**	**09 32 30.0**	**-0.3**
AYDN				*i* S			**Sg**	**09 32 35.0**	**-0.2**
BDRM	**Kayabasi**	**0.54**	**242**	*i P*			**Pg**	**09 32 33.3**	**-0.4**
BDRM	**Kayabasi**	**0.54**	**242**	*i P*			**Pg**	**09 32 33.3**	**-0.4**
BDRM				*i* S			**Sg**	**09 32 42.8**	**+2.1**
TURN	**Turunc**	**0.64**	**135**	*i P*			**Pg**	**09 32 33.5**	**-2.0**
TURN	**Turunc**	**0.64**	**135**	*i P*			**Pg**	**09 32 33.5**	**-2.0**
TURN				*i* S			**Sg**	**09 32 43.6**	**-0.2**

DAT	**Datca**	**0.70**	**212**	*e*PG	**Pg**	**09 32 35.8**	**-0.8**
DAT	**Datca**	**0.70**	**212**	*e*Pg	**Pg**	**09 32 35.8**	**-0.8**
GCAM	**G?zelcaml?**	**0.74**	**301**	*i* P	**Pg**	**09 32 37.2**	**-0.3**
GCAM	**G?zelcaml?**	**0.74**	**301**	*i* P	**Pg**	**09 32 37.2**	**-0.4**
GCAM				*i* S	**Sg**	**09 32 47.4**	**+0.1**
DNZL	**Cakiroluk**	**0.88**	**65**	*i* P	**Pg**	**09 32 40.0**	**-0.2**
DNZL	**Cakiroluk**	**0.88**	**65**	*i* P	**Pg**	**09 32 40.0**	**-0.2**
DNZL				*i* S	**Sg**	**09 32 55.0**	**+3.3**
GOLH	**Golhisar**	**1.22**	**93**	*i* P	**Pn**	**09 32 46.3**	**-0.1**
GOLH	**Golhisar**	**1.22**	**93**	*i* P	**Pn**	**09 32 46.3**	**-0.1**
MANT	**Manisa**	**1.24**	**19**	*i* P	**Pn**	**09 32 46.1**	**-0.6**
MANT	**Manisa**	**1.24**	**19**	*i* P	**Pn**	**09 32 46.1**	**-0.6**
MANT				*i* S	**Sb**	**09 33 02.2**	**-0.7**
KULA	**Kula-Manisa**	**1.29**	**22**	*e*PN	**Pn**	**09 32 46.9**	**-0.5**
KULA	**Kula-Manisa**	**1.29**	**22**	*e*Pn	**Pn**	**09 32 46.9**	**-0.5**
KHAL	**Karahalli**	**1.56**	**47**	*i* P	**Pn**	**09 32 51.5**	**+0.5**
KHAL	**Karahalli**	**1.56**	**47**	*i* P	**Pn**	**09 32 51.5**	**+0.4**
KHAL				*i* S	**Sn**	**09 33 13.2**	**+1.8**

*NEIC **24** 09:35:02.1, 16°.25N×93°.99W, h93km, MD3.7(MEX), After MEX.*

MEX 24 09:35:02.1±0.6, 16°.25N×93°.99W, h93km±9km, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.92**	**126**	*i* P	Pn	09 35 20.0	-1.1
PCIG				*i* S	Sn	09 35 33.8	-1.5
TGIG		**0.99**	**57**	*i* P	Pn	09 35 21.2	-0.7
TGIG				*i* S	Sn	09 35 34.7	-2.0
CCIG	**Comitan**	**1.78**	**89**	*i* P	Pn	09 35 30.4	-1.2
CCIG				*i* S	Sn	09 35 52.1	-1.9
CCIG	**Comitan**	**1.78**	**89**	*i* P	Pn	09 35 30.4	-1.2
CCIG				*i* S	Sn	09 35 52.1	-1.9
HUIG	**Huatulco**	**2.09**	**257**	*i* P	Pn	09 35 34.5	-1.1
HUIG				*i* S	Sn	09 35 59.4	-1.8
HUIG	**Huatulco**	**2.09**	**257**	*i* P	Pn	09 35 34.5	-1.1
HUIG				*i* S	Sn	09 35 59.4	-1.8
THIG		**2.13**	**128**	*e*P	Pn	09 35 35.0	-1.2
THIG				*i* S	Sn	09 35 59.9	-2.2
VHO	**Vista Hermosa**	**2.75**	**288**	*e*P	Pn	09 35 44.2	-0.2
VHO				*i* S	Sn	09 36 15.2	-1.8
VHO	**Vista Hermosa**	**2.75**	**288**	*e*P	Pn	09 35 44.2	-0.2
VHO				*i* S	Sn	09 36 15.2	-1.8
UTMO	**Huajuapan**	**3.97**	**294**	*i* P	Pn	09 36 00.4	-0.4
UTMO				*i* S	Sn	09 36 45.5	-0.9
PNIG	**Pinotepa**	**3.97**	**273**	*e*P	Pn	09 36 00.4	-0.5
PNIG				*i* S	Sn	09 36 44.4	-2.0
PNIG	**Pinotepa**	**3.97**	**273**	*e*P	Pn	09 36 00.4	-0.5
PNIG				*i* S	Sn	09 36 44.4	-2.0

*IDC **24** 09:41:09.1±1.4, 0°.05S×129°.56E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/20, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=55.9km s-min=21.7km az=69.0*
*ISCJB **24** 09:41:14.7±0.9, 0°.3S±0°.1×129°.34E±0°.05, h53km±12km, mb3.9/4, Error ellipse: s-maj=18.5km s-min=7.7km az=15.1*
*DJA **24** 09:41:14, 0°.44S×129°.30E, h76km, MLv3.7/3*

ISC 24 09:41:15.7±0.9, 0°.3S±0°.1×129°.34E±0°.05, h44km±12km, n8, σ1°.16/11, mb3.9/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.88**	**258**	P	**Pn**	**09 41 44.9**	**-0.5**
LBMI				S	**Sn**	**09 42 06.2**	**-1.7**
SWI	**Sorong**	**2.01**	**107**	P	**Pn**	**09 41 45.1**	**-2.0**
SWI				S	**Sn**	**09 42 12.0**	**+1.0**
TNTI	**Ternate**	**2.23**	**297**	P	**Pn**	**09 41 49.8**	**-0.3**
TNTI				S	**Sn**	**09 42 18.2**	**+1.8**
KAPI	**Kappang**	**10.68**	**244**	Pn	**Pn**	**09 43 47.9**	**+1.7**
	0.6nm,0.3s,baz=76,slow=17,SNR=3.3						
ASAR	**Alice Springs**	**23.68**	**170**	P	**P**	**09 46 24.1**	**+0.5**
	2.4nm,0.8s,mb3.7,baz=353,slow=9.5,SNR=22						
STKA	**Stephens Creek**	**33.51**	**161**	P	**P**	**09 47 51.6**	**+0.5**
	2.3nm,0.7s,mb4.2,baz=335,slow=9.7,SNR=6.5						
MKAR	**Makanchi Array**	**62.30**	**325**	P	**P**	**09 51 32.6**	**-0.8**
	0.4nm,0.6s,mb3.7,baz=124,slow=8.0,SNR=3.4						
KURK	**Kurchatov**	**66.49**	**328**	P	**P**	**09 52 00.3**	**-0.4**
	0.4nm,0.4s,mb3.8,baz=125,slow=6.0,SNR=5.5						

*IDC **24** 09:42:23.3±1.1, 25°.23N×87°.31E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/26, mbtmp3.7/6, Error ellipse: s-maj=41.5km s-min=24.3km az=90.0*
*DMN **24** 09:42:33.1±0.5, 26°.10N×90°.06E, h60km, Ml4.9/7, Error ellipse: s-maj=25.9km s-min=8.7km az=24.0*
*ISCJB **24** 09:42:34.9±0.5, 26°.07N±0°.06×89°.74E±0°.04, h66km±9km, mb3.3/4, Error ellipse: s-maj=11.4km s-min=4.4km az=22.4*

ISC 24 09:42:36.2±0.4, 26°.10N±0°.07×89°.77E±0°.04, h61km±10km, n26, σ1°.12/34, mb3.4/4, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGI	**Shiliguri**	**1.36**	**297**	*ex*	**Pn**	**09 42 57.8**	**-1.1**
SLGI				*e*S	**Sn**	**09 43 14.5**	**-1.5**
GTK	**Gangtok**	**1.61**	**320**	*e*P	**Pn**	**09 43 00.5**	**-1.8**
GTK				*e*S	**Sn**	**09 43 16.0**	**-6.1**
SHL	**Shillong**	**1.97**	**105**	*i* P	**Pn**	**09 43 07.0**	**-0.3**
SHL				*i* x	**Sn**	**09 43 32.5**	**+1.5**
TAPN	**Taplejung**	**2.23**	**305**	*e*Pn	**Pn**	**09 43 10.7**	**0.0**
TAPN				*e*Sn	**Sn**	**09 43 38.8**	**+1.7**
	2μm,0.4s						
ODAN	**Odare**	**2.27**	**290**	*e*Pn	**Pn**	**09 43 11.8**	**+0.5**
ODAN				*e*Sn	**Sn**	**09 43 40.5**	**+2.4**
	3μm,0.3s						
AGT	**Agartala**	**2.58**	**148**	*ex*	**Pn**	**09 43 15.0**	**-0.6**
RAMN	**Ramite**	**2.97**	**287**	*e*Pn	**Pn**	**09 43 21.7**	**+0.9**
RAMN				*e*Sn	**Sn**	**09 43 57.6**	**+2.4**
	510nm,0.3s						
JIRN	**Jiri**	**3.56**	**297**	*e*Pn	**Pn**	**09 43 29.5**	**+0.6**
GUN	**Gumba**	**3.92**	**298**	*e*Pn	**Pn**	**09 43 34.4**	**+0.6**
GUN				*e*Sn	**Sn**	**09 44 18.9**	**+0.4**
	430nm,0.4s						
IMP	**Imphal**	**3.98**	**108**	*e*P	**Pn**	**09 43 35.0**	**+0.3**
IMP				*e*S	**Sn**	**09 44 20.0**	**-0.2**
PKI	**Pulchoki**	**4.17**	**292**	*e*Pn	**Pn**	**09 43 37.3**	**+0.1**
PKI				*e*Sn	**Sn**	**09 44 25.5**	**+0.9**
	162nm,0.3s						
PKIN	**Phulchoki**	**4.18**	**292**	*e*Pn	**Pn**	**09 43 37.3**	**-0.1**
BOK	**Bokaro**	**4.21**	**238**	*e*P	**Pn**	**09 43 35.8**	**-2.0**
BOK				*e*S	**Sn**	**09 44 25.5**	**-0.2**
KKN	**Kakani**	**4.35**	**294**	*e*Pn	**Pn**	**09 43 39.7**	**0.0**
KKN				*e*Sn	**Sn**	**09 44 29.2**	**0.0**
	173nm,0.2s						
DMN	**Daman**	**4.43**	**291**	*e*Pn	**Pn**	**09 43 40.6**	**-0.3**
GKN	**Gorkha**	**4.96**	**294**	*e*Pn	**Pn**	**09 43 48.1**	**0.0**
GKN				*e*Sn	**Sn**	**09 44 43.0**	**-1.1**
	272nm,0.3s						
KOLN	**Koldanda**	**5.76**	**288**	*e*Pn	**Pn**	**09 43 58.5**	**-0.5**
PYUN	**Piuthan**	**6.37**	**290**	*e*Pn	**Pn**	**09 44 06.0**	**-1.4**
JOSI	**Joshimath**	**10.03**	**299**	*ex*	x	09 46 26.5	
JOSI				AML	AML	09 47 13.7	
	comp=E,78nm,0.1s						
JOSI				AML	AML	09 47 14.1	
	comp=N,108nm,0.1s						
NDI	**New Delhi**	**11.45**	**286**	*e*P	x	09 45 07.0	
NDI				*ex*	x	09 47 09.0	
BHPL	**Bhopal**	**11.58**	**258**	*e*S	x	09 47 19.1	
BHPL				AML	AML	09 48 50.2	
	comp=E,25nm,0.3s						
BHPL				AML	AML	09 48 50.5	
	comp=N,48nm,0.4s						
MKAR	**Makanchi Array**	**21.49**	**346**	P	**P**	**09 47 18.9**	**-0.9**
	comp=N,1.3nm,0.6s,mb3.4,baz=151,slow=11,SNR=7.9						
SONM	**Songino Array**	**25.33**	**27**	P	pP	09 48 07.6	-4.3
	comp=N,0.8nm,0.6s,baz=212,slow=8.1,SNR=4.3						
KURK	**Kurchatov**	**26.03**	**344**	P	**P**	**09 48 00.8**	**-2.6**
	comp=N,1.2nm,0.6s,mb3.6,baz=163,slow=8.7,SNR=7.7						
ASAR	**Alice Springs**	**65.35**	**135**	P	**P**	**09 53 15.1**	**+2.9**
	comp=N,0.2nm,0.6s,mb3.3,baz=318,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**89.59**	**11**	P	**P**	**09 55 27.0**	**+0.3**
	comp=N,0.1nm,0.6s,mb3.3,baz=329,slow=4.7,SNR=2.6						

*NEIC **24** 09:43:46.2, 15°.41N×92°.80W, h31km, MD3.7(MEX), After MEX.*

MEX 24 09:43:46.2±0.9, 15°.41N×92°.80W, h31km±27km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.50**	**306**	*i* P	Pb	09 43 54.4	-2.2
PCIG				*i* S	Sb	09 44 02.0	-1.8
THIG		**0.72**	**134**	*i* P	Pn	09 43 57.9	-2.4
THIG				*i* S	Sb	09 44 08.0	-1.9
CCIG	**Comitan**	**1.08**	**36**	*i* P	Pn	09 44 02.8	-2.4
CCIG				*i* S	Sn	09 44 16.0	-3.1
CCIG	**Comitan**	**1.08**	**36**	*i* P	Pn	09 44 02.8	-2.4
CCIG				*i* S	Sn	09 44 16.0	-3.1
SCX	**San Cristobal**	**1.33**	**7**	*e*P	Pn	09 44 07.1	-1.6
SCX				*i* S	Sn	09 44 23.7	-1.6
SCX	**San Cristobal**	**1.33**	**7**	*e*P	Pn	09 44 07.1	-1.6
SCX				*i* S	Sn	09 44 23.7	-1.6
TGIG		**1.39**	**347**	*i* P	Pn	09 44 07.9	-1.6
TGIG				*i* S	Sn	09 44 25.2	-1.7
HUIG	**Huatulco**	**3.21**	**277**	*e*P	Pn	09 44 33.9	-0.5
HUIG				*i* S	Sn	09 45 11.4	-0.2
HUIG	**Huatulco**	**3.21**	**277**	*e*P	Pn	09 44 33.9	-0.5
HUIG				*i* S	Sn	09 45 11.4	-0.2
VHO	**Vista Hermosa**	**4.12**	**294**	*e*P	Pn	09 44 46.9	-0.1
VHO				*i* S	Sn	09 45 34.9	+0.6
VHO	**Vista Hermosa**	**4.12**	**294**	*e*P	Pn	09 44 46.9	-0.1
VHO				*i* S	Sn	09 45 34.9	+0.6
UTMO	**Huajuapan**	**5.37**	**297**	*i* P	Pn	09 45 03.9	-0.2
UTMO				*i* S	Sn	09 46 02.6	-2.4

IDC 24 09:56:31.3±19.0, 24°.18S×179°.76E, h650km±258km, mb2.9/4, mb1 3.1/4, mb1mx2.9/13, mbtmp2.9/4, Error ellipse: s-maj=129.2km s-min=84.3km az=136.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.26**	**271**	P	P	10 02 01.4	+0.1
	3.0nm,0.3s,baz=92,slow=14,SNR=6.7						
STKA	**Stephens Creek**	**34.42**	**248**	P	P	10 02 27.4	-0.2
	1.0nm,0.7s,baz=72,slow=6.4,SNR=4.0						
ASAR	**Alice Springs**	**41.77**	**261**	P	P	10 03 27.1	+0.3
	0.8nm,0.5s,baz=95,slow=6.7,SNR=23						
TXAR	**Lajitas Array**	**90.76**	**58**	P	P	10 08 27.4	+0.2
	0.4nm,0.7s,baz=223,slow=6.0,SNR=6.6						

IDC 24 10:00:44.2±3.4, 50°.12N×178°.14E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/27, mbtmp3.4/4, ML2.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/37, Error ellipse: s-maj=99.0km s-min=40.1km az=8.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**13.04**	**291**	Pn	Pn	10 03 50.6	0.0
	0.1nm,0.3s,baz=96,slow=18,SNR=3.8						
PETK				LR	LR	10 08 13.1	
	comp=Z,28nm,18.2s,baz=51,slow=34						
YKA	**Yellowknife Ar**	**37.50**	**45**	P	P	10 07 58.8	-0.4
	0.3nm,0.4s,baz=284,slow=7.7,SNR=8.6						
PDAR	**Pinedale Array**	**48.56**	**69**	P	P	10 09 30.0	+1.1
	0.4nm,0.8s,baz=315,slow=3.2,SNR=3.9						
SFJD	**Kangerlussuaq**	**57.53**	**21**	LR	LR	10 36 36.2	
	comp=Z,38nm,18.4s,baz=60,slow=37						
TXAR	**Lajitas Array**	**60.79**	**78**	P	P	10 10 57.6	-0.3
	0.3nm,0.6s,baz=293,slow=6.0,SNR=5.1						

*IDC **24** 10:08:36.0±0.7, 31°.09N×103°.61E, h0km, mb4.0/17, mb1 4.1/19, mb1mx4.1/28, mbtmp4.0/19, ML4.1/2, MS3.4/7, Ms1 3.4/7, ms1mx3.0/32, Error ellipse: s-maj=24.6km s-min=15.1km az=51.0*
*ISCJB **24** 10:08:38.1±0.7, 31°.11N±0°.04×103°.67E±0°.05, h24km±5km, mb4.2/35, MS3.5/7, Error ellipse: s-maj=7.6km s-min=6.4km az=23.0*
*NEIC **24** 10:08:38.0±0.4, 31°.13N×103°.64E, h10km, mb4.3/11, Error ellipse: s-maj=9.6km s-min=7.6km az=62.0*
*BJI **24** 10:08:38.1, 31°.20N×103°.83E, h11km, mB4.6/4, mb4.3/12, ML4.3/17, Ms4.1/13, Ms7 3.9/12*
*MOS **24** 10:08:39.5±1.2, 31°.07N×103°.65E, h37km, mb4.4/24, Error ellipse: s-maj=14.1km s-min=6.9km az=100.5*

ISC 24 10:08:39.0±0.6, 31°.10N±0°.03×103°.69E±0°.05, h16km±4km, n89, σ1°.11/102, mb4.2/35, MS3.5/7, 9C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.20**	**163**	Pg	**Pg**	**10 08 43.4**	**-0.2**
CD2				Sg	**Sg**	**10 08 47.8**	**+1.0**
CD2				smax			
	comp=N,82μm,0.6s						
LZH	**Lanzhou**	**4.98**	**1**	Pn	**Pn**	**10 09 57.6**	**+4.6**
LZH				Pg	**Pg**	**10 10 11.9**	**-2.4**
LZH				Sn	**Sn**	**10 10 55.3**	**+5.1**
LZH				Sg	**Sg**	**10 11 18.3**	**-0.5**
LZH				smax			
	comp=N,310nm,0.9s						
LZH				smax			
	comp=E,400nm,1.1s						
LZH				LR	LR		
	comp=E,2μm,8.4s						
LZH				LR	LR		
	comp=Z,2μm,9.0s						
ENH	**Enshi**	**5.06**	**98**	*e*Pn	**Pn**	**10 09 56.2**	**+2.1**
	comp=Z,109nm,0.5s						
ENH				*e*Sn	**Sn**	**10 10 54.4**	**+2.2**
XAN	**Xi'an**	**5.30**	**55**	Pn	**Pn**	**10 09 56.3**	**-1.1**
XAN				Sn	**Sn**	**10 10 58.3**	**+0.2**
XAN				Sg	**Sg**	**10 11 22.8**	**-6.3**
XAN				smax			
	comp=N,420nm,0.8s						
XAN				smax			
	comp=E,160nm,1.1s						
XAN				LR	LR		
	comp=N,640nm,11.1s						
XAN				LR	LR		
	comp=E,110nm,12.1s						
XAN				LR	LR		
	comp=Z,210nm,8.5s						
GYA	**Guiyang**	**5.31**	**150**	Pn	**Pn**	**10 10 01.3**	**+3.8**
GYA				Sg	**Sg**	**10 11 16.1**	**-13**
GYA				smax			
	comp=N,510nm,0.9s						
GYA				smax			
	comp=E,430nm,0.9s						
GYA				LR	LR		
	comp=N,4μm,5.8s						
GYA				LR	LR		
	comp=E,3μm,5.0s						
GYA				LR	LR		
	comp=Z,5μm,4.9s						
GTA	**Gaotai**	**8.88**	**340**	*e*P	**Pn**	**10 10 53.8**	**+7.3**
GTA				pP		10 10 57.3	
GTA				sP		10 10 59.8	
GTA				S	**Sn**	**10 12 27.6**	**+1.4**
GTA				sS		10 12 33.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,58nm,4.5s						
GTA				LR	LR		
	comp=N,300nm,14.3s						
GTA				LR	LR		
	comp=E,260nm,12.5s						
GTA				LR	LR		
	comp=Z,340nm,14.7s						
WHN	**Wuhan**	**9.18**	**91**	P	**Pn**	**10 10 53.5**	**+2.8**
WHN				S	**Sn**	**10 12 27.3**	**-6.4**
WHN				LR	LR		
	comp=N,2μm,12.8s						
WHN				LR	LR		
	comp=E,970nm,7.8s						
WHN				LR	LR		
	comp=Z,720nm,5.2s						
QIZ	**Qiongzhong**	**13.24**	**154**	P	**Pn**	**10 11 44.8**	**-1.5**
QIZ				S	**Sn**	**10 14 11.4**	**-1.8**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
QIZ				LR	LR		
	comp=N,330nm,8.4s						
QIZ				LR	LR		
	comp=E,75nm,9.5s						
QIZ				LR	LR		
	comp=Z,390nm,10.2s						
CMAR	**Chiang Mai Arr**	**13.30**	**200**	Pn	**Pn**	**10 11 47.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=18,slow=11,SNR=2.4						
CMAR				LR	LR	10 17 30.7	
	comp=Z,101nm,18.1s,baz=0.0,slow=40						
SONM	**Songino Array**	**16.84**	**6**	Pn	**Pn**	**10 12 34.3**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=198,slow=14,SNR=19						
SONM				LR	LR	10 19 38.9	
	comp=Z,110nm,18.5s,baz=290,slow=39						
SONM	**Songino Array**	**16.84**	**6**	P	**Pn**	**10 12 34.3**	**+0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,110nm,18.5s						
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*P	**Pn**	**10 12 34.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**16.94**	**8**	*e*Pn	**Pn**	**10 12 34.9**	**-0.3**
	comp=Z,6.0nm,0.8s						
ZAK	**Zakamensk**	**19.27**	**359**	*e*P	**Pn**	**10 13 03.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TLY	**Talaya**	**20.57**	**360**	*e*P	**P**	**10 13 19.1**	**+2.3**
TLY				*e*		10 13 31.5	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,87nm,10.0s,MS3.4						
TLY	**Talaya**	**20.57**	**360**	P	**P**	**10 13 15.1**	**-1.6**
	comp=Z,4.4nm,0.9s						
MOY	**Mondy**	**20.65**	**355**	*e*P	**P**	**10 13 20.5**	**+2.8**
KSRS	**Korea Array**	**20.98**	**66**	P	**P**	**10 13 21.4**	**+0.1**
	comp=Z,16nm,0.7s,baz=262,slow=11,SNR=91						
KSRS	**Korea Array**	**20.98**	**66**	P	**P**	**10 13 21.5**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,16nm,0.7s						
CN2	**Changchun**	**21.35**	**47**	*e*P	**P**	**10 13 25.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,50nm,0.8s,mb4.9						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
HIA	**Hailar**	**21.82**	**29**	*e*P	**P**	**10 13 31.0**	**+0.7**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HIA	**Hailar**	**21.82**	**29**	*e*P	**P**	**10 13 31.0**	**+0.6**
	comp=Z,6.0nm,0.5s,mb4.3						
MK31	**Makanchi Array**	**22.75**	**320**	*e*P	**P**	**10 13 41.4**	**+1.1**
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**10 13 41.1**	**+0.8**
	comp=Z,1.8nm,0.7s,mb3.6,baz=122,slow=11,SNR=11						
MKAR				LR	LR	10 23 06.4	
	comp=Z,84nm,18.5s,MS3.2,baz=356,slow=38						
MKAR	**Makanchi Array**	**22.75**	**320**	P	**P**	**10 13 41.1**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,84nm,18.5s						
KSH	**Kashi**	**24.06**	**298**	P	**P**	**10 13 57.3**	**+4.0**
KSH				pmax	pmax		
	comp=Z,48nm,2.7s,mb4.5						
UCH	**Uchtor**	**25.79**	**304**	*e*P	**P**	**10 14 11.5**	**+2.5**
	comp=Z,2.9nm,0.8s,mb3.9						
AAK	**Ala-Archa**	**25.91**	**305**	P	**P**	**10 14 14.2**	**+4.0**
	comp=Z,0.8nm,0.3s,mb3.8,baz=112,slow=11,SNR=4.4						
AAK				LR	LR	10 25 04.8	
	comp=Z,89nm,19.6s,MS3.3,baz=24,slow=38						
AAK	**Ala-Archa**	**25.91**	**305**	*de*P	**P**	**10 14 13.4**	**+3.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.5						
ZALV	**Zalesovo Beam**	**26.57**	**335**	P	**P**	**10 14 16.1**	**+0.1**
	comp=Z,2.7nm,0.7s,mb3.9,baz=141,slow=9.6,SNR=10						
ZALV				LR	LR	10 25 23.7	
	comp=Z,65nm,20.5s,MS3.2,baz=31,slow=38						
ZALV	**Zalesovo Beam**	**26.57**	**335**	P	**P**	**10 14 16.1**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
ZALV				MLR	MLR		
	comp=Z,65nm,20.5s,MS3.2						
KURK	**Kurchatov**	**27.04**	**324**	P	**P**	**10 14 20.5**	**+0.2**
	comp=Z,2.8nm,0.7s,mb3.9,baz=126,slow=10,SNR=15						
KURK	**Kurchatov**	**27.04**	**324**	*de*P	**P**	**10 14 20.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**10 15 08.6**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=101,slow=7.5,SNR=3.1						
BVAR				PcP	PcP	10 17 54.9	-0.5
	comp=Z,1.5nm,0.8s,baz=144,slow=5.5,SNR=5.4						
BVAR				LR	LR	10 29 19.1	
	comp=Z,116nm,20.8s,MS3.6,baz=319,slow=38						
BVAR	**Borovoye Array**	**32.58**	**322**	P	**P**	**10 15 08.6**	**-0.7**
BVAR						10 17 54.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,116nm,20.8s						
YAK	**Yakutsk**	**35.24**	**21**	*e*P	**P**	**10 15 32.2**	**-0.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ABKAR	**Akbulak array**	**37.41**	**312**	*e*P	**P**	**10 15 51.4**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.8						
AKTK	**Aktyubinsk**	**38.88**	**313**	P	**P**	**10 16 03.4**	**0.0**
AKTK				PcP	PcP	10 18 13.8	-0.3
AKTO	**Aktyubinsk**	**38.88**	**313**	P	**P**	**10 16 03.4**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.7,baz=92,slow=12,SNR=3.0						
AKTO				PcP	PcP	10 18 13.8	-0.3
	comp=Z,0.6nm,0.3s,baz=135,slow=4.3,SNR=4.0						
AKTO	**Aktyubinsk**	**38.88**	**313**	P	**P**	**10 16 03.4**	**0.0**
AKTO						10 18 13.8	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
ARU	**Arti**	**40.22**	**322**	*d* iP	**P**	**10 16 12.2**	**-2.3**
ARU				S	**S**	**10 22 17.3**	**-3.3**
ARU				SS	SS	10 25 13.3	-5.4
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
TIXI	**Tiksi**	**42.83**	**11**	*e*P	**P**	**10 16 34.8**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
TIXI	**Tiksi**	**42.83**	**11**	*e*P	**P**	**10 16 34.8**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.1						
MIB	**Mutribah**	**48.14**	**284**	*e*P	**P**	**10 17 18.2**	**-0.2**
MIB				AMb	AMB	10 17 19.0	
	comp=Z,12nm,1.0s,mb4.9						
RDF	**Al-Radifah**	**48.22**	**283**	*e*P	**P**	**10 17 19.6**	**+0.6**
RDF				AMb	AMB	10 17 30.1	
	comp=Z,14nm,1.1s,mb4.9						
NAY	**Al-Naaiem**	**48.38**	**283**	*e*P	**P**	**10 17 20.0**	**-0.2

comp=Z,3.0nm,0.9s
FINES FINESS Array B 57.38 326 P **P 10 18 25.3 -0.8**
WRAB Tennant Creek 58.66 146 *e*P **P 10 18 35.9 +0.3**
WRAB pmax pmax
comp=Z,12nm,0.8s,mb5.0
WRAB Tennant Creek 58.66 146 *e*P **P 10 18 35.9 +0.3**
comp=Z,12nm,0.8s,mb5.0
ASAR Alice Springs 61.67 148 P **P 10 18 56.5 +0.3**
comp=Z,2.3nm,0.9s,mb4.3,baz=332,slow=5.9,SNR=18
ASAR Alice Springs 61.67 148 P **P 10 18 56.5 +0.4**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
NB2 NORSAR Subarra 64.47 327 P **P 10 19 13.1 -1.2**
comp=Z,0.1nm,0.6s,mb3.0,baz=75,slow=7.4
NOA NORSAR Array B 64.47 327 P **P 10 19 13.2 -1.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=74,slow=6.7,SNR=4.6
NOA NORSAR Array B 64.47 327 P **P 10 19 13.3 -1.0**
NOA pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 67.30 314 P **P 10 19 31.2 -1.6**
comp=Z,0.6nm,0.7s,mb3.7,baz=101,slow=6.9,SNR=5.1
GERES GERESS Array B 67.30 314 P **P 10 19 31.2 -1.6**
GERES pmax pmax
comp=Z,1.0nm,0.7s
COLA College 69.59 26 *e*P **P 10 19 46.6 -0.2**
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 69.59 26 *e*P **P 10 19 46.6 -0.2**
comp=Z,2.9nm,0.8s,mb4.3
DAVOX Davos/Dischmat 70.48 313 LR LR 10 53 33.5
comp=Z,38nm,19.3s,MS3.7,baz=80,slow=38
CDF Champ du Feu 71.37 316 *e*P **P 10 19 57.8 -0.2**
STKA Stephens Creek 72.20 147 P **P 10 20 02.8 -0.2**
comp=Z,1.5nm,0.6s,mb4.1,baz=323,slow=8.6,SNR=4.6
INK Inuvik 72.28 19 P **P 10 20 02.7 -0.4**
comp=Z,2.9nm,0.7s,mb4.3,baz=332,slow=8.0,SNR=18
INK Inuvik 72.28 19 P **P 10 20 02.7 -0.4**
INK pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 72.28 19 *e*P **P 10 20 02.8 -0.3**
LPG La Plagne 73.00 313⇑*i*P **P 10 20 08.5 +0.7**
comp=Z,14nm,0.8s,mb4.6
LPG La Plagne 73.00 313⇑*i*P **P 10 20 08.5 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LPG La Plagne 73.00 313⇑*i*P **P 10 20 08.5 +0.7**
comp=Z,6.9nm,0.8s,mb4.6
LPL La Plagne 73.00 313⇑*i*P **P 10 20 08.3 +0.5**
comp=Z,6.0nm,0.6s,mb4.4
LPL La Plagne 73.00 313⇑*i*P **P 10 20 08.3 +0.5**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LPL La Plagne 73.00 313⇑*i*P **P 10 20 08.3 +0.5**
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 74.25 315 *e*P **P 10 20 14.8 -0.3**
AVF Avril sur Loir 74.48 315 *e*P **P 10 20 16.0 -0.4**
TCF Toulx Ste Croi 75.41 315 *e*P **P 10 20 21.8 0.0**
comp=Z,8.9nm,0.9s,mb4.4
TCF Toulx Ste Croi 75.41 315 *e*P **P 10 20 21.8 0.0**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TCF Toulx Ste Croi 75.41 315 *e*P **P 10 20 21.8 0.0**
comp=Z,4.4nm,0.9s,mb4.4
YKA Yellowknife Ar 81.80 17 P **P 10 20 56.4 -0.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=329,slow=5.3,SNR=16
YKA Yellowknife Ar 81.80 17 P **P 10 20 56.4 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
FFC Flin Flon 91.71 15 *c e*P **P 10 21 46.1 +0.7**
TORD Torodi Ar. Bea 93.30 287 P **P 10 21 53.2 -0.2**
comp=Z,0.5nm,0.8s,mb4.0,baz=85,slow=5.3,SNR=3.0

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*IDC **24** 10:12:13.1±2.7, 36°.20N×142°.25E, h0km, mb3.8/3, mb1 3.7/7, mb1mx3.5/29, mbtmp3.9/7, ML3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.1/38, Error ellipse: s-maj=52.8km s-min=25.9km az=90.0*
*NEIC **24** 10:12:17.0, 36°.25N×142°.06E, h69km, MG3.4(JMA), After JMA.*
*JMA **24** 10:12:16.9±0.2, 36°.25N×142°.06E, h69km, M3.4*
ISC 24 10:12:16.0±2.4, 36°.22N±0°.04×142°.14E±0°.10, h20km±21km, n19, σ0°90/24, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.16**	**244**	P	**Pn**	**10 12 37.1**	**0.0**
JHO	**Hitachi**	**1.33**	**288**	P	**Pn**	**10 12 38.6**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.40**	**310**	P	**Pn**	**10 12 39.7**	**-0.6**
JFK	**Kawauchi**	**1.53**	**319**	P	**Pn**	**10 12 41.4**	**-0.8**
BSO1	**Boso 1**	**1.83**	**212**	*e*S	**Sn**	**10 13 09.6**	**+0.8**
BSO3	**Boso 3**	**1.94**	**224**	P	**Pn**	**10 12 48.2**	**+0.4**
JFT	**Otama**	**1.94**	**312**	P	**Pn**	**10 12 48.4**	**+0.5**
JMM	**Marumori**	**1.97**	**327**	P	**Pn**	**10 12 47.6**	**-0.6**
JAG	**Ashikaga**	**2.18**	**276**	P	**Pn**	**10 12 51.0**	**-0.1**
JAG				*e*S	**Sn**	**10 13 16.6**	**-0.9**
MJAR	**Matsushiro Arr**	**3.19**	**277**	Pn	**Pn**	**10 13 05.6**	**+0.6**
	4.3nm,0.3s,baz=89,slow=11,SNR=41						
MJAR				Sn	**Sn**	**10 13 50.1**	**+7.6**
	3.7nm,0.3s,baz=91,slow=28,SNR=5.2						
MAJO	**Matsushiro**	**3.19**	**277**	*e*Pn	**Pn**	**10 13 06.2**	**+1.2**
MAT	**Matsushiro**	**3.19**	**277**	P	**Pn**	**10 13 06.0**	**+1.0**
MAT				S	**Sn**	**10 13 49.9**	**+7.4**
JHJ	**Hachijo jima 2**	**3.65**	**213**	Pn	**Pn**	**10 13 11.8**	**+0.4**
	24nm,0.3s,baz=276,slow=16,SNR=7.3						
JHJ				Sn	**Sn**	**10 13 51.4**	**-2.4**
	52nm,0.3s,baz=68,slow=23,SNR=5.9						
ASAJ	**Asahikawa**	**7.90**	**2**	Pn	**Pn**	**10 14 09.9**	**+0.2**
	0.7nm,0.3s,baz=213,slow=13,SNR=5.3						
ASAJ				Sn	**Sn**	**10 15 37.4**	**-1.0**
	0.2nm,0.3s,baz=90,slow=20,SNR=2.6						
CBIJ	**Chichi jima**	**9.09**	**180**	Pn	**Pn**	**10 14 25.0**	**-1.1**
	3.0nm,0.3s,baz=55,slow=23,SNR=9.4						
CBIJ				Sn	**Sn**	**10 15 58.8**	**-9.1**
	2.6nm,0.3s,baz=294,slow=19,SNR=3.5						
KSRS	**Korea Array**	**11.46**	**280**	LR	LR	10 19 26.1	
	comp=Z,43nm,18.1s,baz=85,slow=37						
SONM	**Songino Array**	**28.73**	**305**	P	**P**	**10 18 12.3**	**+0.4**
	0.8nm,0.7s,mb3.6,baz=108,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**45.05**	**303**	P	**P**	**10 20 31.7**	**+1.4**
	0.8nm,0.6s,mb3.8,baz=79,slow=7.8,SNR=5.8						
KURK	**Kurchatov**	**46.90**	**309**	P	**P**	**10 20 45.8**	**+1.0**
	0.6nm,0.4s,mb3.9,baz=85,slow=8.2,SNR=3.7						

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*ISCJB **24** 10:23:37.0±1.5, 14°.52N±0°.06×119°.5E±0°.1, h44km±16km, mb3.7/2, Error ellipse: s-maj=23.9km s-min=9.8km az=178.2*
*MAN **24** 10:23:36, 14°.53N×119°.54E, h32km, mb4.7, ML3.6, MS3.6*
*IDC **24** 10:23:41.7±2.2, 14°.42N×119°.94E, h66km±22km, mb3.5/3, mb1 3.8/3, mb1mx3.2/22, mbtmp3.5/3, Error ellipse: s-maj=42.4km s-min=28.0km az=43.0*
ISC 24 10:23:37.9±1.5, 14°.51N±0°.06×119°.5E±0°.2, h40km±17km, n14, σ1°12/16, mb3.7/2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**1.04**	**138**	*e*P	**Pn**	**10 23 54.9**	**-1.1**
LUBP				*e*S	**Sn**	**10 24 08.1**	**-1.1**
TGY	**Tagaytay City**	**1.42**	**107**	P	**Pn**	**10 24 00.3**	**-0.9**
	310nm,0.3s,baz=280,slow=1.7,SNR=21						
TGY				S	**Sn**	**10 24 22.4**	**+3.8**
	307nm,0.3s,baz=135,slow=7.5,SNR=5.1						
BOLP	**Bolinao**	**1.89**	**11**	*e*P	**Pn**	**10 24 06.3**	**-1.4**
BALP	**Baler**	**2.32**	**58**	*e*P	**Pn**	**10 24 13.2**	**-0.4**
POLP	**Polilio Island**	**2.33**	**84**	*e*P	**Pn**	**10 24 13.5**	**-0.3**
BOAC	**Boac**	**2.47**	**115**	*e*P	**Pn**	**10 24 15.8**	**+0.1**
SJMP	**San Jose**	**2.56**	**143**	*e*P	**Pn**	**10 24 19.6**	**+2.7**
BUSP	**Coron**	**2.58**	**165**	*e*P	**Pn**	**10 24 18.2**	**+1.0**
CAUP	**Cauayan**	**3.27**	**42**	*e*P	**Pn**	**10 24 28.2**	**+1.5**
CUYO	**Cuyo Island**	**3.92**	**158**	*e*P	**Pn**	**10 24 35.5**	**-0.1**
PVCP	**Virac**	**4.57**	**101**	*e*P	**Pn**	**10 24 46.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**20.13**	**284**	P	**P**	**10 28 14.8**	**+6.1**
	0.9nm,0.4s,baz=101,slow=9.5,SNR=6.2						
ASAR	**Alice Springs**	**40.46**	**159**	P	**P**	**10 31 12.1**	**-0.7**
	0.4nm,0.3s,mb3.6,baz=335,slow=7.4,SNR=27						
YKA	**Yellowknife Ar**	**92.46**	**22**	P	**P**	**10 36 44.6**	**+0.2**
	0.3nm,0.6s,mb3.8,baz=311,slow=4.4,SNR=8.4						

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*NOU **24** 10:28:36.7±0.6, 18°.06S×169°.01E, h30km, MD3.6, ML3.6*
*MOS **24** 10:28:36.9±1.2, 19°.18S×169°.54E, h226km, mb5.2/26, Error ellipse: s-maj=11.4km s-min=9.3km az=58.1*
*LDG **24** 10:28:39.2±0.2, 19°.14S×169°.63E, h240km, Mb4.8/2, Error ellipse: s-maj=22.5km s-min=3.4km az=126.0*
*SZGRF **24** 10:28:39.0, 19°.98S×170°.39E, h260km, Vanuatu Islands*
*ISCJB **24** 10:28:40.8±0.6, 19°.31S±0°.06×169°.44E±0°.04, h262km±6km, mb4.8/85, Error ellipse: s-maj=9.8km s-min=5.4km az=163.2*
*BJI **24** 10:28:41.5, 19°.24S×170°.17E, h288km, mB4.9/21, mb4.8/26*
*IDC **24** 10:28:42.4±0.8, 19°.36S×169°.62E, h270km±7km, mb4.4/15, mb1 4.4/17, mb1mx4.4/18, mbtmp4.3/17, Error ellipse: s-maj=12.2km s-min=11.7km az=116.0*
*GCMT **24** 10:28:43.4±0.4, 19°.36S×169°.47E, h278km±3km, MW5.2/53, Moment Tensor Solution. s30,c34; s53,c73; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.86±.24; Mθθ 2.27±.24; Mφφ -4.13±.22; Mrθ 3.43±.27; Mφθ -1.08±.23; Mφr -4.15±.26; Best double couple: M0 6.54300×10^16 NP1: φs 45.00000°, δ 33.00000°, λ 162.00000°. NP2: φs 150.00000°, δ 81.00000°, λ 59.00000°. Principal axes: T 6.7850, Plg45.0000°, Azm28.0000°; N -0.4830, Plg31.0000°, Azm156.0000°; P -6.3020, Plg29.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **24** 10:28:43.4±0.2, 19°.38S×169°.51E, mb5.0/56 Error ellipse: s-maj=8.3km s-min=4.7km az=150.0*
ISC 24 10:28:41.2±0.5, 19°.31S±0°.06×169°.50E±0°.04, h253km±6km, h284km±1.5km: pP-P, n530, σ0°62/363, mb4.8/85, 112C-85D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.74**	**220**	*e*P	**Pn**	**10 29 42.5**	**+0.4**
BAYA				AMP		10 30 50.9	
	comp=Z,32nm,2.8s						
DZM	**Mont Dzumac**	**3.97**	**226**	*e*Pn	**Pn**	**10 29 45.6**	**+0.9**
	comp=Z,123nm,0.3s						
DZM	**Mont Dzumac**	**3.97**	**226**	*e*P*n*	**Pn**	**10 29 44.0**	**-0.7**
DZM				AMP		10 30 43.8	
	comp=Z,2μm,4.2s						
DZM	**Mont Dzumac**	**3.97**	**226**	*e*Pn	**Pn**	**10 29 45.6**	**+0.9**
DZM				*e*Sn	**S**	**10 30 35.3**	**+0.1**
LASL	**Noumea**	**4.01**	**223**	*e*P	**Pn**	**10 29 45.1**	**-0.1**
NOUC	**Port Laguerre**	**4.08**	**227**	*e*P	**Pn**	**10 29 45.9**	**-0.1**
NOUC				*e*S	**S**	**10 30 36.6**	**-1.0**
NOUC				AMP		10 31 06.6	
	comp=Z,132nm,0.0s						
MVNO	**Noumea**	**4.11**	**224**	*e*P	**Pn**	**10 29 46.3**	**0.0**
ONTRN	**Noumea**	**4.12**	**223**	*e*P	**Pn**	**10 29 46.2**	**-0.3**
MSVF	**Nonsavu**	**8.26**	**80**	Pn	**Pn**	**10 30 39.0**	**+1.2**
	comp=Z,3μm,0.9s,SNR=59						
MSVF	**Nonsavu**	**8.26**	**80**	⇓*i*Pn	**Pn**	**10 30 38.8**	**+1.0**
	comp=Z,406nm,0.8s						
EIDS	**Eidsvold**	**18.07**	**247**	*e*P	**P**	**10 32 35.7**	**+1.3**
	comp=Z,44nm,0.6s						
AFI	**Afiamalu**	**18.72**	**76**	P	**P**	**10 32 39.0**	**-2.6**
	comp=Z,1.7nm,0.3s,baz=191,slow=17,SNR=5.7						
ARMA	**Armidale**	**19.60**	**232**	*e*P	**P**	**10 32 52.0**	**+1.2**
ARMA	**Armidale**	**19.60**	**232**	*e*P	**P**	**10 32 51.8**	**+1.1**
	comp=Z,58nm,0.8s						
URZ	**Urewera**	**20.01**	**162**	P	**P**	**10 32 55.0**	**0.0**
	baz=297,slow=2.3,SNR=1.8						
RIV	**Riverview**	**21.82**	**225**	*e*P	**P**	**10 33 13.4**	**+0.1**
RIV				*e*pP		10 34 02.1	
CTA	**Charters Tower**	**21.90**	**264**	*e*P	**P**	**10 33 15.0**	**+0.8**
	comp=Z,54nm,0.9s,mb5.1						
CTA				*e*S	**S**	**10 36 59.9**	**+2.1**
CTA	**Charters Tower**	**21.90**	**264**	P	**P**	**10 33 14.9**	**+0.8**
	comp=Z,69nm,0.9s,mb5.2,baz=88,slow=12,SNR=39						
CTAO	**Charters Tower**	**21.90**	**264**	*e*P	**P**	**10 33 15.1**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,112nm,1.0s,mb5.3						
CTAO	**Charters Tower**	**21.90**	**264**	*e*P	**P**	**10 33 15.1**	**+0.9**
	comp=Z,112nm,1.0s,mb5.3						
CNB	**Canberra Magne**	**23.89**	**224**	*e*P	**P**	**10 33 32.5**	**+0.4**
CNB				*e*pP		10 34 18.9	
CAN	**Canberra**	**24.14**	**224**	*e*P	**P**	**10 33 34.3**	**0.0**
CAN				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.0						
CAN	**Canberra**	**24.14**	**224**	*e*P	**P**	**10 33 34.3**	**0.0**
	comp=Z,44nm,1.1s,mb5.0						
RPZ	**Rata Peaks**	**24.37**	**177**	P	**P**	**10 33 36.3**	**0.0**
	comp=Z,5.7nm,0.5s,mb4.5,baz=51,slow=14,SNR=8.8						
COEN	**Coen**	**25.77**	**278**	*e*P	**P**	**10 33 50.4**	**+1.2**
	comp=Z,458nm,1.5s,mb5.9						
TOO	**Toolangi**	**27.74**	**224**	*e*P	**P**	**10 34 06.2**	**-0.4**
TOO				*e*pP	pP	10 34 56.1	0.0
STKA	**Stephens Creek**	**28.02**	**238**	*e*P	**P**	**10 34 09.2**	**+0.1**
	comp=Z,43nm,0.8s,mb5.1						
STKA				*e*pP	pP	10 35 03.3	+4.6
STKA	**Stephens Creek**	**28.02**	**238**	P	**P**	**10 34 09.1**	**0.0**
	comp=Z,50nm,0.8s,mb5.2,baz=69,slow=8.1,SNR=82						
STKA				pP	pP	10 35 02.9	+4.2
	comp=Z,24nm,0.9s,baz=72,slow=7.5,SNR=5.6						
STKA				ScP	ScP	10 40 32.0	-1.9
	comp=Z,3.5nm,0.9s,baz=45,slow=4.3,SNR=3.0						
STKA	**Stephens Creek**	**28.02**	**238**	*e*P	**P**	**10 34 09.2**	**+0.1**
	comp=Z,12nm,0.8s,mb4.6						
STKA				*e*pP	pP	10 35 03.5	+4.8
MOO	**Moorlands**	**29.80**	**214**	*e*P	**P**	**10 34 23.9**	**-0.8**
WRAB	**Tennant Creek**	**33.08**	**263**	P	**P**	**10 34 52.6**	**-1.0**
	comp=Z,207nm,0.7s,mb5.8,SNR=29						
WRAB	**Tennant Creek**	**33.08**	**263**	*e*P	**P**	**10 34 52.6**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**33.08**	**263**	*e*P	**P**	**10 34 52.6**	**-1.1**
	comp=Z,57nm,1.1s,mb5.0						
ASAR	**Alice Springs**	**33.35**	**256**	P	**P**	**10 34 55.4**	**-0.5**
	comp=Z,80nm,0.7s,mb5.3,baz=82,slow=9.3,SNR=1156						
ASAR				pP	pP	10 35 50.2	+3.9
	comp=Z,11nm,0.7s,baz=86,slow=8.9,SNR=3.0						
ASAR				S	**S**	**10 39 55.4**	**-2.4**
	comp=Z,1.4nm,1.0s,baz=84,slow=17,SNR=5.2						
ASAR				ScP	ScP	10 40 50.8	-0.9
	comp=Z,2.8nm,0.9s,baz=95,slow=3.3,SNR=9.0						
ASAR	**Alice Springs**	**33.35**	**256**	P	**P**	**10 34 55.4**	**-0.5**
ASAR				S	**S**	**10 39 55.4**	**-2.4**
KAKA	**Kakadu**	**36.17**	**275**	*e*P	**P**	**10 35 19.2**	**-0.9**
	comp=Z,19nm,0.9s,mb4.6						
FORT	**Forrest**	**39.04**	**245**	*e*P	**P**	**10 35 43.1**	**-0.8**
	comp=Z,28nm,1.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**41.48**	**264**	*e*P	**P**	**10 36 04.2**	**+0.2**
	comp=Z,80nm,0.9s,mb5.2						
FITZ				*e*pP	pP	10 36 54.0	-2.3
FITZ				*e*		10 37 46.9	
FITZ	**Fitzroy Crossi**	**41.48**	**264**	*e*P	**P**	**10 36 04.2**	**+0.2**
	comp=Z,91nm,1.3s,mb5.0						
MBWA	**Marble Bar**	**46.58**	**259**	*e*P	**P**	**10 36 44.1**	**-0.3**
	comp=Z,74nm,1.1s,mb4.9						
MBWA				*e*pP	pP	10 37 43.2	+5.3
MEEK	**Meekatharra**	**47.17**	**251**	*e*P	**P**	**10 36 48.1**	**-0.7**
MEEK				*e*pP	pP	10 37 46.2	+3.7
KLBR	**Kellerberrin**	**47.91**	**245**	*e*P	**P**	**10 36 53.1**	**-1.3**
	comp=Z,64nm,0.9s,mb5.0						
KAPI	**Kappang**	**50.47**	**280**	P	**P**	**10 37 13.4**	**-0.6**
	comp=Z,11nm,0.7s,mb4.3,baz=37,slow=5.1,SNR=5.1						
CBIJ	**Chichi jima**	**53.19**	**329**	P	**P**	**10 37 33.1**	**-0.6**
	comp=Z,39nm,1.0s,mb4.8,baz=303,slow=22,SNR=4.4						
SBA	**Scott Base**	**58.59**	**181**	*e*P	**P**	**10 38 11.6**	**+0.4**
SBA				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
SBA	**Scott Base**	**58.59**	**181**	*e*P	**P**	**10 38 11.6**	**+0.4**
	comp=Z,14nm,1.0s,mb4.6						
JOW	**Kunigami**	**60.85**	**318**	P	**P**	**10 38 28.4**	**+1.1**
	comp=Z,19nm,1.0s,mb4.7,baz=132,slow=12,SNR=3.4						
MJAR	**Matsushiro Arr**	**62.93**	**332**	P	**P**	**10 38 40.6**	**-0.3**
	comp=Z,15nm,1.0s,mb4.6,baz=169,slow=7.2,SNR=29						
MAJO	**Matsushiro**	**62.93**	**332**	*e*P	**P**	**10 38 39.7**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,39nm,1.3s,mb4.9						
MAJO	**Matsushiro**	**62.93**	**332**	*e*P	**P**	**10 38 39.7**	**-1.2**
	comp=Z,39nm,1.3s,mb4.9						
MAT	**Matsushiro**	**62.93**	**332**	P	**P**	**10 38 40.7**	**-0.2**
KSRS	**Korea Array**	**68.70**	**325**	P	**P**	**10 39 18.2**	**+0.6**
	comp=Z,5.8nm,1.0s,mb4.2,baz=142,slow=6.4,SNR=21						
COCO	**West Island**	**69.88**	**264**	P	**P**	**10 39 28.2**	**+2.9**
	comp=Z,1μm,0.4s,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**70.23**	**341**	⇓*i*P	**P**	**10 39 27.9**	**+1.2**
NJ2	**Nanjing**	**70.43**	**316**	*e*P	**P**	**10 39 29.3**	**+1.0**
NJ2				pP	pP	10 40 34.3	+7.7
NJ2				sP	sP	10 41 05.5	+12
NJ2				PP	PP	10 42 10.3	+2.1
NJ2				S	S	10 48 17.0	-3.3
NJ2				sS	sS	10 50 10.5	+7.8
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,110nm,7.9s						
NJ2				LR	LR		
	comp=N,380nm,34.8s						
NJ2				LR	LR		
	comp=E,590nm,30.8s						
NJ2				LR	LR		
	comp=Z,120nm,22.6s						
QSPA	**South Pole Qui**	**70.74**	**180**	*e*P	**P**	**10 39 28.3**	**-1.1**
	comp=Z,5.1nm,0.8s,mb4.2						
SMY	**Shemya**	**71.84**	**3**	*e*P	**P**	**10 39 36.2**	**0.0**
SMY				pmax	pmax		
	comp=Z,206nm,1.3s,mb5.6						
SMY	**Shemya**	**71.84**	**3**	*e*P	**P**	**10 39 36.2**	**0.0**
	comp=Z,206nm,1.3s,mb5.6						
PET	**Petropavlovsk**	**72.64**	**353**	*e*P	**P**	**10 39 41.0**	**+0.1**
PET				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.9						
PEA0B	**Petropavlovsk-**	**72.84**	**353**	*e*P	**P**	**10 39 42.4**	**+0.3**
PETK	**Petropavlovsk-**	**72.84**	**353**	P	**P**	**10 39 42.5**	**+0.4**
	comp=Z,20nm,0.9s,mb4.8,baz=154,slow=8.0,SNR=21						
PETK	**Petropavlovsk-**	**72.84**	**353**	P	**P**	**10 39 42.5**	**+0.4**
MDJ	**Mudanjiang**	**73.30**	**331**	P	**P**	**10 39 45.6**	**+0.6**
MDJ				pP	pP	10 40 50.6	+6.8
MDJ				sP	sP	10 41 19.9	+9.2
MDJ				PP	PP	10 42 33.8	+1.4
MDJ				S	S	10 48 51.8	-0.6
MDJ				ScS	ScS	10 49 27.5	-1.8
MDJ				SS	SS	10 53 41.1	+0.5
MDJ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,66nm,5.5s						
HABR	**Khabarovsk**	**74.16**	**337**	*e*P	**P**	**10 39 48.4**	**-1.5**
HABR						10 42 38.0	
HABR				*e*PPP		10 44 24.8	
HABR				*e*S	S	10 48 56.4	-5.4
HABR				*e*		10 49 29.4	
HABR				*e*SS	SS	10 53 49.0	-4.5
HABR				pmax	pmax		
	comp=N,31nm,2.4s						
HABR				pmax	pmax		
	comp=Z,56nm,2.8s,mb4.7						
HABR				pmax	pmax		
	comp=E,25nm,2.0s						
HABR				MLR	MLR		
	comp=Z,57nm,18.0s						
KLR	**Kul'dur**	**76.04**	**336**	*e*P	**P**	**10 39 57.7**	**-2.9**
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,40nm,1.6s,mb4.8						
GYA	**Guiyang**	**76.06**	**305**	P	**P**	**10 40 02.8**	**+1.5**
GYA				PcP	PcP	10 40 14.8	+2.5
GYA				pP	pP	10 41 08.5	+8.0
GYA				sP	sP	10 41 38.9	+12
GYA				PP	PP	10 43 00.1	+4.1
GYA				S	S	10 49 23.8	+0.1
GYA				SKS		10 49 41.3	
GYA				sS	sS	10 51 18.0	+10
GYA				SS	SS	10 54 25.4	+2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
GYA				LR	LR		
	comp=N,560nm,19.6s						
GYA				LR	LR		
	comp=E,620nm,18.7s						
GYA				LR	LR		
	comp=Z,590nm,18.6s						
BJI	**Beijing**	**77.15**	**321**	P	**P**	**10 40 07.5**	**+0.5**
BJI				pP	pP	10 41 13.3	+6.9
BJI				sP	sP	10 41 43.3	+10
BJI				S	S	10 49 35.1	+0.2
BJI				sS	sS	10 51 30.1	+11
BJI				SS	SS	10 54 40.3	+1.3
BJI				pmax	pmax		
	comp=Z,26nm,0.9s,mb4.9						
BJI				pmax	pmax		
	comp=Z,120nm,3.8s						
MAW	**Mawson**	**78.46**	**202**	pP	pP	10 41 15.9	+2.5
	comp=Z,6.0nm,0.9s,baz=110,slow=14,SNR=5.6						
KMI	**Kunming**	**78.52**	**302**	P	**P**	**10 40 16.5**	**+1.6**
KMI				pP	pP	10 41 23.3	+8.8
KMI				sP	sP	10 41 52.8	+12
KMI				PP	PP	10 43 19.1	+2.5
KMI				S	S	10 49 47.3	-2.8
KMI				sS	sS	10 51 46.0	+11
KMI				SS	SS	10 55 02.3	+2.2
KMI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
KMI				pmax	pmax		
	comp=Z,89nm,6.4s						
KMI				LR	LR		
	comp=N,94nm,18.9s						
KMI				LR	LR		
	comp=E,49nm,13.5s						
KMI				LR	LR		
	comp=Z,80nm,22.7s						
CMAR	**Chiang Mai Arr**	**78.76**	**294**	P	**P**	**10 40 17.9**	**+1.6**
	comp=Z,3.1nm,0.8s,mb4.0,baz=133,slow=4.2,SNR=14						
HHC	**Hu-ho-hao-te**	**80.44**	**319**	*e*P	**P**	**10 40 25.8**	**+1.0**
HHC				pP	pP	10 41 33.0	+8.3
HHC				sP	sP	10 42 03.6	+12
HHC				PP	PP	10 43 37.5	+5.4
HHC				S	S	10 50 08.0	-1.5
HHC				sS	sS	10 52 06.3	+12
HHC				SS	SS	10 55 31.4	+3.3
HHC				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,88nm,6.0s						
HHC				LR	LR		
	comp=N,100nm,17.6s						
HHC				LR	LR		
	comp=E,150nm,17.6s						
HHC				LR	LR		
	comp=Z,87nm,15.9s						
CD2	**Chengdu**	**80.48**	**307**	P	**P**	**10 40 25.5**	**+0.2**
CD2				pP	pP	10 41 33.1	+7.9
CD2				sP	sP	10 42 03.0	+11
CD2				PP	PP	10 43 36.3	+3.7
CD2				S	S

SCI **San Clemente I** 86.11 53 ⇑P P 10 40 53.8 -0.1
baz=86
CIS **Catalina Islan** 86.40 53 ⇑P P 10 40 55.0 -0.3
baz=87
WDC **Whiskeytown Da** 86.73 45 eP P 10 40 56.6 -0.1
WDC pmax pmax
comp=Z,58nm,1.3s,mb5.2
WDC **Whiskeytown Da** 86.73 45 eP P 10 40 56.6 -0.1
comp=Z,58nm,1.3s,mb5.2
ARVC **Arvin** 86.84 51 ⇓P P 10 40 57.6 +0.2
baz=87,SNR=7.3
OHCM **Honcut** 86.86 46 eP P 10 40 57.5 +0.2
PASC **Pasadena Art C** 86.90 52 eP P 10 40 57.5 -0.2
comp=Z,178nm,1.3s,mb5.6
VES **Vestal, Richgr** 86.96 50 ⇓P P 10 40 57.5 -0.4
baz=87,SNR=6.7
YAK **Yakutsk** 87.01 342 eP P 10 40 57.6 0.0
YAK pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
MWC **Mount Wilson** 87.02 52 eP P 10 40 58.1 -0.2
MWC pmax pmax
comp=Z,177nm,2.0s,mb5.5
MWC **Mount Wilson** 87.02 52 eP P 10 40 58.1 -0.2
comp=Z,177nm,2.0s,mb5.5
CMB **Columbia Colle** 87.02 48 eP P 10 40 57.9 -0.3
CMB pmax pmax
comp=Z,49nm,1.3s,mb5.1
CMB **Columbia Colle** 87.02 48 eP P 10 40 57.9 -0.2
comp=Z,49nm,1.3s,mb5.1
RCTC **Rector, Farmer** 87.06 50 ⇑P P 10 40 58.3 -0.1
baz=87
ULN **Ulaanbaatar** 87.07 323 eP P 10 40 58.4 +0.2
ULN pmax pmax
comp=Z,22nm,1.1s,mb4.8
ULN **Ulaanbaatar** 87.07 323 eP P 10 40 58.4 +0.2
comp=Z,22nm,1.1s,mb4.8
PMR **Palmer** 87.12 18 eP P 10 40 57.3 -0.8
BILL **Bilibino** 87.13 359 ⇑/P P 10 40 56.9 -1.1
BILL e 10 44 20.0
BILL pmax pmax
comp=Z,24nm,1.2s,mb4.8
BILL **Bilibino** 87.13 359 eP P 10 40 57.2 -0.7
comp=Z,33nm,1.4s,mb4.9
YBH **Yreka Blue Hor** 87.18 44 eP P 10 40 59.4 +0.6
YBH pmax pmax
comp=Z,38nm,1.1s
YBH **Yreka Blue Hor** 87.18 44 eP P 10 40 59.4 +0.6
comp=Z,38nm,1.1s,mb5.0
BFSC **Mount Baldy St** 87.32 52 ⇓P P 10 40 59.5 -0.2
baz=88,SNR=6.4
ISA **Isabella** 87.33 51 ⇑P P 10 40 59.9 +0.1
baz=88,SNR=25
ISA **Isabella** 87.33 51 eP P 10 40 59.8 +0.1
ISA pmax pmax
comp=Z,64nm,1.4s,mb5.2
ISA **Isabella** 87.33 51 eP P 10 40 59.8 +0.1
comp=Z,64nm,1.4s,mb5.2
EDW2 **Edwards Air Fo** 87.35 52 ⇑P P 10 40 59.7 -0.2
baz=88,SNR=14
GTA **Gaotai** 87.36 313 P P 10 41 00.5 +0.8
GTA pP pP 10 42 09.8 +9.2
GTA sP sP 10 42 38.9 +12
GTA SKS 10 50 54.6
GTA S S 10 51 14.1 -4.3
GTA sS sS 10 53 13.6 +8.2
GTA SS SS 10 57 08.4 -1.6
GTA pmax pmax
comp=Z,11nm,1.3s,mb4.4
GTA pmax pmax
comp=Z,93nm,5.7s
GTA LR LR
comp=N,120nm,19.1s
GTA LR LR
comp=E,190nm,20.0s
GTA LR LR
comp=Z,57nm,18.9s
MURC **Murrieta** 87.39 53 ⇑P P 10 41 00.2 +0.1
baz=88,SNR=5.1
SONM **Songino Array** 87.43 323 P P 10 41 00.0 +0.1
comp=Z,9.4nm,1.0s,mb4.5,baz=132,slow=5.2,SNR=21
HUMO **Hull Mountain** 87.44 43 eP P 10 41 00.4 +0.3
comp=Z,40nm,1.0s,mb5.1
LBCM **Butte Creek Ri** 87.65 45 P P 10 41 01.3 +0.2
MONP **Monument Peak** 87.69 54 ⇓P P 10 41 01.8 +0.3
baz=88,SNR=7.1
LRMC **Laurel Mountai** 87.83 51 ⇑P P 10 41 02.3 +0.3
baz=88,SNR=6.4
DVTC **Desert V Tower** 87.84 54 ⇓P P 10 41 02.0 -0.2
baz=88
BEKR **Beckwourth** 87.88 46 ⇑P P 10 41 02.4 +0.2
baz=88
WAKR **Walker** 87.90 48 eP P 10 41 02.7 +0.4
PFO **Pinyon Flat Ob** 87.96 53 ⇑P P 10 41 02.4 -0.3
baz=88,SNR=6.1
PFO **Pinyon Flat Ob** 87.96 53 eP P 10 41 02.5 -0.2
PFO pmax pmax
comp=Z,53nm,1.5s,mb5.2
PFO **Pinyon Flat Ob** 87.96 53 eP P 10 41 02.5 -0.2
comp=Z,53nm,1.5s,mb5.2
MTUM **Tungsten Hills** 88.01 49 eP P 10 41 03.3 +0.4
WCN **Washoe City** 88.03 47 ⇑P P 10 41 03.1 +0.2
baz=88
KTH **Kantishna Hill** 88.16 17 eP P 10 41 00.5 -2.5
comp=Z,8.3nm,1.0s,mb4.5
MPMC **Manual Prospec** 88.22 51 ⇓P P 10 41 04.2 +0.3
baz=88,SNR=20
GSC **Goldstone** 88.41 52 ⇓P P 10 41 04.7 -0.1
baz=89,SNR=7.4
GSC **Goldstone** 88.41 52 eP P 10 41 04.6 -0.2
GSC pmax pmax
comp=Z,48nm,1.6s,mb5.1
GSC **Goldstone** 88.41 52 eP P 10 41 04.6 -0.2
comp=Z,48nm,1.6s,mb5.1
BELC **Belle Mtn.** 88.47 53 ⇓P P 10 41 05.4 +0.2
baz=89,SNR=22
PAHR **Pah Rah Range** 88.47 47 eP P 10 41 05.2 +0.2
comp=Z,54nm,1.3s,mb5.2
HEC **Hector,Ludlow** 88.56 52 ⇓P P 10 41 05.5 -0.1
baz=89,SNR=11
NVAR **Mina Array Bea** 88.66 48 P P 10 41 06.0 +0.1
comp=Z,14nm,1.0s,mb4.8,baz=227,slow=7.2,SNR=70
F03A **Seaside** 88.69 40 ⇓P P 10 41 06.5 +0.7
baz=89
BC3 **Big Chuckw Mtn** 88.74 54 ⇓P P 10 41 06.7 +0.3
baz=89,SNR=6.6
K05A **Summer Lake** 88.84 44 ⇑P P 10 41 07.3 +0.7
baz=89
MOD **Modoc** 88.84 45 eP P 10 41 06.8 +0.1
MCK **McKinley** 88.85 17 eP P 10 41 04.2 -2.0
MCK pmax pmax
comp=Z,32nm,1.6s,mb4.9
MCK **McKinley** 88.85 17 eP P 10 41 04.2 -2.0
comp=Z,32nm,1.6s,mb4.9
FURC **Furnace Creek,** 88.86 51 ⇑P P 10 41 07.0 +0.1
baz=89,SNR=18
H04A **Detroit Lake** 88.93 42 ⇓P P 10 41 06.9 -0.2
baz=89
GLA **Glamis** 88.98 54 ⇑P P 10 41 07.4 -0.1
baz=89,SNR=7.4
GLA **Glamis** 88.98 54 eP P 10 41 07.4 -0.1
GLA pmax pmax
comp=Z,99nm,1.5s,mb5.4
GLA **Glamis** 88.98 54 eP P 10 41 07.4 -0.2
comp=Z,99nm,1.5s,mb5.4
E03A **Lebam** 89.00 39 ⇑P P 10 41 07.3 0.0
baz=89
GMRC **Granite Mounta** 89.04 53 ⇓P P 10 41 08.2 +0.4
baz=89,SNR=11
SHOC **Shoshone** 89.05 51 ⇑P P 10 41 07.8 0.0
baz=89,SNR=15
BKCOR **Black Crater** 89.06 42 P P 10 41 07.9 +0.2
TUQ **Turquoise Moun** 89.12 52 ⇑P P 10 41 08.2 +0.1
baz=89,SNR=14
IRM **Iron Mountain** 89.18 53 P P 10 41 08.7 +0.3
baz=89,SNR=13
OOW **Octopus West** 89.22 38 P P 10 41 09.4 +1.2
U10A **Ash Meadows, A** 89.22 51 ⇓P P 10 41 09.2 +0.6
baz=89,SNR=10
NLWA **Neilton Lookou** 89.23 39 ⇑P P 10 41 09.1 +0.7
baz=90
NLWA **Neilton Lookou** 89.23 39 eP P 10 41 08.5 +0.1
comp=Z,41nm,1.3s,mb5.1
RVW **Rose Valley** 89.30 40 P P 10 41 09.5 +0.8
OTR **Olympics--Tyee** 89.30 38 P P 10 41 09.8 +1.1
F04A **Amboy** 89.39 40 ⇑P P 10 41 09.3 +0.2
baz=90
Y12C **Blythe** 89.49 54 P P 10 41 10.1 +0.2
baz=90,SNR=6.7
BOD **Bodaibo** 89.51 334 ⇓/P P 10 41 07.8 -1.6
BOD pmax pmax
comp=Z,7.0nm,1.6s,mb4.2
LDFC **Landfair** 89.58 53 eP P 10 41 10.7 +0.4
V11A **Goodsprings** 89.65 52 ⇓P P 10 41 10.5 -0.1
baz=90,SNR=6.1
S10A **Tonopah Range,** 89.66 49 ⇓P P 10 41 10.7 +0.1
baz=90,SNR=35
MENT **Mentasta** 89.80 19 eP P 10 41 08.9 -1.7
VIPM **Ingram Point** 89.84 42 P P 10 41 11.4 +0.1
HDW **Hoodsport** 89.84 39 P P 10 41 11.8 +0.6
U11A **Corn Creek** 89.92 51 ⇓P P 10 41 12.1 +0.3
baz=90
Z13A **Yuma Proving G** 89.94 55 ⇓P P 10 41 12.2 +0.2
baz=90
PDMCI **Parker Dam,Lak** 90.00 54 ⇓P P 10 41 12.5 +0.2
baz=90,SNR=7.0
R10A **Warm Springs** 90.02 49 ⇑P P 10 41 12.9 +0.6
baz=90,SNR=19
V12A **Nelson** 90.03 52 ⇓P P 10 41 12.4 0.0
baz=90,SNR=8.8
COLA **College** 90.04 17 eP P 10 41 09.4 -2.3
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
COLA **College** 90.04 17 eP P 10 41 09.4 -2.3
comp=Z,7.5nm,0.8s,mb4.6
PGC **Sidney** 90.10 38 eP P 10 41 12.3 0.0
comp=Z,1.7nm,1.0s,mb3.8
SHPR **Sheep Range** 90.12 51 eP P 10 41 13.1 +0.3
LON **Longmire** 90.15 40 eP P 10 41 10.3 -2.4
LON pmax pmax
comp=Z,23nm,1.4s,mb4.8
LON **Longmire** 90.15 40 eP P 10 41 10.3 -2.3
comp=Z,23nm,1.4s,mb4.8
S11A **Rachel** 90.16 50 P P 10 41 13.1 +0.2
baz=90,SNR=8.7
Q10A **Clear Creek Ra** 90.18 49 ⇑P P 10 41 13.3 +0.3
baz=90,SNR=11
WVOR **Wild Horse Val** 90.19 45 eP P 10 41 13.0 +0.1
WVOR pmax pmax
comp=Z,31nm,1.2s,mb5.0
WVOR **Wild Horse Val** 90.19 45 eP P 10 41 13.0 0.0
comp=Z,31nm,1.2s,mb5.0
D05A **Enumclaw** 90.25 39 ⇑P P 10 41 13.4 +0.3
baz=90
BMN **Battle Mountai** 90.28 47 eP P 10 41 13.6 +0.2
BMN pmax pmax
comp=Z,75nm,1.8s,mb5.2
BMN **Battle Mountai** 90.28 47 eP P 10 41 13.6 +0.2
comp=Z,75nm,1.8s,mb5.2
X13A **Yucca** 90.35 53 ⇑P P 10 41 13.9 0.0
baz=90,SNR=5.9
I07A **Izee** 90.36 43 ⇓P P 10 41 14.0 +0.3
baz=91
T11A **Corn Creek, Al** 90.37 51 P P 10 41 14.3 +0.3
baz=91,SNR=27
SKAG **Skagway** 90.41 25 eP P 10 41 13.5 0.0
comp=Z,44nm,1.1s,mb5.2
HYT **Haines Junctio** 90.46 23 eP P 10 41 14.1 +0.4
P10A **Eureka** 90.47 48 ⇓P P 10 41 14.6 +0.3
baz=91
MCW **Mount Constitu** 90.47 38 P P 10 41 14.3 +0.2
ZAK **Zakamensk** 90.50 324 ⇑/eP P 10 41 14.0 -0.2
ZAK pmax pmax
comp=Z,9.0nm,1.4s,mb4.4
W13A **Hualapai Mount** 90.51 53 ⇓P P 10 41 14.8 +0.2
baz=91,SNR=10
T12A **Moapa** 90.54 51 ⇑P P 10 41 15.0 +0.3
baz=91,SNR=8.1
Z14A **Wintersburg** 90.55 55 ⇑P P 10 41 14.6 -0.2
baz=91,SNR=5.5
U12A **Valley of Fire** 90.55 51 P P 10 41 15.1 +0.3
baz=91,SNR=12
R11A **Troy Canyon, C** 90.56 49 ⇓P P 10 41 14.5 -0.2
baz=91,SNR=14
J08A **Circle Bar Ran** 90.70 44 ⇑P P 10 41 15.6 +0.3
baz=91
Q11A **Duckwater** 90.72 49 P P 10 41 15.7 +0.2
baz=91,SNR=20
Y14A **Wickenburg** 90.72 54 ⇓P P 10 41 15.6 0.0
baz=91
V13A **Grand Canyon W** 90.73 52 ⇑P P 10 41 15.7 +0.1
baz=91,SNR=9.8
JCW **Jim Creek** 90.77 39 eP P 10 41 15.6 +0.1
S12A **Delamar Landin** 90.79 50 P P 10 41 16.6 +0.8
baz=91,SNR=41
TLY **Talaya** 90.96 325 eP P 10 41 15.6 -0.7
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TLY **Talaya** 90.96 325 eP P 10 41 16.3 +0.1
comp=Z,8.6nm,0.9s,mb4.7
U13A **Pakoon Wash** 90.97 52 ⇓P P 10 41 17.0 +0.3
baz=91,SNR=9.2
X14A **Yava** 91.02 54 ⇓P P 10 41 17.4 +0.5
baz=91,SNR=12
MBW **Mount Baker** 91.07 38 P P 10 41 16.7 -0.1
H08A **Prairie City** 91.09 43 ⇓P P 10 41 17.0 -0.1
baz=91,SNR=7.0
Z15A **Gila River Ind** 91.13 55 ⇓P P 10 41 17.8 +0.3
baz=91
RPW **Rockport** 91.13 38 P P 10 41 17.0 -0.1
W14A **Seligman** 91.16 53 ⇑P P 10 41 18.4 +0.8
baz=91
J09A **Fry Pan Ranch,** 91.17 44 P P 10 41 17.6 +0.1
baz=91,SNR=27
216A **Three Points,** 91.19 57 ⇓P P 10 41 18.1 +0.2
baz=91,SNR=6.7
116A **Eloy** 91.21 56 ⇑P P 10 41 18.5 +0.6
baz=91,SNR=9.2
M10A **I.L. Ranch, Tu** 91.21 46 ⇓P P 10 41 18.2 +0.5
baz=91,SNR=13
O11A **Cowboy Ranch,** 91.24 48 ⇓P P 10 41 18.0 +0.1
baz=91,SNR=12
G08A **Pilot Rock** 91.24 42 ⇑P P 10 41 17.9 +0.2
baz=92,SNR=7.5
Y15A **Casa Rosa Ranc** 91.25 54 ⇓P P 10 41 18.3 +0.3
baz=91,SNR=15
T13A **Saint George** 91.25 51 ⇑P P 10 41 18.4 +0.4
baz=91,SNR=17
R12A **Pony Springs,** 91.26 50 ⇑P P 10 41 18.1 +0.1
baz=92,SNR=16
COLD **Coldfoot** 91.28 15 eP P 10 41 16.6 -0.8
comp=Z,10nm,1.1s,mb4.7
V14A **Boquillas Ranc** 91.30 53 ⇓P P 10 41 19.0 +0.7
baz=92,SNR=10
RSW **Rattlesnake Hi** 91.34 41 eP P 10 41 17.7 -0.5
HAWA **Hanford** 91.38 41 eP P 10 41 18.2 -0.1
comp=Z,23nm,1.0s,mb5.1
Q12A **Willow Creek R** 91.38 49 ⇓P P 10 41 18.7 +0.1
baz=92,SNR=7.6
I09A **Lost Marbles R** 91.45 44 ⇓P P 10 41 18.5 -0.2
baz=92,SNR=8.9
L10A **Juniper Basin** 91.49 46 ⇑P P 10 41 19.4 +0.4
baz=92,SNR=12
P12A **McGill** 91.50 49 P P 10 41 19.5 +0.4
baz=92,SNR=7.3
S13A **Holt Ranch, En** 91.50 51 ⇑P P 10 41 19.6 +0.4
baz=92,SNR=19
K10A **MacKenzie Ranc** 91.51 45 P P 10 41 19.2 +0.1
baz=92,SNR=20
X15A **Humboldt** 91.52 54 P P 10 41 19.9 +0.5
baz=92,SNR=15
U14A **Mt Trumbull** 91.55 52 P P 10 41 19.9 +0.5
baz=92,SNR=19
217A **Green Valley** 91.61 57 P P 10 41 20.3 +0.5
baz=92,SNR=6.1
R13A **O'Grain Ranch,** 91.66 50 P P 10 41 20.4 +0.5
baz=92,SNR=7.5
M11A **Holland Ranch,** 91.68 47 ⇓P P 10 41 20.4 +0.5
baz=92,SNR=10.0
Z16A **Peralta Trail,** 91.72 55 ⇑P P 10 41 20.7 +0.4
baz=92,SNR=6.2
W15A **Williams** 91.76 53 ⇑P P 10 41 21.3 +0.9
baz=92,SNR=5.7
H09A **Durkee** 91.80 43 ⇑P P 10 41 20.4 +0.1
baz=92
TUC **Tucson** 91.84 56 eP P 10 41 20.8 0.0
CCUT **Cedar City** 91.85 51 eP P 10 41 20.9 +0.1
comp=Z,18nm,1.2s,mb4.9
T14A **Hurricane** 91.87 51 P P 10 41 21.2 +0.4
baz=92,SNR=14
Y16A **Circle Bar Ran** 91.88 55 ⇑P P 10 41 21.6 +0.6
baz=92,SNR=9.1
EGAK **Eagle** 91.91 19 eP P 10 41 18.9 -1.5
comp=Z,36nm,1.6s,mb5.0
Q13A **Wheeler Ranch,** 91.93 49 P P 10 41 21.1 +0.1
baz=92,SNR=16
O12A **Currie** 91.94 48 ⇓P P 10 41 20.8 -0.2
baz=92,SNR=8.0
N12A **Clover Valley,** 91.97 47 ⇓P P 10 41 21.4 +0.1
baz=92,SNR=7.8
N12A **Clover Valley,** 91.97 47 eP P 10 41 21.4 +0.2
117A **Oracle** 91.97 56 P P 10 41 21.9 +0.5
baz=92,SNR=9.6
DAWY **Dawson** 91.98 20 eP P 10 41 19.3 -1.4
DAWY ePP PP 10 45 01.8 -2.5
DLBC **Dease Lake** 91.99 27 eP P 10 41 20.7 -0.2
L11A **Cat Creek Ranc** 92.01 46 ⇑P P 10 41 21.5 +0.1
baz=92,SNR=15
K11A **Parker Ranch,** 92.07 45 ⇓P P 10 41 21.7 0.0
baz=92,SNR=10
A07A **Ashnola River,** 92.07 38 P P 10 41 21.6 +0.1
baz=92,SNR=5.5
V15A **Kaibab Nationa** 92.07 53 ⇓P P 10 41 21.9 +0.1
baz=92,SNR=9.9
S14A **Cedar City** 92.08 51 P P 10 41 22.5 +0.7
baz=92,SNR=5.5
X16A **Lo Mia Camp, P** 92.11 54 ⇑P P 10 41 22.5 +0.4
baz=92,SNR=14
I10A **Payette** 92.11 44 ⇓P P 10 41 21.8 0.0
baz=92
P13A **Bates Ranch, G** 92.13 49 ⇑P P 10 41 22.0 0.0
baz=92,SNR=12
318A **Bisbee** 92.15 58 ⇑P P 10 41 22.1 -0.2
baz=92,SNR=7.2
U15A **North Rim** 92.22 52 ⇓P P 10 41 22.9 +0.5
baz=92,SNR=21
M12A **Wells** 92.28 47 ⇓P P 10 41 22.9 +0.2
baz=92
218A **Dragoon** 92.30 57 ⇑P P 10 41 23.5 +0.5
baz=92,SNR=14
Y17A **Roosevelt** 92.30 55 ⇓P P 10 41 22.7 -0.2
baz=92
H10A **Noah's Angus R** 92.36 43 P P 10 41 22.4 -0.5
baz=93,SNR=9.0
T15A **Red Dirt Ranch** 92.37 52 ⇑P P 10 41 23.6 +0.4
baz=93,SNR=9.6
G10A **Bishop Farm, J** 92.42 43 ⇓P P 10 41 22.9 -0.3
baz=93,SNR=7.5
MFID **Camas Ranch** 92.47 45 ⇑P P 10 41 23.3 -0.2
baz=93,SNR=9.3
Q14A **Sevier Lake (B** 92.47 50 ⇑P P 10 41 24.0 +0.4
baz=93,SNR=15
L12A **House Creek Ra** 92.50 46 ⇑P P 10 41 23.8 +0.2
baz=93,SNR=9.0
X17A **Forest Lakes** 92.56 55 P P 10 41 24.9 +0.8
baz=93,SNR=9.5
WUAZ **Wupatki** 92.56 53 ⇑P P 10 41 24.3 +0.2
baz=93,SNR=8.0
WUAZ **Wupatki** 92.56 53 eP P 10 41 24.2 +0.1
comp=Z,12nm,0.9s,mb4.9
I11A **Placerville** 92.59 44 ⇑P P 10 41 23.7 -0.4
baz=93,SNR=10.0
118A **Homack Ranch,** 92.60 56 ⇑P P 10 41 24.9 +0.5
baz=93,SNR=12
319A **Douglas** 92.69 58 ⇑P P 10 41 25.5 +0.7
baz=93,SNR=9.6
P14A **Drum Mountains** 92.86 49 ⇓P P 10 41 24.7 -0.6
baz=93,SNR=8.3
H11A **Donnelly** 92.88 43 P P 10 41 24.8 -0.5
baz=93,SNR=9.3
J12A **Stokes Ranch,** 92.89 45 ⇓P P 10 41 25.6 +0.2
baz=93,SNR=14
219A **White Tail Can** 92.93 57 ⇑P P 10 41 26.1 +0.2
baz=93,SNR=7.9
G11A **Walters Elk Ra** 93.00 43 ⇓P P 10 41 25.2 -0.7
baz=93,SNR=7.9
V17A **Tonalea, Kykot** 93.04 53 ⇓P P 10 41 26.5 +0.2
baz=93,SNR=9.5
MSU **Marysvale** 93.09 50 eP P 10 41 26.7 +0.3
I12A **Atlanta** 93.09 45 ⇑P P 10 41 26.3 0.0
baz=93,SNR=6.1
Q15A **Fillmore** 93.12 50 ⇑P P 10 41 26.9 +0.3
baz=93,SNR=8.1
320A **Kipp Ranch, An** 93.28 58 ⇓P P 10 41 28.3 +0.7
baz=93,SNR=11
M14A **Sheep Mountain** 93.40 47 P P 10 41 27.6 -0.2
baz=94,SNR=11
HLID **Hailey** 93.47 45 ⇑P P 10 41 28.2 +0.1
baz=94,SNR=7.8
HLID **Hailey** 93.47 45 eP P 10 41 28.0 -0.1
comp=Z,3.7nm,0.8s,mb4.5
G12A **Big Creek, Yel** 93.50 43 ⇑P P 10 41 27.9 -0.3
baz=94
R16A **Teasdale** 93.51 51 ⇑P P 10 41 29.2 +0.8
baz=94,SNR=13
T17A **Navajo Res., N** 93.54 52 ⇑P P 10 41 28.7 +0.2
baz=94
J13A **Cove Ranch, Pi** 93.57 45 ⇓P P 10 41 28.7 +0.1
baz=94,SNR=7.3
H12A **Diamond D Ranc** 93.58 44 ⇓P P 10 41 28.2 -0.3
baz=94,SNR=7.5
120A **U Bar Ranch, L** 93.62 57 ⇓P P 10 41 29.6 +0.6
baz=94
Y19A **Nutrioso** 93.63 55 ⇑P P 10 41 29.7 +0.6
baz=94
D11A **Klaveano Farm,** 93.64 41 ⇓P P 10 41 28.0 -0.8
baz=94
L14A **Malta** 93.67 47 ⇓P P 10 41 29.1 0.0
baz=94
NLU **North Lily Min** 93.70 49 eP P 10 41 29.1 -0.1
comp=Z,5.1nm,0.9s,mb4.5
V18A **Ganado** 93.73 54 ⇓P P 10 41 29.4 -0.1
baz=94
S17A **Black Ridge (B** 93.77 52 ⇑P P 10 41 28.8 -0.9
baz=94
F12A **Elk City** 93.80 43 ⇓P P 10 41 28.7 -0.9
baz=94,SNR=11
I13A **Wildhorse Cree** 93.81 45 ⇓P P 10 41 29.9 +0.3
baz=94,SNR=6.0
Z20A **Nine Sixteen R** 93.85 56 ⇓P P 10 41 29.0 -1.1
baz=94
HVU **Hansel Valley** 93.90 47 eP P 10 41 29.7 -0.4
HVU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
HVU **Hansel Valley** 93.90 47 eP P 10 41 29.7 -0.4
comp=Z,7.7nm,0.9s,mb4.7
Q16A **Castle Valley** 93.97 50 ⇓P P 10 41 30.4 0.0
baz=94
H13A **Challis** 93.98 44 P P 10 41 30.4 0.0
baz=94,SNR=6.8
R17A **Hanksville Air** 94.12 51 ⇑P P 10 41 31.1 -0.1
baz=94
G13A **Cobalt** 94.20 44 ⇑P P 10 41 30.9 -0.4
baz=94,SNR=5.7
I14A **Mackay** 94.26 45 ⇑P P 10 41 32.0 +0.3
baz=94,SNR=12
T18A **Mexican Hat** 94.28 52 ⇓P P 10 41 32.0 0.0
baz=94
F13A **Darby** 94.41 43 P P 10 41 31.5 -0.8
baz=95,SNR=6.0
U19A **Dine' College,** 94.48 53 ⇑P P 10 41 32.9 0.0
baz=95
H14A **Leadore** 94.58 44 P P 10 41 33.0 -0.1
baz=95,SNR=6.6
HWUT **Hardware Ranch** 94.67 48 eP P 10 41 33.1 -0.5
R18A **Canyonlands Na** 94.71 51 ⇓P P 10 41 34.0 +0.1
baz=95
O17A **Robinson Place** 94.74 49 ⇑P P 10 41 33.9 -0.1
baz=95
L16A **Fish Haven** 94.92 47 ⇑P P 10 41 34.2 -0.6
baz=95
BSMT **Bassoo Peak** 94.93 41 eP P 10 41 33.8 -0.9
MCMT **McKenzie Canyo** 95.00 44 eP P 10 41 34.6 -0.4
comp=Z,1.4nm,1.0s,mb4.0
H15A **Lima** 95.06 45 ⇓P P 10 41 35.3 0.0
baz=95,SNR=8.7
K16A **Soda Springs** 95.11 46 ⇓P P 10 41 35.8 +0.2
baz=95
J16A **Bone** 95.25 46 ⇓P P 10 41 36.6 +0.4
baz=96
M17A **Scullys Gap (B** 95.25 48 ⇑P P 10 41 35.6 -0.7
baz=95
O18A **Roosevelt** 95.29 49 ⇓P P 10 41 36.6 +0.1
baz=96
DLMT **Dillon** 95.37 44 eP P 10 41 36.0 -0.7
comp=Z,5.0nm,1.0s,mb4.6
U21A **Nageezi** 95.70 54 ⇓P P 10 41 38.1 -0.4
baz=96
324A **Moseley Ranch,** 95.77 59 ⇑P P 10 41 38.6 -0.2
baz=96
REDW **Red Top Meadow** 95.80 46 eP P 10 41 38.3 -0.4
comp=Z,8.9nm,1.4s,mb4.8
IMW **Indian Meadow** 95.93 46 eP P 10 41 38.9 -0.4

comp=Z,3.7nm,1.0s,mb4.6
K18A Toltan Ranch, 96.10 47 ⇓P **P 10 41 40.0 -0.1**
baz=96
BOZ Bozeman (W) 96.11 44 *e*P **P 10 41 39.3 -0.7**
ANMO Albuquerque 96.14 55 *e*P **P 10 41 39.9 -0.6**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ANMO Albuquerque 96.14 55 *e*P **P 10 41 39.9 -0.6**
comp=Z,2.5nm,0.9s,mb4.4
J18A Kendall Valley 96.32 47 ⇓P **P 10 41 40.6 -0.5**
baz=96
L19A Farson 96.39 48 ⇑P **P 10 41 42.1 -0.3**
baz=97
BW06 Boulder Array 96.48 47 ⇑P **P 10 41 41.4 -0.4**
baz=97
BW06 Boulder Array 96.48 47 *e*P **P 10 41 40.9 -1.0**
PDAR Pinedale Array 96.48 47 P **P 10 41 41.1 -0.7**
comp=Z,0.9nm,0.8s,mb4.1,baz=276,slow=4.0,SNR=6.2
PDAR PP PP 10 45 37.2 -2.6
comp=Z,1.8nm,1.1s,baz=241,slow=4.9,SNR=8.7
INK Inuvik 96.53 18 *e*P **P 10 41 40.2 -1.3**
INK *e* 10 45 42.4
INK pmax pmax
comp=Z,13nm,1.2s
INK Inuvik 96.53 18 *e*P **P 10 41 40.2 -1.3**
comp=Z,13nm,1.2s,mb5.0
INK *e*PP PP 10 45 42.4 +2.9
TXAR Lajitas Array 96.58 61 P **P 10 41 42.5 -0.1**
comp=Z,1.6nm,0.8s,mb4.3,baz=224,slow=5.8,SNR=22
Y24A Capitan 96.60 57 ⇓P **P 10 41 41.8 -0.8**
baz=97
A15A Johnson Ranch, 96.63 40 ⇓P **P 10 41 41.6 -0.7**
baz=97
D16A Dana Ranch, Ca 96.66 43 ⇓P **P 10 41 41.9 -0.7**
baz=97
426A McDonald Obser 96.70 60 ⇓P **P 10 41 42.9 -0.3**
baz=97
N20A Spence Gulch, 96.73 49 ⇑P **P 10 41 42.6 -0.4**
baz=97
F17A Fitzpatrick Pl 96.83 44 ⇓P **P 10 41 43.2 -0.1**
baz=97
627A Terlingua Ranc 96.85 61 ⇑P **P 10 41 43.4 -0.4**
baz=97
527A Woodward Ranch 96.88 61 ⇓P **P 10 41 43.8 -0.1**
baz=97
L20A Wamsutter 97.07 48 ⇑P **P 10 41 44.3 -0.2**
baz=97
Y25A Mesa, Roswell 97.19 57 ⇓P **P 10 41 44.8 -0.5**
baz=97
D17A Six Diamond Ra 97.25 43 ⇑P **P 10 41 44.4 -0.8**
baz=98
427A Hayter Ranch, 97.27 60 ⇑P **P 10 41 45.2 -0.5**
baz=97
Z26A Caprock 97.55 58 ⇓P **P 10 41 46.1 -0.8**
baz=98
CPRX Cap Rock 97.57 58 *e*P **P 10 41 46.0 -1.0**
comp=Z,2.5nm,0.9s,mb4.5
YKA Yellowknife Ar 100.62 27 P Pdif 10 41 58.7 -1.6
comp=Z,0.6nm,0.4s,baz=260,slow=5.1,SNR=21
YKA PP PP 10 46 08.6 -2.0
comp=Z,0.6nm,1.0s,baz=247,slow=7.3,SNR=4.9
YKA Yellowknife Ar 100.62 27 P Pdif 10 41 58.7 -1.6
YKA PP PP 10 46 08.6 -2.0
MKAR Makanchi Array 101.96 315 P Pdif 10 42 07.5 +1.3
comp=Z,1.9nm,0.8s,baz=110,slow=5.7,SNR=10
MKAR PP PP 10 46 26.5 +5.3
comp=Z,0.8nm,0.7s,baz=90,slow=7.5,SNR=3.5
ZALV Zalesovo Beam 102.32 323 P Pdif 10 42 06.5 -1.3
comp=Z,0.5nm,0.3s,baz=57,slow=5.5,SNR=4.1
KURK Kurchatov 105.25 319 Pdiff Pdif 10 42 21.4 +0.5
comp=Z,0.6nm,0.8s,baz=109,slow=3.0,SNR=3.1
KURK PKiKP PKiKP 10 46 31.9 -1.5
comp=Z,0.4nm,0.6s,baz=108,slow=2.1,SNR=5.3
KURK Kurchatov 105.25 319 Pdif Pdif 10 42 21.4 +0.5
KURK PKPdf PKiKP 10 46 31.9 -1.5
BVAR Borovoye Array 110.63 320 PKiKP PKiKP 10 46 42.3 -1.2
comp=Z,0.7nm,0.3s,baz=116,slow=3.4,SNR=6.0
ABKAR Akbulak array 117.10 316 *e*PKPdf PKPdf 10 46 54.4 -1.5
ARU Arti 117.44 324 *i* PKIKP PKPdf 10 46 55.0 -1.4
ARU 10 48 07.0
ARU 10 53 18.5
ARU Arti 117.44 324 *e*PKPdf PKPdf 10 46 54.9 -1.5
AKTK Aktyubinsk 118.29 317 PKP PKPdf 10 46 56.6 -1.6
AKTO Aktyubinsk 118.29 317 PKP PKPdf 10 46 56.6 -1.6
comp=Z,4.0nm,0.8s,baz=72,slow=1.4,SNR=14
SPITS Spitsbergen Ar 119.69 354 PKP PKPdf 10 46 58.0 -2.2
comp=Z,3.4nm,0.7s,baz=93,slow=4.2,SNR=9.0
SCHQ Schefferville 124.82 36 PKhKP 10 47 06.8
comp=Z,5.7nm,0.9s,baz=299,slow=5.0,SNR=4.5
ARCES ARCESS Array B 125.20 345 PKP PKPdf 10 47 09.5 -1.4
comp=Z,7.1nm,0.9s,baz=63,slow=2.5,SNR=42
KIV Kislovodsk 129.50 311 ⇑*i*PKIKP PKPdf 10 47 18.1 -1.8
KIV *e* 10 49 30.7
KIV *e*S SKSac 10 53 59.4 -5.0
KIV pmax pmax
comp=Z,7.0nm,1.2s
OBN Obninsk 129.69 327 ⇑*i*PKIKP PKPdf 10 47 19.0 -0.9
OBN *e* 10 49 35.3
OBN *e*S SKSac 10 53 57.7 -6.7
OBN pmax pmax
comp=Z,6.0nm,0.7s
FINES FINESS Array B 130.75 338 PKP PKPdf 10 47 18.6 -3.1
comp=Z,1.7nm,0.8s,baz=36,slow=5.2,SNR=4.6
FINES SKPab 10 50 20.2
comp=Z,2.0nm,0.7s,baz=116,slow=4.4,SNR=7.1
FINES FINESS Array B 130.75 338 PKP PKPdf 10 47 18.6 -3.1
FINES SKPab 10 50 20.2
NB2 NORSAR Subarra135.58 345 PKPdf PKPdf 10 47 30.4 -0.4
comp=Z,2.5nm,1.0s,baz=31,slow=1.9
NOA NORSAR Array B 135.58 345 PKP PKPdf 10 47 28.9 -1.9
comp=Z,1.5nm,0.7s,baz=31,slow=2.1,SNR=5.7
AKASG Malin Array Be 135.69 324 PKP PKPdf 10 47 29.7 -1.7
comp=Z,2.3nm,0.7s,baz=85,slow=1.3,SNR=9.4
AKASG SKP 10 50 38.1
comp=Z,4.4nm,0.9s,baz=51,slow=2.8,SNR=17
AKASG Malin Array Be 135.69 324 PKP PKPdf 10 47 29.7 -1.7
AKASG SKP 10 50 38.1
BR131 Keskin Array S 137.05 308 *e*PKPdf PKPdf 10 47 34.9 +0.7
BRTR Keskin Array B 137.05 308 PKP PKPdf 10 47 34.8 +0.6
comp=Z,2.1nm,0.9s,baz=116,slow=2.9,SNR=11
BRTR SKP 10 50 42.5
comp=Z,0.8nm,0.9s,baz=132,slow=1.8,SNR=4.6
BUR08 Bucovina Ar. S 139.53 323 *e*PKPdf PKPdf 10 47 41.0 +2.5
MLR Muntele Rosu 140.18 319 PKP PKPdf 10 47 39.0 -0.8
comp=Z,1.4nm,0.5s,baz=106,slow=5.6,SNR=4.5
MLR SKPbc SKPbc 10 50 50.4 -1.3
comp=Z,1.3nm,0.5s,baz=16,slow=6.8,SNR=5.4
KOLS Kolonicke sedl 140.43 326 *e*PKHKP 10 47 34.2
KOLS *e* PKPdf 10 47 40.4 +0.3
KOLS Kolonicke sedl 140.43 326 *e*PKP 10 47 34.1
KOLS *e* PKPdf 10 47 40.4 +0.3
KOLS *e*PP PP 10 50 52.6 +11
KECS Kecovo 141.64 327 *e*PKHKP 10 47 35.9
KECS Kecovo 141.64 327 *e*PKP 10 47 35.9
BSEG Bad Segeberg 141.91 340 *e*PKIKP PKPdf 10 47 43.0 +0.4
VYHS Vyhne 142.48 328 *e*PKIKP PKPdf 10 47 40.5 -3.3
VYHS *e* 10 50 57.3
VYHS Vyhne 142.48 328 *e*PKPdf PKPdf 10 47 40.5 -3.3
VYHS *e*PP PP 10 50 57.3 +3.6
RZN Rozhen 142.72 315 *i* P PKPdf 10 47 40.0 -4.4
VRAC Vranov 143.02 330 PKP PKPdf 10 47 41.4 -3.3
comp=Z,2.9nm,0.6s,baz=44,slow=3.8,SNR=6.6
BRG Berggiesshubel 143.04 334 *e*PKPbc PKPdf 10 47 40.8 -3.9
BRG Berggiesshubel 143.04 334 *i* PKP PKPdf 10 47 41.0 -3.7
comp=Z,12nm,1.0s
BRG *e* 10 47 47.0
comp=Z,15nm,1.5s
BRG *e*pPKP pPKPdf 10 48 55.1 +6.0
comp=Z,2.3nm,0.9s
BRG *i* SKP 10 50 58.3
comp=Z,20nm,1.6s
CLL Collm 143.09 335 ⇑*i*PKHKP 10 47 40.3
CLL *i* 10 47 42.9
CLL *e* 10 49 02.0
CLL *i* 10 50 58.0
CLL Collm 143.09 335 ⇑*i*PKP 10 47 40.3
CLL *i* 10 47 42.9
CLL ⇓*i*PKP PKPdf 10 47 46.7 +2.0
CLL *e*pPKP pPKPdf 10 49 02.0 +13
CLL *i* PP PP 10 50 58.0 +0.9
CLL Collm 143.09 335 ⇑*i*PKPdf 10 47 40.3
comp=Z,15nm,1.6s
CLL ⇓*i*PKiKP PKiKP 10 47 46.7 -1.4
comp=Z,7.0nm,0.9s
CLL *e* 10 49 02.0
CLL *i* PP PP 10 50 58.0 +0.9
CLL comp=Z,17nm,1.5s
CLL *e*PKSdf 10 51 18.0
VTS Vitosha 143.31 317 *i* P PKPdf 10 47 42.7 -2.7
MMB Musomiste 143.43 315 *i* P PKPdf 10 47 42.0 -3.7
EKA Eskdalemuir Ar 143.61 353 PKP PKPdf 10 47 41.9 -3.6
comp=Z,3.8nm,0.8s,baz=316,slow=3.5,SNR=6.8
CLZ Clausthal 143.64 338 *e*PKPbc PKPdf 10 47 43.0 -2.7
KKB Krupnik 143.73 316 *i* P PKPdf 10 47 43.1 -3.1
SRS Serrai 143.73 314 P PKPdf 10 47 43.3 -2.9
TANN Tannenbergstha 144.00 335 *e*PKPbc PKPdf 10 47 44.1 -2.3
SOH Sokhos 144.03 314 P PKPdf 10 47 44.0 -2.7
IBBN Ibbenburen 144.11 341 *e*PKPbc PKPdf 10 47 44.2 -2.3
MOX Moxa 144.15 336 *e*PKP PKPdf 10 47 44.5 -2.1
comp=Z,33nm,1.3s
PLG Polygyros 144.16 313 P PKPdf 10 47 45.0 -2.0
KNT Kendrikon 144.18 315 P PKPdf 10 47 46.2 -0.8
VAY Valandovo 144.33 315 *e*PKP PKPdf 10 47 44.3 -3.0
VAY Valandovo 144.33 315 P PKPdf 10 47 44.5 -2.7
CONA Conrad Observa 144.33 329 ⇑*i*PKPbc PKPdf 10 47 45.7 -1.4
comp=Z,55nm,1.9s,SNR=21
AOS Alonnisos 144.36 311 P PKPdf 10 47 44.7 -2.7
STIP Stip 144.40 316 *e*PKP PKPdf 10 47 44.9 -2.4
KHC Kasperske Hory 144.51 333 *e*PKPbc PKPdf 10 47 46.1 -1.2
KHC Kasperske Hory 144.51 333 *e*PKP PKPdf 10 47 46.0 -1.3
KHC *ex* x 10 47 50.5
LAST Lasithi 144.56 304 P PKPdf 10 47 47.0 -0.8
ROTZ Rotzenmuhle 144.61 334 *e*PKPbc PKPdf 10 47 46.4 -1.1
UBBA Unterbreizbach 144.61 337 *e*PKPbc PKPdf 10 47 46.0 -1.4
RCBR Riachuelo 144.65 132 *e*PKPbc PKPdf 10 47 45.2 -3.4
RCBR *e*pPKPdf pPKPdf 10 48 55.8 +2.7
GEC2 GERESS Array S 144.67 332 *e*PKPbc PKPdf 10 47 46.3 -1.3
GEC2 GERESS Array S 144.67 332 *e*PKPbc PKPdf 10 47 46.4 -1.2
GERES GERESS Array B 144.67 332 PKP PKPdf 10 47 46.5 -1.1
comp=Z,13nm,0.9s,baz=46,slow=3.9,SNR=91
GERES pPKP pPKPdf 10 48 54.6 +2.5
comp=Z,1.2nm,0.6s,baz=29,slow=3.0,SNR=2.7
SKO Skopje 144.75 317 *e*PKP PKPdf 10 47 47.5 -0.5
SKO Skopje 144.75 317 P PKPdf 10 47 47.9 -0.1
KOR Korichti 144.77 312 P PKPdf 10 47 46.1 -2.0
WET Wettzell 144.81 333 *e*PKPbc PKPdf 10 47 46.9 -0.9
LIT Litokhoron 144.94 313 P PKPdf 10 47 47.0 -1.3
ARSA Arzberg 144.97 329 ⇑*i*PKPbc PKPdf 10 47 47.5 -0.6
comp=Z,27nm,1.2s,SNR=14
BUG Bochum--Univer 145.01 341 *e*PKPbc PKPbc 10 47 47.0 -1.0
GRF Grafenberg Arr 145.06 335 *e*PKPbc PKPbc 10 47 47.7 -0.5
MOA Molln 145.15 330 ⇑*i*PKPdf PKPdf 10 47 48.1 -0.4
comp=Z,53nm,1.6s,SNR=14
KRUS Krusevo 145.18 316 *e*PKP PKPdf 10 47 46.8 -1.9
LKR Lokris 145.20 311 P PKPdf 10 47 47.5 -1.3
AGG Agios Georgios 145.52 312 P PKPdf 10 47 48.4 -1.0
PERS Pernice 145.59 328 *e*PKPbc PKPbc 10 47 48.9 -1.0
PERS *i* 10 48 55.7
OHR Ohrid 145.60 316 *e*PKP PKPdf 10 47 48.2 -1.2
SOKA Soboth 145.60 328 ⇑*i*PKPdf PKPdf 10 47 49.1 -0.2
comp=Z,17nm,1.2s
TNS Taunus Mts 145.66 338 *e*PKPbc PKPbc 10 47 49.5 -0.6
GCIS Gornji Cirnik 145.86 327 *i* PKPdf PKPdf 10 47 50.3 +0.6
RJOB Jochberg 145.90 332 *e*PKPbc PKPbc 10 47 50.0 -0.9
RJOB *e*pPKPbc pPKPbc 10 48 55.8 +1.6
GUR Goura 145.96 310 P PKPdf 10 47 50.7 +0.5
TIR Tirane 146.09 317 *e*PKP2 PKPab 10 47 51.4 -1.3
MEM Membach 146.13 341 PKPbc PKPbc 10 47 50.7 -0.8
KBA Koelnbreinsper 146.13 330 *i* PKPdf PKPdf 10 47 50.3 +0.1
comp=Z,14nm,0.9s,SNR=7.9
VLX Vlachokerasia 146.16 309 P PKPdf 10 47 51.4 +0.9
FUR Furstenfeldbru 146.24 333 *e*PKPbc PKPbc 10 47 51.2 -0.6
BOJS Bojanci 146.30 327 *e*PKPdf PKPdf 10 47 49.2 -1.3
BOJS *i* PKPbc PKPbc 10 47 51.5 -0.6
BOJS *e* 10 48 58.8
LJU Ljubljana 146.30 328 *e*PKPdf PKPdf 10 47 49.0 -1.5
LJU *e*PKPbc PKPbc 10 47 51.4 -0.7
VISS Visnje 146.31 327 *i* PKPdf PKPdf 10 47 49.1 -1.4
VISS *i* PKPbc PKPbc 10 47 51.4 -0.8
UCC Uccle 146.44 343 PKPbc PKPbc 10 47 51.4 -1.0
BCLA Clavier 146.51 342 PKPbc PKPbc 10 47 51.4 -1.1
CEY Cerknica 146.56 328 *i* PKPbc PKPbc 10 47 52.0 -0.9
STU Stuttgart 146.59 336 *e*PKPbc PKPbc 10 47 52.2 -0.6
STU Stuttgart 146.59 336 *e*PKPbc PKPbc 10 47 52.5 -0.3
PTCC Patocco-Chiusa 146.62 329 PKP PKPdf 10 47 51.6 +0.6
VOY Vojsko 146.62 328 *e*PKPdf PKPdf 10 47 50.1 -0.9
VOY *e*PKPbc PKPbc 10 47 51.8 -1.2
VOY *e* 10 48 58.8
JAVS Javornik 146.63 328 *i* PKPbc PKPbc 10 47 52.0 -1.0
JAVS *i* 10 48 56.8
WTTA Wattenberg 146.78 332 ⇑*i*PKPdf PKPdf 10 47 52.6 +1.4
comp=Z,31nm,1.3s
WLF Walferdange 146.91 340 PKPbc PKPbc 10 47 53.2 -0.5
WLF APKP 10 49 00.9
WLF Walferdange 146.91 340 *e*PKPbc PKPbc 10 47 53.4 -0.3
WLF *e*pPKPbc pPKPbc 10 48 57.6 +0.3
WLF Walferdange 146.91 340 *e*PKPbc PKPbc 10 47 53.8 +0.1
GIVF Givet 146.94 342 ⇑*i*PKP1 PKPbc 10 47 52.9 -0.8
comp=Z,38nm,0.8s
KFL Anninata 147.00 311 P PKPbc 10 47 53.9 -0.4
DOU Dourbes 147.01 342 PKPbc PKPbc 10 47 53.1 -0.9
DOU APKP 10 49 00.6
BAIF Baives 147.15 342 ⇑*i*PKP1 PKPbc 10 47 53.6 -0.7
comp=Z,44nm,1.0s
BFO Black Forest 147.28 337 *e*PKPbc PKPbc 10 47 53.7 -1.1
FETA Feichten 147.36 333 *i* PKPdf PKPbc 10 47 54.3 -0.7
comp=Z,28nm,1.1s,SNR=12
CDF Champ du Feu 147.60 338 ⇑*i*PKP1 PKPbc 10 47 54.7 -0.9
comp=Z,43nm,1.1s
ECH Echery 147.81 338 *e*PKPbc PKPbc 10 47 55.3 -0.9
DAVOX Davos/Dischmat 147.91 333 PKPbc PKPbc 10 47 55.9 -0.5
comp=Z,27nm,0.7s,baz=28,slow=1.9,SNR=30
HINF Hinteralfeld 148.26 338 ⇑*i*PKP1 PKPbc 10 47 56.1 -1.2
comp=Z,24nm,1.0s
HAU Haudompre 148.28 338 ⇑*i*PKP1 PKPbc 10 47 56.4 -1.0
comp=Z,27nm,0.9s
MEZF Maizieres J'vi 148.28 340 ⇑*i*PKP1 PKPbc 10 47 56.8 -0.6
comp=Z,89nm,1.2s
LTRZ Laterza 148.43 318 PKP PKPbc 10 47 57.1 -0.9
RGNG Rignano Grg 148.56 321 PKP PKPbc 10 47 57.3 -1.0
FG2 Serracapriola 148.73 321 PKP PKPbc 10 47 58.3 -0.5
CING Cingoli 148.82 326 PKP PKPdf 10 47 53.1 -1.6
FSSB Fossombrone 148.82 326 PKP PKPbc 10 47 58.3 -0.6
SNTG Esanatoglia 149.04 326 PKP PKPbc 10 47 58.9 -0.6
PIEI Pieia 149.06 326 PKP PKPbc 10 47 59.0 -0.5
THEO Teramo 149.10 324 PKP PKPbc 10 47 58.5 -1.1
SFI Santa Sofia 149.15 328 PKP2 PKPbc 10 47 59.5 -0.2
BADI Badiali 149.23 327 PKP PKPbc 10 47 59.1 -0.8
NRCA Norcia 149.23 325 PKP PKPdf 10 47 53.9 -1.5
TIP Timpagrande 149.25 316 *e*PKPbc PKPbc 10 47 59.7 -0.4
MURB Monte Urbino 149.25 326 PKP PKPbc 10 47 58.9 -1.1
CDCA Citt' di Caste 149.27 327 PKP PKPbc 10 47 59.5 -0.5
RNI2 Rionero Sannit 149.39 322 PKP PKPbc 10 47 59.6 -0.8
AQU L'Aquila 149.39 324 *e*PKP2 PKPbc 10 47 59.9 -0.5
FLN La Foliniere 149.53 347 ⇑*i*PKP1 PKPbc 10 47 59.1 -1.4
comp=Z,99nm,1.2s
CABF La Chapelle 149.55 337 ⇑*i*PKP1 PKPbc 10 48 00.1 -0.5
comp=Z,86nm,1.2s
SDI San Donato 149.58 323 PKHKP PKPbc 10 47 59.5 -1.3
VVLD Villa Vallelon 149.58 323 PKP PKPbc 10 47 59.5 -1.3
LDF La Drutiere 149.61 346 *e*PKP1 PKPbc 10 47 59.4 -1.3
FIAM Fiamignano 149.61 324 PKP PKPbc 10 48 00.0 -0.9
LOR Lormes 149.75 340 ⇑*i*PKP1 PKPbc 10 48 00.1 -0.9
comp=Z,51nm,1.1s
GRR Gorron 149.96 347 *e*PKP1 PKPbc 10 48 00.4 -1.1
SSF Saint Saulge 150.04 341 ⇑*i*PKP1 PKPbc 10 48 00.8 -1.0
comp=Z,38nm,1.0s
HYF Humbligny 150.12 342 ⇑*i*PKP1 PKPbc 10 48 01.4 -0.5
LPL La Plagne 150.22 335 ⇑*i*PKP1 PKPbc 10 48 01.8 -0.5
comp=Z,43nm,1.0s
LPG La Plagne 150.23 335 ⇑*i*PKP1 PKPbc 10 48 01.9 -0.4
comp=Z,35nm,0.9s
SMF Signal de Mont 150.30 340 ⇑*i*PKP1 PKPbc 10 48 01.3 -1.1
comp=Z,31nm,1.2s
CEL Celeste 150.31 315 *e*PKPbc PKPbc 10 48 01.4 -1.3
CEL *e*PKPab PKPab 10 48 11.0 +1.1
AVF Avril sur Loir 150.33 341 *e*PKP1 PKPbc 10 48 01.1 -1.4
comp=Z,13nm,0.9s
SGMF Saint Gilles 150.42 349 ⇑*i*PKP1 PKPbc 10 48 01.1 -1.5
comp=Z,42nm,1.0s
ROSF Rostrenen 150.46 350 ⇑*i*PKP1 PKPbc 10 48 01.1 -1.6
BNI Bardonecchia 150.63 335 *e*PKIKP PKPbc 10 48 02.6 -0.6
BGF Bois d'Agland 150.69 341 ⇑*i*PKP1 PKPbc 10 48 02.2 -1.1
comp=Z,24nm,0.7s
QUIF Quistinic 150.85 350 *e*PKP1 PKPbc 10 48 01.9 -1.7
MBDF Montbardon 150.86 334 ⇑*i*PKP1 PKPbc 10 48 02.7 -1.1
comp=Z,16nm,0.8s
ORIF Oris-en-Rattie 151.06 336 ⇑*i*PKP1 PKPbc 10 48 03.2 -1.0
comp=Z,36nm,0.8s
TCF Toulx Ste Croi 151.13 342 ⇑*i*PKP1 PKPbc 10 48 03.2 -1.1
comp=Z,20nm,0.9s
SSB Saint Sauveur 151.25 338 *e*PKIKP PKPbc 10 48 03.9 -0.8
SBF Sospel 151.27 332 *e*PKP1 PKPbc 10 48 04.3 -0.5
comp=Z,62nm,1.1s
MFF Saint Martin d 151.48 345 ⇑*i*PKP1 PKPbc 10 48 03.8 -1.3
comp=Z,18nm,0.8s
PGF Pioggiola 151.56 329 ⇑*i*PKP1 PKPbc 10 48 04.3 -1.2
comp=Z,84nm,0.9s
VIVF Saint-Julien-l 151.57 337 ⇑*i*PKP1 PKPbc 10 48 04.4 -1.0
comp=Z,21nm,0.9s
FRF La Foret Royal 151.86 333 *e*PKP1 PKPbc 10 48 04.7 -1.4
SMRF Simiane la Rot 151.96 335 ⇑*i*PKP1 PKPbc 10 48 05.5 -0.8
comp=Z,48nm,1.1s
LMR La Mourre 152.10 333 *e*PKP1 PKPbc 10 48 05.2 -1.4
comp=Z,56nm,1.1s
RJF Les Rejaudouix 152.23 342 *e*PKP1 PKPbc 10 48 05.6 -1.3
CAF Calviac 152.40 341 *e*PKP1 PKPbc 10 48 06.2 -1.1
LASF Ste Croix 152.54 337 *e*PKP1 PKPbc 10 48 06.7 -0.9
LFF La Frestale 152.79 342 *e*PKP1 PKPbc 10 48 06.9 -1.2
comp=Z,16nm,0.9s
KEST Kesra 156.05 317 PKPab PKPab 10 48 34.8 +0.5
comp=Z,2.9nm,0.8s,baz=229,slow=3.7,SNR=7.2
TORD Torodi Ar. Bea 166.79 244 PKP PKPdf 10 48 16.0 -1.3
comp=Z,1.6nm,0.9s,baz=103,slow=0.8,SNR=6.4
TORD PKPab PKPab 10 49 20.8 -1.1
comp=Z,0.5nm,0.6s,baz=106,slow=4.4,SNR=4.4

ISCJB ***24*** *10:43:16.2±0.9, 33°.67N±0°.03×36°.77E±0°.04, h9km±7km, Error ellipse: s-maj=6.3km s-min=5.5km az=164.5*
NSSC ***24*** *10:43:16, 33°.65N×36°.78E, h13km±6km*
GRAL ***24*** *10:43:16.5±0.3, 33°.65N×36°.82E, h7km±4km, MD3.5*
CSEM ***24*** *10:43:16.4±0.1, 33°.66N×36°.76E, h18km±1km, Mc3.0, Error ellipse: s-maj=2.6km s-min=2.4km az=78.0*
ISC 24 10:43:16.3±0.6, 33°.66N±0°.03×36°.77E±0°.04, h16km±6km, n18, σ0s47/30, 4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOTH	**TOTAH**	**0.41**	**224**	⇑P	**Pg**	**10 43 24.0**	**-0.7**
TOTH	**TOTAH**	**0.41**	**224**	⇑*i*P	**Pg**	**10 43 24.7**	**0.0**
QASN	**Qassioun**	**0.43**	**253**	⇑P	**Pg**	**10 43 25.0**	**0.0**
QASN				⇑S	**Sg**	**10 43 31.0**	**+0.1**
QASN	**Qassioun**	**0.43**	**253**	⇑*i*P	**Pg**	**10 43 25.5**	**+0.5**
QASN				⇑*i*S	**Sg**	**10 43 31.6**	**+0.7**
MARH	**Ras Al Marh**	**0.43**	**327**	⇑P	**Pg**	**10 43 25.0**	**-0.1**
MARH	**Ras Al Marh**	**0.43**	**327**	⇑*i*P	**Pg**	**10 43 25.7**	**+0.6**
ROOS	**tl_alroos**	**0.67**	**40**	⇑P	**Pg**	**10 43 29.0**	**-0.4**
ROOS				⇑S	**Sg**	**10 43 38.0**	**-0.2**
ROOS	**tl_alroos**	**0.67**	**40**	⇑*i*P	**Pg**	**10 43 29.3**	**-0.1**
ROOS				⇑*i*S	**Sg**	**10 43 38.9**	**+0.7**
RCY	**Rachaya**	**0.81**	**258**	*e*P	**Pb**	**10 43 31.6**	**-0.5**
RCY				*e*S	**Sb**	**10 43 42.9**	**0.0**
RCY	**Rachaya**	**0.81**	**258**	*e*P	**Pb**	**10 43 31.6**	**-0.5**
RCY				*e*S	**Sb**	**10 43 42.8**	**0.0**
ZALF	**Zalf**	**0.88**	**147**	⇓P	**Pb**	**10 43 33.0**	**-0.2**
ZALF				⇓S	**Sb**	**10 43 45.0**	**+0.3**
ZALF	**Zalf**	**0.88**	**147**	⇓*i*P	**Pb**	**10 43 33.2**	**0.0**
ZALF				⇓*i*S	**Sb**	**10 43 45.3**	**+0.6**
HWQ	**Hawqa**	**0.92**	**312**	*e*P	**Pb**	**10 43 33.7**	**-0.2**
HWQ				*e*S	**Sb**	**10 43 46.3**	**+0.4**
HWQ	**Hawqa**	**0.92**	**312**	*e*P	**Pb**	**10 43 33.7**	**-0.2**
HWQ				*e*S	**Sb**	**10 43 46.3**	**+0.4**
SALA	**Sala**	**0.95**	**182**	⇑P	**Pb**	**10 43 33.0**	**-1.4**
SALA				⇑S	**Sb**	**10 43 47.0**	**+0.3**
SALA	**Sala**	**0.95**	**182**	⇑*i*P	**Pb**	**10 43 33.9**	**-0.5**
SALA				⇑*i*S	**Sb**	**10 43 47.6**	**+0.9**
BHL	**Bhannes**	**0.96**	**285**	*e*P	**Pb**	**10 43 34.5**	**-0.2**
BHL	**Bhannes**	**0.96**	**285**	*e*P	**Pb**	**10 43 34.5**	**-0.1**

IDC ***24*** *11:14:58.9±0.7, 1°.22N×98°.43E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.1/25, mbtmp4.1/16, ML4.1/1, MS3.7/1, Ms1 3.6/1, ms1mx2.7/26, Error ellipse: s-maj=22.7km s-min=13.9km az=61.0*
ISCJB ***24*** *11:15:04.8±0.6, 1°.31N±0°.04×98°.42E±0°.06, h53km±6km, mb4.3/24, Error ellipse: s-maj=10.3km s-min=6.0km az=157.0*
NEIC ***24*** *11:15:04.0±0.4, 1°.20N×98°.45E, h35km, mb4.7/9, Error ellipse: s-maj=10.9km s-min=8.1km az=57.0*
DJA ***24*** *11:15:04, 1°.25N×98°.34E, h20km, MLv4.6/13*
ISC 24 11:15:05.9±0.6, 1°.31N±0°.04×98°.39E±0°.06, h46km±6km, n58, σ0s99/57, mb4.3/24, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.81**	**270**	P	**Pn**	**11 15 19.6**	**-1.4**
TRSI	**Tarutung**	**0.91**	**39**	P	**Pn**	**11 15 22.0**	**-0.4**
MNSI	**Mandailing Nat**	**1.30**	**113**	P	**Pn**	**11 15 27.0**	**-0.6**
PSI	**Prapat**	**1.58**	**20**	Pn	**Pn**	**11 15 29.9**	**-1.6**
	23nm,0.3s,baz=200,slow=12,SNR=27						
PSI				Sn	**Sn**	**11 15 48.4**	**-2.3**
	736nm,0.3s,baz=288,slow=20,SNR=152						
TSI	**Tuntungan**	**2.18**	**5**	P	**Pn**	**11 15 42.2**	**+2.4**
PPI	**Padang Panjang**	**2.67**	**131**	P	**Pn**	**11 15 46.9**	**+0.5**
SISI	**Saibi**	**2.71**	**165**	P	**Pn**	**11 15 46.8**	**-0.2**
BKNI	**Bangkinang**	**2.83**	**110**	P	**Pn**	**11 15 50.0**	**+1.4**
PDSI	**Padang**	**3.03**	**137**	P	**Pn**	**11 15 51.2**	**-0.2**
SDSI	**Sungai Dareh**	**3.77**	**126**	P	**Pn**	**11 16 02.0**	**+0.5**
IPM	**Ipoh**	**4.11**	**40**	P	**Pn**	**11 16 07.3**	**+1.1**
KULM	**Kulim**	**4.55**	**30**	*e*Pn	**Pn**	**11 16 13.2**	**+0.9**
KULM				*e*Sg	**Sn**	**11 17 23.4**	**+19**
KULM	**Kulim**	**4.55**	**30**	P	**Pn**	**11 16 13.2**	**+0.9**
BSI	**Banda Aceh**	**5.18**	**324**	P	**Pn**	**11 16 20.8**	**-0.1**
	62nm,0.6s,1μm0.4nm						
MYKOM	**Kota Tinggi**	**5.48**	**85**	P	**Pn**	**11 16 27.3**	**+2.2**
	24nm,0.9s,746nm0.2nm						
MNAI	**Manna**	**7.25**	**141**	P	**Pn**	**11 16 50.2**	**+0.9**
	237nm,2.1s,1.0nm						
MDSI	**Maura Dua**	**8.16**	**135**	P	**Pn**	**11 17 02.6**	**+0.7**
	61nm,0.6s						
KASI	**Kota Agung**	**9.13**	**138**	P	**Pn**	**11 17 14.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**17.05**	**2**	P	**Pn**	**11 18 59.8**	**-1.3**
	0.3nm,0.3s,baz=180,slow=12,SNR=4.7						
KAPI	**Kappang**	**22.25**	**107**	P	**P**	**11 19 56.2**	**-2.8**
	8.2nm,1.0s,mb4.1,baz=255,slow=7.8,SNR=2.7						
FITZ	**Fitzroy Crossi**	**33.04**	**127**	P	**P**	**11 21 34.7**	**-2.5**
	0.9nm,0.6s,mb3.9,baz=285,slow=13,SNR=4.7						
ASAR	**Alice Springs**	**42.52**	**128**	P	**P**	**11 22 55.1**	**-2.0**
	0.8nm,0.6s,mb3.6,baz=302,slow=7.7,SNR=23						
KSRS	**Korea Array**	**45.09**	**34**	P	**P**	**11 23 16.5**	**-1.1**
	1.5nm,0.7s,mb3.9,baz=218,slow=7.7,SNR=7.4						
UCH	**Uchtor**	**46.04**	**335**	*e*P	**P**	**11 23 25.6**	**+0.6**
	3.2nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**46.18**	**337**	*e*P	**P**	**11 23 27.2**	**+1.1**
	3.4nm,0.6s,mb4.5						
SONM	**Songino Array**	**46.86**	**7**	P	**P**	**11 23 31.7**	**+0.4**
	1.1nm,0.4

comp=Z,1.7nm,0.8s,mb4.3,baz=93,slow=5.1,SNR=4.8
NOA **NORSAR Array B** 87.49 331 P P 11 27 48.4 0.0
LPG **La Plagne** 90.23 315 *e*P P 11 28 02.5 +0.8
comp=Z,10nm,0.9s,mb4.9
LPG **La Plagne** 90.23 315 *e*P P 11 28 02.5 +0.8
comp=Z,5.3nm,0.9s,mb4.9
LPL **La Plagne** 90.24 315 *e*P P 11 28 02.5 +0.7
comp=Z,8.9nm,0.8s,mb4.8
LPL **La Plagne** 90.24 315 *e*P P 11 28 02.5 +0.7
comp=Z,4.4nm,0.8s,mb4.8
HAU **Haudompre** 90.41 318 *e*P P 11 28 02.8 +0.3
comp=Z,8.9nm,0.8s,mb4.8
HAU **Haudompre** 90.41 318 *e*P P 11 28 02.8 +0.3
comp=Z,4.4nm,0.8s,mb4.8
CABF **La Chapelle** 90.64 316 *e*P P 11 28 04.3 +0.7
comp=Z,8.5nm,0.8s,mb4.8
CABF **La Chapelle** 90.64 316 *e*P P 11 28 04.3 +0.7
comp=Z,4.3nm,0.8s,mb4.8
BAIF **Baives** 91.70 320 *e*P P 11 28 08.4 0.0
LOR **Lormes** 92.13 317 *e*P P 11 28 10.9 +0.4
comp=Z,11nm,0.9s,mb4.9
LOR **Lormes** 92.13 317 *e*P P 11 28 10.9 +0.4
comp=Z,5.4nm,0.9s,mb4.9
SMF **Signal de Mont** 92.19 317 *e*P P 11 28 11.0 +0.2
NVAR **Mina Array Bea** 128.00 37 PKP PKPdf 11 34 09.0 +1.8
comp=Z,0.6nm,0.8s,baz=290,slow=1.8,SNR=4.5
TXAR **Lajitas Array** 142.94 33 PKhKP 11 34 32.1
comp=Z,0.4nm,0.7s,baz=12,slow=4.6,SNR=4.9
TXAR PKP PKPdf 11 34 35.5 +0.3
comp=Z,0.4nm,0.6s,baz=206,slow=1.3,SNR=6.1
CPUP **Villa Florida** 145.88 221 PKPbc PKPbc 11 34 41.9 +0.8
comp=Z,1.3nm,0.5s,baz=99,slow=1.2,SNR=6.7

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*ISCJB **24** 11:19:28.2±0.3, 12°.17S±0°.06×41°.70E±0°.07, h10km, mb4.4/38, MS3.8/16, Error ellipse: s-maj=9.5km s-min=8.2km az=160.8*
*IDC **24** 11:19:28.7±0.6, 12°.09S×41°.64E, h0km, mb4.3/22, mb1 4.4/24, mb1mx4.3/29, mbtmp4.3/24, ML4.2/2, MS3.8/15, Ms1 3.8/15, ms1mx3.6/32, Error ellipse: s-maj=17.4km s-min=13.8km az=137.0*
*NEIC **24** 11:19:30.1±0.3, 12°.19S×41°.67E, h10km, mb4.4/10, Error ellipse: s-maj=9.6km s-min=8.4km az=80.0*
*LDG **24** 11:19:30.0±0.3, 11°.85S×41°.81E, h10km, Mb4.8/11, Ms3.7/8, Error ellipse: s-maj=20.4km s-min=8.3km az=48.0*
ISC 24 11:19:30.3±0.3, 12°.19S±0°.06×41°.67E±0°.06, h10km, n154, σ1§00/68, mb4.4/38, MS3.8/16, 38C-34D, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**8.28**	**141**	Pn	**Pn**	**11 21 30.4**	**-0.1**
	134nm,0.3s,baz=304,slow=12,SNR=256						
OPO				Sn	**Sn**	**11 22 56.7**	**-7.5**
	44nm,0.3s,baz=220,slow=17,SNR=4.1						
ABPO	**Ambohimpanom**	**8.65**	**142**	*e*Pn	**Pn**	**11 21 35.5**	**0.0**
	220nm,0.6s						
ABPO				*e*Sn	**Sn**	**11 23 07.0**	**-6.2**
KMBO	**Kilima Mbogo**	**11.83**	**338**	Pn	**Pn**	**11 22 14.8**	**-4.3**
	16nm,0.3s,baz=89,slow=16,SNR=4.9						
KMBO	**Kilima Mbogo**	**11.83**	**338**	Pn	**Pn**	**11 22 14.8**	**-4.3**
LSZ	**Lusaka**	**13.45**	**255**	Pn	**Pn**	**11 22 39.3**	**-2.0**
	2.2nm,0.3s,baz=72,slow=11,SNR=12						
LSZ				Sn	**Sn**	**11 24 59.3**	**-12**
	2.9nm,0.3s,baz=356,slow=17,SNR=9.4						
LSZ				Lg		11 26 19.0	
	1.9nm,0.3s,baz=0.0,slow=20,SNR=2.4						
LBTB	**Lobatse**	**19.84**	**228**	P	**Pn**	**11 24 01.6**	**-1.4**
	0.3nm,0.3s,baz=67,slow=10,SNR=11						
LBTB				LR	LR	11 31 30.1	
	comp=Z,221nm,19.3s,baz=63,slow=36						
BOSA	**Boshof**	**22.40**	**221**	P	**P**	**11 24 28.8**	**-0.2**
	20nm,1.0s,mb4.5,baz=56,slow=11,SNR=16						
BOSA				LR	LR	11 33 13.1	
	comp=Z,380nm,19.0s,MS3.8,baz=53,slow=37						
BOSA	**Boshof**	**22.40**	**221**	*e*P	**P**	**11 24 28.7**	**-0.3**
	2.2nm,0.6s,mb3.8						
BOSA				LR	LR	11 33 13.1	
ATD	**Arta Tunnel**	**23.59**	**3**	P	**P**	**11 24 40.7**	**-0.9**
	3.8nm,0.5s,mb4.1,baz=73,slow=19,SNR=3.1						
ATD	**Arta Tunnel**	**23.59**	**3**	P	**P**	**11 24 40.7**	**-0.9**
TSUM	**Tsumeb**	**24.20**	**250**	P	**P**	**11 24 48.1**	**+1.0**
	14nm,0.9s,mb4.4,baz=66,slow=7.3,SNR=20						
TSUM				LR	LR	11 34 25.9	
	comp=Z,280nm,20.0s,MS3.7,baz=132,slow=37						
MMAI	**Mount Meron Ar**	**45.34**	**353**	LR	LR	11 45 22.1	
	comp=Z,134nm,20.9s,MS3.9,baz=135,slow=34						
TORD	**Torodi Ar. Bea**	**46.96**	**301**	P	**P**	**11 28 01.6**	**-0.1**
	3.5nm,0.8s,mb4.3,baz=110,slow=7.5,SNR=20						
TORD				PcP	PcP	11 29 34.2	-0.1
	1.5nm,0.7s,baz=108,slow=3.4,SNR=7.6						
TORD				LR	LR	11 48 39.2	
	comp=Z,343nm,18.2s,MS4.3,baz=120,slow=37						
TAM	**Tamanrasset**	**49.62**	**314**	*e*P	**P**	**11 28 23.8**	**+1.6**
	1.9nm,0.8s,mb4.2						
DBIC	**Dimbokro**	**49.91**	**290**	P	**P**	**11 28 23.9**	**-0.6**
	6.1nm,0.8s,mb4.7,baz=99,slow=8.4,SNR=4.3						
DBIC	**Dimbokro**	**49.91**	**290**	P	**P**	**11 28 23.9**	**-0.6**
BR131	**Keskin Array S**	**52.18**	**352**	*e*P	**P**	**11 28 42.0**	**+0.9**
	2.6nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**52.18**	**352**	P	**P**	**11 28 41.7**	**+0.6**
	2.0nm,0.8s,mb4.1,baz=183,slow=8.7,SNR=15						
BRTR				LR	LR	11 50 28.2	
	comp=Z,34nm,19.6s,MS3.4,baz=22,slow=36						
KEST	**Kesra**	**56.61**	**329**	LR	LR	11 53 25.4	
	comp=Z,46nm,18.0s,MS3.6,baz=252,slow=36						
MAW	**Mawson**	**57.11**	**171**	LR	LR	11 49 33.6	
	comp=Z,162nm,18.8s,MS4.2,baz=147,slow=32						
PSI	**Prapat**	**58.80**	**79**	LR	LR	11 49 32.1	
	comp=Z,174nm,18.8s,MS4.2,baz=96,slow=31						
PGF	**Pioggiola**	**62.16**	**333**	*e*P	**P**	**11 29 52.7**	**+1.0**
AAK	**Ala-Archa**	**62.30**	**27**	P	**P**	**11 29 53.5**	**+0.9**
	1.6nm,0.5s,mb4.4,baz=251,slow=6.1,SNR=8.2						
AAK				LR	LR	11 55 28.4	
	comp=Z,61nm,19.6s,MS3.8,baz=307,slow=35						
TKM2	**Tokmak 2**	**63.02**	**27**	*e*P	**P**	**11 29 57.5**	**+0.1**
	12nm,0.9s,mb5.0						
KECS	**Kecovo**	**63.25**	**344**	*e*P	**P**	**11 29 58.8**	**-0.1**
	3.3nm,1.3s,mb4.3						
KECS	**Kecovo**	**63.25**	**344**	*e*P	**P**	**11 29 58.8**	**-0.1**
ABKAR	**Akbulak array**	**63.26**	**13**	*e*P	**P**	**11 29 58.2**	**-0.7**
	3.7nm,0.8s,mb4.6						
AKASG	**Malin Array Be**	**63.56**	**351**	P	**P**	**11 29 59.3**	**-1.5**
	1.7nm,0.7s,mb4.2,baz=177,slow=6.9,SNR=6.5						
VYHS	**Vyhne**	**63.71**	**343**	*e*P	**P**	**11 30 01.7**	**-0.2**
	4.5nm,1.5s,mb4.3						
VYHS	**Vyhne**	**63.71**	**343**	*e*P	**P**	**11 30 01.6**	**-0.3**
STHS	**Stebnicka Huta**	**63.92**	**345**	*e*P	**P**	**11 30 03.6**	**+0.3**
	2.4nm,1.0s,mb4.2						
STHS	**Stebnicka Huta**	**63.92**	**345**	*e*P	**P**	**11 30 03.5**	**+0.2**
AKTK	**Aktyubinsk**	**63.97**	**12**	P	**P**	**11 30 02.5**	**-1.0**
AKTK				LR	LR	12 03 59.1	
AKTO	**Aktyubinsk**	**63.97**	**12**	P	**P**	**11 30 02.5**	**-1.1**
	1.9nm,0.6s,mb4.3,baz=188,slow=5.9,SNR=4.3						
AKTO				LR	LR	12 03 59.1	
	comp=Z,42nm,18.2s,MS3.7,baz=272,slow=42						
FRF	**La Foret Royal**	**64.02**	**332**	*e*P	**P**	**11 30 06.3**	**+2.3**
CMAR	**Chiang Mai Arr**	**64.17**	**63**	P	**P**	**11 30 05.8**	**+0.3**
	2.0nm,0.8s,mb4.2,baz=254,slow=8.0,SNR=16						
MBDF	**Montbardon**	**64.88**	**333**	*e*P	**P**	**11 30 11.2**	**+1.6**
	18nm,0.9s,mb4.8						
MBDF	**Montbardon**	**64.88**	**333**	*e*P	**P**	**11 30 11.2**	**+1.6**
	9.3nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**65.42**	**333**	*e*P	**P**	**11 30 15.3**	**+2.1**
ORIF				*e*MLR	MLR		
	comp=Z,86nm,22.5s,MS3.6						
LPG	**La Plagne**	**65.49**	**334**	*e*P	**P**	**11 30 13.4**	**-0.2**
LPL	**La Plagne**	**65.52**	**334**	*e*P	**P**	**11 30 13.6**	**-0.2**
GERES	**GERESS Array B**	**65.60**	**340**	P	**P**	**11 30 13.5**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.1,baz=152,slow=5.9,SNR=12						
KHC	**Kasperske Hory**	**65.89**	**340**	*e*P	**P**	**11 30 15.3**	**-0.8**
	comp=Z,2.2nm,1.0s,mb4.1						
VIVF	**Saint-Julien-l**	**65.92**	**332**	*e*P	**P**	**11 30 17.5**	**+1.1**
	comp=Z,11nm,0.9s,mb4.6						
CABF	**La Chapelle**	**66.65**	**334**	*e*P	**P**	**11 30 21.4**	**+0.3**
ESDC	**Sonseca Array**	**66.78**	**323**	P	**P**	**11 30 22.4**	**+0.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=127,slow=5.9,SNR=6.9						
CDF	**Champ du Feu**	**67.59**	**336**	*e*P	**P**	**11 30 25.6**	**-1.4**
SMF	**Signal de Mont**	**67.66**	**333**	*e*P	**P**	**11 30 27.6**	**+0.1**
	comp=Z,7.8nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**67.99**	**333**	*e*P	**P**	**11 30 29.6**	**+0.1**
	comp=Z,12nm,0.9s,mb4.6						
SSF	**Saint Saulge**	**68.13**	**333**	*e*P	**P**	**11 30 31.5**	**+1.1**
LOR	**Lormes**	**68.13**	**333**	*e*P	**P**	**11 30 30.5**	**+0.1**
	comp=Z,9.1nm,0.7s,mb4.6						
LOR				*e*MLR	MLR		
	comp=Z,44nm,19.2s,MS3.4						
TCF	**Toulx Ste Croi**	**68.14**	**332**	*e*P	**P**	**11 30 31.4**	**+0.9**
	comp=Z,13nm,0.9s,mb4.7						
MEZF	**Maizieres J'vi**	**68.57**	**335**	*e*P	**P**	**11 30 34.5**	**+1.4**
MKAR	**Makanchi Array**	**69.05**	**29**	P	**P**	**11 30 35.4**	**-0.7**
	comp=Z,2.4nm,0.8s,mb4.2,baz=216,slow=6.1,SNR=10						
MKAR				LR	LR	11 59 44.3	
	comp=Z,31nm,18.7s,MS3.6,baz=176,slow=35						
MKAR	**Makanchi Array**	**69.05**	**29**	P	**P**	**11 30 35.4**	**-0.7**
MKAR				LR	LR	11 59 44.3	
BVAR	**Borovoye Array**	**69.46**	**18**	P	**P**	**11 30 38.1**	**-0.4**
	comp=Z,4.7nm,0.9s,mb4.4,baz=223,slow=6.1,SNR=15						
KURK	**Kurchatov**	**70.44**	**24**	P	**P**	**11 30 43.1**	**-1.4**
	comp=Z,3.6nm,0.8s,mb4.3,baz=221,slow=7.1,SNR=18						
KURK				LR	LR	12 00 07.6	
	comp=Z,51nm,20.4s,MS3.8,baz=190,slow=35						
FINES	**FINESS Array B**	**74.42**	**352**	P	**P**	**11 31 07.4**	**-0.7**
	comp=Z,3.7nm,0.7s,mb4.4,baz=140,slow=6.4,SNR=10						
GTA	**Gaotai**	**74.50**	**43**	*e*P	**P**	**11 31 09.8**	**+0.7**
GTA				pP	pP	11 31 14.3	+1.9
GTA				sP	sP	11 31 16.8	+3.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
KAF	**Kangasniemi**	**75.03**	**353**	*e*p	**P**	**11 31 10.4**	**-1.3**
	comp=Z,6.8nm,0.6s,mb4.8						
JOF	**Joensuu**	**75.30**	**355**	*e*p	**P**	**11 31 11.6**	**-1.6**
	comp=Z,4.9nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**75.37**	**25**	P	**P**	**11 31 12.6**	**-1.2**
	comp=Z,3.8nm,0.6s,mb4.5,baz=234,slow=6.8,SNR=6.3						
NOA	**NORSAR Array B**	**76.88**	**345**	P	**P**	**11 31 21.8**	**-0.5**
	comp=Z,3.1nm,0.9s,mb4.2,baz=150,slow=5.6,SNR=4.2						
NOA				LR	LR	12 11 55.8	
	comp=Z,21nm,18.3s,MS3.5,baz=105,slow=41						
NOA	**NORSAR Array B**	**76.88**	**345**	P	**P**	**11 31 21.8**	**-0.5**
NOA				LR	LR	12 11 55.8	
FITZ	**Fitzroy Crossi**	**80.65**	**107**	P	**P**	**11 31 45.1**	**+1.1**
	baz=210,slow=5.4						
ARCES	**ARCESS Array B**	**82.30**	**354**	P	**P**	**11 31 51.1**	**-0.5**
	comp=Z,4.2nm,0.8s,mb4.5,baz=144,slow=4.5,SNR=8.9						
SONM	**Songino Array**	**82.74**	**38**	P	**P**	**11 31 55.0**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.2,baz=230,slow=5.2,SNR=6.3						
ASAR	**Alice Springs**	**87.21**	**113**	P	**P**	**11 32 18.1**	**+0.7**
	comp=Z,0.9nm,0.7s,mb4.1,baz=262,slow=4.3,SNR=11						
CPUP	**Villa Florida**	**92.56**	**243**	P	**P**	**11 32 44.6**	**+2.1**
	comp=Z,0.6nm,0.5s,mb4.3,baz=117,slow=5.3,SNR=3.7						
CPUP				LR	LR	12 09 47.2	
	comp=Z,81nm,18.5s,MS4.2,baz=274,slow=33						
YKA	**Yellowknife Ar**	**126.97**	**346**	PKP	PKPdf	11 38 33.6	-0.5
	comp=Z,0.5nm,0.7s,baz=23,slow=1.9,SNR=15						
PDAR	**Pinedale Array**	**140.62**	**326**	PKP	PKPdf	11 39 00.6	+0.3
	comp=Z,0.5nm,0.7s,baz=116,slow=3.4,SNR=5.1						
I12A	**Atlanta**	**142.70**	**332**	⇓P	PKPdf	11 39 02.9	-1.1
	baz=143						
Y24A	**Capitan**	**143.05**	**311**	⇑P	PKPdf	11 39 01.0	-3.9
	baz=143,SNR=5.2						
J12A	**Stokes Ranch,**	**143.10**	**331**	⇓P	PKPdf	11 39 05.4	+0.7
	baz=143,SNR=5.2						
Z24A	**Sheeppen Canyo**	**143.27**	**310**	⇓P	PKPdf	11 39 02.1	-3.2
	baz=143						
MFID	**Camas Ranch**	**143.31**	**332**	⇓pP	PKPdf	11 39 04.4	-0.7
	baz=143						
TXAR	**Lajitas Array**	**143.56**	**303**	PKP	PKPdf	11 39 03.5	-2.5
	comp=Z,0.9nm,0.8s,baz=109,slow=5.0,SNR=12						
BNM	**Barren Site**	**143.81**	**312**	*e*PKPdf	PKPdf	11 39 03.8	-2.5
224A	**Corundas Mount**	**143.95**	**309**	⇑P	PKPdf	11 39 05.1	-1.5
	baz=144						
T19A	**Beclabito**	**144.03**	**318**	⇑P	PKPdf	11 39 04.7	-1.8
	baz=144,SNR=9.2						
W21A	**San Fidel**	**144.04**	**315**	⇑P	PKPdf	11 39 05.9	-0.8
	baz=144						
R17A	**Hanksville Air**	**144.13**	**322**	⇓P	PKPdf	11 39 03.5	-3.2
	baz=144						
Y22A	**Socorro**	**144.16**	**312**	⇓P	PKPdf	11 39 05.7	-1.2
	baz=144,SNR=6.2						
DUG	**Dugway**	**144.17**	**326**	⇓pP	PKPdf	11 39 05.2	-1.5
	baz=144						
J09A	**Fry Pan Ranch,**	**144.22**	**334**	⇓P	PKPdf	11 39 06.1	-0.6
	baz=144,SNR=6.9						
P15A	**Leamington**	**144.29**	**324**	⇑pP	PKPdf	11 39 05.9	-1.0
	baz=144						
T18A	**Mexican Hat**	**144.39**	**319**	⇑P	PKPdf	11 39 06.1	-1.1
	baz=144						
U19A	**Dine' College,**	**144.46**	**317**	⇑P	PKPdf	11 39 06.1	-1.2
	baz=144,SNR=9.4						
X21A	**Alamocita Cree**	**144.49**	**314**	⇑P	PKPdf	11 39 07.3	-0.2
	baz=144,SNR=20						
J08A	**Circle Bar Ran**	**144.51**	**335**	⇓P	PKPdf	11 39 06.5	-0.7
	baz=144						
Y21A	**Point of Rocks**	**144.63**	**313**	⇑P	PKPdf	11 39 06.1	-1.6
	baz=145,SNR=9.9						
L10A	**Juniper Basin**	**144.65**	**331**	⇓P	PKPdf	11 39 07.7	+0.2
	baz=145,SNR=8.1						
S17A	**Black Ridge (B**	**144.67**	**321**	⇓P	PKPdf	11 39 07.0	-0.7
	baz=145,SNR=8.7						
R16A	**Teasdale**	**144.68**	**322**	⇓P	PKPdf	11 39 07.0	-0.6
	baz=145,SNR=12						
P14A	**Drum Mountains**	**144.73**	**325**	⇓P	PKPdf	11 39 07.8	+0.1
	baz=145,SNR=8.8						
Q15A	**Fillmore**	**144.74**	**324**	⇑P	PKPdf	11 39 07.6	-0.1
	baz=145						
U18A	**Rough Rock, Ch**	**144.82**	**318**	⇑P	PKPdf	11 39 07.9	-0.1
	baz=145,SNR=8.4						
M11A	**Holland Ranch,**	**144.82**	**330**	⇑P	PKPdf	11 39 08.8	+1.0
	baz=145,SNR=8.7						
O13A	**Hicks Ranch, I**	**144.85**	**327**	⇑P	PKPdf	11 39 08.4	+0.5
	baz=145,SNR=6.6						
N12A	**Clover Valley,**	**144.88**	**329**	*e*PKPdf	PKPdf	11 39 08.2	+0.3
X20A	**Quemado**	**144.94**	**314**	⇑P	PKPdf	11 39 08.6	+0.4
	baz=145,SNR=8.9						
MSU	**Marysvale**	**144.94**	**323**	*e*PKPdf	PKPdf	11 39 08.4	+0.3
T17A	**Navajo Res., N**	**145.07**	**320**	⇑P	PKPbc	11 39 08.6	+0.8
	baz=145,SNR=6.9						
M10A	**I.L. Ranch, Tu**	**145.11**	**331**	⇑P	PKPbc	11 39 09.1	+1.3
	baz=145						
222A	**Williams Famil**	**145.13**	**310**	⇑P	PKPbc	11 39 09.0	+0.8
	baz=145,SNR=6.4						
O12A	**Currie**	**145.15**	**328**	⇑P	PKPbc	11 39 08.7	+0.8
	baz=145,SNR=6.6						
Y20A	**Horse Springs,**	**145.19**	**313**	⇓P	PKPbc	11 39 09.4	+1.2
	baz=145,SNR=5.5						
R15A	**Junction**	**145.20**	**323**	⇓P	PKPbc	11 39 09.6	+1.4
	baz=145,SNR=11						
U17A	**Shonto**	**145.22**	**319**	⇓P	PKPbc	11 39 09.6	+1.3
	baz=145,SNR=18						
W19A	**Sanders**	**145.24**	**316**	⇓P	PKPbc	11 39 08.0	-0.4
	baz=145,SNR=13						
Q14A	**Sevier Lake (B**	**145.26**	**325**	P	PKPbc	11 39 09.7	+1.3
	baz=145,SNR=20						
V18A	**Ganado**	**145.27**	**317**	⇓P	PKPbc	11 39 09.5	+1.0
	baz=145,SNR=10						
WVOR	**Wild Horse Val**	**145.34**	**334**	*e*PKPbc	PKPbc	11 39 09.6	+1.2
P13A	**Bates Ranch, G**	**145.34**	**326**	⇑P	PKPbc	11 39 09.5	+0.9
	baz=145,SNR=21						
T16A	**Glen Canyon Da**	**145.52**	**320**	⇓P	PKPdf	11 39 09.8	+0.6
	baz=146,SNR=5.6						
S15A	**Panguitch**	**145.60**	**322**	⇑P	PKPdf	11 39 10.0	+0.7
	baz=146						
Q13A	**Wheeler Ranch,**	**145.70**	**325**	P	PKPdf	11 39 11.0	+1.6
	baz=146,SNR=28						
P12A	**McGill**	**145.81**	**327**	P	PKPdf	11 39 11.7	+2.1
	baz=146,SNR=8.9						
V17A	**Tonalea, Kykot**	**145.89**	**318**	⇓P	PKPdf	11 39 11.6	+1.7
	baz=146						
K05A	**Summer Lake**	**146.01**	**337**	P	PKPab	11 39 12.2	+1.1
	baz=146,SNR=6.3						
Q12A	**Willow Creek R**	**146.08**	**326**	⇑P	PKPab	11 39 12.3	+0.8
	baz=146,SNR=8.4						
R13A	**O'Grain Ranch,**	**146.21**	**324**	⇓P	PKPab	11 39 12.6	+0.6
	baz=146						
WUAZ	**Wupatki**	**146.33**	**318**	⇓P	PKPab	11 39 12.9	+0.4
	baz=146,SNR=5.9						
U15A	**North Rim**	**146.36**	**320**	⇓P	PKPab	11 39 12.7	+0.1
	baz=146,SNR=14						
P10A	**Eureka**	**146.52**	**329**	⇓P	PKPab	11 39 13.3	+0.2
	baz=146						
320A	**Kipp Ranch, An**	**146.57**	**309**	⇑P	PKPab	11 39 14.2	+0.6
	baz=146						
X17A	**Forest Lakes**	**146.64**	**316**	⇓P	PKPab	11 39 14.4	+0.6
	baz=147						
V15A	**Kaibab Nationa**	**146.66**	**319**	⇓P	PKPab	11 39 13.9	+0.1
	baz=147,SNR=10.0						
Q11A	**Duckwater**	**146.67**	**327**	⇑P	PKPab	11 39 13.0	-0.7
	baz=147,SNR=8.7						
W16A	**Flagstaff**	**146.69**	**318**	⇑P	PKPab	11 39 13.9	0.0
	baz=147,SNR=6.4						
219A	**White Tail Can**	**146.79**	**311**	⇓P	PKPbc	11 39 13.1	-0.1
	baz=147						
U14A	**Mt Trumbull**	**146.91**	**321**	⇑P	PKPab	11 39 14.5	-0.3
	baz=147,SNR=6.3						
T13A	**Saint George**	**146.96**	**323**	⇑P	PKPab	11 39 14.6	-0.3
	baz=147,SNR=7.1						
R11A	**Troy Canyon, C**	**146.99**	**326**	⇑P	PKPbc	11 39 13.9	+0.4
	baz=147						
X16A	**Lo Mia Camp, P**	**147.03**	**317**	⇑P	PKPab	11 39 15.2	-0.1
	baz=147,SNR=6.5						
V14A	**Boquillas Ranc**	**147.37**	**320**	⇑P	PKPbc	11 39 15.0	+0.2
	baz=147,SNR=8.2						
218A	**Dragoon**	**147.38**	**312**	⇓P	PKPab	11 39 15.8	-1.0
	baz=147,SNR=6.0						
U13A	**Pakoon Wash**	**147.40**	**322**	P	PKPbc	11 39 15.3	+0.5
	baz=147,SNR=6.7						
R10A	**Warm Springs**	**147.42**	**327**	⇓P	PKPbc	11 39 15.0	+0.2
	baz=147						
X15A	**Humboldt**	**147.52**	**317**	⇓P	PKPab	11 39 16.4	-0.8
	baz=148,SNR=8.2						
117A	**Oracle**	**147.57**	**313**	⇑P	PKPbc	11 39 15.3	-0.1
	baz=148						
T11A	**Corn Creek, Al**	**147.57**	**324**	⇑P	PKPbc	11 39 15.6	+0.3
	baz=148,SNR=6.4						
W14A	**Seligman**	**147.62**	**319**	⇓P	PKPbc	11 39 15.3	-0.2
	baz=148						
S10A	**Tonopah Range,**	**147.85**	**327**	⇑P	PKPbc	11 39 15.4	-0.5
	baz=148,SNR=6.5						
Y15A	**Casa Rosa Ranc**	**147.90**	**317**	⇓P	PKPab	11 39 17.6	-1.1
	baz=148,SNR=5.7						
BEKR	**Beckwourth**	**148.18**	**333**	⇑P	PKPbc	11 39 17.0	+0.3
	baz=148						
Y14A	**Wickenburg**	**148.35**	**317**	⇓P	PKPbc	11 39 18.0	+0.5
	baz=148,SNR=5.9						
NVAR	**Mina Array Bea**	**148.35**	**329**	PKPbc	PKPbc	11 39 15.6	-1.7
	comp=Z,4.3nm,0.9s,baz=107,slow=0.9,SNR=22						
X13A	**Yucca**	**148.49**	**319**	⇑P	PKPbc	11 39 18.6	+0.8
	baz=148						
SHOC	**Shoshone**	**149.12**	**324**	⇓P	PKPbc	11 39 20.4	+1.1
	baz=149						
Y12C	**Blythe**	**149.46**	**319**	⇑P	PKPbc	11 39 21.6	+1.3
	baz=149						
IRM	**Iron Mountain**	**149.60**	**320**	⇑P	PKPbc	11 39 20.4	-0.1
	baz=150						
GSC	**Goldstone**	**149.84**	**323**	⇑P	PKPbc	11 39 22.1	+1.0
	baz=150						
HEC	**Hector,Ludlow**	**149.88**	**322**	⇑P	PKPab	11 39 23.1	-3.6
	baz=150						

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*IDC **24** 11:28:12.1±1.2, 31°.29N×104°.07E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.6/25, mbtmp3.7/8, Error ellipse: s-maj=40.0km s-min=20.9km az=47.0*
*NEIC **24** 11:28:14.4±0.6, 31°.38N×104°.08E, h10km, mb3.8/2, Error ellipse: s-maj=13.9km s-min=9.7km az=62.0*
*BJI **24** 11:28:15.1, 31°.15N×104°.33E, h9km, ML3.6/14*
ISC 24 11:28:13.3±1.0, 31°.31N±0°.03×104°.11E±0°.07, h5km±8km, n16, σ1§06/21, mb3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.50**	**217**	Pg	**Pg**	**11 28 22.8**	**-0.1**
CD2				Sg	**Sg**	**11 28 29.8**	**+0.4**
CD2				smax			
	comp=N,3μm,0.7s						
ENH	**Enshi**	**4.74**	**101**	*e*Pn	**Pn**	**11 29 27.4**	**+2.0**
LZH	**Lanzhou**	**4.77**	**357**	Pg	**Pg**	**11 29 43.8**	**-0.9**
LZH				Sg	**Sg**	**11 30 46.8**	**+0.2**
LZH				smax			
	comp=N,65nm,0.9s						
LZH				smax			
	comp=E,80nm,0.9s						
XAN	**Xi'an**	**4.89**	**55**	Pn	**Pn**	**11 29 29.8**	**+2.4**
XAN				Sn	**Sn**	**11 30 23.8**	**-0.5**
XAN				Sg	**Sg**	**11 30 45.3**	**-5.0**
XAN				smax			
	comp=N,89nm,0.9s						
XAN				smax			
	comp=E,41nm,1.1s						
GYA	**Guiyang**	**

*BJI **24** 11:39:50.3, 31.10N×103.82E, h13km, ML3.7/12, Ms3.6/1, Ms7 3.5/2*

ISC 24 11:39:49.9±0.9, 31.20N±0.04×103.62E±0.07, h11km±6km, n15, σ0.83/20, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**157**	Pg	**Pg**	**11 39 55.3**	**-0.8**
CD2				Sg	**Sg**	**11 40 01.5**	**+1.1**
CD2				smax			
	comp=N,12μm,0.7s						
LZH	**Lanzhou**	**4.88**	**2**	*e*Pg	**Pg**	**11 41 22.6**	**-0.7**
LZH				Sg	**Sg**	**11 42 26.6**	**+0.1**
LZH				smax			
	comp=N,69nm,1.2s						
LZH				smax			
	comp=E,71nm,1.0s						
ENH	**Enshi**	**5.14**	**99**	*e*Pn	**Pn**	**11 41 07.1**	**+0.3**
	comp=E,58nm,0.5s						
ENH				*e*Sn	**Sn**	**11 42 06.6**	**+0.5**
XAN	**Xi'an**	**5.29**	**56**	Pn	**Pn**	**11 41 08.3**	**-0.6**
XAN				Sn	**Sn**	**11 42 03.9**	**-6.1**
XAN				Sg	**Sg**	**11 42 32.1**	**-7.8**
XAN				smax			
	comp=N,120nm,0.8s						
XAN				smax			
	comp=E,55nm,0.9s						
GYA	**Guiyang**	**5.43**	**150**	Pg	**Pb**	**11 41 20.8**	**-3.9**
GYA				smax			
	comp=N,150nm,0.6s						
GYA				smax			
	comp=E,110nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.38**	**200**	Pn	**Pn**	**11 42 59.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=86,slow=15,SNR=2.6						
SONM	**Songino Array**	**16.75**	**7**	Pn	**Pn**	**11 43 46.6**	**+2.2**
	comp=E,0.3nm,0.3s,baz=184,slow=13,SNR=6.2						
SONM				LR	LR	11 51 10.9	
	comp=E,44nm,20.4s,baz=240,slow=41						
KSRS	**Korea Array**	**20.99**	**66**	P	**P**	**11 44 32.4**	**-0.9**
	comp=E,2.5nm,0.7s,baz=261,slow=10,SNR=11						
MKAR	**Makanchi Array**	**22.64**	**320**	P	**P**	**11 44 51.8**	**+1.1**
	comp=E,0.7nm,0.7s,mb3.2,baz=130,slow=10,SNR=4.5						
NIL	**Nilore**	**25.71**	**284**	*e*P	**P**	**11 45 19.9**	**-0.3**
	comp=E,18nm,0.9s,mb4.6						
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**11 45 27.0**	**+0.3**
	comp=E,1.8nm,0.9s,mb3.6,baz=129,slow=8.5,SNR=5.3						
KURK	**Kurchatov**	**26.92**	**324**	P	**P**	**11 45 31.0**	**0.0**
	comp=E,1.1nm,0.7s,mb3.5,baz=129,slow=9.6,SNR=6.1						
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**11 50 08.2**	**-0.6**
	comp=E,0.3nm,0.5s,mb3.7,baz=337,slow=6.6,SNR=8.6						
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**11 52 07.4**	**-0.8**
	comp=E,0.3nm,0.7s,mb3.3,baz=331,slow=5.3,SNR=5.8						
YKA	**Yellowknife Ar**	**81.72**	**17**	P	**P**	**11 52 07.4**	**-0.8**

*ISCJB **24** 11:42:12.9±0.4, 32.60N±0.03×105.22E±0.04, h10km, mb3.8/11, Error ellipse: s-maj=5.4km s-min=4.7km az=154.3*

*IDC **24** 11:42:12.6±1.0, 32.51N×105.32E, h0km, mb3.8/10, mb1 3.9/13, mb1mx3.7/28, mbtmp3.8/13, ML3.8/3, Error ellipse: s-maj=31.0km s-min=20.4km az=48.0*

*BJI **24** 11:42:14.2, 32.58N×105.48E, h13km, mB4.6/5, mb4.1/8, ML4.2/13, Ms4.1/5, Ms7 3.5/4*

*NEIC **24** 11:42:17.8±0.7, 32.91N×105.01E, h10km, mb3.8/2, Error ellipse: s-maj=17.7km s-min=10.8km az=216.0*

ISC 24 11:42:14.8±0.4, 32.58N±0.03×105.22E±0.04, h10km, n21, σ1.16/28, mb3.8/11, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.08**	**217**	Pn	**Pn**	**11 42 50.4**	**+0.6**
CD2				Pg	**Pg**	**11 42 53.4**	**-1.3**
CD2				Sg	**Sg**	**11 43 22.5**	**+0.8**
CD2				smax			
	comp=N,3μm,0.7s						
LZH	**Lanzhou**	**3.68**	**342**	Pn	**Pn**	**11 43 14.1**	**+2.4**
LZH				Pg	**Pg**	**11 43 23.8**	**-1.5**
LZH				Sn	**Sn**	**11 43 56.5**	**+1.4**
LZH				Sg	**Sg**	**11 44 10.8**	**-2.1**
LZH				smax			
	comp=N,790nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,2μm,7.2s						
LZH				LR	LR		
	comp=Z,3μm,8.0s						
ENH	**Enshi**	**4.31**	**121**	*e*Pn	**Pb**	**11 43 28.6**	**-2.1**
ENH				*e*Sn	**Sb**	**11 44 23.6**	**+0.8**
GTA	**Gaotai**	**8.10**	**329**	⇑P	**Pn**	**11 44 13.3**	**+0.9**
GTA				pP		11 44 16.8	
GTA				sP		11 44 19.3	
GTA				S	**Sn**	**11 45 44.3**	**+0.3**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,43nm,5.7s						
GTA				LR	LR		
	comp=N,230nm,9.9s						
GTA				LR	LR		
	comp=E,280nm,9.0s						
GTA				LR	LR		
	comp=Z,160nm,11.4s						
BTO	**Baotou**	**8.89**	**24**	*e*P	Px	11 44 37.6	
BTO				S	Sx	11 46 34.1	
BTO				LR	LR		
	comp=N,180nm,12.0s						
BTO				LR	LR		
	comp=E,150nm,11.4s						
NJ2	**Nanjing**	**11.55**	**89**	*e*P	**Pn**	**11 45 01.9**	**+2.2**
NJ2				pP		11 45 09.8	
NJ2				PP		11 45 11.9	
NJ2				S	**Sn**	**11 47 09.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,80nm,6.0s						
NJ2				LR	LR		
	comp=N,440nm,10.7s						
NJ2				LR	LR		
	comp=E,190nm,11.0s						
NJ2				LR	LR		
	comp=Z,210nm,8.8s						
CMAR	**Chiang Mai Arr**	**15.16**	**203**	Pn	**Pn**	**11 45 46.0**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=16,slow=11,SNR=5.6						
SONM	**Songino Array**	**15.26**	**3**	Pn	**Pn**	**11 45 49.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=3.2						
SONM				Lg		11 50 22.0	
	comp=Z,0.1nm,0.3s,baz=193,slow=31,SNR=4.3						
KSRS	**Korea Array**	**19.20**	**69**	P	**Pn**	**11 46 37.0**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=255,slow=10,SNR=7.9						
HIA	**Hailar**	**19.90**	**29**	P	**Pn**	**11 46 47.8**	**-0.1**
	comp=Z,2.9nm,0.5s						
MKAR	**Makanchi Array**	**22.54**	**316**	P	**P**	**11 47 15.2**	**+0.4**
	comp=Z,1.6nm,0.8s,mb3.5,baz=112,slow=12,SNR=7.9						
ZALV	**Zalesovo Beam**	**25.84**	**332**	P	**P**	**11 47 45.9**	**-0.3**
	comp=Z,0.5nm,0.3s,mb3.5,baz=144,slow=9.6,SNR=3.8						
KURK	**Kurchatov**	**26.67**	**321**	P	**P**	**11 47 54.1**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.4,baz=129,slow=8.7,SNR=3.8						
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**11 49 28.7**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**56.31**	**335**	P	**P**	**11 51 55.4**	**+0.1**
	comp=Z,2.7nm,1.0s,mb4.2,baz=72,slow=8.6,SNR=3.3						
BRTR	**Keskin Array B**	**56.85**	**299**	P	**P**	**11 52 00.3**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=78,slow=9.0,SNR=2.5						
FINES	**FINESS Array B**	**56.88**	**326**	P	**P**	**11 51 59.6**	**+0.2**
	comp=Z,1.9nm,0.9s,mb4.1,baz=110,slow=5.1,SNR=5.3						
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**11 52 01.0**	**-0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=66,slow=7.2,SNR=2.9						
ASAR	**Alice Springs**	**62.28**	**150**	P	**P**	**11 52 36.0**	**-1.1**
	comp=Z,0.8nm,0.6s,mb4.0,baz=331,slow=6.9,SNR=5.9						
NOA	**NORSAR Array B**	**63.93**	**327**	P	**P**	**11 52 48.0**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=70,slow=6.5,SNR=2.9						
YKA	**Yellowknife Ar**	**80.00**	**18**	P	**P**	**11 54 23.8**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=329,slow=5.2,SNR=3.4						

*ISCJB **24** 12:02:16.7±1.9, 6.3N±0.1×124.1E±0.2, h559km±26km, mb3.8/16, Error ellipse: s-maj=33.9km s-min=11.2km az=151.5*

*NEIC **24** 12:02:18.7±1.4, 6.24N×123.92E, h570km±18km, mb4.8/2, Error ellipse: s-maj=27.5km s-min=9.2km az=63.0*

*IDC **24** 12:02:19.8±1.9, 6.27N×123.98E, h580km±24km, mb3.3/15, mb1 3.3/15, mb1mx3.2/25, mbtmp3.3/15, Error ellipse: s-maj=28.8km s-min=9.7km az=69.0*

ISC 24 12:02:18.1±1.8, 6.3N±0.1×124.0E±0.2, h558km±23km, n23, σ0.73/22, mb3.8/16, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**7.74**	**269**	*e*P	**P**	**12 04 12.9**	**-0.6**
KAPI	**Kappang**	**11.99**	**201**	*e*P	**P**	**12 04 56.5**	**-0.1**
KAKA	**Kakadu**	**20.65**	**156**	*e*P	**P**	**12 06 19.0**	**-0.7**
	19nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.28**	**176**	P	**P**	**12 06 51.5**	**-0.7**
	1.7nm,0.5s,mb4.0,baz=261,slow=6.7,SNR=24						
CMAR	**Chiang Mai Arr**	**27.25**	**299**	P	**P**	**12 07 19.6**	**+1.3**
	0.3nm,0.4s,mb3.2,baz=118,slow=7.0,SNR=6.9						
WRAB	**Tennant Creek**	**27.97**	**159**	*e*P	**P**	**12 07 24.5**	**0.0**
	6.7nm,0.4s,mb4.6						
ASAR	**Alice Springs**	**31.30**	**162**	P	**P**	**12 07 54.0**	**+0.7**
	4.7nm,0.5s,mb4.3,baz=341,slow=7.0,SNR=129						
ASAR				ScP	ScP	12 13 20.9	+0.1
	0.3nm,0.4s,baz=340,slow=3.4,SNR=7.3						
NWAO	**Narrogin (SRO)**	**39.52**	**189**	P	**P**	**12 09 01.8**	**+0.6**
	5.4nm,0.6s,mb4.2,baz=18,slow=13,SNR=5.1						
STKA	**Stephens Creek**	**41.49**	**157**	P	**P**	**12 09 17.9**	**+0.9**
	2.9nm,0.4s,mb4.2,baz=341,slow=6.3,SNR=16						
STKA	**Stephens Creek**	**41.49**	**157**	*e*P	**P**	**12 09 17.8**	**+0.8**
	0.6nm,0.5s,mb3.4						
SONM	**Songino Array**	**44.05**	**343**	P	**P**	**12 09 37.5**	**+0.8**
	0.9nm,0.7s,mb3.4,baz=153,slow=8.6,SNR=5.3						
SONM				PcP	PcP	12 11 09.4	-0.4
	0.7nm,0.9s,baz=127,slow=3.9,SNR=4.1						
MKAR	**Makanchi Array**	**53.92**	**326**	P	**P**	**12 10 50.4**	**+0.8**
	3.1nm,0.4s,mb4.0,baz=118,slow=8.1,SNR=57						
MKAR				PcP	PcP	12 11 45.4	-0.8
	0.8nm,0.6s,baz=140,slow=3.2,SNR=4.6						
MKAR	**Makanchi Array**	**53.92**	**326**	P	**P**	**12 10 50.4**	**+0.8**
MKAR				PcP	PcP	12 11 45.4	-0.8
PETK	**Petropavlovsk-**	**54.18**	**24**	P	**P**	**12 10 51.7**	**+0.4**
	1.3nm,0.7s,mb3.4,baz=193,slow=4.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**57.10**	**334**	P	**P**	**12 11 10.7**	**-0.8**
	0.9nm,0.5s,mb3.2,baz=116,slow=8.6,SNR=3.9						
KURK	**Kurchatov**	**58.14**	**328**	P	**P**	**12 11 18.9**	**+0.2**
	4.4nm,0.6s,mb3.9,baz=128,slow=6.2,SNR=11						
BVAR	**Borovoye Array**	**63.71**	**327**	P	**P**	**12 11 55.3**	**+0.2**
	1.0nm,0.6s,mb3.4,baz=132,slow=6.6,SNR=5.0						
AKTK	**Aktyubinsk**	**69.98**	**322**	P	**P**	**12 12 33.8**	**0.0**
AKTO	**Aktyubinsk**	**69.98**	**322**	P	**P**	**12 12 33.8**	**0.0**
	1.2nm,0.4s,mb3.8,baz=100,slow=8.7,SNR=8.3						
BRTR	**Keskin Array B**	**86.30**	**309**	P	**P**	**12 14 01.2**	**-0.3**
	0.4nm,0.5s,mb3.3,baz=93,slow=2.9,SNR=3.3						
ARCES	**ARCESS Array B**	**87.13**	**340**	P	**P**	**12 14 02.9**	**-1.8**
	6.1nm,1.0s,mb4.2,baz=62,slow=6.4,SNR=3.9						
FINES	**FINESS Array B**	**88.31**	**332**	P	**P**	**12 14 09.4**	**-0.9**
	2.3nm,1.0s,mb3.9,baz=146,slow=1.4,SNR=4.3						
TORD	**Torodi Ar. Bea**	**119.53**	**289**	PKP	PKPdf	12 20 03.2	-2.5
	0.6nm,0.9s,baz=73,slow=1.0,SNR=3.0						

JMA 24 12:35:06.5±0.9, 27.58N×143.07E, h21km, M4.3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.92**	**239**	P	Pb	12 35 23.8	0.0
CBIJ				S	Sb	12 35 35.7	0.0
JHHJ	**Haha-jima-NKT**	**1.24**	**220**	P	Pn	12 35 28.5	0.0
JHHJ				S	Sn	12 35 43.8	-0.8
JMY	**Miyakejima3**	**7.16**	**336**	*e*S	Sn	12 38 14.2	+3.6
JOD2	**Odawara 2**	**8.38**	**337**	P	Pn	12 37 00.9	-5.8
JHU	**Hanno**	**8.85**	**340**	P	Pn	12 37 07.2	-6.0
JYT	**Yasato**	**8.96**	**345**	P	Pn	12 37 11.1	-3.6
JYT				*e*S	Sn	12 38 45.6	-9.3
JRY	**Ryogami san**	**9.13**	**338**	P	Pn	12 37 11.0	-5.9
JHO	**Hitachi**	**9.25**	**347**	P	Pn	12 37 12.5	-6.1
JHO				*e*S	Sn	12 38 49.0	-13

*ISCJB **24** 13:08:07.5±1.1, 42.03S±0.06×72.15W±0.09, h12km±6km, mb4.3/14, Error ellipse: s-maj=12.4km s-min=7.5km az=140.9*

*IDC **24** 13:08:07.4±0.8, 42.06S×72.14W, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.2/16, mbtmp4.0/11, ML4.0/2, MS3.6/4, Ms1 3.6/4, ms1mx3.5/19, Error ellipse: s-maj=32.6km s-min=18.1km az=92.0*

*GUC **24** 13:08:08.7±0.5, 41.97S×72.23W, h14km±9km, ML5.2*

*NEIC **24** 13:08:08.7±0.4, 42.05S×72.33W, h10km, mb4.6/7, Error ellipse: s-maj=12.9km s-min=9.7km az=98.0*

NEIC Felt [III] at Puerto Montt and [II] at Puerto Varas.

ISC 24 13:08:08.6±1.1, 42.06S±0.05×72.3W±0.1, h9km±6km, n38, σ0.91/38, mb4.3/14, 3C-2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.18**	**328**	⇑*i*P	**Pg**	**13 08 12.5**	**+0.1**
HOCH				*i* S	**Sg**	**13 08 15.3**	**+0.4**
HOCH				AML	AML	13 08 23.4	
	comp=E,467μm,0.5s						
PMCH	**Puerto Montt**	**0.74**	**321**	⇑*i*P	**Pg**	**13 08 22.1**	**-0.6**
PMCH				*i* S	**Sg**	**13 08 31.8**	**-0.5**
OSCH	**Osorno**	**1.62**	**336**	*e*P	**Pn**	**13 08 36.7**	**-0.6**
OSCH				*i* S	**Sn**	**13 08 57.7**	**-0.5**
VLCH	**Valdivia**	**2.37**	**342**	⇑*i*P	**Pn**	**13 08 48.8**	**+1.1**
VLCH				*i* S	**Sn**	**13 09 19.9**	**+3.1**
VLCH				AML	AML	13 09 27.7	
	comp=N,22μm,0.6s						
TMU	**Temuco**	**3.33**	**356**	*e*P	**Pn**	**13 09 05.3**	**+4.4**
TMU				*i* S	**Sn**	**13 09 48.0**	**+7.4**
TRQA	**Tornquist**	**8.85**	**67**	*e*Pn	**Pn**	**13 10 18.4**	**+1.8**
	comp=N,18nm,0.4s						
TRQA				*e*Sn	**Sn**	**13 12 06.5**	**+10**
CFAA	**Coronel Fontan**	**10.93**	**18**	Pn	**Pn**	**13 10 45.2**	**+0.1**
	comp=N,0.2nm,0.3s,baz=203,slow=12,SNR=14						
CFAA				Sn	**Sn**	**13 12 46.9**	**-0.6**
	comp=N,0.1nm,0.3s,baz=209,slow=13,SNR=1.5						
CFAA				Lg		13 13 59.2	
	comp=N,0.0nm,0.3s,baz=278,slow=6.4,SNR=2.7						
CFAA				LR	LR	13 14 51.0	
	comp=N,65nm,20.9s,baz=203,slow=37						
CFAA	**Coronel Fontan**	**10.93**	**18**	Pn	**Pn**	**13 10 45.2**	**+0.1**
CFAA				Sn	**Sn**	**13 12 46.9**	**-0.6**
CFAA				Lg		13 13 59.2	
CFAA				LR	LR	13 14 51.0	
USHA	**Ushuaia**	**13.03**	**170**	LR	LR	13 16 18.0	
	comp=N,590nm,19.0s,baz=332,slow=38						
CPUP	**Villa Florida**	**19.93**	**43**	P	**Pn**	**13 12 39.9**	**-2.5**
	comp=N,0.4nm,0.3s,baz=204,slow=10,SNR=4.2						
CPUP				Lg		13 18 44.9	
	comp=N,0.3nm,0.3s,baz=272,slow=14,SNR=4.2						
CPUP				LR	LR	13 21 38.3	
	comp=N,178nm,21.6s,baz=96,slow=41						
CPUP	**Villa Florida**	**19.93**	**43**	*e*P	**Pn**	**13 12 37.1**	**-5.2**
	comp=N,25nm,0.8s						
PMSA	**Palmer Station**	**23.23**	**171**	LR	LR	13 20 58.2	
	comp=N,252nm,18.2s,baz=358,slow=33						
LPAZ	**La Paz**	**25.93**	**9**	P	**P**	**13 13 43.2**	**+2.0**
	comp=N,12nm,0.9s,mb4.4,baz=168,slow=7.8,SNR=33						
LPAZ	**La Paz**	**25.93**	**9**	*e*P	**P**	**13 13 42.3**	**+1.1**
	comp=N,18nm,1.0s,mb4.6						
SIV	**San Ignacio**	**27.71**	**24**	P	**P**	**13 13 56.1**	**-1.2**
	comp=N,3.9nm,0.9s,mb4.0,baz=201,slow=9.5,SNR=14						
QSPA	**South Pole Qui**	**48.19**	**180**	P	**P**	**13 16 49.0**	**+0.4**
	comp=N,2.1nm,0.7s,mb4.3,baz=152,slow=2.1,SNR=5.9						
QSPA	**South Pole Qui**	**48.19**	**180**	P	**P**	**13 16 49.0**	**+0.4**
RCBR	**Riachuelo**	**48.41**	**52**	P	**P**	**13 16 50.1**	**-1.0**
	comp=N,32nm,1.5s,mb5.1						
SDV	**Santo Domingo**	**50.72**	**2**	*e*P	**P**	**13 17 08.7**	**+0.1**
	comp=N,6.0nm,0.9s,mb4.5						
SYO	**Syowa Base**	**58.49**	**157**	‖*e*P	**P**	**13 18 01.0**	**-3.5**
SYO	**Syowa Base**	**58.49**	**157**	‖*e*P	**P**	**13 18 09.4**	**+4.9**
MAW	**Mawson**	**65.53**	**163**	P	**P**	**13 18 51.7**	**-0.1**
	comp=N,0.9nm,0.5s,mb4.0,baz=301,slow=12,SNR=1.9						
LRAL	**Lakeview Retre**	**75.95**	**347**	*e*P	**P**	**13 19 55.1**	**-0.3**
	comp=N,2.0nm,0.5s,mb4.3						
JCT	**Junction City**	**76.51**	**336**	*e*P	**P**	**13 19 58.7**	**-0.1**
	comp=N,4.7nm,0.8s,mb4.5						
BOSA	**Boshof**	**76.58**	**116**	P	**P**	**13 19 59.5**	**0.0**
	comp=N,1.8nm,0.8s,mb4.1,baz=210,slow=8.1,SNR=3.2						
BOSA	**Boshof**	**76.58**	**116**	P	**P**	**13 19 59.5**	**0.0**
TXAR	**Lajitas Array**	**76.72**	**332**	P	**P**	**13 20 00.2**	**+0.2**
	comp=N,0.9nm,0.6s,mb3.9,baz=154,slow=8.1,SNR=12						
CCM	**Cathedral Cave**	**81.59**	**345**	*e*P	**P**	**13 20 25.6**	**-0.8**
	comp=N,4.1nm,0.6s,mb4.5						
TORD	**Torodi Ar. Bea**	**87.17**	**70**	P	**P**	**13 20 54.6**	**-0.6**
	comp=N,0.6nm,0.7s,mb4.0,baz=212,slow=8.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**87.17**	**70**	P	**P**	**13 20 54.6**	**-0.6**
NVAR	**Mina Array Bea**	**90.41**	**326**	P	**P**	**13 21 11.2**	**+1.2**
	comp=N,0.6nm,0.8s,mb4.0,baz=163,slow=6.6,SNR=2.2						
PDAR	**Pinedale Array**	**90.87**	**334**	P	**P**	**13 21 12.2**	**+0.1**
	comp=N,1.3nm,0.9s,mb4.2,baz=180,slow=4.0,SNR=3.6						
BRTR	**Keskin Array B**	**125.62**	**66**	PKP	PKPdf	13 27 11.1	+1.1
	comp=N,0.2nm,0.3s,baz=113,slow=3.7,SNR=2.2						
PETK	**Petropavlovsk-**	**145.21**	**306**	PKPbc	PKPbc	13 27 45.1	-0.3
	comp=N,2.4nm,0.8s,baz=81,slow=9.2,SNR=4.5						
ARU	**Arti**	**145.64**	**48**	*e*PKPdf	PKPdf	13 27 45.7	-0.7
ABKAR	**Akbulak array**	**146.31**	**61**	*e*PKPdf	PKPdf	13 27 47.8	0.0
CMAR	**Chiang Mai Arr**	**155.31**	**160**	PKP	PKPdf	13 28 03.9	+1.3
	comp=N,0.3nm,0.4s,baz=127,slow=2.4,SNR=4.0						
MKAR	**Makanchi Array**	**161.27**	**67**	PKPab	PKPab	13 28 52.0	-0.8
	comp=N,0.9nm,0.8s,baz=263,slow=6.0,SNR=5.2						

*ISCJB **24** 13:08:19.3±0.5, 51.51N±0.03×6.76E±0.05, h0km, Error ellipse: s-maj=4.8km s-min=3.2km az=43.8*

*BUG **24** 13:08:19.0, 51.55N×6.73E, h1km, ML2.1*

*CSEM **24** 13:08:19.8±0.3, 51.57N×6.81E, h1km, ML2.7/7, Error ellipse: s-maj=5.6km s-min=4.9km az=142.0*

*LDG **24** 13:08:20.7±0.0, 51.59N×6.86E, h1km, Ml2.7/7, Error ellipse: s-maj=2.1km s-min=1.0km az=107.0, Suspected Mining induced.*

*NEIC **24** 13:08:20.7, 51.59N×6.86E, h1km, ML2.7(LDG), After LDG.*

*BNS **24** 13:08:20.7±0.8, 51.60N×6.86E, h1km, ML2.1*

*BGR **24** 13:08:21.0±0.6, 51.58N×6.92E, h1km, ML2.3/2, Error ellipse: s-maj=8.9km s-min=4.4km az=132.0*

ISC 24 13:08:19.9±0.5, 51.56N±0.03×6.79E±0.04, h0km, n53, σ1.16/79, 1C, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZER	**Hlnxe**	**0.08**	**39**	Pg	**Pg**	**13 08 21.5**	**+0.1**
BZER				Sg	**Sg**	**13 08 22.8**	**+0.4**
BZER	**Hlnxe**	**0.08**	**39**	Pg	**Pg**	**13 08 21.5**	**+0.1**
BZER				Sg	**Sg**	**13 08 22.8**	**+0.4**
LAUG	**Laupendahl**	**0.23**	**155**	*e*Pg	**Pg**	**13 08 25.2**	**+0.9**
LAUG	**Laupendahl**	**0.23**	**155**	Pg	**Pg**	**13 08 25.2**	**+0.9**
BUG	**Bochum--Univer**	**0.32**	**112**	⇑*e*Pg	**Pg**	**13 08 26.6**	**+0.5**
BUG				Sg	**Sg**	**13 08 32.2**	**+2.0**
HOBG	**Hohbusch**	**0.67**	**149**	*e*Pg	**Pg**	**13 08 33.6**	**+0.9**
HOBG	**Hohbusch**	**0.67**	**149**	Pg	**Pg**	**13 08 33.6**	**+0.9**
IBBN	**Ibbenburen**	**0.96**	**38**	*e*Sn	**Sn**	**13 08 53.4**	**-1.5**
IBBN	**Ibbenburen**	**0.96**	**38**	Sn	**Sn**	**13 08 53.4**	**-1.5**
KLL	**Kalltalsperre**	**0.96**	**198**	*e*Pg	**Pg**	**13 08 39.4**	**+1.1**
KLL	**Kalltalsperre**	**0.96**	**198**	Pg	**Pg**	**13 08 39.4**	**+1.1**
STB	**Steinbach**	**0.97**	**178**	*e*Pg	**Pg**	**13 08 39.7**	**+1.3**
STB				*e*Sg	**Sg**	**13 08 53.9**	**+2.9**
	41nm,0.4s						
STB	**Steinbach**	**0.97**	**178**	Pg	**Pg**	**13 08 39.7**	**+1.3**
STB				Sg	**Sg**	**13 08 53.9**	**+3.0**
	41nm,0.4s						
MEM	**Membach**	**1.07**	**208**	P	**Pg**	**13 08 41.0**	**+0.6**
MEM	**Membach**	**1.07**	**208**	P	**Pg**	**13 08 41.0**	**+0.6**
HILG	**Hillesheim**	**1.27**	**183**	*e*Pg	**Pg**	**13 08 45.1**	**+0.9**
HILG	**Hillesheim**	**1.27**	**183**	Pg	**Pg**	**13 08 45.1**	**+0.9**
KOE	**Koeppel**	**1.28**	**152**	*e*Pg	**Pg**	**13 08 44.5**	**0.0**
KOE	**Koeppel**	**1.28**	**152**	Pg	**Pg**	**13 08 44.5**	**0.0**
BGG	**Burgeitz**	**1.40**	**165**	*e*Pg	**Pg**	**13 08 46.3**	**-0.4**
BGG	**Burgeitz**	**1.40**	**165**	Pg	**Pg**	**13 08 46.3**	**-0.4**
BCLA	**Clavier**	**1.48**	**220**	P	**Pn**	**13 08 47.9**	**+0.2**
BCLA	**Clavier**	**1.48**	**220**	P	**Pn**	**13 08 47.9**	**+0.2**
TNS	**Taunus Mts**	**1.70**	**141**	*e*Pg	**Pg**	**13 08 51.4**	**-1.1**
	SNR=3.2						
TNS				*e*Sg	**Sg**	**13 09 13.8**	**-0.7**
	SNR=2.6						
TNS	**Taunus Mts**	**1.70**	**141**	Pg	**Pg**	**13 08 51.4**	**-1.1**
	SNR=3.2						
TNS				Sg	**Sg**	**13 09 13.8**	**-0.7**
	SNR=2.6						
SNF	**Seneffe**	**1.90**	**237**	P	**Pn**	**13 08 55.9**	**+2.4**
SNF	**Seneffe**	**1.90**	**237**	P	**Pn**	**13 08 55.9**	**+2.4**
GIVF	**Givet**	**1.92**	**221**	*e*P	**Pn**	**13 08 55.7**	**+1.9**
GIVF				*e*Sg	**Sg**	**13 09 22.4**	**+0.9**
	25nm,0.4s						
GIVF	**Givet**	**1.92**	**221**	*e*P	**Pn**	**13 08 55.7**	**+1.9**
GIVF				*e*Sg	**Sg**	**13 09 22.4**	**+0.9**
	13nm,0.4s						
WLF	**Walferdange**	**1.94**	**192**	P	**Pn**	**13 08 57.2**	**+3.1**
WLF	**Walferdange**	**1.94**	**192**	P	**Pn**	**13 08 57.1**	**+3.0**
GTTG	**Gvttingen**	**1.98**	**89**	*e*Sg	**Sg**	**13 09 21.8**	**-1.7**
	S

ISC 24 13:21:31.2±1.8,0'.34S±0'.06×18'.66W±0'.06,h16km±10km, h19km±.5km:pP-P,n294,σ0'.86/293,mb4.8/114,MS4.8/25, 83C-12D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**15.05**	**8**	Pn	**Pn**		**13 25 00.3**	**-3.1**
	12nm,0.3s,baz=268,slow=1.3,SNR=24							
BBTS				Sn	**Sn**		**13 27 31.1**	**-19**
	5.3nm,0.3s,baz=293,slow=18,SNR=12							
BBTS				LR	LR		13 30 06.0	
	comp=Z,716nm,18.4s,baz=200,slow=34							
LIC	**Lamto**	**15.08**	**64**	*e*Pn	**Pn**		**13 25 02.7**	**-1.1**
	baz=253							
LIC				*e*Sn	**Sn**		**13 27 38.2**	**-13**
	116nm,0.7s							
LIC				*e*MLR	MLR			
	comp=Z,2μm,18.8s							
LIC	**Lamto**	**15.08**	**64**	*e*P	**Pn**		**13 25 02.6**	**-1.2**
	comp=Z,489nm,1.3s							
TIC	**Toumodi**	**15.27**	**63**	*e*P	**Pn**		**13 25 04.8**	**-1.5**
	comp=Z,144nm,0.2s							
KIC	**Kosan Boka**	**15.40**	**64**	*e*P	**Pn**		**13 25 06.9**	**-1.1**
	comp=Z,110nm,0.5s							
DBIC	**Dimbokro**	**15.43**	**63**	Pn	**Pn**		**13 25 06.8**	**-1.6**
	comp=Z,21nm,0.3s,baz=232,slow=14,SNR=150							
DBIC				Sn	**Sn**		**13 27 46.0**	**-13**
	comp=Z,5.3nm,0.3s,baz=310,slow=14,SNR=5.0							
DBIC				LR	LR		13 29 54.1	
	comp=Z,1μm,19.3s,baz=223,slow=33							
DBIC	**Dimbokro**	**15.43**	**63**	Pn	**Pn**		**13 25 06.8**	**-1.6**
DBIC				Sn	**Sn**		**13 27 46.0**	**-13**
DBIC				LR	LR		13 29 54.1	
RCBR	**Riachuelo**	**18.06**	**252**	*e*P	**Pn**		**13 25 36.7**	**-5.0**
	comp=Z,4.4nm,0.7s							
TOA0	**Torodi Ar. Sit**	**24.22**	**56**	⇑*i*P	**P**		**13 26 46.5**	**-0.9**
TOA0				*e*S	**S**		**13 31 04.1**	**-1.5**
TORD	**Torodi Ar. Bea**	**24.22**	**56**	P	**P**		**13 26 46.5**	**-1.0**
	comp=Z,22nm,0.8s,mb4.7,baz=233,slow=9.8,SNR=84							
TORD				S	**S**		**13 31 08.9**	**+3.3**
	comp=Z,9.2nm,0.9s,baz=239,slow=23,SNR=9.6							
TORD				LR	LR		13 36 00.1	
	comp=Z,519nm,20.2s,MS4.0,baz=235,slow=36							
TORD	**Torodi Ar. Bea**	**24.22**	**56**	P	**P**		**13 26 46.5**	**-1.0**
TORD				S	**S**		**13 31 08.9**	**+3.3**
TORD				LR	LR		13 36 00.1	
TAM	**Tamanrasset**	**32.90**	**44**	⇑*i*P	**P**		**13 28 05.7**	**+0.8**
TAM				pmax	pmax			
	comp=Z,17nm,1.3s,mb4.8							
TAM	**Tamanrasset**	**32.90**	**44**	⇑*i*P	**P**		**13 28 05.7**	**+0.8**
	comp=Z,17nm,1.3s,mb4.8							
PBDV	**Barranco-do-Ve**	**38.69**	**14**	*e*P	**P**		**13 28 55.4**	**+1.1**
	comp=Z,30nm,1.3s,mb4.9							
ESPR	**Espera**	**38.88**	**16**	P	**P**		**13 28 56.0**	**0.0**
	comp=Z,43nm,1.2s,mb5.0							
PVAQ	**Vaqueiros**	**38.89**	**14**	*e*P	**P**		**13 28 57.0**	**+0.9**
	comp=Z,55nm,1.4s,mb5.1							
PCVE	**Castro Verde**	**39.03**	**13**	*e*P	**P**		**13 28 59.7**	**+2.5**
	comp=Z,23nm,2.0s,mb4.6							
PBEJ	**Beja**	**39.45**	**13**	*e*P	**P**		**13 29 02.0**	**+1.3**
	comp=Z,25nm,1.3s,mb4.8							
ERON	**Agron**	**39.63**	**19**	P	**P**		**13 29 02.9**	**+0.7**
	comp=Z,6.1nm,0.6s,mb4.5							
ELOJ	**Sierra Loja**	**39.64**	**18**	P	**P**		**13 29 02.6**	**+0.3**
ELOJ				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.5							
ELOJ	**Sierra Loja**	**39.64**	**18**	P	**P**		**13 29 02.6**	**+0.3**
	comp=Z,7.1nm,0.7s,mb4.5							
PBAR	**Barrancos**	**39.79**	**14**	*e*P	**P**		**13 29 03.6**	**0.0**
	comp=Z,20nm,1.6s,mb4.6							
EVO	**Evora**	**39.90**	**13**	*e*P	**P**		**13 29 04.4**	**-0.1**
	comp=Z,80nm,1.4s,mb5.0							
EVO				*e*MLR	MLR			
	comp=Z,924nm,19.8s,MS4.3							
EVO	**Evora**	**39.90**	**13**	*e*P	**P**		**13 29 05.5**	**+1.0**
	comp=Z,57nm,1.5s,mb5.1							
ECOG	**Cogollos-Vega**	**39.95**	**19**	P	**P**		**13 29 05.3**	**+0.4**
ECOG				pmax	pmax			
	comp=Z,13nm,0.5s,mb4.9							
ECOG	**Cogollos-Vega**	**39.95**	**19**	P	**P**		**13 29 05.3**	**+0.4**
	comp=Z,13nm,0.5s,mb4.9							
EADA	**Adamuz**	**40.45**	**17**	P	**P**		**13 29 08.1**	**-1.0**
	comp=Z,32nm,1.3s,mb4.9							
EBAN	**Banos Encina**	**40.69**	**18**	P	**P**		**13 29 10.4**	**-0.6**
EBAN				pmax	pmax			
	comp=Z,9.0nm,0.6s,mb4.6							
EBAN	**Banos Encina**	**40.69**	**18**	P	**P**		**13 29 10.4**	**-0.6**
	comp=Z,9.0nm,0.6s,mb4.6							
EHUE	**Huescar**	**40.76**	**20**	P	**P**		**13 29 11.1**	**-0.5**
EHUE				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.2							
EHUE	**Huescar**	**40.76**	**20**	P	**P**		**13 29 11.1**	**-0.4**
	comp=Z,4.6nm,0.8s,mb4.2							
EMUR	**La Murta**	**41.25**	**21**	P	**P**		**13 29 15.5**	**-0.2**
	comp=Z,72nm,1.7s,mb5.0							
MTE	**Manteigas**	**41.79**	**13**	*e*P	**P**		**13 29 21.0**	**+1.0**
	comp=Z,37nm,1.3s,mb4.9							
PAB	**San Pablo**	**41.80**	**17**	*e*P	**P**		**13 29 20.0**	**-0.1**
PAB				pmax	pmax			
	comp=Z,26nm,1.1s,mb4.8							
PAB	**San Pablo**	**41.80**	**17**	*e*P	**P**		**13 29 20.0**	**-0.1**
	comp=Z,26nm,1.1s,mb4.8							
ETOB	**Tobarra**	**41.86**	**20**	P	**P**		**13 29 20.4**	**-0.2**
	comp=Z,39nm,1.4s,mb4.8							
ESDC	**Sonseca Array**	**42.03**	**17**	P	**P**		**13 29 22.5**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.1,baz=206,slow=8.3,SNR=25							
ESDC				PP	PP		13 30 57.1	-2.3
	comp=Z,6.2nm,1.1s,baz=206,slow=9.6,SNR=6.5							
ESDC	**Sonseca Array**	**42.03**	**17**	P	**P**		**13 29 21.9**	**-0.1**
	comp=Z,16nm,1.3s,mb4.5							
ESLA	**Sonseca Array**	**42.03**	**17**	⇑*e*P	**P**		**13 29 22.6**	**+0.6**
MVO	**Moncorvo**	**42.63**	**13**	*e*P	**P**		**13 29 27.8**	**+0.9**
	comp=Z,28nm,1.6s,mb4.7							
GUD	**Guadarrama**	**42.87**	**16**	P	**P**		**13 29 29.7**	**+0.9**
GUD				pmax	pmax			
	comp=Z,23nm,0.8s,mb5.0							
GUD	**Guadarrama**	**42.87**	**16**	P	**P**		**13 29 29.7**	**+0.8**
	comp=Z,23nm,0.8s,mb5.0							
ECHE	**Chera**	**42.91**	**20**	P	**P**		**13 29 28.9**	**-0.2**
ECHE				pmax	pmax			
	comp=Z,43nm,1.3s,mb5.0							
ECHE	**Chera**	**42.91**	**20**	P	**P**		**13 29 28.9**	**-0.2**
	comp=Z,43nm,1.3s,mb5.0							
PBRG	**Braganca**	**43.31**	**13**	*e*P	**P**		**13 29 34.2**	**+1.8**
	comp=Z,26nm,2.0s,mb4.6							
ETOR	**Torete**	**43.66**	**18**	P	**P**		**13 29 30.8**	**-4.4**
ETOR				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.1							
ETOR	**Torete**	**43.66**	**18**	P	**P**		**13 29 30.8**	**-4.4**
	comp=Z,4.0nm,1.0s,mb4.1							
EMOS	**Mosqueruela**	**43.77**	**20**	P	**P**		**13 29 36.1**	**+0.1**
	comp=Z,71nm,2.0s,mb5.0							
KEST	**Kesra**	**44.36**	**33**	P	**P**		**13 29 41.8**	**+0.8**
	comp=Z,2.4nm,0.9s,mb3.9,baz=218,slow=7.0,SNR=5.7							
KEST				PP	PP		13 31 20.8	-3.8
	comp=Z,3.3nm,0.9s,baz=214,slow=7.3,SNR=3.9							
KEST				LR	LR		13 49 30.1	
	comp=Z,467nm,19.3s,MS4.4,baz=16,slow=38							
ERTA	**Horta de San J**	**44.57**	**21**	P	**P**		**13 29 41.5**	**-1.0**
	comp=Z,59nm,1.2s,mb5.3							
SIV	**San Ignacio**	**44.63**	**247**	P	**P**		**13 29 42.9**	**-0.5**
	comp=Z,3.5nm,1.1s,mb4.1,baz=116,slow=9.5,SNR=8.7							
ESAC	**San Caprasio**	**44.98**	**19**	P	**P**		**13 29 43.7**	**-2.1**
	comp=Z,94nm,1.4s,mb5.4							
EARI	**Arriondas**	**45.09**	**14**	P	**P**		**13 29 46.9**	**+0.4**
	comp=Z,104nm,1.5s,mb5.4							
EPOB	**Poblet**	**45.19**	**21**	P	**P**		**13 29 46.0**	**-1.5**
	comp=Z,66nm,1.5s,mb5.2							
CPUP	**Villa Florida**	**45.31**	**232**	P	**P**		**13 29 48.4**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=50,slow=7.9,SNR=2.9							
CPUP				LR	LR		13 47 07.5	
	comp=Z,361nm,19.8s,MS4.3,baz=78,slow=34							
CPUP	**Villa Florida**	**45.31**	**232**	P	**P**		**13 29 48.4**	**-0.3**
CPUP				LR	LR		13 47 07.5	
ELAN	**Lanestosa**	**45.47**	**16**	P	**P**		**13 29 48.3**	**-1.4**
	comp=Z,46nm,1.4s,mb5.1							
SJPF	**Ste Jean**	**46.00**	**18**	⇑*i*P	**P**		**13 29 54.7**	**+0.9**
	comp=Z,24nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**46.00**	**18**	⇑*i*P	**P**		**13 29 54.7**	**+0.9**
SJPF				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**46.00**	**18**	⇑*i*P	**P**		**13 29 54.7**	**+0.9**
	comp=Z,12nm,0.8s,mb4.9							
ETSF	**Etsaut**	**46.01**	**18**	⇑*i*P	**P**		**13 29 54.8**	**+0.9**
	comp=Z,38nm,1.0s,mb5.0							
ETSF	**Etsaut**	**46.01**	**18**	⇑*i*P	**P**		**13 29 54.8**	**+0.9**
ETSF				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
ETSF	**Etsaut**	**46.01**	**18**	⇑*i*P	**P**		**13 29 54.8**	**+0.9**
	comp=Z,19nm,1.0s,mb5.0							
EBIE	**Bielsa**	**46.05**	**19**	P	**P**		**13 29 54.4**	**+0.2**
	comp=Z,15nm,1.0s,mb4.9							
EPF	**Esparros**	**46.42**	**19**	⇑*i*P	**P**		**13 29 58.1**	**+1.0**
	comp=Z,37nm,1.1s,mb4.9							
EPF	**Esparros**	**46.42**	**19**	⇑*i*P	**P**		**13 29 58.1**	**+1.0**
EPF				pmax	pmax			
	comp=Z,19nm,1.1s,mb4.9							
EPF	**Esparros**	**46.42**	**19**	⇑*i*P	**P**		**13 29 58.1**	**+1.0**
	comp=Z,19nm,1.1s,mb4.9							
PCRV	**Puerto La Cruz**	**46.91**	**284**	LR	LR		13 47 10.8	
	comp=Z,471nm,21.4s,MS4.4,baz=107,slow=33							
MTLF	**Montolieu**	**47.34**	**21**	⇑*i*P	**P**		**13 30 04.2**	**-0.1**
	comp=Z,43nm,1.3s,mb4.9							
MTLF	**Montolieu**	**47.34**	**21**	⇑*i*P	**P**		**13 30 04.2**	**-0.1**
MTLF				pmax	pmax			
	comp=Z,22nm,1.3s,mb4.9							
MTLF	**Montolieu**	**47.34**	**21**	⇑*i*P	**P**		**13 30 04.2**	**-0.1**
	comp=Z,22nm,1.3s,mb4.9							
LFF	**La Frestale**	**48.26**	**18**	⇑*i*P	**P**		**13 30 12.1**	**+0.7**
	comp=Z,76nm,1.2s,mb5.3							
LFF	**La Frestale**	**48.26**	**18**	⇑*i*P	**P**		**13 30 12.1**	**+0.7**
LFF				pmax	pmax			
	comp=Z,38nm,1.2s,mb5.3							
LFF	**La Frestale**	**48.26**	**18**	⇑*i*P	**P**		**13 30 12.1**	**+0.7**
	comp=Z,38nm,1.2s,mb5.3							
LASF	**Ste Croix**	**48.56**	**22**	⇑*i*P	**P**		**13 30 14.1**	**+0.3**
	comp=Z,113nm,1.6s,mb5.3							
LSZ	**Lusaka**	**48.58**	**110**	P	**P**		**13 30 15.6**	**+1.3**
	comp=Z,6.4nm,1.1s,mb4.6,baz=271,slow=9.8,SNR=6.2							
LSZ	**Lusaka**	**48.58**	**110**	P	**P**		**13 30 15.6**	**+1.2**
LSZ				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.5							
CAF	**Calviac**	**48.67**	**20**	*e*P	**P**		**13 30 14.8**	**+0.2**
	comp=Z,33nm,1.3s,mb4.9							
CAF	**Calviac**	**48.67**	**20**	*e*P	**P**		**13 30 14.8**	**+0.2**
CAF				pmax	pmax			
	comp=Z,16nm,1.3s,mb4.9							
CAF	**Calviac**	**48.67**	**20**	*e*P	**P**		**13 30 14.8**	**+0.2**
	comp=Z,16nm,1.3s,mb4.9							
RJF	**Les Rejaudoux**	**48.83**	**19**	*e*P	**P**		**13 30 15.9**	**+0.1**
	comp=Z,69nm,1.4s,mb5.2							
RJF				*e*MLR	MLR			
	comp=Z,411nm,23.0s,MS4.0							
RJF	**Les Rejaudoux**	**48.83**	**19**	*e*P	**P**		**13 30 15.9**	**+0.1**
RJF				pmax	pmax			
	comp=Z,35nm,1.4s,mb5.2							
RJF				MLR	MLR			
	comp=Z,410nm,23.0s,MS4.3							
RJF	**Les Rejaudoux**	**48.83**	**19**	*e*P	**P**		**13 30 15.9**	**+0.1**
	comp=Z,34nm,1.4s,mb5.2							
RJF				LR	LR			
	comp=Z,410nm,23.0s,MS4.3							
SUR	**Sutherland**	**48.98**	**135**	*e*P	**P**		**13 30 19.3**	**+2.1**
	comp=Z,16nm,1.0s,mb5.0							
LBTB	**Lobatse**	**49.28**	**123**	P	**P**		**13 30 20.1**	**+0.4**
	comp=Z,4.4nm,0.9s,mb4.5,baz=333,slow=6.8,SNR=3.9							
LBTB	**Lobatse**	**49.28**	**123**	P	**P**		**13 30 20.1**	**+0.4**
LBTB				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5							
LBTB	**Lobatse**	**49.28**	**123**	*e*P	**P**		**13 30 22.2**	**+2.5**
	comp=Z,28nm,1.0s,mb5.2							
PGF	**Pioggiola**	**49.41**	**27**	⇑*i*P	**P**		**13 30 20.7**	**+0.4**
	comp=Z,76nm,1.6s,mb5.2							
PGF	**Pioggiola**	**49.41**	**27**	⇑*i*P	**P**		**13 30 20.7**	**+0.4**
PGF				pmax	pmax			
	comp=Z,38nm,1.6s,mb5.2							
PGF	**Pioggiola**	**49.41**	**27**	⇑*i*P	**P**		**13 30 20.7**	**+0.4**
	comp=Z,38nm,1.6s,mb5.2							
MFF	**Saint Martin d**	**49.49**	**17**	⇑*i*P	**P**		**13 30 21.1**	**+0.3**
	comp=Z,38nm,1.1s,mb5.0							
MFF	**Saint Martin d**	**49.49**	**17**	⇑*i*P	**P**		**13 30 21.1**	**+0.3**
MFF				pmax	pmax			
	comp=Z,19nm,1.1s,mb5.0							
MFF	**Saint Martin d**	**49.49**	**17**	⇑*i*P	**P**		**13 30 21.1**	**+0.3**
	comp=Z,19nm,1.1s,mb5.0							
VIVF	**Saint-Julien-l**	**49.53**	**22**	⇑*i*P	**P**		**13 30 21.7**	**+0.5**
	comp=Z,38nm,1.3s,mb5.0							
VIVF	**Saint-Julien-l**	**49.53**	**22**	⇑*i*P	**P**		**13 30 21.7**	**+0.5**
VIVF				pmax	pmax			
	comp=Z,19nm,1.3s,mb5.0							
VIVF	**Saint-Julien-l**	**49.53**	**22**	⇑*i*P	**P**		**13 30 21.7**	**+0.5**
	comp=Z,19nm,1.3s,mb5.0							
TCF	**Toulx Ste Croi**	**49.93**	**19**	⇑*i*P	**P**		**13 30 24.7**	**+0.5**
	comp=Z,18nm,1.2s,mb4.7							
TCF	**Toulx Ste Croi**	**49.93**	**19**	⇑*i*P	**P**		**13 30 24.7**	**+0.5**
TCF				pmax	pmax			
	comp=Z,9.0nm,1.2s,mb4.7							
TCF	**Toulx Ste Croi**	**49.93**	**19**	⇑*i*P	**P**		**13 30 24.7**	**+0.5**
	comp=Z,9.1nm,1.2s,mb4.7							
ORIF	**Oris-en-Rattie**	**50.04**	**23**	⇑*i*P	**P**		**13 30 26.3**	**+1.2**
ORIF				*e*MLR	MLR			
	comp=Z,286nm,18.5s,MS4.0							
MBDF	**Montbardon**	**50.23**	**23**	*e*P	**P**		**13 30 27.9**	**+1.4**
BGF	**Bois d'Agland**	**50.37**	**19**	*e*P	**P**		**13 30 28.3**	**+0.7**
	comp=Z,25nm,1.1s,mb4.9							
BGF	**Bois d'Agland**	**50.37**	**19**	*e*P	**P**		**13 30 28.3**	**+0.7**
BGF				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.9							
BGF	**Bois d'Agland**	**50.37**	**19**	*e*P	**P**		**13 30 28.3**	**+0.7**
	comp=Z,13nm,1.1s,mb4.9							
BNI	**Bardonecchia**	**50.47**	**23**	*e*P	**P**		**13 30 29.9**	**+1.6**
BNI				pmax	pmax			
	comp=Z,26nm,1.3s,mb5.1							
BNI	**Bardonecchia**	**50.47**	**23**	*e*P	**P**		**13 30 29.9**	**+1.6**
	comp=Z,26nm,1.3s,mb5.1							
BOSA	**Boshof**	**50.49**	**128**	P	**P**		**13 30 29.1**	**+0.3**
	comp=Z,3.3nm,0.6s,mb4.6,baz=330,slow=7.0,SNR=4.2							
BOSA				PP	PP		13 32 31.9	+7.2
	comp=Z,10nm,1.2s,baz=269,slow=16,SNR=3.3							
AVF	**Avril sur Loir**	**50.74**	**19**	⇑*i*P	**P**		**13 30 30.7**	**+0.3**
	comp=Z,35nm,1.3s,mb4.8							
AVF	**Avril sur Loir**	**50.74**	**19**	⇑*i*P	**P**		**13 30 30.7**	**+0.3**
AVF				pmax	pmax			
	comp=Z,17nm,1.3s,mb4.8							
AVF	**Avril sur Loir**	**50.74**	**19**	⇑*i*P	**P**		**13 30 30.7**	**+0.3**
	comp=Z,17nm,1.3s,mb4.8							
SMF	**Signal de Mont**	**50.78**	**20**	*e*P	**P**		**13 30 31.2**	**+0.6**
LPG	**La Plagne**	**50.87**	**23**	⇑*i*P	**P**		**13 30 32.8**	**+1.5**
LPL	**La Plagne**	**50.87**	**23**	⇑*i*P	**P**		**13 30 32.7**	**+1.3**
TIP	**Timpagrande**	**50.97**	**35**	*e*P	**P**		**13 30 32.4**	**+0.2**
	comp=Z,42nm,1.3s,mb5.2							
SSF	**Saint Saulge**	**51.03**	**19**	⇑*i*P	**P**		**13 30 33.1**	**+0.6**
LPAZ	**La Paz**	**51.27**	**249**	P	**P**		**13 30 34.2**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.0,baz=40,slow=8.3,SNR=4.2							
LPAZ				LR	LR		13 52 32.1	
	comp=Z,274nm,18.2s,MS4.3,baz=343,slow=36							
LPAZ	**La Paz**	**51.27**	**249**	P	**P**		**13 30 34.2**	**-0.7**
LPAZ				LR	LR		13 52 32.1	
LDF	**La Druitiere**	**51.31**	**16**	*e*P	**P**		**13 30 34.7**	**+0.1**
LOR	**Lormes**	**51.33**	**20**	⇑*i*P	**P**		**13 30 35.1**	**+0.3**
	comp=Z,12nm,0.6s,mb4.7							
LOR				*e*MLR	MLR			
	comp=Z,217nm,19.8s,MS3.9							
LOR	**Lormes**	**51.33**	**20**	⇑*i*P	**P**		**13 30 35.1**	**+0.3**
LOR				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7							
LOR	**Lormes**	**51.33**	**20**	⇑*i*P	**P**		**13 30 35.1**	**+0.3**
	comp=Z,5.9nm,0.6s,mb4.7							
AQU	**L'Aquila**	**51.37**	**30**	*e*P	**P**		**13 30 35.8**	**+0.6**
AQU				pmax	pmax			
	comp=Z,23nm,0.9s,mb5.1							
AQU	**L'Aquila**	**51.37**	**30**	*e*P	**P**		**13 30 35.8**	**+0.6**
	comp=Z,23nm,0.9s,mb5.1							
FLN	**La Foliniere**	**51.37**	**15**	*e*P	**P**		**13 30 34.8**	**-0.2**
FLN				*e*MLR	MLR			
	comp=Z,346nm,19.8s,MS4.1							
CABF	**La Chapelle**	**51.55**	**22**	⇑*i*P	**P**		**13 30 36.7**	**+0.3**
	comp=Z,22nm,1.0s,mb4.7							
CABF	**La Chapelle**	**51.55**	**22**	⇑*i*P	**P**		**13 30 36.7**	**+0.3**
CABF				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
CABF	**La Chapelle**	**51.55**	**22**	⇑*i*P	**P**		**13 30 36.7**	**+0.3**
	comp=Z,11nm,1.0s,mb4.7							
MEZF	**Maizieres J'vi**	**52.80**	**20**	*e*P	**P**		**13 30 46.0**	**+0.3**
HAU	**Haudompre**	**52.82**	**21**	⇑*i*P	**P**		**13 30 45.9**	**0.0**
	comp=Z,20nm,0.8s,mb4.8							
HAU				*e*MLR	MLR			
	comp=Z,214nm,19.0s,MS3.9							
HAU	**Haudompre**	**52.82**	**21**	⇑*i*P	**P**		**13 30 45.9**	**0.0**
HAU				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8							
HAU	**Haudompre**	**52.82**	**21**	⇑*i*P	**P**		**13 30 45.9**	**0.0**
	comp=Z,10nm,0.8s,mb4.8							
HINF	**Hinteralfeld**	**52.85**	**21**	⇑*i*P	**P**		**13 30 45.8**	**-0.2**
	comp=Z,65nm,1.6s,mb5.0							
HINF	**Hinteralfeld**	**52.85**	**21**	⇑*i*P	**P**		**13 30 45.8**	**-0.2**
HINF				pmax	pmax			
	comp=Z,32nm,1.6s,mb5.0							
HINF	**Hinteralfeld**	**52.85**	**21**	⇑*i*P	**P**		**13 30 45.8**	**-0.2**
	comp=Z,32nm,1.6s,mb5.0							
CDF	**Champ du Feu**	**53.50**	**21**	⇑*i*P	**P**		**13 30 50.6**	**-0.2**
	comp=Z,48nm,1.4s,mb4.9							
CDF	**Champ du Feu**	**53.50**	**21**	⇑*i*P	**P**		**13 30 50.6**	**-0.2**
CDF				pmax	pmax			
	comp=Z,24nm,1.4s,mb4.9							
CDF	**Champ du Feu**	**53.50**	**21**	⇑*i*P	**P**		**13 30 50.6**	**-0.2**
	comp=Z,24nm,1.4s,mb4.9							
DAVA	**Damuels**	**53.57**	**24**	⇑*i*P	**P**		**13 30 51.1**	**-0.3**
	comp=Z,37nm,1.3s,mb5.1,SNR=5.9							
FETA	**Feichten**	**53.71**	**25**	⇑*i*P	**P**		**13 30 51.9**	**-0.5**
	comp=Z,20nm,1.3s,mb4.9,SNR=9.0							
BFO	**Black Forest**	**53.82**	**22**	*e*P	**P**		**13 30 52.9**	**-0.3**
BFO				pmax	pmax			
	comp=Z,26nm,1.4s,mb5.0							
BFO	**Black Forest**	**53.82**	**22**	*e*P	**P**		**13 30 52.9**	**-0.3**
	comp=Z,26nm,1.4s,mb5.0							
BAIF	**Baives**	**53.88**	**18**	⇑*i*P	**P**		**13 30 53.4**	**-0.2**
	comp=Z,53nm,1.3s,mb5.0							
BAIF	**Baives**	**53.88**	**18**	⇑*i*P	**P**		**13 30 53.4**	**-0.2**
BAIF				pmax	pmax			
	comp=Z,26nm,1.3s,mb5.0							
BAIF	**Baives**	**53.88**	**18**	⇑*i*P	**P**		**13 30 53.4**	**-0.2**
	comp=Z,26nm,1.3s,mb5.0							
SKDS	**Skadanscina**	**54.03**	**28**	*e*P	**P**		**13 30 54.9**	**+0.1**
GIVF	**Givet**	**54.11**	**18**	⇑*i*P	**P**		**13 30 55.0**	**-0.3**
	comp=Z,23nm,1.0s,mb4.8							
GIVF	**Givet**	**54.11**	**18**	⇑*i*P	**P**		**13 30 55.0**	**-0.3**
GIVF				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
GIVF	**Givet**	**54.11**	**18**	⇑*i*P	**P**		**13 30 55.0**	**-0.3**
	comp=Z,11nm,1.0s,mb4.8							
MOTA	**Moosalm**	**54.12**	**25**	⇑*i*P	**P**		**13 30 54.6**	**-0.9**
	comp=Z,21nm,1.5s,mb4.8							
ABTA	**Abfalbersbach**	**54.26**	**26**	⇓*i*P	**P**		**13 30 56.5**	**0.0**
	comp=Z,24nm,1.3s,mb5.0,SNR=9.6							
WTTA	**Wattenberg**	**54.28**	**25**	⇑*i*P	**P**		**13 30 56.3**	**-0.2**
	comp=Z,22nm,1.4s,mb4.9							
JAVS	**Javornik**	**54.31**	**28**	*i* P	**P**		**13 30 57.0**	**+0.2**
JAVS				*i*	pP		13 31 03.0	+1.1
VOY	**Vojsko**	**54.33**	**27**	*e*P	**P**		**13 30 57.3**	**+0.3**
VOY				*e*			13 31 21.7	
CADS	**Cadrg**	**54.41**	**27**	*e*P	**P**		**13 30 57.8**	**+0.2**
BOJS	**Bojanci**	**54.59**	**29**	*i* P	**P**		**13 30 59.3**	**+0.5**
BOJS				*i*			13 31 06.5	
VISS	**Visnje**	**54.61**	**28**	*i* P	**P**		**13 30 59.1**	**+0.2**
VISS				*i*	pP		13 31 04.9	+0.8
LJU	**Ljubljana**	**54.64**	**28**	*e*P	**P**		**13 31 00.0**	**+0.8**
MYKA	**Terra Mystica**	**54.67**	**27**	⇑*i*P	**P**		**13 30 59.9**	**+0.5**
	comp=Z,25nm,1.4s,mb5.0							
**SOKA

DPC AMS AMS 13 54 40.0
comp=Z,300nm,19.5s
MORC Moravsky Berou 58.75 27 *eP* **P 13 31 28.3 -0.1**
MORC Moravsky Berou 58.75 27⇑*iP* **P 13 31 28.2 -0.2**
OKC Ostrava-Krasne 59.07 27 *eP* **P 13 31 30.8 +0.2**
OKC MLR MLR
comp=Z,200nm,18.9s,MS4.3
OKC Ostrava-Krasne 59.07 27 *eP* **P 13 31 30.8 +0.2**
OKC AMS AMS 13 54 50.0
comp=Z,200nm,18.9s
KECS Kecovo 59.23 29 *eP* **P 13 31 32.1 +0.4**
KECS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
KECS Kecovo 59.23 29 *eP* **P 13 31 32.1 +0.4**
comp=Z,5.7nm,1.1s,mb4.5
KECS Kecovo 59.23 29 *eP* **P 13 31 32.1 +0.4**
DRGR 59.24 32 P **P 13 31 32.2 +0.4**
DRGR 59.24 32⇑*iP* **P 13 31 32.0 +0.2**
NIE Niedzica 59.78 28 *eP* **P 13 31 35.8 +0.3**
ATAH Atahualpa 59.94 262 LR LR 13 57 44.1
comp=Z,528nm,18.8s,MS4.7,baz=96,slow=36
TRPA Tarpa 60.02 31⇑*iP* **P 13 31 37.0 -0.2**
OJC Ojcow 60.09 27 *eP* **P 13 31 37.0 -0.6**
UZH Uzhgorod 60.22 30⇑*iP* **P 13 31 38.0 -0.5**
UZH *i* pP 13 31 42.7 -0.9
UZH *e* 13 32 27.0
UZH *e* 13 33 49.7
UZH *eS* **S 13 39 46.0 -5.8**
UZH *e* 13 40 07.0
UZH *e* 13 43 48.0
MLR Muntele Rosu 60.22 35 P **P 13 31 38.7 +0.1**
MLR Muntele Rosu 60.22 35⇑*iP* **P 13 31 38.5 -0.1**
STHS Stebnicka Huta 60.23 29 *eP* **P 13 31 39.3 +0.7**
STHS pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
STHS Stebnicka Huta 60.23 29 *eP* **P 13 31 39.3 +0.7**
comp=Z,1.4nm,0.7s,mb4.1
STHS Stebnicka Huta 60.23 29 *eP* **P 13 31 39.3 +0.7**
KOLS Kolonicke sedl 60.41 30 *eP* **P 13 31 40.4 +0.6**
KOLS pmax pmax
comp=Z,11nm,1.3s,mb4.7
KOLS Kolonicke sedl 60.41 30 *eP* **P 13 31 40.4 +0.6**
comp=Z,10nm,1.3s,mb4.7
KOLS Kolonicke sedl 60.41 30 *eP* **P 13 31 40.4 +0.6**
PLOR Plostina 60.83 35 P **P 13 31 41.9 -0.9**
VRI Vrincioaia 60.88 35⇓*iP* **P 13 31 42.7 -0.4**
VRI Vrincioaia 60.88 35⇓*iP* **P 13 31 42.7 -0.4**
HARR Harsova 60.91 36⇓P **P 13 31 43.0 -0.4**
HARR Harsova 60.91 36⇓*iP* **P 13 31 43.0 -0.4**
TIRR Tirgusor 61.07 37 *eP* **P 13 31 43.5 -1.0**
TIRR pmax pmax
comp=Z,26nm,1.5s,mb5.1
TIRR Tirgusor 61.07 37 *eP* **P 13 31 43.5 -0.9**
comp=Z,26nm,1.5s,mb5.2
TIRR Tirgusor 61.07 37⇑*iP* **P 13 31 43.8 -0.7**
BUR08 Bucovina Ar. S 61.10 32 *eP* **P 13 31 44.9 +0.3**
TLCR 61.71 36⇑P **P 13 31 49.0 +0.2**
TLCR 61.71 36⇑*iP* **P 13 31 49.0 +0.2**
LVV L'vov 61.86 30 *eP* **P 13 31 48.2 -1.4**
BR131 Keskin Array S 62.10 44 *eP* **P 13 31 51.2 -0.3**
BRTR Keskin Array B 62.10 44 P **P 13 31 51.6 +0.1**
comp=Z,7.8nm,0.7s,mb5.0,baz=233,slow=5.8,SNR=53
BRTR Keskin Array B 62.10 44*ceP* **P 13 31 51.7 +0.2**
BRTR pmax pmax
comp=Z,8.0nm,0.6s
KIS Kishinev 62.72 35 *eP* **P 13 31 51.0 -4.5**
SUW Suwalki 64.21 26 *eP* **P 13 32 05.0 -0.2**
KIEV Kiev 65.03 31 *eP* **P 13 32 09.4 -1.2**
KIEV pmax pmax
comp=Z,38nm,1.2s,mb5.3
KIEV Kiev 65.03 31 *eP* **P 13 32 09.4 -1.2**
comp=Z,38nm,1.2s,mb5.3
AKASG Malin Array Be 65.04 31 P **P 13 32 09.4 -1.3**
comp=Z,10nm,0.9s,mb4.9,baz=234,slow=7.3,SNR=52
AKASG LR LR 14 05 10.4
comp=Z,276nm,18.1s,MS4.5,baz=235,slow=40
AKBB Malin Array Si 65.04 31 *eP* **P 13 32 09.2 -1.5**
NB2 NORSAR Subarra 65.36 15 P **P 13 32 12.0 -0.5**
comp=Z,5.3nm,0.9s,mb4.6,baz=211,slow=6.9
NOA NORSAR Array B 65.36 15 P **P 13 32 11.9 -0.6**
comp=Z,1.5nm,0.7s,mb4.1,baz=211,slow=6.7,SNR=4.7
IIGN Ignalina 66.43 26 *eP* **P 13 32 19.1 -0.4**
ISAL Salakas 66.53 26 *eP* **P 13 32 20.0 -0.2**
IDID Didziasalis 66.63 26 *eP* **P 13 32 21.2 +0.3**
IZAR Zarasai 66.69 26 *eP* **P 13 32 21.0 -0.3**
ANN Anapa 66.85 40 *eP* **P 13 32 17.5 -5.0**
ANN *e* 13 34 49.1
ANN pmax pmax
comp=Z,54nm,1.1s,mb5.5
SOC Sochi 67.85 42 *eP* **P 13 32 26.9 -1.9**
SOC pmax pmax
comp=Z,34nm,1.2s,mb5.2
NAY Al-Naaiem 69.27 59 *eP* **P 13 32 38.2 +0.2**
NAY AMb AMB 13 32 39.6
comp=Z,18nm,1.3s,mb4.8
RDF Al-Radifah 69.46 59 *eP* **P 13 32 40.2 +1.0**
RDF AMb AMB 13 32 41.8
comp=Z,31nm,1.4s,mb5.0
MIB Mutribah 69.47 58 *eP* **P 13 32 39.3 0.0**
MIB AMb AMB 13 32 41.4
comp=Z,25nm,1.5s,mb4.9
KIV Kislovodsk 69.98 42⇑*eP* **P 13 32 42.2 +0.1**
KIV *e* 13 35 14.6
KIV *eS* S 13 41 51.2 -0.8
KIV pmax pmax
comp=Z,37nm,1.1s,mb5.2
KIV Kislovodsk 69.98 42 *eP* **P 13 32 42.6 +0.5**
ONI Oni 70.03 44 P **P 13 32 42.1 -0.3**
GNI Garni 70.16 47*c iP* **P 13 32 43.6 +0.4**
GNI pmax pmax
comp=Z,38nm,1.3s
KEH Kehvi 70.27 44 P **P 13 32 43.0 -0.9**
FINES FINESS Array B 70.35 21 P **P 13 32 44.0 0.0**
comp=Z,6.4nm,0.8s,mb4.6,baz=192,slow=4.3,SNR=22
ZEI Tsey 70.40 44 *eP* **P 13 32 42.9 -1.8**
ZEI pmax pmax
comp=Z,24nm,1.6s,mb4.9
TBLG Delisi 70.65 45 *eP* **P 13 32 46.2 0.0**
TBLG Delisi 70.65 45 P **P 13 32 46.3 0.0**
MTA Mtatsminda 70.68 45 P **P 13 32 46.8 +0.4**
DGRG David-gareji 71.01 46 P **P 13 32 49.5 +1.0**
OBN Obninsk 71.16 30⇑*eP* **P 13 32 48.2 -0.8**
OBN *e* 13 35 21.9
OBN pmax pmax
comp=Z,35nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.4
MOS Moscow 71.99 30 *eP* **P 13 32 52.1 -1.9**
MOS pmax pmax
comp=Z,55nm,0.8s,mb5.5
ARCES ARCESS Array B 75.71 15 P **P 13 33 15.8 +0.3**
comp=Z,1.0nm,0.5s,mb4.0,baz=246,slow=5.0,SNR=5.4
APA Apatity 76.67 18⇑*eP* **P 13 33 21.0 -0.1**
APA *eS* S 13 43 10.0 +3.1
APA pmax pmax
comp=Z,26nm,1.3s,mb5.0
LVZ Lovozero 77.25 18*ceP* **P 13 33 24.4 +0.1**
LVZ pmax pmax
comp=Z,38nm,1.7s,mb5.0
ECSD EROS Data Cent 81.53 314 *eP* **P 13 33 45.4 -2.9**
comp=Z,3.5nm,1.0s,mb4.2
ABKAR Akbulak array 82.81 40 *eP* **P 13 33 54.5 -0.3**
comp=Z,4.2nm,0.8s,mb4.5
SOKR Solikamsk 82.94 30*d iP* **P 13 33 55.9 +0.7**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ARU Arti 83.22 33 *eP* **P 13 33 56.5 -0.2**
ARU pmax pmax
comp=Z,24nm,1.4s,mb5.0
ARU Arti 83.22 33 *eP* **P 13 33 56.5 -0.2**
comp=Z,24nm,1.4s,mb5.0
SVE Sverdlovsk 84.42 33 *eP* **P 13 34 02.9 0.0**
SVE pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
TXAR Lajitas Array 85.81 299 P **P 13 34 10.4 0.0**
comp=Z,0.6nm,1.0s,mb3.8,baz=97,slow=6.4,SNR=5.2
GDL2 Guadalupe Moun 86.54 302 *eP* **P 13 34 09.3 -4.7**
BVAR Borovoye Array 89.69 37 P **P 13 34 28.3 -0.2**
comp=Z,1.4nm,0.8s,mb4.3,baz=224,slow=6.0,SNR=4.5
PDAR Pinedale Array 90.89 313 P **P 13 34 33.9 -0.5**
comp=Z,0.1nm,0.5s,baz=127,slow=10,SNR=2.0
AAK Ala-Archa 92.55 48 *eP* **P 13 34 44.1 +2.0**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
AAK Ala-Archa 92.55 48 *eP* **P 13 34 44.1 +2.0**
comp=Z,2.3nm,0.8s,mb4.7
YKA Yellowknife Ar 93.06 332 P **P 13 34 42.4 -1.5**
comp=Z,0.3nm,0.5s,mb4.0,baz=82,slow=5.5,SNR=7.6
WMQ Urumqi 101.99 45 *eP* Pdif 13 35 24.8 +0.3
GTA Gaotai 111.90 47 *e*PKP PKiKP 13 40 05.4 -0.6
GTA PP PP 13 40 54.5 +5.6
GTA SKS SKSdf 13 47 16.9 -0.8
GTA SKKS SKKSac 13 47 48.1 -3.2
GTA SS SS 13 56 30.8 +5.4
GTA AMB AMB
comp=Z,130nm,6.6s
GTA LR LR
comp=N,350nm,17.1s,MS5.1
GTA LR LR
comp=E,280nm,18.0s,MS5.1
GTA LR LR
comp=Z,400nm,18.6s,MS5.0
LZH Lanzhou 116.02 49 *e*PKP PKPdf 13 40 09.8 -4.2
LZH sPKP 13 40 14.3
LZH *e*PP PP 13 41 20.0 +1.9
LZH SKKS SKKSac 13 48 10.1 -9.2
LZH *e*SS SS 13 57 18.0 -1.9
LZH AMB AMB
comp=Z,97nm,8.1s
LZH LR LR
comp=E,200nm,18.0s
LZH LR LR
comp=Z,290nm,20.1s,MS4.9
CD2 Chengdu 117.63 55 PKP PKPdf 13 40 16.6 -0.6
CD2 PP PP 13 41 35.6 +6.0
CD2 PKS 13 43 52.1
CD2 SKS SKSdf 13 47 27.8 -1.3
CD2 SKKS SKKSac 13 48 27.8 -2.5
CD2 SS SS 13 57 45.8 +4.5
CD2 AMB AMB
comp=Z,160nm,6.0s
CD2 LR LR
comp=N,500nm,17.8s
CD2 LR LR
comp=Z,520nm,17.8s,MS5.2
KMI Kunming 118.34 62 PKP PKPdf 13 40 16.4 -2.4
KMI sPKP 13 40 23.4
KMI LR LR
comp=N,180nm,17.9s,MS5.0
KMI LR LR
comp=E,230nm,16.1s,MS5.0
KMI LR LR
comp=Z,260nm,16.1s,MS5.0
HHC Hu-ho-hao-te 119.58 42 *e*PKP PKPdf 13 40 21.0 +0.3
HHC PP PP 13 41 47.4 +4.8
HHC PKS 13 43 56.3
HHC SKS SKSdf 13 47 31.4 -1.0
HHC SKKS SKKSac 13 48 41.1 -1.6
HHC SS SS 13 58 11.8 +6.2
HHC AMB AMB
comp=Z,66nm,8.0s
HHC LR LR
comp=N,250nm,20.1s,MS5.1
HHC LR LR
comp=E,410nm,20.0s,MS5.1
HHC LR LR
comp=Z,220nm,19.2s,MS4.8
GYA Guiyang 121.39 59 Pdif Pdif 13 36 50.8 +0.1
GYA PKP PKPdf 13 40 23.0 -1.6
GYA PP PP 13 42 01.9 +6.2
GYA PKS 13 43 58.9
GYA SKKS SKKSac 13 48 50.8 -4.4
GYA SS SS 13 58 32.5 +2.4
GYA AMB AMB
comp=Z,130nm,7.8s
GYA LR LR
comp=N,130nm,22.8s,MS4.6
GYA LR LR
comp=E,120nm,24.3s,MS4.6
GYA LR LR
comp=Z,180nm,22.5s,MS4.7
BJI Beijing 123.02 40 PKP PKPdf 13 40 25.4 -2.0
MDJ Mudanjiang 127.69 28 PKP PKPdf 13 40 33.3 -2.8
NJ2 Nanjing 129.00 48 *e*PKP PKPdf 13 40 35.8 -3.2
ASAR Alice Springs 144.23 134 PKP PKPdf 13 41 05.3 -2.1
comp=Z,1.2nm,0.6s,baz=233,slow=2.1,SNR=2.3
ASAR Alice Springs 144.23 134 PKIKP PKPdf 13 41 05.3 -2.1
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 144.23 134 PKP PKPdf 13 41 05.3 -2.1

NOU ***24*** *13:21:31.7±0.3, 9.°10N×151.°98E, h30km*
SZGRF ***24*** *13:24:03.3, 8.°44S×157.°41E, h38km, mb5.5, Bougainville - Solomon Islands region*
BJI ***24*** *13:24:04.3, 7.°04S×156.°36E, h30km, mB5.8/41, mb5.6/63, Ms5.5/69, Ms7 5.4/61*
GCMT ***24*** *13:24:05.9±0.1, 7.°39S×156.°02E, h41km, MW5.9/112, Moment Tensor Solution. s112,c227; s110,c315; Duration: 2s2 Moment tensor: Scale 10^18Nm; Mrr0.47±.01; Mθθ0.03±.01; Mφφ-0.49±.01; Mrθ-0.17±.01; Mφθ0.56±.01; Mφr-0.44±.01; Best double couple: M0 0.87300×10^18 NP1:φs294.00000°, δ47.00000°, λ32.00000°. NP2:φs180.00000°, δ67.00000°, λ132.00000°. Principal axes: T 0.8340, Plg49.0000°, Azm136.0000°; N 0.0790, Plg38.0000°, Azm341.0000°; P -0.9130, Plg12.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***24*** *13:24:06.0±0.1, 7.°18S×156.°07E, h29km, mb5.8/97, MS5.5/73, MW5.8, MW5.8 Error ellipse: s-maj=4.0km s-min=3.9km az=150.0, Moment Tensor Solution. s91 Moment tensor: Scale 10^17Nm; Mrr2.48; Mθθ0.69; Mφφ-3.17; Mrθ-1.39; Mθφ4.89; Mφr-1.97; Best double couple: M0 6.20000×10^17 NP1:φs184.00000°, δ70.00000°, λ149.00000°. NP2:φs286.00000°, δ61.00000°, λ23.00000°. Principal axes: T 5.6500, Plg35.0000°, Azm142.0000°; N 0.9300, Plg53.0000°, Azm334.0000°; P -6.5800, Plg5.0000°, Azm236.0000°;*
ISCJB ***24*** *13:24:06.2±0.1, 7.°21S±0.°03×156.°05E±0.°02, h38km, mb5.8/168, MS5.4/139 Error ellipse: s-maj=3.7km s-min=2.9km az=9.3*
MOS ***24*** *13:24:06.6±0.9, 7.°10S×156.°05E, h37km, mb6.0/46, MS5.4/43, Error ellipse: s-maj=8.1km s-min=5.9km az=103.9*
BGS ***24*** *13:24:06.9±1.9, 7.°18S×156.°07E, h33km, mb5.8(NEIC)*
IDC ***24*** *13:24:07.4±0.3, 7.°18S×156.°01E, h38km±1km, mb5.4/29, mb1 5.4/30, mb1mx5.4/30, mbtmp5.4/30, ML5.1/1, MS5.2/15, Ms1 5.2/15, ms1mx5.2/16, Error ellipse: s-maj=9.4km s-min=7.9km az=49.0*
DJA ***24*** *13:24:14, 7.°28S×156.°11E, h82km, Mw6.3/57*
ISC 24 13:24:08.1±0.1, 7.°20S±0.°02×156.°08E±0.°02, h40km, h40km±.8km:pP-P, n1017, σ0.993/511, mb5.8/168, MS5.4/139, 188C-156D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**14.35**	**241**	⇓*iPn*	**Pn**	**13 27 30.4**	**+1.5**
	7μm,1.2s						
CTA	**Charters Tower**	**15.97**	**216**	*eP*	**Pn**	**13 27 50.8**	**+0.8**
	199nm,1.0s						
CTA				*ep*P	pP	13 28 03.2	+0.2
CTA				*eS*	**S**	**13 30 54.8**	**-3.9**
CTA				*e*PCP	PcP	13 32 46.4	+0.3
CTA				*ep*PCP		13 32 59.5	
CTA	**Charters Tower**	**15.97**	**216**	Pn	**Pn**	**13 27 51.1**	**+1.1**
	5.4nm,0.3s,baz=42,slow=14,SNR=37						
CTA				Sn	**Sn**	**13 30 53.6**	**+7.4**
	0.4nm,0.3s,baz=49,slow=14,SNR=1.6						
CTAO	**Charters Tower**	**15.97**	**216**	*eP*	**Pn**	**13 27 51.5**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,693nm,1.1s						
CTAO	**Charters Tower**	**15.97**	**216**	*e*Pn	**Pn**	**13 27 51.5**	**+1.5**
	comp=Z,693nm,1.1s						
NOUC	**Port Laguerre**	**17.80**	**147**	*eP*	**Pn**	**13 28 12.6**	**-0.3**
DZM	**Mont Dzumac**	**17.85**	**147**	*eP*	**Pn**	**13 28 14.6**	**+1.1**
	comp=Z,675nm,1.1s						
DZM				*e*LR	LR	13 32 33.0	
	comp=Z,41μm,27.6s						
DZM	**Mont Dzumac**	**17.85**	**147**	*eP*	**Pn**	**13 28 13.8**	**+0.2**
DZM	**Mont Dzumac**	**17.85**	**147**	*eP*	**Pn**	**13 28 13.9**	**+0.3**
	comp=Z,631nm,1.1s						
NORM	**Noumea**	**18.00**	**147**	*eP*	**Pn**	**13 28 15.0**	**-0.4**
EIDS	**Eidsvold**	**18.69**	**194**	*e*Pn	**Pn**	**13 28 23.4**	**-0.3**
	comp=Z,564nm,1.5s						
TARA	**Tarawa**	**18.83**	**64**	*eP*	**Pn**	**13 28 26.5**	**+1.0**
	comp=Z,2μm,1.4s						
TARA				*eS*	**S**	**13 31 42.9**	**-14**
KWAJ	**Kwajalein Atol**	**19.61**	**36**	*eP*	**Pn**	**13 28 35.6**	**+0.8**
	comp=Z,1μm,0.6s						
FUNA	**Funafuti**	**22.93**	**95**	*eP*	**P**	**13 29 07.7**	**-1.3**
	comp=Z,1μm,1.3s,mb6.2						
GUMO	**Guam**	**23.46**	**332**	P	**P**	**13 29 14.9**	**+0.6**
	comp=Z,70nm,0.7s,mb5.2,baz=178,slow=8.8,SNR=4.2						
GUMO				PcP	PcP	13 32 58.9	-0.7
	comp=Z,53nm,0.7s,baz=2.7,slow=14,SNR=4.1						
GUMO				S	**S**	**13 33 36.7**	**+12**
	comp=Z,33nm,0.7s,baz=352,slow=20,SNR=1.5						
GUMO				ScP	ScP	13 36 31.2	-3.6
	comp=Z,58nm,0.9s,baz=42,slow=18,SNR=3.5						
GUMO	**Guam**	**23.46**	**332**	P	**P**	**13 29 14.9**	**+0.6**
GUMO						13 32 58.9	
GUMO				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.2						
GUMO				pmax	pmax		
	comp=Z,53nm,0.7s,mb5.1						
GUMO				pmax	pmax		
	comp=N,58nm,0.9s						
GUMO	**Guam**	**23.46**	**332**	*eP*	**P**	**13 29 15.0**	**+0.7**
	comp=N,1μm,1.2s,mb6.2						
ARMA	**Armidale**	**23.48**	**190**	*eP*	**P**	**13 29 14.9**	**+0.5**
ARMA				*e*PCP	PcP	13 32 59.7	+0.3
ARMA				*ep*PCP		13 33 12.9	
ARMA				*eS*	**S**	**13 33 25.9**	**+0.9**
ARMA				*e*SCP	ScP	13 36 35.8	+1.2
ARMA				*e*SCS	ScS	13 40 22.9	+1.8
ARMA	**Armidale**	**23.48**	**190**	*eP*	**P**	**13 29 14.0**	**-0.4**
	comp=N,787nm,1.4s,mb6.0						
MSVF	**Nonsavu**	**23.84**	**118**	P	**P**	**13 29 17.0**	**-0.8**
	comp=N,2μm,0.9s,mb6.5,SNR=44						
MSVF	**Nonsavu**	**23.84**	**118**	*eP*	**P**	**13 29 17.7**	**-0.1**
	comp=N,362nm,1.1s,mb5.7						
KAKA	**Kakadu**	**23.91**	**255**	*eP*	**P**	**13 29 17.4**	**-1.1**
	comp=N,589nm,0.6s,mb6.2						
KAKA				*eS*	**S**	**13 33 28.9**	**-3.5**
KAKA	**Kakadu**	**23.91**	**255**⇓*iP*		**P**	**13 29 17.5**	**-1.1**
	comp=N,4μm,1.1s,mb6.8						
WRAB	**Tennant Creek**	**24.59**	**237**	P	**P**	**13 29 24.0**	**-0.6**
	comp=N,4μm,1.2s,mb6.8						
WRAB	**Tennant Creek**	**24.59**	**237**	*eP*	**P**	**13 29 24.8**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,3μm,1.7s,mb6.6						
WRAB	**Tennant Creek**	**24.59**	**237**	*eP*	**P**	**13 29 24.8**	**+0.1**
	comp=Z,3μm,1.7s,mb6.6						
ASAR	**Alice Springs**	**26.86**	**230**	P	**P**	**13 29 44.2**	**-0.9**
	comp=Z,42nm,0.9s,mb5.0,baz=58,slow=9.0,SNR=120						
ASAR				pP	pP	13 29 54.8	-1.4
	comp=Z,97nm,0.8s,baz=62,slow=9.1,SNR=32						
ASAR				PcP	PcP	13 33 06.9	-0.2
	comp=Z,21nm,0.5s,baz=66,slow=2.5,SNR=13						
ASAR				pPcP		13 33 19.9	
	comp=Z,30nm,0.8s,baz=45,slow=2.8,SNR=6.1						
ASAR				ScP	ScP	13 36 44.0	-0.4
	comp=Z,14nm,0.8s,baz=47,slow=3.2,SNR=8.6						
ASAR				PKiKP	PKiKP	13 40 43.1	-2.4
	comp=Z,4.5nm,0.6s,baz=111,slow=0.9,SNR=18						
ASAR				P3KPbc		14 02 26.2	
	comp=Z,0.8nm,0.6s,baz=236,slow=4.3,SNR=17						
ASAR				P3KP		14 03 22.7	
	comp=Z,0.6nm,0.8s,baz=168,slow=2.8,SNR=4.6						
ASAR	**Alice Springs**	**26.86**	**230**	P	**P**	**13 29 44.3**	**-0.9**
ASAR				*PP	pP	13 29 54.8	-1.4
ASAR						13 33 06.9	
ASAR	**Alice Springs**	**26.86**	**230**	P	**P**	**13 29 44.2**	**-0.9**
ASAR				pP	pP	13 29 54.8	-1.4
ASAR				PcP	PcP	13 33 06.9	-0.2
ASAR				pPcP		13 33 19.9	
ASAR				ScP	ScP	13 36 44.0	-0.4
ASAR	**Alice Springs**	**26.86**	**230**	PKPdf	PKiKP	13 40 43.0	-2.4
ASAR				*e*		14 02 26.2	
ASAR				PKKKP		14 03 22.7	
RIV	**Riverview**	**26.89**	**189**	*eP*	**P**	**13 29 45.3**	**0.0**
STKA	**Stephens Creek**	**28.03**	**207**	*eP*	**P**	**13 29 54.5**	**-1.1**
	comp=Z,28nm,0.8s,mb5.0						
STKA				*ep*P	pP	13 30 08.0	+1.4
STKA				*e*PCP	PcP	13 33 09.1	-0.7
STKA				*ep*PCP		13 33 22.3	
STKA				*e*SCP	ScP	13 36 47.3	-0.4
STKA				*e*SCS	ScS	13 40 36.7	-3.5
STKA	**Stephens Creek**	**28.03**	**207**	P	**P**	**13 29 54.6**	**-1.0**
	comp=Z,20nm,0.8s,mb4.8,baz=16,slow=8.2,SNR=19						
STKA				pP	pP	13 30 05.9	-0.7
	comp=Z,173nm,0.8s,baz=27,slow=14,SNR=30						
STKA				PcP	PcP	13 33 09.0	-0.8
	comp=Z,40nm,0.8s,baz=57,slow=3.9,SNR=7.0						
STKA				pPcP		13 33 21.7	
	comp=Z,56nm,0.9s,baz=336,slow=0.7,SNR=4.9						
STKA				S	**S**	**13 34 33.9**	**-3.5**
	comp=Z,5.5nm,0.8s,baz=240,slow=15,SNR=1.0						
STKA				ScP	ScP	13 36 47.6	-0.1
	comp=Z,53nm,0.9s,baz=44,slow=3.6,SNR=15						
STKA				pScP		13 37 05.0	
	comp=Z,14nm,1.0s,baz=30,slow=12,SNR=3.9						
STKA				PKiKP	PKiKP	13 40 43.5	-2.4
	comp=Z,3.8nm,0.6s,baz=303,slow=22,SNR=7.7						
STKA				LR	LR	13 40 57.4	
	comp=Z,16μm,19.0s,MS5.6,baz=25,slow=36						
STKA				P3KP		14 03 26.6	
	comp=Z,0.9nm,0.5s,baz=270,slow=6.1,SNR=1.6						
STKA	**Stephens Creek**	**28.03**	**207**	PKPdf	PKiKP	13 40 43.5	-2.4
STKA				LR	LR	13 40 57.4	
STKA				PKKKP		14 03 26.6	
STKA	**Stephens Creek**	**28.03**	**207**	*eP*	**P**	**13 29 55.1**	**-0.5**
	comp=Z,43nm,0.9s,mb5.1						
CNB	**Canberra Magne**	**28.66**	**192**	*eP*	**P**	**13 30 01.0**	**-0.1**
CNB				*ep*P	pP	13 30 14.4	+2.2
CNB				*eS*	**S**	**13 34 49.9**	**+2.7**
CNB				*e*SCP	ScP	13 36 50.2	+0.6
CAN	**Canberra**	**28.74**	**192**	*eP*	**P**	**13 30 00.5**	**-1.3**
CAN				pmax	pmax		
	comp=Z,285nm,1.5s,mb5.8						
CAN				MLR	MLR		
	comp=Z,13μm,19.0s,MS5.6						
CAN	**Canberra**	**28.74**	**192**	*eP*	**P**	**13 30 00.5**	**-1.3**
	comp=Z,285nm,1.5s,mb5.8						
CAN				LR	LR		
	comp=Z,13μm,19.0s,MS5.6						
FITZ	**Fitzroy Crossi**	**31.57**	**247**	*eP*	**P**	**13 30 26.3**	**-0.8**
	comp=Z,196nm,0.8s,mb6.0						
FITZ				*ep*P	pP	13 30 37.9	-0.3
FITZ				*eS*	**S**	**13 35 31.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**31.57**	**247**	P	**P**	**13 30 26.0**	**-1.1**
	comp=Z,137nm,1.0s,mb5.7,baz=79,slow=8.6,SNR=170						
FITZ				pP	pP	13 30 37.2	-1.0
	comp=Z,400nm,0.8s,baz=80,slow=9.6,SNR=29						
FITZ				S	**S**	**13 35 23.3**	**-10**
	comp=Z,15nm,0.9s,baz=117,slow=23,SNR=1.1						
FITZ				ScP	ScP	13 36 58.7	-0.7
	comp=Z,22nm,0.8s,baz=163,slow=6.8,SNR=2.8						
FITZ				LR	LR	13 43 23.2	
	comp=Z,10μm,18.3s,MS5.5,baz=61,slow=37						
TOO	**Toolangi**	**31.73**	**196**	*eP*	**P**	**13 30 27.7**	**-0.6**
TOO				*e*PCP	PcP	13 33 18.7	-0.5
TOO				*ep*PCP		13 33 32.1	
TOO				*e*SCP	ScP	13 36 59.5	-0.1
OUZ	**Omahuta**	**32.20**	**152**	*eP*	**P**	**13 30 32.3**	**-0.2**
	comp=Z,143nm,1.2s,mb5.7						
OUZ				*e*PcP	PcP	13 33 21.0	+0.4
AFI	**Afiamalu**	**32.27**	**105**	P	**P**	**13 30 33.2**	**-0.1**
	comp=Z,190nm,0.9s,mb5.9,baz=310,slow=2.1,SNR=25						
AFI	**Afiamalu**	**32.27**	**105**	P	**P**	**13 30 33.2**	**-0.1**
AFI				LR	LR		
	comp=Z,8μm,19.0s,MS5.4						
MATI	**Mati**	**32.90**	**295**	*eP*	**P**	**13 30 38.4**	**-0.5**
DAV	**Davao City (W)**	**33.56**	**294**	P	**P**	**13 30 43.0**	**-1.6**
	comp=Z,131nm,0.4s,mb6.2,baz=143,slow=5.1,SNR=0.9						
DAV				pP	pP	13 30 55.3	-0.5
	comp=Z,190nm,0.4s,baz=274,slow=14,SNR=1.2						
DAV	**Davao City (W)**	**33.56**	**294**	P	**P**	**13 30 43.0**	**-1.6**
DAV				pP	pP	13 30 55.2	-0.5
DAV				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
DAV	**Davao City (W)**	**33.56**	**294**⇑*eP*		**P**	**13 30 44.2**	**-0.4**
BUKP	**Musuan**	**34.37**	**295**	*eP*	**P**	**13 30 52.5**	**+0.9**
CTBH	**Cotabato--PC H**	**34.83**	**294**⇑*eP*		**P**	**13 31 03.8**	**+8.2**
FORT	**Forrest**	**35.20**	**225**	*eP*	**P**	**13 30 57.6**	**-0.9**
	comp=Z,81nm,0.6s,mb5.8						
FORT				*ep*P	pP	13 31 08.5	-1.2

FORT	Forest	35.20	225	*e*P	P	13 30 57.4 -1.2
MSLP	Maasin	35.54	299	*e*P	P	13 31 02.1 +0.4
PAGZ	Pagadian	35.87	294	*e*P	P	13 31 06.4 +1.8
MOO	Moorlands	35.97	191	*e*P	P	13 31 05.5 +0.5
MOO				*e*PCP	PcP	13 33 44.4 +13
MOO				*e*S	S	13 36 42.7 +1.8
MOO				*e*SCP	ScP	13 37 15.5 +1.1
KAPI	Kappang	36.18	271	P	P	13 31 07.5 +0.2
	comp=Z,3μm,1.0s,SNR=7.5					
KAPI	Kappang	36.18	271	P	P	13 31 06.0 -1.3
	comp=Z,95nm,0.5s,mb6.0,baz=115,slow=3.4,SNR=33					
KAPI				pP	pP	13 31 17.2 -1.2
	comp=Z,520nm,0.9s,baz=145,slow=2.9,SNR=33					
KAPI				S	S	13 36 40.6 -4.3
	comp=Z,5.7nm,1.0s,baz=212,slow=15,SNR=1.1					
URZ	Urewera	36.31	152	P	P	13 31 07.7 -0.3
	comp=Z,154nm,1.1s,mb5.9,baz=12,slow=3.6,SNR=32					
URZ				PcP	PcP	13 33 30.5 -1.7
	comp=Z,37nm,0.8s,baz=319,slow=11,SNR=3.3					
URZ				ScP	ScP	13 37 13.2 -2.6
	comp=Z,9.3nm,0.8s,baz=7.8,slow=22,SNR=2.8					
TAU	Tasmania Unive	36.40	191	P	P	13 31 09.7 +1.0
	comp=Z,1μm,1.3s,mb6.8,SNR=29					
TAU	Tasmania Unive	36.40	191	*e*P	P	13 31 09.2 +0.5
TAU				pmax	pmax	
	comp=Z,638nm,1.4s,mb6.4					
TAU	Tasmania Unive	36.40	191	*e*P	P	13 31 09.2 +0.5
	comp=Z,638nm,1.4s,mb6.4					
CNP	Cataman	36.86	302	*e*P	P	13 31 12.9 0.0
GUIM	Jordan	37.75	298	*e*P	P	13 31 21.5 +0.9
MBWA	Marble Bar	37.76	245	*e*P	P	13 31 19.5 -1.1
	comp=Z,284nm,0.9s,mb6.0					
MBWA				*e*pP	pP	13 31 27.6 -4.2
MBWA				*e*PP	PP	13 32 46.3 -1.1
MBWA	Marble Bar	37.76	245	⇑P	P	13 31 25.2 +4.6
	SNR=50					
MBWA				⇑P		13 31 25.2
	SNR=50					
PVCP	Virac	37.84	303	*e*P	P	13 31 22.2 +0.9
RCP	Roxas	38.04	299	⇑*e*P	P	13 31 23.9 +0.9
KHZ	Kahutara	38.32	159	*e*P	P	13 31 23.5 -1.4
	comp=Z,132nm,0.6s,mb5.8					
KALP	Kalibo	38.45	299	⇓*e*P	P	13 31 29.6 +3.2
RPZ	Rata Peaks	38.67	163	P	P	13 31 27.2 -0.7
	comp=Z,222nm,0.9s,mb5.9,baz=316,slow=1.0,SNR=62					
RPZ				PcP	PcP	13 33 38.6 -0.7
	comp=Z,17nm,0.6s,baz=194,slow=5.0,SNR=1.8					
AUQP	San Andres	38.94	301	*e*P	P	13 31 33.2 +2.7
OTRP	Odiongan	39.04	300	*e*P	P	13 31 32.6 +1.3
CUYO	Cuyo Island	39.24	297	*e*P	P	13 31 34.5 +1.4
MYLDM	Lahad Datu	39.47	287	P	P	13 31 36.9 +1.9
BOAC	Boac	39.71	301	*e*P	P	13 31 38.0 +1.0
TSM	Tawau	39.80	286	P	P	13 31 38.4 +0.5
SJMP	San Jose	39.86	299	*e*P	P	13 31 39.6 +1.3
BUSP	Coron	40.46	298	*e*P	P	13 31 43.7 +0.5
TGY	Tagaytay City	40.79	301	P	P	13 31 45.2 -0.7
	comp=Z,118nm,0.3s,mb6.0,baz=153,slow=9.0,SNR=4.1					
TGY				pP	pP	13 31 57.1 -0.2
	comp=Z,112nm,0.3s,baz=181,slow=10,SNR=1.3					
ENPP	El Nido	40.80	296	*e*P	P	13 31 47.1 +1.1
SDKM	Sandakan	40.84	287	P	P	13 31 46.5 0.0
PPR	Puerto Princes	40.85	294	⇑*i*P	P	13 31 47.9 +1.4
PALP	Palanan	41.09	306	*e*P	P	13 31 49.6 +1.3
LUBP	Lubang	41.21	300	*e*P	P	13 31 48.9 -0.5
BATP	Bataraza	41.33	292	*e*P	P	13 31 51.9 +1.5
CAUP	Cauayan	41.51	306	*e*P	P	13 31 53.1 +1.3
KDM	Kudat	41.58	289	P	P	13 31 54.2 +1.7
KKM	Kota Kinabalu	41.90	287	P	P	13 31 55.5 +0.4
KKM	Kota Kinabalu	41.90	287	*e*P	P	13 31 54.5 -0.5
APYP	Conner	42.47	306	*e*P	P	13 32 00.2 +0.6
BOLP	Bolinao	42.77	303	*e*P	P	13 32 01.7 -0.5
ABRA	Dolores	42.78	306	*e*P	P	13 32 02.7 +0.5
KLBR	Kellerberrin	43.19	231	*e*P	P	13 32 04.5 -0.8
	comp=Z,60nm,0.5s,mb5.6					
KLBR				*e*pP	pP	13 32 15.3 -1.4
KLBR				*e*S	S	13 38 20.4 -9.0
JOW	Kunigami	43.25	323	P	P	13 32 06.5 +0.7
	comp=Z,27nm,0.7s,mb5.1,baz=143,slow=12					
JOW				PcP	PcP	13 33 55.0 +0.5
	comp=Z,42nm,0.7s,baz=127,slow=3.9,SNR=4.1					
JOW				S	S	13 38 27.6 -2.7
	comp=Z,5.3nm,0.8s,baz=45,slow=22,SNR=1.1					
JOW				LR	LR	13 48 51.2
	comp=Z,4μm,20.8s,MS5.3,baz=134,slow=34					
BBP	Basco	43.35	310	*e*P	P	13 32 10.7 +4.0
BTM	Bintulu	44.14	282	P	P	13 32 15.0 +1.8
NWAO	Narrogin (SRO)	44.17	229	P	P	13 32 13.0 -0.3
	comp=Z,26nm,0.6s,mb5.1,baz=75,slow=6.7,SNR=22					
NWAO				pP	pP	13 32 23.4 -1.2
	comp=Z,352nm,0.9s,baz=72,slow=8.1,SNR=39					
NWAO				PcP	PcP	13 33 57.0 -0.7
	comp=Z,97nm,1.1s,baz=30,slow=10,SNR=3.1					
NWAO	Narrogin (SRO)	44.17	229	⇑P	P	13 32 20.5 +7.3
	SNR=10					
NWAO				⇑P		13 32 20.5
	SNR=10					
SBUM	Sibu	44.81	281	P	P	13 32 19.8 +1.2
RAR	Rarotonga	44.84	113	*e*P	P	13 32 17.7 -1.0
RAR				pmax	pmax	
	comp=Z,580nm,1.9s					
RAR	Rarotonga	44.84	113	*e*P	P	13 32 17.7 -1.0
	comp=Z,580nm,1.9s,mb6.1					
TWG	Pinlang	45.42	312	*e*P	P	13 32 22.3 -0.9
	comp=Z,42nm,0.6s,mb5.4					
YULB	Yu-li	45.60	313	*e*P	P	13 32 24.1 -0.6
	comp=Z,58nm,0.8s,mb5.6					
NACB	Ninganchiao	45.87	314	*e*P	P	13 32 26.9 +0.2
	comp=Z,149nm,0.9s,mb5.9					
TPUB	Ta-pu	46.04	312	*e*P	P	13 32 27.1 -1.0
	comp=Z,531nm,1.5s,mb6.2					
SSLB	Suanglung	46.09	313	*e*P	P	13 32 28.0 -0.5
	comp=Z,165nm,1.1s,mb5.9					
YHNB	Yeheng	46.33	314	*e*P	P	13 32 30.9 +0.5
	comp=Z,342nm,1.2s,mb6.2					
KSM	Kuching	46.48	279	P	P	13 32 32.2 +0.5
KSM	Kuching	46.48	279	*e*P	P	13 32 31.1 -0.6
MJAR	Matsushiro Arr	46.63	340	P	P	13 32 31.4 -1.1
	comp=Z,23nm,0.7s,mb5.2,baz=171,slow=8.7,SNR=40					
MJAR				pP	pP	13 32 42.4 -1.6
	comp=Z,26nm,0.8s,baz=164,slow=7.5,SNR=10					
MJAR				PcP	PcP	13 34 06.0 0.0
	comp=Z,17nm,0.7s,baz=153,slow=4.4,SNR=6.9					
MJAR				ScP	ScP	13 37 55.6 -1.0
	comp=Z,0.6nm,0.3s,baz=179,slow=17,SNR=5.2					
MJAR				LR	LR	13 50 34.2
	comp=Z,2μm,20.5s,MS5.1,baz=185,slow=34					
MJAR	Matsushiro Arr	46.63	340	P	P	13 32 31.4 -1.1
MJAR				*PP	pP	13 32 42.4 -1.6
MJAR						13 34 06.0
MAJO	Matsushiro	46.63	340	*e*P	P	13 32 31.3 -1.2
MAJO				pmax	pmax	
	comp=Z,71nm,0.9s,mb5.6					
MAJO	Matsushiro	46.63	340	*e*P	P	13 32 31.3 -1.2
	comp=Z,71nm,0.9s,mb5.6					
MAT	Matsushiro	46.63	340	P	P	13 32 31.5 -1.0
MAT				S	S	13 39 10.0 -8.9
MCQ	Macquarie Isla	47.23	178	*e*P	P	13 32 37.4 +0.5
QZH	Quanzhou	48.51	312	⇑*i*P	P	13 32 48.5 +1.2
QZH				S	S	13 39 45.0 -1.0
QZH				pmax	pmax	
	comp=Z,140nm,0.9s,mb6.0					
QZH				pmax	pmax	
	comp=Z,2μm,4.0s					
QZH				LR	LR	
	comp=N,2μm,19.2s,MS5.5					
QZH				LR	LR	
	comp=E,5μm,21.0s,MS5.5					
QZH				LR	LR	
	comp=Z,10μm,30.5s					
ERM	Erimo	50.38	348	P	P	13 33 03.8 +2.5
	comp=Z,267nm,0.7s,mb6.4,SNR=5.6					
ERM	Erimo	50.38	348	*i*P	P	13 33 02.6 +1.3
ERM	Erimo	50.38	348	PFAKE		13 33 10.0 +8.7
ERM				LR	LR	
	comp=Z,4μm,21.0s,MS5.4					
SSE	Sheshan	50.64	321	P	P	13 33 04.5 +1.0
SSE				sP	sP	13 33 17.4 -2.4
SSE				S	S	13 40 19.1 +3.4
SSE				sS	sS	13 40 34.4 -0.5
SSE				pmax	pmax	
	comp=Z,43nm,1.0s,mb5.3					
SSE				pmax	pmax	
	comp=Z,660nm,8.0s					
SSE				LR	LR	
	comp=N,2μm,23.0s,MS5.2					
SSE				LR	LR	
	comp=E,2μm,23.0s,MS5.2					
SSE				LR	LR	
	comp=Z,3μm,21.8s,MS5.2					
GZH	Guangzhou	51.50	307	P	P	13 33 11.0 +0.9
GZH				S	S	13 40 26.8 -1.0
GZH				LR	LR	
	comp=N,1μm,25.7s,MS5.3					
GZH				LR	LR	
	comp=E,3μm,22.5s,MS5.3					
GZH				LR	LR	
	comp=Z,6μm,24.1s,MS5.5					
KSRS	Korea Array	51.62	331	P	P	13 33 10.9 +0.2
	comp=Z,54nm,0.9s,mb5.5,baz=148,slow=7.3,SNR=224					
KSRS				pP	pP	13 33 21.2 -1.1
	comp=Z,50nm,1.0s,baz=152,slow=6.9,SNR=11					
KSRS				PcP	PcP	13 34 25.0 +0.9
	comp=Z,8.6nm,0.7s,baz=148,slow=4.5,SNR=5.0					
KSRS				ScP	ScP	13 38 18.5 +0.6
	comp=Z,3.1nm,1.0s,baz=132,slow=4.6,SNR=3.5					
KSRS				LR	LR	13 54 11.6
	comp=Z,2μm,20.2s,MS5.0,baz=148,slow=35					
KSRS				PKPPKP		14 03 46.7
	comp=Z,0.6nm,0.8s,baz=246,slow=2.1,SNR=2.1					
KSRS	Korea Array	51.62	331	P	P	13 33 11.0 +0.3
KSRS				*PP	pP	13 33 21.3 -1.1
KSRS						13 34 25.0
KSRS				pmax	pmax	
	comp=Z,54nm,0.9s,mb5.5					
KSRS				pmax	pmax	
	comp=Z,51nm,1.0s,mb5.4					
KSRS				pmax	pmax	
	comp=Z,9.0nm,0.7s,mb4.8					
KSRS				pmax	pmax	
	comp=N,3.0nm,1.0s					
YUK	Yuzh-Kuril'sk	51.82	351	*e*P	pP	13 33 24.0 +0.3
YUK				*e*	PcP	13 34 29.6 +4.9
YUK				*e*S	sS	13 40 52.0 +1.2
YUK				pmax	pmax	
	comp=Z,2μm,4.6s					
YUK				smax		
	comp=E,2μm,8.5s					
INCN	Inchon	52.27	330	*e*P	P	13 33 15.9 +0.3
	comp=E,257nm,1.1s,mb6.1					
INCN	Inchon	52.27	330	P	P	13 33 16.3 +0.8
INCN	SNR=18					
INCN				P		13 33 16.3
	SNR=18					
QIZ	Qiongzhong	52.49	301	P	P	13 33 18.4 +0.9
QIZ				pP	pP	13 33 27.3 -1.9
QIZ				sP	sP	13 33 31.4 -2.5
QIZ				S	S	13 40 41.1 -0.5
QIZ				sS	sS	13 40 55.4 -5.5
QIZ				pmax	pmax	
	comp=Z,72nm,1.1s,mb5.5					
QIZ				pmax	pmax	
	comp=Z,830nm,8.8s					
QIZ				LR	LR	
	comp=N,2μm,22.8s,MS5.1					
QIZ				LR	LR	
	comp=E,1μm,25.8s,MS5.1					
QIZ				LR	LR	
	comp=Z,6μm,26.1s,MS5.5					
QIZ	Qiongzhong	52.49	301	*e*P	P	13 33 17.8 +0.3
	comp=Z,167nm,1.3s,mb5.8					
MYKOM	Kota Tinggi	52.88	278	P	P	13 33 19.9 -0.6
KIP	Kipapa	53.26	57	*e*P	P	13 33 23.7 +0.5
KIP				pmax	pmax	
	comp=Z,415nm,1.5s,mb6.1					
KIP	Kipapa	53.26	57	*e*P	P	13 33 23.7 +0.5
	comp=Z,415nm,1.5s,mb6.1					
KGM	Kluang	53.44	278	P	P	13 33 24.6 -0.1
PPT	Papeete	53.91	106	*e*P	P	13 33 29.0 +1.0
	comp=Z,117nm,1.5s,mb5.6					
PPT				*e*S	S	13 41 03.9 +3.0
	comp=Z,2μm,28.0s					
PPT				*e*SS	SS	13 44 47.7 +5.1
	comp=Z,1μm,26.0s					
PPT				*e*LQ		13 47 05.4
	comp=Z,7μm,26.2s					
PPT				*e*LR	LR	13 49 25.9
	comp=Z,5μm,22.8s,baz=277					
PPT	Papeete	53.91	106	P	P	13 33 28.5 +0.5
	comp=Z,49nm,0.8s,mb5.5,baz=337,slow=2.9,SNR=8.0					
PPT				pP	pP	13 33 40.4 +0.7
	comp=Z,54nm,0.8s,baz=60,slow=5.9,SNR=5.0					
PPT				LR	LR	13 51 48.9
	comp=Z,3μm,19.1s,MS5.4,baz=273,slow=31					
PPT	Papeete	53.91	106	*e*P	P	13 33 29.0 +1.0
PPT				*e*S	S	13 41 03.9 +3.0
PPT				*e*SS	SS	13 44 47.7 +5.1
PPT				pmax	pmax	
	comp=Z,117nm,1.5s					
PPT	Papeete	53.91	106	*e*P	P	13 33 29.0 +1.0
	comp=Z,117nm,1.5s,mb5.6					
PPT				*e*S	S	13 41 03.9 +3.0
PPT				*e*SS	SS	13 44 47.7 +5.1
PPT				*e*LQ		13 47 05.4
TIAR	Tiarei	54.12	106	*e*P	P	13 33 30.7 +1.1
	comp=Z,252nm,1.0s,mb6.1					
KTGM	Kuala Trenggan	54.28	282	P	P	13 33 30.9 +0.1
KHU	Kahuku	54.35	60	*e*P	P	13 33 32.1 +0.9
POHA	Pohakuloa	54.63	60	*e*P	P	13 33 34.0 +0.8
	comp=Z,562nm,1.3s,mb6.4					
VLA	Vladivostok	54.69	338	*d i*P	P	13 33 34.0 +0.8
VLA				pmax	pmax	
	comp=Z,134nm,1.2s,mb5.8					
STCH	Steam Cracks	54.83	60	*e*P	P	13 33 34.4 -0.3
WHN	Wuhan	54.84	315	⇑P	P	13 33 35.0 +0.5
WHN				sP	sP	13 33 50.1 -0.8
WHN				S	S	13 41 11.3 -1.7
WHN				pmax	pmax	
	comp=Z,110nm,0.9s,mb5.9					
WHN				pmax	pmax	
	comp=Z,2μm,9.1s					
WHN				LR	LR	
	comp=N,6μm,21.0s,MS5.7					
WHN				LR	LR	
	comp=E,2μm,17.5s,MS5.7					
WHN				LR	LR	
	comp=Z,6μm,19.5s,MS5.7					
YSS	Yuzh-Sakhalins	55.20	349	*i*P	P	13 33 37.3 +0.5
YSS				pmax	pmax	
	comp=Z,40nm,1.3s,mb5.3					
YSS	Yuzh-Sakhalins	55.20	349	*e*P	P	13 33 37.0 +0.3
	comp=Z,130nm,0.9s,mb6.0					
UBT	Ubonrachathani	55.29	294	⇓P	P	13 33 39.5 +1.4
	comp=Z,1μm,0.7s					
FRIM	Kepong	55.33	279	P	P	13 33 37.5 -0.9
MEH	Mehetia	55.36	107	*e*P	P	13 33 39.3 +0.7
	comp=Z,171nm,1.0s,mb6.0					
PMOR	Pomariorio Ree	55.40	103	*e*P	P	13 33 40.0 +1.1
	comp=Z,811nm,1.0s,mb6.7					
PMOR				*e*pP	pP	13 33 53.9 +3.3
	comp=Z,1μm,1.3s					
DL2	Dalian	55.91	328	P	P	13 33 42.4 +0.3
DL2				S	S	13 41 25.3 -1.7
DL2				pmax	pmax	
	comp=Z,80nm,0.9s,mb5.8					
DL2				pmax	pmax	
	comp=Z,100nm,4.7s					
DL2				LR	LR	
	comp=N,1μm,24.5s,MS4.9					
DL2				LR	LR	
	comp=E,720nm,24.5s,MS4.9					
DL2				LR	LR	
	comp=Z,2μm,25.6s,MS5.0					
IPM	Ipoh	56.16	280	P	P	13 33 43.9 -0.4
TIA	Tai'an	56.58	322	P	P	13 33 46.5 -0.4
TIA				pmax	pmax	
	comp=Z,54nm,0.6s,mb5.8					
KULM	Kulim	56.69	281	P	P	13 33 47.6 -0.5
KULM	Kulim	56.69	281	*e*P	P	13 33 46.9 -1.3
	comp=Z,276nm,1.0s,mb6.2					
MDJ	Mudanjiang	56.83	338	P	P	13 33 49.0 +0.5
MDJ				pP	pP	13 33 55.1 -5.1
MDJ				sP	sP	13 33 58.0 -6.9
MDJ				PcP	PcP	13 34 44.6 +0.7
MDJ				PP	PP	13 35 52.5 -2.8
MDJ				ScP	ScP	13 38 43.3 +2.9
MDJ				PcS	PcS	13 38 45.8 +1.3
MDJ				S	S	13 41 42.8 +3.8
MDJ				SS	SS	13 45 30.8 +2.9
MDJ				pmax	pmax	
	comp=Z,29nm,1.4s,mb5.1					
MDJ				pmax	pmax	
	comp=Z,740nm,7.7s					
MDJ				LR	LR	
	comp=N,980nm,23.7s					
MDJ				LR	LR	
	comp=E,880nm,30.8s					
MDJ				LR	LR	
	comp=Z,1μm,29.9s					
MDJ	Mudanjiang	56.83	338	*e*P	P	13 33 48.6 +0.1
	comp=Z,80nm,1.0s,mb5.7					
SNY	Shenyang	57.13	331	⇑P	P	13 33 50.4 -0.3
SNY				S	S	13 41 33.4 -10
SNY				pmax	pmax	
	comp=Z,26nm,1.4s,mb5.1					
SNY				pmax	pmax	
	comp=Z,920nm,7.7s					
SNY				LR	LR	
	comp=N,1μm,18.6s,MS5.2					
SNY				LR	LR	
	comp=E,2μm,18.6s,MS5.2					
SNY				LR	LR	
	comp=Z,3μm,37.2s					
SKR	Severo-Kuril's	57.64	0	*e*P	P	13 33 52.0 -2.1
SKR				*e*		13 34 11.9
SKR				*e*S	S	13 41 48.0 -1.5
SKR				*e*SS	SS	13 45 40.0 -0.4
SKR				pmax	pmax	
	comp=Z,220nm,1.0s,mb6.1					
SKR				pmax	pmax	
	comp=Z,2μm,8.0s					
SKR				smax		
	comp=N,3μm,12.0s					
SKR				smax		
	comp=E,5μm,12.0s					
SKR				MLR	MLR	
	comp=N,3μm,18.0s,MS5.6					
SKR				MLR	MLR	
	comp=E,3μm,18.0s,MS5.6					
SKR				MLR	MLR	
	comp=Z,3μm,18.0s,MS5.4					
KKTK	Khon Kaen	57.65	294	P	P	13 33 55.6 +0.8
CN2	Changchun	57.84	334	⇑P	P	13 33 55.6 0.0
CN2				PP	PP	13 36 05.3 +1.0
CN2				*e*S	S	13 41 49.3 -3.0
CN2				SS	SS	13 45 41.3 -2.5
CN2				pmax	pmax	
	comp=Z,30nm,1.3s,mb5.2					
CN2				pmax	pmax	
	comp=Z,200nm,3.0s					
CN2				LR	LR	
	comp=N,2μm,19.0s,MS5.2					
CN2				LR	LR	
	comp=E,900nm,19.0s,MS5.2					
CN2				LR	LR	
	comp=Z,2μm,20.0s,MS5.3					
PSI	Prapat	57.90	278	P	P	13 33 55.5 -1.2
	comp=Z,8.3nm,0.7s,mb4.9,baz=72,slow=9.7,SNR=8.4					
PSI				pP	pP	13 34 06.7 -1.8
	comp=Z,24nm,0.9s,baz=207,slow=17,SNR=12					
PSI				S	S	13 41 46.4 -7.9
	comp=Z,1.3nm,0.4s,baz=268,slow=16,SNR=1.3					
PSI	Prapat	57.90	278	P	P	13 33 55.5 -1.2
PSI				pP	pP	13 34 06.7 -1.8
PSI				S	S	13 41 46.4 -7.9
ENH	Enshi	58.17	312	*e*P	P	13 33 57.3 -0.9
	comp=Z,100nm,0.9s,mb5.8					
GYA	Guiyang	58.43	307	⇑*i*P	P	13 34 02.8 +2.6
GYA				pP	pP	13 34 11.3 -0.6
GYA				PcP	PcP	13 34 53.9 +3.3
GYA				PP	PP	13 36 14.3 +4.4
GYA				ScP	ScP	13 38 50.0 +2.0
GYA				sS	sS	13 42 15.9 -4.4
GYA				pmax	pmax	
	comp=Z,90nm,1.0s,mb5.8					
GYA				LR	LR	
	comp=N,16μm,16.8s,MS6.3					
GYA				LR	LR	
	comp=E,11μm,17.3s,MS6.3					
GYA				LR	LR	
	comp=Z,15μm,16.5s,MS6.2					
HABR	Khabarovsk	58.44	344	*de*P	P	13 33 59.4 -0.3
HABR				*e*SP	sP	13 34 11.8 -4.4
HABR						13 34 48.2
HABR				*e*		13 36 06.8
HABR				S	S	13 41 58.1 -1.9
HABR				*e*SS	sS	13 42 14.8 -4.7
HABR				*e*		13 43 44.4
HABR				*e*SS	SS	13 45 51.5 -1.5
HABR				pmax	pmax	
	comp=Z,98nm,1.8s,mb5.5					
HABR				pmax	pmax	
	comp=E,18nm,0.9s					
HABR				pmax	pmax	
	comp=N,22nm,1.0s					
HABR				MLR	MLR	
	comp=Z,1μm,22.0s,MS5.0					
COCO	West Island	58.52	260	PFAKE		13 34 10.0 +9.0
COCO				LR	LR	
	comp=Z,2μm,19.0s,MS5.3					
NNT	Nongplab	59.35	289	P	P	13 34 07.1 +0.4
BJT	Baijiatuau	59.68	325	*e*P	P	13 34 08.2 -0.4
BJT				pmax	pmax	
	comp=Z,24nm,0.4s					
BJT				MLR	MLR	
	comp=Z,3μm,22.0s					
BJT	Baijiatuau	59.68	325	*e*P	P	13 34 08.2 -0.4
	comp=Z,24nm,0.4s,mb5.6					
BJT				LR	LR	
	comp=Z,3μm,22.0s,MS5.3					
BJI	Beijing	59.70	325	P	P	13 34 08.4 -0.2
BJI				pP	pP	13 34 17.4 -3.1
BJI				sP	sP	13 34 19.9 -5.2
BJI				PP	PP	13 36 23.0 +2.1
BJI				S	S	13 42 12.8 -3.8
BJI				pmax	pmax	
	comp=Z,56nm,0.8s,mb5.7					
BJI				pmax	pmax	
	comp=Z,270nm,6.0s					
BJI				LR	LR	
	comp=N,2μm,19.2s,MS5.3					
BJI				LR	LR	
	comp=E,2μm,21.0s,MS5.3					
BJI				LR	LR	
	comp=Z,2μm,22.7s,MS5.3					
NST	Nakhon Sawan	59.88	293	⇓P	P	13 34 10.8 +0.4
	comp=Z,217nm,1.0s,mb6.1					
PET	Petropavlovsk	60.02	2	*e*P	P	13 34 10.9 +0.3
PET				*i*S	S	13 42 22.1 +1.8
PET				*e*SS	SS	13 46 19.0 +1.2
PET				pmax	pmax	
	comp=Z,900nm,16.1s					
PET				pmax	pmax	
	comp=Z,300nm,16.9s					
PET				pmax	pmax	
	comp=Z,88nm,1.1s,mb5.7					
PET				MLR	MLR	
	comp=Z,2μm,13.0s,MS5.4					
PET				MLR	MLR	
	comp=Z,2μm,19.0s					
PET	Petropavlovsk	60.02	2	*e*P	P	13 34 10.1 -0.5
	comp=Z,68nm,0.9s,mb5.7					
KLR	Kul'dur	60.09	342	*e*P	P	13 34 07.0 -4.1
KLR				*e*PPP		13 37 51.5
KLR				*e*S	S	13 42 13.5 -7.8
KLR				pmax	pmax	
	comp=Z,1μm,8.0s					
KLR				MLR	MLR	
	comp=E,1μm,14.0s					
KLR				MLR	MLR	
	comp=Z,2μm,14.0s,MS5.3					
PEA0B	Petropavlovsk-	60.09	1	*e*P	P	13 34 11.1 +0.1
PETK	Petropavlovsk-	60.09	1	P	P	13 34 11.2 +0.2
	comp=Z,28nm,0.7s,mb5.4,baz=149,slow=4.7,SNR=54					
PETK				pP	pP	13 34 23.1 +0.2
	comp=Z,43nm,0.8s,baz=154,slow=6.3,SNR=10					
PETK				LR	LR	13 56 19.4
	comp=Z,3μm,21.5s,MS5.3,baz=173,slow=32					
PETK				PKP2bc		14 03 41.5
	comp=Z,6.8nm,1.0s,baz=79,slow=7.7,SNR=6.4					
PETK				PKP2ab		14 03 56.2
	comp=Z,11nm,1.0s,baz=113,slow=15,SNR=3.9					
PETK	Petropavlovsk-	60.09	1	P	P	13 34 11.2 +0.2
PETK				*PP	pP	13 34 23.1 +0.2
PETK	Petropavlovsk-	60.09	1	P	P	13 34 11.2 +0.2
PETK				pP	pP	13 34 23.1 +0.2
PETK				LR	LR	13 56 19.4
PETK				⇑*e*		14 03 41.5

PETK			P'P'ab		14 03 56.2	
DRV	**Dumont d'Urvil**	**60.40 187**	P	**P**	**13 34 17.0**	**+4.0**
DRV			S	**S**	**13 42 27.0**	**+2.1**
DRV			L		13 49 00.0	
DRV			R		13 53 00.0	
TIY	**Taiyuan**	**60.42 321**	*e*P	**P**	**13 34 13.8**	**+0.1**
TIY			pP	pP	13 34 24.0	-1.5
TIY			S	**S**	**13 42 17.9**	**-8.1**
TIY			pmax	pmax		
	comp=Z,640nm,5.3s					
TIY			LR	LR		
	comp=N,1μm,18.5s,MS5.3					
TIY			LR	LR		
	comp=E,1μm,20.1s,MS5.3					
TIY			LR	LR		
	comp=Z,2μm,19.8s,MS5.3					
XAN	**Xi'an**	**60.60 316**	P	**P**	**13 34 14.5**	**-0.5**
XAN			pP	pP	13 34 23.8	-3.0
XAN			sP	sP	13 34 27.3	-4.2
XAN			PcP	PcP	13 34 58.4	-0.7
XAN			PP	PP	13 36 30.8	+1.8
XAN			ScP	ScP	13 38 55.5	-1.9
XAN			PcS	PcS	13 39 00.3	-1.4
XAN			S	**S**	**13 42 25.3**	**-3.2**
XAN			ScS	ScS	13 43 58.8	-4.1
XAN			pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0					
XAN			pmax	pmax		
	comp=Z,200nm,8.5s					
XAN			LR	LR		
	comp=N,1μm,21.0s,MS5.1					
XAN			LR	LR		
	comp=E,810nm,21.0s,MS5.1					
XAN			LR	LR		
	comp=Z,1μm,21.0s,MS5.0					
KMI	**Kunming**	**61.02 304**	P	**P**	**13 34 19.0**	**+1.0**
KMI			pP	pP	13 34 31.3	+1.4
KMI			sP	sP	13 34 36.8	+2.3
KMI			PP	PP	13 36 30.9	-2.0
KMI			S	**S**	**13 42 34.8**	**+0.6**
KMI			sS	sS	13 42 55.0	+1.2
KMI			SS	SS	13 46 35.8	+1.3
KMI			pmax	pmax		
	comp=Z,50nm,1.2s,mb5.5					
KMI			pmax	pmax		
	comp=Z,200nm,3.7s					
KMI			LR	LR		
	comp=N,1μm,19.9s,MS5.4					
KMI			LR	LR		
	comp=E,3μm,23.3s,MS5.4					
KMI			LR	LR		
	comp=Z,4μm,22.7s,MS5.5					
BDT	**Bhumibol Dam**	**61.40 294**	P	**P**	**13 34 15.0**	**-5.7**
	comp=Z,40nm,1.0s,mb5.5					
CHRT	**Chiangrai**	**61.57 297**	⇑P	**P**	**13 34 22.5**	**+0.7**
	comp=Z,895nm,1.0s,mb6.8					
CM31	**Chiang Mai Arr**	**61.84 295**	*e*P	**P**	**13 34 24.4**	**+0.8**
	comp=Z,196nm,1.0s,mb6.2					
CM31			LR	LR		
	comp=Z,1μm,22.0s,MS5.0					
CMAR	**Chiang Mai Arr**	**61.84 295**	P	**P**	**13 34 24.1**	**+0.5**
	comp=Z,64nm,0.8s,mb5.8,baz=119,slow=5.2,SNR=374					
CMAR			pP	pP	13 34 32.7	-2.8
	comp=Z,75nm,1.0s,baz=112,slow=4.5,SNR=17					
CMAR			sP	sP	13 34 38.1	-2.1
	comp=Z,150nm,1.0s,baz=118,slow=4.7,SNR=19					
CMAR			PKiKP	PKiKP	13 41 18.1	-0.4
	comp=Z,0.5nm,0.6s,baz=182,slow=2.7,SNR=1.5					
CMAR			S	**S**	**13 42 44.2**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=259,slow=1.5,SNR=1.1					
CMAR			LR	LR	13 59 29.6	
	comp=Z,945nm,20.6s,MS4.9,baz=300,slow=34					
CMAR			PKPPKP		14 03 17.9	
	comp=Z,2.4nm,1.0s,baz=268,slow=4.3,SNR=8.9					
CMAR			PKP2bc		14 03 38.5	
	comp=Z,5.4nm,0.8s,baz=280,slow=4.1,SNR=13					
CMAR			PKP2ab		14 03 51.9	
	comp=Z,6.6nm,1.1s,baz=269,slow=4.3,SNR=6.3					
CMAR	**Chiang Mai Arr**	**61.84 295**	P	**P**	**13 34 24.1**	**+0.5**
CMAR			pP	pP	13 34 32.7	-2.8
CMAR			sP	sP	13 34 38.1	-2.1
CHG	**Chiang Mai**	**61.96 296**	⇑P	**P**	**13 34 24.7**	**+0.2**
	comp=Z,218nm,1.0s,mb6.2					
CHTO	**Chiang Mai**	**61.96 296**	*e*P	**P**	**13 34 24.6**	**+0.1**
CHTO			pmax	pmax		
	comp=Z,403nm,1.4s,mb6.4					
CHTO			MLR	MLR		
	comp=Z,1μm,21.0s,MS5.1					
CHTO	**Chiang Mai**	**61.96 296**	*e*P	**P**	**13 34 24.6**	**+0.1**
	comp=Z,403nm,1.4s,mb6.4					
CHTO			LR	LR		
	comp=Z,1μm,21.0s,MS5.1					
CHTO	**Chiang Mai**	**61.96 296**	P	**P**	**13 34 25.1**	**+0.7**
	SNR=91					
CHTO			P		13 34 25.1	
	SNR=91					
CD2	**Chengdu**	**62.77 310**	P	**P**	**13 34 33.3**	**+3.7**
CD2			PP	PP	13 36 53.5	+5.3
CD2			S	**S**	**13 42 56.6**	**+0.6**
CD2			SS	SS	13 47 04.8	+3.2
CD2			pmax	pmax		
	comp=Z,80nm,0.7s,mb6.0					
CD2			pmax	pmax		
	comp=Z,9μm,7.4s					
CD2			LR	LR		
	comp=N,2μm,20.2s					
CD2			LR	LR		
	comp=Z,2μm,19.0s,MS5.4					
HHC	**Hu-ho-hao-te**	**62.89 323**	⇑P	**P**	**13 34 31.1**	**+0.8**
HHC			pP	pP	13 34 38.8	-3.4
HHC			sP	sP	13 34 42.3	-4.5
HHC			PP	PP	13 36 51.3	+2.2
HHC			ScP	ScP	13 39 07.8	+0.4
HHC			S	**S**	**13 42 58.0**	**+0.8**
HHC			sS	sS	13 43 11.0	-6.0
HHC			ScS	ScS	13 44 18.9	-1.0
HHC			SS	SS	13 47 06.3	+3.0
HHC			pmax	pmax		
	comp=Z,73nm,1.1s,mb5.7					
HHC			pmax	pmax		
	comp=Z,910nm,7.4s					
HHC			LR	LR		
	comp=N,2μm,17.5s,MS5.3					
HHC			LR	LR		
	comp=E,1μm,17.5s,MS5.3					
HHC			LR	LR		
	comp=Z,2μm,17.2s,MS5.4					
TAOE	**Nuku Hiva Isla**	**63.10 96**	*e*PP	PP	13 36 42.1	-9.3
	comp=Z,211nm,26.0s					
TAOE			*e*S	**S**	**13 43 04.1**	**+3.3**
	comp=Z,679nm,27.6s					
TAOE			*e*SS	SS	13 47 13.7	+6.3
	comp=Z,880nm,30.1s					
TAOE			*e*LQ		13 50 57.4	
	comp=Z,3μm,25.0s					
TAOE			*e*LR	LR	13 53 27.6	
	comp=Z,5μm,22.4s,baz=270					
TAOE	**Nuku Hiva Isla**	**63.10 96**	*e*P	**P**	**13 34 32.5**	**+0.3**
	comp=Z,362nm,0.9s,mb6.5					
TAOE			*e*PP	PP	13 36 42.1	-9.3
TAOE			*e*S	**S**	**13 43 04.1**	**+3.3**
TAOE			*e*SS	SS	13 47 13.7	+6.3
TAOE			*e*LQ		13 50 57.4	
ADK	**Adak**	**63.31 19**	*e*P	**P**	**13 34 32.8**	**0.0**
ADK			pmax	pmax		
	comp=Z,160nm,1.1s,mb6.1					
ADK			MLR	MLR		
	comp=Z,5μm,22.0s,MS5.7					
ADK	**Adak**	**63.31 19**	*e*P	**P**	**13 34 32.8**	**0.0**
	comp=Z,160nm,1.1s,mb6.1					
ADK			LR	LR		
	comp=Z,5μm,22.0s,MS5.7					
BTO	**Baotou**	**63.67 322**	*e*P	**P**	**13 34 34.8**	**-0.6**
BTO			pmax	pmax		
	comp=Z,34nm,0.6s,mb5.5					
HIA	**Hailar**	**64.56 335**	*e*P	**P**	**13 34 41.2**	**+0.1**
HIA			pmax	pmax		
	comp=Z,85nm,0.8s					
HIA	**Hailar**	**64.56 335**	*e*P	**P**	**13 34 41.2**	**+0.1**
	comp=Z,85nm,0.8s,mb5.8					
LZH	**Lanzhou**	**65.22 315**	⇑P	**P**	**13 34 46.8**	**+1.2**
LZH			pP	pP	13 34 57.3	-0.3
LZH			sP	sP	13 35 01.0	-1.2
LZH			PP	PP	13 37 12.8	+3.2
LZH			S	S	13 43 26.3	+0.1
LZH			sS	sS	13 43 42.6	-3.4
LZH			SS	SS	13 47 41.0	+1.3
LZH			pmax	pmax		
	comp=Z,130nm,1.5s,mb5.7					
LZH			pmax	pmax		
	comp=Z,790nm,6.8s					
LZH			LR	LR		
	comp=N,2μm,14.5s					
LZH			LR	LR		
	comp=Z,3μm,18.0s,MS5.5					
CASY	**Casey**	**66.74 198**	*e*P	**P**	**13 34 54.2**	**-0.7**
CASY	**Casey**	**66.74 198**	*e*P	**P**	**13 34 53.7**	**-1.2**
	comp=Z,206nm,1.4s,mb6.0					
CASY			LR	LR		
	comp=Z,4μm,20.0s,MS5.7					
RKT	**Rikitea**	**67.87 112**	*e*S	S	13 44 00.2	+1.3
	comp=Z,2μm,34.2s					
RKT			*e*SS	SS	13 48 26.0	+4.8
	comp=Z,1μm,32.0s					
RKT			*e*LQ		13 52 54.9	
	comp=Z,5μm,34.8s					
RKT			*e*LR	LR	13 55 48.4	
	comp=Z,12μm,28.2s,baz=276					
IMP	**Imphal**	**68.32 300**	*ex*	pP	13 35 15.0	-2.6
NRGR	**Nerungri**	**68.64 342**	*e*P	pP	13 35 24.4	+5.4
NRGR			S	S	13 44 09.0	+2.2
NRGR			smax			
	comp=N,34nm,0.5s					
CLNS	**Chul'man**	**68.74 342***c i*P		**P**	**13 35 08.3**	**+0.7**
CLNS			*e**PP	pP	13 35 18.4	-1.2
CLNS			*e*		13 35 34.3	
CLNS			*e*S	S	13 44 08.2	+0.3
CLNS			*e*		13 44 50.1	
CLNS			pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3					
CLNS			pmax	pmax		
	comp=N,22nm,1.3s					
CLNS			pmax	pmax		
	comp=E,8.0nm,0.8s					
CLNS			pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8					
CLNS			pmax	pmax		
	comp=N,29nm,1.5s					
CLNS			pmax	pmax		
	comp=E,18nm,1.0s					
CLNS			smax			
	comp=N,106nm,11.8s					
CLNS			smax			
	comp=E,322nm,10.6s					
CIT	**Chita**	**69.27 333**	*e*P	**P**	**13 35 10.5**	**-0.5**
CIT			*e*	pP	13 35 21.7	-1.3
GTA	**Gaotai**	**69.62 317**	⇑P	**P**	**13 35 14.4**	**+0.9**
GTA			pP	pP	13 35 22.3	-3.2
GTA			sP	sP	13 35 25.6	-4.5
GTA			PP	PP	13 37 51.1	+3.2
GTA			S	S	13 44 21.9	+2.9
GTA			sS	sS	13 44 34.8	-4.2
GTA			SKS		13 45 10.0	
GTA			SS	SS	13 48 52.8	+4.9
GTA			pmax	pmax		
	comp=Z,34nm,1.5s,mb5.1					
GTA			pmax	pmax		
	comp=Z,230nm,4.2s					
GTA			LR	LR		
	comp=N,1μm,22.8s,MS5.3					
GTA			LR	LR		
	comp=E,2μm,24.0s,MS5.3					
GTA			LR	LR		
	comp=Z,3μm,25.2s,MS5.4					
ULN	**Ulaanbaatar**	**69.75 327**	*e*P	**P**	**13 35 14.6**	**+0.6**
ULN			pmax	pmax		
	comp=Z,146nm,1.0s,mb5.9					
ULN	**Ulaanbaatar**	**69.75 327**	*e*P	**P**	**13 35 14.6**	**+0.6**
	comp=Z,146nm,1.0s,mb5.9					
ULN	**Ulaanbaatar**	**69.75 327**	P	**P**	**13 35 15.5**	**+1.4**
	SNR=90					
ULN			P		13 35 15.5	
	SNR=90					
SEY	**Seymchan**	**69.98 358***c i*P		**P**	**13 35 15.0**	**-0.1**
SONM	**Songino Array**	**70.09 327**	P	**P**	**13 35 16.9**	**+0.8**
	comp=Z,123nm,0.8s,mb5.9,baz=135,slow=6.1,SNR=420					
SONM			pP	pP	13 35 26.4	-1.7
	comp=Z,136nm,0.9s,baz=125,slow=5.2,SNR=20					
SONM			S	S	13 44 21.7	-2.4
	comp=Z,0.6nm,0.6s,baz=138,slow=6.7,SNR=1.6					
SONM			PKPPKP		14 03 18.2	
	comp=Z,22nm,1.1s,baz=289,slow=2.3,SNR=38					
SONM			LR	LR	14 06 15.2	
	comp=Z,2μm,20.9s,MS5.3,baz=128,slow=36					
SONM	**Songino Array**	**70.09 327**	P	**P**	**13 35 16.9**	**+0.8**
SONM			*PP	pP	13 35 26.4	-1.7
SONM			S	S	13 44 21.8	-2.4
SHL	**Shillong**	**70.33 300**	*i* P	**P**	**13 35 19.0**	**+0.9**
SHL			*i x*	x	13 44 26.0	
AGT	**Agartala**	**70.36 298**	*ex*	x	13 35 13.0	
AGT			*ex*	x	13 35 58.0	
SBA	**Scott Base**	**70.84 178**⇑	*e*P	**P**	**13 35 21.1**	**+0.8**
	comp=Z,361nm,1.5s,mb6.1					
TURI	**Tura**	**71.65 300**	*e*P	**P**	**13 35 26.5**	**+0.4**
TURI			*ex*	x	13 36 43.0	
YAK	**Yakutsk**	**71.98 347**	*e*P	**P**	**13 35 26.7**	**-0.6**
YAK			*e*	pP	13 35 40.3	+0.9
YAK			*e**PP	pP	13 35 45.2	+5.8
YAK			*e*		13 38 07.8	
YAK			*e*PPP		13 39 50.6	
YAK			*e*S	S	13 44 45.5	-0.1
YAK			*e*		13 45 09.7	
YAK			*e*SS	SS	13 49 30.0	+6.8
YAK			*e*SSS		13 52 28.2	
YAK			pmax	pmax		
	comp=E,10.0nm,0.9s					
YAK			pmax	pmax		
	comp=Z,97nm,1.0s,mb5.7					
YAK			pmax	pmax		
	comp=N,28nm,1.2s					
YAK			pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9					
YAK			smax			
	comp=N,494nm,5.1s					
YAK			smax			
	comp=E,359nm,3.3s					
YAK			MLR	MLR		
	comp=Z,2μm,21.0s,MS5.3					
YAK			MLR	MLR		
	comp=N,1μm,17.0s,MS5.3					
YAK			MLR	MLR		
	comp=E,411nm,14.0s,MS5.3					
YAK	**Yakutsk**	**71.98 347**	*e*P	**P**	**13 35 26.6**	**-0.7**
	comp=E,114nm,0.9s,mb5.8					
LSA	**Lhasa**	**72.28 304**	P	**P**	**13 35 31.3**	**+1.5**
LSA			pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6					
LSA			pmax	pmax		
	comp=Z,270nm,7.0s					
LSA			LR	LR		
	comp=N,580nm,24.0s,MS5.3					
LSA			LR	LR		
	comp=E,2μm,24.0s,MS5.3					
LSA			LR	LR		
	comp=Z,3μm,23.0s,MS5.5					
LSA	**Lhasa**	**72.28 304**	*e*P	**P**	**13 35 30.6**	**+0.8**
LSA			pmax	pmax		
	comp=Z,180nm,1.1s,mb5.9					
LSA	**Lhasa**	**72.28 304**	*e*P	**P**	**13 35 30.6**	**+0.8**
	comp=Z,180nm,1.1s,mb5.9					
CAL	**Calcutta**	**72.55 296**	*e*P	**P**	**13 35 30.7**	**-0.8**
CAL			⇓*i x*	x	13 35 46.6	
MIR	**Mirnyy**	**72.91 202**	*i* P	**P**	**13 35 32.8**	**0.0**
MIR			*e*	pP	13 35 44.0	-0.9
MIR			*i*	pP	13 35 45.0	+0.1
MIR			*e**PP	pP	13 35 54.0	+9.1
MIR			*e*S	S	13 44 59.0	+2.8
MIR			*e*SP		13 45 28.0	
MIR			*e*SP		13 45 34.0	
MIR			*e**SS	sS	13 45 49.0	+33
MIR			pmax	pmax		
	comp=Z,355nm,1.4s,mb6.1					
MIR			pmax	pmax		
	comp=Z,909nm,3.0s					
MIR			pmax	pmax		
	comp=N,510nm,6.0s					
MIR			pmax	pmax		
	comp=E,800nm,4.0s					
MIR			smax			
	comp=N,2μm,11.0s					
MIR			smax			
	comp=E,490nm,14.0s					
BOD	**Bodaibo**	**73.20 338**	*e*P	**P**	**13 35 34.1**	**-0.5**
BOD			pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3					
ZAK	**Zakamensk**	**73.23 328**⇓	*e*P	**P**	**13 35 35.1**	**+0.1**
ZAK			pmax	pmax		
	comp=Z,72nm,1.2s,mb5.5					
TLY	**Talaya**	**73.78 329**	P	**P**	**13 35 38.0**	**-0.2**
	comp=Z,402nm,1.0s,mb6.3,SNR=14					
TLY	**Talaya**	**73.78 329***c i*P		**P**	**13 35 38.4**	**+0.2**
TLY			*e*	pP	13 35 47.8	-2.5
TLY			*e*S	S	13 45 07.0	+0.5
TLY			*e*		13 45 42.8	
TLY			pmax	pmax		
	comp=Z,57nm,1.2s,mb5.4					
TLY			MLR	MLR		
	comp=Z,1μm,20.0s,MS5.1					
TLY	**Talaya**	**73.78 329**	*e*P	**P**	**13 35 37.8**	**-0.4**
	comp=Z,67nm,0.9s,mb5.6					
TLY	**Talaya**	**73.78 329**	P	**P**	**13 35 39.0**	**+0.8**
	SNR=26					
TLY			P		13 35 39.0	
	SNR=26					
IRK	**Irkutsk**	**73.80 330**	*e*P	**P**	**13 35 37.8**	**-0.4**
IRK			*e*	pP	13 35 47.3	-3.0
IRK			*e*		13 35 56.8	
IRK			*e*S	S	13 45 03.4	-3.2
IRK			*e*		13 45 43.1	
IRK			pmax	pmax		
	comp=Z,94nm,1.9s,mb5.4					
MOY	**Mondy**	**75.15 328**	*e*P	**P**	**13 35 46.6**	**+0.5**
MOY			pmax	pmax		
	comp=Z,102nm,1.6s,mb5.5					
BILL	**Bilibino**	**75.40 4**	*i* P	**P**	**13 35 47.2**	**0.0**
BILL			pmax	pmax		
	comp=Z,104nm,1.0s,mb5.7					
BILL	**Bilibino**	**75.40 4**⇑	*i* P	**P**	**13 35 47.2**	**0.0**
	comp=Z,261nm,1.4s,mb6.0					
BILL			LR	LR		
	comp=Z,1μm,19.0s,MS5.2					
GUN	**Gumba**	**76.14 301**	*e*P	**P**	**13 35 52.6**	**+0.2**
	comp=Z,501nm,0.8s,mb6.5					
PKI	**Pulchoki**	**76.45 300**	*e*P	**P**	**13 35 54.1**	**0.0**
	comp=Z,642nm,1.3s,mb6.4					
PKIN	**Phulchoki**	**76.47 300**	*e*P	**P**	**13 35 54.6**	**+0.4**
	comp=Z,181nm,0.7s,mb6.1					
PALK	**Pallekele**	**76.54 279**	P	**P**	**13 35 55.7**	**+0.8**
	comp=Z,574nm,1.1s,mb6.4,SNR=5.9					
PALK	**Pallekele**	**76.54 279**	P	**P**	**13 35 54.9**	**0.0**
	comp=Z,22nm,0.8s,mb5.1,baz=106,slow=6.3,SNR=11					
PALK			pP	pP	13 36 05.8	-1.3
	comp=Z,75nm,0.9s,baz=100,slow=5.3,SNR=16					
KKN	**Kakani**	**76.62 301**	*e*P	**P**	**13 35 55.1**	**0.0**
	comp=Z,254nm,0.8s,mb6.2					
DMN	**Daman**	**76.72 300**	*e*P	**P**	**13 35 55.9**	**+0.2**
	comp=Z,549nm,0.9s,mb6.5					
KDAK	**Kodiak Island**	**76.88 25**	*i* P	**P**	**13 35 57.7**	**+1.9**
GKN	**Gorkha**	**77.23 301**	*e*P	**P**	**13 35 58.4**	**-0.1**
	comp=Z,770nm,1.1s,mb6.5					
TNA	**Tin City**	**77.24 15**	*e*P	**P**	**13 35 57.1**	**-0.6**
	comp=Z,64nm,1.2s,mb5.4					
SVW2	**Sparrevohn**	**77.78 22**	*e*P	**P**	**13 36 01.0**	**+0.2**
KOLN	**Koldanda**	**78.06 300**	*e*P	**P**	**13 36 02.8**	**-0.3**
	comp=Z,368nm,0.9s,mb6.3					
RSO	**Redoubt South**	**78.45 23**	*e*P	**P**	**13 36 03.7**	**-0.9**
PYUN	**Piuthan**	**78.66 300**	*e*P	**P**	**13 36 05.8**	**-0.6**
TTA	**Tatalina**	**78.83 20**	*e*P	**P**	**13 36 06.7**	**+0.1**
SEW	**Seward**	**79.56 24**	*e*P	**P**	**13 36 10.1**	**-0.6**
	comp=Z,94nm,1.0s,mb5.7					
SEW			*e*	pP	13 36 22.1	-0.7
WMQ	**Urumqi**	**79.71 317**	P	**P**	**13 36 12.1**	**+0.3**
WMQ			PcP	PcP	13 36 20.3	+0.8
WMQ			PP	PP	13 39 15.5	+2.2
WMQ			S	S	13 46 08.3	-3.2
WMQ			SKS		13 46 17.1	
WMQ			ScS	ScS	13 46 27.5	-5.3
WMQ			SS	SS	13 51 19.1	-1.9
WMQ			pmax	pmax		
	comp=Z,93nm,1.2s,mb5.6					
WMQ			pmax	pmax		
	comp=Z,1μm,4.5s					
WMQ			LR	LR		
	comp=N,1μm,20.0s,MS5.5					
WMQ			LR	LR		
	comp=E,2μm,21.0s,MS5.5					
WMQ			LR	LR		
	comp=Z,2μm,22.0s,MS5.4					
RC01	**Rabbit Creek A**	**80.01 24**	*e*P	**P**	**13 36 12.0**	**-1.1**
PPLA	**Purkeypile**	**80.16 21**	*e*P	**P**	**13 36 13.2**	**-0.6**
	comp=Z,125nm,1.3s,mb5.7					
HYB	**Hyderabad**	**80.36 289**	*i* P	**P**	**13 36 14.5**	**-1.4**
	comp=Z,130nm,1.0s,mb5.8					
HYB			*e*	pP	13 36 24.5	-3.6
HYB			*e*S	S	13 46 16.0	-3.3
PMR	**Palmer**	**80.54 23**	*e*P	**P**	**13 36 15.0**	**-0.9**
PMR			pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2					
PMR	**Palmer**	**80.54 23**	*e*P	**P**	**13 36 15.0**	**-0.9**
	comp=Z,40nm,1.2s,mb5.2					
NGP	**Nagpur**	**80.61 293**⇑	*i x*	**P**	**13 36 12.1**	**-5.1**
NGP			*ex*	x	13 36 14.9	
	comp=Z,182nm,1.6s					
NGP			*ex*	x	13 46 14.5	
TIXI	**Tiksi**	**80.71 352***ce*P		**P**	**13 36 15.3**	**-1.3**
TIXI			*e*	pP	13 36 27.0	-1.8
TIXI			*e*S	S	13 46 17.1	-3.8
TIXI			*e*SSS		13 54 53.2	
TIXI			pmax	pmax		
	comp=Z,35nm,1.5s,mb5.1					
TIXI			MLR	MLR		
	comp=Z,1μm,21.0s,MS5.2					
TIXI	**Tiksi**	**80.71 352**	*e*P	**P**	**13 36 15.7**	**-0.9**
	comp=Z,68nm,1.3s,mb5.4					
CHUM	**Lake Minchumin**	**80.72 21**	*e*P	**P**	**13 36 16.3**	**-0.5**
	comp=Z,159nm,1.1s,mb5.9					
CHUM			*e*	pP	13 36 25.9	-3.1
KTH	**Kantishna Hill**	**81.02 21**	*e*P	**P**	**13 36 17.1**	**-1.2**
	comp=Z,107nm,1.1s,mb5.7					
TRF	**Thorofare Moun**	**81.18 21**	*e*P	**P**	**13 36 17.8**	**-1.5**
	comp=Z,52nm,0.7s,mb5.6					
TRF			*e*PcP	PcP	13 36 22.4	-3.0
BPAW	**Bear Paw Mtn.**	**81.32 21**	*e*P	**P**	**13 36 18.4**	**-1.6**
	comp=Z,89nm,1.3s,mb5.5					
BPAW			*e*	pP	13 36 30.8	-1.4
PTH	**Pithoragarh**	**81.37 301**	*e*P	**P**	**13 36 20.5**	**-0.6**
DIV	**Divide**	**81.64 25**	*e*P	**P**	**13 36 21.2**	**-0.5**
	comp=Z,100nm,1.2s,mb5.6					
DIV			*e*	pP	13 36 33.5	-0.5
MCK	**McKinley**	**81.84 22**	*e*P	**P**	**13 36 21.2**	**-1.6**
MCK			*e*	pP	13 36 33.8	-1.2
MCK			pmax	pmax		
	comp=Z,296nm,1.2s,mb6.1					
MCK	**McKinley**	**81.84 22**	*e*P	**P**	**13 36 21.2**	**-1.6**
	comp=Z,296nm,1.2s,mb6.1					
MCK			*e*	pP	13 36 33.8	-1.2
PAF	**Port-aux-Franc**	**81.90 221**	*e*P	**P**	**13 36 23.3**	**-0.2**
PAF			*e*	pP	13 36 35.6	-0.1
PAF			pmax	pmax		
	comp=Z,251nm,1.3s,mb6.0					
PAF	**Port-aux-Franc**	**81.90 221**	*e*P	**P**	**13 36 23.3**	**-0.2**
	comp=Z,251nm,1.3s,mb6.0					
PAF			*e*	pP	13 36 35.6	-0.1
BHPL	**Bhopal**	**82.49 295**	*e*P	**P**	**13 36 24.7**	**-2.4**
BHPL			AMb	AMB	13 36 36.9	
	comp=Z,153nm,0.9s,mb5.9					
BHPL			*ex*	x	13 46 34.6	
DGAR	**Diego Garcia**	**82.81 263**	PFAKE		13 36 40.0	+11
DGAR			LR	LR		
	comp=Z,2μm,20.0s,MS5.4					
COLA	**College**	**82.88 21**	*e*P	**P**	**13 36 26.3**	**-1.8**
COLA			*e*	pP	13 36 39.6	-0.8
COLA			pmax	pmax		
	comp=Z,125nm,1.2s,mb5.8					
COLA			MLR	MLR		
	comp=Z,3μm,21.0s,MS5.6					
COLA	**College**	**82.88 21**	*e*P	**P**	**13 36 26.3**	**-1.9**
	comp=Z,125nm,1.2s,mb5.8					
COLA			*e*	pP	13 36 39.6	-0.8
COLA			LR	LR		
	comp=Z,3μm,21.0s,MS5.6					
DDI	**Dehra Dun**	**83.37 302**	*e*P	**P**	**13 36 29.9**	**-1.6**
DDI			*ex*	x	13 46 47.0	
MENT	**Mentasta**	**83.40 24**	*e*P	**P**	**13 36 29.7**	**-1.2**
MENT			*e*	pP	13 36 43.0	-0.2

COLD Coldfoot 83.45 18 *eP* **P 13 36 30.8 -0.3**
comp=Z,108nm,1.5s,mb5.7
PNL Peninsula 83.72 27 *eP* **P 13 36 32.3 -0.3**
comp=Z,110nm,1.2s,mb5.9
PNL *e* pP 13 36 45.0 +0.2
NDI New Delhi 83.75 300 *ex* **P 13 36 30.0 -3.5**
NDI *ex* x 13 46 46.0
MK31 Makanchi Array 84.27 318⇑*iP* **P 13 36 35.5 -0.2**
MKAR Makanchi Array 84.27 318 P **P 13 36 35.7 0.0**
comp=Z,216nm,0.7s,mb6.4,baz=98,slow=6.6,SNR=1317
MKAR pP pP 13 36 45.2 -2.8
comp=Z,103nm,0.8s,baz=104,slow=5.1,SNR=10.0
MKAR S S 13 46 47.6 -11
comp=Z,0.9nm,1.0s,baz=350,slow=6.4,SNR=2.1
MKAR PKKPbc PKKPbc 13 54 47.8 -2.7
comp=Z,2.4nm,0.7s,baz=286,slow=2.5,SNR=14
MKAR PKPPKP 14 02 52.0
comp=Z,1.7nm,0.7s,baz=282,slow=1.1,SNR=8.8
MKAR LR LR 14 14 27.6
comp=Z,829nm,20.2s,MS5.1,baz=108,slow=36
MKAR Makanchi Array 84.27 318 P **P 13 36 35.7 0.0**
MKAR *PP pP 13 36 45.2 -2.8
MKAR S S 13 46 47.6 -11
MKAR Makanchi Array 84.27 318 P **P 13 36 35.7 0.0**
MKAR pP pP 13 36 45.2 -2.8
MKAR S S 13 46 47.6 -11
MKAR PKKPbc PKKPbc 13 54 47.8 -2.7
MKAR P'P' 14 02 52.0
MKAR LR LR 14 14 27.6
KAD Karad 84.45 288 *eP* **P 13 36 35.0 -2.2**
KAD *ex* x 13 46 47.2
SDNR Sundarnagar 84.53 303 *eP* **P 13 36 37.5 +0.1**
SIT Sitka 84.62 31 *eP* **P 13 36 37.6 +0.4**
SIT pmax pmax
comp=Z,24nm,1.0s,mb5.3
SIT Sitka 84.62 31 *eP* **P 13 36 37.6 +0.3**
comp=Z,24nm,1.0s,mb5.3
MAW Mawson 84.63 203 *eP* **P 13 36 36.8 -0.4**
comp=Z,98nm,1.1s,mb5.8
MAW *e*pP pP 13 36 49.1 -0.4
MAW *e*S S 13 46 57.2 -4.0
MAW Mawson 84.63 203 P **P 13 36 36.8 -0.3**
comp=Z,135nm,1.1s,mb6.0,baz=92,slow=6.5,SNR=104
MAW pP pP 13 36 48.8 -0.6
comp=Z,324nm,1.1s,baz=90,slow=6.3,SNR=27
MAW LR LR 14 08 50.1
comp=Z,1μm,21.6s,MS5.2,baz=89,slow=32
MAW Mawson 84.63 203 P **P 13 36 36.8 -0.4**
MAW *PP pP 13 36 48.8 -0.7
ZAA0 Zalesovo Array 84.95 326⇑*iP* **P 13 36 37.6 -1.4**
ZALV Zalesovo Beam 84.95 326 P **P 13 36 37.5 -1.5**
comp=Z,97nm,0.7s,mb6.1,baz=112,slow=5.7,SNR=327
ZALV S S 13 46 51.6 -13
comp=Z,0.5nm,0.4s,baz=145,slow=5.3,SNR=2.1
ZALV PKKPbc PKKPbc 13 54 46.2 -2.9
comp=Z,2.0nm,0.5s,baz=294,slow=2.7,SNR=7.2
ZALV PKP2bc 14 02 41.7
comp=Z,0.6nm,0.5s,baz=270,slow=2.2,SNR=2.2
ZALV PKPPKP 14 02 53.3
comp=Z,3.8nm,0.8s,baz=329,slow=1.7,SNR=9.7
ZALV LR LR 14 15 15.5
comp=Z,1μm,20.9s,MS5.3,baz=104,slow=36
ZALV Zalesovo Beam 84.95 326 P **P 13 36 37.5 -1.5**
ZALV S S 13 46 51.6 -13
ZALV Zalesovo Beam 84.95 326 P **P 13 36 37.5 -1.5**
ZALV S S 13 46 51.6 -13
ZALV PKKPbc PKKPbc 13 54 46.2 -2.9
ZALV ⇑*e* 14 02 41.7
ZALV P'P' 14 02 53.3
ZALV LR LR 14 15 15.5
POO Poona 84.96 289 *eP* **P 13 36 37.9 -1.9**
POO *ex* x 13 36 47.2
POO AMb AMB 13 36 50.6
comp=Z,169nm,0.8s,mb6.2
EGAK Eagle 85.29 22 *eP* **P 13 36 39.9 -0.5**
comp=Z,44nm,0.9s,mb5.6
SKAG Skagway 85.53 28 *eP* **P 13 36 41.8 +0.1**
comp=Z,72nm,2.1s,mb5.5
AJM Ajmer 85.57 297 *i*P **P 13 36 41.0 -1.7**
DAWY Dawson 85.65 23 *eP* **P 13 36 42.3 +0.1**
THN Thein Dam 85.76 303 *eP* **P 13 36 41.2 -2.3**
NVS Novosibirsk 86.11 326⇑*iP* **P 13 36 43.7 -1.0**
NVS *i* pP 13 36 56.5 -0.6
NVS *i* S S 13 47 02.7 -13
NVS pmax pmax
comp=N,65nm,1.6s
NVS pmax pmax
comp=E,123nm,1.6s
NVS pmax pmax
comp=Z,228nm,1.6s,mb6.2
NVS pmax pmax
comp=N,30nm,1.8s
NVS pmax pmax
comp=E,40nm,1.8s
NVS pmax pmax
comp=Z,35nm,1.8s,mb5.3
NVS smax
comp=N,90nm,2.3s
NVS smax
comp=E,68nm,1.8s
KSH Kashi 86.96 310⇑*iP* **P 13 36 50.8 +1.5**
KSH *e*pP pP 13 36 57.8 -3.8
KSH *e*sP sP 13 37 01.8 -4.4
KSH *e*PP PP 13 40 15.3 +2.4
KSH *e*SKS 13 47 12.9
KSH *e*S S 13 47 24.4 -0.7
KSH *e*SS SS 13 53 09.9 +1.2
KSH pmax pmax
comp=Z,440nm,1.7s,mb6.4
KSH LR LR
comp=N,440nm,14.9s,MS5.4
KSH LR LR
comp=E,1μm,18.3s,MS5.4
KSH LR LR
comp=Z,1μm,20.1s,MS5.4
ULHL Ulahol 87.33 313 P **P 13 36 51.7 +0.7**
SNR=6.9
HOPS Hopland 87.42 50 PFAKE 13 37 00.0 +8.5
HOPS LR LR
comp=Z,2μm,22.0s,MS5.6
KURK Kurchatov 87.66 322 P **P 13 36 51.0 -1.4**
comp=Z,53nm,0.7s,mb5.9,baz=104,slow=3.8,SNR=61
KURK PKKPbc PKKPbc 13 54 38.4 -4.1
comp=Z,3.9nm,0.6s,baz=286,slow=3.0,SNR=12
KURK PKPPKP 14 02 45.2
comp=Z,0.6nm,0.3s,baz=282,slow=2.8,SNR=6.2
KURK Kurchatov 87.66 322*c iP* **P 13 36 51.3 -1.0**
KURK pmax pmax
comp=Z,154nm,1.7s,mb6.0
KURK Kurchatov 87.66 322 ⇓P **P 13 36 52.3 -0.1**
SNR=63
KURK ⇓P 13 36 52.3
SNR=63
DLBC Dease Lake 87.77 30 *eP* **P 13 36 52.7 0.0**
DLBC *e* pP 13 37 05.4 +0.3
TKM2 Tokmak 2 87.93 314 P **P 13 36 53.9 0.0**
SNR=99
TKM2 Tokmak 2 87.93 314 *eP* **P 13 36 53.4 -0.5**
TKM2 pmax pmax
comp=Z,86nm,0.7s,mb6.1
TKM2 Tokmak 2 87.93 314 *eP* **P 13 36 53.4 -0.5**
comp=Z,86nm,0.7s,mb6.1
KZA Kyzart 88.02 313 P **P 13 36 55.4 +1.1**
SNR=56
WDC Whiskeytown Da 88.13 49 *eP* **P 13 36 55.7 +0.9**
WDC pmax pmax
comp=Z,43nm,1.8s,mb5.4
WDC Whiskeytown Da 88.13 49 *eP* **P 13 36 55.7 +0.9**
comp=Z,43nm,1.8s,mb5.4
HUMO Hull Mountain 88.21 47 *eP* **P 13 36 54.9 -0.3**
comp=Z,26nm,1.1s,mb5.4
YBH Yreka Blue Hor 88.22 48 *eP* **P 13 36 56.3 +1.0**
YBH pmax pmax
comp=Z,26nm,1.0s
YBH Yreka Blue Hor 88.22 48 *eP* **P 13 36 56.3 +1.1**
comp=Z,26nm,1.0s,mb5.4
KBK Karagaybulak 88.35 313 P **P 13 36 55.8 0.0**
SNR=42
COR Corvallis 88.36 45 PFAKE 13 37 10.0 +14
COR LR LR
comp=Z,2μm,20.0s,MS5.6
CHMS Chumysh 88.56 313 P **P 13 36 56.5 -0.3**
SNR=52
UCH Uchtor 88.58 313 P **P 13 36 57.7 +0.7**
SNR=59
UCH Uchtor 88.58 313 *eP* **P 13 36 57.3 +0.4**
comp=Z,11nm,0.6s,mb5.4
E03A Lebam 88.58 43⇑P **P 13 36 58.3 +1.4**
baz=89
E03A ⇑sP sP 13 37 10.8 -3.0
baz=89
FRU Bishkek 88.62 313⇑*iP* **P 13 36 56.0 -1.1**
FRU *i* pP 13 37 07.0 -2.5
FRU *e* 13 47 18.0
FRU *e*S S 13 47 38.0 -2.8
FRU pmax pmax
comp=Z,160nm,1.8s,mb6.0
AAK Ala-Archa 88.67 313 P **P 13 36 57.0 -0.4**
comp=Z,546nm,0.6s,SNR=32
AAK Ala-Archa 88.67 313 P **P 13 36 57.5 +0.1**
SNR=41
AAK Ala-Archa 88.67 313 P **P 13 36 57.1 -0.3**
comp=Z,55nm,0.8s,mb5.9,baz=117,slow=4.0,SNR=98
AAK PKKPbc PKKPbc 13 54 38.8 -0.8
baz=233,slow=1.9
AAK PKPPKP 14 02 45.0
comp=Z,2.2nm,0.6s,baz=158,slow=4.2,SNR=8.0
AAK Ala-Archa 88.67 313*c iP* **P 13 36 57.3 -0.1**
AAK pmax pmax
comp=Z,41nm,0.8s,mb5.8
AAK Ala-Archa 88.67 313 P **P 13 36 57.1 -0.3**
AAK PKKPbc PKKPbc 13 54 38.8 -0.8
AAK P'P' 14 02 45.0
AAK LR LR
comp=Z,1μm,20.0s,MS5.3
AAK Ala-Archa 88.67 313 P **P 13 36 57.7 +0.4**
SNR=38
AAK P 13 36 57.7
SNR=38
USP Ospenovka 88.79 314 P **P 13 36 57.7 -0.2**
SNR=101
AML Almayashu 89.16 312 PFAKE 13 37 10.0 +10
AML LR LR
comp=Z,257nm,22.0s,MS4.6
EKS2 Erkin-Say 89.20 313 P **P 13 37 00.0 +0.2**
SNR=44
EKS2 Erkin-Say 89.20 313 *eP* **P 13 36 59.6 -0.3**
comp=Z,57nm,0.9s,mb5.9
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.3
F04A Amboy 89.24 44 ⇓sP sP 13 37 13.6 -3.2
baz=89
PKM Peak Mountain 89.25 55⇑P **P 13 37 01.8 +1.5**
baz=89,SNR=6.3
PKM ⇓sP sP 13 37 13.9 -3.3
baz=89
CMB Columbia Colle 89.32 52 PFAKE 13 37 10.0 +9.5
CMB LR LR
comp=Z,1μm,22.0s,MS5.3
INK Inuvik 89.53 21 *eP* **P 13 36 59.5 -1.3**
INK *e* pP 13 37 11.3 -1.9
INK pmax pmax
comp=Z,138nm,1.4s
INK Inuvik 89.53 21 *eP* **P 13 36 59.5 -1.3**
comp=Z,138nm,1.4s,mb6.1
INK *e* pP 13 37 11.3 -1.9
BHJ Bhuj 89.54 293 *ex* x 13 36 56.5
BHJ AMb AMB 13 37 20.3
comp=Z,266nm,1.9s,mb6.2
BEKR Beckwourth 89.64 50 ⇓P **P 13 37 02.3 +0.3**
baz=90,SNR=7.9
BEKR ⇓sP pP 13 37 15.5 +1.1
baz=90
K05A Summer Lake 89.73 47 ⇓P **P 13 37 02.7 +0.4**
baz=90,SNR=5.7
K05A ⇓sP sP 13 37 16.3 -2.9
baz=90
D05A Enumclaw 89.77 42 ⇓sP pP 13 37 15.6 +0.8
baz=90
JCW Jim Creek 90.00 41 *eP* **P 13 37 03.2 -0.2**
JCW *e* pP 13 37 16.1 +0.3
SCI San Clemente I 90.00 57⇑sP sP 13 37 18.5 -2.2
baz=90
WCN Washoe City 90.01 51 ⇓P **P 13 37 04.8 +1.1**
baz=90
MOD Modoc 90.02 48 *eP* **P 13 37 03.5 -0.2**
comp=Z,34nm,1.0s,mb5.6
CIS Catalina Islan 90.19 57⇑sP pP 13 37 16.8 -0.3
baz=90
ISA Isabella 90.46 54 ⇓P **P 13 37 06.3 +0.4**
baz=90,SNR=7.7
ISA ⇓sP sP 13 37 19.5 -3.3
baz=90
ISA Isabella 90.46 54 *eP* **P 13 37 05.6 -0.3**
ISA pmax pmax
comp=Z,22nm,1.1s,mb5.4
ISA Isabella 90.46 54 *eP* **P 13 37 05.6 -0.3**
comp=Z,22nm,1.1s,mb5.4
PASC Pasadena Art C 90.48 56 *eP* **P 13 37 05.1 -0.9**
comp=Z,392nm,1.5s,mb6.5
PASC *e* pP 13 37 17.2 -1.2
MWC Mount Wilson 90.59 56 *eP* **P 13 37 07.1 +0.6**
MWC *e* pP 13 37 18.4 -0.5
MWC pmax pmax
comp=Z,180nm,1.1s,mb6.3
MWC Mount Wilson 90.59 56 *eP* **P 13 37 07.1 +0.5**
comp=Z,180nm,1.1s,mb6.3
MWC *e* pP 13 37 18.4 -0.6
EDW2 Edwards Air Fo 90.74 55 P **P 13 37 07.9 +0.7**
baz=91,SNR=12
EDW2 ⇓sP pP 13 37 19.6 0.0
baz=91
BFSC Mount Baldy St 90.92 56 P **P 13 37 08.7 +0.6**
baz=91,SNR=9.7
BFSC ⇓sP pP 13 37 21.6 +1.1
baz=91
I07A Izee 90.95 46⇑P **P 13 37 08.1 +0.1**
baz=91
I07A ⇓sP pP 13 37 20.4 0.0
baz=91
NVAR Mina Array Bea 91.00 52 P **P 13 37 08.8 +0.5**
comp=Z,7.0nm,0.8s,mb5.0,baz=254,slow=5.1,SNR=30
NVAR pP pP 13 37 21.0 +0.3
comp=Z,18nm,1.0s,baz=247,slow=5.8,SNR=14
NVAR PP PP 13 40 45.5 +0.3
comp=Z,2.2nm,1.1s,baz=255,slow=9.3,SNR=1.7
NVAR PKiKP PKiKP 13 42 01.9 +0.4
comp=Z,1.0nm,0.7s,baz=245,slow=1.9,SNR=1.7
NVAR PKKPbc PKKPbc 13 54 32.1 -1.5
comp=Z,1.0nm,0.7s,baz=136,slow=2.4,SNR=6.3
NVAR PKPPKP 14 02 40.7
comp=Z,1.3nm,0.9s,baz=77,slow=4.2,SNR=7.8
NVAR Mina Array Bea 91.00 52 P **P 13 37 08.8 +0.5**
NVAR pP pP 13 37 21.0 +0.3
NVAR PP PP 13 40 45.5 +0.3
LRMC Laurel Mountai 91.07 55⇑P **P 13 37 09.7 +1.0**
baz=91,SNR=14
LRMC ⇑sP pP 13 37 21.3 +0.2
baz=91
DAC Darwin (Calif) 91.25 54 PFAKE 13 37 20.0 +10
DAC LR LR
comp=Z,3μm,19.0s,MS5.7
MPMC Manual Prospec 91.31 54 ⇓P **P 13 37 10.5 +0.6**
baz=91,SNR=13
MPMC ⇑sP pP 13 37 22.9 +0.7
baz=91
WVOR Wild Horse Val 91.33 48 *eP* **P 13 37 09.4 -0.4**
WVOR pmax pmax
comp=Z,42nm,1.3s,mb5.6
WVOR Wild Horse Val 91.33 48 *eP* **P 13 37 09.4 -0.3**
comp=Z,42nm,1.3s,mb5.6
G08A Pilot Rock 91.52 45⇑sP pP 13 37 23.8 +0.8
baz=92
GRAC Grapevine Rang 91.53 53 ⇓P **P 13 37 11.6 +0.7**
baz=92
GRAC ⇓sP pP 13 37 23.6 +0.3
baz=92
J08A Circle Bar Ran 91.58 47 ⇓P **P 13 37 10.9 0.0**
baz=92
J08A ⇓sP sP 13 37 25.0 -2.8
baz=92
KBL Kabul 91.60 304 *eP* **P 13 37 09.2 -2.0**
KBL *e* pP 13 37 19.8 -3.8
KBL pmax pmax
comp=Z,66nm,1.0s,mb5.9
KBL Kabul 91.60 304 *eP* **P 13 37 09.2 -2.1**
comp=Z,66nm,1.0s,mb5.9
KBL *e* pP 13 37 19.8 -3.8
GSC Goldstone 91.76 55 ⇓P **P 13 37 12.7 +0.8**
baz=92,SNR=8.6
GSC ⇑sP pP 13 37 24.8 +0.5
baz=92
GSC Goldstone 91.76 55 *eP* **P 13 37 12.2 +0.3**
GSC *e* pP 13 37 24.9 +0.6
GSC pmax pmax
comp=Z,37nm,1.0s,mb5.7
GSC Goldstone 91.76 55 *eP* **P 13 37 12.2 +0.2**
comp=Z,37nm,1.0s,mb5.7
GSC *e* pP 13 37 24.9 +0.6
MONP Monument Peak 91.76 57 ⇓P **P 13 37 12.8 +0.8**
baz=92
MONP ⇓sP sP 13 37 25.1 -3.8
baz=92
PFO Pinyon Flat Ob 91.83 57 P **P 13 37 13.1 +0.8**
comp=Z,224nm,1.0s,mb6.5,SNR=5.2
PFO Pinyon Flat Ob 91.83 57 ⇓P **P 13 37 13.0 +0.7**
baz=92
PFO ⇓sP sP 13 37 26.2 -3.0
baz=92
PFO Pinyon Flat Ob 91.83 57 *eP* **P 13 37 12.5 +0.2**
PFO pmax pmax
comp=Z,13nm,1.0s,mb5.2
PFO Pinyon Flat Ob 91.83 57 *eP* **P 13 37 12.5 +0.2**
comp=Z,13nm,1.0s,mb5.2
FURC Furnace Creek, 91.87 54 P **P 13 37 13.1 +0.7**
baz=92,SNR=11
FURC ⇑sP sP 13 37 26.4 -2.9
baz=92
OD2 Odessa Site #2 92.00 43 *eP* **P 13 37 10.4 -2.3**
comp=Z,12nm,0.9s,mb5.2
OD2 *e* pP 13 37 23.1 -2.1
HEC Hector,Ludlow 92.08 55⇑sP sP 13 37 27.8 -2.6
baz=92
J09A Fry Pan Ranch, 92.10 47⇑P **P 13 37 13.0 -0.4**
baz=92,SNR=10
J09A ⇑sP sP 13 37 26.9 -3.3
baz=92
BMN Battle Mountai 92.10 50 *eP* pP 13 37 25.4 -0.4
BMN MLR MLR
comp=Z,2μm,22.0s,MS5.4
I09A Lost Marbles R 92.20 46⇑sP sP 13 37 27.7 -3.0
baz=92
D09A Jones Farm, Ri 92.23 43⇑P **P 13 37 13.6 -0.2**
baz=92
BELC Belle Mtn. 92.25 56 ⇓P **P 13 37 14.9 +0.6**
baz=92,SNR=17
BELC ⇑sP sP 13 37 28.6 -2.6
baz=92
SHOC Shoshone 92.26 54⇑P **P 13 37 15.0 +0.7**
baz=92,SNR=8.4
SHOC ⇓sP sP 13 37 28.1 -3.1
baz=92
S10A Tonopah Range, 92.26 52 ⇓P **P 13 37 14.9 +0.7**
baz=92,SNR=18
S10A ⇓sP sP 13 37 28.9 -2.2
baz=92
U10A Ash Meadows, A 92.28 54 ⇓sP sP 13 37 29.2 -2.1
baz=92
SWSC Sam W. Stewart 92.29 57⇑sP sP 13 37 28.6 -2.8
baz=92
H09A Durkee 92.34 45⇑P **P 13 37 14.1 -0.3**
baz=92
H09A ⇓sP sP 13 37 27.8 -3.6
baz=92
G09A Cove 92.34 45⇑P **P 13 37 13.9 -0.5**
baz=92
G09A ⇑sP sP 13 37 27.6 -3.8
baz=92
SYO Syowa Base 92.49 199⇓*iP* **P 13 37 12.0 -2.6**
SYO Syowa Base 92.49 199⇓*e*PcP PcP 13 37 15.0 -0.3
SYO Syowa Base 92.49 199⇓*i*pP pP 13 37 25.0 -2.0
TUQ Turquoise Moun 92.49 55 ⇓P **P 13 37 15.6 +0.2**
baz=92,SNR=11
TUQ ⇑sP sP 13 37 29.7 -2.6
baz=92
B09A Rice 92.52 42 ⇓P **P 13 37 14.5 -0.7**
baz=93
B09A ⇓sP pP 13 37 28.5 +0.9
baz=93
Q10A Clear Creek Ra 92.53 51 ⇓P **P 13 37 16.3 +0.9**
baz=93,SNR=9.6
Q10A ⇓sP sP 13 37 30.5 -1.9
baz=93
R10A Warm Springs 92.54 52 ⇓sP sP 13 37 30.7 -1.7
baz=93
GMRC Granite Mounta 92.63 55⇑P **P 13 37 16.6 +0.6**
baz=93,SNR=14
GMRC ⇑sP sP 13 37 30.4 -2.5
baz=93
O10A Cortez Mining, 92.63 50⇑sP pP 13 37 29.1 +0.9
baz=93
BC3 Big Chuckw Mtn 92.66 57 ⇓P **P 13 37 14.0 -2.2**
baz=93,SNR=6.3
BC3 ⇓sP sP 13 37 30.8 -2.3
baz=93
K10A MacKenzie Ranc 92.67 47⇑P **P 13 37 15.6 -0.3**
baz=93,SNR=10
K10A ⇑sP sP 13 37 29.7 -3.2
baz=93
M10A I.L. Ranch, Tu 92.76 49 ⇓sP pP 13 37 30.0 +1.2
baz=93
G10A Bishop Farm, J 92.81 45 ⇓P **P 13 37 15.6 -1.0**
baz=93,SNR=8.0
G10A ⇓sP pP 13 37 30.0 +1.1
baz=93
L10A Juniper Basin 92.88 48 ⇓P **P 13 37 17.0 0.0**
baz=93,SNR=15
L10A ⇓sP pP 13 37 30.2 +0.8
baz=93
V11A Goodsprings 92.94 54 ⇓P **P 13 37 18.1 +0.7**
baz=93,SNR=7.7
V11A ⇑sP sP 13 37 31.9 -2.4
baz=93
IRM Iron Mountain 92.97 56⇑P **P 13 37 18.0 +0.5**
baz=93,SNR=11
IRM ⇑sP sP 13 37 32.5 -2.0
baz=93
H10A Noah's Angus R 92.98 46⇑P **P 13 37 16.8 -0.6**
baz=93,SNR=9.5
H10A ⇓sP pP 13 37 30.6 +0.9
baz=93
BVAR Borovoye Array 93.11 323 P **P 13 37 16.0 -1.8**
comp=Z,86nm,0.8s,mb6.2,baz=103,slow=5.2,SNR=251
BVAR S SKSac 13 47 42.5 -6.1
comp=Z,0.4nm,0.3s,baz=180,slow=4.4,SNR=4.2
BVAR PKKPbc PKKPbc 13 54 26.0 -2.8
comp=Z,3.0nm,0.8s,baz=274,slow=3.3,SNR=12
BVAR LR LR 14 17 51.5
comp=Z,2μm,21.6s,MS5.5,baz=106,slow=35
BVAR Borovoye Array 93.11 323 P **P 13 37 16.0 -1.7**
BVAR S SKSac 13 47 42.5 -6.1
R11A Troy Canyon, C 93.11 52⇑P **P 13 37 18.6 +0.5**
baz=93,SNR=14
R11A ⇑sP pP 13 37 31.6 +1.1
baz=93
Q11A Duckwater 93.11 51 ⇓P **P 13 37 18.9 +0.8**
baz=93,SNR=26
Q11A ⇓sP sP 13 37 31.9 -3.1
baz=93
LDFC Landfair 93.11 55 *eP* **P 13 37 18.9 +0.7**
comp=Z,123nm,1.2s,mb6.2
LDFC *e* pP 13 37 31.1 +0.6
GLA Glamis 93.11 57⇑sP sP 13 37 33.0 -2.2
baz=93
P11A Circle Ranch, 93.11 51 ⇓sP sP 13 37 32.2 -2.8
baz=93
BRVK Borovoye 93.17 323 P **P 13 37 16.6 -1.4**
comp=Z,478nm,0.7s,mb7.0,SNR=26
BRVK Borovoye 93.17 323 *eP* **P 13 37 16.0 -2.0**
BRVK *e**PP pP 13 37 26.6 -3.8
BRVK pmax pmax
comp=Z,81nm,0.9s,mb6.2
BRVK MLR MLR
comp=Z,2μm,22.0s,MS5.5
BRVK Borovoye 93.17 323 *eP* **P 13 37 16.0 -2.0**
comp=Z,81nm,0.9s,mb6.2
BRVK *e*pP pP 13 37 26.6 -3.9
BRVK LR LR
comp=Z,2μm,22.0s,MS5.5
BRVK Borovoye 93.17 323 ⇓P **P 13 37 17.5 -0.6**
SNR=44
BRVK ⇓P 13 37 17.5
O11A Cowboy Ranch, 93.25 50 P **P 13 37 19.4 +0.7**
baz=93,SNR=12
O11A ⇓sP sP 13 37 32.4 -3.2
baz=93
T11A Corn Creek, Al 93.27 53 P **P 13 37 19.6 +0.8**
baz=93,SNR=11
T11A ⇑sP sP 13 37 33.9 -1.9

baz=93
N11A Elko Archery C 93.27 49 ⇑sP sP 13 37 33.5 -2.2
baz=93
K11A Parker Ranch, 93.28 47 ⇓P **P 13 37 18.9 +0.1**
baz=93,SNR=12
K11A ⇓sP sP 13 37 32.5 -3.2
baz=93
M11A Holland Ranch, 93.30 49 ⇓P **P 13 37 20.1 +1.1**
baz=93,SNR=9.7
M11A ⇓sP sP 13 37 33.3 -2.6
baz=93
W12A Cal Nev Ari 93.33 55 ⇓sP sP 13 37 34.9 -1.3
baz=93
V12A Nelson 93.39 55 ⇑sP sP 13 37 33.8 -2.6
baz=93
L11A Cat Creek Ranc 93.42 48 ⇓P **P 13 37 19.7 +0.3**
baz=94,SNR=13
G11A Walters Elk Ra 93.42 45 ⇓sP pP 13 37 31.2 -0.6
baz=94
Y12C Blythe 93.44 57 ⇓sP sP 13 37 33.9 -2.8
baz=94
I11A Placerville 93.47 46 ⇓P **P 13 37 19.6 -0.1**
baz=94
I11A ⇑sP pP 13 37 32.6 +0.6
baz=94
MFID Camas Ranch 93.50 47 ⇑P **P 13 37 19.8 0.0**
baz=94,SNR=5.7
MFID ⇓sP pP 13 37 32.8 +0.6
baz=94
H11A Donnelly 93.52 46 ⇑sP pP 13 37 32.6 +0.4
baz=94
F11A Grangeville 93.55 44 ⇓sP pP 13 37 32.5 +0.1
baz=94
D11A Klaveano Farm, 93.56 43 ⇓sP pP 13 37 33.2 +0.8
baz=94
E11A Bogner Ranch, 93.57 44 ⇑P **P 13 37 18.8 -1.2**
baz=94
E11A ⇓sP pP 13 37 32.2 -0.2
baz=94
S12A Delamar Landin 93.60 53 ⇓P **P 13 37 21.1 +0.7**
baz=94,SNR=7.6
S12A ⇑sP sP 13 37 35.6 -1.7
baz=94
T12A Moapa 93.61 54 ⇑sP sP 13 37 35.4 -2.0
baz=94
ELK Elko 93.64 50 PFAKE 13 37 30.0 +9.5
ELK LR LR
comp=Z,3μm,22.0s,MS5.7
U12A Valley of Fire 93.72 54 ⇑P **P 13 37 22.1 +1.1**
baz=94,SNR=7.4
U12A ⇑sP sP 13 37 35.6 -2.3
baz=94
P12A McGill 93.76 51 ⇑P **P 13 37 21.9 +0.8**
baz=94,SNR=12
P12A ⇑sP sP 13 37 35.8 -2.2
baz=94
Q12A Willow Creek R 93.77 51 ⇓P **P 13 37 21.0 -0.1**
baz=94,SNR=22
Q12A ⇑sP sP 13 37 35.4 -2.7
baz=94
N12A Clover Valley, 93.80 49 ⇑P **P 13 37 21.3 +0.1**
baz=94,SNR=10
N12A ⇓sP sP 13 37 34.9 -3.2
baz=94
N12A Clover Valley, 93.80 49 *e*P **P 13 37 20.9 -0.4**
comp=Z,98nm,1.1s,mb6.2
R12A Pony Springs, 93.87 52 ⇑P **P 13 37 22.3 +0.7**
baz=94,SNR=11
R12A ⇓sP sP 13 37 36.4 -2.1
baz=94
M12A Wells 93.96 49 ⇑P **P 13 37 22.4 +0.4**
baz=94,SNR=6.9
M12A ⇑sP sP 13 37 35.5 -3.3
baz=94
L12A House Creek Ra 93.96 48 ⇑P **P 13 37 22.5 +0.6**
baz=94,SNR=13
L12A ⇓sP sP 13 37 35.6 -3.2
baz=94
O12A Currie 93.96 50 ⇓P **P 13 37 22.8 +0.8**
baz=94,SNR=6.0
O12A ⇓sP sP 13 37 35.8 -3.2
baz=94
J12A Stokes Ranch, 94.02 47 ⇓P **P 13 37 22.0 -0.2**
baz=94,SNR=18
J12A ⇑sP sP 13 37 35.6 -3.5
baz=94
Y13A Salome 94.03 57 ⇓sP sP 13 37 35.9 -3.4
baz=94
G12A Big Creek, Yel 94.05 45 ⇑P **P 13 37 21.4 -0.9**
baz=94
G12A ⇑sP sP 13 37 35.8 -3.4
baz=94
X13A Yucca 94.10 56 ⇓sP sP 13 37 37.0 -2.7
baz=94
V13A Grand Canyon W 94.11 55 ⇑P **P 13 37 23.3 +0.5**
baz=94
V13A ⇑sP sP 13 37 37.6 -2.1
baz=94
W13A Hualapai Mount 94.11 55 ⇓P **P 13 37 21.4 -1.4**
baz=94
W13A ⇓sP sP 13 37 37.4 -2.3
baz=94
U13A Pakoon Wash 94.18 54 ⇑P **P 13 37 23.2 +0.1**
baz=94,SNR=7.1
U13A ⇓sP sP 13 37 37.8 -2.2
baz=94
T13A Saint George 94.29 53 ⇑P **P 13 37 24.4 +0.8**
baz=94,SNR=12
T13A ⇓sP sP 13 37 38.2 -2.3
baz=94
R13A O'Grain Ranch, 94.35 52 ⇑P **P 13 37 25.1 +1.3**
baz=94,SNR=7.0
S13A Holt Ranch, En 94.38 53 ⇑sP sP 13 37 38.5 -2.4
baz=94
Q13A Wheeler Ranch, 94.39 51 ⇑P **P 13 37 24.7 +0.7**
baz=94,SNR=18
N13A Wendover, West 94.43 50 ⇓sP sP 13 37 38.5 -2.6
baz=94
N13A Wendover, West 94.43 50 *e*P **P 13 37 25.1 +0.9**
comp=Z,38nm,1.1s,mb5.7
P13A Bates Ranch, G 94.44 51 ⇑P **P 13 37 24.6 +0.4**
baz=94,SNR=13
P13A ⇓sP sP 13 37 38.5 -2.6
baz=94
M13A Montello 94.51 49 ⇓P **P 13 37 24.9 +0.4**
baz=95,SNR=13
M13A ⇓sP sP 13 37 38.8 -2.7
baz=95
M13A Montello 94.51 49 *e*P **P 13 37 24.3 -0.2**
comp=Z,49nm,1.2s,mb5.8
M13A *e* pP 13 37 36.9 0.0
HLID Hailey 94.54 47 ⇓P **P 13 37 24.6 +0.1**
baz=95,SNR=6.1
H13A Challis 94.75 46 ⇓P **P 13 37 25.5 -0.1**
baz=95,SNR=11
CCUT Cedar City 94.77 53 *e*P **P 13 37 26.6 +0.8**
comp=Z,29nm,1.2s,mb5.6
I13A Wildhorse Cree 94.79 46 ⇑P **P 13 37 25.8 +0.1**
baz=95,SNR=6.8
V14A Boquillas Ranc 94.80 55 ⇓sP sP 13 37 40.4 -2.5
baz=95
U14A Mt Trumbull 94.81 54 ⇑P **P 13 37 26.2 +0.2**
baz=95
U14A ⇑sP sP 13 37 41.4 -1.5
baz=95
F13A Darby 94.81 45 ⇑P **P 13 37 26.2 +0.4**
baz=95,SNR=6.9
X14A Yava 94.86 56 ⇑sP sP 13 37 41.8 -1.4
baz=95
T14A Hurricane 94.95 53 ⇓sP sP 13 37 40.9 -2.6
baz=95
B13A Whitefish 94.95 42 ⇑P **P 13 37 25.9 -0.5**
baz=95
Q14A Sevier Lake (B 94.97 51 ⇑P **P 13 37 27.1 +0.4**
baz=95,SNR=11
M14A Sheep Mountain 95.14 49 ⇑P **P 13 37 27.7 +0.4**
baz=95,SNR=10
P14A Drum Mountains 95.18 51 ⇑P **P 13 37 28.4 +0.7**
baz=95,SNR=12
P14A ⇑sP sP 13 37 42.0 -2.6
baz=95
N14A Grayback Hills 95.20 50 ⇓P **P 13 37 28.3 +0.6**
baz=95,SNR=8.6
N14A ⇓sP sP 13 37 40.6 -4.0
baz=95
BGU Big Grassy Mou 95.33 50 *e*P **P 13 37 29.4 +1.2**
comp=Z,18nm,1.2s,mb5.4
BGU *e* pP 13 37 40.1 -0.5

K14A Jones Ranch, D 95.35 48 ⇑P **P 13 37 27.8 -0.5**
baz=95
X15A Humboldt 95.40 56 ⇓P **P 13 37 29.1 +0.3**
baz=95
X15A ⇑sP sP 13 37 44.2 -1.5
baz=95
DUG Dugway 95.43 50 ⇓P **P 13 37 29.8 +1.1**
baz=96
DUG Dugway 95.43 50 PFAKE 13 37 40.0 +11
DUG LR LR
comp=Z,2μm,22.0s,MS5.5
W15A Williams 95.44 55 ⇓sP sP 13 37 44.6 -1.2
baz=96
T15A Red Dirt Ranch 95.50 53 ⇑P **P 13 37 28.8 -0.3**
baz=96
T15A ⇑sP sP 13 37 43.4 -2.6
baz=96
U15A North Rim 95.52 54 ⇓P **P 13 37 29.8 +0.6**
baz=96
U15A ⇑sP sP 13 37 44.3 -1.9
baz=96
V15A Kaibab Nationa 95.57 55 ⇑P **P 13 37 30.6 +1.1**
baz=96
V15A ⇑sP sP 13 37 44.8 -1.6
baz=96
A14A Double T Ranch 95.70 41 ⇓P **P 13 37 29.9 +0.2**
baz=96
MCMT McKenzie Canyo 95.77 46 *e*P **P 13 37 28.2 -1.9**
comp=Z,3.1nm,1.1s,mb4.7
P15A Leamington 95.79 51 ⇓sP sP 13 37 44.2 -3.1
baz=96
L15A Malad City 95.90 49 ⇓P **P 13 37 30.9 +0.1**
baz=96
H15A Lima 95.90 46 ⇓P **P 13 37 30.4 -0.4**
baz=96
NLU North Lily Min 95.98 51 *e*P **P 13 37 30.7 -0.5**
comp=Z,14nm,1.4s,mb5.2
YKA Yellowknife Ar 96.01 28 P **P 13 37 29.9 -0.9**
comp=Z,7.4nm,0.8s,mb5.2,baz=265,slow=4.7,SNR=79
YKA pP pP 13 37 42.9 -0.3
comp=Z,11nm,0.8s,baz=266,slow=4.6,SNR=16
YKA PP PP 13 41 28.6 +5.0
comp=Z,6.8nm,1.2s,baz=268,slow=7.6,SNR=4.7
YKA PKIKP PKiKP 13 42 08.1 -1.3
comp=Z,0.4nm,0.5s,baz=259,slow=1.2,SNR=6.8
YKA PKKPbc PKKPbc 13 54 16.8 -4.6
comp=Z,4.5nm,0.6s,baz=81,slow=2.9,SNR=66
YKA PKKPab 13 55 00.7
comp=Z,2.1nm,0.9s,baz=86,slow=4.9,SNR=5.6
YKA PKPPKP 14 02 25.7
comp=Z,0.2nm,0.7s,baz=97,slow=3.2,SNR=3.8
YKA LR LR 14 16 49.4
comp=Z,156nm,21.2s,MS4.5,baz=265,slow=33
YKA Yellowknife Ar 96.01 28 P **P 13 37 29.9 -0.9**
YKA pP pP 13 37 42.9 -0.3
YKA PP PP 13 41 28.6 +5.0
E15A Deer Lodge 96.03 44 ⇑P **P 13 37 30.4 -0.9**
baz=96
EDM Edmonton 96.05 37 *e*P **P 13 37 29.4 -1.8**
EDM *e* pP 13 37 41.3 -2.3
X16A Lo Mia Camp, P 96.05 56 ⇑sP sP 13 37 48.0 -0.7
baz=96
A15A Johnson Ranch, 96.15 41 ⇓P **P 13 37 30.9 -0.9**
baz=96
C15A Salmond Ranch, 96.15 43 ⇑P **P 13 37 31.0 -0.8**
baz=96
R16A Teasdale 96.31 52 ⇑sP sP 13 37 48.7 -1.0
baz=96
MPU Maple Canyon 96.32 51 *e*P **P 13 37 32.1 -0.7**
comp=Z,7.8nm,1.2s,mb5.0
217A Green Valley 96.37 59 ⇑sP sP 13 37 48.5 -1.6
baz=96
JLU Jordanelle 96.50 50 *e*P **P 13 37 33.8 +0.2**
comp=Z,28nm,1.5s,mb5.5
JLU *e* pP 13 37 45.6 -0.4
G16A Moss Hill, Enn 96.54 45 ⇑P **P 13 37 32.6 -1.0**
baz=97
K16A Soda Springs 96.54 48 ⇑P **P 13 37 33.0 -0.7**
baz=97
J16A Bone 96.55 47 ⇓sP sP 13 37 48.1 -2.6
baz=97
TMUT Trail Mountain 96.60 51 *e*P **P 13 37 34.5 +0.4**
comp=Z,6.3nm,0.8s,mb5.1
TMUT *e* pP 13 37 44.7 -1.8
L16A Fish Haven 96.61 49 ⇑sP sP 13 37 47.1 -3.9
baz=97
I16A Newdale 96.68 47 ⇓P **P 13 37 33.8 -0.5**
baz=97
BOZ Bozeman (W) 96.69 45 ⇑P **P 13 37 33.4 -0.9**
baz=97
BOZ Bozeman (W) 96.69 45 PFAKE 13 37 50.0 +16
BOZ LR LR
comp=Z,2μm,20.0s,MS5.6
T17A Navajo Res., N 96.76 54 ⇓sP sP 13 37 49.1 -2.7
baz=97
S17A Black Ridge (B 96.80 53 ⇑sP sP 13 37 50.2 -1.7
baz=97
AHID Auburn Hatcher 96.90 48 PFAKE 13 37 50.0 +15
AHID LR LR
comp=Z,2μm,20.0s,MS5.7
H16A Russell Place, 96.90 46 ⇑P **P 13 37 35.0 -0.3**
baz=97
H16A ⇑sP sP 13 37 48.7 -3.6
baz=97
R17A Hanksville Air 96.93 52 ⇑P **P 13 37 35.8 +0.2**
baz=97
R17A ⇑sP sP 13 37 50.4 -2.2
baz=97
O17A Robinson Place 97.02 50 ⇓sP sP 13 37 49.6 -3.3
baz=97
IMW Indian Meadow 97.08 47 *e*P **P 13 37 36.1 0.0**
comp=Z,9.0nm,1.1s,mb5.1
P18A Preston Nutter 97.36 51 ⇑sP sP 13 37 51.8 -2.7
baz=97
H17A Grant Village 97.37 46 ⇑sP sP 13 37 50.9 -3.4
baz=97
F17A Fitzpatrick Pl 97.38 45 ⇓P **P 13 37 37.6 +0.2**
baz=97
F17A ⇑sP sP 13 37 51.0 -3.4
baz=97
C17A Wharram Farm, 97.39 43 ⇓P **P 13 37 36.7 -0.7**
baz=97
B17A L&G Farms, Che 97.39 42 ⇓P **P 13 37 36.8 -0.6**
baz=97
D17A Six Diamond Ra 97.42 43 ⇓P **P 13 37 37.2 -0.4**
baz=98
Q18A Rafter H Ranch 97.42 52 ⇓P **P 13 37 36.8 -1.0**
baz=98
S18A Hurst Farm, Bl 97.45 53 ⇓sP sP 13 37 52.5 -2.4
baz=98
R18A Canyonlands Na 97.56 52 ⇓sP sP 13 37 53.1 -2.3
baz=98
K18A Tolan Ranch, 97.67 48 ⇑sP sP 13 37 51.9 -3.8
baz=98
E18A Harlowton 97.92 44 ⇑P **P 13 37 39.9 +0.1**
baz=98
BW06 Boulder Array 98.03 48 ⇑P **P 13 37 39.3 -1.2**
baz=98
BW06 ⇓sP pP 13 37 52.3 -0.5
baz=98
BW06 Boulder Array 98.03 48 PFAKE 13 37 50.0 +10
BW06 LR LR
comp=Z,3μm,20.0s,MS5.8
PDAR Pinedale Array 98.03 48 P **P 13 37 39.3 -1.2**
comp=Z,3.8nm,0.7s,mb5.0,baz=228,slow=2.1,SNR=31
PDAR pP pP 13 37 51.9 -0.9
comp=Z,7.4nm,0.9s,baz=264,slow=2.7,SNR=11
PDAR PP PP 13 41 40.4 +0.6
comp=Z,2.7nm,1.1s,baz=245,slow=3.7,SNR=2.3
PDAR PKIKP PKiKP 13 42 14.9 +1.3
comp=Z,1.5nm,0.9s,baz=186,slow=2.7,SNR=1.6
PDAR PKKPbc PKKPbc 13 54 12.4 -2.6
comp=Z,0.8nm,0.6s,baz=115,slow=5.6,SNR=6.3
PDAR PKPPKP 14 02 28.4
comp=Z,1.0nm,1.1s,baz=34,slow=0.5,SNR=5.2
PDAR LR LR 14 18 29.3
comp=Z,2μm,19.0s,MS5.7,baz=274,slow=33
PDAR Pinedale Array 98.03 48 P **P 13 37 39.3 -1.2**
PDAR pP pP 13 37 51.9 -0.9
PDAR PP PP 13 41 40.5 +0.6
S19A Harvey Farm, M 98.13 53 ⇑P **P 13 37 42.0 +1.0**
baz=98
NVL N'lazarevskaya 98.60 191 *e*P pP 13 37 52.8 -2.1
NVL *e**SP sP 13 38 05.8 +6.4
NVL *e*S SKSac 13 48 13.3 -3.7
NVL *e* 13 59 46.2
NVL pmax pmax

comp=Z,32nm,1.1s,mb5.8
NVL MLR MLR
comp=Z,4μm,19.0s,MS6.0
MAIT Maitri 98.61 191 *e*P **P 13 37 41.4 -1.1**
MAIT *e*E pP 13 37 55.1 +0.2
SVE Sverdlovsk 98.96 326⇑ *e*P **P 13 37 42.6 -1.6**
SVE *e*S SKSac 13 48 16.5 -2.7
SVE pmax pmax
comp=Z,42nm,1.5s,mb5.8
SVE MLR MLR
comp=Z,1μm,21.0s,MS5.4
ABKAR Akbulak array 99.41 319 *e*P **P 13 37 43.6 -2.8**
comp=Z,13nm,0.8s,mb5.5
ARU Arti 100.11 326*c i*P Pdif 13 37 47.1 -2.4
ARU 13 41 51.9
ARU S SKSac 13 48 23.0 -1.9
ARU SP SP 13 50 46.4 -3.2
ARU PS PS 13 50 53.3 -1.9
ARU pmax pmax
comp=Z,45nm,1.7s
ARU Arti 100.11 326 *e*P Pdif 13 37 46.3 -3.1
comp=Z,24nm,1.0s
ARU LR LR
comp=Z,2μm,21.0s,MS5.5
ANMO Albuquerque 100.18 56 PFAKE 13 38 00.0 +10
ANMO LR LR
comp=Z,1μm,20.0s,MS5.4
AKTO Aktyubinsk 100.64 320 PKPPKP 14 02 23.0
comp=Z,0.4nm,0.3s,baz=356,slow=1.2,SNR=4.4
SOKR Solikamsk 100.87 329 *e*P Pdif 13 37 50.7 -2.2
SOKR S SKSac 13 48 26.4 -2.1
SOKR PS PS 13 51 01.9 -1.3
SOKR pmax pmax
comp=Z,9.0nm,0.9s
VNA2 Neumayer--Watz 101.26 185 *e*P Pdif 13 37 52.3 -2.3
VNA2 *e* 13 42 17.3
DGMT Dagmar 101.79 42 PFAKE 13 38 10.0 +13
DGMT LR LR
comp=Z,3μm,22.0s,MS5.7
TXAR Lajitas Array 102.41 62 Pdiff Pdif 13 38 03.3 +3.7
comp=Z,0.9nm,1.0s,baz=242,slow=5.3,SNR=6.9
TXAR PP PP 13 42 10.5 -2.9
comp=Z,3.2nm,1.2s,baz=263,slow=5.8,SNR=3.6
TXAR PKiKP PKiKP 13 42 21.3 -0.5
comp=Z,0.4nm,0.6s,baz=287,slow=3.1,SNR=4.4
TXAR PKKPbc PKKPbc 13 54 01.8 -0.4
comp=Z,1.4nm,0.6s,baz=111,slow=4.7,SNR=14
TXAR PKKPab 13 54 22.1
comp=Z,0.8nm,0.7s,baz=104,slow=5.3,SNR=3.9
TXAR PKPPKP 14 02 20.3
comp=Z,1.2nm,1.1s,baz=123,slow=4.6,SNR=5.2
TXAR Lajitas Array 102.41 62 Pdif Pdif 13 38 03.3 +3.6
TXAR PP PP 13 42 10.5 -2.9
FFC Flin Flon 102.73 36 PFAKE 13 38 10.0 +8.9
FFC LR LR
comp=Z,4μm,21.0s,MS5.9
AMTX Amarillo 104.11 56 PFAKE 13 38 20.0 +13
AMTX LR LR
comp=Z,1μm,19.0s,MS5.5
ABPO Ambohimpanom 105.25 248 PFAKE 13 42 40.0 +13
ABPO LR LR
comp=Z,2μm,19.0s,MS5.7
KBS Kingsbay 106.11 353 *e*PP PP 13 42 36.7 -2.8
KBS *e* 13 52 08.5
KBS AMS AMS 14 20 25.8
comp=Z,979nm,25.3s,MS5.2
ULM Lac du Bonnet 107.02 40 PKiKP PKiKP 13 42 27.6 -2.0
comp=Z,1.3nm,0.4s,baz=268,slow=1.6,SNR=3.0
ULM PKKPab PKKPab 13 54 00.0 -2.1
comp=Z,2.5nm,0.7s,baz=106,slow=4.1,SNR=2.3
AGMN Agassiz Refuge 107.34 42 PFAKE 13 42 40.0 +10
AGMN LR LR
comp=Z,2μm,22.0s,MS5.6
ECSD EROS Data Cent 107.44 47 PFAKE 13 42 40.0 +9.3
ECSD LR LR
comp=Z,2μm,22.0s,MS5.6
USHA Ushuaia 107.93 155 PKKPab PKKPab 13 53 56.0 -3.7
comp=Z,14nm,1.0s,baz=72,slow=4.5,SNR=3.3
APA Apatity 108.69 340 *e*P Pdif 13 38 20.0 -7.6
APA *i* 13 43 03.7
APA *e* 13 49 00.0
APA *e*PS PS 13 52 24.0 -0.4
APA pmax pmax
comp=Z,7.0nm,0.6s
APA MLR MLR
comp=Z,1μm,23.0s,MS5.4
ARCES ARCESS Array B 110.09 343 Pdiff Pdif 13 38 31.2 -2.6
comp=Z,3.5nm,1.0s,baz=35,slow=9.9,SNR=2.7
ARCES PKiKP PKiKP 13 42 33.8 -1.1
comp=Z,3.1nm,0.5s,baz=80,slow=2.2,SNR=25
ARCES PKKPbc PKKPbc 13 53 35.8 -3.9
comp=Z,3.5nm,0.6s,baz=264,slow=2.4,SNR=16
ARCES PKKPab PKKPab 13 53 48.8 +0.6
comp=Z,6.5nm,0.9s,baz=235,slow=4.3,SNR=7.9
GNI Garni 110.90 310*c i*PKIKP PKiKP 13 42 35.6 -1.7
ZEI Tsey 111.10 313 *e*P Pdif 13 38 36.5 -1.8
ZEI pmax pmax
comp=Z,21nm,1.3s
MOS Moscow 111.72 328 *e*PKIKP PKiKP 13 42 28.8 -10
MOS *e* 13 43 23.5
KIV Kislovodsk 111.75 314⇓ *i*PKIKP PKiKP 13 42 38.2 -0.6
KIV *i* 13 43 30.0
KIV *e*S SKSac 13 49 08.6 -8.8
KIV *e*PS PS 13 52 54.6 -0.1
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,800nm,21.0s,MS5.3
TRO Tromso 111.79 345 *e*PP PP 13 43 22.3 +1.6
TRO AMS AMS 14 26 51.5
comp=Z,1μm,22.0s,MS5.4
VOR Voronezh 112.11 323 PKIKP PKiKP 13 42 48.0 +8.8
VOR pmax pmax
comp=Z,140nm,2.0s
JFWS Jewell Farm 112.15 47 *e*PKIKP PKiKP 13 42 37.2 -2.4
CCM Cathedral Cave 112.23 52 PFAKE 13 42 50.0 +10
CCM LR LR
comp=Z,1μm,20.0s,MS5.5
COWI Conover 112.26 43 PFAKE 13 42 50.0 +10
COWI LR LR
comp=Z,2μm,20.0s,MS5.7
OBN Obninsk 112.50 327⇑ *i*PKIKP PKiKP 13 42 39.1 -0.8
OBN *e*PS PS 13 52 56.1 -4.9
OBN *e*SS SS 13 59 17.8 +14
OBN pmax pmax
comp=Z,40nm,2.1s
HDIL Hopedale 113.30 49 *e*PKPdf PKiKP 13 42 39.9 -2.0
SOC Sochi 113.94 315 *i* PKIKP PKiKP 13 42 39.7 -3.3
SOC *e* 13 43 44.0
SOC *e*SS SS 13 59 18.0 -5.7
SOC pmax pmax
comp=Z,25nm,1.3s
SOC pmax pmax
comp=Z,32nm,1.4s
SOC MLR MLR
comp=Z,1μm,23.0s,MS5.5
EFI East Falkland 114.45 157 PFAKE 13 42 50.0 +6.2
EFI LR LR
comp=Z,1μm,20.0s,MS5.5
OLIL Olney 114.55 51 *e*PKPdf PKiKP 13 42 42.3 -2.0
FINES FINESS Array B 114.56 336 Pdiff Pdif 13 38 52.4 -1.3
comp=Z,0.7nm,0.6s,baz=85,slow=2.1,SNR=4.7
FINES PKP PKiKP 13 42 42.2 -1.4
comp=Z,13nm,0.8s,baz=37,slow=2.6,SNR=32
FINES pPKP 13 42 54.8
comp=Z,9.3nm,0.8s,baz=90,slow=3.8,SNR=6.2
FINES PKKPbc PKKPbc 13 53 21.2 -3.3
comp=Z,5.4nm,0.6s,baz=186,slow=3.5,SNR=14
FINES PKKPab PKKPab 13 53 27.7 -0.7
comp=Z,4.3nm,0.7s,baz=172,slow=3.9,SNR=7.4
FINES FINESS Array B 114.56 336 P Pdif 13 38 52.4 -1.3
FINES 13 42 42.2
FINES 13 42 54.8
FINES 13 53 21.3
FINES FINESS Array B 114.56 336 Pdif Pdif 13 38 52.4 -1.3
FINES PKP PKiKP 13 42 42.2 -1.4
FINES pPKP 13 42 54.8
FINES PKKPbc PKKPbc 13 53 21.2 -3.3
FINES PKKPab PKKPab 13 53 27.7 -0.7
ANN Anapa 115.22 316 *i* PKIKP PKiKP 13 42 44.4 -1.0
ANN *e* 13 43 43.5
ANN *e* 13 49 29.0
ANN pmax pmax
comp=Z,43nm,1.1s
JMIC Jan Mayen 115.53 354 *i* PKKPbc 13 53 20.6 -0.7

BLO Bloomington 115.67 50 *e*PKIKP PKPdf 13 42 44.7 -1.7
WCI Wyandotte Cave 116.04 51 *e*PKIKP PKPdf 13 42 45.0 -2.2
LRAL Lakeview Retre 116.41 57 *e*PKPdf PKPdf 13 42 46.2 -1.8
BRAL Brewton 116.66 59 PFAKE 13 43 00.0 +11
BRAL LR LR
comp=Z,1μm,22.0s,MS5.5
SCO Scoresbysund 116.77 359 *i* P PP 13 43 52.0 -3.8
SCO
comp=Z,720nm,23.0s
AAM Ann Arbor 117.03 46 PFAKE 13 43 00.0 +11
AAM LR LR
comp=Z,2μm,20.0s,MS5.7
MICGM Minsk 117.32 329 *e* PKPdf 13 42 46.0 -3.1
MNK Minsk 117.35 329 *e*PKIKP PKPdf 13 42 46.0 -3.2
NSS Namsos 117.38 343 *e* PKPdf 13 42 46.4 -2.5
SIM Simferopol' 117.43 317 PKIKP PKPdf 13 43 02.3 +13
SIM pmax pmax
comp=Z,11μm,0.7s
SIM MLR MLR
comp=Z,700nm,19.0s,MS5.3
IDID Didziasalis 117.50 330 *e*P PKPdf 13 42 49.0 -0.5
IZAR Zarasai 117.52 331 *e*P PKPdf 13 42 48.5 -1.0
ISAL Salakas 117.67 331 *e*P PKPdf 13 42 49.2 -0.6
IIGN Ignalina 117.73 330 *e*P PKPdf 13 42 49.4 -0.5
CPCT Cooper Cave 118.00 54 *e*PKPdf PKPdf 13 42 47.1 -3.9
ACSO Alum Creek Sta 118.07 48 PFAKE 13 43 00.0 +9.0
ACSO LR LR
comp=Z,1μm,19.0s,MS5.6
AKASG Malin Array Be 118.33 325 Pdiff Pdif 13 39 09.1 -1.4
comp=Z,0.9nm,0.5s,baz=56,slow=4.6,SNR=6.0
AKASG PKP PKPdf 13 42 49.6 -1.6
comp=Z,23nm,0.5s,baz=51,slow=2.5,SNR=103
AKASG pPKP pPKPdf 13 43 01.5 -2.5
comp=Z,14nm,0.7s,baz=65,slow=2.3,SNR=7.6
AKASG PP PP 13 44 04.3 -3.0
comp=Z,0.4nm,0.3s,baz=53,slow=3.6,SNR=4.3
AKASG PKKPbc PKKPbc 13 53 08.4 -2.6
comp=Z,5.1nm,0.7s,baz=252,slow=3.9,SNR=8.2
AKASG Malin Array Be 118.33 325 P Pdif 13 39 09.1 -1.4
AKASG 13 42 49.6
AKASG 13 43 01.5
AKASG 13 44 04.3
AKASG Malin Array Be 118.33 325 Pdif Pdif 13 39 09.1 -1.4
AKASG PKP PKPdf 13 42 49.6 -1.6
AKASG pPKP pPKPdf 13 43 01.5 -2.5
AKASG PP PP 13 44 04.3 -3.0
AKASG PKKPbc PKKPbc 13 53 08.4 -2.6
AKBB Malin Array Si 118.33 325 *e*PKIKP PKPdf 13 42 49.7 -1.5
KIEV Kiev 118.34 325 *e*PKIKP PKPdf 13 42 49.5 -1.7
KMBO Kilima Mbogo 118.42 265 PKP PKPdf 13 42 52.2 -0.3
comp=Z,7.3nm,0.9s,baz=178,slow=24,SNR=1.9
KMBO pPKP pPKPdf 13 43 05.2 -0.1
comp=Z,9.1nm,0.9s,baz=178,slow=23,SNR=7.0
KMBO Kilima Mbogo 118.42 265 PKP PKPdf 13 42 52.2 -0.3
KMBO pPKP pPKPdf 13 43 05.2 -0.1
TZTN Tazewell 118.54 52 *e*PKPdf PKPdf 13 42 50.1 -1.9
TKL Tuckaleechee C 118.55 53 *e*PKIKP PKPdf 13 42 50.3 -1.8
GOGA Godfrey 119.26 56 *e*PKIKP PKPdf 13 42 51.7 -1.8
BR131 Keskin Array S 119.32 312 *e*PKPdf PKPdf 13 42 52.4 -1.1
BR131 LR LR
comp=Z,425nm,22.0s,MS5.0
BRTR Keskin Array B 119.32 312 Pdiff Pdif 13 39 15.8 +0.9
comp=Z,0.2nm,0.3s,baz=64,slow=3.4,SNR=2.3
BRTR PKP PKPdf 13 42 52.0 -1.4
comp=Z,7.4nm,0.6s,baz=126,slow=2.7,SNR=42
BRTR pPKP pPKPdf 13 43 03.8 -2.4
comp=Z,9.3nm,0.9s,baz=132,slow=2.1,SNR=7.4
BRTR PKKPbc PKKPbc 13 53 06.7 -0.3
comp=Z,7.8nm,0.7s,baz=222,slow=3.6,SNR=44
BRTR SKKP 13 57 02.9
comp=Z,1.1nm,0.9s,baz=187,slow=1.2,SNR=4.0
BRTR Keskin Array B 119.32 312 P Pdif 13 39 15.8 +0.9
BRTR 13 42 52.0
BRTR 13 43 03.8
MMAI Mount Meron Ar 119.53 304 PKP PKPdf 13 42 53.3 -0.8
comp=Z,17nm,0.8s,baz=76,slow=7.0,SNR=22
MMAI pPKP pPKPdf 13 43 05.2 -1.6
comp=Z,13nm,0.9s,baz=49,slow=2.7,SNR=6.8
ERPA Erie 119.68 45 PFAKE 13 43 10.0 +16
ERPA LR LR
comp=Z,2μm,20.0s,MS5.7
SUW Suwalki 119.94 330 *e*P PKPdf 13 42 53.4 -0.8
SUW *e* 13 43 05.2
SUW Suwalki 119.94 330 *e*PKPdf PKPdf 13 42 53.1 -1.1
KIS Kishinev 120.13 321 *e*PP PP 13 44 24.0 +4.1
KIS LRM 14 32 12.0
comp=Z,700nm,20.0s
KIS Kishinev 120.13 321 *e*PKIKP PKPdf 13 43 04.0 +9.2
KIS *e* 13 44 24.0
KIS *e* 13 49 45.0
KIS MLR MLR
comp=Z,700nm,20.0s,MS5.3
KIS MLR MLR
comp=Z,1μm,24.0s
NB2 NORSAR Subarra120.24 341 PKPdf PKPdf 13 42 53.3 -1.3
baz=41,slow=1.9
NOA NORSAR Array B 120.24 341 PKP PKPdf 13 42 53.0 -1.6
comp=Z,7.8nm,0.6s,baz=45,slow=1.9,SNR=40
NOA pPKP pPKPdf 13 43 04.9 -2.4
comp=Z,4.7nm,0.8s,baz=45,slow=1.9,SNR=6.1
NOA PKKPbc PKKPbc 13 53 02.0 -2.2
comp=Z,7.6nm,0.7s,baz=43,slow=3.7,SNR=29
NOA NORSAR Array B 120.24 341 PKIKP PKPdf 13 42 53.0 -1.6
NOA 13 43 04.9
NAO01 NORSAR Array S 120.49 341 *e*PKPdf PKPdf 13 42 53.0 -2.0
MCWV Mont Chateau 120.55 48 *e*PKPdf PKPdf 13 42 53.5 -2.3
BOSA Boshof 120.73 231 PKP PKPdf 13 42 55.8 -0.7
comp=Z,9.8nm,0.7s,baz=134,slow=2.0,SNR=27
BOSA pPKP pPKPdf 13 43 08.9 -0.4
comp=Z,19nm,1.0s,baz=116,slow=2.3,SNR=10
BOSA Boshof 120.73 231 PKP PKPdf 13 42 55.8 -0.7
BOSA pPKP pPKPdf 13 43 08.9 -0.4
BOSA LR LR
comp=Z,2μm,19.0s,MS5.7
CSS Prodhromos 120.79 306 *e*PKPdf PKPdf 13 42 54.6 -1.8
CSS LR LR
comp=Z,900nm,22.0s,MS5.4
BLA Blacksburg 120.80 51 *e*PKIKP PKPdf 13 42 54.5 -1.9
BLA MLR MLR
comp=Z,2μm,22.0s,MS5.8
TLCR 120.86 319 ⇑PKIKP PKPdf 13 42 55.9 -0.3
TLCR 120.86 319 ⇑*i*P PKPdf 13 42 55.9 -0.3
CFR Carcaliu 121.30 319 ⇑PKIKP PKPdf 13 42 56.4 -0.7
CFR Carcaliu 121.30 319 ⇑*i*P PKPdf 13 42 56.4 -0.7
TIRR Tirgusor 121.40 318 *e*PKIKP PKPdf 13 42 56.1 -1.2
TIRR *e* 13 43 07.1
TIRR Tirgusor 121.40 318 ⇓*i*P PKPdf 13 42 56.5 -0.8
SCHQ Schefferville 121.46 28 PKP PKPdf 13 42 55.6 -1.5
comp=Z,2.1nm,0.5s,baz=188,slow=19,SNR=4.3
SCHQ PKKPbc PKKPbc 13 52 57.2 -2.3
comp=Z,6.1nm,0.8s,baz=110,slow=6.3,SNR=7.3
SCHQ Schefferville 121.46 28 PKP PKPdf 13 42 55.6 -1.5
SCHQ PKKPbc PKKPbc 13 52 57.2 -2.3
FOO Floro 121.63 344 AMS AMS 14 27 55.3
comp=Z,1μm,24.4s,MS5.4
HARR Harsova 121.63 319 ⇓PKIKP PKPdf 13 42 57.6 -0.1
HARR Harsova 121.63 319 ⇓*i*P PKPdf 13 42 57.6 -0.1
SSPA Standing Stone 121.66 46 *e*PKPdf PKPdf 13 42 55.6 -2.3
LVV L'vov 121.69 326 *e*PKIKP PKPdf 13 42 56.2 -1.5
LVV *e* 13 43 09.4
LVV MLR MLR
comp=Z,1μm,22.0s,MS5.6
LVV MLR MLR
comp=N,400nm,21.0s,MS5.6
LVV MLR MLR
comp=E,2μm,22.0s,MS5.6
KONO Kongsberg 121.82 341 *e*PP PP 13 44 26.6 -4.2
KONO AMS AMS 14 34 57.0
comp=Z,1μm,23.9s,MS5.5
PSN Preselentsi 121.86 318 *i* P PKPdf 13 42 57.2 -1.0
VRI Vrincioaia 121.92 320 ⇓PKIKP PKPdf 13 42 57.7 -0.6
VRI Vrincioaia 121.92 320 ⇓*i*P PKPdf 13 42 57.7 -0.6
DWPF Disney 121.94 61 PFAKE 13 43 10.0 +11
DWPF LR LR
comp=Z,913nm,19.0s,MS5.4
SUR Sutherland 122.02 225 *e*PKPdf PKPdf 13 42 58.9 -0.1
SUR *e* 13 43 10.1
BUR08 Bucovina Ar. S 122.06 323 *e*PKPdf PKPdf 13 42 58.0 -0.4
BURAR Bucovina Array 122.06 323 ⇑PKIKP PKPdf 13 42 58.4 -0.1
BURAR Bucovina Array 122.06 323 ⇑*i*P PKPdf 13 42 58.4 -0.1
LBTB Lobatse 122.15 235 *e*PKIKP PKPdf 13 42 58.2 -1.2
LBTB *e* 13 43 10.8
LCO Las Campanas 122.35 131 *e*PKPdf PKPdf 13 42 59.0 -0.6
BINY Binghamton 122.44 44 *e*PKPdf PKPdf 13 42 57.9 -1.5
BINY LR LR
comp=Z,2μm,19.0s,MS5.7
BORG Borgarnes 122.52 359 PFAKE 13 43 10.0 +11
BORG LR LR
comp=Z,970nm,21.0s,MS5.4
KWP Kalwaria Pacla 122.52 326 *e*P PKPdf 13 42 59.3 0.0
BER Bergen 122.55 343 *e*PP PP 13 44 34.3 -1.3
BER AMS AMS 14 29 49.4
comp=Z,882nm,25.5s,MS5.3
MLR Muntele Rosu 122.57 320 ⇓PKIKP PKPdf 13 42 58.7 -0.8
MLR Muntele Rosu 122.57 320 ⇓*i*P PKPdf 13 42 58.7 -0.8
PRD Provadia 122.57 317 *i* P PKPdf 13 42 58.6 -1.0
CFAA Coronel Fontan 122.74 135 PKP PKPdf 13 42 59.1 -1.2
comp=Z,5.7nm,0.7s,baz=244,slow=2.6,SNR=78
CFAA pPKP pPKPdf 13 43 12.3 -0.8
comp=Z,3.4nm,0.8s,baz=259,slow=3.1,SNR=8.0
CFAA PP PP 13 44 34.5 -3.3
comp=Z,0.7nm,0.9s,baz=207,slow=5.7,SNR=7.4
CFAA PKKPbc PKKPbc 13 52 52.5 -1.5
comp=Z,0.2nm,0.4s,baz=56,slow=1.5,SNR=4.9
CFAA Coronel Fontan 122.74 135 PKP PKPdf 13 42 59.1 -1.2
CFAA pPKP pPKPdf 13 43 12.3 -0.8
CFAA PP PP 13 44 34.5 -3.3
CFAA PKKPbc PKKPbc 13 52 52.5 -1.5
CBN Corbin 122.83 49 PFAKE 13 43 10.0 +10
CBN LR LR
comp=Z,2μm,20.0s,MS5.8
NCB Newcomb 122.93 41 *e*PKPdf PKPdf 13 42 58.2 -2.1
BMR Baia Mare 123.06 324 ⇑PKIKP PKPdf 13 43 00.3 -0.1
BMR Baia Mare 123.06 324 ⇑*i*P PKPdf 13 43 00.3 -0.1
KOLS Kolonicke sedl 123.13 325 *e*PKIKP PKPdf 13 43 00.6 +0.1
KOLS *e* 13 43 12.3
KOLS MLR MLR
comp=Z,1μm,23.0s,MS5.4
KOLS Kolonicke sedl 123.13 325 *e*PKP PKPdf 13 43 00.6 +0.1
KOLS *e* 13 43 12.3
GKP Gorka Klasztor 123.25 332 *e*P PKPdf 13 43 00.2 -0.3
GKP Gorka Klasztor 123.25 332 *e*PKIKP PKPdf 13 43 00.2 -0.4
UZH Uzhgorod 123.27 325 *e*PKIKP PKPdf 13 42 59.0 -1.8
UZH *i* 13 43 12.5
UZH MLR MLR
comp=N,450nm,21.0s,MS5.5
UZH MLR MLR
comp=E,1μm,21.0s,MS5.5
UZH MLR MLR
comp=Z,600nm,21.0s,MS5.2
CNNC Cliffs of the 123.31 52 PFAKE 13 43 10.0 +8.7
CNNC LR LR
comp=Z,2μm,22.0s,MS5.8
TRPA Tarpa 123.39 324 ⇓*i*P PKPdf 13 43 00.7 -0.3
JMB Yambol 123.41 317 *i* P PKPdf 13 43 00.6 -0.6
STHS Stebnicka Huta 123.45 326 *e*PKIKP PKPdf 13 43 01.4 +0.3
STHS *e* 13 43 14.8
STHS Stebnicka Huta 123.45 326 *e*PKP PKPdf 13 43 01.3 +0.2
STHS *e* 13 43 14.8
LSZ Lusaka 123.75 246 *e*PKIKP PKPdf 13 43 02.3 -0.3
LSZ *e* 13 43 14.4
OJC Ojcow 123.78 328 *e*PKPdf PKPdf 13 43 00.6 -1.1
ATAH Atahualpa 123.83 104 PKP PKPdf 13 43 03.9 +1.0
comp=Z,28nm,0.7s,baz=260,slow=1.1,SNR=17
NIE Niedzica 123.95 327 *e*PKIKP PKPdf 13 43 02.2 +0.1
NIE *e* 13 43 13.7
DRGR 123.96 323 ⇑PKIKP PKPdf 13 43 01.5 -0.6
DRGR 123.96 323 ⇑*i*P PKPdf 13 43 01.5 -0.6
NNA Nana 124.03 110 PKP PKPdf 13 43 02.6 -0.6
comp=Z,26nm,0.9s,baz=282,slow=6.3,SNR=8.5
LBNH Lisbon 124.31 40 *e*PKIKP PKPdf 13 43 01.5 -1.4
KECS Kecovo 124.37 326 *e*PKIKP PKPdf 13 43 02.5 -0.4
KECS *e* 13 43 15.0
KECS Kecovo 124.37 326 *e*PKP PKPdf 13 43 02.5 -0.4
KECS *e* 13 43 15.0
ALN Alexandroupoli 124.40 315 P PKPdf 13 43 02.0 -1.2
LRW Lerwick 124.45 346 ⇓*e*P PKPdf 13 43 01.9 -0.8
LRW AMb AMB 13 43 05.9
comp=Z,51nm,2.0s
KDZ Kurdzhali 124.54 316 *i* P PKPdf 13 43 02.1 -1.3
GZR Gura Zlata 124.60 321 ⇓PKIKP PKPdf 13 43 03.0 -0.4
GZR Gura Zlata 124.60 321 ⇓*i*P PKPdf 13 43 03.0 -0.4
BCIP Isla Barro Col 124.66 84 *e*PKPdf PKPdf 13 43 01.1 -3.4
BCIP LR LR
comp=Z,689nm,20.0s,MS5.3
RDO Rodhopi 124.66 316 P PKPdf 13 43 02.3 -1.4
PLD Plovdiv 124.83 317 P PKPdf 13 43 02.2 -1.8
PRK Paraskevi 124.87 313 P PKPdf 13 43 03.0 -1.1
OKC Ostrava-Krasne 124.87 328 *e*PKIKP PKPdf 13 43 03.3 -0.5
OKC *e* 13 43 14.7
OKC *e* 13 54 56.1
OKC MLR MLR
comp=Z,1μm,19.4s,MS5.5
OKC Ostrava-Krasne 124.87 328 *e*PKPdf PKPdf 13 43 03.3 -0.5
OKC *e*pPKP pPKPdf 13 43 14.7 -1.9
OKC *e*x x 13 54 56.1
OKC AMS AMS 14 40 10.0
comp=Z,1μm,19.4s
PSZ Piszkesteto 125.01 325 *e*PKPdf PKPdf 13 43 03.7 -0.4
PSZ Piszkesteto 125.01 325 ⇑*e*PKP PKPdf 13 43 03.3 -0.8
PSZ Piszkesteto 125.01 325 ⇓*i*P PKPdf 13 43 03.4 -0.7
OTAV Otavalo 125.19 95 *e*PKPdf PKPdf 13 43 03.9 -1.6
OTAV *e* 13 43 18.8
KSP Ksiaz 125.21 330 *e*P PKPdf 13 43 04.2 -0.3
KSP *e* 13 43 17.1
KSP Ksiaz 125.21 330 *e*PKIKP PKPdf 13 43 04.0 -0.4
KSP *e* 13 43 17.0
KSP *e* 13 45 01.0
MORC Moravsky Berou 125.23 328 *e*PKIKP PKPdf 13 43 03.5 -1.0
MORC Moravsky Berou 125.23 328 ⇑*i*P PKPdf 13 43 04.2 -0.3
VYHS Vyhne 125.28 326 *e*PKIKP PKPdf 13 43 04.1 -0.5
VYHS *e* 13 43 17.3
VYHS MLR MLR
comp=Z,1μm,21.6s,MS5.5
VYHS Vyhne 125.28 326 *e*PKP PKPdf 13 43 04.1 -0.5
VYHS *e* 13 43 17.3
VYHS 13 52 56.0 +4.6
CHOS Chios island 125.34 312 P PKPdf 13 43 04.6 -0.5
RUE Ruedersdorf 125.35 333 *e*PKPdf PKPdf 13 43 04.3 -0.4
LIA Limnos Island 125.40 314 P PKPdf 13 43 03.6 -1.5
KAVA Kavala 125.43 316 P PKPdf 13 43 04.4 -0.7
KOLL Kolacno 125.47 327 *e*PKIKP PKPdf 13 43 04.9 -0.1
KOLL *e* 13 43 17.0
KOLL Kolacno 125.47 327 *e*PKP PKPdf 13 43 04.9 -0.1
KOLL *e* 13 43 17.0
DPC Dobruska-Polom 125.50 329 *e*PKIKP PKPdf 13 43 04.9 -0.1
DPC *e* 13 43 16.7
DPC *e* 13 45 00.3
DPC MLR MLR
comp=Z,1μm,21.4s,MS5.6
DPC Dobruska-Polom 125.50 329 *e*PKPdf PKPdf 13 43 04.9 -0.1
DPC *e*pPKP pPKPdf 13 43 16.7 -1.1
DPC *e*PP PP 13 45 00.3 +4.4
DPC *e*x x 13 53 16.7
DPC *e*x x 13 54 41.9
DPC *e*x x 13 56 33.4
DPC AMS AMS 14 37 50.0
comp=Z,1μm,21.4s
UPC Upice 125.56 330 *e*PKPdf PKPdf 13 43 04.8 -0.3
UPC *e*x x 13 43 17.7
UPC *e*x x 13 56 35.4
VTS Vitosha 125.62 318 P PKPdf 13 43 04.8 -0.7
VTS Vitosha 125.62 318 *i* P PKPdf 13 43 04.6 -0.9
MMB Musomiste 125.71 317 *i* P PKPdf 13 43 04.1 -1.6
BUD Budapest 125.74 325 ⇑*e*PKP PKPdf 13 43 04.9 -0.6
BSEG Bad Segeberg 125.83 336 *e*PKPdf PKPdf 13 43 05.4 -0.1
BSEG *e*PP PP 13 45 05.1 +7.3
VRAC Vranov 126.00 328 ⇑PKIKP PKPdf 13 43 05.2 -0.8
VRAC Vranov 126.00 328 ⇑*i*P PKPdf 13 43 05.2 -0.8
SRS Serrai 126.01 316 P PKPdf 13 43 04.2 -2.1
KKB Krupnik 126.03 318 *i* P PKPdf 13 43 04.7 -1.6
APE Apeiranthos 126.20 311 ⇓PKIKP PKPdf 13 43 05.2 -1.6
APE Apeiranthos 126.20 311 ⇓*i*P PKPdf 13 43 05.2 -1.6
APE Apeiranthos 126.20 311 P PKPdf 13 43 05.4 -1.4
PVCC Panska Ves 126.26 330 *e*PKIKP PKPdf 13 43 06.2 -0.2
PVCC *e* 13 43 18.2
PVCC *e* 13 45 02.6
PVCC MLR MLR
comp=Z,1μm,21.3s,MS5.6
PVCC Panska Ves 126.26 330 *e*PKPdf PKPdf 13 43 06.2 -0.2
PVCC *e*pPKP pPKPdf 13 43 18.2 -1.0
PVCC *e*PP PP 13 45 02.6 +1.7
PVCC AMS AMS 14 41 50.0
comp=Z,1μm,21.3s
BRG Berggiesshubel 126.34 331 *e*PKPdf PKPdf 13 43 06.3 -0.3
BRG *e*PP PP 13 45 07.6 +6.2
BRG Berggiesshubel 126.34 331 *i* PKP PKPdf 13 43 06.3 -0.3
comp=Z,42nm,0.7s
BRG *i* 13 43 19.4
comp=Z,75nm,1.1s
BRG PP PP 13 45 01.0 -0.4
BRG *i* SKP 13 46 20.9
comp=Z,9.7nm,1.2s
ZST Bratislava 126.40 327 *e*PKIKP PKPdf 13 43 06.6 -0.2
ZST *e* 13 43 20.2
ZST MLR MLR
comp=Z,1μm,20.6s,MS5.5
ZST Bratislava 126.40 327 *e*PKP PKPdf 13 43 06.6 -0.2
ZST *e* 13 43 20.2
PLG Polygyros 126.42 316 P PKPdf 13 43 06.0 -1.1
KNT Kendrikon 126.46 317 P PKPdf 13 43 06.5 -0.6
ORE Reay 126.47 347 ⇓*e*P PKPdf 13 43 05.9 -0.7
CLL Collm 126.50 332 *e*PKPdf PKPdf 13 43 06.3 -0.6
CLL *e*PP PP 13 45 09.2 +6.8
CLL Collm 126.50 332 ⇑*i*PKIKP PKPdf 13 43 06.2 -0.7
CLL *i* 13 43 18.5
CLL *e* 13 45 10.0
CLL MLR MLR
comp=Z,1μm,20.7s,MS5.5
CLL Collm 126.50 332 ⇑*i*PKP PKPdf 13 43 06.2 -0.7
CLL *i*pPKP pPKPdf 13 43 18.5 -1.1
CLL *e*PP PP 13 45 10.0 +7.6
CLL *e*SKP 13 46 27.0
CLL LR LR
comp=Z,1μm,20.7s,MS5.5
CLL Collm 126.50 332 ⇑*i*PKPdf PKPdf 13 43 06.2 -0.7
comp=Z,52nm,0.7s
CLL *i*pPKPdf pPKPdf 13 43 18.5 -1.1
CLL *i*pPKiKP 13 43 19.6
CLL *i* 13 43 26.1
CLL *e*PP PP 13 45 03.0 +0.6
CLL *e*SKPdf SKPdf 13 46 27.0 -12
CLL *e*PPPP 13 49 50.0
CLL *e*SKSdf SKSdf 13 50 21.0 +5.5
CLL *e*SKKSac SKKSac 13 51 48.0 -10
CLL *e*PSKS 13 54 58.0
CLL *e*PcPP 13 56 32.0
CLL *e*PPS 13 56 39.0
CLL *e*SS SS 14 02 02.0 -1.8
CLL *e*SKSSKSac 14 04 54.0
CLL *e*SSS 14 07 00.0
CLL LmV 14 45 00.0
comp=Z,1μm,20.7s
TREC Trest 126.58 329 *e*PKIKP PKPdf 13 43 07.1 0.0
TREC MLR MLR
comp=Z,2μm,20.0s,MS5.7
TREC Trest 126.58 329 *e*PKPdf PKPdf 13 43 07.1 0.0
TREC AMS AMS 14 42 40.0
comp=Z,2μm,20.0s
AOS Alonnisos 126.61 314 P PKPdf 13 43 05.8 -1.7
VAY Valandovo 126.61 317 *e*PKP PKPdf 13 43 04.8 -2.7
PRU Pruhonice 126.62 330 *e*PKIKP PKPdf 13 43 07.0 -0.1
PRU *e* 13 43 18.8
PRU *e* 13 45 07.2
PRU MLR MLR
comp=Z,2μm,21.7s,MS5.6
PRU Pruhonice 126.62 330 *e*PKPdf PKPdf 13 43 07.0 -0.1
PRU *e*pPKP pPKPdf 13 43 18.8 -1.1
PRU *e*PP PP 13 45 07.2 +3.9
PRU *e*x x 13 54 46.9
PRU *e*x x 13 56 25.2
PRU AMS AMS 14 41 00.0
comp=Z,2μm,21.7s
PRA Prague 126.62 330 PKPdf PKPdf 13 43 07.0 -0.1
PRA pPKP pPKPdf 13 43 20.0 +0.1
PKSM Moragy 126.66 324 ⇑PKIKP PKPdf 13 43 06.4 -0.9
PKSM Moragy 126.66 324 ⇑*i*P PKPdf 13 43 06.4 -0.9
STIP Stip 126.70 318 *e*PKP PKPdf 13 43 05.3 -2.3
LAST Lasithi 126.90 309 P PKPdf 13 43 07.4 -0.8
NRDL Niedersach Rie 126.96 335 *e*PKPdf PKPdf 13 43 07.5 -0.2
NRDL *e*PP PP 13 45 12.3 +6.9
DIVS Divibare 126.97 321 P PKPdf 13 43 07.1 -0.9
XOR Xorichti 127.02 315 P PKPdf 13 43 06.3 -2.0
SKO Skopje 127.07 318 *e*PKP PKPdf 13 43 07.7 -0.6
MVH1 Achvaich 127.13 347 ⇓*e*P PKPdf 13 43 07.0 -0.9
LIT Litokhoron 127.20 316 P PKPdf 13 43 06.8 -1.8
MCD Coleburn Disti 127.22 346 ⇓*e*P PKPdf 13 43 06.7 -1.4
CONA Conrad Observa 127.22 327 *i* PKPdf PKPdf 13 43 07.9 -0.5
comp=Z,37nm,1.1s,SNR=25
CLZ Clausthal 127.31 334 *e*PKPdf PKPdf 13 43 08.5 +0.1
CLZ *e*PP PP 13 45 14.5 +6.8
TANN Tannenbergstha 127.35 331 *e*PKPdf PKPdf 13 43 08.3 -0.2
TANN *e*PP PP 13 45 15.2 +7.1
MME1 Meikle Cairn 127.39 346 ⇓*e*P PKPdf 13 43 07.2 -1.2
LKR Lokris 127.45 314 P PKPdf 13 43 07.2 -1.9
KRUS Krusevo 127.48 318 *e*PKP PKPdf 13 43 07.1 -2.0
RRR Rugha Reidh 127.54 348 *e*P PKPdf 13 43 07.8 -0.8
MOX Moxa 127.59 332 *e*PKP PKPdf 13 43 08.0 -1.0
comp=Z,39nm,1.5s
MOX *e* 13 43 20.5
MOX Moxa 127.59 332 *e*PKPdf PKPdf 13 43 08.7 -0.3
MOX *e*PP PP 13 45 15.5 +5.9
MOX Moxa 127.59 332 *e*PKIKP PKPdf 13 43 08.0 -1.0
MOX *e* 13 43 20.5
MOX MLR MLR
comp=Z,600nm,21.0s,MS5.2
MOX Moxa 127.59 332 *e*PKP PKPdf 13 43 08.0 -1.0
MOX *e* 13 43 20.5
MOX *e*S SS 14 02 07.0 -10
MOX LR LR
comp=Z,600nm,21.0s,MS5.2
KZN Kozani 127.61 316 P PKPdf 13 43 07.8 -1.5
MDO Dochfour 127.61 347 ⇓*e*P PKPdf 13 43 07.7 -1.1
KHC Kasperske Hory 127.66 330 *e*PKIKP PKPdf 13 43 08.8 -0.3
KHC *e* 13 43 20.6
KHC MLR MLR
comp=Z,2μm,20.7s,MS5.7
KHC Kasperske Hory 127.66 330 *e*PKPdf PKPdf 13 43 08.5 -0.6
KHC *e*pPKPdf pPKPdf 13 43 18.9 -3.0
KHC Kasperske Hory 127.66 330 *e*PKPdf PKPdf 13 43 08.8 -0.3
KHC *e*pPKP pPKPdf 13 43 20.6 -1.3
KHC *e*x x 13 45 20.6
KHC *e*x x 13 56 25.2
KHC AMS AMS 14 39 10.0
comp=Z,2μm,20.7s
LTK Loutraki 127.73 313 P PKPdf 13 43 07.7 -1.9
KAC Achnashellach 127.76 347 ⇓*e*P PKPdf 13 43 08.6 -0.5
THL Klokotos Trika 127.76 315 P PKPdf 13 43 07.4 -2.3
AGG Agios Georgios 127.77 315 P PKPdf 13 43 08.7 -1.0
GEC2 GERESS Array S 127.78 329 *e*PKPdf PKPdf 13 43 09.0 -0.4
GEC2 *e*pPKPdf pPKPdf 13 43 20.7 -1.5
GERES GERESS Array B 127.78 329 PKhKP 13 43 05.0
comp=Z,28nm,0.7s,baz=186,slow=1.8,SNR=31
GERES PKP PKPdf 13 43 08.6 -0.8
comp=Z,21nm,0.6s,baz=75,slow=1.2,SNR=112
GERES pPKP pPKPdf 13 43 19.6 -2.6
comp=Z,15nm,0.8s,baz=79,slow=2.9,SNR=12
GERES PKKPbc 13 52 32.8
comp=Z,0.6nm,0.7s,baz=224,slow=3.7,SNR=3.8
GERES PKKP 13 53 19.1
comp=Z,0.9nm,0.8s,baz=222,slow=1.8,SNR=5.1
GERES SKKPbc 13 56 22.3
comp=Z,0.6nm,0.8s,baz=248,slow=2.2,SNR=3.4
GERES GERESS Array B 127.78 329 PKIKP 13 43 05.1
GERES 13 43 19.6
DSF Desfina 127.89 314 P PKPdf 13 43 08.8 -1.1
OHR Ohrid 127.90 318 *e*PKP PKPdf 13 43 08.1 -1.8
ROTZ Rotzenmuhle 127.91 331 *e*PKPdf PKPdf 13 43 09.4 -0.2
ROTZ *e*PP PP 13 45 22.0 +10
KPL Plockton 127.99 348 ⇓*e*P PKPdf 13 43 08.7 -0.8
KPL AMb AMB 13 43 09.4
comp=Z,46nm,3.6s
WET Wettzell 128.00 330 *e*PKPdf PKPdf 13 43 09.6 -0.2
WET *e*pPKPdf pPKPdf 13 43 21.0 -1.6
KARN Karanos 128.02 310 P PKPdf 13 43 10.5 +0.2
IBBN Ibbenburen 128.08 336 *e*PKPdf PKPdf 13 43 09.6 -0.2
IBBN *e*pPKPdf pPKPdf 13 43 21.0 -1.6
IBBN *e*PP PP 13 45 23.3 +11
MOA Molln 128.12 328 ⇑*i*PKPdf PKPdf 13 43 09.1 -0.9
comp=Z,24nm,1.2s,SNR=12
UBBA Unterbreizbach 128.21 333 *e*PKPdf PKPdf 13 43 09.9 -0.2
GUR Goura 128.22 313 P PKPdf 13 43 09.8 -0.8
PERS Pernice 128.41 326 *i* PKPdf PKPdf 13 43 09.4 -1.3

PERS *i* 13 43 22.0
PERS *e* 13 45 27.6
PERS *e* 13 46 26.9
KAR1 Arisaig 128.41 347⇓ *e*P PKPdf 13 43 09.9 -0.4
SOKA Soboth 128.43 326⇑ *i*PKPdf PKPdf 13 43 09.4 -1.3
comp=Z,29nm,1.1s
GRA1 Grafenberg Arr 128.43 332 *e*PKPdf PKPdf 13 43 10.3 -0.3
GRA1 *ep*PKPdf pPKPdf 13 43 21.9 -1.5
GRA1 *e*PP PP 13 45 26.1 +11
GRA1 LR LR
comp=Z,1µm,21.8s,MS5.5
GRF Grafenberg Arr 128.43 332 *e*PKPdf PKPdf 13 43 10.3 -0.3
GRF *ep*PKPdf pPKPdf 13 43 21.9 -1.5
GRF *e*PP PP 13 45 26.1 +11
GRF *e*L 14 42 34.2
comp=Z,1µm,21.8s
GRF Grafenberg Arr 128.43 332 *e*PKIKP PKPdf 13 43 10.3 -0.3
GRF *e* 13 43 21.9
GRF MLR MLR
comp=Z,1µm,21.8s,MS5.5
GRF Grafenberg Arr 128.43 332 *e*PKIKP PKPdf 13 43 10.3 -0.3
GRF 13 43 21.9
GRF MLR MLR
comp=Z,1µm,21.8s,MS5.5
EAB Aberfoyle 128.74 346⇓ *e*P PKPdf 13 43 10.7 -0.3
EAU Auchinoon 128.83 345⇓ *e*P PKPdf 13 43 10.7 -0.4
BUG Bochum--Univer 128.93 335 *e*PKPdf PKPdf 13 43 11.1 -0.4
BUG *e*PP PP 13 45 27.7 +9.4
BOJS Bojanci 129.01 325 *i* PKPdf PKPdf 13 43 11.3 -0.6
BOJS *i* 13 43 23.8
BOJS *i* 13 45 31.8
BOJS *e* 13 46 28.6
VISS Visnje 129.06 326 *i* PKPdf PKPdf 13 43 11.1 -0.8
VISS *i* 13 43 23.8
VISS *e* 13 45 32.4
VISS *e* 13 46 30.2
KBA Koelnbreinsper 129.09 328⇓ *i*PKPdf PKPdf 13 43 10.5 -1.4
comp=Z,24nm,1.2s,SNR=12
LJU Ljubljana 129.09 326 *e*PKIKP PKPdf 13 43 11.5 -0.5
LJU *e* 13 43 24.0
LJU Ljubljana 129.09 326 *e*PKPdf PKPdf 13 43 11.5 -0.5
LJU *e* 13 43 24.0
LJU *e* 13 44 40.0
LJU *e* 13 45 43.5
ESK Eskdalemuir 129.24 345⇓ *e*P PKPdf 13 43 10.9 -1.1
ESK AMb AMB 13 43 11.5
comp=Z,22nm,2.1s
ESK Eskdalemuir 129.24 345 PFAKE 13 43 20.0 +8.0
ESK LR LR
comp=Z,851nm,20.0s,MS5.4
TNS Taunus Mts 129.32 334 *e*PKPdf PKPdf 13 43 12.2 -0.1
XAL Allendale 129.38 344⇓ *e*P PKPdf 13 43 12.0 -0.3
JAVS Javornik 129.44 326 *i* PKPdf PKPdf 13 43 11.8 -0.8
JAVS *i* 13 43 24.1
JAVS *e* 13 46 30.9
FUR Furstenfeldbru 129.44 330 *e*PKPdf PKPdf 13 43 12.2 -0.4
FUR *e*PP PP 13 45 32.0 +10
VOY Vojsko 129.45 326 *e* PKPdf 13 43 10.2 -2.5
VOY *e*PKPdf PKPdf 13 43 12.2 -0.5
VOY *e* 13 43 23.9
VOY Vojsko 129.45 326 *e*PKPdf PKPdf 13 43 12.2 -0.5
VOY *e* 13 43 23.9
PTCC Patocco-Chiusa 129.51 327 PKP PKPdf 13 43 11.4 -1.4
TOD Tromm 129.61 333 PKP PKPdf 13 43 12.6 -0.3
ABTA Abfaltersbach 129.74 328⇑ *i*PKPdf PKPdf 13 43 11.9 -1.3
comp=Z,33nm,1.4s,SNR=9.9
ROSC El Rosal 129.83 90 PKP PKPdf 13 43 13.9 -0.4
comp=Z,24nm,0.6s,baz=138,slow=6.3,SNR=16
ROSC pPKP pPKPdf 13 43 27.2 0.0
comp=Z,19nm,0.9s,baz=84,slow=20,SNR=2.1
WATA Walderalm 129.84 329⇓ *i*PKPdf PKPdf 13 43 12.5 -0.9
comp=Z,23nm,0.5s,SNR=22
WTTA Wattenberg 129.86 329⇑ *i*PKPdf PKPdf 13 43 12.6 -0.8
comp=Z,60nm,1.4s,SNR=16
ABH Alteburg 129.97 334 PKP PKPdf 13 43 13.9 +0.4
HPK Haverah Park 130.01 343 *e*P PKPdf 13 43 13.5 0.0
HPK AMb AMB 13 43 14.9
comp=Z,42nm,1.8s
HPK Haverah Park 130.01 343 P PKPdf 13 43 13.5 0.0
HPK AMb AMB 13 43 14.9
comp=Z,42nm,1.8s
STU Stuttgart 130.03 332 *e*PKPdf PKPdf 13 43 13.3 -0.4
STU *e*PP PP 13 45 33.6 +8.0
STU Stuttgart 130.03 332 *e*PKPdf PKPdf 13 43 12.8 -0.8
STU *ep*PKPdf pPKPdf 13 43 23.7 -2.8
GAL1 Galloway 130.03 346⇓ *e*P PKPdf 13 43 12.6 -0.9
GAL1 AMb AMB 13 43 20.9
comp=Z,49nm,1.9s
BEBN Eben Emael 130.07 336 PKP PKPdf 13 43 14.1 +0.4
BEBN APKP 13 43 26.4
MOTA Moosalm 130.08 329⇑ *i*PKPdf PKPdf 13 43 13.0 -0.8
comp=Z,33nm,0.5s,SNR=20
MEM Membach 130.08 335 PKP PKPdf 13 43 13.2 -0.5
MEM APKP 13 43 24.0
LPAZ La Paz 130.41 118 PKhKP 13 42 56.5
comp=Z,1.3nm,0.7s,baz=146,slow=6.0,SNR=4.0
LPAZ PKP PKPdf 13 43 15.8 +0.4
comp=Z,44nm,0.9s,baz=285,slow=1.3,SNR=61
LPAZ pPKP pPKPdf 13 43 28.5 +0.4
comp=Z,43nm,1.0s,baz=27,slow=1.3,SNR=12
LPAZ SKPbc SKPbc 13 46 35.9 +0.3
comp=Z,8.1nm,0.9s,baz=245,slow=1.7,SNR=5.8
LPAZ SKKPbc 13 56 12.9
comp=Z,3.6nm,1.0s,baz=30,slow=4.0,SNR=4.7
LPAZ La Paz 130.41 118 PKIKP PKPdf 13 43 15.8 +0.5
LPAZ 13 43 28.5
LPAZ La Paz 130.41 118 PKP PKPdf 13 43 15.8 +0.4
LPAZ pPKP pPKPdf 13 43 28.5 +0.4
LPAZ SKPbc SKPbc 13 46 35.9 +0.3
LPAZ SKKPbc 13 56 12.9
LHO Holmfirth 130.44 343⇓ *e*P PKPdf 13 43 14.2 -0.1
FETA Feichten 130.48 329⇑ *i*PKPdf PKPdf 13 43 13.9 -0.7
comp=Z,22nm,0.7s,SNR=7.0
BCLA Clavier 130.51 336 PKP PKPdf 13 43 14.8 +0.3
BCLA APKP 13 43 26.4
LANF Langenberg 130.51 333 PKP PKPdf 13 43 15.0 +0.4
UCC Uccle 130.59 337 PKP PKPdf 13 43 15.0 +0.3
UCC APKP 13 43 26.7
SPAK Spaichingen-Ko 130.69 331 PKP PKPdf 13 43 14.6 -0.4
WLF Walferdange 130.73 335 PKP PKPdf 13 43 15.6 +0.6
WLF APKP 13 43 27.3
WLF Walferdange 130.73 335 *e*PKPdf PKPdf 13 43 15.5 +0.5
WLF Walferdange 130.73 335 *e*PKPdf PKPdf 13 43 14.6 -0.4
WLF *e* 13 43 27.9
BFO Black Forest 130.74 332 *e*PKPdf PKPdf 13 43 14.5 -0.6
BFO *e*PP PP 13 45 36.7 +6.5
BFO Black Forest 130.74 332 *e*PKIKP PKPdf 13 43 14.5 -0.6
BFO *e* 13 45 36.7
BFO MLR MLR
comp=Z,709nm,20.0s,MS5.4
BFO Black Forest 130.74 332 *e*PKPdf PKPdf 13 43 14.5 -0.6
BFO *e*PP PP 13 45 36.7 +6.5
BFO LR LR
comp=Z,709nm,20.0s,MS5.4
SNF Seneffe 130.85 336 PKP PKPdf 13 43 15.3 +0.1
SNF APKP 13 43 26.8
GIVF Givet 130.95 336 *e*PKIKP PKPdf 13 43 14.9 -0.5
CWF Charnwood Fore 130.97 342 *e*P PKPdf 13 43 15.8 +0.4
RGNG Rignano Grg 130.99 321 PKP PKPdf 13 43 14.7 -1.0
BRMO Bormio 131.03 329 PKP PKPdf 13 43 15.1 -0.6
DOU Dourbes 131.05 336 PKP PKPdf 13 43 16.2 +0.6
DOU APKP 13 43 28.2
CDF Champ du Feu 131.17 333⇑ *i*PKIKP PKPdf 13 43 14.9 -1.0
comp=Z,39nm,0.9s
LIBD Limburg 131.21 332 PKP PKPdf 13 43 15.9 0.0
FELD Feldberg im Sc 131.22 332 PKP PKPdf 13 43 15.4 -0.6
BAIF Baives 131.24 336 *e*PKIKP PKPdf 13 43 15.5 -0.4
comp=Z,43nm,0.9s
MABI Malga Bissina 131.24 328 PKP PKPdf 13 43 14.5 -1.6
ECH Echery 131.37 333 PKIKP PKPdf 13 43 15.7 -0.5
ECH MLR MLR
comp=Z,1µm,21.0s,MS5.5
TSUM Tsumeb 131.42 237 *e*PKPdf PKPdf 13 43 15.5 -1.7
TSUM *ep*PKPdf pPKPdf 13 43 28.2 -1.8
DMUB Kingscourt 131.44 347 *e*P PKPdf 13 43 15.0 -1.2
TIP Timpagrande 131.54 317 *e*PKPdf PKPdf 13 43 15.7 -1.2
MENF Mencas 131.63 338 PKP PKPdf 13 43 17.1 +0.4
MOF Molkenrain 131.65 332 PKP PKPdf 13 43 16.9 +0.1
BBS Basel-Blauen 131.75 332 PKP PKPdf 13 43 16.5 -0.5
HINF Hinteralfeld 131.80 332⇑ *i*PKIKP PKPdf 13 43 16.3 -0.8
comp=Z,46nm,0.7s
MIDA Miranda 131.84 322 PKP PKPdf 13 43 16.1 -1.2

MGR Morigerati 131.84 319 PKP PKPdf 13 43 15.0 -2.4
THEF They Montfort 131.89 333 PKP PKPdf 13 43 16.9 -0.3
HAU Haudompre 131.89 333 *e*PKIKP PKPdf 13 43 16.6 -0.6
comp=Z,55nm,0.6s
HAU *e*MLR MLR
comp=Z,1µm,21.5s,MS5.2
HAU Haudompre 131.89 333 *e*PKPdf PKPdf 13 43 16.6 -0.6
HAU LR LR
comp=Z,1µm,21.5s,MS5.5
MURB Monte Urbino 131.92 324 PKP PKPdf 13 43 17.5 +0.1
BADI Badiali 131.93 325 PKP PKPdf 13 43 16.4 -1.1
AQU L'Aquila 131.95 323 *e*PKIKP PKPdf 13 43 16.4 -1.1
AQU MLR MLR
comp=Z,2µm,22.0s,MS5.7
AQU L'Aquila 131.95 323 *e*PKPdf PKPdf 13 43 16.4 -1.1
AQU LR LR
comp=Z,2µm,22.0s,MS5.7
AQU L'Aquila 131.95 323⇓ *i*P PKPdf 13 43 14.2 -3.3
CRE Caprese Michel 132.03 325 PKIKP PKPdf 13 43 16.2 -1.4
MEZF Maizieres J'vi 132.09 334⇑ *i*PKIKP PKPdf 13 43 17.5 -0.1
comp=Z,126nm,0.9s
HTR Trewern Hill 132.14 343⇓ *e*P PKPdf 13 43 17.7 +0.1
FNVD Fontana Vidola 132.15 326 PKP PKPdf 13 43 17.8 0.0
WOL Wolverton 132.18 341 *e*P PKPdf 13 43 17.9 +0.2
WOL AMb AMB 13 43 21.0
comp=Z,97nm,1.9s
HGH Gray Hill 132.39 342⇓ *e*P PKPdf 13 43 17.9 -0.2
CERT Cerreto 132.44 323 PKP PKPdf 13 43 17.0 -1.5
BDI Bagni Di Lucca 132.50 326 PKIKP PKPdf 13 43 16.9 -1.6
MTCE Montecelio 132.54 323 PKP PKPdf 13 43 18.0 -0.7
CEL Celeste 132.59 317 *e*PKPdf PKPdf 13 43 16.4 -2.5
CEL LR LR
comp=Z,766nm,22.0s,MS5.4
BOB Bobbio (Coli) 132.66 328 PKIKP PKPdf 13 43 17.6 -1.2
ORO Oropa 132.83 330 PKIKP PKPdf 13 43 19.1 0.0
CABF La Chapelle 133.04 332⇑ *i*PKIKP PKPdf 13 43 19.4 0.0
comp=Z,60nm,0.6s
CPUP Villa Florida 133.50 137 PKhKP 13 43 01.9
comp=Z,3.2nm,0.7s,baz=224,slow=4.5,SNR=9.0
CPUP PKP PKPdf 13 43 20.2 -0.8
comp=Z,24nm,0.7s,baz=291,slow=1.2,SNR=34
CPUP pPKP pPKPdf 13 43 33.3 -0.4
comp=Z,14nm,0.8s,baz=285,slow=3.4,SNR=6.9
CPUP PP PP 13 45 46.0 -2.5
comp=Z,1.5nm,0.7s,baz=233,slow=10,SNR=1.8
CPUP SKPbc SKPbc 13 46 44.7 -1.8
comp=Z,5.7nm,0.8s,baz=151,slow=6.4,SNR=4.1
CPUP Villa Florida 133.50 137 *e*PKIKP PKPdf 13 43 19.9 -1.1
CPUP 13 43 33.3
CPUP 13 45 46.0
CPUP MLR MLR
comp=Z,246nm,22.0s
CPUP Villa Florida 133.50 137 *e*PKPdf PKPdf 13 43 19.9 -1.1
CPUP PKP PKPdf 13 43 20.2 -0.8
CPUP pPKP pPKPdf 13 43 33.3 -0.4
CPUP PP PP 13 45 46.0 -2.5
CPUP SKPbc SKPbc 13 46 44.7 -1.8
CPUP LR LR
comp=Z,246nm,22.0s,MS4.9
LPL La Plagne 133.52 330 *e*PKIKP PKPdf 13 43 20.3 -0.1
comp=Z,43nm,0.7s
LPG La Plagne 133.53 330 *e*PKIKP PKPdf 13 43 20.4 0.0
comp=Z,39nm,0.5s
LOR Lormes 133.55 334⇑ *i*PKIKP PKPdf 13 43 20.0 -0.4
comp=Z,51nm,1.0s
LOR *e*MLR MLR
comp=Z,1µm,23.0s,MS5.3
LOR Lormes 133.55 334⇑ *i*PKPdf PKPdf 13 43 20.0 -0.4
LOR LR LR
comp=Z,1µm,23.0s,MS5.6
SDV Santo Domingo 133.74 85 PKhKP 13 43 06.9
comp=Z,0.9nm,0.4s,baz=168,slow=22,SNR=3.2
SDV PKP PKPdf 13 43 20.7 -1.0
comp=Z,58nm,0.7s,baz=286,slow=5.6,SNR=50
SDV pPKP pPKPdf 13 43 33.2 -1.3
comp=Z,26nm,0.7s,baz=291,slow=12,SNR=6.7
SDV SKPbc SKPbc 13 46 47.9 +0.3
comp=Z,6.7nm,0.8s,baz=260,slow=4.6,SNR=6.5
SDV Santo Domingo 133.74 85 PKP PKPdf 13 43 20.7 -1.0
SDV pPKP pPKPdf 13 43 33.2 -1.3
SDV SKPbc SKPbc 13 46 47.9 +0.3
SSF Saint Saulge 133.86 334⇑ *i*PKIKP PKPdf 13 43 20.5 -0.5
comp=Z,44nm,0.8s
BNI Bardonecchia 133.88 330 PKIKP PKPdf 13 43 21.4 +0.3
BNI MLR MLR
comp=Z,1µm,20.0s,MS5.6
SMF Signal de Mont 134.04 333 *e*PKIKP PKPdf 13 43 20.8 -0.5
comp=Z,59nm,0.9s
MBDF Montbardon 134.07 330⇑ *i*PKIKP PKPdf 13 43 20.6 -0.8
HYF Humbligny 134.07 335 *e*PKIKP PKPdf 13 43 21.4 0.0
FLN La Foliniere 134.08 339 *e*PKIKP PKPdf 13 43 21.0 -0.3
comp=Z,49nm,0.7s
FLN *e*MLR MLR
comp=Z,2µm,21.0s,MS5.5
FLN La Foliniere 134.08 339 *e*PKPdf PKPdf 13 43 21.0 -0.3
FLN LR LR
comp=Z,2µm,21.0s,MS5.8
LDF La Druitiere 134.09 338⇑ *i*PKIKP PKPdf 13 43 20.6 -0.8
comp=Z,16nm,0.6s
AVF Avril sur Loir 134.14 334 *e*PKIKP PKPdf 13 43 20.9 -0.6
comp=Z,21nm,0.8s
SAOF Saorge 134.19 328 PKP PKPdf 13 43 22.4 +0.7
GRN Grenoble 134.20 331 PKP PKPdf 13 43 21.8 +0.1
SURF Saint Ours 134.22 329 PKP PKPdf 13 43 22.3 +0.6
TOUF Mont Tournerai 134.33 329 PKP PKPdf 13 43 21.9 -0.1
SBF Sospel 134.33 328 *e*PKIKP PKPdf 13 43 21.0 -1.0
comp=Z,43nm,0.6s
ORIF Oris-en-Rattie 134.37 330⇑ *i*PKIKP PKPdf 13 43 21.5 -0.5
comp=Z,37nm,0.5s
ORIF *e*MLR MLR
comp=Z,2µm,21.5s,MS5.5
PGF Pioggiola 134.38 326⇑ *i*PKIKP PKPdf 13 43 21.4 -0.7
comp=Z,94nm,0.7s
GRR Gorron 134.53 339⇑ *i*PKIKP PKPdf 13 43 21.7 -0.5
comp=Z,33nm,0.6s
BGF Bois d'Agland 134.54 334 *e*PKIKP PKPdf 13 43 21.8 -0.5
comp=Z,48nm,0.7s
BBSR BB Station 134.60 51 PFAKE 13 43 30.0 +7.2
BBSR LR LR
comp=Z,1µm,22.0s,MS5.5
AGO Saint Agoulin 134.81 333 PKP PKPdf 13 43 24.1 +1.3
FRF La Foret Royal 134.95 329 *e*PKIKP PKPdf 13 43 22.3 -0.8
comp=Z,37nm,0.6s
VIVF Saint-Julien-l 135.00 331⇑ *i*PKIKP PKPdf 13 43 22.8 -0.4
comp=Z,47nm,0.8s
TCF Toulx Ste Croi 135.03 334⇑ *i*PKIKP PKPdf 13 43 22.7 -0.5
comp=Z,69nm,0.8s
PYM Petit Puy Mans 135.09 333 PKP PKPdf 13 43 24.6 +1.3
LMR La Mourre 135.18 328 *e*PKIKP PKPdf 13 43 22.8 -0.8
comp=Z,36nm,0.6s
SMRF Simiane la Rot 135.20 330 *e*PKIKP PKPdf 13 43 22.8 -0.8
comp=Z,55nm,0.9s
SGMF Saint Gilles 135.25 340⇑ *i*PKIKP PKPdf 13 43 22.7 -0.8
comp=Z,68nm,1.0s
ROSF Rostrenen 135.42 340 *e*PKIKP PKPdf 13 43 23.4 -0.5
MFF Saint Martin d 135.74 337⇑ *i*PKIKP PKPdf 13 43 23.9 -0.6
comp=Z,38nm,0.8s
QUIF Quistinic 135.74 340 *e*PKIKP PKPdf 13 43 23.6 -0.9
comp=Z,25nm,0.8s
LASF Ste Croix 135.97 331 *e*PKIKP PKPdf 13 43 24.6 -0.4
comp=Z,71nm,0.8s
RJF Les Rejaudoux 136.10 334 *e*PKIKP PKPdf 13 43 24.1 -1.1
RJF *e*MLR MLR
comp=Z,1µm,21.2s,MS5.3
RJF Les Rejaudoux 136.10 334 *e*PKPdf PKPdf 13 43 24.1 -1.1
RJF LR LR
comp=Z,1µm,21.3s,MS5.6
VSL Villasalto 136.10 322 *e*PKPdf PKPdf 13 43 22.8 -2.7
CAF Calviac 136.15 333 *e*PKIKP PKPdf 13 43 24.5 -0.8
SIV San Ignacio 136.60 122 PKhKP 13 43 11.7
comp=Z,9.3nm,0.8s,baz=240,slow=2.4,SNR=17
SIV PKP PKPdf 13 43 24.0 -3.0
comp=Z,25nm,0.9s,baz=258,slow=1.9,SNR=26
SIV pPKP pPKPdf 13 43 38.3 -1.5
comp=Z,14nm,0.8s,baz=249,slow=8.5,SNR=5.5
SIV PP PP 13 46 06.4 -2.2
comp=Z,2.3nm,0.8s,baz=209,slow=7.4,SNR=3.8
SIV SKPbc SKPbc 13 46 56.0 -0.5
comp=Z,4.4nm,0.8s,baz=222,slow=16,SNR=3.5
SIV San Ignacio 136.60 122 PKP PKPdf 13 43 24.0 -3.0
SIV pPKP pPKPdf 13 43 38.3 -1.5
SIV PP PP 13 46 06.4 -2.2
SIV SKPbc SKPbc 13 46 56.0 -0.5
LFF La Frestale 136.72 334 *e*PKIKP PKPdf 13 43 25.4 -1.0
MTLF Montolieu 137.31 332⇑ *i*PKIKP PKPdf 13 43 27.1 -0.4

comp=Z,20nm,0.7s
SJG San Juan 137.49 71 *e*PKIKP PKPdf 13 43 27.2 -1.4
KEST Kesra 138.36 318 PKhKP 13 43 18.8
comp=Z,2.4nm,0.6s,baz=189,slow=2.6,SNR=6.9
KEST PKP PKPdf 13 43 28.9 -0.8
comp=Z,9.8nm,0.9s,baz=248,slow=1.6,SNR=12
KEST pPKP pPKPdf 13 43 42.3 -0.2
comp=Z,17nm,1.2s,baz=42,slow=2.8,SNR=6.7
KEST SKPbc SKPbc 13 47 01.3 +0.2
comp=Z,2.8nm,0.7s,baz=43,slow=1.8,SNR=4.3
EPF Esparros 138.41 333 *e*PKIKP PKPdf 13 43 28.4 -1.2
ETSF Etsaut 138.92 334 *e*PKIKP PKPdf 13 43 29.9 -0.6
comp=Z,53nm,0.6s
SJPF Ste Jean 139.03 334 *e*PKIKP PKPdf 13 43 29.7 -1.0
comp=Z,30nm,0.8s
PCRV Puerto La Cruz 139.66 83 PKhKP 13 43 23.7
comp=Z,4.4nm,0.6s,baz=315,slow=8.6,SNR=2.8
PCRV PKP PKPdf 13 43 30.0 -2.7
comp=Z,8.7nm,0.7s,baz=335,slow=20,SNR=4.6
PCRV pPKP pPKPdf 13 43 44.5 -1.0
comp=Z,11nm,0.6s,baz=228,slow=8.8,SNR=2.9
PCRV PP PP 13 46 27.6 -0.8
comp=Z,2.0nm,0.3s,baz=349,slow=6.8,SNR=1.4
ABA Alger-Bouzarea 141.64 324 P PKPdf 13 43 30.4 -5.2
AKET Djebel Ketaf 141.65 322 P PKPdf 13 43 31.5 -4.2
ANWB Willy Bob 141.66 71 PFAKE 13 43 50.0 +14
ANWB LR LR
comp=Z,1µm,22.0s,MS5.6
ADJB Djebel Djouab 141.84 323 P PKPdf 13 43 31.2 -4.8
EMHD Djebel Mahouad 142.10 323 P PKPdf 13 43 31.6 -4.9
PBRG Braganca 142.31 339 *e*PKPdf PKPdf 13 43 32.1 -4.6
FDF Fort de France 142.73 75 PFAKE 13 43 50.0 +12
FDF LR LR
comp=Z,763nm,20.0s,MS5.5
PCAB Cabril 142.85 340 *e*PKPdf PKPdf 13 43 33.9 -3.7
EBNR Beni Rached 142.86 325 P PKPdf 13 43 46.0 +8.2
MVO Moncorvo 142.98 339 *e*PKPdf PKPdf 13 43 34.4 -3.5
MVO Moncorvo 142.98 339 *e*PKPab PKPdf 13 43 47.8 +10
MVO *e*LQ 14 26 23.1
MVO *e*LR LR 14 34 16.8
comp=Z,777nm,20.0s
ESDC Sonseca Array 143.03 334 PKP PKPdf 13 43 34.6 -3.4
comp=Z,12nm,0.8s,baz=24,slow=2.8,SNR=54
ESDC PP PP 13 46 46.3 -0.6
comp=Z,3.1nm,0.9s,baz=34,slow=7.8,SNR=2.8
ESLA Sonseca Array 143.03 334 *e*PKPdf PKPdf 13 43 34.1 -4.0
PVRL Vila Real 143.13 339 *e*PKPdf PKPdf 13 43 35.2 -2.9
PAB San Pablo 143.30 334 *e*PKIKP PKPdf 13 43 34.9 -3.6
EANR 'Ain N'Sour 143.35 325 P PKPdf 13 43 35.1 -3.6
OKGL Djebel Kef Gue 143.54 325 P PKPdf 13 43 36.0 -3.0
ETRT Tiaret 143.63 324 P PKPdf 13 43 36.5 -2.7
PVIS Viseu 143.68 339 *e*PKPdf PKPdf 13 43 36.8 -2.3
PVIS Viseu 143.68 339 *e*PKPab PKPdf 13 43 50.2 +11
MTE Manteigas 143.84 339 *e*PKPdf PKPdf 13 43 37.5 -1.9
MTE Manteigas 143.84 339 *e*PKPab PKPdf 13 43 50.4 +11
MTE *e*LQ 14 25 40.0
MTE *e*LR LR 14 33 56.6
comp=Z,864nm,24.0s
MTE Manteigas 143.84 339 *e*PKPdf PKPdf 13 43 37.1 -2.3
OJGS Djebel Guires 143.87 325 P PKPdf 13 43 37.0 -2.6
OJBR Djebel Berber 144.04 325 P PKPdf 13 43 38.0 -1.9
PCBR Castelo Branco 144.31 338 *e*PKPdf PKPdf 13 43 38.7 -1.5
PCBR Castelo Branco 144.31 338 *e*PKPab PKPdf 13 43 50.5 +10
BBGH Gun Hill 144.45 78 PFAKE 13 43 50.0 +8.8
BBGH LR LR
comp=Z,2µm,20.0s,MS5.8
ODJA Bouhanifia 144.50 325 P PKPdf 13 43 39.0 -1.7
PMRV Marv??o 144.63 338 *i* PKPdf PKPdf 13 43 39.4 -1.4
PMRV Marv??o 144.63 338 *e*PKPab PKPdf 13 43 51.7 +11
PMRV *e*LR LR 14 34 41.3
comp=Z,909nm,20.0s
ODZI Dziouia 145.13 327 P PKPbc 13 43 42.0 +0.6
PESTR Estremoz 145.20 337 *i* PKPdf PKPdf 13 43 41.0 -0.8
PESTR Estremoz 145.20 337 *e*PKPab PKPab 13 43 52.9 +11
PESTR *e*LR LR 14 35 33.6
comp=Z,859nm,24.0s
OLHC Oulhaca 145.26 327 P PKPbc 13 43 41.5 -0.3
ALMR Almeirim 145.31 339 *e*P PKPbc 13 43 41.5 -0.3
PBAR Barrancos 145.58 336 *i* PKPdf PKPdf 13 43 42.6 +0.1
PBAR Barrancos 145.58 336 *e*PKPab PKPab 13 43 54.3 +11
PBAR *e*LR LR 14 35 56.8
comp=Z,1µm,20.0s
EVO Evora 145.65 338⇑ *i*PKIKP PKPdf 13 43 43.0 +0.4
comp=Z,139nm,0.6s
EVO *e*MLR MLR
comp=Z,712nm,21.8s,MS5.1
EVO Evora 145.65 338 *e*PKPdf PKPdf 13 43 42.7 +0.1
EVO Evora 145.65 338 *e*PKPab PKPab 13 43 54.5 +11
EVOP Sao Brissos 145.69 338 *e*P PKPdf 13 43 42.1 -0.6
EVOP AMS AMS 14 46 45.0
comp=Z,831nm,29.6s,MS5.3
PMAFR Mafra 145.74 340 *i* PKPdf PKPdf 13 43 43.1 +0.4
PMAFR Mafra 145.74 340 *e*PKPab PKPab 13 43 55.5 +12
PMAFR *e*LR LR 14 34 58.5
comp=Z,1µm,22.0s
LIS Lisbon 145.90 339 *e*P PKPdf 13 43 43.0 -0.1
LIS AMS AMS 14 52 38.6
comp=E,2µm,17.8s
PLML Palmela 145.96 339 *e*PKPdf PKPdf 13 43 44.6 +1.5
PBEJ Beja 146.03 337 *i* PKPdf PKPdf 13 43 44.3 +1.0
PBEJ Beja 146.03 337 *e*PKPab PKPab 13 43 56.5 +12
PCVE Castro Verde 146.44 337 *i* PKPdf PKPdf 13 43 46.1 +2.1
PCVE Castro Verde 146.44 337 *e*PKPab PKPab 13 43 58.0 +12
PCVE *e*LQ 14 33 54.8
PCVE *e*LR LR 14 36 10.8
comp=E,945nm,24.0s
PVAQ Vaqueiros 146.52 336 *i* PKPdf PKPdf 13 43 45.8 +1.7
PVAQ Vaqueiros 146.52 336 *e*PKPab PKPab 13 43 57.2 +11
PVAQ *e*LR LR 14 36 13.9
comp=E,1µm,22.0s
SFS San Fernando 146.68 333 *e*PKPbc PKPbc 13 43 46.3 +0.3
SFS *e* 13 43 57.5
PBDV Barranco-do-Ve 146.74 336 *i* PKPdf PKPdf 13 43 46.6 +2.1
PBDV Barranco-do-Ve 146.74 336 *e*PKPab PKPab 13 43 58.3 +11
PBDV *e*LQ 14 31 56.0
PBDV *e*LR LR 14 36 20.5
comp=E,975nm,22.0s
PTEO Sao Teotonio 146.78 338 *i* PKPdf PKPdf 13 43 46.6 +2.0
PTEO Sao Teotonio 146.78 338 *e*PKPab PKPab 13 43 58.9 +11
MORF Marmelete 146.97 337 *i* PKPdf PKPdf 13 43 47.1 +2.2
MORF Marmelete 146.97 337 *e*PKPab PKPab 13 43 59.4 +11
MORF *e*LR LR 14 36 43.4
comp=E,1µm,22.0s
MORF Marmelete 146.97 337 *e*PKP2 PKPab 13 43 45.1 -3.2
PFVI Vila Bisbo 147.19 337 *i* PKPdf PKPdf 13 43 47.7 +2.5
PFVI Vila Bisbo 147.19 337 *e*PKPab PKPab 13 43 59.5 +10
PFVI *e*LR LR 14 36 16.3
comp=E,974nm,20.0s
TAM Tamanrasset 147.71 302 *e*PKIKP PKPdf 13 43 46.8 +0.3
TAM *e* 13 44 01.1
ROSA Rosais 148.37 6 *e*PKP PKPdf 13 43 50.9 +3.7
PMAN Manadas 148.48 6 *e*PKP PKPdf 13 43 51.1 +3.8
ADH Angra Heroismo 148.54 5 *e*PKP PKPdf 13 43 51.2 +3.8
RTC Rabat Centre 149.03 332 *e*PKPbc PKPbc 13 43 52.3 -0.1
CMLA Cha da Macela 149.54 3 *e*PKP PKPdf 13 43 52.1 +3.0
CMLA Cha da Macela 149.54 3 PFAKE 13 44 00.0 +11
CMLA LR LR
comp=Z,1µm,20.0s,MS5.6
PDA Ponta Delgada 149.55 3 *e*PKP PKPdf 13 44 05.7 +17
PSMA Santa Maria 150.32 2 *e*PKP PKPdf 13 43 47.7 -2.6
SHEL Horse Pasture 150.79 218 *e*PKIKP PKPdf 13 43 57.4 +5.8
TOA0 Torodi Ar. Sit 154.12 285 *e*PKPdf PKPdf 13 43 55.0 -1.6
TOA0 *e*PKPbc PKPbc 13 44 03.6 -1.1
TORD Torodi Ar. Bea 154.12 285 PKP PKPdf 13 43 54.8 -1.7
comp=Z,12nm,0.8s,baz=22,slow=1.5,SNR=38
TORD PKPbc PKPbc 13 44 03.5 -1.2
comp=Z,48nm,0.8s,baz=60,slow=2.1,SNR=38
TORD PKPab PKPab 13 44 15.6 -2.8
comp=Z,97nm,1.2s,baz=38,slow=1.4,SNR=13
TORD pPKPab pPKPab 13 44 29.2 -1.7
comp=Z,26nm,0.8s,baz=78,slow=3.6,SNR=3.7
TORD PP PP 13 47 55.3 +1.8
comp=Z,7.5nm,1.1s,baz=29,slow=3.3,SNR=3.6
KIC Kosan Boka 160.94 269 *e*PKIKP PKPdf 13 44 03.6 -1.6
comp=Z,426nm,1.1s
DBIC Dimbokro 161.07 270 PKP PKPdf 13 44 04.0 -1.3
comp=Z,36nm,0.9s,baz=317,slow=1.7,SNR=15
DBIC pPKP pPKPdf 13 44 15.9 -2.2
comp=Z,47nm,1.0s,baz=59,slow=0.5,SNR=10
DBIC PKPab PKPab 13 44 47.9 -0.6
comp=Z,27nm,0.6s,baz=92,slow=5.1,SNR=20
DBIC pPKPab pPKPab 13 45 00.2 -0.8
comp=Z,72nm,0.9s,baz=82,slow=5.2,SNR=7.5
DBIC PP PP 13 48 33.7 +1.8

comp=Z,14nm,1.2s,baz=120,slow=7.8,SNR=2.2
DBIC Dimbokro 161.07 270 PKIKP PKPdf 13 44 04.0 -1.3
DBIC 13 44 15.9
DBIC 13 44 47.9
DBIC 13 48 33.7
DBIC Dimbokro 161.07 270 PKP PKPdf 13 44 04.0 -1.3
DBIC pPKP pPKPdf 13 44 15.9 -2.2
DBIC PKPab PKPab 13 44 47.9 -0.6
DBIC pPKPab pPKPab 13 45 00.2 -0.8
DBIC PP PP 13 48 33.7 +1.8
LIC Lamto 161.22 268 ⇑*i*PKIKP PKPdf 13 44 04.2 -1.3
comp=Z,174nm,1.1s
LIC *e*MLR MLR
comp=Z,1μm,18.8s
LIC Lamto 161.22 268 *e*PKIKP PKPdf 13 44 03.8 -1.7
comp=Z,420nm,1.2s
LIC Lamto 161.22 268 ⇑*i*PKPdf PKPdf 13 44 04.2 -1.3
LIC LR LR
comp=Z,690nm,18.8s
TIC Toumodi 161.23 269 *e*PKIKP PKPdf 13 44 03.9 -1.6
comp=Z,405nm,1.2s
ASCN Ascension 162.21 213 PFAKE 13 44 20.0 +14
ASCN LR LR
comp=Z,596nm,19.0s

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*NEIC **24** 13:36:23.3, 11°.08N×59°.99W, h43km, MD4.0(TRN), After TRN.*
TRN 24 13:36:20.5, 11°.08N×59°.91W, h24km, MD4.0, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	**Speyside**	**0.65**	**290**	*e*P	Pb	13 36 37.3	+4.0
TOSP				*e*S	Sb	13 36 45.5	+3.6
TPR	**Prospect**	**0.86**	**277**	*e*S	Sb	13 36 50.5	+2.6
TRN	**Trinidad (W)**	**1.53**	**254**	*e*P	Pn	13 36 48.0	+1.7
TRN	**Trinidad (W)**	**1.53**	**254**	*e*P	Pn	13 36 48.0	+1.7
GRW	**Mount Saint Ca**	**2.02**	**302**	*e*P	Pn	13 36 56.7	+3.6
GRW				*e*S	Sn	13 37 19.0	+1.3
GRW	**Mount Saint Ca**	**2.02**	**302**	*e*P	Pn	13 36 54.9	+1.7
GRW				*e*S	Sn	13 37 19.0	+1.3
BHS	**Barnard House**	**2.51**	**332**	*e*S	Sn	13 37 31.3	+1.7
SVB	**Belmont**	**2.55**	**329**	*e*P	Pn	13 37 02.9	+2.5
SVB				*e*S	Sn	13 37 32.6	+2.0
SVB	**Belmont**	**2.55**	**329**	*e*P	Pn	13 37 02.9	+2.5
SVB				*e*S	Sn	13 37 32.6	+2.0
SSV	**Crater Summit**	**2.56**	**331**	*e*S	Sn	13 37 33.0	+2.0
SVV	**Soufriere Volc**	**2.57**	**330**	*e*S	Sn	13 37 32.9	+1.8
MCLT	**Moule a Chique**	**2.80**	**339**	*e*P	Pn	13 37 06.8	+2.8
MCLT				*e*S	Sn	13 37 38.3	+1.3
MCLT	**Moule a Chique**	**2.80**	**339**	*e*P	Pn	13 37 06.8	+2.8
MCLT				*e*S	Sn	13 37 38.3	+1.3
SLB	**Belfond**	**2.95**	**338**	*e*P	Pn	13 37 08.1	+2.2
SLB				*e*S	Sn	13 37 42.1	+1.6
SLB	**Belfond**	**2.95**	**338**	*e*P	Pn	13 37 08.1	+2.2
SLB				*e*S	Sn	13 37 42.1	+1.6

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*NNC **24** 13:57:04.4±2.9, 53°.68N×87°.62E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=22.5km s-min=21.3km az=95.0*
*IDC **24** 13:57:05.0±2.7, 54°.10N×87°.39E, h0km, mb1 3.2/3, mb1mx3.0/28, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=24.8km s-min=16.0km az=41.0*
ISC 24 13:57:09.9±2.6, 54°.1N±0°.1×86°.9E±0°.2, h10km, n7, σ1§01/10, 2C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.24**	**266**	Pg	**Pg**	**13 57 31.4**	**-2.2**
	8.5nm,0.3s,baz=81,slow=17,SNR=50						
ZALV				Lg		13 57 53.0	
	2.0nm,0.3s,baz=80,slow=26,SNR=8.3						
ZALV				Rg		13 58 03.0	
	19nm,0.9s,baz=77,slow=38,SNR=8.6						
KURK	**Kurchatov**	**6.08**	**240**	⇓Lg		14 00 24.7	
	7.7nm,1.1s						
KURK	**Kurchatov**	**6.08**	**240**	Pn	**Pn**	**13 58 40.6**	**+0.9**
	0.3nm,0.3s,baz=54,slow=14,SNR=10						
KURK				Sn	**Sn**	**13 59 54.1**	**+4.9**
	0.1nm,0.3s,baz=60,slow=29,SNR=1.7						
KURK				Lg		14 00 31.4	
	0.1nm,0.3s,baz=54,slow=29,SNR=2.4						
KURBB	**Kurchatov Arra**	**6.18**	**240**	⇓Pn	**Pn**	**13 58 41.2**	**+0.1**
	0.2nm,0.3s						
KURBB				⇓Sn	**Sn**	**13 59 53.0**	**+1.2**
	1.2nm,1.0s						
KURBB				⇓Lg		14 00 26.9	
	3.6nm,1.4s						
MK31	**Makanchi Array**	**7.85**	**204**	⇑Pn	**Pn**	**13 58 59.8**	**-4.2**
	1.7nm,1.1s,baz=28,slow=14,SNR=14						
MK31				⇑Sn	**Sn**	**14 00 32.1**	**-0.7**
	2.0nm,1.0s						
MK31				⇓Lg		14 01 05.5	
	4.7nm,0.9s,baz=36,slow=35,SNR=5.4						
MKAR	**Makanchi Array**	**7.85**	**204**	Pn	**Pn**	**13 59 03.9**	**-0.1**
	0.2nm,0.3s,baz=27,slow=14,SNR=9.8						
MKAR				Lg		14 01 21.4	
	0.0nm,0.3s,baz=26,slow=30,SNR=2.8						
BVAR	**Borovoye Array**	**9.89**	**271**	Pn	**Pn**	**13 59 32.8**	**+0.8**
	0.1nm,0.3s,baz=79,slow=13,SNR=2.7						
BVAR				Sn	**Sn**	**14 01 22.6**	**-0.3**
	0.1nm,0.3s,baz=70,slow=26,SNR=4.6						

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*DJA **24** 14:10:05, 4°.40S×103°.40E, h238km, MLv3.2/7*
*ISCJB **24** 14:10:09.9±1.3, 5°.1S±0°.1×102°.37E±0°.08, h33km, mb3.7/4, Error ellipse: s-maj=16.2km s-min=11.3km az=175.8*
*IDC **24** 14:10:11.9±4.0, 4°.41S×102°.62E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.6/4, Error ellipse: s-maj=178.5km s-min=27.1km az=56.0*
ISC 24 14:10:12.7±1.3, 5°.1S±0°.1×102°.55E±0°.10, h35km, n11, σ1§21/12, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.82**	**30**	P	**Sn**	**14 10 37.8**	**-1.0**
KSI	**Kapahiang**	**1.42**	**2**	P	**Pn**	**14 10 39.2**	**+3.1**
LWLI	**Liwa**	**1.51**	**88**	P	**Pn**	**14 10 38.6**	**+1.4**
MDSI	**Maura Dua**	**1.73**	**70**	P	**Pn**	**14 10 39.1**	**-1.2**
MDSI				S	**Sn**	**14 11 04.6**	**+3.4**
KASI	**Kota Agung**	**1.99**	**103**	P	**Pn**	**14 10 42.8**	**-1.1**
RBSI	**Rajabasa**	**3.27**	**104**	P	**Pn**	**14 10 54.4**	**-7.1**
CGJI	**Cibinong**	**3.48**	**116**	P	**Pn**	**14 10 59.3**	**-5.1**
ASAR	**Alice Springs**	**35.41**	**125**	P	**P**	**14 17 12.6**	**+7.1**
	0.3nm,0.5s,mb3.5,baz=300,slow=7.7,SNR=9.0						
SONM	**Songino Array**	**52.80**	**3**	P	**P**	**14 19 24.3**	**0.0**
	0.3nm,0.4s,mb3.6,baz=156,slow=7.4,SNR=3.0						
MKAR	**Makanchi Array**	**54.68**	**343**	P	**P**	**14 19 38.2**	**0.0**
	0.5nm,0.6s,mb3.7,baz=152,slow=7.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**60.67**	**348**	P	**P**	**14 20 19.9**	**-0.3**
	0.5nm,0.5s,mb3.9,baz=108,slow=4.7,SNR=3.7						

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*ISCJB **24** 14:12:48.7±0.4, 10°.94N±0°.02×62°.28W±0°.02, h99km±5km, Error ellipse: s-maj=4.7km s-min=2.9km az=44.3*
*FUNV **24** 14:12:50.4, 10°.96N×62°.20W, h90km, MW3.4*
*TRN **24** 14:12:50.9, 10°.98N×62°.17W, h95km, MD3.3*
*NEIC **24** 14:12:51.8, 10°.99N×62°.15W, h89km, MD3.3(TRN), After TRN.*
ISC 24 14:12:49.7±0.4, 10°.94N±0°.02×62°.27W±0°.02, h94km±5km, n56, σ0§89/98, 17C-9D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.30**	**171**	⇑*i*P	**Pn**	**14 13 04.2**	**+0.6**
GUIV				*e*S	**Sn**	**14 13 13.8**	**-0.1**
TCE	**Chacachacare**	**0.57**	**116**	⇓*i*P	**Pn**	**14 13 06.5**	**+1.2**
TCE				*e*S	**Sn**	**14 13 17.4**	**+0.4**
TCE	**Chacachacare**	**0.57**	**116**	⇓*i*P	**Pn**	**14 13 06.5**	**+1.2**
TCE				*e*S	**Sn**	**14 13 17.4**	**+0.4**
TRN	**Trinidad (W)**	**0.90**	**109**	⇑*i*P	**Pn**	**14 13 09.7**	**+1.0**
TRN				*e*S	**Sn**	**14 13 22.4**	**-0.4**
TRN	**Trinidad (W)**	**0.90**	**109**	⇑*i*P	**Pn**	**14 13 09.7**	**+1.0**
TRN				*e*S	**Sn**	**14 13 22.4**	**-0.4**
ITEV	**Isla Los Testi**	**0.94**	**296**	⇓*i*P	**Pn**	**14 13 09.5**	**+0.5**
ITEV				*e*S	**Sn**	**14 13 23.7**	**+0.2**
CRUV	**Carupano**	**0.98**	**254**	⇓*i*P	**Pn**	**14 13 10.4**	**+0.9**
CRUV				*e*S	**Sn**	**14 13 23.9**	**-0.4**
GUNV	**Guanoco**	**1.02**	**220**	*e*P	**Pn**	**14 13 11.3**	**+1.4**
GUNV				*e*S	**Sn**	**14 13 25.2**	**+0.1**
TPP	**Pointe-a-Pierr**	**1.02**	**128**	*e*P	**Pn**	**14 13 11.4**	**+1.5**
TPP				*e*S	**Sn**	**14 13 28.0**	**+2.9**
TPP	**Pointe-a-Pierr**	**1.02**	**128**	*e*P	**Pn**	**14 13 11.4**	**+1.5**
TPP				*e*S	**Sn**	**14 13 24.9**	**-0.1**
TBH	**Brigand Hill**	**1.27**	**111**	*e*P	**Pn**	**14 13 13.7**	**+0.9**
TBH				*e*S	**Sn**	**14 13 24.6**	**-5.7**
TBH	**Brigand Hill**	**1.27**	**111**	*e*P	**Pn**	**14 13 13.7**	**+0.9**
TBH				*e*S	**Sn**	**14 13 29.0**	**-1.3**
GRGR	**Grenville**	**1.33**	**27**	*e*Pn	**Pn**	**14 13 12.8**	**-0.8**
GRGR				*e*Sn	**Sn**	**14 13 30.8**	**-0.8**
GRW	**Mount Saint Ca**	**1.35**	**26**	*e*P	**Pn**	**14 13 14.5**	**+0.7**
GRW				*e*S	**Sn**	**14 13 27.8**	**-4.2**
GRW	**Mount Saint Ca**	**1.35**	**26**	*e*P	**Pn**	**14 13 14.5**	**+0.7**
GRHS	**Sauteurs**	**1.42**	**26**	*e*P	**Pn**	**14 13 14.7**	**+0.1**
GRHS				*e*S	**Sn**	**14 13 26.2**	**-7.2**
GRHS	**Sauteurs**	**1.42**	**26**	*e*P	**Pn**	**14 13 14.7**	**+0.1**
GRHS				*e*S	**Sn**	**14 13 32.7**	**-0.7**
TPR	**Prospect**	**1.49**	**81**	⇑*i*P	**Pn**	**14 13 16.0**	**+0.5**
TPR				*e*S	**Sn**	**14 13 33.8**	**-1.2**
TPR	**Prospect**	**1.49**	**81**	⇑*i*P	**Pn**	**14 13 16.0**	**+0.5**
TPR				*e*S	**Sn**	**14 13 33.8**	**-1.2**
GRIC	**Isle de Caille**	**1.49**	**27**	⇑*i*P	**Pn**	**14 13 15.9**	**+0.3**
GRIC				*e*S	**Sn**	**14 13 34.1**	**-1.1**
GRSS	**Sisters**	**1.49**	**26**	⇑*i*P	**Pn**	**14 13 16.0**	**+0.4**
GRSS				*e*S	**Sn**	**14 13 34.4**	**-0.8**
GRSS	**Sisters**	**1.49**	**26**	⇑*i*P	**Pn**	**14 13 16.0**	**+0.4**
GRSS				*e*S	**Sn**	**14 13 34.4**	**-0.8**
BOT	**Bacolet**	**1.54**	**82**	⇓*e*P	**Pn**	**14 13 16.5**	**+0.3**
BOT				*e*S	**Sn**	**14 13 34.9**	**-1.3**
BOT	**Bacolet**	**1.54**	**82**	⇓*e*P	**Pn**	**14 13 16.5**	**+0.3**
BOT				*e*S	**Sn**	**14 13 34.9**	**-1.3**
GRCU	**Cariacou**	**1.72**	**28**	⇑*i*P	**Pn**	**14 13 18.4**	**0.0**
GRCU				*e*S	**Sn**	**14 13 40.1**	**-0.1**
GRCU	**Cariacou**	**1.72**	**28**	⇑*i*P	**Pn**	**14 13 18.4**	**0.0**
GRCU				*e*S	**Sn**	**14 13 40.1**	**-0.1**
TOSP	**Speyside**	**1.74**	**78**	*e*P	**Pn**	**14 13 17.6**	**-1.1**
TOSP				*e*S	**Sn**	**14 13 36.3**	**-4.4**
ORIV	**Oritupano**	**2.17**	**211**	⇑*e*P	**Pn**	**14 13 25.3**	**+0.9**
ORIV				*e*S	**Sn**	**14 13 50.0**	**-0.8**
FCV	**Fort Charlotte**	**2.42**	**24**	*e*P	**Pn**	**14 13 27.8**	**+0.2**
FCV	**Fort Charlotte**	**2.42**	**24**	*e*P	**Pn**	**14 13 27.8**	**+0.2**
IBAV	**Isla La Blanqu**	**2.42**	**291**	⇓*i*P	**Pn**	**14 13 28.1**	**+0.5**
PCRV	**Puerto La Cruz**	**2.45**	**252**	⇑*i*P	**Pn**	**14 13 29.3**	**+1.4**
PCRV				*e*S	**Sn**	**14 13 56.8**	**-0.5**
SVB	**Belmont**	**2.52**	**23**	*e*P	**Pn**	**14 13 29.8**	**+0.8**
SVB				*e*S	**Sn**	**14 14 04.2**	**+5.2**
SVB	**Belmont**	**2.52**	**23**	*e*P	**Pn**	**14 13 29.8**	**+0.8**
SVB				*e*S	**Sn**	**14 14 04.2**	**+5.2**
SVV	**Soufriere Volc**	**2.58**	**24**	⇑*e*P	**Pn**	**14 13 30.6**	**+0.9**
SVV				*e*S	**Sn**	**14 14 02.0**	**+1.7**
SVV	**Soufriere Volc**	**2.58**	**24**	⇑*e*P	**Pn**	**14 13 30.6**	**+0.9**
SVV				*e*S	**Sn**	**14 13 58.3**	**-2.0**
BHS	**Barnard House**	**2.59**	**25**	*e*P	**Pn**	**14 13 31.9**	**+2.0**
BHS	**Barnard House**	**2.59**	**25**	*e*P	**Pn**	**14 13 29.5**	**-0.4**
SSV	**Crater Summit**	**2.59**	**24**	*e*P	**Pn**	**14 13 30.3**	**+0.4**
SSV				*e*S	**Sn**	**14 14 01.9**	**+1.2**
SSV	**Crater Summit**	**2.59**	**24**	*e*P	**Pn**	**14 13 30.3**	**+0.4**
SSV				*e*S	**Sn**	**14 13 59.1**	**-1.7**
RIOV	**Rio Grande**	**2.89**	**171**	*e*P	**Pn**	**14 13 34.4**	**+0.4**
RIOV				*e*S	**Sn**	**14 14 06.2**	**-1.7**
MCLT	**Moule a Chique**	**3.04**	**25**	*e*P	**Pn**	**14 13 35.7**	**-0.2**
MCLT	**Moule a Chique**	**3.04**	**25**	*e*P	**Pn**	**14 13 35.7**	**-0.2**
MCLT				*e*S	**Sn**	**14 14 11.0**	**-0.5**
SLB	**Belfond**	**3.11**	**23**	*e*P	**Pn**	**14 13 37.2**	**+0.4**
SLB				*e*S	**Sn**	**14 14 13.9**	**+0.8**
SLB	**Belfond**	**3.11**	**23**	*e*P	**Pn**	**14 13 37.2**	**+0.4**
SLB				*e*S	**Sn**	**14 14 11.8**	**-1.3**
PRGV	**PARIAGUAN**	**3.19**	**227**	*e*P	**Pn**	**14 13 38.5**	**+0.6**
PRGV				*e*S	**Sn**	**14 14 13.4**	**-1.6**
GURV	**El Guri**	**3.26**	**194**	⇑*i*P	**Pn**	**14 13 39.0**	**+0.1**
CUPV	**Cœpira**	**3.57**	**256**	⇑*i*P	**Pn**	**14 13 44.0**	**+1.1**
CUPV				*e*S	**Sn**	**14 14 23.6**	**-0.6**
ORCV	**Isla La Orchil**	**3.94**	**283**	⇓*e*P	**Pn**	**14 13 47.5**	**-0.5**
BIRV	**Birongo**	**3.96**	**264**	*e*P	**Pn**	**14 13 49.6**	**+1.4**
BIRV				*e*S	**Sn**	**14 14 32.8**	**-0.8**
MERV	**Las Mercedes**	**4.30**	**247**	⇑*e*P	**Pn**	**14 13 53.0**	**0.0**
MERV				*e*S	**Sn**	**14 14 40.9**	**-1.2**
LUEV	**Luepa**	**5.13**	**171**	*e*P	**Pn**	**14 14 03.0**	**-1.2**
CAOV	**Caicara del Or**	**5.38**	**228**	*e*P	**Pn**	**14 14 07.3**	**-0.2**
TURV	**Turiamo**	**5.49**	**265**	*e*P	**Pn**	**14 14 09.2**	**+0.1**
BAUV	**El Baul**	**6.02**	**251**	⇓*e*P	**Pn**	**14 14 15.3**	**-1.0**
MONV	**Montecano**	**7.61**	**278**	*e*P	**Pn**	**14 14 36.9**	**-1.1**

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*ISCJB **24** 14:42:10.1±0.7, 0°.0S±0°.1×17°.95W±0°.08, h10km, mb3.9/10, Error ellipse: s-maj=16.1km s-min=11.1km az=157.4*
*IDC **24** 14:42:10.9±1.3, 0°.05N×17°.96W, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.9/26, mbtmp3.9/10, ML4.6/1, Error ellipse: s-maj=34.4km s-min=29.0km az=119.0*
*NEIC **24** 14:42:12.1±0.6, 0°.04N×17°.96W, h10km, mb4.6/3, Error ellipse: s-maj=15.2km s-min=11.9km az=129.0*
ISC 24 14:42:11.7±0.7, 0°.0S±0°.1×17°.95W±0°.08, h10km, n20, σ0§87/20, mb3.9/10, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**14.32**	**64**	*e*P	**Pn**	**14 45 34.6**	**0.0**
	30nm,0.3s						
TIC	**Toumodi**	**14.51**	**62**	*e*P	**Pn**	**14 45 37.4**	**+0.2**
	57nm,0.3s						
KIC	**Kosan Boka**	**14.63**	**64**	*e*P	**Pn**	**14 45 38.6**	**-0.4**
	34nm,0.3s						
BBTS	**Babate**	**14.68**	**5**	Pn	**Pn**	**14 45 38.0**	**-1.5**
	2.7nm,0.3s,baz=186,slow=1.5,SNR=1.9						
BBTS				Sn	**Sn**	**14 48 07.6**	**-15**
	6.1nm,0.3s,baz=29,slow=17,SNR=9.3						
RCBR	**Riachuelo**	**18.82**	**252**	*e*P	**Pn**	**14 46 31.6**	**-0.7**
	3.1nm,0.3s						
SHEL	**Horse Pasture**	**19.88**	**143**	P	**Pn**	**14 46 44.6**	**-0.3**
	50nm,0.8s						
TOA0	**Torodi Ar. Sit**	**23.47**	**55**	*e*P	**P**	**14 47 20.7**	**-1.2**
TORD	**Torodi Ar. Bea**	**23.47**	**55**	P	**P**	**14 47 21.0**	**-0.9**
	14nm,1.1s,mb4.3,baz=236,slow=4.9,SNR=33						
TAM	**Tamanrasset**	**32.20**	**44**	*e*P	**P**	**14 48 42.0**	**+1.8**
	15nm,1.4s,mb4.6						
ESDC	**Sonseca Array**	**41.54**	**16**	P	**P**	**14 50 00.6**	**+1.1**
	0.1nm,0.3s,mb2.9,baz=224,slow=8.9,SNR=5.9						
GERES	**GERESS Array B**	**55.82**	**25**	P	**P**	**14 51 49.2**	**+0.1**
	0.6nm,0.6s,mb3.8,baz=214,slow=8.0,SNR=4.5						
GERES				PP	PP	14 53 50.8	-2.9
	1.5nm,1.0s,baz=204,slow=8.8,SNR=6.7						
GERES	**GERESS Array B**	**55.82**	**25**	P	**P**	**14 51 49.2**	**+0.1**
GERES				PP	PP	14 53 50.8	-2.9
BRTR	**Keskin Array B**	**61.40**	**43**	P	**P**	**14 52 29.3**	**+1.1**
	1.2nm,0.9s,mb4.0,baz=242,slow=5.2,SNR=7.9						
AKASG	**Malin Array Be**	**64.42**	**31**	P	**P**	**14 52 48.5**	**+0.4**
	0.2nm,0.3s,mb3.6,baz=235,slow=5.3,SNR=6.6						
NOA	**NORSAR Array B**	**64.89**	**15**	P	**P**	**14 52 50.2**	**-0.8**
	1.3nm,0.9s,mb4.0,baz=209,slow=6.5,SNR=3.6						
FINES	**FINESS Array B**	**69.83**	**21**	P	**P**	**14 53 23.1**	**+0.9**
	0.8nm,0.3s,mb4.1,baz=216,slow=4.9,SNR=14						
TXAR	**Lajitas Array**	**86.29**	**299**	P	**P**	**14 54 55.1**	**+0.7**
	1.0nm,0.8s,mb4.1,baz=125,slow=7.4,SNR=11						
YKA	**Yellowknife Ar**	**93.12**	**332**	P	**P**	**14 55 25.4**	**-0.3**
	0.2nm,0.6s,mb3.7,baz=85,slow=5.1,SNR=4.4						
YKA	**Yellowknife Ar**	**93.12**	**332**	P	**P**	**14 55 25.4**	**-0.3**
ASAR	**Alice Springs**	**143.91**	**133**	PKP	PKPdf	15 01 48.9	+0.6
	0.1nm,0.4s,baz=236,slow=2.3,SNR=1.5						

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*ISCJB **24** 14:44:29.3±0.6, 39°.70N±0°.03×21°.70E±0°.05, h9km±5km, Error ellipse: s-maj=6.5km s-min=4.0km az=161.5*
*CSEM **24** 14:44:30.3±0.2, 39°.71N×21°.80E, h20km, MD3.1, Error ellipse: s-maj=7.2km s-min=4.1km az=74.0*
*ATH **24** 14:44:30.6, 39°.71N×21°.81E, h15km±6km, MD3.1/6*
*NEIC **24** 14:44:30.6, 39°.71N×21°.81E, h15km, MD3.1(ATH), ML3.0(THE), After ATH.*
*THE **24** 14:44:30.3, 39°.69N×21°.75E, h11km±1km, ML3.0/4, Error ellipse: s-maj=1.7km s-min=0.7km az=70.0*
*SKO **24** 14:44:30.4, 39°.72N×21°.78E, h26km*
ISC 24 14:44:30.1±0.6, 39°.70N±0°.03×21°.72E±0°.05, h15km±5km, n29, σ0§78/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.27**	**120**	*e*PB	**Pg**	**14 44 35.5**	**-0.2**
THL				*e*SB	**Sg**	**14 44 39.5**	**0.0**
THL	**Klokotos Trika**	**0.27**	**120**	P	**Pg**	**14 44 35.4**	**-0.3**
THL				S	**Sg**	**14 44 39.5**	**0.0**
THL	**Klokotos Trika**	**0.27**	**120**	*e*Pb	**Pg**	**14 44 35.5**	**-0.2**
THL				S	**Sg**	**14 44 39.5**	**0.0**
KZN	**Kozani**	**0.61**	**4**	*e*PN	**Pg**	**14 44 41.6**	**-0.4**
KZN	**Kozani**	**0.61**	**4**	P	**Pg**	**14 44 41.5**	**-0.5**
KZN				S	**Sg**	**14 44 51.2**	**+1.1**
KZN	**Kozani**	**0.61**	**4**	P	**Pg**	**14 44 41.5**	**-0.5**
KZN				S	**Sg**	**14 44 51.2**	**+1.1**
LIT	**Litokhoron**	**0.72**	**56**	*e*PN	**Pg**	**14 44 43.7**	**-0.3**
LIT				*e*SN	**Sg**	**14 44 53.1**	**-0.4**
LIT	**Litokhoron**	**0.72**	**56**	P	**Pg**	**14 44 43.0**	**-1.0**
LIT				S	**Sg**	**14 44 54.1**	**+0.6**
LIT	**Litokhoron**	**0.72**	**56**	P	**Pg**	**14 44 43.0**	**-1.0**
LIT	**Litokhoron**	**0.72**	**56**	*e*Pn	**Pg**	**14 44 43.7**	**-0.3**
LIT				*e*Sn	**Sg**	**14 44 53.1**	**-0.4**
LIT				S	**Sg**	**14 44 54.1**	**+0.6**
EVR	**Evrytania**	**0.78**	**175**	*e*PB	**Pg**	**14 44 45.3**	**0.0**
EVR	**Evrytania**	**0.78**	**175**	*e*Pb	**Pg**	**14 44 45.3**	**0.0**
AGG	**Agios Georgios**	**0.82**	**145**	*e*PN	**Pg**	**14 44 45.2**	**-0.9**
AGG	**Agios Georgios**	**0.82**	**145**	P	**Pg**	**14 44 45.5**	**-0.6**
AGG				S	**Sg**	**14 44 57.6**	**+0.7**
AGG	**Agios Georgios**	**0.82**	**145**	*e*Pn	**Pg**	**14 44 45.2**	**-0.9**
AGG	**Agios Georgios**	**0.82**	**145**	P	**Pg**	**14 44 45.5**	**-0.6**
AGG				S	**Sg**	**14 44 57.6**	**+0.7**
IGT	**Igoumenitsa**	**1.08**	**262**	P	**Pg**	**14 44 51.6**	**+0.6**
IGT	**Igoumenitsa**	**1.08**	**262**	P	**Pg**	**14 44 51.6**	**+0.6**
FNA	**Florina**	**1.11**	**347**	P	**Pg**	**14 44 50.7**	**-0.9**
FNA				S	**Sg**	**14 45 07.3**	**+1.2**
FNA	**Florina**	**1.11**	**347**	P	**Pg**	**14 44 50.7**	**-0.9**
FNA				S	**Sg**	**14 45 07.3**	**+1.2**
XOR	**Xorichti**	**1.19**	**106**	P	**Pn**	**14 44 51.1**	**-1.0**
XOR				S	**Sb**	**14 45 09.0**	**+1.6**
XOR	**Xorichti**	**1.19**	**106**	P	**Pn**	**14 44 51.1**	**-1.0**
XOR				S	**Sb**	**14 45 09.0**	**+1.6**
DSF	**Desfina**	**1.43**	**154**	P	**Pn**	**14 44 55.9**	**+0.4**
DSF				S	**Sn**	**14 45 14.0**	**0.0**
DSF	**Desfina**	**1.43**	**154**	P	**Pn**	**14 44 55.9**	**+0.4**
DSF				S	**Sn**	**14 45 14.0**	**0.0**
KEK	**Kerkira**	**1.48**	**271**	*e*PN	**Pn**	**14 45 00.9**	**+4.7**
KRUS	**Krusevo**	**1.71**	**348**	*e*Pn	**Pn**	**14 44 59.7**	**+0.4**
KRUS				*e*Sg	**Sg**	**14 45 24.0**	**-1.0**
KRUS	**Krusevo**	**1.71**	**348**	*e*Pn	**Pn**	**14 44 59.6**	**+0.3**
KRUS				*e*Sg	**Sg**	**14 45 24.0**	**-1.0**
AOS	**Alonnisos**	**1.75**	**107**	P	**Pn**	**14 44 58.9**	**-1.0**
AOS	**Alonnisos**	**1.75**	**107**	P	**Pn**	**14 44 58.9**	**-1.0**

IDC 24 15:04:56.2±1.5, 44°.22N×129°.35W, h0km, mb3.5/6, mb1 3.6/10, mb1mx3.5/28, mbtmp3.4/10, ML3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/26, Error ellipse: s-maj=48.1km s-min=17.6km az=40.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YBH	**Yreka Blue Hor**	**5.47**	**115**	Pn	Pn	15 06 21.9	+2.9
	0.1nm,0.3s,baz=238,slow=7.7,SNR=4.7						
BBB	**Bella Bella**	**8.01**	**5**	LR	LR	15 09 29.0	
	comp=Z,158nm,20.4s,baz=117,slow=34						
NVAR	**Mina Array Bea**	**10.12**	**121**	Pn	Pn	15 07 24.6	+1.9
	0.1nm,0.3s,baz=272,slow=14,SNR=4.8						
PDAR	**Pinedale Array**	**14.45**	**89**	Pn	Pn	15 08 25.4	+3.7
	0.1nm,0.3s,baz=297,slow=8.0,SNR=2.5						
ANMO	**Albuquerque**	**19.87**	**110**	P	Pn	15 09 29.2	-1.2
	0.1nm,0.3s,baz=329,slow=12,SNR=2.1						
YKA	**Yellowknife Ar**	**20.21**	**20**	P	P	15 09 33.2	+0.9
	0.8nm,0.9s,baz=207,slow=10,SNR=7.7						
TXAR	**Lajitas Array**	**25.24**	**117**	P	P	15 10 23.3	-0.5
	0.2nm,0.6s,baz=277,slow=9.8,SNR=3.1						
SONM	**Songino Array**	**76.06**	**325**	P	P	15 16 46.2	+1.0
	0.4nm,0.8s,baz=90,slow=5.8,SNR=2.4						
BVAR	**Borovoye Array**	**81.66**	**348**	P	P	15 17 15.9	0.0
	0.5nm,0.6s,baz=9.5,slow=4.4,SNR=2.9						
LPAZ	**La Paz**	**82.03**	**122**	P	P	15 17 18.9	+0.6
	0.8nm,0.8s,baz=2.6,slow=8.1,SNR=3.7						
KURK	**Kurchatov**	**82.37**	**342**	P	P	15 17

RPZ	**Rata Peaks**	**58.32**	**144**	*e*P		**P**		**15 22 12.7**	**+4.5**
	16nm,0.6s,mb5.0								
PETK	**Petropavlovsk-**	**58.62**	**21**	P		**P**		**15 22 11.1**	**+1.0**
	2.7nm,0.8s,mb4.1,baz=200,slow=4.0,SNR=14								
MKAR	**Makanchi Array**	**61.03**	**326**	P		**P**		**15 22 27.1**	**+0.4**
	0.5nm,0.3s,mb3.8,baz=109,slow=8.5,SNR=12								
YAK	**Yakutsk**	**61.91**	**1**	*e*P		**P**		**15 22 32.5**	**+0.2**
	14nm,0.7s,mb4.9								
KURK	**Kurchatov**	**65.27**	**328**	P		**P**		**15 22 54.5**	**0.0**
	0.7nm,0.6s,mb3.7,baz=128,slow=6.2,SNR=6.8								
TIXI	**Tiksi**	**71.55**	**0**	*e*P		**P**		**15 23 33.0**	**-0.1**
	4.6nm,0.7s,mb4.3								

*NEIC **24** 15:13:19.6, 16°.54N×98°.24W, h26km, MD3.7(MEX), After MEX.*

MEX 24 15:13:19.2±0.9, 16°.53N×98°.27W, h28km±10km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PNIG	**Pinotepa**	**0.19**	**135**	*i* P		Pb	15 13 23.2	-1.9
PNIG				*i* S		Sb	15 13 28.4	-0.6
PNIG	**Pinotepa**	**0.19**	**135**	*i* P		Pb	15 13 23.2	-1.9
PNIG				*i* S		Sb	15 13 28.4	-0.6
UTMO	**Huajuapan**	**1.37**	**19**	*i* P		Pn	15 13 39.6	-2.9
UTMO				*i* S		Sn	15 13 57.1	-2.5
VHO	**Vista Hermosa**	**1.57**	**70**	*i* P		Pn	15 13 43.6	-1.6
VHO				*i* S		Sn	15 14 02.1	-2.5
VHO	**Vista Hermosa**	**1.57**	**70**	*i* P		Pn	15 13 43.6	-1.6
VHO				*i* S		Sn	15 14 02.1	-2.5
ACX	**Acapulco**	**1.61**	**282**	*i* P		Pn	15 13 46.5	+0.7
ACX				*i* S		Sn	15 14 03.1	-2.6
ACX	**Acapulco**	**1.61**	**282**	*i* P		Pn	15 13 43.0	-2.9
ACX				*i* S		Sn	15 14 03.1	-2.6
CAIG	**El Cayaco**	**1.98**	**285**	*i* P		Pn	15 13 48.9	-2.0
CAIG				*i* S		Sn	15 14 12.7	-2.1
CAIG	**El Cayaco**	**1.98**	**285**	*i* P		Pn	15 13 48.9	-2.0
CAIG				*i* S		Sn	15 14 12.7	-2.1
HUIG	**Huatulco**	**2.21**	**110**	*e*P		Pn	15 13 52.1	-1.9
HUIG				*i* S		Sn	15 14 18.1	-2.3
HUIG	**Huatulco**	**2.21**	**110**	*e*P		Pn	15 13 52.1	-1.9
HUIG				*i* S		Sn	15 14 18.1	-2.3
MZVM		**2.80**	**341**	*i* P		Pn	15 14 01.1	-1.0
MZVM				*i* S		Sn	15 14 33.0	-2.0
IIO	**Organos**	**3.08**	**352**	*e*P		Pn	15 14 04.7	-1.3
IIO				*i* P			15 14 05.3	
IIO				*i* S		Sn	15 14 40.7	-1.1
IIO	**Organos**	**3.08**	**352**	*e*P		Pn	15 14 04.7	-1.3
IIO				*i* S		Sn	15 14 40.7	-1.1

*ISK **24** 15:20:00.8, 38°.38N×29°.73E, h8km, MD2.8*
*ISCJB **24** 15:20:01.1±0.6, 38°.46N±0°.04×29°.72E±0°.03, h4km±6km, Error ellipse: s-maj=6.4km s-min=3.9km az=176.5*
*CSEM **24** 15:20:01.0±0.1, 38°.43N×29°.72E, h8km, MD2.8, Error ellipse: s-maj=4.0km s-min=2.7km az=1.0*
*DDA **24** 15:20:01.2, 38°.48N×29°.69E, h7km±2km, Md2.8*

ISC 24 15:20:01.5±0.5, 38°.45N±0°.04×29°.71E±0°.03, h11km±8km, n23, σ0°64/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHAL	**Karahalli**	**0.19**	**246**	*i* P		**Pg**	**15 20 05.3**	**-0.2**
KHAL				*i* S		**Sg**	**15 20 08.8**	**+0.5**
KHAL	**Karahalli**	**0.19**	**246**	*i* P		**Pg**	**15 20 05.3**	**-0.3**
KHAL				*i* S		**Sg**	**15 20 08.8**	**+0.5**
KHL	**Karahalli**	**0.19**	**230**	*e*PG		**Pg**	**15 20 05.1**	**-0.5**
KHL	**Karahalli**	**0.19**	**230**	*e*Pg		**Pg**	**15 20 05.1**	**-0.5**
GDZ	**Gediz**	**0.67**	**344**	*i* P		**Pg**	**15 20 13.8**	**-0.6**
GDZ				*i* S		**Sg**	**15 20 22.3**	**-0.8**
GDZ	**Gediz**	**0.67**	**344**	*i* P		**Pg**	**15 20 13.8**	**-0.6**
GDZ				*i* S		**Sg**	**15 20 22.3**	**-0.8**
SHUT	**Suhut-Afyon**	**0.67**	**81**	*e*PG		**Pg**	**15 20 14.1**	**-0.3**
SHUT				*e*SG		**Sg**	**15 20 24.0**	**+0.9**
SHUT	**Suhut-Afyon**	**0.67**	**81**	*e*Pg		**Pg**	**15 20 14.1**	**-0.3**
SHUT				*e*Sg		**Sg**	**15 20 24.0**	**+0.9**
KULA	**Kula-Manisa**	**0.83**	**275**	*e*PG		**Pg**	**15 20 18.0**	**+0.6**
KULA				*e*SG		**Sg**	**15 20 29.2**	**+1.0**
KULA	**Kula-Manisa**	**0.83**	**275**	*e*Pg		**Pg**	**15 20 18.0**	**+0.5**
KULA				*e*Sg		**Sg**	**15 20 29.2**	**+0.9**
ISP	**Isparta**	**0.87**	**134**	*e*PG		**Pg**	**15 20 17.0**	**-1.3**
MANT	**Manisa**	**0.91**	**273**	*i* P		**Pg**	**15 20 18.7**	**-0.3**
MANT				*i* S		**Sg**	**15 20 31.1**	**+0.3**
MANT	**Manisa**	**0.91**	**273**	*i* P		**Pg**	**15 20 18.7**	**-0.3**
MANT				*i* S		**Sg**	**15 20 31.1**	**+0.3**
DNZL	**Cakiroluk**	**0.92**	**215**	*i* P		**Pg**	**15 20 19.4**	**+0.1**
DNZL				*i* S		**Sg**	**15 20 36.1**	**+4.9**
DNZL	**Cakiroluk**	**0.92**	**215**	*i* P		**Pg**	**15 20 19.4**	**+0.2**
DEMI	**Demirci**	**0.98**	**308**	*i* P		**Pg**	**15 20 20.3**	**-0.1**
DEMI				*i* S		**Sg**	**15 20 32.9**	**-0.2**
DEMI	**Demirci**	**0.98**	**308**	*i* P		**Pg**	**15 20 20.3**	**-0.1**
DEMI				*i* S		**Sg**	**15 20 32.9**	**-0.2**
BOLV	**Bolvadin**	**1.01**	**74**	*i* P		**Pg**	**15 20 20.3**	**-0.6**
BOLV				*i* S		**Sg**	**15 20 35.2**	**+1.2**
BOLV	**Bolvadin**	**1.01**	**74**	*i* P		**Pg**	**15 20 20.3**	**-0.6**
BOLV				*i* S		**Sg**	**15 20 35.2**	**+1.2**
ESKT	**Eskisehir**	**1.39**	**39**	*e*PN		**Pn**	**15 20 27.6**	**+0.7**
ESKT	**Eskisehir**	**1.39**	**39**	*e*Pn		**Pn**	**15 20 27.6**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.41**	**133**	*e*PN		**Pn**	**15 20 26.7**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.41**	**133**	*e*Pn		**Pn**	**15 20 26.7**	**-0.4**

*ISCJB **24** 15:22:02.9±1.5, 39°.63N±0°.05×21°.65E±0°.09, h6km±9km, Error ellipse: s-maj=12.6km s-min=5.9km az=154.7*
*CSEM **24** 15:22:03.1±0.7, 39°.65N×21°.67E, h2km, ML2.9/5, Error ellipse: s-maj=16.2km s-min=7.0km az=64.0*
*THE **24** 15:22:03.1, 39°.63N×21°.67E, h12km±1km, ML2.9/5, Error ellipse: s-maj=2.2km s-min=0.9km az=72.0*
*SKO **24** 15:22:12.6, 40°.14N×21°.96E, h23km*

ISC 24 15:22:02.6±1.3, 39°.64N±0°.04×21°.61E±0°.09, h12km±8km, n12, σ1°10/24, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THL	**Klokotos Trika**	**0.32**	**103**	P		**Pg**	**15 22 08.7**	**-0.3**
THL				S		**Sg**	**15 22 13.1**	**-0.3**
THL	**Klokotos Trika**	**0.32**	**103**	P		**Pg**	**15 22 08.7**	**-0.3**
THL				S		**Sg**	**15 22 13.1**	**-0.3**
KZN	**Kozani**	**0.68**	**10**	P		**Pg**	**15 22 15.0**	**-0.8**
KZN				S		**Sg**	**15 22 26.7**	**+1.9**
KZN	**Kozani**	**0.68**	**10**	P		**Pg**	**15 22 15.0**	**-0.8**
KZN				S		**Sg**	**15 22 26.7**	**+1.9**
LIT	**Litokhoron**	**0.82**	**55**	P		**Pg**	**15 22 18.4**	**-0.1**
LIT				S		**Sg**	**15 22 29.4**	**+0.2**
LIT	**Litokhoron**	**0.82**	**55**	P		**Pg**	**15 22 18.4**	**-0.1**
LIT				S		**Sg**	**15 22 29.4**	**+0.2**
AGG	**Agios Georgios**	**0.83**	**138**	P		**Pg**	**15 22 18.9**	**+0.3**
AGG				S		**Sg**	**15 22 30.1**	**+0.7**
AGG	**Agios Georgios**	**0.83**	**138**	P		**Pg**	**15 22 18.9**	**+0.3**
AGG				S		**Sg**	**15 22 30.1**	**+0.7**
XOR	**Xorichti**	**1.25**	**102**	P		**Pn**	**15 22 24.7**	**-1.3**
XOR				S		**Sb**	**15 22 42.1**	**-0.2**
XOR	**Xorichti**	**1.25**	**102**	P		**Pn**	**15 22 24.7**	**-1.3**
XOR				S		**Sb**	**15 22 42.1**	**-0.2**
KRUS	**Krusevo**	**1.75**	**351**	*e*Pn		**Pn**	**15 22 35.8**	**+2.9**
KRUS				*e*Sg		**Sg**	**15 22 57.0**	**-2.0**
KRUS	**Krusevo**	**1.75**	**351**	*e*Pn		**Pn**	**15 22 35.7**	**+2.8**
KRUS				*e*Sg		**Sg**	**15 22 57.0**	**-2.0**

*IPEC **24** 15:40:16.9±0.3, 51°.50N×16°.35E, h0km, ML2.0/4, Error ellipse: s-maj=2.0km s-min=1.5km az=37.0*
*ISCJB **24** 15:40:16.4±0.7, 51°.39N±0°.03×16°.20E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=2.5km az=19.5*
*CSEM **24** 15:40:17.3±0.4, 51°.45N×16°.19E, h2km, ML3.2/9, Error ellipse: s-maj=7.0km s-min=4.0km az=10.0*
*WAR **24** 15:40:18.7, 51°.44N×16°.20E, ML2.6, Mining Induced*
*VIE **24** 15:40:19.8±0.6, 51°.27N×16°.14E, h0km, mb2.0/4, ML2.7/4, Error ellipse: s-maj=3.7km s-min=3.4km az=173.0 63 km WNW of Wroclaw Suspected Mining induced.*
*PRU **24** 15:40:20.3, 51°.35N×16°.12E, h0km*

ISC 24 15:40:17.7±0.7, 51°.43N±0°.04×16°.18E±0°.03, h0km, n37, σ1°02/67, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.59**	**173**	*e*Pg		**Pg**	**15 40 29.7**	**+0.7**
	baz=2.8							
KSP				*e*Sg		**Sg**	**15 40 37.0**	**+0.3**
	baz=2.8							
UPC	**Upice**	**0.93**	**187**	*e*PG		**Pg**	**15 40 35.9**	**+0.4**
UPC	**Upice**	**0.93**	**187**	Pg		**Pg**	**15 40 35.9**	**+0.4**
DPC	**Dobruska-Polom**	**1.08**	**175**	*e*PG		**Pg**	**15 40 38.6**	**+0.1**
DPC				*e*SG		**Sg**	**15 40 52.5**	**0.0**
	comp=Z,20nm,0.4s							
DPC	**Dobruska-Polom**	**1.08**	**175**	Pg		**Pg**	**15 40 38.6**	**+0.1**
DPC				*e*Sg		**Sg**	**15 40 52.6**	**+0.1**
	baz=0.7							
PVCC	**Panska Ves**	**1.36**	**229**	*e*PG		**Pg**	**15 40 43.9**	**+0.1**
PVCC				*e*SG		**Sg**	**15 41 02.5**	**+1.1**
	comp=Z,135nm,0.3s							
PVCC	**Panska Ves**	**1.36**	**229**	*e*Pn		**Pn**	**15 40 44.0**	**+0.1**
	baz=48							
PVCC				Sg		**Sg**	**15 41 02.5**	**+1.1**
	comp=Z,135nm,0.3s							
BRG	**Berggiesshubel**	**1.52**	**249**	PN		**Pn**	**15 40 45.9**	**-0.1**
BRG				PG		**Pg**	**15 40 46.9**	**+0.2**
BRG				SG		**Sg**	**15 41 07.0**	**+0.6**
	comp=Z,30nm,0.4s							
PRU	**Pruhonice**	**1.78**	**216**	*e*PG		**Pg**	**15 40 51.4**	**-0.4**
PRU				*e*SG		**Sg**	**15 41 14.6**	**-0.3**
	comp=Z,13nm,0.2s							
PRU	**Pruhonice**	**1.78**	**216**	Pg		**Pg**	**15 40 51.4**	**-0.4**
PRU				Sg		**Sg**	**15 41 14.6**	**-0.3**
	comp=Z,13nm,0.2s							
MORC	**Moravsky Berou**	**1.87**	**152**	*e*Pn		**Pn**	**15 40 50.5**	**-0.4**
	baz=337							
MORC				*e*Sg		**Sg**	**15 41 16.0**	**-1.7**
	comp=Z,8.3nm,0.2s,baz=337							
CLL	**Collm**	**2.00**	**268**	*e*Pg		**Pg**	**15 40 55.0**	**-0.9**
CLL				*e*Sg		**Sg**	**15 41 23.0**	**+1.2**
	comp=Z,11nm,0.6s							
OKC	**Ostrava-Krasne**	**2.03**	**141**	*e*PG		**Pg**	**15 40 55.6**	**-0.9**
OKC				*e*SG		**Sg**	**15 41 20.7**	**-2.1**
OKC	**Ostrava-Krasne**	**2.03**	**141**	Pg		**Pg**	**15 40 55.6**	**-0.9**
OKC				Sg		**Sg**	**15 41 20.7**	**-2.1**
VRAC	**Vranov**	**2.14**	**173**	*e*Sg		**Sg**	**15 41 26.2**	**-0.2**
	comp=Z,7.0nm,0.2s,baz=356							
TREC	**Trest**	**2.18**	**192**	*e*PN		**Pn**	**15 40 55.8**	**+0.6**
TREC				*e*PG		**Pg**	**15 40 58.5**	**-1.0**
TREC	**Trest**	**2.18**	**192**	Pn		**Pn**	**15 40 55.8**	**+0.6**
KRUC	**Moravsky**	**2.37**	**177**	*e*Pn		**Pn**	**15 40 59.0**	**+1.2**
	baz=359							
KRUC				*e*Sg		**Sg**	**15 41 33.4**	**-0.5**
	comp=Z,7.0nm,0.5s,baz=359							
OJC	**Ojcow**	**2.59**	**116**	*e*Pg		**Pg**	**15 41 05.4**	**-2.0**
OJC				*e*Sg		**Sg**	**15 41 40.8**	**-0.2**
OJC	**Ojcow**	**2.59**	**116**	*e*Pg		**Pg**	**15 41 05.4**	**-2.0**
OJC				*e*Sg		**Sg**	**15 41 40.8**	**-0.2**
NKC	**Novy Kostel**	**2.65**	**245**	*e*PN		**Pn**	**15 41 01.7**	**0.0**
NKC				*e*PG		**Pg**	**15 41 07.7**	**-0.8**
NKC				*e*SG		**Sg**	**15 41 42.8**	**-0.1**
	comp=Z,14nm,0.3s							
NKC	**Novy Kostel**	**2.65**	**245**	Pn		**Pn**	**15 41 01.7**	**0.0**
NKC	**Novy Kostel**	**2.65**	**245**	Pg		**Pg**	**15 41 07.7**	**-0.8**
NKC				Sg		**Sg**	**15 41 42.8**	**-0.1**
	comp=Z,14nm,0.3s							
JAVC	**Velka Javorina**	**2.75**	**159**	*e*Sg		**Sg**	**15 41 47.7**	**+1.8**
	comp=Z,6.2nm,0.5s							
KHC	**Kasperske Hory**	**2.84**	**217**	*e*PN		**Pn**	**15 41 04.1**	**-0.2**
KHC				*e*PG		**Pg**	**15 41 10.3**	**-1.9**
KHC				*e*SN		**Sn**	**15 41 37.3**	**-1.9**
KHC				*e*SG		**Sg**	**15 41 46.4**	**-2.6**
	comp=Z,9.7nm,0.6s							
KHC	**Kasperske Hory**	**2.84**	**217**	Pn		**Pn**	**15 41 04.1**	**-0.2**
KHC	**Kasperske Hory**	**2.84**	**217**	Pg		**Pg**	**15 41 10.3**	**-1.9**
KHC				Sn		**Sn**	**15 41 37.3**	**-1.9**
KHC				Sg		**Sg**	**15 41 46.4**	**-2.6**
	comp=Z,9.7nm,0.6s							
MOX	**Moxa**	**2.99**	**257**	*e*PG		**Pg**	**15 41 15.3**	**+0.4**
MOX				*e*SG		**Sg**	**15 41 54.7**	**+1.1**
VYHS	**Vyhne**	**3.40**	**149**	*e*SG		**Sg**	**15 42 08.7**	**+1.8**
VYHS	**Vyhne**	**3.40**	**149**	*e*Sg		**Sg**	**15 42 08.7**	**+1.8**
CONA	**Conrad Observa**	**3.51**	**184**	⇑*i*Pn		**Pn**	**15 41 14.0**	**+0.5**
CONA				⇑*i*Sg		**Sg**	**15 42 10.2**	**-0.2**
	comp=Z,5.6nm,0.3s							
CONA	**Conrad Observa**	**3.51**	**184**	Pn		**Pn**	**15 41 14.0**	**+0.5**
CONA				Sg		**Sg**	**15 42 10.2**	**-0.2**
	comp=Z,5.6nm,0.3s							
MOA	**Molln**	**3.79**	**200**	⇑*i*Pn		**Pn**	**15 41 17.8**	**+0.5**
MOA				⇑*i*Sg		**Sg**	**15 42 20.5**	**+1.0**
	comp=Z,9.8nm,0.6s							
MOA	**Molln**	**3.79**	**200**	Pn		**Pn**	**15 41 17.8**	**+0.5**
MOA				Sg		**Sg**	**15 42 20.5**	**+1.0**
	comp=Z,9.8nm,0.6s							
STHS	**Stebnicka Huta**	**3.81**	**120**	*e*SG		**Sg**	**15 42 21.9**	**+1.8**
STHS	**Stebnicka Huta**	**3.81**	**120**	*e*Sg		**Sg**	**15 42 21.9**	**+1.8**
KECS	**Kecovo**	**4.05**	**135**	*e*SG		**Sg**	**15 42 29.2**	**+1.4**

*NEIC **24** 15:51:46.0, 37°.74N×19°.93E, h57km, MD3.5(ATH), After ATH.*
*CSEM **24** 15:51:46.0, 37°.74N×19°.93E, h57km, MD3.5, After ATH*

ATH 24 15:51:46.0, 37°.74N×19°.93E, h57km±6km, MD3.5/6, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.68**	**50**	*e*P		Pn	15 52 01.0	+1.2
VLS				*e*S		Sn	15 52 11.4	+1.5
VLS	**Valsamata**	**0.68**	**50**	*e*P		Pn	15 52 01.0	+1.2
VLS				*e*S		Sn	15 52 11.4	+1.5
RLS	**Riolos of Patr**	**1.26**	**75**	*e*P		Pn	15 52 08.1	+0.8
RLS				*e*S		Sn	15 52 24.8	+1.6
RLS	**Riolos of Patr**	**1.26**	**75**	*e*P		Pn	15 52 08.1	+0.8
RLS				*e*S		Sn	15 52 24.8	+1.6
PYL	**PYLOS**	**1.67**	**120**	*e*P		Pn	15 52 14.2	+1.3
PYL	**PYLOS**	**1.67**	**120**	*e*P		Pn	15 52 14.2	+1.3
ITM	**Ithomi**	**1.68**	**109**	*e*P		Pn	15 52 14.2	+1.1
ITM	**Ithomi**	**1.68**	**109**	*e*P		Pn	15 52 14.2	+1.1
GUR	**Goura**	**1.92**	**83**	*e*P		Pn	15 52 18.1	+1.8
GUR	**Goura**	**1.92**	**83**	*e*P		Pn	15 52 18.1	+1.8
KEK	**Kerkira**	**1.97**	**357**	*e*P		Pn	15 52 18.3	+1.3
KEK	**Kerkira**	**1.97**	**357**	*e*P		Pn	15 52 18.3	+1.3

*IDC **24** 15:55:02.5±2.8, 7°.15S×156°.22E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/15, mbtmp4.1/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=88.8km s-min=27.0km az=100.0*
*ISCJB **24** 15:55:07.6±2.3, 7°.2S±0°.2×155°.8E±0°.4, h33km, mb4.1/10, Error ellipse: s-maj=61.4km s-min=19.1km az=13.5*
*NEIC **24** 15:55:08.0±1.8, 7°.22S×156°.09E, h35km, mb4.4/5, Error ellipse: s-maj=51.1km s-min=18.5km az=104.0*

ISC 24 15:55:09.7±2.4, 7°.2S±0°.2×155°.8E±0°.4, h35km, n13, σ0°92/11, mb4.1/10, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRAB	**Tennant Creek**	**24.39**	**236**	*e*P		**P**	**16 00 24.9**	**+0.1**
	13nm,0.6s,mb4.5							
ASAR	**Alice Springs**	**26.68**	**230**	P		**P**	**16 00 45.1**	**-0.5**
	0.9nm,0.5s,mb3.5,baz=58,slow=9.9,SNR=27							
STKA	**Stephens Creek**	**27.94**	**206**	P		**P**	**16 00 58.3**	**+1.5**
	2.6nm,0.8s,mb3.9,baz=349,slow=11,SNR=4.7							
STKA	**Stephens Creek**	**27.94**	**206**	*e*P		**P**	**16 00 57.3**	**+0.5**
	2.1nm,1.3s,mb3.6							
MBWA	**Marble Bar**	**37.54**	**244**	*e*P		**P**	**16 02 20.3**	**-0.5**
	12nm,1.3s,mb4.5							
KSRS	**Korea Array**	**51.46**	**332**	LR		LR	16 23 24.7	
	comp=Z,30nm,19.0s,baz=335,slow=33							
CM31	**Chiang Mai Arr**	**61.59**	**295**	*e*P		**P**	**16 05 24.9**	**+0.8**
	0.5nm,0.4s,mb4.0							
CMAR	**Chiang Mai Arr**	**61.59**	**295**	P		**P**	**16 05 25.3**	**+1.3**
	1.2nm,0.9s,mb4.0,baz=119,slow=4.5,SNR=8.3							
SONM	**Songino Array**	**69.91**	**327**	P		**P**	**16 06 18.0**	**+0.9**
	0.9nm,0.8s,mb3.8,baz=138,slow=6.5,SNR=6.2							
PALK	**Pallekele**	**76.27**	**279**	*e*P		**P**	**16 06 53.9**	**-1.6**
	5.9nm,0.9s,mb4.5							
MKAR	**Makanchi Array**	**84.06**	**319**	P		**P**	**16 07 36.3**	**-0.5**
	1.9nm,0.8s,mb4.3,baz=107,slow=5.9,SNR=16							
ZALV	**Zalesovo Beam**	**84.77**	**326**	P		**P**	**16 07 39.1**	**-1.0**
	0.9nm,0.5s,mb4.2,baz=110,slow=5.5,SNR=6.0							
TORD	**Torodi Ar. Bea**	**153.85**	**285**	PKPbc		PKPbc	16 15 04.2	-2.1
	0.4nm,0.8s,baz=106,slow=3.1,SNR=2.6							

*PGC **24** 16:04:36.4±3.1, 61°.64N×141°.40W, h10km, ML2.8/4, 229km Wnw of Haines Jct., Yt Southern Alaska*

NEIC 24 16:04:34.0, 61°.51N×141°.44W, h6km, ML2.5(AEIC), 4D, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BMRM	**Bremner River**	**1.62**	**252**	P		Pn	16 05 02.5	-0.6
BMRM				S		Sn	16 05 24.6	+0.4
MENT	**Mentasta**	**1.79**	**324**	*e*P		Pn	16 05 07.2	+1.8
HYT	**Haines Junctio**	**2.02**	**108**	⇑Pn		Pn	16 05 11.4	+2.8
HYT				⇓Pg		Pg	16 05 12.6	-0.2
HYT				⇑Sg		Sg	16 05 40.8	+1.8
PNL	**Peninsula**	**2.10**	**150**	P		Pn	16 05 08.1	-1.5
DIV	**Divide**	**2.12**	**262**	P		Pn	16 05 09.3	-0.6
EYAK	**Cordova Ski Ar**	**2.31**	**247**	P		Pn	16 05 12.3	-0.2
PAX	**Paxson**	**2.39**	**310**	*e*Pn		Pn	16 05 15.8	+2.2
PAX				*e*Sn		Sn	16 05 47.0	+3.9
DOT	**Dot Lake**	**2.47**	**332**	P		Pn	16 05 14.7	0.0
DAWY	**Dawson**	**2.73**	**19**	P		Pn	16 05 18.5	+0.2
DAWY	**Dawson**	**2.73**	**19**	⇑Pn		Pn	16 05 18.6	+0.3
DAWY				⇑Sg		Sg	16 05 57.5	-4.3
PLBC	**Pleasant Camp**	**3.25**	**127**	⇓Pg		Pg	16 05 32.9	-3.2
PLBC				⇓Sg		Sg	16 06 15.8	-2.3
EGAK	**Eagle**	**3.29**	**2**	P		Pn	16 05 26.5	+0.6
WHY	**Whitehorse**	**3.30**	**102**	P		Pn	16 05 26.6	+0.6
WHY	**Whitehorse**	**3.30**	**102**	⇓Pn		Pn	16 05 26.7	+0.7
WHY				⇑Pg		Pg	16 05 33.1	-4.0
WHY				⇑Sg		Sg	16 06 16.1	-3.7
PMR	**Palmer**	**3.68**	**275**	*e*P		Pn	16 05 37.9	+6.5
MCK	**McKinley**	**4.12**	**306**	*e*Pn		Pn	16 05 41.3	+4.0

*NEIC **24** 16:26:54.9±1.0, 7°.80N×78°.11W, h10km, mb4.2/3, Error ellipse: s-maj=20.3km s-min=11.3km az=196.0*
*IDC **24** 16:26:54.3±1.8, 7°.90N×77°.99W, h0km, mb3.4/4, mb1 3.9/6, mb1mx3.7/20, mbtmp3.6/6, ML1.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/20, Error ellipse: s-maj=58.0km s-min=20.3km az=29.0*
*ISCJB **24** 16:26:57.3±0.8, 7°.91N±0°.09×77°.99W±0°.06, h33km, mb3.5/5, Error ellipse: s-maj=13.3km s-min=6.0km az=26.1*

ISC 24 16:26:59.6±0.8, 7°.90N±0°.09×78°.02W±0°.06, h35km, n17, σ1°13/19, mb3.5/5, Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BCIP	**Isla Barro Col**	**2.19**	**305**	*e*Pn		**Pn**	**16 27 28.8**	**-4.8**
BCIP				*e*Sn		**Sn**	**16 28 00.2**	**+0.8**
ROSC	**El Rosal**	**4.76**	**129**	Pn		**Pn**	**16 28 07.2**	**-1.7**
	1.1nm,0.3s,baz=276,slow=23,SNR=5.0							
ROSC				Sn		**Sn**	**16 29 04.4**	**+1.6**
	1.3nm,0.3s,baz=74,slow=19,SNR=4.1							
SDV	**Santo Domingo**	**7.38**	**82**	Pn		**Pn**	**16 28 43.6**	**-1.2**
	2.6nm,0.3s,baz=257,slow=8.7,SNR=51							
SDV				Sn		**Sn**	**16 30 08.6**	**+1.2**
	4.8nm,0.3s,baz=42,slow=18,SNR=5.4							
SDV	**Santo Domingo**	**7.38**	**82**	Pn		**Pn**	**16 28 43.6**	**-1.2**
SDV				Sn		**Sn**	**16 30 08.6**	**+1.2**
SDDR	**Presa de Saban**	**12.81**	**30**	*e*Pn		**Pn**	**16 30 00.3**	**+1.0**
	17nm,0.6s							
APG	**El Apazote**	**14.08**	**301**	LR		LR	16 36 01.2	
	comp=Z,63nm,19.2s,baz=189,slow=39							
AOPR	**Arecibo Observ**	**15.10**	**45**	*e*Pn		**Pn**	**16 30 29.7**	**-0.7**
	7.8nm,0.7s							
TEIG	**Tepich**	**15.77**	**322**	LR		LR	16 37 51.2	
	comp=Z,63nm,18.6s,baz=133,slow=42							
MTP	**Monte Pirata**	**15.81**	**49**	*e*Pn		**Pn**	**16 30 38.7**	**-1.0**
	3.4nm,0.4s							
TXAR	**Lajitas Array**	**32.18**	**315**	P		**P**	**16 33 22.8**	**-1.5**
	0.2nm,0.7s,mb3.1,baz=134,slow=5.4,SNR=4.0							
TXAR	**Lajitas Array**	**32.18**	**315**	P		**P**	**16 33 22.8**	**-1.5**
PDAR	**Pinedale Array**	**44.42**	**327**	P		**P**	**16 35 07.8**	**+0.7**
	0.4nm,0.7s,mb3.2,baz=175,slow=5.4,SNR=3.5							
NVAR	**

COCO West Island 53.07 260 *eP* **P 16 48 05.8 -2.9**
71nm,0.4s
CMAR Chiang Mai Arr 56.81 297 P **P 16 48 36.6 +0.9**
0.6nm,0.7s,mb3.7,baz=122,slow=5.2,SNR=5.5
SONM Songino Array 67.04 329 P **P 16 49 44.3 +0.4**
2.1nm,0.9s,mb4.2,baz=144,slow=3.0,SNR=11
MK31 Makanchi Array 80.53 320 *eP* **P 16 51 02.7 -0.4**
MKAR Makanchi Array 80.53 320 P **P 16 51 02.8 -0.3**
1.3nm,0.9s,mb3.9,baz=90,slow=7.3,SNR=7.8
TTA Tatalina 80.70 22 *eP* **P 16 51 04.0 +0.4**
7.8nm,1.0s,mb4.6
ZALV Zalesovo Beam 81.76 327 P **P 16 51 08.5 -1.0**
1.1nm,0.6s,mb4.0,baz=114,slow=5.5,SNR=5.7
MAW Mawson 82.61 203 P **P 16 51 15.5 +1.8**
3.6nm,0.9s,mb4.4,baz=49,slow=10,SNR=5.3
CHUM Lake Minchumin 82.62 22 *eP* **P 16 51 13.3 -0.4**
30nm,1.2s,mb5.2
KTH Kantishna Hill 82.97 23 *eP* **P 16 51 12.2 -3.3**
6.8nm,0.9s,mb4.7
MCK McKinley 83.82 23 *eP* **P 16 51 18.6 -1.4**
17nm,1.1s,mb5.1
KURK Kurchatov 84.14 323 P **P 16 51 21.9 0.0**
3.4nm,0.9s,mb4.5,baz=108,slow=3.9,SNR=14
UCH Uchtor 84.44 314 *eP* **P 16 51 25.0 +1.4**
11nm,1.1s,mb4.9
AAK Ala-Archa 84.56 314 P **P 16 51 26.1 +2.0**
3.1nm,0.6s,mb4.6,baz=97,slow=4.2,SNR=11
EKS2 Erkin-Say 85.07 314 *eP* **P 16 51 28.1 +1.3**
12nm,1.0s,mb5.0
EGAK Eagle 87.33 23 *eP* **P 16 51 37.1 -0.3**
6.4nm,1.0s,mb4.8
SKAG Skagway 88.10 29 *eP* **P 16 51 41.9 +0.7**
10nm,1.2s,mb4.9
BVAR Borovoye Array 89.67 323 P **P 16 51 48.2 -0.4**
0.9nm,0.7s,mb4.2,baz=132,slow=6.2,SNR=6.1
NVAR Mina Array Bea 95.28 52 P **P 16 52 15.7 +0.7**
0.6nm,0.7s,mb4.2,baz=248,slow=5.0,SNR=4.5
YKA Yellowknife Ar 98.49 28 P **P 16 52 29.9 +1.0**
0.9nm,0.8s,mb4.4,baz=272,slow=4.7,SNR=16
YKA Yellowknife Ar 98.49 28 P **P 16 52 29.9 +1.0**
GERES GERESS Array B 124.72 327 PKP PKPdf 16 57 50.0 -0.5
0.3nm,0.7s,baz=162,slow=0.8,SNR=3.8
TORD Torodi Ar. Bea 148.71 284 PKPbc PKPbc 16 58 39.4 +0.3
2.9nm,0.6s,baz=56,slow=3.1,SNR=19

IDC ***24*** *16:47:46.9±1.1, 7°.05S×150°.59E, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.1/17, mbtmp4.0/12, MS3.2/1, Ms1 3.2/1, ms1mx2.8/23, Error ellipse: s-maj=37.4km s-min=20.7km az=110.0*
ISCJB ***24*** *16:47:50.5±0.7, 7°.11S±0°.08×150°.5E±0°.2, h33km, mb4.1/14, Error ellipse: s-maj=22.1km s-min=11.2km az=10.9*
NEIC ***24*** *16:47:52.1±0.6, 7°.12S×150°.60E, h35km, mb4.4/4, Error ellipse: s-maj=22.4km s-min=11.2km az=119.0*
ISC 24 16:47:52.2±0.7, 7°.12S±0°.08×150°.6E±0°.2, h35km, n22, σ0§74/20, mb4.1/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.56**	**198**	LR	LR	16 55 44.3	
	comp=Z,109nm,20.0s,baz=45,slow=35						
RMQ	**Roma**	**19.34**	**185**	*eP*	**Pn**	**16 52 15.7**	**-0.2**
	21nm,1.3s						
WRAB	**Tennant Creek**	**20.26**	**229**	*eP*	**P**	**16 52 24.7**	**0.0**
	12nm,1.1s						
ASAR	**Alice Springs**	**22.96**	**222**	**P**	**P**	**16 52 54.1**	**+0.4**
	1.5nm,0.3s,mb3.8,baz=56,slow=9.4,SNR=53						
CMSA	**Cobar Meteorol**	**24.72**	**190**	*eP*	**P**	**16 53 10.3**	**+1.0**
STKA	**Stephens Creek**	**26.02**	**198**	P	**P**	**16 53 21.2**	**-0.8**
	3.1nm,0.9s,mb3.8,baz=137,slow=5.3,SNR=3.9						
STKA	**Stephens Creek**	**26.02**	**198**	*eP*	**P**	**16 53 21.2**	**-0.9**
	1.1nm,1.0s,mb3.3						
FITZ	**Fitzroy Crossi**	**26.64**	**243**	*eP*	**P**	**16 53 28.4**	**+0.6**
	6.8nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**26.64**	**243**	P	**P**	**16 53 28.3**	**+0.5**
	4.0nm,0.6s,mb4.1,baz=33,slow=7.3,SNR=10						
KSRS	**Korea Array**	**49.14**	**336**	P	**P**	**16 56 36.0**	**-0.6**
	1.3nm,0.7s,mb4.0,baz=154,slow=9.0,SNR=6.3						
CMAR	**Chiang Mai Arr**	**56.92**	**297**	P	**P**	**16 57 34.5**	**+0.2**
	0.6nm,0.9s,mb3.6,baz=128,slow=5.1,SNR=4.3						
SONM	**Songino Array**	**67.14**	**329**	P	**P**	**16 58 42.2**	**-0.1**
	0.9nm,0.7s,mb3.9,baz=133,slow=5.1,SNR=6.9						
MKAR	**Makanchi Array**	**80.64**	**320**	P	**P**	**17 00 00.7**	**-0.7**
	0.3nm,0.4s,mb3.5,baz=98,slow=6.2,SNR=5.3						
KURK	**Kurchatov**	**84.25**	**323**	P	**P**	**17 00 19.6**	**-0.6**
	1.7nm,1.0s,mb4.1,baz=112,slow=4.1,SNR=8.8						
AAK	**Ala-Archa**	**84.67**	**314**	P	**P**	**17 00 24.2**	**+1.7**
	1.7nm,0.5s,mb4.4,baz=155,slow=9.9,SNR=6.0						
EKS2	**Erkin-Say**	**85.19**	**314**	*eP*	**P**	**17 00 25.9**	**+0.8**
	5.9nm,1.0s,mb4.7						
EGAK	**Eagle**	**87.35**	**23**	*eP*	**P**	**17 00 35.0**	**-0.3**
	5.0nm,1.2s,mb4.6						
BVAR	**Borovoye Array**	**89.78**	**323**	P	**P**	**17 00 45.3**	**-1.7**
	1.0nm,0.6s,mb4.4,baz=255,slow=40,SNR=3.3						
NVAR	**Mina Array Bea**	**95.24**	**52**	P	**P**	**17 01 13.2**	**+0.6**
	0.5nm,0.7s,mb4.0,baz=243,slow=8.5,SNR=3.4						
YKA	**Yellowknife Ar**	**98.49**	**28**	P	**P**	**17 01 27.4**	**+0.7**
	0.6nm,0.8s,mb4.2,baz=270,slow=4.8,SNR=8.7						
YKA	**Yellowknife Ar**	**98.49**	**28**	P	**P**	**17 01 27.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**148.82**	**284**	PKPbc	PKPbc	17 07 37.5	+0.3
	2.2nm,0.6s,baz=63,slow=2.7,SNR=14						

ISCJB ***24*** *16:59:58.6±0.9, 45°.54N±0°.09×149°.5E±0°.1, h154km±7km, mb3.6/10, Error ellipse: s-maj=20.4km s-min=8.7km az=38.4*
MOS ***24*** *16:59:59.9±1.3, 45°.81N×149°.34E, h155km, mb4.1/4, Error ellipse: s-maj=18.9km s-min=10.9km az=60.2*
SKHL ***24*** *17:00:01.5±1.0, 45°.45N×149°.42E, h129km±17km, mb4.8/2, msh5.2/2*
NEIC ***24*** *17:00:03.5±1.7, 45°.94N×149°.23E, h166km±13km, mb4.5/3, Error ellipse: s-maj=23.1km s-min=12.3km az=145.0*
IDC ***24*** *17:00:03.9±2.4, 45°.98N×149°.07E, h164km±22km, mb3.3/7, mb1 3.5/10, mb1mx3.2/27, mbtmp3.3/10, Error ellipse: s-maj=31.9km s-min=14.9km az=133.0*
JMA ***24*** *17:00:04.0±0.5, 45°.12N×149°.27E, h149km, M3.8*
ISC 24 16:59:59.7±0.9, 45°.48N±0°.09×149°.5E±0°.1, h153km±8km, n67, σ1§25/72, mb3.6/10, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.20**	**259**	⇓*i*PN	**Pn**	**17 00 25.9**	**-0.6**
KUR				*eS*	**Sn**	**17 00 45.2**	**-1.7**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,2μm,1.0s						
KUR				smax			
	comp=E,680nm,0.5s						
KUR	**Kuril'sk**	**1.20**	**259**	⇓*i*P	**Pn**	**17 00 25.9**	**-0.6**
KUR				AMB	AMB	17 00 26.2	
	comp=E,130nm,0.5s						
KUR				*eS*	**Sn**	**17 00 45.2**	**-1.7**
KUR				A		17 00 46.0	
	comp=E,2μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**2.99**	**242**	*e*PN	**Pn**	**17 00 47.9**	**+0.9**
YUK				*i* S	**Sn**	**17 01 22.2**	**-1.3**
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=E,2μm,0.6s						
YUK				smax			
	comp=N,350nm,0.4s						
YUK				smax			
	comp=E,890nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.99**	**242**	*e*P	**Pn**	**17 00 47.9**	**+0.9**
YUK				AMB	AMB	17 00 48.4	
	comp=E,350nm,0.4s						
YUK				*i* S	**Sn**	**17 01 22.2**	**-1.3**
YUK				A		17 01 24.3	
	comp=E,2μm,0.6s						
YUK				A		17 01 24.6	
	comp=E,350nm,0.5s						
YUK				A		17 01 24.6	
	comp=E,890nm,0.5s						
NEM2	**Nemuro 2**	**3.44**	**233**	P	**Pn**	**17 00 52.5**	**-0.2**
NEM2				*e*S	Sx	17 01 30.3	
JRA	**Rausu**	**3.50**	**245**	P	**Pn**	**17 00 54.6**	**+1.1**
JNK	**Nakash**	**3.93**	**243**	P	**Pn**	**17 01 00.0**	**+1.0**
JAK	**Akkeshi**	**4.27**	**236**	P	**Pn**	**17 01 03.2**	**-0.3**
JAK				*e*S	**Sn**	**17 01 49.6**	**-3.5**
JTKR	**Abashiri--Toko**	**4.28**	**251**	P	**Pn**	**17 01 04.6**	**+1.0**
JMP	**Maruseppu**	**4.63**	**254**	P	**Pn**	**17 01 09.3**	**+1.0**
JAR	**Ashorobuto**	**4.67**	**244**	P	**Pn**	**17 01 10.2**	**+1.4**
JOB	**Onbets**	**4.84**	**240**	P	**Pn**	**17 01 11.5**	**+0.5**
JOB				*e*S	**Sn**	**17 02 04.0**	**-2.5**
YSS	**Yuzh-Sakhalins**	**4.93**	**290**	*e*PN	**Pn**	**17 01 11.8**	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.93**	**290**	*e*Pn	**Pn**	**17 01 11.4**	**-0.7**
YSS	**Yuzh-Sakhalins**	**4.93**	**290**	*e*P	**Pn**	**17 01 11.8**	**-0.3**
JKK2	**Kamakawa 2**	**5.10**	**254**	P	**Pn**	**17 01 15.8**	**+1.4**
ASAJ	**Asahikawa**	**5.12**	**257**	P	**Pn**	**17 01 16.3**	**+1.6**
ASAJ	**Asahikawa**	**5.12**	**257**	P	**Pn**	**17 01 16.4**	**+1.8**
	comp=E,2.9nm,0.3s,baz=83,slow=14,SNR=47						
ASAJ	**Asahikawa**	**5.12**	**257**	PN	**Pn**	**17 01 16.5**	**+1.8**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JCH	**Churui**	**5.29**	**239**	P	**Pn**	**17 01 16.8**	**-0.1**
JCH				*e*S	Sx	17 02 12.8	
JWK2	**Keihoku**	**5.38**	**271**	P	**Pn**	**17 01 20.2**	**+2.1**
JFR	**Furan**	**5.49**	**247**	P	**Pn**	**17 01 20.8**	**+1.2**
JAB	**Ashibetsu**	**5.59**	**252**	P	**Pn**	**17 01 22.9**	**+2.0**
JEM	**Erimo**	**5.77**	**235**	P	**Pn**	**17 01 24.1**	**+0.8**
ERM	**Erimo**	**5.77**	**235**	*e*PN	**Pn**	**17 01 24.4**	**+1.1**
ERM				pmax	pmax		
	comp=Z,20nm,0.4s						
ERM	**Erimo**	**5.77**	**235**	*e*Pn	**Pn**	**17 01 24.4**	**+1.1**
	comp=Z,20nm,0.4s						
ERM				*e*Sn	Sx	17 02 18.9	
JBT2	**Biratori 2**	**5.82**	**245**	P	**Pn**	**17 01 24.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**5.85**	**239**	P	**Pn**	**17 01 23.3**	**-1.1**
JNBK				*e*S	Sx	17 02 22.7	
JEW	**Eniwo**	**6.38**	**248**	P	**Pn**	**17 01 32.7**	**+1.3**
JNB	**Noboribetsu**	**6.83**	**247**	P	**Pn**	**17 01 36.9**	**-0.4**
JNB				*e*S	Sx	17 02 50.7	
JKB	**Kayabe**	**7.13**	**243**	P	**Pn**	**17 01 40.3**	**-1.1**
JKB				*e*S	Sx	17 02 55.3	
JSH	**Shimam**	**7.40**	**251**	P	**Pn**	**17 01 45.6**	**+0.6**
JYM2	**Yakumo 2**	**7.43**	**246**	P	**Pn**	**17 01 44.6**	**-0.8**
JSR	**Shiriuchi**	**7.71**	**242**	P	**Pn**	**17 01 48.1**	**-1.0**
JTM	**Tenmabayashi**	**7.76**	**236**	P	**Pn**	**17 01 48.8**	**-1.1**
JTM				*e*S	Sx	17 03 08.1	
JANG	**Nango**	**7.78**	**232**	P	**Pn**	**17 01 48.2**	**-2.0**
JOSM	**Okushiri--Mats**	**8.03**	**249**	P	**Pn**	**17 01 52.9**	**-0.5**
OFUJ	**Ofunato**	**8.65**	**225**	*e*S	Sx	17 03 30.6	
JRG	**Rokugo**	**8.95**	**230**	P	**Pn**	**17 02 05.0**	**-0.7**
JRG				*e*S	Sx	17 03 39.3	
JIO	**Ouri**	**9.29**	**224**	P	**Pn**	**17 02 08.5**	**-1.7**
JIO				*e*S	Sx	17 03 45.2	
PETK	**Petropavlovsk-**	**9.31**	**32**	P	**Pn**	**17 02 10.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=175,slow=11,SNR=13						
PETK	**Petropavlovsk-**	**9.31**	**32**	*e*PN	**Pn**	**17 02 10.2**	**-0.1**
PETK	**Petropavlovsk-**	**9.31**	**32**	P	**Pn**	**17 02 10.3**	**0.0**
JYA	**Atsumi**	**10.03**	**230**	P	**Pn**	**17 02 19.8**	**-0.2**
JYA				*e*S	Sx	17 04 05.6	
JFK	**Kawauchi**	**10.38**	**222**	*e*S	Sx	17 04 11.7	
MAJO	**Matsushiro**	**12.35**	**228**	*e*PN	**Pn**	**17 03 00.3**	**+10**
MJAR	**Matsushiro Arr**	**12.35**	**228**	P	**Pn**	**17 02 59.9**	**+9.5**
	comp=Z,0.7nm,0.3s,baz=43,slow=9.9,SNR=14						
KSRS	**Korea Array**	**18.03**	**251**	P	**P**	**17 04 02.8**	**+3.8**
	comp=Z,0.4nm,0.3s,baz=57,slow=11,SNR=18						
KSRS	**Korea Array**	**18.03**	**251**	*e*P	**P**	**17 04 02.7**	**+3.7**
YAK	**Yakutsk**	**20.16**	**332**	P	**P**	**17 04 19.8**	**-2.0**
BILL	**Bilibino**	**24.23**	**15**	⇑*e*P	**P**	**17 04 58.8**	**-3.1**
BILL				*e*S	**S**	**17 09 08.8**	**-0.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.5						
INK	**Inuvik**	**44.05**	**31**	P	**P**	**17 07 53.5**	**+1.8**
	comp=Z,0.9nm,0.4s,mb3.8,baz=307,slow=6.6,SNR=13						
INK	**Inuvik**	**44.05**	**31**	P	**P**	**17 07 53.5**	**+1.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**44.05**	**31**	*e*P	**P**	**17 07 52.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**49.64**	**254**	P	**P**	**17 08 38.6**	**+2.9**
	comp=Z,0.7nm,0.8s,mb3.3,baz=31,slow=7.1,SNR=4.2						
RES	**Resolute Bay**	**52.81**	**18**	*e*P	**P**	**17 08 58.6**	**0.0**
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
RES	**Resolute Bay**	**52.81**	**18**	*e*P	**P**	**17 08 58.6**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.1						
YKA	**Yellowknife Ar**	**53.41**	**35**	P	**P**	**17 09 04.9**	**+1.7**
	comp=Z,0.4nm,0.6s,mb3.3,baz=298,slow=6.7,SNR=6.9						
YKA	**Yellowknife Ar**	**53.41**	**35**	P	**P**	**17 09 04.9**	**+1.7**
NEW	**Newport**	**59.92**	**50**	*e*P	**P**	**17 09 55.8**	**+6.6**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NEW	**Newport**	**59.92**	**50**	*e*P	**P**	**17 09 55.8**	**+6.6**
	comp=Z,5.3nm,0.6s,mb4.5						
FCC	**Fort Churchill**	**63.67**	**31**	P	**P**	**17 10 12.9**	**-1.2**
FINES	**FINESS Array B**	**64.09**	**334**	P	**P**	**17 10 15.4**	**-1.5**
	comp=Z,1.3nm,0.7s,mb3.9,baz=29,slow=8.8,SNR=8.0						
NOA	**NORSAR Array B**	**68.59**	**340**	P	**P**	**17 10 44.6**	**-0.8**
	comp=Z,0.6nm,0.6s,mb3.5,baz=158,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**70.27**	**195**	P	**P**	**17 11 00.8**	**+4.6**
	comp=Z,0.6nm,0.7s,mb3.5,baz=10,slow=6.0,SNR=5.8						
ASAR	**Alice Springs**	**70.27**	**195**	*e*P	**P**	**17 11 00.7**	**+4.6**
GERES	**GERESS Array B**	**78.45**	**332**	P	**P**	**17 11 42.4**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.1,baz=17,slow=5.6,SNR=4.3						

IDC ***24*** *17:01:14.2±0.9, 10°.96S×162°.24E, h0km, mb4.0/13, mb1 4.1/13, mb1mx4.1/18, mbtmp4.0/13, ML4.9/1, MS3.8/13, Ms1 3.9/13, ms1mx3.7/21, Error ellipse: s-maj=28.8km s-min=18.9km az=112.0*
ISCJB ***24*** *17:01:18.6±3.0, 10°.98S±0°.09×162°.21E±0°.08, h42km±24km, mb4.3/24, MS3.9/13, Error ellipse: s-maj=15.3km s-min=12.9km az=165.5*
NEIC ***24*** *17:01:21.7±2.8, 10°.96S×162°.26E, h61km±27km, mb4.6/16, Error ellipse: s-maj=16.5km s-min=11.6km az=167.0*
ISC 24 17:01:20.4±2.5, 10°.99S±0°.09×162°.24E±0°.08, h42km±24km, n52, σ1§17/39, mb4.3/24, MS3.9/13, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.74**	**160**	*e*LR	LR	17 06 21.5	
	968nm,24.0s						
MSVF	**Nonsavu**	**16.72**	**115**	*e*Pn	**Pn**	**17 05 11.1**	**-0.6**
	25nm,1.0s						
EIDS	**Eidsvold**	**17.79**	**215**	*e*Pn	**Pn**	**17 05 25.1**	**+0.1**
	30nm,0.8s						
CTA	**Charters Tower**	**17.85**	**238**	*e*P	**Pn**	**17 05 28.3**	**+2.6**
	66nm,1.1s						
CTA	**Charters Tower**	**17.85**	**238**	P	**Pn**	**17 05 26.3**	**+0.5**
	2.8nm,0.3s,baz=68,slow=13,SNR=27						
CTA	**Charters Tower**	**17.85**	**238**	P	**Pn**	**17 05 26.3**	**+0.5**
CTAO	**Charters Tower**	**17.85**	**238**	*e*Pn	**Pn**	**17 05 28.1**	**+2.4**
	109nm,1.0s						
COEN	**Coen**	**18.84**	**259**	*e*P	**Pn**	**17 05 38.4**	**+0.5**
	340nm,1.1s						
ARMA	**Armidale**	**21.70**	**205**	*e*P	**P**	**17 06 08.2**	**+0.2**
AFI	**Afiamalu**	**25.54**	**99**	LR	LR	17 15 26.9	
	comp=Z,343nm,18.0s,MS3.9,baz=282,slow=33						
STKA	**Stephens Creek**	**28.20**	**219**	P	**P**	**17 07 09.7**	**+0.4**
	1.7nm,0.4s,mb4.0,baz=25,slow=11,SNR=3.8						
STKA				LR	LR	17 18 24.3	
	comp=Z,435nm,18.3s,MS4.1,baz=130,slow=36						
STKA	**Stephens Creek**	**28.20**	**219**	*e*P	**P**	**17 07 09.4**	**+0.1**
	1.4nm,0.7s,mb3.7						
STKA				LR	LR	17 18 24.3	
WRAB	**Tennant Creek**	**28.27**	**248**	*e*P	**P**	**17 07 10.6**	**+0.5**
	6.5nm,0.9s,mb4.3						
KAKA	**Kakadu**	**29.20**	**264**	*e*P	**P**	**17 07 16.0**	**-2.4**
	9.5nm,0.6s,mb4.7						
KAKA				*e*	pP	17 07 24.3	-5.4
KAKA	**Kakadu**	**29.20**	**264**	*e*P	**P**	**17 07 16.2**	**-2.2**
	59nm,0.6s,mb5.5						
KAKA				*e*		17 07 24.1	
ASAR	**Alice Springs**	**29.77**	**241**	P	**P**	**17 07 21.9**	**-1.5**
	1.1nm,0.6s,mb3.8,baz=65,slow=9.6,SNR=19						
GUMO	**Guam**	**29.88**	**324**	LR	LR	17 16 48.2	
	comp=Z,97nm,21.2s,MS3.4,baz=264,slow=31						
URZ	**Urewera**	**30.25**	**156**	LR	LR	17 18 25.8	
	comp=Z,188nm,18.7s,MS3.8,baz=339,slow=34						
TOO	**Toolangi**	**30.45**	**207**	*e*P	**P**	**17 07 28.8**	**-0.3**
RPZ	**Rata Peaks**	**33.49**	**168**	P	**P**	**17 07 56.6**	**+0.8**
	8.0nm,0.8s,mb4.7,baz=45,slow=7.1,SNR=4.0						
FITZ	**Fitzroy Crossi**	**36.07**	**254**	⇑*i*P	**P**	**17 08 16.8**	**-1.6**
	8.9nm,0.6s,mb4.9						
FITZ				*e*		17 08 24.9	
FITZ	**Fitzroy Crossi**	**36.07**	**254**	P	**P**	**17 08 16.9**	**-1.5**
	5.0nm,0.7s,mb4.6,baz=89,slow=6.8,SNR=19						
FORT	**Forrest**	**37.29**	**233**	*e*P	**P**	**17 08 28.1**	**-0.5**
	16nm,0.7s,mb5.0						
MBWA	**Marble Bar**	**41.96**	**251**	*e*P	**P**	**17 09 06.4**	**-1.3**
	34nm,1.4s,mb4.8						
PPT	**Papeete**	**47.06**	**104**	*e*LR	LR	17 23 08.7	
	253nm,25.8s						
PPT	**Papeete**	**47.06**	**104**	LR	LR	17 24 55.4	
	comp=Z,120nm,20.1s,MS3.9,baz=309,slow=30						
KKM	**Kota Kinabalu**	**48.83**	**288**	*e*P	**P**	**17 10 02.2**	**+0.1**
	10.0nm,0.9s,mb4.8						
JOW	**Kunigami**	**50.01**	**319**	LR	LR	17 28 30.7	
	comp=Z,74nm,19.8s,MS3.7,baz=266,slow=33						
MJAR	**Matsushiro Arr**	**52.41**	**336**	P	**P**	**17 10 28.4**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=169,slow=8.6,SNR=3.8						
MAJO	**Matsushiro**	**52.41**	**336**	P	**P**	**17 10 25.1**	**-3.6**
	9.1nm,1.2s,mb4.6						
KSRS	**Korea Array**	**57.94**	**328**	P	**P**	**17 11 10.1**	**+1.5**
	1.0nm,1.0s,mb3.8,baz=157,slow=7.2,SNR=3.6						
KSRS				LR	LR	17 32 45.9	
	comp=Z,72nm,19.7s,MS3.8,baz=300,slow=33						
RKT	**Rikitea**	**60.84**	**110**	*e*LR	LR	17 29 25.5	
	305nm,25.0s						
PETK	**Petropavlovsk-**	**63.95**	**357**	P	**P**	**17 11 49.2**	**+0.1**
	2.0nm,0.9s,mb4.2,baz=115,slow=8.7,SNR=3.1						
PETK				LR	LR	17 36 31.1	
	comp=Z,48nm,18.8s,MS3.7,baz=333,slow=33						
SBA	**Scott Base**	**66.90**	**179**	*e*P	**P**	**17 12 09.5**	**+1.6**
	3.7nm,1.0s,mb4.4						
CMAR	**Chiang Mai Arr**	**68.94**	**295**	P	**P**	**17 12 22.4**	**+0.7**
	0.2nm,0.7s,mb3.2,baz=134,slow=5.2,SNR=2.4						
CMAR				LR	LR	17 39 05.4	
	comp=Z,55nm,20.3s,MS3.8,baz=125,slow=33						
ULN	**Ulaanbaatar**	**76.26**	**325**	P	**P**	**17 13 07.0**	**+2.3**
	4.9nm,1.0s,mb4.4						
SONM	**Songino Array**	**76.61**	**325**	P	**P**	**17 13 07.6**	**+0.9**
	0.4nm,0.4s,mb3.8,baz=142,slow=7.2,SNR=2.1						
BILL	**Bilibino**	**78.87**	**2**	*e*P	**P**	**17 13 17.9**	**-0.9**
	18nm,1.2s,mb4.9						
MAW	**Mawson**	**83.47**	**202**	P	**P**	**17 13 43.8**	**+0.4**
	1.4nm,0.8s,mb4.0,baz=155,slow=4.2,SNR=3.0						
MAW	**Mawson**	**83.47**	**202**	*e*P	**P**	**17 13 42.8**	**-0.6**
	4.2nm,1.5s,mb4.2						
DIB	**Dawson Inlet,**	**84.51**	**33**	T		18 46 54.3	
	SNR=83						
TIXI	**Tiksi**	**85.40**	**350**	*e*P	**P**	**17 13 56.2**	**+3.3**
	1.1nm,0.3s,mb4.5						
EGAK	**Eagle**	**86.53**	**21**	*e*P	**P**	**17 13 57.9**	**-0.8**
	21nm,1.7s,mb5.1						
NVAR	**Mina Array Bea**	**88.63**	**51**	P	**P**	**17 14 09.5**	**+0.1**
	0.6nm,0.6s,mb4.1,baz=235,slow=5.2,SNR=5.2						
MK31	**Makanchi Array**	**91.13**	**317**	*e*P	**P**	**17 14 23.1**	**+2.2**
MKAR	**Makanchi Array**	**91.13**	**317**	P	**P**	**17 14 19.6**	**-1.3**
	0.2nm,0.5s,mb3.7,baz=90,slow=3.5,SNR=4.4						
MKAR				LR	LR	17 52 58.7	
	comp=Z,35nm,19.3s,MS3.8,baz=22,slow=34						
PDAR	**Pinedale Array**	**96.05**	**48**	LR	LR	17 56 01.3	
	comp=Z,50nm,18.7s,MS4.0,baz=161,slow=34						
YKA	**Yellowknife Ar**	**96.51**	**28**	P	**P**	**17 14 43.5**	**-1.7**
	0.3nm,0.8s,mb3.8,baz=261,slow=4.3,SNR=3.8						
YKA	**Yellowknife Ar**	**96.51**	**28**	P	**P**	**17 14 43.5**	**-1.7**
TXAR	**Lajitas Array**	**98.83**	**62**	LR	LR	17 49 28.9	
	comp=Z,85nm,20.7s,MS4.2,baz=0.0,slow=29						
BVAR	**Borovoye Array**	**99.79**	**322**	LR	LR	17 54 50.6	
	comp=Z,52nm,21.8s,MS4.0,baz=189,slow=32						
TORD	**Torodi Ar. Bea**	**160.85**	**278**	PKP	PKPdf	17 21 15.3	-1.7
	0.1nm,0.4s,baz=45,slow=1.7,SNR=2.2						

ISCJB ***24*** *17:08:13.7±2.0, 4°.39N±0°.06×73°.73W±0°.09, h8km±13km, mb3.8/10, MS3.3/4, Error ellipse: s-maj=15.7km s-min=9.0km az=15.4*
IDC ***24*** *17:08:13.9±0.8, 4°.39N×73°.66W, h0km, mb3.7/8, mb1 4.0/10, mb1mx3.9/21, mbtmp3.8/10, ML4.1/2, MS3.3/6, Ms1 3.4/6, ms1mx3.1/27, Error ellipse: s-maj=22.1km s-min=9.7km az=38.0*
NEIC ***24*** *17:08:15.5±0.6, 4°.39N×73°.74W, h10km, mb4.1/3, Error ellipse: s-maj=14.2km s-min=11.1km az=75.0*
ISC 24 17:08:15.1±2.3, 4°.42N±0°.06×73°.74W±0°.09, h2km±14km, n25, σ1§06/24, mb3.8/10, MS3.3/4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.73**	**306**	Pg	**Pg**	**17 08 28.2**	**-0.9**
	baz=120,slow=14						
ROSC				Lg		17 08 41.1	
	187nm,0.3s,baz=94,slow=23,SNR=15						
ROSC	**El Rosal**	**0.73**	**306**	*e*Pg	**Pg**	**17 08 28.0**	**-1.1**
ROSC				Pg	**Pg**	**17

KSH				smax			
	comp=E,150nm,0.7s						
KBL	**Kabul**	**4.05**	**224**	*e*Pn	**Pn**	**17 37 18.1**	**+1.1**
KBL				*e*Sn	**Sn**	**17 38 04.1**	**-1.2**
UCH	**Uchtor**	**4.95**	**18**	P	**Pn**	**17 37 29.5**	**+1.1**
	SNR=47						
UCH	**Uchtor**	**4.95**	**18**	*e*Pn	**Pn**	**17 37 29.1**	**+0.7**
UCH				*e*Sn	**Sn**	**17 38 24.4**	**-1.6**
KZA	**Kyzart**	**5.03**	**25**	P	**Pn**	**17 37 30.0**	**+0.6**
	SNR=19						
EKS2	**Erkin-Say**	**5.22**	**11**	P	**Pn**	**17 37 32.6**	**+0.7**
	SNR=14						
EKS2	**Erkin-Say**	**5.22**	**11**	*e*Pn	**Pn**	**17 37 32.4**	**+0.5**
	comp=E,9.6nm,0.6s						
EKS2				*e*Sn	**Sn**	**17 38 29.9**	**-2.4**
AAK	**Ala-Archa**	**5.33**	**17**	P	**Pn**	**17 37 34.6**	**+1.3**
	SNR=27						
KBK	**Karagaybulak**	**5.47**	**20**	P	**Pn**	**17 37 37.2**	**+2.1**
	SNR=8.8						
ULHL	**Ulahol**	**5.54**	**31**	P	**Pn**	**17 37 37.0**	**+0.9**
	SNR=10						
CHMS	**Chumysh**	**5.74**	**17**	P	**Pn**	**17 37 39.7**	**+1.1**
	SNR=6.3						
KK31	**Karatay Array**	**5.75**	**346**	Pn	**Pn**	**17 37 38.9**	**+0.1**
	comp=E,3.0nm,0.3s,baz=160,slow=11,SNR=171						
KK31				⇑Sn	**Sn**	**17 38 40.2**	**-4.4**
	comp=E,7.7nm,0.4s,baz=168,slow=23,SNR=7.5						
TKM2	**Tokmak 2**	**5.90**	**23**	⇓Pn	**Pn**	**17 37 41.3**	**+0.6**
	comp=E,3.1nm,0.5s						
TKM2				⇓Sn	**Sn**	**17 38 47.1**	**-1.1**
	comp=E,3.2nm,0.7s						
TKM2	**Tokmak 2**	**5.90**	**23**	P	**Pn**	**17 37 41.9**	**+1.2**
	SNR=8.0						
TKM2	**Tokmak 2**	**5.90**	**23**	*e*Pn	**Pn**	**17 37 41.3**	**+0.6**
	comp=E,8.5nm,0.8s						
USP	**Ospenovka**	**5.94**	**15**	P	**Pn**	**17 37 42.3**	**+1.1**
	SNR=7.5						
MKAR	**Makanchi Array**	**11.79**	**35**	P	**Pn**	**17 38 55.7**	**-1.9**
	comp=E,0.1nm,0.3s,baz=217,slow=14,SNR=3.2						
MKAR	**Makanchi Array**	**11.79**	**35**	P	**Pn**	**17 38 55.7**	**-1.9**
KOLN	**Koldanda**	**13.53**	**133**	*e*P	**Pn**	**17 39 19.7**	**-0.3**
	comp=E,3.0nm,0.2s						
KURK	**Kurchatov**	**13.90**	**17**	P	**Pn**	**17 39 24.6**	**+0.3**
	comp=E,0.0nm,0.3s,baz=205,slow=11,SNR=4.0						
GKN	**Gorkha**	**13.98**	**129**	*e*P	**Pn**	**17 39 25.1**	**-0.5**
	comp=E,7.6nm,0.3s						
KKN	**Kakani**	**14.54**	**128**	*e*P	**Pn**	**17 39 32.9**	**+0.4**
	comp=E,14nm,0.7s						
DMN	**Daman**	**14.56**	**129**	*e*P	**Pn**	**17 39 32.9**	**+0.2**
	comp=E,5.4nm,0.4s						
PKIN	**Phulchoki**	**14.76**	**129**	*e*P	**Pn**	**17 39 35.4**	**+0.2**
	comp=E,6.6nm,0.5s						
PKI	**Pulchoki**	**14.77**	**129**	*e*P	**Pn**	**17 39 35.5**	**+0.1**
AB31	**Akbulak array**	**14.79**	**326**	Pn	**Pn**	**17 39 34.1**	**-1.3**
	comp=E,0.5nm,0.4s,baz=131,slow=11,SNR=24						
AB31				⇓Sn	**Sn**	**17 42 11.9**	**-8.4**
	comp=E,0.3nm,0.4s,baz=150,slow=23,SNR=5.6						
ABKAR	**Akbulak array**	**14.79**	**326**	*e*Pn	**Pn**	**17 39 34.2**	**-1.2**
	comp=E,0.9nm,0.3s						
ABKAR				*e*S	**Sn**	**17 42 06.4**	**-14**
GUN	**Gumba**	**14.83**	**126**	*e*P	**Pn**	**17 39 35.0**	**-1.1**
	comp=E,7.3nm,0.5s						
BVAR	**Borovoye Array**	**15.55**	**355**	P	**Pn**	**17 39 44.7**	**0.0**
	comp=E,0.2nm,0.3s,baz=165,slow=12,SNR=11						
AKTK	**Aktyubinsk**	**16.51**	**326**	P	**Pn**	**17 39 56.9**	**+0.7**
AKTO	**Aktyubinsk**	**16.51**	**326**	P	**Pn**	**17 39 56.9**	**+0.7**
	comp=E,0.3nm,0.3s,baz=118,slow=8.8,SNR=4.7						
ZAA0	**Zalesovo Array**	**18.51**	**24**	*e*P	**P**	**17 40 16.8**	**-0.7**
ZALV	**Zalesovo Beam**	**18.51**	**24**	P	**P**	**17 40 18.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=218,slow=9.3,SNR=7.3						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**17 43 37.7**	**+0.8**
	comp=E,2.8nm,1.0s,mb3.9,baz=106,slow=8.9,SNR=5.4						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**17 43 37.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**66.88**	**269**	P	**P**	**17 46 47.2**	**-0.9**
	comp=E,0.4nm,0.5s,mb3.5,baz=53,slow=6.1,SNR=3.5						
YKA	**Yellowknife Ar**	**80.16**	**3**	P	**P**	**17 48 04.6**	**-0.1**
	comp=E,0.2nm,0.4s,mb3.1,baz=348,slow=5.5,SNR=6.5						
YKA	**Yellowknife Ar**	**80.16**	**3**	P	**P**	**17 48 04.6**	**-0.1**

*IDC **24** 17:49:55.9±1.2, 0°.28N×99°.43E, h0km, mb3.9/9, mb1 3.9/11, mb1mx3.7/24, mbtmp3.8/11, ML3.6/2, Error ellipse: s-maj=59.4km s-min=20.3km az=60.0*
*DJA **24** 17:49:59, 0°.52N×99°.48E, h8km, MLv4.4/12*
*NEIC **24** 17:50:01.1±0.6, 0°.35N×99°.59E, h35km, mb4.4/3, Error ellipse: s-maj=19.3km s-min=9.3km az=63.0*

ISC 24 17:49:59.1±1.5, 0°.48N±0°.05×99°.55E±0°.06, h14km±9km, n39, σ1§12/41, mb4.0/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.32**	**5**	P	**Pg**	**17 50 04.9**	**-0.7**
PPI	**Padang Panjang**	**1.26**	**138**	P	**Pn**	**17 50 21.5**	**-0.9**
BKNI	**Bangkinang**	**1.50**	**96**	P	**Pn**	**17 50 25.3**	**-0.3**
PDSI	**Padang**	**1.66**	**147**	P	**Pn**	**17 50 28.5**	**+0.7**
SISI	**Saibi**	**1.85**	**194**	P	**Pn**	**17 50 31.5**	**+0.9**
SDSI	**Sungai Dareh**	**2.34**	**127**	P	**Pn**	**17 50 40.0**	**+2.7**
PSI	**Prapat**	**2.39**	**345**	Pn	**Pn**	**17 50 38.5**	**+0.6**
	13nm,0.3s,baz=154,slow=6.9,SNR=14						
PSI				Sn	**Sn**	**17 51 12.5**	**+5.4**
	14nm,0.3s,baz=138,slow=23,SNR=6.0						
RGRI	**Rengat**	**2.90**	**106**	P	**Pn**	**17 50 52.1**	**+7.1**
FRIM	**Kepong**	**3.43**	**37**	P	**Pn**	**17 50 53.1**	**+0.7**
KGM	**Kluang**	**4.06**	**68**	P	**Pn**	**17 51 01.2**	**+0.2**
IPM	**Ipoh**	**4.24**	**20**	P	**Pn**	**17 51 05.8**	**+2.4**
IPM	**Ipoh**	**4.24**	**20**	P	**Pn**	**17 51 05.3**	**+1.9**
MYKOM	**Kota Tinggi**	**4.49**	**73**	P	**Pn**	**17 51 07.3**	**+0.5**
MYKOM	**Kota Tinggi**	**4.49**	**73**	P	**Pn**	**17 51 07.0**	**+0.1**
KULM	**Kulim**	**4.90**	**13**	P	**Pn**	**17 51 14.0**	**+1.4**
KULM	**Kulim**	**4.90**	**13**	*e*Pn	**Pn**	**17 51 13.1**	**+0.6**
	27nm,0.6s						
KULM				*e*Sg	**Sg**	**17 52 35.6**	**-1.1**
KULM	**Kulim**	**4.90**	**13**	P	**Pn**	**17 51 13.3**	**+0.8**
KTGM	**Kuala Trenggan**	**6.00**	**37**	P	**Pn**	**17 51 28.8**	**+1.2**
MDSI	**Maura Dua**	**6.76**	**137**	P	**Pn**	**17 51 41.8**	**+3.7**
KSM	**Kuching**	**10.80**	**85**	P	**Pn**	**17 52 34.4**	**+0.9**
SBUM	**Sibu**	**12.81**	**81**	P	**Pn**	**17 53 01.4**	**+0.2**
KKM	**Kota Kinabalu**	**17.52**	**71**	P	**Pn**	**17 54 02.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**17.88**	**358**	P	**Pn**	**17 54 09.6**	**+2.0**
	0.1nm,0.3s,baz=189,slow=11,SNR=10						
TSM	**Tawau**	**18.69**	**78**	P	**Pn**	**17 54 15.0**	**-2.6**
MYLDM	**Lahad Datu**	**19.49**	**76**	P	**Pn**	**17 54 23.8**	**-3.4**
ASAR	**Alice Springs**	**41.09**	**128**	P	**P**	**17 57 40.8**	**-2.1**
	0.6nm,0.9s,mb3.2,baz=300,slow=7.4,SNR=9.1						
ASAR				PcP	PcP	17 59 43.3	+0.8
	0.5nm,0.8s,baz=311,slow=3.0,SNR=6.9						
SONM	**Songino Array**	**47.54**	**6**	P	**P**	**17 58 34.6**	**+0.5**
	0.7nm,0.6s,mb3.9,baz=189,slow=9.7,SNR=4.4						
EKS2	**Erkin-Say**	**47.95**	**334**	P	**P**	**17 58 38.2**	**+0.9**
	2.8nm,0.9s,mb4.3						
MK31	**Makanchi Array**	**48.54**	**344**	*e*P	**P**	**17 58 42.1**	**+0.3**
MKAR	**Makanchi Array**	**48.54**	**344**	P	**P**	**17 58 42.0**	**+0.2**
	1.0nm,0.4s,mb4.2,baz=155,slow=7.5,SNR=20						
CTAO	**Charters Tower**	**50.08**	**117**	*e*P	**P**	**17 58 52.8**	**-1.3**
	19nm,1.3s,mb5.0						
KURK	**Kurchatov**	**53.12**	**344**	P	**P**	**17 59 15.4**	**-0.8**
	0.7nm,0.6s,mb3.8,baz=164,slow=7.2,SNR=5.5						
ZAA0	**Zalesovo Array**	**54.66**	**349**	P	**P**	**17 59 27.1**	**-0.5**
ZALV	**Zalesovo Beam**	**54.66**	**349**	P	**P**	**17 59 27.1**	**-0.4**
	2.0nm,0.5s,mb4.4,baz=163,slow=7.1,SNR=11						
BVAR	**Borovoye Array**	**57.72**	**340**	P	**P**	**17 59 48.8**	**-0.6**
	0.5nm,0.5s,mb3.8,baz=146,slow=13,SNR=3.4						
ABKAR	**Akbulak array**	**59.27**	**331**	*e*P	**P**	**17 59 58.8**	**-1.5**
	0.7nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**71.33**	**312**	P	**P**	**18 01 18.4**	**-0.4**
	0.4nm,0.7s,mb3.5,baz=91,slow=7.9,SNR=3.5						
FINES	**FINESS Array B**	**81.72**	**332**	P	**P**	**18 02 16.9**	**-0.3**
	1.2nm,0.9s,mb3.8,baz=108,slow=10,SNR=5.1						
ARCES	**ARCESS Array B**	**84.00**	**340**	P	**P**	**18 02 28.4**	**-0.5**
	2.1nm,0.9s,mb4.3,baz=107,slow=4.1,SNR=5.3						

DJA 24 17:56:29, 0°.48N×99°.53E, h2km, MLv3.7/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.32**	**9**	P	Pg	17 56 35.7	+0.6
MNSI				S	Sg	17 56 40.5	+1.2
PPI	**Padang Panjang**	**1.27**	**137**	P	Pg	17 56 51.7	-1.7
PPI				S	Sg	17 57 08.9	-1.0
BKNI	**Bangkinang**	**1.52**	**96**	P	Pn	17 56 56.3	-0.9
PDSI	**Padang**	**1.67**	**146**	P	Pn	17 56 59.5	+0.3
SISI	**Saibi**	**1.85**	**194**	P	Pn	17 57 01.7	0.0
SDSI	**Sungai Dareh**	**2.36**	**126**	P	Pn	17 57 11.2	+2.4
IPM	**Ipoh**	**4.24**	**21**	P	Pn	17 57 36.5	+1.8
KULM	**Kulim**	**4.91**	**13**	P	Pn	17 57 44.2	+0.4

IDC 24 17:58:22.9±1.3, 31°.33N×103°.98E, h0km, mb3.2/5, mb1 3.3/6, mb1mx3.2/25, mbtmp3.2/6, Error ellipse: s-maj=39.3km s-min=23.4km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.60**	**201**	Pn	Pn	18 01 37.5	+0.4
	baz=34,slow=14,SNR=3.1						
KSRS	**Korea Array**	**20.66**	**66**	P	P	18 03 04.2	0.0
	0.2nm,0.3s,baz=265,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	**22.74**	**319**	P	P	18 03 27.4	+1.1
	0.3nm,0.7s,baz=121,slow=11,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	P	18 04 01.3	-0.1
	0.5nm,0.6s,baz=144,slow=12,SNR=4.1						
KURK	**Kurchatov**	**27.00**	**323**	P	P	18 04 05.6	-0.7
	0.3nm,0.8s,baz=129,slow=8.8,SNR=3.9						
ASAR	**Alice Springs**	**61.74**	**149**	P	P	18 08 43.1	-0.1
	0.3nm,0.8s,baz=335,slow=6.6,SNR=4.9						

ISC 24 18:04:35.5±1.7, 36°.6N±0°.2×71°.5E±0°.3, h150km, n7, σ0§50/8, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.56**	**354**	Pn	**Pn**	**18 06 10.2**	**+0.7**
	0.9nm,0.5s,baz=175,slow=12,SNR=25						
KK31				⇑Sn	**Sn**	**18 07 23.0**	**-0.3**
	1.1nm,0.5s,baz=183,slow=24,SNR=4.5						
PYUN	**Piuthan**	**12.87**	**128**	*e*P	**Pn**	**18 07 32.2**	**-0.8**
	4.3nm,0.4s						
KOLN	**Koldanda**	**13.48**	**127**	*e*P	**Pn**	**18 07 41.2**	**+0.3**
	7.5nm,0.7s						
GKN	**Gorkha**	**14.01**	**124**	*e*P	**Pn**	**18 07 47.0**	**-0.5**
	3.2nm,0.3s						
KKN	**Kakani**	**14.57**	**123**	*e*P	**Pn**	**18 07 54.8**	**+0.2**
PKIN	**Phulchoki**	**14.79**	**123**	*e*P	**Pn**	**18 07 58.0**	**+0.7**
AB31	**Akbulak array**	**15.21**	**330**	⇑Pn	**Pn**	**18 08 02.2**	**-0.2**
	0.6nm,0.5s,baz=212,slow=38,SNR=7.2						

*ISCJB **24** 18:06:19.2±0.6, 4°.4N±0°.1×32°.54W±0°.10, h10km, mb4.0/12, MS3.8/13, Error ellipse: s-maj=21.1km s-min=12.5km az=157.9*
*IDC **24** 18:06:19.5±0.7, 4°.44N×32°.57W, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.9/27, mbtmp4.0/12, MS3.8/14, Ms1 3.8/14, ms1mx3.6/24, Error ellipse: s-maj=26.9km s-min=15.2km az=156.0*
*NEIC **24** 18:06:20.7±0.5, 4°.35N×32°.59W, h10km, mb4.4/1, Error ellipse: s-maj=16.7km s-min=11.0km az=143.0*

ISC 24 18:06:21.0±0.6, 4°.4N±0°.1×32°.57W±0°.10, h10km, n23, σ0§92/15, mb4.0/12, MS3.8/13, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.64**	**198**	*e*Pn	**Pn**	**18 08 51.6**	**-2.1**
	7.9nm,0.7s						
BBTS	**Babate**	**18.83**	**56**	LR	LR	18 16 05.4	
	comp=Z,284nm,19.2s,baz=61,slow=31						
DBIC	**Dimbokro**	**27.68**	**84**	LR	LR	18 20 39.1	
	comp=Z,143nm,19.4s,MS3.6,baz=167,slow=31						
SIV	**San Ignacio**	**34.70**	**234**	P	**P**	**18 13 12.5**	**+1.2**
	1.9nm,0.7s,mb4.2,baz=95,slow=11,SNR=16						
TORD	**Torodi Ar. Bea**	**34.93**	**73**	P	**P**	**18 13 12.9**	**-0.5**
	2.9nm,1.0s,mb4.2,baz=251,slow=7.5,SNR=8.3						
TORD				LR	LR	18 25 25.5	
	comp=Z,266nm,19.2s,MS4.0,baz=235,slow=33						
SDV	**Santo Domingo**	**38.06**	**279**	P	**P**	**18 13 40.3**	**+0.1**
	4.1nm,0.8s,mb4.2,baz=111,slow=3.9,SNR=5.6						
SDV	**Santo Domingo**	**38.06**	**279**	*e*P	**P**	**18 13 38.5**	**-1.7**
	6.8nm,0.9s,mb4.4						
CPUP	**Villa Florida**	**38.80**	**217**	P	**P**	**18 13 46.5**	**+0.3**
	0.4nm,0.3s,mb3.6,baz=225,slow=17,SNR=2.9						
CPUP				LR	LR	18 29 19.5	
	comp=Z,211nm,18.0s,MS4.0,baz=15,slow=36						
LPAZ	**La Paz**	**40.71**	**239**	P	**P**	**18 14 02.8**	**+0.5**
	1.5nm,0.4s,mb4.0,baz=31,slow=3.2,SNR=6.5						
LPAZ				LR	LR	18 30 02.8	
	comp=Z,130nm,21.0s,MS3.8,baz=192,slow=35						
ROSC	**El Rosal**	**41.63**	**272**	P	**P**	**18 14 10.7**	**+0.9**
	2.8nm,0.3s,mb4.3,baz=107,slow=19,SNR=4.8						
ROSC				LR	LR	18 32 22.8	
	comp=Z,138nm,18.5s,MS3.9,baz=196,slow=38						
KEST	**Kesra**	**49.65**	**45**	LR	LR	18 36 44.8	
	comp=Z,84nm,18.5s,MS3.8,baz=294,slow=37						
TSUM	**Tsumeb**	**54.60**	**117**	P	**P**	**18 15 51.4**	**+1.3**
	3.8nm,1.0s,mb4.4,baz=284,slow=6.7,SNR=3.3						
SCHQ	**Schefferville**	**57.44**	**337**	LR	LR	18 34 23.2	
	comp=Z,35nm,21.3s,MS3.4,baz=220,slow=29						
GERES	**GERESS Array B**	**59.21**	**34**	P	**P**	**18 16 22.0**	**-0.4**
	0.3nm,0.6s,mb3.5,baz=251,slow=4.1,SNR=4.5						
BOSA	**Boshof**	**64.47**	**124**	P	**P**	**18 16 58.1**	**0.0**
	4.0nm,0.9s,mb4.4,baz=277,slow=9.6,SNR=4.4						
BOSA				LR	LR	18 40 14.1	
	comp=Z,106nm,18.8s,MS4.0,baz=84,slow=32						
NOA	**NORSAR Array B**	**65.41**	**22**	LR	LR	18 44 03.7	
	comp=Z,27nm,18.1s,MS3.5,baz=255,slow=35						
HFS	**Hagfors**	**65.78**	**23**	LR	LR	18 40 31.3	
	comp=Z,35nm,20.7s,MS3.5,baz=256,slow=31						
BRTR	**Keskin Array B**	**69.01**	**49**	P	**P**	**18 17 27.4**	**+0.4**
	2.5nm,1.1s,mb4.1,baz=235,slow=4.4,SNR=12						
BRTR				LR	LR	18 45 44.3	
	comp=Z,37nm,21.4s,MS3.6,baz=259,slow=34						
AKASG	**Malin Array Be**	**69.03**	**37**	P	**P**	**18 17 26.9**	**0.0**
	0.8nm,0.7s,mb3.7,baz=247,slow=8.0,SNR=7.8						
PDAR	**Pinedale Array**	**77.51**	**313**	LR	LR	18 48 05.9	
	comp=Z,67nm,18.9s,MS4.0,baz=89,slow=32						
YKA	**Yellowknife Ar**	**82.48**	**332**	P	**P**	**18 18 42.4**	**-1.2**
	0.5nm,1.0s,mb3.4,baz=92,slow=4.9,SNR=4.4						
YKA	**Yellowknife Ar**	**82.48**	**332**	P	**P**	**18 18 42.4**	**-1.2**
BVAR	**Borovoye Array**	**94.30**	**36**	LR	LR	19 00 03.1	
	comp=Z,42nm,19.1s,MS3.9,baz=306,slow=34						

*BJI **24** 18:52:35.7, 41°.67N×79°.09E, h7km, ML3.5/7*
*NEIC **24** 18:52:36.7±1.9, 41°.37N×79°.09E, h10km, mb3.3/2, Error ellipse: s-maj=27.4km s-min=13.1km az=174.0*
*ISCJB **24** 18:52:37.2±0.9, 41°.66N±0°.07×79°.21E±0°.05, h10km, Error ellipse: s-maj=10.4km s-min=5.2km az=166.3*
*MOS **24** 18:52:40.6±1.9, 41°.63N×79°.30E, h33km, mb3.9/2, Error ellipse: s-maj=20.0km s-min=10.2km az=95.7*
*NNC **24** 18:52:41.2±3.6, 41°.94N×79°.04E, h16km±17km, mb3.9, mpv3.9, Error ellipse: s-maj=21.7km s-min=12.6km az=148.0*
*IDC **24** 18:52:47.0±2.4, 42°.18N×79°.99E, h0km, mb3.8/1, mb1 3.5/6, mb1mx3.2/29, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=25.4km s-min=21.8km az=111.0*

ISC 24 18:52:38.3±0.7, 41°.54N±0°.05×79°.13E±0°.05, h10km, n42, σ1§43/56, 9C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.27**	**289**	P	**Pn**	**18 53 13.5**	**-2.3**
	SNR=50						
KNDC	**Almaty**	**2.32**	**317**	⇑Pn	**Pn**	**18 53 15.6**	**-0.9**
	173nm,0.5s						
KNDC				⇓Lg		18 53 46.3	
	553nm,0.5s						
AAA	**Alma-Ata**	**2.37**	**318**	*i* PN	**Pn**	**18 53 16.2**	**-1.0**
AAA				*i* S	**Sn**	**18 53 46.2**	**-0.1**
AAA				pmax	pmax		
	comp=Z,1μm,0.3s						
AAA				smax			
	comp=N,2μm,0.6s						
KZA	**Kyzart**	**2.95**	**282**	P	**Pn**	**18 53 23.0**	**-2.1**
	SNR=20						
TKM2	**Tokmak 2**	**2.96**	**299**	⇓Pn	**Pn**	**18 53 23.4**	**-1.9**
	comp=N,42nm,0.3s						
TKM2				⇑Lg		18 54 03.4	
	comp=N,233nm,0.4s						
TKM2	**Tokmak 2**	**2.96**	**299**	P	**Pn**	**18 53 23.4**	**-1.9**
	SNR=140						
TKM2	**Tokmak 2**	**2.96**	**299**	*e*Pn	**Pn**	**18 53 23.1**	**-2.2**
TKM2				*e*Sn	**Sn**	**18 54 02.3**	**+1.4**
KSH	**Kashi**	**3.14**	**231**	Pn	**Pg**	**18 53 36.0**	**-2.4**
KSH				Sn	**Sg**	**18 54 19.3**	**+0.3**
KSH				smax			
	comp=N,170nm,0.8s						
KSH				smax			
	comp=E,240nm,0.7s						
KBK	**Karagaybulak**	**3.30**	**291**	P	**Pn**	**18 53 30.7**	**+0.7**
	SNR=18						
UCH	**Uchtor**	**3.51**	**283**	P	**Pn**	**18 53 35.7**	**+2.8**
	SNR=15						
UCH	**Uchtor**	**3.51**	**283**	*e*Pn	**Pn**	**18 53 32.2**	**-0.7**
UCH				*e*Sn	**Sn**	**18 54 20.6**	**+6.1**
CHMS	**Chumysh**	**3.56**	**296**	P	**Pn**	**18 53 34.2**	**+0.6**
	SNR=8.2						
AAK	**Ala-Archa**	**3.62**	**289**	P	**Pn**	**18 53 36.0**	**+1.6**
	SNR=16						
USP	**Ospenovka**	**3.84**	**298**	P	**Pn**	**18 53 38.9**	**+1.5**
	SNR=12						
EKS2	**Erkin-Say**	**4.14**	**288**	P	**Pn**	**18 53 46.6**	**+5.2**
	SNR=13						
EKS2	**Erkin-Say**	**4.14**	**288**	*e*Pn	**Pn**	**18 53 44.4**	**+3.0**
EKS2				*e*Sn	**Sb**	**18 54 38.9**	**-2.2**
MK31	**Makanchi Array**	**5.73**	**22**	Pn	**Pn**	**18 53 04.6**	**+0.4**
	comp=E,1.6nm,0.4s,baz=203,slow=12,SNR=192						
MK31				⇑Sn	**Sn**	**18 55 07.3**	**-1.7**
	comp=E,9.9nm,0.7s,baz=203,slow=22,SNR=3.9						
MK31				⇓Lg		18 55 32.6	
	comp=E,11nm,0.6s,baz=212,slow=28,SNR=4.8						
MK31	**Makanchi Array**	**5.73**	**22**	*e*Pn	**Pn**	**18 54 03.6**	**+0.4**
MKAR	**Makanchi Array**	**5.73**	**22**	Pn	**Pn**	**18 54 03.9**	**+0.6**
	comp=E,1.5nm,0.3s,baz=210,slow=15,SNR=34						
MKAR				Pg	**Pb**	**18 54 13.5**	**-4.8**
	comp=E,3.2nm,0.3s,baz=203,slow=15,SNR=24						
MKAR				Sn	**Sn**	**18 55 02.6**	**-6.4**
	comp=E,1.3nm,0.3s,baz=213,slow=16,SNR=2.5						
MKAR				Lg		18 55 24.7	
	comp=E,1.5nm,0.3s,baz=224,slow=20,SNR=4.2						
MKAR	**Makanchi Array**	**5.73**	**22**	Pn	**Pn**	**18 54 03.9**	**+0.6**
MKAR				Pg	**Pb**	**18 54 13.4**	**-4.8**
MKAR				Sn	**Sn**	**18 55 02.6**	**-6.4**
MKAR				Lg		18 55 24.7	
KK31	**Karatay Array**	**6.58**	**287**	⇑Pg	**Pb**	**18 54 34.0**	**+1.4**
	comp=E,4.2nm,0.7s,baz=91,slow=15,SNR=9.3						
KK31				⇓Lg		18 56 00.9	
	comp=E,8.4nm,0.5s,baz=106,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**9.10**	**358**	⇓Lg		18 57 17.4	
	comp=E,8.8nm,0.7s						
KURK	**Kurchatov**	**9.19**	**358**	⇑Lg		18 57 20.4	
	comp=E,26nm,0.8s						
KURK	**Kurchatov**	**9.19**	**358**	Pn	**Pn**	**18 54 52.2**	**+1.4**
	comp=E,0.0nm,0.3s,baz=186,slow=12,SNR=3.1						
KURK				Sn	**Sn**	**18 56 25.7**	**-8.5**
	comp=E,0.1nm,0.3s,baz=177,slow=17,SNR=3.1						
KURK				Lg		18 57 19.2	
	comp=E,0.2nm,0.3s,baz=190,slow=24,SNR=4.2						
KURK	**Kurchatov**	**9.19**	**358**	P	**Pn**	**18 54 52.2**	**+1.4**
KURK						18 56 25.7	
KURK	**Kurchatov**	**9.19**	**358**	Pn	**Pn**	**18 54 52.2**	**+1.4**
KURK				Sn	**Sn**	**18 56 25.6**	**-8.5**
KURK				Lg		18 57 19.2	
KURK				*e*Sg	Sn	18 57 19.9	+46
VOSK	**Vostochnaya**	**12.48**	**336**	⇑Pn	**Pn**	**18 55 34.0**	**-1.7**
	comp=E,1.9nm,0.8s						
VOSK				⇓Sn	**Sn**	**18 57 48.1**	**-6.7**
	comp=E,1.4nm,1.0s						
VOSK				⇓Lg		18 59 03.8	
	comp=E,6.8nm,0.9s						
BVA0	**Borovoye Array**	**12.92**	**336**	⇑Pn	**Pn**	**18 55 41.5**	**-0.3**
	comp=E,0.4nm,0.9s,baz=155,slow=15,SNR=4.3						
BVA0				⇑Lg		18 59 23.7	
	comp=E,2.1nm,1.4s,baz=145,slow=29,SNR=3.9						
BVAR	**Borovoye Array**	**12.92**	**336**	Pn	**Pn**	**18 55 44.4**	**+2.6**
	comp=E,0.1nm,0.3s,baz=150,slow=15,SNR=4.8						
BVAR				Lg		18 59 24.2	
	comp=E,0.2nm,0.3s,baz=141,slow=29,SNR=7.4						
BRVK	**Borovoye**	**12.98**	**336**	*e*Pn	**Pn**	**18 55 48.5**	**+5.9**
BRVK				*e*Sn	**Sn**	**18 58 06.8**	**-0.2**
ZALV	**Zalesovo Beam**	**12.99**	**15**	Pn	**Pn**	**18 55 41.5**	**-1.2**
	comp=E,0.1nm,0.3s,ba

comp=Z,4.1nm,1.1s,mb4.5
PDAR Pinedale Array 85.28 313 P **P 19 19 02.8 +0.4**
comp=Z,0.5nm,0.8s,mb3.7,baz=90,slow=4.4,SNR=4.9
REDW Red Top Meadow 86.26 313 *eP* **P 19 19 08.1 +0.9**
comp=Z,2.6nm,1.0s,mb4.4
REDW *e* 19 19 17.7
ABKAR Akbulak array 86.48 41 *eP* **P 19 19 08.3 +0.2**
comp=Z,0.6nm,0.8s,mb3.9
HWUT Hardware Ranch 86.72 311 *eP* **P 19 19 09.8 +0.4**
comp=Z,3.5nm,0.9s,mb4.6
MCMT McKenzie Canyo 87.75 315 *eP* **P 19 19 14.9 +0.5**
comp=Z,0.3nm,0.4s,mb3.9
YKA Yellowknife Ar 89.08 332 P **P 19 19 19.4 -0.9**
comp=Z,0.4nm,0.7s,mb3.9,baz=90,slow=5.1,SNR=8.1
MAW Mawson 89.91 157 P **P 19 19 24.6 +0.5**
comp=Z,1.4nm,1.3s,mb4.1
ASAR Alice Springs 149.54 140 PKPbc PKPbc 19 26 17.4 +1.8
comp=Z,1.1nm,1.0s,baz=142,slow=0.9,SNR=5.8

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*CSEM **24** 19:11:24.4, 35°.17N×27°.86E, h14km, MD3.3, After ATH*
*NEIC **24** 19:11:24.4, 35°.17N×27°.86E, h14km, MD3.3(ATH), After ATH.*
*ATH **24** 19:11:24.4, 35°.17N×27°.86E, h14km±5km, MD3.3/4*
ISC 24 19:11:25.0±3.7, 35°.2N±0°.2×27°.9E±0°.1, h11km±17km**, n12, σ1908/15, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.69**	**296**	*e*PB	**Pg**	**19 11 37.7**	**-0.7**
KARP				*e*SB	**Sg**	19 11 47.2	-0.3
KARP	**Karpathos**	**0.69**	**296**	*e*Pb	**Pg**	**19 11 37.7**	**-0.7**
KARP				*e*Sb	**Sg**	19 11 47.2	-0.3
ARG	**Arkhangelos**	**0.98**	**10**	*e*PB	**Pg**	**19 11 44.7**	**+0.7**
ARG	**Arkhangelos**	**0.98**	**10**	*e*Pb	**Pg**	**19 11 44.7**	**+0.7**
TURN	**Turunc**	**1.72**	**18**	*i* P	**Pn**	**19 11 52.5**	**-2.2**
BDRM	**Kayabasi**	**1.86**	**348**	*e*P	**Pn**	**19 11 56.8**	**0.0**
NPS	**Neapolis**	**1.89**	**271**	*e*PN	**Pn**	**19 11 57.7**	**+0.5**
NPS	**Neapolis**	**1.89**	**271**	*e*Pn	**Pn**	**19 11 57.7**	**+0.5**
LAST	**Lasithi**	**2.00**	**268**	*e*PN	**Pn**	**19 11 59.1**	**+0.4**
LAST	**Lasithi**	**2.00**	**268**	*e*Pn	**Pn**	**19 11 59.1**	**+0.4**
AYDN	**Tasoluk**	**2.41**	**359**	*e*P	**Pn**	**19 12 07.1**	**+2.7**
AYDN				*e*S	**Pg**	**19 12 11.8**	**+0.5**
DNZL	**Cakiroluk**	**2.60**	**20**	*e*P	**Pn**	**19 12 06.0**	**-0.9**

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*IDC **24** 19:20:41.6±0.4, 4°.41N×73°.66W, h0km, mb5.3/19, mb1 5.4/24, mb1mx5.4/25, mbtmp5.3/24, ML4.8/4, MS5.6/20, Ms1 5.6/20, ms1mx5.5/28, Error ellipse: s-maj=12.2km s-min=7.0km az=44.0*
*GCMT **24** 19:20:42.5±0.1, 4°.32N×73°.79W, h15km, MW5.9/108, Moment Tensor Solution. s99,c201; s108,c345; Duration: ≥≥1 Moment tensor: Scale 10^17^Nm; M_{rr}0.69±.06; $M_{\theta\theta}$3.86±.06; $M_{\phi\phi}$-4.56±.08; $M_{r\theta}$-1.05±.17; $M_{\theta\phi}$6.64±.06; $M_{\phi r}$0.67±.21; Best double couple: M_0=7.95400×10^17^ NP1:ϕ_s196.00000°, δ82.00000°, λ-179.00000°. NP2:ϕ_s106.00000°, δ89.00000°, λ-8.00000°. Principal axes: T 7.5650, Plg5.0000°, Azm152.0000°; N 0.7740, Plg81.0000°, Azm277.0000°; P -8.3440, Plg7.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **24** 19:20:42.5±1.1, 4°.33N×73°.76W, h9km±6km, mb5.6/275, MS5.6/125, MW5.9, ML5.7(RSNC) Error ellipse: s-maj=3.9km s-min=2.5km az=191.0*
NEIC At least 6 people killed by a landslide in Meta. Several buildings damaged at Quetame. Felt [V] at Bogota, [IV] at Chia and [III] at Medellin. Felt widely in Colombia.
*ISCJB **24** 19:20:42.2±0.1, 4°.47N±0°.02×73°.68W±0°.01, h10km, mb5.5/324, MS5.6/186, Error ellipse: s-maj=2.8km s-min=1.8km az=13.9*
*MOS **24** 19:20:46.9±0.9, 4°.72N×73°.75W, h35km, mb5.7/123, MS5.5/70, Error ellipse: s-maj=5.7km s-min=4.1km az=75.9*
*SZGRF **24** 19:20:56.2, 5°.21N×71°.59W, h33km, mb5.4, MS5.7, Colombia*
ISC 24 19:20:43.8±0.1, 4°.43N±0°.02×73°.65W±0°.01, h10km**, (h16**km±9km**; pP-P), n1447, σ0892/1301, mb5.5/324, MS5.6/186, 372C-180D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.80**	**302**	Pg	**Pg**	**19 20 58.2**	**-1.1**
	14μm,0.3s,baz=113,slow=6.8						
ROSC				Lg		19 21 09.8	
	9μm,0.3s,baz=108,slow=20,SNR=14						
ROSC	**El Rosal**	**0.80**	**302**	⇑*i*P	**Pg**	**19 20 58.3**	**-1.0**
ROSC	**El Rosal**	**0.80**	**302**	*e*P	**Pg**	**19 20 58.1**	**-1.2**
SDV	**Santo Domingo**	**5.35**	**34**	Pn	**Pn**	**19 22 06.6**	**+2.9**
	436nm,0.3s,baz=204,slow=11,SNR=1052						
SDV				Sn	**Sn**	**19 23 09.3**	**+3.9**
	262nm,0.3s,baz=257,slow=18,SNR=4.0						
SDV				Lg		19 23 38.7	
	1μm,0.3s,baz=300,slow=18,SNR=5.4						
SDV	**Santo Domingo**	**5.35**	**34**	‖*e*Pn	**Pn**	**19 22 06.3**	**+2.6**
SDV				*e*Sn	**Sn**	**19 23 06.6**	**+1.2**
UPD1	**Univ de Panama**	**5.96**	**314**	*e*P	Px	19 22 54.5	
UPD1				*e*S	**Sn**	**19 23 29.1**	**+8.4**
OTAV	**Otavalo**	**6.35**	**229**	‖*e*Pn	**Pn**	**19 22 17.5**	**0.0**
OTAV				Sn	**Sn**	**19 23 35.2**	**+5.0**
OTAV	**Otavalo**	**6.35**	**229**	*e*P	**Pn**	**19 22 20.4**	**+2.9**
UPIG		**7.40**	**308**	⇑*i*P	**Pn**	**19 22 29.3**	**-2.6**
BCIP	**Isla Barro Col**	**7.74**	**308**	*e*Pn	**Pn**	**19 22 35.0**	**-1.6**
BCIP				S	**Sn**	**19 23 57.6**	**-6.9**
BCIP	**Isla Barro Col**	**7.74**	**308**	*e*P	**Pn**	**19 22 36.0**	**-0.7**
BRU2	**Volcan**	**9.97**	**296**	*e*P	**Pn**	**19 23 08.1**	**+0.8**
ACR	**Cerro Adams**	**10.35**	**294**	*e*P	**Pn**	**19 23 11.5**	**-0.9**
PCRV	**Puerto La Cruz**	**10.61**	**57**	Pn	**Pn**	**19 23 16.9**	**+1.0**
	34nm,0.3s,baz=203,slow=7.2,SNR=73						
PCRV				Sn	**Sn**	**19 25 34.2**	**+19**
	46nm,0.3s,baz=166,slow=19,SNR=3.1						
PCRV				Lg		19 26 34.3	
	40nm,0.3s,baz=221,slow=20,SNR=2.6						
BAR1		**10.72**	**297**	*e*P	**Pn**	**19 23 18.2**	**+0.7**
URSC	**Urasca**	**11.39**	**299**	*e*P	**Pn**	**19 23 28.8**	**+2.0**
QCR	**Quepos**	**11.56**	**296**	*e*P	**Pn**	**19 23 30.7**	**+1.7**
LAJ	**Bijagual**	**11.71**	**298**	*e*P	**Pn**	**19 23 37.4**	**+6.3**
PRS1	**Puriscal**	**11.93**	**298**	*e*P	**Pn**	**19 23 36.4**	**+2.3**
CGA2	**Cerro Gallo 2**	**12.08**	**298**	*e*P	**Pn**	**19 23 38.1**	**+2.0**
ATAH	**Atahualpa**	**12.42**	**202**	Pn	**Pn**	**19 23 39.5**	**-1.3**
	2.6nm,0.3s,baz=32,slow=8.2,SNR=42						
ATAH				Sn	**Sn**	**19 26 07.3**	**+7.9**
	5.2nm,0.3s,baz=292,slow=22,SNR=1.9						
FORC	**Fortuna**	**12.46**	**299**	*e*P	**Pn**	**19 23 42.4**	**+1.0**
JCR	**Jicaral**	**12.58**	**296**	*e*P	**Pn**	**19 23 44.5**	**+1.5**
VCR	**Vista de Mar**	**13.16**	**296**	*e*P	**Pn**	**19 23 53.5**	**+2.6**
PCJ	**Portland Cotta**	**13.67**	**346**	⇑*e*P	**Pn**	**19 23 58.9**	**+1.0**
PCJ				*e*S	**Sn**	**19 26 28.7**	**-1.2**
CONN	**Concepcion**	**13.81**	**302**	*i* P	**Pn**	**19 24 00.9**	**+1.0**
HOJ	**Hope**	**13.83**	**348**	⇑*e*P	**Pn**	**19 24 02.2**	**+2.2**
CMJ	**Castle Mountai**	**13.88**	**349**	⇑*e*P	**Pn**	**19 24 02.1**	**+1.4**
CMJ				*e*S	**Sn**	**19 26 33.6**	**-1.4**
GWJ	**Greenwich**	**13.89**	**348**	*i* P	**Pn**	**19 24 02.9**	**+2.0**
STH	**Stony Hill**	**13.91**	**347**	⇑*e*P	**Pn**	**19 24 02.3**	**+1.1**
STH				*e*S	**Sn**	**19 26 35.4**	**-0.4**
MCJ	**Malvern**	**13.99**	**344**	⇑*e*P	**Pn**	**19 24 02.7**	**+0.5**
GRGR	**Grenville**	**14.12**	**56**	*e*Pn	**Pn**	**19 24 03.1**	**-0.9**
	979nm,0.9s						
GRGR				*e*Sn	**Sn**	**19 26 40.3**	**-0.5**
GRW	**Mount Saint Ca**	**14.13**	**56**	*e*P	**Pn**	**19 24 07.2**	**+3.1**
GRW	**Mount Saint Ca**	**14.13**	**56**	*e*P	**Pn**	**19 24 07.2**	**+3.1**
GRHS	**Sauteurs**	**14.18**	**56**	*e*P	**Pn**	**19 24 07.5**	**+2.7**
GRHS	**Sauteurs**	**14.18**	**56**	*e*P	**Pn**	**19 24 07.5**	**+2.7**
MTDJ	**Mount Denham**	**14.23**	**345**	*e*Pn	**Pn**	**19 24 05.7**	**+0.2**
MTDJ				*e*Sn	**Sn**	**19 26 34.1**	**-9.5**
GRSS	**Sisters**	**14.24**	**56**	*e*P	**Pn**	**19 24 07.6**	**+1.9**
GRSS	**Sisters**	**14.24**	**56**	*e*P	**Pn**	**19 24 07.6**	**+1.9**
GRIC	**Isle de Caille**	**14.26**	**56**	*e*P	**Pn**	**19 24 11.0**	**+5.1**
BOAB	**BOACO BROADBAN**	**14.31**	**305**	*i* P	**Pn**	**19 24 04.4**	**-2.2**
TPR	**Prospect**	**14.41**	**61**	*e*P	**Pn**	**19 24 12.6**	**+4.6**
TPR				*e*P		19 24 18.6	
TPR	**Prospect**	**14.41**	**61**	*e*P	**Pn**	**19 24 12.6**	**+4.6**
GRCU	**Cariacou**	**14.46**	**56**	*e*P	**Pn**	**19 24 09.3**	**+0.6**
GRCU	**Cariacou**	**14.46**	**56**	*e*P	**Pn**	**19 24 09.3**	**+0.6**
MBJ	**Montego Bay**	**14.49**	**344**	*i* S	**Sn**	**19 26 49.4**	**-0.5**
TICN	**Ticuantepe**	**14.56**	**302**	*e*P	**Pn**	**19 24 13.5**	**+3.5**
WILN	**Americas 2**	**14.59**	**303**	*e*P	**Pn**	**19 24 10.1**	**-0.3**
MGAN	**Managua**	**14.63**	**302**	*i* P	**Pn**	**19 24 10.1**	**-0.9**
TISN	**Laguna Tiscapa**	**14.65**	**302**	*e*P	**Pn**	**19 24 13.1**	**+1.9**
SDDR	**Presa de Saban**	**14.65**	**9**	⇑*e*Pn	**Pn**	**19 24 11.1**	**-0.1**
SDDR				*e*Sn	**Sn**	**19 26 52.9**	**-0.9**
HUEN		**14.67**	**303**	*i* P	**Pn**	**19 24 11.4**	**0.0**
XAVN	**Gruta Xavier**	**14.70**	**302**	*e*P	**Pn**	**19 24 12.9**	**+1.0**
CSAN		**14.80**	**302**	*e*P	**Pn**	**19 24 13.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**14.94**	**25**	*e*Pn	**Pn**	**19 24 13.7**	**-1.5**
CRPR				*e*Sn	**Sn**	**19 26 54.7**	**-6.1**
COPN	**Copaltepe**	**14.94**	**302**	*e*P	**Pn**	**19 24 15.2**	**+0.1**
ICM	**Isla Caja Muer**	**15.09**	**27**	*e*Pn	**Pn**	**19 24 14.7**	**-2.5**
ICM				Sn	**Sn**	**19 26 56.9**	**-7.7**
LSP	**Las Mesas**	**15.10**	**25**	*e*Pn	**Pn**	**19 24 15.7**	**-1.6**
MPR	**Mayaguez**	**15.11**	**24**	*e*Pn	**Pn**	**19 24 15.8**	**-1.7**
SSV	**Crater Summit**	**15.14**	**53**	*e*P	**Pn**	**19 24 23.6**	**+5.7**
SSV	**Crater Summit**	**15.14**	**53**	*e*P	**Pn**	**19 24 23.6**	**+5.7**
OBIP	**Obispado Ponce**	**15.19**	**26**	*e*Pn	**Pn**	**19 24 16.7**	**-1.7**
	965nm,1.5s						
CNGN	**Cerro Negro**	**15.19**	**303**	*i* P	**Pn**	**19 24 18.1**	**-0.4**
CELP	**Cerrillos**	**15.23**	**26**	*e*Pn	**Pn**	**19 24 17.2**	**-1.8**
AGP	**Aguadilla**	**15.28**	**24**	*e*Pn	**Pn**	**19 24 19.0**	**-0.8**
LRS	**Lares**	**15.30**	**25**	*e*P	**Pn**	**19 24 28.3**	**+8.3**
AGPR	**Aguadilla, PR**	**15.35**	**24**	*e*Pn	**Pn**	**19 24 19.4**	**-1.2**
	933nm,1.3s						
TELN	**Telica**	**15.35**	**303**	*e*P	**Pn**	**19 24 22.1**	**+1.5**
AOPR	**Arecibo Observ**	**15.39**	**25**	*e*Pn	**Pn**	**19 24 18.9**	**-2.3**
	258nm,0.8s						
SJG	**San Juan**	**15.45**	**28**	Pn	**Pn**	**19 24 21.3**	**-0.7**
	24nm,0.3s,baz=228,slow=9.3,SNR=12						
SJG				Sn	**Sn**	**19 27 09.5**	**-3.8**
	20nm,0.3s,baz=18,slow=19,SNR=4.2						
SJG				LR	LR	19 30 42.1	
	comp=Z,55μm,18.9s,baz=207,slow=39						
SJG	**San Juan**	**15.45**	**28**	*e*P	**Pn**	**19 24 20.2**	**-1.8**
SJG				*e*		19 27 08.4	
SJG				pmax	pmax		
	comp=Z,2μm,1.1s						
SJG	**San Juan**	**15.45**	**28**	*e*Pn	**Pn**	**19 24 20.2**	**-1.7**
	comp=Z,2μm,1.1s						
SJG				*e*Sn	**Sn**	**19 27 08.4**	**-5.0**
SJG	**San Juan**	**15.45**	**28**	*e*P	**Pn**	**19 24 20.8**	**-1.2**
GTBY	**Guantanamo Bay**	**15.47**	**355**	⇑*e*Pn	**Pn**	**19 24 23.2**	**+1.0**
	comp=Z,661nm,0.9s						
SLDE	**Delcer**	**15.52**	**52**	*e*P	**Pn**	**19 24 25.4**	**+2.5**
SLDE	**Delcer**	**15.52**	**52**	*e*P	**Pn**	**19 24 25.4**	**+2.5**
SLB	**Belfond**	**15.55**	**52**	*e*P	**Pn**	**19 24 24.6**	**+1.3**
SLB	**Belfond**	**15.55**	**52**	*e*P	**Pn**	**19 24 24.6**	**+1.3**
MCLT	**Moule a Chique**	**15.56**	**53**	*e*P	**Pn**	**19 24 23.2**	**-0.3**
MCLT	**Moule a Chique**	**15.56**	**53**	*e*P	**Pn**	**19 24 23.2**	**-0.3**
SLPE	**Piton Saint Es**	**15.60**	**52**	*e*P	**Pn**	**19 24 26.3**	**+2.4**
SLPE	**Piton Saint Es**	**15.60**	**52**	*e*P	**Pn**	**19 24 26.3**	**+2.4**
RCC	**Rio Carpintero**	**15.60**	**353**	*e*P	**Pn**	**19 24 24.3**	**+0.4**
HUMP	**Col San Antoni**	**15.62**	**29**	*e*Pn	**Pn**	**19 24 23.3**	**-0.8**
	comp=Z,348nm,0.8s						
MASC	**Masc**	**15.66**	**358**	*e*P	**Pn**	**19 24 26.1**	**+1.4**
MASC				*e*S	**Sn**	**19 27 21.0**	**+2.5**
	comp=N,10nm,6.4s						
MASC				*e*			
	comp=E,14nm,2.9s						
MTP	**Monte Pirata**	**15.73**	**30**	⇑*e*Pn	**Pn**	**19 24 24.1**	**-1.4**
	comp=E,299nm,0.9s						
CBYP	**Canovanas**	**15.73**	**28**	⇑*e*Pn	**Pn**	**19 24 24.0**	**-1.5**
	comp=E,374nm,0.8s						
CBYP				*e*Sn	**Sn**	**19 27 08.0**	**-12**
CDVI	**St. Croix**	**15.84**	**33**	*e*Pn	**Pn**	**19 24 25.9**	**-1.2**
	comp=E,1μm,0.9s						
LMGC	**Las Mercedes**	**15.88**	**348**	*e*P	**Pn**	**19 24 28.6**	**+1.0**
LMGC				*e*S	**Sn**	**19 27 30.6**	**+6.8**
	comp=N,23μm,18.0s						
LMGC				*e*			
	comp=E,24μm,20.4s						
FDF	**Fort de France**	**16.01**	**49**	*e*P	**Pn**	**19 24 26.7**	**-2.5**
FDF				pmax	pmax		
	comp=Z,560nm,0.8s						
FDF	**Fort de France**	**16.01**	**49**	*e*Pn	**Pn**	**19 24 26.7**	**-2.6**
	comp=Z,560nm,0.8s						
FDF	**Fort de France**	**16.01**	**49**	*e*P	**Pn**	**19 24 28.1**	**-1.2**
MVM	**Montagne Vaucl**	**16.10**	**50**	*e*P	**Pn**	**19 24 33.1**	**+2.8**
DPMT	**Pointe Michel**	**16.18**	**47**	*e*P	**Pn**	**19 24 35.5**	**+4.2**
DPMT				*e*P		19 24 40.7	
DPMT	**Pointe Michel**	**16.18**	**47**	*e*P	**Pn**	**19 24 35.5**	**+4.2**
DPMT	**Pointe Michel**	**16.18**	**47**	*e*P	**Pn**	**19 24 40.7**	**+9.3**
DFBT	**Forest Bistro**	**16.18**	**48**	*e*P	**Pn**	**19 24 35.1**	**+3.7**
DFBT	**Forest Bistro**	**16.18**	**48**	*e*P	**Pn**	**19 24 35.1**	**+3.7**
MDN	**Morne-Daniel**	**16.20**	**47**	*e*P	**Pn**	**19 24 40.6**	**+8.9**
MDN	**Morne-Daniel**	**16.20**	**47**	*e*P	**Pn**	**19 24 40.6**	**+8.9**
DSTT	**Stowe**	**16.22**	**48**	*e*P	**Pn**	**19 24 36.4**	**+4.5**
DSTT				*e*P		19 24 46.2	
DSTT	**Stowe**	**16.22**	**48**	*e*P	**Pn**	**19 24 36.4**	**+4.5**
STVI	**Saint Thomas**	**16.24**	**31**	*e*Pn	**Pn**	**19 24 30.7**	**-1.5**
	comp=Z,766nm,1.4s						
DLPL	**La Plaine**	**16.32**	**48**	*e*P	**Pn**	**19 24 34.4**	**+1.2**
BBGH	**Gun Hill**	**16.39**	**57**	*e*Pn	**Pn**	**19 24 37.3**	**+3.2**
TGUH	**Tegucigalpa,Un**	**16.49**	**306**	⇑*e*Pn	**Pn**	**19 24 34.1**	**-1.3**
	comp=Z,2μm,1.9s						
TGUH	**Tegucigalpa,Un**	**16.49**	**306**	*e*P	**Pn**	**19 24 34.4**	**-1.0**
TGUH				AMb	AMB	19 24 45.3	
	comp=Z,3μm,1.7s						
CNCH	**Conchagua**	**16.54**	**303**	*e*P	**Pn**	**19 24 36.7**	**+0.8**
NNA	**Nana**	**16.61**	**191**	Pn	**Pn**	**19 24 37.2**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=344,slow=16,SNR=9.8						
NNA				Sn	**Sn**	**19 27 42.2**	**+0.7**
	comp=Z,3.0nm,0.3s,baz=351,slow=19,SNR=2.3						
NNA				Lg		19 29 33.0	
	comp=Z,3.0nm,0.3s,baz=216,slow=19,SNR=1.5						
NNA				LR	LR	19 32 06.9	
	comp=Z,57μm,18.1s,baz=299,slow=41						
NNA	**Nana**	**16.61**	**191**	*e*Pn	**Pn**	**19 24 33.8**	**-3.2**
	comp=Z,530nm,1.2s						
NNA				Sn	**Sn**	**19 27 42.2**	**+0.7**
NNA				Lg		19 29 33.0	
NNA				LR	LR	19 32 06.9	
SKI	**Saint Kitts**	**16.70**	**39**	*e*P	**Pn**	**19 24 41.1**	**+3.1**
SKI	**Saint Kitts**	**16.70**	**39**	*e*P	**Pn**	**19 24 41.1**	**+3.1**
BPA	**Boggy Peak**	**17.06**	**42**	*e*P	**Pn**	**19 24 48.1**	**+5.6**
BPA	**Boggy Peak**	**17.06**	**42**	*e*P	**Pn**	**19 24 48.1**	**+5.6**
GRTK	**Grand Turk**	**17.16**	**8**	⇑*e*Pn	**Pn**	**19 24 42.5**	**-1.3**
	comp=Z,1μm,1.3s						
PAYG	**Puerto Ayora**	**17.38**	**253**	*e*Pn	**Pn**	**19 24 43.5**	**-3.2**
	comp=Z,463nm,1.1s						
ANWB	**Willy Bob**	**17.55**	**41**	*e*Pn	**Pn**	**19 24 50.6**	**+1.8**
	comp=Z,2μm,1.4s						
SNET	**Serv Nac Est T**	**17.92**	**302**	*e*P	**Pn**	**19 24 53.0**	**-0.2**
APG	**El Apazote**	**19.61**	**304**	P	**Pn**	**19 25 10.6**	**-3.2**
	comp=Z,1.9nm,0.3s,baz=133,slow=6.7,SNR=19						
SOR	**Soroa**	**20.38**	**334**	*e*P	**P**	**19 25 21.2**	**+0.4**
SOR				*e*S	S	19 28 37.5	-32
	comp=N,11nm,8.4s						
SOR				*e*			
	comp=E,11nm,8.4s						
TEIG	**Tepich**	**21.20**	**319**	P	**P**	**19 25 28.8**	**-1.0**
	comp=E,250nm,1.0s,mb5.5,baz=193,slow=0.0,SNR=41						
TEIG				LR	LR	19 33 59.2	
	comp=E,17μm,21.3s,MS5.4,baz=313,slow=38						
TEIG	**Tepich**	**21.20**	**319**	P	**P**	**19 25 28.8**	**-1.0**
TEIG				⇑*e*Pn	**P**	**19 25 29.8**	**+0.1**
TEIG				LR	LR	19 33 59.2	
LPAZ	**La Paz**	**21.29**	**165**	P	**P**	**19 25 30.9**	**+0.2**
	comp=E,48nm,0.6s,mb5.0,baz=344,slow=11,SNR=80						
LPAZ				S	**S**	**19 29 30.9**	**+3.6**
	comp=E,54nm,1.0s,baz=324,slow=19,SNR=1.7						
LPAZ				Lg		19 31 48.0	
	comp=E,177nm,0.8s,baz=175,slow=12,SNR=3.7						
LPAZ				LR	LR	19 34 14.0	
	comp=E,59μm,18.9s,MS6.0,baz=210,slow=38						
LPAZ	**La Paz**	**21.29**	**165**	*e*P	**P**	**19 25 29.5**	**-1.2**
LPAZ				pmax	pmax		
	comp=Z,1μm,1.4s						
LPAZ				MLR	MLR		
	comp=Z,69μm,19.0s						
LPAZ	**La Paz**	**21.29**	**165**	*e*P	**P**	**19 25 29.5**	**-1.2**
	comp=Z,1μm,1.4s,mb6.0						
LPAZ				LR	LR		
	comp=Z,69μm,19.0s,MS6.1						
CCIG	**Comitan**	**21.64**	**304**	*e*P	**P**	**19 25 31.9**	**-2.6**
SCX	**San Cristobal**	**22.28**	**305**	*e*P	**P**	**19 25 47.0**	**+5.6**
SIV	**San Ignacio**	**23.80**	**149**	P	**P**	**19 25 56.2**	**-0.9**
	comp=Z,97nm,0.8s,mb5.3,baz=329,slow=9.5,SNR=97						
SIV				S	**S**	**19 30 16.8**	**+4.1**
	comp=Z,32nm,0.8s,baz=285,slow=16,SNR=1.8						
SIV				Lg		19 33 04.9	
	comp=Z,292nm,0.8s,baz=297,slow=20,SNR=3.4						
CMIG	**Matias Romero**	**24.33**	**303**	P	**P**	**19 25 59.3**	**-2.6**
	comp=Z,7.8nm,0.8s,mb4.2,baz=89,slow=10,SNR=9.6						
CMIG				PcP	PcP	19 29 41.0	-0.8
	comp=Z,7.2nm,0.8s,baz=90,slow=4.0,SNR=2.5						
CMIG				ScP	ScP	19 33 20.7	0.0
	comp=Z,9.6nm,1.0s,baz=90,slow=4.1,SNR=4.3						
DWPF	**Disney**	**24.69**	**343**	⇑*i*P	**P**	**19 26 05.9**	**+0.8**
	comp=Z,385nm,1.0s,mb5.9						
DWPF				LR	LR		
	comp=Z,23μm,19.0s,MS5.7						
HUIG	**Huatulco**	**24.78**	**299**	*e*P	**P**	**19 25 59.8**	**-6.3**
VHO	**Vista Hermosa**	**25.89**	**301**	*i* P	**P**	**19 26 17.7**	**+1.6**
PNIG	**Pinotepa**	**26.81**	**298**	*e*P	**P**	**19 26 26.5**	**+2.1**
LVIG	**Laguna Verde**	**26.90**	**306**	*e*P	**P**	**19 26 23.8**	**-1.4**
YAIG	**Yautepec**	**28.67**	**302**	*e*P	**P**	**19 26 43.7**	**+2.7**
IIO	**Organos**	**28.72**	**304**	*i* P	**P**	**19 26 43.1**	**+1.7**
PLIG	**Platanillo**	**28.83**	**301**	*e*P	**P**	**19 26 44.3**	**+1.7**
PBVM	**Pinon**	**28.95**	**303**	*e*P	**P**	**19 26 47.7**	**+4.1**
CAIG	**El Cayaco**	**28.95**	**298**	*e*P	**P**	**19 26 44.5**	**+0.9**
BBSR	**BB Station**	**29.04**	**16**	*e*P	**P**	**19 26 40.7**	**-3.5**
	comp=Z,24nm,0.7s,mb5.0						
BBSR				*e*Pn	**P**	**19 26 41.5**	**-2.7**
BBSR				LR	LR		
	comp=Z,7μm,19.0s,MS5.3						
PTVM	**Pico Tres Padr**	**29.04**	**303**	*e*P	**P**	**19 26 47.7**	**+3.3**
NHSC	**New Hope**	**29.18**	**349**	⇑*e*P	**P**	**19 26 42.5**	**-2.9**
	comp=Z,330nm,1.3s,mb5.9						
NHSC				LR	LR		
	comp=Z,17μm,19.0s,MS5.7						
BRAL	**Brewton**	**29.30**	**336**	*e*P	**P**	**19 26 48.0**	**+1.4**
	comp=Z,476nm,1.5s,mb6.0						
BRAL				LR	LR		
	comp=Z,13μm,19.0s,MS5.6						
COW	**Cow Castle Cre**	**29.55**	**348**	*e*P	**P**	**19 26 49.4**	**+0.7**
ZIIG	**Zihuatanejo**	**30.22**	**298**	*e*P	**P**	**19 26 59.6**	**+4.8**
GOGA	**Godfrey**	**30.26**	**344**	*e*P	**P**	**19 26 55.9**	**+0.9**
GOGA				pmax	pmax		
	comp=Z,58nm,0.6s,mb5.5						
GOGA				MLR	MLR		
	comp=Z,17μm,20.0s,MS5.7						
GOGA	**Godfrey**	**30.26**	**344**	*e*P	**P**	**19 26 55.9**	**+0.9**
	comp=Z,58nm,0.6s,mb5.5						
GOGA				*e*ScP	ScP	19 33 37.5	-0.9
GOGA				LR	LR		
	comp=Z,17μm,20.0s,MS5.7						
JSC	**Jenkinsville**	**30.54**	**348**	*e*P	**P**	**19 26 58.7**	**+1.3**
LHS	**Liberty Hill**	**30.63**	**348**	*e*P	**P**	**19 26 59.5**	**+1.3**
CNNC	**Cliffs of the**	**30.91**	**353**	PFAKE		19 27 10.0	+9.3
CNNC				LR	LR		
	comp=Z,11μm,21.0s,MS5.5						
LRAL	**Lakeview Retre**	**31.07**	**338**	*e*P	**P**	**19 27 02.6**	**+0.4**
	comp=Z,69nm,1.1s,mb5.4						
LRAL				LR	LR		
	comp=Z,10μm,20.0s,MS5.5						
VBMS	**Vicksburg**	**31.85**	**332**	*e*P	**P**	**19 27 09.3**	**+0.3**
	comp=Z,386nm,1.3s,mb6.1						
TKL	**Tuckaleechee C**	**32.45**	**345**	⇑*i*P	**P**	**19 27 14.8**	**+0.5**
CPCT	**Cooper Cave**	**32.47**	**343**	⇑*i*P	**P**	**19 27 14.8**	**+0.4**
KVTX	**Kingsville**	**32.60**	**317**	*e*P	**P**	**19 27 19.8**	**+4.1**
	comp=Z,137nm,1.1s,mb5.8						
SWET	**Sewanee**	**32.68**	**341**	⇑*i*P	**P**	**19 27 16.1**	**-0.1**
SFJM	**Santa Fe**	**32.74**	**302**	*e*P	**P**	**19 27 22.1**	**+5.1**
HKT	**Hockley**	**32.93**	**323**	⇑*i*P	**P**	**19 27 17.6**	**-0.

ACSO Alum Creek Sta 36.63 348⇑*i*P P 19 27 50.9 +0.6
comp=Z,151nm,0.8s,mb5.9
ACSO LR LR
comp=Z,19µm,19.0s,MS5.9
YLE Yale 36.73 1 *e*P P 19 27 52.8 +1.5
FVM French Village 36.74 338⇑*e*P P 19 27 50.4 -1.0
FVM *e*S S 19 33 35.4 +0.2
FVM pmax pmax
comp=Z,282nm,0.7s,mb6.2
FVM French Village 36.74 338⇑*e*P P 19 27 50.4 -1.0
comp=Z,282nm,0.7s,mb6.2
FVM *e*S S 19 33 35.4 +0.2
CCM Cathedral Cave 37.12 337⇑*i*P P 19 27 53.4 -1.2
CCM *e*S S 19 33 37.6 -3.4
CCM MLR MLR
comp=Z,12µm,21.0s,MS5.7
628A Black Gap, Mar 37.24 315 ⇓P P 19 27 55.3 -0.5
baz=37,SNR=32
SLM Saint Louis 37.25 338⇑*e*P P 19 27 54.6 -1.1
SLM pmax pmax
comp=Z,99nm,0.9s,mb5.6
SLM Saint Louis 37.25 338⇑*e*P P 19 27 54.6 -1.0
comp=Z,99nm,0.9s,mb5.6
ALLY Alegheny Colle 37.52 352 *e*P P 19 27 59.0 +1.1
627A Terlingua Ranc 37.57 315 ⇓P P 19 27 58.3 -0.3
baz=38,SNR=70
528A Cox Ranch, San 37.58 316 ⇑P P 19 27 58.0 -0.6
baz=38,SNR=31
BINY Binghamton 37.67 357⇑*i*P P 19 28 00.1 +1.0
comp=Z,96nm,0.9s,mb5.5
BINY *e*PP PP 19 29 29.6 +4.3
BINY *e*PcP PcP 19 30 17.1 +0.5
BINY LR LR
comp=Z,8µm,20.0s,MS5.5
FCH Farellones 37.68 175⇑*i*P P 19 27 58.8 -0.6
TXAR Lajitas Array 37.70 314 P P 19 27 59.0 -0.7
comp=Z,4.8nm,0.5s,mb4.5,baz=135,slow=7.8,SNR=64
TXAR PcP PcP 19 30 16.6 -0.3
comp=Z,10nm,0.8s,baz=137,slow=6.0,SNR=3.6
TXAR LR LR 19 45 45.0
comp=Z,3µm,19.1s,MS5.2,baz=100,slow=40
TXAR Lajitas Array 37.70 314 P P 19 27 59.0 -0.7
TXAR 19 30 16.7
TXAR Lajitas Array 37.70 314 P P 19 27 59.0 -0.7
TXAR PcP PcP 19 30 16.6 -0.3
TXAR LR LR 19 45 45.0
428A Kincaid Ranch, 37.85 317 ⇓P P 19 28 00.4 -0.5
baz=38,SNR=60
ERPA Erie 37.95 352⇑*i*P P 19 28 02.2 +0.7
comp=Z,126nm,1.1s,mb5.6
ERPA LR LR
comp=Z,12µm,19.0s,MS5.7
WMOK Wichita Mounta 38.10 325⇑*i*P P 19 28 01.2 -1.8
WMOK *e*S S 19 33 54.7 -1.3
WMOK pmax pmax
comp=Z,124nm,0.8s,mb5.7
WMOK Wichita Mounta 38.10 325⇑*i*P P 19 28 01.2 -1.8
comp=Z,124nm,0.8s,mb5.7
WMOK *e*S S 19 33 54.7 -1.3
WMOK *e*ScP ScP 19 34 05.8 -0.2
527A Woodward Ranch 38.14 316 ⇓P P 19 28 02.9 -0.5
baz=38,SNR=31
TRY Troy 38.14 360 *e*P P 19 28 04.8 +1.7
626A Big Bend Ranch 38.16 314 ⇑P P 19 28 02.9 -0.6
baz=38,SNR=29
LMEL Las Melosas 38.20 175⇑*i*P P 19 28 04.9 +1.1
328A Wristen Ranch, 38.34 318 ⇓P P 19 28 04.2 -0.8
baz=38,SNR=38
427A Hayter Ranch, 38.41 317 ⇑P P 19 28 05.0 -0.7
baz=38,SNR=58
526A Mary Lane Ranc 38.42 315 ⇑P P 19 28 04.8 -0.9
baz=38,SNR=31
HDIL Hopedale 38.63 341⇑*i*P P 19 28 05.6 -1.8
comp=Z,176nm,0.6s,mb6.0
HDIL LR LR
comp=Z,6µm,19.0s,MS5.4
426A McDonald Obser 38.74 316 ⇑P P 19 28 08.0 -0.4
baz=39,SNR=72
AAM Ann Arbor 38.75 348⇑*e*P P 19 28 08.5 +0.2
AAM pmax pmax
comp=Z,48nm,0.6s,mb5.4
AAM MLR MLR
comp=Z,16µm,19.0s,MS5.9
AAM Ann Arbor 38.75 348⇑*e*P P 19 28 08.5 +0.2
comp=Z,48nm,0.6s,mb5.4
AAM LR LR
comp=Z,16µm,19.0s,MS5.9
ACCN Adirondack Com 38.80 360 *e*P P 19 28 09.6 +1.0
comp=Z,49nm,0.8s,mb5.3
RCBR Riachuelo 39.05 105 *e*P P 19 28 11.4 +0.2
326A Caldwell Ranch 39.09 317 ⇓P P 19 28 11.1 -0.2
baz=39,SNR=19
HNH Hanover 39.13 2 *e*P P 19 28 12.8 +1.4
NICH Los Niches 39.28 177⇑*i*P P 19 28 12.1 -0.8
NCB Newcomb 39.38 359⇑*e*P P 19 28 14.1 +0.5
NCB LR LR
comp=Z,11µm,20.0s,MS5.7
425A Indio Mountain 39.47 315 ⇑P P 19 28 14.1 -0.4
baz=40,SNR=32
127A Arkansas Junct 39.51 319 ⇑P P 19 28 15.1 +0.3
baz=40,SNR=6.4
226A Malaga, Loving 39.62 318 P P 19 28 15.4 -0.4
baz=40,SNR=38
LBNH Lisbon 39.68 2⇑*i*P P 19 28 16.4 +0.4
LBNH *e* 19 30 23.2
LBNH pmax pmax
comp=Z,106nm,0.9s,mb5.6
LBNH MLR MLR
comp=Z,6µm,20.0s,MS5.4
LBNH Lisbon 39.68 2⇑*i*P P 19 28 16.4 +0.4
comp=Z,106nm,0.9s,mb5.6
LBNH *e*PcP PcP 19 30 23.2 +0.4
LBNH LR LR
comp=Z,6µm,20.0s,MS5.4
325A Bean Ranch, Si 39.80 316 ⇓P P 19 28 17.0 -0.3
baz=40,SNR=37
Z27A Tatum 39.82 320 ⇓P P 19 28 16.4 -0.9
baz=40,SNR=230
GDL2 Guadalupe Moun 39.88 318 *e*P P 19 28 17.2 -0.7
GDL2 *e*PP PP 19 29 50.8 +1.2
AMTX Amarillo 39.90 323⇑*i*P P 19 28 17.1 -1.0
AMTX *e*ScP ScP 19 34 12.1 -0.9
AMTX LR LR
comp=Z,4µm,20.0s,MS5.2
126A Clayton Basin, 39.92 318 ⇑P P 19 28 17.8 -0.5
baz=40,SNR=8.9
MSTX Muleshoe 39.96 321 ⇑P P 19 28 17.7 -0.8
baz=40,SNR=52
LONY Lake Ozonia 40.04 359⇑*i*P P 19 28 19.5 +0.5
LONY *e*PP PP 19 29 47.3 -3.8
CPRX Cap Rock 40.06 319 *e*P P 19 28 19.2 -0.2
comp=Z,22nm,0.6s,mb5.1
CPRX *e*PP PP 19 29 55.0 +3.5
CPRX *e*ScP ScP 19 34 13.8 +0.2
225A Deer Hill, Car 40.14 317 ⇓P P 19 28 20.1 +0.1
baz=40
Y27A Causey 40.15 321 ⇓P P 19 28 19.2 -0.9
baz=40,SNR=81
324A Moseley Ranch, 40.20 316 ⇑P P 19 28 20.1 -0.5
baz=40,SNR=64
FRNY Flat Rock 40.24 0 *e*P P 19 28 21.6 +0.9
MNTX Cornudas Mount 40.28 316⇑*e*P P 19 28 19.7 -1.6
comp=Z,1µm,1.4s,mb6.5
MNTX LR LR
comp=Z,4µm,20.0s,MS5.3
Z26A Caprock 40.29 319 ⇓P P 19 28 20.8 -0.5
baz=40,SNR=116
KSU1 Kansas State U 40.31 332⇑*i*P P 19 28 19.4 -2.0
KSU1 LR LR
comp=Z,7µm,20.0s,MS5.5
125A Gardner Draw, 40.36 318 ⇓P P 19 28 21.7 -0.2
baz=40,SNR=49
224A Corundas Mount 40.59 316 ⇓P P 19 28 24.0 +0.2
baz=41,SNR=66
Y26A Elida 40.60 320 P P 19 28 23.1 -0.7
baz=41,SNR=55
X27A F and S Farms, 40.61 321 ⇓P P 19 28 23.7 -0.2
baz=41,SNR=13
Z25A Roswell 40.77 319 ⇑P P 19 28 25.6 +0.3
baz=41
PKME Peaks-Kenny Pk 40.85 5⇑*i*P P 19 28 25.9 +0.2
PKME *e*PP PP 19 30 02.4 +2.4
W27A Bowe Ranch, En 40.86 322 ⇓P P 19 28 25.6 -0.4
baz=41,SNR=74
124A Stringfield Ra 40.92 317 ⇑P P 19 28 26.9 +0.4
baz=41,SNR=42

X26A CR and CF Fran 40.99 321 ⇑P P 19 28 26.8 -0.2
baz=41,SNR=24
JFWS Jewell Farm 41.06 341⇑*i*P P 19 28 25.9 -1.6
JFWS *e* 19 30 27.6
Y25A Mesa, Roswell 41.16 319 ⇓P P 19 28 28.6 +0.1
baz=41,SNR=69
SCIA State Center 41.21 338⇑*i*P P 19 28 27.4 -1.3
Z24A Sheeppen Canyo 41.23 318 ⇑P P 19 28 29.6 +0.5
baz=41,SNR=54
GLMI Grayling 41.37 348⇑*e*P P 19 28 29.6 -0.5
GLMI LR LR
comp=Z,21µm,19.0s,MS6.0
X25A Clemmons Ranch 41.52 320 P P 19 28 31.4 +0.1
baz=42,SNR=49
Y24A Capitan 41.64 319 ⇓P P 19 28 32.9 +0.4
baz=42,SNR=137
222A Williams Famil 41.71 315 ⇓P P 19 28 33.4 +0.4
baz=42,SNR=13
Z23A Rita Site, Whi 41.78 317 ⇓P P 19 28 33.9 +0.3
baz=42,SNR=20
V26A Tequesquite Ra 41.79 322 P P 19 28 33.0 -0.6
baz=42,SNR=42
W25A X Bar L Ranch, 41.83 321 ⇓P P 19 28 34.0 +0.1
baz=42,SNR=36
LPA La Plata 41.83 160*c*e*P P 19 28 33.0 -0.9
LPA *e*S S 19 34 53.0 +1.3
LPA *e*SS SS 19 38 09.0 +11
LPA *e*SS SS 19 38 14.0 +16
LPA *e*SCS ScS 19 38 35.0 -2.4
LPA SKIKP 19 41 03.0
LPA
comp=Z,16µm,18.0s
122A Conniff Cattle 41.97 316 ⇑P P 19 28 35.4 +0.3
baz=42,SNR=9.7
X24A Lazy VL Ranch, 42.04 320 ⇑P P 19 28 36.0 +0.4
baz=42,SNR=18
Y23A Lovelace Mesa, 42.06 318 ⇓P P 19 28 36.2 +0.4
baz=42,SNR=38
221A Mesquite Ranch 42.13 315 ⇓P P 19 28 36.7 +0.3
baz=42,SNR=26
320A Kipp Ranch, An 42.31 313 ⇑P P 19 28 38.1 +0.2
baz=42,SNR=15
V25A Rancho No Teng 42.32 322 ⇓P P 19 28 38.1 +0.1
baz=42
W24A Lazy 6 Ranch, 42.42 320 ⇑P P 19 28 39.2 +0.4
baz=42,SNR=25
121A Cookes Peak, D 42.43 315 ⇓P P 19 28 39.1 +0.2
baz=42,SNR=37
BNM Barren Site 42.57 318 *e*P P 19 28 39.6 -0.4
comp=Z,41nm,1.2s,mb5.0
BNM *e*PP PP 19 30 20.5 +1.7
BNM *e*ScP ScP 19 34 22.6 -1.0
220A Playas Peak, P 42.61 314 ⇓P P 19 28 40.8 +0.4
baz=43
LPM Los Pinos Moun 42.67 318 *e*P P 19 28 40.5 -0.3
Y22A Socorro 42.67 318 P P 19 28 41.0 +0.2
baz=43,SNR=25
Z21A St. Cloud Mine 42.78 316 ⇑P P 19 28 42.0 +0.2
baz=43,SNR=11
LENM Lemitar 42.81 318 *e*P P 19 28 41.2 -0.8
LENM *e*PP PP 19 30 20.6 -0.7
W23A Werner Place, 42.87 320 ⇑P P 19 28 42.8 +0.4
baz=43,SNR=18
319A Douglas 42.87 313 ⇑P P 19 28 42.6 +0.1
baz=43,SNR=14
ANMO Albuquerque 42.94 319⇑*e*P P 19 28 42.4 -0.6
ANMO *e* 19 30 25.4
ANMO MLR MLR
comp=Z,4µm,21.0s
120A U Bar Ranch, L 43.03 315 ⇑P P 19 28 44.1 +0.3
baz=43,SNR=66
X22A Bernardo 43.03 318 ⇓P P 19 28 44.1 +0.3
baz=43,SNR=30
LAZ Ladron 43.06 318⇑*e*P P 19 28 43.8 -0.2
comp=Z,49nm,1.0s,mb5.2
219A White Tail Can 43.19 314 ⇑P P 19 28 45.3 +0.3
baz=43,SNR=38
Y21A Point of Rocks 43.19 317 ⇓P P 19 28 45.7 +0.6
baz=43,SNR=20
V23A Ortiz Mt. (NFS 43.25 320 ⇓P P 19 28 46.4 +0.9
baz=43,SNR=34
Z20A Nine Sixteen R 43.31 316 ⇑P P 19 28 46.5 +0.5
baz=43,SNR=30
318A Bisbee 43.43 313 ⇑P P 19 28 47.3 +0.3
baz=44,SNR=34
X21A Alamocita Cree 43.52 318 P P 19 28 48.3 +0.6
baz=44,SNR=74
Y20A Horse Springs, 43.61 317 ⇓P P 19 28 49.3 +0.8
baz=44,SNR=14
U23A El Rito 43.62 321 ⇑P P 19 28 49.3 +0.9
baz=44
TRQA Tornquist 43.63 167 *e*P P 19 28 46.6 -1.9
TRQA LR LR
comp=Z,15µm,19.0s,MS5.9
COWI Conover 43.64 344⇑*i*P P 19 28 47.5 -1.0
comp=Z,99nm,1.0s,mb5.5
COWI *e*ScP ScP 19 34 25.3 -2.3
COWI LR LR
comp=Z,23µm,20.0s,MS6.1
218A Dragoon 43.74 313 ⇓P P 19 28 49.9 +0.4
baz=44,SNR=117
V22A San Miguel Ran 43.82 320 ⇑P P 19 28 50.5 +0.5
baz=44,SNR=36
Z19A T-Link Ranch, 43.88 315 ⇑P P 19 28 50.9 +0.3
baz=44,SNR=5.9
118A Homack Ranch, 44.03 314 P P 19 28 52.1 +0.3
baz=44,SNR=61
X20A Quemado 44.05 317 ⇓P P 19 28 52.9 +0.9
baz=44,SNR=65
ECSD EROS Data Cent 44.09 336⇑*i*P P 19 28 49.8 -2.3
ECSD *e*PP PP 19 30 35.0 +0.1
ECSD *e*ScP ScP 19 34 25.2 -4.3
ECSD *e*S S 19 35 19.6 -5.1
ECSD LR LR
comp=Z,11µm,20.0s,MS5.8
SDCO Great Sand Dun 44.10 323⇑*i*P P 19 28 52.3 -0.1
comp=Z,85nm,0.9s,mb5.5
217A Green Valley 44.20 312 P P 19 28 53.3 +0.1
baz=44,SNR=25
V21A Milan 44.22 319 ⇓P P 19 28 54.0 +0.7
baz=44,SNR=30
Y19A Nutrioso 44.24 316 ⇑P P 19 28 54.4 +0.9
baz=44,SNR=42
OGNE Ogallala 44.40 329⇑*i*P P 19 28 53.4 -1.2
TUC Tucson 44.45 313⇑*e*P P 19 28 54.4 -0.8
TUC pmax pmax
comp=Z,174nm,1.4s,mb5.6
TUC MLR MLR
comp=Z,4µm,20.0s,MS5.3
TUC Tucson 44.45 313⇑*e*P P 19 28 54.4 -0.8
comp=Z,174nm,1.4s,mb5.6
TUC LR LR
comp=Z,4µm,20.0s,MS5.3
T22A Edith 44.49 321 ⇑P P 19 28 55.9 +0.4
baz=45,SNR=8.3
X19A St. Johns 44.53 317 ⇓P P 19 28 56.8 +1.0
baz=45,SNR=49
117A Oracle 44.55 313 P P 19 28 56.2 +0.2
baz=45,SNR=44
U21A Nageezi 44.61 320 ⇑P P 19 28 56.5 +0.1
baz=45
Z17A San Carlos Hig 44.74 315 ⇑P P 19 28 58.0 +0.5
baz=45,SNR=6.5
V20A Brimhall 44.76 319 ⇓P P 19 28 58.5 +0.9
baz=45,SNR=22
216A Three Points, 44.79 312 ⇓P P 19 28 58.2 +0.3
baz=45,SNR=11
W19A Sanders 44.98 317 P P 19 28 59.9 +0.5
baz=45,SNR=23
X18A Snowflake 45.04 316 ⇓P P 19 29 00.4 +0.6
baz=45,SNR=53
V19A Window Rock 45.09 318 ⇑P P 19 29 01.0 +0.7
baz=45,SNR=10
R22A Saguache, Gunn 45.17 323 ⇑P P 19 29 01.7 +0.8
baz=45
Y17A Roosevelt 45.21 315 ⇑P P 19 29 01.7 +0.4
baz=45
W18A Petrified Fore 45.22 317 ⇑P P 19 29 02.4 +1.2
baz=45
116A Eloy 45.25 313 P P 19 29 01.6 0.0
baz=45,SNR=25
Z16A Peralta Trail, 45.44 314 ⇑P P 19 29 03.8 +0.7
baz=46,SNR=18
S21A Coal Bank Pass 45.45 321 ⇓P P 19 29 03.6 +0.5
baz=46,SNR=48
X17A Forest Lakes 45.52 316 ⇓P P 19 29 04.8 +1.0
baz=46

ISCO Idaho Springs 45.53 325⇑*i*P P 19 29 03.6 -0.1
U19A Dine' College, 45.53 319 ⇑P P 19 29 03.6 -0.2
baz=46,SNR=18
MVCO Mesa Verde 45.62 320 ⇑P P 19 29 04.8 +0.3
baz=46,SNR=31
MVCO Mesa Verde 45.62 320⇑*e*P P 19 29 03.7 -0.8
MVCO *e*ScP ScP 19 34 34.0 -1.9
Q22A Crested Butte, 45.67 323 ⇑P P 19 29 05.5 +0.7
baz=46,SNR=60
115A Sonoran Desert 45.70 313 P P 19 29 05.8 +0.6
baz=46,SNR=18
T19A Beclabito 45.73 320 ⇑P P 19 29 05.4 +0.1
baz=46,SNR=30
R21A Cimarron 45.74 322 ⇓P P 19 29 06.1 +0.8
baz=46
Y16A Circle Bar Ran 45.76 315 P P 19 29 06.0 +0.5
baz=46,SNR=57
214A Organ Pipe Nat 45.77 311 ⇑P P 19 29 06.4 +0.7
baz=46,SNR=16
SMCO Snowmass 45.91 324⇑*i*P P 19 29 06.8 +0.1
Z15A Gila River Ind 45.94 313 ⇑P P 19 29 07.4 +0.3
baz=46,SNR=11
EYMN Ely 45.99 343⇑*i*P P 19 29 06.0 -1.2
comp=Z,202nm,0.6s,mb6.2
EYMN LR LR
comp=Z,18µm,22.0s,MS6.0
X16A Lo Mia Camp, P 46.01 315 ⇑P P 19 29 08.3 +0.7
baz=46,SNR=27
U18A Rough Rock, Ch 46.04 319 P P 19 29 07.8 0.0
baz=46,SNR=38
Q21A Lamborn Mesa, 46.05 323 P P 19 29 08.7 +0.9
baz=46,SNR=6.1
R20A Redvale 46.14 321 ⇑P P 19 29 09.1 +0.5
baz=46,SNR=69
114A Black Gap (USA 46.21 312 P P 19 29 09.5 +0.3
baz=46,SNR=24
V17A Tonalea, Kykot 46.21 317 ⇓P P 19 29 09.7 +0.5
baz=46,SNR=93
PV01 Paradox Valley 46.23 321 *e*P P 19 29 09.1 -0.1
comp=Z,894nm,0.7s,mb6.8
S19A Harvey Farm, M 46.35 321 ⇑P P 19 29 10.1 0.0
baz=46,SNR=40
Y15A Casa Rosa Ranc 46.41 314 ⇑P P 19 29 11.0 +0.3
baz=46,SNR=34
W16A Flagstaff 46.44 316 ⇓P P 19 29 11.8 +0.9
baz=46,SNR=32
PHWY Pilot Hill 46.47 327⇑*i*P P 19 29 10.7 -0.4
Z14A Wintersburg 46.55 313 ⇓P P 19 29 12.4 +0.5
baz=47,SNR=28
WUAZ Wupatki 46.55 317 ⇑P P 19 29 12.3 +0.5
baz=47,SNR=21
WUAZ Wupatki 46.55 317⇑*i*P P 19 29 11.8 0.0
comp=Z,103nm,1.0s,mb5.7
Q20A Ridgley Place, 46.56 322 ⇑P P 19 29 12.9 +1.1
baz=47,SNR=32
PV04 Paradox Valley 46.59 321⇑*e*P P 19 29 11.6 -0.5
PV04 *e*PP PP 19 31 05.4 +3.8
PV04 *e*ScP ScP 19 34 39.2 -0.8
RPN Rapa Nui 46.61 226 PFAKE 19 29 20.0 +7.6
RPN LR LR
comp=Z,9µm,21.0s,MS5.7
X15A Humboldt 46.61 315 ⇑P P 19 29 13.0 +0.7
baz=47,SNR=60
U17A Shonto 46.67 318 ⇓P P 19 29 13.1 +0.4
baz=47,SNR=22
N22A Wattenberg Ran 46.68 326 ⇑P P 19 29 13.4 +0.7
baz=47,SNR=18
R19A Curley Farm, L 46.75 321 ⇓P P 19 29 13.5 +0.2
baz=47,SNR=16
S18A Hurst Farm, Bl 46.86 320 ⇑P P 19 29 14.4 +0.1
baz=47,SNR=50
113A Mohawk Valley, 46.87 312 ⇑P P 19 29 14.6 +0.3
baz=47,SNR=11
O21A Pagoda 46.87 324 P P 19 29 14.9 +0.6
baz=47,SNR=23
Y14A Wickenburg 46.88 314 ⇑P P 19 29 14.7 +0.3
baz=47,SNR=32
T17A Navajo Res., N 46.99 319 ⇓P P 19 29 15.7 +0.4
baz=47,SNR=27
W15A Williams 46.99 316 ⇓P P 19 29 16.2 +1.0
baz=47,SNR=6.0
Z13A Yuma Proving G 46.99 313 ⇓P P 19 29 15.8 +0.5
baz=47,SNR=24
X14A Yava 47.06 314 ⇓P P 19 29 16.2 +0.3
baz=47,SNR=49
Q19A Hogan Spring (47.16 322 ⇓P P 19 29 16.4 -0.1
baz=47,SNR=63
R18A Canyonlands Na 47.21 321 ⇑P P 19 29 17.4 +0.5
baz=47,SNR=8.0
N21A Black Mountain 47.26 325 ⇑P P 19 29 18.0 +0.8
baz=47,SNR=13
V15A Kaibab Nationa 47.26 316 P P 19 29 18.1 +0.7
baz=47,SNR=102
O20A White River Ci 47.27 324 ⇑P P 19 29 18.0 +0.6
baz=47,SNR=35
S17A Black Ridge (B 47.35 319 P P 19 29 18.6 +0.5
baz=47,SNR=34
P19A Cripple Cowboy 47.40 323 ⇓P P 19 29 18.4 0.0
baz=48,SNR=24
Y13A Salome 47.41 313 ⇓P P 19 29 18.9 +0.3
baz=48
T16A Glen Canyon Da 47.45 318 ⇑P P 19 29 19.9 +1.1
baz=48,SNR=15
L22A Ellis Ranch, M 47.50 327 ⇑P P 19 29 20.0 +0.9
baz=48
W14A Seligman 47.58 315 ⇓P P 19 29 20.5 +0.6
baz=48
AGMN Agassiz Refuge 47.67 340⇑*i*P P 19 29 19.0 -1.3
comp=Z,193nm,0.9s,mb6.1
AGMN *e*S S 19 36 08.1 -8.0
AGMN LR LR
comp=Z,14µm,19.0s,MS6.0
U15A North Rim 47.67 317 ⇓P P 19 29 21.2 +0.7
baz=48,SNR=69
RWWY Rawlins 47.70 326⇑*i*P P 19 29 20.2 -0.4
comp=Z,191nm,1.2s,mb6.0
M21A Separation Pea 47.73 326 ⇓P P 19 29 21.6 +0.8
baz=48,SNR=30
RSSD Black Hills 47.73 331⇑*e*P P 19 29 20.0 -0.9
RSSD pmax pmax
comp=Z,253nm,1.5s,mb6.0
RSSD Black Hills 47.73 331⇑*e*P P 19 29 20.0 -0.9
comp=Z,253nm,1.5s,mb6.0
N20A Spence Gulch, 47.73 324 ⇑P P 19 29 21.5 +0.6
baz=48,SNR=11
R17A Hanksville Air 47.75 320 P P 19 29 20.9 -0.2
baz=48,SNR=19
Q18A Rafter H Ranch 47.78 321 ⇓P P 19 29 21.5 +0.1
baz=48,SNR=36
GLA Glamis 47.79 312 ⇓P P 19 29 22.0 +0.4
baz=48,SNR=14
GLA Glamis 47.79 312⇑*e*P P 19 29 20.4 -1.1
X13A Yucca 47.80 314 ⇓P P 19 29 21.9 +0.4
baz=48
V14A Boquillas Ranc 47.81 316 ⇓P P 19 29 22.5 +0.8
baz=48,SNR=55
Y12C Blythe 47.89 313 ⇑P P 19 29 22.5 +0.2
baz=48,SNR=19
O19A Miners Draw (B 47.90 323 ⇓P P 19 29 22.2 -0.1
baz=48,SNR=47
L21A Rawlins 47.97 326 ⇑P P 19 29 23.4 +0.6
baz=48,SNR=31
SRU San Rafael 48.03 321 ⇓P P 19 29 23.4 +0.1
baz=48,SNR=68
SRU San Rafael 48.03 321⇑*e*P P 19 29 22.6 -0.7
SRU *e*ScP ScP 19 34 45.6 -0.4
T15A Red Dirt Ranch 48.05 318 ⇓P P 19 29 23.9 +0.5
baz=48,SNR=39
W13A Hualapai Mount 48.09 315 ⇓P P 19 29 24.6 +0.8
baz=48,SNR=13
M20A Sweetwater, Wa 48.12 325 ⇓P P 19 29 24.2 +0.3
baz=48,SNR=27
R16A Teasdale 48.16 320 P P 19 29 25.0 +0.7
baz=48,SNR=20
P18A Preston Nutter 48.17 322 ⇑P P 19 29 24.8 +0.4
baz=48,SNR=43
U14A Mt Trumbull 48.27 317 ⇑P P 19 29 25.9 +0.7
baz=48,SNR=36
N19A John Jarvie Ra 48.31 324 P P 19 29 25.2 -0.1
baz=48,SNR=23
Q16A Castle Valley 48.33 320 ⇓P P 19 29 25.7 +0.1
baz=48,SNR=20
P17A Butcher Ranch, 48.38 321 ⇑P P 19 29 26.2 +0.2
baz=48,SNR=29
S15A Panguitch 48.40 318 ⇓P P 19 29 26.7 +0.6
baz=48,SNR=15
O18A Roosevelt 48.41 323 ⇓P P 19 29 27.0 +0.8
baz=48,SNR=19

SWSC **Sam W. Stewart** 48.46 311 ⇑P P 19 29 27.1 +0.4
baz=48,SNR=18
BC3 **Big Chuckw Mtn** 48.53 312 ⇓P P 19 29 27.5 +0.2
baz=49,SNR=22
V13A **Grand Canyon W** 48.54 315 ⇑P P 19 29 27.6 +0.4
baz=49,SNR=29
L20A **Wamsutter** 48.54 326 ⇓P P 19 29 27.9 +0.7
baz=49,SNR=13
IRM **Iron Mountain** 48.54 313 ⇓P P 19 29 27.7 +0.3
baz=49,SNR=38
T14A **Hurricane** 48.55 317 ⇓P P 19 29 27.9 +0.6
baz=49,SNR=63
TMUT **Trail Mountain** 48.57 321 *e*P P 19 29 27.2 -0.3
comp=Z,32nm,0.7s,mb5.5
R15A **Junction** 48.64 319 ⇑P P 19 29 28.8 +0.8
baz=49,SNR=19
N18A **Larsen Ranch,** 48.65 324 ⇑P P 19 29 28.4 +0.3
baz=49,SNR=17
MSU **Marysvale** 48.74 319 *e*P P 19 29 28.6 -0.2
MVU **Marysvale** 48.76 319 PFAKE 19 29 40.0 +11
MVU LR LR
comp=Z,5μm,22.0s,MS5.5
U13A **Pakoon Wash** 48.81 316 ⇓P P 19 29 29.9 +0.5
baz=49,SNR=63
O17A **Robinson Place** 48.81 322 ⇓P P 19 29 29.7 +0.4
baz=49,SNR=62
MONP **Monument Peak** 48.91 311 ⇓P P 19 29 31.1 +0.9
baz=49,SNR=7.6
K20A **Yellowstone Ra** 48.97 326 P P 19 29 30.8 +0.4
baz=49,SNR=9.0
S14A **Cedar City** 48.98 318 P P 19 29 30.9 +0.3
baz=49,SNR=12
CCUT **Cedar City** 49.00 318 *e*P P 19 29 30.3 -0.4
comp=Z,98nm,1.6s,mb5.6
CCUT *e*ScP ScP 19 34 51.3 +1.1
P16A **Fountain Green** 49.04 321 P P 19 29 31.7 +0.7
baz=49,SNR=12
T13A **Saint George** 49.08 317 P P 19 29 31.9 +0.5
baz=49,SNR=47
V12A **Nelson** 49.08 315 ⇑P P 19 29 31.8 +0.3
baz=49,SNR=54
BELC **Belle Mtn.** 49.09 312 P P 19 29 31.6 0.0
baz=49,SNR=33
Q15A **Fillmore** 49.15 320 ⇓P P 19 29 32.2 +0.3
baz=49,SNR=25
M18A **Lyman** 49.16 324 ⇑P P 19 29 32.0 0.0
baz=49,SNR=9.2
L19A **Farson** 49.18 325 ⇑P P 19 29 32.7 +0.6
baz=49,SNR=28
GMRC **Granite Mounta** 49.21 313 ⇓P P 19 29 32.5 +0.1
baz=49,SNR=20
U12A **Valley of Fire** 49.22 316 ⇓P P 19 29 32.7 +0.2
baz=49,SNR=19
PFO **Pinyon Flat Ob** 49.26 312 P P 19 29 32.5 -0.3
comp=Z,180nm,1.3s,mb5.9,SNR=5.5
PFO **Pinyon Flat Ob** 49.26 312 ⇑P P 19 29 33.6 +0.8
baz=49,SNR=12
PFO **Pinyon Flat Ob** 49.26 312 *e*P P 19 29 30.5 -2.3
PFO pmax pmax
comp=Z,102nm,1.4s,mb5.7
PFO MLR MLR
comp=Z,2μm,20.0s,MS5.1
PFO **Pinyon Flat Ob** 49.26 312 *e*P P 19 29 30.5 -2.3
comp=Z,102nm,1.4s,mb5.7
PFO LR LR
comp=Z,2μm,20.0s,MS5.1
MPU **Maple Canyon** 49.26 321⇑*i*P P 19 29 32.3 -0.4
comp=Z,85nm,1.0s,mb5.7
MPU *e*ScP ScP 19 34 49.2 -2.0
DAU **Daniels Canyon** 49.26 322 *e*P P 19 29 32.4 -0.3
DAU *e*ScP ScP 19 34 49.9 -1.3
N17A **Moffit Pass** 49.32 323 ⇑P P 19 29 34.1 +0.9
baz=49,SNR=22
S13A **Holt Ranch, En** 49.35 317 ⇑P P 19 29 34.4 +0.9
baz=49,SNR=95
K19A **Absolon Red Bu** 49.36 326 ⇓P P 19 29 33.3 -0.1
baz=50,SNR=28
ULM **Lac du Bonnet** 49.36 341 P P 19 29 31.7 -1.6
comp=Z,134nm,0.9s,mb6.0,baz=153,slow=7.5,SNR=88
ULM LR LR 19 51 41.3
comp=Z,8μm,21.0s,MS5.7,baz=146,slow=38
P15A **Leamington** 49.41 321 ⇑P P 19 29 34.3 +0.4
baz=50,SNR=17
L18A **Fontenelle, Gr** 49.46 324 P P 19 29 34.5 +0.3
baz=50,SNR=28
JLU **Jordanelle** 49.49 322⇑*e*P P 19 29 33.9 -0.6
comp=Z,69nm,1.1s,mb5.6
JLU *e*ScP ScP 19 34 51.4 -0.9
NLU **North Lily Min** 49.50 321⇑*i*P P 19 29 34.1 -0.4
comp=Z,173nm,1.7s,mb5.8
M17A **Scullys Gap (B** 49.55 324 P P 19 29 34.2 -0.7
baz=50,SNR=23
V11A **Goodsprings** 49.55 315 ⇓P P 19 29 35.4 +0.3
baz=50,SNR=30
N16A **Rees Ranch, Co** 49.66 322 ⇑P P 19 29 36.9 +1.1
baz=50,SNR=19
TUQ **Turquoise Moun** 49.71 314 ⇑P P 19 29 36.5 +0.3
baz=50,SNR=29
HEC **Hector,Ludlow** 49.72 313 P P 19 29 36.7 +0.4
baz=50,SNR=21
BW06 **Boulder Array** 49.72 326 ⇑P P 19 29 36.2 0.0
baz=50,SNR=90
BW06 **Boulder Array** 49.72 326⇑*i*P P 19 29 34.8 -1.4
comp=Z,18nm,0.2s,mb5.8
BW06 LR LR
comp=Z,6μm,21.0s,MS5.5
PDAR **Pinedale Array** 49.72 326 P P 19 29 35.2 -1.0
comp=Z,26nm,0.9s,mb5.3,baz=125,slow=9.3,SNR=112
PDAR ScP ScP 19 34 53.4 +0.3
comp=Z,5.8nm,1.0s,baz=108,slow=4.8,SNR=4.6
PDAR LR LR 19 50 31.2
comp=Z,4μm,21.2s,MS5.4,baz=125,slow=36
Q14A **Sevier Lake (B** 49.72 319 ⇓P P 19 29 36.7 +0.4
baz=50,SNR=84
R13A **O'Grain Ranch,** 49.74 318 P P 19 29 37.0 +0.6
baz=50,SNR=30
MURC **Murrieta** 49.81 311 P P 19 29 37.5 +0.5
baz=50,SNR=11
K18A **Toltan Ranch,** 49.91 325 ⇓P P 19 29 38.0 +0.3
baz=50,SNR=24
P14A **Drum Mountains** 49.92 320 ⇓P P 19 29 38.3 +0.5
baz=50,SNR=38
NOQ **North Oquirrh** 49.93 322⇑*e*P P 19 29 37.1 -0.8
comp=Z,93nm,1.3s,mb5.7
M16A **Huntsville** 50.03 323 ⇓P P 19 29 38.2 -0.3
baz=50,SNR=27
S12A **Delamar Landin** 50.03 317 P P 19 29 39.0 +0.4
baz=50,SNR=16
L17A **Cokeville** 50.05 324 ⇑P P 19 29 38.6 -0.1
baz=50,SNR=57
T11A **Corn Creek, Al** 50.10 316 ⇓P P 19 29 39.6 +0.4
baz=50,SNR=34
DUG **Dugway** 50.10 321 ⇑P P 19 29 39.4 +0.3
baz=50,SNR=50
DUG **Dugway** 50.10 321⇑*e*P P 19 29 38.5 -0.7
DUG pmax pmax
comp=Z,43nm,0.9s,mb5.5
DUG MLR MLR
comp=Z,5μm,22.0s,MS5.5
DUG **Dugway** 50.10 321⇑*e*P P 19 29 38.5 -0.7
comp=Z,43nm,0.9s,mb5.5
DUG *e*ScP ScP 19 34 53.3 -1.5
DUG LR LR
comp=Z,5μm,22.0s,MS5.5
HWUT **Hardware Ranch** 50.16 323⇑*i*P P 19 29 38.4 -1.2
comp=Z,61nm,1.0s,mb5.6
HWUT *e*ScP ScP 19 34 53.0 -2.1
HWUT LR LR
comp=Z,4μm,22.0s,MS5.3
Q13A **Wheeler Ranch,** 50.19 319 ⇑P P 19 29 40.2 +0.4
baz=50,SNR=37
R12A **Pony Springs,** 50.24 318 P P 19 29 40.8 +0.5
baz=50,SNR=31
J18A **Kendall Valley** 50.26 326 ⇓P P 19 29 40.8 +0.5
baz=50,SNR=88
GSC **Goldstone** 50.28 313 ⇓P P 19 29 41.0 +0.4
baz=50,SNR=39
GSC **Goldstone** 50.28 313⇓*e*P P 19 29 40.4 -0.2
GSC pmax pmax
comp=Z,68nm,1.1s,mb5.6
GSC **Goldstone** 50.28 313⇓*e*P P 19 29 40.4 -0.3
comp=Z,68nm,1.1s,mb5.6
L16A **Fish Haven** 50.33 324 ⇓P P 19 29 41.1 +0.2
baz=50
BFSC **Mount Baldy St** 50.43 312 ⇑P P 19 29 41.9 +0.2
baz=50
P13A **Bates Ranch, G** 50.46 319 ⇓P P 19 29 42.4 +0.6
baz=50,SNR=70

I18A **Diamond G Ranc** 50.47 326 ⇑P P 19 29 42.5 +0.6
baz=51,SNR=36
U10A **Ash Meadows, A** 50.47 315 ⇑P P 19 29 42.7 +0.7
baz=50,SNR=13
K17A **Gardner Place,** 50.48 325 ⇓P P 19 29 42.4 +0.4
baz=51,SNR=13
SPUT **South Promonto** 50.52 322⇑*i*P P 19 29 41.6 -0.7
comp=Z,59nm,0.9s,mb5.5
SCHQ **Scheffervilla** 50.56 5 P P 19 29 42.6 +0.3
comp=Z,86nm,0.8s,mb5.7,baz=193,slow=6.0,SNR=71
SCHQ LR LR 19 50 25.7
comp=Z,8μm,19.6s,MS5.7,baz=193,slow=35
AHID **Auburn Hatcher** 50.60 325⇑*e*P P 19 29 41.8 -1.1
comp=Z,116nm,1.2s,mb5.7
AHID LR LR
comp=Z,4μm,22.0s,MS5.4
LAO **LASA Array** 50.65 331⇑*i*P P 19 29 41.8 -1.4
comp=Z,34nm,0.5s,mb5.5
LAO *e*ScP ScP 19 34 54.0 -3.0
LAO LR LR
comp=Z,6μm,21.0s,MS5.6
BGU **Big Grassy Mou** 50.66 322⇑*i*P P 19 29 42.6 -0.7
comp=Z,27nm,0.8s,mb5.2
BGU *e*ScP ScP 19 34 56.2 -1.0
N14A **Grayback Hills** 50.71 321 ⇓P P 19 29 43.8 0.0
baz=51,SNR=79
MWC **Mount Wilson** 50.72 311 *e*P P 19 29 42.7 -1.3
MWC pmax pmax
comp=Z,234nm,2.0s,mb5.8
MWC **Mount Wilson** 50.72 311 *e*P P 19 29 42.7 -1.2
comp=Z,234nm,2.0s,mb5.8
J17A **Brown Place, J** 50.75 325 ⇓P P 19 29 44.6 +0.6
baz=51,SNR=58
Q12A **Willow Creek R** 50.77 319 ⇓P P 19 29 44.9 +0.7
baz=51,SNR=38
PASC **Pasadena Art C** 50.79 311 *e*P P 19 29 45.1 +0.6
comp=Z,864nm,1.8s,mb6.4
O13A **Hicks Ranch, I** 50.81 320 ⇓P P 19 29 45.3 +0.8
baz=51,SNR=17
REDW **Red Top Meadow** 50.83 325⇑*i*P P 19 29 43.8 -0.8
comp=Z,261nm,1.0s,mb6.1
SNOW **Snow King Moun** 50.84 325⇑*i*P P 19 29 44.1 -0.6
comp=Z,123nm,0.9s,mb5.8
LOHW **Long Hollow** 50.85 326⇑*i*P P 19 29 44.0 -0.7
comp=Z,86nm,0.9s,mb5.7
LOHW *e*ScP ScP 19 34 54.8 -3.2
FURC **Furnace Creek,** 50.87 315 ⇑P P 19 29 45.4 +0.4
baz=51,SNR=32
L15A **Malad City** 50.89 323 ⇓P P 19 29 44.9 -0.2
baz=51,SNR=53
R11A **Troy Canyon, C** 50.91 317 ⇓P P 19 29 45.7 +0.4
baz=51,SNR=55
K16A **Soda Springs** 50.92 324 ⇓P P 19 29 45.9 +0.6
baz=51,SNR=10
EDW2 **Edwards Air Fo** 50.96 312 ⇑P P 19 29 46.0 +0.3
baz=51,SNR=24
TPAW **Teton Pass** 50.97 325⇑*i*P P 19 29 44.9 -0.7
comp=Z,98nm,0.9s,mb5.7
HVU **Hansel Valley** 50.99 323⇑*i*P P 19 29 44.6 -1.3
HVU pmax pmax
comp=Z,56nm,1.1s,mb5.4
HVU **Hansel Valley** 50.99 323⇑*i*P P 19 29 44.6 -1.3
comp=Z,56nm,1.1s,mb5.4
HVU *e*ScP ScP 19 34 57.7 -1.0
LRMC **Laurel Mountai** 51.00 313 ⇑P P 19 29 46.3 +0.2
baz=51,SNR=28
I17A **Pilgrim Ck.** 51.03 326 P P 19 29 46.7 +0.6
baz=51,SNR=16
P12A **McGill** 51.05 319 P P 19 29 46.6 +0.3
baz=51,SNR=42
DGMT **Dagmar** 51.05 334 ⇑P P 19 29 46.8 +0.6
baz=51,SNR=29
DGMT **Dagmar** 51.05 334⇑*i*P P 19 29 45.2 -0.9
comp=Z,99nm,0.6s,mb5.9
DGMT *e*ScP ScP 19 34 59.1 +0.4
DGMT LR LR
comp=Z,11μm,22.0s,MS5.8
RRI2 **Red Ridge** 51.09 325⇑*i*P P 19 29 45.7 -0.8
comp=Z,106nm,0.9s,mb5.8
MPMC **Manual Prospec** 51.12 314 ⇑P P 19 29 46.9 -0.1
baz=51,SNR=23
DCID1 **Drake Creek** 51.16 325⇑*i*P P 19 29 46.3 -0.8
comp=Z,105nm,1.0s,mb5.7
M14A **Sheep Mountain** 51.18 322 ⇑P P 19 29 47.7 +0.4
baz=51,SNR=56
Q11A **Duckwater** 51.21 318 ⇓P P 19 29 47.9 +0.3
baz=51,SNR=28
IMW **Indian Meadow** 51.22 326⇑*i*P P 19 29 46.9 -0.6
comp=Z,79nm,0.8s,mb5.7
DAC **Darwin (Calif)** 51.30 314 PFAKE 19 30 00.0 +12
DAC LR LR
comp=Z,5μm,20.0s,MS5.5
H17A **Grant Village** 51.33 327 ⇑P P 19 29 49.4 +1.1
baz=51,SNR=12
LKWY **Lake** 51.34 327 PFAKE 19 30 00.0 +12
LKWY LR LR
comp=Z,6μm,22.0s,MS5.6
N13A **Wendover, West** 51.35 321 ⇑P P 19 29 49.4 +0.9
baz=51,SNR=12
N13A **Wendover, West** 51.35 321⇑*i*P P 19 29 47.6 -0.9
comp=Z,55nm,0.8s,mb5.5
R10A **Warm Springs** 51.37 317 P P 19 29 49.4 +0.7
baz=51,SNR=18
O12A **Currie** 51.37 320 ⇓P P 19 29 49.1 +0.3
baz=52,SNR=19
S10A **Tonopah Range,** 51.38 316 ⇓P P 19 29 49.3 +0.4
baz=51,SNR=80
G18A **Lazy EL Ranch,** 51.38 328 ⇑P P 19 29 49.1 +0.3
baz=52,SNR=71
K15A **Arbon** 51.38 324 ⇑P P 19 29 49.2 +0.4
baz=52,SNR=32
L14A **Malta** 51.42 323 ⇑P P 19 29 49.1 0.0
baz=52,SNR=47
GRAC **Grapevine Rang** 51.48 315 ⇑P P 19 29 50.2 +0.6
baz=52,SNR=12
I16A **Newdale** 51.51 325 ⇓P P 19 29 50.6 +0.9
baz=52,SNR=59
YFT **Old Faithful** 51.51 326⇑*e*P P 19 29 50.1 +0.5
comp=Z,112nm,1.1s,mb5.7
YNR **Norris Junctio** 51.59 327 *e*P P 19 29 50.6 +0.3
comp=Z,44nm,1.1s,mb5.3
M13A **Montello** 51.61 321 ⇑P P 19 29 50.5 0.0
baz=52,SNR=11
M13A **Montello** 51.61 321⇑*i*P P 19 29 49.8 -0.7
comp=Z,104nm,1.0s,mb5.7
M13A *e*ScP ScP 19 35 00.4 -0.9
ISA **Isabella** 51.66 313 ⇓P P 19 29 51.3 +0.3
baz=52,SNR=13
ISA **Isabella** 51.66 313 *e*P P 19 29 50.5 -0.5
ISA pmax pmax
comp=Z,64nm,1.3s,mb5.4
ISA **Isabella** 51.66 313 *e*P P 19 29 50.5 -0.5
comp=Z,64nm,1.3s,mb5.4
K14A **Jones Ranch, D** 51.69 323 ⇓P P 19 29 50.9 -0.1
baz=52,SNR=44
Q10A **Clear Creek Ra** 51.70 317 P P 19 29 51.6 +0.4
baz=52,SNR=27
YMR **Madison River** 51.72 327⇑*i*P P 19 29 51.0 -0.2
comp=Z,190nm,1.1s,mb5.9
GCMT **Greycliff** 51.76 328 *e*P P 19 29 51.2 -0.3
comp=Z,124nm,0.9s,mb5.8
BSC **Santa Cruz Isl** 51.81 311 P P 19 29 52.7 +0.5
baz=52,SNR=5.7
F18A **Big Timber** 51.86 328 ⇑P P 19 29 52.6 +0.3
baz=52,SNR=172
N12A **Clover Valley,** 51.88 320 ⇓P P 19 29 52.6 +0.1
baz=52,SNR=16
N12A **Clover Valley,** 51.88 320⇑*i*P P 19 29 51.7 -0.8
comp=Z,40nm,1.0s,mb5.3
L13A **Double Diamond** 51.88 322 ⇑P P 19 29 52.6 +0.1
baz=52,SNR=18
O11A **Cowboy Ranch,** 51.89 319 ⇓P P 19 29 52.9 +0.3
baz=52,SNR=51
H16A **Russell Place,** 51.90 326 ⇓P P 19 29 53.2 +0.6
baz=52,SNR=70
ELK **Elko** 51.95 320 *e*P P 19 29 53.4 +0.4
ELK pmax pmax
comp=Z,25nm,0.9s
ELK MLR MLR
comp=Z,5μm,21.0s
ELK **Elko** 51.95 320 *e*P P 19 29 53.4 +0.4
comp=Z,25nm,0.9s,mb5.2
ELK LR LR
comp=Z,5μm,21.0s,MS5.5
G17A **Pierce Place,** 52.02 327 P P 19 29 54.4 +0.9
baz=52,SNR=24
QLMT **Earthquake Lak** 52.08 326 *e*P P 19 29 54.0 +0.1
comp=Z,176nm,1.4s,mb5.8

M12A **Wells** 52.11 321 ⇑P P 19 29 54.2 0.0
baz=52,SNR=45
P10A **Eureka** 52.15 318 ⇑P P 19 29 55.1 +0.6
baz=52,SNR=12
I15A **Monteview** 52.15 325 P P 19 29 55.2 +0.7
baz=52,SNR=16
VES **Vestal, Richgr** 52.18 313 P P 19 29 55.5 +0.7
baz=52,SNR=16
K13A **Stover Farm, H** 52.29 323 ⇓P P 19 29 55.5 -0.1
baz=52,SNR=12
PKM **Peak Mountain** 52.32 311 P P 19 29 56.3 +0.4
baz=52,SNR=7.3
F17A **Fitzpatrick Pl** 52.35 328 ⇑P P 19 29 56.3 +0.3
baz=52,SNR=76
E18A **Harlowton** 52.40 329 ⇑P P 19 29 56.3 +0.1
baz=52,SNR=65
O10A **Cortez Mining,** 52.52 319 ⇓P P 19 29 57.6 +0.3
baz=53,SNR=13
G16A **Moss Hill, Enn** 52.53 327 ⇑P P 19 29 57.6 +0.3
baz=53,SNR=86
L12A **House Creek Ra** 52.58 322 ⇑P P 19 29 57.7 0.0
baz=53,SNR=18
H15A **Lima** 52.62 326 P P 19 29 58.5 +0.5
baz=53,SNR=75
SMMC **Simmler** 52.63 312 ⇓P P 19 29 58.3 +0.1
baz=53,SNR=8.4
I14A **Mackay** 52.67 324 ⇓P P 19 29 58.6 +0.2
baz=53,SNR=30
M11A **Holland Ranch,** 52.67 321 ⇑P P 19 29 58.5 +0.2
baz=53,SNR=46
BOZ **Bozeman (W)** 52.70 327 ⇑P P 19 29 58.4 -0.2
baz=53,SNR=94
BOZ **Bozeman (W)** 52.70 327⇑*i*P P 19 29 57.8 -0.8
BOZ pmax pmax
comp=Z,75nm,1.1s,mb5.5
BOZ MLR MLR
comp=Z,3μm,20.0s,MS5.3
BOZ **Bozeman (W)** 52.70 327⇑*i*P P 19 29 57.8 -0.8
comp=Z,75nm,1.1s,mb5.5
BOZ LR LR
comp=Z,3μm,20.0s,MS5.3
D18A **Linhart Farms,** 52.77 330 ⇑P P 19 29 59.1 +0.1
baz=53,SNR=24
J13A **Cove Ranch, Pi** 52.78 324 ⇑P P 19 29 59.0 -0.2
baz=53,SNR=42
K12A **Draper Farm, C** 52.78 322 P P 19 29 59.2 0.0
baz=53,SNR=30
F16A **Kennard Place,** 52.79 327 ⇓P P 19 29 59.3 +0.1
baz=53,SNR=17
NVAR **Mina Array Bea** 52.81 316 P P 19 29 59.4 0.0
comp=Z,17nm,0.6s,mb5.2,baz=124,slow=6.5,SNR=93
NVAR **Mina Array Bea** 52.81 316 P P 19 29 59.4 0.0
E17A **Martinsdale** 52.82 328 ⇑P P 19 29 59.3 -0.1
baz=53,SNR=74
MCMT **McKenzie Canyo** 52.87 326 *e*P P 19 29 59.8 0.0
comp=Z,73nm,1.3s,mb5.5
MCMT *e*ScP ScP 19 35 04.4 -2.3
G15A **Dillon** 52.87 326 ⇓P P 19 30 00.1 +0.3
baz=53,SNR=25
HLID **Hailey** 53.02 324 ⇓P P 19 30 00.9 0.0
baz=53,SNR=41
HLID **Hailey** 53.02 324⇑*i*P P 19 30 00.2 -0.7
comp=Z,33nm,1.0s,mb5.2
H14A **Leadore** 53.03 325 ⇓P P 19 30 01.5 +0.5
baz=53,SNR=24
L11A **Cat Creek Ranc** 53.04 321 ⇑P P 19 30 01.6 +0.4
baz=53,SNR=38
I13A **Wildhorse Cree** 53.05 324 ⇑P P 19 30 01.7 +0.6
baz=53,SNR=52
DLMT **Dillon** 53.05 326⇑*i*P P 19 30 00.5 -0.7
comp=Z,94nm,1.1s,mb5.6
BMN **Battle Mountai** 53.06 319⇑*i*P P 19 30 00.6 -0.7
BMN pmax pmax
comp=Z,71nm,1.1s,mb5.5
BMN MLR MLR
comp=Z,5μm,22.0s,MS5.5
BMN **Battle Mountai** 53.06 319⇑*i*P P 19 30 00.6 -0.7
comp=Z,71nm,1.1s,mb5.5
BMN LR LR
comp=Z,5μm,22.0s,MS5.5
M10A **I.L. Ranch, Tu** 53.19 320 ⇑P P 19 30 02.7 +0.4
baz=53,SNR=22
J12A **Stokes Ranch,** 53.24 323 ⇑P P 19 30 02.3 -0.3
baz=53,SNR=54
LRM **Limekiln Ridge** 53.26 327 *e*P P 19 30 01.9 -0.8
comp=Z,181nm,0.6s,mb6.2
F15A **Butte** 53.30 327 ⇑P P 19 30 02.8 -0.1
baz=53,SNR=65
EGMT **Eagleton** 53.30 330 ⇓P P 19 30 03.1 +0.1
baz=53,SNR=42
EGMT **Eagleton** 53.30 330⇑*i*P P 19 30 01.9 -1.0
comp=Z,145nm,1.3s,mb5.8
EGMT LR LR
comp=Z,8μm,20.0s,MS5.7
L10A **Juniper Basin** 53.44 321 ⇓P P 19 30 04.1 0.0
baz=54,SNR=70
G14A **Jackson** 53.46 326 ⇑P P 19 30 04.4 +0.2
baz=54,SNR=9.6
HRY **Holter Researc** 53.49 328 *e*P P 19 30 03.9 -0.5
comp=Z,91nm,0.8s,mb5.8
H13A **Challis** 53.51 325 ⇑P P 19 30 04.2 -0.3
baz=54,SNR=27
C17A **Wharram Farm,** 53.54 330 ⇓P P 19 30 04.7 0.0
baz=54,SNR=122
K11A **Parker Ranch,** 53.55 322 ⇓P P 19 30 04.8 0.0
baz=54,SNR=51
D16A **Dana Ranch, Ca** 53.55 329 ⇑P P 19 30 04.9 +0.1
baz=54,SNR=80
B18A **Beardsley Farm** 53.57 331 ⇑P P 19 30 05.5 +0.6
baz=54,SNR=102
I12A **Atlanta** 53.58 323 ⇑P P 19 30 05.2 +0.2
baz=54,SNR=41
E15A **Deer Lodge** 53.74 327 ⇓P P 19 30 06.5 +0.3
baz=54,SNR=79
F14A **Wisdom** 53.76 326 ⇑P P 19 30 06.5 +0.2
baz=54,SNR=21
MFID **Camas Ranch** 53.78 323 ⇑P P 19 30 06.8 +0.3
baz=54,SNR=53
G13A **Cobalt** 53.81 325 ⇓P P 19 30 06.7 0.0
baz=54,SNR=34
H12A **Diamond D Ranc** 53.85 324 ⇑P P 19 30 07.2 +0.2
baz=54,SNR=61
A18A **Metzger Ranch,** 53.96 331 ⇓P P 19 30 07.6 -0.1
baz=54,SNR=68
B17A **L&G Farms, Che** 54.00 330 ⇓P P 19 30 07.9 -0.1
baz=54,SNR=17
D15A **Lincoln** 54.07 328 ⇓P P 19 30 08.8 +0.2
baz=54,SNR=56
K10A **MacKenzie Ranc** 54.07 321 ⇑P P 19 30 08.6 0.0
baz=54,SNR=79
CMB **Columbia Colle** 54.08 315⇑*e*P P 19 30 07.6 -1.3
CMB pmax pmax
comp=Z,17nm,1.0s,mb4.9
CMB MLR MLR
comp=Z,5μm,19.0s,MS5.6
CMB **Columbia Colle** 54.08 315⇑*e*P P 19 30 07.6 -1.2
comp=Z,17nm,1.0s,mb4.9
CMB LR LR
comp=Z,5μm,19.0s,MS5.6
I11A **Placerville** 54.13 323 ⇓P P 19 30 09.3 +0.1
baz=54,SNR=12
C16A **Fuhringer Ranc** 54.15 329 ⇑P P 19 30 08.8 -0.4
baz=54,SNR=26
E14A **Clinton** 54.20 327 ⇓P P 19 30 09.3 -0.2
baz=54,SNR=34
WCN **Washoe City** 54.22 316 ⇓P P 19 30 10.4 +0.6
baz=54,SNR=20
F13A **Darby** 54.28 326 ⇑P P 19 30 09.7 -0.4
baz=54,SNR=56
CHMT **Chamberlain Mo** 54.38 327⇑*e*P P 19 30 09.3 -1.5
comp=Z,26nm,1.2s,mb5.0
A17A **Triple J Farms** 54.39 331 ⇓P P 19 30 10.5 -0.3
baz=54,SNR=61
B16A **M & M Farms, S** 54.53 330 ⇓P P 19 30 11.7 -0.3
baz=55,SNR=50
E13A **Victor** 54.59 327 ⇑P P 19 30 12.5 +0.1
baz=55,SNR=19
H11A **Donnelly** 54.61 324 ⇑P P 19 30 12.3 -0.3
baz=55,SNR=30
D14A **Greenough** 54.62 328 ⇓P P 19 30 12.6 +0.1
baz=55,SNR=22
MSO **Missoula** 54.70 327⇑*i*P P 19 30 11.9 -1.2
comp=Z,56nm,1.4s,mb5.4
MSO LR LR
comp=Z,2μm,21.0s,MS5.3
SLMT **Seeley Lake** 54.71 328 *e*P P 19 30 12.1 -1.1
comp=Z,37nm,0.9s,mb5.4
F12A **Elk City** 54.78 325 ⇓P P 19 30 13.4 -0.4

baz=55,SNR=55
BEKR Beckwourth 54.89 317 ⇓P **P 19 30 14.7 0.0**
baz=55,SNR=15
B15A Bradely Ranch, 54.90 329 ⇑P **P 19 30 14.4 -0.2**
baz=55,SNR=25
J09A Fry Pan Ranch, 54.92 322 ⇑P **P 19 30 14.4 -0.4**
baz=55,SNR=95
CMLA Cha da Macela 54.95 46 PFAKE 19 30 30.0 +15
CMLA LR LR
comp=Z,4μm,22.0s,MS5.4
H10A Noah's Angus R 54.98 323 ⇓P **P 19 30 13.7 -1.6**
baz=55,SNR=20
WVOR Wild Horse Val 55.00 320⇑*e*P **P 19 30 14.5 -0.9**
WVOR pmax pmax
comp=Z,352nm,1.4s,mb6.2
WVOR Wild Horse Val 55.00 320⇑*e*P **P 19 30 14.5 -1.0**
comp=Z,352nm,1.4s,mb6.2
D13A Huson 55.14 327 ⇑P **P 19 30 16.0 -0.4**
baz=55,SNR=38
FFC Flin Flon 55.14 340 P **P 19 30 15.3 -0.9**
comp=Z,750nm,1.2s,mb6.6,SNR=59
FFC Flin Flon 55.14 340⇑*i*P **P 19 30 14.9 -1.3**
FFC pmax pmax
comp=Z,103nm,0.8s,mb5.9
FFC MLR MLR
comp=Z,7μm,19.0s,MS5.8
FFC Flin Flon 55.14 340⇑*i*P **P 19 30 14.9 -1.3**
comp=Z,103nm,0.8s,mb5.9
FFC LR LR
comp=Z,7μm,19.0s,MS5.8
SWMT Swartz Lake 55.15 328 *e*P **P 19 30 15.4 -1.0**
comp=Z,20nm,0.7s,mb5.2
G11A Walters Elk Ra 55.16 324 ⇑P **P 19 30 15.5 -1.0**
baz=55,SNR=35
I09A Lost Marbles R 55.24 322 ⇓P **P 19 30 16.7 -0.5**
baz=55,SNR=12
F11A Grangeville 55.37 325 ⇓P **P 19 30 17.1 -0.9**
baz=56,SNR=35
YBMT Yellow Bay 55.37 328 *e*P **P 19 30 17.6 -0.4**
comp=Z,193nm,1.4s,mb5.9
A15A Johnson Ranch, 55.42 330 ⇑P **P 19 30 17.6 -0.7**
baz=56,SNR=61
JTMT Jette 55.44 328 *e*P **P 19 30 18.0 -0.5**
comp=Z,141nm,1.4s,mb5.8
C13A Hot Springs 55.56 328 ⇓P **P 19 30 19.3 0.0**
baz=56,SNR=42
H09A Durkee 55.57 323 ⇓P **P 19 30 19.0 -0.6**
baz=56,SNR=6.4
G10A Bishop Farm, J 55.59 324 ⇓P **P 19 30 19.0 -0.6**
baz=56,SNR=47
E11A Bogner Ranch, 55.67 325 ⇓P **P 19 30 19.8 -0.4**
baz=56,SNR=32
A14A Double T Ranch 55.76 329 ⇓P **P 19 30 20.6 -0.2**
baz=56,SNR=20
BSMT Bassoo Peak 55.78 328 *e*P **P 19 30 20.2 -0.7**
comp=Z,158nm,1.4s,mb5.8
MOD Modoc 55.81 319⇓*e*P **P 19 30 19.4 -1.9**
comp=Z,95nm,1.5s,mb5.6
MOD LR LR
comp=Z,5μm,22.0s,MS5.5
MCCM Marconi Confer 55.91 314 PFAKE 19 30 30.0 +7.9
MCCM LR LR
comp=Z,3μm,19.0s,MS5.4
B13A Whitefish 55.93 328 ⇓P **P 19 30 21.7 -0.2**
baz=56,SNR=39
G09A Cove 55.98 324 P **P 19 30 22.0 -0.4**
baz=56,SNR=35
F10A Beach Ranch, E 56.04 325 ⇓P **P 19 30 22.6 -0.2**
baz=56,SNR=16
C12B Naegeli Ranch, 56.06 327 P **P 19 30 23.2 +0.2**
baz=56,SNR=19
WALA Waterton Lakes 56.07 329⇑*i*P **P 19 30 21.6 -1.4**
comp=Z,2.9nm,1.5s,mb4.1
H08A Prairie City 56.10 322 ⇑P **P 19 30 23.2 -0.2**
baz=56,SNR=19
D11A Klaveano Farm, 56.14 326 ⇑P **P 19 30 23.1 -0.5**
baz=56,SNR=29
A13A Flathead Natio 56.25 329 ⇑P **P 19 30 24.3 +0.1**
baz=56,SNR=14
E10A Myers Farm, Un 56.26 325 ⇓P **P 19 30 24.7 +0.3**
baz=56,SNR=17
I07A Izee 56.39 322 ⇓P **P 19 30 25.5 +0.1**
baz=56,SNR=44
HOPS Hopland 56.40 315 PFAKE 19 30 40.0 +14
HOPS LR LR
comp=Z,3μm,22.0s,MS5.4
FCC Fort Churchill 56.47 347⇑*i*P **P 19 30 24.0 -1.7**
FCC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
FCC Fort Churchill 56.47 347⇑*i*P **P 19 30 24.0 -1.7**
comp=Z,7.4nm,0.9s,mb4.7
LNOR Lincton Mounta 56.59 324 P **P 19 30 26.4 -0.4**
D10A Wagner Farm, O 56.67 326 ⇑P **P 19 30 26.8 -0.6**
baz=57,SNR=12
G08A Pilot Rock 56.68 323 ⇑P **P 19 30 27.2 -0.2**
baz=57,SNR=55
WDC Whiskeytown Da 56.70 317⇑*e*P **P 19 30 24.6 -3.1**
WDC pmax pmax
comp=Z,41nm,1.4s,mb5.3
WDC Whiskeytown Da 56.70 317⇑*e*P **P 19 30 24.6 -3.1**
comp=Z,41nm,1.4s,mb5.3
E09A Wood Farm, Sta 56.87 325 ⇓P **P 19 30 28.6 -0.1**
baz=57,SNR=8.6
A12A Yaak River Ran 56.89 328 ⇓P **P 19 30 29.6 +0.8**
baz=57,SNR=17
HOG Hogback Mounta 56.89 319 P **P 19 30 29.1 0.0**
B11A Sandpoint 56.97 327 ⇓P **P 19 30 29.5 +0.1**
baz=57,SNR=11
A11A Hall Mountain, 57.28 328 ⇑P **P 19 30 31.7 +0.1**
baz=57,SNR=18
NEW Newport 57.28 327⇑*i*P **P 19 30 29.9 -1.7**
NEW pmax pmax
comp=Z,80nm,1.4s
NEW Newport 57.28 327⇑*i*P **P 19 30 29.9 -1.8**
comp=Z,80nm,1.4s,mb5.6
VIPM Ingram Point 57.29 322 P **P 19 30 31.5 -0.3**
YBH Yreka Blue Hor 57.33 318 LR LR 19 58 13.3
comp=Z,5μm,21.9s,MS5.6,baz=137,slow=39
YBH Yreka Blue Hor 57.33 318 *e*P **P 19 30 30.0 -2.1**
YBH pmax pmax
comp=Z,19nm,0.8s
YBH Yreka Blue Hor 57.33 318 *e*P **P 19 30 30.0 -2.1**
comp=Z,19nm,0.8s,mb5.2
EFI East Falkland 57.45 169 P **P 19 30 31.3 -1.4**
EFI MLR MLR
comp=Z,14μm,19.0s,MS6.1
HAWA Hanford 57.61 324⇑*e*P **P 19 30 32.4 -1.6**
comp=Z,94nm,1.5s,mb5.6
HAWA *e*PcP PcP 19 31 26.6 -0.6
D08A Wollman Farm, 57.61 325 ⇑P **P 19 30 34.1 +0.1**
baz=58,SNR=9.5
RSW Rattlesnake Hi 57.64 324 *e*P **P 19 30 30.0 -4.2**
comp=Z,68nm,1.5s,mb5.5
DPW Davenport 57.65 326 P **P 19 30 33.8 -0.5**
C09A Chrisman Ranch 57.65 326 ⇑P **P 19 30 34.3 0.0**
baz=58,SNR=9.9
G06A Carlson Farm, 57.67 322 ⇑P **P 19 30 35.0 +0.6**
baz=58,SNR=21
OD2 Odessa Site #2 57.67 325 *e*P **P 19 30 33.0 -1.4**
comp=Z,30nm,1.3s,mb5.2
CHIE El Hierro 57.74 60 P **P 19 30 35.3 0.0**
comp=Z,133nm,0.9s,mb6.0
BKCOR Black Crater 57.86 321 P **P 19 30 36.3 +0.5**
HUMO Hull Mountain 57.88 319 *e*P **P 19 30 33.5 -2.5**
comp=Z,14nm,0.8s,mb5.0
HUMO LR LR
comp=Z,4μm,20.0s,MS5.6
B09A Rice 57.93 327 ⇑P **P 19 30 35.7 -0.5**
baz=58,SNR=10
HOOD Mount Hood Mea 58.33 322⇑*e*P **P 19 30 38.8 -0.3**
comp=Z,464nm,1.0s,mb6.5
H04A Detroit Lake 58.35 321 ⇓P **P 19 30 39.4 +0.1**
baz=58,SNR=20
EDM Edmonton 58.50 333⇑*i*P **P 19 30 38.1 -2.0**
B08A Colville Reser 58.55 326 ⇓P **P 19 30 40.5 -0.1**
baz=59,SNR=25
TBM Table Mountain 58.64 324 P **P 19 30 40.8 -0.3**
ETW Entiat 58.71 325 *e*P **P 19 30 40.5 -1.2**
comp=Z,354nm,2.0s,mb6.0
G04A Mulino 58.79 322 ⇓P **P 19 30 42.3 0.0**
baz=59
RNO Roman Nose 58.98 320 P **P 19 30 43.1 -0.6**
COR Corvallis 59.01 321⇑*e*P **P 19 30 42.9 -0.9**
COR pmax pmax
comp=Z,400nm,1.8s,mb6.2
COR MLR MLR
comp=Z,3μm,20.0s,MS5.4
COR Corvallis 59.01 321⇑*e*P **P 19 30 42.9 -0.9**
comp=Z,400nm,1.8s,mb6.2
COR LR LR
comp=Z,3μm,20.0s,MS5.4
F04A Amboy 59.10 322 ⇓P **P 19 30 44.2 -0.3**
baz=59
LON Longmire 59.14 323⇑*e*P **P 19 30 43.5 -1.2**
LON *e* 19 32 53.4
LON pmax pmax
comp=Z,43nm,1.0s,mb5.4
LON Longmire 59.14 323⇑*e*P **P 19 30 43.5 -1.1**
comp=Z,42nm,1.0s,mb5.4
LON *e*PP PP 19 32 53.4 -2.0
EBAJ Bajamar 59.32 59 P **P 19 30 47.6 +1.3**
comp=Z,452nm,2.2s,mb6.1
D05A Enumclaw 59.46 324 ⇑P **P 19 30 46.8 -0.1**
baz=60,SNR=6.8
A07A Ashnola River, 59.51 326 ⇓P **P 19 30 47.5 +0.3**
baz=60,SNR=21
RPW Rockport 59.83 325 *e*P **P 19 30 47.6 -1.8**
comp=Z,37nm,1.4s,mb5.2
JCW Jim Creek 59.94 325 *e*P **P 19 30 47.9 -2.3**
E03A Lebam 60.09 322 ⇑P **P 19 30 51.6 +0.4**
baz=60,SNR=9.9
NLWA Neilton Lookou 60.68 323 ⇑P **P 19 30 55.6 +0.4**
baz=61,SNR=18
NLWA Neilton Lookou 60.68 323⇑*i*P **P 19 30 54.3 -1.0**
comp=Z,105nm,1.1s,mb5.9
PGC Sidney 61.04 325⇑*i*P **P 19 30 56.8 -0.9**
comp=Z,18nm,1.9s,mb4.9
SFJD Kangerlussuaq 64.46 10⇑*i*P **P 19 31 19.1 -1.0**
SFJD pmax pmax
comp=Z,18nm,0.9s,mb5.1
SFJD MLR MLR
comp=Z,6μm,22.0s,MS5.8
SFJD Kangerlussuaq 64.46 10⇑*e*P **P 19 31 18.5 -1.6**
comp=Z,116nm,1.5s,mb5.7
SFJD Kangerlussuaq 64.46 10⇑*i*P **P 19 31 19.1 -1.0**
comp=Z,18nm,0.9s,mb5.1
SFJD
comp=Z,6μm,22.0s
YKA Yellowknife Ar 65.32 340 P **P 19 31 24.4 -1.4**
comp=Z,84nm,0.7s,mb5.9,baz=136,slow=6.3,SNR=1301
YKA PKP2bc 20 00 10.8
comp=Z,0.9nm,1.0s,baz=306,slow=3.1,SNR=5.3
YKA Yellowknife Ar 65.32 340 P **P 19 31 24.4 -1.4**
YKA ⇑*e* 20 00 10.8
RKT Rikitea 65.76 242 *e*P **P 19 31 31.9 +2.5**
comp=Z,202nm,1.2s,mb6.0
RKT *e*S S 19 40 17.4 +1.1
comp=Z,3μm,38.2s
RKT *e*SS SS 19 44 33.6 +2.6
comp=Z,2μm,31.8s
RKT *e*LQ 19 48 34.5
comp=Z,5μm,30.5s
RKT *e*LR LR 19 51 19.6
comp=Z,6μm,34.0s,baz=73
RKT Rikitea 65.76 242 *e*P **P 19 31 31.9 +2.5**
RKT *e*S S 19 40 17.4 +1.1
RKT *e*SS SS 19 44 33.6 +2.6
RKT pmax pmax
comp=Z,202nm,1.2s,mb6.0
RKT Rikitea 65.76 242 *e*P **P 19 31 31.9 +2.5**
comp=Z,202nm,1.2s,mb6.0
RKT *e*S S 19 40 17.4 +1.1
RKT *e*SS SS 19 44 33.6 +2.6
RKT *e*LQ 19 48 34.5
PFVI Vila Bisbo 67.35 52 *e*S S 19 40 37.7 +2.6
PFVI *e*LR LR 19 52 48.0
comp=Z,4μm,20.0s
PMAFR Mafra 67.40 50 *e*S S 19 40 38.0 +2.4
PMAFR *e*LQ 19 50 58.4
PMAFR *e*LR LR 19 55 12.2
comp=Z,4μm,20.0s
LIS Lisbon 67.44 50 *e*P **P 19 31 39.9 0.0**
LIS *e*S S 19 40 33.5 -2.7
LIS AMS AMS 20 00 09.9
comp=Z,6μm,23.9s,MS5.7
LIS Lisbon 67.44 50 *e*P **P 19 31 40.0 +0.1**
LIS *e*S S 19 40 33.5 -2.7
MORF Marmelete 67.52 51 *e*P **P 19 31 42.5 +2.0**
comp=Z,99nm,1.8s,mb5.5
MORF *e*S S 19 40 40.8 +3.6
MORF *e*LR LR 19 55 23.0
comp=Z,3μm,20.0s
MORF Marmelete 67.52 51 *e*P **P 19 31 39.5 -1.0**
MORF *e*S S 19 40 33.8 -3.4
TAOE Nuku Hiva Isla 67.59 259 *e*P **P 19 31 42.8 +1.5**
comp=Z,256nm,1.1s,mb6.2
TAOE *e*S S 19 40 35.3 -3.5
comp=Z,850nm,24.3s
TAOE *e*SS SS 19 45 05.3 +5.5
comp=Z,833nm,27.8s
TAOE *e*LQ 19 49 20.4
comp=Z,5μm,33.8s
TAOE *e*LR LR 19 52 11.5
comp=Z,16μm,28.6s,baz=81
TAOE Nuku Hiva Isla 67.59 259 *e*P **P 19 31 41.3 0.0**
comp=Z,64nm,0.8s,mb5.7
TAOE *e*S S 19 40 35.3 -3.5
TAOE *e*SS SS 19 45 05.3 +5.5
TAOE *e*LQ 19 49 20.4
PCVE Castro Verde 68.07 51 *e*P **P 19 31 46.9 +3.0**
comp=Z,48nm,1.3s,mb5.4
PCVE *e*S S 19 40 43.4 -0.3
PCVE *e*LR LR 19 53 23.2
comp=Z,3μm,18.0s
PBDV Barranco-do-Ve 68.07 52 *e*S S 19 40 48.9 +5.1
PBDV *e*LQ 19 52 48.8
PBDV *e*LR LR 19 55 56.5
comp=Z,5μm,20.0s
EVOP Sao Brissos 68.19 50 *e*P **P 19 31 44.3 -0.4**
EVOP *e*S S 19 40 42.5 -2.6
EVOP *e*S S 19 40 42.7 -2.4
EVOP AMS AMS 20 00 11.8
comp=Z,4μm,21.0s,MS5.7
EVOP Sao Brissos 68.19 50 *e*P **P 19 31 44.3 -0.3**
EVOP *e*S S 19 40 42.5 -2.6
PVAQ Vaqueiros 68.27 52 *e*S S 19 40 49.6 +3.4
PVAQ *e*LR LR 19 53 09.7
EVO Evora 68.27 50⇑*i*P **P 19 31 45.8 +0.6**
comp=Z,71nm,1.0s,mb5.3
EVO *e*MLR MLR
comp=Z,6μm,20.0s,MS5.5
EVO Evora 68.27 50 *e*P **P 19 31 46.4 +1.2**
comp=Z,34nm,1.2s,mb5.2
PBEJ Beja 68.28 51 *e*P **P 19 31 47.7 +2.5**
comp=Z,56nm,1.9s,mb5.3
TIC Toumodi 68.30 85 *e*P **P 19 31 45.1 -0.7**
comp=Z,406nm,1.7s,mb6.2
LIC Lamto 68.31 85 *e*P **P 19 31 45.3 -0.5**
comp=Z,128nm,1.0s,mb5.6,baz=279
LIC *e*MLR MLR
comp=Z,5μm,18.5s,MS5.5
LIC Lamto 68.31 85 *e*P **P 19 31 46.2 +0.4**
comp=Z,274nm,1.5s,mb6.1
LIC Lamto 68.31 85 *e*P **P 19 31 45.3 -0.5**
comp=Z,64nm,1.0s,mb5.6
LIC LR LR
comp=Z,3μm,18.5s,MS5.5
RTC Rabat Centre 68.34 55 PFAKE 19 32 00.0 +14
RTC LR LR
comp=Z,4μm,21.0s,MS5.6
DBIC Dimbokro 68.46 85 P **P 19 31 46.5 -0.3**
comp=Z,30nm,0.6s,mb5.5,baz=264,slow=7.3,SNR=20
DBIC LR LR 20 02 44.9
comp=Z,4μm,18.4s,MS5.6,baz=248,slow=37
DBIC Dimbokro 68.46 85 *e*P **P 19 31 46.0 -0.7**
DBIC LR LR
comp=Z,3μm,21.0s,MS5.4
EGRO El Granado 68.48 51 P **P 19 31 49.2 +2.7**
comp=Z,123nm,2.0s,mb5.6
EMAZ Mazaricos 68.58 45 P **P 19 31 52.1 +5.2**
comp=Z,249nm,2.7s,mb5.7
EZAM Zamans 68.58 46 P **P 19 31 51.7 +4.7**
EZAM pmax pmax
comp=Z,56nm,1.1s,mb5.4
EZAM Zamans 68.58 46 P **P 19 31 51.7 +4.7**
comp=Z,56nm,1.1s,mb5.4
KIC Kosan Boka 68.59 85 *e*P **P 19 31 48.3 +0.7**
comp=Z,332nm,1.3s,mb6.1
PESTR Estremoz 68.67 50 *e*P **P 19 31 49.0 +1.4**
comp=Z,84nm,1.4s,mb5.5
PESTR *e*S S 19 40 52.8 +2.0
PESTR *e*LR LR 19 57 33.9
comp=Z,5μm,18.0s
PVIS Viseu 68.83 48 *e*P **P 19 31 49.8 +1.2**
comp=Z,64nm,1.3s,mb5.4
PMRV Marv??o 68.94 49 *e*P **P 19 31 50.7 +1.4**
comp=Z,46nm,1.4s,mb5.2
PMRV *e*S S 19 40 56.7 +2.7
PMRV *e*LQ 19 50 35.6
PMRV *e*LR LR 19 53 48.0
comp=Z,4μm,20.0s
PBAR Barrancos 68.95 51 *e*P **P 19 31 50.0 +0.6**
comp=Z,50nm,1.7s,mb5.2
PBAR *e*S S 19 41 01.4 +7.2
PBAR *e*LR LR 19 55 41.5
comp=Z,3μm,20.0s
PCBR Castelo Branco 68.96 49 *e*P **P 19 31 51.1 +1.7**
comp=Z,55nm,1.5s,mb5.3
PCAB Cabril 68.96 47 *e*P **P 19 31 51.2 +1.8**
comp=Z,64nm,1.3s,mb5.4
ELOB Lobios 68.97 47 P **P 19 31 54.1 +4.6**
comp=Z,64nm,1.7s,mb5.3
MTE Manteigas 69.03 48 *e*P **P 19 31 51.2 +1.4**
comp=Z,46nm,1.7s,mb5.1
MTE *e*S S 19 40 55.0 0.0
MTE *e*LQ 19 50 16.3
MTE *e*LR LR 19 58 14.9
comp=Z,4μm,18.0s
MTE Manteigas 69.03 48 *e*P **P 19 31 50.4 +0.6**
comp=Z,26nm,1.1s,mb5.1
MTE LR LR
comp=Z,4μm,20.0s,MS5.6
PVRL Vila Real 69.09 47 *e*P **P 19 31 51.1 +0.9**
comp=Z,61nm,1.5s,mb5.3
EMIN Mina Concepcio 69.16 51 P **P 19 31 53.0 +2.4**
comp=Z,116nm,2.7s,mb5.3
DLBC Dease Lake 69.17 332⇑*i*P **P 19 31 49.6 -0.7**
PMSA Palmer Station 69.39 176 LR LR 20 03 41.9
comp=Z,4μm,18.5s,MS5.6,baz=349,slow=37
PMSA Palmer Station 69.39 176 PFAKE 19 32 00.0 +8.5
PMSA LR LR
comp=Z,5μm,20.0s,MS5.7
MVO Moncorvo 69.57 48 *e*P **P 19 31 54.5 +1.3**
comp=Z,59nm,1.3s,mb5.4
MVO *e*S 19 41 42.5
MVO *e*LQ 19 50 19.5
MVO *e*LR LR 19 54 11.5
comp=Z,3μm,18.0s
ESPR Espera 69.63 52 P **P 19 31 54.4 +0.7**
comp=Z,319nm,3.1s
EJIF Jimena Fronter 69.87 53 P **P 19 31 55.5 +0.4**
EJIF pmax pmax
comp=Z,34nm,0.8s,mb5.3
EJIF Jimena Fronter 69.87 53 P **P 19 31 55.5 +0.4**
comp=Z,34nm,0.8s,mb5.3
PBRG Braganca 69.92 47 *e*P **P 19 31 55.9 +0.6**
comp=Z,39nm,1.9s,mb5.0
ECAL Calabor 69.95 47 P **P 19 31 58.8 +3.3**
comp=Z,20nm,0.9s,mb5.1
EPON Pontenova 69.97 45 P **P 19 31 58.5 +2.9**
comp=Z,282nm,2.4s,mb5.8
BORG Borgarnes 70.69 21 *e*P **P 19 32 00.1 +0.6**
BORG pmax pmax
comp=Z,29nm,0.8s
BORG MLR MLR
comp=Z,2μm,21.0s
BORG Borgarnes 70.69 21 *e*P **P 19 32 00.1 +0.5**
comp=Z,29nm,0.8s,mb5.3
BORG LR LR
comp=Z,2μm,21.0s,MS5.4
EADA Adamuz 70.86 51 P **P 19 32 00.5 -0.6**
comp=Z,113nm,1.5s,mb5.6
ELOJ Sierra Loja 71.03 52 P **P 19 32 03.2 +1.0**
ELOJ pmax pmax
comp=Z,89nm,1.2s,mb5.6
ELOJ Sierra Loja 71.03 52 P **P 19 32 03.1 +1.0**
comp=Z,89nm,1.2s,mb5.6
PAB San Pablo 71.27 50⇓*e*P **P 19 32 03.2 -0.4**
PAB pmax pmax
comp=Z,66nm,1.3s,mb5.4
PAB San Pablo 71.27 50⇓*e*P **P 19 32 03.2 -0.4**
comp=Z,66nm,1.3s,mb5.4
ERON Agron 71.28 52 P **P 19 32 05.4 +1.7**
comp=Z,33nm,1.0s,mb5.2
RES Resolute Bay 71.28 354⇑*i*P **P 19 32 02.1 -0.9**
RES pmax pmax
comp=Z,16nm,0.6s,mb5.1
RES Resolute Bay 71.28 354⇑*i*P **P 19 32 02.0 -1.0**
comp=Z,16nm,0.6s,mb5.1
EARI Arriondas 71.34 46 P **P 19 32 07.8 +3.9**
comp=Z,308nm,3.0s
SUMG Summit 71.42 11⇑*i*P **P 19 32 04.1 +0.2**
comp=Z,233nm,0.8s,mb6.2
EBAN Banos Encina 71.47 51 P **P 19 32 05.6 +0.7**
EBAN pmax pmax
comp=Z,32nm,1.2s,mb5.1
EBAN Banos Encina 71.47 51 P **P 19 32 05.6 +0.8**
comp=Z,32nm,1.2s,mb5.1
ECOG Cogollos-Vega 71.51 52 P **P 19 32 06.8 +1.7**
ECOG pmax pmax
comp=Z,54nm,1.2s,mb5.3
ECOG Cogollos-Vega 71.51 52 P **P 19 32 06.8 +1.7**
comp=Z,54nm,1.2s,mb5.3
ESDC Sonseca Array 71.58 50 P **P 19 32 05.2 -0.3**
comp=Z,13nm,0.9s,mb4.9,baz=259,slow=5.8,SNR=22
ESDC LR LR 20 01 52.0
comp=Z,2μm,18.7s,MS5.5,baz=250,slow=34
ESDC Sonseca Array 71.58 50 P **P 19 32 05.0 -0.5**
comp=Z,30nm,1.1s,mb5.1
ESLA Sonseca Array 71.58 50 *e*P **P 19 32 06.1 +0.6**
comp=Z,19nm,1.4s,mb4.8
ESLA LR LR
comp=Z,16μm,20.0s,MS6.3
GUD Guadarrama 71.61 49 P **P 19 32 06.6 +1.0**
GUD pmax pmax
comp=Z,29nm,0.9s,mb5.2
GUD Guadarrama 71.61 49 P **P 19 32 06.6 +1.0**
comp=Z,29nm,0.9s,mb5.2
EQES Quesada 71.97 52 P **P 19 32 08.7 +0.8**
comp=Z,297nm,2.5s,mb5.8
EBER Berja 71.99 53 P **P 19 32 08.4 +0.4**
comp=Z,287nm,2.0s,mb5.9
SKAG Skagway 72.09 332 *e*P **P 19 32 08.3 +0.2**
comp=Z,12nm,0.8s,mb4.9
EHUE Huescar 72.35 52 P **P 19 32 10.4 +0.3**
EHUE pmax pmax
comp=Z,93nm,1.2s,mb5.6
EHUE Huescar 72.35 52 P **P 19 32 10.4 +0.3**
comp=Z,93nm,1.2s,mb5.6
ENIJ Nijar 72.54 53 P **P 19 32 11.5 +0.2**
ENIJ pmax pmax
comp=Z,77nm,1.2s,mb5.5
ENIJ Nijar 72.54 53 P **P 19 32 11.5 +0.2**
comp=Z,76nm,1.2s,mb5.5
EVIA Vianos 72.54 51 P **P 19 32 12.2 +0.9**
EVIA pmax pmax
comp=Z,36nm,1.4s,mb5.1
EVIA Vianos 72.54 51 P **P 19 32 12.2 +0.9**
comp=Z,36nm,1.4s,mb5.1
ELAN Lanestosa 72.60 46 P **P 19 32 15.3 +3.8**
comp=Z,94nm,2.1s,mb5.3
ETOR Torete 73.21 49 P **P 19 32 16.6 +1.4**
ETOR pmax pmax
comp=Z,30nm,1.0s,mb5.2
ETOR Torete 73.21 49 P **P 19 32 16.6 +1.4**
comp=Z,30nm,1.0s,mb5.2
ETOB Tobarra 73.28 51 P **P 19 32 15.4 -0.2**
comp=Z,238nm,1.6s,mb5.9
EMUR La Murta 73.42 52 P **P 19 32 14.8 -1.7**
comp=Z,179nm,1.9s,mb5.7
QUIF Quistinic 73.69 41 *e*P **P 19 32 17.5 -0.4**
comp=Z,158nm,1.5s,mb5.4
QUIF Quistinic 73.69 41 *e*P **P 19 32 17.5 -0.4**
QUIF pmax pmax
comp=Z,79nm,1.5s,mb5.4
QUIF Quistinic 73.69 41 *e*P **P 19 32 17.5 -0.4**
comp=Z,79nm,1.5s,mb5.4
ROSF Rostrenen 73.71 41 *e*P **P 19 32 17.4 -0.5**
comp=Z,247nm,1.7s,mb5.6
ROSF Rostrenen 73.71 41 *e*P **P 19 32 17.4 -0.5**
ROSF pmax pmax
comp=Z,124nm,1.7s,mb5.6
ROSF Rostrenen 73.71 41 *e*P **P 19 32 17.4 -0.5**
comp=Z,124nm,1.7s,mb5.6
SCO Scoresbysund 73.75 16 *e*P **P 19 32 17.4 -0.3**
SCO pmax pmax
comp=Z,15nm,1.1s,mb4.8
SCO MLR MLR
comp=Z,3μm,22.0s,MS5.5
SCO Scoresbysund 73.75 16 *i*P **P 19 32 17.4 -0.3**

comp=Z,15nm,1.1s,mb4.8
SCO
comp=Z,3µm,22.0s
ECHE Chera 73.86 50 P **P 19 32 20.0 +1.0**
ECHE pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ECHE Chera 73.86 50 P **P 19 32 20.0 +1.0**
comp=Z,9.6nm,0.7s,mb4.8
EALK Alkurruntz 73.99 46 P **P 19 32 18.5 -1.2**
comp=Z,261nm,3.4s
PNL Peninsula 74.10 331⇑ *eP* **P 19 32 19.3 -0.7**
comp=Z,57nm,1.2s,mb5.4
SGMF Saint Gilles 74.16 41 *eP* **P 19 32 20.0 -0.6**
comp=Z,170nm,1.3s,mb5.5
SGMF Saint Gilles 74.16 41 *eP* **P 19 32 20.0 -0.6**
SGMF pmax pmax
comp=Z,85nm,1.3s,mb5.5
SGMF Saint Gilles 74.16 41 *eP* **P 19 32 20.0 -0.6**
comp=Z,85nm,1.3s,mb5.5
OSSF Osses 74.17 46 *eP* **P 19 32 20.6 -0.2**
SJPF Ste Jean 74.17 47 *eP* **P 19 32 20.7 -0.1**
comp=Z,103nm,1.0s,mb5.4
SJPF Ste Jean 74.17 47 *eP* **P 19 32 20.7 -0.1**
SJPF pmax pmax
comp=Z,52nm,1.0s,mb5.4
SJPF Ste Jean 74.17 47 *eP* **P 19 32 20.7 -0.1**
comp=Z,52nm,1.0s,mb5.4
EBEN Beniarda 74.32 51 P **P 19 32 20.8 -0.9**
comp=Z,43nm,1.4s,mb5.2
ESAC San Caprasio 74.52 48 P **P 19 32 24.7 +1.8**
comp=Z,256nm,1.4s,mb6.0
ETSF Etsaut 74.63 47 *eP* **P 19 32 23.6 +0.2**
comp=Z,71nm,1.3s,mb5.2
ETSF Etsaut 74.63 47 *eP* **P 19 32 23.6 +0.2**
ETSF pmax pmax
comp=Z,36nm,1.3s,mb5.1
ETSF Etsaut 74.63 47 *eP* **P 19 32 23.6 +0.2**
comp=Z,36nm,1.3s,mb5.1
TOA0 Torodi Ar. Sit 74.75 78 *eP* **P 19 32 23.2 -1.5**
TORD Torodi Ar. Bea 74.75 78 P **P 19 32 23.9 -0.7**
comp=Z,10.0nm,0.6s,mb5.0,baz=285,slow=6.9,SNR=32
TORD PKPPKP 19 59 52.1
comp=Z,2.4nm,1.1s,baz=29,slow=3.4,SNR=6.2
TORD LR LR 20 04 25.4
comp=Z,3µm,20.9s,MS5.6,baz=225,slow=35
TORD Torodi Ar. Bea 74.75 78 P **P 19 32 23.9 -0.7**
TORD P'P' 19 59 52.1
TORD LR LR 20 04 25.4
REYF Montagne du Re 74.77 47 *eP* **P 19 32 24.9 +0.6**
VIEF Viey 75.05 47 *eP* **P 19 32 26.5 +0.6**
EANR 'Ain N'Sour 75.07 54 P **P 19 32 27.0 +0.8**
INK Inuvik 75.09 341⇑ *iP* **P 19 32 24.3 -1.3**
INK pmax pmax
comp=Z,202nm,1.4s
INK Inuvik 75.09 341⇑ *iP* **P 19 32 24.3 -1.4**
comp=Z,202nm,1.4s,mb5.9
LABF Labassere 75.11 47 *eP* **P 19 32 26.8 +0.6**
ETRT Tiaret 75.18 55 P **P 19 32 30.1 +3.3**
RESF Ens 75.27 47 *eP* **P 19 32 28.0 +0.9**
EPF Esparros 75.30 47 *eP* **P 19 32 27.3 0.0**
comp=Z,174nm,1.4s,mb5.5
EPF Esparros 75.30 47 *eP* **P 19 32 27.3 0.0**
EPF pmax pmax
comp=Z,87nm,1.4s,mb5.5
EPF Esparros 75.30 47 *eP* **P 19 32 27.3 0.0**
comp=Z,87nm,1.4s,mb5.5
GRR Gorron 75.30 41 *eP* **P 19 32 26.6 -0.6**
comp=Z,117nm,1.0s,mb5.5
GRR Gorron 75.30 41 *eP* **P 19 32 26.6 -0.6**
GRR pmax pmax
comp=Z,58nm,1.0s,mb5.5
GRR Gorron 75.30 41 *eP* **P 19 32 26.6 -0.6**
comp=Z,58nm,1.0s,mb5.5
ESK Eskdalemuir 75.30 34 *eP* **P 19 32 26.6 -0.5**
ESK MLR MLR
comp=Z,2µm,20.0s,MS5.5
EBNR Beni Rached 75.45 54 P **P 19 32 32.7 +4.4**
MFF Saint Martin d 75.48 43 *eP* **P 19 32 27.9 -0.4**
comp=Z,122nm,1.0s,mb5.5
MFF Saint Martin d 75.48 43 *eP* **P 19 32 27.9 -0.4**
MFF pmax pmax
comp=Z,61nm,1.0s,mb5.5
MFF Saint Martin d 75.48 43 *eP* **P 19 32 27.9 -0.4**
comp=Z,61nm,1.0s,mb5.5
EIBI Ibiza 75.57 51 P **P 19 32 28.7 -0.2**
comp=Z,93nm,1.1s,mb5.6
MELF Melles 75.58 47 *eP* **P 19 32 29.7 +0.8**
DAWY Dawson 75.58 336⇑ *iP* **P 19 32 27.3 -1.2**
FLN La Foliniere 75.61 41 *eP* **P 19 32 28.1 -0.9**
comp=Z,127nm,1.1s,mb5.5
FLN *e*MLR MLR
comp=Z,3µm,21.2s,MS5.2
FLN La Foliniere 75.61 41 *eP* **P 19 32 28.1 -0.9**
FLN pmax pmax
comp=Z,63nm,1.1s,mb5.5
FLN MLR MLR
comp=Z,3µm,21.3s,MS5.5
FLN La Foliniere 75.61 41 *eP* **P 19 32 28.1 -0.9**
comp=Z,64nm,1.1s,mb5.5
FLN LR LR
comp=Z,3µm,21.3s,MS5.5
LDF La Druitiere 75.81 41 *eP* **P 19 32 29.6 -0.6**
comp=Z,149nm,1.3s,mb5.5
LDF La Druitiere 75.81 41 *eP* **P 19 32 29.6 -0.6**
LDF pmax pmax
comp=Z,75nm,1.3s,mb5.5
LDF La Druitiere 75.81 41 *eP* **P 19 32 29.6 -0.6**
comp=Z,75nm,1.3s,mb5.5
LFF La Frestale 75.84 45 *eP* **P 19 32 29.9 -0.5**
comp=Z,184nm,1.3s,mb5.5
LFF La Frestale 75.84 45 *eP* **P 19 32 29.9 -0.5**
LFF pmax pmax
comp=Z,92nm,1.3s,mb5.5
LFF La Frestale 75.84 45 *eP* **P 19 32 29.9 -0.5**
comp=Z,92nm,1.3s,mb5.5
SALF Salau 75.88 47 *eP* **P 19 32 31.6 +0.9**
PMOR Pomariorio Ree 76.00 253 *eP* **P 19 32 33.7 +1.9**
comp=Z,174nm,1.3s,mb5.8
RJF Les Rejaudoux 76.44 45 *eP* **P 19 32 33.2 -0.6**
comp=Z,62nm,0.9s,mb5.2
RJF *e*MLR MLR
comp=Z,3µm,19.5s,MS5.3
RJF Les Rejaudoux 76.44 45 *eP* **P 19 32 33.2 -0.6**
RJF pmax pmax
comp=Z,31nm,0.9s,mb5.2
RJF MLR MLR
comp=Z,3µm,19.5s,MS5.6
RJF Les Rejaudoux 76.44 45 *eP* **P 19 32 33.2 -0.6**
comp=Z,31nm,0.9s,mb5.2
RJF LR LR
comp=Z,3µm,19.5s,MS5.6
EGAK Eagle 76.54 336⇑ *iP* **P 19 32 33.0 -1.0**
comp=Z,173nm,1.3s,mb5.8
EGAK LR LR
comp=Z,5µm,22.0s,MS5.8
EMHD Djebel Mahouad 76.59 54 P **P 19 32 40.0 +5.2**
MEH Mehetia 76.61 251 *eP* **P 19 32 37.1 +1.9**
comp=Z,139nm,1.3s,mb5.7
MTLF Montolieu 76.70 47 *eP* **P 19 32 34.7 -0.6**
comp=Z,81nm,1.2s,mb5.2
MTLF Montolieu 76.70 47 *eP* **P 19 32 34.7 -0.6**
MTLF pmax pmax
comp=Z,40nm,1.2s,mb5.2
MTLF Montolieu 76.70 47 *eP* **P 19 32 34.7 -0.6**
comp=Z,40nm,1.2s,mb5.2
CAF Calviac 76.78 45 *eP* **P 19 32 35.3 -0.4**
comp=Z,79nm,1.1s,mb5.3
CAF Calviac 76.78 45 *eP* **P 19 32 35.3 -0.4**
CAF pmax pmax
comp=Z,39nm,1.1s,mb5.2
CAF Calviac 76.78 45 *eP* **P 19 32 35.3 -0.4**
comp=Z,39nm,1.1s,mb5.2
FILF Fillols 76.86 47 *eP* **P 19 32 35.8 -0.4**
BMRM Bremner River 76.96 332⇑ *iP* **P 19 32 35.6 -0.8**
comp=Z,167nm,1.3s,mb5.8
ADJB Djebel Djouab 76.98 54 P **P 19 32 37.9 +0.9**
TCF Toulx Ste Croi 77.05 44 *eP* **P 19 32 36.5 -0.7**
comp=Z,68nm,1.2s,mb5.2
TCF Toulx Ste Croi 77.05 44 *eP* **P 19 32 36.5 -0.7**
TCF pmax pmax
comp=Z,34nm,1.2s,mb5.2
TCF Toulx Ste Croi 77.05 44 *eP* **P 19 32 36.5 -0.7**
comp=Z,34nm,1.2s,mb5.2
AKET Djebel Ketaf 77.33 54 P **P 19 32 32.1 -6.9**
HYF Humbligny 77.46 43 *eP* **P 19 32 39.1 -0.4**
BGF Bois d'Agland 77.52 43 *eP* **P 19 32 39.1 -0.7**
comp=Z,43nm,0.7s,mb5.2
BGF Bois d'Agland 77.52 43 *eP* **P 19 32 39.1 -0.7**
BGF pmax pmax
comp=Z,21nm,0.7s,mb5.2
BGF Bois d'Agland 77.52 43 *eP* **P 19 32 39.1 -0.7**
comp=Z,21nm,0.7s,mb5.2
PYM Petit Puy Mans 77.53 44 *eP* **P 19 32 40.1 +0.2**
DIV Divide 77.55 332 *eP* **P 19 32 36.4 -3.3**
comp=Z,41nm,1.1s,mb5.3
LBL Lubilhac 77.64 45 *eP* **P 19 32 41.0 +0.4**
AGO Saint Agoulin 77.65 44 *eP* **P 19 32 39.8 -0.8**
TIAR Tiarei 77.76 251 *eP* **P 19 32 43.8 +2.1**
comp=Z,42nm,0.9s,mb5.4
PAX Paxson 77.86 334⇑ *eP* **P 19 32 39.6 -1.8**
PAX pmax pmax
comp=Z,20nm,0.4s,mb5.4
PAX Paxson 77.86 334⇑ *eP* **P 19 32 39.6 -1.8**
comp=Z,20nm,0.4s,mb5.4
AVF Avril sur Loir 77.89 43 *eP* **P 19 32 41.0 -0.9**
comp=Z,36nm,1.0s,mb5.0
AVF Avril sur Loir 77.89 43 *eP* **P 19 32 41.0 -0.9**
AVF pmax pmax
comp=Z,18nm,1.0s,mb5.0
AVF Avril sur Loir 77.89 43 *eP* **P 19 32 41.0 -0.9**
comp=Z,18nm,1.0s,mb5.0
LASF Ste Croix 77.96 46 *eP* **P 19 32 42.3 0.0**
comp=Z,58nm,1.0s,mb5.2
PPT Papeete 77.98 251 *eP* **P 19 32 44.8 +1.8**
comp=Z,61nm,1.4s,mb5.3
PPT *e*S S 19 42 37.3 +0.2
comp=Z,1µm,25.0s
PPT *e*LQ 19 53 40.3
comp=Z,3µm,30.0s
PPT *e*LR LR 19 57 00.2
comp=Z,4µm,23.5s,baz=79
PPT Papeete 77.98 251 P **P 19 32 42.3 -0.7**
comp=Z,20nm,0.3s,mb5.5,baz=33,slow=19,SNR=5.6
PPT LR LR 19 59 34.9
comp=Z,2µm,18.5s,MS5.5,baz=78,slow=30
PPT Papeete 77.98 251 *eP* **P 19 32 44.8 +1.8**
PPT *e*S S 19 42 37.3 +0.2
PPT pmax pmax
comp=Z,61nm,1.4s
PPT Papeete 77.98 251 *eP* **P 19 32 44.8 +1.8**
comp=Z,61nm,1.4s,mb5.3
PPT *e*S S 19 42 37.3 +0.2
PPT *e*LQ 19 53 40.3
PLDF La Plantade 77.98 44 *eP* **P 19 32 42.8 +0.4**
COLF Collangettes 77.99 45 *eP* **P 19 32 41.2 -1.3**
SSF Saint Saulge 78.02 43 *eP* **P 19 32 41.6 -1.0**
comp=Z,44nm,1.0s,mb5.0
SSF Saint Saulge 78.02 43 *eP* **P 19 32 41.6 -1.0**
SSF pmax pmax
comp=Z,22nm,1.0s,mb5.0
SSF Saint Saulge 78.02 43 *eP* **P 19 32 41.6 -1.0**
comp=Z,22nm,1.0s,mb5.0
DAG Danmarks Havn 78.09 11⇓ *eP* **P 19 32 42.0 -0.5**
DAG pmax pmax
comp=Z,15nm,0.6s,mb5.1
DAG Danmarks Havn 78.09 11⇓ *iP* **P 19 32 42.0 -0.5**
comp=Z,15nm,0.6s,mb5.1
ALE Alert 78.20 2 P **P 19 32 42.0 -1.0**
comp=Z,271nm,0.9s,mb6.2,SNR=34
SMF Signal de Mont 78.21 43 *eP* **P 19 32 42.8 -0.9**
comp=Z,97nm,1.1s,mb5.4
SMF Signal de Mont 78.21 43 *eP* **P 19 32 42.8 -0.9**
SMF pmax pmax
comp=Z,49nm,1.1s,mb5.3
SMF Signal de Mont 78.21 43 *eP* **P 19 32 42.8 -0.9**
comp=Z,49nm,1.1s,mb5.3
LOR Lormes 78.29 43 *eP* **P 19 32 43.1 -1.0**
comp=Z,90nm,1.1s,mb5.3
LOR *e*MLR MLR
comp=Z,3µm,19.5s,MS5.4
LOR Lormes 78.29 43 *eP* **P 19 32 43.1 -1.0**
LOR pmax pmax
comp=Z,45nm,1.1s,mb5.3
LOR MLR MLR
comp=Z,3µm,19.5s,MS5.7
LOR Lormes 78.29 43 *eP* **P 19 32 43.1 -1.0**
comp=Z,45nm,1.1s,mb5.3
LOR LR LR
comp=Z,3µm,19.5s,MS5.7
TAM Tamanrasset 78.32 68⇑ *eP* **P 19 32 45.7 +0.9**
TAM pmax pmax
comp=Z,40nm,1.1s,mb5.3
TAM Tamanrasset 78.32 68⇑ *eP* **P 19 32 45.7 +0.9**
comp=Z,40nm,1.1s,mb5.3
SSB Saint Sauveur 78.56 45 *eP* **P 19 32 44.9 -0.7**
SET Setif 78.56 54 P **P 19 32 47.0 +1.1**
VIVF Saint-Julien-I 78.61 45 *eP* **P 19 32 46.1 +0.2**
comp=Z,58nm,0.9s,mb5.2
VIVF Saint-Julien-I 78.61 45 *eP* **P 19 32 46.1 +0.2**
VIVF pmax pmax
comp=Z,29nm,0.9s,mb5.2
VIVF Saint-Julien-I 78.61 45 *eP* **P 19 32 46.1 +0.2**
comp=Z,29nm,0.9s,mb5.2
BAIF Baives 78.83 40 *eP* **P 19 32 46.2 -0.8**
comp=Z,32nm,1.0s,mb4.9
BAIF Baives 78.83 40 *eP* **P 19 32 46.2 -0.8**
BAIF pmax pmax
comp=Z,16nm,1.0s,mb4.9
BAIF Baives 78.83 40 *eP* **P 19 32 46.2 -0.8**
comp=Z,16nm,1.0s,mb4.9
SNF Seneffe 78.92 40 P **P 19 32 47.2 -0.3**
comp=Z,27nm,1.8s,mb4.9
DFRA Djebel Bou Aff 78.96 54 P **P 19 32 48.6 +0.5**
UCC Uccle 79.00 39 P **P 19 32 47.8 -0.2**
DOU Dourbes 79.08 40 P **P 19 32 48.9 +0.5**
comp=Z,18nm,1.5s,mb4.8
SEW Seward 79.11 330 *eP* **P 19 32 46.3 -2.0**
comp=Z,36nm,1.3s,mb5.1
SMRF Simiane la Rot 79.19 46 *eP* **P 19 32 49.6 +0.5**
comp=Z,180nm,1.5s,mb5.5
SMRF Simiane la Rot 79.19 46 *eP* **P 19 32 49.6 +0.5**
comp=Z,180nm,1.5s,mb5.8
MEZF Maizieres J'vi 79.21 42 *eP* **P 19 32 48.5 -0.7**
comp=Z,239nm,1.3s,mb5.7
MEZF Maizieres J'vi 79.21 42 *eP* **P 19 32 48.5 -0.7**
comp=Z,239nm,1.3s,mb6.0
GIVF Givet 79.22 40 *eP* **P 19 32 48.6 -0.6**
comp=Z,114nm,1.2s,mb5.4
GIVF Givet 79.22 40 *eP* **P 19 32 48.6 -0.6**
GIVF pmax pmax
comp=Z,57nm,1.2s,mb5.4
GIVF Givet 79.22 40 *eP* **P 19 32 48.6 -0.6**
comp=Z,57nm,1.2s,mb5.4
PMR Palmer 79.23 332 *eP* **P 19 32 49.2 +0.2**
PMR pmax pmax
comp=Z,60nm,1.0s,mb5.5
PMR Palmer 79.23 332 *eP* **P 19 32 49.2 +0.2**
comp=Z,60nm,1.0s,mb5.5
COLA College 79.33 335⇑ *iP* **P 19 32 47.8 -1.6**
COLA pmax pmax
comp=Z,84nm,1.2s,mb5.5
COLA MLR MLR
comp=Z,4µm,19.0s,MS5.8
COLA College 79.33 335⇑ *iP* **P 19 32 47.8 -1.6**
comp=Z,84nm,1.2s,mb5.5
COLA LR LR
comp=Z,4µm,19.0s,MS5.8
CTEI Djebel Teioual 79.37 54 P **P 19 32 48.8 -1.5**
CASM Ain Smara 79.45 54 P **P 19 32 49.5 -1.2**
ORIF Oris-en-Rattie 79.47 45 *eP* **P 19 32 51.0 +0.3**
comp=Z,83nm,1.2s,mb5.2
ORIF *e*MLR MLR
comp=Z,4µm,19.2s,MS5.4
ORIF Oris-en-Rattie 79.47 45 *eP* **P 19 32 51.0 +0.3**
ORIF pmax pmax
comp=Z,42nm,1.2s,mb5.2
ORIF Oris-en-Rattie 79.47 45 *eP* **P 19 32 51.0 +0.3**
comp=Z,42nm,1.2s,mb5.2
MCK McKinley 79.55 334⇑ *iP* **P 19 32 49.4 -1.3**
MCK pmax pmax
comp=Z,158nm,1.4s,mb5.8
MCK McKinley 79.55 334⇑ *iP* **P 19 32 49.4 -1.3**
comp=Z,158nm,1.4s,mb5.8
BCLA Clavier 79.56 40 P **P 19 32 51.5 +0.5**
comp=Z,23nm,1.9s,mb4.8
CKFL Kef-Lekhel 79.64 54 P **P 19 32 52.2 +0.4**
CABF La Chapelle 79.75 44 *eP* **P 19 32 51.7 -0.4**
comp=Z,72nm,1.1s,mb5.2
CABF La Chapelle 79.75 44 *eP* **P 19 32 51.7 -0.4**
CABF pmax pmax
comp=Z,36nm,1.1s,mb5.2
CABF La Chapelle 79.75 44 *eP* **P 19 32 51.7 -0.4**
comp=Z,36nm,1.1s,mb5.2
THEF They Montfort 79.81 42 *eP* **P 19 32 52.4 0.0**
LMR La Mourre 79.82 47 *eP* **P 19 32 52.0 -0.6**
comp=Z,74nm,1.0s,mb5.3
LMR La Mourre 79.82 47 *eP* **P 19 32 52.0 -0.6**
LMR pmax pmax
comp=Z,37nm,1.0s,mb5.3
LMR La Mourre 79.82 47 *eP* **P 19 32 52.0 -0.6**
comp=Z,37nm,1.0s,mb5.3
BEBN Eben Emael 79.84 39 P **P 19 32 52.8 +0.3**
comp=Z,17nm,2.0s,mb4.6
FRF La Foret Royal 79.93 47 *eP* **P 19 32 52.7 -0.5**
comp=Z,201nm,1.3s,mb5.6
FRF La Foret Royal 79.93 47 *eP* **P 19 32 52.7 -0.5**
FRF pmax pmax
comp=Z,100nm,1.3s,mb5.6
FRF La Foret Royal 79.93 47 *eP* **P 19 32 52.7 -0.5**
comp=Z,100nm,1.3s,mb5.6
MEM Membach 80.03 40 P **P 19 32 54.2 +0.7**
comp=Z,27nm,1.3s,mb5.0
HAU Haudompre 80.03 42 *eP* **P 19 32 52.8 -0.8**
comp=Z,59nm,1.2s,mb5.1
HAU *e*MLR MLR
comp=Z,3µm,22.8s,MS5.2
HAU Haudompre 80.03 42 *eP* **P 19 32 52.8 -0.8**
HAU pmax pmax
comp=Z,29nm,1.2s,mb5.1
HAU MLR MLR
comp=Z,3µm,22.8s,MS5.5
HAU Haudompre 80.03 42 *eP* **P 19 32 52.8 -0.8**
comp=Z,29nm,1.2s,mb5.1
HAU LR LR
comp=Z,3µm,22.8s,MS5.5
WLF Walferdange 80.04 40 P **P 19 32 53.1 -0.5**
comp=Z,46nm,1.3s,mb5.2
WLF Walferdange 80.04 40 *eP* **P 19 32 53.2 -0.4**
WLF Walferdange 80.04 40⇑ *iP* **P 19 32 52.8 -0.8**
WLF pmax pmax
comp=Z,71nm,1.1s,mb5.5
WLF Walferdange 80.04 40⇑ *iP* **P 19 32 52.8 -0.8**
comp=Z,71nm,1.1s,mb5.5
BNI Bardonecchia 80.05 45 *eP* **P 19 32 54.2 +0.4**
BNI pmax pmax
comp=Z,60nm,1.6s,mb5.3
BNI MLR MLR
comp=Z,3µm,21.0s,MS5.7
BNI Bardonecchia 80.05 45 *eP* **P 19 32 54.2 +0.4**
comp=Z,60nm,1.6s,mb5.3
BNI LR LR
comp=Z,3µm,21.0s,MS5.7
MBDF Montbardon 80.09 46 *eP* **P 19 32 54.3 +0.3**
TRF Thorofare Moun 80.09 334⇑ *iP* **P 19 32 51.5 -2.1**
comp=Z,236nm,1.3s,mb6.0
LPL La Plagne 80.12 45 *eP* **P 19 32 54.6 +0.5**
comp=Z,101nm,1.2s,mb5.3
LPL La Plagne 80.12 45 *eP* **P 19 32 54.6 +0.5**
LPL pmax pmax
comp=Z,51nm,1.2s,mb5.3
LPL La Plagne 80.12 45 *eP* **P 19 32 54.6 +0.5**
comp=Z,51nm,1.2s,mb5.3
LPG La Plagne 80.13 45 *eP* **P 19 32 54.8 +0.6**
comp=Z,144nm,1.2s,mb5.5
LPG La Plagne 80.13 45 *eP* **P 19 32 54.8 +0.6**
LPG pmax pmax
comp=Z,72nm,1.2s,mb5.5
LPG La Plagne 80.13 45 *eP* **P 19 32 54.8 +0.6**
comp=Z,72nm,1.2s,mb5.5
CMAH Djebel Manchou 80.21 54 P **P 19 32 52.8 -2.0**
ABSA Djebel Ababsia 80.24 54 P **P 19 32 53.8 -1.2**
LOMF Lomont 80.31 43 *eP* **P 19 32 55.0 -0.1**
HINF Hinteralfeld 80.36 42⇑ *iP* **P 19 32 54.3 -1.1**
comp=Z,84nm,1.5s,mb5.2
HINF Hinteralfeld 80.36 42⇑ *iP* **P 19 32 54.3 -1.1**
HINF pmax pmax
comp=Z,42nm,1.5s,mb5.2
HINF Hinteralfeld 80.36 42⇑ *iP* **P 19 32 54.3 -1.1**
comp=Z,42nm,1.5s,mb5.2
KDAK Kodiak Island 80.37 328 *i* P **P 19 32 55.5 +0.3**
TOUF Mont Tournerai 80.39 46 *eP* **P 19 32 53.5 -2.2**
KTH Kantishna Hill 80.39 334⇑ *iP* **P 19 32 53.9 -1.3**
comp=Z,70nm,1.0s,mb5.5
LUCF Luceram 80.46 46 *eP* **P 19 32 55.9 -0.1**
BPAW Bear Paw Mtn. 80.51 334⇑ *iP* **P 19 32 54.2 -1.6**
comp=Z,239nm,1.3s,mb6.0
STCH Steam Cracks 80.52 289 *eP* **P 19 32 57.0 +0.2**
SBF Sospel 80.52 46 *eP* **P 19 32 55.9 -0.5**
comp=Z,85nm,1.0s,mb5.3
SBF Sospel 80.52 46 *eP* **P 19 32 55.9 -0.5**
SBF pmax pmax
comp=Z,43nm,1.0s,mb5.3
SBF Sospel 80.52 46 *eP* **P 19 32 55.9 -0.5**
comp=Z,42nm,1.0s,mb5.3
MOF Molkenrain 80.55 42 *eP* **P 19 32 56.3 -0.1**
ECH Echery 80.59 42 *eP* **P 19 32 56.5 -0.1**
ECH MLR MLR
comp=Z,2µm,19.0s,MS5.5
CDF Champ du Feu 80.68 42 *eP* **P 19 32 56.4 -0.7**
comp=Z,142nm,1.5s,mb5.4
CDF Champ du Feu 80.68 42 *eP* **P 19 32 56.4 -0.7**
CDF pmax pmax
comp=Z,71nm,1.5s,mb5.4
CDF Champ du Feu 80.68 42 *eP* **P 19 32 56.4 -0.7**
comp=Z,71nm,1.5s,mb5.4
OHAK Old Harbor 80.69 327 *eP* **P 19 32 55.1 -1.9**
comp=Z,44nm,1.0s,mb5.3
BER Bergen 80.72 30 *eP* **P 19 33 00.6 +3.5**
BER *e*S S 19 43 04.8 +0.1
BER AMS AMS 20 02 25.3
comp=Z,1µm,19.9s,MS5.3
COLD Coldfoot 80.74 337⇑ *iP* **P 19 32 56.8 -0.3**
comp=Z,107nm,1.1s,mb5.7
FOO Floro 80.75 28 *eP* **P 19 32 58.5 +1.3**
FOO *e*S S 19 43 06.8 +1.9
FOO AMS AMS 20 03 37.5
comp=Z,2µm,23.6s,MS5.3
RSO Redoubt South 80.80 330 *eP* **P 19 32 55.9 -1.6**
PPLA Purkeypile 80.86 333⇑ *eP* **P 19 32 56.4 -1.3**
comp=Z,280nm,1.4s,mb6.0
POHA Pohakuloa 80.89 289 *eP* **P 19 32 58.5 -0.3**
comp=Z,189nm,1.3s,mb5.9
POHA LR LR
comp=Z,2µm,22.0s,MS5.5
BUG Bochum-Univer 80.89 39 *eP* **P 19 32 57.5 -0.7**
comp=Z,66nm,1.3s,mb5.4
ABH Alteburg 80.96 40 *eP* **P 19 32 58.9 +0.3**
CHUM Lake Minchumin 81.06 334⇑ *iP* **P 19 32 57.1 -1.7**
comp=Z,222nm,1.2s,mb6.0
LANF Langenberg 81.07 41 *eP* **P 19 32 59.3 +0.1**
FELD Feldberg im Sc 81.13 42 *eP* **P 19 32 58.9 -0.6**
IBBN Ibbenburen 81.26 38 *eP* **P 19 32 59.6 -0.5**
BFO Black Forest 81.38 42 *eP* **P 19 32 59.5 -1.3**
comp=Z,34nm,1.2s,mb5.2
BFO Black Forest 81.38 42 *eP* **P 19 32 59.5 -1.3**
BFO pmax pmax
comp=Z,34nm,1.2s,mb5.2
BFO MLR MLR
comp=Z,2µm,19.0s,MS5.5
BFO Black Forest 81.38 42 *eP* **P 19 32 59.5 -1.3**
comp=Z,34nm,1.2s,mb5.2
BFO LR LR
comp=Z,2µm,19.0s,MS5.5
TNS Taunus Mts 81.56 40 *eP* **P 19 33 01.0 -0.7**
TNS Taunus Mts 81.56 40 *eP* **P 19 33 01.0 -0.7**
TNS Taunus Mts 81.56 40 *eP* **P 19 33 01.0 -0.7**
VAI Varese 81.56 44 P **P 19 33 02.1 +0.2**
VAI pmax pmax
comp=Z,71nm,1.6s,mb5.3
VAI Varese 81.56 44 P **P 19 33 02.1 +0.2**
comp=Z,70nm,1.6s,mb5.3
PGF Pioggiola 81.61 48 *eP* **P 19 33 01.8 -0.4**
comp=Z,78nm,1.1s,mb5.2
PGF Pioggiola 81.61 48 *eP* **P 19 33 01.8 -0.4**
PGF pmax pmax
comp=Z,39nm,1.1s,mb5.2
PGF Pioggiola 81.61 48 *eP* **P 19 33 01.8 -0.4**
comp=Z,39nm,1.1s,mb5.2
SPAK Spaichingen-Ko 81.67 42 *eP* **P 19 33 02.4 0.0**
KEST Kesra 81.75 55 P **P 19 33 02.9 -0.2**
comp=Z,8.2nm,0.7s,mb4.8,baz=218,slow=3.2,SNR=21
KEST LR LR 20 08 44.8
comp=Z,644nm,18.2s,MS5.0,baz=221,slow=35
VSL Villasalto 81.82 51⇑ *eP* **P 19 33 02.9 -0.5**
comp=Z,67nm,0.9s,mb5.6
STU Stuttgart 81.97 42 *eP* **P 19 33 02.6 -1.4**
STU Stuttgart 81.97 42 *eP* **P 19 33 03.7 -0.3**
STU pmax pmax
comp=Z,46nm,1.1s,mb5.3

STU Stuttgart 81.97 42 *e*P **P 19 33 03.7 -0.2**
comp=Z,46nm,1.1s,mb5.3
SVW2 Sparrevohn 82.24 331 *e*P **P 19 33 03.6 -1.5**
MUD Monsted U'grnd 82.36 34 *i* P **P 19 33 06.3 +0.5**
MUD pmax pmax
comp=Z,33nm,1.1s,mb5.2
MUD MLR MLR
comp=Z,2µm,20.0s,MS5.5
MUD Monsted U'grnd 82.36 34 *i* P **P 19 33 06.3 +0.5**
comp=Z,33nm,1.1s,mb5.2
MUD *i* 19 33 57.8
MUD
comp=Z,2µm,20.0s
DAVA Damuels 82.38 43⇓*i*P **P 19 33 06.1 0.0**
comp=Z,71nm,1.1s,mb5.5,SNR=17
UBBA Unterbreizbach 82.58 39 *e*P **P 19 33 06.4 -0.7**
TTA Tatalina 82.60 333 *e*P **P 19 33 06.7 -0.2**
NRDL Niedersach Rie 82.70 38 *e*P **P 19 33 08.0 +0.3**
PII Pisa 82.75 47 P **P 19 33 08.4 +0.2**
PII pmax pmax
comp=Z,45nm,1.0s,mb5.5
PII Pisa 82.75 47 P **P 19 33 08.4 +0.2**
comp=Z,44nm,1.0s,mb5.5
KONO Kongsberg 82.78 31 *e*P **P 19 33 07.0 -1.0**
KONO *e*S S 19 43 26.7 +0.7
KONO AMS AMS 20 05 21.8
comp=Z,2µm,25.3s,MS5.3
CLZ Clausthal 82.84 38 *e*P **P 19 33 08.1 -0.4**
comp=Z,44nm,1.1s,mb5.4
CLZ Clausthal 82.84 38 *e*P **P 19 33 08.1 -0.4**
CLZ pmax pmax
comp=Z,44nm,1.1s,mb5.4
CLZ Clausthal 82.84 38 *e*P **P 19 33 08.1 -0.4**
comp=Z,44nm,1.1s,mb5.4
BSEG Bad Segeberg 82.89 36 *e*P **P 19 33 07.9 -0.7**
comp=Z,32nm,1.1s,mb5.3
BSEG Bad Segeberg 82.89 36 *e*P **P 19 33 08.1 -0.5**
BSEG pmax pmax
comp=Z,44nm,1.1s,mb5.4
BSEG Bad Segeberg 82.89 36 *e*P **P 19 33 07.9 -0.7**
FETA Feichten 82.95 43⇑*i*P **P 19 33 08.8 -0.3**
comp=Z,79nm,1.2s,mb5.6,SNR=25
RETA Reutte 82.98 43⇑*i*P **P 19 33 08.6 -0.6**
comp=Z,24nm,1.3s,mb5.1,SNR=11
KIP Kipapa 83.16 291 PFAKE 19 33 20.0 +9.2
KIP LR LR
comp=Z,3µm,19.0s,MS5.6
MOTA Moosalm 83.21 43⇑*i*P **P 19 33 10.0 -0.5**
comp=Z,25nm,0.9s,mb5.3,SNR=22
CSNT Castellina Chi 83.31 47 P **P 19 33 09.9 -1.1**
GRA1 Grafenberg Arr 83.33 41 *e*P **P 19 33 10.7 -0.3**
comp=Z,32nm,1.2s,mb5.2
GRA1 *e*S S 19 43 24.2 -7.7
GRA1 LR LR
comp=Z,4µm,21.1s,MS5.7
GRF Grafenberg Arr 83.33 41 *e*P **P 19 33 10.7 -0.3**
comp=Z,32nm,1.2s,mb5.2
GRF *e*S S 19 43 24.2 -7.7
GRF *e*L 20 07 55.6
comp=Z,3µm,21.1s
GRF Grafenberg Arr 83.33 41 *e*P **P 19 33 10.7 -0.3**
GRF *e*S S 19 43 24.2 -7.7
GRF pmax pmax
comp=Z,32nm,1.2s,mb5.2
GRF MLR MLR
comp=Z,4µm,21.1s,MS5.7
GRF Grafenberg Arr 83.33 41 *e*P **P 19 33 10.7 -0.3**
GRF *e*S S 19 43 24.2 -7.7
GRF pmax pmax
comp=Z,32nm,1.2s,mb5.2
GRF MLR MLR
comp=Z,4µm,21.1s,MS5.7
GRF Grafenberg Arr 83.33 41 *e*P **P 19 33 10.7 -0.3**
comp=Z,32nm,1.2s,mb5.2
GRF *e*S S 19 43 24.2 -7.7
GRF LR LR
comp=Z,4µm,21.1s,MS5.7
FUR Furstenfeldbru 83.34 42 *e*P **P 19 33 10.7 -0.4**
comp=Z,138nm,2.0s,mb5.6
FUR Furstenfeldbru 83.34 42 *e*P **P 19 33 10.7 -0.4**
FUR pmax pmax
comp=Z,138nm,2.0s,mb5.6
FUR Furstenfeldbru 83.34 42 *e*P **P 19 33 10.7 -0.4**
comp=Z,138nm,2.0s,mb5.6
VMG Vicchio 83.49 46 P **P 19 33 13.0 +1.0**
comp=Z,14nm,0.6s,mb5.2
NAO01 NORSAR Array S 83.49 29⇑*e*P **P 19 33 11.2 -0.4**
comp=Z,52nm,0.9s,mb5.6
WTTA Wattenberg 83.57 43⇑*i*P **P 19 33 12.0 -0.3**
comp=Z,35nm,1.0s,mb5.5,SNR=17
MOX Moxa 83.60 40 *e*P **P 19 33 12.4 0.0**
comp=Z,34nm,1.9s,mb5.2
MOX *e* 19 33 41.7
MOX *e*SKS 19 43 31.0
MOX
comp=Z,2µm,20.0s
MOX Moxa 83.60 40 *e*P **P 19 33 11.9 -0.5**
comp=Z,57nm,2.1s,mb5.3
MOX Moxa 83.60 40 *e*P **P 19 33 12.4 0.0**
MOX *e* 19 43 31.0
MOX pmax pmax
comp=Z,34nm,1.9s,mb5.2
MOX MLR MLR
comp=Z,2µm,20.0s,MS5.4
NB2 NORSAR Subarra 83.66 29 P **P 19 33 12.8 +0.3**
comp=Z,40nm,0.8s,mb5.6,baz=268,slow=5.3
NOA NORSAR Array B 83.66 29 P **P 19 33 12.9 +0.5**
comp=Z,44nm,0.8s,mb5.6,baz=268,slow=5.2,SNR=49
TOLF Tolfa 83.83 48 P **P 19 33 14.2 +0.4**
ROTZ Rotzenmuhle 83.97 41 *e*P **P 19 33 14.2 -0.1**
BADI Badiali 84.00 47 P **P 19 33 14.2 -0.4**
NKC Novy Kostel 84.12 40 *e*P **P 19 33 15.4 +0.3**
NKC *e* 19 43 38.7
NKC MLR MLR
comp=Z,3µm,23.7s,MS5.6
NKC Novy Kostel 84.12 40 *e*P **P 19 33 15.4 +0.3**
NKC *e*SKS 19 43 38.7
NKC AMS AMS 20 03 40.0
comp=Z,3µm,23.7s
TANN Tannenbergstha 84.13 40 *e*P **P 19 33 14.5 -0.6**
ABTA Abfaltersbach 84.17 44⇑*i*P **P 19 33 14.9 -0.5**
comp=Z,27nm,0.8s,mb5.4,SNR=17
MURB Monte Urbino 84.20 47 P **P 19 33 14.8 -0.8**
ERC Erice 84.33 52 P **P 19 33 18.9 +2.5**
comp=Z,371nm,1.0s,mb6.5
FVI Forni Avoltri 84.36 44 P **P 19 33 15.5 -0.8**
MTCE Montecelio 84.38 48 P **P 19 33 16.6 0.0**
WET Wettzell 84.41 41 *e*P **P 19 33 16.3 -0.2**
comp=Z,39nm,1.5s,mb5.3
WET Wettzell 84.41 41 *e*P **P 19 33 16.3 -0.2**
WET pmax pmax
comp=Z,39nm,1.5s,mb5.3
WET Wettzell 84.41 41 *e*P **P 19 33 16.3 -0.2**
comp=Z,39nm,1.5s,mb5.3
CLL Collm 84.48 39 *e*P **P 19 33 16.4 -0.4**
comp=Z,48nm,1.7s,mb5.3
CLL Collm 84.48 39⇓*i*P **P 19 33 16.8 0.0**
CLL *i* 19 33 22.4
CLL *e*S S 19 43 38.0 -5.4
CLL pmax pmax
comp=Z,20nm,1.3s,mb5.1
CLL MLR MLR
comp=Z,2µm,19.3s,MS5.6
CLL Collm 84.48 39⇓*i*P **P 19 33 16.8 0.0**
comp=Z,20nm,1.3s,mb5.1
CLL *i* 19 33 22.4
CLL *e*S S 19 43 38.0 -5.4
CLL LR LR
comp=Z,2µm,19.3s,MS5.6
CLL Collm 84.48 39⇓*i*P **P 19 33 16.8 0.0**
comp=Z,20nm,1.3s,mb5.1
CLL LV 19 12 00.0
comp=Z,2µm,19.3s
CLL *i* PcP PcP 19 33 20.2 -0.3
comp=Z,50nm,1.8s
CLL *i* pPcP 19 33 22.4
CLL *i* 19 33 34.5
CLL *e* 19 33 44.0
CLL *e*PP PP 19 36 41.0 +9.0
CLL *e*S S 19 43 44.0 +0.6
CLL *e*PS 19 44 35.0
CLL *e* 19 47 59.0
CLL *e*(SS) 19 49 02.0
CLL *e* 19 49 41.0
CLL *e*SSS 19 52 48.0

CING Cingoli 84.69 47 P **P 19 33 16.5 -1.6**
KBA Koelnbreinsper 84.74 43⇑*i*P **P 19 33 17.8 -0.5**
comp=Z,84nm,1.1s,mb5.8,SNR=30
KBS Kingsbay 84.83 11 *e*P **P 19 33 18.7 +0.5**
KBS AMB AMB 19 33 23.2
comp=Z,42nm,1.4s,mb5.4
KBS *e*SKS 19 43 42.3
KBS AMS AMS 20 05 56.8
comp=Z,3µm,31.3s,MS5.5
KBS Kingsbay 84.83 11⇑*i*P **P 19 33 18.9 +0.7**
KBS pmax pmax
comp=Z,22nm,0.8s,mb5.3
KBS Kingsbay 84.83 11⇑*i*P **P 19 33 18.9 +0.7**
comp=Z,22nm,0.8s,mb5.3
AQU L'Aquila 84.86 48⇓*e*P **P 19 33 18.9 -0.1**
AQU pmax pmax
comp=Z,40nm,1.0s,mb5.5
AQU MLR MLR
comp=Z,3µm,22.0s,MS5.6
AQU L'Aquila 84.86 48⇓*e*P **P 19 33 18.9 -0.1**
comp=Z,40nm,1.0s,mb5.5
AQU LR LR
comp=Z,3µm,22.0s,MS5.6
AQU L'Aquila 84.86 48⇑*i*P **P 19 33 20.6 +1.6**
KHC Kasperske Hory 84.86 41 *e*P **P 19 33 18.6 -0.3**
KHC *e* 19 43 46.2
KHC MLR MLR
comp=Z,2µm,21.0s,MS5.6
KHC Kasperske Hory 84.86 41⇑*i*P **P 19 33 18.1 -0.8**
comp=Z,31nm,1.3s,mb5.3
KHC Kasperske Hory 84.86 41 *e*P **P 19 33 18.6 -0.3**
KHC *e*SKS 19 43 46.2
KHC AMS AMS 20 08 10.0
comp=Z,2µm,21.0s
LOF Lofoten 84.87 22 *e*P **P 19 33 20.5 +2.0**
VENT Ventotene 84.92 50 P **P 19 33 20.5 +1.2**
MYKA Terra Mystica 84.95 44⇑*i*P **P 19 33 18.9 -0.4**
comp=Z,52nm,1.1s,mb5.6
GEC2 GERESS Array S 84.95 41 *e*P **P 19 33 18.6 -0.7**
comp=Z,32nm,1.2s,mb5.3
GEC2 GERESS Array S 84.95 41 *e*P **P 19 33 18.6 -0.7**
GEC2 pmax pmax
comp=Z,32nm,1.2s,mb5.3
GEC2 GERESS Array S 84.95 41 *e*P **P 19 33 18.6 -0.7**
comp=Z,32nm,1.2s,mb5.3
GERES GERESS Array B 84.95 41 P **P 19 33 18.8 -0.4**
comp=Z,10nm,0.8s,mb5.0,baz=264,slow=2.7,SNR=34
GERES PKPPKP 19 59 33.6
comp=Z,0.4nm,0.7s,baz=90,slow=2.7,SNR=3.6
GERES GERESS Array B 84.95 41 P **P 19 33 18.8 -0.5**
GERES P'P' 19 59 33.6
TRI Trieste 85.05 45 P **P 19 33 19.4 -0.5**
BRG Berggiesshubel 85.07 39 *e*P **P 19 33 19.5 -0.4**
comp=Z,37nm,1.5s,mb5.3
BRG Berggiesshubel 85.07 39 *e*P **P 19 33 19.9 0.0**
comp=Z,22nm,1.2s,mb5.2
BRG *i* 19 33 49.0
comp=Z,16nm,1.0s
BRG PP PP 19 36 42.0 +5.2
BRG S S 19 43 47.0 -2.4
BRG PS 19 44 45.0
BRG SS SS 19 49 37.0 +14
BRG *e*PKPPKP 19 59 28.0
comp=Z,2.5nm,1.0s
BRG
comp=N,1µm,20.8s
BRG
comp=E,3µm,29.0s
BRG
comp=Z,4µm,28.7s
VOY Vojsko 85.14 44 *e*P **P 19 33 19.8 -0.5**
VOY *e* 19 33 34.7
VOY *e* 19 33 49.8
VOY *e* 19 34 04.0
VOY *e* 19 34 25.3
VOY *e* 19 34 49.1
JAVS Javornik 85.26 44 *i* P **P 19 33 20.5 -0.4**
JAVS *e*SKSac SKSac 19 43 50.0 +3.9
MOA Molln 85.35 42⇑*i*P **P 19 33 20.3 -1.0**
comp=Z,67nm,1.2s,mb5.6,SNR=27
PRA Prague 85.40 40 P **P 19 33 22.0 +0.5**
PRA AMS AMS 20 12 30.0
PRU Pruhonice 85.48 40 *e*P **P 19 33 22.8 +0.9**
PRU *e* 19 43 50.8
PRU MLR MLR
comp=Z,2µm,18.8s,MS5.6
PRU Pruhonice 85.48 40 *e*P **P 19 33 22.8 +0.9**
PRU *e*SKS 19 43 50.8
PRU AMS AMS 20 10 20.0
comp=Z,2µm,18.8s
PVCC Panska Ves 85.48 40 *e*P **P 19 33 22.2 +0.3**
PVCC *e* 19 43 48.6
PVCC MLR MLR
comp=Z,4µm,26.3s,MS5.7
PVCC Panska Ves 85.48 40 *e*P **P 19 33 22.2 +0.3**
PVCC *e*SKS 19 43 48.6
PVCC AMS AMS 20 04 20.0
comp=Z,4µm,26.3s
MIDA Miranda 85.52 49 P **P 19 33 21.8 -0.5**
BSD Bornholm Skovb 85.58 35 *e*P **P 19 33 25.4 +3.1**
BSD MLR MLR
comp=Z,2µm,20.0s,MS5.5
BSD Bornholm Skovb 85.58 35 *i* P **P 19 33 25.4 +3.1**
BSD
comp=Z,2µm,20.0s
LJU Ljubljana 85.58 44 *i* P **P 19 33 22.2 -0.3**
LJU *e*SKSac SKSac 19 43 52.3 +4.2
SPB4 Spitsbergen Ar 85.70 12⇑*i*P **P 19 33 22.3 -0.2**
NVLJ Novalja 85.87 46 P **P 19 33 22.6 -1.3**
NVLJ Novalja 85.87 46 *i* P **P 19 33 22.6 -1.3**
SOKA Soboth 85.91 44⇓*i*P **P 19 33 23.4 -0.7**
comp=Z,22nm,1.2s,mb5.3
PERS Pernice 85.97 44 *i* P **P 19 33 24.5 +0.1**
PERS *e*SKSac SKSac 19 43 58.0 +7.5
BOJS Bojanci 86.10 45 *i* P **P 19 33 25.4 +0.3**
BOJS *e*SKSac SKSac 19 43 59.5 +8.1
TREC Trest 86.11 41 *e*P **P 19 33 25.5 +0.4**
TREC *e* 19 43 53.1
TREC MLR MLR
comp=Z,2µm,17.7s,MS5.5
TREC Trest 86.11 41 *e*P **P 19 33 25.5 +0.4**
TREC *e*SKS 19 43 53.1
TREC AMS AMS 20 14 40.0
comp=Z,2µm,17.7s
VNA1 Neumayer--Stat 86.21 162 *e*P **P 19 33 23.9 -1.1**
VNA1 *e* pP 19 33 28.8 +0.4
VNA1 *e* 19 36 44.4
ARSA Arzberg 86.22 43⇑*i*P **P 19 33 24.9 -0.7**
comp=Z,33nm,1.4s,mb5.4,SNR=21
FG5 Orsara di Pugl 86.30 49 P **P 19 33 26.4 +0.2**
FG5 pmax pmax
comp=Z,30nm,0.9s,mb5.5
FG5 Orsara di Pugl 86.30 49 P **P 19 33 26.4 +0.2**
comp=Z,30nm,0.9s,mb5.5
CONA Conrad Observa 86.42 42⇓*i*P **P 19 33 26.4 -0.2**
comp=Z,39nm,1.5s,mb5.4,SNR=21
RGNG Rignano Grg 86.52 49 P **P 19 33 26.7 -0.5**
BJO Bjornoya 86.53 16 *e*SKS 19 43 51.9
KSP Ksiaz 86.56 39 *e*P **P 19 33 27.7 +0.4**
KSP LMZ 20 04 52.8
comp=Z,7µm,27.4s
KSP Ksiaz 86.56 39 *e*P **P 19 33 27.6 +0.3**
KSP *e*S S 19 43 58.0 -6.0
KSP MLR MLR
comp=Z,8µm,27.4s,MS6.0
VNA2 Neumayer--Watz 86.58 162 *e*P **P 19 33 24.8 -2.1**
VNA2 *e* 19 33 31.1
VNA2 *e* 19 36 47.2
DPC Dobruska-Polom 86.61 40 *e*P **P 19 33 27.4 -0.1**
DPC *e* 19 43 59.2
DPC MLR MLR
comp=Z,2µm,17.8s,MS5.6
DPC Dobruska-Polom 86.61 40 *e*P **P 19 33 27.4 -0.1**
DPC *e*SKS 19 43 59.2
DPC AMS AMS 20 13 10.0
comp=Z,2µm,17.8s
TRO Tromso 86.78 21 *e*P **P 19 33 28.2 +0.2**
TRO AMB AMB 19 33 34.6
comp=Z,111nm,0.9s,mb6.1
TRO *e*SKS 19 43 53.5
VRAC Vranov 86.83 41⇑P **P 19 33 28.3 -0.3**
VRAC Vranov 86.83 41⇑*i*P **P 19 33 28.3 -0.3**
CEL Celeste 86.93 52 PFAKE 19 33 40.0 +11
CEL LR LR

comp=Z,3µm,22.0s,MS5.7
GKP Gorka Klasztor 87.02 37 *e*P **P 19 33 30.5 +1.1**
GKP LMZ 20 06 57.1
comp=Z,3µm,25.4s
ZST Bratislava 87.23 42 *e*P **P 19 33 31.7 +1.1**
ZST pmax pmax
comp=Z,21nm,0.8s,mb5.4
ZST MLR MLR
comp=Z,3µm,18.6s,MS5.7
ZST Bratislava 87.23 42 *e*P **P 19 33 31.7 +1.1**
comp=Z,21nm,0.8s,mb5.4
ZST *e*S S 19 44 18.1 +7.5
ZST *e*SS SS 19 49 39.5 -15
ZST LR LR
comp=Z,3µm,18.6s,MS5.7
ZST Bratislava 87.23 42 *e*P **P 19 33 31.7 +1.1**
MORC Moravsky Berou 87.42 40⇑*i*P **P 19 33 31.1 -0.4**
MORC pmax pmax
comp=Z,47nm,1.5s,mb5.5
MORC Moravsky Berou 87.42 40⇑*i*P **P 19 33 31.1 -0.4**
comp=Z,47nm,1.5s,mb5.5
MORC Moravsky Berou 87.42 40⇓*i*P **P 19 33 31.2 -0.3**
SMOL Smolenice 87.43 42 *e*P **P 19 33 33.7 +2.2**
SMOL Smolenice 87.43 42 *e*P **P 19 33 33.7 +2.2**
TIP Timpagrande 87.55 51⇑*e*P **P 19 33 30.1 -2.2**
comp=Z,24nm,1.0s,mb5.4
TNA Tin City 87.78 335⇑*i*P **P 19 33 32.2 -0.7**
comp=Z,85nm,1.2s,mb5.8
OKC Ostrava-Krasne 87.81 40 *e*P **P 19 33 33.8 +0.5**
OKC *e* 19 44 08.8
OKC MLR MLR
comp=Z,2µm,19.9s,MS5.6
OKC Ostrava-Krasne 87.81 40 *e*P **P 19 33 33.8 +0.5**
OKC *e*SKS 19 44 08.8
OKC AMS AMS 20 12 20.0
comp=Z,2µm,19.9s
RAC Raciborz 87.82 40 *e*P **P 19 33 34.2 +0.8**
RAC MLR MLR
comp=Z,2µm,20.0s,MS5.5
STON Ston 88.01 47 P **P 19 33 30.0 -4.5**
STON Ston 88.01 47 *i* P **P 19 33 30.0 -4.5**
KOLL Kolacno 88.07 42 *e*P **P 19 33 35.9 +1.3**
KOLL Kolacno 88.07 42 *e*P **P 19 33 35.8 +1.2**
UNV Unalaska Valle 88.15 324 *e*P **P 19 33 32.7 -2.1**
VYHS Vyhne 88.37 42 *e*P **P 19 33 36.6 +0.6**
VYHS *e*S S 19 44 22.6 +1.2
VYHS pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
VYHS MLR MLR
comp=Z,1µm,19.7s,MS5.3
VYHS Vyhne 88.37 42 *e*P **P 19 33 36.6 +0.6**
comp=Z,9.9nm,1.1s,mb5.0
VYHS *e*S S 19 44 22.6 +1.2
VYHS LR LR
comp=Z,1µm,19.7s,MS5.3
VYHS Vyhne 88.37 42 *e*P **P 19 33 36.6 +0.6**
PKSM Moragy 88.42 44⇑P **P 19 33 36.0 -0.3**
PKSM Moragy 88.42 44⇑*i*P **P 19 33 36.0 -0.3**
BUD Budapest 88.58 43⇓*e*PcP PcP 19 33 34.9 -3.7
OJC Ojcow 88.84 40 *e*P **P 19 33 38.1 -0.1**
OJC *e*PP PP 19 37 06.2 -1.0
OJC *e*SKSac SKSac 19 44 07.1 -0.8
OJC *e*S S 19 44 25.6 -0.2
OJC L 20 11 24.6
comp=Z,3.4nm,21.4s
ARCES ARCESS Array B 89.08 20 P **P 19 33 38.4 -0.5**
comp=Z,29nm,0.8s,mb5.7,baz=266,slow=3.4,SNR=41
PSZ Piszkesteto 89.12 42 *e*P **P 19 33 39.5 -0.1**
PSZ pmax pmax
comp=Z,16nm,1.0s,mb5.3
PSZ MLR MLR
comp=Z,2µm,19.0s,MS5.5
PSZ Piszkesteto 89.12 42 *e*P **P 19 33 39.5 -0.1**
comp=Z,16nm,1.0s,mb5.3
PSZ LR LR
comp=Z,2µm,19.0s,MS5.5
PSZ Piszkesteto 89.12 42⇓*e*PcP PcP 19 33 40.7 -0.3
PSZ Piszkesteto 89.12 42⇓*i*P **P 19 33 40.6 +1.0**
NIE Niedzica 89.25 41 *e*P **P 19 33 41.9 +1.8**
KECS Kecovo 89.46 42 *e*P **P 19 33 42.7 +1.6**
KECS pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
KECS Kecovo 89.46 42 *e*P **P 19 33 42.7 +1.6**
comp=Z,7.3nm,1.1s,mb4.9
KECS *e* 19 33 48.0
KECS Kecovo 89.46 42 *e*P **P 19 33 42.7 +1.6**
KECS *e*pP pP 19 33 48.0 +3.5
KEV Kevo 89.56 20 *e*P **P 19 33 40.2 -1.0**
KEV pmax pmax
comp=Z,46nm,1.0s,mb5.8
KEV Kevo 89.56 20 *e*P **P 19 33 40.2 -0.9**
comp=Z,46nm,1.0s,mb5.8
KEV Kevo 89.56 20 *e*p **P 19 33 41.3 +0.1**
comp=Z,40nm,1.3s,mb5.6
DIVS Divibare 89.57 46 P **P 19 33 42.5 +0.8**
GAMB Gambell 89.62 334 *e*P **P 19 33 40.8 -0.8**
comp=Z,95nm,1.2s,mb6.0
PUK Puka 89.70 48 *e*P **P 19 33 43.4 +1.0**
KEK Kerkira 89.85 50 P **P 19 33 44.2 +1.0**
STHS Stebnicka Huta 89.86 41 *e*P **P 19 33 45.3 +2.3**
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
STHS Stebnicka Huta 89.86 41 *e*P **P 19 33 45.3 +2.3**
comp=Z,8.0nm,1.0s,mb5.0
STHS Stebnicka Huta 89.86 41 *e*P **P 19 33 45.3 +2.3**
SRN Sarande 89.99 50 *e*P **P 19 33 44.0 +0.2**
PHP Peshkopia 90.14 48 *e*P **P 19 33 44.9 +0.4**
IGT Igoumenitsa 90.28 50 P **P 19 33 44.5 -0.7**
SUW Suwalki 90.46 36 *e*P **P 19 33 47.0 +1.3**
SUW LMZ 20 06 38.3
comp=Z,2µm,25.8s
SUW Suwalki 90.46 36 *e*P **P 19 33 46.5 +0.8**
SUW pmax pmax
comp=Z,37nm,0.3s,mb6.2
SUW Suwalki 90.46 36 *e*P **P 19 33 46.5 +0.8**
comp=Z,37nm,0.3s,mb6.2
OHR Ohrid 90.47 49 *e*P **P 19 33 46.4 +0.3**
KBN Korca 90.51 49 *e*P **P 19 33 43.5 -2.8**
BZS Buzias 90.55 44 P **P 19 33 47.3 +1.0**
BZS Buzias 90.55 44⇓*i*P **P 19 33 47.1 +0.8**
KOLS Kolonicke sedl 90.58 41 *e*P **P 19 33 47.1 +0.7**
KOLS pmax pmax
comp=Z,11nm,1.1s,mb5.1
KOLS MLR MLR
comp=Z,1µm,28.2s,MS5.2
KOLS Kolonicke sedl 90.58 41 *e*P **P 19 33 47.1 +0.7**
comp=Z,11nm,1.1s,mb5.1
KOLS *e* pP 19 33 51.5 +1.8
KOLS *e*S S 19 44 47.0 +4.9
KOLS LR LR
comp=Z,1µm,28.2s,MS5.2
KOLS Kolonicke sedl 90.58 41 *e*P **P 19 33 47.1 +0.7**
KOLS *e*pP pP 19 33 51.5 +1.8
VLS Valsamata 90.62 52 P **P 19 33 47.3 +0.5**
UZH Uzhgorod 90.64 41 *e*P **P 19 33 46.8 +0.2**
UZH *e* 19 33 59.0
UZH *e* 19 37 17.0
UZH *e* 19 39 17.0
UZH *e* 19 44 08.0
UZH *e*S S 19 44 41.0 -1.6
UZH *e* 19 45 47.0
UZH MLR MLR
comp=N,400nm,19.0s,MS5.5
UZH MLR MLR
comp=E,2µm,19.0s,MS5.5
UZH MLR MLR
comp=Z,1µm,19.0s,MS5.3
KAF Kangasniemi 90.77 28 *e*P **P 19 33 46.4 -0.5**
KAF pmax pmax
comp=Z,29nm,1.3s,mb5.5
KAF Kangasniemi 90.77 28 *e*p **P 19 33 46.4 -0.5**
comp=Z,29nm,1.3s,mb5.4
KWP Kalwaria Pacla 90.78 40 *e*P **P 19 33 49.1 +1.9**
KWP LMZ 20 06 16.0
comp=Z,3µm,30.2s
KWP Kalwaria Pacla 90.78 40 *e*P **P 19 33 47.7 +0.4**
KWP pmax pmax
comp=Z,30nm,0.9s,mb5.6
KWP MLR MLR
comp=Z,2µm,21.0s,MS5.5
KWP Kalwaria Pacla 90.78 40 *e*P **P 19 33 47.7 +0.5**
comp=Z,30nm,0.9s,mb5.6
KWP LR LR
comp=Z,2µm,21.0s,MS5.5

KWP	Kalwaria Pacla	90.78	40	⇓	*i* P	P	19 33 48.0 +0.7
KRUS	Krusevo	90.78	49		*e* P	P	19 33 47.5 0.0
FINES	FINESS Array B	90.78	28		P	P	19 33 46.3 -0.7
	comp=Z,18nm,0.9s,mb5.4,baz=318,slow=2.6,SNR=24						
FINES					LR	LR	20 08 36.8
	comp=Z,1μm,20.2s,MS5.3,baz=279,slow=32						
SKO	Skopje	90.85	48		*e* P	P	19 33 47.9 +0.1
TRPA	Tarpa	90.86	42	⇑	*i* P	P	19 33 47.5 -0.2
FNA	Florina	90.94	49		P	P	19 33 48.2 0.0
DRGR		91.16	43		P	P	19 33 50.0 +0.9
GZR	Gura Zlata	91.39	44		P	P	19 33 51.6 +1.4
GZR	Gura Zlata	91.39	44	⇓	*i* P	P	19 33 52.3 +2.1
STIP	Stip	91.44	48		*e* P	P	19 33 51.1 +0.6
BMR	Baia Mare	91.56	42		P	P	19 33 52.6 +1.6
THL	Klokotos Trika	91.57	50		P	P	19 33 51.8 +0.6
LVV	L'vov	91.60	40		*e* P	P	19 33 51.6 +0.5
LVV					MLR	MLR	
	comp=Z,1μm,19.0s,MS5.4						
LVV					MLR	MLR	
	comp=N,500nm,18.0s,MS5.5						
LVV					MLR	MLR	
	comp=E,2μm,20.0s,MS5.5						
EFP	Efpalio	91.62	51		P	P	19 33 53.1 +1.6
VSU	Vasula	91.67	31	*d*	*i* P	P	19 33 51.2 0.0
VSU					pmax	pmax	
	comp=Z,73nm,0.9s,mb6.0						
VAY	Valandovo	91.77	49		*e* P	P	19 33 52.1 0.0
VAY	Valandovo	91.77	49		P	P	19 33 50.3 -1.8
AGG	Agios Georgios	91.88	51		P	P	19 33 53.2 +0.6
ISAL	Salakas	91.89	34		*e* P	P	19 33 53.0 +0.7
IZAR	Zarasai	91.93	34		*e* P	P	19 33 52.9 +0.4
IIGN	Ignalina	91.99	34		*e* P	P	19 33 53.6 +0.9
VTS	Vitosha	92.08	47		P	P	19 33 53.6 +0.1
VTS	Vitosha	92.08	47		*e* P	P	19 33 54.2 +0.7
DSF	Desfina	92.11	51		P	P	19 33 53.7 0.0
VLX	Vlachokerasia	92.12	52		P	P	19 33 56.0 +2.2
IDID	Didziasalis	92.28	34		*e* P	P	19 33 54.8 +0.6
APA	Apatity	92.37	22	⇑	*i* P	P	19 33 54.0 -0.3
APA					*e*		19 44 30.0
APA					*e*S	S	19 44 52.0 -5.6
APA					*e*SS	SS	19 51 07.0 -0.8
APA					pmax	pmax	
	comp=Z,43nm,1.4s,mb5.6						
APA					MLR	MLR	
	comp=Z,1μm,21.0s,MS5.3						
NACGM	Naroch	92.39	35		*e* P	P	19 33 54.0 -0.6
SOH	Sokhos	92.43	49		P	P	19 33 57.1 +2.0
XOR	Xorichti	92.50	50		P	P	19 33 54.1 -1.4
LTK	Loutraki	92.50	52		P	P	19 33 53.8 -1.7
PLG	Polygyros	92.56	49		P	P	19 33 58.9 +3.2
SRS	Serrai	92.56	49		P	P	19 33 55.4 -0.3
TSUM	Tsumeb	92.60	109	⇑	*e* P	P	19 33 57.2 +0.8
	comp=Z,29nm,1.4s,mb5.5						
MMB	Musomiste	92.60	48		*e* P	P	19 33 56.3 +0.4
MAIT	Maitri	92.62	161		*e* P	P	19 33 54.7 -0.6
NVL	N'lazarevskaya	92.65	161		*e* P	P	19 33 52.7 -2.8
NVL					*e*		19 34 01.0
NVL					*e*		19 44 53.9
NVL					pmax	pmax	
	comp=Z,25nm,1.0s,mb5.6						
NVL					MLR	MLR	
	comp=Z,3μm,19.0s,MS5.8						
BUR08	Bucovina Ar. S	92.71	42		*e* P	P	19 33 56.8 +0.5
BURAR	Bucovina Array	92.72	42	⇓	P	P	19 33 57.5 +1.2
BURAR	Bucovina Array	92.72	42	⇓	*i* P	P	19 33 57.5 +1.2
LVZ	Lovozero	92.72	21		*i* P	P	19 33 56.0 +0.1
LVZ	Lovozero	92.72	21		PFAKE		19 34 10.0 +14
LVZ					LR	LR	
	comp=Z,1μm,19.0s,MS5.4						
PAIG	Paliouri	92.80	50		P	P	19 33 57.3 +0.4
JOF	Joensuu	92.85	26		*e* P	P	19 33 54.5 -2.0
JOF					pmax	pmax	
	comp=Z,20nm,1.0s,mb5.5						
JOF	Joensuu	92.85	26		*e*p	P	19 33 54.5 -2.0
	comp=Z,20nm,1.0s,mb5.5						
AOS	Alonnisos	93.06	51		P	P	19 33 56.6 -1.5
MNK	Minsk	93.07	35		*e* P	P	19 33 56.0 -1.7
MNK					*e*		19 45 04.0
MNK					MLR	MLR	
	comp=Z,6μm,20.0s,MS6.1						
MICGM	Minsk	93.09	35		*e* P	P	19 33 56.0 -1.9
RZN	Rozhen	93.32	48		*e* P	P	19 33 59.4 +0.2
MLR	Muntele Rosu	93.58	44		P	P	19 34 01.1 +0.8
MLR	Muntele Rosu	93.58	44	⇑	*i* P	P	19 34 01.0 +0.7
SZH	Strazhica	93.95	46		*e* P	P	19 34 02.4 +0.3
RDO	Rodhopi	94.01	48		P	P	19 34 02.7 +0.3
VRI	Vrincioaia	94.05	44	⇑	P	P	19 34 05.0 +2.5
VRI	Vrincioaia	94.05	44	⇑	*i* P	P	19 34 05.0 +2.5
ALN	Alexandroupoli	94.43	49		P	P	19 34 04.6 +0.2
AKASG	Malin Array Be	94.71	38		P	P	19 34 04.5 -0.9
	comp=Z,2.7nm,0.8s,mb4.7,baz=274,slow=3.6,SNR=8.8						
AKASG					LR	LR	20 15 44.5
	comp=Z,3μm,20.0s,MS5.7,baz=280,slow=35						
KIS	Kishinev	95.25	42		*e* P	P	19 34 05.0 -2.9
KIS					*e*SKS		19 44 40.0
KIS	Kishinev	95.25	42		*e*PS	ScS	19 45 20.0 -4.6
KIS					LRM		20 17 56.0
	comp=Z,500nm,22.0s						
KIS	Kishinev	95.25	42		*e* P	P	19 34 05.0 -2.9
KIS					*e*		19 37 57.0
KIS					*e*		19 40 10.0
KIS					*e*		19 44 40.0
KIS					*e*PS	ScS	19 45 20.0 -4.6
KIS					MLR	MLR	
	comp=Z,2μm,18.0s,MS5.6						
KIS					MLR	MLR	
	comp=N,400nm,20.0s,MS5.1						
KIS					MLR	MLR	
	comp=E,500nm,22.0s,MS5.1						
KIS					MLR	MLR	
	comp=Z,2μm,20.0s						
TIRR	Tirgusor	95.49	45	⇑	*i* P	P	19 34 08.0 -1.1
TIRR					pmax	pmax	
	comp=Z,16nm,1.1s,mb5.4						
TIRR	Tirgusor	95.49	45	⇑	*i* P	P	19 34 08.0 -1.1
	comp=Z,16nm,1.1s,mb5.4						
TIRR	Tirgusor	95.49	45	⇓	*i* P	P	19 34 08.3 -0.8
SUR	Sutherland	96.11	122		*e* P	P	19 34 12.9 +0.7
BILL	Bilibino	96.72	341	⇑	*e* P	P	19 34 13.6 -0.6
BILL					*i* S	SKSac	19 44 52.4 +1.4
BILL					pmax	pmax	
	comp=Z,24nm,1.0s,mb5.6						
BILL	Bilibino	96.72	341	⇑	*i* P	P	19 34 12.3 -1.9
	comp=Z,18nm,0.9s,mb5.5						
BILL					LR	LR	
	comp=Z,5μm,20.0s,MS6.0						
OBN	Obninsk	97.77	33	⇑	*e* P	P	19 34 19.7 +0.5
OBN					*e*		19 38 23.1
OBN					*e*S	SKSac	19 44 58.9 +2.0
OBN					*i* PS	PS	19 47 03.1 -5.9
OBN					pmax	pmax	
	comp=Z,26nm,1.3s,mb5.6						
OBN					MLR	MLR	
	comp=Z,2μm,19.0s,MS5.7						
OBN	Obninsk	97.77	33		PFAKE		19 34 30.0 +11
OBN					LR	LR	
	comp=Z,2μm,20.0s,MS5.7						
ISP	Isparta	98.42	51		PFAKE		19 34 30.0 +7.5
ISP					LR	LR	
	comp=Z,1μm,20.0s,MS5.3						
AFI	Afiamalu	98.93	257		LR	LR	20 09 08.9
	comp=Z,2μm,21.1s,MS5.5,baz=83,slow=29						
AFI	Afiamalu	98.93	257		PFAKE		19 34 30.0 +4.7
AFI					LR	LR	
	comp=Z,3μm,20.0s,MS5.8						
SIM	Simferopol'	99.33	43		P	P	19 34 31.8 +5.4
SIM					S	SKSac	19 44 57.9 -7.3
SIM					pmax	pmax	
	comp=Z,33nm,17.0s						
SIM					MLR	MLR	
	comp=Z,2μm,19.0s,MS5.6						
BOSA	Boshof	99.92	118		LR	LR	20 18 04.4
	comp=Z,4μm,18.7s,MS6.0,baz=270,slow=34						
BOSA	Boshof	99.92	118		PFAKE		19 34 40.0 +11
BOSA					LR	LR	
	comp=Z,4μm,19.0s,MS6.0						
MIDW	Midway	99.94	299		PFAKE		19 34 40.0 +11
MIDW					LR	LR	
	comp=Z,1μm,21.0s,MS5.4						
LBTB	Lobatse	100.23	114		PFAKE		19 34 40.0 +10
LBTB					LR	LR	
	comp=Z,4μm,20.0s,MS6.0						
SBA	Scott Base	100.33	191		PFAKE		19 34 40.0 +9.4
SBA					LR	LR	
	comp=Z,2μm,19.0s,MS5.7						
BR131	Keskin Array S	100.35	48		PFAKE		19 34 40.0 +9.3
BR131					LR	LR	
	comp=Z,935nm,21.0s,MS5.3						
BRTR	Keskin Array B	100.35	48		P	Pdif	19 34 31.7 +1.0
	comp=Z,0.7nm,0.9s,baz=266,slow=3.5,SNR=5.8						
BRTR					PP	PP	19 38 43.0 +5.8
	comp=Z,0.8nm,1.0s,baz=272,slow=4.7,SNR=3.6						
BRTR					PKKP	PKKPbc	19 50 46.6 -2.0
	comp=Z,0.9nm,0.9s,baz=157,slow=4.1,SNR=4.0						
BRTR	Keskin Array B	100.35	48		P	Pdif	19 34 31.7 +1.0
BRTR							19 38 43.1
CSS	Prodhromos	101.27	53		PFAKE		19 34 50.0 +15
CSS					LR	LR	
	comp=Z,1μm,21.0s,MS5.3						
LSZ	Lusaka	102.56	105		*e* P	Pdif	19 34 45.9 +5.4
TIXI	Tiksi	102.65	353		*i* P	Pdif	19 34 40.3 -0.6
TIXI					pmax	pmax	
	comp=Z,14nm,1.5s						
TIXI	Tiksi	102.65	353		*e*Pdif	Pdif	19 34 39.7 -1.2
	comp=Z,8.1nm,0.8s						
KIV	Kislovodsk	105.45	42	⇓	*e* P	Pdif	19 34 53.9 +0.5
KIV					*e*		19 39 12.7
KIV					*e*S	SKSac	19 45 33.3 -0.9
KIV					pmax	pmax	
	comp=Z,2.0nm,0.7s						
KIV					MLR	MLR	
	comp=Z,700nm,21.0s,MS5.2						
KIV	Kislovodsk	105.45	42		PFAKE		19 39 20.0 +13
KIV					LR	LR	
	comp=Z,1μm,19.0s,MS5.4						
FUNA	Funafuti	107.59	262		PFAKE		19 39 20.0 +7.9
FUNA					LR	LR	
	comp=Z,13μm,20.0s,MS6.5						
ARU	Arti	107.96	26		PFAKE		19 39 20.0 +8.4
ARU					LR	LR	
	comp=Z,2μm,21.0s,MS5.6						
GNI	Garni	108.31	45		PFAKE		19 39 20.0 +7.2
GNI					LR	LR	
	comp=Z,859nm,21.0s,MS5.3						
PETK	Petropavlovsk-	108.32	330		PP	PP	19 39 35.6 -0.1
	comp=Z,3.3nm,0.9s,baz=96,slow=9.1,SNR=4.2						
SNZO	South Karori	109.12	228		PFAKE		19 39 20.0 +5.8
SNZO					LR	LR	
	comp=Z,2μm,21.0s,MS5.7						
MAW	Mawson	110.37	164		*e*PKIKP	PKiKP	19 39 14.3 -1.5
MAW					MLR	MLR	
	comp=Z,5μm,22.0s						
YAK	Yakutsk	111.35	348		*e*PKIKP	PKiKP	19 39 15.9 -1.9
ABKAR	Akbulak array	113.11	31		*e*PKPdf	PKiKP	19 39 21.1 -0.5
TARA	Tarawa	113.24	273		PFAKE		19 39 30.0 +7.1
TARA					LR	LR	
	comp=Z,1μm,20.0s,MS5.6						
BRVK	Borovoye	115.17	23		PFAKE		19 39 40.0 +15
BRVK					LR	LR	
	comp=Z,2μm,20.0s,MS5.7						
BVAR	Borovoye Array	115.24	23		PKP	PKiKP	19 39 25.4 -0.1
	comp=Z,1.5nm,0.7s,baz=212,slow=1.4,SNR=7.8						
BVAR					PP	PP	19 40 24.3 -0.9
	comp=Z,2.6nm,0.9s,baz=8.7,slow=2.0,SNR=4.0						
WAKE	Wake Island	116.20	294		PFAKE		19 39 40.0 +12
WAKE					LR	LR	
	comp=Z,2μm,21.0s,MS5.6						
CLNS	Chul'man	117.10	349		*e*PKIKP	PKPdf	19 39 23.7 -5.3
CLNS					pmax	pmax	
	comp=Z,12nm,1.0s						
CLNS					pmax	pmax	
	comp=N,5.0nm,0.9s						
BOD	Bodaibo	117.65	355		*e* P	Pdif	19 35 46.7 -0.9
NVS	Novosibirsk	117.90	15		*i* PKIKP	PKPdf	19 39 29.8 -0.8
NVS					*i*		19 46 21.8
NVS					pmax	pmax	
	comp=Z,15nm,1.9s						
NVS					pmax	pmax	
	comp=E,7.0nm,2.0s						
CASY	Casey	118.19	182		PFAKE		19 39 40.0 +9.2
CASY					LR	LR	
	comp=Z,2μm,20.0s,MS5.8						
ZAA0	Zalesovo Array	119.10	14		*e*PKPdf	PKPdf	19 39 31.8 -1.2
ZALV	Zalesovo Beam	119.10	14		PKP	PKPdf	19 39 32.2 -0.7
	comp=Z,12nm,0.7s,baz=273,slow=1.4,SNR=33						
ZALV	Zalesovo Beam	119.10	14		PKP	PKPdf	19 39 32.2 -0.7
DZM	Mont Dzumac	119.33	247		*e*PS	PS	19 50 42.9 -1.3
	comp=Z,503nm,25.9s						
DZM					*e*LR	LR	20 16 11.1
	comp=Z,2μm,25.4s						
YSS	Yuzh-Sakhalins	119.60	332		*i* PKIKP	PKPdf	19 39 37.0 +2.9
YSS					*e*		19 40 52.0
YSS					*e*		19 46 30.0
YSS					*e*PS	PS	19 50 48.0 +2.9
KURK	Kurchatov	120.12	20		PKP	PKPdf	19 39 34.1 -0.9
	comp=Z,8.7nm,0.8s,baz=327,slow=2.2,SNR=22						
KURK					PP	PP	19 41 02.7 +3.7
	comp=Z,3.9nm,1.0s,baz=330,slow=6.9,SNR=4.9						
KURK	Kurchatov	120.12	20		PKP	PKPdf	19 39 34.1 -0.9
KURK					PP	PP	19 41 02.7 +3.6
KURK					LR	LR	
	comp=Z,2μm,20.0s,MS5.7						
ABPO	Ambohimpanom	120.59	109		PFAKE		19 39 50.0 +13
ABPO					LR	LR	
	comp=Z,5μm,22.0s,MS6.1						
JMP	Maruseppu	121.43	329		P	PKPdf	19 39 35.2 -2.5
HABR	Khabarovsk	121.65	338		P	Pdif	19 36 03.4 -2.0
HABR					*i*		19 39 37.0
HABR					*e*		19 41 06.6
HABR					*e*PPP		19 43 41.6
HABR					*e*PS	PS	19 50 59.4 -3.9
HABR					*e*SS	SS	19 57 39.0 -6.0
HABR					pmax	pmax	
	comp=Z,29nm,1.1s						
HABR					pmax	pmax	
	comp=N,29nm,1.5s						
HABR					pmax	pmax	
	comp=E,25nm,1.0s						
HABR					MLR	MLR	
	comp=Z,2μm,23.0s,MS5.6						
ASAJ	Asahikawa	121.74	330		P	PKPdf	19 39 37.4 -0.9
ASAJ	Asahikawa	121.74	330		PKP	PKPdf	19 39 37.0 -1.3
	comp=Z,18nm,1.0s,baz=231,slow=2.0,SNR=6.4						
KLR	Kul'dur	122.18	341		*e*PKIKP	PKPdf	19 39 34.0 -5.0
KLR					*e*		19 46 37.5
KLR					MLR	MLR	
	comp=Z,2μm,19.0s,MS5.9						
ERM	Erimo	122.94	328		PFAKE		19 39 50.0 +9.3
ERM					LR	LR	
	comp=Z,2μm,20.0s,MS5.7						
IRK	Irkutsk	123.52	2		*e*PKIKP	PKPdf	19 39 40.5 -1.0
IRK					pmax	pmax	
	comp=Z,24nm,2.1s						
MOY	Mondy	123.94	4		*e*PKIKP	PKPdf	19 39 42.9 +0.6
MOY					*e*		19 41 25.5
TLY	Talaya	124.06	2		*i* PKIKP	PKPdf	19 39 43.0 +0.4
TLY					*e*		19 41 25.9
TLY					*e*		19 51 24.5
TLY					*e*SS	SS	19 58 08.7 -6.3
TLY					pmax	pmax	
	comp=Z,6.0nm,1.0s						
TLY					MLR	MLR	
	comp=Z,1μm,22.0s,MS5.5						
JOT	Ohata	124.50	329		P	PKPdf	19 39 45.0 +1.3
EKS2	Erkin-Say	124.61	29		*e*PKPdf	PKPdf	19 39 44.1 +0.2
EKS2					LR	LR	
	comp=Z,1μm,20.0s,MS5.6						
MK31	Makanchi Array	124.74	20		*e*PKIKP	PKPdf	19 39 42.0 -2.0
MKAR	Makanchi Array	124.74	20		PKP	PKPdf	19 39 42.6 -1.4
	comp=Z,11nm,0.9s,baz=316,slow=2.2,SNR=40						
FRU	Bishkek	124.88	28		*e*PKIKP	PKPdf	19 39 45.0 +0.6
FRU					*e*		19 41 34.0
FRU					MLR	MLR	
	comp=E,2μm,21.0s						
AML	Almayashu	124.97	29		PFAKE		19 40 00.0 +15
AML					LR	LR	
	comp=Z,190nm,20.0s,MS4.8						
TKM2	Tokmak 2	125.27	27		*e*PKIKP	PKPdf	19 39 43.8 -1.3
HIA	Hailar	125.27	349		*e*PKPdf	PKPdf	19 39 43.9 -1.0
HIA					*e*PP	PP	19 41 25.5 -8.2
UCH	Uchtor	125.30	29		*e*PKPdf	PKPdf	19 39 44.8 -0.4
ZAK	Zakamensk	125.35	2		*e*PKIKP	PKPdf	19 39 43.8 -1.3
ZAK					*e*		19 46 44.1
ZAK					pmax	pmax	
	comp=Z,7.0nm,1.6s						
PAF	Port-aux-Franc	125.77	152		PFAKE		19 40 00.0 +14
PAF					LR	LR	
	comp=Z,4μm,22.0s,MS6.0						
MDJ	Mudanjiang	126.92	339		PKP	PKPdf	19 39 47.0 -1.3
MDJ					PP	PP	19 41 45.8 +1.0
MDJ					PKS		19 43 23.8
MDJ					SKS	SKSdf	19 46 56.5 -3.8
MDJ					SS	SS	19 58 50.1 -1.2
MDJ					AMB	AMB	
	comp=Z,170nm,8.3s						
MDJ					LR	LR	
	comp=N,2μm,35.9s						
MDJ					LR	LR	
	comp=E,3μm,29.1s						
MDJ					LR	LR	
	comp=Z,2μm,31.4s,MS5.7						
MDJ	Mudanjiang	126.92	339		*e*PKPdf	PKPdf	19 39 47.3 -0.9
JMM	Marumori	127.15	326		P	PKPdf	19 39 50.0 +1.1
JYA	Atsumi	127.23	327		P	PKPdf	19 39 48.6 -0.4
VLA	Vladivostok	127.34	337		*e*PKIKP	PKPdf	19 39 49.8 +0.7
VLA					*e*		19 39 59.0
VLA					*e*		19 41 46.0
VLA					pmax	pmax	
	comp=Z,51nm,1.6s						
VLA					MLR	MLR	
	comp=Z,1μm,16.3s,MS5.7						
KBL	Kabul	127.69	39		*e*PKIKP	PKPdf	19 39 49.0 -1.0
ULN	Ulaanbaatar	127.93	359		*e*PKPdf	PKPdf	19 39 49.9 -0.2
ULN					*e*PP	PP	19 41 41.5 -10
SONM	Songino Array	127.96	360		PKP	PKPdf	19 39 49.8 -0.4
	comp=Z,6.5nm,0.8s,baz=312,slow=1.1,SNR=32						
SONM					PP	PP	19 41 51.8 +0.4
	comp=Z,3.8nm,1.0s,baz=353,slow=9.3,SNR=3.9						
KSH	Kashi	128.08	30		*e*PKP	PKPdf	19 39 52.6 +2.0
KSH					*e*PKS		19 43 27.6
KSH					*e*SKS	SKSdf	19 46 58.6 -4.1
KSH					AMB	AMB	
	comp=Z,110nm,5.5s						
KSH					LR	LR	
	comp=N,1μm,17.2s,MS5.7						
KSH					LR	LR	
	comp=E,910nm,15.8s,MS5.7						
KSH					LR	LR	
	comp=Z,1μm,19.4s,MS5.6						
RER	Riviere de l'E	128.18	113		PFAKE		19 40 00.0 +8.7
RER					LR	LR	
	comp=Z,3μm,20.0s,MS6.0						
JSD	Sado	128.41	328		P	PKPdf	19 39 50.0 -1.3
JYT	Yasato	128.65	325		P	PKPdf	19 39 51.3 -0.5
CN2	Changchun	129.00	342		*e*PKP	PKPdf	19 39 50.5 -1.8
CN2					PP	PP	19 42 01.8 +3.3
CN2					SKS	SKSdf	19 47 00.4 -3.8
CN2					AMB	AMB	
	comp=Z,200nm,6.0s						
CN2					LR	LR	
	comp=N,2μm,20.0s,MS6.0						
CN2					LR	LR	
	comp=E,3μm,20.0s,MS6.0						
CN2					LR	LR	
	comp=Z,2μm,22.0s,MS5.7						
WMQ	Urumqi	129.12	17		Pdif	Pdif	19 36 38.6 0.0
WMQ					PKP	PKPdf	19 39 52.8 +0.3
WMQ					PP	PP	19 42 04.8 +5.6
WMQ					PKS		19 43 28.3
WMQ					SKS	SKSdf	19 47 03.0 -1.4
WMQ					SKKS	SKKSac	19 48 55.9 -1.8
WMQ					S	Sdif	19 50 03.8 -2.9
WMQ					SS	SS	19 59 19.6 +1.1
WMQ					AMB	AMB	
	comp=Z,320nm,5.2s						
WMQ					LR	LR	
	comp=N,1μm,24.0s,MS5.7						
WMQ					LR	LR	
	comp=E,1μm,24.0s,MS5.7						
WMQ					LR	LR	
	comp=Z,2μm,22.0s,MS5.7						
RIV	Riverview	129.15	229		*e*PKP	PKPdf	19 39 52.7 -0.1
MSEY	Mahe Island	129.30	92		PFAKE		19 40 00.0 +6.3
MSEY					LR	LR	
	comp=Z,2μm,20.0s,MS5.7						
JRY	Ryogami san	129.53	326		P	PKPdf	19 39 51.0 -2.5
MAJO	Matsushiro	129.54	327		*e*PKPdf	PKPdf	19 39 51.3 -2.2
MAJO					*e*SKP		19 43 14.1
MAT	Matsushiro	129.54	327		PKP	PKPdf	19 39 52.2 -1.3
MAT	Matsushiro	129.54	327		P	PKPdf	19 39 52.3 -1.2
MJAR	Matsushiro Arr	129.54	327		PKP	PKPdf	19 39 52.5 -1.0
	comp=Z,23nm,1.1s,baz=90,slow=0.6,SNR=23						
MJAR					SKPbc		19 43 15.7
	comp=Z,14nm,1.1s,baz=18,slow=2.7,SNR=15						
JOD2	Odawara 2	129.96	325		P	PKPdf	19 39 53.2 -1.1
CAN	Canberra	130.08	226		*e*PKIKP	PKPdf	19 39 54.0 -0.5
CAN					MLR	MLR	
	comp=Z,1μm,21.0s,MS5.6						
ARMA	Armidale	130.14	233		*e*PKP	PKPdf	19 39 55.5 +0.7
NIL	Nilore	130.88	37		PFAKE		19 40 10.0 +14
NIL					LR	LR	
	comp=Z,109nm,19.0s,MS4.6						
SNY	Shenyang	131.36	343	⇓	PKP	PKPdf	19 39 56.3 -0.5
SNY					AMB	AMB	
	comp=Z,630nm,9.3s						
SNY					LR	LR	
	comp=N,1μm,19.8s,MS6.0						
SNY					LR	LR	
	comp=E,2μm,19.2s,MS6.0						
SNY					LR	LR	
	comp=Z,3μm,19.9s,MS6.0						
TOO	Toolangi	131.38	222		*e*PKP	PKPdf	19 39 56.9 0.0
JWT	Wachi	131.99	328		P	PKPdf	19 39 56.6 -1.6
JAD	Aida	132.91	328		P	PKPdf	19 39 59.9 0.0
JHS	Saijyo	133.40	329		P	PKPdf	19 40 01.7 +0.8
KSRS	Korea Array	133.75	336		PKP	PKPdf	19 40 00.7 -0.7
	comp=Z,8.8nm,0.8s,baz=16,slow=1.3,SNR=28						
KSRS					SKPbc	SKPbc	19 43 30.2 -0.3
	comp=Z,7.5nm,1.0s,baz=17,slow=3.0,SNR=7.3						
HHC	Hu-ho-hao-te	134.69	354		*e*PKP	PKPdf	19 40 03.4 +0.3
HHC					PP	PP	19 42 35.0 +0.1
HHC					PKS		19 43 38.0
HHC					SKS	SKSdf	19 47 08.8 -5.8
HHC					SKKS	SKKSac	19 49 28.3 -3.7
HHC					SS	SS	20 00 27.4 +1.3
HHC					AMB	AMB	
	comp=Z,190nm,7.6s						
HHC					LR	LR	
	comp=N,1μm,21.6s,MS5.8						
HHC					LR	LR	
	comp=E,1μm,20.2s,MS5.8						
HHC					LR	LR	
	comp=Z,2μm,21.1s,MS5.8						
BJI	Beijing	134.84	349		PKP	PKPdf	19 40 02.3 -1.1
BJI					SS	SS	20 00 31.9 +3.9
BJI					AMB	AMB	
	comp=Z,210nm,5.9s						
BJI					LR	LR	
	comp=N,2μm,20.7s,MS6.0						
BJI					LR	LR	
	comp=E,2μm,19.2s,MS6.0						
BJI					LR	LR	
	comp=Z,3μm,21.3s,MS5.9						
BJT	Baijiatuau	134.86	349		PFAKE		19 40 10.0 +6.6
BJT					LR	LR	
	comp

CTA Charters Tower 138.17 245 *e*PKP PKPdf 19 40 10.4 +0.3
comp=Z,19nm,1.1s
CTAO Charters Tower 138.17 245 *e*PKIKP PKPdf 19 40 09.6 -0.5
CTAO MLR MLR
comp=Z,1μm,20.0s,MS5.7
LZH Lanzhou 139.63 3 PP PP 19 43 06.4 +0.6
LZH PKS 19 43 46.0
LZH SKKS SKKSac 19 49 56.0 -5.5
LZH SS SS 20 01 32.5 +7.7
LZH AMB AMB
comp=Z,360nm,6.6s
LZH LR LR
comp=N,3μm,19.7s
LZH LR LR
comp=Z,3μm,20.2s,MS6.0
NJ2 Nanjing 141.82 343 *e*PKP PKPdf 19 40 15.6 -0.9
NJ2 PP PP 19 43 23.0 +3.6
NJ2 PKS 19 43 50.5
NJ2 SKS SKSdf 19 47 21.0 -5.9
NJ2 AMB AMB
comp=Z,260nm,6.7s
NJ2 LR LR
comp=N,200nm,24.6s,MS4.9
NJ2 LR LR
comp=E,130nm,22.6s,MS4.9
NJ2 LR LR
comp=Z,250nm,29.2s
JOW Kunigami 142.38 327 P PKPdf 19 40 13.0 -4.6
JOW Kunigami 142.38 327 PKhKP 19 40 10.3
comp=Z,19nm,0.8s,baz=200,slow=8.5,SNR=4.3
JOW Kunigami 142.38 327 PKP 19 40 10.3
COEN Coen 142.49 253 *e*PKPdf PKPdf 19 40 11.7 -6.4
LSA Lhasa 143.07 22 *e*PKIKP PKPdf 19 40 15.7 -3.0
WHN Wuhan 144.40 348 PKP PKPdf 19 40 18.4 -2.6
WHN SKKS SKKSac 19 50 23.5 -5.8
WHN LR LR
comp=N,4μm,18.6s
WHN LR LR
comp=E,740nm,12.3s
WHN LR LR
comp=Z,6μm,20.2s,MS6.4
CD2 Chengdu 144.78 4 PKP PKPdf 19 40 20.5 -1.2
CD2 PP PP 19 43 40.6 +3.6
CD2 PKS 19 43 54.6
CD2 SKS SKSdf 19 47 28.3 -3.2
CD2 SKKS SKKSac 19 50 29.6 -1.8
CD2 SS SS 20 02 26.6 +2.1
CD2 AMB AMB
comp=Z,430nm,7.4s
CD2 LR LR
comp=N,1μm,23.8s
CD2 LR LR
comp=Z,2μm,21.4s,MS5.8
HYB Hyderabad 145.01 51 *i* PKP PKPdf 19 40 21.0 -1.4
comp=Z,120nm,1.0s
HYB *e* 19 40 36.0
ENH Enshi 145.37 355 PFAKE 19 40 30.0 +7.5
ENH LR LR
comp=Z,2μm,21.0s,MS5.9
DGAR Diego Garcia 146.16 97 PFAKE 19 40 40.0 +15
DGAR LR LR
comp=Z,2μm,20.0s,MS6.0
FORT Forrest 146.75 215 *e*PKP PKPdf 19 40 23.2 -1.8
comp=Z,50nm,0.8s
FORT Forrest 146.75 215 *e*PKPdf PKPdf 19 40 23.2 -1.9
YOJ Yonaguni jima 147.02 331 P PKPdf 19 40 25.9 +0.2
SHL Shillong 147.04 25 *i* P PKPdf 19 40 27.0 +1.3
SHL *i* S 19 50 40.0
ASAR Alice Springs 147.26 232 PKPbc PKPbc 19 40 24.9 -3.5
comp=Z,42nm,0.9s,baz=118,slow=2.5,SNR=156
YHNB Yeheng 147.60 334 *e*PKPdf PKPdf 19 40 22.9 -3.7
NACB Ninganchiao 147.93 333 *e*PKPbc PKPbc 19 40 28.7 -1.5
AGT Agartala 148.24 27 *e*P PKPdf 19 40 25.0 -2.7
QZH Quanzhou 148.47 338 ⇑*i*PKPbc PKPbc 19 40 27.9 -3.7
QZH PP PP 19 44 01.8 +2.6
QZH SKKS SKKSac 19 50 51.6 -0.9
QZH LR LR
comp=N,3μm,21.2s,MS6.2
QZH LR LR
comp=E,3μm,23.9s,MS6.2
QZH LR LR
comp=Z,3μm,26.7s,MS5.9
SSLB Suanglung 148.55 334 *e*PKPdf PKPdf 19 40 26.3 -1.9
IMP Imphal 148.55 22 *e*P PKPbc 19 40 33.0 +1.2
WRAB Tennant Creek 148.68 238 *e*PKHKP PKPdf 19 40 26.9 -1.6
YULB Yu-li 148.74 333 *e*PKPbc PKPbc 19 40 29.8 -2.6
TPUB Ta-pu 149.12 334 *e*PKPdf PKPdf 19 40 27.3 -1.9
GYA Guiyang 149.30 359 PKPbc PKPdf 19 40 28.0 -1.4
GYA PKPab PKPab 19 40 40.3 +2.3
GYA PP PP 19 44 08.3 +4.7
GYA SKKS SKKSac 19 50 55.8 -1.1
GYA SS SS 20 03 16.6 +0.9
GYA AMB AMB
comp=Z,180nm,7.9s
GYA LR LR
comp=N,390nm,24.3s,MS5.2
GYA LR LR
comp=E,270nm,25.3s,MS5.2
GYA LR LR
comp=Z,420nm,23.1s,MS5.2
TWG Pinlang 149.34 333 *e*PKPdf PKPdf 19 40 28.6 -0.9
TWG *e*PKPbc PKPbc 19 40 32.1 -1.8
NWAO Narrogin (SRO) 149.88 198 *e*PKIKP PKPdf 19 40 28.3 -1.8
NWAO *e* 19 40 31.3
NWAO MLR MLR
comp=Z,2μm,22.0s
KMI Kunming 150.42 7 PKPbc PKPdf 19 40 28.8 -2.4
KMI pPKP pPKPdf 19 40 34.3 -0.3
KMI sPKP 19 40 36.0
KMI PKPab PKPab 19 40 43.5 +0.8
KMI PP PP 19 44 16.3 +6.2
KMI SKKS SKKSac 19 51 00.8 -2.4
KMI AMB AMB
comp=Z,300nm,6.7s
KMI LR LR
comp=N,960nm,23.6s,MS5.8
KMI LR LR
comp=E,1μm,23.6s,MS5.8
KMI LR LR
comp=Z,2μm,23.6s,MS5.8
KLBR Kellerberrin 150.93 200 *e*PKP PKPdf 19 40 33.3 +1.5
comp=Z,89nm,1.1s
PALK Pallekele 151.89 66 *e*PKIKP PKPdf 19 40 34.2 +0.5
KAKA Kakadu 152.95 251 *e*PKP PKPdf 19 40 33.5 -1.7
comp=Z,95nm,0.9s
KAKA Kakadu 152.95 251 *e*PKPdf PKPdf 19 40 34.9 -0.4
KAKA *e*PKPbc PKPbc 19 40 40.0 -2.5
CHG Chiang Mai 155.78 17 ⇓P PKPdf 19 40 38.6 -0.5
comp=Z,28nm,1.0s
CHTO Chiang Mai 155.78 17 *e*PKIKP PKPdf 19 40 38.6 -0.5
CHTO *e* 19 41 03.9
CHTO MLR MLR
comp=Z,2μm,20.0s,MS5.9
CM31 Chiang Mai Arr 156.12 18 *e*PKPdf PKPdf 19 40 39.9 +0.3
CM31 *e*PKPab PKPab 19 41 06.0 -0.8
CM31 LR LR
comp=Z,1μm,19.0s,MS5.7
CMAR Chiang Mai Arr 156.12 18 PKP PKPdf 19 40 40.3 +0.7
comp=Z,8.4nm,0.9s,baz=308,slow=2.2,SNR=40
CMAR PKPab PKPab 19 41 07.0 +0.2
comp=Z,21nm,0.8s,baz=328,slow=5.1,SNR=18
QIZ Qiongzhong 156.44 352 PKP PKPdf 19 40 38.9 -1.1
QIZ PP PP 19 44 45.0 +0.8
QIZ LR LR
comp=N,1μm,20.9s,MS5.7
QIZ LR LR
comp=E,590nm,20.0s,MS5.7
QIZ LR LR
comp=Z,3μm,20.9s,MS6.1
QIZ Qiongzhong 156.44 352 *e*PKPdf PKPdf 19 40 39.2 -0.8
QIZ *e*PKPab PKPab 19 41 07.5 -0.6
TGY Tagaytay City 156.59 322 PKP PKPdf 19 40 41.3 +1.0
comp=Z,38nm,0.4s,baz=337,slow=19,SNR=3.4
TGY PKPab PKPab 19 41 11.7 +2.7
comp=Z,38nm,0.4s,baz=105,slow=15,SNR=5.1
FITZ Fitzroy Crossi 156.75 233 *e*PKP PKPdf 19 40 39.4 -1.0
comp=Z,40nm,0.9s
FITZ Fitzroy Crossi 156.75 233 *e*PKPdf PKPdf 19 40 39.0 -1.4
BDT Bhumibol Dam 157.28 18 P PKPdf 19 40 40.5 -0.6
DAV Davao City (W) 157.67 301 PFAKE 19 40 50.0 +8.3
DAV LR LR
comp=Z,1μm,20.0s,MS5.7
MBWA Marble Bar 158.89 217 *e*PKPdf PKPdf 19 40 41.7 -1.3
MBWA LR LR
comp=Z,2μm,19.0s,MS6.1
NST Nakhon Sawan 159.10 17 P PKPdf 19 40 37.0 -6.3
KKM Kota Kinabalu 165.68 316 *e*PKPdf PKPdf 19 40 48.9 -1.1
KKM LR LR
comp=Z,2μm,22.0s
KAPI Kappang 166.63 267 PKPab PKPab 19 41 49.9 -3.3
comp=Z,22nm,0.9s,baz=98,slow=7.8,SNR=4.4
KAPI Kappang 166.63 267 *e*PKPdf PKPdf 19 40 47.0 -3.8
KAPI *e*PKPab PKPab 19 41 49.4 -3.8
KAPI LR LR
comp=Z,2μm,22.0s
COCO West Island 167.83 130 PFAKE 19 41 00.0 +8.4
COCO LR LR
comp=Z,3μm,20.0s
KULM Kulim 168.79 31 *e*PKPdf PKPdf 19 40 50.2 -2.1
KULM LR LR
comp=Z,3μm,21.0s
PSI Prapat 169.67 46 PKP PKPdf 19 40 52.1 -0.8
comp=Z,4.5nm,0.8s,baz=58,slow=5.6,SNR=5.4
PSI PKPab PKPab 19 42 08.1 +1.6
comp=Z,12nm,0.9s,baz=313,slow=4.0,SNR=6.0
KSM Kuching 172.93 326 *e*PKPdf PKPdf 19 40 53.0 -1.5
KSM *e*PKPab PKPab 19 42 20.1 -0.6
KSM LR LR
comp=Z,3μm,20.0s

IDC 24 19:34:02.5±1.8, 4°.28N×73°.74W, h0km, mb3.6/1, mb1 4.2/2, mb1mx3.7/20, mbtmp4.0/2, ML4.3/1, Error ellipse: s-maj=34.3km s-min=13.7km az=39.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.82**	**314**	Pg	Pg	19 34 18.5	+0.3
	289nm,0.3s,baz=114,slow=11,SNR=77						
ROSC				Lg		19 34 29.2	
	125nm,0.3s,baz=120,slow=21,SNR=12						
SDV	**Santo Domingo**	**5.52**	**34**	Pn	Pn	19 35 27.5	+1.6
	8.3nm,0.3s,baz=266,slow=16,SNR=12						
SDV				Sn	Sn	19 36 32.7	+2.5
	7.5nm,0.3s,baz=271,slow=21,SNR=7.8						
YKA	**Yellowknife Ar**	**65.43**	**340**	P	P	19 44 45.3	-1.5
	0.4nm,0.5s,baz=134,slow=6.2,SNR=5.8						
ASAR	**Alice Springs**	**147.09**	**232**	PKPbc	PKPbc	19 53 48.6	+0.3
	0.5nm,0.9s,baz=115,slow=3.3,SNR=5.7						

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*ISCJB **24** 19:37:50.5±1.1, 31°.79N±0°.04×104°.57E±0°.05, h6km±7km, mb3.7/7, Error ellipse: s-maj=8.1km s-min=5.8km az=32.9*
*IDC **24** 19:37:51.2±1.1, 31°.76N×104°.36E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/28, mbtmp3.8/9, ML2.6/1, MS4.1/1, Ms1 4.1/1, ms1mx2.8/36, Error ellipse: s-maj=37.3km s-min=19.5km az=46.0*
*NEIC **24** 19:37:53.0±0.8, 31°.71N×104°.27E, h10km, Error ellipse: s-maj=22.8km s-min=10.2km az=222.0*
*BJI **24** 19:37:52.1, 31°.88N×104°.47E, h12km, mb3.8/1, ML3.7/12, Ms3.4/5, Ms7 3.4/2*
ISC 24 19:37:52.1±1.0, 31°.82N±0°.03×104°.48E±0°.05, h3km±7km, n15, σ1§23/21, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.10**	**214**	Pg	**Pg**	**19 38 12.9**	**-0.3**
CD2				Sg	**Sg**	**19 38 28.0**	**+0.6**
CD2				smax			
	comp=N,6μm,0.7s						
LZH	**Lanzhou**	**4.28**	**353**	*e*Pn	**Pn**	**19 39 00.8**	**+2.6**
LZH				Sn	**Sn**	**19 39 51.3**	**+2.7**
LZH				Sg	**Sg**	**19 40 07.4**	**-2.3**
LZH				smax			
	comp=N,96nm,0.5s						
LZH				smax			
	comp=E,160nm,0.7s						
LZH				LR	LR		
	comp=E,400nm,6.5s						
XAN	**Xi'an**	**4.34**	**58**	Pn	**Pn**	**19 38 59.0**	**0.0**
XAN				Sn	**Sn**	**19 39 48.8**	**-1.3**
XAN				Sg	**Sg**	**19 40 11.4**	**-0.2**
XAN				smax			
	comp=N,150nm,0.7s						
XAN				smax			
	comp=E,94nm,0.8s						
XAN				LR	LR		
	comp=N,150nm,7.5s						
XAN				LR	LR		
	comp=E,130nm,10.0s						
XAN				LR	LR		
	comp=Z,160nm,9.1s						
ENH	**Enshi**	**4.57**	**108**	*e*Pn	**Pn**	**19 39 04.1**	**+2.0**
GYA	**Guiyang**	**5.68**	**160**	Pn	**Pn**	**19 39 17.8**	**+0.4**
GYA				Sn	**Sn**	**19 40 21.8**	**-1.3**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,80nm,0.7s						
SONM	**Songino Array**	**16.06**	**5**	Pn	**Pn**	**19 41 40.4**	**+1.6**
	comp=E,0.0nm,0.3s,baz=224,slow=4.0,SNR=2.6						
KSRS	**Korea Array**	**20.07**	**67**	P	**P**	**19 42 27.5**	**+0.9**
	comp=E,4.5nm,0.7s,baz=255,slow=10,SNR=18						
MKAR	**Makanchi Array**	**22.65**	**318**	P	**P**	**19 42 54.5**	**+0.3**
	comp=E,0.6nm,0.5s,mb3.3,baz=117,slow=12,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**19 43 28.2**	**+0.2**
	comp=E,1.0nm,0.5s,mb3.6,baz=129,slow=9.8,SNR=3.3						
KURK	**Kurchatov**	**26.87**	**322**	P	**P**	**19 43 34.0**	**+0.1**
	comp=E,0.7nm,0.5s,mb3.4,baz=129,slow=8.3,SNR=3.4						
AKTK	**Aktyubinsk**	**38.88**	**312**	P	**P**	**19 45 16.9**	**-1.7**
AKTO	**Aktyubinsk**	**38.88**	**312**	P	**P**	**19 45 16.9**	**-1.7**
	comp=E,0.5nm,0.3s,mb3.7,baz=166,slow=7.4,SNR=2.2						
AKTO				LR	LR	20 04 56.6	
	comp=E,299nm,20.6s,baz=313,slow=42						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**19 47 39.4**	**-0.4**
	comp=E,0.6nm,0.5s,mb3.9,baz=104,slow=6.1,SNR=8.7						
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**19 48 13.2**	**-0.1**
	comp=E,0.9nm,0.5s,mb4.2,baz=332,slow=6.5,SNR=13						
YKA	**Yellowknife Ar**	**80.91**	**17**	P	**P**	**19 50 06.4**	**-0.9**
	comp=E,0.3nm,0.5s,mb3.5,baz=332,slow=5.5,SNR=3.4						

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*IDC **24** 19:45:33.5±8.1, 36°.22N×71°.05E, h188km±96km, mb3.0/2, mb1 3.0/5, mb1mx2.8/27, mbtmp3.0/5, Error ellipse: s-maj=59.8km s-min=36.5km az=96.0*
*ISCJB **24** 19:45:36.6±0.5, 36°.69N±0°.03×70°.95E±0°.07, h187km±10km, Error ellipse: s-maj=9.4km s-min=5.6km az=177.3*
*NEIC **24** 19:45:36.8±1.1, 36°.52N×71°.01E, h212km±13km, mb3.7/1, Error ellipse: s-maj=28.3km s-min=11.6km az=132.0*
*NNC **24** 19:45:42.6±4.0, 37°.41N×70°.68E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=36.5km s-min=30.9km az=85.0*
ISC 24 19:45:37.6±0.5, 36°.69N±0°.03×70°.98E±0°.07, h178km±9km, n24, σ1§20/32, 2C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.66**	**217**	*e*Pn	**Pn**	**19 46 22.5**	**+0.4**
KBL				*e*Sn	**Sn**	**19 46 55.8**	**-0.8**
KSH	**Kashi**	**4.84**	**53**	Pn	**Pn**	**19 46 47.4**	**-2.0**
KSH				Sn	**Sn**	**19 47 36.4**	**-9.3**
KSH				smax			
	comp=N,120nm,0.6s						
KSH				smax			
	comp=E,110nm,0.3s						
UCH	**Uchtor**	**6.17**	**25**	*e*Pn	**Pn**	**19 47 08.7**	**+2.1**
	comp=E,3.4nm,0.6s						
UCH				*e*Sn	**Sn**	**19 48 17.7**	**+0.9**
EKS2	**Erkin-Say**	**6.34**	**19**	*e*Pn	**Pn**	**19 47 10.1**	**+1.2**
EKS2				*e*S	**Sn**	**19 48 20.7**	**-0.2**
KK31	**Karatay Array**	**6.42**	**357**	Pn	**Pn**	**19 47 11.5**	**+1.6**
	comp=E,0.7nm,0.3s,baz=186,slow=12,SNR=47						
KK31				Sn	**Sn**	**19 48 20.9**	**-1.8**
	comp=E,1.9nm,0.3s,baz=186,slow=18,SNR=15						
TKM2	**Tokmak 2**	**7.17**	**28**	⇑Pn	**Pn**	**19 47 21.7**	**+2.0**
	comp=E,9.2nm,1.1s						
TKM2				⇑Sn	**Sn**	**19 48 39.3**	**-1.1**
	comp=E,3.7nm,0.8s						
TKM2	**Tokmak 2**	**7.17**	**28**	*e*Pn	**Pn**	**19 47 20.9**	**+1.2**
MKAR	**Makanchi Array**	**13.15**	**36**	P	**Pn**	**19 48 38.4**	**+0.9**
	comp=E,0.2nm,0.3s,baz=216,slow=12,SNR=9.1						
PYUN	**Piuthan**	**13.27**	**127**	*e*P	**Pn**	**19 48 37.8**	**-1.3**
	comp=E,5.3nm,0.4s						
KOLN	**Koldanda**	**13.89**	**126**	*e*P	**Pn**	**19 48 45.3**	**-1.6**
	comp=E,1.7nm,0.2s						
GKN	**Gorkha**	**14.42**	**123**	*e*P	**Pn**	**19 48 53.0**	**-0.5**
	comp=E,7.2nm,0.4s						
AB31	**Akbulak array**	**14.91**	**331**	Pn	**Pn**	**19 49 00.8**	**+1.4**
	comp=E,2.1nm,1.1s,baz=142,slow=12,SNR=11						
ABKAR	**Akbulak array**	**14.91**	**331**	*e*Pn	**Pn**	**19 48 59.0**	**-0.4**
DMN	**Daman**	**14.99**	**123**	*e*P	**Pn**	**19 49 01.2**	**+0.6**
	comp=E,4.9nm,0.4s						
KKN	**Kakani**	**14.99**	**122**	*e*P	**Pn**	**19 49 00.8**	**+0.2**
	comp=E,6.0nm,0.5s						
KURK	**Kurchatov**	**15.06**	**19**	P	**Pn**	**19 48 58.9**	**-2.3**
	comp=E,0.1nm,0.3s,baz=211,slow=10,SNR=5.0						
PKIN	**Phulchoki**	**15.21**	**123**	*e*P	**Pn**	**19 49 04.0**	**+0.8**
	comp=E,6.1nm,0.5s						
PKI	**Pulchoki**	**15.22**	**123**	*e*P	**Pn**	**19 49 04.1**	**+0.7**
GUN	**Gumba**	**15.32**	**121**	*e*P	**Pn**	**19 49 05.9**	**+1.2**
	comp=E,7.7nm,0.3s						
AKTK	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**19 49 19.7**	**-0.3**
AKTK				S	**S**	**19 52 28.3**	**+4.6**
AKTO	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**19 49 19.7**	**-0.3**
	comp=E,0.3nm,0.3s,baz=137,slow=10,SNR=5.5						
AKTO				S	**S**	**19 52 28.3**	**+4.6**
	comp=E,0.1nm,0.3s,baz=185,slow=11,SNR=1.9						
ZAA0	**Zalesovo Array**	**19.75**	**25**	*e*P	**P**	**19 49 51.8**	**-1.7**
ZALV	**Zalesovo Beam**	**19.75**	**25**	P	**P**	**19 49 53.1**	**-0.3**
	comp=E,1.4nm,0.4s,baz=219,slow=11,SNR=9.7						
TORD	**Torodi Ar. Bea**	**65.71**	**269**	P	**P**	**19 55 58.5**	**-4.8**
	comp=E,0.2nm,0.6s,baz=43,slow=5.8,SNR=2.4						

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*ISCJB **24** 19:48:11.4±1.0, 23°.32S±0°.06×179°.86W±0°.07, h520km±13km, mb4.5/45, Error ellipse: s-maj=10.9km s-min=7.1km az=35.3*
*NEIC **24** 19:48:13.0±0.8, 23°.36S×179°.78W, h535km±8km, mb4.8/28, Error ellipse: s-maj=11.2km s-min=7.2km az=134.0*
*IDC **24** 19:48:14.6±1.5, 23°.32S×179°.91W, h544km±15km, mb4.0/15, mb1 4.2/15, mb1mx4.0/19, mbtmp4.0/15, Error ellipse: s-maj=14.5km s-min=11.8km az=152.0*
ISC 24 19:48:11.4±1.0, 23°.32S±0°.06×179°.78W±0°.07, h510km±11km, h537km±2.6km; pP-P, n92, σ1§05/78, mb4.5/45, 1C-17D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.92**	**340**	*e*P	**P**	**19 49 52.9**	**+5.4**
	62nm,0.7s						
AFI	**Afiamalu**	**12.05**	**40**	P	**P**	**19 50 50.9**	**+0.3**
	6.4nm,0.3s,baz=49,slow=20,SNR=9.2						
AFI				S	**S**	**19 52 57.0**	**-4.7**
	6.3nm,0.3s,baz=233,slow=22,SNR=6.3						
AFI	**Afiamalu**	**12.05**	**40**	*e*P	**P**	**19 50 50.5**	**-0.1**
	84nm,0.9s						
AFI				*e*S	**S**	**19 53 00.3**	**-1.4**
FUNA	**Funafuti**	**14.75**	**356**	P	**P**	**19 51 19.4**	**+0.4**
	182nm,1.1s						
URZ	**Urewera**	**15.12**	**189**	P	**P**	**19 51 21.3**	**-1.3**
	6.6nm,0.3s,baz=329,slow=2.5,SNR=36						
URZ				S	**S**	**19 53 56.7**	**-3.5**
	2.3nm,0.3s,baz=43,slow=23,SNR=14						
URZ	**Urewera**	**15.12**	**189**	*e*P	**P**	**19 51 21.9**	**-0.7**
	53nm,0.7s						
SNZO	**South Karori**	**18.52**	**193**	*e*P	**P**	**19 51 55.2**	**-0.6**
	92nm,1.1s						
RPZ	**Rata Peaks**	**21.70**	**198**	P	**P**	**19 52 24.8**	**+0.2**
	20nm,0.5s,mb5.0,baz=315,slow=1.7,SNR=18						
RPZ	**Rata Peaks**	**21.70**	**198**	*e*P	**P**	**19 52 23.9**	**-0.8**
	23nm,0.6s,mb5.0						
ARMA	**Armidale**	**26.41**	**248**	⇓*i*P	**P**	**19 53 08.7**	**+1.9**
ARMA	**Armidale**	**26.41**	**248**	*e*P	**P**	**19 53 08.6**	**+1.7**
	30nm,1.0s,mb4.9						
EIDS	**Eidsvold**	**26.60**	**260**	*e*P	**P**	**19 53 09.3**	**+0.8**
	33nm,1.1s,mb4.9						
CNB	**Canberra Magne**	**29.32**	**239**	⇓*i*P	**P**	**19 53 33.8**	**+1.6**
CAN	**Canberra**	**29.60**	**239**	⇓*i*P	**P**	**19 53 35.9**	**+1.2**
	38nm,0.7s,mb5.0						
CTA	**Charters Tower**	**31.68**	**269**	⇓*i*P	**P**	**19 53 53.5**	**+0.8**
	62nm,0.5s,mb5.4						
CTA	**Charters Tower**	**31.68**	**269**	P	**P**	**19 53 53.7**	**+1.0**
	81nm,0.5s,mb5.5,baz=96,slow=10,SNR=206						
CTA	**Charters Tower**	**31.68**	**269**	P	**P**	**19 53 53.7**	**+1.0**
CTAO	**Charters Tower**	**31.68**	**269**	⇓*i*P	**P**	**19 53 53.6**	**+0.9**
	77nm,0.6s,mb5.4						
TOO	**Toolangi**	**32.93**	**236**	*e*P	**P**	**19 54 04.0**	**+0.9**
TAU	**Tasmania Unive**	**33.47**	**226**	*e*P	**P**	**19 54 08.1**	**+0.5**
STKA	**Stephens Creek**	**35.12**	**247**	⇑*i*P	**P**	**19 54 22.4**	**+0.7**
	27nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**35.12**	**247**	P	**P**	**19 54 22.6**	**+0.8**
	33nm,0.6s,mb5.1,baz=93,slow=9.9,SNR=104						
STKA	**Stephens Creek**	**35.12**	**247**	⇓*i*P	**P**	**19 54 22.3**	**+0.6**
	6.4nm,0.7s,mb4.3						
ASAR	**Alice Springs**	**42.33**	**260**	P	**P**	**19 55 20.2**	**0.0**
	43nm,0.8s,mb5.1,baz=94,slow=6.7,SNR=539						
ASAR				ScP	ScP	20 00 02.2	-2.0
	1.7nm,0.7s,baz=106,slow=4.0,SNR=7.4						
ASAR				S	**S**	**20 00 59.8**	**-4.4**
	1.1nm,0.7s,baz=100,slow=13,SNR=8.6						
WRAB	**Tennant Creek**	**42.64**	**265**	⇓*i*P	**P**	**19 55 22.0**	**-0.7**
	50nm,0.8s,mb5.1						
KAKA	**Kakadu**	**46.46**	**275**	*e*P	**P**	**19 55 50.8**	**-1.5**
	33nm,0.7s,mb5.0						
KAKA	**Kakadu**	**46.46**	**275**	*e*P	**P**	**19 55 51.0**	**-1.3**
	71nm,0.6s,mb5.4						
FORT	**Forrest**	**46.70**	**249**	⇓*i*P	**P**	**19 55 53.2**	**-0.7**
	115nm,0.6s,mb5.6						
FORT	**Forrest**	**46.70**	**249**	⇓*i*P	**P**	**19 55 53.0**	**-0.9**
	138nm,0.7s,mb5.6						
FITZ	**Fitzroy Crossi**	**51.07**	**265**	⇓*i*P	**P**	**19 56 26.4**	**-0.2**
	29nm,0.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.07**	**265**	P	**P**	**19 56 26.5**	**-0.1**
	20nm,0.6s,mb4.6,baz=114,slow=4.7,SNR=93						
SBA	**Scott Base**	**54.96**	**183**	⇓*i*P	**P**	**19 56 56.1**	**+2.7**
	20nm,0.9s,mb4.4						
SBA				*e*PcP	PcP	19 57 48.1	+0.6
KLBR	**Kellerberrin**	**55.40**	**247**	⇓*i*P	**P**	**19 56 56.5**	**-0.7**
	37nm,0.5s,mb4.9						
NWAO	**Narrogin (SRO)**	**55.66**	**245**	P	**P**	**19 56 58.0**	**-0.9**
	15nm,0.6s,mb4.4,baz=144,slow=7.7,SNR=28						
MBWA	**Marble Bar**	**55.67**	**260**	⇓*i*P	**P**	**19 56 58.3**	**-1.0**
	36nm,0.7s,mb4.7						
CASY	**Casey**	**60.71**	**206**	*e*P	**P**	**19 57 32.2**	**-0.5**
KAPI	**Kappang**	**60.95**	**277**	P	**P**	**19 57 33.5**	**-1.6**
	8.8nm,0.5s,mb4.3,baz=91,slow=22,SNR=5.1						
QSPA	**South Pole Qui**	**66.76**	**180**	P	**P**	**19 58 12.6**	**+1.5**
	20nm,0.6s,mb4.8,baz=21,slow=1.3,SNR=167						
KKM	**Kota Kinabalu**	**68.93**	**287**	⇓*e*P	**P**	**19 58 24.5**	**-0.9**
	11nm,0.6s,mb4.5						
KSM	**Kuching**	**72.20**	**280**	⇓*i*P	**P**	**19 58 43.9**	**-0.9**
	14nm,0.7s,mb4.5						
SSE	**Sheshan**	**78.26**	**311**	P	**P**	**19 59 17.9**	**-0.4**
SSE				pP	pP	20 01 11.0	+3.1
SSE				PP	PP	20 02 24.9	+0.3
SSE				S	S	20 08 31.9	+0.4
SSE				sS	sS	20 11 53.8	+6.8
SSE				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.6						
SSE				pmax	pmax		
	comp=Z,160nm,12.0s						
MAW	**Mawson**	**78.36**	**200**	⇓*i*P	**P**	**19 59 18.5**	**+0.3**
	comp=Z,6.9nm,0.6s,mb4.2						
MAW	**Mawson**	**78.36**	**200**	P	**P**	**19 59 18.6**	**+0.3**
	comp=Z,8.7nm,0.6s,mb4.3,baz=130,slow=6.9,SNR=37						
MAW	**Mawson**	**78.36**	**200**	⇓*i*P	**P**	**19 59 18.5**	**+0.3**
	comp=Z,5.1nm,1.3s,mb3.7						
PETK	**Petropavlovsk-**	**78.59**	**346**	P	**P**	**19 59 19.6**	**+0.1**
	comp=Z,6.3nm,0.8s,mb4.0,baz=108,slow=8.4,SNR=17						
NJ2	**Nanjing**	**80.43**	**311**	*e*P	**P**	**19 59 30.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
MDJ	**Mudanjiang**	**81.90**	**326**	P	**P**	**19 59 38.8**	**+1.8**
MDJ				pP	pP	20 01 34.0	+6.1
MDJ				sP	sP	20 02 27.5	+7.3
MDJ				PP	PP	20 02 55.6	+1.6
MDJ				S	S	20 09 09.6	+1.4
MDJ				SS	SS	20 14 45.6	+3.6
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,62nm,9.8s						
ISA	**Isabella**	**82.48**	**46**	*e*P	**P**	**19 59 39.9**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.0						
KULM	**Kulim**	**82.55**	**279**	*e*P	**P**	**19 59 40.4**	**-0.7**
	comp=Z,5.5nm,0.7s,mb4.2						
CMB	**Columbia Colle**	**82.65**	**43**	*e*P	**P**	**19 59 41.6**	**+0.6**
PSI	**Prapat**	**83.11**	**276

CN2			*es*P	sP	20 02 35.0	+6.1
CN2			*e*S	S	20 09 21.6	-2.9
CN2			pmax	pmax		
comp=Z,10.0nm,0.5s,mb4.6						
CN2			pmax	pmax		
comp=Z,200nm,4.0s						
NVAR	**Mina Array Bea**	**84.20 44**	P	**P**	**19 59 49.1**	**+0.3**
comp=Z,0.8nm,0.4s,mb3.6,baz=218,slow=7.2,SNR=8.6						
VNA2	**Neumayer--Watz**	**85.86 177**	*e*P	**P**	**19 59 55.0**	**-1.3**
ENH	**Enshi**	**86.27 305**	*e*P	**P**	**19 59 59.0**	**0.0**
comp=Z,5.7nm,0.8s,mb4.2						
RSO	**Redoubt South**	**86.34 13**	*e*P	**P**	**19 59 57.4**	**-1.1**
GYA	**Guiyang**	**86.62 301**	P	**P**	**20 00 01.8**	**+1.1**
GYA			pP	pP	20 01 59.8	+6.6
GYA			sP	sP	20 02 53.3	+8.2
GYA			PP	PP	20 03 37.6	+5.3
GYA			SKS		20 09 38.0	
GYA			S	S	20 09 55.3	+0.3
GYA			sS	sS	20 13 21.9	+6.5
GYA			pmax	pmax		
comp=Z,10.0nm,1.0s,mb4.4						
GYA			pmax	pmax		
comp=Z,110nm,5.9s						
PMR	**Palmer**	**88.14 14**	*e*P	**P**	**20 00 06.3**	**-0.7**
comp=Z,3.3nm,0.6s,mb4.2						
M13A	**Montello**	**88.48 43**	*e*P	**P**	**20 00 09.8**	**+0.7**
comp=Z,7.1nm,1.0s,mb4.3						
KMI	**Kunming**	**89.17 298**	P	**P**	**20 00 16.5**	**+3.8**
KMI			pmax	pmax		
comp=Z,4.0nm,1.0s,mb4.2						
TMUT	**Trail Mountain**	**89.30 46**	*e*P	**P**	**20 00 14.7**	**+1.8**
CM31	**Chiang Mai Arr**	**89.51 290**	*e*P	**P**	**20 00 15.3**	**+0.9**
comp=Z,4.3nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	**89.51 290**	P	**P**	**20 00 15.2**	**+0.9**
comp=Z,3.2nm,0.9s,mb4.2,baz=135,slow=3.2,SNR=21						
EFI	**East Falkland**	**89.59 148**	*e*P	**P**	**20 00 14.4**	**+0.2**
comp=Z,56nm,1.1s,mb5.3						
CHTO	**Chiang Mai**	**89.66 291**	*e*P	**P**	**20 00 15.7**	**+0.6**
comp=Z,8.1nm,1.1s,mb4.5						
SRU	**San Rafael**	**89.66 47**	*e*P	**P**	**20 00 16.0**	**+1.4**
TXAR	**Lajitas Array**	**89.96 58**	P	**P**	**20 00 16.3**	**+0.1**
comp=Z,0.8nm,0.3s,mb4.0,baz=125,slow=31,SNR=6.0						
HHC	**Hu-ho-hao-te**	**90.15 315**	*e*P	**P**	**20 00 17.6**	**+0.8**
HHC			pP	pP	20 02 17.3	+7.1
HHC			sP	sP	20 03 10.9	+9.1
HHC			PP	PP	20 04 04.0	+4.2
HHC			SKS		20 09 57.3	
HHC			S	S	20 10 23.8	-3.0
HHC			sS	sS	20 13 55.9	+6.6
HHC			pmax	pmax		
comp=Z,9.0nm,1.0s,mb4.5						
HHC			pmax	pmax		
comp=Z,140nm,7.4s						
CD2	**Chengdu**	**90.93 303**	P	**P**	**20 00 20.3**	**-0.4**
CD2			pP	pP	20 02 20.1	+6.0
CD2			sP	sP	20 03 13.3	+7.6
CD2			PP	PP	20 04 09.5	+3.4
CD2			SKS		20 10 00.6	
CD2			S	S	20 10 30.6	-3.6
CD2			sS	sS	20 14 02.9	+5.8
CD2			SS	SS	20 16 55.5	+2.3
CD2			pmax	pmax		
comp=Z,10.0nm,0.5s,mb5.0						
CD2			pmax	pmax		
comp=Z,190nm,11.8s						
BILL	**Bilibino**	**91.67 355**	*e*P	**P**	**20 00 22.4**	**-0.8**
comp=Z,2.9nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**92.14 44**	P	**P**	**20 00 25.7**	**-0.2**
comp=Z,0.9nm,0.6s,mb4.0,baz=214,slow=3.0,SNR=8.5						
PDAR			PP	PP	20 04 14.2	-1.1
comp=Z,0.5nm,0.9s,baz=198,slow=4.4,SNR=4.4						
SDCO	**Great Sand Dun**	**92.44 50**	*e*P	**P**	**20 00 24.8**	**-2.7**
LZH	**Lanzhou**	**93.18 308**	*e*P	**P**	**20 00 30.8**	**-0.1**
LZH			pP	pP	20 02 31.0	+6.5
LZH			sP	sP	20 03 25.0	+9.0
LZH			PP	PP	20 04 29.0	+5.5
LZH			SKS		20 10 13.0	
LZH			S	S	20 10 50.5	-3.2
LZH			*e*SS	SS	20 17 30.0	+5.0
LZH			pmax	pmax		
comp=Z,17nm,1.4s,mb4.9						
LZH			pmax	pmax		
comp=Z,95nm,5.3s						
YKA	**Yellowknife Ar**	**99.76 25**	PP	PP	20 05 10.2	-2.5
comp=Z,0.2nm,0.8s,baz=248,slow=6.8,SNR=4.4						
MKAR	**Makanchi Array**	**111.91 313**	PKiKP	PKiKP	20 05 46.2	-1.9
comp=Z,0.4nm,0.6s,baz=118,slow=1.6,SNR=7.5						
MKAR	**Makanchi Array**	**111.91 313**	PKPdf	PKiKP	20 05 46.2	-1.9
KURK	**Kurchatov**	**114.92 317**	PKP	PKPdf	20 05 51.8	-1.9
comp=Z,0.2nm,0.3s,baz=75,slow=1.4,SNR=3.9						
BVAR	**Borovoye Array**	**120.14 319**	PKP	PKPdf	20 06 02.5	-1.2
comp=Z,0.8nm,0.4s,baz=90,slow=4.4,SNR=4.3						
BOSA	**Boshof**	**123.00 206**	PKP	PKPdf	20 06 09.5	-0.6
comp=Z,1.3nm,0.6s,baz=203,slow=12,SNR=4.8						
ARCES	**ARCESS Array B**	**131.36 348**	PKP	PKPdf	20 06 23.3	-1.4
comp=Z,4.1nm,0.9s,baz=26,slow=2.0,SNR=6.6						
ARCES			SKPbc	SKPbc	20 08 58.6	-3.4
comp=Z,5.6nm,0.9s,baz=34,slow=4.5,SNR=8.2						
ARCES	**ARCESS Array B**	**131.36 348**	PKP	PKPdf	20 06 23.3	-1.4
ARCES			SKPbc	SKPbc	20 08 58.6	-3.4
FINES	**FINESS Array B**	**137.96 342**	PKhKP		20 06 25.9	
comp=Z,1.7nm,1.0s,baz=25,slow=3.3,SNR=4.8						
FINES			SKPbc	SKPbc	20 09 19.0	-4.0
comp=Z,2.9nm,0.9s,baz=26,slow=3.7,SNR=6.5						
NOA	**NORSAR Array B**	**141.54 351**	PKhKP		20 06 37.7	
comp=Z,1.0nm,0.8s,baz=16,slow=4.6,SNR=3.8						
AKASG	**Malin Array Be**	**144.59 328**	PKP	PKPdf	20 06 48.1	-1.2
comp=Z,1.0nm,0.3s,baz=46,slow=4.4,SNR=5.1						
AKASG			SKPbc	SKPbc	20 09 36.0	-4.2
comp=Z,0.4nm,0.4s,baz=42,slow=2.8,SNR=4.0						
ASF	**Jabal al Asfar**	**146.49 293**	PKPbc	PKPbc	20 06 55.4	-0.1
comp=Z,2.3nm,0.5s,baz=280,slow=3.6,SNR=6.9						
BR131	**Keskin Array S**	**147.38 308**	*e*PKPbc	PKPbc	20 06 56.8	-0.9
BRTR	**Keskin Array B**	**147.38 308**	PKPbc	PKPbc	20 06 56.5	-1.1
comp=Z,1.7nm,0.8s,baz=137,slow=4.6,SNR=9.9						
MMAI	**Mount Meron Ar**	**147.64 295**	PKPbc	PKPbc	20 06 58.9	+0.3
comp=Z,7.6nm,0.5s,baz=72,slow=5.4,SNR=22						
EIL	**Elat**	**148.36 289**	PKPbc	PKPbc	20 07 00.1	-0.4
comp=Z,6.1nm,0.8s,baz=323,slow=3.5,SNR=6.1						
CLL	**Collm**	**150.36 344**	*i* PKPbc	PKPbc	20 07 04.5	-0.1
TORD	**Torodi Ar. Bea**	**169.78 188**	PKP	PKPdf	20 07 18.9	-2.0
comp=Z,1.4nm,1.0s,baz=37,slow=1.4,SNR=4.3						
TORD			PKPab	PKPab	20 08 37.9	-0.6
comp=Z,3.1nm,0.9s,baz=163,slow=4.7,SNR=11						

MAN 24 20:05:18.10˝83N×125˝15E,h1km,mb4.7,ML3.6,MS3.6, 1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.38**	**334**	⇑*i*P	Pg	20 05 27.5	+2.3
PLP				*i* S	Sg	20 05 34.3	+4.2
OCLP	**Ormoc**	**0.57**	**293**	*e*P	Pg	20 05 30.7	+1.6
MSLP	**Maasin**	**0.74**	**202**	*e*P	Pg	20 05 33.9	+1.6
BESP	**Borongan**	**0.82**	**20**	*e*P	Pg	20 05 34.1	+0.3
LLP	**Lapu-Lapu**	**1.27**	**247**	*e*P	Pg	20 05 42.9	+0.6
LLP				*e*S	Sg	20 06 01.1	+2.3
TBP	**Tagbilaran**	**1.69**	**228**	*e*P	Pn	20 05 49.8	+1.0
TBP				*i* S	Sn	20 06 10.8	-0.3
CNP	**Catarman**	**1.74**	**344**	*e*P	Pn	20 05 49.3	0.0
CNP				*e*S	Sn	20 06 08.4	-3.8
BUTP	**Butuan**	**1.90**	**166**	*e*P	Pn	20 05 53.8	+2.2
PVCP	**Virac**	**2.92**	**341**	*e*P	Pn	20 06 07.5	+1.9
PVCP				*e*S	Sn	20 06 44.7	+3.3
BUKP	**Musuan**	**2.93**	**182**	*e*P	Pn	20 06 08.1	+2.4

NEIC 24 20:07:21.6,63˝09N×151˝57W,h11km,ML3.0(AEIC), ML3.5(PMR),After AEIC.,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.34**	**236**	P	Pg	20 07 28.1	-0.2
PPLA				S	Sg	20 07 32.5	-0.3
KTH	**Kantishna Hill**	**0.55**	**32**	P	Pg	20 07 33.1	+0.7
KTH				S	Sg	20 07 41.0	+1.4
TRF	**Thorofare Moun**	**0.69**	**57**	P	Pg	20 07 35.5	+0.6
TRF				S	Sg	20 07 45.6	+1.7
CHUM	**Lake Minchumin**	**0.87**	**338**	P	Pg	20 07 37.3	-1.0
CHUM				S	Sg	20 07 51.2	+1.6
BPAW	**Bear Paw Mtn.**	**1.05**	**14**	P	Pb	20 07 41.2	-0.6
BPAW				S	Sg	20 07 56.6	+1.2
SKT	**Skwentna**	**1.11**	**179**	P	Pb	20 07 41.7	-1.1
MCK	**McKinley**	**1.35**	**60**	P	Pn	20 07 46.4	0.0
MCK				S	Sb	20 08 05.6	+1.4
PMR	**Palmer**	**1.88**	**142**	*e*P	Pn	20 07 53.6	-0.1
PMR				P		20 07 53.8	
SML	**Sawmill**	**1.98**	**129**	P	Pn	20 07 55.5	+0.6
TTA	**Tatalina**	**2.03**	**268**	*e*P	Pn	20 07 55.4	-0.3
FIB	**Fire Island**	**2.04**	**161**	P	Pn	20 07 57.2	+1.4
TT01	**Tatalina**	**2.04**	**267**	P	Pn	20 07 55.5	-0.2
RC01	**Rabbit Creek A**	**2.18**	**156**	*e*Pn	Pn	20 07 58.9	+1.1
RC01				*e*Sn	Sn	20 08 25.7	+1.0
COLA	**College**	**2.43**	**41**	*e*Pn	Pn	20 08 00.7	-0.5
COLA				*e*Sg	Sg	20 08 37.5	-2.2
SLKM	**Skilak Lake**	**2.67**	**165**	P	Pn	20 08 05.5	+1.1
RSO	**Redoubt South**	**2.69**	**193**	*e*Pn	Pn	20 08 06.7	+1.9
SVW2	**Sparrevohn**	**2.75**	**225**	*e*P	Pn	20 08 06.6	+1.1
PAX	**Paxson**	**2.79**	**90**	P	Pn	20 08 07.0	+1.0
IM3	**Indian Mountai**	**3.06**	**343**	P	Pn	20 08 07.8	-2.0
SEW	**Seward**	**3.16**	**160**	*e*Pn	Pn	20 08 14.2	+3.0
SEW				*e*Sn	Sn	20 08 47.1	-1.7
DIV	**Divide**	**3.36**	**123**	P	Pn	20 08 15.3	+1.3
DOT	**Dot Lake**	**3.43**	**77**	P	Pn	20 08 16.4	+1.5
MENT	**Mentasta**	**3.58**	**89**	*e*Pn	Pn	20 08 18.6	+1.6
BMRM	**Bremner River**	**3.91**	**120**	P	Pn	20 08 23.0	+1.5
COLD	**Coldfoot**	**4.20**	**7**	P	Pn	20 08 25.9	+0.5
EGAK	**Eagle**	**4.90**	**65**	*e*Pn	Pn	20 08 35.0	0.0
EGAK				*e*Sg	Sg	20 09 53.6	-5.0
BM3	**Burnt Mountain**	**5.24**	**31**	P	Pn	20 08 39.4	-0.3
DAWY	**Dawson**	**5.53**	**74**	*e*Pn	Pn	20 08 44.2	+0.5
DAWY				*e*Sg	Sg	20 10 14.3	-4.6
OHAK	**Old Harbor**	**5.95**	**189**	*e*Pn	Pn	20 08 55.8	+6.3
OHAK				*e*Sn	Sn	20 09 58.3	+0.9
OHAK				*e*Sg	Sg	20 10 21.6	-11
TNA	**Tin City**	**7.52**	**296**	*e*Pn	Pn	20 09 11.2	+0.2

*IDC **24** 20:07:58.5±0.7,4˚23N×73˚73W,h0km,mb3.8/12, mb1 4.2/15,mb1mx4.1/24,mbtmp4.0/15,ML4.7/2,Error ellipse: s-maj=16.3km s-min=9.2km az=43.0*
*ISCJB **24** 20:08:01.0±1.4,4˚32N±0˚05×73˚77W±0˚05,h28km±10km, mb4.0/22,Error ellipse: s-maj=10.2km s-min=7.6km az=43.6*
*NEIC **24** 20:08:02.1±1.4,4˚32N×73˚81W,h23km±10km,mb4.3/9, Error ellipse: s-maj=8.7km s-min=7.9km az=109.0*
ISC 24 20:08:01.3±1.4,4˚35N±0˚05×73˚78W±0˚05,h13km±8km, n37,σ0±97/41,mb4.0/22,1C,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.74**	**313**	Pg	**Pg**	**20 08 15.4**	**-0.3**
1μm,0.3s,baz=112,slow=9.2,SNR=1245							
ROSC				Lg		20 08 27.6	
904nm,0.3s,baz=257,slow=21,SNR=12							
ROSC	**El Rosal**	**0.74**	**313**	⇑*i*Pg	**Pg**	**20 08 15.3**	**-0.3**
ROSC				Pg	**Pg**	**20 08 15.4**	**-0.3**
ROSC				Lg		20 08 27.6	
SDV	**Santo Domingo**	**5.48**	**35**	Pn	**Pn**	**20 09 24.5**	**+1.8**
24nm,0.3s,baz=209,slow=9.0,SNR=86							
SDV				Sn	**Sn**	**20 10 26.7**	**+0.9**
36nm,0.3s,baz=67,slow=16,SNR=3.6							
SDV				Lg		20 10 56.0	
31nm,0.3s,baz=335,slow=15,SNR=4.5							
SDV	**Santo Domingo**	**5.48**	**35**	*e*Pn	**Pn**	**20 09 23.9**	**+1.2**
98nm,0.6s							
SDV				Sn	**Sn**	**20 10 26.7**	**+0.9**
SDV				Lg		20 10 56.0	
SDV				*e*Sg	**Sg**	**20 10 56.2**	**-1.3**
OTAV	**Otavalo**	**6.20**	**229**	*e*Pn	**Pn**	**20 09 34.1**	**+1.5**
65nm,0.9s							
BCIP	**Isla Barro Col**	**7.68**	**309**	Pn	**Pn**	**20 09 55.1**	**+2.2**
16nm,0.8s							
PCRV	**Puerto La Cruz**	**10.76**	**57**	Pn	**Pn**	**20 10 36.0**	**+0.9**
4.2nm,0.3s,baz=228,slow=7.0,SNR=13							
PCRV				Sn	**Sn**	**20 12 36.6**	**+1.1**
1.8nm,0.3s,baz=184,slow=14,SNR=1.9							
ATAH	**Atahualpa**	**12.18**	**202**	Pn	**Pn**	**20 10 55.6**	**+0.9**
0.3nm,0.3s,baz=64,slow=7.5,SNR=3.9							
MTDJ	**Mount Denham**	**14.27**	**345**	*e*Pn	**Pn**	**20 11 22.1**	**-1.1**
27nm,0.7s							
SDDR	**Presa de Saban**	**14.74**	**9**	*e*P	**Pn**	**20 11 29.9**	**+0.3**
14nm,0.7s							
AOPR	**Arecibo Observ**	**15.51**	**26**	Pn	**Pn**	**20 11 40.1**	**+0.3**
SJG	**San Juan**	**15.58**	**28**	Pn	**Pn**	**20 11 42.1**	**+1.3**
8.8nm,0.3s,baz=273,slow=19,SNR=3.2							
TEIG	**Tepich**	**21.17**	**319**	P	**P**	**20 12 47.6**	**+1.2**
13nm,0.9s,mb4.3,baz=39,slow=0.0							
LPAZ	**La Paz**	**21.26**	**165**	P	**P**	**20 12 47.1**	**-0.3**
12nm,1.0s,mb4.2,baz=359,slow=14,SNR=13							
SIV	**San Ignacio**	**23.81**	**148**	P	**P**	**20 13 13.0**	**-1.2**
2.0nm,0.7s,mb3.7,baz=329,slow=10,SNR=9.7							
WVT	**Waverly**	**34.17**	**340**	P	**P**	**20 14 46.2**	**-0.2**
2.2nm,0.6s,mb4.3							
FVM	**French Village**	**36.76**	**338**	*e*P	**P**	**20 15 09.6**	**+1.0**
7.1nm,0.6s,mb4.7							
CCM	**Cathedral Cave**	**37.14**	**337**	*e*P	**P**	**20 15 11.3**	**-0.5**
5.0nm,0.8s,mb4.4							
TXAR	**Lajitas Array**	**37.66**	**315**	P	**P**	**20 15 16.9**	**+0.6**
0.3nm,0.7s,mb3.2,baz=128,slow=9.0,SNR=4.5							
WMOK	**Wichita Mounta**	**38.09**	**326**	*e*P	**P**	**20 15 19.0**	**-1.0**
2.4nm,0.7s,mb4.0							
EYMN	**Ely**	**46.02**	**343**	*e*P	**P**	**20 16 23.6**	**-0.9**
5.7nm,0.7s,mb4.6							
PDAR	**Pinedale Array**	**49.70**	**326**	P	**P**	**20 16 53.5**	**+0.4**
0.5nm,0.6s,mb3.7,baz=115,slow=5.6,SNR=5.8							
SCHQ	**Schefferville**	**50.64**	**5**	P	**P**	**20 17 00.6**	**+0.6**
2.3nm,0.7s,mb4.2,baz=225,slow=16,SNR=3.2							
NVAR	**Mina Array Bea**	**52.77**	**316**	P	**P**	**20 17 16.1**	**-0.1**
0.4nm,0.3s,mb3.8,baz=140,slow=7.1,SNR=3.9							
MCMT	**McKenzie Canyo**	**52.85**	**326**	*e*P	**P**	**20 17 15.9**	**-0.8**
0.8nm,0.7s,mb3.8							
FFC	**Flin Flon**	**55.16**	**340**	*e*P	**P**	**20 17 32.0**	**-1.4**
1.9nm,0.6s,mb4.3							
FCC	**Fort Churchill**	**56.52**	**347**	*e*P	**P**	**20 17 42.0**	**-1.0**
0.1nm,0.9s,mb2.9							
YKA	**Yellowknife Ar**	**65.35**	**340**	P	**P**	**20 18 41.8**	**-1.2**
2.4nm,0.9s,mb4.2,baz=135,slow=6.3,SNR=22							
YKA	**Yellowknife Ar**	**65.35**	**340**	P	**P**	**20 18 41.8**	**-1.2**
SUMG	**Summit**	**71.52**	**11**	*e*P	**P**	**20 19 20.6**	**-0.9**
4.7nm,0.8s,mb4.5							
ESDC	**Sonseca Array**	**71.73**	**50**	P	**P**	**20 19 22.5**	**-0.9**
0.2nm,0.5s,mb3.3,baz=274,slow=6.3,SNR=3.4							
TORD	**Torodi Ar. Bea**	**74.89**	**78**	P	**P**	**20 19 41.4**	**-1.1**
0.5nm,0.5s,mb3.7,baz=280,slow=5.4,SNR=10							
TORD	**Torodi Ar. Bea**	**74.89**	**78**	P	**P**	**20 19 41.4**	**-1.1**
INK	**Inuvik**	**75.12**	**341**	P	**P**	**20 19 42.5**	**-0.3**
2.6nm,1.0s,mb4.1							
NOA	**NORSAR Array B**	**83.79**	**29**	P	**P**	**20 20 31.0**	**+0.9**
0.9nm,0.7s,mb4.0,baz=265,slow=5.1,SNR=2.6							
ARCES	**ARCESS Array B**	**89.20**	**20**	P	**P**	**20 20 55.8**	**-0.7**
1.6nm,0.7s,mb4.5,baz=297,slow=5.3,SNR=3.8							
ASAR	**Alice Springs**	**147.11**	**232**	PKPbc	PKPbc	20 27 42.1	-2.8
0.6nm,0.7s,baz=104,slow=3.0,SNR=3.3							

IDC 24 20:18:18.7±1.4,7˚66S×124˚47E,h0km,mb3.9/3, mb1 3.9/4,mb1mx3.5/17,mbtmp3.9/4,ML3.9/1,Error ellipse: s-maj=316.4km s-min=24.8km az=61.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**18.30**	**151**	P	Pn	20 22 35.5	+1.2
0.4nm,0.3s,baz=324,slow=11,SNR=18							
STKA	**Stephens Creek**	**28.89**	**149**	P	P	20 24 18.9	-0.5
0.5nm,0.3s,baz=334,slow=9.2,SNR=3.3							
MKAR	**Makanchi Array**	**65.90**	**330**	P	P	20 29 06.7	+0.3
0.8nm,0.7s,baz=138,slow=7.7,SNR=6.9							
ZALV	**Zalesovo Beam**	**69.86**	**336**	P	P	20 29 30.9	-0.3
0.5nm,0.4s,baz=126,slow=5.2,SNR=3.6							

*ISCJB **24** 20:21:00.2±0.5,43˚76N±0˚04×105˚23W±0˚05,h0km,Error ellipse: s-maj=5.9km s-min=5.6km az=141.2*
*NEIC **24** 20:21:01.9±0.4,43˚74N×105˚24W,h0km,ML3.0,MS5.8/1, Error ellipse: s-maj=4.9km s-min=4.5km az=160.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **24** 20:21:01.3±2.0,43˚66N×105˚41W,h0km,mb4.2/1, mb1 3.8/5,mb1mx3.4/27,mbtmp3.6/5,ML3.5/4,Error ellipse: s-maj=58.6km s-min=8.0km az=151.0*
ISC 24 20:21:01.9±0.4,43˚74N±0˚04×105˚24W±0˚05,h0km,n36, σ0±95/37,Wyoming

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

RSSD	**Black Hills**	**0.95**	**66**	*e*Pg	**Pg**	**20 21 20.8**	**+0.7**
PHWY	**Pilot Hill**	**2.44**	**184**	*e*Pn	**Pn**	**20 21 42.4**	**-0.6**
RWWY	**Rawlins**	**2.51**	**216**	*e*Pn	**Pn**	**20 21 44.4**	**+0.4**
LAO	**LASA Array**	**3.03**	**347**	*e*Pn	**Pn**	**20 21 51.2**	**+0.1**
BW06	**Boulder Array**	**3.30**	**254**	*e*Pn	**Pn**	**20 21 54.2**	**-0.6**
PDAR	**Pinedale Array**	**3.30**	**254**	Pn	**Pn**	**20 21 54.5**	**-0.4**
5.1nm,0.3s,baz=70,slow=15,SNR=82							
PDAR				Pg	**Pg**	**20 22 02.9**	**-2.3**
9.1nm,0.3s,baz=70,slow=19,SNR=29							
PDAR				Lg		20 22 38.9	
28nm,0.3s,baz=64,slow=33,SNR=24							
OGNE	**Ogallala**	**3.67**	**139**	*e*Pn	**Pn**	**20 22 00.1**	**+0.3**
GCMT	**Greycliff**	**3.76**	**305**	*e*Pn	**Pn**	**20 22 01.8**	**+0.6**
LOHW	**Long Hollow**	**3.90**	**270**	*e*Pn	**Pn**	**20 22 04.4**	**+1.4**
ISCO	**Idaho Springs**	**3.95**	**184**	*e*Pn	**Pn**	**20 22 03.7**	**+0.1**
SNOW	**Snow King Moun**	**4.02**	**268**	*e*Pn	**Pn**	**20 22 05.1**	**+0.4**
REDW	**Red Top Meadow**	**4.10**	**267**	*e*Pn	**Pn**	**20 22 05.6**	**-0.2**
IMW	**Indian Meadow**	**4.13**	**274**	*e*Pn	**Pn**	**20 22 05.9**	**-0.3**
TPAW	**Teton Pass**	**4.16**	**269**	*e*Pn	**Pn**	**20 22 07.0**	**+0.5**
RRI2	**Red Ridge**	**4.44**	**267**	*e*Pn	**Pn**	**20 22 10.8**	**+0.3**
BOZ	**Bozeman (W)**	**4.94**	**295**	*e*Pn	**Pn**	**20 22 16.1**	**-1.3**
HWUT	**Hardware Ranch**	**5.13**	**248**	*e*Pn	**Pn**	**20 22 19.1**	**-0.9**
5.3nm,0.3s							
EGMT	**Eagleton**	**5.32**	**325**	*e*Pn	**Pn**	**20 22 21.6**	**-1.0**
7.3nm,0.4s							
HRY	**Holter Researc**	**5.53**	**305**	*e*Pn	**Pn**	**20 22 25.6**	**+0.2**
8.8nm,0.4s							
LRM	**Limekiln Ridge**	**5.54**	**295**	*e*Pn	**Pn**	**20 22 25.1**	**-0.5**
15nm,0.3s							
MCMT	**McKenzie Canyo**	**5.57**	**284**	*e*Pn	**Pn**	**20 22 28.9**	**+2.8**
1.2nm,0.4s							
DAU	**Daniels Canyon**	**5.58**	**235**	*e*Pn	**Pn**	**20 22 28.2**	**+2.1**
4.4nm,0.4s							
PV04	**Paradox Valley**	**6.02**	**209**	*e*Pn	**Pn**	**20 22 32.0**	**-0.1**
MPU	**Maple Canyon**	**6.05**	**234**	Pn	**Pn**	**20 22 36.1**	**+3.5**
SRU	**San Rafael**	**6.10**	**222**	*e*Pn	**Pn**	**20 22 31.5**	**-1.8**
7.2nm,0.3s							
PV01	**Paradox Valley**	**6.14**	**205**	*e*Pn	**Pn**	**20 22 34.5**	**+0.6**
155nm,0.4s							
ECSD	**EROS Data Cent**	**6.25**	**87**	*e*Pn	**Pn**	**20 22 35.4**	**+0.1**
2.4nm,0.4s							
TMUT	**Trail Mountain**	**6.31**	**227**	*e*Pn	**Pn**	**20 22 35.9**	**-0.2**
27nm,0.5s							
CHMT	**Chamberlain Mo**	**6.48**	**302**	*e*Pn	**Pn**	**20 22 38.5**	**0.0**
1.5nm,0.3s							
DUG	**Dugway**	**6.67**	**240**	*e*Pn	**Pn**	**20 22 40.2**	**-0.8**
2.2nm,0.3s							
YBMT	**Yellow Bay**	**7.39**	**307**	*e*Pn	**Pn**	**20 22 51.8**	**+0.9**
3.4nm,0.3s							
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**20 23 00.9**	**+1.5**
0.2nm,0.3s,baz=53,slow=15,SNR=3.4							
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**20 23 13.8**	**-0.9**
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**20 23 13.8**	**-0.9**
4.3nm,0.3s,baz=233,slow=11,SNR=18							
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**Pn**	**20 25 32.5**	**+0.2**
0.1nm,0.3s,baz=155,slow=8.9,SNR=5.4							
ARCES	**ARCESS Array B**	**61.41**	**18**	P	**P**	**20 31 18.2**	**-1.1**
3.3nm,1.0s,baz=335,slow=8.0,SNR=5.3							

*IDC **24** 20:21:28.2±0.9,4˚32N×73˚63W,h0km,mb4.0/11, mb1 4.2/12,mb1mx4.0/21,mbtmp4.0/12,ML3.6/1,Error ellipse: s-maj=26.4km s-min=10.6km az=37.0*
*NEIC **24** 20:21:30.6±1.7,4˚27N×73˚88W,h17km±9km,mb4.3/10, Error ellipse: s-maj=11.0km s-min=9.8km az=197.0*
ISC 24 20:21:30.8±1.5,4˚47N±0˚06×73˚70W±0˚05,h9km±9km,n36, σ1±24/41,mb4.1/19,1C,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.73**	**302**	Pg	**Pg**	**20 21 45.3**	**+0.3**
631nm,0.3s,baz=111,slow=14,SNR=255							
ROSC				Lg		20 21 57.4	
511nm,0.3s,baz=90,slow=22,SNR=

MSL	**Mosul**	**1.17 283**	*e*Pb	**Pg**	**20 23 44.0**	**-1.9**
MSL			*e*Sb	**Sg**	**20 24 02.0**	**+0.9**
CUKT	**Cukurca**	**1.33 327**	*e*PN	**Pn**	**20 23 46.1**	**-1.4**
CUKT			*e*SN	**Sn**	**20 24 03.6**	**-1.4**
CUKT	**Cukurca**	**1.33 327**	*e*Pn	**Pn**	**20 23 46.1**	**-1.4**
CUKT			*e*Sn	**Sn**	**20 24 03.6**	**-1.4**
HAKT	**HAKKARI**	**1.56 336**	*i* P	**Pg**	**20 23 52.8**	**-0.6**
HAKT	**HAKKARI**	**1.56 336**	*i* P	**Pg**	**20 23 52.8**	**-0.6**
HKR	**Hakkari**	**1.57 337**	*e*PN	**Pn**	**20 23 52.1**	**+1.3**
HKR			*e*SN	**Sn**	**20 24 10.8**	**-0.1**
HKR	**Hakkari**	**1.57 337**	*e*Pn	**Pn**	**20 23 52.1**	**+1.3**
HKR			*e*Sn	**Sn**	**20 24 10.8**	**-0.1**
BHD	**Baghdad**	**2.86 182**	*e*Pn	**Pn**	**20 24 10.0**	**+1.5**
BHD			*e*Sn	**Sn**	**20 24 41.0**	**-1.7**
BHD	**Baghdad**	**2.86 182**	*e*Pn	**Pn**	**20 24 10.0**	**+1.5**
BEST	**Besiri**	**3.14 305**	*i* P	**Pn**	**20 24 13.8**	**+1.5**
BTMT	**Batman**	**3.17 311**	*e*PN	**Pn**	**20 24 14.2**	**+1.4**
SVRC	**Sivrice-ELAZID**	**4.72 300**	*e*PN	**Pn**	**20 24 34.5**	**+0.4**
SVRC	**Sivrice-ELAZID**	**4.72 300**	*e*Pn	**Pn**	**20 24 34.5**	**+0.4**
PTK	**Pertek**	**4.92 306**	*e*PN	**Pn**	**20 24 36.5**	**-0.3**
PTK	**Pertek**	**4.92 306**	*e*Pn	**Pn**	**20 24 36.5**	**-0.3**

*ISCJB **24** 20:29:48.7±1.1, 32.°38N±0.°03×104.°96E±0.°05, h15km±7km, mb3.7/6, Error ellipse: s-maj=7.3km s-min=5.6km az=20.6*
*IDC **24** 20:29:48.1±1.1, 32.°39N×105.°02E, h0km, mb3.6/6, mb1 3.6/9, mb1mx3.4/27, mbtmp3.5/9, ML3.4/2, Error ellipse: s-maj=37.3km s-min=20.6km az=57.0*
*BJI **24** 20:29:49.4, 32.°37N×105.°24E, h11km, ML3.6/12, Ms3.5/2, Ms7 3.5/2*
*NEIC **24** 20:29:50.0±0.5, 32.°39N×104.°93E, h10km, Error ellipse: s-maj=13.5km s-min=8.2km az=75.0*

ISC 24 20:29:49.4±1.0, 32.°41N±0.°03×105.°00E±0.°05, h7km±7km, n18, σ1°01/26, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.83**	**216**	Pg	**Pg**	**20 30 23.9**	**-0.7**
CD2				Sg	**Sg**	**20 30 49.8**	**+1.4**
CD2				smax			
	comp=N,2μm,1.0s						
XAN	**Xi'an**	**3.67**	**63**	Pn	**Pn**	**20 30 46.1**	**-0.5**
XAN				Pg	**Pb**	**20 30 54.3**	**-0.3**
XAN				Sn	**Sn**	**20 31 31.3**	**+1.2**
XAN				Sg	**Sb**	**20 31 39.5**	**+0.2**
XAN				smax			
	comp=N,130nm,0.6s						
XAN				smax			
	comp=E,66nm,0.8s						
LZH	**Lanzhou**	**3.79**	**346**	*e*Pn	**Pn**	**20 30 51.8**	**+3.5**
LZH				Pg	**Pg**	**20 31 02.6**	**+0.6**
LZH				Sn	**Sn**	**20 31 33.8**	**+0.7**
LZH				Sg	**Sg**	**20 31 49.1**	**-2.0**
LZH				smax			
	comp=N,180nm,0.7s						
LZH				smax			
	comp=E,360nm,0.6s						
LZH				LR	LR		
	comp=N,830nm,5.5s						
LZH				LR	LR		
	comp=Z,1μm,6.8s						
ENH	**Enshi**	**4.39**	**118**	*e*Pn	**Pn**	**20 30 57.7**	**+1.1**
GYA	**Guiyang**	**6.11**	**166**	Pn	**Pn**	**20 31 20.8**	**+0.6**
GYA				Sn	**Sn**	**20 32 28.9**	**-1.4**
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,50nm,0.7s						
CHTO	**Chiang Mai**	**14.60**	**203**	Pn	**Pn**	**20 33 16.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**14.93**	**203**	Pn	**Pn**	**20 33 21.0**	**0.0**
	comp=E,0.1nm,0.3s,baz=6.4,slow=8.4,SNR=3.2						
SONM	**Songino Array**	**15.44**	**4**	Pn	**Pn**	**20 33 29.2**	**+1.6**
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=2.4						
KSRS	**Korea Array**	**19.44**	**69**	P	**Pn**	**20 34 16.1**	**-1.5**
	baz=253,slow=10,SNR=2.7						
MK31	**Makanchi Array**	**22.53**	**316**	*e*P	**P**	**20 34 48.5**	**-1.2**
MKAR	**Makanchi Array**	**22.53**	**316**	P	**P**	**20 34 51.4**	**+1.7**
	comp=E,0.6nm,0.5s,mb3.2,baz=111,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**22.53**	**316**	P	**P**	**20 34 51.4**	**+1.7**
TKM2	**Tokmak 2**	**25.41**	**303**	P	**P**	**20 35 18.1**	**+0.5**
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**20 35 21.4**	**-0.5**
	comp=E,0.3nm,0.3s,mb3.3,baz=134,slow=8.2,SNR=2.8						
ARCES	**ARCESS Array B**	**56.39**	**335**	P	**P**	**20 39 30.8**	**-0.2**
	comp=E,1.0nm,0.8s,mb3.9,baz=84,slow=8.3,SNR=2.9						
FINES	**FINESS Array B**	**56.91**	**326**	P	**P**	**20 39 34.5**	**-0.3**
	comp=E,1.7nm,0.9s,mb4.1,baz=98,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**20 40 11.5**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.8,baz=330,slow=6.5,SNR=8.2						
NOA	**NORSAR Array B**	**63.97**	**327**	P	**P**	**20 40 22.2**	**-0.9**
	comp=E,0.7nm,0.6s,mb3.9,baz=72,slow=6.8,SNR=3.1						

MEX 24 20:30:01.2±1.3, 18.°75N×105.°53W, h8km±96km, MD3.6, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.88**	**31**	*i* P	Pg	20 30 15.1	-2.9
CJM				*i* S	Sg	20 30 27.5	-1.9
MMIG	**Aquila**	**2.12**	**102**	*i* P	Pn	20 30 34.3	-2.6
MMIG				*i* S	Sn	20 30 58.4	-5.1
ANIG	**Ahuacatlan**	**2.48**	**22**	*e*P	Pn	20 30 40.0	-1.9
ANIG				*i* S	Sn	20 31 09.0	-3.4
SFJM	**Santa Fe**	**2.91**	**53**	*i* P	Pn	20 30 46.0	-1.9
SFJM				*i* S	Sn	20 31 20.0	-3.1
ZIIG	**Zihuatanejo**	**4.02**	**106**	*e*P	Pn	20 31 01.4	-1.7
ZIIG				*i* S	Sn	20 31 47.4	-3.1

*IDC **24** 20:36:02.5±1.0, 4.°12N×73.°71W, h0km, mb3.7/6, mb1 4.1/8, mb1mx3.8/21, mbtmp3.9/8, ML4.3/2, Error ellipse: s-maj=20.3km s-min=11.5km az=45.0*
*NEIC **24** 20:36:05.8±0.9, 4.°32N×73.°80W, h10km, mb4.3/4, Error ellipse: s-maj=17.5km s-min=14.7km az=220.0*

ISC 24 20:36:09.7±1.8, 4.°45N±0.°07×73.°86W±0.°07, h27km±14km, n24, σ1°23/28, mb3.8/12, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.62**	**310**	Pg	**Pb**	**20 36 21.0**	**-1.0**
	258nm,0.3s,baz=114,slow=11,SNR=182						
ROSC				Lg		20 36 32.8	
	428nm,0.3s,baz=90,slow=20,SNR=17						
SDV	**Santo Domingo**	**5.45**	**36**	Pn	**Pn**	**20 37 29.8**	**+0.7**
	21nm,0.3s,baz=222,slow=13,SNR=27						
SDV				Sn	**Sn**	**20 38 33.7**	**+2.8**
	37nm,0.3s,baz=84,slow=22,SNR=11						
SDV				Lg		20 39 01.1	
	19nm,0.3s,baz=289,slow=20,SNR=4.0						
SDV	**Santo Domingo**	**5.45**	**36**	*e*Pn	**Pn**	**20 37 29.3**	**+0.2**
SDV				Pn	**Pn**	**20 37 29.8**	**+0.7**
SDV				*e*Sn	**Sn**	**20 38 32.6**	**+1.7**
SDV				Sn	**Sn**	**20 38 33.7**	**+2.8**
SDV				Lg		20 39 01.1	
OTAV	**Otavalo**	**6.21**	**228**	*e*Pn	**Pn**	**20 37 42.0**	**+2.4**
	33nm,0.8s						
PCRV	**Puerto La Cruz**	**10.77**	**58**	Pn	**Pn**	**20 38 41.3**	**-0.9**
	1.1nm,0.3s,baz=206,slow=6.4,SNR=3.6						
PCRV				Sn	**Sn**	**20 40 41.3**	**-0.6**
	0.7nm,0.3s,baz=180,slow=20,SNR=3.1						
PCRV				Lg		20 42 03.3	
	1.0nm,0.3s,baz=324,slow=19,SNR=3.6						
ATAH	**Atahualpa**	**12.24**	**202**	Pn	**Pn**	**20 39 03.1**	**+0.8**
	0.4nm,0.3s,baz=62,slow=7.1,SNR=4.8						
SDDR	**Presa de Saban**	**14.66**	**10**	*e*Pn	**Pn**	**20 39 35.6**	**+0.2**
	17nm,0.8s						
TEIG	**Tepich**	**21.05**	**319**	P	**P**	**20 40 53.5**	**+1.8**
	9.1nm,0.7s,mb4.2,baz=88,slow=0.0,SNR=3.3						
LPAZ	**La Paz**	**21.37**	**165**	P	**P**	**20 40 55.3**	**+0.2**
	19nm,1.1s,mb4.3,baz=360,slow=13,SNR=13						
LPAZ	**La Paz**	**21.37**	**165**	*e*P	**P**	**20 40 55.2**	**+0.2**
	24nm,1.1s,mb4.4						
SIV	**San Ignacio**	**23.93**	**148**	P	**P**	**20 41 14.5**	**-7.1**
	0.4nm,0.3s,mb3.3,baz=270,slow=10,SNR=2.4						
FVM	**French Village**	**36.65**	**338**	*e*P	**P**	**20 43 14.3**	**+0.4**
	7.7nm,0.7s,mb4.6						
TXAR	**Lajitas Array**	**37.54**	**315**	P	**P**	**20 43 22.8**	**+1.1**
	0.4nm,0.8s,mb3.2,baz=120,slow=8.1,SNR=5.2						
TXAR	**Lajitas Array**	**37.54**	**315**	P	**P**	**20 43 22.8**	**+1.1**
WMOK	**Wichita Mounta**	**37.97**	**326**	*e*P	**P**	**20 43 24.1**	**-1.1**
	3.6nm,0.9s,mb4.1						
PDAR	**Pinedale Array**	**49.58**	**326**	P	**P**	**20 44 59.0**	**+0.5**
	0.4nm,0.7s,mb3.6,baz=115,slow=10.0,SNR=4.9						
NVAR	**Mina Array Bea**	**52.65**	**316**	P	**P**	**20 45 17.7**	**-3.9**
	0.2nm,0.4s,mb3.4,baz=155,slow=6.6,SNR=2.5						
NVAR	**Mina Array Bea**	**52.65**	**316**	P	**P**	**20 45 17.7**	**-3.9**
FCC	**Fort Churchill**	**56.41**	**348**	*e*P	**P**	**20 45 47.5**	**-1.0**
	0.1nm,1.1s,mb2.8						
YKA	**Yellowknife Ar**	**65.23**	**341**	P	**P**	**20 46 47.5**	**-1.0**
	1.6nm,0.8s,mb4.1,baz=130,slow=6.9,SNR=25						
YKA	**Yellowknife Ar**	**65.23**	**341**	P	**P**	**20 46 47.5**	**-1.0**
RES	**Resolute Bay**	**71.24**	**354**	P	**P**	**20 47 24.4**	**-1.6**
	1.3nm,0.8s,mb3.9						
NOA	**NORSAR Array B**	**83.74**	**29**	P	**P**	**20 48 32.8**	**-3.2**
	0.4nm,0.8s,mb3.6,baz=268,slow=5.1,SNR=2.5						
ASAR	**Alice Springs**	**147.11**	**232**	PKPbc	PKPbc	20 55 47.4	-3.6
	1.3nm,0.9s,baz=122,slow=3.4,SNR=7.0						

*ISCJB **24** 20:50:06.8±0.9, 12.°94N±0.°08×143.°4E±0.°1, h164km±11km, mb4.2/31, Error ellipse: s-maj=21.2km s-min=12.4km az=179.7*
*MOS **24** 20:50:06.6±0.7, 12.°94N×143.°34E, h159km, mb4.2/19, Error ellipse: s-maj=18.6km s-min=9.4km az=109.8*
*NEIC **24** 20:50:08.0±0.8, 12.°95N×143.°48E, h161km±9km, mb4.1/8, Error ellipse: s-maj=15.0km s-min=8.1km az=83.0*
*IDC **24** 20:50:08.4±1.1, 12.°94N×143.°48E, h163km±14km, mb3.8/12, mb1 3.8/13, mb1mx3.7/23, mbtmp3.8/13, Error ellipse: s-maj=24.7km s-min=12.3km az=80.0*

ISC 24 20:50:08.1±0.9, 12.°93N±0.°08×143.°4E±0.°1, h160km±11km, n58, σ0°63/63, mb4.2/31, 1C-1D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.54**	**65**	P	**Pn**	**20 50 38.8**	**+0.1**
	23nm,0.3s,baz=199,slow=7.8,SNR=21						
GUMO				S	**Sn**	**20 51 02.6**	**+0.3**
	75nm,0.3s,baz=208,slow=23,SNR=14						
GUMO	**Guam**	**1.54**	**65**	P	**Pn**	**20 50 38.8**	**+0.1**
GUMO				S	**Sn**	**20 51 02.6**	**+0.3**
GUMO				pmax	pmax		
	comp=Z,23nm,0.3s						
GUMO				smax			
	comp=N,75nm,0.3s						
GUMO	**Guam**	**1.54**	**65**	*e*Pn	**Pn**	**20 50 38.4**	**-0.3**
GUMO				P		20 50 38.8	
GUMO				*e*Sn	**Sn**	**20 50 59.1**	**-3.2**
GUMO				S	**Sn**	**20 51 02.6**	**+0.3**
JOW	**Kunigami**	**19.83**	**316**	P	**P**	**20 54 27.3**	**+0.8**
	comp=N,2.5nm,0.3s,baz=149,slow=12,SNR=8.2						
MJAR	**Matsushiro Arr**	**23.97**	**350**	P	**P**	**20 55 06.8**	**-0.9**
	comp=N,3.9nm,0.9s,mb3.9,baz=178,slow=11,SNR=12						
MJAR	**Matsushiro Arr**	**23.97**	**350**	P	**P**	**20 55 06.8**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	**23.97**	**350**	P	**P**	**20 55 06.8**	**-0.9**
MAJO	**Matsushiro**	**23.97**	**350**	*e*P	**P**	**20 55 06.4**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
MAJO	**Matsushiro**	**23.97**	**350**	*e*P	**P**	**20 55 06.4**	**-1.3**
	comp=Z,8.6nm,0.8s,mb4.3						
KSRS	**Korea Array**	**28.08**	**333**	P	**P**	**20 55 44.8**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.6,baz=138,slow=8.9,SNR=6.2						
KSRS	**Korea Array**	**28.08**	**333**	P	**P**	**20 55 44.8**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
WRAB	**Tennant Creek**	**33.86**	**195**	*e*P	**P**	**20 56 35.7**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**33.86**	**195**	*e*P	**P**	**20 56 35.7**	**+0.1**
	comp=Z,8.6nm,0.6s,mb4.7						
ENH	**Enshi**	**35.79**	**304**	*e*P	**P**	**20 56 51.7**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.0						
HABR	**Khabarovsk**	**36.11**	**351**	P	**P**	**20 56 53.7**	**-0.8**
HABR				*e*		20 58 19.7	
HABR				*e*		20 59 15.0	
HABR				*e*S	**S**	**21 02 18.2**	**-3.7**
HABR				MLR	MLR		
	comp=Z,214nm,15.0s						
ASAR	**Alice Springs**	**37.55**	**194**	P	**P**	**20 57 07.0**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.0,baz=21,slow=11,SNR=39						
ASAR				PcP	PcP	20 59 22.6	+1.0
	comp=Z,0.4nm,0.7s,baz=19,slow=2.0,SNR=4.7						
ASAR	**Alice Springs**	**37.55**	**194**	P	**P**	**20 57 07.1**	**+0.2**
ASAR						20 59 22.6	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LZH	**Lanzhou**	**42.36**	**310**	*e*P	**P**	**20 57 46.5**	**0.0**
LZH				pP	pP	20 57 51.0	-31
LZH				sP	sP	20 57 53.5	-46
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.5						
CMAR	**Chiang Mai Arr**	**43.11**	**283**	P	**P**	**20 57 53.1**	**+0.3**
	comp=Z,1.4nm,0.6s,mb3.8,baz=82,slow=6.8,SNR=13						
CMAR	**Chiang Mai Arr**	**43.11**	**283**	P	**P**	**20 57 53.1**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**44.59**	**182**	P	**P**	**20 58 04.0**	**-0.3**
	comp=Z,3.7nm,0.6s,mb4.2,baz=1.2,slow=8.9,SNR=14						
STKA	**Stephens Creek**	**44.59**	**182**	P	**P**	**20 58 04.0**	**-0.3**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
STKA	**Stephens Creek**	**44.59**	**182**	*e*P	**P**	**20 58 03.8**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.5						
SONM	**Songino Array**	**46.48**	**326**	P	**P**	**20 58 19.9**	**+0.9**
	comp=Z,1.3nm,0.5s,mb3.8,baz=149,slow=8.4,SNR=14						
SONM	**Songino Array**	**46.48**	**326**	P	**P**	**20 58 19.9**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA	**Gaotai**	**46.58**	**313**	*e*P	**P**	**20 58 20.3**	**+0.4**
GTA				pP	pP	20 58 23.8	-32
GTA				sP	sP	20 58 26.3	-47
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
ZAK	**Zakamensk**	**49.62**	**327**	*e*P	**P**	**20 58 43.8**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
YAK	**Yakutsk**	**50.01**	**352**	*e*P	**P**	**20 58 46.8**	**+1.0**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
BOD	**Bodaibo**	**50.04**	**340**	*e*P	**P**	**20 58 46.0**	**-0.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
LSA	**Lhasa**	**51.06**	**298**	*e*P	**P**	**20 58 54.5**	**+0.2**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
LSA	**Lhasa**	**51.06**	**298**	*e*P	**P**	**20 58 54.5**	**+0.3**
	comp=Z,1.4nm,0.3s,mb4.1						
GUN	**Gumba**	**55.50**	**295**	*e*P	**P**	**20 59 26.9**	**+0.2**
	comp=Z,9.8nm,0.4s,mb5.0						
PKIN	**Phulchoki**	**55.91**	**295**	*e*P	**P**	**20 59 28.7**	**-0.9**
	comp=Z,2.7nm,0.4s,mb4.4						
KKN	**Kakani**	**56.03**	**295**	*e*P	**P**	**20 59 30.0**	**-0.5**
	comp=Z,2.6nm,0.3s,mb4.5						
DMN	**Daman**	**56.17**	**295**	*e*P	**P**	**20 59 30.9**	**-0.6**
	comp=Z,2.7nm,0.4s,mb4.4						
GKN	**Gorkha**	**56.60**	**295**	*e*P	**P**	**20 59 34.1**	**-0.4**
	comp=Z,4.0nm,0.3s,mb4.8						
TIXI	**Tiksi**	**59.35**	**355**	*e*P	**P**	**20 59 54.6**	**+1.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
TIXI	**Tiksi**	**59.35**	**355**	P	**P**	**20 59 53.1**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.0						
MK31	**Makanchi Array**	**61.00**	**317**	*e*P	**P**	**21 00 04.7**	**+0.2**
MKAR	**Makanchi Array**	**61.00**	**317**	P	**P**	**21 00 05.2**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.0,baz=89,slow=9.2,SNR=20						
MKAR	**Makanchi Array**	**61.00**	**317**	P	**P**	**21 00 05.2**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAA0	**Zalesovo Array**	**61.35**	**325**	*e*P	**P**	**21 00 06.5**	**-0.3**
ZALV	**Zalesovo Beam**	**61.35**	**325**	P	**P**	**21 00 06.7**	**0.0**
	comp=Z,2.7nm,0.4s,mb4.4,baz=109,slow=7.1,SNR=19						
ZALV				PcP	PcP	21 00 47.0	-0.4
	comp=Z,1.0nm,0.5s,baz=135,slow=2.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**61.35**	**325**	P	**P**	**21 00 06.7**	**0.0**
ZALV					pP	21 00 47.1	+2.8
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
ZALV	**Zalesovo Beam**	**61.35**	**325**	P	**P**	**21 00 06.7**	**0.0**
ZALV				PcP	PcP	21 00 47.0	-0.4
KURK	**Kurchatov**	**64.19**	**320**	*e*P	**P**	**21 00 25.6**	**0.0**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KURK	**Kurchatov**	**64.19**	**320**	*e*P	**P**	**21 00 25.6**	**0.0**
	comp=Z,10nm,0.8s,mb4.7						
BVAR	**Borovoye Array**	**69.58**	**322**	P	**P**	**21 01 00.1**	**+0.5**
	comp=Z,5.5nm,0.5s,mb4.6,baz=104,slow=8.5,SNR=34						
BVAR	**Borovoye Array**	**69.58**	**322**	P	**P**	**21 01 00.1**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRVK	**Borovoye**	**69.65**	**322**	*ce*P	**P**	**21 01 00.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**76.09**	**318**	*e*P	**P**	**21 01 37.8**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.5						
ARU	**Arti**	**76.51**	**325**	*d* P	**P**	**21 01 40.2**	**-0.1**
ARU				S	S	21 11 08.5	-4.3
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb3.9						
ARU	**Arti**	**76.51**	**325**	*e*P	**P**	**21 01 39.4**	**-0.8**
YKA	**Yellowknife Ar**	**84.08**	**27**	P	**P**	**21 02 21.5**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.1,baz=286,slow=4.8,SNR=4.2						
ARCES	**ARCESS Array B**	**87.27**	**342**	P	**P**	**21 02 36.2**	**-0.1**
	comp=Z,3.3nm,1.0s,mb4.1,baz=76,slow=6.8,SNR=10.0						
ARCES	**ARCESS Array B**	**87.27**	**342**	P	**P**	**21 02 36.2**	**0.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**91.16**	**335**	P	**P**	**21 02 53.5**	**-1.1**
	comp=Z,1.4nm,0.4s,mb4.4,baz=61,slow=4.3,SNR=40						
FINES	**FINESS Array B**	**91.16**	**335**	P	**P**	**21 02 53.5**	**-1.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						

*IDC **24** 21:04:04.0±1.4, 4.°16N×73.°74W, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.7/19, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=24.0km s-min=14.3km az=46.0*
*NEIC **24** 21:04:07.7±1.1, 4.°36N×73.°88W, h10km, mb3.5/1, Error ellipse: s-maj=22.8km s-min=14.8km az=56.0*
*ISCJB **24** 21:04:10.5±1.2, 4.°54N±0.°09×73.°86W±0.°09, h46km±12km, mb3.5/4, Error ellipse: s-maj=17.8km s-min=12.3km az=41.7*

ISC 24 21:04:11.7±1.8, 4.°56N±0.°09×73.°9W±0.°1, h33km±13km, n12, σ0°86/14, mb3.5/4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.54**	**303**	Pg	**Pb**	**21 04 22.3**	**-0.5**
	103nm,0.3s,baz=125,slow=10,SNR=85						
ROSC				Lg		21 04 33.7	
	182nm,0.3s,baz=102,slow=20,SNR=19						
ROSC	**El Rosal**	**0.54**	**303**	*e*Pg	**Pb**	**21 04 22.2**	**-0.7**
ROSC				*e*Sg	**Sb**	**21 04 30.6**	**+0.1**
SDV	**Santo Domingo**	**5.37**	**37**	Pn	**Pn**	**21 05 30.7**	**+1.1**
	7.0nm,0.3s,baz=28,slow=5.5,SNR=26						
SDV				Sn	**Sn**	**21 06 35.0**	**+4.7**
	8.1nm,0.3s,baz=79,slow=20,SNR=6.3						
SDV				Lg		21 07 01.1	
	5.2nm,0.3s,baz=350,slow=13,SNR=4.2						
SDV	**Santo Domingo**	**5.37**	**37**	*e*Pn	**Pn**	**21 05 30.7**	**+1.2**
SDV				*e*S	**Sn**	**21 06 29.5**	**-0.8**
OTAV	**Otavalo**	**6.27**	**227**	*e*Pn	**Pn**	**21 05 43.3**	**+1.4**
LPAZ	**La Paz**	**21.48**	**165**	P	**P**	**21 08 57.0**	**-0.7**
	1.3nm,0.9s,mb3.3,baz=347,slow=11,SNR=4.8						
LPAZ	**La Paz**	**21.48**	**165**	*e*P	**P**	**21 08 56.2**	**-1.5**
	2.1nm,0.9s,mb3.5						
TXAR	**Lajitas Array**	**37.44**	**314**	P	**P**	**21 11 21.1**	**-1.0**
	0.1nm,0.4s,mb3.0,baz=96,slow=7.3,SNR=3.4						
PDAR	**Pinedale Array**	**49.48**	**326**	P	**P**	**21 12 59.1**	**+0.3**
	0.3nm,0.3s,mb3.8,baz=202,slow=27,SNR=4.1						
YKA	**Yellowknife Ar**	**65.12**	**340**	P	**P**	**21 14 49.0**	**+0.1**
	0.4nm,0.6s,mb3.6,baz=134,slow=6.2,SNR=9.8						
YKA	**Yellowknife Ar**	**65.12**	**340**	P	**P**	**21 14 49.0**	**+0.1**
ASAR	**Alice Springs**	**147.16**	**232**	PKPbc	PKPbc	21 23 49.5	-2.8
	0.4nm,0.9s,baz=129,slow=3.8,SNR=3.5						

DJA 24 21:13:48, 7.°99S×107.°06E, h30km, MLv3.6/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**1.28**	**26**	P	Pn	21 14 11.5	+1.6
CGJI	**Cibinong**	**1.93**	**315**	P	Pn	21 14 19.6	+0.9
CGJI				S	Sn	21 14 41.5	-0.5
UGM	**Wanagama**	**3.43**	**89**	P	Pn	21 14 40.7	+1.2
UGM				S	Sn	21 15 18.8	-0.3
KASI	**Kota Agung**	**3.53**	**314**	P	Pn	21 14 41.8	+0.9
PCJI	**Pacitan**	**4.08**	**93**	P	Pn	21 14 49.5	+1.1

*NEIC **24** 21:19:07.4, 17.°83N×100.°16W, h54km, MD3.8(MEX), After MEX.*

MEX 24 21:19:07.4±1.0, 17.°83N×100.°16W, h54km±17km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.78**	**187**	*i* P	Pn	21 19 20.4	-2.1

ISC 24 21:38:17.3±0.9, 24°.85N±0°.03×122°.49E±0°.04, h0km±4km, n47, σ0°.87/74, mb3.4/2, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48**	**289**	⇓*i*P	**Pg**	**21 38 26.9**	**+0.5**
	baz=287						
TWB1				*i* S	**Sg**	**21 38 32.8**	**+0.1**
	baz=287						
TWC	**Suao**	**0.63**	**247**	P	**Pg**	**21 38 29.8**	**+0.5**
	baz=240						
TWC				S	**Sg**	**21 38 37.3**	**-0.2**
	baz=240						
NWF	**Wu-fen Shan**	**0.68**	**289**	*i* P	**Pg**	**21 38 31.0**	**+0.7**
	baz=287						
NWF				*i* S	**Sg**	**21 38 39.6**	**+0.6**
	baz=287						
ILA	**Ilan**	**0.68**	**263**	*e*P	**Pg**	**21 38 30.9**	**+0.6**
	baz=258						
TWE	**Neicheng**	**0.76**	**260**	*i* P	**Pg**	**21 38 32.0**	**+0.2**
	baz=246						
TWE				*e*S	**Sg**	**21 38 41.9**	**+0.2**
	baz=246						
ENA	**Nanau**	**0.80**	**238**	P	**Pg**	**21 38 33.1**	**+0.5**
	baz=232						
ENA				*e*S	**Sg**	**21 38 42.6**	**-0.4**
	baz=232						
TWA	**Mucha**	**0.83**	**279**	⇑*i*P	**Pg**	**21 38 33.6**	**+0.4**
	baz=276						
TWA				*e*S	**Sg**	**21 38 43.6**	**-0.4**
	baz=276						
PCYT	**Pengchaiyu**	**0.86**	**334**	*e*P	**Pg**	**21 38 33.5**	**-0.3**
	baz=338						
PCYT				*e*S	**Sg**	**21 38 46.0**	**+1.1**
	baz=338						
ENTT	**Nioudou**	**0.86**	**256**	P	**Pg**	**21 38 34.0**	**+0.2**
	baz=251						
ENTT				*e*S	**Sg**	**21 38 45.2**	**+0.2**
	baz=251						
TAP1	**Taipei**	**0.89**	**282**	*e*P	**Pg**	**21 38 34.6**	**+0.1**
	baz=280						
TAP1				S	**Sg**	**21 38 46.2**	**+0.2**
	baz=280						
TWY	**Chenhua**	**0.91**	**298**	*e*P	**Pg**	**21 38 34.3**	**-0.4**
	baz=297						
TWY				*e*S	**Sg**	**21 38 46.7**	**+0.2**
	baz=297						
TATO	**Taipei**	**0.92**	**278**	*e*Pn	**Pn**	**21 38 34.7**	**-2.7**
TWS1	**Kuangyinshan**	**1.00**	**284**	P	**Pg**	**21 38 36.0**	**-0.5**
	baz=283						
TWS1				*e*S	**Sg**	**21 38 49.1**	**-0.4**
	baz=283						
YHNB	**Yeheng**	**1.03**	**260**	*e*Pn	**Pn**	**21 38 36.6**	**-2.3**
NSK	**Sanguang**	**1.04**	**260**	P	**Pg**	**21 38 37.0**	**-0.3**
	baz=266						
NSK				*e*S	**Sg**	**21 38 50.0**	**-0.8**
	baz=266						
NACB	**Ninganchiao**	**1.06**	**230**	*e*Pn	**Pn**	**21 38 37.0**	**-2.3**
NACB				*e*Sn	**Sn**	**21 38 50.3**	**-4.5**
NNS	**Nan Shan**	**1.09**	**248**	P	**Pg**	**21 38 38.3**	**0.0**
	baz=232						
NNS				*e*S	**Sg**	**21 38 52.3**	**-0.2**
	baz=232						
TWD	**Chiawan**	**1.12**	**227**	P	**Pg**	**21 38 38.8**	**+0.1**
	baz=230						
TWD				*e*S	**Sg**	**21 38 53.5**	**+0.2**
	baz=230						
TWT	**Tachien**	**1.33**	**244**	*e*P	**Pg**	**21 38 42.6**	**-0.3**
	baz=231						
TWT				*e*S	**Sg**	**21 39 00.1**	**-0.1**
	baz=231						
NSTT	**Nanjuang**	**1.37**	**261**	*e*P	**Pg**	**21 38 41.9**	**-1.7**
	baz=258						
NSTT				*e*S	**Sg**	**21 39 00.3**	**-1.0**
	baz=258						
ESL	**Shilin**	**1.41**	**223**	*e*P	**Pn**	**21 38 42.5**	**-1.7**
	baz=201						
ESL				*e*S	**Sg**	**21 39 02.6**	**-0.1**
	baz=201						
NSY	**Sanyi**	**1.63**	**255**	*e*P	**Pn**	**21 38 47.8**	**+0.6**
	baz=267						
TWQ1	**Liyutan**	**1.64**	**252**	*e*P	**Pn**	**21 38 47.8**	**+0.5**
	baz=265						
EHY	**Hungye**	**1.71**	**219**	*e*P	**Pn**	**21 38 48.5**	**+0.1**
	baz=215						
SMLT	**Sun Moon Lake**	**1.74**	**237**	*e*P	**Pn**	**21 38 49.3**	**+0.5**
	baz=233						
SMLT				*e*S	**Sn**	**21 39 13.4**	**+1.7**
	baz=233						
SSLB	**Suanglung**	**1.76**	**233**	*e*Pn	**Pn**	**21 38 48.8**	**-0.2**
SSLB				*e*Sn	**Sn**	**21 39 12.6**	**+0.5**
TYC	**Yuchr**	**1.76**	**238**	P	**Pn**	**21 38 49.4**	**+0.3**
	baz=234						
TYC				*e*S	**Sn**	**21 39 13.8**	**+1.7**
	baz=234						
TCU	**Taichung**	**1.79**	**247**	*e*P	**Pn**	**21 38 49.2**	**-0.3**
	baz=245						
YULB	**Yu-li**	**1.82**	**217**	*e*Pn	**Pn**	**21 38 49.7**	**-0.1**
TWF1	**Yuli**	**1.85**	**216**	*e*P	**Pn**	**21 38 49.2**	**-1.0**
	baz=213						
TWF1				*e*S	**Sn**	**21 39 13.6**	**-0.7**
	baz=213						
CHKT	**Chengkung**	**2.03**	**211**	*e*P	**Pn**	**21 38 49.4**	**-3.3**
	baz=192						
ALS	**Alishan**	**2.04**	**229**	*e*P	**Pn**	**21 38 53.6**	**+0.8**
	baz=209						
ALS				*e*S	**Sn**	**21 39 18.4**	**-0.5**
	baz=209						
CHN5	**Tsauling**	**2.07**	**233**	*e*P	**Pn**	**21 38 53.7**	**+0.4**
	baz=213						
CHN5				*e*S	**Sn**	**21 39 20.2**	**+0.3**
	baz=213						
ELDTW	**Lidau**	**2.13**	**219**	*e*P	**Pn**	**21 38 52.8**	**-1.4**
	baz=203						
CHN4	**Tsaushan**	**2.29**	**230**	*e*P	**Pn**	**21 38 57.6**	**+1.4**
	baz=211						
TPUB	**Ta-pu**	**2.30**	**228**	*e*Pn	**Pn**	**21 38 57.2**	**+0.8**
TPUB				*e*Sg	**Sg**	**21 39 30.9**	**-0.2**
WTP	**Ta-pu**	**2.34**	**227**	*e*P	**Pn**	**21 38 58.0**	**+0.9**
	baz=209						
WTP				*e*S	**Sn**	**21 39 26.4**	**-0.1**
	baz=209						
TWK	**Hsinying**	**2.42**	**230**	*e*P	**Pn**	**21 38 58.9**	**+0.9**
	baz=212						
TWK				*e*S	**Sn**	**21 39 26.4**	**-1.9**
	baz=212						
CHN1	**Nanshi**	**2.44**	**228**	*e*P	**Pn**	**21 38 59.3**	**+0.9**
	baz=226						
CHN1				*e*S	**Sn**	**21 39 29.7**	**+0.7**
	baz=226						
SGST	**Jiashian**	**2.48**	**225**	*e*P	**Pn**	**21 38 59.0**	**+0.1**
	baz=207						
SSD	**Sandimen**	**2.70**	**219**	*e*P	**Pn**	**21 39 03.4**	**+1.4**
	baz=202						
EAST	**Anshuo**	**2.88**	**212**	*e*P	**Pn**	**21 39 05.8**	**+1.4**
	baz=209						
KSRS	**Korea Array**	**13.39**	**19**	Pn	Px	21 41 39.6	
	0.2nm,0.3s,baz=198,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**38.70**	**315**	P	**P**	**21 45 42.4**	**-0.4**
	0.2nm,0.4s,mb3.1,baz=99,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**38.70**	**315**	P	**P**	**21 45 42.4**	**-0.4**
BVAR	**Borovoye Array**	**47.92**	**320**	P	**P**	**21 46 55.7**	**-1.4**
	0.2nm,0.4s,mb3.6,baz=108,slow=9.3,SNR=2.1						
BVAR	**Borovoye Array**	**47.92**	**320**	P	**P**	**21 46 55.7**	**-1.4**

*CASC **24** 21:59:03.5±2.1, 15°.90N×93°.97W, h34km±999km, MD4.4*
*ISCJB **24** 21:59:04.2±0.5, 15°.85N±0°.05×93°.88W±0°.04, h66km±5km, mb4.0/4, Error ellipse: s-maj=9.7km s-min=3.3km az=39.2*
*MEX **24** 21:59:04.2, 15°.75N×94°.01W, h61km±10km, MD4.5*
*NEIC **24** 21:59:04.2, 15°.75N×94°.01W, h61km, MD4.5(MEX), After MEX.*
*IDC **24** 21:59:04.5±1.7, 15°.88N×93°.80W, h71km±12km, mb3.8/3, mb1 4.2/6, mb1mx3.7/22, mbtmp3.9/6, Error ellipse: s-maj=29.0km s-min=7.1km az=28.0*

ISC 24 21:59:05.6±0.4, 15°.90N±0°.04×93°.87W±0°.04, h59km±6km, n86, σ1°.06/108, mb4.1/4, 27C-26D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.66**	**107**	*e*P	**Pn**	**21 59 18.0**	**-1.3**
PCIG				*e*S	**Sn**	**21 59 28.8**	**-0.5**
TGIG		**1.13**	**40**	*e*P	**Pn**	**21 59 25.5**	**+0.2**
TGIG				*e*S	**Sn**	**21 59 41.0**	**+1.0**
CMIG	**Matias Romero**	**1.53**	**321**	P	**Pn**	**21 59 29.7**	**-1.0**
	46nm,0.3s,baz=142,slow=11,SNR=618						
CMIG				S	**Sn**	**21 59 50.7**	**+1.2**
	69nm,0.3s,baz=165,slow=19,SNR=15						
CMIG	**Matias Romero**	**1.53**	**321**	P	**Pn**	**21 59 29.7**	**-1.0**
CMIG				S	**Sn**	**21 59 50.7**	**+1.2**
CCIG	**Comitan**	**1.71**	**77**	*e*P	**Pn**	**21 59 33.2**	**+0.1**
CCIG				*e*S	**Sn**	**21 59 55.1**	**+1.2**
CCIG	**Comitan**	**1.71**	**77**	*e*P	**Pn**	**21 59 33.2**	**+0.1**
CCIG				*e*S	**Sn**	**21 59 55.1**	**+1.2**
THIG		**1.84**	**122**	*e*P	**Pn**	**21 59 32.5**	**-2.4**
THIG				*e*S	**Sn**	**21 59 55.2**	**-1.9**
HUIG	**Huatulco**	**2.16**	**267**	*e*P	**Pn**	**21 59 34.3**	**-4.8**
HUIG				*e*S	**Sn**	**21 59 58.4**	**-6.4**
HUIG	**Huatulco**	**2.16**	**267**	*e*P	**Pn**	**21 59 34.3**	**-4.8**
HUIG				*e*S	**Sn**	**21 59 58.4**	**-6.4**
TUIG	**Tuzandepetl**	**2.18**	**346**	*e*P	**Pn**	**21 59 38.5**	**-1.0**
TUIG				*e*S	**Sn**	**22 00 06.4**	**+0.9**
TUIG	**Tuzandepetl**	**2.18**	**346**	*e*P	**Pn**	**21 59 38.5**	**-1.0**
TUIG				*e*S	**Sn**	**22 00 06.4**	**+0.9**
JAT	**Jato**	**2.67**	**126**	⇓*e*P	**Pn**	**21 59 45.1**	**-1.1**
TP2	**Tecpan 2**	**2.97**	**112**	⇓*e*P	**Pn**	**21 59 50.9**	**+0.7**
VHO	**Vista Hermosa**	**2.98**	**293**	*e*P	**Pn**	**21 59 49.9**	**-0.5**
VHO				*e*S	**Sn**	**22 00 26.0**	**+1.1**
VHO	**Vista Hermosa**	**2.98**	**293**	*e*P	**Pn**	**21 59 49.9**	**-0.5**
VHO				*e*S	**Sn**	**22 00 26.0**	**+1.1**
FG6		**3.18**	**114**	*e*P	**Pn**	**21 59 51.4**	**-1.7**
FUG	**Fuego 3**	**3.26**	**116**	*e*P	**Pn**	**21 59 54.5**	**+0.2**
APG	**El Apazote**	**3.41**	**105**	P	**Pn**	**21 59 54.5**	**-1.7**
	7.9nm,0.3s,baz=290,slow=16,SNR=44						
APG				S	**Sn**	**22 00 33.7**	**-1.7**
	88nm,0.3s,baz=81,slow=19,SNR=25						
NBG	**Las Nubes**	**3.65**	**111**	*e*P	**Pn**	**21 59 59.1**	**-0.4**
IXG	**Ixpaco**	**3.72**	**117**	*e*P	**Pn**	**22 00 01.0**	**+0.4**
IXG				*e*S	**Sn**	**22 00 50.0**	**+6.8**
MRL	**Marmol**	**4.12**	**101**	*e*P	**Pn**	**22 00 05.5**	**-0.5**
RBDL	**Robledal**	**4.42**	**113**	*e*P	**Pn**	**22 00 11.6**	**+1.5**
RBDL				*e*S	**Sn**	**22 01 05.1**	**+4.8**
SBLS	**San Blas**	**4.59**	**116**	*e*P	**Pn**	**22 00 12.9**	**+0.5**
SBLS				*e*S	**Sn**	**22 01 07.0**	**+2.4**
SNJE	**San Jose**	**4.59**	**116**	*e*P	**Pn**	**22 00 13.0**	**+0.5**
SNJE				*e*S	**Sn**	**22 01 06.3**	**+1.6**
BOQS	**Boqueron**	**4.94**	**115**	*e*P	**Pn**	**22 00 17.9**	**+0.7**
BOQS				*e*S	**Sn**	**22 01 14.5**	**+1.4**
LFRS	**El Faro**	**5.18**	**115**	*e*P	**Pn**	**22 00 20.6**	**+0.1**
LFRS				*e*S	**Sn**	**22 01 19.8**	**+0.9**
SNVI	**San Vicente**	**5.38**	**114**	*e*P	**Pn**	**22 00 24.2**	**+0.9**
SNVI				*e*S	**Sn**	**22 01 24.9**	**+1.1**
TGUH	**Tegucigalpa,Un**	**6.64**	**105**	*e*Pn	**Pn**	**22 00 39.8**	**-0.7**
	14nm,0.4s						
TEIG	**Tepich**	**6.84**	**50**	P	**Pn**	**22 00 41.6**	**-1.7**
	baz=139,slow=0.0						
TEIG				S	**Sn**	**22 01 58.7**	**-1.1**
	baz=135,slow=0.0						
628A	**Black Gap, Mar**	**15.86**	**330**	⇑P	**Pn**	**22 02 45.2**	**+0.1**
	baz=16,SNR=8.2						
627A	**Terlingua Ranc**	**16.08**	**329**	⇑P	**Pn**	**22 02 48.1**	**+0.2**
	baz=16						
TXAR	**Lajitas Array**	**16.12**	**328**	P	**Pn**	**22 02 48.9**	**+0.4**
	0.1nm,0.3s,baz=146,slow=14,SNR=31						
528A	**Cox Ranch, San**	**16.38**	**332**	⇓P	**Pn**	**22 02 51.3**	**-0.4**
	baz=16						
626A	**Big Bend Ranch**	**16.54**	**327**	⇑P	**Pn**	**22 02 54.9**	**+1.3**
	baz=17,SNR=10						
527A	**Woodward Ranch**	**16.76**	**329**	⇓P	**Pn**	**22 02 57.5**	**+1.1**
	baz=17,SNR=7.8						
428A	**Kincaid Ranch,**	**16.82**	**333**	⇓P	**Pn**	**22 02 58.2**	**+1.1**
	baz=17						
526A	**Mary Lane Ranc**	**16.93**	**328**	⇓P	**Pn**	**22 02 59.5**	**+1.0**
	baz=17,SNR=13						
427A	**Hayter Ranch,**	**17.24**	**331**	⇓P	**Pn**	**22 03 03.1**	**+0.7**
	baz=17						
426A	**McDonald Obser**	**17.39**	**329**	⇑P	**Pn**	**22 03 05.2**	**+1.0**
	baz=18,SNR=17						
328A	**Wristen Ranch,**	**17.43**	**334**	⇓P	**Pn**	**22 03 05.7**	**+1.0**
	baz=18,SNR=11						
326A	**Caldwell Ranch**	**17.90**	**331**	⇑P	**Pn**	**22 03 12.0**	**+1.5**
	baz=18,SNR=9.3						
425A	**Indio Mountain**	**17.97**	**327**	⇓P	**Pn**	**22 03 11.9**	**+0.7**
	baz=18						
325A	**Bean Ranch, Si**	**18.43**	**329**	⇓P	**Pn**	**22 03 16.6**	**-0.2**
	baz=18						
226A	**Malaga, Loving**	**18.58**	**332**	⇑P	**Pn**	**22 03 18.9**	**+0.2**
	baz=19,SNR=7.2						
324A	**Moseley Ranch,**	**18.75**	**328**	⇓P	**Pn**	**22 03 20.0**	**-0.7**
	baz=19						
127A	**Arkansas Junct**	**18.79**	**334**	⇑P	**Pn**	**22 03 19.8**	**-1.3**
	baz=19						
224A	**Corundas Mount**	**19.27**	**329**	⇑P	**Pn**	**22 03 25.2**	**-1.7**
	baz=19,SNR=6.7						
Z27A	**Tatum**	**19.29**	**336**	⇑P	**Pn**	**22 03 25.2**	**-1.9**
	baz=19,SNR=23						
125A	**Gardner Draw,**	**19.34**	**332**	⇑P	**Pn**	**22 03 26.1**	**-1.7**
	baz=20,SNR=22						
Z26A	**Caprock**	**19.56**	**334**	⇑P	**Pn**	**22 03 28.2**	**-2.2**
	baz=20						
MSTX	**Muleshoe**	**19.70**	**338**	⇓P	**Pn**	**22 03 30.1**	**-1.9**
	baz=20,SNR=5.2						
Y27A	**Causey**	**19.77**	**337**	⇑P	**Pn**	**22 03 30.3**	**-2.4**
	baz=20,SNR=6.6						
Z25A	**Roswell**	**19.89**	**332**	⇓P	**Pn**	**22 03 31.5**	**-2.7**
	baz=20						
Y25A	**Mesa, Roswell**	**20.42**	**333**	⇓P	**P**	**22 03 37.8**	**-0.1**
	baz=21,SNR=23						
Z23A	**Rita Site, Whi**	**20.58**	**329**	⇑P	**P**	**22 03 39.8**	**+0.2**
	baz=21						
X26A	**CR and CF Fran**	**20.61**	**336**	⇑P	**P**	**22 03 39.4**	**-0.5**
	baz=21,SNR=5.3						
Y24A	**Capitan**	**20.75**	**332**	⇓P	**P**	**22 03 41.9**	**+0.5**
	baz=21,SNR=12						
220A	**Playas Peak, P**	**20.77**	**323**	⇑P	**P**	**22 03 42.6**	**+0.8**
	baz=21						
121A	**Cookes Peak, D**	**20.82**	**325**	⇑P	**P**	**22 03 41.8**	**-0.4**
	baz=21,SNR=9.2						
319A	**Douglas**	**20.85**	**320**	⇓P	**P**	**22 03 42.9**	**+0.4**
	baz=21						
Y23A	**Lovelace Mesa,**	**21.04**	**331**	⇑P	**P**	**22 03 45.3**	**+0.7**
	baz=21						
W26A	**Owens Ranch, T**	**21.06**	**337**	⇓P	**P**	**22 03 45.1**	**+0.3**
	baz=21						
X24A	**Lazy VL Ranch,**	**21.29**	**333**	⇓P	**P**	**22 03 47.1**	**-0.2**
	baz=21						
318A	**Bisbee**	**21.34**	**319**	⇓P	**P**	**22 03 47.9**	**+0.1**
	baz=21,SNR=5.8						
W25A	**X Bar L Ranch,**	**21.45**	**336**	⇑P	**P**	**22 03 49.8**	**+0.9**
	baz=22						
Y22A	**Socorro**	**21.49**	**329**	⇑P	**P**	**22 03 49.5**	**+0.2**
	baz=22						
W24A	**Lazy 6 Ranch,**	**21.83**	**334**	⇑P	**P**	**22 03 53.1**	**+0.1**
	baz=22						
V25A	**Rancho No Teng**	**22.05**	**336**	⇑P	**P**	**22 03 56.0**	**+0.6**
	baz=22						
ANMO	**Albuquerque**	**22.07**	**332**	P	**P**	**22 03 54.2**	**-1.4**
	2.3nm,0.8s,mb3.6,baz=152,slow=13,SNR=7.2						
Y20A	**Horse Springs,**	**22.19**	**327**	⇓P	**P**	**22 03 57.2**	**+0.3**
	baz=22						
X21A	**Alamocita Cree**	**22.30**	**328**	⇑P	**P**	**22 03 58.0**	**0.0**
	baz=22						
U25A	**Circle Dot Ran**	**22.47**	**337**	⇑P	**P**	**22 04 00.6**	**+0.9**
	baz=23						
V23A	**Ortiz Mt. (NFS**	**22.61**	**333**	⇓P	**P**	**22 04 01.2**	**-0.1**
	baz=23						
Y19A	**Nutrioso**	**22.70**	**325**	⇑P	**P**	**22 04 03.0**	**+0.7**
	baz=23						
X20A	**Quemado**	**22.74**	**327**	⇓P	**P**	**22 04 03.7**	**+1.0**
	baz=23						
X19A	**St. Johns**	**23.07**	**326**	⇑P	**P**	**22 04 06.9**	**+0.7**
	baz=23						
U23A	**El Rito**	**23.11**	**334**	⇓P	**P**	**22 04 05.9**	**-0.7**
	baz=23						
214A	**Organ Pipe Nat**	**23.50**	**316**	⇑P	**P**	**22 04 08.8**	**-1.4**
	baz=24						
U21A	**Nageezi**	**23.84**	**332**	⇓P	**P**	**22 04 13.4**	**+0.1**
	baz=24						
T22A	**Edith**	**24.00**	**334**	⇓P	**P**	**22 04 14.6**	**-0.1**
	baz=24						
113A	**Mohawk Valley,**	**24.64**	**317**	⇑P	**P**	**22 04 21.3**	**+0.7**
	baz=25						
Z13A	**Yuma Proving G**	**24.83**	**317**	⇓P	**P**	**22 04 23.6**	**+1.2**
	baz=25,SNR=6.1						
NVAR	**Mina Array Bea**	**31.06**	**321**	P	**P**	**22 05 17.5**	**-0.5**
	2.3nm,0.8s,mb4.1,baz=133,slow=8.9,SNR=12						
YKA	**Yellowknife Ar**	**48.78**	**347**	P	**P**	**22 07 41.5**	**-2.8**
	2.8nm,0.6s,mb4.5,baz=153,slow=7.3,SNR=53						
YKA				pP	pP	22 07 59.7	0.0
	0.9nm,0.8s,baz=151,slow=7.5,SNR=2.9						
YKA				sP	sP	22 08 07.8	+1.3
	0.9nm,0.7s,baz=151,slow=7.4,SNR=3.4						
YKA	**Yellowknife Ar**	**48.78**	**347**	P	**P**	**22 07 41.5**	**-2.8**
YKA				pP	pP	22 07 59.7	0.0
YKA				sP	sP	22 08 07.8	+1.3
ARCES	**ARCESS Array B**	**84.90**	**18**	P	**P**	**22 11 28.3**	**-5.4**
	1.8nm,0.8s,mb4.2,baz=289,slow=5.4,SNR=3.3						

*IDC **24** 22:11:06.1±1.1, 30°.51N×102°.09E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/26, mbtmp3.7/8, ML3.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.1/32, Error ellipse: s-maj=32.3km s-min=20.4km az=61.0*
*ISCJB **24** 22:11:07.9±0.5, 30°.44N±0°.06×101°.78E±0°.05, h33km, mb3.6/6, Error ellipse: s-maj=8.4km s-min=5.7km az=7.6*
*BJI **24** 22:11:07.6, 30°.35N×102°.01E, h13km, ML3.6/11, Ms3.7/4, Ms7 3.5/4*

ISC 24 22:11:07.7±2.1, 30°.49N±0°.05×101°.80E±0°.05, h17km±15km, n19, σ1°.35/22, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.74**	**76**	Pg	**Pn**	**22 11 36.3**	**-0.8**
CD2				Sg	**Sn**	**22 11 57.1**	**-1.8**
CD2				smax			
	comp=N,5μm,0.7s						
KMI	**Kunming**	**5.41**	**171**	Pn	**Pn**	**22 12 29.5**	**+1.8**
KMI				smax			
	comp=N,44nm,1.6s						
KMI				smax			
	comp=E,34nm,0.9s						
KMI				LR	LR		
	comp=N,260nm,8.7s						
KMI				LR	LR		
	comp=E,530nm,10.4s						
KMI				LR	LR		
	comp=Z,170nm,9.0s						
LZH	**Lanzhou**	**5.84**	**16**	*e*Pn	**Pn**	**22 12 39.6**	**+6.1**
LZH				Sg	**Sg**	**22 14 15.4**	**+0.3**
LZH				smax			
	comp=N,51nm,1.2s						
LZH				smax			
	comp=E,68nm,1.2s						
LZH				LR	LR		
	comp=E,610nm,7.3s						
LZH				LR	LR		
	comp=Z,790nm,8.0s						
GYA	**Guiyang**	**5.87**	**132**	Pn	**Pn**	**22 12 34.3**	**+0.3**
GYA				Sn	**Sn**	**22 13 41.4**	**+0.5**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,140nm,0.9s						
WHN	**Wuhan**	**10.82**	**87**	P	Px	22 13 54.0	
WHN				S	**Sn**	**22 15 37.0**	**-5.7**
WHN				LR	LR		
	comp=N,360nm,3.9s						
WHN				LR	LR		
	comp=E,560nm,5.8s						
WHN				LR	LR		
	comp=Z,460nm,7.7s						
CMAR	**Chiang Mai Arr**	**12.26**	**193**	Pn	**Pn**	**22 14 04.9**	**+3.3**
	baz=6.6,slow=10,SNR=7.1						
PKIN	**Phulchoki**	**14.64**	**263**	*e*P	**Pn**	**22 14 33.4**	**-0.7**
	comp=Z,6.9nm,0.5s						
KKN	**Kakani**	**14.69**	**264**	*e*P	**Pn**	**22 14 34.3**	**-0.4**
	comp=Z,19nm,0.7s						
DMN	**Daman**	**14.88**	**263**	*e*P	**Pn**	**22 14 36.5**	**-0.9**
	comp=Z,15nm,0.9s						
GKN	**Gorkha**	**15.19**	**265**	*e*P	**Pn**	**22 14 40.7**	**-0.8**
	comp=Z,28nm,0.8s						
KOLN	**Koldanda**	**16.13**	**265**	*e*P	**Pn**	**22 14 51.3**	**-2.5**
	comp=Z,15nm,0.8s						
PYUN	**Piuthan**	**16.58**	**266**	*e*P	**Pn**	**22 14 56.1**	**-3.4**
	comp=Z,19nm,1.0s						
SONM	**Songino Array**	**17.68**	**10**	P	**Pn**	**22 15 13.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=14						
MKAR	**Makanchi Array**	**22.20**	**323**	P	**P**	**22 16 05.2**	**+2.0**
	comp=Z,0.8nm,0.6s,mb3.3,baz=138,slow=11,SNR=6.7						
KSRS	**Korea Array**	**22.71**	**65**	P	**P**	**22 16 06.8**	**-1.8**
	comp=Z,2.4nm,0.8s,mb3.7,baz=254,slow=9.8,SNR=10						
ZALV	**Zalesovo Beam**	**26.46**	**337**	P	**P**	**22 16 46.2**	**+2.5**
	comp=Z,1.4nm,0.6s,mb3.7,baz=144,slow=7.9,SNR=7.6						
ZALV				LR	LR	22 27 47.7	
	comp=Z,38nm,20.6s,baz=204,slow=38						
KURK	**Kurchatov**	**26.60**	**326**	P	**P**	**22 16 46.3**	**+1.3**
	comp=Z,2.6nm,0.8s,mb3.8,baz=132,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**62.03**	**147**	P	**P**	**22 21 27.2**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.8,baz=333,slow=6.9,SNR=7.3						
YKA	**Yellowknife Ar**	**82.84**	**16**	P	**P**	**22 23 31.4**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.4,baz=329,slow=5.4,SNR=4.6						

*ISCJB **24** 22:13:23.1±1.0, 24°.22S±0°.06×67°.2W±0°.2, h168km±25km, Error ellipse: s-maj=23.3km s-min=10.2km az=5.3*
*GUC **24** 22:13:26.5±0.5, 23°.85S×67°.53W, h200km, ML4.5*
*IDC **24** 22:13:59.8±1.6, 20°.52S×66°.59W, h413km±16km, mb3.6/1, mb1 2.9/5, mb1mx2.7/18, mbtmp2.8/5, Error ellipse: s-maj=33.1km s-min=25.6km az=102.0*

ISC 24 22:13:23.9±0.9, 24°.22S±0°.06×67°.1W±0°.1, h157km±23km, n13, σ1°.12/14, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.84**	**304**	⇑*i*P	**Pn**	**22 14 10.3**	**+0.8**
PECH				*i* S	**Sn**	**22 14 43.7**	**-1.1**
PECH				AML	AML	22 14 44.3	
	comp=E,2μm,0.2s						
CEN1	**Los Morros**	**2.93**	**286**	⇓*i*P	**Pn**	**22 14 13.2**	**+2.5**
CEN1				*e*S	**Sn**	**22 14 48.1**	**+1.3**
ANCH	**Antofagasta**	**3.04**	**279**	⇓*i*P	**Pn**	**22 14 13.2**	**+1.1**
ANCH				*i* S	**Sn**	**22 14 48.9**	**-0.5**
ANCH				AML	AML	22 14 50.4	
	comp=E,752nm,0.1s						
MACH	**Maria

ZIIG				*i* S		Sn	22 31 01.0	-0.1
ZIIG	**Zihuatanejo**	**3.86**	**102**	*i* P		**Pn**	**22 30 18.0**	**+1.3**
ZIIG				*i* S		**Sn**	**22 31 01.0**	**-0.1**
CMIG	**Matias Romero**	**10.13**	**96**	Pn		**Pn**	**22 31 47.1**	**+4.3**
	1.0nm,0.3s,baz=280,slow=9.2,SNR=10							
CMIG				Lg			22 34 52.1	
	0.2nm,0.3s,baz=110,slow=14,SNR=2.7							
CMIG				LR		LR	22 35 46.1	
	comp=Z,188nm,19.4s,baz=319,slow=38							
TXAR	**Lajitas Array**	**10.92**	**8**	Pn		**Pn**	**22 31 52.1**	**-1.5**
	0.1nm,0.3s,baz=184,slow=7.1,SNR=10.0							
TXAR				Lg			22 34 54.2	
	0.0nm,0.3s,baz=185,slow=34,SNR=2.7							
JCT	**Junction City**	**12.98**	**22**	*e*Pn		**Pn**	**22 32 22.3**	**+0.4**
MNTX	**Cornudas Mount**	**13.16**	**0**	*e*Pn		**Pn**	**22 32 24.5**	**+0.3**
319A	**Douglas**	**13.30**	**345**	⇑P		**Pn**	**22 32 26.5**	**+0.3**
	baz=13,SNR=8.9							
318A	**Bisbee**	**13.55**	**343**	⇑P		**Pn**	**22 32 29.4**	**-0.1**
	baz=13,SNR=23							
220A	**Playas Peak, P**	**13.65**	**349**	⇑P		**Pn**	**22 32 30.9**	**-0.1**
	baz=13							
GDL2	**Guadalupe Moun**	**13.69**	**4**	*e*Pn		**Pn**	**22 32 33.1**	**+1.6**
219A	**White Tail Can**	**13.90**	**346**	⇑P		**Pn**	**22 32 34.1**	**-0.2**
	baz=14,SNR=9.4							
218A	**Dragoon**	**14.07**	**344**	⇓P		**Pn**	**22 32 36.3**	**-0.4**
	baz=14,SNR=9.1							
217A	**Green Valley**	**14.10**	**341**	⇓P		**Pn**	**22 32 36.8**	**-0.4**
	baz=14							
121A	**Cookes Peak, D**	**14.15**	**352**	⇑P		**Pn**	**22 32 37.7**	**-0.1**
	baz=14							
124A	**Stringfield Ra**	**14.16**	**360**	⇓P		**Pn**	**22 32 40.5**	**+2.6**
	baz=14,SNR=6.9							
120A	**U Bar Ranch, L**	**14.30**	**349**	⇑P		**Pn**	**22 32 39.8**	**-0.1**
	baz=14							
216A	**Three Points,**	**14.52**	**339**	⇓P		**Pn**	**22 32 42.2**	**-0.7**
	baz=14							
TUC	**Tucson**	**14.59**	**342**	*e*Pn		**Pn**	**22 32 42.8**	**-1.1**
	6.3nm,1.0s							
118A	**Homack Ranch,**	**14.68**	**345**	⇓P		**Pn**	**22 32 44.5**	**-0.5**
	baz=14							
APG	**El Apazote**	**14.73**	**101**	Pn		**Pn**	**22 32 52.4**	**+6.6**
	0.2nm,0.3s,baz=90,slow=18,SNR=3.8							
Z22A	**Elephant Butte**	**14.78**	**355**	⇑P		**Pn**	**22 32 46.3**	**-0.1**
	baz=14							
Z26A	**Caprock**	**14.78**	**5**	⇓P		**Pn**	**22 32 46.3**	**-0.1**
	baz=14,SNR=6.5							
Z20A	**Nine Sixteen R**	**14.85**	**350**	⇓P		**Pn**	**22 32 47.0**	**-0.2**
	baz=15							
Z21A	**St. Cloud Mine**	**14.90**	**353**	⇑P		**Pn**	**22 32 49.8**	**+1.8**
	baz=15							
Y24A	**Capitan**	**15.38**	**360**	⇑P		**Pn**	**22 32 55.1**	**+0.8**
	baz=15							
Y23A	**Lovelace Mesa,**	**15.39**	**358**	⇑P		**Pn**	**22 32 54.9**	**+0.4**
	baz=15							
Y22A	**Socorro**	**15.45**	**355**	⇓P		**Pn**	**22 32 55.9**	**+0.7**
	baz=15							
Y27A	**Causey**	**15.47**	**7**	⇓P		**Pn**	**22 32 59.6**	**+4.1**
	baz=15,SNR=27							
Y20A	**Horse Springs,**	**15.59**	**351**	⇓P		**Pn**	**22 32 57.9**	**+0.9**
	baz=15							
MSTX	**Muleshoe**	**15.60**	**8**	⇓P		**Pn**	**22 33 01.4**	**+4.2**
	baz=15,SNR=12							
BNM	**Barren Site**	**15.64**	**356**	*e*Pn		**Pn**	**22 32 57.0**	**-0.7**
	8.7nm,1.2s							
Y19A	**Nutrioso**	**15.79**	**348**	⇓P		**Pn**	**22 33 03.2**	**+3.6**
	baz=16							
LAZ	**Ladron**	**15.93**	**355**	*e*Pn		**Pn**	**22 33 01.3**	**-0.1**
	25nm,1.4s							
X25A	**Clemmons Ranch**	**15.99**	**2**	⇑P		**Pn**	**22 33 05.6**	**+3.4**
	baz=16							
113A	**Mohawk Valley,**	**16.08**	**334**	⇓P		**Pn**	**22 33 04.4**	**+0.9**
	baz=16,SNR=9.1							
X20A	**Quemado**	**16.23**	**351**	⇑P		**Pn**	**22 33 06.5**	**+1.3**
	baz=16							
X19A	**St. Johns**	**16.25**	**348**	⇑P		**Pn**	**22 33 07.2**	**+1.6**
	baz=16,SNR=5.6							
Y16A	**Circle Bar Ran**	**16.26**	**342**	⇑P		**Pn**	**22 33 05.6**	**0.0**
	baz=16							
TEIG	**Tepich**	**16.27**	**81**	LR		LR	22 41 20.9	
	comp=Z,176nm,18.1s,baz=133,slow=44							
Z14A	**Wintersburg**	**16.28**	**337**	⇓P		**Pn**	**22 33 05.0**	**-1.0**
	baz=16							
NATX	**Nacogdoches**	**16.40**	**34**	*e*Pn		**Pn**	**22 33 07.3**	**-0.1**
	20nm,0.7s							
Z13A	**Yuma Proving G**	**16.41**	**335**	⇓P		**Pn**	**22 33 07.4**	**-0.3**
	baz=16							
ANMO	**Albuquerque**	**16.43**	**357**	Pn		**Pn**	**22 33 05.6**	**-2.2**
	0.1nm,0.3s,baz=169,slow=14,SNR=6.4							
ANMO				LR		LR	22 39 24.1	
	comp=Z,551nm,20.4s,baz=327,slow=38							
ANMO	**Albuquerque**	**16.43**	**357**	*e*Pn		**Pn**	**22 33 07.5**	**-0.2**
	16nm,1.7s							
Y15A	**Casa Rosa Ranc**	**16.60**	**339**	⇑P		**Pn**	**22 33 10.4**	**+0.4**
	baz=16							
W23A	**Werner Place,**	**16.62**	**358**	⇑P		**Pn**	**22 33 11.3**	**+1.1**
	baz=16							
W24A	**Lazy 6 Ranch,**	**16.66**	**0**	⇑P		**Pn**	**22 33 11.6**	**+0.9**
	baz=16							
AMTX	**Amarillo**	**16.67**	**11**	*e*Pn		**Pn**	**22 33 10.3**	**-0.5**
	3.9nm,0.4s							
W25A	**X Bar L Ranch,**	**16.69**	**3**	⇑P		**Pn**	**22 33 11.4**	**+0.3**
	baz=16,SNR=10							
X16A	**Lo Mia Camp, P**	**16.75**	**342**	⇑P		**Pn**	**22 33 10.8**	**-1.1**
	baz=17,SNR=8.5							
Y14A	**Wickenburg**	**16.82**	**338**	⇑P		**Pn**	**22 33 11.7**	**-1.1**
	baz=17							
W19A	**Sanders**	**16.93**	**349**	⇓P		**Pn**	**22 33 12.7**	**-1.4**
	baz=17							
X15A	**Humboldt**	**17.06**	**340**	⇓P		**Pn**	**22 33 16.2**	**+0.5**
	baz=17,SNR=5.9							
DVTC	**Desert V Tower**	**17.07**	**328**	⇓P		**Pn**	**22 33 15.0**	**-0.9**
	baz=17							
WMOK	**Wichita Mounta**	**17.23**	**19**	*e*Pn		**Pn**	**22 33 16.0**	**-1.8**
	17nm,1.4s							
V25A	**Rancho No Teng**	**17.30**	**2**	⇓P		**Pn**	**22 33 19.1**	**+0.3**
	baz=17							
V26A	**Tequesquite Ra**	**17.30**	**4**	⇑P		**Pn**	**22 33 19.8**	**+1.0**
	baz=17,SNR=12							
V17A	**Tonalea, Kykot**	**17.72**	**345**	⇑P		**Pn**	**22 33 24.2**	**+0.2**
	baz=18,SNR=17							
WUAZ	**Wupatki**	**17.77**	**344**	*e*Pn		**Pn**	**22 33 24.9**	**+0.4**
	275nm,1.0s							
U23A	**El Rito**	**17.79**	**358**	⇓P		**Pn**	**22 33 25.6**	**+0.8**
	baz=18							
IRM	**Iron Mountain**	**17.87**	**333**	⇓P		**Pn**	**22 33 25.2**	**-0.6**
	baz=18							
U22A	**Llaves**	**17.87**	**356**	⇓P		**Pn**	**22 33 26.6**	**+0.9**
	baz=18							
U21A	**Nageezi**	**17.98**	**354**	⇓P		**Pn**	**22 33 29.2**	**+2.0**
	baz=18							
W14A	**Seligman**	**18.00**	**339**	⇑P		**Pn**	**22 33 27.3**	**-0.1**
	baz=18							
BELC	**Belle Mtn.**	**18.11**	**331**	⇓P		**Pn**	**22 33 28.3**	**-0.5**
	baz=18							
V15A	**Kaibab Nationa**	**18.27**	**342**	⇓P		**Pn**	**22 33 31.3**	**+0.6**
	baz=18,SNR=6.7							
U18A	**Rough Rock, Ch**	**18.29**	**348**	⇑P		**Pn**	**22 33 31.5**	**+0.5**
	baz=18							
T22A	**Edith**	**18.51**	**356**	⇑P		**Pn**	**22 33 35.4**	**+1.8**
	baz=18,SNR=9.3							
T19A	**Beclabito**	**18.55**	**351**	⇑P		**Pn**	**22 33 33.7**	**-0.3**
	baz=18,SNR=9.3							
GMRC	**Granite Mounta**	**18.61**	**333**	⇑P		**Pn**	**22 33 34.4**	**-0.4**
	baz=18,SNR=7.1							
LDFC	**Landfair**	**18.64**	**334**	*e*Pn		**Pn**	**22 33 35.1**	**0.0**
T18A	**Mexican Hat**	**18.99**	**349**	⇓P		**Pn**	**22 33 38.6**	**-0.8**
	baz=19							
S21A	**Coal Bank Pass**	**19.22**	**354**	⇓P		**Pn**	**22 33 42.3**	**+0.2**
	baz=19							
TUQ	**Turquoise Moun**	**19.29**	**333**	⇑P		**Pn**	**22 33 42.9**	**-0.1**
	baz=19							
T15A	**Red Dirt Ranch**	**19.45**	**343**	⇑P		**Pn**	**22 33 43.3**	**-1.6**
	baz=19							
S19A	**Harvey Farm, M**	**19.46**	**351**	⇑P		**Pn**	**22 33 44.3**	**-0.8**
	baz=19							
S18A	**Hurst Farm, Bl**	**19.55**	**349**	⇓P		**Pn**	**22 33 46.6**	**+0.5**
	baz=19,SNR=6.0							
GSC	**Goldstone**	**19.56**	**331**	*e*P		**Pn**	**22 33 45.7**	**-0.6**
	3.8nm,0.8s							
PV01	**Paradox Valley**	**19.77**	**353**	*e*P		**Pn**	**22 33 48.9**	**+0.2**
	714nm,1.2s							
EDW2	**Edwards Air Fo**	**19.79**	**328**	⇓P		**Pn**	**22 33 47.9**	**-1.1**
	baz=20							
R20A	**Redvale**	**19.80**	**353**	⇑P		**Pn**	**22 33 49.0**	**-0.1**
	baz=20,SNR=7.7							
T13A	**Saint George**	**19.92**	**340**	⇓P		**Pn**	**22 33 49.2**	**-1.3**
	baz=20							
PV04	**Paradox Valley**	**20.07**	**352**	*e*P		**P**	**22 33 50.6**	**+0.2**
R18A	**Canyonlands Na**	**20.21**	**350**	⇑P		**P**	**22 33 52.0**	**+0.1**
	baz=20,SNR=12							
R17A	**Hanksville Air**	**20.39**	**348**	⇑P		**P**	**22 33 53.9**	**0.0**
	baz=20							
MPMC	**Manual Prospec**	**20.50**	**331**	⇑P		**P**	**22 33 54.6**	**-0.4**
	baz=20,SNR=10							
T11A	**Corn Creek, Al**	**20.57**	**337**	⇑P		**P**	**22 33 55.8**	**0.0**
	baz=20							
ISA	**Isabella**	**20.65**	**329**	⇓P		**P**	**22 33 56.4**	**-0.3**
	baz=20							
SMCO	**Snowmass**	**20.66**	**357**	*e*Pn		**P**	**22 33 58.1**	**+1.3**
	89nm,2.8s							
MSU	**Marysvale**	**20.81**	**345**	*e*P		**P**	**22 33 58.8**	**+0.4**
Q16A	**Castle Valley**	**20.97**	**347**	⇓P		**P**	**22 34 00.2**	**+0.1**
	baz=21,SNR=12							
R13A	**O'Grain Ranch,**	**21.00**	**341**	⇓P		**P**	**22 34 01.2**	**+0.8**
	baz=21							
SRU	**San Rafael**	**21.03**	**349**	*e*P		**P**	**22 33 59.9**	**-0.8**
	15nm,1.5s,mb4.1							
ISCO	**Idaho Springs**	**21.24**	**360**	*e*P		**P**	**22 34 03.5**	**+0.5**
	14nm,1.4s,mb4.1							
R12A	**Pony Springs,**	**21.34**	**340**	P		**P**	**22 34 04.1**	**0.0**
	baz=21,SNR=7.7							
TMUT	**Trail Mountain**	**21.34**	**348**	*e*P		**P**	**22 34 04.5**	**+0.4**
	16nm,1.1s,mb4.3							
P17A	**Butcher Ranch,**	**21.42**	**349**	⇓P		**P**	**22 34 04.7**	**-0.2**
	baz=21,SNR=14							
P18A	**Preston Nutter**	**21.48**	**350**	⇓P		**P**	**22 34 05.4**	**-0.2**
	baz=21							
Q14A	**Sevier Lake (B**	**21.54**	**343**	⇑P		**P**	**22 34 06.2**	**-0.1**
	baz=21,SNR=14							
R11A	**Troy Canyon, C**	**21.69**	**338**	⇑P		**P**	**22 34 07.3**	**-0.5**
	baz=22,SNR=8.3							
S10A	**Tonopah Range,**	**21.70**	**335**	⇑P		**P**	**22 34 07.4**	**-0.5**
	baz=22,SNR=7.1							
O20A	**White River Ci**	**21.71**	**354**	⇑P		**P**	**22 34 08.8**	**+0.8**
	baz=22							
Q13A	**Wheeler Ranch,**	**21.73**	**342**	⇓P		**P**	**22 34 08.0**	**-0.2**
	baz=22							
P15A	**Leamington**	**21.84**	**346**	⇑P		**P**	**22 34 08.8**	**-0.6**
	baz=22							
R10A	**Warm Springs**	**21.90**	**337**	⇓P		**P**	**22 34 10.1**	**0.0**
	baz=22							
P14A	**Drum Mountains**	**22.05**	**344**	⇑P		**P**	**22 34 11.6**	**-0.1**
	baz=22							
Q12A	**Willow Creek R**	**22.06**	**340**	⇑P		**P**	**22 34 11.8**	**0.0**
	baz=22							
Q11A	**Duckwater**	**22.16**	**338**	⇓P		**P**	**22 34 12.6**	**-0.3**
	baz=22							
P13A	**Bates Ranch, G**	**22.19**	**342**	⇓P		**P**	**22 34 13.4**	**+0.2**
	baz=22							
DAU	**Daniels Canyon**	**22.43**	**348**	*e*P		**P**	**22 34 15.4**	**-0.3**
DUG	**Dugway**	**22.56**	**345**	⇓P		**P**	**22 34 16.9**	**-0.1**
	baz=22,SNR=7.1							
DUG	**Dugway**	**22.56**	**345**	*e*P		**P**	**22 34 16.7**	**-0.4**
	10nm,1.3s,mb4.1							
JLU	**Jordanelle**	**22.65**	**348**	*e*P		**P**	**22 34 17.6**	**-0.4**
	2.8nm,0.9s,mb3.7							
NVAR	**Mina Array Bea**	**22.83**	**333**	P		**P**	**22 34 19.3**	**-0.7**
	3.1nm,1.0s,mb3.7,baz=140,slow=9.9,SNR=9.3							
CCM	**Cathedral Cave**	**23.10**	**30**	*e*P		**P**	**22 34 21.0**	**-1.8**
	6.0nm,0.8s,mb4.1							
ELK	**Elko**	**23.74**	**341**	P		**P**	**22 34 27.6**	**-1.5**
	0.3nm,0.4s,mb3.1,baz=167,slow=18,SNR=3.3							
ELK				LR		LR	22 43 19.2	
	comp=Z,283nm,18.3s,MS3.8,baz=153,slow=36							
BMN	**Battle Mountai**	**24.12**	**338**	*e*P		**P**	**22 34 32.4**	**-0.2**
	5.0nm,0.8s,mb4.0							
PDAR	**Pinedale Array**	**24.46**	**353**	P		**P**	**22 34 34.8**	**-0.8**
	1.2nm,1.0s,mb3.3,baz=163,slow=7.7,SNR=6.9							
PDAR				LR		LR	22 44 09.6	
	comp=Z,212nm,19.1s,MS3.6,baz=174,slow=37							
M11A	**Holland Ranch,**	**24.54**	**341**	⇑P		**P**	**22 34 37.6**	**+1.3**
	baz=24							
J18A	**Kendall Valley**	**24.96**	**352**	⇓P		**P**	**22 34 40.3**	**+0.2**
	baz=25							
L11A	**Cat Creek Ranc**	**25.20**	**342**	⇑P		**P**	**22 34 43.2**	**+0.8**
	baz=25							
J17A	**Brown Place, J**	**25.20**	**351**	⇑P		**P**	**22 34 43.5**	**+1.1**
	baz=25,SNR=5.9							
REDW	**Red Top Meadow**	**25.22**	**351**	*e*P		**P**	**22 34 42.6**	**+0.1**
	10.0nm,0.8s,mb4.4							
J16A	**Bone**	**25.26**	**349**	⇓P		**P**	**22 34 44.1**	**+1.2**
	baz=25							
RRI2	**Red Ridge**	**25.28**	**350**	*e*P		**P**	**22 34 42.7**	**-0.5**
	12nm,1.1s,mb4.3							
SNOW	**Snow King Moun**	**25.31**	**351**	*e*P		**P**	**22 34 44.2**	**+0.9**
	14nm,0.9s,mb4.5							
L10A	**Juniper Basin**	**25.33**	**341**	⇓P		**P**	**22 34 44.8**	**+1.2**
	baz=25							
TPAW	**Teton Pass**	**25.36**	**351**	*e*P		**P**	**22 34 44.5**	**+0.7**
	12nm,1.1s,mb4.3							
LOHW	**Long Hollow**	**25.43**	**351**	*e*P		**P**	**22 34 45.2**	**+0.7**
	13nm,1.2s,mb4.3							
TKL	**Tuckaleechee C**	**25.67**	**44**	P		**P**	**22 34 46.8**	**0.0**
	2.9nm,0.9s,mb3.8,baz=220,slow=9.5,SNR=4.0							
TKL				LR		LR	22 47 41.2	
	comp=Z,146nm,20.0s,MS3.5,baz=0,3,slow=43							
J12A	**Stokes Ranch,**	**26.01**	**344**	⇑P		**P**	**22 34 49.0**	**-0.7**
	baz=26							
K10A	**MacKenzie Ranc**	**26.09**	**341**	⇓P		**P**	**22 34 50.0**	**-0.5**
	baz=26							
I13A	**Wildhorse Cree**	**26.39**	**346**	⇓P		**P**	**22 34 53.2**	**0.0**
	baz=26							
I12A	**Atlanta**	**26.53**	**344**	⇓P		**P**	**22 34 54.9**	**+0.5**
	baz=26							
J09A	**Fry Pan Ranch,**	**26.89**	**340**	⇓P		**P**	**22 34 57.7**	**0.0**
	baz=27							
YBH	**Yreka Blue Hor**	**27.48**	**331**	LR		LR	22 45 37.2	
	comp=Z,184nm,18.6s,MS3.7,baz=150,slow=36							
BOZ	**Bozeman (W)**	**27.57**	**351**	⇑P		**P**	**22 35 03.7**	**-0.1**
	baz=27							
H10A	**Noah's Angus R**	**27.70**	**342**	⇑P		**P**	**22 35 04.2**	**-0.8**
	baz=28							
LRM	**Limekiln Ridge**	**27.88**	**349**	*e*P		**P**	**22 35 07.2**	**+0.7**
	24nm,1.1s,mb4.7							
F15A	**Butte**	**27.91**	**349**	⇑P		**P**	**22 35 06.7**	**-0.1**
	baz=28							
D17A	**Six Diamond Ra**	**28.92**	**353**	⇑P		**P**	**22 35 16.1**	**+0.3**
	baz=29							
CHMT	**Chamberlain Mo**	**29.08**	**349**	*e*P		**P**	**22 35 18.8**	**+1.6**
	3.3nm,1.2s,mb3.9							
MSO	**Missoula**	**29.13**	**348**	*e*P		**P**	**22 35 17.4**	**-0.2**
	6.0nm,1.3s,mb4.2							
ULM	**Lac du Bonnet**	**32.60**	**11**	P		**P**	**22 35 46.0**	**-2.2**
	3.2nm,0.7s,mb4.3,baz=202,slow=10,SNR=3.0							
ATAH	**Atahualpa**	**36.77**	**131**	LR		LR	22 48 23.9	
	comp=Z,214nm,20.2s,MS3.9,baz=185,slow=31							
YKA	**Yellowknife Ar**	**44.43**	**354**	P		**P**	**22 37 25.7**	**-1.6**
	0.3nm,0.8s,mb3.1,baz=166,slow=7.3,SNR=6.4							
YKA	**Yellowknife Ar**	**44.43**	**354**	*e*P		**P**	**22 37 25.7**	**-1.6**
SCHQ	**Schefferville**	**46.66**	**30**	LR		LR	22 57 57.5	
	comp=Z,91nm,21.7s,MS3.7,baz=270,slow=37							
RKT	**Rikitea**	**50.43**	**216**	*e*LR		LR	22 52 31.5	
	268nm,30.2s							
RKT				*e*T			23 32 09.0	
	3.0nm,0.3s							
SIV	**San Ignacio**	**55.49**	**125**	P		**P**	**22 38 55.2**	**+3.2**
	0.9nm,0.6s,mb4.0,baz=288,slow=16,SNR=6.1							
PPT	**Papeete**	**56.30**	**233**	*e*LR		LR	22 55 09.8	
	157nm,23.8s							
PPT	**Papeete**	**56.30**	**233**	LR		LR	22 57 01.0	
	comp=Z,114nm,21.3s,MS3.9,baz=27,slow=30							
NOA	**NORSAR Array B**	**86.09**	**26**	LR		LR	23 21 45.9	
	comp=Z,31nm,18.2s,MS3.7,baz=270,slow=37							
GERES	**GERESS Array B**	**93.93**	**35**	LR		LR	23 24 09.7	
	comp=Z,75nm,18.3s,MS4.2,baz=100,slow=35							
DZM	**Mont Dzumac**	**95.12**	**249**	*e*LR		LR	23 13 13.3	
	144nm,25.9s							
CN2	**Changchun**	**102.50**	**325**	*e*P		Pdif	22 43 11.8	-1.0
HHC	**Hu-ho-hao-te**	**111.70**	**331**	*e*PKP		PKiKP	22 47 46.5	-5.0
HHC				sPKP			22 48 00.8	
HHC				PP		PP	22 48 32.8	0.0
HHC				PKS			22 51 22.4	
HHC				SKS		SKSdf	22 54 53.8	-8.0
HHC				SKKS		SKKSac	22 55 22.8	-12
HHC				SS		SS	23 04 02.6	-3.6
HHC				AMB		AMB		
	comp=Z,62nm,5.6s							
HHC				LR		LR		
	comp=N,74nm,21.3s,MS4.3							
HHC				LR		LR		
	comp=E,52nm,19.7s,MS4.3							
HHC				LR		LR		
	comp=Z,58nm,20.8s,MS4.2							
WMQ	**Urumqi**	**116.85**	**349**	*e*PKP		PKPdf	22 47 58.6	-2.7
CD2	**Chengdu**	**123.45**	**330**	PKP		PKPdf	22 48 14.3	-0.1

MAN 24 22:49:12, 6°.98N×125°.86E, h48km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.37**	**286**	⇑*e*P	Pn	22 49 23.7	+2.1
DMPH				*e*S	Sn	22 49 37.4	+8.9
MATI	**Mati**	**0.39**	**95**	*e*P	Pn	22 49 22.4	+0.6
MATI				*e*S	Sn	22 49 32.9	+4.0
BUKP	**Musuan**	**1.19**	**318**	*e*P	Pn	22 49 33.9	+1.6
BUKP				*e*S	Sn	22 49 47.8	+0.4

DJA 24 22:51:41, 0°.21N×123°.84E, h161km, MLv4.2/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.64**	**221**	P	Pn	22 52 13.4	+0.5
MRSI	**Marisa**	**1.92**	**278**	P	Pn	22 52 15.9	0.0
APSI	**Ampana**	**2.46**	**243**	P	Pn	22 52 24.2	+2.0
LBMI	**Labuha**	**3.76**	**103**	P	Pn	22 52 39.7	+1.3
KDI	**Kendari**	**4.32**	**196**	P	Pn	22 52 45.3	-0.4
NLAI	**Namlea**	**4.73**	**136**	P	Pn	22 52 51.3	+0.2
TTSI	**Tana Toraja**	**5.16**	**231**	P	Pn	22 52 57.7	+1.0

GUC 24 23:00:35.6±0.6, 22°.73S×67°.05W, h260km±26km, ML4.3, 2C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.43**	**273**	*i* P	Pn	23 01 25.6	+2.8
PECH				*i* S	S	23 02 03.4	+3.2
PECH				AML	AML	23 02 04.3	
	comp=N,352nm,0.2s						
MACH	**Maria Elena**	**2.56**	**281**	*i* S	S	23 02 05.4	+2.8
CEN1	**Los Morros**	**2.98**	**257**	⇓*i* P	Pn	23 01 29.4	+1.0
CEN1				*i* S	S	23 02 13.2	+2.9
ANCH	**Antofagasta**	**3.24**	**252**	⇑*i* P	Pn	23 01 33.8	+2.6
ANCH				*i* S	S	23 02 17.6	+2.3
ANCH				AML	AML	23 02 19.2	
	comp=E,238nm,0.0s						
HMBC	**Humberston**	**3.60**	**312**	⇑*i* P	Pn	23 01 38.3	+3.0
HMBC				*i* S	S	23 02 25.6	+3.0
PSGC	**Pisagua**	**4.24**	**317**	*e*P	Pn	23 01 45.3	+2.6
PSGC				*i* S	S	23 02 38.4	+2.4
MNMC	**Miæe Miæ**	**4.30**	**326**	⇓*i* P	Pn	23 01 47.1	+3.7
MNMC				*i* S	S	23 02 41.6	+4.2

IDC 24 23:08:00.9±1.7, 4°.68N×73°.50W, h0km, mb3.3/2, mb1 3.7/2, mb1mx3.3/19, mbtmp3.4/2, Error ellipse: s-maj=29.9km s-min=13.6km az=15.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.85**	**282**	Pg	Pg	23 08 17.1	-0.1
	99nm,0.3s,baz=104,slow=13,SNR=83						
ROSC				Lg		23 08 28.9	
	165nm,0.3s,baz=106,slow=21,SNR=20						
LPAZ	**La Paz**	**21.50**	**166**	P	P	23 12 52.3	+0.8
	0.9nm,0.8s,baz=328,slow=13,SNR=3.7						
YKA	**Yellowknife Ar**	**65.14**	**340**	P	P	23 18 43.2	-0.1
	0.2nm,0.4s,baz=133,slow=6.1,SNR=6.4						

*IDC **24** 23:09:45.2±1.0, 10°.01S×151°.11E, h0km, mb4.4/14, mb1 4.4/14, mb1mx4.4/17, mbtmp4.4/14, MS3.8/5, Ms1 3.8/5, ms1mx3.2/22, Error ellipse: s-maj=36.9km s-min=16.4km az=93.0*

*MOS **24** 23:09:46.5±0.8, 10°.01S×151°.07E, h21km, mb4.6/16, MS4.0/4, Error ellipse: s-maj=17.9km s-min=11.0km az=84.6*

*BJI **24** 23:09:46.9, 10°.00S×150°.90E, h25km, mB5.0/3, mb4.8/7*

*ISCJB **24** 23:09:49.0±0.5, 9°.97S±0°.05×150°.9E±0°.1, h33km, mb4.4/22, MS3.8/6, Error ellipse: s-maj=16.8km s-min=7.5km az=8.5*

*NEIC **24** 23:09:50.9±0.5, 10°.00S×150°.92E, h35km, mb4.2/3, Error ellipse: s-maj=15.7km s-min=7.7km az=99.0*

ISC 24 23:09:48.7±7.6, 9°.95S±0°.09×151°.0E±0°.1, h19km±47km, n52, σ0=97/48, mb4.4/22, MS3.8/6, 2C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.59

```
GTA                                  pP    pP     23 20 56.3 +1.8
GTA                                  sP    sP     23 20 59.3 +2.5
GTA                                  pmax  pmax
        comp=Z,5.0nm,1.4s,mb4.3
ULN     Ulaanbaatar     69.44 330 eP    P      23 20 56.6 +1.0
SONM    Songino Array   69.75 330 P     P      23 20 58.8 +1.3
        comp=Z,2.1nm,0.8s,mb4.1,baz=141,slow=6.2,SNR=16
SONM    Songino Array   69.75 330 P     P      23 20 58.8 +1.3
SONM                                 pmax  pmax
        comp=Z,2.0nm,0.8s
SEY     Seymchan        72.67   1 ceP   P      23 21 14.2 -0.7
ZAK     Zakamensk       72.97 330 eP    P      23 21 17.4 +0.5
ZAK                                  pmax  pmax
        comp=Z,6.0nm,1.3s,mb4.4
YAK     Yakutsk         73.65 350 eP    P      23 21 20.7  0.0
YAK                                  pmax  pmax
        comp=Z,19nm,1.3s,mb4.9
YAK                                  MLR   MLR
        comp=Z,150nm,16.0s,MS4.4
YAK                                  MLR   MLR
        comp=N,60nm,19.0s,MS4.4
YAK                                  MLR   MLR
        comp=E,161nm,18.0s,MS4.4
BOD     Bodaibo         73.95 340 eP    P      23 21 21.7 -0.9
BOD                                  pmax  pmax
        comp=Z,4.0nm,1.2s,mb4.2
MOY     Mondy           74.90 330 eP    P      23 21 29.6 +1.4
BILL    Bilibino        78.56   6 eP    P      23 21 47.1 -1.4
BILL                                 e      23 24 48.8
BILL                                 pmax  pmax
        comp=Z,15nm,1.7s,mb4.7
QSPA    South Pole Qui  80.05 180 P     P      23 21 56.5 -0.2
        comp=Z,3.6nm,1.0s,mb4.3,baz=360,slow=3.7,SNR=8.4
MAW     Mawson          80.14 203 P     P      23 21 57.0 -0.4
        comp=Z,4.2nm,1.0s,mb4.3,baz=74,slow=3.8,SNR=5.8
MAW                                  LR    LR     23 54 17.4
        comp=Z,128nm,19.9s,MS4.3,baz=255,slow=33
MAW     Mawson          80.14 203 P     P      23 21 57.0 -0.3
MAW                                  pmax  pmax
        comp=Z,4.0nm,1.0s
MAW                                  MLR   MLR
        comp=Z,128nm,19.9s
TIXI    Tiksi           82.74 353 eP    P      23 22 10.2 -0.7
TIXI                                 pmax  pmax
        comp=Z,6.0nm,1.3s,mb4.5
MKAR    Makanchi Array  83.01 320 P     P      23 22 12.9 +0.1
        comp=Z,2.6nm,0.8s,mb4.3,baz=96,slow=6.3,SNR=17
MKAR    Makanchi Array  83.01 320 P     P      23 22 13.0 +0.2
MKAR                                 pmax  pmax
        comp=Z,3.0nm,0.8s
ZALV    Zalesovo Beam   84.42 327 P     P      23 22 18.9 -0.9
        comp=Z,4.2nm,0.8s,mb4.6,baz=109,slow=5.7,SNR=14
ZALV    Zalesovo Beam   84.42 327 P     P      23 22 19.0 -0.9
ZALV                                 pmax  pmax
        comp=Z,4.0nm,0.8s,mb4.6
NVS     Novosibirsk     85.64 328 eP    P      23 22 24.4 -1.6
NVS                                  pmax  pmax
        comp=N,7.0nm,1.8s
NVS                                  pmax  pmax
        comp=E,9.0nm,1.8s
NVS                                  pmax  pmax
        comp=Z,13nm,1.8s,mb4.9
KURK    Kurchatov       86.70 323 P     P      23 22 31.3  0.0
        comp=Z,0.8nm,0.7s,mb4.1,baz=105,slow=4.8,SNR=6.3
KURK    Kurchatov       86.70 323 P     P      23 22 31.3  0.0
KURK                                 pmax  pmax
        comp=Z,1.0nm,0.7s,mb4.2
KURK    Kurchatov       86.70 323 P     P      23 22 31.3  0.0
GERES   GERESS Array B 127.35 326 PKP   PKPdf  23 28 51.3 -1.0
        comp=Z,0.9nm,0.7s,baz=72,slow=1.9,SNR=9.3
GERES   GERESS Array B 127.35 326 PKIKP PKPdf  23 28 51.3 -1.0
GERES                                pmax  pmax
        comp=Z,1.0nm,0.7s
TORD    Torodi Ar. Bea  149.72 279 PKPbc PKPbc  23 29 38.4  0.0
        comp=Z,10nm,0.7s,baz=59,slow=2.5,SNR=70
TORD                                 PKPab PKPab  23 29 45.6 +1.9
        comp=Z,4.8nm,1.0s,baz=78,slow=2.3,SNR=6.4
```

*BJI **24** 23:20:34.4, 44°.20N×129°.40W, h10km, mB4.7/2, mb4.5/1, Ms4.4/2, Ms7 4.2/2*
*IDC **24** 23:20:39.4±1.2, 44°.05N×129°.30W, h0km, mb3.7/10, mb1 3.8/15, mb1mx3.7/29, mbtmp3.6/15, ML3.7/4, MS4.1/2, Ms1 4.2/2, ms1mx3.1/23, Error ellipse: s-maj=33.9km s-min=13.2km az=39.0*
*ISCJB **24** 23:20:40.3±0.6, 44°.23N±0°.06×129°.30W±0°.07, h10km, mb3.9/10, MS4.3/3, Error ellipse: s-maj=9.6km s-min=6.2km az=35.7*
*NEIC **24** 23:20:41.5±0.9, 44°.19N×129°.41W, h10km, mb4.1/8, Error ellipse: s-maj=13.4km s-min=8.9km az=46.0*
ISC 24 23:20:41.4±0.7, 44°.18N±0°.06×129°.41W±0°.07, h10km, n66, σ1§50/66, mb3.9/10, MS4.3/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	Roman Nose	4.09	92	P	Pn	23 21 41.8	-2.2
HEBO	Mount Hebo	4.16	74	ePn	Pn	23 21 43.1	-1.8
COR	Corvallis	4.39	83	eSn	Sn	23 22 37.7	-1.6
COR	Corvallis	4.39	83	ePn	Pn	23 21 46.8	-1.3
DBO	Dodson Butte	4.60	101	P	Pn	23 21 48.0	-2.9
HSO	Harness Mounta	4.61	96	P	Pn	23 21 49.3	-1.8
HUMO	Hull Mountain	4.96	106	ePn	Pn	23 21 53.4	-2.5
NLWA	Neilton Lookou	5.03	48	ePn	Pn	23 21 55.1	-1.8
	24nm,1.2s						
BBOR	Butler Butte	5.06	102	P	Pn	23 21 54.8	-2.5
IRO	Indian Ridge	5.15	89	P	Pn	23 21 58.4	-0.2
YBH	Yreka Blue Hor	5.49	114	Pn	Pn	23 22 01.0	-2.2
	1.0nm,0.3s,baz=311,slow=9.3,SNR=15						
YBH				Sn	Sn	23 23 04.3	-2.0
	0.3nm,0.3s,baz=159,slow=8.6,SNR=3.2						
YBH	Yreka Blue Hor	5.49	114	ePn	Pn	23 22 01.1	-2.1
	9.0nm,0.9s						
HOOD	Mount Hood Mea	5.64	76	ePn	Pn	23 22 04.7	-0.6
	91nm,0.8s						
LON	Longmire	5.93	62	ePn	Pn	23 22 09.0	-0.2
	9.4nm,0.6s						
PGC	Sidney	6.08	41	ePn	Pn	23 22 09.9	-1.3
JCW	Jim Creek	6.56	50	ePn	Pn	23 22 16.8	-1.0
RPW	Rockport	6.93	49	ePn	Pn	23 22 22.2	-0.8
	7.3nm,0.3s						
MOD	Modoc	7.05	106	ePn	Pn	23 22 26.2	+1.6
	8.3nm,1.1s						
BMN	Battle Mountai	9.77	108	ePn	Pn	23 23 05.8	+3.9
	14nm,1.2s						
NVAR	Mina Array Bea	10.13	121	Pn	Pn	23 23 06.8	-0.1
	0.1nm,0.3s,baz=291,slow=13,SNR=4.4						
HLID	Hailey	10.85	88	ePn	Pn	23 23 19.4	+2.7
	9.2nm,1.0s						
ELK	Elko	11.01	103	Pn	Pn	23 23 19.6	+0.6
	baz=282,slow=17,SNR=5.1						
JTMT	Jette	11.11	66	ePn	Pn	23 23 22.3	+2.1
	19nm,1.8s						
SWMT	Swartz Lake	11.25	67	ePn	Pn	23 23 23.6	+1.4
	7.3nm,1.2s						
SLMT	Seeley Lake	11.54	69	ePn	Pn	23 23 27.9	+1.8
	21nm,1.4s						
M13A	Montello	11.55	99	ePn	Pn	23 23 29.4	+3.1
	7.6nm,1.2s						
MCMT	McKenzie Canyo	11.84	81	ePn	Pn	23 23 30.3	0.0
	0.8nm,0.6s						
QLMT	Earthquake Lak	12.85	81	ePn	Pn	23 23 45.9	+1.8
	2.1nm,0.5s						
IMW	Indian Meadow	13.29	85	ePn	Pn	23 23 52.6	+2.5
	25nm,1.5s						
HWUT	Hardware Ranch	13.33	95	ePn	Pn	23 23 51.3	+0.7
	32nm,1.8s						
TPAW	Teton Pass	13.34	87	ePn	Pn	23 23 53.1	+2.3
	14nm,1.2s						
REDW	Red Top Meadow	13.44	87	ePn	Pn	23 23 50.5	-1.5
	34nm,1.6s						
LOHW	Long Hollow	13.57	86	ePn	Pn	23 23 56.4	+2.5
	18nm,1.4s						
CCUT	Cedar City	13.82	113	ePn	Pn	23 23 59.6	+2.3
	35nm,1.6s						
DAU	Daniels Canyon	13.95	99	ePn	Pn	23 24 01.8	+2.8
EGMT	Eagleton	14.16	67	ePn	Pn	23 24 01.4	-0.5
	17nm,1.1s						
BW06	Boulder Array	14.48	89	ePn	Pn	23 24 07.2	+0.9
	10nm,1.5s						
PDAR	Pinedale Array	14.48	89	Pn	Pn	23 24 08.0	+1.7
	0.1nm,0.3s,baz=311,slow=7.7,SNR=7.2						
SRU	San Rafael	14.99	103	Pn	Pn	23 24 15.0	+1.8
	41nm,1.1s						
PV04	Paradox Valley	16.44	104	ePn	Pn	23 24 31.5	-0.6
PV01	Paradox Valley	16.80	104	ePn	Pn	23 24 36.8	+0.2
	2μm,1.3s						
MVCO	Mesa Verde	17.29	107	ePn	Pn	23 24 43.9	+1.1
	114nm,1.9s						
RSSD	Black Hills	18.19	81	eP	Pn	23 24 54.6	+0.7
	9.8nm,1.4s						
ISCO	Idaho Springs	18.20	96	eP	Pn	23 24 54.2	+0.2
	11nm,1.2s						
LAZ	Ladron	19.75	112	eP	Pn	23 25 08.4	-4.5
	3.8nm,1.1s						
ANMO	Albuquerque	19.89	110	P	Pn	23 25 13.2	-1.3
	0.1nm,0.3s,baz=282,slow=8.3,SNR=2.3						
BNM	Barren Site	20.24	112	eP	P	23 25 18.2	+1.5
	15nm,1.4s						
YKA	Yellowknife Ar	20.27	20	P	P	23 25 17.7	+1.0
	3.5nm,1.0s,baz=208,slow=10,SNR=15						
YKA	Yellowknife Ar	20.27	20	P	P	23 25 17.7	+1.0
FFC	Flin Flon	20.58	49	eP	P	23 25 20.4	+0.1
	8.2nm,0.9s						
ULM	Lac du Bonnet	23.43	63	P	P	23 25 48.8	-1.9
	3.1nm,0.7s,mb3.8,baz=288,slow=1.5,SNR=2.2						
ECSD	EROS Data Cent	23.53	80	eP	P	23 25 51.2	-0.5
	11nm,1.2s,mb4.2						
TXAR	Lajitas Array	25.26	117	P	P	23 26 06.9	-0.7
	1.4nm,1.0s,mb3.5,baz=312,slow=7.5,SNR=9.6						
WMOK	Wichita Mounta	25.33	101	eP	P	23 26 08.9	+0.6
	13nm,1.1s,mb4.4						
RES	Resolute Bay	34.20	16	P	P	23 27 28.2	+1.7
	1.3nm,0.8s,mb3.9,baz=234,slow=12,SNR=6.2						
CN2	Changchun	69.95	312	eP	P	23 31 48.4	-4.3
SONM	Songino Array	76.07	325	P	P	23 32 29.7	+0.9
	0.5nm,0.7s,mb3.5,baz=54,slow=7.5,SNR=3.7						
ZALV	Zalesovo Beam	77.96	340	P	P	23 32 40.6	+1.2
	1.0nm,0.5s,mb4.0,baz=153,slow=40,SNR=2.6						
HHC	Hu-ho-hao-te	79.19	318	eP	P	23 32 43.1	-3.3
HHC				pP	pP	23 32 47.9	-1.8
HHC				sP	sP	23 32 50.3	-0.6
HHC				PP	PP	23 35 44.1	-1.1
HHC				S	S	23 42 39.8	-6.3
HHC				sS	sS	23 42 47.9	-3.6
HHC				ScS	ScS	23 43 01.4	-7.6
HHC				SS	SS	23 47 48.9	-2.3
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				LR	LR		
	comp=N,100nm,19.3s,MS4.4						
HHC				LR	LR		
	comp=E,120nm,19.6s,MS4.4						
HHC				LR	LR		
	comp=Z,120nm,19.4s,MS4.2						
BVAR	Borovoye Array	81.69	348	P	P	23 32 58.6	-1.0
	comp=Z,1.4nm,0.8s,mb3.9,baz=248,slow=38,SNR=3.4						
GERES	GERESS Array B	81.88	24	P	P	23 33 00.2	-0.5
	comp=Z,0.1nm,0.3s,baz=200,slow=11,SNR=2.3						
LPAZ	La Paz	82.04	122	P	P	23 33 00.5	-1.4
	comp=Z,0.5nm,0.6s,mb3.6,baz=32,slow=5.3,SNR=2.6						
LPAZ				LR	LR	00 11 32.8	
	comp=Z,56nm,18.5s,MS4.0,baz=326,slow=37						
AKASG	Malin Array Be	83.69	13	P	P	23 33 11.0	+0.9
	comp=Z,0.2nm,0.2s,mb3.8,baz=328,slow=4.6,SNR=4.4						
WMQ	Urumqi	86.34	334	eP	P	23 33 21.6	-1.9
GYA	Guiyang	93.00	312	P	P	23 33 50.8	-4.4
DAV	Davao City (W)	95.75	286	LR	LR	00 14 05.4	
	comp=Z,155nm,18.4s,MS4.5,baz=29,slow=33						

*IDC **24** 23:22:26.2±1.8, 54°.86N×166°.73E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.3/26, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=119.1km s-min=23.8km az=171.0*
*KRSC **24** 23:22:28.0±0.9, 55°.34N×166°.26E, h29km±29km, ML3.9*
*ISCJB **24** 23:22:29.4±0.9, 55°.32N±0°.05×166°.24E±0°.09, h31km±5km, mb3.6/2, Error ellipse: s-maj=8.7km s-min=8.1km az=36.9*
*NEIC **24** 23:22:31.6±1.2, 54°.97N×166°.64E, h35km, Error ellipse: s-maj=63.2km s-min=14.4km az=162.0*
ISC 24 23:22:30.4±0.9, 55°.35N±0°.05×166°.25E±0°.09, h23km±6km, n25, σ1§14/46, mb3.6/2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.21	227	iP	Pb	23 22 35.0	-0.9
BKI				iS	Sb	23 22 39.9	+0.2
KBTR	Krutoberegovo	2.12	295	eP	Pn	23 23 01.2	-3.2
KBTR				iS	Sn	23 23 25.6	-4.3
MKZ	Mys Kozlova	2.72	255	iP	Pn	23 23 11.9	-0.8
MKZ				iS	Sn	23 23 44.5	-0.3
SRKR	Sorokina	3.14	297	iP	Pn	23 23 17.4	-0.9
SRKR				eS	Sn	23 23 54.1	-0.9
ZLN	Zelenaya	3.15	285	iP	Pn	23 23 18.6	0.0
ZLN				iS	Sn	23 23 55.2	-0.2
BZGR	Bezymyannyi-Gr	3.20	283	P	Pn	23 23 19.0	-0.2
BZGR				iS	Sn	23 23 56.0	-0.6
KLY	Klyuchi	3.30	289	P	Pn	23 23 18.6	-2.0
KLY				iS	Sn	23 23 56.4	-2.6
KMNR	Kamenistaya	3.44	279	iP	Pn	23 23 23.2	+0.7
KMNR				iS	Sn	23 24 04.0	+1.6
KPT	Kopyto	3.47	283	eP	Pn	23 23 22.8	-0.1
KPT				iS	Sn	23 24 03.8	+0.6
TUMR	Tumrok	3.49	271	P	Pn	23 23 23.9	+0.8
TUMR				iS	Sn	23 24 04.9	+1.3
KOZ	Kozyrevsk	3.67	284	eP	Pn	23 23 26.6	+0.9
KOZ				iS	Sn	23 24 09.9	+1.6
SRDR	Sredinnyy	3.81	287	eP	Pn	23 23 27.4	-0.2
SRDR				eS	Sn	23 24 11.1	-0.5
KII	Karymskiy	4.16	254	P	Pn	23 23 33.1	+0.7
KII				iS	Sn	23 24 20.3	+0.1
SPN	Mys Shipunski	4.29	241	eP	Pn	23 23 33.3	-0.9
SPN				iS	Sn	23 24 21.5	-2.0
NLC	Nalytchevo	4.60	245	eP	Pn	23 23 37.9	-0.5
NLC				iS	Sn	23 24 29.7	-1.3
AVH	Avacha	4.87	248	iP	Pn	23 23 43.3	+1.2
AVH				iS	Sn	23 24 37.3	-0.4
PET	Petropavlovsk	5.03	246	P	Pn	23 23 45.5	+1.1
PET				iS	Sn	23 24 40.8	-0.9
PET	Petropavlovsk	5.03	246	ePn	Pn	23 23 46.0	+1.6
	6.9nm,0.3s						
PET				eS	Sn	23 24 41.9	+0.2
GNL	Ganaly	5.11	255	iP	Pn	23 23 46.9	+1.4
GNL				eS	Sn	23 24 44.7	+1.0
RUS	Russkaya	5.42	241	eP	Pn	23 23 50.4	+0.6
RUS				iS	Sn	23 24 49.3	-2.1
PEA0B	Petropavlovsk-	5.49	249	ePn	Pn	23 23 51.9	+1.2
PETK	Petropavlovsk-	5.49	249	Pn	Pn	23 23 51.5	+0.8
	1.8nm,0.3s,baz=73,slow=16,SNR=59						
PETK				Sn	Sn	23 24 56.5	+3.4
	1.2nm,0.3s,baz=83,slow=22,SNR=6.8						
SONM	Songino Array	36.88	284	P	P	23 29 39.4	+2.5
	0.6nm,0.8s,mb3.5,baz=53,slow=8.2,SNR=4.0						
SONM	Songino Array	36.88	284	P	P	23 29 39.4	+2.5
TXAR	Lajitas Array	66.47	72	P	P	23 33 16.8	-1.1
	0.5nm,0.5s,mb3.8,baz=302,slow=5.1,SNR=11						

*BJI **24** 23:23:02.0, 44°.20N×129°.40W, h10km, mB4.9/8, mb5.0/10, Ms4.8/7, Ms7 4.3/7*
*IDC **24** 23:23:03.3±1.0, 44°.06N×129°.41W, h0km, mb4.2/13, mb1 4.3/18, mb1mx4.2/29, mbtmp4.2/18, ML3.5/4, MS4.2/14, Ms1 4.2/14, ms1mx4.0/25, Error ellipse: s-maj=29.7km s-min=11.5km az=36.0*
*ISCJB **24** 23:23:04.9±0.3, 44°.28N±0°.03×129°.27W±0°.03, h10km, mb4.5/45, MS4.2/14, Error ellipse: s-maj=4.6km s-min=3.4km az=24.4*
*MOS **24** 23:23:05.0±1.0, 44°.21N×129°.32W, h15km, mb4.7/22, MS4.0/8, Error ellipse: s-maj=8.2km s-min=6.1km az=20.2*
*GCMT **24** 23:23:06.0±0.2, 44°.01N×129°.44W, h12km±1km, MWS.1/92, Moment Tensor Solution. s38,c45; s92,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.01±.12; $M_{\theta\theta}$-2.73±.10; $M_{\phi\phi}$3.74±.11; $M_{r\theta}$-2.27±.38; $M_{\theta\phi}$-3.08±.10; $M_{\phi r}$1.31±.29; Best double couple: $M_0$5.19600×10^{16} NP1:ϕ_s23.00000°, δ58.00000°, λ-6.00000°. NP2: ϕ_s116.00000°, δ85.00000°, λ-148.00000°. Principal axes: T 5.6370, Plg18.0000°, Azm245.0000°; N -0.8810, Plg58.0000°, Azm124.0000°; P -4.7560, Plg26.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **24** 23:23:06.0±0.4, 44°.21N×129°.39W, h10km, mb4.7/37 Error ellipse: s-maj=6.7km s-min=4.1km az=224.0*
ISC 24 23:23:06.2±0.3, 44°.26N±0°.03×129°.38W±0°.03, h10km, (h15km±.3km:pP-P), n202, σ1§13/200, mb4.5/45, MS4.2/14, 4C-4D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	Mount Hebo	4.12	75	ePn	Pn	23 24 07.5	-1.7
HEBO				eSn	Sn	23 24 54.6	-2.8
MPOR	Mary's Peak	4.19	85	P	Pn	23 24 07.7	-2.4
COR	Corvallis	4.37	84	ePn	Pn	23 24 10.9	-1.6
COR				eSn	Sn	23 25 02.4	-1.1
KMOR	Kings Mountain	4.41	70	P	Pn	23 24 11.4	-1.6
HUMO	Hull Mountain	4.96	107	ePn	Pn	23 24 17.3	-3.4
HUMO				eSn	Sn	23 25 13.3	-4.8
NLWA	Neilton Lookou	4.97	49	ePn	Pn	23 24 19.6	-1.1
	35nm,0.5s						
NLWA				eSn	Sn	23 25 17.4	-0.8
SSOR	Sweet Springs	4.98	81	P	Pn	23 24 20.7	-0.3
GT2	Goat Mountain	5.15	78	P	Pn	23 24 22.5	-0.7
SHW	Mount Saint He	5.41	67	P	Pn	23 24 26.8	0.0
YBH	Yreka Blue Hor	5.51	115	Pn	Pn	23 24 25.5	-2.7
	0.8nm,0.3s,baz=309,slow=10,SNR=23						
YBH				Sn	Sn	23 25 27.7	-3.9
	1.3nm,0.3s,baz=45,slow=14,SNR=4.4						
YBH	Yreka Blue Hor	5.51	115	eP	Pn	23 24 25.8	-2.4
YBH				e		23 25 28.5	
YBH				pmax	pmax		
	comp=Z,37nm,0.9s						
YBH	Yreka Blue Hor	5.51	115	ePn	Pn	23 24 25.8	-2.4
	comp=Z,36nm,0.9s						
YBH				eSn	Sn	23 25 28.5	-3.0
HOOD	Mount Hood Mea	5.61	76	ePn	Pn	23 24 28.5	-1.0
	comp=Z,434nm,0.8s						
HOOD				eSn	Sn	23 25 33.8	-0.1
LON	Longmire	5.88	62	eP	Pn	23 24 32.8	-0.4
LON				e		23 25 42.0	
LON				pmax	pmax		
	comp=Z,105nm,0.9s						
LON	Longmire	5.88	62	ePn	Pn	23 24 32.8	-0.4
	comp=Z,105nm,0.9s						
LON				eSn	Sn	23 25 42.0	+1.4
PGC	Sidney	6.00	41	ePn	Pn	23 24 34.2	-0.8
	comp=Z,2.0nm,0.6s						
PGC				eSn	Sn	23 25 41.5	-2.3
WDC	Whiskeytown Da	6.26	124	eP	Pn	23 24 37.8	-0.7
WDC				pmax	pmax		
	comp=Z,27nm,1.2s						
WDC	Whiskeytown Da	6.26	124	ePn	Pn	23 24 37.8	-0.7
	comp=Z,27nm,1.2s						
JCW	Jim Creek	6.50	50	ePn	Pn	23 24 41.8	+0.1
JCW				eSn	Sn	23 25 52.4	-3.5
RPW	Rockport	6.87	50	ePn	Pn	23 24 46.8	-0.1
	comp=Z,22nm,0.4s						
RPW				eSn	Sn	23 26 03.8	-1.3
MOD	Modoc	7.05	106	ePn	Pn	23 24 48.4	-1.0
	comp=Z,23nm,0.9s						
HOPS	Hopland	7.07	136	ePn	Pn	23 24 47.4	-2.3
	comp=Z,133nm,1.4s						
ETW	Entiat	7.14	59	ePn	Pn	23 24 50.8	+0.2
	comp=Z,22nm,0.7s						
RSW	Rattlesnake Hi	7.22	69	ePn	Pn	23 24 52.0	+0.3
	comp=Z,87nm,1.5s						
HAWA	Hanford	7.26	69	ePn	Pn	23 24 52.1	-0.1
	comp=Z,26nm,0.7s						
BBB	Bella Bella	7.97	6	Pn	Pn	23 25 06.0	+4.0
	comp=Z,0.9nm,0.3s,baz=193,slow=7.5,SNR=8.3						
BBB				LR	LR	23 27 15.7	
	comp=Z,664nm,19.3s,baz=189,slow=31						
LNOR	Lincton Mounta	8.02	75	eP	Pn	23 25 02.4	-0.3
LNOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LNOR	Lincton Mounta	8.02	75	ePn	Pn	23 25 02.4	-0.3
	comp=Z,7.4nm,0.9s						
WVOR	Wild Horse Val	8.04	99	eP	Pn	23 25 01.3	-1.7
WVOR				pmax	pmax		
	comp=Z,14nm,0.8s						
WVOR	Wild Horse Val	8.04	99	ePn	Pn	23 25 01.3	-1.7
	comp=Z,14nm,0.8s						
OD2	Odessa Site #2	8.09	63	ePn	Pn	23 25 03.0	-0.5
	comp=Z,47nm,1.0s						
CMB	Columbia Colle	9.20	129	eP	Pn	23 25 18.6	-0.3
CMB				pmax	pmax		
	comp=Z,169nm,1.9s						
CMB	Columbia Colle	9.20	129	ePn	Pn	23 25 18.6	-0.3
	comp=Z,169nm,1.9s						
BMN	Battle Mountai	9.78	109	eP	Pn	23 25 29.8	+3.0
BMN				pmax	pmax		
	comp=Z,46nm,1.4s						
BMN	Battle Mountai	9.78	109	ePn	Pn	23 25 29.8	+2.9
	comp=Z,46nm,1.4s						
NVAR	Mina Array Bea	10.16	121	Pn	Pn	23 25 31.6	-0.4
	comp=Z,0.4nm,0.3s,baz=285,slow=12,SNR=20						
BSMT	Bassoo Peak	10.76	65	ePn	Pn	23 25 40.3	+0.1
	comp=Z,32nm,1.1s						
HLID	Hailey	10.83	88	ePn	Pn	23 25 43.0	+1.8
	comp=Z,65nm,1.0s						
ELK	Elko	11.02	104	Pn	Pn	23 25 45.5	+1.8
	comp=Z,0.1nm,0.3s,baz=286,slow=12,SNR=17						
ELK				LR	LR	23 29 46.1	
	comp=Z,1μm,19.4s,baz=284,slow=37						
JTMT	Jette	11.07	66	ePn	Pn	23 25 44.3	-0.1
	comp=Z,59nm,1.5s						
N12A	Clover Valley,	11.12	103	ePn	Pn	23 25 46.8	+1.8
	comp=Z,23nm,1.0s						
MSO	Missoula	11.13	71	ePn	Pn	23 25 44.8	-0.5
	comp=Z,20nm,1.0s						
SWMT	Swartz Lake	11.21	68	ePn	Pn	23 25 47.0	+0.7
	comp=Z,43nm,1.1s						
SLMT	Seeley Lake	11.50	69	ePn	Pn	23 25 49.6	-0.7
	comp=Z,98nm,1.0s						
M13A	Montello	11.55	99	ePn	Pn	23 25 50.9	-0.2
	comp=Z,3.3nm,0.4s						
CHMT	Chamberlain Mo	11.61	71	ePn	Pn	23 25 51.0	-0.9
	comp=Z,14nm,1.0s						
WALA	Waterton Lakes	11.66	60	ePn	Pn	23 25 52.2	-0.3
N13A	Wendover, West	11.70	102	ePn	Pn	23 25 53.7	+0.6
	comp=Z,35nm,1.0s						
MCMT	McKenzie Canyo	11.82	81	ePn	Pn	23 25 55.2	+0.6
	comp=Z,9.8nm,1.0s						
DLMT	Dillon	11.98	79	ePn	Pn	23 25 56.9	0.0
	comp=Z,34nm,1.1s						
ISA	Isabella	11.98	132	eP	Pn	23 25 55.8	-1.1
ISA				pmax	pmax		
	comp=Z,27nm,1.3s						
ISA	Isabella	11.98	132	ePn	Pn	23 25 55.8	-1.2
	comp=Z,27nm,1.3s						
LRM	Limekiln Ridge	12.08	77	ePn	Pn	23 25 58.7	+0.4
	comp=Z,116nm,1.0s						
HVU	Hansel Valley	12.41	96	eP	Pn	23 26 03.8	+1.1
HVU				pmax	pmax		
	comp=Z,16nm,1.1s						
HVU	Hansel Valley	12.41	96	eP	Pn	23 26 03.8	+1.0
	comp=Z,16nm,1.1s						
BGU	Big Grassy Mou	12.51	100	Pn	Pn	23 26 05.2	+1.2
	comp=Z,19nm,1.3s						
BOZ	Bozeman (W)	12.66	77	eP	Pn	23 26 06.6	+0.5
BOZ				pmax	pmax		
	comp=Z,33nm,1.2s						
BOZ	Bozeman (W)	12.66	77	ePn	Pn	23 26 06.6	+0.5
	comp=Z,33nm,1.2s						
QLMT	Earthquake Lak	12.82	81	ePn	Pn	23 26 09.8	+1.4
	comp=Z,29nm,1.2s	

comp=Z,29nm,1.6s
LOHW Long Hollow 13.55 86 *e*Pn **Pn 23 26 20.1 +1.7**
comp=Z,61nm,1.5s
JLU Jordanelle 13.74 99 *e*Pn **Pn 23 26 21.0 0.0**
comp=Z,27nm,1.3s
CCUT Cedar City 13.84 113 *e*Pn **Pn 23 26 23.6 +1.3**
comp=Z,73nm,1.4s
EDM Edmonton 13.84 44 *e*P **Pn 23 26 23.0 +0.8**
DAU Daniels Canyon 13.95 100 *e*P **Pn 23 26 24.6 +0.8**
DAU pmax pmax
comp=Z,28nm,1.4s
DAU Daniels Canyon 13.95 100 *e*Pn **Pn 23 26 24.6 +0.8**
comp=Z,28nm,1.4s
EGMT Eagleton 14.12 68 *e*Pn **Pn 23 26 25.1 -0.9**
comp=Z,82nm,1.2s
MSU Marysvale 14.13 108 *e*P **Pn 23 26 28.4 +2.2**
MSU pmax pmax
comp=Z,113nm,1.5s
MSU Marysvale 14.13 108 *e*Pn **Pn 23 26 28.4 +2.1**
comp=Z,113nm,1.5s
DLBC Dease Lake 14.20 359 Pn **Pn 23 26 32.7 +5.6**
comp=Z,0.3nm,0.3s,baz=167,slow=26,SNR=4.9
DLBC LR LR 23 31 20.0
comp=Z,3μm,18.1s,baz=176,slow=34
DLBC Dease Lake 14.20 359 Pn **Pn 23 26 32.7 +5.6**
DLBC LR LR 23 31 20.0
LDFC Landfair 14.30 125 *e*Pn **Pn 23 26 28.7 +0.1**
comp=Z,107nm,1.1s
TMUT Trail Mountain 14.43 104 *e*Pn **Pn 23 26 31.4 +1.0**
comp=Z,21nm,1.0s
BW06 Boulder Array 14.47 89 *e*Pn **Pn 23 26 31.8 +1.0**
comp=Z,16nm,1.1s
PDAR Pinedale Array 14.47 89 Pn **Pn 23 26 32.5 +1.7**
baz=286,slow=12,SNR=13
PDAR LR LR 23 32 08.0
comp=Z,2μm,19.8s,baz=290,slow=38
SRU San Rafael 14.99 104 *e*P **Pn 23 26 39.2 +1.2**
SRU pmax pmax
comp=Z,83nm,0.9s
SRU San Rafael 14.99 104 *e*Pn **Pn 23 26 39.1 +1.1**
comp=Z,83nm,0.9s
BAR Barrett 15.24 135 *e*Pn **Pn 23 26 39.4 -1.8**
comp=Z,134nm,2.0s
SKAG Skagway 15.65 349 *e*Pn **Pn 23 26 47.1 +0.6**
comp=Z,15nm,1.3s
GLA Glamis 15.93 130 *e*P **Pn 23 26 49.5 -0.8**
WUAZ Wupatki 16.32 116 *e*Pn **Pn 23 26 56.2 +0.8**
comp=Z,64nm,1.2s
PV10 Paradox Valley 16.36 104 *e*Pn **Pn 23 26 56.6 +0.7**
comp=Z,686nm,1.2s
LAO LASA Array 16.42 73 *e*Pn **Pn 23 26 56.4 -0.1**
comp=Z,66nm,1.0s
RWWY Rawlins 16.43 91 *e*Pn **Pn 23 26 57.7 +1.1**
comp=Z,78nm,1.5s
PV04 Paradox Valley 16.45 104 *e*Pn **Pn 23 26 57.0 +0.1**
PNL Peninsula 16.59 342 *e*Pn **Pn 23 27 00.1 +1.5**
comp=Z,70nm,1.5s
PV01 Paradox Valley 16.80 104 *e*Pn **Pn 23 27 01.2 -0.2**
comp=Z,5μm,1.3s
MVCO Mesa Verde 17.30 107 *e*Pn **Pn 23 27 07.5 -0.2**
comp=Z,283nm,1.8s
SMCO Snowmass 17.47 99 *e*Pn **Pn 23 27 09.3 -0.4**
RSSD Black Hills 18.16 82 *e*P **Pn 23 27 18.0 -0.3**
RSSD pmax pmax
comp=Z,39nm,1.3s
RSSD Black Hills 18.16 82 *e*Pn **Pn 23 27 18.0 -0.3**
comp=Z,39nm,1.3s
ISCO Idaho Springs 18.19 96 *e*P **Pn 23 27 17.9 -0.8**
ISCO pmax pmax
comp=Z,25nm,1.2s
ISCO Idaho Springs 18.19 96 *e*Pn **Pn 23 27 17.9 -0.8**
comp=Z,25nm,1.2s
TUC Tucson 18.81 123 *e*P **Pn 23 27 25.9 -0.3**
TUC pmax pmax
comp=Z,14nm,1.1s
TUC Tucson 18.81 123 *e*P **Pn 23 27 25.9 -0.4**
comp=Z,14nm,1.1s
SDCO Great Sand Dun 19.13 102 *e*P **Pn 23 27 30.1 0.0**
comp=Z,38nm,1.4s
KDAK Kodiak Island 19.77 321 LR LR 23 33 17.6
comp=Z,1μm,20.2s,slow=31
LAZ Ladron 19.77 112 *e*P **Pn 23 27 37.5 -0.3**
comp=Z,16nm,1.3s
ANMO Albuquerque 19.91 110 P **Pn 23 27 37.9 -1.5**
comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=13
ANMO LR LR 23 35 04.8
comp=Z,406nm,18.9s,baz=129,slow=36
ANMO Albuquerque 19.91 110 *e*P **Pn 23 27 38.5 -0.9**
ANMO pmax pmax
comp=Z,25nm,1.2s
ANMO Albuquerque 19.91 110 *e*P **Pn 23 27 38.5 -0.9**
comp=Z,25nm,1.2s
YKA Yellowknife Ar 20.19 20 P **P 23 27 41.9 +1.3**
comp=Z,8.8nm,0.9s,baz=208,slow=12,SNR=22
YKA Yellowknife Ar 20.19 20 P **P 23 27 41.9 +1.3**
YKA pmax pmax
comp=Z,9.0nm,0.9s
YKA Yellowknife Ar 20.19 20 P **P 23 27 41.9 +1.3**
BNM Barren Site 20.26 112 *e*P **P 23 27 42.9 +1.2**
comp=Z,17nm,1.0s
OGNE Ogallala 20.37 90 *e*P **P 23 27 43.8 +1.0**
comp=Z,123nm,1.4s
FFC Flin Flon 20.52 50 *e*P **P 23 27 44.3 0.0**
FFC pmax pmax
comp=Z,29nm,0.8s
FFC Flin Flon 20.52 50 *e*P **P 23 27 44.2 0.0**
comp=Z,29nm,0.8s
MNTX Cornudas Mount 22.61 116 *e*P **P 23 28 06.7 -0.2**
comp=Z,41nm,1.8s,mb4.6
PPLA Purkeypile 22.83 333 *e*P **P 23 28 11.9 +2.9**
comp=Z,109nm,1.9s,mb5.0
AMTX Amarillo 23.23 104 *e*P **P 23 28 12.9 -0.5**
comp=Z,19nm,0.8s,mb4.6
BPAW Bear Paw Mtn. 23.33 336 *e*P **P 23 28 15.1 +0.9**
comp=Z,57nm,2.0s,mb4.7
ULM Lac du Bonnet 23.38 63 P **P 23 28 13.5 -1.4**
comp=Z,26nm,1.0s,mb4.6,baz=278,slow=8.8,SNR=13
ULM LR LR 23 37 26.6
comp=Z,1μm,19.4s,MS4.4,baz=69,slow=37
ULM Lac du Bonnet 23.38 63 *e*P **P 23 28 13.8 -1.1**
comp=Z,25nm,1.0s,mb4.6
AGMN Agassiz Refuge 23.41 68 *e*P **P 23 28 14.6 -0.6**
comp=Z,19nm,0.9s,mb4.5
ECSD EROS Data Cent 23.50 80 *e*P **P 23 28 15.0 -1.2**
comp=Z,84nm,1.4s,mb5.0
INK Inuvik 24.20 356 LR LR 23 37 31.1
comp=Z,582nm,22.0s,MS4.0,baz=52,slow=36
TXAR Lajitas Array 25.28 117 P **P 23 28 30.9 -1.8**
comp=Z,2.9nm,0.8s,mb3.9,baz=297,slow=7.2,SNR=15
TXAR LR LR 23 38 51.8
comp=Z,220nm,18.2s,MS3.7,baz=0.0,slow=38
TXAR Lajitas Array 25.28 117 P **P 23 28 30.9 -1.7**
TXAR pmax pmax
comp=Z,3.0nm,0.8s
TXAR MLR MLR
comp=Z,220nm,18.2s
WMOK Wichita Mounta 25.33 102 *e*P **P 23 28 33.1 0.0**
WMOK pmax pmax
comp=Z,25nm,1.0s,mb4.7
WMOK Wichita Mounta 25.33 102 *e*P **P 23 28 33.0 0.0**
comp=Z,25nm,1.0s,mb4.7
FCC Fort Churchill 25.95 43 *e*P **P 23 28 38.5 +0.1**
FCC pmax pmax
comp=Z,2.0nm,1.5s,mb3.4
FCC Fort Churchill 25.95 43 *e*P **P 23 28 38.5 +0.1**
comp=Z,1.7nm,1.5s,mb3.4
EYMN Ely 26.35 68 *e*P **P 23 28 41.9 -0.3**
comp=Z,17nm,1.1s,mb4.5
COWI Conover 28.22 72 *e*P **P 23 28 58.5 -0.4**
comp=Z,5.7nm,0.9s,mb4.2
MIAR Mount Ida 29.12 97 *e*P **P 23 29 06.8 -0.3**
MIAR pmax pmax
comp=Z,38nm,1.3s,mb5.0
MIAR Mount Ida 29.12 97 *e*P **P 23 29 06.8 -0.3**
comp=Z,38nm,1.3s,mb5.0
CCM Cathedral Cave 29.18 89 *e*P **P 23 29 06.5 -1.1**
CCM pmax pmax
comp=Z,19nm,1.4s,mb4.6
CCM Cathedral Cave 29.18 89 *e*P **P 23 29 06.5 -1.1**
comp=Z,19nm,1.4s,mb4.6
HDIL Hopedale 29.62 83 *e*P **P 23 29 10.8 -0.7**
comp=Z,49nm,1.3s,mb5.1
OLIL Olney 31.17 86 *e*P **P 23 29 24.0 -1.1**
comp=Z,57nm,1.4s,mb5.2
BLO Bloomington 32.12 84 *e*P **P 23 29 32.3 -1.2**
BLO pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BLO Bloomington 32.12 84 *e*P **P 23 29 32.3 -1.2**
comp=Z,9.9nm,0.7s,mb4.8
PLAL Pickwick Lake 32.85 92 *e*P **P 23 29 38.3 -1.6**
comp=Z,32nm,1.4s,mb5.0
RES Resolute Bay 34.12 16 P **P 23 29 51.0 +0.5**
comp=Z,2.5nm,0.8s,mb4.2,baz=234,slow=10,SNR=10
RES Resolute Bay 34.12 16 P **P 23 29 51.1 +0.5**
RES pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
RES Resolute Bay 34.12 16 *e*P **P 23 29 51.1 +0.6**
comp=Z,12nm,1.5s,mb4.6
BILL Bilibino 40.41 328↓*e*P **P 23 30 44.5 +0.5**
BILL pmax pmax
comp=Z,26nm,2.5s,mb4.5
BILL MLR MLR
comp=Z,500nm,18.0s,MS4.4
BILL Bilibino 40.41 328 *e*P **P 23 30 44.8 +0.8**
comp=Z,32nm,1.6s,mb4.8
SCHQ Schefferville 40.63 52 LR LR 23 47 40.2
comp=Z,919nm,18.5s,MS4.7,baz=126,slow=36
SEY Seymchan 46.73 322*ce*P **P 23 31 34.8 -0.1**
PETK Petropavlovsk- 46.99 308 P **P 23 31 36.9 -0.2**
comp=Z,2.9nm,0.9s,mb4.2,baz=75,slow=13,SNR=3.5
PETK LR LR 23 48 10.5
comp=Z,78nm,18.8s,MS3.7,baz=265,slow=32
PETK Petropavlovsk- 46.99 308 P **P 23 31 36.9 -0.2**
PETK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
PETK MLR MLR
comp=Z,78nm,18.8s,MS3.7
TIXI Tiksi 52.17 337 *e*P **P 23 32 15.5 -0.8**
TIXI pmax pmax
comp=Z,10.0nm,2.2s,mb4.4
TIXI MLR MLR
comp=Z,343nm,19.0s,MS4.4
TAOE Nuku Hiva Isla 53.76 193 *e*LR LR 23 47 52.1
comp=Z,248nm,24.5s
TAOE *e*T 00 29 59.1
comp=Z,70nm,0.2s
PMOR Pomariorio Ree 61.35 200 *e*T 00 39 34.7
comp=Z,27nm,0.2s
MEH Mehetia 64.15 200 *e*T 00 43 05.5
comp=Z,37nm,0.2s
TIAR Tiarei 64.17 201 *e*T 00 43 05.8
comp=Z,37nm,0.2s
PPT Papeete 64.24 201 *e*LQ 23 49 43.8
comp=Z,2μm,30.2s
PPT *e*LR LR 23 52 49.7
comp=Z,56nm,22.5s
BOD Bodaibo 65.46 328 *e*P **P 23 33 46.1 -2.8**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
MDJ Mudanjiang 67.13 310 P **P 23 33 57.5 -2.3**
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MDJ pmax pmax
comp=Z,80nm,5.9s
RKT Rikitea 67.24 186 *e*LQ 23 51 08.7
comp=Z,378nm,28.5s
RKT *e*LR LR 23 54 04.9
comp=Z,265nm,25.0s
RKT *e*T 00 46 57.0
comp=Z,5.8nm,0.2s
APA Apatity 67.74 7↑*e*P **P 23 33 56.0 -7.3**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
CN2 Changchun 69.91 312 *e*P **P 23 34 15.4 -1.8**
NOA NORSAR Array B 70.28 19 P **P 23 34 19.2 0.0**
comp=Z,0.8nm,0.8s,mb3.7,baz=143,slow=20,SNR=2.6
NOA NORSAR Array B 70.28 19 P **P 23 34 19.2 0.0**
NOA pmax pmax
comp=Z,1.0nm,0.8s
ESK Eskdalemuir 70.84 29 *i*P **P 23 34 16.8 -5.9**
FINES FINESS Array B 72.79 12 P **P 23 34 34.7 +0.4**
comp=Z,3.1nm,0.8s,mb4.3,baz=35,slow=4.7,SNR=6.7
FINES FINESS Array B 72.79 12 P **P 23 34 34.7 +0.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 72.79 12 P **P 23 34 34.7 +0.4**
KSRS Korea Array 72.81 306 LR LR 00 05 56.8
comp=Z,57nm,18.2s,MS3.9,baz=222,slow=35
SONM Songino Array 76.01 325 P **P 23 34 52.7 -0.6**
comp=Z,2.1nm,1.0s,mb4.0,baz=17,slow=2.7,SNR=9.1
SONM Songino Array 76.01 325 P **P 23 34 52.7 -0.6**
SONM pmax pmax
comp=Z,2.0nm,1.0s
NVS Novosibirsk 77.45 341 *i*P **P 23 35 00.8 -0.5**
NVS pmax pmax
comp=Z,38nm,2.2s,mb4.9
NVS pmax pmax
comp=N,11nm,1.8s
NVS pmax pmax
comp=E,17nm,1.8s
ZALV Zalesovo Beam 77.89 340 P **P 23 35 03.5 -0.3**
comp=E,1.9nm,0.8s,mb4.1,baz=25,slow=4.9,SNR=8.2
ZALV Zalesovo Beam 77.89 340 P **P 23 35 03.5 -0.3**
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
HHC Hu-ho-hao-te 79.14 318 *e*P **P 23 35 11.6 +0.7**
HHC pP pP 23 35 16.3 +2.1
HHC sP sP 23 35 18.9 +3.5
HHC PP PP 23 38 12.4 +2.9
HHC S S 23 45 10.3 0.0
HHC sS sS 23 45 16.8 +1.1
HHC ScS ScS 23 45 30.1 -3.2
HHC SS SS 23 50 17.1 +1.9
HHC pmax pmax
comp=Z,14nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,60nm,5.5s
HHC LR LR
comp=N,160nm,19.9s,MS4.5
HHC LR LR
comp=E,140nm,18.6s,MS4.5
HHC LR LR
comp=Z,130nm,17.9s,MS4.3
ARU Arti 79.46 356*d*i*P **P 23 35 14.2 +1.9**
ARU *e* 23 38 09.3
ARU S S 23 45 16.5 +3.4
ARU pmax pmax
comp=Z,15nm,2.5s,mb4.5
BRG Berggiesshubel 80.04 23 *e*P **P 23 35 20.9 +5.3**
comp=Z,11nm,1.7s,mb4.5
BRG *e* 23 35 26.8
comp=Z,16nm,1.8s
OBN Obninsk 80.28 8↓*e*P **P 23 35 17.3 +0.5**
OBN *e*S S 23 45 28.8 +6.9
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,22.0s,MS4.1
BRVK Borovoye 81.60 348*ce*P **P 23 35 23.8 -0.1**
BRVK pmax pmax
comp=Z,12nm,2.5s,mb4.4
BVAR Borovoye Array 81.61 348 P **P 23 35 24.2 +0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=40,slow=2.5,SNR=8.7
BVAR Borovoye Array 81.61 348 P **P 23 35 24.2 +0.2**
BVAR pmax pmax
comp=Z,2.0nm,0.8s
NJ2 Nanjing 81.89 307 *e*P **P 23 35 26.8 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
LPAZ La Paz 82.07 122 P **P 23 35 25.3 -1.5**
comp=Z,2.9nm,0.8s,mb4.3,baz=23,slow=14,SNR=13
LPAZ La Paz 82.07 122 P **P 23 35 25.3 -1.5**
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 82.33 342*ce*P **P 23 35 28.3 +0.6**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
KURK Kurchatov 82.33 342 *e*P **P 23 35 27.8 +0.1**
comp=Z,4.7nm,1.1s,mb4.3
AKASG Malin Array Be 83.61 13 P **P 23 35 35.1 +0.7**
comp=Z,0.2nm,0.3s,mb3.7,baz=335,slow=4.2,SNR=6.8
AKASG Malin Array Be 83.61 13 *i*P **P 23 35 38.7 +4.3**
MKAR Makanchi Array 85.11 339 P **P 23 35 40.7 -1.4**
comp=Z,0.6nm,0.9s,mb3.7,baz=15,slow=6.3,SNR=3.7
MKAR Makanchi Array 85.11 339 P **P 23 35 40.7 -1.4**
MKAR pmax pmax
comp=Z,1.0nm,0.9s
ABKAR Akbulak array 86.51 354 *e*P **P 23 35 49.3 +0.4**
comp=Z,3.6nm,1.1s,mb4.5
DZM Mont Dzumac 88.25 237 *e*LR LR 00 03 52.5
comp=Z,307nm,22.1s
CD2 Chengdu 90.86 317 P **P 23 36 10.1 +0.2**
CD2 pP pP 23 36 14.9 +1.6
CD2 sP sP 23 36 17.1 +2.6
CD2 PP PP 23 39 47.5 +2.5
CD2 SKS 23 46 39.3
CD2 S S 23 47 02.9 -3.9
CD2 sS sS 23 47 10.9 -1.4
CD2 SS SS 23 53 07.8 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,80nm,5.5s
CD2 LR LR
comp=N,130nm,7.1s
CD2 LR LR
comp=Z,160nm,8.3s
KIV Kislovodsk 91.89 6↓*e*P **P 23 36 16.1 +1.6**
KIV pmax pmax
comp=Z,2.0nm,1.0s,mb4.4
KIV MLR MLR
comp=Z,100nm,24.0s,MS4.2
KMI Kunming 96.10 314 P **P 23 36 32.8 -1.3**
KMI pP pP 23 36 37.3 -0.2
KMI sP sP 23 36 38.8 +0.1
KMI PP PP 23 40 28.3 +2.2
KMI S S 23 47 49.3 -4.0
KMI SS SS 23 54 24.1 +0.9
KMI pmax pmax
comp=Z,6.0nm,0.6s,mb5.2
KMI pmax pmax
comp=Z,75nm,4.5s
KMI LR LR
comp=N,110nm,18.2s,MS4.5
KMI LR LR
comp=E,120nm,17.3s,MS4.5
KMI LR LR
comp=Z,92nm,19.2s,MS4.3
CPUP Villa Florida 96.21 121 LR LR 00 18 29.5
comp=Z,77nm,19.1s,MS4.2,baz=71,slow=35
CTA Charters Tower 99.85 252 LR LR 00 13 00.8
comp=Z,342nm,20.3s,MS4.8,baz=52,slow=30

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*IDC **24** 23:38:36.2±1.0,31°.66N×104°.26E,h0km,mb3.8/10, mb1 3.9/11,mb1mx3.7/26,mbtmp3.8/11,ML3.5/1,Error ellipse: s-maj=34.6km s-min=19.3km az=47.0*
*NEIC **24** 23:38:37.6±0.7,31°.58N×104°.22E,h10km,mb4.2/1,Error ellipse: s-maj=20.8km s-min=10.1km az=219.0*
*BJI **24** 23:38:38.5,31°.66N×104°.47E,h11km,mB4.3/1,mb4.3/1, ML3.8/15,Ms3.7/5,Ms7 3.6/5*
ISC 24 23:38:37.3±0.8,31°.74N±0°.03×104°.39E±0°.04,h2km±5km, n22,σ1°.05/31,mb3.8/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.99**	**213**	Pg	**Pg**	**23 38 56.1**	**-0.2**
CD2				Sg	**Sg**	**23 39 10.3**	**+1.2**
CD2				smax			
comp=N,2μm,0.8s							
LZH	**Lanzhou**	**4.36**	**354**	*e*Pn	**Pn**	**23 39 51.3**	**+6.8**
LZH				Pg	**Pg**	**23 40 01.0**	**+0.1**
LZH				Sn	**Sn**	**23 40 38.0**	**+2.2**
LZH				Sg	**Sg**	**23 40 56.5**	**-0.9**
LZH				smax			
comp=N,77nm,0.8s							
LZH				smax			
comp=E,220nm,1.0s							
LZH				LR	LR		
comp=N,560nm,6.0s							
LZH				LR	LR		
comp=Z,690nm,7.2s							
XAN	**Xi'an**	**4.45**	**58**	Pn	**Pn**	**23 39 47.1**	**+1.4**
XAN				Pg	**Pg**	**23 40 01.6**	**-1.0**
XAN				Sn	**Sn**	**23 40 48.1**	**+10**
XAN				Sg	**Sg**	**23 40 59.8**	**-0.4**
XAN				smax			
comp=N,140nm,0.7s							
XAN				smax			
comp=E,80nm,0.8s							
ENH	**Enshi**	**4.61**	**107**	*e*Pn	**Pn**	**23 39 48.6**	**+0.6**
ENH				*e*S	**Sn**	**23 40 42.8**	**+0.7**
GYA	**Guiyang**	**5.62**	**159**	Pn	**Pn**	**23 40 02.5**	**+0.6**
GYA				Sn	**Sn**	**23 41 05.8**	**-1.3**
GYA				smax			
comp=N,150nm,0.8s							
GYA				smax			
comp=E,130nm,0.8s							
GTA	**Gaotai**	**8.51**	**335**	*e*P	Px	23 41 21.5	
GTA				pP		23 41 26.4	
GTA				sP		23 41 28.5	
GTA				S	**Sn**	**23 42 33.5**	**+15**
GTA				sS		23 42 38.6	
GTA				pmax	pmax		
comp=Z,3.0nm,1.8s							
GTA				pmax	pmax		
comp=Z,80nm,5.4s							
GTA				LR	LR		
comp=N,170nm,14.3s							
GTA				LR	LR		
comp=E,160nm,11.3s							
GTA				LR	LR		
comp=Z,220nm,9.8s							
WHN	**Wuhan**	**8.62**	**95**	S	**Sn**	**23 42 15.4**	**-5.4**
SONM	**Songino Array**	**16.15**	**5**	Pn	**Pn**	**23 42 27.8**	**+2.6**
comp=Z,0.2nm,0.3s,baz=182,slow=12,SNR=7.6							
KSRS	**Korea Array**	**20.17**	**67**	P	**P**	**23 43 13.5**	**+0.5**
comp=Z,2.0nm,0.7s,baz=256,slow=11,SNR=13							
MKAR	**Makanchi Array**	**22.67**	**318**	P	**P**	**23 43 40.3**	**+0.6**
comp=Z,1.1nm,0.7s,mb3.4,baz=112,slow=15,SNR=5.3							
KSH	**Kashi**	**24.30**	**297**	P	**P**	**23 43 59.5**	**+3.5**
KSH				pmax	pmax		
comp=Z,66nm,6.4s							
ZAA0	**Zalesovo Array**	**26.26**	**333**	*e*P	**P**	**23 44 13.4**	**-0.2**
ZALV	**Zalesovo Beam**	**26.26**	**333**	P	**P**	**23 44 13.4**	**-0.3**
comp=Z,1.7nm,0.6s,mb3.7,baz=135,slow=9.3,SNR=11							
KURK	**Kurchatov**	**26.89**	**322**	P	**P**	**23 44 18.7**	**-0.7**
comp=Z,0.7nm,0.6s,mb3.4,baz=131,slow=8.9,SNR=3.2							
ARU	**Arti**	**40.08**	**322**	*e*P	**P**	**23 46 13.5**	**-0.3**
comp=Z,3.6nm,0.7s,mb4.2							
BRTR	**Keskin Array B**	**56.64**	**299**	P	**P**	**23 48 19.6**	**-2.2**
comp=Z,0.4nm,0.7s,mb3.5,baz=94,slow=7.4,SNR=3.9							
ARCES	**ARCESS Array B**	**56.78**	**336**	P	**P**	**23 48 21.0**	**-1.3**
comp=Z,2.7nm,0.9s,mb4.3,baz=62,slow=13,SNR=3.0							
ARCES	**ARCESS Array B**	**56.78**	**336**	P	**P**	**23 48 21.0**	**-1.3**
FINES	**FINESS Array B**	**57.18**	**326**	P	**P**	**23 48 24.4**	**-0.9**
comp=Z,1.6nm,0.6s,mb4.2,baz=102,slow=4.7,SNR=9.2							
ASAR	**Alice Springs**	**61.91**	**149**	P	**P**	**23 48 57.9**	**-0.4**
comp=Z,1.2nm,0.5s,mb4.2,baz=335,slow=6.6,SNR=19							
GERES	**GERESS Array B**	**67.28**	**314**	P	**P**	**23 49 33.6**	**+0.3**
comp=Z,0.3nm,0.7s,mb3.4,baz=44,slow=9.7,SNR=4.0							
YKA	**Yellowknife Ar**	**81.01**	**17**	P	**P**	**23 50 52.4**	**-0.8**
comp=Z,0.6nm,0.6s,mb3.7,baz=329,slow=5.0,SNR=10							

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*ISCJB **25** 00:04:56.6±1.9,1°.66N±0°.04×127°.1E±0°.1,h75km±18km, mb4.3/18,Error ellipse: s-maj=17.8km s-min=7.0km az=179.6*
*NEIC **25** 00:05:01.0±1.7,1°.69N×127°.35E,h105km±16km,mb4.3/8, Error ellipse: s-maj=17.6km s-min=6.2km az=77.0*
*IDC **25** 00:05:01.8±4.2,1°.68N×127°.31E,h110km±41km,mb3.9/10, mb1 3.9/12,mb1mx3.8/21,mbtmp3.9/12,Error ellipse: s-maj=32.6km s-min=12.2km az=82.0*
ISC 25 00:04:57.6±1.6,1°.65N±0°.04×127°.1E±0°.1,h68km±15km, n30,σ0°.53/32,mb4.3/18,1C,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**4.92**	**334**↑	*e*P	**Sn**	**00 07 04.8**	**+0.1**
DAV	**Davao City (W)**	**5.61**	**344**	S	**Sn**	**00 07 21.6**	**0.0**
22nm,0.3s,baz=244,slow=17,SNR=2.8							
KAPI	**Kappang**	**9.91**	**228**	P	**Pn**	**00 07 23.1**	**+5.7**
7.2nm,0.3s,baz=98,slow=9.4,SNR=13							
KAPI				S	**Sn**	**00 09 06.9**	**-0.1**
1.3nm,0.3s,baz=54,slow=22,SNR=4.2							
KAKA	**Kakadu**	**15.20**	**160**	*e*P	**Pn**	**00 08 34.0**	**+5.5**
17nm,0.6s							
FITZ	**Fitzroy Crossi**	**19.68**	**184**	*e*P	**Pn**	**00 09 22.7**	**-0.7**
5.2nm,0.5s							
FITZ	**Fitzroy Crossi**	**19.68**	**184**	P	**Pn**	**00 09 23.1**	**-0.3**
0.6nm,0.3s,baz=42,slow=9.5,SNR=14							
FITZ	**Fitzroy Crossi**	**19.68**	**184**	*e*P	**Pn**	**00 09 22.8**	**-0.5**
1.8nm,0.5s							
TPUB	**Ta-pu**	**22.43**	**344**	*e*P	**P**	**00 09 51.4**	**+0.5**
12nm,0.6s,mb4.4							
WRAB	**Tennant Creek**	**22.58**	**162**	*e*P	**P**	**00 09 52.7**	**+0.2**
24nm,0.6s,mb4.7							

MBWA	Marble Bar	23.80	197	*e*P	P	00 10 04.3 +0.1
	7.9nm,0.6s,mb4.2					
ASAR	Alice Springs	26.01	166	P	P	00 10 24.2 -0.1
	1.7nm,0.5s,mb3.7,baz=350,slow=7.6,SNR=33					
ASAR				S	S	00 14 54.9 +4.6
	0.6nm,0.7s,baz=344,slow=16,SNR=4.1					
FORT	Forrest	32.26	179	*e*P	P	00 11 19.5 -0.3
	16nm,0.7s,mb4.9					
KLBR	Kellerberrin	34.23	194	*e*P	P	00 11 37.2 +0.2
	11nm,0.6s,mb4.9					
NWAO	Narrogin (SRO)	35.64	194	P	P	00 11 49.2 +0.2
	6.3nm,0.5s,mb4.8,baz=39,slow=6.9,SNR=8.1					
NWAO	Narrogin (SRO)	35.64	194	P	P	00 11 49.2 +0.2
KSRS	Korea Array	35.64	1	P	P	00 11 49.4 +0.3
	2.6nm,0.6s,mb4.3,baz=178,slow=9.6,SNR=13					
STKA	Stephens Creek	36.05	159	*e*P	P	00 11 52.6 0.0
	3.1nm,0.7s,mb4.3					
STKA	Stephens Creek	36.05	159	P	P	00 11 53.0 +0.4
	3.2nm,0.6s,mb4.5,baz=329,slow=7.1,SNR=10					
STKA	Stephens Creek	36.05	159	*e*P	P	00 11 53.0 +0.3
	0.6nm,0.6s,mb3.7					
MJAR	Matsushiro Arr	36.20	15	P	P	00 11 51.9 -2.0
	1.1nm,0.5s,mb4.1,baz=186,slow=9.2,SNR=7.0					
ARMA	Armidale	39.52	146	*e*P	P	00 12 22.8 +0.9
ULN	Ulaanbaatar	49.21	342	*e*P	P	00 13 39.0 0.0
	3.6nm,1.0s,mb4.3					
SONM	Songino Array	49.39	342	P	P	00 13 40.9 +0.5
	1.6nm,0.8s,mb4.0,baz=158,slow=8.4,SNR=8.5					
MK31	Makanchi Array	59.49	326	*e*P	P	00 14 53.6 -0.1
MKAR	Makanchi Array	59.49	326	P	P	00 14 53.8 +0.1
	3.3nm,0.5s,mb4.6,baz=118,slow=8.2,SNR=55					
TKM2	Tokmak 2	61.57	319	*e*P	P	00 15 08.5 +0.6
	1.3nm,0.5s,mb4.2					
ZALV	Zalesovo Beam	62.62	333	P	P	00 15 15.2 +0.5
	1.1nm,0.5s,mb4.0,baz=134,slow=6.4,SNR=5.8					
KURK	Kurchatov	63.71	328	*e*P	P	00 15 21.5 -0.5
	2.5nm,0.4s,mb4.4					
BVAR	Borovoye Array	69.28	327	P	P	00 15 56.8 -0.7
	0.6nm,0.5s,mb3.7,baz=116,slow=6.8,SNR=5.9					
MAW	Mawson	81.95	200	P	P	00 17 09.2 -0.4
	1.0nm,0.6s,mb3.8,baz=76,slow=7.1,SNR=6.8					

*ISCJB **25** 00:08:02.3±0.6, 10.°68N±0.°04×62.°66W±0.°03, h103km±6km, Error ellipse: s-maj=7.5km s-min=5.0km az=166.3*
*FUNV **25** 00:08:04.3, 10.°65N×62.°65W, h96km, MW3.0*
*TRN **25** 00:08:06.4, 10.°85N×62.°51W, h99km, MD3.1*
*NEIC **25** 00:08:06.4, 10.°85N×62.°51W, h99km, MD3.1(TRN), After TRN.*

ISC 25 00:08:03.1±0.6, 10.°69N±0.°04×62.°65W±0.°03, h100km±6km, n26, σ1°06/41, 3C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.42	96⇑	*e*P	Pn	00 08 19.1	+0.7
GUIV				*e*S	Sn	00 08 30.3	+0.5
CRUV	Carupano	0.57	269	*e*P	Pn	00 08 20.3	+0.9
CRUV				*e*S	Sn	00 08 31.2	-0.5
GUNV	Guanoco	0.60	209⇑	*i*P	Pn	00 08 20.8	+1.1
GUNV				*e*S	Sn	00 08 31.0	-1.0
ITEV	Isla Los Testi	0.81	325⇓	*i*P	Pn	00 08 21.5	-0.1
ITEV				*e*S	Sn	00 08 35.1	-0.4
TCE	Chacachacare	0.89	89	*e*P	Pn	00 08 24.2	+1.9
TCE				*e*S	Sn	00 08 38.1	+1.4
TCE	Chacachacare	0.89	89	*e*P	Pn	00 08 24.2	+1.9
TCE				*e*S	Sn	00 08 38.1	+1.4
TRN	Trinidad (W)	1.23	92	*e*P	Pn	00 08 28.0	+1.9
TRN				*e*S	Sn	00 08 44.2	+0.7
TRN	Trinidad (W)	1.23	92	*e*P	Pn	00 08 28.0	+1.9
TRN				*e*S	Sn	00 08 44.2	+0.7
TPP	Pointe-a-Pierr	1.24	107	*e*P	Pn	00 08 24.7	-1.5
TPP				*e*S	Sn	00 08 41.0	-2.7
TPP	Pointe-a-Pierr	1.24	107	*e*P	Pn	00 08 24.7	-1.5
TBH	Brigand Hill	1.57	97	*e*P	Pn	00 08 32.2	+1.9
TBH				*e*S	Sn	00 08 50.4	-0.5
TBH	Brigand Hill	1.57	97	*e*P	Pn	00 08 32.2	+1.9
TBH				*e*S	Sn	00 08 50.4	-0.5
GRGR	Grenville	1.74	34	*e*Pn	Pn	00 08 32.4	0.0
GRGR				*e*Sn	Sn	00 08 53.7	-0.9
GRW	Mount Saint Ca	1.76	34	*e*P	Pn	00 08 33.1	+0.6
GRW				*e*S	Sn	00 08 52.9	-2.1
GRW	Mount Saint Ca	1.76	34	*e*P	Pn	00 08 33.1	+0.6
GRW				*e*S	Sn	00 08 52.9	-2.1
ORIV	Oritupano	1.77	205	*e*P	Pn	00 08 32.2	-0.6
PCRV	Puerto La Cruz	2.02	256	*e*P	Pn	00 08 35.3	-0.5
TOSP	Speyside	2.17	74	*e*P	Pn	00 08 38.9	+1.1
TOSP				*e*S	Sn	00 09 03.0	-1.4
RIOV	Rio Grande	2.73	162	*e*P	Pn	00 08 44.2	-1.1
PRGV	PARIAGUAN	2.74	226	*e*P	Pn	00 08 45.0	-0.5
GURV	El Guri	2.94	188⇑	*i*P	Pn	00 08 48.0	-0.1
CUPV	Cœpira	3.15	259	*e*P	Pn	00 08 51.2	+0.3
BIRV	Birongo	3.56	267	*e*P	Pn	00 08 57.4	+1.0
LUEV	Luepa	4.96	166	*e*P	Pn	00 09 14.6	-0.7
TURV	Turiamo	5.11	268	*e*P	Pn	00 09 17.5	+0.2
BAUV	El Baul	5.59	252	*e*P	Pn	00 09 23.3	-0.5

DJA 25 00:52:29, 5.°77S×105.°40E, h10km, MLv3.8/11, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBSI	Rajabasa	0.35	102	P	Pg	00 52 33.9	-2.0
RBSI				S	Sg	00 52 38.7	-1.9
BLSI	Bandar Lampung	0.43	339	P	Pg	00 52 35.9	-1.5
BLSI				S	Sg	00 52 41.8	-1.3
SBJI	Serang	0.81	116	P	Pg	00 52 44.0	-0.6
SBJI				S	Sg	00 52 53.0	-2.1
CGJI	Cibinong	0.89	161	P	Pg	00 52 44.3	-1.8
CGJI				S	Sg	00 52 57.4	-0.3
KASI	Kota Agung	0.93	285	P	Pg	00 52 45.6	-1.4
KASI				S	Sg	00 52 59.4	+0.3
KLI	Kotabumi	1.05	329	P	Pg	00 52 47.7	-1.5
KLI				S	Sg	00 53 02.2	-0.7
TNG	Tangerang	1.30	108	S	Sb	00 53 09.4	-1.0
TNG				S	Sb	00 53 09.6	-0.8
LWLI	Liwa	1.53	299	P	Pn	00 52 56.6	+0.2
LWLI				S	Sn	00 53 19.0	+2.6
DBJI	Dramaga	1.55	120	P	Pn	00 52 56.9	+0.2
DBJI				S	Sn	00 53 18.4	+1.5
MDSI	Maura Dua	1.76	316	P	Pn	00 52 59.3	-0.3
MDSI				S	Sn	00 53 24.0	+1.9
LEM	Lembang	2.44	116	P	Pn	00 53 09.8	+0.9
PPBI	Pangkal Pinang	3.66	12	P	Pn	00 53 24.7	-1.0
TPI	Tanjungpandan	3.74	37	P	Pn	00 53 27.0	+0.1

MAN 25 00:57:57, 14.°99N×121.°54E, h18km, mb3.7, ML2.4, MS1.9, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.47	124	*e*P	Pg	00 58 06.4	-0.2
POLP				*e*S	Sg	00 58 13.5	+0.5
PCPH	Palayan	0.71	323⇓	*e*P	Pb	00 58 11.5	+0.7
BALP	Baler	0.74	3	*e*P	Pb	00 58 13.1	+1.6
BALP				*e*S	Sb	00 58 23.9	+2.7
GQP	Guinayangan	1.40	141⇑	*e*P	Pn	00 58 21.4	-0.2
GQP				*i*S	Sn	00 58 40.9	+1.3
BOAC	Boac	1.56	169	*e*P	Pn	00 58 26.8	+3.0
BOAC				*e*S	Sn	00 58 43.9	+0.4
LUBP	Lubang	1.77	225	*e*P	Pn	00 58 26.5	-0.2
LUBP				*e*S	Sn	00 58 46.1	-2.7
BOLP	Bolinao	2.08	312	*e*P	Pn	00 58 37.3	+6.2

*TIR **25** 00:58:55.1±1.2, 39.°29N×20.°00E, h17km±13km*
*NEIC **25** 00:58:58.8, 39.°48N×20.°39E, h6km, MD3.6(ATH), After ATH.*
*ATH **25** 00:58:58.8, 39.°48N×20.°39E, h6km±3km, MD3.6/15*
*THE **25** 00:58:58.9, 39.°52N×20.°27E, h0km±1km, ML3.5/4, Error ellipse: s-maj=1.9km s-min=1.2km az=136.0*
*IDC **25** 00:58:59.1±1.7, 39.°72N×20.°38E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/23, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=36.2km s-min=26.8km az=87.0*
*CSEM **25** 00:58:59.0±0.2, 39.°46N×20.°30E, h2km, ML3.5/4, Error ellipse: s-maj=5.2km s-min=3.6km az=24.0*
*ISCJB **25** 00:58:59.2±0.3, 39.°49N±0.°02×20.°27E±0.°03, h10km, mb3.1/2, Error ellipse: s-maj=3.2km s-min=2.6km az=36.7*
*ROM **25** 00:59:12.2±1.2, 40.°16N×19.°42E, h10km, Ml2.7/5, Error ellipse: s-maj=23.9km s-min=3.6km az=140.0*

ISC 25 00:58:59.1±0.6, 39.°48N±0.°02×20.°30E±0.°03, h1km±4km, n119, σ1°11/148, mb3.2/2, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.06	23	P	Pg	00 58 59.6	-0.6
IGT				S	Sg	00 59 00.9	-0.1
IGT	Igoumenitsa	0.06	23	P	Pg	00 58 59.6	-0.6
IGT				S	Sg	00 59 00.9	-0.1
KEK	Kerkira	0.46	301	*e*PB	Pg	00 59 07.9	+0.1
KEK				*e*SB	Sg	00 59 16.4	+2.7
KEK	Kerkira	0.46	301	*e*Pb	Pg	00 59 07.9	+0.1
KEK				*e*Sb	Sg	00 59 16.4	+2.7
JAN	Janina	0.46	67	*e*PB	Pg	00 59 06.3	-1.6
JAN	Janina	0.46	67	*e*Pb	Pg	00 59 06.3	-1.6
SRN	Sarande	0.46	330	*e*PG	Pg	00 59 07.4	-0.6
SRN				*i*SG	Sg	00 59 15.1	+1.1
SRN	Sarande	0.46	330	*e*Pg	Pg	00 59 07.4	-0.6
SRN	SNR=97						
SRN				*i*Sg	Sg	00 59 15.1	+1.1
	SNR=97						
KBN	Korca	1.20	18	*e*PN	Pn	00 59 21.9	-1.1
KBN				*i*SN	Sg	00 59 42.7	+5.0
KBN	Korca	1.20	18	*e*Pn	Pn	00 59 21.9	-1.1
KBN	SNR=61						
KBN				*i*Sn	Sg	00 59 42.7	+5.0
	SNR=61						
EVR	Evrytania	1.30	115	*e*PB	Pn	00 59 22.9	-1.4
EVR	Evrytania	1.30	115	*e*Pb	Pn	00 59 22.9	-1.4
VLS	Valsamata	1.32	170	*e*PG	Pn	00 59 23.1	-1.5
VLS				*e*SB	Sn	00 59 42.0	-0.8
VLS	Valsamata	1.32	170	*e*Pg	Pn	00 59 23.1	-1.5
VLS				*e*Sb	Sn	00 59 42.0	-0.8
KZN	Kozani	1.40	53	*e*PB	Pn	00 59 24.2	-1.5
KZN	Kozani	1.40	53	*e*Pb	Pn	00 59 24.2	-1.5
SCTE	Santa Cesarea	1.53	293	Pn	Pn	00 59 26.4	-1.2
SCTE	Santa Cesarea	1.53	293	Pn	Pn	00 59 26.4	-1.2
FNA	Florina	1.54	32	P	Pn	00 59 26.5	-1.2
FNA				S	Sn	00 59 47.8	-0.5
FNA	Florina	1.54	32	P	Pn	00 59 26.5	-1.2
FNA				S	Sn	00 59 47.8	-0.5
EFP	Efpalio	1.63	130	*e*PB	Pb	00 59 29.7	-0.2
EFP	Efpalio	1.63	130	*e*Pb	Pb	00 59 29.7	-0.2
AGG	Agios Georgios	1.64	106	P	Pn	00 59 28.3	-0.7
AGG				S	Sn	00 59 52.2	+1.5
AGG	Agios Georgios	1.64	106	P	Pn	00 59 28.3	-0.7
AGG				S	Sn	00 59 52.2	+1.5
OHR	Ohrid	1.67	13	*e*Pn	Pn	00 59 29.7	+0.2
OHR				*e*Sg	Sg	00 59 54.9	+2.0
OHR	Ohrid	1.67	13	*e*Pn	Pn	00 59 29.7	+0.2
OHR				*e*Sg	Sg	00 59 54.9	+2.0
RLS	Riolos of Patr	1.69	147	*e*PB	Pb	00 59 29.8	-1.1
RLS				*e*SG	Sg	00 59 53.1	-0.1
RLS	Riolos of Patr	1.69	147	*e*Pb	Pb	00 59 29.8	-1.1
RLS				*e*Sg	Sg	00 59 53.1	-0.1
BIA	Bitola	1.73	27	*e*Pn	Pn	00 59 29.4	-0.7
BIA				*e*Sg	Sg	00 59 54.8	+0.3
BIA	Bitola	1.73	27	*e*Pn	Pn	00 59 29.4	-0.8
BIA				*e*Sg	Sg	00 59 54.8	+0.3
LIT	Litokhoron	1.79	69	P	Pn	00 59 31.1	0.0
LIT				S	Sn	00 59 55.3	+0.7
LIT	Litokhoron	1.79	69	P	Pn	00 59 31.1	0.0
LIT				S	Sn	00 59 55.3	+0.7
TIR	Tirane	1.90	350	Pn	Pg	00 59 34.9	-0.5
TIR	Tirane	1.90	350	Pn	Pg	00 59 34.9	-0.5
KRUS	Krusevo	2.02	21	*e*Pn	Pn	00 59 35.0	+0.7
KRUS				*e*Sg	Sg	01 00 02.8	-1.2
KRUS	Krusevo	2.02	21	*e*Pn	Pn	00 59 34.9	+0.7
KRUS				*e*Sg	Sg	01 00 02.8	-1.2
PHP	Peshkopia	2.21	3	*e*PN	Pn	00 59 37.3	+0.5
PHP	Peshkopia	2.21	3	*e*Pn	Pn	00 59 37.3	+0.5
GUR	Goura	2.22	133	*e*PN	Pn	00 59 37.5	+0.6
GUR	Goura	2.22	133	*e*Pn	Pn	00 59 37.5	+0.6
XOR	Xorichti	2.24	92	P	Pn	00 59 36.5	-0.8
XOR	Xorichti	2.24	92	P	Pn	00 59 36.5	-0.8
LKR	Lokris	2.26	111	*e*PN	Pn	00 59 38.2	+0.7
LKR	Lokris	2.26	111	*e*Pn	Pn	00 59 38.2	+0.7
NEO	Neokhori	2.27	93	*e*PN	Pn	00 59 38.0	+0.3
NEO	Neokhori	2.27	93	*e*Pn	Pn	00 59 38.0	+0.3
VAY	Valandovo	2.53	43	*e*Pn	Pn	00 59 43.5	+2.4
VAY	Valandovo	2.53	43	*e*Pn	Pn	00 59 43.5	+2.3
LTK	Loutraki	2.54	124	*e*PN	Pn	00 59 42.6	+1.2
LTK	Loutraki	2.54	124	*e*Pn	Pn	00 59 42.6	+1.2
PLG	Polygyros	2.58	69	*e*PN	Pn	00 59 42.7	+0.8
PLG	Polygyros	2.58	69	*e*Pn	Pn	00 59 42.7	+0.8
PUK	Puka	2.58	353	*e*PN	Pn	00 59 42.6	+0.7
PUK	Puka	2.58	353	*e*Pn	Pn	00 59 42.6	+0.7
PUK	SNR=61						
ITM	Ithomi	2.63	150	*e*PB	Pn	00 59 43.0	+0.4
ITM	Ithomi	2.63	150	*e*Pb	Pn	00 59 43.0	+0.4
STIP	Stip	2.64	32	*e*Pn	Pn	00 59 44.2	+1.5
STIP	Stip	2.64	32	*e*Pn	Pn	00 59 44.2	+1.5
PAIG	Paliouri	2.64	79	P	Pn	00 59 42.6	-0.2
PAIG	Paliouri	2.64	79	P	Pn	00 59 42.6	-0.2
SOH	Sokhos	2.69	59	P	Pn	00 59 44.0	+0.5
SOH				S	Sn	01 00 17.2	+0.5
SOH	Sokhos	2.69	59	P	Pn	00 59 44.0	+0.5
SOH				S	Sn	01 00 17.2	+0.5
TIP	Timpagrande	2.77	265	*e*Pn	Pn	00 59 43.4	-1.1
TIP	Timpagrande	2.77	265	*e*Pn	Pn	00 59 43.3	-1.2
AOS	Alonnisos	2.79	95	P	Pn	00 59 44.9	+0.1
AOS	Alonnisos	2.79	95	P	Pn	00 59 44.9	+0.1
NOCI	Noci	2.81	299	Pn	Pn	00 59 44.5	-0.6
NOCI	Noci	2.81	299	Pn	Pn	00 59 44.5	-0.6
PYL	PYLOS	2.82	156	*e*PB	Pn	00 59 44.5	-0.7
PYL	PYLOS	2.82	156	*e*Pb	Pn	00 59 44.5	-0.7
BCI	Bajram Curri	2.89	357	*e*PN	Pn	00 59 48.8	+2.6
BCI	Bajram Curri	2.89	357	*e*Pn	Pn	00 59 48.8	+2.6
BCI	SNR=61						
LTRZ	Laterza	2.90	294	Pn	Pn	00 59 47.8	+1.4
	17nm,1.0s						
LTRZ	Laterza	2.90	294	Pn	Pn	00 59 47.8	+1.4
	17nm,1.0s						
OUR	Ouranopolis	2.96	72	P	Pn	00 59 46.7	-0.4
OUR	Ouranopolis	2.96	72	P	Pn	00 59 46.7	-0.4
SG1	Sgolgore (BA)	3.09	297	*e*Pn	Pn	00 59 48.1	-0.9
AMUR	Altamura	3.17	298	Pn	Pn	00 59 49.6	-0.5
AMUR	Altamura	3.17	298	Pn	Pn	00 59 49.6	-0.5
VLI	Veliai	3.45	142	*e*PB	Pn	00 59 55.7	+1.8
VLI	Veliai	3.45	142	*e*Pb	Pn	00 59 55.7	+1.8
MRVN	Minervino Murg	3.52	298	Pn	Pn	00 59 54.2	-0.6
MRVN	Minervino Murg	3.52	298	Pn	Pn	00 59 54.2	-0.6
CEL	Celeste	3.65	252	*e*Pn	Pn	00 59 56.2	-0.5
CEL	Celeste	3.65	252	*e*Pn	Pn	00 59 56.2	-0.5
KYTH	Kithira	3.86	145	*e*Pn	Pn	01 00 00.8	+1.3
KYTH	Kithira	3.86	145	*e*Pn	Pn	01 00 00.8	+1.3
STON	Ston	3.92	331	*i*Pn	Pn	00 59 58.4	-2.0
STON				Sn	Sn	01 00 44.3	-2.6
STON	Ston	3.92	331	*i*Pn	Pn	00 59 58.3	-2.0
STON				Sn	Sn	01 00 44.3	-2.6
CDRU	Civita di Ruta	3.97	286	Pn	Pn	01 00 02.3	+1.2
	5.0nm,0.4s						
CDRU	Civita di Ruta	3.97	286	Pn	Pn	01 00 02.3	+1.2
	5.0nm,0.4s						
MCRV	Calabrutti - M	4.15	290	Pn	Pn	01 00 04.2	+0.7
	698nm,1.7s						
MCRV	Calabrutti - M	4.15	290	Pn	Pn	01 00 04.2	+0.7
	698nm,1.7s						
RGNG	Rignano Grg	4.21	303	Pn	Pn	01 00 03.5	-0.8
RGNG	Rignano Grg	4.21	303	Pn	Pn	01 00 03.5	-0.8
RGNG	Rignano Grg	4.21	303	Pn	Pn	01 00 03.5	-0.8
FG5	Orsara di Pugl	4.25	297	Pn	Pn	01 00 05.5	+0.7
FG5	Orsara di Pugl	4.25	297	Pn	Pn	01 00 05.5	+0.7
	5.0nm,0.3s						
FG5	Orsara di Pugl	4.25 297	Pn	Pn	01 00 05.5	+0.7
	5.0nm,0.3s						
MELA	Melanico ??? S	4.53	301	Pn	Pn	01 00 08.8	+0.1
	24nm,0.8s						
MELA	Melanico ??? S	4.53	301	Pn	Pn	01 00 08.8	+0.1
	24nm,0.8s						
FG2	Serracapriola	4.55	302	Pn	Pn	01 00 09.1	+0.1
FG2	Serracapriola	4.55	302	Pn	Pn	01 00 09.1	+0.1
FG2	Serracapriola	4.55	302	Pn	Pn	01 00 09.1	+0.1
SGG	Gregorio Mates	4.91	295	Pn	Pn	01 00 15.3	+1.4
SGG	Gregorio Mates	4.91	295	Pn	Pn	01 00 15.3	+1.4
	8.0nm,0.5s						
SGG	Gregorio Mates	4.91	295	Pn	Pn	01 00 15.3	+1.4
	8.0nm,0.5s						
SDI	San Donato	5.42	296	Pn	Pn	01 00 23.0	+2.0
	2.0nm,0.6s						
SDI	San Donato	5.42	296	Pn	Pn	01 00 23.0	+2.0
	2.0nm,0.6s						
NRCA	Norcia	6.38	304	Pn	Pn	01 00 34.3	+0.2
NRCA	Norcia	6.38	304	Pn	Pn	01 00 34.3	+0.2
NRCA	Norcia	6.38	304	Pn	Pn	01 00 34.3	+0.2
NVLJ	Novalja	6.49	323	*i*Pn	Pn	01 00 33.6	-2.1
NVLJ				Sn	Sn	01 01 46.6	-3.7
NVLJ	Novalja	6.49	323	*i*Pn	Pn	01 00 33.6	-2.1
GERES	GERESS Array B	10.49	335	Pn	Pn	01 01 29.2	-1.3
	0.1nm,0.3s,baz=152,slow=14,SNR=4.4						
TORD	Torodi Ar. Bea	30.95	217	P	P	01 05 19.9	+2.2
	0.2nm,0.6s,mb3.2,baz=27,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	44.78	59	P	P	01 07 12.8	-1.2
	0.2nm,0.6s,mb3.2,baz=282,slow=6.1,SNR=4.2						
MKAR	Makanchi Array	44.78	59	P	P	01 07 12.8	-1.2

*ISCJB **25** 01:03:03.9±0.5, 39.°73N±0.°02×21.°81E±0.°03, h4km±5km, Error ellipse: s-maj=4.2km s-min=3.4km az=160.8*
*CSEM **25** 01:03:04.7±0.2, 39.°74N×21.°84E, h10km, MD3.3, Error ellipse: s-maj=4.4km s-min=3.4km az=83.0*
*THE **25** 01:03:04.9, 39.°74N×21.°81E, h9km±1km, ML3.2/5, Error ellipse: s-maj=1.5km s-min=0.7km az=93.0*
*NEIC **25** 01:03:04.0, 39.°71N×21.°84E, h23km, MD3.3(ATH), After ATH.*
*ATH **25** 01:03:04.0, 39.°71N×21.°84E, h23km±2km, MD3.3/10*

ISC 25 01:03:04.8±0.4, 39.°74N±0.°02×21.°81E±0.°03, h10km±4km, n42, σ1°06/65, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.57	357	*e*PN	Pg	01 03 15.9	0.0
KZN				*e*SN	Sg	01 03 25.0	+1.6
KZN	Kozani	0.57	357	*e*Pn	Pg	01 03 15.9	0.0
LIT	Litokhoron	0.64	55	P	Pg	01 03 17.1	-0.1
LIT				S	Sg	01 03 26.5	+1.0
LIT	Litokhoron	0.64	55	P	Pg	01 03 17.1	-0.1
LIT				S	Sg	01 03 26.5	+1.0
JAN	Janina	0.74	264	*e*PN	Pg	01 03 18.3	-0.9
JAN				*e*SN	Sg	01 03 29.1	+0.2
AGG	Agios Georgios	0.82	150	P	Pg	01 03 20.0	-0.6
AGG				S	Sg	01 03 33.1	+1.8
AGG	Agios Georgios	0.82	150	P	Pg	01 03 20.0	-0.6
AGG				S	Sg	01 03 33.1	+1.8
EVR	Evrytania	0.82	180	*e*PN	Pg	01 03 19.5	-1.1
EVR				*e*SN	Sg	01 03 31.5	+0.2
FNA	Florina	1.10	343	P	Pg	01 03 25.2	-0.7
FNA				S	Sg	01 03 41.5	+1.3
FNA	Florina	1.10	343	P	Pg	01 03 25.2	-0.7
FNA				S	Sg	01 03 41.5	+1.3
XOR	Xorichti	1.13	109	P	Pg	01 03 25.7	-0.9
XOR				S	Sg	01 03 42.7	+1.4
XOR	Xorichti	1.13	109	P	Pg	01 03 25.7	-0.9
XOR				S	Sg	01 03 42.7	+1.4
IGT	Igoumenitsa	1.16	260	P	Pb	01 03 26.1	-0.8
IGT				S	Sb	01 03 43.3	+1.3
IGT	Igoumenitsa	1.16	260	P	Pb	01 03 26.1	-0.8
IGT				S	Sb	01 03 43.3	+1.3
EFP	Efpalio	1.31	177	*e*PN	Pn	01 03 28.5	-0.6
EFP				*e*SN	Sn	01 03 46.9	+0.2
EFP	Efpalio	1.31	177	*e*Pn	Pn	01 03 28.5	-0.6
EFP				*e*Sn	Sn	01 03 46.9	+0.2
BIA	Bitola	1.33	344	*e*Pn	Pn	01 03 29.1	-0.3
BIA				*e*Sg	Sg	01 03 48.7	+1.0
BIA	Bitola	1.33	344	*e*Pn	Pn	01 03 29.1	-0.4
BIA				*e*Sg	Sg	01 03 48.7	+0.9
PAIG	Paliouri	1.45	82	P	Pn	01 03 30.1	-1.0
PAIG	Paliouri	1.45	82	P	Pn	01 03 30.1	-1.0
KEK	Kerkira	1.55	270	*e*PN	Pn	01 03 33.6	+1.1
KEK	Kerkira	1.55	270	*e*Pn	Pn	01 03 33.6	+1.1
OHR	Ohrid	1.57	331	*e*Pn	Pn	01 03 33.3	+0.5
OHR				*e*Sg	Sg	01 03 54.3	-1.2
OHR	Ohrid	1.57	331	*e*Pn	Pn	01 03 33.3	+0.5
OHR				*e*Sg	Sg	01 03 54.3	-1.2
KNT	Kendrikon	1.65	30	P	Pn	01 03 33.6	-0.2
KNT	Kendrikon	1.65	30	P	Pn	01 03 33.6	-0.2
KRUS	Krusevo	1.69	345	*e*Pn	Pn	01 03 34.8	+0.5
KRUS				*e*Sg	Sg	01 03 57.2	-1.8
KRUS	Krusevo	1.69	345	*e*Pn	Pn	01 03 34.7	+0.4
KRUS				*e*Sg	Sg	01 03 57.1	-1.9
VAY	Valandovo	1.69	20	*e*Pn	Pn	01 03 35.8	+1.5
VAY				*e*Sg	Sg	01 03 55.8	-3.2
VAY	Valandovo	1.69	20	*e*Pn	Pn	01 03 35.

	baz=218						
TWG				eS		Sb	01 28 26.5 -2.1
	baz=218						
ALS	**Alishan**	**1.07**	**271**	⇑iP		**Pb**	**01 28 15.0 0.0**
	baz=270						
ALS				i S		Sb	01 28 28.9 +0.1
	baz=270						
NNS	**Nan Shan**	**1.09**	**330**	eP		**Pb**	**01 28 14.9 -0.4**
	baz=331						
NNS				eS		Sb	01 28 28.8 -0.6
	baz=331						
TYC	**Yuchr**	**1.10**	**292**	eP		**Pb**	**01 28 14.4 -1.0**
	baz=302						
TYC				eS		Sb	01 28 29.0 -0.6
	baz=302						
TWC	**Suao**	**1.12**	**354**	i P		**Pb**	**01 28 15.7 -0.1**
	baz=356						
TWC				i S		Sb	01 28 30.3 +0.1
	baz=356						
CHN5	**Tsauling**	**1.19**	**275**	i P		**Pn**	**01 28 17.4 +0.5**
	baz=274						
CHN5				i S		Sb	01 28 33.1 +0.9
	baz=274						
ENTT	**Nioudou**	**1.20**	**342**	i P		**Pn**	**01 28 17.2 +0.2**
	baz=344						
ENTT				i S		Sb	01 28 32.4 -0.1
	baz=344						
WNT	**Mingjian**	**1.24**	**288**	eP		**Pn**	**01 28 16.9 -0.6**
	baz=288						
TWE	**Neicheng**	**1.25**	**347**	eP		**Pn**	**01 28 18.2 +0.4**
	baz=349						
TWE				eS		Sb	01 28 33.8 -0.3
	baz=349						
WTP	**Ta-pu**	**1.27**	**259**	i P		**Pn**	**01 28 18.2 +0.3**
	baz=257						
WTP				i S		Sb	01 28 35.6 +1.0
	baz=257						
CHN4	**Tsaushan**	**1.27**	**264**	i P		**Pn**	**01 28 18.8 +0.7**
	baz=263						
CHN4				eS		Sb	01 28 35.9 +1.2
	baz=263						
ILA	**Ilan**	**1.28**	**351**	eP		**Pn**	**01 28 16.9 -1.3**
	baz=353						
ECL	**Taimali**	**1.29**	**227**	eP		**Pn**	**01 28 15.8 -2.4**
	baz=224						
NSK	**Sanguang**	**1.30**	**335**	P		**Pn**	**01 28 18.1 -0.3**
	baz=336						
NSK				eS		Sb	01 28 34.0 -1.5
	baz=336						
SGST	**Jiashian**	**1.34**	**253**	eP		**Pn**	**01 28 18.8 -0.1**
	baz=239						
YOJ	**Yonaguni jima**	**1.35**	**44**	P		**Pn**	**01 28 19.5 +0.4**
YOJ				eS		Sn	01 28 37.1 +0.2
CHN1	**Nanshi**	**1.36**	**257**	P		**Pn**	**01 28 19.8 +0.6**
	baz=255						
CHN1				eS		Sn	01 28 37.8 +0.8
	baz=255						
TWK	**Hsinying**	**1.38**	**261**	i P		**Pn**	**01 28 20.3 +0.8**
	baz=259						
TWK				eS		Sn	01 28 38.2 +0.7
	baz=259						
TWQ1	**Liyutan**	**1.39**	**308**	eP		**Pn**	**01 28 21.1 +1.5**
	baz=309						
TWQ1				eS		Sn	01 28 37.5 -0.2
	baz=309						
NSTT	**Nanjuang**	**1.44**	**322**	eP		**Pn**	**01 28 21.0 +0.7**
	baz=323						
NSTT				eS		Sn	01 28 38.6 -0.3
	baz=323						
SSD	**Sandimen**	**1.44**	**239**	eP		**Pn**	**01 28 20.7 +0.4**
	baz=226						
NWF	**Wu-fen Shan**	**1.58**	**354**	eP		**Pn**	**01 28 22.9 +0.6**
	baz=355						
NWF				eS		Sn	01 28 43.1 +0.6
	baz=355						
SCZT	**Fangliau**	**1.67**	**228**	eP		**Pn**	**01 28 25.2 +1.7**
	baz=217						
SCZT				eS		Sn	01 28 44.7 -0.1
	baz=217						
HATJ	**Hateruma jima**	**1.77**	**71**	P		**Pn**	**01 28 24.7 -0.2**
HATJ				eS		Sn	01 28 46.8 -0.4
TWY	**Chenhua**	**1.81**	**349**	eP		**Pn**	**01 28 27.5 +2.1**
	baz=332						
IRIF	**Iriomote-Funau**	**1.81**	**62**	P		**Pn**	**01 28 25.6 +0.1**
IRIF				eS		Sn	01 28 48.8 +0.5
JKRS	**Kuro-shima**	**2.01**	**68**	P		**Pn**	**01 28 28.6 +0.5**
JKRS				eS		Sn	01 28 52.3 -0.7
JIJ	**Ishigaki jima**	**2.17**	**66**	P		**Pn**	**01 28 30.7 +0.4**
JIJ				eS		Sn	01 28 57.1 +0.1
JTJ	**Tarama**	**2.75**	**65**	eS		**Sn**	**01 29 11.4 +0.2**

MAN 25 01:45:06.11˝30N×124˚64E, h5km, mb4.3, ML3.2, MS3.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.25**	**187**	eP	Pg	01 45 12.4	+1.4
PLP	**Palo**	**0.36**	**113**	⇓eP	Pg	01 45 14.5	+1.6
MSLP	**Maasin**	**1.18**	**170**	eP	Pg	01 45 29.3	+0.6
MSLP				eS	Sg	01 45 44.1	+0.1
LLP	**Lapu-Lapu**	**1.19**	**214**	eP	Pg	01 45 29.4	+0.6
LLP				eS	Sg	01 45 43.8	-0.4
CNP	**Catarman**	**1.20**	**1**	eP	Pg	01 45 29.1	+0.1
CNP				eS	Sg	01 45 42.7	-2.0

IDC 25 01:45:40.2±2.9, 10˚67S×165˚77E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/16, mbtmp4.1/4, Error ellipse: s-maj=114.7km s-min=36.9km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.00**	**241**	P	P	01 50 26.5	+1.2
	8.0nm,0.8s,baz=69,slow=15,SNR=4.2						
STKA	**Stephens Creek**	**30.73**	**223**	P	P	01 51 57.4	+0.3
	1.6nm,0.5s,baz=14,slow=8.3,SNR=5.1						
ASAR	**Alice Springs**	**32.98**	**243**	P	P	01 52 16.2	-0.9
	2.2nm,0.6s,baz=65,slow=10,SNR=36						
MKAR	**Makanchi Array**	**93.26**	**317**	P	P	01 58 57.4	+0.6
	0.5nm,0.7s,baz=119,slow=4.1,SNR=3.7						
ARCES	**ARCESS Array B**	**115.97**	**346**	PKP	PKPdf	02 04 24.1	-0.4
	3.0nm,1.0s,baz=39,slow=3.5,SNR=5.2						

*ISCJB **25** 01:46:22.2±6.0, 62˚9S±0˚2×158˚2W±0˚3, h1km±33km, mb4.4/8, MS4.1/8, Error ellipse: s-maj=30.3km s-min=19.8km az=27.7*

*IDC **25** 01:46:23.3±0.8, 62˚75S×157˚97W, h0km, mb4.2/6, mb1 4.2/6, mb1mx4.2/8, mbtmp4.2/6, MS4.2/8, Ms1 4.1/8, ms1mx4.0/14, Error ellipse: s-maj=34.4km s-min=24.0km az=19.0*

*NEIC **25** 01:46:25.1±0.5, 62˚83S×158˚04W, h10km, mb4.5/3, Error ellipse: s-maj=20.3km s-min=18.2km az=192.0*

*GCMT **25** 01:46:25.0±0.2, 63˚01S×157˚94W, h20km±1km, MW5.2/80, Moment Tensor Solution. s48,c65; s80,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.04±.23; $M_{\theta\theta}$6.93±.24; $M_{\phi\phi}$-5.89±.17; $M_{r\theta}$-0.76±.37; $M_{\theta\phi}$2.93±.17; $M_{\phi r}$1.57±.39; Best double couple: $M_0$7.29900×10^{16} NP1:ϕ_s214.00000°, δ77.00000°, λ-171.00000°. NP2: ϕ_s122.00000°, δ81.00000°, λ-13.00000°. Principal axes: T 7.5870, Plg3.0000°, Azm168.0000°; N -0.5770, Plg74.0000°, Azm268.0000°; P -7.0100, Plg16.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 01:46:24.4±7.0, 62˚9S±0˚2×158˚1W±0˚3, h3km±39km, n39, σ1º19/17, mb4.3/8, MS4.1/8, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**18.51**	**203**	eP	**Pn**	**01 50 41.3**	**0.0**
	16nm,0.9s						
RPZ	**Rata Peaks**	**26.24**	**303**	LR	LR	01 59 27.4	
	comp=Z,380nm,18.2s,MS4.0,baz=318,slow=30						
QSPA	**South Pole Qui**	**27.18**	**180**	P	**P**	**01 52 09.5**	**+1.1**
	12nm,0.9s,mb4.4,baz=61,slow=5.2,SNR=13						
QSPA				LR	LR	02 01 00.1	
	comp=Z,595nm,20.2s,MS4.2,baz=242,slow=32						
QSPA	**South Pole Qui**	**27.18**	**180**	P	**P**	**01 52 09.5**	**+1.1**
QSPA				LR	LR	02 01 00.1	
URZ	**Urewera**	**28.94**	**317**	LR	LR	02 00 56.4	
	comp=Z,641nm,19.9s,MS4.2,baz=164,slow=30						
PMSA	**Palmer Station**	**37.83**	**136**	LR	LR	02 06 51.2	
	comp=Z,574nm,19.7s,MS4.4,baz=70,slow=32						
RKT	**Rikitea**	**42.73**	**32**	eS	**S**	**02 00 48.0**	**+1.4**
	224nm,31.0s						
RKT				eLQ		02 04 11.6	
	2μm,30.2s						
RKT				eLR	LR	02 06 15.4	
	453nm,28.0s						
VNA2	**Neumayer--Watz**	**44.87**	**167**	e	**P**	**01 54 37.4**	**-1.7**
VNA2				e	pP	01 54 39.8	-0.3
VNA1	**Neumayer--Stat**	**45.03**	**166**	e	**P**	**01 54 39.6**	**-0.9**
VNA1				e	pP	01 54 41.8	+0.3
PPT	**Papeete**	**45.71**	**11**	eS	**S**	**02 01 26.7**	**-3.3**
	259nm,26.0s						
PPT				eLQ		02 05 10.1	
	1μm,29.5s						
PPT				eLR	LR	02 07 21.8	
	1μm,27.2s,baz=191						
PPT	**Papeete**	**45.71**	**11**	LR	LR	02 09 08.4	
	comp=Z,454nm,18.6s,MS4.4,baz=194,slow=30						
MAW	**Mawson**	**46.45**	**200**	P	**P**	**01 54 53.4**	**+1.7**
	3.5nm,1.0s,mb4.2,baz=139,slow=11,SNR=4.6						
MAW				LR	LR	02 13 24.0	
	comp=Z,286nm,18.9s,MS4.2,baz=59,slow=35						
DZM	**Mont Dzumac**	**47.35**	**313**	eLR	LR	02 08 20.8	
	598nm,22.7s						
STKA	**Stephens Creek**	**48.72**	**280**	P	**P**	**01 55 10.5**	**+0.7**
	1.1nm,0.5s,mb4.2,baz=194,slow=4.9,SNR=3.3						
STKA				LR	LR	02 12 47.3	
	comp=Z,259nm,18.2s,MS4.3,baz=315,slow=32						
TAOE	**Nuku Hiva Isla**	**55.52**	**22**	eS	**S**	**02 03 46.2**	**-0.1**
	145nm,28.8s						
TAOE				eLQ		02 09 45.2	
	485nm,26.6s						
TAOE				eLR	LR	02 12 05.1	
	568nm,26.9s,baz=209						
ASAR	**Alice Springs**	**59.22**	**278**	P	**P**	**01 56 25.1**	**-1.5**
	0.9nm,0.8s,mb3.9,baz=147,slow=6.5,SNR=6.5						
WRAB	**Tennant Creek**	**62.27**	**281**	eP	**P**	**01 56 47.4**	**0.0**
	3.2nm,0.9s,mb4.5						
CFAA	**Coronel Fontan**	**62.29**	**105**	LR	LR	02 18 48.2	
	comp=Z,19nm,20.1s,MS3.2,baz=214,slow=31						
CPUP	**Villa Florida**	**71.58**	**112**	P	**P**	**01 57 45.0**	**-1.6**
	2.9nm,0.9s,mb4.2,baz=228,slow=12,SNR=5.3						
CPUP	**Villa Florida**	**71.58**	**112**	P	**P**	**01 57 45.0**	**-1.6**
LPAZ	**La Paz**	**75.61**	**97**	P	**P**	**01 58 11.6**	**+1.2**
	1.9nm,0.9s,mb4.0,baz=227,slow=3.3,SNR=5.3						
LPAZ	**La Paz**	**75.61**	**97**	P	**P**	**01 58 11.6**	**+1.2**
OTAV	**Otavalo**	**85.47**	**81**	eP	**P**	**01 59 04.0**	**+0.7**
	8.8nm,1.3s,mb4.7						
TORD	**Torodi Ar. Bea**	**128.24**	**155**	PKP	PKPdf	02 05 29.6	-2.2
	0.6nm,1.0s,baz=181,slow=5.8,SNR=2.8						
MK31	**Makanchi Array**	**143.29**	**273**	ePKPdf	PKPdf	02 05 58.0	-0.7
MKAR	**Makanchi Array**	**143.29**	**273**	PKP	PKPdf	02 06 01.6	+2.9
	0.6nm,0.8s,baz=97,slow=10,SNR=4.5						
RES	**Resolute Bay**	**143.36**	**23**	PKP	PKPdf	02 05 56.6	-1.4
	1.0nm,0.9s,baz=270,slow=11,SNR=4.2						
RES	**Resolute Bay**	**143.36**	**23**	PKP	PKPdf	02 05 56.6	-1.4
RES				ePKPdf	PKPdf	02 05 57.1	-0.9
AAK	**Ala-Archa**	**143.65**	**261**	PKP	PKPdf	02 06 00.1	+0.6
	0.6nm,0.3s,baz=283,slow=9.0,SNR=2.9						
AAK	**Ala-Archa**	**143.65**	**261**	PKP	PKPdf	02 06 00.1	+0.6
AAK				ePKPdf	PKPdf	02 06 00.4	+0.9
EKS2	**Erkin-Say**	**143.99**	**261**	ePKPdf	PKPdf	02 06 01.1	+1.1
ZALV	**Zalesovo Beam**	**147.20**	**284**	PKPbc	PKPdf	02 06 04.7	-0.5
	0.6nm,0.4s,baz=95,slow=3.6,SNR=2.5						
ASF	**Jabal al Asfar**	**147.78**	**204**	PKPbc	PKPbc	02 06 09.5	-0.2
	0.7nm,0.3s,baz=182,slow=9.5,SNR=2.4						
KURK	**Kurchatov**	**147.80**	**275**	ePKPbc	PKPbc	02 06 07.9	-1.4
MMAI	**Mount Meron Ar**	**148.87**	**202**	PKPbc	PKPbc	02 06 11.5	-1.1
	0.3nm,0.2s,baz=310,slow=27,SNR=3.1						
ESDC	**Sonseca Array**	**152.00**	**134**	PKPbc	PKPbc	02 06 21.4	+1.6
	1.6nm,0.7s,baz=236,slow=0.5,SNR=5.8						
ESDC	**Sonseca Array**	**152.00**	**134**	PKPbc	PKPbc	02 06 21.4	+1.6
BVAR	**Borovoye Array**	**153.12**	**271**	PKPbc	PKPbc	02 06 21.9	+0.1
	0.5nm,0.5s,baz=231,slow=44,SNR=3.3						
BRTR	**Keskin Array B**	**155.71**	**202**	PKP	PKPdf	02 06 20.0	+1.5
	0.4nm,0.9s,baz=160,slow=3.9,SNR=2.6						

*NEIC **25** 01:51:11.7, 14˚41N×59˚40W, h27km, MD3.9(TRN), After TRN.*

TRN 25 01:51:10.9, 14˚44N×59˚32W, h34km, MD3.9, M3.8(FDF), 5C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**1.53**	**275**	eP	Pn	01 51 37.8	+1.9
SLW	**Petit Monier**	**1.63**	**255**	eP	Pn	01 51 39.2	+2.0
SLW				eS	Sn	01 51 58.8	+1.8
SLW	**Petit Monier**	**1.63**	**255**	eP	Pn	01 51 39.2	+2.0
SLW				eS	Sn	01 51 58.8	+1.8
BIM	**Bigot**	**1.70**	**273**	⇑eP	Pn	01 51 40.2	+2.0
SLPE	**Piton Saint Es**	**1.73**	**250**	eP	Pn	01 51 41.3	+2.7
SLPE				eS	Sn	01 52 02.6	+3.0
SLPE	**Piton Saint Es**	**1.73**	**250**	eP	Pn	01 51 41.3	+2.7
SLPE				eS	Sn	01 52 02.6	+3.0
MCLT	**Moule a Chique**	**1.73**	**246**	eP	Pn	01 51 39.5	+0.8
MCLT				eS	Sn	01 51 59.4	-0.2
MCLT	**Moule a Chique**	**1.73**	**246**	eP	Pn	01 51 39.5	+0.8
MCLT				eS	Sn	01 51 59.4	-0.2
SLB	**Belfond**	**1.78**	**250**	eP	Pn	01 51 40.1	+0.8
SLB				eS	Sn	01 51 60.0	-0.8
SLB	**Belfond**	**1.78**	**250**	eP	Pn	01 51 40.8	+1.5
SLB				eS	Sn	01 52 02.6	+1.9
FDF	**Fort de France**	**1.80**	**280**	ePn	Pn	01 51 40.7	+1.1
FDF				eSn	Sn	01 52 02.9	+1.6
FDF	**Fort de France**	**1.80**	**280**	⇑eP	Pn	01 51 41.1	+1.5
FDF				⇑eS	Sn	01 52 04.4	+3.1
SLDE	**Delcer**	**1.80**	**250**	eS	Sn	01 52 03.1	+1.8
SLPL	**La Plaine**	**2.07**	**296**	eP	Pn	01 51 45.5	+2.3
DLPL				eS	Sn	01 52 10.3	+2.4
BHS	**Barnard House**	**2.09**	**237**	eP	Pn	01 51 46.9	+3.3
BHS				eS	Sn	01 52 11.3	+2.9
BHS	**Barnard House**	**2.09**	**237**	eP	Pn	01 51 44.5	+0.9
BHS				eS	Sn	01 52 11.3	+2.9
SSV	**Crater Summit**	**2.13**	**239**	eP	Pn	01 51 45.2	+1.1
SSV				eS	Sn	01 52 08.6	-0.9
SSV	**Crater Summit**	**2.13**	**239**	eP	Pn	01 51 45.2	+1.1
SSV				eS	Sn	01 52 10.7	+1.3
SVV	**Soufriere Volc**	**2.15**	**239**	eP	Pn	01 51 45.7	+1.3
SVV				eS	Sn	01 52 11.7	+1.7
SVV	**Soufriere Volc**	**2.15**	**239**	eP	Pn	01 51 45.7	+1.3
SVV				eS	Sn	01 52 11.7	+1.7
SVB	**Belmont**	**2.21**	**239**	eP	Pn	01 51 47.1	+1.9
SVB				eS	Sn	01 52 12.5	+1.2
SVB	**Belmont**	**2.21**	**239**	eP	Pn	01 51 47.1	+1.9
SVB				eS	Sn	01 52 12.5	+1.2
FCV	**Fort Charlotte**	**2.27**	**236**	eP	Pn	01 51 47.9	+1.9
FCV				eS	Sn	01 52 14.1	+1.3
FCV	**Fort Charlotte**	**2.27**	**236**	eP	Pn	01 51 47.9	+1.9
FCV				eS	Sn	01 52 14.1	+1.3
DEG	**La Desirade**	**2.51**	**318**	⇑iP	Pn	01 51 50.2	+0.8
DEG				⇑eS	Sn	01 52 18.6	-0.2
PHG	**Guadaloupe-2**	**2.74**	**305**	eP	Pn	01 51 55.1	+2.6
BCG	**Bois Riant Cap**	**2.76**	**307**	eP	Pn	01 51 54.8	+2.0
HMG	**Houelmont**	**2.77**	**304**	eP	Pn	01 51 54.9	+2.0
HMG				eS	Sn	01 52 26.1	+0.9
SCG	**Saint Claude**	**2.78**	**305**	eP	Pn	01 51 55.4	+2.3
SCG				eS	Sn	01 52 28.8	+3.4
LZG	**Guadaloupe-1**	**2.92**	**306**	eP	Pn	01 51 55.9	+1.0
GRIC	**Isle de Caille**	**3.07**	**226**	eS	Sn	01 52 35.2	+2.4
GRSS	**Sisters**	**3.08**	**227**	eS	Sn	01 52 35.5	+2.5
GRW	**Mount Saint Ca**	**3.21**	**226**	eP	Pn	01 52 02.8	+3.7
GRW				eS	Sn	01 52 37.0	+0.8
GRW	**Mount Saint Ca**	**3.21**	**226**	eP	Pn	01 52 02.8	+3.7
GRW				eS	Sn	01 52 37.0	+0.8
TOSP	**Speyside**	**3.34**	**201**	eP	Pn	01 52 03.3	+2.6

*IDC **25** 01:53:32.0±5.0, 44˚18N×129˚21W, h0km, mb3.0/2, mb1 3.6/5, mb1mx3.4/26, mbtmp3.1/5, ML3.4/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/12, Error ellipse: s-maj=80.1km s-min=30.6km az=65.0*

*NEIC **25** 01:53:34.6±2.5, 44˚25N×129˚01W, h10km, ML2.7, Error ellipse: s-maj=31.5km s-min=13.3km az=76.0*

ISC 25 01:53:35.5±2.0, 44˚3N±0˚1×129˚0W±0˚2, h10km, n16, σ0º99/14, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEBO	**Mount Hebo**	**3.82**	**74**	ePn	**Pn**	**01 54 33.4**	**-0.9**
COR	**Corvallis**	**4.05**	**84**	ePn	**Pn**	**01 54 37.3**	**-0.2**
HUMO	**Hull Mountain**	**4.67**	**109**	ePn	**Pn**	**01 54 43.1**	**-2.9**
HUMO				eSn	**Sn**	**01 55 39.4**	**-0.7**
IRO	**Indian Ridge**	**4.82**	**91**	P	**Pn**	**01 54 49.0**	**+0.9**
YBH	**Yreka Blue Hor**	**5.23**	**117**	Pn	**Pn**	**01 54 54.1**	**+0.5**
	0.1nm,0.3s,baz=298,slow=15,SNR=9.4						
VBEM	**Beaver Butte**	**5.31**	**79**	P	**Pn**	**01 54 55.8**	**+1.1**
JCW	**Jim Creek**	**6.25**	**49**	ePn	**Pn**	**01 55 07.7**	**+0.1**
RPW	**Rockport**	**6.62**	**48**	ePn	**Pn**	**01 55 12.6**	**-0.2**
	2.7nm,0.3s						
BBB	**Bella Bella**	**7.94**	**4**	LR	LR	01 58 16.8	
	comp=Z,46nm,19.7s,baz=289,slow=35						
NVAR	**Mina Array Bea**	**9.90**	**122**	Pn	**Pn**	**01 55 58.3**	**+0.5**
	0.1nm,0.3s,baz=303,slow=14,SNR=6.1						
HLID	**Hailey**	**10.51**	**89**	ePn	**Pn**	**01 56 09.2**	**+3.1**
PDAR	**Pinedale Array**	**14.15**	**89**	Pn	**Pn**	**01 57 01.2**	**+5.4**
	0.0nm,0.3s,baz=273,slow=7.1,SNR=3.5						
DLBC	**Dease Lake**	**14.20**	**358**	LR	LR	02 01 46.2	
	comp=Z,146nm,19.6s,baz=184,slow=35						
YKA	**Yellowknife Ar**	**20.07**	**20**	P	**P**	**01 58 08.0**	**-0.5**
	0.2nm,0.7s,baz=211,slow=9.4,SNR=4.0						
ULM	**Lac du Bonnet**	**23.10**	**63**	LR	LR	02 07 52.6	
	comp=Z,41nm,18.7s,baz=181,slow=37						
TXAR	**Lajitas Array**	**25.01**	**118**	P	**P**	**01 58 59.0**	**-0.4**
	0.5nm,0.9s,baz=316,slow=5.0,SNR=4.7						

*IDC **25** 01:55:11.5±0.7, 58˚73S×25˚34W, h0km, mb4.1/7, mb1 4.1/7, mb1mx4.0/15, mbtmp4.1/7, MS3.8/2, Ms1 3.8/2, ms1mx3.4/21, Error ellipse: s-maj=25.1km s-min=24.5km az=78.0*

*ISCJB **25** 01:55:16.7±3.8, 58˚9S±0˚1×25˚2W±0˚2, h50km±36km, mb4.1/8, MS3.7/2, Error ellipse: s-maj=22.4km s-min=15.0km az=140.9*

*NEIC **25** 01:55:16.6±0.4, 58˚77S×25˚40W, h35km, mb4.2/3, Error ellipse: s-maj=15.7km s-min=14.0km az=162.0*

ISC 25 01:55:17.5±2.7, 58˚9S±0˚1×25˚3W±0˚2, h39km±27km, n23, σ0º89/15, mb4.1/8, MS3.7/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.80**	**156**	e	**Pn**	**01 58 31.2**	**+1.1**
VNA1				eS	**Sn**	**02 01 00.0**	**-1.7**
VNA2	**Neumayer--Watz**	**14.19**	**156**	e	**Pn**	**01 58 35.5**	**0.0**
VNA2				eS	**Sn**	**02 01 03.3**	**-8.0**
USHA	**Ushuaia**	**23.59**	**261**	P	**P**	**02 00 24.9**	**+0.5**
	9.3nm,1.0s,mb4.2,baz=41,slow=11,SNR=4.4						
USHA				LR	LR	02 06 51.2	
	comp=Z,372nm,21.5s,MS3.8,baz=199,slow=30						
QSPA	**South Pole Qui**	**31.37**	**180**	P	**P**	**02 01 36.0**	**+2.2**
	2.8nm,0.9s,mb4.1,baz=198,slow=5.8,SNR=11						
QSPA				LR	LR	02 13 36.5	
	comp=Z,121nm,19.9s,MS3.6,baz=233,slow=35						
QSPA	**South Pole Qui**	**31.37**	**180**	eP	**P**	**02 01 35.3**	**+1.6**
	5.8nm,1.1s,mb4.3						
QSPA				LR	LR	02 13 36.5	
CFAA	**Coronel Fontan**	**39.62**	**294**	P	**P**	**02 02 44.2**	**-0.8**
	0.6nm,0.7s,mb3.4,baz=158,slow=8.6,SNR=10.0						
LPAZ	**La Paz**	**52.83**	**305**	P	**P**	**02 04 27.8**	**-1.0**
	1.0nm,0.6s,mb3.9,baz=194,slow=5.1,SNR=4.6						
LPAZ	**La Paz**	**52.83**	**305**	eP	**P**	**02 04 27.4**	**-1.4**
	1.2nm,0.7s,mb3.9						
LSZ	**Lusaka**	**58.55**	**65**	eP	**P**	**02 05 10.1**	**+0.2**
	2.0nm,0.8s,mb4.2						
DBIC	**Dimbokro**	**67.37**	**22**	P	**P**	**02 06 08.4**	**0.0**
	1.3nm,0.4s,mb4.3,baz=190,slow=6.1,SNR=4.4						
TOA0	**Torodi Ar. Sit**	**75.07**	**27**	eP	**P**	**02 06 54.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**75.07**	**27**	P	**P**	**02 06 55.1**	**+0.2**
	2.2nm,0.5s,mb4.3,baz=199,slow=6.4,SNR=79						
ASAR	**Alice Springs**	**95.99**	**161**	P	**P**	**02 08 40.3**	**+0.1**
	0.5nm,0.8s,mb4.0,baz=192,slow=4.4,SNR=4.8						
CMAR	**Chiang Mai Arr**	**123.14**	**111**	PKP	PKPdf	02 14 08.2	-1.3
	0.8nm,0.3s,baz=205,slow=3.0,SNR=4.0						
FINES	**FINESS Array B**	**126.42**	**28**	PKP	PKPdf	02 14 13.6	-0.8
	0.8nm,0.5s,baz=169,slow=3.1,SNR=12						
FINES	**FINESS Array B**	**126.42**	**28**	PKP	PKPdf	02 14 13.6	-0.8
ABKAR	**Akbulak array**	**128.14**	**56**	ePKPdf	PKPdf	02 14 17.5	-0.6
ARCES	**ARCESS Array B**	**133.20**	**22**	PKP	PKPdf	02 14 24.8	-2.2
	0.7nm,0.6s,baz=238,slow=1.7,SNR=4.1						
YKA	**Yellowknife Ar**	**138.91**	**315**	PKP	PKPdf	02 14 37.1	-0.7
	0.9nm,0.5s,baz=129,slow=2.3,SNR=26						
YKW3	**Yellowknife Ar**	**138.96**	**315**	ePKPdf	PKPdf	02 14 37.2	-0.8
INK	**Inuvik**	**148.60**	**317**	PKPbc	PKPbc	02 14 56.9	-1.4
	1.6nm,0.5s,baz=46,slow=3.6,SNR=11						
INK	**Inuvik**	**148.60**	**317**	ePKPbc	PKPbc	02 14 58.0	-0.4
SONM	**Songino Array**	**149.81**	**90**	PKPbc	PKPbc	02 15 02.1	+0.1
	0.7nm,0.4s,baz=197,slow=4.6,SNR=7.7						

*SZGRF **25** 02:07:41.0, 14˚95S×14˚45W, h33km, mb4.9, Southern Mid-Atlantic Ridge*

*ISCJB **25** 02:07:49.6±6.8, 12˚83S±0˚08×14˚62W±0˚07, h6km±42km, mb4.6/95, MS3.9/16, Error ellipse: s-maj=16.0km s-min=7.8km az=140.2*

*IDC **25** 02:07:49.9±0.6, 12˚96S×14˚56W, h0km, mb4.2/17, mb1 4.4/17, mb1mx4.3/23, mbtmp4.2/17, MS4.0/7, Ms1 3.9/7, ms1mx3.6/27, Error ellipse: s-maj=24.4km s-min=14.4km az=138.0*

*NEIC **25** 02:07:51.9±0.2, 12˚91S×14˚65W, h10km, mb4.8/62, Error ellipse: s-maj=8.5km s-min=4.5km az=138.0*

**ISC 25 02:07:54.9±4.7, 12˚87S±0˚08×14˚65W±0˚07, h28km±32km, n174, σ0º71/156, mb4.6/95, MS3.9

PCBR Castelo Branco 52.86 7 *eP* **P 02 17 08.6 +0.5**
comp=Z,18nm,1.2s,mb4.9
ESDC Sonseca Array 53.22 10 P **P 02 17 10.0 -0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=185,slow=8.2,SNR=9.2
KEST Kesra 53.41 24 P **P 02 17 13.3 +1.1**
comp=Z,7.7nm,0.9s,mb4.6,baz=179,slow=3.0,SNR=16
MTE Manteigas 53.41 7 *eP* **P 02 17 12.2 +0.1**
comp=Z,25nm,2.3s,mb4.7
MVO Moncorvo 54.22 7 *eP* **P 02 17 17.6 -0.5**
comp=Z,32nm,1.6s,mb5.0
PVRL Vila Real 54.26 6 *eP* **P 02 17 17.4 -0.9**
comp=Z,15nm,1.3s,mb4.8
LCO Las Campanas 54.28 244 *eP* **P 02 17 20.6 +1.8**
comp=Z,12nm,1.0s,mb4.8
ETSF Etsaut 56.98 12 *eP* **P 02 17 38.4 +0.5**
SJPF Ste Jean 57.05 12 *eP* **P 02 17 39.0 +0.6**
comp=Z,14nm,0.8s,mb4.7
SJPF Ste Jean 57.05 12 *eP* **P 02 17 39.0 +0.6**
comp=Z,6.8nm,0.8s,mb4.7
EPF Esparros 57.30 13 *eP* **P 02 17 40.6 +0.5**
comp=Z,21nm,1.4s,mb4.7
EPF Esparros 57.30 13 *eP* **P 02 17 40.6 +0.5**
comp=Z,11nm,1.4s,mb4.7
MTLF Montolieu 58.03 14 *eP* **P 02 17 47.1 +1.9**
comp=Z,32nm,1.5s,mb4.8
MTLF Montolieu 58.03 14 *eP* **P 02 17 47.1 +1.9**
comp=Z,16nm,1.5s,mb4.8
LMR La Mourre 59.19 18 *eP* **P 02 17 54.0 +0.7**
comp=Z,48nm,1.3s,mb5.0
LMR La Mourre 59.19 18 *eP* **P 02 17 54.0 +0.7**
comp=Z,24nm,1.3s,mb5.1
LFF La Frestale 59.21 13 *eP* **P 02 17 53.6 +0.2**
comp=Z,35nm,1.1s,mb5.0
LFF La Frestale 59.21 13 *eP* **P 02 17 53.6 +0.2**
comp=Z,17nm,1.1s,mb5.0
CAF Calviac 59.49 14 *eP* **P 02 17 55.1 -0.3**
TIP Timpagrande 59.49 28 *eP* **P 02 17 55.6 +0.1**
comp=Z,4.3nm,1.0s,mb4.4
SDV Santo Domingo 59.66 288 *eP* **P 02 17 58.0 +0.8**
comp=Z,6.0nm,0.8s,mb4.7
RJF Les Rejaudoux 59.73 13 *eP* **P 02 17 56.9 -0.1**
comp=Z,46nm,1.2s,mb5.1
RJF *e*MLR MLR
comp=Z,111nm,17.5s,MS3.8
RJF Les Rejaudoux 59.73 13 *eP* **P 02 17 56.9 -0.1**
comp=Z,23nm,1.2s,mb5.1
RJF LR LR
comp=Z,110nm,17.5s,MS4.0
VIVF Saint-Julien-l 60.07 16 *eP* **P 02 17 59.6 +0.2**
comp=Z,21nm,1.1s,mb4.8
VIVF Saint-Julien-l 60.07 16 *eP* **P 02 17 59.6 +0.2**
comp=Z,11nm,1.1s,mb4.8
ORIF Oris-en-Rattie 60.46 17 *eP* **P 02 18 02.8 +0.8**
comp=Z,9.1nm,0.8s,mb4.5
ORIF *e*MLR MLR
comp=Z,115nm,19.8s,MS3.7
ORIF Oris-en-Rattie 60.46 17 *eP* **P 02 18 02.8 +0.8**
comp=Z,4.6nm,0.8s,mb4.6
MBDF Montbardon 60.54 17 *eP* **P 02 18 03.5 +0.9**
MFF Saint Martin d 60.62 11 *eP* **P 02 18 02.9 -0.2**
comp=Z,87nm,1.7s,mb5.3
MFF Saint Martin d 60.62 11 *eP* **P 02 18 02.9 -0.2**
comp=Z,43nm,1.7s,mb5.3
AQU L'Aquila 60.70 24 *eP* **P 02 18 04.2 +0.5**
comp=Z,9.1nm,0.9s,mb4.9
BNI Bardonecchia 60.81 17 *eP* **P 02 18 05.4 +1.0**
comp=Z,7.3nm,1.0s,mb4.8
TCF Toulx Ste Croi 60.81 13 *eP* **P 02 18 04.8 +0.4**
comp=Z,12nm,0.8s,mb4.8
TCF Toulx Ste Croi 60.81 13 *eP* **P 02 18 04.8 +0.4**
comp=Z,6.0nm,0.8s,mb4.8
LPG La Plagne 61.23 17 *eP* **P 02 18 08.3 +1.0**
comp=Z,24nm,1.0s,mb5.0
LPG La Plagne 61.23 17 *eP* **P 02 18 08.3 +1.0**
comp=Z,12nm,1.0s,mb5.0
LPL La Plagne 61.25 17 *eP* **P 02 18 08.3 +0.9**
comp=Z,9.7nm,0.7s,mb4.8
LPL La Plagne 61.25 17 *eP* **P 02 18 08.3 +0.9**
comp=Z,4.8nm,0.7s,mb4.7
QUIF Quistinic 61.38 9 *eP* **P 02 18 07.0 -1.2**
comp=Z,71nm,1.3s,mb5.3
QUIF Quistinic 61.38 9 *eP* **P 02 18 07.0 -1.2**
comp=Z,36nm,1.3s,mb5.3
AVF Avril sur Loir 61.55 14 *eP* **P 02 18 09.5 +0.1**
comp=Z,5.2nm,0.7s,mb4.5
AVF Avril sur Loir 61.55 14 *eP* **P 02 18 09.5 +0.1**
comp=Z,2.6nm,0.7s,mb4.5
HYF Humbligny 61.84 13 *eP* **P 02 18 11.7 +0.4**
ROSC El Rosal 61.84 283 LR LR 02 42 27.2
comp=Z,211nm,21.8s,MS4.3,baz=178,slow=34
SSF Saint Saulge 61.84 14 *eP* **P 02 18 11.5 +0.2**
comp=Z,20nm,1.0s,mb4.9
SSF Saint Saulge 61.84 14 *eP* **P 02 18 11.5 +0.2**
comp=Z,10nm,1.0s,mb4.9
CABF La Chapelle 62.07 16 *eP* **P 02 18 12.8 -0.1**
comp=Z,26nm,0.8s,mb5.1
CABF La Chapelle 62.07 16 *eP* **P 02 18 12.8 -0.1**
comp=Z,13nm,0.8s,mb5.1
LOR Lormes 62.12 14 *eP* **P 02 18 13.1 -0.1**
comp=Z,6.9nm,0.9s,mb4.5
LOR *e*MLR MLR
comp=Z,93nm,18.8s,MS3.7
LOR Lormes 62.12 14 *eP* **P 02 18 13.1 -0.1**
comp=Z,3.5nm,0.9s,mb4.5
LOR LR LR
comp=Z,90nm,18.8s,MS4.0
GRR Gorron 62.21 10 *eP* **P 02 18 13.4 -0.4**
comp=Z,80nm,1.3s,mb5.4
GRR Gorron 62.21 10 *eP* **P 02 18 13.4 -0.4**
comp=Z,40nm,1.3s,mb5.4
FLN La Foliniere 62.63 11 *eP* **P 02 18 17.0 +0.4**
FLN *e*MLR MLR
comp=Z,69nm,19.5s,MS3.5
FLN La Foliniere 62.63 11 *eP* **P 02 18 17.0 +0.4**
FLN LR LR
comp=Z,70nm,19.5s,MS3.8
HAU Haudompre 63.43 16 *eP* **P 02 18 21.5 -0.4**
comp=Z,20nm,0.9s,mb4.9
HAU *e*MLR MLR
comp=Z,73nm,21.8s,MS3.5
HAU Haudompre 63.43 16 *eP* **P 02 18 21.5 -0.4**
comp=Z,10nm,0.9s,mb5.0
HAU LR LR
comp=Z,70nm,21.8s,MS3.8
MEZF Maizieres J'vi 63.56 15 *eP* **P 02 18 22.9 +0.2**
comp=Z,20nm,0.9s,mb4.8
MEZF Maizieres J'vi 63.56 15 *eP* **P 02 18 22.9 +0.2**
comp=Z,20nm,0.9s,mb5.2
FETA Feichten 63.81 19⇑ *iP* **P 02 18 24.4 -0.1**
comp=Z,12nm,1.0s,mb4.9
CDF Champ du Feu 64.05 16 *eP* **P 02 18 25.4 -0.6**
comp=Z,6.3nm,0.7s,mb4.5
CDF Champ du Feu 64.05 16 *eP* **P 02 18 25.4 -0.6**
comp=Z,3.2nm,0.7s,mb4.5
BOJS Bojanci 64.08 23 *eP* **P 02 18 26.1 -0.2**
RETA Reutte 64.23 19⇑ *iP* **P 02 18 26.8 -0.4**
comp=Z,8.9nm,1.2s,mb4.7
BFO Black Forest 64.26 17 *eP* **P 02 18 26.7 -0.7**
comp=Z,7.6nm,1.1s,mb4.6
LJU Ljubljana 64.27 22 *eP* **P 02 18 27.9 +0.5**
WTTA Wattenberg 64.32 20⇑ *iP* **P 02 18 27.8 0.0**
comp=Z,14nm,1.3s,mb4.8
OTAV Otavalo 64.56 276 *eP* **P 02 18 30.3 +0.2**
comp=Z,6.3nm,1.2s,mb4.5
BAIF Baives 64.81 13 *eP* **P 02 18 30.4 -0.6**
comp=Z,64nm,1.5s,mb5.1
BAIF Baives 64.81 13 *eP* **P 02 18 30.4 -0.6**
comp=Z,32nm,1.5s,mb5.1
STU Stuttgart 64.91 17 *eP* **P 02 18 31.3 -0.3**
comp=Z,9.9nm,1.0s,mb4.8
WLF Walferdange 64.91 15 P **P 02 18 32.0 +0.4**
comp=Z,25nm,2.3s,mb4.8
WLF Walferdange 64.91 15 *eP* **P 02 18 31.6 0.0**
comp=Z,17nm,1.1s,mb5.0
SOKA Soboth 64.99 22⇑ *iP* **P 02 18 32.9 +0.7**
comp=Z,8.3nm,1.3s,mb4.6
GIVF Givet 65.00 14 *eP* **P 02 18 31.8 -0.3**
MEM Membach 65.75 14 P **P 02 18 37.1 +0.2**
GRA1 Grafenberg Arr 66.33 18 *eP* **P 02 18 40.4 -0.4**
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 66.33 18 *eP* **P 02 18 40.4 -0.4**
comp=Z,9.0nm,1.1s,mb4.7
GERES GERESS Array B 66.38 20 P **P 02 18 40.6 -0.5**
comp=Z,1.5nm,0.8s,mb4.1,baz=199,slow=3.7,SNR=17
KHC Kasperske Hory 66.58 20 *eP* **P 02 18 42.3 -0.1**
ZST Bratislava 67.03 22 *eP* **P 02 18 46.3 +1.0**
comp=Z,4.1nm,0.6s,mb4.6
ZST Bratislava 67.03 22 *eP* **P 02 18 46.3 +1.0**

MOX Moxa 67.29 18 *eP* **P 02 18 47.0 +0.1**
comp=Z,10.0nm,1.4s,mb4.7
PRU Pruhonice 67.64 20 *eP* **P 02 18 48.7 -0.4**
KOLL Kolacno 67.83 23 *eP* **P 02 18 50.8 +0.5**
KOLL Kolacno 67.83 23 *eP* **P 02 18 50.8 +0.5**
PSZ Piszkesteto 67.88 24 *eP* **P 02 18 51.1 +0.4**
comp=Z,4.3nm,0.8s,mb4.5
VYHS Vyhne 67.93 23 *eP* **P 02 18 51.3 +0.3**
comp=Z,4.2nm,1.2s,mb4.3
VYHS *e* pP 02 18 58.1 -1.8
VYHS Vyhne 67.93 23 *eP* **P 02 18 51.3 +0.3**
VYHS *ep*P pP 02 18 58.1 -1.8
PVCC Panska Ves 68.11 20 *eP* **P 02 18 52.1 0.0**
BRG Berggiesshubel 68.21 19 *eP* **P 02 18 52.5 -0.1**
comp=Z,6.2nm,1.1s,mb4.5
BCIP Isla Barro Col 68.34 285 *eP* **P 02 18 54.9 +0.6**
comp=Z,16nm,1.1s,mb5.0
MORC Moravsky Berou 68.50 22 *eP* **P 02 18 54.5 0.0**
comp=Z,4.0nm,1.0s,mb4.3
DPC Dobruska-Polom 68.55 21 *eP* **P 02 18 55.0 +0.2**
KECS Kecovo 68.57 24 *eP* **P 02 18 55.5 +0.5**
comp=Z,4.6nm,0.9s,mb4.4
KECS *e* pP 02 19 02.9 -1.0
KECS Kecovo 68.57 24 *eP* **P 02 18 55.5 +0.5**
KECS *ep*P pP 02 19 02.9 -1.0
UPC Upice 68.58 20 *eP* **P 02 18 54.9 -0.1**
BR131 Keskin Array S 68.93 38 *eP* **P 02 18 57.5 0.0**
comp=Z,4.1nm,1.0s,mb4.3
BRTR Keskin Array B 68.93 38 P **P 02 18 58.0 +0.6**
comp=Z,2.1nm,0.8s,mb4.1,baz=219,slow=6.5,SNR=17
STHS Stebnicka Huta 69.62 24 *eP* **P 02 19 01.8 +0.3**
comp=Z,2.9nm,1.4s,mb4.0
STHS Stebnicka Huta 69.62 24 *eP* **P 02 19 01.8 +0.3**
NAY Al-Naaiem 72.91 54 *eP* **P 02 19 21.9 0.0**
NAY AMb AMB 02 19 28.4
comp=Z,6.0nm,1.4s,mb4.3
RDF Al-Radifah 73.01 54 *eP* **P 02 19 23.3 +0.9**
RDF AMb AMB 02 19 24.8
comp=Z,16nm,1.5s,mb4.7
MAW Mawson 73.43 157 P **P 02 19 23.5 -0.7**
comp=Z,3.3nm,0.8s,mb4.3,baz=275,slow=10.0,SNR=6.9
MAW LR LR 02 44 01.0
comp=Z,96nm,18.1s,MS4.1,baz=50,slow=30
KIEV Kiev 73.96 27 *eP* **P 02 19 26.9 -0.6**
comp=Z,7.0nm,0.8s,mb4.6
AKASG Malin Array Be 73.97 27 P **P 02 19 27.1 -0.5**
comp=Z,5.6nm,0.8s,mb4.6,baz=226,slow=6.3,SNR=23
AKBB Malin Array Si 73.97 27 *eP* **P 02 19 26.7 -0.9**
IIGN Ignalina 76.15 23 *eP* **P 02 19 40.0 0.0**
ISAL Salakas 76.28 22 *eP* **P 02 19 40.1 -0.7**
IDID Didziasalis 76.31 23 *eP* **P 02 19 40.7 -0.3**
NB2 NORSAR Subarra 76.49 13 P **P 02 19 42.1 +0.3**
comp=Z,4.3nm,0.8s,mb4.4,baz=204,slow=6.2
NOA NORSAR Array B 76.49 13 P **P 02 19 42.5 +0.6**
comp=Z,3.8nm,0.8s,mb4.4,baz=205,slow=6.1,SNR=13
KIV Kislovodsk 76.88 39 *eP* **P 02 19 44.8 +0.3**
QSPA South Pole Qui 77.28 180 *eP* **P 02 19 46.9 +0.7**
comp=Z,12nm,0.9s,mb4.8
SCHQ Schefferville 80.48 332 P **P 02 20 03.9 -0.1**
comp=Z,2.1nm,0.6s,mb4.2,baz=138,slow=5.8,SNR=4.5
FINES FINESS Array B 80.74 19 P **P 02 20 05.5 +0.2**
comp=Z,4.2nm,0.6s,mb4.5,baz=217,slow=4.7,SNR=26
FINES FINESS Array B 80.74 19 P **P 02 20 05.5 +0.2**
KAF Kangasniemi 81.32 18 *ep* **P 02 20 07.8 -0.5**
comp=Z,2.7nm,0.7s,mb4.3
LRAL Lakeview Retre 82.63 306 *eP* **P 02 20 15.6 -0.3**
comp=Z,7.9nm,1.1s,mb4.7
JOF Joensuu 83.49 19 *ep* **P 02 20 18.6 -1.0**
comp=Z,2.4nm,0.7s,mb4.3
WCI Wyandotte Cave 83.95 311 *eP* **P 02 20 22.0 -0.5**
comp=Z,5.3nm,0.7s,mb4.8
PLAL Pickwick Lake 84.14 308 *eP* **P 02 20 21.7 -1.9**
comp=Z,4.6nm,0.8s,mb4.7
WVT Waverly 84.35 309 *eP* **P 02 20 23.9 -0.8**
comp=Z,5.0nm,0.7s,mb4.8
SUMG Summit 86.69 353 *eP* **P 02 20 37.6 +2.0**
comp=Z,6.4nm,1.0s,mb4.8
KEV Kevo 87.36 13 *ep* **P 02 20 29.2 -10**
comp=Z,2.3nm,0.6s,mb4.6
CCM Cathedral Cave 87.56 310 *eP* **P 02 20 39.9 -0.6**
comp=Z,18nm,1.2s,mb5.2
JFWS Jewell Farm 88.39 315 *eP* **P 02 20 43.5 -0.8**
comp=Z,6.6nm,0.8s,mb4.9
ABKAR Akbulak array 89.86 39 *eP* **P 02 20 51.2 +0.1**
comp=Z,1.8nm,0.7s,mb4.5
ARU Arti 91.58 32 *eP* **P 02 20 58.8 -0.2**
comp=Z,3.1nm,0.7s,mb4.8
JCT Junction City 92.33 301 *eP* **P 02 21 02.9 -0.1**
comp=Z,13nm,1.1s,mb5.2
ECSD EROS Data Cent 93.08 314 *eP* **P 02 21 05.8 -0.4**
comp=Z,2.3nm,0.6s,mb4.8
ULM Lac du Bonnet 94.26 320 *eP* **P 02 21 10.6 -0.8**
TXAR Lajitas Array 95.35 299 P **P 02 21 15.6 -1.4**
comp=Z,0.8nm,0.9s,mb4.2,baz=94,slow=3.8,SNR=4.7
FCC Fort Churchill 95.50 329 *eP* **P 02 21 16.3 -0.6**
comp=Z,0.1nm,1.0s
BRVK Borovoye 97.15 37 *eP* **P 02 21 24.1 -0.4**
comp=Z,1.1nm,0.6s,mb4.5
MNTX Cornudas Mount 97.26 301 *eP* **P 02 21 25.4 -0.2**
comp=Z,0.7nm,0.7s,mb4.2
WMQ Urumqi 107.68 48 *eP* Pdif 02 22 11.0 -0.5
CMAR Chiang Mai Arr 116.11 76 PKP PKPdf 02 26 36.1 -0.1
comp=Z,0.8nm,0.3s,baz=229,slow=3.5,SNR=3.8
KMI Kunming 120.01 68 PKP PKPdf 02 26 43.5 -0.1
SONM Songino Array 120.16 42 PKP PKPdf 02 26 42.4 -0.8
comp=Z,0.4nm,0.4s,baz=267,slow=2.9,SNR=2.8
LZH Lanzhou 120.44 56 *e*PKP PKPdf 02 26 39.0 -5.1
LZH sPKP 02 26 49.0
CD2 Chengdu 120.79 62 PKP PKPdf 02 26 46.3 +1.3
GYA Guiyang 123.54 67 *e*Pdif Pdif 02 23 22.0 0.0
GYA PKP PKPdf 02 26 48.9 -1.5
GYA PP PP 02 28 35.8 +3.4
GYA PKS 02 30 24.3
GYA SKKS SKKSac 02 35 25.8 -3.6
GYA SS SS 02 45 19.3 +0.7
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,120nm,20.6s,MS4.7
GYA LR LR
comp=E,110nm,22.1s,MS4.7
GYA LR LR
comp=Z,120nm,21.5s,MS4.5
BJI Beijing 129.15 49 PKP PKPdf 02 26 59.8 -0.9
BJI SS SS 02 46 29.1 +1.5
BJI LR LR
comp=N,100nm,25.0s,MS4.5
BJI LR LR
comp=E,76nm,26.4s,MS4.5
BJI LR LR
comp=Z,41nm,24.6s,MS4.0
WHN Wuhan 129.90 61 PKP PKPdf 02 26 59.3 -3.1
ASAR Alice Springs 132.41 140 PKhKP 02 27 06.1
comp=Z,0.6nm,0.7s,baz=219,slow=1.1,SNR=6.0
CN2 Changchun 133.98 40 *e*PKP PKPdf 02 27 11.5 +1.8
MDJ Mudanjiang 136.07 37 PKP PKPdf 02 27 08.1 -5.5
MDJ sPKP 02 27 17.8
MDJ PP PP 02 29 51.5 -1.4
MDJ AMB AMB
comp=Z,68nm,5.3s
PETK Petropavlovsk- 139.41 7 PKP PKPdf 02 27 18.6 -0.8
comp=Z,1.3nm,0.8s,baz=187,slow=6.4,SNR=3.1
COEN Coen 145.46 140 *e*PKPbc PKPbc 02 27 30.8 -0.6
MAT Matsushiro 146.11 41 PKP PKPdf 02 27 29.9 -2.0
MJAR Matsushiro Arr 146.11 41 PKPbc PKPbc 02 27 32.2 -0.6
comp=Z,3.9nm,0.9s,baz=307,slow=2.7,SNR=9.5

IDC ***25*** *02:11:28.4±1.1, 53°.21N×165°.70W, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, Error ellipse: s-maj=32.7km s-min=19.0km az=20.0*
ISCJB ***25*** *02:11:32.9±1.1, 53°.09N±0°.08×165°.58W±0°.09, h50km±9km, mb3.8/14, Error ellipse: s-maj=14.1km s-min=8.2km az=162.7*
NEIC ***25*** *02:11:32.2, 53°.03N×165°.57W, h26km, ML3.7(AEIC), After AEIC.*
ISC 25 02:11:33.0±2.3, 53°.07N±0°.06×165°.59W±0°.08, h32km±17km, n28, σ1§02/32, mb3.8/14, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.95**	**325**	P	**Pn**	**02 11 49.6**	**-0.5**
UNV				S	**Sn**	**02 12 03.2**	**+0.7**
AKUT	**Akutan**	**1.07**	**354**	P	**Pn**	**02 11 51.6**	**-0.1**
AKUT				S	**Sn**	**02 12 05.1**	**-0.5**
AKLV	**Akutan Long Va**	**1.12**	**349**	P	**Pn**	**02 11 51.9**	**-0.5**
AKLV				S	**Sn**	**02 12 07.9**	**+1.2**
AKGG	**Akutan Green G**	**1.16**	**348**	P	**Pn**	**02 11 52.8**	**-0.1**
OKFG	**Magazine Ridge**	**1.44**	**285**	P	**Pn**	**02 11 56.6**	**-0.1**
OKFG				S	**Sn**	**02 12 14.9**	**+0.4**
NIKO	**Nikolski**	**1.97**	**269**	P	**Pn**	**02 12 04.2**	**+0.1**
FALS	**False Pass**	**2.21**	**35**	*e*Pn	**Pn**	**02 12 07.3**	**+0.1**
SDPT	**Sand Point**	**3.77**	**51**	P	**Pn**	**02 12 28.7**	**-0.1**
TRF	**Thorofare Moun**	**13.12**	**32**	*e*Pn	**Pn**	**02 14 37.2**	**+0.5**
20nm,1.5s
DLBC Dease Lake 20.55 61 P **P 02 16 14.3 +5.8**
1.1nm,0.6s,baz=278,slow=18,SNR=3.2
DLBC Dease Lake 20.55 61 P **P 02 16 14.3 +5.8**
INK Inuvik 21.51 33 P **P 02 16 15.9 -2.8**
1.0nm,0.6s,mb3.5,baz=239,slow=5.9,SNR=2.9
PETK Petropavlovsk- 21.90 285 P **P 02 16 25.2 +2.2**
0.5nm,0.3s,mb3.4,baz=94,slow=15,SNR=4.3
YKA Yellowknife Ar 28.04 50 P **P 02 17 20.5 -0.3**
0.2nm,0.5s,mb3.0,baz=273,slow=8.2,SNR=4.7
NVAR Mina Array Bea 35.41 95 P **P 02 18 27.7 +2.0**
0.8nm,0.7s,mb3.8,baz=304,slow=8.2,SNR=7.4
NVAR Mina Array Bea 35.41 95 P **P 02 18 27.7 +2.0**
PDAR Pinedale Array 38.02 83 P **P 02 18 48.6 +0.8**
0.3nm,0.5s,mb3.3,baz=309,slow=2.9,SNR=2.8
MDJ Mudanjiang 42.14 286 P **P 02 19 19.3 -2.7**
MDJ pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
MDJ pmax pmax
comp=Z,48nm,6.3s
TXAR Lajitas Array 50.46 92 P **P 02 20 28.2 +0.7**
comp=Z,1.8nm,0.8s,mb4.2,baz=299,slow=5.7,SNR=24
ARCES ARCESS Array B 57.44 355 P **P 02 21 16.3 -1.5**
comp=Z,3.9nm,1.0s,mb4.4,baz=6.7,slow=10.0,SNR=3.7
ZALV Zalesovo Beam 58.43 319 P **P 02 21 24.8 -0.2**
comp=Z,0.5nm,0.4s,mb3.9,baz=54,slow=9.7,SNR=2.9
BVAR Borovoye Array 64.44 326 P **P 02 22 06.4 +0.8**
comp=Z,1.0nm,0.6s,mb4.0,baz=47,slow=6.4,SNR=7.0
MKAR Makanchi Array 64.96 315 P **P 02 22 08.4 -0.8**
comp=Z,0.3nm,0.6s,mb3.5,baz=43,slow=11,SNR=3.5
MKAR Makanchi Array 64.96 315 P **P 02 22 08.4 -0.8**
FINES FINESS Array B 65.46 354 P **P 02 22 10.8 -1.3**
comp=Z,0.9nm,0.6s,mb4.0,baz=2.5,slow=7.3,SNR=5.7
FINES FINESS Array B 65.46 354 P **P 02 22 10.8 -1.3**
AKASG Malin Array Be 75.85 350 P **P 02 23 16.4 +0.8**
comp=Z,0.8nm,0.5s,mb3.9,baz=13,slow=5.8,SNR=3.3
ASAR Alice Springs 92.63 233 P **P 02 24 40.2 -0.9**
comp=Z,0.5nm,0.7s,mb4.1,baz=37,slow=4.5,SNR=6.6

ISCJB ***25*** *02:32:10.6±0.3, 28°.56N±0°.05×128°.59E±0°.07, h141km±4km, mb3.8/21, Error ellipse: s-maj=11.7km s-min=4.4km az=34.8*
NEIC ***25*** *02:32:11.4±1.1, 28°.59N×128°.64E, h137km±12km, mb3.9/9, Error ellipse: s-maj=16.5km s-min=9.4km az=206.0*
IDC ***25*** *02:32:11.4±1.3, 28°.52N×128°.59E, h139km±14km, mb3.6/12, mb1 3.7/13, mb1mx3.5/26, mbtmp3.5/13, Error ellipse: s-maj=25.4km s-min=15.9km az=68.0*
JMA ***25*** *02:32:12.0±0.1, 28°.63N×128°.48E, h124km±4km, M3.5*
ISC 25 02:32:11.7±0.3, 28°.56N±0°.05×128°.61E±0°.07, h138km±4km, n44, σ0§98/56, mb3.8/21, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.82**	**158**	P	**Pn**	**02 32 34.1**	**+0.3**
JTK				S	**Sn**	**02 32 50.6**	**0.0**
JAM	**Amami Oshima**	**0.89**	**99**	P	**Pn**	**02 32 34.3**	**0.0**
JAM				*e*S	**Sn**	**02 32 50.8**	**+8.6**
JZK	**Kikaishima**	**1.23**	**101**	P	**Pn**	**02 32 38.6**	**+1.2**
JZK				*e*S	**Sn**	**02 32 58.8**	**+8.5**
JIH	**Iheya**	**1.62**	**201**	P	**Pn**	**02 32 41.9**	**+0.2**
JIH				S	**Sn**	**02 33 04.6**	**+4.7**
JNN	**Nakanoshima**	**1.69**	**41**	P	**Pn**	**02 32 42.2**	**-0.2**
JNN				*e*S	**Sn**	**02 33 05.2**	**+3.5**
JOW	**Kunigami**	**1.74**	**190**	P	**Pn**	**02 32 43.1**	**0.0**
JOW				*e*S	**Sn**	**02 33 06.5**	**+3.6**
JOW	**Kunigami**	**1.74**	**190**	P	**Pn**	**02 32 43.1**	**0.0**
16nm,0.3s,baz=102,slow=25,SNR=96
JOW S **Sn** **02 33 06.0** **+3.2**
203nm,0.3s,baz=125,slow=29,SNR=56
JAGN Aguni-jima 2.31 212 P **Pn** **02 32 49.9** **+0.1**
JAGN *e*S **Sn** **02 33 18.5** **+2.0**
JKC Kuchinoerabu 2.35 36 P **Pn** **02 32 50.2** **-0.1**
NAH1 Naha 2.48 199 P **Pn** **02 32 52.4** **+0.4**
NAH1 *e*S **Sn** **02 33 22.2** **+1.4**
JJT2 Tamagusuku 2 2.53 198 P **Pn** **02 32 53.2** **+0.6**
JJT2 *e*S **Sn** **02 33 24.0** **+2.2**
JKE Kume jima 2 2.75 217 P **Pn** **02 32 55.2** **-0.2**
JKE *e*S **Sn** **02 33 28.9** **+1.7**
JTN Tanegashima 3 2.94 44 P **Pn** **02 32 57.7** **0.0**
JTN *e*S **Sn** **02 33 31.5** **-0.2**
JSJ Shimokoshiki 3.26 17 P **Pn** **02 33 02.5** **+0.7**
JTSR Tashiro 2 3.29 37 P **Pn** **02 33 02.5** **+0.3**
JTZ Takazaki 3.96 32 P **Pn** **02 33 11.8** **+0.7**
KSRS Korea Array 8.89 356 P **Pn** **02 34 17.7** **+0.7**
0.2nm,0.3s,baz=178,slow=14,SNR=6.4
GTA Gaotai 26.11 302 *eP* **P 02 37 34.0** **+1.4**
GTA pP pP 02 37 37.3 -24
GTA sP sP 02 37 40.1 -38
GTA pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
MK31 Makanchi Array 40.27 310 *eP* **P 02 39 35.3** **+0.3**
MKAR Makanchi Array 40.27 310 P **P 02 39 35.5** **+0.5**
comp=Z,1.1nm,0.4s,mb3.8,baz=89,slow=9.9,SNR=20
ZAA0 Zalesovo Array 40.63 321 *eP* **P 02 39 37.0** **-0.8**
ZALV Zalesovo Beam 40.63 321 P **P 02 39 37.6** **-0.2**
comp=Z,1.8nm,0.4s,mb4.0,baz=103,slow=8.2,SNR=7.3
KURK Kurchatov 43.40 315 P **P 02 40 00.8** **+0.5**
comp=Z,2.3nm,0.5s,mb4.1,baz=101,slow=9.0,SNR=11
TKM2 Tokmak 2 44.65 303 *eP* **P 02 40 11.9** **+1.5**
comp=Z,2.2nm,0.6s,mb4.0
AAK Ala-Archa 45.46 303 *eP* **P 02 40 17.2** **+0.4**
comp=Z,1.9nm,0.4s,mb4.1
BVAR Borovoye Array 48.79 317 P **P 02 40 42.2** **-0.3**
comp=Z,1.9nm,0.4s,mb4.1,baz=98,slow=9.7,SNR=9.7
BRVK Borovoye 48.86 317 *eP* **P 02 40 43.0** **0.0**
comp=Z,2.1nm,0.4s,mb4.1
ASAR Alice Springs 52.17 174 P **P 02 41 08.1** **+0.1**
comp=Z,0.1nm,0.3s,mb2.9,baz=357,slow=6.6,SNR=3.0
ASAR PcP PcP 02 42 18.1 +0.2
comp=Z,0.2nm,0.6s,baz=339,slow=4.0,SNR=3.7
ABKAR Akbulak array 55.32 312 *eP* **P 02 41 30.8** **-0.1**
comp=Z,0.6nm,0.5s,mb3.6
INK Inuvik 66.63 24 *eP* **P 02 42 46.3** **-0.6**
comp=Z,0.9nm,0.5s,mb3.9
FINES FINESS Array B 71.02 330 P **P 02 43 13.2** **-0.8**
comp=Z,1.3nm,0.6s,mb3.9,baz=59,slow=5.6,SNR=21
RES Resolute Bay 73.21 11 *eP* **P 02 43 25.7** **-1.2**
comp=Z,0.9nm,0.7s,mb3.6
AKASG Malin Array Be 73.99 319 P **P 02 43 30.7** **-1.2**
comp=Z,1.0nm,0.5s,mb3.9,baz=60,slow=5.6,SNR=4.1
BR131 Keskin Array S 75.88 308 *eP* **P 02 43 43.0** **0.0**
comp=Z,0.3nm,0.5s,mb3.2
BRTR Keskin Array B 75.88 308 P **P 02 43 42.7** **-0.3**
comp=Z,0.7nm,0.7s,mb3.4,baz=118,slow=7.1,SNR=6.3
YKW3 Yellowknife Ar 76.24 25 *eP* **P 02 43 44.4** **-0.1**
YKA Yellowknife Ar 76.28 25 P **P 02 43 44.5** **-0.3**
comp=Z,0.9nm,0.5s,mb3.7,baz=303,slow=6.0,SNR=18
YKA Yellowknife Ar 76.28 25 P **P 02 43 44.5** **-0.3**
GERES GERESS Array B 83.56 323 P **P 02 44 23.4** **-0.8**
comp=Z,0.7nm,0.7s,mb3.5,baz=46,slow=4.1,SNR=7.8
FCC Fort Churchill 86.05 21 *eP* **P 02 44 35.1** **-1.4**
HLID Hailey 87.91 40 *eP* **P 02 44 46.9** **+1.1**
comp=Z,0.6nm,0.6s,mb3.6
NVAR Mina Array Bea 88.66 46 P **P 02 44 49.8** **+0.4**
comp=Z,0.1nm,0.4s,mb3.1,baz=289,slow=5.5,SNR=3.1
DUG Dugway 90.95 42 *eP* **P 02 45 00.5** **+0.4**
comp=Z,1.2nm,0.7s,mb4.0
PDAR Pinedale Array 91.14 39 P **P 02 45 01.5** **+0.6**
comp=Z,0.4nm,0.8s,mb3.5,baz=46,slow=2.6,SNR=3.1

HLW ***25*** *02:34:11.3, 34°.74N×32°.08E, h33km±43km, Md3.0*
ISCJB ***25*** *02:34:11.6±0.9, 34°.53N±0°.06×31°.95E±0°.06, h28km±8km, Error ellipse: s-maj=11.3km s-min=6.6km az=140.0*
ISK ***25*** *02:34:11.6, 34°.47N×32°.03E, h38km, MD3.3*
NIC ***25*** *02:34:12.8±0.1, 34°.54N×31°.91E, h25km, ML3.2, MW3.2*
NEIC ***25*** *02:34:12.8, 34°.54N×31°.91E, h25km, ML3.2(NIC), After NIC.*
CSEM ***25*** *02:34:12.9±0.3, 34°.57N×32°.04E, h24km±3km, Mw3.2, Error ellipse: s-maj=7.3km s-min=4.9km az=135.0*
ISC 25 02:34:12.9±0.9, 34°.56N±0°.06×32°.02E±0°.07, h25km±9km, n32, σ0§71/44, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.42**	**39**	P	**Pb**	**02 34 22.3**	**+0.5**
PPCY	**Paphos**	**0.42**	**39**	P	**Pb**	**02 34 22.3**	**+0.5**
SZAC	**Souni-Zanaja**	**0.74**	**74**	P	**Pb**	**02 34 27.0**	**-0.1**
24nm,0.1s							
SZAC	**Souni-Zanaja**	**0.74**	**74**	P	**Pb**	**02 34 27.0**	**-0.1**
24nm,0.1s							
ALFC	**Alevga**	**0.77**	**38**	P	**Pb**	**02 34 27.2**	**-0.4**
19nm,0.2s							
ALFC				S	**Sb**	**02 34 38.3**	**+0.7**
ALFC	**Alevga**	**0.77**	**38**	P	**Pb**	**02 34 27.2**	**-0.4**
19nm,0.2s							
ALFC				S	**Sb**	**02 34 38.3**	**+0.7**
LEF	**Lefka**	**0.91**	**52**	*e*PG	**Pb**	**02 34 29.3**	**-0.7**
LEF				*e*SG	**Sb**	**02 34 41.3**	**-0.4**
LEF	**Lefka**	**0.91**	**52**	*e*Pg	**Pb**	**02 34 29.3**	**-0.7**
LEF				*e*Sg	**Sb**	**02 34 41.3**	**-0.4**
CSS	**Prodhromos**	**1.15**	**69**	P	**Pn**	**02 34 32.9**	**-0.5**
2.4nm,0.2s							
CSS				S	**Sn**	**02 34 48.5**	**+0.1**
CSS	**Prodhromos**	**1.15**	**69**	*e*PN	**Pn**	**02 34 32.2**	**-1.3**
CSS				*e*SN	**Sn**	**02 34 47.1**	**-1.3**
CSS	**Prodhromos**	**1.15**	**69**	*e*Pn	**Pn**	**02 34 32.2**	**-1.2**
CSS	**Prodhromos**	**1.15**	**69**	P	**Pn**	**02 34 32.9**	**-0.5**
2.4nm,0.2s							
CSS				*e*Sn	**Sn**	**02 34 47.1**	**-1.3**
CSS				S	**Sn**	**02 34 48.5**	**+0.1**
LFK	**Lefkose**	**1.44**	**59**	*e*PN	**Pn**	**02 34 37.0**	**-0.4**
LFK	**Lefkose**	**1.44**	**59**	*e*Pn	**Pn**	**02 34 37.0**	**-0.4**
PHNC	**Paralimni**	**1.72**	**74**	P	**Pn**	**02 34 42.1**	**+0.9**
1.2nm,0.4s							
PHNC				S	**Sn**	**02 35 06.0**	**+3.7**
PHNC	**Paralimni**	**1.72**	**74**	P	**Pn**	**02 34 42.1**	**+0.9**
1.2nm,0.4s							
PHNC				S	**Sn**	**02 35 06.0**	**+3.7**
IKL	**Isikli**	**2.16**	**39**	*e*PN	**Pn**	**02 34 46.9**	**-0.4**
IKL	**Isikli**	**2.16**	**39**	*e*Pn	**Pn**	**02 34 46.9**	**-0.4**
HDMB	**Hadim**	**2.43**	**9**	*e*PN	**Pn**	**02 34 51.6**	**+0.6**
HDMB	**Hadim**	**2.43**	**9**	*e*Pn	**Pn**	**02 34 51.6**	**+0.6**
ELL	**Elmali**	**2.78**	**322**	*e*PN	**Pn**	**02 34 55.3**	**-0.6**
ELL	**Elmali**	**2.78**	**322**	*e*Pn	**Pn**	**02 34 55.3**	**-0.5**
KARA	**Karaisali**	**3.65**	**42**	*e*PN	**Pn**	**02 35 08.5**	**+0.7**
KARA	**Karaisali**	**3.65**	**42**	*e*Pn	**Pn**	**02 35 08.5**	**+0.7**
AMAG	**Maghara**	**4.03**	**165**	P	**Pn**	**02 35 13.1**	**+0.1**
baz=166							
AMAG	**Maghara**	**4.03**	**165**	P	**Pn**	**02 35 13.1**	**+0.1**
HNKL	**Nakhl**	**4.90**	**160**	P	**Pn**	**02 35 25.1**	**+0.1**
baz=160							
HNKL	**Nakhl**	**4.90**	**160**	P	**Pn**	**02 35 25.1**	**+0.1**
HMAT	**Matruh**	**5.39**	**232**	P	**Pn**	**02 35 32.7**	**+1.0**
baz=231							
HMAT				S	**Sn**	**02 36 29.3**	**-3.7**
baz=231							
HMAT	**Matruh**	**5.39**	**232**	P	**Pn**	**02 35 32.7**	**+0.9**
HMAT				S	**Sn**	**02 36 29.3**	**-3.8**
SWA2		**7.69**	**228**	P	**Pn**	**02 36 03.3**	**0.0**
baz=228							
SWA2		**7.69**	**228**	P	**Pn**	**02 36 03.3**	**-0.1**

IDC ***25*** *02:41:56.7±1.1, 31°.81N×104°.50E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.8/2, Error ellipse: s-maj=34.6km s-min=21.5km az=56.0*
NEIC ***25*** *02:41:58.1±0.5, 31°.86N×104°.65E, h10km, mb3.8/2, Error ellipse: s-maj=11.5km s-min=7.5km az=59.0*
BJI ***25*** *02:42:01.4, 31°.81N×104°.27E, h10km, ML3.5/9*
ISC 25 02:41:58.1±0.9, 31°.78N±0°.05×104°.56E±0°.05, h10km±8km, n21, σ0s87/27, mb3.5/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.10**	**219**	Pg	**Pg**	**02 42 19.0**	**-0.3**
CD2				Sg	**Sg**	**02 42 33.6**	**0.0**
CD2				smax			
comp=N,3μm,0.8s							
XAN	**Xi'an**	**4.31**	**57**	Pg	**Pg**	**02 43 21.0**	**+0.3**
XAN				Sg	**Sg**	**02 44 17.3**	**+0.8**
XAN				smax			
comp=N,110nm,0.6s							
XAN				smax			
comp=E,68nm,0.6s							
LZH	**Lanzhou**	**4.34**	**352**	*e*Pn	**Pn**	**02 43 07.1**	**+2.9**
LZH				Sn	**Sn**	**02 43 54.1**	**-0.7**
LZH				smax			
comp=N,50nm,0.7s							
LZH				smax			
comp=E,81nm,0.9s							
ENH	**Enshi**	**4.49**	**108**	*e*Pn	**Pn**	**02 43 05.4**	**-0.8**
ENH				*e*Pb	**Pb**	**02 43 17.0**	**-0.1**
ENH				*e*Pg	**Pg**	**02 43 22.4**	**-1.7**
GYA	**Guiyang**	**5.61**	**160**	Pn	**Pn**	**02 43 30.0**	**+8.4**
GYA				Sn	**Sn**	**02 44 36.0**	**+10**
GYA				smax			
comp=N,40nm,0.9s							
GYA				smax			
comp=E,40nm,0.7s							
CMAR	**Chiang Mai Arr**	**14.20**	**202**	Pn	**Pn**	**02 45 21.3**	**+2.0**
comp=E,0.3nm,0.3s,baz=12,slow=10,SNR=2.9							
SONM	**Songino Array**	**16.10**	**4**	Pn	**Pn**	**02 45 44.0**	**-0.5**
comp=E,0.2nm,0.3s,baz=215,slow=12,SNR=2.8							
KSRS	**Korea Array**	**20.03**	**67**	P	**P**	**02 46 32.3**	**+1.2**
comp=E,1.7nm,0.8s,baz=257,slow=9.9,SNR=9.1							
MK31	**Makanchi Array**	**22.74**	**318**	*e*P	**P**	**02 47 00.7**	**+0.5**
MKAR	**Makanchi Array**	**22.74**	**318**	P	**P**	**02 47 00.2**	**0.0**
comp=E,0.7nm,0.8s,mb3.1,baz=122,slow=14,SNR=4.9							
TKM2	**Tokmak 2**	**25.45**	**304**	*e*P	**P**	**02 47 25.9**	**-0.2**
comp=E,0.7nm,0.5s,mb3.5							
ZALV	**Zalesovo Beam**	**26.29**	**333**	P	**P**	**02 47 33.1**	**-0.5**
comp=E,0.6nm,0.3s,mb3.5,baz=146,slow=11,SNR=2.0							
ZALV	**Zalesovo Beam**	**26.29**	**333**	P	**P**	**02 47 33.1**	**-0.5**
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**02 47 39.7**	**+0.1**
comp=E,0.4nm,0.5s,mb3.2,baz=133,slow=8.3,SNR=3.5							
KURK	**Kurchatov**	**26.95**	**322**	P	**P**	**02 47 39.7**	**+0.1**
ARU	**Arti**	**40.14**	**322**	*e*P	**P**	**02 49 33.7**	**-0.3**
comp=E,1.7nm,0.6s,mb4.0							
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**02 51 44.2**	**-1.0**
comp=E,0.9nm,0.9s,mb3.8,baz=97,slow=9.8,SNR=4.7							
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	**02 51 44.2**	**-1.0**
ASAR	**Alice Springs**	**61.87**	**149**	P	**P**	**02 52 17.9**	**+0.2**
comp=E,0.3nm,0.5s,mb3.7,baz=334,slow=6.4,SNR=6.8							
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**02 54 12.2**	**-0.2**
comp=E,0.3nm,0.5s,mb3.5,baz=326,slow=5.1,SNR=5.2							
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**02 54 12.2**	**-0.2**

IDC ***25*** *02:46:14.3±2.6, 14°.21N×93°.11W, h0km, mb3.8/3, mb1 4.1/7, mb1mx3.8/23, mbtmp3.8/7, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/28, Error ellipse: s-maj=51.1km s-min=23.0km az=12.0*
CASC ***25*** *02:46:15.9±1.3, 13°.99N×93°.19W, h86km±59km, MD4.4, mb3.9(NEIC)*
ISCJB ***25*** *02:46:16.2±1.3, 14°.25N±0°.04×93°.13W±0°.03, h26km±11km, mb3.8/10, Error ellipse: s-maj=8.0km s-min=4.6km az=26.2*
NEIC ***25*** *02:46:18.9, 14°.25N×93°.17W, h13km, mb3.9/8, MD4.3(MEX), After MEX.*
MEX ***25*** *02:46:18.0±0.8, 14°.28N×93°.16W, h4km±22km, MD4.3*
ISC 25 02:46:16.5±1.7, 14°.28N±0°.05×93°.10W±0°.03, h12km±12km, n43, σ1s15/59, mb3.8/10, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.02**	**52**	*i* P	**Pb**	**02 46 35.7**	**-0.3**
THIG				*i* S	**Sb**	**02 46 49.7**	**+0.4**
JAT	**Jato**	**1.42**	**88**	*e*P	**Pn**	**02 46 42.2**	**+0.2**
PCIG		**1.42**	**355**	*i* P	**Pn**	**02 46 40.6**	**-1.5**
PCIG				*i* S	**Sn**	**02 46 57.9**	**-2.8**
TP2	**Tecpan 2**	**2.07**	**76**	*e*P	**Pn**	**02 46 52.1**	**+1.1**
CCIG	**Comitan**	**2.19**	**25**	*i* P	**Pn**	**02 46 54.0**	**+1.3**
CCIG				*i* S	**Sn**	**02 47 20.4**	**+0.6**
CCIG	**Comitan**	**2.19**	**25**	*e*P	**Pn**	**02 46 51.8**	**-0.9**
CCIG				*i* S	**Sn**	**02 47 20.4**	**+0.6**
SCX	**San Cristobal**	**2.48**	**10**	*i* P	**Pn**	**02 46 57.2**	**+0.6**
SCX				*i* S	**Sn**	**02 47 26.1**	**-0.8**
SCX	**San Cristobal**	**2.48**	**10**	*i* P	**Pn**	**02 46 57.2**	**+0.6**
SCX				*i* S	**Sn**	**02 47 26.1**	**-0.8**
TGIG		**2.48**	**359**	*e*P	**Pn**	**02 46 55.4**	**-1.3**
TGIG				*i* S	**Sn**	**02 47 26.2**	**-0.7**
IXG	**Ixpaco**	**2.56**	**92**	*e*P	**Pn**	**02 46 56.9**	**-0.9**
APG	**El Apazote**	**2.65**	**74**	Pn	**Pn**	**02 46 59.3**	**+0.3**
6.8nm,0.3s,baz=92,slow=24,SNR=66							
APG				Sn	**Sn**	**02 47 35.4**	**+4.4**
11nm,0.3s,baz=285,slow=18,SNR=5.5							
NBG	**Las Nubes**	**2.68**	**83**	*e*P	**Pn**	**02 47 00.8**	**+1.4**
HUIG	**Huatulco**	**3.26**	**297**	*i* P	**Pn**	**02 47 05.9**	**-1.6**
HUIG				*i* S	**Sn**	**02 47 37.8**	**-8.4**
HUIG	**Huatulco**	**3.26**	**297**	*i* P	**Pn**	**02 47 05.9**	**-1.6**
HUIG				*i* S	**Sn**	**02 47 43.8**	**-2.5**
CMIG	**Matias Romero**	**3.28**	**329**	Pn	**Pn**	**02 47 07.5**	**-0.2**
3.3nm,0.3s,baz=138,slow=11,SNR=41							
CMIG				Sn	**Sn**	**02 47 49.3**	**+2.6**
11nm,0.3s,baz=266,slow=5.1,SNR=8.2							
RBDL	**Robledal**	**3.31**	**92**	*e*P	**Pn**	**02 47 07.1**	**-1.0**
RTR	**El Retiro**	**3.37**	**96**	*e*P	**Pn**	**02 47 08.2**	**-0.7**
RTR				*e*S	**Sn**	**02 47 48.0**	**-0.8**
MRL	**Marmol**	**3.39**	**76**	*e*P	**Pn**	**02 47 09.5**	**+0.4**
SBLS	**San Blas**	**3.40**	**97**	*e*P	**Pn**	**02 47 08.9**	**-0.4**
SBLS				*e*S	**Sn**	**02 47 50.8**	**+1.2**
LFRS	**El Faro**	**3.97**	**99**	*e*P	**Pn**	**02 47 16.1**	**-1.0**
VHO	**Vista Hermosa**	**4.47**	**309**	*i* P	**Pn**	**02 47 24.2**	**+0.2**
VHO				*i* S	**Sn**	**02 48 15.2**	**-0.8**
VHO	**Vista Hermosa**	**4.47**	**309**	*i* P	**Pn**	**02 47 24.2**	**+0.2**
VHO				*i* S	**Sn**	**02 48 15.2**	**-0.8**
PNIG	**Pinotepa**	**5.29**	**294**	*e*P	**Pn**	**02 47 35.2**	**-0.1**
PNIG				*i* S	**Sn**	**02 48 40.7**	**+4.5**
PNIG	**Pinotepa**	**5.29**	**294**	*e*P	**Pn**	**02 47 35.2**	**-0.1**
PNIG				*i* S	**Sn**	**02 48 40.7**	**+4.5**
UTMO	**Huajuapan**	**5.74**	**309**	*e*P	**Pn**	**02 47 47.9**	**+6.4**
UTMO				*i* S	**Sn**	**02 48 55.8**	**+8.5**
TPIG	**Tehuac#an**	**5.80**	**316**	*i* S	**Sn**	**02 48 56.3**	**+7.4**
TEIG	**Tepich**	**7.49**	**37**	Pn	**Pn**	**02 48 05.6**	**0.0**
baz=112,slow=0.0							
TEIG				LR	LR	02 51 23.8	
comp=Z,176nm,21.6s,baz=313,slow=41							
TXAR	**Lajitas Array**	**17.89**	**329**	P	**Pn**	**02 50 26.1**	**+0.9**
0.0nm,0.3s,baz=149,slow=16,SNR=11							
GDL2	**Guadalupe Moun**	**20.60**	**332**	*e*P	**P**	**02 50 58.0**	**+2.5**
9.3nm,1.1s							
MNTX	**Cornudas Mount**	**20.67**	**329**	*e*P	**P**	**02 50 57.5**	**+1.3**
2.1nm,0.9s							
WMOK	**Wichita Mounta**	**21.00**	**347**	*e*P	**P**	**02 51 01.9**	**+2.1**
1.5nm,0.6s,mb3.5							
CPRX	**Cap Rock**	**21.08**	**334**	*e*P	**P**	**02 51 01.1**	**+0.4**
3.8nm,0.9s,mb3.7							
TKL	**Tuckaleechee C**	**22.88**	**20**	LR	LR	03 03 09.5	
comp=Z,71nm,18.9s,baz=252,slow=44							
TUC	**Tucson**	**24.14**	**321**	*e*P	**P**	**02 51 32.6**	**+0.2**
1.1nm,0.6s,mb3.5							
PDAR	**Pinedale Array**	**31.73**	**337**	P	**P**	**02 52 40.4**	**+0.2**
0.5nm,1.0s,mb3.3,baz=131,slow=11,SNR=2.7							
NVAR	**Mina Array Bea**	**32.79**	**322**	P	**P**	**02 52 51.2**	**+1.7**
1.3nm,0.7s,mb4.0,baz=130,slow=8.4,SNR=14							
NVAR	**Mina Array Bea**	**32.79**	**322**	P	**P**	**02 52 51.2**	**+1.7**
TPAW	**Teton Pass**	**32.89**	**336**	*e*P	**P**	**02 52 52.8**	**+2.5**
4.7nm,1.1s,mb4.3							
YKA	**Yellowknife Ar**	**50.51**	**347**	P	**P**	**02 55 13.5**	**-0.7**
2.3nm,0.7s,mb4.2,baz=152,slow=7.3,SNR=38							
YKW3	**Yellowknife Ar**	**50.58**	**347**	*e*P	**P**	**02 55 13.6**	**-1.1**
0.1nm,0.7s,mb2.9							
INK	**Inuvik**	**59.87**	**344**	*e*P	**P**	**02 56 20.8**	**-0.9**
2.0nm,0.8s,mb4.2							
RES	**Resolute Bay**	**60.41**	**359**	*e*P	**P**	**02 56 23.3**	**-2.0**
1.1nm,0.7s,mb4.0							
CMAR	**Chiang Mai Arr**	**145.37**	**340**	PKPbc	PKPbc	03 05 54.0	-1.1
1.4nm,0.5s,baz=347,slow=3.7,SNR=4.1							

MAN 25 02:57:00, 16°.59N×122°.26E, h25km, mb4.2, ML3.0, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.50**	**19**	*e*P	Pb	02 57 10.4	+0.2
PALP				*e*S	Sb	02 57 21.6	+4.5
CAUP	**Cauayan**	**0.55**	**310**	*e*P	Pb	02 57 12.5	+1.6
CAUP				*e*S	Sb	02 57 20.9	+2.4
BALP	**Baler**	**1.07**	**218**	*e*P	Pn	02 57 18.7	-0.7
BALP				*e*S	Sb	02 57 31.7	-1.7
PCPH	**Palayan**	**1.51**	**228**⇑	*e*P	Pn	02 57 26.5	+1.0
APYP	**Conner**	**1.59**	**323**	*e*P	Pn	02 57 29.3	+2.7

MAN 25 02:58:17, 13°.92N×120°.52E, h65km, mb4.4, ML3.2, MS3.1, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.32**	**236**	*e*P	Pn	02 58 31.0	+3.2
LUBP				*e*S	Sn	02 58 40.1	+4.5
TGY	**Tagaytay City**	**0.44**	**65**⇓	*i*P	Pn	02 58 33.1	+4.2
PGP	**Puerto Galera**	**0.59**	**134**	*e*P	Pn	02 58 33.2	+2.9
SJMP	**San Jose**	**1.56**	**158**	*e*P	Pn	02 58 45.4	+2.8
SJMP				*e*S	Sn	02 58 57.5	-4.5
PCPH	**Palayan**	**1.73**	**19**⇓	*e*P	Pn	02 58 46.0	+1.1
BUSP	**Coron**	**1.93**	**189**	*e*P	Pn	02 58 48.7	+1.1
BALP	**Baler**	**2.08**	**29**	*e*P	Pn	02 58 52.7	+3.0
BOLP	**Bolinao**	**2.52**	**347**	*e*P	Pn	02 58 57.2	+1.6
PALP	**Palanan**	**3.63**	**30**	*e*P	Pn	02 59 14.1	+3.4
APYP	**Conner**	**3.98**	**10**	*e*P	Pn	02 59 18.2	+2.6

DJA 25 03:05:46, 4°.44S×122°.30E, h39km, MLv3.5/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.57**	**34**	P	Pn	03 05 59.2	+1.4
TTSI	**Tana Toraja**	**2.84**	**299**	P	Pn	03 06 29.4	+0.6
LUWI	**Luwuk**	**3.41**	**8**	P	Pn	03 06 38.6	+1.9
APSI	**Ampana**	**3.56**	**349**	P	Pn	03 06 39.3	+0.4

CASC 25 03:09:40.0±2.1, 8°.49N×83°.07W, h13km±18km, MD3.6, 2C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.48**	**51**⇓	*i*P	Pg	03 09 49.7	+0.2
BRU2				*e*S	Sg	03 09 57.5	+1.6
TBS2		**0.51**	**53**	*e*P	Pg	03 09 51.6	+1.6
TBS2				*e*S	Sg	03 09 59.0	+2.2
BAR1		**0.79**	**342**⇓	*e*P	Pg	03 09 54.7	-0.6
BAR1				*e*S	Sg	03 10 06.5	+0.9
CNI	**Changuinola**	**1.07**	**31**⇑	*i*P	Pb	03 09 59.3	-1.2
CNI				*e*S	Sb	03 10 12.4	-1.9
BUS	**Buena Vista**	**1.26**	**327**	*e*P	Pn	03 10 02.4	-0.9
BUS				*e*S	Sb	03 10 19.6	-0.2
QCR	**Quepos**	**1.43**	**311**⇑	*e*P	Pn	03 10 05.0	-0.6
QCR				*e*S	Sn	03 10 24.4	+0.1
PRS1	**Puriscal**	**1.93**	**321**	*e*P	Pn	03 10 11.9	-0.6
CGA2	**Cerro Gallo 2**	**2.05**	**318**	*e*P	Pn	03 10 14.0	-0.2

NEIC ***25*** *03:14:42.8, 18°.71N×105°.57W, h10km, MD3.8(MEX), After MEX.*
MEX 25 03:14:42.8±0.6, 18°.71N×105°.57W, h10km, MD3.8, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.93**	**32**	*i* P	Pg	03 14 57.6	-3.1
CJM				*i* S	Sg	03 15 09.8	-3.1
CJM	**Chamela**	**0.93**	**32**	*i* P	Pg	03 14 57.6	-3.1
CJM				*i* S	Sg	03 15 09.8	-3.1
MMIG	**Aquila**	**2.15**	**101**	*e*P	Pn	03 15 15.3	-3.3
MMIG				*i* S	Sn	03 15 41.3	-4.1
ANIG	**Ahuacatlan**	**2.54**	**23**	*i* P	Pn	03 15 22.1	-1.9
ANIG				*i* S	Sn	03 15 52.0	-2.9
SFJM	**Santa Fe**	**2.97**	**53**	*e*P	Pn	03 15 27.5	-2.5
SFJM				*i* S	Sn	03 16 01.3	-4.4
SFJM	**Santa Fe**	**2.97**	**53**	*e*P	Pn	03 15 27.5	-2.5
SFJM				*i* S	Sn	03 16 01.3	-4.4
ZIIG	**Zihuatanejo**	**4.05**	**105**	*e*P	Pn	03 15 42.5	-2.4
ZIIG				*i* S	Sn	03 16 28.6	-3.7
ZIIG	**Zihuatanejo**	**4.05**	**105**	*e*P	Pn	03 15 42.5	-2.4
ZIIG				*i* S	Sn	03 16 28.6	-3.7
CAIG	**El Cayaco**	**5.31**	**107**	*e*P	Pn	03 16 00.1	-2.1
CAIG	**El Cayaco**	**5.31**	**107**	*e*P	Pn	03 16 00.1	-2.1
UTMO	**Huajuapan**	**7.43**	**96**	*i* P	Pn	03 16 32.8	+1.5
CGIG		**11.81**	**350**	*e*P	Pn	03 17 52.8	+21
CGIG				*i* S	Sn	03 19 56.1	+13

MAN 25 03:17:22, 13°.89N×120°.51E, h60km, mb4.0, ML2.8, MS2.4, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.30**	**240**	*e*P	Pn	03 17 35.1	+3.0
LUBP				*e*S	Sn	03 17 43.5	+4.1
PGP	**Puerto Galera**	**0.57**	**131**	*e*P	Pn	03 17 37.4	+2.6
SJMP	**San Jose**	**1.54**	**157**	*e*P	Pn	03 17 49.6	+2.4
SJMP				*e*S	Sn	03 18 00.6	-5.5
BUSP	**Coron**	**1.90**	**189**	*e*P	Pn	03 17 53.2	+1.2
BALP	**Baler**	**2.11**	**29**	*e*P	Pn	03 17 56.8	+1.8

NIED ***25*** *03:25:00, 46°.90N×153°.50E, h11km, Mw4.5 Best double couple: M0=5.31000×10^15 NP1:φs=30.00000°, δ51.00000°, λ124.00000°. NP2:φs=162.00000°, δ50.00000°, λ55.00000°.*
IDC ***25*** *03:25:34.4±0.6, 46°.61N×153°.43E, h0km, mb4.4/25, mb1 4.5/27, mb1mx4.5/29, mbtmp4.3/27, ML3.5/2, MS4.0/12, Ms1 4.0/12, ms1mx3.5/44, Error ellipse: s-maj=17.9km s-min=13.0km az=159.0*
SZGRF ***25*** *03:25:37.2, 46°.60N×156°.23E, h33km, mb4.7, East of Kuril Islands, Russia*
ISCJB ***25*** *03:25:38.3±0.2, 46°.46N±0°.04×153°.43E±0°.03, h40km, mb4.6/143, MS4.1/29, Error ellipse: s-maj=6.0km s-min=2.6km az=155.3*
BJI ***25*** *03:25:38.6, 46°.74N×153°.34E, h36km, mB4.8/25, mb4.6/31, Ms4.3/26, Ms7 4.1/25*
MOS ***25*** *03:25:38.1±1.0, 46°.59N×153°.35E, h34km, mb4.9/57, Error ellipse: s-maj=7.9km s-min=5.2km az=101.2*
NEIC ***25*** *03:25:38.2±1.2, 46°.52N×153°.34E, h26km±8km, mb4.7/86, Error ellipse: s-maj=5.4km s-min=3.0km az=161.0*
SKHL ***25*** *03:25:38.5±1.8, 46°.64N×153°.74E, h51km±20km, mb5.3/1, Ms4.3/2, msh5.2/2*
ISC 25 03:25:40.7±0.2, 46°.55N±0°.04×153°.37E±0°.04, h42km, h42km±.7km:pP-P, n364, σ0s99/383, mb4.6/143, MS4.1/29, 15C-15D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.06**	**253**	*e*PN	**Pn**	**03 26 41.5**	**+1.3**
KUR				*e*S	**Sn**	**03 27 29.5**	**+3.0**
KUR				pmax	pmax		
comp=N,210nm,0.6s							
KUR				pmax	pmax		
comp=E,150nm,0.6s							
KUR				pmax	pmax		
comp=Z,460nm,0.6s							
KUR				smax			
comp=N,860nm,0.8s							
KUR				smax			
comp=E,540nm,0.8s							
KUR	**Kuril'sk**	**4.06**	**253**	*e*P	**Pn**	**03 26 41.5**	**+1.3**
KUR				AMB	AMB	03 26 46.5	
comp=E,210nm,0.6s							
KUR				AMB	AMB	03 26 46.5	
comp=E,150nm,0.6s							
KUR				AMB	AMB	03 26 46.5	
comp=E,460nm,0.6s							
KUR				*e*S	**Sn**	**03 27 29.5**	**+3.0**
KUR				A		03 27 38.0	
comp=E,860nm,0.8s							
KUR				A		03 27 38.0	
comp=E,540nm,0.8s							
KUR				A		03 27 50.0	
comp=E,3μm,2.0s							
KUR				A		03 27 50.0	
comp=E,2μm,2.0s							
SKR	**Severo-Kuril's**	**4.52**	**23**	*e*PN	**Pn**	**03 26 41.5**	**-5.0**
SKR				pmax	pmax		
comp=Z,270nm,1.0s							
SKR				pmax	pmax		
comp=N,80nm,0.4s							
SKR				pmax	pmax		
comp=E,220μm,1.0s							
SKR				MLR	MLR		
comp=E,3μm,16.0s							
SKR				MLR	MLR		
comp=Z,2μm,16.0s							
SKR	**Severo-Kuril's**	**4.52**	**23**	*e*P	**Pn**	**03 26 41.5**	**-5.0**
SKR				AMB	AMB	03 26 45.2	
comp=Z,80nm,0.4s							
SKR				AMB	AMB	03 26 45.2	
comp=Z,220nm,1.0s							
SKR				AMB	AMB	03 26 45.2	
comp=Z,270nm,1.0s							
SKR				*e*S	**Sn**	**03 27 29.6**	**-8.2**
SKR				A		03 27 40.0	
comp=Z,3μm,8.0s							
SKR				A		03 27 40.0	
comp=Z,2μm,8.0s							
SKR				A		03 27 46.5	
comp=Z,460nm,0.9s							
SKR				A		03 27 46.5	
comp=Z,220nm,0.9s							
SKR				A		03 27 46.5	
comp=Z,200nm,0.9s							
SKR				AMS	AMS	03 28 36.0	
comp=Z,3μm,16.0s							
SKR				AMS	AMS	03 28 36.0	
comp=Z,2μm,16.0s							
YUK	**Yuzh-Kuril'sk**	**5.86**	**247**	*e*P	**Pn**	**03 27 06.7**	**+1.7**
YUK				AMB	AMB	03 27 07.6	
comp=Z,270nm,0.5s							
NEM2	**Nemuro 2**	**6.28**	**242**	P	**Pn**	**03 27 08.9**	**-1.8**
NEM2				*e*S	**Sn**	**03 28 17.8**	**-3.2**
JRA	**Rausu**	**6.38**	**249**	P	**Pn**	**03 27 13.0**	**+0.9**
JNK	**Nakash**	**6.80**	**247**	P	**Pn**	**03 27 18.3**	**+0.4**
JAK	**Akkeshi**	**7.12**	**243**	P	**Pn**	**03 27 20.7**	**-1.5**
JAK				*e*S	**Sn**	**03 28 37.4**	**-4.3**
PEA0B	**Petropavlovsk-**	**7.14**	**22**	*e*Pn	**Pn**	**03 27 22.3**	**-0.1**
PETK	**Petropavlovsk-**	**7.14**	**22**	Pn

TYV				AMB	AMB	03 27 44.8	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	03 27 44.8	
	comp=Z,39nm,1.0s						
TYV				AMB	AMB	03 27 44.8	
	comp=Z,44nm,1.0s						
TYV				*e*S	**Sn**	**03 29 15.8**	**+5.3**
TYV				A		03 29 20.0	
	comp=Z,22nm,1.0s						
TYV				AMS	AMS	03 31 09.0	
	comp=Z,1μm,16.0s						
TYV				AMS	AMS	03 31 09.0	
	comp=Z,1μm,16.0s						
TYV				AMS	AMS	03 31 09.0	
	comp=Z,2μm,16.0s						
JFR	**Furan**	**8.37**	**250**	P	**Pn**	**03 27 41.4**	**+2.1**
ERM	**Erimo**	**8.61**	**242**	*e*PN	**Pn**	**03 27 41.8**	**-0.9**
ERM	**Erimo**	**8.61**	**242**	*e*Pn	**Pn**	**03 27 41.9**	**-0.8**
JNBK	**Urakawa-nobuka**	**8.71**	**244**	P	**Pn**	**03 27 42.4**	**-1.6**
JEW	**Eniwo**	**9.26**	**251**	P	**Pn**	**03 27 51.6**	**0.0**
JNB	**Noboribetsu**	**9.71**	**250**	P	**Pn**	**03 27 57.6**	**0.0**
JNB				*e*S	**Sn**	**03 29 43.2**	**-2.0**
JKB	**Kayabe**	**10.00**	**247**	P	**Pn**	**03 27 59.9**	**-1.8**
JKB				*e*S	**Sn**	**03 29 46.4**	**-6.1**
JYM2	**Yakumo 2**	**10.31**	**249**	P	**Pn**	**03 28 05.4**	**-0.5**
NKL	**Nikolayevsk**	**10.51**	**314**	*e*P	**Pn**	**03 28 06.7**	**-1.9**
NKL				AMB	AMB	03 28 10.0	
	comp=Z,26nm,1.0s						
NKL				AMB	AMB	03 28 10.0	
	comp=Z,40nm,1.0s						
NKL				AMB	AMB	03 28 12.0	
	comp=Z,400nm,5.5s						
NKL				*e*L		03 31 12.0	
NKL				AMS	AMS	03 33 26.0	
	comp=Z,1μm,15.0s						
NKL				AMS	AMS	03 33 26.0	
	comp=Z,600nm,15.0s						
NKL				AMS	AMS	03 33 26.0	
	comp=Z,2μm,15.0s						
JANG	**Nango**	**10.59**	**239**	P	**Pn**	**03 28 05.8**	**-4.0**
JANG				*e*S	**Sn**	**03 29 57.7**	**-9.3**
JTM	**Tenmabayashi**	**10.60**	**242**	P	**Pn**	**03 28 07.5**	**-2.4**
JTH	**Tanohata**	**10.67**	**236**	*e*S	**Sn**	**03 29 58.2**	**-11**
JOSM	**Okushiri–Mats**	**10.91**	**251**	P	**Pn**	**03 28 13.1**	**-1.0**
OFUJ	**Ofunato**	**11.37**	**233**	*e*S	**Sn**	**03 30 15.1**	**-11**
JRG	**Rokugo**	**11.74**	**237**	P	**Pn**	**03 28 22.1**	**-3.4**
JIO	**Ouri**	**11.99**	**232**	*e*S	**Sn**	**03 30 31.0**	**-10**
HABR	**Khabarovsk**	**12.53**	**285**	*e*PN	**Pn**	**03 28 34.6**	**-1.7**
HABR				pmax	pmax		
	comp=E,29nm,1.3s						
HABR				pmax	pmax		
	comp=N,15nm,1.1s						
HABR				pmax	pmax		
	comp=Z,31nm,1.2s						
HABR				MLR	MLR		
	comp=Z,613nm,16.0s						
KLR	**Kul'dur**	**14.74**	**288**	*e*P	**Pn**	**03 29 05.0**	**-1.2**
KLR				MLR	MLR		
	comp=E,700nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
MJAR	**Matsushiro Arr**	**15.10**	**234**	Pn	**Pn**	**03 29 07.9**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=30,slow=11,SNR=7.9						
MAJO	**Matsushiro**	**15.10**	**234**	*e*P	**Pn**	**03 29 08.5**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,21nm,0.7s						
MAJO	**Matsushiro**	**15.10**	**234**	*e*Pn	**Pn**	**03 29 08.5**	**-2.5**
	comp=Z,21nm,0.7s						
MAT	**Matsushiro**	**15.10**	**234**	P	**Pn**	**03 29 07.3**	**-3.7**
VLA	**Vladivostok**	**15.61**	**265**	P	**Pn**	**03 29 17.0**	**-0.5**
VLA				pmax	pmax		
	comp=Z,35nm,1.1s						
VLA				MLR	MLR		
	comp=Z,300nm,16.3s						
SEY	**Seymchan**	**16.43**	**358**	*ce*P	**Pn**	**03 29 27.7**	**-0.2**
MDJ	**Mudanjiang**	**16.74**	**272**	P	**Pn**	**03 29 32.1**	**+0.1**
MDJ				pP	pP	03 29 44.3	+0.4
MDJ				sP	sP	03 29 49.5	+0.2
MDJ				S	**S**	**03 32 39.5**	**-6.7**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,75nm,14.0s						
MDJ				LR	LR		
	comp=N,230nm,17.4s						
MDJ				LR	LR		
	comp=E,250nm,17.1s						
MDJ				LR	LR		
	comp=Z,360nm,17.1s						
ZEA	**Zeya**	**18.15**	**303**	*e*P	**Pn**	**03 29 55.3**	**+6.1**
ZEA				AMB	AMB	03 30 06.1	
	comp=Z,37nm,1.4s						
CN2	**Changchun**	**19.83**	**272**	*e*P	**Pn**	**03 30 09.3**	**-0.2**
CN2				*ep*P	pP	03 30 18.9	+0.9
CN2				*e*S	**S**	**03 33 44.8**	**-3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,17.0s						
CN2				LR	LR		
	comp=E,400nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
YAK	**Yakutsk**	**20.58**	**327**	*e*P	**P**	**03 30 24.0**	**+8.3**
YAK				*e**PP		03 30 32.2	
YAK				*e*		03 30 43.5	
YAK				*e*		03 34 29.7	
YAK				*e*SS		03 34 41.2	
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,55nm,2.5s						
YAK				pmax	pmax		
	comp=N,16nm,1.9s						
YAK				pmax	pmax		
	comp=E,28nm,2.0s						
YAK				MLR	MLR		
	comp=Z,208nm,18.0s,MS3.5						
YAK				MLR	MLR		
	comp=N,335nm,18.0s,MS3.8						
YAK				MLR	MLR		
	comp=E,156nm,16.0s,MS3.8						
YAK	**Yakutsk**	**20.58**	**327**	*e*P	**P**	**03 30 15.6**	**-0.1**
	comp=E,25nm,0.7s						
KSRS	**Korea Array**	**20.91**	**253**	P	**P**	**03 30 20.7**	**+1.3**
	comp=E,14nm,0.9s,baz=58,slow=10,SNR=33						
KSRS				LR	LR	03 37 10.4	
	comp=E,122nm,20.7s,MS3.3,baz=60,slow=33						
KSRS	**Korea Array**	**20.91**	**253**	P	**P**	**03 30 20.7**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,14nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,122nm,20.7s,MS3.3						
SNY	**Shenyang**	**21.80**	**268**	⇓P	**P**	**03 30 29.8**	**+0.8**
SNY				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
SNY				pmax	pmax		
	comp=Z,99nm,4.5s						
SNY				LR	LR		
	comp=N,260nm,16.9s						
SNY				LR	LR		
	comp=Z,290nm,16.3s,MS3.8						
BILL	**Bilibino**	**22.55**	**13**	*e*P	**P**	**03 30 35.3**	**-1.3**
BILL				*e*S	**S**	**03 34 42.1**	**+0.9**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.4						
BILL	**Bilibino**	**22.55**	**13**	*e*P	**P**	**03 30 36.0**	**-0.6**
	comp=Z,11nm,0.8s,mb4.3						
DL2	**Dalian**	**24.41**	**263**	P	**P**	**03 30 57.1**	**+2.1**
DL2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
BOD	**Bodaibo**	**26.25**	**310**	*e*P	**P**	**03 31 08.6**	**-2.9**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.0						
BJI	**Beijing**	**27.65**	**270**	P	**P**	**03 31 22.9**	**-1.4**
BJI				S	**S**	**03 35 56.0**	**-7.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
BJI				pmax	pmax		
	comp=Z,80nm,5.4s						
BJI				LR	LR		
	comp=N,180nm,15.9s,MS4.1						
BJI				LR	LR		
	comp=E,340nm,14.9s,MS4.1						
BJI				LR	LR		
	comp=Z,170nm,17.2s,MS3.7						
TIXI	**Tiksi**	**27.71**	**344**	*e*P	**P**	**03 31 22.7**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb3.9						
HHC	**Hu-ho-hao-te**	**30.48**	**275**	⇑P	**P**	**03 31 50.5**	**+1.1**
HHC				pP	pP	03 32 02.5	+1.7
HHC				sP	sP	03 32 07.9	+2.1
HHC				PP	PP	03 32 51.8	-6.8
HHC				PcP	PcP	03 34 47.8	+0.1
HHC				S	**S**	**03 36 48.3**	**+0.7**
HHC				sS	sS	03 37 07.8	+1.1
HHC				ScP	ScP	03 38 27.1	+0.5
HHC				ScS	ScS	03 42 20.8	-1.9
HHC				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				LR	LR		
	comp=N,240nm,12.6s,MS4.1						
HHC				LR	LR		
	comp=E,200nm,13.6s,MS4.1						
HHC				LR	LR		
	comp=Z,270nm,14.9s,MS4.0						
ULN	**Ulaanbaatar**	**31.13**	**290**	*e*P	**P**	**03 31 54.2**	**-0.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**31.13**	**290**	*e*P	**P**	**03 31 54.2**	**-0.8**
	comp=Z,8.9nm,1.1s,mb4.5						
SONM	**Songino Array**	**31.57**	**290**	P	**P**	**03 31 57.4**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.7,baz=52,slow=9.3,SNR=3.2						
SONM				PcP	PcP	03 34 51.0	+0.5
	comp=Z,1.4nm,0.9s,baz=116,slow=3.4,SNR=4.9						
SONM				LR	LR	03 45 53.5	
	comp=Z,342nm,18.1s,MS4.1,baz=180,slow=39						
SONM	**Songino Array**	**31.57**	**290**	P	**P**	**03 31 57.4**	**-1.5**
SONM						03 34 51.0	
TLY	**Talaya**	**32.43**	**298**	*e*P	**P**	**03 32 06.8**	**+0.4**
TLY				*e*S	**S**	**03 37 25.7**	**+7.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
TLY				MLR	MLR		
	comp=Z,410nm,15.0s,MS4.2						
ZAK	**Zakamensk**	**32.92**	**295**	*e*P	**P**	**03 32 10.0**	**-0.7**
ZAK				*e*		03 34 54.6	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
WHN	**Wuhan**	**34.05**	**256**	P	**P**	**03 32 21.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**34.80**	**39**	*e*P	**P**	**03 32 26.8**	**-0.1**
	comp=Z,9.9nm,1.4s,mb4.5						
KTH	**Kantishna Hill**	**34.80**	**40**	*e*P	**P**	**03 32 26.9**	**0.0**
	comp=Z,27nm,1.4s,mb5.0						
COLD	**Coldfoot**	**35.40**	**34**	*e*P	**P**	**03 32 31.9**	**0.0**
	comp=Z,5.1nm,0.8s,mb4.5						
MCK	**McKinley**	**35.69**	**40**	*e*P	**P**	**03 32 33.7**	**-0.8**
MCK				*e**PP	pP	03 32 44.9	-1.1
MCK				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
MCK	**McKinley**	**35.69**	**40**	*e*P	**P**	**03 32 33.7**	**-0.9**
	comp=Z,14nm,1.4s,mb4.7						
MCK				*ep*P	pP	03 32 44.9	-1.2
COLA	**College**	**36.19**	**38**	*e*P	**P**	**03 32 38.5**	**-0.2**
COLA				*e**PP	pP	03 32 50.2	-0.1
COLA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
COLA	**College**	**36.19**	**38**	*e*P	**P**	**03 32 38.5**	**-0.3**
	comp=Z,12nm,1.0s,mb4.8						
COLA				*ep*P	pP	03 32 50.2	0.0
LZH	**Lanzhou**	**38.07**	**272**	*e*P	**P**	**03 32 56.8**	**+1.7**
LZH				pP	pP	03 33 09.0	+2.4
LZH				sP	sP	03 33 14.9	+3.3
LZH				PP	PP	03 34 30.0	+7.5
LZH				PcP	PcP	03 35 11.6	+2.1
LZH				*e*S	**S**	**03 38 45.3**	**+0.6**
LZH				sS	sS	03 39 03.5	-0.5
LZH				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.1						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=N,420nm,14.5s						
LZH				LR	LR		
	comp=Z,700nm,15.1s,MS4.6						
EGAK	**Eagle**	**39.05**	**38**	*e*P	**P**	**03 33 02.1**	**-0.8**
	comp=Z,15nm,1.4s,mb4.5						
EGAK				*ep*P	pP	03 33 13.7	-0.8
GTA	**Gaotai**	**39.17**	**279**	P	**P**	**03 33 05.9**	**+1.6**
GTA				pP	pP	03 33 18.4	+2.5
GTA				sP	sP	03 33 23.6	+2.7
GTA				PP	PP	03 34 42.8	+8.3
GTA				PcP	PcP	03 35 14.5	+1.6
GTA				S	**S**	**03 39 06.1**	**+4.8**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
GTA				pmax	pmax		
	comp=Z,77nm,4.2s						
GTA				LR	LR		
	comp=N,560nm,12.5s,MS4.8						
GTA				LR	LR		
	comp=E,840nm,12.8s,MS4.8						
GTA				LR	LR		
	comp=Z,310nm,16.1s,MS4.2						
CD2	**Chengdu**	**41.04**	**266**	P	**P**	**03 33 20.6**	**+0.8**
CD2				pP	pP	03 33 30.4	-1.1
CD2				sP	sP	03 33 34.3	-2.2
CD2				PP	PP	03 34 58.9	+4.0
CD2				S	**S**	**03 39 29.8**	**+0.5**
CD2				sS	sS	03 39 45.8	-2.9
CD2				SS	SS	03 42 27.6	-4.8
CD2				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,90nm,3.9s						
CD2				LR	LR		
	comp=N,170nm,7.1s						
CD2				LR	LR		
	comp=Z,210nm,8.3s						
INK	**Inuvik**	**41.73**	**32**	P	**P**	**03 33 25.0**	**0.0**
	comp=Z,2.1nm,0.6s,mb3.9,baz=270,slow=6.9,SNR=7.8						
INK	**Inuvik**	**41.73**	**32**	*e*P	**P**	**03 33 25.3**	**+0.3**
INK				*e**PP	pP	03 33 36.6	-0.1
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**41.73**	**32**	*e*P	**P**	**03 33 25.3**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.1						
INK				*ep*P	pP	03 33 36.6	-0.1
GYA	**Guiyang**	**41.84**	**258**	*i*P	**P**	**03 33 27.8**	**+1.3**
GYA				pP	pP	03 33 38.5	+0.3
GYA				sP	sP	03 33 45.3	+2.2
GYA				PP	PP	03 35 05.0	+1.3
GYA				PcP	PcP	03 35 23.1	+1.3
GYA				ScP	ScP	03 39 07.8	-0.7
GYA				S	**S**	**03 39 40.8**	**-0.5**
GYA				sS	sS	03 40 00.8	0.0
GYA				SS	SS	03 42 40.8	-7.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
GYA				LR	LR		
	comp=N,480nm,16.8s,MS4.6						
GYA				LR	LR		
	comp=E,420nm,17.2s,MS4.6						
GYA				LR	LR		
	comp=Z,530nm,17.6s,MS4.5						
ZALV	**Zalesovo Beam**	**42.87**	**306**	P	**P**	**03 33 32.9**	**-1.6**
	comp=Z,1.1nm,0.5s,mb3.9,baz=75,slow=6.9,SNR=5.6						
ZALV				PcP	PcP	03 35 25.3	+0.6
	comp=Z,0.7nm,0.3s,baz=90,slow=2.9,SNR=5.9						
ZALV				LR	LR	03 52 35.1	
	comp=Z,213nm,19.4s,MS4.0,baz=59,slow=38						
ZALV	**Zalesovo Beam**	**42.87**	**306**	P	**P**	**03 33 32.9**	**-1.6**
ZALV						03 35 25.3	
ZALV	**Zalesovo Beam**	**42.87**	**306**	P	**P**	**03 33 32.9**	**-1.6**
ZALV				PcP	PcP	03 35 25.3	+0.6
ZALV				LR	LR	03 52 35.1	
WMQ	**Urumqi**	**45.16**	**292**	*e*P	**P**	**03 33 54.4**	**+1.4**
KMI	**Kunming**	**45.38**	**260**	P	**P**	**03 33 56.3**	**+1.4**
KMI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**47.19**	**298**	*e*P	**P**	**03 34 08.4**	**-0.5**
MKAR	**Makanchi Array**	**47.19**	**298**	P	**P**	**03 34 08.3**	**-0.5**
	comp=Z,5.2nm,0.8s,mb4.5,baz=66,slow=8.2,SNR=37						
MKAR				PcP	PcP	03 35 39.4	-0.4
	comp=Z,0.8nm,0.7s,baz=54,slow=3.8,SNR=3.8						
MKAR				LR	LR	03 55 08.6	
	comp=Z,364nm,18.1s,MS4.4,baz=355,slow=38						
MKAR	**Makanchi Array**	**47.19**	**298**	P	**P**	**03 34 08.4**	**-0.5**
MKAR						03 35 39.4	
KURK	**Kurchatov**	**47.62**	**304**	LR	LR	03 55 28.0	
	comp=Z,213nm,18.1s,MS4.2,baz=105,slow=38						
KURK	**Kurchatov**	**47.62**	**304**	*e*P	**P**	**03 34 11.0**	**-1.2**
KURK				*e**PP	pP	03 34 22.2	-1.8
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KURK	**Kurchatov**	**47.62**	**304**	*e*P	**P**	**03 34 11.0**	**-1.1**
	comp=Z,8.8nm,0.8s,mb4.8						
KURK				*ep*P	pP	03 34 22.2	-1.8
RES	**Resolute Bay**	**50.97**	**19**	*e*P	**P**	**03 34 36.9**	**-0.5**
RES				*e**PP	pP	03 34 48.4	-1.0
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
RES	**Resolute Bay**	**50.97**	**19**	*e*P	**P**	**03 34 36.9**	**-0.5**
	comp=Z,5.3nm,0.8s,mb4.5						
RES				*ep*P	pP	03 34 48.4	-0.9
YKA	**Yellowknife Ar**	**50.98**	**37**	P	**P**	**03 34 37.2**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.3,baz=295,slow=7.0,SNR=35						
YKA	**Yellowknife Ar**	**50.98**	**37**	P	**P**	**03 34 37.2**	**-0.4**
BVAR	**Borovoye Array**	**51.12**	**310**	P	**P**	**03 34 38.1**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.4,baz=54,slow=7.9,SNR=17						
BVAR				PcP	PcP	03 35 54.4	+0.5
	comp=Z,1.5nm,0.8s,baz=114,slow=5.5,SNR=4.3						
BVAR				LR	LR	03 58 37.6	
	comp=Z,226nm,18.3s,MS4.2,baz=66,slow=39						
BVAR	**Borovoye Array**	**51.12**	**310**	P	**P**	**03 34 38.1**	**-0.7**
BVAR						03 35 54.4	
BRVK	**Borovoye**	**51.16**	**310**	*de*P	**P**	**03 34 38.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BRVK	**Borovoye**	**51.16**	**310**	*e*P	**P**	**03 34 38.5**	**-0.6**
	comp=Z,6.3nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**52.24**	**257**	*e*P	**P**	**03 34 48.6**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
CHTO	**Chiang Mai**	**52.24**	**257**	*e*P	**P**	**03 34 48.6**	**+1.0**
	comp=Z,16nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**52.49**	**257**	P	**P**	**03 34 50.5**	**+1.0**
	comp=Z,5.8nm,0.8s,mb4.6,baz=34,slow=7.6,SNR=20						
SHL	**Shillong**	**52.54**	**269**	*e*P	**P**	**03 34 50.0**	**+0.2**
TKM2	**Tokmak 2**	**53.24**	**296**	*e*P	**P**	**03 34 54.3**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
TKM2	**Tokmak 2**	**53.24**	**296**	*e*P	**P**	**03 34 54.3**	**-0.4**
	comp=Z,7.9nm,1.4s,mb4.5						
AAK	**Ala-Archa**	**54.08**	**297**	P	**P**	**03 35 01.2**	**+0.3**
	comp=Z,2.8nm,0.6s,mb4.3,baz=124,slow=3.8,SNR=11						
AAK				LR	LR	03 59 12.0	
	comp=Z,202nm,18.3s,MS4.2,baz=69,slow=37						
AAK	**Ala-Archa**	**54.08**	**297**	*ce*P	**P**	**03 35 01.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
AAK				MLR	MLR		
	comp=Z,109nm,15.0s,MS4.0						
AAK	**Ala-Archa**	**54.08**	**297**	*e*P	**P**	**03 35 01.2**	**+0.4**
	comp=Z,7.1nm,1.0s,mb4.5						
SVE	**Sverdlovsk**	**54.10**	**317**	*e*P	**P**	**03 34 59.1**	**-1.7**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
UCH	**Uchtor**	**54.29**	**296**	*e*P	**P**	**03 35 02.3**	**-0.1**
	comp=Z,1.4nm,0.9s,mb3.9						
EKS2	**Erkin-Say**	**54.51**	**297**	*e*P	**P**	**03 35 04.2**	**+0.2**
	comp=Z,6.1nm,1.1s,mb4.5						
KSH	**Kashi**	**54.89**	**293**	*e*P	**P**	**03 35 11.1**	**+4.3**
KSH				*ep*P	pP	03 35 23.3	+4.4
KSH				*es*P	sP	03 35 29.3	+5.6
KSH				*e*PcP	PcP	03 36 11.6	+3.1
KSH				*e*PP	PP	03 37 16.1	+6.4
KSH				*e*ScP	ScP	03 40 04.3	+0.9
KSH				*e*PcS	PcS	03 40 10.1	+1.9
KSH				*e*S	**S**	**03 42 48.8**	**+3.7**
KSH				*es*S	sS	03 43 10.1	+5.0
KSH				*e*ScS	ScS	03 44 52.1	-0.2
KSH				*e*SS	SS	03 46 33.1	+4.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KSH				pmax	pmax		
	comp=Z,110nm,5.4s						
KSH				LR	LR		
	comp=N,140nm,9.6s						
KSH				LR	LR		
	comp=E,130nm,8.1s						
KSH				LR	LR		
	comp=Z,350nm,16.6s,MS4.5						
GUN	**Gumba**	**55.19**	**275**	*e*P	**P**	**03 35 10.6**	**+1.5**
	comp=Z,15nm,0.4s,mb5.3						
ARU	**Arti**	**55.28**	**318**	*d i*P	**P**	**03 35 07.8**	**-1.5**
ARU				S	**S**	**03 42 50.1**	**+0.3**
ARU				SS	SS	03 46 26.7	-7.0
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.6						
ARU	**Arti**	**55.28**	**318**	*e*P	**P**	**03 35 07.7**	**-1.7**
	comp=Z,5.9nm,0.8s,mb4.7						
KKN	**Kakani**	**55.68**	**276**	*e*P	**P**	**03 35 14.2**	**+1.6**
	comp=Z,57nm,1.0s,mb5.5						
PKI	**Pulchoki**	**55.73**	**275**	*e*P	**P**	**03 35 14.2**	**+1.2**
	comp=Z,13nm,0.6s,mb5.1						
PKIN	**Phulchoki**	**55.73**	**275**	*e*P	**P**	**03 35 14.0**	**+1.0**
	comp=Z,24nm,0.8s,mb5.3						
DMN	**Daman**	**55.91**	**276**	*e*P	**P**	**03 35 16.0**	**+1.7**
	comp=Z,32nm,0.9s,mb5.3						
GKN	**Gorkha**	**55.99**	**276**	*e*P	**P**	**03 35 16.2**	**+1.4**
	comp=Z,112nm,1.3s,mb5.8						
EDM	**Edmonton**	**56.33**	**46**	*e*P	**P**	**03 35 15.8**	**-1.1**
KOLN	**Koldanda**	**56.84**	**277**	*e*P	**P**	**03 35 21.9**	**+0.9**
	comp=Z,47nm,1.0s,mb5.5						
PYUN	**Piuthan**	**57.05**	**277**	*e*P	**P**	**03 35 23.8**	**+1.4**
	comp=Z,63nm,1.2s,mb5.5						
NEW	**Newport**	**57.16**	**53**	*e*P	**P**	**03 35 24.4**	**+1.5**
NEW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEW	**Newport**	**57.16**	**53**	*e*P	**P**	**03 35 24.4**	**+1.5**
	comp=Z,6.9nm,1.0s,mb4.6						
ARCES	**ARCESS Array B**	**58.10**	**341**	P	**P**	**03 35 29.2**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=19,slow=7.7,SNR=7.3						
ABKAR	**Akbulak array**	**58.69**	**310**	*e*P	**P**	**03 35 32.8**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.3						
AKTK	**Aktyubinsk**	**58.99**	**312**	P	**P**	**03 35 35.0**	**-0.7**
AKTO	**Aktyubinsk**	**58.99**	**312**	P	**P**	**03 35 35.0**	**-0.7**
	comp=Z,1.0nm,0.4s,mb4.2,baz=58,slow=5.7,SNR=5.4						
WVOR	**Wild Horse Val**	**59.71**	**59**	*e*P	**P**	**03 35 40.8**	**0.0**
WVOR				*e**PP	pP	03 35 52.8	-0.1
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WVOR	**Wild Horse Val**	**59.71**	**59**	*e*P	**P**	**03 35 40.8**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.2						
WVOR				*ep*P	pP	03 35 52.8	-0.2
SLMT	**Seeley Lake**	**59.74**	**52**	*e*P	**P**	**03 35 40.5**	**-0.4**
SLMT				*ep*P	pP	03 35 52.7	-0.3
MSO	**Missoula**	**59.75**	**53**	*e*P	**P**	**03 35 45.0**	**+4.1**
	comp=Z,4.8nm,1.1s,mb4.4						
CHMT	**Chamberlain Mo**	**60.07**

JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
JOF Joensuu 61.59 334 *ep* **P 03 35 51.7 -1.5**
comp=Z,3.5nm,0.6s,mb4.7
BOZ Bozeman (W) 61.74 53 *eP* **P 03 35 54.8 +0.3**
BOZ *e**PP pP 03 36 06.3 -0.4
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
BOZ Bozeman (W) 61.74 53 *eP* **P 03 35 54.8 +0.4**
comp=Z,3.3nm,0.7s,mb4.6
BOZ *ep*P pP 03 36 06.3 -0.4
KBL Kabul 62.30 292 *eP* **P 03 35 58.0 -0.5**
KBL pmax pmax
comp=Z,16nm,1.0s,mb5.1
KBL Kabul 62.30 292 *eP* **P 03 35 58.0 -0.5**
comp=Z,16nm,1.0s,mb5.1
QLMT Earthquake Lak 62.36 53 *eP* **P 03 35 58.6 0.0**
comp=Z,1.8nm,0.4s,mb4.5
QLMT *ep*P pP 03 36 11.0 +0.1
NVAR Mina Array Bea 62.37 62 P **P 03 35 58.6 -0.2**
comp=Z,0.7nm,0.6s,mb4.0,baz=293,slow=7.7,SNR=7.2
IMW Indian Meadow 63.23 54 *eP* **P 03 36 10.1 +5.6**
comp=Z,9.0nm,1.4s,mb4.7
SCO Scoresbysund 63.23 358 *i* P **P 03 36 04.4 +0.3**
SCO pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
SCO Scoresbysund 63.23 358 *i* P **P 03 36 04.4 +0.3**
comp=Z,5.0nm,0.9s,mb4.6
RRI2 Red Ridge 63.36 54 *eP* **P 03 36 06.4 +1.0**
comp=Z,10.0nm,0.8s,mb5.0
RRI2 *ep*P pP 03 36 18.1 +0.5
TPAW Teton Pass 63.48 54 *eP* **P 03 36 07.5 +1.3**
comp=Z,8.3nm,0.8s,mb4.9
TPAW *ep*P pP 03 36 18.9 +0.5
LOHW Long Hollow 63.59 54 *eP* **P 03 36 07.3 +0.4**
comp=Z,4.4nm,1.0s,mb4.4
LOHW *ep*P pP 03 36 19.3 +0.1
REDW Red Top Meadow 63.62 54 *eP* **P 03 36 08.5 +1.4**
comp=Z,14nm,1.4s,mb4.8
REDW *ep*P pP 03 36 19.5 +0.2
KAF Kangasniemi 63.70 335 *eP* **P 03 36 05.8 -1.5**
KAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KAF Kangasniemi 63.70 335 *ep* **P 03 36 05.8 -1.5**
comp=Z,9.4nm,0.9s,mb4.8
FINES FINESS Array B 64.30 335 P **P 03 36 10.4 -0.7**
comp=Z,10.0nm,0.8s,mb4.9,baz=32,slow=7.5,SNR=46
FINES LR LR 04 07 10.7
comp=Z,141nm,18.1s,MS4.2,baz=129,slow=39
HWUT Hardware Ranch 64.34 56 *eP* **P 03 36 11.7 -0.1**
comp=Z,2.1nm,0.6s,mb4.3
HWUT *ep*P pP 03 36 23.9 -0.2
DUG Dugway 64.53 58 *eP* **P 03 36 13.4 +0.3**
DUG *e**PP pP 03 36 25.0 -0.4
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
DUG Dugway 64.53 58 *eP* **P 03 36 13.4 +0.3**
comp=Z,6.4nm,1.1s,mb4.6
DUG *ep*P pP 03 36 25.0 -0.4
BW06 Boulder Array 64.72 54 *eP* **P 03 36 14.4 +0.1**
BW06 *ep*P pP 03 36 25.7 -0.9
BW06 *ep*P pP 03 36 26.0 -0.6
PDAR Pinedale Array 64.72 54 P **P 03 36 14.2 -0.1**
comp=Z,1.5nm,0.8s,mb4.1,baz=336,slow=3.3,SNR=14
CCUT Cedar City 65.93 60 *eP* **P 03 36 23.2 +1.0**
comp=Z,3.3nm,1.1s,mb4.3
LDFC Landfair 66.49 63 *eP* **P 03 36 25.9 +0.1**
LDFC *ep*P pP 03 36 39.0 +0.8
ULM Lac du Bonnet 66.56 41 P **P 03 36 24.8 -1.2**
comp=Z,2.5nm,0.6s,mb4.4,baz=301,slow=8.2,SNR=4.6
ULM Lac du Bonnet 66.56 41 *eP* **P 03 36 25.2 -0.8**
comp=Z,1.9nm,0.5s,mb4.4
SRU San Rafael 66.58 57 *eP* **P 03 36 26.9 +0.6**
SRU *e**PP pP 03 36 38.0 -0.7
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SRU San Rafael 66.58 57 *eP* **P 03 36 26.9 +0.5**
comp=Z,5.1nm,0.8s,mb4.6
SRU *ep*P pP 03 36 38.0 -0.7
RSSD Black Hills 66.82 50 *eP* **P 03 36 27.3 -0.5**
RSSD *e**PP pP 03 36 39.1 -1.0
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RSSD Black Hills 66.82 50 *eP* **P 03 36 27.3 -0.5**
comp=Z,5.8nm,0.8s,mb4.7
RSSD *ep*P pP 03 36 39.1 -1.0
AGMN Agassiz Refuge 67.96 42 *eP* **P 03 36 33.7 -1.3**
WRAB Tennant Creek 68.37 199 *eP* **P 03 36 37.1 -0.6**
WRAB pmax pmax
comp=Z,12nm,1.2s,mb4.8
WRAB Tennant Creek 68.37 199 *eP* **P 03 36 37.1 -0.6**
comp=Z,12nm,1.2s,mb4.8
NB2 NORSAR Subarra 68.47 341 P **P 03 36 37.4 -0.5**
comp=Z,12nm,0.8s,mb5.0,baz=28,slow=6.5
NOA NORSAR Array B 68.47 341 P **P 03 36 37.6 -0.3**
comp=Z,6.8nm,0.8s,mb4.7,baz=28,slow=6.3,SNR=22
NOA LR LR 04 11 04.0
comp=Z,68nm,18.8s,MS3.9,baz=35,slow=40
SMCO Snowmass 68.58 55 *eP* **P 03 36 39.2 +0.3**
NAO01 NORSAR Array S 68.72 341 *eP* **P 03 36 39.1 -0.3**
comp=Z,9.0nm,0.9s,mb4.7
IZAR Zarasai 68.81 331 *eP* **P 03 36 39.6 -0.5**
ISAL Salakas 69.00 331 *eP* **P 03 36 40.8 -0.5**
IDID Didziasalis 69.00 331 *eP* **P 03 36 40.8 -0.5**
IIGN Ignalina 69.15 331 *eP* **P 03 36 42.0 -0.2**
SDCO Great Sand Dun 70.40 56 *eP* **P 03 36 50.4 +0.2**
comp=Z,1.6nm,0.9s,mb4.0
ECSD EROS Data Cent 70.90 46 *eP* **P 03 36 52.4 -0.8**
comp=Z,4.6nm,0.8s,mb4.5
KIV Kislovodsk 71.06 314 *eP* **P 03 36 56.4 +2.3**
KIV pmax pmax
comp=Z,17nm,1.9s,mb4.7
ZEI Tsey 71.32 313 *eP* **P 03 36 53.9 -1.8**
ZEI pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
ANMO Albuquerque 71.79 58 *eP* **P 03 36 59.0 +0.3**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 71.79 58 *eP* **P 03 36 59.0 +0.3**
comp=Z,1.3nm,0.8s,mb3.9
AKASG Malin Array Be 71.81 326 P **P 03 36 57.8 -0.7**
comp=Z,6.5nm,0.6s,mb4.8,baz=34,slow=6.1,SNR=39
AKBB Malin Array Si 71.81 326 *eP* **P 03 36 58.0 -0.5**
KIEV Kiev 71.82 326 *eP* **P 03 36 57.8 -0.8**
KIEV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIEV Kiev 71.82 326 *eP* **P 03 36 57.8 -0.8**
comp=Z,16nm,1.0s,mb4.9
ASAR Alice Springs 72.07 199 P **P 03 37 00.8 +0.5**
comp=Z,5.5nm,0.8s,mb4.5,baz=12,slow=5.3,SNR=60
GNI Garni 72.79 311 *ceP* **P 03 37 06.5 +1.9**
GNI pmax pmax
comp=Z,13nm,1.6s
SCHQ Schefferville 73.43 23 LR LR 04 10 15.5
comp=Z,73nm,18.5s,MS4.0,baz=84,slow=36
SIM Simferopol' 74.33 320 *eP* **P 03 37 15.2 +1.7**
SIM pmax pmax
comp=Z,18nm,0.8s,mb5.0
SIM MLR MLR
comp=Z,110nm,15.0s,MS4.3
MNTX Cornudas Mount 74.72 60 *eP* **P 03 37 15.3 -0.7**
comp=Z,1.2nm,0.8s,mb3.9
KWP Kalwaria Pacla 75.08 329 *eP* **P 03 37 18.1 +0.4**
KWP Kalwaria Pacla 75.08 329 *eP* **P 03 37 17.2 -0.6**
KWP pmax pmax
comp=Z,23nm,0.9s,mb5.1
KWP Kalwaria Pacla 75.08 329 *eP* **P 03 37 17.1 -0.6**
comp=Z,23nm,0.9s,mb5.1
KWP Kalwaria Pacla 75.08 329 ||*iP* **P 03 37 18.9 +1.1**
OJC Ojcow 75.58 331 *eP* **P 03 37 19.7 -0.9**
STHS Stebnicka Huta 75.78 330 *eP* **P 03 37 23.1 +1.3**
STHS pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
STHS Stebnicka Huta 75.78 330 *eP* **P 03 37 23.1 +1.3**
comp=Z,10nm,1.6s,mb4.5
STHS Stebnicka Huta 75.78 330 *eP* **P 03 37 23.1 +1.3**
KOLS Kolonicke sedl 75.83 329 *eP* **P 03 37 22.1 0.0**
KOLS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
KOLS Kolonicke sedl 75.83 329 *eP* **P 03 37 22.1 0.0**
comp=Z,7.8nm,1.3s,mb4.5
KOLS Kolonicke sedl 75.83 329 *eP* **P 03 37 22.1 0.0**
BUR08 Bucovina Ar. S 75.83 327 *eP* **P 03 37 22.1 -0.1**
BURAR Bucovina Array 75.85 327 ⇑*iP* **P 03 37 22.3 +0.1**
NIE Niedzica 76.09 331 *eP* **P 03 37 24.1 +0.5**

DPC Dobruska-Polom 76.58 333 *eP* **P 03 37 26.3 0.0**
DPC *e**PP pP 03 37 37.3 -1.6
DPC MLR MLR
comp=Z,200nm,16.7s,MS4.5
DPC Dobruska-Polom 76.58 333 *eP* **P 03 37 26.3 0.0**
DPC *ep*P pP 03 37 37.3 -1.6
DPC AMS AMS 04 15 20.0
comp=Z,200nm,16.7s
MORC Moravsky Berou 76.70 332 *eP* **P 03 37 27.4 +0.4**
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MORC Moravsky Berou 76.70 332 *eP* **P 03 37 27.4 +0.4**
comp=Z,6.9nm,0.9s,mb4.6
MORC Moravsky Berou 76.70 332 ||*iP* **P 03 37 27.8 +0.8**
VRI Vrincioaia 76.71 325 P **P 03 37 28.5 +1.4**
VRI Vrincioaia 76.71 325 ||*iP* **P 03 37 29.8 +2.7**
CLL Collm 76.72 336 ||*iP* **P 03 37 26.8 -0.3**
CLL pmax pmax
comp=Z,13nm,0.8s,mb4.9
CLL MLR MLR
comp=Z,100nm,18.8s,MS4.2
CLL Collm 76.72 336 ||*iP* **P 03 37 26.8 -0.3**
comp=Z,13nm,0.8s,mb4.9
CLL *i* 03 37 30.7
CLL LR LR
comp=Z,100nm,18.8s,MS4.2
CLL Collm 76.72 336 ||*iP* **P 03 37 26.8 -0.3**
comp=Z,13nm,0.8s,mb4.9
CLL *i* PcP PcP 03 37 38.5 +0.2
CLL Lm 04 17 00.0
comp=Z,100nm,18.8s
KECS Kecovo 76.83 330 *eP* **P 03 37 27.6 -0.2**
KECS *e* pP 03 37 40.9 +0.6
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 76.83 330 *eP* **P 03 37 27.6 -0.2**
comp=Z,2.9nm,1.1s,mb4.1
KECS *e* pP 03 37 40.9 +0.6
KECS Kecovo 76.83 330 *eP* **P 03 37 27.6 -0.2**
KECS *ep*P pP 03 37 40.9 +0.6
BRG Berggiesshubel 76.84 335 *eP* **P 03 37 28.2 +0.4**
comp=Z,1.7nm,0.6s,mb4.2
BRG *e* 03 37 33.2
comp=Z,4.2nm,1.1s
TIRR Tirgusor 77.18 323 *eP* **P 03 37 29.1 -0.7**
TIRR pmax pmax
comp=Z,11nm,1.1s,mb4.7
TIRR Tirgusor 77.18 323 *eP* **P 03 37 29.1 -0.7**
comp=Z,11nm,1.1s,mb4.7
TIRR Tirgusor 77.18 323 ⇑*iP* **P 03 37 30.2 +0.4**
HARR Harsova 77.19 323 ⇑*iP* **P 03 37 29.9 +0.1**
MLR Muntele Rosu 77.33 325 P **P 03 37 31.9 +1.3**
MLR Muntele Rosu 77.33 325 ||*iP* **P 03 37 32.0 +1.4**
VYHS Vyhne 77.39 331 *eP* **P 03 37 31.1 +0.2**
VYHS *e* pP 03 37 43.4 0.0
VYHS pmax pmax
comp=Z,14nm,2.1s,mb4.5
VYHS Vyhne 77.39 331 *eP* **P 03 37 31.1 +0.2**
comp=Z,14nm,2.1s,mb4.5
VYHS *e* pP 03 37 43.4 0.0
VYHS Vyhne 77.39 331 *eP* **P 03 37 31.1 +0.2**
VYHS *ep*P pP 03 37 43.4 0.0
VRAC Vranov 77.41 333 P **P 03 37 31.9 +0.9**
VRAC Vranov 77.41 333 ⇑*iP* **P 03 37 31.5 +0.5**
TXAR Lajitas Array 77.44 61 P **P 03 37 31.1 -0.4**
comp=Z,2.9nm,0.6s,mb4.4,baz=301,slow=4.0,SNR=55
PRU Pruhonice 77.44 334 *eP* **P 03 37 31.5 +0.3**
PRU MLR MLR
comp=Z,100nm,18.3s,MS4.2
PRU Pruhonice 77.44 334 *eP* **P 03 37 31.5 +0.3**
PRU AMS AMS 04 15 00.0
comp=Z,100nm,18.3s
KOLL Kolacno 77.46 331 *eP* **P 03 37 32.3 +1.0**
KOLL Kolacno 77.46 331 *eP* **P 03 37 32.3 +1.0**
DRGR 77.48 328 P **P 03 37 31.9 +0.5**
DRGR 77.48 328 ||*iP* **P 03 37 32.1 +0.7**
PSZ Piszkesteto 77.52 330 *eP* **P 03 37 31.4 -0.2**
PSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PSZ Piszkesteto 77.52 330 *eP* **P 03 37 31.4 -0.3**
comp=Z,5.0nm,0.8s,mb4.5
MOX Moxa 77.70 336 *eP* **P 03 37 33.2 +0.6**
TREC Trest 77.77 333 AMS AMS 04 16 10.0
comp=Z,200nm,16.6s
SMOL Smolenice 77.83 332 *eP* **P 03 37 34.1 +0.7**
SMOL Smolenice 77.83 332 *eP* **P 03 37 34.1 +0.7**
ZST Bratislava 78.22 332 *eP* **P 03 37 36.7 +1.2**
ZST pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ZST Bratislava 78.22 332 *eP* **P 03 37 36.7 +1.2**
comp=Z,4.3nm,0.8s,mb4.4
ZST Bratislava 78.22 332 *eP* **P 03 37 36.7 +1.2**
KHC Kasperske Hory 78.50 334 *eP* **P 03 37 36.8 -0.2**
KHC pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KHC Kasperske Hory 78.50 334 *eP* **P 03 37 36.8 -0.3**
comp=Z,3.9nm,0.7s,mb4.5
KHC Kasperske Hory 78.50 334 *eP* **P 03 37 37.0 0.0**
KHC *ep*P pP 03 37 44.7 -4.9
KHC AMS AMS 04 15 40.0
comp=Z,100nm,18.0s
GZR Gura Zlata 78.63 327 ⇑*iP* **P 03 37 38.4 +0.5**
BR131 Keskin Array S 78.66 317 *eP* **P 03 37 39.0 +0.9**
comp=Z,4.6nm,0.8s,mb4.5
BR131 *ep*P pP 03 37 52.2 +1.5
BRTR Keskin Array B 78.66 317 P **P 03 37 38.9 +0.8**
comp=Z,3.6nm,0.8s,mb4.3,baz=58,slow=3.5,SNR=25
GRA1 Grafenberg Arr 78.67 336 *eP* **P 03 37 38.5 +0.5**
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 78.67 336 *eP* **P 03 37 38.5 +0.5**
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 78.67 336 *eP* **P 03 37 38.5 +0.5**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GRF Grafenberg Arr 78.67 336 *eP* **P 03 37 38.5 +0.5**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GEC2 GERESS Array S 78.71 334 *eP* **P 03 37 38.3 +0.1**
GEC2 *e**PP pP 03 37 50.5 -0.3
GEC2 pmax pmax
comp=Z,366nm,0.7s
GEC2 GERESS Array S 78.71 334 *eP* **P 03 37 38.2 0.0**
comp=Z,366nm,0.7s
GEC2 *ep*P pP 03 37 50.5 -0.3
GERES GERESS Array B 78.71 334 P **P 03 37 38.4 +0.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=30,slow=5.2,SNR=23
STKA Stephens Creek 78.78 190 P **P 03 37 38.8 +0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=11,slow=10,SNR=3.4
CONA Conrad Observa 78.86 332 ||*iP* **P 03 37 39.7 +0.7**
comp=Z,6.2nm,0.8s,mb4.6
BZS Buzias 78.88 328 P **P 03 37 39.2 0.0**
BZS Buzias 78.88 328 ⇑*iP* **P 03 37 39.5 +0.3**
MIB Mutribah 78.92 302 *eP* **P 03 37 40.2 +0.5**
MIB AMb AMB 03 37 42.3
comp=Z,36nm,0.8s,mb5.3
MEM Membach 79.20 340 P **P 03 37 40.7 -0.2**
comp=Z,12nm,2.5s,mb4.4
NAY Al-Naaiem 79.38 301 *eP* **P 03 37 42.6 +0.4**
NAY AMb AMB 03 37 44.9
comp=Z,13nm,1.4s,mb4.7
PKSM Moragy 79.43 330 ||*iP* **P 03 37 41.7 -0.5**
RDF Al-Radifah 79.44 301 *eP* **P 03 37 43.7 +1.1**
RDF AMb AMB 03 37 46.9
comp=Z,32nm,1.9s,mb4.9
BCLA Clavier 79.54 340 P **P 03 37 42.4 -0.4**
WCI Wyandotte Cave 80.13 44 *eP* **P 03 37 44.7 -1.5**
WCI *e**PP pP 03 37 57.1 -1.7
WCI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WCI Wyandotte Cave 80.13 44 *eP* **P 03 37 44.7 -1.4**
comp=Z,7.4nm,1.0s,mb4.6
WCI *ep*P pP 03 37 57.1 -1.7
SOKA Soboth 80.22 332 ⇑*iP* **P 03 37 46.5 +0.1**
comp=Z,7.3nm,0.9s,mb4.6
PERS Pernice 80.23 332 *iP* **P 03 37 46.7 +0.1**
KBA Koelnbreinsper 80.40 334 ⇑*iP* **P 03 37 48.3 +0.9**
comp=Z,15nm,0.9s,mb4.9
GOLS Golise 80.62 332 *eP* **P 03 37 48.2 -0.4**
WATA Walderalm 80.70 335 ||*iP* **P 03 37 49.9 +0.9**
comp=Z,8.5nm,0.9s,mb4.7
BFO Black Forest 80.71 337 *eP* **P 03 37 49.1 +0.1**
BFO pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BFO Black Forest 80.71 337 *eP* **P 03 37 49.1 +0.1**
comp=Z,3.1nm,0.8s,mb4.3

WTTA Wattenberg 80.75 335 ⇑*iP* **P 03 37 49.9 +0.7**
comp=Z,9.6nm,0.8s,mb4.8
MOTA Moosalm 80.83 335 ⇑*iP* **P 03 37 50.1 +0.3**
comp=Z,7.7nm,0.8s,mb4.7
CRES Cresnjev 80.84 332 *i* P **P 03 37 49.4 -0.4**
CDF Champ du Feu 80.91 338 *eP* **P 03 37 49.9 -0.2**
comp=Z,28nm,1.2s,mb4.8
CDF Champ du Feu 80.91 338 *eP* **P 03 37 49.9 -0.2**
CDF pmax pmax
comp=Z,14nm,1.2s,mb4.8
CDF Champ du Feu 80.91 338 *eP* **P 03 37 49.9 -0.2**
comp=Z,14nm,1.2s,mb4.8
WVT Waverly 81.05 46 *eP* **P 03 37 50.3 -0.8**
WVT *e**PP pP 03 38 01.5 -2.2
WVT pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
WVT Waverly 81.05 46 *eP* **P 03 37 50.3 -0.8**
comp=Z,5.5nm,0.9s,mb4.5
WVT *ep*P pP 03 38 01.5 -2.2
MEZF Maizieres J'vi 81.39 339 *eP* **P 03 37 52.7 0.0**
comp=Z,16nm,0.9s,mb4.7
MEZF Maizieres J'vi 81.39 339 *eP* **P 03 37 52.7 0.0**
comp=Z,16nm,0.9s,mb5.0
HAU Haudompre 81.52 338 *eP* **P 03 37 52.9 -0.5**
comp=Z,8.5nm,0.7s,mb4.5
HAU *e*MLR MLR
comp=Z,99nm,18.8s,MS3.9
HAU Haudompre 81.52 338 *eP* **P 03 37 52.9 -0.5**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HAU MLR MLR
comp=Z,100nm,18.8s,MS4.2
HAU Haudompre 81.52 338 *eP* **P 03 37 52.9 -0.5**
comp=Z,4.3nm,0.7s,mb4.5
HAU LR LR
comp=Z,100nm,18.8s,MS4.2
HINF Hinteralfeld 81.57 338 *eP* **P 03 37 52.9 -0.7**
GRR Gorron 82.81 343 *eP* **P 03 37 59.7 -0.4**
comp=Z,54nm,1.1s,mb5.2
GRR Gorron 82.81 343 *eP* **P 03 37 59.7 -0.4**
GRR pmax pmax
comp=Z,27nm,1.1s,mb5.2
GRR Gorron 82.81 343 *eP* **P 03 37 59.7 -0.4**
comp=Z,27nm,1.1s,mb5.2
LOR Lormes 82.83 340 *eP* **P 03 37 59.9 -0.3**
comp=Z,25nm,1.2s,mb4.8
LOR *e*MLR MLR
comp=Z,88nm,18.8s,MS3.9
LOR Lormes 82.83 340 *eP* **P 03 37 59.9 -0.3**
LOR pmax pmax
comp=Z,12nm,1.2s,mb4.8
LOR MLR MLR
comp=Z,90nm,18.8s,MS4.2
LOR Lormes 82.83 340 *eP* **P 03 37 59.9 -0.3**
comp=Z,12nm,1.2s,mb4.8
LOR LR LR
comp=Z,90nm,18.8s,MS4.2
CABF La Chapelle 82.88 338 *eP* **P 03 38 00.6 +0.1**
comp=Z,54nm,1.6s,mb5.0
CABF La Chapelle 82.88 338 *eP* **P 03 38 00.6 +0.1**
CABF pmax pmax
comp=Z,27nm,1.6s,mb5.0
CABF La Chapelle 82.88 338 *eP* **P 03 38 00.6 +0.1**
comp=Z,27nm,1.6s,mb5.0
MMAI Mount Meron Ar 83.08 312 P **P 03 38 03.3 +1.5**
comp=Z,9.8nm,0.8s,mb4.9,baz=42,slow=8.0,SNR=8.5
MMAI LR LR 04 20 55.6
comp=Z,86nm,18.5s,MS4.2,baz=60,slow=40
SSF Saint Saulge 83.10 340 *eP* **P 03 38 01.5 -0.2**
comp=Z,8.3nm,0.9s,mb4.5
SSF Saint Saulge 83.10 340 *eP* **P 03 38 01.5 -0.2**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SSF Saint Saulge 83.10 340 *eP* **P 03 38 01.5 -0.2**
comp=Z,4.2nm,0.9s,mb4.5
AVF Avril sur Loir 83.39 340 *eP* **P 03 38 03.0 -0.2**
comp=Z,21nm,1.0s,mb4.8
AVF Avril sur Loir 83.39 340 *eP* **P 03 38 03.0 -0.2**
AVF pmax pmax
comp=Z,11nm,1.0s,mb4.8
AVF Avril sur Loir 83.39 340 *eP* **P 03 38 03.0 -0.2**
comp=Z,11nm,1.0s,mb4.8
SMF Signal de Mont 83.41 339 *eP* **P 03 38 03.1 -0.2**
comp=Z,54nm,1.1s,mb5.2
SMF Signal de Mont 83.41 339 *eP* **P 03 38 03.1 -0.2**
SMF pmax pmax
comp=Z,27nm,1.1s,mb5.2
SMF Signal de Mont 83.41 339 *eP* **P 03 38 03.1 -0.2**
comp=Z,27nm,1.1s,mb5.2
LPL La Plagne 83.72 337 *eP* **P 03 38 05.6 +0.7**
BGF Bois d'Agland 83.73 340 *eP* **P 03 38 04.5 -0.4**
LPG La Plagne 83.74 337 *eP* **P 03 38 05.8 +0.8**
comp=Z,14nm,1.0s,mb4.8
LPG La Plagne 83.74 337 *eP* **P 03 38 05.8 +0.8**
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LPG La Plagne 83.74 337 *eP* **P 03 38 05.8 +0.8**
comp=Z,7.0nm,1.0s,mb4.8
TCF Toulx Ste Croi 84.14 340 *eP* **P 03 38 06.8 -0.2**
comp=Z,30nm,1.2s,mb5.0
TCF Toulx Ste Croi 84.14 340 *eP* **P 03 38 06.8 -0.2**
TCF pmax pmax
comp=Z,15nm,1.2s,mb5.0
TCF Toulx Ste Croi 84.14 340 *eP* **P 03 38 06.8 -0.2**
comp=Z,15nm,1.2s,mb5.0
MBDF Montbardon 84.44 337 *eP* **P 03 38 08.4 -0.2**
ORIF Oris-en-Rattie 84.51 337 *eP* **P 03 38 09.4 +0.5**
comp=Z,22nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,82nm,19.5s,MS3.8
ORIF Oris-en-Rattie 84.51 337 *eP* **P 03 38 09.4 +0.5**
ORIF pmax pmax
comp=Z,11nm,1.0s,mb4.9
ORIF Oris-en-Rattie 84.51 337 *eP* **P 03 38 09.4 +0.5**
comp=Z,11nm,1.0s,mb5.0
AQU L'Aquila 84.60 331 *eP* **P 03 38 09.6 +0.2**
AQU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AQU L'Aquila 84.60 331 *eP* **P 03 38 09.6 +0.2**
comp=Z,8.2nm,0.9s,mb4.9
AQU L'Aquila 84.60 331 ||*iP* **P 03 38 10.5 +1.1**
VIVF Saint-Julien-I 84.88 338 *eP* **P 03 38 10.9 +0.1**
comp=Z,16nm,0.9s,mb4.9
VIVF Saint-Julien-I 84.88 338 *eP* **P 03 38 10.9 +0.1**
VIVF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
VIVF Saint-Julien-I 84.88 338 *eP* **P 03 38 10.9 +0.1**
comp=Z,8.1nm,0.9s,mb4.8
SBF Sospel 85.06 336 *eP* **P 03 38 11.3 -0.4**
comp=Z,39nm,1.2s,mb5.1
SBF Sospel 85.06 336 *eP* **P 03 38 11.3 -0.4**
SBF pmax pmax
comp=Z,19nm,1.2s,mb5.1
SBF Sospel 85.06 336 *eP* **P 03 38 11.3 -0.4**
comp=Z,20nm,1.2s,mb5.1
RJF Les Rejaudoux 85.22 340 *eP* **P 03 38 12.4 -0.1**
comp=Z,20nm,1.1s,mb4.8
RJF *e*MLR MLR
comp=Z,82nm,22.2s,MS3.8
RJF Les Rejaudoux 85.22 340 *eP* **P 03 38 12.4 -0.1**
RJF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
RJF MLR MLR
comp=Z,80nm,22.3s,MS4.1
RJF Les Rejaudoux 85.22 340 *eP* **P 03 38 12.4 -0.1**
comp=Z,9.8nm,1.1s,mb4.8
RJF LR LR
comp=Z,80nm,22.3s,MS4.1
LMR La Mourre 85.80 336 *eP* **P 03 38 15.2 -0.2**
comp=Z,44nm,1.2s,mb5.3
LMR La Mourre 85.80 336 *eP* **P 03 38 15.2 -0.2**
LMR pmax pmax
comp=Z,22nm,1.2s,mb5.3
LMR La Mourre 85.80 336 *eP* **P 03 38 15.2 -0.2**
comp=Z,22nm,1.2s,mb5.3
TIP Timpagrande 86.25 328 *eP* **P 03 38 17.5 -0.2**
comp=Z,9.5nm,1.2s,mb4.9
SJPF Ste Jean 87.92 342 *eP* **P 03 38 24.5 -1.2**
ESDC Sonseca Array 91.80 343 P **P 03 38 42.9 -1.0**
comp=Z,1.3nm,0.9s,mb4.2,baz=6.9,slow=4.4,SNR=5.6
KEST Kesra 91.93 331 P **P 03 38 45.1 +0.5**
comp=Z,1.5nm,0.9s,mb4.3,baz=153,slow=22,SNR=3.7
TORD Torodi Ar. Bea 115.36 329 PKP PKPdf 03 44 16.4 -1.6
comp=Z,0.9nm,1.1s,baz=32,slow=2.2,SNR=4.6
TORD Torodi Ar. Bea 115.36 329 PKP PKPdf 03 44 16.4 -1.6
SIV San Ignacio 138.21 55 PKhKP 03 44 58.2
comp=Z,0.8nm,0.8s,baz=305,slow=22,SNR=2.8

CFAA	**Coronel Fontan**	**144.86**	**80**	PKP	PKPdf	03 45 10.8	-2.0
	comp=Z,0.3nm,0.6s,baz=266,slow=5.1,SNR=4.4						
CPUP	**Villa Florida**	**148.41**	**61**	PKPbc	PKPbc	03 45 21.6	-0.8
	comp=Z,1.3nm,0.6s,baz=273,slow=8.1,SNR=5.0						

IDC 25 03:35:53.0±6.4, 18°.56S×68°.78W, h148km±41km, mb3.2/2, mb1 3.4/4, mb1mx3.1/16, mbtmp3.2/4, Error ellipse: s-maj=75.5km s-min=33.3km az=37.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.34**	**15**	P	Pn	03 36 32.9	+0.8
	3.8nm,0.3s,baz=219,slow=6.4,SNR=120						
LPAZ				S	Sn	03 37 03.9	+1.7
	0.4nm,0.3s,baz=28,slow=15,SNR=2.5						
SIV	**San Ignacio**	**7.79**	**72**	P	Pn	03 37 43.0	-0.6
	1.4nm,0.3s,baz=273,slow=11,SNR=23						
TORD	**Torodi Ar. Bea**	**76.27**	**71**	P	P	03 47 26.0	+0.2
	0.6nm,0.9s,baz=254,slow=5.4,SNR=7.0						
YKA	**Yellowknife Ar**	**88.47**	**341**	P	P	03 48 27.9	0.0
	0.2nm,0.4s,baz=130,slow=4.6,SNR=7.1						

IDC 25 03:40:53.4±2.4, 16°.15S×178°.73W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.9/14, mbtmp3.8/5, Error ellipse: s-maj=193.9km s-min=30.4km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.00**	**253**	P	P	03 49 10.9	+0.1
	0.2nm,0.4s,baz=88,slow=8.0,SNR=6.4						
NVAR	**Mina Array Bea**	**78.38**	**44**	P	P	03 52 57.2	+1.3
	0.9nm,0.7s,baz=223,slow=9.3,SNR=8.9						
TXAR	**Lajitas Array**	**85.32**	**58**	P	P	03 53 32.6	0.0
	0.5nm,0.7s,baz=219,slow=5.7,SNR=6.9						
PDAR	**Pinedale Array**	**86.30**	**44**	P	P	03 53 37.2	+0.1
	0.6nm,0.5s,baz=192,slow=2.4,SNR=6.3						
YKA	**Yellowknife Ar**	**92.87**	**25**	P	P	03 54 06.6	-1.1
	0.2nm,0.4s,baz=240,slow=4.6,SNR=5.6						

ISC 25 03:42:26.9±2.4, 24°.4N±0°.3×94°.2E±0°.2, h100km, n9, σ0s87/11, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.47**	**334**	*e*P	**Pn**	03 42 42.0	-0.5
IMP				*i* S	**Sn**	03 42 54.0	-0.1
SHL	**Shillong**	**2.39**	**301**	*e*PN	**Pn**	03 43 06.0	+1.5
SHL				*e*SN	**Sn**	03 43 33.0	-0.4
GUN	**Gumba**	**8.24**	**297**	*e*P	**Pn**	03 44 24.7	+1.1
	6.1nm,0.2s						
PKI	**Pulchoki**	**8.50**	**294**	*e*P	**Pn**	03 44 27.6	+0.5
	7.7nm,0.2s						
PKIN	**Phulchoki**	**8.51**	**294**	*e*P	**Pn**	03 44 27.6	+0.3
	8.4nm,0.2s						
KKN	**Kakani**	**8.68**	**295**	*e*P	**Pn**	03 44 29.9	+0.3
	11nm,0.4s						
GKN	**Gorkha**	**9.29**	**295**	*e*P	**Pn**	03 44 38.1	+0.2
	19nm,0.3s						
KOLN	**Koldanda**	**10.08**	**292**	*e*P	**Pn**	03 44 47.5	-1.2
	6.4nm,0.2s						
PYUN	**Piuthan**	**10.70**	**293**	*e*P	**Pn**	03 44 55.3	-1.7
	2.5nm,0.2s						

SZGRF ***25*** *03:43:22.5, 29°.72N×107°.58E, h33km, mb4.3, Sichuan, China*
BJI ***25*** *03:43:38.8, 31°.65N×104°.50E, h9km, mB4.5/7, mb4.2/14, ML4.0/19, Ms4.1/18, Ms7 3.8/13*
IDC ***25*** *03:43:38.2±0.9, 31°.76N×104°.35E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/27, mbtmp4.1/15, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.3/32, Error ellipse: s-maj=29.0km s-min=17.9km az=49.0*
NEIC ***25*** *03:43:39.9±0.3, 31°.78N×104°.46E, h10km, mb4.3/19, Error ellipse: s-maj=9.1km s-min=6.1km az=66.0*
MOS ***25*** *03:43:41.6±1.2, 31°.70N×104°.47E, h37km, mb4.7/18, Error ellipse: s-maj=12.6km s-min=6.3km az=114.6*

ISC 25 03:43:38.3±0.9, 31°.67N±0°.03×104°.38E±0°.03, h0km±6km, n101, σ1s30/115, mb4.4/35, MS3.9/2, 4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.93**	**215**	Pg	**Pg**	03 43 55.5	-0.7
CD2				Sg	**Sg**	03 44 09.8	+1.6
CD2				smax			
	comp=N,6μm,1.0s						
LZH	**Lanzhou**	**4.42**	**354**	*e*Pn	**Pn**	03 44 49.6	+3.0
LZH				Sn	**Sn**	03 45 38.3	-0.5
LZH				smax			
	comp=N,200nm,0.7s						
LZH				smax			
	comp=E,290nm,0.9s						
XAN	**Xi'an**	**4.49**	**57**	Pn	**Pn**	03 44 50.1	+2.5
XAN				Sn	**Sn**	03 45 45.5	+5.0
XAN				Sg	**Sg**	03 46 02.3	-0.3
XAN				smax			
	comp=N,69nm,1.0s						
XAN				smax			
	comp=E,180nm,1.0s						
XAN				LR	LR		
	comp=N,470nm,6.0s						
XAN				LR	LR		
	comp=E,320nm,4.5s						
XAN				LR	LR		
	comp=E,310nm,6.6s						
ENH	**Enshi**	**4.60**	**106**	*e*Pn	**Pn**	03 44 50.3	+1.2
ENH				*e*Pg	**Pg**	03 45 04.6	-2.0
ENH				*e*Sg	**Sg**	03 46 05.8	-0.4
GYA	**Guiyang**	**5.57**	**158**	Pn	**Pn**	03 45 03.3	+0.9
GYA				Sn	**Sn**	03 46 06.6	-0.4
GYA				smax			
	comp=N,370nm,1.0s						
GYA				smax			
	comp=E,300nm,1.0s						
GYA				LR	LR		
	comp=N,1μm,5.8s						
GYA				LR	LR		
	comp=E,1μm,4.9s						
GYA				LR	LR		
	comp=Z,1μm,5.3s						
KMI	**Kunming**	**6.68**	**193**	Pn	**Pn**	03 45 19.8	+2.1
KMI				Sn	**Sn**	03 46 41.3	+6.7
KMI				smax			
	comp=N,75nm,1.3s						
KMI				smax			
	comp=E,61nm,1.2s						
KMI				LR	LR		
	comp=N,950nm,6.3s						
KMI				LR	LR		
	comp=E,1μm,8.9s						
GTA	**Gaotai**	**8.57**	**336**	*e*P	**Pn**	03 45 46.3	+2.8
GTA				pP		03 45 49.5	
GTA				sP		03 45 52.3	
GTA				S	**Sn**	03 47 21.1	+0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,24nm,6.8s						
GTA				LR	LR		
	comp=N,560nm,12.5s						
GTA				LR	LR		
	comp=E,840nm,12.5s						
GTA				LR	LR		
	comp=Z,410nm,11.3s						
WHN	**Wuhan**	**8.62**	**95**	P	**Pn**	03 45 43.8	-0.5
WHN				S	**Sn**	03 47 16.9	-5.3
WHN				LR	LR		
	comp=N,3μm,7.6s						
WHN				LR	LR		
	comp=E,2μm,7.8s						
WHN				LR	LR		
	comp=Z,2μm,6.4s						
BTO	**Baotou**	**10.01**	**26**	*e*P	**Pn**	03 45 55.6	-7.7
BTO				S	**Sn**	03 47 46.1	-10
BTO				LR	LR		
	comp=N,150nm,8.4s						
BTO				LR	LR		
	comp=E,130nm,7.1s						
LSA	**Lhasa**	**11.56**	**264**	*e*P	**Pn**	03 46 24.6	0.0
LSA				LR	LR		
	comp=N,90nm,9.0s						
LSA				LR	LR		
	comp=E,190nm,8.0s						
LSA				LR	LR		
	comp=Z,330nm,9.0s						
QIZ	**Qiongzhong**	**13.52**	**157**	P	**Pn**	03 46 49.3	-2.1
QIZ				*e*S	**Sn**	03 49 18.5	-3.9
QIZ				pmax	pmax		
	comp=Z,7.0nm,2.0s						
QIZ				LR	LR		
	comp=N,330nm,8.8s						
QIZ				LR	LR		
	comp=E,140nm,6.7s						
QIZ				LR	LR		
	comp=Z,390nm,13.0s						
CHTO	**Chiang Mai**	**13.71**	**202**	*e*P	**Pn**	03 46 56.4	+2.4
CMAR	**Chiang Mai Arr**	**14.05**	**202**	Pn	**Pn**	03 47 00.8	+2.2
	comp=Z,0.3nm,0.3s,baz=7.0,slow=11,SNR=8.1						
SONM	**Songino Array**	**16.21**	**5**	Pn	**Pn**	03 47 27.6	+0.2
	baz=189,slow=13,SNR=6.6						
ULN	**Ulaanbaatar**	**16.30**	**6**	*e*P	**Pn**	03 47 27.2	-1.2
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**16.30**	**6**	*e*P	**Pn**	03 47 27.2	-1.2
	comp=Z,6.6nm,1.0s						
GUN	**Gumba**	**16.49**	**262**	*e*P	**Pn**	03 47 28.5	-2.5
	comp=Z,52nm,0.8s						
PKI	**Pulchoki**	**16.99**	**261**	*e*P	**Pn**	03 47 34.8	-2.6
	comp=Z,18nm,0.6s						
PKIN	**Phulchoki**	**17.00**	**261**	*e*P	**Pn**	03 47 34.8	-2.7
	comp=Z,31nm,0.7s						
KKN	**Kakani**	**17.03**	**262**	*e*P	**Pn**	03 47 35.6	-2.3
	comp=Z,33nm,0.9s						
DMN	**Daman**	**17.24**	**261**	*e*P	**Pn**	03 47 37.2	-3.2
	comp=Z,38nm,0.9s						
GKN	**Gorkha**	**17.52**	**263**	*e*P	**Pn**	03 47 41.4	-2.5
	comp=Z,25nm,0.9s						
KOLN	**Koldanda**	**18.46**	**263**	*e*P	**Pn**	03 47 52.3	-3.3
	comp=Z,24nm,0.9s						
ZAK	**Zakamensk**	**18.71**	**358**	*e*P	**Pn**	03 48 01.0	+2.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PYUN	**Piuthan**	**18.88**	**265**	*e*P	**Pn**	03 47 57.3	-3.4
	comp=Z,29nm,1.1s						
KSRS	**Korea Array**	**20.20**	**67**	P	**P**	03 48 15.2	+0.6
	comp=Z,5.1nm,0.8s,baz=256,slow=10,SNR=17						
KSRS	**Korea Array**	**20.20**	**67**	P	**P**	03 48 15.2	+0.6
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**22.71**	**318**	*e*P	**P**	03 48 41.7	+0.2
MKAR	**Makanchi Array**	**22.71**	**318**	P	**P**	03 48 41.9	+0.4
	comp=Z,5.6nm,1.0s,mb4.0,baz=116,slow=11,SNR=16						
KSH	**Kashi**	**24.32**	**297**	P	**P**	03 49 01.3	+3.8
KSH				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.5						
TKM2	**Tokmak 2**	**25.38**	**304**	*e*P	**P**	03 49 07.0	-0.1
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**25.38**	**304**	*e*P	**P**	03 49 07.0	-0.1
	comp=Z,2.7nm,0.9s,mb4.0						
UCH	**Uchtor**	**25.97**	**302**	*e*P	**P**	03 49 13.9	+1.5
	comp=Z,14nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**26.08**	**303**	*de*P	**P**	03 49 16.3	+2.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.8s,mb3.6						
AAK	**Ala-Archa**	**26.08**	**303**	*e*P	**P**	03 49 16.5	+3.0
	comp=Z,3.0nm,0.9s,mb3.9						
ZAA0	**Zalesovo Array**	**26.32**	**333**	*e*P	**P**	03 49 14.4	-1.1
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	**P**	03 49 14.8	-0.6
	comp=Z,2.3nm,0.5s,mb4.1,baz=128,slow=9.2,SNR=10						
ZALV	**Zalesovo Beam**	**26.32**	**333**	P	**P**	03 49 14.8	-0.6
KURK	**Kurchatov**	**26.94**	**322**	P	**P**	03 49 18.3	-2.9
	comp=Z,4.1nm,0.9s,mb4.1,baz=131,slow=8.7,SNR=18						
KURK	**Kurchatov**	**26.94**	**322**	*e*P	**P**	03 49 21.8	+0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
KURK	**Kurchatov**	**26.94**	**322**	*e*P	**P**	03 49 21.8	+0.7
	comp=Z,8.0nm,1.1s,mb4.4						
KLR	**Kul'dur**	**27.01**	**42**	*e*P	**P**	03 49 22.0	+0.2
BVAR	**Borovoye Array**	**32.49**	**321**	P	**P**	03 50 09.9	-0.4
	comp=Z,1.1nm,0.8s,mb3.9,baz=104,slow=12,SNR=5.7						
ABKAR	**Akbulak array**	**37.48**	**311**	*e*P	**P**	03 50 53.8	+0.4
	comp=Z,2.8nm,1.0s,mb4.0						
SVE	**Sverdlovsk**	**39.19**	**323**	||*e*P	**P**	03 51 08.6	+0.9
SVE				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
ARU	**Arti**	**40.13**	**322**	*d i*P	**P**	03 51 15.0	-0.6
ARU				S	**S**	03 57 22.4	-0.3
ARU				SS	SS	04 00 15.5	-4.3
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
ARU	**Arti**	**40.13**	**322**	*e*P	**P**	03 51 15.6	0.0
	comp=Z,14nm,0.9s,mb4.6						
SOKR	**Solikamsk**	**42.06**	**326**	||*i*P	**P**	03 51 32.3	+0.9
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
PETK	**Petropavlovsk-**	**43.62**	**44**	LR	LR	04 12 09.0	
	comp=Z,52nm,18.0s,MS3.5,baz=46,slow=39						
KIV	**Kislovodsk**	**49.20**	**303**	*e*P	**P**	03 52 29.3	+1.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
SOC	**Sochi**	**51.38**	**303**	*e*P	**P**	03 52 47.1	+2.4
SOC				*e*PPP		03 55 42.3	
SOC				*e*S	**S**	03 59 58.9	-6.2
SOC				*e*SSS		04 05 08.0	
SOC				MLR	MLR		
	comp=Z,218nm,18.0s,MS4.2						
OBN	**Obninsk**	**52.22**	**318**	*e*P	**P**	03 52 51.7	+1.0
OBN				*e*S	**S**	04 00 16.0	-0.3
OBN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ANN	**Anapa**	**52.80**	**305**	*e*P	**P**	03 52 53.6	-1.6
ANN				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.4						
BR131	**Keskin Array S**	**56.67**	**299**	*e*P	**P**	03 53 23.4	+0.1
	comp=Z,2.3nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**56.67**	**299**	P	**P**	03 53 23.5	+0.1
	comp=Z,2.3nm,0.8s,mb4.2,baz=100,slow=6.4,SNR=16						
ARCES	**ARCESS Array B**	**56.84**	**336**	P	**P**	03 53 21.6	-2.5
	comp=Z,1.6nm,0.7s,mb4.2,baz=76,slow=5.1,SNR=3.7						
AKASG	**Malin Array Be**	**57.17**	**313**	P	**P**	03 53 25.7	-1.0
	comp=Z,0.7nm,0.5s,mb4.0,baz=68,slow=7.1,SNR=6.0						
FINES	**FINESS Array B**	**57.23**	**326**	P	**P**	03 53 26.6	-0.3
	comp=Z,4.6nm,0.9s,mb4.5,baz=77,slow=7.2,SNR=12						
COEN	**Coen**	**58.67**	**135**	*e*P	**P**	03 53 38.0	+0.3
	comp=Z,70nm,1.1s,mb5.6						
WRAB	**Tennant Creek**	**58.81**	**147**	*e*P	**P**	03 53 38.5	0.0
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**58.81**	**147**	*e*P	**P**	03 53 38.5	-0.1
	comp=Z,10.0nm,1.0s,mb4.8						
KWP	**Kalwaria Pacla**	**61.49**	**313**	*e*P	**P**	03 53 57.2	+0.5
KWP	**Kalwaria Pacla**	**61.49**	**313**	*e*P	**P**	03 53 57.6	+0.9
KWP				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
KWP	**Kalwaria Pacla**	**61.49**	**313**	*e*P	**P**	03 53 57.6	+0.9
	comp=Z,13nm,0.9s,mb5.1						
ASAR	**Alice Springs**	**61.85**	**149**	P	**P**	03 53 59.5	+0.2
	comp=Z,0.9nm,0.5s,mb4.3,baz=334,slow=6.7,SNR=15						
KOLS	**Kolonicke sedl**	**61.97**	**312**	*e*P	**P**	03 53 59.9	0.0
KOLS				pmax	pmax		
	comp=Z,46nm,3.4s						
KOLS	**Kolonicke sedl**	**61.97**	**312**	*e*P	**P**	03 53 59.9	0.0
	comp=Z,46nm,3.4s						
KOLS	**Kolonicke sedl**	**61.97**	**312**	*e*P	**P**	03 53 59.9	0.0
STHS	**Stebnicka Huta**	**62.47**	**313**	*e*P	**P**	03 54 04.1	+0.9
STHS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**62.47**	**313**	*e*P	**P**	03 54 04.1	+0.9
	comp=Z,2.1nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**62.47**	**313**	*e*P	**P**	03 54 04.1	+0.9
STHS				*e*pP		03 54 10.8	
OJC	**Ojcow**	**63.12**	**314**	*e*P	**P**	03 54 08.2	+0.7
KECS	**Kecovo**	**63.23**	**312**	*e*P	**P**	03 54 07.2	-1.1
KECS				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.1						
KECS	**Kecovo**	**63.23**	**312**	*e*P	**P**	03 54 07.2	-1.1
	comp=Z,1.9nm,1.2s,mb4.1						
KECS	**Kecovo**	**63.23**	**312**	*e*P	**P**	03 54 07.2	-1.1
VYHS	**Vyhne**	**64.27**	**313**	*e*P	**P**	03 54 16.6	+1.5
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.3						
VYHS	**Vyhne**	**64.27**	**313**	*e*P	**P**	03 54 16.6	+1.5
	comp=Z,3.0nm,1.5s,mb4.3						
VYHS	**Vyhne**	**64.27**	**313**	*e*P	**P**	03 54 16.6	+1.5
NOA	**NORSAR Array B**	**64.31**	**327**	P	**P**	03 54 14.6	-0.6
	comp=Z,1.7nm,0.9s,mb4.3,baz=71,slow=6.7,SNR=3.3						
MORC	**Moravsky Berou**	**64.64**	**314**	*e*P	**P**	03 54 17.6	0.0
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
MORC	**Moravsky Berou**	**64.64**	**314**	*e*P	**P**	03 54 17.6	0.0
	comp=Z,1.7nm,0.8s,mb4.3						
BRG	**Berggiesshubel**	**66.41**	**316**	*e*P	**P**	03 54 29.4	+0.3
	comp=Z,2.2nm,0.9s,mb4.4						
GERES	**GERESS Array B**	**67.32**	**314**	P	**P**	03 54 35.2	+0.3
	comp=Z,1.2nm,0.9s,mb4.1,baz=64,slow=6.1,SNR=8.6						
GRA1	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	03 54 41.0	-1.1
	comp=Z,3.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	03 54 41.0	-1.1
	comp=Z,3.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	03 54 41.0	-1.1
GRF				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	03 54 41.0	-1.1
GRF				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**68.48**	**316**	*e*P	**P**	03 54 41.0	-1.1
	comp=Z,3.0nm,1.1s,mb4.4						
CDF	**Champ du Feu**	**71.37**	**316**	*e*P	**P**	03 54 59.5	-0.5
INK	**Inuvik**	**71.54**	**19**	*e*P	**P**	03 54 59.3	-1.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**71.54**	**19**	*e*P	**P**	03 54 59.3	-1.3
	comp=Z,1.5nm,0.9s,mb4.1						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	03 55 10.0	+0.1
	comp=Z,11nm,0.8s,mb4.7						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	03 55 10.0	+0.1
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	03 55 10.0	+0.1
	comp=Z,5.5nm,0.8s,mb4.7						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	03 55 10.0	0.0
	comp=Z,26nm,1.1s,mb5.0						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	03 55 10.0	0.0
LPL				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	03 55 10.0	0.0
	comp=Z,13nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**74.26**	**315**	*e*P	**P**	03 55 16.1	-1.0
TCF	**Toulx Ste Croi**	**75.42**	**316**	*e*P	**P**	03 55 23.2	-0.6
YKA	**Yellowknife Ar**	**81.08**	**17**	P	**P**	03 55 54.4	-0.5
	comp=Z,0.8nm,0.7s,mb3.9,baz=327,slow=5.2,SNR=9.4						
FFC	**Flin Flon**	**91.01**	**15**	*i* P	**P**	03 56 48.1	+4.0

CASC 25 03:48:28.1±1.8, 13°.75N×92°.35W, h31km±244km, MD3.9, 2D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.90**	**51**	||*e*P	Pn	03 48 44.6	0.0
FUG	**Fuego 3**	**1.62**	**64**	||*e*P	Pn	03 48 54.1	-0.4
TP2	**Tecpan 2**	**1.65**	**51**	*e*P	Pn	03 48 56.0	+1.0
IXG	**Ixpaco**	**1.89**	**77**	*e*P	Pn	03 48 58.3	+0.1
NBG	**Las Nubes**	**2.12**	**67**	*e*P	Pn	03 49 02.7	+1.3
RBDL	**Robledal**	**2.61**	**82**	*e*P	Pn	03 49 08.4	+0.2
RBDL				*e*S	Sn	03 49 39.0	+0.1
RTR	**El Retiro**	**2.63**	**86**	*e*P	Pn	03 49 09.2	+0.8
SBLS	**San Blas**	**2.65**	**88**	*e*P	Pn	03 49 09.3	+0.6
MRL	**Marmol**	**2.89**	**63**	*e*P	Pn	03 49 13.6	+1.5
LFRS	**El Faro**	**3.20**	**92**	*e*P	Pn	03 49 16.3	+0.1
LFRS				*e*S	Sn	03 49 56.2	+2.9

IDC 25 03:50:23.6±1.5, 1°.08S×23°.98W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/23, mbtmp3.6/3, Error ellipse: s-maj=56.4km s-min=38.6km az=159.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**29.13**	**60**	P	P	03 56 26.4	-0.1
	0.5nm,0.6s,baz=242,slow=7.8,SNR=6.1						
GERES	**GERESS Array B**	**59.43**	**28**	P	P	04 00 28.3	+0.2
	0.4nm,0.6s,baz=260,slow=5.9,SNR=5.5						
TXAR	**Lajitas Array**	**81.54**	**300**	P	P	04 02 43.7	+0.1
	0.3nm,0.8s,baz=128,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**147.33**	**140**	PKPbc	PKPbc	04 10 09.4	-0.6
	0.8nm,0.6s,baz=211,slow=2.1,SNR=16						

KRSC 25 03:59:23.7±0.4, 53°.56N×163°.39E, h40km±29km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.40**	**316**	*e*P	Pn	03 59 46.8	+0.1
MKZ				*e*S	Sn	04 00 04.7	+0.8
SPN	**Mys Shipunski**	**2.07**	**258**	*e*P	Pn	03 59 56.4	+0.5
SPN				*e*S	Sn	04 00 20.0	-0.4
BKI	**Bering**	**2.23**	**41**	*e*P	Pn	03 59 57.0	-1.1
BKI				*e*S	Sn	04 00 20.6	-3.9
KII	**Karymskiy**	**2.39**	**283**	*e*P	Pn	04 00 01.3	+1.1
KII				*e*S	Sn	04 00 28.4	+0.2
NLC	**Nalytchevo**	**2.46**	**262**	*e*P	Pn	04 00 02.0	+0.8
NLC				*e*S	Sn	04 00 29.7	-0.2
TUMR	**Tumrok**	**2.56**	**314**	*e*P	Pn	04 00 05.4	+2.7
TUMR				*e*S	Sn	04 00 35.2	+2.6
KBTR	**Krutoberegovo**	**2.67**	**353**	*e*P	Pn	04 00 03.7	-0.5
KBTR				*e*S	Sn	04 00 33.7	-1.6
AVH	**Avacha**	**2.80**	**266**	*e*P	Pn	04 00 07.6	+1.7
AVH				*e*S	Sn	04 00 39.6	+1.2
KMNR	**Kamenistaya**	**2.86**	**322**	*e*P	Pn	04 00 08.5	+1.7
KMNR				*e*S	Sn	04 00 42.1	+2.2
ZLN	**Zelenaya**	**2.88**	**330**	*e*P	Pn	04 00 09.9	+2.9
ZLN				*e*S	Sn	04 00 43.5	+3.1
PET	**Petropavlovsk**	**2.89**	**261**	*e*S	Sn	04 00 42.3	+1.6
BZMR	**Bezymyannaya**	**2.91**	**326**	*e*P	Pn	04 00 10.7	+3.2
KIRR	**Kirishev**	**2.98**	**325**	*e*P	Pn	04 00 11.2	+2.9
KIRR				*e*S	Sn	04 00 46.9	+4.1
CIRR	**Tsirk**	**2.98**	**330**	*e*P	Pn	04 00 11.1	+2.7
CIRR				*e*S	Sn	04 00 46.8	+3.9
KPT	**Kopyto**	**3.03**	**324**	*e*P	Pn	04 00 11.0	+1.9
RUS	**Russkaya

RTR **El Retiro** 1.90 107 eP Pn 04 17 36.0 -0.3
CCIG **Comitan** 1.91 342 i P Pn 04 17 37.9 +1.5
CCIG i S Sn 04 18 06.8 +7.2
CCIG **Comitan** 1.91 342 i P Pn 04 17 37.9 +1.5
CCIG i S Sn 04 18 06.8 +7.2
SBLS **San Blas** 1.94 108 eP Pn 04 17 36.3 -0.5
SNJE **San Jose** 1.94 107 eP Pn 04 17 36.4 -0.5
PCIG 2.06 307 eP Pn 04 17 37.0 -1.4
PCIG eS Sn 04 18 03.8 +0.6
BOQS **Boqueron** 2.29 108 eP Pn 04 17 41.0 -0.5
SNET **Serv Nac Est T** 2.35 109 eP Pn 04 17 42.8 +0.5
LBRS **Las Brisas** 2.50 106 eP Pn 04 17 44.1 -0.3
LBRS eS Sn 04 18 18.9 +4.9
LFRS **El Faro** 2.52 109 eP Pn 04 17 44.2 -0.4
SNVI **San Vicente** 2.73 108 eP Pn 04 17 47.2 -0.3
SNVI eS Sn 04 18 23.8 +4.2
TGIG 2.77 326 i P Pn 04 17 47.0 -1.1
TGIG i S Sn 04 18 25.0 +4.4
CAHU **Cacacuatique** 3.28 102 eP Pn 04 17 54.3 -0.6
VSM **San Miguel** 3.31 108 eP Pn 04 17 55.5 +0.1
VSM eS Sn 04 18 38.2 +4.5
BLLM **Bellamira** 3.34 107 eP Pn 04 17 55.6 -0.2
CNCH **Conchagua** 3.77 108 eP Pn 04 18 01.1 -0.4
CNCH eS Sn 04 18 50.6 +5.9
TGUH **Tegucigalpa,Un** 4.13 95 ePn Pn 04 18 06.3 -0.3
TGUH **Tegucigalpa,Un** 4.13 95 eP Pn 04 18 05.9 -0.7
TGUH AML AML 04 19 26.8
comp=E,1µm,0.7s
CMIG **Matias Romero** 4.17 309 P Pn 04 18 06.2 -0.7
comp=E,74nm,0.3s,baz=126,slow=9.6,SNR=401
CMIG S Sn 04 18 53.8 -0.6
comp=E,118nm,0.3s,baz=176,slow=9.7,SNR=5.4
CMIG LR LR 04 19 12.3
comp=E,178nm,19.3s,baz=141,slow=31
CRIN **San Cristobal** 4.68 111 eP Pn 04 18 13.9 -0.2
CRIN AML AML 04 19 24.4
comp=N,3µm,1.5s
TELN **Telica** 4.92 112 eP Pn 04 18 17.2 -0.1
CNGN **Cerro Negro** 5.08 112 eP Pn 04 18 18.8 -0.7
MIRN **Miramar** 5.09 113 eP Pn 04 18 18.9 -0.7
CSAN 5.45 114 eP Pn 04 18 24.1 -0.5
APYN **Apoyeque** 5.49 113 eP Pn 04 18 24.9 -0.3
XAVN **Gruta Xavier** 5.55 114 eP Pn 04 18 25.7 -0.2
TISN **Laguna Tiscapa** 5.60 114 eP Pn 04 18 26.2 -0.5
HUEN 5.61 111 eP Pn 04 18 26.6 -0.2
MGAN **Managua** 5.62 114 eP Pn 04 18 26.9 0.0
TICN **Ticuantepe** 5.68 115 eP Pn 04 18 28.6 +0.8
CONN **Concepcion** 6.42 116 eP Pn 04 18 38.6 +0.7
TEIG **Tepich** 6.51 28 P Pn 04 18 40.8 +1.7
TEIG S Sn 04 19 51.9 0.0
TEIG LR LR 04 21 49.3
comp=N,490nm,20.0s,baz=313,slow=44
VCR **Vista de Mar** 7.18 126 eP Pn 04 18 48.0 -0.3
JCR **Jicaral** 7.76 126 eP Pn 04 18 56.2 0.0
CGA2 **Cerro Gallo 2** 8.19 122 eP Pn 04 19 02.4 +0.5
PRS1 **Puriscal** 8.33 121 eP Pn 04 19 05.0 +1.1
QCR **Quepos** 8.76 124 eP Pn 04 19 09.9 0.0
BUS **Buena Vista** 9.02 122 eP Pn 04 19 14.2 +0.8
BAR1 9.56 122 eP Pn 04 19 20.7 0.0
BRU2 **Volcan** 10.32 122 eP Pn 04 19 31.5 +0.4
BCIP **Isla Barro Col** 12.58 113 ePn Pn 04 20 02.7 +0.8
MTDJ **Mount Denham** 13.93 73 ePn Pn 04 20 23.0 +3.1
BRAL **Brewton** 16.97 13 eP Pn 04 21 03.7 +5.2
comp=N,64nm,1.2s
JCT **Junction City** 17.67 336 ePn Pn 04 21 08.3 +1.3
comp=N,12nm,1.0s
628A **Black Gap, Mar** 18.27 327 ⇑P Pn 04 21 13.9 -0.5
baz=18
627A **Terlingua Ranc** 18.52 326 ⇓P Pn 04 21 17.0 -0.3
baz=19,SNR=8.5
TXAR **Lajitas Array** 18.58 325 P Pn 04 21 17.5 -0.6
comp=N,0.2nm,0.3s,baz=152,slow=11,SNR=29
TXAR PcP PcP 04 25 42.0 -1.5
comp=N,0.1nm,0.3s,baz=151,slow=2.9,SNR=4.0
LRAL **Lakeview Retre** 18.94 12 eP Pn 04 21 21.0 -1.3
comp=N,18nm,1.0s
626A **Big Bend Ranch** 19.01 324 ⇑P Pn 04 21 22.8 -0.3
baz=19,SNR=12
OTAV **Otavalo** 19.15 136 eP Pn 04 21 24.5 -0.5
comp=N,4.2nm,1.0s
428A **Kincaid Ranch,** 19.17 329 ⇑P Pn 04 21 23.7 -1.3
baz=19
527A **Woodward Ranch** 19.18 326 ⇑P Pn 04 21 24.1 -1.0
baz=19,SNR=9.0
526A **Mary Lane Ranc** 19.37 325 ⇓P Pn 04 21 26.5 -1.0
baz=20,SNR=8.5
ROSC **El Rosal** 19.43 118 P Pn 04 21 25.2 -3.0
comp=N,0.7nm,0.3s,baz=98,slow=21,SNR=5.7
427A **Hayter Ranch,** 19.63 328 ⇓P Pn 04 21 29.0 -1.5
baz=20
328A **Wristen Ranch,** 19.77 330 ⇑P Pn 04 21 30.4 -1.7
baz=20,SNR=6.9
SDDR **Presa de Saban** 19.88 74 eP Pn 04 21 30.6 -2.9
comp=N,18nm,1.0s
OXF **Oxford** 20.05 5 eP P 04 21 34.6 +1.7
comp=N,39nm,0.9s
MIAR **Mount Ida** 20.08 355 eP P 04 21 34.5 +1.3
comp=N,22nm,1.2s
GOGA **Godfrey** 20.23 20 eP P 04 21 35.2 +0.3
comp=N,15nm,0.9s
UALR **University of** 20.24 358 eP P 04 21 35.0 0.0
comp=N,24nm,1.1s
UALR epP 04 21 59.3
425A **Indio Mountain** 20.43 325 ⇓P P 04 21 37.3 +0.3
baz=21,SNR=13
227A **Bennet, Jal** 20.52 330 ⇑P P 04 21 38.0 0.0
baz=21
PLAL **Pickwick Lake** 20.67 8 eP P 04 21 39.1 -0.5
comp=N,12nm,1.1s
325A **Bean Ranch, Si** 20.86 326 ⇑P P 04 21 41.5 -0.3
baz=21,SNR=6.2
226A **Malaga, Loving** 20.96 329 ⇓P P 04 21 43.0 +0.3
baz=21
127A **Arkansas Junct** 21.10 331 ⇓P P 04 21 44.4 +0.1
baz=21
SDV **Santo Domingo** 21.18 103 P P 04 21 41.8 -3.5
comp=N,9.6nm,0.6s,mb4.3,baz=315,slow=6.7,SNR=14
SDV **Santo Domingo** 21.18 103 eP P 04 21 41.4 -3.9
comp=N,10nm,0.7s,mb4.3
324A **Moseley Ranch,** 21.20 325 ⇑P P 04 21 45.0 -0.4
baz=21,SNR=9.9
GDL2 **Guadalupe Moun** 21.20 329 eP P 04 21 46.2 +0.9
WMOK **Wichita Mounta** 21.23 343 eP P 04 21 44.6 -1.0
comp=N,26nm,1.1s,mb4.5
WMOK epP 04 22 01.9
SWET **Sewanee** 21.27 13 eP P 04 21 45.3 -0.8
MNTX **Cornudas Mount** 21.34 326 eP P 04 21 45.5 -1.4
comp=N,7.4nm,0.8s,mb4.1
225A **Deer Hill, Car** 21.36 328 ⇓P P 04 21 47.2 +0.1
baz=22
CPRX **Cap Rock** 21.63 331 eP P 04 21 49.0 -0.9
comp=N,1.3nm,0.3s,mb3.7
224A **Corundas Mount** 21.71 326 ⇓P P 04 21 50.0 -0.7
baz=22,SNR=13
125A **Gardner Draw,** 21.71 329 ⇓P P 04 21 49.8 -1.0
baz=22
CPCT **Cooper Cave** 21.82 16 eP P 04 21 51.0 -0.9
CPCT epP 04 22 09.0
WVT **Waverly** 21.83 8 eP P 04 21 51.4 -0.7
comp=N,8.3nm,1.0s,mb4.0
Z26A **Caprock** 21.88 331 ⇓P P 04 21 51.6 -1.0
baz=22
MSTX **Muleshoe** 21.93 334 ⇑P P 04 21 52.1 -1.1
baz=22
Y27A **Causey** 22.03 333 ⇓P P 04 21 53.2 -0.9
baz=22,SNR=6.3
124A **Stringfield Ra** 22.16 327 ⇑P P 04 21 55.5 -0.1
baz=22,SNR=23
PARMO **Parma** 22.16 4 eP P 04 21 54.6 -1.0
TKL **Tuckaleechee C** 22.22 17 P P 04 21 54.6 -1.6
comp=N,11nm,0.9s,mb4.2,baz=184,slow=11,SNR=8.4
TKL LR LR 04 31 39.1
comp=N,193nm,19.4s,baz=261,slow=39
TKL **Tuckaleechee C** 22.22 17 eP P 04 21 56.2 0.0
Z25A **Roswell** 22.24 330 ⇓P P 04 21 55.7 -0.7
baz=22
AMTX **Amarillo** 22.30 338 eP P 04 21 55.5 -1.6
comp=N,17nm,0.9s,mb4.4
Z24A **Sheeppen Canyo** 22.61 329 ⇓P P 04 22 00.7 +0.5
baz=23,SNR=9.4
Y25A **Mesa, Roswell** 22.76 331 ⇑P P 04 22 01.7 -0.2
baz=23
320A **Kipp Ranch, An** 22.92 320 ⇓P P 04 22 04.1 +0.5
baz=23,SNR=7.3
221A **Mesquite Ranch** 22.93 322 ⇓P P 04 22 04.8 +1.1
baz=23
122A **Conniff Cattle** 22.99 325 ⇓P P 04 22 05.1 +0.7
baz=23
W27A **Bowe Ranch, En** 23.00 335 ⇑P P 04 22 02.4 -2.0
baz=23,SNR=5.2
Z23A **Rita Site, Whi** 23.00 327 ⇓P P 04 22 04.5 +0.1
baz=23,SNR=7.2
Y24A **Capitan** 23.12 329 ⇓P P 04 22 05.0 -0.5
baz=23
SIUC **Southern Illin** 23.25 5 eP P 04 22 04.4 -2.2
comp=N,25nm,0.9s,mb4.5
SIUC epP 04 22 22.5
220A **Playas Peak, P** 23.31 321 ⇑P P 04 22 08.3 +1.0
baz=23
121A **Cookes Peak, D** 23.31 323 ⇓P P 04 22 07.3 0.0
baz=23,SNR=8.3
Z22A **Elephant Butte** 23.39 326 ⇑P P 04 22 07.8 -0.2
baz=24,SNR=6.4
319A **Douglas** 23.42 319 ⇑P P 04 22 08.4 +0.1
baz=24,SNR=6.1
Y23A **Lovelace Mesa,** 23.43 328 ⇓P P 04 22 09.0 +0.6
baz=24
CCM **Cathedral Cave** 23.50 1 eP P 04 22 05.1 -3.9
comp=N,18nm,1.0s,mb4.3
120A **U Bar Ranch, L** 23.82 322 ⇓P P 04 22 12.1 +0.1
baz=24
219A **White Tail Can** 23.82 320 ⇑P P 04 22 12.0 0.0
baz=24,SNR=6.7
BNM **Barren Site** 23.90 328 eP P 04 22 13.3 +0.7
comp=N,13nm,1.4s,mb4.1
Y22A **Socorro** 23.91 327 ⇓P P 04 22 13.4 +0.6
baz=24
318A **Bisbee** 23.91 318 ⇑P P 04 22 13.6 +0.8
baz=24,SNR=11
SLM **Saint Louis** 24.11 2 eP P 04 22 13.3 -1.2
comp=N,36nm,0.6s,mb4.9
WCI **Wyandotte Cave** 24.12 10 eP P 04 22 12.8 -1.9
comp=N,21nm,1.0s,mb4.4
WCI epP 04 22 32.6
Z20A **Nine Sixteen R** 24.20 323 ⇑P P 04 22 16.1 +0.7
baz=24
218A **Dragoon** 24.30 319 ⇑P P 04 22 17.0 +0.7
baz=24
Y21A **Point of Rocks** 24.34 326 ⇑P P 04 22 17.7 +1.0
baz=24,SNR=6.9
LAZ **Ladron** 24.36 327 eP P 04 22 16.9 +0.1
comp=N,3.5nm,1.3s,mb3.5
LAZ epP 04 22 28.3
OLIL **Olney** 24.36 6 eP P 04 22 14.8 -2.1
comp=N,30nm,0.9s,mb4.6
OLIL epP 04 22 34.3
U26A **Atchley Ranch,** 24.43 336 ⇑P P 04 22 16.5 -0.9
baz=25
ANMO **Albuquerque** 24.44 329 P P 04 22 16.8 -0.8
comp=N,0.4nm,0.4s,mb3.1,baz=144,slow=16,SNR=5.4
ANMO **Albuquerque** 24.44 329 eP P 04 22 17.8 +0.1
SJG **San Juan** 24.61 78 LR LR 04 30 50.9
comp=N,205nm,21.9s,baz=95,slow=34
Y20A **Horse Springs,** 24.66 325 ⇑P P 04 22 20.6 +1.1
baz=25,SNR=9.4
217A **Green Valley** 24.67 318 ⇓P P 04 22 20.2 +0.4
baz=25,SNR=6.6
118A **Homack Ranch,** 24.70 320 ⇑P P 04 22 20.5 +0.6
baz=25
U25A **Circle Dot Ran** 24.70 334 ⇓P P 04 22 20.2 +0.2
baz=25
X21A **Alamocita Cree** 24.74 326 ⇓P P 04 22 20.9 +0.6
baz=25,SNR=9.4
ATAH **Atahualpa** 24.98 148 P P 04 22 23.7 +1.0
comp=N,14nm,0.7s,mb4.5,baz=336,slow=8.8,SNR=10
TUC **Tucson** 24.99 319 eP P 04 22 22.6 0.0
comp=N,4.7nm,0.9s,mb3.9
117A **Oracle** 25.14 319 ⇓P P 04 22 24.3 +0.3
baz=25
Y19A **Nutrioso** 25.19 323 ⇑P P 04 22 24.3 -0.1
baz=25
X20A **Quemado** 25.20 326 ⇓P P 04 22 24.7 +0.2
baz=25,SNR=6.1
U23A **El Rito** 25.43 332 ⇓P P 04 22 26.5 -0.1
baz=26
HDIL **Hopedale** 26.07 4 eP P 04 22 30.1 -2.2
comp=N,20nm,1.1s,mb4.5
HDIL epP pP 04 22 49.4 -0.4
W19A **Sanders** 26.11 325 ⇑P P 04 22 32.8 +0.1
baz=26
PCRV **Puerto La Cruz** 26.59 96 LR LR 04 33 23.3
comp=N,56nm,21.4s,baz=26,slow=37
X16A **Lo Mia Camp, P** 26.81 321 ⇑P P 04 22 39.8 +0.8
baz=27,SNR=6.2
U19A **Dine' College,** 26.89 327 ⇓P P 04 22 39.8 0.0
baz=27
Y15A **Casa Rosa Ranc** 27.05 319 ⇓P P 04 22 41.3 +0.1
baz=27
V17A **Tonalea, Kykot** 27.27 324 ⇑P P 04 22 43.5 +0.3
baz=27,SNR=6.1
X15A **Humboldt** 27.34 320 ⇑P P 04 22 43.9 +0.1
baz=28
Z13A **Yuma Proving G** 27.43 317 ⇑P P 04 22 44.5 -0.1
baz=28
Y14A **Wickenburg** 27.46 319 ⇑P P 04 22 45.0 0.0
baz=28
X14A **Yava** 27.73 320 ⇓P P 04 22 47.6 +0.2
baz=28
T18A **Mexican Hat** 27.88 327 ⇓P P 04 22 48.9 +0.3
baz=28
Y13A **Salome** 27.92 318 ⇑P P 04 22 49.4 +0.4
baz=28
V15A **Kaibab Nationa** 28.20 323 ⇑P P 04 22 52.0 +0.5
baz=28,SNR=6.5
T17A **Navajo Res., N** 28.27 326 ⇓P P 04 22 52.6 +0.5
baz=28
S18A **Hurst Farm, Bl** 28.36 328 ⇑P P 04 22 53.6 +0.7
baz=28
X13A **Yucca** 28.41 319 ⇓P P 04 22 53.7 +0.4
baz=28
V14A **Boquillas Ranc** 28.63 321 ⇓P P 04 22 56.0 +0.7
baz=29
U15A **North Rim** 28.69 323 ⇑P P 04 22 56.4 +0.6
baz=29,SNR=5.8
W13A **Hualapai Mount** 28.77 320 ⇓P P 04 22 57.0 +0.5
baz=29
BC3 **Big Chuckw Mtn** 28.91 316 ⇓P P 04 22 57.7 -0.1
baz=29
IRM **Iron Mountain** 29.00 317 ⇑P P 04 22 58.9 +0.3
baz=29
T15A **Red Dirt Ranch** 29.16 324 ⇑P P 04 23 00.6 +0.7
baz=29,SNR=6.9
U14A **Mt Trumbull** 29.21 322 ⇑P P 04 23 01.3 +0.9
baz=29
R17A **Hanksville Air** 29.28 328 ⇓P P 04 23 01.3 +0.3
baz=29
V13A **Grand Canyon W** 29.31 321 ⇓P P 04 23 01.6 +0.3
baz=29,SNR=6.3
LDFC **Landfair** 29.53 318 eP P 04 23 04.9 +1.6
R16A **Teasdale** 29.58 327 ⇓P P 04 23 04.5 +0.8
baz=30,SNR=9.5
T14A **Hurricane** 29.59 323 ⇑P P 04 23 04.0 +0.2
baz=30,SNR=7.4
U13A **Pakoon Wash** 29.67 322 ⇑P P 04 23 04.9 +0.4
baz=30,SNR=6.7
GMRC **Granite Mounta** 29.71 317 ⇑P P 04 23 05.4 +0.5
baz=30
V12A **Nelson** 29.77 320 ⇓P P 04 23 06.0 +0.6
baz=30,SNR=11
Q16A **Castle Valley** 29.89 328 ⇓P P 04 23 06.9 +0.5
baz=30
T13A **Saint George** 30.04 322 ⇓P P 04 23 08.1 +0.4
baz=30,SNR=6.5
CCUT **Cedar City** 30.09 324 eP P 04 23 09.5 +1.3
comp=N,6.0nm,1.0s,mb4.2
CCUT ePcP PcP 04 26 08.3 0.0
MSU **Marysvale** 30.12 327 eP P 04 23 09.3 +0.8
MSU ePcP PcP 04 26 08.0 -0.4
S14A **Cedar City** 30.12 324 ⇑P P 04 23 09.3 +0.8
baz=30
TUQ **Turquoise Moun** 30.28 318 ⇑P P 04 23 10.5 +0.6
baz=30
S13A **Holt Ranch, En** 30.40 323 ⇓P P 04 23 11.7 +0.8
baz=30,SNR=15
R13A **O'Grain Ranch,** 30.87 324 ⇓P P 04 23 15.9 +0.8
baz=31,SNR=7.0
Q14A **Sevier Lake (B** 31.06 326 ⇑P P 04 23 17.5 +0.8
baz=31
U10A **Ash Meadows, A** 31.14 319 ⇑P P 04 23 17.5 +0.1
baz=31
R12A **Pony Springs,** 31.34 324 ⇓P P 04 23 20.4 +1.2
baz=32,SNR=5.1
P14A **Drum Mountains** 31.38 327 ⇓P P 04 23 20.2 +0.6
baz=32
Q13A **Wheeler Ranch,** 31.44 325 ⇑P P 04 23 20.2 +0.1
baz=32,SNR=5.1
MPMC **Manual Prospec** 31.67 317 ⇓P P 04 23 22.1 0.0
baz=32,SNR=8.1
P13A **Bates Ranch, G** 31.79 326 ⇑P P 04 23 23.4 +0.2
baz=32,SNR=6.0
R11A **Troy Canyon, C** 31.92 323 ⇓P P 04 23 24.0 -0.3
baz=32,SNR=5.4
PDAR **Pinedale Array** 32.20 335 P P 04 23 24.2 -2.4
comp=N,0.4nm,0.8s,mb3.2,baz=127,slow=9.4,SNR=3.9
PDAR PcP PcP 04 26 11.8 -2.0
comp=N,1.3nm,1.0s,baz=134,slow=4.3,SNR=6.2
S10A **Tonopah Range,** 32.25 321 ⇑P P 04 23 27.8 +0.7
baz=32
Q11A **Duckwater** 32.29 323 ⇑P P 04 23 28.2 +0.7
baz=32,SNR=8.7
P12A **McGill** 32.30 325 ⇑P P 04 23 28.1 +0.5
baz=32,SNR=5.1
N14A **Grayback Hills** 32.37 328 ⇑P P 04 23 28.8 +0.6
baz=32
VES **Vestal, Richgr** 32.61 316 ⇑P P 04 23 30.6 +0.3
baz=33
Q10A **Clear Creek Ra** 32.71 323 ⇓P P 04 23 31.5 +0.3
baz=33
O12A **Currie** 32.76 326 ⇑P P 04 23 32.9 +1.3
baz=33,SNR=5.8
M14A **Sheep Mountain** 32.94 329 ⇓P P 04 23 33.3 +0.1
baz=33,SNR=7.8
O11A **Cowboy Ranch,** 33.17 325 ⇑P P 04 23 35.9 +0.8
baz=33,SNR=5.3
REDW **Red Top Meadow** 33.23 334 eP P 04 23 37.0 +1.3
comp=N,11nm,1.0s,mb4.6
REDW epP pP 04 23 56.9 +3.3
M13A **Montello** 33.24 328 ⇑P P 04 23 36.4 +0.6
baz=33,SNR=6.6
M13A **Montello** 33.24 328 eP P 04 23 36.5 +0.7
comp=N,6.1nm,0.8s,mb4.5
M13A ePcP PcP 04 26 16.3 -0.4
NVAR **Mina Array Bea** 33.61 320 P P 04 23 40.4 +1.3
comp=N,6.6nm,0.8s,mb4.5,baz=135,slow=8.9,SNR=55
NVAR PcP PcP 04 26 17.9 0.0
comp=N,1.9nm,0.9s,baz=129,slow=3.5,SNR=6.5
NVAR **Mina Array Bea** 33.61 320 P P 04 23 40.4 +1.3
NVAR PcP PcP 04 26 17.9 0.0
M12A **Wells** 33.67 327 ⇑P P 04 23 39.8 +0.3
baz=34,SNR=7.4
M11A **Holland Ranch,** 34.15 327 ⇓P P 04 23 44.1 +0.4
baz=34,SNR=5.9
M10A **I.L. Ranch, Tu** 34.61 326 ⇑P P 04 23 48.1 +0.4
baz=35,SNR=6.0
L11A **Cat Creek Ranc** 34.65 328 ⇓P P 04 23 48.4 +0.4
baz=35,SNR=5.8
HLID **Hailey** 35.00 330 ⇑P P 04 23 51.0 0.0
baz=35,SNR=5.7
HLID **Hailey** 35.00 330 eP P 04 23 51.6 +0.6
comp=N,3.0nm,1.0s,mb4.1
I13A **Wildhorse Cree** 35.13 331 ⇑P P 04 23 52.8 +0.7
baz=35
MCMT **McKenzie Canyo** 35.27 333 eP P 04 23 52.7 -0.6
comp=N,1.5nm,0.8s,mb3.9
MCMT epP pP 04 24 15.2 +4.0
I12A **Atlanta** 35.52 330 ⇑P P 04 23 55.8 +0.4
baz=36,SNR=8.1
MFID **Camas Ranch** 35.58 329 ⇓P P 04 23 55.7 -0.3
baz=36
H13A **Challis** 35.69 332 ⇓P P 04 23 56.6 -0.3
baz=36,SNR=6.5
BEKR **Beckwourth** 35.75 321 ⇑P P 04 23 57.7 +0.1
baz=36
ULM **Lac du Bonnet** 35.87 355 LR LR 04 39 34.1
comp=N,90nm,19.6s,baz=190,slow=38
LRM **Limekiln Ridge** 35.89 335 eP P 04 23 58.6 0.0
LRM epP pP 04 24 20.5 +3.9
H12A **Diamond D Ranc** 35.96 331 ⇑P P 04 23 59.4 +0.2
baz=36
I11A **Placerville** 36.01 329 ⇑P P 04 24 00.1 +0.5
baz=36,SNR=11
J09A **Fry Pan Ranch,** 36.52 327 ⇓P P 04 24 03.8 -0.3
baz=37,SNR=16
I10A **Payette** 36.56 329 ⇓P P 04 24 04.0 -0.3
baz=37
G12A **Big Creek, Yel** 36.61 331 ⇑P P 04 24 04.4 -0.4
baz=37
H11A **Donnelly** 36.62 330 ⇓P P 04 24 04.6 -0.3
baz=37,SNR=6.2
H10A **Noah's Angus R** 36.89 330 ⇓P P 04 24 06.5 -0.6
baz=37
J08A **Circle Bar Ran** 36.91 327 ⇓P P 04 24 07.2 -0.1
baz=37
I09A **Lost Marbles R** 36.95 328 ⇓P P 04 24 07.5 -0.2
baz=37,SNR=9.5
F12A **Elk City** 37.06 332 ⇓P P 04 24 07.7 -0.9
baz=37,SNR=7.7
F10A **Beach Ranch, E** 38.13 331 ⇑P P 04 24 16.7 -0.9
baz=38,SNR=7.3
LPAZ **La Paz** 38.30 142 P P 04 24 17.7 -1.6
comp=N,1.3nm,0.8s,mb3.8,baz=336,slow=12,SNR=5.5
LON **Longmire** 40.94 328 eP P 04 24 41.0 0.0
comp=N,5.0nm,0.8s,mb4.4
FCC **Fort Churchill** 44.26 358 eP P 04 25 04.8 -2.9
comp=N,0.1nm,0.6s,mb2.7
SCHQ **Schefferville** 44.63 20 P P 04 25 06.9 -3.7
comp=N,4.2nm,0.8s,mb4.2,baz=46,slow=16,SNR=5.4
SCHQ pP pP 04 25 28.4 -0.7
comp=N,5.1nm,0.8s,baz=207,slow=8.4,SNR=4.0
SCHQ LR LR 04 44 36.7
comp=N,130nm,20.0s,baz=174,slow=37
YKA **Yellowknife Ar** 50.69 346 P P 04 25 54.8 -2.6
comp=N,1.4nm,0.8s,mb4.1,baz=148,slow=7.5,SNR=27
YKA pP pP 04 26 17.8 +1.5
comp=N,1.6nm,0.8s,baz=149,slow=7.4,SNR=6.6
YKA PcP PcP 04 27 11.1 -2.6
comp=N,0.8nm,0.7s,baz=148,slow=4.6,SNR=9.0
YKA LR LR 04 48 09.1
comp=N,4.2nm,22.0s,baz=5.0,slow=37
YKA **Yellowknife Ar** 50.69 346 P P 04 25 54.8 -2.6
YKA pP pP 04 26 17.8 +1.6
YKA PcP PcP 04 27 11.2 -2.6
YKA LR LR 04 48 09.1
DLBC **Dease Lake** 52.43 336 eP P 04 26 11.5 +1.1
CPUP **Villa Florida** 52.44 140 P P 04 26 07.2 -3.8
comp=N,2.2nm,0.8s,mb4.2,baz=54,slow=18,SNR=4.0
CPUP **Villa Florida** 52.44 140 P P 04 26 07.2 -3.8
HYT **Haines Junctio** 56.90 335 eP P 04 26 48.3 +5.5
INK **Inuvik** 60.13 343 eP P 04 27 03.3 -1.8
comp=N,1.8nm,0.9s,mb4.1
RES **Resolute Bay** 60.25 359 eP P 04 27 02.0 -3.8
comp=N,0.8nm,0.7s,mb3.9
ESDC **Sonseca Array** 79.06 52 P P 04 28 58.0 -4.2
comp=N,0.1nm,0.3s,mb3.1,baz=287,slow=6.0,SNR=4.3
ESDC **Sonseca Array** 79.06 52 P P 04 28 58.0 -4.2
BILL **Bilibino** 81.21 338 eP P 04 29 11.7 -1.4
comp=N,2.3nm,0.8s,mb4.1
DBIC **Dimbokro** 85.14 84 LR LR 05 04 40.4
comp=N,66nm,21.2s,baz=256,slow=34
PETK **Petropavlovsk-** 90.53 326 P P 04 29 58.1 -1.4
comp=N,3.3nm,0.9s,mb4.5,baz=102,slow=6.2,SNR=4.6
PETK LR LR 05 14 08.4
comp=N,40nm,18.9s,baz=243,slow=38
MDJ **Mudanjiang** 110.34 330 P Pdif 04 31 27.8 -0.8
MDJ pmax pmax
comp=Z,3.0nm,0.7s
MDJ pmax pmax
comp=Z,39nm,7.6s
BJI **Beijing** 119.97 336 PKP PKPdf 04 35 47.1 -1.0
BJI SS SS 04 53 30.9 -0.7
BJI LR LR
comp=N,84nm,17.9s
BJI LR LR
comp=E,96nm,17.9s
BJI LR LR
comp=Z,32nm,17.8s
WMQ **Urumqi** 122.00 1 ePKP PKPdf 04 35 51.5 -0.4
CD2 **Chengdu** 132.56 342 PKP PKPdf 04 36 09.0 -3.4
CHTO **Chiang Mai** 145.37 342 ePKPbc PKPbc 04 36 33.5 -2.4
CM31 **Chiang Mai Arr** 145.70 342 ePKPbc PKPbc 04 36 34.9 -2.2
CMAR **Chiang Mai Arr** 145.70 342 PKPbc PKPbc 04 36 34.8 -2.2
comp=Z,10nm,0.8s,baz=330,slow=3.3,SNR=31

*IDC **25** 04:27:04.0s 0.6,31°.89N×104°.57E,h0km,mb4.5/20,*
mb1 4.5/23,mb1mx4.5/30,mbtmp4.4/23,ML4.2/3,MS3.5/8,
Ms1 3.5/8,ms1mx3.2/28,Error ellipse: s-maj=18.0km
s-min=12.1km az=46.0
*BJI **25** 04:27:04.9,31°.91N×104°.69E,h13km,mB4.7/17,mb4.5/27,*

ML4.4/20, Ms4.4/44, Ms7 4.2/34
ISCJB ***25*** *04:27:04.3±0.8, 31°.94N±0°.02×104°.56E±0°.03, h11km±5km, mb4.6/82, MS3.9/19, Error ellipse: s-maj=4.1km s-min=3.7km az=176.9*
MOS ***25*** *04:27:05.8±0.9, 31°.96N×104°.63E, h22km, mb4.9/39, MS4.2/12, Error ellipse: s-maj=8.8km s-min=4.9km az=114.3*
NEIC ***25*** *04:27:06.3±0.2, 31°.93N×104°.51E, h10km, mb4.6/47, Error ellipse: s-maj=7.3km s-min=4.4km az=217.0*
SZGRF ***25*** *04:27:25.6, 34°.41N×103°.50E, h33km, mb4.8, Gansu, China*
ISC 25 04:27:05.4±0.7, 31°.97N±0°.02×104°.51E±0°.03, h3km±4km, h12km±2.3km: pP-P, n248, σ1§17/272, mb4.6/82, MS3.9/19, 40C-7D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.23**	**211**	Pn	**Pn**	**04 27 28.9**	**-0.6**
CD2				Pg	**Pg**	**04 27 30.6**	**+1.6**
CD2				Sg	**Sg**	**04 27 49.3**	**+4.2**
CD2				smax			
	comp=N,29μm,0.7s						
LZH	**Lanzhou**	**4.14**	**353**	*e*Pn	**Pn**	**04 28 12.3**	**+2.8**
LZH				Pg	**Pg**	**04 28 23.4**	**-1.3**
LZH				Sn	**Sn**	**04 29 04.9**	**+6.5**
LZH				Sg	**Sg**	**04 29 16.8**	**-1.6**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.7s						
LZH				LR	LR		
	comp=N,7μm,6.5s						
LZH				LR	LR		
	comp=Z,7μm,7.1s						
XAN	**Xi'an**	**4.25**	**60**	Pn	**Pn**	**04 28 09.8**	**-1.1**
XAN				Pg	**Pg**	**04 28 20.1**	**-6.6**
XAN				Sn	**Sn**	**04 29 00.0**	**-1.0**
XAN				Sg	**Sg**	**04 29 12.9**	**-8.8**
XAN				smax			
	comp=N,1μm,0.7s						
XAN				smax			
	comp=E,530nm,0.8s						
XAN				LR	LR		
	comp=N,610nm,5.3s						
XAN				LR	LR		
	comp=E,290nm,7.6s						
XAN				LR	LR		
	comp=Z,230nm,6.6s						
ENH	**Enshi**	**4.59**	**110**	*e*Pn	**Pn**	**04 28 15.2**	**-0.6**
ENH				*e*Pg	**Pg**	**04 28 34.0**	**+0.6**
ENH				*e*Sg	**Sg**	**04 29 32.5**	**-0.5**
GYA	**Guiyang**	**5.81**	**161**	Pn	**Pn**	**04 28 31.8**	**-0.6**
GYA				Sn	**Sn**	**04 29 42.8**	**+3.3**
GYA				smax			
	comp=N,590nm,0.8s						
GYA				smax			
	comp=E,590nm,1.0s						
GYA				LR	LR		
	comp=N,4μm,5.2s						
GYA				LR	LR		
	comp=E,3μm,4.8s						
GYA				LR	LR		
	comp=Z,4μm,5.0s						
KMI	**Kunming**	**7.00**	**193**	Pn	**Pn**	**04 28 49.4**	**+0.7**
KMI				Sn	**Sn**	**04 30 08.1**	**-0.7**
KMI				Sg	**Sg**	**04 30 46.6**	**-3.5**
KMI				smax			
	comp=N,130nm,1.3s						
KMI				smax			
	comp=E,100nm,1.4s						
KMI				LR	LR		
	comp=N,970nm,8.2s						
KMI				LR	LR		
	comp=E,1μm,6.2s						
GTA	**Gaotai**	**8.35**	**334**	⇑P	**Pn**	**04 29 08.4**	**+1.2**
GTA				pP		04 29 12.8	
GTA				sP		04 29 15.4	
GTA				S	**Sn**	**04 30 43.4**	**+1.4**
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,85nm,4.8s						
GTA				LR	LR		
	comp=N,2μm,9.3s						
GTA				LR	LR		
	comp=E,830nm,9.6s						
GTA				LR	LR		
	comp=Z,1μm,10.7s						
WHN	**Wuhan**	**8.55**	**97**	P	**Pn**	**04 29 04.0**	**-6.0**
WHN				S	**Sn**	**04 30 39.8**	**-7.2**
WHN				LR	LR		
	comp=N,2μm,5.7s						
WHN				LR	LR		
	comp=E,3μm,5.2s						
WHN				LR	LR		
	comp=Z,4μm,6.8s						
BTO	**Baotou**	**9.70**	**26**	*e*P	**Pn**	**04 29 24.6**	**-1.1**
BTO				S	**Sn**	**04 31 12.8**	**-2.3**
BTO				LR	LR		
	comp=N,240nm,8.4s						
BTO				LR	LR		
	comp=E,230nm,8.2s						
HHC	**Hu-ho-hao-te**	**10.52**	**31**	*e*P	**Pn**	**04 29 39.3**	**+2.2**
HHC				pP		04 29 42.5	
HHC				PP		04 29 47.8	
HHC				S	**Sn**	**04 31 38.1**	**+2.6**
HHC				sS		04 31 42.9	
HHC				SS		04 31 51.5	
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
HHC				LR	LR		
	comp=N,750nm,4.7s						
HHC				LR	LR		
	comp=E,900nm,5.0s						
HHC				LR	LR		
	comp=Z,400nm,5.9s						
LSA	**Lhasa**	**11.70**	**262**	P	**Pn**	**04 29 49.6**	**-3.6**
LSA				pP		04 29 55.6	
LSA				S	Sn	04 33 08.1	+64
LSA				pmax	pmax		
	comp=Z,30nm,0.9s						
LSA				LR	LR		
	comp=N,170nm,9.0s						
LSA				LR	LR		
	comp=E,470nm,9.0s						
LSA				LR	LR		
	comp=Z,590nm,10.0s						
LSA	**Lhasa**	**11.70**	**262**	*e*P	**Pn**	**04 29 55.6**	**+2.4**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	**Lhasa**	**11.70**	**262**	*e*Pn	**Pn**	**04 29 55.5**	**+2.3**
	comp=Z,10nm,0.6s						
GZH	**Guangzhou**	**11.82**	**136**	P	**Pn**	**04 29 47.9**	**-7.0**
GZH				S	**Sn**	**04 31 49.4**	**-18**
GZH				LR	LR		
	comp=N,1μm,9.5s						
GZH				LR	LR		
	comp=E,1μm,8.9s						
GZH				LR	LR		
	comp=Z,2μm,9.8s						
NJ2	**Nanjing**	**12.18**	**86**	*e*P	**Pn**	**04 30 00.6**	**+0.8**
NJ2				pP		04 30 03.8	
NJ2				sP		04 30 05.8	
NJ2				PP		04 30 10.3	
NJ2				S	**Sn**	**04 32 16.0**	**-0.1**
NJ2				sS		04 32 21.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,60nm,3.5s						
NJ2				LR	LR		
	comp=N,370nm,11.6s						
NJ2				LR	LR		
	comp=E,810nm,11.4s						
BJI	**Beijing**	**12.40**	**46**	P	**Pn**	**04 30 04.0**	**+1.2**
BJI				pmax	pmax		
	comp=Z,11nm,0.7s						
BJI				LR	LR		
	comp=N,870nm,16.2s						
BJI				LR	LR		
	comp=E,530nm,18.5s						
QIZ	**Qiongzhong**	**13.75**	**158**	P	**Pn**	**04 30 21.8**	**+0.5**
QIZ				S	**Sn**	**04 32 56.9**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,15nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,34nm,3.5s						
QIZ				LR	LR		
	comp=N,1μm,11.7s						
QIZ				LR	LR		
	comp=E,280nm,10.7s						
QIZ				LR	LR		
	comp=Z,2μm,10.5s						
CHG	**Chiang Mai**	**14.03**	**202**	⇓P	**Pn**	**04 30 28.2**	**+3.1**
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**14.03**	**202**	*e*P	**Pn**	**04 30 28.3**	**+3.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	**Chiang Mai**	**14.03**	**202**	*e*Pn	**Pn**	**04 30 28.3**	**+3.2**
	comp=Z,8.3nm,0.8s						
QZH	**Quanzhou**	**14.22**	**116**	P	**Pn**	**04 30 29.8**	**+2.1**
QZH				S	**Sn**	**04 33 09.3**	**+3.2**
QZH				LR	LR		
	comp=N,2μm,7.5s						
QZH				LR	LR		
	comp=E,4μm,8.0s						
QZH				LR	LR		
	comp=Z,5μm,9.4s						
CM31	**Chiang Mai Arr**	**14.36**	**202**	*e*Pn	**Pn**	**04 30 35.9**	**+6.3**
	comp=Z,12nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.36**	**202**	Pn	**Pn**	**04 30 29.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=13,slow=11,SNR=13						
BDT	**Bhumibol Dam**	**15.49**	**200**	P	**Pn**	**04 30 46.0**	**+1.2**
SONM	**Songino Array**	**15.91**	**5**	Pn	**Pn**	**04 30 49.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=184,slow=14,SNR=20						
SONM				Lg		04 35 31.9	
	comp=Z,0.1nm,0.3s,baz=188,slow=26,SNR=3.9						
ULN	**Ulaanbaatar**	**15.99**	**6**	*e*P	**Pn**	**04 30 51.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
ULN	**Ulaanbaatar**	**15.99**	**6**	*e*Pn	**Pn**	**04 30 51.3**	**+0.1**
	comp=Z,12nm,0.8s						
YHNB	**Yeheng**	**16.53**	**112**	*e*Pn	**Pn**	**04 31 00.8**	**+2.5**
	comp=Z,24nm,0.8s						
GUN	**Gumba**	**16.64**	**261**	*e*P	**Pn**	**04 30 58.0**	**-1.7**
	comp=Z,54nm,0.8s						
SSLB	**Suanglung**	**16.66**	**115**	*e*Pn	**Pn**	**04 31 01.7**	**+1.8**
	comp=Z,36nm,0.8s						
NACB	**Ninganchiao**	**16.95**	**113**	*e*Pn	**Pn**	**04 31 04.8**	**+1.2**
	comp=Z,38nm,1.0s						
YULB	**Yu-li**	**17.14**	**116**	*e*Pn	**Pn**	**04 31 08.4**	**+2.5**
	comp=Z,14nm,0.8s						
PKI	**Pulchoki**	**17.15**	**260**	*e*P	**Pn**	**04 31 03.5**	**-2.5**
	comp=Z,77nm,1.0s						
PKIN	**Phulchoki**	**17.16**	**260**	*e*P	**Pn**	**04 31 03.7**	**-2.4**
	comp=Z,48nm,0.7s						
KKN	**Kakani**	**17.18**	**261**	*e*P	**Pn**	**04 31 04.8**	**-1.7**
	comp=Z,45nm,0.9s						
DMN	**Daman**	**17.39**	**261**	*e*P	**Pn**	**04 31 06.8**	**-2.2**
	comp=Z,26nm,0.7s						
GKN	**Gorkha**	**17.66**	**262**	*e*P	**Pn**	**04 31 10.3**	**-2.1**
	comp=Z,33nm,0.6s						
WMQ	**Urumqi**	**17.74**	**317**	*e*P	**Pn**	**04 31 14.0**	**+0.7**
ZAK	**Zakamensk**	**18.42**	**358**	*e*P	**Pn**	**04 31 21.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KOLN	**Koldanda**	**18.60**	**262**	*e*P	**Pn**	**04 31 21.6**	**-2.4**
	comp=Z,50nm,0.8s						
PYUN	**Piuthan**	**19.02**	**264**	*e*P	**Pn**	**04 31 27.2**	**-1.9**
	comp=Z,211nm,1.5s						
TLY	**Talaya**	**19.71**	**358**	*e*P	**Pn**	**04 31 37.7**	**+0.6**
TLY				*e*S	**Sn**	**04 35 11.1**	**-7.6**
TLY				pmax	pmax		
	comp=Z,17nm,1.6s						
TLY				MLR	MLR		
	comp=Z,365nm,11.0s						
MOY	**Mondy**	**19.85**	**354**	*e*P	**Pn**	**04 31 42.0**	**+3.2**
MOY				pmax	pmax		
	comp=Z,37nm,2.2s						
KSRS	**Korea Array**	**19.99**	**68**	P	**Pn**	**04 31 38.3**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=255,slow=9.8,SNR=28						
KSRS				LR	LR	04 39 14.2	
	comp=Z,56nm,18.5s,baz=245,slow=37						
KSRS	**Korea Array**	**19.99**	**68**	P	**Pn**	**04 31 38.3**	**-2.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,56nm,18.5s						
CN2	**Changchun**	**20.25**	**48**	*e*P	**P**	**04 31 42.0**	**+0.2**
CN2				*es*P	sP	04 31 49.0	+6.0
CN2				*e*S	**S**	**04 35 23.1**	**-6.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS3.9						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.7						
CN2	**Changchun**	**20.25**	**48**	*e*P	**P**	**04 31 38.0**	**-3.8**
IRK	**Irkutsk**	**20.26**	**360**	*e*P	**P**	**04 31 43.5**	**+1.8**
IRK				pmax	pmax		
	comp=Z,69nm,0.7s						
JOW	**Kunigami**	**21.32**	**98**	P	**P**	**04 31 51.2**	**-2.2**
	comp=Z,6.7nm,0.6s,mb4.2						
MK31	**Makanchi Array**	**22.56**	**317**	*e*P	**P**	**04 32 07.5**	**+0.9**
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**04 32 07.2**	**+0.6**
	comp=Z,21nm,0.8s,mb4.6,baz=109,slow=12,SNR=77						
MKAR				LR	LR	04 41 46.5	
	comp=Z,577nm,18.9s,MS4.0,baz=173,slow=39						
MDJ	**Mudanjiang**	**23.28**	**50**	P	**P**	**04 32 14.8**	**+0.6**
MDJ				pP		04 32 18.0	
MDJ				sP	sP	04 32 19.3	+3.9
MDJ				S	**S**	**04 36 29.3**	**+2.2**
MDJ				ScP	ScP	04 39 40.4	-0.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,53nm,7.5s						
KSH	**Kashi**	**24.28**	**296**	*e*P	**P**	**04 32 28.1**	**+4.3**
KSH				*ep*P		04 32 31.6	
KSH				*es*P	sP	04 32 34.6	+10
KSH				*e*PP		04 33 03.6	
KSH				*e*PcP	PcP	04 36 05.6	+1.8
KSH				*e*S	**S**	**04 36 45.5**	**+2.1**
KSH				*es*S	sS	04 36 51.6	+6.8
KSH				*e*SS		04 37 40.6	
KSH				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.4						
KSH				LR	LR		
	comp=N,190nm,9.0s						
KSH				LR	LR		
	comp=E,230nm,6.6s						
KSH				LR	LR		
	comp=Z,180nm,6.7s						
TKM2	**Tokmak 2**	**25.30**	**304**	*e*P	**P**	**04 32 34.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**25.30**	**304**	*e*P	**P**	**04 32 34.1**	**+1.1**
	comp=Z,11nm,0.8s,mb4.5						
UCH	**Uchtor**	**25.90**	**302**	*e*P	**P**	**04 32 39.9**	**+1.4**
	comp=Z,31nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**26.01**	**303**	P	**P**	**04 32 41.6**	**+2.1**
	comp=Z,8.0nm,0.9s,mb4.2,baz=108,slow=7.8,SNR=11						
AAK				LR	LR	04 44 48.2	
	comp=Z,281nm,18.9s,MS3.8,baz=282,slow=41						
AAK	**Ala-Archa**	**26.01**	**303**	P	**P**	**04 32 41.6**	**+2.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
AAK				MLR	MLR		
	comp=Z,281nm,18.9s,MS3.8						
AAK	**Ala-Archa**	**26.01**	**303**	*e*P	**P**	**04 32 42.1**	**+2.5**
	comp=Z,9.6nm,0.9s,mb4.3						
ZAA0	**Zasovo Array**	**26.10**	**333**	*e*P	**P**	**04 32 40.0**	**-0.1**
ZALV	**Zalesovo Beam**	**26.10**	**333**	P	**P**	**04 32 40.1**	**-0.1**
	comp=Z,24nm,0.6s,mb4.9,baz=130,slow=10.0,SNR=106						
ZALV				LR	LR	04 43 22.6	
	comp=Z,53nm,21.6s,MS3.0,baz=46,slow=37						
EKS2	**Erkin-Say**	**26.53**	**302**	*e*P	**P**	**04 32 45.0**	**+0.7**
	comp=Z,4.6nm,0.7s,mb4.1						
BOD	**Bodaibo**	**26.66**	**11**	*e*P	**P**	**04 32 44.8**	**-0.3**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
KLR	**Kul'dur**	**26.71**	**42**	*e*P	**P**	**04 32 44.9**	**-0.9**
KURK	**Kurchatov**	**26.77**	**322**	P	**P**	**04 32 46.4**	**+0.2**
	comp=Z,9.8nm,0.7s,mb4.4,baz=130,slow=8.5,SNR=43						
KURK				LR	LR	04 43 23.8	
	comp=Z,29nm,19.5s,MS2.9,baz=110,slow=36						
KURK	**Kurchatov**	**26.77**	**322**	*e*P	**P**	**04 32 46.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
KURK	**Kurchatov**	**26.77**	**322**	*e*P	**P**	**04 32 46.4**	**+0.2**
	comp=Z,10nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**28.14**	**71**	P	**P**	**04 32 59.7**	**+1.0**
	comp=Z,2.7nm,1.0s,mb3.8,baz=270,slow=9.9,SNR=6.4						
MJAR				LR	LR	04 44 03.0	
	comp=Z,56nm,21.4s,MS3.1,baz=270,slow=36						
MJAR	**Matsushiro Arr**	**28.14**	**71**	P	**P**	**04 32 59.7**	**+1.0**
MJAR				LR	LR	04 44 03.0	
HABR	**Khabarovsk**	**28.31**	**45**	*e*P	**P**	**04 32 57.3**	**-2.8**
HABR				*e*PP	pP	04 33 07.1	+6.1
HABR				*e*		04 33 46.7	
HABR				PPP		04 33 55.5	
HABR				*e*		04 36 10.3	
HABR				*e*S	**S**	**04 37 41.7**	**-5.3**
HABR				*e*SS		04 39 02.5	
HABR				*e*		04 43 41.8	
HABR				pmax	pmax		
	comp=N,35nm,2.2s						
HABR				pmax	pmax		
	comp=E,75nm,2.5s						
HABR				pmax	pmax		
	comp=Z,41nm,2.5s,mb4.6						
HABR				MLR	MLR		
	comp=Z,56nm,16.0s,MS3.2						
PSI	**Prapat**	**29.49**	**191**	P	**P**	**04 33 10.0**	**-0.8**
	comp=Z,9.9nm,0.9s,mb4.5,baz=340,slow=5.2,SNR=7.2						
PSI				LR	LR	04 45 35.4	
	comp=Z,131nm,18.1s,MS3.6,baz=315,slow=38						
KBL	**Kabul**	**29.68**	**285**	*e*P	**P**	**04 33 14.8**	**+2.4**
KBL				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
KBL	**Kabul**	**29.68**	**285**	*e*P	**P**	**04 33 14.8**	**+2.4**
	comp=Z,18nm,0.9s,mb4.8						
BVAR	**Borovoye Array**	**32.33**	**321**	P	**P**	**04 33 36.2**	**+0.6**
	comp=Z,4.0nm,0.6s,mb4.4,baz=112,slow=9.3,SNR=26						
BVAR				LR	LR	04 47 17.0	
	comp=Z,166nm,18.7s,MS3.8,baz=332,slow=37						
BRVK	**Borovoye**	**32.41**	**321**	*ce*P	**P**	**04 33 37.2**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
BRVK	**Borovoye**	**32.41**	**321**	*e*P	**P**	**04 33 37.1**	**+0.9**
	comp=Z,5.1nm,0.7s,mb4.5						
ABKAR	**Akbulak array**	**37.36**	**311**	*e*P	**P**	**04 34 19.3**	**+0.2**
	comp=Z,4.4nm,0.6s,mb4.5						
SVE	**Sverdlovsk**	**39.01**	**323**	⇑*e*P	**P**	**04 34 33.8**	**+0.9**
SVE				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
ARU	**Arti**	**39.96**	**322**	*d i*P	**P**	**04 34 40.9**	**+0.1**
ARU				*e*		04 36 11.6	
ARU				S	**S**	**04 40 46.5**	**-0.1**
ARU				SS	SS	04 43 43.2	+0.3
ARU				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0						
ARU	**Arti**	**39.96**	**322**	*e*P	**P**	**04 34 40.4**	**-0.4**
	comp=Z,23nm,0.8s,mb5.0						
TIXI	**Tiksi**	**41.84**	**11**	*e*P	**P**	**04 34 54.2**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,156nm,16.0s,MS4.0						
TIXI	**Tiksi**	**41.84**	**11**	*e*P	**P**	**04 34 57.6**	**+1.5**
	comp=Z,3.4nm,0.6s,mb4.2						
SOKR	**Solikamsk**	**41.87**	**326**	*c i*P	**P**	**04 34 57.4**	**+0.9**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
SOKR				MLR	MLR		
	comp=Z,210nm,21.0s,MS4.0						
PETK	**Petropavlovsk-**	**43.33**	**45**	P	**P**	**04 35 07.5**	**-1.0**
	comp=Z,2.7nm,0.8s,mb4.1,baz=236,slow=10,SNR=4.7						
ZEI	**Tsey**	**48.42**	**301**	*e*P	**P**	**04 35 48.2**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MIB	**Mutribah**	**48.62**	**283**	*e*P	**P**	**04 35 50.3**	**-0.2**
MIB				AMb	AMB	04 35 54.4	
	comp=Z,29nm,0.9s,mb5.3						
NAY	**Al-Naaiem**	**48.87**	**283**	*e*P	**P**	**04 35 52.0**	**-0.4**
NAY				AMb	AMB	04 35 56.2	
	comp=Z,30nm,0.7s,mb5.4						
BILL	**Bilibino**	**50.25**	**26**	*e*P	**P**	**04 36 02.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
BILL	**Bilibino**	**50.25**	**26**	*e*P	**P**	**04 36 03.5**	**+1.1**
	comp=Z,2.6nm,0.4s,mb4.6						
VORD	**Divnogorie**	**50.69**	**312**	*e*P	**P**	**04 36 05.5**	**-0.5**
VORD				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
VORD				pmax	pmax		
	comp=N,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,10.0nm,1.5s						
VSR	**Storozhevoye**	**50.75**	**312**	*e*P	**P**	**04 36 06.2**	**-0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VSR				pmax	pmax		
	comp=N,10.0nm,1.3s						
VSR				pmax	pmax		
	comp=E,30nm,1.2s						
SOC	**Sochi**	**51.31**	**303**	*e*P	**P**	**04 36 14.3**	**+3.5**
SOC				*e*PP	pP	04 36 20.7	+9.0
SOC				*e*PPP		04 39 12.3	
SOC				*e*S	**S**	**04 43 36.4**	**+5.8**
SOC				pmax	pmax		
	comp=Z,29nm,1.9s,mb4.9						
SOC				MLR	MLR		
	comp=Z,155nm,14.0s,MS4.2						
OBN	**Obninsk**	**52.07**	**318**	*e*P	**P**	**04 36 16.1**	**-0.2**
OBN				*e*		04 38 13.6	
OBN				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
APA	**Apatity**	**53.69**	**333**	⇑*e*P	**P**	**04 36 28.0**	**0.0**
APA				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.5						
FITZ	**Fitzroy Crossi**	**53.75**	**155**	*e*P	**P**	**04 36 26.3**	**-2.7**
	comp=Z,12nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.75**	**155**	*e*P	**P**	**04 36 27.3**	**-1.7**
	comp=Z,10nm,1.0s,mb4.7						
JOF	**Joensuu**	**54.48**	**327**	*e*P	**P**	**04 36 32.2**	**-1.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
JOF	**Joensuu**	**54.48**	**327**	*ep*	**P**	**04 36 32.2**	**-1.7**
	comp=Z,7.1nm,0.7s,mb4.7						
MBWA	**Marble Bar**	**54.80**	**163**	*e*P	**P**	**04 36 35.0**	**-1.6**
	comp=Z,9.7nm,0.9s,mb4.8						
KEV	**Kevo**	**56.08**	**336**	*e*P	**P**	**04 36 44.0**	**-1.3**
KEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KEV	**Kevo**	**56.08**	**336**	*ep*	**P**	**04 36 44.0**	**-1.3**
	comp=Z,11nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**56.61**	**336**	P	**P**	**04 36 48.6**	**-0.5**
	comp=Z,4.4nm,0.6s,mb4.7,baz=91,slow=7.4,SNR=38						
BR131	**Keskin Array S**	**56.62**	**299**	*e*P	**P**	**04 36 49.5**	**-0.1**
	comp=Z,6.8nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**04 36 49.5**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.5,baz=97,slow=7.1,SNR=18						
BRTR	**Keskin Array B**	**56.62**	**299**	*ce*P	**P**	**04 36 52.7**	**+3.1**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KAF	**Kangasniemi**	**56.85**	**327**	*e*P	**P**	**04 36 49.4**	**-1.5**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KAF	**Kangasniemi**	**56.85**	**327**	*ep*	**P**	**04 36 49.4**	**-1.5**
	comp=Z,5.0nm,0.7s,mb4.7,baz=82,slow=6.6						
FINES	**FINESS Array B**	**57.04**	**326**	P	**P**	**04 36 51.9**	**-0.4**
	comp=Z,7.4nm,0.7s,mb4.8,baz=86,slow=7.4,SNR=27						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**04 36 51.7**	**-0.8**
	comp=Z,6.3nm,0.6s,mb4.8,baz=68,slow=6.6,SNR=18						
AKASG	**Malin Array Be**	**57.05**	**313**	P	**P**	**04 36 51.7**	**-0.8**
AKBB	**Malin Array Si**	**57.05**	**313**	*e*P	**P**	**04 36 51.7**	**-0.8**
KIEV	**Kiev**	**57.06**	**313**	*e*P	**P**	**04 36 51.5**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KIEV	**Kiev**	**57.06**	**313**	*e*P	**P**	**04 36 51.5**	**-1.0**
	comp=Z,8.7nm,0.9s,mb4.8						

comp=Z,14nm,0.6s,mb5.2
WRAB Tennant Creek 59.00 147 *e*P **P** **04 37 05.0 -1.4**
comp=Z,14nm,0.6s,mb5.2
TIRR Tirgusor 59.06 306 *e*P **P** **04 37 06.2 -0.6**
TIRR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TIRR Tirgusor 59.06 306 *e*P **P** **04 37 06.2 -0.6**
comp=Z,4.3nm,0.9s,mb4.5
TIRR Tirgusor 59.06 306⇑*i*P **P** **04 37 06.6 -0.2**
ISP Isparta 59.51 298 *e*P **P** **04 37 13.2 +3.3**
ISP Isparta 59.51 298⇑*i*P **P** **04 37 13.1 +3.2**
VRI Vrincioaia 59.82 308 ⇓P **P** **04 37 12.6 +0.6**
VRI Vrincioaia 59.82 308⇓*i*P **P** **04 37 12.6 +0.6**
PLOR Plostina 59.88 308 ⇑P **P** **04 37 13.5 +1.1**
PLOR Plostina 59.88 308⇑*i*P **P** **04 37 13.5 +1.1**
BURAR Bucovina Array 60.34 310 ⇑P **P** **04 37 15.4 -0.1**
BURAR Bucovina Array 60.34 310⇑*i*P **P** **04 37 15.4 -0.1**
BUR08 Bucovina Ar. S 60.34 310 *e*P **P** **04 37 15.5 0.0**
MLR Muntele Rosu 60.46 308 ⇑P **P** **04 37 17.9 +1.6**
MLR Muntele Rosu 60.46 308⇑*i*P **P** **04 37 17.9 +1.6**
LVV L'vov 60.49 313 *e*P **P** **04 37 23.9 +7.4**
KWP Kalwaria Pacla 61.37 313 *e*P **P** **04 37 22.8 +0.3**
KWP Kalwaria Pacla 61.37 313 *e*P **P** **04 37 22.6 +0.1**
KWP pmax pmax
comp=Z,43nm,1.0s,mb5.5
KWP Kalwaria Pacla 61.37 313 *e*P **P** **04 37 22.6 +0.2**
comp=Z,43nm,1.0s,mb5.5
KWP Kalwaria Pacla 61.37 313⇓*i*P **P** **04 37 22.6 +0.1**
KOLS Kolonicke sedl 61.84 312 *i*P **P** **04 37 25.7 0.0**
KOLS pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
KOLS MLR MLR
comp=Z,100nm,18.4s,MS4.0
KOLS Kolonicke sedl 61.84 312 *i*P **P** **04 37 25.7 0.0**
comp=Z,5.3nm,1.2s,mb4.5
KOLS LR LR
comp=Z,100nm,18.4s,MS4.0
KOLS Kolonicke sedl 61.84 312 *i*P **P** **04 37 25.7 0.0**
ASAR Alice Springs 62.05 149 P **P** **04 37 26.2 -1.0**
comp=Z,5.6nm,0.8s,mb4.7,baz=334,slow=6.8,SNR=48
DRGR 62.21 310 ⇓P **P** **04 37 28.1 -0.1**
DRGR 62.21 310⇓*i*P **P** **04 37 28.1 -0.1**
STHS Stebnicka Huta 62.34 313 *e*P **P** **04 37 29.3 +0.3**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
STHS Stebnicka Huta 62.34 313 *e*P **P** **04 37 29.3 +0.3**
comp=Z,3.9nm,0.8s,mb4.6
STHS Stebnicka Huta 62.34 313 *e*P **P** **04 37 29.3 +0.3**
NIE Niedzica 62.92 313 *e*P **P** **04 37 33.5 +0.6**
OJC Ojcow 62.99 314 *e*P **P** **04 37 32.2 -1.1**
KECS Kecovo 63.11 312 *e*P **P** **04 37 34.5 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.11 312 *e*P **P** **04 37 34.5 +0.3**
comp=Z,1.8nm,0.7s,mb4.3
KECS Kecovo 63.11 312 *e*P **P** **04 37 34.5 +0.3**
BZS Buzias 63.31 309 ⇑P **P** **04 37 28.7 -6.8**
BZS Buzias 63.31 309⇑*i*P **P** **04 37 28.6 -6.9**
PSZ Piszkesteto 63.67 312 *e*P **P** **04 37 38.2 +0.3**
PSZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
PSZ Piszkesteto 63.67 312 *e*P **P** **04 37 38.2 +0.3**
comp=Z,2.7nm,0.7s,mb4.4
PSZ Piszkesteto 63.67 312⇑*e*PcP **P** **04 37 38.4 +0.5**
NB2 NORSAR Subarra 64.12 327 P **P** **04 37 39.1 -1.5**
comp=Z,4.8nm,0.7s,mb4.6,baz=72,slow=6.5
NOA NORSAR Array B 64.12 327 P **P** **04 37 39.5 -1.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=72,slow=6.6,SNR=18
OKC Ostrava-Krasne 64.12 314 *e*P **P** **04 37 41.4 +0.6**
OKC *e*PP pP 04 37 43.8 +2.1
OKC MLR MLR
comp=Z,200nm,12.3s,MS4.5
OKC Ostrava-Krasne 64.12 314 *e*P **P** **04 37 41.4 +0.6**
OKC *e*pP pP 04 37 43.8 +2.1
OKC AMS AMS 05 07 00.0
comp=Z,200nm,12.3s
VYHS Vyhne 64.14 313 *e*P **P** **04 37 41.3 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
VYHS Vyhne 64.14 313 *e*P **P** **04 37 41.3 +0.3**
comp=Z,4.1nm,1.0s,mb4.4
VYHS Vyhne 64.14 313 *e*P **P** **04 37 41.3 +0.3**
BUD Budapest 64.37 311⇑*e*PcP **P** **04 37 42.8 +0.3**
KOLL Kolacno 64.39 313 *e*P **P** **04 37 43.3 +0.7**
KOLL Kolacno 64.39 313 *e*P **P** **04 37 43.3 +0.7**
MORC Moravsky Berou 64.51 314 *e*P **P** **04 37 43.4 +0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MORC Moravsky Berou 64.51 314 *e*P **P** **04 37 43.4 0.0**
comp=Z,5.0nm,0.8s,mb4.6
MORC Moravsky Berou 64.51 314⇑*i*P **P** **04 37 43.5 +0.2**
SMOL Smolenice 65.02 313 *e*P **P** **04 37 47.2 +0.5**
SMOL Smolenice 65.02 313 *e*P **P** **04 37 47.2 +0.5**
DPC Dobruska-Polom 65.05 315 *e*P **P** **04 37 47.2 +0.3**
DPC *e*PP pP 04 37 50.2 +2.4
DPC MLR MLR
comp=Z,300nm,16.6s,MS4.6
DPC Dobruska-Polom 65.05 315 *e*P **P** **04 37 47.2 +0.3**
DPC *e*pP pP 04 37 50.2 +2.4
DPC AMS AMS 05 07 20.0
comp=Z,300nm,16.6s
PKSM Moragy 65.06 310 ⇑P **P** **04 37 46.8 -0.2**
PKSM Moragy 65.06 310⇑*i*P **P** **04 37 46.8 -0.2**
TREC Trest 65.93 314 AMS AMS 05 07 50.0
comp=Z,200nm,20.4s
PVCC Panska Ves 66.03 316 AMS AMS 05 08 00.0
comp=Z,200nm,17.9s
PRU Pruhonice 66.25 315 *e*P **P** **04 37 55.2 +0.6**
PRU *e*PP pP 04 37 58.0 +2.4
PRU MLR MLR
comp=Z,300nm,16.8s,MS4.6
PRU Pruhonice 66.25 315 *e*P **P** **04 37 55.2 +0.6**
PRU *e*pP pP 04 37 58.0 +2.4
PRU AMS AMS 05 08 10.0
comp=Z,300nm,16.8s
BRG Berggiesshubel 66.27 316 *e*P **P** **04 37 54.5 -0.3**
comp=Z,5.2nm,0.8s,mb4.6
FORT Forrest 66.28 158 *e*P **P** **04 37 53.6 -1.3**
comp=Z,14nm,0.6s,mb5.2
FORT Forrest 66.28 158 *e*P **P** **04 37 54.0 -0.9**
comp=Z,20nm,0.7s,mb5.3
COLD Coldfoot 66.54 24 *e*P **P** **04 37 56.8 +0.6**
comp=Z,3.0nm,0.8s,mb4.4
CLL Collm 66.66 317 *e*P **P** **04 37 56.0 -1.2**
CLL *i* 04 37 59.2
CLL pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CLL MLR MLR
comp=Z,100nm,17.7s,MS4.1
CLL Collm 66.66 317 *e*P **P** **04 37 56.0 -1.2**
comp=Z,4.0nm,1.0s,mb4.4
CLL *i* 04 37 59.2
CLL LR LR
comp=Z,100nm,17.7s,MS4.1
CLL Collm 66.66 317 *e*P **P** **04 37 56.0 -1.2**
comp=Z,4.0nm,1.0s,mb4.4
CLL *i*pP pP 04 37 59.2 +1.0
comp=Z,6.0nm,1.0s
CLL *i*(sP) sP 04 38 01.4 +2.9
CLL *e*PcP PcP 04 38 25.0 -1.4
CLL *e*PP PP 04 40 24.0 +0.4
ARSA Arzberg 66.67 312⇑*i*P **P** **04 37 57.3 0.0**
comp=Z,3.8nm,0.9s,mb4.4
KHC Kasperske Hory 67.15 315 *e*P **P** **04 38 00.4 0.0**
KHC *e*PP pP 04 38 04.0 +2.6
KHC MLR MLR
comp=Z,300nm,20.4s,MS4.5
KHC Kasperske Hory 67.15 315 *e*P **P** **04 38 00.4 0.0**
KHC *e*pP pP 04 38 04.0 +2.6
KHC AMS AMS 05 08 20.0
comp=Z,300nm,20.4s
PERS Pernice 67.16 312 *e*P **P** **04 38 00.1 -0.4**
GEC2 GERESS Array S 67.19 314 *e*P **P** **04 38 00.3 -0.3**
GEC2 pmax pmax
comp=Z,780nm,0.9s
GEC2 GERESS Array S 67.19 314 *e*P **P** **04 38 00.3 -0.3**
comp=Z,780nm,0.9s
GERES GERESS Array B 67.19 314 P **P** **04 38 00.8 +0.1**
comp=Z,1.8nm,0.6s,mb4.3,baz=65,slow=5.4,SNR=30
SOKA Soboth 67.20 312⇑*i*P **P** **04 38 00.1 -0.7**
comp=Z,7.9nm,0.8s,mb4.8
NKC Novy Kostel 67.40 316 AMS AMS 05 08 50.0
comp=Z,200nm,15.9s
BOJS Bojanci 67.52 310 *e*P **P** **04 38 02.2 -0.6**
BPAW Bear Paw Mtn. 67.67 27 *e*P **P** **04 38 03.5 +0.1**
comp=Z,6.1nm,1.0s,mb4.6
GRA1 Grafenberg Arr 68.34 316 *e*P **P** **04 38 08.0 +0.1**
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.34 316 *e*P **P** **04 38 08.0 +0.1**
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.34 316 *e*P **P** **04 38 08.0 +0.1**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.34 316 *e*P **P** **04 38 08.0 +0.1**
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
GRF Grafenberg Arr 68.34 316 *e*P **P** **04 38 08.0 +0.1**
comp=Z,6.0nm,1.0s,mb4.6
RSO Redoubt South 68.61 31 *e*P **P** **04 38 16.8 +7.4**
TIP Timpagrande 69.05 304 *e*P **P** **04 38 15.1 +2.5**
MOTA Moosalm 69.39 314⇑*i*P **P** **04 38 14.0 -0.5**
comp=Z,6.3nm,0.8s,mb4.6
PMR Palmer 69.62 29 *e*P **P** **04 38 16.2 +0.6**
PMR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
PMR Palmer 69.62 29 *e*P **P** **04 38 16.2 +0.6**
comp=Z,3.9nm,0.7s,mb4.5
FETA Feichten 69.76 313⇑*i*P **P** **04 38 16.5 -0.2**
comp=Z,5.7nm,0.8s,mb4.5
KDAK Kodiak Island 69.93 34 *i*P **P** **04 38 19.4 +1.8**
AQU L'Aquila 70.03 308 *e*P **P** **04 38 18.7 +0.2**
AQU pmax pmax
comp=Z,12nm,0.9s,mb4.8
AQU L'Aquila 70.03 308 *e*P **P** **04 38 18.7 +0.2**
comp=Z,12nm,0.9s,mb4.8
MEM Membach 70.97 318 AP pP 04 38 27.1 +2.0
INK Inuvik 71.23 19 *e*P **P** **04 38 25.2 -0.1**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 71.23 19 *e*P **P** **04 38 25.2 -0.2**
comp=Z,4.5nm,0.9s,mb4.4
CDF Champ du Feu 71.24 316⇑*i*P **P** **04 38 25.5 -0.2**
comp=Z,7.9nm,0.6s,mb4.6
CDF Champ du Feu 71.24 316⇑*i*P **P** **04 38 25.5 -0.2**
CDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
CDF Champ du Feu 71.24 316⇑*i*P **P** **04 38 25.5 -0.2**
comp=Z,4.0nm,0.6s,mb4.5
WLF Walferdange 71.32 317 P **P** **04 38 26.8 +0.5**
comp=Z,16nm,1.6s,mb4.7
WLF Walferdange 71.32 317 *e*P **P** **04 38 26.5 +0.3**
WLF pmax pmax
comp=Z,17nm,1.0s,mb4.9
WLF Walferdange 71.32 317 *e*P **P** **04 38 26.5 +0.2**
comp=Z,17nm,1.0s,mb4.9
BCLA Clavier 71.46 318 P **P** **04 38 27.1 +0.1**
comp=Z,24nm,2.9s,mb4.6
SNF Seneffe 71.99 319 P **P** **04 38 30.5 +0.3**
comp=Z,15nm,2.8s,mb4.4
DOU Dourbes 72.01 318 P **P** **04 38 30.5 +0.1**
comp=Z,9.3nm,1.9s,mb4.4
STKA Stephens Creek 72.55 147 *e*P **P** **04 38 31.7 -2.0**
comp=Z,4.2nm,0.7s,mb4.5
STKA Stephens Creek 72.55 147 P **P** **04 38 31.5 -2.2**
comp=Z,4.9nm,0.7s,mb4.5,baz=339,slow=5.9,SNR=9.3
STKA Stephens Creek 72.55 147 *e*P **P** **04 38 32.0 -1.7**
comp=Z,1.0nm,0.8s,mb3.8
RES Resolute Bay 72.85 5 *e*P **P** **04 38 35.7 +0.7**
RES pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
RES Resolute Bay 72.85 5 *e*P **P** **04 38 35.7 +0.7**
comp=Z,1.0nm,0.7s,mb3.9
LPG La Plagne 72.91 313⇑*i*P **P** **04 38 36.5 +0.7**
comp=Z,29nm,0.6s,mb5.1
LPG La Plagne 72.91 313⇑*i*P **P** **04 38 36.5 +0.7**
LPG pmax pmax
comp=Z,15nm,0.6s,mb5.1
LPG La Plagne 72.91 313⇑*i*P **P** **04 38 36.5 +0.7**
comp=Z,15nm,0.6s,mb5.1
LPL La Plagne 72.91 313⇑*i*P **P** **04 38 36.3 +0.5**
comp=Z,27nm,0.6s,mb5.1
LPL La Plagne 72.91 313⇑*i*P **P** **04 38 36.3 +0.5**
LPL pmax pmax
comp=Z,13nm,0.6s,mb5.0
LPL La Plagne 72.91 313⇑*i*P **P** **04 38 36.3 +0.5**
comp=Z,13nm,0.6s,mb5.0
BNI Bardonecchia 73.17 313 *e*P **P** **04 38 37.1 -0.3**
BNI pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BNI Bardonecchia 73.17 313 *e*P **P** **04 38 37.1 -0.3**
comp=Z,6.4nm,0.7s,mb4.7
SMF Signal de Mont 74.12 315⇑*i*P **P** **04 38 42.5 -0.5**
comp=Z,9.2nm,0.7s,mb4.5
SMF Signal de Mont 74.12 315⇑*i*P **P** **04 38 42.5 -0.5**
SMF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SMF Signal de Mont 74.12 315⇑*i*P **P** **04 38 42.5 -0.5**
comp=Z,4.6nm,0.7s,mb4.5
HYT Haines Junctio 74.70 27 *e*P **P** **04 38 51.2 +5.2**
TCF Toulx Ste Croi 75.28 316⇑*i*P **P** **04 38 49.5 -0.2**
comp=Z,12nm,1.0s,mb4.5
TCF Toulx Ste Croi 75.28 316⇑*i*P **P** **04 38 49.5 -0.2**
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 75.28 316⇑*i*P **P** **04 38 49.5 -0.2**
comp=Z,6.3nm,1.0s,mb4.5
YKA Yellowknife Ar 80.77 17 P **P** **04 39 19.1 -0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=329,slow=5.2,SNR=34
YKA PKKPbc PKKPbc 04 57 58.1 -1.2
comp=Z,0.2nm,0.5s,baz=154,slow=2.0,SNR=6.6
ESDC Sonseca Array 82.69 312 P **P** **04 39 29.6 -0.8**
comp=Z,1.5nm,0.9s,mb4.0,baz=37,slow=5.5,SNR=9.0
TORD Torodi Ar. Bea 93.70 288 P **P** **04 40 23.8 -0.1**
comp=Z,0.5nm,1.0s,mb3.9,baz=42,slow=3.3,SNR=3.4

ISCJB ***25*** *04:36:04.8±5.7, 13°.8S±0°.2×166°.4E±0°.2, h81km±54km, mb3.7/5, Error ellipse: s-maj=38.3km s-min=34.6km az=4.6*
IDC ***25*** *04:36:22.3±15.0, 13°.60S×166°.07E, h216km±139km, mb3.4/6, mb1 3.5/6, mb1mx3.3/15, mbtmp3.4/6, Error ellipse: s-maj=56.6km s-min=49.1km az=92.0*
ISC 25 04:36:05.2±5.0, 13°.7S±0°.2×166°.4E±0°.2, h70km±49km, n8, σ1§40/8, mb3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.30**	**180**	*e*P	**Pn**	**04 38 03.3**	**+0.4**
DZM				*e*S	**Sn**	**04 39 34.2**	**-0.8**
STKA	**Stephens Creek**	**29.03**	**227**	P	**P**	**04 42 02.1**	**+3.4**
0.9nm,0.4s,mb3.7,baz=66,slow=10.0,SNR=2.3							
ASAR	**Alice Springs**	**32.27**	**247**	P	**P**	**04 42 27.9**	**+0.6**
0.4nm,0.6s,mb3.4,baz=73,slow=9.7,SNR=8.9							
ASAR				PcP	PcP	04 45 13.1	-1.3
0.3nm,0.8s,baz=66,slow=3.1,SNR=4.4							
SONM	**Songino Array**	**81.20**	**324**	P	**P**	**04 48 12.7**	**-0.6**
0.3nm,0.6s,mb3.3,baz=116,slow=9.8,SNR=2.2							
MKAR	**Makanchi Array**	**95.91**	**317**	P	**P**	**04 49 22.7**	**-1.5**
0.4nm,0.8s,mb3.9,baz=84,slow=7.4,SNR=3.1							
ZALV	**Zalesovo Beam**	**96.10**	**324**	P	**P**	**04 49 24.7**	**-0.2**
0.4nm,0.3s,mb4.3,baz=103,slow=6.4,SNR=2.5							
TXAR	**Lajitas Array**	**96.53**	**62**	P	**P**	**04 49 28.4**	**+1.0**
0.0nm,0.3s,baz=242,slow=17,SNR=2.8							
ARCES	**ARCESS Array B**	**119.08**	**345**	PKP	PKPdf	04 54 43.6	-1.8
2.8nm,0.9s,baz=32,slow=2.4,SNR=5.3							

KRSC 25 04:37:56.8±0.9, 49°.72N×156°.80E, h5km±5km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.40**	**326**	*e*P	Pn	04 38 22.8	-0.2
ALID				*i*S	Sb	04 38 41.4	-0.2
MIPR	**Malaya Ipel'ka**	**2.56**	**359**	*e*P	Pn	04 38 40.5	+1.6
MIPR				*i*S	Sn	04 39 13.1	+2.7
RUS	**Russkaya**	**2.92**	**21**	*e*P	Pn	04 38 45.6	+1.7
RUS				*i*S	Sn	04 39 21.0	+1.7
PET	**Petropavlovsk**	**3.51**	**19**	*e*P	Pn	04 38 55.2	+3.3
PET				*i*S	Sn	04 39 37.8	+4.1
AVH	**Avacha**	**3.75**	**18**	*e*P	Pn	04 38 58.9	+3.7
NLC	**Nalytchevo**	**3.81**	**24**	P	Pn	04 38 57.4	+1.4
NLC				*i*S	Sn	04 39 41.4	+0.3
SPN	**Mys Shipunski**	**3.94**	**30**	*e*P	Pn	04 39 00.6	+2.8
SPN				*i*S	Sn	04 39 47.2	+2.8
GNL	**Ganaly**	**4.04**	**10**	*e*P	Pn	04 39 02.0	+2.7
MKZ	**Mys Kozlova**	**5.71**	**30**	*e*P	Pn	04 39 23.5	+1.3
MKZ				*i*S	Sn	04 40 27.1	-1.0
KBTR	**Krutoberegovo**	**7.44**	**27**	*e*P	Pn	04 39 47.5	+1.6

NEIC ***25*** *04:49:55.5, 19°.12N×62°.29W, h77km, MD3.7(RSPR), After RSPR.*
RSPR ***25*** *04:49:55.5, 19°.12N×62°.29W, h77km±6km, MD3.7/6, MD3.7/6*
TRN 25 04:49:52.2, 19°.04N×62°.49W, h3km, 10C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.77**	**260**⇑	*e*P	Pn	04 50 26.3	+2.6
ABV				*e*S	Sn	04 50 50.7	+4.0
ABV	**Anegada**	**1.77**	**260**⇑	*e*P	Pn	04 50 26.3	+2.6
ABV				*e*S	Sn	04 50 50.7	+4.0
TBVI	**Tortola**	**2.11**	**253**⇓	*e*P	Pn	04 50 31.3	+3.0
TBVI	**Tortola**	**2.11**	**253**⇓	*e*P	Pn	04 50 31.3	+3.0
STVI	**Saint Thomas**	**2.43**	**254**⇓	*e*P	Pn	04 50 35.3	+2.5
STVI				*e*S	Sn	04 51 06.4	+3.3
STVI	**Saint Thomas**	**2.43**	**254**⇓	*e*P	Pn	04 50 35.3	+2.5
STVI				*e*S	Sn	04 51 06.4	+3.3
MTP	**Monte Pirata**	**3.05**	**253**⇑	*e*P	Pn	04 50 44.1	+2.8
MTP				*e*S	Sn	04 51 22.0	+3.6
MTP	**Monte Pirata**	**3.05**	**253**⇑	*e*P	Pn	04 50 44.8	+3.5
MTP				*e*S	Sn	04 51 22.0	+3.6
CBYP	**Canovanas**	**3.28**	**257**⇑	*e*P	Pn	04 50 47.1	+2.7
CBYP				*e*S	Sn	04 51 27.8	+3.8
CBYP	**Canovanas**	**3.28**	**257**⇑	*e*P	Pn	04 50 47.1	+2.7
CBYP				*e*S	Sn	04 51 27.8	+3.8
HUMP	**Col San Antoni**	**3.31**	**255**⇑	*e*P	Pn	04 50 47.3	+2.4
HUMP				*e*S	Sn	04 51 27.8	+3.1
HUMP	**Col San Antoni**	**3.31**	**255**⇑	*e*P	Pn	04 50 47.3	+2.4
HUMP				*e*S	Sn	04 51 27.8	+3.1
AOPR	**Arecibo Observ**	**4.10**	**261**⇑	*e*P	Pn	04 50 57.7	+2.0
AOPR				*e*S	Sn	04 51 47.7	+3.5
AOPR	**Arecibo Observ**	**4.10**	**261**⇑	*e*P	Pn	04 50 57.7	+2.0
AOPR				*e*S	Sn	04 51 47.7	+3.5
CRPR	**Cabo Rojo, PR**	**4.50**	**257**⇓	*e*P	Pn	04 51 04.5	+3.3
CRPR				*e*S	Sn	04 51 58.1	+4.0
CRPR	**Cabo Rojo, PR**	**4.50**	**257**⇓	*e*P	Pn	04 51 04.5	+3.3
CRPR				*e*S	Sn	04 51 58.1	+4.0

NEIC ***25*** *05:01:25.3±0.9, 1°.47N×125°.97E, h35km, mb4.1/3, Error ellipse: s-maj=18.7km s-min=13.8km az=51.0*
DJA ***25*** *05:01:28, 1°.35N×125°.87E, h129km, MLv4.2/6*
ISCJB ***25*** *05:01:29.0±0.8, 1°.22N±0°.07×125°.73E±0°.06, h88km±10km, mb4.2/5, Error ellipse: s-maj=11.5km s-min=9.7km az=178.3*
IDC ***25*** *05:01:32.5±10.0, 1°.24N×125°.49E, h99km±100km, mb3.9/3, mb1 4.0/4, mb1mx3.4/20, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=80.8km s-min=22.5km az=58.0*
ISC 25 05:01:30.1±0.8, 1°.23N±0°.07×125°.76E±0°.06, h80km±10km, n18, σ0§95/19, mb4.2/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.67**	**106**	P	**Pn**	**05 01 57.7**	**0.0**
SGSI	**Sangihe**	**2.46**	**355**	P	**Pn**	**05 02 07.3**	**-0.9**
LBMI	**Labuha**	**2.54**	**137**	P	**Pn**	**05 02 10.3**	**+1.0**
LUWI	**Luwuk**	**3.74**	**233**	P	**Pn**	**05 02 26.8**	**+1.2**
MRSI	**Marisa**	**3.89**	**259**	P	**Pn**	**05 02 27.9**	**+0.3**
APSI	**Ampana**	**4.62**	**243**	P	**Pn**	**05 02 38.8**	**+1.2**
NLAI	**Namlea**	**4.63**	**163**	P	**Pn**	**05 02 37.6**	**-0.1**
AAI	**Ambon**	**5.45**	**153**	P	**Pn**	**05 02 48.4**	**-0.5**
72nm,1.0s							
KDI	**Kendari**	**6.03**	**211**	P	**Pn**	**05 02 56.9**	**+0.1**
KAPI	**Kappang**	**8.63**	**224**	P	**Pn**	**05 03 32.3**	**0.0**
1.7nm,0.3s,baz=57,slow=6.4,SNR=7.1							
KAPI				S	**Sn**	**05 05 06.4**	**-1.6**
0.7nm,0.3s,baz=38,slow=19,SNR=3.1							
MMRI	**Maumere**	**10.40**	**200**	P	**Pn**	**05 03 47.8**	**-8.7**
KAKA	**Kakadu**	**15.35**	**155**	*e*Pn	**Pn**	**05 05 00.5**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.20**	**180**	*e*P	**Pn**	**05 05 48.5**	**-1.0**
2.6nm,0.9s							
WRAB	**Tennant Creek**	**22.65**	**159**	*e*P	**P**	**05 06 24.5**	**-0.3**
6.2nm,0.8s,mb4.0							
ASAR	**Alice Springs**	**25.98**	**163**	P	**P**	**05 06 57.4**	**+1.9**
4.7nm,0.3s,mb4.4,baz=342,slow=11,SNR=101							
CTAO	**Charters Tower**	**29.20**	**138**	*e*P	**P**	**05 07 24.4**	**+0.1**
16nm,1.2s,mb4.5							
STKA	**Stephens Creek**	**36.18**	**157**	P	**P**	**05 08 26.1**	**+1.1**
6.1nm,0.8s,mb4.6,baz=334,slow=7.5,SNR=7.8							
MKAR	**Makanchi Array**	**59.07**	**327**	P	**P**	**05 11 21.3**	**-0.7**
0.3nm,0.4s,mb3.7,baz=112,slow=7.4,SNR=7.3							

ISCJB ***25*** *05:32:06.7±0.9, 32°.51N±0°.03×117°.88W±0°.03, h6km±7km, Error ellipse: s-maj=6.2km s-min=3.5km az=40.1*
NEIC ***25*** *05:32:09.3, 32°.48N×117°.87W, h6km, ML3.4(PAS), After PAS.*
ECX ***25*** *05:32:09.7±0.6, 32°.43N×117°.87W, h20km, MD3.2, ML3.4*
ISC 25 05:32:06.9±0.7, 32°.51N±0°.03×117°.87W±0°.03, h2km±4km, n47, σ1§13/64, 24C-24D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCI	**San Clemente I**	**0.74**	**309**	⇓P	**Pg**	**05 32 22.7**	**+1.6**
baz=0.8							
109C	**Camp Elliot, M**	**0.74**	**60**	⇑P	**Pg**	**05 32 22.9**	**+1.7**
baz=0.8,SNR=173							
109C				⇑S	**Sg**	**05 32 32.0**	**+1.2**
baz=0.8							
DPP	**Dos Picos Cty**	**0.92**	**58**	⇓*e*P	**Pg**	**05 32 25.8**	**+1.2**
EML	**El Monte Cty P**	**0.94**	**66**	⇑*e*P	**Pg**	**05 32 25.8**	**+0.8**
CIS	**Catalina Islan**	**1.00**	**333**	⇓P	**Pg**	**05 32 26.1**	**-0.1**
baz=1.0,SNR=1000							
CIS				⇓S	**Sg**	**05 32 38.7**	**-0.4**
baz=1.0							
BAR	**Barrett**	**1.02**	**80**	⇑*e*P	**Pg**	**05 32 27.0**	**+0.4**
BAR	**Barrett**	**1.02**	**80**	*e*Pg	**Pg**	**05 32 26.9**	**+0.3**
BAR				*e*Sg	**Sg**	**05 32 39.7**	**-0.1**
CBX	**Cerro Bola**	**1.04**	**101**	*e*P	**Pg**	**05 32 27.1**	**+0.3**
CBX				*e*S	**Sg**	**05 32 40.7**	**+0.4**
CBX				⇑*e*		05 32 43.8	
comp=N,2μm,0.5s							
MURC	**Murrieta**	**1.22**	**27**	⇓P	**Pg**	**05 32 29.8**	**-0.6**
baz=1.3,SNR=17							
MURC				⇑S	**Sg**	**05 32 44.9**	**-1.3**
baz=1.3							
PBX	**Punta Banda**	**1.24**	**128**	⇑*e*P	**Pg**	**05 32 29.3**	**-1.3**
PBX				*e*S	**Sg**	**05 32 47.5**	**+0.8**
PBX				⇑*e*		05 32 50.3	
comp=N,814nm,0.2s							
FMP	**Fort Macarthur**	**1.25**	**343**	⇑P	**Pg**	**05 32 30.0**	**-0.9**
baz=1.3,SNR=15							
MONP	**Monument Peak**	**1.28**	**72**	⇑P	**Pg**	**05 32 31.0**	**-0.4**
baz=1.3,SNR=56							
MONP				⇓S	**Sg**	**05 32 46.8**	**-1.2**
baz=1.3							
ECNX	**Esteban Cantu**	**1.37**	**128**	*e*P	**Pn**	**05 32 31.7**	**-1.4**
ECNX				⇓*e*P		05 32 29.4	
ECNX				*e*S	**Sg**	**05 32 46.5**	**-4.6**
ECNX				*e*S	**Sg**	**05 32 50.7**	**-0.4**
DVTC	**Desert V Tower**	**1.50**	**84**	⇓P	**Pn**	**05 32 34.2**	**-0.6**
baz=1.5,SNR=31							
DVTC				⇓Sn	**Sn**	**05 32 52.9**	**-2.1**
baz=1.5							
DVTC				⇑Sb	**Sb**	**05 32 55.2**	**+0.3**
baz=1.5							
SNCC	**San Nicolas Is**	**1.57**	**298**	⇓Pn	**Pn**	**05 32 34.5**	**-1.4**
baz=1.6,SNR=20							
SNCC	**San Nicolas Is**	**1.57**	**298**	*e*Pn	**Pn**	**05 32 34.3**	**-1.6**
PFO	**Pinyon Flat Ob**	**1.61**	**47**	⇑Pb	**Pb**	**05 32 36.6**	**-0.8**
baz=1.6							
PFO	**Pinyon Flat Ob**	**1.61**	**47**	*e*Pn	**Pn**	**05 32 36.6**	**+0.1**
PFO				*e*Sn	**Sn**	**05 32 58.7**	**+0.9**
YUH	**Yuha Desert**	**1.65**	**85**	⇑*e*P	**Pn**	**05 32 36.9**	**0.0**
PASC	**Pasadena Art C**	**1.68**	**351**	*e*

BBRC					⇑Sb		Sb	05 33 05.1	-1.9
	baz=2.0								
BSC	**Santa Cruz Isl**	**2.09**	**315**		⇑Pn		**Pn**	**05 32 41.8**	**-1.2**
	baz=2.1,SNR=9.5								
BELC	**Belle Mtn.**	**2.16**	**46**		⇓Pb		**Pb**	**05 32 46.0**	**-0.7**
	baz=2.2								
BC3	**Big Chuckw Mtn**	**2.33**	**60**		⇓Pb		**Pb**	**05 32 49.0**	**-0.6**
	baz=2.3								
EDW2	**Edwards Air Fo**	**2.36**	**358**		⇓P		**Pn**	**05 32 47.2**	**+0.5**
	baz=2.4,SNR=19								
SPX	**San Pedro Mart**	**2.52**	**125**		*e*PN		**Pn**	**05 32 48.5**	**-0.3**
SPX					*e*S		**Sn**	**05 33 19.4**	**-0.7**
GLA	**Glamis**	**2.62**	**77**		⇓Pb		**Pb**	**05 32 54.2**	**-0.4**
	baz=2.6								
GLA	**Glamis**	**2.62**	**77**		*e*Pn		**Pn**	**05 32 52.5**	**+2.3**
GMRC	**Granite Mounta**	**2.92**	**39**		⇓P		**Pn**	**05 32 55.0**	**+0.6**
	baz=3.0								
GSC	**Goldstone**	**2.92**	**17**		⇓P		**Pn**	**05 32 55.5**	**+1.1**
	baz=3.0								
GSC	**Goldstone**	**2.92**	**17**		*e*Pn		**Pn**	**05 32 55.3**	**+0.9**
GSC					*e*Sg		**Sg**	**05 33 39.4**	**-1.3**
ISA	**Isabella**	**3.18**	**351**		⇓P		**Pn**	**05 32 57.4**	**-0.6**
	baz=3.2,SNR=5.2								
TUQ	**Turquoise Moun**	**3.33**	**28**		⇑P		**Pn**	**05 33 00.9**	**+0.8**
	baz=3.4,SNR=6.9								
MPMC	**Manual Prospec**	**3.55**	**5**		⇑P		**Pn**	**05 33 03.5**	**+0.4**
	baz=3.6,SNR=15								
V12A	**Nelson**	**4.07**	**37**		⇓P		**Pn**	**05 33 11.5**	**+1.3**
	baz=4.1,SNR=8.1								
U10A	**Ash Meadows, A**	**4.10**	**18**		⇑Pn		**Pn**	**05 33 08.9**	**-1.7**
	baz=4.1,SNR=7.5								
GRAC	**Grapevine Rang**	**4.50**	**5**		⇑P		**Pn**	**05 33 18.2**	**+2.1**
	baz=4.5								
V13A	**Grand Canyon W**	**4.63**	**43**		⇑P		**Pn**	**05 33 19.6**	**+1.7**
	baz=4.7								
U12A	**Valley of Fire**	**4.78**	**34**		⇑P		**Pn**	**05 33 21.4**	**+1.5**
	baz=4.8								
U13A	**Pakoon Wash**	**5.05**	**39**		⇓P		**Pn**	**05 33 25.3**	**+1.6**
	baz=5.1								
T11A	**Corn Creek, Al**	**5.19**	**24**		⇑P		**Pn**	**05 33 27.7**	**+2.1**
	baz=5.2								
S10A	**Tonopah Range,**	**5.50**	**11**		⇑P		**Pn**	**05 33 32.1**	**+2.3**
	baz=5.5								

NEIC ***25*** *05:44:21.6±2.2,23°.88N×121°.77E,h32km±10km, Error ellipse: s-maj=33.6km s-min=9.0km az=104.0*
ISCJB ***25*** *05:44:23.6±0.3,23°.95N±0°.02×121°.67E±0°.02,h38km±5km, Error ellipse: s-maj=4.0km s-min=2.6km az=145.5*
TAP ***25*** *05:44:23.1,23°.95N×121°.57E,h44km,ML3.4,C*
JMA ***25*** *05:44:23.0±0.3,24°.15N×121°.62E,h82km,M2.5*
ISC 25 05:44:24.0±0.3,23°.97N±0°.02×121°.65E±0°.02,h36km±4km, n45,σ0°85/77,3C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**285**	P	**Pn**	**05 44 30.7**	**+0.7**
	baz=51						
HWA				*e*S	**Sn**	**05 44 35.1**	**+0.9**
	baz=51						
TWD	**Chiawan**	**0.12**	**336**	*i* P	**Pn**	**05 44 30.4**	**0.0**
	baz=357						
TWD				*i* S	**Sn**	**05 44 35.4**	**+0.6**
	baz=357						
NACB	**Ninganchiao**	**0.21**	**346**	⇑*i*Pg	**Pn**	**05 44 30.3**	**-0.8**
NACB				*e*Sg	**Sn**	**05 44 35.9**	**-0.1**
ESL	**Shilin**	**0.25**	**233**	*i* P	**Pn**	**05 44 30.7**	**-0.8**
	baz=223						
ESL				S	**Sn**	**05 44 35.6**	**-0.9**
	baz=223						
ENA	**Nanau**	**0.47**	**10**	P	**Pn**	**05 44 33.8**	**-0.5**
	baz=10.0						
TWT	**Tachien**	**0.52**	**303**	P	**Pn**	**05 44 34.9**	**-0.1**
	baz=308						
TWT				S	**Sn**	**05 44 42.5**	**-0.1**
	baz=308						
NNS	**Nan Shan**	**0.54**	**332**	*e*P	**Pn**	**05 44 34.8**	**-0.4**
	baz=345						
EHY	**Hungye**	**0.55**	**214**	*e*P	**Pn**	**05 44 33.3**	**-2.1**
	baz=207						
EHY				*e*S	**Sn**	**05 44 40.9**	**-2.4**
	baz=207						
YULB	**Yu-li**	**0.66**	**210**	*e*Pg	**Pn**	**05 44 34.3**	**-2.6**
SSLB	**Suanglung**	**0.66**	**255**	*e*Pg	**Pn**	**05 44 35.6**	**-1.3**
TWC	**Suao**	**0.67**	**16**	*e*P	**Pn**	**05 44 36.8**	**-0.2**
	baz=15						
ENTT	**Nioudou**	**0.68**	**353**	P	**Pn**	**05 44 36.4**	**-0.7**
	baz=6.0						
ENTT				*e*S	**Sn**	**05 44 46.1**	**-0.4**
	baz=6.0						
TWF1	**Yuli**	**0.69**	**208**	P	**Pn**	**05 44 35.1**	**-2.2**
	baz=207						
SMLT	**Sun Moon Lake**	**0.69**	**263**	*i* P	**Pn**	**05 44 36.4**	**-0.9**
	baz=263						
SMLT				*e*S	**Sn**	**05 44 47.2**	**+0.3**
	baz=263						
TYC	**Yuchr**	**0.73**	**265**	P	**Pn**	**05 44 36.9**	**-0.9**
	baz=266						
TYC				S	**Sn**	**05 44 47.1**	**-0.7**
	baz=266						
YHNB	**Yeheng**	**0.74**	**340**	*e*Pg	**Pn**	**05 44 37.0**	**-1.0**
YHNB				*e*Sg	**Sn**	**05 44 47.3**	**-0.9**
NSK	**Sanguang**	**0.76**	**339**	⇓*i*P	**Pn**	**05 44 37.8**	**-0.5**
	baz=345						
NSK				S	**Sn**	**05 44 47.7**	**-0.8**
	baz=345						
YUS	**Yu-Shan**	**0.80**	**234**	⇑*i*P	**Pn**	**05 44 38.5**	**-0.3**
	baz=226						
YUS				S	**Sn**	**05 44 48.7**	**-0.8**
	baz=226						
TWQ1	**Liyutan**	**0.89**	**296**	⇑*i*P	**Pn**	**05 44 39.9**	**-0.1**
	baz=299						
TWQ1				S	**Sn**	**05 44 52.1**	**+0.4**
	baz=299						
NSTT	**Nanjuang**	**0.89**	**318**	*e*P	**Pn**	**05 44 40.3**	**+0.2**
	baz=312						
NSTT				*e*S	**Sn**	**05 44 52.0**	**+0.3**
	baz=312						
WNT	**Mingjian**	**0.89**	**265**	P	**Pn**	**05 44 40.2**	**+0.2**
	baz=265						
WNT				*e*S	**Sn**	**05 44 52.2**	**+0.5**
	baz=265						
ALS	**Alishan**	**0.90**	**240**	*i* P	**Pn**	**05 44 40.0**	**-0.1**
	baz=230						
ALS				*e*S	**Sn**	**05 44 52.8**	**+0.9**
	baz=230						
NSY	**Sanyi**	**0.93**	**299**	P	**Pn**	**05 44 40.6**	**0.0**
	baz=302						
NSY				S	**Sn**	**05 44 53.7**	**+1.0**
	baz=302						
CHN5	**Tsauling**	**0.96**	**248**	P	**Pn**	**05 44 41.0**	**-0.1**
	baz=237						
CHN5				*e*S	**Sn**	**05 44 54.0**	**+0.5**
	baz=237						
ELDTW	**Lidau**	**0.97**	**217**	*e*P	**Pn**	**05 44 39.5**	**-1.6**
	baz=207						
TATO	**Taipei**	**1.02**	**352**	*e*Pg	**Pn**	**05 44 41.1**	**-0.7**
TATO				*e*Sg	**Sn**	**05 44 55.4**	**+0.6**
WGK	**Gukeng**	**1.04**	**255**	*e*P	**Pn**	**05 44 42.0**	**0.0**
	baz=253						
WGK				*e*S	**Sn**	**05 44 56.2**	**+0.9**
	baz=253						
TWB1	**Santiao Chiao**	**1.08**	**16**	P	**Pn**	**05 44 43.5**	**+0.8**
	baz=8.0						
NWF	**Wu-fen Shan**	**1.11**	**6**	*e*P	**Pn**	**05 44 43.1**	**0.0**
	baz=10.0						
CHN4	**Tsaushan**	**1.15**	**238**	P	**Pn**	**05 44 43.8**	**+0.2**
	baz=226						
CHN4				*e*S	**Sn**	**05 44 59.1**	**+1.0**
	baz=226						
TPUB	**Ta-pu**	**1.15**	**235**	*e*Pn	**Pn**	**05 44 43.3**	**-0.3**
TPUB				*e*Sn	**Sn**	**05 44 58.9**	**+0.8**
CHN2	**Minshiung**	**1.16**	**248**	*e*P	**Pn**	**05 44 44.7**	**+0.9**
	baz=246						
CHN2				*e*S	**Sn**	**05 45 00.0**	**+1.6**
	baz=246						
WTP	**Ta-pu**	**1.19**	**233**	*e*P	**Pn**	**05 44 44.2**	**0.0**
	baz=230						
CHY	**Chiayi**	**1.22**	**248**	*e*P	**Pn**	**05 44 45.2**	**+0.7**
	baz=235						
CHY				S	**Sn**	**05 45 01.1**	**+1.3**
	baz=235						
TWG	**Pinlang**	**1.26**	**205**	*e*Pn	**Pn**	**05 44 42.3**	**-2.8**
TWG	**Pinlang**	**1.26**	**205**	*e*P	**Pn**	**05 44 44.2**	**-0.9**
	baz=190						
TWK	**Hsinying**	**1.27**	**237**	P	**Pn**	**05 44 45.5**	**+0.2**
	baz=234						
TWK				*e*S	**Sn**	**05 45 01.7**	**+0.5**
	baz=234						
CHN1	**Nanshi**	**1.29**	**233**	*e*P	**Pn**	**05 44 45.6**	**0.0**
	baz=230						
CHN1				*e*S	**Sn**	**05 45 02.5**	**+0.9**
	baz=230						
SGST	**Jiashian**	**1.32**	**228**	*e*P	**Pn**	**05 44 46.3**	**+0.4**
	baz=225						
SGST				*e*S	**Sn**	**05 45 03.5**	**+1.3**
	baz=225						
YOJ	**Yonaguni jima**	**1.34**	**68**	P	**Pn**	**05 44 46.2**	**0.0**
YOJ				S	**Sn**	**05 45 03.7**	**+1.0**
SSD	**Sandimen**	**1.53**	**218**	*e*P	**Pn**	**05 44 49.6**	**+0.7**
	baz=203						
IRIF	**Iriomote-Funau**	**1.93**	**79**	P	**Pn**	**05 44 54.5**	**+0.1**
IRIF				S	**Sn**	**05 45 18.4**	**+0.9**
JKRS	**Kuro-shima**	**2.17**	**82**	P	**Pn**	**05 44 58.3**	**+0.6**
JKRS				S	**Sn**	**05 45 25.0**	**+1.7**
JIJ	**Ishigaki jima**	**2.31**	**80**	P	**Pn**	**05 44 59.5**	**-0.1**
JIJ				S	**Sn**	**05 45 26.1**	**-0.7**
JTJ	**Tarama**	**2.86**	**76**	P	**Pn**	**05 45 07.4**	**+0.2**
JTJ				S	**Sn**	**05 45 41.1**	**+0.7**

ISCJB ***25*** *05:45:11.4±0.2,15°.28N±0°.02×91°.76W±0°.02,h191km, mb4.6/67, Error ellipse: s-maj=3.9km s-min=1.9km az=34.7*
MEX ***25*** *05:45:12.7±1.3,15°.29N×91°.89W,h199km±9km,MD4.8*
NEIC ***25*** *05:45:12.7,15°.29N×91°.89W,h199km,mb4.8/73, MD4.8(MEX),After MEX.*
GCMT ***25*** *05:45:12.7±0.4,15°.44N×91°.70W,h190km±3km,MW5.0/64, Moment Tensor Solution. s24,c27; s64,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.26±.13; $M_{\theta\theta}$-1.63±.14; $M_{\phi\phi}$0.36±.18; $M_{r\theta}$1.40±.10; $M_{\theta\phi}$0.38±.16; $M_{\phi r}$-2.75±.12; Best double couple: $M_0$3.39300×10^{16} NP1:ϕ_b258.00000°,δ22.00000°,λ26.00000°. NP2: ϕ_b144.00000°,δ81.00000°,λ110.00000°. Principal axes: T 3.7300, Plg51.0000°, Azm76.0000°; N -0.6780, Plg19.0000°, Azm320.0000°; P -3.0570, Plg33.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***25*** *05:45:12.0±0.5,15°.28N×91°.59W,h191km±2km, mb3.9/17, mb1 4.0/21,mb1mx4.0/26,mbtmp3.9/21,MS3.4/3, Ms1 3.4/3,ms1mx2.9/26 Error ellipse: s-maj=14.4km s-min=6.4km az=48.0*
SZGRF ***25*** *05:45:37.2,13°.83N×92°.64W,h71km,mb5.1,Off coast of Chiapas, Mexico*
ISC 25 05:45:12.4±0.2,15°.21N±0°.03×91°.77W±0°.02,h193km, h193km±1.2km;pP-P,n434,σ1°08/291,mb4.6/67, 121C-122D,Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.56**	**238**	*i* P	**Pn**	**05 45 37.6**	**-1.3**
THIG				*i* S	**Sn**	**05 45 58.6**	**-0.8**
TP2	**Tecpan 2**	**0.84**	**120**	⇓*i*P	**Pn**	**05 45 40.8**	**+0.5**
JAT	**Jato**	**0.89**	**171**	⇑*i*P	**Pn**	**05 45 40.5**	**-0.3**
FG6		**1.07**	**127**	*e*P	**Pn**	**05 45 42.5**	**+0.5**
CCIG	**Comitan**	**1.13**	**342**	*i* P	**Pn**	**05 45 41.7**	**-0.6**
CCIG				*i* S	**Sn**	**05 46 02.9**	**-2.8**
CCIG	**Comitan**	**1.13**	**342**	*i* P	**Pn**	**05 45 41.7**	**-0.6**
CCIG				*i* S	**Sn**	**05 46 02.9**	**-2.8**
FUG	**Fuego 3**	**1.17**	**130**	*e*P	**Pn**	**05 45 42.6**	**-0.1**
APG	**El Apazote**	**1.28**	**99**	P	**Pn**	**05 45 41.0**	**-2.5**
	0.9nm,0.3s,baz=0.9,slow=20,SNR=57						
APG				S	**Sn**	**05 46 05.6**	**-2.0**
	1μm,0.3s,baz=133,slow=21,SNR=27						
PCIG		**1.48**	**290**	*i* P	**Pn**	**05 45 43.8**	**-1.5**
PCIG				*i* S	**Sn**	**05 46 07.8**	**-2.9**
NBG	**Las Nubes**	**1.51**	**114**	⇓*e*P	**Pn**	**05 45 46.3**	**+0.8**
NBG				*e*S	**Sn**	**05 46 11.9**	**+0.8**
SCX	**San Cristobal**	**1.73**	**332**	*i* P	**Pn**	**05 45 47.0**	**-0.6**
SCX				*i* S	**Sn**	**05 46 12.8**	**-2.4**
SCX	**San Cristobal**	**1.73**	**332**	*i* P	**Pn**	**05 45 47.0**	**-0.6**
SCX				*i* S	**Sn**	**05 46 12.8**	**-2.4**
MRL	**Marmol**	**2.02**	**94**	⇓*i*P	**Pn**	**05 45 50.4**	**-0.2**
TGIG		**2.03**	**321**	*i* P	**Pn**	**05 45 49.8**	**-0.9**
TGIG				*i* S	**Sn**	**05 46 17.0**	**-3.6**
RBDL	**Robledal**	**2.29**	**118**	⇓*i*P	**Pn**	**05 45 52.9**	**-0.6**
RBDL				*e*S	**Sn**	**05 46 25.4**	**-0.1**
RTR	**El Retiro**	**2.44**	**122**	*e*P	**Pn**	**05 45 54.8**	**-0.3**
RTR				*e*S	**Sn**	**05 46 29.4**	**+1.0**
SNJE	**San Jose**	**2.48**	**122**	*i* P	**Pn**	**05 45 55.3**	**-0.4**
SNJE				*e*S	**Sn**	**05 46 30.2**	**+0.9**
SBLS	**San Blas**	**2.48**	**123**	*e*P	**Pn**	**05 45 55.1**	**-0.5**
SBLS				*e*S	**Sn**	**05 46 30.8**	**+1.4**
BOQS	**Boqueron**	**2.82**	**121**	*e*P	**Pn**	**05 45 59.1**	**-0.4**
SNET	**Serv Nac Est T**	**2.89**	**121**	*e*P	**Pn**	**05 45 59.8**	**-0.6**
LBRS	**Las Brisas**	**3.02**	**119**	*e*P	**Pn**	**05 46 01.2**	**-0.7**
LFRS	**El Faro**	**3.06**	**121**	*e*P	**Pn**	**05 46 01.5**	**-0.9**
SNVI	**San Vicente**	**3.25**	**119**	*e*P	**Pn**	**05 46 04.3**	**-0.4**
CMIG	**Matias Romero**	**3.53**	**303**	P	**Pn**	**05 46 07.0**	**-1.0**
	138nm,0.3s,baz=108,slow=7.9,SNR=1336						
CMIG				S	**Sn**	**05 46 46.9**	**-4.7**
	210nm,0.3s,baz=81,slow=23,SNR=30						
CAHU	**Cacacuatique**	**3.73**	**112**	*e*P	**Pn**	**05 46 10.4**	**-0.2**
SCIG	**Sabancuy**	**3.78**	**8**	*i* P	**Pn**	**05 46 09.2**	**-2.0**
SCIG				*i* S	**Sn**	**05 46 53.1**	**-4.3**
TUIG	**Tuzandepetl**	**3.79**	**318**	*i* P	**Pn**	**05 46 10.1**	**-1.1**
TUIG				*i* S	**Sn**	**05 46 52.5**	**-5.0**
TUIG	**Tuzandepetl**	**3.79**	**318**	*i* P	**Pn**	**05 46 10.1**	**-1.1**
TUIG				*i* S	**Sn**	**05 46 52.5**	**-5.0**
VSM	**San Miguel**	**3.82**	**117**	*e*P	**Pn**	**05 46 11.9**	**+0.2**
HUIG	**Huatulco**	**4.22**	**278**	*i* P	**Pn**	**05 46 14.3**	**-2.3**
HUIG				*i* S	**Sn**	**05 46 59.6**	**-7.5**
HUIG	**Huatulco**	**4.22**	**278**	*i* P	**Pn**	**05 46 14.3**	**-2.3**
HUIG				*i* S	**Sn**	**05 46 59.6**	**-7.5**
CNCH	**Conchagua**	**4.27**	**116**	*e*P	**Pn**	**05 46 16.9**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.50**	**104**	*e*Pn	**Pn**	**05 46 20.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**4.50**	**104**	*e*P	**Pn**	**05 46 20.2**	**0.0**
OXX	**Oaxaca**	**5.11**	**292**	*i* P	**Pn**	**05 46 25.7**	**-2.3**
OXX				*i* S	**Sn**	**05 47 23.7**	**-3.9**
OXX	**Oaxaca**	**5.11**	**292**	*i* P	**Pn**	**05 46 25.7**	**-2.3**
OXX				*i* S	**Sn**	**05 47 23.7**	**-3.9**
VHO	**Vista Hermosa**	**5.12**	**292**	*e*P	**Pn**	**05 46 26.4**	**-1.7**
VHO				*i* S	**Sn**	**05 47 22.5**	**-5.2**
VHO	**Vista Hermosa**	**5.12**	**292**	*e*P	**Pn**	**05 46 26.4**	**-1.7**
VHO				*i* S	**Sn**	**05 47 22.5**	**-5.2**
CRIN	**San Cristobal**	**5.22**	**118**	*e*P	**Pn**	**05 46 29.7**	**+0.3**
CRIN				AML	AML	05 47 35.3	
	comp=N,935nm,0.6s						
CNGN	**Cerro Negro**	**5.61**	**118**	*e*P	**Pn**	**05 46 34.0**	**-0.6**
CNGN				AML	AML	05 47 35.6	
	comp=N,165nm,0.7s						
MIRN	**Miramar**	**5.63**	**119**	*e*P	**Pn**	**05 46 35.0**	**+0.2**
TEIG	**Tepich**	**6.00**	**33**	P	**Pn**	**05 46 36.7**	**-2.8**
	baz=210,slow=0.0						
CSAN		**6.00**	**119**	*e*P	**Pn**	**05 46 40.5**	**+0.8**
APYN	**Apoyeque**	**6.04**	**119**	*e*P	**Pn**	**05 46 41.1**	**+1.0**
PNIG	**Pinotepa**	**6.23**	**282**	*i* P	**Pn**	**05 46 41.0**	**-1.5**
PNIG				*i* S	**Sn**	**05 47 48.6**	**-5.1**
PNIG	**Pinotepa**	**6.23**	**282**	*i* P	**Pn**	**05 46 41.0**	**-1.5**
PNIG				*i* S	**Sn**	**05 47 48.6**	**-5.1**
TPIG	**Tehuac#an**	**6.23**	**302**	*i* P	**Pn**	**05 46 40.7**	**-1.9**
TPIG				*i* S	**Sn**	**05 47 49.7**	**-4.2**
LVIG	**Laguna Verde**	**6.31**	**316**	*e*P	**Pn**	**05 46 41.5**	**-2.1**
LVIG				*i* S	**Sn**	**05 47 48.3**	**-7.4**
LVIG	**Laguna Verde**	**6.31**	**316**	*e*P	**Pn**	**05 46 41.5**	**-2.1**
LVIG				*i* S	**Sn**	**05 47 48.3**	**-7.4**
UTMO	**Huajuapan**	**6.35**	**295**	*i* P	**Pn**	**05 46 42.6**	**-1.4**
UTMO				*i* S	**Sn**	**05 47 52.8**	**-3.7**
VCR	**Vista de Mar**	**7.83**	**129**	*e*P	**Pn**	**05 47 03.6**	**+0.1**
YAIG	**Yautepec**	**7.87**	**299**	*i* P	**Pn**	**05 47 05.4**	**+1.5**
YAIG				*i* S	**Sn**	**05 48 27.9**	**-4.6**
YAIG	**Yautepec**	**7.87**	**299**	*i* P	**Pn**	**05 47 05.4**	**+1.5**
YAIG				*i* S	**Sn**	**05 48 27.9**	**-4.6**
IIO	**Organos**	**7.94**	**304**	*e*P	**Pn**	**05 47 06.1**	**+1.2**
IIO	**Organos**	**7.94**	**304**	*e*P	**Pn**	**05 47 06.1**	**+1.2**
ACX	**Acapulco**	**8.00**	**283**	*e*P	**Pn**	**05 47 04.5**	**-1.1**
ACX	**Acapulco**	**8.00**	**283**	*e*P	**Pn**	**05 47 04.5**	**-1.1**
PLIG	**Platanillo**	**8.05**	**294**	*i* P	**Pn**	**05 47 08.0**	**+1.7**
PLIG				*i* S	**Sn**	**05 48 35.1**	**-1.8**
PLIG	**Platanillo**	**8.05**	**294**	*i* P	**Pn**	**05 47 08.0**	**+1.7**
PLIG				*i* S	**Sn**	**05 48 35.1**	**-1.8**
MZVM		**8.15**	**300**	*e*P	**Pn**	**05 47 09.8**	**+2.2**
PBVM	**Pinon**	**8.15**	**302**	*e*P	**Pn**	**05 47 07.9**	**+0.3**
PBVM	**Pinon**	**8.15**	**302**	*e*P	**Pn**	**05 47 07.9**	**+0.3**
UNM	**Universidad Na**	**8.18**	**301**	*i* P	**Pn**	**05 47 06.3**	**-1.6**
UNM				*i* S	**Sn**	**05 48 35.1**	**-4.7**
UNM	**Universidad Na**	**8.18**	**301**	*i* P	**Pn**	**05 47 06.3**	**-1.6**
UNM				*i* S	**Sn**	**05 48 35.1**	**-4.7**
PTVM	**Pico Tres Padr**	**8.25**	**303**	*e*P	**Pn**	**05 47 11.6**	**+2.7**
PTVM	**Pico Tres Padr**	**8.25**	**303**	*e*P	**Pn**	**05 47 11.6**	**+2.7**
CAIG	**El Cayaco**	**8.37**	**284**	*i* P	**Pn**	**05 47 10.8**	**+0.3**
CAIG				*i* S	**Sn**	**05 48 42.7**	**-1.7**
CAIG	**El Cayaco**	**8.37**	**284**	*i* P	**Pn**	**05 47 10.8**	**+0.3**
CAIG				*i* S	**Sn**	**05 48 42.7**	**-1.7**
FORC	**Fortuna**	**8.38**	**123**	*e*P	**Pn**	**05 47 11.5**	**+1.0**
JCR	**Jicaral**	**8.40**	**129**	*e*P	**Pn**	**05 47 11.0**	**+0.1**
DEIG	**Demacu**	**8.58**	**307**	*e*P	**Pn**	**05 47 14.1**	**+1.0**
DEIG				*e*P		05 47 14.1	
CGA2	**Cerro Gallo 2**	**8.80**	**125**	*e*P	**Pn**	**05 47 16.7**	**+0.6**
PRS1	**Puriscal**	**8.94**	**125**	*e*P	**Pn**	**05 47 19.0**	**+1.1**
LAJ	**Bijagual**	**9.16**	**125**	*e*P	**Pn**	**05 47 17.6**	**-3.3**
URSC	**Urasca**	**9.45**	**123**	*e*P	**Pn**	**05 47 25.3**	**+0.7**
ZIIG	**Zihuatanejo**	**9.60**	**286**	*i* P	**Pn**	**05 47 27.3**	**+0.8**
ZIIG				*i* S	**Sn**	**05 49 11.9**	**-2.0**
ZIIG	**Zihuatanejo**	**9.60**	**286**	*i* P	**Pn**	**05 47 27.3**	**+0.8**
ZIIG				*i* S	**Sn**	**05 49 11.9**	**-2.0**
BUS	**Buena Vista**	**9.63**	**125**	*e*P	**Pn**	**05 47 27.4**	**+0.4**
MOIG	**Morelia**	**10.03**	**298**	*e*P	**Pn**	**05 47 33.1**	**+1.0**
MOIG	**Morelia**	**10.03**	**298**	*e*P	**Pn**	**05 47 33.1**	**+1.0**
BAR1		**10.17**	**125**	*e*P	**Pn**	**05 47 33.8**	**-0.2**
SOR	**Soroa**	**11.21**	**46**	*e*P	**Pn**	**05 47 47.5**	**+0.2**
MTDJ	**Mount Denham**	**13.97**	**76**	*e*Pn	**Pn**	**05 48 25.5**	**+3.3**
LMGC	**Las Mercedes**	**14.88**	**69**	*e*P	**Pn**	**05 48 33.6**	**+0.1**
HKT	**Hockley**	**15.14**	**346**	*e*Pn	**Pn**	**05 48 34.7**	**-1.9**
	comp=N,37nm,1.5s						
BRAL	**Brewton**	**16.32**	**15**	Pn	**Pn**	**05 48 53.1**	**+2.3**
	comp=N,166nm,0.4s						
GTBY	**Guantanamo Bay**	**16.56**	**71**	*e*Pn	**Pn**	**05 48 53.6**	**-0.2**
	comp=N,50nm,0.8s						
NATX	**Nacogdoches**	**16.69**	**351**	*e*Pn	**Pn**	**05 48 55.2**	**0.0**
	comp=N,68nm,1.1s						
JCT	**Junction City**	**16.90**	**335**	*e*Pn	**Pn**	**05 48 57.4**	**-0.3**
	comp=N,5.6nm,0.6s						
JCT				*e*S	**S**	**05 52 04.3**	**+1.4**
VBMS	**Vicksburg**	**16.98**	**4**	*e*Pn	**Pn**	**05 48 58.9**	**+0.3**
	comp=N,42nm,0.5s						
627A	**Terlingua Ranc**	**17.77**	**325**	⇓P	**Pn**	**05 49 08.1**	**0.0**
	baz=18,SNR=10						
627A				⇓pP	pP	05 49 37.4	-0.5
	baz=18						
TXAR	**Lajitas Array**	**17.84**	**324**	P	**Pn**	**05 49 09.0**	**+0.2**
	comp=N,0.4nm,0.3s,baz=148,slow=8.9,SNR=30						
TXAR				pP	pP	05 49 39.4	+0.8
	comp=N,0.1nm,0.3s,baz=149,slow=15,SNR=5.1						
TXAR				PcP	PcP	05 53 35.1	+0.8
	comp=N,0.1nm,0.3s,baz=158,slow=4.3,SNR=5.5						
528A	**Cox Ranch, San**	**18.00**	**328**	⇓P	**P**	**05 49 09.3**	**+0.6**
	baz=18						
626A	**Big Bend Ranch**	**18.27**	**323**	⇓P	**P**	**05 49 12.7**	**+1.2**
	baz=18						
626A				⇑pP		05 49 41.1	
	baz=18						
LRAL	**Lakeview Retre**	**18.27**	**13**	*e*Pn	**Pn**	**05 49 12.7**	**-1.2**
	comp=N,14nm,1.1s						
LRAL				*e*S	**S**	**05 52 21.0**	**-9.4**
428A	**Kincaid Ranch,**	**18.41**	**329**	⇓pP	pP	05 49 44.0	-0.9
	baz=18						
527A	**Woodward Ranch**	**18.43**	**326**	⇓P	**P**	**05 49 14.9**	**+1.6**
	baz=18						
527A				⇑pP		05 49 44.1	
	baz=18						
526A	**Mary Lane Ranc**	**18.63**	**325**	⇑P	**P**	**05 49 17.4**	**+1.9**
	baz=18,SNR=6.5						
427A	**Hayter Ranch,**	**18.87**	**328**	⇑P	**P**	**05 49 19.3**	**+1.3**
	baz=19						
427A				⇓pP		05 49 49.9	
	baz=19						
328A	**Wristen Ranch,**	**19.00**	**330**	⇓P	**P**	**05 49 20.3**	**+0.8**
	baz=19,SNR=9.6						
328A				⇓pP		05 49 51.2	
	baz=19						
426A	**McDonald Obser**	**19.06**	**326**	⇑P	**P**	**05 49 21.8**	**+1.7**
	baz=19,SNR=8.4						
426A				⇓pP		05 49 52.7	
	baz=19,SNR=10						
MIAR	**Mount Ida**	**19.33**	**356**	*e*P	**P**	**05 49 23.0**	**+0.1**
	comp=N

CPCT Cooper Cave 21.18 17 *eP* **P 05 49 42.8 0.0**
CPCT *epP* 05 50 17.4
UTMT University of 21.21 7 *eP* **P 05 49 42.5 -0.5**
comp=N,75nm,0.7s,mb5.3
JSC Jenkinsville 21.23 25 *eP* **P 05 49 43.2 0.0**
JSC *epP* 05 50 15.2
Y27A Causey 21.26 333 ⇓P **P 05 49 43.7 +0.1**
baz=21,SNR=6.9
124A Stringfield Ra 21.40 327 ⇓P **P 05 49 46.6 +1.6**
baz=21,SNR=9.3
124A ⇑pP 05 50 21.1
baz=21,SNR=6.2
PARMO Parma 21.45 4 *eP* **P 05 49 45.3 -0.2**
Z25A Roswell 21.48 329 ⇑P **P 05 49 45.7 -0.2**
baz=21
Z25A ⇑pP 05 50 21.1
baz=21
AMTX Amarillo 21.53 337 *eP* **P 05 49 46.3 0.0**
comp=N,70nm,1.0s,mb5.2
AMTX *epP* 05 50 21.2
Y26A Elida 21.59 332 ⇓P **P 05 49 46.9 -0.1**
baz=22,SNR=6.0
Y26A ⇓pP 05 50 22.3
baz=22
TKL Tuckaleechee C 21.59 18 P **P 05 49 47.0 -0.1**
comp=N,40nm,1.0s,mb4.9,baz=189,slow=9.3,SNR=28
TKL LR LR 05 58 45.7
comp=N,102nm,20.0s,baz=90,slow=38
TKL Tuckaleechee C 21.59 18 *eP* **P 05 49 47.1 0.0**
SDV Santo Domingo 21.60 104 P **P 05 49 44.9 -2.4**
comp=N,24nm,0.7s,mb4.8,baz=301,slow=4.7,SNR=45
SDV Santo Domingo 21.60 104 *eP* **P 05 49 44.8 -2.5**
comp=N,24nm,0.8s,mb4.8
Z24A Sheeppen Canyo 21.85 328 ⇓P **P 05 49 50.6 +0.8**
baz=22
Z24A ⇑pP 05 50 26.4
baz=22
X27A F and S Farms, 21.88 334 ⇑pP pP 05 50 23.1 -0.1
baz=22
Y25A Mesa, Roswell 21.99 330 ⇑P **P 05 49 51.4 +0.4**
baz=22,SNR=8.4
Y25A ⇓pP 05 50 27.5
baz=22,SNR=7.0
X26A CR and CF Fran 22.11 333 ⇑P **P 05 49 52.0 -0.1**
baz=22
320A Kipp Ranch, An 22.19 319 ⇓pP pP 05 50 31.1 +4.5
baz=22,SNR=10
221A Mesquite Ranch 22.20 322 ⇑pP pP 05 50 30.5 +3.9
baz=22,SNR=5.8
W27A Bowe Ranch, En 22.23 335 ⇑P **P 05 49 52.8 -0.4**
baz=22,SNR=10
W27A ⇓pP 05 50 30.5
baz=22
Z23A Rita Site, Whi 22.25 326 ⇓pP pP 05 50 29.5 +2.3
baz=22,SNR=5.9
Y24A Capitan 22.36 329 ⇑P **P 05 49 54.9 +0.6**
baz=22
Y24A ⇑pP 05 50 31.8
baz=22,SNR=10
X25A Clemmons Ranch 22.47 331 ⇑pP pP 05 50 31.3 +1.6
baz=22
TZTN Tazewell 22.48 18 *eP* **P 05 49 55.6 +0.1**
comp=N,16nm,0.6s,mb4.7
SIUC Southern Illin 22.54 5 *eP* **P 05 49 55.7 -0.2**
comp=N,332nm,1.0s
121A Cookes Peak, D 22.57 323 ⇓pP pP 05 50 34.2 +3.4
baz=22,SNR=13
220A Playas Peak, P 22.58 320 ⇑P **P 05 49 58.9 +2.4**
baz=22
220A ⇑pP 05 50 30.6
baz=22
Z22A Elephant Butte 22.64 325 ⇑pP pP 05 50 35.4 +3.9
baz=23,SNR=12
Y23A Lovelace Mesa, 22.68 328 ⇑P **P 05 49 58.3 +1.0**
baz=23,SNR=7.4
Y23A ⇑pP 05 50 34.6
baz=23,SNR=14
319A Douglas 22.70 318 ⇓pP pP 05 50 32.4 +0.3
baz=23
FVM French Village 22.72 3 *eP* **P 05 49 56.0 -1.6**
comp=N,10nm,0.5s,mb4.6
CCM Cathedral Cave 22.77 1 *eP* **P 05 49 57.5 -0.6**
comp=N,143nm,1.3s,mb5.3
X24A Lazy VL Ranch, 22.87 330 ⇓pP pP 05 50 34.8 +0.9
baz=23,SNR=5.2
W25A X Bar L Ranch, 22.95 333 ⇑P **P 05 49 59.5 -0.3**
baz=23,SNR=7.1
W25A ⇓pP 05 50 36.9
baz=23,SNR=5.5
USIN University of 22.96 8 *eP* **P 05 49 59.6 -0.2**
comp=N,106nm,1.3s,mb5.2
USIN *epP* 05 50 35.3
Z21A St. Cloud Mine 23.07 324 ⇓pP pP 05 50 41.3 +5.1
baz=23,SNR=6.7
120A U Bar Ranch, L 23.09 321 ⇓P **P 05 50 02.4 +1.4**
baz=23
219A White Tail Can 23.10 319 ⇑P **P 05 50 03.5 +2.3**
baz=23
219A ⇑pP 05 50 36.5
baz=23
BNM Barren Site 23.14 327 *eP* **P 05 50 02.7 +1.2**
comp=N,2.3nm,1.0s,mb3.7
BNM *epP* 05 50 37.1
BNM *esP* sP 05 51 01.7 +0.6
V26A Tequesquite Ra 23.16 335 ⇓P **P 05 50 01.2 -0.5**
baz=23
V26A ⇓pP 05 50 37.1
baz=23
Y22A Socorro 23.16 326 ⇑P **P 05 50 02.5 +0.8**
baz=23
Y22A ⇑pP 05 50 36.1
baz=23,SNR=6.6
318A Bisbee 23.20 317 ⇓P **P 05 50 04.2 +2.1**
baz=23
318A ⇓pP 05 50 37.1
baz=23,SNR=5.2
SLM Saint Louis 23.38 3 *eP* **P 05 50 03.6 0.0**
comp=N,66nm,0.6s,mb5.3
W24A Lazy 6 Ranch, 23.38 331 ⇓P **P 05 50 04.1 +0.4**
baz=23
W24A ⇑pP 05 50 39.4
baz=23,SNR=6.8
WCI Wyandotte Cave 23.44 11 *eP* **P 05 50 03.8 -0.4**
comp=N,41nm,0.7s,mb5.1
CNNC Cliffs of the 23.52 29 *eP* **P 05 50 05.0 0.0**
comp=N,99nm,1.5s,mb5.2
CNNC *epP* 05 50 39.6
CNNC *esP* sP 05 51 06.8 +1.6
V25A Rancho No Teng 23.54 333 ⇑P **P 05 50 05.4 +0.2**
baz=24
V25A ⇓pP 05 50 40.9
baz=24
Y21A Point of Rocks 23.59 325 ⇓pP pP 05 50 44.7 +2.9
baz=24,SNR=9.0
LAZ Ladron 23.61 327 *eP* **P 05 50 05.6 -0.1**
comp=N,22nm,1.5s,mb4.6
LAZ *epP* 05 50 41.3
U26A Atchley Ranch, 23.65 335 ⇑P **P 05 50 05.4 -0.7**
baz=24,SNR=6.3
OLIL Olney 23.66 7 *eP* **P 05 50 06.0 -0.2**
comp=N,96nm,0.8s,mb5.5
OLIL *epP* 05 50 42.7
ANMO Albuquerque 23.68 329 P **P 05 50 07.7 +1.2**
comp=N,0.4nm,0.5s,baz=164,slow=14,SNR=2.5
ANMO pP 05 50 42.3
comp=N,4.3nm,0.8s,baz=127,slow=14,SNR=4.2
ANMO Albuquerque 23.68 329 P **P 05 50 07.2 +0.7**
ANMO *epP* 05 50 42.0
W23A Werner Place, 23.70 330 ⇓pP pP 05 50 44.1 +1.2
baz=24,SNR=6.1
CRPR Cabo Rojo, PR 23.79 80 *eP* **P 05 50 08.7 +1.0**
comp=N,20nm,1.0s,mb4.7
Y20A Horse Springs, 23.91 324 ⇓P **P 05 50 09.7 +1.1**
baz=24,SNR=7.0
Y20A ⇑pP 05 50 48.5
baz=24,SNR=17
U25A Circle Dot Ran 23.93 334 ⇓pP pP 05 50 45.6 +0.2
baz=24
217A Green Valley 23.96 317 ⇑pP pP 05 50 46.3 +0.6
baz=24
118A Homack Ranch, 23.98 320 ⇑pP pP 05 50 46.2 +0.3
baz=24
X21A Alamocita Cree 23.98 326 ⇓P **P 05 50 10.0 +0.8**
baz=24
X21A ⇓pP 05 50 46.7
baz=24,SNR=6.2
ELN Prospectdale 24.02 22 *eP* **P 05 50 09.8 +0.3**

ELN *epP* 05 50 47.1
BLA Blacksburg 24.13 23 *eP* **P 05 50 10.5 +0.1**
comp=N,38nm,1.1s,mb4.9
BLA *epP* 05 50 47.7
KSU1 Kansas State U 24.18 351 *eP* **P 05 50 08.4 -2.6**
KSU1 *epP* 05 50 48.3
BLO Bloomington 24.32 10 *eP* **P 05 50 10.7 -1.5**
comp=N,38nm,0.8s,mb5.1
BLO *epP* 05 50 49.5
BLO *esP* sP 05 51 13.1 -0.4
117A Oracle 24.42 318 ⇑pP pP 05 50 50.5 -0.1
baz=24,SNR=6.6
X20A Quemado 24.45 325 ⇓P **P 05 50 14.6 +1.2**
baz=24
X20A ⇓pP 05 50 51.9
baz=24
Y19A Nutrioso 24.45 323 ⇓pP pP 05 50 52.3 +1.3
baz=24
216A Three Points, 24.52 316 ⇑pP pP 05 50 54.1 +2.3
baz=24,SNR=6.0
U23A El Rito 24.66 331 ⇑P **P 05 50 15.4 +0.1**
baz=25
U23A ⇓pP 05 50 54.2
baz=25
V22A San Miguel Ran 24.67 329 ⇑pP pP 05 50 55.2 +1.9
baz=25,SNR=9.3
SJG San Juan 24.71 80 P **P 05 50 15.1 -0.9**
comp=N,107nm,0.8s,mb5.5,baz=260,slow=2.4,SNR=5.2
Z17A San Carlos Hig 24.73 320 ⇓pP pP 05 50 54.6 +0.7
baz=25
X19A St. Johns 24.81 324 ⇑pP pP 05 50 54.8 0.0
baz=25,SNR=9.2
V21A Milan 24.95 328 ⇑pP pP 05 50 57.3 +1.1
baz=25
CBYP Canovanas 25.00 79 *eP* **P 05 50 14.5 -4.1**
comp=N,28nm,1.1s,mb4.8
U22A Llaves 25.01 330 ⇓pP pP 05 50 57.3 +0.4
baz=25
Y17A Roosevelt 25.23 320 ⇓pP pP 05 50 59.4 +0.2
baz=25
X18A Snowflake 25.26 323 ⇓pP pP 05 50 59.1 -0.4
baz=25
MTP Monte Pirata 25.28 80 *eP* **P 05 50 19.5 -1.6**
comp=N,40nm,0.9s,mb5.0
MTP *epP* pP 05 51 00.3 +0.4
HDIL Hopedale 25.35 4 *eP* **P 05 50 21.1 -0.4**
comp=N,52nm,1.0s,mb5.1
Z16A Peralta Trail, 25.36 319 ⇓pP pP 05 51 00.8 +0.2
baz=25
V20A Brimhall 25.37 327 ⇑pP pP 05 51 00.4 -0.3
baz=25,SNR=6.6
214A Organ Pipe Nat 25.41 315 ⇑pP pP 05 51 00.8 -0.3
baz=25,SNR=6.9
U21A Nageezi 25.45 329 ⇓pP pP 05 51 01.5 +0.2
baz=25
115A Sonoran Desert 25.47 317 ⇑pP pP 05 51 02.8 +1.2
baz=25,SNR=8.5
SDCO Great Sand Dun 25.53 334 *eP* **P 05 50 23.9 +0.7**
SDCO *epP* pP 05 51 04.2 +2.0
T22A Edith 25.55 331 ⇓pP pP 05 51 01.6 -0.7
baz=26,SNR=14
JSRW J. Sargeant Re 25.56 26 *eP* **P 05 50 23.3 -0.1**
JSRW *epP* pP 05 51 02.2 -0.1
X17A Forest Lakes 25.64 321 ⇑pP pP 05 51 04.1 +1.0
baz=26
Y16A Circle Bar Ran 25.74 320 ⇑pP pP 05 51 05.8 +1.8
baz=26,SNR=11
ATAH Atahualpa 25.85 148 P **P 05 50 27.6 +1.3**
comp=N,8.3nm,0.8s,mb4.4,baz=344,slow=7.5,SNR=5.8
STVI Saint Thomas 25.86 79 *eP* **P 05 50 30.5 +4.2**
comp=N,41nm,0.9s,mb5.1
X16A Lo Mia Camp, P 26.08 321 ⇓pP pP 05 51 07.9 +0.8
baz=26,SNR=18
ACSO Alum Creek Sta 26.09 15 *eP* **P 05 50 27.2 -0.9**
comp=N,23nm,0.6s,mb5.0
ACSO *epP* pP 05 51 09.5 +2.4
U19A Dine' College, 26.14 327 ⇓pP pP 05 51 08.7 +1.1
baz=26
CBN Corbin 26.20 26 *eP* **P 05 50 30.0 +0.8**
comp=N,67nm,1.3s,mb5.1
CBN *epP* pP 05 51 08.0 -0.2
Y15A Casa Rosa Ranc 26.33 319 ⇑pP pP 05 51 09.6 +0.2
baz=26,SNR=12
Z14A Wintersburg 26.35 317 ⇓pP pP 05 51 10.6 +0.9
baz=26
MVCO Mesa Verde 26.48 329 ⇓pP pP 05 51 11.7 +1.0
baz=26,SNR=7.7
MVCO Mesa Verde 26.48 329 *eP* **P 05 50 33.5 +1.8**
MVCO *epP* pP 05 51 12.2 +1.5
R22A Saguache, Gunn 26.48 333 ⇑pP pP 05 51 12.1 +1.3
baz=26
S21A Coal Bank Pass 26.49 331 ⇓pP pP 05 51 12.0 +1.2
baz=26
V17A Tonalea, Kykot 26.52 324 ⇓pP pP 05 51 11.0 -0.2
baz=26,SNR=7.2
113A Mohawk Valley, 26.54 315 ⇑pP pP 05 51 12.3 +0.9
baz=26,SNR=9.6
W16A Flagstaff 26.59 322 ⇑pP pP 05 51 13.7 +1.9
baz=26,SNR=8.3
X15A Humboldt 26.61 320 ⇑pP pP 05 51 13.2 +1.1
baz=26,SNR=12
SCIA State Center 26.64 358 *eP* **P 05 50 32.1 -0.9**
comp=N,21nm,1.1s,mb4.7
SCIA *epP* pP 05 51 15.3 +3.2
Z13A Yuma Proving G 26.72 316 ⇑pP pP 05 51 14.4 +1.3
baz=27,SNR=19
WUAZ Wupatki 26.79 323 ⇓pP pP 05 51 13.6 0.0
baz=27,SNR=7.4
PCRV Puerto La Cruz 26.93 97 P **P 05 50 36.3 +0.4**
comp=N,7.9nm,0.8s,mb4.4,baz=335,slow=8.2,SNR=3.2
X14A Yava 27.01 319 ⇑pP pP 05 51 18.0 +2.3
baz=27
W15A Williams 27.09 321 ⇑pP pP 05 51 18.3 +1.9
baz=27
T18A Mexican Hat 27.12 327 ⇓pP pP 05 51 18.9 +2.3
baz=27,SNR=5.9
R20A Redvale 27.19 330 ⇓pP pP 05 51 19.6 +2.4
baz=27,SNR=13
Y13A Salome 27.21 317 ⇑pP pP 05 51 19.3 +1.9
baz=27
S19A Harvey Farm, M 27.21 329 ⇓pP pP 05 51 18.2 +0.7
baz=27,SNR=12
PV01 Paradox Valley 27.24 330 *eP* **P 05 50 39.1 +0.6**
comp=N,2µm,1.4s
PV01 *epP* pP 05 51 15.6 -2.1
ISCO Idaho Springs 27.33 336 *eP* **P 05 50 40.0 +0.8**
comp=N,3.8nm,0.7s,mb4.1
GLA Glamis 27.43 314 ⇓pP pP 05 51 20.3 +0.8
baz=27,SNR=5.3
SDMD Soldier's Deli 27.44 26 *eP* **P 05 50 40.5 +0.3**
comp=N,23nm,1.0s,mb4.8
T17A Navajo Res., N 27.52 326 ⇓pP pP 05 51 20.4 +0.1
baz=27
PV04 Paradox Valley 27.60 330 *eP* **P 05 50 42.8 +1.1**
PV04 *epP* pP 05 51 22.2 +1.3
S18A Hurst Farm, Bl 27.61 328 ⇑pP pP 05 51 22.0 +1.1
baz=28,SNR=8.1
W14A Seligman 27.61 320 ⇑pP pP 05 51 22.4 +1.3
baz=28,SNR=8.2
JFWS Jewell Farm 27.65 2 *eP* **P 05 50 42.1 +0.2**
comp=N,14nm,0.8s,mb4.7
JFWS *epP* pP 05 51 20.9 -0.3
R19A Curley Farm, L 27.70 329 ⇑pP pP 05 51 20.9 -0.9
baz=28,SNR=7.1
PDMCI Parker Dam,Lak 27.71 317 ⇑pP pP 05 51 24.9 +2.9
baz=28
AAM Ann Arbor 27.89 13 *eP* **P 05 50 43.4 -0.8**
comp=N,4.8nm,0.4s,mb4.5
AAM *epP* pP 05 51 22.1 -1.4
AAM *esP* sP 05 51 45.0 -1.0
V14A Boquillas Ranc 27.90 321 ⇓pP pP 05 51 24.4 +0.7
baz=28
U15A North Rim 27.95 323 ⇑pP pP 05 51 25.0 +0.8
baz=28,SNR=5.4
S17A Black Ridge (B 27.99 327 ⇓pP pP 05 51 26.4 +1.9
baz=28
W13A Hualapai Mount 28.04 319 ⇑pP pP 05 51 27.1 +2.1
baz=28,SNR=5.8
SSPA Standing Stone 28.07 23 *eP* **P 05 50 45.5 -0.4**
comp=N,8.8nm,0.9s,mb4.4
SSPA *epP* pP 05 51 25.1 -0.1
R18A Canyonlands Na 28.09 329 ⇑pP pP 05 51 25.3 0.0
baz=28,SNR=5.4
MVL Millersville 28.14 26 *eP* **P 05 50 46.9 +0.4**
comp=N,16nm,0.9s,mb4.7
BC3 Big Chuckw Mtn 28.21 315 ⇑pP pP 05 51 26.1 -0.4
baz=28,SNR=6.2

Q19A Hogan Spring (28.22 330 ⇓pP pP 05 51 26.9 +0.4
baz=28
IRM Iron Mountain 28.30 316 ⇓pP pP 05 51 30.2 +3.0
baz=28
T15A Red Dirt Ranch 28.42 324 ⇑pP pP 05 51 30.1 +1.7
baz=28
U14A Mt Trumbull 28.47 322 ⇓pP pP 05 51 28.7 -0.1
baz=28
R17A Hanksville Air 28.52 328 ⇓pP pP 05 51 30.3 +1.0
baz=28,SNR=6.9
V13A Grand Canyon W 28.59 320 ⇑pP pP 05 51 32.5 +2.6
baz=28
ECSD EROS Data Cent 28.73 353 P **P 05 50 54.3 +2.7**
comp=N,20nm,1.4s,mb4.6
ECSD *epP* pP 05 51 30.9 -0.2
Q18A Rafter H Ranch 28.76 329 ⇓pP pP 05 51 31.7 +0.4
baz=29,SNR=6.7
R16A Teasdale 28.83 327 ⇓pP pP 05 51 32.5 +0.5
baz=29
S15A Panguitch 28.87 325 ⇑pP pP 05 51 34.6 +2.2
baz=29
N21A Black Mountain 28.91 335 ⇓pP pP 05 51 33.4 +0.6
baz=29
U13A Pakoon Wash 28.94 321 ⇓pP pP 05 51 34.2 +1.1
baz=29
SRU San Rafael 28.96 329 ⇓pP pP 05 51 35.1 +1.9
baz=29,SNR=6.7
V12A Nelson 29.05 319 ⇓pP pP 05 51 34.2 +0.2
baz=29,SNR=6.1
Q16A Castle Valley 29.14 328 ⇑pP pP 05 51 34.2 -0.6
baz=29,SNR=7.6
N20A Spence Gulch, 29.29 334 ⇑pP pP 05 51 36.1 0.0
baz=29
U12A Valley of Fire 29.30 320 ⇓pP pP 05 51 38.2 +1.9
baz=29
P17A Butcher Ranch, 29.34 329 ⇓pP pP 05 51 36.4 -0.2
baz=29,SNR=6.3
CCUT Cedar City 29.35 323 *eP* **P 05 51 01.2 +4.1**
comp=N,14nm,1.3s,mb4.4
CCUT *epP* pP 05 51 38.7 +2.0
S14A Cedar City 29.38 324 ⇑pP pP 05 51 37.6 +0.6
baz=29,SNR=5.9
TUQ Turquoise Moun 29.56 317 ⇑pP pP 05 51 41.0 +2.3
baz=30
O18A Roosevelt 29.61 331 ⇑pP pP 05 51 39.2 +0.2
baz=30,SNR=6.4
S13A Holt Ranch, En 29.66 323 ⇑pP pP 05 51 40.5 +1.1
baz=30,SNR=6.6
Q15A Fillmore 29.83 327 ⇓pP pP 05 51 42.5 +1.5
baz=30
L21A Rawlins 29.87 336 ⇑pP pP 05 51 42.0 +0.7
baz=30
O17A Robinson Place 29.90 330 ⇓pP pP 05 51 42.5 +0.9
baz=30,SNR=8.1
PAL Palisades 30.03 28 *eP* **P 05 51 03.1 0.0**
comp=N,21nm,1.1s,mb4.7
R13A O'Grain Ranch, 30.13 324 ⇓pP pP 05 51 46.3 +2.6
baz=30,SNR=6.7
GLMI Grayling 30.14 10 *eP* **P 05 51 03.0 -1.0**
comp=N,31nm,0.9s,mb4.9
BINY Binghamton 30.15 24 *eP* **P 05 51 03.8 -0.3**
comp=N,17nm,0.9s,mb4.7
BINY *epP* pP 05 51 43.8 +0.1
DAU Daniels Canyon 30.32 330 *eP* **P 05 51 07.5 +1.8**
DAU *epP* pP 05 51 48.6 +3.3
U10A Ash Meadows, A 30.42 319 ⇓pP pP 05 51 48.8 +2.5
baz=30
R12A Pony Springs, 30.60 323 ⇑pP pP 05 51 48.9 +1.1
baz=30,SNR=7.0
P14A Drum Mountains 30.63 327 ⇑pP pP 05 51 49.6 +1.6
baz=30
Q13A Wheeler Ranch, 30.69 325 ⇓pP pP 05 51 50.0 +1.4
baz=31,SNR=6.4
S11A Rachel 30.82 321 ⇑pP pP 05 51 51.7 +1.9
baz=31
M17A Scullys Gap (B 30.87 332 ⇓pP pP 05 51 49.7 -0.5
baz=31
COWI Conover 30.88 4 *eP* **P 05 51 09.5 -1.0**
comp=N,3.0nm,0.5s,mb4.2
COWI *epP* pP 05 51 48.9 -1.3
TCUT Toone Canyon 30.93 330 *eP* **P 05 51 16.9 +5.9**
comp=N,31nm,1.3s,mb4.8
MPMC Manual Prospec 30.96 317 ⇑pP pP 05 51 50.5 -0.6
baz=31,SNR=7.0
P13A Bates Ranch, G 31.04 325 ⇓pP pP 05 51 53.0 +1.3
baz=31
SADO Sadowa 31.35 17 P **P 05 51 13.5 -1.2**
comp=N,12nm,0.7s,mb4.7,baz=226,slow=8.1,SNR=23
SADO Sadowa 31.35 17 P **P 05 51 13.5 -1.2**
BW06 Boulder Array 31.43 334 ⇑pP pP 05 51 57.0 +1.9
baz=31
PDAR Pinedale Array 31.43 334 P **P 05 51 15.3 -0.1**
comp=N,0.2nm,0.6s,baz=98,slow=10,SNR=2.4
PDAR pP pP 05 51 56.2 +1.1
comp=N,2.1nm,1.0s,baz=152,slow=6.7,SNR=9.4
PDAR sP sP 05 52 17.0 -0.4
comp=N,3.8nm,1.1s,baz=167,slow=7.2,SNR=6.5
PDAR PcP PcP 05 54 03.6 -0.3
comp=N,0.4nm,0.5s,baz=121,slow=4.8,SNR=4.2
L17A Cokeville 31.46 332 ⇓pP pP 05 51 54.9 -0.5
baz=31,SNR=5.2
K18A Toltan Ranch, 31.52 334 ⇑pP pP 05 51 56.3 +0.3
baz=32,SNR=8.8
TRY Troy 31.53 26 *eP* **P 05 51 15.9 -0.4**
TRY *epP* pP 05 51 56.3 +0.3
Q11A Duckwater 31.55 323 ⇓pP pP 05 51 57.0 +0.7
baz=32,SNR=5.4
N14A Grayback Hills 31.61 328 ⇑pP pP 05 51 57.5 +0.7
baz=32
L16A Fish Haven 31.64 331 ⇑pP pP 05 51 56.4 -0.7
baz=32,SNR=6.8
VES Vestal, Richgr 31.91 315 ⇑pP pP 05 51 59.1 -0.3
baz=32
J18A Kendall Valley 31.99 334 ⇑pP pP 05 52 00.5 +0.5
baz=32
K17A Gardner Place, 32.00 333 ⇓pP pP 05 52 00.1 -0.1
baz=32,SNR=5.9
ACCN Adirondack Com 32.07 25 *eP* **P 05 51 20.7 -0.2**
comp=N,20nm,1.3s,mb4.5
L15A Malad City 32.09 330 ⇓pP pP 05 51 59.5 -1.4
baz=32,SNR=7.7
N13A Wendover, West 32.14 327 ⇓pP pP 05 52 02.4 +0.9
baz=32
M14A Sheep Mountain 32.17 329 ⇑pP pP 05 52 02.3 +0.6
baz=32,SNR=8.0
NCB Newcomb 32.33 24 *eP* **P 05 51 22.6 -0.7**
comp=N,12nm,0.9s,mb4.4
NCB *epP* pP 05 52 02.7 -0.4
K16A Soda Springs 32.36 332 ⇓pP pP 05 52 03.0 -0.3
baz=32
J17A Brown Place, J 32.40 334 ⇓pP pP 05 52 04.1 +0.4
baz=32,SNR=10
O11A Cowboy Ranch, 32.42 325 ⇓pP pP 05 52 04.4 +0.4
baz=32,SNR=6.2
REDW Red Top Meadow 32.46 334 *eP* **P 05 51 24.9 +0.5**
comp=N,26nm,1.0s,mb4.7
REDW *epP* pP 05 52 04.2 0.0
L14A Malta 32.52 330 ⇑pP pP 05 52 05.1 +0.3
baz=32,SNR=17
TPAW Teton Pass 32.61 334 *eP* **P 05 51 26.8 +1.2**
TPAW *epP* pP 05 52 08.0 +2.5
TPAW *esP* sP 05 52 27.4 -0.4
RRI2 Red Ridge 32.65 333 *eP* **P 05 51 28.0 +1.9**
RRI2 *epP* pP 05 52 08.3 +2.4
RRI2 *esP* sP 05 52 26.9 -1.3
LONY Lake Ozonia 32.74 23 *eP* **P 05 51 26.2 -0.6**
comp=N,45nm,1.5s,mb4.8
LONY *epP* pP 05 52 06.1 -0.6
K14A Jones Ranch, D 32.88 330 ⇑pP pP 05 52 07.6 -0.3
baz=33,SNR=6.7
NVAR Mina Array Bea 32.89 320 P **P 05 51 29.7 +1.6**
comp=N,2.5nm,0.8s,mb3.8,baz=133,slow=8.3,SNR=20
NVAR pP pP 05 52 08.6 +0.5
comp=N,6.9nm,0.7s,baz=132,slow=8.9,SNR=17
NVAR PcP PcP 05 54 07.5 -0.5
comp=N,0.3nm,0.6s,baz=156,slow=2.5,SNR=3.7
NVAR pPcP 05 54 57.7
comp=N,1.6nm,0.8s,baz=155,slow=3.0,SNR=4.9
NVAR ScP ScP 05 57 35.8 +1.9
comp=N,0.9nm,0.6s,baz=116,slow=4.1,SNR=9.4
M12A Wells 32.92 327 ⇑pP pP 05 52 08.3 +0.1
baz=33,SNR=13
AGMN Agassiz Refuge 33.17 355 *eP* **P 05 51 30.9 +0.4**
comp=N,11nm,1.1s,mb4.3
AGMN *epP* pP 05 52 09.1 -1.3
FRNY Flat Rock 33.31 24 *eP* **P 05 51 30.9 -0.8**
comp=N,14nm,1.1s,mb4.4

FRNY *e*pP pP 05 52 10.9 -0.8
M11A Holland Ranch, 33.39 326 ⇓pP pP 05 52 13.1 +0.7
baz=33
L12A House Creek Ra 33.49 328 ⇑pP pP 05 52 13.5 +0.1
baz=33
L11A Cat Creek Ranc 33.89 327 ⇑pP pP 05 52 16.6 -0.2
baz=34,SNR=5.6
J13A Cove Ranch, Pi 34.00 330 ⇑pP pP 05 52 17.2 -0.5
baz=34,SNR=5.3
I14A Mackay 34.06 332 ⇓pP pP 05 52 18.0 -0.4
baz=34,SNR=6.5
L10A Juniper Basin 34.21 326 ⇓pP pP 05 52 19.6 0.0
baz=34
HLID Hailey 34.24 330 ⇑pP pP 05 52 19.4 -0.4
baz=34,SNR=6.2
HLID Hailey 34.24 330 *e*P **P 05 51 41.3 +1.6**
comp=N,8.1nm,1.1s,mb4.2
HLID *e*pP pP 05 52 20.3 +0.5
I13A Wildhorse Cree 34.36 331 ⇑pP pP 05 52 22.0 +1.0
baz=34
G16A Moss Hill, Enn 34.37 335 ⇓pP pP 05 52 20.9 -0.1
baz=34
MCMT McKenzie Canyo 34.50 333 *e*P **P 05 51 43.8 +1.9**
comp=N,9.1nm,1.0s,mb4.3
MCMT *e*pP pP 05 52 22.7 +0.6
MCMT *e*sP sP 05 52 44.2 -0.1
H14A Leadore 34.56 332 ⇑pP pP 05 52 23.8 +1.2
baz=34
G15A Dillon 34.61 334 ⇑pP pP 05 52 23.4 +0.3
baz=35,SNR=6.7
BOZ Bozeman (W) 34.64 335 ⇑pP pP 05 52 23.1 -0.3
baz=35
BOZ Bozeman (W) 34.64 335 *e*P **P 05 51 43.9 +0.7**
comp=N,5.3nm,1.2s,mb4.0
I12A Atlanta 34.76 330 ⇓pP pP 05 52 24.2 -0.2
baz=35,SNR=8.2
DLMT Dillon 34.81 334 *e*P **P 05 51 46.6 +1.9**
comp=N,36nm,1.6s,mb4.7
DLMT *e*pP pP 05 52 25.0 +0.1
DLMT *e*pP pP 05 52 25.6 +0.7
DLMT *e*sP sP 05 52 46.5 -0.6
H13A Challis 34.92 331 ⇓pP pP 05 52 26.1 +0.3
baz=35,SNR=13
E17A Martinsdale 35.01 337 ⇓pP pP 05 52 26.9 +0.3
baz=35
BEKR Beckwourth 35.03 320 ⇑pP pP 05 52 28.8 +2.0
baz=35,SNR=7.1
ULM Lac du Bonnet 35.11 355 P **P 05 51 45.5 -1.6**
comp=N,2.3nm,0.4s,mb4.0,baz=185,slow=4.5,SNR=3.2
ULM pP pP 05 52 25.6 -1.7
comp=N,11nm,0.8s,baz=178,slow=9.5,SNR=9.8
ULM LR LR 06 08 30.0
comp=N,56nm,20.3s,baz=124,slow=40
ULM Lac du Bonnet 35.11 355 *e*P **P 05 51 48.0 +0.9**
comp=N,8.4nm,0.8s,mb4.3
ULM *e*pP pP 05 52 26.6 -0.8
F15A Butte 35.15 335 ⇑pP pP 05 52 28.0 +0.2
baz=35,SNR=11
H12A Diamond D Ranc 35.19 331 ⇑pP pP 05 52 28.0 -0.2
baz=35,SNR=9.8
I11A Placerville 35.25 329 ⇑pP pP 05 52 28.9 +0.2
baz=35,SNR=15
WVOR Wild Horse Val 35.63 325 *e*P **P 05 51 51.6 0.0**
comp=N,2.1nm,1.0s,mb3.6
WVOR *e*pP pP 05 52 32.6 +0.6
WVOR *e*sP sP 05 52 52.9 -1.3
E15A Deer Lodge 35.69 335 ⇑pP pP 05 52 32.3 -0.1
baz=36
I10A Payette 35.80 329 ⇓pP pP 05 52 33.7 +0.2
baz=36,SNR=9.6
G12A Big Creek, Yel 35.85 331 ⇓pP pP 05 52 33.2 -0.7
baz=36
H11A Donnelly 35.86 330 ⇓pP pP 05 52 33.5 -0.4
baz=36
F13A Darby 35.90 333 ⇑pP pP 05 52 33.6 -0.7
baz=36
EGMT Eagleton 35.94 339 ⇓pP pP 05 52 34.7 +0.1
baz=36,SNR=5.4
H10A Noah's Angus R 36.13 329 ⇓pP pP 05 52 35.4 -1.0
baz=36
J08A Circle Bar Ran 36.16 326 ⇑pP pP 05 52 36.3 -0.3
baz=36
I09A Lost Marbles R 36.20 328 ⇓pP pP 05 52 36.1 -0.8
baz=36,SNR=18
B18A Beardsley Farm 36.27 340 ⇓pP pP 05 52 36.3 -1.2
baz=36
F12A Elk City 36.29 332 ⇑pP pP 05 52 37.2 -0.5
baz=36,SNR=12
E13A Victor 36.35 334 ⇓pP pP 05 52 37.7 -0.5
baz=36,SNR=5.3
G11A Walters Elk Ra 36.49 331 ⇑pP pP 05 52 38.7 -0.7
baz=36,SNR=12
A18A Metzger Ranch, 36.75 340 ⇓pP pP 05 52 41.5 0.0
baz=37,SNR=8.2
C15A Salmond Ranch, 36.77 336 ⇓pP pP 05 52 41.7 -0.1
baz=37
G10A Bishop Farm, J 36.82 330 ⇓pP pP 05 52 41.2 -1.0
baz=37,SNR=6.5
B15A Bradely Ranch, 37.20 337 ⇓pP pP 05 52 46.2 +0.8
baz=37,SNR=7.9
I07A Izee 37.20 326 ⇑pP pP 05 52 44.8 -0.7
baz=37
D12A Red Ives Fores 37.33 333 ⇑pP pP 05 52 45.3 -1.2
baz=37
F10A Beach Ranch, E 37.37 330 ⇑pP pP 05 52 45.8 -1.2
baz=37,SNR=9.0
YBH Yreka Blue Hor 37.57 321 pP pP 05 52 48.8 +0.1
comp=N,1.7nm,0.8s,baz=159,slow=2.3,SNR=4.3
A15A Johnson Ranch, 37.81 337 ⇓pP pP 05 52 50.7 0.0
baz=38,SNR=5.9
B13A Whitefish 37.99 335 ⇓pP pP 05 52 51.5 -0.7
baz=38
A14A Double T Ranch 38.06 337 ⇑pP pP 05 52 52.9 0.0
baz=38
LPAZ La Paz 39.04 142 P **P 05 52 21.4 +0.8**
comp=N,9.3nm,0.8s,mb4.4,baz=326,slow=6.7,SNR=42
LPAZ La Paz 39.04 142 *e*P **P 05 52 21.2 +0.6**
comp=N,11nm,0.9s,mb4.4
LPAZ *e*PcP PcP 05 54 27.9 +1.2
SIV San Ignacio 43.36 134 P **P 05 52 54.8 -1.0**
comp=N,19nm,0.9s,mb4.5,baz=312,slow=8.6,SNR=80
SIV pP pP 05 53 36.6 -0.9
comp=N,3.7nm,0.8s,baz=322,slow=9.2,SNR=2.8
SIV PcP PcP 05 54 40.7 -0.2
comp=N,3.2nm,0.9s,baz=295,slow=7.1,SNR=3.5
SCHQ Schefferville 44.02 21 P **P 05 52 59.4 -1.2**
comp=N,1.9nm,0.5s,mb3.7,baz=208,slow=11,SNR=10
SCHQ pP pP 05 53 41.6 -0.8
comp=N,6.5nm,0.9s,baz=222,slow=6.5,SNR=4.3
SCHQ LR LR 06 11 53.7
comp=N,64nm,19.3s,baz=42,slow=36
YKA Yellowknife Ar 49.91 346 P **P 05 53 45.5 -0.5**
comp=N,2.9nm,0.6s,mb3.8,baz=150,slow=7.6,SNR=76
YKA pP pP 05 54 28.0 -0.8
comp=N,4.8nm,0.7s,baz=144,slow=8.0,SNR=13
YKA Yellowknife Ar 49.91 346 P **P 05 53 45.5 -0.5**
YKA pP pP 05 54 28.1 -0.8
CPUP Villa Florida 53.16 141 P **P 05 54 09.0 -1.6**
comp=N,10nm,0.8s,mb4.3,baz=305,slow=7.0,SNR=20
CPUP Villa Florida 53.16 141 *e*P **P 05 54 09.1 -1.6**
comp=N,98nm,1.6s,mb5.0
INK Inuvik 59.35 343 *e*P **P 05 54 53.4 -0.4**
comp=N,12nm,1.0s,mb4.5
INK *e*pP pP 05 55 36.0 -2.0
TRQA Tornquist 59.91 153 *e*P **P 05 54 58.3 +0.3**
comp=N,22nm,1.5s,mb4.6
ESDC Sonseca Array 78.80 52 P **P 05 56 52.3 -1.6**
comp=N,1.3nm,0.8s,mb3.6,baz=284,slow=6.3,SNR=7.3
ESDC pP pP 05 57 38.7 -2.0
comp=N,2.2nm,0.7s,baz=289,slow=5.8,SNR=8.5
ESDC sP sP 05 57 59.3 -1.8
comp=N,1.9nm,0.8s,baz=300,slow=5.5,SNR=3.9
ESDC Sonseca Array 78.80 52 P **P 05 56 52.3 -1.6**
ESDC pP pP 05 57 38.7 -2.0
ESDC sP sP 05 57 59.3 -1.8
GRR Gorron 79.40 43 *e*P pP 05 57 41.6 -2.2
comp=N,33nm,1.1s
FLN La Foliniere 79.57 42 *e*P pP 05 57 44.0 -0.7
LDF La Druitiere 79.84 42 *e*P pP 05 57 46.0 -0.2
BILL Bilibino 80.43 338 *e*P **P 05 57 02.4 +0.2**
comp=N,18nm,1.4s,mb4.5
BILL *e*pP pP 05 57 47.8 -1.3
BILL *e*sP sP 05 58 08.2 -1.3
BGF Bois d'Agland 82.24 44 *e*P pP 05 57 58.4 -0.8
comp=N,27nm,1.1s
SSF Saint Saulge 82.56 43 *e*P pP 05 57 59.8 -1.0
comp=N,9.0nm,0.9s

LOR Lormes 82.74 43 *e*P pP 05 58 01.2 -0.6
comp=N,17nm,1.1s
SMF Signal de Mont 82.89 44 *e*P pP 05 58 00.7 -1.9
NB2 NORSAR Subarra 82.99 29 P pP 05 58 00.8 -2.0
comp=Z,4.9nm,1.1s,baz=287,slow=5.3
NOA NORSAR Array B 82.99 29 P **P 05 57 15.1 -0.5**
comp=Z,0.8nm,0.8s,baz=112,slow=20,SNR=3.4
NOA pP pP 05 58 01.5 -1.3
comp=Z,1.5nm,0.8s,baz=289,slow=5.1,SNR=4.9
NOA sP sP 05 58 21.5 -1.7
comp=Z,1.8nm,0.9s,baz=292,slow=5.2,SNR=3.9
WLF Walferdange 83.59 40 P **P 05 57 18.4 -0.6**
comp=Z,16nm,2.2s,mb4.4
ARCES ARCESS Array B 84.93 18 P **P 05 57 23.9 -1.4**
comp=Z,5.9nm,1.1s,mb4.2,baz=305,slow=4.3,SNR=7.2
GRF Grafenberg Arr 86.72 39 *e*P pP 05 58 20.3 -1.7
comp=Z,11nm,1.2s
GRF *e*pP sP 05 58 39.7 -2.6
CLL Collm 87.23 37 *e*pP pP 05 58 23.0 -1.5
comp=Z,5.0nm,0.9s
CLL *e*sP sP 05 58 42.0 -2.8
GERES GERESS Array B 88.54 40 P **P 05 57 41.4 -1.7**
comp=Z,0.2nm,0.7s,baz=321,slow=7.6,SNR=3.0
GERES pP pP 05 58 28.0 -2.9
comp=Z,1.5nm,1.0s,baz=298,slow=2.9,SNR=6.0
GERES sP sP 05 58 49.2 -2.0
comp=Z,1.9nm,1.1s,baz=270,slow=2.5,SNR=4.1
FINES FINESS Array B 89.32 25 P **P 05 57 44.5 -2.0**
comp=Z,1.1nm,0.7s,mb3.8,baz=197,slow=8.7,SNR=3.5
FINES pP pP 05 58 32.9 -1.5
comp=Z,3.1nm,0.8s,baz=316,slow=5.3,SNR=2.9
FINES sP sP 05 58 52.8 -1.8
comp=Z,4.3nm,0.9s,baz=289,slow=5.8,SNR=4.7
TORD Torodi Ar. Bea 89.88 76 pP pP 05 58 34.6 -3.3
comp=Z,1.1nm,0.9s,baz=294,slow=5.3,SNR=3.9
CN2 Changchun 112.14 332 *e*Pdif Pdif 05 59 26.8 -2.5
CN2 PP PP 06 04 12.8 +1.3
CN2 *e*S Sdif 06 11 25.1 -9.0
CN2 AMB AMB
comp=Z,200nm,4.0s
BJI Beijing 119.19 336 PKP PKPdf 06 03 38.6 -0.1
BJI SS SS 06 21 06.3 +0.4
BJI LR LR
comp=N,63nm,14.9s
BJI LR LR
comp=E,52nm,14.9s
BJI LR LR
comp=Z,24nm,20.6s
HHC Hu-ho-hao-te 120.18 340 *e*PKP PKPdf 06 03 39.3 -1.3
HHC PKS 06 07 14.5
HHC SKS SKSdf 06 10 27.5 -6.9
HHC SKKS SKKSac 06 11 47.8 -0.9
HHC AMB AMB
comp=Z,62nm,6.2s
HHC LR LR
comp=N,95nm,20.6s
HHC LR LR
comp=E,280nm,21.1s
HHC LR LR
comp=Z,84nm,19.6s
WMQ Urumqi 121.26 0 *e*PKP PKPdf 06 03 42.0 -0.6
NJ2 Nanjing 124.60 328 *e*PKP PKPdf 06 03 52.0 +2.7
MAW Mawson 125.10 168 PKP PKPdf 06 03 49.3 +0.2
comp=Z,2.0nm,0.5s,baz=170,slow=3.6,SNR=11
CD2 Chengdu 131.78 342 PKP PKPdf 06 04 02.0 -1.0
CD2 sPKP 06 05 12.0
CD2 PP PP 06 06 27.1 +3.0
CD2 PKS 06 07 37.3
CD2 SKS SKSdf 06 10 49.6 -6.8
CD2 SKKS SKKSac 06 12 54.3 -8.1
CD2 SS SS 06 23 39.3 -3.7
CD2 AMB AMB
comp=Z,230nm,6.8s
GYA Guiyang 134.87 336 Pdif Pdif 06 01 08.9 -1.5
GYA PKP PKPdf 06 04 07.6 -1.4
GYA sPKP 06 05 19.0
GYA PP PP 06 06 47.4 +3.5
GYA AMB AMB
comp=Z,120nm,7.8s
ASAR Alice Springs 136.26 252 PKP PKPdf 06 04 13.0 +1.5
comp=Z,0.5nm,0.7s,baz=81,slow=1.8,SNR=4.4
KMI Kunming 137.49 340 PKP PKPdf 06 04 13.5 -0.4
FITZ Fitzroy Crossi 144.08 260 PKP PKPdf 06 04 25.9 +0.1
comp=Z,1.2nm,0.4s,baz=46,slow=6.3,SNR=6.2
CMAR Chiang Mai Arr 144.93 342 PKP PKPdf 06 04 25.7 -1.6
comp=Z,1.5nm,0.3s,baz=334,slow=3.6,SNR=18

ISCJB ***25*** *05:46:11.6±0.6, 36°.99N±0°.03×29°.18E±0°.05, h5km±10km, Error ellipse: s-maj=7.6km s-min=4.9km az=21.3*
CSEM ***25*** *05:46:11.8±0.2, 37°.00N×29°.20E, h8km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.6km az=103.0*
ISK ***25*** *05:46:11.2, 36°.98N×29°.21E, h8km, MD3.0*
DDA ***25*** *05:46:12.3, 37°.07N×29°.23E, h19km, Md2.8*
ISC 25 05:46:12.1±0.5, 36°.98N±0°.03×29°.19E±0°.06, h9km±8km, n24, σ0°.68/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**55**	*e*PG	**Pg**	**Pg**	**05 46 17.7**	**-0.3**
GLHS				*e*SG	**Sg**	**Sg**	**05 46 22.2**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.30**	**55**	*e*Pg	**Pg**	**Pg**	**05 46 17.7**	**-0.3**
GLHS				*e*Sg	**Sg**	**Sg**	**05 46 22.3**	**+0.2**
FETY	**Fethiye**	**0.36**	**194**	*e*PG	**Pg**	**Pg**	**05 46 18.7**	**-0.4**
FETY				*e*SG	**Sg**	**Sg**	**05 46 24.2**	**+0.4**
FETY	**Fethiye**	**0.36**	**194**	*e*Pg	**Pg**	**Pg**	**05 46 18.7**	**-0.4**
FETY				*e*Sg	**Sg**	**Sg**	**05 46 24.2**	**+0.4**
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**Pg**	**05 46 18.9**	**-0.8**
GOLH				*i* S	**Sg**	**Sg**	**05 46 26.1**	**+1.2**
GOLH	**Golhisar**	**0.39**	**50**	*i* P	**Pg**	**Pg**	**05 46 18.9**	**-0.8**
GOLH				*i* S	**Sg**	**Sg**	**05 46 26.0**	**+1.1**
ELL	**Elmali**	**0.62**	**112**	*e*PG	**Pg**	**Pg**	**05 46 23.2**	**-0.9**
ELL	**Elmali**	**0.62**	**112**	*e*Pg	**Pg**	**Pg**	**05 46 23.2**	**-0.9**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**Pg**	**05 46 24.4**	**-1.4**
DNZL				*i* S	**Sg**	**Sg**	**05 46 36.2**	**+1.1**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P	**Pg**	**Pg**	**05 46 24.4**	**-1.4**
DNZL				*i* S	**Sg**	**Sg**	**05 46 36.2**	**+1.1**
YER	**Yerkesik**	**0.74**	**282**	*e*PG	**Pg**	**Pg**	**05 46 26.2**	**-0.1**
YER	**Yerkesik**	**0.74**	**282**	*e*Pg	**Pg**	**Pg**	**05 46 26.3**	**0.0**
DENT	**Denizli**	**0.78**	**351**	*e*PG	**Pg**	**Pg**	**05 46 26.9**	**-0.2**
DENT	**Denizli**	**0.78**	**351**	*e*Pg	**Pg**	**Pg**	**05 46 26.9**	**-0.2**
AKAS	**Kas**	**0.82**	**156**	*i* P	**Pg**	**Pg**	**05 46 28.7**	**+0.8**
AKAS				*i* S	**Sg**	**Sg**	**05 46 43.7**	**+5.2**
AKAS	**Kas**	**0.82**	**156**	*i* P	**Pg**	**Pg**	**05 46 28.7**	**+0.9**
MLSB	**Milas**	**1.17**	**286**	*e*PN	**Pn**	**Pn**	**05 46 34.4**	**-0.2**
MLSB	**Milas**	**1.17**	**286**	*e*Pn	**Pn**	**Pn**	**05 46 34.4**	**-0.2**
DAT	**Datca**	**1.32**	**259**	*e*PN	**Pn**	**Pn**	**05 46 37.2**	**+0.6**
DAT	**Datca**	**1.32**	**259**	*e*Pn	**Pn**	**Pn**	**05 46 37.2**	**+0.6**
KHL	**Karahalli**	**1.36**	**11**	*e*PN	**Pn**	**Pn**	**05 46 37.3**	**+0.1**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn	**Pn**	**Pn**	**05 46 37.3**	**0.0**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN	**Pn**	**Pn**	**05 46 40.2**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn	**Pn**	**Pn**	**05 46 40.2**	**-0.1**

IDC ***25*** *05:48:42.6±1.3, 31°.55N×104°.14E, h0km, mb3.3/6, mb1 3.4/7, mb1mx3.3/27, mbtmp3.3/7, ML3.6/1, Error ellipse: s-maj=42.2km s-min=22.7km az=52.0*
ISCJB ***25*** *05:48:45.0±0.6, 31°.48N±0°.05×104°.08E±0°.08, h33km, mb3.2/5, Error ellipse: s-maj=9.4km s-min=6.3km az=13.6*
NEIC ***25*** *05:48:44.7±1.0, 31°.59N×104°.02E, h10km, Error ellipse: s-maj=28.1km s-min=12.7km az=43.0*
BJI ***25*** *05:48:45.8, 31°.44N×104°.06E, h14km, ML3.3/10*
ISC 25 05:48:44.4±1.0, 31°.50N±0°.03×104°.09E±0°.09, h13km±8km, n13, σ0°.72/19, mb3.2/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.65**	**206**	Pg	**Pg**	**Pg**	**05 48 56.0**	**-1.0**
CD2				Sg	**Sg**	**Sg**	**05 49 05.9**	**+0.3**
CD2				smax				
comp=N,1μm,0.7s
LZH Lanzhou 4.58 358 *e*Pg **Pg** **05 50 12.3 +0.1**
LZH Sg **Sg** **05 51 12.0 +0.4**
LZH smax
comp=N,39nm,0.5s
LZH smax
comp=E,52nm,0.6s
XAN Xi'an 4.80 57 Pn **Pn** **05 49 56.4 +0.1**
XAN Pg **Pg** **05 50 06.9 -9.4**
XAN Sn **Sn** **05 50 51.3 -0.5**
XAN Sg **Sg** **05 51 11.5 -7.0**
XAN smax
comp=N,84nm,0.8s
XAN smax
comp=E,47nm,0.7s
ENH Enshi 4.80 103 *e*Pn **Pn** **05 49 59.3 +3.0**
GYA Guiyang 5.50 155 Pn **Pn** **05 50 10.8 +4.8**
GYA Sn **Sn** **05 51 09.1 -0.1**
GYA smax
comp=N,30nm,0.7s
GYA smax
comp=E,50nm,0.7s
SONM Songino Array 16.41 6 Pn **Pn** **05 52 33.2 -1.1**
comp=E,0.2nm,0.3s,baz=199,slow=7.2,SNR=3.7
KSRS Korea Array 20.51 67 P **P** **05 53 21.8 -0.4**
comp=E,1.1nm,0.6s,baz=262,slow=9.8,SNR=4.8
MKAR Makanchi Array 22.68 319 P **P** **05 53 45.9 +0.6**
comp=E,0.2nm,0.4s,mb2.9,baz=109,slow=13,SNR=2.2
ZALV Zalesovo Beam 26.36 334 P **P** **05 54 19.8 -0.2**
comp=E,0.5nm,0.3s,mb3.5,baz=144,slow=2.7,SNR=3.4
KURK Kurchatov 26.93 323 P **P** **05 54 25.4 +0.3**
comp=E,0.6nm,0.8s,mb3.2,baz=128,slow=9.4,SNR=5.4
ASAR Alice Springs 61.83 149 P **P** **05 59 03.7 +0.5**
comp=E,0.2nm,0.4s,mb3.6,baz=341,slow=6.4,SNR=4.5
ASAR Alice Springs 61.83 149 P **P** **05 59 03.7 +0.5**
YKA Yellowknife Ar 81.32 17 P **P** **06 00 59.9 -0.2**
comp=E,0.1nm,0.6s,mb2.9,baz=324,slow=4.7,SNR=3.0

ISCJB ***25*** *05:55:57.9±1.8, 23°.34S±0°.09×179°.6W±0°.1, h489km±27km, mb3.9/11, Error ellipse: s-maj=19.9km s-min=12.9km az=20.3*
NEIC ***25*** *05:55:59.4±1.2, 23°.28S×179°.54W, h504km±15km, mb4.3/4, Error ellipse: s-maj=19.3km s-min=11.9km az=144.0*
IDC ***25*** *05:56:00.4±2.5, 23°.14S×179°.64W, h507km±27km, mb3.4/8, mb1 3.5/9, mb1mx3.3/17, mbtmp3.4/9, Error ellipse: s-maj=27.2km s-min=17.7km az=143.0*
ISC 25 05:55:58.6±1.5, 23°.3S±0°.1×179°.7W±0°.1, h480km±24km, n24, σ0°.89/17, mb3.9/11, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.91**	**40**	P	**P**	**P**	**05 58 36.7**	**+0.3**
1.0nm,0.3s,baz=54,slow=22,SNR=2.2
URZ Urewera 15.22 190 P **P** **05 59 10.0 -1.3**
1.9nm,0.3s,baz=323,slow=2.8,SNR=13
URZ S **S** **06 01 43.9 -6.4**
0.4nm,0.3s,baz=198,slow=20,SNR=5.0
RPZ Rata Peaks 21.81 198 P **P** **06 00 15.9 +1.4**
9.5nm,0.5s,mb4.6,baz=52,slow=1.6,SNR=8.4
EIDS Eidsvold 26.74 259 *e*P **P** **06 00 59.1 +0.4**
3.0nm,0.6s,mb3.9
CTA Charters Tower 31.80 269 P **P** **06 01 43.7 +0.9**
9.2nm,0.4s,mb4.6,baz=97,slow=11,SNR=20
CTAO Charters Tower 31.80 269 *e*P **P** **06 01 43.3 +0.5**
6.7nm,0.4s,mb4.4
STKA Stephens Creek 35.27 247 P **P** **06 02 12.2 +0.1**
1.2nm,0.5s,mb3.5,baz=106,slow=4.2,SNR=3.9
COEN Coen 36.34 278 *e*P **P** **06 02 22.0 +0.9**
8.0nm,0.6s,mb4.3
ASAR Alice Springs 42.46 260 P **P** **06 03 10.1 -0.6**
1.8nm,0.4s,mb3.9,baz=98,slow=7.1,SNR=38
ASAR PcP PcP 06 04 51.1 -1.7
0.4nm,0.6s,baz=104,slow=4.6,SNR=3.0
ASAR S **S** **06 08 50.4 -6.8**
0.3nm,0.7s,baz=101,slow=15,SNR=4.7
WRAB Tennant Creek 42.77 265 *e*P **P** **06 03 11.9 -1.1**
2.7nm,0.4s,mb4.0
FITZ Fitzroy Crossi 51.20 265 P **P** **06 04 16.9 -0.1**
2.3nm,0.6s,mb3.7,baz=105,slow=6.6,SNR=8.0
FITZ Fitzroy Crossi 51.20 265 P **P** **06 04 16.9 -0.1**
PETK Petropavlovsk- 78.54 346 P **P** **06 07 07.3 -1.8**
1.4nm,0.7s,mb3.6,baz=134,slow=4.2,SNR=4.1
CMAR Chiang Mai Arr 89.60 290 P **P** **06 08 05.2 +0.4**
0.3nm,0.3s,mb3.6,baz=140,slow=3.4,SNR=4.1
TXAR Lajitas Array 89.81 58 P **P** **06 08 06.1 +0.6**
0.2nm,0.6s,mb3.1,baz=196,slow=8.4,SNR=3.2
MKAR Makanchi Array 111.95 313 PKiKP PKiKP 06 13 36.3 -2.1
0.3nm,0.7s,baz=223,slow=1.8,SNR=3.4
BVAR Borovoye Array 120.16 319 PKP PKPdf 06 13 52.0 -2.0
0.5nm,0.4s,baz=134,slow=4.2,SNR=3.8
ARCES ARCESS Array B 131.31 349 PKP PKPdf 06 14 12.8 -2.1
2.0nm,0.8s,baz=17,slow=8.9,SNR=6.4
FINES FINESS Array B 137.93 342 PKhKP 06 14 15.0
1.1nm,0.8s,baz=42,slow=2.3,SNR=2.6
FINES PKP PKPdf 06 14 26.3 -1.1
0.9nm,0.7s,baz=116,slow=8.7,SNR=4.7
AKASG Malin Array Be 144.59 328 PKP PKPdf 06 14 37.9 -1.7
1.6nm,0.4s,baz=42,slow=4.1,SNR=4.1
BRTR Keskin Array B 147.44 308 PKPbc PKPbc 06 14 46.4 -1.6
0.5nm,0.4s,baz=140,slow=4.7,SNR=4.2
BRTR PKPab PKPab 06 14 51.2 -0.4
1.5nm,0.7s,baz=98,slow=3.5,SNR=8.2
MMAI Mount Meron Ar 147.72 295 PKPbc PKPbc 06 14 48.6 -0.4
3.7nm,0.5s,baz=68,slow=5.7,SNR=5.1
CLL Collm 150.32 344 ⇓PKPbc PKPbc 06 14 53.7 -1.0
comp=Z,4.0nm,0.7s
GERES GERESS Array B 152.35 341 PKPbc PKPbc 06 14 57.0 -2.4
comp=Z,0.2nm,0.7s,baz=4.4,slow=1.7,SNR=3.7

IDC 25 06:04:40.2±3.4, 2°.09N×127°.89E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.5/19, mbtmp3.9/4, Error ellipse: s-maj=388.3km s-min=21.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.26**	**167**	P	P	P	**06 10 17.4**	**+0.2**
0.3nm,0.3s,baz=344,slow=11,SNR=9.4
STKA Stephens Creek 36.20 160 P P 06 11 44.6 -0.1
1.4nm,0.7s,baz=321,slow=13,SNR=3.6
MKAR Makanchi Array 59.55 325 P P 06 14 45.7 +0.1
0.8nm,0.4s,baz=114,slow=8.1,SNR=16
KURK Kurchatov 63.74 328 P P 06 15 13.7 -0.1
0.8nm,0.4s,baz=130,slow=5.8,SNR=6.4

GUC 25 06:11:47.0±0.8, 31°.79S×72°.12W, h25km±6km, MD4.0, ML3.5, 2C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.95**	**142**	⇑*i*P	Pn	Pn	06 12 04.5	-0.2
PACH				*e*S	Sb	Sb	06 12 17.5	+0.5
OVCH	**Ovalle**	**1.42**	**34**	⇓*i*P	Pn	Pn	06 12 11.6	+0.5
OVCH				*e*S	Sn	Sn	06 12 29.4	+0.5
OVCH				AML	AML	AML	06 12 41.0	
comp=N,974nm,0.5s
PEL Peldehue 1.82 138 ⇓*i*P Pn 06 12 17.6 +0.9
PEL *i* S Sn 06 12 41.2 +2.3
PEL AML AML 06 12 50.5
comp=E,1μm,0.6s
TLL Tololo Astrono 1.97 35 *e*P Pn 06 12 20.9 +2.2
TLL *i* S Sn 06 12 46.5 +3.8
TLL AML AML 06 12 56.9
comp=N,602nm,0.6s
CLCH Cerro Calan 2.09 141 AML AML 06 12 58.0
comp=N,857nm,0.7s
ANTU Antumapu 2.18 145 *e*P Pn 06 12 23.1 +1.5
ANTU AML AML 06 13 03.4
comp=N,393nm,0.5s
FCH Farellones 2.18 135 ⇓*i*P Pn 06 12 23.3 +1.6
FCH AML AML 06 12 53.4
comp=E,282nm,0.8s
CHCH Chadas Angostu 2.47 150 *e*P Pn 06 12 26.8 +1.1
LMEL Las Melosas 2.62 142 ⇑*i*P Pn 06 12 29.3 +1.6
LMEL AML AML 06 13 18.1
comp=E,197nm,0.5s
CACH El Canelo 2.66 152 *e*P Pn 06 12 30.4 +2.2

ISCJB ***25*** *06:14:36.0±0.8, 8°.02S±0°.07×120°.1E±0°.1, h206km±8km, mb4.2/13, Error ellipse: s-maj=25.3km s-min=6.9km az=160.5*
NEIC ***25*** *06:14:36.9±0.9, 8°.01S×119°.98E, h198km±9km, mb4.6/1, Error ellipse: s-maj=22.0km s-min=8.0km az=75.0*
IDC ***25*** *06:14:37.8±1.1, 7°.95S×120°.13E, h207km±10km, mb3.8/10, mb1 3.8/12, mb1mx3.6/22, mbtmp3.8/12, Error ellipse: s-maj=25.9km s-min=8.2km az=63.0*
ISC 25 06:14:37.0±0.8, 8°.03S±0°.07×120°.0E±0°.1, h197km±8km, n32, σ0°.83/29, mb4.2/13, 1D, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.01**	**355**	P	**Pn**	**Pn**	**06 15 26.7**	**+0.1**
35nm,0.3s,baz=190,slow=7.8,SNR=114

KAPI S **Sn** **06 16 05.9 +0.4**
baz=88,slow=20,SNR=1.9
KAPI Kappang 3.01 355 P **Pn** **06 15 26.7 +0.1**
KAPI S **Sn** **06 16 05.9 +0.4**
FITZ Fitzroy Crossi 11.41 152 *e*P **Pn** **06 17 13.8 -0.6**
9.8nm,0.6s
FITZ *e*S **Sn** **06 19 15.6 -6.0**
FITZ Fitzroy Crossi 11.41 152 P **Pn** **06 17 13.9 -0.5**
0.4nm,0.3s,baz=346,slow=8.0,SNR=14
FITZ S **Sn** **06 19 16.2 -5.5**
1.3nm,0.3s,baz=219,slow=21,SNR=7.1
KNA Kununurra 11.49 133 ǁ *i*P **Pn** **06 17 14.6 -0.9**
4.4nm,0.2s
KNA *e*S **Sn** **06 19 13.5 -10**
MBWA Marble Bar 13.06 181 *e*Pn **Pn** **06 17 33.8 -1.5**
17nm,0.7s
ASAR Alice Springs 20.47 141 P **P** **06 19 00.5 +0.9**
3.2nm,0.5s,baz=318,slow=10,SNR=54
ASAR S **S** **06 22 36.4 -1.3**
3.1nm,0.6s,baz=326,slow=23,SNR=14
ASAR PcP PcP 06 23 02.8 -0.4
1.4nm,0.4s,baz=324,slow=1.4,SNR=7.6
ASAR ScP ScP 06 26 18.8 -2.3
1.4nm,0.7s,baz=339,slow=2.6,SNR=6.6
KLBR Kellerberrin 23.54 185 *e*P **P** **06 19 29.5 +0.1**
16nm,0.9s,mb4.7
FORT Forrest 23.85 163 *e*P **P** **06 19 33.0 +0.7**
42nm,0.7s,mb5.2
NWAO Narrogin (SRO) 24.91 186 P **P** **06 19 42.1 +0.3**
13nm,0.8s,mb4.6,baz=348,slow=7.6,SNR=7.0
BBOO Buckleboo 28.80 151 *e*P **P** **06 20 17.3 +0.7**
8.6nm,0.8s,mb4.4
STKA Stephens Creek 31.08 143 *e*P **P** **06 20 38.5 +1.8**
3.7nm,0.8s,mb4.1
STKA Stephens Creek 31.08 143 P **P** **06 20 38.1 +1.4**
5.1nm,0.8s,mb4.2,baz=312,slow=9.2,SNR=9.4
STKA ScP ScP 06 26 50.4 -1.3
0.5nm,0.4s,baz=323,slow=10,SNR=3.1
CMAR Chiang Mai Arr 33.54 322 P **P** **06 20 59.4 +1.1**
0.8nm,0.3s,mb3.7,baz=150,slow=6.3,SNR=5.8
SONM Songino Array 56.91 349 P **P** **06 24 02.1 +0.8**
0.7nm,0.5s,mb3.5,baz=157,slow=8.0,SNR=4.0
CASY Casey 58.53 184 P **P** **06 24 13.3 +1.0**
26nm,0.5s,mb5.1
CASY *e*pP pP 06 24 49.7 -7.6
KSH Kashi 62.44 323 P **P** **06 24 38.6 -0.6**
KSH pmax pmax
comp=Z,32nm,3.4s
MKAR Makanchi Array 64.07 332 P **P** **06 24 49.3 -0.4**
comp=Z,2.8nm,0.5s,mb4.1,baz=149,slow=7.2,SNR=38
ZAA0 Zalesovo Array 68.50 339 *e*P **P** **06 25 16.7 -1.1**
ZALV Zalesovo Beam 68.50 339 P **P** **06 25 16.6 -1.2**
comp=Z,1.7nm,0.3s,mb4.1,baz=142,slow=5.1,SNR=14
PETK Petropavlovsk- 68.79 23 P **P** **06 25 19.2 -0.3**
comp=Z,1.3nm,0.7s,mb3.7,baz=182,slow=0.6,SNR=4.6
BVAR Borovoye Array 73.93 331 P **P** **06 25 49.7 -0.6**
comp=Z,0.3nm,0.3s,mb3.4,baz=200,slow=31,SNR=4.1
BOSA Boshof 90.36 241 P **P** **06 27 16.4 +0.2**
comp=Z,1.8nm,0.7s,mb4.0,baz=64,slow=5.2,SNR=3.8
YKA Yellowknife Ar 112.90 24 PKiKP PKiKP 06 32 47.8 -2.2
comp=Z,0.3nm,0.6s,baz=305,slow=1.9,SNR=8.1
YKA Yellowknife Ar 112.90 24 PKPdf PKiKP 06 32 47.8 -2.2
TORD Torodi Ar. Bea 119.28 281 PKP PKPdf 06 33 02.4 -1.2
comp=Z,1.3nm,0.6s,baz=71,slow=1.7,SNR=12
TORD Torodi Ar. Bea 119.28 281 PKP PKPdf 06 33 02.4 -1.2
NVAR Mina Array Bea 119.63 50 PKP PKPdf 06 33 03.5 -0.2
comp=Z,0.3nm,0.5s,baz=302,slow=2.2,SNR=4.4
TXAR Lajitas Array 133.86 57 PKP PKPdf 06 33 31.9 +0.8
comp=Z,0.3nm,0.9s,baz=204,slow=2.7,SNR=3.5
TKL Tuckaleechee C 144.93 35 *e*PKPbc PKPdf 06 33 49.8 -1.3
CPUP Villa Florida 145.75 184 PKPbc PKPbc 06 33 54.1 +0.6
comp=Z,1.6nm,0.6s,baz=144,slow=3.5,SNR=6.2
LPAZ La Paz 154.53 162 PKPab PKPab 06 34 31.8 +1.5
comp=Z,1.2nm,0.7s,baz=203,slow=12,SNR=4.8

GUC 25 06:31:56.7±0.6, 33°.22S×68°.17W, h20km, MD3.5, ML3.1, 1D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**1.78**	**266**	ǁ *i*P	Pn	06 32 27.3	+1.0
FCH				AML	AML	06 32 49.4	
comp=E,218nm,0.3s							
SJCH	**San Jose de Ma**	**1.88**	**257**	*e*P	Pn	06 32 28.6	+1.0
SJCH				*e*S	Sn	06 32 52.0	+1.3
SJCH				AML	AML	06 32 54.0	
comp=E,259nm,0.2s							
ANTU	**Antumapu**	**2.09**	**260**	*i*P	Pn	06 32 31.8	+1.2
ANTU				*i*S	Sn	06 32 58.8	+2.8
ANTU				AML	AML	06 32 59.5	
comp=N,316nm,0.5s							
PEL	**Peldehue**	**2.11**	**271**	*e*P	Pn	06 32 31.9	+1.0
PEL				*e*S	Sn	06 32 59.3	+2.8
PEL				AML	AML	06 33 00.4	
comp=N,156nm,0.4s							
CHCH	**Chadas Angostu**	**2.19**	**250**	*e*P	Pn	06 32 33.5	+1.5
CHCH				*e*S	Sn	06 33 01.2	+2.7

*ISCJB **25** 06:40:26.4±0.5, 32°.16N±0°.04×105°.08E±0°.05, h10km, mb3.6/8, Error ellipse: s-maj=6.6km s-min=5.7km az=146.0*
*IDC **25** 06:40:26.1±1.1, 32°.21N×104°.97E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, Error ellipse: s-maj=44.0km s-min=20.8km az=48.0*
*NEIC **25** 06:40:27.4±0.8, 32°.07N×104°.85E, h10km, Error ellipse: s-maj=27.6km s-min=11.5km az=45.0*
*BJI **25** 06:40:28.4, 32°.25N×104°.95E, h10km, ML3.4/10, Ms7 3.3/2*
ISC 25 06:40:27.8±0.5, 32°.25N±0°.04×105°.05E±0°.04, h10km, n15, σ1°.23/25, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.73**	**220**	Pn	**Pn**	**06 40 58.8**	**+0.8**
CD2				Pg	**Pg**	**06 41 00.5**	**-0.5**
CD2				Sg	**Sg**	**06 41 22.5**	**-1.0**
CD2				smax			
comp=N,980nm,0.8s							
XAN	**Xi'an**	**3.71**	**60**	Pn	**Pn**	**06 41 26.5**	**+1.4**
XAN				Pg	**Pg**	**06 41 35.5**	**-3.3**
XAN				Sn	**Sn**	**06 42 13.0**	**+4.2**
XAN				Sg	**Sg**	**06 42 25.5**	**-1.3**
XAN				smax			
comp=N,130nm,0.5s							
XAN				smax			
comp=E,65nm,0.5s							
LZH	**Lanzhou**	**3.95**	**346**	*e*Pn	**Pn**	**06 41 30.8**	**+2.3**
LZH				Pg	**Pg**	**06 41 40.8**	**-2.7**
LZH				Sn	**Sn**	**06 42 20.5**	**+5.6**
LZH				Sg	**Sg**	**06 42 28.3**	**-6.4**
LZH				smax			
comp=N,300nm,0.6s							
LZH				smax			
comp=E,200nm,0.5s							
LZH				LR	LR		
comp=Z,600nm,7.4s							
ENH	**Enshi**	**4.28**	**116**	*e*Pn	**Pn**	**06 41 33.8**	**+0.8**
ENH				*e*Sg	**Sg**	**06 42 45.5**	**+0.1**
GTA	**Gaotai**	**8.31**	**331**	*e*P	**Pb**	**06 42 47.5**	**-4.2**
GTA				pP		06 42 51.3	
GTA				sP		06 42 53.5	
GTA				S	**Sb**	**06 44 21.8**	**-8.8**
GTA				sS		06 44 25.8	
GTA				pmax	pmax		
comp=Z,2.0nm,1.3s							
GTA				pmax	pmax		
comp=Z,62nm,4.8s							
GTA				LR	LR		
comp=N,100nm,11.0s							
GTA				LR	LR		
comp=E,96nm,10.4s							
GTA				LR	LR		
comp=Z,130nm,10.4s							
SONM	**Songino Array**	**15.60**	**3**	Pn	**Pn**	**06 44 10.7**	**+3.1**
comp=Z,0.2nm,0.3s,baz=186,slow=18,SNR=2.9							
KSRS	**Korea Array**	**19.46**	**68**	P	**Pn**	**06 44 55.7**	**-0.1**
baz=263,slow=11,SNR=3.6							
MKAR	**Makanchi Array**	**22.67**	**316**	P	**P**	**06 45 30.2**	**+1.1**
comp=Z,0.3nm,0.3s,mb3.1,baz=111,slow=11,SNR=6.2							
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**06 46 02.4**	**+1.3**
comp=Z,0.5nm,0.3s,mb3.5,baz=147,slow=8.6,SNR=3.1							
KURK	**Kurchatov**	**26.83**	**321**	P	**P**	**06 46 08.1**	**-0.1**
comp=Z,0.3nm,0.4s,mb3.2,baz=116,slow=8.8,SNR=3.6							

ARCES ARCESS Array B 56.55 336 P **P** **06 50 09.8 -0.1**
comp=Z,0.9nm,0.6s,mb4.0,baz=99,slow=7.6,SNR=4.8
FINES FINESS Array B 57.07 326 P **P** **06 50 13.2 -0.6**
comp=Z,0.5nm,0.4s,mb3.9,baz=64,slow=8.7,SNR=5.7
ASAR Alice Springs 62.07 150 P **P** **06 50 48.8 +0.2**
comp=Z,0.5nm,0.4s,mb4.0,baz=335,slow=6.9,SNR=11
NOA NORSAR Array B 64.13 327 P **P** **06 51 00.5 -1.5**
comp=Z,0.4nm,0.6s,mb3.6,baz=170,slow=6.5,SNR=2.4
YKA Yellowknife Ar 80.36 17 P **P** **06 52 38.8 -0.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=327,slow=5.0,SNR=13

MEX 25 06:55:42.4±0.7, 19°.76N×103°.73W, h28km±43km, MD3.6, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJM	**Santa Fe**	**0.97**	**42**	*i*P	Pn	06 55 57.8	-2.3
SFJM				*i*S	Sb	06 56 09.5	-3.5
CJM	**Chamela**	**1.27**	**258**	*i*P	Pn	06 56 01.1	-3.1
CJM				*i*S	Sn	06 56 17.6	-2.8
ANIG	**Ahuacatlan**	**1.48**	**330**	*i*P	Pn	06 56 05.0	-2.3
ANIG				*i*S	Sn	06 56 22.8	-2.9
MMIG	**Aquila**	**1.51**	**166**	*e*P	Pn	06 56 06.0	-1.6
MMIG				*i*S	Sn	06 56 23.4	-3.0
ZIIG	**Zihuatanejo**	**3.03**	**135**	*e*P	Pn	06 56 26.6	-2.0
ZIIG				*i*S	Sn	06 57 01.4	-2.6

*ISCJB **25** 06:56:16.6±0.9, 55°.9S±0°.2×27°.7W±0°.4, h10km, mb3.9/5, Error ellipse: s-maj=34.4km s-min=14.1km az=145.9*
*IDC **25** 06:56:16.0±1.2, 56°.05S×27°.60W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/13, mbtmp3.9/4, Error ellipse: s-maj=55.2km s-min=26.4km az=42.0*
*NEIC **25** 06:56:21.3±0.7, 55°.98S×27°.56W, h35km, mb4.4/1, Error ellipse: s-maj=28.5km s-min=15.0km az=51.0*
ISC 25 06:56:18.5±0.9, 55°.9S±0°.2×27°.6W±0°.4, h10km, n9, σ0°.88/8, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**17.41**	**158**	*e*	**Pn**	**07 00 22.4**	**+1.3**
TRQA	**Tornquist**	**29.04**	**293**	*e*P	**P**	**07 02 18.4**	**-0.1**
QSPA	**South Pole Qui**	**34.33**	**180**	*e*P	**P**	**07 03 04.2**	**-0.4**
3.0nm,0.6s,mb4.4							
CPUP	**Villa Florida**	**36.53**	**312**	P	**P**	**07 03 23.3**	**-0.7**
0.5nm,0.5s,mb3.6,baz=169,slow=10,SNR=3.1							
MAW	**Mawson**	**40.41**	**144**	P	**P**	**07 03 54.7**	**-1.4**
1.9nm,0.7s,mb3.9,baz=289,slow=4.0,SNR=4.4							
LPAZ	**La Paz**	**50.09**	**306**	P	**P**	**07 05 14.5**	**+1.0**
1.5nm,0.6s,mb4.2,baz=144,slow=5.6,SNR=17							
LPAZ	**La Paz**	**50.09**	**306**	P	**P**	**07 05 14.5**	**+1.0**
TORD	**Torodi Ar. Bea**	**73.07**	**30**	P	**P**	**07 07 49.0**	**+0.4**
0.3nm,0.5s,mb3.5,baz=202,slow=5.9,SNR=5.7							
SONM	**Songino Array**	**150.97**	**87**	PKPbc	PKPbc	07 16 08.0	-2.4
0.8nm,0.4s,baz=209,slow=3.9,SNR=4.1							

BJI 25 07:00:31.1, 37°.87N×100°.50E, h10km, ML3.6/8, Ms3.2/1, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.63**	**341**	Pg	Pg	07 00 59.0	-3.4
GTA				Sg	Sg	07 01 19.5	-4.0
GTA				smax			
comp=N,170nm,0.7s							
GTA				smax			
comp=E,250nm,0.7s							
LZH	**Lanzhou**	**3.21**	**123**	*e*Pn	Pn	07 01 26.3	+4.7
LZH				Pg	Pg	07 01 32.5	-0.2
LZH				Sn	Sn	07 02 07.5	+7.5
LZH				Sg	Sg	07 02 13.8	-0.6
LZH				smax			
comp=N,190nm,1.0s							
LZH				smax			
comp=E,250nm,0.8s							
LZH				LR	LR		
comp=N,330nm,6.2s							

IDC 25 07:16:36.7±1.6, 4°.11N×32°.44W, h0km, mb3.5/5, mb1 3.9/5, mb1mx3.6/24, mbtmp3.5/5, MS3.5/10, Ms1 3.5/10, ms1mx3.2/28, Error ellipse: s-maj=55.5km s-min=31.1km az=179.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**18.85**	**55**	LR	LR	07 26 13.4	
comp=Z,114nm,18.5s,baz=190,slow=31							
DBIC	**Dimbokro**	**27.58**	**84**	LR	LR	07 31 16.0	
comp=Z,89nm,19.1s,baz=150,slow=32							
TORD	**Torodi Ar. Bea**	**34.88**	**73**	P	P	07 23 30.1	-0.1
1.3nm,1.0s,baz=248,slow=8.3,SNR=4.9							
TORD				LR	LR	07 35 31.8	
comp=Z,111nm,19.1s,baz=225,slow=32							
MDT	**Midelt**	**38.63**	**39**	LR	LR	07 38 34.5	
comp=Z,95nm,19.1s,baz=158,slow=34							
CPUP	**Villa Florida**	**38.69**	**217**	LR	LR	07 39 34.6	
comp=Z,78nm,20.6s,baz=243,slow=36							
LPAZ	**La Paz**	**40.70**	**239**	LR	LR	07 40 27.9	
comp=Z,50nm,20.3s,baz=211,slow=35							
ESDC	**Sonseca Array**	**43.78**	**32**	P	P	07 24 44.3	+0.1
0.1nm,0.3s,baz=225,slow=9.3,SNR=4.4							
NNA	**Nana**	**46.95**	**250**	LR	LR	07 43 43.4	
comp=Z,74nm,21.1s,baz=136,slow=35							
APG	**El Apazote**	**58.08**	**285**	LR	LR	07 48 47.7	
comp=Z,29nm,19.6s,baz=248,slow=33							
TXAR	**Lajitas Array**	**71.64**	**299**	P	P	07 28 01.5	+0.9
0.3nm,0.8s,baz=100,slow=6.9,SNR=3.6							
PDAR	**Pinedale Array**	**77.76**	**313**	P	P	07 28 35.1	-0.7
0.3nm,0.6s,baz=132,slow=6.6,SNR=4.1							
PDAR				LR	LR	07 56 13.6	
comp=Z,50nm,20.7s,baz=337,slow=31							
YKA	**Yellowknife Ar**	**82.75**	**332**	P	P	07 29 02.8	+0.5
0.2nm,0.8s,baz=83,slow=5.0,SNR=4.8							
YKA				LR	LR	08 02 20.3	
comp=Z,3.2nm,19.0s,baz=145,slow=33							
STKA	**Stephens Creek**	**151.82**	**169**	PKPbc	PKPbc	07 36 34.0	-0.1
1.5nm,0.7s,baz=135,slow=5.7,SNR=2.8							

*NEIC **25** 07:39:27.4, 37°.16N×13°.74W, h0km, MG3.7(MDD), After MDD.*
*MDD **25** 07:39:27.7±2.1, 37°.12N×13°.70W, h0km, mb4.0/7, Error ellipse: s-maj=18.7km s-min=15.9km az=61.0, PRIMO*
*INMG **25** 07:39:29.5±2.2, 36°.91N×14°.05W, h10km, ML2.4, Error ellipse: s-maj=9.7km s-min=8.1km az=89.0*
*CSEM **25** 07:39:31.3±0.4, 37°.24N×13°.39W, h10km, ML3.2/14, Error ellipse: s-maj=7.4km s-min=6.5km az=37.0*
ISC 25 07:39:31.4±1.0, 37°.26N±0°.05×13°.39W±0°.06, h10km, n97, σ0°.88/174, 3C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.65**	**91**	*i*Pn	**Pn**	**07 40 26.9**	**-1.0**
PFVI				*e*Sn	**Sn**	**07 41 10.1**	**-0.9**
PFVI				A		07 41 14.2	
6.4nm,0.9s							
PMAFR	**Mafra**	**3.66**	**61**	*e*Pn	**Pn**	**07 40 28.5**	**+0.5**
PMAFR				*e*Sn	**Sn**	**07 41 13.7**	**+2.6**
PMAFR				A		07 41 18.3	
18nm,0.2s							
PMAFR	**Mafra**	**3.66**	**61**	*e*Pn	**Pn**	**07 40 28.5**	**+0.5**
PMAFR				*e*Sn	**Sn**	**07 41 13.7**	**+2.6**
18nm,0.2s							
PTEO	**Sao Teotonio**	**3.73**	**84**	*e*Pn	**Pn**	**07 40 28.7**	**-0.3**
PTEO				*e*Sn	**Sn**	**07 41 12.5**	**-0.4**
PTEO				A		07 41 18.4	
6.3nm,0.8s							
PTEO	**Sao Teotonio**	**3.73**	**84**	P	**Pn**	**07 40 28.7**	**-0.3**
PTEO				S	**Sn**	**07 41 12.5**	**-0.4**
3.2nm,0.8s							
PTEO	**Sao Teotonio**	**3.73**	**84**	P	**Pn**	**07 40 28.7**	**-0.3**
PTEO				S	**Sn**	**07 41 12.5**	**-0.4**
3.2nm,0.8s							
PTEO	**Sao Teotonio**	**3.73**	**84**	*e*Pn	**Pn**	**07 40 28.7**	**-0.3**
PTEO				*e*Sn	**Sn**	**07 41 12.5**	**-0.4**
6.3nm,0.8s							
MORF	**Marmelete**	**3.78**	**88**	P	**Pn**	**07 40 28.7**	**-1.0**
MORF				S	**Sn**	**07 41 13.3**	**-1.0**
MORF	**Marmelete**	**3.78**	**88**	P	**Pn**	**07 40 28.7**	**-1.0**
MORF				S	**Sn**	**07 41 13.3**	**-1.0**
MOE	**Montemor**	**4.18**	**71**	*e*Sn	**Sn**	**07 41 24.4**	**+0.3**

MOE Montemor 4.18 71 *e*Sn **Sn** **07 41 24.4 +0.3**
PCVE Castro Verde 4.28 83 *e*Pn **Pn** **07 40 36.6 +0.1**
PCVE *e*Sn **Sn** **07 41 26.5 0.0**
PCVE A 07 41 34.7
2.5nm,0.6s
PCVE Castro Verde 4.28 83 P **Pn** **07 40 36.6 +0.1**
PCVE S **Sn** **07 41 26.5 0.0**
1.2nm,0.6s
PCVE Castro Verde 4.28 83 P **Pn** **07 40 36.6 +0.1**
PCVE S **Sn** **07 41 26.5 0.0**
1.2nm,0.6s
PCVE Castro Verde 4.28 83 *e*Pn **Pn** **07 40 36.6 +0.1**
PCVE *e*Sn **Sn** **07 41 26.5 0.0**
2.5nm,0.6s
PBDV Barranco-do-Ve 4.36 89 *e*Pn **Pn** **07 40 37.2 -0.4**
PBDV *e*Sn **Sn** **07 41 28.5 0.0**
PBDV A 07 41 35.7
3.3nm,0.3s
PBDV Barranco-do-Ve 4.36 89 P **Pn** **07 40 37.2 -0.4**
PBDV S **Sn** **07 41 28.5 0.0**
3.3nm,0.3s
PBDV Barranco-do-Ve 4.36 89 P **Pn** **07 40 37.2 -0.4**
PBDV S **Sn** **07 41 28.5 0.0**
3.3nm,0.3s
PBDV Barranco-do-Ve 4.36 89 *e*Pn **Pn** **07 40 37.2 -0.4**
PBDV *e*Sn **Sn** **07 41 28.5 0.0**
3.3nm,0.3s
PBEJ Beja 4.45 78 *e*Pn **Pn** **07 40 40.7 +1.8**
PBEJ *e*Sn **Sn** **07 41 30.6 -0.2**
PBEJ A 07 41 34.5
3.1nm,0.3s
PBEJ Beja 4.45 78 P **Pn** **07 40 40.7 +1.8**
PBEJ S **Sn** **07 41 30.6 -0.2**
1.6nm,0.3s
PBEJ Beja 4.45 78 P **Pn** **07 40 40.7 +1.8**
PBEJ S **Sn** **07 41 30.6 -0.2**
1.6nm,0.3s
PBEJ Beja 4.45 78 *e*Pn **Pn** **07 40 40.7 +1.8**
PBEJ *e*Sn **Sn** **07 41 30.6 -0.2**
3.1nm,0.3s
PVAQ Vaqueiros 4.53 87 *e*Pn **Pn** **07 40 39.6 -0.3**
PVAQ *e*Sn **Sn** **07 41 32.6 0.0**
PVAQ A 07 41 37.8
3.3nm,0.1s
PVAQ Vaqueiros 4.53 87 P **Pn** **07 40 39.6 -0.3**
PVAQ S **Sn** **07 41 32.6 0.0**
3.3nm,0.1s
PVAQ Vaqueiros 4.53 87 P **Pn** **07 40 39.6 -0.3**
PVAQ S **Sn** **07 41 32.6 0.0**
3.3nm,0.1s
PVAQ Vaqueiros 4.53 87 *e*Pn **Pn** **07 40 39.6 -0.3**
PVAQ *e*Sn **Sn** **07 41 32.6 0.0**
3.3nm,0.1s
EGRO El Granado 4.71 85 P **Pn** **07 40 42.2 -0.3**
EGRO S **Sn** **07 41 37.5 +0.2**
EGRO El Granado 4.71 85 P **Pn** **07 40 42.2 -0.3**
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** **07 41 37.5 +0.2**
2.7nm,0.2s,SNR=7.4
EGRO El Granado 4.71 85 P **Pn** **07 40 42.2 -0.3**
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** **07 41 37.5 +0.2**
2.7nm,0.2s,SNR=7.4
EGRO El Granado 4.71 85 P **Pn** **07 40 42.2 -0.3**
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** **07 41 37.5 +0.3**
2.7nm,0.2s,SNR=7.4
PESTR Estremoz 4.85 69 *e*Pn **Pn** **07 40 45.2 +0.8**
PESTR *e*Sn **Sn** **07 41 42.1 +1.5**
PESTR A 07 41 47.4
2.7nm,0.2s
PESTR Estremoz 4.85 69 P **Pn** **07 40 45.2 +0.8**
PESTR S **Sn** **07 41 42.1 +1.5**
2.7nm,0.2s
PESTR Estremoz 4.85 69 P **Pn** **07 40 45.2 +0.8**
PESTR S **Sn** **07 41 42.1 +1.5**
2.7nm,0.2s
PESTR Estremoz 4.85 69 *e*Pn **Pn** **07 40 45.2 +0.8**
PESTR *e*Sn **Sn** **07 41 42.1 +1.5**
2.7nm,0.2s
PMRV Marv??o 5.19 64 *e*Pn **Pn** **07 40 49.0 0.0**
PMRV *e*Sn **Sn** **07 41 49.5 +0.6**
PMRV A 07 41 52.2
3.1nm,0.4s
PMRV Marv??o 5.19 64 P **Pn** **07 40 49.0 0.0**
PMRV S **Sn** **07 41 49.5 +0.6**
3.1nm,0.4s
PMRV Marv??o 5.19 64 P **Pn** **07 40 49.0 0.0**
PMRV S **Sn** **07 41 49.5 +0.6**
3.1nm,0.4s
PMRV Marv??o 5.19 64 *e*Pn **Pn** **07 40 49.0 0.0**
PMRV *e*Sn **Sn** **07 41 49.5 +0.6**
3.1nm,0.4s
EBAD Badajoz 5.25 72 P **Pn** **07 40 49.6 -0.3**
EBAD S **Sn** **07 41 51.0 +0.4**
EBAD Badajoz 5.25 72 P **Pn** **07 40 49.6 -0.3**
0.6nm,0.1s,SNR=6.3
EBAD S **Sn** **07 41 51.0 +0.4**
5.0nm,0.2s
EBAD Badajoz 5.25 72 P **Pn** **07 40 49.6 -0.3**
0.6nm,0.1s,SNR=6.3
EBAD S **Sn** **07 41 51.0 +0.4**
5.0nm,0.2s
EBAD Badajoz 5.25 72 P **Pn** **07 40 49.6 -0.3**
0.6nm,0.1s,SNR=6.3
EBAD S **Sn** **07 41 51.0 +0.4**
5.0nm,0.2s
PCBR Castelo Branco 5.30 59 *e*Pn **Pn** **07 40 50.7 +0.1**
PCBR *e*Sn **Sn** **07 41 52.4 +0.7**
PCBR A 07 41 57.3
1.7nm,0.2s
PCBR Castelo Branco 5.30 59 P **Pn** **07 40 50.7 +0.1**
PCBR S **Sn** **07 41 52.4 +0.7**
0.9nm,0.2s
PCBR Castelo Branco 5.30 59 P **Pn** **07 40 50.7 +0.1**
PCBR S **Sn** **07 41 52.4 +0.7**
0.9nm,0.2s
PCBR Castelo Branco 5.30 59 *e*Pn **Pn** **07 40 50.7 +0.1**
PCBR *e*Sn **Sn** **07 41 52.4 +0.7**
1.7nm,0.2s
EMIN Mina Concepcio 5.37 83 P **Pn** **07 40 51.4 -0.1**
EMIN S **Sn** **07 41 52.5 -0.9**
EMIN Mina Concepcio 5.37 83 P **Pn** **07 40 51.4 -0.1**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn** **07 41 52.5 -0.9**
0.7nm,0.1s,SNR=6.4
EMIN Mina Concepcio 5.37 83 P **Pn** **07 40 51.4 -0.1**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn** **07 41 52.5 -0.9**
0.7nm,0.1s,SNR=6.4
EMIN Mina Concepcio 5.37 83 P **Pn** **07 40 51.4 -0.1**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn** **07 41 52.5 -0.8**
0.7nm,0.1s,SNR=6.4
PVIS Viseu 5.50 49 *e*Pn **Pn** **07 40 54.6 +1.3**
PVIS *e*Sn **Sn** **07 41 57.3 +0.8**
PVIS A 07 42 03.4
2.9nm,0.1s
PVIS Viseu 5.50 49 P **Pn** **07 40 54.6 +1.3**
PVIS S **Sn** **07 41 57.3 +0.8**
1.4nm,0.1s
PVIS Viseu 5.50 49 P **Pn** **07 40 54.6 +1.3**
PVIS S **Sn** **07 41 57.3 +0.8**
1.4nm,0.1s
PVIS Viseu 5.50 49 *e*Pn **Pn** **07 40 54.6 +1.3**
PVIS *e*Sn **Sn** **07 41 57.3 +0.8**
2.9nm,0.1s
MTE Manteigas 5.54 54 *e*Pn **Pn** **07 40 55.0 +1.2**
MTE *e*Sn **Sn** **07 41 58.7 +1.2**
MTE A 07 42 00.6
3.6nm,0.3s
MTE Manteigas 5.54 54 *e*Pn **Pn** **07 40 55.0 +1.2**
MTE *e*Sn **Sn** **07 41 58.7 +1.2**
3.6nm,0.3s
PVRL Vila Real 5.95 46 *e*Sn **Sn** **07 42 08.3 +0.5**
PVRL A 07 42 10.9
2.7nm,0.3s
PVRL Vila Real 5.95 46 S **Sn** **07 42 08.3 +0.5**
1.4nm,0.3s
PVRL Vila Real 5.95 46 S **Sn** **07 42 08.3 +0.5**
1.4nm,0.3s
PVRL Vila Real 5.95 46 *e*Sn **Sn** **07 42 08.3 +0.5**
2.7nm,0.3s
ESPR Espera 6.04 91 P **Pn** **07 41 00.1 -0.6**
ESPR S **Sn** **07 42 09.9 0.0**

ESPR Espera 6.04 91 P Pn 07 41 00.1 -0.6
1.0nm,0.1s,SNR=4.6
ESPR S Sn 07 42 09.9 0.0
4.5nm,0.8s
ESPR Espera 6.04 91 P Pn 07 41 00.1 -0.6
1.0nm,0.1s,SNR=4.6
ESPR S Sn 07 42 09.9 0.0
4.5nm,0.8s
ESPR Espera 6.04 91 P Pn 07 41 00.1 -0.6
1.0nm,0.1s,SNR=4.6
ESPR S Sn 07 42 09.9 0.0
4.5nm,0.8s
PCAB Cabril 6.08 41 eSn Sn 07 42 09.4 -1.4
PCAB A 07 42 14.7
2.7nm,0.1s
PCAB Cabril 6.08 41 S Sn 07 42 09.4 -1.4
1.4nm,0.1s
PCAB Cabril 6.08 41 S Sn 07 42 09.4 -1.4
1.4nm,0.1s
PCAB Cabril 6.08 41 eSn Sn 07 42 09.4 -1.4
2.7nm,0.1s
ELOB Lobios 6.17 40 P Pn 07 41 02.0 -0.6
ELOB S Sn 07 42 11.0 -2.2
ELOB Lobios 6.17 40 P Pn 07 41 02.0 -0.6
0.2nm,0.1s,SNR=4.0
ELOB S Sn 07 42 11.0 -2.2
1.0nm,0.1s,SNR=6.0
ELOB Lobios 6.17 40 P Pn 07 41 02.0 -0.6
0.2nm,0.1s,SNR=4.0
ELOB S Sn 07 42 11.0 -2.2
1.0nm,0.1s,SNR=6.0
ELOB Lobios 6.17 40 P Pn 07 41 02.0 -0.5
0.2nm,0.1s,SNR=4.0
EMAZ Mazaricos 6.61 29 P Pn 07 41 08.3 -0.2
EMAZ S Sn 07 42 19.6 -4.3
EMAZ Mazaricos 6.61 29 P Pn 07 41 08.3 -0.2
0.6nm,0.2s,SNR=4.0
EMAZ S Sn 07 42 19.6 -4.3
1.4nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.61 29 P Pn 07 41 08.3 -0.2
0.6nm,0.2s,SNR=4.0
EMAZ S Sn 07 42 19.6 -4.3
1.4nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.61 29 P Pn 07 41 08.3 -0.3
0.6nm,0.2s,SNR=4.0
ECAL Calabor 6.94 46 P Pn 07 41 14.3 +1.2
ECAL S Sn 07 42 31.2 -0.9
ECAL Calabor 6.94 46 P Pn 07 41 13.3 +0.2
0.3nm,0.2s,SNR=7.9
ECAL S Sn 07 42 31.2 -0.9
1.3nm,0.2s,SNR=7.9
ECAL Calabor 6.94 46 P Pn 07 41 13.3 +0.2
0.3nm,0.2s,SNR=7.9
ECAL S Sn 07 42 31.2 -0.9
1.3nm,0.2s,SNR=7.9
ECAL Calabor 6.94 46 P Pn 07 41 14.3 +1.2
0.3nm,0.2s,SNR=7.9
ECAL S Sn 07 42 31.2 -0.9
1.3nm,0.2s,SNR=7.9
EADA Adamuz 7.05 80 P Pn 07 41 13.9 -0.6
EADA S Sn 07 42 35.0 +0.3
EADA Adamuz 7.05 80 P Pn 07 41 13.9 -0.6
0.3nm,0.1s,SNR=7.9
EADA S Sn 07 42 35.0 +0.3
0.6nm,0.1s,SNR=7.9
EADA Adamuz 7.05 80 P Pn 07 41 13.9 -0.6
0.3nm,0.1s,SNR=7.9
EADA S Sn 07 42 35.0 +0.3
0.6nm,0.1s,SNR=7.9
EADA Adamuz 7.05 80 P Pn 07 41 13.9 -0.7
0.3nm,0.1s,SNR=7.9
EADA S Sn 07 42 35.0 +0.3
0.6nm,0.1s,SNR=7.9
EPON Pontenova 7.71 36 S Sn 07 42 48.5 -2.4
0.7nm,0.2s,SNR=7.9
EPON Pontenova 7.71 36 S Sn 07 42 48.5 -2.4
0.7nm,0.2s,SNR=7.9
ESDC Sonseca Array 7.78 69 ⇑P Pn 07 41 24.5 -0.1
ESDC S Sn 07 42 52.6 -0.1
ESDC Sonseca Array 7.78 69 ⇑P Pn 07 41 24.5 -0.1
1.0nm,0.1s,baz=256,slow=13,SNR=18
ESDC S Sn 07 42 51.4 -1.3
0.5nm,0.2s,baz=255,slow=24,SNR=7.9
ESDC Sonseca Array 7.78 69 ⇑P Pn 07 41 24.5 -0.1
1.0nm,0.1s,baz=256,slow=13,SNR=18
ESDC S Sn 07 42 51.4 -1.3
0.5nm,0.2s,baz=255,slow=24,SNR=7.9
ESDC Sonseca Array 7.78 69 P Pn 07 41 24.5 -0.1
1.0nm,0.1s,baz=256,slow=13,SNR=18
ESDC S Sn 07 42 52.6 -0.1
0.5nm,0.2s,baz=255,slow=24,SNR=7.9
ECOG Cogollos-Vega 7.84 87 P Pn 07 41 26.8 +1.4
ECOG Cogollos-Vega 7.84 87 P Pn 07 41 26.8 +1.4
ETOR Torete 9.51 65 P Pn 07 41 48.5 +0.2
ETOR Torete 9.51 65 P Pn 07 41 48.5 +0.2
2.2nm,0.2s,SNR=7.9
ETOR Torete 9.51 65 P Pn 07 41 48.5 +0.2
2.2nm,0.2s,SNR=7.9
ETOR Torete 9.51 65 P Pn 07 41 48.5 +0.2
2.2nm,0.2s,SNR=7.9

NEIC 25 08:02:49.0, 37.43N×35.20E, h7km, ML3.3(ISK), After ISK.
ISCJB 25 08:02:49.7±0.5, 37.44N±0.02×35.22E±0.02, h3km±4km, mb3.6/4, Error ellipse: s-maj=3.7km s-min=3.1km az=173.1
ISK 25 08:02:49.1, 37.43N×35.21E, h6km, MD3.6
IDC 25 08:02:50.6±1.1, 37.42N×35.30E, h0km, mb3.7/4, mb1 3.8/9, mb1mx3.5/26, mbtmp3.6/9, ML3.5/5, MS2.8/1, Ms1 2.8/1, ms1mx2.2/43, Error ellipse: s-maj=28.4km s-min=12.8km az=67.0
DDA 25 08:02:50.1, 37.39N×35.22E, h13km±2km, Md3.3
CSEM 25 08:02:50.1±0.1, 37.43N×35.22E, h2km, MD3.6, Error ellipse: s-maj=3.5km s-min=3.1km az=164.0
ISC 25 08:02:50.5±0.4, 37.41N±0.02×35.24E±0.02, h4km±3km, n96, σ1s06/126, mb3.6/4, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KARA Karaisali 0.21 225 PG Pg 08 02 53.6 -0.9
KARA eSG Sg 08 02 57.5 +0.2
KARA Karaisali 0.21 225 i Pg Pg 08 02 53.7 -0.8
KARA eSg Sg 08 02 57.5 +0.2
GULE Gulek 0.39 251 i P Pg 08 02 57.7 -0.2
GULE i S Sg 08 03 04.3 +1.3
GULE Gulek 0.39 251 i P Pg 08 02 57.7 -0.3
GULE i S Sg 08 03 04.3 +1.3
KOZT Kozan 0.48 81 PG Pg 08 02 59.1 -0.6
KOZT eSG Sg 08 03 06.7 +0.8
KOZT Kozan 0.48 81 i Pg Pg 08 02 59.1 -0.6
KOZT eSg Sg 08 03 06.7 +0.8
YURE YUREGIR 0.66 151 i P Pg 08 03 03.9 +0.7
YURE i S Sg 08 03 15.6 +3.8
YURE YUREGIR 0.66 151 i P Pg 08 03 03.9 +0.7
YURE i S Sg 08 03 15.6 +3.8
MERS Mersin 0.79 227 ePG Pg 08 03 04.4 -1.2
MERS Mersin 0.79 227 ePg Pg 08 03 04.4 -1.2
KRTS Karatas 0.84 172 ePG Pg 08 03 06.5 -0.2
KRTS Karatas 0.84 172 ePg Pg 08 03 06.5 -0.2
ANDN Andirin 0.90 79 i P Pg 08 03 07.0 -0.8
ANDN i S Sg 08 03 21.6 +2.1
ANDN Andirin 0.90 79 i P Pg 08 03 06.9 -0.9
ANDN i S Sg 08 03 21.6 +2.2
BSTP Nigde 1.04 302 eP Pg 08 03 09.7 -0.9
BSTP i S Sg 08 03 26.6 +2.4
COBT Iskenderun 1.21 137 i P Pg 08 03 13.9 +0.3
COBT i S Sg 08 03 29.9 +0.6
COBT Iskenderun 1.21 137 i P Pg 08 03 13.9 +0.3
COBT i S Sg 08 03 29.9 +0.6
KMRS Kahramanmaras 1.33 85 ePN Pn 08 03 14.9 -0.9
KMRS Kahramanmaras 1.33 85 ePn Pn 08 03 14.9 -1.0
HTY Hatay 1.47 150 ePN Pn 08 03 17.3 -0.6
HTY Hatay 1.47 150 ePn Pn 08 03 17.3 -0.6
BNN Bunyan 1.52 18 ePN Pn 08 03 17.5 -1.0
BNN Bunyan 1.52 18 ePn Pn 08 03 17.5 -1.0
YAYL Yayladag 1.54 153 i P Pn 08 03 18.3 -0.4
YAYL i S Sn 08 03 38.5 -0.7
YAYL Yayladag 1.54 153 i P Pn 08 03 18.3 -0.5
YAYL i S Sn 08 03 38.5 -0.7
PINB Pinarbasi 1.57 36 i P Pn 08 03 18.5 -0.7
PINB i S Sn 08 03 38.4 -1.4
PINB Pinarbasi 1.57 36 i P Pn 08 03 18.5 -0.7
PINB i S Sn 08 03 38.4 -1.5
SULT Sultanhani-AKS 1.57 301 ePN Pn 08 03 18.3 -1.0
SULT Sultanhani-AKS 1.57 301 ePn Pn 08 03 18.3 -1.0
GAZ Gaziantep 1.59 98 ePN Pn 08 03 18.6 -0.9
GAZ Gaziantep 1.59 98 ePn Pn 08 03 18.6 -0.9
IKL Isikli 1.71 227 ePN Pn 08 03 20.1 -0.9
IKL Isikli 1.71 227 ePn Pn 08 03 20.1 -1.0
SARI SarD1z-Kayseri 1.71 42 ePN Pn 08 03 14.5 -6.7
GZT Gaziantep 1.85 91 i P Pn 08 03 22.7 -0.4
GZT i S Sn 08 03 51.6 +4.6
ERMK Ermenek 2.01 248 i P Pn 08 03 27.2 +1.9
ERMK i S Sn 08 03 53.5 +2.6
ERMK Ermenek 2.01 248 i P Pn 08 03 27.2 +1.9
ERMK i S Sn 08 03 53.5 +2.7
EREN Erenkoy 2.06 205 ePN Pn 08 03 25.4 -0.6
EREN Erenkoy 2.06 205 ePn Pn 08 03 25.4 -0.6
YOZ Yozgat 2.23 2 ePN Pn 08 03 27.4 -0.9
YOZ Yozgat 2.23 2 ePn Pn 08 03 27.4 -0.9
HDMB Hadim 2.24 259 ePN Pn 08 03 27.6 -0.8
HDMB Hadim 2.24 259 ePn Pn 08 03 27.6 -0.8
AKCD Akcadag 2.30 67 eP Pn 08 03 31.6 +2.3
AKCD i S Sn 08 04 01.7 +3.6
AKCD Akcadag 2.30 67 eP Pn 08 03 31.6 +2.3
AKCD i S Sn 08 04 01.7 +3.6
CDAG Cicekdag 2.31 343 i P Pn 08 03 30.0 +0.5
CDAG i S Sn 08 04 02.2 +3.9
CDAG Cicekdag 2.31 343 i P Pn 08 03 30.0 +0.6
CDAG i S Sn 08 04 02.2 +3.9
KONT Konya--Tatoy 2.34 284 ePN Pn 08 03 28.9 -1.0
KONT Konya--Tatoy 2.34 284 ePn Pn 08 03 28.9 -0.9
LADK Ladik-KONYA 2.41 290 ePN Pn 08 03 29.8 -0.9
LADK Ladik-KONYA 2.41 290 ePn Pn 08 03 29.8 -0.9
LFK Lefkose 2.53 213 ePN Pn 08 03 32.0 -0.4
LFK Lefkose 2.53 213 ePn Pn 08 03 32.0 -0.4
DARE Darende-Malaty 2.54 52 ePN Pn 08 03 26.3 -6.3
BR131 Keskin Array S 2.63 332 ePn Pn 08 03 34.5 +0.7
BR131 eSg Sg 08 04 14.2 -0.8
BR131 Keskin Array S 2.63 332 ePn Pn 08 03 34.5 +0.7
BR131 eSg Sg 08 04 14.2 -0.9
BRTR Keskin Array B 2.63 332 Pn Pn 08 03 34.1 +0.3
2.1nm,0.3s,baz=168,slow=13,SNR=52
BRTR Pg Pg 08 03 38.3 -2.7
6.0nm,0.3s,baz=157,slow=19,SNR=133
BRTR Sn Sn 08 04 08.7 +2.5
1.5nm,0.3s,baz=151,slow=24,SNR=3.9
BRTR Lg 08 04 17.4
3.9nm,0.3s,baz=158,slow=30,SNR=12
BRTR Keskin Array B 2.63 332 Pn Pn 08 03 34.1 +0.3
BRTR Pg Pg 08 03 38.3 -2.7
BRTR Sn Sn 08 04 08.7 +2.5
BRTR Lg 08 04 17.4
BRTR Keskin Array B 2.63 332 Pn Pn 08 03 34.1 +0.3
BRTR Keskin Array B 2.63 332 Pg Pg 08 03 38.3 -2.7
MYA Malataya 2.69 69 ePN Pn 08 03 34.4 -0.1
MYA Malataya 2.69 69 ePn Pn 08 03 34.4 -0.1
URFA Urfa 2.85 88 ePN Pn 08 03 36.9 0.0
URFA Urfa 2.85 88 ePn Pn 08 03 36.9 0.0
SVSK Karacayir 2.86 28 ePN Pn 08 03 36.6 -0.4
SVSK Karacayir 2.86 28 ePn Pn 08 03 36.6 -0.3
LEF Lefka 2.97 220 ePN Pn 08 03 38.6 +0.2
LEF Lefka 2.97 220 ePn Pn 08 03 38.6 +0.2
CTKT Corum 3.23 354 i P Pn 08 03 49.1 +7.1
SVRC Sivrice-ELAZID 3.36 72 ePN Pn 08 03 44.0 +0.2
SVRC Sivrice-ELAZID 3.36 72 ePn Pn 08 03 44.0 +0.2
SVRH Sivrihisar-ESK 3.56 306 ePN Pn 08 03 46.2 -0.3
SVRH Sivrihisar-ESK 3.56 306 ePn Pn 08 03 46.2 -0.3
PTK Pertek 3.59 64 ePN Pn 08 03 47.3 +0.2
PTK Pertek 3.59 64 ePn Pn 08 03 47.3 +0.3
EZC Erzincan 3.99 53 ePN Pn 08 03 52.8 +0.4
ELL Elmali 4.31 263 ePN Pn 08 03 57.0 +0.2
ELL Elmali 4.31 263 ePn Pn 08 03 57.0 +0.1
ALT Altintas 4.36 294 ePN Pn 08 03 57.5 -0.1
ALT Altintas 4.36 294 ePn Pn 08 03 57.5 0.0
MMAI Mount Meron Ar 4.38 178 Pn Pn 08 03 58.5 +0.5
7.0nm,0.3s,baz=354,slow=13,SNR=15
MMAI Sn Sn 08 04 47.5 -1.9
3.1nm,0.3s,baz=16,slow=27,SNR=4.1
ASF Jabal al Asfar 5.40 165 Pn Pn 08 04 13.3 +1.4
0.3nm,0.3s,baz=225,slow=20,SNR=2.5
ASF Lg 08 05 44.2
0.2nm,0.3s,baz=353,slow=16,SNR=3.5
EIL Elat 7.72 182 LR LR 08 08 16.1
comp=Z,58nm,18.6s,baz=274,slow=42
IDI Anoyia 8.61 259 Pn Pn 08 04 57.3 +1.4
1.5nm,0.3s,baz=73,slow=14,SNR=16
IDI Anoyia 8.61 259 Pn Pn 08 04 57.3 +1.4
GERES GERESS Array B 19.36 313 P P 08 07 19.2 +1.1
0.1nm,0.3s,baz=113,slow=10,SNR=5.6
FINES FINESS Array B 24.74 349 P P 08 08 12.6 -0.1
0.8nm,0.8s,mb3.3,baz=151,slow=13,SNR=4.1
FINES FINESS Array B 24.74 349 P P 08 08 12.6 -0.1
ARCES ARCESS Array B 32.62 354 P P 08 09 23.8 +0.9
1.5nm,0.9s,mb3.9,baz=163,slow=6.6,SNR=3.7
ARCES ARCESS Array B 32.62 354 P P 08 09 23.8 +0.9
ARCES ARCESS Array B 32.62 354 P P 08 09 23.8 +0.9
MKAR Makanchi Array 35.68 60 P P 08 09 50.9 +1.1
0.7nm,0.9s,mb3.6,baz=297,slow=3.5,SNR=5.0
MKAR Makanchi Array 35.68 60 P P 08 09 50.9 +1.1
YKA Yellowknife Ar 77.52 346 P P 08 14 46.7 -0.3
0.5nm,0.8s,mb3.5,baz=29,slow=5.3,SNR=7.5
YKA Yellowknife Ar 77.52 346 P P 08 14 46.7 -0.3
YKA Yellowknife Ar 77.52 346 P P 08 14 46.7 -0.3

ISCJB 25 08:06:07.1±1.4, 7.54S±0.07×128.4E±0.1, h147km±15km, mb3.6/3, Error ellipse: s-maj=19.4km s-min=11.2km az=4.4
NEIC 25 08:06:07.8±1.8, 7.51S×128.42E, h133km±18km, mb4.6/1, Error ellipse: s-maj=18.6km s-min=14.5km az=57.0
DJA 25 08:06:09, 7.61S×128.44E, h68km, mb4.1/3
IDC 25 08:06:13.3±9.4, 7.80S×127.97E, h186km±87km, mb3.4/3, mb1 3.4/5, mb1mx3.1/18, mbtmp3.3/5, Error ellipse: s-maj=108.6km s-min=20.9km az=58.0
ISC 25 08:06:07.5±1.6, 7.60S±0.08×128.3E±0.1, h128km±16km, n20, σ1s16/25, mb3.6/3, Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TLE Tual 4.80 66 P Pn 08 07 17.4 -0.5
KAKA Kakadu 6.49 142 eP Pn 08 07 40.4 -0.2
31nm,0.6s
KAKA eS Sn 08 08 47.6 -5.8
KAKA Kakadu 6.49 142 ePn Pn 08 07 40.7 0.0
56nm,0.2s
KAKA eSn Sn 08 08 47.6 -5.8
KAKA Kakadu 6.49 142 P Pn 08 07 40.7 +0.1
65nm,0.5s,6μm2.1nm
KNA Kununurra 8.11 177 eP Pn 08 08 04.5 +2.0
8.5nm,0.2s
KNA eS Sn 08 09 29.3 -3.2
FITZ Fitzroy Crossi 10.76 194 eP Pn 08 08 39.5 +1.5
3.3nm,0.2s
FITZ eS Sn 08 10 31.6 -5.1
FITZ Fitzroy Crossi 10.76 194 P Pn 08 08 39.6 +1.6
0.1nm,0.3s,baz=6.3,slow=9.2,SNR=1.8
FITZ S Sn 08 10 35.4 -1.3
2.7nm,0.3s,baz=92,slow=20,SNR=8.1
FITZ Fitzroy Crossi 10.76 194 P Pn 08 08 39.8 +1.8
14nm,3.0s
WRAB Tennant Creek 13.57 155 ePn Pn 08 09 15.3 +0.4
WRAB Tennant Creek 13.57 155 P Pn 08 09 16.5 +1.6
MBWA Marble Bar 15.83 211 ePn Pn 08 09 38.3 -5.0
COEN Coen 15.89 115 ePn Pn 08 09 43.6 -0.5
11nm,0.3s
COEN eSn Sn 08 12 26.7 -14
ASAR Alice Springs 16.84 162 P Pn 08 09 57.4 +1.7
0.3nm,0.3s,baz=341,slow=10,SNR=20
ASAR S S 08 12 57.7 -5.8
0.4nm,0.3s,baz=318,slow=18,SNR=5.4
STKA Stephens Creek 27.13 155 eP P 08 11 38.6 0.0
2.4nm,1.1s,mb3.6
STKA Stephens Creek 27.13 155 P P 08 11 38.6 0.0
1.3nm,0.5s,mb3.7,baz=326,slow=15,SNR=5.2
CMSA Cobar Meteorol 28.80 148 eP P 08 11 53.5 0.0
MKAR Makanchi Array 67.83 328 P P 08 16 51.5 -0.3
0.5nm,0.5s,mb3.6,baz=117,slow=8.5,SNR=6.8
KURK Kurchatov 72.18 329 P P 08 17 17.2 -1.0
0.5nm,0.5s,mb3.6,baz=127,slow=5.4,SNR=5.9
LPAZ La Paz 151.21 146 PKPbc PKPbc 08 25 47.0 +0.3
0.4nm,0.4s,baz=333,slow=2.3,SNR=5.2
LPAZ PKPab PKPab 08 25 53.7 -1.2
0.4nm,0.6s,baz=226,slow=2.1,SNR=4.8
LPAZ La Paz 151.21 146 PKPbc PKPbc 08 25 47.0 +0.3
LPAZ PKPab PKPab 08 25 53.7 -1.2

IDC 25 08:08:06.6±1.0, 10.08N×126.05E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/22, mbtmp3.9/10, Error ellipse: s-maj=76.0km s-min=20.1km az=68.0
NEIC 25 08:08:09.0±0.5, 9.89N×125.81E, h15km, mb4.9/1, Error ellipse: s-maj=27.3km s-min=9.4km az=76.0
ISCJB 25 08:08:14.3±1.0, 10.02N±0.05×126.08E±0.08, h72km±9km, mb4.0/12, Error ellipse: s-maj=13.9km s-min=8.4km az=164.4
MAN 25 08:08:15, 9.99N×125.92E, h14km, mb4.7, ML3.6, MS3.6
ISC 25 08:08:15.3±1.1, 10.02N±0.06×126.07E±0.09, h65km±10km, n32, σ1s05/38, mb4.0/12, 3D, Philippine Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BUTP Butuan 1.13 203 eP Pn 08 08 33.8 -1.5
MSLP Maasin 1.20 276 eP Pn 08 08 35.8 -0.4
PLP Palo 1.56 317⇓eP Pn 08 08 39.9 -1.1
CGP Cagayan de Oro 2.06 221⇓eP Pn 08 08 45.3 -2.5
CGP eS Sn 08 09 12.3 -0.2
LLP Lapu-Lapu 2.09 278 eP Pn 08 08 47.5 -0.6
LLP eS Sn 08 09 12.9 -0.2
TBP Tagbilaran 2.20 262 eP Pn 08 08 50.2 +0.6
TBP eS Sn 08 09 15.3 -0.4
BUKP Musuan 2.35 205 eP Pn 08 08 53.0 +1.3
CNP Catarman 2.83 331 eP Pn 08 08 58.2 0.0
SNPH Sibulan 2.87 257 eP Pn 08 09 00.9 +2.1
SNPH eS Sn 08 09 40.8 +8.6
DAV Davao City (W) 2.97 189 Pn Pn 08 09 01.1 +1.0
57nm,0.3s,baz=182,slow=5.8,SNR=2.7
DAV Sn Sn 08 09 44.7 +10
42nm,0.3s,baz=77,slow=20,SNR=3.9
DAV Davao City (W) 2.97 189 ePn Pn 08 08 52.5 -7.6
DAV Sn Sn 08 09 44.7 +10
DCPH Dipolog City 3.04 242 eP Pn 08 08 60.0 -1.0
PAGZ Pagadian 3.42 231 eP Pn 08 09 07.6 +1.3
GUIM Jordan 3.48 280 eP Pn 08 09 08.5 +1.5
RCP Roxas 3.61 295⇓eP Pn 08 09 10.1 +1.3
PVCP Virac 4.02 332 eP Pn 08 09 20.7 +6.2
ASAR Alice Springs 34.34 167 P P 08 14 56.0 0.0
1.2nm,0.7s,mb3.8,baz=9.2,slow=7.5,SNR=4.6
SONM Songino Array 41.18 340 P P 08 15 50.5 -2.9
0.5nm,0.6s,mb3.5,baz=147,slow=9.2,SNR=2.8
SONM Songino Array 41.18 340 P P 08 15 50.5 -2.9
STKA Stephens Creek 44.23 161 P P 08 16 17.8 -0.5
1.6nm,0.8s,mb3.8,baz=329,slow=15,SNR=4.1
MK31 Makanchi Array 52.11 323 eP P 08 17 19.4 +0.7
MKAR Makanchi Array 52.11 323 P P 08 17 19.2 +0.4
1.0nm,0.7s,mb4.0,baz=120,slow=8.8,SNR=7.1
MKAR Makanchi Array 52.11 323 P P 08 17 19.2 +0.4
ZALV Zalesovo Beam 54.75 331 P P 08 17 37.3 -0.7
0.9nm,0.5s,mb4.1,baz=130,slow=8.6,SNR=3.1
KURK Kurchatov 56.16 326 P P 08 17 47.5 -0.7
0.9nm,0.6s,mb4.0,baz=126,slow=6.7,SNR=5.9
ABKAR Akbulak array 66.94 319 eP P 08 18 59.7 -1.2
14nm,0.8s,mb4.8
BPAW Bear Paw Mtn. 77.97 26 eP P 08 20 07.6 +1.4
20nm,1.9s,mb4.5
ARCES ARCESS Array B 84.36 340 P P 08 20 40.7 +0.6
4.0nm,1.1s,mb4.2,baz=67,slow=6.9,SNR=4.4
ARCES ARCESS Array B 84.36 340 P P 08 20 40.6 +0.6
BRTR Keskin Array B 85.54 309 P P 08 20 46.3 -0.3
0.5nm,0.8s,mb3.5,baz=121,slow=4.8,SNR=3.9
FINES FINESS Array B 86.02 332 P P 08 20 48.5 0.0
0.7nm,0.6s,mb3.8,baz=66,slow=4.4,SNR=8.4
YKA Yellowknife Ar 94.06 24 P P 08 21 26.8 +0.6
0.5nm,0.7s,mb4.0,baz=298,slow=4.3,SNR=6.7

ISCJB 25 08:12:27.1±1.4, 31.80N±0.06×103.96E±0.09, h10km, Error ellipse: s-maj=11.6km s-min=8.1km az=169.1
IDC 25 08:12:39.3±3.5, 31.91N×105.17E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.2/26, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=84.9km s-min=40.1km az=100.0
ISC 25 08:12:29.7±1.4, 31.72N±0.06×103.88E±0.10, h10km, n6, σ1s20/11, Sichuan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LZH Lanzhou 4.35 360 ePg Pg 08 13 51.0 -2.1
LZH Sg Sg 08 14 50.3 +0.8
LZH smax
comp=N,66nm,1.2s
LZH smax
comp=E,42nm,1.0s
XAN Xi'an 4.83 60 Pn Pn 08 13 44.5 +2.1
XAN Pg Pg 08 14 02.3 +0.1
XAN Sn Sn 08 14 45.5 +7.0
XAN Sg Sg 08 15 04.3 -0.5
XAN smax
comp=N,32nm,0.7s
XAN smax
comp=E,19nm,0.8s
GYA Guiyang 5.78 154 Pg Pn 08 13 55.8 +0.3
GYA Sg Sn 08 14 58.0 -3.9
GYA smax
comp=N,60nm,0.9s
GYA smax
comp=E,60nm,0.8s
SONM Songino Array 16.21 6 Pn Pn 08 16 24.5 +7.2
comp=E,0.2nm,0.3s,baz=184,slow=12,SNR=4.5
KSRS Korea Array 20.58 67 P P 08 17 07.9 -0.8
comp=E,0.3nm,0.3s,baz=260,slow=10,SNR=7.7
ASAR Alice Springs 62.12 149 P P 08 22 59.5 +8.6
comp=E,0.2nm,0.5s,baz=338,slow=6.9,SNR=4.9

ISCJB 25 08:21:46.7±0.5, 32.58N±0.01×105.33E±0.01, h6km±3km, mb5.6/370, MS6.0/274, Error ellipse: s-maj=2.4km s-min=1.9km az=8.8
IDC 25 08:21:46.6±0.3, 32.50N×105.43E, h0km, mb5.2/36, mb1 5.2/39, mb1mx5.2/39, mbtmp5.2/39, ML4.9/3, MS5.8/28, Ms1 5.8/28, ms1mx5.7/36, Error ellipse: s-maj=8.6km s-min=6.7km az=38.0
BJI 25 08:21:47.0, 32.55N×105.48E, h14km, mB6.1/34, mb5.7/52, ML6.3/17, Ms6.4/56, Ms7 6.2/67
MOS 25 08:21:48.9±0.9, 32.59N×105.42E, h23km, mb5.9/121, MS6.1/96, Error ellipse: s-maj=5.5km s-min=3.2km az=118.4
GCMT 25 08:21:48.7±0.1, 32.57N×105.45E, h27km, MW6.1/117, Moment Tensor Solution. s104,c216; s117,c378; Duration: 2s6 Moment tensor: Scale 10^18Nm; Mrr-0.03±.01; Mθθ1.40±.01; Mφφ-1.37±.01; Mrθ0.15±.02; Mrφ-0.75±.01; Mθφ-0.12±.03; Best double couple: M0 1.58800×10^18 NP1:φs59.00000°, δ84.00000°, λ178.00000°. NP2:φs149.00000°, δ88.00000°, λ6.00000°. Principal axes: T 1.6100, Plg6.0000°, Azm14.0000°; N -0.0480, Plg83.0000°, Azm168.0000°; P -1.5660, Plg3.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.
NEIC 25 08:21:50.0±0.1, 32.56N×105.42E, h18km, mb5.8/244, MS6.0/198, MW6.0, MW6.0 Error ellipse: s-maj=2.6km s-min=2.1km az=22.0, Moment Tensor Solution. s84 Moment tensor: Scale 10^18Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0 1.10000×10^18 NP1:φs61.00000°, δ83.00000°, λ174.00000°. NP2:φs152.00000°, δ84.00000°, λ7.00000°. Principal axes: T 1.0400, Plg9.0000°, Azm16.0000°; N 0.0900, Plg80.0000°, Azm192.0000°; P -1.1200, Plg0.0000°, Azm286.0000°; Broadband fault plane solution: P waves. NP1:φs55.00000°, δ85.00000°, λ-175.00000°. NP2:φs325.00000°, δ85.00000°, λ-5.00000°. Principal axes: T Plg0.0000°, Azm190.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm280.0000°; Depth from synthetics of broadband displacement seismograms.
NEIC Eight people killed, 927 injured, at least 400,000 homes destroyed and a road blocked by a mudslide in Sichuan. Felt [IV] at Chengdu, Lanzhou and Xi'an; [III] at Chongqing. Also felt at Baoji, Dawan, Jiexiu, Xianyang, Yanan and Zigong.
TEH 25 08:21:49.0, 32.58N×105.46E, h10km

*SZGRF **25** 08:21:52.0, 33.01N×105.91E, h33km, mb6.1, MS6.2, Gansu, China*
*DJA **25** 08:21:54, 32.58N×105.19E, h39km, Mw6.5/55*
*BGS **25** 08:21:57.1±1.7, 33.51N×103.87E, h10km, mb5.5, MS6.2*
ISC 25 08:21:49.6±0.5, 32.60N±0.01×105.38E±0.01, h14km±3km, h23km±1.5km; pP-P, n1532, σ 96/1491, mb5.6/369, MS6.0/274, 122C-140D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.18**	**220**	Pn	Pn	**Pn**	**08 22 26.0**	**+0.6**
CD2				Sg	Sg	**Sg**	**08 22 58.8**	**-0.9**
CD2				smax				
	comp=N,502μm,0.9s							
XAN	**Xi'an**	**3.29**	**63**	⇑Pn	Pn	**Pn**	**08 22 41.2**	**+0.4**
XAN				Pg	Pb	**Pb**	**08 22 49.2**	**+1.4**
XAN				Sn	Sn	**Sn**	**08 23 21.5**	**+1.8**
XAN				Sg	Sb	**Sb**	**08 23 30.0**	**+2.2**
XAN				smax				
	comp=N,205μm,1.3s							
XAN				smax				
	comp=E,126μm,1.0s							
XAN				LR	LR			
	comp=N,1310μm,13.2s							
XAN				LR	LR			
	comp=E,230μm,7.4s							
XAN				LR	LR			
	comp=Z,129μm,8.4s							
LZH	**Lanzhou**	**3.70**	**340**	*e*Pn	Pn	**Pn**	**08 22 49.0**	**+2.7**
LZH				Sn	Sb	**Sb**	**08 23 38.5**	**-0.9**
LZH				Sg	Sg	**Sg**	**08 23 47.0**	**-1.4**
LZH				smax				
	comp=N,173μm,0.9s							
LZH				smax				
	comp=E,238μm,0.8s							
LZH				LR	LR			
	comp=E,442μm,7.0s							
LZH				LR	LR			
	comp=Z,463μm,7.5s							
ENH	**Enshi**	**4.21**	**122**	*e*Pn	Pn	**Pn**	**08 22 53.7**	**+0.4**
ENH				*e*Sg	Sg	**Sg**	**08 24 04.9**	**0.0**
GYA	**Guiyang**	**6.22**	**169**	⇑*i*Pn	Pn	**Pn**	**08 23 21.3**	**+0.2**
GYA				Sn	Sn	**Sn**	**08 24 30.0**	**-2.0**
GYA				smax				
	comp=N,52μm,1.0s							
GYA				smax				
	comp=E,21μm,1.0s							
GYA				LR	LR			
	comp=E,168μm,11.2s							
GYA				LR	LR			
	comp=Z,89μm,5.4s							
TIY	**Taiyuan**	**7.70**	**47**	*e*Pn	Pn	**Pn**	**08 23 40.0**	**-1.3**
TIY				Sn	Sn	**Sn**	**08 25 07.0**	**-1.4**
TIY				LR	LR			
	comp=N,86μm,6.9s							
TIY				LR	LR			
	comp=E,48μm,3.8s							
TIY				LR	LR			
	comp=Z,35μm,6.5s							
KMI	**Kunming**	**7.80**	**198**	Pn	Pn	**Pn**	**08 23 42.5**	**-0.2**
KMI				Sn	Sn	**Sn**	**08 25 14.0**	**+3.1**
KMI				smax				
	comp=N,4μm,1.6s							
KMI				smax				
	comp=E,5μm,2.1s							
KMI				LR	LR			
	comp=N,120μm,7.1s							
KMI				LR	LR			
	comp=E,174μm,9.5s							
KMI				LR	LR			
	comp=Z,108μm,12.2s							
WHN	**Wuhan**	**7.93**	**103**	⇓Pn	Pn	**Pn**	**08 23 42.8**	**-1.6**
WHN				Sn	Sn	**Sn**	**08 25 17.0**	**+3.1**
WHN				LR	LR			
	comp=Z,394μm,7.8s							
GTA	**Gaotai**	**8.15**	**328**	⇓P	Pn	**Pn**	**08 23 48.0**	**+0.5**
GTA				pP			08 23 51.5	
GTA				sP			08 23 54.0	
GTA				S	Sn	**Sn**	**08 25 20.5**	**+1.2**
GTA				pmax	pmax			
	comp=Z,83nm,1.1s							
GTA				pmax	pmax			
	comp=Z,480nm,5.1s							
GTA				LR	LR			
	comp=Z,254μm,13.4s							
BTO	**Baotou**	**8.81**	**24**	*e*P	Pn	**Pn**	**08 23 55.5**	**-1.0**
BTO				S	Sn	**Sn**	**08 25 45.0**	**+9.3**
BTO				pmax	pmax			
	comp=Z,200nm,2.3s							
BTO				LR	LR			
	comp=N,90μm,8.8s							
BTO				LR	LR			
	comp=E,41μm,4.3s							
HHC	**Hu-ho-hao-te**	**9.61**	**29**	⇑*i*P	Pn	**Pn**	**08 24 06.0**	**-1.4**
HHC				pP			08 24 13.0	
HHC				sP			08 24 17.8	
HHC				S	Sn	**Sn**	**08 25 54.0**	**-1.2**
HHC				sS			08 26 04.8	
HHC				pmax	pmax			
	comp=Z,210nm,1.3s							
HHC				pmax	pmax			
	comp=Z,4μm,5.0s							
HHC				LR	LR			
	comp=N,164μm,6.0s							
HHC				LR	LR			
	comp=E,61μm,5.2s							
HHC				LR	LR			
	comp=Z,111μm,5.5s							
TIA	**Tai'an**	**10.35**	**66**	*e*P	Pn	**Pn**	**08 24 17.5**	**-0.1**
TIA				pP			08 24 21.0	
TIA				sP			08 24 24.0	
TIA				PP			08 24 26.5	
TIA				S	Sn	**Sn**	**08 26 22.0**	**+8.6**
TIA				pmax	pmax			
	comp=Z,46nm,0.6s							
TIA				LR	LR			
	comp=N,151μm,9.0s							
NJ2	**Nanjing**	**11.41**	**89**	*e*P	Pn	**Pn**	**08 24 30.5**	**-1.7**
NJ2				pP			08 24 38.3	
NJ2				sP			08 24 41.3	
NJ2				PP			08 24 42.5	
NJ2				S	Sn	**Sn**	**08 26 39.8**	**+0.2**
NJ2				sS			08 26 49.8	
NJ2				pmax	pmax			
	comp=Z,140nm,0.9s							
NJ2				pmax	pmax			
	comp=Z,2μm,3.6s							
NJ2				LR	LR			
	comp=N,83μm,11.9s							
NJ2				LR	LR			
	comp=E,91μm,9.5s							
NJ2				LR	LR			
	comp=Z,115μm,10.7s							
BJT	**Baijiatuau**	**11.42**	**47**	*e*P	Pn	**Pn**	**08 24 31.2**	**-1.0**
BJT				pmax	pmax			
	comp=Z,445nm,0.6s							
BJT	**Baijiatuau**	**11.42**	**47**	*e*Pn	Pn	**Pn**	**08 24 31.1**	**-1.1**
	comp=Z,445nm,0.6s							
BJT				*e*Sg	Sx		08 27 41.7	
BJI	**Beijing**	**11.44**	**47**	P	Pn	**Pn**	**08 24 31.3**	**-1.2**
BJI				pmax	pmax			
	comp=Z,96nm,0.9s							
BJI				pmax	pmax			
	comp=Z,2μm,7.5s							
BJI				LR	LR			
	comp=Z,33μm,17.9s							
LSA	**Lhasa**	**12.53**	**260**	P	Pn	**Pn**	**08 24 48.3**	**+0.9**
LSA				pP			08 24 55.3	
LSA				S	Sn	**Sn**	**08 27 04.0**	**-2.8**
LSA				pmax	pmax			
	comp=Z,110nm,1.0s							
LSA				LR	LR			
	comp=N,100μm,11.0s							
LSA				LR	LR			
	comp=E,41μm,12.0s							
LSA				LR	LR			
	comp=Z,72μm,13.0s							
LSA	**Lhasa**	**12.53**	**260**	*e*P	Pn	**Pn**	**08 24 48.7**	**+1.3**
LSA				*e*			08 27 05.0	
LSA				pmax	pmax			
	comp=Z,13nm,0.9s							
LSA	**Lhasa**	**12.53**	**260**	*e*Pn	Pn	**Pn**	**08 24 48.7**	**+1.2**
	comp=Z,13nm,0.9s							
LSA				*e*Sn	Sn	**Sn**	**08 27 05.0**	**-1.7**
IMP	**Imphal**	**12.71**	**235**	*e*P	Pn	**Pn**	**08 24 48.0**	**-1.9**
IMP				*ex*	x		08 28 28.0	
HKC	**Hong Kong Obse**	**12.89**	**141**	P	Pn	**Pn**	**08 24 51.0**	**-1.4**
HKC				S	Sn	**Sn**	**08 27 16.0**	**+0.3**
SSE	**Sheshan**	**13.53**	**92**	P	Pn	**Pn**	**08 24 59.3**	**-1.8**
SSE				S	Sn	**Sn**	**08 27 32.5**	**+1.3**
SSE				pmax	pmax			
	comp=Z,41nm,0.7s							
SSE				pmax	pmax			
	comp=Z,1μm,6.6s							
SSE				LR	LR			
	comp=N,166μm,12.5s							
SSE				LR	LR			
	comp=E,55μm,12.5s							
SSE				LR	LR			
	comp=Z,105μm,9.1s							
CHRT	**Chiangrai**	**13.63**	**203**	P	Pn	**Pn**	**08 25 02.0**	**-0.6**
	comp=Z,2μm,0.9s							
SHL	**Shillong**	**13.72**	**243**	*ex*	Pn	**Pn**	**08 25 01.8**	**-1.9**
SHL				*ex*	Sn	**Sn**	**08 27 42.0**	**+6.1**
QZH	**Quanzhou**	**13.87**	**120**	⇓*i*P	Pn	**Pn**	**08 25 03.0**	**-2.8**
QZH				S	Sn	**Sn**	**08 27 38.3**	**-1.3**
QZH				pmax	pmax			
	comp=Z,660nm,1.0s							
QZH				pmax	pmax			
	comp=Z,4μm,8.8s							
QZH				LR	LR			
	comp=Z,356μm,12.2s							
QIZ	**Qiongzhong**	**14.10**	**162**	P	Pn	**Pn**	**08 25 06.8**	**-2.2**
QIZ				pP			08 25 10.8	
QIZ				sP			08 25 14.3	
QIZ				S	Sn	**Sn**	**08 27 47.3**	**+2.0**
QIZ				sS			08 27 52.5	
QIZ				SS			08 28 04.5	
QIZ				pmax	pmax			
	comp=Z,60nm,1.0s							
QIZ				LR	LR			
	comp=N,88μm,13.9s							
QIZ				LR	LR			
	comp=E,193μm,13.4s							
QIZ				LR	LR			
	comp=Z,86μm,11.1s							
QIZ	**Qiongzhong**	**14.10**	**162**	*e*Pn	Pn	**Pn**	**08 25 06.4**	**-2.5**
	comp=Z,294nm,0.9s							
QIZ				*e*Sn	Sn		08 27 21.6	-24
DL2	**Dalian**	**14.61**	**60**	⇑*i*P	Pn	**Pn**	**08 25 17.0**	**+1.2**
DL2				S	Sn	**Sn**	**08 28 00.0**	**+2.5**
DL2				pmax	pmax			
	comp=Z,400nm,1.4s							
DL2				pmax	pmax			
	comp=Z,3μm,5.8s							
DL2				LR	LR			
	comp=N,94μm,19.6s							
DL2				LR	LR			
	comp=E,71μm,18.0s							
DL2				LR	LR			
	comp=Z,61μm,11.7s							
CHG	**Chiang Mai**	**14.90**	**204**	⇑P	Pn	**Pn**	**08 25 18.2**	**-1.7**
	comp=Z,395nm,0.9s							
CHTO	**Chiang Mai**	**14.90**	**204**	*e*Pn	Pn	**Pn**	**08 25 18.5**	**-1.4**
CHTO				*e*Sn	Sn	**Sn**	**08 28 03.5**	**-1.3**
CHTO	**Chiang Mai**	**14.90**	**204**	P	Pn	**Pn**	**08 25 18.8**	**-1.0**
	SNR=176							
CHTO				P			08 25 18.8	
	SNR=176							
TURI	**Tura**	**14.90**	**246**	*e*P	Pn	**Pn**	**08 25 19.0**	**-0.9**
TURI				*ex*	x		08 26 45.0	
CM31	**Chiang Mai Arr**	**15.23**	**204**	*e*Pn	Pn	**Pn**	**08 25 23.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**15.23**	**204**	Pn	Pn	**Pn**	**08 25 23.3**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=15,slow=11,SNR=157							
CMAR				Sn	Sn	**Sn**	**08 28 22.1**	**+9.3**
	baz=20,slow=9.3,SNR=2.9							
CMAR				Lg			08 29 54.1	
	baz=19,slow=7.9,SNR=2.5							
CMAR				LR	LR		08 32 05.0	
	comp=Z,32μm,18.5s,baz=18,slow=41							
CMAR	**Chiang Mai Arr**	**15.23**	**204**	P	Pn	**Pn**	**08 25 23.3**	**-1.0**
CMAR							08 28 22.2	
SONM	**Songino Array**	**15.23**	**3**	Pn	Pn	**Pn**	**08 25 24.1**	**-0.1**
	comp=Z,4.1nm,0.3s,baz=185,slow=14,SNR=286							
SONM				Sn	Sn	**Sn**	**08 28 19.4**	**+6.8**
	comp=Z,3.7nm,0.3s,baz=182,slow=14,SNR=2.8							
SONM				Lg			08 29 50.6	
	comp=Z,5.9nm,0.3s,baz=208,slow=25,SNR=4.1							
SONM				LR	LR		08 32 02.2	
	comp=Z,60μm,19.7s,baz=180,slow=40							
SONM				P3KPbc			09 00 57.2	
	comp=Z,0.2nm,0.3s,baz=10,slow=8.8,SNR=2.5							
SONM	**Songino Array**	**15.23**	**3**	P	Pn	**Pn**	**08 25 24.1**	**-0.1**
SONM							08 28 19.4	
SONM	**Songino Array**	**15.23**	**3**	Pn	Pn	**Pn**	**08 25 24.1**	**-0.1**
SONM				Sn	Sn	**Sn**	**08 28 19.4**	**+6.8**
SONM				Lg			08 29 50.6	
SONM				LR	LR		08 32 02.2	
ULN	**Ulaanbaatar**	**15.30**	**4**	*e*Pn	Pn	**Pn**	**08 25 22.9**	**-2.1**
ULN				*e*Sn	Sn	**Sn**	**08 28 22.8**	**+8.6**
ULN	**Ulaanbaatar**	**15.30**	**4**	P	Pn	**Pn**	**08 25 23.5**	**-1.5**
	SNR=388							
ULN				P			08 25 23.5	
	SNR=388							
GTK	**Gangtok**	**15.44**	**254**	*e*P	Pn	**Pn**	**08 25 28.0**	**+1.0**
TATO	**Taipei**	**16.03**	**114**	*e*Pn	Pn	**Pn**	**08 25 33.1**	**-1.6**
	comp=Z,2μm,1.1s							
TATO				*e*S	Sn	**Sn**	**08 28 41.4**	**+9.2**
TAPN	**Taplejung**	**16.18**	**256**	*e*P	Pn	**Pn**	**08 25 33.0**	**-3.5**
	comp=Z,2μm,1.0s							
BDT	**Bhumibol Dam**	**16.34**	**202**	P	Pn	**Pn**	**08 25 37.0**	**-1.7**
	comp=Z,233nm,1.0s							
KKTK	**Khon Kaen**	**16.36**	**189**	P	Pn	**Pn**	**08 25 36.0**	**-2.9**
	comp=Z,864nm,0.5s							
ODAN	**Odare**	**16.63**	**255**	*e*P	Pn	**Pn**	**08 25 39.2**	**-3.2**
	comp=Z,2μm,1.1s							
SNY	**Shenyang**	**17.15**	**52**	⇓P	Pn	**Pn**	**08 25 48.5**	**-0.2**
SNY				S	Sn	**Sn**	**08 28 58.5**	**-0.7**
SNY				pmax	pmax			
	comp=Z,170nm,2.0s							
SNY				pmax	pmax			
	comp=Z,6μm,11.2s							
SNY				LR	LR			
	comp=N,139μm,19.2s							
SNY				LR	LR			
	comp=E,71μm,15.6s							
SNY				LR	LR			
	comp=Z,64μm,16.9s							
RAMN	**Ramite**	**17.24**	**256**	*e*P	Pn	**Pn**	**08 25 46.4**	**-3.6**
UBT	**Ubonrachathani**	**17.28**	**181**	PN	Pn	**Pn**	**08 25 52.0**	**+1.4**
	comp=Z,486nm,1.0s							
JIRN	**Jiri**	**17.31**	**258**	*e*P	Pn	**Pn**	**08 25 48.1**	**-2.8**
	comp=Z,1μm,1.0s							
GUN	**Gumba**	**17.48**	**260**	*e*P	Pn	**Pn**	**08 25 49.7**	**-3.3**
	comp=Z,2μm,0.8s							
NST	**Nakhon Sawan**	**17.52**	**197**	⇑P	Pn	**Pn**	**08 25 53.0**	**-0.5**
	comp=Z,400nm,1.2s							
WMQ	**Urumqi**	**17.81**	**314**	P	Pn	**Pn**	**08 25 56.5**	**-0.4**
WMQ				sP	sP		08 26 04.0	+0.6
WMQ				S	Sn	**Sn**	**08 29 12.5**	**-2.6**
WMQ				sS	sS		08 29 18.5	-10
WMQ				SS			08 29 35.5	
WMQ				PcP	PcP		08 30 35.5	+1.8
WMQ				pmax	pmax			
	comp=Z,460nm,1.8s							
WMQ				pmax	pmax			
	comp=Z,4μm,5.0s							
WMQ				LR	LR			
	comp=Z,90μm,18.0s							
ZAK	**Zakamensk**	**17.83**	**356**	*e*P	Pn	**Pn**	**08 25 56.8**	**-0.4**
ZAK				pmax	pmax			
	comp=Z,293nm,1.4s							
PKI	**Pulchoki**	**17.99**	**259**	*e*P	Pn	**Pn**	**08 25 55.9**	**-3.4**
	comp=Z,2μm,1.1s							
PKI	**Pulchoki**	**17.99**	**259**	*e*P	Pn	**Pn**	**08 25 56.1**	**-3.2**
	comp=Z,1μm,0.8s							
PKIN	**Phulchoki**	**18.00**	**259**	*e*P	Pn	**Pn**	**08 25 56.1**	**-3.3**
	comp=Z,1μm,0.8s							
KKN	**Kakani**	**18.02**	**260**	*e*P	Pn	**Pn**	**08 25 56.1**	**-3.5**
	comp=Z,2μm,1.1s							
INCN	**Inchon**	**18.06**	**68**	*e*Pn	Pn	**Pn**	**08 25 59.7**	**-0.4**
	comp=Z,4μm,2.2s							
CAL	**Calcutta**	**18.11**	**241**	*e*P	Pn	**Pn**	**08 26 01.1**	**+0.3**
CAL				⇓*ex*	x		08 29 19.6	
DMN	**Daman**	**18.23**	**259**	*e*P	Pn	**Pn**	**08 25 58.8**	**-3.4**
	comp=Z,2μm,1.0s							
KSRS	**Korea Array**	**19.07**	**69**	P	Pn	**Pn**	**08 26 11.7**	**-0.7**
	comp=Z,4.2nm,0.3s,baz=255,slow=10,SNR=214							
KSRS				S	Sn	**Sn**	**08 29 43.4**	**-2.4**
	baz=242,slow=9.7,SNR=1.8							
KSRS				Lg			08 31 50.8	
	comp=Z,0.6nm,0.3s,baz=259,slow=29,SNR=5.3							
KSRS				LR	LR		08 34 29.0	
	comp=Z,33μm,18.6s,baz=263,slow=40							
KSRS				P3KP			09 01 23.4	
	comp=Z,0.1nm,0.3s,baz=81,slow=3.9,SNR=4.5							
KSRS	**Korea Array**	**19.07**	**69**	P	Pn	**Pn**	**08 26 11.7**	**-0.7**
KSRS				S	Sn	**Sn**	**08 29 43.4**	**-2.5**
KSRS				pmax	pmax			
	comp=Z,4.0nm,0.3s							
KSRS				MLR	MLR			
	comp=Z,33μm,18.6s							
TLY	**Talaya**	**19.11**	**357**	Pn	Pn	**Pn**	**08 26 13.2**	**+0.5**
	comp=Z,1μm,1.1s,SNR=70							
TLY	**Talaya**	**19.11**	**357**	*i* P	Pn	**Pn**	**08 26 13.4**	**+0.7**
TLY				*e*S	Sn	**Sn**	**08 29 42.6**	**-3.8**
TLY				pmax	pmax			
	comp=Z,287nm,1.5s							
TLY	**Talaya**	**19.11**	**357**	*e*Pn	Pn	**Pn**	**08 26 13.4**	**+0.7**
	comp=Z,332nm,1.1s							
TLY	**Talaya**	**19.11**	**357**	P	Pn	**Pn**	**08 26 13.8**	**+1.1**
	SNR=74							
TLY				P			08 26 13.8	
	SNR=74							
BBP	**Basco**	**19.13**	**125**	*e*P	Pn	**Pn**	**08 26 12.7**	**-0.5**
CN2	**Changchun**	**19.28**	**49**	⇑P	Pn	**Pn**	**08 26 14.5**	**-0.4**
CN2				*e*pP	pP		08 26 18.3	+0.5
CN2				*e*sP	sP		08 26 21.5	+1.9
CN2				*e*S	Sn	**Sn**	**08 29 45.0**	**-5.8**
CN2				pmax	pmax			
	comp=Z,80nm,1.0s							
CN2				LR	LR			
	comp=N,71μm,17.0s							
CN2				LR	LR			
	comp=E,86μm,17.0s							
CN2				LR	LR			
	comp=Z,93μm,15.0s							
IRK	**Irkutsk**	**19.64**	**358**	⇑*i*P	Pn	**Pn**	**08 26 20.2**	**+1.1**
IRK				pmax	pmax			
	comp=Z,2μm,3.4s							
PIP	**Pasuquin**	**19.75**	**132**	⇓*e*P	Pn	**Pn**	**08 26 19.9**	**-0.7**
HIA	**Hailar**	**19.81**	**29**	*e*P	Pn	**Pn**	**08 26 20.7**	**-0.5**
HIA				*e*S	Sn	**Sn**	**08 30 02.3**	**-1.2**
HIA				pmax	pmax			
	comp=Z,1μm,1.2s							
HIA	**Hailar**	**19.81**	**29**	*e*Pn	Pn	**Pn**	**08 26 20.7**	**-0.5**
	comp=Z,1μm,1.2s							
HIA				*e*S	Sn	**Sn**	**08 30 02.3**	**-1.2**
CIT	**Chita**	**20.30**	**15**	*e*P	P	**P**	**08 26 26.0**	**+1.1**
CIT				*e*			08 26 39.0	
CIT				*e*			08 26 44.8	
CIT				*e*			08 26 52.4	
CIT				pmax	pmax			
	comp=Z,2μm,2.6s							
APYP	**Conner**	**20.49**	**132**	*e*P	P	**P**	**08 26 29.8**	**+2.6**
JOW	**Kunigami**	**20.68**	**100**	P	P	**P**	**08 26 29.2**	**-0.1**
	comp=Z,160nm,0.7s,baz=275,slow=6.4,SNR=41							
JOW				S	S	**S**	**08 30 22.2**	**+2.2**
	comp=Z,52nm,1.0s,baz=69,slow=19,SNR=3.2							
JOW	**Kunigami**	**20.68**	**100**	P	P	**P**	**08 26 29.2**	**-0.1**
JOW				S	S	**S**	**08 30 22.2**	**+2.2**
BOLP	**Bolinao**	**20.84**	**137**	*e*P	P	**P**	**08 26 34.3**	**+3.4**
CAUP	**Cauayan**	**21.54**	**132**	*e*P	P	**P**	**08 26 41.4**	**+2.9**
PTH	**Pithoragarh**	**21.75**	**269**	*e*P	P	**P**	**08 26 39.8**	**-0.9**
PALP	**Palanan**	**21.83**	**131**	*e*P	P	**P**	**08 26 49.2**	**+7.6**
JOSI	**Joshimath**	**22.08**	**272**	*e*P	P	**P**	**08 26 45.0**	**+0.8**
MDJ	**Mudanjiang**	**22.31**	**50**	P	P	**P**	**08 26 47.0**	**+0.4**
MDJ				*e*Pn	Pn	**Pn**	**08 26 51.8**	-0.6
MDJ				S	S	**S**	**08 30 51.3**	**-0.4**
MDJ				PcS	PcS		08 34 21.3	+0.8
MDJ				pmax	pmax			
	comp=Z,150nm,1.6s,mb5.2							
MDJ				pmax	pmax			
	comp=Z,2μm,6.8s							
MDJ				LR	LR			
	comp=N,71μm,15.6s,MS6.3							
MDJ				LR	LR			
	comp=E,55μm,15.6s,MS6.3							
MDJ				LR	LR			
	comp=Z,51μm,17.3s,MS6.0							
MDJ	**Mudanjiang**	**22.31**	**50**	*e*P	P	**P**	**08 26 46.8**	**+0.2**
	comp=Z,425nm,1.0s,mb5.8							
MDJ				*e*S	S	**S**	**08 30 53.0**	**+1.4**
MDJ				LR	LR			
	comp=Z,29μm,19.0s,MS5.7							
BALP	**Baler**	**22.31**	**135**	*e*P	P	**P**	**08 26 48.5**	**+1.7**
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	P	**P**	**08 26 50.3**	**+0.5**
MK31				*e*S	S	**S**	**08 30 59.1**	**+1.6**
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	P	**P**	**08 26 50.3**	**+0.5**
MK31				*e*S	S	**S**	**08 30 59.1**	**+1.6**
MK31				*e*ScP	ScP		08 34 17.8	-1.9
MKAR	**Makanchi Array**	**22.61**	**316**	P	P	**P**	**08 26 50.0**	**+0.3**
	comp=Z,135nm,1.0s,mb5.3,baz=112,slow=8.6,SNR=196							
MKAR				S	S	**S**	**08 30 57.5**	**+0.1**
	comp=Z,17nm,0.8s,baz=95,slow=8.6,SNR=2.1							
MKAR				Lg			08 33 51.7	
	comp=Z,12nm,1.0s,baz=108,slow=19,SNR=2.5							
MKAR				ScP	ScP		08 34 16.8	-3.0
	comp=Z,12nm,0.9s,baz=103,slow=3.9,SNR=3.8							
MKAR				LR	LR		08 35 23.2	
	comp=Z,73μm,19.0s,MS6.1,baz=111,slow=36							
MKAR				P3KPbc			09 00 33.8	
	comp=Z,1.7nm,1.0s,baz=318,slow=1.6,SNR=8.4							
MKAR	**Makanchi Array**	**22.61**	**316**	P	P	**P**	**08 26 50.1**	**+0.3**
MKAR				S	S	**S**	**08 30 57.5**	**0.0**
MKAR	**Makanchi Array**	**22.61**	**316**	P	P	**P**	**08 26 50.0**	**+0.3**
MKAR				S	S	**S**	**08 30 57.5**	**+0.1**
MKAR				Lg			08 33 51.7	
MKAR				ScP	ScP		08 34 16.8	-3.0
MKAR				LR	LR		08 35 23.2	
KLP	**Kalpa**	**23.00**	**275**	*e*P	P	**P**	**08 26 54.4**	**+0.5**
KLP				AMb	AMB		08 27 11.4	
	comp=Z,862nm,1.0s,mb6.1							
LUBP	**Lubang**	**23.18**	**141**	*e*P	P	**P**	**08 26 57.1**	**+1.1**
TGY	**Tagaytay City**	**23.25**	**139**	P	P	**P**	**08 26 58.0**	**+1.2**
	comp=Z,148nm,0.4s,mb5.8,baz=217,slow=13,SNR=8.6							
VLA	**Vladivostok**	**23.33**	**56**	*d i*P	P	**P**	**08 26 56.6**	**-0.8**
VLA				*e**PP			08 27 05.5	
VLA				*e*			08 27 21.6	
VLA				*e*S	S	**S**	**08 31 06.7**	**-2.6**
VLA				*e**SS	sS		08 31 21.0	+4.7
VLA				pmax	pmax			
	comp=Z,106nm,1.0s,mb5.2							
VLA				MLR	MLR			
	comp=Z,46μm,15.0s,MS6.1							
DDI	**Dehra Dun**	**23.39**	**272**	⇓*i*P	P	**P**	**08 26 57.0**	**-1.2**
DDI				*e*S	S	**S**	**08 31 10.0**	**-0.6**
SMLA	**Simla**	**23.98**	**274**	*i* P	P	**P**	**08 27 03.9**	**+0.2**
SDNR	**Sundarnagar**	**24.08**	**275**	*e*P	P	**P**	**08 27 06.1**	**+1.5**
SDNR				*ex*	x		08 31 31.1	
GQP	**Guinayangan**	**24.27**	**136**	⇓*e*P	P	**P**	**08 27 08.6**	**+2.2**
BOAC	**Boac**	**24.28**	**138**	*e*P	P	**P**	**08 27 07.5**	**+1.0**
AGRA	**Agra**	**24.34**	**264**	*e*P	P	**P**	**08 27 06.5**	**-0.5**
AGRA				AMb	AMB		08 27 19.2	
	comp=Z,1μm,1.6s,mb6.0							
BISR	**Bishrakh**	**24.35**	**268**	*e*P	P	**P**	**08 27 06.8**	**-0.3**
BISR				AMb	AMB		08 27 28.2	
	comp=Z,1μm,1.2s,mb6.2							
NDI	**New Delhi**	**24.51**	**268**	*e*P	P	**P**	**08 27 08.0**	**-0.6**
NDI				*ex*	x		08 31 41.0	
KKR	**Kurukshetra**	**24.52**	**271**	*e*P	P	**P**	**08 27 09.1**	**+0.5**
BHK	**

comp=Z,13μm,4.4s
AAA MLR MLR
comp=Z,46μm,15.0s,MS6.1
SONA Sohna 24.75 267 *e*P **P** **08 27 10.8 +0.1**
DLH Dalhousie 24.75 278 *e*P **P** **08 27 12.0 +1.2**
DLH *ex* x 08 31 50.0
VIS Vishakhapatnam 24.78 239 *i* x **P** **08 27 16.4 +5.3**
VIS *ex* x 08 27 24.9
comp=Z,302nm,1.6s
VIS *i* S **S** **08 31 32.5 -0.7**
AUQP San Andres 24.87 137 *e*P **P** **08 27 14.4 +2.5**
ENPP El Nido 24.91 146 *e*P **P** **08 27 12.5 +0.2**
ULHL Ulahol 24.96 301 P **P** **08 27 14.1 +1.6**
SNR=121
THN Thein Dam 24.98 278 *e*P **P** **08 27 11.2 -1.6**
THN *ex* x 08 35 56.1
OTRP Odiongan 25.28 139 *e*P **P** **08 27 18.6 +3.0**
PVCP Virac 25.54 133 *e*P **P** **08 27 19.7 +1.7**
TKM2 Tokmak 2 25.58 302 P **P** **08 27 19.5 +1.4**
SNR=103
TKM2 Tokmak 2 25.58 302 PFAKE 08 27 30.0 +12
TKM2 LR LR
comp=Z,52μm,21.0s,MS6.0
KZA Kyzart 25.64 300 P **P** **08 27 20.9 +2.2**
SNR=224
KLR Kul'dur 25.75 42⇓ *i*P **P** **08 27 15.9 -3.7**
KLR pmax pmax
comp=Z,730nm,1.8s,mb5.9
KLR pmax pmax
comp=E,2μm,7.5s
KLR pmax pmax
comp=Z,4μm,7.5s
PPR Puerto Princes 25.85 149⇑ *i*P **P** **08 27 21.2 +0.4**
KHET Khetri 25.88 268 *e*P **P** **08 27 20.9 -0.1**
ZAA0 Zalesovo Array 25.88 332 *e*P **P** **08 27 21.1 +0.3**
ZALV Zalesovo Beam 25.88 332 P **P** **08 27 21.2 +0.5**
comp=Z,74nm,0.9s,mb5.2,baz=130,slow=8.6,SNR=99
ZALV S **S** **08 31 53.6 +3.5**
comp=Z,10nm,0.8s,baz=355,slow=33,SNR=2.4
ZALV Lg 08 35 21.8
comp=Z,5.4nm,0.8s,baz=118,slow=8.9,SNR=4.3
ZALV LR LR 08 38 12.9
comp=Z,11μm,21.9s,MS5.4,baz=137,slow=38
ZALV P3KPbc 09 00 17.2
comp=Z,1.3nm,0.6s,baz=316,slow=6.2,SNR=6.0
ZALV Zalesovo Beam 25.88 332 P **P** **08 27 21.2 +0.4**
ZALV S **S** **08 31 53.6 +3.5**
ZALV Zalesovo Beam 25.88 332 P **P** **08 27 21.2 +0.5**
ZALV S **S** **08 31 53.6 +3.5**
ZALV Lg 08 35 21.8
ZALV LR LR 08 38 12.9
ZALV *e* 09 00 17.2
BOD Bodaibo 25.89 11⇓ *i*P **P** **08 27 21.6 +0.8**
BOD pmax pmax
comp=Z,382nm,1.4s,mb5.7
KBK Karagaybulak 25.98 301 P **P** **08 27 23.5 +1.7**
SNR=81
CUYO Cuyo Island 26.00 143 *e*P **P** **08 27 23.1 +0.9**
NGP Nagpur 26.04 251 *i* P **P** **08 27 19.3 -3.2**
NGP *ex* x 08 27 36.2
comp=Z,600nm,2.0s
NGP *e*S **S** **08 31 48.5 -4.6**
CHMS Chumysh 26.20 302 P **P** **08 27 25.4 +1.6**
SNR=20
UCH Uchtor 26.21 300 P **P** **08 27 25.9 +2.1**
SNR=179
UCH Uchtor 26.21 300 PFAKE 08 27 30.0 +6.1
UCH LR LR
comp=Z,33μm,21.0s,MS5.8
FRU Bishkek 26.26 302 *i* P **P** **08 27 26.0 +1.7**
FRU *e*S **S** **08 31 58.0 +1.7**
FRU *e* 08 32 10.0
FRU pmax pmax
comp=Z,920nm,2.0s,mb6.0
AAK Ala-Archa 26.30 301 P **P** **08 27 26.5 +1.8**
comp=Z,593nm,1.3s,mb6.0,SNR=52
AAK Ala-Archa 26.30 301 P **P** **08 27 26.1 +1.3**
SNR=17
AAK Ala-Archa 26.30 301 P **P** **08 27 25.8 +1.0**
comp=Z,34nm,0.9s,mb4.9,baz=130,slow=6.9,SNR=34
AAK S **S** **08 32 07.5 +10**
comp=Z,16nm,0.9s,baz=3.2,slow=18,SNR=1.5
AAK LR LR 08 38 19.1
comp=Z,54μm,19.9s,MS6.1,baz=317,slow=38
AAK Ala-Archa 26.30 301 *e*P **P** **08 27 26.0 +1.3**
comp=Z,329nm,1.1s,mb5.8
AAK LR LR
comp=Z,45μm,22.0s,MS6.0
AAK Ala-Archa 26.30 301 P **P** **08 27 26.3 +1.6**
SNR=176
AAK P 08 27 26.3
SNR=176
RCP Roxas 26.33 139⇓ *e*P **P** **08 27 25.5 +0.3**
BATP Bataraza 26.34 151 *e*P **P** **08 27 25.5 +0.3**
BHPL Bhopal 26.34 256 *e*P **P** **08 27 25.4 +0.3**
BHPL *ex* x 08 31 49.7
USP Ospenovka 26.44 303 P **P** **08 27 26.9 +1.0**
SNR=35
CNP Catarman 26.69 134 *e*P **P** **08 27 29.7 +1.3**
KURK Kurchatov 26.74 320 P **P** **08 27 28.5 0.0**
comp=Z,58nm,1.0s,mb5.1,baz=139,slow=8.6,SNR=54
KURK S **S** **08 32 10.7 +7.0**
comp=Z,14nm,0.9s,baz=118,slow=12,SNR=2.0
KURK Lg 08 36 01.1
comp=Z,5.8nm,0.9s,baz=106,slow=39,SNR=4.5
KURK LR LR 08 40 09.4
comp=Z,6μm,18.2s,MS5.2,baz=115,slow=41
KURK P3KPbc 09 00 14.1
comp=Z,2.1nm,1.1s,baz=298,slow=3.8,SNR=6.5
KURK P3KP 09 01 01.5
comp=Z,1.2nm,1.0s,baz=302,slow=4.4,SNR=3.9
KURK Kurchatov 26.74 320 P **P** **08 27 28.5 0.0**
KURK S **S** **08 32 10.7 +7.0**
KURK pmax pmax
comp=Z,59nm,1.0s,mb5.1
KURK smax
comp=N,14nm,0.9s
KURK MLR MLR
comp=Z,6μm,18.3s,MS5.2
KURK Kurchatov 26.74 320 *e*P **P** **08 27 28.7 +0.2**
comp=Z,352nm,1.0s,mb5.8
KURK LR LR
comp=Z,39μm,20.0s,MS6.0
KURK Kurchatov 26.74 320 P **P** **08 27 29.2 +0.7**
SNR=238
KURK P 08 27 29.2
SNR=238
EKS2 Erkin-Say 26.83 301 P **P** **08 27 30.7 +1.3**
SNR=17
EKS2 Erkin-Say 26.83 301 PFAKE 08 27 40.0 +11
EKS2 LR LR
comp=Z,54μm,22.0s,MS6.1
NVS Novosibirsk 27.17 331 *i* P **P** **08 27 33.0 +0.6**
NVS *e*S **S** **08 31 59.3 -11**
NVS pmax pmax
comp=Z,420nm,1.8s,mb5.7
NVS pmax pmax
comp=N,428nm,1.7s
NVS pmax pmax
comp=E,353nm,1.9s
NVS smax
comp=N,362nm,1.9s
NVS smax
comp=E,270nm,2.2s
KTGM Kuala Trenggan 27.22 185 P **P** **08 27 33.9 +0.8**
MAJO Matsushiro 27.24 73 *e*P **P** **08 27 31.5 -1.7**
MAJO pmax pmax
comp=Z,233nm,1.0s,mb5.7
MAJO MLR MLR
comp=Z,16μm,22.0s,MS5.5
MAJO Matsushiro 27.24 73 *e*P **P** **08 27 31.5 -1.7**
comp=Z,233nm,1.0s,mb5.7
MAJO LR LR
comp=Z,16μm,22.0s,MS5.5
MAT Matsushiro 27.24 73 P **P** **08 27 30.6 -2.6**
MAT S **S** **08 32 09.0 -2.9**
MJAR Matsushiro Arr 27.24 73 P **P** **08 27 31.7 -1.5**
comp=Z,16nm,0.9s,mb4.5,baz=273,slow=10,SNR=24
MJAR LR LR 08 37 12.4
comp=Z,15μm,20.9s,MS5.5,baz=275,slow=34
HABR Khabarovsk 27.34 46 *de*P **P** **08 27 31.3 -2.7**
HABR *e**PP pP 08 27 40.2 +2.0
HABR *e**PP pP 08 27 40.2 +2.0
HABR *e*PPP 08 28 23.7
HABR *e* 08 30 49.8
HABR *e*S **S** **08 32 09.0 -4.2**
HABR *e**SS sS 08 32 24.9 +4.7
HABR pmax pmax
comp=Z,83nm,1.8s,mb5.0
AJM Ajmer 27.37 265 *e*P **P** **08 27 33.9 -0.6**
AJM *ex* x 08 32 12.7
NRGR Nerungri 27.52 23 *i* P **P** **08 27 37.0 +1.5**
KULM Kulim 27.53 190 P **P** **08 27 36.0 +0.1**
KULM Kulim 27.53 190 *e*P **P** **08 27 35.2 -0.7**
comp=Z,374nm,1.5s,mb5.8
KULM *e*S **S** **08 32 21.4 +4.7**
KULM LR LR
comp=Z,17μm,20.0s,MS5.6
KDM Kudat 27.69 155 P **P** **08 27 37.8 +0.4**
CLNS Chul'man 27.72 23 *e*P **P** **08 27 38.1 +0.8**
CLNS *e* 08 28 33.3
CLNS *e*PPP 08 28 43.1
CLNS pmax pmax
comp=E,53nm,1.1s
CLNS pmax pmax
comp=Z,121nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,82nm,1.0s
CLNS pmax pmax
comp=N,161nm,1.3s
CLNS pmax pmax
comp=E,95nm,1.4s
CLNS pmax pmax
comp=Z,140nm,1.5s,mb5.4
CLNS MLR MLR
comp=N,47μm,14.0s,MS6.4
CLNS MLR MLR
comp=Z,64μm,14.0s,MS6.3
CLNS MLR MLR
comp=E,50μm,15.0s,MS6.4
OCLP Ormoc 27.81 136 *e*P **P** **08 27 42.6 +4.2**
PLP Palo 27.94 135⇓ *e*P **P** **08 27 39.7 +0.1**
LLP Lapu-Lapu 28.03 138 *e*P **P** **08 27 40.6 +0.1**
IPM Ipoh 28.27 189 P **P** **08 27 41.6 -1.0**
KKM Kota Kinabalu 28.29 157 P **P** **08 27 42.9 +0.1**
KKM Kota Kinabalu 28.29 157 *e*P **P** **08 27 42.2 -0.5**
comp=E,824nm,1.8s,mb6.1
KKM LR LR
comp=Z,19μm,19.0s,MS5.7
SNPH Sibulan 28.43 141 *e*P Px 08 27 54.4
TBP Tagbilaran 28.49 139 *e*P **P** **08 27 44.6 +0.1**
HYB Hyderabad 28.52 244 *i* P **P** **08 27 44.5 -0.3**
comp=Z,160nm,1.0s,mb5.7
HYB *e* pP 08 27 50.0 +0.9
HYB *e*S **S** **08 32 28.0 -4.3**
HYB LR LR 08 39 36.0
comp=Z,18nm,20.0s
MSLP Maasin 28.69 137 *e*P **P** **08 27 47.7 +1.3**
JHJ Hachijo jima 2 28.83 80 P **P** **08 27 46.4 -1.0**
comp=Z,129nm,0.9s,mb5.7,baz=72,slow=20,SNR=2.7
JHJ LR LR 08 39 30.3
comp=Z,19μm,20.0s,MS5.7,baz=81,slow=37
SDKM Sandakan 29.00 155 P **P** **08 27 49.5 +0.4**
FRIM Kepong 29.42 188 P **P** **08 27 53.0 +0.2**
LATR Latur 29.48 248 *e*P **P** **08 27 53.0 -0.3**
PAGZ Pagadian 29.77 142 *e*P **P** **08 28 02.4 +6.5**
MYLDM Lahad Datu 29.91 153 P **P** **08 27 59.0 +1.8**
BTM Bintulu 30.13 165 P **P** **08 28 00.2 +1.1**
KBL Kabul 30.24 284 *e*P **P** **08 28 01.0 +1.1**
KBL pmax pmax
comp=Z,215nm,1.0s,mb5.8
KBL Kabul 30.24 284 *e*P **P** **08 28 01.0 +1.1**
comp=Z,215nm,1.0s,mb5.8
PSI Prapat 30.26 193 P **P** **08 28 00.0 -0.2**
comp=Z,89nm,0.7s,mb5.6,baz=342,slow=8.0,SNR=65
PSI S **S** **08 32 58.9 -0.7**
comp=Z,7.1nm,0.7s,baz=288,slow=10,SNR=6.3
PSI Lg 08 37 51.6
comp=Z,3.6nm,0.4s,baz=152,slow=12,SNR=4.0
PSI Prapat 30.26 193 P **P** **08 28 00.0 -0.2**
PSI S **S** **08 32 58.9 -0.7**
JASL Jaisalmer 30.37 268 *e*P **P** **08 28 00.9 -0.3**
KGM Kluang 30.49 184 P **P** **08 28 02.6 +0.3**
TSM Tawau 30.50 155 P **P** **08 28 03.1 +0.8**
BUKP Musuan 30.64 139 *e*P **P** **08 28 09.6 +6.0**
SBUM Sibu 30.68 167 P **P** **08 28 05.1 +1.2**
MYKOM Kota Tinggi 30.68 183 P **P** **08 28 04.4 +0.5**
ASAJ Asahikawa 31.12 57 P **P** **08 28 06.4 -1.2**
comp=Z,9.8nm,0.5s,mb4.9,baz=262,slow=13,SNR=7.6
ASAJ S **S** **08 33 06.8 -5.9**
comp=Z,14nm,1.1s,baz=169,slow=16,SNR=2.1
ASAJ Asahikawa 31.12 57 P **P** **08 28 06.4 -1.2**
ASAJ S **S** **08 33 06.8 -5.8**
ASAJ pmax pmax
comp=Z,10.0nm,0.5s
ASAJ smax
comp=N,14nm,1.1s
ERM Erimo 31.27 62 *ce*P **P** **08 28 09.3 +0.4**
ERM pmax pmax
comp=Z,39nm,1.2s,mb5.1
ERM MLR MLR
comp=Z,20μm,20.0s,MS5.8
ERM Erimo 31.27 62 *e*P **P** **08 28 09.8 +0.8**
comp=Z,97nm,0.8s,mb5.7
ERM LR LR
comp=Z,20μm,19.0s,MS5.8
KSM Kuching 31.31 170 P **P** **08 28 10.2 +0.7**
KSM Kuching 31.31 170 *e*P **P** **08 28 09.3 -0.2**
comp=Z,1μm,2.6s,mb6.2
KSM LR LR
comp=Z,12μm,21.0s,MS5.5
BHV Bhavnagar 31.36 258 *ex* pP 08 28 12.5 -1.7
POO Poona 31.57 251 *e*P **P** **08 28 06.9 -4.9**
POO AMb AMB 08 28 23.7
comp=Z,157nm,1.5s,mb5.6
POO *e*S **S** **08 33 14.0 -6.2**
DAV Davao City (W) 31.60 139 P **P** **08 28 10.6 -1.4**
comp=Z,145nm,0.4s,mb6.1,baz=200,slow=4.8,SNR=2.0
DAV LR LR 08 43 27.0
comp=Z,25μm,19.0s,MS5.9,baz=24,slow=41
DAV Davao City (W) 31.60 139 P **P** **08 28 20.6 +8.5**
SNR=16
DAV P 08 28 20.6
SNR=16
DAV Davao City (W) 31.60 139⇓ *e*P **P** **08 28 12.4 +0.4**
YSS Yuzh-Sakhalins 31.77 52 *de*P **P** **08 28 12.0 -1.3**
YSS *e**SP sP 08 28 16.9 -2.5
YSS *e* 08 29 21.0
YSS *e*PPP 08 29 39.2
YSS *e* 08 31 09.5
YSS *e*S **S** **08 33 17.0 -5.8**
YSS *e*SSS 08 35 35.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.4
YSS MLR MLR
comp=Z,32μm,15.0s,MS6.1
YSS MLR MLR
comp=N,38μm,13.0s,MS6.3
YSS MLR MLR
comp=E,23μm,14.0s,MS6.3
YSS Yuzh-Sakhalins 31.77 52 *e*P **P** **08 28 12.7 -0.6**
comp=E,196nm,1.0s,mb5.9
YSS LR LR
comp=Z,10μm,20.0s,MS5.5
KAD Karad 31.97 249 *e*P **P** **08 28 15.2 -0.2**
KAD AMb AMB 08 28 31.0
comp=Z,138nm,1.8s,mb5.5
KAD *i* x x 08 33 18.1
KAD *ex* x 08 33 18.5
GSPH General Santos 32.07 141⇓ *i*P **P** **08 28 24.0 +7.8**
CBIJ Chichi jima 32.28 90 P **P** **08 28 13.4 -4.6**
comp=Z,45nm,0.7s,mb5.4,baz=310,slow=7.9,SNR=4.2
CBIJ S **S** **08 33 22.2 -9.0**
comp=Z,36nm,0.8s,baz=163,slow=23,SNR=2.9
BVAR Borovoye Array 32.32 320 P **P** **08 28 18.9 +0.8**
comp=Z,18nm,0.7s,mb5.0,baz=118,slow=9.4,SNR=36
BVAR Lg 08 38 49.5
comp=Z,0.3nm,0.3s,baz=302,slow=47,SNR=2.2
BVAR LR LR 08 41 30.5
comp=Z,31μm,20.5s,MS6.0,baz=284,slow=36
BRVK Borovoye 32.39 320 *ce*P **P** **08 28 19.1 +0.4**
BRVK pmax pmax
comp=Z,87nm,1.2s,mb5.5
BRVK MLR MLR
comp=Z,34μm,18.0s,MS6.1
BRVK Borovoye 32.39 320 *e*P **P** **08 28 19.7 +1.0**
comp=Z,86nm,0.9s,mb5.6
BRVK LR LR
comp=Z,33μm,19.0s,MS6.0
BRVK Borovoye 32.39 320 P **P** **08 28 19.5 +0.8**
SNR=64
BRVK P 08 28 19.5
SNR=64
BHJ Bhuj 32.78 263 *e*P **P** **08 28 21.5 -0.9**
BHJ AMb AMB 08 28 36.3
comp=Z,187nm,1.1s,mb5.9
GOA Goa 33.30 247⇑ *i*P **P** **08 28 28.0 +1.0**
GOA *ex* x 08 33 44.9
YAK Yakutsk 33.32 21 *c i*P **P** **08 28 26.5 -0.2**
YAK *e**PP pP 08 28 35.5 +4.5
YAK *e* 08 29 39.2
YAK *e*PPP 08 29 51.5
YAK *e* 08 31 05.9
YAK *e*S **S** **08 33 47.8 +1.2**
YAK *e*SS SS 08 35 53.6 -17
YAK *e*SSS 08 36 11.1
YAK pmax pmax
comp=Z,126nm,0.9s,mb5.8
YAK pmax pmax
comp=N,54nm,1.0s
YAK pmax pmax
comp=E,54nm,1.3s
YAK pmax pmax
comp=Z,200nm,1.3s,mb5.9
YAK pmax pmax
comp=N,175nm,1.4s
YAK pmax pmax
comp=E,191nm,1.7s
YAK smax
comp=N,445nm,2.2s
YAK smax
comp=E,760nm,2.9s
YAK MLR MLR
comp=Z,27μm,15.0s,MS6.1
YAK MLR MLR
comp=N,11μm,11.0s,MS6.1
YAK MLR MLR
comp=E,23μm,14.0s,MS6.1
YAK Yakutsk 33.32 21 *e*P **P** **08 28 26.6 -0.1**
comp=E,444nm,0.7s,mb6.5
YAK LR LR
comp=Z,20μm,21.0s,MS5.8
PALK Pallekele 34.07 228 P **P** **08 28 35.5 +1.8**
comp=Z,504nm,1.2s,mb6.3,SNR=8.1
PALK Pallekele 34.07 228 P **P** **08 28 34.0 +0.3**
comp=Z,23nm,1.1s,mb5.0,baz=30,slow=5.9,SNR=6.2
PALK S **S** **08 33 56.9 -2.2**
comp=Z,16nm,1.0s,baz=135,slow=15,SNR=1.7
PALK LR LR 08 44 09.4
comp=Z,10μm,20.6s,MS5.5,baz=292,slow=40
PALK Pallekele 34.07 228 P **P** **08 28 34.0 +0.3**
PALK S **S** **08 33 56.9 -2.2**
PALK pmax pmax
comp=Z,23nm,1.1s,mb5.0
PALK smax
comp=N,16nm,1.0s
PALK MLR MLR
comp=Z,10μm,20.6s,MS5.5
PALK Pallekele 34.07 228 *e*P **P** **08 28 33.7 0.0**
comp=Z,164nm,1.3s,mb5.8
PALK Pallekele 34.07 228⇓ P **P** **08 28 39.7 +6.0**
SNR=12
PALK ⇓ P 08 28 39.7
SNR=12
ABKAR Akbulak array 37.52 310 *e*P **P** **08 29 03.5 +0.5**
comp=Z,53nm,0.7s,mb5.4
IDAH Dahanechah 38.08 283 *e*P **P** **08 29 07.9 0.0**
IEMG Emamgholi 38.27 291 *e*P **P** **08 29 10.5 +1.1**
IAKL Akhelmad 38.29 289 *e*P **P** **08 29 11.0 +1.4**
IKRD Kardeh 38.46 290 *e*P **P** **08 29 05.6 -5.5**
ABKT Ailbek 38.63 292 P **P** **08 29 14.3 +1.9**
comp=Z,2μm,1.0s,mb6.7,SNR=48
IKOO Kooshah 38.86 283 *e*P **P** **08 29 13.7 -0.8**
AKTK Aktyubinsk 38.93 312 P **P** **08 29 15.4 +0.6**
AKTO Aktyubinsk 38.93 312 P **P** **08 29 15.4 +0.6**
comp=Z,26nm,0.5s,mb5.2,baz=94,slow=11,SNR=74
SVE Sverdlovsk 38.97 322⇓ *e*P **P** **08 29 16.2 +1.2**
SVE *e* 08 30 49.8
SVE *e*S **S** **08 35 13.4 +0.4**
SVE *e*SS SS 08 38 00.1 -4.6
SVE pmax pmax
comp=Z,312nm,1.1s,mb6.0
SVE MLR MLR
comp=Z,19μm,13.0s,MS6.1
KAPI Kappang 39.83 157 P **P** **08 29 21.8 -0.8**
comp=Z,2μm,0.8s,mb6.8,SNR=17
KAPI Kappang 39.83 157 P **P** **08 29 21.2 -1.4**
comp=Z,102nm,0.8s,mb5.6,baz=331,slow=4.4,SNR=43
KAPI S **S** **08 35 24.6 -2.1**
comp=Z,25nm,1.1s,baz=261,slow=7.8,SNR=2.4
KAPI Kappang 39.83 157 *e*P **P** **08 29 21.1 -1.5**
comp=Z,343nm,1.0s,mb6.0
KAPI LR LR
comp=Z,9μm,19.0s,MS5.6
ARU Arti 39.93 321 P **P** **08 29 24.4 +1.3**
comp=Z,1μm,1.1s,mb6.6,SNR=53
ARU Arti 39.93 321 *d i*P **P** **08 29 23.3 +0.2**
ARU *e* 08 30 59.1
ARU *e* 08 31 25.7
ARU *e*S **S** **08 35 28.2 +0.6**
ARU SS SS 08 38 17.4 -6.7
ARU SSS 08 38 48.6
ARU 08 39 22.8
ARU pmax pmax
comp=Z,468nm,1.7s,mb5.9
ARU MLR MLR
comp=Z,22μm,19.0s,MS6.0
ARU Arti 39.93 321 *e*P **P** **08 29 23.6 +0.5**
comp=Z,288nm,0.9s,mb6.0
ARU LR LR
comp=Z,22μm,19.0s,MS6.0
GUMO Guam 40.66 108 P **P** **08 29 28.8 -0.8**
comp=Z,58nm,0.7s,mb5.3,baz=192,slow=22,SNR=2.8
GUMO S **S** **08 35 37.0 -2.3**
comp=Z,66nm,0.8s,baz=314,slow=9.5,SNR=2.3
GUMO LR LR 08 45 08.9
comp=Z,6μm,20.0s,MS5.5,baz=133,slow=35
GUMO Guam 40.66 108 P **P** **08 29 28.8 -0.8**
GUMO S **S** **08 35 37.0 -2.3**
GUMO pmax pmax
comp=Z,58nm,0.7s,mb5.3
GUMO smax
comp=N,66nm,0.9s
GUMO Guam 40.66 108 *e*P **P** **08 29 29.4 -0.2**
comp=N,749nm,1.1s,mb6.2
GUMO LR LR
comp=Z,7μm,19.0s,MS5.5
TIXI Tiksi 41.08 11 *i* P **P** **08 29 31.5 -0.8**
TIXI *e* 08 31 06.1
TIXI *e*S **S** **08 35 41.0 -3.3**
TIXI *e*SS SS 08 38 43.3 -3.1
TIXI *e* 08 39 35.6
TIXI pmax pmax
comp=Z,376nm,4.9s
TIXI pmax pmax
comp=N,211nm,1.6s
TIXI pmax pmax
comp=Z,422nm,1.3s,mb5.9
TIXI pmax pmax
comp=E,178nm,1.4s
TIXI smax
comp=E,374nm,6.9s
TIXI smax
comp=N,942nm,8.7s
TIXI MLR MLR
comp=Z,31μm,16.0s,MS6.3
TIXI MLR MLR
comp=E,11μm,15.0s,MS6.0
TIXI MLR MLR
comp=N,16μm,18.0s,MS6.0
TIXI Tiksi 41.08 11 *e*P **P** **08 29 31.4 -0.9**
comp=N,600nm,1.3s,mb6.1
TIXI *e*S **S** **08 35 40.1 -4.2**
TIXI LR LR
comp=Z,31μm,20.0s,MS6.2
SKR Severo-Kuril's 41.10 49 *e*P **P** **08 29 27.0 -5.8**
SKR *e* 08 31 09.0
SKR *e*PPP 08 31 34.0
SKR *e*S **S** **08 35 38.0 -7.1**
SKR *e* 08 38 34.0
SKR pmax pmax
comp=E,2μm,12.0s
SKR pmax pmax
comp=Z,3μm,12.0s
SKR pmax pmax
comp=N,3μm,10.0s
SKR pmax pmax

comp=N,480nm,1.5s
SKR pmax pmax
comp=Z,640nm,1.5s,mb6.0
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,2μm,10.0s
SKR MLR MLR
comp=N,483μm,16.0s,MS7.5
SKR MLR MLR
comp=E,22μm,16.0s,MS7.5
SKR MLR MLR
comp=Z,45μm,16.0s,MS6.4
SOKR Solikamsk 41.77 325 *c iP* **P 08 29 39.2 +1.0**
SOKR S **S 08 35 53.6 -1.3**
SOKR pmax pmax
comp=Z,330nm,0.9s,mb6.0
SOKR MLR MLR
comp=Z,19μm,13.0s,MS6.2
IBAF Bafgh 41.90 283 *e*P **P 08 29 40.2 +0.6**
IGLO Ghaloghah 42.22 290 *e*P **P 08 29 43.5 +1.3**
SEY Seymchan 42.26 30 *ce*P **P 08 29 41.7 -0.4**
IBND Bandar-abas 42.30 276 *e*P **P 08 29 43.2 +0.2**
IANJ Anjilo 42.35 289 *e*P **P 08 29 43.3 0.0**
PEA0B Petropavlovsk- 42.37 45 *e*P **P 08 29 42.3 -0.8**
PETK Petropavlovsk- 42.37 45 P **P 08 29 42.7 -0.4**
comp=Z,24nm,0.8s,mb4.9,baz=205,slow=2.5,SNR=25
PETK LR LR 08 48 58.2
comp=Z,22μm,18.4s,MS6.1,baz=74,slow=38
IKIA Kiasar 42.39 290 *e*P **P 08 29 44.7 +1.1**
SMDO Samad 42.63 269 P **P 08 29 48.9 +3.2**
SNR=20
ICHK Chekchek 42.68 284 *e*P **P 08 29 46.7 +0.7**
PET Petropavlovsk 42.93 45 *c i*P **P 08 29 46.0 -1.7**
PET *e* 08 31 26.9
PET *i* S **S 08 36 06.6 -5.4**
PET pmax pmax
comp=Z,900nm,5.7s
PET pmax pmax
comp=Z,145nm,1.2s,mb5.6
PET pmax pmax
comp=Z,900nm,17.5s
PET pmax pmax
comp=Z,700nm,5.8s
PET pmax pmax
comp=Z,1μm,7.9s
PET MLR MLR
comp=Z,23μm,18.0s,MS6.1
PET MLR MLR
comp=Z,20μm,17.0s
PET Petropavlovsk 42.93 45 *e*P **P 08 29 47.3 -0.4**
comp=Z,130nm,0.9s,mb5.7
PET LR LR
comp=Z,20μm,20.0s,MS6.0
IALA Alasht 43.11 290 *e*P **P 08 29 49.5 +0.1**
IFIR Firoozkooh 43.24 289 *e*P **P 08 29 51.8 +1.3**
BSY Bisya 43.47 270 P **P 08 29 54.0 +1.5**
SNR=28
ASHO Ashiyiah 43.68 273 P **P 08 29 55.7 +1.6**
SNR=21
ARQ Araqi 43.81 271 ⇓P **P 08 29 57.0 +1.8**
SNR=16
IDMV Damavand 43.83 289 *e*P **P 08 29 56.4 +1.1**
IGAR Gharneh 44.58 285 *e*P **P 08 30 01.3 0.0**
IR3 Iran Long-Peri 44.66 289 *e*P **P 08 30 01.8 -0.1**
IR5 Iran Long-Peri 45.07 289 *e*P **P 08 30 05.3 +0.1**
COCO West Island 45.28 192 *e*P **P 08 30 08.0 +1.1**
COCO pmax pmax
comp=Z,884nm,1.4s,mb6.4
COCO MLR MLR
comp=Z,9μm,19.0s,MS5.7
COCO West Island 45.28 192 *e*P **P 08 30 08.0 +1.0**
comp=Z,884nm,1.4s,mb6.4
COCO LR LR
comp=Z,9μm,19.0s,MS5.7
COCO West Island 45.28 192 ⇑P **P 08 30 14.3 +7.4**
SNR=6.2
COCO ⇑P 08 30 14.3
SNR=6.2
MAK Makhachkala 46.08 300 *e*P **P 08 30 12.9 -0.2**
MAK *e* 08 32 01.7
MAK *e*PPP 08 32 38.9
MAK *e*S **S 08 36 54.9 -3.3**
MAK *e*SSS 08 41 15.5
MAK pmax pmax
comp=Z,350nm,1.5s,mb6.1
MAK MLR MLR
comp=Z,25μm,14.0s,MS6.3
IKOM Komasi 47.78 289 *e*P **P 08 30 26.6 +0.2**
DGRG David-gareji 47.87 299 P **P 08 30 28.5 +1.5**
DGRG S **S 08 37 23.5 -0.2**
MTA Mtatsminda 48.26 299 P **P 08 30 30.2 +0.2**
MTA S **S 08 37 27.9 -1.3**
TBLG Delisi 48.29 299 *e*P **P 08 30 30.2 -0.1**
TBLG Delisi 48.29 299 P **P 08 30 30.2 -0.1**
WHFO Wadi Hawf 48.47 265 P Px 08 30 43.2
SNR=7.2
IGHG Ghaleghazi 48.49 289 *e*P **P 08 30 31.5 -0.4**
GNI Garni 48.58 297 *e*P **P 08 30 33.6 +1.1**
GNI Garni 48.58 297 *ce*P **P 08 30 33.7 +1.2**
GNI pmax pmax
comp=Z,110nm,1.7s
GNI MLR MLR
comp=Z,7μm,17.0s
GNI Garni 48.58 297 *e*P **P 08 30 33.9 +1.4**
comp=Z,121nm,0.9s,mb5.9
GNI LR LR
comp=Z,9μm,19.0s,MS5.8
GNI Garni 48.58 297 P **P 08 30 34.3 +1.8**
SNR=107
GNI P 08 30 34.3
SNR=107
GOR Gori 48.71 300 P **P 08 30 35.7 +2.2**
ZEI Tsey 48.73 301 *e*P **P 08 30 31.8 -1.9**
ZEI pmax pmax
comp=Z,192nm,1.4s,mb5.9
KEH Kehvi 48.78 300 P **P 08 30 34.5 +0.4**
ONI Oni 49.09 300 P **P 08 30 37.6 +1.1**
ONI S **S 08 37 43.3 +2.4**
KBD Kabd 49.10 282 *e*P **P 08 30 36.4 -0.4**
KBD AMb AMB 08 30 52.8
comp=Z,238nm,1.0s,mb6.2
MIB Mutribah 49.19 283 *e*P **P 08 30 36.8 -0.6**
MIB AMb AMB 08 30 49.0
comp=Z,500nm,1.2s,mb6.4
RDF Al-Radifah 49.31 282 *e*P **P 08 30 38.3 0.0**
RDF AMb AMB 08 30 42.5
comp=Z,235nm,1.0s,mb6.2
VRHR Novokhopersk 49.34 312 *e*P **P 08 30 38.2 0.0**
VRHR *e**PP pP 08 30 47.3 +4.7
VRHR *e* 08 32 33.6
VRHR *e*S **S 08 37 38.9 -5.3**
VRHR *e*SS SS 08 41 16.2 +0.7
VRHR pmax pmax
comp=Z,100nm,1.3s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,90nm,1.6s
VRHR pmax pmax
comp=Z,440nm,7.2s
VRHR pmax pmax
comp=N,180nm,13.2s
VRHR pmax pmax
comp=E,230nm,5.7s
VRHR smax
comp=N,3μm,6.7s
VRHR smax
comp=Z,900nm,5.2s
VRHR smax
comp=E,1μm,5.6s
VRHR MLR MLR
comp=E,12μm,14.0s,MS6.2
VRHR MLR MLR
comp=Z,12μm,14.0s,MS6.1
VRHR MLR MLR
comp=N,13μm,17.0s,MS6.2
BILL Bilibino 49.36 26 *e*P **P 08 30 37.4 -0.7**
BILL *i* 08 30 49.9
BILL *i* 08 32 35.0
BILL *i* S **S 08 37 42.1 -1.9**
BILL pmax pmax
comp=Z,96nm,1.2s,mb5.7
BILL MLR MLR
comp=Z,48μm,17.0s,MS6.6

BILL Bilibino 49.36 26 *e*P **P 08 30 37.5 -0.7**
comp=Z,89nm,0.6s,mb6.0
BILL *e*S **S 08 37 43.3 -0.8**
BILL LR LR
comp=Z,52μm,19.0s,MS6.5
CLDR Caldiran 49.40 296 *e*P **P 08 30 40.4 +1.4**
KIV Kislovodsk 49.41 302 P **P 08 30 39.1 +0.2**
comp=Z,1μm,1.4s,mb6.7,SNR=37
KIV Kislovodsk 49.41 302 *i* P **P 08 30 39.3 +0.4**
KIV pmax pmax
comp=Z,188nm,1.7s,mb5.8
KIV Kislovodsk 49.41 302 *e*P **P 08 30 40.2 +1.3**
KIV LR LR
comp=Z,20μm,19.0s,MS6.1
KIV Kislovodsk 49.41 302 P **P 08 30 39.5 +0.6**
SNR=110
KIV P 08 30 39.5
SNR=110
NAY Al-Naaiem 49.45 282 *e*P **P 08 30 38.6 -0.8**
NAY AMb AMB 08 30 51.1
comp=Z,281nm,0.9s,mb6.3
KARS Kars 49.73 298 *e*P **P 08 30 40.4 -1.0**
VANB Van 49.93 295 *e*P **P 08 30 42.1 -0.8**
AGRB Hanur-Agry 50.01 297 *e*P **P 08 30 43.9 +0.3**
CUKT Cukurca 50.08 294 *e*P **P 08 30 42.7 -1.4**
BHD Baghdad 50.53 288 *i* P **P 08 30 43.0 -4.6**
BHD *e*S **S 08 37 53.0 -8.4**
BCA Borcka 50.64 299 *e*P **P 08 30 48.9 +0.6**
DGAR Diego Garcia 50.66 224 PFAKE 08 31 00.0 +11
DGAR LR LR
comp=Z,4μm,21.0s,MS5.4
MSL Mosul 50.67 293 *e*P **P 08 30 54.0 +5.4**
MSL *e*S **S 08 38 10.0 +6.7**
VOR Voronezh 50.81 313 ⇑*i*P **P 08 30 48.0 -1.3**
VOR pmax pmax
comp=Z,600nm,1.2s,mb6.4
VORD Divnogorie 50.82 312 *e*P **P 08 30 49.2 -0.2**
VORD *e**PP pP 08 30 58.3 +4.4
VORD *e*S **S 08 38 01.4 -3.4**
VORD *e*SS SS 08 41 38.7 -0.4
VORD pmax pmax
comp=Z,70nm,1.8s,mb5.3
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,200nm,2.7s
VORD smax
comp=N,2μm,5.8s
VORD smax
comp=Z,860nm,5.9s
VORD smax
comp=E,980nm,3.8s
VORD MLR MLR
comp=Z,14μm,17.0s,MS6.0
VORD MLR MLR
comp=N,3μm,8.0s
VORD MLR MLR
comp=E,7μm,12.0s
VSR Storozhevoye 50.87 312 *e*P **P 08 30 49.9 0.0**
VSR *e**PP pP 08 30 59.1 +4.8
VSR *e* 08 32 49.6
VSR *e*S **S 08 38 01.6 -4.0**
VSR *e*SS SS 08 41 39.2 -0.8
VSR pmax pmax
comp=Z,40nm,0.6s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,40nm,0.8s
VSR pmax pmax
comp=Z,250nm,7.4s
VSR pmax pmax
comp=N,10.0nm,4.4s
VSR pmax pmax
comp=E,160nm,6.9s
VSR smax
comp=N,2μm,5.8s
VSR smax
comp=Z,620nm,4.7s
VSR smax
comp=E,1μm,4.9s
EZM Erzurum 51.16 297 *e*P **P 08 30 53.2 +1.0**
MOS Moscow 51.47 318 *e*P **P 08 30 51.3 -2.9**
MOS *e* 08 32 08.1
MOS *e* 08 32 49.4
MOS *e*PPP 08 33 50.0
MOS *e*S **S 08 38 03.7 -10**
MOS pmax pmax
comp=Z,1μm,1.9s,mb6.4
MOS pmax pmax
comp=E,200nm,1.5s
MOS pmax pmax
comp=Z,550nm,1.5s,mb6.3
MOS pmax pmax
comp=E,148nm,1.2s
MOS smax
comp=N,2μm,5.3s
MOS smax
comp=E,2μm,5.1s
MOS MLR MLR
comp=Z,22μm,14.0s,MS6.3
MOS MLR MLR
comp=E,16μm,15.0s
SOC Sochi 51.60 302 *d i*P **P 08 30 55.4 0.0**
SOC *e**PP pP 08 31 03.6 +3.7
SOC *e*S **S 08 38 15.1 -0.7**
SOC *e**SS sS 08 38 25.3 +2.2
SOC pmax pmax
comp=Z,249nm,3.8s
SOC pmax pmax
comp=Z,120nm,1.9s,mb5.5
SOC MLR MLR
comp=Z,26μm,20.0s,MS6.2
KOPT Kop Dagi 51.78 298 *i* P **P 08 31 06.5 +10**
KAKA Kakadu 51.96 146 *e*P **P 08 30 56.3 -2.0**
comp=Z,95nm,0.8s,mb5.8
KAKA Kakadu 51.96 146 *e*P **P 08 30 56.3 -2.0**
comp=Z,319nm,0.8s,mb6.3
BINT Bingol 52.06 296 *e*P **P 08 31 01.4 +2.4**
OBN Obninsk 52.11 317 P **P 08 30 59.1 +0.1**
comp=Z,851nm,1.1s,mb6.6,SNR=17
OBN Obninsk 52.11 317 *d i*P **P 08 30 58.8 -0.2**
OBN *i* 08 31 07.1
OBN *e* 08 33 02.7
OBN *i* S **S 08 38 18.5 -4.0**
OBN *i* SS SS 08 41 53.6 -5.7
OBN pmax pmax
comp=Z,338nm,1.6s,mb6.0
OBN MLR MLR
comp=Z,14μm,14.0s,MS6.2
OBN Obninsk 52.11 317 *e*P **P 08 30 59.3 +0.3**
OBN LR LR
comp=Z,15μm,19.0s,MS6.0
MACK Trabzon 52.11 299 *i* P **P 08 31 07.6 +8.3**
SMY Shemya 52.27 46 *e*P **P 08 31 00.5 +0.2**
SMY pmax pmax
comp=Z,331nm,0.8s,mb6.3
SMY Shemya 52.27 46 *e*P **P 08 31 00.5 +0.2**
comp=Z,331nm,0.8s,mb6.3
GUMT Gumushane 52.44 299 *e*P **P 08 31 02.3 +0.5**
EZC Erzincan 52.70 298 *e*P **P 08 31 05.3 +1.6**
ESPY Espiye-Giresun 52.89 299 *e*P **P 08 31 04.8 -0.2**
PTK Pertek 52.89 297 *e*P **P 08 31 06.1 +1.0**
ANN Anapa 52.97 304 *e*P **P 08 31 04.8 -0.8**
ANN *e* 08 33 07.6
ANN *e*PPP 08 34 09.8
ANN *e*S **S 08 38 32.9 -1.7**
ANN *e*SSS 08 43 59.1
ANN pmax pmax
comp=Z,417nm,7.1s
ANN pmax pmax
comp=Z,325nm,1.3s,mb6.1
ANN MLR MLR
comp=N,17μm,18.0s,MS6.2
ANN MLR MLR
comp=E,10μm,18.0s,MS6.2
ANN MLR MLR
comp=Z,24μm,18.0s,MS6.3
LVZ Lovozero 53.00 333 P **P 08 31 05.7 +0.2**
comp=Z,678nm,0.9s,mb6.6,SNR=21
LVZ Lovozero 53.00 333 *ce*P **P 08 31 05.3 -0.2**
LVZ pmax pmax
comp=Z,103nm,1.0s,mb5.7
LVZ MLR MLR
comp=Z,35μm,20.0s,MS6.4

LVZ Lovozero 53.00 333 PFAKE 08 31 20.0 +15
LVZ LR LR
comp=Z,21μm,22.0s,MS6.1
SVRC Sivrice-ELAZID 53.09 296 *e*P **P 08 30 59.6 -6.9**
ELZG Elazig 53.30 296 *i* P **P 08 31 09.1 +1.0**
APA Apatity 53.46 333 ⇑*e*P **P 08 31 09.0 +0.2**
APA *i* 08 31 16.0
APA *i* 08 33 10.0
APA *i* S **S 08 38 38.0 -2.6**
APA *i* 08 40 49.0
APA *i* PS 08 42 20.0
APA pmax pmax
comp=Z,150nm,1.2s,mb5.8
APA MLR MLR
comp=Z,44μm,15.0s,MS6.6
KEMA Kemaliye 53.47 297 *i* P **P 08 31 09.8 +0.5**
URFA Urfa 53.71 295 *e*P **P 08 31 11.5 +0.4**
MYA Malataya 53.77 296 *e*P **P 08 31 11.9 +0.3**
FITZ Fitzroy Crossi 54.02 156 *e*P **P 08 31 12.3 -1.2**
comp=Z,183nm,1.0s,mb6.0
FITZ *e*S **S 08 38 42.4 -6.7**
FITZ Fitzroy Crossi 54.02 156 P **P 08 31 12.5 -1.0**
comp=Z,15nm,0.7s,mb5.1,baz=350,slow=5.5,SNR=29
FITZ Fitzroy Crossi 54.02 156 *e*P **P 08 31 12.4 -1.1**
comp=Z,158nm,1.0s,mb5.9
DARE Darende-Malaty 54.07 297 *e*P **P 08 31 19.4 +5.7**
ATAB Bozova 54.10 295 *i* P **P 08 31 15.3 +1.3**
AKCD Akcadag 54.16 296 *i* P **P 08 31 16.2 +1.8**
JOF Joensuu 54.35 327 *e*P **P 08 31 15.4 0.0**
JOF pmax pmax
comp=Z,136nm,0.9s,mb5.9
JOF Joensuu 54.35 327 *ep* **P 08 31 15.4 0.0**
comp=Z,136nm,0.9s,mb5.9
SVSK Karacayir 54.41 298 *e*P **P 08 31 16.8 +0.5**
GZT Gaziantep 54.69 295 *i* P **P 08 31 18.9 +0.6**
KVT Kavak 54.81 300 *e*P **P 08 31 20.2 +1.0**
SARI SarD1z-Kayseri 54.97 297 *e*P **P 08 31 22.9 +2.5**
GAZ Gaziantep 55.02 295 *e*P **P 08 31 20.6 0.0**
PUL Pulkovo 55.07 323 *ce*P **P 08 31 21.8 +1.1**
PUL pmax pmax
comp=Z,368nm,1.0s,mb6.4
PUL MLR MLR
comp=Z,19μm,14.0s,MS6.3
KMRS Kahramanmaras 55.16 296 *e*P **P 08 31 21.1 -0.6**
MBWA Marble Bar 55.19 164 *e*P **P 08 31 20.8 -1.2**
comp=Z,226nm,1.1s,mb6.1
MBWA LR LR
comp=Z,4μm,20.0s,MS5.5
MBWA Marble Bar 55.19 164 P **P 08 31 28.5 +6.6**
SNR=18
MBWA P 08 31 28.5
SNR=18
PINB Pinarbasi 55.20 297 *i* P **P 08 31 23.0 +1.1**
DIKM Dikmen 55.24 301 *e*P **P 08 31 22.6 +0.4**
SIM Simferopol' 55.24 305 *de*P **P 08 31 22.8 +0.6**
SIM *e*S **S 08 39 05.0 -0.3**
SIM *e* 08 41 08.0
SIM pmax pmax
comp=Z,178nm,0.8s,mb6.2
SIM MLR MLR
comp=Z,15μm,17.2s,MS6.1
ANDN Andirin 55.55 296 *i* P **P 08 31 24.9 +0.4**
BNN Bunyan 55.56 298 *e*P **P 08 31 24.1 -0.5**
KEV Kevo 55.81 336 *e*P **P 08 31 25.5 -0.4**
KEV pmax pmax
comp=Z,128nm,1.0s,mb5.9
KEV Kevo 55.81 336 *e*P **P 08 31 25.9 +0.1**
comp=Z,27nm,0.8s,mb5.3
KEV LR LR
comp=Z,21μm,21.0s,MS6.2
KEV Kevo 55.81 336 *ep* **P 08 31 25.5 -0.4**
comp=Z,128nm,1.0s,mb5.9
CTKT Corum 55.85 300 *i* P **P 08 31 27.4 +0.7**
KOZT Kozan 55.98 296 *e*P **P 08 31 27.4 -0.2**
WAKE Wake Island 56.00 88 *e*P **P 08 31 27.8 -0.2**
comp=Z,133nm,1.0s,mb5.9
WAKE LR LR
comp=Z,3μm,20.0s,MS5.4
BZK Bozkurt 56.06 302 *e*P **P 08 31 27.0 -1.1**
CORM Corum 56.09 299 *e*P **P 08 31 29.2 +0.8**
YAYL Yayladag 56.20 294 *i* P **P 08 31 29.2 0.0**
TOS Tosya 56.30 301 *e*P **P 08 31 29.4 -0.5**
ARCES ARCESS Array B 56.35 335 P **P 08 31 29.8 +0.1**
comp=Z,45nm,0.8s,mb5.5,baz=76,slow=6.7,SNR=82
CDAG Cicekdag 56.44 299 *i* P **P 08 31 29.6 -1.2**
ILGA Ilgaz 56.52 301 *i* P **P 08 31 31.5 +0.1**
BALT Daday 56.62 301 *i* P **P 08 31 33.2 +1.1**
KARA Karaisali 56.63 296 *e*P **P 08 31 32.5 +0.3**
CANT Cankiri 56.71 300 *e*P **P 08 31 32.3 -0.5**
KAF Kangasniemi 56.73 326 *e*P **P 08 31 31.8 -0.8**
KAF pmax pmax
comp=Z,107nm,1.1s,mb5.8
KAF Kangasniemi 56.73 326 *ep* **P 08 31 31.8 -0.8**
comp=Z,107nm,1.1s,mb5.8,baz=81,slow=6.7
GULE Gulek 56.84 296 *i* P **P 08 31 34.1 +0.4**
ELDT Eldivan 56.89 300 *i* P **P 08 31 34.3 +0.3**
HWQ Hawqa 56.89 292 *e*P **P 08 31 34.3 +0.2**
FINES FINESS Array B 56.94 326 P **P 08 31 33.8 -0.2**
comp=Z,58nm,0.8s,mb5.7,baz=92,slow=7.1,SNR=113
FINES LR LR 08 55 46.1
comp=Z,13μm,19.5s,MS6.0,baz=87,slow=36
BR131 Keskin Array S 56.95 299 *e*P **P 08 31 34.8 +0.3**
BR131 LR LR
comp=Z,7μm,21.0s,MS5.8
BRTR Keskin Array B 56.95 299 P **P 08 31 34.2 -0.2**
comp=Z,14nm,0.9s,mb5.0,baz=98,slow=6.4,SNR=54
BRTR LR LR 08 59 09.3
comp=Z,4μm,19.2s,MS5.5,baz=234,slow=39
BRTR Keskin Array B 56.95 299 *i* P **P 08 31 34.2 -0.3**
BRTR pmax pmax
comp=Z,14nm,0.9s
VSU Vasula 57.07 322 *de*P **P 08 31 35.0 0.0**
VSU pmax pmax
comp=Z,258nm,1.2s,mb6.1
VSU MLR MLR
comp=Z,11μm,17.0s,MS6.0
MERS Mersin 57.16 296 *e*P **P 08 31 36.1 +0.1**
AKASG Malin Array Be 57.16 313 P **P 08 31 35.2 -0.5**
comp=Z,19nm,0.5s,mb5.4,baz=68,slow=6.5,SNR=76
AKASG LR LR 08 56 51.7
comp=Z,19μm,18.7s,MS6.2,baz=55,slow=37
AKASG Malin Array Be 57.16 313 P **P 08 31 35.2 -0.5**
AKASG LR LR 08 56 51.7
AKBB Malin Array Si 57.16 313 *e*P **P 08 31 35.5 -0.2**
AKBB *e*S **S 08 39 16.0 -15**
MICGM Minsk 57.17 317 ⇑*i*P **P 08 31 34.0 -1.8**
KIEV Kiev 57.17 313 *e*P **P 08 31 35.5 -0.3**
KIEV pmax pmax
comp=Z,173nm,1.1s,mb6.0
KIEV MLR MLR
comp=Z,20μm,22.0s,MS6.2
KIEV Kiev 57.17 313 *e*P **P 08 31 35.5 -0.4**
comp=Z,173nm,1.1s,mb6.0
KIEV LR LR
comp=Z,20μm,22.0s,MS6.2
KTK1 Kautokeino 57.19 335 *e*P **P 08 31 36.3 +0.6**
KTK1 *e*S **S 08 39 32.6 +2.2**
MNK Minsk 57.20 317 ⇑*i*P **P 08 31 34.0 -2.0**
MNK *e* 08 32 36.0
MNK *e* 08 33 40.0
MNK *e*S **S 08 39 26.0 -4.9**
MNK *e*SS SS 08 43 20.0 +0.5
MNK *e*SSS 08 45 28.0
MNK pmax pmax
comp=E,230nm,1.4s
MNK pmax pmax
comp=Z,290nm,1.5s,mb6.1
MNK smax
comp=E,4μm,8.0s
MNK MLR MLR
comp=Z,47μm,18.0s,MS6.6
MNK MLR MLR
comp=N,23μm,12.0s
MNK MLR MLR
comp=E,37μm,18.0s
BHL Bhannes 57.25 292 *e*P **P 08 31 37.2 +0.6**
RCY Rachaya 57.26 291 *e*P **P 08 31 37.6 +0.8**
SULT Sultanhani-AKS 57.50 297 *e*P **P 08 31 38.1 -0.3**
LOD Lodumlu 57.55 300 *e*P **P 08 31 38.7 0.0**
IDID Didziasalis 57.65 318 *e*P **P 08 31 39.8 +0.6**
NACGM Naroch 57.72 318 *e*P **P 08 31 38.0 -1.6**
MMAI Mount Meron Ar 57.75 291 P **P 08 31 40.9 +0.7**
comp=E,13nm,0.9s,mb5.0,baz=72,slow=8.1,SNR=7.1
MMAI LR LR 09 01 00.9

comp=E,8μm,21.8s,MS5.8,baz=75,slow=41
IZAR Zarasai 57.84 319 *e*P **P 08 31 41.0 +0.5**
EREN Erenkoy 57.86 294 *e*P **P 08 31 36.4 -4.6**
SGKT Sivrigoynuk 57.86 300 *i* P **P 08 31 41.3 +0.4**
BJO Bjornoya 57.89 342 *e*P **P 08 31 40.0 -0.6**
BJO *e*S **S 08 39 40.8 +1.3**
BJO AMS AMS 09 00 40.0
comp=Z,24μm,17.0s,MS6.4
IIGN Ignalina 57.94 319 *e*P **P 08 31 42.1 +0.9**
ISAL Salakas 57.94 319 *e*P **P 08 31 42.1 +0.9**
DHBB Dhamar BB 57.97 267 *e*P **P 08 31 43.0 +1.1**
IKL Isikli 58.00 295 *e*P **P 08 31 36.4 -5.6**
KDZE Karadeniz Ereo 58.09 301 *e*P **P 08 31 39.3 -3.2**
SPB4 Spitsbergen Ar 58.15 346 *e*P **P 08 31 42.6 +0.2**
GAMB Gambell 58.22 31 *e*P **P 08 31 42.5 -0.6**
comp=Z,82nm,0.8s,mb5.8
KIS Kishinev 58.32 309 ⇓*i*P **P 08 31 41.0 -3.0**
comp=Z,200nm,2.0s,mb5.8
KIS Kishinev 58.32 309 *e*PP PP 08 33 56.0 +3.2
KIS Kishinev 58.32 309κ *i*P **P 08 31 41.0 -3.0**
KIS *i* 08 31 50.0
KIS *e* 08 33 56.0
KIS *e*PPP 08 35 16.0
KIS *i* S **S 08 39 38.0 -7.8**
KIS pmax pmax
comp=Z,200nm,2.0s,mb5.8
KIS pmax pmax
comp=Z,400nm,3.0s
KIS smax
comp=E,1μm,8.0s
KIS MLR MLR
comp=Z,14μm,17.0s,MS6.1
KIS MLR MLR
comp=N,18μm,16.0s,MS6.4
KIS MLR MLR
comp=E,14μm,16.0s,MS6.4
KIS MLR MLR
comp=Z,14μm,16.0s
LADK Ladik-KONYA 58.36 298 *e*P **P 08 31 43.7 -0.7**
HSP Hornsund 58.47 345 *e*P **P 08 31 44.4 -0.2**
MDU Mudurnu 58.51 301 *e*P **P 08 31 44.5 -0.9**
SVRH Sivrihisar-ESK 58.59 299 *e*P **P 08 31 45.8 -0.3**
TRO Tromso 58.63 336 *e*P **P 08 31 45.4 -0.3**
TRO *e*S **S 08 39 48.1 -1.1**
TRO AMS AMS 08 58 53.7
comp=Z,23μm,13.0s,MS6.5
HDMB Hadim 58.67 296 *e*P **P 08 31 46.6 0.0**
CSS Prodhromos 58.70 294 *e*P **P 08 31 46.0 -0.8**
comp=Z,147nm,0.8s,mb6.1
CSS LR LR
comp=Z,11μm,22.0s,MS5.9
CSS Prodhromos 58.70 294 P **P 08 31 45.5 -1.3**
COEN Coen 58.73 136 *e*P **P 08 31 46.0 -1.2**
comp=Z,1μm,0.9s,mb6.9
TLCR 58.81 306 ⇑P **P 08 31 47.5 0.0**
TLCR 58.81 306 ⇑*i*P **P 08 31 47.5 0.0**
TRBA At Turbah 58.86 266 *e*P **P 08 31 48.3 +0.1**
KBS Kingsbay 58.91 347 *e*P **P 08 31 47.0 -0.7**
KBS *e*S **S 08 39 52.0 -0.8**
KBS AMS AMS 09 02 40.5
comp=Z,15μm,15.2s,MS6.2
KBS Kingsbay 58.91 347 *ce*P **P 08 31 46.9 -0.8**
KBS pmax pmax
comp=Z,42nm,1.0s,mb5.4
KBS Kingsbay 58.91 347 *e*P **P 08 31 47.4 -0.3**
KBS LR LR
comp=Z,10μm,20.0s,MS5.9
LEF Lefka 58.98 294 *e*P **P 08 31 46.9 -1.9**
GULT Gulveren 59.02 301 *e*P **P 08 31 47.4 -1.6**
ESKT Eskisehir 59.07 300 *i* P **P 08 31 48.8 -0.5**
WRAB Tennant Creek 59.14 148 P **P 08 31 49.0 -0.9**
comp=Z,2μm,0.7s,SNR=66
WRAB Tennant Creek 59.14 148 *e*P **P 08 31 49.1 -0.8**
WRAB pmax pmax
comp=Z,812nm,1.3s,mb6.6
WRAB MLR MLR
comp=Z,5μm,21.0s,MS5.6
WRAB Tennant Creek 59.14 148 *e*P **P 08 31 49.1 -0.8**
comp=Z,488nm,1.3s,mb6.4
WRAB LR LR
comp=Z,11μm,21.0s,MS6.0
BORA Eskisehir 59.24 300 *i* P **P 08 31 50.0 -0.6**
BOLV Bolvadin 59.25 299 *i* P **P 08 31 50.0 -0.6**
CFR Carcaliu 59.27 307 ⇓P **P 08 31 51.0 +0.3**
CFR Carcaliu 59.27 307 ⇓*i*P **P 08 31 51.0 +0.3**
TIRR Tirgusor 59.30 306 *e*P **P 08 31 50.3 -0.5**
TIRR pmax pmax
comp=Z,64nm,0.9s,mb5.7
TIRR Tirgusor 59.30 306 *e*P **P 08 31 50.3 -0.6**
comp=Z,64nm,0.9s,mb5.7
TIRR Tirgusor 59.30 306 ⇑*i*P **P 08 31 51.4 +0.6**
TNA Tin City 59.48 29 *e*P **P 08 31 50.8 -1.0**
comp=Z,217nm,1.1s,mb6.1
CAVI Cavuskoy 59.59 301 *e*P **P 08 31 53.0 +0.1**
ADVT Abdulvahap 59.59 301 *e*P **P 08 31 52.7 -0.2**
SHUT Suhut-Afyon 59.60 299 *e*P **P 08 31 52.6 -0.4**
SUTC Sutluce-Ispart 59.62 297 *e*P **P 08 31 52.0 -1.2**
PSN Preselentsi 59.68 305 *i* P **P 08 31 53.9 +0.4**
ALT Altintas 59.76 299 *e*P **P 08 31 54.2 +0.1**
KLYT Kilyos 59.83 302 *e*P **P 08 31 54.0 -0.5**
ISP Isparta 59.86 298 *e*P **P 08 31 52.6 -2.2**
ISP Isparta 59.86 298 *e*P **P 08 31 54.8 0.0**
ISP MLR MLR
comp=Z,10μm,21.0s,MS5.9
ISP Isparta 59.86 298 *e*P **P 08 31 54.8 -0.1**
ISP LR LR
comp=Z,10μm,21.0s,MS5.9
ISP Isparta 59.86 298 ⇓*i*P **P 08 31 55.0 +0.2**
ISP Isparta 59.86 298 P **P 08 31 54.1 -0.7**
ISK Istanbul-Kandi 59.88 302 *e*P **P 08 31 54.5 -0.4**
BCK Bucak 59.93 297 *e*P **P 08 31 52.7 -2.6**
SUW Suwalki 59.97 318 *e*P **P 08 31 55.0 -0.2**
SUW *e*pP pP 08 32 03.3 +3.5
SUW *e*S **S 08 40 04.3 -2.7**
SUW LMZ 08 56 32.9
comp=Z,18μm,26.5s
SUW Suwalki 59.97 318 *e*P **P 08 31 55.0 -0.3**
SUW *e**PP pP 08 32 03.3 +3.5
SUW *e*S **S 08 40 04.3 -2.7**
SUW Suwalki 59.97 318 *e*P **P 08 31 54.0 -1.2**
GEMT Gemlik 59.98 301 *e*P **P 08 31 53.6 -2.0**
VRI Vrincioaia 60.02 308 P **P 08 31 56.5 +0.7**
VRI Vrincioaia 60.02 308 ⇑*i*P **P 08 31 57.2 +1.4**
BGKT Bogazkoy 60.04 302 *e*P **P 08 31 54.5 -1.6**
PLOR Plostina 60.08 308 ⇓P **P 08 31 57.4 +1.2**
PLOR Plostina 60.08 308 ⇓*i*P **P 08 31 57.4 +1.2**
MSEY Mahe Island 60.10 242 PFAKE 08 32 10.0 +13
MSEY LR LR
comp=Z,6μm,21.0s,MS5.7
GDZ Gediz 60.21 300 *i* P **P 08 31 56.4 -0.9**
CTKS Kestanelik-??a 60.22 302 *e*P **P 08 31 55.0 -2.2**
CTYL Yal??k??y-??at 60.30 303 *e*P **P 08 31 55.6 -2.1**
ELBA Catalca 60.30 302 *i* P **P 08 31 56.9 -0.9**
PRD Provadia 60.37 305 *i* P **P 08 31 58.0 -0.3**
KHAL Karahalli 60.44 299 *i* P **P 08 31 57.5 -1.3**
BURAR Bucovina Array 60.50 310 P **P 08 31 59.5 +0.5**
BURAR Bucovina Array 60.50 310 ⇑*i*P **P 08 31 59.7 +0.7**
BUR08 Bucovina Ar. S 60.50 310 *e*P **P 08 31 59.0 0.0**
LVV L'vov 60.61 313 *e*P **P 08 32 00.5 +0.8**
LVV *e* 08 32 43.5
LVV *e* 08 34 17.5
LVV *i* S **S 08 40 14.5 -0.8**
LVV *e* 08 46 51.7
MLR Muntele Rosu 60.66 308 P **P 08 32 00.9 +0.7**
MLR Muntele Rosu 60.66 308 ⇑*i*P **P 08 32 01.3 +1.1**
DST Dursunbey 60.67 300 *e*P **P 08 31 59.1 -1.2**
ELL Elmali 60.69 297 *e*P **P 08 31 59.1 -1.4**
DURS Dursunbey 60.78 300 *i* P **P 08 31 59.9 -1.1**
GOLH Golhisar 60.78 298 *i* P **P 08 31 58.0 -3.1**
ATD Arta Tunnel 60.78 265 P **P 08 32 02.4 +0.9**
comp=Z,29nm,0.9s,mb5.4,baz=344,slow=7.1,SNR=8.1
DEMI Demirci 60.79 300 *i* P **P 08 31 59.9 -1.2**
LOF Lofoten 60.85 335 *e*P **P 08 32 02.3 +1.2**
LOF AMB AMB 08 32 13.6
comp=Z,211nm,1.2s,mb6.1
GLHS Glhisar (BURDU 60.85 297 *e*P **P 08 31 59.7 -1.9**
DENT Denizli 60.99 298 *e*P **P 08 32 01.4 -1.1**
DNZL Cakiroluk 61.01 298 *i* P **P 08 32 01.6 -1.0**
KULA Kula-Manisa 61.01 299 *e*P **P 08 32 01.4 -1.3**
MOR8 Moi Rana 61.03 332 *e*P **P 08 32 00.3 -2.0**
MOR8 AMB AMB 08 32 09.5
comp=Z,83nm,0.8s,mb5.9
MANT Manisa 61.09 299 *i* P **P 08 32 11.2 +8.0**

AKAS Kas 61.10 296 *i* P **P 08 32 06.7 +3.4**
JMB Yambol 61.18 304 *i* P **P 08 32 05.1 +1.4**
BALB Balikesir 61.20 301 *e*P **P 08 32 02.0 -1.9**
EDRB Edirne 61.27 303 *e*P **P 08 32 01.4 -2.9**
SART Tekirdag 61.34 302 *i* P **P 08 32 04.6 -0.3**
RKY Sarkoy-Tekirda 61.35 302 *e*P **P 08 32 04.0 -0.9**
BALY Balya 61.35 301 *i* P **P 08 32 04.5 -0.5**
SZH Strazhica 61.37 305 *i* P **P 08 32 04.8 -0.2**
KWP Kalwaria Pacla 61.48 313 *e*P **P 08 32 06.6 +0.9**
KWP *e*S **S 08 40 27.1 +0.6**
KWP LMZ 08 58 12.4
comp=Z,18μm,19.3s
KWP Kalwaria Pacla 61.48 313 *e*P **P 08 32 06.6 +0.9**
KWP *e*S **S 08 40 27.1 +0.6**
KWP Kalwaria Pacla 61.48 313 *e*P **P 08 32 06.2 +0.5**
comp=Z,362nm,0.9s,mb6.5
KWP LR LR
comp=Z,12μm,19.0s,MS6.0
KWP Kalwaria Pacla 61.48 313 ⇑*i*P **P 08 32 07.0 +1.3**
AKHS Akhisar 61.51 300 *i* P **P 08 32 06.0 -0.1**
STOK Stokkvaagen 61.54 333 *e*P **P 08 32 06.1 +0.3**
BMR Baia Mare 61.59 310 ⇑P **P 08 32 07.9 +1.5**
BMR Baia Mare 61.59 310 ⇑*i*P **P 08 32 07.9 +1.5**
TURN Turunc 61.63 297 *i* P **P 08 32 07.7 +0.8**
LPK Lapseki 61.75 302 *e*P **P 08 32 07.3 -0.4**
AYDN Tasoluk 61.88 299 *i* P **P 08 32 08.6 0.0**
KOLS Kolonicke sedl 61.97 312 *e*P **P 08 32 09.4 +0.4**
KOLS *e*S **S 08 40 31.7 -1.0**
KOLS pmax pmax
comp=Z,73nm,1.0s,mb5.8
KOLS MLR MLR
comp=Z,11μm,17.7s,MS6.0
KOLS Kolonicke sedl 61.97 312 *e*P **P 08 32 09.4 +0.4**
comp=Z,73nm,1.0s,mb5.8
KOLS *e*S **S 08 40 31.7 -1.0**
KOLS LR LR
comp=Z,11μm,17.7s,MS6.0
KOLS Kolonicke sedl 61.97 312 *e*P **P 08 32 09.4 +0.4**
KOLS *e*S **S 08 40 31.6 -1.1**
UZH Uzhgorod 62.05 312 *e*P **P 08 32 10.0 +0.5**
UZH *e*S **S 08 40 28.0 -5.8**
UZH MLR MLR
comp=Z,8μm,14.0s,MS6.0
ENEZ Enez 62.06 302 *e*P **P 08 32 09.0 -0.7**
ALN Alexandroupoli 62.08 303 P **P 08 32 09.7 -0.2**
MLSB Milas 62.09 298 *e*P **P 08 32 09.0 -1.0**
ASAR Alice Springs 62.23 150 P **P 08 32 10.4 -0.5**
comp=Z,42nm,0.7s,mb5.7,baz=340,slow=7.2,SNR=430
ASAR PKP2bc 09 01 18.1
comp=Z,1.8nm,0.9s,baz=129,slow=3.1,SNR=7.0
ASAR Alice Springs 62.23 150 P **P 08 32 10.4 -0.5**
ASAR ⇑*e* 09 01 18.1
BLCB Balcova 62.24 300 *e*P **P 08 32 10.2 -0.8**
BLCB Balcova 62.24 300 P **P 08 32 10.8 -0.2**
EZN Ezine 62.26 301 *e*P **P 08 32 10.8 -0.3**
KDZ Kurdzhali 62.27 304 *i* P **P 08 32 11.8 +0.7**
GCAM G?zelcaml? 62.35 299 *i* P **P 08 32 11.6 -0.1**
RDO Rodhopi 62.36 303 *e*P **P 08 32 11.9 +0.2**
DRGR 62.38 310 P **P 08 32 12.5 +0.8**
DRGR 62.38 310 ⇓*i*P **P 08 32 12.9 +1.2**
BDRM Kayabasi 62.42 298 *i* P **P 08 32 13.1 +0.9**
GADA Gvkgeada 62.44 302 *e*P **P 08 32 10.8 -1.4**
DAT Datca 62.45 298 *e*P **P 08 32 08.4 -3.9**
BOZC Bozcaada 62.45 301 *i* P **P 08 32 11.1 -1.3**
STHS Stebnicka Huta 62.46 313 *i* P **P 08 32 12.6 +0.4**
STHS pmax pmax
comp=Z,44nm,0.9s,mb5.6
STHS Stebnicka Huta 62.46 313 *i* P **P 08 32 12.6 +0.4**
comp=Z,44nm,0.9s,mb5.6
STHS Stebnicka Huta 62.46 313 *i* P **P 08 32 12.6 +0.4**
CRAR CRAIOVA 62.48 307 P **P 08 32 13.3 +0.8**
NSS Namsos 62.50 331 *e*P **P 08 32 09.7 -2.6**
NSS *e*S **S 08 40 39.7 +0.9**
NSS *e*SS SS 08 44 47.2 +5.0
NSS AMS AMS 09 00 14.0
comp=Z,16μm,14.2s,MS6.3
URLA Izmir 62.58 300 *i* P **P 08 32 12.2 -1.1**
SMG Samos 62.64 299 *e*P **P 08 32 13.8 +0.1**
RZN Rozhen 62.75 304 *i* P **P 08 32 14.2 -0.1**
GZR Gura Zlata 62.80 308 P **P 08 32 15.8 +1.2**
GZR Gura Zlata 62.80 308 ⇓*i*P **P 08 32 15.9 +1.3**
PGB Panagyurishte 62.83 305 *i* P **P 08 32 15.5 +0.6**
CHOS Chios island 62.97 300 P **P 08 32 15.8 0.0**
NIE Niedzica 63.03 313 *e*P **P 08 32 17.5 +1.5**
NIE *e* pP 08 32 23.3 +2.7
OJC Ojcow 63.08 314 *e*P **P 08 32 16.3 -0.1**
OJC *e*S **S 08 40 45.1 -1.5**
OJC L 09 00 00.5
comp=Z,22nm,17.5s
KAVA Kavala 63.14 303 P **P 08 32 16.6 -0.3**
HFS Hagfors 63.14 326 P **P 08 32 16.0 -0.6**
KARP Karpathos 63.20 297 *e*P **P 08 32 17.1 -0.3**
KECS Kecovo 63.24 312 *i* P **P 08 32 18.0 +0.6**
KECS *e* 08 34 37.0
KECS pmax pmax
comp=Z,25nm,1.0s,mb5.3
KECS Kecovo 63.24 312 *i* P **P 08 32 18.0 +0.6**
comp=Z,25nm,1.0s,mb5.3
KECS *e*PP PP 08 34 37.0 +0.8
KECS Kecovo 63.24 312 *i* P **P 08 32 18.0 +0.6**
KECS *e*PP PP 08 34 37.0 +0.8
VTS Vitosha 63.48 305 *i* P **P 08 32 19.7 +0.5**
BZS Buzias 63.49 309 P **P 08 32 19.4 +0.2**
BZS Buzias 63.49 309 ⇑*i*P **P 08 32 19.6 +0.4**
GKP Gorka Klasztor 63.56 318 *e*P **P 08 32 20.7 +1.1**
GKP *e*S **S 08 40 51.0 -1.6**
GKP LMZ 09 00 42.4
comp=Z,24μm,20.8s
OUR Ouranopolis 63.75 303 P **P 08 32 20.5 -0.5**
PSZ Piszkesteto 63.80 312 *e*P **P 08 32 21.4 +0.2**
PSZ pmax pmax
comp=Z,147nm,1.3s,mb5.8
PSZ MLR MLR
comp=Z,10μm,19.0s,MS6.0
PSZ Piszkesteto 63.80 312 *e*P **P 08 32 21.4 +0.2**
comp=Z,147nm,1.3s,mb5.8
PSZ LR LR
comp=Z,10μm,19.0s,MS6.0
PSZ Piszkesteto 63.80 312 ⇓*e*P **P 08 32 21.5 +0.3**
PSZ Piszkesteto 63.80 312 ⇓*i*P **P 08 32 22.6 +1.4**
KKB Krupnik 63.83 304 *i* P **P 08 32 21.0 -0.5**
APE Apeiranthos 63.84 299 *e*P **P 08 32 20.5 -1.1**
APE Apeiranthos 63.84 299 ⇓*i*P **P 08 32 19.8 -1.8**
APE Apeiranthos 63.84 299 P **P 08 32 19.7 -1.9**
LIKS Likavka 63.90 313 *e*P **P 08 32 23.9 +2.1**
LIKS pmax pmax
comp=Z,38nm,0.9s,mb5.4
LIKS Likavka 63.90 313 *e*P **P 08 32 23.9 +2.1**
comp=Z,38nm,0.9s,mb5.4
LIKS Likavka 63.90 313 *e*P **P 08 32 23.9 +2.1**
NB2 NORSAR Subarra 63.98 327 P **P 08 32 21.2 -1.0**
comp=Z,215nm,1.1s,mb6.1,baz=72,slow=6.9
NOA NORSAR Array B 63.98 327 P **P 08 32 21.1 -1.1**
comp=Z,44nm,0.8s,mb5.5,baz=71,slow=6.6,SNR=81
ZKR Zakros 64.08 296 *e*P **P 08 32 22.8 -0.4**
ZKR Zakros 64.08 296 P **P 08 32 22.5 -0.7**
RAC Raciborz 64.10 314 *e*P **P 08 32 24.1 +1.0**
RAC *e*S **S 08 40 57.8 -1.5**
RAC MLR MLR
comp=Z,13μm,17.0s,MS6.2
PAIG Palioure 64.12 302 P **P 08 32 23.2 -0.2**
PLG Polygyros 64.12 303 *e*P **P 08 32 24.9 +1.5**
NAO01 NORSAR Array S 64.20 327 *e*P **P 08 32 23.1 -0.5**
comp=Z,47nm,0.8s,mb5.6
NAO01 LR LR
comp=Z,13μm,19.0s,MS6.1
OKC Ostrava-Krasne 64.21 314 *e*P **P 08 32 24.7 +0.9**
OKC *e* 08 34 53.9
OKC *e*S **S 08 40 56.6 -4.1**
OKC MLR MLR
comp=Z,16μm,19.3s,MS6.2
OKC Ostrava-Krasne 64.21 314 *e*P **P 08 32 24.7 +0.9**
OKC *e*PP PP 08 34 53.9 +9.2
OKC *e*S **S 08 40 56.6 -4.1**
OKC *ex* x 08 48 12.1
OKC AMS AMS 09 00 30.0
comp=Z,16μm,19.3s
KNT Kendrikon 64.21 304 P **P 08 32 23.9 -0.1**
BSD Bornholm Skovb 64.22 320 *e*P **P 08 32 24.0 +0.2**
BSD *i* S **S 08 41 00.1 -0.5**
BSD pmax pmax
comp=Z,99nm,0.7s,mb6.0
BSD MLR MLR

comp=Z,15μm,18.0s,MS6.2
BSD Bornholm Skovb 64.22 320 *i* P **P 08 32 24.0 +0.2**
comp=Z,99nm,0.7s,mb6.0
BSD *i* S **S 08 41 00.1 -0.5**
BSD
comp=Z,15μm,18.0s
AOS Alonnisos 64.26 301 P **P 08 32 23.7 -0.6**
VYHS Vyhne 64.26 313 *e*P **P 08 32 25.1 +0.9**
VYHS *e*S **S 08 41 01.9 +0.5**
VYHS *e* 08 42 18.0
VYHS pmax pmax
comp=Z,159nm,1.7s,mb5.8
VYHS MLR MLR
comp=Z,7μm,19.7s,MS5.9
VYHS Vyhne 64.26 313 *e*P **P 08 32 25.1 +0.9**
comp=Z,159nm,1.7s,mb5.8
VYHS *e*S **S 08 41 01.9 +0.5**
VYHS *e*ScS ScS 08 42 18.0 +0.2
VYHS *e*SS SS 08 45 20.0 +10
VYHS LR LR
comp=Z,7μm,19.7s,MS5.9
VYHS Vyhne 64.26 313 *e*P **P 08 32 25.1 +0.9**
VYHS *e*S **S 08 41 01.9 +0.5**
VYHS *e*SCS ScS 08 42 18.0 +0.2
VYHS *e*SS SS 08 45 20.0 +10
HORT Hortiatis 64.28 303 P **P 08 32 23.8 -0.7**
VAY Valandovo 64.39 304 *e*P **P 08 32 23.9 -1.3**
VAY Valandovo 64.39 304 P **P 08 32 24.4 -0.7**
NPS Neapolis 64.47 297 *e*P **P 08 32 25.2 -0.6**
KOLL Kolacno 64.50 313 *e*P **P 08 32 27.0 +1.2**
KOLL Kolacno 64.50 313 *e*P **P 08 32 27.0 +1.2**
BUD Budapest 64.50 311 ⇓*e*P **P 08 32 26.5 +0.7**
STIP Stip 64.51 305 *e*P **P 08 32 25.0 -1.0**
XRY Khrisi 64.56 296 *e*P **P 08 32 25.9 -0.5**
DOMB Dombas 64.58 329 *e*P **P 08 32 26.0 0.0**
DOMB AMB AMB 08 32 36.8
comp=Z,135nm,1.1s,mb5.9
MORC Moravsky Berou 64.60 314 *e*P **P 08 32 27.1 +0.7**
MORC Moravsky Berou 64.60 314 ⇓*i*P **P 08 32 26.8 +0.4**
OSL Oslo 64.61 326 *e*P **P 08 32 26.7 +0.5**
OSL AMB AMB 08 32 34.5
comp=Z,196nm,1.7s,mb5.8
LAST Lasithi 64.61 297 *e*P **P 08 32 26.5 -0.2**
LAST Lasithi 64.61 297 P **P 08 32 26.4 -0.3**
XOR Xorichti 64.68 302 P **P 08 32 26.4 -0.7**
PTL Penteli 64.69 300 *e*P **P 08 32 26.9 -0.3**
VLY Voula,Athens 64.82 300 *e*P **P 08 32 26.1 -1.9**
LIT Litokhoron 64.90 303 P **P 08 32 27.5 -1.0**
KLBR Kellerberrin 64.91 168 *e*P **P 08 32 27.9 -0.6**
comp=Z,112nm,1.1s,mb5.8
SKO Skopje 64.93 305 *e*P **P 08 32 28.6 -0.1**
ALE Alert 64.96 358 P **P 08 32 29.0 +0.7**
comp=Z,564nm,1.0s,mb6.5,SNR=26
KSP Ksiaz 64.96 316 *e*P **P 08 32 30.1 +1.4**
KSP *e*pP pP 08 32 38.3 +5.0
KSP *e*S **S 08 41 09.4 -0.6**
KSP LMZ 09 01 00.9
comp=Z,34μm,17.9s
KSP Ksiaz 64.96 316 *e*P **P 08 32 28.7 0.0**
KSP *e**PP pP 08 32 35.8 +2.5
KSP *e* 08 34 50.0
KSP *e*S **S 08 41 08.5 -1.4**
KSP *e*SSS 08 48 15.5
KSP MLR MLR
comp=Z,39μm,17.9s,MS6.7
IDI Anoyia 65.01 297 *e*P **P 08 32 27.9 -1.4**
MOL Molde 65.04 330 *e*P **P 08 32 27.6 -1.4**
MOL *e*S S 08 41 11.1 +0.6
MOL AMS AMS 09 01 31.1
comp=Z,14μm,22.2s,MS6.1
NAIG Nisos Aigina 65.08 300 *e*P **P 08 32 27.9 -1.8**
LKR Lokris 65.09 301 *e*P **P 08 32 29.0 -0.8**
DPC Dobruska-Polom 65.12 315 *e*P **P 08 32 30.8 +1.0**
DPC *e* 08 35 02.3
DPC *e*S S 08 41 11.5 -0.4
DPC *e* 08 48 22.7
DPC MLR MLR
comp=Z,25μm,15.6s,MS6.5
DPC Dobruska-Polom 65.12 315 *e*P **P 08 32 30.8 +1.0**
DPC *e*PP PP 08 35 02.3 +10
DPC *e*S S 08 41 11.5 -0.4
DPC *ex* x 08 48 22.7
DPC AMS AMS 09 01 10.0
comp=Z,25μm,15.6s
SMOL Smolenice 65.13 313 *e*P **P 08 32 31.3 +1.5**
SMOL Smolenice 65.13 313 *e*P **P 08 32 31.3 +1.5**
SIVA Sivas 65.17 297 *e*P **P 08 32 30.1 -0.3**
SIVA Sivas 65.17 297 P **P 08 32 30.0 -0.4**
PKSM Moragy 65.21 310 ⇑P **P 08 32 30.2 -0.3**
PKSM Moragy 65.21 310 ⇑*i*P **P 08 32 30.1 -0.4**
TTA Tatalina 65.23 30 *e*P **P 08 32 30.2 0.0**
KONO Kongsberg 65.24 326 *e*P **P 08 32 29.2 -1.2**
KONO *e*S S 08 41 13.6 +0.5
KONO AMS AMS 09 00 35.2
comp=Z,12μm,20.9s,MS6.1
KONO Kongsberg 65.24 326 *e*P **P 08 32 30.9 +0.5**
KONO pmax pmax
comp=Z,74nm,0.8s,mb5.8
KONO MLR MLR
comp=Z,14μm,19.0s,MS6.2
KONO Kongsberg 65.24 326 *e*P **P 08 32 30.9 +0.5**
comp=Z,74nm,0.8s,mb5.8
KONO LR LR
comp=Z,14μm,19.0s,MS6.2
RGN Rugen 65.28 320 *e*S S 08 41 14.3 +0.6
RGN Rugen 65.28 320 *e*P **P 08 32 27.6 -3.1**
comp=Z,126nm,0.9s,mb6.0
KRUS Krusevo 65.29 304 *e*P **P 08 32 28.8 -2.2**
COP Copenhagen 65.33 322 *i* P **P 08 32 31.1 +0.1**
COP *i* S S 08 41 15.6 +1.3
COP pmax pmax
comp=Z,96nm,0.7s,mb5.9
COP MLR MLR
comp=Z,5μm,17.0s,MS5.8
COP Copenhagen 65.33 322 *i* P **P 08 32 31.1 +0.1**
comp=Z,96nm,0.7s,mb5.9
COP *i* S S 08 41 15.6 +1.3
COP
comp=Z,5μm,17.0s
KZN Kozani 65.33 303 *e*P **P 08 32 30.2 -1.1**
VRAC Vranov 65.34 314 P **P 08 32 32.0 +0.8**
VRAC Vranov 65.34 314 ⇑*i*P **P 08 32 32.0 +0.8**
LTK Loutraki 65.36 301 *e*P **P 08 32 28.5 -3.0**
CTA Charters Tower 65.37 137 *e*P **P 08 32 30.8 -0.9**
comp=Z,22nm,0.6s,mb5.4
CTA *e*S S 08 41 06.7 -8.8
CTAO Charters Tower 65.37 137 *e*P **P 08 32 31.0 -0.7**
CTAO pmax pmax
comp=Z,276nm,1.5s,mb6.1
CTAO MLR MLR
comp=Z,3μm,21.0s,MS5.4
CTAO Charters Tower 65.37 137 *e*P **P 08 32 31.0 -0.7**
comp=Z,276nm,1.5s,mb6.1
CTAO LR LR
comp=Z,3μm,21.0s,MS5.4
MIDW Midway 65.38 71 PFAKE 08 32 40.0 +8.1
MIDW LR LR
comp=Z,5μm,20.0s,MS5.7
FNA Florina 65.42 304 P **P 08 32 30.6 -1.3**
AGG Agios Georgios 65.43 302 P **P 08 32 30.4 -1.6**
THL Klokotos Trika 65.44 302 *e*P **P 08 32 30.4 -1.7**
ZST Bratislava 65.45 313 *e*P **P 08 32 33.5 +1.6**
ZST *e*S S 08 41 15.9 -0.1
ZST pmax pmax
comp=Z,27nm,0.9s,mb5.3
ZST MLR MLR
comp=Z,24μm,14.5s,MS6.5
ZST Bratislava 65.45 313 *e*P **P 08 32 33.5 +1.6**
comp=Z,26nm,0.9s,mb5.3
ZST *e*S S 08 41 15.9 -0.1
ZST LR LR
comp=Z,24μm,14.5s,MS6.5
ZST Bratislava 65.45 313 *e*P **P 08 32 33.5 +1.6**
ZST *e*S S 08 41 15.9 -0.1
VAM Vamos 65.48 297 *e*P **P 08 32 28.5 -3.9**
DAG Danmarks Havn 65.61 348 ⇓*e*P **P 08 32 30.8 -1.7**
DAG pmax pmax
comp=Z,42nm,1.4s,mb5.3
DAG Danmarks Havn 65.61 348 ⇓*i*P **P 08 32 30.8 -1.7**
comp=Z,42nm,1.4s,mb5.3
IVA Berane 65.64 306 ⇓*i*P **P 08 32 34.0 +0.7**
FURI Furi 65.65 265 *e*P **P 08 32 36.2 +2.4**
FURI S S 08 41 36.2 +17

COLD Coldfoot 65.66 24 *e*P **P 08 32 32.5 -0.5**
comp=Z,162nm,0.9s,mb6.0
KARN Karanos 65.69 298 *e*P **P 08 32 33.0 -0.7**
KARN Karanos 65.69 298 P **P 08 32 32.9 -0.8**
PVY Plav 65.70 306 ⇓*i*P **P 08 32 33.6 -0.1**
BCI Bajram Curri 65.72 306 *e*PN **P 08 32 35.0 +1.2**
GVD Gavdhos 65.79 297 *e*P **P 08 32 34.0 -0.4**
comp=Z,173nm,0.5s,mb6.3
RUE Ruedersdorf 65.80 318 *e*P **P 08 32 34.2 0.0**
comp=Z,218nm,1.3s,mb6.0
RUE Ruedersdorf 65.80 318 *e*P **P 08 32 34.5 +0.4**
comp=Z,186nm,1.1s,mb6.0
PLE Pljevlja 65.81 307 ⇓*i*P **P 08 32 34.8 +0.5**
PLE Pljevlja 65.81 307 ⇓*i*P **P 08 32 34.8 +0.5**
KALE Kalithea 65.81 301 P **P 08 32 42.1 +7.6**
GUR Goura 65.84 301 *e*P **P 08 32 30.4 -4.3**
VLI Veliai 65.89 299 *e*P **P 08 32 33.2 -1.8**
KBN Korca 65.90 304 *e*PN **P 08 32 33.9 -1.1**
EFP Efpalio 65.97 301 *e*P **P 08 32 35.0 -0.5**
PUK Puka 65.97 306 *e*PN **P 08 32 35.4 0.0**
LAKA Lakka 65.99 301 P **P 08 32 45.2 +10**
KYTH Kithira 66.00 299 *e*P **P 08 32 33.9 -1.8**
TREC Trest 66.02 314 *e*P **P 08 32 35.8 +0.2**
TREC *e*S S 08 41 15.3 -7.7
TREC MLR MLR
comp=Z,23μm,18.4s,MS6.4
TREC Trest 66.02 314 *e*P **P 08 32 35.8 +0.2**
TREC *e*x x 08 41 15.3
TREC AMS AMS 09 01 40.0
comp=Z,23μm,18.4s
VLX Vlachokerasia 66.04 300 *e*P **P 08 32 33.3 -2.7**
SDPT Sand Point 66.09 39 *e*P **P 08 32 43.8 +7.9**
PVCC Panska Ves 66.10 316 *e*P **P 08 32 36.9 +0.8**
PVCC *e*S S 08 41 23.9 +0.1
PVCC MLR MLR
comp=Z,20μm,14.7s,MS6.4
PVCC Panska Ves 66.10 316 *e*P **P 08 32 36.9 +0.8**
PVCC *e*x x 08 35 24.0
PVCC *e*S S 08 41 23.9 +0.1
PVCC *e*x x 08 48 48.8
PVCC AMS AMS 09 01 30.0
comp=Z,20μm,14.7s
NWAO Narrogin (SRO) 66.13 169 *e*P **P 08 32 36.5 +0.2**
NWAO MLR MLR
comp=Z,6μm,22.0s
NWAO Narrogin (SRO) 66.13 169 *e*P **P 08 32 36.5 +0.1**
NWAO LR LR
comp=Z,6μm,22.0s,MS5.7
NWAO Narrogin (SRO) 66.13 169 P **P 08 32 43.6 +7.3**
SNR=5.6
NWAO P 08 32 43.6
SNR=5.6
UPM Unac-Piva 66.18 307 ⇓*i*P **P 08 32 36.1 -0.7**
UPM Unac-Piva 66.18 307 ⇓*i*P **P 08 32 36.1 -0.6**
TTG Podgorica 66.25 306 ⇓*i*P **P 08 32 35.8 -1.4**
TTG Podgorica 66.25 306 ⇓*i*P **P 08 32 35.9 -1.3**
TIR Tirane 66.26 305 *e*P **P 08 32 36.4 -0.9**
TIR pmax pmax
comp=Z,87nm,0.8s,mb5.8
TIR MLR MLR
comp=Z,7μm,20.0s,MS5.9
TIR Tirane 66.26 305 *e*P **P 08 32 36.4 -0.8**
comp=Z,87nm,0.8s,mb5.8
TIR LR LR
comp=Z,7μm,20.0s,MS5.9
TIR Tirane 66.26 305 P **P 08 32 37.7 +0.4**
NKY Niksic 66.28 307 ⇓*i*P **P 08 32 35.6 -1.8**
NKY Niksic 66.28 307 ⇓*i*P **P 08 32 35.6 -1.7**
CONA Conrad Observa 66.32 313 *i* P **P 08 32 38.4 +0.9**
comp=Z,120nm,1.5s,mb5.7,SNR=20
PRU Pruhonice 66.32 315 *e*P **P 08 32 38.7 +1.2**
PRU *e*S S 08 41 26.7 +0.1
PRU MLR MLR
comp=Z,21μm,14.1s,MS6.5
PRU Pruhonice 66.32 315 *e*P **P 08 32 38.7 +1.2**
PRU *e*x x 08 35 22.2
PRU *e*S S 08 41 26.7 +0.1
PRU *e*x x 08 48 48.9
PRU AMS AMS 09 02 00.0
comp=Z,21μm,14.1s
BRG Berggiesshubel 66.33 316 *e*P **P 08 32 37.5 -0.1**
comp=Z,120nm,1.4s,mb5.7
BRG *e*S S 08 41 25.4 -1.2
BRG Berggiesshubel 66.33 316 *i* P **P 08 32 37.9 +0.4**
comp=Z,132nm,1.7s,mb5.7
BRG *i* 08 32 47.1
comp=Z,121nm,1.4s
BRG *i* 08 32 51.7
comp=Z,108nm,1.1s
BRG *i* 08 33 20.2
comp=Z,94nm,1.2s
BRG PP PP 08 35 04.0 +0.8
BRG S S 08 41 27.0 +0.3
BRG *e* 08 42 30.3
comp=Z,22nm,1.6s
BRG *i* 08 42 35.0
BRG SS SS 08 45 42.0 -0.4
BRG *e*PKPPKP 09 01 16.7
comp=Z,26nm,1.9s
BRG
comp=N,38μm,17.9s
BRG
comp=E,14μm,18.0s
BRG
comp=Z,14μm,14.3s
CHUM Lake Minchumin 66.35 28 *e*P **P 08 32 37.3 -0.2**
comp=Z,38nm,1.0s,mb5.4
PRA Prague 66.35 315 ⇓P **P 08 32 39.0 +1.3**
PRA S S 08 41 28.0 +1.0
PRA AMS AMS 09 02 10.0
RLS Riolos of Patr 66.43 301 *e*P **P 08 32 37.4 -1.0**
ULC Ulcinj 66.44 306 ⇓*i*P **P 08 32 37.3 -1.1**
ULC Ulcinj 66.44 306 ⇓*i*P **P 08 32 37.4 -1.1**
ITM Ithomi 66.45 300 *e*P **P 08 32 36.7 -1.9**
FOO Floro 66.51 329 *e*P **P 08 32 37.9 -0.6**
FOO *e*S S 08 41 27.1 -1.4
FOO AMS AMS 09 02 59.3
comp=Z,18μm,14.6s,MS6.4
BUM Brajici-Budva 66.55 306 ⇓*i*P **P 08 32 38.5 -0.6**
BUM Brajici-Budva 66.55 306 ⇓*i*P **P 08 32 38.6 -0.5**
BRY Bratogost 66.55 307 ⇓*i*P **P 08 32 38.5 -0.6**
FORT Forrest 66.59 159 *e*P **P 08 32 38.3 -1.0**
comp=Z,186nm,0.7s,mb6.2
FORT Forrest 66.59 159 *e*P **P 08 32 38.6 -0.8**
IGT Igoumenitsa 66.65 303 P **P 08 32 38.4 -1.4**
KOGS Kog 66.65 311 *i* P **P 08 32 39.8 +0.1**
PYL PYLOS 66.70 300 *e*P **P 08 32 37.6 -2.6**
CLL Collm 66.70 317 *e*P **P 08 32 39.6 -0.3**
comp=Z,138nm,1.4s,mb5.8
CLL *e*S S 08 41 29.2 -2.0
CLL Collm 66.70 317 ⇓*i*P **P 08 32 39.8 -0.1**
CLL *i* 08 32 46.5
CLL *i* 08 32 48.9
CLL *e*S S 08 41 31.0 -0.2
CLL *e*ScS ScS 08 42 34.0 -2.6
CLL *e* 08 42 34.0
CLL pmax pmax
comp=Z,90nm,1.4s,mb5.6
CLL MLR MLR
comp=Z,13μm,18.0s,MS6.2
CLL Collm 66.70 317 ⇓*i*P **P 08 32 39.8 -0.1**
comp=Z,90nm,1.4s,mb5.6
CLL *i* 08 32 46.5
CLL *i* 08 32 48.9
CLL *e*S S 08 41 31.0 -0.2
CLL *e*ScS ScS 08 42 34.0 -2.6
CLL LR LR
comp=Z,13μm,18.0s,MS6.2
CLL Collm 66.70 317 ⇓*i*P **P 08 32 39.8 -0.1**
comp=Z,90nm,1.4s,mb5.6
CLL LmV 08 07 00.0
comp=Z,13μm,18.0s
CLL *i* pP pP 08 32 46.5 +2.0
CLL *i* sP sP 08 32 48.9 +2.7
comp=Z,139nm,1.4s
CLL *i* 08 32 56.7
CLL *e*PP PP 08 35 08.0 +1.5
CLL *e*PPP 08 37 00.0
CLL *e*S S 08 41 31.0 -0.2
comp=N,900nm,20.4s
CLL *e*S S 08 41 31.0 -0.2
comp=E,1μm,19.3s
CLL *e*sS sS 08 41 41.0 +2.3
CLL *e*PPS 08 42 06.0
CLL *e*ScS ScS 08 42 34.0 -2.6
CLL *e*SS SS 08 45 45.0 -3.2
CLL *e* 08 46 48.0
CLL *e*SSS 08 49 04.0
CLL LmH 08 58 00.0
comp=N,43μm,21.6s
CLL LmH 08 58 00.0
comp=E,20μm,21.2s
MUD Monsted U'grnd 66.71 323 ⇑*i*P **P 08 32 40.8 +0.9**
MUD pmax pmax
comp=Z,130nm,0.9s,mb6.0
MUD MLR MLR
comp=Z,9μm,17.0s,MS6.0
MUD Monsted U'grnd 66.71 323 ⇑*i*P **P 08 32 40.8 +0.9**
comp=Z,130nm,0.9s,mb6.0
MUD
comp=Z,9μm,17.0s
SRN Sarande 66.75 303 *e*PN **P 08 32 39.9 -0.5**
HCY Herceg Novi 66.76 306 ⇓*i*P **P 08 32 40.1 -0.4**
HCY Herceg Novi 66.76 306 ⇓*i*P **P 08 32 40.2 -0.3**
JMIC Jan Mayen 66.76 341 *e*S S 08 41 32.0 +0.7
JMIC AMS AMS 09 02 54.5
comp=Z,11μm,20.5s,MS6.0
BPAW Bear Paw Mtn. 66.78 28 *e*P **P 08 32 39.8 -0.4**
comp=Z,8.1nm,1.3s,mb4.6
CHGN Chignik 66.78 37 *e*P **P 08 32 39.1 -1.2**
ARSA Arzberg 66.80 312 ⇓*i*P **P 08 32 40.7 +0.1**
comp=Z,75nm,1.5s,mb5.5,SNR=20
PPLA Purkeypile 66.83 29 *e*P **P 08 32 40.6 +0.1**
comp=Z,103nm,0.3s,mb6.3
SNART Snartemo 66.90 325 *e*P **P 08 32 41.4 +0.3**
BER Bergen 66.90 328 *e*S S 08 41 33.7 +0.4
BER AMS AMS 08 59 46.6
comp=Z,11μm,26.6s,MS6.0
KEK Kerkira 66.95 303 *e*P **P 08 32 36.1 -5.7**
SISC Sisak 66.96 310 P **P 08 32 42.1 +0.4**
SISC Sisak 66.96 310 *i* P **P 08 32 42.1 +0.4**
KTH Kantishna Hill 67.05 28 *e*P **P 08 32 41.4 -0.6**
comp=Z,287nm,1.1s,mb6.2
STON Ston 67.13 307 P **P 08 32 41.8 -1.0**
STON Ston 67.13 307 *i* P **P 08 32 41.8 -1.0**
BSEG Bad Segeberg 67.14 320 *e*P **P 08 32 43.1 +0.4**
comp=Z,174nm,0.8s,mb6.1
BSEG *e*S S 08 41 36.2 -0.2
KHC Kasperske Hory 67.24 315 *e*P **P 08 32 43.9 +0.5**
KHC *e* pP 08 32 49.0 +1.1
KHC *e*S S 08 41 38.1 +0.4
KHC MLR MLR
comp=Z,26μm,18.2s,MS6.5
KHC Kasperske Hory 67.24 315 *e*P **P 08 32 43.8 +0.4**
comp=Z,55nm,1.1s,mb5.5
KHC Kasperske Hory 67.24 315 *e*P **P 08 32 43.9 +0.5**
KHC *e*pP pP 08 32 49.0 +1.1
KHC *e*x x 08 32 56.0
KHC *e*x x 08 33 02.0
KHC *e*x x 08 33 21.5
KHC *e*x x 08 35 36.5
KHC *e*S S 08 41 38.1 +0.4
KHC *e*x x 08 49 15.5
KHC AMS AMS 09 02 30.0
comp=Z,26μm,18.2s
DOBS Dobrina 67.27 311 *e*P **P 08 32 43.6 -0.1**
GEC2 GERESS Array S 67.28 314 *e*P **P 08 32 43.8 +0.2**
comp=Z,129nm,1.2s,mb5.8
GEC2 *e*S S 08 41 38.4 +0.2
GEC2 GERESS Array S 67.28 314 *e*P **P 08 32 43.8 +0.2**
GEC2 *e*S S 08 41 38.4 +0.2
GEC2 pmax pmax
comp=Z,129nm,1.2s,mb5.8
GERES GERESS Array B 67.28 314 P **P 08 32 44.1 +0.4**
comp=Z,9.8nm,0.9s,mb4.8,baz=71,slow=5.8,SNR=56
GERES LR LR 09 03 07.2
comp=Z,19μm,18.6s,MS6.3,baz=62,slow=37
PERS Pernice 67.30 312 *i* P **P 08 32 44.0 +0.2**
PERS *e* 08 35 20.9
PERS *e* 08 37 01.9
PERS *e*S S 08 41 33.4 -5.1
PERS *e* 08 46 35.9
SOKA Soboth 67.33 312 ⇓*i*P **P 08 32 44.2 +0.2**
comp=Z,133nm,1.2s,mb5.9
MOA Molln 67.34 313 *i* P **P 08 32 44.8 +0.8**
comp=Z,127nm,1.5s,mb5.7,SNR=16
TRF Thorofare Moun 67.35 28 *e*P **P 08 32 43.5 -0.3**
comp=Z,122nm,0.8s,mb6.0
TANN Tannenbergstha 67.38 316 *e*P **P 08 32 44.3 +0.1**
comp=Z,130nm,1.4s,mb5.8
TANN *e*S S 08 41 38.0 -1.3
WERD Werda 67.45 316 *e*P **P 08 32 44.7 0.0**
comp=Z,111nm,1.4s,mb5.7
NKC Novy Kostel 67.46 316 *e*P **P 08 32 45.3 +0.5**
NKC *e* 08 35 21.5
NKC *e*S S 08 41 40.1 -0.2
NKC MLR MLR
comp=Z,17μm,14.0s,MS6.4
NKC Novy Kostel 67.46 316 *e*P **P 08 32 45.3 +0.5**
NKC *e*PP PP 08 35 21.5 +8.4
NKC *e*S S 08 41 40.1 -0.2
NKC *e*x x 08 49 20.7
NKC AMS AMS 09 02 30.0
comp=Z,17μm,14.0s
GUNZ Gunzen 67.47 316 *e*P **P 08 32 45.0 +0.1**
comp=Z,192nm,1.4s,mb5.9
WERN Wernitzgruen 67.48 316 *e*P **P 08 32 45.1 +0.2**
comp=Z,144nm,1.4s,mb5.8
COLA College 67.61 26 *e*P **P 08 32 44.7 -0.8**
COLA *e*S S 08 41 40.1 -1.6
COLA pmax pmax
comp=Z,422nm,0.8s,mb6.5
COLA MLR MLR
comp=Z,9μm,22.0s,MS5.9
COLA College 67.61 26 *e*P **P 08 32 44.7 -0.7**
comp=Z,422nm,0.8s,mb6.5
COLA *e*S S 08 41 40.1 -1.6
COLA LR LR
comp=Z,9μm,22.0s,MS5.9
WET Wettzell 67.65 315 *e*P **P 08 32 46.3 +0.3**
comp=Z,94nm,1.2s,mb5.7
WET *e*S S 08 41 42.0 -0.7
WET Wettzell 67.65 315 *e*P **P 08 32 46.3 +0.3**
WET *e*S S 08 41 42.0 -0.7
WET pmax pmax
comp=Z,94nm,1.2s,mb5.7
BOJS Bojanci 67.67 311 *i* P **P 08 32 46.8 +0.6**
BOJS *e* 08 35 24.4
BOJS *e*S S 08 41 40.1 -2.9
BOJS *e* 08 48 53.8
RSO Redoubt South 67.68 32 *e*P **P 08 32 46.2 +0.2**
SCTE Santa Cesarea 67.74 304 *e*P **P 08 32 45.4 -1.4**
MCK McKinley 67.75 28 *e*P **P 08 32 45.6 -0.8**
MOX Moxa 67.78 317 *e*P **P 08 32 47.2 +0.5**
comp=Z,139nm,1.9s,mb5.7
MOX *e*S S 08 41 45.0 +0.9
MOX
comp=Z,8μm,17.0s
MOX Moxa 67.78 317 *e*P **P 08 32 46.8 +0.1**
comp=Z,81nm,1.2s,mb5.6
MOX *e*S S 08 41 43.3 -0.8
MOX Moxa 67.78 317 *e*P **P 08 32 47.2 +0.5**
MOX *e*S S 08 41 45.0 +0.9
MOX pmax pmax
comp=Z,139nm,1.9s,mb5.7
MOX MLR MLR
comp=Z,8μm,17.0s,MS6.0
MOX Moxa 67.78 317 *e*P **P 08 32 47.2 +0.5**
comp=Z,139nm,1.9s,mb5.7
MOX *e*S S 08 41 45.0 +0.9
MOX LR LR
comp=Z,8μm,17.0s,MS6.0
ROTZ Rotzenmuhle 67.79 316 *e*P **P 08 32 47.5 +0.6**
comp=Z,208nm,1.3s,mb6.0
ROTZ *e*S S 08 41 45.3 +1.0
NRDL Niedersach Rie 67.86 319 *e*P **P 08 32 47.7 +0.5**
comp=Z,209nm,1.2s,mb6.0
NRDL *e*S S 08 41 45.1 +0.1
LJU Ljubljana 67.91 311 *e*P **P 08 32 47.0 -0.7**
LJU *e*S S 08 41 41.8 -4.1
CLZ Clausthal 67.98 318 *e*P **P 08 32 48.4 +0.4**
comp=Z,296nm,1.3s,mb6.2
CLZ *e*S S 08 41 45.8 -0.7
CLZ Clausthal 67.98 318 *e*P **P 08 32 48.4 +0.4**
CLZ *e*S S 08 41 45.8 -0.7
CLZ pmax pmax
comp=Z,296nm,1.3s,mb6.2
CEY Cerknica 68.10 311 *i* P **P 08 32 49.0 +0.1**
KNDS Knezji Dol 68.22 311 *i* P **P 08 32 49.8 +0.2**
KBA Koelnbreinsper 68.22 313 *i* P **P 08 32 50.0 +0.3**
comp=Z,72nm,1.2s,mb5.6,SNR=28
MYKA Terra Mystica 68.23 312 ⇓*i*P **P 08 32 49.5 -0.2**
comp=Z,24nm,1.0s,mb5.2
RJOB Jochberg 68.29 313 *e*P **P 08 32 50.7 +0.7**
comp=Z,93nm,1.4s,mb5.6
NVLJ Novalja 68.31 310 P **P 08 32 47.2 -3.0**
NVLJ Novalja 68.31 310 *i* P **P 08 32 47.2 -3.0**
VOY Vojsko 68.32 311 *e*P **P 08 32 49.8 -0.5**
VOY *e* 08 32 56.2
VOY *e* 08 33 06.2
VOY *e* 08 33 28.2
GRA1 Grafenberg Arr 68.41 316 *e*P **P 08 32 51.2 +0.5**
comp=Z,331nm,1.2s,mb6.2
GRA1 *e*S S 08 41 51.8 +0.1
GRA1 LR LR
comp=Z,13μm,20.0s,MS6.2
GRF Grafenberg Arr 68.41 316 *e*P **P 08 32 51.2 +0.5**
comp=Z,331nm,1.2s,mb6.2
GRF *e*S S 08 41 51.8 +0.1
GRF *e*L 08 59 56.2
comp=Z,13μm,20.0s
GRF Grafenberg Arr 68.41 316 *e*P **P 08 32 51.2 +0.5**
GRF *e*S S 08 41 51.8 +0.1
GRF pmax pmax
comp=Z,331nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,13μm,20.0s,MS6.2
GRF Grafenberg Arr 68.41 316 *e*P **P 08 32 51.2 +0.5**
GRF *e*S S 08 41 51.8 +0.1
GRF pmax pmax
comp=Z,331nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,13μm,20.0s,MS6.2
PTCC Patocco-Chiusa 68.50 312 P **P 08 32 50.7 -0.7**
TRI Trieste 68.54 311 *e*P **P 08 32 50.7 -0.9**
TRI pmax pmax
comp=Z,69nm,0.9s,mb5.6
TRI MLR MLR
comp=Z,9μm,21.0s,MS6.0
TRI Trieste 68.54 311 *e*P **P 08 32 50.7 -0.9**
comp=Z,68nm,0.9s,mb5.6
TRI LR LR
comp=Z,9μm,21.0s,MS6.0
UBBA Unterbreizbach 68.63 317 *e*P **P 08 32 52.0 -0.1**
comp=Z,170nm,2.1s,mb5.6
UBBA *e*S S 08 41 52.8 -1.5
RC01 Rabbit Creek A 68.70 30 *e*P **P 08 32 51.3 -1.0**
comp=Z,105nm,0.7s,mb5.9
PMR Palmer 68.71 30 *e*P **P 08 32 50.5 -1.9**
PMR pmax pmax
comp=Z,112nm,2.4s,mb5.4
PMR Palmer 68.71 30 *e*P **P 08 32 50.5 -1.9**
comp=Z,112nm,2.4s,mb5.4
ABTA Abfaltersbach 68.88 313 ⇓*i*P **P 08 32 53.1 -0.6**
comp=Z,46nm,1.0s,mb5.4,SNR=16
OHAK Old Harbor 68.92 35 *e*P **P 08 32 52.7 -1.1**
comp=Z,114nm,2.0s,mb5.5
KDAK Kodiak Island 68.99 34 *i* P **P 08 32 53.5 -0.7**
FUR Furstenfeldbru 69.03 314 *e*P **P 08 32 55.3 +0.7**
comp=Z,345nm,1.2s,mb6.2
FUR *e*S S 08 41 59.5 +0.4
FUR Furstenfeldbru 69.03 314 *e*P **P 08 32 55.3 +0.7**
FUR *e*S S 08 41 59.5 +0.4
FUR pmax pmax
comp=Z,345nm,1.2s,mb6.2
RGNG Rignano Grg 69.05 307 P **P 08 32 54.6 -0.3**
ORI Oriolo Calabro 69.15 305 P **P 08 32 56.2 +0.6**
WTTA Wattenberg 69.20 313 *i* P **P 08 32 56.0 +0.2**
comp=Z,162nm,1.5s,mb5.7,SNR=17
WATA Walderalm 69.20 313 ⇓*i*P **P 08 32 55.9 +0.1**
comp=Z,56nm,0.9s,mb5.5,SNR=14
IBBN Ibbenburen 69.24 319 *e*P **P 08 32 55.9 +0.1**
comp=Z,223nm,1.5s,mb5.9
SEW Seward 69.30 31 *e*P **P 08 32 54.4 -1.8**
comp=Z,171nm,0.8s,mb6.0
TIP Timpagrande 69.32 304 *e*P **P 08 32 56.4 -0.2**
comp=Z,139nm,1.3s,mb5.7
TIP LR LR
comp=Z,7μm,22.0s,MS5.8
PAX Paxson 69.48 27 *e*P **P 08 32 56.6 -0.6**
PAX pmax pmax
comp=Z,98nm,1.0s,mb5.7
PAX Paxson 69.48 27 *e*P **P 08 32 56.6 -0.6**
comp=Z,98nm,1.0s,mb5.7
MOTA Moosalm 69.49 314 ⇓*i*P **P 08 32 57.3 -0.2**
comp=Z,64nm,0.9s,mb5.6,SNR=10.0
RETA Reutte 69.64 314 ⇓*i*P **P 08 32 58.4 0.0**
comp=Z,82nm,1.7s,mb5.4,SNR=9.9
TNS Taunus Mts 69.78 317 *e*P **P 08 32 59.3 0.0**
comp=Z,167nm,1.3s,mb5.8
TNS *e*S S 08 42 06.2 -1.7
TNS Taunus Mts 69.78 317 *e*P **P 08 32 59.3 0.0**
TNS *e*S S 08 42 06.2 -1.7
TNS pmax pmax
comp=Z,167nm,1.3s,mb5.8
TOD Tromm 69.86 316 *e*P **P 08 32 59.9 +0.2**
FETA Feichten 69.86 313 *i* P **P 08 32 59.9 +0.1**
comp=Z,147nm,1.0s,mb5.8,SNR=24
LRW Lerwick 69.89 329 *e*P **P 08 32 59.8 +0.1**
LRW AMb AMB 08 33 01.2
comp=Z,60nm,1.6s,mb5.3
LRW AMS AMS 09 03 42.2
comp=Z,10μm,17.6s,MS6.1
BUG Bochum-Univer 69.90 319 *e*P **P 08 33 00.1 +0.2**
comp=Z,262nm,1.6s,mb5.9
BUG *e*S S 08 42 08.6 -0.6
CING Cingoli 69.91 309 P **P 08 33 00.6 +0.4**
MIDA Miranda 69.97 307 P **P 08 33 00.8 +0.2**
STU Stuttgart 70.00 316 *e*P **P 08 33 00.5 -0.1**
comp=Z,145nm,1.5s,mb5.7
STU Stuttgart 70.00 316 *e*P **P 08 33 00.9 +0.3**
STU pmax pmax
comp=Z,113nm,1.2s,mb5.7
STU Stuttgart 70.00 316 *e*P **P 08 33 00.9 +0.2**
comp=Z,113nm,1.2s,mb5.7
WAL1 Walls 70.01 330 *e*P **P 08 32 59.2 -1.3**
EGAK Eagle 70.09 25 *e*P **P 08 32 59.9 -1.0**
EGAK LR LR
comp=Z,11μm,19.0s,MS6.1
MENT Mentasta 70.18 27 *e*P **P 08 33 01.3 -0.2**
AQU L'Aquila 70.22 308 *e*P **P 08 33 02.8 +0.7**
AQU pmax pmax
comp=Z,298nm,1.1s,mb6.1
AQU MLR MLR
comp=Z,13μm,22.0s,MS6.1
AQU L'Aquila 70.22 308 *e*P **P 08 33 02.8 +0.6**
comp=Z,298nm,1.1s,mb6.1
AQU LR LR
comp=Z,13μm,22.0s,MS6.1
AQU L'Aquila 70.22 308 ⇓*i*P **P 08 33 03.0 +0.9**
DAVA Damuels 70.26 314 ⇓*i*P **P 08 33 02.2 -0.1**
comp=Z,67nm,1.5s,mb5.3,SNR=6.2
PIEI Pieia 70.27 309 P **P 08 33 02.9 +0.5**
RFI Roccamonfina 70.30 307 P **P 08 33 03.0 +0.4**
comp=Z,37nm,1.4s,mb5.1
CEL Celeste 70.33 303 *e*P **P 08 33 02.9 +0.1**
comp=Z,206nm,1.1s,mb6.0
CEL LR LR
comp=Z,6μm,20.0s,MS5.8
DIV Divide 70.34 29 *e*P **P 08 33 02.0 -0.5**
comp=Z,138nm,0.9s,mb5.9
INK Inuvik 70.39 20 *e*P **P 08 33 01.7 -0.9**
TARA Tarawa 70.43 101 *e*P **P 08 33 03.3 -0.5**
comp=Z,284nm,1.0s,mb6.2
TARA LR LR
comp=Z,2μm,19.0s,MS5.5
ABH Alteburg 70.46 317 *e*P **P 08 33 03.7 +0.3**
BADI Badiali 70.47 310 P **P 08 33 04.6 +1.0**
SCO Scoresbysund 70.55 344 ⇑*i*P **P 08 33 03.3 -0.3**
SCO pmax pmax
comp=Z,27nm,1.1s,mb5.1
SCO MLR MLR
comp=Z,6μm,21.0s,MS5.8
SCO Scoresbysund 70.55 344 ⇑*i*P **P 08 33 03.3 -0.3**
comp=Z,27nm,1.1s,mb5.1
SCO
comp=Z,6μm,21.0s
SPAK Spaichingen-Ko 70.55 315 *e*P **P 08 33 04.2 +0.2**
BFO Black Forest 70.72 315 P **P 08 33 05.0 0.0**
comp=Z,260nm,1.5s,mb5.9,SNR=7.9
BFO Black Forest 70.72 315 *e*P **P 08 33 04.7 -0.3**
comp=Z,160nm,1.6s,mb5.7
BFO Black Forest 70.72 315 *e*P **P 08 33 04.7 -0.3**
BFO pmax pmax
comp=Z,160nm,1.6s,mb5.7

LANF Langenberg 70.72 316 *eP* **P 08 33 05.1 0.0**
FNVD Fontana Vidola 70.90 311 P **P 08 33 07.6 +1.4**
BMRM Bremner River 70.90 29 *eP* **P 08 33 05.5 -0.4**
comp=Z,441nm,0.9s,mb6.4
RDP Rocca di Papa 70.94 308 P **P 08 33 06.6 +0.1**
MEM Membach 70.99 318 P **P 08 33 08.1 +1.5**
comp=Z,36nm,2.0s,mb5.0
BEBN Eben Emael 71.09 319 P **P 08 33 08.0 +0.7**
comp=Z,24nm,1.9s,mb4.8
CSNT Castellina Chi 71.11 310 P **P 08 33 07.2 -0.3**
FELD Feldberg im Sc 71.12 315 *eP* **P 08 33 07.4 -0.1**
DAWY Dawson 71.13 25 *eP* **P 08 33 06.8 -0.4**
SOFL Sornfelli, Far 71.22 333 *eP* **P 08 33 07.5 -0.3**
SOFL AMb AMB 08 33 10.8
comp=Z,96nm,1.5s,mb5.5
LIBD Limburg 71.23 316 *eP* **P 08 33 07.9 -0.2**
CDF Champ du Feu 71.30 316 *eP* **P 08 33 08.6 0.0**
comp=Z,310nm,1.3s,mb5.8
CDF Champ du Feu 71.30 316 *eP* **P 08 33 08.6 0.0**
CDF pmax pmax
comp=Z,155nm,1.3s,mb5.8
CDF Champ du Feu 71.30 316 *eP* **P 08 33 08.6 0.0**
comp=Z,155nm,1.3s,mb5.8
WLF Walferdange 71.36 317 P **P 08 33 09.9 +1.0**
comp=Z,162nm,1.6s,mb5.7
WLF Walferdange 71.36 317 *eP* **P 08 33 09.5 +0.6**
comp=Z,454nm,1.6s,mb6.2
WLF Walferdange 71.36 317 *eP* **P 08 33 09.7 +0.8**
WLF pmax pmax
comp=Z,254nm,1.1s,mb6.1
WLF MLR MLR
comp=Z,16µm,19.0s,MS6.3
WLF Walferdange 71.36 317 *eP* **P 08 33 09.7 +0.8**
comp=Z,254nm,1.1s,mb6.1
WLF LR LR
comp=Z,16µm,19.0s,MS6.3
VLC Villacollemand 71.37 311 PFAKE 08 33 20.0 +11
VLC LR LR
comp=Z,10µm,20.0s,MS6.1
ECH Echery 71.46 316 *eP* **P 08 33 09.4 -0.1**
ECH Echery 71.46 316 *eP* **P 08 33 09.6 +0.1**
ECH pmax pmax
comp=Z,84nm,1.3s,mb5.5
ECH MLR MLR
comp=Z,12µm,22.0s,MS6.1
ECH Echery 71.46 316 *eP* **P 08 33 09.6 +0.1**
comp=Z,84nm,1.3s,mb5.5
ECH LR LR
comp=Z,12µm,22.0s,MS6.1
RER Riviere de l'E 71.47 229 PFAKE 08 33 20.0 +10
RER LR LR
comp=Z,5µm,20.0s,MS5.8
BCLA Clavier 71.48 318 P **P 08 33 09.8 +0.2**
comp=Z,60nm,1.5s,mb5.3
PII Pisa 71.48 310 P **P 08 33 09.8 0.0**
PII pmax pmax
comp=Z,75nm,0.8s,mb5.7
PII Pisa 71.48 310 P **P 08 33 09.8 0.0**
comp=Z,75nm,0.8s,mb5.7
VAI Varese 71.59 313 P **P 08 33 09.9 -0.5**
VAI pmax pmax
comp=Z,199nm,1.1s,mb6.0
VAI Varese 71.59 313 P **P 08 33 09.9 -0.5**
comp=Z,199nm,1.1s,mb6.0
BBS Basel-Blauen 71.61 315 *eP* **P 08 33 10.2 -0.2**
MOF Molkenrain 71.65 315 *eP* **P 08 33 10.7 0.0**
BOB Bobbio (Coli) 71.69 312 P **P 08 33 11.6 +0.6**
UCC Uccle 71.82 319 P **P 08 33 11.9 +0.2**
comp=Z,80nm,1.9s,mb5.3
HINF Hinteralfeld 71.83 315 *eP* **P 08 33 11.5 -0.3**
comp=Z,97nm,1.0s,mb5.4
HINF Hinteralfeld 71.83 315 *eP* **P 08 33 11.5 -0.3**
HINF pmax pmax
comp=Z,49nm,1.0s,mb5.4
HINF Hinteralfeld 71.83 315 *eP* **P 08 33 11.5 -0.3**
comp=Z,48nm,1.0s,mb5.4
ORE Reay 71.85 329 *eP* **P 08 33 11.5 -0.2**
GIVF Givet 71.90 318 *eP* **P 08 33 12.3 +0.2**
comp=Z,86nm,0.8s,mb5.4
GIVF Givet 71.90 318 *eP* **P 08 33 12.3 +0.2**
GIVF pmax pmax
comp=Z,43nm,0.8s,mb5.4
GIVF Givet 71.90 318 *eP* **P 08 33 12.3 +0.2**
comp=Z,43nm,0.8s,mb5.4
SNF Seneffe 72.00 319 P **P 08 33 14.4 +1.7**
comp=Z,57nm,1.8s,mb5.2
DOU Dourbes 72.03 318 P **P 08 33 13.2 +0.3**
HAU Haudompre 72.04 316 *eP* **P 08 33 12.7 -0.3**
comp=Z,130nm,1.2s,mb5.5
HAU *e*MLR MLR
comp=Z,17µm,18.8s,MS6.0
HAU Haudompre 72.04 316 *eP* **P 08 33 12.7 -0.3**
HAU pmax pmax
comp=Z,65nm,1.2s,mb5.4
HAU MLR MLR
comp=Z,17µm,18.8s,MS6.3
HAU Haudompre 72.04 316 *eP* **P 08 33 12.7 -0.3**
comp=Z,65nm,1.2s,mb5.4
HAU LR LR
comp=Z,17µm,18.8s,MS6.3
LOMF Lomont 72.07 315 *eP* **P 08 33 13.1 -0.1**
THEF They Montfort 72.14 316 *eP* **P 08 33 13.9 +0.3**
MCD Coleburn Disti 72.15 326 *eP* **P 08 33 13.2 -0.3**
RES Resolute Bay 72.15 6 *eP* **P 08 33 12.8 -0.4**
MME1 Meikle Cairn 72.16 327 *eP* **P 08 33 13.1 -0.5**
SUMG Summit 72.18 349 *eP* **P 08 33 13.3 -0.1**
comp=Z,128nm,1.0s,mb5.8
ORO Oropa 72.19 313 P **P 08 33 13.2 -0.8**
ORO pmax pmax
comp=Z,27nm,0.6s,mb5.3
ORO Oropa 72.19 313 P **P 08 33 13.2 -0.8**
comp=Z,27nm,0.6s,mb5.4
EIDS Eidsvold 72.25 137 *eP* **P 08 33 13.9 -0.6**
comp=Z,206nm,1.3s,mb5.9
BAIF Baives 72.27 318 *eP* **P 08 33 14.6 +0.3**
comp=Z,104nm,1.0s,mb5.4
BAIF Baives 72.27 318 *eP* **P 08 33 14.6 +0.3**
BAIF pmax pmax
comp=Z,52nm,1.0s,mb5.4
BAIF Baives 72.27 318 *eP* **P 08 33 14.6 +0.3**
comp=Z,52nm,1.0s,mb5.4
KMBO Kilima Mbogo 72.31 257 P **P 08 33 15.9 +0.7**
comp=Z,6.4nm,0.7s,mb4.6,baz=179,slow=24,SNR=13
KMBO LR LR 09 07 05.3
comp=Z,5µm,18.9s,MS5.8,baz=327,slow=38
KMBO Kilima Mbogo 72.31 257 *eP* **P 08 33 15.3 +0.2**
KMBO *e*S S 08 42 37.8 -0.4
KMBO pmax pmax
comp=Z,97nm,1.1s
KMBO MLR MLR
comp=Z,4µm,19.0s
KMBO Kilima Mbogo 72.31 257 *eP* **P 08 33 15.3 +0.2**
comp=Z,97nm,1.1s,mb5.6
KMBO *e*S S 08 42 37.8 -0.5
KMBO LR LR
comp=Z,4µm,19.0s,MS5.8
KMBO Kilima Mbogo 72.31 257 ⇑P **P 08 33 18.1 +2.9**
SNR=31
KMBO ⇑P 08 33 18.1
SNR=31
MVH1 Achvaich 72.38 328 *eP* **P 08 33 14.8 -0.1**
WDD Wield Dalam 72.39 302 *eP* **P 08 33 15.8 +0.4**
comp=Z,89nm,0.7s,mb5.8
WDD LR LR
comp=Z,5µm,21.0s,MS5.8
MEZF Maizieres J'vi 72.55 317 *eP* **P 08 33 16.2 +0.1**
comp=Z,245nm,1.3s,mb5.7
MEZF Maizieres J'vi 72.55 317 *eP* **P 08 33 16.2 +0.1**
comp=Z,245nm,1.3s,mb6.0
RSC Scourie 72.58 329 *eP* **P 08 33 14.9 -1.1**
STKA Stephens Creek 72.69 148 *eP* **P 08 33 15.8 -1.1**
comp=Z,70nm,0.9s,mb5.6
STKA *e*S S 08 42 37.0 -4.8
STKA Stephens Creek 72.69 148 P **P 08 33 16.0 -0.9**
comp=Z,22nm,0.8s,mb5.2,baz=329,slow=5.9,SNR=46
STKA LR LR 09 05 05.3
comp=Z,2µm,21.3s,MS5.5,baz=323,slow=36
STKA Stephens Creek 72.69 148 *eP* **P 08 33 15.8 -1.1**
comp=Z,17nm,0.8s,mb5.0
MDO Dochfour 72.73 328 *eP* **P 08 33 15.4 -1.5**
ESY Stoneypath 72.76 326 *eP* **P 08 33 16.7 -0.5**
CABF La Chapelle 72.87 315 *eP* **P 08 33 17.9 -0.1**
comp=Z,209nm,1.2s,mb5.6
CABF La Chapelle 72.87 315 *eP* **P 08 33 17.9 -0.1**
CABF pmax pmax
comp=Z,105nm,1.2s,mb5.6
CABF La Chapelle 72.87 315 *eP* **P 08 33 17.9 -0.1**
comp=Z,105nm,1.2s,mb5.6
EBH Black Hill 73.00 326 *eP* **P 08 33 18.5 0.0**
LPG La Plagne 73.01 313 *eP* **P 08 33 19.7 +0.8**
comp=Z,469nm,0.8s,mb6.2
LPG La Plagne 73.01 313 *eP* **P 08 33 19.7 +0.8**
LPG pmax pmax
comp=Z,234nm,0.8s,mb6.2
LPG La Plagne 73.01 313 *eP* **P 08 33 19.7 +0.8**
comp=Z,234nm,0.8s,mb6.2
LPL La Plagne 73.02 313 *eP* **P 08 33 19.7 +0.8**
comp=Z,296nm,0.8s,mb6.0
LPL La Plagne 73.02 313 *eP* **P 08 33 19.7 +0.8**
LPL pmax pmax
comp=Z,148nm,0.8s,mb6.0
LPL La Plagne 73.02 313 *eP* **P 08 33 19.7 +0.8**
comp=Z,148nm,0.8s,mb6.0
PGF Pioggiola 73.02 310 *eP* **P 08 33 19.5 +0.5**
comp=Z,254nm,0.8s,mb5.9
PGF Pioggiola 73.02 310 *eP* **P 08 33 19.5 +0.5**
PGF pmax pmax
comp=Z,127nm,0.8s,mb5.9
PGF Pioggiola 73.02 310 *eP* **P 08 33 19.5 +0.5**
comp=Z,127nm,0.8s,mb5.9
EDI Edinburgh 73.03 326 *eP* **P 08 33 17.6 -1.1**
EDI AMb AMB 08 33 19.6
comp=Z,64nm,2.5s,mb5.1
EDI AMS AMS 09 06 24.1
comp=Z,8µm,16.1s,MS6.1
EBL Broad Law 73.04 326 *eP* **P 08 33 17.6 -1.2**
KAC Achnashellach 73.11 328 *eP* **P 08 33 18.7 -0.6**
RRR Rubha Reidh 73.14 329 *eP* **P 08 33 20.1 +0.7**
XAL Allendale 73.14 325 *eP* **P 08 33 18.5 -0.9**
MENF Mencas 73.15 320 *eP* **P 08 33 19.5 -0.1**
EAU Auchinoon 73.19 326 *eP* **P 08 33 19.4 -0.4**
SAOF Saorge 73.25 312 *eP* **P 08 33 20.7 +0.4**
BNI Bardonecchia 73.28 313 *eP* **P 08 33 20.6 +0.2**
BNI pmax pmax
comp=Z,116nm,1.0s,mb5.8
BNI MLR MLR
comp=Z,21µm,19.0s,MS6.5
BNI Bardonecchia 73.28 313 *eP* **P 08 33 20.6 +0.1**
comp=Z,116nm,1.0s,mb5.8
BNI LR LR
comp=Z,21µm,19.0s,MS6.5
AUTN L'Aution 73.33 312 *eP* **P 08 33 20.9 +0.1**
HPK Haverah Park 73.34 324 AMS AMS 09 07 03.8
comp=Z,12µm,15.9s,MS6.3
KPL Plockton 73.36 328 *eP* **P 08 33 20.5 -0.2**
KPL AMb AMB 08 33 30.0
comp=Z,82nm,1.5s,mb5.5
KPL AMS AMS 09 05 57.9
comp=Z,10µm,18.7s,MS6.1
ESK Eskdalemuir 73.37 326 *eP* **P 08 33 20.7 -0.1**
ESK AMb AMB 08 33 22.3
comp=Z,48nm,1.9s,mb5.1
ESK AMS AMS 09 07 16.9
comp=Z,11µm,16.2s,MS6.2
ESK Eskdalemuir 73.37 326 P **P 08 33 19.8 -1.0**
ESK pmax pmax
comp=Z,90nm,1.1s,mb5.6
ESK MLR MLR
comp=Z,11µm,19.0s,MS6.2
ESK Eskdalemuir 73.37 326 P **P 08 33 19.8 -1.0**
comp=Z,90nm,1.1s,mb5.6
ESK LR LR
comp=Z,11µm,19.0s,MS6.2
MBDF Montbardon 73.38 313 *eP* **P 08 33 20.8 -0.3**
comp=Z,157nm,0.9s,mb5.6
MBDF Montbardon 73.38 313 *eP* **P 08 33 20.8 -0.3**
MBDF pmax pmax
comp=Z,79nm,0.9s,mb5.6
MBDF Montbardon 73.38 313 *eP* **P 08 33 20.8 -0.3**
comp=Z,79nm,0.9s,mb5.6
SBF Sospel 73.39 312 *eP* **P 08 33 21.1 0.0**
comp=Z,294nm,0.9s,mb5.9
SBF Sospel 73.39 312 *eP* **P 08 33 21.1 0.0**
SBF pmax pmax
comp=Z,147nm,0.9s,mb5.9
SBF Sospel 73.39 312 *eP* **P 08 33 21.1 0.0**
comp=Z,147nm,0.9s,mb5.9
ECK Cauldkaine Hil 73.41 325 *eP* **P 08 33 21.0 0.0**
TFO1 Folkestone 73.42 320 AMS AMS 09 07 18.9
comp=Z,18µm,15.4s,MS6.5
EAB Aberfoyle 73.42 327 *eP* **P 08 33 20.5 -0.6**
TOUF Mont Tournerai 73.43 312 *eP* **P 08 33 19.8 -1.6**
GDM Grand'Maison 73.55 313 *eP* **P 08 33 22.5 +0.5**
LHO Holmfirth 73.68 324 *eP* **P 08 33 21.9 -0.8**
KAR1 Arisaig 73.68 328 *eP* **P 08 33 22.2 -0.4**
PGBU Glenifferbraes 73.69 326 *eP* **P 08 33 22.8 +0.1**
PGBU AMb AMB 08 33 32.0
comp=Z,168nm,1.5s,mb5.7
PGBU AMS AMS 09 08 33.6
comp=Z,10µm,18.0s,MS6.1
GRN Grenoble 73.76 313 *eP* **P 08 33 23.6 +0.3**
PNL Peninsula 73.77 29 *eP* **P 08 33 23.4 +0.3**
comp=Z,262nm,0.8s,mb6.2
CALN Calern 73.78 312 *eP* **P 08 33 22.9 -0.6**
HYT Haines Junctio 73.80 27 *eP* **P 08 33 25.0 +1.8**
ORIF Oris-en-Rattie 73.83 313 *eP* **P 08 33 23.9 +0.2**
comp=Z,286nm,1.0s,mb5.9
ORIF *e*MLR MLR
comp=Z,26µm,19.2s,MS6.2
ORIF Oris-en-Rattie 73.83 313 *eP* **P 08 33 23.9 +0.2**
ORIF pmax pmax
comp=Z,143nm,1.0s,mb5.9
ORIF Oris-en-Rattie 73.83 313 *eP* **P 08 33 23.9 +0.2**
comp=Z,143nm,1.0s,mb5.8
CWF Charnwood Fore 73.84 323 *eP* **P 08 33 23.2 -0.4**
CWF AMS AMS 09 07 57.3
comp=Z,12µm,16.7s,MS6.2
LOR Lormes 73.87 316 *eP* **P 08 33 23.1 -0.8**
comp=Z,77nm,0.9s,mb5.3
LOR *e*MLR MLR
comp=Z,14µm,19.0s,MS6.0
LOR Lormes 73.87 316 *eP* **P 08 33 23.1 -0.8**
LOR pmax pmax
comp=Z,38nm,0.9s,mb5.3
LOR MLR MLR
comp=Z,14µm,19.0s,MS6.3
LOR Lormes 73.87 316 *eP* **P 08 33 23.1 -0.8**
comp=Z,38nm,0.9s,mb5.3
LOR LR LR
comp=Z,14µm,19.0s,MS6.3
FRF La Foret Royal 74.03 312 *eP* **P 08 33 24.6 -0.3**
comp=Z,284nm,1.5s,mb5.7
FRF La Foret Royal 74.03 312 *eP* **P 08 33 24.6 -0.3**
FRF pmax pmax
comp=Z,142nm,1.5s,mb5.7
FRF La Foret Royal 74.03 312 *eP* **P 08 33 24.6 -0.3**
comp=Z,142nm,1.5s,mb5.7
SSF Saint Saulge 74.18 316 *eP* **P 08 33 25.3 -0.4**
comp=Z,68nm,1.0s,mb5.2
SSF Saint Saulge 74.18 316 *eP* **P 08 33 25.3 -0.4**
SSF pmax pmax
comp=Z,34nm,1.0s,mb5.2
SSF Saint Saulge 74.18 316 *eP* **P 08 33 25.3 -0.4**
comp=Z,34nm,1.0s,mb5.2
SMF Signal de Mont 74.19 315 *eP* **P 08 33 25.6 -0.2**
comp=Z,267nm,1.1s,mb5.8
SMF Signal de Mont 74.19 315 *eP* **P 08 33 25.6 -0.2**
SMF pmax pmax
comp=Z,133nm,1.1s,mb5.8
SMF Signal de Mont 74.19 315 *eP* **P 08 33 25.6 -0.2**
comp=Z,133nm,1.1s,mb5.8
LMR La Mourre 74.23 311 *eP* **P 08 33 26.0 -0.1**
comp=Z,193nm,1.1s,mb5.6
LMR La Mourre 74.23 311 *eP* **P 08 33 26.0 -0.1**
LMR pmax pmax
comp=Z,97nm,1.1s,mb5.7
LMR La Mourre 74.23 311 *eP* **P 08 33 26.0 -0.1**
comp=Z,97nm,1.1s,mb5.6
VSL Villasalto 74.25 307 *eP* **P 08 33 27.3 +1.1**
comp=Z,108nm,1.4s,mb5.6
VSL LR LR
comp=Z,4µm,22.0s,MS5.7
GAL1 Galloway 74.34 326 *eP* **P 08 33 25.6 -0.9**
GAL1 AMb AMB 08 33 41.4
comp=Z,74nm,1.7s,mb5.3
GAL1 AMS AMS 09 07 14.6
comp=Z,11µm,17.7s,MS6.2
AVF Avril sur Loir 74.41 316 *eP* **P 08 33 26.8 -0.2**
comp=Z,304nm,1.2s,mb5.8
AVF Avril sur Loir 74.41 316 *eP* **P 08 33 26.8 -0.2**
AVF pmax pmax
comp=Z,152nm,1.2s,mb5.8
AVF Avril sur Loir 74.41 316 *eP* **P 08 33 26.8 -0.2**
comp=Z,152nm,1.2s,mb5.8
BORG Borgarnes 74.46 339 *eP* **P 08 33 27.3 +0.3**
BORG pmax pmax
comp=Z,67nm,0.8s
BORG MLR MLR
comp=Z,7µm,19.0s
BORG Borgarnes 74.46 339 *eP* **P 08 33 27.3 +0.3**
comp=Z,67nm,0.8s,mb5.6
BORG LR LR
comp=Z,7µm,19.0s,MS6.0
SSB Saint Sauveur 74.47 314 *eP* **P 08 33 27.2 -0.2**
SSB Saint Sauveur 74.47 314 *eP* **P 08 33 27.3 -0.1**
SSB pmax pmax
comp=Z,76nm,1.2s,mb5.5
SSB MLR MLR
comp=Z,10µm,20.0s,MS6.1
SSB Saint Sauveur 74.47 314 *eP* **P 08 33 27.3 -0.1**
comp=Z,76nm,1.2s,mb5.5
SSB LR LR
comp=Z,10µm,20.0s,MS6.1
SMRF Simiane la Rot 74.50 312 *eP* **P 08 33 28.0 +0.4**
comp=Z,245nm,1.4s,mb5.6
SMRF Simiane la Rot 74.50 312 *eP* **P 08 33 28.0 +0.4**
comp=Z,245nm,1.4s,mb5.9
GIM North Isle of 74.55 325 *eP* **P 08 33 27.1 -0.5**
HYF Humbligny 74.58 316 *eP* **P 08 33 28.2 +0.2**
VIVF Saint-Julien-l 74.61 314 *eP* **P 08 33 28.1 -0.1**
comp=Z,60nm,0.8s,mb5.3
VIVF Saint-Julien-l 74.61 314 *eP* **P 08 33 28.1 -0.1**
VIVF pmax pmax
comp=Z,30nm,0.8s,mb5.3
VIVF Saint-Julien-l 74.61 314 *eP* **P 08 33 28.1 -0.1**
comp=Z,30nm,0.8s,mb5.3
PLDF La Plantade 74.67 315 *eP* **P 08 33 29.0 +0.4**
HLM1 Long Mynd 74.76 323 *eP* **P 08 33 28.4 -0.5**
SWN1 Swindon 74.76 322 AMS AMS 09 08 16.8
comp=Z,13µm,16.2s,MS6.3
AGO Saint Agoulin 74.92 315 *eP* **P 08 33 30.0 0.0**
WLF1 Llynfaes 75.08 324 *eP* **P 08 33 31.6 +0.8**
WLF1 AMb AMB 08 33 45.8
comp=Z,434nm,1.2s,mb6.2
PYM Petit Puy Mans 75.15 315 *eP* **P 08 33 31.8 +0.4**
HTR Trewern Hill 75.20 323 *eP* **P 08 33 30.8 -0.8**
HGH Gray Hill 75.21 322 *eP* **P 08 33 31.5 -0.1**
LBL Lubilhac 75.28 314 *eP* **P 08 33 32.1 0.0**
GMM Mts of Mourne 75.29 326 *eP* **P 08 33 31.2 -0.8**
TCF Toulx Ste Croi 75.34 316 *eP* **P 08 33 32.6 +0.1**
comp=Z,264nm,1.2s,mb5.7
TCF Toulx Ste Croi 75.34 316 *eP* **P 08 33 32.6 +0.1**
TCF pmax pmax
comp=Z,132nm,1.2s,mb5.7
TCF Toulx Ste Croi 75.34 316 *eP* **P 08 33 32.6 +0.1**
comp=Z,132nm,1.2s,mb5.7
LDF La Druitiere 75.45 319 *eP* **P 08 33 32.8 -0.2**
comp=Z,90nm,1.0s,mb5.4
LDF La Druitiere 75.45 319 *eP* **P 08 33 32.8 -0.2**
LDF pmax pmax
comp=Z,45nm,1.0s,mb5.3
LDF La Druitiere 75.45 319 *eP* **P 08 33 32.8 -0.2**
comp=Z,45nm,1.0s,mb5.4
LASF Ste Croix 75.51 313 *eP* **P 08 33 33.8 +0.3**
comp=Z,193nm,1.2s,mb5.6
SKAG Skagway 75.52 27 *eP* **P 08 33 33.5 +0.3**
comp=Z,412nm,1.0s,mb6.3
FLN La Foliniere 75.56 319 *eP* **P 08 33 33.4 -0.2**
FLN *e*MLR MLR
comp=Z,12µm,21.8s,MS5.9
FLN La Foliniere 75.56 319 *eP* **P 08 33 33.4 -0.2**
FLN LR LR
comp=Z,12µm,21.8s,MS6.2
ABPO Ambohimpanom 75.66 236 *eP* **P 08 33 33.9 -0.7**
ABPO pmax pmax
comp=Z,47nm,1.0s,mb5.4
ABPO MLR MLR
comp=Z,5µm,20.0s,MS5.8
ABPO Ambohimpanom 75.66 236 *eP* **P 08 33 33.9 -0.6**
comp=Z,48nm,1.0s,mb5.4
ABPO LR LR
comp=Z,5µm,20.0s,MS5.8
DMUB Kingscourt 75.95 326 *eP* **P 08 33 32.0 -3.8**
GRR Gorron 75.97 319 *eP* **P 08 33 35.9 -0.1**
comp=Z,179nm,1.1s,mb5.6
GRR Gorron 75.97 319 *eP* **P 08 33 35.9 -0.1**
GRR pmax pmax
comp=Z,90nm,1.1s,mb5.6
GRR Gorron 75.97 319 *eP* **P 08 33 35.9 -0.1**
comp=Z,90nm,1.1s,mb5.6
DSB Dublin 76.08 325 *eP* **P 08 33 34.9 -1.6**
comp=Z,87nm,1.0s,mb5.6
KEST Kesra 76.14 304 P **P 08 33 37.1 -0.1**
comp=Z,2.3nm,0.6s,mb4.3,baz=46,slow=0.7,SNR=8.4
KEST LR LR 09 07 33.7
comp=Z,2µm,21.9s,MS5.4,baz=174,slow=36
CAF Calviac 76.15 315 *eP* **P 08 33 37.6 +0.5**
comp=Z,140nm,1.2s,mb5.5
CAF Calviac 76.15 315 *eP* **P 08 33 37.6 +0.5**
CAF pmax pmax
comp=Z,70nm,1.2s,mb5.5
CAF Calviac 76.15 315 *eP* **P 08 33 37.6 +0.5**
comp=Z,70nm,1.2s,mb5.5
RJF Les Rejaudoux 76.28 315 *eP* **P 08 33 38.4 +0.6**
comp=Z,237nm,1.3s,mb5.7
RJF *e*MLR MLR
comp=Z,16µm,22.2s,MS6.0
RJF Les Rejaudoux 76.28 315 *eP* **P 08 33 38.4 +0.6**
RJF pmax pmax
comp=Z,118nm,1.3s,mb5.7
RJF MLR MLR
comp=Z,16µm,22.3s,MS6.3
RJF Les Rejaudoux 76.28 315 *eP* **P 08 33 38.4 +0.6**
comp=Z,118nm,1.3s,mb5.7
RJF LR LR
comp=Z,16µm,22.3s,MS6.3
HTL Hartland 76.45 322 AMS AMS 09 09 45.9
comp=Z,13µm,15.4s,MS6.4
ARMA Armidale 76.46 140 *eP* **P 08 33 39.0 +0.1**
ARMA *e*S S 08 43 23.7 -0.4
ARMA Armidale 76.46 140 *eP* **P 08 33 39.1 +0.2**
comp=Z,111nm,1.4s,mb5.6
DYA Yadsworthy 76.48 322 AMS AMS 09 09 22.1
comp=Z,11µm,12.3s,MS6.4
MFF Saint Martin d 76.55 317 *eP* **P 08 33 39.5 +0.2**
comp=Z,251nm,1.1s,mb5.8
MFF Saint Martin d 76.55 317 *eP* **P 08 33 39.5 +0.2**
MFF pmax pmax
comp=Z,126nm,1.1s,mb5.8
MFF Saint Martin d 76.55 317 *eP* **P 08 33 39.5 +0.2**
comp=Z,126nm,1.1s,mb5.8
MTLF Montolieu 76.91 313 *eP* **P 08 33 41.4 0.0**
comp=Z,92nm,1.3s,mb5.2
MTLF Montolieu 76.91 313 *eP* **P 08 33 41.4 0.0**
MTLF pmax pmax
comp=Z,46nm,1.3s,mb5.2
MTLF Montolieu 76.91 313 *eP* **P 08 33 41.4 0.0**
comp=Z,46nm,1.3s,mb5.2
LFF La Frestale 76.94 315 *eP* **P 08 33 42.1 +0.5**
comp=Z,198nm,1.3s,mb5.6
LFF La Frestale 76.94 315 *eP* **P 08 33 42.1 +0.5**
LFF pmax pmax
comp=Z,99nm,1.3s,mb5.6
LFF La Frestale 76.94 315 *eP* **P 08 33 42.1 +0.5**
comp=Z,99nm,1.3s,mb5.6
EJON La Jonquera 76.97 312 P **P 08 33 43.3 +1.5**
comp=Z,6.2nm,0.7s,mb4.7
SGMF Saint Gilles 76.99 319 *eP* **P 08 33 42.0 +0.2**
comp=Z,129nm,0.9s,mb5.6
SGMF Saint Gilles 76.99 319 *eP* **P 08 33 42.0 +0.2**
SGMF pmax pmax
comp=Z,65nm,0.9s,mb5.6
SGMF Saint Gilles 76.99 319 *eP* **P 08 33 42.0 +0.2**
comp=Z,65nm,0.9s,mb5.6
CMAH Djebel Manchou 77.03 305 P **P 08 33 49.0 +6.8**
SIT Sitka 77.09 29 *eP* **P 08 33 42.5 +0.3**
SIT pmax pmax
comp=Z,173nm,1.0s,mb5.9
SIT Sitka 77.09 29 *eP* **P 08 33 42.5 +0.3**
comp=Z,173nm,1.0s,mb5.9
JOHN Johnston Islan 77.14 78 PFAKE 08 33 50.0 +6.9
JOHN LR LR
comp=Z,3µm,20.0s,MS5.6
ABSA Djebel Ababsia 77.17 305 P **P 08 33 48.1 +5.1**
ROSF Rostrenen 77.33 320 *eP* **P 08 33 44.0 +0.3**
comp=Z,111nm,0.9s,mb5.5
ROSF Rostrenen 77.33 320 *eP* **P 08 33 44.0 +0.3**
ROSF pmax pmax

comp=Z,56nm,0.9s,mb5.5
ROSF Rostrenen 77.33 320 *e*P **P 08 33 44.0 +0.3**
comp=Z,56nm,0.9s,mb5.5
QUIF Quistinic 77.51 319 *e*P **P 08 33 44.8 +0.1**
comp=Z,112nm,1.0s,mb5.5
QUIF Quistinic 77.51 319 *e*P **P 08 33 44.8 +0.1**
QUIF pmax pmax
comp=Z,56nm,1.0s,mb5.5
QUIF Quistinic 77.51 319 *e*P **P 08 33 44.8 +0.1**
comp=Z,56nm,1.0s,mb5.5
CKFL Kef-Lekhel 77.62 305 P **P 08 33 52.7 +7.1**
MLS Moulis 77.81 313 *e*P **P 08 33 43.8 -2.7**
CASM Ain Smara 77.86 305 P **P 08 33 53.9 +7.0**
CTEI Djebel Teioual 78.02 305 P **P 08 33 53.8 +6.0**
EMIR Miracle 78.11 312 P **P 08 33 52.4 +4.2**
comp=Z,12nm,0.6s,mb5.0
DLBC Dease Lake 78.23 26 *e*P **P 08 33 48.5 0.0**
RESF Ens 78.35 313 *e*P **P 08 33 50.2 +0.7**
ETOS Mallorca 78.45 310 P **P 08 33 50.7 +0.6**
comp=Z,13nm,0.8s,mb4.9
VIEF Viey 78.50 314 *e*P **P 08 33 51.0 +0.7**
EBIE Bielsa 78.54 313 P **P 08 33 52.8 +2.3**
comp=Z,7.8nm,0.6s,mb4.8
SET Setif 78.64 306 P **P 08 33 52.0 +0.8**
CKHR Kef el Ahmar 78.66 305 P **P 08 33 55.0 +3.7**
EPOB Poblet 78.70 312 P **P 08 33 52.9 +1.4**
comp=Z,11nm,0.8s,mb4.8
ETSF Etsaut 78.85 314 *e*P **P 08 33 53.0 +0.8**
comp=Z,39nm,0.6s,mb5.2
ETSF Etsaut 78.85 314 *e*P **P 08 33 53.0 +0.8**
ETSF pmax pmax
comp=Z,19nm,0.6s,mb5.2
ETSF Etsaut 78.85 314 *e*P **P 08 33 53.0 +0.8**
comp=Z,19nm,0.6s,mb5.2
RIV Riverview 78.88 143 *e*P **P 08 33 58.1 +5.8**
CAN Canberra 78.99 145 *e*P **P 08 33 52.6 -0.3**
CAN pmax pmax
comp=Z,137nm,1.3s,mb5.7
CAN MLR MLR
comp=Z,3μm,20.0s,MS5.6
CAN Canberra 78.99 145 *e*P **P 08 33 52.6 -0.2**
comp=Z,136nm,1.3s,mb5.7
CAN LR LR
comp=Z,3μm,20.0s,MS5.6
SFJD Kangerlussuaq 79.05 351 *i* P **P 08 33 51.8 -1.1**
SFJD pmax pmax
comp=Z,33nm,1.1s,mb5.2
SFJD MLR MLR
comp=Z,6μm,18.0s,MS6.0
SFJD Kangerlussuaq 79.05 351 *e*P **P 08 33 51.9 -1.0**
comp=Z,33nm,1.0s,mb5.2
SFJD LR LR
comp=Z,5μm,19.0s,MS5.9
SFJD Kangerlussuaq 79.05 351 *i* P **P 08 33 51.8 -1.1**
comp=Z,33nm,1.1s,mb5.2
SFJD
comp=Z,6μm,18.0s
CRAG Craig 79.07 30 *e*P **P 08 33 53.4 +0.2**
comp=Z,205nm,1.3s,mb5.9
SJPF Ste Jean 79.13 314 *e*P **P 08 33 54.6 +0.8**
comp=Z,108nm,1.0s,mb5.4
SJPF Ste Jean 79.13 314 *e*P **P 08 33 54.6 +0.8**
SJPF pmax pmax
comp=Z,54nm,1.0s,mb5.4
SJPF Ste Jean 79.13 314 *e*P **P 08 33 54.6 +0.8**
comp=Z,54nm,1.0s,mb5.4
CNB Canberra Magne 79.16 145 *e*P **P 08 33 53.2 -0.6**
CNB *e*S S 08 43 48.8 -4.2
TOO Toolangi 79.20 149 *e*P **P 08 33 53.5 -0.5**
TOO *e*S S 08 43 59.5 +6.1
EALK Alkurruntz 79.24 315 P **P 08 33 55.2 +0.8**
comp=Z,7.1nm,0.7s,mb4.7
ELIZ Elizondo 79.28 315 P **P 08 33 58.6 +4.0**
comp=Z,1.3nm,0.5s
ERTA Horta de San J 79.39 312 P **P 08 33 55.8 +0.6**
comp=Z,296nm,1.8s,mb5.9
DZM Mont Dzumac 79.72 124 *e*P **P 08 33 57.9 +0.7**
comp=Z,381nm,1.3s,mb6.2
DZM Mont Dzumac 79.72 124 *e*PP PP 08 36 59.6 +1.0
comp=Z,259nm,25.5s
DZM *e*LR LR 08 58 47.1
comp=Z,6μm,25.3s
DZM Mont Dzumac 79.72 124 *e*P **P 08 33 57.0 -0.2**
DZM Mont Dzumac 79.72 124 *e*P **P 08 33 58.2 +1.1**
comp=Z,97nm,0.7s,mb5.8
YKA Yellowknife Ar 79.94 18 P **P 08 33 56.8 -1.0**
comp=Z,15nm,0.7s,mb5.0,baz=324,slow=5.0,SNR=125
YKA PKKP PKKPbc 08 52 29.4 -14
comp=Z,0.3nm,0.7s,baz=105,slow=2.3,SNR=4.1
YKA PKKPbc PKKPbc 08 52 40.0 -3.4
comp=Z,1.2nm,0.7s,baz=154,slow=2.1,SNR=12
YKA PKPPKP 09 00 48.5
comp=Z,0.1nm,0.5s,baz=133,slow=2.0,SNR=4.9
YKA LR LR 09 13 53.1
comp=Z,1μm,18.4s,MS5.2,baz=60,slow=39
YKA Yellowknife Ar 79.94 18 P **P 08 33 56.8 -1.0**
YKA 08 52 29.4
YKA pmax pmax
comp=Z,15nm,0.7s
YKA Yellowknife Ar 79.94 18 P **P 08 33 56.9 -1.0**
YKA PKKP PKKPbc 08 52 29.4 -14
YKA PKKPbc PKKPbc 08 52 40.0 -3.4
YKA P'P' 09 00 48.5
YKA LR LR 09 13 53.1
ECRI Cripan 80.19 315 P **P 08 34 01.2 +1.6**
ECRI pmax pmax
comp=Z,38nm,1.4s,mb5.1
ECRI Cripan 80.19 315 P **P 08 34 01.2 +1.6**
comp=Z,38nm,1.4s,mb5.1
EMOS Mosqueruela 80.22 312 P **P 08 34 00.5 +0.7**
comp=Z,12nm,0.6s,mb5.0
EMHD Djebel Mahouad 80.30 307 P **P 08 34 02.0 +1.7**
ELAN Lanestosa 80.38 315 P **P 08 34 01.5 +0.9**
comp=Z,172nm,1.3s,mb5.8
ETOR Torete 80.95 313 P **P 08 34 03.5 -0.2**
ETOR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ETOR Torete 80.95 313 P **P 08 34 03.5 -0.2**
comp=Z,9.6nm,0.7s,mb4.8
ECHE Chera 80.98 311 P **P 08 34 05.9 +2.1**
ECHE pmax pmax
comp=Z,48nm,2.2s,mb5.0
ECHE Chera 80.98 311 P **P 08 34 05.9 +2.1**
comp=Z,48nm,2.2s,mb5.0
EBEN Beniarda 81.01 310 P **P 08 34 09.1 +5.1**
comp=Z,219nm,2.3s,mb5.7
FUNA Funafuti 81.16 106 PFAKE 08 34 10.0 +4.9
FUNA LR LR
comp=Z,10μm,19.0s,MS6.2
EARI Arriondas 81.39 316 P **P 08 34 06.8 +0.8**
comp=Z,6.3nm,0.6s,mb4.7
EANR 'Ain N'Sour 81.69 307 P pP 08 34 18.0 +5.7
ETRT Tiaret 81.87 307 P **P 08 34 09.5 +0.9**
ETOB Tobarra 81.89 311 P **P 08 34 09.5 +0.8**
comp=Z,7.7nm,0.6s,mb4.8
EMUR La Murta 82.16 310 P **P 08 34 10.0 -0.1**
comp=Z,287nm,2.2s,mb5.8
GUD Guadarrama 82.35 314 P **P 08 34 11.4 +0.4**
GUD pmax pmax
comp=Z,21nm,0.8s,mb5.1
GUD Guadarrama 82.35 314 P **P 08 34 11.4 +0.4**
comp=Z,21nm,0.8s,mb5.1
EPON Pontenova 82.49 317 P **P 08 34 12.2 +0.4**
comp=Z,6.0nm,1.2s,mb4.4
EVIA Vianos 82.50 311 P **P 08 34 13.2 +1.3**
EVIA pmax pmax
comp=Z,91nm,1.4s,mb5.6
EVIA Vianos 82.50 311 P **P 08 34 13.2 +1.3**
comp=Z,90nm,1.4s,mb5.6
ESDC Sonseca Array 82.81 313 P **P 08 34 13.8 +0.3**
comp=Z,5.0nm,0.8s,mb4.6,baz=42,slow=5.4,SNR=25
ESDC PP PP 08 37 30.2 +7.1
comp=Z,5.1nm,0.8s,baz=52,slow=6.9,SNR=4.1
ESDC LR LR 09 14 31.1
comp=Z,7μm,18.4s,MS6.1,baz=50,slow=38
ESDC Sonseca Array 82.81 313 P **P 08 34 13.5 +0.1**
comp=Z,2.7nm,0.6s,mb4.5
ESLA Sonseca Array 82.81 313 *e*P **P 08 34 13.7 +0.3**
comp=Z,49nm,1.6s,mb5.3
ESLA LR LR
comp=Z,52μm,22.0s,MS6.9
EHUE Huescar 83.04 311 P **P 08 34 15.5 +0.8**
comp=Z,2.5nm,0.6s,mb4.4
ECAL Calabor 83.11 316 P **P 08 34 15.6 +0.7**
comp=Z,465nm,3.3s
PAB San Pablo 83.12 313 *e*P **P 08 34 15.1 0.0**
PAB pmax pmax
comp=Z,20nm,1.0s,mb5.1
PAB MLR MLR
comp=Z,8μm,19.0s,MS6.1
PAB San Pablo 83.12 313 *e*P **P 08 34 15.1 0.0**
comp=Z,20nm,1.0s,mb5.1
PAB LR LR
comp=Z,8μm,19.0s,MS6.1
PBRG Braganca 83.19 316 *e*P **P 08 34 15.7 +0.3**
comp=Z,49nm,1.6s,mb5.3
PBRG *e*pP pP 08 34 24.3 +4.2
EQES Quesada 83.36 311 P **P 08 34 16.8 +0.4**
comp=Z,8.5nm,0.8s,mb4.8
STS Santiago 83.57 317 P **P 08 34 21.1 +3.8**
STS pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
STS Santiago 83.57 317 P **P 08 34 21.1 +3.7**
comp=Z,3.6nm,0.5s,mb4.8
EBAN Banos Encina 83.59 311 P **P 08 34 17.7 +0.2**
comp=Z,3.5nm,1.0s,mb4.4
MVO Moncorvo 83.76 315 *e*P **P 08 34 18.8 +0.5**
MVO *e*pP pP 08 34 26.2 +3.2
MVO *e*S S 08 44 39.9 -1.0
MVO *e*LQ 09 00 00.2
MVO *e*LR LR 09 07 59.6
comp=Z,10μm,20.0s
EMAZ Mazaricos 83.77 318 P **P 08 34 20.2 +1.8**
comp=Z,9.1nm,1.2s,mb4.8
ELOB Lobios 83.93 316 P **P 08 34 20.2 +1.0**
comp=Z,6.3nm,0.8s,mb4.8
MOO Moorlands 83.97 150 *e*P **P 08 34 21.8 +2.8**
KIP Kipapa 84.02 69 *e*P **P 08 34 19.2 -0.8**
KIP pmax pmax
comp=Z,155nm,1.3s,mb6.0
KIP Kipapa 84.02 69 *e*P **P 08 34 19.2 -0.8**
comp=Z,155nm,1.3s,mb6.0
EADA Adamuz 84.09 312 P **P 08 34 20.5 +0.4**
comp=Z,5.7nm,0.9s,mb4.7
PVRL Vila Real 84.10 316 *e*P **P 08 34 20.7 +0.6**
comp=Z,46nm,1.5s,mb5.4
TAU Tasmania Unive 84.41 150 PFAKE 08 34 30.0 +8.7
TAU LR LR
comp=Z,5μm,22.0s,MS5.9
MTE Manteigas 84.54 315 *e*P **P 08 34 23.2 +0.9**
comp=Z,86nm,1.8s,mb5.6
MTE *e*pP pP 08 34 31.8 +4.8
MTE *e*S S 08 44 44.1 -4.7
MTE *e*LQ 09 01 17.4
MTE *e*LR LR 09 08 26.4
comp=Z,11μm,20.0s
MTE Manteigas 84.54 315 P **P 08 34 22.6 +0.3**
comp=Z,229nm,1.6s,mb6.1
MTE LR LR
comp=Z,8μm,22.0s,MS6.0
PMRV Marv??o 85.06 314 *e*P **P 08 34 25.8 +0.8**
comp=Z,99nm,1.6s,mb5.7
PMRV *e*pP pP 08 34 32.8 +3.2
PMRV *e*S S 08 44 49.8 -4.1
PMRV *e*LQ 09 00 30.6
PMRV *e*LR LR 09 07 07.8
comp=Z,7μm,18.0s
EBAD Badajoz 85.24 313 P **P 08 34 25.8 -0.1**
comp=Z,19nm,1.2s,mb5.1
PESTR Estremoz 85.53 314 *e*P **P 08 34 27.9 +0.6**
comp=Z,58nm,1.4s,mb5.6
PESTR *e*pP pP 08 34 35.0 +3.0
PESTR *e*S S 08 44 53.4 -5.2
PESTR *e*LQ 09 01 18.1
PESTR *e*LR LR 09 06 10.2
comp=Z,5μm,18.0s
MSVF Nonsavu 85.57 114 *e*P **P 08 34 28.9 +1.2**
comp=Z,161nm,1.0s,mb6.2
MSVF LR LR
comp=Z,3μm,20.0s,MS5.7
PBAR Barrancos 85.62 313 *e*P **P 08 34 28.5 +0.7**
comp=Z,76nm,1.8s,mb5.6
PBAR *e*pP pP 08 34 35.3 +2.8
PBAR *e*S S 08 44 53.5 -6.1
PBAR *e*LQ 09 00 39.9
PBAR *e*LR LR 09 07 29.3
comp=Z,9μm,20.0s
EMIN Mina Concepcio 85.65 313 P **P 08 34 28.0 +0.1**
comp=Z,16nm,1.0s,mb5.2
ESPR Espera 85.69 311 P **P 08 34 27.9 -0.2**
comp=Z,15nm,0.9s,mb5.2
EJIF Jimena Fronter 85.70 311 P **P 08 34 29.1 +0.9**
TAM Tamanrasset 85.80 294 *e*P **P 08 34 29.8 +0.8**
TAM pmax pmax
comp=Z,18nm,0.9s,mb5.3
TAM MLR MLR
comp=Z,6μm,21.0s,MS6.0
TAM Tamanrasset 85.80 294 *e*P **P 08 34 29.8 +0.8**
comp=Z,18nm,0.9s,mb5.3
TAM LR LR
comp=Z,6μm,21.0s,MS6.0
EVO Evora 85.99 314 *e*P **P 08 34 30.3 +0.7**
comp=Z,208nm,1.6s,mb5.8
EVO *e*MLR MLR
comp=Z,6μm,18.8s,MS5.7
EVO Evora 85.99 314 *e*P **P 08 34 30.2 +0.6**
comp=Z,100nm,1.5s,mb5.8
EVO *e*pP pP 08 34 38.8 +4.5
EVOP Sao Brissos 86.06 314 *e*P **P 08 34 30.3 +0.3**
EVOP *e*S SKSac 08 44 54.3 -1.4
EVOP *e*S SKSac 08 44 54.3 -1.4
EVOP AMS AMS 09 10 13.4
comp=N,10μm,27.2s
EVOP Sao Brissos 86.06 314 *e*P **P 08 34 30.3 +0.3**
EVOP *e*S SKSac 08 44 54.3 -1.4
SFS San Fernando 86.16 311 PFAKE 08 34 40.0 +10
SFS LR LR
comp=Z,18μm,19.0s,MS6.5
PMAFR Mafra 86.49 315 *e*P **P 08 34 32.9 +0.8**
comp=Z,170nm,1.2s,mb6.2
PMAFR *e*pP pP 08 34 39.9 +3.1
PMAFR *e*S SKSac 08 44 53.8 -4.6
PMAFR *e*LQ 09 01 27.5
PMAFR *e*LR LR 09 08 42.8
comp=Z,8μm,20.0s
PVAQ Vaqueiros 86.52 313 *e*P **P 08 34 33.0 +0.7**
comp=Z,90nm,1.0s,mb6.0
PVAQ *e*pP pP 08 34 39.8 +2.9
PVAQ *e*S SKSac 08 44 57.2 -1.4
PVAQ *e*LQ 08 57 23.6
PVAQ *e*LR LR 09 05 42.2
comp=Z,6μm,18.0s
LIS Lisbon 86.56 315 *e*P **P 08 34 33.1 +0.7**
LIS *e*S SKSac 08 44 59.1 +0.2
LIS *e*S SKSac 08 44 59.1 +0.3
LIS AMS AMS 09 10 37.4
comp=E,13μm,22.0s
PCVE Castro Verde 86.58 313 *e*P **P 08 34 34.0 +1.5**
comp=E,72nm,1.5s,mb5.7
PCVE *e*pP pP 08 34 42.6 +5.4
PCVE Castro Verde 86.58 313 *e*PP PP 08 38 02.3 +8.5
PCVE *e*S SKSac 08 44 59.1 +0.2
PCVE *e*LQ 09 01 20.9
PCVE *e*LR LR 09 08 28.6
comp=E,7μm,18.0s
PBDV Barranco-do-Ve 86.75 313 *e*P **P 08 34 34.9 +1.5**
comp=E,133nm,1.5s,mb6.0
PBDV *e*pP pP 08 34 41.6 +3.5
PBDV *e*S S 08 45 10.3 -0.4
PBDV *e*LQ 08 57 55.5
PBDV *e*LR LR 09 06 27.6
comp=E,7μm,20.0s
POHA Pohakuloa 86.87 69 *e*P **P 08 34 34.5 +0.3**
comp=E,224nm,1.1s,mb6.3
POHA LR LR
comp=Z,4μm,20.0s,MS5.8
KHU Kahuku 87.08 69 *e*P **P 08 34 35.4 +0.1**
MORF Marmelete 87.16 313 *e*P **P 08 34 36.9 +1.5**
comp=Z,145nm,1.3s,mb6.0
MORF *e*pP pP 08 34 44.1 +4.0
MORF *e*S SKSac 08 45 02.3 -0.2
MORF *e*LQ 09 04 14.6
MORF *e*LR LR 09 08 00.6
comp=Z,8μm,18.0s
PUH Pauahi 87.33 69 *e*P **P 08 34 37.2 +0.7**
PFVI Vila Bisbo 87.38 313 *e*P **P 08 34 34.9 -1.5**
PFVI *e*S SKSac 08 45 02.2 -1.7
PFVI *e*LQ 09 01 35.0
PFVI *e*LR LR 09 08 10.0
comp=Z,9μm,18.0s
PAF Port-aux-Franc 87.39 202 PFAKE 08 34 50.0 +14
PAF LR LR
comp=Z,6μm,20.0s,MS6.0
FCC Fort Churchill 87.54 10 *e*P **P 08 34 35.9 -0.9**
comp=Z,2.3nm,0.9s,mb4.4
LSZ Lusaka 87.69 250 *e*P **P 08 34 38.2 0.0**
LSZ pmax pmax
comp=Z,70nm,1.1s,mb5.8
LSZ MLR MLR
comp=Z,5μm,22.0s,MS5.9
LSZ Lusaka 87.69 250 *e*P **P 08 34 38.1 0.0**
comp=Z,17nm,1.1s,mb5.2
LSZ LR LR
comp=Z,5μm,22.0s,MS5.9
LSZ Lusaka 87.69 250 ⇑P **P 08 34 41.9 +3.7**
SNR=26
LSZ ⇑P 08 34 41.9
SNR=26
RTC Rabat Centre 88.11 310 PFAKE 08 34 50.0 +10
RTC LR LR
comp=Z,4μm,20.0s,MS5.9
PGC Sidney 88.12 30 *e*P **P 08 34 39.6 -0.1**
comp=Z,2.4nm,0.8s,mb4.5
EDM Edmonton 88.14 22 *e*P **P 08 34 39.5 -0.2**
A05A Maple Falls 88.41 29 ⇓P **P 08 34 40.2 -0.9**
baz=88
OSD Olympics--Snow 88.65 31 P **P 08 34 43.7 +1.4**
MBW Mount Baker 88.66 29 P **P 08 34 42.1 -0.2**
NLWA Neilton Lookou 88.91 31 ⇑P **P 08 34 43.5 0.0**
baz=89
NLWA Neilton Lookou 88.91 31 *e*P **P 08 34 44.0 +0.6**
comp=Z,175nm,1.4s,mb6.2
NLWA LR LR
comp=Z,7μm,21.0s,MS6.0
B06A Marblemount 89.04 29 ⇑P **P 08 34 43.7 -0.4**
baz=89
A07A Ashnola River, 89.06 28 ⇓P **P 08 34 43.3 -0.8**
baz=89
RPW Rockport 89.08 29 *e*P **P 08 34 44.3 0.0**
comp=Z,57nm,1.0s,mb5.9
JCW Jim Creek 89.11 29 *e*P **P 08 34 44.5 +0.1**
comp=Z,285nm,1.3s,mb6.4
JCW *e*PP PP 08 38 13.9 +0.2
E03A Lebam 89.69 31 ⇓P **P 08 34 44.6 -2.6**
baz=89,SNR=6.6
NLW Nelson Butte 89.85 29 P **P 08 34 48.7 +0.8**
D05A Enumclaw 89.87 30 ⇓P **P 08 34 46.4 -1.6**
baz=90,SNR=12
D05A ⇓pP pP 08 34 49.3 -3.4
baz=90
FFC Flin Flon 89.89 15 *e*P **P 08 34 47.1 -0.8**
FFC pmax pmax
comp=Z,86nm,0.8s,mb6.1
FFC MLR MLR
comp=Z,8μm,19.0s,MS6.2
FFC Flin Flon 89.89 15 *e*P **P 08 34 47.1 -0.8**
comp=Z,86nm,0.8s,mb6.1
FFC LR LR
comp=Z,8μm,19.0s,MS6.2
B08A Colville Reser 90.03 28 ⇑P **P 08 34 48.2 -0.5**
baz=90,SNR=36
B08A ⇓pP pP 08 34 49.4 -4.0
baz=90
F03A Seaside 90.17 32 ⇓P **P 08 34 50.1 +0.7**
baz=90,SNR=11
CBSW Chelan Butte S 90.19 29 P **P 08 34 49.9 +0.4**
ETW Entiat 90.23 29 P **P 08 34 50.3 +0.6**
RCM Mount Rainier- 90.26 30 P **P 08 34 51.4 +1.6**
LON Longmire 90.29 30 *e*P **P 08 34 49.9 -0.1**
LON pmax pmax
comp=Z,49nm,1.1s,mb5.8
LON Longmire 90.29 30 *e*P **P 08 34 49.9 -0.1**
comp=Z,49nm,1.1s,mb5.8
WTV Waterville 90.31 29 P **P 08 34 50.5 +0.5**
B09A Rice 90.44 27 ⇓P **P 08 34 51.5 +0.8**
baz=90,SNR=32
TBM Table Mountain 90.47 29 P **P 08 34 51.3 +0.5**
SHW Mount Saint He 90.55 31 P **P 08 34 52.8 +1.6**
HEBO Mount Hebo 90.64 32 *e*P **P 08 34 52.7 +1.1**
comp=Z,181nm,1.0s,mb6.4
F04A Amboy 90.67 31 ⇑P **P 08 34 51.0 -0.7**
baz=90,SNR=21
F04A ⇓pP pP 08 34 52.7 -3.7
baz=90
A11A Hall Mountain, 90.68 26 ⇓P **P 08 34 52.6 +0.8**
baz=90,SNR=15
B10A Chitwood Farm, 90.90 27 ⇑P **P 08 34 53.8 +1.0**
baz=91,SNR=5.8
C09A Chrisman Ranch 90.90 28 ⇓P **P 08 34 53.7 +0.9**
baz=91,SNR=19
NEW Newport 90.97 27 *e*P **P 08 34 53.5 +0.4**
NEW pmax pmax
comp=Z,102nm,1.0s
NEW MLR MLR
comp=Z,8μm,20.0s
NEW Newport 90.97 27 *e*P **P 08 34 53.5 +0.4**
comp=Z,102nm,1.0s,mb6.1
NEW LR LR
comp=Z,8μm,20.0s,MS6.2
OD2 Odessa Site #2 91.06 28 *e*P **P 08 34 54.1 +0.5**
comp=Z,123nm,1.1s,mb6.2
MXC Moxie City 91.07 30 P **P 08 34 54.8 +1.2**
B11A Sandpoint 91.11 26 ⇓P **P 08 34 55.2 +1.4**
baz=91,SNR=6.6
G04A Mulino 91.21 32 ⇑P **P 08 34 55.6 +1.3**
baz=91,SNR=15
D08A Wollman Farm, 91.25 29 ⇑P **P 08 34 53.7 -0.7**
baz=91,SNR=8.2
E07A Sunnyside 91.27 29 ⇓P **P 08 34 55.6 +1.1**
baz=91
COR Corvallis 91.32 32 *e*P **P 08 34 54.8 0.0**
COR pmax pmax
comp=Z,218nm,1.1s,mb6.4
COR MLR MLR
comp=Z,3μm,21.0s,MS5.7
COR Corvallis 91.32 32 *e*P **P 08 34 54.8 -0.1**
comp=Z,218nm,1.1s,mb6.4
COR LR LR
comp=Z,3μm,21.0s,MS5.7
WRD Warden 91.36 29 P **P 08 34 55.2 +0.2**
B12A Libby 91.37 26 ⇓P **P 08 34 55.8 +0.8**
baz=91,SNR=9.1
A13A Flathead Natio 91.41 25 ⇓P **P 08 34 56.0 +0.8**
baz=91
WALA Waterton Lakes 91.48 25 *e*P **P 08 34 55.8 +0.3**
comp=Z,3.1nm,1.1s,mb4.5
HOOD Mount Hood Mea 91.48 31 *e*P **P 08 34 56.5 +1.0**
comp=Z,324nm,1.0s,mb6.6
D09A Jones Farm, Ri 91.49 28 ⇑P **P 08 34 54.1 -1.5**
baz=91,SNR=12
D09A ⇓pP pP 08 34 56.5 -3.8
baz=91
AFI Afiamalu 91.49 105 PFAKE 08 35 10.0 +14
AFI LR LR
comp=Z,2μm,21.0s,MS5.6
RSW Rattlesnake Hi 91.51 29 *e*P **P 08 34 55.4 -0.2**
comp=Z,190nm,1.2s,mb6.3
HAWA Hanford 91.53 29 *e*P **P 08 34 56.1 +0.4**
comp=Z,161nm,1.3s,mb6.2
HAWA LR LR
comp=Z,5μm,20.0s,MS5.9
VFP Flag Point 91.57 31 P **P 08 34 56.8 +0.9**
RNO Roman Nose 91.64 33 P **P 08 34 57.7 +1.4**
A14A Double T Ranch 91.72 24 ⇑P **P 08 34 55.7 -0.9**
baz=91,SNR=22
H04A Detroit Lake 91.75 32 ⇑P **P 08 34 55.2 -1.6**
baz=92,SNR=18
H04A ⇓pP pP 08 34 57.4 -4.1
baz=92
B13A Whitefish 91.86 25 ⇑P **P 08 34 58.2 +0.9**
baz=92,SNR=30
D10A Wagner Farm, O 91.90 28 ⇑P **P 08 34 56.1 -1.4**
baz=92
A15A Johnson Ranch, 91.96 24 ⇑P **P 08 34 57.4 -0.3**
baz=92,SNR=20
G06A Carlson Farm, 91.99 31 ⇓P **P 08 34 57.3 -0.6**
baz=92,SNR=16
E09A Wood Farm, Sta 92.00 28 ⇑P **P 08 34 57.4 -0.5**
baz=92,SNR=8.9
C12B Naegeli Ranch, 92.05 26 ⇑P **P 08 34 56.2 -1.9**
baz=92,SNR=8.9
C12B ⇓pP pP 08 34 59.2 -3.6
baz=92
BSMT Bassoo Peak 92.18 26 *e*P **P 08 34 59.4 +0.7**
comp=Z,74nm,1.0s,mb6.0
BKCOR Black Crater 92.27 32 P **P 08 35 00.5 +1.2**
D11A Klaveano Farm, 92.27 27 P **P 08 34 59.4 +0.2**
baz=92,SNR=28

B14A Marquette Ranc 92.30 25 ⇓P P 08 34 59.8 +0.6
baz=92,SNR=7.8
F08A Pendleton 92.32 29 ⇑P P 08 34 59.2 -0.3
baz=92
A16A West Butte Ran 92.37 23 ⇑P P 08 34 59.7 +0.1
baz=92
C13A Hot Springs 92.41 26 P P 08 35 00.6 +0.8
baz=92,SNR=28
E10A Myers Farm, Un 92.43 28 ⇑P P 08 35 00.7 +0.7
baz=92,SNR=8.9
JTMT Jette 92.46 26 eP P 08 35 01.0 +1.0
comp=Z,40nm,1.0s,mb5.7
YBMT Yellow Bay 92.46 25 eP P 08 35 01.0 +1.0
comp=Z,50nm,1.0s,mb5.8
LNOR Lincton Mounta 92.46 29 eP P 08 35 01.0 +0.9
LNOR pmax pmax
comp=Z,19nm,1.0s,mb5.4
LNOR Lincton Mounta 92.46 29 eP P 08 35 01.0 +0.9
comp=Z,38nm,1.0s,mb5.7
VIPM Ingram Point 92.58 31 P P 08 35 01.5 +0.9
B15A Bradely Ranch, 92.59 24 P P 08 35 00.2 -0.4
baz=92,SNR=25
C14A Swan Lake 92.63 25 ⇑P P 08 35 01.5 +0.7
baz=92
D12A Red Ives Fores 92.64 27 ⇓P P 08 35 00.8 0.0
baz=92
G08A Pilot Rock 92.66 30 ⇓P P 08 35 01.9 +0.9
baz=92,SNR=8.8
SCHQ Schefferville 92.66 355 P P 08 35 00.3 -0.5
comp=Z,18nm,1.0s,mb5.5,baz=29,slow=6.6,SNR=9.6
SCHQ Schefferville 92.66 355 eP P 08 35 00.3 -0.5
SCHQ LR LR
comp=Z,67nm,1.0s,mb6.0
comp=Z,7μm,19.0s,MS6.1
A17A Triple J Farms 92.67 23 P P 08 35 00.7 -0.3
baz=92,SNR=27
SWMT Swartz Lake 92.76 26 eP P 08 35 01.5 +0.1
comp=Z,37nm,1.0s,mb5.8
B16A M & M Farms, S 92.79 24 ⇓P P 08 35 01.5 -0.1
baz=92,SNR=15
F10A Beach Ranch, E 92.81 28 ⇑P P 08 35 02.0 +0.4
baz=92,SNR=20
E11A Bogner Ranch, 92.89 27 P P 08 35 02.3 +0.3
baz=93,SNR=53
D13A Huson 92.94 26 ⇓P P 08 35 01.9 -0.3
baz=93,SNR=12
A18A Metzger Ranch, 92.97 22 ⇑P P 08 35 01.7 -0.6
baz=93,SNR=24
HUMO Hull Mountain 93.01 34 eP P 08 35 02.7 0.0
comp=Z,41nm,0.9s,mb5.9
HUMO LR LR
comp=Z,2μm,19.0s,MS5.7
C15A Salmond Ranch, 93.03 25 ⇑P P 08 35 02.6 -0.1
baz=93
E12A Beaver Dam Sad 93.09 27 ⇑P P 08 35 02.3 -0.6
baz=93
G09A Cove 93.15 29 P P 08 35 03.8 +0.5
baz=93,SNR=29
SLMT Seeley Lake 93.17 25 eP P 08 35 03.3 0.0
comp=Z,878nm,0.9s
B17A L&G Farms, Che 93.20 23 P P 08 35 03.5 +0.1
baz=93,SNR=21
D14A Greenough 93.30 25 P P 08 35 03.2 -0.7
baz=93,SNR=21
F11A Grangeville 93.30 28 ⇓P P 08 35 03.8 -0.2
baz=93
C16A Fuhringer Ranc 93.31 24 ⇑P P 08 35 03.9 -0.1
baz=93,SNR=14
MSO Missoula 93.36 26 eP P 08 35 03.8 -0.3
MSO LR LR
comp=Z,35nm,1.0s,mb5.7
comp=Z,7μm,19.0s,MS6.1
I07A Izee 93.40 31 ⇑P P 08 35 05.5 +1.0
baz=93,SNR=13
H08A Prairie City 93.40 30 ⇓P P 08 35 05.1 +0.7
baz=93,SNR=15
G10A Bishop Farm, J 93.41 29 P P 08 35 04.6 +0.1
baz=93,SNR=29
B18A Beardsley Farm 93.45 23 ⇑P P 08 35 04.6 0.0
baz=93,SNR=11
CHMT Chamberlain Mo 93.53 25 eP P 08 35 04.7 -0.3
comp=Z,22nm,0.8s,mb5.6
E13A Victor 93.59 26 P P 08 35 05.0 -0.2
baz=93,SNR=29
G11A Walters Elk Ra 93.66 28 ⇓P P 08 35 05.5 -0.1
baz=93,SNR=12
D15A Lincoln 93.69 25 ⇓P P 08 35 05.5 -0.2
baz=93
H09A Durkee 93.70 29 ⇑P P 08 35 06.4 +0.5
baz=93,SNR=20
F12A Elk City 93.76 27 P P 08 35 05.7 -0.4
baz=94,SNR=14
EGMT Eagleton 93.78 23 P P 08 35 05.9 -0.2
baz=94,SNR=19
EGMT Eagleton 93.78 23 eP P 08 35 05.7 -0.4
EGMT LR LR
comp=Z,40nm,0.9s,mb5.8
comp=Z,7μm,19.0s,MS6.1
C17A Wharram Farm, 93.79 24 ⇓P P 08 35 05.1 -1.0
baz=94,SNR=12
YBH Yreka Blue Hor 93.81 34 eP P 08 35 06.3 -0.1
YBH pmax pmax
comp=Z,33nm,1.2s
YBH MLR MLR
comp=Z,3μm,20.0s
YBH Yreka Blue Hor 93.81 34 eP P 08 35 06.3 0.0
comp=Z,33nm,1.2s,mb5.6
YBH LR LR
comp=Z,3μm,20.0s,MS5.8
K05A Summer Lake 93.87 32 ⇓P P 08 35 07.7 +1.1
baz=94,SNR=31
E14A Clinton 93.87 26 ⇓P P 08 35 05.5 -1.1
baz=94
D16A Dana Ranch, Ca 94.04 24 ⇑P P 08 35 07.0 -0.3
baz=94,SNR=16
F13A Darby 94.09 27 ⇑P P 08 35 07.1 -0.4
baz=94,SNR=8.5
H10A Noah's Angus R 94.14 29 ⇑P P 08 35 07.5 -0.3
baz=94,SNR=13
E15A Deer Lodge 94.17 25 ⇑P P 08 35 07.2 -0.8
baz=94,SNR=22
TORD Torodi Ar. Bea 94.20 288 P P 08 35 08.6 0.0
comp=Z,2.2nm,0.8s,mb4.7,baz=58,slow=3.8,SNR=21
TORD PKPPKP 09 00 39.8
comp=Z,0.6nm,1.0s,baz=205,slow=6.6,SNR=3.6
TORD LR LR 09 23 03.1
comp=Z,5μm,18.4s,MS6.0,baz=55,slow=39
HRY Holter Researc 94.22 25 eP P 08 35 08.7 +0.6
comp=Z,45nm,0.8s,mb6.0
D17A Six Diamond Ra 94.23 24 ⇓P P 08 35 07.3 -0.9
baz=94
I09A Lost Marbles R 94.23 30 P P 08 35 09.2 +0.9
baz=94,SNR=8.1
H11A Donnelly 94.34 28 ⇑P P 08 35 08.1 -0.6
baz=94,SNR=23
J08A Circle Bar Ran 94.42 30 ⇓P P 08 35 10.0 +0.9
baz=94
F14A Wisdom 94.43 26 ⇑P P 08 35 09.4 +0.3
baz=94,SNR=9.2
D18A Linhart Farms, 94.49 23 ⇓P P 08 35 09.8 +0.4
baz=94,SNR=11
G13A Cobalt 94.71 27 ⇓P P 08 35 08.8 -1.6
baz=94,SNR=9.8
F15A Butte 94.72 26 ⇑P P 08 35 09.1 -1.4
baz=94,SNR=15
J09A Fry Pan Ranch, 94.74 30 P P 08 35 10.9 +0.3
baz=94,SNR=27
LRM Limekiln Ridge 94.75 25 eP P 08 35 10.6 0.0
comp=Z,78nm,0.9s,mb6.1
E17A Martinsdale 94.77 24 ⇓P P 08 35 11.3 +0.6
baz=94,SNR=14
WDC Whiskeytown Da 94.78 35 eP P 08 35 10.8 -0.1
WDC pmax pmax
comp=Z,39nm,1.4s,mb5.6
WDC MLR MLR
comp=Z,3μm,20.0s,MS5.7
WDC Whiskeytown Da 94.78 35 eP P 08 35 10.8 0.0
comp=Z,38nm,1.4s,mb5.6
WDC LR LR
comp=Z,3μm,20.0s,MS5.7
MOD Modoc 94.79 32 eP P 08 35 11.4 +0.6
comp=Z,29nm,1.2s,mb5.6
MOD LR LR
comp=Z,2μm,20.0s,MS5.5
G14A Jackson 94.88 26 ⇑P P 08 35 11.8 +0.6
baz=95
H12A Diamond D Ranc 94.92 28 ⇑P P 08 35 09.6 -1.8
baz=95,SNR=7.7

XMAS Kiritimati 94.96 84 PFAKE 08 35 20.0 +7.9
XMAS LR LR
comp=Z,3μm,22.0s,MS5.7
E18A Harlowton 95.00 24 P P 08 35 12.1 +0.4
baz=95,SNR=17
I11A Placerville 95.02 29 ⇑P P 08 35 12.1 +0.3
baz=95,SNR=12
DGMT Dagmar 95.07 19 ⇑P P 08 35 10.4 -1.6
baz=95,SNR=12
DGMT Dagmar 95.07 19 eP P 08 35 12.0 0.0
comp=Z,58nm,0.8s,mb6.1
DGMT LR LR
comp=Z,9μm,19.0s,MS6.2
F16A Kennard Place, 95.08 25 ⇑P P 08 35 10.8 -1.3
baz=95,SNR=8.1
DLMT Dillon 95.09 26 eP P 08 35 12.1 -0.1
comp=Z,33nm,1.0s,mb5.7
WVOR Wild Horse Val 95.10 31 eP P 08 35 12.1 -0.2
WVOR pmax pmax
comp=Z,25nm,1.0s,mb5.6
WVOR MLR MLR
comp=Z,4μm,20.0s,MS5.9
WVOR Wild Horse Val 95.10 31 eP P 08 35 12.1 -0.2
comp=Z,25nm,1.0s,mb5.6
WVOR LR LR
comp=Z,4μm,20.0s,MS5.9
LBTB Lobatse 95.14 244 eP P 08 35 12.1 -0.5
LBTB pmax pmax
comp=Z,15nm,0.9s,mb5.4
LBTB MLR MLR
comp=Z,4μm,21.0s,MS5.9
LBTB Lobatse 95.14 244 eP P 08 35 12.1 -0.5
comp=Z,15nm,0.9s,mb5.4
LBTB LR LR
comp=Z,4μm,21.0s,MS5.9
H13A Challis 95.15 27 ⇑P P 08 35 10.7 -1.7
baz=95,SNR=13
BOZ Bozeman (W) 95.20 25 ⇓P P 08 35 11.5 -1.1
baz=95,SNR=17
BOZ Bozeman (W) 95.20 25 eP P 08 35 12.8 +0.1
BOZ pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
BOZ MLR MLR
comp=Z,6μm,21.0s,MS6.1
BOZ Bozeman (W) 95.20 25 eP P 08 35 12.8 +0.1
comp=Z,3.3nm,1.0s,mb4.7
BOZ LR LR
comp=Z,6μm,21.0s,MS6.1
G15A Dillon 95.30 26 ⇑P P 08 35 12.3 -0.8
baz=95,SNR=29
F17A Fitzpatrick Pl 95.32 24 ⇑P P 08 35 12.7 -0.5
baz=95,SNR=22
ULM Lac du Bonnet 95.39 14 P P 08 35 12.0 -1.4
comp=Z,8.0nm,0.9s,mb5.2,baz=335,slow=5.2,SNR=7.7
ULM PKKPbc PKKPbc 08 52 15.2 +9.3
comp=Z,2.6nm,0.6s,baz=157,slow=1.4,SNR=3.4
ULM LR LR 09 24 08.5
comp=Z,5μm,19.0s,MS6.0,baz=196,slow=39
ULM Lac du Bonnet 95.39 14 eP P 08 35 12.0 -1.4
comp=Z,17nm,0.9s,mb5.5
ULM LR LR
comp=Z,2μm,21.0s,MS5.6
H14A Leadore 95.44 27 ⇑P P 08 35 12.0 -1.8
baz=95,SNR=5.9
I12A Atlanta 95.45 28 ⇓P P 08 35 14.4 +0.6
baz=95,SNR=21
MCMT McKenzie Canyo 95.46 26 eP P 08 35 14.0 +0.2
comp=Z,453nm,0.7s,mb7.0
G16A Moss Hill, Enn 95.50 25 ⇓P P 08 35 12.6 -1.4
baz=95,SNR=12
K10A MacKenzie Ranc 95.58 30 ⇑P P 08 35 15.0 +0.6
baz=95,SNR=12
F18A Big Timber 95.65 24 ⇓P P 08 35 14.9 +0.2
baz=95,SNR=22
H15A Lima 95.71 26 ⇓P P 08 35 15.2 +0.2
baz=95,SNR=13
I13A Wildhorse Cree 95.75 28 ⇑P P 08 35 15.3 +0.1
baz=95,SNR=11
HOPS Hopland 95.75 36 eP P 08 35 14.7 -0.6
comp=Z,72nm,1.4s,mb5.9
HOPS LR LR
comp=Z,4μm,19.0s,MS5.9
J12A Stokes Ranch, 95.91 28 ⇑P P 08 35 16.8 +0.8
baz=96,SNR=23
HLID Hailey 95.92 28 ⇓P P 08 35 16.6 +0.6
baz=96,SNR=33
HLID Hailey 95.92 28 eP P 08 35 16.5 +0.5
comp=Z,53nm,1.4s,mb5.8
HLID LR LR
comp=Z,5μm,19.0s,MS6.0
K11A Parker Ranch, 95.93 29 ⇓P P 08 35 16.5 +0.4
baz=96
QLMT Earthquake Lak 95.98 25 eP P 08 35 16.6 +0.4
comp=Z,1.2nm,0.3s,mb4.8
I14A Mackay 95.99 27 ⇓P P 08 35 16.6 +0.3
baz=96,SNR=10
LAO LASA Array 96.08 21 eP P 08 35 16.8 +0.2
comp=Z,13nm,0.9s,mb5.4
LAO LR LR
comp=Z,6μm,22.0s,MS6.0
H16A Russell Place, 96.15 25 ⇓P P 08 35 17.3 +0.2
baz=96,SNR=6.2
J13A Cove Ranch, Pi 96.16 28 P P 08 35 17.9 +0.8
baz=96,SNR=33
YMR Madison River 96.28 25 eP P 08 35 17.1 -0.5
comp=Z,11nm,1.3s,mb5.1
I15A Monteview 96.30 26 P P 08 35 18.5 +0.8
baz=96,SNR=9.3
L10A Juniper Basin 96.32 30 ⇓P P 08 35 18.4 +0.6
baz=96,SNR=16
CMLA Cha da Macela 96.37 323 PFAKE 08 35 30.0 +12
CMLA LR LR
comp=Z,7μm,21.0s,MS6.1
BEKR Beckwourth 96.38 34 P P 08 35 18.3 +0.2
baz=96,SNR=12
MCCM Marconi Confer 96.50 36 PFAKE 08 35 30.0 +11
MCCM LR LR
comp=Z,2μm,20.0s,MS5.7
K12A Draper Farm, C 96.51 29 ⇓P P 08 35 19.3 +0.6
baz=96
YFT Old Faithful 96.52 25 eP P 08 35 20.9 +2.2
comp=Z,32nm,1.0s,mb5.7
L11A Cat Creek Ranc 96.55 29 P P 08 35 19.5 +0.7
baz=96,SNR=16
LKWY Lake 96.58 25 PFAKE 08 35 30.0 +11
LKWY LR LR
comp=Z,14μm,19.0s,MS6.5
H17A Grant Village 96.66 25 ⇑P P 08 35 21.1 +1.7
baz=96,SNR=10
M10A I.L. Ranch, Tu 96.75 30 ⇑P P 08 35 20.8 +1.1
baz=96,SNR=10
I16A Newdale 96.78 26 ⇑P P 08 35 20.6 +0.7
baz=96
K13A Stover Farm, H 96.82 28 P P 08 35 21.1 +1.0
baz=96,SNR=7.7
L12A House Creek Ra 96.87 29 ⇑P P 08 35 21.3 +0.9
baz=97,SNR=7.4
IMW Indian Meadow 96.96 26 eP P 08 35 20.8 +0.1
comp=Z,14nm,0.8s,mb5.5
DCID1 Drake Creek 97.13 26 eP P 08 35 22.0 +0.5
comp=Z,13nm,0.8s,mb5.4
M11A Holland Ranch, 97.14 30 ⇓P P 08 35 22.5 +0.9
baz=97,SNR=12
J16A Bone 97.25 26 ⇓P P 08 35 22.6 +0.6
baz=97
AGMN Agassiz Refuge 97.25 14 eP P 08 35 20.9 -1.0
comp=Z,7.4nm,0.7s,mb5.2
AGMN LR LR
comp=Z,6μm,20.0s,MS6.0
K14A Jones Ranch, D 97.27 28 ⇑P P 08 35 23.0 +0.8
baz=97
TPAW Teton Pass 97.31 26 eP P 08 35 22.5 +0.2
comp=Z,17nm,1.3s,mb5.3
LOHW Long Hollow 97.33 25 eP P 08 35 22.8 +0.4
comp=Z,5.1nm,0.9s,mb5.0
L13A Double Diamond 97.35 28 ⇑P P 08 35 23.4 +0.9
baz=97,SNR=6.3
BOSA Boshof 97.36 241 P P 08 35 21.5 -1.1
comp=Z,1.7nm,0.7s,mb4.6,baz=148,slow=20,SNR=7.0
BOSA PKKPbc PKKPbc 08 52 12.9 +12
comp=Z,1.6nm,0.7s,baz=62,slow=14,SNR=3.1
BOSA LR LR 09 22 29.6
comp=Z,2μm,18.2s,MS5.7,baz=57,slow=37
BOSA Boshof 97.36 241 P P 08 35 21.5 -1.1
BOSA PKKPbc PKKPbc 08 52 12.9 +12
BOSA LR LR 09 22 29.6
SNZO South Karori 97.36 135 PFAKE 08 35 30.0 +7.7
SNZO LR LR

comp=Z,3μm,22.0s,MS5.7
REDW Red Top Meadow 97.45 26 eP P 08 35 23.0 0.0
comp=Z,14nm,1.3s,mb5.2
K16A Soda Springs 97.64 27 ⇓P P 08 35 24.4 +0.6
baz=97
L14A Malta 97.68 28 ⇓P P 08 35 24.6 +0.6
baz=97
CMB Columbia Colle 97.81 35 eP P 08 35 24.6 -0.1
comp=Z,186nm,0.6s,mb6.8
CMB LR LR
comp=Z,3μm,20.0s,MS5.8
M13A Montello 97.87 29 eP P 08 35 25.2 +0.3
comp=Z,25nm,1.1s,mb5.7
AHID Auburn Hatcher 97.88 26 eP P 08 35 25.0 +0.2
AHID LR LR
comp=Z,8μm,21.0s,MS6.2
N12A Clover Valley, 97.94 30 P P 08 35 26.2 +1.1
baz=98,SNR=11
N12A Clover Valley, 97.94 30 eP P 08 35 26.1 +0.9
comp=Z,14nm,0.8s,mb5.5
ELK Elko 97.94 30 eP P 08 35 25.9 +0.7
ELK pmax pmax
comp=Z,21nm,1.2s
ELK MLR MLR
comp=Z,5μm,21.0s
ELK Elko 97.94 30 eP P 08 35 25.9 +0.7
comp=Z,21nm,1.2s,mb5.5
ELK LR LR
comp=Z,5μm,21.0s,MS6.0
L15A Malad City 98.04 27 ⇓P P 08 35 25.4 -0.2
baz=98
M14A Sheep Mountain 98.08 28 ⇓P P 08 35 26.5 +0.7
baz=98,SNR=9.2
O11A Cowboy Ranch, 98.27 31 ⇑P P 08 35 27.4 +0.7
baz=98,SNR=7.3
N13A Wendover, West 98.28 29 ⇑P P 08 35 27.4 +0.6
baz=98
N13A Wendover, West 98.28 29 eP P 08 35 27.1 +0.4
comp=Z,32nm,1.0s,mb5.8
SAO San Andreas Ge 98.29 36 PFAKE 08 35 40.0 +13
SAO LR LR
comp=Z,4μm,19.0s,MS5.9
TSUM Tsumeb 98.31 253 PFAKE 08 35 40.0 +13
TSUM LR LR
comp=Z,4μm,21.0s,MS5.9
P10A Eureka 98.34 31 ⇓P P 08 35 27.9 +0.9
baz=98
EYMN Ely 98.40 11 P P 08 35 26.2 -0.9
comp=Z,9.8nm,1.2s,mb5.2
EYMN LR LR
comp=Z,8μm,20.0s,MS6.2
BW06 Boulder Array 98.44 25 PFAKE 08 35 40.0 +13
BW06 LR LR
comp=Z,6μm,20.0s,MS6.1
PDAR Pinedale Array 98.44 25 P P 08 35 26.1 -1.3
comp=Z,0.9nm,0.8s,mb4.4,baz=10,slow=2.5,SNR=6.7
PDAR PP PP 08 39 24.9 -1.7
comp=Z,2.2nm,0.8s,baz=334,slow=3.5,SNR=3.6
PDAR PKKPbc PKKPbc 08 52 00.3 +2.9
comp=Z,0.5nm,0.5s,baz=131,slow=4.1,SNR=4.3
PDAR LR LR 09 24 58.1
comp=Z,5μm,18.2s,MS6.0,baz=332,slow=38
NVAR Mina Array Bea 98.48 33 P P 08 35 27.4 -0.3
comp=Z,1.7nm,0.8s,mb4.6,baz=302,slow=4.0,SNR=13
NVAR PKKPbc PKKPbc 08 51 58.4 +1.1
comp=Z,0.5nm,0.8s,baz=147,slow=5.3,SNR=3.1
NVAR PKPPKP 09 00 24.0
comp=Z,0.6nm,0.9s,baz=170,slow=4.3,SNR=5.1
NVAR Mina Array Bea 98.48 33 P P 08 35 27.4 -0.3
NVAR PKKPbc PKKPbc 08 51 58.4 +1.1
NVAR P'P' 09 00 24.0
O12A Currie 98.55 30 ⇑P P 08 35 28.7 +0.8
baz=98,SNR=6.7
CASY Casey 98.64 178 PFAKE 08 35 40.0 +13
CASY LR LR
comp=Z,4μm,20.0s,MS5.9
HWUT Hardware Ranch 98.70 27 eP P 08 35 28.6 0.0
comp=Z,7.8nm,0.8s,mb5.3
HWUT LR LR
comp=Z,6μm,19.0s,MS6.1
BGU Big Grassy Mou 98.70 28 eP P 08 35 29.1 +0.5
comp=Z,10nm,1.1s,mb5.3
N14A Grayback Hills 98.70 29 ⇑P P 08 35 29.1 +0.5
baz=98,SNR=6.8
L18A Fontenelle, Gr 99.00 26 ⇑P P 08 35 29.2 -0.7
baz=99
Q10A Clear Creek Ra 99.03 32 ⇓P P 08 35 29.6 -0.5
baz=99
RSSD Black Hills 99.06 21 eP P 08 35 30.2 +0.1
RSSD pmax pmax
comp=Z,34nm,0.9s,mb5.9
RSSD MLR MLR
comp=Z,8μm,19.0s,MS6.2
RSSD Black Hills 99.06 21 eP P 08 35 30.2 0.0
comp=Z,34nm,0.9s,mb5.9
RSSD LR LR
comp=Z,8μm,19.0s,MS6.2
L19A Farson 99.09 25 ⇓P P 08 35 29.8 -0.6
baz=99
P12A McGill 99.14 30 ⇓P P 08 35 29.9 -0.7
baz=99,SNR=7.1
M17A Scullys Gap (B 99.15 27 ⇓P P 08 35 29.9 -0.7
baz=99,SNR=8.0
TPH Tonopah 99.27 33 PFAKE 08 35 40.0 +8.8
TPH LR LR
comp=Z,3μm,19.0s,MS5.8
Q11A Duckwater 99.34 31 ⇑P P 08 35 29.8 -1.7
baz=99
Q11A ⇓pPdiff pP 08 35 32.0 -4.1
baz=99
DUG Dugway 99.41 29 ⇑P P 08 35 30.4 -1.3
baz=99
DUG Dugway 99.41 29 eP P 08 35 31.7 -0.1
DUG pmax pmax
comp=Z,12nm,1.0s,mb5.4
DUG MLR MLR
comp=Z,4μm,19.0s,MS5.9
DUG Dugway 99.41 29 eP P 08 35 31.7 -0.1
comp=Z,12nm,1.0s,mb5.4
DUG LR LR
comp=Z,4μm,19.0s,MS5.9
M18A Lyman 99.42 26 ⇓P P 08 35 30.7 -1.1
baz=99,SNR=6.9
R10A Warm Springs 99.51 32 ⇑P P 08 35 33.2 +0.9
baz=99,SNR=8.2
P13A Bates Ranch, G 99.53 30 ⇑P P 08 35 32.3 0.0
baz=99,SNR=11
Q12A Willow Creek R 99.53 31 ⇑P P 08 35 32.2 -0.1
baz=99,SNR=8.3
L20A Wamsutter 99.54 25 ⇑P P 08 35 32.4 +0.1
baz=99
JLU Jordanelle 99.60 28 eP P 08 35 32.7 +0.1
comp=Z,9.0nm,1.1s,mb5.1
S10A Tonopah Range, 99.68 32 ⇓P Pdif 08 35 33.8 +0.9
baz=99,SNR=9.5
R11A Troy Canyon, C 99.78 32 ⇓P Pdif 08 35 33.6 +0.3
baz=100,SNR=7.7
NLU North Lily Min 99.91 28 ePdif Pdif 08 35 35.1 +1.2
comp=Z,12nm,1.2s
L21A Rawlins 99.92 24 ⇑P Pdif 08 35 34.1 +0.2
baz=100
Q13A Wheeler Ranch, 99.95 30 ⇓P Pdif 08 35 35.0 +0.9
baz=100,SNR=7.4
O17A Robinson Place 100.23 27 ⇓P Pdif 08 35 36.0 +0.7
baz=100,SNR=9.8
Q14A Sevier Lake (B 100.24 30 ⇑P Pdif 08 35 34.5 -0.8
baz=100
S11A Rachel 100.29 32 ⇓P Pdif 08 35 36.0 +0.5
baz=100
DAC Darwin (Calif) 100.55 34 PFAKE 08 35 50.0 +13
DAC LR LR
comp=Z,2μm,20.0s,MS5.7
COWI Conover 100.57 10 PFAKE 08 35 50.0 +13
COWI LR LR
comp=Z,6μm,20.0s,MS6.1
Q15A Fillmore 100.60 29 ⇑P Pdif 08 35 37.3 +0.3
baz=100
N20A Spence Gulch, 100.60 25 ⇓P Pdif 08 35 37.7 +0.7
baz=100,SNR=5.2
S12A Delamar Landin 100.72 31 ⇓P Pdif 08 35 38.7 +1.2
baz=100,SNR=5.7
FURC Furnace Creek, 100.74 33 ⇑P Pdif 08 35 38.6 +1.0
baz=100
TMUT Trail Mountain 100.82 28 ePdif Pdif 08 35 38.6 +0.7
comp=Z,9.0nm,0.9s
T11A Corn Creek, Al 100.86 32 ⇑P Pdif 08 35 38.9 +0.7
baz=101
P18A Preston Nutter 100.91 27 ⇑P Pdif 08 35 38.9 +0.5

baz=101,SNR=9.9
MVU Marysvale 101.09 29 PFAKE 08 35 50.0 +11
MVU LR LR
comp=Z,4μm,20.0s,MS6.0
MSU Marysvale 101.09 29 *e*P Pdif 08 35 40.4 +1.2
MSU pmax pmax
comp=Z,10.0nm,1.1s
MSU Marysvale 101.09 29 *e*Pdif Pdif 08 35 40.4 +1.2
comp=Z,10nm,1.1s
PHWY Pilot Hill 101.16 23 *e*Pdif Pdif 08 35 39.9 +0.5
comp=Z,12nm,0.9s
SRU San Rafael 101.25 28 *e*P Pdif 08 35 38.8 -1.1
SRU pmax pmax
comp=Z,5.0nm,0.8s
SRU San Rafael 101.25 28 *e*Pdif Pdif 08 35 38.8 -1.0
comp=Z,4.5nm,0.8s
ECSD EROS Data Cent 101.42 16 *e*Pdif Pdif 08 35 39.7 -0.9
comp=Z,9.0nm,1.0s
ECSD LR LR
comp=Z,8μm,19.0s,MS6.2
R16A Teasdale 101.57 29 ⇑P Pdif 08 35 39.6 -1.7
baz=101,SNR=13
R16A ⇑pPdiff 08 35 42.6
baz=101
PKME Peaks-Kenny Pk 102.35 356 PFAKE 08 35 50.0 +5.2
PKME LR LR
comp=Z,6μm,21.0s,MS6.1
GLMI Grayling 102.41 7 PFAKE 08 35 50.0 +5.0
GLMI LR LR
comp=Z,7μm,20.0s,MS6.2
DRV Dumont d'Urvil 102.43 167 SS SS 08 54 32.0 -2.9
DRV L 09 05 00.0
ISCO Idaho Springs 102.45 24 PFAKE 08 36 00.0 +15
ISCO LR LR
comp=Z,7μm,19.0s,MS6.2
SMCO Snowmass 102.53 25 *e*Pdif Pdif 08 35 46.6 +1.1
comp=Z,12nm,1.1s
OGNE Ogallala 102.56 21 PFAKE 08 36 00.0 +14
OGNE LR LR
comp=Z,7μm,19.0s,MS6.2
SUR Sutherland 102.60 240 PFAKE 08 36 00.0 +14
SUR LR LR
comp=Z,3μm,19.0s,MS5.8
PV01 Paradox Valley 102.85 27 *e*Pdif Pdif 08 35 47.1 +0.1
comp=Z,605nm,0.9s
LONY Lake Ozonia 103.15 360 PFAKE 08 36 00.0 +12
LONY LR LR
comp=Z,4μm,19.0s,MS6.0
DBIC Dimbokro 103.19 287 PP PP 08 40 07.7 +3.8
comp=Z,15nm,1.0s,baz=34,slow=8.0,SNR=4.6
DBIC Dimbokro 103.19 287 PFAKE 08 36 00.0 +12
DBIC LR LR
comp=Z,4μm,19.0s,MS6.0
PFO Pinyon Flat Ob 103.26 35 PFAKE 08 36 00.0 +11
PFO LR LR
comp=Z,3μm,22.0s,MS5.8
LBNH Lisbon 103.49 358 PFAKE 08 36 00.0 +10
LBNH LR LR
comp=Z,7μm,22.0s,MS6.2
JFWS Jewell Farm 103.50 12 *e*P Pdif 08 35 48.9 -0.9
JFWS pmax pmax
comp=Z,6.0nm,0.7s
JFWS MLR MLR
comp=Z,7μm,19.0s,MS6.2
JFWS Jewell Farm 103.50 12 *e*Pdif Pdif 08 35 48.9 -0.9
comp=Z,5.7nm,0.7s
JFWS LR LR
comp=Z,7μm,19.0s,MS6.2
MVCO Mesa Verde 103.69 27 PFAKE 08 36 00.0 +9.3
MVCO LR LR
comp=Z,5μm,20.0s,MS6.0
NCB Newcomb 103.79 360 PFAKE 08 36 00.0 +8.8
NCB LR LR
comp=Z,4μm,19.0s,MS6.0
SCIA State Center 103.91 14 PFAKE 08 36 00.0 +8.3
SCIA LR LR
comp=Z,7μm,21.0s,MS6.2
WUAZ Wupatki 103.98 30 PFAKE 08 36 00.0 +8.0
WUAZ LR LR
comp=Z,3μm,19.0s,MS5.9
SDCO Great Sand Dun 104.32 25 PFAKE 08 36 00.0 +6.5
SDCO LR LR
comp=Z,6μm,19.0s,MS6.1
MAW Mawson 104.88 196 PP PP 08 40 16.7 +0.8
comp=Z,6.3nm,1.2s,baz=0.5,slow=10,SNR=4.0
MAW PKKPbc PKKPbc 08 51 40.3 +0.3
comp=Z,3.8nm,0.8s,baz=218,slow=5.4,SNR=5.0
MAW Mawson 104.88 196 PFAKE 08 36 00.0 +4.0
MAW LR LR
comp=Z,4μm,21.0s,MS6.0
AAM Ann Arbor 105.00 7 PFAKE 08 40 20.0 +8.7
AAM LR LR
comp=Z,5μm,21.0s,MS6.1
RAR Rarotonga 105.04 106 PFAKE 08 36 10.0 +13
RAR LR LR
comp=Z,3μm,22.0s,MS5.7
ERPA Erie 105.48 4 PFAKE 08 40 20.0 +7.8
ERPA LR LR
comp=Z,5μm,20.0s,MS6.0
BINY Binghamton 105.56 1 PFAKE 08 40 20.0 +7.7
BINY LR LR
comp=Z,6μm,21.0s,MS6.1
KSU1 Kansas State U 105.80 18 PFAKE 08 40 20.0 +7.1
KSU1 LR LR
comp=Z,10μm,22.0s,MS6.3
HDIL Hopedale 105.95 12 PFAKE 08 40 20.0 +6.9
HDIL LR LR
comp=Z,9μm,19.0s,MS6.3
ANMO Albuquerque 106.45 27 PFAKE 08 40 20.0 +5.8
ANMO LR LR
comp=Z,1μm,20.0s,MS5.4
TUC Tucson 106.97 31 PFAKE 08 40 30.0 +15
TUC LR LR
comp=Z,3μm,22.0s,MS5.8
SSPA Standing Stone 107.06 3 PFAKE 08 40 20.0 +4.8
SSPA LR LR
comp=Z,4μm,19.0s,MS6.0
BNM Barren Site 107.10 27 *e*PKPdf PKiKP 08 40 15.4 -0.1
ACSO Alum Creek Sta 107.12 7 PFAKE 08 40 30.0 +15
ACSO LR LR
comp=Z,6μm,21.0s,MS6.1
MCWV Mont Chateau 107.94 4 PFAKE 08 40 30.0 +13
MCWV LR LR
comp=Z,7μm,21.0s,MS6.2
CCM Cathedral Cave 108.02 14 PFAKE 08 40 30.0 +13
CCM LR LR
comp=Z,8μm,20.0s,MS6.3
AMTX Amarillo 108.22 23 PFAKE 08 40 30.0 +13
AMTX LR LR
comp=Z,5μm,19.0s,MS6.1
WCI Wyandotte Cave 108.70 10 PFAKE 08 40 30.0 +12
WCI LR LR
comp=Z,4μm,19.0s,MS6.0
WMOK Wichita Mounta 109.27 21 PFAKE 08 40 30.0 +11
WMOK LR LR
comp=Z,6μm,20.0s,MS6.2
CBN Corbin 109.51 2 PFAKE 08 40 30.0 +10
CBN LR LR
comp=Z,8μm,20.0s,MS6.3
GDL2 Guadalupe Moun 109.69 27 *e*PKPdf PKiKP 08 40 19.2 -1.1
MNTX Cornudas Mount 109.75 28 PFAKE 08 40 30.0 +10
MNTX LR LR
comp=Z,3μm,19.0s,MS5.9
BLA Blacksburg 110.34 5 PFAKE 08 40 30.0 +8.6
BLA LR LR
comp=Z,7μm,19.0s,MS6.2
WVT Waverly 110.52 11 PFAKE 08 40 30.0 +8.2
WVT LR LR
comp=Z,5μm,20.0s,MS6.0
MIAR Mount Ida 110.87 17 PFAKE 08 40 30.0 +7.5
MIAR LR LR
comp=Z,8μm,19.0s,MS6.3
PLAL Pickwick Lake 111.59 12 PFAKE 08 40 30.0 +6.1
PLAL LR LR
comp=Z,6μm,19.0s,MS6.2
PPT Papeete 111.71 97 *e*Pdif Pdif 08 36 27.0 +0.6
comp=Z,56nm,27.2s
PPT Papeete 111.71 97 *e*PP PP 08 41 06.7 0.0
comp=Z,179nm,26.5s
PPT Papeete 111.71 97 *e*PS PS 08 50 37.0 -2.2
comp=Z,1μm,29.8s
PPT *e*SS SS 08 56 48.8 +6.1
comp=Z,1μm,26.8s
PPT *e*LQ 09 08 38.5
comp=Z,3μm,31.0s
PPT *e*LR LR 09 13 28.4
comp=Z,4μm,30.5s
PPT Papeete 111.71 97 *e*P Pdif 08 36 27.0 +0.6
PPT *e* 08 41 06.7
PPT *e*PS PS 08 50 37.0 -2.2
PPT *e*SS SS 08 56 48.8 +6.1
PPT Papeete 111.71 97 *e*Pdif Pdif 08 36 27.0 +0.6
PPT *e*PP PP 08 41 06.7 0.0
PPT *e*PS PS 08 50 37.0 -2.2
PPT *e*SS SS 08 56 48.8 +6.1
PPT *e*LQ 09 08 38.5
OXF Oxford 111.81 13 PFAKE 08 40 30.0 +5.7
OXF LR LR
comp=Z,6μm,19.0s,MS6.2
CNNC Cliffs of the 112.44 3 PFAKE 08 40 40.0 +15
CNNC LR LR
comp=Z,6μm,19.0s,MS6.2
TXAR Lajitas Array 112.52 27 Pdiff Pdif 08 36 33.0 +3.0
comp=Z,0.2nm,0.7s,baz=37,slow=13,SNR=2.5
TXAR PKiKP PKiKP 08 40 25.1 -0.7
comp=Z,0.8nm,0.6s,baz=223,slow=0.3,SNR=11
TXAR PP PP 08 41 12.3 +1.4
comp=Z,2.1nm,0.9s,baz=352,slow=6.3,SNR=3.3
TXAR PKKPbc PKKPbc 08 51 14.2 -0.3
comp=Z,1.2nm,0.9s,baz=160,slow=5.6,SNR=7.3
TXAR PKKPab PKKPab 08 51 21.7 -4.3
comp=Z,1.8nm,0.7s,baz=158,slow=7.2,SNR=9.3
TXAR Lajitas Array 112.52 27 P Pdif 08 36 33.0 +3.0
TXAR 08 40 25.1
TXAR 08 41 12.3
TXAR Lajitas Array 112.52 27 Pdif Pdif 08 36 33.0 +3.0
TXAR PKPdf PKiKP 08 40 25.1 -0.7
TXAR PP PP 08 41 12.3 +1.4
TXAR PKKPbc PKKPbc 08 51 14.2 -0.3
TXAR PKKPab PKKPab 08 51 21.7 -4.3
JCT Junction City 112.88 23 *e*PKIKP PKiKP 08 40 25.4 -1.0
JCT MLR MLR
comp=Z,6μm,20.0s,MS6.2
NATX Nacogdoches 113.24 19 PFAKE 08 40 40.0 +13
NATX LR LR
comp=Z,10μm,22.0s,MS6.3
LRAL Lakeview Retre 113.68 11 PFAKE 08 40 40.0 +12
LRAL LR LR
comp=Z,5μm,19.0s,MS6.1
VBMS Vicksburg 113.80 15 PFAKE 08 40 40.0 +12
VBMS LR LR
comp=Z,7μm,22.0s,MS6.2
GOGA Godfrey 113.81 8 PFAKE 08 40 40.0 +12
GOGA LR LR
comp=Z,7μm,19.0s,MS6.3
NHSC New Hope 114.43 5 PFAKE 08 40 40.0 +11
NHSC LR LR
comp=Z,6μm,19.0s,MS6.2
HKT Hockley 114.62 20 PFAKE 08 40 40.0 +10
HKT LR LR
comp=Z,7μm,19.0s,MS6.3
BBSR BB Station 114.70 351 PFAKE 08 40 40.0 +10
BBSR LR LR
comp=Z,4μm,21.0s,MS6.0
TAOE Nuku Hiva Isla 115.31 84 *e*PP PP 08 41 22.2 -10
comp=Z,225nm,25.3s
TAOE Nuku Hiva Isla 115.31 84 *e*PS PS 08 51 09.5 -2.8
comp=Z,964nm,29.2s
TAOE *e*SS SS 08 57 27.9 -2.4
comp=Z,2μm,33.2s
TAOE *e*LQ 09 10 25.2
comp=Z,4μm,33.2s
TAOE *e*LR LR 09 15 09.6
comp=Z,5μm,23.0s
BRAL Brewton 115.65 12 PFAKE 08 40 40.0 +8.3
BRAL LR LR
comp=Z,9μm,20.0s,MS6.4
SBA Scott Base 116.00 168 *e*PKIKP PKPdf 08 40 29.5 -1.4
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.5
SHEL Horse Pasture 116.05 267 PFAKE 08 40 40.0 +7.3
SHEL LR LR
comp=Z,3μm,19.0s,MS5.9
KVTX Kingsville 116.22 23 PFAKE 08 40 40.0 +7.1
KVTX LR LR
comp=Z,5μm,19.0s,MS6.1
DWPF Disney 119.28 7 PFAKE 08 40 50.0 +11
DWPF LR LR
comp=Z,6μm,22.0s,MS6.2
NVL N'lazarevskaya 121.55 203⇑*e*PKIKP PKPdf 08 40 48.1 +6.4
NVL *e**SP 08 40 59.5
NVL *e*PS 08 53 23.4
NVL *e*SS SS 08 58 55.3 +6.3
NVL pmax pmax
comp=Z,18nm,0.6s
NVL MLR MLR
comp=Z,2μm,18.0s,MS5.8
MAIT Maitri 121.58 203 *e*PKPab PKPdf 08 40 41.2 -0.5
MAIT *e*E 08 40 50.3
QSPA South Pole Qui 122.37 180 *e*PKPdf PKPdf 08 40 41.9 -1.1
QSPA LR LR
comp=Z,2μm,20.0s,MS5.8
GRTK Grand Turk 126.09 356 PFAKE 08 41 00.0 +8.0
GRTK LR LR
comp=Z,3μm,19.0s,MS6.0
RKT Rikitea 126.42 96 *e*PP PP 08 42 40.0 -8.3
comp=Z,206nm,28.0s
RKT *e*LQ 09 15 07.5
comp=Z,2μm,36.0s
RKT *e*LR LR 09 20 15.6
comp=Z,2μm,36.2s
GTBY Guantanamo Bay 127.77 1 PFAKE 08 41 10.0 +15
GTBY LR LR
comp=Z,5μm,19.0s,MS6.2
VNA2 Neumayer--Watz 127.87 203 *e* PKPdf 08 40 59.9 +6.1
VNA1 Neumayer--Stat 128.20 203 *e* PKPdf 08 41 01.5 +7.1
ANWB Willy Bob 128.53 344 PFAKE 08 41 10.0 +13
ANWB LR LR
comp=Z,3μm,21.0s,MS5.9
SDDR Presa de Saban 128.61 356 *e*PKPdf PKPdf 08 40 57.9 +1.0
SDDR LR LR
comp=Z,3μm,19.0s,MS6.0
SJG San Juan 128.93 350 PFAKE 08 41 10.0 +13
SJG LR LR
comp=Z,9μm,20.0s,MS6.5
MTDJ Mount Denham 129.38 4 PFAKE 08 41 10.0 +12
MTDJ LR LR
comp=Z,3μm,20.0s,MS6.0
FDF Fort de France 131.20 343 PFAKE 08 41 10.0 +8.2
FDF LR LR
comp=Z,3μm,20.0s,MS6.0
TGUH Tegucigalpa,Un 132.05 17 *e*PKPdf PKPdf 08 41 04.5 +1.1
TGUH LR LR
comp=Z,5μm,22.0s,MS6.1
BBGH Gun Hill 132.29 340 PFAKE 08 41 10.0 +6.1
BBGH LR LR
comp=Z,4μm,22.0s,MS6.0
GRGR Grenville 133.82 342 PFAKE 08 41 20.0 +13
GRGR LR LR
comp=Z,2μm,21.0s,MS5.9
RCBR Riachuelo 135.18 298 PFAKE 08 41 20.0 +11
RCBR LR LR
comp=Z,4μm,20.0s,MS6.2
PCRV Puerto La Cruz 136.41 346 PKhKP 08 41 00.5
comp=Z,7.5nm,0.7s,baz=18,slow=6.8,SNR=5.2
PCRV PKP PKPdf 08 41 11.9 +0.3
comp=Z,11nm,0.8s,baz=348,slow=15,SNR=5.1
PCRV Puerto La Cruz 136.41 346 PKP PKPdf 08 41 11.9 +0.3
BCIP Isla Barro Col 138.17 8 PFAKE 08 41 20.0 +5.1
BCIP LR LR
comp=Z,3μm,21.0s,MS6.0
SDV Santo Domingo 138.57 354 PKhKP 08 41 05.2
comp=Z,5.6nm,0.8s,baz=285,slow=6.4,SNR=3.9
SDV PKP PKPdf 08 41 16.0 +0.3
comp=Z,14nm,0.9s,baz=82,slow=3.6,SNR=12
SDV Santo Domingo 138.57 354 *e*PKPdf PKPdf 08 41 14.6 -1.0
SDV LR LR
comp=Z,876nm,19.0s,MS5.5
ROSC El Rosal 142.75 360 PKhKP 08 41 18.5
comp=Z,7.5nm,0.6s,baz=89,slow=7.4,SNR=9.5
ROSC El Rosal 142.75 360 *e*PKPdf PKPdf 08 41 19.7 -3.6
PAYG Puerto Ayora 144.98 28 *e*PKPbc PKPdf 08 41 26.4 -0.7
PAYG LR LR
comp=Z,2μm,20.0s,MS5.8
OTAV Otavalo 147.14 7 *e*PKPdf PKPdf 08 41 31.6 +0.7
OTAV LR LR
comp=Z,2μm,21.0s,MS5.9
PMSA Palmer Station 147.15 188 PFAKE 08 41 40.0 +11
PMSA LR LR
comp=Z,3μm,19.0s,MS6.1
ATAH Atahualpa 154.42 9 PKP PKPdf 08 41 42.0 +0.1
comp=Z,4.9nm,0.7s,baz=342,slow=7.4,SNR=4.8
ATAH PKPbc PKPbc 08 41 50.7 +0.4
comp=Z,14nm,0.9s,baz=346,slow=5.6,SNR=11
ATAH PKPab PKPab 08 42 03.9 -0.5
comp=Z,38nm,1.1s,baz=25,slow=4.1,SNR=5.0
NNA Nana 159.38 6 PFAKE 08 42 00.0 +12
NNA LR LR
comp=Z,2μm,22.0s,MS6.0
SIV San Ignacio 159.40 320 PKP PKPdf 08 41 47.1 -1.1
comp=Z,4.1nm,1.0s,baz=90,slow=2.3,SNR=15
SIV PKPab PKPab 08 42 24.4 -1.3
comp=Z,9.1nm,0.8s,baz=13,slow=2.5,SNR=6.1
LPAZ La Paz 162.72 339 PKP PKPdf 08 41 51.6 -0.2
comp=Z,3.1nm,0.8s,baz=35,slow=4.6,SNR=3.5
LPAZ La Paz 162.72 339 *e*PKPdf PKPdf 08 41 51.8 0.0
LPAZ LR LR
comp=Z,3μm,21.0s
CPUP Villa Florida 163.70 288 PKP PKPdf 08 41 51.3 -1.1
comp=Z,5.2nm,1.0s,baz=241,slow=3.4,SNR=3.4
CPUP PKPab PKPab 08 42 42.9 -1.7
comp=Z,3.0nm,0.7s,baz=75,slow=2.8,SNR=5.4
CPUP Villa Florida 163.70 288 PKP PKPdf 08 41 51.3 -1.1
CPUP PKPab PKPab 08 42 42.9 -1.7
CPUP LR LR
comp=Z,791nm,22.0s
TRQA Tornquist 168.33 239 *e*PKPdf PKPdf 08 42 01.4 +5.6
TRQA *e*PKPab PKPab 08 43 09.8 +5.2
TRQA LR LR
comp=Z,5μm,21.0s
CFAA Coronel Fontan 174.49 279 PKP PKPdf 08 41 58.0 -1.1
comp=Z,0.9nm,1.1s,baz=58,slow=2.2,SNR=2.6
LCO Las Campanas 175.08 316 *e*PKPdf PKPdf 08 41 59.9 +0.6
LCO LR LR
comp=Z,3μm,21.0s

JMA 25 08:32:06.1±0.1**, 28°.80N×129°.39E, h47**km±2km**, M3.8, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.43**	**154**	P	Pn	08 32 16.1	-0.2
JAM				S	Sn	08 32 23.8	+0.2
JZK	**Kikaishima**	**0.70**	**133**	P	Pn	08 32 19.9	+0.1
JTK	**Tokunoshima**	**1.08**	**201**	P	Pn	08 32 25.3	+0.4
JTK				*e*S	Sn	08 32 39.4	+0.7
JNN	**Nakanoshima**	**1.12**	**22**	P	Pn	08 32 25.8	+0.4
JNN				S	Sn	08 32 40.3	+0.6
JKC	**Kuchinoerabu**	**1.80**	**23**	P	Pn	08 32 35.0	+0.3
JKC				S	Sn	08 32 56.4	+0.1
JIH	**Iheya**	**2.16**	**216**	P	Pn	08 32 40.8	+1.2
JIH				*e*S	Sn	08 33 06.0	+0.8
JOW	**Kunigami**	**2.19**	**207**	P	Pn	08 32 40.4	+0.3
JOW				*e*S	Sn	08 33 06.6	+0.6
JTN	**Tanegashima 3**	**2.31**	**36**	P	Pn	08 32 41.8	+0.2
JTN				*e*S	Sn	08 33 09.5	+0.7
JAGN	**Aguni-jima**	**2.91**	**221**	P	Pn	08 32 50.9	+1.0
JAGN				*e*S	Sn	08 33 25.2	+1.5
JJT2	**Tamagusuku 2**	**3.03**	**209**	P	Pn	08 32 52.1	+0.6
JJT2				*e*S	Sn	08 33 26.9	+0.4
JKE	**Kume jima 2**	**3.38**	**224**	P	Pn	08 32 57.2	+0.9
JKE				*e*S	Sn	08 33 36.1	+0.9

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*IDC **25** 08:38:45.2±1.2, 31°.14N×103°.88E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, Error ellipse: s-maj=43.9km s-min=21.7km az=50.0*
*BJI **25** 08:38:49.7, 31°.28N×104°.01E, h8km, ML3.9/6*
ISC 25 08:38:45.6±0.6**, 31°.31N**±0°.05×**104°.03E**±0°.07**, h10**km**, n10, σ1s.61**/13**, mb3.5**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.46**	**211**	Pg	**Pg**	**08 38 53.0**	**-1.6**
CD2				Sg	**Sg**	**08 38 59.3**	**-1.3**
CD2				smax			
	comp=N,43μm,0.6s						
LZH	**Lanzhou**	**4.77**	**358**	*e*Pg	**Pg**	**08 40 15.8**	**-1.2**
LZH				Sg	**Sg**	**08 41 17.3**	**-1.5**
LZH				smax			
	comp=N,62nm,0.6s						
LZH				smax			
	comp=E,200nm,0.7s						
XAN	**Xi'an**	**4.94**	**55**	Pg	**Pg**	**08 40 17.8**	**-2.5**
XAN				Sg	**Sg**	**08 41 24.0**	**-0.4**
XAN				smax			
	comp=N,140nm,0.7s						
XAN				smax			
	comp=E,93nm,0.9s						
KSRS	**Korea Array**	**20.63**	**66**	P	**P**	**08 43 28.1**	**+3.0**
	comp=E,1.6nm,0.8s,baz=259,slow=10.0,SNR=6.8						
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**08 43 49.4**	**+1.2**
	comp=E,0.3nm,0.5s,mb3.0,baz=114,slow=11,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.51**	**334**	P	**P**	**08 44 26.4**	**+3.3**
	comp=E,0.7nm,0.4s,mb3.5,baz=124,slow=7.8,SNR=2.6						
KURK	**Kurchatov**	**27.05**	**323**	P	**P**	**08 44 30.9**	**+2.9**
	comp=E,0.5nm,0.5s,mb3.3,baz=125,slow=9.8,SNR=2.9						
FINES	**FINESS Array B**	**57.37**	**326**	P	**P**	**08 48 33.6**	**-0.1**
	comp=E,1.4nm,0.9s,mb4.0,baz=152,slow=6.3,SNR=2.5						
ASAR	**Alice Springs**	**61.70**	**149**	P	**P**	**08 49 05.0**	**+1.0**
	comp=E,0.3nm,0.3s,mb3.9,baz=337,slow=6.6,SNR=13						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**08 51 04.5**	**+1.6**
	comp=E,0.3nm,0.7s,mb3.4,baz=329,slow=5.7,SNR=3.7						

GUC 25 08:46:03.2±0.7**, 23°.90S×67°.39W, h200**km**, ML4.3, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**2.46**	**301**	*e*P	Pn	08 46 49.4	+2.7
PECH				*i* S	Sn	08 47 23.8	+3.2
PECH				AML	AML	08 47 27.4	
	comp=N,948nm,0.4s						
PB04	**Plate Boundary**	**2.52**	**310**	*e*P	Pn	08 46 54.7	+7.4
PB04				*i* S	Sn	08 47 33.8	+12
PB04				AML	AML	08 47 38.6	
	comp=N,642nm,0.3s						
CEN1	**Los Morros**	**2.62**	**280**⇓	*i*P	Pn	08 46 52.3	+3.9
CEN1				*i* S	Sn	08 47 29.2	+5.5
CEN1				AML	AML	08 47 32.1	
	comp=N,156nm,0.2s						
ANCH	**Antofagasta**	**2.77**	**274**⇑	*i*P	Pn	08 46 51.8	+1.6
ANCH				*i* S	Sn	08 47 28.3	+1.5
ANCH				AML	AML	08 47 30.8	
	comp=E,408nm,0.1s						
PB01	**Plate Boundary**	**3.44**	**325**⇑	*i*P	Pn	08 46 60.0	+1.9
PB01				*e*S	Sn	08 47 43.7	+2.6
PB01				AML	AML	08 47 47.0	
	comp=E,430nm,0.4s						
HMBC	**Humberston**	**4.28**	**327**⇑	*i*P	Pn	08 47 09.4	+0.9
HMBC				*i* S	Sn	08 48 00.8	+1.0

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*ISK **25** 08:57:46.2, 38°.69N×38°.81E, h9km, MD2.9*
*ISCJB **25** 08:57:47.7±0.5, 38°.62N±0°.03×38°.87E±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=4.0km az=40.8*
*CSEM **25** 08:57:47.6±0.1, 38°.61N×38°.86E, h5km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.3km az=128.0*
*DDA **25** 08:57:47.2, 38°.64N×38°.84E, h7km±1km, Md2.9*
ISC 25 08:57:47.9±0.5**, 38°.63N**±0°.03×**38°.87E**±0°.04**, h4**km±7km**, n20, σ0s.72**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.16**	**145**	*i* P	**Pg**	**08 57 51.5**	**+0.4**
ELZG				*i* S	**Sg**	**08 57 54.1**	**+0.9**
ELZG	**Elazig**	**0.16**	**145**	*i* P	**Pg**	**08 57 51.5**	**+0.4**
ELZG				*i* S	**Sg**	**08 57 54.2**	**+1.0**
SVRC	**Sivrice-ELAZID**	**0.43**	**126**	*e*PG	**Pg**	**08 57 56.0**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.43**	**126**	*e*Pg	**Pg**	**08 57 56.0**	**-0.1**
MYA	**Malataya**	**0.46**	**229**	*e*PG	**Pg**	**08 57 55.9**	**-0.9**
MYA				*e*SG	**Sg**	**08 58 03.0**	**+0.2**
MYA	**Malataya**	**0.46**	**229**	*e*Pg	**Pg**	**08 57 55.9**	**-0.9**
MYA				*e*Sg	**Sg**	**08 58 03.0**	**+0.3**
PTK	**Pertek**	**0.49**	**57**	*e*PG	**Pg**	**08 57 56.4**	**-0.9**
PTK				*e*SG	**Sg**	**08 58 03.8**	**+0.2**
PTK	**Pertek**	**0.49**	**57**	*e*Pg	**Pg**	**08 57 56.4**	**-0.9**
PTK				*e*Sg	**Sg**	**08 58 03.8**	**+0.2**
KEMA	**Kemaliye**	**0.70**	**336**	*i* P	**Pg**	**08 58 00.6**	**-0.8**
KEMA				*i* S	**Sg**	**08 58 10.8**	**+0.3**
KEMA	**Kemaliye**	**0.70**	**336**	*i* P	**Pg**	**08 58 00.6**	**-0.8**
KEMA				*i* S	**Sg**	**08 58 10.8**	**+0.3**
AKCD	**Akcadag**	**0.81**	**246**	*i* P	**Pg**	**08 58 02.5**	**-1.0**

AKCD				*i* S		**Sg**	08 58 14.0	0.0
AKCD	**Akcadag**	**0.81**	**246**	*i* P		**Pg**	08 58 02.5	-1.0
AKCD				*i* S		**Sg**	08 58 14.0	-0.1
DARE	**Darende-Malaty**	**0.89**	**292**	*e*PG		**Pg**	08 58 06.3	+1.4
DARE	**Darende-Malaty**	**0.89**	**292**	*e*Pg		**Pg**	08 58 06.3	+1.3
URFA	**Urfa**	**1.19**	**182**	*e*PN		**Pn**	08 58 10.4	-0.9
URFA	**Urfa**	**1.19**	**182**	*e*Pn		**Pn**	08 58 10.4	-0.9
KELT	**Kelkit**	**1.55**	**11**	*i* P		**Pn**	08 58 16.2	0.0
KELT				*i* S		**Sn**	08 58 37.0	+0.2
KELT	**Kelkit**	**1.55**	**11**	*i* P		**Pn**	08 58 16.2	-0.1
KELT				*i* S		**Sn**	08 58 37.0	+0.2
SARI	**SarD1z-Kayseri**	**1.70**	**272**	*e*PN		**Pn**	08 58 19.5	+1.2
SARI	**SarD1z-Kayseri**	**1.70**	**272**	*e*Pn		**Pn**	08 58 19.5	+1.1

MEX ***25*** *09:01:20.6±0.5, 15°.61N×94°.09W, h5km±6km, MD4.0*
NEIC ***25*** *09:01:20.6, 15°.61N×94°.09W, h5km, MD4.0(MEX), After MEX.*
IDC ***25*** *09:01:22.2±2.0, 16°.00N×93°.77W, h62km±14km, mb3.1/2, mb1 3.6/5, mb1mx3.3/22, mbtmp3.3/5, Error ellipse: s-maj=45.4km s-min=6.9km az=30.0*
ISC 25 09:01:20.3±2.1, 15°.57N±0°.06×94°.05W±0°.03, h34km±19km, n22, σ0°97/39, mb3.4/2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.81**	**80**	*i* P	**Pn**	**09 01 35.4**	**0.0**
PCIG				*i* S	**Sn**	**09 01 46.6**	**+0.4**
TGIG		**1.50**	**36**	*i* P	**Pn**	**09 01 44.1**	**-0.8**
TGIG				*i* S	**Sn**	**09 02 03.0**	**-0.2**
CMIG	**Matias Romero**	**1.71**	**332**	P	**Pn**	**09 01 47.1**	**-0.7**
	17nm,0.3s,baz=145,slow=12,SNR=337						
CMIG				S	**Sn**	**09 02 06.0**	**-2.5**
	18nm,0.3s,baz=134,slow=12,SNR=11						
SCX	**San Cristobal**	**1.79**	**49**	*e*P	**Pn**	**09 01 48.7**	**-0.1**
SCX				*i* S	**Sn**	**09 02 10.8**	**+0.4**
SCX	**San Cristobal**	**1.79**	**49**	*e*P	**Pn**	**09 01 48.7**	**-0.1**
SCX				*i* S	**Sn**	**09 02 10.8**	**+0.4**
THIG		**1.84**	**111**	*i* P	**Pn**	**09 01 50.1**	**+0.5**
THIG				*i* S	**Sn**	**09 02 12.5**	**+0.8**
CCIG	**Comitan**	**1.97**	**69**	*e*P	**Pn**	**09 01 51.6**	**+0.3**
CCIG				*i* S	**Sn**	**09 02 15.5**	**+0.6**
CCIG	**Comitan**	**1.97**	**69**	*e*P	**Pn**	**09 01 51.6**	**+0.3**
CCIG				*i* S	**Sn**	**09 02 15.5**	**+0.6**
HUIG	**Huatulco**	**1.99**	**276**	*i* P	**Pn**	**09 01 50.9**	**-0.8**
HUIG				*i* S	**Sn**	**09 02 14.9**	**-0.5**
HUIG	**Huatulco**	**1.99**	**276**	*i* P	**Pn**	**09 01 50.9**	**-0.8**
HUIG				*i* S	**Sn**	**09 02 14.9**	**-0.5**
VHO	**Vista Hermosa**	**2.98**	**301**	*i* P	**Pn**	**09 02 05.0**	**-0.2**
VHO				*i* S	**Sn**	**09 02 40.8**	**+1.0**
VHO	**Vista Hermosa**	**2.98**	**301**	*i* P	**Pn**	**09 02 05.0**	**-0.2**
VHO				*i* S	**Sn**	**09 02 40.8**	**+1.0**
APG	**El Apazote**	**3.50**	**99**	P	**Pn**	**09 02 12.5**	**0.0**
	1.6nm,0.3s,baz=301,slow=16,SNR=61						
APG				S	**Sn**	**09 02 51.2**	**-1.5**
	13nm,0.3s,baz=112,slow=23,SNR=20						
PNIG	**Pinotepa**	**4.01**	**282**	*e*P	**Pn**	**09 02 19.7**	**+0.4**
PNIG				*i* S	**Sn**	**09 03 03.6**	**-1.5**
PNIG	**Pinotepa**	**4.01**	**282**	*e*P	**Pn**	**09 02 19.7**	**+0.4**
PNIG				*i* S	**Sn**	**09 03 03.6**	**-1.5**
UTMO	**Huajuapan**	**4.24**	**303**	*i* P	**Pn**	**09 02 22.9**	**+0.3**
UTMO				*i* S	**Sn**	**09 03 12.3**	**+1.3**
TPIG	**Tehuac#an**	**4.25**	**312**	*e*P	**Pn**	**09 02 24.7**	**+2.0**
TPIG				*i* S	**Sn**	**09 03 13.0**	**+1.8**
TEIG	**Tepich**	**7.19**	**49**	P	**Pn**	**09 02 59.4**	**-3.7**
	baz=202,slow=0.0						
TXAR	**Lajitas Array**	**16.32**	**329**	P	**Pn**	**09 05 06.5**	**-0.4**
	0.0nm,0.3s,baz=151,slow=11,SNR=4.1						
NVAR	**Mina Array Bea**	**31.22**	**322**	P	**P**	**09 07 35.8**	**-0.7**
	0.2nm,0.6s,mb3.1,baz=131,slow=9.7,SNR=2.9						
YKA	**Yellowknife Ar**	**49.07**	**348**	P	**P**	**09 09 58.7**	**-5.1**
	0.5nm,0.6s,mb3.8,baz=152,slow=7.3,SNR=9.7						
YKA	**Yellowknife Ar**	**49.07**	**348**	P	**P**	**09 09 58.7**	**-5.1**

ISCJB ***25*** *09:05:45.0±0.9, 2°.29S±0°.05×78°.4W±0°.1, h121km±10km, mb3.7/11, Error ellipse: s-maj=16.9km s-min=8.1km az=178.2*
NEIC ***25*** *09:05:46.0±0.8, 2°.29S×78°.40W, h117km±8km, mb3.9/5, MD4.3(IGQ), Error ellipse: s-maj=11.9km s-min=6.7km az=74.0*
IDC ***25*** *09:05:46.7±2.0, 2°.26S×78°.33W, h120km±20km, mb3.3/8, mb1 3.7/14, mb1mx3.6/24, mbtmp3.5/14, Error ellipse: s-maj=21.2km s-min=15.3km az=66.0*
ISC 25 09:05:47.0±0.8, 2°.24S±0°.05×78°.4W±0°.1, h123km±9km, n28, σ0°75/28, mb3.7/11, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**2.47**	**358**	*e*Pn	**Pn**	**09 06 26.5**	**-0.1**
ATAH	**Atahualpa**	**4.73**	**180**	P	**Pn**	**09 06 57.4**	**+1.0**
	16nm,0.3s,baz=13,slow=12,SNR=53						
ATAH				S	**Sn**	**09 07 50.0**	**-0.3**
	16nm,0.3s,baz=250,slow=13,SNR=9.2						
ROSC	**El Rosal**	**8.12**	**30**	P	**Pn**	**09 07 42.5**	**+0.3**
	0.6nm,0.3s,baz=90,slow=20,SNR=4.1						
NNA	**Nana**	**9.80**	**171**	P	**Pn**	**09 08 03.6**	**-1.3**
	7.0nm,0.3s,baz=338,slow=12,SNR=13						
NNA				S	**Sn**	**09 09 47.0**	**-6.0**
	8.1nm,0.3s,baz=306,slow=22,SNR=7.1						
NNA	**Nana**	**9.80**	**171**	*e*Pn	**Pn**	**09 08 02.5**	**-2.3**
NNA				*e*Sn	**Sn**	**09 09 43.1**	**-10**
SDV	**Santo Domingo**	**13.47**	**35**	P	**Pn**	**09 08 52.6**	**-0.8**
	2.7nm,0.3s,baz=249,slow=3.4,SNR=11						
SDV	**Santo Domingo**	**13.47**	**35**	*e*Pn	**Pn**	**09 08 52.6**	**-0.7**
LPAZ	**La Paz**	**17.21**	**145**	P	**Pn**	**09 09 41.7**	**+1.7**
	0.3nm,0.3s,baz=317,slow=14,SNR=15						
LPAZ	**La Paz**	**17.21**	**145**	*e*P	**Pn**	**09 09 40.3**	**+0.3**
	2.4nm,0.6s						
PCRV	**Puerto La Cruz**	**18.41**	**48**	P	**P**	**09 09 53.8**	**+0.9**
	1.9nm,0.3s,baz=320,slow=4.7,SNR=11						
SIV	**San Ignacio**	**21.83**	**130**	P	**P**	**09 10 29.6**	**-0.1**
	1.0nm,0.4s,mb3.5,baz=325,slow=14,SNR=9.6						
TXAR	**Lajitas Array**	**39.66**	**324**	P	**P**	**09 13 07.5**	**+0.4**
	0.3nm,0.6s,mb3.3,baz=145,slow=9.5,SNR=5.0						
TXAR				PcP	PcP	09 15 12.2	+0.5
	0.6nm,0.8s,baz=155,slow=6.3,SNR=6.5						
TXAR	**Lajitas Array**	**39.66**	**324**	P	**P**	**09 13 07.5**	**+0.4**
TXAR				PcP	PcP	09 15 12.2	+0.5
ANMO	**Albuquerque**	**45.42**	**327**	P	**P**	**09 13 54.2**	**+0.6**
	1.9nm,0.8s,mb3.9,baz=149,slow=11,SNR=8.5						
ANMO	**Albuquerque**	**45.42**	**327**	*e*P	**P**	**09 13 54.1**	**+0.5**
	1.2nm,0.8s,mb3.7						
PV10	**Paradox Valley**	**49.35**	**328**	*e*P	**P**	**09 14 23.9**	**-0.1**
	37nm,0.8s						
PDAR	**Pinedale Array**	**52.91**	**331**	P	**P**	**09 14 50.4**	**0.0**
	0.4nm,0.6s,mb3.6,baz=176,slow=9.7,SNR=4.1						
HWUT	**Hardware Ranch**	**53.04**	**329**	*e*P	**P**	**09 14 51.0**	**-0.5**
	2.6nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**54.72**	**322**	P	**P**	**09 15 04.6**	**+0.9**
	0.9nm,0.8s,mb3.9,baz=127,slow=6.8,SNR=7.6						
NVAR	**Mina Array Bea**	**54.72**	**322**	P	**P**	**09 15 04.6**	**+0.9**
YKA	**Yellowknife Ar**	**70.14**	**343**	P	**P**	**09 16 44.7**	**-1.1**
	0.2nm,0.5s,mb3.2,baz=137,slow=6.1,SNR=5.9						
ESDC	**Sonseca Array**	**79.47**	**49**	P	**P**	**09 17 40.2**	**+0.1**
	0.3nm,0.4s,mb3.4,baz=252,slow=6.0,SNR=5.0						
INK	**Inuvik**	**79.86**	**342**	*e*P	**P**	**09 17 40.9**	**-0.7**
	1.5nm,0.9s,mb3.8						
TORD	**Torodi Ar. Bea**	**80.83**	**76**	P	**P**	**09 17 47.2**	**-0.7**
	0.4nm,0.5s,mb3.5,baz=282,slow=6.0,SNR=12						
QSPA	**South Pole Qui**	**87.82**	**180**	*e*P	**P**	**09 18 22.8**	**+0.9**
	4.8nm,0.7s,mb4.6						
KAKA	**Kakadu**	**146.00**	**243**	*e*PKPdf	PKPdf	09 25 11.7	-0.9
FITZ	**Fitzroy Crossi**	**148.90**	**228**	PKPbc	PKPbc	09 25 21.1	-0.3
	3.4nm,0.7s,baz=158,slow=5.4,SNR=3.7						
FITZ	**Fitzroy Crossi**	**148.90**	**228**	*e*PKPbc	PKPbc	09 25 20.9	-0.5

IDC ***25*** *09:14:13.6±0.6, 3°.64S×131°.32E, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.3/19, mbtmp4.4/13, Error ellipse: s-maj=35.2km s-min=13.7km az=70.0*
ISCJB ***25*** *09:14:15.0±2.0, 3°.71S±0°.05×131°.47E±0°.07, h24km±15km, mb4.5/21, Error ellipse: s-maj=12.8km s-min=6.2km az=156.0*
DJA ***25*** *09:14:16, 3°.52S×131°.47E, h12km, MLv4.4/5*
NEIC ***25*** *09:14:18.5±0.4, 3°.74S×131°.41E, h35km, mb4.6/10, Error ellipse: s-maj=13.4km s-min=7.1km az=63.0*
ISC 25 09:14:17.6±2.2, 3°.66S±0°.05×131°.46E±0°.07, h27km±16km, n51, σ1°01/53, mb4.5/21, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.34**	**147**	P	**Pn**	**09 14 56.4**	**+2.1**
SWI	**Sorong**	**2.78**	**356**	P	**Pn**	**09 14 59.0**	**-1.4**
AAI	**Ambon**	**3.26**	**269**	P	**Pn**	**09 15 07.6**	**+0.7**
NLAI	**Namlea**	**4.37**	**275**	P	**Pn**	**09 15 22.4**	**+0.2**
LBMI	**Labuha**	**4.96**	**307**	P	**Pn**	**09 15 30.1**	**-0.3**
KAKA	**Kakadu**	**9.05**	**174**	*e*P	**Pn**	**09 16 24.9**	**-1.6**
	15nm,0.2s						
KAKA				*e*S	**Sn**	**09 18 03.4**	**-4.1**
KAKA	**Kakadu**	**9.05**	**174**	*e*Pn	**Pn**	**09 16 24.6**	**-1.8**
	71nm,0.6s						
KAKA				*e*Sn	**Sn**	**09 18 05.4**	**-2.1**
KAPI	**Kappang**	**11.75**	**263**	Pn	**Pn**	**09 17 04.4**	**+0.8**
	0.7nm,0.3s,baz=144,slow=19,SNR=3.2						
COEN	**Coen**	**15.44**	**132**	*e*P	**Pn**	**09 17 52.4**	**-1.2**
	111nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.45**	**201**	*e*P	**Pn**	**09 17 47.7**	**-6.0**
	22nm,0.6s						
FITZ				*e*S	**Sn**	**09 20 28.5**	**-16**
FITZ	**Fitzroy Crossi**	**15.45**	**201**	Pn	**Pn**	**09 17 47.6**	**-6.0**
	1.0nm,0.3s,baz=44,slow=13,SNR=21						
FITZ				Sn	**Sn**	**09 20 31.0**	**-13**
	0.5nm,0.3s,baz=188,slow=22,SNR=2.9						
FITZ	**Fitzroy Crossi**	**15.45**	**201**	*e*Pn	**Pn**	**09 17 49.9**	**-3.8**
WRAB	**Tennant Creek**	**16.42**	**170**	*e*P	**Pn**	**09 18 03.1**	**-3.1**
	32nm,0.9s						
KKM	**Kota Kinabalu**	**18.02**	**302**	*e*P	**Pn**	**09 18 27.5**	**+1.2**
	31nm,1.1s						
ASAR	**Alice Springs**	**20.03**	**173**	P	**P**	**09 18 48.8**	**+0.3**
	12nm,0.6s,baz=352,slow=9.9,SNR=102						
ASAR				S	**S**	**09 22 25.4**	**-7.0**
	2.2nm,0.8s,baz=0.4,slow=28,SNR=4.1						
KSM	**Kuching**	**21.75**	**283**	*e*P	**P**	**09 19 07.5**	**+0.3**
	15nm,0.8s,mb4.5						
CTA	**Charters Tower**	**21.79**	**140**	*e*P	**P**	**09 19 08.8**	**+1.3**
	29nm,0.6s,mb4.9						
CTA	**Charters Tower**	**21.79**	**140**	P	**P**	**09 19 08.7**	**+1.2**
	35nm,0.6s,mb5.0,baz=319,slow=12,SNR=60						
CTAO	**Charters Tower**	**21.79**	**140**	*e*P	**P**	**09 19 08.5**	**+1.0**
	36nm,0.6s,mb5.0						
FORT	**Forrest**	**27.17**	**186**	*e*P	**P**	**09 19 58.3**	**-0.5**
	20nm,0.6s,mb4.8						
FORT	**Forrest**	**27.17**	**186**	*e*P	**P**	**09 19 58.5**	**-0.2**
	28nm,0.8s,mb4.8						
KMBL	**Kambalda**	**29.00**	**197**	*e*P	**P**	**09 20 14.6**	**-0.6**
	138nm,0.6s						
STKA	**Stephens Creek**	**29.64**	**162**	*e*P	**P**	**09 20 21.5**	**+0.7**
	6.3nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**29.64**	**162**	P	**P**	**09 20 21.1**	**+0.3**
	7.3nm,0.7s,mb4.5,baz=334,slow=8.1,SNR=16						
STKA	**Stephens Creek**	**29.64**	**162**	*e*P	**P**	**09 20 20.8**	**0.0**
	1.1nm,0.6s,mb3.8						
KLBR	**Kellerberrin**	**30.63**	**203**	*e*P	**P**	**09 20 28.3**	**-1.3**
	8.9nm,0.6s,mb4.8						
CMSA	**Cobar Meteorol**	**30.80**	**156**	*e*P	**P**	**09 20 32.1**	**+1.0**
NWAO	**Narrogin (SRO)**	**32.02**	**203**	P	**P**	**09 20 41.1**	**-0.7**
	4.0nm,0.7s,mb4.4,baz=42,slow=10,SNR=3.3						
ARMA	**Armidale**	**32.74**	**147**	*e*P	**P**	**09 20 49.4**	**+1.3**
YNG	**Young**	**34.32**	**155**	*e*P	**P**	**09 21 03.3**	**+1.4**
	4.4nm,0.9s,mb4.4						
TOO	**Toolangi**	**36.12**	**161**	*e*P	**P**	**09 21 19.3**	**+2.0**
CMAR	**Chiang Mai Arr**	**38.84**	**306**	*e*P	**P**	**09 21 40.8**	**+0.1**
	1.9nm,0.6s,mb4.0,baz=138,slow=7.9,SNR=11						
MJAR	**Matsushiro Arr**	**40.48**	**8**	P	**P**	**09 21 53.0**	**-1.0**
	1.0nm,0.9s,mb3.6,baz=186,slow=8.2,SNR=4.8						
ULN	**Ulaanbaatar**	**55.59**	**340**	*e*P	**P**	**09 23 51.3**	**+0.6**
	2.7nm,0.9s,mb4.3						
SONM	**Songino Array**	**55.79**	**340**	P	**P**	**09 23 53.0**	**+0.8**
	1.6nm,0.7s,mb4.2,baz=154,slow=7.5,SNR=7.0						
MK31	**Makanchi Array**	**66.28**	**325**	*e*P	**P**	**09 25 03.7**	**+0.3**
MKAR	**Makanchi Array**	**66.28**	**325**	P	**P**	**09 25 03.9**	**+0.5**
	1.6nm,0.7s,mb4.2,baz=113,slow=8.1,SNR=14						
ZAA0	**Zalesovo Array**	**69.27**	**333**	*e*P	**P**	**09 25 21.3**	**-0.8**
ZALV	**Zalesovo Beam**	**69.27**	**333**	P	**P**	**09 25 21.8**	**-0.4**
	2.7nm,0.6s,mb4.3,baz=107,slow=5.7,SNR=10						
KURK	**Kurchatov**	**70.47**	**327**	P	**P**	**09 25 29.1**	**-0.4**
	6.5nm,0.9s,mb4.6,baz=128,slow=5.5,SNR=27						
KURK	**Kurchatov**	**70.47**	**327**	*e*P	**P**	**09 25 29.1**	**-0.4**
	8.1nm,0.9s,mb4.7						
BVAR	**Borovoye Array**	**76.05**	**327**	P	**P**	**09 26 01.6**	**-0.8**
	1.7nm,0.7s,mb4.1,baz=14,slow=10.0,SNR=9.3						
MAW	**Mawson**	**78.57**	**201**	P	**P**	**09 26 16.2**	**-0.1**
	1.5nm,0.6s,mb4.1,baz=104,slow=8.4,SNR=7.2						
QSPA	**South Pole Qui**	**86.30**	**180**	*e*P	**P**	**09 26 57.0**	**+0.6**
	2.1nm,0.7s,mb4.5						
RDF	**Al-Radifah**	**86.43**	**299**	*e*P	**P**	**09 26 58.5**	**+0.4**
RDF				AMb	AMB	09 26 58.6	
	comp=Z,15nm,1.1s,mb5.1						
MIB	**Mutribah**	**86.70**	**300**	*e*P	**P**	**09 26 59.4**	**0.0**
MIB				AMb	AMB	09 27 00.2	
	comp=Z,18nm,0.6s,mb5.5						
NAY	**Al-Naaiem**	**86.73**	**299**	*e*P	**P**	**09 26 59.3**	**-0.3**
NAY				AMb	AMB	09 27 00.2	
	comp=Z,15nm,0.6s,mb5.4						
BRTR	**Keskin Array B**	**98.34**	**309**	P	**P**	**09 27 51.5**	**-1.6**
	comp=Z,0.3nm,0.4s,mb4.2,baz=116,slow=3.4,SNR=2.8						
TXAR	**Lajitas Array**	**121.95**	**58**	PKP	PKPdf	09 33 11.7	+1.6
	comp=Z,0.2nm,0.6s,baz=272,slow=0.9,SNR=3.7						
CPUP	**Villa Florida**	**149.00**	**165**	PKPbc	PKPbc	09 34 04.8	+1.0
	comp=Z,2.9nm,0.7s,baz=132,slow=1.3,SNR=11						
LPAZ	**La Paz**	**152.29**	**136**	PKPbc	PKPbc	09 34 13.9	+2.0
	comp=Z,1.5nm,0.8s,baz=146,slow=1.5,SNR=8.3						

IDC ***25*** *09:17:20.8±1.2, 31°.36N×103°.95E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.7/10, ML3.7/1, Error ellipse: s-maj=41.0km s-min=20.6km az=48.0*
ISCJB ***25*** *09:17:21.2±0.5, 31°.49N±0°.04×104°.00E±0°.06, h10km, mb3.9/9, Error ellipse: s-maj=7.8km s-min=5.1km az=9.0*
NEIC ***25*** *09:17:22.9±0.6, 31°.42N×103°.96E, h10km, mb4.5/2, Error ellipse: s-maj=21.2km s-min=9.4km az=45.0*
BJI ***25*** *09:17:23.1, 31°.34N×104°.18E, h13km, ML3.6/10*
ISC 25 09:17:23.0±0.4, 31°.49N±0°.03×103°.94E±0°.06, h10km, n19, σ1°21/26, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.60**	**195**	Pg	**Pg**	**09 17 32.5**	**-2.0**
CD2				Sg	**Sg**	**09 17 41.0**	**-1.4**
CD2				smax			
	comp=N,3μm,0.8s						
LZH	**Lanzhou**	**4.58**	**359**	*e*Pg	**Pg**	**09 18 49.5**	**-1.3**
LZH				Sg	**Sg**	**09 19 48.5**	**-1.7**
LZH				smax			
	comp=N,92nm,1.2s						
LZH				smax			
	comp=E,140nm,1.2s						
XAN	**Xi'an**	**4.91**	**57**	Pn	**Pn**	**09 18 35.5**	**-1.3**
XAN				Pg	**Pb**	**09 18 50.8**	**+1.8**
XAN				Sn	**Sn**	**09 19 32.5**	**-1.2**
XAN				Sg	**Sb**	**09 19 52.3**	**+4.2**
XAN				smax			
	comp=N,110nm,1.2s						
XAN				smax			
	comp=E,49nm,1.1s						
ENH	**Enshi**	**4.92**	**103**	*e*Pn	**Pn**	**09 18 37.1**	**+0.1**
ENH				*e*Pg	**Pg**	**09 18 53.6**	**-3.7**
GYA	**Guiyang**	**5.55**	**154**	Pn	**Pn**	**09 18 46.5**	**+0.8**
GYA				Sn	**Sn**	**09 19 51.3**	**+1.7**
GYA				smax			
	comp=N,70nm,1.0s						
GYA				smax			
	comp=E,70nm,1.0s						
SONM	**Songino Array**	**16.43**	**6**	Pn	**Pn**	**09 21 14.8**	**+1.2**
	comp=E,0.3nm,0.3s,baz=189,slow=7.5,SNR=3.1						
KSRS	**Korea Array**	**20.63**	**67**	P	**P**	**09 22 03.0**	**+0.6**
	comp=E,0.8nm,0.6s,baz=246,slow=9.4,SNR=3.8						
MK31	**Makanchi Array**	**22.59**	**319**	*e*P	**P**	**09 22 25.2**	**+1.7**
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**09 22 25.2**	**+1.7**
	comp=E,1.2nm,0.5s,mb3.6,baz=115,slow=12,SNR=18						
ZALV	**Zalesovo Beam**	**26.31**	**334**	P	**P**	**09 22 58.8**	**+0.2**
	comp=E,1.2nm,0.4s,mb3.8,baz=129,slow=12,SNR=7.5						
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**09 23 04.4**	**+0.9**
	comp=E,0.7nm,0.4s,mb3.5,baz=136,slow=9.2,SNR=10						
KURK	**Kurchatov**	**26.85**	**323**	*e*P	**P**	**09 23 04.0**	**+0.5**
	comp=E,8.2nm,1.4s,mb4.1						
ARCES	**ARCESS Array B**	**56.85**	**336**	P	**P**	**09 27 07.4**	**+0.2**
	comp=E,1.2nm,0.5s,mb4.2,baz=78,slow=7.9,SNR=9.1						
FINES	**FINESS Array B**	**57.17**	**326**	P	**P**	**09 27 10.4**	**+0.8**
	comp=E,1.1nm,0.5s,mb4.2,baz=93,slow=6.9,SNR=12						
WRAB	**Tennant Creek**	**58.87**	**146**	*e*P	**P**	**09 27 22.3**	**+0.2**
	comp=E,4.2nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**61.90**	**149**	P	**P**	**09 27 41.5**	**-1.1**
	comp=E,0.4nm,0.7s,mb3.6,baz=332,slow=5.7,SNR=2.8						
NB2	**NORSAR Subarra**	**64.26**	**327**	P	**P**	**09 27 57.3**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.26**	**327**	P	**P**	**09 27 57.1**	**-0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=73,slow=6.7,SNR=5.0						
YKA	**Yellowknife Ar**	**81.37**	**17**	P	**P**	**09 29 38.9**	**-0.6**
	comp=Z,0.1nm,0.5s,mb3.0,baz=331,slow=6.3,SNR=3.1						

DJA 25 09:23:34, 2°.65S×128°.90E, h20km, MLv3.7/5, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.69**	**178**	P	Pb	09 23 46.1	-1.3
MSAI				S	Sb	09 23 58.5	+2.0
AAI	**Ambon**	**1.25**	**214**	P	Pn	09 23 55.6	-0.7
NLAI	**Namlea**	**1.89**	**252**	P	Pn	09 24 05.5	+0.3
SWI	**Sorong**	**2.95**	**53**	P	Pn	09 24 20.5	+0.7

NNC 25 09:26:24.7±6.5, 37°.32N×71°.31E, h0km, mb3.7, mpv3.6, 4C, Error ellipse: s-maj=58.9km s-min=50.1km az=76.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.81**	**354**	Pn	Pn	09 27 54.9	+2.8
	1.7nm,0.3s,baz=179,slow=12,SNR=97						
KK31				⇑Sn	Sn	09 29 06.4	+7.0
	1.9nm,0.5s,baz=186,slow=22,SNR=5.0						
TKM2	**Tokmak 2**	**6.49**	**29**	⇑Pn	Pn	09 28 03.8	+2.4
	4.4nm,0.8s						
TKM2				⇑Sn	Sn	09 29 15.8	-0.4
	3.0nm,1.1s						
AB31	**Akbulak array**	**14.50**	**329**	⇑Pn	Pn	09 29 46.2	-4.8
	0.1nm,0.2s,baz=150,slow=12,SNR=6.4						

ISCJB ***25*** *09:31:32.9±0.3, 45°.51N±0°.03×26°.34E±0°.04, h156km±3km, mb3.3/5, Error ellipse: s-maj=5.3km s-min=4.1km az=27.5*
CSEM ***25*** *09:31:33.6±0.1, 45°.51N×26°.32E, h151km±1km, MD4.7/3, Error ellipse: s-maj=3.6km s-min=2.7km az=26.0*
MOS ***25*** *09:31:33.1±0.9, 45°.51N×26°.29E, h152km, mb4.2/1, Error ellipse: s-maj=12.0km s-min=7.0km az=130.1*
IDC ***25*** *09:31:33.8±0.7, 45°.58N×26°.20E, h146km±3km, mb3.2/5, mb1 3.1/11, mb1mx3.0/28, mbtmp3.0/11, Error ellipse: s-maj=17.7km s-min=12.1km az=126.0*
BUC ***25*** *09:31:33.1±1.0, 45°.53N×26°.28E, h158km±9km, MD4.7/3, Error ellipse: s-maj=7.7km s-min=6.8km az=104.0*
NEIC ***25*** *09:31:34.8, 45°.50N×26°.43E, h137km, MD4.0(BUC), After BUC.*
SOF ***25*** *09:31:35.7, 45°.42N×26°.33E, h130km, MD3.2*
ISC 25 09:31:33.9±0.3, 45°.50N±0°.03×26°.33E±0°.04, h153km±3km, n115, σ0°74/149, mb3.3/5, 25C-19D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.27**	**267**	P	**Pn**	**09 31 54.7**	**+0.1**
	49nm,0.3s,baz=189,slow=0.5,SNR=770						
MLR				S	**Sn**	**09 32 09.9**	**-0.5**
	100nm,0.3s,baz=248,slow=17,SNR=16						
MLR	**Muntele Rosu**	**0.27**	**267**	⇑*i*P	**Pn**	**09 31 54.7**	**+0.1**
MLR				*i* S	**Sn**	**09 32 10.3**	**-0.1**
MLR	**Muntele Rosu**	**0.27**	**267**	⇑*i*P	**Pn**	**09 31 54.7**	**+0.1**
MLR	**Muntele Rosu**	**0.27**	**267**	P	**Pn**	**09 31 54.8**	**+0.2**
MLR				*i* S	**Sn**	**09 32 10.3**	**-0.1**
PLOR	**Plostina**	**0.41**	**33**	P	**Pn**	**09 31 55.0**	**-0.1**
PLOR	**Plostina**	**0.41**	**33**	⇑*i*P	**Pn**	**09 31 54.9**	**-0.2**
PLOR				*i* S	**Sn**	**09 32 12.2**	**+0.8**
PLOR	**Plostina**	**0.41**	**33**	⇑*i*P	**Pn**	**09 31 54.9**	**-0.2**
PLOR	**Plostina**

JMB	**Yambol**	**3.04 177**	*i* P		**Pn**	**09 32 22.1**	**+0.2**
BZS	**Buzias**	**3.31 274**	P		**Pn**	**09 32 24.2**	**-1.1**
BZS	**Buzias**	**3.31 274**	⇓*i*P		**Pn**	**09 32 24.1**	**-1.2**
BZS	**Buzias**	**3.31 274**	⇓*i*P		**Pn**	**09 32 24.1**	**-1.2**
BZS	**Buzias**	**3.31 274**	*i* Pn		**Pn**	**09 32 24.4**	**-0.9**
NISS		**3.78 238**	*i* Pn		**Pn**	**09 32 30.9**	**-0.3**
BARS	**Barje**	**4.22 232**	*i* Pn		**Pn**	**09 32 36.8**	**-0.2**
KOLS	**Kolonicke sedl**	**4.41 323**	*e*P		**Pn**	**09 32 39.8**	**+0.4**
KOLS	**Kolonicke sedl**	**4.41 323**	*e*P		**Pn**	**09 32 39.8**	**+0.4**
KOLS	**Kolonicke sedl**	**4.41 323**	*e*P		**Pn**	**09 32 39.8**	**+0.4**
KECS	**Kecovo**	**4.99 309**	*e*P		**Pn**	**09 32 46.7**	**-0.3**
KECS	**Kecovo**	**4.99 309**	*e*P		**Pn**	**09 32 46.7**	**-0.3**
PSZ	**Piszkesteto**	**5.04 301**	*e*P		**Pn**	**09 32 48.0**	**+0.2**
PSZ	**Piszkesteto**	**5.04 301**	*e*P		**Pn**	**09 32 48.0**	**+0.2**
BBLS	**Lazići**	**5.21 254**	*i* Pn		**Pn**	**09 32 50.1**	**+0.2**
STHS	**Stebnicka Huta**	**5.22 320**	*e*P		**Pn**	**09 32 50.3**	**+0.2**
STHS	**Stebnicka Huta**	**5.22 320**	*e*P		**Pn**	**09 32 50.2**	**+0.1**
STHS	**Stebnicka Huta**	**5.22 320**	*e*P		**Pn**	**09 32 50.3**	**+0.2**
SEV	**Sevastopol'**	**5.29 98**	⇓*e*P		**Pn**	**09 32 50.1**	**-0.9**
SEV			*e*S		**Sn**	**09 33 50.0**	**-1.3**
SEV			pmax	pmax			
	comp=Z,4.0nm,0.3s						
SEV			smax				
	comp=N,6.0nm,0.3s						
SEV			smax				
	comp=E,2.0nm,0.3s						
SEV	**Sevastopol'**	**5.29 98**	*e*P		**Pn**	**09 32 50.1**	**-0.9**
	comp=E,4.0nm,0.3s						
SEV			*e*S		**Sn**	**09 33 50.0**	**-1.3**
	comp=E,6.0nm,0.3s						
PKSM	**Moragy**	**5.42 280**	P		**Pn**	**09 32 52.9**	**+0.1**
PKSM	**Moragy**	**5.42 280**	P		**Pn**	**09 32 52.9**	**+0.1**
AKASG	**Malin Array Be**	**5.55 19**	P		**Pn**	**09 32 53.8**	**-0.6**
	comp=E,1.6nm,0.3s,baz=205,slow=12,SNR=5.2						
AKASG			S		**Sn**	**09 33 53.6**	**-3.8**
	comp=E,1.6nm,0.3s,baz=198,slow=25,SNR=4.9						
AKASG	**Malin Array Be**	**5.55 19**	P		**Pn**	**09 32 53.8**	**-0.6**
VYHS	**Vyhne**	**5.94 303**	*e*P		**Pn**	**09 32 59.4**	**-0.2**
VYHS	**Vyhne**	**5.94 303**	*e*P		**Pn**	**09 32 59.4**	**-0.2**
VYHS	**Vyhne**	**5.94 303**	*e*P		**Pn**	**09 32 59.4**	**-0.2**
SUDU	**Sudak**	**6.16 93**	*e*P		**Pn**	**09 33 02.0**	**-0.6**
SUDU			*e*S		**Sn**	**09 34 10.9**	**-1.1**
SUDU			pmax	pmax			
	comp=Z,6.0nm,0.4s						
SUDU			smax				
	comp=N,13nm,0.4s						
SUDU			smax				
	comp=E,5.0nm,0.4s						
SUDU	**Sudak**	**6.16 93**	*e*P		**Pn**	**09 33 02.0**	**-0.6**
	comp=E,6.0nm,0.4s						
SUDU			*e*S		**Sn**	**09 34 10.9**	**-1.1**
VRAC	**Vranov**	**7.62 303**	P		**Pn**	**09 33 21.8**	**-0.3**
	comp=E,0.3nm,0.3s,baz=119,slow=9.9,SNR=5.9						
VRAC	**Vranov**	**7.62 303**	P		**Pn**	**09 33 21.8**	**-0.3**
BRTR	**Keskin Array B**	**7.90 134**	P		**Pn**	**09 33 26.8**	**+1.0**
	comp=E,0.1nm,0.3s,baz=319,slow=10,SNR=7.3						
BRTR	**Keskin Array B**	**7.90 134**	P		**Pn**	**09 33 26.8**	**+1.0**
GERES	**GERESS Array B**	**9.23 296**	P		**Pn**	**09 33 43.4**	**0.0**
	comp=E,0.1nm,0.3s,baz=116,slow=12,SNR=7.2						
GERES	**GERESS Array B**	**9.23 296**	P		**Pn**	**09 33 43.4**	**0.0**
HFS	**Hagfors**	**16.48 337**	P		**Pn**	**09 35 15.6**	**-0.2**
	comp=E,0.2nm,0.3s,baz=148,slow=8.6,SNR=5.0						
HFS	**Hagfors**	**16.48 337**	P		**Pn**	**09 35 15.6**	**-0.3**
NB2	**NORSAR Subarra**	**17.92 336**	P		**Pn**	**09 35 31.5**	**-1.6**
	comp=Z,1.8nm,0.8s,baz=147,slow=12						
NB2	**NORSAR Subarra**	**17.92 336**	P		**Pn**	**09 35 31.5**	**-1.6**
	comp=Z,1.8nm,0.8s,baz=147,slow=11,SNR=4.5						
NOA	**NORSAR Array B**	**17.92 336**	P		**Pn**	**09 35 31.8**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=142,slow=10,SNR=5.0						
NOA	**NORSAR Array B**	**17.92 336**	P		**Pn**	**09 35 31.8**	**-1.4**
ESDC	**Sonseca Array**	**22.97 266**	P		**P**	**09 36 23.7**	**-1.2**
	comp=Z,0.1nm,0.3s,mb2.7,baz=66,slow=8.4,SNR=4.0						
ESDC	**Sonseca Array**	**22.97 266**	P		**P**	**09 36 23.7**	**-1.1**
KURK	**Kurchatov**	**34.69 62**	P		**P**	**09 38 10.1**	**+1.5**
	comp=Z,0.2nm,0.6s,mb3.0,baz=302,slow=7.6,SNR=3.3						
KURK	**Kurchatov**	**34.69 62**	P		**P**	**09 38 10.1**	**+1.5**
MKAR	**Makanchi Array**	**38.09 67**	P		**P**	**09 38 39.3**	**+1.9**
	comp=Z,0.2nm,0.4s,mb3.1,baz=290,slow=8.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**38.43 221**	P		**P**	**09 38 41.1**	**+0.5**
	comp=Z,1.2nm,0.5s,mb3.8,baz=22,slow=8.6,SNR=32						
DBIC	**Dimbokro**	**47.19 225**	P		**P**	**09 39 50.7**	**-0.4**
	comp=Z,1.7nm,0.3s,mb4.1,baz=13,slow=10,SNR=8.3						
DBIC	**Dimbokro**	**47.19 225**	P		**P**	**09 39 50.7**	**-0.4**
DBIC			pmax	pmax			
	comp=Z,2.0nm,0.3s						
DBIC	**Dimbokro**	**47.19 225**	P		**P**	**09 39 50.7**	**-0.4**
DBIC	**Dimbokro**	**47.19 225**	P		**P**	**09 39 50.7**	**-0.4**
	comp=Z,2.0nm,0.3s,mb4.2						

ISCJB ***25*** *09:34:06.1±0.8, 33.°07N±0.°02×105.°02E±0.°02, h3km±5km, mb4.8/138, MS4.1/5, Error ellipse: s-maj=3.5km s-min=3.0km az=4.7*
BJI ***25*** *09:34:07.8, 33.°04N×105.°05E, h12km, mB5.1/17, mb4.9/32, ML4.8/25, Ms4.7/49, Ms7 4.5/40*
IDC ***25*** *09:34:07.4±0.4, 33.°03N×104.°97E, h0km, mb4.6/32, mb1 4.6/35, mb1mx4.6/40, mbtmp4.6/35, ML4.2/3, MS4.3/3, Ms1 4.3/3, ms1mx3.6/32, Error ellipse: s-maj=14.1km s-min=10.1km az=37.0*
NEIC ***25*** *09:34:09.2±0.1, 33.°07N×104.°96E, h10km, mb4.8/82, Error ellipse: s-maj=4.0km s-min=2.9km az=216.0*
MOS ***25*** *09:34:09.0±0.8, 33.°04N×104.°99E, h22km, mb5.0/70, MS4.1/4, Error ellipse: s-maj=7.1km s-min=4.2km az=116.8*
SZGRF ***25*** *09:34:12.8, 34.°45N×106.°86E, h33km, mb4.9, Gansu, China*
DJA ***25*** *09:34:16, 33.°02N×104.°93E, h57km, mb5.0/22*
ISC 25 09:34:07.8±0.8, 33.°05N±0.°02×104.°97E±0.°02, h1km±4km, n366, σ0°94/389, mb4.9/138, MS4.1/5, 21C-22D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.37**	**206**	Pn	**Pn**	**09 34 49.3**	**+1.4**
CD2				Pg	**Pg**	**09 34 51.8**	**-1.5**
CD2				Sg	**Sg**	**09 35 21.5**	**-2.6**
CD2				smax			
	comp=N,17μm,0.7s						
LZH	**Lanzhou**	**3.17**	**343**	*e*Pn	**Pn**	**09 35 00.3**	**+1.5**
LZH				Pg	**Pg**	**09 35 06.5**	**-2.0**
LZH				Sn	**Sn**	**09 35 40.5**	**+3.2**
LZH				Sg	**Sg**	**09 35 46.0**	**-3.6**
LZH				smax			
	comp=N,4μm,0.6s						
LZH				smax			
	comp=E,5μm,0.6s						
LZH				LR	LR		
	comp=E,21μm,6.1s						
LZH				LR	LR		
	comp=Z,25μm,7.3s						
XAN	**Xi'an**	**3.44**	**72**	Pn	**Pn**	**09 35 03.8**	**+1.2**
XAN				Sn	**Sn**	**09 35 40.3**	**-3.7**
XAN				Sg	**Sg**	**09 35 56.5**	**-1.9**
XAN				smax			
	comp=N,10μm,0.9s						
XAN				smax			
	comp=E,4μm,0.7s						
XAN				LR	LR		
	comp=N,12μm,7.0s						
XAN				LR	LR		
	comp=E,1μm,5.0s						
XAN				LR	LR		
	comp=Z,1μm,7.2s						
ENH	**Enshi**	**4.74**	**125**	*e*Pn	**Pn**	**09 35 22.4**	**+1.9**
ENH				*e*Pg	**Pg**	**09 35 35.0**	**-3.7**
ENH				*e*S	**Sg**	**09 36 40.1**	**-0.1**
GYA	**Guiyang**	**6.73**	**167**	⇑*i*Pn	**Pn**	**09 35 49.0**	**+1.1**
GYA				Sn	**Sn**	**09 37 04.0**	**-1.3**
GYA				smax			
	comp=N,420nm,0.8s						
GYA				smax			
	comp=E,380nm,0.9s						
GYA				LR	LR		
	comp=N,1μm,5.8s						
GYA				LR	LR		
	comp=E,3μm,4.7s						
GYA				LR	LR		
	comp=Z,2μm,8.1s						
GTA	**Gaotai**	**7.59**	**328**	⇑Pn	**Pn**	**09 35 59.0**	**-0.6**
GTA				Sn	**Sn**	**09 37 25.8**	**-0.4**
GTA				LR	LR		
	comp=N,5μm,10.2s						
GTA				LR	LR		
	comp=E,1μm,9.2s						
GTA				LR	LR		
	comp=Z,4μm,10.1s						
TIY	**Taiyuan**	**7.66**	**51**	*e*Pn	**Pn**	**09 36 00.3**	**-0.3**
TIY				Sn	**Sn**	**09 37 27.8**	**-0.3**
TIY				LR	LR		
	comp=N,2μm,5.9s						
TIY				LR	LR		
	comp=E,670nm,2.9s						
TIY				LR	LR		
	comp=Z,950nm,9.4s						
KMI	**Kunming**	**8.14**	**194**	P	**Pn**	**09 36 09.0**	**+1.8**
KMI				S	**Sn**	**09 37 37.5**	**-2.4**
KMI				smax			
	comp=N,150nm,1.8s						
KMI				smax			
	comp=E,240nm,2.1s						
KMI				LR	LR		
	comp=N,4μm,6.9s						
KMI				LR	LR		
	comp=E,4μm,9.3s						
WHN	**Wuhan**	**8.36**	**105**	⇓*i*P	**Pn**	**09 36 10.5**	**+0.3**
WHN				pP		09 36 18.3	
WHN				S	**Sn**	**09 37 44.0**	**-1.4**
WHN				LR	LR		
	comp=N,16μm,11.6s						
WHN				LR	LR		
	comp=E,15μm,12.0s						
WHN				LR	LR		
	comp=Z,6μm,11.4s						
BTO	**Baotou**	**8.55**	**27**	*e*P	**Pn**	**09 36 12.5**	**-0.3**
BTO				LR	LR		
	comp=N,1μm,9.0s						
BTO				LR	LR		
	comp=E,920nm,3.3s						
HHC	**Hu-ho-hao-te**	**9.40**	**32**	⇓P	**Pn**	**09 36 25.0**	**+0.6**
HHC				pP		09 36 32.0	
HHC				sP		09 36 36.8	
HHC				S	**Sn**	**09 38 11.8**	**+1.1**
HHC				sS		09 38 20.5	
HHC				pmax	pmax		
	comp=Z,41nm,1.1s						
HHC				pmax	pmax		
	comp=Z,480nm,4.8s						
HHC				LR	LR		
	comp=N,4μm,5.1s						
HHC				LR	LR		
	comp=E,2μm,4.6s						
HHC				LR	LR		
	comp=Z,2μm,5.3s						
TIA	**Tai'an**	**10.49**	**69**	*e*P	**Pn**	**09 36 40.3**	**+0.9**
TIA				LR	LR		
	comp=N,1μm,7.0s						
TIA				LR	LR		
	comp=E,620nm,8.0s						
BJT	**Baijiatuau**	**11.37**	**49**	*e*P	**Pn**	**09 36 50.4**	**-1.0**
BJT				pmax	pmax		
	comp=Z,33nm,0.6s						
BJT	**Baijiatuau**	**11.37**	**49**	*e*Pn	**Pn**	**09 36 50.4**	**-1.0**
	comp=Z,33nm,0.6s						
BJI	**Beijing**	**11.39**	**49**	P	**Pn**	**09 36 51.5**	**-0.1**
BJI				pmax	pmax		
	comp=Z,35nm,0.6s						
BJI				pmax	pmax		
	comp=Z,350nm,10.7s						
BJI				LR	LR		
	comp=N,3μm,8.4s						
BJI				LR	LR		
	comp=E,2μm,8.2s						
BJI				LR	LR		
	comp=Z,890nm,17.5s						
NJ2	**Nanjing**	**11.76**	**91**	*e*P	**Pn**	**09 36 56.5**	**-0.2**
NJ2				pP		09 37 03.0	
NJ2				sP		09 37 07.0	
NJ2				PP		09 37 09.5	
NJ2				S	**Sn**	**09 39 08.5**	**-0.1**
NJ2				sS		09 39 18.8	
NJ2				pmax	pmax		
	comp=Z,100nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,370nm,4.0s						
NJ2				LR	LR		
	comp=N,4μm,13.4s						
NJ2				LR	LR		
	comp=E,1μm,9.0s						
LSA	**Lhasa**	**12.28**	**258**	*e*P	**Pn**	**09 37 04.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,17nm,0.9s						
LSA	**Lhasa**	**12.28**	**258**	*e*Pn	**Pn**	**09 37 04.8**	**+1.0**
	comp=Z,17nm,0.9s						
GZH	**Guangzhou**	**12.37**	**141**	P	**Pn**	**09 37 00.5**	**-4.6**
GZH				S	**Sn**	**09 39 14.0**	**-10**
GZH				LR	LR		
	comp=N,2μm,9.5s						
GZH				LR	LR		
	comp=E,2μm,6.9s						
GZH				LR	LR		
	comp=Z,4μm,9.7s						
SHL	**Shillong**	**13.63**	**240**	*e*P	**Pn**	**09 37 22.0**	**-0.4**
SHL				*ex*	x	09 41 34.0	
QZH	**Quanzhou**	**14.39**	**121**	P	**Pn**	**09 37 37.0**	**+4.3**
QZH				*e*S	**Sn**	**09 40 17.5**	**+4.5**
QZH				LR	LR		
	comp=N,5μm,8.6s						
QZH				LR	LR		
	comp=E,4μm,11.2s						
QZH				LR	LR		
	comp=Z,2μm,11.2s						
QIZ	**Qiongzhong**	**14.63**	**161**	P	**Pn**	**09 37 33.3**	**-2.7**
QIZ				S	**Sn**	**09 40 22.5**	**+3.5**
QIZ				LR	LR		
	comp=N,2μm,9.6s						
QIZ				LR	LR		
	comp=E,550nm,8.7s						
QIZ				LR	LR		
	comp=Z,2μm,9.6s						
QIZ	**Qiongzhong**	**14.63**	**161**	*e*Pn	**Pn**	**09 37 33.3**	**-2.8**
	comp=Z,82nm,1.0s						
DL2	**Dalian**	**14.69**	**62**	P	**Pn**	**09 37 40.0**	**+3.3**
DL2				*e*S	**Sn**	**09 40 26.5**	**+6.3**
DL2				pmax	pmax		
	comp=Z,40nm,1.3s						
DL2				pmax	pmax		
	comp=Z,350nm,6.9s						
DL2				LR	LR		
	comp=N,670nm,16.4s						
DL2				LR	LR		
	comp=E,290nm,17.7s						
DL2				LR	LR		
	comp=Z,570nm,11.6s						
SONM	**Songino Array**	**14.80**	**4**	Pn	**Pn**	**09 37 38.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=185,slow=14,SNR=32						
SONM				Lg		09 41 56.5	
	comp=Z,0.4nm,0.3s,baz=190,slow=24,SNR=3.7						
SONM				LR	LR	09 43 51.2	
	comp=Z,2μm,19.1s,baz=81,slow=39						
ULN	**Ulaanbaatar**	**14.88**	**5**	Pn	**Pn**	**09 37 41.9**	**+2.6**
	SNR=15						
ULN				Pn	**Pn**	**09 37 41.9**	**+2.6**
	SNR=15						
CHTO	**Chiang Mai**	**15.18**	**202**	*e*P	**Pn**	**09 37 44.1**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	**Chiang Mai**	**15.18**	**202**	*e*P	**Pn**	**09 37 44.1**	**+0.6**
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**15.18**	**202**	Pn	**Pn**	**09 37 45.4**	**+2.0**
	SNR=12						
CHTO				Pn	**Pn**	**09 37 45.4**	**+2.0**
	SNR=12						
CM31	**Chiang Mai Arr**	**15.51**	**202**	*e*P	**Pn**	**09 37 48.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**15.51**	**202**	Pn	**Pn**	**09 37 48.0**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=15,slow=11,SNR=30						
TATO	**Taipei**	**16.52**	**115**	*e*Pn	**Pn**	**09 38 00.7**	**-0.2**
YHNB	**Yeheng**	**16.61**	**116**	*e*P	**Pn**	**09 38 02.5**	**+0.5**
	comp=Z,88nm,0.9s						
BDT	**Bhumibol Dam**	**16.64**	**200**	P	**Pn**	**09 38 04.0**	**+1.6**
SSLB	**Suanglung**	**16.80**	**119**	*e*P	**Pn**	**09 38 05.5**	**+1.1**
	comp=Z,200nm,1.2s						
TPUB	**Ta-pu**	**16.86**	**121**	*e*P	**Pn**	**09 38 06.3**	**+1.1**
	comp=Z,94nm,0.9s						
NACB	**Ninganchiao**	**17.05**	**117**	*e*P	**Pn**	**09 38 09.8**	**+2.2**
	comp=Z,140nm,1.4s						
SNY	**Shenyang**	**17.15**	**54**	⇓P	**Pn**	**09 38 09.5**	**+0.8**
SNY				S	**Sn**	**09 41 10.8**	**-9.2**
SNY				pmax	pmax		
	comp=Z,50nm,1.2s						
SNY				pmax	pmax		
	comp=Z,670nm,12.0s						
SNY				LR	LR		
	comp=N,820nm,13.5s						
SNY				LR	LR		
	comp=Z,1μm,15.0s						
WMQ	**Urumqi**	**17.25**	**314**	*e*P	**Pn**	**09 38 10.3**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,19nm,1.2s						
YULB	**Yu-li**	**17.29**	**120**	*e*P	**Pn**	**09 38 12.8**	**+2.2**
	comp=Z,100nm,1.0s						
ZAK	**Zakamensk**	**17.36**	**356**	*e*P	**Pn**	**09 38 12.0**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TWG	**Pinlang**	**17.48**	**122**	*e*P	**Pn**	**09 38 13.1**	**+0.1**
	comp=Z,46nm,0.8s						
INCN	**Inchon**	**18.22**	**70**	*e*P	**Pn**	**09 38 23.4**	**+1.3**
	comp=Z,84nm,1.0s						
INCN	**Inchon**	**18.22**	**70**	Pn	**Pn**	**09 38 24.3**	**+2.3**
	SNR=9.3						
INCN				Pn	**Pn**	**09 38 24.3**	**+2.3**
	SNR=9.3						
TLY	**Talaya**	**18.64**	**357**	*e*P	**Pn**	**09 38 28.2**	**+1.2**
TLY				pmax	pmax		
	comp=Z,32nm,2.1s						
TLY				MLR	MLR		
	comp=Z,832nm,18.0s						
TLY	**Talaya**	**18.64**	**357**	*e*P	**Pn**	**09 38 26.5**	**-0.5**
	comp=Z,10nm,0.8s						
IRK	**Irkutsk**	**19.19**	**359**	*e*P	**Pn**	**09 38 32.6**	**-1.0**
IRK				pmax	pmax		
	comp=Z,60nm,2.6s						
KSRS	**Korea Array**	**19.24**	**70**	P	**Pn**	**09 38 34.5**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=262,slow=11,SNR=110						
KSRS				Lg		09 44 19.6	
	comp=Z,0.1nm,0.3s,baz=257,slow=32,SNR=4.4						
KSRS				LR	LR	09 45 56.8	
	comp=Z,768nm,19.8s,baz=94,slow=37						
CN2	**Changchun**	**19.25**	**50**	⇓P	**Pn**	**09 38 35.8**	**+1.3**
CN2				*e*pP	pP	09 38 39.5	+5.8
CN2				*e*sP	sP	09 38 42.8	+9.0
CN2				*e*S	**Sn**	**09 42 06.3**	**-4.4**
CN2				pmax	pmax		
	comp=Z,40nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,17.0s						
CN2				LR	LR		
	comp=E,900nm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
HIA	**Hailar**	**19.59**	**30**	*e*P	**Pn**	**09 38 38.4**	**-0.1**
HIA				pmax	pmax		
	comp=Z,106nm,1.4s						
HIA	**Hailar**	**19.59**	**30**	*e*P	**Pn**	**09 38 38.4**	**-0.1**
	comp=Z,106nm,1.4s						
NNT	**Nongplab**	**20.93**	**194**	P	**P**	**09 38 53.5**	**+1.5**
JOW	**Kunigami**	**21.10**	**101**	P	**P**	**09 38 54.3**	**+0.4**
	comp=Z,22nm,0.6s,mb4.7,baz=110,slow=6.6,SNR=8.1						
JOSI	**Joshimath**	**21.73**	**270**	*e*P	**P**	**09 39 00.4**	**-0.2**
MK31	**Makanchi Array**	**22.06**	**315**	*e*P	**P**	**09 39 04.1**	**+0.1**
MKAR	**Makanchi Array**	**22.06**	**315**	P	**P**	**09 39 04.9**	**+0.9**
	comp=Z,11nm,0.8s,mb4.3,baz=113,slow=13,SNR=78						
MKAR				PcP	PcP	09 43 01.7	-0.2
	comp=Z,1.0nm,0.7s,baz=148,slow=2.8,SNR=4.5						
MKAR				LR	LR	09 48 50.5	
	comp=Z,614nm,22.0s,MS4.0,baz=227,slow=40						
MKAR	**Makanchi Array**	**22.06**	**315**	P	**P**	**09 39 04.9**	**+0.9**
MKAR						09 43 01.7	
MKAR	**Makanchi Array**	**22.06**	**315**	P	**P**	**09 39 04.9**	**+0.9**
MKAR				PcP	PcP	09 43 01.7	-0.2
MKAR				LR	LR	09 48 50.5	
MDJ	**Mudanjiang**	**22.30**	**52**	P	**P**	**09 39 09.0**	**+2.5**
MDJ				S	**S**	**09 43 11.5**	**-1.1**
MDJ				ScP	ScP	09 46 38.5	-2.5
MDJ				pmax	pmax		
	comp=Z,55nm,1.2s,mb4.9						
MDJ				LR	LR		
	comp=E,440nm,23.1s						
MDJ				LR	LR		
	comp=Z,330nm,20.8s,MS3.7						
MDJ	**Mudanjiang**	**22.30**	**52**	*e*P	**P**	**09 39 09.6**	**+3.0**
	comp=Z,69nm,1.1s,mb5.0						
KLP	**Kalpa**	**22.62**	**273**	*e*P	**P**	**09 39 10.6**	**+0.4**
KLP				AMb	AMB	09 39 18.6	
	comp=Z,43nm,1.0s,mb4.9						
VLA	**Vladivostok**	**23.36**	**57**	*e*P	**P**	**09 39 18.8**	**+0.9**
VLA				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.0						
AGRA	**Agra**	**24.05**	**263**	*e*P	**P**	**09 39 25.0**	**+0.4**
AGRA				AMb	AMB	09 39 27.6	
	comp=Z,35nm,0.3s,mb5.4						
KKR	**Kurukshetra**	**24.17**	**270**	*e*P	**P**	**09 39 27.1**	**+1.4**
KSH	**Kashi**	**24.19**	**294**	*e*P	**P**	**09 39 30.5**	**+4.8**
KSH				*e*pP		09 39 34.5	
KSH				*e*sP	sP	09 39 37.3	+11
KSH				*e*PP		09 40 06.5	
KSH				*e*PcP	PcP	09 43 08.5	+2.0
KSH				*e*S	**S**	**09 43 48.0**	**+3.1**
KSH				*e*sS	sS	09 43 54.5	+9.4
KSH				*e*SS		09 44 43.5	
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
KSH				LR	LR		
	comp=N,670nm,11.2s,MS4.5						
KSH				LR	LR		
	comp=E,550nm,13.1s,MS4.5						
KSH				LR	LR		
	comp=Z,400nm,14.0s,MS4.0						
NDI	**New Delhi**	**24.19**	**267**	*e*P	**P**	**09 39 25.0**	**-0.9**
AYAN	**Aya Nagar**	**24.32**	**267**	*e*P	**P**	**09 39 27.1**	**0.0**
AYAN				AMb	AMB	09 39 32.5	
	comp=Z,8.9nm,0.4s,mb4.7						
SONA	**Sohna**	**24.43**	**266**	*e*P	**P**	**09 39 28.1**	**0.0**
SONA				AMb	AMB	09 39 29.8	
	comp=Z,8.0nm,0.4s,mb4.6						
ULHL	**Ulahol**	**24.44**	**300**	P	**P**	**09 39 30.4**	**+2.4**
	SNR=12						
TKM2	**Tokmak 2**	**25.05**	**302**	P	**P**	**09 39 35.9**	**+2.3**
	SNR=16						
TKM2	**Tokmak 2**	**25.05**	**302**	*e*P	**P**	**09 39 35.6**	**+2.0**
TKM2				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
TKM2	**Tokmak 2**	**25.05**	**302**	*e*P	**P**	**09 39 35.5**	**+2.0**
	comp=Z,15nm,1.0s,mb4.7						
KZA	**Kyzart**	**25.12**	**300**	P	**P**	**09 39 37.3**	**+3.1**
	SNR=28						
ZALV	**Zalesovo Beam**	**25.33**	**332**	P	**P**	**09 39 36.1**	**+0.1**
	comp=Z,28nm,0.9s,mb5.0,baz=131,slow=9.0,SNR=51						
KBK	**Karagaybulak**	**25.46**	**301**	P	**P**	**09 39 40.1**	**+2.8**
	SNR=25						
BOD	**Bodaibo**	**25.52**	**11**	*e*P	**P**	**09 39 38.3**	**+0.6**
BOD				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7						
KHET	**Khetri**	**25.56**	**267**	*e*P	**P**	**09 39 38.2**	**-0.2**
KHET				AMb	AMB	09 39 42.8	
	comp=Z,13nm,1.1s,mb4.5						
KLR	**Kul'dur**	**25.65**	**43**	*e*P	**P**	**09 39 35.7**	**-3.3**
KLR				pmax	pmax		
	comp=E,40nm,1.2s						
KLR				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.4						
UCH	**Uchtor**	**25.69**	**300**	P	**P**	**09 39 41.8**	**+2.4**
	SNR=28						
UCH	**Uchtor**	**25.69**	**300**	*e*P	**P**	**09 39 41.5**	**+2.1**
	comp=Z,12nm,0.9s,mb4.5

comp=Z,2.3nm,0.5s,baz=107,slow=2.0,SNR=4.6
KURK Kurchatov 26.18 320 P **P 09 39 43.9 +0.2**
KURK 09 43 09.8
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
KURK Kurchatov 26.18 320 *eP* **P 09 39 43.7 0.0**
comp=Z,108nm,2.1s,mb5.1
KURK Kurchatov 26.18 320 P **P 09 39 44.5 +0.8**
SNR=16
KURK P 09 39 44.5
SNR=16
NVS Novosibirsk 26.61 331 *i* P **P 09 39 48.4 +0.8**
NVS *e* 09 40 26.2
NVS pmax pmax
comp=N,40nm,2.0s
NVS pmax pmax
comp=E,33nm,2.0s
NVS pmax pmax
comp=Z,47nm,2.0s,mb4.9
MAJO Matsushiro 27.43 73 *eP* **P 09 39 54.7 -0.5**
MAJO pmax pmax
comp=Z,28nm,0.7s,mb5.1
MAJO Matsushiro 27.43 73 *eP* **P 09 39 54.7 -0.5**
comp=Z,28nm,0.7s,mb5.1
MAT Matsushiro 27.43 73 P **P 09 39 54.3 -0.9**
MJAR Matsushiro Arr 27.44 73 P **P 09 39 55.1 -0.1**
comp=Z,22nm,0.8s,mb5.0,baz=273,slow=9.4,SNR=53
MJAR PcP PcP 09 43 13.7 -0.2
comp=Z,1.4nm,0.7s,baz=280,slow=1.9,SNR=4.6
KKM Kota Kinabalu 28.84 156 *eP* **P 09 40 08.1 +0.2**
comp=Z,15nm,0.9s,mb4.8
KBL Kabul 29.80 283 *eP* **P 09 40 17.3 +1.0**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
KBL Kabul 29.80 283 *eP* **P 09 40 17.3 +1.0**
comp=Z,4.5nm,0.5s,mb4.5
PSI Prapat 30.62 192 P **P 09 40 24.2 +0.5**
comp=Z,15nm,0.8s,mb5.0,baz=328,slow=3.8,SNR=12
ASAJ Asahikawa 31.17 58 P **P 09 40 28.5 +0.2**
comp=Z,16nm,0.8s,mb5.0,baz=258,slow=7.7,SNR=15
ASAJ Asahikawa 31.17 58 P **P 09 40 28.5 +0.2**
ASAJ pmax pmax
comp=Z,16nm,0.8s
POO Poona 31.39 250 *eP* **P 09 40 30.9 +0.4**
BVAR Borovoye Array 31.76 319 P **P 09 40 34.3 +0.9**
comp=Z,1.8nm,0.6s,mb4.2,baz=115,slow=10,SNR=8.8
BVAR PcP PcP 09 43 24.2 -0.4
comp=Z,1.6nm,0.6s,baz=132,slow=2.1,SNR=4.1
YSS Yuzh-Sakhalins 31.77 53 *eP* **P 09 40 33.0 -0.5**
YSS pmax pmax
comp=Z,69nm,2.5s,mb5.1
KAD Karad 31.82 248 *ex* x 09 38 28.5
BRVK Borovoye 31.83 319 *ceP* **P 09 40 35.1 +1.1**
BRVK pmax pmax
comp=Z,18nm,2.3s,mb4.6
BRVK Borovoye 31.83 319 *eP* **P 09 40 35.4 +1.4**
comp=Z,68nm,0.3s,mb6.0
YAK Yakutsk 33.03 21 *eP* **P 09 40 44.7 +0.3**
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK MLR MLR
comp=Z,285nm,14.0s,MS4.1
YAK MLR MLR
comp=N,146nm,9.0s
YAK MLR MLR
comp=E,294nm,15.0s
YAK Yakutsk 33.03 21 *eP* **P 09 40 44.0 -0.3**
comp=E,27nm,0.5s,mb5.4
PALK Pallekele 34.13 227 *eP* **P 09 40 55.8 +1.4**
PALK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
PALK Pallekele 34.13 227 *eP* **P 09 40 55.8 +1.3**
comp=Z,7.0nm,0.7s,mb4.7
ABKAR Akbulak array 36.97 310 *eP* **P 09 41 18.9 +0.3**
comp=Z,2.5nm,0.5s,mb4.2
AKTK Aktyubinsk 38.38 311 P **P 09 41 30.4 -0.1**
AKTK PcP PcP 09 43 43.9 -0.1
AKTO Aktyubinsk 38.38 311 P **P 09 41 30.4 -0.1**
comp=Z,2.7nm,0.7s,mb4.1,baz=87,slow=9.9,SNR=14
AKTO PcP PcP 09 43 43.9 -0.1
comp=Z,1.4nm,0.6s,baz=88,slow=8.5,SNR=4.1
SVE Sverdlovsk 38.40 322 *eP* **P 09 41 31.4 +0.8**
SVE pmax pmax
comp=Z,33nm,1.1s,mb5.0
ARU Arti 39.37 321 *d iP* **P 09 41 39.2 +0.5**
ARU *e* 09 43 08.1
ARU S **S 09 47 40.6 -0.2**
ARU SS SS 09 50 32.5 -1.6
ARU pmax pmax
comp=Z,43nm,1.0s,mb5.0
ARU Arti 39.37 321 *eP* **P 09 41 38.8 +0.1**
comp=Z,47nm,1.1s,mb5.0
TIXI Tiksi 40.70 11 *eP* **P 09 41 48.6 -1.0**
TIXI pmax pmax
comp=Z,23nm,1.1s,mb4.8
TIXI MLR MLR
comp=Z,549nm,17.0s,MS4.5
TIXI Tiksi 40.70 11 *eP* **P 09 41 49.3 -0.3**
comp=Z,15nm,0.8s,mb4.8
SOKR Solikamsk 41.21 325 *c iP* **P 09 41 55.6 +1.7**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.0
SEY Seymchan 42.04 30 *ceP* **P 09 42 00.9 +0.3**
PETK Petropavlovsk- 42.29 45 P **P 09 42 02.5 -0.3**
comp=Z,8.9nm,1.0s,mb4.4,baz=197,slow=4.6,SNR=8.4
GNI Garni 48.07 297 *ceP* **P 09 42 49.9 +1.0**
GNI pmax pmax
comp=Z,16nm,1.5s
MIB Mutribah 48.76 282 *eP* **P 09 42 53.6 -0.8**
MIB AMb AMB 09 43 01.7
comp=Z,34nm,1.0s,mb5.3
VRHR Novokhopersk 48.79 311 *eP* **P 09 42 54.3 0.0**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VRHR pmax pmax
comp=E,40nm,0.7s
RDF Al-Radifah 48.88 281 *eP* **P 09 42 54.6 -0.8**
RDF AMb AMB 09 42 57.3
comp=Z,26nm,0.7s,mb5.3
KIV Kislovodsk 48.89 302 *eP* **P 09 42 56.3 +1.1**
KIV pmax pmax
comp=Z,17nm,1.0s,mb5.0
NAY Al-Naaiem 49.03 282 *eP* **P 09 42 55.3 -1.2**
NAY AMb AMB 09 42 57.7
comp=Z,24nm,0.7s,mb5.3
BILL Bilibino 49.10 26 *eP* **P 09 42 56.4 -0.1**
BILL pmax pmax
comp=Z,13nm,1.0s,mb4.9
BILL Bilibino 49.10 26 *eP* **P 09 42 56.5 0.0**
comp=Z,18nm,1.2s,mb5.0
VORD Divnogorie 50.27 311 *eP* **P 09 43 04.8 -0.8**
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,10.0nm,0.5s
VSR Storozhevoye 50.32 312 *eP* **P 09 43 05.3 -0.7**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,9.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.7s
MOS Moscow 50.91 318 *eP* **P 09 43 08.8 -1.5**
MOS pmax pmax
comp=Z,68nm,0.8s,mb5.6
MOS pmax pmax
comp=Z,100nm,0.8s,mb5.8
OBN Obninsk 51.55 317 *eP* **P 09 43 16.1 +0.9**
OBN *e* 09 45 10.6
OBN pmax pmax
comp=Z,33nm,1.2s,mb5.1
ANN Anapa 52.44 304 *eP* **P 09 43 15.3 -6.7**
ANN pmax pmax
comp=Z,44nm,1.7s,mb5.1
KAKA Kakadu 52.52 145 *eP* **P 09 43 21.5 -1.3**
comp=Z,15nm,0.9s,mb4.9
KAKA Kakadu 52.52 145 *eP* **P 09 43 23.1 +0.2**
comp=Z,38nm,0.8s,mb5.4
KNA Kununurra 53.59 151 *eP* **P 09 43 30.2 -0.5**
comp=Z,19nm,0.5s,mb5.4
JOF Joensuu 53.79 327 *iP* **P 09 43 30.9 -0.7**
JOF pmax pmax
comp=Z,16nm,0.9s,mb5.0
JOF Joensuu 53.79 327 *ep* **P 09 43 30.9 -0.7**
comp=Z,16nm,0.9s,mb5.0
FITZ Fitoy Crossi 54.57 156 *eP* **P 09 43 37.3 -0.5**
comp=Z,8.0nm,0.8s,mb4.8
FITZ Fitzroy Crossi 54.57 156 P **P 09 43 37.1 -0.7**
comp=Z,5.6nm,0.9s,mb4.6,baz=42,slow=4.2,SNR=8.7
KEV Kevo 55.26 336 *eP* **P 09 43 39.3 -3.0**
KEV pmax pmax
comp=Z,22nm,0.7s,mb5.3
KEV Kevo 55.26 336 *ep* **P 09 43 39.3 -3.0**
comp=Z,22nm,0.7s,mb5.3
MBWA Marble Bar 55.72 163 *eP* **P 09 43 45.4 -0.7**
MBWA Marble Bar 55.72 163 *eP* **P 09 43 44.9 -1.2**
comp=Z,7.1nm,0.6s,mb4.9
ARCES ARCESS Array B 55.80 335 P **P 09 43 45.9 -0.3**
comp=Z,12nm,0.7s,mb5.0,baz=78,slow=7.5,SNR=33
ARCES PcP PcP 09 44 45.0 -0.1
comp=Z,3.2nm,0.9s,baz=77,slow=3.9,SNR=4.3
KAF Kangasniemi 56.17 326 *eP* **P 09 43 47.6 -1.3**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KAF Kangasniemi 56.17 326 *ep* **P 09 43 47.6 -1.3**
comp=Z,4.2nm,0.6s,mb4.7
FINES FINESS Array B 56.37 326 P **P 09 43 49.8 -0.6**
comp=Z,4.7nm,0.5s,mb4.8,baz=86,slow=6.5,SNR=61
ASF Jabal al Asfar 56.39 289 P **P 09 43 51.5 +0.5**
comp=Z,3.7nm,0.6s,mb4.6,baz=292,slow=4.7,SNR=5.7
BR131 Keskin Array S 56.44 299 *eP* **P 09 43 50.6 -0.5**
comp=Z,2.7nm,0.6s,mb4.5
BRTR Keskin Array B 56.44 299 P **P 09 43 50.9 -0.3**
comp=Z,3.9nm,0.7s,mb4.5,baz=97,slow=6.3,SNR=25
VSU Vasula 56.51 322 *ceP* **P 09 43 51.2 -0.2**
VSU pmax pmax
comp=Z,17nm,0.8s,mb5.1
AKASG Malin Array Be 56.60 312 P **P 09 43 51.6 -0.6**
comp=Z,7.4nm,0.6s,mb4.9,baz=68,slow=6.6,SNR=24
KIEV Kiev 56.62 312 *eP* **P 09 43 51.4 -0.9**
KIEV pmax pmax
comp=Z,12nm,1.0s,mb4.9
KIEV Kiev 56.62 312 *eP* **P 09 43 51.4 -0.8**
comp=Z,12nm,1.0s,mb4.9
IDID Didziasalis 57.09 318 *eP* **P 09 43 55.8 +0.2**
MMAI Mount Meron Ar 57.27 291 P **P 09 43 58.2 +1.0**
comp=Z,0.9nm,0.4s,mb4.2,baz=45,slow=14,SNR=2.5
IIGN Ignalina 57.37 318 *eP* **P 09 43 57.3 -0.2**
ISAL Salakas 57.38 319 *eP* **P 09 43 56.7 -0.9**
SPB4 Spitsbergen Ar 57.63 346 *eP* **P 09 43 58.9 -0.2**
TLCR 58.27 306 ⇓P **P 09 44 04.7 +0.7**
TLCR 58.27 306 ⇓*iP* **P 09 44 04.7 +0.7**
CFR Carcaliu 58.73 306 ⇓P **P 09 44 06.9 -0.4**
CFR Carcaliu 58.73 306 ⇓*iP* **P 09 44 06.9 -0.4**
TIRR Tirgusor 58.76 305 ⇑P **P 09 44 08.2 +0.8**
TIRR Tirgusor 58.76 305 ⇑*iP* **P 09 44 08.2 +0.8**
EIL Elat 58.86 287 P **P 09 44 08.6 +0.2**
comp=Z,4.8nm,0.7s,mb4.6,baz=229,slow=22,SNR=4.4
HARR Harsova 59.02 306 ⇓P **P 09 44 10.3 +1.1**
HARR Harsova 59.02 306 ⇓*iP* **P 09 44 10.3 +1.1**
VRI Vrincioaia 59.48 307 ⇓P **P 09 44 12.7 +0.3**
VRI Vrincioaia 59.48 307 ⇓*iP* **P 09 44 12.6 +0.2**
PLOR Plostina 59.53 307 ⇓P **P 09 44 13.8 +1.0**
PLOR Plostina 59.53 307 ⇓*iP* **P 09 44 13.8 +1.0**
WRAB Tennant Creek 59.70 148 *eP* **P 09 44 13.2 -0.9**
WRAB pmax pmax
comp=Z,17nm,0.6s,mb5.2
WRAB Tennant Creek 59.70 148 *eP* **P 09 44 13.2 -0.9**
comp=Z,17nm,0.6s,mb5.3
BURAR Bucovina Array 59.95 310 ⇑P **P 09 44 15.0 -0.6**
BURAR Bucovina Array 59.95 310 ⇑*iP* **P 09 44 15.0 -0.6**
BUR08 Bucovina Ar. S 59.95 310 *eP* **P 09 44 15.2 -0.4**
MLR Muntele Rosu 60.12 307 ⇑P **P 09 44 16.9 +0.1**
MLR Muntele Rosu 60.12 307 ⇑*iP* **P 09 44 16.9 +0.1**
KWP Kalwaria Pacla 60.93 313 *eP* **P 09 44 22.3 0.0**
KWP pmax pmax
comp=Z,38nm,0.8s,mb5.6
KWP Kalwaria Pacla 60.93 313 *eP* **P 09 44 22.3 0.0**
comp=Z,38nm,0.8s,mb5.6
KOLS Kolonicke sedl 61.42 312 *eP* **P 09 44 26.0 +0.4**
KOLS pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KOLS Kolonicke sedl 61.42 312 *eP* **P 09 44 26.0 +0.4**
comp=Z,4.4nm,0.8s,mb4.6
KOLS Kolonicke sedl 61.42 312 *eP* **P 09 44 26.0 +0.4**
TRPA Tarpa 61.50 311 ⇑*iP* **P 09 44 26.7 +0.5**
DRGR 61.83 309 ⇑P **P 09 44 29.0 +0.6**
DRGR 61.83 309 ⇑*iP* **P 09 44 29.0 +0.6**
STHS Stebnicka Huta 61.90 313 *eP* **P 09 44 29.2 +0.3**
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
STHS Stebnicka Huta 61.90 313 *eP* **P 09 44 29.2 +0.3**
comp=Z,5.6nm,0.8s,mb4.8
STHS Stebnicka Huta 61.90 313 *eP* **P 09 44 29.2 +0.3**
OJC Ojcow 62.52 314 *eP* **P 09 44 33.2 +0.2**
HFS Hagfors 62.58 326 P **P 09 44 32.8 -0.4**
comp=Z,2.9nm,0.6s,mb4.6,baz=72,slow=6.8,SNR=13
HFS PcP PcP 09 45 11.4 -0.8
comp=Z,3.7nm,0.8s,baz=113,slow=3.4,SNR=3.5
HFS Hagfors 62.58 326 P **P 09 44 32.8 -0.4**
HFS PcP PcP 09 45 11.4 -0.8
KECS Kecovo 62.68 312 *eP* **P 09 44 34.5 +0.4**
KECS pmax pmax
comp=Z,2.0nm,1.2s,mb4.1
KECS Kecovo 62.68 312 *eP* **P 09 44 34.5 +0.4**
comp=Z,2.4nm,1.2s,mb4.2
KECS Kecovo 62.68 312 *eP* **P 09 44 34.5 +0.4**
ASAR Alice Springs 62.79 150 P **P 09 44 34.8 -0.2**
comp=Z,10nm,0.7s,mb5.0,baz=337,slow=6.8,SNR=96
BZS Buzias 62.94 308 ⇓P **P 09 44 36.7 +0.8**
BZS Buzias 62.94 308 ⇓*iP* **P 09 44 36.7 +0.8**
PSZ Piszkesteto 63.25 311 *eP* **P 09 44 38.4 +0.5**
PSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
PSZ Piszkesteto 63.25 311 *eP* **P 09 44 38.4 +0.5**
comp=Z,5.8nm,0.9s,mb4.7
NB2 NORSAR Subarra 63.42 327 P **P 09 44 37.2 -1.6**
comp=Z,9.1nm,0.8s,mb5.0,baz=72,slow=6.9
NOA NORSAR Array B 63.42 327 P **P 09 44 37.4 -1.4**
comp=Z,7.2nm,0.8s,mb4.8,baz=71,slow=6.7,SNR=21
NAO01 NORSAR Array S 63.64 327 *eP* **P 09 44 38.2 -2.1**
comp=Z,6.5nm,0.8s,mb4.9
VYHS Vyhne 63.71 312 *eP* **P 09 44 41.2 +0.3**
VYHS *e* 09 44 48.3
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.7
VYHS Vyhne 63.71 312 *eP* **P 09 44 41.2 +0.3**
comp=Z,6.3nm,1.2s,mb4.7
VYHS *e* 09 44 48.3
VYHS Vyhne 63.71 312 *eP* **P 09 44 41.2 +0.3**
VYHS *ep*P 09 44 48.3
KOLL Kolacno 63.95 312 *eP* **P 09 44 43.5 +1.0**
KOLL Kolacno 63.95 312 *eP* **P 09 44 43.5 +1.0**
MORC Moravsky Berou 64.04 314 *eP* **P 09 44 42.9 -0.2**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
MORC Moravsky Berou 64.04 314 *eP* **P 09 44 42.9 -0.2**
comp=Z,6.9nm,0.8s,mb4.9
MORC Moravsky Berou 64.04 314 ⇓*iP* **P 09 44 43.5 +0.4**
IDI Anoyia 64.50 297 P **P 09 44 45.1 -1.3**
comp=Z,3.8nm,0.6s,mb4.8,baz=121,slow=9.4,SNR=6.5
PKSM Moragy 64.67 310 ⇑P **P 09 44 46.8 -0.5**
PKSM Moragy 64.67 310 ⇑*iP* **P 09 44 46.8 -0.5**
VRAC Vranov 64.79 314 ⇓P **P 09 44 48.9 +0.9**
VRAC Vranov 64.79 314 ⇓*iP* **P 09 44 48.9 +0.9**
ZST Bratislava 64.89 312 *eP* **P 09 44 48.5 -0.2**
ZST pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ZST Bratislava 64.89 312 *eP* **P 09 44 48.5 -0.2**
comp=Z,4.8nm,0.7s,mb4.8
ZST Bratislava 64.89 312 *eP* **P 09 44 48.5 -0.2**
COLD Coldfoot 65.39 24 *eP* **P 09 44 51.4 -0.3**
comp=Z,10nm,1.0s,mb5.0
BRG Berggiesshubel 65.77 316 *eP* **P 09 44 54.4 +0.1**
comp=Z,5.5nm,0.9s,mb4.8
KMBL Kambalda 66.03 164 *eP* **P 09 44 55.7 -0.4**
comp=Z,34nm,0.6s,mb5.8
CLL Collm 66.14 317 *eP* **P 09 44 56.0 -0.7**
CLL pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
CLL Collm 66.14 317 *eP* **P 09 44 56.0 -0.7**
comp=Z,6.0nm,1.1s,mb4.7
CLL Collm 66.14 317 *eP* **P 09 44 56.0 -0.7**
comp=Z,6.0nm,1.1s,mb4.7
GROS Grobnik 66.57 311 *i* P **P 09 44 58.9 -0.7**
PPLA Purkeypile 66.61 29 *eP* **P 09 44 59.2 -0.3**
comp=Z,43nm,1.4s,mb5.5
NWAO Narrogin (SRO) 66.64 169 *eP* **P 09 45 00.0 +0.1**
comp=Z,72nm,0.6s,mb6.1
NWAO Narrogin (SRO) 66.64 169 *eP* **P 09 44 59.7 -0.2**
NWAO pmax pmax
comp=Z,12nm,0.7s
NWAO Narrogin (SRO) 66.64 169 *eP* **P 09 44 59.7 -0.2**
comp=Z,12nm,0.7s,mb5.2
GERES GERESS Array B 66.72 314 P **P 09 45 00.5 0.0**
comp=Z,3.8nm,0.9s,mb4.6,baz=64,slow=6.1,SNR=24
PERS Pernice 66.74 311 *eP* **P 09 45 00.1 -0.6**
SOKA Soboth 66.78 311 ⇓*iP* **P 09 45 00.2 -0.7**
comp=Z,8.1nm,1.0s,mb4.9
TRF Tînorefare Moun 67.11 28 *eP* **P 09 45 03.9 +1.1**
comp=Z,3.7nm,0.8s,mb4.7
FORT Forrest 67.14 159 *eP* **P 09 45 03.2 0.0**
comp=Z,19nm,0.7s,mb5.4
VISS Visnje 67.26 311 *i* P **P 09 45 03.5 -0.5**
COLA College 67.36 26 *eP* **P 09 45 03.9 -0.3**
COLA pmax pmax
comp=Z,27nm,1.0s,mb5.4
COLA College 67.36 26 *eP* **P 09 45 03.9 -0.4**
comp=Z,27nm,1.0s,mb5.4
RSO Redoubt South 67.48 32 *eP* **P 09 45 05.8 +0.7**
MCK McKinley 67.51 28 *eP* **P 09 45 04.2 -1.0**
MCK pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
MCK McKinley 67.51 28 *eP* **P 09 45 04.2 -1.0**
comp=Z,4.5nm,0.9s,mb4.7
KBA Koelnbreinsper 67.67 312 ⇓*iP* **P 09 45 06.5 -0.1**
comp=Z,5.9nm,0.7s,mb4.9
GRA1 Grafenberg Arr 67.85 316 *eP* **P 09 45 07.4 -0.2**
comp=Z,8.0nm,1.0s,mb4.9
GRF Grafenberg Arr 67.85 316 *eP* **P 09 45 07.4 -0.2**
comp=Z,8.0nm,1.0s,mb4.9
GRF Grafenberg Arr 67.85 316 *eP* **P 09 45 07.4 -0.2**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
GRF Grafenberg Arr 67.85 316 *eP* **P 09 45 07.4 -0.2**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
GRF Grafenberg Arr 67.85 316 *eP* **P 09 45 07.4 -0.2**
comp=Z,8.0nm,1.0s,mb4.9
PMR Palmer 68.49 30 *eP* **P 09 45 10.3 -1.1**
PMR pmax pmax
comp=Z,13nm,1.0s,mb5.1
PMR Palmer 68.49 30 *eP* **P 09 45 10.3 -1.1**
comp=Z,13nm,1.0s,mb5.1
WTTA Wattenberg 68.64 313 ⇑*iP* **P 09 45 12.4 -0.3**
comp=Z,8.6nm,0.7s,mb5.1
TIP Timpagrande 68.78 304 *eP* **P 09 45 12.4 -1.2**
comp=Z,3.5nm,0.7s,mb4.7
FETA Feichten 69.31 313 ⇑*iP* **P 09 45 14.6 -2.2**
comp=Z,11nm,1.1s,mb5.0
EGAK Eagle 69.83 25 *eP* **P 09 45 18.3 -1.4**
comp=Z,7.0nm,1.1s,mb4.7
DAVOX Davos/Dischmat 69.94 313 P **P 09 45 20.3 -0.4**
comp=Z,7.1nm,0.7s,mb4.9,baz=86,slow=6.7,SNR=12
INK Inuvik 70.08 20 *eP* **P 09 45 20.5 -0.7**
INK pmax pmax
comp=Z,13nm,1.0s
INK Inuvik 70.08 20 *eP* **P 09 45 20.4 -0.7**
comp=Z,13nm,1.0s,mb5.0
BMRM Bremner River 70.68 29 *eP* **P 09 45 25.2 +0.2**
comp=Z,20nm,1.0s,mb5.2
CDF Champ du Feu 70.74 316 *eP* **P 09 45 24.8 -0.8**
WLF Walferdange 70.80 317 P **P 09 45 25.6 -0.2**
comp=Z,16nm,1.7s,mb4.9
WLF Walferdange 70.80 317 *eP* **P 09 45 27.8 +1.9**
WLF pmax pmax
comp=Z,13nm,0.9s,mb5.1
WLF Walferdange 70.80 317 *eP* **P 09 45 27.8 +1.9**
comp=Z,13nm,0.9s,mb5.1
HINF Hinteralfeld 71.27 315 *eP* **P 09 45 28.6 -0.2**
GIVF Givet 71.34 318 *eP* **P 09 45 28.7 -0.5**
comp=Z,11nm,0.7s,mb4.8
GIVF Givet 71.34 318 *eP* **P 09 45 28.7 -0.5**
GIVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
GIVF Givet 71.34 318 *eP* **P 09 45 28.7 -0.5**
comp=Z,5.7nm,0.7s,mb4.8
SUMG Summit 71.67 349 *eP* **P 09 45 30.7 -0.1**
comp=Z,5.1nm,0.7s,mb4.8
BAIF Baives 71.70 318 *eP* **P 09 45 30.9 -0.5**
RES Resolute Bay 71.73 5 *eP* **P 09 45 30.3 -0.9**
RES pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
RES Resolute Bay 71.73 5 *eP* **P 09 45 30.3 -0.8**
comp=Z,3.9nm,1.0s,mb4.5
BBOO Buckleboo 71.76 153 *eP* **P 09 45 31.0 -0.8**
comp=Z,2.7nm,0.5s,mb4.6
MEZF Maizieres J'vi 71.99 316 *eP* **P 09 45 33.2 +0.1**
KMBO Kilima Mbogo 72.08 256 P **P 09 45 34.1 -0.1**
comp=Z,3.5nm,0.9s,mb4.5,baz=180,slow=24,SNR=7.8
KMBO Kilima Mbogo 72.08 256 P **P 09 45 34.1 -0.1**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 72.08 256 *eP* **P 09 45 35.1 +0.9**
comp=Z,6.6nm,1.1s,mb4.7
CABF La Chapelle 72.31 314 *eP* **P 09 45 34.6 -0.5**
RMQ Roma 72.39 139 *eP* **P 09 45 36.1 +0.5**
comp=Z,19nm,1.2s,mb5.1
LPG La Plagne 72.46 313 *eP* **P 09 45 36.2 +0.2**
comp=Z,39nm,0.8s,mb5.3
LPG La Plagne 72.46 313 *eP* **P 09 45 36.2 +0.2**
LPG pmax pmax
comp=Z,19nm,0.8s,mb5.3
LPG La Plagne 72.46 313 *eP* **P 09 45 36.2 +0.2**
comp=Z,19nm,0.8s,mb5.3
LPL La Plagne 72.46 313 *eP* **P 09 45 36.1 +0.1**
comp=Z,18nm,0.5s,mb5.2
LPL La Plagne 72.46 313 *eP* **P 09 45 36.1 +0.1**
LPL pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
LPL La Plagne 72.46 313 *eP* **P 09 45 36.1 +0.1**
comp=Z,9.0nm,0.5s,mb5.2
PGF Pioggiola 72.47 310 *eP* **P 09 45 35.9 -0.2**
comp=Z,17nm,0.7s,mb5.0
PGF Pioggiola 72.47 310 *eP* **P 09 45 35.9 -0.2**
PGF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
PGF Pioggiola 72.47 310 *eP* **P 09 45 35.9 -0.2**
comp=Z,8.6nm,0.7s,mb5.0
EKA Eskdalemuir Ar 72.77 325 P **P 09 45 37.9 +0.2**
comp=Z,2.3nm,0.7s,mb4.4,baz=44,slow=5.5,SNR=6.3
MBDF Montbardon 72.83 312 *eP* **P 09 45 37.5 -0.7**
comp=Z,12nm,0.8s,mb4.8
MBDF Montbardon 72.83 312 *eP* **P 09 45 37.5 -0.7**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MBDF Montbardon 72.83 312 *eP* **P 09 45 37.5 -0.7**
comp=Z,6.1nm,0.8s,mb4.8
SBF Sospel 72.83 311 *eP* **P 09 45 37.6 -0.6**
comp=Z,33nm,0.7s,mb5.2
SBF Sospel 72.83 311 *eP* **P 09 45 37.6 -0.6**
SBF pmax pmax
comp=Z,16nm,0.7s,mb5.3
SBF Sospel 72.83 311 *eP* **P 09 45 37.6 -0.6**
comp=Z,16nm,0.7s,mb5.3
STKA Stephens Creek 73.25 148 *eP* **P 09 45 39.9 -0.8**
comp=Z,7.4nm,0.8s,mb4.9
STKA Stephens Creek 73.25 148 P **P 09 45 39.9 -0.8**
comp=Z,8.8nm,0.8s,mb5.0,baz=323,slow=6.6,SNR=18
STKA Stephens Creek 73.25 148 *eP* **P 09 45 39.9 -0.7**
comp=Z,1.4nm,0.8s,mb4.1
ORIF Oris-en-Rattie 73.28 313 *eP* **P 09 45 40.4 -0.5**
comp=Z,31nm,0.9s,mb5.2
ORIF Oris-en-Rattie 73.28 313 *eP* **P 09 45 40.4 -0.5**
ORIF pmax pmax
comp=Z,16nm,0.9s,mb5.2
ORIF Oris-en-Rattie 73.28 313 *eP* **P 09 45 40.4 -0.5**
comp=Z,16nm,0.9s,mb5.1
LOR Lormes 73.31 316 *eP* **P 09 45 40.5 -0.5**
SSF Saint Saulge 73.62 316 *eP* **P 09 45 41.7 -1.1**
comp=Z,6.9nm,0.8s,mb4.5
SSF Saint Saulge 73.62 316 *eP* **P 09 45 41.7 -1.1**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
SSF Saint Saulge 73.62 316 *eP* **P 09 45 41.7 -1.1**
comp=Z,3.5nm,0.8s,mb4.4
SMF Signal de Mont 73.64 315 *eP* **P 09 45 42.0 -0.9**
comp=Z,29nm,1.0s,mb5.0

SMF Signal de Mont 73.64 315 *e*P **P 09 45 42.0 -0.9**
SMF pmax pmax
comp=Z,14nm,1.0s,mb5.0
SMF Signal de Mont 73.64 315 *e*P **P 09 45 42.0 -0.9**
comp=Z,14nm,1.0s,mb5.0
LMR La Mourre 73.68 311 *e*P **P 09 45 42.5 -0.8**
comp=Z,9.0nm,0.6s,mb4.7
LMR La Mourre 73.68 311 *e*P **P 09 45 42.5 -0.8**
LMR pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LMR La Mourre 73.68 311 *e*P **P 09 45 42.5 -0.8**
comp=Z,4.5nm,0.6s,mb4.7
AVF Avril sur Loir 73.85 316 *e*P **P 09 45 43.2 -1.0**
comp=Z,15nm,0.9s,mb4.7
AVF Avril sur Loir 73.85 316 *e*P **P 09 45 43.2 -1.0**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
AVF Avril sur Loir 73.85 316 *e*P **P 09 45 43.2 -1.0**
comp=Z,7.3nm,0.9s,mb4.7
VIVF Saint-Julien-l 74.05 313 *e*P **P 09 45 44.8 -0.6**
comp=Z,34nm,1.2s,mb5.0
VIVF Saint-Julien-l 74.05 313 *e*P **P 09 45 44.8 -0.6**
VIVF pmax pmax
comp=Z,17nm,1.2s,mb5.0
VIVF Saint-Julien-l 74.05 313 *e*P **P 09 45 44.8 -0.6**
comp=Z,17nm,1.2s,mb5.0
TCF Toulx Ste Croi 74.78 316 *e*P **P 09 45 49.1 -0.5**
comp=Z,17nm,0.9s,mb4.8
TCF Toulx Ste Croi 74.78 316 *e*P **P 09 45 49.1 -0.5**
TCF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 74.78 316 *e*P **P 09 45 49.1 -0.5**
comp=Z,8.4nm,0.9s,mb4.8
CMSA Cobar Meteorol 74.87 145 *e*P **P 09 45 50.2 0.0**
LASF Ste Croix 74.95 313 *e*P **P 09 45 50.2 -0.5**
comp=Z,27nm,0.9s,mb5.0
FLN La Foliniere 74.99 319 *e*P **P 09 45 50.1 -0.7**
SKAG Skagway 75.27 27 *e*P **P 09 45 52.3 +0.1**
comp=Z,18nm,1.1s,mb5.0
GRR Gorron 75.41 318 *e*P **P 09 45 52.5 -0.7**
comp=Z,22nm,0.9s,mb4.9
GRR Gorron 75.41 318 *e*P **P 09 45 52.5 -0.7**
GRR pmax pmax
comp=Z,11nm,0.9s,mb4.9
GRR Gorron 75.41 318 *e*P **P 09 45 52.5 -0.7**
comp=Z,11nm,0.9s,mb4.9
CAF Calviac 75.60 314 *e*P **P 09 45 54.1 -0.2**
comp=Z,27nm,1.1s,mb5.0
CAF Calviac 75.60 314 *e*P **P 09 45 54.1 -0.2**
CAF pmax pmax
comp=Z,14nm,1.1s,mb5.0
CAF Calviac 75.60 314 *e*P **P 09 45 54.1 -0.2**
comp=Z,14nm,1.1s,mb5.0
RJF Les Rejaudoux 75.72 315 *e*P **P 09 45 55.0 0.0**
comp=Z,8.0nm,0.8s,mb4.6
RJF Les Rejaudoux 75.72 315 *e*P **P 09 45 55.0 0.0**
RJF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
RJF Les Rejaudoux 75.72 315 *e*P **P 09 45 55.0 0.0**
comp=Z,4.0nm,0.8s,mb4.6
MFF Saint Martin d 75.99 317 *e*P **P 09 45 56.1 -0.5**
comp=Z,16nm,0.9s,mb4.8
MFF Saint Martin d 75.99 317 *e*P **P 09 45 56.1 -0.5**
MFF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
MFF Saint Martin d 75.99 317 *e*P **P 09 45 56.1 -0.5**
comp=Z,8.1nm,0.9s,mb4.8
LFF La Frestale 76.38 315 *e*P **P 09 45 58.6 -0.2**
ETSF Etsaut 78.29 314 *e*P **P 09 46 10.4 +0.8**
SFJD Kangerlussuaq 78.55 350 *i*P **P 09 46 09.2 -1.3**
SFJD pmax pmax
comp=Z,19nm,0.7s,mb5.2
SFJD Kangerlussuaq 78.55 350 *e*P **P 09 46 10.1 -0.5**
comp=Z,20nm,0.7s,mb5.2
SFJD Kangerlussuaq 78.55 350 *i*P **P 09 46 09.2 -1.3**
comp=Z,19nm,0.7s,mb5.2
SJPF Ste Jean 78.57 314 *e*P **P 09 46 10.3 -0.8**
comp=Z,10nm,0.8s,mb4.6
SJPF Ste Jean 78.57 314 *e*P **P 09 46 10.3 -0.8**
SJPF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SJPF Ste Jean 78.57 314 *e*P **P 09 46 10.3 -0.8**
comp=Z,5.2nm,0.8s,mb4.6
YKA Yellowknife Ar 79.62 18 P **P 09 46 16.0 -0.4**
comp=Z,4.6nm,0.8s,mb4.4,baz=326,slow=4.7,SNR=44
YKA PKKPbc PKKPbc 10 05 01.3 -3.2
comp=Z,0.5nm,0.6s,baz=151,slow=2.2,SNR=11
YKA Yellowknife Ar 79.62 18 P **P 09 46 16.0 -0.5**
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 79.62 18 P **P 09 46 16.1 -0.4**
YKA PKKPbc PKKPbc 10 05 01.3 -3.3
ESDC Sonseca Array 82.25 313 P **P 09 46 30.6 -0.4**
comp=Z,1.2nm,0.6s,mb4.2,baz=37,slow=5.5,SNR=12
FCC Fort Churchill 87.16 10 *e*P **P 09 46 54.2 -1.1**
comp=Z,0.2nm,0.9s
LSZ Lusaka 87.53 250 *e*P **P 09 46 57.3 -0.5**
LSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
LSZ Lusaka 87.53 250 *e*P **P 09 46 57.3 -0.5**
comp=Z,5.2nm,0.9s,mb4.9
FFC Flin Flon 89.55 15 *i*P **P 09 47 07.3 +0.5**
NEW Newport 90.72 27 *e*P **P 09 47 12.4 0.0**
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW Newport 90.72 27 *e*P **P 09 47 12.4 0.0**
comp=Z,5.5nm,0.9s,mb4.9
SCHQ Schefferville 92.19 355 P **P 09 47 19.4 +0.4**
comp=Z,2.6nm,1.0s,mb4.5,baz=235,slow=5.9,SNR=4.1
SCHQ Schefferville 92.19 355 P **P 09 47 19.4 +0.4**
SLMT Seeley Lake 92.91 25 *e*P **P 09 47 23.2 +0.6**
comp=Z,3.7nm,0.7s,mb4.9
TORD Torodi Ar. Bea 93.74 288 P **P 09 47 26.8 -0.2**
comp=Z,0.4nm,0.8s,mb3.8,baz=42,slow=4.9,SNR=4.7
MCMT McKenzie Canyo 95.20 26 *e*P **P 09 47 33.7 +0.5**
comp=Z,0.8nm,0.9s,mb4.2
RSSD Black Hills 98.77 21 *e*P **P 09 47 49.7 +0.4**
RSSD pmax pmax
comp=Z,1.0nm,0.7s,mb4.7
RSSD Black Hills 98.77 21 *e*P **P 09 47 49.7 +0.5**
comp=Z,1.4nm,0.7s,mb4.8
TXAR Lajitas Array 112.27 27 PKiKP PKiKP 09 52 45.5 -0.3
comp=Z,0.1nm,0.4s,baz=6.4,slow=1.1,SNR=9.0
QSPA South Pole Qui 122.82 180 *e*PKPdf PKPdf 09 53 02.9 -1.5
SDV Santo Domingo 138.09 353 *e*PKPdf PKPdf 09 53 32.8 -2.5
LPAZ La Paz 162.18 338 *e*PKIKP PKPdf 09 54 12.0 +0.3

NEIC ***25*** *09:39:54.8±2.0, 4°.51N×73°.78W, h25km±16km, mb3.8/1, Error ellipse: s-maj=15.6km s-min=12.9km az=131.0*
IDC ***25*** *09:39:54.2±2.5, 4°.45N×73°.83W, h22km±16km, mb3.3/6, mb1 3.8/8, mb1mx3.6/20, mbtmp3.6/8, ML4.4/2, Error ellipse: s-maj=19.3km s-min=19.1km az=41.0*
ISC 25 09:39:53.8±1.9, 4°.39N±0°.08×73°.9W±0°.1, h20km±13km, n15, σ0°.92/16, mb3.4/7, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.65**	**316**	Pg	**Pg**	**09 40 06.8**	**+0.2**
	449nm,0.3s,baz=98,slow=22,SNR=760						
SDV	**Santo Domingo**	**5.50**	**36**	Pn	**Pn**	**09 41 15.1**	**+0.4**
	21nm,0.3s,baz=219,slow=6.4,SNR=198						
SDV				Sn	**Sn**	**09 42 18.1**	**+0.6**
	20nm,0.3s,baz=70,slow=18,SNR=9.0						
SDV				Lg		09 42 46.9	
	16nm,0.3s,baz=309,slow=19,SNR=4.1						
SDV	**Santo Domingo**	**5.50**	**36**	*e*Pn	**Pn**	**09 41 14.6**	**-0.1**
SDV				*e*Sn	**Sn**	**09 42 18.6**	**+1.0**
SDV				Lg		09 42 46.9	
OTAV	**Otavalo**	**6.16**	**228**	*e*Pn	**Pn**	**09 41 29.0**	**+5.3**
	8.9nm,0.6s						
PCRV	**Puerto La Cruz**	**10.82**	**57**	Pn	**Pn**	**09 42 26.6**	**-1.1**
	1.9nm,0.3s,baz=205,slow=7.4,SNR=9.4						
LPAZ	**La Paz**	**21.32**	**165**	P	**P**	**09 44 41.4**	**+1.8**
	2.1nm,0.8s,mb3.5,baz=350,slow=14,SNR=7.4						
LPAZ	**La Paz**	**21.32**	**165**	*e*P	**P**	**09 44 41.0**	**+1.4**
	3.7nm,1.0s,mb3.7						
SIV	**San Ignacio**	**23.89**	**148**	P	**P**	**09 45 05.1**	**-1.3**
	0.9nm,1.0s,mb3.1,baz=297,slow=14,SNR=3.6						
SIV				Lg		09 52 19.0	
	3.3nm,0.8s,baz=250,slow=20,SNR=5.6						
TXAR	**Lajitas Array**	**37.56**	**315**	P	**P**	**09 47 12.2**	**+5.2**
	0.1nm,0.5s,mb2.8,baz=131,slow=7.5,SNR=3.6						
PDAR	**Pinedale Array**	**49.62**	**326**	P	**P**	**09 48 43.1**	**-0.8**
	0.3nm,0.7s,mb3.5,baz=127,slow=5.8,SNR=3.0						
NVAR	**Mina Array Bea**	**52.67**	**316**	P	**P**	**09 49 07.8**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=111,slow=7.2,SNR=3.7						
YKA	**Yellowknife Ar**	**65.28**	**341**	P	**P**	**09 50 33.0**	**-1.0**
	0.4nm,0.4s,mb3.8,baz=135,slow=6.1,SNR=13						
YKA	**Yellowknife Ar**	**65.28**	**341**	P	**P**	**09 50 33.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**74.98**	**78**	P	**P**	**09 51 34.9**	**+0.5**
	0.2nm,0.6s,mb3.2,baz=285,slow=6.6,SNR=4.3						
ASAR	**Alice Springs**	**147.06**	**232**	PKPbc	PKPbc	09 59 37.1	+1.0
	0.7nm,0.9s,baz=179,slow=2.3,SNR=5.2						

IDC 25 09:55:37.6±1.2, 12°.35N×143°.90E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/23, mbtmp3.8/7, Error ellipse: s-maj=43.2km s-min=33.0km az=84.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**37.10**	**195**	P	P	10 02 49.9	0.0
	0.2nm,0.7s,baz=17,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**61.73**	**317**	P	P	10 05 58.5	+0.6
	0.6nm,0.8s,baz=93,slow=7.3,SNR=3.8						
KURK	**Kurchatov**	**64.93**	**320**	P	P	10 06 19.3	+0.3
	0.4nm,0.4s,baz=102,slow=6.7,SNR=4.1						
BVAR	**Borovoye Array**	**70.32**	**322**	P	P	10 06 53.4	+0.4
	1.0nm,0.3s,baz=98,slow=8.2,SNR=8.1						
YKA	**Yellowknife Ar**	**84.39**	**27**	P	P	10 08 11.5	-0.2
	0.3nm,0.4s,baz=292,slow=5.3,SNR=7.2						
NVAR	**Mina Array Bea**	**88.43**	**51**	P	P	10 08 33.0	+0.9
	0.4nm,0.7s,baz=269,slow=5.6,SNR=4.4						
FINES	**FINESS Array B**	**91.88**	**335**	P	P	10 08 46.2	-1.5
	0.7nm,0.5s,baz=64,slow=3.2,SNR=6.3						

ISCJB ***25*** *09:57:07.1±0.8, 32°.35N±0°.04×104°.97E±0°.04, h8km±6km, mb3.8/12, Error ellipse: s-maj=7.5km s-min=5.7km az=144.0*
IDC ***25*** *09:57:07.8±1.1, 32°.37N×104°.89E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/27, mbtmp3.7/12, ML3.4/2, Error ellipse: s-maj=43.0km s-min=20.5km az=61.0*
NEIC ***25*** *09:57:09.2±0.4, 32°.33N×104°.89E, h10km, mb4.1/2, Error ellipse: s-maj=12.4km s-min=7.2km az=62.0*
BJI ***25*** *09:57:11.7, 32°.34N×104°.82E, h13km, ML3.7/9, Ms3.4/3, Ms7 3.3/3*
ISC 25 09:57:09.7±0.8, 32°.36N±0°.04×104°.88E±0°.04, h11km±6km, n22, σ0°.95/32, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.74**	**214**	Pn	**Pn**	**09 57 40.8**	**+1.0**
CD2				Pg	**Pg**	**09 57 42.5**	**-0.5**
CD2				Sg	**Sg**	**09 58 06.5**	**+1.0**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**3.78**	**63**	Pn	**Pn**	**09 58 10.3**	**+2.4**
XAN				Pg	**Pg**	**09 58 18.0**	**-4.0**
XAN				Sn	**Sn**	**09 58 58.0**	**+5.7**
XAN				Sg	**Sg**	**09 59 11.5**	**+0.5**
XAN				smax			
	comp=N,240nm,1.0s						
XAN				smax			
	comp=E,160nm,1.2s						
LZH	**Lanzhou**	**3.81**	**347**	*e*Pn	**Pn**	**09 58 14.0**	**+5.6**
LZH				Pg	**Pg**	**09 58 23.8**	**+1.0**
LZH				Sn	**Sn**	**09 59 01.8**	**+8.6**
LZH				Sg	**Sg**	**09 59 09.8**	**-2.4**
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,190nm,0.6s						
LZH				LR	LR		
	comp=N,490nm,5.2s						
LZH				LR	LR		
	comp=Z,500nm,6.4s						
ENH	**Enshi**	**4.46**	**117**	Pn	**Pn**	**09 58 16.4**	**-0.9**
ENH				*e*Pg	**Pg**	**09 58 33.3**	**-1.7**
ENH				*e*Sg	**Sg**	**09 59 33.1**	**+0.2**
GTA	**Gaotai**	**8.15**	**331**	*e*P	**Pn**	**09 59 13.5**	**+5.6**
GTA				pP		09 59 17.3	
GTA				sP		09 59 19.5	
CMAR	**Chiang Mai Arr**	**14.84**	**203**	Pn	**Pn**	**10 00 38.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=2.8						
SONM	**Songino Array**	**15.50**	**4**	Pn	**Pn**	**10 00 48.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=183,slow=9.1,SNR=2.8						
KSRS	**Korea Array**	**19.55**	**69**	P	**Pn**	**10 01 39.2**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=258,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**22.50**	**316**	P	**P**	**10 02 10.2**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.4,baz=114,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**25.90**	**332**	P	**P**	**10 02 41.8**	**+0.3**
	comp=Z,0.6nm,0.3s,mb3.5,baz=146,slow=13,SNR=3.2						
KURK	**Kurchatov**	**26.66**	**321**	P	**P**	**10 02 48.6**	**+0.1**
	comp=Z,0.6nm,0.4s,mb3.4,baz=126,slow=10,SNR=7.7						
ARU	**Arti**	**39.86**	**321**	*e*P	**P**	**10 04 43.5**	**+0.4**
	comp=Z,1.3nm,0.5s,mb3.9						
ARCES	**ARCESS Array B**	**56.39**	**335**	P	**P**	**10 06 49.6**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=70,slow=7.1,SNR=5.1						
BRTR	**Keskin Array B**	**56.70**	**299**	P	**P**	**10 06 53.1**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=87,slow=6.6,SNR=3.7						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**10 06 54.1**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.1,baz=93,slow=6.3,SNR=9.0						
AKASG	**Malin Array Be**	**57.02**	**313**	P	**P**	**10 06 54.8**	**-0.5**
	comp=Z,0.4nm,0.3s,mb4.0,baz=68,slow=8.1,SNR=4.6						
WRAB	**Tennant Creek**	**59.16**	**147**	*e*P	**P**	**10 07 10.5**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**62.23**	**150**	P	**P**	**10 07 31.8**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.8,baz=340,slow=7.0,SNR=8.5						
NB2	**NORSAR Subarra**	**63.96**	**327**	P	**P**	**10 07 41.3**	**-1.3**
	comp=Z,0.1nm,0.6s,mb3.0,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**63.96**	**327**	P	**P**	**10 07 41.4**	**-1.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=73,slow=6.5,SNR=3.8						
YKA	**Yellowknife Ar**	**80.30**	**17**	P	**P**	**10 09 20.2**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=325,slow=4.9,SNR=4.0						
YKA	**Yellowknife Ar**	**80.30**	**17**	P	**P**	**10 09 20.2**	**-0.2**

NEIC ***25*** *10:00:13.2, 18°.17N×100°.55W, h58km, MD3.6(MEX), After MEX.*
MEX 25 10:00:13.4±1.3, 18°.13N×100°.53W, h56km±38km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**1.01**	**75**	*i*P	Pn	10 00 29.9	-1.6
PLIG				*i*S	Sn	10 00 42.9	-1.9
PLIG	**Platanillo**	**1.01**	**75**	*i*P	Pn	10 00 29.9	-1.6
PLIG				*i*S	Sn	10 00 42.9	-1.9
ZIIG	**Zihuatanejo**	**1.03**	**240**	*i*P	Pn	10 00 30.2	-1.5
ZIIG				*i*S	Sn	10 00 43.6	-1.7
ZIIG	**Zihuatanejo**	**1.03**	**240**	*i*P	Pn	10 00 30.2	-1.5
ZIIG				*i*S	Sn	10 00 43.6	-1.7
CAIG	**El Cayaco**	**1.10**	**167**	*i*P	Pn	10 00 29.8	-2.9
CAIG				*i*S	Sn	10 00 45.0	-1.9
CAIG	**El Cayaco**	**1.10**	**167**	*i*P	Pn	10 00 29.8	-2.9
CAIG				*i*S	Sn	10 00 45.0	-1.9
ACX	**Acapulco**	**1.39**	**155**	*e*P	Pn	10 00 36.2	-0.2
ACX				*i*S	Sn	10 00 55.1	+1.4
ACX	**Acapulco**	**1.39**	**155**	*e*P	Pn	10 00 36.2	-0.2
ACX				*i*S	Sn	10 00 52.9	-0.8
MZVM		**1.62**	**49**	*i*P	Pn	10 00 38.2	-1.5
MZVM				*i*S	Sn	10 00 58.2	-1.3
IIO	**Organos**	**2.25**	**49**	*i*P	Pn	10 00 46.8	-1.4
IIO				*i*S	Sn	10 01 15.6	+0.9
IIO	**Organos**	**2.25**	**49**	*i*P	Pn	10 00 46.8	-1.4
IIO				*i*S	Sn	10 01 13.9	-0.8
UTMO	**Huajuapan**	**2.61**	**96**	*i*P	Pn	10 00 53.6	+0.4
UTMO				*i*S	Sn	10 01 28.5	+4.8
PNIG	**Pinotepa**	**2.87**	**127**	*e*P	Pn	10 00 57.2	+0.4
PNIG				*i*S	Sn	10 01 33.8	+3.7
PNIG	**Pinotepa**	**2.87**	**127**	*e*P	Pn	10 00 57.2	+0.4
PNIG				*i*S	Sn	10 01 33.8	+3.7

BJI ***25*** *10:28:17.3, 28°.01N×88°.53E, h15km, mb4.7/2, ML4.0/1, Ms4.1/2*
LDG ***25*** *10:28:20.8±0.6, 28°.75N×89°.33E, h10km, Mb4.4/7, Error ellipse: s-maj=28.6km s-min=12.7km az=144.0*
NEIC ***25*** *10:28:25.5±0.3, 28°.96N×89°.00E, h10km, mb4.4/17, Error ellipse: s-maj=8.1km s-min=6.0km az=48.0*
MOS ***25*** *10:28:29.8±1.0, 29°.00N×89°.08E, h58km, mb4.6/18, Error ellipse: s-maj=12.3km s-min=6.5km az=110.5*
IDC ***25*** *10:28:30.6±3.8, 29°.04N×89°.06E, h45km±35km, mb4.0/18, mb1 4.1/20, mb1mx4.0/27, mbtmp4.0/20, ML4.0/2, Error ellipse: s-maj=22.7km s-min=13.7km az=48.0*
DMN ***25*** *10:28:33.4±0.6, 29°.11N×89°.16E, h10km, Ml4.7/8, Error ellipse: s-maj=11.6km s-min=10.4km az=171.0*
ISC 25 10:28:25.4±0.7, 28°.99N±0°.04×88°.91E±0°.03, h7km±4km, n122, σ1°.16/135, mb4.3/36, 7C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Gangtok**	**1.68**	**189**	*e*P	**Pg**	**10 29 05.0**	**+7.5**
GTK				*e*S	**Sg**	**10 29 29.0**	**+10**
TAPN	**Taplejung**	**1.95**	**213**	*e*Pn	**Pg**	**10 29 08.8**	**+6.0**
TAPN				*e*Sn	**Sg**	**10 29 32.8**	**+4.7**
	477nm,0.3s						
LSA	**Lhasa**	**2.08**	**70**	Pg	**Pg**	**10 29 06.5**	**+1.3**
LSA				smax			
	comp=N,350nm,0.7s						
LSA				smax			
	comp=E,920nm,0.7s						
LSA	**Lhasa**	**2.08**	**70**	*e*Pn	**Pg**	**10 29 06.6**	**+1.4**
LSA				*e*Sn	**Sg**	**10 29 30.1**	**-2.1**
SLGI	**Shiliguri**	**2.33**	**191**	*ex*	x	10 29 25.0	
ODAN	**Odare**	**2.52**	**213**	*e*Pn	**Pg**	**10 29 15.5**	**+1.9**
ODAN				*e*Sn	**Sg**	**10 29 47.6**	**+1.3**
	comp=E,388nm,0.3s						
JIRN	**Jiri**	**2.74**	**242**	*e*Pn	**Pg**	**10 29 19.2**	**+1.2**
JIRN				*e*Sn	**Sg**	**10 29 53.6**	**0.0**
	comp=E,684nm,0.3s						
GUN	**Gumba**	**2.88**	**249**	*e*Pn	**Pg**	**10 29 21.6**	**+1.0**
GUN				*e*Sn	**Sg**	**10 29 56.9**	**-1.1**
	comp=E,662nm,0.3s						
RAMN	**Ramite**	**2.89**	**226**	*e*Pn	**Pg**	**10 29 20.2**	**-0.5**
RAMN				*e*Sn	**Sg**	**10 29 56.1**	**-2.0**
	comp=E,650nm,0.5s						
PKI	**Pulchoki**	**3.40**	**246**	*e*Pn	**Pg**	**10 29 27.9**	**-2.7**
PKI				*e*Sn	**Sg**	**10 30 08.0**	**-6.6**
	comp=E,257nm,0.2s						
PKIN	**Phulchoki**	**3.41**	**246**	*e*Pn	**Pg**	**10 29 29.2**	**-1.5**
PKIN				*e*Sn	**Sg**	**10 30 08.5**	**-6.4**
	comp=E,550nm,0.3s						
KKN	**Kakani**	**3.42**	**250**	*e*Pn	**Pg**	**10 29 28.2**	**-2.7**
KKN				*e*Sn	**Sg**	**10 30 08.1**	**-7.1**
DMN	**Daman**	**3.63**	**249**	*e*Pn	**Pg**	**10 29 31.1**	**-3.9**
DMN				*e*Sn	**Sg**	**10 30 14.9**	**-7.1**
	comp=E,271nm,0.2s						
SHL	**Shillong**	**4.32**	**142**	*i*P	**Pn**	**10 29 37.0**	**+5.5**
SHL				*e*S	**Sn**	**10 30 24.5**	**+2.4**
IMP	**Imphal**	**6.14**	**132**	*ex*	**Pn**	**10 30 01.0**	**+4.5**
IMP				*ex*	**Sn**	**10 31 00.0**	**-7.0**
KLP	**Kalpa**	**9.56**	**288**	*e*P	**Pn**	**10 30 45.4**	**+2.0**
KLP				*e*S	**Sn**	**10 32 26.9**	**-4.2**
KLP				AML	AML	10 32 40.6	
	comp=N,91nm,0.4s						
KLP				AML	AML	10 32 40.6	
	comp=E,108nm,0.6s						
AGRA	**Agra**	**9.84**	**262**	*e*P	**Pn**	**10 30 50.8**	**+3.4**
AGRA				*e*S	**Sn**	**10 32 35.0**	**-3.1**
AGRA				*e*S	**Sn**	**10 32 36.2**	**-2.0**
AGRA				AML	AML	10 32 42.4	
	comp=E,97nm,0.8s						
AGRA				AML	AML	10 32 43.0	
	comp=N,92nm,0.4s						
NDI	**New Delhi**	**10.26**	**271**	*e*P	**Pn**	**10 30 53.0**	**-0.1**
AYAN	**Aya Nagar**	**10.36**	**270**	*e*P	**Pn**	**10 30 55.7**	**+1.3**
AYAN				*e*S	**Sn**	**10 32 46.8**	**-4.0**
SONA	**Sohna**	**10.42**	**269**	*e*S	**Sn**	**10 32 48.8**	**-3.5**
SONA				*e*S	**Sn**	**10 32 50.7**	**-1.7**
KHET	**Khetri**	**11.56**	**269**	*e*P	**Pn**	**10 31 12.6**	**+1.7**
KHET				*e*S	**Sn**	**10 33 14.0**	**-6.3**
BHPL	**Bhopal**	**11.80**	**244**	*e*S	**Sn**	**10 33 19.6**	**-6.6**
NGP	**Nagpur**	**11.86**	**231**	*e*P	**Pn**	**10 31 15.2**	**+0.1**
NGP				*e*S	**Sn**	**10 33 21.1**	**-6.6**
AJM	**Ajmer**	**12.88**	**262**	*e*S	**Sn**	**10 33 44.3**	**-8.4**
AJM				AML	AML	10 33 56.8	
	comp=E,40nm,0.3s						
AJM				AML	AML	10 33 57.0	
	comp=N,40nm,0.4s						
CMAR	**Chiang Mai Arr**	**13.93**	**137**	P	**Pn**	**10 31 43.0**	**-0.3**
	comp=N,0.2nm,0.3s,baz=313,slow=12,SNR=6.7						
CEP	**Cherat**	**15.29**	**293**	P	**Pn**	**10 32 04.5**	**+2.8**
TKM2	**Tokmak 2**	**17.56**	**326**	*e*P	**Pn**	**10 32 33.9**	**+3.4**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TKM2	**Tokmak 2**	**17.56**	**326**	*e*P	**Pn**	**10 32 33.9**	**+3.4**
	comp=Z,2.7nm,0.8s						
AAK	**Ala-Archa**	**17.91**	**323**	*ce*P	**Pn**	**10 32 39.2**	**+4.3**
ENH	**Enshi**	**17.93**	**81**	*e*P	**Pn**	**10 32 34.3**	**-1.0**
EKS2	**Erkin-Say**	**18.31**	**322**	*e*P	**Pn**	**10 32 43.9**	**+4.1**
	comp=Z,4.9nm,0.9s						
MK31	**Makanchi Array**	**18.51**	**346**	*e*P	**Pn**	**10 32 43.0**	**+0.8**
MKAR	**Makanchi Array**	**18.51**	**346**	P	**Pn**	**10 32 43.4**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=149,slow=14,SNR=35						
MKAR	**Makanchi Array**	**18.51**	**346**	*i*P	**Pn**	**10 32 43.9**	**+1.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURK	**Kurchatov**	**23.05**	**343**	P	**P**	**10 33 30.7**	**-0.4**
	comp=Z,6.0nm,0.9s,mb4.0,baz=169,slow=8.1,SNR=26						
KURK	**Kurchatov**	**23.05**	**343**	*e*P	**P**	**10 33 32.7**	**+1.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**23.05**	**343**	*e*P	**P**	**10 33 32.7**	**+1.6**
	comp=Z,6.4nm,0.9s,mb4.0						
SONM	**Songino Array**	**23.17**	**31**	P	**P**	**10 33 32.8**	**+0.3**
	comp=Z,3.7nm,0.7s,mb3.9,baz=218,slow=9.9,SNR=22						
ULN	**Ulaanbaatar**	**23.50**	**32**	*e*P	**P**	**10 33 34.3**	**-1.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**23.50**	**32**	*e*P	**P**	**10 33 34.3**	**-1.6**
	comp=Z,4.5nm,0.8s,mb4.0						
ZAK	**Zakamensk**	**23.97**	**23**	*e*P	**P**	**10 33 40.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
ZAA0	**Zalesovo Array**	**25.11**	**354**	*e*P	**P**	**10 33 51.1**	**+0.5**
ZALV	**Zalesovo Beam**	**25.11**	**354**	P	**P**	**10 33 51.1**	**+0.5**
	comp=Z,3.3nm,0.5s,mb4.1,baz=177,slow=8.5,SNR=15						
NJ2	**Nanjing**	**25.93**	**76**	*e

DRGR		**53.61 309**	⇑ *i* P		**P**		**10 37 48.0**	**+0.8**
ARCES	**ARCESS Array B**	**53.89 337**	P		**P**		**10 37 49.3**	**+0.4**
	comp=Z,1.1nm,0.3s,mb4.2,baz=102,slow=7.4,SNR=27							
BILL	**Bilibino**	**58.74 25**	*e*P		**P**		**10 38 23.0**	**-0.5**
BILL			pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.7							
BILL	**Bilibino**	**58.74 25**	*e*P		**P**		**10 38 23.4**	**-0.2**
	comp=Z,6.9nm,0.9s,mb4.7							
NB2	**NORSAR Subarra**	**59.20 326**	P		**P**		**10 38 26.0**	**-0.8**
	comp=Z,5.3nm,1.1s,mb4.5,baz=84,slow=6.5							
NOA	**NORSAR Array B**	**59.20 326**	P		**P**		**10 38 26.2**	**-0.5**
	comp=Z,2.2nm,0.7s,mb4.3,baz=86,slow=6.8,SNR=8.5							
NOA	**NORSAR Array B**	**59.20 326**	P		**P**		**10 38 26.2**	**-0.6**
NOA			pmax		pmax			
	comp=Z,2.0nm,0.7s							
GERES	**GERESS Array B**	**59.35 312**	P		**P**		**10 38 28.6**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=75,slow=5.2,SNR=18							
CDF	**Champ du Feu**	**63.61 313**	*e*P		**P**		**10 38 56.9**	**0.0**
PGF	**Pioggiola**	**64.01 306**	*e*P		**P**		**10 38 59.1**	**-0.5**
LPG	**La Plagne**	**64.73 310**	*e*P		**P**		**10 39 04.9**	**+0.6**
LPL	**La Plagne**	**64.74 310**	*e*P		**P**		**10 39 04.6**	**+0.2**
WRAB	**Tennant Creek**	**65.49 133**	*e*P		**P**		**10 39 09.3**	**-0.1**
WRAB			pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.8							
WRAB	**Tennant Creek**	**65.49 133**	*e*P		**P**		**10 39 09.3**	**-0.1**
	comp=Z,6.1nm,0.6s,mb4.8							
ORIF	**Oris-en-Rattie**	**65.49 309**	*e*P		**P**		**10 39 08.8**	**-0.4**
SMF	**Signal de Mont**	**66.34 311**	*e*P		**P**		**10 39 13.5**	**-1.2**
SSF	**Saint Saulge**	**66.43 312**	*e*P		**P**		**10 39 14.7**	**-0.5**
AVF	**Avril sur Loir**	**66.61 312**	*e*P		**P**		**10 39 15.7**	**-0.7**
TCF	**Toulx Ste Croi**	**67.52 311**	*e*P		**P**		**10 39 22.1**	**-0.1**
	comp=Z,9.6nm,0.8s,mb4.6							
TCF	**Toulx Ste Croi**	**67.52 311**	*e*P		**P**		**10 39 22.1**	**-0.1**
TCF			pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
TCF	**Toulx Ste Croi**	**67.52 311**	*e*P		**P**		**10 39 22.1**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.6							
ASAR	**Alice Springs**	**67.94 136**	P		**P**		**10 39 25.2**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.5,baz=322,slow=6.5,SNR=48							
CAF	**Calviac**	**68.06 310**	*e*P		**P**		**10 39 25.8**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.2							
CAF	**Calviac**	**68.06 310**	*e*P		**P**		**10 39 25.8**	**+0.2**
CAF			pmax		pmax			
	comp=Z,1.0nm,0.6s,mb4.0							
CAF	**Calviac**	**68.06 310**	*e*P		**P**		**10 39 25.8**	**+0.2**
	comp=Z,1.5nm,0.6s,mb4.2							
LDF	**La Druitiere**	**68.26 314**	*e*P		**P**		**10 39 26.3**	**-0.5**
	comp=Z,4.6nm,0.4s,mb4.5							
RJF	**Les Rejaudoux**	**68.30 311**	*e*P		**P**		**10 39 27.5**	**+0.4**
	comp=Z,2.3nm,0.5s,mb4.1							
RJF	**Les Rejaudoux**	**68.30 311**	*e*P		**P**		**10 39 27.5**	**+0.4**
RJF			pmax		pmax			
	comp=Z,1.0nm,0.5s,mb4.1							
RJF	**Les Rejaudoux**	**68.30 311**	*e*P		**P**		**10 39 27.5**	**+0.4**
	comp=Z,1.1nm,0.5s,mb4.1							
GRR	**Gorron**	**68.79 314**	*e*P		**P**		**10 39 29.7**	**-0.4**
LFF	**La Frestale**	**68.94 310**	*e*P		**P**		**10 39 31.2**	**+0.1**
ROSF	**Rostrenen**	**70.31 315**	*e*P		**P**		**10 39 39.6**	**+0.1**
ETSF	**Etsaut**	**70.55 309**	*e*P		**P**		**10 39 41.2**	**+0.1**
	comp=Z,5.3nm,0.5s,mb4.5							
ETSF	**Etsaut**	**70.55 309**	*e*P		**P**		**10 39 41.2**	**+0.1**
ETSF			pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.5							
ETSF	**Etsaut**	**70.55 309**	*e*P		**P**		**10 39 41.2**	**+0.1**
	comp=Z,2.7nm,0.5s,mb4.4							
LSZ	**Lusaka**	**73.31 242**	*e*P		**P**		**10 39 58.8**	**+0.8**
LSZ			pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.5							
LSZ	**Lusaka**	**73.31 242**	*e*P		**P**		**10 39 58.8**	**+0.8**
	comp=Z,2.5nm,0.5s,mb4.4							
ESDC	**Sonseca Array**	**74.17 307**	P		**P**		**10 40 03.0**	**+0.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=56,slow=6.3,SNR=7.8							
ESDC	**Sonseca Array**	**74.17 307**	P		**P**		**10 40 03.0**	**+0.2**
INK	**Inuvik**	**78.04 15**	*e*P		**P**		**10 40 22.7**	**-1.6**
INK			pmax		pmax			
	comp=Z,1.0nm,0.7s							
INK	**Inuvik**	**78.04 15**	*e*P		**P**		**10 40 22.7**	**-1.6**
	comp=Z,1.1nm,0.7s,mb3.9							
STKA	**Stephens Creek**	**78.56 136**	P		**P**		**10 40 27.1**	**-0.5**
	comp=Z,2.4nm,1.0s,mb4.1,baz=333,slow=16,SNR=2.5							
LBTB	**Lobatse**	**81.13 235**	*e*P		**P**		**10 40 42.4**	**+0.7**
LBTB			pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.5							
LBTB	**Lobatse**	**81.13 235**	*e*P		**P**		**10 40 42.4**	**+0.6**
	comp=Z,4.2nm,0.6s,mb4.5							
TORD	**Torodi Ar. Bea**	**81.35 280**	P		**P**		**10 40 43.4**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=58,slow=4.4,SNR=13							
BOSA	**Boshof**	**83.57 232**	P		**P**		**10 40 55.0**	**+0.6**
	comp=Z,5.4nm,0.8s,mb4.8,baz=24,slow=4.4,SNR=14							
BOSA	**Boshof**	**83.57 232**	*e*P		**P**		**10 40 54.5**	**+0.1**
BOSA			pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.7							
BOSA	**Boshof**	**83.57 232**	*e*P		**P**		**10 40 54.5**	**+0.1**
	comp=Z,3.9nm,0.6s,mb4.7							
YKA	**Yellowknife Ar**	**86.90 11**	P		**P**		**10 41 08.8**	**-1.8**
	comp=Z,1.3nm,0.6s,mb4.3,baz=331,slow=4.6,SNR=21							
YKA	**Yellowknife Ar**	**86.90 11**	P		**P**		**10 41 08.8**	**-1.8**
YKA			pmax		pmax			
	comp=Z,1.0nm,0.6s							
DBIC	**Dimbokro**	**90.09 278**	P		**P**		**10 41 27.0**	**+0.4**
	comp=Z,6.7nm,0.8s,mb5.0,baz=27,slow=6.8,SNR=4.1							
DBIC	**Dimbokro**	**90.09 278**	P		**P**		**10 41 27.0**	**+0.3**
DBIC			pmax		pmax			
	comp=Z,7.0nm,0.8s							
TXAR	**Lajitas Array**	**120.77 13**	PKP		PKPdf		10 47 17.8	-0.9
	comp=Z,0.2nm,0.5s,baz=36,slow=1.1,SNR=7.6							
TXAR	**Lajitas Array**	**120.77 13**	PKIKP		PKPdf		10 47 17.8	-0.9
OTAV	**Otavalo**	**148.52 335**	*e*PKPdf		PKPdf		10 48 09.6	-0.6
CPUP	**Villa Florida**	**150.04 267**	PKPbc		PKPbc		10 48 16.4	-0.7
	comp=Z,6.8nm,0.5s,baz=61,slow=2.9,SNR=28							
CPUP	**Villa Florida**	**150.04 267**	PKIKP		PKPbc		10 48 16.5	-0.7
CPUP			pmax		pmax			
	comp=Z,7.0nm,0.5s							
CPUP	**Villa Florida**	**150.04 267**	*e*PKPbc		PKPbc		10 48 16.2	-0.9

*ISCJB **25** 10:43:54.4±0.5, 40°.60N±0°.03×34°.90E±0°.05, h10km, Error ellipse: s-maj=5.7km s-min=3.7km az=179.0*
*CSEM **25** 10:43:54.6±0.2, 40°.61N×34°.87E, h2km, MD3.0, Error ellipse: s-maj=4.6km s-min=3.2km az=91.0*
*DDA **25** 10:43:54.8, 40°.58N×34°.87E, h5km±2km, Ml3.0*
*ISK **25** 10:43:54.0, 40°.61N×34°.88E, h6km, MD3.0*

ISC 25 10:43:54.8±0.7, 40°.60N±0°.03×34°.93E±0°.05, h0km±9km, n27, σ0°82/37, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.11**	**281**	⇓ *i* Pg	**Pg**	**10 43 57.5**	**+0.6**
CTKT				*i* Sg	**Sg**	**10 43 58.0**	**-0.2**
CORM	**Corum**	**0.48**	**208**	PG	**Pg**	**10 44 03.8**	**-0.2**
CORM				*e*SG	**Sg**	**10 44 11.3**	**+1.2**
CORM	**Corum**	**0.48**	**208**	*i* Pg	**Pg**	**10 44 03.8**	**-0.2**
CORM				*e*Sg	**Sg**	**10 44 11.3**	**+1.1**
TOS	**Tosya**	**0.81**	**303**	*e*PG	**Pg**	**10 44 09.2**	**-1.2**
TOS	**Tosya**	**0.81**	**303**	*e*Pg	**Pg**	**10 44 09.2**	**-1.1**
BYBT	**Boyabat**	**0.87**	**352**	*e*PG	**Pg**	**10 44 11.3**	**-0.2**
BYBT				*e*SG	**Sg**	**10 44 22.9**	**+0.1**
BYBT	**Boyabat**	**0.87**	**352**	*e*Pg	**Pg**	**10 44 11.3**	**-0.2**
BYBT				*e*Sg	**Sg**	**10 44 22.9**	**+0.1**
KVT	**Kavak**	**0.97**	**60**	*e*PG	**Pg**	**10 44 13.8**	**+0.4**
KVT	**Kavak**	**0.97**	**60**	*e*Pg	**Pg**	**10 44 13.8**	**+0.4**
CANT	**Cankiri**	**1.00**	**271**	*e*PG	**Pg**	**10 44 12.5**	**-1.3**
YOZ	**Yozgat**	**1.01**	**163**	*e*PG	**Pg**	**10 44 13.2**	**-0.9**
YOZ	**Yozgat**	**1.01**	**163**	*e*Pg	**Pg**	**10 44 13.2**	**-0.9**
CDAG	**Cicekdag**	**1.07**	**204**	⇑ *i* P	**Pg**	**10 44 15.0**	**-0.2**
CDAG				*i* S	**Sg**	**10 44 28.9**	**-0.1**
CDAG	**Cicekdag**	**1.07**	**204**	*i* P	**Pg**	**10 44 15.0**	**-0.2**
CDAG				*i* S	**Sg**	**10 44 28.9**	**-0.1**
DIKM	**Dikmen**	**1.07**	**13**	*e*PG	**Pg**	**10 44 15.5**	**+0.1**
DIKM	**Dikmen**	**1.07**	**13**	*e*Pg	**Pg**	**10 44 15.5**	**+0.1**
BALT	**Daday**	**1.49**	**309**	*e*P	**Pn**	**10 44 22.4**	**-0.4**
BALT				*e*S	**Sg**	**10 44 45.0**	**+2.3**
BALT	**Daday**	**1.49**	**309**	*e*P	**Pn**	**10 44 22.4**	**-0.4**
BALT				*e*S	**Sg**	**10 44 45.0**	**+2.3**
BZK	**Bozkurt**	**1.52**	**333**	*e*PN	**Pn**	**10 44 22.6**	**-0.6**
BZK	**Bozkurt**	**1.52**	**333**	*e*Pn	**Pn**	**10 44 22.6**	**-0.6**
SVSK	**Karacayir**	**1.73**	**113**	*e*PN	**Pn**	**10 44 25.8**	**-0.2**
SVSK	**Karacayir**	**1.73**	**113**	*e*Pn	**Pn**	**10 44 25.8**	**-0.2**
AVNT	**Avonos**	**1.82**	**182**	*e*P	**Pn**	**10 44 14.2**	**-13**
AVNT				*e*S	**Sn**	**10 44 37.8**	**-13**
SARI	**SarD1z-Kayseri**	**2.36**	**144**	*e*PN	**Pn**	**10 44 36.2**	**+1.6**
SARI	**SarD1z-Kayseri**	**2.36**	**144**	*e*Pn	**Pn**	**10 44 36.2**	**+1.5**
SULT	**Sultanhani-AKS**	**2.64**	**205**	*e*PN	**Pn**	**10 44 38.3**	**-0.2**
SULT	**Sultanhani-AKS**	**2.64**	**205**	*e*Pn	**Pn**	**10 44 38.3**	**-0.2**

*ISCJB **25** 10:58:14.4±1.1, 31°.41N±0°.04×103°.53E±0°.08, h7km±7km, mb3.7/9, Error ellipse: s-maj=12.1km s-min=6.0km az=169.0*
*IDC **25** 10:58:14.5±1.1, 31°.25N×103°.48E, h0km, mb3.8/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.8/10, Error ellipse: s-maj=33.0km s-min=19.7km az=42.0*
*NEIC **25** 10:58:16.1±0.7, 31°.25N×103°.42E, h10km, mb4.1/2, Error ellipse: s-maj=19.2km s-min=9.9km az=224.0*
*BJI **25** 10:58:16.6, 31°.33N×103°.85E, h12km, mb4.0/2, ML3.7/15, Ms3.9/3*

ISC 25 10:58:15.2±1.0, 31°.42N±0°.03×103°.59E±0°.07, h0km±7km, n21, σ1°19/27, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.53**	**164**	Pg	**Pg**	**10 58 25.3**	**-0.1**
CD2				Sg	**Sg**	**10 58 32.8**	**+0.5**
CD2				smax			
	comp=N,5μm,0.4s						
LZH	**Lanzhou**	**4.66**	**3**	*e*Pg	**Pg**	**10 59 46.0**	**+1.5**
LZH				Sg	**Sg**	**11 00 43.3**	**-1.6**
LZH				smax			
	comp=N,100nm,0.8s						
LZH				smax			
	comp=E,58nm,0.7s						
XAN	**Xi'an**	**5.20**	**58**	Pn	**Pn**	**10 59 34.0**	**-0.2**
XAN				Pg	**Pb**	**10 59 47.5**	**+0.5**
XAN				Sn	**Sn**	**11 00 42.3**	**+7.4**
XAN				Sg	**Sg**	**11 01 00.5**	**-1.7**
XAN				smax			
	comp=N,96nm,0.9s						
XAN				smax			
	comp=E,38nm,0.7s						
ENH	**Enshi**	**5.20**	**101**	*e*Pn	**Pn**	**10 59 35.9**	**+1.6**
	comp=E,53nm,0.7s						
GYA	**Guiyang**	**5.63**	**151**	Pg	**Pb**	**10 59 49.3**	**-5.1**
GYA				Sn	**Sn**	**11 00 47.3**	**+1.7**
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,160nm,0.9s						
KMI	**Kunming**	**6.32**	**187**	Pn	**Pn**	**10 59 49.3**	**-0.4**
KMI				Sn	**Sn**	**11 01 00.3**	**-2.3**
KMI				smax			
	comp=N,27nm,0.8s						
KMI				smax			
	comp=E,26nm,0.9s						
KMI				LR	LR		
	comp=N,390nm,6.7s						
KMI				LR	LR		
	comp=E,1μm,8.3s						
GTA	**Gaotai**	**8.54**	**340**	*e*P	Px	11 00 57.0	
GTA				pP		11 01 01.5	
GTA				sP		11 01 04.0	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**13.57**	**199**	Pn	**Pn**	**11 01 33.0**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=3.4						
SONM	**Songino Array**	**16.53**	**7**	Pn	**Pn**	**11 02 09.5**	**+1.1**
	baz=193,slow=12,SNR=6.8						
KSRS	**Korea Array**	**20.93**	**67**	P	**P**	**11 02 58.9**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=255,slow=9.1,SNR=9.1						
MKAR	**Makanchi Array**	**22.45**	**319**	P	**P**	**11 03 15.5**	**-0.2**
	comp=Z,1.6nm,0.9s,mb3.5,baz=119,slow=13,SNR=8.0						
ZALV	**Zalesovo Beam**	**26.24**	**335**	P	**P**	**11 03 52.6**	**+0.8**
	comp=Z,2.2nm,0.7s,mb3.9,baz=128,slow=9.6,SNR=8.1						
KURK	**Kurchatov**	**26.73**	**323**	P	**P**	**11 03 57.0**	**+0.8**
	comp=Z,1.8nm,0.8s,mb3.9,baz=126,slow=10,SNR=18						
KURK	**Kurchatov**	**26.73**	**323**	*e*P	**P**	**11 03 56.9**	**+0.7**
	comp=Z,2.0nm,0.9s,mb3.9						
PETK	**Petropavlovsk-**	**44.27**	**44**	P	**P**	**11 06 28.6**	**+2.3**
	comp=Z,1.9nm,0.9s,mb3.8,baz=243,slow=6.3,SNR=2.9						
FINES	**FINESS Array B**	**57.06**	**326**	P	**P**	**11 08 03.1**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=79,slow=7.2,SNR=3.3						
WRAB	**Tennant Creek**	**58.98**	**146**	*e*P	**P**	**11 08 15.0**	**-1.7**
	comp=Z,2.6nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**61.99**	**148**	P	**P**	**11 08 36.1**	**-1.1**
	comp=Z,0.6nm,0.7s,mb3.9,baz=340,slow=7.2,SNR=10						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**11 08 50.0**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.8,baz=72,slow=8.8,SNR=3.2						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**11 10 33.7**	**-0.5**
	comp=Z,0.3nm,0.8s,mb3.5,baz=327,slow=5.3,SNR=3.6						
YKA	**Yellowknife Ar**	**81.52**	**17**	P	**P**	**11 10 33.7**	**-0.5**

*ISCJB **25** 11:04:11.0±0.9, 37°.96N±0°.06×23°.26E±0°.09, h133km±7km, Error ellipse: s-maj=13.3km s-min=8.1km az=146.6*
*CSEM **25** 11:04:11.7±0.4, 37°.92N×23°.24E, h129km±3km, ML2.7, Error ellipse: s-maj=8.9km s-min=6.0km az=55.0*
*NEIC **25** 11:04:12.5, 37°.84N×23°.22E, h118km, MG2.7(ATH), After ATH.*
*ATH **25** 11:04:12.5, 37°.84N×23°.22E, h118km±4km, ML2.7*
*ROM **25** 11:04:15.0±0.8, 38°.15N×22°.75E, h10km, Ml3.5/7, Error ellipse: s-maj=15.5km s-min=10.1km az=43.0*

ISC 25 11:04:12.0±0.9, 37°.94N±0°.06×23°.25E±0°.09, h127km±8km, n75, σ0°75/85, 4C-5D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.24**	**291**	*e*P	**Pn**	**11 04 29.2**	**-0.4**
LTK	**Loutraki**	**0.24**	**291**	*e*P	**Pn**	**11 04 29.2**	**-0.4**
NAIG	**Nisos Aigina**	**0.26**	**133**	*e*P	**Pn**	**11 04 29.5**	**-0.2**
NAIG	**Nisos Aigina**	**0.26**	**133**	*e*P	**Pn**	**11 04 29.5**	**-0.2**
ATH	**Athens Observa**	**0.37**	**84**	*e*P	**Pn**	**11 04 30.5**	**+0.4**
ATH				*e*S	**Sn**	**11 04 43.0**	**-0.7**
ATH	**Athens Observa**	**0.37**	**84**	*e*P	**Pn**	**11 04 30.5**	**+0.4**
ATH				*e*S	**Sn**	**11 04 43.0**	**-0.7**
PTL	**Penteli**	**0.50**	**77**	⇑ *i* P	**Pn**	**11 04 31.4**	**+0.7**
PTL				*e*S	**Sn**	**11 04 44.2**	**-0.7**
PTL	**Penteli**	**0.50**	**77**	⇑ *i* P	**Pn**	**11 04 31.4**	**+0.7**
PTL				*e*S	**Sn**	**11 04 44.2**	**-0.7**
GUR	**Goura**	**0.72**	**270**	*e*P	**Pn**	**11 04 32.3**	**+0.1**
GUR	**Goura**	**0.72**	**270**	*e*P	**Pn**	**11 04 32.3**	**+0.1**
LKR	**Lokris**	**0.74**	**345**	*e*P	**Pn**	**11 04 32.8**	**+0.4**
LKR				*e*S	**Sn**	**11 04 47.5**	**-0.3**
LKR	**Lokris**	**0.74**	**345**	*e*P	**Pn**	**11 04 32.8**	**+0.4**
LKR				*e*S	**Sn**	**11 04 47.5**	**-0.3**
VLX	**Vlachokerasia**	**0.89**	**231**	*e*P	**Pn**	**11 04 33.8**	**+0.1**
VLX	**Vlachokerasia**	**0.89**	**231**	*e*P	**Pn**	**11 04 33.8**	**+0.1**
EFP	**Efpalio**	**1.17**	**295**	*e*P	**Pn**	**11 04 37.4**	**+1.1**
EFP	**Efpalio**	**1.17**	**295**	*e*P	**Pn**	**11 04 37.4**	**+1.1**
VLI	**Veliai**	**1.24**	**192**	*e*P	**Pn**	**11 04 36.6**	**-0.5**
VLI	**Veliai**	**1.24**	**192**	*e*P	**Pn**	**11 04 36.6**	**-0.5**
ITM	**Ithomi**	**1.29**	**235**	⇑ *i* P	**Pn**	**11 04 37.9**	**+0.3**
ITM	**Ithomi**	**1.29**	**235**	⇑ *i* P	**Pn**	**11 04 37.9**	**+0.3**
RLS	**Riolos of Patr**	**1.41**	**275**	*e*P	**Pn**	**11 04 40.5**	**+1.6**
RLS	**Riolos of Patr**	**1.41**	**275**	*e*P	**Pn**	**11 04 40.5**	**+1.6**
EVR	**Evrytania**	**1.50**	**311**	*e*P	**Pn**	**11 04 41.7**	**+1.9**
EVR	**Evrytania**	**1.50**	**311**	*e*P	**Pn**	**11 04 41.7**	**+1.9**
PYL	**PYLOS**	**1.59**	**230**	*e*P	**Pn**	**11 04 40.0**	**-0.9**
PYL	**PYLOS**	**1.59**	**230**	*e*P	**Pn**	**11 04 40.0**	**-0.9**
KYTH	**Kithira**	**1.66**	**186**	*e*P	**Pn**	**11 04 41.4**	**-0.4**
KYTH	**Kithira**	**1.66**	**186**	*e*P	**Pn**	**11 04 41.4**	**-0.4**
APE	**Apeiranthos**	**2.01**	**115**	⇓ *i* P	**Pn**	**11 04 47.2**	**+1.2**
APE	**Apeiranthos**	**2.01**	**115**	⇓ *i* P	**Pn**	**11 04 47.2**	**+1.2**
VLS	**Valsamata**	**2.11**	**277**	*e*P	**Pn**	**11 04 46.9**	**-0.3**
VLS	**Valsamata**	**2.11**	**277**	*e*P	**Pn**	**11 04 46.9**	**-0.3**
VAM	**Vamos**	**2.64**	**163**	*e*P	**Pn**	**11 04 53.5**	**-0.4**
VAM	**Vamos**	**2.64**	**163**	*e*P	**Pn**	**11 04 53.5**	**-0.4**
SCTE	**Santa Cesarea**	**4.29**	**301**	Pn	**Pn**	**11 05 15.3**	**-0.2**
	35nm,0.2s						
SCTE	**Santa Cesarea**	**4.29**	**301**	Pn	**Pn**	**11 05 15.3**	**-0.2**
	35nm,0.2s						
TIP	**Timpagrande**	**5.24**	**286**	⇓ *i* Pn	**Pn**	**11 05 28.0**	**-0.2**
TIP	**Timpagrande**	**5.24**	**286**	⇓ *i* Pn	**Pn**	**11 05 28.0**	**-0.2**
	10.0nm,0.5s						
TIP	**Timpagrande**	**5.24**	**286**	⇓ *i* Pn	**Pn**	**11 05 28.0**	**-0.2**
	10.0nm,0.5s						
SERS	**Sersale**	**5.26**	**284**	Pn	**Pn**	**11 05 28.3**	**-0.2**
	11nm,0.6s						
SERS	**Sersale**	**5.26**	**284**	Pn	**Pn**	**11 05 28.3**	**-0.2**
	11nm,0.6s						
NOCI	**Noci**	**5.57**	**303**	Pn	**Pn**	**11 05 32.3**	**-0.4**
	20nm,0.3s						
NOCI	**Noci**	**5.57**	**303**	Pn	**Pn**	**11 05 32.3**	**-0.4**
	20nm,0.3s						
LTRZ	**Laterza**	**5.65**	**300**	Pn	**Pn**	**11 05 33.1**	**-0.7**
LTRZ				Sn	**Sn**	**11 06 31.1**	**-6.4**
LTRZ	**Laterza**	**5.65**	**300**	Pn	**Pn**	**11 05 33.1**	**-0.7**
LTRZ				Sn	**Sn**	**11 06 31.1**	**-6.4**
	11nm,0.2s						
LTRZ	**Laterza**	**5.65**	**300**	Pn	**Pn**	**11 05 33.1**	**-0.7**
LTRZ				Sn	**Sn**	**11 06 31.1**	**-6.4**
	11nm,0.2s						
CARO	**Carolei**	**5.66**	**286**	Pn	**Pn**	**11 05 35.6**	**+1.7**
	13nm,0.4s						
CARO	**Carolei**	**5.66**	**286**	Pn	**Pn**	**11 05 35.6**	**+1.7**
	13nm,0.4s						
CEL	**Celeste**	**5.81**	**275**	Pn	**Pn**	**11 05 35.2**	**-0.7**
CEL	**Celeste**	**5.81**	**275**	Pn	**Pn**	**11 05 35.2**	**-0.7**
CEL	**Celeste**	**5.81**	**275**	Pn	**Pn**	**11 05 35.2**	**-0.7**
CRAC	**Craco**	**5.82**	**297**	Pn	**Pn**	**11 05 36.3**	**+0.2**
	3868μm,76.0s						
CRAC	**Craco**	**5.82**	**297**	Pn	**Pn**	**11 05 36.3**	**+0.2**
	3868μm,76.0s						
SG1	**Sgolgore (BA)**	**5.86**	**302**	*e*Pn	**Pn**	**11 05 36.0**	**-0.5**
MIGL	**Miglionico**	**5.92**	**299**	Pn	**Pn**	**11 05 37.1**	**-0.2**
	50nm,0.9s						
MIGL	**Miglionico**	**5.92**	**299**	Pn	**Pn**	**11 05 37.1**	**-0.2**
	50nm,0.9s						
AMUR	**Altamura**	**5.94**	**302**	Pn	**Pn**	**11 05 37.1**	**-0.5**
	19nm,1.2s						
AMUR	**Altamura**	**5.94**	**302**	Pn	**Pn**	**11 05 37.1**	**-0.5**
	19nm,1.2s						
SCHR	**S. Chirico Rap**	**6.02**	**294**	Pn	**Pn**	**11 05 39.2**	**+0.5**
	41nm,2.7s						
SCHR	**S. Chirico Rap**	**6.02**	**294**	Pn	**Pn**	**11 05 39.2**	**+0.5**
	41nm,2.7s						
SIRI	**Monte Sirino -**	**6.17**	**294**	Pn	**Pn**	**11 05 41.0**	**+0.3**
SIRI	**Monte Sirino -**	**6.17**	**294**	Pn	**Pn**	**11 05 41.0**	**+0.3**
MCEL	**Monticello**	**6.26**	**295**	Pn	**Pn**	**11 05 42.1**	**+0.1**
	10.0nm,0.5s						
MCEL	**Monticello**	**6.26**	**295**	Pn	**Pn**	**11 05 42.1**	**+0.1**
	10.0nm,0.5s						
MRVN	**Minervino Murg**	**6.28**	**302**	Pn	**Pn**	**11 05 41.6**	**-0.7**
	5.0nm,0.3s						
MRVN	**Minervino Murg**	**6.28**	**302**	Pn	**Pn**	**11 05 41.6**	**-0.7**
	5.0nm,0.3s						
MGR	**Morigerati**	**6.38**	**293**	Pn	**Pn**	**11 05 43.4**	**-0.2**
MGR	**Morigerati**	**6.38**	**293**	Pn	**Pn**	**11 05 43.4**	**-0.2**
	4.0nm,0.7s						
MGR	**Morigerati**	**6.38**	**293**	Pn	**Pn**	**11 05 43.4**	**-0.2**
	4.0nm,0.7s						
STON	**Ston**	**6.50**	**321**	*e*Pn	**Pn**	**11 05 42.8**	**-2.3**
STON				Sn	**Sn**	**11 06 51.4**	**-6.4**
STON	**Ston**	**6.50**	**321**	*e*Pn	**Pn**	**11 05 42.8**	**-2.3**
CDRU	**Civita di Ruta**	**6.67**	**295**	Pn	**Pn**	**11 05 47.8**	**+0.3**
	6.0nm,0.5s						
CDRU	**Civita di Ruta**	**6.67**	**295**	Pn	**Pn**	**11 05 47.8**	**+0.3**
	6.0nm,0.5s						
MCRV	**Calabrutti - M**	**6.88**	**297**	Pn	**Pn**	**11 05 50.7**	**+0.5**
	135nm,0.7s						
MCRV	**Calabrutti - M**	**6.88**	**297**	Pn	**Pn**	**11 05 50.7**	**+0.5**
	135nm,0.7s						

GUC 25 11:43:55.5±0.7, 32°.06S×71°.64W, h39km±14km, MD3.5, ML2.7, 2C, Near coast of central Chile

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

ellipse: s-maj=47.9km s-min=35.9km az=16.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.32**	**202**	Pn	Pn	12 30 19.5	0.0
	0.1nm,0.3s,baz=17,slow=9.4,SNR=4.5						
KSRS	**Korea Array**	**19.29**	**70**	P	Pn	12 31 08.0	-1.1
	0.1nm,0.3s,baz=263,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**22.23**	**315**	P	P	12 31 40.2	+0.3
	0.5nm,0.8s,baz=110,slow=10,SNR=4.3						
KURK	**Kurchatov**	**26.36**	**320**	P	P	12 32 19.2	-0.2
	0.5nm,0.8s,baz=133,slow=9.1,SNR=3.0						

*IDC **25** 12:58:33.3±0.9, 56°.02N×153°.70W, h0km, mb3.7/16, mb1 3.9/17, mb1mx3.8/28, mbtmp3.7/17, ML3.5/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/39, Error ellipse: s-maj=24.1km s-min=14.5km az=23.0*

*NEIC **25** 12:58:36.1, 55°.90N×153°.42W, h25km, ML3.6(AEIC), After AEIC.*

ISC 25 12:58:35.1±1.7, 56°.08N±0°.06×153°.67W±0°.10, h12km±10km, n45, σ0°83/44, mb3.8/16, MS3.4/2, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.17**	**10**	P	**Pg**	12 58 57.3	-0.3
OHAK				S	**Sg**	12 59 13.7	+0.9
KDAK	**Kodiak Island**	**1.81**	**19**	Pn	**Pn**	12 59 06.2	+0.1
KDAK	**Kodiak Island**	**1.81**	**19**	P	**Pn**	12 59 06.1	0.0
KDAK				S	**Sn**	12 59 28.3	-0.8
CHGN	**Chignik**	**2.66**	**277**	*e*Pn	**Pn**	12 59 16.9	-0.8
SDPT	**Sand Point**	**3.92**	**262**	P	**Pn**	12 59 34.1	-1.0
RSO	**Redoubt South**	**4.43**	**6**	*e*Pn	**Pn**	12 59 43.1	+1.1
SEW	**Seward**	**4.62**	**27**	P	**Pn**	12 59 43.4	-1.2
SLKM	**Skilak Lake**	**4.80**	**21**	P	**Pn**	12 59 46.5	-0.7
SVW2	**Sparrevohn**	**5.14**	**350**	P	**Pn**	12 59 52.3	+0.6
PMR	**Palmer**	**6.01**	**21**	*e*Pn	**Pn**	13 00 03.9	+0.1
SKT	**Skwentna**	**6.03**	**10**	P	**Pn**	13 00 03.7	-0.3
EYAK	**Cordova Ski Ar**	**6.13**	**40**	P	**Pn**	13 00 03.9	-1.4
BMRM	**Bremner River**	**6.83**	**40**	*e*Pn	**Pn**	13 00 13.8	-1.1
	8.9nm,0.5s						
BMRM				*e*Sn	**Sn**	13 01 28.9	-3.5
TT01	**Tatalina**	**6.96**	**351**	P	**Pn**	13 00 17.3	+0.6
TRF	**Thorofare Moun**	**7.59**	**12**	P	**Pn**	13 00 25.7	+0.3
KTH	**Kantishna Hill**	**7.63**	**9**	P	**Pn**	13 00 26.6	+0.7
MCK	**McKinley**	**8.04**	**15**	P	**Pn**	13 00 31.4	-0.1
COLA	**College**	**9.28**	**16**	*e*Pn	**Pn**	13 00 49.0	+0.5
	2.3nm,0.5s						
IL1	**Eielson Array**	**9.34**	**18**	P	**Pn**	13 00 47.7	-1.6
IM3	**Indian Mountai**	**9.94**	**360**	P	**Pn**	13 00 58.2	+0.6
BM3	**Burnt Mountain**	**12.15**	**17**	P	**Pn**	13 01 26.1	-1.6
DIB	**Dawson Inlet,**	**12.60**	**94**	T		13 14 18.4	
	SNR=5.3						
DLBC	**Dease Lake**	**13.00**	**70**	LR	LR	13 05 57.6	
	comp=Z,145nm,20.3s,baz=200,slow=34						
INK	**Inuvik**	**15.34**	**29**	Pn	**Pn**	**13 02 13.4**	**+2.3**
	0.1nm,0.3s,baz=206,slow=12,SNR=4.2						
BBB	**Bella Bella**	**15.44**	**94**	LR	LR	13 06 51.5	
	comp=Z,65nm,19.3s,baz=254,slow=32						
YKA	**Yellowknife Ar**	**20.69**	**56**	P	**P**	**13 03 15.1**	**+0.4**
	0.7nm,0.6s,baz=268,slow=9.1,SNR=13						
YBH	**Yreka Blue Hor**	**24.64**	**113**	P	**P**	**13 03 55.1**	**-0.1**
	0.3nm,0.3s,mb3.3,baz=315,slow=2.9,SNR=3.0						
PETK	**Petropavlovsk-**	**27.87**	**285**	P	**P**	**13 04 24.2**	**-0.1**
	0.6nm,0.4s,mb3.6,baz=69,slow=14,SNR=13						
PETK	**Petropavlovsk-**	**27.87**	**285**	P	**P**	**13 04 24.2**	**-0.1**
RES	**Resolute Bay**	**28.90**	**28**	P	**P**	**13 04 33.6**	**+0.4**
	0.6nm,0.5s,mb3.5,baz=254,slow=8.7,SNR=4.7						
NVAR	**Mina Array Bea**	**29.35**	**112**	P	**P**	**13 04 37.4**	**-0.2**
	0.4nm,0.7s,mb3.3,baz=284,slow=15,SNR=4.9						
PDAR	**Pinedale Array**	**31.06**	**97**	P	**P**	**13 04 53.6**	**+0.9**
	0.3nm,0.7s,mb3.2,baz=311,slow=4.7,SNR=3.1						
TXAR	**Lajitas Array**	**44.09**	**106**	P	**P**	**13 06 43.8**	**+0.8**
	0.5nm,0.7s,mb3.3,baz=318,slow=5.1,SNR=7.5						
MDJ	**Mudanjiang**	**47.82**	**290**	P	**P**	**13 07 11.0**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,44nm,6.2s						
MDJ				LR	LR		
	comp=N,52nm,21.3s,MS3.5						
MDJ				LR	LR		
	comp=E,25nm,22.7s,MS3.5						
MDJ				LR	LR		
	comp=Z,30nm,19.9s,MS3.3						
ARCES	**ARCESS Array B**	**54.70**	**0**	P	**P**	**13 08 03.4**	**+0.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=12,slow=7.9,SNR=6.6						
ARCES	**ARCESS Array B**	**54.70**	**0**	P	**P**	**13 08 03.4**	**+0.1**
SONM	**Songino Array**	**56.86**	**308**	P	**P**	**13 08 20.2**	**+1.0**
	comp=Z,1.6nm,0.7s,mb4.1,baz=40,slow=7.5,SNR=9.3						
TEIG	**Tepich**	**59.75**	**99**	LR	LR	13 35 35.0	
	comp=Z,34nm,18.9s,MS3.5,baz=133,slow=37						
ZALV	**Zalesovo Beam**	**60.35**	**325**	P	**P**	**13 08 44.0**	**+0.6**
	comp=Z,1.2nm,0.5s,mb4.2,baz=40,slow=7.7,SNR=6.6						
FINES	**FINESS Array B**	**62.82**	**0**	P	**P**	**13 09 00.2**	**+0.3**
	comp=Z,0.6nm,0.5s,mb4.0,baz=31,slow=12,SNR=5.6						
BVAR	**Borovoye Array**	**65.39**	**332**	P	**P**	**13 09 17.4**	**+0.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=15,slow=6.4,SNR=5.4						
MKAR	**Makanchi Array**	**67.30**	**322**	P	**P**	**13 09 29.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=37,slow=5.8,SNR=4.7						
GERES	**GERESS Array B**	**74.92**	**9**	P	**P**	**13 10 15.5**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=346,slow=7.5,SNR=2.8						
ESDC	**Sonseca Array**	**81.21**	**23**	P	**P**	**13 10 50.3**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=337,slow=6.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**84.17**	**294**	P	**P**	**13 11 06.5**	**+0.3**
	comp=Z,0.6nm,0.3s,mb4.2,baz=15,slow=5.1,SNR=6.6						

IDC 25 13:19:49.4±5.2, 24°.84N×109°.33W, h0km, mb3.4/1, mb1 3.8/5, mb1mx3.6/21, mbtmp3.4/5, ML3.5/4, MS3.4/2, Ms1 3.5/2, ms1mx2.7/20, Error ellipse: s-maj=69.4km s-min=24.6km az=166.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.74**	**47**	Pn	Pn	13 21 31.2	+1.5
	0.2nm,0.3s,baz=226,slow=15,SNR=16						
TXAR				Sn	Sn	13 22 47.2	0.0
	0.5nm,0.3s,baz=221,slow=23,SNR=5.8						
TXAR				Lg		13 23 21.6	
	0.4nm,0.3s,baz=232,slow=31,SNR=3.9						
NVAR	**Mina Array Bea**	**15.54**	**333**	Pn	Pn	13 23 34.1	+4.3
	0.1nm,0.3s,baz=155,slow=13,SNR=12						
ELK	**Elko**	**16.61**	**344**	Pn	Pn	13 23 46.5	+2.9
	0.1nm,0.3s,baz=180,slow=13,SNR=3.8						
PDAR	**Pinedale Array**	**17.88**	**359**	P	Pn	13 24 00.2	+0.7
	0.1nm,0.3s,baz=169,slow=10,SNR=6.9						
TKL	**Tuckaleechee C**	**24.50**	**58**	LR	LR	13 35 33.8	
	comp=Z,54nm,19.6s,baz=278,slow=38						
YKA	**Yellowknife Ar**	**37.81**	**356**	P	P	13 27 06.4	-0.8
	0.6nm,0.9s,baz=174,slow=8.2,SNR=7.5						
LPAZ	**La Paz**	**57.31**	**131**	LR	LR	13 52 38.3	
	comp=Z,59nm,18.5s,baz=131,slow=34						

*ISCJB **25** 13:22:50.4±3.1, 31°.73S±0°.09×72°.29W±0°.08, h9km±20km, mb4.0/6, Error ellipse: s-maj=15.3km s-min=11.3km az=9.4*

*IDC **25** 13:22:51.0±1.4, 31°.67S×71°.92W, h0km, mb4.1/6, mb1 4.2/8, mb1mx4.1/16, mbtmp4.1/8, ML4.0/2, Error ellipse: s-maj=56.3km s-min=27.8km az=26.0*

*NEIC **25** 13:22:58.7±1.8, 31°.48S×71°.90W, h51km±13km, mb4.7/1, Error ellipse: s-maj=25.4km s-min=9.8km az=63.0*

ISC 25 13:22:51.5±3.8, 31°.70S±0°.09×72°.31W±0°.08, h5km±24km, n21, σ1°25/18, mb4.0/6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.02**	**28**	*e*Pn	**Pn**	**13 23 39.0**	**-0.9**
CFAA	**Coronel Fontan**	**3.47**	**89**	Pn	**Pn**	**13 23 46.9**	**+0.7**
	0.7nm,0.3s,baz=250,slow=11,SNR=55						
CFAA				Sn	**Sn**	**13 24 27.4**	**-0.3**
	2.1nm,0.3s,baz=306,slow=19,SNR=4.8						
CFAA				Lg		13 24 35.7	
	3.5nm,0.3s,baz=6.8,slow=20,SNR=14						
CFAA	**Coronel Fontan**	**3.47**	**89**	Pn	**Pn**	**13 23 46.9**	**+0.7**
CFAA				Sn	**Sn**	**13 24 27.4**	**-0.3**
CFAA				Lg		13 24 35.7	
TRQA	**Tornquist**	**10.59**	**130**	*e*P	**Pn**	**13 25 25.6**	**+1.7**
	12nm,0.8s						
CPUP	**Villa Florida**	**14.15**	**72**	Pn	**Pn**	**13 26 07.3**	**-5.4**
	0.2nm,0.3s,baz=255,slow=19,SNR=3.2						
CPUP				Sn	**Sn**	**13 28 51.2**	**+1.1**
	0.2nm,0.3s,baz=270,slow=20,SNR=2.9						
LPAZ	**La Paz**	**15.81**	**15**	Pn	**Pn**	**13 26 34.0**	**-0.9**
	0.2nm,0.3s,baz=194,slow=5.5,SNR=10.0						
VNA2	**Neumayer--Watz**	**52.22**	**158**	*e*	**P**	**13 32 01.3**	**-1.7**
TXAR	**Lajitas Array**	**67.62**	**331**	P	**P**	**13 33 50.4**	**+1.1**
	0.3nm,0.8s,mb3.4,baz=132,slow=7.4,SNR=4.6						
DBIC	**Dimbokro**	**74.67**	**72**	P	**P**	**13 34 30.9**	**-1.6**
	5.1nm,0.8s,mb4.5,baz=250,slow=15,SNR=3.7						
DBIC	**Dimbokro**	**74.67**	**72**	*e*P	**P**	**13 34 30.9**	**-1.5**
	8.4nm,0.9s,mb4.7						
BOSA	**Boshof**	**81.35**	**118**	P	**P**	**13 35 08.2**	**-1.2**
	2.9nm,0.9s,mb4.2,baz=232,slow=11,SNR=3.7						
NVAR	**Mina Array Bea**	**81.87**	**325**	P	**P**	**13 35 13.0**	**+1.3**
	0.9nm,0.8s,mb3.7,baz=149,slow=6.2,SNR=6.1						
NVAR	**Mina Array Bea**	**81.87**	**325**	P	**P**	**13 35 13.0**	**+1.3**
ELK	**Elko**	**82.29**	**329**	P	**P**	**13 35 15.7**	**+1.8**
	0.6nm,0.5s,mb3.8,baz=163,slow=4.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**83.65**	**70**	P	**P**	**13 35 20.3**	**-1.2**
	3.8nm,0.8s,mb4.6,baz=253,slow=4.4,SNR=20						
BRVK	**Borovoye**	**145.65**	**41**	*e*PKP	PKPdf	13 42 30.6	+0.1
BVAR	**Borovoye Array**	**145.72**	**41**	PKPbc	PKPbc	13 42 31.0	0.0
	1.2nm,0.4s,baz=266,slow=5.8,SNR=11						
BVAR				pPKPbc	pPKPbc	13 42 39.9	+7.2
	2.7nm,0.6s,baz=296,slow=4.8,SNR=8.9						
KURK	**Kurchatov**	**151.31**	**40**	*e*PKPbc	PKPbc	13 42 45.1	-0.7
ZAA0	**Zalesovo Array**	**152.38**	**30**	*e*PKPbc	PKPbc	13 42 47.2	-0.8
ZALV	**Zalesovo Beam**	**152.38**	**30**	PKPbc	PKPbc	13 42 47.5	-0.6
	2.0nm,0.6s,baz=294,slow=3.8,SNR=10						
ZALV				pPKPbc	pPKPbc	13 42 54.4	+4.5
	2.2nm,0.5s,baz=311,slow=3.1,SNR=6.6						
MKAR	**Makanchi Array**	**155.37**	**45**	PKPbc	PKPdf	13 42 53.8	+8.1
	0.3nm,0.7s,baz=288,slow=1.5,SNR=3.2						
MKAR				PKPab	PKPab	13 43 10.5	-0.6
	0.9nm,0.8s,baz=318,slow=1.6,SNR=7.8						

*ISCJB **25** 13:47:17.8±1.0, 13°.9S±0°.2×72°.8W±0°.1, h78km±14km, mb3.8/4, Error ellipse: s-maj=37.6km s-min=6.9km az=33.0*

*IDC **25** 13:47:18.6±1.6, 13°.80S×72°.79W, h65km±20km, mb3.3/3, mb1 3.9/7, mb1mx3.6/19, mbtmp3.6/7, Error ellipse: s-maj=62.1km s-min=10.5km az=29.0*

*NEIC **25** 13:47:19.4±1.2, 13°.77S×72°.74W, h74km±13km, mb4.6/1, Error ellipse: s-maj=40.6km s-min=11.7km az=211.0*

ISC 25 13:47:19.3±0.8, 13°.8S±0°.2×72°.8W±0°.1, h70km±12km, n14, σ1°03/15, mb3.8/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.35**	**294**	P	**Pn**	**13 48 21.5**	**-1.4**
	10nm,0.3s,baz=108,slow=10,SNR=13						
NNA				S	**Sn**	**13 49 12.3**	**-0.1**
	14nm,0.3s,baz=205,slow=19,SNR=4.2						
NNA	**Nana**	**4.35**	**294**	*e*Pn	**Pn**	**13 48 23.2**	**+0.3**
NNA				*e*Sn	**Sn**	**13 49 12.6**	**+0.3**
LPAZ	**La Paz**	**5.13**	**120**	P	**Pn**	**13 48 35.0**	**+1.4**
	5.8nm,0.3s,baz=305,slow=10.0,SNR=150						
LPAZ				S	**Sn**	**13 49 32.2**	**+0.8**
	0.2nm,0.3s,baz=38,slow=19,SNR=3.9						
LPAZ	**La Paz**	**5.13**	**120**	*e*P	**Pn**	**13 48 35.3**	**+1.7**
LPAZ				S	**Sn**	**13 49 32.2**	**+0.8**
ATAH	**Atahualpa**	**8.72**	**320**	S	**Sn**	**13 50 59.6**	**+0.1**
	0.5nm,0.3s,baz=101,slow=10,SNR=3.2						
SIV	**San Ignacio**	**11.52**	**102**	P	**Pn**	**13 49 58.7**	**-2.3**
	2.8nm,0.3s,baz=298,slow=11,SNR=55						
CPUP	**Villa Florida**	**19.11**	**133**	P	**Pn**	**13 51 37.1**	**-1.0**
	0.4nm,0.3s,baz=303,slow=9.2,SNR=5.0						
TXAR	**Lajitas Array**	**52.22**	**325**	P	**P**	**13 56 23.8**	**+0.4**
	0.6nm,0.5s,mb3.9,baz=152,slow=9.0,SNR=12						
SDCO	**Great Sand Dun**	**59.76**	**330**	*e*P	**P**	**13 57 18.1**	**+1.1**
	8.7nm,1.7s,mb4.5						
PDAR	**Pinedale Array**	**65.62**	**331**	P	**P**	**13 57 56.2**	**+0.3**
	0.2nm,0.5s,mb3.2,baz=149,slow=7.2,SNR=3.0						
YKA	**Yellowknife Ar**	**82.74**	**342**	P	**P**	**13 59 34.1**	**-1.0**
	0.5nm,0.8s,mb3.4,baz=141,slow=4.8,SNR=7.2						
ASAR	**Alice Springs**	**134.54**	**215**	PKP	PKPdf	14 06 28.1	-2.4
	0.2nm,0.7s,baz=140,slow=2.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**136.22**	**19**	PKP	PKPdf	14 06 32.1	-0.5
	0.8nm,0.5s,baz=340,slow=2.2,SNR=4.0						
SONM	**Songino Array**	**146.05**	**1**	PKPbc	PKPbc	14 06 51.4	+0.1
	1.0nm,0.4s,baz=339,slow=3.7,SNR=5.2						

CASC 25 13:56:05.3±2.4, 13°.69N×92°.18W, h47km±159km, MD3.6, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.82**	**40**	*e*P	Pn	13 56 20.4	-0.1
FUG	**Fuego 3**	**1.50**	**60**	*e*P	Pn	13 56 29.9	+0.2
FG6		**1.52**	**55**	*e*P	Pn	13 56 30.4	+0.3
TP2	**Tecpan 2**	**1.56**	**46**	*e*P	Pn	13 56 31.0	+0.3
RBDL	**Robledal**	**2.46**	**80**	*e*P	Pn	13 56 44.2	+1.3
RBDL				*e*S	Sn	13 57 14.1	+2.4
SBLS	**San Blas**	**2.49**	**86**	*e*P	Pn	13 56 44.7	+1.4
SBLS				*e*S	Sn	13 57 13.7	+1.3
SNJE	**San Jose**	**2.50**	**86**	*e*P	Pn	13 56 45.7	+2.1
SNJE				*e*S	Sn	13 57 13.6	+0.7

*ISK **25** 14:02:34.5, 37°.01N×29°.17E, h6km, MD3.4*

*CSEM **25** 14:02:35.5±0.2, 36°.97N×29°.17E, h10km, MD3.4, Error ellipse: s-maj=3.8km s-min=3.6km az=57.0*

*ISCJB **25** 14:02:35.3±0.5, 37°.01N±0°.02×29°.19E±0°.03, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=35.1*

*IDC **25** 14:02:35.8±1.8, 36°.84N×29°.28E, h0km, mb3.4/1, mb1 3.4/5, mb1mx3.2/26, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=32.6km s-min=20.1km az=166.0*

*DDA **25** 14:02:36.0, 36°.98N×29°.24E, h7km±5km, Md3.2*

*NEIC **25** 14:02:37.1±0.5, 36°.84N×29°.37E, h10km, MD3.2(ISK), MD3.6(ATH), Error ellipse: s-maj=12.8km s-min=6.2km az=146.0*

*ATH **25** 14:02:39.0, 36°.77N×29°.10E, h17km±1km, MD3.6/7*

ISC 25 14:02:36.0±0.4, 37°.00N±0°.02×29°.22E±0°.03, h7km±4km, n86, σ1°18/106, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**55**	*e*PG	**Pg**	**14 02 41.3**	**-0.1**
GLHS				*e*SG	**Sg**	**14 02 46.0**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.27**	**55**	*e*Pg	**Pg**	**14 02 41.3**	**-0.1**
GLHS				*e*Sg	**Sg**	**14 02 46.0**	**+0.9**
GOLH	**Golhisar**	**0.36**	**49**	*i* P	**Pg**	**14 02 43.2**	**+0.1**
GOLH				*i* S	**Sg**	**14 02 50.0**	**+2.1**
GOLH	**Golhisar**	**0.36**	**49**	*i* P	**Pg**	**14 02 43.2**	**+0.1**
GOLH				*i* S	**Sg**	**14 02 50.0**	**+2.1**
FETY	**Fethiye**	**0.38**	**197**	*e*PG	**Pg**	**14 02 42.2**	**-1.1**
FETY				*e*SG	**Sg**	**14 02 48.5**	**+0.2**
FETY	**Fethiye**	**0.38**	**197**	*e*Pg	**Pg**	**14 02 42.2**	**-1.1**
FETY				*e*Sg	**Sg**	**14 02 48.5**	**+0.2**
TURN	**Turunc**	**0.51**	**256**	*i* P	**Pg**	**14 02 52.1**	**+6.2**
TURN				*i* S	**Sg**	**14 03 05.9**	**+13**
ELL	**Elmali**	**0.61**	**114**	*e*PG	**Pg**	**14 02 47.1**	**-0.7**
ELL	**Elmali**	**0.61**	**114**	*e*Pg	**Pg**	**14 02 47.1**	**-0.6**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**14 02 49.3**	**-0.3**
DNZL				*i* S	**Sg**	**14 02 58.8**	**0.0**
DNZL	**Cakiroluk**	**0.70**	**349**	*i* P	**Pg**	**14 02 49.3**	**-0.3**
DNZL				*i* S	**Sg**	**14 02 58.8**	**0.0**
YER	**Yerkesik**	**0.76**	**281**	*e*PG	**Pg**	**14 02 48.4**	**-2.2**
YER	**Yerkesik**	**0.76**	**281**	*e*Pg	**Pg**	**14 02 48.4**	**-2.2**
DENT	**Denizli**	**0.77**	**349**	*e*PG	**Pg**	**14 02 49.5**	**-1.4**
DENT	**Denizli**	**0.77**	**349**	*e*Pg	**Pg**	**14 02 49.5**	**-1.3**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**14 02 51.6**	**-0.2**
AKAS				*i* S	**Sg**	**14 03 04.8**	**+2.3**
AKAS	**Kas**	**0.82**	**158**	*i* P	**Pg**	**14 02 51.6**	**-0.2**
AKAS				*i* S	**Sg**	**14 03 04.8**	**+2.3**
KSL	**Kastellorizon**	**0.90**	**161**	*e*PN	**Pg**	**14 02 53.2**	**0.0**
ANTB	**Antalya**	**1.15**	**94**	*e*PN	**Pg**	**14 02 57.9**	**-0.3**
ANTB	**Antalya**	**1.15**	**94**	*e*Pn	**Pg**	**14 02 57.9**	**-0.3**
ARG	**Arkhangelos**	**1.18**	**229**	*e*PN	**Pn**	**14 02 57.5**	**-1.4**
ARG	**Arkhangelos**	**1.18**	**229**	*e*Pn	**Pn**	**14 02 57.5**	**-1.4**
BCK	**Bucak**	**1.19**	**67**	*e*PN	**Pn**	**14 02 57.4**	**-1.7**
BCK	**Bucak**	**1.19**	**67**	*e*Pn	**Pn**	**14 02 57.4**	**-1.7**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**14 02 57.2**	**-1.9**
MLSB	**Milas**	**1.19**	**285**	*e*Pn	**Pn**	**14 02 57.2**	**-1.9**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pn**	**14 03 00.8**	**+0.8**
AYDN				*i* S	**Sb**	**14 03 18.9**	**+2.5**
AYDN	**Tasoluk**	**1.26**	**302**	*i* P	**Pn**	**14 03 00.8**	**+0.8**
AYDN				*i* S	**Sb**	**14 03 18.9**	**+2.5**
ISP	**Isparta**	**1.33**	**50**	*e*PN	**Pn**	**14 03 00.7**	**-0.4**
ISP	**Isparta**	**1.33**	**50**	*e*P	**Pn**	**14 03 01.3**	**+0.2**
ISP	**Isparta**	**1.33**	**50**	*e*Pn	**Pn**	**14 03 00.7**	**-0.4**
ISP	**Isparta**	**1.33**	**50**	*e*P	**Pn**	**14 03 01.3**	**+0.2**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**14 03 00.3**	**-0.9**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**14 03 00.3**	**-0.9**
KHL	**Karahalli**	**1.34**	**10**	*e*PN	**Pn**	**14 03 00.4**	**-0.9**
KHL	**Karahalli**	**1.34**	**10**	*e*Pn	**Pn**	**14 03 00.4**	**-0.9**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**14 03 02.1**	**+0.3**
KHAL				*i* S	**Sb**	**14 03 22.7**	**+2.5**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**14 03 02.2**	**+0.4**
KHAL				*i* S	**Sb**	**14 03 22.7**	**+2.5**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*PN	**Pn**	**14 03 03.1**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.50**	**71**	*e*Pn	**Pn**	**14 03 03.1**	**-0.3**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*PN	**Pn**	**14 03 03.2**	**-1.2**
KULA	**Kula-Manisa**	**1.58**	**344**	*e*Pn	**Pn**	**14 03 03.3**	**-1.2**
MANT	**Manisa**	**1.58**	**341**	*i* P	**Pn**	**14 03 04.7**	**+0.2**
MANT	**Manisa**	**1.58**	**341**	*i* P	**Pn**	**14 03 04.7**	**+0.2**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN	**Pn**	**14 03 07.4**	**-1.2**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*Pn	**Pn**	**14 03 07.4**	**-1.2**
IZM	**Izmir**	**2.09**	**313**	*e*PN	**Pn**	**14 03 09.9**	**-1.6**
IZM	**Izmir**	**2.09**	**313**	*e*Pn	**Pn**	**14 03 09.9**	**-1.6**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**14 03 12.3**	**-0.3**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**14 03 12.3**	**-0.3**
AKS	**Akhisar**	**2.18**	**330**	*e*PN	**Pn**	**14 03 11.6**	**-1.2**
AKS	**Akhisar**	**2.18**	**330**	*e*Pn	**Pn**	**14 03 11.6**	**-1.2**
KARP	**Karpathos**	**2.20**	**230**	*e*PN	**Pn**	**14 03 14.3**	**+1.2**
KARP	**Karpathos**	**2.20**	**230**	*e*Pn	**Pn**	**14 03 14.3**	**+1.2**
BLCB	**Balcova**	**2.21**	**309**	*e*PN	**Pn**	**14 03 11.8**	**-1.4**
BLCB	**Balcova**	**2.21**	**309**	*e*Pn	**Pn**	**14 03 11.8**	**-1.4**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**14 03 19.1**	**+0.3**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**14 03 19.1**	**+0.4**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*PN	**Pn**	**14 03 19.6**	**+0.1**
KONT	**Konya--Tatoy**	**2.67**	**68**	*e*Pn	**Pn**	**14 03 19.6**	**+0.1**
LADK	**Ladik-KONYA**	**2.77**	**63**	*e*PN	**Pn**	**14 03 21.2**	**+0.3**
LADK	**Ladik-KONYA**	**2.77**	**63**	*e*Pn	**Pn**	**14 03 21.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**3.04**	**36**	*e*PN	**Pn**	**14 03 24.8**	**+0.2**
SVRH	**Sivrihisar-ESK**	**3.04**	**36**	*e*Pn	**Pn**	**14 03 24.8**	**+0.2**
ZKR	**Zakros**	**3.07**	**233**	*e*PN	**Pn**	**14 03 26.6**	**+1.6**
ZKR	**Zakros**	**3.07**	**233**	*e*Pn	**Pn**	**14 03 26.6**	**+1.6**
NPS	**Neapolis**	**3.39**	**240**	*e*PN	**Pn**	**14 03 31.0**	**+1.6**
NPS	**Neapolis**	**3.39**	**240**	*e*Pn	**Pn**	**14 03 31.0**	**+1.6**
LAST	**Lasithi**	**3.54**	**240**	*e*PN	**Pn**	**14 03 33.3**	**+1.9**
LAST	**Lasithi**	**3.54**	**240**	*e*Pn	**Pn**	**14 03 33.3**	**+1.9**
XRY	**Khrisi**	**3.56**	**235**	*e*PN	**Pn**	**14 03 33.3**	**+1.6**
XRY	**Khrisi**	**3.56**	**235**	*e*Pn	**Pn**	**14 03 33.3**	**+1.6**
YLV	**Yalova**	**3.57**	**2**	*e*PN	**Pn**	**14 03 32.5**	**+0.7**
YLV	**Yalova**	**3.57**	**2**	*e*Pn	**Pn**	**14 03 32.5**	**+0.7**
LPK	**Lapseki**	**3.88**

RKT *e*LR LR 15 13 04.0
549nm,37.5s
TAOE Nuku Hiva Isla 28.23 296 *e*LR LR 15 17 17.4
548nm,26.3s,baz=130
PPT Papeete 33.16 273 *e*LR LR 15 19 24.0
116nm,24.2s
LPAZ La Paz 44.17 90 P P 15 12 26.6 +1.2
0.8nm,0.9s,baz=252,slow=6.4,SNR=2.6
LPAZ LR LR 15 26 09.7
comp=Z,55nm,19.4s,baz=315,slow=30
ROSC El Rosal 48.17 60 LR LR 15 28 05.9
comp=Z,101nm,21.0s,baz=208,slow=30
NVAR Mina Array Bea 61.28 357 P P 15 14 32.9 +1.4
0.8nm,0.7s,baz=191,slow=9.3,SNR=6.6
PDAR Pinedale Array 65.68 4 P P 15 15 00.1 -0.6
0.4nm,0.7s,baz=170,slow=4.4,SNR=3.9
PDAR LR LR 15 39 37.2
comp=Z,46nm,21.1s,baz=57,slow=32
DZM Mont Dzumac 71.94 253 *e*LR LR 15 37 54.3
128nm,28.1s
YKA Yellowknife Ar 85.28 0 P P 15 16 53.0 +0.3
0.7nm,0.9s,baz=170,slow=5.8,SNR=7.6
SCHQ Schefferville 87.71 25 LR LR 15 50 23.8
comp=Z,82nm,20.4s,baz=304,slow=32
ZALV Zalesovo Beam 145.86 339 PKPbc PKPbc 15 23 54.4 -1.1
0.5nm,0.4s,baz=0.0,slow=2.9,SNR=4.3
CMAR Chiang Mai Arr 148.30 268 PKPbc PKPbc 15 24 03.8 +0.3
0.7nm,0.8s,baz=48,slow=1.3,SNR=5.8
BRTR Keskin Array B 148.46 51 PKPbc PKPbc 15 24 02.2 -1.1
0.3nm,0.5s,baz=197,slow=4.5,SNR=2.4
BVAR Borovoye Array 149.86 354 PKPbc PKPbc 15 24 05.7 -0.6
0.9nm,0.5s,baz=202,slow=1.6,SNR=6.4
KURK Kurchatov 150.54 343 PKPbc PKPbc 15 24 08.2 +0.1
1.0nm,0.8s,baz=26,slow=2.3,SNR=7.0
MKAR Makanchi Array 152.68 334 PKPbc PKPbc 15 24 11.9 -1.3
0.4nm,0.8s,baz=56,slow=3.6,SNR=3.3

NEIC ***25*** *15:05:01.0, 15°.80N×94°.05W, h24km, MD3.8(MEX), After MEX.*
MEX 25 15:05:01.0±0.6, 15°.80N×94°.05W, h24km±31km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.80**	**97**	*i* P	Pb	15 05 13.4	-2.9
PCIG				*i* S	Sb	15 05 24.0	-2.8
TGIG		**1.32**	**42**	*i* P	Pn	15 05 21.4	-2.5
TGIG				*i* S	Sn	15 05 36.8	-3.9
SCX	**San Cristobal**	**1.64**	**55**	*i* P	Pn	15 05 26.0	-2.4
SCX				*i* S	Sn	15 05 46.0	-2.8
SCX	**San Cristobal**	**1.64**	**55**	*i* P	Pn	15 05 26.0	-2.4
SCX				*i* S	Sn	15 05 46.0	-2.8
CCIG	**Comitan**	**1.90**	**75**	*i* P	Pn	15 05 29.4	-2.5
CCIG				*i* S	Sn	15 05 51.6	-3.5
CCIG	**Comitan**	**1.90**	**75**	*i* P	Pn	15 05 29.4	-2.5
CCIG				*i* S	Sn	15 05 51.6	-3.5
THIG		**1.94**	**117**	*e*P	Pn	15 05 30.6	-1.9
THIG				*i* S	Sn	15 05 52.5	-3.6
HUIG	**Huatulco**	**1.98**	**269**	*i* P	Pn	15 05 31.2	-1.9
HUIG				*i* S	Sn	15 05 52.7	-4.5
HUIG	**Huatulco**	**1.98**	**269**	*i* P	Pn	15 05 31.2	-1.9
HUIG				*i* S	Sn	15 05 52.7	-4.5
VHO	**Vista Hermosa**	**2.87**	**296**	*i* P	Pn	15 05 43.5	-1.8
VHO				*i* S	Sn	15 06 15.8	-3.3
VHO	**Vista Hermosa**	**2.87**	**296**	*i* P	Pn	15 05 43.5	-1.8
VHO				*i* S	Sn	15 06 15.8	-3.3
PNIG	**Pinotepa**	**3.96**	**279**	*e*P	Pn	15 06 00.2	-0.1
PNIG				*i* S	Sn	15 06 41.9	-4.2
PNIG	**Pinotepa**	**3.96**	**279**	*e*P	Pn	15 06 00.2	-0.1
PNIG				*i* S	Sn	15 06 41.9	-4.2
UTMO	**Huajuapan**	**4.12**	**300**	*i* P	Pn	15 06 01.1	-1.4
UTMO				*i* S	Sn	15 06 48.3	-1.7

PRU ***25*** *15:11:30.2, 37°.55N×22°.56E, h0km, M4.4*
ATH ***25*** *15:11:36.7, 38°.13N×22°.73E, h25km±1km, MD3.9/29, ML4.1*
ROM ***25*** *15:11:36.4±0.6, 38°.17N×22°.84E, h10km, Ml4.1/11, Error ellipse: s-maj=8.9km s-min=4.4km az=111.0*
ISCJB ***25*** *15:11:37.1±0.3, 38°.17N±0°.01×22°.75E±0°.01, h25km±2km, mb4.3/59, MS3.6/10, Error ellipse: s-maj=2.3km s-min=1.8km az=17.2*
PDG ***25*** *15:11:37.9±0.8, 38°.21N×22°.72E, h17km±2km, ML4.0/10, Error ellipse: s-maj=1.1km s-min=1.7km az=0.0*
THE ***25*** *15:11:37.9, 38°.21N×22°.81E, h6km±1km, ML4.8/8, Error ellipse: s-maj=1.9km s-min=1.4km az=230.0*
MOS ***25*** *15:11:38.5±1.1, 38°.24N×22°.75E, h32km, mb4.6/18, Error ellipse: s-maj=4.8km s-min=2.9km az=106.0*
CSEM ***25*** *15:11:38.1±0.1, 38°.16N×22°.81E, h19km, mb4.4/26, Ms2.8, Error ellipse: s-maj=2.8km s-min=2.3km az=17.0*
NEIC ***25*** *15:11:38.5±0.6, 38°.14N×22°.79E, h21km±5km, mb4.4/31, ML4.0(PDG), ML4.1(ROM), ML4.1(ATH), Error ellipse: s-maj=3.5km s-min=2.6km az=200.0*
NEIC Felt in the Athens area and at Corinth.
IDC ***25*** *15:11:39.1±2.7, 38°.21N×22°.75E, h29km±19km, mb4.0/25, mb1 4.1/32, mb1mx4.1/37, mbtmp4.0/32, ML4.0/7, MS3.3/9, Ms1 3.3/9, ms1mx2.9/55, Error ellipse: s-maj=11.6km s-min=11.0km az=149.0*
BJI ***25*** *15:11:41.0, 38°.97N×23°.00E, h22km, mB4.9/10, mb4.7/14, Ms5.0/8, Ms7 4.7/7*
ISC 25 15:11:38.3±0.4, 38°.15N±0°.01×22°.79E±0°.01, h20km±3km, h35km±.2km: pP-P, n718, σ1.9±10/791, mb4.3/59, MS3.6/10, 44C-44D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.19**	**132**	*e*PB	**Pg**	**15 11 42.0**	**-1.3**
LTK				*e*SB	**Sg**	**15 11 47.0**	**+0.4**
LTK	**Loutraki**	**0.19**	**132**	*e*Pb	**Pg**	**15 11 42.0**	**-1.3**
LTK				*e*Sb	**Sg**	**15 11 47.0**	**+0.4**
GUR	**Goura**	**0.41**	**239**	*e*PB	**Pg**	**15 11 44.0**	**-2.9**
LKR	**Lokris**	**0.53**	**18**	⇑*i*PN	**Pb**	**15 11 47.5**	**-1.4**
LKR				*e*SN	**Sb**	**15 11 56.7**	**+0.6**
LKR	**Lokris**	**0.53**	**18**	⇑*i*Pn	**Pb**	**15 11 47.5**	**-1.4**
NAIG	**Nisos Aigina**	**0.68**	**125**	*e*PN	**Pn**	**15 11 51.1**	**-1.6**
NAIG	**Nisos Aigina**	**0.68**	**125**	*e*Pn	**Pn**	**15 11 51.1**	**-1.6**
EFP	**Efpalio**	**0.75**	**292**	*e*PN	**Pb**	**15 11 50.3**	**-2.4**
EFP				*e*SN	**Sb**	**15 12 00.8**	**-1.7**
ATH	**Athens Observa**	**0.75**	**103**	⇑*i*PN	**Pn**	**15 11 52.8**	**-1.0**
ATH				*e*SN	**Sn**	**15 12 04.2**	**-0.4**
ATH	**Athens Observa**	**0.75**	**103**	⇑*i*Pn	**Pn**	**15 11 52.8**	**-1.0**
UPR	**University Cam**	**0.80**	**280**	*e*PN	**Pb**	**15 11 51.8**	**-1.8**
VLX	**Vlachokerasia**	**0.84**	**203**	*e*PB	**Pb**	**15 11 52.1**	**-2.2**
VLY	**Voula,Athens**	**0.84**	**110**	*e*PN	**Pn**	**15 11 54.5**	**-0.6**
VLY				*e*SN	**Sn**	**15 12 05.4**	**-1.5**
VLY	**Voula,Athens**	**0.84**	**110**	*e*Pn	**Pn**	**15 11 54.5**	**-0.6**
VLY				*e*Sn	**Sn**	**15 12 05.4**	**-1.5**
PTL	**Penteli**	**0.85**	**96**	*e*PN	**Pn**	**15 11 54.5**	**-0.7**
PTL	**Penteli**	**0.85**	**96**	*e*Pn	**Pn**	**15 11 54.5**	**-0.7**
AGG	**Agios Georgios**	**0.94**	**338**	P	**Pb**	**15 11 53.6**	**-2.4**
AGG				S	**Sb**	**15 12 07.4**	**-0.7**
AGG	**Agios Georgios**	**0.94**	**338**	P	**Pb**	**15 11 53.6**	**-2.4**
AGG				S	**Sb**	**15 12 07.4**	**-0.7**
RLS	**Riolos of Patr**	**1.05**	**265**	*e*PN	**Pb**	**15 11 55.4**	**-2.4**
RLS				*e*SN	**Sb**	**15 12 10.6**	**-0.5**
EVR	**Evrytania**	**1.09**	**315**	*e*PN	**Pn**	**15 11 57.2**	**-1.2**
EVR				*e*SN	**Sn**	**15 12 12.9**	**0.0**
EVR	**Evrytania**	**1.09**	**315**	*e*Pn	**Pn**	**15 11 57.2**	**-1.2**
EVR				*e*Sn	**Sn**	**15 12 12.9**	**0.0**
ITM	**Ithomi**	**1.19**	**216**	*e*PB	**Pn**	**15 11 57.8**	**-2.0**
ITM				*e*SN	**Sb**	**15 12 15.7**	**+0.6**
NEO	**Neokhori**	**1.20**	**16**	⇓*i*PN	**Pn**	**15 11 59.7**	**-0.3**
NEO	**Neokhori**	**1.20**	**16**	⇓*i*Pn	**Pn**	**15 11 59.7**	**-0.3**
XOR	**Xorichti**	**1.25**	**14**	P	**Pn**	**15 12 00.1**	**-0.6**
XOR				S	**Sb**	**15 12 17.9**	**+0.9**
XOR	**Xorichti**	**1.25**	**14**	P	**Pn**	**15 12 00.1**	**-0.6**
XOR				S	**Sb**	**15 12 17.9**	**+0.9**
AOS	**Alonnisos**	**1.33**	**40**	P	**Pn**	**15 12 01.5**	**-0.2**
AOS				S	**Sn**	**15 12 19.7**	**+0.9**
AOS	**Alonnisos**	**1.33**	**40**	P	**Pn**	**15 12 01.5**	**-0.2**
AOS				S	**Sn**	**15 12 19.7**	**+0.9**
VLI	**Veliai**	**1.43**	**175**	⇑*i*PN	**Pn**	**15 12 02.5**	**-0.7**
VLI	**Veliai**	**1.43**	**175**	⇑*i*Pn	**Pn**	**15 12 02.5**	**-0.7**
PYL	**PYLOS**	**1.50**	**214**	*e*PN	**Pn**	**15 12 03.4**	**-0.8**
PYL	**PYLOS**	**1.50**	**214**	*e*Pn	**Pn**	**15 12 03.4**	**-0.8**
THL	**Klokotos Trika**	**1.54**	**337**	⇓*i*PN	**Pn**	**15 12 04.3**	**-0.3**
THL	**Klokotos Trika**	**1.54**	**337**	⇓*i*Pn	**Pn**	**15 12 04.3**	**-0.3**
VLS	**Valsamata**	**1.74**	**272**	⇑*i*PN	**Pn**	**15 12 08.0**	**+0.7**
VLS	**Valsamata**	**1.74**	**272**	⇑*i*Pn	**Pn**	**15 12 08.0**	**+0.7**
KYTH	**Kithira**	**1.88**	**174**	*e*PN	**Pn**	**15 12 10.0**	**+0.7**
KYTH	**Kithira**	**1.88**	**174**	*e*Pn	**Pn**	**15 12 10.0**	**+0.7**
PAIG	**Paliouri**	**1.91**	**21**	P	**Pn**	**15 12 09.1**	**-0.6**
PAIG				S	**Sn**	**15 12 34.9**	**+1.8**
PAIG	**Paliouri**	**1.91**	**21**	P	**Pn**	**15 12 09.1**	**-0.6**
PAIG				S	**Sn**	**15 12 34.9**	**+1.8**
LIT	**Litokhoron**	**1.96**	**353**	P	**Pn**	**15 12 10.2**	**-0.3**
LIT				S	**Sn**	**15 12 35.5**	**+1.0**
LIT	**Litokhoron**	**1.96**	**353**	P	**Pn**	**15 12 10.2**	**-0.3**
LIT				S	**Sn**	**15 12 35.5**	**+1.0**
JAN	**Janina**	**2.13**	**315**	*e*PB	**Pn**	**15 12 14.8**	**+2.0**
PLG	**Polygyros**	**2.28**	**13**	⇓*i*PB	**Pn**	**15 12 16.3**	**+1.5**
KZN	**Kozani**	**2.30**	**340**	*e*PN	**Pn**	**15 12 15.4**	**+0.4**
KZN	**Kozani**	**2.30**	**340**	*e*Pn	**Pn**	**15 12 15.4**	**+0.4**
IGT	**Igoumenitsa**	**2.37**	**306**	P	**Pn**	**15 12 17.0**	**+1.0**
IGT	**Igoumenitsa**	**2.37**	**306**	P	**Pn**	**15 12 17.0**	**+1.0**
OUR	**Ouranopolis**	**2.37**	**23**	P	**Pn**	**15 12 15.5**	**-0.5**
OUR				S	**Sn**	**15 12 44.6**	**+0.1**
OUR	**Ouranopolis**	**2.37**	**23**	P	**Pn**	**15 12 15.5**	**-0.5**
OUR				S	**Sn**	**15 12 44.6**	**+0.1**
APE	**Apeiranthos**	**2.43**	**116**	*e*PN	**Pn**	**15 12 17.2**	**+0.4**
APE	**Apeiranthos**	**2.43**	**116**	*e*Pn	**Pn**	**15 12 17.2**	**+0.4**
HORT	**Hortiatis**	**2.46**	**5**	P	**Pn**	**15 12 16.8**	**-0.4**
HORT				S	**Sn**	**15 12 47.1**	**+0.4**
HORT	**Hortiatis**	**2.46**	**5**	P	**Pn**	**15 12 16.8**	**-0.4**
HORT				S	**Sn**	**15 12 47.1**	**+0.4**
THE	**Thessaloniki**	**2.48**	**3**	P	**Pn**	**15 12 16.9**	**-0.7**
THE				S	**Sn**	**15 12 47.5**	**+0.2**
THE	**Thessaloniki**	**2.48**	**3**	P	**Pn**	**15 12 16.9**	**-0.7**
THE				S	**Sn**	**15 12 47.5**	**+0.2**
LOS	**Limnos**	**2.52**	**44**	P	**Pn**	**15 12 18.0**	**-0.1**
LOS	**Limnos**	**2.52**	**44**	P	**Pn**	**15 12 18.0**	**-0.1**
LIA	**Limnos Island**	**2.55**	**46**	*e*PN	**Pn**	**15 12 18.5**	**-0.1**
LIA	**Limnos Island**	**2.55**	**46**	*e*Pn	**Pn**	**15 12 18.5**	**-0.1**
CHOS	**Chios island**	**2.58**	**84**	P	**Pn**	**15 12 20.0**	**+1.1**
CHOS	**Chios island**	**2.58**	**84**	P	**Pn**	**15 12 20.0**	**+1.1**
SOH	**Sokhos**	**2.70**	**9**	P	**Pn**	**15 12 20.9**	**+0.3**
SOH				S	**Sn**	**15 12 54.2**	**+1.4**
SOH	**Sokhos**	**2.70**	**9**	P	**Pn**	**15 12 20.9**	**+0.3**
SOH				S	**Sn**	**15 12 54.2**	**+1.4**
SRN	**Sarande**	**2.78**	**309**	*e*PN	**Pn**	**15 12 22.3**	**+0.6**
SRN	**Sarande**	**2.78**	**309**	*e*Pn	**Pn**	**15 12 22.3**	**+0.6**
KEK	**Kerkira**	**2.81**	**305**	⇓*i*PB	**Pn**	**15 12 23.0**	**+0.9**
FNA	**Florina**	**2.85**	**338**	P	**Pn**	**15 12 22.9**	**+0.2**
FNA				S	**Sn**	**15 12 57.8**	**+1.4**
FNA	**Florina**	**2.85**	**338**	P	**Pn**	**15 12 22.9**	**+0.2**
FNA				S	**Sn**	**15 12 57.8**	**+1.4**
KBN	**Korca**	**2.92**	**328**	*e*PN	**Pn**	**15 12 24.4**	**+0.8**
KBN	**Korca**	**2.92**	**328**	*e*Pn	**Pn**	**15 12 24.4**	**+0.8**
PRK	**Paraskevi**	**2.93**	**67**	*e*PN	**Pn**	**15 12 24.3**	**+0.5**
PRK	**Paraskevi**	**2.93**	**67**	*e*Pn	**Pn**	**15 12 24.3**	**+0.5**
VAM	**Vamos**	**2.96**	**157**	*e*PN	**Pn**	**15 12 24.6**	**+0.4**
VAM	**Vamos**	**2.96**	**157**	*e*Pn	**Pn**	**15 12 24.6**	**+0.4**
KNT	**Kendrikon**	**3.01**	**2**	P	**Pn**	**15 12 25.2**	**+0.4**
KNT	**Kendrikon**	**3.01**	**2**	P	**Pn**	**15 12 25.2**	**+0.4**
SRS	**Serrai**	**3.03**	**12**	P	**Pn**	**15 12 25.1**	**0.0**
SRS	**Serrai**	**3.03**	**12**	P	**Pn**	**15 12 25.1**	**0.0**
BIA	**Bitola**	**3.08**	**339**	*e*Pn	**Pn**	**15 12 24.7**	**-1.2**
BIA				*e*Sg	**Sn**	**15 13 04.1**	**+2.0**
BIA	**Bitola**	**3.08**	**339**	*e*Pn	**Pn**	**15 12 24.6**	**-1.2**
KAVA	**Kavala**	**3.14**	**25**	P	**Pn**	**15 12 25.9**	**-0.7**
KAVA	**Kavala**	**3.14**	**25**	P	**Pn**	**15 12 25.9**	**-0.7**
GADA	**Gvkgeada**	**3.16**	**49**	*e*PN	**Pn**	**15 12 24.4**	**-2.5**
VAY	**Valandovo**	**3.17**	**357**	*e*Pn	**Pn**	**15 12 27.1**	**0.0**
VAY				*e*Sg	**Sn**	**15 13 03.1**	**-1.2**
VAY	**Valandovo**	**3.17**	**357**	*e*Pn	**Pn**	**15 12 27.0**	**-0.1**
EZN	**Ezine**	**3.22**	**58**	*e*PN	**Pn**	**15 12 24.8**	**-2.9**
SMG	**Samos**	**3.23**	**97**	*e*PN	**Pn**	**15 12 29.7**	**+1.8**
SMG	**Samos**	**3.23**	**97**	*e*Pn	**Pn**	**15 12 29.7**	**+1.8**
NVR	**Nevrokopi**	**3.30**	**14**	*e*PN	**Pn**	**15 12 28.6**	**-0.2**
NVR	**Nevrokopi**	**3.30**	**14**	*e*Pn	**Pn**	**15 12 28.6**	**-0.2**
IDI	**Anoyia**	**3.32**	**149**	Pn	**Pn**	**15 12 28.8**	**-0.2**
IDI	6.6nm,0.3s,baz=310,slow=16,SNR=41			Sn	**Sn**	**15 13 08.0**	**+0.2**
IDI	**Anoyia**	**3.32**	**149**	Pn	**Pn**	**15 12 28.8**	**-0.3**
IDI	13nm,0.3s,baz=21,slow=21,SNR=6.9			Sn	**Sn**	**15 13 08.0**	**+0.1**
OHR	**Ohrid**	**3.33**	**333**	*e*Pn	**Pn**	**15 12 29.5**	**+0.2**
OHR				*e*Sg	**Sn**	**15 13 13.1**	**+4.8**
OHR	**Ohrid**	**3.33**	**333**	*e*Pn	**Pn**	**15 12 29.4**	**+0.1**
BLCB	**Balcova**	**3.35**	**85**	*e*PN	**Pn**	**15 12 28.1**	**-1.5**
KRUS	**Krusevo**	**3.43**	**340**	*e*Pn	**Pn**	**15 12 31.0**	**+0.4**
KRUS				*e*Sg	**Sn**	**15 13 10.4**	**-0.2**
KRUS	**Krusevo**	**3.43**	**340**	*e*Pn	**Pn**	**15 12 31.0**	**+0.4**
GVD	**Gavdhos**	**3.46**	**162**	*e*Pn	**Pn**	**15 12 33.1**	**+2.0**
GVD	**Gavdhos**	**3.46**	**162**	*e*Pn	**Pn**	**15 12 33.1**	**+2.0**
IZM	**Izmir**	**3.53**	**85**	*e*PN	**Pn**	**15 12 35.6**	**+3.7**
STIP	**Stip**	**3.57**	**353**	*e*Pn	**Pn**	**15 12 33.4**	**+0.9**
STIP	**Stip**	**3.57**	**353**	*e*Pn	**Pn**	**15 12 33.4**	**+0.8**
ENEZ	**Enez**	**3.67**	**44**	*e*PN	**Pn**	**15 12 34.0**	**+0.1**
RDO	**Rodhopi**	**3.67**	**34**	*e*PN	**Pn**	**15 12 33.3**	**-0.6**
RDO	**Rodhopi**	**3.67**	**34**	*e*Pn	**Pn**	**15 12 33.3**	**-0.6**
ALN	**Alexandroupoli**	**3.72**	**42**	P	**Pn**	**15 12 34.1**	**-0.5**
ALN	**Alexandroupoli**	**3.72**	**42**	P	**Pn**	**15 12 34.1**	**-0.5**
LPK	**Lapseki**	**3.80**	**53**	*e*PN	**Pn**	**15 12 32.4**	**-3.3**
SCTE	**Santa Cesarea**	**3.87**	**301**	⇓*i*Pg	**Pn**	**15 12 36.7**	**0.0**
	322nm,0.8s						
TIR	**Tirane**	**3.91**	**326**	*e*P	**Pn**	**15 12 39.2**	**+2.0**
TIR	**Tirane**	**3.91**	**326**	*e*P	**Pn**	**15 12 39.2**	**+2.0**
SKO	**Skopje**	**3.96**	**345**	*e*Pn	**Pn**	**15 12 38.7**	**+0.8**
SKO	**Skopje**	**3.96**	**345**	*e*Pn	**Pn**	**15 12 38.6**	**+0.7**
DAT	**Datca**	**4.06**	**109**	*e*PN	**Pn**	**15 12 41.6**	**+2.3**
RKY	**Sarkoy-Tekirda**	**4.24**	**52**	*e*PN	**Pn**	**15 12 39.6**	**-2.1**
BALB	**Balikesir**	**4.24**	**68**	*e*PN	**Pn**	**15 12 37.6**	**-4.1**
MFT	**Murefte**	**4.36**	**51**	*e*PN	**Pn**	**15 12 41.7**	**-1.6**
YER	**Yerkesik**	**4.47**	**101**	*e*PN	**Pn**	**15 12 47.8**	**+2.8**
PUK	**Puka**	**4.48**	**331**	*e*PN	**Pn**	**15 12 47.2**	**+2.2**
PUK	**Puka**	**4.48**	**331**	*e*Pn	**Pn**	**15 12 47.2**	**+2.2**
KULA	**Kula-Manisa**	**4.63**	**84**	*e*PN	**Pn**	**15 12 45.2**	**-1.9**
ULC	**Ulcinj**	**4.68**	**326**	⇓*i*Pn	**Pn**	**15 12 48.3**	**+0.5**
ULC				*e*Sn	**Sn**	**15 13 41.3**	**-0.2**
ULC	**Ulcinj**	**4.68**	**326**	⇓*i*Pn	**Pn**	**15 12 48.3**	**+0.5**
ULC				*e*Sn	**Sn**	**15 13 41.3**	**-0.2**
BCI	**Bajram Curri**	**4.70**	**335**	*e*PN	**Pn**	**15 12 49.5**	**+1.4**
BCI	**Bajram Curri**	**4.70**	**335**	*e*Pn	**Pn**	**15 12 49.5**	**+1.4**
BARS	**Barje**	**4.72**	**351**	⇓*i*Pn	**Pn**	**15 12 48.7**	**+0.3**
EDRB	**Edirne**	**4.78**	**38**	*e*PN	**Pn**	**15 12 47.6**	**-1.6**
TIP	**Timpagrande**	**4.83**	**284**	*e*Pn	**Pn**	**15 12 50.2**	**+0.3**
TIP				Pg	**Pn**	**15 12 50.4**	**+0.5**
TIP				Sg	**Sn**	**15 13 44.2**	**-1.1**
TIP	**Timpagrande**	**4.83**	**284**	Pg	**Pn**	**15 12 50.4**	**+0.5**
TIP				Sg	**Sn**	**15 13 44.2**	**-1.1**
	106nm,0.7s						
TIP	**Timpagrande**	**4.83**	**284**	*e*Pn	**Pn**	**15 12 50.2**	**+0.3**
SERS	**Sersale**	**4.86**	**282**	Pg	**Pn**	**15 12 50.9**	**+0.6**
SERS				Sg	**Sn**	**15 13 44.9**	**-1.1**
	86nm,0.4s						
TAR1	**Taranto**	**4.88**	**301**	*e*Pn	**Pn**	**15 12 49.9**	**-0.7**
TAR1				*e*Sn	**Sn**	**15 13 47.2**	**+0.6**
PVY	**Plav**	**4.93**	**335**	⇓*i*Pn	**Pn**	**15 12 51.8**	**+0.5**
PVY				*e*Sn	**Sn**	**15 13 47.6**	**-0.2**
PVY	**Plav**	**4.93**	**335**	⇓*i*Pn	**Pn**	**15 12 51.8**	**+0.5**
PVY				*e*Sn	**Sn**	**15 13 47.6**	**-0.2**
PLAC	**Placanica**	**5.01**	**275**	Pg	**Pn**	**15 12 52.0**	**-0.3**
	31nm,0.5s						
GRI	**Girifalco**	**5.04**	**280**	Pg	**Pn**	**15 12 54.3**	**+1.5**
	1μm,2.8s						
PDG	**Podgorica**	**5.06**	**329**	⇑*i*Pn	**Pn**	**15 12 53.1**	**+0.1**
PDG				*e*Sn	**Sn**	**15 13 50.8**	**0.0**
TTG	**Podgorica**	**5.06**	**329**	⇑*i*Pn	**Pn**	**15 12 53.1**	**+0.1**
TTG				*e*Sn	**Sn**	**15 13 50.8**	**0.0**
TTG	**Podgorica**	**5.06**	**329**	*i* P	**Pn**	**15 12 53.1**	**+0.1**
TTG				*e*S	**Sn**	**15 13 50.8**	**0.0**
BUM	**Brajici-Budva**	**5.11**	**326**	⇓*i*Pn	**Pn**	**15 12 54.0**	**+0.4**
BUM				*e*Sn	**Sn**	**15 13 52.2**	**+0.2**
BUM	**Brajici-Budva**	**5.11**	**326**	⇓*i*Pn	**Pn**	**15 12 54.0**	**+0.4**
BUM				*e*Sn	**Sn**	**15 13 52.2**	**+0.2**
NOCI	**Noci**	**5.16**	**303**	Pg	**Pn**	**15 12 54.0**	**-0.3**
	139nm,0.5s						
BEY	**Berane**	**5.21**	**336**	⇓*i*Pn	**Pn**	**15 12 56.2**	**+1.2**
BEY				*e*Sn	**Sn**	**15 13 54.2**	**-0.3**
IVA	**Berane**	**5.21**	**336**	⇓*i*Pn	**Pn**	**15 12 56.2**	**+1.2**
IVA				*e*Sn	**Sn**	**15 13 54.2**	**-0.3**
IVA	**Berane**	**5.21**	**336**	⇓*i*Pn	**Pn**	**15 12 56.2**	**+1.2**
IVA				*e*Sn	**Sn**	**15 13 54.2**	**-0.3**
FETY	**Fethiye**	**5.23**	**105**	*e*PN	**Pn**	**15 12 59.0**	**+3.6**
LTRZ	**Laterza**	**5.24**	**300**	Pg	**Pn**	**15 12 55.0**	**-0.4**
LTRZ	**Laterza**	**5.24**	**300**	Pg	**Pn**	**15 12 55.0**	**-0.4**
	89nm,0.5s						
CARO	**Carolei**	**5.26**	**284**	Pg	**Pn**	**15 12 56.8**	**+1.0**
	208nm,0.6s						
NISS		**5.29**	**353**	*i* Pn	**Pn**	**15 12 56.5**	**+0.4**
ORI	**Oriolo Calabro**	**5.29**	**293**	Pg	**Pn**	**15 12 56.6**	**+0.4**
	280nm,0.4s						
KHL	**Karahalli**	**5.30**	**86**	*e*PN	**Pn**	**15 12 57.3**	**+1.0**
SOI	**Samo**	**5.31**	**271**	P	**Pn**	**15 12 56.6**	**+0.1**
SOI				pmax	pmax		
	comp=Z,21nm,0.4s						
SOI	**Samo**	**5.31**	**271**	Pg	**Pn**	**15 12 56.6**	**+0.1**
	comp=Z,21nm,0.4s						
SOI	**Samo**	**5.31**	**271**	Pg	**Pn**	**15 12 56.6**	**+0.1**
	comp=Z,21nm,0.4s						
MATE	**Matera**	**5.33**	**300**	Pg	**Pn**	**15 12 56.6**	**-0.2**
	comp=Z,75nm,0.4s						
MPAZ	**Palizzi**	**5.36**	**270**	Pg	**Pn**	**15 12 57.4**	**+0.3**
	comp=Z,105nm,0.7s						
CTYL	**Yal??k??y-??at**	**5.38**	**50**	*e*PN	**Pn**	**15 12 55.4**	**-2.0**
HCY	**Herceg Novi**	**5.40**	**324**	⇓*i*Pn	**Pn**	**15 12 57.3**	**-0.4**
HCY				*e*Sn	**Sn**	**15 13 58.7**	**-0.6**
HCY	**Herceg Novi**	**5.40**	**324**	⇓*i*Pn	**Pn**	**15 12 57.3**	**-0.4**
HCY				*e*Sn	**Sn**	**15 13 58.7**	**-0.6**
CRAC	**Craco**	**5.41**	**296**	Pg	**Pn**	**15 12 57.5**	**-0.3**
	comp=Z,234nm,0.8s						
CEL	**Celeste**	**5.43**	**273**	*e*Pn	**Pn**	**15 12 58.0**	**-0.2**
	comp=Z,27nm,0.4s						
CEL				Pg	**Pn**	**15 12 58.5**	**+0.3**
CEL	**Celeste**	**5.43**	**273**	Pg	**Pn**	**15 12 58.5**	**+0.3**
	comp=Z,100nm,1.0s						
CEL	**Celeste**	**5.43**	**273**	*e*Pn	**Pn**	**15 12 58.0**	**-0.2**
	comp=Z,27nm,0.4s						
JOPP	**Joppolo**	**5.45**	**277**	Pg	**Pn**	**15 12 59.0**	**+0.7**
	comp=Z,203nm,1.1s						
GEMT	**Gemlik**	**5.46**	**63**	*e*PN	**Pn**	**15 12 56.9**	**-1.7**
NKY	**Niksic**	**5.48**	**329**	⇓*i*Pn	**Pn**	**15 12 59.0**	**+0.2**
NKY				*e*Sn	**Sn**	**15 14 01.4**	**+0.1**
NKY	**Niksic**	**5.48**	**329**	⇓*i*Pn	**Pn**	**15 12 59.0**	**+0.2**
NKY				*e*Sn	**Sn**	**15 14 01.4**	**+0.1**
MIGL	**Miglionico**	**5.50**	**298**	Pg	**Pn**	**15 12 59.1**	**+0.1**
	comp=Z,474nm,0.8s						
MSCL	**Scilla**	**5.52**	**273**	Pg	**Pn**	**15 12 59.8**	**+0.5**
	comp=Z,167nm,0.5s						
BGKT	**Bogazkoy**	**5.52**	**55**	*e*PN	**Pn**	**15 12 58.5**	**-0.8**
AMUR	**Altamura**	**5.52**	**302**	⇓*i*Pn	**Pn**	**15 12 58.8**	**-0.5**
	comp=Z,78nm,0.3s						
SCLL	**Scilla**	**5.58**	**273**	Pg	**Pn**	**15 13 01.1**	**+1.0**
	comp=Z,38nm,0.9s						
SCLL	**Scilla**

IFIL Filicudi I Eol 6.48 276 Pg Pn 15 13 12.1 -0.4
comp=Z,107nm,0.5s
HVZN Vizzini 6.48 264 Pg Pn 15 13 13.1 +0.6
comp=Z,128nm,0.9s
HVZN Vizzini 6.48 264 Pg Pn 15 13 13.1 +0.6
comp=Z,128nm,0.9s
HVZN Vizzini 6.48 264 Pg Pn 15 13 13.1 +0.6
comp=Z,128nm,0.9s
SNAL S. Angelo Dei 6.48 298 Pg Pn 15 13 12.8 +0.2
comp=Z,106nm,0.7s
SNAL S. Angelo Dei 6.48 298 Pg Pn 15 13 12.8 +0.2
comp=Z,106nm,0.7s
SGRT San Giovanni R 6.50 306 Pg Pn 15 13 12.1 -0.7
comp=Z,57nm,0.5s
SGRT San Giovanni R 6.50 306 Pg Pn 15 13 12.1 -0.7
comp=Z,57nm,0.5s
GALF Gagliano Caste 6.52 269 Pg Pn 15 13 14.3 +1.3
GALF Gagliano Caste 6.52 269 Pg Pn 15 13 14.3 +1.3
SUTC Sutluce-Ispart 6.53 93 ePN Pn 15 13 09.8 -3.4
RGNG Rignano Grg 6.56 305 Pg Pn 15 13 13.1 -0.5
RGNG Rignano Grg 6.56 305 Pg Pn 15 13 13.1 -0.5
RGNG Rignano Grg 6.56 305 Pg Pn 15 13 13.1 -0.5
CSSN Cassano Irpino 6.59 297 Pg Pn 15 13 14.9 +0.9
comp=Z,30nm,0.4s
CSSN Cassano Irpino 6.59 297 Pg Pn 15 13 14.9 +0.9
comp=Z,30nm,0.4s
CSSN Cassano Irpino 6.59 297 Pg Pn 15 13 14.9 +0.9
comp=Z,30nm,0.4s
FG5 Orsara di Pugl 6.59 301 P Pn 15 13 14.7 +0.7
FG5 pmax pmax
comp=Z,71nm,0.6s
FG5 Orsara di Pugl 6.59 301 Pg Pn 15 13 14.7 +0.7
comp=Z,71nm,0.6s
FG5 Orsara di Pugl 6.59 301 Pg Pn 15 13 14.7 +0.7
comp=Z,71nm,0.6s
FG5 Orsara di Pugl 6.59 301 Pg Pn 15 13 14.7 +0.7
comp=Z,71nm,0.6s
VAE Valguarnera 6.67 267 Pn Pn 15 13 18.7 +3.6
comp=Z,1.6nm,0.3s,baz=103,slow=14,SNR=2.9
VAE Sn Sn 15 14 28.5 -2.0
comp=Z,3.6nm,0.3s,baz=60,slow=17,SNR=2.4
VAE Valguarnera 6.67 267 Pn Pn 15 13 18.7 +3.6
VAE Sn Sn 15 14 28.5 -2.0
MOCO Biccari - m.te 6.70 301 Pg Pn 15 13 16.3 +0.7
comp=Z,97nm,1.1s
MRB1 Monte Rocchett 6.73 299 Pg Pn 15 13 15.6 -0.3
comp=Z,217nm,0.8s
MRB1 Monte Rocchett 6.73 299 Pg Pn 15 13 15.6 -0.3
comp=Z,217nm,0.8s
MRB1 Monte Rocchett 6.73 299 Pg Pn 15 13 15.6 -0.3
comp=Z,217nm,0.8s
MELA Melanico ??? S 6.88 303 Pg Pn 15 13 18.2 +0.2
comp=Z,69nm,0.3s
MELA Melanico ??? S 6.88 303 Pg Pn 15 13 18.2 +0.2
comp=Z,69nm,0.3s
PSB1 Pescosannita 6.88 299 Pg Pn 15 13 19.1 +1.1
comp=Z,101nm,1.0s
PSB1 Pescosannita 6.88 299 Pg Pn 15 13 19.1 +1.1
comp=Z,101nm,1.0s
PSB1 Pescosannita 6.88 299 Pg Pn 15 13 19.1 +1.1
comp=Z,101nm,1.0s
FG2 Serracapriola 6.90 304 Pg Pn 15 13 18.2 -0.1
comp=Z,113nm,0.3s
FG2 Serracapriola 6.90 304 Pg Pn 15 13 18.2 -0.1
comp=Z,113nm,0.3s
FG2 Serracapriola 6.90 304 Pg Pn 15 13 18.2 -0.1
comp=Z,113nm,0.3s
GIB Gibilmanna 6.92 271 P Pn 15 13 20.0 +1.5
GIB pmax pmax
comp=Z,81nm,0.9s
GIB Gibilmanna 6.92 271 Pg Pn 15 13 20.0 +1.5
comp=Z,81nm,0.9s
GIB Gibilmanna 6.92 271 Pg Pn 15 13 20.0 +1.5
comp=Z,81nm,0.9s
GIB Gibilmanna 6.92 271 Pg Pn 15 13 20.0 +1.5
comp=Z,81nm,0.9s
CIGN Sant'Elia a Pi 7.00 302 Pg Pn 15 13 20.3 +0.6
comp=Z,62nm,0.7s
CIGN Sant'Elia a Pi 7.00 302 Pg Pn 15 13 20.3 +0.6
comp=Z,62nm,0.7s
CIGN Sant'Elia a Pi 7.00 302 Pg Pn 15 13 20.3 +0.6
comp=Z,62nm,0.7s
SACR S. Croce Del S 7.02 300 Pg Pn 15 13 21.0 +1.0
comp=Z,70nm,0.8s
SACR S. Croce Del S 7.02 300 Pg Pn 15 13 21.0 +1.0
comp=Z,70nm,0.8s
BSSO Busso 7.16 301 Pg Pn 15 13 22.5 +0.6
comp=Z,86nm,0.7s
BSSO Busso 7.16 301 Pg Pn 15 13 22.5 +0.6
comp=Z,86nm,0.7s
GZR Gura Zlata 7.24 360 P Pn 15 13 22.9 0.0
GZR Gura Zlata 7.24 360 ⇑*i*P Pn 15 13 22.3 -0.6
GZR Gura Zlata 7.24 360 P Pn 15 13 22.9 0.0
TRIV Trivento 7.29 302 Pg Pn 15 13 24.3 +0.7
comp=Z,88nm,0.8s
TRIV Trivento 7.29 302 Pg Pn 15 13 24.3 +0.7
comp=Z,88nm,0.8s
FRES Fresagrandinar 7.31 304 Pg Pn 15 13 24.5 +0.6
comp=Z,97nm,0.6s
FRES Fresagrandinar 7.31 304 Pg Pn 15 13 24.5 +0.6
comp=Z,97nm,0.6s
VAGA Valle Agricola 7.35 299 Pg Pn 15 13 25.2 +0.7
comp=Z,83nm,0.6s
VAGA Valle Agricola 7.35 299 Pg Pn 15 13 25.2 +0.7
comp=Z,83nm,0.6s
RFI Roccamonfina 7.48 298 Pg Pn 15 13 27.7 +1.4
comp=Z,4.0nm,1.2s
RFI Roccamonfina 7.48 298 Pg Pn 15 13 27.7 +1.4
comp=Z,4.0nm,1.2s
RFI Roccamonfina 7.48 298 Pg Pn 15 13 27.7 +1.4
comp=Z,4.0nm,1.2s
MODR Mondragone 7.50 296 Pg Pn 15 13 26.6 +0.1
comp=Z,16nm,0.8s
MODR Mondragone 7.50 296 Pg Pn 15 13 26.6 +0.1
comp=Z,16nm,0.8s
BZS Buzias 7.51 354 P Pn 15 13 26.9 +0.2
BZS Buzias 7.51 354 ⇑*i*P Pn 15 13 26.4 -0.3
BZS Buzias 7.51 354 P Pn 15 13 26.9 +0.2
RNI2 Rionero Sannit 7.53 301 Pg Pn 15 13 28.7 +1.8
comp=Z,126nm,0.6s
RNI2 Rionero Sannit 7.53 301 Pg Pn 15 13 28.7 +1.8
comp=Z,126nm,0.6s
RNI2 Rionero Sannit 7.53 301 Pg Pn 15 13 28.7 +1.8
comp=Z,126nm,0.6s
USI Ustica 7.57 277 Pg Pn 15 13 26.4 -1.1
comp=Z,82nm,1.2s
USI Ustica 7.57 277 Pg Pn 15 13 26.4 -1.1
comp=Z,82nm,1.2s
USI Ustica 7.57 277 Pg Pn 15 13 26.4 -1.1
comp=Z,82nm,1.2s
CERA Filignano 7.58 300 Pg Pn 15 13 28.7 +1.2
comp=Z,120nm,0.7s
CERA Filignano 7.58 300 Pg Pn 15 13 28.7 +1.2
comp=Z,120nm,0.7s
HARR Harsova 7.59 29 ⇑P Pn 15 13 28.0 +0.3
HARR Harsova 7.59 29 ⇑*i*P Pn 15 13 28.0 +0.3
HARR Harsova 7.59 29 P Pn 15 13 28.0 +0.3
TIRR Tirgusor 7.59 32 ⇑P Pn 15 13 27.8 +0.1
TIRR Tirgusor 7.59 32 ⇑*i*P Pn 15 13 27.8 +0.1
TIRR Tirgusor 7.59 32 P Pn 15 13 27.8 +0.1
LPEL Lama dei Pelig 7.66 303 Pg Pn 15 13 29.2 +0.5
comp=Z,77nm,0.7s
LPEL Lama dei Pelig 7.66 303 Pg Pn 15 13 29.2 +0.5
comp=Z,77nm,0.7s
MLR Muntele Rosu 7.70 17 Pn Pn 15 13 30.5 +1.2
comp=Z,2.7nm,0.3s,baz=175,slow=16,SNR=35
MLR Sn Sn 15 14 54.5 -1.4
baz=232,slow=18,SNR=1.5
MLR LR LR 15 16 49.2
comp=Z,258nm,19.4s,baz=56,slow=40
MLR Muntele Rosu 7.70 17 P Pn 15 13 30.5 +1.2
MLR 15 14 54.5
MLR Muntele Rosu 7.70 17 ⇓*i*P Pn 15 13 30.4 +1.1
MLR Muntele Rosu 7.70 17 P Pn 15 13 30.5 +1.2
MLR S Sn 15 14 54.5 -1.4
SDI San Donato 7.76 300 P Pn 15 13 30.9 +0.8
SDI pmax pmax
comp=Z,5.0nm,0.4s
SDI San Donato 7.76 300 Pg Pn 15 13 30.9 +0.8
comp=Z,5.0nm,0.4s
SDI San Donato 7.76 300 Pg Pn 15 13 30.9 +0.8
comp=Z,5.0nm,0.4s
SDI San Donato 7.76 300 Pg Pn 15 13 30.9 +0.8
comp=Z,5.0nm,0.4s
INTR Introdacqua 7.83 302 Pg Pn 15 13 32.0 +1.0
comp=Z,41nm,0.7s
INTR Introdacqua 7.83 302 Pg Pn 15 13 32.0 +1.0
comp=Z,41nm,0.7s
INTR Introdacqua 7.83 302 Pg Pn 15 13 32.0 +1.0
comp=Z,41nm,0.7s
POFI Posta Fibreno 7.83 300 Pg Pn 15 13 32.0 +0.9
comp=Z,60nm,0.7s
POFI Posta Fibreno 7.83 300 Pg Pn 15 13 32.0 +0.9
comp=Z,60nm,0.7s
VVLD Villa Vallelon 7.96 301 Pg Pn 15 13 33.9 +1.1
comp=Z,91nm,0.6s
VVLD Villa Vallelon 7.96 301 Pg Pn 15 13 33.9 +1.1
comp=Z,91nm,0.6s
VVLD Villa Vallelon 7.96 301 Pg Pn 15 13 33.9 +1.1
comp=Z,91nm,0.6s
GIUL Giuliano Di Ro 8.09 298 Pg Pn 15 13 34.8 +0.2
comp=Z,26nm,0.7s
GIUL Giuliano Di Ro 8.09 298 Pg Pn 15 13 34.8 +0.2
comp=Z,26nm,0.7s
FAGN Fagnano 8.16 303 Pg Pn 15 13 37.3 +1.8
comp=Z,104nm,0.5s
FAGN Fagnano 8.16 303 Pg Pn 15 13 37.3 +1.8
comp=Z,104nm,0.5s
PLOR Plostina 8.21 19 P Pn 15 13 38.5 +2.2
PLOR Plostina 8.21 19 ⇓*i*P Pn 15 13 38.7 +2.4
PLOR Plostina 8.21 19 P Pn 15 13 38.5 +2.2
VRI Vrincioaia 8.25 20 P Pn 15 13 39.3 +2.5
VRI Vrincioaia 8.25 20 ⇓*i*P Pn 15 13 38.3 +1.5
VRI Vrincioaia 8.25 20 ⇓*i*P Pn 15 13 38.3 +1.5
TERO Teramo 8.31 305 Pg Pn 15 13 37.5 -0.2
comp=Z,35nm,0.6s
TERO Teramo 8.31 305 Pg Pn 15 13 37.5 -0.2
comp=Z,35nm,0.6s
TERO Teramo 8.31 305 Pg Pn 15 13 37.5 -0.2
comp=Z,35nm,0.6s
AQU L'Aquila 8.32 303 *e*P Pn 15 13 38.9 +1.2
AQU pmax pmax
comp=Z,25nm,0.6s
AQU L'Aquila 8.32 303 *e*Pn Pn 15 13 38.9 +1.2
comp=Z,25nm,0.6s
AQU Pg Pn 15 13 39.8 +2.1
AQU L'Aquila 8.32 303 ⇑*i*P Pn 15 13 39.5 +1.8
AQU L'Aquila 8.32 303 Pg Pn 15 13 39.8 +2.1
comp=Z,14nm,0.3s
AQU L'Aquila 8.32 303 *e*P Pn 15 13 38.9 +1.2
comp=Z,25nm,0.6s
AQU L'Aquila 8.32 303 Pg Pn 15 13 39.8 +2.1
comp=Z,14nm,0.3s
TLCR 8.35 31 ⇑P Pn 15 13 38.0 -0.1
TLCR 8.35 31 ⇑*i*P Pn 15 13 38.0 -0.1
TLCR 8.35 31 P Pn 15 13 38.0 -0.1
CERT Cerreto 8.43 300 Pg Pn 15 13 39.8 +0.6
comp=Z,37nm,0.6s
CERT Cerreto 8.43 300 Pg Pn 15 13 39.8 +0.6
comp=Z,37nm,0.6s
CERT Cerreto 8.43 300 Pg Pn 15 13 39.8 +0.6
comp=Z,37nm,0.6s
RHK3 Tenkes 8.44 338⇑*e*P Pn 15 13 38.8 -0.6
FIAM Fiamignano 8.47 302 Pg Pn 15 13 41.6 +1.8
comp=Z,38nm,0.6s
FIAM Fiamignano 8.47 302 Pg Pn 15 13 41.6 +1.8
comp=Z,38nm,0.7s
FIAM Fiaignano 8.47 302 Pg Pn 15 13 41.6 +1.8
comp=Z,38nm,0.7s
BR131 Keskin Array S 8.60 76 *e*Pn Pn 15 13 44.2 +2.6
comp=Z,5.1nm,0.8s
BRTR Keskin Array B 8.60 76 Pn Pn 15 13 45.1 +3.5
comp=Z,0.3nm,0.3s,baz=257,slow=12,SNR=17
PKSM Moragy 8.62 340 ⇑P Pn 15 13 42.8 +0.9
PKSM Moragy 8.62 340 ⇑*i*P Pn 15 13 42.8 +0.9
PKSM Moragy 8.62 340⇓*e*P Pn 15 13 41.2 -0.7
DRGR 8.64 360 P Pn 15 13 43.1 +1.0
DRGR 8.64 360 ⇑*i*P Pn 15 13 42.1 0.0
DRGR 8.64 360 P Pn 15 13 43.1 +1.0
LNSS Leonessa 8.67 304 Pg Pn 15 13 44.0 +1.5
comp=Z,76nm,0.6s
LNSS Leonessa 8.67 304 Pg Pn 15 13 44.0 +1.5
comp=Z,76nm,0.6s
NRCA Norcia 8.73 305 Pg Pn 15 13 43.4 0.0
comp=Z,18nm,0.3s
NRCA Norcia 8.73 305 Pg Pn 15 13 43.4 0.0
comp=Z,18nm,0.3s
NRCA Norcia 8.73 305 Pg Pn 15 13 43.4 0.0
comp=Z,18nm,0.3s
NVLJ Novalja 8.74 320 *e*Pn Pn 15 13 42.3 -1.3
NVLJ Sn Sn 15 15 16.0 -5.5
NVLJ Novalja 8.74 320 *e*Pn Pn 15 13 42.3 -1.3
FDMO Fiordimonte 8.85 307 Pg Pn 15 13 44.7 -0.3
comp=Z,19nm,0.6s
FDMO Fiordimonte 8.85 307 Pg Pn 15 13 44.7 -0.3
comp=Z,19nm,0.6s
CESI CESI - Serrava 8.95 306 Pg Pn 15 13 47.6 +1.2
comp=Z,12nm,0.5s
CESI CESI - Serrava 8.95 306 Pg Pn 15 13 47.6 +1.2
comp=Z,12nm,0.5s
PKS9 Tamasi 9.07 340⇑*e*P Pn 15 13 47.8 -0.2
MURB Monte Urbino 9.32 306 Pg Pn 15 13 52.5 +1.1
comp=Z,48nm,0.3s
MURB Monte Urbino 9.32 306 Pg Pn 15 13 52.5 +1.1
comp=Z,48nm,0.3s
MURB Monte Urbino 9.32 306 Pg Pn 15 13 52.5 +1.1
comp=Z,48nm,0.3s
MGAB Montegabbione 9.42 304 Pg Pn 15 13 54.3 +1.5
comp=Z,21nm,0.4s
MGAB Montegabbione 9.42 304 Pg Pn 15 13 54.3 +1.5
comp=Z,21nm,0.4s
MGAB Montegabbione 9.42 304 Pg Pn 15 13 54.3 +1.5
comp=Z,21nm,0.4s
BEHE Becsehely 9.43 334⇑*e*P Pn 15 13 52.1 -0.9
PIEI Pieia 9.45 308 Pg Pn 15 13 52.7 -0.5
comp=Z,13nm,0.4s
PIEI Pieia 9.45 308 Pg Pn 15 13 52.7 -0.5
comp=Z,13nm,0.4s
PIEI Pieia 9.45 308 Pg Pn 15 13 52.7 -0.5
comp=Z,13nm,0.4s
BADI Badiali 9.62 307 Pg Pn 15 13 55.6 0.0
comp=Z,25nm,0.8s
BADI Badiali 9.62 307 Pg Pn 15 13 55.6 0.0
comp=Z,25nm,0.8s
BADI Badiali 9.62 307 Pg Pn 15 13 55.6 0.0
comp=Z,25nm,0.8s
BURAR Bucovina Array 9.62 10 ⇑P Pn 15 13 57.4 +1.8
BURAR Bucovina Array 9.62 10 ⇑*i*P Pn 15 13 57.4 +1.8
BURAR Bucovina Array 9.62 10 ⇑*i*P Pn 15 13 57.4 +1.8
BUR08 Bucovina Ar. S 9.65 10 *e*Pn Pn 15 13 57.1 +1.1
BUR08 Bucovina Ar. S 9.65 10 *e*Pn Pn 15 13 57.1 +1.1
PARC Parchiule 9.69 308 Pg Pn 15 13 56.1 -0.5
comp=Z,24nm,0.8s
PARC Parchiule 9.69 308 Pg Pn 15 13 56.1 -0.5
comp=Z,24nm,0.8s
PSZ Piszkesteto 9.99 349 *e*Pn Pn 15 14 01.3 +0.7
comp=Z,10nm,0.8s
PSZ Piszkesteto 9.99 349⇓*e* Pn 15 14 02.3 +1.7
PSZ Piszkesteto 9.99 349 ⇑*i*P Pn 15 14 01.5 +0.9
PSZ Piszkesteto 9.99 349 *e*Pn Pn 15 14 01.3 +0.7
comp=Z,10nm,0.8s
SFI Santa Sofia 10.07 308 P Pn 15 14 03.0 +1.3
SFI pmax pmax
comp=Z,18nm,1.0s
SFI Santa Sofia 10.07 308 Pg Pn 15 14 03.0 +1.3
comp=Z,18nm,1.0s
SFI Santa Sofia 10.07 308 Pg Pn 15 14 03.0 +1.3
comp=Z,18nm,1.0s
SFI Santa Sofia 10.07 308 Pg Pn 15 14 03.0 +1.3
comp=Z,18nm,1.0s
SOKA Soboth 10.27 329⇑*i*Pn Pn 15 14 02.0 -2.4
VOY Vojsko 10.28 323 *e*Pn Pn 15 14 04.3 -0.3
VOY *e* 15 14 06.3
VOY *e*Sn Sn 15 15 55.1 -4.0
OBKA Obir 10.34 327⇓*i*Pn Pn 15 14 03.5 -1.9
OBKA ⇑*i*Sn Sn 15 15 56.2 -4.4
OBKA Obir 10.34 327 Pn Pn 15 14 03.5 -1.9
KECS Kecovo 10.46 352 *e*P Pn 15 14 09.4 +2.3
KECS *e* 15 16 07.5
KECS Kecovo 10.46 352 *e*PN Pn 15 14 09.4 +2.3
KECS *e*SN Sn 15 16 07.5 +3.8
UZH Uzhgorod 10.48 358 *e*P Pn 15 14 07.4 0.0
UZH Uzhgorod 10.48 358 *e*P Pn 15 14 07.4 0.0
ARSA Arzberg 10.55 332 ⇑*i*Pn Pn 15 14 06.6 -1.7
ARSA Arzberg 10.55 332 Pn Pn 15 14 06.6 -1.6
VYHS Vyhne 10.73 346 *e*P Pn 15 14 11.4 +0.6
VYHS *e* 15 16 16.0
VYHS Vyhne 10.73 346 *e*PN Pn 15 14 11.4 +0.6
VYHS Vyhne 10.73 346 *e*SN Sn 15 16 16.0 +5.8
VYHS Vyhne 10.73 346 *e*P Pn 15 14 11.4 +0.6
KOLS Kolonicke sedl 10.79 358 *e*P Pn 15 14 14.7 +3.2
KOLS Kolonicke sedl 10.79 358 *e*PN Pn 15 14 14.7 +3.2
PTCC Patocco-Chiusa 10.81 323 Pg Pn 15 14 11.0 -0.8
PTCC Patocco-Chiusa 10.81 323 Pg Pn 15 14 11.0 -0.8
PTCC Patocco-Chiusa 10.81 323 Pg Pn 15 14 11.0 -0.8
KEST Kesra 11.03 261 Pn Pn 15 14 16.2 +1.3
comp=Z,0.0nm,0.3s,baz=34,slow=3.6,SNR=3.2
STHS Stebnicka Huta 11.32 355 *e*P Pn 15 14 21.6 +2.8
STHS Stebnicka Huta 11.32 355 *e*PN Pn 15 14 21.6 +2.8
MMAI Mount Meron Ar 11.47 113 Pn Pn 15 14 22.4 +1.4
comp=Z,1.0nm,0.3s,baz=343,slow=11,SNR=3.6
KWP Kalwaria Pacla 11.48 360 *e*P Pn 15 14 22.7 +1.7
KWP pmax pmax
comp=Z,39nm,1.1s
KWP Kalwaria Pacla 11.48 360 *e*Pn Pn 15 14 22.7 +1.7
comp=Z,39nm,1.1s
KWP Kalwaria Pacla 11.48 360 *e*P Pn 15 14 22.7 +1.7
comp=Z,39nm,1.1s
MOA Molln 11.52 330⇑*i*Pn Pn 15 14 19.4 -2.1
MOA Molln 11.52 330 Pn Pn 15 14 19.4 -2.2
VRAC Vranov 12.02 340 Pn Pn 15 14 23.6 -4.7
comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=2.2
OKC Ostrava-Krasne 12.15 346 AMS AMS 15 20 40.0
comp=Z,200nm,9.3s
WTTA Wattenberg 12.25 322⇑*i*Pn Pn 15 14 29.5 -2.0
WTTA ⇑*i*Sn Sn 15 16 43.0 -4.3
WTTA Wattenberg 12.25 322 Pn Pn 15 14 29.5 -2.0
TREC Trest 12.32 337 AMS AMS 15 20 50.0
comp=Z,200nm,11.3s
GEC2 GERESS Array S 12.55 331 *e*P Pn 15 14 33.8 -1.9
GEC2 pmax pmax
comp=Z,584nm,0.7s
GEC2 GERESS Array S 12.55 331 *e*Pn Pn 15 14 33.8 -1.9
comp=Z,584nm,0.7s
GEC2 GERESS Array S 12.55 331 *e*P Pn 15 14 33.8 -1.9
comp=Z,584nm,0.7s
GERES GERESS Array B 12.55 331 Pn Pn 15 14 34.0 -1.6
comp=Z,0.3nm,0.3s,baz=144,slow=14,SNR=14
GERES GERESS Array B 12.55 331 P Pn 15 14 34.0 -1.7
KHC Kasperske Hory 12.83 332 *e*P Pn 15 14 37.3 -2.2
KHC *e* 15 17 00.3
KHC MLR MLR
comp=Z,500nm,11.5s
KHC Kasperske Hory 12.83 332 *e*P Pn 15 14 37.1 -2.4
comp=Z,3.7nm,0.7s
KHC Kasperske Hory 12.83 332 *e*P Pn 15 14 37.3 -2.2
KHC *ex* x 15 14 50.5
KHC *e*S Sn 15 17 00.3 -1.4
KHC AMS AMS 15 19 50.0
comp=Z,500nm,11.5s
KHC Kasperske Hory 12.83 332 Pn Pn 15 14 37.3 -2.2
KHC Sn Sn 15 17 00.3 -1.4
DAVOX Davos/Dischmat 12.84 316 Pn Pn 15 14 40.3 +0.7
comp=Z,0.3nm,0.3s,baz=144,slow=18,SNR=3.6
DAVOX Sn Sn 15 16 59.8 -2.1
comp=Z,0.2nm,0.3s,baz=343,slow=19,SNR=2.9
DAVOX LR LR 15 19 59.8
comp=Z,70nm,20.0s,baz=88,slow=39
DAVOX Davos/Dischmat 12.84 316 P Pn 15 14 40.3 +0.7
DAVOX 15 16 59.8
DAVOX Davos/Dischmat 12.84 316 P Pn 15 14 40.3 +0.7
ASF Jabal al Asfar 12.98 113 Pn Pn 15 14 45.0 +3.3
comp=Z,0.2nm,0.3s,baz=346,slow=12,SNR=1.9
DPC Dobruska-Polom 13.04 341 *e*P Pn 15 14 42.5 +0.2
DPC MLR MLR
comp=Z,300nm,10.4s
DPC Dobruska-Polom 13.04 341 *e*P Pn 15 14 42.5 +0.2
DPC AMS AMS 15 20 20.0
comp=Z,300nm,10.4s
DPC Dobruska-Polom 13.04 341 Pn Pn 15 14 42.5 +0.2
EIL Elat 13.16 126 Pn Pn 15 14 45.2 +1.1
comp=Z,0.4nm,0.3s,baz=347,slow=12,SNR=4.1
EIL Elat 13.16 126 Pn Pn 15 14 45.2 +1.1
EIL Elat 13.16 126 Pn Pn 15 14 45.2 +1.1
PRU Pruhonice 13.23 336 AMS AMS 15 21 30.0
comp=Z,300nm,8.5s
KIEV Kiev 13.35 18 *e*P Pn 15 14 46.5 0.0
KIEV pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 13.35 18 *e*P Pn 15 14 46.5 +0.1
comp=Z,4.0nm,0.9s
KIEV Kiev 13.35 18 *e*P Pn 15 14 46.5 0.0
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 13.36 18 Pn Pn 15 14 45.2 -1.4
comp=Z,0.3nm,0.3s,baz=207,slow=12,SNR=4.1
AKASG Malin Array Be 13.36 18 P Pn 15 14 45.2 -1.4
AKBB Malin Array Si 13.36 18 *e*P Pn 15 14 46.2 -0.4
AKBB Malin Array Si 13.36 18 *e*P Pn 15 14 46.2 -0.4
MBDF Montbardon 13.69 304 *e*P Pn 15 14 49.8 -1.4
comp=Z,27nm,1.1s
MBDF Montbardon 13.69 304 *e*P Pn 15 14 49.8 -1.4
MBDF pmax pmax
comp=Z,13nm,1.1s
MBDF Montbardon 13.69 304 *e*P Pn 15 14 49.8 -1.4
comp=Z,13nm,1.1s
PVCC Panska Ves 13.69 337 AMS AMS 15 21 40.0
comp=Z,200nm,13.8s
LPG La Plagne 14.02 307 *e*P Pn 15 14 55.0 -0.7
LPL La Plagne 14.04 307 *e*P Pn 15 14 55.4 -0.6
NKC Novy Kostel 14.16 332 AMS AMS 15 20 50.0
comp=Z,400nm,11.8s
BRG Berggiesshubel 14.19 337 *i* P Pn 15 15 05.9 +8.0
comp=Z,4.8nm,0.7s
GRA1 Grafenberg Arr 14.21 328 *e*P Pn 15 15 06.2 +7.9
GRA1 Grafenberg Arr 14.21 328 *e*P Pn 15 15 06.2 +7.9
GRF Grafenberg Arr 14.21 328 *e*P Pn 15 15 06.2 +7.9
GRF *e*L 15 21 17.9
comp=Z,146nm,21.0s
GRF Grafenberg Arr 14.21 328 *e*P Pn 15 15 06.2 +7.9
BFO Black Forest 14.63 319 Pn Pn 15 15 02.2 -1.8
BFO *e* 15 15 10.5
BFO Black Forest 14.63 319 Pn Pn 15 15 02.2 -1.7
MOX Moxa 14.80 331 *e*P Pn 15 15 12.5 +6.1
MOX Moxa 14.80 331 *e*P Pn 15 15 12.5 +6.1
CLL Collm 14.86 335 *e*P Pn 15 15 09.0 +1.8
CLL *i* 15 15 11.5
CLL *i* 15 15 13.3
CLL Collm 14.86 335 *e*P Pn 15 15 09.0 +1.8
CLL *i*pP pP 15 15 11.5 -6.8
CLL *i* 15 15 13.3
comp=Z,12nm,1.2s
CABF La Chapelle 14.94 310 *e*P Pn 15 15 06.0 -2.3
comp=Z,18nm,0.7s
CABF La Chapelle 14.94 310 *e*P Pn 15 15 06.0 -2.3
CABF pmax pmax
comp=Z,9.0nm,0.7s
CABF La Chapelle 14.94 310 *e*P Pn 15 15 06.0 -2.3
comp=Z,8.8nm,0.7s
SUW Suwalki 15.87 1 *e*P Pn 15 15 21.1 +0.8
SUW pmax pmax
comp=Z,63nm,1.0s
SUW Suwalki 15.87 1 *e*Pn Pn 15 15 21.1 +0.8
comp=Z,63nm,1.0s
SUW Suwalki 15.87 1 *e*Pn Pn 15 15 21.1 +0.8
comp=Z,63nm,1.0s
KIV Kislovodsk 16.07 63 *e*P Pn 15 15 27.8 +4.7
KIV pmax pmax
comp=Z,12nm,1.3s
KIV Kislovodsk 16.07 63 *e*P Pn 15 15 27.8 +4.7
comp=Z,12nm,1.3s
SMF Signal de Mont 16.34 307 *e*P Pn 15 15 21.8 -4.7
comp=Z,28nm,1.1s
SMF Signal de Mont 16.34 307 *e*P Pn 15 15 21.8 -4.7
SMF pmax pmax
comp=Z,14nm,1.1s
SMF Signal de Mont 16.34 307 *e*P Pn 15 15 21.8 -4.7
comp=Z,14nm,1.1s
MTLF Montolieu 16.42 295 *e*P Pn 15 15 29.5 +2.0
comp=Z,17nm,0.9s
MTLF Montolieu 16.42 295 *e*P Pn 15 15 29.5 +2.0
MTLF pmax pmax
comp=Z,9.0nm,0.9s
MTLF Montolieu 16.42 295 *e*P Pn 15 15 29.5 +2.0
comp=Z,8.6nm,0.9s
MTLF Montolieu 16.42 295 *e*P Pn 15 15 29.5 +2.0
comp=Z,8.6nm,0.9s
LOR Lormes 16.60 309 *e*P Pn 15 15 28.8 -0.9
LOR *e*MLR MLR
comp=Z,62nm,21.8s
ZEI Tsey 16.70 67 *e*P Pn 15 15 36.3 +5.2
ZEI pmax pmax
comp=Z,6.0nm,0.5s
SSF Saint Saulge 16.73 308 *e*P Pn 15 15 34.5 +3.2
comp=Z,16nm,0.7s
SSF Saint Saulge 16.73 308 *e*P Pn 15 15 34.5 +3.2
SSF pmax pmax
comp=Z,8.0nm,0.7s

SSF	**Saint Saulge**	16.73	308	*e*P		Pn	15 15 34.5 +3.2
	comp=Z,8.3nm,0.7s						
SSF	**Saint Saulge**	16.73	308	*e*P		Pn	15 15 34.5 +3.2
	comp=Z,8.2nm,0.7s						
BGF	**Bois d'Agland**	16.94	306	*e*P		Pn	15 15 34.2 +0.2
	comp=Z,30nm,0.9s						
BGF	**Bois d'Agland**	16.94	306	*e*P		Pn	15 15 34.2 +0.2
BGF				pmax		pmax	
	comp=Z,15nm,0.9s						
BGF	**Bois d'Agland**	16.94	306	*e*P		Pn	15 15 34.2 +0.2
	comp=Z,15nm,0.9s						
BGF	**Bois d'Agland**	16.94	306	*e*P		Pn	15 15 34.2 +0.2
	comp=Z,15nm,0.9s						
GNI	**Garni**	17.14	76	*de*P		Pn	15 15 37.7 +1.1
GNI				pmax		pmax	
	comp=Z,8.0nm,1.2s						
GNI	**Garni**	17.14	76	*e*P		Pn	15 15 37.7 +1.1
	comp=Z,8.0nm,1.2s						
TCF	**Toulx Ste Croi**	17.25	305	*e*P		Pn	15 15 37.2 -0.6
	comp=Z,15nm,1.0s						
TCF	**Toulx Ste Croi**	17.25	305	*e*P		Pn	15 15 37.2 -0.6
TCF				pmax		pmax	
	comp=Z,8.0nm,1.0s						
TCF	**Toulx Ste Croi**	17.25	305	*e*P		Pn	15 15 37.2 -0.6
	comp=Z,7.5nm,1.0s						
TCF	**Toulx Ste Croi**	17.25	305	*e*P		Pn	15 15 37.2 -0.6
	comp=Z,7.5nm,1.0s						
IIGN	**Ignalina**	17.36	7	*e*P		Pn	15 15 40.1 +0.9
IIGN	**Ignalina**	17.36	7	*e*P		Pn	15 15 40.1 +0.9
IDID	**Didziasalis**	17.38	8	*e*P		Pn	15 15 39.4 0.0
IDID	**Didziasalis**	17.38	8	*e*P		Pn	15 15 39.4 0.0
ISAL	**Salakas**	17.57	6	*e*P		Pn	15 15 42.4 +0.5
ISAL	**Salakas**	17.57	6	*e*P		Pn	15 15 42.4 +0.6
IZAR	**Zarasai**	17.76	6	*e*P		Pn	15 15 43.2 -1.0
IZAR	**Zarasai**	17.76	6	*e*P		Pn	15 15 43.2 -0.9
BAIF	**Baives**	17.83	318	*e*P		Pn	15 15 43.0 -2.0
SJPF	**Ste Jean**	18.87	293	*e*P		Pn	15 15 57.7 -0.1
	comp=Z,11nm,0.6s						
SJPF	**Ste Jean**	18.87	293	*e*P		Pn	15 15 57.7 -0.1
SJPF				pmax		pmax	
	comp=Z,5.0nm,0.6s						
SJPF	**Ste Jean**	18.87	293	*e*P		Pn	15 15 57.7 -0.1
	comp=Z,5.3nm,0.6s						
SJPF	**Ste Jean**	18.87	293	*e*P		Pn	15 15 57.7 -0.1
	comp=Z,5.3nm,0.6s						
MFF	**Saint Martin d**	18.89	304	*e*P		Pn	15 15 58.3 +0.3
	comp=Z,26nm,0.7s						
MFF	**Saint Martin d**	18.89	304	*e*P		Pn	15 15 58.3 +0.3
MFF				pmax		pmax	
	comp=Z,13nm,0.7s						
MFF	**Saint Martin d**	18.89	304	*e*P		Pn	15 15 58.3 +0.3
	comp=Z,13nm,0.7s						
MFF	**Saint Martin d**	18.89	304	*e*P		Pn	15 15 58.3 +0.3
	comp=Z,13nm,0.7s						
OBN	**Obninsk**	19.36	24	*e*P		Pn	15 16 05.0 +1.3
OBN				pmax		pmax	
	comp=Z,19nm,1.4s						
LDF	**La Druitiere**	19.59	310	*e*P		Pn	15 16 04.7 -1.7
	comp=Z,6.2nm,0.4s						
LDF	**La Druitiere**	19.59	310	*e*P		Pn	15 16 04.7 -1.7
LDF				pmax		pmax	
	comp=Z,3.0nm,0.4s						
LDF	**La Druitiere**	19.59	310	*e*P		Pn	15 16 04.7 -1.7
	comp=Z,3.1nm,0.4s						
LDF	**La Druitiere**	19.59	310	*e*P		Pn	15 16 04.7 -1.7
	comp=Z,3.1nm,0.4s						
FLN	**La Foliniere**	19.87	310	*e*P		Pn	15 16 07.8 -2.0
	comp=Z,7.8nm,0.4s						
FLN				*e*MLR		MLR	
	comp=Z,72nm,19.2s						
FLN	**La Foliniere**	19.87	310	*e*P		Pn	15 16 07.8 -2.0
FLN				pmax		pmax	
	comp=Z,4.0nm,0.4s						
FLN	**La Foliniere**	19.87	310	*e*P		Pn	15 16 07.8 -2.0
	comp=Z,3.9nm,0.4s						
FLN	**La Foliniere**	19.87	310	*e*P		Pn	15 16 07.8 -2.0
	comp=Z,3.9nm,0.4s						
GRR	**Gorron**	19.96	308	*e*P		Pn	15 16 09.1 -1.7
	comp=Z,26nm,0.7s						
GRR	**Gorron**	19.96	308	*e*P		Pn	15 16 09.1 -1.7
GRR				pmax		pmax	
	comp=Z,13nm,0.7s						
GRR	**Gorron**	19.96	308	*e*P		Pn	15 16 09.1 -1.7
	comp=Z,13nm,0.7s						
GRR	**Gorron**	19.96	308	*e*P		Pn	15 16 09.1 -1.7
	comp=Z,13nm,0.7s						
MOS	**Moscow**	20.22	25	*e*P		P	15 16 13.8 +2.0
MOS				*e*			15 16 35.3
MOS				pmax		pmax	
	comp=Z,48nm,0.8s						
MOS	**Moscow**	20.22	25	*e*P		P	15 16 13.8 +2.0
	comp=Z,48nm,0.8s						
VSU	**Vasula**	20.49	6	*c i*P		P	15 16 14.6 -0.1
VSU				pmax		pmax	
	comp=Z,80nm,0.6s						
VSU	**Vasula**	20.49	6	*i*P		P	15 16 14.6 -0.1
	comp=Z,80nm,0.6s						
ESDC	**Sonseca Array**	20.85	283	P		P	15 16 18.2 -0.6
	comp=Z,13nm,0.7s,baz=76,slow=11,SNR=95						
ESDC	**Sonseca Array**	20.85	283	P		P	15 16 18.2 -0.7
ESDC	**Sonseca Array**	20.85	283	P		P	15 16 18.2 -0.6
ESLA	**Sonseca Array**	20.85	283	*e*P		P	15 16 18.2 -0.6
	comp=Z,13nm,1.3s						
ESLA	**Sonseca Array**	20.85	283	*e*P		P	15 16 18.2 -0.6
	comp=Z,13nm,1.3s						
SGMF	**Saint Gilles**	20.97	307	*e*P		P	15 16 18.8 -1.2
	comp=Z,26nm,0.7s						
SGMF	**Saint Gilles**	20.97	307	*e*P		P	15 16 18.8 -1.2
SGMF				pmax		pmax	
	comp=Z,13nm,0.7s						
SGMF	**Saint Gilles**	20.97	307	*e*P		P	15 16 18.8 -1.2
	comp=Z,13nm,0.7s						
SGMF	**Saint Gilles**	20.97	307	*e*P		P	15 16 18.8 -1.2
	comp=Z,13nm,0.7s						
PAB	**San Pablo**	21.16	282	*e*P		P	15 16 21.4 -0.7
PAB				pmax		pmax	
	comp=Z,28nm,1.3s,mb4.4						
PAB	**San Pablo**	21.16	282	*e*P		P	15 16 21.4 -0.7
	comp=Z,28nm,1.3s,mb4.4						
PAB	**San Pablo**	21.16	282	*e*P		P	15 16 21.4 -0.7
	comp=Z,28nm,1.3s,mb4.4						
QUIF	**Quistinic**	21.25	306	*e*P		P	15 16 22.9 -0.1
	comp=Z,82nm,0.7s,mb4.9						
QUIF	**Quistinic**	21.25	306	*e*P		P	15 16 22.9 -0.1
QUIF				pmax		pmax	
	comp=Z,41nm,0.7s,mb4.9						
QUIF	**Quistinic**	21.25	306	*e*P		P	15 16 22.9 -0.1
	comp=Z,41nm,0.7s,mb4.9						
QUIF	**Quistinic**	21.25	306	*e*P		P	15 16 22.9 -0.1
	comp=Z,41nm,0.7s,mb4.9						
TAM	**Tamanrasset**	21.30	229	P		P	15 16 24.9 +1.2
TAM				pmax		pmax	
	comp=Z,4.0nm,0.9s,mb3.8						
TAM	**Tamanrasset**	21.30	229	P		P	15 16 24.9 +1.1
	comp=Z,3.7nm,0.9s,mb3.7						
TAM	**Tamanrasset**	21.30	229	P		P	15 16 24.9 +1.2
	comp=Z,3.7nm,0.9s,mb3.7						
ROSF	**Rostrenen**	21.45	307	*e*P		P	15 16 24.9 -0.3
	comp=Z,31nm,0.7s,mb4.4						
ROSF	**Rostrenen**	21.45	307	*e*P		P	15 16 24.9 -0.3
ROSF				pmax		pmax	
	comp=Z,16nm,0.7s,mb4.5						
ROSF	**Rostrenen**	21.45	307	*e*P		P	15 16 24.9 -0.3
	comp=Z,16nm,0.7s,mb4.5						
ROSF	**Rostrenen**	21.45	307	*e*P		P	15 16 24.9 -0.3
	comp=Z,16nm,0.7s,mb4.4						
HFS	**Hagfors**	22.75	348	P		P	15 16 36.7 -2.2
	comp=Z,3.7nm,0.5s,mb4.1,baz=158,slow=9.9,SNR=19						
HFS				LR		LR	15 26 37.6
	comp=Z,58nm,18.9s,MS3.0,baz=38,slow=40						
HFS	**Hagfors**	22.75	348	P		P	15 16 36.7 -2.2
MDT	**Midelt**	22.90	265	P		P	15 16 40.5 -0.3
	comp=Z,3.0nm,0.9s,mb3.7,baz=68,slow=10,SNR=4.2						
MDT	**Midelt**	22.90	265	P		P	15 16 40.5 -0.3
FINES	**FINESS Array B**	23.41	4	P		P	15 16 43.1 -2.7
	comp=Z,1.9nm,0.7s,mb3.6,baz=176,slow=11,SNR=17						
FINES				PcP		PcP	15 20 30.5 -1.0
	comp=Z,1.4nm,0.8s,baz=123,slow=3.8,SNR=3.4						
FINES				LR		LR	15 25 50.4
	comp=Z,67nm,19.5s,MS3.1,baz=156,slow=36						
FINES	**FINESS Array B**	23.41	4	P		P	15 16 43.2 -2.6
FINES							15 20 30.5
FINES	**FINESS Array B**	23.41	4	PcP		PcP	15 20 30.5 -1.0
NAO01	**NORSAR Array S**	23.92	346	*e*P		P	15 16 49.5 -1.2
NAO01	**NORSAR Array S**	23.92	346	*e*P		P	15 16 49.5 -1.1
NB2	**NORSAR Subarra**	24.04	346	P		P	15 16 49.6 -2.1
	comp=Z,2.8nm,0.7s,mb3.8,baz=150,slow=10						
NB2	**NORSAR Subarra**	24.04	346	P		P	15 16 49.6 -2.1
	comp=Z,2.8nm,0.7s,mb3.8,baz=150,slow=10,SNR=9.7						
NOA	**NORSAR Array B**	24.04	346	P		P	15 16 50.2 -1.5
	comp=Z,2.1nm,0.5s,mb3.8,baz=159,slow=9.9,SNR=14						
NOA				LR		LR	15 26 46.2
	comp=Z,40nm,19.2s,MS2.9,baz=180,slow=38						
NOA	**NORSAR Array B**	24.04	346	P		P	15 16 50.2 -1.5
NOA				LR		LR	15 26 46.2
NOA	**NORSAR Array B**	24.04	346	P		P	15 16 50.2 -1.5
KAF	**Kangasniemi**	24.09	4	*e*P		P	15 16 49.8 -2.4
KAF				pmax		pmax	
	comp=Z,2.0nm,0.5s,mb3.8						
KAF	**Kangasniemi**	24.09	4	*e*P		P	15 16 49.8 -2.4
	comp=Z,2.3nm,0.5s,mb3.9						
KAF	**Kangasniemi**	24.09	4	*e*P		P	15 16 49.8 -2.4
	comp=Z,2.0nm,0.5s,mb3.8						
EKA	**Eskdalemuir Ar**	24.51	323	P		P	15 16 55.4 -0.7
	comp=Z,11nm,0.8s,mb4.4,baz=114,slow=9.3,SNR=22						
EKA	**Eskdalemuir Ar**	24.51	323	P		P	15 16 55.4 -0.7
JOF	**Joensuu**	25.34	9	*e*P		P	15 17 01.8 -1.7
JOF				pmax		pmax	
	comp=Z,3.0nm,0.5s,mb4.1						
JOF	**Joensuu**	25.34	9	*e*P		P	15 17 01.8 -1.7
	comp=Z,3.3nm,0.5s,mb4.1						
JOF	**Joensuu**	25.34	9	*e*P		P	15 17 01.8 -1.7
	comp=Z,3.0nm,0.5s,mb4.1						
AKTK	**Aktyubinsk**	27.77	52	P		P	15 17 25.6 0.0
AKTK				LR		LR	15 31 14.5
AKTK	**Aktyubinsk**	27.77	52	P		P	15 17 25.6 0.0
AKTO	**Aktyubinsk**	27.77	52	P		P	15 17 25.6 -0.1
	comp=Z,0.8nm,0.7s,mb3.5,baz=252,slow=9.6,SNR=2.6						
AKTO				LR		LR	15 31 14.5
	comp=Z,28nm,19.3s,MS2.9,baz=42,slow=42						
ARU	**Arti**	29.90	41	*d i*P		P	15 17 44.9 +0.4
ARU				*e*			15 18 43.1
ARU				S		S	15 22 44.4 +3.9
ARU				SS		SS	15 24 18.6 -29
ARU				pmax		pmax	
	comp=Z,4.0nm,1.2s,mb4.0						
ARU	**Arti**	29.90	41	*i*P		P	15 17 44.9 +0.4
	comp=Z,4.0nm,1.2s,mb4.0						
LVZ	**Lovozero**	30.53	9	*ce*P		P	15 17 48.6 -1.3
LVZ				pmax		pmax	
	comp=Z,39nm,1.6s,mb5.0						
LVZ	**Lovozero**	30.53	9	*e*P		P	15 17 48.6 -1.3
	comp=Z,39nm,1.6s,mb5.0						
TORD	**Torodi Ar. Bea**	31.18	223	P		P	15 17 55.7 -0.4
	comp=Z,1.1nm,0.5s,mb3.9,baz=30,slow=9.2,SNR=10						
TORD				LR		LR	15 30 42.2
	comp=Z,67nm,18.8s,MS3.3,baz=145,slow=37						
ARCES	**ARCESS Array B**	31.48	2	P		P	15 17 57.1 -1.1
	comp=Z,1.6nm,0.6s,mb4.1,baz=193,slow=9.3,SNR=15						
ARCES				PcP		PcP	15 20 49.7 -1.0
	comp=Z,1.3nm,0.8s,baz=194,slow=1.9,SNR=4.8						
ARCES	**ARCESS Array B**	31.48	2	P		P	15 17 57.1 -1.1
ARCES							15 20 49.7
ARCES				pmax		pmax	
	comp=Z,2.0nm,0.6s						
ARCES				pmax		pmax	
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	31.48	2	P		P	15 17 57.2 -1.0
ARCES	**ARCESS Array B**	31.48	2	PcP		PcP	15 20 49.8 -1.0
KEV	**Kevo**	31.75	3	*e*P		P	15 17 58.7 -1.9
KEV				pmax		pmax	
	comp=Z,5.0nm,0.8s,mb4.4						
KEV	**Kevo**	31.75	3	*e*P		P	15 17 58.7 -1.9
	comp=Z,4.5nm,0.8s,mb4.3						
KEV	**Kevo**	31.75	3	*e*P		P	15 17 58.7 -1.9
	comp=Z,5.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	35.71	50	*e*P		P	15 18 35.9 +0.7
BRVK				pmax		pmax	
	comp=Z,2.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	35.71	50	*e*P		P	15 18 35.9 +0.7
	comp=Z,2.1nm,0.5s,mb4.3						
BRVK	**Borovoye**	35.71	50	*e*P		P	15 18 35.9 +0.7
	comp=Z,2.1nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	35.77	50	P		P	15 18 36.2 +0.5
	comp=Z,1.4nm,0.6s,mb4.1,baz=258,slow=6.0,SNR=11						
BVAR				LR		LR	15 35 16.7
	comp=Z,46nm,18.3s,MS3.3,baz=290,slow=40						
BVAR	**Borovoye Array**	35.77	50	P		P	15 18 36.2 +0.5
EKS2	**Erkin-Say**	38.61	67	*e*P		P	15 19 00.7 +0.7
	comp=Z,2.7nm,0.8s,mb4.0						
EKS2	**Erkin-Say**	38.61	67	*e*P		P	15 19 00.7 +0.7
	comp=Z,2.7nm,0.8s,mb4.0						
AAK	**Ala-Archa**	39.13	67	P		P	15 19 05.7 +1.4
	comp=Z,1.0nm,0.3s,mb4.0,baz=269,slow=5.2,SNR=2.2						
AAK	**Ala-Archa**	39.13	67	*ce*P		P	15 19 05.4 +1.1
AAK				pmax		pmax	
	comp=Z,4.0nm,2.9s,mb3.6						
AAK	**Ala-Archa**	39.13	67	*e*P		P	15 19 05.4 +1.1
	comp=Z,4.0nm,2.9s,mb3.6						
DBIC	**Dimbokro**	40.12	226	P		P	15 19 13.9 +1.1
	comp=Z,7.6nm,1.1s,mb4.3,baz=0.8,slow=10.0,SNR=3.2						
DBIC	**Dimbokro**	40.12	226	P		P	15 19 13.9 +1.1
DBIC				pmax		pmax	
	comp=Z,8.0nm,1.1s						
DBIC	**Dimbokro**	40.12	226	P		P	15 19 13.7 +0.8
DBIC	**Dimbokro**	40.12	226	P		P	15 19 13.7 +0.9
LIC	**Lamto**	40.58	226	*e*P		P	15 19 16.6 -0.1
LIC	**Lamto**	40.58	226	*e*P		P	15 19 16.6 -0.1
KURK	**Kurchatov**	40.86	54	P		P	15 19 18.4 -0.2
	comp=Z,5.7nm,0.6s,mb4.4,baz=281,slow=8.8,SNR=26						
KURK	**Kurchatov**	40.86	54	P		P	15 19 18.4 -0.2
KURK				pmax		pmax	
	comp=Z,6.0nm,0.6s,mb4.4						
KURK	**Kurchatov**	40.86	54	*e*P		P	15 19 18.0 -0.5
	comp=Z,17nm,1.2s,mb4.5						
KURK	**Kurchatov**	40.86	54	P		P	15 19 18.4 -0.2
	comp=Z,6.0nm,0.6s,mb4.4						
NVS	**Novosibirsk**	43.38	47	*i*P		P	15 19 39.7 +0.6
NVS				*e*S		S	15 26 05.2 -0.6
NVS				pmax		pmax	
	comp=Z,16nm,1.1s,mb4.7						
NVS				pmax		pmax	
	comp=E,10.0nm,1.0s						
NVS				smax			
	comp=N,12nm,1.9s						
NVS	**Novosibirsk**	43.38	47	*i*P		P	15 19 39.7 +0.6
	comp=N,12nm,1.9s,mb4.3						
MK31	**Makanchi Array**	43.79	59	*e*P		P	15 19 42.5 0.0
MK31	**Makanchi Array**	43.79	59	*e*P		P	15 19 42.5 0.0
MKAR	**Makanchi Array**	43.79	59	P		P	15 19 42.4 -0.1
	comp=N,1.6nm,0.4s,mb4.1,baz=276,slow=7.1,SNR=32						
MKAR				ScP		ScP	15 25 17.7 -1.6
	comp=N,0.9nm,0.8s,baz=264,slow=4.6,SNR=6.0						
MKAR	**Makanchi Array**	43.79	59	P		P	15 19 42.4 -0.1
MKAR				ScP		ScP	15 25 17.7 -1.6
MKAR	**Makanchi Array**	43.79	59	P		P	15 19 42.4 -0.1
ZAA0	**Zalesovo Array**	44.38	48	*e*P		P	15 19 46.8 -0.3
ZAA0	**Zalesovo Array**	44.38	48	*e*P		P	15 19 46.8 -0.3
ZALV	**Zalesovo Beam**	44.38	48	P		P	15 19 46.9 -0.2
	comp=N,10nm,0.5s,mb4.8,baz=277,slow=8.5,SNR=52						
ZALV	**Zalesovo Beam**	44.38	48	P		P	15 19 46.9 -0.2
WMQ	**Urumqi**	48.20	62	*e*P		P	15 20 19.5 +2.2
GTA	**Gaotai**	58.26	63	*e*P		P	15 21 31.0 -0.4
GTA				pP		pP	15 21 41.3 +3.6
GTA				sP		sP	15 21 45.0 +4.9
GTA				pmax		pmax	
	comp=Z,3.0nm,0.8s,mb4.4						
TIXI	**Tiksi**	59.05	21	*e*P		P	15 21 35.8 -0.6
TIXI				pmax		pmax	
	comp=Z,4.0nm,2.5s,mb4.0						
TIXI	**Tiksi**	59.05	21	*e*P		P	15 21 35.8 -0.6
	comp=Z,4.0nm,2.5s,mb4.0						
SONM	**Songino Array**	59.09	51	P		P	15 21 36.2 -0.8
	comp=Z,0.9nm,0.6s,mb4.0,baz=279,slow=7.5,SNR=6.6						
SONM	**Songino Array**	59.09	51	P		P	15 21 36.2 -0.8
BOD	**Bodaibo**	59.29	38	*e*P		P	15 21 36.6 -1.6
BOD				pmax		pmax	
	comp=Z,4.0nm,1.1s,mb4.4						
BOD	**Bodaibo**	59.29	38	*e*P		P	15 21 36.6 -1.6
	comp=Z,4.0nm,1.1s,mb4.4						
SCHQ	**Schefferville**	59.69	318	P		P	15 21 40.6 -0.4
	comp=Z,13nm,0.7s,mb5.1,baz=55,slow=6.0,SNR=30						
SCHQ	**Schefferville**	59.69	318	*e*P		P	15 21 40.7 -0.3
	comp=Z,17nm,0.9s,mb5.1						
SCHQ	**Schefferville**	59.69	318	*e*P		P	15 21 40.7 -0.3
	comp=Z,17nm,0.9s,mb5.1						
YAK	**Yakutsk**	64.25	30	*e*P		P	15 22 11.7 +0.1
YAK				pmax		pmax	
	comp=Z,5.0nm,0.6s,mb4.7						
YAK	**Yakutsk**	64.25	30	*e*P		P	15 22 11.7 +0.1
	comp=Z,5.0nm,0.6s,mb4.7						
CD2	**Chengdu**	65.11	69	P		P	15 22 19.0 +1.3
CD2				pP		pP	15 22 29.3 +5.1
CD2				sP		sP	15 22 33.0 +6.4
CD2				PP		PP	15 24 44.0 +3.2
CD2				S		S	15 30 57.0 -2.4
CD2				sS		sS	15 31 14.0 +4.0
CD2				SS		SS	15 35 11.0 -0.4
CD2				pmax		pmax	
	comp=Z,20nm,0.6s,mb5.3						
CD2				pmax		pmax	
	comp=Z,80nm,6.5s						
CD2				LR		LR	
	comp=N,170nm,7.7s						
CD2				LR		LR	
	comp=Z,150nm,7.1s						
HHC	**Hu-ho-hao-te**	65.57	56	*e*P		P	15 22 22.0 +1.5
HHC				pP		pP	15 22 32.3 +5.3
HHC				sP		sP	15 22 36.3 +7.0
HHC				PP		PP	15 24 48.5 +4.0
HHC				ScP			15 26 52.3
HHC				S		S	15 31 02.8 -1.9
HHC				sS		sS	15 31 19.5 +4.2
HHC				ScS		ScS	15 32 11.3 -3.8
HHC				SS		SS	15 35 19.5 +1.5
HHC				pmax		pmax	
	comp=Z,13nm,1.1s,mb4.9						
HHC				pmax		pmax	
	comp=Z,110nm,5.5s						
HHC				LR		LR	
	comp=N,140nm,17.5s,MS4.8						
HHC				LR		LR	
	comp=E,520nm,19.4s,MS4.8						
HHC				LR		LR	
	comp=Z,93nm,17.5s,MS4.0						
BOSA	**Boshof**	66.45	178	P		P	15 22 25.3 -0.8
	comp=Z,2.6nm,1.0s,mb4.2,baz=358,slow=8.2,SNR=2.3						
BOSA	**Boshof**	66.45	178	P		P	15 22 25.3 -0.8
KMI	**Kunming**	67.39	75	P		P	15 22 36.3 +3.9
KMI				pmax		pmax	
	comp=Z,7.0nm,1.0s,mb4.7						
CMAR	**Chiang Mai Arr**	68.12	83	P		P	15 22 35.1 -2.0
	comp=Z,0.5nm,0.4s,mb3.9,baz=310,slow=7.1,SNR=6.6						
CMAR	**Chiang Mai Arr**	68.12	83	P		P	15 22 35.1 -2.0
BJI	**Beijing**	69.00	55	P		P	15 22 42.0 -0.3
BJI				S		S	15 31 44.5 -1.5
BJI				SS		SS	15 36 10.0 -1.1
BJI				pmax		pmax	
	comp=Z,7.0nm,0.5s,mb4.8						
BJI				pmax		pmax	
	comp=Z,79nm,5.1s						
BJI				LR		LR	
	comp=N,180nm,15.7s,MS4.5						
BJI				LR		LR	
	comp=E,160nm,15.6s,MS4.5						
GYA	**Guiyang**	69.63	72	P		P	15 22 48.8 +2.4
GYA				pP		pP	15 22 59.0 +6.1
GYA				sP		sP	15 23 03.5 +8.2
GYA				PcP		PcP	15 23 12.8 +3.5
GYA				PP		PP	15 25 23.0 +2.8
GYA				ScP			15 27 15.5
GYA				S		S	15 31 51.3 -2.6
GYA				SKS			15 32 41.0
GYA				SS		SS	15 36 22.0 +0.4
GYA				pmax		pmax	
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				pmax		pmax	
	comp=Z,110nm,5.0s						
GYA				LR		LR	
	comp=N,460nm,17.8s,MS4.9						
GYA				LR		LR	
	comp=E,430nm,18.0s,MS4.9						
GYA				LR		LR	
	comp=Z,440nm,17.5s,MS4.8						
BILL	**Bilibino**	70.63	14	*e*P		P	15 22 50.2 -1.6
BILL				pmax		pmax	
	comp=Z,3.0nm,1.6s,mb4.0						
BILL	**Bilibino**	70.63	14	*e*P		P	15 22 50.2 -1.6
	comp=Z,3.0nm,1.6s,mb4.0						
SEY	**Seymchan**	71.51	22	*ce*P		P	15 22 57.1 -0.1
SEY	**Seymchan**	71.51	22	*e*P		P	15 22 57.1 -0.1
INK	**Inuvik**	72.39	351	*e*P		P	15 23 01.7 -0.7
INK				pmax		pmax	
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	72.39	351	*e*P		P	15 23 01.7 -0.7
	comp=Z,1.6nm,0.5s,mb4.2						
INK	**Inuvik**	72.39	351	*e*P		P	15 23 01.7 -0.7
	comp=Z,1.6nm,0.5s,mb4.2						
CN2	**Changchun**	72.59	48	*e*P		P	15 23 05.0 +0.9
CN2				*es*P		sP	15 23 19.3 +6.4
CN2				*e*S		S	15 32 25.0 -2.7
CN2				pmax		pmax	
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				pmax		pmax	
	comp=Z,200nm,3.0s						
ERPA	**Erie**	73.67	311	*e*P		P	15 23 11.5 +1.0
	comp=Z,17nm,0.7s,mb5.1						
ERPA	**Erie**	73.67	311	*e*P		P	15 23 11.5 +1.0
	comp=Z,17nm,0.7s,mb5.1						
YKA	**Yellowknife Ar**	74.02	341	P		P	15 23 10.9 -1.2
	comp=Z,0.6nm,0.3s,mb3.9,baz=34,slow=5.5,SNR=10						
YKA	**Yellowknife Ar**	74.02	341	P		P	15 23 10.9 -1.2
MDJ	**Mudanjiang**	74.47	45	P		P	15 23 15.0 -0.1
MDJ				pmax		pmax	
	comp=Z,5.0nm,1.4s,mb4.2						
MDJ				p

TXAR	Lajitas Array	96.28	315	P	P	15 25 06.2	+0.7
	comp=Z,1.2nm,0.8s,mb4.3,baz=46,slow=3.6,SNR=8.8						
ASAR	Alice Springs	120.39	97	PKP	PKPdf	15 30 27.2	-1.2
	comp=Z,0.7nm,0.6s,baz=303,slow=1.4,SNR=19						

*ISCJB **25** 15:35:01.9±0.5, 36°.96N±0°.03×29°.23E±0°.04, h6km±5km, Error ellipse: s-maj=5.2km s-min=4.1km az=34.4*
*ISK **25** 15:35:01.2, 36°.96N×29°.24E, h8km, MD3.2*
*CSEM **25** 15:35:02.3±0.1, 36°.98N×29°.25E, h10km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.4km az=175.0*
*DDA **25** 15:35:02.7, 37°.02N×29°.25E, h7km±2km, Md3.0*
ISC 25 15:35:02.3±0.5, **36°.96N**±0°.03×**29°.23E**±0°.04, **h8**km±4km, **n46**, σ0°**79**/60, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.29	47	PG	Pg	15 35 07.5	-0.5
GLHS				eSG	Sg	15 35 12.3	+0.5
GLHS	Glhisar (BURDU	0.29	47	i Pg	Pg	15 35 07.6	-0.4
GLHS				eSg	Sg	15 35 12.4	+0.5
FETY	Fethiye	0.35	200	PG	Pg	15 35 07.7	-1.3
FETY				eSG	Sg	15 35 13.9	+0.3
FETY	Fethiye	0.35	200	i Pg	Pg	15 35 07.7	-1.3
FETY				eSg	Sg	15 35 13.9	+0.3
GOLH	Golhisar	0.38	44	↑iP	Pg	15 35 09.5	-0.2
GOLH				i S	Sg	15 35 16.3	+1.5
GOLH	Golhisar	0.38	44	i P	Pg	15 35 09.5	-0.2
GOLH				i S	Sg	15 35 16.3	+1.5
ELL	Elmali	0.58	111	ePG	Pg	15 35 13.5	0.0
ELL	Elmali	0.58	111	ePg	Pg	15 35 13.5	0.0
DNZL	Cakiroluk	0.74	349	eP	Pg	15 35 15.6	-1.0
DNZL				eS	Sg	15 35 26.8	+0.5
DNZL	Cakiroluk	0.74	349	eP	Pg	15 35 15.6	-1.0
DNZL				eS	Sg	15 35 26.8	+0.5
YER	Yerkesik	0.78	283	ePG	Pg	15 35 17.1	-0.2
YER	Yerkesik	0.78	283	ePg	Pg	15 35 17.1	-0.2
AKAS	Kas	0.79	157	eP	Pg	15 35 18.3	+0.9
AKAS				eS	Sg	15 35 31.4	+3.9
AKAS	Kas	0.79	157	eP	Pg	15 35 18.3	+0.9
AKAS				eS	Sg	15 35 31.5	+3.9
DENT	Denizli	0.81	349	ePG	Pg	15 35 17.1	-0.8
DENT	Denizli	0.81	349	ePg	Pg	15 35 17.1	-0.7
ANTB	Antalya	1.14	93	ePN	Pn	15 35 23.0	-1.6
ANTB	Antalya	1.14	93	ePn	Pn	15 35 23.0	-1.5
BCK	Bucak	1.19	65	ePN	Pn	15 35 24.6	-0.6
BCK	Bucak	1.19	65	ePn	Pn	15 35 24.6	-0.7
MLSB	Milas	1.21	286	ePN	Pn	15 35 25.0	-0.5
MLSB	Milas	1.21	286	ePn	Pn	15 35 25.0	-0.5
ISP	Isparta	1.35	49	ePN	Pn	15 35 26.5	-0.8
ISP	Isparta	1.35	49	ePn	Pn	15 35 26.5	-0.9
DAT	Datca	1.35	261	ePN	Pn	15 35 28.0	+0.6
DAT	Datca	1.35	261	ePn	Pn	15 35 28.0	+0.6
KHL	Karahalli	1.38	10	ePN	Pn	15 35 27.3	-0.6
KHL	Karahalli	1.38	10	ePn	Pn	15 35 27.3	-0.5
KHAL	Karahalli	1.42	8	eP	Pn	15 35 28.6	+0.2
KHAL				eS	Sn	15 35 48.0	+0.7
KHAL	Karahalli	1.42	8	eP	Pn	15 35 28.6	+0.2
KHAL				eS	Sn	15 35 48.0	+0.7
BDRM	Kayabasi	1.44	275	eP	Pn	15 35 30.3	+1.8
BDRM				eS	Sn	15 35 48.1	+0.5
BDRM	Kayabasi	1.44	275	eP	Pn	15 35 30.3	+1.7
BDRM				eS	Sn	15 35 48.1	+0.5
SUTC	Sutluce-Ispart	1.50	69	ePN	Pn	15 35 29.8	+0.2
SUTC	Sutluce-Ispart	1.50	69	ePn	Pn	15 35 29.8	+0.3
KULA	Kula-Manisa	1.62	344	ePN	Pn	15 35 30.9	-0.2
KULA	Kula-Manisa	1.62	344	ePn	Pn	15 35 30.9	-0.2
SHUT	Suhut-Afyon	1.90	33	ePN	Pn	15 35 34.0	-1.0
SHUT	Suhut-Afyon	1.90	33	ePn	Pn	15 35 34.0	-1.0
IZM	Izmir	2.12	313	ePN	Pn	15 35 37.9	-0.1
IZM	Izmir	2.12	313	ePn	Pn	15 35 37.9	-0.1
ALT	Altintas	2.20	18	ePN	Pn	15 35 39.3	+0.1
ALT	Altintas	2.20	18	ePn	Pn	15 35 39.3	+0.1
HDMB	Hadim	2.61	89	ePN	Pn	15 35 45.1	+0.4
HDMB	Hadim	2.61	89	ePn	Pn	15 35 45.1	+0.4
LADK	Ladik-KONYA	2.78	63	ePN	Pn	15 35 47.8	+0.8
LADK	Ladik-KONYA	2.78	63	ePn	Pn	15 35 47.8	+0.7

*DJA **25** 15:36:04, 8°.25N×126°.20E, h10km, mb4.8/8*
*IDC **25** 15:36:07.3±0.8, 7°.65N×126°.36E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/23, mbtmp4.0/10, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.2/27, Error ellipse: s-maj=21.5km s-min=13.5km az=104.0*
*MAN **25** 15:36:08, 7°.27N×126°.17E, h79km, mb4.9, ML3.9, MS3.9*
MAN INTENSITY III - TAGUM DAVAO DEL SUR; INTENSITY II - DAVAO CITY.
*NEIC **25** 15:36:09.0±0.3, 7°.65N×126°.25E, h10km, mb4.6/3, Error ellipse: s-maj=10.7km s-min=6.3km az=88.0*
*ISCJB **25** 15:36:11.5±0.7, 7°.58N±0°.04×126°.20E±0°.07, h43km±7km, mb4.2/15, Error ellipse: s-maj=11.7km s-min=4.9km az=159.9*
ISC 25 15:36:12.7±0.9, **7°.53N**±0°.04×**126°.15E**±0°.06, **h33**km±7km, **n47**, σ0°**88**/53, **mb4.2**/15, **3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.59	170	eP	Pb	15 36 23.9	-0.8
MATI				eS	Sb	15 36 33.0	0.0
DAV	Davao City (W)	0.73	231	Pg	Pn	15 36 25.9	-0.8
	699nm,0.3s,baz=325,slow=0.8,SNR=59						
DAV	Davao City (W)	0.73	231	ePg	Pn	15 36 25.8	-0.9
DMPH	Davao City--Mi	0.78	235	↑eP	Pn	15 36 26.6	-0.8
DMPH				eS	Sn	15 36 43.0	+5.1
BUKP	Musuan	1.13	288	eP	Pn	15 36 30.9	-1.3
BUTP	Butuan	1.52	340	eP	Pn	15 36 37.5	0.0
BUTP				eS	Sn	15 37 01.5	+5.3
CGP	Cagayan de Oro	1.71	302	↓↓iP	Pn	15 36 39.1	-1.1
CGP				i S	Sn	15 37 01.2	+0.3
GSPH	General Santos	1.87	220	↓↓iP	Pn	15 36 42.5	+0.2
CTBH	Cotabato--PC H	1.92	261	↑eP	Pn	15 36 42.6	-0.4
PAGZ	Pagadian	2.76	277	eP	Pn	15 36 54.8	+0.1
PAGZ				eS	Sn	15 37 13.0	-14
MSLP	Maasin	2.88	334	eP	Pn	15 36 57.5	+1.2
DCPH	Dipolog City	2.96	291	eP	Pn	15 36 60.0	+2.6
TBP	Tagbilaran	3.12	314	eP	Pn	15 36 58.7	-0.8
SNPH	Sibulan	3.40	302	eP	Pn	15 37 04.2	+0.8
SNPH				eS	Sn	15 37 46.1	+3.5
LLP	Lapu-Lapu	3.51	322	eP	Pn	15 37 04.4	-0.5
LLP				eS	Sn	15 37 43.4	-1.9
OCLP	Ormoc	3.81	337	eP	Pn	15 37 09.4	+0.3
ZMPH	Zamboanga City	4.10	262	↑iP	Pn	15 37 12.9	-0.1
GUIM	Jordan	4.67	311	eP	Pn	15 37 21.1	+0.3
CNP	Catarman	5.16	344	eP	Pn	15 37 28.9	+1.3
RCP	Roxas	5.22	320	↓↓eP	Pn	15 37 29.0	+0.5
CUYO	Cuyo Island	6.04	303	eP	Pn	15 37 41.4	+1.6
PVCP	Virac	6.34	342	eP	Pn	15 37 45.0	+1.2
ENPP	El Nido	7.57	299	eP	Pn	15 38 00.8	0.0
CAUP	Cauayan	10.26	336	eP	Pn	15 38 37.3	-0.4
KAPI	Kappang	14.00	207	LR	LR	15 45 11.7	
	comp=Z,97nm,20.0s,baz=168,slow=38						
JOW	Kunigami	19.30	6	P	Pn	15 40 32.3	-3.8
	0.1nm,0.3s,baz=160,slow=12,SNR=1.6						
KAKA	Kakadu	21.06	163	eP	P	15 40 54.6	+0.5
	17nm,0.6s,mb4.5						
KAKA	Kakadu	21.06	163	eP	P	15 40 54.5	+0.4
	44nm,0.6s,mb5.0						
KNA	Kununurra	23.28	174	eP	P	15 41 18.3	+0.6
	18nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	25.48	181	eP	P	15 41 39.1	+1.2
	8.7nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	25.48	181	P	P	15 41 38.0	+0.1
	1.2nm,0.4s,mb3.8,baz=24,slow=12,SNR=7.9						
FITZ	Fitzroy Crossi	25.48	181	eP	P	15 41 38.1	+0.2
COEN	Coen	27.23	142	eP	P	15 41 54.1	+0.3
WRAB	Tennant Creek	28.46	164	eP	P	15 42 05.3	+0.5
	2.1nm,0.7s,mb3.9						
MJAR	Matsushiro Arr	30.90	19	P	P	15 42 23.4	-2.8
	0.7nm,0.7s,mb3.6,baz=195,slow=8.8,SNR=3.6						
ASAR	Alice Springs	31.92	166	P	P	15 42 35.1	-0.2
	1.4nm,0.5s,mb4.1,baz=341,slow=6.9,SNR=55						
FORT	Forrest	38.14	177	eP	P	15 43 29.1	+0.3
	10nm,0.5s,mb4.8						
BBOO	Buckleboo	41.21	167	eP	P	15 43 54.7	+0.3
	4.2nm,0.4s,mb4.4						
STKA	Stephens Creek	41.87	160	eP	P	15 43 59.9	+0.1
	3.1nm,0.4s,mb4.3						
STKA	Stephens Creek	41.87	160	P	P	15 44 00.2	+0.4
	5.8nm,0.6s,mb4.4,baz=339,slow=8.0,SNR=20						
PETK	Petropavlovsk-	52.17	24	P	P	15 45 19.4	-0.6
	0.9nm,0.7s,mb3.8,baz=193,slow=2.5,SNR=3.0						
MK31	Makanchi Array	54.14	324	eP	P	15 45 34.3	-0.3
MKAR	Makanchi Array	54.14	324	P	P	15 45 34.7	+0.1
	2.7nm,0.6s,mb4.3,baz=117,slow=8.1,SNR=27						
ZALV	Zalesovo Beam	56.97	332	P	P	15 45 54.1	-0.6
	1.0nm,0.6s,mb4.0,baz=143,slow=7.7,SNR=2.2						
KURK	Kurchatov	58.26	327	eP	P	15 46 03.5	-0.4
	4.9nm,0.8s,mb4.6						
BVAR	Borovoye Array	63.85	326	P	P	15 46 42.3	+0.5
	0.8nm,0.5s,mb4.0,baz=122,slow=5.6,SNR=5.2						
FINES	FINESS Array B	88.23	332	P	P	15 48 59.3	-1.1
	0.9nm,0.4s,mb4.3,baz=25,slow=5.0,SNR=12						

*ISCJB **25** 15:39:43.4±3.5, 54°.35S±0°.06×55°.8W±0°.2, h8km±22km, mb4.6/16, MS4.8/17, Error ellipse: s-maj=19.9km s-min=9.3km az=164.2*
*IDC **25** 15:39:43.4±0.6, 54°.45S×55°.99W, h0km, mb4.4/10, mb1 4.4/10, mb1mx4.4/13, mbtmp4.4/10, MS4.7/15, Ms1 4.7/15, ms1mx4.6/17, Error ellipse: s-maj=26.8km s-min=15.9km az=65.0*
*MOS **25** 15:39:47.9±1.1, 54°.49S×55°.76W, h33km, mb4.3/10, MS4.7/7, Error ellipse: s-maj=42.8km s-min=17.8km az=96.4*
*NEIC **25** 15:39:49.5±1.4, 54°.35S×55°.89W, h40km±13km, mb5.1/7, Error ellipse: s-maj=13.9km s-min=7.2km az=75.0*
*GCMT **25** 15:39:49.5±0.2, 54°.46S×56°.12W, h19km±1km, MW5.2/78, Moment Tensor Solution. s47,c71; s78,c124; Duration: 0 Moment tensor: Scale 10^16Nm; Mr=0.07±.19; Mθθ=1.95±.17; Mφφ=1.88±.22; Mrθ=0.39±.36; Mθφ=6.81±.17; Mφr=0.64±.41; Best double couple: M0=7.11400×10^16 NP1:φs=82.00000°, δ85.00000°, λ4.00000°. NP2: φs=352.00000°, δ86.00000°, λ175.00000°. Principal axes: T 7.1180, Plg6.0000°, Azm307.0000°; N -0.0030, Plg84.0000°, Azm133.0000°; P -7.1100, Plg1.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 25 15:39:46.7±4.1, **54°.35S**±0°.07×**55°.8W**±0°.2, **h17**km±25km, **n87**, σ0°**95**/38, **mb4.6**/16, **MS4.8**/17, **Falkland Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	Ushuaia	7.34	261	Pn	Pn	15 41 26.1	-6.8
	5.9nm,0.3s,baz=69,slow=11,SNR=30						
USHA				Sn	Sn	15 42 46.6	-9.2
	84nm,0.3s,baz=319,slow=11,SNR=26						
PMSA	Palmer Station	11.24	198	Pn	Pn	15 42 28.6	+2.2
	15nm,0.3s,baz=21,slow=9.6,SNR=48						
PMSA	Palmer Station	11.24	198	ePn	Pn	15 42 28.2	+1.8
TRQA	Tornquist	16.83	343	eP	Pn	15 43 40.9	-0.4
	63nm,0.9s						
CFAA	Coronel Fontan	24.40	334	P	P	15 45 02.0	-1.9
	0.5nm,0.6s,baz=170,slow=7.9,SNR=7.5						
CFAA				LR	LR	15 56 23.4	
	comp=Z,110nm,20.1s,baz=155,slow=41						
VNA1	Neumayer--Stat	26.36	146	e	P	15 45 21.4	0.0
VNA2	Neumayer--Watz	26.70	147	e	P	15 45 24.0	-0.5
	baz=289,slow=11						
VNA2				e		15 48 54.6	
LCO	Las Campanas	27.53	331	eP	P	15 45 31.6	-0.6
	63nm,1.1s,mb5.2						
CPUP	Villa Florida	28.01	357	P	P	15 45 38.1	+1.6
	1.0nm,0.4s,mb3.8,baz=169,slow=5.6,SNR=3.5						
CPUP				LR	LR	15 57 41.6	
	comp=Z,765nm,18.6s,MS4.3,baz=161,slow=38						
CPUP	Villa Florida	28.01	357	P	P	15 45 38.2	+1.7
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CPUP				MLR	MLR		
	comp=Z,765nm,18.6s						
MAIT	Maitri	32.97	146	eP	P	15 46 20.0	+0.1
MAIT				eE		15 46 28.6	
NVL	N'lazarevskaya	33.01	146	eP	P	15 46 30.0	+10
NVL				eS	S	15 51 38.0	+0.6
NVL				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
NVL				MLR	MLR		
	comp=Z,847nm,17.0s,MS4.5						
QSPA	South Pole Qui	35.90	180	P	P	15 46 44.8	-0.5
	comp=Z,15nm,0.8s,mb5.0,baz=166,slow=3.3,SNR=52						
SIV	San Ignacio	38.49	352	P	P	15 47 07.5	-0.2
	comp=Z,2.5nm,0.5s,mb4.2,baz=178,slow=9.3,SNR=14						
LPAZ	La Paz	39.17	341	P	P	15 47 14.5	+1.1
	comp=Z,0.9nm,0.5s,mb3.8,baz=112,slow=9.3,SNR=7.6						
LPAZ				LR	LR	16 04 32.6	
	comp=Z,1μm,18.2s,MS4.8,baz=52,slow=38						
LPAZ	La Paz	39.17	341	P	P	15 47 14.5	+1.1
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LPAZ				MLR	MLR		
	comp=Z,1μm,18.2s						
LPAZ	La Paz	39.17	341	eP	P	15 47 13.3	-0.1
LPAZ				LR	LR	16 04 32.6	
NNA	Nana	45.41	330	LR	LR	16 07 47.9	
	comp=Z,757nm,19.2s,MS4.7,baz=315,slow=37						
SBA	Scott Base	45.49	192	eP	P	15 48 05.1	+0.8
SBA				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
SBA	Scott Base	45.49	192	eP	P	15 48 05.1	+0.7
	comp=Z,21nm,1.0s,mb4.9						
RPN	Rapa Nui	47.31	283	LR	LR	16 06 02.9	
	comp=Z,795nm,19.0s,MS4.7,baz=137,slow=33						
MAW	Mawson	50.13	154	P	P	15 48 38.6	-1.7
	comp=Z,2.0nm,0.8s,mb4.2,baz=192,slow=12,SNR=2.6						
MAW				LR	LR	16 09 26.2	
	comp=Z,955nm,18.2s,MS4.8,baz=233,slow=36						
MAW	Mawson	50.13	154	P	P	15 48 38.6	-1.7
MAW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAW				MLR	MLR		
	comp=Z,955nm,18.3s						
ATAH	Atahualpa	50.47	330	LR	LR	16 12 31.0	
	comp=Z,518nm,18.1s,MS4.6,baz=313,slow=39						
SUR	Sutherland	56.87	101	eP	P	15 49 31.2	+1.0
	comp=Z,22nm,1.0s,mb5.2						
OTAV	Otavalo	57.52	333	eP	P	15 49 36.6	+1.7
	comp=Z,23nm,1.0s,mb5.2						
ROSC	El Rosal	60.98	339	LR	LR	16 18 46.6	
	comp=Z,789nm,18.2s,MS4.9,baz=183,slow=38						
BOSA	Boshof	62.23	101	P	P	15 50 06.7	-0.6
	comp=Z,5.1nm,1.0s,mb4.6,baz=202,slow=5.5,SNR=9.6						
BOSA				LR	LR	16 13 47.2	
	comp=Z,801nm,20.2s,MS4.9,baz=225,slow=33						
BOSA	Boshof	62.23	101	eP	P	15 50 06.6	-0.6
BOSA				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.2						
BOSA	Boshof	62.23	101	eP	P	15 50 06.5	-0.7
	comp=Z,24nm,1.3s,mb5.2						
BOSA				LR	LR	16 13 47.2	
TSUM	Tsumeb	64.98	88	eP	P	15 50 25.5	0.0
LBTB	Lobatse	65.16	99	P	P	15 50 26.4	-0.2
	comp=Z,7.6nm,0.6s,mb4.9,baz=234,slow=7.6,SNR=17						
LBTB	Lobatse	65.16	99	P	P	15 50 26.4	-0.2
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
LBTB	Lobatse	65.16	99	eP	P	15 50 26.3	-0.4
RKT	Rikitea	65.29	264	eLQ		16 07 00.2	
	comp=Z,379nm,31.2s						
RKT				eLR	LR	16 09 47.6	
	comp=Z,773nm,25.0s,baz=137						
DBIC	Dimbokro	74.18	53	LR	LR	16 16 39.7	
	comp=Z,404nm,21.1s,MS4.7,baz=194,slow=30						
LSZ	Lusaka	74.27	94	eP	P	15 51 23.3	+0.5
LSZ				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
LSZ	Lusaka	74.27	94	eP	P	15 51 23.3	+0.5
	comp=Z,21nm,1.4s,mb4.9						
PPT	Papeete	78.07	257	eLR	LR	16 15 33.2	
	comp=Z,1μm,23.8s,baz=145						
PPT	Papeete	78.07	257	LR	LR	16 19 11.8	
	comp=Z,762nm,21.2s,MS5.0,baz=149,slow=30						
TEIG	Tepich	79.32	329	LR	LR	16 23 13.4	
	comp=Z,186nm,21.6s,MS4.4,baz=132,slow=33						
TAOE	Nuku Hiva Isla	79.56	269	eLR	LR	16 16 28.8	
	comp=Z,717nm,24.8s,baz=155						
TORD	Torodi Ar. Bea	82.93	56	P	P	15 52 10.6	+0.2
	comp=Z,4.8nm,0.8s,mb4.6,baz=217,slow=4.6,SNR=23						
TORD				LR	LR	16 23 03.0	
	comp=Z,532nm,20.1s,MS4.9,baz=205,slow=31						
KMBO	Kilima Mbogo	90.89	93	LR	LR	16 33 27.8	
	comp=Z,560nm,19.5s,MS5.0,baz=256,slow=35						
STKA	Stephens Creek	92.82	195	P	P	15 52 57.1	-1.0
	comp=Z,1.5nm,0.8s,mb4.5,baz=147,slow=3.4,SNR=2.8						
STKA				LR	LR	16 32 51.7	
	comp=Z,253nm,18.7s,MS4.7,baz=195,slow=34						
STKA	Stephens Creek	92.82	195	P	P	15 52 57.1	-1.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA				MLR	MLR		
	comp=Z,253nm,18.7s						
TXAR	Lajitas Array	92.98	320	P	P	15 52 58.3	-0.3
	comp=Z,0.3nm,0.6s,mb3.9,baz=156,slow=9.5,SNR=3.7						
TXAR				LR	LR	16 32 23.6	
	comp=Z,340nm,19.6s,MS4.8,baz=175,slow=34						
DZM	Mont Dzumac	95.68	219	eLR	LR	16 23 55.4	
	comp=Z,709nm,31.1s						
ASAR	Alice Springs	101.86	189	P	Pdif	15 53 36.3	-2.8
	comp=Z,0.3nm,0.8s,baz=164,slow=4.3,SNR=4.6						
ASAR				PP	PP	15 57 47.4	-1.6
	comp=Z,0.8nm,0.9s,baz=172,slow=11,SNR=5.7						
ASAR	Alice Springs	101.86	189	P	Pdif	15 53 36.3	-2.8
ASAR						15 57 47.4	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	120.79	64	PKP	PKPdf	15 58 37.1	+0.1
	comp=Z,0.3nm,0.7s,baz=161,slow=6.1,SNR=2.3						
YKA	Yellowknife Ar	125.25	331	PKP	PKPdf	15 58 44.1	-0.6
	comp=Z,0.7nm,0.6s,baz=143,slow=2.1,SNR=10						
YKA	Yellowknife Ar	125.25	331	PKIKP	PKPdf	15 58 44.1	-0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	126.41	52	PKP	PKPdf	15 58 47.0	-0.3
	comp=Z,0.8nm,0.6s,baz=266,slow=1.2,SNR=2.4						
AKASG	Malin Array Be	126.41	52	PKIKP	PKPdf	15 58 47.0	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	126.66	34	PKP	PKPdf	15 58 47.9	+0.4
	comp=Z,0.8nm,0.9s,baz=231,slow=1.7,SNR=2.9						
NOA	NORSAR Array B	126.66	34	PKIKP	PKPdf	15 58 47.9	+0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	132.17	40	PKP	PKPdf	15 58 57.4	-0.6
	comp=Z,0.5nm,0.7s,baz=247,slow=2.9,SNR=3.1						
FINES	FINESS Array B	132.17	40	PKIKP	PKPdf	15 58 57.4	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	134.93	329	PKP	PKPdf	15 59 02.6	-0.4
	comp=Z,0.5nm,0.6s,baz=146,slow=3.6,SNR=3.5						
INK	Inuvik	134.93	329	PKIKP	PKPdf	15 59 02.6	-0.4
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	139.47	142	PKP	PKPdf	15 59 12.1	-0.5
	comp=Z,0.7nm,0.8s,baz=200,slow=4.0,SNR=5.3						
CMAR	Chiang Mai Arr	139.27	142	PKIKP	PKPdf	15 59 12.1	-0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	Arti	143.94	59	i PKIKP	PKPdf	15 59 18.2	-1.5
ARU				MLR	MLR		
	comp=Z,298nm,21.0s,MS5.0						
SVE	Sverdlovsk	145.15	59	ePKIKP	PKPdf	15 59 21.5	-0.3
SVE				pmax	pmax		
	comp=Z,28nm,1.2s						
UCH	Uchtor	145.52	90	eP	PKPdf	15 59 23.4	+0.4
AAK	Ala-Archa	145.76	89	PKPbc	PKPbc	15 59 24.3	+0.4
	comp=Z,4.2nm,0.6s,baz=181,slow=3.0,SNR=16						
AAK	Ala-Archa	145.76	89	PKP2	PKPab	15 59 24.3	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	Ala-Archa	145.76	89	eP	PKPdf	15 59 23.4	0.0
AAK				PKPbc	PKPbc	15 59 24.3	+0.4
LSA	Lhasa	145.76	123	ePKP2	PKPdf	15 59 23.6	-0.2
FRU	Bishkek	145.95	89	ePKP2	PKPdf	15 59 23.0	-0.6
TNA	Tin City	145.98	316	ePKPbc	PKPbc	15 59 24.1	+0.3
TKM2	Tokmak 2	146.58	90	ePKP2	PKPdf	15 59 25.2	+0.5
BVAR	Borovoye Array	148.76	70	PKPbc	PKPbc	15 59 31.6	-0.2
	comp=Z,2.2nm,0.7s,baz=259,slow=3.0,SNR=14						
BVAR	Borovoye Array	148.76	70	PKP2	PKPbc	15 59 31.6	-0.3
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	152.43	79	PKPbc	PKPbc	15 59 39.9	-0.7
	comp=Z,2.4nm,0.6s,baz=244,slow=2.6,SNR=14						
KURK	Kurchatov	152.43	79	PKPbc	PKPbc	15 59 39.9	-0.7
MK31	Makanchi Array	152.69	89	ePKIKP	PKPbc	15 59 40.6	-0.7
MKAR	Makanchi Array	152.69	89	PKPbc	PKPbc	15 59 40.4	-0.9
	comp=Z,1.5nm,0.6s,baz=272,slow=2.3,SNR=11						
MKAR				PKPab	PKPab	15 59 53.6	+1.3
	comp=Z,2.6nm,0.7s,baz=256,slow=2.6,SNR=7.1						
MKAR	Makanchi Array	152.69	89	PKIKP	PKPbc	15 59 40.4	-0.9
MKAR						15 59 53.6	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	152.69	89	PKPbc	PKPbc	15 59 40.4	-0.9
MKAR				PKPab	PKPab	15 59 53.6	+1.4
BILL	Bilibino	156.14	321	ePKP2	PKPab	16 00 06.1	-0.2
BIL

*IDC **25** 15:52:02.7±3.3, 23°.07S×70°.00W, h67km±25km, mb3.7/3, mb1 3.6/6, mb1mx3.4/17, mbtmp3.5/6, Error ellipse: s-maj=53.7km s-min=27.1km az=91.0*

ISC 25 15:52:01.7±0.5, 23°.00S±0°.05×70°.1W±0°.1, h66km±5km, n18, σ0°98/24, mb3.7/3, 5C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.40**	**194**	⇓*i*P	**Pn**	**15 52 15.1**	**+1.8**
CEN1				*i* S	**Sn**	**15 52 24.9**	**+3.3**
CEN1				AML	AML	15 52 25.7	
	comp=E,3μm,0.3s						
PECH	**Pedro de Valdi**	**0.56**	**45**	⇑*i*P	**Pn**	**15 52 14.6**	**-0.1**
PECH				*i* S	**Sn**	**15 52 24.1**	**-0.2**
PECH				AML	AML	15 52 24.8	
	comp=E,19μm,0.4s						
ANCH	**Antofagasta**	**0.74**	**203**	⇑*i*P	**Pn**	**15 52 16.4**	**-0.4**
ANCH				*i* S	**Sn**	**15 52 26.9**	**-1.0**
ANCH				AML	AML	15 52 28.3	
	comp=N,4μm,0.3s						
MACH	**Maria Elena**	**0.86**	**22**	⇑*i*P	**Pn**	**15 52 18.2**	**0.0**
MACH				*i* S	**Sn**	**15 52 30.7**	**+0.4**
PB01	**Plate Boundary**	**2.02**	**16**	⇑*i*P	**Pn**	**15 52 34.1**	**+0.5**
PB01				*i* S	**Sn**	**15 52 57.5**	**-0.3**
PB01				AML	AML	15 53 17.1	
	comp=E,729nm,0.5s						
HMBC	**Humberston**	**2.71**	**4**	⇓*i*P	**Pn**	**15 52 42.2**	**-0.7**
PSGC	**Pisagua**	**3.38**	**360**	⇑*i*P	**Pn**	**15 52 50.5**	**-1.6**
MNMC	**Miæe Miæ**	**3.87**	**7**	*e*P	**Pn**	**15 52 58.6**	**-0.3**
LCO	**Las Campanas**	**6.01**	**185**	*e*P	**Pn**	**15 53 27.3**	**-0.8**
LPAZ	**La Paz**	**6.92**	**16**	P	**Pn**	**15 53 43.6**	**+3.0**
	comp=E,0.6nm,0.3s,baz=185,slow=5.8,SNR=13						
LPAZ	**La Paz**	**6.92**	**16**	*e*P	**Pn**	**15 53 43.3**	**+2.7**
CFAA	**Coronel Fontan**	**8.73**	**169**	P	**Pn**	**15 54 05.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=340,slow=12,SNR=10						
CFAA				S	**Sn**	**15 55 49.5**	**+7.4**
	comp=E,0.0nm,0.3s,baz=240,slow=16,SNR=3.1						
SIV	**San Ignacio**	**10.99**	**52**	P	**Pn**	**15 54 35.4**	**-0.8**
	comp=E,0.2nm,0.3s,baz=243,slow=13,SNR=4.0						
TRQA	**Tornquist**	**16.55**	**157**	*e*Pn	**Pn**	**15 55 48.6**	**-0.8**
	comp=E,3.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.89**	**71**	P	**P**	**16 03 59.7**	**+1.3**
	comp=E,0.6nm,0.6s,mb3.6,baz=250,slow=4.9,SNR=7.8						
BOSA	**Boshof**	**83.71**	**118**	P	**P**	**16 04 23.6**	**-0.3**
	comp=E,1.6nm,0.7s,mb3.9,baz=196,slow=7.0,SNR=3.1						
YKA	**Yellowknife Ar**	**92.23**	**341**	P	**P**	**16 05 04.6**	**+0.8**
	comp=E,0.3nm,0.6s,mb3.7,baz=139,slow=4.1,SNR=5.1						
YKA	**Yellowknife Ar**	**92.23**	**341**	P	**P**	**16 05 04.6**	**+0.8**

*IDC **25** 15:53:43.4±1.3, 30°.94N×103°.58E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.5/6, ML2.6/1, Error ellipse: s-maj=41.4km s-min=21.9km az=51.0*

*ISCJB **25** 15:53:45.6±0.7, 31°.02N±0°.04×103°.68E±0°.09, h25km±5km, mb3.6/6, Error ellipse: s-maj=12.9km s-min=6.5km az=3.0*

*NEIC **25** 15:53:45.8±0.7, 31°.05N×103°.64E, h10km, mb4.7/1, Error ellipse: s-maj=17.8km s-min=12.1km az=62.0*

*BJI **25** 15:53:45.4, 31°.04N×103°.86E, h13km, mB4.2/2, mb4.2/1, ML3.9/17, Ms3.4/5, Ms7 3.3/4*

ISC 25 15:53:46.6±0.7, 31°.06N±0°.03×103°.70E±0°.07, h16km±4km, n18, σ1°09/24, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.15**	**161**	Pg	**Pg**	**15 53 49.8**	**-0.8**
CD2				Sg	**Sg**	**15 53 53.5**	**+0.1**
CD2				smax			
	comp=N,21μm,0.6s						
LZH	**Lanzhou**	**5.02**	**1**	*e*Pg	**Pg**	**15 55 21.8**	**-0.9**
LZH				Sn	**Sb**	**15 56 13.3**	**-0.9**
LZH				Sg	**Sg**	**15 56 30.5**	**+2.7**
LZH				smax			
	comp=N,59nm,0.5s						
LZH				smax			
	comp=E,47nm,0.5s						
LZH				LR	LR		
	comp=E,1μm,5.8s						
LZH				LR	LR		
	comp=Z,1μm,6.2s						
ENH	**Enshi**	**5.05**	**97**	*e*P	**Pn**	**15 55 02.6**	**+1.0**
	comp=Z,48nm,0.6s						
XAN	**Xi'an**	**5.32**	**55**	Pn	**Pn**	**15 55 04.5**	**-0.8**
XAN				Pg	**Pb**	**15 55 20.8**	**+1.6**
XAN				Sg	**Sg**	**15 56 36.3**	**-1.1**
XAN				smax			
	comp=N,170nm,0.9s						
XAN				smax			
	comp=E,61nm,0.9s						
XAN				LR	LR		
	comp=N,210nm,8.8s						
XAN				LR	LR		
	comp=E,45nm,9.0s						
XAN				LR	LR		
	comp=Z,48nm,11.4s						
KMI	**Kunming**	**5.97**	**188**	Pn	**Pn**	**15 55 15.3**	**+1.0**
KMI				Sn	**Sn**	**15 56 21.8**	**-0.6**
KMI				Sg	**Sg**	**15 56 52.8**	**-5.5**
KMI				smax			
	comp=N,50nm,1.4s						
KMI				smax			
	comp=E,56nm,1.2s						
KMI				LR	LR		
	comp=N,420nm,9.1s						
KMI				LR	LR		
	comp=E,1μm,7.5s						
GTA	**Gaotai**	**8.92**	**340**	*e*P	Px	15 56 34.0	
GTA				pP		15 56 37.5	
GTA				sP		15 56 40.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**13.26**	**200**	Pn	**Pn**	**15 56 55.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=8.6,slow=11,SNR=5.5						
SONM	**Songino Array**	**16.89**	**6**	P	**Pn**	**15 57 44.4**	**+2.3**
	comp=Z,0.0nm,0.3s,baz=170,slow=12,SNR=2.8						
KSRS	**Korea Array**	**20.99**	**66**	P	**P**	**15 58 29.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=245,slow=10,SNR=12						
MKAR	**Makanchi Array**	**22.79**	**320**	P	**P**	**15 58 48.7**	**+0.4**
	comp=Z,1.2nm,1.0s,mb3.3,baz=117,slow=10,SNR=6.0						
MKAR	**Makanchi Array**	**22.79**	**320**	P	**P**	**15 58 48.7**	**+0.4**
EKS2	**Erkin-Say**	**26.46**	**304**	*e*P	**P**	**15 59 22.3**	**-0.5**
	comp=Z,17nm,0.9s,mb4.6						
ZALV	**Zalesovo Beam**	**26.62**	**335**	P	**P**	**15 59 22.7**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.3,baz=133,slow=8.3,SNR=2.4						
ZALV	**Zalesovo Beam**	**26.62**	**335**	P	**P**	**15 59 22.7**	**-1.4**
KURK	**Kurchatov**	**27.08**	**324**	P	**P**	**15 59 27.7**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.2,baz=130,slow=9.2,SNR=4.3						
KURK	**Kurchatov**	**27.08**	**324**	P	**P**	**15 59 27.7**	**-0.6**
WRAB	**Tennant Creek**	**58.62**	**146**	*e*P	**P**	**16 03 42.4**	**-0.6**
ASAR	**Alice Springs**	**61.63**	**148**	P	**P**	**16 04 02.9**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.7,baz=331,slow=7.1,SNR=8.8						

IDC 25 16:28:22.1±1.6, 4°.25N×125°.14E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/22, mbtmp3.9/5, Error ellipse: s-maj=130.4km s-min=20.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.22**	**179**	P	P	16 33 20.7	+0.2
	1.5nm,0.3s,baz=17,slow=10,SNR=11						
ASAR	**Alice Springs**	**29.04**	**163**	P	P	16 34 23.8	-0.4
	0.6nm,0.4s,baz=341,slow=7.5,SNR=15						
STKA	**Stephens Creek**	**39.20**	**158**	P	P	16 35 52.3	+0.2
	1.9nm,0.4s,baz=324,slow=8.7,SNR=8.8						
MKAR	**Makanchi Array**	**56.23**	**326**	P	P	16 38 04.5	+0.3
	0.3nm,0.4s,baz=114,slow=8.8,SNR=5.2						
KURK	**Kurchatov**	**60.45**	**328**	P	P	16 38 33.3	-0.3
	0.2nm,0.4s,baz=122,slow=5.6,SNR=4.0						

*IDC **25** 16:29:14.8±1.1, 32°.39N×105°.14E, h0km, mb3.7/10, mb1 3.8/13, mb1mx3.6/28, mbtmp3.6/13, ML3.4/3, Error ellipse: s-maj=33.0km s-min=20.3km az=50.0*

*NEIC **25** 16:29:15.4±0.4, 32°.32N×105°.34E, h10km, mb4.3/3, Error ellipse: s-maj=13.3km s-min=7.8km az=50.0*

*BJI **25** 16:29:18.1, 32°.62N×105°.26E, h12km, mB4.2/1, ML3.9/9, Ms3.3/2, Ms7 3.3/3*

ISC 25 16:29:16.9±0.8, 32°.57N±0°.04×105°.24E±0°.05, h7km±5km, n30, σ1°08/37, mb3.8/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.08**	**218**	Pg	**Pg**	**16 29 59.8**	**+3.0**
CD2				Sg	**Sg**	**16 30 23.8**	**0.0**
CD2				smax			
	comp=N,890nm,0.5s						
XAN	**Xi'an**	**3.41**	**64**	Pn	**Pn**	**16 30 12.8**	**+2.3**
XAN				Pg	**Pg**	**16 30 20.5**	**-1.9**
XAN				Sg	**Sg**	**16 31 07.3**	**+0.7**
XAN				smax			
	comp=N,190nm,0.8s						
XAN				smax			
	comp=E,91nm,0.7s						
LZH	**Lanzhou**	**3.69**	**342**	*e*Pn	**Pn**	**16 30 17.0**	**+2.6**
LZH				Pg	**Pg**	**16 30 27.3**	**-0.4**
LZH				Sn	**Sn**	**16 30 59.8**	**+1.7**
LZH				Sg	**Sg**	**16 31 14.3**	**-1.3**
LZH				smax			
	comp=N,310nm,0.5s						
LZH				smax			
	comp=E,370nm,0.6s						
LZH				LR	LR		
	comp=N,420nm,6.6s						
LZH				LR	LR		
	comp=Z,660nm,7.8s						
ENH	**Enshi**	**4.29**	**121**	*e*Pg	**Pb**	**16 30 32.7**	**0.0**
GTA	**Gaotai**	**8.12**	**329**	*e*P	**Pb**	**16 31 38.5**	**+0.7**
GTA				pP		16 31 42.0	
GTA				sP		16 31 44.5	
GTA				S	**Sb**	**16 33 11.0**	**-3.7**
GTA				sS		16 33 15.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,62nm,4.5s						
GTA				LR	LR		
	comp=N,310nm,11.0s						
GTA				LR	LR		
	comp=E,210nm,10.7s						
GTA				LR	LR		
	comp=Z,180nm,9.5s						
CMAR	**Chiang Mai Arr**	**15.15**	**203**	Pn	**Pn**	**16 32 47.1**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=9.9,slow=11,SNR=2.8						
SONM	**Songino Array**	**15.27**	**3**	Pn	**Pn**	**16 32 56.3**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=163,slow=10,SNR=3.6						
KSRS	**Korea Array**	**19.20**	**69**	P	**Pn**	**16 33 42.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=248,slow=11,SNR=4.4						
MK31	**Makanchi Array**	**22.56**	**316**	*e*P	**P**	**16 34 16.5**	**-0.9**
MKAR	**Makanchi Array**	**22.56**	**316**	P	**P**	**16 34 18.1**	**+0.7**
	comp=Z,2.0nm,0.8s,mb3.6,baz=118,slow=9.2,SNR=22						
ZALV	**Zalesovo Beam**	**25.86**	**332**	P	**P**	**16 34 48.6**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.5,baz=130,slow=10,SNR=5.4						
UCH	**Uchtor**	**26.12**	**300**	*e*P	**P**	**16 34 52.8**	**+1.4**
KURK	**Kurchatov**	**26.69**	**321**	P	**P**	**16 34 56.7**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.5,baz=131,slow=8.8,SNR=10						
KURK	**Kurchatov**	**26.69**	**321**	*e*P	**P**	**16 34 56.9**	**+0.4**
	comp=Z,1.2nm,0.7s,mb3.5						
BVAR	**Borovoye Array**	**32.27**	**320**	P	**P**	**16 35 46.5**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=119,slow=12,SNR=3.8						
ABKAR	**Akbulak array**	**37.45**	**310**	*e*P	**P**	**16 36 31.0**	**+0.3**
ARCES	**ARCESS Array B**	**56.33**	**335**	P	**P**	**16 38 57.5**	**-0.5**
	comp=Z,2.4nm,0.9s,mb4.2,baz=77,slow=5.4,SNR=4.1						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**16 39 01.2**	**-0.9**
	comp=Z,1.5nm,0.7s,mb4.1,baz=67,slow=6.4,SNR=7.2						
AKASG	**Malin Array Be**	**57.10**	**313**	P	**P**	**16 39 02.6**	**-1.1**
	comp=Z,1.1nm,0.4s,mb4.3,baz=66,slow=7.8,SNR=6.7						
ASAR	**Alice Springs**	**62.26**	**150**	P	**P**	**16 39 38.2**	**-1.2**
	comp=Z,0.5nm,0.7s,mb3.8,baz=328,slow=6.6,SNR=5.6						
GERES	**GERESS Array B**	**67.22**	**314**	P	**P**	**16 40 11.8**	**+0.1**
	comp=Z,0.2nm,0.7s,mb3.2,baz=90,slow=4.7,SNR=3.8						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**16 40 47.1**	**+0.2**
	comp=Z,2.9nm,0.5s,mb4.2						
LPG	**La Plagne**	**72.95**	**313**	*e*P	**P**	**16 40 47.1**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.2						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**16 40 46.9**	**0.0**
	comp=Z,6.2nm,0.6s,mb4.4						
LPL	**La Plagne**	**72.95**	**313**	*e*P	**P**	**16 40 46.9**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.4						
MBDF	**Montbardon**	**73.32**	**313**	*e*P	**P**	**16 40 48.7**	**-0.4**
ORIF	**Oris-en-Rattie**	**73.77**	**313**	*e*P	**P**	**16 40 51.1**	**-0.7**
SMF	**Signal de Mont**	**74.14**	**315**	*e*P	**P**	**16 40 53.5**	**-0.4**
SJPF	**Ste Jean**	**79.07**	**314**	*e*P	**P**	**16 41 20.7**	**-1.2**
YKA	**Yellowknife Ar**	**80.01**	**18**	P	**P**	**16 41 25.8**	**-0.8**
	comp=Z,0.2nm,0.6s,mb3.2,baz=334,slow=5.6,SNR=2.7						

DJA 25 17:01:45, 1°.57S×98°.52E, h10km, MLv4.0/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**2.58**	**24**	P	Pn	17 02 31.1	+4.3
GSI	**Gunungsitoli**	**3.01**	**342**	P	Pn	17 02 39.6	+6.9
GSI				S	Sn	17 03 03.5	-5.4
KSI	**Kapahiang**	**4.56**	**117**	P	Pn	17 02 50.1	-4.1
KSI				S	Pg	17 03 13.9	+1.4

*NNC **25** 17:13:07.6±1.8, 44°.06N×87°.14E, h31km±14km, mb3.2, mpv2.9, Error ellipse: s-maj=37.0km s-min=13.0km az=47.0*

*BJI **25** 17:13:07.5, 44°.05N×87°.13E, h16km, ML3.0/8*

ISC 25 17:13:04.5±2.3, 44°.32N±0°.06×88°.0E±0°.3, h35km, n4, σ0°88/8, 4C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.56**	**206**	Pg	**Pn**	**17 13 15.3**	**-0.6**
WMQ				Sg	**Sn**	**17 13 23.8**	**-0.1**
WMQ				smax			
	comp=N,750nm,0.5s						
WMQ				smax			
	comp=E,630nm,0.7s						
MK31	**Makanchi Array**	**4.73**	**304**	⇓Pn	**Pn**	**17 14 14.6**	**+1.4**
	comp=E,0.3nm,0.3s,baz=124,slow=14,SNR=40						
MK31				Sn	**Sn**	**17 15 07.4**	**+0.6**
MK31				⇑Lg		17 15 26.5	
	comp=E,4.9nm,0.5s,baz=129,slow=28,SNR=5.5						
KURBB	**Kurchatov Arra**	**9.00**	**318**	⇓Pn	**Pn**	**17 15 12.9**	**+1.1**
	comp=E,0.3nm,0.9s						
KURBB				⇑Sn	**Sn**	**17 16 51.6**	**-0.3**
	comp=E,0.6nm,0.7s						
KURBB				⇓Lg		17 17 49.7	
	comp=E,1.9nm,0.6s						
KURK	**Kurchatov**	**9.02**	**318**	⇑Pn	**Pn**	**17 15 11.4**	**-0.7**
	comp=E,1.7nm,1.0s						
KURK				⇑Sn	**Sn**	**17 16 50.9**	**-1.4**
	comp=E,1.3nm,0.6s						
KURK				⇓Lg		17 17 47.0	
	comp=E,6.6nm,0.7s						

*DJA **25** 17:40:17, 0°.09S×96°.84E, h26km, MLv4.1/8*

*ISCJB **25** 17:40:20.7±1.1, 0°.00N±0°.07×97°.1E±0°.1, h33km, mb3.9/5, Error ellipse: s-maj=17.8km s-min=7.8km az=153.5*

*IDC **25** 17:40:23.8±1.7, 0°.06N×97°.21E, h34km±7km, mb3.6/5, mb1 3.6/7, mb1mx3.4/24, mbtmp3.6/7, ML3.4/2, Error ellipse: s-maj=48.2km s-min=24.7km az=63.0*

*NEIC **25** 17:40:23.8±1.2, 0°.08N×97°.23E, h35km, mb3.4/1, Error ellipse: s-maj=27.8km s-min=15.8km az=72.0*

ISC 25 17:40:23.1±1.1, 0°.02N±0°.08×97°.2E±0°.1, h35km, (h37km±.7km:pP-P), n20, σ0°83/19, mb3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.32**	**16**	P	**Pn**	**17 40 43.9**	**-1.2**
SISI	**Saibi**	**2.31**	**126**	P	**Pn**	**17 40 58.1**	**-0.5**
MNSI	**Mandailing Nat**	**2.49**	**72**	P	**Pn**	**17 41 01.9**	**+0.8**
PPI	**Padang Panjang**	**3.22**	**98**	P	**Pn**	**17 41 12.3**	**+1.1**
PSI	**Prapat**	**3.25**	**32**	Pn	**Pn**	**17 41 10.5**	**-1.1**
	1.5nm,0.3s,baz=147,slow=18,SNR=6.6						
PSI	**Prapat**	**3.25**	**32**	Pn	**Pn**	**17 41 10.5**	**-1.1**
PDSI	**Padang**	**3.38**	**106**	P	**Pn**	**17 41 13.7**	**+0.3**
PPSI	**Pulau Pagai**	**3.93**	**135**	P	**Pn**	**17 41 19.0**	**-2.0**
IPM	**Ipoh**	**5.84**	**41**	P	**Pn**	**17 41 47.8**	**+0.5**
	16nm,0.8s,0.0nm						
KULM	**Kulim**	**6.26**	**33**	P	**Pn**	**17 41 52.6**	**-0.4**
	20nm,0.8s,0.1nm						
MNAI	**Manna**	**7.20**	**127**	P	**Pn**	**17 42 05.7**	**-0.3**
CM31	**Chiang Mai Arr**	**18.40**	**5**	*e*P	**Pn**	**17 44 35.9**	**+0.3**
	2.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.40**	**5**	P	**Pn**	**17 44 34.7**	**-0.8**
	0.1nm,0.3s,baz=198,slow=12,SNR=18						
ASAR	**Alice Springs**	**42.69**	**126**	P	**P**	**17 48 17.8**	**+0.9**
	0.4nm,0.8s,mb3.2,baz=320,slow=8.5,SNR=3.3						
KSRS	**Korea Array**	**46.81**	**34**	P	**P**	**17 48 50.1**	**+0.6**
	0.5nm,0.5s,mb3.7,baz=219,slow=8.6,SNR=3.9						
SONM	**Songino Array**	**48.29**	**8**	P	**P**	**17 49 01.4**	**+0.6**
	0.6nm,0.5s,mb3.9,baz=193,slow=9.8,SNR=3.8						
SONM				pP	pP	17 49 11.3	0.0
	0.9nm,0.6s,baz=181,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**48.38**	**346**	P	**P**	**17 49 02.0**	**+0.5**
	0.9nm,0.6s,mb4.0,baz=159,slow=7.9,SNR=8.1						
MKAR				pP	pP	17 49 12.4	+0.5
	1.0nm,0.7s,baz=151,slow=8.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**54.72**	**351**	P	**P**	**17 49 49.1**	**+0.4**
	2.3nm,0.3s,mb4.6,baz=181,slow=6.1,SNR=13						
ZALV				pP	pP	17 49 59.7	+0.3
	1.2nm,0.5s,baz=174,slow=6.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**54.72**	**351**	P	**P**	**17 49 49.1**	**+0.4**
ZALV				pP	pP	17 49 59.7	+0.3
TXAR	**Lajitas Array**	**144.65**	**33**	PKP	PKPdf	17 59 56.5	-0.3
	0.3nm,0.5s,baz=202,slow=1.6,SNR=5.0						

*MOS **25** 17:41:54.3±1.2, 44°.38N×141°.73E, h234km, mb3.9/1, Error ellipse: s-maj=28.0km s-min=11.6km az=67.3*

*ISCJB **25** 17:41:54.8±0.4, 44°.41N±0°.04×141°.74E±0°.07, h239km±3km, mb3.3/4, Error ellipse: s-maj=8.0km s-min=6.0km az=12.9*

*JMA **25** 17:41:55.1±0.2, 44°.48N×141°.70E, h240km±2km, M2.9*

*IDC **25** 17:41:55.6±0.7, 44°.40N×141°.70E, h230km±6km, mb3.0/4, mb1 3.2/7, mb1mx2.9/26, mbtmp3.0/7, Error ellipse: s-maj=27.0km s-min=17.2km az=137.0*

*NEIC **25** 17:41:55.2±0.7, 44°.37N×141°.63E, h225km±9km, mb3.7/2, Error ellipse: s-maj=19.6km s-min=8.7km az=116.0*

*SKHL **25** 17:41:56.1±0.8, 45°.29N×142°.08E, h309km±6km, mb4.7/3, msh4.9/1*

ISC 25 17:41:55.7±0.4, 44°.41N±0°.04×141°.74E±0°.07, h234km±3km, n45, σ1°06/62, mb3.3/4, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	**Shosan**	**0.08**	**94**	P	**Pn**	**17 42 26.4**	**+0.5**
JSS				*e*S	**S**	**17 42 50.8**	**+1.2**
JYG	**Yagishiri**	**0.22**	**276**	P	**Pn**	**17 42 26.1**	**0.0**
JYG				*e*S	**S**	**17 42 49.9**	**+0.1**
JHR	**Hokuryu**	**0.66**	**181**	P	**Pn**	**17 42 28.5**	**+1.1**
ASAJ	**Asahikawa**	**0.68**	**115**	P	**Pn**	**17 42 27.5**	**+0.1**
ASAJ				*e*S	**S**	**17 42 52.9**	**+0.7**
ASAJ	**Asahikawa**	**0.68**	**115**	P	**Pn**	**17 42 27.6**	**+0.2**
	5.3nm,0.3s,baz=267,slow=7.8,SNR=56						
ASAJ				S	**S**	**17 42 52.1**	**0.0**
	1.6nm,0.3s,baz=70,slow=31,SNR=7.3						
ASAJ	**Asahikawa**	**0.68**	**115**	PN	**Pn**	**17 42 27.7**	**+0.3**
ASAJ				S	**S**	**17 42 52.2**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
JRR	**Rishiri**	**0.79**	**338**	P	**Pn**	**17 42 28.0**	**+0.2**
JSE	**Soyaes**	**0.82**	**47**	P	**Pn**	**17 42 27.9**	**-0.1**
JSE				*e*S	**S**	**17 42 52.5**	**-0.9**
JKK2	**Kamakawa 2**	**0.90**	**126**	P	**Pn**	**17 42 29.0**	**+0.5**
JWK2	**Keihoku**	**0.92**	**7**	P	**Pn**	**17 42 28.2**	**-0.3**
JWK2				*e*S	**S**	**17 42 53.5**	**-0.8**
JAB	**Ashibetsu**	**0.97**	**159**	P	**Pn**	**17 42 29.7**	**+0.8**
JFR	**Furan**	**1.39**	**153**	P	**Pn**	**17 42 32.0**	**+0.3**
JFR				*e*S	**S**	**17 43 01.1**	**+1.3**
JSK	**Shakotan**	**1.39**	**221**	P	**Pn**	**17 42 32.0**	**+0.3**
JEW	**Eniwo**	**1.58**	**188**	P	**Pn**	**17 42 34.0**	**+0.8**
JEW				*e*S	**S**	**17 43 03.5**	**+1.0**
JTKR	**Abashiri--Toko**	**1.62**	**105**	P	**Pn**	**17 42 34.2**	**+0.7**
JTKR				*e*S	**S**	**17 43 04.5**	**+1.4**
JAR	**Ashorobuto**	**1.84**	**126**	P	**Pn**	**17 42 36.3**	**+0.9**
JAR				*e*S	**S**	**17 43 08.0**	**+1.5**
JCH	**Churui**	**2.15**	**146**	P	**Pn**	**17 42 37.2**	**-1.1**
JCH				*e*S	**S**	**17 43 09.4**	**-2.3**
JNBK	**Urakawa-nobuka**	**2.25**	**160**	P	**Pn**	**17 42 39.6**	**+0.3**
JNBK				*e*S	**S**	**17 43 13.3**	**-0.2**
JAK	**Akkeshi**	**2.57**	**122**	*e*S	**S**	**17 43 18.4**	**-0.9**
JKB	**Kayabe**	**2.57**	**192**	*e*S	**S**	**17 43 18.0**	**-1.4**
ERM	**Erimo**	**2.60**	**156**	*e*PN	**Pn**	**17 42 41.8**	**-1.1**
ERM				*e*S	**S**	**17 43 16.0**	**-4.1**
YSS	**Yuzh-Sakhalins**	**2.65**	**15**	⇓*i*PN	**Pn**	**17 42 42.1**	**-1.1**
YSS				*i* S	**S**	**17 43 18.9**	**-1.9**
YSS				smax			
	comp=N,140nm,0.9s						
YSS				smax			
	comp=E,170nm,1.0s						
YSS	**Yuzh-Sakhalins**	**2.65**	**15**	*e*P	**Pn**	**17 42 42.5**	**-0.7**
YSS				*e*S	**S**	**17 43 18.7**	**-2.1**
YSS	**Yuzh-Sakhalins**	**2.65**	**15**	⇓*i*P	**Pn**	**17 42 42.1**	**-1.1**
YSS				AMB	AMB	17 42 42.3	
	comp=E,55nm,0.3s						
YSS				*i* S	**S**	**17 43 18.9**	**-1.9**
YSS				A		17 43 20.5	
	comp=E,140nm,0.9s						
YSS				A		17 43 20.5	
	comp=E,170nm,0.9s						
JOSM	**Okushiri--Mats**	**2.85**	**216**	P	**Pn**	**17 42 45.2**	**-0.4**
NEM2	**Nemuro 2**	**3.08**	**108**	*e*S	**S**	**17 43 26.8**	**-2.5**
TEY	**Ternei**	**3.71**	**282**	*e*S	**S**	**17 43 54.5**	**+12**
KUR	**Kuril'sk**	**4.44**	**77**	*e*P	**Pn**	**17 43 05.0**	**+1.0**
KUR				AMB	AMB	17 43 06.0	
	comp=E,97nm,0.9s						
GRNR	**Gornyy**	**7.31**	**332**	*e*P	**Pn**	**17 43 34.0**	**-5.9**
MAJO	**Matsushiro**	**8.30**	**200**	*e*PN	**Pn**	**17 43 51.4**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAJO	**Matsushiro**

JACV	Jacura	3.75 271	eP	Pn	17 42 54.6	-1.4
JACV			eS	Sn	17 43 37.8	-3.2
GURV	El Guri	3.76 150	eP	Pn	17 42 54.2	-1.9
CAOV	Caicara del Or	3.90 200	eP	Pn	17 42 56.2	-1.8
CAOV			eS	Sn	17 43 40.7	-3.8
TEPV	Terepaima	4.25 256	eP	Pn	17 43 01.9	-1.0
RIOV	Rio Grande	4.31 133	eP	Pn	17 43 02.7	-0.9
RIOV			eS	Sn	17 43 50.4	-4.2
SANV	Sanarito	4.71 252	eP	Pn	17 43 08.2	-1.0
SIQV	Siquisique	4.73 266	eP	Pn	17 43 08.1	-1.5
MONV	Montecano	4.95 281⇑	eP	Pn	17 43 10.0	-2.6
CURV	Curarigua	4.98 259	eP	Pn	17 43 11.6	-1.3
FDF	Fort de France	5.26 45	eP	Pn	17 43 14.2	-2.6
FDF			eS	Sn	17 44 13.2	-5.0
QARV	Quebrada Arrib	5.49 262	eP	Pn	17 43 18.8	-1.2
IMOV	Isla Los Monje	5.93 283	eP	Pn	17 43 23.7	-2.2
LUEV	Luepa	6.23 145	eP	Pn	17 43 27.9	-2.2
SOCV	Socops	6.38 245	eP	Pn	17 43 30.6	-1.6

GUC 25 17:43:30.5±0.5, 31°.88S×72°.05W, h29km±5km, MD3.7, ML2.8, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	Papudo	0.84	142	i S	Sb	17 43 57.4	-0.1
PEL	Peldehue	1.71	138⇑	iP	Pn	17 43 59.9	+1.5
PEL				i S	Sn	17 44 22.0	+2.7
PEL				AML	AML	17 44 26.3	
	comp=E,391nm,0.3s						
TLL	Tololo Astrono	2.01	33⇓	iP	Pn	17 44 04.2	+1.6
TLL				i S	Sn	17 44 30.4	+3.6
TLL				AML	AML	17 44 35.5	
	comp=N,74nm,0.4s						
FCH	Farellones	2.08	135	eP	Pn	17 44 05.6	+2.1
FCH				eP		17 44 05.9	
FCH				i S	Sn	17 44 32.1	+3.8
FCH				i S	Sn	17 44 33.3	+5.0
FCH				AML	AML	17 44 38.7	
	comp=E,66nm,0.3s						

IDC 25 17:52:50.6±6.1, 31°.50N×103°.50E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/25, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=123.2km s-min=32.4km az=11.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	16.46	7	Pn	Pn	17 56 43.5	+0.6
	0.1nm,0.3s,baz=183,slow=12,SNR=3.2						
KSRS	Korea Array	20.97	67	P	P	17 57 35.0	-0.2
	1.2nm,0.7s,baz=261,slow=9.6,SNR=6.7						
MKAR	Makanchi Array	22.34	319	P	P	17 57 50.6	+0.7
	0.9nm,0.7s,baz=112,slow=12,SNR=8.4						
ZALV	Zalesovo Beam	26.14	335	P	P	17 58 25.8	-0.4
	0.6nm,0.5s,baz=131,slow=8.1,SNR=5.9						
KURK	Kurchatov	26.62	323	P	P	17 58 30.4	-0.2
	1.8nm,0.8s,baz=127,slow=9.5,SNR=15						

*ISCJB **25** 18:02:04.6±0.5, 43°.77N±0°.04×105°.26W±0°.05, h0km, Error ellipse: s-maj=5.6km s-min=5.3km az=16.8*
*IDC **25** 18:02:06.9±1.5, 44°.26N×105°.93W, h0km, mb3.9/1, mb1 3.9/5, mb1mx3.5/27, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=72.0km s-min=8.7km az=145.0*
*NEIC **25** 18:02:06.2±0.3, 43°.76N×105°.23W, h0km, ML3.3, Error ellipse: s-maj=4.2km s-min=3.8km az=133.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 25 18:02:06.2±0.4, 43°.77N±0°.04×105°.22W±0°.05, h0km, n49, σ0s83/49, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	67	eP	Pg	18 02 24.2	+0.4
PHWY	Pilot Hill	2.48	184	ePn	Pn	18 02 48.0	+0.3
RWWY	Rawlins	2.55	216	ePn	Pn	18 02 49.5	+0.8
LAO	LASA Array	3.00	347	ePn	Pn	18 02 56.2	+1.2
BW06	Boulder Array	3.33	254	ePn	Pn	18 02 58.9	-0.6
PDAR	Pinedale Array	3.33	254	Pn	Pn	18 02 59.8	+0.4
	5.1nm,0.3s,baz=71,slow=15,SNR=96						
PDAR				Lg		18 03 39.2	
	8.2nm,0.3s,baz=67,slow=23,SNR=4.2						
OGNE	Ogallala	3.68	139	ePn	Pn	18 03 04.7	+0.5
GCMT	Greycliff	3.76	304	ePn	Pn	18 03 05.4	+0.1
LOHW	Long Hollow	3.91	270	ePn	Pn	18 03 08.1	+0.7
ISCO	Idaho Springs	3.98	184	ePn	Pn	18 03 08.4	0.0
SNOW	Snow King Moun	4.04	268	ePn	Pn	18 03 09.9	+0.7
YNR	Norris Junctio	4.04	285	ePn	Pn	18 03 10.6	+1.4
YFT	Old Faithful	4.10	281	ePn	Pn	18 03 10.2	+0.1
REDW	Red Top Meadow	4.12	266	ePn	Pn	18 03 11.1	+0.9
IMW	Indian Meadow	4.14	274	ePn	Pn	18 03 10.4	-0.2
TPAW	Teton Pass	4.17	268	ePn	Pn	18 03 11.9	+0.8
DCID1	Drake Creek	4.33	270	ePn	Pn	18 03 14.3	+1.0
AHID	Auburn Hatcher	4.41	259	ePn	Pn	18 03 14.4	+0.1
RRI2	Red Ridge	4.46	267	ePn	Pn	18 03 15.0	0.0
DGMT	Dagmar	4.75	8	ePn	Pn	18 03 20.1	+1.1
SMCO	Snowmass	4.78	197	ePn	Pn	18 03 20.7	+1.4
BOZ	Bozeman (W)	4.94	295	ePn	Pn	18 03 20.4	-1.2
HWUT	Hardware Ranch	5.16	247	ePn	Pn	18 03 23.9	-0.6
	9.9nm,0.4s						
EGMT	Eagleton	5.30	325	ePn	Pn	18 03 25.8	-0.8
	17nm,0.4s						
DLMT	Dillon	5.51	289	ePn	Pn	18 03 29.7	+0.3
	5.6nm,0.4s						
HRY	Holter Researc	5.52	304	ePn	Pn	18 03 29.3	-0.2
	14nm,0.3s						
LRM	Limekiln Ridge	5.54	294	ePn	Pn	18 03 30.4	+0.6
	23nm,0.3s						
MCMT	McKenzie Canyo	5.58	284	ePn	Pn	18 03 34.2	+3.9
	2.8nm,0.4s						
DAU	Daniels Canyon	5.61	235	ePn	Pn	18 03 31.0	+0.2
	11nm,0.3s						
JLU	Jordanelle	5.61	238	ePn	Pn	18 03 30.6	-0.2
	6.2nm,0.4s						
SPUT	South Promonto	5.88	248	ePn	Pn	18 03 33.6	-1.0
	4.3nm,0.4s						
HVU	Hansel Valley	5.91	253	ePn	Pn	18 03 33.8	-1.1
	5.4nm,0.4s						
MPU	Maple Canyon	6.08	234	ePn	Pn	18 03 36.1	-1.2
	6.1nm,0.3s						
SRU	San Rafael	6.13	222	ePn	Pn	18 03 36.2	-1.7
	17nm,0.3s						
ECSD	EROS Data Cent	6.23	87	ePn	Pn	18 03 39.7	+0.4
	8.6nm,0.3s						
TMUT	Trail Mountain	6.34	227	ePn	Pn	18 03 41.0	+0.1
	12nm,0.4s						
NLU	North Lily Min	6.38	236	ePn	Pn	18 03 40.9	-0.5
	2.9nm,0.3s						
CHMT	Chamberlain Mo	6.48	302	ePn	Pn	18 03 42.4	-0.3
	2.3nm,0.3s						
DUG	Dugway	6.69	240	ePn	Pn	18 03 44.0	-1.7
	4.4nm,0.4s						
SLMT	Seeley Lake	6.77	304	ePn	Pn	18 03 46.2	-0.5
	2.5nm,0.4s						
SWMT	Swartz Lake	7.20	304	ePn	Pn	18 03 52.1	-0.5
	2.8nm,0.3s						
YBMT	Yellow Bay	7.38	307	ePn	Pn	18 03 55.6	+0.6
	3.5nm,0.3s						
MSU	Marysvale	7.43	227	ePn	Pn	18 03 55.9	+0.1
	3.4nm,0.4s						
ELK	Elko	8.03	251	Pn	Pn	18 04 04.7	+0.8
ELK	Elko	8.03	251	Pn	Pn	18 04 04.7	+0.8
	0.6nm,0.3s,baz=63,slow=11,SNR=8.3						
CCUT	Cedar City	8.77	228	ePn	Pn	18 04 14.5	+0.3
	1.4nm,0.3s						
ULM	Lac du Bonnet	9.09	41	Pn	Pn	18 04 16.7	-1.8
	2.5nm,0.3s,baz=232,slow=11,SNR=11						
NVAR	Mina Array Bea	11.22	246	Pn	Pn	18 04 47.9	+0.2
	0.2nm,0.3s,baz=45,slow=13,SNR=4.0						
ARCES	ARCESS Array B	61.37	18	P	P	18 12 21.4	-1.9
	0.9nm,0.6s,baz=325,slow=6.2,SNR=4.8						

*CSEM **25** 18:04:19.7±0.3, 29°.49N×34°.91E, h20km, ML3.3, Error ellipse: s-maj=7.9km s-min=3.9km az=105.0*

SGS 25 18:04:19.5, 29°.51N×34°.88E, h15km, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	Haql	0.46	176	P	Pg	18 04 28.7	+0.1
HAQS	Haql	0.46	176	P	Pg	18 04 28.7	+0.1
HAQS				S	Sg	18 04 35.7	+0.9
JLOS		0.94	145	P	Pb	18 04 36.3	-1.1
JLOS		0.94	145	P	Pb	18 04 36.3	-1.2
JLOS				S	Sb	18 04 48.8	-0.9
BDAS	Al Bad'	1.09	170	P	Pb	18 04 38.4	-1.7
BDAS	Al Bad'	1.09	170	P	Pb	18 04 38.4	-1.7
TBKS	Tabuk	1.94	131	P	Pn	18 04 52.8	+0.8
TBKS	Tabuk	1.94	131	P	Pn	18 04 52.8	+0.9

*ISCJB **25** 18:06:57.3±0.7, 22°.51S±0°.04×68°.3W±0°.1, h107km±13km, mb3.8/2, Error ellipse: s-maj=17.0km s-min=5.6km az=7.8*
*IDC **25** 18:06:58.9±2.5, 22°.58S×68°.20W, h103km±21km, mb3.7/2, mb1 3.8/4, mb1mx3.5/16, mbtmp3.7/4, Error ellipse: s-maj=42.4km s-min=25.0km az=101.0*
*GUC **25** 18:06:59.6±0.8, 22°.44S×68°.51W, h115km±15km, ML4.0*
*NEIC **25** 18:06:59.0, 22°.44S×68°.51W, h115km, mb4.1/2, After GUC.*

ISC 25 18:06:58.3±0.6, 22°.50S±0°.04×68°.28W±0°.08, h100km±12km, n18, σ0s88/27, mb3.8/2, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	Pedro de Valdi	1.29	265	eP	Pn	18 07 23.0	+0.9
PECH				i S	Sn	18 07 40.8	+0.8
PECH				AML	AML	18 07 43.1	
	comp=N,6μm,0.5s						
MACH	Maria Elena	1.40	282	⇓iP	Pn	18 07 24.0	+0.6
MACH				i S	Sn	18 07 42.3	0.0
TOCH	Tocopilla	1.82	282	eP	Pn	18 07 28.6	0.0
TOCH				i S	Sn	18 07 50.4	-1.3
TOCH				AML	AML	18 07 58.5	
	comp=E,1μm,0.3s						
PB01	Plate Boundary	1.83	322	⇓iP	Pn	18 07 28.9	+0.1
PB01				i S	Sn	18 07 52.1	+0.2
PB01				AML	AML	18 07 55.3	
	comp=E,728nm,0.3s						
ANCH	Antofagasta	2.29	239	⇑iP	Pn	18 07 35.7	+1.1
ANCH				i S	Sn	18 08 02.2	-0.2
ANCH				AML	AML	18 08 08.9	
	comp=E,1μm,0.4s						
HMBC	Humberston	2.67	326	⇓iP	Pn	18 07 39.0	-0.7
HMBC				i S	Sn	18 08 10.3	-1.2
HMBC				AML	AML	18 08 12.8	
	comp=N,426nm,0.3s						
MNMC	Miæe Miæ	3.57	340	⇓iP	Pn	18 07 51.9	+0.1
MNMC				i S	Sn	18 08 33.2	+0.1
MNMC				AML	AML	18 08 39.5	
	comp=N,473nm,0.5s						
LPAZ	La Paz	6.18	1	P	Pn	18 08 30.4	+3.3
	comp=N,1.7nm,0.3s,baz=166,slow=6.2,SNR=28						
LPAZ				S	Sn	18 09 37.7	+1.3
	comp=N,0.2nm,0.3s,baz=252,slow=16,SNR=2.0						
LPAZ	La Paz	6.18	1	ePn	Pn	18 08 29.3	+2.2
LPAZ				eSn	Sn	18 09 36.2	-0.2
LCO	Las Campanas	6.84	198	ePn	Pn	18 08 34.4	-1.6
	comp=N,18nm,0.8s						
LCO				eSn	Sn	18 09 52.0	-0.4
CFAA	Coronel Fontan	9.07	180	P	Pn	18 09 05.7	-0.6
	comp=N,0.1nm,0.3s,baz=356,slow=12,SNR=8.8						
CFAA	Coronel Fontan	9.07	180	P	Pn	18 09 05.7	-0.6
SIV	San Ignacio	9.39	48	P	Pn	18 09 10.2	-0.6
	comp=N,1.9nm,0.3s,baz=246,slow=11,SNR=59						
SIV				S	Sn	18 10 50.8	-3.8
	comp=N,0.4nm,0.3s,baz=325,slow=22,SNR=4.6						
TRQA	Tornquist	16.42	162	ePn	Pn	18 10 44.3	+1.5
	comp=N,3.8nm,0.7s						
TORD	Torodi Ar. Bea	77.14	70	P	P	18 18 41.7	+0.2
	comp=N,0.7nm,0.5s,mb3.7,baz=257,slow=5.5,SNR=13						
YKA	Yellowknife Ar	92.32	340	P	P	18 19 56.6	-0.3
	comp=N,0.5nm,0.7s,mb3.9,baz=133,slow=4.8,SNR=6.4						
ASAR	Alice Springs	129.29	207	PKP	PKPdf	18 25 55.7	0.0
	comp=N,0.2nm,0.6s,baz=128,slow=2.5,SNR=5.3						
MKAR	Makanchi Array	146.08	37	PKPbc	PKPbc	18 26 26.5	-0.2
	comp=N,0.5nm,0.7s,baz=330,slow=5.0,SNR=4.3						

*ISCJB **25** 18:20:52.0±0.6, 32°.01N±0°.04×104°.05E±0°.06, h10km, mb3.5/6, MS3.0/3, Error ellipse: s-maj=7.2km s-min=5.8km az=156.1*
*IDC **25** 18:20:51.8±1.1, 31°.89N×104°.07E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.7/7, MS3.1/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=45.7km s-min=19.5km az=48.0*
*BJI **25** 18:20:53.1, 32°.06N×104°.39E, h14km, ML3.6/14, Ms3.4/4, Ms7 3.3/4*
*NEIC **25** 18:20:54.3±0.7, 31°.92N×104°.03E, h10km, Error ellipse: s-maj=17.7km s-min=11.0km az=75.0*

ISC 25 18:20:54.1±0.6, 31°.96N±0°.04×104°.04E±0°.06, h10km, n17, σ0s91/20, mb3.5/6, MS3.0/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	4.12	358	ePg	Pb	18 22 02.0	-4.7
LZH				Sn	Sn	18 22 46.8	+1.5
LZH				Sg	Sg	18 23 06.0	-0.4
LZH				smax			
	comp=N,140nm,1.1s						
LZH				smax			
	comp=E,110nm,0.9s						
LZH				LR	LR		
	comp=N,280nm,5.6s						
LZH				LR	LR		
	comp=Z,310nm,6.2s						
XAN	Xi'an	4.59	62	Pn	Pn	18 22 02.3	-1.3
XAN				Sn	Sn	18 22 57.5	+0.5
XAN				Sg	Sg	18 23 17.0	-4.6
ENH	Enshi	4.96	108	ePn	Pn	18 22 08.3	-0.4
ENH				eSn	Sn	18 23 07.6	+1.4
CM31	Chiang Mai Arr	14.21	200	Pn	Pn	18 24 15.0	-0.5
	comp=Z,2.5nm,0.6s						
CMAR	Chiang Mai Arr	14.21	200	Pn	Pn	18 24 17.2	+1.7
	comp=Z,0.1nm,0.3s,baz=1.6,slow=13,SNR=4.7						
SONM	Songino Array	15.96	6	Pn	Pn	18 24 42.5	+3.9
	comp=Z,0.0nm,0.3s,baz=167,slow=8.1,SNR=2.5						
KSRS	Korea Array	20.36	68	P	P	18 25 29.7	-1.1
	comp=Z,3.2nm,0.7s,baz=256,slow=11,SNR=13						
JOW	Kunigami	21.70	97	LR	LR	18 35 13.4	
	comp=Z,42nm,18.7s,MS2.9,baz=1.3,slow=40						
MK31	Makanchi Array	22.30	318	eP	P	18 25 51.9	+0.3
MKAR	Makanchi Array	22.30	318	P	P	18 25 51.8	+0.3
	comp=Z,0.4nm,0.4s,mb3.2,baz=108,slow=12,SNR=9.4						
AAK	Ala-Archa	25.69	303	LR	LR	18 38 25.1	
	comp=Z,46nm,19.3s,MS3.0,baz=232,slow=41						
ZALV	Zalesovo Beam	25.93	334	P	P	18 26 26.2	-0.1
	comp=Z,1.0nm,0.6s,mb3.5,baz=129,slow=9.3,SNR=5.6						
ZALV	Zalesovo Beam	25.93	334	P	P	18 26 26.2	-0.1
KURK	Kurchatov	26.53	322	P	P	18 26 32.0	+0.2
	comp=Z,1.0nm,0.6s,mb3.5,baz=128,slow=8.3,SNR=12						
KURK				LR	LR	18 38 04.7	
	comp=Z,50nm,19.4s,MS3.1,baz=155,slow=39						
BVAR	Borovoye Array	32.09	321	P	P	18 27 20.9	-0.3
	comp=Z,0.3nm,0.7s,mb3.3,baz=58,slow=3.6,SNR=3.0						
FINES	FINESS Array B	56.83	326	P	P	18 30 37.8	-0.6
	comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=6.2,SNR=7.2						
ASAR	Alice Springs	62.25	149	P	P	18 31 15.2	-1.1
	comp=Z,0.4nm,0.4s,mb3.9,baz=334,slow=6.7,SNR=25						

GUC 25 18:24:41.5±1.0, 21°.76S×68°.63W, h126km±15km, ML3.7, 2C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.07	312	⇑iP	Pn	18 25 05.2	+0.4
PB01				i S	Sn	18 25 23.7	+1.2
PB01				AML	AML	18 25 25.0	
	comp=E,2μm,0.2s						
MACH	Maria Elena	1.14	247	⇓iP	Pn	18 25 06.3	+0.9
MACH				i S	Sn	18 25 24.9	+1.3
PECH	Pedro de Valdi	1.28	229	⇓iP	Pn	18 25 07.6	+0.7
PECH				i S	Sn	18 25 27.3	+1.1
PECH				AML	AML	18 25 28.7	
	comp=E,1μm,0.2s						
TOCH	Tocopilla	1.50	257	⇓iP	Pn	18 25 10.2	+0.8
TOCH				i S	Sn	18 25 31.3	+0.8
TOCH				AML	AML	18 25 34.8	
	comp=N,677nm,0.2s						
CEN1	Los Morros	2.18	222	⇑iP	Pn	18 25 21.4	+3.9
CEN1				AML	AML	18 25 59.5	
	comp=N,180nm,0.8s						
MNMC	Miæe Miæ	2.77	341	eS	Sn	18 26 00.1	+1.5
MNMC				AML	AML	18 26 02.7	
	comp=E,507nm,0.2s						

*IDC **25** 18:29:02.5±3.0, 5°.04S×144°.41E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/16, mbtmp3.8/8, Error ellipse: s-maj=89.6km s-min=24.4km az=105.0*
*NEIC **25** 18:29:08.3±1.8, 5°.02S×144°.26E, h35km, mb3.9/1, Error ellipse: s-maj=46.1km s-min=14.0km az=106.0*

ISC 25 18:29:10.7±6.5, 5°.1S±0°.2×144°.1E±0°.5, h52km±49km, n10, σ0s76/10, mb3.6/7, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	13.83	236	ePn	Pn	18 32 24.0	-0.1
	135nm,0.6s						
WRAB	Tennant Creek	17.59	212	ePn	Pn	18 33 12.3	+0.1
	5.2nm,0.5s						
ASAR	Alice Springs	20.96	207	P	P	18 33 50.2	+0.7
	16nm,0.8s,baz=32,slow=12,SNR=21						
FITZ	Fitzroy Crossi	22.25	233	P	P	18 34 02.3	-1.0
	2.1nm,0.5s,mb3.8,baz=28,slow=5.2,SNR=11						
KSRS	Korea Array	44.92	342	P	P	18 37 20.6	+0.2
	1.4nm,0.9s,mb3.8,baz=163,slow=10,SNR=5.1						
CMAR	Chiang Mai Arr	50.31	299	P	P	18 38 04.0	+1.4
	0.4nm,0.6s,mb3.6,baz=122,slow=5.9,SNR=7.7						
MKAR	Makanchi Array	74.98	321	P	P	18 40 46.4	-0.2
	0.2nm,0.4s,mb3.4,baz=99,slow=8.1,SNR=5.4						
ZALV	Zalesovo Beam	76.72	329	P	P	18 40 54.8	-1.5
	0.2nm,0.3s,mb3.5,baz=119,slow=9.0,SNR=2.5						
KURK	Kurchatov	78.78	324	P	P	18 41 07.9	+0.1
	0.2nm,0.4s,mb3.4,baz=117,slow=4.9,SNR=2.4						
BVAR	Borovoye Array	84.35	324	P	P	18 41 37.5	+0.3
	0.7nm,0.6s,mb4.0,baz=111,slow=6.6,SNR=7.3						

*NEIC **25** 18:46:10.1±2.0, 14°.19S×76°.02W, h102km±14km, mb4.7/5, Error ellipse: s-maj=41.3km s-min=11.8km az=218.0*
NEIC Felt [III] at Ica.

ISC 25 18:46:10.2±2.5, 14°.2S±0°.3×76°.1W±0°.2, h103km±17km, n7, σ0s71/8, mb4.7/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.34	341	ePn	Pn	18 46 48.0	+0.6
NNA				eSn	Sn	18 47 21.6	+5.8
LPAZ	La Paz	7.92	106	ePn	Pn	18 48 02.1	-0.5
	5.5nm,0.7s						
OTAV	Otavalo	14.55	350	Pn	Pn	18 49 30.6	-0.6
	1.8nm,0.8s						
PAYG	Puerto Ayora	19.47	312	eP	P	18 50 29.0	-0.1
	74nm,1.3s						
SDV	Santo Domingo	23.57	13	eP	P	18 51 11.3	-0.2
	11nm,1.6s,mb3.9						
TEIG	Tepich	36.27	340	P	P	18 53 03.5	-0.2
	31nm,1.3s,mb5.1						
RCBR	Riachuelo	40.35	82	eP	P	18 53 39.0	+0.9
	41nm,1.7s,mb5.0						

*BJI **25** 19:18:18.3, 55°.90N×153°.50W, h10km, mB6.0/51, mb5.3/58, Ms6.4/77, Ms7 6.1/63*
*ISCJB **25** 19:18:23.0±0.1, 56°.11N±0°.02×153°.77W±0°.02, h13km, mb5.4/421, MS6.0/295, Error ellipse: s-maj=2.7km s-min=1.4km az=31.5*
*MOS **25** 19:18:22.3±0.9, 56°.11N×153°.76W, h10km, mb5.7/161, MS5.9/104, Error ellipse: s-maj=6.9km s-min=3.2km az=88.1*
*SZGRF **25** 19:18:22.1, 55°.46N×155°.33W, h33km, mb5.5, MS6.2, South of Alaska*
*IDC **25** 19:18:22.4±0.4, 56°.12N×153°.75W, h0km, mb5.2/31, mb1 5.2/34, mb1mx5.2/35, mbtmp5.1/34, ML4.3/3, MS5.9/31, Ms1 5.9/31, ms1mx5.7/45, Error ellipse: s-maj=14.2km s-min=9.4km az=14.0*
*GCMT **25** 19:18:24.4±0.1, 55°.59N×153°.27W, h15km, MW5.9/112, Moment Tensor Solution. s110,c239; s112,c332; Duration: 2s1 Moment tensor: Scale 10^{17}Nm; M_{rr}3.74±.05; $M_{\theta\theta}$-2.66±.04; $M_{\phi\phi}$-1.08±.04; $M_{r\theta}$6.44±.21; $M_{\theta\phi}$-2.19±.03; $M_{\phi r}$3.78±.14; Best double couple: $M_0$8.45800×10^{17} NP1:ϕ_s230.00000°, δ14.00000°, λ81.00000°. NP2:ϕ_s59.00000°, δ76.00000°, λ92.00000°. Principal axes: T 8.2410, Plg59.0000°, Azm332.0000°; N 0.4340, Plg2.0000°, Azm239.0000°; P -8.6750, Plg31.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IGIL **25** 19:18:24.5, 56°.08N×153°.81W, h10km, MS6.2*
*NEIC **25** 19:18:25.7±0.1, 56°.09N×153°.78W, h22km, mb5.5/292, ME5.4, MS6.0/217, MW5.9, MW6.0, Error ellipse: s-maj=2.9km s-min=1.9km az=208.0, Moment Tensor Solution. s167 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^{18} NP1:ϕ_s291.00000°, δ25.00000°, λ151.00000°. NP2:ϕ_s47.00000°, δ78.00000°, λ68.00000°. Principal axes: T 0.9800, Plg51.0000°, Azm291.0000°; N 0.2500, Plg21.0000°, Azm52.0000°; P -1.2300, Plg29.0000°, Azm155.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s324.00000°, δ40.00000°, λ172.00000°. NP2:ϕ_s60.00000°, δ85.00000°, λ50.00000°. Principal axes: T Plg37.0000°, Azm295.0000°; N Plg0.0000°, Azm0.0000°; P Plg29.0000°, Azm181.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

ISC 25 19:18:24.8±0.1, 56°.11N±0°.02×153°.80W±0°.02, h14km, h14km±1.3km: pP-P, n1495, σ0s85/1408, mb5.4/421, MS6.0/295, 221C-177D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	1.15	14	P	Pb	19 18 45.8	-0.6
OHAK				S	Sb	19 19 02.3	+1.3
KDAK	Kodiak Island	1.80	21	Pn	Pn	19 18 53.8	-1.6
KDAK				Sn	Sn	19 19 16.4	-1.6
KDAK				LR	LR	19 19 33.8	
	comp=Z,117μm,20.3s,slow=40						
KDAK	Kodiak Island	1.80	21	P	Pn	19 18 54.5	-0.9
KDAK				S	Sn	19 19 17.7	-0.3
CHGN	Chignik	2.58	276	P	Pn	19 19 05.6	-0.4
AUL	Augustine Lava	3.28	3	P	Pn	19 19 17.0	+1.3
SDPT	Sand Point	3.85	261	eP	Pn	19 19 22.5	-1.0
SDPT				S	Sn	19 20 09.4	+0.9
RSO	Redoubt South	4.40	7	ePn	Pn	19 19 31.6	+0.6
SEW	Seward	4.62	28	P	Pn	19 19 32.0	-2.1
SLKM	Skilak Lake	4.79	22	P	Pn	19 19 35.2	-1.2
SVW2	Sparrevohn	5.08	350	eP	Pn	19 19 40.5	+0.1
MID	Middleton Isla	5.20	47	eP	Pn	19 19 39.0	-2.9
MID				pmax	pmax		
	comp=Z,378nm,0.8s						
MID	Middleton Isla	5.20	47	ePn	Pn	19 19

SIT pmax pmax
comp=Z,20nm,0.3s
SIT Sitka 10.24 77 *e*P **Pn 19 20 50.9 -0.1**
comp=Z,20nm,0.3s
SKAG Skagway 10.41 64 *e*P **Pn 19 20 54.4 +1.0**
comp=Z,11nm,0.4s
EGAK Eagle 10.68 30 *e*Pn **Pn 19 20 56.6 -0.5**
DAWY Dawson 10.71 36 *e*Pn **Pn 19 20 56.8 -0.7**
COLD Coldfoot 11.28 7 *e*Pn **Pn 19 21 02.3 -2.9**
comp=Z,1μm,0.6s
CRAG Craig 11.65 85 *e*P **Pn 19 21 10.5 +0.1**
comp=Z,103nm,0.8s
TNA Tin City 11.68 330 *e*Pn **Pn 19 21 12.2 +1.5**
comp=Z,11μm,0.6s
GAMB Gambell 11.77 318 *e*Pn **Pn 19 21 12.6 +0.6**
comp=Z,173nm,1.2s
DIB Dawson Inlet, 12.68 94 T 19 33 40.0
SNR=11
DLBC Dease Lake 13.05 70 Pn **Pn 19 21 29.2 -0.3**
comp=Z,2.7nm,0.3s,baz=251,slow=8.9,SNR=19
DLBC LR LR 19 25 58.5
comp=Z,83μm,19.3s,baz=285,slow=35
INK Inuvik 15.34 29 Pn **Pn 19 22 00.0 -0.5**
comp=Z,0.4nm,0.3s,baz=232,slow=16,SNR=24
INK LR LR 19 29 26.1
comp=Z,84μm,18.1s,baz=221,slow=43
INK Inuvik 15.34 29 *e*Pn **Pn 19 22 00.0 -0.5**
BBB Bella Bella 15.52 94 Pn **Pn 19 22 00.3 -2.6**
comp=Z,0.2nm,0.3s,baz=294,slow=9.7,SNR=8.3
BBB LR LR 19 26 42.8
comp=Z,27μm,18.8s,baz=296,slow=32
SMY Shemya 18.88 273 *e*P **Pn 19 22 44.7 -0.3**
SMY pmax pmax
comp=Z,1μm,2.2s
SMY Shemya 18.88 273 *e*P **Pn 19 22 44.7 -0.3**
comp=Z,1μm,2.2s
PGC Sidney 19.85 99 *e*Pn **Pn 19 22 55.5 -1.1**
comp=Z,69nm,3.0s
NLWA Neilton Lookou 20.34 103 ⇑P **P 19 23 00.2 -0.2**
baz=20,SNR=41
NLWA Neilton Lookou 20.34 103 *e*P **P 19 23 00.8 +0.4**
comp=Z,163nm,1.1s
NLWA LR LR
comp=Z,47μm,19.0s,MS5.9
A05A Maple Falls 20.42 97 ⇓P **P 19 23 01.5 +0.3**
baz=20
YKA Yellowknife Ar 20.73 56 P **P 19 23 03.9 -0.6**
comp=Z,35nm,0.7s,baz=270,slow=9.5,SNR=135
YKA PcP PcP 19 27 13.9 +0.7
comp=Z,3.1nm,0.7s,baz=268,slow=1.4,SNR=5.0
YKA ScP ScP 19 30 48.7 -0.4
comp=Z,6.0nm,1.0s,baz=278,slow=2.2,SNR=7.7
YKA Yellowknife Ar 20.73 56 P **P 19 23 03.9 -0.6**
YKA 19 27 13.9
YKA Yellowknife Ar 20.73 56 P **P 19 23 03.9 -0.6**
YKA PcP PcP 19 27 13.9 +0.7
YKA ScP ScP 19 30 48.7 -0.4
GNW Green Mountain 20.81 101 *e*Pn **P 19 23 04.3 -1.2**
comp=Z,57nm,1.3s
JCW Jim Creek 20.95 99 *e*P **P 19 23 06.7 -0.2**
JCW *e*ScP ScP 19 30 50.2 +0.3
B06A Marblemount 21.01 98 ⇓P **P 19 23 07.8 +0.2**
baz=21
E03A Lebam 21.02 104 ⇓P **P 19 23 07.3 -0.4**
baz=21,SNR=17
RPW Rockport 21.04 98 P **P 19 23 07.7 -0.2**
A07A Ashnola River, 21.34 95 ⇑P **P 19 23 11.0 -0.1**
baz=21,SNR=66
F03A Seaside 21.41 106 ⇓P **P 19 23 11.4 -0.5**
baz=21,SNR=8.8
D05A Enumclaw 21.50 101 ⇓P **P 19 23 12.9 +0.1**
baz=21,SNR=14
BILL Bilibino 21.70 319 *e*P **P 19 23 13.7 -1.1**
BILL *i* 19 23 34.5
BILL pmax pmax
comp=Z,290nm,1.6s,mb5.5
BILL MLR MLR
comp=Z,55μm,15.0s,MS6.1
BILL Bilibino 21.70 319 ⇑*i*P **P 19 23 14.4 -0.4**
comp=Z,401nm,1.4s,mb5.7
BILL *e*S **S 19 27 22.2 +8.1**
BILL LR LR
comp=Z,42μm,20.0s,MS5.8
WRW Wenatchee Ridg 21.72 98 P **P 19 23 15.1 -0.1**
HEBO Mount Hebo 21.77 107 *e*P **P 19 23 16.1 +0.3**
comp=Z,282nm,1.2s,mb5.6
LON Longmire 21.86 102 *e*P **P 19 23 15.9 -0.8**
LON pmax pmax
comp=Z,119nm,1.2s,mb5.2
LON Longmire 21.86 102 *e*P **P 19 23 15.9 -0.7**
comp=Z,119nm,1.2s,mb5.2
NLW Nelson Butte 21.89 97 P **P 19 23 17.4 +0.3**
F04A Amboy 22.03 104 ⇓P **P 19 23 18.5 0.0**
baz=22,SNR=18
WPW White Pass 22.03 102 P **P 19 23 18.8 +0.3**
JLK June Lake 22.04 104 P **P 19 23 19.5 +0.9**
ETW Entiat 22.17 98 *e*P **P 19 23 19.1 -0.9**
TBM Table Mountain 22.27 100 P **P 19 23 20.9 -0.2**
B08A Colville Reser 22.30 96 ⇓P **P 19 23 21.1 -0.2**
baz=22,SNR=59
COR Corvallis 22.42 108 *e*P **P 19 23 21.2 -1.5**
COR pmax pmax
comp=Z,500nm,1.3s,mb5.8
COR MLR MLR
comp=Z,37μm,19.0s,MS5.8
COR Corvallis 22.42 108 *e*P **P 19 23 21.2 -1.5**
comp=Z,500nm,1.3s,mb5.8
COR LR LR
comp=Z,37μm,19.0s,MS5.8
EBG Ellensburg 22.44 100 P **P 19 23 22.7 -0.3**
G04A Mulino 22.46 106 ⇓P **P 19 23 22.6 -0.5**
baz=22,SNR=50
VLL Laurance Lake 22.73 104 P **P 19 23 25.9 0.0**
HOOD Mount Hood Mea 22.83 105 *e*P **P 19 23 26.7 -0.4**
comp=Z,529nm,1.0s,mb5.9
B09A Rice 22.92 95 ⇑P **P 19 23 27.5 -0.5**
baz=23,SNR=21
H04A Detroit Lake 22.96 106 ⇓P **P 19 23 28.0 -0.3**
baz=23,SNR=42
KEBM Edson Butte 23.06 113 *e*P **P 19 23 29.7 +0.1**
comp=Z,282nm,1.1s,mb5.6
OD2 Odessa Site #2 23.19 97 P **P 19 23 30.0 -0.8**
C09A Chrisman Ranch 23.20 96 ⇑P **P 19 23 30.1 -0.9**
baz=23,SNR=5.3
D08A Wollman Farm, 23.27 98 P **P 19 23 30.7 -1.0**
baz=23,SNR=40
RSW Rattlesnake Hi 23.29 100 *e*P **P 19 23 31.6 -0.3**
HAWA Hanford 23.32 100 *e*P **P 19 23 30.7 -1.5**
comp=Z,134nm,1.3s,mb5.2
HAWA LR LR
comp=Z,33μm,19.0s,MS5.8
EDM Edmonton 23.34 80 *e*P **P 19 23 31.3 -1.0**
EDM *e*ScP ScP 19 30 56.2 +0.3
F07A Phinny Hill Vi 23.41 102 ⇑P **P 19 23 32.4 -0.8**
baz=23,SNR=8.7
E08A Dider Farm, El 23.52 99 ⇑P **P 19 23 33.5 -0.8**
baz=23
NEW Newport 23.58 94 *e*P **P 19 23 34.1 -0.8**
NEW pmax pmax
comp=Z,100nm,1.3s
NEW MLR MLR
comp=Z,21μm,21.0s
NEW Newport 23.58 94 *e*P **P 19 23 34.1 -0.7**
comp=Z,100nm,1.3s,mb5.1
NEW LR LR
comp=Z,21μm,21.0s,MS5.6
D09A Jones Farm, Ri 23.60 98 ⇑P **P 19 23 33.6 -1.4**
baz=23,SNR=10
A11A Hall Mountain, 23.64 92 ⇓P **P 19 23 35.5 +0.2**
baz=23,SNR=39
B11A Sandpoint 23.91 93 ⇓P **P 19 23 37.6 -0.2**
baz=24,SNR=28
HUMO Hull Mountain 23.97 111 *e*P **P 19 23 38.6 +0.2**
comp=Z,293nm,1.4s,mb5.5
HUMO *e*ScP ScP 19 30 58.4 +0.6
HUMO LR LR
comp=Z,47μm,19.0s,MS6.0
E09A Wood Farm, Sta 24.02 98 ⇑P **P 19 23 38.0 -0.8**
baz=24,SNR=14
F08A Pendleton 24.10 100 ⇑P **P 19 23 39.3 -0.3**
baz=24,SNR=5.8
D10A Wagner Farm, O 24.18 97 ⇑P **P 19 23 39.9 -0.4**
baz=24,SNR=20
G08A Pilot Rock 24.32 102 ⇓P **P 19 23 41.0 -0.6**
baz=24
LNOR Lincton Mounta 24.33 100 *e*P **P 19 23 41.5 -0.2**
E10A Myers Farm, Un 24.61 97 ⇑P **P 19 23 43.6 -0.6**
baz=24,SNR=34
F09A S2 Ranch, Elgi 24.64 100 ⇓P **P 19 23 44.6 +0.1**
baz=24,SNR=8.1
D11A Klaveano Farm, 24.71 96 ⇑P **P 19 23 43.8 -1.3**
baz=24,SNR=76
YBH Yreka Blue Hor 24.72 112 P **P 19 23 45.9 +0.6**
comp=Z,26nm,0.9s,mb4.8,baz=327,slow=2.8,SNR=43
YBH ScP ScP 19 30 59.6 -0.3
comp=Z,3.8nm,1.0s,baz=334,slow=3.4,SNR=4.9
YBH LR LR 19 31 27.0
comp=Z,43μm,18.2s,MS6.0,baz=315,slow=32
YBH Yreka Blue Hor 24.72 112 *e*P **P 19 23 45.8 +0.5**
YBH pmax pmax
comp=Z,2μm,3.0s
YBH MLR MLR
comp=Z,35μm,19.0s
YBH Yreka Blue Hor 24.72 112 *e*P **P 19 23 45.8 +0.5**
comp=Z,2μm,3.0s
YBH LR LR
comp=Z,35μm,19.0s,MS5.9
A13A Flathead Natio 24.74 90 ⇓P **P 19 23 45.2 -0.2**
baz=24
I07A Izee 24.80 104 ⇑P **P 19 23 46.1 +0.1**
baz=24,SNR=99
C12B Naegeli Ranch, 24.81 94 ⇓P **P 19 23 45.8 -0.3**
baz=24,SNR=12
KHMM Horse Mountain 24.82 115 *e*P **P 19 23 47.0 +0.7**
comp=Z,140nm,1.2s,mb5.4
WALA Waterton Lakes 24.95 89 *e*P **P 19 23 46.2 -1.2**
comp=Z,2.2nm,1.0s
H08A Prairie City 24.97 103 ⇓P **P 19 23 47.6 +0.1**
baz=25,SNR=86
K05A Summer Lake 24.97 108 ⇓P **P 19 23 48.3 +0.7**
baz=25,SNR=85
G09A Cove 24.98 100 ⇑P **P 19 23 47.6 0.0**
baz=25
B13A Whitefish 25.01 91 ⇓P **P 19 23 47.4 -0.4**
baz=25,SNR=14
BSMT Bassoo Peak 25.12 93 *e*P **P 19 23 48.6 -0.3**
E11A Bogner Ranch, 25.19 97 ⇑P **P 19 23 48.3 -1.2**
baz=25,SNR=57
D12A Red Ives Fores 25.25 95 ⇑P **P 19 23 49.6 -0.5**
baz=25
A14A Double T Ranch 25.27 89 ⇓P **P 19 23 49.6 -0.6**
baz=25,SNR=46
G10A Bishop Farm, J 25.33 100 ⇑P **P 19 23 50.6 -0.2**
baz=25,SNR=58
C13A Hot Springs 25.33 93 ⇑P **P 19 23 50.5 -0.3**
baz=25,SNR=45
H09A Durkee 25.43 101 ⇓P **P 19 23 51.7 0.0**
baz=25,SNR=35
JTMT Jette 25.46 92 *e*P **P 19 23 51.7 -0.3**
F11A Grangeville 25.50 98 ⇓P **P 19 23 51.7 -0.6**
baz=25,SNR=55
E12A Beaver Dam Sad 25.51 96 ⇑P **P 19 23 51.6 -0.8**
baz=25
YBMT Yellow Bay 25.55 92 *e*P **P 19 23 52.3 -0.4**
WDC Whiskeytown Da 25.65 114 *e*P **P 19 23 54.1 +0.4**
WDC pmax pmax
comp=Z,106nm,1.4s,mb5.2
WDC MLR MLR
comp=Z,51μm,19.0s,MS6.1
WDC Whiskeytown Da 25.65 114 *e*P **P 19 23 54.1 +0.3**
comp=Z,106nm,1.4s,mb5.2
WDC LR LR
comp=Z,51μm,19.0s,MS6.1
A15A Johnson Ranch, 25.66 89 ⇓P **P 19 23 52.7 -1.0**
baz=25,SNR=76
B14A Marquette Ranc 25.68 90 ⇑P **P 19 23 53.6 -0.4**
baz=25,SNR=20
D13A Huson 25.73 94 ⇓P **P 19 23 53.9 -0.5**
baz=26,SNR=17
G11A Walters Elk Ra 25.73 99 ⇑P **P 19 23 53.7 -0.7**
baz=25,SNR=88
C14A Swan Lake 25.75 92 ⇓P **P 19 23 54.2 -0.4**
baz=26
SWMT Swartz Lake 25.75 93 *e*P **P 19 23 54.4 -0.2**
KCPM Cahto Peak 25.79 117 *e*P **P 19 23 55.9 +0.8**
comp=Z,350nm,1.8s,mb5.6
I09A Lost Marbles R 25.83 103 ⇑P **P 19 23 55.1 -0.2**
baz=26,SNR=37
J08A Circle Bar Ran 25.84 105 P **P 19 23 55.6 +0.2**
baz=26,SNR=51
MOD Modoc 25.86 109 *e*P **P 19 23 55.2 -0.5**
MOD *e*ScP ScP 19 31 03.3 +0.2
MOD LR LR
comp=Z,24μm,20.0s,MS5.7
H10A Noah's Angus R 25.98 101 ⇑P **P 19 23 56.4 -0.2**
baz=26
F12A Elk City 26.08 97 ⇓P **P 19 23 56.8 -0.8**
baz=26,SNR=41
B15A Bradely Ranch, 26.11 90 ⇓P **P 19 23 57.2 -0.6**
baz=26,SNR=36
MSO Missoula 26.17 94 *e*P **P 19 23 56.9 -1.5**
comp=Z,21nm,1.0s,mb4.6
MSO *e*ScP ScP 19 31 03.5 -0.4
MSO LR LR
comp=Z,14μm,19.0s,MS5.5
SLMT Seeley Lake 26.18 93 *e*P **P 19 23 57.8 -0.7**
J09A Fry Pan Ranch, 26.24 104 ⇑P **P 19 23 59.3 +0.3**
baz=26,SNR=129
E13A Victor 26.26 95 ⇑P **P 19 23 57.5 -1.7**
baz=26,SNR=14
D14A Greenough 26.27 93 ⇓P **P 19 23 58.5 -0.8**
baz=26,SNR=44
I10A Payette 26.27 102 ⇓P **P 19 23 59.7 +0.3**
baz=26,SNR=27
A16A West Butte Ran 26.31 88 ⇑P **P 19 23 58.5 -1.2**
baz=26
H11A Donnelly 26.31 100 ⇓P **P 19 23 59.0 -0.7**
baz=26,SNR=88
WVOR Wild Horse Val 26.38 106 ⇓*i*P **P 19 24 00.3 0.0**
WVOR pmax pmax
comp=Z,193nm,1.1s,mb5.5
WVOR MLR MLR
comp=Z,29μm,19.0s,MS5.8
WVOR Wild Horse Val 26.38 106 ⇓*i*P **P 19 24 00.3 0.0**
comp=Z,193nm,1.1s,mb5.5
WVOR LR LR
comp=Z,29μm,19.0s,MS5.8
C15A Salmond Ranch, 26.38 91 ⇓P **P 19 23 59.4 -0.9**
baz=26
G12A Big Creek, Yel 26.43 98 ⇑P **P 19 24 00.0 -0.7**
baz=26
CHMT Chamberlain Mo 26.51 93 *e*P **P 19 24 00.1 -1.4**
B16A M & M Farms, S 26.53 89 ⇓P **P 19 24 00.5 -1.1**
baz=26,SNR=11
F13A Darby 26.57 96 ⇑P **P 19 24 01.2 -0.8**
baz=26,SNR=25
HOPS Hopland 26.58 117 *e*P **P 19 24 01.3 -0.8**
HOPS *e*ScP ScP 19 31 08.6 +3.3
HOPS LR LR
comp=Z,26μm,19.0s,MS5.8
E14A Clinton 26.66 94 ⇑P **P 19 24 02.5 -0.4**
baz=26
J10A Berg Farm, Mel 26.72 103 ⇑P **P 19 24 03.5 +0.1**
baz=26
A17A Triple J Farms 26.81 87 ⇑P **P 19 24 03.2 -1.0**
baz=26,SNR=39
D15A Lincoln 26.84 92 ⇑P **P 19 24 03.9 -0.6**
baz=27,SNR=17
C16A Fuhringer Ranc 26.85 90 ⇑P **P 19 24 03.5 -1.0**
baz=27,SNR=6.5
H12A Diamond D Ranc 27.05 99 ⇑P **P 19 24 06.0 -0.4**
baz=27,SNR=19
G13A Cobalt 27.05 97 ⇓P **P 19 24 05.7 -0.7**
baz=27,SNR=22
F14A Wisdom 27.09 95 ⇑P **P 19 24 06.8 +0.1**
baz=27,SNR=13
K10A MacKenzie Ranc 27.10 104 ⇓P **P 19 24 06.7 -0.1**
baz=27,SNR=58
B17A L&G Farms, Che 27.11 88 ⇓P **P 19 24 05.7 -1.1**
baz=27
OHCM Honcut 27.12 115 *e*P **P 19 24 06.4 -0.6**
E15A Deer Lodge 27.14 93 ⇑P **P 19 24 06.5 -0.6**
baz=27,SNR=31
MFID Camas Ranch 27.24 102 ⇓P **P 19 24 07.9 -0.2**
baz=27,SNR=28
BEKR Beckwourth 27.30 112 ⇓P **P 19 24 07.9 -0.8**
baz=27,SNR=5.7
A18A Metzger Ranch, 27.30 87 ⇑P **P 19 24 07.4 -1.2**
baz=27,SNR=8.7
PET Petropavlovsk 27.30 284 *c i*P **P 19 24 08.2 -0.3**
PET *e* 19 24 55.0
PET *e*S **S 19 28 47.7 +0.4**
PET pmax pmax
comp=Z,3μm,21.8s
PET pmax pmax
comp=Z,4μm,15.6s
PET pmax pmax
comp=Z,163nm,1.0s,mb5.5
PET pmax pmax
comp=Z,2μm,16.1s
PET MLR MLR
comp=Z,17μm,18.0s,MS5.7
PET MLR MLR
comp=Z,22μm,17.0s
PET Petropavlovsk 27.30 284 *e*P **P 19 24 07.8 -0.8**
comp=Z,304nm,1.4s,mb5.6
PET LR LR
comp=Z,20μm,20.0s,MS5.7
MCCM Marconi Confer 27.33 118 *e*P **P 19 24 07.8 -1.1**
comp=Z,124nm,1.4s,mb5.2
MCCM LR LR
comp=Z,20μm,21.0s,MS5.7
H13A Challis 27.37 98 ⇓P **P 19 24 08.6 -0.6**
baz=27,SNR=37
I12A Atlanta 27.38 100 ⇓P **P 19 24 09.0 -0.4**
baz=27,SNR=22
SEY Seymchan 27.39 307 *c e*P **P 19 24 07.9 -1.3**
D16A Dana Ranch, Ca 27.39 91 ⇑P **P 19 24 08.8 -0.6**
baz=27,SNR=39
HRY Holter Researc 27.42 92 *e*P **P 19 24 09.4 -0.2**
C17A Wharram Farm, 27.49 90 ⇓P **P 19 24 10.0 -0.3**
baz=27
K11A Parker Ranch, 27.56 103 ⇑P **P 19 24 10.8 -0.1**
baz=27,SNR=51
F15A Butte 27.57 94 ⇓P **P 19 24 10.7 -0.3**
baz=27,SNR=20
LRM Limekiln Ridge 27.60 94 *e*P **P 19 24 10.8 -0.5**
E16A East Helena 27.61 92 ⇓P **P 19 24 11.3 -0.1**
baz=27,SNR=18
B18A Beardsley Farm 27.62 87 ⇑P **P 19 24 11.0 -0.5**
baz=27,SNR=9.7
J12A Stokes Ranch, 27.75 101 ⇑P **P 19 24 12.6 -0.1**
baz=28,SNR=59
PEA0B Petropavlovsk- 27.79 284 *e*P **P 19 24 11.4 -1.4**
PETK Petropavlovsk- 27.79 284 P **P 19 24 13.2 +0.3**
comp=Z,32nm,0.9s,mb5.0,baz=77,slow=12,SNR=34
L10A Juniper Basin 27.79 104 ⇑P **P 19 24 13.4 +0.3**
baz=28,SNR=28
DLMT Dillon 27.80 95 *e*P **P 19 24 13.2 +0.2**
DLMT *e*ScP ScP 19 31 09.6 +0.8
H14A Leadore 27.83 97 ⇑P **P 19 24 13.1 -0.2**
baz=28,SNR=15
EGMT Eagleton 27.84 88 *e*P **P 19 24 10.7 -2.7**
comp=Z,39nm,1.0s,mb5.0
EGMT LR LR
comp=Z,24μm,19.0s,MS5.8
I13A Wildhorse Cree 27.86 99 ⇓P **P 19 24 13.6 -0.1**
baz=28,SNR=37
PAHR Pah Rah Range 27.92 111 *e*P **P 19 24 14.3 +0.1**
comp=Z,50nm,1.1s,mb5.1
HLID Hailey 27.93 100 ⇓P **P 19 24 13.9 -0.3**
baz=28,SNR=42
HLID Hailey 27.93 100 *e*P **P 19 24 13.8 -0.4**
comp=Z,29nm,1.0s,mb4.9
HLID LR LR
comp=Z,35μm,19.0s,MS6.0
G15A Dillon 27.98 95 ⇓P **P 19 24 14.1 -0.5**
baz=28,SNR=8.7
MCMT McKenzie Canyo 27.99 96 *e*P **P 19 24 13.9 -0.8**
comp=Z,13nm,1.0s,mb4.5
WCN Washoe City 28.03 112 P **P 19 24 15.2 0.0**
baz=28,SNR=11
E17A Martinsdale 28.11 92 ⇓P **P 19 24 16.1 +0.2**
baz=28,SNR=7.5
L11A Cat Creek Ranc 28.12 104 ⇑P **P 19 24 16.3 +0.3**
baz=28,SNR=50
M10A I.L. Ranch, Tu 28.14 105 ⇑P **P 19 24 16.7 +0.6**
baz=28,SNR=21
BOZ Bozeman (W) 28.17 94 ⇓P **P 19 24 16.2 -0.1**
baz=28
BOZ Bozeman (W) 28.17 94 *e*P **P 19 24 16.2 -0.1**
BOZ pmax pmax
comp=Z,122nm,2.5s,mb5.1
BOZ MLR MLR
comp=Z,10μm,20.0s,MS5.4
BOZ Bozeman (W) 28.17 94 *e*P **P 19 24 16.2 -0.1**
comp=Z,122nm,2.5s,mb5.1
BOZ LR LR
comp=Z,10μm,20.0s,MS5.4
J13A Cove Ranch, Pi 28.17 100 ⇑P **P 19 24 16.5 +0.2**
baz=28,SNR=26
I14A Mackay 28.22 98 ⇑P **P 19 24 16.9 0.0**
baz=28,SNR=25
H15A Lima 28.23 96 ⇑P **P 19 24 16.7 -0.3**
baz=28,SNR=18
D18A Linhart Farms, 28.28 90 ⇑P **P 19 24 17.9 +0.6**
baz=28,SNR=8.0
G16A Moss Hill, Enn 28.32 95 ⇓P **P 19 24 17.7 -0.1**
baz=28,SNR=18
L12A House Creek Ra 28.54 103 ⇑P **P 19 24 20.2 +0.5**
baz=28,SNR=23
BMN Battle Mountai 28.54 108 PFAKE 19 24 30.0 +10
BMN LR LR
comp=Z,37μm,19.0s,MS6.0
F17A Fitzpatrick Pl 28.55 93 ⇓P **P 19 24 19.9 +0.1**
baz=28,SNR=8.1
E18A Harlowton 28.58 91 ⇓P **P 19 24 20.6 +0.6**
baz=28
M11A Holland Ranch, 28.61 105 ⇑P **P 19 24 20.4 +0.1**
baz=28,SNR=23
CMB Columbia Colle 28.66 115 *e*P **P 19 24 20.7 -0.1**
CMB pmax pmax
comp=Z,52nm,1.4s,mb5.1
CMB MLR MLR
comp=Z,49μm,19.0s,MS6.1
CMB Columbia Colle 28.66 115 *e*P **P 19 24 20.7 -0.1**
comp=Z,52nm,1.4s,mb5.1
CMB LR LR
comp=Z,49μm,19.0s,MS6.1
K13A Stover Farm, H 28.71 101 ⇑P **P 19 24 21.1 -0.1**
baz=28,SNR=7.5
QLMT Earthquake Lak 28.78 95 *e*P **P 19 24 21.1 -0.6**
WAKR Walker 28.79 113 *e*P **P 19 24 22.2 +0.3**
G17A Pierce Place, 28.86 94 ⇓P **P 19 24 22.6 +0.1**
baz=29,SNR=8.1
FFC Flin Flon 28.89 71 *e*P **P 19 24 24.5 +1.9**
FFC pmax pmax
comp=Z,41nm,1.3s,mb5.0
FFC MLR MLR
comp=Z,45μm,20.0s,MS6.1
FFC Flin Flon 28.89 71 *e*P **P 19 24 24.5 +1.9**
comp=Z,41nm,1.3s,mb5.0
FFC LR LR
comp=Z,45μm,20.0s,MS6.1
RES Resolute Bay 28.90 28 P **P 19 24 22.6 +0.1**
comp=Z,25nm,0.7s,mb5.1,baz=258,slow=12,SNR=64
RES Resolute Bay 28.90 28 *e*P **P 19 24 22.2 -0.4**
RES pmax pmax
comp=Z,86nm,1.0s,mb5.4
RES Resolute Bay 28.90 28 *e*P **P 19 24 22.2 -0.4**
comp=Z,86nm,1.0s,mb5.4
H16A Russell Place, 28.96 95 P **P 19 24 23.5 +0.2**
baz=29,SNR=13
N11A Elko Archery C 29.06 106 ⇓P **P 19 24 24.9 +0.5**
baz=29
F18A Big Timber 29.08 92 ⇑P **P 19 24 24.4 0.0**
baz=29,SNR=9.2
M12A Wells 29.09 104 ⇑P **P 19 24 25.2 +0.6**
baz=29,SNR=17
SAO San Andreas Ge 29.12 118 *e*P **P 19 24 23.2 -1.6**
SAO pmax pmax
comp=Z,28nm,1.3s,mb4.8
SAO MLR MLR
comp=Z,27μm,19.0s,MS5.9
SAO San Andreas Ge 29.12 118 *e*P **P 19 24 23.2 -1.7**
comp=Z,28nm,1.3s,mb4.8
SAO LR LR
comp=Z,27μm,19.0s,MS5.9
YMR Madison River 29.14 95 *e*P **P 19 24 24.6 -0.4**
comp=Z,60nm,1.0s,mb5.3
L13A Double Diamond 29.16 102 ⇓P **P 19 24 25.7 +0.5**
baz=29,SNR=13
GCMT Greycliff 29.18 92 *e*P **P 19 24 21.3 -4.0**
comp=Z,32nm,1.2s,mb4.9
YNR Norris Junctio 29.27 94 *e*P **P 19 24 26.3 +0.2**
comp=Z,41nm,1.2s,mb5.0
YNR *e*ScP ScP 19 31 16.4 +2.9
K14A Jones Ranch, D 29.28 100 ⇓P **P 19 24 26.9 +0.7**
baz=29,SNR=13
YFT Old Faithful 29.34 95 *e*P **P 19 24 26.7 -0.1**
comp=Z,42nm,1.0s,mb5.1
YFT *e*ScP ScP 19 31 16.4 +2.6

I16A Newdale 29.35 97 ⇊P **P 19 24 27.2 +0.3**
baz=29
ELK Elko 29.38 105 P **P 19 24 27.4 +0.2**
comp=Z,28nm,0.9s,mb5.0,baz=309,slow=7.3,SNR=46
ELK ScP ScP 19 31 13.7 -0.2
comp=Z,3.3nm,0.9s,baz=211,slow=1.2,SNR=6.2
ELK LR LR 19 34 46.6
comp=Z,22µm,19.4s,MS5.8,baz=316,slow=34
ELK Elko 29.38 105 *e*P **P 19 24 27.4 +0.2**
ELK pmax pmax
comp=Z,32nm,0.9s
ELK MLR MLR
comp=Z,23µm,19.0s
ELK Elko 29.38 105 *e*P **P 19 24 27.4 +0.2**
comp=Z,32nm,0.9s,mb5.0
ELK LR LR
comp=Z,23µm,19.0s,MS5.8
N12A Clover Valley, 29.42 105 P **P 19 24 28.1 +0.6**
baz=29,SNR=29
NVAR Mina Array Bea 29.43 112 P **P 19 24 27.6 -0.1**
comp=Z,23nm,0.8s,mb5.0,baz=301,slow=8.8,SNR=81
NVAR PcP PcP 19 27 35.0 +1.9
comp=Z,5.1nm,0.7s,baz=269,slow=2.1,SNR=4.3
NVAR ScP ScP 19 31 13.8 -0.3
comp=Z,6.6nm,1.0s,baz=313,slow=2.0,SNR=13
LKWY Lake 29.52 94 *e*P **P 19 24 29.2 +0.9**
LKWY pmax pmax
comp=Z,38nm,1.1s,mb5.0
LKWY MLR MLR
comp=Z,12µm,19.0s,MS5.5
LKWY Lake 29.52 94 *e*P **P 19 24 29.2 +0.9**
comp=Z,38nm,1.1s,mb5.0
LKWY LR LR
comp=Z,12µm,19.0s,MS5.5
H17A Grant Village 29.52 95 ⇑P **P 19 24 29.8 +1.4**
baz=29,SNR=20
P10A Eureka 29.53 108 ⇊P **P 19 24 29.0 +0.6**
baz=29
M13A Montello 29.54 103 P **P 19 24 28.9 +0.3**
baz=29,SNR=56
K15A Arbon 29.54 99 ⇑P **P 19 24 29.6 +1.0**
baz=29,SNR=27
L14A Malta 29.59 101 ⇊P **P 19 24 30.2 +1.2**
baz=29,SNR=31
O11A Cowboy Ranch, 29.59 106 ⇊P **P 19 24 29.6 +0.5**
baz=29,SNR=29
IMW Indian Meadow 29.64 96 *e*P **P 19 24 30.2 +0.8**
comp=Z,31nm,1.1s,mb5.0
IMW *e*ScP ScP 19 31 15.8 +1.2
J16A Bone 29.66 98 ⇑P **P 19 24 30.5 +0.8**
baz=29,SNR=8.6
DCID1 Drake Creek 29.70 97 *e*P **P 19 24 29.8 -0.1**
comp=Z,39nm,1.1s,mb5.0
RRI2 Red Ridge 29.78 97 *e*P **P 19 24 30.9 +0.3**
comp=Z,19nm,0.8s,mb4.9
SKR Severo-Kuril's 29.79 281 *e*P **P 19 24 24.0 -6.7**
SKR *e* 19 25 27.0
SKR *e*PPP 19 25 49.0
SKR *e*S **S 19 29 34.0 +7.5**
SKR *e*SS SS 19 31 08.0 -25
SKR pmax pmax
comp=Z,60nm,0.7s,mb5.4
SKR pmax pmax
comp=Z,3µm,14.0s
SKR smax
comp=N,8µm,16.0s
SKR smax
comp=E,6µm,16.0s
SKR MLR MLR
comp=N,16µm,18.0s,MS5.8
SKR MLR MLR
comp=Z,12µm,18.0s,MS5.6
SKR MLR MLR
comp=E,11µm,20.0s,MS5.8
N13A Wendover, West 29.87 104 P **P 19 24 32.3 +0.8**
baz=30,SNR=24
N13A Wendover, West 29.87 104 *e*P **P 19 24 31.9 +0.5**
comp=E,53nm,0.8s,mb5.3
M14A Sheep Mountain 29.89 102 ⇑P **P 19 24 31.9 +0.2**
baz=30,SNR=44
TPAW Teton Pass 29.89 97 *e*P **P 19 24 29.9 -1.7**
TPAW *e*ScP ScP 19 31 17.4 +1.9
P11A Circle Ranch, 29.95 107 ⇊P **P 19 24 33.3 +1.1**
baz=30,SNR=8.2
K16A Soda Springs 29.97 98 ⇊P **P 19 24 33.8 +1.5**
baz=30
O12A Currie 29.99 105 ⇊P **P 19 24 33.1 +0.5**
baz=30,SNR=21
LOHW Long Hollow 30.01 96 *e*P **P 19 24 33.4 +0.7**
comp=E,90nm,2.0s,mb5.2
HVU Hansel Valley 30.01 101 *e*P **P 19 24 32.6 -0.2**
HVU pmax pmax
comp=Z,27nm,0.9s,mb5.0
HVU Hansel Valley 30.01 101 *e*P **P 19 24 32.6 -0.1**
comp=Z,27nm,0.9s,mb5.0
REDW Red Top Meadow 30.03 97 *e*P **P 19 24 33.1 +0.2**
comp=Z,36nm,1.3s,mb4.9
L15A Malad City 30.08 100 ⇊P **P 19 24 33.7 +0.4**
baz=30,SNR=18
J17A Brown Place, J 30.11 97 ⇑P **P 19 24 33.8 +0.2**
baz=30,SNR=6.7
MTUM Tungsten Hills 30.11 114 *e*P **P 19 24 33.9 +0.2**
MTUM *e*ScP ScP 19 31 18.8 +2.5
Q10A Clear Creek Ra 30.14 109 ⇊P **P 19 24 34.5 +0.6**
baz=30,SNR=28
TPH Tonopah 30.26 111 PFAKE 19 24 40.0 +5.0
TPH LR LR
comp=Z,32µm,20.0s,MS6.0
AHID Auburn Hatcher 30.28 98 PFAKE 19 24 50.0 +15
AHID LR LR
comp=Z,11µm,20.0s,MS5.5
M15A Larsen Ranch, 30.41 101 ⇊P **P 19 24 36.4 +0.2**
baz=30,SNR=27
N14A Grayback Hills 30.42 103 ⇑P **P 19 24 36.8 +0.4**
baz=30,SNR=86
BGU Big Grassy Mou 30.46 103 *e*P **P 19 24 36.4 -0.3**
comp=Z,32nm,1.1s,mb5.0
BGU *e*PcP PcP 19 27 35.6 -0.1
P12A McGill 30.46 107 ⇊P **P 19 24 36.9 +0.1**
baz=30,SNR=42
SPUT South Promonto 30.51 101 *e*P **P 19 24 36.9 -0.3**
comp=Z,214nm,2.3s,mb5.6
Q11A Duckwater 30.52 108 ⇊P **P 19 24 37.4 +0.2**
baz=30,SNR=60
LAO LASA Array 30.57 88 PFAKE 19 24 50.0 +12
LAO LR LR
comp=Z,22µm,20.0s,MS5.8
R10A Warm Springs 30.59 110 ⇑P **P 19 24 38.3 +0.4**
baz=30,SNR=5.6
J18A Kendall Valley 30.59 96 ⇊P **P 19 24 38.6 +0.7**
baz=30
L16A Fish Haven 30.59 99 ⇑P **P 19 24 38.6 +0.7**
baz=30,SNR=21
DGMT Dagmar 30.70 83 *e*P **P 19 24 38.1 -0.7**
comp=Z,61nm,1.1s,mb5.3
DGMT LR LR
comp=Z,22µm,19.0s,MS5.8
S10A Tonopah Range, 30.71 111 ⇊P **P 19 24 38.8 -0.1**
baz=30,SNR=19
N15A Stansbury Isla 30.76 102 ⇑P **P 19 24 39.4 0.0**
baz=30,SNR=19
HWUT Hardware Ranch 30.80 100 *e*P **P 19 24 40.3 +0.6**
comp=Z,29nm,1.2s,mb5.0
HWUT *e*ScP ScP 19 31 19.6 +1.2
HWUT LR LR
comp=Z,31µm,19.0s,MS6.0
Q12A Willow Creek R 30.82 107 ⇊P **P 19 24 40.4 +0.5**
baz=30,SNR=33
L17A Cokeville 30.85 99 ⇑P **P 19 24 40.5 +0.4**
baz=31,SNR=11
R11A Troy Canyon, C 30.92 109 ⇑P **P 19 24 40.5 -0.3**
baz=31,SNR=60
P13A Bates Ranch, G 30.96 106 ⇊P **P 19 24 41.3 +0.2**
baz=31,SNR=48
M16A Huntsville 30.96 101 ⇊P **P 19 24 41.1 0.0**
baz=31
SMMC Simmler 30.98 118 ⇑P **P 19 24 41.6 +0.2**
baz=31,SNR=24
VES Vestal, Richgr 31.02 116 ⇊P **P 19 24 41.3 -0.4**
baz=31,SNR=5.5
DUG Dugway 31.09 103 ⇑P **P 19 24 42.5 +0.3**
baz=31,SNR=34
DUG Dugway 31.09 103 *e*P **P 19 24 42.3 +0.1**
DUG MLR MLR
comp=Z,16µm,20.0s,MS5.7
DUG Dugway 31.09 103 *e*P **P 19 24 42.3 +0.1**
DUG *e*ScP ScP 19 31 19.6 +0.2
DUG LR LR
comp=Z,16µm,20.0s,MS5.7
BW06 Boulder Array 31.14 96 PFAKE 19 24 50.0 +7.3
BW06 LR LR
comp=Z,10µm,21.0s,MS5.5
PDAR Pinedale Array 31.14 96 P **P 19 24 42.6 -0.1**
comp=Z,11nm,0.8s,mb4.7,baz=317,slow=6.1,SNR=22
PDAR ScP ScP 19 31 18.9 -0.7
comp=Z,0.8nm,0.6s,baz=333,slow=2.0,SNR=5.8
PDAR P3KPbc 19 56 24.2
comp=Z,1.3nm,0.9s,baz=121,slow=5.1,SNR=8.2
PDAR Pinedale Array 31.14 96 P **P 19 24 42.6 -0.1**
PDAR ScP ScP 19 31 18.9 -0.7
PDAR *e* 19 56 24.2
NOQ North Oquirrh 31.14 102 *e*P **P 19 24 42.2 -0.5**
comp=Z,80nm,1.3s,mb5.4
Q13A Wheeler Ranch, 31.32 106 ⇊P **P 19 24 44.5 +0.2**
baz=31,SNR=36
FCC Fort Churchill 31.33 60 *e*P **P 19 24 43.9 -0.3**
comp=Z,5.3nm,1.8s,mb4.1
N16A Rees Ranch, Co 31.36 101 ⇑P **P 19 24 45.2 +0.5**
baz=31,SNR=5.2
P14A Drum Mountains 31.37 104 ⇑P **P 19 24 45.3 +0.5**
baz=31,SNR=79
M17A Scullys Gap (B 31.38 99 ⇊P **P 19 24 44.6 -0.3**
baz=31,SNR=26
PKM Peak Mountain 31.40 118 ⇑P **P 19 24 44.8 -0.3**
baz=31,SNR=23
DAC Darwin (Calif) 31.44 114 PFAKE 19 25 00.0 +15
DAC LR LR
comp=Z,23µm,19.0s,MS5.9
R12A Pony Springs, 31.46 108 ⇑P **P 19 24 45.8 +0.3**
baz=31,SNR=18
ISA Isabella 31.47 116 ⇊P **P 19 24 45.8 +0.2**
baz=31,SNR=7.4
ISA Isabella 31.47 116 *e*P **P 19 24 45.4 -0.2**
ISA pmax pmax
comp=Z,38nm,1.3s,mb5.1
ISA Isabella 31.47 116 *e*P **P 19 24 45.4 -0.2**
comp=Z,38nm,1.3s,mb5.1
JLU Jordanelle 31.55 101 *e*P **P 19 24 46.6 +0.3**
comp=Z,22nm,1.1s,mb4.9
NLU North Lily Min 31.66 103 *e*P **P 19 24 47.4 +0.1**
comp=Z,19nm,0.9s,mb4.9
NLU *e*ScP ScP 19 31 22.1 +0.7
MPMC Manual Prospec 31.66 114 ⇊P **P 19 24 47.8 +0.4**
baz=31,SNR=48
FURC Furnace Creek, 31.67 113 P **P 19 24 47.6 +0.2**
baz=31,SNR=11
Q14A Sevier Lake (B 31.69 105 ⇑P **P 19 24 47.8 +0.2**
baz=31,SNR=44
DAU Daniels Canyon 31.79 101 *e*P **P 19 24 48.7 +0.3**
O16A Springville 31.79 102 ⇊P **P 19 24 49.1 +0.6**
baz=32,SNR=16
P15A Leamington 31.82 104 ⇑P **P 19 24 48.4 -0.3**
baz=32,SNR=7.1
MPU Maple Canyon 31.86 102 *e*P **P 19 24 48.5 -0.6**
comp=Z,131nm,2.3s,mb5.4
S12A Delamar Landin 31.86 109 ⇊P **P 19 24 49.7 +0.6**
baz=32,SNR=32
R13A O'Grain Ranch, 31.91 107 ⇊P **P 19 24 49.5 0.0**
baz=32,SNR=17
T11A Corn Creek, Al 31.94 110 ⇑P **P 19 24 50.1 +0.3**
baz=32,SNR=42
U10A Ash Meadows, A 31.98 112 ⇊P **P 19 24 50.6 +0.5**
baz=32,SNR=15
LRMC Laurel Mountai 32.01 115 ⇊P **P 19 24 50.4 0.0**
baz=32,SNR=47
Q15A Fillmore 32.17 104 ⇑P **P 19 24 52.1 +0.3**
baz=32,SNR=31
M19A Rock Springs 32.20 98 ⇑P **P 19 24 52.1 +0.1**
baz=32,SNR=7.9
BSC Santa Cruz Isl 32.21 119 ⇊P **P 19 24 53.8 +1.6**
baz=32
N18A Larsen Ranch, 32.27 99 ⇑P **P 19 24 52.6 0.0**
baz=32
EDW2 Edwards Air Fo 32.33 116 ⇑P **P 19 24 52.3 -0.9**
baz=32
R14A James Farms, M 32.33 106 ⇊P **P 19 24 53.6 +0.4**
baz=32,SNR=6.7
SHOC Shoshone 32.40 113 ⇊P **P 19 24 54.0 +0.1**
baz=32,SNR=11
S13A Holt Ranch, En 32.41 108 ⇊P **P 19 24 54.1 +0.3**
baz=32,SNR=46
SHPR Sheep Range 32.52 111 *e*P **P 19 24 54.4 -0.5**
MIDW Midway 32.57 221 PFAKE 19 25 10.0 +15
MIDW LR LR
comp=Z,18µm,19.0s,MS5.8
O18A Roosevelt 32.57 100 ⇊P **P 19 24 55.9 +0.6**
baz=32,SNR=32
TMUT Trail Mountain 32.59 103 *e*P **P 19 24 55.1 -0.4**
comp=Z,29nm,0.9s,mb5.2
GSC Goldstone 32.60 114 ⇊P **P 19 24 55.6 0.0**
baz=32,SNR=14
GSC Goldstone 32.60 114 *e*P **P 19 24 55.2 -0.3**
GSC *e*ScP ScP 19 31 24.5 -0.2
N19A John Jarvie Ra 32.60 99 ⇊P **P 19 24 55.2 -0.3**
baz=32,SNR=13
MVU Marysvale 32.62 105 PFAKE 19 25 10.0 +14
MVU LR LR
comp=Z,13µm,20.0s,MS5.6
MSU Marysvale 32.63 105 *e*P **P 19 24 56.3 +0.5**
MSU *e*ScP ScP 19 31 25.1 +0.4
S14A Cedar City 32.64 107 ⇑P **P 19 24 56.1 +0.2**
baz=32,SNR=16
CCUT Cedar City 32.70 107 *e*P **P 19 24 56.5 +0.1**
comp=Z,29nm,1.0s,mb5.2
P17A Butcher Ranch, 32.73 102 ⇑P **P 19 24 56.9 +0.3**
baz=32
M20A Sweetwater, Wa 32.75 97 ⇊P **P 19 24 56.9 +0.1**
baz=32,SNR=6.3
PASC Pasadena Art C 32.79 117 *e*P **P 19 24 56.3 -1.0**
comp=Z,18nm,0.9s,mb5.0
R15A Junction 32.80 105 ⇊P **P 19 24 58.2 +0.9**
baz=32,SNR=18
T13A Saint George 32.80 109 ⇑P **P 19 24 57.8 +0.5**
baz=32,SNR=41
MWC Mount Wilson 32.81 117 *e*P **P 19 24 57.7 +0.3**
MWC pmax pmax
comp=Z,34nm,1.0s,mb5.2
MWC Mount Wilson 32.81 117 *e*P **P 19 24 57.7 +0.2**
comp=Z,34nm,1.0s,mb5.2
L21A Rawlins 32.88 96 ⇊P **P 19 24 57.8 -0.3**
baz=33
Q16A Castle Valley 32.88 103 ⇊P **P 19 24 58.6 +0.6**
baz=33,SNR=23
P18A Preston Nutter 32.89 101 ⇑P **P 19 24 58.1 +0.1**
baz=33
V11A Goodsprings 32.89 112 ⇑P **P 19 24 58.7 +0.6**
baz=33,SNR=31
U12A Valley of Fire 32.91 110 ⇑P **P 19 24 58.5 +0.3**
baz=33
TUQ Turquoise Moun 32.95 113 ⇊P **P 19 24 58.8 +0.2**
baz=33
BFSC Mount Baldy St 33.00 116 ⇑P **P 19 24 59.2 +0.1**
baz=33,SNR=18
O19A Miners Draw (B 33.04 99 ⇑P **P 19 24 59.7 +0.3**
baz=33,SNR=21
SRU San Rafael 33.10 102 ⇊P **P 19 25 00.7 +0.8**
baz=33
SRU San Rafael 33.10 102 *e*P **P 19 25 00.2 +0.3**
SRU pmax pmax
comp=Z,114nm,1.0s,mb5.8
SRU San Rafael 33.10 102 *e*P **P 19 25 00.2 +0.3**
comp=Z,114nm,1.0s,mb5.8
SRU *e*ScP ScP 19 31 28.9 +2.6
M21A Separation Pea 33.13 96 ⇊P **P 19 24 59.2 -0.9**
baz=33,SNR=17
S15A Panguitch 33.14 106 ⇊P **P 19 25 01.2 +1.0**
baz=33,SNR=13
N20A Spence Gulch, 33.15 98 ⇑P **P 19 25 00.9 +0.6**
baz=33,SNR=18
RWWY Rawlins 33.16 96 *e*P **P 19 24 59.8 -0.6**
comp=Z,110nm,1.0s,mb5.7
R16A Teasdale 33.17 104 ⇑P **P 19 25 01.6 +1.0**
baz=33,SNR=42
T14A Hurricane 33.21 108 ⇊P **P 19 25 01.3 +0.4**
baz=33,SNR=49
HEC Hector,Ludlow 33.21 114 ⇊P **P 19 25 00.9 0.0**
baz=33,SNR=6.5
U13A Pakoon Wash 33.22 109 ⇑P **P 19 25 01.4 +0.4**
baz=33,SNR=61
V12A Nelson 33.28 111 ⇊P **P 19 25 01.9 +0.4**
baz=33,SNR=21
Q18A Rafter H Ranch 33.32 102 ⇑P **P 19 25 01.8 0.0**
baz=33,SNR=13
RSSD Black Hills 33.36 90 PFAKE 19 25 10.0 +7.9
RSSD LR LR
comp=Z,17µm,19.0s,MS5.8
L22A Ellis Ranch, M 33.36 95 ⇊P **P 19 25 02.8 +0.6**
baz=33,SNR=7.6
R17A Hanksville Air 33.49 103 ⇊P **P 19 25 03.6 +0.2**
baz=33,SNR=61
P19A Cripple Cowboy 33.58 100 ⇊P **P 19 25 04.3 +0.2**
baz=33,SNR=48
GMRC Granite Mounta 33.59 113 ⇑P **P 19 25 04.5 +0.2**
baz=33,SNR=8.0
N21A Black Mountain 33.61 97 ⇊P **P 19 25 04.9 +0.5**
baz=33,SNR=7.8
T15A Red Dirt Ranch 33.61 107 ⇊P **P 19 25 05.1 +0.7**
baz=33,SNR=45
U14A Mt Trumbull 33.63 109 ⇊P **P 19 25 05.1 +0.5**
baz=33,SNR=71
V13A Grand Canyon W 33.64 110 ⇑P **P 19 25 05.0 +0.4**
baz=33,SNR=37
O20A White River Ci 33.64 99 ⇊P **P 19 25 04.7 0.0**
baz=33,SNR=53
LDFC Landfair 33.64 112 *e*P **P 19 25 03.3 -1.4**
Q19A Hogan Spring (33.90 101 ⇊P **P 19 25 06.6 -0.3**
baz=34,SNR=41
R18A Canyonlands Na 33.96 103 ⇊P **P 19 25 06.8 -0.7**
baz=34,SNR=29
P20A De Beque 34.00 100 ⇑P **P 19 25 07.4 -0.3**
baz=34,SNR=6.9
S17A Black Ridge (B 34.01 105 ⇑P **P 19 25 08.4 +0.5**
baz=34,SNR=13
BELC Belle Mtn. 34.03 114 ⇑P **P 19 25 07.8 -0.3**
baz=34,SNR=17
U15A North Rim 34.10 108 ⇑P **P 19 25 09.2 +0.6**
baz=34,SNR=25
PFO Pinyon Flat Ob 34.11 115 P **P 19 25 08.0 -0.7**
comp=Z,136nm,0.9s,mb5.9,SNR=5.9
PFO Pinyon Flat Ob 34.11 115 ⇑P **P 19 25 08.3 -0.4**
baz=34,SNR=7.9
PFO Pinyon Flat Ob 34.11 115 *e*P **P 19 25 07.8 -0.9**
PFO pmax pmax
comp=Z,35nm,1.0s,mb5.2
PFO MLR MLR
comp=Z,5µm,20.0s,MS5.3
PFO Pinyon Flat Ob 34.11 115 *e*P **P 19 25 07.8 -1.0**
comp=Z,22nm,1.0s,mb5.0
PFO LR LR
comp=Z,13µm,20.0s,MS5.6
N22A Wattenberg Ran 34.17 96 ⇊P **P 19 25 08.9 -0.3**
baz=34
W13A Hualapai Mount 34.27 111 ⇑P **P 19 25 10.3 +0.2**
baz=34,SNR=15
V14A Boquillas Ranc 34.27 109 ⇊P **P 19 25 10.8 +0.7**
baz=34,SNR=15
ULM Lac du Bonnet 34.30 75 P **P 19 25 11.5 +1.3**
comp=Z,28nm,1.1s,mb5.1,baz=302,slow=9.5,SNR=16
ULM ScP ScP 19 31 30.6 +0.3
comp=Z,6.7nm,0.9s,baz=282,slow=4.4,SNR=4.1
ULM LR LR 19 39 04.4
comp=Z,33µm,18.7s,MS6.1,baz=309,slow=36
ULM Lac du Bonnet 34.30 75 *e*P **P 19 25 10.6 +0.3**
comp=Z,52nm,1.1s,mb5.4
ULM LR LR
comp=Z,41µm,19.0s,MS6.2
IRM Iron Mountain 34.34 113 ⇊P **P 19 25 10.9 +0.2**
baz=34,SNR=40
109C Camp Elliot, M 34.35 117 ⇊P **P 19 25 11.1 +0.2**
baz=34,SNR=5.2
R19A Curley Farm, L 34.38 102 ⇑P **P 19 25 10.7 -0.4**
baz=34
S18A Hurst Farm, Bl 34.41 104 ⇊P **P 19 25 11.1 -0.2**
baz=34,SNR=32
Q20A Ridgley Place, 34.44 100 ⇑P **P 19 25 10.8 -0.8**
baz=34,SNR=15
TIXI Tiksi 34.45 327 *c i*P **P 19 25 10.8 -0.5**
TIXI *e* 19 26 27.0
TIXI *e*S **S 19 30 41.4 +2.8**
TIXI *e* 19 35 33.0
TIXI pmax pmax
comp=Z,78nm,1.1s,mb5.5
TIXI MLR MLR
comp=N,12µm,13.0s,MS6.1
TIXI MLR MLR
comp=Z,51µm,14.0s,MS6.4
TIXI MLR MLR
comp=E,23µm,15.0s,MS6.1
TIXI Tiksi 34.45 327 *e*P **P 19 25 10.9 -0.4**
comp=E,276nm,1.8s,mb5.9
TIXI LR LR
comp=Z,9µm,21.0s,MS5.5
T17A Navajo Res., N 34.48 105 ⇊P **P 19 25 11.7 -0.3**
baz=34,SNR=12
PV04 Paradox Valley 34.50 102 *e*P **P 19 25 12.3 +0.2**
P21A Newcastle 34.50 99 ⇑P **P 19 25 12.3 +0.1**
baz=34
BC3 Big Chuckw Mtn 34.58 114 ⇊P **P 19 25 12.0 -0.8**
baz=34,SNR=17
W14A Seligman 34.60 110 ⇊P **P 19 25 13.6 +0.6**
baz=34,SNR=26
V15A Kaibab Nationa 34.62 108 ⇑P **P 19 25 13.5 +0.3**
baz=34,SNR=50
X13A Yucca 34.68 111 P **P 19 25 13.5 -0.2**
baz=34,SNR=18
MONP Monument Peak 34.70 116 ⇊P **P 19 25 14.3 +0.4**
baz=34,SNR=25
KIP Kipapa 34.78 187 *c e*P **P 19 25 13.5 -1.2**
KIP Kipapa 34.78 187 PFAKE 19 25 20.0 +5.3
KIP LR LR
comp=Z,14µm,19.0s,MS5.7
S19A Harvey Farm, M 34.84 103 ⇑P **P 19 25 15.3 +0.3**
baz=34,SNR=15
U17A Shonto 34.85 106 ⇊P **P 19 25 15.0 -0.1**
baz=34,SNR=16
PV01 Paradox Valley 34.87 102 *e*P **P 19 25 15.2 -0.1**
comp=Z,4µm,1.1s
T18A Mexican Hat 34.88 104 ⇊P **P 19 25 14.7 -0.7**
baz=35,SNR=61
Q21A Lamborn Mesa, 34.92 100 ⇊P **P 19 25 15.5 -0.2**
baz=35
R20A Redvale 34.93 101 ⇊P **P 19 25 15.9 +0.1**
baz=35,SNR=31
SWSC Sam W. Stewart 34.97 115 ⇊P **P 19 25 16.0 -0.2**
baz=35,SNR=5.4
ALE Alert 34.98 13 P **P 19 25 16.0 +0.2**
comp=Z,822nm,0.8s,mb6.7,SNR=71
Y12C Blythe 34.98 113 ⇑P **P 19 25 16.5 +0.2**
baz=35,SNR=29
SMCO Snowmass 35.01 99 *e*ScP ScP 19 31 33.5 +0.4
W15A Williams 35.06 109 ⇑P **P 19 25 18.1 +1.1**
baz=35,SNR=21
Q22A Crested Butte, 35.27 99 ⇑P **P 19 25 18.2 -0.5**
baz=35
X14A Yava 35.27 110 ⇑P **P 19 25 19.5 +0.7**
baz=35,SNR=50
WUAZ Wupatki 35.28 108 ⇑P **P 19 25 19.4 +0.5**
baz=35,SNR=17
WUAZ Wupatki 35.28 108 *e*P **P 19 25 19.4 +0.6**
comp=Z,163nm,1.8s,mb5.7
WUAZ LR LR
comp=Z,26µm,20.0s,MS6.0
Y13A Salome 35.29 112 ⇊P **P 19 25 18.6 -0.4**
baz=35,SNR=11
ISCO Idaho Springs 35.33 97 PFAKE 19 25 30.0 +11
ISCO LR LR
comp=Z,8µm,19.0s,MS5.5
GLA Glamis 35.38 114 ⇑P **P 19 25 19.6 -0.1**
baz=35
GLA Glamis 35.38 114 *e*P **P 19 25 19.9 +0.2**
GLA pmax pmax
comp=Z,54nm,1.1s,mb5.4
GLA Glamis 35.38 114 *e*P **P 19 25 19.9 +0.2**
comp=Z,54nm,1.1s,mb5.4
AGMN Agassiz Refuge 35.40 78 *e*P **P 19 25 19.3 -0.4**
comp=Z,44nm,0.8s,mb5.5
AGMN LR LR
comp=Z,20µm,20.0s,MS5.9
V17A Tonalea, Kykot 35.51 107 ⇑P **P 19 25 21.2 +0.3**
baz=35,SNR=50
W16A Flagstaff 35.51 108 ⇊P **P 19 25 22.0 +1.1**
baz=35,SNR=30
T19A Beclabito 35.57 104 P **P 19 25 20.9 -0.4**
baz=35,SNR=44
MVCO Mesa Verde 35.58 103 ⇑P **P 19 25 21.0 -0.3**
baz=35,SNR=7.0
MVCO Mesa Verde 35.58 103 *e*P **P 19 25 21.2 -0.2**
comp=Z,30nm,0.8s,mb5.3
MVCO LR LR
comp=Z,9µm,19.0s,MS5.6
X15A Humboldt 35.60 110 P **P 19 25 22.1 +0.4**
baz=35,SNR=32

Y14A	**Wickenburg**	**35.62**	**111**	⇓P	**P**	**19 25 21.7 -0.1**
	baz=35,SNR=16					
S21A	**Coal Bank Pass**	**35.63**	**101**	⇑P	**P**	**19 25 22.0 +0.1**
	baz=35,SNR=16					
R22A	**Saguache, Gunn**	**35.80**	**100**	⇓P	**P**	**19 25 23.8 +0.5**
	baz=36					
Z13A	**Yuma Proving G**	**35.86**	**113**	⇓P	**P**	**19 25 23.9 0.0**
	baz=36,SNR=16					
V18A	**Ganado**	**35.90**	**106**	⇑P	**P**	**19 25 24.6 +0.4**
	baz=36,SNR=8.1					
112A	**Yuma**	**35.91**	**114**	⇑P	**P**	**19 25 24.5 +0.2**
	baz=36,SNR=5.6					
Y15A	**Casa Rosa Ranc**	**35.96**	**110**	⇓P	**P**	**19 25 25.4 +0.6**
	baz=36,SNR=13					
X16A	**Lo Mia Camp, P**	**36.08**	**109**	⇓P	**P**	**19 25 26.4 +0.7**
	baz=36,SNR=44					
Z14A	**Wintersburg**	**36.10**	**112**	⇑P	**P**	**19 25 26.0 0.0**
	baz=36					
113A	**Mohawk Valley,**	**36.14**	**113**	⇓P	**P**	**19 25 26.5 +0.2**
	baz=36,SNR=5.3					
T21A	**Navajo Lake**	**36.26**	**102**	⇓P	**P**	**19 25 27.3 0.0**
	baz=36					
POHA	**Pohakuloa**	**36.32**	**183**	PFAKE		19 25 40.0 +12
POHA				LR	LR	
	comp=Z,11μm,22.0s,MS5.6					
V19A	**Window Rock**	**36.38**	**105**	⇑P	**P**	**19 25 28.8 +0.5**
	baz=36					
Y16A	**Circle Bar Ran**	**36.47**	**110**	⇓P	**P**	**19 25 30.1 +1.1**
	baz=36,SNR=8.6					
OGNE	**Ogallala**	**36.55**	**92**	*e*P	**P**	**19 25 28.8 -0.8**
	comp=Z,80nm,0.8s,mb5.6					
OGNE				LR	LR	
	comp=Z,13μm,19.0s,MS5.7					
T22A	**Edith**	**36.59**	**101**	⇓P	**P**	**19 25 30.8 +0.7**
	baz=36,SNR=38					
U21A	**Nageezi**	**36.61**	**103**	⇑P	**P**	**19 25 30.6 +0.3**
	baz=36					
V20A	**Brimhall**	**36.63**	**104**	P	**P**	**19 25 30.3 -0.1**
	baz=36,SNR=17					
X18A	**Snowflake**	**36.78**	**107**	⇓P	**P**	**19 25 32.3 +0.6**
	baz=36					
SDCO	**Great Sand Dun**	**36.84**	**99**	*e*P	**P**	**19 25 32.2 +0.1**
	comp=Z,28nm,1.1s,mb5.0					
SDCO				LR	LR	
	comp=Z,22μm,19.0s,MS6.0					
Z16A	**Peralta Trail,**	**36.91**	**110**	⇓P	**P**	**19 25 33.2 +0.4**
	baz=37,SNR=6.4					
Y17A	**Roosevelt**	**36.95**	**109**	⇑P	**P**	**19 25 33.5 +0.4**
	baz=37					
115A	**Sonoran Desert**	**36.99**	**112**	⇓P	**P**	**19 25 34.2 +0.6**
	baz=37					
V21A	**Milan**	**37.08**	**103**	⇓P	**P**	**19 25 34.6 +0.4**
	baz=37,SNR=17					
U22A	**Llaves**	**37.08**	**102**	⇑P	**P**	**19 25 34.7 +0.4**
	baz=37					
X19A	**St. Johns**	**37.22**	**107**	⇓P	**P**	**19 25 35.8 +0.4**
	baz=37					
214A	**Organ Pipe Nat**	**37.28**	**113**	P	**P**	**19 25 36.0 0.0**
	baz=37,SNR=15					
V22A	**San Miguel Ran**	**37.39**	**103**	⇑P	**P**	**19 25 37.3 +0.4**
	baz=37,SNR=46					
U23A	**El Rito**	**37.48**	**101**	⇓P	**P**	**19 25 38.6 +0.9**
	baz=37					
X20A	**Quemado**	**37.55**	**106**	⇓P	**P**	**19 25 38.6 +0.3**
	baz=37					
W21A	**San Fidel**	**37.58**	**104**	⇑P	**P**	**19 25 38.5 0.0**
	baz=37					
Y19A	**Nutrioso**	**37.59**	**107**	⇑P	**P**	**19 25 39.8 +1.2**
	baz=37,SNR=15					
YAK	**Yakutsk**	**37.61**	**311**	*c iP*	**P**	**19 25 37.6 -0.9**
YAK				*e*		19 27 02.5
YAK				*e*PPP		19 27 22.5
YAK				*e*		19 27 55.4
YAK				*e*S	**S**	**19 31 25.0 -2.2**
YAK				*e*SS	SS	19 34 00.9 -11
YAK				*e*SSS		19 34 29.6
YAK				*e*		19 35 49.6
YAK				pmax	pmax	
	comp=Z,193nm,0.9s,mb5.8					
YAK				pmax	pmax	
	comp=N,12nm,1.0s					
YAK				pmax	pmax	
	comp=E,31nm,1.0s					
YAK				pmax	pmax	
	comp=Z,866nm,6.7s					
YAK				pmax	pmax	
	comp=N,1μm,14.1s					
YAK				pmax	pmax	
	comp=E,2μm,15.0s					
YAK				smax		
	comp=E,253nm,3.1s					
YAK				smax		
	comp=N,138nm,4.8s					
YAK				MLR	MLR	
	comp=Z,43μm,16.0s,MS6.3					
YAK				MLR	MLR	
	comp=N,21μm,16.0s,MS6.2					
YAK				MLR	MLR	
	comp=E,25μm,16.0s,MS6.2					
YAK	**Yakutsk**	**37.61**	**311**	*e*P	**P**	**19 25 37.5 -1.0**
	comp=E,222nm,0.8s,mb5.9					
YAK				LR	LR	
	comp=Z,42μm,19.0s,MS6.3					
ECSD	**EROS Data Cent**	**37.75**	**84**	*e*P	**P**	**19 25 40.2 +0.3**
	comp=Z,520nm,3.0s					
ECSD				*e*ScP	ScP	19 31 44.6 +1.5
ECSD				LR	LR	
	comp=Z,28μm,19.0s,MS6.1					
117A	**Oracle**	**37.87**	**110**	⇑P	**P**	**19 25 41.8 +0.8**
	baz=38,SNR=24					
V23A	**Ortiz Mt. (NFS**	**37.92**	**102**	⇑P	**P**	**19 25 42.2 +0.9**
	baz=38,SNR=17					
U24A	**Moreno Valley**	**37.93**	**100**	⇓P	**P**	**19 25 42.4 +1.0**
	baz=38					
216A	**Three Points,**	**37.94**	**111**	⇓P	**P**	**19 25 44.0 +2.4**
	baz=38					
EYMN	**Ely**	**37.98**	**75**	*e*P	**P**	**19 25 41.4 -0.4**
	comp=Z,247nm,1.8s,mb5.6					
EYMN				LR	LR	
	comp=Z,27μm,20.0s,MS6.1					
X21A	**Alamocita Cree**	**38.01**	**105**	⇑P	**P**	**19 25 43.0 +0.9**
	baz=38,SNR=71					
TUC	**Tucson**	**38.05**	**110**	*e*P	**P**	**19 25 42.5 0.0**
TUC				pmax	pmax	
	comp=Z,100nm,1.9s,mb5.2					
TUC				MLR	MLR	
	comp=Z,11μm,20.0s,MS5.7					
TUC	**Tucson**	**38.05**	**110**	*e*P	**P**	**19 25 42.5 -0.1**
	comp=Z,100nm,1.9s,mb5.2					
TUC				LR	LR	
	comp=Z,11μm,20.0s,MS5.7					
Y20A	**Horse Springs,**	**38.10**	**106**	⇓P	**P**	**19 25 43.7 +0.8**
	baz=38,SNR=12					
118A	**Homack Ranch,**	**38.23**	**109**	⇓P	**P**	**19 25 44.5 +0.5**
	baz=38					
ANMO	**Albuquerque**	**38.35**	**103**	ScP	ScP	19 31 45.7 +0.1
	comp=Z,9.0nm,1.0s,baz=308,slow=4.2,SNR=8.9					
ANMO				LR	LR	19 39 14.0
	comp=Z,8μm,21.4s,MS5.5,baz=123,slow=33					
ANMO	**Albuquerque**	**38.35**	**103**	*e*P	**P**	**19 25 44.8 -0.2**
ANMO				pmax	pmax	
	comp=Z,27nm,1.3s					
ANMO				MLR	MLR	
	comp=Z,8μm,21.0s					
ANMO	**Albuquerque**	**38.35**	**103**	*e*P	**P**	**19 25 44.8 -0.3**
	comp=Z,6.7nm,1.3s,mb4.2					
ANMO				LR	LR	
	comp=Z,8μm,21.0s,MS5.5					
W23A	**Werner Place,**	**38.37**	**103**	P	**P**	**19 25 45.4 +0.3**
	baz=38,SNR=18					
X22A	**Bernardo**	**38.39**	**104**	⇓P	**P**	**19 25 46.4 +1.1**
	baz=38					
LAZ	**Ladron**	**38.40**	**104**	*e*P	**P**	**19 25 45.1 -0.3**
	comp=Z,25nm,1.3s,mb4.8					
Y21A	**Point of Rocks**	**38.40**	**105**	⇑P	**P**	**19 25 46.3 +0.8**
	baz=38,SNR=16					
U25A	**Circle Dot Ran**	**38.41**	**100**	⇑P	**P**	**19 25 45.9 +0.4**
	baz=38					
217A	**Green Valley**	**38.46**	**111**	⇑P	**P**	**19 25 46.3 +0.4**
	baz=38,SNR=14					
Z20A	**Nine Sixteen R**	**38.59**	**107**	⇑P	**P**	**19 25 48.0 +0.9**
	baz=38,SNR=37					
LENM	**Lemitar**	**38.66**	**105**	*e*P	**P**	**19 25 47.9 +0.3**
V25A	**Rancho No Teng**	**38.71**	**100**	⇓P	**P**	**19 25 48.5 +0.5**
	baz=38					
W24A	**Lazy 6 Ranch,**	**38.74**	**102**	⇑P	**P**	**19 25 48.9 +0.7**
	baz=38,SNR=39					
U26A	**Atchley Ranch,**	**38.78**	**99**	P	**P**	**19 25 49.0 +0.4**
	baz=38,SNR=18					
Y22A	**Socorro**	**38.84**	**105**	⇓P	**P**	**19 25 50.0 +0.8**
	baz=38,SNR=12					
BNM	**Barren Site**	**38.86**	**104**	*e*P	**P**	**19 25 49.6 +0.3**
	comp=Z,29nm,1.1s,mb4.9					
Z21A	**St. Cloud Mine**	**38.94**	**106**	⇑P	**P**	**19 25 50.9 +0.9**
	baz=39,SNR=18					
219A	**White Tail Can**	**39.10**	**109**	⇓P	**P**	**19 25 51.9 +0.6**
	baz=39,SNR=32					
318A	**Bisbee**	**39.15**	**110**	⇑P	**P**	**19 25 52.2 +0.4**
	baz=39					
YSS	**Yuzh-Sakhalins**	**39.19**	**284**	*αe*P	**P**	**19 25 51.0 -0.9**
YSS				*e**SP	sP	19 25 58.0 0.0
YSS				*e*PPP		19 27 53.0
YSS				*e*S	**S**	**19 31 52.0 +0.7**
YSS				pmax	pmax	
	comp=Z,50nm,1.0s,mb5.2					
YSS				MLR	MLR	
	comp=Z,11μm,20.0s,MS5.7					
YSS				MLR	MLR	
	comp=N,8μm,17.0s					
YSS				MLR	MLR	
	comp=E,11μm,23.0s					
YSS	**Yuzh-Sakhalins**	**39.19**	**284**	*e*P	**P**	**19 25 51.5 -0.4**
	comp=E,128nm,1.6s,mb5.4					
YSS				LR	LR	
	comp=Z,5μm,22.0s,MS5.3					
V26A	**Tequesquite Ra**	**39.20**	**100**	⇑P	**P**	**19 25 52.6 +0.5**
	baz=39,SNR=201					
W25A	**X Bar L Ranch,**	**39.25**	**101**	⇓P	**P**	**19 25 53.0 +0.4**
	baz=39,SNR=51					
Y23A	**Lovelace Mesa,**	**39.34**	**104**	⇓P	**P**	**19 25 53.9 +0.6**
	baz=39,SNR=32					
Z22A	**Elephant Butte**	**39.36**	**105**	⇑P	**P**	**19 25 54.3 +0.8**
	baz=39,SNR=12					
121A	**Cookes Peak, D**	**39.47**	**107**	P	**P**	**19 25 54.9 +0.4**
	baz=39,SNR=14					
220A	**Playas Peak, P**	**39.56**	**108**	⇓P	**P**	**19 25 55.6 +0.4**
	baz=39,SNR=33					
Y24A	**Capitan**	**39.68**	**103**	⇑P	**P**	**19 25 56.7 +0.5**
	baz=39,SNR=33					
W26A	**Owens Ranch, T**	**39.73**	**100**	⇑P	**P**	**19 25 56.8 +0.3**
	baz=39,SNR=13					
Z23A	**Rita Site, Whi**	**39.75**	**105**	⇑P	**P**	**19 25 57.5 +0.8**
	baz=39					
122A	**Conniff Cattle**	**39.77**	**106**	⇑P	**P**	**19 25 57.8 +1.0**
	baz=40					
221A	**Mesquite Ranch**	**39.88**	**108**	⇑P	**P**	**19 25 58.6 +0.8**
	baz=40,SNR=5.8					
320A	**Kipp Ranch, An**	**40.01**	**109**	⇓P	**P**	**19 25 59.5 +0.7**
	baz=40					
Y25A	**Mesa, Roswell**	**40.09**	**103**	⇑P	**P**	**19 25 59.9 +0.4**
	baz=40,SNR=80					
X26A	**CR and CF Fran**	**40.10**	**101**	⇑P	**P**	**19 25 59.8 +0.2**
	baz=40,SNR=33					
W27A	**Bowe Ranch, En**	**40.13**	**100**	⇑P	**P**	**19 25 59.6 -0.3**
	baz=40,SNR=6.1					
Z24A	**Sheeppen Canyo**	**40.17**	**104**	P	**P**	**19 26 00.4 +0.2**
	baz=40,SNR=26					
COWI	**Conover**	**40.38**	**76**	*e*P	**P**	**19 26 00.4 -1.4**
	comp=Z,108nm,1.8s,mb5.3					
COWI				LR	LR	
	comp=Z,26μm,19.0s,MS6.1					
X27A	**F and S Farms,**	**40.42**	**100**	P	**P**	**19 26 02.6 +0.3**
	baz=40,SNR=22					
Z25A	**Roswell**	**40.56**	**103**	⇓P	**P**	**19 26 03.5 +0.1**
	baz=40					
Y26A	**Elida**	**40.56**	**102**	⇓P	**P**	**19 26 03.5 0.0**
	baz=40					
124A	**Stringfield Ra**	**40.60**	**105**	⇓P	**P**	**19 26 03.9 +0.2**
	baz=40,SNR=24					
SCIA	**State Center**	**40.84**	**84**	*e*P	**P**	**19 26 08.3 +2.7**
	comp=Z,228nm,1.8s,mb5.5					
SCIA				LR	LR	
	comp=Z,26μm,19.0s,MS6.1					
KSU1	**Kansas State U**	**40.85**	**90**	*e*P	**P**	**19 26 04.7 -1.0**
	comp=Z,60nm,0.8s,mb5.3					
KSU1				LR	LR	
	comp=Z,25μm,19.0s,MS6.1					
Y27A	**Causey**	**40.96**	**101**	⇓P	**P**	**19 26 06.7 0.0**
	baz=41,SNR=50					
Z26A	**Caprock**	**40.97**	**102**	P	**P**	**19 26 06.7 -0.1**
	baz=41,SNR=17					
AMTX	**Amarillo**	**41.03**	**99**	*e*P	**P**	**19 26 06.6 -0.7**
	comp=Z,77nm,0.9s,mb5.3					
AMTX				LR	LR	
	comp=Z,26μm,19.0s,MS6.1					
224A	**Corundas Mount**	**41.04**	**105**	⇓P	**P**	**19 26 07.6 +0.2**
	baz=41,SNR=37					
ASAJ	**Asahikawa**	**41.06**	**281**	P	**P**	**19 26 07.2 -0.2**
	comp=Z,59nm,0.9s,mb5.2,baz=14,slow=4.6,SNR=29					
ASAJ				LR	LR	19 44 01.5
	comp=Z,13μm,21.7s,MS5.8,baz=277,slow=38					
125A	**Gardner Draw,**	**41.06**	**104**	⇑P	**P**	**19 26 08.0 +0.4**
	baz=41,SNR=15					
JOHN	**Johnston Islan**	**41.09**	**203**	PFAKE		19 26 20.0 +12
JOHN				LR	LR	
	comp=Z,12μm,20.0s,MS5.8					
MSTX	**Muleshoe**	**41.11**	**101**	P	**P**	**19 26 07.6 -0.3**
	baz=41,SNR=21					
CPRX	**Cap Rock**	**41.21**	**103**	*e*P	**P**	**19 26 08.1 -0.8**
	comp=Z,19nm,1.0s,mb4.7					
Z27A	**Tatum**	**41.35**	**102**	⇑P	**P**	**19 26 09.5 -0.5**
	baz=41					
225A	**Deer Hill, Car**	**41.39**	**104**	⇓P	**P**	**19 26 10.6 +0.3**
	baz=41					
MNTX	**Cornudas Mount**	**41.41**	**105**	*e*P	**P**	**19 26 09.7 -0.8**
	comp=Z,41nm,1.2s,mb4.9					
MNTX				LR	LR	
	comp=Z,21μm,19.0s,MS6.0					
126A	**Clayton Basin,**	**41.42**	**103**	⇑P	**P**	**19 26 10.7 +0.2**
	baz=41,SNR=13					
324A	**Moseley Ranch,**	**41.55**	**106**	⇑P	**P**	**19 26 11.6 0.0**
	baz=41,SNR=9.3					
GDL2	**Guadalupe Moun**	**41.57**	**104**	*e*P	**P**	**19 26 12.1 +0.3**
GDL2				*e*ScP	ScP	19 31 58.1 -0.1
127A	**Arkansas Junct**	**41.76**	**102**	⇑P	**P**	**19 26 13.0 -0.3**
	baz=42,SNR=8.9					
JFWS	**Jewell Farm**	**41.82**	**81**	*e*P	**P**	**19 26 14.7 +1.0**
JFWS				pmax	pmax	
	comp=Z,44nm,0.9s,mb5.1					
JFWS				MLR	MLR	
	comp=Z,19μm,20.0s,MS6.0					
JFWS	**Jewell Farm**	**41.82**	**81**	*e*P	**P**	**19 26 14.7 +1.0**
	comp=Z,44nm,0.9s,mb5.1					
JFWS				LR	LR	
	comp=Z,19μm,20.0s,MS6.0					
226A	**Malaga, Loving**	**41.82**	**104**	⇓P	**P**	**19 26 14.0 +0.1**
	baz=42,SNR=18					
325A	**Bean Ranch, Si**	**41.88**	**105**	⇓P	**P**	**19 26 14.6 +0.3**
	baz=42,SNR=35					
ERM	**Erimo**	**42.13**	**278**	*de*P	**P**	**19 26 16.5 +0.3**
ERM				pmax	pmax	
	comp=Z,196nm,1.7s,mb5.5					
ERM				MLR	MLR	
	comp=Z,11μm,20.0s,MS5.8					
ERM	**Erimo**	**42.13**	**278**	*e*P	**P**	**19 26 16.7 +0.5**
	comp=Z,200nm,1.2s,mb5.6					
ERM				LR	LR	
	comp=Z,11μm,20.0s,MS5.8					
227A	**Bennet, Jal**	**42.30**	**103**	⇓P	**P**	**19 26 17.8 +0.1**
	baz=42					
425A	**Indio Mountain**	**42.33**	**106**	⇑P	**P**	**19 26 18.5 +0.5**
	baz=42,SNR=45					
HABR	**Khabarovsk**	**42.37**	**291**	*ce*P	**P**	**19 26 17.0 -1.1**
HABR				*e**PP	pP	19 26 19.0 -3.5
HABR				*e**SP	sP	19 26 20.5 -3.7
HABR						19 27 54.9
HABR						19 28 09.1
HABR				*e*S	**S**	**19 32 38.7 +0.1**
HABR				*e**SS	sS	19 32 43.1 -2.7
HABR				*e*		19 36 19.9
HABR				*e*SSS		19 36 20.8
HABR				pmax	pmax	
	comp=Z,46nm,1.0s,mb5.1					
HABR				MLR	MLR	
	comp=N,13μm,20.0s,MS6.0					
HABR				MLR	MLR	
	comp=E,17μm,18.0s,MS6.0					
HABR				MLR	MLR	
	comp=Z,12μm,17.0s,MS5.8					
CLNS	**Chul'man**	**42.39**	**306**	*e*P	**P**	**19 26 17.2 -0.9**
CLNS				*e*		19 28 11.0
CLNS				*e*PPP		19 28 25.7
CLNS				*e*S	**S**	**19 32 33.5 -5.1**
CLNS				pmax	pmax	
	comp=Z,36nm,1.0s,mb5.0					
CLNS				pmax	pmax	
	comp=N,14nm,1.0s					
CLNS				pmax	pmax	
	comp=E,30nm,1.0s					
CLNS				pmax	pmax	
	comp=Z,18nm,1.0s,mb4.7					
CLNS				pmax	pmax	
	comp=N,19nm,1.1s					
CLNS				pmax	pmax	
	comp=E,20nm,1.1s					
CLNS				smax		
	comp=E,3μm,16.4s					
CLNS				smax		
	comp=N,2μm,15.4s					
CLNS				MLR	MLR	
	comp=N,20μm,18.0s,MS6.2					
CLNS				MLR	MLR	
	comp=E,19μm,16.0s,MS6.2					
CLNS				MLR	MLR	
	comp=Z,28μm,17.0s,MS6.2					
326A	**Caldwell Ranch**	**42.46**	**104**	⇑P	**P**	**19 26 19.3 +0.3**
	baz=42,SNR=34					
NRGR	**Nerungri**	**42.57**	**306**	*e*P	**P**	**19 26 19.1 -0.5**
WMOK	**Wichita Mounta**	**42.75**	**96**	*e*P	**P**	**19 26 20.8 -0.6**
WMOK				pmax	pmax	
	comp=Z,64nm,0.9s,mb5.3					
WMOK				MLR	MLR	
	comp=Z,6μm,19.0s,MS5.5					
WMOK	**Wichita Mounta**	**42.75**	**96**	*e*P	**P**	**19 26 20.8 -0.5**
	comp=Z,64nm,0.9s,mb5.3					
WMOK				LR	LR	
	comp=Z,6μm,19.0s,MS5.5					
426A	**McDonald Obser**	**42.94**	**105**	⇑P	**P**	**19 26 23.2 +0.3**
	baz=43,SNR=26					
427A	**Hayter Ranch,**	**43.14**	**104**	⇑P	**P**	**19 26 24.4 -0.1**
	baz=43,SNR=14					
526A	**Mary Lane Ranc**	**43.38**	**106**	⇑P	**P**	**19 26 27.0 +0.6**
	baz=43,SNR=29					
527A	**Woodward Ranch**	**43.57**	**105**	⇑P	**P**	**19 26 28.0 -0.1**
	baz=43,SNR=21					
KLR	**Kul'dur**	**43.61**	**294**	*d iP*	**P**	**19 26 24.2 -3.9**
KLR				*e*PPP		19 28 52.5
KLR				*e*S	**S**	**19 32 50.0 -6.8**
KLR				pmax	pmax	
	comp=E,200nm,1.8s					
KLR				pmax	pmax	
	comp=Z,300nm,1.8s,mb5.7					
KLR				pmax	pmax	
	comp=Z,2μm,9.0s					
KLR				MLR	MLR	
	comp=Z,18μm,15.0s,MS6.1					
428A	**Kincaid Ranch,**	**43.62**	**104**	⇓P	**P**	**19 26 28.8 +0.4**
	baz=43,SNR=56					
GLMI	**Grayling**	**43.65**	**75**	PFAKE		19 26 40.0 +12
GLMI				LR	LR	
	comp=Z,23μm,19.0s,MS6.1					
626A	**Big Bend Ranch**	**43.75**	**106**	⇑P	**P**	**19 26 29.6 +0.1**
	baz=44,SNR=35					
HDIL	**Hopedale**	**43.93**	**82**	*e*P	**P**	**19 26 29.4 -1.4**
	comp=Z,145nm,1.0s,mb5.7					
HDIL				LR	LR	
	comp=Z,30μm,19.0s,MS6.2					
528A	**Cox Ranch, San**	**44.00**	**104**	⇓P	**P**	**19 26 31.8 +0.3**
	baz=44					
SUMG	**Summit**	**44.14**	**23**	*e*P	**P**	**19 26 32.7 +0.6**
	comp=Z,157nm,1.0s,mb5.7					
TXAR	**Lajitas Array**	**44.17**	**106**	P	**P**	**19 26 32.6 -0.3**
	comp=Z,31nm,0.9s,mb5.0,baz=313,slow=5.7,SNR=129					
TXAR				PcP	PcP	19 28 21.1 +3.5
	comp=Z,6.9nm,0.8s,baz=220,slow=0.4,SNR=3.6					
TXAR				ScP	ScP	19 32 10.6 +1.9
	comp=Z,3.8nm,1.0s,baz=291,slow=3.5,SNR=7.0					
TXAR				LR	LR	19 44 07.5
	comp=Z,24μm,18.7s,MS6.1,baz=20,slow=35					
TXAR	**Lajitas Array**	**44.17**	**106**	P	**P**	**19 26 32.6 -0.3**
TXAR						19 28 21.1
627A	**Terlingua Ranc**	**44.23**	**105**	⇑P	**P**	**19 26 33.0 -0.3**
	baz=44,SNR=59					
DAG	**Danmarks Havn**	**44.38**	**13**	⇓*iP*	**P**	**19 26 34.0 0.0**
DAG				pmax	pmax	
	comp=Z,42nm,1.5s,mb5.0					
DAG	**Danmarks Havn**	**44.38**	**13**	⇓*iP*	**P**	**19 26 34.0 0.0**
	comp=Z,42nm,1.5s,mb4.9					
628A	**Black Gap, Mar**	**44.47**	**105**	⇓P	**P**	**19 26 35.1 -0.2**
	baz=44					
CCM	**Cathedral Cave**	**44.58**	**87**	*e*P	**P**	**19 26 33.6 -2.4**
CCM				pmax	pmax	
	comp=Z,47nm,1.1s,mb5.2					
CCM				MLR	MLR	
	comp=Z,20μm,20.0s,MS6.0					
CCM	**Cathedral Cave**	**44.58**	**87**	*e*P	**P**	**19 26 33.6 -2.5**
	comp=Z,47nm,1.1s,mb5.2					
CCM				LR	LR	
	comp=Z,20μm,20.0s,MS6.0					
SFJD	**Kangerlussuaq**	**44.64**	**33**	LR	LR	19 47 28.7
	comp=Z,30μm,19.3s,MS6.2,baz=292,slow=39					
SFJD	**Kangerlussuaq**	**44.64**	**33**	*e*P	**P**	**19 26 35.8 -0.4**
SFJD				pmax	pmax	
	comp=Z,161nm,1.1s,mb5.8					
SFJD				MLR	MLR	
	comp=Z,29μm,20.0s,MS6.2					
SFJD	**Kangerlussuaq**	**44.64**	**33**	*e*P	**P**	**19 26 35.8 -0.4**
	comp=Z,40nm,1.1s,mb5.2					
SFJD				LR	LR	
	comp=Z,29μm,20.0s,MS6.2					
SLM	**Saint Louis**	**44.73**	**85**	*e*P	**P**	**19 26 35.7 -1.6**
SLM				pmax	pmax	
	comp=Z,94nm,1.2s,mb5.5					
SLM	**Saint Louis**	**44.73**	**85**	*e*P	**P**	**19 26 35.7 -1.6**
	comp=Z,94nm,1.2s,mb5.5					
KBS	**Kingsbay**	**44.94**	**4**	*e*P	**P**	**19 26 36.6 -1.8**
KBS				*e*S	**S**	**19 33 17.4 +1.8**
KBS				*e*SS	SS	19 36 41.1 +4.7
KBS				AMS	AMS	19 50 35.6
	comp=Z,9μm,14.8s,MS5.8					
KBS	**Kingsbay**	**44.94**	**4**	*e*P	**P**	**19 26 40.0 +1.5**
KBS				pmax	pmax	
	comp=Z,59nm,0.8s,mb5.5					
KBS				MLR	MLR	
	comp=Z,11μm,21.0s,MS5.8					
KBS	**Kingsbay**	**44.94**	**4**	*e*P	**P**	**19 26 40.0 +1.5**
	comp=Z,59nm,0.8s,mb5.5					
KBS				LR	LR	
	comp=Z,11μm,21.0s,MS5.8					
FVM	**French Village**	**45.09**	**86**	*e*P	**P**	**19 26 38.8 -1.3**
FVM				pmax	pmax	
	comp=Z,123nm,1.3s,mb5.6					
FVM	**French Village**	**45.09**	**86**	*e*P	**P**	**19 26 38.8 -1.3**
	comp=Z,123nm,1.3s,mb5.6					
JCT	**Junction City**	**45.39**	**101**	*e*P	**P**	**19 26 41.7 -0.9**
JCT				pmax	pmax	
	comp=Z,152nm,1.0s,mb5.8					
JCT				MLR	MLR	
	comp=Z,21μm,19.0s,MS6.1					
JCT	**Junction City**	**45.39**	**101**	*e*P	**P**	**19 26 41.7 -0.8**
	comp=Z,152nm,1.0s,mb5.8					
JCT				LR	LR	
	comp=Z,21μm,19.0s,MS6.1					
MIAR	**Mount Ida**	**45.80**	**92**	*e*P	**P**	**19 26 45.1 -0.7**
MIAR				pmax	pmax	
	comp=Z,146nm,1.0s,mb5.9					
MIAR				MLR	MLR	
	comp=Z,18μm,19.0s,MS6.0					
MIAR	**Mount Ida**	**45.80**	**92**	*e*P	**P**	**19 26 45.1 -0.7**
	comp=Z,146nm,1.0s,mb5.9					
MIAR				LR	LR	
	comp=Z,18μm,19.0s,MS6.0					
SPB4	**Spitsbergen Ar**	**45.83**	**3**	*e*P	**P**	**19 26 45.7 +0.2**
AAM	**Ann Arbor**	**45.84**	**77**	*e*P	**P**	**19 26 44.3 -1.7**
AAM				pmax	pmax	
	comp=Z,354nm,2.4s,mb5.9					
AAM				MLR	MLR	
	comp=Z,16μm,19.0s,MS6.0					
AAM	**Ann Arbor**	**45.84**	**77**	*e*P	**P**	**19 26 44.3 -1.7**
	comp

SCHQ LR LR
comp=Z,38μm,19.0s,MS6.4
UALR University of 46.32 91 *eP* **P 19 26 49.1 -0.8**
comp=Z,55nm,1.0s,mb5.4
PARMO Parma 46.40 87 *eP* **P 19 26 48.7 -1.8**
BLO Bloomington 46.43 82 *eP* **P 19 26 49.5 -1.2**
BLO pmax pmax
comp=Z,59nm,1.0s,mb5.5
BLO Bloomington 46.43 82 *eP* **P 19 26 49.5 -1.1**
comp=Z,60nm,1.0s,mb5.5
BOD Bodaibo 46.50 313⇓*iP* **P 19 26 49.9 -1.1**
BOD pmax pmax
comp=Z,107nm,1.2s,mb5.7
USIN University of 46.64 84 *eP* **P 19 26 51.0 -1.3**
comp=Z,87nm,0.9s,mb5.7
UTMT University of 47.13 86 *eP* **P 19 26 55.8 -0.4**
comp=Z,434nm,1.2s,mb6.3
WAKE Wake Island 47.16 235 *eP* **P 19 26 56.3 -0.3**
comp=Z,70nm,0.8s,mb5.6
WAKE LR LR
comp=Z,17μm,21.0s,MS6.0
HALT Halls 47.18 87 *eP* **P 19 26 55.6 -1.0**
WCI Wyandotte Cave 47.22 83 *eP* **P 19 26 55.4 -1.4**
WCI pmax pmax
comp=Z,334nm,2.4s,mb5.8
WCI MLR MLR
comp=Z,25μm,19.0s,MS6.2
WCI Wyandotte Cave 47.22 83 *eP* **P 19 26 55.4 -1.5**
comp=Z,334nm,2.4s,mb5.8
WCI LR LR
comp=Z,25μm,19.0s,MS6.2
NATX Nacogdoches 47.26 95 *eP* **P 19 26 56.8 -0.5**
comp=Z,99nm,0.8s,mb5.8
NATX LR LR
comp=Z,11μm,19.0s,MS5.9
VLA Vladivostok 47.53 287 *eP* **P 19 26 58.7 -0.5**
VLA *e**SP sP 19 27 02.8 -2.6
VLA *eS* **S 19 33 58.2 +4.7**
VLA *e**SS sS 19 34 08.0 +7.2
VLA pmax pmax
comp=Z,91nm,1.8s,mb5.5
ACSO Alum Creek Sta 47.64 78 *eP* **P 19 27 02.0 +1.9**
comp=Z,121nm,1.4s,mb5.7
ACSO LR LR
comp=Z,25μm,19.0s,MS6.2
MDJ Mudanjiang 47.74 290 P **P 19 26 59.5 -1.3**
MDJ pP pP 19 27 02.8 -2.4
MDJ sP sP 19 27 04.0 -3.0
MDJ PcP PcP 19 28 29.3 -0.5
MDJ ScP ScP 19 32 23.0 -0.3
MDJ S **S 19 33 54.5 -1.8**
MDJ ScS ScS 19 36 53.5 0.0
MDJ SS SS 19 37 21.0 -3.2
MDJ pmax pmax
comp=Z,23nm,1.0s,mb5.2
MDJ LR LR
comp=N,26μm,22.9s,MS6.2
MDJ LR LR
comp=E,13μm,23.6s,MS6.2
MDJ LR LR
comp=Z,17μm,22.9s,MS6.0
MDJ Mudanjiang 47.74 290 *eP* **P 19 26 59.0 -1.8**
comp=Z,17nm,0.8s,mb5.1
MDJ LR LR
comp=Z,19μm,22.0s,MS6.0
WVT Waverly 47.86 86 *eP* **P 19 27 01.1 -0.8**
WVT pmax pmax
comp=Z,67nm,1.1s,mb5.6
WVT MLR MLR
comp=Z,22μm,20.0s,MS6.1
WVT Waverly 47.86 86 *eP* **P 19 27 01.1 -0.8**
comp=Z,67nm,1.1s,mb5.6
WVT LR LR
comp=Z,22μm,20.0s,MS6.1
ERPA Erie 47.96 74 *eP* **P 19 27 03.0 +0.4**
comp=Z,90nm,1.1s,mb5.7
ERPA LR LR
comp=Z,33μm,19.0s,MS6.3
HKT Hockley 47.99 98 *eP* **P 19 27 02.2 -0.7**
HKT pmax pmax
comp=Z,105nm,1.3s,mb5.7
HKT MLR MLR
comp=Z,24μm,19.0s,MS6.2
HKT Hockley 47.99 98 *eP* **P 19 27 02.1 -0.8**
comp=Z,105nm,1.3s,mb5.7
HKT LR LR
comp=Z,24μm,19.0s,MS6.2
OXF Oxford 48.16 88 *eP* **P 19 27 02.7 -1.5**
OXF pmax pmax
comp=Z,223nm,0.9s,mb6.2
OXF MLR MLR
comp=Z,22μm,21.0s,MS6.1
OXF Oxford 48.16 88 *eP* **P 19 27 02.7 -1.5**
comp=Z,223nm,0.9s,mb6.2
OXF LR LR
comp=Z,22μm,21.0s,MS6.1
ALLY Alegheny Colle 48.20 75 *eP* **P 19 27 04.8 +0.4**
comp=Z,152nm,1.3s,mb5.9
PLAL Pickwick Lake 48.56 87 *eP* **P 19 27 06.1 -1.2**
comp=Z,203nm,1.0s,mb6.1
PLAL LR LR
comp=Z,15μm,20.0s,MS6.0
MJAR Matsushiro Arr 48.69 276 P **P 19 27 08.2 0.0**
comp=Z,5.8nm,0.7s,mb4.7,baz=43,slow=7.5,SNR=19
MJAR LR LR 19 48 47.6
comp=Z,6μm,18.3s,MS5.6,baz=60,slow=38
MAJO Matsushiro 48.69 276 *eP* **P 19 27 08.0 -0.3**
MAJO pmax pmax
comp=Z,61nm,1.0s,mb5.6
MAJO MLR MLR
comp=Z,12μm,20.0s,MS5.9
MAJO Matsushiro 48.69 276 *eP* **P 19 27 08.0 -0.3**
comp=Z,61nm,1.0s,mb5.6
MAJO LR LR
comp=Z,12μm,20.0s,MS5.9
MAT Matsushiro 48.69 276 P **P 19 27 07.7 -0.6**
MAT S **S 19 34 10.0 0.0**
KVTX Kingsville 48.71 102 PFAKE 19 27 20.0 +11
KVTX LR LR
comp=Z,18μm,19.0s,MS6.1
LONY Lake Ozonia 49.10 68 *eP* **P 19 27 11.5 +0.2**
comp=Z,25nm,1.0s,mb5.2
LONY LR LR
comp=Z,22μm,20.0s,MS6.2
SCO Scoresbysund 49.11 19⇑*iP* **P 19 27 10.5 -0.6**
SCO pmax pmax
comp=Z,25nm,1.3s,mb5.1
SCO MLR MLR
comp=Z,16μm,19.0s,MS6.0
SCO Scoresbysund 49.11 19⇑*iP* **P 19 27 10.5 -0.6**
comp=Z,25nm,1.3s,mb5.1
SCO
comp=Z,16μm,19.0s
VBMS Vicksburg 49.23 91 *eP* **P 19 27 12.5 0.0**
comp=Z,330nm,1.1s,mb6.3
VBMS LR LR
comp=Z,24μm,19.0s,MS6.2
FRNY Flat Rock 49.47 67 *eP* **P 19 27 13.5 -0.7**
comp=Z,32nm,0.8s,mb5.4
HIA Hailar 49.56 301 *eP* **P 19 27 13.7 -1.1**
HIA pmax pmax
comp=Z,95nm,1.4s
HIA MLR MLR
comp=Z,18μm,20.0s
HIA Hailar 49.56 301 *eP* **P 19 27 13.7 -1.1**
comp=Z,95nm,1.4s,mb5.6
HIA LR LR
comp=Z,18μm,20.0s,MS6.1
BJO Bjornoya 49.58 2 *eP* **P 19 27 13.9 -0.6**
BJO *eS* **S 19 34 20.8 -0.7**
BJO AMS AMS 19 55 40.5
comp=Z,5μm,14.9s,MS5.7
SWET Sewanee 49.59 85 *eP* **P 19 27 15.2 +0.1**
NCB Newcomb 49.74 69 *eP* **P 19 27 15.9 -0.3**
comp=Z,74nm,1.1s,mb5.6
NCB LR LR
comp=Z,24μm,20.0s,MS6.2
MCWV Mont Chateau 49.76 76 *eP* **P 19 27 17.8 +1.4**
comp=Z,418nm,2.3s,mb6.1
MCWV LR LR
comp=Z,11μm,19.0s,MS5.9
TZTN Tazewell 49.95 82 *eP* **P 19 27 18.7 +0.8**
comp=Z,233nm,2.1s,mb5.8
BINY Binghamton 50.04 71 *eP* **P 19 27 19.0 +0.5**
comp=Z,96nm,1.0s,mb5.8
BINY LR LR
comp=Z,16μm,22.0s,MS6.0

SSPA Standing Stone 50.12 74 *eP* **P 19 27 19.3 +0.1**
comp=Z,106nm,1.3s,mb5.7
SSPA LR LR
comp=Z,32μm,19.0s,MS6.3
CPCT Cooper Cave 50.20 84 *eP* **P 19 27 20.3 +0.5**
JHJ Hachijo jima 2 50.31 272 LR LR 19 48 12.0
comp=Z,6μm,20.7s,MS5.6,baz=78,slow=36
ACCN Adirondack Com 50.44 69 *eP* **P 19 27 22.9 +1.4**
comp=Z,58nm,1.1s,mb5.5
CN2 Changchun 50.46 292⇑P **P 19 27 21.0 -0.7**
CN2 *e*sP sP 19 27 28.0 +0.1
CN2 PP PP 19 29 17.3 +0.3
CN2 *e*S **S 19 34 31.3 -3.3**
CN2 SS SS 19 38 01.5 -6.5
CN2 pmax pmax
comp=Z,30nm,0.9s,mb5.3
CN2 pmax pmax
comp=Z,2μm,10.0s
CN2 LR LR
comp=N,14μm,20.0s,MS6.1
CN2 LR LR
comp=E,12μm,20.0s,MS6.1
CN2 LR LR
comp=Z,13μm,20.0s,MS5.9
TKL Tuckaleechee C 50.47 83 *eP* **P 19 27 20.1 -1.7**
CIT Chita 50.55 307 *eP* **P 19 27 22.3 0.0**
CIT *e* 19 29 25.2
CIT *e* 19 34 32.4
CIT pmax pmax
comp=Z,450nm,2.0s,mb6.0
LRAL Lakeview Retre 50.60 88 *eP* **P 19 27 21.8 -1.1**
comp=Z,24nm,0.9s,mb5.1
LRAL LR LR
comp=Z,7μm,20.0s,MS5.7
LBNH Lisbon 50.74 67 *eP* **P 19 27 22.9 -0.9**
LBNH pmax pmax
comp=Z,19nm,0.9s,mb5.0
LBNH MLR MLR
comp=Z,33μm,20.0s,MS6.3
LBNH Lisbon 50.74 67 *eP* **P 19 27 22.9 -0.9**
comp=Z,19nm,0.9s,mb5.0
LBNH LR LR
comp=Z,33μm,20.0s,MS6.3
JMIC Jan Mayen 50.82 14 *eP* **P 19 27 26.5 +2.4**
JMIC *eS* **S 19 34 41.5 +2.6**
JMIC AMS AMS 19 54 12.8
comp=Z,5μm,20.5s,MS5.5
TRY Troy 50.89 69 *eP* **P 19 27 25.7 +0.7**
HNH Hanover 50.93 68 *eP* **P 19 27 25.1 -0.1**
ELN Prospectdale 51.00 79 *eP* **P 19 27 24.2 -1.6**
BLA Blacksburg 51.19 79 *eP* **P 19 27 25.4 -1.9**
BLA pmax pmax
comp=Z,66nm,1.2s,mb5.4
BLA MLR MLR
comp=Z,13μm,21.0s,MS5.9
BLA Blacksburg 51.19 79 *eP* **P 19 27 25.4 -1.9**
comp=Z,66nm,1.2s,mb5.4
BLA LR LR
comp=Z,13μm,21.0s,MS5.9
PKME Peaks-Kenny Pk 51.37 64 *eP* **P 19 27 28.5 0.0**
comp=Z,34nm,0.9s,mb5.3
PKME LR LR
comp=Z,34μm,19.0s,MS6.4
MVL Millersville 51.40 74 *eP* **P 19 27 29.3 +0.5**
comp=Z,46nm,1.0s,mb5.4
VWCC Virginia Weste 51.41 79 *eP* **P 19 27 28.8 -0.1**
SDMD Soldier's Deli 51.56 74 *eP* **P 19 27 30.9 +0.8**
comp=Z,52nm,1.1s,mb5.4
PAL Palisades 51.99 71 *eP* **P 19 27 34.6 +1.4**
PAL pmax pmax
comp=Z,28nm,0.9s,mb5.2
PAL Palisades 51.99 71 *eP* **P 19 27 34.6 +1.4**
comp=Z,28nm,0.9s,mb5.2
BRAL Brewton 52.08 90 PFAKE 19 27 40.0 +6.0
BRAL LR LR
comp=Z,17μm,19.0s,MS6.1
CBN Corbin 52.14 76 PFAKE 19 27 40.0 +5.7
CBN LR LR
comp=Z,18μm,20.0s,MS6.1
JSRW J. Sargeant Re 52.23 77 *eP* **P 19 27 35.7 +0.6**
YLE Yale 52.28 70 *eP* **P 19 27 35.7 +0.4**
GOGA Godfrey 52.29 85 *eP* **P 19 27 36.4 +0.9**
GOGA pmax pmax
comp=Z,33nm,1.0s,mb5.2
GOGA MLR MLR
comp=Z,23μm,19.0s,MS6.2
GOGA Godfrey 52.29 85 *eP* **P 19 27 36.4 +0.8**
comp=Z,33nm,1.0s,mb5.2
GOGA LR LR
comp=Z,23μm,19.0s,MS6.2
SNY Shenyang 52.83 292⇑P **P 19 27 39.8 +0.4**
SNY S **S 19 35 11.0 +3.7**
SNY pmax pmax
comp=Z,87nm,1.5s,mb5.5
SNY pmax pmax
comp=Z,2μm,12.0s
SNY LR LR
comp=N,18μm,22.3s,MS6.2
SNY LR LR
comp=E,17μm,23.1s,MS6.2
SNY LR LR
comp=Z,12μm,14.1s
JSC Jenkinsville 52.87 82 *eP* **P 19 27 38.2 -1.6**
KSRS Korea Array 53.69 285 P **P 19 27 46.0 +0.3**
comp=Z,20nm,0.9s,mb5.1,baz=52,slow=6.5,SNR=31
KSRS LR LR 19 48 51.5
comp=Z,5μm,21.1s,MS5.6,baz=57,slow=34
XMAS Kiritimati 53.98 184 PFAKE 19 28 00.0 +12
XMAS LR LR
comp=Z,10μm,19.0s,MS5.9
CNNC Cliffs of the 54.03 79 *eP* **P 19 27 46.4 -1.9**
comp=Z,166nm,1.8s,mb5.7
CNNC LR LR
comp=Z,19μm,19.0s,MS6.2
BORG Borgarnes 54.12 23 *eP* **P 19 27 46.2 -2.4**
BORG pmax pmax
comp=Z,101nm,1.4s
BORG MLR MLR
comp=Z,15μm,20.0s
BORG Borgarnes 54.12 23 *eP* **P 19 27 46.2 -2.4**
comp=Z,101nm,1.4s,mb5.6
BORG LR LR
comp=Z,15μm,20.0s,MS6.0
NHSC New Hope 54.35 82 *eP* **P 19 27 52.1 +1.5**
comp=Z,128nm,1.0s,mb5.8
NHSC LR LR
comp=Z,29μm,19.0s,MS6.4
INCN Inchon 54.36 286 *eP* **P 19 27 50.9 +0.2**
comp=Z,26nm,1.0s,mb5.1
INCN LR LR
comp=Z,6μm,22.0s,MS5.6
IRK Irkutsk 54.40 312 *eP* **P 19 27 50.0 -0.8**
IRK pmax pmax
comp=Z,111nm,2.1s,mb5.4
KEV Kevo 54.44 360 *eP* **P 19 27 50.4 -0.4**
KEV pmax pmax
comp=Z,58nm,1.0s,mb5.5
KEV MLR MLR
comp=Z,6μm,20.0s,MS5.7
KEV Kevo 54.44 360 *eP* **P 19 27 50.4 -0.4**
comp=Z,14nm,1.0s,mb4.9
KEV LR LR
comp=Z,6μm,20.0s,MS5.7
KEV Kevo 54.44 360 *ep* **P 19 27 50.0 -0.8**
comp=Z,25nm,1.0s,mb5.1
TRO Tromso 54.45 3 *eP* **P 19 27 48.3 -2.5**
TRO *eS* **S 19 35 33.0 +4.5**
TRO AMS AMS 19 49 38.4
comp=Z,9μm,22.5s,MS5.8
ARCES ARCESS Array B 54.66 0 P **P 19 27 52.0 -0.4**
comp=Z,6.9nm,0.5s,mb4.9,baz=359,slow=8.2,SNR=37
ARCES ARCESS Array B 54.66 0 P **P 19 27 52.0 -0.4**
TLY Talaya 55.08 312*c iP* **P 19 27 56.2 +0.5**
TLY *eS* **S 19 35 41.9 +4.5**
TLY pmax pmax
comp=Z,149nm,1.8s,mb5.7
TLY MLR MLR
comp=Z,23μm,16.0s,MS6.3
TLY Talaya 55.08 312 *eP* **P 19 27 56.4 +0.8**
comp=Z,307nm,1.9s,mb6.0
TLY LR LR
comp=Z,25μm,20.0s,MS6.3
TLY Talaya 55.08 312 P **P 19 27 56.2 +0.6**
SNR=27
TLY P 19 27 56.2
SNR=27

KTK1 Kautokeino 55.16 1 *eP* **P 19 27 53.5 -2.6**
KTK1 *eS* **S 19 35 38.5 +0.4**
DL2 Dalian 55.98 290⇑*iP* **P 19 28 02.0 -0.3**
DL2 S **S 19 35 49.3 -0.4**
DL2 SS SS 19 39 30.8 -4.3
DL2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
DL2 pmax pmax
comp=Z,1μm,9.2s
DL2 LR LR
comp=N,6μm,22.8s,MS5.8
DL2 LR LR
comp=E,5μm,22.5s,MS5.8
DL2 LR LR
comp=Z,6μm,21.6s,MS5.6
LVZ Lovozero 56.14 356 P **P 19 28 03.8 +0.7**
comp=Z,650nm,1.1s,mb6.6,SNR=7.4
LVZ Lovozero 56.14 356*cePP* **P 19 28 02.9 -0.2**
LVZ pmax pmax
comp=Z,185nm,1.7s,mb5.8
LVZ Lovozero 56.14 356 PFAKE 19 28 10.0 +6.9
LVZ LR LR
comp=Z,6μm,19.0s,MS5.7
MOY Mondy 56.18 314 *eP* **P 19 28 04.4 +0.8**
MOY pmax pmax
comp=Z,143nm,2.2s,mb5.6
ZAK Zakamensk 56.20 311 *eP* **P 19 28 03.8 0.0**
ZAK pmax pmax
comp=Z,30nm,1.8s,mb5.0
ULN Ulaanbaatar 56.46 307 *eP* **P 19 28 06.2 +0.6**
ULN pmax pmax
comp=Z,35nm,1.0s,mb5.3
ULN MLR MLR
comp=Z,28μm,20.0s,MS6.3
ULN Ulaanbaatar 56.46 307 *eP* **P 19 28 06.2 +0.5**
comp=Z,35nm,1.0s,mb5.3
ULN LR LR
comp=Z,28μm,20.0s,MS6.3
ULN Ulaanbaatar 56.46 307 P **P 19 28 06.4 +0.7**
SNR=23
ULN P 19 28 06.4
SNR=23
APA Apatity 56.52 357⇑*iP* **P 19 28 08.2 +2.4**
APA *i* 19 28 58.0
APA *i* S **S 19 35 58.0 +1.9**
APA *i* PS 19 36 11.0
APA *i* 19 37 50.0
APA *i* SS SS 19 39 40.0 -2.4
APA pmax pmax
comp=Z,200nm,15.0s
APA pmax pmax
comp=Z,97nm,1.4s,mb5.6
APA MLR MLR
comp=Z,8μm,18.0s,MS5.8
SONM Songino Array 56.78 307 P **P 19 28 08.8 +0.9**
comp=Z,62nm,1.0s,mb5.6,baz=44,slow=6.8,SNR=140
SONM PcP PcP 19 29 05.7 +2.1
comp=Z,32nm,0.8s,baz=54,slow=3.3,SNR=4.0
SONM LR LR 19 54 55.1
comp=Z,36μm,19.4s,MS6.5,baz=45,slow=39
SONM Songino Array 56.78 307 P **P 19 28 08.8 +0.9**
SONM 19 29 05.7
DWPF Disney 57.44 87 PFAKE 19 28 20.0 +7.1
DWPF LR LR
comp=Z,9μm,21.0s,MS5.8
STOK Stokkvaagen 57.47 6 *eS* **S 19 36 14.3 +5.6**
MOR8 Moi Rana 57.71 6 *eP* **P 19 28 13.6 -0.6**
BJI Beijing 57.95 295 P **P 19 28 16.0 -0.3**
BJI S **S 19 36 14.5 -1.2**
BJI SS SS 19 40 06.5 +0.4
BJI pmax pmax
comp=Z,42nm,1.2s,mb5.3
BJI pmax pmax
comp=Z,2μm,11.1s
BJI LR LR
comp=N,19μm,20.3s,MS6.3
BJI LR LR
comp=E,13μm,20.7s,MS6.3
BJI LR LR
comp=Z,10μm,21.2s,MS5.9
BJT Baijiatuau 57.97 295 PFAKE 19 28 30.0 +14
BJT LR LR
comp=Z,13μm,20.0s,MS6.0
NSS Namsos 59.19 7 *eP* **P 19 28 20.8 -3.8**
NSS *eS* **S 19 36 32.6 +1.4**
NSS AMS AMS 19 59 44.8
comp=Z,6μm,20.5s,MS5.7
HHC Hu-ho-hao-te 59.64 299⇑P **P 19 28 29.0 +1.0**
HHC pP pP 19 28 39.0 +6.5
HHC PcS PcS 19 33 09.8 -7.3
HHC S **S 19 36 41.8 +4.1**
HHC ScS ScS 19 38 15.3 -2.3
HHC pmax pmax
comp=Z,47nm,1.3s,mb5.4
HHC pmax pmax
comp=Z,2μm,6.5s
HHC LR LR
comp=N,14μm,15.7s,MS6.3
HHC LR LR
comp=E,13μm,16.3s,MS6.3
HHC LR LR
comp=Z,16μm,17.2s,MS6.2
NVS Novosibirsk 60.04 326⇑*iP* **P 19 28 30.1 -0.4**
NVS *eS* **S 19 36 43.9 +1.6**
NVS pmax pmax
comp=Z,170nm,1.8s,mb5.8
NVS pmax pmax
comp=N,83nm,1.7s
NVS pmax pmax
comp=E,91nm,1.8s
NVS pmax pmax
comp=N,103nm,1.8s
NVS pmax pmax
comp=E,87nm,1.8s
NVS pmax pmax
comp=Z,80nm,1.8s,mb5.5
NVS smax
comp=N,222nm,2.2s
NVS smax
comp=E,320nm,2.5s
ZAA0 Zalesovo Array 60.28 324⇑*iP* **P 19 28 32.4 +0.2**
ZAA0 *eS* **S 19 36 47.1 +1.7**
ZALV Zalesovo Beam 60.28 324 P **P 19 28 32.6 +0.4**
comp=E,50nm,0.8s,mb5.6,baz=33,slow=6.8,SNR=196
ZALV PKP2bc 19 58 03.5
comp=E,0.6nm,0.7s,baz=298,slow=3.2,SNR=4.0
ZALV Zalesovo Beam 60.28 324 P **P 19 28 32.6 +0.4**
ZALV ⇑*e* 19 58 03.5
TIA Tai'an 60.36 292 *eP* **P 19 28 32.8 -0.2**
TIA S **S 19 36 50.8 +3.8**
TIA LR LR
comp=N,3μm,21.0s,MS5.7
TIA LR LR
comp=E,6μm,21.0s,MS5.7
BTO Baotou 60.58 300 *eP* **P 19 28 33.8 -0.7**
BTO pmax pmax
comp=Z,17nm,1.7s,mb4.9
MOL Molde 60.76 10 *eP* **P 19 28 34.4 -1.0**
MOL *eS* **S 19 36 55.1 +3.6**
MOL AMS AMS 19 55 04.5
comp=Z,5μm,20.5s,MS5.7
TARA Tarawa 60.81 219 PFAKE 19 28 50.0 +14
TARA LR LR
comp=Z,8μm,20.0s,MS5.9
JOF Joensuu 61.24 357 *eP* **P 19 28 38.2 -0.4**
JOF pmax pmax
comp=Z,18nm,0.8s,mb5.2
JOF Joensuu 61.24 357 *ep* **P 19 28 38.2 -0.4**
comp=Z,18nm,0.8s,mb5.2
FOO Floro 61.46 11 *eP* **P 19 28 38.5 -1.6**
FOO *eS* **S 19 37 02.0 +1.7**
FOO AMS AMS 19 53 08.4
comp=Z,3μm,21.1s,MS5.4
JOW Kunigami 61.53 276 LR LR 19 53 48.3
comp=Z,4μm,21.4s,MS5.5,baz=287,slow=34
TIY Taiyuan 61.61 296 *eP* **P 19 28 42.0 +0.5**
TIY S **S 19 37 06.8 +3.9**
TIY SS SS 19 41 03.5 -0.1
TIY pmax pmax
comp=Z,1μm,8.6s
TIY LR LR
comp=N,11μm,13.7s,MS6.2
TIY LR LR
comp=E,9μm,17.2s,MS6.2
TIY LR LR
comp=Z,8μm,20.2s,MS5.8

KAF	**Kangasniemi**	**62.11**	**360**	*e*P	**P**	**19 28 40.5**	**-4.0**
KAF				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.5						
KAF	**Kangasniemi**	**62.11**	**360**	*e*p	**P**	**19 28 40.5**	**-4.0**
	comp=Z,29nm,0.8s,mb5.5,baz=356,slow=6.5						
SOKR	**Solikamsk**	**62.12**	**343***c*	*i*P	**P**	**19 28 43.0**	**-1.6**
SOKR						19 30 57.7	
SOKR				S	**S**	**19 37 10.1**	**+1.3**
SOKR				pmax	pmax		
	comp=Z,200nm,1.1s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,10μm,18.0s,MS6.0						
SSE	**Sheshan**	**62.13**	**285**	P	**P**	**19 28 45.3**	**+0.2**
SSE				S	**S**	**19 37 07.8**	**-1.8**
SSE				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.5						
SSE				pmax	pmax		
	comp=Z,1μm,8.2s						
SSE				LR	LR		
	comp=N,5μm,21.9s,MS5.6						
SSE				LR	LR		
	comp=E,1μm,22.2s,MS5.6						
SSE				LR	LR		
	comp=Z,4μm,21.1s,MS5.6						
NB2	**NORSAR Subarra**	**62.59**	**8**	P	**P**	**19 28 47.7**	**0.0**
	comp=Z,107nm,1.4s,mb5.8,baz=350,slow=6.9						
NOA	**NORSAR Array B**	**62.59**	**8**	P	**P**	**19 28 47.7**	**-0.1**
	comp=Z,20nm,0.8s,mb5.3,baz=351,slow=6.7,SNR=68						
NOA	**NORSAR Array B**	**62.59**	**8**	P	**P**	**19 28 47.7**	**-0.1**
NJ2	**Nanjing**	**62.64**	**287**	*e*P	**P**	**19 28 48.3**	**-0.2**
NJ2				pP	pP	19 28 55.8	+2.8
NJ2				sP	sP	19 28 59.3	+4.5
NJ2				PP	PP	19 31 09.5	+3.5
NJ2				S	**S**	**19 37 16.5**	**+0.4**
NJ2				sS	sS	19 37 27.5	+3.9
NJ2				SS	SS	19 41 23.0	+3.1
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,1μm,5.1s						
NJ2				LR	LR		
	comp=N,5μm,18.2s,MS6.1						
NJ2				LR	LR		
	comp=E,9μm,17.3s,MS6.1						
NJ2				LR	LR		
	comp=Z,93μm,18.6s,MS7.0						
BER	**Bergen**	**62.68**	**11**	*e*P	**P**	**19 28 46.8**	**-1.5**
BER				*e*S	**S**	**19 37 21.2**	**+5.4**
BER				AMS	AMS	19 59 18.6	
	comp=Z,6μm,22.0s,MS5.7						
NAO01	**NORSAR Array B**	**62.76**	**8**	*e*P	**P**	**19 28 48.6**	**-0.3**
NAO01				LR	LR		
	comp=Z,8μm,20.0s,MS5.9						
FINES	**FINESS Array B**	**62.78**	**0**	P	**P**	**19 28 48.7**	**-0.3**
	comp=Z,37nm,0.9s,mb5.5,baz=2.7,slow=8.2,SNR=36						
FINES				PKP2bc		19 58 01.1	
	comp=Z,2.5nm,0.9s,baz=116,slow=4.4,SNR=4.2						
FINES	**FINESS Array B**	**62.78**	**0**	P	**P**	**19 28 48.7**	**-0.3**
FINES			⇑*e*			19 58 01.1	
GUMO	**Guam**	**62.95**	**253**	LR	LR	19 54 53.5	
	comp=Z,3μm,19.6s,MS5.5,baz=47,slow=35						
GUMO	**Guam**	**62.95**	**253**	PFAKE		19 29 00.0	+9.3
GUMO				LR	LR		
	comp=Z,3μm,20.0s,MS5.5						
BBSR	**BB Station**	**63.34**	**71**	PFAKE		19 29 00.0	+6.9
BBSR				LR	LR		
	comp=Z,9μm,19.0s,MS6.0						
KONO	**Kongsberg**	**63.83**	**9**	*e*P	**P**	**19 28 56.2**	**+0.3**
KONO				AMB	AMB	19 29 08.9	
	comp=Z,72nm,1.1s,mb5.6						
KONO				*e*S	**S**	**19 37 30.0**	**-0.1**
KONO				*e*SS	SS	19 41 42.6	+5.5
KONO				AMS	AMS	20 01 03.4	
	comp=Z,5μm,19.6s,MS5.7						
KONO	**Kongsberg**	**63.83**	**9**	*e*P	**P**	**19 28 56.0**	**+0.1**
KONO				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.3						
KONO				MLR	MLR		
	comp=Z,6μm,20.0s,MS5.8						
KONO	**Kongsberg**	**63.83**	**9**	*e*P	**P**	**19 28 56.0**	**+0.1**
	comp=Z,42nm,1.2s,mb5.3						
KONO				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
SVE	**Sverdlovsk**	**64.02**	**340**⇓	*e*P	**P**	**19 28 57.3**	**0.0**
SVE				*e*S	**S**	**19 37 36.1**	**+3.5**
SVE				pmax	pmax		
	comp=Z,125nm,1.4s,mb5.8						
SVE				MLR	MLR		
	comp=Z,11μm,15.0s,MS6.2						
ARU	**Arti**	**64.79**	**341***c*	*i*P	**P**	**19 29 01.7**	**-0.6**
ARU				*e*		19 29 33.9	
ARU				*e*PPP		19 33 00.8	
ARU				S	**S**	**19 37 45.1**	**+3.0**
ARU						19 38 53.5	
ARU				SS	SS	19 41 56.3	+4.1
ARU				SSS		19 44 47.8	
ARU				pmax	pmax		
	comp=Z,142nm,1.7s,mb5.7						
ARU				MLR	MLR		
	comp=Z,11μm,18.0s,MS6.1						
ARU	**Arti**	**64.79**	**341**	*e*P	**P**	**19 29 00.8**	**-1.5**
	comp=Z,88nm,1.0s,mb5.7						
ARU				LR	LR		
	comp=Z,13μm,19.0s,MS6.1						
KURK	**Kurchatov**	**65.02**	**326**	P	**P**	**19 29 04.3**	**+0.5**
	comp=Z,30nm,0.8s,mb5.4,baz=27,slow=5.8						
KURK	**Kurchatov**	**65.02**	**326**	*e*P	**P**	**19 29 03.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.5						
KURK				MLR	MLR		
	comp=Z,18μm,20.0s,MS6.3						
KURK	**Kurchatov**	**65.02**	**326**	*e*P	**P**	**19 29 03.0**	**-0.9**
	comp=Z,54nm,1.0s,mb5.5						
KURK				LR	LR		
	comp=Z,18μm,20.0s,MS6.3						
KURK	**Kurchatov**	**65.02**	**326**	P	**P**	**19 29 04.1**	**+0.2**
	SNR=35						
KURK				P		19 29 04.1	
	SNR=35						
BRVK	**Borovoye**	**65.31**	**332**	*e*P	**P**	**19 29 05.7**	**0.0**
BRVK				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.7						
BRVK				MLR	MLR		
	comp=Z,14μm,19.0s,MS6.2						
BRVK	**Borovoye**	**65.31**	**332**	*e*P	**P**	**19 29 05.7**	**-0.1**
	comp=Z,71nm,1.0s,mb5.7						
BRVK				LR	LR		
	comp=Z,14μm,19.0s,MS6.2						
BRVK	**Borovoye**	**65.31**	**332**	P	**P**	**19 29 05.9**	**+0.1**
	SNR=55						
BRVK				P		19 29 05.9	
	SNR=55						
BVAR	**Borovoye Array**	**65.32**	**332**	P	**P**	**19 29 05.7**	**-0.1**
	comp=Z,36nm,0.7s,mb5.5,baz=34,slow=6.0,SNR=155						
BVAR				PKP2ab		19 58 00.2	
	comp=Z,1.7nm,0.9s,baz=117,slow=0.3,SNR=5.9						
BVAR				LR	LR	20 02 51.3	
	comp=Z,21μm,18.2s,MS6.4,baz=55,slow=41						
TGUH	**Tegucigalpa,Un**	**65.39**	**102**	*e*P	**P**	**19 29 06.9**	**+0.1**
	comp=Z,71nm,1.0s,mb5.7						
TGUH				LR	LR		
	comp=Z,8μm,19.0s,MS6.0						
TAOE	**Nuku Hiva Isla**	**65.72**	**165**	*e*P	**P**	**19 29 05.2**	**-3.5**
	comp=Z,180nm,1.2s,mb6.0						
TAOE				*e*S	S	19 37 45.3	-9.0
	comp=Z,18μm,24.9s						
TAOE				*e*SS	SS	19 42 06.1	-2.9
	comp=Z,3μm,24.5s						
TAOE				*e*LQ		19 45 43.8	
	comp=Z,7μm,27.4s						
TAOE				*e*LR	LR	19 48 49.2	
	comp=Z,8μm,23.1s,baz=0.0						
TAOE	**Nuku Hiva Isla**	**65.72**	**165**	*e*P	**P**	**19 29 05.2**	**-3.5**
	comp=Z,180nm,1.2s,mb6.0						
TAOE				*e*S	S	19 37 45.3	-9.0
TAOE				*e*SS	SS	19 42 06.1	-2.9
TAOE				*e*LQ		19 45 43.8	
VSU	**Vasula**	**65.78**	**360***c*	*i*P	**P**	**19 29 08.5**	**-0.1**
VSU				pmax	pmax		
	comp=Z,96nm,0.8s,mb5.9						
VSU				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.7						
WHN	**Wuhan**	**66.21**	**290**	P	**P**	**19 29 11.5**	**-0.4**
WHN				S	S	19 38 02.0	+1.7
WHN				LR	LR		
	comp=N,9μm,15.9s,MS6.2						
WHN				LR	LR		
	comp=E,11μm,19.2s,MS6.2						
WHN				LR	LR		
	comp=Z,9μm,18.4s,MS6.0						
XAN	**Xi'an**	**66.25**	**296**	P	**P**	**19 29 11.5**	**-0.6**
XAN				pP	pP	19 29 21.8	+5.1
XAN				S	S	19 38 04.3	+3.6
XAN				SS	SS	19 42 15.3	-0.8
XAN				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
XAN				LR	LR		
	comp=N,7μm,18.0s						
XAN				LR	LR		
	comp=Z,3μm,19.8s,MS5.5						
GTA	**Gaotai**	**66.33**	**306**	⇑P	**P**	**19 29 12.5**	**0.0**
GTA				pP	pP	19 29 17.3	+0.2
GTA				sP	sP	19 29 19.8	+1.0
GTA				PP	PP	19 31 41.0	+2.9
GTA				S	S	19 38 02.5	+1.0
GTA				sS	sS	19 38 09.0	0.0
GTA				SS	SS	19 42 19.0	+2.0
GTA				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
GTA				pmax	pmax		
	comp=Z,2μm,7.5s						
GTA				LR	LR		
	comp=N,16μm,20.9s,MS6.4						
GTA				LR	LR		
	comp=E,19μm,17.9s,MS6.4						
GTA				LR	LR		
	comp=Z,21μm,19.4s,MS6.3						
ESK	**Eskdalemuir**	**66.38**	**18**	*e*P	**P**	**19 29 13.7**	**+1.2**
ESK				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
ESK				MLR	MLR		
	comp=Z,12μm,20.0s,MS6.1						
ESK	**Eskdalemuir**	**66.38**	**18**	*e*P	**P**	**19 29 13.7**	**+1.2**
	comp=Z,50nm,1.1s,mb5.5						
ESK				LR	LR		
	comp=Z,12μm,20.0s,MS6.1						
TATO	**Taipei**	**66.75**	**280**	PFAKE		19 29 30.0	+15
TATO				LR	LR		
	comp=Z,9μm,20.0s,MS6.0						
MUD	**Monsted U'grnd**	**66.94**	**10**	*i*P	**P**	**19 29 17.0**	**+0.9**
MUD				*i*S	S	19 38 11.4	+3.1
MUD				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4						
MUD				MLR	MLR		
	comp=Z,5μm,19.0s,MS5.8						
MUD	**Monsted U'grnd**	**66.94**	**10**	*i*P	**P**	**19 29 17.0**	**+0.9**
	comp=Z,44nm,1.1s,mb5.4						
MUD				*i*S	S	19 38 11.4	+3.1
MUD							
	comp=Z,5μm,19.0s						
YHNB	**Yeheng**	**67.06**	**280**	PFAKE		19 29 30.0	+13
YHNB				LR	LR		
	comp=Z,7μm,19.0s,MS5.9						
LZH	**Lanzhou**	**67.12**	**301**	⇑P	**P**	**19 29 18.0**	**+0.4**
LZH				pP	pP	19 29 23.5	+1.3
LZH				sP	sP	19 29 25.3	+1.4
LZH				PP	PP	19 31 47.5	+2.4
LZH				S	S	19 38 07.0	-4.2
LZH				SS	SS	19 42 27.0	-2.4
LZH				pmax	pmax		
	comp=Z,140nm,1.0s,mb6.0						
LZH				pmax	pmax		
	comp=Z,1μm,5.1s						
LZH				LR	LR		
	comp=E,18μm,16.3s						
LZH				LR	LR		
	comp=Z,19μm,17.4s,MS6.4						
MK31	**Makanchi Array**	**67.22**	**322**	*e*P	**P**	**19 29 17.3**	**-0.8**
MKAR	**Makanchi Array**	**67.22**	**322**	P	**P**	**19 29 17.9**	**-0.2**
	comp=Z,17nm,0.8s,mb5.1,baz=45,slow=6.5,SNR=73						
MKAR				PKPPKP		19 57 43.4	
	comp=Z,0.6nm,0.9s,baz=183,slow=4.9,SNR=3.9						
MKAR				LR	LR	20 01 23.3	
	comp=Z,11μm,20.6s,MS6.1,baz=210,slow=38						
MKAR	**Makanchi Array**	**67.22**	**322**	*i*P	**P**	**19 29 17.8**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
NACB	**Ninganchiao**	**67.33**	**280**	*e*P	**P**	**19 29 17.0**	**-2.1**
	comp=Z,134nm,1.3s,mb5.8						
GTBY	**Guantanamo Bay**	**67.42**	**88**	PFAKE		19 29 30.0	+10
GTBY				LR	LR		
	comp=Z,16μm,19.0s,MS6.3						
MTDJ	**Mount Denham**	**67.42**	**91**	*e*P	**P**	**19 29 20.3**	**+0.5**
	comp=Z,126nm,1.2s,mb5.8						
MTDJ				LR	LR		
	comp=Z,14μm,19.0s,MS6.2						
WMQ	**Urumqi**	**67.78**	**317**	*e*P	**P**	**19 29 22.8**	**+1.1**
WMQ				PcP	PcP	19 29 49.3	+1.0
WMQ				PP	PP	19 31 53.8	+3.2
WMQ				S	S	19 38 18.8	0.0
WMQ				sS	sS	19 38 27.8	+1.4
WMQ				ScS	ScS	19 39 17.5	-2.1
WMQ				SS	SS	19 42 41.8	+2.6
WMQ				pmax	pmax		
	comp=Z,57nm,1.8s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,2μm,5.6s						
WMQ				LR	LR		
	comp=N,18μm,18.0s,MS6.5						
WMQ				LR	LR		
	comp=E,17μm,20.0s,MS6.5						
WMQ				LR	LR		
	comp=Z,16μm,18.0s,MS6.3						
SSLB	**Suanglung**	**67.99**	**280**	*e*P	**P**	**19 29 20.7**	**-2.5**
	comp=Z,97nm,1.1s,mb5.8						
COP	**Copenhagen**	**68.00**	**8**	*i*P	**P**	**19 29 27.5**	**+4.7**
COP				*i*S	S	19 38 24.3	+3.3
COP							
	comp=Z,2μm,19.0s						
YULB	**Yu-li**	**68.11**	**280**	*e*P	**P**	**19 29 23.6**	**-0.5**
	comp=Z,23nm,0.7s,mb5.3						
MOS	**Moscow**	**68.12**	**353**	*e*P	**P**	**19 29 21.1**	**-2.5**
MOS				*e*		19 31 52.7	
MOS				*e*S	S	19 38 21.9	-0.6
MOS				*e*		19 39 18.1	
MOS				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.8						
MOS				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.8						
MOS				smax			
	comp=E,1μm,5.8s						
MOS				smax			
	comp=N,2μm,9.6s						
FUNA	**Funafuti**	**68.18**	**209**	PFAKE		19 29 30.0	+5.6
FUNA				LR	LR		
	comp=Z,17μm,19.0s,MS6.3						
QZH	**Quanzhou**	**68.37**	**283**⇓	*i*P	**P**	**19 29 25.5**	**-0.1**
QZH				S	S	19 38 23.3	-3.0
QZH				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
QZH				pmax	pmax		
	comp=Z,2μm,5.8s						
QZH				LR	LR		
	comp=N,7μm,14.6s,MS6.2						
QZH				LR	LR		
	comp=E,7μm,13.4s,MS6.2						
QZH				LR	LR		
	comp=Z,9μm,13.6s,MS6.2						
GRTK	**Grand Turk**	**68.38**	**83**	PFAKE		19 29 40.0	+14
GRTK				LR	LR		
	comp=Z,13μm,19.0s,MS6.2						
IZAR	**Zarasai**	**68.50**	**360**	*e*P	**P**	**19 29 25.8**	**-0.1**
TPUB	**Ta-pu**	**68.55**	**280**	*e*P	**P**	**19 29 25.7**	**-1.1**
	comp=Z,52nm,1.0s,mb5.4						
ISAL	**Salakas**	**68.67**	**0**	*e*P	**P**	**19 29 27.1**	**+0.1**
TWG	**Pinlang**	**68.69**	**279**	*e*P	**P**	**19 29 26.6**	**-1.1**
	comp=Z,18nm,0.6s,mb5.2						
BSD	**Bornholm Skovb**	**68.75**	**7**⇑	*i*P	**P**	**19 29 27.1**	**-0.4**
BSD				*i*S	S	19 38 32.5	+2.5
BSD				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
BSD				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.5						
BSD	**Bornholm Skovb**	**68.75**	**7**⇑	*i*P	**P**	**19 29 27.1**	**-0.4**
	comp=Z,46nm,1.0s,mb5.4						
BSD				*i*S	S	19 38 32.5	+2.5
BSD							
	comp=Z,3μm,20.0s						
OBN	**Obninsk**	**68.81**	**354**	*i*P	**P**	**19 29 26.9**	**-1.0**
OBN				*i*		19 29 35.1	
OBN				*i*PCP	PcP	19 29 48.4	-4.0
OBN				*i*S	S	19 38 29.5	-1.2
OBN				*i*SS	SS	19 42 55.0	+0.6
OBN				pmax	pmax		
	comp=Z,158nm,1.6s,mb5.7						
OBN	**Obninsk**	**68.81**	**354**	*e*P	**P**	**19 29 27.8**	**-0.1**
OBN				LR	LR		
	comp=Z,7μm,19.0s,MS5.9						
IIGN	**Ignalina**	**68.90**	**360**	*e*P	**P**	**19 29 28.5**	**0.0**
IDID	**Didziasalis**	**68.93**	**360**	*e*P	**P**	**19 29 28.6**	**-0.1**
ENH	**Enshi**	**68.97**	**293**	*e*P	**P**	**19 29 28.7**	**-0.6**
	comp=Z,80nm,0.8s,mb5.7						
ENH				LR	LR		
	comp=Z,8μm,20.0s,MS6.0						
HLG	**Helgoland**	**69.05**	**11**	*e*P	**P**	**19 29 31.7**	**+2.3**
HLG				*e*S	S	19 38 37.9	+4.4
NACGM	**Naroch**	**69.35**	**360**	*e*P	**P**	**19 29 28.0**	**-3.2**
BSEG	**Bad Segeberg**	**69.54**	**10**	*e*P	**P**	**19 29 32.9**	**+0.4**
	comp=Z,80nm,1.2s,mb5.5						
MICGM	**Minsk**	**69.74**	**359**⇑	*e*P	**P**	**19 29 31.0**	**-2.7**
MNK	**Minsk**	**69.74**	**359**⇑	*e*P	**P**	**19 29 31.0**	**-2.7**
MNK				*e*S	S	19 38 42.0	+0.3
MNK				*e*PS		19 39 04.0	
MNK				*e*SS	SS	19 43 18.0	+9.3
MNK				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7						
MNK				pmax	pmax		
	comp=N,200nm,1.4s						
MNK				MLR	MLR		
	comp=Z,8μm,20.0s,MS6.0						
SUW	**Suwalki**	**70.21**	**2**	*e*P	**P**	**19 29 35.9**	**-0.6**
SUW				*e*S	S	19 38 55.3	+8.1
SUW				LMZ		19 59 21.5	
	comp=Z,6μm,24.6s						
SUW	**Suwalki**	**70.21**	**2**	*e*P	**P**	**19 29 36.0**	**-0.6**
	comp=Z,102nm,0.9s,mb5.8						
SDDR	**Presa de Saban**	**70.31**	**85**	*e*P	**P**	**19 29 37.0**	**-0.7**
	comp=Z,32nm,0.8s,mb5.3						
SDDR				LR	LR		
	comp=Z,11μm,19.0s,MS6.1						
GKP	**Gorka Klasztor**	**70.73**	**6**	*e*P	**P**	**19 29 40.1**	**+0.4**
GKP				*e*S	S	19 39 03.2	+10
GKP				LMZ		19 59 18.5	
	comp=Z,8μm,23.2s						
IBBN	**Ibbenburen**	**70.88**	**12**	*e*P	**P**	**19 29 41.0**	**+0.3**
	comp=Z,67nm,1.1s,mb5.5						
IBBN				*e*S	S	19 38 58.6	+3.5
NRDL	**Niedersach Rie**	**70.95**	**10**	*e*P	**P**	**19 29 41.1**	**0.0**
	comp=Z,78nm,1.1s,mb5.5						
NRDL				*e*S	S	19 39 00.3	+4.4
PMOR	**Pomariorio Ree**	**71.02**	**174**	*e*P	**P**	**19 29 37.7**	**-4.1**
	comp=Z,165nm,1.3s,mb5.8						
RUE	**Ruedersdorf**	**71.29**	**8**	*e*P	**P**	**19 29 43.3**	**+0.1**
	comp=Z,88nm,1.1s,mb5.6						
RUE	**Ruedersdorf**	**71.29**	**8**	*e*P	**P**	**19 29 42.0**	**-1.1**
	comp=Z,186nm,1.3s,mb5.9						
ABKAR	**Akbulak array**	**71.30**	**337**⇑	*i*P	**P**	**19 29 42.9**	**-0.4**
	comp=Z,32nm,0.8s,mb5.3						
CD2	**Chengdu**	**71.35**	**298**	P	**P**	**19 29 43.3**	**-0.6**
CD2				pP	pP	19 29 48.0	-0.5
CD2				sP	sP	19 29 50.3	+0.1
CD2				PP	PP	19 32 23.5	+1.8
CD2				S	S	19 38 58.5	-2.7
CD2				sS	sS	19 39 06.5	-2.3
CD2				SS	SS	19 43 34.3	-0.5
CD2				pmax	pmax		
	comp=Z,160nm,0.9s,mb6.0						
CD2				pmax	pmax		
	comp=Z,2μm,11.6s						
CD2				LR	LR		
	comp=N,11μm,19.0s						
CD2				LR	LR		
	comp=Z,5μm,22.6s,MS5.7						
AFI	**Afiamalu**	**71.37**	**198**	LR	LR	19 56 49.2	
	comp=Z,5μm,20.0s,MS5.8,baz=1.3,slow=32						
AFI	**Afiamalu**	**71.37**	**198**	PFAKE		19 29 50.0	+6.0
AFI				LR	LR		
	comp=Z,5μm,20.0s,MS5.8						
CLZ	**Clausthal**	**71.62**	**10**	*e*P	**P**	**19 29 45.7**	**+0.5**
	comp=Z,94nm,1.2s,mb5.6						
CLZ	**Clausthal**	**71.62**	**10**	*e*P	**P**	**19 29 45.7**	**+0.5**
CLZ				pmax	pmax		
	comp=Z,94nm,1.2s,mb5.6						
BUG	**Bochum--Univer**	**71.67**	**12**	*e*P	**P**	**19 29 45.3**	**-0.2**
	comp=Z,98nm,1.1s,mb5.7						
BUG				*e*S	S	19 39 07.7	+3.4
MENF	**Mencas**	**71.84**	**16**	*e*P	**P**	**19 29 47.0**	**+0.5**
UCC	**Uccle**	**71.93**	**14**	P	**P**	**19 29 47.3**	**+0.3**
	comp=Z,62nm,1.5s,mb5.3						
WAR	**Warsaw**	**71.93**	**3**	*e*P	**P**	**19 29 47.8**	**+0.8**
WAR				*e*S	S	19 39 27.6	+20
WAR				LMZ		20 00 11.3	
	comp=Z,6μm,22.8s						
VOR	**Voronezh**	**71.98**	**352**	*e*P	**P**	**19 29 45.0**	**-2.4**
VOR				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.5						
BEBN	**Eben Emael**	**72.11**	**14**	P	**P**	**19 29 48.2**	**+0.1**
	comp=Z,20nm,1.3s,mb4.9						
AAA	**Alma-Ata**	**72.12**	**324**	*e*P	**P**	**19 29 49.5**	**+1.1**
AAA				*e*S	S	19 39 14.8	+5.1
AAA				pmax	pmax		
	comp=Z,1μm,6.5s						
AAA				MLR	MLR		
	comp=Z,26μm,14.0s,MS6.7						
SNF	**Seneffe**	**72.20**	**14**	P	**P**	**19 29 48.6**	**-0.1**
	comp=Z,40nm,1.4s,mb5.2						
MEM	**Membach**	**72.33**	**13**	P	**P**	**19 29 49.6**	**+0.2**
	comp=Z,42nm,1.3s,mb5.2						
CLL	**Collm**	**72.39**	**9**	*e*P	**P**	**19 29 49.4**	**-0.4**
	comp=Z,34nm,1.0s,mb5.2						
CLL	**Collm**	**72.39**	**9**	*i*P	**P**	**19 29 49.5**	**-0.3**
CLL				*i*		19 29 58.1	
CLL				*e*S	S	19 39 16.0	+3.5
CLL				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
CLL				MLR	MLR		
	comp=Z,9μm,18.5s,MS6.1						
CLL	**Collm**	**72.39**	**9**	*i*P	**P**	**19 29 49.5**	**-0.3**
	comp=Z,34nm,1.0s,mb5.2						
CLL				*i*		19 29 58.1	
CLL				*e*S	S	19 39 16.0	+3.5
CLL				LR	LR		
	comp=Z,9μm,18.5s,MS6.1						
CLL	**Collm**	**72.39**	**9**	*i*P	**P**	**19 29 49.5**	**-0.3**
	comp=Z,34nm,1.0s,mb5.2						
CLL				*i*pP	pP	19 29 58.1	+3.7
CLL				*e*(PcP)	PcP	19 30 06.0	-1.7
CLL				*e*(PP)		19 32 42.0	
CLL				*e*PPPP		19 35 18.0	
CLL				*e*S	S	19 39 16.0	+3.5
	comp=N,2μm,22.6s						
CLL				*e*S	S	19 39 16.0	+3.5
	comp=E,2μm,23.7s						
CLL				*e*SS	SS	19 44 10.0	+21
CLL				*e*(SSS)		19 47 54.0	
CLL				LmH		20 06 00.0	
	comp=N,6μm,20.4s						
CLL				LmH		20 06 00.0	
	comp=E,4μm,19.7s						
VRHR	**Novokhopersk**	**72.39**	**350**	*e*P	**P**	**19 29 49.0**	**-0.8**
VRHR				*e*		19 32 27.1	
VRHR				*i*PPP		19 34 19.7	
VRHR				*e*S	S	19 39 13.5	+0.9
VRHR				*e*SS	SS	19 44 00.6	+11
VRHR				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
VRHR				pmax	pmax		
	comp=N,40nm,1.1s						
VRHR				pmax	pmax		
	comp=E,30nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,450nm,7.3s						
VRHR				pmax	pmax		
	comp=N,1μm,12.6s						
VRHR				pmax	pmax		
	comp=E,460nm,6.3s						
VRHR				smax			
	comp=N,1μm,6.5s						
VRHR				smax			
	comp=Z,720nm,8.9s						
VRHR				smax			
	comp=E,660nm,4.2s						
VRHR				MLR	MLR		
	comp=Z,5μm,

VRHR			MLR	MLR		
	comp=E,2μm,16.0s,MS5.9					
BCLA	**Clavier**	**72.42**	**14**	P	**P**	**19 29 49.8 -0.3**
	comp=Z,38nm,1.4s,mb5.1					
VSR	**Storozhevoye**	**72.50**	**351**	*e*P	**P**	**19 29 49.6 -0.8**
VSR				*e*		19 32 32.4
VSR				*i* PPP		19 34 23.6
VSR				*e*S	S	19 39 12.6 -1.2
VSR				*e*SS	SS	19 44 01.5 +10
VSR				pmax	pmax	
	comp=Z,30nm,0.8s,mb5.3					
VSR				pmax	pmax	
	comp=N,30nm,0.9s					
VSR				pmax	pmax	
	comp=E,4.0nm,0.4s					
VSR				pmax	pmax	
	comp=Z,570nm,6.7s					
VSR				pmax	pmax	
	comp=N,670nm,10.7s					
VSR				pmax	pmax	
	comp=E,130nm,5.2s					
VSR				smax		
	comp=N,1μm,6.9s					
VSR				smax		
	comp=Z,520nm,7.1s					
VSR				smax		
	comp=E,610nm,6.0s					
VSR				MLR	MLR	
	comp=Z,5μm,20.0s,MS5.8					
VSR				MLR	MLR	
	comp=N,4μm,20.0s,MS5.8					
VSR				MLR	MLR	
	comp=E,3μm,19.0s,MS5.8					
UBBA	**Unterbreizbach**	**72.59**	**11**	*e*P	**P**	**19 29 51.0 0.0**
	comp=Z,55nm,1.6s,mb5.2					
UBBA				*e*S	S	19 39 18.5 +3.7
BAIF	**Baives**	**72.63**	**15**	*e*P	**P**	**19 29 51.6 +0.4**
	comp=Z,133nm,1.0s,mb5.5					
BAIF	**Baives**	**72.63**	**15**	*e*P	**P**	**19 29 51.6 +0.4**
BAIF				pmax	pmax	
	comp=Z,67nm,1.0s,mb5.5					
BAIF	**Baives**	**72.63**	**15**	*e*P	**P**	**19 29 51.6 +0.4**
	comp=Z,67nm,1.0s,mb5.5					
DOU	**Dourbes**	**72.64**	**14**	P	**P**	**19 29 51.3 -0.1**
	comp=Z,26nm,1.3s,mb5.0					
GIVF	**Givet**	**72.67**	**14**	*e*P	**P**	**19 29 51.7 +0.2**
	comp=Z,243nm,1.4s,mb5.6					
GIVF	**Givet**	**72.67**	**14**	*e*P	**P**	**19 29 51.7 +0.2**
GIVF				pmax	pmax	
	comp=Z,122nm,1.4s,mb5.6					
GIVF	**Givet**	**72.67**	**14**	*e*P	**P**	**19 29 51.7 +0.2**
	comp=Z,122nm,1.4s,mb5.6					
GZH	**Guangzhou**	**72.70**	**286**	P	**P**	**19 29 48.3 -3.8**
GZH				S	S	19 39 10.3 -6.6
GZH				LR	LR	
	comp=N,6μm,18.0s,MS6.1					
GZH				LR	LR	
	comp=E,8μm,17.2s,MS6.1					
GZH				LR	LR	
	comp=Z,10μm,16.3s,MS6.2					
TKM2	**Tokmak 2**	**72.88**	**324**	P	**P**	**19 29 53.9 +1.0**
	SNR=41					
TKM2	**Tokmak 2**	**72.88**	**324**	*e*P	**P**	**19 29 53.6 +0.7**
TKM2				pmax	pmax	
	comp=Z,43nm,0.9s,mb5.4					
TKM2				MLR	MLR	
	comp=Z,21μm,19.0s,MS6.4					
TKM2	**Tokmak 2**	**72.88**	**324**	*e*P	**P**	**19 29 53.5 +0.7**
	comp=Z,43nm,0.9s,mb5.4					
TKM2				LR	LR	
	comp=Z,21μm,19.0s,MS6.4					
BRG	**Berggiesshubel**	**72.90**	**8**	*e*P	**P**	**19 29 52.7 -0.1**
	comp=Z,45nm,1.2s,mb5.3					
BRG	**Berggiesshubel**	**72.90**	**8**	*i* P	**P**	**19 29 53.0 +0.1**
	comp=Z,46nm,1.2s,mb5.3					
BRG				*i* pP	pP	19 30 01.8 +4.4
	comp=Z,91nm,1.5s					
BRG				PP	PP	19 32 33.0 -1.3
BRG				S	S	19 39 21.0 +2.7
BRG				SS	SS	19 43 58.0 +0.8
BRG				*e*PKPPKP		19 57 45.2
BRG						
	comp=N,6μm,17.6s					
BRG						
	comp=E,4μm,18.7s					
BRG						
	comp=Z,10μm,18.0s					
MOX	**Moxa**	**72.92**	**10**	*e*P	**P**	**19 29 53.2 +0.2**
	comp=Z,99nm,1.3s,mb5.6					
MOX				*e*S	S	19 39 23.0 +4.4
MOX						
	comp=Z,8μm,20.0s					
MOX	**Moxa**	**72.92**	**10**	*e*P	**P**	**19 29 52.9 -0.1**
	comp=Z,72nm,1.2s,mb5.5					
MOX				*e*S	S	19 39 21.5 +2.9
MOX	**Moxa**	**72.92**	**10**	*e*P	**P**	**19 29 53.2 +0.2**
MOX				*e*S	S	19 39 23.0 +4.4
MOX				pmax	pmax	
	comp=Z,99nm,1.3s,mb5.6					
MOX				MLR	MLR	
	comp=Z,8μm,20.0s,MS6.0					
MOX	**Moxa**	**72.92**	**10**	*e*P	**P**	**19 29 53.2 +0.2**
	comp=Z,99nm,1.3s,mb5.6					
MOX				*e*S	S	19 39 23.0 +4.4
MOX				LR	LR	
	comp=Z,8μm,20.0s,MS6.0					
USP	**Ospenovka**	**72.93**	**325**	P	**P**	**19 29 53.9 +0.8**
	SNR=30					
TNS	**Taunus Mts**	**73.01**	**12**	*e*P	**P**	**19 29 53.5 0.0**
	comp=Z,77nm,1.1s,mb5.5					
TNS	**Taunus Mts**	**73.01**	**12**	*e*P	**P**	**19 29 53.5 0.0**
TNS				pmax	pmax	
	comp=Z,77nm,1.1s,mb5.5					
ROSF	**Rostrenen**	**73.05**	**20**	*e*P	**P**	**19 29 53.7 0.0**
	comp=Z,266nm,1.6s,mb5.6					
ROSF	**Rostrenen**	**73.05**	**20**	*e*P	**P**	**19 29 53.7 0.0**
ROSF				pmax	pmax	
	comp=Z,133nm,1.6s,mb5.6					
ROSF	**Rostrenen**	**73.05**	**20**	*e*P	**P**	**19 29 53.7 0.0**
	comp=Z,133nm,1.6s,mb5.6					
CHMS	**Chumysh**	**73.09**	**325**	P	**P**	**19 29 55.0 +0.9**
	SNR=35					
KSP	**Ksiaz**	**73.09**	**7**	*e*P	**P**	**19 29 54.4 +0.4**
KSP				*e*S	S	19 39 30.5 +10
KSP				LMZ		20 07 25.9
	comp=Z,8μm,19.9s					
KSP	**Ksiaz**	**73.09**	**7⇑**	*e*P	**P**	**19 29 54.1 +0.1**
KSP				*e**PP	pP	19 30 02.5 +3.9
KSP				*e*S	S	19 39 23.5 +2.9
KSP				MLR	MLR	
	comp=Z,9μm,19.9s,MS6.0					
FLN	**La Foliniere**	**73.15**	**18**	*e*P	**P**	**19 29 54.1 -0.2**
	comp=Z,109nm,1.1s,mb5.4					
FLN				*e*MLR	MLR	
	comp=Z,27μm,19.0s,MS6.2					
FLN	**La Foliniere**	**73.15**	**18**	*e*P	**P**	**19 29 54.1 -0.2**
FLN				pmax	pmax	
	comp=Z,55nm,1.1s,mb5.4					
FLN				MLR	MLR	
	comp=Z,27μm,19.0s,MS6.5					
FLN	**La Foliniere**	**73.15**	**18**	*e*P	**P**	**19 29 54.1 -0.2**
	comp=Z,55nm,1.1s,mb5.4					
FLN				LR	LR	
	comp=Z,27μm,19.0s,MS6.5					
WERD	**Werda**	**73.18**	**9**	*e*P	**P**	**19 29 54.5 0.0**
	comp=Z,33nm,1.3s,mb5.1					
TANN	**Tannenbergstha**	**73.23**	**9**	*e*P	**P**	**19 29 54.9 +0.1**
	comp=Z,34nm,1.3s,mb5.1					
TANN				*e*S	S	19 39 25.1 +3.0
ABH	**Alteburg**	**73.24**	**12**	*e*P	**P**	**19 29 54.7 -0.2**
SGMF	**Saint Gilles**	**73.26**	**20**	*e*P	**P**	**19 29 55.2 +0.2**
	comp=Z,384nm,1.5s,mb5.8					
SGMF	**Saint Gilles**	**73.26**	**20**	*e*P	**P**	**19 29 55.2 +0.2**
SGMF				pmax	pmax	
	comp=Z,192nm,1.5s,mb5.8					
SGMF	**Saint Gilles**	**73.26**	**20**	*e*P	**P**	**19 29 55.2 +0.2**
	comp=Z,192nm,1.5s,mb5.8					
GUNZ	**Gunzen**	**73.27**	**9**	*e*P	**P**	**19 29 55.0 0.0**
	comp=Z,39nm,1.4s,mb5.1					
ULHL	**Ulahol**	**73.27**	**324**	P	**P**	**19 29 55.8 +0.6**
	SNR=57					
WLF	**Walferdange**	**73.28**	**13**	P	**P**	**19 29 54.8 -0.3**
	comp=Z,54nm,2.0s,mb5.1					
WLF	**Walferdange**	**73.28**	**13**	*e*P	**P**	**19 29 55.5 +0.4**
	comp=Z,105nm,1.5s,mb5.5					
WLF				*e*S	S	19 39 28.5 +5.8
WLF	**Walferdange**	**73.28**	**13**	*e*P	**P**	**19 29 56.3 +1.2**
WLF				pmax	pmax	
	comp=Z,94nm,1.3s,mb5.6					
WLF				MLR	MLR	
	comp=Z,9μm,20.0s,MS6.0					
WLF	**Walferdange**	**73.28**	**13**	*e*P	**P**	**19 29 56.3 +1.2**
	comp=Z,94nm,1.3s,mb5.6					
WLF				LR	LR	
	comp=Z,9μm,20.0s,MS6.0					
PVCC	**Panska Ves**	**73.29**	**8**	*e*P	**P**	**19 29 55.7 +0.6**
PVCC				*e**PP	pP	19 29 58.6 -1.2
PVCC				*e*S	S	19 39 28.0 +5.2
PVCC				MLR	MLR	
	comp=Z,6μm,17.6s,MS5.9					
PVCC	**Panska Ves**	**73.29**	**8**	*e*P	**P**	**19 29 55.7 +0.6**
PVCC				*e*pP	pP	19 29 58.6 -1.2
PVCC				*e*x	x	19 32 53.8
PVCC				*e*x	x	19 35 15.8
PVCC				*e*S	S	19 39 28.0 +5.2
PVCC				*e*x	x	19 44 32.3
PVCC				*e*x	x	19 48 11.6
PVCC				AMS	AMS	20 09 50.0
	comp=Z,6μm,17.6s					
KBK	**Karagaybulak**	**73.33**	**325**	P	**P**	**19 29 56.7 +1.2**
	SNR=43					
WERN	**Wernitzgruen**	**73.35**	**9**	*e*P	**P**	**19 29 55.7 +0.2**
	comp=Z,40nm,1.2s,mb5.2					
AOPR	**Arecibo Observ**	**73.35**	**82**	*e*P	**P**	**19 29 52.8 -3.2**
	comp=Z,19nm,0.9s,mb5.0					
LDF	**La Druitiere**	**73.37**	**18**	*e*P	**P**	**19 29 55.3 -0.4**
	comp=Z,150nm,1.3s,mb5.5					
LDF	**La Druitiere**	**73.37**	**18**	*e*P	**P**	**19 29 55.3 -0.4**
LDF				pmax	pmax	
	comp=Z,75nm,1.3s,mb5.5					
LDF	**La Druitiere**	**73.37**	**18**	*e*P	**P**	**19 29 55.3 -0.4**
	comp=Z,75nm,1.3s,mb5.5					
NKC	**Novy Kostel**	**73.41**	**9**	*e*P	**P**	**19 29 56.7 +0.9**
NKC				*e**PP	pP	19 29 59.1 -1.4
NKC				*e*		19 30 05.7
NKC				*e*		19 34 32.9
NKC				*e*S	S	19 39 29.4 +5.3
NKC				MLR	MLR	
	comp=Z,7μm,18.7s,MS6.0					
NKC	**Novy Kostel**	**73.41**	**9**	*e*P	**P**	**19 29 56.7 +0.9**
NKC				*e*pP	pP	19 29 59.1 -1.4
NKC				*e*PCP	PcP	19 30 05.7 -6.3
NKC				*e*x	x	19 32 56.1
NKC				*e*x	x	19 34 32.9
NKC				*e*S	S	19 39 29.4 +5.3
NKC				*e*x	x	19 44 33.4
NKC				*e*x	x	19 48 35.3
NKC				AMS	AMS	20 07 20.0
	comp=Z,7μm,18.7s					
GRR	**Gorron**	**73.44**	**18**	*e*P	**P**	**19 29 56.0 -0.1**
	comp=Z,140nm,1.3s,mb5.4					
GRR	**Gorron**	**73.44**	**18**	*e*P	**P**	**19 29 56.0 -0.1**
GRR				pmax	pmax	
	comp=Z,70nm,1.3s,mb5.4					
GRR	**Gorron**	**73.44**	**18**	*e*P	**P**	**19 29 56.0 -0.1**
	comp=Z,70nm,1.3s,mb5.4					
TIAR	**Tiarei**	**73.48**	**176**	*e*P	**P**	**19 29 52.5 -4.0**
	comp=Z,128nm,1.2s,mb5.7					
PPT	**Papeete**	**73.48**	**176**	*e*PP	PP	19 32 32.5 -8.2
	comp=Z,325nm,24.2s					
PPT				*e*S	S	19 39 19.2 -6.2
	comp=Z,19μm,27.2s					
PPT				*e*SS	SS	19 44 02.8 -5.8
	comp=Z,2μm,24.5s					
PPT				*e*LQ		19 48 40.3
	comp=Z,6μm,26.8s					
PPT				*e*LR	LR	19 52 19.6
	comp=Z,9μm,22.2s,baz=355					
PPT	**Papeete**	**73.48**	**176**	LR	LR	19 56 45.3
	comp=Z,7μm,18.6s,MS6.0,baz=355,slow=31					
PPT	**Papeete**	**73.48**	**176**	*e*P	**P**	**19 29 52.5 -4.0**
PPT				*e*S	S	19 39 19.2 -6.2
PPT				*e*SS	SS	19 44 02.8 -5.8
PPT				pmax	pmax	
	comp=Z,55nm,1.3s					
PPT	**Papeete**	**73.48**	**176**	*e*P	**P**	**19 29 52.5 -4.0**
	comp=Z,55nm,1.3s,mb5.3					
PPT				*e*PP	PP	19 32 32.5 -8.2
PPT				*e*S	S	19 39 19.2 -6.2
PPT				*e*SS	SS	19 44 02.8 -5.8
PPT				*e*LQ		19 48 40.3
AAK	**Ala-Archa**	**73.50**	**325**	P	**P**	**19 29 57.4 +0.9**
	SNR=26					
AAK	**Ala-Archa**	**73.50**	**325**	P	**P**	**19 29 57.5 +1.0**
	comp=Z,21nm,0.8s,mb5.1,baz=137,slow=1.8,SNR=28					
AAK	**Ala-Archa**	**73.50**	**325**	*e*P	**P**	**19 29 57.3 +0.8**
AAK				pmax	pmax	
	comp=Z,59nm,1.1s,mb5.4					
AAK				MLR	MLR	
	comp=Z,10μm,19.0s,MS6.1					
AAK	**Ala-Archa**	**73.50**	**325**	*e*P	**P**	**19 29 57.3 +0.8**
	comp=Z,59nm,1.1s,mb5.4					
AAK				LR	LR	
	comp=Z,10μm,19.0s,MS6.1					
AAK	**Ala-Archa**	**73.50**	**325**	P	**P**	**19 29 57.7 +1.2**
	SNR=32					
AAK				P		19 29 57.7
	SNR=32					
GYA	**Guiyang**	**73.50**	**293⇑**	*i* P	**P**	**19 29 57.0 +0.2**
GYA				PcP	PcP	19 30 14.0 +1.2
GYA				PP	PP	19 32 41.8 +1.6
GYA				S	S	19 39 24.3 -1.6
GYA				SKS		19 39 59.5
GYA				SS	SS	19 44 09.0 +1.1
GYA				pmax	pmax	
	comp=Z,140nm,1.0s,mb5.8					
GYA				LR	LR	
	comp=N,5μm,19.8s,MS5.9					
GYA				LR	LR	
	comp=E,4μm,20.4s,MS5.9					
GYA				LR	LR	
	comp=Z,6μm,20.1s,MS5.9					
BCIP	**Isla Barro Col**	**73.51**	**98**	PFAKE		19 30 10.0 +13
BCIP				LR	LR	
	comp=Z,6μm,19.0s,MS5.9					
AKASG	**Malin Array Be**	**73.52**	**358**	P	**P**	**19 29 55.6 -0.9**
	comp=Z,43nm,0.9s,mb5.4,baz=2.7,slow=5.7,SNR=66					
AKASG				LR	LR	20 06 44.9
	comp=Z,10μm,19.9s,MS6.1,baz=350,slow=40					
AKBB	**Malin Array Si**	**73.52**	**358**	*e*P	**P**	**19 29 55.6 -0.9**
KIEV	**Kiev**	**73.53**	**358**	*e*P	**P**	**19 29 55.4 -1.2**
KIEV				pmax	pmax	
	comp=Z,46nm,0.9s,mb5.4					
KIEV				MLR	MLR	
	comp=Z,9μm,20.0s,MS6.0					
KIEV	**Kiev**	**73.53**	**358**	*e*P	**P**	**19 29 55.4 -1.2**
	comp=Z,46nm,0.9s,mb5.4					
KIEV				LR	LR	
	comp=Z,9μm,20.0s,MS6.0					
DPC	**Dobruska-Polom**	**73.59**	**7**	*e*P	**P**	**19 29 57.5 +0.6**
DPC				*e**PP	pP	19 30 00.5 -1.0
DPC				*e*		19 30 06.9
DPC				*e*		19 32 44.3
DPC				*e*S	S	19 39 30.5 +4.3
DPC				MLR	MLR	
	comp=Z,5μm,18.4s,MS5.9					
DPC	**Dobruska-Polom**	**73.59**	**7**	*e*P	**P**	**19 29 57.5 +0.6**
DPC				*e*pP	pP	19 30 00.5 -1.0
DPC				*e*PCP	PcP	19 30 06.9 -5.9
DPC				*e*PP	PP	19 32 44.3 +4.1
DPC				*e*S	S	19 39 30.5 +4.3
DPC				*e*x	x	19 44 32.7
DPC				*e*x	x	19 48 26.2
DPC				AMS	AMS	20 07 20.0
	comp=Z,5μm,18.4s					
TOD	**Tromm**	**73.66**	**12**	*e*P	**P**	**19 29 57.5 +0.2**
CELP	**Cerrillos**	**73.67**	**82**	*e*P	**P**	**19 30 00.8 +2.9**
OBIP	**Obispado Ponce**	**73.68**	**82**	*e*P	**P**	**19 30 03.0 +5.1**
	comp=Z,35nm,0.9s,mb5.3					
EKS2	**Erkin-Say**	**73.70**	**325**	P	**P**	**19 29 58.8 +1.1**
	SNR=60					
EKS2	**Erkin-Say**	**73.70**	**325**	*e*P	**P**	**19 29 58.4 +0.6**
	comp=Z,93nm,1.2s,mb5.6					
EKS2				LR	LR	
	comp=Z,15μm,19.0s,MS6.3					
PRA	**Prague**	**73.73**	**8**	P	**P**	**19 29 58.0 +0.2**
PRA				S	S	19 39 34.0 +6.2
PRA				AMS	AMS	20 13 10.0
KZA	**Kyzart**	**73.75**	**324**	P	**P**	**19 29 59.2 +1.2**
	SNR=43					
PRU	**Pruhonice**	**73.82**	**8**	*e*P	**P**	**19 29 59.0 +0.7**
PRU				*e**PP	pP	19 30 01.9 -1.0
PRU				*e*		19 30 08.4
PRU				*e*		19 32 44.3
PRU				*e*		19 34 36.1
PRU				*e*S	S	19 39 32.9 +4.1
PRU				MLR	MLR	
	comp=Z,5μm,15.8s,MS5.9					
PRU	**Pruhonice**	**73.82**	**8**	*e*P	**P**	**19 29 59.0 +0.7**
PRU				*e*pP	pP	19 30 01.9 -1.0
PRU				*e*PCP	PcP	19 30 08.4 -5.4
PRU				*e*PP	PP	19 32 44.3 +2.1
PRU				*e*x	x	19 34 36.1
PRU				*e*S	S	19 39 32.9 +4.1
PRU				*e*x	x	19 44 41.2
PRU				*e*x	x	19 48 33.8
PRU				AMS	AMS	20 12 50.0
	comp=Z,5μm,15.8s					
GRA1	**Grafenberg Arr**	**73.83**	**10**	*e*P	**P**	**19 29 58.4 +0.1**
	comp=Z,63nm,1.1s,mb5.5					
GRA1				*e*S	S	19 39 33.4 +4.5
GRA1				LR	LR	
	comp=Z,13μm,18.7s,MS6.2					
GRF	**Grafenberg Arr**	**73.83**	**10**	*e*P	**P**	**19 29 58.4 +0.1**
	comp=Z,63nm,1.1s,mb5.5					
GRF				*e*S	S	19 39 33.3 +4.4
GRF				*e*L		20 08 57.6
	comp=Z,13μm,18.7s					
GRF	**Grafenberg Arr**	**73.83**	**10**	*e*P	**P**	**19 29 58.4 +0.1**
GRF				*e*S	S	19 39 33.4 +4.5
GRF				pmax	pmax	
	comp=Z,63nm,1.1s,mb5.5					
GRF				MLR	MLR	
	comp=Z,13μm,18.7s,MS6.2					
GRF	**Grafenberg Arr**	**73.83**	**10**	*e*P	**P**	**19 29 58.4 +0.1**
	comp=Z,63nm,1.1s,mb5.5					
GRF				*e*S	S	19 39 33.4 +4.5
GRF				LR	LR	
	comp=Z,13μm,18.7s,MS6.2					
ROTZ	**Rotzenmuhle**	**73.85**	**9**	*e*P	**P**	**19 29 58.8 +0.4**
	comp=Z,40nm,1.1s,mb5.3					
MEH	**Mehetia**	**73.86**	**174**	*e*P	**P**	**19 29 54.8 -3.9**
	comp=Z,46nm,0.9s,mb5.4					
UCH	**Uchtor**	**73.86**	**325**	P	**P**	**19 29 60.0 +1.4**
	SNR=19					
UCH	**Uchtor**	**73.86**	**325**	*e*P	**P**	**19 29 59.6 +1.0**
	comp=Z,59nm,1.6s,mb5.3					
UCH				*e*PP	PP	19 32 42.1 -0.6
UCH				LR	LR	
	comp=Z,21μm,22.0s,MS6.4					
SJG	**San Juan**	**73.87**	**82**	*e*P	**P**	**19 30 03.1 +4.0**
SJG				pmax	pmax	
	comp=Z,747nm,2.0s					
SJG				MLR	MLR	
	comp=Z,24μm,20.0s					
SJG	**San Juan**	**73.87**	**82**	*e*P	**P**	**19 30 03.0 +4.0**
	comp=Z,747nm,2.0s,mb6.3					
SJG				LR	LR	
	comp=Z,24μm,20.0s,MS6.5					
OJC	**Ojcow**	**73.90**	**4**	*e*P	**P**	**19 29 57.0 -1.8**
OJC				*e*S	S	19 39 32.9 +3.2
OJC				L		20 01 15.5
	comp=Z,4.9nm,22.2s					
RAC	**Raciborz**	**73.96**	**5**	*e*P	**P**	**19 29 59.1 0.0**
RAC				*e*S	S	19 39 30.8 +0.4
RAC				MLR	MLR	
	comp=E,5μm,18.0s,MS6.0					
RAC				MLR	MLR	
	comp=Z,6μm,17.0s,MS6.0					
RAC				MLR	MLR	
	comp=N,6μm,18.0s,MS6.0					
HUMP	**Col San Antoni**	**74.02**	**81**	*e*P	**P**	**19 30 00.9 +1.0**
	comp=N,21nm,0.8s,mb5.1					
LANF	**Langenberg**	**74.16**	**12**	*e*P	**P**	**19 30 00.3 0.0**
OKC	**Ostrava-Krasne**	**74.21**	**5**	*e*P	**P**	**19 30 01.0 +0.5**
OKC				*e**PP	pP	19 30 03.8 -1.3
OKC				*e*		19 30 09.9
OKC				*e*S	S	19 39 40.6 +7.5
OKC				MLR	MLR	
	comp=Z,6μm,17.0s,MS5.9					
OKC	**Ostrava-Krasne**	**74.21**	**5**	*e*P	**P**	**19 30 01.0 +0.5**
OKC				*e*pP	pP	19 30 03.8 -1.3
OKC				*e*PCP	PcP	19 30 09.9 -5.6
OKC				*e*S	S	19 39 40.6 +7.5
OKC				*e*x	x	19 44 32.6
OKC				*e*x	x	19 48 35.2
OKC				AMS	AMS	20 11 30.0
	comp=Z,6μm,17.0s					
MTP	**Monte Pirata**	**74.22**	**81**	*e*P	**P**	**19 29 58.9 -2.2**
	comp=Z,104nm,1.5s,mb5.5					
MORC	**Moravsky Berou**	**74.23**	**6**	*e*P	**P**	**19 30 00.7 0.0**
MORC				pmax	pmax	
	comp=Z,157nm,2.4s,mb5.5					
MORC	**Moravsky Berou**	**74.23**	**6**	*e*P	**P**	**19 30 00.7 0.0**
	comp=Z,157nm,2.4s,mb5.5					
MORC	**Moravsky Berou**	**74.23**	**6⇑**	*i* P	**P**	**19 30 00.7 0.0**
MEZF	**Maizieres J'vi**	**74.27**	**14**	*e*P	**P**	**19 30 01.3 +0.4**
	comp=Z,138nm,1.2s,mb5.5					
MEZF	**Maizieres J'vi**	**74.27**	**14**	*e*P	**P**	**19 30 01.3 +0.4**
	comp=Z,138nm,1.2s,mb5.8					
LVV	**L'vov**	**74.42**	**1**	*e*P	**P**	**19 30 01.5 -0.3**
LVV				*e*		19 30 13.1
LVV				*i* S	S	19 39 33.3 -2.3
LVV				MLR	MLR	
	comp=Z,5μm,20.0s,MS5.8					
LVV				MLR	MLR	
	comp=N,6μm,19.0s,MS6.0					
LVV				MLR	MLR	
	comp=E,4μm,19.0s,MS6.0					
STU	**Stuttgart**	**74.53**	**12**	*e*P	**P**	**19 30 02.3 -0.1**
	comp=Z,70nm,1.7s,mb5.3					
STU				*e*S	S	19 39 40.5 +3.7
STU	**Stuttgart**	**74.53**	**12**	*e*P	**P**	**19 30 02.5 +0.1**
STU				pmax	pmax	
	comp=Z,48nm,1.2s,mb5.3					
STU	**Stuttgart**	**74.53**	**12**	*e*P	**P**	**19 30 02.5 +0.1**
	comp=Z,48nm,1.2s,mb5.3					
WET	**Wettzell**	**74.53**	**9**	*e*P	**P**	**19 30 02.7 +0.3**
	comp=Z,52nm,1.4s,mb5.3					
WET				*e*S	S	19 39 40.8 +4.1
WET	**Wettzell**	**74.53**	**9**	*e*P	**P**	**19 30 02.7 +0.3**
WET				*e*S	S	19 39 40.8 +4.1
WET				pmax	pmax	
	comp=Z,52nm,1.4s,mb5.3					
TREC	**Trest**	**74.58**	**7**	*e*P	**P**	**19 30 03.0 +0.3**
TREC				*e**PP	pP	19 30 05.7 -1.7
TREC				*e*		19 30 11.9
TREC				MLR	MLR	
	comp=Z,5μm,17.3s,MS5.9					
TREC	**Trest**	**74.58**	**7**	*e*P	**P**	**19 30 03.0 +0.3**
TREC				*e*pP	pP	19 30 05.7 -1.7
TREC				*e*PCP	PcP	19 30 11.9 -5.2
TREC				*e*S	S	19 39 46.8 +9.4
TREC				*e*x	x	19 44 39.5
TREC				*e*x	x	19 48 33.9
TREC				AMS	AMS	20 14 30.0
	comp=Z,5μm,17.3s					
KWP	**Kalwaria Pacla**	**74.58**	**2**	*e*P	**P**	**19 30 03.0 +0.3**
KWP				*e*PcP	PcP	19 30 12.5 -4.6
KWP				*e*S	S	19 39 53.0 +16
KWP				LMZ		20 01 36.3
	comp=Z,5μm,23.1s					
KWP	**Kalwaria Pacla**	**74.58**	**2**	*e*P	**P**	**19 30 03.0 +0.3**
KWP				*e*		19 30 12.5
KWP				MLR	MLR	
	comp=Z,5μm,23.1s,MS5.8					
KWP	**Kalwaria Pacla**	**74.58**	**2**	*e*P	**P**	**19 30 02.6 -0.2**
	comp=Z,82nm,1.1s,mb5.6					
KWP				LR	LR	
	comp=Z,6μm,19.0s,MS5.9					
KWP	**Kalwaria Pacla**	**74.58**	**2⇑**	*i* P	**P**	**19 30 02.4 -0.3**
KHC	**Kasperske Hory**	**74.60**	**9**	*e*P	**P**	**19 30 03.6 +0.8**
KHC				*e**PP	pP	19 30 06.4 -1.0
KHC				*e*		19 30 14.1
KHC				*e*		19 34 40.1
KHC				*e*S	S	19 39 42.3 +4.7
KHC				MLR	MLR	
	comp=Z,9μm,18.6s,MS6.1					
KHC	**Kasperske Hory**	**74.60**	**9**	*e*P	**P**	**19 30 03.1 +0.2**
	comp=Z,44nm,1.0s,mb5.3					
KHC	**Kasperske Hory**	**74.60**	**9**	*e*P	**P**	**19 30 03.6 +0.8**

KHC *e*pP pP 19 30 06.4 -1.0
KHC *e*PCP PcP 19 30 14.1 -3.1
KHC *e*x x 19 33 04.0
KHC *e*x x 19 34 40.1
KHC *e*S S 19 39 42.3 +4.7
KHC *e*x x 19 44 44.1
KHC *e*x x 19 48 34.6
KHC AMS AMS 20 08 40.0
comp=Z,9μm,18.6s
VRAC Vranov 74.64 7⇑P P 19 30 03.4 +0.3
VRAC Vranov 74.64 7⇑*i*P P 19 30 03.4 +0.3
CDF Champ du Feu 74.65 13 *e*P P 19 30 03.5 +0.4
comp=Z,140nm,1.3s,mb5.4
CDF Champ du Feu 74.65 13 *e*P P 19 30 03.5 +0.4
CDF pmax pmax
comp=Z,70nm,1.3s,mb5.4
CDF Champ du Feu 74.65 13 *e*P P 19 30 03.5 +0.4
comp=Z,70nm,1.3s,mb5.4
THEF They Montfort 74.67 14 *e*P P 19 30 03.5 +0.3
NIE Niedzica 74.72 4 *e*P P 19 30 03.9 +0.4
NIE *e* 19 30 12.9
STHS Stebnicka Huta 74.76 3 *e*P P 19 30 04.8 +1.0
STHS pmax pmax
comp=Z,28nm,0.9s,mb5.2
STHS Stebnicka Huta 74.76 3 *e*P P 19 30 04.8 +1.0
comp=Z,28nm,0.9s,mb5.2
STHS Stebnicka Huta 74.76 3 *e*P P 19 30 04.8 +1.0
ECH Echery 74.83 13 *e*P P 19 30 04.2 0.0
ECH MLR MLR
comp=Z,8μm,19.0s,MS6.0
BFO Black Forest 74.86 12 *e*P P 19 30 04.2 -0.2
BFO pmax pmax
comp=Z,38nm,1.2s,mb5.2
BFO MLR MLR
comp=Z,8μm,19.0s,MS6.0
BFO Black Forest 74.86 12 *e*P P 19 30 04.2 -0.2
comp=Z,38nm,1.2s,mb5.2
BFO LR LR
comp=Z,8μm,19.0s,MS6.0
GEC2 GERESS Array S 74.89 9 *e*P P 19 30 04.5 0.0
comp=Z,26nm,1.1s,mb5.1
GEC2 GERESS Array S 74.89 9 *e*P P 19 30 04.5 0.0
GEC2 pmax pmax
comp=Z,26nm,1.1s,mb5.1
GERES GERESS Array B 74.89 9 P P 19 30 04.7 +0.2
comp=Z,8.1nm,0.7s,mb4.8,baz=353,slow=4.4,SNR=84
GERES PKPPKP 19 57 38.8
comp=Z,0.8nm,0.9s,baz=145,slow=4.9,SNR=6.6
HAU Haudompre 74.93 14 *e*P P 19 30 04.9 +0.1
comp=Z,119nm,1.1s,mb5.4
HAU *e*MLR MLR
comp=Z,13μm,18.8s,MS5.9
HAU Haudompre 74.93 14 *e*P P 19 30 04.9 +0.1
HAU pmax pmax
comp=Z,60nm,1.1s,mb5.4
HAU MLR MLR
comp=Z,13μm,18.8s,MS6.2
HAU Haudompre 74.93 14 *e*P P 19 30 04.9 +0.1
comp=Z,60nm,1.1s,mb5.4
HAU LR LR
comp=Z,13μm,18.8s,MS6.2
LIBD Limburg 74.95 13 *e*P P 19 30 05.1 +0.2
LIKS Likavka 75.04 5 *e*P P 19 30 06.8 +1.4
LIKS pmax pmax
comp=Z,24nm,1.0s,mb5.1
LIKS Likavka 75.04 5 *e*P P 19 30 06.8 +1.4
comp=Z,24nm,1.0s,mb5.1
LIKS Likavka 75.04 5 *e*P P 19 30 06.8 +1.4
HYF Humbligny 75.11 16 *e*P P 19 30 06.2 +0.4
SPAK Spaichingen-Ko 75.14 12 *e*P P 19 30 05.9 -0.1
HINF Hinteralfeld 75.18 13 *e*P P 19 30 06.2 0.0
comp=Z,119nm,1.2s,mb5.4
HINF Hinteralfeld 75.18 13 *e*P P 19 30 06.2 0.0
HINF pmax pmax
comp=Z,60nm,1.2s,mb5.4
HINF Hinteralfeld 75.18 13 *e*P P 19 30 06.2 0.0
comp=Z,60nm,1.2s,mb5.4
MOF Molkenrain 75.18 13 *e*P P 19 30 05.9 -0.3
FELD Feldberg im Sc 75.27 13 *e*P P 19 30 06.1 -0.6
KOLS Kolonicke sedl 75.27 3 *e*P P 19 30 07.0 +0.3
KOLS *e* 19 30 15.2
KOLS *e*S S 19 39 48.9 +3.8
KOLS pmax pmax
comp=Z,32nm,1.4s,mb5.1
KOLS MLR MLR
comp=Z,4μm,22.8s,MS5.7
KOLS Kolonicke sedl 75.27 3 *e*P P 19 30 07.0 +0.3
comp=Z,32nm,1.4s,mb5.1
KOLS *e* 19 30 15.2
KOLS *e*S S 19 39 48.9 +3.8
KOLS *e*SS SS 19 44 58.1 +25
KOLS LR LR
comp=Z,4μm,22.8s,MS5.7
KOLS Kolonicke sedl 75.27 3 *e*P P 19 30 07.0 +0.3
KOLS *e*pP pP 19 30 15.2 +3.9
KOLS *e*S S 19 39 48.9 +3.8
KOLS *e*SS SS 19 44 58.1 +25
MFF Saint Martin d 75.29 18 *e*P P 19 30 07.0 +0.1
comp=Z,273nm,1.4s,mb5.7
MFF Saint Martin d 75.29 18 *e*P P 19 30 07.0 +0.1
MFF pmax pmax
comp=Z,136nm,1.4s,mb5.7
MFF Saint Martin d 75.29 18 *e*P P 19 30 07.0 +0.1
comp=Z,136nm,1.4s,mb5.7
LOR Lormes 75.30 16 *e*P P 19 30 07.0 +0.1
comp=Z,279nm,1.4s,mb5.7
LOR *e*MLR MLR
comp=Z,14μm,18.0s,MS6.0
LOR Lormes 75.30 16 *e*P P 19 30 07.0 +0.1
LOR pmax pmax
comp=Z,140nm,1.4s,mb5.7
LOR MLR MLR
comp=Z,14μm,18.0s,MS6.3
LOR Lormes 75.30 16 *e*P P 19 30 07.0 +0.1
comp=Z,140nm,1.4s,mb5.7
LOR LR LR
comp=Z,14μm,18.0s,MS6.3
FUR Furstenfeldbru 75.34 10 *e*P P 19 30 07.1 -0.1
comp=Z,72nm,1.2s,mb5.5
FUR Furstenfeldbru 75.34 10 *e*P P 19 30 07.1 -0.1
FUR pmax pmax
comp=Z,72nm,1.2s,mb5.5
SSF Saint Saulge 75.45 16 *e*P P 19 30 07.9 +0.1
comp=Z,176nm,1.1s,mb5.6
SSF Saint Saulge 75.45 16 *e*P P 19 30 07.9 +0.1
SSF pmax pmax
comp=Z,88nm,1.1s,mb5.6
SSF Saint Saulge 75.45 16 *e*P P 19 30 07.9 +0.1
comp=Z,88nm,1.1s,mb5.6
KOLL Kolacno 75.47 5 *e*P P 19 30 08.6 +0.7
KOLL Kolacno 75.47 5 *e*P P 19 30 08.6 +0.7
SMOL Smolenice 75.49 6 *e*P P 19 30 09.3 +1.3
SMOL *e* 19 30 18.4
SMOL Smolenice 75.49 6 *e*P P 19 30 09.3 +1.3
SMOL *e*pP pP 19 30 18.4 +5.8
UZH Uzhgorod 75.58 3⇓*i*P P 19 30 08.3 -0.2
UZH *e* 19 30 18.0
UZH *i*S S 19 39 49.0 +0.6
UZH *i* 19 40 31.0
UZH MLR MLR
comp=N,4μm,17.0s,MS5.9
UZH MLR MLR
comp=E,2μm,17.0s,MS5.9
UZH MLR MLR
comp=Z,3μm,17.0s,MS5.7
VYHS Vyhne 75.58 5 *e*P P 19 30 08.7 +0.2
VYHS *e* 19 30 17.7
VYHS *e*S S 19 39 51.2 +2.7
VYHS pmax pmax
comp=Z,18nm,1.1s,mb4.9
VYHS MLR MLR
comp=Z,2μm,22.8s,MS5.4
VYHS Vyhne 75.58 5 *e*P P 19 30 08.7 +0.2
comp=Z,18nm,1.1s,mb4.9
VYHS *e* 19 30 17.7
VYHS *e*S S 19 39 51.2 +2.7
VYHS *e*SS SS 19 45 03.0 +25
VYHS LR LR
comp=Z,2μm,22.8s,MS5.4
VYHS Vyhne 75.58 5 *e*P P 19 30 08.7 +0.2
VYHS *e*pP pP 19 30 17.7 +4.6
VYHS *e*S S 19 39 51.2 +2.7
VYHS *e*SS SS 19 45 03.0 +25
LOMF Lomont 75.64 13 *e*P P 19 30 09.6 +0.8
KECS Kecovo 75.67 4 *e*P P 19 30 09.5 +0.5

KECS *e* 19 30 18.8
KECS pmax pmax
comp=Z,12nm,0.9s,mb4.8
KECS Kecovo 75.67 4 *e*P P 19 30 09.5 +0.5
comp=Z,12nm,0.9s,mb4.8
KECS *e* 19 30 18.8
KECS Kecovo 75.67 4 *e*P P 19 30 09.5 +0.5
KECS *e*pP pP 19 30 18.8 +5.2
AVF Avril sur Loir 75.69 16 *e*P P 19 30 09.0 -0.2
comp=Z,118nm,1.1s,mb5.4
AVF Avril sur Loir 75.69 16 *e*P P 19 30 09.0 -0.2
AVF pmax pmax
comp=Z,59nm,1.1s,mb5.4
AVF Avril sur Loir 75.69 16 *e*P P 19 30 09.0 -0.2
comp=Z,59nm,1.1s,mb5.4
ZST Bratislava 75.78 6 *e*P P 19 30 10.8 +1.1
ZST pmax pmax
comp=Z,19nm,1.1s,mb4.9
ZST MLR MLR
comp=Z,7μm,17.3s,MS6.0
ZST Bratislava 75.78 6 *e*P P 19 30 10.8 +1.1
comp=Z,19nm,1.1s,mb4.9
ZST *e*S S 19 40 04.8 +14
ZST LR LR
comp=Z,7μm,17.3s,MS6.0
ZST Bratislava 75.78 6 *e*P P 19 30 10.8 +1.1
ZST *e*S S 19 40 04.8 +14
TGY Tagaytay City 75.79 274 P P 19 30 10.1 -0.1
comp=Z,60nm,0.3s,mb6.0,baz=176,slow=7.8,SNR=6.2
KSH Kashi 75.81 322 P P 19 30 13.5 +3.5
KSH *e*pP pP 19 30 17.5 +2.9
KSH *e*sP sP 19 30 20.8 +4.5
KSH *e*PcP PcP 19 30 25.5 +3.0
KSH *e*PP PP 19 33 05.5 +6.2
KSH *e*S S 19 39 55.0 +3.7
KSH sS sS 19 40 03.8 +4.9
KSH *e*SKS 19 40 18.8
KSH *e*ScS ScS 19 40 24.5 +1.1
KSH *e*SS SS 19 44 51.5 +9.5
KSH pmax pmax
comp=Z,23nm,0.9s,mb5.1
KSH pmax pmax
comp=Z,1μm,6.8s
KSH LR LR
comp=N,12μm,17.5s,MS6.7
KSH LR LR
comp=E,29μm,19.8s,MS6.7
KSH LR LR
comp=Z,6μm,17.2s,MS6.0
BGF Bois d'Agland 75.84 16 *e*P P 19 30 09.9 -0.1
comp=Z,142nm,1.1s,mb5.5
BGF Bois d'Agland 75.84 16 *e*P P 19 30 09.9 -0.1
BGF pmax pmax
comp=Z,71nm,1.1s,mb5.5
BGF Bois d'Agland 75.84 16 *e*P P 19 30 09.9 -0.1
comp=Z,71nm,1.1s,mb5.5
SMF Signal de Mont 75.91 16 *e*P P 19 30 10.3 -0.1
comp=Z,219nm,1.2s,mb5.7
SMF Signal de Mont 75.91 16 *e*P P 19 30 10.3 -0.1
SMF pmax pmax
comp=Z,110nm,1.2s,mb5.7
SMF Signal de Mont 75.91 16 *e*P P 19 30 10.3 -0.1
comp=Z,110nm,1.2s,mb5.7
RJOB Jochberg 75.91 9 *e*P P 19 30 10.2 -0.2
comp=Z,46nm,0.9s,mb5.4
RJOB *e*S S 19 39 56.0 +3.8
CONA Conrad Observa 75.97 7 *i*P P 19 30 11.2 +0.4
comp=Z,37nm,1.1s,mb5.2,SNR=19
TCF Toulx Ste Croi 76.00 17 *e*P P 19 30 10.8 -0.1
comp=Z,98nm,1.0s,mb5.4
TCF Toulx Ste Croi 76.00 17 *e*P P 19 30 10.8 -0.1
TCF pmax pmax
comp=Z,49nm,1.0s,mb5.4
TCF Toulx Ste Croi 76.00 17 *e*P P 19 30 10.8 -0.1
comp=Z,49nm,1.0s,mb5.4
PAYG Puerto Ayora 76.11 113 PFAKE 19 30 20.0 +8.0
PAYG LR LR
comp=Z,2μm,20.0s,MS5.5
MOTA Moosalm 76.14 11⇓*i*P P 19 30 11.8 +0.1
comp=Z,50nm,1.0s,mb5.4,SNR=17
WATA Walderalm 76.20 10⇑*i*P P 19 30 12.3 +0.3
comp=Z,85nm,1.1s,mb5.6,SNR=15
PSZ Piszkesteto 76.20 4 *e*P P 19 30 12.6 +0.5
PSZ *e* 19 33 00.9
PSZ pmax pmax
comp=Z,39nm,1.1s,mb5.2
PSZ MLR MLR
comp=Z,5μm,20.0s,MS5.8
PSZ Piszkesteto 76.20 4 *e*P P 19 30 12.6 +0.5
comp=Z,39nm,1.1s,mb5.2
PSZ *e*PP PP 19 33 00.9 -1.5
PSZ LR LR
comp=Z,5μm,20.0s,MS5.8
PSZ Piszkesteto 76.20 4⇑*e*P P 19 30 12.6 +0.5
PSZ Piszkesteto 76.20 4⇑*i*P P 19 30 12.6 +0.5
CABF La Chapelle 76.26 14 *e*P P 19 30 12.9 +0.5
comp=Z,80nm,0.9s,mb5.3
CABF La Chapelle 76.26 14 *e*P P 19 30 12.9 +0.5
CABF pmax pmax
comp=Z,40nm,0.9s,mb5.3
CABF La Chapelle 76.26 14 *e*P P 19 30 12.9 +0.5
comp=Z,40nm,0.9s,mb5.3
WTTA Wattenberg 76.27 10⇑*i*P P 19 30 13.1 +0.6
comp=Z,130nm,1.5s,mb5.6,SNR=19
AGO Saint Agoulin 76.38 16 *e*P P 19 30 15.1 +2.0
FETA Feichten 76.42 11⇑*i*P P 19 30 14.0 +0.6
comp=Z,71nm,1.0s,mb5.5,SNR=28
PLDF La Plantade 76.53 16 *e*P P 19 30 15.8 +1.8
BUD Budapest 76.60 5⇑*e*P P 19 30 16.6 +2.3
KMI Kunming 76.61 295 P P 19 30 14.8 +0.1
KMI *e*pP pP 19 30 18.0 -1.4
KMI *e*sP sP 19 30 19.8 -1.2
KMI *e*PcP PcP 19 30 27.5 +1.3
KMI *e*PP PP 19 33 06.5 0.0
KMI *e*S S 19 39 56.0 -4.5
KMI *e*SKS 19 40 20.0
KMI *e*ScS ScS 19 40 27.8 -2.5
KMI *e*SS SS 19 44 56.5 +1.5
KMI pmax pmax
comp=Z,45nm,1.1s,mb5.3
KMI pmax pmax
comp=Z,1μm,6.7s
KMI LR LR
comp=N,10μm,19.4s,MS6.3
KMI LR LR
comp=E,12μm,20.3s,MS6.3
KMI LR LR
comp=Z,8μm,19.0s,MS6.0
BUR08 Bucovina Ar. S 76.61 1 *e*P P 19 30 13.9 -0.5
KBA Koelnbreinsper 76.62 9 *i*P P 19 30 15.0 +0.6
comp=Z,93nm,1.2s,mb5.6,SNR=48
ARSA Arzberg 76.62 7⇑*i*P P 19 30 14.7 +0.3
comp=Z,25nm,1.2s,mb5.0,SNR=10
OG01 Vacheresse 76.62 14 *e*P P 19 30 15.4 +0.9
ANWB Willy Bob 76.64 78 PFAKE 19 30 20.0 +5.0
ANWB LR LR
comp=Z,9μm,21.0s,MS6.0
BURAR Bucovina Array 76.64 1⇑P P 19 30 14.0 -0.5
BURAR Bucovina Array 76.64 1⇑*i*P P 19 30 13.9 -0.6
PYM Petit Puy Mans 76.65 16 *e*P P 19 30 16.1 +1.5
CMLA Cha da Macela 76.69 40 *e*LQ 19 49 46.1
CMLA *e*LR LR 19 56 14.8
CMLA Cha da Macela 76.69 40 PFAKE 19 30 20.0 +5.0
CMLA LR LR
comp=Z,8μm,19.0s,MS6.1
RJF Les Rejaudoux 76.84 18 *e*P P 19 30 15.4 -0.3
comp=Z,110nm,1.0s,mb5.4
RJF *e*MLR MLR
comp=Z,18μm,18.5s,MS6.1
RJF Les Rejaudoux 76.84 18 *e*P P 19 30 15.4 -0.3
RJF pmax pmax
comp=Z,55nm,1.0s,mb5.4
RJF MLR MLR
comp=Z,18μm,18.5s,MS6.4
RJF Les Rejaudoux 76.84 18 *e*P P 19 30 15.4 -0.3
comp=Z,55nm,1.0s,mb5.4
RJF LR LR
comp=Z,18μm,18.5s,MS6.4
ABTA Abfaltersbach 76.87 10⇑*i*P P 19 30 15.5 -0.3
comp=Z,39nm,1.3s,mb5.2,SNR=12
BRMO Bormio 76.92 11 P P 19 30 17.0 +0.8
EMAZ Mazaricos 76.93 26 P P 19 30 19.3 +3.0
comp=Z,452nm,3.4s
COLF Collangettes 76.98 16 *e*P P 19 30 17.2 +0.7
EPON Pontenova 77.00 24 P P 19 30 19.9 +3.2

comp=Z,738nm,5.0s
LFF La Frestale 77.06 18 *e*P P 19 30 17.1 +0.1
comp=Z,243nm,1.1s,mb5.7
LFF La Frestale 77.06 18 *e*P P 19 30 17.1 +0.1
LFF pmax pmax
comp=Z,121nm,1.1s,mb5.7
LFF La Frestale 77.06 18 *e*P P 19 30 17.1 +0.1
comp=Z,121nm,1.1s,mb5.7
IAS Iasi 77.06 359 P P 19 30 16.9 0.0
STS Santiago 77.09 25 P P 19 30 26.6 +9.5
comp=Z,155nm,2.1s,mb5.6
SOKA Soboth 77.15 8⇑*i*P P 19 30 17.5 0.0
comp=Z,58nm,1.2s,mb5.4
RAR Rarotonga 77.18 186 PFAKE 19 30 30.0 +12
RAR LR LR
comp=Z,5μm,19.0s,MS5.9
LBL Lubilhac 77.19 16 *e*P P 19 30 17.5 -0.2
PERS Pernice 77.20 8 *i*P P 19 30 17.8 +0.1
KIS Kishinev 77.24 358 *e*P P 19 30 15.0 -2.9
comp=Z,1μm,10.0s
KIS Kishinev 77.24 358 *e*PP PP 19 33 10.0 -1.0
KIS Kishinev 77.24 358 *e*PS 19 40 50.0
KIS *e*SS SS 19 45 24.0 +21
KIS *e*SSS 19 49 24.0
KIS LRM 20 04 10.0
comp=Z,3μm,17.0s
KIS Kishinev 77.24 358 *e*P P 19 30 15.0 -2.9
KIS *e* 19 33 10.0
KIS *e*PPP 19 35 05.0
KIS *e*S S 19 40 07.0 +0.3
KIS *e* 19 40 22.0
KIS *e*PS 19 40 50.0
KIS pmax pmax
comp=Z,1.0nm,10.0s
KIS MLR MLR
comp=N,3μm,20.0s,MS5.8
KIS MLR MLR
comp=Z,5μm,20.0s,MS5.8
KIS MLR MLR
comp=E,3μm,17.0s,MS5.8
KIS MLR MLR
comp=Z,5μm,20.0s
RSL Roselend 77.24 14 *e*P P 19 30 19.0 +1.0
OBKA Obir 77.28 8 *i*P P 19 30 18.4 +0.3
SNR=48
PTCC Patocco-Chiusa 77.28 9 P P 19 30 17.9 -0.3
comp=Z,15nm,1.0s,mb4.9
MSVF Nonsavu 77.29 207 *e*P P 19 30 18.3 -0.1
comp=Z,28nm,1.1s,mb5.1
MSVF LR LR
comp=Z,5μm,19.0s,MS5.8
CAF Calviac 77.30 17 *e*P P 19 30 18.3 0.0
comp=Z,171nm,1.2s,mb5.5
CAF Calviac 77.30 17 *e*P P 19 30 18.3 0.0
CAF pmax pmax
comp=Z,86nm,1.2s,mb5.6
CAF Calviac 77.30 17 *e*P P 19 30 18.3 0.0
comp=Z,86nm,1.2s,mb5.5
SSB Saint Sauveur 77.35 15 *e*P P 19 30 16.9 -1.7
SSB pmax pmax
comp=Z,28nm,1.1s,mb5.1
SSB MLR MLR
comp=Z,6μm,21.0s,MS5.9
SSB Saint Sauveur 77.35 15 *e*P P 19 30 16.9 -1.6
comp=Z,28nm,1.1s,mb5.1
SSB LR LR
comp=Z,6μm,21.0s,MS5.9
GROS Grobnik 77.40 8 *e*P P 19 30 18.8 0.0
LPL La Plagne 77.42 14 *e*P P 19 30 20.1 +1.1
DRGR 77.42 2 P P 19 30 19.0 0.0
DRGR 77.42 2⇓*i*P P 19 30 17.8 -1.2
LPG La Plagne 77.44 14 *e*P P 19 30 20.5 +1.4
comp=Z,150nm,1.3s,mb5.5
LPG La Plagne 77.44 14 *e*P P 19 30 20.5 +1.4
LPG pmax pmax
comp=Z,75nm,1.3s,mb5.5
LPG La Plagne 77.44 14 *e*P P 19 30 20.5 +1.4
comp=Z,75nm,1.3s,mb5.5
EARI Arriondas 77.46 23 P P 19 30 19.7 +0.5
comp=Z,200nm,2.2s,mb5.7
KOGS Kog 77.47 7 *e*P P 19 30 19.2 0.0
ORO Oropa 77.48 13 P P 19 30 22.0 +2.7
ORO pmax pmax
comp=Z,18nm,0.6s,mb5.2
ORO Oropa 77.48 13 P P 19 30 22.0 +2.7
comp=Z,18nm,0.6s,mb5.2
CADS Cadrg 77.49 9 *i*P P 19 30 18.5 -0.9
CADS *e*S S 19 40 11.9 +2.4
VOY Vojsko 77.70 9 *e*P P 19 30 20.4 -0.1
VOY *e* pP 19 30 22.8 -2.4
VOY *e* 19 30 29.3
EZAM Zamans 77.75 26 P P 19 30 24.1 +3.2
EZAM pmax pmax
comp=Z,63nm,0.9s,mb5.5
EZAM Zamans 77.75 26 P P 19 30 24.1 +3.2
comp=Z,62nm,0.9s,mb5.5
VIVF Saint-Julien-l 77.78 15 *e*P P 19 30 21.2 +0.2
comp=Z,115nm,1.1s,mb5.4
VIVF Saint-Julien-l 77.78 15 *e*P P 19 30 21.2 +0.2
VIVF pmax pmax
comp=Z,58nm,1.1s,mb5.4
VIVF Saint-Julien-l 77.78 15 *e*P P 19 30 21.2 +0.2
comp=Z,58nm,1.1s,mb5.4
PKSM Moragy 77.85 5 P P 19 30 21.5 +0.1
PKSM Moragy 77.85 5⇑*i*P P 19 30 21.0 -0.4
BNI Bardonecchia 77.87 14 *e*P P 19 30 23.2 +1.7
BNI pmax pmax
comp=Z,63nm,1.1s,mb5.5
BNI MLR MLR
comp=Z,12μm,20.0s,MS6.2
BNI Bardonecchia 77.87 14 *e*P P 19 30 23.2 +1.7
comp=Z,63nm,1.1s,mb5.5
BNI LR LR
comp=Z,12μm,20.0s,MS6.2
QIZ Qiongzhong 77.89 286 P P 19 30 21.3 -0.7
QIZ *e*pP pP 19 30 25.8 -0.8
QIZ *e*sP sP 19 30 28.0 -0.3
QIZ *e*PP PP 19 33 22.8 +5.4
QIZ *e*S S 19 40 16.5 +2.0
QIZ *e*sS sS 19 40 24.3 +2.1
QIZ *e*SS SS 19 45 16.3 +1.7
QIZ pmax pmax
comp=Z,32nm,1.7s,mb5.0
QIZ pmax pmax
comp=Z,1μm,14.0s
QIZ LR LR
comp=N,4μm,16.6s
QIZ LR LR
comp=Z,6μm,16.3s,MS6.0
QIZ Qiongzhong 77.89 286 *e*P P 19 30 20.1 -1.9
comp=Z,132nm,1.5s,mb5.6
QIZ LR LR
comp=Z,4μm,19.0s,MS5.8
ERUA La Rua 77.89 25 P P 19 30 22.6 +0.9
ERUA pmax pmax
comp=Z,78nm,1.1s,mb5.5
ERUA La Rua 77.89 25 P P 19 30 22.6 +0.9
comp=Z,78nm,1.1s,mb5.5
ORIF Oris-en-Rattie 77.89 15 *e*P P 19 30 22.0 +0.4
comp=Z,32nm,0.8s,mb5.0
ORIF *e*MLR MLR
comp=Z,10μm,19.5s,MS5.9
ORIF Oris-en-Rattie 77.89 15 *e*P P 19 30 22.0 +0.4
ORIF pmax pmax
comp=Z,16nm,0.8s,mb5.0
ORIF Oris-en-Rattie 77.89 15 *e*P P 19 30 22.0 +0.4
comp=Z,16nm,0.8s,mb5.0
ELAN Lanestosa 77.91 22 P P 19 30 23.5 +1.7
comp=Z,138nm,1.3s,mb5.7
TRI Trieste 78.01 9 PFAKE 19 30 30.0 +7.7
TRI LR LR
comp=Z,4μm,19.0s,MS5.8
ELOB Lobios 78.17 25 P P 19 30 25.9 +2.7
comp=Z,391nm,3.2s
MBDF Montbardon 78.20 14 *e*P P 19 30 24.4 +1.0
comp=Z,80nm,1.0s,mb5.3
MBDF Montbardon 78.20 14 *e*P P 19 30 24.4 +1.0
MBDF pmax pmax
comp=Z,40nm,1.0s,mb5.3
MBDF Montbardon 78.20 14 *e*P P 19 30 24.4 +1.0
comp=Z,40nm,1.0s,mb5.3
GOF Gofitskoye 78.21 348⇑*i*P P 19 30 16.1 -7.3
GOF *e*S S 19 40 25.0 +7.7
GOF pmax pmax
comp=Z,200nm,1.2s,mb5.9
EALK Alkurruntz 78.31 20 P P 19 30 28.1 +4.1

comp=Z,238nm,2.4s,mb5.7
PCAB Cabril 78.33 25 *e*P **P 19 30 25.1 +1.0**
comp=Z,43nm,1.8s,mb5.1
PCAB *e*pP pP 19 30 27.7 -1.0
PCAB Cabril 78.33 25 *e*PcP PcP 19 30 35.3 +1.9
BOJS Bojanci 78.34 8 *i* P **P 19 30 23.8 -0.3**
BOJS *e*S S 19 40 22.1 +3.5
LSA Lhasa 78.34 306 P **P 19 30 25.8 +1.4**
LSA S S 19 40 18.0 -1.2
LSA pmax pmax
comp=Z,30nm,1.0s,mb5.2
LSA pmax pmax
comp=Z,1μm,14.0s
LSA LR LR
comp=N,14μm,17.0s,MS6.5
LSA LR LR
comp=E,15μm,17.0s,MS6.5
LSA LR LR
comp=Z,32μm,20.0s,MS6.7
LSA Lhasa 78.34 306 *e*P **P 19 30 25.7 +1.3**
LSA pmax pmax
comp=Z,79nm,0.9s,mb5.6
LSA MLR MLR
comp=Z,30μm,22.0s,MS6.6
LSA Lhasa 78.34 306 *e*P **P 19 30 25.7 +1.3**
comp=Z,78nm,0.9s,mb5.6
LSA LR LR
comp=Z,30μm,22.0s,MS6.6
ELIZ Elizondo 78.35 20 P **P 19 30 25.2 +1.0**
ELIZ pmax pmax
comp=Z,18nm,1.0s,mb5.0
ELIZ Elizondo 78.35 20 P **P 19 30 25.2 +1.0**
comp=Z,18nm,1.0s,mb5.0
VRI Vrincioaia 78.39 360 P **P 19 30 24.9 +0.5**
VRI Vrincioaia 78.39 360 ⇑*i*P **P 19 30 24.2 -0.2**
PLOR Plostina 78.41 360 P **P 19 30 25.2 +0.7**
ECAL Calabor 78.41 24 P **P 19 30 26.6 +2.0**
comp=Z,297nm,2.9s,mb5.7
LASF Ste Croix 78.42 16 *e*P **P 19 30 25.0 +0.5**
comp=Z,100nm,1.3s,mb5.3
SJPF Ste Jean 78.46 20 *e*P **P 19 30 25.3 +0.5**
comp=Z,75nm,1.4s,mb5.1
SJPF Ste Jean 78.46 20 *e*P **P 19 30 25.3 +0.5**
SJPF pmax pmax
comp=Z,38nm,1.4s,mb5.1
SJPF Ste Jean 78.46 20 *e*P **P 19 30 25.3 +0.5**
comp=Z,38nm,1.4s,mb5.1
BOB Bobbio (Coli) 78.50 12 P **P 19 30 25.3 +0.3**
PBRG Braganca 78.54 25 *e*P **P 19 30 26.0 +0.7**
comp=Z,41nm,1.4s,mb5.2
PBRG *e*pP pP 19 30 29.2 -0.7
PBRG Braganca 78.54 25 *e*PcP PcP 19 30 36.2 +1.9
BZS Buzias 78.57 3 P **P 19 30 25.5 +0.1**
BZS Buzias 78.57 3 ⇑*i*P **P 19 30 25.0 -0.3**
ECRI Cripan 78.69 21 P **P 19 30 26.7 +0.6**
ECRI pmax pmax
comp=Z,32nm,1.3s,mb5.1
ECRI Cripan 78.69 21 P **P 19 30 26.7 +0.6**
comp=Z,32nm,1.3s,mb5.1
MLR Muntele Rosu 78.77 0 ⇑P **P 19 30 27.4 +1.0**
MLR Muntele Rosu 78.77 0 ⇑*i*P **P 19 30 27.4 +1.0**
SMRF Simiane la Rot 78.77 15 *e*P **P 19 30 27.4 +0.9**
comp=Z,102nm,1.0s,mb5.4
SMRF Simiane la Rot 78.77 15 *e*P **P 19 30 27.4 +0.9**
comp=Z,102nm,1.0s,mb5.7
ETSF Etsaut 78.80 20 *e*P **P 19 30 27.2 +0.5**
comp=Z,144nm,0.9s,mb5.6
ETSF Etsaut 78.80 20 *e*P **P 19 30 27.2 +0.5**
ETSF pmax pmax
comp=Z,72nm,0.9s,mb5.6
ETSF Etsaut 78.80 20 *e*P **P 19 30 27.2 +0.5**
comp=Z,72nm,0.9s,mb5.6
PVRL Vila Real 78.81 25 *e*P **P 19 30 27.7 +0.9**
comp=Z,74nm,1.3s,mb5.5
PVRL *e*pP pP 19 30 30.9 -0.5
PVRL Vila Real 78.81 25 *e*PcP PcP 19 30 38.1 +2.6
GZR Gura Zlata 78.82 2 ⇓P **P 19 30 27.0 +0.2**
GZR Gura Zlata 78.82 2 ⇓*i*P **P 19 30 27.0 +0.2**
EPF Esparros 78.83 19 *e*P **P 19 30 26.3 -0.6**
comp=Z,70nm,1.1s,mb5.2
EPF Esparros 78.83 19 *e*P **P 19 30 26.3 -0.6**
EPF pmax pmax
comp=Z,35nm,1.1s,mb5.2
EPF Esparros 78.83 19 *e*P **P 19 30 26.3 -0.6**
comp=Z,35nm,1.1s,mb5.2
MTLF Montolieu 78.86 18 *e*P **P 19 30 27.1 +0.1**
comp=Z,75nm,1.0s,mb5.3
MTLF Montolieu 78.86 18 *e*P **P 19 30 27.1 +0.1**
MTLF pmax pmax
comp=Z,38nm,1.0s,mb5.3
MTLF Montolieu 78.86 18 *e*P **P 19 30 27.1 +0.1**
comp=Z,38nm,1.0s,mb5.3
SDV Santo Domingo 78.88 91 *e*P **P 19 30 25.7 -1.7**
comp=Z,131nm,2.2s,mb5.5
SDV LR LR
comp=Z,3μm,20.0s,MS5.6
VIEF Viey 78.92 19 *e*P **P 19 30 28.3 +1.0**
DAV Davao City (W) 78.94 266 LR LR 20 01 39.5
comp=Z,11μm,22.0s,MS6.1,baz=258,slow=33
DAV Davao City (W) 78.94 266 PFAKE 19 30 40.0 +12
DAV LR LR
comp=Z,10μm,22.0s,MS6.1
TOUF Mont Tournerai 78.97 14 *e*P **P 19 30 28.5 +0.9**
AUTN L'Aution 79.01 14 *e*P **P 19 30 27.7 -0.1**
ANN Anapa 79.01 352 *e*P **P 19 30 26.0 -1.8**
ANN *e**PP pP 19 30 32.5 +0.1
ANN *e* 19 33 21.2
ANN *e*PPP 19 35 24.4
ANN *e*S S 19 40 25.8 -0.1
ANN *e*SS SS 19 45 32.5 +2.6
ANN *e*SSS 19 48 50.3
ANN pmax pmax
comp=Z,43nm,1.4s,mb5.2
ANN pmax pmax
comp=Z,859nm,9.1s
SAOF Saorge 79.04 14 *e*P **P 19 30 27.2 -0.8**
MLS Moulis 79.04 18 *e*P **P 19 30 25.7 -2.3**
TLCR 79.05 358 ⇑P **P 19 30 27.5 -0.5**
TLCR 79.05 358 ⇑*i*P **P 19 30 27.5 -0.5**
RESF Ens 79.05 19 *e*P **P 19 30 29.4 +1.3**
CFR Carcaliu 79.07 359 ⇑P **P 19 30 28.4 +0.3**
CFR Carcaliu 79.07 359 ⇑*i*P **P 19 30 28.4 +0.3**
MVO Moncorvo 79.08 25 *e*P **P 19 30 28.9 +0.6**
comp=Z,113nm,1.3s,mb5.6
MVO *e*pP pP 19 30 32.4 -0.5
MVO Moncorvo 79.08 25 *e*PcP PcP 19 30 39.4 +2.7
MVO *e*S S 19 40 32.5 +5.7
MVO *e*LQ 19 58 12.8
MVO *e*LR LR 20 01 39.3
comp=Z,20μm,18.8s
SIM Simferopol' 79.09 354 *e*P **P 19 30 29.6 +1.4**
SIM *e* 19 33 27.5
SIM *e*S S 19 40 32.0 +5.3
SIM pmax pmax
comp=Z,154nm,4.9s
LUCF Luceram 79.10 14 *e*P **P 19 30 29.0 +0.7**
EBIE Bielsa 79.13 19 P **P 19 30 30.0 +1.5**
comp=Z,138nm,1.6s,mb5.6
SBF Sospel 79.14 14 *e*P **P 19 30 28.6 +0.1**
comp=Z,182nm,1.0s,mb5.7
SBF Sospel 79.14 14 *e*P **P 19 30 28.6 +0.1**
SBF pmax pmax
comp=Z,91nm,1.0s,mb5.7
SBF Sospel 79.14 14 *e*P **P 19 30 28.6 +0.1**
comp=Z,91nm,1.0s,mb5.7
VLC Villacollemand 79.21 12 *e*P **P 19 30 26.9 -2.0**
comp=Z,64nm,1.0s,mb5.5
VLC LR LR
comp=Z,9μm,20.0s,MS6.1
FNVD Fontana Vidola 79.28 11 P **P 19 30 29.9 +0.6**
PVIS Viseu 79.30 26 *e*P **P 19 30 30.7 +1.2**
comp=Z,85nm,1.4s,mb5.5
PVIS *e*pP pP 19 30 33.4 -0.7
PVIS Viseu 79.30 26 *e*PcP PcP 19 30 40.3 +2.6
BDI Bagni Di Lucca 79.33 11 P **P 19 30 30.3 +0.7**
FRF La Foret Royal 79.33 14 *e*P **P 19 30 29.6 0.0**
comp=Z,145nm,1.3s,mb5.5
FRF La Foret Royal 79.33 14 *e*P **P 19 30 29.6 0.0**
FRF pmax pmax
comp=Z,73nm,1.3s,mb5.5
FRF La Foret Royal 79.33 14 *e*P **P 19 30 29.6 0.0**
comp=Z,73nm,1.3s,mb5.5
KIV Kislovodsk 79.33 348 *e*P **P 19 30 29.2 -0.4**
KIV pmax pmax
comp=Z,96nm,1.7s,mb5.5
KIV Kislovodsk 79.33 348 *e*P **P 19 30 29.4 -0.1**
comp=Z,49nm,0.9s,mb5.4
KIV LR LR
comp=Z,4μm,19.0s,MS5.8
KIV Kislovodsk 79.33 348 P **P 19 30 30.8 +1.2**
SNR=10
KIV P 19 30 30.8
SNR=10
FDF Fort de France 79.38 80 PFAKE 19 30 40.0 +10
FDF LR LR
comp=Z,7μm,20.0s,MS6.0
LMR La Mourre 79.53 14 *e*P **P 19 30 30.9 +0.2**
comp=Z,162nm,1.2s,mb5.5
LMR La Mourre 79.53 14 *e*P **P 19 30 30.9 +0.2**
LMR pmax pmax
comp=Z,81nm,1.2s,mb5.5
LMR La Mourre 79.53 14 *e*P **P 19 30 30.9 +0.2**
comp=Z,81nm,1.2s,mb5.5
HARR Harsova 79.56 359 ⇑P **P 19 30 31.1 +0.3**
HARR Harsova 79.56 359 ⇑*i*P **P 19 30 31.1 +0.3**
MAK Makhachkala 79.66 344 *e*P **P 19 30 28.6 -2.8**
MAK *e*PPP 19 35 23.5
MAK *e*S S 19 40 32.8 -0.1
MAK pmax pmax
comp=N,698nm,1.6s
MAK pmax pmax
comp=Z,897nm,1.7s,mb6.4
MAK pmax pmax
comp=E,766nm,1.9s
MAK pmax pmax
comp=Z,1μm,1.6s,mb6.6
MAK smax
comp=E,853nm,2.3s
MAK smax
comp=N,1μm,2.7s
MTE Manteigas 79.68 26 *e*P **P 19 30 32.5 +0.9**
comp=N,110nm,1.3s,mb5.6
MTE *e*pP pP 19 30 35.5 -0.7
MTE Manteigas 79.68 26 *e*PcP PcP 19 30 42.5 +3.2
MTE *e*S S 19 40 36.4 +3.2
MTE *i* P 19 45 56.2
MTE *e*LQ 19 57 36.0
MTE *e*LR LR 20 03 28.9
comp=N,15μm,20.0s
MTE Manteigas 79.68 26 *e*P **P 19 30 32.2 +0.7**
comp=N,77nm,1.0s,mb5.6
MTE LR LR
comp=Z,17μm,20.0s,MS6.4
TIRR Tirgusor 79.78 358 *e*P **P 19 30 30.1 -1.9**
TIRR *e* 19 30 39.0
TIRR pmax pmax
comp=Z,33nm,1.0s,mb5.2
TIRR Tirgusor 79.78 358 *e*P **P 19 30 30.1 -2.0**
comp=Z,33nm,1.0s,mb5.2
TIRR *e* 19 30 39.0
TIRR Tirgusor 79.78 358 ⇑*i*P **P 19 30 31.7 -0.3**
ESAC San Caprasio 79.95 20 P **P 19 30 35.4 +2.4**
comp=Z,244nm,1.3s,mb6.0
CSNT Castellina Chi 79.99 11 P **P 19 30 28.2 -4.9**
SOC Sochi 80.02 350 *e*P **P 19 30 32.7 -0.6**
SOC *e**PP pP 19 30 34.7 -3.3
SOC *e*S S 19 40 39.8 +3.2
SOC *e**SS sS 19 40 49.0 +4.7
SOC *e* 19 41 21.7
SOC *e*SSS 19 49 16.6
SOC pmax pmax
comp=Z,60nm,1.5s,mb5.3
SOC pmax pmax
comp=Z,705nm,7.4s
DIVS Divibare 80.02 5 P **P 19 30 33.8 +0.5**
BADI Badiali 80.05 10 P **P 19 30 33.8 +0.3**
ROSC El Rosal 80.12 96 P **P 19 30 34.3 0.0**
comp=Z,3.4nm,0.3s,mb4.7,baz=92,slow=22,SNR=2.3
PCBR Castelo Branco 80.23 26 *e*P **P 19 30 34.9 +0.4**
comp=Z,58nm,1.6s,mb5.3
PCBR *e*pP pP 19 30 38.0 -1.2
PCBR Castelo Branco 80.23 26 *e*PcP PcP 19 30 45.1 +3.4
GUD Guadarrama 80.23 23 P **P 19 30 34.6 +0.1**
GUD pmax pmax
comp=Z,45nm,1.0s,mb5.3
GUD Guadarrama 80.23 23 P **P 19 30 34.6 +0.1**
comp=Z,45nm,1.0s,mb5.3
ZEI Tsey 80.36 347 *e*P **P 19 30 34.2 -0.9**
ZEI pmax pmax
comp=Z,96nm,1.6s,mb5.5
SNTG Esanatoglia 80.37 10 P **P 19 30 35.3 +0.1**
comp=Z,59nm,1.0s,mb5.5
ETOR Torete 80.51 21 P **P 19 30 35.9 -0.1**
ETOR pmax pmax
comp=Z,33nm,1.3s,mb5.1
ETOR Torete 80.51 21 P **P 19 30 35.9 -0.1**
comp=Z,33nm,1.3s,mb5.1
RKT Rikitea 80.52 162 *e*PP PP 19 33 36.8 -3.1
comp=Z,487nm,26.2s
RKT *e*S S 19 40 35.0 -7.0
comp=Z,6μm,26.5s
RKT *e*SS SS 19 45 48.9 -6.1
comp=Z,1μm,26.5s
RKT *e*LQ 19 52 13.4
comp=Z,2μm,29.2s
RKT *e*LR LR 19 55 36.1
comp=Z,6μm,29.2s,baz=348
ONI Oni 80.59 347 P **P 19 30 36.4 0.0**
ONI S S 19 40 48.7 +6.1
EPOB Poblet 80.60 19 P **P 19 30 36.5 0.0**
comp=Z,432nm,3.2s
PMAFR Mafra 80.62 27 *e*P **P 19 30 37.2 +0.6**
comp=Z,232nm,1.1s,mb6.0
PMAFR *e*pP pP 19 30 40.2 -1.1
PMAFR Mafra 80.62 27 *e*PcP PcP 19 30 47.6 +4.2
PMAFR *e*S S 19 40 46.3 +3.3
PMAFR *e*LQ 19 57 00.0
PMAFR *e*LR LR 20 00 05.8
comp=Z,9μm,22.0s
PGF Pioggiola 80.64 13 *e*P **P 19 30 36.8 +0.1**
comp=Z,114nm,1.1s,mb5.4
PGF Pioggiola 80.64 13 *e*P **P 19 30 36.8 +0.1**
PGF pmax pmax
comp=Z,57nm,1.1s,mb5.4
PGF Pioggiola 80.64 13 *e*P **P 19 30 36.8 +0.1**
comp=Z,57nm,1.1s,mb5.4
PMRV Marv??o 80.64 26 *e*P **P 19 30 39.6 +2.9**
comp=Z,50nm,1.5s,mb5.2
PMRV *e*S S 19 40 46.1 +2.8
PMRV *e*LR LR 20 01 54.8
comp=Z,12μm,17.6s
ERTA Horta de San J 80.84 20 P **P 19 30 38.5 +0.7**
comp=Z,371nm,2.4s,mb5.9
LIS Lisbon 80.88 27 *e*P **P 19 30 38.7 +0.7**
LIS *e*S S 19 40 47.0 +1.2
LIS *e*S S 19 40 47.5 +1.7
LIS AMS AMS 20 04 21.6
comp=Z,9μm,20.7s,MS6.1
LIS Lisbon 80.88 27 *e*P **P 19 30 38.7 +0.7**
LIS *e*S S 19 40 47.0 +1.3
PRD Provadia 81.05 359 *i* P **P 19 30 37.5 -1.4**
GOR Gori 81.10 347 P **P 19 30 42.4 +3.3**
PESTR Estremoz 81.12 26 *e*P **P 19 30 40.0 +0.7**
comp=Z,43nm,1.3s,mb5.2
PESTR *e*pP pP 19 30 42.6 -1.4
PESTR Estremoz 81.12 26 *e*PcP PcP 19 30 49.5 +3.8
PESTR *e*S S 19 40 51.0 +2.7
PESTR *e*LQ 19 57 36.0
PESTR *e*LR LR 20 00 53.4
comp=Z,13μm,19.4s
ESBB Sonseca Array 81.20 23 P **P 19 30 39.9 +0.2**
comp=Z,300nm,2.6s,mb5.8
ESDC Sonseca Array 81.20 23 P **P 19 30 40.0 +0.3**
comp=Z,22nm,0.8s,mb5.1,baz=342,slow=5.2,SNR=69
ESDC PKKPbc PKKPbc 19 49 20.8 +8.3
comp=Z,0.6nm,0.8s,baz=118,slow=2.2,SNR=4.7
ESDC LR LR 20 08 53.5
comp=Z,10μm,18.9s,MS6.2,baz=340,slow=37
ESDC Sonseca Array 81.20 23 P **P 19 30 39.8 +0.1**
comp=Z,42nm,0.9s,mb5.4
ESLA Sonseca Array 81.20 23 *e*P **P 19 30 39.9 +0.2**
ESLA LR LR
comp=Z,62μm,19.0s,MS7.0
GRGR Grenville 81.23 81 PFAKE 19 30 50.0 +10
GRGR LR LR
comp=Z,5μm,19.0s,MS5.9
PAB San Pablo 81.24 23 *e*P **P 19 30 39.4 -0.5**
PAB pmax pmax
comp=Z,29nm,1.1s,mb5.1
PAB MLR MLR
comp=Z,11μm,19.0s,MS6.2
PAB San Pablo 81.24 23 *e*P **P 19 30 39.4 -0.6**
comp=Z,29nm,1.1s,mb5.1
PAB LR LR
comp=Z,11μm,19.0s,MS6.2
EMOS Mosqueruela 81.26 20 P **P 19 30 42.0 +2.0**
comp=Z,465nm,3.5s
TBLG Delisi 81.27 346 *e*P **P 19 30 40.3 +0.3**
TBLG *e*S S 19 41 00.4 +11
TBLG Delisi 81.27 346 P **P 19 30 40.3 +0.3**
TBLG S S 19 41 00.4 +11
MTA Mtatsminda 81.30 346 P **P 19 30 40.3 +0.1**
MTA S S 19 40 54.9 +4.9
AQU L'Aquila 81.31 10 *e*P **P 19 30 41.2 +1.0**
AQU pmax pmax
comp=Z,75nm,1.2s,mb5.5
AQU MLR MLR
comp=Z,5μm,20.0s,MS5.8
AQU L'Aquila 81.31 10 *e*P **P 19 30 41.2 +1.0**
comp=Z,75nm,1.2s,mb5.5
AQU LR LR
comp=Z,5μm,20.0s,MS5.8
AQU L'Aquila 81.31 10 ⇑*i*P **P 19 30 50.4 +10**
EVOP Sao Brissos 81.31 27 *e*P **P 19 30 40.8 +0.5**
EVOP *e*S S 19 40 51.7 +1.3
EVOP *e*S S 19 40 51.7 +1.4
EVOP AMS AMS 20 07 33.2
comp=Z,13μm,19.9s,MS6.3
EVOP Sao Brissos 81.31 27 *e*P **P 19 30 40.8 +0.5**
EVOP *e*S S 19 40 51.7 +1.4
EVO Evora 81.34 26 *e*P **P 19 30 39.3 -1.2**
comp=Z,69nm,1.1s,mb5.2
EVO *e*MLR MLR
comp=Z,17μm,19.5s,MS6.1
EVO Evora 81.34 26 *e*P **P 19 30 40.8 +0.3**
comp=Z,45nm,1.7s,mb5.1
EVO Evora 81.34 26 *e*PcP PcP 19 30 50.8 +4.2
FIAM Fiamignano 81.36 10 P **P 19 30 40.6 +0.1**
EBAD Badajoz 81.37 26 P **P 19 30 43.4 +2.8**
comp=Z,252nm,2.6s,mb5.7
DGRG David-gareji 81.45 346 P **P 19 30 43.9 +2.9**
DGRG S S 19 40 58.1 +6.4
SHL Shillong 81.53 304 *e*P **P 19 30 42.0 +0.3**
SHL *e*S S 19 40 54.0 +1.1
BBGH Gun Hill 81.56 79 PFAKE 19 30 50.0 +8.1
BBGH LR LR
comp=Z,12μm,20.0s,MS6.3
VTS Vitosha 81.63 2 *i* P **P 19 30 39.3 -2.7**
OTAV Otavalo 81.66 102 *e*P **P 19 30 42.2 -0.2**
comp=Z,257nm,2.4s,mb5.7
OTAV LR LR
comp=Z,4μm,20.0s,MS5.7
CERT Cerreto 81.67 10 P **P 19 30 41.5 -0.6**
PBEJ Beja 81.85 27 *e*P **P 19 30 43.5 +0.3**
comp=Z,34nm,1.3s,mb5.1
PBEJ Beja 81.85 27 *e*PcP PcP 19 30 54.1 +5.2
ECHE Chera 81.91 21 P **P 19 30 45.6 +2.1**
ECHE pmax pmax
comp=Z,59nm,1.5s,mb5.3
ECHE Chera 81.91 21 P **P 19 30 45.6 +2.1**
comp=Z,59nm,1.5s,mb5.3
PBAR Barrancos 81.92 26 *e*P **P 19 30 44.1 +0.6**
comp=Z,76nm,1.4s,mb5.4
PBAR *e*pP pP 19 30 47.0 -1.2
PBAR Barrancos 81.92 26 *e*PcP PcP 19 30 54.2 +5.1
PBAR *e*S S 19 41 01.3 +4.7
PBAR *e*LR LR 20 01 16.5
comp=Z,14μm,18.4s
KLP Kalpa 82.12 317 *e*P **P 19 30 44.8 +0.1**
KLP AMb AMB 19 30 49.1
comp=Z,88nm,1.4s,mb5.5
PLD Plovdiv 82.14 1 *i* P **P 19 30 43.6 -1.1**
PCVE Castro Verde 82.18 27 *e*P **P 19 30 45.7 +0.8**
comp=Z,34nm,1.4s,mb5.1
PCVE *e*pP pP 19 30 49.4 -0.2
PCVE Castro Verde 82.18 27 *e*PcP PcP 19 30 56.4 +6.1
PCVE *e*S S 19 41 03.3 +4.0
PCVE *e*LQ 19 55 40.2
PCVE *e*LR LR 20 00 49.0
comp=Z,10μm,19.5s
SKO Skopje 82.20 4 *e*P **P 19 30 45.3 +0.4**
GUN Gumba 82.21 310 *e*P **P 19 30 45.9 +0.7**
comp=Z,428nm,1.1s,mb6.3
THN Thein Dam 82.26 320 *e*P **P 19 30 44.1 -1.3**
MORF Marmelete 82.33 27 *e*P **P 19 30 45.8 +0.1**
comp=Z,80nm,1.5s,mb5.4
MORF *e*S S 19 41 05.0 +4.1
MORF *e*LQ 19 57 37.2
MORF *e*LR LR 20 03 27.1
comp=Z,7μm,17.3s
MORF Marmelete 82.33 27 *e*P **P 19 30 46.2 +0.5**
MORF *e*S S 19 41 02.6 +1.7
EMIN Mina Concepcio 82.39 26 P **P 19 30 46.2 +0.2**
comp=Z,254nm,2.3s,mb5.7
EGRO El Granado 82.42 26 P **P 19 30 47.6 +1.4**
comp=Z,354nm,2.9s,mb5.8
PFVI Vila Bisbo 82.45 28 *e*P **P 19 30 46.8 +0.4**
comp=Z,81nm,1.1s,mb5.6
PFVI Vila Bisbo 82.45 28 *e*PcP PcP 19 30 57.2 +5.7
PFVI *e*S S 19 41 04.4 +2.3
PFVI *e*LQ 20 00 47.6
PFVI *e*LR LR 20 03 27.4
comp=Z,8μm,16.9s
ABKT Ailbek 82.47 335 P **P 19 30 47.2 +0.8**
comp=Z,216nm,1.3s,mb5.9,SNR=21
CHRT Chiangrai 82.48 294 P **P 19 30 46.0 -0.7**
comp=Z,368nm,0.7s,mb6.4
PVAQ Vaqueiros 82.48 27 *e*P **P 19 30 46.7 +0.2**
comp=Z,73nm,1.4s,mb5.4
PVAQ Vaqueiros 82.48 27 *e*PcP PcP 19 30 57.2 +5.6
PVAQ *e*S S 19 41 07.5 +5.1
PVAQ *e*LR LR 20 00 07.5
comp=Z,10μm,21.1s
STIP Stip 82.50 3 *e*P **P 19 30 45.7 -0.8**
EADA Adamuz 82.51 24 P **P 19 30 47.2 +0.6**
comp=Z,185nm,1.4s,mb5.9
EVIA Vianos 82.51 22 P **P 19 30 46.7 +0.1**
EVIA pmax pmax
comp=Z,89nm,1.2s,mb5.7
EVIA Vianos 82.51 22 P **P 19 30 46.7 +0.1**
comp=Z,89nm,1.2s,mb5.7
RZN Rozhen 82.56 1 *i* P **P 19 30 46.6 -0.2**
KKN Kakani 82.58 310 *e*P **P 19 30 47.6 +0.5**
comp=Z,453nm,1.3s,mb6.3
PBDV Barranco-do-Ve 82.58 27 *e*P **P 19 30 44.5 -2.5**
comp=Z,65nm,1.3s,mb5.5
PBDV *e*pP pP 19 30 50.6 -1.1
PBDV Barranco-do-Ve 82.58 27 *e*PcP PcP 19 30 58.2 +6.2
PBDV *e*S S 19 41 09.5 +6.1
PBDV *e*LQ 19 57 58.7
PBDV *e*LR LR 20 01 06.6
comp=Z,11μm,19.7s
KBL Kabul 82.61 326 *e*P **P 19 30 46.1 -1.1**
KBL pmax pmax
comp=Z,34nm,0.9s,mb5.4
KBL Kabul 82.61 326 *e*P **P 19 30 46.1 -1.1**
comp=Z,34nm,0.9s,mb5.4
SDNR Sundarnagar 82.64 318 *e*x x 19 30 50.1
MMB Musomiste 82.65 2 *i* P **P 19 30 47.2 -0.1**
EBAN Banos Encina 82.69 23 P **P 19 30 48.0 +0.4**
EBAN pmax pmax
comp=Z,81nm,1.1s,mb5.7
EBAN Banos Encina 82.69 23 P **P 19 30 48.0 +0.4**
comp=Z,81nm,1.1s,mb5.7
ETOB Tobarra 82.70 22 P **P 19 30 48.7 +1.0**
comp=Z,806nm,3.6s
PKI Pulchoki 82.71 310 *e*P **P 19 30 48.3 +0.5**
comp=Z,320nm,1.2s,mb6.2
PKIN Phulchoki 82.71 310 *e*P **P 19 30 48.1 +0.3**
TIR Tirane 82.76 5 PFAKE 19 31 00.0 +12
TIR LR LR
comp=Z,12μm,19.0s,MS6.3
KRUS Krusevo 82.80 4 *e*P **P 19 30 47.0 -1.0**
DMN Daman 82.81 310 *e*P **P 19 30 49.0 +0.6**
comp=Z,307nm,1.0s,mb6.3
GNI Garni 82.82 346 *c*e*P **P 19 30 49.3 +1.1**
GNI pmax pmax
comp=Z,71nm,1.7s
GNI MLR MLR
comp=Z,3μm,22.0s
GNI Garni 82.82 346 *e*P **P 19 30 49.1 +0.9**
comp=Z,63nm,1.1s,mb5.6
GNI LR LR
comp=Z,5μm,20.0s,MS5.9
GNI Garni 82.82 346 P **P 19 30 50.6 +2.4**

SNR=8.1
GNI P 19 30 50.6
SNR=8.1
VAY Valandovo 82.89 3 *e*P **P 19 30 48.0 -0.5**
VAY Valandovo 82.89 3 P **P 19 30 44.6 -3.9**
EBEN Beniarda 82.91 21 P **P 19 30 51.2 +2.4**
comp=Z,119nm,1.4s,mb5.7
BHK Bhakra 82.92 319 *ex* x 19 30 46.0
OHR Ohrid 83.04 4 *e*P **P 19 30 47.9 -1.5**
KNT Kendrikon 83.06 3 P **P 19 30 50.3 +0.9**
SRS Serrai 83.11 2 P **P 19 30 49.6 -0.1**
EQES Quesada 83.19 23 P **P 19 30 54.0 +3.8**
comp=Z,583nm,4.6s
KAVA Kavala 83.25 1 P **P 19 30 50.5 +0.1**
DDI Dehra Dun 83.28 317 *e*P **P 19 30 48.9 -1.9**
DDI *ex* x 19 34 04.0
EHUE Huescar 83.28 23 P **P 19 30 51.1 +0.5**
EHUE pmax pmax
comp=Z,37nm,1.1s,mb5.3
EHUE Huescar 83.28 23 P **P 19 30 51.1 +0.5**
comp=Z,37nm,1.1s,mb5.3
LTRZ Laterza 83.32 7 P **P 19 30 50.6 -0.2**
ALN Alexandroupoli 83.36 0 P **P 19 30 50.7 -0.3**
FNA Florina 83.39 4 P **P 19 30 54.1 +3.0**
SOH Sokhos 83.41 2 P **P 19 30 51.3 +0.1**
ESPR Espera 83.45 25 P **P 19 30 52.0 +0.4**
comp=Z,139nm,1.1s,mb5.9
EMUR La Murta 83.54 22 P **P 19 30 52.1 +0.1**
comp=Z,326nm,3.1s
ELOJ Sierra Loja 83.58 24 P **P 19 30 52.5 +0.3**
ELOJ pmax pmax
comp=Z,74nm,1.4s,mb5.6
ELOJ Sierra Loja 83.58 24 P **P 19 30 52.5 +0.3**
comp=Z,74nm,1.4s,mb5.6
ECOG Cogollos-Vega 83.59 23 P **P 19 30 52.9 +0.7**
ECOG pmax pmax
comp=Z,40nm,1.1s,mb5.5
ECOG Cogollos-Vega 83.59 23 P **P 19 30 52.9 +0.7**
comp=Z,40nm,1.1s,mb5.5
VSL Villasalto 83.69 13 PFAKE 19 31 00.0 +7.3
VSL LR LR
comp=Z,6μm,20.0s,MS6.0
MGR Morigerati 83.69 8 P **P 19 30 51.8 -0.9**
SFS San Fernando 83.75 26 PFAKE 19 31 00.0 +7.0
SFS LR LR
comp=Z,24μm,19.0s,MS6.6
ERON Agron 83.78 24 P **P 19 30 55.0 +1.7**
comp=Z,38nm,1.2s,mb5.4
CHG Chiang Mai 83.79 295 ⇑P **P 19 30 52.6 -0.9**
comp=Z,55nm,1.3s,mb5.5
CHTO Chiang Mai 83.79 295 *e*P **P 19 30 52.7 -0.8**
CHTO pmax pmax
comp=Z,120nm,1.5s,mb5.8
CHTO MLR MLR
comp=Z,8μm,19.0s,MS6.1
CHTO Chiang Mai 83.79 295 *e*P **P 19 30 52.7 -0.8**
comp=Z,120nm,1.5s,mb5.8
CHTO LR LR
comp=Z,8μm,19.0s,MS6.1
CHTO Chiang Mai 83.79 295 P **P 19 30 53.2 -0.3**
SNR=39
CHTO P 19 30 53.2
SNR=39
KKTK Khon Kaen 83.85 290 P **P 19 30 53.0 -0.8**
comp=Z,741nm,0.7s,mb6.9
OUR Ouranopolis 83.90 2 P **P 19 30 54.7 +0.9**
EJIF Jimena Fronter 83.94 25 P **P 19 30 54.9 +0.9**
EJIF pmax pmax
comp=Z,36nm,0.9s,mb5.5
EJIF Jimena Fronter 83.94 25 P **P 19 30 54.9 +0.9**
comp=Z,36nm,0.9s,mb5.5
KDM Kudat 83.96 273 P **P 19 30 55.5 +1.1**
EMIJ Mijas 83.99 25 P **P 19 30 55.6 +1.3**
comp=Z,117nm,1.2s,mb5.9
EGUA Guajares 84.01 24 P **P 19 30 55.7 +1.3**
EGUA pmax pmax
comp=Z,161nm,1.0s,mb6.1
EGUA Guajares 84.01 24 P **P 19 30 55.7 +1.3**
comp=Z,161nm,1.0s,mb6.1
KKR Kurukshetra 84.07 318 *e*P **P 19 30 53.7 -1.1**
CM31 Chiang Mai Arr 84.09 294 *e*P **P 19 30 54.6 -0.4**
comp=Z,46nm,0.7s,mb5.7
CM31 LR LR
comp=Z,7μm,22.0s,MS6.0
CMAR Chiang Mai Arr 84.09 294 P **P 19 30 54.7 -0.3**
comp=Z,54nm,0.8s,mb5.7,baz=11,slow=5.6,SNR=182
CMAR LR LR 20 13 36.0
comp=Z,7μm,19.0s,MS6.1,baz=278,slow=39
EBER Berja 84.10 23 P **P 19 30 58.5 +3.7**
comp=Z,154nm,2.5s,mb5.7
LIT Litokhoron 84.10 3 P **P 19 30 56.5 +1.7**
BR131 Keskin Array S 84.32 354 *e*P **P 19 30 56.1 +0.2**
BR131 LR LR
comp=Z,3μm,21.0s,MS5.6
BRTR Keskin Array B 84.32 354 P **P 19 30 56.0 +0.1**
comp=Z,11nm,0.9s,mb5.0,baz=16,slow=2.4,SNR=42
BRTR PP PP 19 34 12.4 +2.7
comp=Z,4.8nm,1.0s,baz=39,slow=0.8,SNR=3.9
BRTR PKKPbc PKKPbc 19 49 16.4 +11
comp=Z,1.1nm,0.8s,baz=177,slow=4.3,SNR=6.8
BRTR PKPPKP 19 57 13.5
comp=Z,0.5nm,0.8s,baz=103,slow=2.8,SNR=3.9
BRTR LR LR 20 10 04.1
comp=Z,3μm,21.7s,MS5.6,baz=203,slow=37
BRTR Keskin Array B 84.32 354 *i* P **P 19 30 56.0 +0.1**
BRTR pmax pmax
comp=Z,11nm,0.9s
MYLDM Lahad Datu 84.45 271 P **P 19 30 58.8 +1.9**
IGT Igoumenitsa 84.59 5 P **P 19 30 57.1 -0.2**
TIP Timpagrande 84.74 7 *e*P **P 19 30 57.1 -0.9**
TIP LR LR
comp=Z,7μm,20.0s,MS6.0
SDKM Sandakan 84.80 272 P **P 19 31 01.0 +2.3**
DZM Mont Dzumac 84.84 217 *e*P **P 19 30 59.0 +0.5**
comp=Z,113nm,1.2s,mb5.9
DZM *e*S S 19 41 17.7 -8.4
comp=Z,7μm,25.1s
DZM *e*SS SS 19 46 56.4 -2.7
comp=Z,4μm,24.9s
DZM *e*LQ 19 53 44.8
comp=Z,5μm,26.6s
DZM *e*LR LR 19 57 41.4
comp=Z,10μm,20.9s
DZM Mont Dzumac 84.84 217 *e*P **P 19 30 59.7 +1.2**
comp=Z,58nm,1.2s,mb5.6
XOR Xorichti 84.85 2 P **P 19 30 57.8 -0.8**
EALB Alboran 84.99 23 P **P 19 31 02.6 +3.2**
comp=Z,151nm,1.8s,mb5.8
KKM Kota Kinabalu 85.02 273 P **P 19 31 00.6 +0.8**
KKM Kota Kinabalu 85.02 273 *e*P **P 19 30 59.9 +0.1**
KKM LR LR
comp=Z,4μm,21.0s,MS5.7
RTK Rohtak 85.06 318 *ex* x 19 30 47.8
AOS Alonnisos 85.06 2 P **P 19 31 00.3 +0.6**
NDI New Delhi 85.07 317 *e*P **P 19 30 59.0 -0.9**
NDI *ex* x 19 40 40.0
BDT Bhumibol Dam 85.08 294 P **P 19 31 00.0 0.0**
comp=Z,20nm,0.9s,mb5.2
BISR Bishrakh 85.08 316 *e*P **P 19 30 59.3 -0.7**
AGG Agios Georgios 85.17 3 P **P 19 31 01.0 +0.8**
AYAN Aya Nagar 85.28 317 *e*P **P 19 30 59.8 -1.2**
AYAN AMb AMB 19 31 04.5
comp=Z,68nm,1.0s,mb5.8
SONA Sohna 85.51 317 *e*P **P 19 31 01.1 -1.0**
SONA *e*S S 19 41 26.0 -7.0
TSM Tawau 85.53 271 P **P 19 31 02.6 +0.2**
CEL Celeste 85.58 8 *e*P **P 19 30 59.6 -2.7**
comp=Z,37nm,1.0s,mb5.6
CEL LR LR
comp=Z,7μm,20.0s,MS6.1
EFP Efpalio 85.76 3 *e*P **P 19 31 02.4 -0.7**
CAL Calcutta 85.78 305 *e*P **P 19 31 04.2 +0.7**
CAL *ex* x 19 41 36.0
NST Nakhon Sawan 85.81 292 P **P 19 31 04.0 +0.3**
BLCB Balcova 85.86 359 P **P 19 31 03.0 -0.7**
CHOS Chios island 85.87 0 P **P 19 31 04.0 +0.3**
RTC Rabat Centre 85.94 27 PFAKE 19 31 10.0 +5.9
RTC LR LR
comp=Z,8μm,20.0s,MS6.1
AGRA Agra 86.09 316 *e*P **P 19 31 04.2 -0.7**
KHET Khetri 86.15 318 *e*P **P 19 31 03.4 -1.9**
LTK Loutraki 86.19 3 *e*P **P 19 31 03.8 -1.5**
GUR Goura 86.26 3 *e*P **P 19 31 05.2 -0.4**
ISP Isparta 86.34 357 *e*P **P 19 31 05.6 -0.4**
ISP pmax pmax
comp=Z,28nm,1.0s,mb5.5
ISP MLR MLR
comp=Z,5μm,20.0s,MS5.9
ISP Isparta 86.34 357 *e*P **P 19 31 05.6 -0.4**
comp=Z,28nm,1.0s,mb5.5
ISP LR LR
comp=Z,5μm,20.0s,MS5.9
MSL Mosul 86.73 346 *e*P **P 19 31 14.0 +6.0**
MSL *e*S S 19 41 47.0 +2.3
VLX Vlachokerasia 86.83 3 *e*P **P 19 31 06.9 -1.5**
ITM Ithomi 87.00 3 *e*P **P 19 31 08.8 -0.5**
COEN Coen 87.24 240 *e*P **P 19 31 09.6 -1.0**
COEN *e*pP pP 19 31 18.4 +3.1
COEN Coen 87.24 240 *e*P **P 19 31 08.7 -1.8**
comp=Z,450nm,1.1s,mb6.6
PYL PYLOS 87.28 4 *e*P **P 19 31 09.7 -0.9**
KEST Kesra 87.39 14 P **P 19 31 10.3 -1.0**
comp=Z,2.3nm,0.9s,mb4.4,baz=13,slow=5.0,SNR=4.5
KEST LR LR 20 13 14.6
comp=Z,3μm,20.4s,MS5.8,baz=96,slow=38
VLI Veliai 87.49 3 *e*P **P 19 31 10.5 -1.2**
WDD Wield Dalam 87.84 9 PFAKE 19 31 20.0 +6.6
WDD LR LR
comp=Z,5μm,20.0s,MS5.9
KYTH Kithira 87.93 3 *e*P **P 19 31 13.7 -0.1**
AJM Ajmer 88.03 318 *e*P **P 19 31 15.2 +0.7**
AJM AMb AMB 19 31 17.3
comp=Z,56nm,1.3s,mb5.6
CHIE El Hierro 88.44 38 P **P 19 31 19.8 +3.4**
comp=Z,35nm,1.0s,mb5.5
CCAN Las Canadas 88.45 37 P **P 19 31 24.6 +8.2**
comp=Z,53nm,1.0s,mb5.7
KARN Karanos 88.83 2 *e*P **P 19 31 17.0 -1.0**
KARN Karanos 88.83 2 P **P 19 31 16.9 -1.1**
JASL Jaisalmer 88.99 321 *e*P **P 19 31 18.9 -0.1**
CSS Prodhromos 89.08 354 *e*P **P 19 31 18.1 -1.2**
comp=Z,76nm,1.2s,mb5.9
CSS LR LR
comp=Z,5μm,20.0s,MS5.9
CSS Prodhromos 89.08 354 P **P 19 31 18.5 -0.7**
LAST Lasithi 89.08 1 *e*P **P 19 31 09.8 -9.5**
LAST Lasithi 89.08 1 P **P 19 31 22.3 +3.0**
BTM Bintulu 89.11 274 P **P 19 31 23.5 +3.9**
GVD Gavdos 89.39 2 *e*P **P 19 31 19.6 -1.1**
comp=Z,145nm,1.0s,mb6.3
HWQ Hawqa 89.58 352 *e*P **P 19 31 17.3 -4.3**
BHD Baghdad 89.63 345 *e*P **P 19 31 18.0 -3.8**
BHD *e*PP PP 19 34 34.0 -19
BHD *e*S SKSac 19 41 51.0 -0.7
BHPL Bhopal 89.86 314 *e*P **P 19 31 21.6 -1.5**
SBUM Sibu 90.21 275 P **P 19 31 26.6 +1.9**
MTSU Mount Surprise 90.30 237 *e*P **P 19 31 24.8 -0.1**
comp=Z,159nm,1.0s,mb6.3
MMAI Mount Meron Ar 90.88 352 P **P 19 31 27.2 -0.4**
comp=Z,8.4nm,1.0s,mb5.0,baz=276,slow=8.3,SNR=3.7
MMAI PP PP 19 35 06.3 +3.8
comp=Z,6.0nm,0.9s,baz=33,slow=15,SNR=4.9
MMAI LR LR 20 21 41.9
comp=Z,3μm,20.4s,MS5.7,baz=45,slow=42
CTA Charters Tower 91.10 234 *e*P **P 19 31 29.9 +1.3**
comp=Z,10nm,1.0s,mb5.1
CTA *e*pP pP 19 31 37.0 +3.7
CTA Charters Tower 91.10 234 LR LR 20 07 11.9
comp=Z,6μm,21.1s,MS6.0,baz=27,slow=32
CTAO Charters Tower 91.10 234 *e*P **P 19 31 29.3 +0.7**
CTAO MLR MLR
comp=Z,6μm,21.0s,MS6.0
KAKA Kakadu 91.62 250 *e*P **P 19 31 32.8 +1.6**
comp=Z,16nm,0.9s,mb5.4
KSM Kuching 92.08 276 P **P 19 31 35.3 +1.8**
KSM Kuching 92.08 276 *e*P **P 19 31 32.5 -1.0**
comp=Z,41nm,1.2s,mb5.6
KSM LR LR
comp=Z,2μm,22.0s,MS5.6
KAPI Kappang 92.14 264 LR LR 20 12 37.3
comp=Z,2μm,20.1s,MS5.5,baz=236,slow=35
MIB Mutribah 92.55 342 *e*P **P 19 31 34.8 -0.6**
MIB AMb AMB 19 31 39.6
comp=Z,76nm,0.9s,mb6.1
NNA Nana 92.71 107 PFAKE 19 31 50.0 +14
NNA LR LR
comp=Z,2μm,21.0s,MS5.5
KTGM Kuala Trenggan 92.84 284 P **P 19 31 38.9 +1.9**
NAY Al-Naaiem 93.11 342 *e*P **P 19 31 37.2 -0.8**
NAY AMb AMB 19 31 41.4
comp=Z,22nm,1.2s,mb5.5
RDF Al-Radifah 93.37 341 *e*P **P 19 31 39.0 -0.2**
RDF AMb AMB 19 31 43.5
comp=Z,71nm,1.2s,mb6.0
EIDS Eidsvold 93.62 228 *e*P **P 19 31 42.4 +2.2**
KULM Kulim 94.22 286 P **P 19 31 43.7 +0.4**
KULM Kulim 94.22 286 *e*P **P 19 31 42.8 -0.5**
comp=Z,26nm,1.0s,mb5.6
KULM LR LR
comp=Z,4μm,19.0s,MS5.9
HYB Hyderabad 94.60 311 *i* P **P 19 31 44.0 -1.0**
HYB *e* 19 31 54.5
IPM Ipoh 94.70 285 P **P 19 31 46.8 +1.3**
MYKOM Kota Tinggi 95.39 281 P **P 19 31 50.9 +2.2**
FRIM Kepong 95.41 284 P **P 19 31 52.9 +4.1**
KGM Klang 95.50 282 P **P 19 31 49.1 -0.1**
POO Poona 95.53 315 *e*P **P 19 31 49.1 -0.2**
RMQ Roma 95.58 229 *e*P **P 19 31 48.0 -1.1**
comp=Z,90nm,1.3s,mb6.0
KAD Karad 96.50 314 *e*P **P 19 31 52.4 -1.3**
WRAB Tennant Creek 96.69 244 PFAKE 19 32 00.0 +5.7
WRAB LR LR
comp=Z,14μm,20.0s,MS6.5
TAM Tamanrasset 99.47 19 PFAKE 19 32 20.0 +13
TAM LR LR
comp=Z,9μm,20.0s,MS6.3
FITZ Fitzroy Crossi 99.70 252 LR LR 20 17 37.8
comp=Z,4μm,19.8s,MS5.9,baz=28,slow=36
ASAR Alice Springs 100.05 243 P Pdif 19 32 09.1 -0.6
comp=Z,1.6nm,0.8s,baz=36,slow=5.1,SNR=13
ASAR PKiKP PKiKP 19 36 40.1 +3.1
comp=Z,0.6nm,0.8s,baz=102,slow=1.7,SNR=4.6
ASAR PKKP PKKPbc 19 48 34.5 +8.6
comp=Z,0.5nm,0.8s,baz=232,slow=1.4,SNR=4.1
SNZO South Karori 100.66 204 PFAKE 19 32 20.0 +7.6
SNZO LR LR
comp=Z,5μm,21.0s,MS6.0
LPAZ La Paz 100.97 103 P Pdif 19 32 14.8 +1.0
comp=Z,0.9nm,0.7s,baz=11,slow=8.9,SNR=4.8
LPAZ La Paz 100.97 103 P Pdif 19 32 14.8 +1.0
LPAZ LR LR
comp=Z,3μm,20.0s,MS5.8
CAN Canberra 103.22 225 PFAKE 19 32 30.0 +6.2
CAN LR LR
comp=Z,5μm,21.0s,MS6.1
TRD Trivandrum 103.22 308 ⇑*i*x x 19 32 29.0
TRD *i* x x 19 35 55.0
MBWA Marble Bar 105.37 255 PFAKE 19 37 00.0 +13
MBWA LR LR
comp=Z,3μm,21.0s,MS5.8
TORD Torodi Ar. Bea 108.02 25 PKKPbc PKKPbc 19 48 04.0 +2.3
comp=Z,0.7nm,0.7s,baz=165,slow=3.8,SNR=4.4
TORD PKKP PKKPbc 19 48 12.9 +11
comp=Z,1.3nm,0.9s,baz=160,slow=1.6,SNR=6.0
LCO Las Campanas 109.92 112 PFAKE 19 37 10.0 +15
LCO LR LR
comp=Z,2μm,20.0s,MS5.7
RCBR Riachuelo 110.14 69 PFAKE 19 37 10.0 +14
RCBR LR LR
comp=Z,10μm,22.0s,MS6.3
TAU Tasmania Unive 110.44 222 PFAKE 19 37 10.0 +14
TAU LR LR
comp=Z,9μm,19.0s,MS6.4
COCO West Island 110.82 279 PFAKE 19 37 10.0 +13
COCO LR LR
comp=Z,2μm,20.0s,MS5.6
DBIC Dimbokro 112.40 34 PFAKE 19 37 10.0 +10
DBIC LR LR
comp=Z,12μm,20.0s,MS6.5
CPUP Villa Florida 114.97 100 PKP PKiKP 19 37 04.8 0.0
comp=Z,0.3nm,0.3s,baz=88,slow=15,SNR=1.7
CPUP PKKPab PKKPab 19 47 47.4 +2.0
comp=Z,0.5nm,0.4s,baz=84,slow=3.4,SNR=4.5
CPUP Villa Florida 114.97 100 PKP PKiKP 19 37 04.8 0.0
CPUP PKKPab PKKPab 19 47 47.4 +2.0
CPUP LR LR
comp=Z,884nm,19.0s,MS5.4
NWAO Narrogin (SRO) 116.08 249 PFAKE 19 37 20.0 +13
NWAO LR LR
comp=Z,4μm,22.0s,MS6.0
DGAR Diego Garcia 119.36 305 PFAKE 19 37 20.0 +6.4
DGAR LR LR
comp=Z,5μm,19.0s,MS6.2
TRQA Tornquist 121.51 112 PFAKE 19 37 30.0 +13
TRQA LR LR
comp=Z,4μm,19.0s,MS6.1
MSEY Mahe Island 123.64 324 PFAKE 19 37 30.0 +8.1
MSEY LR LR
comp=Z,3μm,19.0s,MS6.0
KMBO Kilima Mbogo 124.46 347 PKP PKPdf 19 37 24.1 +0.6
comp=Z,6.0nm,0.8s,baz=181,slow=23,SNR=11
KMBO Kilima Mbogo 124.46 347 PKP PKPdf 19 37 24.1 +0.6
KMBO LR LR
comp=Z,6μm,20.0s,MS6.3
DRV Dumont d'Urvil 132.05 209 PP PP 19 39 54.0 -4.9
DRV SS SS 19 58 23.0 +48
DRV R 20 24 00.0
SHEL Horse Pasture 133.12 44 PFAKE 19 37 50.0 +10
SHEL LR LR
comp=Z,1μm,19.0s,MS5.7
SBA Scott Base 135.89 191 PFAKE 19 37 50.0 +6.9
SBA LR LR
comp=Z,3μm,19.0s,MS6.0
PMSA Palmer Station 138.37 140 PFAKE 19 38 00.0 +12
PMSA LR LR
comp=Z,3μm,19.0s,MS6.0
RER Riviere de l'E 138.77 316 PFAKE 19 38 00.0 +10
RER LR LR
comp=Z,3μm,19.0s,MS6.1
LSZ Lusaka 139.22 357 PFAKE 19 38 00.0 +8.9
LSZ LR LR
comp=Z,6μm,20.0s,MS6.4
ABPO Ambohimpanom 139.72 328 PFAKE 19 38 00.0 +8.1
ABPO LR LR
comp=Z,4μm,22.0s,MS6.1
CASY Casey 141.25 220 PFAKE 19 38 00.0 +6.8
CASY LR LR
comp=Z,4μm,20.0s,MS6.1
TSUM Tsumeb 142.58 13 PKP PKPdf 19 37 54.9 -2.2
comp=Z,11nm,0.9s,baz=4.6,slow=3.2,SNR=11
TSUM Tsumeb 142.58 13 PKP PKPdf 19 37 54.9 -2.2
TSUM LR LR
comp=Z,5μm,20.0s,MS6.3
QSPA South Pole Qui 145.90 180 PKPbc PKPbc 19 38 00.7 -1.1
comp=Z,44nm,0.9s,baz=64,slow=1.0,SNR=65
QSPA South Pole Qui 145.90 180 PKPbc PKPbc 19 38 00.7 -1.1
QSPA LR LR
comp=Z,3μm,19.0s,MS6.1
MIR Mirnyy 147.93 224 *e*PKP2 PKPab 19 38 10.0 -0.6
MIR pmax pmax
comp=Z,98nm,1.8s
MIR pmax pmax
comp=Z,2μm,12.0s
MIR MLR MLR
comp=N,1μm,20.0s,MS6.0
MIR MLR MLR
comp=E,2μm,20.0s,MS6.0
MIR MLR MLR
comp=Z,2μm,20.0s,MS6.0
LBTB Lobatse 148.93 1 PKPbc PKPbc 19 38 11.4 -0.3
comp=Z,46nm,0.9s,baz=1.6,slow=1.2,SNR=37
LBTB Lobatse 148.93 1 PKPbc PKPbc 19 38 11.4 -0.3
LBTB LR LR
comp=Z,4μm,20.0s,MS6.2
BOSA Boshof 152.51 2 PKP PKPdf 19 38 12.1 -1.1
comp=Z,7.5nm,0.8s,baz=160,slow=1.8,SNR=6.2
BOSA PKPbc PKPbc 19 38 19.6 -0.4
comp=Z,25nm,0.8s,baz=358,slow=3.0,SNR=18
BOSA Boshof 152.51 2 PKP PKPdf 19 38 12.1 -1.1
BOSA PKPbc PKPbc 19 38 19.6 -0.4
BOSA LR LR
comp=Z,7μm,20.0s,MS6.5
PAF Port-aux-Franc 152.89 266 PFAKE 19 38 20.0 +7.0
PAF LR LR
comp=Z,5μm,19.0s,MS6.3
SUR Sutherland 155.97 11 PFAKE 19 38 30.0 +12
SUR LR LR
comp=Z,5μm,20.0s,MS6.3
VNA2 Neumayer--Watz 159.35 149 *e*PKPdf PKPdf 19 38 22.0 +1.1
VNA2 *e* 19 38 57.4
MAW Mawson 159.61 221 PKP PKPdf 19 38 21.0 -0.2
comp=Z,1.7nm,0.9s,baz=338,slow=16,SNR=2.2
MAW Mawson 159.61 221 PKP PKPdf 19 38 21.0 -0.2
MAW LR LR
comp=Z,7μm,19.0s,MS6.5
NVL N'lazarevskaya 164.03 163 *e*PKP2 PKPab 19 39 26.6 +7.4

MAN 25 19:20:03, 17°.48N×121°.27E, h43km, mb4.1, ML2.9, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
APYP	**Conner**	**0.38**	**356**	*e*P	Pn	19 20 14.1	+1.7	
APYP				*e*S	Sn	19 20 22.3	+3.4	
ABRA	**Dolores**	**0.56**	**287**	*e*P	Pn	19 20 16.3	+1.7	
PALP	**Palanan**	**1.18**	**111**	*e*P	Pn	19 20 23.8	+0.8	

*IDC **25** 19:28:19.9±0.9, 56°.11N×153°.68W, h0km, mb3.9/18, mb1 4.1/18, mb1mx3.9/29, mbtmp3.9/18, Error ellipse: s-maj=25.4km s-min=15.0km az=26.0*
*ISCJB **25** 19:28:22.9±0.6, 56°.09N±0°.06×153°.6W±0°.1, h33km, mb3.8/17, Error ellipse: s-maj=11.7km s-min=8.0km az=6.4*
*NEIC **25** 19:28:23.8, 56°.05N×153°.53W, h29km, ML3.4(AEIC), After AEIC.*

ISC 25 19:28:25.4±0.6, 56°.16N±0°.06×153°.6W±0°.1, h35km, n26, σ0°81/27, mb3.8/17, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.08**	**9**	P	**Pn**	**19 28 43.1**	**-0.9**
OHAK				S	**Sn**	**19 28 58.4**	**+0.6**
KDAK	**Kodiak Island**	**1.73**	**19**	Pn	**Pn**	**19 28 51.5**	**-1.3**
KDAK	**Kodiak Island**	**1.73**	**19**	P	**Pn**	**19 28 51.9**	**-0.9**
KDAK				S	**Sn**	**19 29 14.0**	**+0.4**
DLBC	**Dease Lake**	**12.94**	**70**	Pn	**Pn**	**19 31 32.4**	**+5.9**
	0.7nm,0.3s,baz=194,slow=7.0,SNR=4.8						
YKA	**Yellowknife Ar**	**20.62**	**56**	P	**P**	**19 33 01.5**	**+0.3**
	1.5nm,0.7s,baz=270,slow=9.5,SNR=9.3						
YKA	**Yellowknife Ar**	**20.62**	**56**	P	**P**	**19 33 01.5**	**+0.3**
PETK	**Petropavlovsk-**	**27.88**	**284**	P	**P**	**19 34 12.6**	**+1.2**
	1.1nm,0.7s,mb3.6,baz=68,slow=13,SNR=4.7						
RES	**Resolute Bay**	**28.81**	**28**	P	**P**	**19 34 20.3**	**+0.8**
	3.1nm,0.8s,mb4.1,baz=320,slow=18,SNR=4.8						
RES	**Resolute Bay**	**28.81**	**28**	P	**P**	**19 34 20.3**	**+0.8**
ELK	**Elko**	**29.29**	**105**	P	**P**	**19 34 25.4**	**+1.2**
	0.9nm,1.1s,mb3.4,baz=180,slow=20,SNR=2.4						
NVAR	**Mina Array Bea**	**29.35**	**112**	P	**P**	**19 34 24.8**	**+0.1**
	0.5nm,0.8s,mb3.3,baz=309,slow=9.1,SNR=3.2						
PDAR	**Pinedale Array**	**31.04**	**97**	P	**P**	**19 34 39.6**	**+0.1**
	0.2nm,0.4s,mb3.3,baz=312,slow=13,SNR=1.9						
TXAR	**Lajitas Array**	**44.08**	**106**	P	**P**	**19 36 28.2**	**-1.6**
	0.4nm,0.7s,mb3.3,baz=328,slow=4.4,SNR=4.2						
SPITS	**Spitsbergen Ar**	**45.78**	**3**	P	**P**	**19 36 41.8**	**-1.0**
	2.3nm,0.8s,mb4.2,baz=61,slow=6.8,SNR=4.9						
ARCES	**ARCESS Array B**	**54.61**	**0**	P	**P**	**19 37 49.6**	**0.0**
	1.9nm,1.0s,mb4.1,baz=346,slow=8.8,SNR=4.4						
SONM	**Songino Array**	**56.83**	**308**	P	**P**	**19 38 06.1**	**+0.2**
	1.9nm,0.8s,mb4.2,baz=57,slow=8.4,SNR=4.6						
ZALV	**Zalesovo Beam**	**60.30**	**325**	P	**P**	**19 38 30.1**	**+0.2**
	1.2nm,0.6s,mb4.1,baz=34,slow=7.9,SNR=6.0						
NB2	**NORSAR Subarra**	**62.54**	**8**	P	**P**	**19 38 45.1**	**+0.2**
	comp=Z,0.9nm,0.6s,mb4.1,baz=351,slow=6.9						
NOA	**NORSAR Array B**	**62.54**	**8**	P	**P**	**19 38 45.3**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.1,baz=351,slow=6.6,SNR=6.4						
BVAR	**Borovoye Array**	**65.33**	**332**	P	**P**	**19 39 03.5**	**+0.2**
	comp=Z,1.4nm,0.7s,mb4.1,baz=40,slow=7.7,SNR=6.6						
AKTO	**Aktyubinsk**	**70.58**	**339**	P	**P**	**19 39 35.3**	**-1.0**
	comp=Z,1.3nm,0.6s,mb4.1,baz=309,slow=3.4,SNR=4.2						
AKASG	**Malin Array Be**	**73.48**	**358**	P	**P**	**19 39 52.3**	**-1.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=2.9,slow=6.1,SNR=5.7						
GERES	**GERESS Array B**	**74.83**	**9**	P	**P**	**19 40 02.5**	**+0.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=350,slow=4.7,SNR=6.0						
ESDC	**Sonseca Array**	**81.12**	**23**	P	**P**	**19 40 37.5**	**+0.8**
	comp=Z,0.8nm,0.8s,mb3.7,baz=338,slow=5.7,SNR=6.0						
CMAR	**Chiang Mai Arr**	**84.17**	**294**	P	**P**	**19 40 52.4**	**-0.5**
	comp=Z,1.0nm,0.8s,mb4.0,baz=20,slow=5.4,SNR=8.5						
LBTB	**Lobatse**	**148.88**	**1**	PKPbc	PKPbc	19 48 08.8	-0.1
	comp=Z,2.1nm,0.8s,baz=24,slow=22,SNR=3.6						

*ISCJB **25** 19:31:17.4±0.7, 35°.31N±0°.08×81°.2E±0°.1, h10km, mb3.7/7, Error ellipse: s-maj=16.9km s-min=10.8km az=168.5*

*IDC **25** 19:31:17.5±1.2, 35°26N×81°22E, h0km, mb3.7/6, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.3/4, Error ellipse: s-maj=35.0km s-min=22.1km az=76.0*
*NEIC **25** 19:31:18.9±0.5, 35°26N×81°26E, h10km, mb4.0/2, Error ellipse: s-maj=12.7km s-min=8.2km az=71.0*
ISC 25 19:31:19.0±0.7, 35°29N±0°09×81°3E±0°1, h10km, n17, σ0s63/16, mb3.7/7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**9.04**	**326**	Pg	Px	19 34 03.3	
	0.0nm,0.3s,baz=180,slow=10,SNR=3.7						
AAK				Lg		19 36 04.5	
	0.0nm,0.3s,baz=229,slow=20,SNR=5.0						
MK31	**Makanchi Array**	**11.52**	**3**	*e*Pn	**Pn**	**19 34 04.5**	**+1.1**
MKAR	**Makanchi Array**	**11.52**	**3**	Pn	**Pn**	**19 34 03.3**	**-0.2**
	0.2nm,0.3s,baz=176,slow=12,SNR=4.2						
MKAR				Sn	**Sn**	**19 36 17.2**	**+5.1**
	0.1nm,0.3s,baz=166,slow=37,SNR=3.5						
MKAR				Lg		19 37 33.3	
	0.1nm,0.3s,baz=190,slow=23,SNR=3.0						
KURK	**Kurchatov**	**15.54**	**354**	Pn	**Pn**	**19 34 53.9**	**-4.1**
	0.0nm,0.3s,baz=178,slow=13,SNR=2.8						
KURK	**Kurchatov**	**15.54**	**354**	*e*Pn	**Pn**	**19 34 58.2**	**+0.1**
	6.4nm,1.2s						
ZALV	**Zalesovo Beam**	**18.83**	**7**	P	**Pn**	**19 35 38.8**	**-0.4**
	0.1nm,0.3s,baz=184,slow=13,SNR=3.3						
BVAR	**Borovoye Array**	**19.34**	**340**	P	**Pn**	**19 35 44.3**	**-1.0**
	0.1nm,0.3s,baz=140,slow=7.8,SNR=4.4						
CMAR	**Chiang Mai Arr**	**22.95**	**132**	P	**P**	**19 36 23.9**	**+0.5**
	0.6nm,0.8s,mb3.1,baz=324,slow=6.1,SNR=3.7						
ENH	**Enshi**	**24.20**	**94**	*e*P	**P**	**19 36 35.0**	**-0.6**
	1.6nm,0.3s,mb3.9						
AKASG	**Malin Array Be**	**40.20**	**309**	P	**P**	**19 38 55.5**	**+0.2**
	0.5nm,0.5s,mb3.5,baz=78,slow=8.2,SNR=4.5						
FINES	**FINESS Array B**	**43.22**	**325**	P	**P**	**19 39 20.9**	**+1.0**
	1.2nm,0.7s,mb3.7,baz=110,slow=10,SNR=3.7						
FINES	**FINESS Array B**	**43.22**	**325**	P	**P**	**19 39 20.9**	**+1.0**
NB2	**NORSAR Subarra**	**50.35**	**324**	P	**P**	**19 40 15.8**	**+0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**50.35**	**324**	P	**P**	**19 40 15.4**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=88,slow=7.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**74.09**	**275**	P	**P**	**19 42 55.4**	**-0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=46,slow=5.1,SNR=11						
BOSA	**Boshof**	**82.64**	**227**	P	**P**	**19 43 42.3**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.2,baz=342,slow=2.2,SNR=3.6						
WMOK	**Wichita Mounta**	**110.34**	**0**	*e*PKPdf	PKiKP	19 49 51.3	-0.1

*ISCJB **25** 19:35:54.9±1.6, 7°3S±0°1×156°2E±0°3, h33km, mb4.1/10, Error ellipse: s-maj=43.2km s-min=15.4km az=6.9*
*NEIC **25** 19:35:56.4±1.0, 7°25S×156°27E, h35km, mb3.9/4, Error ellipse: s-maj=30.8km s-min=11.9km az=98.0*
*IDC **25** 19:35:56.2±1.9, 7°35S×156°47E, h39km±6km, mb3.9/8, mb1 4.0/8, mb1mx3.8/17, mbtmp3.9/8, Error ellipse: s-maj=56.5km s-min=23.9km az=107.0*
ISC 25 19:35:56.5±1.6, 7°3S±0°1×156°3E±0°3, h35km, n14, σ0s57/13, mb4.1/10, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**18.68**	**195**	*e*P	**Pn**	**19 40 12.2**	**0.0**
	11nm,1.2s						
WRAB	**Tennant Creek**	**24.70**	**237**	*e*P	**P**	**19 41 14.7**	**+0.1**
	16nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**26.96**	**230**	P	**P**	**19 41 34.8**	**-0.2**
	1.4nm,0.5s,mb3.8,baz=58,slow=9.9,SNR=42						
STKA	**Stephens Creek**	**28.05**	**207**	P	**P**	**19 41 45.5**	**+0.8**
	1.3nm,0.6s,mb3.7,baz=32,slow=15,SNR=4.5						
STKA	**Stephens Creek**	**28.05**	**207**	*e*P	**P**	**19 41 44.5**	**-0.2**
	0.2nm,0.7s,mb2.9						
FITZ	**Fitzroy Crossi**	**31.70**	**247**	P	**P**	**19 42 16.7**	**-0.4**
	4.0nm,0.6s,mb4.5,baz=100,slow=6.9,SNR=11						
CM31	**Chiang Mai Arr**	**62.03**	**295**	*e*P	**P**	**19 46 13.3**	**-0.6**
	0.4nm,0.4s,mb3.9						
CMAR	**Chiang Mai Arr**	**62.03**	**295**	P	**P**	**19 46 14.9**	**+1.1**
	1.1nm,0.8s,mb4.0,baz=125,slow=5.6,SNR=8.0						
CMAR				pP	pP	19 46 27.2	+2.7
	0.9nm,0.8s,baz=120,slow=5.6,SNR=4.0						
MKAR	**Makanchi Array**	**84.43**	**318**	P	**P**	**19 48 26.4**	**+0.9**
	0.7nm,0.4s,mb4.2,baz=90,slow=9.7,SNR=24						
MKAR	**Makanchi Array**	**84.43**	**318**	P	**P**	**19 48 26.4**	**+0.9**
ZALV	**Zalesovo Beam**	**85.10**	**326**	P	**P**	**19 48 28.6**	**-0.1**
	0.7nm,0.3s,mb4.2,baz=117,slow=5.9,SNR=5.3						
ZALV				pP	pP	19 48 41.5	+1.7
	0.7nm,0.4s,baz=114,slow=7.0,SNR=3.6						
KURK	**Kurchatov**	**87.82**	**322**	P	**P**	**19 48 41.8**	**-0.3**
	0.5nm,0.3s,mb4.3,baz=92,slow=5.4,SNR=3.2						
BVAR	**Borovoye Array**	**93.26**	**323**	P	**P**	**19 49 06.7**	**-0.8**
	1.6nm,0.9s,mb4.5,baz=68,slow=9.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**154.31**	**285**	PKPbc	PKPbc	19 55 54.0	-0.2
	0.2nm,0.6s,baz=56,slow=1.7,SNR=3.8						
TORD				pPKPbc	pPKPbc	19 56 05.1	-0.5
	0.7nm,0.8s,baz=58,slow=1.3,SNR=3.8						

*IDC **25** 19:41:08.6±1.0, 56°08N×153°62W, h0km, mb3.7/13, mb1 3.8/14, mb1mx3.7/26, mbtmp3.7/14, ML3.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.8/36, Error ellipse: s-maj=28.3km s-min=17.3km az=19.0*
*ISCJB **25** 19:41:11.4±0.6, 56°06N±0°06×153°6W±0°1, h33km, mb3.7/12, Error ellipse: s-maj=10.8km s-min=7.7km az=29.0*
*NEIC **25** 19:41:12.8, 56°15N×153°45W, h6km, ML3.2(AEIC), After AEIC.*
ISC 25 19:41:12.0±2.5, 56°10N±0°08×153°7W±0°1, h22km±16km, n25, σ0s76/25, mb3.7/12, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.15**	**11**	P	**Pn**	**19 41 32.2**	**-0.4**
OHAK				S	**Sb**	**19 41 47.9**	**+0.5**
KDAK	**Kodiak Island**	**1.79**	**19**	Pn	**Pn**	**19 41 40.7**	**-0.8**
KDAK				LR	LR	19 42 18.7	
	comp=Z,1μm,20.4s,slow=39						
KDAK	**Kodiak Island**	**1.79**	**19**	P	**Pn**	**19 41 41.0**	**-0.6**
KDAK				S	**Sn**	**19 42 03.0**	**-0.5**
CHGN	**Chignik**	**2.65**	**276**	*e*Pn	**Pn**	**19 41 51.9**	**-1.5**
PAX	**Paxson**	**8.05**	**28**	*e*Pn	**Pn**	**19 43 07.7**	**+0.3**
	8.4nm,0.4s						
DIB	**Dawson Inlet,**	**12.61**	**94**	T		19 56 58.5	
INK	**Inuvik**	**15.32**	**29**	Pn	**Pn**	**19 44 46.9**	**+0.4**
	0.1nm,0.3s,baz=225,slow=15,SNR=2.6						
INK	**Inuvik**	**15.32**	**29**	Pn	**Pn**	**19 44 46.9**	**+0.4**
YKA	**Yellowknife Ar**	**20.68**	**56**	P	**P**	**19 45 50.5**	**+0.5**
	0.6nm,0.7s,baz=270,slow=9.7,SNR=4.3						
YKA	**Yellowknife Ar**	**20.68**	**56**	P	**P**	**19 45 50.5**	**+0.5**
PETK	**Petropavlovsk-**	**27.86**	**284**	P	**P**	**19 47 00.9**	**+1.3**
	0.7nm,0.5s,mb3.5,baz=70,slow=14,SNR=4.7						
NVAR	**Mina Array Bea**	**29.36**	**112**	P	**P**	**19 47 14.3**	**+1.1**
	0.1nm,0.4s,mb2.9,baz=283,slow=11,SNR=3.6						
NVAR	**Mina Array Bea**	**29.36**	**112**	P	**P**	**19 47 14.3**	**+1.1**
PDAR	**Pinedale Array**	**31.07**	**97**	P	**P**	**19 47 26.6**	**-1.5**
	0.3nm,0.7s,mb3.3,baz=209,slow=5.2,SNR=3.2						
TXAR	**Lajitas Array**	**44.10**	**106**	P	**P**	**19 49 18.2**	**-0.2**
	0.3nm,0.7s,mb3.1,baz=319,slow=5.5,SNR=4.8						
TXAR	**Lajitas Array**	**44.10**	**106**	P	**P**	**19 49 18.2**	**-0.2**
ARCES	**ARCESS Array B**	**54.67**	**0**	P	**P**	**19 50 38.5**	**0.0**
	1.5nm,0.8s,mb4.1,baz=20,slow=8.8,SNR=3.7						
SONM	**Songino Array**	**56.84**	**308**	P	**P**	**19 50 55.0**	**+0.6**
	1.2nm,0.7s,mb4.0,baz=39,slow=9.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**60.33**	**325**	P	**P**	**19 51 19.4**	**+0.8**
	0.9nm,0.6s,mb4.0,baz=32,slow=5.6,SNR=6.3						
FINES	**FINESS Array B**	**62.80**	**0**	P	**P**	**19 51 34.0**	**-1.0**
	2.4nm,1.0s,mb4.3,baz=354,slow=16,SNR=4.0						
BVAR	**Borovoye Array**	**65.36**	**332**	P	**P**	**19 51 52.5**	**+0.4**
	0.8nm,0.7s,mb3.9,baz=38,slow=7.5,SNR=5.5						
MKAR	**Makanchi Array**	**67.27**	**322**	P	**P**	**19 52 04.5**	**+0.1**
	0.3nm,0.6s,mb3.5,baz=36,slow=5.7,SNR=3.1						
TGY	**Tagaytay City**	**75.86**	**274**	LR	LR	20 27 09.2	
	comp=Z,6.7nm,19.6s,baz=218,slow=36						
CMAR	**Chiang Mai Arr**	**84.16**	**294**	P	**P**	**19 53 41.1**	**-0.3**
	0.7nm,0.5s,mb4.0,baz=5.9,slow=5.6,SNR=6.8						
BRTR	**Keskin Array B**	**84.34**	**354**	P	**P**	**19 53 41.9**	**-0.1**
	0.3nm,0.7s,mb3.5,baz=60,slow=3.0,SNR=3.7						

*ISCJB **25** 19:41:27.8±0.6, 35°65N±0°04×139°96E±0°06, h62km±4km, mb3.7/5, Error ellipse: s-maj=9.8km s-min=5.3km az=148.8*
*IDC **25** 19:41:27.2±2.2, 35°67N×140°19E, h41km±20km, mb3.6/4, mb1 3.7/7, mb1mx3.4/28, mbtmp3.9/7, ML3.8/3, Error ellipse: s-maj=24.3km s-min=6.4km az=62.0*
*NEIC **25** 19:41:28.0, 35°72N×139°98E, h53km, mb3.7/1, After JMA.*
*JMA **25** 19:41:27.9±0.2, 35°72N×139°98E, h53km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φ±253.00000°, δ39.00000°, λ-164.00000°. NP2: φ±151.00000°, δ80.00000°, λ-52.00000°. Principal axes: T Plg25.0000°, Azm212.0000°; N Plg38.0000°, Azm323.0000°; P Plg42.0000°, Azm97.0000°;*
JMA Felt I J1.
ISC 25 19:41:28.5±0.5, 35°66N±0°04×139°97E±0°06, h55km±5km, n20, σ0s88/29, mb3.7/5, 3C-5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.18**	**280**	⇓P	**Pn**	**19 41 37.0**	**-0.2**
TOK				*i* S	**Sn**	**19 41 43.7**	**+0.3**
JCN	**Nagara**	**0.30**	**142**	⇑P	**Pn**	**19 41 38.4**	**+0.3**
JCN				*i* S	**Sn**	**19 41 46.8**	**+1.8**
JOD2	**Odawara 2**	**0.82**	**242**	⇓P	**Pn**	**19 41 43.7**	**-0.3**
JOD2				S	**Sn**	**19 41 55.2**	**-0.1**
JAG	**Ashikaga**	**0.87**	**331**	⇓P	**Pn**	**19 41 44.0**	**-0.7**
JRY	**Ryogami san**	**0.94**	**293**	⇓P	**Pn**	**19 41 45.4**	**-0.1**
JRY				*e*S	**Sn**	**19 41 58.9**	**+0.8**
BSO3	**Boso 3**	**0.96**	**153**	⇑P	**Pn**	**19 41 45.2**	**-0.6**
BSO3				S	**Sn**	**19 41 59.4**	**+0.8**
JIM2	**Oshima 3**	**1.04**	**205**	P	**Pn**	**19 41 46.2**	**-0.6**
JIM2				S	**Sn**	**19 42 00.0**	**-0.4**
JYN	**Shimob**	**1.17**	**263**	⇓P	**Pn**	**19 41 48.6**	**-0.1**
JKT	**Katashina**	**1.25**	**332**	P	**Pn**	**19 41 49.1**	**-0.6**
JIZS	**Izushimoda**	**1.30**	**224**	⇑P	**Pn**	**19 41 50.2**	**-0.1**
MJAR	**Matsushiro Arr**	**1.68**	**302**	P	**Pn**	**19 41 55.7**	**+0.2**
	18nm,0.3s,baz=116,slow=16,SNR=123						
MJAR				S	**Sn**	**19 42 17.4**	**+1.5**
	48nm,0.3s,baz=156,slow=22,SNR=15						
MAT	**Matsushiro**	**1.68**	**302**	P	**Pn**	**19 41 55.8**	**+0.3**
MAT				S	**Sn**	**19 42 14.6**	**-1.3**
JHJ	**Hachijo jima 2**	**2.54**	**184**	P	**Pn**	**19 42 07.1**	**-0.1**
	44nm,0.3s,baz=264,slow=24,SNR=22						
JHJ				S	**Sn**	**19 42 36.4**	**-0.5**
	161nm,0.3s,baz=220,slow=21,SNR=19						
ASAJ	**Asahikawa**	**8.69**	**13**	P	**Pn**	**19 43 29.9**	**-1.5**
	0.5nm,0.3s,baz=231,slow=10,SNR=5.8						
CBIJ	**Chichi jima**	**8.74**	**167**	P	**Pn**	**19 43 29.9**	**-2.4**
	7.5nm,0.3s,baz=263,slow=21,SNR=6.1						
ZALV	**Zalesovo Beam**	**42.00**	**314**	P	**P**	**19 49 14.5**	**+0.4**
	0.4nm,0.4s,mb3.4,baz=79,slow=7.5,SNR=2.4						
MKAR	**Makanchi Array**	**43.88**	**303**	P	**P**	**19 49 30.2**	**+0.8**
	0.4nm,0.6s,mb3.4,baz=82,slow=9.4,SNR=2.8						
KURK	**Kurchatov**	**45.88**	**309**	P	**P**	**19 49 45.4**	**+0.1**
	1.3nm,0.2s,mb4.5,baz=82,slow=7.9,SNR=5.2						
ABKAR	**Akbulak array**	**57.94**	**310**	*e*P	**P**	**19 51 15.1**	**+0.2**
	0.3nm,0.5s,mb3.6						
ASAR	**Alice Springs**	**59.28**	**186**	P	**P**	**19 51 26.7**	**+2.3**
	0.2nm,0.3s,mb3.6,baz=17,slow=11,SNR=5.9						

*IDC **25** 19:43:04.3±0.9, 24°45S×177°01W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.9/16, mbtmp4.1/5, MS4.0/1, Ms1 4.0/1, ms1mx3.2/27, Error ellipse: s-maj=31.6km s-min=30.5km az=135.0*
*ISCJB **25** 19:43:08.8±1.1, 24°7S±0°2×177°2W±0°2, h33km, mb4.1/8, Error ellipse: s-maj=29.4km s-min=23.5km az=15.8*
*NEIC **25** 19:43:09.5±0.8, 24°54S×177°03W, h35km, mb4.4/4, Error ellipse: s-maj=25.0km s-min=22.0km az=176.0*
ISC 25 19:43:10.8±1.1, 24°7S±0°2×177°2W±0°2, h35km, n22, σ1s01/12, mb4.1/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.39**	**198**	LR	LR	19 51 01.9	
	comp=Z,553nm,20.8s,baz=359,slow=33						
CTA	**Charters Tower**	**34.07**	**270**	P	**P**	**19 49 53.0**	**+1.0**
	9.6nm,1.1s,mb4.7,baz=84,slow=11,SNR=5.9						
CTAO	**Charters Tower**	**34.07**	**270**	*e*P	**P**	**19 49 52.4**	**+0.4**
	51nm,1.5s,mb5.2						
ASAR	**Alice Springs**	**44.47**	**261**	P	**P**	**19 51 19.0**	**+0.2**
	1.5nm,0.7s,mb3.8,baz=92,slow=7.1,SNR=24						
ASAR	**Alice Springs**	**44.47**	**261**	P	**P**	**19 51 19.0**	**+0.2**
WRAB	**Tennant Creek**	**44.93**	**266**	P	**P**	**19 51 21.4**	**-1.1**
	1.1nm,0.5s,mb3.9						
SBA	**Scott Base**	**53.78**	**184**	*e*P	**P**	**19 52 27.5**	**-1.7**
	0.5nm,0.3s,mb3.9						
CASY	**Casey**	**60.55**	**206**	P	**P**	**19 53 08.9**	**-8.3**
	6.9nm,0.9s,mb4.8						
QSPA	**South Pole Qui**	**65.41**	**180**	P	**P**	**19 53 50.9**	**+1.6**
	1.0nm,0.6s,mb4.0,baz=268,slow=2.6,SNR=8.1						
MAW	**Mawson**	**77.92**	**200**	P	**P**	**19 55 05.1**	**+0.4**
	1.1nm,0.4s,mb4.1,baz=91,slow=8.9,SNR=9.2						
NVAR	**Mina Array Bea**	**83.54**	**43**	P	**P**	**19 55 35.0**	**-0.1**
	0.1nm,0.3s,mb3.4,baz=224,slow=9.2,SNR=4.4						
NVAR	**Mina Array Bea**	**83.54**	**43**	P	**P**	**19 55 35.0**	**-0.1**
DLMT	**Dillon**	**91.09**	**40**	P	pP	19 56 27.1	+4.4
CHTO	**Chiang Mai**	**92.38**	**289**	*e*P	**P**	**19 56 27.4**	**+9.3**
MKAR	**Makanchi Array**	**114.59**	**312**	PKP	PKiKP	20 01 44.5	-2.5
	0.2nm,0.5s,baz=218,slow=2.8,SNR=5.5						
BVAR	**Borovoye Array**	**122.74**	**318**	PKP	PKPdf	20 02 00.0	-2.5
	0.5nm,0.4s,baz=142,slow=2.6,SNR=3.7						
ARCES	**ARCESS Array B**	**133.15**	**349**	PKP	PKPdf	20 02 20.9	-0.9
	5.2nm,1.2s,baz=0.0,slow=2.4,SNR=5.1						
AKASG	**Malin Array Be**	**147.00**	**329**	PKPbc	PKPbc	20 02 47.0	-2.4
	0.7nm,0.3s,baz=48,slow=4.2,SNR=4.7						
CLL	**Collm**	**152.29**	**346**	*i* P	PKPbc	20 03 01.2	-1.4
CLL				*i*		20 03 08.3	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**152.29**	**346**	*i* P	PKPbc	20 03 01.2	-1.4
	comp=Z,4.0nm,0.9s						
CLL				*i*		20 03 08.3	
CLL	**Collm**	**152.29**	**346**	*i* PKPbc	PKPbc	20 03 01.2	-1.4
	comp=Z,4.0nm,0.9s						
CLL				*i* (PKPab)	PKPab	20 03 08.3	-4.2
TORD	**Torodi Ar. Bea**	**168.48**	**174**	PKPab	PKPab	20 04 22.7	-1.0
	comp=Z,0.5nm,0.9s,baz=192,slow=4.8,SNR=3.3						

*ISCJB **25** 19:51:29.3±1.4, 56°14N±0°04×153°71W±0°06, h4km±8km, mb4.2/48, MS5.1/3, Error ellipse: s-maj=6.3km s-min=5.8km az=7.1*
*BJI **25** 19:51:29.6, 55°90N×153°50W, h24km, mB5.2/1, mb4.7/11, Ms5.1/7, Ms7 5.0/6*
*MOS **25** 19:51:30.5±1.0, 56°17N×153°68W, h12km, mb4.4/33, Error ellipse: s-maj=15.4km s-min=6.3km az=93.6*
*IDC **25** 19:51:30.4±0.8, 56°10N×153°71W, h0km, mb4.1/21, mb1 4.2/24, mb1mx4.2/31, mbtmp4.1/24, ML3.7/3, Error ellipse: s-maj=21.3km s-min=12.2km az=22.0*
*NEIC **25** 19:51:32.7, 55°91N×153°47W, h25km, mb4.3/13, ML4.0(AEIC), ML4.3(PMR), After AEIC.*
ISC 25 19:51:31.8±1.4, 56°09N±0°04×153°75W±0°06, h9km±8km, n125, σ1s07/132, mb4.2/48, MS5.1/3, 6C-1D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.16**	**12**	*e*Pn	**Pn**	**19 51 53.9**	**-0.2**
OHAK				*e*Sn	**Sn**	**19 52 05.5**	**-4.5**
OHAK				S	**Sg**	**19 52 10.2**	**+1.1**
KDAK	**Kodiak Island**	**1.81**	**20**	Pn	**Pn**	**19 52 02.4**	**-0.6**
KDAK	**Kodiak Island**	**1.81**	**20**	P	**Pn**	**19 52 02.8**	**-0.2**
KDAK				S	**Sn**	**19 52 25.0**	**-1.1**
CHGN	**Chignik**	**2.62**	**277**	P	**Pn**	**19 52 14.0**	**0.0**
SDPT	**Sand Point**	**3.88**	**262**	P	**Pn**	**19 52 30.8**	**-0.6**
RSO	**Redoubt South**	**4.41**	**6**	*e*Pn	**Pn**	**19 52 38.8**	**+0.1**
SEW	**Seward**	**4.62**	**28**	*e*Pn	**Pn**	**19 52 39.9**	**-1.7**
SEW				P		19 52 40.3	
SVW2	**Sparrevohn**	**5.11**	**350**	P	**Pn**	**19 52 49.2**	**+0.8**
SVW2				*e*P		19 52 49.5	
FIB	**Fire Island**	**5.42**	**19**	*e*P	**Pn**	**19 52 53.2**	**+0.6**
RC01	**Rabbit Creek A**	**5.43**	**21**	*e*Pn	**Pn**	**19 52 51.0**	**-1.7**
	210nm,1.3s						
PMR	**Palmer**	**6.01**	**22**	*e*P	**Pn**	**19 52 59.0**	**-1.7**
EYAK	**Cordova Ski Ar**	**6.14**	**40**	P	**Pn**	**19 53 01.1**	**-1.4**
BMRM	**Bremner River**	**6.84**	**41**	*e*Pn	**Pn**	**19 53 10.3**	**-1.7**
BMRM				*e*Sn	**Sn**	**19 54 23.7**	**-6.2**
PPLA	**Purkeypile**	**6.87**	**6**	*e*Pn	**Pn**	**19 53 13.1**	**+0.6**
	12nm,0.5s						
TT01	**Tatalina**	**6.93**	**351**	P	**Pn**	**19 53 14.0**	**+0.7**
TTA	**Tatalina**	**6.96**	**351**	*e*P	**Pn**	**19 53 15.2**	**+1.6**
TRF	**Thorofare Moun**	**7.58**	**12**	P	**Pn**	**19 53 22.5**	**+0.2**
KTH	**Kantishna Hill**	**7.62**	**10**	*e*Pn	**Pn**	**19 53 22.7**	**0.0**
	4.2nm,0.4s						
UNV	**Unalaska Valle**	**7.68**	**258**	*e*Pn	**Pn**	**19 53 21.1**	**-2.5**
	9.2nm,0.4s						
MCK	**McKinley**	**8.03**	**15**	P	**Pn**	**19 53 28.0**	**-0.4**
BPAW	**Bear Paw Mtn.**	**8.15**	**9**	P	**Pn**	**19 53 29.7**	**-0.3**
PNL	**Peninsula**	**8.44**	**59**	*e*Pn	**Pn**	**19 53 32.8**	**-1.2**
	34nm,0.3s						
COLA	**College**	**9.27**	**16**	*e*P	**Pn**	**19 53 43.4**	**-2.0**
COLA				*e*		19 55 25.1	
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
COLA	**College**	**9.27**	**16**	*e*Pn	**Pn**	**19 53 43.4**	**-2.0**
	comp=Z,14nm,0.9s						
COLA				*e*Sn	**Sn**	**19 55 25.1**	**-4.5**
IL1	**Eielson Array**	**9.34**	**18**	P	**Pn**	**19 53 45.3**	**-1.0**
SKAG	**Skagway**	**10.39**	**63**	*e*Pn	**Pn**	**19 54 02.1**	**+1.4**
EGAK	**Eagle**	**10.68**	**30**	*e*Pn	**Pn**	**19 54 06.2**	**+1.6**
DIB	**Dawson Inlet,**	**12.64**	**94**	T		20 07 22.9	
	SNR=29						
DLBC	**Dease Lake**	**13.03**	**70**	Pn	**Pn**	**19 54 38.5**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=270,slow=4.5,SNR=5.7						
INK	**Inuvik**	**15.35**	**29**	Pn	**Pn**	**19 55 10.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=225,slow=13,SNR=10						
BBB	**Bella Bella**	**15.48**	**94**	Pn	**Pn**	**19 55 10.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=166,slow=5.1,SNR=3.0						
SMY	**Shemya**	**18.91**	**273**	*e*P	**Pn**	**19 55 58.2**	**+5.2**
SMY				pmax	pmax		
	comp=Z,361nm,2.1s						
SMY	**Shemya**	**18.91**	**273**	*e*P	**Pn**	**19 55 58.2**	**+5.2**
	comp=Z,361nm,2.1s						
YKA	**Yellowknife Ar**	**20.72**	**56**	P	**P**	**19 56 12.3**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=269,slow=9.9,SNR=32						
YKA	**Yellowknife Ar**	**20.72**	**56**	P	**P**	**19 56 12.3**	**+0.3**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JCW	**Jim Creek**	**20.91**	**99**	*e*P	**P**	**19 56 14.6**	**+0.4**
BILL	**Bilibino**	**21.73**	**319**	*e*P	**P**	**19 56 22.3**	**-0.6**
BILL				*e*		19 56 31.9	
BILL				*e*		19 56 41.8	
BILL				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.0						
LON	**Longmire**	**21.82**	**102**	*e*P	**P**	**19 56 24.1**	**+0.1**
LON				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
LON	**Longmire**	**21.82**	**102**	*e*P	**P**	**19 56 24.1**	**+0.1**
	comp=Z,12nm,1.2s,mb4.2						
NEW	**Newport**	**23.55**	**94**	*e*P	**P**	**19 56 40.3**	**-2.0**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NEW	**Newport**	**23.55**	**94**	*e*P	**P**	**19 56 40.2**	**-2.0**
	comp=Z,1.8nm,0.7s,mb3.6						
YBH	**Yreka Blue Hor**	**24.68**	**112**	P	**P**	**19 56 53.4**	**+0.8**
	comp=Z,3.0nm,0.9s,mb3.8,baz=346,slow=3.4,SNR=7.8						
YBH	**Yreka Blue Hor**	**24.68**	**112**	P	**P**	**19 56 53.4**	**+0.8**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JTMT	**Jette**	**25.43**	**92**	*e*P	**P**	**19 56 59.6**	**+0.3**
	comp=Z,6.1nm,1.1s,mb4.0						
YBMT	**Yellow Bay**	**25.51**	**92**	*e*P	**P**	**19 56 57.6**	**-2.5**
	comp=Z,4.6nm,1.1s,mb3.9						
WVOR	**Wild Horse Val**	**26.34**	**106**	*e*P	**P**	**19 57 08.1**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
WVOR	**Wild Horse Val**	**26.34**	**106**	*e*P	**P**	**19 57 08.1**	**+0.4**
	comp=Z,6.2nm,1.0s,mb4.1						
SEY	**Seymchan**	**27.42**	**307**	*ce*P	**P**	**19 57 16.7**	**-0.5**
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**	**19 57 22.8**	**+1.9**
	comp=Z,1.7nm,0.4s,mb4.0,baz=70,slow=13,SNR=6.6						
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**	**19 57 22.8**	**+1.9**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**

JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
JOF Joensuu 61.26 357 *ep* **P 20 01 46.2 -0.3**
comp=Z,1.0nm,0.4s,mb4.3
KAF Kangasniemi 62.13 360 *eP* **P 20 01 51.9 -0.5**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.7
KAF Kangasniemi 62.13 360 *ep* **P 20 01 51.9 -0.5**
comp=Z,1.9nm,0.3s,mb4.7
SOKR Solikamsk 62.15 343 *eP* **P 20 01 52.7 +0.2**
SOKR pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
NB2 NORSAR Subarra 62.61 8 P **P 20 01 55.6 0.0**
comp=Z,3.8nm,1.1s,mb4.4,baz=350,slow=6.9
NOA NORSAR Array B 62.61 8 P **P 20 01 56.0 +0.4**
comp=Z,1.0nm,0.6s,mb4.1,baz=351,slow=6.6,SNR=5.8
NOA NORSAR Array B 62.61 8 P **P 20 01 56.0 +0.4**
NOA pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 62.80 0 P **P 20 01 57.0 +0.1**
comp=Z,0.8nm,0.4s,mb4.2,baz=7.0,slow=8.0,SNR=10
FINES FINESS Array B 62.80 0 P **P 20 01 57.0 +0.1**
FINES pmax pmax
comp=Z,1.0nm,0.4s
ARU Arti 64.82 341 *d iP* **P 20 02 10.6 +0.4**
ARU S **S 20 10 52.8 +2.1**
ARU SS SS 20 15 04.0 +3.2
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
KURK Kurchatov 65.06 326 *ceP* **P 20 02 12.1 +0.2**
KURK pmax pmax
comp=Z,12nm,2.5s,mb4.5
BRVK Borovoye 65.35 333 *ceP* **P 20 02 14.0 +0.3**
BRVK pmax pmax
comp=Z,10.0nm,2.5s,mb4.4
BVAR Borovoye Array 65.35 332 P **P 20 02 14.1 +0.3**
comp=Z,1.2nm,0.5s,mb4.2,baz=46,slow=6.4,SNR=12
BVAR Borovoye Array 65.35 332 P **P 20 02 14.1 +0.4**
BVAR pmax pmax
comp=Z,1.0nm,0.5s
LZH Lanzhou 67.16 301 *eP* **P 20 02 30.0 +4.4**
LZH pP pP 20 02 38.0 +9.3
LZH sP sP 20 02 41.3 +11
LZH PP PP 20 05 00.5 +7.4
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.0
MK31 Makanchi Array 67.25 322 *eP* **P 20 02 25.7 -0.3**
MKAR Makanchi Array 67.25 322 P **P 20 02 26.2 +0.2**
comp=Z,0.5nm,0.5s,mb3.8,baz=36,slow=7.6,SNR=11
MKAR Makanchi Array 67.25 322 P **P 20 02 26.2 +0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
WMQ Urumqi 67.82 317 *eP* **P 20 02 32.3 +2.6**
ISAL Salakas 68.70 0 *eP* **P 20 02 36.5 +1.6**
IIGN Ignalina 68.92 0 *eP* **P 20 02 37.1 +0.8**
IDID Didziasalis 68.95 360 *eP* **P 20 02 37.4 +0.9**
ABKAR Abkulak array 71.33 337 *eP* **P 20 02 51.2 0.0**
comp=Z,1.3nm,0.5s,mb4.1
CD2 Chengdu 71.39 298 P **P 20 02 51.8 -0.1**
CD2 pP pP 20 02 56.5 +1.5
CD2 sP sP 20 02 58.5 +2.4
CD2 PP PP 20 05 31.8 +2.0
CD2 S S 20 12 06.5 -3.4
CD2 SS SS 20 16 42.8 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CD2 LR LR
comp=N,1μm,17.8s
CD2 LR LR
comp=Z,2μm,17.8s,MS5.3
AAK Ala-Archa 73.53 325 *ceP* **P 20 03 05.5 +1.0**
AAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.8
AAK Ala-Archa 73.53 325 *eP* **P 20 03 04.5 0.0**
comp=Z,3.4nm,0.9s,mb4.3
GYA Guiyang 73.54 293 P **P 20 03 04.3 -0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
AKASG Malin Array Be 73.55 358 P **P 20 03 03.2 -1.2**
comp=Z,1.0nm,0.5s,mb4.0,baz=6.6,slow=5.6,SNR=4.3
AKASG Malin Array Be 73.55 358 P **P 20 03 03.2 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
EKS2 Erkin-Say 73.74 325 *eP* **P 20 03 03.6 -2.1**
EKS2 pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
EKS2 Erkin-Say 73.74 325 *eP* **P 20 03 03.6 -2.1**
comp=Z,7.3nm,1.4s,mb4.4
GERES GERESS Array B 74.91 9 P **P 20 03 12.5 +0.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=316,slow=3.7,SNR=7.4
GERES GERESS Array B 74.91 9 P **P 20 03 12.5 +0.1**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GOF Gofitskoye 78.23 348 *eP* **P 20 03 34.2 +2.9**
LSA Lhasa 78.38 306 *eP* **P 20 03 33.9 +1.5**
LSA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LSA Lhasa 78.38 306 *eP* **P 20 03 33.9 +1.5**
comp=Z,5.2nm,1.0s,mb4.4
KIV Kislovodsk 79.36 348 *eP* **P 20 03 38.5 +1.0**
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ESDC Sonseca Array 81.21 23 P **P 20 03 47.3 -0.2**
comp=Z,1.4nm,0.8s,mb3.9,baz=338,slow=4.8,SNR=7.1
CMAR Chiang Mai Arr 84.13 294 P **P 20 04 03.0 -0.1**
comp=Z,1.7nm,0.5s,mb4.4,baz=17,slow=5.5,SNR=18
CMAR Chiang Mai Arr 84.13 294 P **P 20 04 03.0 0.0**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 84.34 354 P **P 20 04 03.6 -0.2**
comp=Z,0.6nm,0.7s,mb3.8,baz=27,slow=5.7,SNR=4.2
BRTR Keskin Array B 84.34 354 *ceP* **P 20 04 05.1 +1.3**
BRTR pmax pmax
comp=Z,1.0nm,0.7s

IDC 25 20:03:47.2±3.6, 7°.20S×148°.18E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/14, mbtmp3.5/4, Error ellipse: s-maj=109.2km s-min=37.8km az=102.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.36**	**218**	P	P	20 08 36.0	-0.2
	0.5nm,0.7s,baz=52,slow=9.1,SNR=7.4						
CMAR	**Chiang Mai Arr**	**54.85**	**298**	P	P	20 13 19.8	+0.1
	0.4nm,0.5s,baz=120,slow=6.0,SNR=5.0						
MKAR	**Makanchi Array**	**79.16**	**320**	P	P	20 15 54.2	+0.3
	0.3nm,0.6s,baz=104,slow=6.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**80.64**	**328**	P	P	20 16 01.5	-0.3
	0.4nm,0.5s,baz=116,slow=3.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**146.51**	**283**	PKPbc	PKPbc	20 23 31.1	-0.4
	0.2nm,0.4s,baz=82,slow=2.9,SNR=6.7						

*JMA **25** 20:18:02.9±0.2, 29°.77N×138°.97E, h471km±4km, M3.9*
*ISCJB **25** 20:18:02.9±0.3, 29°.75N±0°.03×138°.82E±0°.06, h460km±4km, mb3.6/23, Error ellipse: s-maj=8.0km s-min=5.3km az=177.1*
*BJI **25** 20:18:02.9, 29°.68N×138°.72E, h465km, mB4.9/3, mb4.6/8*
*NEIC **25** 20:18:03.7±0.6, 29°.78N×138°.59E, h444km±7km, mb4.3/12, Error ellipse: s-maj=8.7km s-min=6.0km az=99.0*
*IDC **25** 20:18:03.6±0.6, 29°.81N×138°.83E, h448km±8km, mb3.1/12, mb1 3.3/17, mb1mx3.2/30, mbtmp3.2/17, Error ellipse: s-maj=17.9km s-min=8.5km az=77.0*
*MOS **25** 20:18:03.0±0.8, 29°.78N×138°.49E, h454km, mb3.9/6, Error ellipse: s-maj=27.0km s-min=9.8km az=101.8*
ISC 25 20:18:04.0±0.3, 29.78N±0°.03×138.86E±0°.06, h454km±4km, n73, σ1°15/86, mb3.6/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.42**	**14**	P	**P**	**20 19 15.5**	**+1.1**
JHJ2				S	**S**	**20 20 11.1**	**-0.7**
JHJ	**Hachijo jima 2**	**3.42**	**13**	P	**P**	**20 19 15.5**	**+1.1**
	24nm,0.3s,baz=259,slow=22,SNR=20						
JHJ				S	**S**	**20 20 10.9**	**-0.9**
	44nm,0.3s,baz=68,slow=23,SNR=10						
CBIJ	**Chichi jima**	**3.96**	**132**	P	**P**	**20 19 18.6**	**-0.5**
CBIJ				S	**S**	**20 20 18.2**	**-1.9**
CBIJ	**Chichi jima**	**3.96**	**132**	P	**P**	**20 19 18.8**	**-0.3**
	9.9nm,0.3s,baz=333,slow=20,SNR=20						
CBIJ				S	**S**	**20 20 18.2**	**-1.9**
	88nm,0.3s,baz=282,slow=22,SNR=14						
JHHJ	**Haha-jima-NKT**	**4.29**	**136**	P	**P**	**20 19 22.2**	**+0.2**
JHHJ				S	**S**	**20 20 23.7**	**-1.7**
JWZ	**Kozaga**	**4.60**	**325**	P	**P**	**20 19 26.0**	**+1.3**
JIE	**Ise**	**4.95**	**339**	P	**P**	**20 19 29.4**	**+1.5**
JIE				S	**S**	**20 20 38.0**	**+1.5**
BSO1	**Boso 1**	**5.18**	**20**	P	**P**	**20 19 30.6**	**+0.5**
BSO1				S	**S**	**20 20 39.3**	**-1.2**
JWY	**Kouya**	**5.23**	**329**	P	**P**	**20 19 32.4**	**+1.8**
JOD2	**Odawara 2**	**5.47**	**2**	P	**P**	**20 19 34.0**	**+1.0**
JOD2				*eS*	**S**	**20 20 46.0**	**+0.3**
JTO	**Tosashimizu**	**6.03**	**302**	P	**P**	**20 19 39.9**	**+1.3**
JRY	**Ryogami san**	**6.22**	**0**	P	**P**	**20 19 40.6**	**+0.1**
JRY				S	**S**	**20 20 58.0**	**-1.5**
MJAR	**Matsushiro Arr**	**6.77**	**356**	P	**P**	**20 19 45.8**	**-0.4**
	4.1nm,0.3s,baz=172,slow=12,SNR=59						
MJAR				S	**S**	**20 21 07.8**	**-2.1**
	0.6nm,0.3s,baz=177,slow=17,SNR=3.1						
MAJO	**Matsushiro**	**6.77**	**356**	*eP*	**P**	**20 19 45.4**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,58nm,0.8s						
MAJO	**Matsushiro**	**6.77**	**356**	*eP*	**P**	**20 19 45.4**	**-0.8**
	comp=Z,58nm,0.8s						
MAT	**Matsushiro**	**6.77**	**356**	P	**P**	**20 19 45.8**	**-0.4**
MAT				S	**S**	**20 21 09.2**	**-0.7**
MAT	**Matsushiro**	**6.77**	**356**	P	**P**	**20 19 46.0**	**-0.2**
MAT				S	**S**	**20 21 07.7**	**-2.2**
JHS	**Saijyo**	**7.12**	**318**	P	**P**	**20 19 51.1**	**+1.2**
JSJ	**Shimokoshiki**	**8.10**	**286**	P	**P**	**20 20 01.5**	**+1.1**
JAM	**Amami Oshima**	**8.21**	**263**	P	**P**	**20 20 02.2**	**+0.5**
JMK	**Ichinoseki**	**9.36**	**11**	P	**P**	**20 20 15.2**	**+1.3**
JMK				*eS*	**S**	**20 21 59.3**	**-1.5**
JOW	**Kunigami**	**9.78**	**255**	P	**P**	**20 20 19.9**	**+1.2**
JOW	**Kunigami**	**9.78**	**255**	P	**P**	**20 20 19.8**	**+1.1**
	comp=Z,9.8nm,0.3s,baz=97,slow=8.2,SNR=62						
JKE	**Kume jima 2**	**11.21**	**255**	P	**P**	**20 20 34.2**	**0.0**
JOT	**Ohata**	**11.71**	**8**	P	**P**	**20 20 39.6**	**+0.2**
KSRS	**Korea Array**	**11.90**	**313**	P	**P**	**20 20 41.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=126,slow=12,SNR=19						
KSRS	**Korea Array**	**11.90**	**313**	P	**P**	**20 20 41.5**	**0.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KS15	**Wonju Array Si**	**11.92**	**313**	*eP*	**P**	**20 20 40.7**	**-1.1**
JKB	**Kayabe**	**12.21**	**8**	P	**P**	**20 20 46.1**	**+1.3**
JOSM	**Okushiri--Mats**	**12.29**	**2**	P	**P**	**20 20 46.6**	**+0.9**
ASAJ	**Asahikawa**	**14.62**	**11**	P	**P**	**20 21 12.7**	**+2.0**
	comp=Z,1.6nm,0.3s,baz=225,slow=12,SNR=16						
ASAJ	**Asahikawa**	**14.62**	**11**	P	**P**	**20 21 12.7**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JTKR	**Abashiri--Toko**	**14.72**	**14**	P	**P**	**20 21 14.2**	**+2.4**
YHNB	**Yeheng**	**16.36**	**256**	*eP*	**P**	**20 21 26.4**	**-3.1**
NACB	**Ninganchiao**	**16.37**	**254**	*eP*	**P**	**20 21 24.1**	**-5.5**
	comp=Z,13nm,0.6s						
NACB				*eS*	S	20 23 48.3	-31
MDJ	**Mudanjiang**	**16.53**	**336**	*eP*	**P**	**20 21 29.3**	**-1.6**
	comp=Z,4.2nm,0.5s						
YULB	**Yu-li**	**16.94**	**252**	*eP*	**P**	**20 21 32.0**	**-3.6**
	comp=Z,12nm,0.6s						
GUMO	**Guam**	**17.04**	**160**	P	**P**	**20 21 39.1**	**+2.4**
	comp=Z,6.8nm,0.3s,baz=198,slow=9.6,SNR=3.5						
GUMO	**Guam**	**17.04**	**160**	*eP*	**P**	**20 21 38.0**	**+1.3**
GUMO				pmax	pmax		
	comp=Z,23nm,0.6s						
GUMO	**Guam**	**17.04**	**160**	*eP*	**P**	**20 21 38.0**	**+1.3**
	comp=Z,22nm,0.6s						
ENH	**Enshi**	**25.41**	**279**	*eP*	**P**	**20 22 52.3**	**-1.5**
	comp=Z,12nm,0.5s,mb4.6						
BOD	**Bodaibo**	**32.91**	**336**	*eP*	**P**	**20 23 56.9**	**-1.8**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
GTA	**Gaotai**	**33.33**	**297**	*eP*	**P**	**20 24 02.3**	**-0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
CHTO	**Chiang Mai**	**37.81**	**262**	*eP*	**P**	**20 24 39.3**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**37.81**	**262**	*eP*	**P**	**20 24 39.3**	**-1.0**
	comp=Z,12nm,0.6s,mb4.5						
CM31	**Chiang Mai Arr**	**37.96**	**262**	*eP*	**P**	**20 24 40.6**	**-0.9**
	comp=Z,3.7nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**37.96**	**262**	P	**P**	**20 24 41.2**	**-0.3**
	comp=Z,2.7nm,0.4s,mb4.0,baz=66,slow=5.1,SNR=38						
BILL	**Bilibino**	**41.57**	**15**	*eP*	**P**	**20 25 11.3**	**+1.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BILL	**Bilibino**	**41.57**	**15**	*eP*	**P**	**20 25 11.3**	**+1.3**
	comp=Z,5.6nm,1.0s,mb4.0						
TIXI	**Tiksi**	**42.28**	**355**	*eP*	**P**	**20 25 15.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
TIXI	**Tiksi**	**42.28**	**355**	*eP*	**P**	**20 25 15.6**	**+0.1**
	comp=Z,3.2nm,0.8s,mb3.8						
ZALV	**Zalesovo Beam**	**45.55**	**318**	P	**P**	**20 25 40.1**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.2,baz=59,slow=8.8,SNR=4.9						
MKAR	**Makanchi Array**	**46.52**	**308**	P	**P**	**20 25 48.4**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.1,baz=84,slow=10,SNR=8.3						
MKAR	**Makanchi Array**	**46.52**	**308**	P	**P**	**20 25 48.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**49.28**	**197**	P	**P**	**20 26 10.4**	**+0.5**
	comp=Z,1.8nm,0.6s,mb3.6,baz=38,slow=7.3,SNR=6.2						
WRAB	**Tennant Creek**	**49.61**	**186**	*eP*	**P**	**20 26 12.4**	**0.0**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.3						
WRAB	**Tennant Creek**	**49.61**	**186**	*eP*	**P**	**20 26 12.4**	**0.0**
	comp=Z,1.5nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**53.35**	**186**	P	**P**	**20 26 40.2**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.0,baz=17,slow=11,SNR=11						
BVAR	**Borovoye Array**	**54.09**	**316**	P	**P**	**20 26 43.9**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.3,baz=80,slow=11,SNR=6.2						
NWAO	**Narrogin (SRO)**	**65.64**	**200**	P	**P**	**20 28 01.6**	**-0.3**
	comp=Z,4.0nm,0.6s,mb4.2,baz=30,slow=8.1,SNR=4.0						
ARCES	**ARCESS Array B**	**70.04**	**340**	P	**P**	**20 28 28.9**	**+0.5**
	comp=Z,1.2nm,0.5s,mb3.7,baz=69,slow=8.6,SNR=22						
ARCES	**ARCESS Array B**	**70.04**	**340**	P	**P**	**20 28 28.9**	**+0.5**
YKA	**Yellowknife Ar**	**71.17**	**28**	P	**P**	**20 28 36.2**	**+1.0**
	comp=Z,0.1nm,0.4s,mb2.7,baz=303,slow=6.1,SNR=4.4						
YKA	**Yellowknife Ar**	**71.17**	**28**	P	**P**	**20 28 36.2**	**+1.0**
JOF	**Joensuu**	**71.38**	**333**	*eP*	**P**	**20 28 35.0**	**-1.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
JOF	**Joensuu**	**71.38**	**333**	*ep*	**P**	**20 28 35.0**	**-1.5**
	comp=Z,2.2nm,0.5s,mb3.9						
KAF	**Kangasniemi**	**73.78**	**333**	*eP*	**P**	**20 28 49.4**	**-1.0**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KAF	**Kangasniemi**	**73.78**	**333**	*ep*	**P**	**20 28 49.4**	**-1.0**
	comp=Z,1.2nm,0.5s,mb3.7						
FINES	**FINESS Array B**	**74.24**	**333**	P	**P**	**20 28 52.8**	**-0.3**
	comp=Z,0.9nm,0.5s,mb3.5,baz=57,slow=4.6,SNR=14						
NOA	**NORSAR Array B**	**80.03**	**337**	P	**P**	**20 29 24.6**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.2,baz=49,slow=4.8,SNR=3.1						
BRTR	**Keskin Array B**	**82.04**	**311**	P	**P**	**20 29 35.8**	**+0.1**
	comp=Z,0.2nm,0.5s,mb2.9,baz=102,slow=4.0,SNR=3.8						
BRTR	**Keskin Array B**	**82.04**	**311**	P	**P**	**20 29 35.8**	**+0.1**
MVU	**Marysvale**	**85.12**	**48**	*eP*	**P**	**20 29 53.0**	**+2.0**
	comp=Z,2.2nm,0.7s,mb3.9						

*ISCJB **25** 20:33:08.7±1.0, 31°.31N±0°.04×104°.02E±0°.07, h11km±7km, mb3.8/11, Error ellipse: s-maj=10.6km s-min=6.3km az=13.6*
*IDC **25** 20:33:08.5±0.9, 31°.30N×104°.03E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.4/1, Error ellipse: s-maj=34.4km s-min=17.1km az=55.0*
*BJI **25** 20:33:10.3, 31°.23N×104°.15E, h14km, mB4.6/5, mb4.3/9, ML3.9/16, Ms4.0/5, Ms7 3.9/3*
*NEIC **25** 20:33:11.6±0.5, 31°.38N×104°.01E, h10km, mb3.9/1, Error ellipse: s-maj=12.3km s-min=8.5km az=53.0*
ISC 25 20:33:10.3±0.9, 31°.32N±0°.03×103°.94E±0°.06, h7km±6km, n23, σ1°20/29, mb3.9/12, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.44**	**201**	Pg	**Pg**	**20 33 17.8**	**-1.0**
CD2				Sg	**Sg**	**20 33 24.5**	**0.0**
CD2				smax			
	comp=N,24μm,0.5s						
LZH	**Lanzhou**	**4.76**	**359**	*ePg*	**Pg**	**20 34 42.8**	**+1.4**
LZH				Sg	**Sg**	**20 35 40.8**	**-2.3**
LZH				smax			
	comp=N,95nm,0.8s						
LZH				smax			
	comp=E,100nm,0.8s						
LZH				LR	LR		
	comp=E,910nm,6.7s						
LZH				LR	LR		
	comp=Z,1μm,7.5s						
ENH	**Enshi**	**4.88**	**101**	*ePn*	**Pn**	**20 34 24.9**	**+0.7**
ENH				*eSn*	**Sn**	**20 35 23.3**	**+2.4**
XAN	**Xi'an**	**5.00**	**56**	Pn	**Pn**	**20 34 22.8**	**-2.9**
XAN				smax			
	comp=N,180nm,0.8s						
XAN				smax			
	comp=E,70nm,0.8s						
KMI	**Kunming**	**6.26**	**190**	Pn	**Pn**	**20 34 43.3**	**+0.2**
KMI				Sn	**Sn**	**20 35 53.8**	**-1.1**
KMI				Sg	**Sg**	**20 36 27.0**	**-4.4**
KMI				smax			
	comp=N,31nm,1.7s						
KMI				smax			
	comp=E,27nm,1.7s						
KMI				LR	LR		
	comp=N,1μm,13.9s						
KMI				LR	LR		
	comp=E,790nm,12.0s						
GTA	**Gaotai**	**8.75**	**338**	*eP*	**Pn**	**20 35 26.8**	**+10**
GTA				pP		20 35 31.3	
GTA				sP		20 35 34.0	
GTA				S	**Sn**	**20 37 04.8**	**+8.8**
GTA				sS		20 37 08.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,180nm,4.5s						
GTA				LR	LR		
	comp=N,950nm,14.6s						
GTA				LR	LR		
	comp=E,1μm,14.6s						
GTA				LR	LR		
	comp=Z,450nm,11.6s						
CHTO	**Chiang Mai**	**13.24**	**201**	*ePn*	**Pn**	**20 36 21.4**	**+2.6**
	comp=Z,5.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.58**	**201**	Pn	**Pn**	**20 36 24.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=12,slow=11,SNR=9.0						
SSLB	**Suanglung**	**16.84**	**112**	*ePn*	**Pn**	**20 37 07.1**	**+0.6**
	comp=Z,8.4nm,0.9s						
KSRS	**Korea Array**	**20.69**	**66**	P	**P**	**20 37 50.3**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=260,slow=10,SNR=8.0						
CN2	**Changchun**	**21.05**	**48**	*eP*	**P**	**20 37 55.0**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.4						
MK31	**Makanchi Array**	**22.73**	**319**	*ePn*	**P**	**20 38 13.2**	**+0.6**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**20 38 13.7**	**+1.0**
	comp=Z,1.3nm,0.7s,mb3.5,baz=123,slow=10,SNR=9.2						
AAK	**Ala-Archa**	**25.97**	**304**	P	**P**	**20 38 46.5**	**+3.1**
	comp=Z,0.6nm,0.3s,mb3.6,baz=90,slow=3.0,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.47**	**334**	P	**P**	**20 38 48.1**	**+0.3**
	comp=Z,2.3nm,0.7s,mb3.8,baz=134,slow=10.0,SNR=14						
KURK	**Kurchatov**	**26.99**	**323**	P	**P**	**20 38 52.8**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.6,baz=127,slow=9.2,SNR=7.7						
BVAR	**Borovoye Array**	**32.54**	**322**	P	**P**	**20 39 42.1**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=125,slow=7.8,SNR=3.7						
ARCES	**ARCESS Array B**	**57.01**	**336**	P	**P**	**20 42 55.4**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.9,baz=90,slow=7.3,SNR=7.7						
FINES	**FINESS Array B**	**57.31**	**326**	P	**P**	**20 42 57.5**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.1,baz=76,slow=5.9,SNR=4.8						
ASAR	**Alice Springs**	**61.75**	**149**	P	**P**	**20 43 28.7**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.2,baz=341,slow=6.3,SNR=12						
NOA	**NORSAR Array B**	**64.40**	**327**	P	**P**	**20 43 45.8**	**-0.9**
	comp=Z,0.6nm,0.6s,mb3.8,baz=62,slow=4.1,SNR=2.9						
STKA	**Stephens Creek**	**72.26**	**147**	P	**P**	**20 44 34.7**	**-1.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=329,slow=5.9,SNR=3.0						
YKA	**Yellowknife Ar**	**81.53**	**17**	P	**P**	**20 45 27.2**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=325,slow=5.1,SNR=4.6						

*IDC **25** 20:35:59.9±5.9, 32°.23S×179°.91W, h224km±49km, mb3.5/2, mb1 3.6/4, mb1mx3.4/14, mbtmp3.5/4, Error ellipse: s-maj=52.3km s-min=31.6km az=31.0*
*NEIC **25** 20:36:00.8±6.7, 32°.24S×179°.82W, h246km±69km, mb3.8/1, Error ellipse: s-maj=81.7km s-min=46.3km az=177.0*
ISC 25 20:36:13.1±3.7, 33°.1S±0°.4×17°.9E±°, h334km±55km, n8, σ2°21/8, mb3.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.49**	**200**	P	**Pn**	**20 37 35.4**	**-2.0**
	1.8nm,0.3s,baz=315,slow=2.9,SNR=21						
URZ				S	**S**	**20 38 46.5**	**+1.0**
	13nm,0.3s,baz=161,slow=23,SNR=19						
RPZ	**Rata Peaks**	**12.47**	**209**	P	**Pn**	**20 39 02.5**	**+2.1**
	1.2nm,0.3s,baz=33,slow=8.6,SNR=6.8						
RPZ				S	**S**	**20 41 17.5**	**-1.1**
	1.0nm,0.3s,baz=322,slow=18,SNR=9.0						
STKA	**Stephens Creek**	**31.84**	**262**	P	**P**	**20 42 10.9**	**+3.0**
	0.6nm,0.3s,mb3.4,baz=106,slow=13,SNR=6.8						
ASAR	**Alice Springs**	**40.89**	**271**	P	**P**	**20 43 24.1**	**+0.3**
	1.6nm,0.4s,mb3.6,baz=107,slow=7.4,SNR=34						
ASAR	**Alice Springs**	**40.89**	**271**	P	**P**	**20 43 24.1**	**+0.3**
WRAB	**Tennant Creek**	**42.13**	**277**	*eP*	**P**	**20 43 32.4**	**-1.4**
	2.2nm,0.5s,mb3.5						
FINES	**FINESS Array B**	**146.84**	**337**	PKPbc	PKPbc	20 55 11.8	-3.6
	0.6nm,0.4s,baz=48,slow=3.9,SNR=9.3						
TORD	**Torodi Ar. Bea**	**160.04**	**186**	PKPab	PKPab	20 56 17.6	+3.0
	0.2nm,0.5s,baz=192,slow=1.5,SNR=3.4						

*ISCJB **25** 20:51:33.3±4.8, 5°.95S±0°.08×133°.7E±0°.2, h28km±35km, mb3.5/7, Error ellipse: s-maj=35.4km s-min=13.0km az=175.7*
*NEIC **25** 20:51:36.6±1.0, 5°.97S×133°.63E, h35km, mb3.1/1, Error ellipse: s-maj=34.9km s-min=10.5km az=82.0*
*IDC **25** 20:51:36.4±1.3, 6°.05S×133°.51E, h32km±6km, mb3.3/6, mb1 3.6/8, mb1mx3.5/15, mbtmp3.5/8, ML4.1/2, Error ellipse: s-maj=52.3km s-min=15.1km az=79.0*
ISC 25 20:51:33.9±4.4, 5°.90S±0°.06×133°.8E±0°.2, h18km±28km, h33km±4km: pP-P, n18, σ1°11/19, mb3.5/7, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.90**	**191**	*eP*	**Pn**	**20 53 16.3**	**+2.1**
	9.7nm,0.5s						
KAKA	**Kakadu**	**6.90**	**191**	*ePn*	**Pn**	**20 53 15.3**	**+1.2**
KAKA				*eSn*	**Sn**	**20 54 32.3**	**+0.1**
KNA	**Kununurra**	**10.96**	**206**	*eP*	**Pn**	**20 54 11.5**	**+1.6**
	10nm,0.4s						
WRAB	**Tennant Creek**	**13.96**	**178**	*ePn*	**Pn**	**20 54 50.0**	**-0.9**

KRSC 25 20:56:25.9±0.1, 56°.25N×163°.58E, h5km±5km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.43**	**265**	*e*P	Pg	20 56 34.2	+0.1
KBTR				*i* S	Sg	20 56 40.3	+0.6
SMKR	**Semkarok**	**1.22**	**287**	*e*P	Pg	20 56 49.6	+0.3
SMKR				*i* S	Sg	20 57 06.6	+1.5
BDR	**Baidarnaya**	**1.36**	**285**	*e*P	Pn	20 56 52.0	+0.6
BDR				*i* S	Sb	20 57 10.2	+0.8
SRKR	**Sorokina**	**1.40**	**288**	*e*P	Pn	20 56 52.6	+0.6
SRKR				*i* S	Sb	20 57 11.7	+1.1
ZLN	**Zelenaya**	**1.57**	**263**	*e*P	Pn	20 56 55.5	+1.1
ZLN				*i* S	Sn	20 57 16.5	+1.4
CIRR	**Tsirk**	**1.59**	**266**	*e*P	Pn	20 56 55.5	+0.9
CIRR				*i* S	Sn	20 57 17.0	+1.5
KLY	**Klyuchi**	**1.63**	**273**	*e*P	Pn	20 56 54.2	-1.1
KLY				*i* S	Sn	20 57 14.9	-1.7
KRSR	**Krestovskiy**	**1.68**	**270**	*e*P	Pn	20 56 57.0	+1.1
BKI	**Bering**	**1.71**	**127**	*e*P	Pn	20 56 58.3	+2.0
BKI				*i* S	Sn	20 57 21.8	+3.3
BZMR	**Bezymyannaya**	**1.76**	**261**	*e*P	Pn	20 56 58.3	+1.3
BZMR				*i* S	Sn	20 57 22.8	+3.1
KIRR	**Kirishev**	**1.84**	**262**	*e*P	Pn	20 56 59.6	+1.5
KIRR				*i* S	Sn	20 57 24.9	+3.2
KPT	**Kopyto**	**1.90**	**263**	*e*P	Pn	20 57 00.5	+1.6
KPT				*i* S	Sn	20 57 25.7	+2.5
KMNR	**Kamenistaya**	**1.94**	**257**	*e*P	Pn	20 57 01.7	+2.2
KMNR				*i* S	Sn	20 57 27.6	+3.4
MKZ	**Mys Kozlova**	**2.00**	**213**	*e*P	Pn	20 57 00.6	+0.3
MKZ				*i* S	Sn	20 57 25.9	+0.3
KOZ	**Kozyrevsk**	**2.08**	**266**	*e*P	Pn	20 57 03.6	+2.2
KOZ				*i* S	Sn	20 57 30.7	+3.0
SRDR	**Sredinnyy**	**2.15**	**273**	*e*P	Pn	20 57 04.6	+2.2
SRDR				*i* S	Sn	20 57 32.9	+3.4
TUMR	**Tumrok**	**2.17**	**245**	*e*P	Pn	20 57 04.6	+2.0
SPN	**Mys Shipunski**	**3.77**	**215**	*e*P	Pn	20 57 26.0	+1.4
SPN				*i* S	Sn	20 58 09.3	-0.1
AVH	**Avacha**	**4.10**	**225**	*e*P	Pn	20 57 31.8	+2.7
GNL	**Ganaly**	**4.14**	**234**	*e*P	Pn	20 57 32.3	+2.7

*IDC **25** 20:58:02.9±1.1, 32°.21N×105°.09E, h0km, mb3.7/9, mb1 3.7/11, mb1mx3.6/27, mbtmp3.6/11, ML3.4/2, Error ellipse: s-maj=33.7km s-min=21.4km az=46.0*
*ISCJB **25** 20:58:03.2±0.5, 32°.18N±0°.04×105°.02E±0°.06, h10km, mb3.6/9, Error ellipse: s-maj=6.8km s-min=5.3km az=1.6*
*BJI **25** 20:58:04.9, 32°.17N×104°.92E, h11km, ML3.4/11, Ms3.4/2, Ms7 3.2/1*
*NEIC **25** 20:58:05.0±0.5, 32°.24N×104°.98E, h10km, mb3.8/1, Error ellipse: s-maj=14.7km s-min=8.9km az=68.0*

ISC 25 20:58:05.1±0.4, 32°.19N±0°.04×105°.00E±0°.05, h10km, n20, σ1°.06/27, mb3.6/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.66**	**220**	Pg	**Pn**	**20 58 34.5**	**+0.3**
CD2				Sg	**Sg**	**20 58 58.5**	**+0.1**
CD2				smax			
	comp=N,1μm,0.9s						
XAN	**Xi'an**	**3.77**	**60**	Pg	**Pb**	**20 59 13.0**	**+1.2**
XAN				Sg	**Sg**	**21 00 02.0**	**-4.3**
XAN				smax			
	comp=N,100nm,0.8s						
XAN				smax			
	comp=E,66nm,0.8s						
LZH	**Lanzhou**	**4.00**	**346**	*e*Pn	**Pn**	**20 59 07.3**	**+0.8**
LZH				Pg	**Pg**	**20 59 17.5**	**-4.3**
LZH				Sn	**Sn**	**20 59 54.5**	**+1.1**
LZH				Sg	**Sg**	**21 00 09.0**	**-4.7**
LZH				smax			
	comp=N,170nm,0.7s						
LZH				smax			
	comp=E,130nm,0.5s						
LZH				LR	LR		
	comp=E,450nm,5.6s						
ENH	**Enshi**	**4.29**	**115**	*e*Pn	**Pn**	**20 59 12.0**	**+1.5**
ENH				*e*Sn	**Sn**	**21 00 01.1**	**+0.5**
KMI	**Kunming**	**7.32**	**196**	Pn	**Pn**	**20 59 51.8**	**-0.2**
KMI				smax			
	comp=N,16nm,0.9s						
KMI				smax			
	comp=E,15nm,1.3s						
GTA	**Gaotai**	**8.34**	**331**	*e*P	**Pb**	**21 00 37.8**	**+8.2**
GTA				pP		21 00 41.5	
GTA				sP		21 00 43.5	
GTA				S	**Sb**	**21 02 12.0**	**+3.0**
GTA				sS		21 02 17.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,260nm,4.5s						
GTA				LR	LR		
	comp=N,490nm,14.6s						
GTA				LR	LR		
	comp=E,380nm,14.0s						
GTA				LR	LR		
	comp=Z,630nm,14.6s						
CM31	**Chiang Mai Arr**	**14.72**	**203**	*e*Pn	**Pn**	**21 01 33.7**	**+0.2**
	comp=Z,1.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.72**	**203**	Pn	**Pn**	**21 01 34.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=22,slow=14,SNR=5.3						
KSRS	**Korea Array**	**19.52**	**68**	P	**Pn**	**21 02 31.5**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=255,slow=12,SNR=3.3						
MK31	**Makanchi Array**	**22.69**	**317**	*e*P	**P**	**21 03 06.3**	**-0.3**
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**21 03 07.3**	**+0.7**
	comp=Z,1.8nm,0.9s,mb3.5,baz=120,slow=10,SNR=8.0						
ZALV	**Zalesovo Beam**	**26.10**	**332**	P	**P**	**21 03 40.0**	**+1.2**
	comp=Z,0.5nm,0.4s,mb3.4,baz=118,slow=12,SNR=4.5						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**21 03 45.2**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.2,baz=130,slow=8.1,SNR=4.5						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**21 03 44.3**	**-1.4**
	comp=Z,2.0nm,1.0s,mb3.6						
BVAR	**Borovoye Array**	**32.43**	**320**	P	**P**	**21 04 34.7**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=112,slow=12,SNR=3.4						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**21 07 46.3**	**-1.3**
	comp=Z,2.0nm,0.9s,mb4.1,baz=82,slow=9.9,SNR=4.1						
BRTR	**Keskin Array B**	**56.88**	**299**	P	**P**	**21 07 49.6**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=105,slow=6.3,SNR=2.1						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**21 07 50.2**	**-1.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=84,slow=5.9,SNR=3.9						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**21 08 25.1**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.9,baz=331,slow=6.7,SNR=4.1						
YKA	**Yellowknife Ar**	**80.43**	**17**	P	**P**	**21 10 15.1**	**-1.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=329,slow=5.6,SNR=4.5						

*NEIC **25** 20:58:10.7±0.9, 1°.32N×102°.62E, h35km, mb3.8/3, Error ellipse: s-maj=34.3km s-min=14.5km az=221.0*
*ISCJB **25** 20:58:22.2±0.4, 0°.37N±0°.07×100°.22E±0°.09, h184km±5km, mb3.5/6, Error ellipse: s-maj=17.0km s-min=7.5km az=145.0*
*DJA **25** 20:58:23, 0°.32N×100°.22E, h170km, MLv3.6/9*
*IDC **25** 20:58:23.2±1.7, 0°.53N×100°.57E, h168km±24km, mb3.3/6, mb1 3.3/7, mb1mx3.1/23, mbtmp3.2/7, Error ellipse: s-maj=157.1km s-min=17.0km az=57.0*

ISC 25 20:58:23.2±0.4, 0°.36N±0°.07×100°.22E±0°.09, h177km±5km, n28, σ0°.58/28, mb3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.78**	**304**	P	**Pn**	**20 58 49.3**	**+0.2**
BKNI	**Bangkinang**	**0.82**	**92**	P	**Pn**	**20 58 49.3**	**0.0**
PPI	**Padang Panjang**	**0.83**	**168**	P	**Pn**	**20 58 49.6**	**+0.2**
PDSI	**Padang**	**1.28**	**169**	P	**Pn**	**20 58 53.0**	**+0.1**
SDSI	**Sungai Dareh**	**1.76**	**137**	P	**Pn**	**20 58 57.7**	**+0.2**
SISI	**Saibi**	**2.02**	**214**	P	**Pn**	**20 59 00.4**	**+0.1**
PSI	**Prapat**	**2.75**	**332**	P	**Pn**	**20 59 08.6**	**-0.2**
	0.9nm,0.3s,baz=156,slow=11,SNR=7.2						
PSI				S	**Sn**	**20 59 43.0**	**-1.2**
	1.0nm,0.3s,baz=33,slow=17,SNR=6.7						
PSI	**Prapat**	**2.75**	**332**	P	**Pn**	**20 59 08.6**	**-0.2**
PSI				S	**Sn**	**20 59 43.0**	**-1.2**
GSI	**Gunungsitoli**	**2.81**	**290**	P	**Pn**	**20 59 10.5**	**+1.1**
MYKOM	**Kota Tinggi**	**3.90**	**69**	P	**Pn**	**20 59 23.8**	**+0.9**
MNAI	**Manna**	**5.42**	**150**	P	**Pn**	**20 59 42.3**	**-0.3**
	232nm,1.2s,1.0nm						
MDSI	**Maura Dua**	**6.22**	**141**	P	**Pn**	**20 59 53.2**	**+0.1**
	13nm,1.1s,0.1nm						
BSI	**Banda Aceh**	**7.09**	**316**	P	**Pn**	**21 00 03.8**	**-0.7**
	20nm,1.4s,1μm						
KASI	**Kota Agung**	**7.23**	**144**	P	**Pn**	**21 00 05.6**	**-0.8**
ASAR	**Alice Springs**	**40.49**	**128**	P	**P**	**21 05 44.0**	**-1.0**
	0.2nm,0.3s,mb3.2,baz=299,slow=7.9,SNR=5.8						
ASAR				PcP	PcP	21 07 45.0	+0.9
	0.5nm,0.6s,baz=295,slow=1.9,SNR=5.8						
MK31	**Makanchi Array**	**48.84**	**344**	P	**P**	**21 06 50.4**	**-0.2**
MKAR	**Makanchi Array**	**48.84**	**344**	P	**P**	**21 06 51.1**	**+0.6**
	0.2nm,0.4s,mb3.1,baz=151,slow=8.6,SNR=6.7						
MKAR	**Makanchi Array**	**48.84**	**344**	P	**P**	**21 06 51.1**	**+0.6**
STKA	**Stephens Creek**	**50.57**	**133**	P	**P**	**21 07 03.8**	**-0.1**
	1.7nm,0.9s,mb3.7,baz=304,slow=15,SNR=2.5						
STKA	**Stephens Creek**	**50.57**	**133**	*e*P	**P**	**21 06 59.5**	**-4.4**
	0.6nm,1.0s,mb3.2						
KURK	**Kurchatov**	**53.43**	**343**	P	**P**	**21 07 24.7**	**0.0**
	0.2nm,0.5s,mb3.1,baz=168,slow=6.8,SNR=2.7						
KURK				pP	pP	21 08 04.0	-0.8
	0.3nm,0.6s,baz=163,slow=6.8,SNR=3.3						
KURK	**Kurchatov**	**53.43**	**343**	P	**P**	**21 07 25.5**	**+0.8**
	0.6nm,0.5s,mb3.6						
ZALV	**Zalesovo Beam**	**54.91**	**349**	P	**P**	**21 07 35.8**	**+0.4**
	0.7nm,0.3s,mb3.9,baz=172,slow=6.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**54.91**	**349**	P	**P**	**21 07 35.8**	**+0.4**
ARCES	**ARCESS Array B**	**84.35**	**340**	P	**P**	**21 10 35.1**	**+0.1**
	1.4nm,0.9s,mb3.7,baz=119,slow=4.3,SNR=4.0						
ARCES	**ARCESS Array B**	**84.35**	**340**	P	**P**	**21 10 35.1**	**+0.1**
TXAR	**Lajitas Array**	**142.69**	**36**	PKP	PKPdf	21 17 34.3	-1.7
	0.1nm,0.4s,baz=240,slow=1.8,SNR=3.2						
TXAR	**Lajitas Array**	**142.69**	**36**	PKP	PKPdf	21 17 34.3	-1.7

*ISCJB **25** 21:14:21.1±1.2, 56°.11N±0°.02×153°.73W±0°.04, h1km±7km, mb4.4/56, Error ellipse: s-maj=4.6km s-min=3.3km az=44.6*
*BJI **25** 21:14:21.0, 55°.90N×153°.50W, h15km, mB5.0/8, mb4.5/14, Ms4.7/6, Ms7 4.3/6*
*IDC **25** 21:14:22.9±0.6, 56°.14N×153°.71W, h0km, mb4.2/27, mb1 4.3/29, mb1mx4.3/34, mbtmp4.2/29, ML3.8/2, Error ellipse: s-maj=17.7km s-min=11.3km az=20.0*
*MOS **25** 21:14:23.6±0.7, 56°.18N×153°.77W, h15km, mb4.5/36, Error ellipse: s-maj=14.6km s-min=5.6km az=89.1*
*NEIC **25** 21:14:24.5, 55°.91N×153°.47W, h15km, mb4.5/21, ML4.1(AEIC), After AEIC.*

ISC 25 21:14:24.3±1.3, 56°.10N±0°.02×153°.71W±0°.04, h10km±8km, h22km±1.4km: pP-P, n255, σ0°.88/266, mb4.3/56, 42C-41D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.15**	**12**	P	**Pb**	**21 14 46.1**	**-0.1**
OHAK				S	**Sb**	**21 15 01.5**	**+0.4**
KDAK	**Kodiak Island**	**1.80**	**20**	Pn	**Pn**	**21 14 54.9**	**-0.4**
KDAK	**Kodiak Island**	**1.80**	**20**	P	**Pn**	**21 14 55.0**	**-0.3**
KDAK				S	**Sn**	**21 15 17.4**	**-0.7**
CHGN	**Chignik**	**2.63**	**276**	P	**Pn**	**21 15 06.4**	**-0.4**
SDPT	**Sand Point**	**3.90**	**262**	P	**Pn**	**21 15 23.4**	**-0.7**
RSO	**Redoubt South**	**4.40**	**6**	*e*Pn	**Pn**	**21 15 32.1**	**+1.1**
RSO				*e*Sn	**Sn**	**21 16 25.8**	**+3.5**
SEW	**Seward**	**4.61**	**28**	*e*Pn	**Pn**	**21 15 32.3**	**-1.5**
SEW				Sn	**Sn**	**21 16 19.0**	**-8.3**
SLKM	**Skilak Lake**	**4.79**	**21**	P	**Pn**	**21 15 35.6**	**-0.7**
SVW2	**Sparrevohn**	**5.11**	**350**	P	**Pn**	**21 15 42.5**	**+1.8**
FIB	**Fire Island**	**5.41**	**19**	P	**Pn**	**21 15 46.8**	**+2.0**
RC01	**Rabbit Creek A**	**5.42**	**21**	P	**Pn**	**21 15 44.1**	**-0.9**
PMR	**Palmer**	**6.00**	**21**	*e*P	**Pn**	**21 15 52.7**	**-0.2**
EYAK	**Cordova Ski Ar**	**6.12**	**40**	P	**Pn**	**21 15 52.9**	**-1.8**
DIV	**Divide**	**6.53**	**36**	*e*Pn	**Pn**	**21 15 59.1**	**-1.1**
	19nm,0.4s						
DIV				*e*Sn	**Sn**	**21 17 11.8**	**-2.8**
BMRM	**Bremner River**	**6.82**	**41**	P	**Pn**	**21 16 03.4**	**-0.8**
BMRM				Sn	**Sn**	**21 17 21.7**	**-0.1**
PPLA	**Purkeypile**	**6.86**	**6**	*e*Pn	**Pn**	**21 16 06.8**	**+2.0**
	90nm,1.2s						
PPLA				*e*Sn	**Sn**	**21 17 25.1**	**+2.3**
TT01	**Tatalina**	**6.93**	**351**	P	**Pn**	**21 16 06.8**	**+1.1**
TTA	**Tatalina**	**6.95**	**351**	*e*P	**Pn**	**21 16 07.1**	**+1.1**
AKUT	**Akutan**	**7.19**	**259**	*e*Pn	**Pn**	**21 16 09.8**	**+0.4**
AKUT				*e*Sn	**Sn**	**21 17 27.2**	**-3.7**
TRF	**Thorofare Moun**	**7.57**	**12**	P	**Pn**	**21 16 14.3**	**-0.2**
KTH	**Kantishna Hill**	**7.61**	**9**	P	**Pn**	**21 16 15.2**	**+0.2**
UNV	**Unalaska Valle**	**7.70**	**258**	*e*Pn	**Pn**	**21 16 14.2**	**-2.0**
UNV				*e*Sn	**Sn**	**21 17 38.3**	**-5.1**
CHUM	**Lake Minchumin**	**7.84**	**5**	Pn	**Pn**	**21 16 20.9**	**+2.7**
	25nm,0.8s						
CHUM				Sn	**Sn**	**21 17 55.5**	**+8.7**
MCK	**McKinley**	**8.02**	**15**	*e*P	**Pn**	**21 16 20.8**	**+0.1**
MCK				*e*		21 17 53.8	
MCK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MCK	**McKinley**	**8.02**	**15**	*e*Pn	**Pn**	**21 16 20.8**	**+0.1**
	comp=Z,3.0nm,0.3s						
MCK				*e*Sn	**Sn**	**21 17 53.8**	**+2.5**
BPAW	**Bear Paw Mtn.**	**8.14**	**8**	P	**Pn**	**21 16 21.8**	**-0.5**
PNL	**Peninsula**	**8.42**	**59**	*e*Pn	**Pn**	**21 16 25.1**	**-1.0**
PNL				*e*Sn	**Sn**	**21 17 58.2**	**-3.0**
COLA	**College**	**9.26**	**16**	P	**Pn**	**21 16 37.2**	**-0.4**
IL1	**Eielson Array**	**9.32**	**18**	P	**Pn**	**21 16 37.2**	**-1.4**
HYT	**Haines Junctio**	**9.71**	**54**	*e*Pn	**Pn**	**21 16 46.4**	**+2.5**
SIT	**Sitka**	**10.19**	**77**	P	**Pn**	**21 16 47.4**	**-3.0**
SKAG	**Skagway**	**10.37**	**63**	*e*Pn	**Pn**	**21 16 51.5**	**-1.4**
SKAG				*e*Sn	**Sn**	**21 18 46.0**	**-3.0**
EGAK	**Eagle**	**10.66**	**30**	*e*Pn	**Pn**	**21 16 57.0**	**+0.2**
EGAK				*e*Sn	**Sn**	**21 19 02.8**	**+6.8**
CRAG	**Craig**	**11.61**	**85**	Pn	**Pn**	**21 17 06.0**	**-3.8**
TNA	**Tin City**	**11.71**	**330**	*e*Pn	**Pn**	**21 17 13.5**	**+2.3**
	comp=Z,4.2nm,0.8s						
DIB	**Dawson Inlet,**	**12.62**	**94**	T		21 30 03.4	
	SNR=6.9						
DLBC	**Dease Lake**	**13.01**	**70**	Pn	**Pn**	**21 17 28.5**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=236,slow=12,SNR=3.2						
DLBC	**Dease Lake**	**13.01**	**70**	*e*Pn	**Pn**	**21 17 27.4**	**-1.5**
INK	**Inuvik**	**15.33**	**29**	Pn	**Pn**	**21 18 00.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=228,slow=12,SNR=11						
INK	**Inuvik**	**15.33**	**29**	*e*P	**Pn**	**21 17 59.8**	**-0.5**
INK						21 20 54.5	
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	**Inuvik**	**15.33**	**29**	*e*Pn	**Pn**	**21 17 59.8**	**-0.6**
	comp=Z,9.7nm,0.8s						
INK				Sn	**Sn**	**21 20 54.5**	**+4.5**
NLWA	**Neilton Lookou**	**20.29**	**103**	⇑P	**P**	**21 19 00.3**	**+0.4**
	baz=20						
NLWA	**Neilton Lookou**	**20.29**	**103**	*e*P	**P**	**21 18 59.0**	**-0.9**
YKA	**Yellowknife Ar**	**20.70**	**56**	P	**P**	**21 19 04.3**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=269,slow=9.7,SNR=32						
YKA	**Yellowknife Ar**	**20.70**	**56**	P	**P**	**21 19 04.3**	**+0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JCW	**Jim Creek**	**20.89**	**99**	P	**P**	**21 19 03.1**	**-3.3**
A07A	**Ashnola River,**	**21.29**	**95**	⇓P	**P**	**21 19 11.2**	**+0.5**
	baz=21						
BILL	**Bilibino**	**21.74**	**319**	*e*P	**P**	**21 19 14.4**	**-0.9**
	comp=Z,9.9nm,1.0s,mb4.2						
LON	**Longmire**	**21.80**	**102**	*e*P	**P**	**21 19 17.9**	**+1.7**
LON				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
LON	**Longmire**	**21.80**	**102**	*e*P	**P**	**21 19 17.9**	**+1.7**
	comp=Z,4.9nm,0.9s,mb3.9						
B08A	**Colville Reser**	**22.25**	**96**	⇑P	**P**	**21 19 21.0**	**+0.1**
	baz=22,SNR=6.2						
B09A	**Rice**	**22.87**	**95**	⇓P	**P**	**21 19 27.6**	**+0.1**
	baz=23						
H04A	**Detroit Lake**	**22.90**	**107**	⇑P	**P**	**21 19 28.0**	**+0.1**
	baz=23						
D08A	**Wollman Farm,**	**23.21**	**98**	⇑P	**P**	**21 19 30.7**	**-0.5**
	baz=23						
G08A	**Pilot Rock**	**24.27**	**102**	⇑P	**P**	**21 19 40.9**	**-0.3**
	baz=24						
D11A	**Klaveano Farm,**	**24.66**	**96**	⇑P	**P**	**21 19 44.3**	**-0.5**
	baz=24						
YBH	**Yreka Blue Hor**	**24.67**	**113**	P	**P**	**21 19 45.9**	**+1.0**
	comp=Z,3.2nm,1.0s,mb3.8,baz=27,slow=1.1,SNR=8.3						
YBH	**Yreka Blue Hor**	**24.67**	**113**	P	**P**	**21 19 45.9**	**+1.0**
YBH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
I07A	**Izee**	**24.75**	**105**	⇑P	**P**	**21 19 46.7**	**+1.0**
	baz=24,SNR=6.8						
H08A	**Prairie City**	**24.92**	**103**	⇑P	**P**	**21 19 48.2**	**+1.0**
	baz=25,SNR=7.7						
K05A	**Summer Lake**	**24.92**	**109**	⇓P	**P**	**21 19 48.7**	**+1.5**
	baz=25,SNR=9.6						
G09A	**Cove**	**24.92**	**100**	⇓P	**P**	**21 19 47.5**	**+0.2**
	baz=25						
BSMT	**Bassoo Peak**	**25.07**	**93**	P	**P**	**21 19 46.1**	**-2.4**
	comp=Z,2.5nm,1.0s,mb3.7						
E11A	**Bogner Ranch,**	**25.14**	**97**	⇑P	**P**	**21 19 48.7**	**-0.4**
	baz=25						
D12A	**Red Ives Fores**	**25.20**	**95**	⇑P	**P**	**21 19 50.1**	**+0.3**
	baz=25						
A14A	**Double T Ranch**	**25.22**	**89**	⇑P	**P**	**21 19 50.3**	**+0.4**
	baz=25						
G10A	**Bishop Farm, J**	**25.28**	**100**	⇑P	**P**	**21 19 51.3**	**+0.9**
	baz=25						
C13A	**Hot Springs**	**25.28**	**93**	⇓P	**P**	**21 19 50.2**	**-0.2**
	baz=25						
F11A	**Grangeville**	**25.45**	**98**	⇓P	**P**	**21 19 51.2**	**-0.7**
	baz=25						
E12A	**Beaver Dam Sad**	**25.45**	**96**	⇓P	**P**	**21 19 51.5**	**-0.6**
	baz=25						
YBMT	**Yellow Bay**	**25.49**	**92**	*e*P	**P**	**21 19 50.9**	**-1.5**
G11A	**Walters Elk Ra**	**25.68**	**99**	⇑P	**P**	**21 19 53.4**	**-0.7**
	baz=25						
C14A	**Swan Lake**	**25.70**	**92**	⇓P	**P**	**21 19 53.6**	**-0.6**
	baz=26						
J08A	**Circle Bar Ran**	**25.79**	**105**	⇓P	**P**	**21 19 55.3**	**+0.3**
	baz=26						
H10A	**Noah's Angus R**	**25.93**	**101**	⇓P	**P**	**21 19 56.1**	**-0.2**
	baz=26,SNR=5.9						
F12A	**Elk City**	**26.03**	**97**	⇑P	**P**	**21 19 56.5**	**-0.7**
	baz=26						
J09A	**Fry Pan Ranch,**	**26.18**	**104**	⇑P	**P**	**21 19 58.5**	**-0.1**
	baz=26						
D14A	**Greenough**	**26.22**	**93**	⇑P	**P**	**21 19 59.7**	**+0.7**
	baz=26						
H11A	**Donnelly**	**26.26**	**100**	⇓P	**P**	**21 19 58.7**	**-0.6**
	baz=26						
WVOR	**Wild Horse Val**	**26.32**	**106**	*e*P	**P**	**21 20 00.3**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
WVOR	**Wild Horse Val**	**26.32**	**106**	*e*P	**P**	**21 20 00.3**	**+0.3**
	comp=Z,7.1nm,0.9s,mb4.2						
C15A	**Salmond Ranch,**	**26.33**	**91**	⇑P	**P**	**21 19 58.7**	**-1.2**
	baz=26						
F13A	**Darby**	**26.52**	**96**	⇓P	**P**	**21 20 01.3**	**-0.4**
	baz=26						
A17A	**Triple J Farms**	**26.76**	**87**	⇑P	**P**	**21 20 03.3**	**-0.6**
	baz=26						
K10A	**MacKenzie Ranc**	**27.05**	**104**	⇓P	**P**	**21 20 07.5**	**+1.1**
	baz=27						
H13A	**Challis**	**27.32**	**98**	⇑P	**P**	**21 20 08.9**	**0.0**
	baz=27						
K11A	**Parker Ranch,**	**27.51**	**103**	⇑P	**P**	**21 20 10.4**	**-0.2**
	baz=27						
J12A	**Stokes Ranch,**	**27.70**	**101**	⇓P	**P**	**21 20 12.4**	**+0.1**
	baz=27						
I13A	**Wildhorse Cree**	**27.81**	**99**	⇓P	**P**	**21 20 13.0**	**-0.3**
	baz=28						
PETK	**Petropavlovsk-**	**27.84**	**284**	P	**P**	**21 20 14.7**	**+1.2**
	comp=Z,3.9nm,0.6s,mb4.2,baz=78,slow=12,SNR=8.0						
PETK	**Petropavlovsk-**	**27.84**	**284**	P	**P**	**21 20 14.7**	**+1.2**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
HLID	**Hailey**	**27.87**	**100**	⇑P	**P**	**21 20 13.9**	**0.0**
	baz=28						
L11A	**Cat Creek Ranc**	**28.07**	**104**	⇑P	**P**	**21 20 15.8**	**+0.2**
	baz=28						
G16A	**Moss Hill, Enn**	**28.27**	**95**	⇑P	**P**	**21 20 17.2**	**-0.1**
	baz=28						
F17A	**Fitzpatrick Pl**	**28.50**	**93**	⇑P	**P**	**21 20 18.8**	**-0.6**
	baz=28						
RES	**Resolute Bay**	**28.88**	**28**	P	**P**	**21 20 22.9**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.1,baz=255,slow=11,SNR=15						
RES	**Resolute Bay**	**28.88**	**28**	P	**P**	**21 20 22.9**	**+0.3**
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ELK	**Elko**	**29.33**	**105**	P	**P**	**21 20 27.8**	**+0.9**
	comp=Z,2.1nm,0.8s,mb3.9,baz=298,slow=6.0,SNR=10						
ELK	**Elko**	**29.33**	**105**	P	**P**	**21 20 27.8**	**+1.0**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ELK	**Elko**	**29.33**	**105**	P	**P**	**21 20 27.8**	**+0.9**
NVAR	**Mina Array Bea**	**29.38**	**112**	P	**P**	**21 20 28.1**	**+0.8**
	comp=Z,1.6nm,0.8s,mb3.8,baz=298,slow=9.3,SNR=13						
M13A	**Montello**	**29.49**	**103**	⇓P	**P**	**21 20 28.9**	**+0.7**
	baz=29						
M15A	**Larsen Ranch,**	**30.36**	**101**	⇑P	**P**	**21 20 36.1**	**+0.1**
	baz=30						
N14A

V26A Tequesquite Ra 39.14 100 ⇓P P 21 21 52.0 +0.2
baz=39,SNR=9.3
Y25A Mesa, Roswell 40.04 103 ⇓P P 21 22 00.2 +0.9
baz=40,SNR=7.4
Y27A Causey 40.90 101 ⇓P P 21 22 06.7 +0.3
baz=41
Z26A Caprock 40.92 103 ⇑P P 21 22 07.0 +0.4
baz=41
224A Corundas Mount 40.99 105 ⇓P P 21 22 07.3 +0.2
baz=41
425A Indio Mountain 42.28 106 ⇓P P 21 22 18.5 +0.9
baz=42
428A Kincaid Ranch, 43.57 104 ⇓P P 21 22 27.6 -0.5
baz=43
KLR Kul'dur 43.66 294 *eP* **P 21 22 25.3 -3.4**
TXAR Lajitas Array 44.12 106 P **P 21 22 33.2 +0.6**
comp=Z,2.4nm,0.9s,mb4.0,baz=309,slow=6.3,SNR=23
TXAR **Lajitas Array 44.12 106** P **P 21 22 33.3 +0.7**
pmax pmax
comp=Z,2.0nm,0.9s
SUMG Summit 44.13 23 *eP* **P 21 22 33.3 +1.1**
SUMG pmax pmax
comp=Z,200nm,3.0s
SUMG Summit 44.13 23 *eP* **P 21 22 33.3 +1.1**
comp=Z,200nm,3.0s
627A Terlingua Ranc 44.18 106 ⇓P P 21 22 33.0 -0.1
baz=44
KBS Kingsbay 44.95 4 *eP* **P 21 22 40.7 +2.0**
KBS pmax pmax
comp=Z,30nm,1.7s,mb4.8
KBS Kingsbay 44.95 4 *eP* **P 21 22 40.7 +2.0**
comp=Z,30nm,1.7s,mb4.8
SPB4 Spitsbergen Ar 45.84 3 *eP* **P 21 22 45.8 +0.1**
SPITS Spitsbergen Ar 45.84 3 P **P 21 22 45.8 +0.1**
comp=Z,4.9nm,0.6s,mb4.6,baz=29,slow=3.8,SNR=17
SPITS Spitsbergen Ar 45.84 3 P **P 21 22 45.8 +0.1**
SPITS pmax pmax
comp=Z,5.0nm,0.6s
SCHQ Schefferville 46.12 53 P **P 21 22 47.8 -0.3**
comp=Z,1.5nm,0.5s,mb4.2,baz=128,slow=15,SNR=5.4
BOD Bodaibo 46.55 313 *eP* **P 21 22 50.6 -0.9**
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MDJ Mudanjiang 47.79 290 P **P 21 23 00.8 -0.6**
MDJ pP pP 21 23 06.8 +2.2
MDJ sP sP 21 23 09.5 +3.6
MDJ PP PP 21 24 52.5 -0.3
MDJ pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
PLAL Pickwick Lake 48.51 87 *eP* **P 21 23 05.5 -1.5**
comp=Z,8.0nm,0.7s,mb4.9
MJAR Matsushiro Arr 48.74 276 P **P 21 23 08.9 +0.2**
comp=Z,0.6nm,0.4s,mb4.0,baz=38,slow=5.9,SNR=4.0
MJAR Matsushiro Arr 48.74 276 P **P 21 23 09.0 +0.2**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
CN2 Changchun 50.52 292 *eP* **P 21 23 21.3 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KSRS Korea Array 53.74 285 P **P 21 23 46.7 +0.4**
comp=Z,1.3nm,0.6s,mb4.1,baz=48,slow=7.1,SNR=6.5
KSRS Korea Array 53.74 285 P **P 21 23 46.7 +0.4**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KEV Kevo 54.45 360 *eP* **P 21 23 49.9 -1.1**
KEV pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KEV Kevo 54.45 360 *ep* **P 21 23 49.9 -1.1**
comp=Z,6.6nm,1.1s,mb4.5
ARCES ARCESS Array B 54.67 0 P **P 21 23 52.2 -0.4**
comp=Z,1.0nm,0.5s,mb4.1,baz=8.1,slow=7.9,SNR=25
ARCES ARCESS Array B 54.67 0 P **P 21 23 52.3 -0.3**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ULN Ulaanbaatar 56.51 307 *eP* **P 21 24 06.3 +0.2**
ULN pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ULN Ulaanbaatar 56.51 307 *eP* **P 21 24 06.3 +0.1**
comp=Z,1.9nm,0.7s,mb4.2
SONM Songino Array 56.82 308 P **P 21 24 09.5 +1.1**
comp=Z,6.9nm,0.8s,mb4.8,baz=27,slow=10.0,SNR=3.9
SONM Songino Array 56.82 308 P **P 21 24 09.5 +1.1**
SONM pmax pmax
comp=Z,7.0nm,0.8s
BJI Beijing 58.00 295 P **P 21 24 15.8 -1.0**
BJI S **S 21 32 16.0 -0.9**
BJI pmax pmax
comp=Z,15nm,0.4s,mb5.4
BJI pmax pmax
comp=Z,120nm,9.7s
BJI LR LR
comp=N,210nm,18.2s
BJI LR LR
comp=E,250nm,18.3s
BJI LR LR
comp=Z,140nm,20.3s
NVS Novosibirsk 60.08 326 *eP* **P 21 24 24.6 -6.4**
ZAA0 Zalesovo Array 60.32 325 *eP* **P 21 24 32.5 -0.1**
ZAA0 *e*PcP PcP 21 25 14.2 -3.5
ZALV Zalesovo Beam 60.32 325 P **P 21 24 33.1 +0.4**
comp=Z,4.1nm,0.6s,mb4.7,baz=38,slow=6.2,SNR=29
ZALV Zalesovo Beam 60.32 325 P **P 21 24 33.1 +0.5**
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
JOF Joensuu 61.25 357 *eP* **P 21 24 37.9 -1.0**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
JOF Joensuu 61.25 357 *ep* **P 21 24 37.9 -1.0**
comp=Z,3.0nm,0.6s,mb4.6
KAF Kangasniemi 62.12 360 *eP* **P 21 24 44.0 -0.7**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
KAF Kangasniemi 62.12 360 *ep* **P 21 24 44.0 -0.7**
comp=Z,3.0nm,0.6s,mb4.6
NB2 NORSAR Subarra 62.60 8 P **P 21 24 48.0 +0.1**
comp=Z,2.4nm,0.6s,mb4.5,baz=350,slow=6.9
NOA NORSAR Array B 62.60 8 P **P 21 24 48.1 +0.2**
comp=Z,2.2nm,0.7s,mb4.4,baz=350,slow=6.7,SNR=10
NOA NORSAR Array B 62.60 8 P **P 21 24 48.1 +0.2**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NAO01 NORSAR Array S 62.77 8 *eP* **P 21 24 49.2 +0.1**
FINES FINESS Array B 62.80 0 P **P 21 24 49.1 -0.2**
comp=Z,1.9nm,0.6s,mb4.4,baz=10,slow=8.2,SNR=16
FINES FINESS Array B 62.80 0 P **P 21 24 49.1 -0.1**
FINES pmax pmax
comp=Z,2.0nm,0.6s
ARU Arti 64.82 341 *eP* **P 21 25 01.8 -0.9**
comp=Z,6.2nm,0.7s,mb4.8
KURK Kurchatov 65.06 326 P **P 21 25 04.9 +0.6**
comp=Z,2.0nm,0.6s,mb4.3,baz=29,slow=6.7,SNR=7.8
KURK Kurchatov 65.06 326 P **P 21 25 04.9 +0.6**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KURK Kurchatov 65.06 326 *eP* **P 21 25 04.4 +0.1**
comp=Z,1.7nm,0.5s,mb4.3
BRVK Borovoye 65.35 333 *eP* **P 21 25 06.1 0.0**
BVAR Borovoye Array 65.35 332 P **P 21 25 06.2 0.0**
comp=Z,4.3nm,0.8s,mb4.5,baz=38,slow=7.5,SNR=21
BVAR Borovoye Array 65.35 332 P **P 21 25 06.2 0.0**
BVAR pmax pmax
comp=Z,4.0nm,0.8s
XAN Xi'an 66.31 296 P **P 21 25 12.5 -0.1**
XAN pP pP 21 25 20.5 +4.5
XAN pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
GTA Gaotai 66.38 306 *eP* **P 21 25 13.5 +0.5**
GTA pP pP 21 25 19.5 +3.2
GTA sP sP 21 25 23.3 +5.7
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
LZH Lanzhou 67.17 301 *eP* **P 21 25 18.0 -0.1**
LZH pP pP 21 25 24.3 +2.8
LZH sP sP 21 25 27.0 +4.3
LZH PP PP 21 27 48.5 +2.9
LZH pmax pmax
comp=Z,19nm,1.5s,mb4.9
MK31 Makanchi Array 67.26 322 *eP* **P 21 25 18.2 -0.3**
MK31 *e* 21 25 45.8
MKAR Makanchi Array 67.26 322 P **P 21 25 18.2 -0.3**
comp=Z,1.2nm,0.6s,mb4.1,baz=39,slow=7.4,SNR=14
MKAR Makanchi Array 67.26 322 P **P 21 25 18.2 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
ENH Enshi 69.02 293 *eP* **P 21 25 29.2 -0.6**
comp=Z,3.0nm,0.6s,mb4.4

AKTK Aktyubinsk 70.61 339 P **P 21 25 39.0 -0.2**
AKTO Aktyubinsk 70.61 339 P **P 21 25 39.0 -0.2**
comp=Z,3.3nm,0.8s,mb4.3,baz=349,slow=5.4,SNR=4.9
AKTO Aktyubinsk 70.61 339 P **P 21 25 39.0 -0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ABKAR Akbulak array 71.33 337 *eP* **P 21 25 43.2 -0.5**
CLL Collm 72.39 9 *i P* **P 21 25 50.1 +0.1**
CLL *i* pP pP 21 25 55.4 +2.0
BAIF Baives 72.63 15 *eP* **P 21 25 51.3 -0.1**
TKM2 Tokmak 2 72.92 324 *eP* **P 21 25 53.7 +0.4**
AAK Ala-Archa 73.54 325 P **P 21 25 57.7 +0.8**
comp=Z,2.1nm,0.6s,mb4.2,baz=14,slow=4.2,SNR=3.4
AAK Ala-Archa 73.54 325 P **P 21 25 57.7 +0.8**
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
AAK Ala-Archa 73.54 325 *eP* **P 21 25 57.3 +0.3**
AKASG Malin Array Be 73.54 358 P **P 21 25 56.0 -0.8**
comp=Z,2.7nm,0.7s,mb4.3,baz=2.4,slow=5.9,SNR=7.7
AKASG Malin Array Be 73.54 358 P **P 21 25 56.0 -0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 73.54 358 P **P 21 25 56.0 -0.8**
GYA Guiyang 73.56 293 P **P 21 25 57.8 +0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
EKS2 Erkin-Say 73.74 325 *eP* **P 21 25 58.2 +0.1**
EKS2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
EKS2 Erkin-Say 73.74 325 *eP* **P 21 25 58.2 0.0**
comp=Z,1.8nm,0.6s,mb4.2
KWP Kalwaria Pacla 74.59 2 *eP* **P 21 26 03.0 0.0**
KWP pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KWP Kalwaria Pacla 74.59 2 *eP* **P 21 26 03.0 0.0**
comp=Z,3.5nm,0.8s,mb4.3
GERES GERESS Array B 74.90 9 P **P 21 26 04.9 +0.2**
comp=Z,1.2nm,0.8s,mb3.9,baz=354,slow=5.4,SNR=14
GERES GERESS Array B 74.90 9 P **P 21 26 04.9 +0.2**
GERES pmax pmax
comp=Z,1.0nm,0.8s
HAU Haudompre 74.93 14 *eP* **P 21 26 05.0 +0.1**
HINF Hinteralfeld 75.18 13 *eP* **P 21 26 06.4 0.0**
SSF Saint Saulge 75.45 16 *eP* **P 21 26 08.0 +0.1**
comp=Z,13nm,1.1s,mb4.5
SSF Saint Saulge 75.45 16 *eP* **P 21 26 08.0 +0.1**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
SSF Saint Saulge 75.45 16 *eP* **P 21 26 08.0 +0.1**
comp=Z,6.4nm,1.1s,mb4.5
AVF Avril sur Loir 75.69 16 *eP* **P 21 26 09.0 -0.3**
comp=Z,7.2nm,0.8s,mb4.3
AVF Avril sur Loir 75.69 16 *eP* **P 21 26 09.0 -0.3**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AVF Avril sur Loir 75.69 16 *eP* **P 21 26 09.0 -0.3**
comp=Z,3.6nm,0.8s,mb4.3
BGF Bois d'Agland 75.83 16 *eP* **P 21 26 10.3 +0.1**
SMF Signal de Mont 75.90 16 *eP* **P 21 26 10.5 -0.1**
LFF La Frestale 77.05 18 *eP* **P 21 26 17.5 +0.4**
LSA Lhasa 78.39 306 *eP* **P 21 26 26.0 +1.2**
LSA Lhasa 78.39 306 *eP* **P 21 26 25.5 +0.7**
LSA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LSA Lhasa 78.39 306 *eP* **P 21 26 25.5 +0.7**
comp=Z,5.8nm,0.9s,mb4.5
KIV Kislovodsk 79.36 348 P **P 21 26 29.5 -0.4**
ESDC Sonseca Array 81.19 23 P **P 21 26 39.4 -0.5**
comp=Z,1.4nm,0.8s,mb4.0,baz=336,slow=4.7,SNR=8.1
EVO Evora 81.33 27 *eP* **P 21 26 39.4 -1.2**
CM31 Chiang Mai Arr 84.14 294 *eP* **P 21 26 55.2 -0.3**
comp=Z,1.5nm,0.5s,mb4.4
CMAR Chiang Mai Arr 84.14 294 P **P 21 26 55.3 -0.2**
comp=Z,3.7nm,0.7s,mb4.7,baz=13,slow=5.4,SNR=32
BR131 Keskin Array S 84.34 354 *eP* **P 21 26 56.1 -0.1**
BRTR Keskin Array B 84.34 354 P **P 21 26 56.5 +0.4**
comp=Z,0.7nm,0.7s,mb3.9,baz=52,slow=2.0,SNR=5.6
BRTR Keskin Array B 84.34 354 P **P 21 26 56.6 +0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
TIP Timpagrande 84.74 7 *eP* **P 21 26 57.8 -0.4**
comp=Z,2.1nm,0.7s,mb4.4
QSPA South Pole Qui 145.89 180 PKPbc PKPbc 21 34 01.3 -0.7
comp=Z,6.0nm,1.0s,baz=12,slow=2.3,SNR=10
BOSA Boshof 152.52 2 PKPbc PKPbc 21 34 20.3 0.0
comp=Z,0.8nm,0.5s,baz=333,slow=4.5,SNR=2.2
BOSA PKPab PKPab 21 34 26.7 -4.0
comp=Z,2.5nm,0.9s,baz=82,slow=6.0,SNR=4.2
BOSA Boshof 152.52 2 PKIKP PKPbc 21 34 20.3 0.0
BOSA 21 34 26.7
BOSA pmax pmax
comp=Z,1.0nm,0.5s
BOSA pmax pmax
comp=Z,3.0nm,0.9s
BOSA Boshof 152.52 2 PKPbc PKPbc 21 34 20.3 0.0
BOSA PKPab PKPab 21 34 26.7 -4.0

DJA 25 21:19:38.0ˢ13N×124°55E, h50km, MLv3.7/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**2.12**	**237**	P	Pn	21 20 12.2	+1.1
LUWI				S	Sn	21 20 33.7	-2.6
MRSI	**Marisa**	**2.63**	**278**	P	Pn	21 20 16.9	-1.1
APSI	**Ampana**	**3.08**	**250**	P	Pn	21 20 23.8	-0.4
APSI				S	Sn	21 21 03.1	+3.3
KDI	**Kendari**	**4.50**	**205**	P	Pn	21 20 43.1	-0.5

*IDC **25** 21:20:43.4±6.0, 36°00N×70°78E, h85km±55km, mb3.3/5, mb1 3.4/9, mb1mx3.2/28, mbtmp3.4/9, ML3.6/2, Error ellipse: s-maj=58.3km s-min=38.0km az=128.0*
*ISCJB **25** 21:20:44.0±0.4, 36°10N±0°03×70°92E±0°05, h110km±7km, mb3.6/6, Error ellipse: s-maj=6.8km s-min=4.6km az=6.4*
*MOS **25** 21:20:44.2±1.0, 36°01N×70°84E, h110km, mb4.2/4, Error ellipse: s-maj=19.5km s-min=10.0km az=88.9*
*NEIC **25** 21:20:45.1±0.7, 36°05N×70°78E, h103km±8km, mb4.2/7, Error ellipse: s-maj=9.5km s-min=7.0km az=122.0*
*NNC **25** 21:20:50.1±7.3, 36°54N×70°40E, h98km±133km, mb3.4, mpv3.9, Error ellipse: s-maj=56.7km s-min=46.1km az=34.0*
ISC 25 21:20:45.2±0.4, 36°08N±0°03×70°85E±0°05, h103km±7km, n49, σ1°16/63, mb3.6/6, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.13**	**224**	*e*Pn	**Pn**	21 21 19.1	-0.5
KBL				*e*Sn	**Sn**	21 21 44.6	-1.3
CEP	**Cherat**	**2.41**	**159**	⇓P	**Pn**	21 21 24.2	+1.0
CEP				S	**Sn**	21 21 54.0	+1.6
CHCP	**Chirah Chowk**	**3.13**	**140**	P	**Pn**	21 21 33.8	+1.1
KSH	**Kashi**	**5.31**	**48**	*e*Pn	**Pn**	21 22 00.0	-2.0
KSH				Sn	**Sn**	21 22 52.5	-9.4
KSH				smax			
	comp=N,170nm,0.6s						
KSH				smax			
	comp=E,130nm,0.4s						
THN	**Thein Dam**	**5.43**	**131**	*e*P	**Pn**	21 22 03.4	-0.3
THN				*e*S	**Sn**	21 23 03.8	-1.1
UCH	**Uchtor**	**6.76**	**24**	P	**Pn**	21 22 23.0	+1.3
	SNR=10						
UCH	**Uchtor**	**6.76**	**24**	*e*Pn	**Pn**	21 22 22.8	+1.0
	comp=E,6.3nm,0.7s						
UCH				*e*Sn	**Sn**	21 23 35.9	-1.3
SDNR	**Sundarnagar**	**6.84**	**130**	*e*P	**Pn**	21 22 23.1	+0.2
SDNR				*e*S	**Sn**	21 23 37.1	-2.1
KZA	**Kyzart**	**6.89**	**28**	P	**Pn**	21 22 24.7	+1.2
	SNR=18						
EKS2	**Erkin-Say**	**6.95**	**18**	P	**Pn**	21 22 25.6	+1.3
	SNR=12						
EKS2	**Erkin-Say**	**6.95**	**18**	*e*Pn	**Pn**	21 22 25.2	+0.9
	comp=E,5.9nm,0.6s						
EKS2				*e*Sn	**Sn**	21 23 39.5	-2.2
KK31	**Karatay Array**	**7.02**	**358**	P	**Pn**	21 22 24.9	-0.3
	comp=E,9.5nm,0.7s,baz=185,slow=13,SNR=75						
KK31				⇑S	**Sn**	21 23 39.2	-4.2
	comp=E,4.3nm,0.4s,baz=193,slow=24,SNR=6.0						
AAK	**Ala-Archa**	**7.12**	**22**	P	**Pn**	21 22 27.9	+1.3
	SNR=11						
AAK	**Ala-Archa**	**7.12**	**22**	P	**Pn**	21 22 27.8	+1.1
	comp=E,0.1nm,0.3s,baz=153,slow=5.7,SNR=20						
AAK				S	**Sn**	21 23 45.2	-0.7
	comp=E,0.0nm,0.3s,baz=121,slow=22,SNR=12						
AAK	**Ala-Archa**	**7.12**	**22**	*e*PN	**Pn**	21 22 27.8	+1.1
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	**Ala-Archa**	**7.12**	**22**	*e*Pn	**Pn**	21 22 27.8	+1.1
	comp=Z,9.0nm,0.6s						
AAK				*e*Sn	**Sn**	21 23 46.2	+0.2
KBK	**Karagaybulak**	**7.29**	**25**	P	**Pn**	21 22 31.4	+2.5
	SNR=7.3						
CHMS	**Chumysh**	**7.54**	**22**	P	**Pn**	21 22 33.2	+1.0
	SNR=5.9						
KLP	**Kalpa**	**7.65**	**124**	*e*S	**Sn**	21 23 54.3	-4.5
TKM2	**Tokmak 2**	**7.75**	**27**	⇓P	**Pn**	21 22 35.5	+0.4
	comp=Z,3.2nm,0.6s						
TKM2				⇑S	**Sn**	21 24 01.2	0.0
	comp=Z,10nm,0.8s						
TKM2	**Tokmak 2**	**7.75**	**27**	P	**Pn**	21 22 37.1	+1.9
	SNR=8.5						
TKM2	**Tokmak 2**	**7.75**	**27**	*e*PN	**Pn**	21 22 36.8	+1.6
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TKM2	**Tokmak 2**	**7.75**	**27**	*e*Pn	**Pn**	21 22 36.8	+1.6
	comp=Z,3.1nm,0.4s						
TKM2				*e*Sn	**Sn**	21 23 59.1	-2.1
KHET	**Khetri**	**9.02**	**151**	*e*S	**Sn**	21 24 24.1	-8.2
SONA	**Sohna**	**9.42**	**144**	*e*S	**Sn**	21 24 33.6	-8.5
AGRA	**Agra**	**10.69**	**144**	AML	AML	21 22 17.9	
	comp=N,73nm,0.4s						
AGRA				AML	AML	21 22 19.6	
	comp=E,85nm,0.4s						
AGRA				*e*S	**Sn**	21 25 03.3	-10
MKAR	**Makanchi Array**	**13.70**	**35**	P	**Pn**	21 23 55.1	+0.2
	baz=214,slow=10,SNR=2.1						
MKAR				S	**Sn**	21 26 20.9	-4.7
	comp=E,0.1nm,0.3s,baz=218,slow=26,SNR=3.6						
AB31	**Akbulak array**	**15.39**	**332**	⇓P	**Pn**	21 24 14.7	-1.8
	comp=E,0.7nm,0.3s,baz=154,slow=12,SNR=60						
AB31				⇑S	S	21 26 54.4	-21
	comp=E,1.9nm,0.5s,baz=154,slow=23,SNR=9.1						
ABKAR	**Akbulak array**	**15.39**	**332**	*e*Pn	**Pn**	21 24 14.6	-1.9
	comp=E,3.5nm,0.5s						
KURK	**Kurchatov**	**15.66**	**19**	P	**Pn**	21 24 16.4	-3.5
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=3.5						
KURK	**Kurchatov**	**15.66**	**19**	Pn	**Pn**	21 24 20.4	+0.5
BVAR	**Borovoye Array**	**16.95**	**359**	P	**Pn**	21 24 34.6	-1.1
	baz=155,slow=8.8,SNR=2.4						
AKTK	**Aktyubinsk**	**17.09**	**331**	P	**Pn**	21 24 38.1	+0.7
AKTO	**Aktyubinsk**	**17.09**	**331**	⇑P	**Pn**	21 24 38.4	+1.0
	comp=E,1.2nm,0.8s						
AKTO				⇓S	**S**	21 27 36.1	-12
	comp=E,0.3nm,0.7s						
AKTO	**Aktyubinsk**	**17.09**	**331**	P	**Pn**	21 24 38.1	+0.7
	comp=E,0.5nm,0.3s,baz=142,slow=12,SNR=8.9						
ZALV	**Zalesovo Beam**	**20.34**	**24**	P	**P**	21 25 14.3	+1.3
	comp=E,2.5nm,0.5s,baz=210,slow=10,SNR=10						
GNI	**Garni**	**20.91**	**289**	*e*P	**P**	21 25 19.9	+0.6
KIV	**Kislovodsk**	**22.88**	**299**	*e*P	**P**	21 25 40.4	+0.5
KIV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
KIV	**Kislovodsk**	**22.88**	**299**	*e*Pn	**P**	21 25 40.4	+0.4
	comp=Z,2.7nm,0.6s,mb3.8						
PALK	**Pallekele**	**30.06**	**160**	*e*P	**P**	21 26 43.9	-0.7
CHTO	**Chiang Mai**	**30.13**	**117**	*e*P	**P**	21 26 46.0	+0.7
	comp=Z,6.0nm,1.3s,mb4.1						
LVV	**L'vov**	**36.32**	**307**	*e*P	**P**	21 27 45.7	+7.0
LVV				MLR	MLR		
	comp=N,300nm,19.0s						
LVV				MLR	MLR		
	comp=E,100nm,19.0s						
LVV				MLR	MLR		
	comp=Z,200nm,19.0s						
FINES	**FINESS Array B**	**37.77**	**326**	P	**P**	21 27 51.3	+0.5
	comp=Z,0.5nm,0.4s,mb3.7,baz=120,slow=11,SNR=4.3						
ARCES	**ARCESS Array B**	**41.49**	**338**	P	**P**	21 28 22.5	+1.0
	comp=Z,1.6nm,0.9s,mb3.9,baz=101,slow=6.5,SNR=5.4						
ARCES	**ARCESS Array B**	**41.49**	**338**	P	**P**	21 28 22.5	+1.0
TIP	**Timpagrande**	**42.42**	**291**	*e*P	**P**	21 28 29.5	-0.1
NOA	**NORSAR Array B**	**44.64**	**323**	P	**P**	21 28 47.1	0.0
	comp=Z,0.2nm,0.3s,mb3.3,baz=103,slow=6.3,SNR=2.2						
VSL	**Villasalto**	**47.87**	**294**	*e*P	**P**	21 29 11.9	-0.8
TORD	**Torodi Ar. Bea**	**65.59**	**269**	P	**P**	21 31 17.4	-0.9
	comp=Z,0.2nm,0.8s,mb3.0,baz=43,slow=7.1,SNR=2.6						

*IDC **25** 21:20:50.5±1.2, 10°45S×121°99E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=73.9km s-min=20.9km az=73.0*
*NEIC **25** 21:20:55.5±0.4, 10°61S×121°86E, h35km, mb4.0/4, Error ellipse: s-maj=38.7km s-min=6.9km az=52.0*
ISC 25 21:20:55.7±0.6, 10°55±0°1×122°0E±0°2, h35km, n17, σ0°75/20, mb3.8/7, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.32**	**155**	Pn	**Pn**	21 22 52.4	-1.5
	0.8nm,0.3s,baz=330,slow=6.8,SNR=11						
FITZ				Sn	**Sn**	21 24 18.1	-8.6
	4.3nm,0.3s,baz=180,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**8.32**	**155**	*e*Pn	**Pn**	21 22 53.0	-0.9
FITZ				*e*Sn	**Sn**	21 24 19.1	-7.6
MBWA	**Marble Bar**	**10.78**	**191**	*e*Pn	**Pn**	21 23 17.7	-10
MBWA				*e*Sn	Sx	21 25 01.2	
WRAB	**Tennant Creek**	**15.15**	**130**	*e*Pn	**Pn**	21 24 27.3	0.0
	3.9nm,0.6s						
ASAR	**Alice Springs**	**17.32**	**140**	P	**Pn**	21 24 55.2	+0.4
	0.4nm,0.3s,baz=317,slow=13,SNR=12						
ASAR				S	**Sn**	21 27 57.4	-9.2
	0.4nm,0.3s,baz=318,slow=25,SNR=7.1						
NWAO	**Narrogin (SRO)**	**22.71**	**190**	P	**P**	21 25 55.2	+0.7
	2.8nm,0.5s,mb4.0,baz=351,slow=15,SNR=3.3						
KULM	**Kulim**	**26.42**	**306**	*e*P	**P**	21 26 28.5	-0.9
	11nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**27.93**	**142**	P	**P**	21 26 46.4	+3.6
	1.5nm,0.8s,mb3.6,baz=294,slow=14,SNR=3.5						
STKA	**Stephens Creek**	**27.93**	**142**	P	**P**	21 26 43.1	+0.3
	0.5nm,0.9s,mb3.1						
LSA	**Lhasa**	**49.82**	**324**	*e*P	**P**	21 29 46.1	+0.7
MKAR	**Makanchi Array**	**67.17**	**332**	P	**P**	21 31 46.2	+0.2
	0.3nm,0.6s,mb3.5,baz=125,slow=7.2,SNR=2.2						
MKAR	**Makanchi Array**	**67.17**	**332**	P	**P**	21 31 46.2	+0.2
KBL	**Kabul**	**67.25**	**314**	P	**P**	21 31 47.7	+0.9
TKM2	**Tokmak 2**	**67.97**	**325**	*e*P	**P**	21 31 51.1	-0.1
	2.6nm,1.3s,mb4.1						
AAK	**Ala-Archa**	**68.42**	**324**	P	**P**	21 31 53.6	-0.4
ZALV	**Zalesovo Beam**	**71.53**	**338**	P	**P**	21 32 13.4	+0.5
	0.5nm,0.5s,mb3.7,baz=160,slow=4.6,SNR=2.5						
KURK	**Kurchatov**	**71.68**	**333**	P	**P**	21 32 12.7	-1.2
	0.3nm,0.7s,mb3.3,baz=138,slow=5.6,SNR=3.5						

*ISCJB **25** 21:22:10.5±0.7, 43°24N±0°02×13°56E±0°05, h1km±10km, Error ellipse: s-maj=6.1km s-min=3.3km az=152.2*
*ROM **25** 21:22:11.1±0.2, 43°21N×13°46E, h2km±1km, Md2.6/23, Ml2.2/14, Error ellipse: s-maj=2.3km s-min=1.3km az=64.0*
*CSEM **25** 21:22:11.1±0.2, 43°23N×13°52E, h10km, ML2.9/10, Error ellipse: s-maj=3.5km s-min=2.1km az=62.0*
ISC 25 21:22:11.6±0.5, 43°23N±0°02×13°52E±0°05, h12km±8km, n50, σ0°86/77, 4C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.28**	**301**	⇓*i*Pg	**Pg**	21 22 17.2	-0.1
CING				Sg	**Sg**	21 22 21.5	+0.3
	262nm,0.5s						
CING	**Cingoli**	**0.28**	**301**	⇓*i*Pg	**Pg**	21 22 17.2	-0.1
CING				Sg	**Sg**	21 22 21.5	+0.3
	262nm,0.5s						
OFFI	**Offida**	**0.32**	**158**	Pg	**Pg**	21 22 20.2	+2.1
	332nm,0.5s						
OFFI	**Offida**	**0.32**	**158**	Pg	**Pg**	21 22 20.2	+2.1
	332nm,0.5s						
FDMO	**Fiordimonte**	**0.37**	**239**	⇑*i*Pg	**Pg**	21 22 18.5	-0.5
FDMO				Sg	**Sg**	21 22 24.1	+0.1
	205nm,0.3s						
FDMO	**Fiordimonte**	**0.37**	**239**	⇑*i*Pg	**Pg**	21 22 18.5	-0.5
FDMO				Sg	**Sg**	21 22 24.1	+0.1
	205nm,0.3s						
SNTG	**Esanatoglia**	**0.42**	**273**	Pg	**Pg**	21 22 19.5	-0.5
SNTG				Sg	**Sg**	21 22 25.8	+0.1
	115nm,0.1s						
SNTG	**Esanatoglia**	**0.42**	**273**	Pg	**Pg**	21 22 19.5	-0.5
SNTG			

39nm,0.3s
NRCA Norcia 0.50 217 Pg **Pg 21 22 20.9 -0.5**
NRCA Sg **Sg 21 22 28.2 +0.3**
39nm,0.3s
CESI CESI - Serrava 0.51 244⇑ *i* Pg **Pg 21 22 20.9 -0.6**
CESI Sg **Sg 21 22 28.4 +0.2**
70nm,0.4s
CESI CESI - Serrava 0.51 244⇑ *i* Pg **Pg 21 22 20.9 -0.6**
CESI Sg **Sg 21 22 28.4 +0.2**
70nm,0.4s
SENI Senigallia 0.52 336 Pg **Pg 21 22 22.5 +0.7**
SENI Senigallia 0.52 336 Pg **Pg 21 22 22.5 +0.7**
TERO Teramo 0.61 174 Pg **Pg 21 22 23.1 -0.4**
TERO Sg **Sg 21 22 33.3 +1.8**
155nm,0.3s
TERO Teramo 0.61 174 Pg **Pg 21 22 23.1 -0.4**
TERO Sg **Sg 21 22 33.3 +1.8**
155nm,0.3s
FSSB Fossombrone 0.71 311 Pg **Pg 21 22 24.9 -0.5**
FSSB Sg **Sg 21 22 37.2 +2.5**
31nm,0.3s
FSSB Fossombrone 0.71 311 Pg **Pg 21 22 24.9 -0.5**
LNSS Leonessa 0.72 210 Pg **Pg 21 22 24.8 -0.8**
LNSS Sg **Sg 21 22 35.8 +0.8**
LNSS Leonessa 0.72 210 Pg **Pg 21 22 24.8 -0.8**
LNSS Sg **Sg 21 22 35.8 +0.8**
MURB Monte Urbino 0.73 273 Pg **Pg 21 22 24.9 -0.8**
MURB Sg **Sg 21 22 36.0 +0.7**
282nm,0.3s
MURB Monte Urbino 0.73 273 Pg **Pg 21 22 24.9 -0.8**
MURB Sg **Sg 21 22 36.0 +0.7**
282nm,0.3s
PIEI Pieia 0.78 293 Pg **Pg 21 22 25.8 -0.9**
PIEI Sg **Sg 21 22 37.5 +0.6**
55nm,0.1s
PIEI Pieia 0.78 293 Pg **Pg 21 22 25.8 -0.9**
PIEI Sg **Sg 21 22 37.5 +0.6**
55nm,0.1s
PESA Pesaro 0.86 325 Pg **Pg 21 22 28.1 -0.2**
PESA Pesaro 0.86 325 Pg **Pg 21 22 28.1 -0.2**
VCEL Villa Celiera 0.87 164 Pg **Pg 21 22 27.9 -0.5**
103nm,0.3s
VCEL Villa Celiera 0.87 164 Pg **Pg 21 22 27.9 -0.5**
103nm,0.3s
FAGN Fagnano 0.97 177 Pg **Pg 21 22 29.6 -0.6**
89nm,0.4s
FAGN Fagnano 0.97 177 Pg **Pg 21 22 29.6 -0.6**
89nm,0.4s
BADI Badiali 0.97 287 Pg **Pg 21 22 30.1 -0.3**
BADI Sg **Sg 21 22 44.2 +1.2**
60nm,0.5s
BADI Badiali 0.97 287 Pg **Pg 21 22 30.1 -0.3**
BADI Sg **Sg 21 22 44.2 +1.2**
60nm,0.5s
FIAM Fiamignano 1.01 197 Pg **Pg 21 22 29.7 -1.3**
FIAM Sg **Sg 21 22 44.7 +0.6**
FIAM Fiamignano 1.01 197 Pg **Pg 21 22 29.7 -1.3**
FIAM Sg **Sg 21 22 44.7 +0.6**
PARC Parchiule 1.02 295 Pg **Pg 21 22 30.5 -0.8**
PARC Sg **Sg 21 22 45.6 +0.9**
32nm,0.4s
PARC Parchiule 1.02 295 Pg **Pg 21 22 30.5 -0.8**
PARC Sg **Sg 21 22 45.6 +0.9**
32nm,0.4s
RSM Repubblica di 1.05 312 Pg **Pg 21 22 31.0 -0.8**
9.0nm,0.3s
RSM Repubblica di 1.05 312 Pg **Pg 21 22 31.0 -0.8**
9.0nm,0.3s
MGAB Montegabbione 1.08 253 Pg **Pg 21 22 30.9 -1.5**
36nm,0.5s
MGAB Montegabbione 1.08 253 Pg **Pg 21 22 30.9 -1.5**
36nm,0.5s
CAFI Castiglion Fio 1.14 275 Pg **Pg 21 22 32.3 -1.2**
19nm,0.4s
CAFI Castiglion Fio 1.14 275 Pg **Pg 21 22 32.3 -1.2**
19nm,0.4s
LPEL Lama dei Pelig 1.28 157 Pg **Pg 21 22 36.2 0.0**
30nm,0.8s
LPEL Lama dei Pelig 1.28 157 Pg **Pg 21 22 36.2 0.0**
30nm,0.8s
VVLD Villa Vallelon 1.36 177 Pg **Pg 21 22 38.0 +0.2**
VVLD Villa Vallelon 1.36 177 Pg **Pg 21 22 38.0 +0.2**
SDI San Donato 1.54 172 Pg **Pn 21 22 39.8 +0.9**
6.0nm,0.5s
SDI San Donato 1.54 172 Pg **Pn 21 22 39.8 +0.9**
6.0nm,0.5s
NVLJ Novalja 1.65 36 *e*Pn **Pn 21 22 40.0 -0.5**
NVLJ Sn **Sn 21 23 02.4 +0.8**
NVLJ Novalja 1.65 36 *e*Pn **Pn 21 22 39.9 -0.6**
NVLJ Sn **Sn 21 23 02.4 +0.8**

CASC 25 21:25:35.3±1.3, 8°.40N×83°.00W, h6km±25km, MD3.7, 2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.49**	**38**	⇓ *i* P	Pg	21 25 45.4	+0.6
BRU2				*e*S	Sg	21 25 53.7	+2.4
BAR1		**0.89**	**339**	⇓ *e*P	Pg	21 25 52.0	-0.4
BAR1				*e*S	Sg	21 26 04.5	+0.4
BUS	**Buena Vista**	**1.37**	**327**	*e*P	Pn	21 26 00.5	-0.5
BUS				*e*S	Sb	21 26 20.2	+1.0
URSC	**Urasca**	**1.62**	**332**	*e*P	Pn	21 26 03.9	-0.6
PRS1	**Puriscal**	**2.04**	**321**	*e*P	Pn	21 26 10.5	+0.3

*ISCJB **25** 21:38:29.9±0.6, 0°.07N±0°.06×123°.11E±0°.06, h181km±6km, mb3.9/12, Error ellipse: s-maj=10.9km s-min=8.7km az=154.3*
*NEIC **25** 21:38:30.7±1.6, 0°.05N×123°.16E, h174km±16km, mb4.1/5, Error ellipse: s-maj=20.0km s-min=9.0km az=66.0*
*DJA **25** 21:38:31, 0°.06N×123°.02E, h154km, MLv4.0/4*
*IDC **25** 21:38:31.2±3.1, 0°.04N×123°.17E, h177km±32km, mb3.4/7, mb1 3.5/9, mb1mx3.3/21, mbtmp3.4/9, Error ellipse: s-maj=28.6km s-min=18.6km az=69.0*
ISC 25 21:38:30.9±0.5, 0°.06N±0°.05×123°.12E±0°.06, h172km±6km, n29, σ1ª04/28, mb3.9/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.14**	**198**	P	**Pn**	**21 38 57.6**	**-1.4**
MRSI	**Marisa**	**1.25**	**290**	P	**Pn**	**21 38 59.2**	**-0.7**
APSI	**Ampana**	**1.75**	**237**	P	**Pn**	**21 39 03.3**	**-1.5**
KDI	**Kendari**	**4.02**	**187**	P	**Pn**	**21 39 32.2**	**+0.2**
TNTI	**Ternate**	**4.31**	**80**	P	**Pn**	**21 39 37.0**	**+1.2**
TTSI	**Tana Toraja**	**4.51**	**227**	P	**Pn**	**21 39 38.1**	**-0.3**
NLAI	**Namlea**	**5.15**	**129**	P	**Pn**	**21 39 48.5**	**+1.8**
KAPI	**Kappang**	**6.05**	**214**	P	**Pn**	**21 39 57.6**	**-1.0**
	2.5nm,0.3s,baz=21,slow=7.4,SNR=12						
KAPI				S	**Sn**	**21 41 09.3**	**+1.7**
	0.2nm,0.3s,baz=252,slow=20,SNR=1.9						
KKM	**Kota Kinabalu**	**9.10**	**311**	*e*Pn	**Pn**	**21 40 39.5**	**+0.7**
KKM				*e*Sn	**Sn**	**21 42 21.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**18.21**	**172**	P	**P**	**21 42 31.1**	**+0.1**
	0.2nm,0.3s,baz=6.3,slow=9.2,SNR=5.3						
WRAB	**Tennant Creek**	**22.71**	**152**	*e*P	**P**	**21 43 17.6**	**-0.5**
	9.2nm,1.4s,mb4.0						
ASAR	**Alice Springs**	**25.80**	**157**	pP	pP	21 44 21.4	-0.1
	0.4nm,0.5s,baz=344,slow=15,SNR=7.9						
CMAR	**Chiang Mai Arr**	**29.98**	**309**	P	**P**	**21 44 25.1**	**+1.8**
	0.9nm,0.7s,mb3.6,baz=142,slow=7.4,SNR=7.5						
CHTO	**Chiang Mai**	**30.18**	**309**	*e*P	**P**	**21 44 24.9**	**-0.3**
STKA	**Stephens Creek**	**36.25**	**153**	P	**P**	**21 45 18.1**	**+0.5**
	2.5nm,1.1s,mb3.7,baz=328,slow=9.5,SNR=3.9						
MJAR	**Matsushiro Arr**	**38.91**	**20**	P	**P**	**21 45 39.3**	**-0.6**
	1.1nm,0.7s,mb3.6,baz=188,slow=8.4,SNR=5.6						
LSA	**Lhasa**	**42.39**	**317**	*e*P	**P**	**21 46 10.4**	**+1.9**
	2.0nm,0.5s,mb4.0						
HIA	**Hailar**	**49.11**	**357**	*e*P	**P**	**21 46 59.5**	**-1.3**
YSS	**Yuzh-Sakhalins**	**49.77**	**18**	*e*P	**P**	**21 47 05.2**	**-0.6**
	109nm,2.1s,mb5.1						
MK31	**Makanchi Array**	**58.63**	**328**	P	**P**	**21 48 09.8**	**-0.1**
MKAR	**Makanchi Array**	**58.63**	**328**	P	**P**	**21 48 10.1**	**+0.2**
	0.4nm,0.4s,mb3.6,baz=114,slow=9.1,SNR=12						
MKAR				PcP	PcP	21 48 57.4	-0.7
	0.5nm,0.5s,baz=141,slow=3.9,SNR=7.7						
MKAR	**Makanchi Array**	**58.63**	**328**	P	**P**	**21 48 10.1**	**+0.2**
MKAR				PcP	PcP	21 48 57.4	-0.7
PETK	**Petropavlovsk-**	**60.19**	**23**	P	**P**	**21 48 20.7**	**+0.3**
	1.3nm,0.7s,mb3.8,baz=240,slow=4.8,SNR=2.3						
KBL	**Kabul**	**61.00**	**310**	*e*P	**P**	**21 48 26.1**	**-0.2**
	2.4nm,0.6s,mb4.2						
ZALV	**Zalesovo Beam**	**62.31**	**336**	P	**P**	**21 48 34.6**	**0.0**
	0.2nm,0.3s,mb3.4,baz=125,slow=7.2,SNR=2.7						
KURK	**Kurchatov**	**62.99**	**330**	*e*P	**P**	**21 48 38.5**	**-0.8**
	1.3nm,0.5s,mb4.0						
ARCES	**ARCESS Array B**	**92.62**	**340**	P	**P**	**21 51 20.6**	**-2.0**
	0.6nm,0.7s,mb3.9,baz=98,slow=6.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**120.51**	**285**	PKP	PKPdf	21 57 01.9	-1.1
	0.3nm,0.5s,baz=84,slow=2.5,SNR=8.7						
TORD	**Torodi Ar. Bea**	**120.51**	**285**	PKP	PKPdf	21 57 01.9	-1.1

*SOF **25** 21:51:42.1, 44°.84N×22°.53E, h5km, MD2.5*
*ISCJB **25** 21:51:44.4±0.5, 44°.85N±0°.02×22°.37E±0°.04, h7km±5km, Error ellipse: s-maj=5.1km s-min=3.7km az=7.8*
*CSEM **25** 21:51:44.5±0.2, 44°.86N×22°.48E, h10km, ML2.6, Error ellipse: s-maj=4.5km s-min=3.1km az=85.0*
*BEO **25** 21:51:44.6±0.5, 44°.85N×22°.54E, h8km±3km, ML2.6/10*
*BUC **25** 21:51:48.6±2.2, 45°.14N×22°.39E, h5km, MD2.3/2, Error ellipse: s-maj=21.3km s-min=6.2km az=2.0*
ISC 25 21:51:44.8±0.5, 44°.86N±0°.02×22°.40E±0°.05, h4km±5km, n44, σ1ª17/58, 6C-11D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJES	**Djerdap**	**0.21**	**156**	*i* P	**Pg**	**21 51 49.6**	**+0.7**
DJES				*i* Sg	**Sg**	**21 51 52.8**	**+1.2**
GZR	**Gura Zlata**	**0.60**	**26**⇑	*i* P	**Pg**	**21 51 56.1**	**-0.2**
GZR				*i* S	**Sg**	**21 52 03.8**	**-0.3**
GZR	**Gura Zlata**	**0.60**	**26**⇑	*i* P	**Pg**	**21 51 56.1**	**-0.2**
GZR	**Gura Zlata**	**0.60**	**26**⇑	*i* P	**Pg**	**21 51 56.1**	**-0.2**
GZR				S	**Sg**	**21 52 03.8**	**-0.3**
BZS	**Buzias**	**0.94**	**324**	*i* Pg	**Pg**	**21 52 03.5**	**+0.6**
BZS				*i* Sg	**Sg**	**21 52 16.1**	**+1.0**
BZS	**Buzias**	**0.94**	**324**⇑	*i* P	**Pg**	**21 52 03.3**	**+0.4**
BZS				*i* S	**Sg**	**21 52 13.8**	**-1.3**
BZS	**Buzias**	**0.94**	**324**⇑	*i* P	**Pg**	**21 52 03.3**	**+0.4**
BZS	**Buzias**	**0.94**	**324**⇑	*i* P	**Pg**	**21 52 03.3**	**+0.4**
BZS	**Buzias**	**0.94**	**324**	*i* Pg	**Pg**	**21 52 03.5**	**+0.6**
BZS				S	**Sg**	**21 52 13.8**	**-1.3**
BZS				*i* Sg	**Sg**	**21 52 16.1**	**+1.0**
SVIS	**Svilajnac**	**1.03**	**236**	*e*Pg	**Pg**	**21 52 04.1**	**-0.6**
SVIS				*i* Sg	**Sg**	**21 52 19.1**	**+1.0**
DEV	**Deva**	**1.09**	**19**⇓	*i* P	**Pg**	**21 52 05.4**	**-0.3**
DEV				*i* S	**Sg**	**21 52 18.0**	**-1.7**
DEV	**Deva**	**1.09**	**19**⇓	*i* P	**Pg**	**21 52 05.4**	**-0.3**
DEV	**Deva**	**1.09**	**19**⇓	*i* P	**Pg**	**21 52 05.4**	**-0.3**
DEV				S	**Sg**	**21 52 18.0**	**-1.7**
NISS		**1.49**	**193**	*i* Pn	**Pn**	**21 52 12.3**	**0.0**
NISS				*i* Sg	**Sg**	**21 52 33.2**	**+0.6**
NISS		**1.49**	**193**	*i* Pn	**Pn**	**21 52 12.3**	**0.0**
GRUS	**Gruza**	**1.55**	**232**	*e*Pg	**Pg**	**21 52 14.1**	**-0.4**
GRUS	**Gruza**	**1.55**	**232**	*e*Pg	**Pg**	**21 52 14.1**	**-0.4**
ZAPS	**Zavoj**	**1.59**	**174**	*i* Pn	**Pn**	**21 52 12.2**	**-1.5**
ZAPS	**Zavoj**	**1.59**	**174**	*i* Pn	**Pn**	**21 52 12.3**	**-1.4**
DIVS	**Divibare**	**1.89**	**247**	*e*Pn	**Pn**	**21 52 17.7**	**0.0**
DIVS	**Divibare**	**1.89**	**247**	*e*Pn	**Pn**	**21 52 17.7**	**0.0**
MDB	**Medias**	**1.89**	**47**⇓	*i* P	**Pn**	**21 52 19.3**	**+1.4**
MDB				*i* S	**Sn**	**21 52 43.3**	**+1.2**
MDB	**Medias**	**1.89**	**47**⇓	*i* P	**Pn**	**21 52 19.3**	**+1.4**
MDB	**Medias**	**1.89**	**47**⇓	*i* P	**Pn**	**21 52 19.3**	**+1.4**
MDB				S	**Sn**	**21 52 43.3**	**+1.2**
BARS	**Barje**	**2.08**	**192**	*i* Pn	**Pn**	**21 52 20.2**	**-0.3**
BARS	**Barje**	**2.08**	**192**	*i* Pn	**Pn**	**21 52 20.2**	**-0.3**
VTS	**Vitosha**	**2.34**	**165**	*i* Pn	**Pn**	**21 52 22.6**	**-1.4**
VTS	**Vitosha**	**2.34**	**165**	*i* Pn	**Pn**	**21 52 23.0**	**-1.0**
VTS	**Vitosha**	**2.34**	**165**	*i* P	**Pn**	**21 52 21.9**	**-2.1**
VTS	**Vitosha**	**2.34**	**165**	*i* P	**Pn**	**21 52 21.9**	**-2.1**
VTS	**Vitosha**	**2.34**	**165**	*i* Pn	**Pn**	**21 52 23.0**	**-1.0**
BBLS	**Lazići**	**2.37**	**246**	*e*Pn	**Pn**	**21 52 25.3**	**+0.9**
BBLS	**Lazići**	**2.37**	**246**	*e*Pn	**Pn**	**21 52 25.3**	**+0.9**
PGB	**Panagyurishte**	**2.64**	**150**	P	**Pn**	**21 52 26.9**	**-1.2**
PGB	**Panagyurishte**	**2.64**	**150**	P	**Pn**	**21 52 26.9**	**-1.2**
SZH	**Strazhica**	**3.00**	**121**	*i* P	**Pn**	**21 52 30.6**	**-2.5**
SZH	**Strazhica**	**3.00**	**121**	*i* P	**Pn**	**21 52 30.6**	**-2.5**
VRI	**Vrincioaia**	**3.21**	**70**⇓	*i* P	**Pn**	**21 52 39.1**	**+3.1**
VRI				*i* S	**Sn**	**21 53 17.8**	**+3.2**
VRI	**Vrincioaia**	**3.21**	**70**⇓	*i* P	**Pn**	**21 52 39.1**	**+3.1**
BURAR	**Bucovina Array**	**3.38**	**34**⇓	*i* P	**Pn**	**21 52 39.9**	**+1.6**
BURAR	**Bucovina Array**	**3.38**	**34**⇓	*i* P	**Pn**	**21 52 39.9**	**+1.6**
BURAR	**Bucovina Array**	**3.38**	**34**⇓	*i* P	**Pn**	**21 52 39.9**	**+1.6**
RZN	**Rozhen**	**3.59**	**151**	*i* P	**Pn**	**21 52 40.0**	**-1.2**
RZN	**Rozhen**	**3.59**	**151**	*i* P	**Pn**	**21 52 40.0**	**-1.2**

IDC 25 21:54:19.6±10.0, 4°.00N×128°.20E, h82km±103km, mb3.7/9, mb1 3.7/9, mb1mx3.5/21, mbtmp3.7/9, Error ellipse: s-maj=70.0km s-min=21.8km az=75.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.11**	**186**	P	P	21 59 07.4	-0.9
	1.9nm,0.9s,baz=329,slow=5.9,SNR=3.8						
ASAR	**Alice Springs**	**28.06**	**169**	P	P	22 00 04.0	+0.6
	0.2nm,0.4s,baz=349,slow=7.2,SNR=4.1						
KSRS	**Korea Array**	**33.29**	**360**	P	P	22 00 49.2	-0.1
	0.7nm,0.5s,baz=175,slow=8.7,SNR=3.9						
STKA	**Stephens Creek**	**37.89**	**161**	P	P	22 01 29.0	+0.2
	1.0nm,0.4s,baz=345,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**58.18**	**324**	P	P	22 04 05.8	+0.8
	3.2nm,0.5s,baz=113,slow=8.4,SNR=82						
ZALV	**Zalesovo Beam**	**61.02**	**332**	P	P	22 04 23.6	-0.8
	0.8nm,0.6s,baz=116,slow=6.9,SNR=4.3						
BVAR	**Borovoye Array**	**67.90**	**327**	P	P	22 05 09.7	+0.4
	1.7nm,0.7s,baz=131,slow=8.6,SNR=9.2						
ARCES	**ARCESS Array B**	**90.70**	**340**	P	P	22 07 12.2	-0.6
	2.2nm,1.1s,baz=79,slow=6.3,SNR=6.1						
FINES	**FINESS Array B**	**92.28**	**332**	P	P	22 07 19.7	-0.7
	2.2nm,1.1s,baz=46,slow=6.0,SNR=3.6						

*NEIC **25** 22:20:45.1, 36°.26N×22°.27E, h26km, MD3.5(ATH), After ATH.*
*CSEM **25** 22:20:45.1, 36°.26N×22°.27E, h26km, MD3.5, After ATH*
ATH 25 22:20:45.1, 36°.26N×22°.27E, h26km±2km, MD3.5/11, 2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.62**	**88**	*e*PN	Pn	22 20 58.2	0.0
KYTH	**Kithira**	**0.62**	**88**	*e*Pn	Pn	22 20 58.2	0.0
VLI	**Veliai**	**0.71**	**49**⇓	*i*PN	Pn	22 20 58.7	-0.7
VLI				*e*SN	Sn	22 21 09.7	+0.3
VLI	**Veliai**	**0.71**	**49**⇓	*i*Pn	Pn	22 20 58.7	-0.7
VLI				*e*Sn	Sn	22 21 09.7	+0.3
PYL	**PYLOS**	**0.76**	**326**	*e*PB	Pb	22 20 59.2	-0.6
PYL				*e*SN	Sn	22 21 11.5	+0.7
PYL	**PYLOS**	**0.76**	**326**	*e*Pb	Pb	22 20 59.2	-0.6
PYL				*e*Sn	Sn	22 21 11.5	+0.7
ITM	**Ithomi**	**0.96**	**343**	*e*PB	Pb	22 21 02.8	-0.3
ITM				*e*SN	Sn	22 21 18.0	+2.3
ITM	**Ithomi**	**0.96**	**343**	*e*Pb	Pb	22 21 02.8	-0.3
ITM				*e*Sn	Sn	22 21 18.0	+2.3
VLX	**Vlachokerasia**	**1.11**	**4**	*e*PN	Pn	22 21 06.2	+1.2
VLX				*e*SN	Sn	22 21 21.6	+2.2
VLX	**Vlachokerasia**	**1.11**	**4**	*e*Pn	Pn	22 21 06.2	+1.2
VLX				*e*Sn	Sn	22 21 21.6	+2.2
GUR	**Goura**	**1.67**	**2**	*e*PN	Pn	22 21 15.3	+2.6
GUR	**Goura**	**1.67**	**2**	*e*Pn	Pn	22 21 15.3	+2.6
VAM	**Vamos**	**1.78**	**118**	*e*PN	Pn	22 21 16.4	+2.2
VAM	**Vamos**	**1.78**	**118**	*e*Pn	Pn	22 21 16.4	+2.2
LTK	**Loutraki**	**1.85**	**17**	*e*PN	Pn	22 21 18.1	+3.0
LTK	**Loutraki**	**1.85**	**17**	*e*Pn	Pn	22 21 18.1	+3.0
RLS	**Riolos of Patr**	**1.91**	**341**	*e*PN	Pn	22 21 18.9	+3.0
RLS	**Riolos of Patr**	**1.91**	**341**	*e*Pn	Pn	22 21 18.9	+3.0
VLY	**Voula,Athens**	**2.00**	**37**	*e*PN	Pn	22 21 18.9	+1.7
VLY	**Voula,Athens**	**2.00**	**37**	*e*Pn	Pn	22 21 18.9	+1.7
VLS	**Valsamata**	**2.34**	**325**	*e*PN	Pn	22 21 24.1	+2.3
VLS	**Valsamata**	**2.34**	**325**	*e*Pn	Pn	22 21 24.1	+2.3

*ISCJB **25** 22:48:47.7±0.3, 32°.63N±0°.03×105°.58E±0°.03, h10km, mb4.1/33, Error ellipse: s-maj=4.4km s-min=3.4km az=11.3*
*IDC **25** 22:48:48.8±0.9, 32°.72N×105°.48E, h0km, mb4.0/13, mb1 4.1/15, mb1mx4.0/27, mbtmp4.0/15, ML4.2/2, Error ellipse: s-maj=26.6km s-min=17.4km az=39.0*
*BJI **25** 22:48:49.3, 32°.70N×105°.65E, h13km, mB4.4/6, mb4.4/13, ML3.9/20, Ms3.9/10, Ms7 3.5/7*
*NEIC **25** 22:48:50.4±3.1, 32°.75N×105°.55E, h12km±20km, mb4.3/14, Error ellipse: s-maj=7.3km s-min=6.2km az=51.0*
*MOS **25** 22:48:51.9±1.1, 32°.79N×105°.59E, h37km, mb4.5/13, Error ellipse: s-maj=10.8km s-min=7.0km az=115.7*
ISC 25 22:48:50.1±0.2, 32°.68N±0°.03×105°.54E±0°.03, h10km, n93, σ1ª11/107, mb4.1/33, 8C-6D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.32**	**221**	Pn	**Pn**	**22 49 29.3**	**+1.0**
CD2				Pg	**Pg**	**22 49 32.5**	**-2.1**
CD2				Sn	**Sn**	**22 50 00.5**	**+3.6**
CD2				Sg	**Sg**	**22 50 04.5**	**-0.2**
CD2				smax			
	comp=N,7μm,0.8s						
XAN	**Xi'an**	**3.14**	**63**	Pn	**Pn**	**22 49 40.8**	**+1.2**
XAN				Pg	**Pg**	**22 49 47.0**	**-3.3**
XAN				Sg	**Sg**	**22 50 32.5**	**+1.5**
XAN				smax			
	comp=N,390nm,0.7s						
XAN				smax			
	comp=E,190nm,0.8s						
LZH	**Lanzhou**	**3.68**	**338**	*e*Pn	**Pn**	**22 49 48.3**	**+1.3**
LZH				Pg	**Pg**	**22 49 56.5**	**-4.0**
LZH				Sn	**Sn**	**22 50 32.0**	**+1.6**
LZH				Sg	**Sg**	**22 50 42.5**	**-5.7**
LZH				smax			
	comp=N,440nm,0.7s						
LZH				smax			
	comp=E,860nm,0.6s						
LZH				LR	LR		
	comp=E,2μm,6.5s						
LZH				LR	LR		
	comp=Z,3μm,7.9s						
ENH	**Enshi**	**4.14**	**124**	*e*Pn	**Pn**	**22 49 53.0**	**-0.3**
ENH				*e*Pg	**Pg**	**22 50 07.0**	**-2.5**
ENH				*e*Sg	**Sg**	**22 51 03.2**	**+0.1**
WHN	**Wuhan**	**7.81**	**103**	Pn	**Pn**	**22 50 42.5**	**-1.3**
WHN				Sn	**Sn**	**22 52 11.3**	**-1.0**
WHN				LR	LR		
	comp=N,1μm,12.2s						
WHN				LR	LR		
	comp=E,1μm,11.3s						
WHN				LR	LR		
	comp=Z,410nm,6.1s						
KMI	**Kunming**	**7.91**	**199**	P	**Pn**	**22 50 49.5**	**+4.3**
KMI				S	**Sn**	**22 52 11.3**	**-3.5**
KMI				smax			
	comp=N,28nm,1.6s						
KMI				smax			
	comp=E,35nm,1.3s						
KMI				LR	LR		
	comp=N,290nm,7.2s						
KMI				LR	LR		
	comp=E,470nm,9.6s						
GTA	**Gaotai**	**8.16**	**327**	⇓P	**Pn**	**22 50 47.8**	**-0.7**
GTA				pP		22 50 51.8	
GTA				S	**Sn**	**22 52 24.3**	**+3.5**
GTA				sS		22 52 29.3	
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
GTA				pmax	pmax		
	comp=Z,75nm,4.2s						
GTA				LR	LR		
	comp=N,250nm,7.8s						
GTA				LR	LR		
	comp=E,210nm,7.5s						
GTA				LR	LR		
	comp=Z,220nm,7.8s						
BTO	**Baotou**	**8.69**	**23**	*e*P	**Pn**	**22 50 55.3**	**-0.5**
BTO				LR	LR		
	comp=N,220nm,10.7s						
BTO				LR	LR		
	comp=E,150nm,9.8s						
NJ2	**Nanjing**	**11.28**	**90**	*e*P	**Pn**	**22 51 33.8**	**+2.5**
NJ2				pP		22 51 38.8	
NJ2				sP		22 51 42.5	
NJ2				PP		22 51 45.0	
NJ2				S	**Sn**	**22 53 39.0**	**+1.5**
NJ2				sS		22 53 49.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.6s						
NJ2				LR	LR		
	comp=N,70nm,8.5s						
NJ2				LR	LR		
	comp=E,200nm,9.5s						
LSA	**Lhasa**	**12.67**	**260**	*e*P	**Pn**	**22 51 49.8**	**-0.5**
SONM	**Songino Array**	**15.15**	**2**	Pn	**Pn**	**22 52 29.8**	**+5.7**
	comp=E,0.8nm,0.3s,baz=177,slow=12,SNR=3.1						
ULN	**Ulaanbaatar**	**15.21**	**4**	*e*P	**Pn**	**22 52 24.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.21**	**4**	*e*Pn	**Pn**	**22 52 24.4**	**-0.4**
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**15.35**	**204**	Pn	**Pn**	**22 52 28.6**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=12,slow=13,SNR=4.6						
KSRS	**Korea Array**	**18.92**	**69**	P	**Pn**	**22 53 12.4**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=254,slow=10,SNR=20						
CN2	**Changchun**	**19.13**	**49**	*e*P	**Pn**	**22 53 15.3**	**+1.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
HIA	**Hailar**	**19.69**	**29**	P	**Pn**	**22 53 19.2**	**-1.4**
MK31	**Makanchi Array**	**22.66**	**315**	*e*P	**P**	**22 53 50.7**	**-0.6**
MKAR	**Makanchi Array**	**22.66**	**315**	P	**P**	**22 53 51.0**	**-0.3**
	comp=Z,4.0nm,0.8s,mb3.9,baz=114,slow=11,SNR=25						
ULHL	**Ulahol**	**25.03**	**301**	P	**P**	**22 54 16.2**	**+2.0**
	SNR=8.9						
KLR	**Kul'dur**	**25.61**	**42**	*e*P	**P**	**22 54 16.0**	**-3.4**
KLR				MLR	MLR		
	comp=Z,500nm,12.0s						
TKM2	**Tokmak 2**	**25.65**	**302**	P	**P**	**22 54 21.4**	**+1.5**
	SNR=5.1						
TKM2	**Tokmak 2**	**25.65**	**302**	*e*P	**P**	**22 54 20.0**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**25.65**	**302**	*e*P	**P**	**22 54 20.0**	**+0.2**
	comp=Z,3.8nm,0.8s,mb4.0						
BOD	**Bodaibo**	**25.80**	**10**	*e*P	**P**	**22 54

JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
JOF Joensuu 54.36 327 *ep* **P 22 58 15.8 -0.8**
comp=Z,3.2nm,0.7s,mb4.4
KEV Kevo 55.80 336 P **P 22 58 25.6 -1.3**
ARCES ARCESS Array B 56.33 335 P **P 22 58 29.8 -0.9**
comp=Z,1.0nm,0.8s,mb3.9,baz=79,slow=9.1,SNR=6.4
KAF Kangasniemi 56.75 326 *eP* **P 22 58 32.1 -1.7**
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF Kangasniemi 56.75 326 *ep* **P 22 58 32.1 -1.7**
comp=Z,3.2nm,0.7s,mb4.5
FINES FINESS Array B 56.95 326 P **P 22 58 34.8 -0.4**
comp=Z,3.0nm,0.7s,mb4.4,baz=86,slow=8.0,SNR=17
BR131 Keskin Array S 57.03 299 *eP* **P 22 58 36.0 -0.2**
comp=Z,0.8nm,0.6s,mb3.9
BRTR Keskin Array B 57.03 299 P **P 22 58 36.9 +0.7**
comp=Z,0.8nm,0.6s,mb3.9,baz=97,slow=7.6,SNR=7.6
AKASG Malin Array Be 57.21 313 P **P 22 58 36.3 -0.9**
comp=Z,2.9nm,0.7s,mb4.4,baz=68,slow=6.6,SNR=8.9
VRI Vrincioaia 60.08 308 ⇑P **P 22 58 57.5 +0.2**
VRI Vrincioaia 60.08 308 ↑*i*P **P 22 58 57.5 +0.2**
BURAR Bucovina Array 60.55 310 ⇓P **P 22 58 55.9 -4.6**
BURAR Bucovina Array 60.55 310 ↓*i*P **P 22 58 55.9 -4.6**
MLR Muntele Rosu 60.72 308 ⇑P **P 22 58 57.9 -3.8**
MLR Muntele Rosu 60.72 308 ↑*i*P **P 22 58 57.9 -3.8**
KWP Kalwaria Pacla 61.53 313 *eP* **P 22 59 07.4 +0.3**
KWP pmax pmax
comp=Z,20nm,1.0s,mb5.2
KWP Kalwaria Pacla 61.53 313 *eP* **P 22 59 07.4 +0.2**
comp=Z,20nm,1.0s,mb5.2
KWP Kalwaria Pacla 61.53 313 ⇓*i*P **P 22 59 07.3 +0.2**
KOLS Kolonicke sedl 62.02 312 *eP* **P 22 59 11.0 +0.6**
KOLS pmax pmax
comp=Z,22nm,2.7s,mb4.8
KOLS Kolonicke sedl 62.02 312 *eP* **P 22 59 11.0 +0.6**
ASAR Alice Springs 62.23 151 P **P 22 59 12.6 +0.5**
comp=Z,1.3nm,0.7s,mb4.2,baz=338,slow=6.7,SNR=16
DRGR 62.43 310 ⇑P **P 22 59 13.7 +0.5**
DRGR 62.43 310 ↑*i*P **P 22 59 13.7 +0.5**
STHS Stebnicka Huta 62.50 313 *eP* **P 22 59 14.3 +0.6**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
STHS Stebnicka Huta 62.50 313 *eP* **P 22 59 14.3 +0.6**
KECS Kecovo 63.28 312 *eP* **P 22 59 18.8 -0.1**
KECS pmax pmax
comp=Z,2.0nm,1.5s,mb4.0
KECS Kecovo 63.28 312 *eP* **P 22 59 18.8 -0.1**
BZS Buzias 63.55 309 ⇓P **P 22 59 19.4 -1.3**
BZS Buzias 63.55 309 ↓*i*P **P 22 59 19.4 -1.3**
NB2 NORSAR Subarra 63.99 327 P **P 22 59 22.1 -1.2**
comp=Z,4.0nm,0.9s,mb4.5,baz=72,slow=6.9
NOA NORSAR Array B 63.99 327 P **P 22 59 22.4 -1.0**
comp=Z,3.0nm,0.9s,mb4.3,baz=70,slow=6.6,SNR=6.1
VYHS Vyhne 64.31 313 *eP* **P 22 59 26.9 +1.3**
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
VYHS Vyhne 64.31 313 *eP* **P 22 59 26.9 +1.3**
MORC Moravsky Berou 64.64 314 *eP* **P 22 59 27.1 -0.7**
MORC pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MORC Moravsky Berou 64.64 314 *eP* **P 22 59 27.1 -0.7**
comp=Z,2.6nm,0.9s,mb4.3
PKSM Moragy 65.27 310 ⇑P **P 22 59 31.9 0.0**
PKSM Moragy 65.27 310 ↑*i*P **P 22 59 31.9 0.0**
GERES GERESS Array B 67.32 314 P **P 22 59 45.8 +0.7**
comp=Z,1.7nm,1.0s,mb4.0,baz=57,slow=4.9,SNR=10
TIP Timpagrande 69.39 304 *eP* **P 22 59 57.9 -0.3**
comp=Z,2.4nm,0.9s,mb4.1
KMBO Kilima Mbogo 72.45 257 P **P 23 00 17.9 +0.8**
LPG La Plagne 73.06 313 *eP* **P 23 00 20.8 +0.5**
comp=Z,10nm,0.9s,mb4.4
LPL La Plagne 73.06 313 *eP* **P 23 00 20.7 +0.4**
comp=Z,8.3nm,0.7s,mb4.5
YKA Yellowknife Ar 79.83 18 P **P 23 00 58.2 -0.1**
comp=Z,0.8nm,0.8s,mb3.7,baz=322,slow=5.4,SNR=7.7
YKA Yellowknife Ar 79.83 18 P **P 23 00 58.2 -0.1**
BOSA Boshof 97.52 241 P **P 23 02 25.3 +0.8**

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*JMA **25** 22:50:21.4±0.3,24°.96N×122°.48E,h109km,M2.2*
*TAP **25** 22:50:22.9,24°.93N×122°.52E,h111km,ML3.2,D*
*ISCJB **25** 22:50:23.5±0.9,24°.81N±0°.07×122°.58E±0°.03,*
h107km±8km,Error ellipse: s-maj=12.1km s-min=3.7km
az=171.4

ISC 25 22:50:23.9±1.0,24°.83N±0°.07×122°.58E±0°.03,h106km±8km,
n23,σ0s85/40,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.53**	**133**	P	**Pn**	**22 50 39.6**	**-1.0**
YOJ				*e*S	**Sn**	**22 50 54.2**	**+1.1**
TWC	**Suao**	**0.70**	**252**	P	**Pn**	**22 50 41.6**	**-0.3**
baz=244							
TWC				*e*S	**Sn**	**22 50 55.0**	**-0.5**
baz=244							
ENA	**Nanau**	**0.86**	**243**	*i* P	**Pn**	**22 50 43.4**	**0.0**
baz=228							
ENA				*i* S	**Sn**	**22 50 58.6**	**+0.5**
baz=228							
NSK	**Sanguang**	**1.12**	**263**	P	**Pn**	**22 50 46.3**	**+0.1**
baz=256							
NSK				S	**Sn**	**22 51 02.7**	**-0.3**
baz=256							
IRIF	**Iriomote-Funau**	**1.15**	**115**	P	**Pn**	**22 50 45.9**	**-0.6**
IRIF				*e*S	**Sn**	**22 51 03.8**	**+0.3**
NNS	**Nan Shan**	**1.17**	**251**	*e*S	**Sn**	**22 51 03.9**	**+0.2**
baz=237							
TWD	**Chiawan**	**1.17**	**231**	*e*S	**Sn**	**22 51 03.1**	**-0.7**
baz=218							
HATJ	**Hateruma jima**	**1.35**	**124**	P	**Pn**	**22 50 48.6**	**-0.2**
HATJ				*e*S	**Sn**	**22 51 09.4**	**+1.8**
JKRS	**Kuro-shima**	**1.43**	**114**	P	**Pn**	**22 50 49.4**	**-0.2**
JKRS				*e*S	**Sn**	**22 51 09.5**	**+0.4**
NSTT	**Nanjuang**	**1.45**	**263**	*e*S	**Sn**	**22 51 08.6**	**-1.0**
baz=257							
JIJ	**Ishigaki jima**	**1.49**	**108**	P	**Pn**	**22 50 49.9**	**-0.5**
JIJ				*e*S	**Sn**	**22 51 10.0**	**-0.6**
EHY	**Hungye**	**1.75**	**221**	*e*S	**Sn**	**22 51 13.7**	**-2.4**
baz=224							
SMLT	**Sun Moon Lake**	**1.80**	**239**	*e*P	**Pn**	**22 50 54.9**	**+0.7**
baz=231							
SMLT				S	**Sn**	**22 51 18.3**	**+1.0**
baz=231							
TYC	**Yuchr**	**1.82**	**240**	*e*P	**Pn**	**22 50 55.2**	**+0.7**
baz=233							
TYC				*e*S	**Sn**	**22 51 18.7**	**+0.9**
baz=233							
TWF1	**Yuli**	**1.88**	**219**	*e*P	**Pn**	**22 50 54.1**	**-1.1**
baz=222							
TWF1				*e*S	**Sn**	**22 51 17.2**	**-1.9**
baz=222							
JTJ	**Tarama**	**1.94**	**95**	P	**Pn**	**22 50 55.6**	**-0.3**
JTJ				*e*S	**Sn**	**22 51 20.4**	**0.0**
YUS	**Yu-Shan**	**2.00**	**229**	*e*P	**Pn**	**22 50 57.0**	**+0.3**
baz=218							
YUS				*e*S	**Sn**	**22 51 21.6**	**-0.1**
baz=218							
CHKT	**Chengkung**	**2.05**	**213**	*e*S	**Sn**	**22 51 20.3**	**-2.6**
baz=203							
ALS	**Alishan**	**2.08**	**231**	*e*P	**Pn**	**22 50 58.6**	**+0.8**
baz=220							
ALS				S	**Sn**	**22 51 25.2**	**+1.4**
baz=220							
CHN5	**Tsauling**	**2.12**	**235**	*e*P	**Pn**	**22 50 58.5**	**+0.2**
baz=240							
CHN5				*e*S	**Sn**	**22 51 25.0**	**+0.3**
baz=240							
CHN4	**Tsaushan**	**2.34**	**231**	*e*S	**Sn**	**22 51 29.8**	**+0.2**
baz=227							
WTP	**Ta-pu**	**2.39**	**229**	*e*P	**Pn**	**22 51 02.1**	**+0.3**
baz=226							
WTP				*e*S	**Sn**	**22 51 31.5**	**+0.7**
baz=226							
CHN1	**Nanshi**	**2.49**	**229**	*e*P	**Pn**	**22 51 03.2**	**+0.1**
baz=226							
CHN1				*e*S	**Sn**	**22 51 33.7**	**+0.6**
baz=226							

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*IDC **25** 22:53:33.7±1.8,34°.52N×141°.97E,h0km,mb3.6/5,*
mb1 3.7/9,mb1mx3.5/29,mbtmp3.8/9,ML3.9/4,MS3.2/2,
Ms1 3.2/2,ms1mx2.6/29,Error ellipse: s-maj=43.5km
s-min=19.8km az=81.0

*ISCJB **25** 22:53:36.0±1.4,34°.49N±0°.04×141°.84E±0°.07,*
h28km±10km,mb3.6/5,Error ellipse: s-maj=9.9km
s-min=6.8km az=172.3
*JMA **25** 22:53:36.3±0.4,34°.50N×141°.83E,h31km±3km,M3.4*

ISC 25 22:53:37.5±1.4,34°.50N±0°.04×141°.77E±0°.07,h24km±9km,
n24,σ0s79/32,mb3.6/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.67**	**284**	P	**Pb**	**22 53 49.8**	**-0.8**
BSO3	**Boso 3**	**1.08**	**287**	P	**Pn**	**22 53 57.0**	**-0.1**
BSO3				S	**Sb**	**22 54 12.6**	**+1.4**
BSO4	**Boso 4**	**1.28**	**293**	P	**Pn**	**22 54 00.0**	**+0.2**
BSO4				S	**Sn**	**22 54 16.7**	**+0.6**
CHOJ	**Chosi**	**1.42**	**328**	P	**Pn**	**22 54 01.3**	**-0.4**
CHOJ				S	**Sn**	**22 54 18.5**	**-1.0**
JHJ2	**Mitsune**	**2.13**	**230**	P	**Pn**	**22 54 11.6**	**0.0**
JHJ2				S	**Sn**	**22 54 37.1**	**-0.2**
JHJ	**Hachijo jima 2**	**2.15**	**231**	Pn	**Pn**	**22 54 11.6**	**-0.2**
43nm,0.3s,baz=75,slow=19,SNR=24							
JHJ				Sn	**Sn**	**22 54 35.8**	**-1.9**
157nm,0.3s,baz=114,slow=23,SNR=17							
JOD2	**Odawara 2**	**2.33**	**290**	P	**Pn**	**22 54 13.5**	**-0.8**
JAG	**Ashikaga**	**2.70**	**316**	P	**Pn**	**22 54 19.3**	**0.0**
JRY	**Ryogami san**	**2.79**	**304**	P	**Pn**	**22 54 20.6**	**0.0**
JYN	**Shimob**	**2.83**	**292**	P	**Pn**	**22 54 20.9**	**-0.2**
JFK	**Kawauchi**	**2.95**	**346**	P	**Pn**	**22 54 22.3**	**-0.5**
MJAR	**Matsushiro Arr**	**3.55**	**306**	Pn	**Pn**	**22 54 31.4**	**+0.4**
3.9nm,0.3s,baz=118,slow=20,SNR=19							
MJAR				Sn	**Sn**	**22 55 12.4**	**+0.3**
2.0nm,0.3s,baz=129,slow=26,SNR=5.2							
MJAR	**Matsushiro Arr**	**3.55**	**306**	P	**Pn**	**22 54 31.5**	**+0.5**
MJAR						22 55 12.4	
MJAR				pmax	pmax		
comp=Z,4.0nm,0.3s							
MAJO	**Matsushiro**	**3.55**	**306**	*e*P	**Pn**	**22 54 31.7**	**+0.7**
MAJO				pmax	pmax		
comp=Z,30nm,0.8s							
MAJO	**Matsushiro**	**3.55**	**306**	*e*P	**Pn**	**22 54 31.7**	**+0.6**
comp=Z,30nm,0.8s							
MAT	**Matsushiro**	**3.55**	**306**	P	**Pn**	**22 54 31.5**	**+0.5**
MAT				S	**Sn**	**22 55 11.3**	**-0.9**
CBIJ	**Chichi jima**	**7.39**	**177**	Pn	**Pn**	**22 55 24.1**	**+0.4**
comp=Z,11nm,0.3s,baz=336,slow=20,SNR=7.9							
CBIJ				Sn	**Sn**	**22 56 41.5**	**-5.3**
comp=Z,7.2nm,0.3s,baz=52,slow=20,SNR=4.3							
ASAJ	**Asahikawa**	**9.63**	**4**	Pn	**Pn**	**22 55 52.8**	**-1.7**
comp=Z,1.3nm,0.3s,baz=197,slow=16,SNR=6.3							
ASAJ				Sn	**Sn**	**22 57 35.6**	**-6.1**
comp=Z,0.2nm,0.3s,baz=169,slow=17,SNR=3.3							
ASAJ				LR	LR	22 59 56.2	
comp=Z,115nm,18.0s,baz=254,slow=40							
JOW	**Kunigami**	**13.89**	**240**	LR	LR	23 01 08.4	
comp=Z,120nm,21.1s,baz=8.3,slow=32							
ZALV	**Zalesovo Beam**	**43.86**	**314**	P	**P**	**23 01 42.1**	**+0.6**
comp=Z,0.4nm,0.4s,mb3.5,baz=98,slow=8.2,SNR=2.6							
MKAR	**Makanchi Array**	**45.75**	**304**	P	**P**	**23 01 58.5**	**+1.8**
comp=Z,0.4nm,0.9s,mb3.4,baz=84,slow=8.6,SNR=3.0							
KURK	**Kurchatov**	**47.75**	**310**	P	**P**	**23 02 12.9**	**+0.7**
comp=Z,0.8nm,0.5s,mb4.0,baz=84,slow=7.7,SNR=3.9							
BVAR	**Borovoye Array**	**52.51**	**314**	P	**P**	**23 02 49.2**	**+0.8**
comp=Z,0.2nm,0.3s,mb3.5,baz=96,slow=7.2,SNR=2.2							
ASAR	**Alice Springs**	**58.32**	**188**	P	**P**	**23 03 30.5**	**+0.1**
comp=Z,0.5nm,0.6s,mb3.7,baz=356,slow=5.6,SNR=6.2							

JMA 25 23:01:58.4±0.4,31°.46N×139°.49E,h232km±3km,M3.6,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.67**	**9**	P	Pn	23 02 37.0	+0.7
JIM2	**Oshima 3**	**3.25**	**359**	P	Pn	23 02 54.0	+1.5
JIM2				*e*S	S	23 03 35.7	+0.3
JIZS	**Izushimoda**	**3.29**	**351**	*e*S	S	23 03 37.2	+1.0
BSO1	**Boso 1**	**3.42**	**21**	P	Pn	23 02 54.3	-0.2
BSO3	**Boso 3**	**3.44**	**14**	P	Pn	23 02 54.7	0.0
BSO3				*e*S	S	23 03 37.2	-2.1
BSO4	**Boso 4**	**3.59**	**11**	P	Pn	23 02 57.0	+0.5
BSO4				*e*S	S	23 03 42.6	+0.1
JHU	**Hanno**	**4.38**	**358**	P	Pn	23 03 05.4	-0.6
JHU				*e*S	S	23 03 56.2	-3.4
JRY	**Ryogami san**	**4.57**	**354**	P	Pn	23 03 09.3	+1.1
JRY				*e*S	S	23 04 02.0	-1.7
CBIJ	**Chichi jima**	**4.95**	**151**	P	Pn	23 03 07.5	-5.5
CBIJ				*e*S	S	23 04 03.7	-8.5
JAG	**Ashikaga**	**4.95**	**360**	P	Pn	23 03 11.6	-1.3
JAG				*e*S	S	23 04 08.7	-3.5
JHO	**Hitachi**	**5.21**	**10**	P	Pn	23 03 15.0	-1.2
JHO				*e*S	S	23 04 11.8	-6.4

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*MOS **25** 23:05:01.6±0.7,52°.31N×158°.79E,h92km,mb4.1/1,Error*
ellipse: s-maj=52.2km s-min=26.5km az=75.7
*ISCJB **25** 23:05:03.6±0.5,52°.52N±0°.05×158°.62E±0°.08,*
h106km±4km,mb3.4/6,Error ellipse: s-maj=10.4km
s-min=5.9km az=135.0
*KRSC **25** 23:05:03.9±1.2,52°.51N×158°.79E,h103km±33km,ML3.9*
*NEIC **25** 23:05:04.3±1.1,52°.60N×158°.14E,h110km±7km,mb3.9/1,*
Error ellipse: s-maj=36.4km s-min=13.6km az=161.0
*IDC **25** 23:05:04.6±2.8,52°.63N×158°.02E,h113km±12km,mb3.1/5,*
mb1 3.5/5,mb1mx3.1/25,mbtmp3.1/5,Error ellipse:
s-maj=73.1km s-min=29.2km az=178.0

ISC 25 23:05:04.9±0.5,52°.52N±0°.05×158°.63E±0°.08,h99km±4km,
n35,σ0s97/51,mb3.4/6,1C,Near east coast of
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.11**	**217**	*e*P	**Pn**	**23 05 18.5**	**-0.2**
RUS				*i* S	**Sn**	**23 05 29.6**	**+0.6**
GRL	**Gorelyy**	**0.34**	**275**	*e*P	**Pn**	**23 05 19.9**	**+0.4**
GRL				*i* S	**Sn**	**23 05 31.8**	**+1.4**
PET	**Petropavlovsk**	**0.50**	**2**	↑*i*PN	**Pn**	**23 05 19.9**	**-0.6**
PET				*e*S	**Sn**	**23 05 31.0**	**-1.2**
PET				pmax	pmax		
comp=Z,341nm,0.3s							
PET				smax			
comp=N,2μm,0.6s							
PET				smax			
comp=E,1μm,0.5s							
PET				smax			
comp=N,2μm,0.5s							
PET	**Petropavlovsk**	**0.50**	**2**	*e*P	**Pn**	**23 05 20.0**	**-0.5**
PET				*i* S	**Sn**	**23 05 31.9**	**-0.3**
PET	**Petropavlovsk**	**0.50**	**2**	*e*Pn	**Pn**	**23 05 20.0**	**-0.5**
PET				*e*Sn	**Sn**	**23 05 31.1**	**-1.1**
AVH	**Avacha**	**0.74**	**5**	*e*P	**Pn**	**23 05 22.6**	**0.0**
AVH				*i* S	**Sn**	**23 05 36.8**	**+0.9**
PEA0B	**Petropavlovsk-**	**0.81**	**317**	*e*Pn	**Pn**	**23 05 22.3**	**-0.9**
PEA0B				*e*Sn	**Sn**	**23 05 36.4**	**-0.6**
PETK	**Petropavlovsk-**	**0.81**	**317**	P	**Pn**	**23 05 22.4**	**-0.8**
comp=N,132nm,0.3s,baz=121,slow=12,SNR=4822							
PETK				S	**Sn**	**23 05 36.6**	**-0.4**
comp=N,17nm,0.3s,baz=115,slow=20,SNR=11							
PETK	**Petropavlovsk-**	**0.81**	**317**	P	**Pn**	**23 05 22.4**	**-0.8**
PETK				S	**Sn**	**23 05 36.6**	**-0.4**
SPN	**Mys Shipunski**	**1.02**	**55**	P	**Pn**	**23 05 25.3**	**-0.1**
SPN				*i* S	**Sn**	**23 05 41.1**	**+0.2**
MIPR	**Malaya Ipel'ka**	**1.17**	**258**	*e*P	**Pn**	**23 05 27.0**	**-0.1**
MIPR				*i* S	**Sn**	**23 05 44.4**	**+0.6**
GNL	**Ganaly**	**1.24**	**341**	*e*P	**Pn**	**23 05 27.0**	**-0.9**
GNL				*i* S	**Sn**	**23 05 44.3**	**-1.0**
KII	**Karymskiy**	**1.59**	**18**	*e*P	**Pn**	**23 05 31.7**	**-0.5**
SKR	**Severo-Kuril's**	**2.42**	**221**	*e*PN	**Pn**	**23 05 39.2**	**-3.6**
SKR				*e*		23 06 04.0	
ALID	**Alaid**	**2.53**	**230**	*e*P	**Pn**	**23 05 44.2**	**-0.1**
MKZ	**Mys Kozlova**	**2.75**	**41**	*e*P	**Pn**	**23 05 46.5**	**-0.7**
MKZ				*i* S	**Sn**	**23 06 17.6**	**-2.2**
TUMR	**Tumrok**	**2.91**	**17**	*e*P	**Pn**	**23 05 50.5**	**+1.3**
KMNR	**Kamenistaya**	**3.38**	**16**	*e*P	**Pn**	**23 05 56.3**	**+0.8**
BZMR	**Bezymyannaya**	**3.59**	**17**	*e*P	**Pn**	**23 05 59.6**	**+1.2**
ZLN	**Zelenaya**	**3.73**	**19**	*e*P	**Pn**	**23 06 01.8**	**+1.6**
ZLN				*i* S	**Sn**	**23 06 44.9**	**+1.8**
CIRR	**Tsirk**	**3.81**	**18**	*e*P	**Pn**	**23 06 02.7**	**+1.4**
SRDR	**Sredinnyy**	**3.85**	**9**	*e*P	**Pn**	**23 06 02.6**	**+0.7**
BDR	**Baidarnaya**	**4.32**	**19**	*e*P	**Pn**	**23 06 07.9**	**-0.3**
SMKR	**Semkarok**	**4.39**	**21**	*e*P	**Pn**	**23 06 09.3**	**+0.1**
SRKR	**Sorokina**	**4.39**	**19**	*e*P	**Pn**	**23 06 10.1**	**+0.9**
KBTR	**Krutoberegovo**	**4.43**	**32**	*e*P	**Pn**	**23 06 09.5**	**-0.2**
KBTR				*i* S	**Sn**	**23 06 57.3**	**-2.8**
BKI	**Bering**	**5.11**	**55**	*e*P	**Pn**	**23 06 17.9**	**-1.0**
BKI				*i* S	**Sn**	**23 07 10.6**	**-6.0**
MCK	**McKinley**	**28.99**	**47**	*e*P	**P**	**23 10 54.4**	**-0.3**
MCK				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.8							
MCK	**McKinley**	**28.99**	**47**	*e*P	**P**	**23 10 54.4**	**-0.3**
comp=Z,1.1nm,0.4s,mb3.8							
YHNB	**Yeheng**	**39.55**	**240**	P	**P**	**23 12 22.6**	**-3.4**
YKA	**Yellowknife Ar**	**44.18**	**42**	P	**P**	**23 13 02.3**	**-0.9**
comp=Z,0.1nm,0.5s,mb2.8,baz=291,slow=7.9,SNR=3.0							
MKAR	**Makanchi Array**	**47.59**	**295**	P	**P**	**23 13 25.7**	**-4.5**
comp=Z,0.1nm,0.4s,mb3.0,baz=49,slow=7.1,SNR=3.5							
NVAR	**Mina Array Bea**	**56.78**	**69**	P	**P**	**23 14 39.3**	**+1.0**
comp=Z,0.3nm,0.4s,mb3.7,baz=302,slow=7.8,SNR=3.9							
PDAR	**Pinedale Array**	**58.58**	**60**	P	**P**	**23 14 51.3**	**+0.4**
comp=Z,0.5nm,0.6s,mb3.8,baz=342,slow=2.3,SNR=4.2							
TXAR	**Lajitas Array**	**71.68**	**66**	P	**P**	**23 16 16.0**	**+0.2**
comp=Z,0.4nm,0.5s,mb3.5,baz=289,slow=4.9,SNR=9.0							

IDC 25 23:10:32.0±2.6,50°.60N×30°.05W,h0km,mb3.6/8,
mb1 3.8/8,mb1mx3.5/30,mbtmp3.7/8,MS3.5/3,Ms1 3.5/3,
ms1mx2.9/43,Error ellipse: s-maj=59.1km
s-min=29.8km az=79.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**21.29**	**111**	P	P	23 15 20.3	+0.4
1.8nm,0.9s,baz=312,slow=11,SNR=6.7							
NOA	**NORSAR Array B**	**25.00**	**49**	P	P	23 15 56.0	-1.1
0.4nm,0.7s,baz=273,slow=12,SNR=2.9							
NOA				LR	LR	23 24 55.1	
comp=Z,57nm,18.8s,baz=325,slow=34							
HFS	**Hagfors**	**26.16**	**52**	LR	LR	23 26 40.2	
comp=Z,95nm,18.0s,baz=299,slow=37							
VRAC	**Vranov**	**29.66**	**74**	LR	LR	23 28 56.2	
comp=Z,147nm,18.1s,baz=317,slow=37							
ARCES	**ARCESS Array B**	**31.99**	**33**	P	P	23 16 58.9	-0.4
0.9nm,0.6s,baz=253,slow=8.5,SNR=9.5							
FINES	**FINESS Array B**	**32.17**	**49**	P	P	23 17 00.6	-0.4
3.2nm,1.1s,baz=264,slow=14,SNR=3.8							
BRTR	**Keskin Array B**	**44.90**	**78**	P	P	23 18 48.6	+0.6
0.5nm,0.9s,baz=324,slow=9.1,SNR=3.5							
TORD	**Torodi Ar. Bea**	**45.41**	**134**	P	P	23 18 51.8	-0.5
0.3nm,0.7s,baz=334,slow=6.9,SNR=4.8							
BVAR	**Borovoye Array**	**57.02**	**45**	P	P	23 20 20.0	+0.9
2.0nm,0.6s,baz=308,slow=6.4,SNR=19							
MKAR	**Makanchi Array**	**66.83**	**44**	P	P	23 21 25.5	+0.3
0.3nm,0.6s,baz=302,slow=7.0,SNR=5.1							
ASAR	**Alice Springs**	**150.36**	**31**	PKPbc	PKPbc	23 30 24.7	-0.4
0.4nm,0.6s,baz=339,slow=1.9,SNR=6.0							

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*IDC **25** 23:15:56.3±0.7,4°.66N×82°.67W,h0km,mb4.2/12,*
mb1 4.5/19,mb1mx4.4/26,mbtmp4.4/19,ML3.8/7,MS4.0/18,
Ms1 4.1/18,ms1mx4.0/22,Error ellipse: s-maj=22.3km
s-min=12.4km az=59.0
*CASC **25** 23:15:56.8±2.7,4°.98N×82°.65W,h0km±110km,MD4.5,*
mb4.6(NEIC)
*NEIC **25** 23:15:57.6±0.3,4°.73N×82°.63W,h10km,mb4.6/33,Error*
ellipse: s-maj=5.9km s-min=4.7km az=219.0
*GCMT **25** 23:15:57.7±0.3,4°.63N×82°.61W,h23km±1km,MW5.1/77,*
Moment Tensor Solution. s44,c56; s77,c116; Duration:
0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.13±.19;
$M_{\theta\theta}$0.90±.17; $M_{\phi\phi}$-0.77±.21; $M_{r\theta}$-0.02±.26; $M_{\theta\phi}$5.60±.16;
$M_{\phi r}$-0.87±.29; Best double couple: $M_0$5.73000×10^{16}
NP1:ϕ_s274.00000°,δ81.00000°,λ-1.00000°. NP2:
ϕ_s4.00000°,δ89.00000°,λ-171.00000°. Principal axes: T
5.7840, Plg6.0000°, Azm139.0000°; N -0.1090,
Plg81.0000°, Azm9.0000°; P -5.6750, Plg7.0000°,
Azm230.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s.

ISC 25 23:15:58.1±1.6,4°.86N±0°.03×82°.60W±0°.03,h5km±10km,
n219,σ1s06/209,mb4.4/40,MS4.0/14,45C-60D,South of
Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBS2		**3.91**	**359**	*e*P	**Pb**	**23 17 04.6**	**-2.9**
BRU2	**Volcan**	**3.91**	**359**	*e*P	**Pn**	**23 16 56.3**	**-2.5**
BRU2				*e*S	**Sn**	**23 17 43.3**	**-1.9**
BAR1		**4.41**	**351**	⇑*e*P	**Pn**	**23 17 02.9**	**-2.8**
BAR1				*e*S	**Sn**	**23 17 56.9**	**-0.6**
CNI	**Changuinola**	**4.52**	**1**	*e*P	**Pn**	**23 17 06.2**	**-1.2**
QCR	**Quepos**	**4.79**	**341**	⇑*e*P	**Pn**	**23 17 07.3**	**-3.7**
BUS	**Buena Vista**	**4.80**	**346**	⇓*e*P	**Pn**	**23 17 09.2**	**-1.9**
URSC	**Urasca**	**5.08**	**347**	*e*P	**Pn**	**23 17 13.1**	**-1.9**
URSC				*e*S	**Sn**	**23 18 12.3**	**-1.7**
BCIP	**Isla Barro Col**	**5.08**	**33**	*e*Pn	**Pn**	**23 17 15.3**	**+0.3**
BCIP				*e*Sn	**Sn**	**23 18 16.5**	**+2.4**
LAJ	**Bijagual**	**5.19**	**343**	⇑*e*P	**Pn**	**23 17 13.4**	**-3.1**
LAJ				*e*S	**Sn**	**23 18 14.4**	**-2.5**
SJS	**Escuela Geolog**	**5.25**	**344**	*e*P	**Pn**	**23 17 15.5**	**-1.8**
PRS1	**Puriscal**	**5.36**	**342**	⇓*e*P	**Pn**	**23 17 15.1**	**-3.7**
CGA2	**Cerro Gallo 2**	**5.44**	**340**	*e*P	**Pn**	**23 17 17.4**	**-2.6**
JCR	**Jicaral**	**5.54**	**333**	*e*P	**Pn**	**23 17 17.8**	**-3.6**
JCR				*e*S	**Sn**	**23 18 20.9**	**-4.7**
FORC	**Fortuna**	**5.93**	**340**	⇑*e*P	**Pn**	**23 17 25.1**	**-1.6**
VCR	**Vista de Mar**	**6.03**	**330**	*e*P	**Pn**	**23 17 25.5**	**-2.6**
OTAV	**Otavalo**	**6.19**	**138**	*e*Pn

MTP	**Monte Pirata**	21.23	50	*e*P	P	23 20 44.6	-0.5
	41nm,1.1s,mb4.7						
LPAZ	**La Paz**	25.43	146	P	P	23 21 25.9	-1.1
	15nm,0.9s,mb4.5,baz=338,slow=9.3,SNR=50						
LPAZ				LR	LR	23 32 26.5	
	comp=Z,738nm,19.7s,MS4.2,baz=152,slow=39						
LPAZ	**La Paz**	25.43	146	*e*P	P	23 21 25.4	-1.6
	34nm,1.3s,mb4.7						
LRAL	**Lakeview Retre**	28.33	352	*e*P	P	23 21 51.9	-1.1
SIV	**San Ignacio**	29.72	135	P	P	23 22 03.3	-2.3
	11nm,1.1s,mb4.5,baz=308,slow=9.8,SNR=27						
OXF	**Oxford**	30.17	349	P	P	23 22 09.0	-0.4
628A	**Black Gap, Mar**	31.11	324	⇓P	P	23 22 17.6	-0.1
	baz=31						
TXAR	**Lajitas Array**	31.46	323	P	P	23 22 21.4	+0.5
	0.4nm,0.7s,mb3.4,baz=138,slow=10,SNR=4.9						
TXAR				PcP	PcP	23 25 15.1	+0.9
	0.2nm,0.5s,baz=150,slow=4.2,SNR=2.6						
TXAR				LR	LR	23 35 34.4	
	comp=Z,147nm,18.6s,MS3.7,baz=145,slow=37						
WVT	**Waverly**	31.49	352	*e*P	P	23 22 18.6	-2.4
	5.6nm,1.1s,mb4.3						
526A	**Mary Lane Ranc**	32.24	323	⇓P	P	23 22 27.6	-0.1
	baz=32						
426A	**McDonald Obser**	32.65	324	⇓P	P	23 22 29.5	-1.7
	baz=33						
WMOK	**Wichita Mounta**	33.29	335	P	P	23 22 36.9	+0.1
425A	**Indio Mountain**	33.30	323	P	P	23 22 37.0	0.0
	baz=34,SNR=8.0						
324A	**Moseley Ranch,**	34.07	324	⇓P	P	23 22 43.0	-0.6
	baz=34						
125A	**Gardner Draw,**	34.49	326	⇓P	P	23 22 47.9	+0.7
	baz=35						
Z25A	**Roswell**	34.99	327	⇑P	P	23 22 51.7	+0.1
	baz=35						
Z24A	**Sheeppen Canyo**	35.38	326	⇓P	P	23 22 55.6	+0.7
	baz=36						
LCO	**Las Campanas**	35.57	162	P	P	23 22 54.6	-2.0
320A	**Kipp Ranch, An**	35.87	320	⇓P	P	23 22 59.9	+0.8
	baz=36						
Y24A	**Capitan**	35.87	327	⇑P	P	23 22 58.6	-0.5
	baz=36						
Y23A	**Lovelace Mesa,**	36.21	326	P	P	23 23 01.4	-0.6
	baz=36,SNR=5.2						
121A	**Cookes Peak, D**	36.22	323	⇑pP	pP	23 23 04.3	+0.7
	baz=36,SNR=6.0						
220A	**Playas Peak, P**	36.24	321	⇑P	P	23 23 03.4	+1.1
	baz=36						
W25A	**X Bar L Ranch,**	36.34	329	⇓P	P	23 23 03.1	0.0
	baz=36						
V26A	**Tequesquite Ra**	36.45	330	⇓P	P	23 23 04.8	+0.7
	baz=37						
Z21A	**St. Cloud Mine**	36.69	324	⇓P	P	23 23 07.2	+1.0
	baz=37						
219A	**White Tail Can**	36.77	320	⇓P	P	23 23 07.1	+0.2
	baz=37,SNR=5.7						
V25A	**Rancho No Teng**	36.90	330	⇓P	P	23 23 08.7	+0.8
	baz=37						
W23A	**Werner Place,**	37.18	327	⇓P	P	23 23 10.5	+0.1
	baz=37						
ANMO	**Albuquerque**	37.19	327	*e*P	P	23 23 10.7	+0.3
	5.0nm,0.9s,mb4.3						
217A	**Green Valley**	37.63	319	⇑P	P	23 23 14.6	+0.4
	baz=38,SNR=5.9						
118A	**Homack Ranch,**	37.64	321	⇑P	P	23 23 15.2	+1.0
	baz=38						
T25A	**Trinidad**	37.82	331	⇓P	P	23 23 16.5	+0.8
	baz=38						
U23A	**El Rito**	38.09	328	⇑P	P	23 23 18.9	+0.9
	baz=38						
U22A	**Llaves**	38.47	328	⇓P	P	23 23 21.4	+0.2
	baz=39						
CFAA	**Coronel Fontan**	38.76	160	P	P	23 23 20.6	-3.1
	0.7nm,0.8s,mb3.5,baz=335,slow=8.0,SNR=6.5						
SDCO	**Great Sand Dun**	38.83	331	*e*P	P	23 23 24.8	+0.6
	9.5nm,1.2s,mb4.4						
214A	**Organ Pipe Nat**	39.07	317	⇑P	P	23 23 26.3	0.0
	baz=39						
CPUP	**Villa Florida**	39.51	143	P	P	23 23 26.9	-3.1
	5.5nm,0.8s,mb4.3,baz=302,slow=6.9,SNR=12						
CPUP				LR	LR	23 41 42.4	
	comp=Z,375nm,18.5s,MS4.3,baz=301,slow=39						
CPUP	**Villa Florida**	39.51	143	*e*P	P	23 23 26.9	-3.1
	20nm,0.8s,mb4.9						
114A	**Black Gap (USA**	39.60	318	⇓P	P	23 23 31.1	+0.4
	baz=40						
X16A	**Lo Mia Camp, P**	39.74	321	⇓P	P	23 23 32.3	+0.4
	baz=40						
S21A	**Coal Bank Pass**	39.93	328	⇓P	P	23 23 34.0	+0.6
	baz=40						
MVCO	**Mesa Verde**	39.97	327	⇑P	P	23 23 34.6	+0.9
	baz=40						
MVCO	**Mesa Verde**	39.97	327	*e*P	P	23 23 34.4	+0.6
	61nm,1.8s,mb5.0						
V17A	**Tonalea, Kykot**	40.15	323	⇓P	P	23 23 36.0	+0.8
	baz=40						
X15A	**Humboldt**	40.28	321	⇓P	P	23 23 37.3	+0.9
	baz=40,SNR=6.5						
Q22A	**Crested Butte,**	40.40	330	⇓P	P	23 23 38.2	+1.0
	baz=41,SNR=8.0						
WUAZ	**Wupatki**	40.43	323	⇓P	P	23 23 38.1	+0.6
	baz=41						
WUAZ	**Wupatki**	40.43	323	*e*P	P	23 23 37.3	-0.3
	10nm,0.8s,mb4.6						
R20A	**Redvale**	40.63	328	⇓P	P	23 23 40.0	+0.8
	baz=41						
SMCO	**Snowmass**	40.67	331	*e*P	P	23 23 39.9	+0.4
	5.9nm,0.9s,mb4.2						
X14A	**Yava**	40.68	320	⇑P	P	23 23 39.0	-0.7
	baz=41						
PV01	**Paradox Valley**	40.69	328	*e*P	P	23 23 39.6	-0.1
	562nm,1.0s						
Y13A	**Salome**	40.88	319	⇓P	P	23 23 42.0	+0.6
	baz=41,SNR=6.5						
V15A	**Kaibab Nationa**	41.11	322	⇓P	P	23 23 44.3	+1.1
	baz=41,SNR=9.4						
PV10	**Paradox Valley**	41.12	328	*e*P	P	23 23 43.3	0.0
	39nm,0.4s,mb5.4						
P21A	**Newcastle**	41.17	330	⇓P	P	23 23 45.0	+1.4
	baz=41						
W14A	**Seligman**	41.28	321	⇓P	P	23 23 45.1	+0.5
	baz=42						
V14A	**Boquillas Ranc**	41.56	321	⇑P	P	23 23 47.4	+0.5
	baz=42,SNR=13						
Q19A	**Hogan Spring (**	41.66	328	⇓P	P	23 23 47.8	+0.1
	baz=42						
W13A	**Hualapai Mount**	41.72	320	⇓P	P	23 23 48.1	0.0
	baz=42						
T15A	**Red Dirt Ranch**	42.04	324	⇑P	P	23 23 51.9	+1.1
	baz=42,SNR=6.8						
R17A	**Hanksville Air**	42.05	326	⇓P	P	23 23 51.1	+0.2
	baz=42						
U14A	**Mt Trumbull**	42.12	322	⇑P	P	23 23 51.5	0.0
	baz=42						
N21A	**Black Mountain**	42.16	332	⇑P	P	23 23 52.9	+1.2
	baz=42						
Q18A	**Rafter H Ranch**	42.23	328	⇓P	P	23 23 52.8	+0.5
	baz=42						
V13A	**Grand Canyon W**	42.25	321	⇑P	P	23 23 53.1	+0.6
	baz=42						
BELC	**Belle Mtn.**	42.44	317	⇓P	P	23 23 53.9	-0.3
	baz=43,SNR=5.5						
SRU	**San Rafael**	42.45	327	⇓P	P	23 23 53.9	-0.2
	baz=43						
N20A	**Spence Gulch,**	42.58	331	⇑P	P	23 23 55.1	0.0
	baz=43						
U13A	**Pakoon Wash**	42.60	322	⇓P	P	23 23 55.8	+0.4
	baz=43						
Q16A	**Castle Valley**	42.66	327	⇑P	P	23 23 57.1	+1.2
	baz=43						
L22A	**Ellis Ranch, M**	42.67	334	⇑P	P	23 23 57.0	+1.2
	baz=43						
P18A	**Preston Nutter**	42.67	328	⇑P	P	23 23 55.7	-0.2
	baz=43						
V12A	**Nelson**	42.72	320	⇓P	P	23 23 56.3	-0.1
	baz=43						
RWWY	**Rawlins**	42.75	333	*e*P	P	23 23 56.4	-0.1
	10nm,1.0s,mb4.5						
M21A	**Separation Pea**	42.75	332	⇓P	P	23 23 57.1	+0.5
	baz=43						
T13A	**Saint George**	42.95	322	⇑P	P	23 23 58.7	+0.5
	baz=43						
U12A	**Valley of Fire**	42.97	321	⇑P	P	23 23 58.9	+0.6
	baz=43						
S14A	**Cedar City**	43.00	324	⇑P	P	23 23 59.6	+1.0
	baz=43						
O18A	**Roosevelt**	43.02	329	⇑P	P	23 23 59.4	+0.7
	baz=43						
RSSD	**Black Hills**	43.41	337	P	P	23 24 01.4	-0.4
L20A	**Wamsutter**	43.52	332	⇓P	P	23 24 03.3	+0.6
	baz=44						
R13A	**O'Grain Ranch,**	43.75	324	⇓P	P	23 24 05.8	+1.1
	baz=44,SNR=7.6						
Q14A	**Sevier Lake (B**	43.89	325	⇓P	P	23 24 06.1	+0.3
	baz=44,SNR=6.6						
T11A	**Corn Creek, Al**	43.90	322	⇑P	P	23 24 05.9	0.0
	baz=44						
K20A	**Yellowstone Ra**	44.03	333	⇑P	P	23 24 06.8	-0.1
	baz=44						
R12A	**Pony Springs,**	44.23	323	P	P	23 24 09.7	+1.2
	baz=44,SNR=6.2						
M17A	**Scullys Gap (B**	44.25	330	⇑P	P	23 24 08.2	-0.5
	baz=44,SNR=6.3						
L18A	**Fontenelle, Gr**	44.27	330	⇓P	P	23 24 09.0	+0.2
	baz=44						
Q13A	**Wheeler Ranch,**	44.30	324	P	P	23 24 09.7	+0.7
	baz=44,SNR=11						
FURC	**Furnace Creek,**	44.46	320	⇑P	P	23 24 11.0	+0.6
	baz=45						
P13A	**Bates Ranch, G**	44.63	325	⇑P	P	23 24 12.2	+0.5
	baz=45						
MPMC	**Manual Prospec**	44.63	319	⇓P	P	23 24 11.5	-0.3
	baz=45						
PDAR	**Pinedale Array**	44.68	332	P	P	23 24 08.8	-3.2
	0.9nm,0.7s,mb3.7,baz=127,slow=9.8,SNR=5.9						
PDAR				LR	LR	23 44 48.4	
	comp=Z,213nm,19.4s,MS4.1,baz=296,slow=39						
HWUT	**Hardware Ranch**	44.80	329	*e*P	P	23 24 12.4	-0.6
	4.6nm,0.8s,mb4.4						
K18A	**Toltan Ranch,**	44.81	331	⇓P	P	23 24 13.1	0.0
	baz=45,SNR=7.8						
Q12A	**Willow Creek R**	44.82	324	⇓P	P	23 24 13.8	+0.5
	baz=45						
R11A	**Troy Canyon, C**	44.83	323	⇑P	P	23 24 13.6	+0.3
	baz=45,SNR=5.9						
BGU	**Big Grassy Mou**	45.09	327	*e*P	P	23 24 15.0	-0.3
	10nm,1.3s,mb4.5						
N14A	**Grayback Hills**	45.12	327	⇑P	P	23 24 15.2	-0.4
	baz=45,SNR=6.8						
M15A	**Larsen Ranch,**	45.16	328	⇑P	P	23 24 15.4	-0.5
	baz=45						
S10A	**Tonopah Range,**	45.18	321	⇑P	P	23 24 16.0	-0.1
	baz=45,SNR=9.2						
Q11A	**Duckwater**	45.19	323	⇓P	P	23 24 16.0	-0.1
	baz=45,SNR=7.6						
L15A	**Malad City**	45.52	329	⇑P	P	23 24 18.3	-0.4
	baz=46						
VES	**Vestal, Richgr**	45.57	317	⇓P	P	23 24 19.5	+0.2
	baz=46						
O12A	**Currie**	45.59	325	⇓P	P	23 24 19.4	+0.1
	baz=46						
Q10A	**Clear Creek Ra**	45.62	323	P	P	23 24 20.6	+1.0
	baz=46,SNR=6.8						
M14A	**Sheep Mountain**	45.66	328	P	P	23 24 19.9	+0.1
	baz=46,SNR=8.2						
TPAW	**Teton Pass**	45.89	331	*e*P	P	23 24 20.9	-0.7
	6.8nm,1.1s,mb4.5						
RRI2	**Red Ridge**	45.97	331	*e*P	P	23 24 21.4	-0.8
	4.5nm,0.7s,mb4.5						
L14A	**Malta**	45.98	328	⇓P	P	23 24 22.0	-0.3
	baz=46						
J16A	**Bone**	46.05	331	⇓P	P	23 24 22.8	-0.1
	baz=46						
IMW	**Indian Meadow**	46.20	332	*e*P	P	23 24 23.2	-0.8
	1.6nm,0.6s,mb4.1						
K14A	**Jones Ranch, D**	46.31	329	⇓P	P	23 24 24.3	-0.7
	baz=46,SNR=5.4						
NVAR	**Mina Array Bea**	46.55	321	P	P	23 24 27.2	+0.2
	4.9nm,0.8s,mb4.5,baz=137,slow=7.5,SNR=37						
NVAR	**Mina Array Bea**	46.55	321	P	P	23 24 27.2	+0.2
F18A	**Big Timber**	47.19	334	⇓P	P	23 24 31.5	-0.2
	baz=47						
L11A	**Cat Creek Ranc**	47.43	326	⇓P	P	23 24 32.7	-1.0
	baz=48						
H15A	**Lima**	47.55	331	⇓P	P	23 24 35.3	+0.7
	baz=48						
HLID	**Hailey**	47.67	329	⇓P	P	23 24 35.5	-0.1
	baz=48						
HLID	**Hailey**	47.67	329	*e*P	P	23 24 35.1	-0.5
	2.9nm,0.9s,mb4.3						
I13A	**Withorse Cree**	47.77	329	⇓P	P	23 24 36.4	+0.1
	baz=48						
J12A	**Stokes Ranch,**	47.81	328	⇑P	P	23 24 36.5	-0.2
	baz=48						
BOZ	**Bozeman (W)**	47.84	333	*e*P	P	23 24 35.2	-1.7
	4.0nm,1.0s,mb4.4						
H14A	**Leadore**	47.90	331	⇓P	P	23 24 37.3	0.0
	baz=48						
K11A	**Parker Ranch,**	47.99	327	⇑P	P	23 24 37.6	-0.4
	baz=48						
D17A	**Six Diamond Ra**	48.58	335	⇑P	P	23 24 42.4	-0.2
	baz=49						
WVOR	**Wild Horse Val**	49.22	325	*e*P	P	23 24 46.5	-1.1
	17nm,1.2s,mb5.0						
H11A	**Donnelly**	49.29	329	⇑P	P	23 24 47.3	-0.8
	baz=50						
A18A	**Metzger Ranch,**	49.63	337	⇓P	P	23 24 50.4	-0.2
	baz=50						
F12A	**Elk City**	49.65	330	⇑P	P	23 24 50.1	-0.6
	baz=50						
J08A	**Circle Bar Ran**	49.72	326	⇓P	P	23 24 50.7	-0.6
	baz=50						
B15A	**Bradely Ranch,**	50.28	334	⇑P	P	23 24 54.5	-1.0
	baz=50						
B14A	**Marquette Ranc**	50.63	334	⇑P	P	23 24 58.0	-0.2
	baz=51						
I07A	**Izee**	50.76	326	⇓P	P	23 24 58.2	-1.0
	baz=51						
A15A	**Johnson Ranch,**	50.86	335	⇑P	P	23 24 59.4	-0.5
	baz=51						
SCHQ	**Schefferville**	51.43	12	P	P	23 25 03.9	-0.1
	7.3nm,1.0s,mb4.6,baz=132,slow=7.1,SNR=6.4						
SCHQ				LR	LR	23 46 10.8	
	comp=Z,168nm,20.4s,MS4.1,baz=112,slow=35						
SCHQ	**Schefferville**	51.43	12	P	P	23 25 03.9	-0.1
SCHQ				LR	LR	23 46 10.8	
EDM	**Edmonton**	54.39	338	*e*P	P	23 25 24.4	-1.5
FCC	**Fort Churchill**	54.49	353	*e*P	P	23 25 26.2	-0.5
FRB	**Frobisher Bay**	59.65	7	P	P	23 26 02.5	-0.6
	4.5nm,0.8s,mb4.5,baz=191,slow=7.7,SNR=4.5						
YKA	**Yellowknife Ar**	62.16	344	P	P	23 26 18.6	-1.5
	1.0nm,0.8s,mb4.0,baz=137,slow=6.9,SNR=12						
YKA				LR	LR	23 54 24.2	
	comp=Z,9.0nm,19.8s,MS2.9,baz=45,slow=37						
DLBC	**Dease Lake**	64.77	335	*e*P	P	23 26 36.5	-1.0
PPT	**Papeete**	69.72	249	*e*S	S	23 36 14.5	-5.2
	65nm,22.8s						
PPT				*e*LR	LR	23 49 00.8	
	295nm,30.8s,baz=81						
PPT	**Papeete**	69.72	249	LR	LR	23 49 49.7	
	comp=Z,203nm,19.8s,MS4.4,baz=94,slow=29						
RES	**Resolute Bay**	70.13	357	*e*P	P	23 27 11.4	+0.3
INK	**Inuvik**	71.84	342	*e*P	P	23 27 23.1	+1.5
	4.3nm,0.8s,mb4.4						
EGAK	**Eagle**	72.61	337	*e*P	P	23 27 25.5	-0.9
	4.3nm,1.0s,mb4.3						
SUMG	**Summit**	72.80	13	*e*P	P	23 27 27.7	+0.4
	8.4nm,0.9s,mb4.7						
EVO	**Evora**	74.93	52	*e*P	P	23 27 43.0	+2.5
	11nm,0.9s,mb4.5						
BPAW	**Bear Paw Mtn.**	76.30	335	*e*P	P	23 27 46.7	-1.1
	3.6nm,0.9s,mb4.3						
ESDC	**Sonseca Array**	78.17	51	P	P	23 28 00.4	+1.5
	1.9nm,0.8s,mb4.1,baz=266,slow=5.6,SNR=10						
ESDC				LR	LR	23 56 07.6	
	comp=Z,76nm,20.3s,MS4.0,baz=195,slow=31						
EKA	**Eskdalemuir Ar**	80.01	35	P	P	23 28 09.6	+1.0
	2.9nm,0.8s,mb4.3,baz=265,slow=7.8,SNR=4.5						
SJPF	**Ste Jean**	80.40	47	*e*P	P	23 28 14.1	+3.2
	18nm,1.1s,mb4.6						
SJPF	**Ste Jean**	80.40	47	*e*P	P	23 28 14.1	+3.2
	9.1nm,1.1s,mb4.6						
EPF	**Esparros**	81.54	47	*e*P	P	23 28 20.3	+3.3
TORD	**Torodi Ar. Bea**	83.37	77	P	P	23 28 25.5	-1.6
	0.8nm,1.0s,mb3.7,baz=266,slow=5.8,SNR=4.6						
TORD				LR	LR	00 08 00.8	
	comp=Z,70nm,18.2s,MS4.1,baz=155,slow=37						
ECH	**Echery**	86.25	42	*e*P	P	23 28 39.6	-1.4
	7.8nm,1.0s,mb4.9						
NOA	**NORSAR Array B**	87.63	29	LR	LR	00 04 06.4	
	comp=Z,40nm,20.4s,MS3.8,baz=265,slow=33						
GERES	**GERESS Array B**	90.52	41	P	P	23 29 01.6	+0.3
	0.4nm,0.8s,mb3.8,baz=289,slow=5.9,SNR=4.6						
GERES				LR	LR	00 03 02.1	
	comp=Z,69nm,21.8s,MS4.0,baz=29,slow=31						
FINES	**FINESS Array B**	94.56	27	LR	LR	00 06 58.6	
	comp=Z,55nm,18.2s,MS4.1,baz=181,slow=32						
ZALV	**Zalesovo Beam**	120.46	9	PKP	PKPdf	23 34 49.4	-1.4
	0.2nm,0.4s,baz=325,slow=2.3,SNR=2.9						
CN2	**Changchun**	125.36	335	*e*PKP	PKPdf	23 35 00.8	+0.3
MKAR	**Makanchi Array**	126.85	13	PKP	PKPdf	23 35 02.5	-0.8
	0.6nm,0.8s,baz=318,slow=1.9,SNR=4.8						
KSRS	**Korea Array**	129.21	329	PKP	PKPdf	23 35 07.2	-0.8
	0.5nm,0.4s,baz=26,slow=3.9,SNR=3.0						
WMQ	**Urumqi**	130.76	9	*e*PKP	PKPdf	23 35 09.8	-1.0
BJI	**Beijing**	132.09	341	PKP	PKPdf	23 35 11.3	-2.2
HHC	**Hu-ho-hao-te**	132.69	345	*e*PKP	PKPdf	23 35 14.5	-0.1
HHC				PP	PP	23 37 42.5	+5.0
HHC				PKS		23 38 49.0	
HHC				SKS	SKSdf	23 42 23.8	-3.1
HHC				SKKS	SKKSac	23 44 34.5	-1.2
HHC				SS	SS	23 55 23.8	+5.9
HHC				AMB	AMB		
	comp=Z,34nm,6.4s						
HHC				LR	LR		
	comp=N,62nm,21.2s,MS4.7						
HHC				LR	LR		
	comp=E,130nm,19.5s,MS4.7						
HHC				LR	LR		
	comp=Z,62nm,19.3s,MS4.3						
LZH	**Lanzhou**	138.82	352	*e*PKP	PKPdf	23 35 20.8	-5.3
ASAR	**Alice Springs**	140.18	238	PKP	PKPdf	23 35 28.5	-0.4
	comp=Z,1.0nm,0.7s,baz=112,slow=1.8,SNR=8.9						
CD2	**Chengdu**	143.91	351	PKP	PKPdf	23 35 34.0	-1.4
KMI	**Kunming**	149.75	350	PKPbc	PKPdf	23 35 44.0	-1.4
CMAR	**Chiang Mai Arr**	156.78	356	PKPab	PKPab	23 36 25.8	+1.0
	comp=Z,0.5nm,0.4s,baz=19,slow=5.9,SNR=3.4						

MEX 25 23:36:06.7±1.4, 14°.88N×93°.99W, h20km±62km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.11**	**42**	*e*P	Pn	23 36 22.7	-4.4
PCIG				*i* S	Sb	23 36 36.5	-4.7
THIG		**1.67**	**89**	*i* P	Pn	23 36 29.0	-5.8
THIG				*i* S	Sn	23 36 47.6	-7.9
TGIG		**2.06**	**24**	*e*P	Pn	23 36 38.4	-1.9
TGIG				*i* S	Sn	23 37 02.3	-3.2
HUIG	**Huatulco**	**2.23**	**294**	*i* P	Pn	23 36 40.9	-1.6
HUIG				*i* S	Sn	23 37 05.3	-4.2
CCIG	**Comitan**	**2.26**	**52**	*e*P	Pn	23 36 41.1	-1.9
CCIG				*i* S	Sn	23 37 07.6	-2.8
PNIG	**Pinotepa**	**4.26**	**291**	*i* P	Pn	23 37 08.1	-2.5
PNIG				*i* S	Sn	23 37 56.4	-3.3
UTMO	**Huajuapan**	**4.69**	**309**	*i* P	Pn	23 37 15.1	-1.3
UTMO				*i* S	Sn	23 38 08.6	-1.8

*ISK **25** 23:43:31.6, 40°.56N×32°.99E, h9km, MD2.9*
*ISCJB **25** 23:43:32.2±0.6, 40°.58N±0°.03×32°.98E±0°.04, h4km±6km, Error ellipse: s-maj=5.7km s-min=4.7km az=7.5*
*CSEM **25** 23:43:32.6±0.1, 40°.57N×32°.99E, h10km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.8km az=18.0*
*DDA **25** 23:43:32.6, 40°.56N×33°.01E, h7km±3km, Md2.8*
ISC 25 23:43:32.8±0.5, 40°.57N±0°.03×32°.99E±0°.04, h11km±6km, n24, σ0°60/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.34**	**104**	*e*P	**Pg**	**23 43 39.7**	**+0.1**
ELDT				*e*S	**Sg**	**23 43 44.5**	**+0.3**
ELDT	**Eldivan**	**0.34**	**104**	*e*P	**Pg**	**23 43 39.7**	**+0.1**
ELDT				*e*S	**Sg**	**23 43 44.5**	**+0.3**
CANT	**Cankiri**	**0.48**	**86**	*e*PG	**Pg**	**23 43 41.9**	**-0.3**
CANT				*e*SG	**Sg**	**23 43 48.6**	**+0.1**
SAFT	**Safranbolu**	**0.70**	**341**	*e*PG	**Pg**	**23 43 46.4**	**0.0**
SAFT	**Safranbolu**	**0.70**	**341**	*e*Pg	**Pg**	**23 43 46.4**	**0.0**
LOD	**Lodumlu**	**0.71**	**194**	*e*PG	**Pg**	**23 43 45.1**	**-1.3**
LOD	**Lodumlu**	**0.71**	**194**	*e*Pg	**Pg**	**23 43 45.1**	**-1.4**
SGKT	**Sivrigoynuk**	**0.71**	**270**	*e*P	**Pg**	**23 43 46.5**	**-0.1**
SGKT				*e*S	**Sg**	**23 43 56.8**	**+0.9**
SGKT	**Sivrigoynuk**	**0.71**	**270**	*e*P	**Pg**	**23 43 46.5**	**-0.1**
SGKT				*e*S	**Sg**	**23 43 56.8**	**+0.9**
TOS	**Tosya**	**0.91**	**59**	*e*PG	**Pg**	**23 43 49.3**	**-1.0**
TOS	**Tosya**	**0.91**	**59**	*e*Pg	**Pg**	**23 43 49.3**	**-1.0**
BALT	**Daday**	**1.00**	**17**	*e*P	**Pg**	**23 43 52.3**	**+0.2**
BALT				*e*S	**Sg**	**23 44 06.0**	**+0.8**
BALT	**Daday**	**1.00**	**17**	*e*P	**Pg**	**23 43 52.3**	**+0.2**
BALT				*e*S	**Sg**	**23 44 06.0**	**+0.8**
BBAL	**Bala**	**1.03**	**174**	*e*P	**Pb**	**23 43 52.6**	**0.0**
BBAL				*e*S	**Sg**	**23 44 06.7**	**+0.5**
BBAL	**Bala**	**1.03**	**174**	*e*P	**Pb**	**23 43 52.6**	**-0.1**
BBAL				*e*S	**Sg**	**23 44 06.7**	**+0.5**
CORM	**Corum**	**1.31**	**107**	*e*PN	**Pn**	**23 43 57.3**	**+0.3**
CORM	**Corum**	**1.31**	**107**	*e*Pn	**Pn**	**23 43 57.3**	**+0.3**
CDAG	**Cicekdag**	**1.42**	**131**	*e*P	**Pn**	**23 43 58.5**	**0.0**
CDAG				*i* S	**Sn**	**23 44 18.1**	**+0.9**
CDAG	**Cicekdag**	**1.42**	**131**	*e*P	**Pn**	**23 43 58.5**	**0.0**
CDAG				*i* S	**Sn**	**23 44 18.1**	**+0.9**
BYBT	**Boyabat**	**1.61**	**56**	*e*PN	**Pn**	**23 44 00.3**	**-0.8**
**BYB

	comp=E,230nm,8.8s					
WHN	**Wuhan**	**8.13**	**101**	P	**Pn**	**23 49 20.8 +1.6**
WHN				S	**Sn**	**23 50 43.5 -8.2**
WHN				LR	LR	
	comp=N,1μm,7.0s					
WHN				LR	LR	
	comp=Z,520nm,5.4s					
GTA	**Gaotai**	**8.20**	**330**	*e*P	**Pn**	**23 49 28.0 +7.8**
GTA				pP		23 49 31.5
GTA				sP		23 49 34.0
GTA				S	**Sn**	**23 51 02.3 +8.9**
GTA				sS		23 51 07.5
GTA				pmax	pmax	
	comp=Z,2.0nm,0.8s					
GTA				pmax	pmax	
	comp=Z,23nm,4.8s					
GTA				LR	LR	
	comp=N,200nm,11.6s					
GTA				LR	LR	
	comp=E,180nm,10.7s					
GTA				LR	LR	
	comp=Z,300nm,10.1s					
BTO	**Baotou**	**9.10**	**24**	*e*P	**Pn**	**23 49 36.5 +3.9**
BTO				S	**Sn**	**23 51 28.0 +12**
BTO				LR	LR	
	comp=N,100nm,5.8s					
BTO				LR	LR	
	comp=E,60nm,6.0s					
CHTO	**Chiang Mai**	**14.61**	**204**	Pn	**Pn**	**23 50 45.7 -2.3**
CMAR	**Chiang Mai Arr**	**14.94**	**203**	Pn	**Pn**	**23 50 51.7 -0.8**
	comp=E,0.5nm,0.3s,baz=14,slow=12,SNR=7.5					
SONM	**Songino Array**	**15.45**	**3**	Pn	**Pn**	**23 50 59.6 +0.5**
	comp=E,0.5nm,0.3s,baz=196,slow=10.0,SNR=3.3					
KSRS	**Korea Array**	**19.38**	**69**	P	**Pn**	**23 51 48.4 +0.1**
	comp=E,0.3nm,0.3s,baz=252,slow=10,SNR=11					
KSRS				LR	LR	23 59 53.1
	comp=E,16nm,18.4s,baz=50,slow=39					
MK31	**Makanchi Array**	**22.59**	**316**	*e*P	**P**	**23 52 22.6 +0.7**
MKAR	**Makanchi Array**	**22.59**	**316**	P	**P**	**23 52 22.4 +0.5**
	comp=E,2.4nm,0.8s,mb3.7,baz=107,slow=11,SNR=20					
TKM2	**Tokmak 2**	**25.48**	**303**	*e*P	**P**	**23 52 50.7 +1.0**
	comp=E,2.0nm,0.5s,mb3.9					
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**23 52 53.9 0.0**
	comp=E,1.4nm,0.5s,mb3.8,baz=134,slow=11,SNR=10					
UCH	**Uchtor**	**26.10**	**301**	*e*P	**P**	**23 52 55.5 +0.2**
	comp=E,0.9nm,0.5s,mb3.6					
AML	**Almayashu**	**26.68**	**300**	P	**P**	**23 53 00.7 +0.2**
EKS2	**Erkin-Say**	**26.72**	**302**	*e*P	**P**	**23 53 01.8 +0.8**
	comp=E,1.1nm,0.6s,mb3.6					
KURK	**Kurchatov**	**26.74**	**321**	P	**P**	**23 53 01.3 +0.3**
	comp=E,2.1nm,0.7s,mb3.8,baz=126,slow=11,SNR=11					
KURK	**Kurchatov**	**26.74**	**321**	*e*P	**P**	**23 53 01.1 +0.1**
	comp=E,2.0nm,0.7s,mb3.8					
KBL	**Kabul**	**30.05**	**284**	P	**P**	**23 53 29.8 -0.9**
BVAR	**Borovoye Array**	**32.32**	**320**	P	**P**	**23 53 51.1 +0.6**
	comp=E,0.8nm,0.7s,mb3.6,baz=127,slow=9.4,SNR=6.2					
BRVK	**Borovoye**	**32.39**	**320**	*e*P	**P**	**23 53 49.6 -1.5**
	comp=E,1.2nm,0.6s,mb3.9					
ABKAR	**Akbulak array**	**37.46**	**310**	*e*P	**P**	**23 54 35.3 +0.4**
	comp=E,0.5nm,0.4s,mb3.7					
ARU	**Arti**	**39.94**	**321**	*e*P	**P**	**23 54 54.3 -1.3**
	comp=E,4.4nm,1.0s,mb4.1					
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**23 57 02.7 -0.2**
	comp=E,1.6nm,0.8s,mb4.1,baz=81,slow=8.3,SNR=8.4					
BR131	**Keskin Array S**	**56.84**	**299**	*e*P	**P**	**23 57 05.8 -0.4**
BRTR	**Keskin Array B**	**56.84**	**299**	P	**P**	**23 57 06.1 -0.1**
	comp=E,0.8nm,0.9s,mb3.7,baz=130,slow=5.0,SNR=4.9					
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**23 57 06.2 -0.6**
	comp=E,1.2nm,0.7s,mb4.0,baz=95,slow=8.4,SNR=4.2					
KWP	**Kalwaria Pacla**	**61.44**	**313**	*e*P	**P**	**23 57 37.8 -0.2**
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**23 57 42.4 -0.7**
	comp=E,1.2nm,0.7s,mb4.1,baz=334,slow=6.2,SNR=11					
NB2	**NORSAR Subarra**	**64.03**	**327**	P	**P**	**23 57 56.2 +1.2**
	comp=Z,0.1nm,0.5s,mb3.1,baz=75,slow=6.9					
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**23 57 53.6 -1.4**
	comp=Z,0.7nm,0.5s,mb3.9,baz=71,slow=6.7,SNR=4.7					
MORC	**Moravsky Berou**	**64.57**	**314**	P	**P**	**23 57 58.3 -0.4**
TIP	**Timpagrande**	**69.23**	**304**	P	**P**	**23 58 28.4 -0.2**
YKA	**Yellowknife Ar**	**80.22**	**18**	P	**P**	**23 59 33.5 +1.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=326,slow=5.1,SNR=4.7					

*NEIC **25** 23:58:53.2±3.2, 1°.70N×127°.63E, h95km±29km, mb4.0/5, Error ellipse: s-maj=25.9km s-min=9.6km az=60.0*
*DJA **25** 23:58:54, 1°.82N×127°.52E, h133km, mb4.6/3*
*IDC **25** 23:58:54.8±6.6, 1°.67N×127°.55E, h106km±64km, mb3.8/6, mb1 3.9/8, mb1mx3.6/21, mbtmp3.8/8, MS3.7/2, Ms1 3.7/2, ms1mx2.5/32, Error ellipse: s-maj=50.8km s-min=15.8km az=66.0*
*ISCJB **25** 23:58:55.7±0.8, 1°.65N±0°.06×127°.33E±0°.09, h133km±8km, mb4.0/9, Error ellipse: s-maj=14.4km s-min=9.9km az=167.6*

ISC 25 23:58:56.4±0.9, 1°.65N±0°.07×127°.40E±0°.10, h122km±8km, n27, σ0s88/27, mb4.1/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.88**	**182**	P	**Pn**	**23 59 18.1**	**+0.6**
LBMI	**Labuha**	**2.28**	**177**	P	**Pn**	**23 59 34.9**	**+1.4**
SGSI	**Sangihe**	**2.75**	**317**	P	**Pn**	**23 59 37.8**	**-1.7**
NLAI	**Namlea**	**4.87**	**184**	P	**Pn**	**00 00 07.9**	**+0.3**
	35nm,0.9s						
LUWI	**Luwuk**	**5.34**	**240**	P	**Pn**	**00 00 14.0**	**0.0**
	3μm97nm,0.6s						
APSI	**Ampana**	**6.29**	**246**	P	**Pn**	**00 00 26.8**	**0.0**
KDI	**Kendari**	**7.34**	**221**	P	**Pn**	**00 00 40.3**	**-0.7**
KAPI	**Kappang**	**10.11**	**229**	P	**Pn**	**00 01 18.2**	**-0.2**
	8.5nm,0.3s,baz=38,slow=5.6,SNR=14						
KAPI				S	**Sn**	**00 03 05.9**	**-4.1**
	1.2nm,0.3s,baz=72,slow=20,SNR=3.2						
FITZ	**Fitzroy Crossi**	**19.70**	**185**	P	**P**	**00 03 16.1**	**-0.2**
	0.2nm,0.3s,baz=27,slow=9.0,SNR=6.6						
FITZ	**Fitzroy Crossi**	**19.70**	**185**	*e*P	**P**	**00 03 15.6**	**-0.6**
	1.7nm,0.5s						
WRAB	**Tennant Creek**	**22.51**	**163**	*e*P	**P**	**00 03 45.2**	**-0.9**
	9.4nm,0.6s,mb4.3						
MBWA	**Marble Bar**	**23.88**	**198**	*e*P	**P**	**00 03 58.5**	**-0.2**
	1.9nm,0.6s,mb3.6						
ASAR	**Alice Springs**	**25.95**	**166**	P	**P**	**00 04 16.9**	**-0.5**
	1.7nm,0.4s,mb3.9,baz=350,slow=7.2,SNR=24						
KULM	**Kulim**	**26.94**	**278**	*e*P	**P**	**00 04 28.1**	**+1.6**
CBIJ	**Chichi jima**	**29.00**	**28**	LR	LR	00 15 07.0	
	comp=Z,158nm,19.1s,baz=103,slow=34						
CMAR	**Chiang Mai Arr**	**32.52**	**303**	P	**P**	**00 05 18.5**	**+2.7**
	0.4nm,0.3s,mb3.8,baz=126,slow=9.0,SNR=3.0						
KSRS	**Korea Array**	**35.63**	**1**	P	**P**	**00 05 42.4**	**-0.1**
	1.4nm,0.7s,mb4.0,baz=176,slow=10.0,SNR=6.2						
STKA	**Stephens Creek**	**35.96**	**159**	P	**P**	**00 05 45.5**	**+0.1**
	19nm,0.7s,mb5.1,baz=336,slow=7.9,SNR=47						
STKA				LR	LR	00 19 57.7	
	comp=Z,124nm,21.5s,baz=25,slow=35						
STKA	**Stephens Creek**	**35.96**	**159**	*e*P	**P**	**00 05 45.1**	**-0.2**
	2.5nm,0.6s,mb4.3						
STKA				LR	LR	00 19 57.7	
MK31	**Makanchi Array**	**59.63**	**326**	*e*P	**P**	**00 08 47.5**	**0.0**
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**00 08 47.8**	**+0.3**
	0.4nm,0.5s,mb3.7,baz=120,slow=8.7,SNR=6.2						
MKAR				pP	pP	00 09 18.5	+1.5
	0.3nm,0.5s,baz=116,slow=8.4,SNR=2.5						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**00 08 47.8**	**+0.3**
MKAR				pP	pP	00 09 18.5	+1.5
YAK	**Yakutsk**	**60.26**	**1**	P	**P**	**00 08 50.5**	**-1.0**
KURK	**Kurchatov**	**63.84**	**328**	P	**P**	**00 09 15.3**	**-0.4**
	0.4nm,0.4s,mb3.6,baz=124,slow=7.0,SNR=4.0						
KURK	**Kurchatov**	**63.84**	**328**	*e*P	**P**	**00 09 14.9**	**-0.7**
	0.6nm,0.4s,mb3.8						
BRVK	**Borovoye**	**69.49**	**327**	*e*P	**P**	**00 09 52.4**	**+0.9**
EGAK	**Eagle**	**89.14**	**25**	P	**P**	**00 11 37.8**	**+0.1**
	5.0nm,0.3s,mb5.0						

*ISCJB **26** 00:03:22.1±0.8, 41°.06N±0°.06×39°.08E±0°.03, h8km±5km, Error ellipse: s-maj=9.9km s-min=4.2km az=4.5*
*CSEM **26** 00:03:22.7±0.1, 41°.03N×39°.07E, h10km, MD2.9, Error ellipse: s-maj=3.5km s-min=1.6km az=2.0*
*DDA **26** 00:03:22.4, 41°.02N×39°.06E, h8km±3km, Md2.9*
*ISK **26** 00:03:22.1, 41°.02N×39°.12E, h9km, MD2.9*

ISC 26 00:03:22.7±0.8, 41°.05N±0°.06×39°.09E±0°.03, h10km±6km, n19, σ0s57/33, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.30**	**244**	*e*PG	**Pg**	**00 03 28.9**	**+0.2**
ESPY				*e*SG	**Sg**	**00 03 33.7**	**+1.0**
ESPY	**Espiye-Giresun**	**0.30**	**244**	*e*Pg	**Pg**	**00 03 28.9**	**+0.2**
ESPY				*e*Sg	**Sg**	**00 03 33.7**	**+0.9**
KTUT	**Trabzon**	**0.52**	**97**	*e*PG	**Pg**	**00 03 33.0**	**+0.1**
KTUT				*e*SG	**Sg**	**00 03 39.5**	**-0.1**
KTUT	**Trabzon**	**0.52**	**97**	*e*Pg	**Pg**	**00 03 33.0**	**+0.2**
KTUT				*e*Sg	**Sg**	**00 03 39.5**	**-0.2**
MACK	**Trabzon**	**0.53**	**102**	*e*P	**Pg**	**00 03 33.5**	**+0.6**
MACK				*e*S	**Sg**	**00 03 40.5**	**+0.6**
MACK	**Trabzon**	**0.53**	**102**	*e*P	**Pg**	**00 03 33.5**	**+0.5**
MACK				*e*S	**Sg**	**00 03 40.5**	**+0.6**
GRSN	**GIRESUNGRSN**	**0.63**	**259**	⇓*i*P	**Pg**	**00 03 34.6**	**-0.3**
GRSN				*i* S	**Sg**	**00 03 42.8**	**-0.3**
GRSN	**GIRESUNGRSN**	**0.63**	**259**	*i* P	**Pg**	**00 03 34.6**	**-0.3**
GRSN				*i* S	**Sg**	**00 03 42.8**	**-0.4**
GUMT	**Gumushane**	**0.66**	**153**	*e*PG	**Pg**	**00 03 34.5**	**-1.1**
GUMT				*e*SG	**Sg**	**00 03 43.7**	**-0.5**
KELT	**Kelkit**	**0.91**	**172**	⇓*i*P	**Pg**	**00 03 40.0**	**-0.3**
KELT				*i* S	**Sg**	**00 03 52.3**	**+0.2**
KELT	**Kelkit**	**0.91**	**172**	*i* P	**Pg**	**00 03 40.0**	**-0.2**
KELT				*i* S	**Sg**	**00 03 52.3**	**+0.2**
EZC	**Erzincan**	**1.31**	**171**	*e*PN	**Pn**	**00 03 46.7**	**-0.4**
ERBA	**Erbaa**	**1.81**	**259**	*e*P	**Pn**	**00 03 53.4**	**-0.5**
ERBA				*e*S	**Sn**	**00 04 16.8**	**0.0**
ERBA	**Erbaa**	**1.81**	**259**	*e*P	**Pn**	**00 03 53.4**	**-0.5**
ERBA				*e*S	**Sn**	**00 04 16.8**	**-0.1**
KEMA	**Kemaliye**	**1.84**	**194**	*e*P	**Pn**	**00 04 02.2**	**+7.9**
KEMA				*e*S	**Sn**	**00 04 21.2**	**+3.5**
SVSK	**Karacayir**	**1.95**	**235**	*e*PN	**Pn**	**00 03 56.0**	**+0.1**
SVSK	**Karacayir**	**1.95**	**235**	*e*Pn	**Pn**	**00 03 56.0**	**+0.1**
PTK	**Pertek**	**2.17**	**174**	*e*PN	**Pn**	**00 03 59.1**	**+0.2**
PTK	**Pertek**	**2.17**	**174**	*e*Pn	**Pn**	**00 03 59.1**	**+0.2**

*CSEM **26** 00:24:52.9±0.1, 43°.20N×13°.55E, h15km, ML3.6/11, Error ellipse: s-maj=3.1km s-min=1.7km az=60.0*
*ROM **26** 00:24:53.3±0.2, 43°.20N×13°.47E, h2km±1km, Md2.8/33, Ml2.6/36, Error ellipse: s-maj=1.8km s-min=1.1km az=46.0*
*VIE **26** 00:24:53.1±0.7, 43°.24N×13°.69E, h10km, mb2.5/3, ML2.8/3, Error ellipse: s-maj=21.7km s-min=3.2km az=95.0 124 km SE of San Marino*
*NEIC **26** 00:24:53.3, 43°.20N×13°.47E, h2km, ML2.6(ROM), ML2.8(LDG), After ROM.*
NEIC Felt at Macerata.
*ISCJB **26** 00:24:54.4±0.4, 43°.25N±0°.02×13°.47E±0°.04, h21km±3km, Error ellipse: s-maj=4.9km s-min=2.7km az=156.2*
*LDG **26** 00:24:56.3±0.3, 43°.27N×13°.41E, h10km, Ml2.8/6, Error ellipse: s-maj=10.7km s-min=4.2km az=49.0*

ISC 26 00:24:54.3±0.4, 43°.24N±0°.02×13°.49E±0°.03, h13km±2km, n163, σ0s95/208, 18C-13D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.25**	**303**	⇓*i*Pg	**Pg**	**00 24 59.6**	**0.0**
CING				Sg	**Sg**	**00 25 04.0**	**+0.8**
CING	**Cingoli**	**0.25**	**303**	⇓*i*Pg	**Pg**	**00 24 59.6**	**0.0**
CING				Sg	**Sg**	**00 25 04.0**	**+0.8**
	853nm,0.5s						
CING	**Cingoli**	**0.25**	**303**	⇓*i*Pg	**Pg**	**00 24 59.6**	**0.0**
CING				Sg	**Sg**	**00 25 04.0**	**+0.8**
	853nm,0.5s						
OFFI	**Offida**	**0.34**	**154**	⇓*i*Pg	**Pg**	**00 25 02.4**	**+1.3**
	1μm,0.4s						
FDMO	**Fiordimonte**	**0.35**	**236**	⇑*i*Pg	**Pg**	**00 25 00.9**	**-0.5**
FDMO				Sg	**Sg**	**00 25 06.5**	**+0.3**
	598nm,0.3s						
FDMO	**Fiordimonte**	**0.35**	**236**	⇑*i*Pg	**Pg**	**00 25 00.9**	**-0.5**
FDMO				Sg	**Sg**	**00 25 06.5**	**+0.3**
	598nm,0.3s						
SNTG	**Esanatoglia**	**0.40**	**273**	⇑*i*Pg	**Pg**	**00 25 01.9**	**-0.3**
SNTG				Sg	**Sg**	**00 25 07.6**	**0.0**
SNTG	**Esanatoglia**	**0.40**	**273**	⇑*i*Pg	**Pg**	**00 25 01.9**	**-0.3**
SNTG				Sg	**Sg**	**00 25 07.6**	**0.0**
	254nm,0.2s						
SNTG	**Esanatoglia**	**0.40**	**273**	⇑*i*Pg	**Pg**	**00 25 01.9**	**-0.3**
SNTG				Sg	**Sg**	**00 25 07.6**	**0.0**
	254nm,0.2s						
CESI	**CESI - Serrava**	**0.49**	**242**	⇑*i*Pg	**Pg**	**00 25 03.3**	**-0.5**
CESI				Sg	**Sg**	**00 25 10.8**	**+0.5**
	195nm,0.4s						
CESI	**CESI - Serrava**	**0.49**	**242**	⇑*i*Pg	**Pg**	**00 25 03.3**	**-0.5**
CESI				Sg	**Sg**	**00 25 10.8**	**+0.5**
	195nm,0.4s						
NRCA	**Norcia**	**0.49**	**214**	⇑*i*Pg	**Pg**	**00 25 03.2**	**-0.7**
NRCA	**Norcia**	**0.49**	**214**	⇑*i*Pg	**Pg**	**00 25 03.2**	**-0.7**
	41nm,0.2s						
NRCA	**Norcia**	**0.49**	**214**	⇑*i*Pg	**Pg**	**00 25 03.2**	**-0.7**
	41nm,0.2s						
SENI	**Senigallia**	**0.50**	**338**	Pg	**Pg**	**00 25 04.8**	**+0.6**
	179nm,0.3s						
SENI	**Senigallia**	**0.50**	**338**	Pg	**Pg**	**00 25 04.8**	**+0.6**
	179nm,0.3s						
TRTR	**Tortoreto Alta**	**0.53**	**144**	Pg	**Pg**	**00 25 05.8**	**+1.1**
TERO	**Teramo**	**0.62**	**172**	⇓*i*Pg	**Pg**	**00 25 05.5**	**-0.9**
TERO	**Teramo**	**0.62**	**172**	⇓*i*Pg	**Pg**	**00 25 05.5**	**-0.9**
	484nm,0.1s						
TERO	**Teramo**	**0.62**	**172**	⇓*i*Pg	**Pg**	**00 25 05.5**	**-0.9**
	484nm,0.1s						
ASS	**Assisi**	**0.64**	**254**	Pg	**Pg**	**00 25 06.0**	**-0.7**
ASS	**Assisi**	**0.64**	**254**	Pg	**Pg**	**00 25 06.0**	**-0.7**
	90nm,0.3s						
ASS	**Assisi**	**0.64**	**254**	Pg	**Pg**	**00 25 06.0**	**-0.7**
	90nm,0.3s						
FSSB	**Fossombrone**	**0.69**	**312**	⇓*i*Pg	**Pg**	**00 25 07.2**	**-0.4**
FSSB				Sg	**Sg**	**00 25 19.0**	**+2.3**
FSSB	**Fossombrone**	**0.69**	**312**	⇓*i*Pg	**Pg**	**00 25 07.2**	**-0.4**
FSSB				Sg	**Sg**	**00 25 19.0**	**+2.3**
	844nm,0.4s						
FSSB	**Fossombrone**	**0.69**	**312**	⇓*i*Pg	**Pg**	**00 25 07.2**	**-0.4**
FSSB				Sg	**Sg**	**00 25 19.0**	**+2.3**
	844nm,0.4s						
MURB	**Monte Urbino**	**0.70**	**272**	⇑*i*Pg	**Pg**	**00 25 07.3**	**-0.6**
MURB				Sg	**Sg**	**00 25 18.4**	**+1.2**
MURB	**Monte Urbino**	**0.70**	**272**	⇑*i*Pg	**Pg**	**00 25 07.3**	**-0.6**
MURB				Sg	**Sg**	**00 25 18.4**	**+1.2**
	1μm,0.4s						
MURB	**Monte Urbino**	**0.70**	**272**	⇑*i*Pg	**Pg**	**00 25 07.3**	**-0.6**
MURB				Sg	**Sg**	**00 25 18.4**	**+1.2**
	1μm,0.4s						
LNSS	**Leonessa**	**0.71**	**208**	Pg	**Pg**	**00 25 07.2**	**-0.9**
LNSS				Sg	**Sg**	**00 25 18.3**	**+0.8**
	860nm,0.3s						
LNSS	**Leonessa**	**0.71**	**208**	Pg	**Pg**	**00 25 07.2**	**-0.9**
LNSS				Sg	**Sg**	**00 25 18.3**	**+0.8**
	860nm,0.3s						
PIEI	**Pieia**	**0.76**	**294**	⇓*i*Pg	**Pg**	**00 25 08.1**	**-0.8**
PIEI				Sg	**Sg**	**00 25 19.9**	**+1.1**
PIEI	**Pieia**	**0.76**	**294**	⇓*i*Pg	**Pg**	**00 25 08.1**	**-0.8**
PIEI				Sg	**Sg**	**00 25 19.9**	**+1.1**
	202nm,0.2s						
PIEI	**Pieia**	**0.76**	**294**	⇓*i*Pg	**Pg**	**00 25 08.1**	**-0.8**
PIEI				Sg	**Sg**	**00 25 19.9**	**+1.1**
	202nm,0.2s						
PESA	**Pesaro**	**0.85**	**326**	Pg	**Pg**	**00 25 10.7**	**+0.1**
PESA	**Pesaro**	**0.85**	**326**	Pg	**Pg**	**00 25 10.7**	**+0.1**
	230nm,0.4s						
PESA	**Pesaro**	**0.85**	**326**	Pg	**Pg**	**00 25 10.7**	**+0.1**
	230nm,0.4s						
VCEL	**Villa Celiera**	**0.88**	**163**	Pg	**Pg**	**00 25 10.1**	**-1.2**
	422nm,0.4s						
VCEL	**Villa Celiera**	**0.88**	**163**	Pg	**Pg**	**00 25 10.1**	**-1.2**
	422nm,0.4s						
AQU	**L'Aquila**	**0.89**	**184**	⇑*i*Pg	**Pg**	**00 25 10.2**	**-1.2**
AQU				Sg	**Sg**	**00 25 23.6**	**+0.7**
AQU	**L'Aquila**	**0.89**	**184**	⇑*i*Pg	**Pg**	**00 25 10.2**	**-1.2**
AQU				Sg	**Sg**	**00 25 23.6**	**+0.7**
	471nm,0.3s						
AQU	**L'Aquila**	**0.89**	**184**	⇑*i*Pg	**Pg**	**00 25 10.2**	**-1.2**
CDCA	**Citt' di Caste**	**0.94**	**284**	Pg	**Pg**	**00 25 12.7**	**+0.3**
CDCA	**Citt' di Caste**	**0.94**	**284**	Pg	**Pg**	**00 25 12.7**	**+0.3**
	124nm,0.5s						
CDCA	**Citt' di Caste**	**0.94**	**284**	Pg	**Pg**	**00 25 12.7**	**+0.3**
	124nm,0.5s						
BADI	**Badiali**	**0.95**	**287**	Pg	**Pg**	**00 25 12.1**	**-0.4**
BADI				Sg	**Sg**	**00 25 26.4**	**+1.5**
BADI	**Badiali**	**0.95**	**287**	Pg	**Pg**	**00 25 12.1**	**-0.4**
BADI				Sg	**Sg**	**00 25 26.4**	**+1.5**
	230nm,0.5s						
BADI	**Badiali**	**0.95**	**287**	Pg	**Pg**	**00 25 12.1**	**-0.4**
BADI				Sg	**Sg**	**00 25 26.4**	**+1.5**
	230nm,0.5s						
FAGN	**Fagnano**	**0.97**	**176**	Pg	**Pg**	**00 25 11.4**	**-1.6**
	360nm,0.4s						
FAGN	**Fagnano**	**0.97**	**176**	Pg	**Pg**	**00 25 11.4**	**-1.6**
	360nm,0.4s						
PARC	**Parchiule**	**1.00**	**295**	Pg	**Pg**	**00 25 12.9**	**-0.6**
PARC				Sg	**Sg**	**00 25 28.0**	**+1.5**
	124nm,0.5s						
PARC	**Parchiule**	**1.00**	**295**	Pg	**Pg**	**00 25 12.9**	**-0.6**
PARC				Sg	**Sg**	**00 25 28.0**	**+1.5**
	124nm,0.5s						
FIAM	**Fiamignano**	**1.01**	**196**	Pg	**Pg**	**00 25 12.1**	**-1.6**
FIAM				Sg	**Sg**	**00 25 27.2**	**+0.4**
FIAM	**Fiamignano**	**1.01**	**196**	Pg	**Pg**	**00 25 12.1**	**-1.6**
FIAM				Sg	**Sg**	**00 25 27.2**	**+0.4**
	142nm,0.5s						
FIAM	**Fiamignano**	**1.01**	**196**	Pg	**Pg**	**00 25 12.1**	**-1.6**
FIAM				Sg	**Sg**	**00 25 27.2**	**+0.4**
	142nm,0.5s						
RSM	**Repubblica di**	**1.02**	**313**	Pg	**Pg**	**00 25 14.3**	**+0.3**
RSM	**Repubblica di**	**1.02**	**313**	Pg	**Pg**	**00 25 14.3**	**+0.3**
	18nm,0.5s						
RSM	**Repubblica di**	**1.02**	**313**	Pg	**Pg**	**00 25 14.3**	**+0.3**
	18nm,0.5s						
MGAB	**Montegabbione**	**1.06**	**253**	Pg	**Pg**	**00 25 13.4**	**-1.3**
MGAB	**Montegabbione**	**1.06**	**253**	Pg	**Pg**	**00 25 13.4**	**-1.3**
	146nm,0.4s						
MGAB	**Montegabbione**	**1.06**	**253**	Pg	**Pg**	**00 25 13.4**	**-1.3**
	146nm,0.4s						
CAFI	**Castiglion Fio**	**1.11**	**275**	Pg	**Pg**	**00 25 14.8**	**-0.9**
	77nm,0.4s						
CAFI	**Castiglion Fio**	**1.11**	**275**	Pg	**Pg**	**00 25 14.8**	**-0.9**
	77nm,0.4s						
CRE	**Caprese Michel**	**1.18**	**289**	Pg	**Pg**	**00 25 16.5**	**-0.5**
CRE	**Caprese Michel**	**1.18**	**289**	Pg	**Pg**	**00 25 16.5**	**-0.5**
	50nm,0.4s						
CRE	**Caprese Michel**	**1.18**	**289**	Pg	**Pg**	**00 25 16.5**	**-0.5**
	50nm,0.4s						
SACS	**San Casciano d**	**1.22**	**252**	Pg	**Pn**	**00 25 16.4**	**-0.6**
	60nm,0.9s						
SACS	**San Casciano d**	**1.22**	**252**	Pg	**Pn**	**00 25 16.4**	**-0.6**
	60nm,0.9s						
INTR	**Introdacqua**	**1.26**	**166**	Pg	**Pn**	**00 25 16.1**	**-1.5**
INTR	**Introdacqua**	**1.26**	**166**	Pg	**Pn**	**00 25 16.1**	**-1.5**
	134nm,0.5s						
INTR	**Introdacqua**	**1.26**	**166**	Pg	**Pn**	**00 25 16.1**	**-1.5**
	134nm,0.5s						
LPEL	**Lama dei Pelig**	**1.30**	**156**	Pg	**Pn**	**00 25 16.9**	**-1.1**
	90nm,0.6s						
LPEL	**Lama dei Pelig**	**1.30**	**156**	Pg	**Pn**	**00 25 16.9**	**-1.1**
	90nm,0.6s						
MTCE	**Montecelio**	**1.33**	**205**	Pg	**Pn**	**00 25 18.4**	**-0.1**
MTCE	**Montecelio**	**1.33**	**205**	Pg	**Pn**	**00 25 18.4**	**-0.1**
MTCE	**Montecelio**	**1.33**	**205**	Pg	**Pn**	**00 25 18.4**	**-0.1**
CERT	**Cerreto**	**1.34**	**196**	Pg	**Pn**	**00 25 17.7**	**-1.0**
CERT	**Cerreto**	**1.34**	**196**	Pg	**Pn**	**00 25 17.7**	**-1.0**
	73nm,0.4s						
CERT	**Cerreto**	**1.34**	**196**	Pg	**Pn**	**00 25 17.7**	**-1.0**
	73nm,0.4s						
ASQU	**Asqua**	**1.36**	**295**	Pg	**Pn**	**00 25 19.1**	**+0.2**
	115nm,1.0s						
ASQU	**Asqua**	**1.36**	**295**	Pg	**Pn**	**00 25 19.1**	**+0.2**
	115nm,1.0s						
SFI	**Santa Sofia**	**1.37**	**300**	Pg	**Pn**	**00 25 19.9**	**+0.9**
SFI	**Santa Sofia**	**1.37**	**300**	Pg	**Pn**	**00 25 19.9**	**+0.9**
	47nm,0.7s						
SFI	**Santa Sofia**	**1.37**	**300**	Pg	**Pn**	**00 25 19.9**	**+0.9**
	47nm,0.7s						
VVLD	**Villa Vallelon**	**1.37**	**176**	Pg	**Pn**	**00 25 19.2**	**+0.1**
VVLD	**Villa Vallelon**	**1.37**	**176**	Pg	**Pn**	**00 25 19.2**	**+0.1**
	101nm,0.7s						
VVLD	**Villa Vallelon**	**1.37**	**176**	Pg	**Pn**	**00 25 19.2**	**+0.1**
	101nm,0.7s						
POFI	**Posta Fibreno**	**1.53**	**174**	Pg	**Pn**	**00 25 21.8**	**+0.6**
	31nm,0.7s						
POFI	**Posta Fibreno**	**1.53**	**174**	Pg	**Pn**	**00 25 21.8**	**+0.6**
	31nm,0.7s						
SDI	**San Donato**	**1.55**	**171**	Pg	**Pn**	**00 25 21.3**	**-0.2**
SDI	**San

SMRF	**Simiane la Rot**	**5.79 280**	*e*Pn	**Pn**	**00 26 18.8**	**-1.0**
SMRF	**Simiane la Rot**	**5.79 280**	*e*Pn	**Pn**	**00 26 18.8**	**-1.0**
CABF	**La Chapelle**	**6.24 305**	*e*Pn	**Pn**	**00 26 26.1**	**+0.1**
CABF			*e*Sn	**Sn**	**00 27 32.8**	**-4.3**
	0.4nm,0.2s					
CABF	**La Chapelle**	**6.24 305**	*e*Pn	**Pn**	**00 26 26.1**	**+0.1**
HINF	**Hinteralfeld**	**6.53 317**	*e*Pn	**Pn**	**00 26 28.9**	**-1.1**
HINF			*e*Sn	**Sn**	**00 27 38.7**	**-5.6**
	2.9nm,0.3s					
HINF	**Hinteralfeld**	**6.53 317**	*e*Pn	**Pn**	**00 26 28.9**	**-1.1**
CDF	**Champ du Feu**	**6.75 322**	*e*Pn	**Pn**	**00 26 32.0**	**-1.0**
CDF	**Champ du Feu**	**6.75 322**	*e*Pn	**Pn**	**00 26 32.0**	**-1.0**
HAU	**Haudompre**	**6.91 316**	*e*Pn	**Pn**	**00 26 34.2**	**-1.0**
HAU			*e*Sn	**Sn**	**00 27 47.4**	**-6.2**
	2.3nm,0.2s					
HAU	**Haudompre**	**6.91 316**	*e*Pn	**Pn**	**00 26 34.2**	**-1.0**
SMF	**Signal de Mont**	**7.64 300**	*e*Sn	**Sn**	**00 28 05.5**	**-6.2**
LOR	**Lormes**	**7.90 304**	*e*Pn	**Pn**	**00 26 47.7**	**-1.0**
LOR			*e*Sn	**Sn**	**00 28 11.5**	**-6.4**
	1.4nm,0.3s					
LOR	**Lormes**	**7.90 304**	*e*Pn	**Pn**	**00 26 47.7**	**-1.0**
SSF	**Saint Saulge**	**8.02 302**	*e*Pn	**Pn**	**00 26 49.4**	**-1.0**
SSF	**Saint Saulge**	**8.02 302**	*e*Pn	**Pn**	**00 26 49.4**	**-1.0**

CSEM ***26*** *00:29:51.2, 37.°35N×44.°56E, h5km, MD3.4, After ISK*

ISK 26 00:29:51.2, 37.°35N×44.°56E, h5km, MD3.4, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.69**	**289**	*e*PG	Pg	00 30 04.9	+0.5
HKR				*e*SG	Sg	00 30 16.2	+2.9
HKR	**Hakkari**	**0.69**	**289**	*e*Pg	Pg	00 30 04.9	+0.5
HKR				*e*Sg	Sg	00 30 16.2	+2.8
CUKT	**Cukurca**	**0.77**	**262**	*e*PG	Pg	00 30 06.8	+0.9
CUKT				*e*SG	Sg	00 30 19.2	+3.4
CUKT	**Cukurca**	**0.77**	**262**	*e*Pg	Pg	00 30 06.8	+0.9
CUKT				*e*Sg	Sg	00 30 19.2	+3.4
VANT	**Van**	**1.43**	**320**	*e*PN	Pn	00 30 19.9	+2.2
MSL	**Mosul**	**1.50**	**231**	*e*Pn	Pn	00 30 28.0	+9.3
MSL				*e*Sn	Sn	00 30 51.0	+12
VANB	**Van**	**1.55**	**324**	*e*PN	Pn	00 30 20.8	+1.4
VANB	**Van**	**1.55**	**324**	*e*Pn	Pn	00 30 20.8	+1.4
CLDR	**Caldiran**	**1.86**	**344**	*e*PN	Pn	00 30 25.7	+2.0
CLDR	**Caldiran**	**1.86**	**344**	*e*Pn	Pn	00 30 25.7	+2.0
AGRB	**Hanur-Agry**	**2.54**	**332**	*e*PN	Pn	00 30 35.9	+2.9
AGRB	**Hanur-Agry**	**2.54**	**332**	*e*Pn	Pn	00 30 35.9	+2.9
BTMT	**Batman**	**2.57**	**290**	*e*PN	Pn	00 30 37.0	+3.5
GNI	**Garni**	**2.80**	**3**	*e*PN	Pn	00 30 38.9	+2.3
GNI	**Garni**	**2.80**	**3**	*e*Pn	Pn	00 30 38.9	+2.3

ISCJB ***26*** *00:33:16.9±0.2, 13.°83N±0.°03×89.°38W±0.°02, h10km, mb4.2/28, MS4.0/13, Error ellipse: s-maj=4.8km s-min=2.2km az=35.1*

IDC ***26*** *00:33:16.7±1.2, 13.°90N×89.°24W, h0km, mb3.7/9, mb1 4.1/13, mb1mx3.9/25, mbtmp3.9/13, ML3.6/3, MS4.0/15, Ms1 4.0/15, ms1mx3.8/33, Error ellipse: s-maj=26.3km s-min=11.6km az=37.0*

CASC ***26*** *00:33:16.3±2.5, 13.°77N×89.°43W, h0km±5km, MD4.4, ML4.8, mb4.4(NEIC)*

BJI ***26*** *00:33:18.7, 13.°90N×89.°40W, h22km, mB5.1/3, Ms4.8/1, Ms7 4.5/3*

GCMT ***26*** *00:33:20.8±0.4, 13.°82N×89.°46W, h26km±1km, MW4.9/62, Moment Tensor Solution. s24,c27; s62,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.23±.17; Mθθ-0.71±.12; Mφφ0.47±.17; Mrθ0.10±.22; Mrφ-2.90±.11; Mθφ0.54±.31; Best double couple: M0 3.01000×10^16 NP1:φ276.00000°, δ79.00000°, λ180.00000°. NP2: φ6.00000°, δ90.00000°, λ11.00000°. Principal axes: T 2.8920, Plg8.0000°, Azm231.0000°; N 0.2360, Plg79.0000°, Azm8.0000°; P -3.1270, Plg7.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *00:33:20.8±2.0, 13.°90N×89.°37W, h22km±16km, mb4.4/25, MD5.0(SNET) Error ellipse: s-maj=10.9km s-min=5.5km az=213.0*

NEIC Felt [V] at Ateos. Also felt at Antiguo Cuscatlan, La Libertad, Nueva San Salvador and San Salvador.

ISC 26 00:33:18.1±0.2, 13.°79N±0.°03×89.°41W±0.°02, h10km, n119, σ1°26/117, mb4.2/29, MS4.0/13, 6C-11D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.14**	**114**	⇑*i*P	**Pg**	**00 33 20.5**	**-0.7**
SNET	**Serv Nac Est T**	**0.20**	**121**	⇓*i*P	**Pg**	**00 33 21.3**	**-1.1**
SNET				*e*S	**Sg**	**00 33 24.6**	**-0.6**
SNET				AML	AML	00 33 29.9	
	comp=Z,217μm,0.5s						
SNJE	**San Jose**	**0.20**	**292**	⇓*i*P	**Pg**	**00 33 21.2**	**-1.2**
SBLS	**San Blas**	**0.21**	**283**	⇓*i*P	**Pg**	**00 33 21.6**	**-1.0**
RTR	**El Retiro**	**0.25**	**295**	⇓*i*P	**Pg**	**00 33 22.3**	**-0.9**
SONS		**0.30**	**260**	⇑*i*P	**Pg**	**00 33 22.4**	**-1.8**
SONS				*e*S	**Sg**	**00 33 27.3**	**-0.9**
SONS				AML	AML	00 33 32.0	
	comp=Z,86μm,0.5s						
LBRS	**Las Brisas**	**0.36**	**98**	⇑*i*P	**Pg**	**00 33 24.3**	**-0.9**
LFRS	**El Faro**	**0.38**	**116**	⇓*i*P	**Pg**	**00 33 24.4**	**-1.1**
RBDL	**Robledal**	**0.42**	**320**	⇓*i*P	**Pg**	**00 33 25.1**	**-1.2**
AIES		**0.48**	**134**	⇓*i*P	**Pg**	**00 33 26.5**	**-1.0**
AIES				*e*S	**Sg**	**00 33 34.3**	**+0.5**
AIES				AML	AML	00 33 38.4	
	comp=Z,36μm,0.6s						
SNVI	**San Vicente**	**0.58**	**108**	⇓*i*P	**Pg**	**00 33 28.5**	**-0.9**
MTO2	**Montecristo 2**	**0.61**	**4**	⇓*i*P	**Pg**	**00 33 28.4**	**-1.5**
IXG	**Ixpaco**	**1.08**	**291**	⇑*e*P	**Pg**	**00 33 37.1**	**-1.8**
VSM	**San Miguel**	**1.16**	**108**	*e*P	**Pn**	**00 33 38.6**	**-1.8**
CAHU	**Cacacuatique**	**1.17**	**91**	⇑*e*P	**Pn**	**00 33 38.3**	**-2.1**
BLLM	**Bellamira**	**1.19**	**107**	*e*P	**Pn**	**00 33 39.0**	**-1.8**
NBG	**Las Nubes**	**1.21**	**311**	⇓*e*P	**Pn**	**00 33 40.2**	**-0.8**
NBG				*e*S	**Sg**	**00 34 00.1**	**+3.1**
MRL	**Marmol**	**1.30**	**348**	⇓*i*P	**Pn**	**00 33 41.7**	**-0.6**
PCG	**Pacaya**	**1.31**	**297**	*e*P	**Pn**	**00 33 42.3**	**-0.1**
FUG	**Fuego 3**	**1.54**	**295**	*e*P	**Pn**	**00 33 45.1**	**-0.5**
APG	**El Apazote**	**1.58**	**320**	Pg	**Pn**	**00 33 44.6**	**-1.5**
	comp=Z,1μm,0.3s,baz=108,slow=8.1,SNR=1031						
APG				Lg		00 34 07.9	
	comp=Z,384nm,0.3s,baz=88,slow=22,SNR=7.0						
CNCH	**Conchagua**	**1.62**	**108**	*e*P	**Pn**	**00 33 45.1**	**-1.6**
FG6		**1.62**	**298**	*e*P	**Pn**	**00 33 46.8**	**+0.1**
TP2	**Tecpan 2**	**1.85**	**302**	*e*P	**Pn**	**00 33 50.2**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.09**	**82**	*e*Pn	**Pn**	**00 33 51.0**	**-2.2**
TGUH				*e*Sn	**Sn**	**00 34 21.6**	**+2.3**
TGUH	**Tegucigalpa,Un**	**2.09**	**82**	⇑*e*P	**Pn**	**00 33 51.2**	**-2.0**
TGUH				*e*S	**Sn**	**00 34 22.2**	**+2.9**
TGUH				AML	AML	00 34 25.1	
	comp=N,44μm,0.6s						
JAT	**Jato**	**2.22**	**284**	*e*P	**Pn**	**00 33 56.5**	**+1.5**
CRIN	**San Cristobal**	**2.54**	**115**	AML	AML	00 34 41.6	
	comp=N,4μm,0.7s						
CNGN	**Cerro Negro**	**2.94**	**116**	*e*P	**Pn**	**00 34 04.5**	**-0.3**
COPN	**Copaltepe**	**3.18**	**120**	*e*P	**Pn**	**00 34 07.6**	**-0.6**
CCIG	**Comitan**	**3.62**	**314**	*i*P	**Pn**	**00 34 14.6**	**+0.4**
CCIG				*i*S	**Sb**	**00 35 09.6**	**+3.5**
SCX	**San Cristobal**	**4.27**	**314**	*i*P	**Pn**	**00 34 25.7**	**+2.5**
SCX				*i*S	**Sb**	**00 35 25.2**	**+0.2**
VCR	**Vista de Mar**	**5.19**	**134**	*e*P	**Pn**	**00 34 35.8**	**-0.1**
JCR	**Jicaral**	**5.75**	**132**	*e*P	**Pn**	**00 34 44.4**	**+0.9**
CGA2	**Cerro Gallo 2**	**6.12**	**127**	*e*P	**Pn**	**00 34 49.6**	**+1.0**
CMIG	**Matias Romero**	**6.21**	**303**	Pn	**Pn**	**00 34 51.2**	**+1.3**
	comp=N,5.1nm,0.3s,baz=134,slow=15,SNR=51						
CMIG				Sn	**Sn**	**00 36 06.6**	**+5.6**
	comp=N,2.2nm,0.3s,baz=108,slow=16,SNR=1.9						
CMIG				Lg		00 36 35.9	
	comp=N,8.1nm,0.3s,baz=279,slow=14,SNR=4.2						
CMIG				LR	LR	00 37 25.7	
	comp=N,3μm,18.6s,baz=124,slow=40						
CMIG	**Matias Romero**	**6.21**	**303**	Pn	**Pn**	**00 34 51.2**	**+1.3**
CMIG				Sn	**Sn**	**00 36 06.6**	**+5.6**
CMIG				Lg		00 36 35.9	
CMIG				LR	LR	00 37 25.7	
PRS1	**Puriscal**	**6.26**	**127**	*e*P	**Pn**	**00 34 54.0**	**+3.5**
TUIG	**Tuzandepetl**	**6.41**	**312**	*e*P	**Pn**	**00 34 50.5**	**-2.1**
TEIG	**Tepich**	**6.49**	**9**	Pn	**Pn**	**00 34 52.8**	**-0.9**
TEIG				Lg		00 36 38.5	
TEIG				LR	LR	00 37 25.3	
	comp=N,985nm,18.6s,baz=313,slow=39						
QCR	**Quepos**	**6.72**	**130**	*e*P	**Pn**	**00 34 58.1**	**+1.2**
HUIG	**Huatulco**	**6.77**	**288**	*i*P	**Pn**	**00 34 57.8**	**+0.3**
HUIG				*i*S	**Sn**	**00 36 23.0**	**+8.2**
URSC	**Urasca**	**6.77**	**125**	*e*P	**Pn**	**00 34 59.6**	**+2.0**
BUS	**Buena Vista**	**6.95**	**127**	*e*P	**Pn**	**00 35 02.4**	**+2.3**
BAR1		**7.49**	**126**	*e*P	**Pn**	**00 35 09.4**	**+1.9**
VHO	**Vista Hermosa**	**7.78**	**296**	*i*P	**Pn**	**00 35 14.2**	**+2.8**
VHO				*i*S	**Sn**	**00 36 48.0**	**+8.4**
PNIG	**Pinotepa**	**8.81**	**288**	*i*P	**Pn**	**00 35 22.1**	**-3.4**
PNIG				*i*S	**Sn**	**00 37 09.3**	**+4.4**
BCIP	**Isla Barro Col**	**10.45**	**115**	*e*Pn	**Pn**	**00 35 50.0**	**+2.0**
OTAV	**Otavalo**	**17.29**	**140**	*e*Pn	**Pn**	**00 37 21.8**	**+2.0**
	comp=N,6.2nm,1.0s						
ROSC	**El Rosal**	**17.32**	**119**	Pn	**Pn**	**00 37 19.3**	**-0.8**
	comp=N,0.9nm,0.3s,baz=283,slow=14,SNR=5.1						
ROSC				LR	LR	00 44 46.2	
	comp=N,465nm,19.6s,baz=347,slow=40						
ROSC	**El Rosal**	**17.32**	**119**	Pn	**Pn**	**00 37 22.9**	**+2.8**
ROSC				LR	LR	00 44 46.2	
SDDR	**Presa de Saban**	**18.13**	**71**	Pn	**Pn**	**00 37 33.8**	**+3.6**
SDV	**Santo Domingo**	**19.04**	**103**	P	**Pn**	**00 37 39.3**	**-2.0**
	comp=N,0.6nm,0.3s,baz=242,slow=5.2,SNR=3.8						
SDV				LR	LR	00 45 36.4	
	comp=N,166nm,19.7s,baz=300,slow=39						
SDV	**Santo Domingo**	**19.04**	**103**	*e*P	**Pn**	**00 37 40.6**	**-0.7**
	comp=N,34nm,1.1s						
JCT	**Junction City**	**19.18**	**332**	*e*Pn	**Pn**	**00 37 42.6**	**-0.2**
	comp=N,19nm,1.1s						
GOGA	**Godfrey**	**20.27**	**14**	*e*P	**P**	**00 37 55.7**	**+1.9**
	comp=N,14nm,1.0s						
TXAR	**Lajitas Array**	**20.34**	**322**	P	**P**	**00 37 55.5**	**+0.9**
	comp=N,6.1nm,1.0s,baz=144,slow=11,SNR=28						
TXAR				LR	LR	00 47 09.6	
	comp=N,248nm,18.4s,MS3.6,baz=355,slow=41						
MIAR	**Mount Ida**	**21.00**	**350**	*e*P	**P**	**00 38 01.6**	**-0.1**
	comp=N,51nm,1.6s,mb4.6						
UALR	**University of**	**21.06**	**353**	*e*P	**P**	**00 38 03.4**	**+1.0**
	comp=N,13nm,0.8s,mb4.3						
PLAL	**Pickwick Lake**	**21.13**	**3**	*e*P	**P**	**00 38 03.6**	**+0.5**
	comp=N,5.3nm,0.8s,mb3.9						
SWET	**Sewanee**	**21.56**	**8**	*e*P	**P**	**00 38 08.3**	**+0.6**
JSC	**Jenkinsville**	**21.70**	**19**	*e*P	**P**	**00 38 09.8**	**+0.6**
CPCT	**Cooper Cave**	**22.01**	**11**	*e*P	**P**	**00 38 19.6**	**+7.1**
WVT	**Waverly**	**22.29**	**3**	*e*P	**P**	**00 38 14.9**	**-0.6**
	comp=N,9.1nm,1.1s,mb4.1						
TKL	**Tuckaleechee C**	**22.36**	**12**	P	**P**	**00 38 15.2**	**-1.0**
	comp=N,4.0nm,0.8s,mb3.9,baz=194,slow=12,SNR=5.1						
TKL				LR	LR	00 48 15.9	
	comp=N,256nm,18.9s,MS3.7,baz=12,slow=40						
TKL	**Tuckaleechee C**	**22.36**	**12**	*e*P	**P**	**00 38 18.9**	**+2.6**
TKL				LR	LR	00 48 15.9	
WMOK	**Wichita Mounta**	**22.51**	**339**	*e*P	**P**	**00 38 16.3**	**-1.7**
	comp=N,10nm,0.9s,mb4.3						
SJG	**San Juan**	**22.77**	**76**	LR	LR	00 46 50.6	
	comp=N,2μm,20.8s,MS4.6,baz=273,slow=36						
GDL2	**Guadalupe Moun**	**22.87**	**326**	*e*P	**P**	**00 38 22.1**	**+0.4**
	comp=N,4.4nm,0.9s,mb3.9						
MNTX	**Cornudas Mount**	**23.07**	**323**	*e*P	**P**	**00 38 22.2**	**-1.7**
	comp=N,5.0nm,1.2s,mb3.8						
MTP	**Monte Pirata**	**23.33**	**76**	P	**P**	**00 38 27.7**	**+1.0**
SIUC	**Southern Illin**	**23.83**	**0**	*e*P	**P**	**00 38 31.7**	**+0.4**
	comp=N,33nm,1.0s,mb4.7						
USIN	**University of**	**24.13**	**3**	*e*P	**P**	**00 38 33.9**	**-0.2**
CCM	**Cathedral Cave**	**24.22**	**356**	*e*P	**P**	**00 38 34.1**	**-0.9**
	comp=N,19nm,1.0s,mb4.5						
WCI	**Wyandotte Cave**	**24.50**	**6**	*e*P	**P**	**00 38 38.7**	**+1.2**
	comp=N,14nm,0.7s,mb4.5						
BNM	**Barren Site**	**25.58**	**325**	*e*P	**P**	**00 38 47.4**	**0.0**
	comp=N,1.6nm,0.4s,mb3.9						
ANMO	**Albuquerque**	**26.09**	**327**	P	**P**	**00 38 53.2**	**+1.2**
	comp=N,0.3nm,0.3s,mb3.2,baz=135,slow=10.0,SNR=2.2						
ANMO				LR	LR	00 51 59.9	
	comp=N,229nm,19.0s,MS3.7,baz=36,slow=43						
ANMO	**Albuquerque**	**26.09**	**327**	P	**P**	**00 38 51.8**	**-0.3**
NNA	**Nana**	**28.48**	**153**	LR	LR	00 48 36.5	
	comp=N,165nm,19.9s,MS3.6,baz=59,slow=32						
ECSD	**EROS Data Cent**	**30.47**	**350**	*e*P	**P**	**00 39 31.6**	**+0.5**
	comp=N,13nm,1.5s,mb4.4						
CCUT	**Cedar City**	**31.85**	**322**	*e*P	**P**	**00 39 45.0**	**+1.7**
	comp=N,35nm,2.7s,mb4.7						
DAU	**Daniels Canyon**	**32.70**	**328**	*e*P	**P**	**00 39 49.9**	**-0.8**
PDAR	**Pinedale Array**	**33.70**	**333**	P	**P**	**00 39 59.1**	**-0.3**
	comp=N,0.5nm,1.0s,mb3.4,baz=114,slow=4.4,SNR=3.3						
PDAR				LR	LR	00 56 35.0	
	comp=N,232nm,19.9s,MS3.9,baz=253,slow=42						
HWUT	**Hardware Ranch**	**33.75**	**329**	P	**P**	**00 39 59.8**	**-0.1**
REDW	**Red Top Meadow**	**34.76**	**332**	*e*P	**P**	**00 40 08.6**	**0.0**
	comp=N,9.8nm,0.9s,mb4.7						
SNOW	**Snow King Moun**	**34.79**	**332**	*e*P	**P**	**00 40 10.1**	**+1.2**
	comp=N,13nm,1.0s,mb4.8						
LOHW	**Long Hollow**	**34.84**	**333**	*e*P	**P**	**00 40 10.3**	**+1.0**
	comp=N,5.5nm,1.0s,mb4.4						
TPAW	**Teton Pass**	**34.90**	**332**	*e*P	**P**	**00 40 10.4**	**+0.6**
	comp=N,7.0nm,1.1s,mb4.5						
NVAR	**Mina Array Bea**	**35.44**	**319**	P	**P**	**00 40 16.7**	**+2.1**
	comp=N,0.8nm,0.7s,mb3.8,baz=145,slow=8.3,SNR=3.3						
NVAR	**Mina Array Bea**	**35.44**	**319**	P	**P**	**00 40 16.7**	**+2.1**
LPAZ	**La Paz**	**36.54**	**144**	P	**P**	**00 40 25.1**	**+0.9**
	comp=N,0.2nm,0.3s,mb3.4,baz=333,slow=2.3,SNR=3.0						
LPAZ				LR	LR	00 56 11.1	
	comp=N,92nm,19.6s,MS3.6,baz=309,slow=38						
LPAZ	**La Paz**	**36.54**	**144**	*e*P	**P**	**00 40 27.3**	**+3.2**
HLID	**Hailey**	**36.61**	**329**	P	**P**	**00 40 24.4**	**-0.1**
ULM	**Lac du Bonnet**	**36.74**	**353**	LR	LR	00 56 47.3	
	comp=N,257nm,20.6s,MS4.0,baz=343,slow=38						
MCMT	**McKenzie Canyo**	**36.80**	**332**	*e*P	**P**	**00 40 26.8**	**+0.8**
	comp=N,4.9nm,1.0s,mb4.3						
LRM	**Limekiln Ridge**	**37.39**	**333**	*e*P	**P**	**00 40 32.2**	**+1.2**
EGMT	**Eagleton**	**38.09**	**338**	*e*P	**P**	**00 40 35.0**	**-2.0**
	comp=N,9.6nm,1.2s,mb4.4						
EDM	**Edmonton**	**43.68**	**339**	*e*P	**P**	**00 41 22.2**	**-0.7**
SCHQ	**Schefferville**	**44.58**	**18**	P	**P**	**00 41 29.4**	**-0.8**
	comp=N,2.0nm,0.7s,mb4.0,baz=220,slow=10,SNR=4.3						
SCHQ				LR	LR	01 02 00.9	
	comp=N,210nm,18.5s,MS4.1,baz=251,slow=39						
SCHQ	**Schefferville**	**44.58**	**18**	P	**P**	**00 41 29.9**	**-0.3**
FCC	**Fort Churchill**	**45.03**	**357**	P	**P**	**00 41 33.0**	**-0.6**
	comp=N,0.3nm,1.3s						
YKA	**Yellowknife Ar**	**51.83**	**345**	P	**P**	**00 42 24.6**	**-1.5**
	comp=N,1.7nm,0.9s,mb4.0,baz=145,slow=7.7,SNR=15						
YKA	**Yellowknife Ar**	**51.83**	**345**	P	**P**	**00 42 24.6**	**-1.5**
DLBC	**Dease Lake**	**53.89**	**335**	*e*P	**P**	**00 42 42.3**	**+1.0**
TAOE	**Nuku Hiva Isla**	**55.15**	**249**	*e*LR	LR	00 58 45.2	
	comp=N,186nm,28.2s						
RES	**Resolute Bay**	**60.96**	**358**	P	**P**	**00 43 31.5**	**+0.5**
INK	**Inuvik**	**61.37**	**343**	*e*P	**P**	**00 43 33.0**	**-0.8**
	comp=N,5.6nm,1.1s,mb4.6						
SUMG	**Summit**	**65.78**	**15**	*e*P	**P**	**00 44 05.2**	**+2.3**
	comp=N,9.5nm,1.0s,mb4.8						
PPT	**Papeete**	**67.05**	**244**	*e*S	S	00 53 05.7	-0.4
	comp=N,52nm,24.0s						
PPT				*e*LR	LR	01 04 21.5	
	comp=N,261nm,28.0s						
ESDC	**Sonseca Array**	**77.87**	**52**	P	**P**	**00 45 14.8**	**-1.4**
	comp=N,0.3nm,0.7s,mb3.4,baz=283,slow=4.9,SNR=3.2						
VAE	**Valguarnera**	**92.36**	**51**	LR	LR	01 25 31.0	
	comp=N,142nm,18.6s,MS4.5,baz=122,slow=34						
MLR	**Muntele Rosu**	**97.14**	**40**	LR	LR	01 25 30.1	
	comp=N,59nm,21.7s,MS4.0,baz=326,slow=32						
BJI	**Beijing**	**121.40**	**337**	PKP	PKPdf	00 52 11.5	-0.5
BJI				SS	SS	01 10 13.0	-2.9
BJI				LR	LR		
	comp=N,79nm,21.2s,MS4.5						
BJI				LR	LR		
	comp=E,120nm,25.8s,MS4.5						
BJI				LR	LR		
	comp=Z,67nm,24.2s,MS4.2						
HHC	**Hu-ho-hao-te**	**122.27**	**341**	*e*PKP	PKPdf	00 52 13.0	-0.7
HHC				PP	PP	00 53 52.5	+4.7
HHC				PKS		00 55 48.8	
HHC				SKS	SKSdf	00 59 19.3	-6.7
HHC				SKKS	SKKSac	01 00 39.0	-10
HHC				SS	SS	01 10 27.3	+0.5
HHC				AMB	AMB		
	comp=Z,130nm,8.8s						
HHC				LR	LR		
	comp=Z,120nm,20.1s,MS4.5						
WMQ	**Urumqi**	**122.61**	**2**	*e*PKP	PKPdf	00 52 13.5	-0.8
NJ2	**Nanjing**	**126.98**	**330**	*e*PKP	PKPdf	00 52 22.8	-0.2
LZH	**Lanzhou**	**128.84**	**346**	*e*PKP	PKPdf	00 52 20.0	-6.4
LZH				sPKP		00 52 33.0	
CD2	**Chengdu**	**133.79**	**344**	PKP	PKPdf	00 52 34.3	-1.6
GYA	**Guiyang**	**137.05**	**339**	*e*Pdif	Pdif	00 49 48.5	+0.4
GYA				PKP	PKPdf	00 52 41.8	-0.3
GYA				PP	PP	00 55 28.0	+3.7
GYA				AMB	AMB		
	comp=Z,70nm,7.9s						

ISCJB ***26*** *00:39:45.2±1.0, 30.°80N±0.°02×103.°37E±0.°03, h5km±6km, mb4.4/64, MS3.8/19, Error ellipse: s-maj=4.2km s-min=3.8km az=26.9*

IDC ***26*** *00:39:46.1±0.6, 30.°75N×103.°30E, h0km, mb4.2/21, mb1 4.2/22, mb1mx4.2/28, mbtmp4.2/22, ML4.0/1, MS3.7/11, Ms1 3.7/11, ms1mx3.3/38, Error ellipse: s-maj=22.0km s-min=13.6km az=38.0*

MOS ***26*** *00:39:47.5±0.9, 30.°80N×103.°34E, h22km, mb4.6/42, Error ellipse: s-maj=9.5km s-min=5.3km az=114.5*

BJI ***26*** *00:39:47.8, 30.°77N×103.°51E, h16km, mB4.6/18, mb4.5/30, ML4.4/22, Ms4.4/42, Ms7 4.2/34*

NEIC ***26*** *00:39:48.5±1.9, 30.°86N×103.°35E, h15km±12km, mb4.6/31, MS4.3/1, Error ellipse: s-maj=4.8km s-min=4.2km az=197.0*

ISC 26 00:39:48.3±0.7, 30.°87N±0.°02×103.°37E±0.°02, h11km±4km, h21km±1.2km: pP-P, n219, σ1°03/236, mb4.4/64, MS3.8/19, 15C-10D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**82**	Pg	**Pg**	**00 39 55.5**	**+0.5**
CD2				Sg	**Sg**	**00 40 01.5**	**+2.0**
CD2				smax			
	comp=N,69μm,0.8s						
LZH	**Lanzhou**	**5.22**	**4**	Pg	**Pg**	**00 41 24.5**	**-3.8**
LZH				Sn	**Sn**	**00 42 13.8**	**+7.4**
LZH				Sg	**Sg**	**00 42 31.0**	**-4.9**
LZH				smax			
	comp=N,130nm,0.8s						
LZH				smax			
	comp=E,200nm,1.0s						
LZH				LR	LR		
	comp=E,3μm,5.2s						
LZH				LR	LR		
	comp=Z,3μm,6.0s						
LZH	**Lanzhou**	**5.22**	**4**	*e*Pn	**Pb**	**00 41 16.8**	**-2.8**
LZH				Pg	**Pg**	**00 41 24.5**	**-3.8**
LZH				Sn	**Sn**	**00 42 13.8**	**+7.4**
LZH				Sg	**Sg**	**00 42 31.0**	**-4.9**
LZH				smax			
	comp=N,130nm,0.8s						
LZH				smax			
	comp=E,200nm,1.0s						
LZH				LR	LR		
	comp=E,3μm,5.2s						
LZH				LR	LR		
	comp=Z,3μm,6.0s						
GYA	**Guiyang**	**5.26**	**146**	Pn	**Pn**	**00 41 06.8**	**0.0**
GYA				smax			
	comp=N,760nm,1.0s						
GYA				smax			
	comp=E,770nm,1.0s						
ENH	**Enshi**	**5.31**	**95**	*e*Pn	**Pn**	**00 41 07.4**	**0.0**
	comp=E,242nm,0.7s						
ENH				*e*S	**Sg**	**00 42 37.6**	**-1.1**
XAN	**Xi'an**	**5.66**	**55**	Pn	**Pn**	**00 41 11.8**	**-0.5**
XAN				Pg	**Pg**	**00 41 32.3**	**-4.3**
XAN				Sn	**Sn**	**00 42 16.0**	**-1.2**
XAN				Sg	**Sg**	**00 42 44.5**	**-5.4**
XAN				smax			
	comp=N,440nm,1.0s						
XAN				smax			
	comp=E,270nm,0.9s						
XAN				LR	LR		
	comp=N,630nm,7.2s						
XAN				LR	LR		
	comp=E,410nm,8.6s						
XAN				LR	LR		
	comp=Z,410nm,8.6s						
KMI	**Kunming**	**5.75**	**186**	Pn	**Pn**	**00 41 14.5**	**+0.9**
KMI				Sn	**Sn**	**00 42 19.3**	**-0.2**
KMI				Sg	**Sg**	**00 42 52.8**	**-0.1**
KMI				smax			
	comp=N,170nm,1.7s						
KMI				smax			
	comp=E,220nm,1.3s						
KMI				LR	LR		
	comp=N,2μm,9.2s						
KMI				LR	LR		
	comp=E,4μm,7.5s						
GTA	**Gaotai**	**9.01**	**342**	*e*P	**Pn**	**00 42 02.3

comp=Z,60nm,3.5s
NJ2 LR LR
comp=N,720nm,9.9s
NJ2 LR LR
comp=E,1µm,9.8s
NJ2 LR LR
comp=Z,1µm,9.4s
BJI Beijing 13.87 45 P Pn 00 43 05.0 +0.3
BJI pmax pmax
comp=Z,7.0nm,1.2s
BJI pmax pmax
comp=Z,96nm,5.8s
BJI LR LR
comp=N,420nm,5.8s
BJI LR LR
comp=E,320nm,8.5s
BDT Bhumibol Dam 14.13 197 P Pn 00 43 19.0 +11
KKTK Khon Kaen 14.47 182 P Pn 00 43 20.0 +6.9
QZH Quanzhou 14.69 110 *eP* **Pn 00 43 16.5 +0.5**
QZH S **Sn 00 45 58.8 0.0**
QZH LR LR
comp=N,1µm,8.6s
QZH LR LR
comp=E,3µm,9.5s
QZH LR LR
comp=Z,4µm,9.4s
NST Nakhon Sawan 15.41 192 P **Pn 00 43 31.4 +5.7**
GUN Gumba 15.53 263 *eP* **Pn 00 43 25.4 -1.8**
comp=Z,57nm,0.9s
PKI Pulchoki 16.02 263 *eP* **Pn 00 43 31.6 -2.0**
comp=Z,46nm,0.7s
PKIN Phulchoki 16.03 263 *eP* **Pn 00 43 32.1 -1.6**
comp=Z,29nm,0.6s
KKN Kakani 16.07 264 *eP* **Pn 00 43 32.0 -2.3**
comp=Z,83nm,0.7s
DMN Daman 16.27 263 *eP* **Pn 00 43 34.6 -2.2**
SONM Songino Array 17.10 7 P **Pn 00 43 47.0 -0.2**
comp=Z,0.6nm,0.3s,baz=198,slow=12,SNR=2.8
SONM Songino Array 17.10 7 P **Pn 00 43 47.0 -0.2**
SONM pmax pmax
comp=Z,1.0nm,0.3s
SSLB Suanglung 17.13 110 *e*Pn **Pn 00 43 47.1 -0.6**
comp=Z,47nm,1.0s
ULN Ulaanbaatar 17.21 8 *eP* **Pn 00 43 48.6 +0.1**
ULN pmax pmax
comp=Z,14nm,1.1s
ULN Ulaanbaatar 17.21 8 *e*Pn **Pn 00 43 48.6 +0.1**
comp=Z,14nm,1.1s
WMQ Urumqi 17.92 321 *eP* **Pn 00 43 57.5 +0.1**
WMQ S **Sn 00 47 14.5 -2.6**
WMQ SS 00 47 39.3
WMQ PcP PcP 00 48 31.3 -1.8
WMQ pmax pmax
comp=Z,10.0nm,1.0s
WMQ LR LR
comp=N,670nm,12.0s
WMQ LR LR
comp=E,530nm,11.0s
WMQ LR LR
comp=Z,310nm,15.0s
ZAK Zakamensk 19.50 360 *eP* **Pn 00 44 17.9 +1.5**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
SNY Shenyang 19.56 50 ⇑P **Pn 00 44 16.0 -1.3**
SNY S **Sn 00 47 56.3 -0.5**
SNY pmax pmax
comp=Z,45nm,5.2s
SNY LR LR
comp=E,200nm,9.0s
SNY LR LR
comp=Z,170nm,12.6s
TLY Talaya 20.80 0 *eP* **P 00 44 34.7 +5.4**
TLY *e*SS 00 49 07.5
TLY pmax pmax
comp=Z,11nm,1.3s
TLY MLR MLR
comp=Z,305nm,11.0s,MS3.9
TLY Talaya 20.80 0 *eP* **P 00 44 27.9 -1.5**
MOY Mondy 20.86 356 *eP* **P 00 44 33.4 +3.4**
KSRS Korea Array 21.32 65 P **P 00 44 35.9 +0.8**
comp=Z,7.7nm,0.7s,mb4.1,baz=253,slow=10,SNR=16
KSRS LR LR 00 53 45.4
comp=Z,97nm,20.3s,MS3.2,baz=250,slow=39
KSRS Korea Array 21.32 65 P **P 00 44 35.9 +0.8**
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb4.2
KSRS MLR MLR
comp=Z,97nm,20.3s,MS3.2
CN2 Changchun 21.71 47 *eP* **P 00 44 41.0 +1.8**
CN2 *ep*P 00 44 45.0
CN2 *es*P sP 00 44 48.0 +4.1
CN2 *e*S **S 00 48 36.3 -3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
CN2 pmax pmax
comp=Z,100nm,4.0s
DDI Dehra Dun 21.79 275 *ex* **P 00 44 38.2 -2.1**
HIA Hailar 22.16 29 *eP* **P 00 44 44.0 0.0**
JOW Kunigami 22.16 94 P **P 00 44 45.0 +0.7**
comp=Z,4.3nm,0.4s,mb4.2,baz=137,slow=2.7,SNR=4.8
JOW LR LR 00 54 11.2
comp=Z,184nm,21.5s,MS3.5,baz=314,slow=39
JOW Kunigami 22.16 94 P **P 00 44 45.0 +0.7**
JOW LR LR 00 54 11.2
MK31 Makanchi Array 22.75 320 *eP* **P 00 44 47.9 -2.5**
MKAR Makanchi Array 22.75 320 P **P 00 44 51.4 +1.0**
comp=Z,3.3nm,0.8s,mb3.8,baz=121,slow=12,SNR=25
MKAR PcP PcP 00 48 41.7 -0.3
comp=Z,1.0nm,0.6s,baz=126,slow=3.7,SNR=3.7
MKAR ScP ScP 00 52 18.1 -1.5
comp=Z,1.7nm,0.8s,baz=150,slow=4.3,SNR=6.7
MKAR LR LR 00 54 28.1
comp=Z,411nm,18.4s,MS3.9,baz=168,slow=39
MKAR Makanchi Array 22.75 320 P **P 00 44 51.4 +1.0**
MKAR 00 48 41.7
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=N,2.0nm,0.9s
MKAR MLR MLR
comp=Z,411nm,18.4s
MKAR Makanchi Array 22.75 320 P **P 00 44 51.4 +1.0**
MKAR PcP PcP 00 48 41.7 -0.3
MKAR ScP ScP 00 52 18.1 -1.5
MKAR LR LR 00 54 28.1
KSH Kashi 23.93 299 *eP* **P 00 45 06.0 +3.7**
KSH *ep*P 00 45 11.0
KSH *es*P sP 00 45 13.3 +6.3
KSH *e*PP 00 45 41.0
KSH *e*PcP PcP 00 48 46.0 +1.4
KSH *e*S **S 00 49 21.3 +2.8**
KSH *es*S sS 00 49 29.5 +5.4
KSH *e*SS 00 50 16.3
KSH pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
KSH pmax pmax
comp=Z,81nm,3.5s
KSH LR LR
comp=N,140nm,7.7s
KSH LR LR
comp=E,95nm,5.1s
KSH LR LR
comp=Z,200nm,8.8s
ULHL Ulahol 24.47 305 P **P 00 45 09.3 +2.1**
SNR=19
MDJ Mudanjiang 24.73 49 P **P 00 45 09.0 -0.6**
MDJ pP 00 45 12.3
MDJ S **S 00 49 32.0 +0.6**
MDJ sS sS 00 49 37.0 0.0
MDJ ScP ScP 00 52 24.8 -0.3
MDJ PcS PcS 00 52 26.0 -0.2
MDJ pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
MDJ LR LR
comp=N,95nm,10.6s
MDJ LR LR
comp=E,63nm,8.9s
MDJ LR LR
comp=Z,110nm,9.9s
KZA Kyzart 25.12 304 P **P 00 45 15.9 +2.8**
SNR=28
TKM2 Tokmak 2 25.14 306 P **P 00 45 15.3 +2.0**
SNR=6.7
TKM2 Tokmak 2 25.14 306 *eP* **P 00 45 13.3 0.0**
TKM2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
TKM2 Tokmak 2 25.14 306 *eP* **P 00 45 13.3 0.0**
comp=Z,5.8nm,0.9s,mb4.1
KBK Karagaybulak 25.51 305 P **P 00 45 19.1 +2.5**
SNR=9.3
UCH Uchtor 25.69 304 P **P 00 45 21.3 +3.0**
SNR=14
UCH Uchtor 25.69 304 *eP* **P 00 45 19.2 +0.9**
comp=Z,9.1nm,1.0s,mb4.3
UCH *e*PcP PcP 00 48 46.9 -1.6
AAK Ala-Archa 25.82 305 P **P 00 45 20.9 +1.4**
comp=Z,5.5nm,0.8s,mb4.1,baz=68,slow=6.1,SNR=13
AAK LR LR 00 57 28.6
comp=Z,224nm,18.6s,MS3.7,baz=90,slow=41
AAK Ala-Archa 25.82 305 P **P 00 45 20.9 +1.4**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
AAK MLR MLR
comp=Z,224nm,18.6s,MS3.7
AAK Ala-Archa 25.82 305 *eP* **P 00 45 19.5 0.0**
comp=Z,14nm,1.0s,mb4.4
HYB Hyderabad 26.23 245 *i* P **P 00 45 26.0 +2.6**
EKS2 Erkin-Say 26.34 305 P **P 00 45 26.4 +2.3**
SNR=6.3
EKS2 Erkin-Say 26.34 305 *eP* **P 00 45 23.8 -0.3**
comp=Z,7.3nm,0.9s,mb4.2
EKS2 *e*PcP PcP 00 48 50.6 +0.7
ZAA0 Zalesovo Array 26.67 335 *eP* **P 00 45 26.9 0.0**
ZALV Zalesovo Beam 26.67 335 P **P 00 45 27.8 +0.8**
comp=Z,6.5nm,0.9s,mb4.2,baz=138,slow=9.1,SNR=26
ZALV LR LR 00 56 19.3
comp=Z,139nm,20.3s,MS3.5,baz=242,slow=37
ZALV Zalesovo Beam 26.67 335 P **P 00 45 27.8 +0.8**
ZALV pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
ZALV MLR MLR
comp=Z,139nm,20.3s,MS3.5
KURK Kurchatov 27.07 324 P **P 00 45 31.2 +0.6**
comp=Z,9.1nm,0.7s,mb4.4,baz=130,slow=9.5,SNR=49
KURK Kurchatov 27.07 324 P **P 00 45 31.2 +0.6**
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
KURK Kurchatov 27.07 324 *eP* **P 00 45 31.1 +0.5**
comp=Z,9.4nm,0.9s,mb4.3
KBL Kabul 29.04 286 *eP* **P 00 45 47.6 -0.8**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
KBL Kabul 29.04 286 *eP* **P 00 45 47.6 -0.8**
comp=Z,7.1nm,0.7s,mb4.5
MJAR Matsushiro Arr 29.42 69 LR LR 00 58 07.8
comp=Z,50nm,18.4s,MS3.2,baz=265,slow=37
DAV Davao City (W) 31.51 134 LR LR 01 00 22.7
comp=Z,165nm,18.6s,MS3.7,baz=65,slow=39
BVAR Borovoye Array 32.59 322 P **P 00 46 19.9 +0.4**
comp=Z,1.4nm,0.5s,mb4.1,baz=108,slow=9.5,SNR=13
BVAR PcP PcP 00 49 05.3 -0.4
comp=Z,3.4nm,0.7s,baz=159,slow=4.5,SNR=20
BVAR ScP ScP 00 52 47.7 -1.8
comp=Z,1.3nm,0.7s,baz=170,slow=4.2,SNR=8.5
BVAR LR LR 01 00 39.4
comp=Z,269nm,19.3s,MS4.0,baz=128,slow=38
BVAR Borovoye Array 32.59 322 P **P 00 46 19.9 +0.4**
BVAR 00 49 05.3
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR pmax pmax
comp=N,1.0nm,0.7s
BVAR MLR MLR
comp=Z,269nm,19.3s
BVAR Borovoye Array 32.59 322 P **P 00 46 19.9 +0.4**
BVAR PcP PcP 00 49 05.3 -0.4
BVAR ScP ScP 00 52 47.7 -1.8
BVAR LR LR 01 00 39.4
BRVK Borovoye 32.66 322 *ceP* **P 00 46 21.0 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
YAK Yakutsk 35.55 21 *eP* **P 00 46 48.5 +3.4**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
YAK MLR MLR
comp=Z,69nm,12.0s,MS3.6
YAK Yakutsk 35.55 21 P **P 00 46 44.1 -1.0**
ABKAR Akbulak array 37.36 312 *eP* **P 00 47 00.1 -0.7**
comp=Z,1.8nm,0.6s,mb4.1
ABKAR *e*PcP PcP 00 49 19.0 -0.6
AKTK Aktyubinsk 38.84 313 P **P 00 47 13.3 +0.1**
AKTO Aktyubinsk 38.84 313 P **P 00 47 13.3 +0.1**
comp=Z,1.0nm,0.6s,mb3.8,baz=80,slow=16,SNR=3.3
AKTO Aktyubinsk 38.84 313 P **P 00 47 13.3 +0.1**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
KAPI Kappang 38.96 153 LR LR 01 05 37.3
comp=Z,112nm,18.6s,MS3.7,baz=33,slow=40
SVE Sverdlovsk 39.32 324 ⇑*eP* **P 00 47 18.2 +1.1**
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.6
ARU Arti 40.24 323 *c i P* **P 00 47 25.2 +0.5**
ARU *e* 00 48 56.3
ARU S **S 00 53 32.1 +0.5**
ARU SS SS 00 56 30.6 +1.1
ARU pmax pmax
comp=Z,11nm,0.8s,mb4.6
ARU Arti 40.24 323 *eP* **P 00 47 25.3 +0.6**
comp=Z,9.7nm,0.8s,mb4.6
SOKR Solikamsk 42.25 327 ⇓*iP* **P 00 47 42.5 +1.3**
SOKR pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
TIXI Tiksi 43.11 12 *eP* **P 00 47 46.3 -1.8**
TIXI pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
TIXI MLR MLR
comp=Z,80nm,11.0s,MS3.9
SEY Seymchan 44.60 29 *c i P* **P 00 47 59.9 -0.3**
PETK Petropavlovsk- 44.80 44 P **P 00 48 02.4 +0.6**
comp=Z,1.9nm,0.8s,mb4.0,baz=226,slow=7.5,SNR=3.3
PETK Petropavlovsk- 44.80 44 P **P 00 48 02.4 +0.5**
PETK pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
GNI Garni 47.86 298 P **P 00 48 25.7 -0.5**
BILL Bilibino 51.66 25 ⇓P **P 00 48 54.0 -0.6**
BILL *e* 00 49 01.7
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.0
OBN Obninsk 52.24 318 ⇓*eP* **P 00 48 59.3 +0.2**
OBN *e* 00 49 05.1
OBN *e* 00 49 10.8
OBN pmax pmax
comp=Z,23nm,1.7s,mb4.8
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.9
OBN Obninsk 52.24 318 P **P 00 48 58.3 -0.9**
APA Apatity 54.24 334 ⇑*eP* **P 00 49 13.0 -0.7**
APA MLR MLR
comp=Z,500nm,14.0s,MS4.7
JOF Joensuu 54.89 328 *eP* **P 00 49 18.2 -0.3**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
JOF Joensuu 54.89 328 *ep* **P 00 49 18.2 -0.3**
comp=Z,6.1nm,0.7s,mb4.7
BR131 Keskin Array S 56.31 300 *eP* **P 00 49 28.8 -0.3**
BRTR Keskin Array B 56.31 300 P **P 00 49 28.6 -0.5**
comp=Z,2.0nm,0.9s,mb4.2,baz=109,slow=5.5,SNR=12
BRTR Keskin Array B 56.31 300 *ceP* **P 00 49 28.7 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
KEV Kevo 56.69 336 *eP* **P 00 49 30.3 -1.0**
KEV pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KEV Kevo 56.69 336 *eP* **P 00 49 31.2 -0.1**
KEV Kevo 56.69 336 *ep* **P 00 49 30.3 -1.0**
comp=Z,6.3nm,0.9s,mb4.7
MMAI Mount Meron Ar 56.78 291 LR LR 01 18 33.5
comp=Z,51nm,18.7s,MS3.6,baz=250,slow=41
AKASG Malin Array Be 57.09 313 P **P 00 49 33.9 -0.5**
comp=Z,1.8nm,0.5s,mb4.3,baz=74,slow=5.8,SNR=7.2
AKASG Malin Array Be 57.09 313 P **P 00 49 33.9 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 57.22 336 P **P 00 49 35.1 +0.1**
comp=Z,2.5nm,0.8s,mb4.3,baz=86,slow=7.4,SNR=7.3
ARCES PcP PcP 00 50 29.0 -0.3
comp=Z,1.0nm,0.8s,baz=77,slow=5.4,SNR=6.4
ARCES ARCESS Array B 57.22 336 P **P 00 49 35.1 +0.1**
ARCES 00 50 29.0
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES pmax pmax
comp=Z,1.0nm,0.8s
KAF Kangasniemi 57.25 327 *eP* **P 00 49 34.7 -0.6**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KAF Kangasniemi 57.25 327 *ep* **P 00 49 34.7 -0.6**
comp=Z,4.0nm,0.8s,mb4.5,baz=83,slow=6.3
VSU Vasula 57.40 323 *d i P* **P 00 49 36.5 0.0**
VSU pmax pmax
comp=Z,18nm,1.0s,mb5.1
FINES FINESS Array B 57.41 326 P **P 00 49 36.4 -0.1**
comp=Z,4.6nm,0.8s,mb4.6,baz=94,slow=7.8,SNR=14
FINES FINESS Array B 57.41 326 P **P 00 49 36.4 -0.1**
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 57.41 326 P **P 00 49 36.4 -0.1**
IDID Didziasalis 57.83 319 *eP* **P 00 49 39.6 +0.1**
IZAR Zarasai 58.04 319 *eP* **P 00 49 40.8 -0.2**
IIGN Ignalina 58.11 319 *eP* **P 00 49 41.9 +0.3**
ISAL Salakas 58.13 319 *eP* **P 00 49 41.9 +0.2**
EIL Elat 58.22 288 LR LR 01 19 33.9
comp=Z,76nm,18.2s,MS3.9,baz=273,slow=41
WRAB Tennant Creek 58.63 145 *eP* **P 00 49 45.2 -0.3**
WRAB pmax pmax
comp=Z,12nm,0.7s,mb5.0
WRAB Tennant Creek 58.63 145 *eP* **P 00 49 45.2 -0.3**
comp=Z,12nm,0.7s,mb5.0
ISP Isparta 59.17 298 *eP* **P 00 49 47.6 -1.6**
ISP pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ISP Isparta 59.17 298 *eP* **P 00 49 47.6 -1.6**
comp=Z,4.7nm,0.7s,mb4.6
ISP Isparta 59.17 298 ⇓*iP* **P 00 49 48.7 -0.5**
VRI Vrincioaia 59.74 308 ⇓P **P 00 49 54.1 +1.1**
VRI Vrincioaia 59.74 308 ⇓*iP* **P 00 49 54.1 +1.1**
PLOR Plostina 59.79 308 ⇑P **P 00 49 54.6 +1.2**
PLOR Plostina 59.79 308 ⇑*iP* **P 00 49 54.6 +1.2**
SUW Suwalki 60.10 318 *eP* **P 00 49 55.3 0.0**
MLR Muntele Rosu 60.36 308 ⇑P **P 00 49 58.3 +1.0**
MLR Muntele Rosu 60.36 308 ⇑*iP* **P 00 49 58.3 +1.0**
KWP Kalwaria Pacla 61.41 313 *eP* **P 00 50 05.1 +0.8**
KWP Kalwaria Pacla 61.41 313 *eP* **P 00 50 04.7 +0.3**
KWP pmax pmax
comp=Z,15nm,1.0s,mb5.1
KWP Kalwaria Pacla 61.41 313 *eP* **P 00 50 04.7 +0.4**
comp=Z,14nm,1.0s,mb5.1
KWP Kalwaria Pacla 61.41 313 ⇓*iP* **P 00 50 04.9 +0.5**
ASAR Alice Springs 61.62 148 P **P 00 50 05.8 -0.2**
comp=Z,1.8nm,0.9s,mb4.2,baz=340,slow=6.5,SNR=14
ASAR Alice Springs 61.62 148 P **P 00 50 05.8 -0.2**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
KOLS Kolonicke sedl 61.87 312 *eP* **P 00 50 07.0 -0.5**
KOLS *e* 00 50 14.1
KOLS pmax pmax
comp=Z,4.0nm,1.5s,mb4.3
KOLS Kolonicke sedl 61.87 312 *eP* **P 00 50 07.0 -0.5**
comp=Z,3.8nm,1.5s,mb4.3
KOLS *e* 00 50 14.1
KOLS Kolonicke sedl 61.87 312 *eP* **P 00 50 07.0 -0.5**
KOLS *ep*P pP 00 50 14.1 +3.0
DRGR 62.17 310 ⇓P **P 00 50 10.4 +0.8**
DRGR 62.17 310 ⇓*iP* **P 00 50 10.4 +0.8**
STHS Stebnicka Huta 62.39 313 *eP* **P 00 50 11.6 +0.7**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
STHS Stebnicka Huta 62.39 313 *eP* **P 00 50 11.6 +0.7**
comp=Z,2.1nm,1.0s,mb4.2
STHS Stebnicka Huta 62.39 313 *eP* **P 00 50 11.6 +0.7**
NIE Niedzica 62.97 313 *eP* **P 00 50 15.6 +0.8**
KECS Kecovo 63.13 312 *eP* **P 00 50 16.2 +0.3**
KECS *e* 00 50 22.6
KECS pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
KECS Kecovo 63.13 312 *eP* **P 00 50 16.2 +0.3**
comp=Z,1.3nm,0.8s,mb4.1
KECS *e* 00 50 22.6
KECS Kecovo 63.13 312 *eP* **P 00 50 16.2 +0.3**
KECS *ep*P pP 00 50 22.6 +3.1
BZS Buzias 63.25 309 ⇑P **P 00 50 16.2 -0.5**
BZS Buzias 63.25 309 ⇑*iP* **P 00 50 16.2 -0.5**
VYHS Vyhne 64.17 313 *eP* **P 00 50 23.4 +0.6**
VYHS *e* 00 50 28.8
VYHS pmax pmax
comp=Z,9.0nm,2.2s,mb4.4
VYHS Vyhne 64.17 313 *eP* **P 00 50 23.4 +0.6**
comp=Z,9.3nm,2.2s,mb4.4
VYHS *e* 00 50 28.8
VYHS Vyhne 64.17 313 *eP* **P 00 50 23.4 +0.6**
VYHS *ep*P pP 00 50 28.8 +2.4
KOLL Kolacno 64.42 313 *eP* **P 00 50 25.0 +0.6**
KOLL Kolacno 64.42 313 *eP* **P 00 50 25.0 +0.6**
NB2 NORSAR Subarra 64.52 327 P **P 00 50 24.0 -0.8**
comp=Z,4.1nm,0.7s,mb4.6,baz=73,slow=6.9
NOA NORSAR Array B 64.52 327 P **P 00 50 24.1 -0.7**
comp=Z,3.8nm,0.8s,mb4.5,baz=74,slow=6.6,SNR=14
NOA NORSAR Array B 64.52 327 P **P 00 50 24.1 -0.7**
NOA pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 64.58 314 *eP* **P 00 50 24.0 -1.4**
MORC pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MORC Moravsky Berou 64.58 314 *eP* **P 00 50 24.0 -1.5**
comp=Z,2.4nm,0.6s,mb4.4
MORC Moravsky Berou 64.58 314 ⇑*iP* **P 00 50 18.0 -7.4**
DPC Dobruska-Polom 65.14 315 *eP* **P 00 50 29.8 +0.7**
DPC *ep*P pP 00 50 35.3 +2.6
DPC AMS AMS 01 19 50.0
comp=Z,200nm,17.1s
TREC Trest 66.01 314 AMS AMS 01 20 20.0
comp=Z,200nm,17.7s
PRU Pruhonice 66.34 315 *eP* **P 00 50 37.6 +0.8**
PRU MLR MLR
comp=Z,200nm,19.1s,MS4.3
PRU Pruhonice 66.34 315 *eP* **P 00 50 37.6 +0.8**
PRU AMS AMS 01 20 30.0
comp=Z,200nm,19.1s
BRG Berggiesshubel 66.40 316 *eP* **P 00 50 37.2 +0.1**
comp=Z,2.3nm,0.6s,mb4.4
BRG *e* 00 51 05.6
comp=Z,3.2nm,1.0s
BRG
comp=N,187nm,23.0s
BRG
comp=E,122nm,24.8s
BRG
comp=Z,225nm,22.1s
CLL Collm 66.80 317 *eP* **P 00 50 39.0 -0.7**
CLL MLR MLR
comp=Z,200nm,20.2s,MS4.3
CLL Collm 66.80 317 *eP* **P 00 50 39.0 -0.7**
CLL LmV 00 21 00.0
comp=Z,200nm,20.2s
SOKA Soboth 67.21 312 ⇑*iP* **P 00 50 42.5 +0.1**
comp=Z,3.7nm,0.8s,mb4.5
KHC Kasperske Hory 67.24 315 *eP* **P 00 50 42.9 +0.4**
KHC MLR MLR
comp=Z,200nm,8.8s
KHC Kasperske Hory 67.24 315 *eP* **P 00 50 42.9 +0.4**
KHC AMS AMS 01 20 40.0
comp=Z,200nm,8.8s
GERES GERESS Array B 67.26 314 P **P 00 50 43.0 +0.3**
comp=Z,1.2nm,0.7s,mb4.0,baz=72,slow=5.7,SNR=12
GERES GERESS Array B 67.26 314 P **P 00 50 43.0 +0.3**
GERES pmax pmax
comp=Z,1.0nm,0.7s
COLD Coldfoot 67.94 24 *eP* **P 00 50 46.5 -0.2**
comp=Z,5.4nm,0.8s,mb4.6
SVW2 Sparrevohn 68.52 31 *eP* **P 00 50 50.2 -0.2**
TIP Timpagrande 68.86 304 *eP* **P 00 50 52.7 -0.3**
comp=Z,9.1nm,1.1s,mb4.6
BPAW Bear Paw Mtn. 69.10 27 *eP* **P 00 50 53.3 -0.7**
comp=Z,3.4nm,0.7s,mb4.4
PPLA Purkeypile 69.17 28 *eP* **P 00 50 55.0 +0.6**
comp=Z,6.4nm,0.8s,mb4.6
KTH Kantishna Hill 69.38 27 P **P 00 50 55.1 -0.6**
TRF Thorofare Moun 69.68 27 P **P 00 50 58.1 +0.5**
comp=Z,11nm,1.6s,mb4.5
COLA College 69.91 25 *eP* **P 00 50 58.7 -0.3**
COLA pmax pmax

comp=Z,7.0nm,0.8s,mb4.6
COLA College 69.91 25 *e*P **P 00 50 58.6 -0.3**
comp=Z,7.4nm,0.8s,mb4.7
AQU L'Aquila 69.94 308 P **P 00 50 58.7 -0.9**
KMBO Kilima Mbogo 70.24 256 P **P 00 51 01.2 -0.7**
comp=Z,1.4nm,0.7s,mb4.0,baz=197,slow=20,SNR=6.4
KMBO Kilima Mbogo 70.24 256 P **P 00 51 01.2 -0.6**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 70.24 256 P **P 00 51 00.8 -1.1**
CDF Champ du Feu 71.35 316 *e*P **P 00 51 07.3 -0.7**
STKA Stephens Creek 72.15 146 P **P 00 51 12.3 -0.6**
comp=Z,2.3nm,0.6s,mb4.3,baz=322,slow=6.5,SNR=5.2
INK Inuvik 72.58 19 *e*P **P 00 51 15.2 +0.1**
INK pmax pmax
comp=Z,5.0nm,0.7s
INK Inuvik 72.58 19 *e*P **P 00 51 15.2 +0.1**
comp=Z,4.7nm,0.7s,mb4.5
LPG La Plagne 72.95 313 *e*P **P 00 51 18.5 +0.8**
comp=Z,18nm,0.9s,mb4.7
LPG La Plagne 72.95 313 *e*P **P 00 51 18.5 +0.8**
LPG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPG La Plagne 72.95 313 *e*P **P 00 51 18.5 +0.8**
comp=Z,9.1nm,0.9s,mb4.7
LPL La Plagne 72.96 313 *e*P **P 00 51 18.3 +0.6**
comp=Z,17nm,0.9s,mb4.7
LPL La Plagne 72.96 313 *e*P **P 00 51 18.3 +0.6**
LPL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LPL La Plagne 72.96 313 *e*P **P 00 51 18.3 +0.6**
comp=Z,8.5nm,0.9s,mb4.7
BMRM Bremner River 73.24 28 *e*P **P 00 51 18.8 -0.3**
comp=Z,14nm,1.1s,mb4.8
RES Resolute Bay 74.03 5 *e*P **P 00 51 23.4 -0.1**
RES pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
RES Resolute Bay 74.03 5 *e*P **P 00 51 23.4 -0.1**
comp=Z,2.6nm,0.8s,mb4.2
SMF Signal de Mont 74.22 315 *e*P **P 00 51 24.9 -0.2**
comp=Z,26nm,1.2s,mb4.7
SMF Signal de Mont 74.22 315 *e*P **P 00 51 24.9 -0.2**
SMF pmax pmax
comp=Z,13nm,1.2s,mb4.7
SMF Signal de Mont 74.22 315 *e*P **P 00 51 24.9 -0.2**
comp=Z,13nm,1.2s,mb4.7
TCF Toulx Ste Croi 75.38 315 *e*P **P 00 51 31.9 0.0**
comp=Z,15nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.38 315 *e*P **P 00 51 31.9 0.0**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 75.38 315 *e*P **P 00 51 31.9 0.0**
comp=Z,7.7nm,1.0s,mb4.6
YKA Yellowknife Ar 82.10 17 P **P 00 52 08.5 +0.1**
comp=Z,3.2nm,0.7s,mb4.4,baz=328,slow=5.0,SNR=28
YKA Yellowknife Ar 82.10 17 P **P 00 52 08.5 0.0**
YKA pmax pmax
comp=Z,3.0nm,0.7s
ESDC Sonseca Array 82.71 312 P **P 00 52 12.0 -0.1**
comp=Z,0.5nm,0.7s,mb3.7,baz=41,slow=4.8,SNR=3.8
LBTB Lobatse 92.84 243 P **P 00 53 01.1 -0.1**
TORD Torodi Ar. Bea 93.11 287 P **P 00 53 01.6 -1.2**
comp=Z,0.3nm,0.8s,mb3.8,baz=57,slow=3.9,SNR=3.1
ROSC El Rosal 144.41 356 *e*PKPdf PKPdf 00 59 24.2 -1.1
OTAV Otavalo 149.02 4 *e*PKPbc PKPbc 00 59 37.1 0.0

CASC 26 00:48:51.3±2.2, 13°.83N×89°.39W, h0km±5km, MD3.7, ML3.3, 1C-6D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.14**	**131**	⇑*i*P	Pg	00 48 55.4	+1.4
BOQS				*e*S	Sg	00 48 58.0	+2.1
BOQS				AML	AML	00 48 59.4	
	comp=Z,3μm,0.5s						
SNET	**Serv Nac Est T**	**0.21**	**132**	*e*P	Pg	00 48 56.1	+0.8
SNET				*e*S	Sg	00 48 59.9	+1.8
SNJE	**San Jose**	**0.21**	**281**	⇓*i*P	Pg	00 48 56.0	+0.7
SBLS	**San Blas**	**0.23**	**273**	⇓*e*P	Pg	00 48 56.4	+0.8
RTR	**El Retiro**	**0.26**	**285**	⇓*i*P	Pg	00 48 57.1	+0.9
LBRS	**Las Brisas**	**0.35**	**105**	*e*P	Pg	00 48 59.2	+1.2
LFRS	**El Faro**	**0.38**	**122**	⇓*i*P	Pg	00 48 59.3	+0.7
RBDL	**Robledal**	**0.40**	**315**	⇓*i*P	Pg	00 48 59.9	+0.9
MTO2	**Montecristo 2**	**0.57**	**3**	⇓*e*P	Pg	00 49 03.2	+1.0
MTO2				*e*S	Sg	00 49 11.7	+2.1
SNVI	**San Vicente**	**0.58**	**112**	*e*P	Pg	00 49 03.3	+0.9
IXG	**Ixpaco**	**1.09**	**289**	*e*P	Pg	00 49 11.9	-0.3
IXG				*i* S	Sg	00 49 28.0	+1.8
CAHU	**Cacacuatique**	**1.15**	**93**	*e*P	Pg	00 49 13.4	0.0
NBG	**Las Nubes**	**1.19**	**309**	*e*P	Pg	00 49 15.1	+0.9
NBG				*e*S	Sg	00 49 32.9	+3.2
MRL	**Marmol**	**1.26**	**347**	*e*P	Pg	00 49 16.5	+0.9
MRL				*e*S	Sg	00 49 34.1	+2.2
FUG	**Fuego 3**	**1.54**	**294**	*e*P	Pn	00 49 19.9	0.0
FUG				*e*S	Sn	00 49 42.0	+1.5
TGUH	**Tegucigalpa,Un**	**2.07**	**83**	*e*P	Pn	00 49 28.8	+1.5
JAT	**Jato**	**2.23**	**283**	*e*P	Pn	00 49 31.5	+2.0

*IDC **26** 00:58:21.9±0.9, 1°.94N×84°.64W, h0km, mb4.1/11, mb1 4.3/14, mb1mx4.2/21, mbtmp4.2/14, ML3.4/3, MS4.2/22, Ms1 4.2/22, ms1mx4.2/23, Error ellipse: s-maj=26.3km s-min=20.2km az=33.0*
*ISCJB **26** 00:58:25.6±2.5, 2°.15N±0°.05×84°.51W±0°.04, h15km±14km, mb4.5/64, MS4.3/20, Error ellipse: s-maj=10.2km s-min=4.6km az=30.3*
*NEIC **26** 00:58:28.4±1.0, 2°.02N×84°.59W, h34km±6km, mb4.7/53, Error ellipse: s-maj=9.6km s-min=5.7km az=204.0*
*GCMT **26** 00:58:28.4±0.2, 2°.13N×84°.52W, h12km, MW5.1/89, Moment Tensor Solution. s53,c74; s89,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.05±.12; $M_{\theta\theta}$4.91±.09; $M_{\phi\phi}$0.14±.14; $M_{r\theta}$1.55±.31; $M_{\theta\phi}$-0.21±.10; $M_{\phi r}$0.16±.46; Best double couple: $M_0$5.22200×10^{16} NP1:ϕ_s95.00000°, δ36.00000°, λ-86.00000°. NP2: ϕ_s270.00000°, δ54.00000°, λ-93.00000°. Principal axes: T 5.1530, Plg9.0000°, Azm2.0000°; N 0.1410, Plg2.0000°, Azm272.0000°; P -5.2920, Plg81.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 00:58:30.5±0.7, 2°.25N±0°.05×84°.49W±0°.04, h35km±6km, n321, $_o$0°73/297, mb4.5/64, MS4.3/20, 107C-79D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**6.36**	**108**	*e*Pn	**Pn**	**00 59 59.8**	**-1.9**
OTAV				*e*Sn	**Sn**	**01 01 13.7**	**+0.6**
BAR1		**7.05**	**9**	*e*P	**Pn**	**01 00 10.1**	**-1.1**
QCR	**Quepos**	**7.14**	**3**	*e*P	**Pn**	**01 00 10.6**	**-1.9**
BUS	**Buena Vista**	**7.30**	**6**	*e*P	**Pn**	**01 00 14.1**	**-0.5**
URSC	**Urasca**	**7.57**	**5**	*e*P	**Pn**	**01 00 19.0**	**+0.6**
LAJ	**Bijagual**	**7.58**	**3**	*e*P	**Pn**	**01 00 14.7**	**-3.8**
JCR	**Jicaral**	**7.58**	**355**	*e*P	**Pn**	**01 00 17.2**	**-1.3**
PRS1	**Puriscal**	**7.69**	**1**	*e*P	**Pn**	**01 00 18.0**	**-2.0**
VCR	**Vista de Mar**	**7.91**	**352**	*e*P	**Pn**	**01 00 21.5**	**-1.6**
BCIP	**Isla Barro Col**	**8.29**	**34**	*e*Pn	**Pn**	**01 00 29.8**	**+1.6**
ROSC	**El Rosal**	**10.46**	**75**	Pn	**Pn**	**01 01 00.2**	**+2.1**
	1.4nm,0.3s,baz=270,slow=16,SNR=12						
ROSC				LR	LR	01 04 46.6	
	comp=Z,477nm,21.7s,baz=214,slow=36						
ROSC	**El Rosal**	**10.46**	**75**	*e*Pn	**Pn**	**01 00 60.0**	**+1.9**
ATAH	**Atahualpa**	**11.02**	**147**	Pn	**Pn**	**01 01 05.5**	**-0.1**
	0.4nm,0.3s,baz=318,slow=9.9,SNR=8.6						
ATAH				Sn	**Sn**	**01 03 08.4**	**+0.7**
	0.1nm,0.3s,baz=243,slow=9.0,SNR=1.8						
TGUH	**Tegucigalpa,Un**	**12.05**	**347**	*e*Pn	**Pn**	**01 01 22.0**	**+2.1**
APG	**El Apazote**	**13.98**	**335**	Pn	**Pn**	**01 01 47.8**	**+1.6**
	0.5nm,0.3s,baz=174,slow=12,SNR=10						
APG				LR	LR	01 06 17.2	
	comp=Z,3μm,19.0s,baz=180,slow=34						
SDV	**Santo Domingo**	**15.28**	**64**	Pn	**Pn**	**01 02 03.6**	**-0.1**
	0.3nm,0.3s,baz=269,slow=7.2,SNR=3.0						
SDV				LR	LR	01 07 34.8	
	comp=Z,866nm,20.2s,baz=264,slow=36						
SDV	**Santo Domingo**	**15.28**	**64**	*e*Pn	**Pn**	**01 02 03.8**	**+0.1**
	79nm,1.3s						
CMIG	**Matias Romero**	**17.95**	**326**	P	**Pn**	**01 02 36.4**	**-1.0**
	0.1nm,0.3s,baz=142,slow=8.4,SNR=10						
CMIG				LR	LR	01 08 09.9	
	comp=Z,1μm,21.2s,baz=149,slow=32						
TEIG	**Tepich**	**18.25**	**349**	P	**Pn**	**01 02 39.5**	**-1.6**
	0.2nm,0.3s,baz=143,slow=0.0,SNR=3.7						
TEIG				LR	LR	01 09 14.8	
	comp=Z,2μm,18.3s,baz=133,slow=35						
SDDR	**Presa de Saban**	**21.07**	**37**	*e*P	**P**	**01 03 12.8**	**+1.0**
	39nm,1.3s,mb4.6						
PCRV	**Puerto La Cruz**	**21.23**	**67**	P	**P**	**01 03 13.4**	**-0.2**
	31nm,1.1s,mb4.6,baz=211,slow=3.3,SNR=10.0						
CRPR	**Cabo Rojo, PR**	**23.15**	**46**	*e*P	**P**	**01 03 34.1**	**+0.1**
	64nm,1.8s,mb4.8						
ICM	**Isla Caja Muer**	**23.51**	**47**	*e*P	**P**	**01 03 38.2**	**+0.6**
OBIP	**Obispado Ponce**	**23.54**	**47**	*e*P	**P**	**01 03 39.7**	**+1.8**
	96nm,1.4s,mb5.0						
CELP	**Cerrillos**	**23.58**	**47**	*e*P	**P**	**01 03 42.3**	**+4.1**
SJG	**San Juan**	**23.92**	**48**	P	**P**	**01 03 41.5**	**+0.1**
	33nm,0.4s,mb5.1,baz=270,slow=6.1,SNR=2.8						
SJG				LR	LR	01 12 23.4	
	comp=Z,2μm,21.9s,MS4.6,baz=265,slow=35						
SJG	**San Juan**	**23.92**	**48**	*e*P	**P**	**01 03 41.7**	**+0.3**
	62nm,0.6s,mb5.2						
HUMP	**Col San Antoni**	**24.16**	**48**	*e*P	**P**	**01 03 45.0**	**+1.5**
	38nm,1.1s,mb4.7						
CBYP	**Canovanas**	**24.24**	**48**	*e*P	**P**	**01 03 45.7**	**+1.4**
	12nm,1.0s,mb4.3						
MTP	**Monte Pirata**	**24.35**	**48**	*e*P	**P**	**01 03 45.8**	**+0.5**
LPAZ	**La Paz**	**24.50**	**139**	P	**P**	**01 03 47.0**	**+0.3**
	25nm,1.1s,mb4.7,baz=335,slow=11,SNR=40						
LPAZ	**La Paz**	**24.50**	**139**	*e*P	**P**	**01 03 47.3**	**+0.7**
	34nm,1.2s,mb4.8						
DWPF	**Disney**	**25.89**	**6**	P	**P**	**01 03 59.5**	**+0.4**
BBGH	**Gun Hill**	**26.94**	**65**	P	**P**	**01 04 08.8**	**0.0**
SIV	**San Ignacio**	**29.39**	**129**	P	**P**	**01 04 29.5**	**-1.2**
	3.1nm,1.0s,mb4.0,baz=312,slow=13,SNR=11						
LRAL	**Lakeview Retre**	**30.72**	**356**	*e*P	**P**	**01 04 41.1**	**-1.1**
	11nm,1.0s,mb4.6						
GOGA	**Godfrey**	**31.02**	**2**	*e*P	**P**	**01 04 43.2**	**-1.6**
	18nm,1.1s,mb4.8						
TXAR	**Lajitas Array**	**32.54**	**328**	P	**P**	**01 04 57.4**	**-0.9**
	0.4nm,0.6s,mb3.5,baz=141,slow=8.1,SNR=5.7						
TXAR				LR	LR	01 17 08.3	
	comp=Z,358nm,20.4s,MS4.1,baz=195,slow=34						
SWET	**Sewanee**	**32.83**	**358**	*e*P	**P**	**01 05 00.5**	**-0.2**
626A	**Big Bend Ranch**	**32.96**	**327**	⇑P	**P**	**01 05 01.9**	**-0.1**
	baz=33						
527A	**Woodward Ranch**	**33.15**	**329**	⇑P	**P**	**01 05 03.8**	**+0.2**
	baz=33						
428A	**Kincaid Ranch,**	**33.15**	**331**	⇑P	**P**	**01 05 03.8**	**+0.2**
	baz=33						
526A	**Mary Lane Ranc**	**33.33**	**328**	⇑P	**P**	**01 05 05.4**	**+0.2**
	baz=34						
427A	**Hayter Ranch,**	**33.61**	**330**	⇑P	**P**	**01 05 08.0**	**+0.3**
	baz=34						
426A	**McDonald Obser**	**33.78**	**329**	⇑P	**P**	**01 05 09.4**	**+0.3**
	baz=34						
326A	**Caldwell Ranch**	**34.28**	**330**	⇑P	**P**	**01 05 13.7**	**+0.3**
	baz=34						
425A	**Indio Mountain**	**34.38**	**328**	⇑P	**P**	**01 05 14.1**	**-0.2**
	baz=35,SNR=11						
325A	**Bean Ranch, Si**	**34.83**	**328**	⇑P	**P**	**01 05 18.5**	**+0.3**
	baz=35						
226A	**Malaga, Loving**	**34.94**	**330**	⇓P	**P**	**01 05 19.1**	**0.0**
	baz=35						
WMOK	**Wichita Mounta**	**34.96**	**339**	*e*P	**P**	**01 05 19.0**	**-0.3**
	10nm,1.3s,mb4.6						
ELN	**Prospectdale**	**34.98**	**5**	*e*P	**P**	**01 05 19.2**	**-0.2**
324A	**Moseley Ranch,**	**35.16**	**328**	⇑P	**P**	**01 05 21.1**	**+0.1**
	baz=35						
MNTX	**Cornudas Mount**	**35.30**	**328**	*e*P	**P**	**01 05 21.2**	**-1.1**
	20nm,1.6s,mb4.8						
225A	**Deer Hill, Car**	**35.34**	**329**	⇑P	**P**	**01 05 22.8**	**+0.2**
	baz=36						
Z27A	**Tatum**	**35.54**	**332**	⇑P	**P**	**01 05 24.8**	**+0.5**
	baz=36						
224A	**Corundas Mount**	**35.67**	**328**	⇓P	**P**	**01 05 25.7**	**+0.2**
	baz=36						
125A	**Gardner Draw,**	**35.70**	**330**	⇑P	**P**	**01 05 26.2**	**+0.6**
	baz=36						
WCI	**Wyandotte Cave**	**35.85**	**358**	*e*P	**P**	**01 05 25.7**	**-1.1**
	17nm,1.2s,mb4.9						
MSTX	**Muleshoe**	**35.89**	**334**	⇓P	**P**	**01 05 27.7**	**+0.4**
	baz=36						
Y27A	**Causey**	**35.99**	**333**	⇑P	**P**	**01 05 28.4**	**+0.2**
	baz=36						
124A	**Stringfield Ra**	**36.13**	**329**	⇓P	**P**	**01 05 29.8**	**+0.4**
	baz=36,SNR=7.9						
CCM	**Cathedral Cave**	**36.17**	**351**	*e*P	**P**	**01 05 28.8**	**-0.9**
	12nm,1.1s,mb4.7						
Z25A	**Roswell**	**36.23**	**331**	⇓P	**P**	**01 05 30.1**	**-0.1**
	baz=36,SNR=6.9						
OLIL	**Olney**	**36.47**	**355**	P	**P**	**01 05 30.5**	**-1.6**
	33nm,1.3s,mb5.1						
Z24A	**Sheeppen Canyo**	**36.59**	**330**	⇑P	**P**	**01 05 33.5**	**+0.2**
	baz=37						
X27A	**F and S Farms,**	**36.60**	**334**	⇓P	**P**	**01 05 33.9**	**+0.5**
	baz=37						
Y25A	**Mesa, Roswell**	**36.74**	**331**	⇑P	**P**	**01 05 35.2**	**+0.7**
	baz=37						
320A	**Kipp Ranch, An**	**36.77**	**324**	⇑P	**P**	**01 05 35.7**	**+0.8**
	baz=37						
W27A	**Bowe Ranch, En**	**36.94**	**334**	⇑P	**P**	**01 05 37.1**	**+0.8**
	baz=37						
Y24A	**Capitan**	**37.10**	**330**	⇓P	**P**	**01 05 38.0**	**+0.4**
	baz=37,SNR=5.8						
220A	**Playas Peak, P**	**37.19**	**325**	⇓P	**P**	**01 05 38.6**	**+0.2**
	baz=37						
121A	**Cookes Peak, D**	**37.24**	**326**	⇓P	**P**	**01 05 39.0**	**+0.1**
	baz=37						
Z22A	**Elephant Butte**	**37.35**	**328**	⇓P	**P**	**01 05 39.7**	**-0.1**
	baz=38						
Y23A	**Lovelace Mesa,**	**37.41**	**330**	⇑P	**P**	**01 05 40.7**	**+0.4**
	baz=38,SNR=15						
219A	**White Tail Can**	**37.68**	**324**	⇓P	**P**	**01 05 42.4**	**-0.2**
	baz=38						
W25A	**X Bar L Ranch,**	**37.69**	**333**	⇑P	**P**	**01 05 43.1**	**+0.5**
	baz=38,SNR=7.6						
RPN	**Rapa Nui**	**37.77**	**218**	LR	LR	01 16 56.8	
	comp=Z,1μm,20.4s,MS4.7,baz=298,slow=30						
Z21A	**St. Cloud Mine**	**37.77**	**327**	⇓P	**P**	**01 05 43.3**	**0.0**
	baz=38						
V26A	**Tequesquite Ra**	**37.87**	**334**	⇑P	**P**	**01 05 44.4**	**+0.2**
	baz=38,SNR=8.6						
BNM	**Barren Site**	**37.88**	**329**	*e*P	**P**	**01 05 45.0**	**+0.8**
	13nm,1.3s,mb4.5						
Y22A	**Socorro**	**37.88**	**329**	⇓P	**P**	**01 05 44.4**	**+0.2**
	baz=38						
Z20A	**Nine Sixteen R**	**38.12**	**326**	⇓P	**P**	**01 05 46.1**	**-0.2**
	baz=38						
W24A	**Lazy 6 Ranch,**	**38.13**	**332**	⇑P	**P**	**01 05 46.8**	**+0.5**
	baz=38,SNR=7.8						
MVL	**Millersville**	**38.30**	**10**	*e*P	**P**	**01 05 48.4**	**+0.8**
	23nm,1.4s,mb4.7						
KSU1	**Kansas State U**	**38.31**	**345**	P	**P**	**01 05 47.0**	**-0.7**
LAZ	**Ladron**	**38.34**	**329**	*e*P	**P**	**01 05 48.3**	**+0.3**
	4.0nm,1.2s,mb4.0						
U26A	**Atchley Ranch,**	**38.36**	**335**	⇑P	**P**	**01 05 48.7**	**+0.5**
	baz=39						
HDIL	**Hopedale**	**38.38**	**354**	*e*P	**P**	**01 05 47.2**	**-1.2**
	21nm,0.8s,mb4.9						
ANMO	**Albuquerque**	**38.43**	**330**	*e*P	**P**	**01 05 49.5**	**+0.7**
	7.1nm,1.0s,mb4.3						
W23A	**Werner Place,**	**38.44**	**331**	⇓P	**P**	**01 05 49.6**	**+0.6**
	baz=39,SNR=5.8						
217A	**Green Valley**	**38.45**	**323**	⇓P	**P**	**01 05 48.9**	**-0.2**
	baz=39						
118A	**Homack Ranch,**	**38.56**	**324**	⇑P	**P**	**01 05 50.0**	**0.0**
	baz=39						
Y20A	**Horse Springs,**	**38.61**	**327**	⇑P	**P**	**01 05 50.7**	**+0.3**
	baz=39						
CPUP	**Villa Florida**	**38.67**	**139**	LR	LR	01 23 42.2	
	comp=Z,240nm,19.7s,MS4.0,baz=303,slow=39						
SSPA	**Standing Stone**	**38.68**	**8**	*e*P	**P**	**01 05 48.8**	**-2.1**
	31nm,1.7s,mb4.8						
X21A	**Alamocita Cree**	**38.70**	**328**	⇑P	**P**	**01 05 52.1**	**+0.9**
	baz=39,SNR=5.8						
TUC	**Tucson**	**38.80**	**323**	*e*pP	pP	01 06 00.2	-2.1
V23A	**Ortiz Mt. (NFS**	**38.93**	**331**	⇑P	**P**	**01 05 53.3**	**+0.3**
	baz=39						
117A	**Oracle**	**38.96**	**324**	⇓P	**P**	**01 05 53.2**	**-0.1**
	baz=39						
Y19A	**Nutrioso**	**39.12**	**327**	⇓P	**P**	**01 05 54.8**	**+0.1**
	baz=39						
116A	**Eloy**	**39.54**	**323**	⇑P	**P**	**01 05 58.0**	**-0.2**
	baz=40						
V21A	**Milan**	**39.69**	**330**	⇑P	**P**	**01 05 59.7**	**+0.3**
	baz=40						
214A	**Organ Pipe Nat**	**39.81**	**321**	⇓P	**P**	**01 06 00.3**	**-0.1**
	baz=40						
Z16A	**Peralta Trail,**	**39.92**	**324**	⇓P	**P**	**01 06 01.3**	**0.0**
	baz=40						
X18A	**Snowflake**	**39.93**	**326**	⇓P	**P**	**01 06 01.7**	**+0.3**
	baz=40						
115A	**Sonoran Desert**	**39.95**	**322**	⇑P	**P**	**01 06 01.7**	**+0.1**
	baz=40						
SDCO	**Great Sand Dun**	**40.26**	**334**	*e*P	**P**	**01 06 04.0**	**0.0**
	11nm,1.1s,mb4.5						
Y16A	**Circle Bar Ran**	**40.33**	**324**	⇑P	**P**	**01 06 04.8**	**+0.1**
	baz=40						
X16A	**Lo Mia Camp, P**	**40.69**	**325**	⇓P	**P**	**01 06 07.8**	**+0.1**
	baz=41						
113A	**Mohawk Valley,**	**40.95**	**321**	⇑P	**P**	**01 06 09.5**	**-0.3**
	baz=41						
Z13A	**Yuma Proving G**	**41.17**	**322**	⇑P	**P**	**01 06 11.5**	**-0.2**
	baz=41						
X15A	**Humboldt**	**41.20**	**324**	⇓P	**P**	**01 06 11.9**	**+0.1**
	baz=41						
V17A	**Tonalea, Kykot**	**41.20**	**327**	⇑P	**P**	**01 06 12.1**	**+0.2**
	baz=41						
R22A	**Saguache, Gunn**	**41.21**	**333**	⇓P	**P**	**01 06 12.4**	**+0.5**
	baz=42						
MVCO	**Mesa Verde**	**41.22**	**330**	⇓P	**P**	**01 06 12.3**	**+0.2**
	baz=42						
MVCO	**Mesa Verde**	**41.22**	**330**	*e*P	**P**	**01 06 12.7**	**+0.7**
	46nm,1.9s,mb4.8						
W16A	**Flagstaff**	**41.23**	**326**	⇓P	**P**	**01 06 11.9**	**-0.2**
	baz=41						
S21A	**Coal Bank Pass**	**41.24**	**332**	⇑P	**P**	**01 06 12.5**	**+0.4**
	baz=42						
Y14A	**Wickenburg**	**41.27**	**323**	⇑P	**P**	**01 06 12.4**	**-0.1**
	baz=42						
U18A	**Rough Rock, Ch**	**41.31**	**328**	⇓P	**P**	**01 06 13.4**	**+0.6**
	baz=42						
WUAZ	**Wupatki**	**41.45**	**326**	⇓P	**P**	**01 06 14.3**	**+0.4**
	baz=42						
TRY	**Troy**	**41.45**	**12**	*e*P	**P**	**01 06 14.6**	**+0.7**
X14A	**Yava**	**41.57**	**324**	⇓P	**P**	**01 06 15.0**	**0.0**
	baz=42						
Y13A	**Salome**	**41.69**	**322**	⇓P	**P**	**01 06 15.9**	**0.0**
	baz=42						
Q22A	**Crested Butte,**	**41.80**	**333**	⇑P	**P**	**01 06 16.8**	**+0.1**
	baz=42						
T18A	**Mexican Hat**	**41.86**	**329**	⇑P	**P**	**01 06 17.2**	**0.0**
	baz=42						
U17A	**Shonto**	**41.86**	**328**	⇑P	**P**	**01 06 17.2**	**0.0**
	baz=42						
S19A	**Harvey Farm, M**	**41.95**	**330**	⇓P	**P**	**01 06 18.5**	**+0.5**
	baz=42						
PV01	**Paradox Valley**	**41.98**	**331**	*e*P	**P**	**01 06 18.3**	**+0.1**
	1μm,1.6s						
ISCO	**Idaho Springs**	**42.02**	**335**	*e*P	**P**	**01 06 20.1**	**+1.6**
	5.3nm,1.0s,mb4.1						
SMCO	**Snowmass**	**42.09**	**334**	*e*P	**P**	**01 06 19.7**	**+0.6**
	16nm,1.1s,mb4.6						
V15A	**Kaibab Nationa**	**42.11**	**326**	⇑P	**P**	**01 06 19.5**	**+0.1**
	baz=42						
W14A	**Seligman**	**42.20**	**324**	⇓P	**P**	**01 06 20.1**	**0.0**
	baz=42						
X13A	**Yucca**	**42.22**	**323**	⇑P	**P**	**01 06 20.2**	**0.0**
	baz=42						
T17A	**Navajo Res., N**	**42.23**	**328**	⇑P	**P**	**01 06 20.5**	**+0.2**
	baz=42						
S18A	**Hurst Farm, Bl**	**42.34**	**330**	⇓P	**P**	**01 06 21.6**	**+0.5**
	baz=43						
PV10	**Paradox Valley**	**42.40**	**331**	P	**P**	**01 06 21.3**	**-0.3**
	26nm,0.6s,mb5.0						
R19A	**Curley Farm, L**	**42.44**	**331**	⇓P	**P**	**01 06 22.3**	**+0.3**
	baz=43						
V14A	**Boquillas Ranc**	**42.51**	**325**	⇓P	**P**	**01 06 22.9**	**+0.3**
	baz=43						
BC3	**Big Chuckw Mtn**	**42.60**	**321**	⇓P	**P**	**01 06 22.2**	**-1.1**
	baz=43						
W13A	**Hualapai Mount**	**42.60**	**324**	⇑P	**P**	**01 06 23.2**	**-0.1**
	baz=43						
U15A	**North Rim**	**42.62**	**326**	⇓P	**P**	**01 06 23.9**	**+0.4**
	baz=43,SNR=5.7						
ECSD	**EROS Data Cent**	**42.70**	**347**	*e*P	**P**	**01 06 22.4**	**-1.6**
	18nm,1.2s,mb4.7						
IRM	**Iron Mountain**	**42.73**	**321**	⇑P	**P**	**01 06 23.1**	**-1.3**
	baz=43						
R18A	**Canyonlands Na**	**42.83**	**330**	⇓P	**P**	**01 06 25.4**	**+0.3**
	baz=43						
Q19A	**Hogan Spring (**	**42.97**	**331**	⇑P	**P**	**01 06 26.6**	**+0.3**
	baz=43						
T15A	**Red Dirt Ranch**	**43.10**	**327**	⇓P	**P**	**01 06 27.5**	**+0.2**
	baz=43						
U14A	**Mt Trumbull**	**43.11**	**325**	⇑P	**P**	**01 06 27.7**	**+0.2**
	baz=43						
V13A	**Grand Canyon W**	**43.18**	**324**	⇑P	**P**	**01 06 28.1**	**+0.1**
	baz=43						
N22A	**Wattenberg Ran**	**43.21**	**335**	⇓P	**P**	**01 06 28.2**	**+0.1**
	baz=44						
PHWY	**Pilot Hill**	**43.23**	**337**	*e*P	**P**	**01 06 30.1**	**+1.8**
	14nm,1.4s,mb4.5						
R17A	**Hanksville Air**	**43.26**	**330**	⇑P	**P**	**01 06 28.6**	**0.0**
	baz=44						
O20A	**White River Ci**	**43.43**	**333**	⇑P	**P**	**01 06 30.3**	**+0.3**
	baz=44						
FRNY	**Flat Rock**	**43.49**	**11**	*e*P	**P**	**01 06 30.1**	**-0.3**
	103nm,2.8s,mb5.1						
Q18A	**Rafter H Ranch**	**43.50**	**331**	⇑P	**P**	**01 06 30.9**	**+0.3**
	baz=44		

L18A	Fontenelle, Gr	45.68	333	⇑P	P	01 06 47.9	0.0
	baz=46						
P13A	Bates Ranch, G	45.75	328	⇑P	P	01 06 48.9	+0.4
	baz=46						
R11A	Troy Canyon, C	45.83	326	⇓P	P	01 06 49.0	-0.2
	baz=46						
K19A	Absolon Red Bu	45.89	335	⇑P	P	01 06 48.7	-0.8
	baz=46						
GRAC	Grapevine Rang	45.96	323	⇑P	P	01 06 49.9	-0.3
	baz=46						
S10A	Tonopah Range,	46.12	324	⇓P	P	01 06 51.9	+0.5
	baz=46						
HWUT	Hardware Ranch	46.13	332	eP	P	01 06 50.9	-0.6
	8.1nm,0.8s,mb4.7						
BW06	Boulder Array	46.14	334	⇑P	P	01 06 51.6	+0.1
	baz=46						
BW06	Boulder Array	46.14	334	eP	P	01 06 51.2	-0.3
	5.5nm,1.1s,mb4.4						
PDAR	Pinedale Array	46.14	334	P	P	01 06 50.2	-1.3
	0.6nm,0.9s,mb3.5,baz=134,slow=8.6,SNR=5.0						
PDAR				PcP	PcP	01 08 25.6	-1.5
	0.8nm,0.7s,baz=137,slow=4.3,SNR=4.3						
PDAR				LR	LR	01 26 47.4	
	comp=Z,503nm,18.3s,MS4.5,baz=150,slow=37						
L17A	Cokeville	46.20	333	⇓P	P	01 06 52.9	+0.9
	baz=46						
Q11A	Duckwater	46.21	326	⇑P	P	01 06 52.0	-0.1
	baz=46						
K18A	Toltan Ranch,	46.25	334	⇑P	P	01 06 52.8	+0.4
	baz=46						
VES	Vestal, Richgr	46.29	320	⇑P	P	01 06 51.2	-1.6
	baz=46						
N14A	Grayback Hills	46.35	330	⇑P	P	01 06 53.3	+0.2
	baz=47,SNR=5.2						
L16A	Fish Haven	46.39	332	⇑P	P	01 06 53.7	+0.2
	baz=47						
M15A	Larsen Ranch,	46.45	331	⇑P	P	01 06 53.9	0.0
	baz=47						
Q10A	Clear Creek Ra	46.62	325	⇑P	P	01 06 55.6	+0.3
	baz=47						
J18A	Kendall Valley	46.70	334	⇑P	P	01 06 56.0	+0.1
	baz=47						
O12A	Currie	46.73	328	⇓P	P	01 06 55.9	-0.2
	baz=47						
L15A	Malad City	46.83	331	⇓P	P	01 06 56.9	0.0
	baz=47						
AGMN	Agassiz Refuge	46.91	350	eP	P	01 06 58.1	+0.7
	12nm,0.8s,mb4.9						
M14A	Sheep Mountain	46.92	330	⇑P	P	01 06 57.3	-0.3
	baz=47						
J17A	Brown Place, J	47.13	334	⇓P	P	01 06 59.0	-0.2
	baz=47						
REDW	Red Top Meadow	47.19	334	eP	P	01 06 59.4	-0.2
	28nm,1.8s,mb4.9						
TPAW	Teton Pass	47.33	334	eP	P	01 07 06.0	+5.2
	5.5nm,1.1s,mb4.4						
RRI2	Red Ridge	47.38	333	eP	P	01 07 01.3	+0.1
	5.4nm,0.8s,mb4.5						
J16A	Bone	47.46	333	⇓P	P	01 07 01.5	-0.2
	baz=48						
NVAR	Mina Array Bea	47.46	324	P	P	01 07 00.3	-1.6
	0.9nm,0.8s,mb3.8,baz=126,slow=10,SNR=2.6						
NVAR				PcP	PcP	01 08 30.3	-1.6
	1.4nm,0.9s,baz=129,slow=7.1,SNR=2.8						
NVAR	Mina Array Bea	47.46	324	P	P	01 07 00.3	-1.6
NVAR				PcP	PcP	01 08 30.3	-1.6
IMW	Indian Meadow	47.65	334	eP	P	01 07 03.5	+0.2
	50nm,2.6s,mb5.1						
G18A	Lazy EL Ranch,	48.23	336	⇓P	P	01 07 07.6	-0.1
	baz=48						
CMB	Columbia Colle	48.47	322	P	P	01 07 09.2	-0.5
J13A	Cove Ranch, Pi	48.75	331	⇓P	P	01 07 11.6	-0.1
	baz=49						
F18A	Big Timber	48.77	337	⇑P	P	01 07 12.1	+0.1
	baz=49						
ULM	Lac du Bonnet	48.80	350	P	P	01 07 09.9	-2.1
	7.7nm,0.9s,mb4.8,baz=177,slow=5.8,SNR=4.6						
ULM				LR	LR	01 27 02.6	
	comp=Z,238nm,20.1s,MS4.2,baz=90,slow=35						
L10A	Juniper Basin	48.93	328	⇓P	P	01 07 13.2	0.0
	baz=49						
H15A	Lima	48.97	333	⇑P	P	01 07 13.7	+0.2
	baz=49						
HLID	Hailey	48.98	331	⇓P	P	01 07 13.2	-0.4
	baz=49						
HLID	Hailey	48.98	331	eP	P	01 07 12.1	-1.5
	6.5nm,1.3s,mb4.5						
J12A	Stokes Ranch,	49.09	331	⇑P	P	01 07 14.7	+0.3
	baz=49						
G16A	Moss Hill, Enn	49.09	335	⇓P	P	01 07 14.1	-0.2
	baz=49						
I13A	Wildhorse Cree	49.11	332	⇓P	P	01 07 15.6	+1.1
	baz=49						
MCMT	McKenzie Canyo	49.23	333	eP	P	01 07 16.0	+0.6
	0.9nm,0.7s,mb3.9						
H14A	Leadore	49.30	333	⇑P	P	01 07 16.4	+0.4
	baz=50						
G15A	Dillon	49.33	334	⇑P	P	01 07 15.8	-0.5
	baz=50						
BOZ	Bozeman (W)	49.35	335	eP	P	01 07 15.3	-1.0
	5.2nm,1.0s,mb4.5						
E18A	Harlowton	49.40	337	⇓P	P	01 07 17.5	+0.9
	baz=50						
I12A	Atlanta	49.51	331	⇑P	P	01 07 17.9	+0.3
	baz=50						
MFID	Camas Ranch	49.57	330	⇑P	P	01 07 18.3	+0.3
	baz=50						
K10A	MacKenzie Ranc	49.64	329	⇓P	P	01 07 17.6	-1.0
	baz=50						
LRM	Limekiln Ridge	49.83	335	P	P	01 07 20.3	+0.3
	20nm,1.2s,mb5.0						
F15A	Butte	49.87	335	⇑P	P	01 07 21.0	+0.7
	baz=50						
H12A	Diamond D Ranc	49.94	332	⇓P	P	01 07 21.0	+0.1
	baz=50						
E16A	East Helena	50.08	336	⇓P	P	01 07 21.7	-0.2
	baz=50						
D17A	Six Diamond Ra	50.18	337	⇑P	P	01 07 22.8	+0.1
	baz=50						
WVOR	Wild Horse Val	50.33	327	eP	P	01 07 23.4	-0.4
	16nm,1.3s,mb4.9						
E15A	Deer Lodge	50.39	335	⇑P	P	01 07 23.6	-0.7
	baz=51						
D16A	Dana Ranch, Ca	50.42	336	⇑P	P	01 07 24.3	-0.1
	baz=51						
EGMT	Eagleton	50.55	338	⇓P	P	01 07 26.3	+0.9
	baz=51						
G12A	Big Creek, Yel	50.59	332	⇑P	P	01 07 26.1	+0.4
	baz=51						
H11A	Donnelly	50.60	331	⇑P	P	01 07 26.0	+0.1
	baz=51						
C17A	Wharram Farm,	50.60	337	⇑P	P	01 07 26.2	+0.4
	baz=51						
F13A	Darby	50.63	333	⇑P	P	01 07 25.6	-0.5
	baz=51						
B18A	Beardsley Farm	50.86	338	⇓P	P	01 07 28.2	+0.4
	baz=51						
H10A	Noah's Angus R	50.88	331	⇑P	P	01 07 28.0	+0.1
	baz=51						
F12A	Elk City	51.03	333	⇓P	P	01 07 29.2	+0.2
	baz=51						
E13A	Victor	51.07	334	⇑P	P	01 07 29.6	+0.2
	baz=51						
C16A	Fuhringer Ranc	51.13	337	⇑P	P	01 07 30.3	+0.6
	baz=51						
G11A	Walters Elk Ra	51.24	332	⇓P	P	01 07 30.5	-0.1
	baz=52						
MSO	Missoula	51.27	334	eP	P	01 07 30.2	-0.6
	8.8nm,1.1s,mb4.6						
A17A	Triple J Farms	51.66	338	⇑P	P	01 07 34.1	+0.4
	baz=52						
E12A	Beaver Dam Sad	51.67	333	⇑P	P	01 07 33.8	-0.1
	baz=52						
D13A	Huson	51.70	334	⇓P	P	01 07 35.2	+1.2
	baz=52						
K05A	Summer Lake	51.76	326	⇓P	P	01 07 34.4	-0.2
	baz=52						
G09A	Cove	51.88	330	⇑P	P	01 07 35.7	+0.3
	baz=52						
E11A	Bogner Ranch,	51.92	332	⇓P	P	01 07 35.6	-0.1
	baz=52						
I07A	Izee	51.92	328	⇓P	P	01 07 35.2	-0.5
	baz=52						
D12A	Red Ives Fores	52.06	334	⇓P	P	01 07 36.0	-0.8
	baz=52						
F10A	Beach Ranch, E	52.12	331	⇑P	P	01 07 37.3	+0.1
	baz=52						
B14A	Marquette Ranc	52.19	336	⇓P	P	01 07 38.9	+1.3
	baz=52						
C13A	Hot Springs	52.20	335	⇓P	P	01 07 38.2	+0.5
	baz=52						
BSMT	Bassoo Peak	52.42	335	eP	P	01 07 39.5	+0.1
A15A	Johnson Ranch,	52.47	337	⇑P	P	01 07 39.3	-0.4
	baz=53						
B13A	Whitefish	52.69	335	⇑P	P	01 07 42.1	+0.7
	baz=53						
A14A	Double T Ranch	52.73	336	⇑P	P	01 07 41.5	-0.2
	baz=53						
D10A	Wagner Farm, O	52.93	332	⇑P	P	01 07 43.6	+0.4
	baz=53						
WALA	Waterton Lakes	53.00	336	P	P	01 07 43.7	+0.1
SCHQ	Schefferville	54.36	12	P	P	01 07 50.9	-2.6
	6.3nm,1.2s,mb4.4,baz=200,slow=9.4,SNR=3.5						
SCHQ				LR	LR	01 31 38.8	
	comp=Z,453nm,18.5s,MS4.6,baz=131,slow=36						
SCHQ	Schefferville	54.36	12	P	P	01 07 53.2	-0.3
A07A	Ashnola River,	55.81	332	⇓P	P	01 08 04.0	-0.2
	baz=56						
EDM	Edmonton	56.13	340	eP	P	01 08 05.0	-1.3
TAOE	Nuku Hiva Isla	56.56	258	eLR	LR	01 24 41.1	
	366nm,25.4s						
FCC	Fort Churchill	56.86	354	eP	P	01 08 10.7	-0.7
	0.3nm,0.9s						
USHA	Ushuaia	58.41	169	LR	LR	01 28 18.4	
	comp=Z,586nm,18.4s,MS4.7,baz=280,slow=31						
YKA	Yellowknife Ar	64.17	345	P	P	01 08 59.3	-1.9
	1.7nm,0.8s,mb4.2,baz=141,slow=6.7,SNR=21						
YKA				LR	LR	01 40 38.2	
	comp=Z,23nm,18.1s,MS3.4,baz=310,slow=39						
DLBC	Dease Lake	66.34	336	eP	P	01 09 15.9	+0.6
PPT	Papeete	67.06	250	eLR	LR	01 29 32.2	
	662nm,25.0s,baz=79						
PPT	Papeete	67.06	250	LR	LR	01 31 13.1	
	comp=Z,323nm,19.6s,MS4.5,baz=56,slow=30						
DAWY	Dawson	73.29	338	eP	P	01 09 57.1	-0.9
INK	Inuvik	73.76	343	eP	P	01 09 59.8	-0.9
	4.9nm,0.9s,mb4.4						
EGAK	Eagle	74.31	338	eP	P	01 10 02.6	-1.4
	6.2nm,1.3s,mb4.4						
SUMG	Summit	75.75	13	eP	P	01 10 10.1	-2.1
	30nm,1.6s,mb5.0						
MCK	McKinley	76.90	336	eP	P	01 10 17.4	-1.4
KTH	Kantishna Hill	77.66	335	eP	P	01 10 22.0	-1.1
BPAW	Bear Paw Mtn.	77.88	336	eP	P	01 10 22.6	-1.7
	10nm,1.1s,mb4.7						
COLD	Coldfoot	78.71	339	eP	P	01 10 28.4	-0.5
	8.6nm,1.2s,mb4.6						
DBIC	Dimbokro	79.45	84	LR	LR	01 43 26.6	
	comp=Z,73nm,19.8s,MS4.0,baz=256,slow=34						
ESDC	Sonseca Array	81.27	50	P	P	01 10 42.4	-0.9
	2.3nm,1.0s,mb4.0,baz=278,slow=4.9,SNR=7.4						
ESDC				LR	LR	01 41 20.4	
	comp=Z,52nm,18.7s,MS3.9,baz=165,slow=32						
TORD	Torodi Ar. Bea	85.78	77	P	P	01 11 05.1	-1.8
	2.5nm,1.0s,mb4.4,baz=296,slow=5.4,SNR=11						
TORD				LR	LR	01 53 39.8	
	comp=Z,88nm,18.1s,MS4.2,baz=195,slow=39						
TORD	Torodi Ar. Bea	85.78	77	P	P	01 11 05.1	-1.8
TORD				LR	LR	01 53 39.8	
NOA	NORSAR Array B	90.82	29	LR	LR	01 47 43.0	
	comp=Z,99nm,21.8s,MS4.2,baz=265,slow=32						
KEST	Kesra	91.82	54	LR	LR	01 46 13.6	
	comp=Z,36nm,19.7s,MS3.8,baz=323,slow=31						
QSPA	South Pole Qui	92.28	180	P	P	01 11 32.5	-3.9
	1.6nm,0.8s,mb4.4,baz=225,slow=2.9,SNR=2.3						
QSPA	South Pole Qui	92.28	180	P	P	01 11 34.4	-2.0
GERES	GERESS Array B	93.72	41	P	P	01 11 43.1	-0.6
	0.3nm,0.8s,mb3.8,baz=261,slow=8.0,SNR=3.6						
GERES				LR	LR	01 46 39.5	
	comp=Z,124nm,21.1s,MS4.3,baz=26,slow=31						
FINES	FINESS Array B	97.73	27	LR	LR	01 50 35.3	
	comp=Z,86nm,18.6s,MS4.3,baz=63,slow=32						
DZM	Mont Dzumac	108.50	248	eLR	LR	01 48 41.4	
	161nm,24.6s						
ZALV	Zalesovo Beam	123.30	8	PKP	PKPdf	01 17 21.0	-2.6
	0.5nm,0.6s,baz=318,slow=1.9,SNR=2.5						
MDJ	Mudanjiang	124.32	331	PKP	PKPdf	01 17 24.5	-1.4
KURK	Kurchatov	125.30	13	PKP	PKPdf	01 17 24.0	-3.6
	0.6nm,0.5s,baz=335,slow=2.4,SNR=5.2						
CN2	Changchun	126.88	333	ePKP	PKPdf	01 17 26.5	-4.4
CN2				PP	PP	01 19 27.3	-0.4
CN2				AMB	AMB		
	comp=Z,90nm,4.0s						
CN2				LR	LR		
	comp=N,130nm,20.0s,MS4.7						
CN2				LR	LR		
	comp=E,100nm,20.0s,MS4.7						
CN2				LR	LR		
	comp=Z,100nm,22.0s,MS4.5						
MKAR	Makanchi Array	129.80	12	PKP	PKPdf	01 17 33.4	-3.0
	comp=Z,0.7nm,0.8s,baz=347,slow=4.2,SNR=4.5						
KSRS	Korea Array	130.38	326	PKP	PKPdf	01 17 34.5	-3.2
	comp=Z,0.9nm,0.6s,baz=50,slow=1.6,SNR=4.7						
BJI	Beijing	133.86	338	PKP	PKPdf	01 17 42.5	-1.7
BJI				SS	SS	01 37 58.5	+1.4
BJI				LR	LR		
	comp=N,100nm,18.0s,MS4.8						
BJI				LR	LR		
	comp=E,130nm,18.4s,MS4.8						
BJI				LR	LR		
	comp=Z,140nm,20.5s,MS4.7						
HHC	Hu-ho-hao-te	134.68	343	ePKP	PKPdf	01 17 44.3	-1.4
HHC				PKS		01 21 18.8	
HHC				SKS	SKSdf	01 24 49.5	-4.9
HHC				SKKS	SKKSac	01 27 10.0	-1.9
HHC				SS	SS	01 38 09.0	+2.3
HHC				AMB	AMB		
	comp=Z,64nm,7.7s						
HHC				LR	LR		
	comp=N,160nm,22.2s,MS4.9						
HHC				LR	LR		
	comp=E,200nm,20.6s,MS4.9						
HHC				LR	LR		
	comp=Z,100nm,20.8s,MS4.5						
ASAR	Alice Springs	137.19	237	PKP	PKPdf	01 17 45.8	-5.1
	comp=Z,0.9nm,0.8s,baz=108,slow=2.0,SNR=7.3						
NJ2	Nanjing	139.34	329	ePKP	PKPdf	01 17 53.0	-1.6
LZH	Lanzhou	141.08	349	ePKP	PKPdf	01 17 57.0	-0.7
LZH				sPKP		01 18 11.0	
ENH	Enshi	145.02	339	ePKPbc	PKPbc	01 18 02.5	-1.6
GYA	Guiyang	149.50	340	ePKPbc	PKPdf	01 18 09.8	-2.6
GYA				PKPab	PKPab	01 18 21.5	-0.1
GYA				PKS		01 21 44.3	
GYA				PP	PP	01 21 51.8	+3.9
GYA				AMB	AMB		
	comp=Z,90nm,8.0s						
CMAR	Chiang Mai Arr	159.15	351	PKP	PKPdf	01 18 23.9	-2.1
	comp=Z,1.5nm,0.3s,baz=8.5,slow=3.6,SNR=3.6						
CMAR				PKPab	PKPab	01 19 01.1	-1.5
	comp=Z,1.2nm,0.3s,baz=341,slow=5.2,SNR=2.3						

GUC 26 01:01:18.3±0.8, 31°.78S×72°.23W, h29km±3km, MD4.0, ML4.0, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	Papudo	1.01	138	⇑iP	Pn	01 01 36.6	0.0
PACH				i S	Sn	01 01 50.0	+0.1
IHA	Instituto Hidr	1.34	158	eP	Pn	01 01 41.4	+0.2
IHA				i S	Sn	01 01 58.7	+0.7
OVCH	Ovalle	1.46	37	eP	Pn	01 01 43.3	+0.5
OVCH				i S	Sn	01 02 02.8	+1.8
OVCH				AML	AML	01 02 08.9	
	comp=E,8μm,0.6s						
PEL	Peldehue	1.89	137	⇓iP	Pn	01 01 49.8	+1.2
PEL				i S	Sn	01 02 14.5	+3.0
PEL				AML	AML	01 02 22.1	
	comp=E,4μm,0.5s						
TLL	Tololo Astrono	2.02	38	eP	Pn	01 01 52.1	+1.7
TLL				eS	Sn	01 02 18.2	+3.5
TLL				AML	AML	01 02 25.7	
	comp=N,1μm,0.7s						
ANTU	Antumapu	2.24	143	eS	Sn	01 02 22.8	+2.6
ANTU				AML	AML	01 02 33.3	
	comp=E,1μm,0.5s						
FCH	Farellones	2.25	134	⇑iP	Pn	01 01 49.6	-4.0
FCH				i S	Sn	01 02 17.5	-3.0
FCH				AML	AML	01 02 26.9	
	comp=E,748nm,0.5s						
CHCH	Chadas Angostu	2.53	149	eP	Pn	01 01 59.0	+1.6

*IDC **26** 01:10:52.5±7.6, 34°.74N×70°.99E, h0km, mb3.8/3,*
mb1 3.9/7, mb1mx3.5/29, mbtmp3.9/7, ML3.5/4, Error ellipse: s-maj=125.6km s-min=40.9km az=157.0
*BJI **26** 01:11:17.0, 36°.48N×70°.93E, h113km, mB4.7/5, mb4.7/10*
*ISCJB **26** 01:11:18.6±0.5, 36°.53N±0°.03×70°.83E±0°.07, h115km±6km, mb4.3/7, Error ellipse: s-maj=9.1km s-min=5.2km az=1.4*
*NEIC **26** 01:11:19.4±1.0, 36°.42N×70°.92E, h125km±12km, mb4.2/4, Error ellipse: s-maj=23.3km s-min=10.3km az=133.0*
*NNC **26** 01:11:19.0±13.0, 36°.88N×70°.75E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=118.8km s-min=90.3km az=151.0*

ISC 26 01:11:19.9±0.4, 36°.51N±0°.03×70°.81E±0°.07, h114km±6km, h128km±1.3km; pP-P, n33, σ1s05/45, mb4.3/7, 6C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.44	217	ePn	Pn	01 11 58.6	-0.1
KBL				eSn	Sn	01 12 28.4	0.0
CEP	Cherat	2.83	161	⇑P	Pn	01 12 03.4	-0.4
CEP				S	Sn	01 12 37.0	-0.5
CHCP	Chirah Chowk	3.49	144	P	Pn	01 12 12.0	-0.4
KSH	Kashi	5.06	52	P	Pn	01 12 30.0	-3.5
KSH				S	Sn	01 13 21.5	-9.3
KSH				smax			
	comp=N,260nm,0.9s						
KSH				smax			
	comp=E,160nm,0.8s						
UCH	Uchtor	6.39	26	P	Pn	01 12 52.3	+0.9
	SNR=14						
UCH	Uchtor	6.39	26	ePn	Pn	01 12 52.2	+0.8
	comp=E,1μm,1.0s						
UCH				eSn	Sn	01 14 03.5	+0.6
KZA	Kyzart	6.54	30	P	Pn	01 12 53.9	+0.5
	SNR=16						
EKS2	Erkin-Say	6.55	20	P	Pn	01 12 54.7	+1.0
	SNR=11						
EKS2	Erkin-Say	6.55	20	ePn	Pn	01 12 54.8	+1.1
	comp=E,7.3nm,0.5s						
EKS2				eSn	Sn	01 14 06.8	-0.1
KK31	Karatay Array	6.59	358	⇓P	Pn	01 12 55.2	+1.0
	comp=E,1.4nm,0.3s,baz=173,slow=12,SNR=44						
KK31				⇑S	Sn	01 14 05.8	-1.9
	comp=E,6.6nm,0.4s						
AAK	Ala-Archa	6.74	24	P	Pn	01 12 57.2	+1.0
	SNR=6.4						
AAK	Ala-Archa	6.74	24	Pn	Pn	01 12 57.1	+0.9
	comp=E,0.0nm,0.3s,baz=178,slow=8.3,SNR=13						
AAK	Ala-Archa	6.74	24	ePn	Pn	01 12 57.0	+0.8
	comp=E,6.3nm,0.3s						
CHMS	Chumysh	7.15	24	P	Pn	01 13 02.2	+0.4
	SNR=6.9						
TKM2	Tokmak 2	7.38	28	⇑P	Pn	01 13 05.2	+0.3
	comp=E,2.2nm,0.5s						
TKM2				⇑S	Sn	01 14 23.5	-3.5
	comp=E,6.7nm,0.9s						
TKM2	Tokmak 2	7.38	28	P	Pn	01 13 06.1	+1.1
	SNR=7.2						
TKM2	Tokmak 2	7.38	28	ePn	Pn	01 13 05.3	+0.4
	comp=E,3.4nm,0.4s						
MKAR	Makanchi Array	13.37	36	Pn	Pn	01 14 23.7	-1.2
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=4.8						
AB31	Akbulak array	15.00	331	P	Pn	01 14 44.9	-0.8
	comp=E,0.8nm,0.3s,baz=153,slow=13,SNR=54						
AB31				⇑S	Sn	01 17 22.1	-9.3
	comp=E,1.4nm,0.6s,baz=152,slow=22,SNR=7.4						
ABKAR	Akbulak array	15.00	331	ePn	Pn	01 14 45.1	-0.6
	comp=E,1.8nm,0.3s						
ABKAR				eSn	Sn	01 17 22.5	-8.8
KURK	Kurchatov	15.27	19	Pn	Pn	01 14 46.7	-2.4
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=9.5						
AKTK	Aktyubinsk	16.69	330	P	Pn	01 15 08.3	+1.6
AKTO	Aktyubinsk	16.69	330	⇑P	Pn	01 15 07.5	+0.8
	comp=E,0.8nm,0.8s						
AKTO	Aktyubinsk	16.69	330	P	Pn	01 15 08.3	+1.6
	comp=E,0.4nm,0.3s,baz=147,slow=11,SNR=26						
ZAA0	Zalesovo Array	19.97	25	eP	P	01 15 42.7	-0.1
ZALV	Zalesovo Beam	19.97	25	P	P	01 15 42.6	-0.2
	comp=E,2.3nm,0.4s,baz=222,slow=11,SNR=12						
LZH	Lanzhou	26.56	81	eP	P	01 16 43.5	-3.5
LZH				pP	pP	01 17 11.0	-0.8
LZH				sP	sP	01 17 25.0	-0.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
KMI	Kunming	29.55	104	P	P	01 17 15.3	+1.6
KMI				pP	pP	01 17 42.3	+3.5
KMI				PP	PP	01 18 16.0	-6.5
KMI				S	S	01 22 00.5	+0.3
KMI				SS	SS	01 23 42.5	-28
KMI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.6						
KMI				pmax	pmax		
	comp=Z,45nm,5.9s						
KMI				LR	LR		
	comp=N,110nm,16.3s						
KMI				LR	LR		
	comp=E,92nm,19.2s						
KMI				LR	LR		
	comp=Z,65nm,16.3s						
HHC	Hu-ho-hao-te	31.90	70	eP	P	01 17 35.5	+1.2
HHC				pP	pP	01 18 02.8	+3.3
HHC				sP	sP	01 18 17.5	+4.8
HHC				PP	PP	01 18 47.3	-1.1
HHC				PcP	PcP	01 20 22.0	0.0
HHC				S	S	01 22 36.5	-0.2
HHC				ScP	ScP	01 23 52.5	-2.4
HHC				PcS	PcS	01 24 06.0	-0.7
HHC				SS	SS	01 24 38.5	-20
HHC				ScS	ScS	01 27 49.5	-3.9
HHC				pmax	pmax		
	comp=Z,29nm,1.2s,mb4.9						
HHC				pmax	pmax		
	comp=Z,93nm,5.0s						
HHC				LR	LR		
	comp=N,150nm,17.9s						
HHC				LR	LR		
	comp=E,590nm,16.7s						
HHC				LR	LR		
	comp=Z,120nm,14.6s						
GYA	Guiyang	32.02	98	P	P	01 17 36.5	+1.1
GYA				pP	pP	01 18 03.8	+3.2
GYA				sP	sP	01 18 18.0	+4.2
GYA				PP	PP	01 18 47.3	-2.6
GYA				PcP	PcP	01 20 22.8	+0.2
GYA				S	S	01 22 38.5	-0.3
GYA				sS	sS	01 23 25.5	+2.8
GYA				ScP	ScP	01 23 54.0	-1.5
GYA				ScS	ScS	01 27 51.8	-2.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
ARCES	ARCESS Array B	41.08	338	P	P	01 18 50.8	-0.9
	comp=Z,0.5nm,0.4s,mb3.7,baz=112,slow=8.5,SNR=12						
MDJ	Mudanjiang	44.53	61	P	P	01 19 18.5	-1.4
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,56nm,4.9s						
SPITS	Spitsbergen Ar	47.45	347	P	P	01 19 42.

CEYT	Ceyhan	0.64	135	*e*Pg		Pg	01	11 44.4	-1.0
YURE	YUREGIR	0.73	150	*e*P		Pg	01	11 47.8	+0.6
YURE				*e*S		Sg	01	11 59.3	+2.5
YURE	YUREGIR	0.73	150	*e*P		Pg	01	11 47.8	+0.6
YURE				*e*S		Sg	01	11 59.3	+2.5
MERS	Mersin	0.80	222	*e*PG		Pg	01	11 47.0	-1.4
MERS				*e*SG		Sg	01	11 58.6	-0.2
MERS	Mersin	0.80	222	*e*Pg		Pg	01	11 47.0	-1.4
MERS				*e*Sg		Sg	01	11 58.6	-0.2
KRTS	Karatas	0.91	170	*e*PG		Pg	01	11 49.4	-1.0
KRTS	Karatas	0.91	170	*e*Pg		Pg	01	11 49.4	-1.0
ANDN	Andirin	0.93	83	*e*P		Pg	01	11 50.0	-0.9
ANDN				*e*S		Sg	01	12 04.6	+1.5
ANDN	Andirin	0.93	83	*e*P		Pg	01	11 50.0	-1.0
ANDN				*e*S		Sg	01	11 04.6	+1.5
AVNT	Avonos	1.33	349	*e*P		Pn	01	11 43.9	-14
AVNT				*e*S		Sb	01	12 03.2	-12
AVNT	Avonos	1.33	349	*e*P		Pn	01	11 43.8	-14
AVNT				*e*S		Sb	01	12 03.2	-12
KMRS	Kahramanmaras	1.37	88	*e*PN		Pn	01	11 57.5	-0.6
KMRS	Kahramanmaras	1.37	88	*e*Pn		Pn	01	11 57.5	-0.6
BNN	Bunyan	1.48	21	*e*PN		Pn	01	11 59.9	+0.2
BNN	Bunyan	1.48	21	*e*Pn		Pn	01	11 59.9	+0.2
SULT	Sultanhani-AKS	1.51	299	*e*PN		Pn	01	12 00.2	+0.1
SULT	Sultanhani-AKS	1.51	299	*e*Pn		Pn	01	12 00.2	+0.1
HTY	Hatay	1.55	150	*e*PN		Pn	01	12 00.7	+0.1
HTY	Hatay	1.55	150	*e*Pn		Pn	01	12 00.7	+0.1
GAZ	Gaziantep	1.65	100	*e*PN		Pn	01	12 00.9	-1.0
GAZ	Gaziantep	1.65	100	*e*Pn		Pn	01	12 00.9	-1.0
SARI	SarD1z-Kayseri	1.70	44	*e*PN		Pn	01	11 57.9	-4.9
SARI	SarD1z-Kayseri	1.70	44	*e*Pn		Pn	01	11 57.9	-4.8
IKL	Isikli	1.72	225	*e*PN		Pn	01	12 03.0	+0.1
IKL	Isikli	1.72	225	*e*Pn		Pn	01	12 03.0	+0.1
HDMB	Hadim	2.21	258	*e*PN		Pn	01	12 10.1	+0.4
HDMB	Hadim	2.21	258	*e*Pn		Pn	01	12 10.1	+0.4
KONT	Konya--Tatoy	2.29	283	*e*PN		Pn	01	12 11.3	+0.5
KONT	Konya--Tatoy	2.29	283	*e*Pn		Pn	01	12 11.3	+0.5
DARE	Darende-Malaty	2.54	54	*e*PN		Pn	01	12 09.1	-5.2
DARE	Darende-Malaty	2.54	54	*e*Pn		Pn	01	12 09.1	-5.2
MYA	Malataya	2.71	71	*e*PN		Pn	01	12 17.2	+0.7
MYA	Malataya	2.71	71	*e*Pn		Pn	01	12 17.2	+0.7

MAN 26 01:12:44, 14°.63N×119°.84E, h15km, mb5.1, ML4.0, MS4.2, Luzon

*ISCJB **26** 01:47:18.9±0.4, 39°.86N±0°.03×38°.98E±0°.04, h10km, Error ellipse: s-maj=4.3km s-min=3.3km az=42.6*
*CSEM **26** 01:47:18.9±0.2, 39°.84N×39°.05E, h2km, MD3.2, Error ellipse: s-maj=4.3km s-min=3.6km az=108.0*
*DDA **26** 01:47:18.7, 39°.89N×38°.94E, h7km±4km, Md3.0*
*ISK **26** 01:47:18.1, 39°.87N×39°.05E, h5km, MD3.2*
ISC 26 01:47:19.1±0.5, 39°.86N±0°.03×39°.00E±0°.04, h5km±7km, n34, σ0°75/48, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	Kelkit	0.35	34	⇓*i*P	Pg	01 47 26.5	+0.7
KELT				*i* S	Sg	01 47 31.5	+1.1
KELT	Kelkit	0.35	34	*i* P	Pg	01 47 26.5	+0.7
KELT				*i* S	Sg	01 47 31.5	+1.1
GUMT	Gumushane	0.70	31	*e*PG	Pg	01 47 31.9	-0.7
GUMT				*e*SG	Sg	01 47 41.5	-0.2
GUMT	Gumushane	0.70	31	*e*Pg	Pg	01 47 31.9	-0.7
GUMT				*e*Sg	Sg	01 47 41.5	-0.2
KEMA	Kemaliye	0.71	214	⇓*i*P	Pg	01 47 32.6	-0.2
KEMA				*i* S	Sg	01 47 42.4	+0.5
KEMA	Kemaliye	0.71	214	*i* P	Pg	01 47 32.6	-0.1
KEMA				*i* S	Sg	01 47 42.4	+0.5
PTK	Pertek	1.01	163	*e*PG	Pg	01 47 37.2	-1.3
PTK	Pertek	1.01	163	*e*Pg	Pg	01 47 37.2	-1.3
ESPY	Espiye-Giresun	1.08	349	*e*PG	Pg	01 47 39.2	-0.5
ESPY	Espiye-Giresun	1.08	349	*e*Pg	Pg	01 47 39.2	-0.6
KOPT	Kop Dagi	1.16	82	*e*P	Pg	01 47 41.2	-0.2
KOPT				*e*S	Sg	01 47 59.3	+2.9
KOPT	Kop Dagi	1.16	82	*e*P	Pg	01 47 41.2	-0.2
KOPT				*e*S	Sg	01 47 59.3	+2.9
GRSN	GIRESUNGRSN	1.20	332	*i* P	Pg	01 47 42.1	0.0
GRSN				*i* S	Sg	01 47 56.9	-0.8
GRSN	GIRESUNGRSN	1.20	332	*i* P	Pg	01 47 42.2	0.0
GRSN				*i* S	Sg	01 47 56.9	-0.8
MACK	Trabzon	1.23	28	*e*P	Pg	01 47 42.5	-0.2
MACK				*e*S	Sg	01 47 58.9	+0.2
MACK	Trabzon	1.23	28	*e*P	Pg	01 47 42.5	-0.2
MACK				*e*S	Sg	01 47 58.9	+0.3
KTUT	Trabzon	1.27	27	*e*PN	Pn	01 47 42.4	-1.1
KTUT	Trabzon	1.27	27	*e*Pn	Pn	01 47 42.4	-1.1
DARE	Darende-Malaty	1.30	226	*e*PN	Pn	01 47 50.4	+6.5
SVRC	Sivrice-ELAZID	1.50	171	*e*PN	Pn	01 47 46.4	-0.3
SVRC	Sivrice-ELAZID	1.50	171	*e*Pn	Pn	01 47 46.4	-0.3
BINT	Bingol	1.52	130	*e*PN	Pn	01 47 46.9	0.0
BINT	Bingol	1.52	130	*e*Pn	Pn	01 47 46.9	0.0
SVSK	Karacayir	1.54	273	*e*PN	Pn	01 47 47.5	+0.2
SVSK	Karacayir	1.54	273	*e*Pn	Pn	01 47 47.5	+0.2
MYA	Malataya	1.60	197	*e*PN	Pn	01 47 48.1	+0.1
MYA	Malataya	1.60	197	*e*Pn	Pn	01 47 48.1	+0.1
EZM	Erzurum	1.82	88	*e*PN	Pn	01 47 50.5	-0.5
ERBA	Erbaa	1.91	296	*e*P	Pg	01 47 55.2	-0.4
ERBA				*e*S	Sg	01 48 20.9	+0.6
ERBA	Erbaa	1.91	296	*e*P	Pg	01 47 55.2	-0.4
ERBA				*e*S	Sg	01 48 20.9	+0.6
BNN	Bunyan	2.65	249	*e*PN	Pn	01 48 03.2	+0.8
BNN	Bunyan	2.65	249	*e*Pn	Pn	01 48 03.2	+0.8
CORM	Corum	3.37	277	*e*PN	Pn	01 48 13.5	+1.1
CORM	Corum	3.37	277	*e*Pn	Pn	01 48 13.5	+1.1

DJA 26 01:58:40, 5°.24N×95°.41E, h1km, MLv4.2/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	0.28	336	P	Pg	01 58 47.4	+2.0
TSI	Tuntungan	3.59	119	P	Pn	01 59 31.8	-5.0
KULM	Kulim	5.22	89	P	Pn	01 59 49.9	-9.3
	7.3nm,1.3s,0.0nm						
IPM	Ipoh	5.65	97	P	Pn	02 00 05.9	+0.8
	9.8nm,2.0s,0.0nm						

*ISCJB **26** 02:01:04.8±1.2, 35°.84N±0°.08×130°.14E±0°.08, h15km±24km, Error ellipse: s-maj=15.4km s-min=8.0km az=149.9*
*JMA **26** 02:01:05.0±0.1, 35°.84N×130°.15E, h16km, M2.4*
*KMA **26** 02:01:06.0, 35°.86N×130°.03E, ML2.5*
ISC 26 02:01:04.9±1.5, 35°.86N±0°.07×130°.11E±0°.05, h16km±14km, n13, σ0°37/18, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSPHA	Pohang	0.69	299	P	Pg	02 01 18.4	+0.1
KSPHA				S	Sg	02 01 27.3	-0.1
KSUSN	Ulsan	0.82	259	P	Pb	02 01 20.6	-0.1
KSYON	Yeongdeok	0.86	318	P	Pb	02 01 20.7	+0.5
KSDAG	Daegu	0.99	265	P	Pb	02 01 23.3	-0.4
KSDAG				S	Sb	02 01 36.1	-0.4
KSULJ	Uljin	1.01	326	P	Pb	02 01 24.2	+0.1
KSBUS	Busan	1.02	233	P	Pb	02 01 23.9	-0.2
KSADO	Andong	1.09	301	P	Pb	02 01 25.2	-0.1
JTU	Tsushima	1.45	204	P	Pn	02 01 30.5	0.0
JTU				*e*S	Sn	02 01 50.0	+0.8
JTY	Toyota	1.77	154	P	Pn	02 01 35.3	+0.4
JTY				S	Sn	02 01 56.5	-0.7
JHIK	Hikimi	1.99	131	*e*S	Sn	02 02 02.3	-0.3
JGT	Gotsu	2.00	114	P	Pn	02 01 38.5	+0.6
JGT				S	Sn	02 02 02.1	-0.5
JII	Iki	2.08	189	*e*S	Sn	02 02 05.0	+0.2
JHT	Toyohira	2.23	122	*e*S	Sn	02 02 08.7	+0.2

DJA 26 02:14:42, 0°.79S×126°.89E, h24km, MLv3.6/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.63	76	P	Pb	02 14 55.4	+1.0
TNTI	Ternate	1.62	17	P	Pn	02 15 09.8	+0.7
NLAI	Namlea	2.44	175	P	Pn	02 15 21.5	+1.1
APSI	Ampana	5.24	269	P	Pn	02 15 59.9	+1.0

CASC 26 02:47:24.6±3.1, 13°.83N×89°.40W, h0km±6km, MD3.6, 2C-4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	Boqueron	0.15	130	⇑*e*P	Pg	02 47 28.8	+1.3
SNJE	San Jose	0.20	280	⇓*i*P	Pg	02 47 29.1	+0.6
SNJE				*e*S	Sg	02 47 32.2	+1.0
SBLS	San Blas	0.22	272	⇓*e*P	Pg	02 47 29.5	+0.7
SNET	Serv Nac Est T	0.22	132	*e*P	Pg	02 47 29.5	+0.8
SNET				*e*S	Sg	02 47 33.0	+1.4
RTR	El Retiro	0.25	285	*e*P	Pg	02 47 30.2	+0.8
LBRS	Las Brisas	0.36	105	⇑*i*P	Pg	02 47 32.6	+1.1
LFRS	El Faro	0.39	122	⇓*i*P	Pg	02 47 32.7	+0.7
RBDL	Robledal	0.40	315	⇓*i*P	Pg	02 47 33.0	+0.8
RBDL				*e*S	Sg	02 47 38.6	+1.3
MTO2	Montecristo 2	0.57	4	*e*P	Pg	02 47 36.5	+1.0
MTO2				*e*S	Sg	02 47 44.9	+2.1
SNVI	San Vicente	0.59	112	*e*P	Pg	02 47 36.8	+1.0
SNVI				*e*S	Sg	02 47 46.0	+2.5
CAHU	Cacacuatique	1.16	93	*e*P	Pg	02 47 46.8	0.0
NBG	Las Nubes	1.19	309	*e*P	Pg	02 47 48.2	+0.9
NBG				*e*S	Sg	02 48 05.9	+3.1
MRL	Marmol	1.26	347	*e*P	Pg	02 47 49.6	+0.8
MRL				*e*S	Sg	02 48 07.7	+2.5
FUG	Fuego 3	1.53	294	*e*P	Pn	02 47 53.1	0.0
FUG				*e*S	Sn	02 48 14.2	+0.6
FG6		1.61	297	*e*P	Pn	02 47 55.5	+1.3
FG6				*e*S	Sn	02 48 18.0	+2.3
TP2	Tecpan 2	1.83	301	*e*P	Pn	02 47 58.4	+1.1
TP2				*e*S	Sn	02 48 26.7	+5.4
TGUH	Tegucigalpa,Un	2.08	84	*e*P	Pn	02 48 01.9	+1.3
TGUH				*e*S	Sn	02 48 31.6	+4.4
JAT	Jato	2.22	283	*e*S	Sn	02 48 35.2	+4.4
JAT				*e*P		02 48 05.1	

*ISCJB **26** 03:06:21.9±1.8, 36°.72S±0°.04×73°.41W±0°.07, h6km±12km, mb3.7/5, Error ellipse: s-maj=9.8km s-min=5.8km az=21.6*
*IDC **26** 03:06:21.4±1.3, 36°.82S×73°.27W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.9/15, mbtmp3.6/8, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/18, Error ellipse: s-maj=40.5km s-min=22.5km az=146.0*
*GUC **26** 03:06:24.3±0.8, 36°.74S×73°.33W, h21km±4km, ML4.1*
*NEIC **26** 03:06:24.0, 36°.74S×73°.33W, h21km, mb3.7/1, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Concepcion, Talcahuano and Tome; [II] at Santa Barbara.
ISC 26 03:06:22.7±1.2, 36°.73S±0°.04×73°.36W±0°.07, h3km±6km, n26, σ0°98/32, mb3.7/5, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	Cobquecura	0.75	38	⇓*i*P	Pg	03 06 37.8	+0.6
COCH				*i* S	Sg	03 06 47.9	+1.0
COCH				AML	AML	03 06 50.5	
	comp=N,7μm,0.5s						
CCHI	Chillan	1.04	84	*e*P	Pg	03 06 42.2	-0.5
CCHI				*i* S	Sg	03 06 55.7	-0.5
CCHI				AML	AML	03 07 02.1	
	comp=E,6μm,0.7s						
CNCO	Chanco	1.20	34	*e*P	Pg	03 06 44.7	-0.9
CNCO				*i* S	Sg	03 07 00.8	-0.4
TALC	Talca	1.93	47	*e*P	Pn	03 06 56.8	+0.4
TALC				*i* S	Sn	03 07 22.6	+1.3
TMU	Temuco	2.09	163	*e*P	Pn	03 06 59.3	+0.5
TMU				*i* S	Sn	03 07 24.9	-0.4
NICH	Los Niches	2.44	46	*e*P	Pn	03 07 04.2	+0.7
NICH				*e*S	Sn	03 07 34.1	+0.2
NICH				AML	AML	03 07 56.0	
	comp=Z,910nm,0.6s						
VLCH	Valdivia	3.08	178	*e*P	Pn	03 07 12.3	+0.1
VLCH				AML	AML	03 08 11.8	
	comp=N,2μm,0.8s						
CACH	El Canelo	3.44	42	*e*P	Pn	03 07 18.2	+0.9
CHCH	Chadas Angostu	3.56	39	*e*P	Pn	03 07 18.5	-0.4
PEL	Peldehue	4.20	32	*e*P	Pn	03 07 27.9	+0.3
FCH	Farellones	4.22	38	*e*P	Pn	03 07 28.8	+0.8
CFAA	Coronel Fontan	6.64	41	Pn	Pn	03 07 59.5	-1.7
	comp=N,0.3nm,0.3s,baz=207,slow=12,SNR=16						
CFAA				Sn	Sn	03 09 15.8	-1.7
	comp=N,0.1nm,0.3s,baz=210,slow=16,SNR=3.3						
CFAA				Lg		03 09 51.6	
	comp=N,0.2nm,0.3s,baz=95,slow=12,SNR=7.7						
CFAA	Coronel Fontan	6.64	41	Pn	Pn	03 07 59.5	-1.7
CFAA				Sn	Sn	03 09 15.8	-1.7
CFAA				Lg		03 09 51.6	
LCO	Las Campanas	8.01	17	*e*Pn	Pn	03 08 18.7	-1.4
	comp=N,12nm,0.5s						
LCO				*e*S	Sn	03 09 46.4	-4.9
TRQA	Tornquist	9.16	102	*e*Pn	Pn	03 08 38.6	+2.8
CPUP	Villa Florida	17.13	57	P	Pn	03 10 22.0	-1.2
	comp=N,0.3nm,0.3s,baz=217,slow=10,SNR=4.0						
CPUP				LR	LR	03 17 25.4	
	comp=N,69nm,18.9s,baz=277,slow=39						
LPAZ	La Paz	20.88	14	P	P	03 11 08.0	+1.9
	comp=N,2.8nm,0.8s,baz=176,slow=9.9,SNR=10						
LPAZ	La Paz	20.88	14	*e*P	P	03 11 08.5	+2.4
	comp=N,2.5nm,0.8s						
SIV	San Ignacio	23.36	31	P	P	03 11 32.7	+0.1
	comp=N,1.6nm,0.7s,mb3.5,baz=230,slow=13,SNR=9.9						
TXAR	Lajitas Array	71.61	332	P	P	03 17 44.4	-1.0
	comp=N,0.9nm,0.6s,mb3.9,baz=153,slow=8.0,SNR=9.8						
NVAR	Mina Array Bea	85.52	326	P	P	03 19 02.3	+0.4
	comp=N,0.3nm,0.6s,mb3.7,baz=137,slow=5.5,SNR=4.4						
PDAR	Pinedale Array	85.72	334	P	P	03 19 03.1	+0.3
	comp=N,0.6nm,0.8s,mb3.9,baz=145,slow=3.6,SNR=5.3						
TORD	Torodi Ar. Bea	86.14	71	P	P	03 19 04.5	-1.0
	comp=N,0.5nm,1.0s,mb3.7,baz=222,slow=1.9,SNR=3.0						
BVAR	Borovoye Array	149.98	46	PKPbc	PKPbc	03 26 12.6	-1.4
	comp=N,0.4nm,0.5s,baz=46,slow=4.2,SNR=3.4						
MKAR	Makanchi Array	159.31	53	PKPab	PKPab	03 26 58.4	-1.2
	comp=N,0.2nm,0.4s,baz=322,slow=4.4,SNR=2.9						
KSRS	Korea Array	163.00	279	PKPab	PKPab	03 27 15.8	-0.3
	comp=N,4.2nm,0.7s,baz=137,slow=5.3,SNR=29						

*ISK **26** 03:24:44.7, 40°.04N×39°.98E, h5km, MD3.5*
*ISCJB **26** 03:24:45.5±0.3, 40°.05N±0°.02×40°.02E±0°.02, h10km, Error ellipse: s-maj=3.2km s-min=2.5km az=170.1*
*DDA **26** 03:24:45.4, 40°.00N×39°.97E, h20km±1km, Md3.8, Ml3.9*
*CSEM **26** 03:24:46.6±0.1, 40°.03N×40°.00E, h2km, ML3.9*
ISC 26 03:24:45.7±0.5, 40°.01N±0°.03×40°.01E±0°.02, h1km±5km, n65, σ1°28/87, 5C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.37	88	⇑*i*P	Pg	03 24 54.0	+1.2
KOPT				*i* S	Sg	03 25 01.1	+3.4
KOPT	Kop Dagi	0.37	88	*i* P	Pg	03 24 54.0	+1.2
KOPT				*i* S	Sg	03 25 01.1	+3.4
EZC	Erzincan	0.57	243	PG	Pg	03 24 56.5	0.0
KELT	Kelkit	0.60	284	⇓*i*P	Pg	03 24 57.2	+0.1
KELT				*i* S	Sg	03 25 05.3	+0.4
KELT	Kelkit	0.60	284	*i* P	Pg	03 24 57.2	+0.1
KELT				*i* S	Sg	03 25 05.3	+0.5
GUMT	Gumushane	0.61	318	*e*PG	Pg	03 24 57.7	+0.3
GUMT				*e*SG	Sg	03 25 05.7	+0.5
GUMT	Gumushane	0.61	318	*e*Pg	Pg	03 24 57.7	+0.4
GUMT				*e*Sg	Sg	03 25 05.7	+0.5
MACK	Trabzon	0.95	349	⇓*i*P	Pg	03 25 04.2	+0.3
MACK				*i* S	Sg	03 25 16.9	+0.6
MACK	Trabzon	0.95	349	*i* P	Pg	03 25 04.2	+0.3
MACK				*i* S	Sg	03 25 16.9	+0.6
KTUT	Trabzon	0.99	349	*e*PG	Pg	03 25 04.4	-0.4
KTUT				*e*SG	Sg	03 25 18.9	+1.2
KTUT	Trabzon	0.99	349	*e*Pg	Pg	03 25 04.4	-0.4
KTUT				*e*Sg	Sg	03 25 18.9	+1.2
EZM	Erzurum	1.04	95	*e*PG	Pg	03 25 06.3	+0.6
ERZM	Erzurum	1.05	95	⇓*i*P	Pg	03 25 06.2	+0.4
ERZM				*e*S	Sg	03 25 21.4	+2.1
ERZM	Erzurum	1.05	95	*i* P	Pg	03 25 06.2	+0.5
ERZM				*e*S	Sg	03 25 21.4	+2.1
BINT	Bingol	1.19	162	*e*PN	Pn	03 25 09.0	-0.5
BINT	Bingol	1.19	162	*e*Pn	Pn	03 25 09.0	-0.4
PTK	Pertek	1.21	203	*e*PN	Pn	03 25 08.4	-1.3
PTK	Pertek	1.21	203	*e*Pn	Pn	03 25 08.5	-1.3
ESPY	Espiye-Giresun	1.33	313	*e*PN	Pn	03 25 10.2	-1.3
ESPY	Espiye-Giresun	1.33	313	*e*Pn	Pn	03 25 10.2	-1.3
PZAR	Pazar-Rize	1.35	30	*e*PN	Pn	03 25 11.2	-0.5
PZAR	Pazar-Rize	1.35	30	*e*Pn	Pn	03 25 11.2	-0.5
KEMA	Kemaliye	1.39	238	⇑*i*P	Pn	03 25 10.2	-1.9
KEMA				*i* S	Sg	03 25 30.3	+0.1
KEMA	Kemaliye	1.39	238	*i* P	Pn	03 25 10.2	-1.9
KEMA				*i* S	Sg	03 25 30.3	+0.1
DDEM	Demirkent	1.59	56	⇑*i*P	Pg	03 25 15.0	-1.2
DDEM				*i* S	Sg	03 25 38.3	+1.4
DDEM	Demirkent	1.59	56	*i* P	Pg	03 25 15.0	-1.2
DDEM				*i* S	Sg	03 25 38.3	+1.4
GRSN	GIRESUNGRSN	1.61	305	⇑*i*P	Pg	03 25 14.9	-1.7
GRSN				*i* S	Sg	03 25 37.4	-0.2
GRSN	GIRESUNGRSN	1.61	305	*i* P	Pg	03 25 14.9	-1.7
GRSN				*i* S	Sg	03 25 37.4	-0.1
SVRC	Sivrice-ELAZID	1.72	199	*e*PN	Pn	03 25 17.2	+0.5
SVRC	Sivrice-ELAZID	1.72	199	*e*Pn	Pn	03 25 17.2	+0.5
DBOC	Borcka	1.83	43	⇑*i*P	Pg	03 25 19.4	-1.4
DBOC				*i* S	Sg	03 25 44.4	-0.2
DBOC	Borcka	1.83	43	*i* P	Pg	03 25 19.4	-1.5
DBOC				*i* S	Sg	03 25 44.4	-0.3
ARTV	Artvin	1.87	51	*e*P	Pg	03 25 20.1	-1.5
ARTV				*e*S	Sg	03 25 45.9	0.0
ARTV	Artvin	1.87	51	*e*P	Pg	03 25 20.1	-1.5
ARTV				*e*S	Sg	03 25 45.9	0.0
BCA	Borcka	1.89	40	*e*PN	Pb	03 25 19.5	-1.4
BCA	Borcka	1.89	40	*e*Pn	Pb	03 25 19.5	-1.4
DARE	Darende-Malaty	2.01	239	*e*PN	Pg	03 25 27.3	+3.1
MYA	Malataya	2.08	217	*e*PN	Pb	03 25 22.5	-1.8
MYA	Malataya	2.08	217	*e*Pn	Pb	03 25 22.5	-1.8
BTMT	Batman	2.15	147	*e*PN	Pb	03 25 23.6	-1.7
BTMT	Batman	2.15	147	*e*Pn	Pb	03 25 23.6	-1.7
SVSK	Karacayir	2.32	269	*e*PN	Pb	03 25 25.5	-2.8
SVSK	Karacayir	2.32	269	*e*Pn	Pb	03 25 25.5	-2.8
AGRB	Hanur-Agry	2.34	100	*e*PN	Pb	03 25 26.4	-2.2
AGRB	Hanur-Agry	2.34	100	*e*Pn	Pb	03 25 26.4	-2.2
TOKT	Tokat	2.67	278	*e*PN	Pn	03 25 30.4	+0.6
TOKT	Tokat	2.67	278	*e*Pn	Pn	03 25 30.5	+0.6
URFA	Urfa	2.73	200	*e*PN	Pn	03 25 31.8	+1.2
URFA	Urfa	2.73	200	*e*Pn	Pn	03 25 31.8	+1.2
SARI	SarD1z-Kayseri	2.89	244	*e*PN	Pg	03 25 38.5	-2.7
SARI	SarD1z-Kayseri	2.89	244	*e*Pn	Pg	03 25 38.5	-2.6
KVT	Kavak	3.21	291	*e*PN	Pn	03 25 38.0	+0.8
KVT	Kavak	3.21	291	*e*Pn	Pn	03 25 38.0	+0.8
BNN	Bunyan	3.43	252	*e*PN	Pn	03 25 41.4	+1.2
BNN	Bunyan	3.43	252	*e*Pn	Pn	03 25 41.4	+1.2
YOZ	Yozgat	3.63	266	*e*PN	Pn	03 25 44.3	+1.3
YOZ	Yozgat	3.63	266	*e*Pn	Pn	03 25 44.3	+1.3
ONI	Oni	3.66	44	P	Pg	03 25 53.9	-1.9
CUKT	Cukurca	3.94	133	*e*PN	Pn	03 25 49.4	+2.1
CUKT	Cukurca	3.94	133	*e*Pn	Pn	03 25 49.4	+2.1
DIKM	Dikmen	3.96	296	*e*PN	Pn	03 25 48.8	+1.2
DIKM	Dikmen	3.96	296	*e*Pn	Pn	03 25 48.8	+1.2
CORM	Corum	4.13	274	*e*PN	Pn	03 25 51.2	+1.3
CORM	Corum	4.13	274	*e*Pn	Pn	03 25 51.2	+1.3
KOZT	Kozan	4.13	234	*e*PN	Pn	03 25 51.5	+1.6

*NEIC **26** 03:53:18.2, 55°.87N×153°.28W, h14km, mb4.7/90, ML4.5(AEIC), After AEIC.*
*IDC **26** 03:53:18.4±0.6, 56°.12N×153°.75W, h0km, mb4.4/23, mb1 4.5/26, mb1mx4.5/31, mbtmp4.4/26, ML3.9/3, MS4.5/15, Ms1 4.5/15, ms1mx4.2/32, Error ellipse: s-maj=17.2km s-min=10.9km az=20.0*
*MOS **26** 03:53:19.0±0.8, 56°.18N×153°.84W, h13km, mb4.9/70, MS4.6/19, Error ellipse: s-maj=9.8km s-min=4.6km az=90.7*
*BJI **26** 03:53:20.0, 56°.36N×154°.07W, h14km, mB5.0/22, mb4.8/31, Ms5.0/21, Ms7 4.7/20*
*ISCJB **26** 03:53:22.0±0.1, 56°.17N±0°.02×153°.73W±0°.04, h33km, mb4.6/138, MS4.7/35, Error ellipse: s-maj=3.9km s-min=2.1km az=35.6*
ISC 26 03:53:19.7±0.8, 56°.13N±0°.02×153°.82W±0°.03, h6km±5km, h19km±2.9km: pP-P, n589, σ0°60/602, mb4.6/138, MS4.7/35, 151C-139D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	1.13	15	P	Pg	03 53 40.6	-0.7
OHAK				S	Sg	03 53 58.1	+2.0
KDAK	Kodiak Island	1.79	22	Pn	Pn	03 53 50.5	-0.6
KDAK				LR	LR	03 54 16.2	
	comp=Z,2μm,19.3s,slow=32

BILL Bilibino 21.68 319 eP P 03 58 10.2 -0.5
comp=Z,30nm,1.3s,mb4.6
LON Longmire 21.87 102 eP P 03 58 12.8 -0.1
LON pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
LON Longmire 21.87 102 eP P 03 58 12.8 -0.1
comp=Z,9.8nm,0.9s,mb4.2
F04A Amboy 22.04 104 ⇑P P 03 58 15.2 +0.5
baz=22
B08A Colville Reser 22.31 96 ⇓P P 03 58 17.2 -0.3
baz=22,SNR=14
EBG Ellensburg 22.45 100 P P 03 58 19.3 +0.2
G04A Mulino 22.47 106 ⇑P P 03 58 18.8 -0.5
baz=22,SNR=8.4
RNO Roman Nose 22.66 110 P P 03 58 21.9 +0.5
HOOD Mount Hood Mea 22.84 105 eP P 03 58 23.3 0.0
comp=Z,158nm,1.0s,mb5.4
B09A Rice 22.93 95 ⇑P P 03 58 24.0 -0.2
baz=23
H04A Detroit Lake 22.97 107 ⇓P P 03 58 23.8 -0.8
baz=23,SNR=13
OD2 Odessa Site #2 23.20 97 eP P 03 58 26.5 -0.5
comp=Z,15nm,1.1s,mb4.3
D08A Wollman Farm, 23.28 98 ⇓P P 03 58 27.2 -0.6
baz=23
EDM Edmonton 23.34 80 eP P 03 58 28.7 +0.3
IRO Indian Ridge 23.38 108 P P 03 58 29.7 +0.7
F07A Phinny Hill Vi 23.42 102 ⇓P P 03 58 29.3 -0.1
baz=23
NEW Newport 23.59 94 eP P 03 58 30.8 -0.3
NEW pmax pmax
comp=Z,22nm,1.1s
NEW Newport 23.59 94 eP P 03 58 30.8 -0.3
comp=Z,22nm,1.1s,mb4.5
A11A Hall Mountain, 23.64 92 ⇓P P 03 58 31.1 -0.4
baz=24,SNR=6.7
B11A Sandpoint 23.92 93 ⇑P P 03 58 33.5 -0.6
baz=24,SNR=6.2
BBOR Butler Butte 23.93 110 P P 03 58 35.0 +0.9
VIPM Ingram Point 23.93 105 P P 03 58 34.5 +0.3
HUMO Hull Mountain 23.98 111 eP P 03 58 35.5 +0.9
comp=Z,64nm,1.5s,mb4.8
E09A Wood Farm, Sta 24.03 98 ⇑P P 03 58 34.3 -0.8
baz=24
D10A Wagner Farm, O 24.19 97 ⇑P P 03 58 35.6 -0.9
baz=24,SNR=8.6
KTRM Thompson Ridge 24.26 113 P P 03 58 38.1 +0.8
G08A Pilot Rock 24.33 102 ⇓P P 03 58 37.4 -0.4
baz=24
LNOR Lincton Mounta 24.34 100 eP P 03 58 39.1 +1.2
LNOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
LNOR Lincton Mounta 24.34 100 eP P 03 58 39.1 +1.2
comp=Z,5.6nm,0.8s,mb4.0
D11A Klaveano Farm, 24.72 96 ⇑P P 03 58 40.9 -0.4
baz=25,SNR=9.4
YBH Yreka Blue Hor 24.73 112 P P 03 58 41.2 -0.3
comp=Z,6.3nm,0.9s,mb4.2,baz=305,slow=4.9,SNR=20
YBH LR LR 04 06 22.0
comp=Z,2µm,18.1s,MS4.6,baz=314,slow=32
YBH Yreka Blue Hor 24.73 112 P P 03 58 41.2 -0.3
YBH pmax pmax
comp=Z,6.0nm,0.9s
YBH MLR MLR
comp=Z,2µm,18.1s
YBH Yreka Blue Hor 24.73 112 eP P 03 58 42.2 +0.7
comp=Z,111nm,2.2s,mb5.0
I07A Izee 24.81 104 ⇑P P 03 58 42.0 -0.3
baz=25,SNR=19
F10A Beach Ranch, E 24.86 99 ⇓P P 03 58 42.1 -0.6
baz=25,SNR=7.1
WALA Waterton Lakes 24.96 90 eP P 03 58 45.6 +2.0
comp=Z,0.6nm,1.2s
H08A Prairie City 24.98 103 ⇑P P 03 58 43.2 -0.5
baz=25,SNR=20
K05A Summer Lake 24.98 108 ⇑P P 03 58 43.3 -0.5
baz=25,SNR=16
G09A Cove 24.99 100 ⇑P P 03 58 43.3 -0.6
baz=25,SNR=11
BSMT Bassoo Peak 25.13 93 eP P 03 58 45.8 +0.7
comp=Z,8.9nm,1.1s,mb4.2
E11A Bogner Ranch, 25.20 97 ⇓P P 03 58 45.0 -0.7
baz=25,SNR=12
D12A Red Ives Fores 25.26 95 ⇑P P 03 58 45.7 -0.6
baz=25
A14A Double T Ranch 25.28 89 ⇓P P 03 58 45.9 -0.6
baz=25,SNR=10
G10A Bishop Farm, J 25.34 100 ⇓P P 03 58 46.3 -0.7
baz=25,SNR=13
C13A Hot Springs 25.34 93 ⇓P P 03 58 46.6 -0.5
baz=25
H09A Durkee 25.44 101 ⇓P P 03 58 47.9 -0.1
baz=25,SNR=13
JTMT Jette 25.47 92 eP P 03 58 49.4 +1.2
comp=Z,16nm,1.0s,mb4.5
F11A Grangeville 25.51 98 ⇑P P 03 58 48.3 -0.2
baz=25,SNR=8.3
E12A Beaver Dam Sad 25.52 96 ⇑P P 03 58 48.7 0.0
baz=25,SNR=7.8
YBMT Yellow Bay 25.55 92 eP P 03 58 49.5 +0.6
comp=Z,15nm,1.0s,mb4.5
WDC Whiskeytown Da 25.66 114 eP P 03 58 50.4 +0.4
WDC pmax pmax
comp=Z,15nm,1.3s,mb4.4
WDC Whiskeytown Da 25.66 114 eP P 03 58 50.4 +0.4
comp=Z,15nm,1.3s,mb4.3
A15A Johnson Ranch, 25.66 89 ⇑P P 03 58 49.3 -0.6
baz=26,SNR=11
B14A Marquette Ranc 25.69 90 ⇓P P 03 58 49.6 -0.6
baz=26
D13A Huson 25.74 94 ⇓P P 03 58 50.2 -0.5
baz=26
G11A Walters Elk Ra 25.75 99 ⇑P P 03 58 50.4 -0.3
baz=26,SNR=12
C14A Swan Lake 25.75 92 ⇓P P 03 58 50.9 +0.1
baz=26,SNR=8.3
SWMT Swartz Lake 25.76 93 eP P 03 58 51.2 +0.4
comp=Z,8.5nm,1.0s,mb4.2
J08A Circle Bar Ran 25.85 105 ⇓P P 03 58 52.0 +0.3
baz=26,SNR=11
MOD Modoc 25.87 109 eP P 03 58 52.5 +0.6
comp=Z,85nm,1.9s,mb5.0
H10A Noah's Angus R 25.99 101 ⇑P P 03 58 52.5 -0.4
baz=26,SNR=17
F12A Elk City 26.09 97 ⇑P P 03 58 54.1 +0.3
baz=26,SNR=7.9
LBCM Butte Creek Ri 26.09 112 P P 03 58 54.3 +0.5
B15A Bradely Ranch, 26.12 90 ⇑P P 03 58 53.8 -0.3
baz=26,SNR=6.6
MSO Missoula 26.18 94 eP P 03 58 54.1 -0.5
comp=Z,3.9nm,0.8s,mb4.0
SLMT Seeley Lake 26.19 93 eP P 03 58 55.4 +0.7
comp=Z,7.5nm,1.0s,mb4.2
J09A Fry Pan Ranch, 26.25 104 ⇑P P 03 58 55.7 +0.4
baz=26,SNR=10
E13A Victor 26.27 95 ⇓P P 03 58 55.3 -0.1
baz=26
D14A Greenough 26.28 93 ⇓P P 03 58 55.4 -0.1
baz=26,SNR=7.0
H11A Donnelly 26.32 100 ⇑P P 03 58 56.2 +0.3
baz=26,SNR=16
C15A Salmond Ranch, 26.39 91 ⇑P P 03 58 56.1 -0.4
baz=26
WVOR Wild Horse Val 26.39 106 eP P 03 58 56.9 +0.3
WVOR pmax pmax
comp=Z,19nm,0.8s,mb4.7
WVOR Wild Horse Val 26.39 106 eP P 03 58 56.9 +0.3
comp=Z,19nm,0.8s,mb4.7
G12A Big Creek, Yel 26.43 98 ⇓P P 03 58 56.9 -0.1
baz=26
CHMT Chamberlain Mo 26.52 93 eP P 03 58 57.8 +0.1
comp=Z,2.0nm,0.8s,mb3.7
F13A Darby 26.58 96 ⇓P P 03 58 57.8 -0.5
baz=26
E14A Clinton 26.68 94 ⇑P P 03 58 58.6 -0.5
baz=27
A17A Triple J Farms 26.82 87 ⇓P P 03 59 00.2 -0.2
baz=27,SNR=6.4
D15A Lincoln 26.85 92 ⇓P P 03 59 00.8 +0.1
baz=27,SNR=5.2
I11A Placerville 26.86 101 ⇑P P 03 59 00.6 -0.2
baz=27
H12A Diamond D Ranc 27.06 99 ⇓P P 03 59 02.2 -0.3
baz=27
G13A Cobalt 27.06 97 ⇓P P 03 59 02.7 +0.1
baz=27
F14A Wisdom 27.10 95 ⇑P P 03 59 03.0 0.0
baz=27
K10A MacKenzie Ranc 27.11 104 ⇓P P 03 59 03.0 -0.1
baz=27
B17A L&G Farms, Che 27.12 88 ⇓P P 03 59 02.9 -0.2
baz=27
E15A Deer Lodge 27.14 93 ⇑P P 03 59 03.1 -0.3
baz=27
MFID Camas Ranch 27.26 102 ⇓P P 03 59 04.1 -0.2
baz=27
PET Petropavlovsk 27.29 284 eP P 03 59 09.0 +4.4
PET eS S 04 03 43.5 -0.6
PET pmax pmax
comp=Z,25nm,1.1s,mb4.7
PET pmax pmax
comp=Z,200nm,18.0s
PET pmax pmax
comp=Z,400nm,4.6s
PET MLR MLR
comp=Z,800nm,18.0s,MS4.3
PET MLR MLR
comp=Z,700nm,20.0s
A18A Metzger Ranch, 27.31 87 ⇑P P 03 59 04.5 -0.3
baz=27
BEKR Beckwourth 27.31 112 ⇑P P 03 59 04.6 -0.3
baz=27,SNR=6.4
SEY Seymchan 27.37 307 eP P 03 59 05.0 -0.2
H13A Challis 27.38 98 ⇓P P 03 59 05.7 +0.3
baz=27,SNR=9.5
I12A Atlanta 27.39 100 ⇑P P 03 59 05.2 -0.3
baz=27
D16A Dana Ranch, Ca 27.40 91 ⇓P P 03 59 05.4 -0.3
baz=27,SNR=7.0
HRY Holter Researc 27.43 92 eP P 03 59 05.6 -0.3
comp=Z,8.8nm,0.8s,mb4.3
K11A Parker Ranch, 27.57 103 ⇓P P 03 59 06.9 -0.3
baz=28,SNR=12
F15A Butte 27.58 94 ⇑P P 03 59 06.9 -0.3
baz=28
LRM Limekiln Ridge 27.61 94 eP P 03 59 07.9 +0.4
comp=Z,18nm,0.8s,mb4.7
E16A East Helena 27.62 92 ⇓P P 03 59 07.4 -0.1
baz=28
J12A Stokes Ranch, 27.77 101 ⇓P P 03 59 08.7 -0.2
baz=28,SNR=8.1
PETK Petropavlovsk- 27.77 284 P P 03 59 08.9 0.0
comp=Z,6.1nm,0.7s,mb4.3,baz=76,slow=12,SNR=11
PETK LR LR 04 10 39.3
comp=Z,405nm,20.6s,MS4.0,baz=175,slow=37
PETK Petropavlovsk- 27.77 284 P P 03 59 08.9 0.0
PETK pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
PETK MLR MLR
comp=Z,405nm,20.6s,MS4.0
L10A Juniper Basin 27.80 104 ⇓P P 03 59 09.2 -0.1
baz=28,SNR=8.5
D17A Six Diamond Ra 27.82 90 ⇑P P 03 59 08.4 -0.9
baz=28
H14A Leadore 27.84 97 ⇑P P 03 59 09.5 -0.1
baz=28,SNR=15
EGMT Eagleton 27.85 88 eP P 03 59 10.0 +0.4
comp=Z,9.8nm,1.0s,mb4.4
I13A Wildhorse Cree 27.87 99 ⇑P P 03 59 09.6 -0.2
baz=28,SNR=13
HLID Hailey 27.94 100 eP P 03 59 10.4 0.0
comp=Z,3.2nm,0.8s,mb4.0
G15A Dillon 27.99 95 ⇓P P 03 59 10.6 -0.3
baz=28
MCMT McKenzie Canyo 28.00 96 eP P 03 59 10.9 -0.1
comp=Z,2.7nm,0.7s,mb4.0
WCN Washoe City 28.04 112 ⇑P P 03 59 11.9 +0.5
baz=28
E17A Martinsdale 28.12 92 ⇓P P 03 59 12.0 0.0
baz=28
L11A Cat Creek Ranc 28.13 104 ⇑P P 03 59 12.2 0.0
baz=28,SNR=15
M10A I.L. Ranch, Tu 28.15 105 ⇑P P 03 59 12.3 -0.1
baz=28,SNR=6.1
J13A Cove Ranch, Pi 28.18 100 ⇑P P 03 59 12.4 -0.2
baz=28
I14A Mackay 28.23 98 ⇑P P 03 59 12.5 -0.6
baz=28
H15A Lima 28.24 96 ⇑P P 03 59 12.8 -0.4
baz=28,SNR=9.0
D18A Linhart Farms, 28.29 90 ⇑P P 03 59 13.5 0.0
baz=28
G16A Moss Hill, Enn 28.33 95 ⇓P P 03 59 13.4 -0.5
baz=28,SNR=10
L12A House Creek Ra 28.55 103 ⇓P P 03 59 15.9 0.0
baz=28
F17A Fitzpatrick Pl 28.56 93 ⇓P P 03 59 16.1 +0.1
baz=28
M11A Holland Ranch, 28.62 105 ⇑P P 03 59 16.2 -0.3
baz=28
RES Resolute Bay 28.89 28 P P 03 59 18.1 -0.5
comp=Z,4.5nm,0.7s,mb4.3,baz=263,slow=11,SNR=15
RES Resolute Bay 28.89 28 eP P 03 59 18.5 -0.1
RES pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
RES Resolute Bay 28.89 28 eP P 03 59 18.5 -0.1
comp=Z,9.5nm,1.0s,mb4.5
H16A Russell Place, 28.97 95 ⇓P P 03 59 19.6 0.0
baz=29
N11A Elko Archery C 29.08 106 ⇓P P 03 59 20.4 -0.2
baz=29
F18A Big Timber 29.09 92 ⇓P P 03 59 20.6 -0.1
baz=29
M12A Wells 29.10 104 ⇓P P 03 59 20.5 -0.3
baz=29
YMR Madison River 29.15 95 eP P 03 59 21.4 +0.2
comp=Z,4.0nm,0.8s,mb4.2
L13A Double Diamond 29.17 102 ⇓P P 03 59 21.6 +0.1
baz=29
K14A Jones Ranch, D 29.29 100 ⇑P P 03 59 23.0 +0.5
baz=29
ELK Elko 29.39 105 P P 03 59 23.9 +0.5
comp=Z,5.6nm,0.8s,mb4.3,baz=300,slow=8.6,SNR=28
ELK LR LR 04 09 51.0
comp=Z,939nm,18.1s,MS4.5,baz=310,slow=34
ELK Elko 29.39 105 P P 03 59 23.9 +0.5
ELK pmax pmax
comp=Z,6.0nm,0.8s
ELK MLR MLR
comp=Z,939nm,18.1s
N12A Clover Valley, 29.43 105 ⇓P P 03 59 24.1 +0.4
baz=29,SNR=7.2
NVAR Mina Array Bea 29.45 112 P P 03 59 24.1 +0.2
comp=Z,4.3nm,0.8s,mb4.2,baz=298,slow=8.7,SNR=34
NVAR PcP PcP 04 02 29.8 +0.4
comp=Z,1.0nm,0.8s,baz=261,slow=2.9,SNR=4.4
NVAR ScP ScP 04 06 09.9 -1.5
comp=Z,0.1nm,0.3s,baz=318,slow=2.0,SNR=4.3
LKWY Lake 29.53 94 eP P 03 59 26.4 +1.8
LKWY pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
LKWY Lake 29.53 94 eP P 03 59 26.4 +1.8
comp=Z,3.7nm,0.8s,mb4.2
H17A Grant Village 29.54 95 ⇑P P 03 59 25.0 +0.3
baz=30,SNR=6.2
P10A Eureka 29.54 108 ⇑P P 03 59 24.9 +0.2
baz=30
M13A Montello 29.55 103 ⇑P P 03 59 25.1 +0.3
baz=30,SNR=7.9
K15A Arbon 29.55 99 ⇑P P 03 59 25.4 +0.6
baz=30,SNR=8.3
L14A Malta 29.60 101 ⇑P P 03 59 25.6 +0.4
baz=30
O11A Cowboy Ranch, 29.60 106 ⇓P P 03 59 25.5 +0.2
baz=30,SNR=7.2
IMW Indian Meadow 29.65 96 eP P 03 59 26.5 +0.9
comp=Z,2.6nm,0.7s,mb4.1
J16A Bone 29.68 98 ⇑P P 03 59 26.2 +0.4
baz=30
N13A Wendover, West 29.88 104 ⇓P P 03 59 27.9 +0.2
baz=30,SNR=7.0
M14A Sheep Mountain 29.90 102 ⇓P P 03 59 28.0 +0.1
baz=30,SNR=9.0
TPAW Teton Pass 29.90 97 eP P 03 59 30.0 +2.1
comp=Z,10.0nm,1.5s,mb4.3
O12A Currie 30.00 105 ⇓P P 03 59 28.9 +0.2
baz=30,SNR=7.7
L15A Malad City 30.09 100 ⇑P P 03 59 29.4 -0.1
baz=30
Q10A Clear Creek Ra 30.15 109 ⇑P P 03 59 30.4 +0.2
baz=30,SNR=5.3
M15A Larsen Ranch, 30.42 101 ⇓P P 03 59 32.5 0.0
baz=30,SNR=7.1
N14A Grayback Hills 30.44 103 ⇑P P 03 59 32.8 +0.1
baz=30,SNR=16
BGU Big Grassy Mou 30.47 103 eP P 03 59 33.2 +0.2
comp=Z,8.8nm,1.3s,mb4.3
P12A McGill 30.48 107 ⇓P P 03 59 33.2 +0.2
baz=30
Q11A Duckwater 30.53 108 ⇑P P 03 59 34.0 +0.4
baz=30,SNR=12
J18A Kendall Valley 30.60 96 ⇑P P 03 59 34.0 0.0
baz=30
R10A Warm Springs 30.60 110 ⇑P P 03 59 34.2 +0.1
baz=30,SNR=5.3
L16A Fish Haven 30.61 99 ⇓P P 03 59 34.1 0.0
baz=30,SNR=6.1
S10A Tonopah Range, 30.72 111 ⇓P P 03 59 35.3 +0.1
baz=31
Q12A Willow Creek R 30.83 107 ⇑P P 03 59 36.2 0.0
baz=31,SNR=6.6
L17A Cokeville 30.86 99 ⇑P P 03 59 37.0 +0.6
baz=31
R11A Troy Canyon, C 30.93 109 ⇓P P 03 59 37.0 -0.1
baz=31,SNR=16
K18A Toltan Ranch, 30.96 97 ⇑P P 03 59 37.7 +0.4
baz=31
P13A Bates Ranch, G 30.97 106 ⇑P P 03 59 37.5 +0.2
baz=31,SNR=12
SMMC Simmler 31.00 118 ⇓P P 03 59 37.7 0.0
baz=31
GRAC Grapevine Rang 31.01 113 ⇑P P 03 59 38.0 +0.3
baz=31,SNR=6.6
VES Vestal, Richgr 31.03 116 ⇓P P 03 59 38.2 +0.3
baz=31
PDAR Pinedale Array 31.15 96 P P 03 59 36.9 -2.0
comp=Z,1.7nm,0.7s,mb4.0,baz=321,slow=5.3,SNR=18
FCC Fort Churchill 31.33 60 eP P 03 59 40.1 -0.2
comp=Z,0.3nm,1.0s
Q13A Wheeler Ranch, 31.33 106 ⇑P P 03 59 40.3 -0.2
baz=31,SNR=8.5
S11A Rachel 31.37 110 ⇑P P 03 59 40.8 -0.2
baz=31
P14A Drum Mountains 31.39 104 ⇓P P 03 59 41.2 +0.1
baz=31,SNR=11
M17A Scullys Gap (B 31.39 99 ⇑P P 03 59 40.9 -0.2
baz=31
PKM Peak Mountain 31.42 118 ⇓P P 03 59 41.6 +0.2
baz=31
R12A Pony Springs, 31.47 108 ⇓P P 03 59 42.0 +0.2
baz=31,SNR=5.9
MPMC Manual Prospec 31.67 114 ⇑P P 03 59 43.8 +0.3
baz=32,SNR=8.1
FURC Furnace Creek, 31.68 113 ⇑P P 03 59 44.0 +0.4
baz=32
Q14A Sevier Lake (B 31.70 105 ⇑P P 03 59 43.4 -0.5
baz=32,SNR=11
M18A Lyman 31.76 99 ⇑P P 03 59 44.2 -0.1
baz=32
S12A Delamar Landin 31.87 109 ⇑P P 03 59 45.1 -0.2
baz=32,SNR=6.8
K20A Yellowstone Ra 31.90 95 ⇑P P 03 59 45.1 -0.3
baz=32
R13A O'Grain Ranch, 31.92 107 ⇑P P 03 59 45.4 -0.3
baz=32
T11A Corn Creek, Al 31.95 110 ⇑P P 03 59 46.0 -0.1
baz=32,SNR=17
U10A Ash Meadows, A 31.99 112 ⇓P P 03 59 46.2 -0.2
baz=32
Q15A Fillmore 32.18 104 ⇑P P 03 59 48.2 +0.1
baz=32,SNR=6.8
O17A Robinson Place 32.23 101 ⇓P P 03 59 48.6 +0.1
baz=32
N18A Larsen Ranch, 32.28 99 ⇓P P 03 59 48.6 -0.3
baz=32
S13A Holt Ranch, En 32.42 108 ⇓P P 03 59 49.7 -0.5
baz=32,SNR=8.9
N19A John Jarvie Ra 32.61 99 ⇓P P 03 59 52.0 +0.2
baz=32
MSU Marysvale 32.64 105 eP P 03 59 52.9 +0.8
MSU pmax pmax
comp=Z,11nm,1.1s,mb4.7
MSU Marysvale 32.64 105 eP P 03 59 52.9 +0.8
comp=Z,11nm,1.1s,mb4.7
S14A Cedar City 32.66 107 ⇓P P 03 59 52.2 0.0
baz=33,SNR=6.4
CCUT Cedar City 32.71 107 eP P 03 59 53.0 +0.3
comp=Z,17nm,1.5s,mb4.8
P17A Butcher Ranch, 32.74 102 ⇓P P 03 59 53.1 +0.2
baz=33
M20A Sweetwater, Wa 32.76 97 ⇓P P 03 59 53.3 +0.3
baz=33
R15A Junction 32.81 105 ⇑P P 03 59 54.1 +0.6
baz=33
T13A Saint George 32.81 109 ⇓P P 03 59 53.6 0.0
baz=33,SNR=13
L21A Rawlins 32.90 96 ⇑P P 03 59 54.4 +0.1
baz=33
Q16A Castle Valley 32.90 103 ⇑P P 03 59 54.0 -0.3
baz=33,SNR=10
P18A Preston Nutter 32.90 101 ⇑P P 03 59 54.6 +0.3
baz=33
V11A Goodsprings 32.91 112 ⇑P P 03 59 54.2 -0.2
baz=33,SNR=7.3
U12A Valley of Fire 32.92 110 ⇑P P 03 59 54.6 0.0
baz=33
TUQ Turquoise Moun 32.96 113 ⇑P P 03 59 54.7 -0.2
baz=33
BFSC Mount Baldy St 33.01 116 ⇓P P 03 59 55.7 +0.4
baz=33
O19A Miners Draw (B 33.05 99 ⇓P P 03 59 55.2 -0.5
baz=33,SNR=6.3
SRU San Rafael 33.11 102 eP P 03 59 56.8 +0.6
SRU pmax pmax
comp=Z,14nm,0.8s,mb4.9
SRU San Rafael 33.11 102 eP P 03 59 56.8 +0.6
comp=Z,14nm,0.8s,mb5.0
M21A Separation Pea 33.14 96 ⇓P P 03 59 56.0 -0.4
baz=33,SNR=5.7
S15A Panguitch 33.15 106 ⇓P P 03 59 56.5 0.0
baz=33,SNR=6.9
N20A Spence Gulch, 33.16 98 ⇑P P 03 59 56.6 0.0
baz=33,SNR=6.3
RWWY Rawlins 33.17 96 eP P 03 59 56.4 -0.3
comp=Z,17nm,0.8s,mb5.0
R16A Teasdale 33.18 104 ⇓P P 03 59 57.3 +0.5
baz=33,SNR=14
T14A Hurricane 33.22 108 ⇑P P 03 59 57.3 +0.1
baz=33,SNR=14
U13A Pakoon Wash 33.23 109 ⇓P P 03 59 57.6 +0.3
baz=33,SNR=14
V12A Nelson 33.29 111 ⇑P P 03 59 57.7 -0.1
baz=33,SNR=10
Q18A Rafter H Ranch 33.33 102 ⇑P P 03 59 57.8 -0.3
baz=33,SNR=7.1
RSSD Black Hills 33.37 90 eP P 03 59 57.7 -0.6
RSSD pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
RSSD Black Hills 33.37 90 eP P 03 59 57.7 -0.6
comp=Z,6.3nm,0.6s,mb4.7
L22A Ellis Ranch, M 33.37 95 ⇑P P 03 59 58.4 0.0
baz=33,SNR=6.9
R17A Hanksville Air 33.51 103 ⇑P P 03 59 59.6 -0.1
baz=33,SNR=14
P19A Cripple Cowboy 33.59 100 ⇑P P 04 00 00.1 -0.2
baz=34,SNR=14
GMRC Granite Mounta 33.60 113 ⇓P P 04 00 00.7 +0.2
baz=34
N21A Black Mountain 33.62 97 ⇑P P 04 00 00.2 -0.4
baz=34,SNR=7.5
T15A Red Dirt Ranch 33.63 107 ⇑P P 04 00 00.5 -0.1
baz=34,SNR=13
U14A Mt Trumbull 33.65 109 ⇑P P 04 00 01.0 +0.1
baz=34,SNR=17
O20A White River Ci 33.65 99 ⇑P P 04 00 00.6 -0.2
baz=34,SNR=13
V13A Grand Canyon W 33.65 110 ⇓P P 04 00 00.7 -0.2
baz=34,SNR=9.7
Q19A Hogan Spring (33.91 101 ⇓P P 04 00 02.7 -0.5
baz=34,SNR=9.1
R18A Canyonlands Na 33.97 103 ⇑P P 04 00 03.4 -0.3
baz=34,SNR=9.1
O21A Pagoda 34.02 98 ⇓P P 04 00 04.1 0.0
baz=34
S17A Black Ridge (B 34.02 105 ⇓P P 04 00 04.1 -0.1
baz=34,SNR=14
BELC Belle Mtn. 34.04 114 ⇑P P 04 00 04.4 +0.1
baz=34
U15A North Rim 34.12 108 ⇓P P 04 00 05.2 +0.2
baz=34,SNR=6.6
N22A Wattenberg Ran 34.19 96 ⇓P P 04 00 05.4 -0.2
baz=34,SNR=8.3
W13A Hualapai Mount 34.28 111 ⇑P P 04 00 06.4 0.0
baz=34,SNR=7.4

V14A **Boquillas Ranc** 34.28 109 ⇑P P 04 00 06.5 +0.1
baz=34,SNR=6.7
ULM **Lac du Bonnet** 34.30 75 LR LR 04 13 49.4
comp=Z,1μm,18.6s,MS4.7,baz=252,slow=36
IRM **Iron Mountain** 34.35 113 ⇓P P 04 00 07.1 +0.1
baz=34
R19A **Curley Farm, L** 34.39 102 ⇑P P 04 00 07.3 0.0
baz=34
S18A **Hurst Farm, Bl** 34.42 104 ⇓P P 04 00 07.4 -0.2
baz=34,SNR=13
TIXI **Tiksi** 34.43 327 eP P 04 00 07.1 -0.2
TIXI e 04 01 22.7
TIXI eS S 04 05 34.2 -1.1
TIXI pmax pmax
comp=Z,14nm,1.3s,mb4.7
TIXI MLR MLR
comp=Z,3μm,15.0s,MS5.1
TIXI **Tiksi** 34.43 327 eP P 04 00 07.3 0.0
comp=Z,9.8nm,1.0s,mb4.7
Q20A **Ridgley Place,** 34.45 100 ⇑P P 04 00 07.4 -0.4
baz=34
T17A **Navajo Res., N** 34.49 105 ⇓P P 04 00 08.0 -0.2
baz=34
BC3 **Big Chuckw Mtn** 34.59 114 ⇓P P 04 00 09.2 +0.1
baz=34
W14A **Seligman** 34.61 110 ⇓P P 04 00 09.1 -0.1
baz=34,SNR=8.1
V15A **Kaibab Nationa** 34.63 108 ⇑P P 04 00 09.8 +0.4
baz=35,SNR=14
X13A **Yucca** 34.70 111 ⇓P P 04 00 09.9 -0.1
baz=35
MONP **Monument Peak** 34.71 116 ⇑P P 04 00 10.3 +0.2
baz=35
PDMCI **Parker Dam,Lak** 34.76 112 ⇑P P 04 00 10.7 +0.1
baz=35
S19A **Harvey Farm, M** 34.85 103 ⇑P P 04 00 11.3 0.0
baz=35,SNR=6.4
U17A **Shonto** 34.86 106 ⇓P P 04 00 11.3 -0.1
baz=35
PV01 **Paradox Valley** 34.88 102 eP P 04 00 11.7 +0.2
comp=Z,500nm,0.8s
T18A **Mexican Hat** 34.89 104 ⇓P P 04 00 11.3 -0.3
baz=35,SNR=15
Q21A **Lamborn Mesa,** 34.93 100 ⇑P P 04 00 12.1 +0.1
baz=35
R20A **Redvale** 34.95 101 ⇓P P 04 00 11.9 -0.2
baz=35,SNR=9.9
Y12C **Blythe** 34.99 113 ⇑P P 04 00 12.7 +0.2
baz=35
W15A **Williams** 35.07 109 ⇑P P 04 00 13.5 +0.2
baz=35
X14A **Yava** 35.28 110 ⇑P P 04 00 15.3 +0.3
baz=35,SNR=9.3
Y13A **Salome** 35.30 112 ⇓P P 04 00 15.3 0.0
baz=35
AGMN **Agassiz Refuge** 35.40 78 eP P 04 00 15.5 -0.5
comp=Z,12nm,0.8s,mb4.9
V17A **Tonalea, Kykot** 35.52 107 ⇑P P 04 00 17.3 +0.2
baz=36,SNR=17
W16A **Flagstaff** 35.52 108 ⇑P P 04 00 17.5 +0.3
baz=36
T19A **Beclabito** 35.58 104 ⇑P P 04 00 17.3 -0.2
baz=36,SNR=9.3
MVCO **Mesa Verde** 35.59 103 eP P 04 00 17.4 -0.2
comp=Z,5.1nm,0.8s,mb4.5
X15A **Humboldt** 35.62 110 ⇓P P 04 00 18.2 +0.2
baz=36,SNR=8.6
Y14A **Wickenburg** 35.64 111 ⇓P P 04 00 18.4 +0.3
baz=36,SNR=6.7
S21A **Coal Bank Pass** 35.65 101 ⇓P P 04 00 18.4 +0.3
baz=36
R22A **Saguache, Gunn** 35.81 100 ⇑P P 04 00 19.6 +0.1
baz=36
Z13A **Yuma Proving G** 35.87 113 ⇓P P 04 00 19.8 -0.3
baz=36
U19A **Dine' College,** 35.88 104 ⇓P P 04 00 19.9 -0.2
baz=36
V18A **Ganado** 35.91 106 ⇓P P 04 00 20.7 +0.2
baz=36
Y15A **Casa Rosa Ranc** 35.98 110 ⇑P P 04 00 21.5 +0.5
baz=36,SNR=10
X16A **Lo Mia Camp, P** 36.09 109 ⇓P P 04 00 22.3 +0.4
baz=36,SNR=12
Y16A **Circle Bar Ran** 36.48 110 ⇑P P 04 00 25.7 +0.4
baz=36
V20A **Brimhall** 36.64 104 ⇑P P 04 00 27.1 +0.4
baz=37
X18A **Snowflake** 36.80 107 ⇓P P 04 00 28.2 +0.2
baz=37
Z16A **Peralta Trail,** 36.93 110 ⇓P P 04 00 29.2 +0.1
baz=37
Y17A **Roosevelt** 36.96 109 ⇓P P 04 00 29.5 +0.1
baz=37
115A **Sonoran Desert** 37.01 112 ⇑P P 04 00 30.3 +0.5
baz=37
V21A **Milan** 37.09 103 ⇓P P 04 00 30.6 +0.1
baz=37,SNR=7.7
214A **Organ Pipe Nat** 37.29 113 ⇑P P 04 00 32.5 +0.3
baz=37
V22A **San Miguel Ran** 37.41 103 ⇓P P 04 00 33.2 0.0
baz=37,SNR=11
X20A **Quemado** 37.57 106 ⇓P P 04 00 34.3 -0.2
baz=38
YAK **Yakutsk** 37.60 311 eP P 04 00 32.6 -1.9
YAK e*PP pP 04 00 40.0 +3.7
YAK eS S 04 06 22.7 -1.2
YAK eSS SS 04 08 59.5 -8.7
YAK pmax pmax
comp=Z,40nm,0.9s,mb5.2
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK smax
comp=E,116nm,16.6s
YAK MLR MLR
comp=Z,2μm,15.0s,MS5.0
YAK MLR MLR
comp=N,622nm,15.0s,MS4.9
YAK MLR MLR
comp=E,1μm,14.0s,MS4.9
YAK **Yakutsk** 37.60 311 eP P 04 00 34.2 -0.3
comp=E,49nm,0.8s,mb5.3
Y19A **Nutrioso** 37.61 107 ⇓P P 04 00 35.3 +0.4
baz=38,SNR=6.4
ECSD **EROS Data Cent** 37.76 84 eP P 04 00 35.5 -0.6
comp=E,6.5nm,0.9s,mb4.4
117A **Oracle** 37.89 110 ⇑P P 04 00 37.6 +0.4
baz=38,SNR=9.5
V23A **Ortiz Mt. (NFS** 37.93 102 ⇑P P 04 00 37.9 +0.4
baz=38
EYMN **Ely** 37.98 75 eP P 04 00 38.1 +0.2
comp=E,16nm,0.7s,mb4.9
X21A **Alamocita Cree** 38.02 105 ⇓P P 04 00 39.0 +0.5
baz=38,SNR=20
Y20A **Horse Springs,** 38.11 106 ⇓P P 04 00 39.5 +0.3
baz=38,SNR=5.6
118A **Homack Ranch,** 38.24 109 ⇑P P 04 00 40.3 +0.1
baz=38
W23A **Werner Place,** 38.38 103 ⇑P P 04 00 41.5 +0.1
baz=38
LAZ **Ladron** 38.41 104 eP P 04 00 41.8 +0.2
comp=E,1.2nm,0.8s,mb3.7
Y21A **Point of Rocks** 38.42 105 ⇑P P 04 00 41.9 +0.2
baz=38
217A **Green Valley** 38.47 111 ⇓P P 04 00 42.3 +0.1
baz=38
Z20A **Nine Sixteen R** 38.61 107 ⇑P P 04 00 43.8 +0.4
baz=38,SNR=9.0
218A **Dragoon** 38.72 110 ⇓P P 04 00 44.9 +0.6
baz=39
W24A **Lazy 6 Ranch,** 38.75 102 ⇑P P 04 00 45.0 +0.5
baz=39,SNR=12
U26A **Atchley Ranch,** 38.79 99 ⇓P P 04 00 45.1 +0.2
baz=39,SNR=20
Y22A **Socorro** 38.85 105 ⇓P P 04 00 45.5 +0.1
baz=39
BNM **Barren Site** 38.88 104 eP P 04 00 46.4 +0.8
comp=E,4.1nm,0.8s,mb4.2
Z21A **St. Cloud Mine** 38.95 106 ⇓P P 04 00 45.8 -0.5
baz=39
120A **U Bar Ranch, L** 39.02 108 ⇓P P 04 00 46.9 +0.1
baz=39
219A **White Tail Can** 39.11 109 ⇑P P 04 00 47.6 0.0
baz=39,SNR=5.4
318A **Bisbee** 39.17 110 ⇑P P 04 00 48.0 0.0
baz=39,SNR=5.9
V26A **Tequesquite Ra** 39.21 100 ⇓P P 04 00 48.7 +0.3
baz=39,SNR=41
W25A **X Bar L Ranch,** 39.26 101 ⇓P P 04 00 49.0 +0.2
baz=39,SNR=11
Y23A **Lovelace Mesa,** 39.35 104 ⇑P P 04 00 49.6 0.0
baz=39,SNR=12
Z22A **Elephant Butte** 39.37 105 ⇑P P 04 00 49.8 0.0
baz=39,SNR=12
121A **Cookes Peak, D** 39.48 107 ⇓P P 04 00 51.0 +0.3
baz=39
220A **Playas Peak, P** 39.58 108 ⇓P P 04 00 51.4 0.0
baz=40,SNR=8.0
Y24A **Capitan** 39.69 103 ⇓P P 04 00 52.5 +0.1
baz=40,SNR=10
W26A **Owens Ranch, T** 39.74 100 ⇑P P 04 00 53.0 +0.2
baz=40
122A **Conniff Cattle** 39.78 106 ⇑P P 04 00 53.8 +0.7
baz=40
320A **Kipp Ranch, An** 40.02 109 ⇑P P 04 00 55.2 +0.1
baz=40,SNR=7.6
Y25A **Mesa, Roswell** 40.10 103 ⇑P P 04 00 55.9 +0.1
baz=40,SNR=11
X26A **CR and CF Fran** 40.11 101 ⇑P P 04 00 56.0 +0.1
baz=40,SNR=8.0
222A **Williams Famil** 40.18 107 ⇑P P 04 00 56.5 +0.1
baz=40
Z24A **Sheeppen Canyo** 40.18 104 ⇓P P 04 00 56.5 0.0
baz=40,SNR=7.7
X27A **F and S Farms,** 40.44 100 ⇑P P 04 00 58.8 +0.2
baz=40
Z25A **Roswell** 40.57 103 ⇓P P 04 00 59.3 -0.4
baz=40
124A **Stringfield Ra** 40.61 105 ⇓P P 04 00 59.8 -0.2
baz=40,SNR=7.4
Y27A **Causey** 40.97 101 ⇓P P 04 01 02.8 -0.2
baz=41,SNR=11
Z26A **Caprock** 40.98 103 ⇑P P 04 01 02.8 -0.3
baz=41
224A **Corundas Mount** 41.05 105 ⇑P P 04 01 03.8 +0.2
baz=41,SNR=10
125A **Gardner Draw,** 41.08 104 ⇓P P 04 01 03.8 -0.1
baz=41
MSTX **Muleshoe** 41.12 101 ⇑P P 04 01 03.9 -0.3
baz=41,SNR=6.2
Z27A **Tatum** 41.37 102 ⇑P P 04 01 06.2 0.0
baz=41
126A **Clayton Basin,** 41.43 103 ⇓P P 04 01 06.4 -0.4
baz=41
GDL2 **Guadalupe Moun** 41.59 104 eP P 04 01 07.8 -0.2
comp=E,4.7nm,1.0s,mb4.1
226A **Malaga, Loving** 41.84 104 ⇓P P 04 01 09.6 -0.5
baz=42,SNR=7.3
325A **Bean Ranch, Si** 41.90 105 ⇓P P 04 01 10.5 -0.1
baz=42,SNR=7.9
227A **Bennet, Jal** 42.31 103 ⇓P P 04 01 13.9 -0.1
baz=42
425A **Indio Mountain** 42.34 106 ⇑P P 04 01 14.2 -0.1
baz=42,SNR=9.8
HABR **Khabarovsk** 42.36 291 eP P 04 01 11.3 -2.9
HABR e*SP sP 04 01 17.4 +0.7
326A **Caldwell Ranch** 42.47 104 ⇓P P 04 01 15.3 0.0
baz=42,SNR=11
WMOK **Wichita Mounta** 42.76 96 eP P 04 01 17.6 0.0
WMOK pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
WMOK **Wichita Mounta** 42.76 96 eP P 04 01 17.6 0.0
comp=Z,10nm,0.8s,mb4.6
426A **McDonald Obser** 42.95 105 ⇑P P 04 01 18.7 -0.5
baz=43
526A **Mary Lane Ranc** 43.39 106 ⇓P P 04 01 22.4 -0.3
baz=43,SNR=8.5
527A **Woodward Ranch** 43.58 105 ⇓P P 04 01 24.1 -0.2
baz=44,SNR=7.0
KLR **Kul'dur** 43.60 294 eP Px 04 01 39.6
KLR eS S 04 07 48.0 -5.6
KLR eSS SS 04 11 24.0 +16
KLR MLR MLR
comp=N,900nm,13.0s,MS4.9
KLR MLR MLR
comp=E,500nm,13.0s,MS4.9
KLR MLR MLR
comp=Z,1μm,13.0s,MS5.0
428A **Kincaid Ranch,** 43.63 104 ⇓P P 04 01 24.3 -0.4
baz=44,SNR=7.1
626A **Big Bend Ranch** 43.76 106 ⇓P P 04 01 25.6 -0.2
baz=44
528A **Cox Ranch, San** 44.01 104 ⇑P P 04 01 27.9 +0.2
baz=44,SNR=9.0
SUMG **Summit** 44.13 23 eP P 04 01 28.7 +0.5
SUMG pmax pmax
comp=Z,15nm,0.8s
SUMG **Summit** 44.13 23 eP P 04 01 28.7 +0.5
comp=Z,15nm,0.8s,mb4.8
TXAR **Lajitas Array** 44.19 106 P P 04 01 29.3 +0.2
comp=Z,6.4nm,0.8s,mb4.4,baz=314,slow=5.5,SNR=52
TXAR ScP ScP 04 07 03.9 -2.1
comp=Z,0.2nm,0.7s,baz=163,slow=6.0,SNR=3.6
TXAR LR LR 04 18 53.7
comp=Z,740nm,18.6s,MS4.6,baz=350,slow=35
627A **Terlingua Ranc** 44.24 106 ⇑P P 04 01 29.7 +0.1
baz=44,SNR=11
DAG **Danmarks Havn** 44.37 13⇓eP P 04 01 30.2 +0.1
DAG pmax pmax
comp=Z,13nm,0.5s,mb4.9
DAG **Danmarks Havn** 44.37 13⇓iP P 04 01 30.2 +0.1
comp=Z,13nm,0.5s,mb4.9
628A **Black Gap, Mar** 44.49 105 ⇓P P 04 01 31.4 -0.2
baz=44
CCM **Cathedral Cave** 44.59 87 eP P 04 01 31.5 -0.8
CCM pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
CCM **Cathedral Cave** 44.59 87 eP P 04 01 31.5 -0.8
comp=Z,4.4nm,0.8s,mb4.3
SFJD **Kangerlussuaq** 44.63 33 eP P 04 01 31.9 -0.4
SFJD pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SFJD **Kangerlussuaq** 44.63 33 iP P 04 01 31.9 -0.4
comp=Z,7.4nm,0.8s,mb4.6
KBS **Kingsbay** 44.93 4 eP P 04 01 34.2 -0.3
KBS eS S 04 08 18.4 +6.0
KBS AMS AMS 04 25 27.4
comp=Z,388nm,15.2s,MS4.5
KBS **Kingsbay** 44.93 4ceP P 04 01 35.2 +0.7
KBS pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
KBS **Kingsbay** 44.93 4 eP P 04 01 36.3 +1.7
comp=Z,12nm,0.9s,mb4.7
JCT **Junction City** 45.40 101 eP P 04 01 38.3 -0.5
JCT pmax pmax
comp=Z,19nm,0.8s,mb5.0
JCT **Junction City** 45.40 101 eP P 04 01 38.3 -0.5
comp=Z,19nm,0.8s,mb5.0
MIAR **Mount Ida** 45.81 92 eP P 04 01 40.9 -1.1
MIAR pmax pmax
comp=Z,13nm,0.8s,mb4.9
MIAR **Mount Ida** 45.81 92 eP P 04 01 40.9 -1.2
comp=Z,13nm,0.8s,mb4.9
SPB4 **Spitsbergen Ar** 45.81 3 eP P 04 01 41.2 -0.3
OLIL **Olney** 45.86 83 eP P 04 01 42.7 +0.2
comp=Z,9.4nm,0.7s,mb4.8
SCHQ **Schefferville** 46.15 53 P P 04 01 43.1 -1.3
comp=Z,7.3nm,0.7s,mb4.7,baz=306,slow=8.4,SNR=6.1
SCHQ **Schefferville** 46.15 53 eP P 04 01 44.1 -0.3
comp=Z,16nm,0.9s,mb4.9
BLO **Bloomington** 46.43 82 eP P 04 01 46.3 -0.6
BLO pmax pmax
comp=Z,11nm,0.8s,mb4.8
BLO **Bloomington** 46.43 82 eP P 04 01 46.3 -0.6
comp=Z,11nm,0.8s,mb4.8
BOD **Bodaibo** 46.48 312 eP P 04 01 46.0 -1.1
BOD pmax pmax
comp=Z,16nm,0.9s,mb5.0
ACSO **Alum Creek Sta** 47.64 78 eP P 04 01 55.0 -1.3
comp=Z,15nm,1.2s,mb4.9
HKT **Hockley** 48.00 98 eP P 04 02 00.1 +0.9
HKT pmax pmax
comp=Z,22nm,1.4s,mb5.0
HKT **Hockley** 48.00 98 eP P 04 02 00.1 +0.9
comp=Z,22nm,1.4s,mb5.0
OXF **Oxford** 48.16 88 eP P 04 01 59.9 -0.5
OXF pmax pmax
comp=Z,30nm,0.8s,mb5.4
OXF **Oxford** 48.16 88 eP P 04 01 59.9 -0.6
comp=Z,30nm,0.8s,mb5.4
PLAL **Pickwick Lake** 48.57 87 eP P 04 02 02.7 -0.9
comp=Z,12nm,0.8s,mb5.0
MJAR **Matsushiro Arr** 48.68 276 P P 04 02 04.2 -0.2
comp=Z,0.9nm,0.5s,mb4.0,baz=44,slow=6.6,SNR=3.8
MJAR LR LR 04 23 23.7
comp=Z,313nm,19.8s,MS4.3,baz=65,slow=37
VBMS **Vicksburg** 49.24 91 eP P 04 02 09.3 +0.6
comp=Z,35nm,0.9s,mb5.4
NCB **Newcomb** 49.74 69 eP P 04 02 12.0 -0.4
comp=Z,5.7nm,0.9s,mb4.6
BINY **Binghamton** 50.05 71 eP P 04 02 14.8 0.0
comp=Z,15nm,0.9s,mb5.0
SSPA **Standing Stone** 50.13 74 eP P 04 02 14.8 -0.6
comp=Z,39nm,1.6s,mb5.2
CN2 **Changchun** 50.45 292 eP P 04 02 17.3 -0.5
CN2 epP pP 04 02 22.0 +2.4
CN2 esP sP 04 02 24.3 +4.0
CN2 eS S 04 09 31.0 -0.5
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,800nm,18.0s,MS4.8
CN2 LR LR
comp=E,400nm,18.0s,MS4.8
CN2 LR LR
comp=Z,300nm,20.0s,MS4.3
JMIC **Jan Mayen** 50.81 14 eS S 04 09 37.3 +1.5
KSRS **Korea Array** 53.67 285 P P 04 02 42.2 +0.4
comp=Z,3.5nm,0.9s,mb4.3,baz=52,slow=6.6,SNR=12
KSRS LR LR 04 25 06.8
comp=Z,175nm,20.6s,MS4.1,baz=283,slow=36
KSRS **Korea Array** 53.67 285 P P 04 02 42.3 +0.4
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KSRS MLR MLR
comp=Z,175nm,20.6s,MS4.1
KEV **Kevo** 54.42 360 eP P 04 02 47.2 +0.4
KEV **Kevo** 54.42 360 ep P 04 02 46.0 -0.8
comp=Z,9.2nm,0.9s,mb4.7
TRO **Tromso** 54.43 3 eP P 04 02 47.2 +0.3
TRO eS S 04 10 27.3 +2.0
ARCES **ARCESS Array B** 54.64 0 P P 04 02 48.7 +0.3
comp=Z,0.9nm,0.4s,mb4.2,baz=357,slow=8.1,SNR=23
ARCES **ARCESS Array B** 54.64 0 P P 04 02 48.7 +0.2
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES **ARCESS Array B** 54.64 0 P P 04 02 48.7 +0.3
TLY **Talaya** 55.06 312 eP P 04 02 53.4 +1.6
TLY eS S 04 10 33.6 -0.6
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.9
TLY MLR MLR
comp=Z,1μm,14.0s,MS5.0
LVZ **Lovozero** 56.13 356ceP P 04 02 59.1 -0.1
LVZ pmax pmax
comp=Z,30nm,1.7s,mb5.0
MOY **Mondy** 56.16 314 eP P 04 03 00.9 +1.3
ZAK **Zakamensk** 56.19 311 eP P 04 02 59.4 -0.5
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
ULN **Ulaanbaatar** 56.44 307 eP P 04 03 02.3 +0.6
ULN pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ULN **Ulaanbaatar** 56.44 307 eP P 04 03 02.3 +0.5
comp=Z,4.8nm,0.7s,mb4.6
SONM **Songino Array** 56.76 307 P P 04 03 04.2 +0.2
comp=Z,14nm,0.9s,mb5.0,baz=54,slow=6.4,SNR=8.9
SONM LR LR 04 29 39.5
comp=Z,1μm,19.5s,MS5.1,baz=186,slow=38
SONM **Songino Array** 56.76 307 P P 04 03 04.2 +0.2
SONM pmax pmax
comp=Z,14nm,0.9s
SONM MLR MLR
comp=Z,1μm,19.5s
BJI **Beijing** 57.94 295 P P 04 03 12.5 +0.1
BJI PP PP 04 05 20.8 +0.5
BJI S S 04 11 13.5 +0.9
BJI SS SS 04 15 05.8 +3.0
BJI pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BJI pmax pmax
comp=Z,60nm,4.4s
BJI LR LR
comp=N,540nm,18.5s,MS4.9
BJI LR LR
comp=E,560nm,17.3s,MS4.9
BJI LR LR
comp=Z,460nm,18.3s,MS4.6
HHC **Hu-ho-hao-te** 59.62 299 eP P 04 03 25.5 +1.4
HHC sP sP 04 03 32.5 +5.8
HHC PP PP 04 05 39.0 +3.7
HHC ScP ScP 04 08 11.0 -1.4
HHC S S 04 11 34.5 0.0
HHC sS sS 04 11 42.0 +4.4
HHC ScS ScS 04 13 11.8 -2.9
HHC SS SS 04 15 30.5 +1.2
HHC pmax pmax
comp=Z,25nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,140nm,5.5s
HHC LR LR
comp=N,280nm,18.1s,MS4.6
HHC LR LR
comp=E,250nm,18.6s,MS4.6
HHC LR LR
comp=Z,310nm,17.9s,MS4.5
NVS **Novosibirsk** 60.02 326⇑iP P 04 03 26.4 -0.2
NVS eS S 04 11 39.7 +0.5
NVS pmax pmax
comp=Z,27nm,1.8s,mb5.0
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,16nm,1.7s
NVS smax
comp=N,35nm,2.1s
NVS smax
comp=E,28nm,2.0s
ZAA0 **Zalesovo Array** 60.26 324 eP P 04 03 28.5 +0.2
ZALV **Zalesovo Beam** 60.26 324 P P 04 03 28.7 +0.4
comp=E,9.8nm,0.8s,mb4.9,baz=34,slow=6.7,SNR=29
ZALV **Zalesovo Beam** 60.26 324 P P 04 03 28.7 +0.4
ZALV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
JOF **Joensuu** 61.22 357 eP P 04 03 34.3 -0.4
JOF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
JOF **Joensuu** 61.22 357 ep P 04 03 34.3 -0.4
comp=Z,4.0nm,0.6s,mb4.7
KAF **Kangasniemi** 62.10 360 eP P 04 03 40.0 -0.6
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
KAF **Kangasniemi** 62.10 360 ep P 04 03 40.0 -0.6
comp=Z,2.2nm,0.4s,mb4.6
SOKR **Solikamsk** 62.10 343c iP P 04 03 40.4 -0.3
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.4
NB2 **NORSAR Subarra** 62.58 8 P P 04 03 43.7 -0.1
comp=Z,7.1nm,0.9s,mb4.8,baz=350,slow=6.9
NOA **NORSAR Array B** 62.58 8 P P 04 03 43.9 +0.1
comp=Z,3.9nm,0.8s,mb4.6,baz=350,slow=6.7,SNR=18
NOA **NORSAR Array B** 62.58 8 P P 04 03 43.9 +0.1
NOA pmax pmax
comp=Z,4.0nm,0.8s
NJ2 **Nanjing** 62.63 287 eP P 04 03 48.0 +3.4
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.5
NJ2 LR LR
comp=N,550nm,21.4s,MS4.8
NJ2 LR LR
comp=E,250nm,16.8s,MS4.8
NJ2 LR LR
comp=Z,770nm,20.0s,MS4.9
BER **Bergen** 62.66 11 eS S 04 12 15.7 +3.0
FINES **FINESS Array B** 62.77 0 P P 04 03 45.0 -0.1
comp=Z,3.9nm,0.8s,mb4.6,baz=4.4,slow=9.9,SNR=10
FINES **FINESS Array B** 62.77 0 P P 04 03 45.0 -0.1
FINES pmax pmax
comp=Z,4.0nm,0.8s
SVE **Sverdlovsk** 64.00 340 eP P 04 04 00.9 +7.5
SVE pmax pmax
comp=Z,23nm,1.2s,mb5.1
ARU **Arti** 64.77 341 diP P 04 03 58.1 -0.3
ARU S S 04 12 40.1 +1.2
ARU SS SS 04 16 45.1 -3.7
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.8
ARU **Arti** 64.77 341 eP P 04 03 57.9 -0.5

comp=Z,28nm,1.2s,mb5.2
KURK Kurchatov 65.00 326 *e*P **P 04 04 00.4 +0.4**
KURK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KURK Kurchatov 65.00 326 *e*P **P 04 04 00.4 +0.4**
comp=Z,8.2nm,0.9s,mb4.8
BRVK Borovoye 65.30 332 *ce*P **P 04 04 01.4 -0.5**
BRVK pmax pmax
comp=Z,19nm,1.7s,mb4.8
BRVK Borovoye 65.30 332 *e*P **P 04 04 00.6 -1.2**
comp=Z,15nm,1.0s,mb5.0
BVAR Borovoye Array 65.30 332 P **P 04 04 01.8 -0.1**
comp=Z,6.0nm,0.8s,mb4.7,baz=45,slow=6.5,SNR=36
BVAR LR LR 04 38 28.3
comp=Z,374nm,18.0s,MS4.6,baz=60,slow=42
VSU Vasula 65.76 360 *ce*P **P 04 04 05.3 +0.5**
VSU pmax pmax
comp=Z,14nm,0.9s,mb5.0
GTA Gaotai 66.32 306 *e*P **P 04 04 10.0 +1.3**
GTA pP pP 04 04 19.5 +9.0
GTA sP sP 04 04 24.0 +13
GTA PP PP 04 06 39.8 +5.7
GTA S S 04 13 00.8 +2.4
GTA sS sS 04 13 08.3 +6.8
GTA pmax pmax
comp=Z,6.0nm,2.2s,mb4.2
GTA pmax pmax
comp=Z,93nm,6.6s
GTA LR LR
comp=N,1μm,16.7s,MS5.4
GTA LR LR
comp=E,1μm,15.5s,MS5.4
GTA LR LR
comp=Z,2μm,15.6s,MS5.4
LZH Lanzhou 67.11 301 *e*P **P 04 04 18.0 +4.2**
LZH pP pP 04 04 21.5 +5.8
LZH sP sP 04 04 23.3 +6.9
LZH PcP PcP 04 04 46.0 +4.1
LZH PP PP 04 06 47.0 +5.9
LZH *e*S S 04 13 09.5 +1.4
LZH sS sS 04 13 17.3 +6.1
LZH SS SS 04 17 24.0 -2.2
LZH pmax pmax
comp=Z,18nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,120nm,6.1s
LZH LR LR
comp=N,970nm,14.0s
LZH LR LR
comp=Z,1μm,14.7s,MS5.2
MK31 Makanchi Array 67.20 322 *e*P **P 04 04 14.3 +0.1**
MKAR Makanchi Array 67.20 322 P **P 04 04 13.9 -0.2**
comp=Z,1.8nm,0.7s,mb4.2,baz=46,slow=6.9,SNR=14
MKAR LR LR 04 36 06.2
comp=Z,394nm,18.6s,MS4.7,baz=211,slow=38
MKAR Makanchi Array 67.20 322 P **P 04 04 14.0 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,394nm,18.6s
WMQ Urumqi 67.77 317 *e*P **P 04 04 21.0 +3.2**
WMQ LR LR
comp=N,410nm,23.0s,MS4.8
WMQ LR LR
comp=E,540nm,21.0s,MS4.8
WMQ LR LR
comp=Z,610nm,16.0s,MS4.9
OBN Obninsk 68.79 354 ||*e*P **P 04 04 24.1 +0.1**
OBN *e*PS 04 13 50.9
OBN pmax pmax
comp=Z,13nm,0.8s,mb4.9
ENH Enshi 68.95 293 *e*P **P 04 04 25.6 +0.2**
comp=Z,7.7nm,0.7s,mb4.7
CD2 Chengdu 71.34 298 P **P 04 04 40.8 +0.7**
CD2 pP pP 04 04 45.5 +3.5
CD2 sP sP 04 04 48.5 +5.8
CD2 PP PP 04 07 21.3 +3.5
CD2 S S 04 13 57.3 -0.9
CD2 sS sS 04 14 05.0 +3.7
CD2 SKS 04 14 39.0
CD2 SS SS 04 18 33.5 +2.0
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,120nm,5.9s
CD2 LR LR
comp=N,610nm,12.5s
CD2 LR LR
comp=Z,930nm,15.5s,MS5.2
AFI Afiamalu 71.38 198 LR LR 04 29 18.6
comp=Z,393nm,19.8s,MS4.7,baz=128,slow=30
CLL Collm 72.37 9 *e*P **P 04 04 46.0 +0.1**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CLL MLR MLR
comp=Z,200nm,18.2s,MS4.4
CLL Collm 72.37 9 *e*P **P 04 04 46.0 +0.1**
comp=Z,5.0nm,1.0s,mb4.4
CLL LR LR
comp=Z,200nm,18.2s,MS4.4
CLL Collm 72.37 9 *e*P **P 04 04 46.0 +0.1**
comp=Z,5.0nm,1.0s,mb4.4
CLL *e*S S 04 14 12.0 +2.5
CLL *e*(SS) 04 19 12.0
CLL *e*(SSS) 04 22 24.0
CLL LmH 04 41 00.0
comp=N,200nm,21.2s
CLL LmH 04 41 00.0
comp=E,100nm,20.7s
CLL LmV 04 44 00.0
comp=Z,300nm,18.2s
VRHR Novokhopersk 72.38 350 *e*P **P 04 04 45.8 -0.2**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VRHR pmax pmax
comp=E,40nm,0.9s
VSR Storozhevoye 72.48 351 *e*P **P 04 04 46.1 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,1.4s
BAIF Baives 72.61 15 *e*P **P 04 04 47.5 +0.1**
GIVF Givet 72.66 14 *e*P **P 04 04 47.5 -0.1**
VORD Divnogorie 72.72 351 *e*P **P 04 04 46.8 -1.2**
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BRG Berggiesshubel 72.88 8 *e*P **P 04 04 48.3 -0.7**
comp=Z,6.2nm,1.1s,mb4.5
BRG *e* 04 05 12.2
comp=Z,4.5nm,0.9s
BRG
comp=N,245nm,19.0s
BRG
comp=E,150nm,19.6s
BRG
comp=Z,326nm,18.1s
MOX Moxa 72.91 10 *e*P **P 04 04 49.1 0.0**
comp=Z,19nm,1.6s,mb4.8
MOX *e* 04 04 57.7
MOX *e*S S 04 14 22.0 +6.4
MOX
comp=Z,200nm,19.0s
MOX Moxa 72.91 10 *e*P **P 04 04 49.1 0.0**
MOX *e* 04 04 57.7
MOX *e*S S 04 14 22.0 +6.4
MOX pmax pmax
comp=Z,19nm,1.6s,mb4.8
MOX MLR MLR
comp=Z,200nm,19.0s,MS4.4
FRU Bishkek 73.26 325 *e*P **P 04 04 52.0 +0.6**
FRU *i* 04 05 02.0
FRU pmax pmax
comp=Z,38nm,1.8s,mb5.0
AAK Ala-Archa 73.48 325 *ce*P **P 04 04 53.4 +0.7**
AAK pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
AAK Ala-Archa 73.48 325 *e*P **P 04 04 53.7 +1.0**
comp=Z,5.8nm,0.9s,mb4.5

GYA Guiyang 73.49 293 *e*P **P 04 04 53.3 +0.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
AKASG Malin Array Be 73.51 358 P **P 04 04 51.3 -1.3**
comp=Z,7.2nm,0.8s,mb4.6,baz=2.3,slow=5.8,SNR=20
AKASG Malin Array Be 73.51 358 *ce*P **P 04 04 52.0 -0.7**
AKASG pmax pmax
comp=Z,7.0nm,0.9s
AKBB Malin Array Si 73.51 358 *e*P **P 04 04 51.7 -1.0**
KIEV Kiev 73.51 358 *e*P **P 04 04 51.8 -0.9**
KIEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIEV Kiev 73.51 358 *e*P **P 04 04 51.8 -0.9**
comp=Z,8.0nm,0.9s,mb4.7
DPC Dobruska-Polom 73.57 7 *e*P **P 04 04 53.5 +0.4**
DPC *e* 04 05 01.3
DPC *e*S S 04 14 24.6 +1.5
DPC MLR MLR
comp=Z,200nm,15.5s,MS4.5
DPC Dobruska-Polom 73.57 7 *e*P **P 04 04 53.5 +0.4**
DPC *ex* x 04 05 01.3
DPC *e*S S 04 14 24.6 +1.5
DPC AMS AMS 04 48 10.0
comp=Z,200nm,15.5s
PRU Pruhonice 73.81 8 *e*P **P 04 04 55.8 +1.4**
PRU *e* 04 05 03.0
PRU *e*S S 04 14 30.2 +4.4
PRU MLR MLR
comp=Z,200nm,16.3s,MS4.5
PRU Pruhonice 73.81 8 *e*P **P 04 04 55.8 +1.4**
PRU *ex* x 04 05 03.0
PRU *e*S S 04 14 30.2 +4.4
PRU AMS AMS 04 47 30.0
comp=Z,200nm,16.3s
TREC Trest 74.57 7 AMS AMS 04 49 10.0
comp=Z,200nm,17.4s
KWP Kalwaria Pacla 74.57 2 *e*P **P 04 04 59.5 +0.6**
KWP Kalwaria Pacla 74.57 2 *e*P **P 04 04 59.0 +0.1**
KWP pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KWP Kalwaria Pacla 74.57 2 *e*P **P 04 04 59.0 +0.2**
comp=Z,6.9nm,0.9s,mb4.6
KHC Kasperske Hory 74.58 9 *e*P **P 04 04 59.6 +0.6**
KHC *e* 04 05 07.2
KHC *e*S S 04 14 33.2 -1.3
KHC MLR MLR
comp=Z,300nm,18.4s,MS4.6
KHC Kasperske Hory 74.58 9 *e*P **P 04 04 59.8 +0.8**
comp=Z,4.8nm,0.8s,mb4.5
KHC Kasperske Hory 74.58 9 *e*P **P 04 04 59.6 +0.6**
KHC *ex* x 04 05 07.2
KHC *e*S S 04 14 33.2 -1.3
KHC AMS AMS 04 43 20.0
comp=Z,300nm,18.4s
CDF Champ du Feu 74.64 13 *e*P **P 04 04 59.3 0.0**
STHS Stebnicka Huta 74.74 3 *e*P **P 04 05 00.6 +0.7**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 74.74 3 *e*P **P 04 05 00.6 +0.7**
comp=Z,4.3nm,0.8s,mb4.4
STHS Stebnicka Huta 74.74 3 *e*P **P 04 05 00.6 +0.7**
GERES GERESS Array B 74.88 9 P **P 04 05 00.4 -0.3**
comp=Z,2.4nm,0.7s,mb4.2,baz=354,slow=5.4,SNR=23
GERES GERESS Array B 74.88 9 P **P 04 05 00.4 -0.3**
GERES pmax pmax
comp=Z,2.0nm,0.7s
HAU Haudompre 74.92 14 *e*P **P 04 05 00.9 0.0**
HAU *e*MLR MLR
comp=Z,347nm,18.8s,MS4.4
HAU Haudompre 74.92 14 *e*P **P 04 05 00.9 0.0**
HAU LR LR
comp=Z,350nm,18.8s,MS4.7
HINF Hinteralfeld 75.17 13 *e*P **P 04 05 02.2 -0.2**
KOLS Kolonicke sedl 75.26 3 *e*P **P 04 05 04.7 +1.8**
KOLS *e* 04 05 12.2
KOLS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KOLS Kolonicke sedl 75.26 3 *e*P **P 04 05 04.7 +1.8**
comp=Z,5.1nm,1.0s,mb4.4
KOLS *e* 04 05 12.2
KOLS Kolonicke sedl 75.26 3 *e*P **P 04 05 04.6 +1.7**
KOLS *es*P sP 04 05 12.2 +6.7
MFF Saint Martin d 75.28 18 *e*P **P 04 05 02.9 -0.2**
comp=Z,44nm,1.3s,mb4.9
MFF Saint Martin d 75.28 18 *e*P **P 04 05 02.9 -0.2**
MFF pmax pmax
comp=Z,22nm,1.3s,mb4.9
MFF Saint Martin d 75.28 18 *e*P **P 04 05 02.9 -0.2**
comp=Z,22nm,1.3s,mb4.9
LOR Lormes 75.29 16 *e*P **P 04 05 02.9 -0.2**
comp=Z,12nm,0.9s,mb4.6
LOR *e*MLR MLR
comp=Z,322nm,17.5s,MS4.4
LOR Lormes 75.29 16 *e*P **P 04 05 02.9 -0.2**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,320nm,17.5s,MS4.7
LOR Lormes 75.29 16 *e*P **P 04 05 02.9 -0.2**
comp=Z,6.3nm,0.9s,mb4.5
LOR LR LR
comp=Z,320nm,17.5s,MS4.7
SSF Saint Saulge 75.44 16 *e*P **P 04 05 03.9 0.0**
comp=Z,14nm,0.9s,mb4.6
SSF Saint Saulge 75.44 16 *e*P **P 04 05 03.9 0.0**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SSF Saint Saulge 75.44 16 *e*P **P 04 05 03.9 0.0**
comp=Z,6.9nm,0.9s,mb4.6
KOLL Kolacno 75.46 5 *e*P **P 04 05 04.3 +0.2**
KOLL Kolacno 75.46 5 *e*P **P 04 05 04.3 +0.2**
VYHS Vyhne 75.57 5 *e*P **P 04 05 04.9 +0.2**
VYHS *e* 04 05 16.0
VYHS pmax pmax
comp=Z,21nm,2.7s,mb4.6
VYHS Vyhne 75.57 5 *e*P **P 04 05 04.9 +0.2**
comp=Z,21nm,2.7s,mb4.6
VYHS *e* 04 05 16.0
VYHS Vyhne 75.57 5 *e*P **P 04 05 04.9 +0.2**
VYHS *es*P sP 04 05 16.0 +8.7
KECS Kecovo 75.65 4 *e*P **P 04 05 05.9 +0.8**
KECS *e* 04 05 14.7
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 75.65 4 *e*P **P 04 05 05.9 +0.8**
comp=Z,2.1nm,0.8s,mb4.1
KECS *e* 04 05 14.7
KECS Kecovo 75.65 4 *e*P **P 04 05 05.9 +0.8**
KECS *es*P sP 04 05 14.7 +7.0
AVF Avril sur Loir 75.68 16 *e*P **P 04 05 05.0 -0.3**
KSH Kashi 75.79 322 P **P 04 05 09.8 +3.7**
KSH pmax pmax
comp=Z,140nm,5.4s
BGF Bois d'Agland 75.82 16 *e*P **P 04 05 05.9 -0.3**
comp=Z,19nm,0.9s,mb4.7
BGF Bois d'Agland 75.82 16 *e*P **P 04 05 05.9 -0.3**
BGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BGF Bois d'Agland 75.82 16 *e*P **P 04 05 05.9 -0.3**
comp=Z,9.7nm,0.9s,mb4.7
SMF Signal de Mont 75.89 16 *e*P **P 04 05 06.1 -0.5**
TCF Toulx Ste Croi 75.98 17 *e*P **P 04 05 06.7 -0.4**
CABF La Chapelle 76.25 14 *e*P **P 04 05 08.7 +0.1**
comp=Z,21nm,1.1s,mb4.7
CABF La Chapelle 76.25 14 *e*P **P 04 05 08.7 +0.1**
CABF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CABF La Chapelle 76.25 14 *e*P **P 04 05 08.7 +0.1**
comp=Z,10nm,1.1s,mb4.7
KMI Kunming 76.59 295 P **P 04 05 11.8 +0.9**
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KBA Koelnbreinsper 76.60 9 ||*i*P **P 04 05 11.7 +1.1**
comp=Z,6.9nm,1.0s,mb4.5
RJF Les Rejaudoux 76.83 18 *e*P **P 04 05 11.3 -0.6**
comp=Z,33nm,1.4s,mb4.8
RJF *e*MLR MLR
comp=Z,581nm,18.8s,MS4.6
RJF Les Rejaudoux 76.83 18 *e*P **P 04 05 11.3 -0.6**
RJF pmax pmax
comp=Z,17nm,1.4s,mb4.8
RJF MLR MLR
comp=Z,580nm,18.8s,MS4.9
RJF Les Rejaudoux 76.83 18 *e*P **P 04 05 11.3 -0.6**
comp=Z,17nm,1.4s,mb4.8

RJF LR LR
comp=Z,580nm,18.8s,MS4.9
LFF La Frestale 77.05 18 *e*P **P 04 05 13.0 -0.1**
comp=Z,19nm,0.8s,mb4.8
LFF La Frestale 77.05 18 *e*P **P 04 05 13.0 -0.1**
LFF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LFF La Frestale 77.05 18 *e*P **P 04 05 13.0 -0.1**
comp=Z,9.6nm,0.8s,mb4.8
OBKA Obir 77.27 8 ||*i*P **P 04 05 14.7 +0.3**
comp=Z,11nm,0.7s,mb4.9
CAF Calviac 77.28 17 *e*P **P 04 05 14.1 -0.4**
comp=Z,35nm,1.3s,mb4.8
CAF Calviac 77.28 17 *e*P **P 04 05 14.1 -0.4**
CAF pmax pmax
comp=Z,18nm,1.3s,mb4.8
CAF Calviac 77.28 17 *e*P **P 04 05 14.1 -0.4**
comp=Z,18nm,1.3s,mb4.8
LPL La Plagne 77.41 14 *e*P **P 04 05 16.0 +0.8**
LPG La Plagne 77.43 14 *e*P **P 04 05 16.4 +1.1**
VIVF Saint-Julien-l 77.77 15 *e*P **P 04 05 17.1 -0.1**
comp=Z,18nm,1.0s,mb4.7
VIVF Saint-Julien-l 77.77 15 *e*P **P 04 05 17.1 -0.1**
VIVF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
VIVF Saint-Julien-l 77.77 15 *e*P **P 04 05 17.1 -0.1**
comp=Z,9.2nm,1.0s,mb4.7
QIZ Qiongzhong 77.87 286 P **P 04 05 16.0 -2.1**
QIZ S S 04 15 11.5 0.0
ETSF Etsaut 78.78 20 *e*P **P 04 05 23.0 +0.2**
comp=Z,16nm,0.9s,mb4.7
ETSF Etsaut 78.78 20 *e*P **P 04 05 23.0 +0.2**
ETSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ETSF Etsaut 78.78 20 *e*P **P 04 05 23.0 +0.2**
comp=Z,8.2nm,0.9s,mb4.7
KIV Kislovodsk 79.32 348 *e*P **P 04 05 25.2 -0.5**
KIV *e* 04 08 23.2
KIV *e*S S 04 15 25.6 -0.7
KIV *e*SS SS 04 20 26.6 -4.9
KIV pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
FRF La Foret Royal 79.32 14 *e*P **P 04 05 25.4 -0.3**
SOC Sochi 80.00 350 *e*P **P 04 05 27.4 -2.1**
SOC *e**PP pP 04 05 32.5 +1.1
SOC *e*S S 04 15 40.4 +6.8
PGF Pioggiola 80.62 13 *e*P **P 04 05 32.5 -0.3**
comp=Z,48nm,1.1s,mb5.0
PGF Pioggiola 80.62 13 *e*P **P 04 05 32.5 -0.3**
PGF pmax pmax
comp=Z,24nm,1.1s,mb5.0
PGF Pioggiola 80.62 13 *e*P **P 04 05 32.5 -0.3**
comp=Z,24nm,1.1s,mb5.0
ESDC Sonseca Array 81.19 23 P **P 04 05 35.6 -0.3**
comp=Z,3.0nm,0.8s,mb4.3,baz=342,slow=4.6,SNR=16
CMAR Chiang Mai Arr 84.07 294 P **P 04 05 51.0 -0.2**
comp=Z,7.0nm,0.8s,mb4.8,baz=10.0,slow=5.8,SNR=17
CMAR LR LR 04 46 22.0
comp=Z,164nm,18.1s,MS4.5,baz=300,slow=38
CMAR Chiang Mai Arr 84.07 294 P **P 04 05 51.1 -0.1**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CMAR MLR MLR
comp=Z,164nm,18.1s
CMAR Chiang Mai Arr 84.07 294 P **P 04 05 51.0 -0.2**
CMAR LR LR 04 46 22.0
BR131 Keskin Array S 84.30 354 *e*P **P 04 05 52.7 +0.6**
comp=Z,2.1nm,0.7s,mb4.4
BRTR Keskin Array B 84.30 354 P **P 04 05 52.4 +0.3**
comp=Z,1.7nm,0.8s,mb4.2,baz=15,slow=3.2,SNR=14
BRTR Keskin Array B 84.30 354 P **P 04 05 52.4 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
TIP Timpagrande 84.72 7 *e*P **P 04 05 53.7 -0.5**
comp=Z,8.1nm,1.2s,mb4.7
LSZ Lusaka 139.20 357 *e*PKHKP 04 12 37.3
QSPA South Pole Qui 145.92 180 PKPbc PKPbc 04 12 57.5 -0.6
comp=Z,15nm,1.0s,baz=54,slow=1.3,SNR=18
QSPA South Pole Qui 145.92 180 *e*PKPbc PKPbc 04 12 57.0 -1.1
BOSA Boshof 152.49 2 PKPbc PKPbc 04 13 15.2 -1.2
comp=Z,3.0nm,0.8s,baz=314,slow=3.8,SNR=3.8

KRSC 26 03:54:29.2±0.9, 55°.72N×162°.28E, h18km±18km, ML3.5,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.58**	**32**	*e*P	Pg	03 54 40.7	+0.1
KBTR				*e*S	Sg	03 54 49.3	+0.9
ZLN	**Zelenaya**	**0.88**	**290**	*e*P	Pb	03 54 46.5	+0.5
ZLN				*e*S	Sb	03 54 59.1	+1.7
CIRR	**Tsirk**	**0.95**	**295**	*e*P	Pb	03 54 47.3	+0.2
CIRR				*e*S	Sb	03 55 00.5	+1.2
SMKR	**Semkarok**	**0.98**	**333**	*e*P	Pb	03 54 47.4	-0.1
SMKR				*e*S	Sb	03 55 00.9	+0.8
BZMR	**Bezymyannaya**	**1.03**	**283**	*e*P	Pb	03 54 48.5	0.0
BZMR				*e*S	Sb	03 55 02.3	+0.6
BDR	**Baidarnaya**	**1.04**	**325**	*e*P	Pb	03 54 48.9	+0.3
KRSR	**Krestovskiy**	**1.08**	**298**	*e*P	Pb	03 54 48.8	-0.6
KRSR				*e*S	Sb	03 55 02.7	-0.5
KLY	**Klyuchi**	**1.09**	**304**	*e*P	Pb	03 54 47.7	-1.8
KLY				*e*S	Sb	03 55 01.3	-2.1
KIRR	**Kirishev**	**1.12**	**283**	*e*P	Pn	03 54 50.2	+0.3
KIRR				*e*S	Sb	03 55 05.6	+1.5
SRKR	**Sorokina**	**1.12**	**327**	*e*P	Pn	03 54 49.9	-0.1
SRKR				*e*S	Sb	03 55 04.8	+0.5
KMNR	**Kamenistaya**	**1.16**	**273**	*e*P	Pn	03 54 51.0	+0.6
KMNR				*e*S	Sb	03 55 06.7	+1.5
KPT	**Kopyto**	**1.19**	**283**	*e*P	Pn	03 54 51.2	+0.4
KPT				*e*S	Sb	03 55 07.2	+1.1
MKZ	**Mys Kozlova**	**1.21**	**195**	*e*P	Pn	03 54 50.3	-0.8
MKZ				*e*S	Sb	03 55 05.4	-1.3
TUMR	**Tumrok**	**1.29**	**251**	*e*P	Pn	03 54 53.6	+1.3
TUMR				*e*S	Sn	03 55 11.0	+1.9
KOZ	**Kozyrevsk**	**1.40**	**285**	*e*P	Pn	03 54 54.9	+1.2
KOZ				*e*S	Sn	03 55 13.4	+1.7
SRDR	**Sredinnyy**	**1.56**	**294**	*e*P	Pn	03 54 56.9	+0.9
SRDR				*e*S	Sn	03 55 17.3	+1.6
BKI	**Bering**	**2.17**	**102**	*e*P	Pn	03 55 05.3	+1.0
BKI				*e*S	Sn	03 55 32.0	+1.4
KII	**Karymskiy**	**2.35**	**225**	*e*P	Pn	03 55 09.1	+2.3
KII				*e*S	Sn	03 55 38.3	+3.1
SPN	**Mys Shipunski**	**2.94**	**208**	*e*P	Pn	03 55 14.5	-0.4
SPN				*e*S	Sn	03 55 47.5	-2.2
NLC	**Nalytchevo**	**3.08**	**215**	*e*P	Pn	03 55 17.5	+0.7
NLC				*e*S	Sn	03 55 52.9	-0.2
AVH	**Avacha**	**3.21**	**221**	*e*P	Pn	03 55 21.5	+2.8
AVH				*e*S	Sn	03 55 59.3	+2.9
GNL	**Ganaly**	**3.23**	**233**	*e*P	Pn	03 55 20.6	+1.6
PET	**Petropavlovsk**	**3.44**	**220**	*e*S	Sn	03 56 03.2	+1.3
RUS	**Russkaya**	**3.97**	**216**	*e*P	Pn	03 55 30.2	+1.1
RUS				*e*S	Sn	03 56 14.6	-0.5

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*DDA **26** 03:56:09.8, 39°.90N×38°.95E, h5km±4km, Md3.3*
*ISK **26** 03:56:09.9, 39°.91N×39°.02E, h5km, MD3.2*
*ISCJB **26** 03:56:10.8±0.4, 39°.90N±0°.02×39°.01E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=2.9km az=14.3*
*CSEM **26** 03:56:10.5±0.1, 39°.90N×38°.99E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.4km az=100.0*
ISC 26 03:56:10.7±0.5, 39°.91N±0°.02×38°.98E±0°.04, h3km±5km,
n43, σ0°.84/63, 1C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.32**	**41**	||*i*P	**Pg**	**03 56 17.6**	**+0.7**
KELT				*i* S	**Sg**	**03 56 22.1**	**+1.0**
KELT	**Kelkit**	**0.32**	**41**	*i* P	**Pg**	**03 56 17.6**	**+0.7**
KELT				*i* S	**Sg**	**03 56 22.0**	**+0.9**
EZC	**Erzincan**	**0.33**	**118**	PG	**Pg**	**03 56 16.6**	**-0.3**
EZC				*e*SG	**Sg**	**03 56 21.1**	**-0.1**
GUMT	**Gumushane**	**0.67**	**35**	*e*PG	**Pg**	**03 56 23.6**	**0.0**
GUMT				*e*SG	**Sg**	**03 56 32.5**	**+0.1**
GUMT	**Gumushane**	**0.67**	**35**	*e*Pg	**Pg**	**03 56 23.6**	**0.0**
GUMT				*e*Sg	**Sg**	**03 56 32.5**	**+0.2**
KEMA	**Kemaliye**	**0.74**	**211**	||*i*P	**Pg**	**03 56 24.5**	**-0.3**
KEMA				*i* S	**Sg**	**03 56 35.0**	**+0.6**
KEMA	**Kemaliye**	**0.74**	**211**	*i* P	**Pg**	**03 56 24.5**	**-0.3**
KEMA				*i* S	**Sg**	**03 56 35.0**	**+0.6**
ESPY	**Espiye-Giresun**	**1.03**	**349**	*e*PG	**Pg**	**03 56 30.5**	**+0.1**
ESPY	**Espiye-Giresun**	**1.03**	**349**	*e*Pg	**Pg**	**03 56 30.5**	**+0.1**
PTK	**Pertek**	**1.06**	**162**	*e*PG	**Pg**	**03 56 29.9**	**-1.1**

PTK eSG Sg 03 56 45.4 +0.7
PTK Pertek 1.06 162 ePg Pg 03 56 29.9 -1.1
PTK eSg Sg 03 56 45.4 +0.7
GRSN GIRESUNGRSN 1.15 332 ⇑iP Pg 03 56 32.8 0.0
GRSN i S Sg 03 56 47.3 -0.5
GRSN GIRESUNGRSN 1.15 332 i P Pg 03 56 32.8 0.0
GRSN i S Sg 03 56 47.3 -0.5
KOPT Kop Dagi 1.17 84 eP Pg 03 56 32.8 -0.4
KOPT eS Sg 03 56 51.8 +3.5
KOPT Kop Dagi 1.17 84 eP Pg 03 56 32.8 -0.3
KOPT eS Sg 03 56 51.8 +3.5
MACK Trabzon 1.20 30 eP Pg 03 56 33.4 -0.3
MACK eS Sg 03 56 49.7 +0.5
MACK Trabzon 1.20 30 eP Pg 03 56 33.4 -0.3
MACK eS Sg 03 56 49.7 +0.5
KTUT Trabzon 1.24 29 ePN Pn 03 56 32.9 -2.0
KTUT Trabzon 1.24 29 ePn Pn 03 56 32.9 -2.0
DARE Darende-Malaty 1.32 224 ePN Pn 03 56 42.7 +6.7
ELZG Elazig 1.41 180 eP Pn 03 56 36.1 -1.1
ELZG eS Sg 03 56 55.1 -0.7
ELZG Elazig 1.41 180 eP Pn 03 56 36.1 -1.1
ELZG eS Sg 03 56 55.2 -0.6
SVSK Karacayir 1.52 271 ePN Pn 03 56 38.6 -0.3
SVSK Karacayir 1.52 271 ePn Pn 03 56 38.6 -0.2
SVRC Sivrice-ELAZID 1.55 170 ePN Pn 03 56 37.8 -1.3
SVRC Sivrice-ELAZID 1.55 170 ePn Pn 03 56 37.8 -1.3
BINT Bingol 1.56 131 ePN Pn 03 56 39.0 -0.3
BINT Bingol 1.56 131 ePn Pn 03 56 39.0 -0.3
MYA Malataya 1.64 195 ePN Pn 03 56 40.4 0.0
MYA Malataya 1.64 195 ePn Pn 03 56 40.4 +0.1
AKCD Akcadag 1.81 207 eP Pn 03 56 43.4 +0.7
AKCD eS Sn 03 57 08.3 +2.2
AKCD Akcadag 1.81 207 eP Pn 03 56 43.4 +0.7
AKCD eS Sn 03 57 08.4 +2.3
EZM Erzurum 1.83 89 ePN Pn 03 56 42.9 -0.2
ERZM Erzurum 1.84 89 eP Pn 03 56 44.5 +1.4
ERZM eS Sn 03 57 14.3 +7.4
ERZM Erzurum 1.84 89 eP Pn 03 56 44.5 +1.4
TOKT Tokat 1.91 283 ePN Pn 03 56 44.8 +0.6
TOKT Tokat 1.91 283 ePn Pn 03 56 44.8 +0.6
PZAR Pazar-Rize 1.94 48 ePN Pn 03 56 44.6 +0.1
PZAR Pazar-Rize 1.94 48 ePn Pn 03 56 44.6 +0.1
URFA Urfa 2.46 183 ePN Pn 03 56 52.3 +0.5
URFA Urfa 2.46 183 ePn Pn 03 56 52.3 +0.5
BCA Borcka 2.53 52 ePN Pn 03 56 51.5 -1.2
BCA Borcka 2.53 52 ePn Pn 03 56 51.5 -1.2

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*ISCJB **26** 04:00:49.2±0.5, 54°.51S±0°.07×56°.3W±0°.1, h10km, mb4.3/12, MS4.1/6, Error ellipse: s-maj=12.0km s-min=9.2km az=139.5*
*IDC **26** 04:00:49.4±0.8, 54°.40S×55°.75W, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.1/12, mbtmp4.1/8, MS3.9/7, Ms1 3.9/7, ms1mx3.8/18, Error ellipse: s-maj=34.6km s-min=17.1km az=69.0*
*NEIC **26** 04:00:50.8±0.5, 54°.47S×56°.17W, h10km, mb4.7/8, Error ellipse: s-maj=17.1km s-min=12.4km az=62.0*
ISC 26 04:00:51.1±0.5, 54°.49S±0°.07×56°.3W±0°.1, h10km, n32, σ1°20/24, mb4.3/12, MS4.1/6, Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**7.05**	**262**	Pn	**Pn**	**04 02 32.1**	**-2.1**
8.7nm,0.3s,baz=70,slow=13,SNR=75							
USHA				Sn	**Sn**	**04 03 54.0**	**-0.3**
253nm,0.3s,baz=326,slow=5.5,SNR=46							
PMSA	**Palmer Station**	**11.02**	**198**	Pn	**Pn**	**04 03 34.5**	**+6.0**
19nm,0.3s,baz=7.2,slow=12,SNR=44							
PMSA	**Palmer Station**	**11.02**	**198**	ePn	**Pn**	**04 03 34.8**	**+6.2**
93nm,0.6s							
TRQA	**Tornquist**	**16.89**	**344**	ePn	**Pn**	**04 04 48.5**	**+1.1**
39nm,0.9s							
TRQA				eS	**Sn**	**04 07 38.9**	**-16**
CFAA	**Coronel Fontan**	**24.42**	**335**	P	**P**	**04 06 08.7**	**-0.8**
0.2nm,0.3s,baz=176,slow=7.9,SNR=4.2							
CFAA				LR	LR	04 15 25.3	
comp=Z,47nm,21.4s,baz=156,slow=36							
VNA1	**Neumayer--Stat**	**26.39**	**146**	e	**P**	**04 06 27.4**	**+0.3**
VNA2	**Neumayer--Watz**	**26.73**	**147**	e	**P**	**04 06 30.7**	**+0.5**
CPUP	**Villa Florida**	**28.14**	**358**	P	**P**	**04 06 42.6**	**-0.6**
0.6nm,0.5s,mb3.5,baz=192,slow=13,SNR=4.2							
CPUP				LR	LR	04 20 04.0	
comp=Z,191nm,18.9s,MS3.7,baz=58,slow=41							
QSPA	**South Pole Qui**	**35.76**	**180**	P	**P**	**04 07 50.8**	**+1.3**
12nm,0.6s,mb5.0,baz=166,slow=2.0,SNR=70							
QSPA	**South Pole Qui**	**35.76**	**180**	eP	**P**	**04 07 50.9**	**+1.5**
7.3nm,0.6s,mb4.8							
SIV	**San Ignacio**	**38.60**	**353**	P	**P**	**04 08 13.6**	**-0.6**
1.4nm,0.5s,mb4.0,baz=189,slow=8.9,SNR=12							
LPAZ	**La Paz**	**39.22**	**342**	P	**P**	**04 08 20.1**	**+0.8**
0.6nm,0.4s,mb3.6,baz=118,slow=11,SNR=7.6							
LPAZ				LR	LR	04 26 04.9	
comp=Z,314nm,18.6s,MS4.2,baz=220,slow=39							
LPAZ	**La Paz**	**39.22**	**342**	P	**P**	**04 08 19.8**	**+0.4**
3.4nm,0.8s,mb4.1							
LPAZ				LR	LR	04 26 04.9	
SBA	**Scott Base**	**45.30**	**192**	eP	**P**	**04 09 11.2**	**+3.0**
15nm,1.0s,mb4.8							
RPN	**Rapa Nui**	**47.08**	**283**	LR	LR	04 26 17.7	
comp=Z,216nm,19.3s,MS4.1,baz=350,slow=32							
MAW	**Mawson**	**50.12**	**154**	P	**P**	**04 09 44.0**	**-1.7**
2.2nm,0.9s,mb4.2,baz=288,slow=19,SNR=3.5							
MAW				LR	LR	04 30 34.6	
comp=Z,174nm,21.5s,MS4.0,baz=60,slow=36							
SUR	**Sutherland**	**57.11**	**101**	eP	**P**	**04 10 37.5**	**+0.1**
6.3nm,0.8s,mb4.7							
OTAV	**Otavalo**	**57.52**	**333**	eP	**P**	**04 10 42.8**	**+2.3**
7.4nm,0.8s,mb4.8							
ROSC	**El Rosal**	**61.02**	**339**	LR	LR	04 38 45.2	
comp=Z,212nm,20.0s,MS4.3,baz=22,slow=37							
BOSA	**Boshof**	**62.46**	**101**	P	**P**	**04 11 13.1**	**-1.2**
2.9nm,0.6s,mb4.6,baz=208,slow=6.8,SNR=11							
BOSA				LR	LR	04 34 41.6	
comp=Z,141nm,21.8s,MS4.1,baz=227,slow=33							
BOSA	**Boshof**	**62.46**	**101**	eP	**P**	**04 11 13.2**	**-1.1**
2.4nm,0.6s,mb4.5							
BOSA				LR	LR	04 34 41.5	
LBTB	**Lobatse**	**65.41**	**99**	eP	**P**	**04 11 32.8**	**-0.9**
4.6nm,0.6s,mb4.7							
TORD	**Torodi Ar. Bea**	**83.24**	**56**	P	**P**	**04 13 16.7**	**-0.9**
1.2nm,0.6s,mb4.1,baz=214,slow=4.2,SNR=15							
TXAR	**Lajitas Array**	**92.92**	**320**	P	**P**	**04 14 05.1**	**+1.3**
0.1nm,0.6s,mb3.4,baz=300,slow=7.2,SNR=2.4							
YKA	**Yellowknife Ar**	**125.24**	**331**	PKP	PKPdf	04 19 49.8	-0.5
0.4nm,0.5s,baz=142,slow=2.1,SNR=7.3							
EKS2	**Erkin-Say**	**145.63**	**89**	ePKPbc	PKPbc	04 20 28.9	-0.1
LSA	**Lhasa**	**145.91**	**123**	P	PKPdf	04 20 30.5	+0.9
TKM2	**Tokmak 2**	**146.85**	**90**	ePKPbc	PKPbc	04 20 32.0	-0.6
BVAR	**Borovoye Array**	**149.07**	**70**	PKPbc	PKPbc	04 20 38.3	+0.1
0.9nm,0.6s,baz=327,slow=2.5,SNR=5.9							
MKAR	**Makanchi Array**	**152.96**	**89**	PKPbc	PKPbc	04 20 46.1	-1.4
0.9nm,0.7s,baz=243,slow=2.6,SNR=5.3							
MKAR				PKPab	PKPab	04 20 55.2	-3.8
2.1nm,0.6s,baz=256,slow=3.4,SNR=8.5							
ZALV	**Zalesovo Beam**	**157.45**	**75**	PKPab	PKPab	04 21 15.3	-2.6
0.5nm,0.3s,baz=173,slow=2.3,SNR=2.5							
MJAR	**Matsushiro Arr**	**159.44**	**215**	PKP	PKPdf	04 20 51.1	+2.0
0.7nm,0.3s,baz=171,slow=5.2,SNR=4.5							

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*IDC **26** 04:08:26.4±0.5, 30°.92S×176°.76W, h0km, mb4.6/12, mb1 4.7/12, mb1mx4.7/16, mbtmp4.5/12, Error ellipse: s-maj=21.6km s-min=19.3km az=147.0*
*NEIC **26** 04:08:27.3±0.4, 31°.34S×176°.76W, h10km, mb4.9/16, Error ellipse: s-maj=11.6km s-min=7.1km az=130.0*
*ISCJB **26** 04:08:29.9±0.2, 31°.41S±0°.06×176°.81W±0°.06, h33km, mb4.8/28, MS4.6/11, Error ellipse: s-maj=9.6km s-min=4.5km az=140.9*
*MOS **26** 04:08:31.8±2.6, 30°.97S×177°.00W, h33km, mb4.9/13, MS4.4/5, Error ellipse: s-maj=16.7km s-min=15.1km az=141.3*
ISC 26 04:08:31.8±0.2, 31°.35S±0°.05×176°.78W±0°.06, h35km, (h9km±3.0km:pP-P), n284, σ0°76/200, mb4.8/28, MS4.6/11, 58C-70D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.53**	**214**	Pn	**Pn**	**04 10 31.3**	**-1.5**
3.3nm,0.3s,baz=24,slow=16,SNR=16							
URZ				Sn	**Sn**	**04 12 07.9**	**+0.1**
31nm,0.3s,baz=195,slow=13,SNR=6.1							
URZ	**Urewera**	**8.53**	**214**	ePn	**Pn**	**04 10 31.4**	**-1.4**
48nm,0.4s							
URZ				eSn	**Sn**	**04 12 08.6**	**+0.9**
OUZ	**Omahuta**	**8.93**	**242**	ePn	**Pn**	**04 10 43.6**	**+5.3**
35nm,0.5s							
SNZO	**South Karori**	**12.07**	**212**	ePn	**Pn**	**04 11 18.4**	**-2.9**
SNZO				eS	**Sn**	**04 13 30.5**	**-4.1**
KHZ	**Kahutara**	**13.48**	**212**	ePn	**Pn**	**04 11 38.6**	**-1.9**
46nm,0.5s							
KHZ				eS	**Sn**	**04 14 04.2**	**-4.9**
MSVF	**Nonsavu**	**14.35**	**340**	ePn	**Pn**	**04 11 47.7**	**-4.7**
RPZ	**Rata Peaks**	**15.65**	**215**	Pn	**Pn**	**04 12 06.1**	**-3.4**
9.6nm,0.3s,baz=44,slow=2.2,SNR=26							
RPZ	**Rata Peaks**	**15.65**	**215**	ePn	**Pn**	**04 12 06.1**	**-3.5**
50nm,0.7s							
ODZ	**Otahua Downs**	**16.84**	**212**	ePn	**Pn**	**04 12 23.3**	**-1.5**
41nm,0.8s							
ODZ				eS	**Sn**	**04 15 21.9**	**-8.8**
DZM	**Mont Dzumac**	**17.59**	**298**	eP	**Pn**	**04 12 35.9**	**+1.6**
82nm,1.4s							
DZM				eLR	LR	04 16 50.7	
2μm,23.6s							
DZM	**Mont Dzumac**	**17.59**	**298**	ePn	**Pn**	**04 12 35.2**	**+0.9**
58nm,1.1s							
AFI	**Afiamalu**	**17.96**	**16**	eP	**Pn**	**04 12 37.2**	**-1.6**
RAR	**Rarotonga**	**18.27**	**61**	eP	**Pn**	**04 12 33.4**	**-9.2**
RAR				pmax	pmax		
comp=Z,105nm,1.1s							
RAR	**Rarotonga**	**18.27**	**61**	eP	**Pn**	**04 12 33.4**	**-9.2**
comp=Z,105nm,1.1s							
ARMA	**Armidale**	**27.08**	**264**	eP	**P**	**04 14 13.8**	**+2.5**
ARMA	**Armidale**	**27.08**	**264**	eP	**P**	**04 14 11.2**	**0.0**
comp=Z,3.4nm,0.6s,mb4.0							
PPT	**Papeete**	**28.21**	**67**	eS	**S**	**04 18 56.8**	**-8.2**
comp=Z,264nm,24.5s							
PPT				eLQ		04 20 13.5	
comp=Z,882nm,26.0s							
PPT				eLR	LR	04 21 34.1	
comp=Z,1μm,26.0s							
CNB	**Canberra Magne**	**28.48**	**253**	eP	**P**	**04 14 26.3**	**+2.6**
EIDS	**Eidsvold**	**28.84**	**274**	P	**P**	**04 14 27.5**	**+0.6**
CMSA	**Cobar Meteorol**	**31.92**	**260**	eP	**P**	**04 14 55.5**	**+1.4**
CTA	**Charters Tower**	**34.99**	**280**	eP	**P**	**04 15 21.5**	**+0.5**
comp=Z,16nm,0.8s,mb5.0							
CTA	**Charters Tower**	**34.99**	**280**	P	**P**	**04 15 19.6**	**-1.3**
comp=Z,20nm,0.8s,mb5.1,baz=98,slow=12,SNR=16							
CTA	**Charters Tower**	**34.99**	**280**	P	**P**	**04 15 19.7**	**-1.3**
CTA				pmax	pmax		
comp=Z,20nm,0.8s							
CTAO	**Charters Tower**	**34.99**	**280**	eP	**P**	**04 15 21.6**	**+0.6**
CTAO				pmax	pmax		
comp=Z,25nm,0.6s,mb5.3							
CTAO	**Charters Tower**	**34.99**	**280**	eP	**P**	**04 15 21.6**	**+0.7**
comp=Z,25nm,0.6s,mb5.3							
STKA	**Stephens Creek**	**35.30**	**258**	eP	**P**	**04 15 24.8**	**+1.3**
comp=Z,6.8nm,0.6s,mb4.8							
STKA	**Stephens Creek**	**35.30**	**258**	P	**P**	**04 15 25.0**	**+1.5**
comp=Z,8.4nm,1.0s,mb4.6,baz=90,slow=11,SNR=11							
STKA	**Stephens Creek**	**35.30**	**258**	P	**P**	**04 15 25.0**	**+1.5**
STKA				pmax	pmax		
comp=Z,8.0nm,1.0s							
STKA	**Stephens Creek**	**35.30**	**258**	eP	**P**	**04 15 24.9**	**+1.4**
comp=Z,2.7nm,0.7s,mb4.3							
RKT	**Rikitea**	**37.88**	**88**	eS	**S**	**04 21 29.3**	**-5.6**
comp=Z,330nm,28.2s							
RKT				eLR	LR	04 25 53.1	
comp=Z,1μm,28.5s							
BBOO	**Buckleboo**	**39.73**	**255**	eP	**P**	**04 16 01.4**	**+0.4**
comp=Z,8.9nm,1.0s,mb4.5							
TAOE	**Nuku Hiva Isla**	**40.74**	**65**	eS	**S**	**04 22 12.3**	**-5.6**
comp=Z,306nm,25.5s							
TAOE				eLQ		04 25 25.6	
comp=Z,892nm,29.8s							
TAOE				eLR	LR	04 27 18.9	
comp=Z,790nm,26.7s							
ASAR	**Alice Springs**	**44.11**	**267**	P	**P**	**04 16 36.0**	**-1.0**
comp=Z,7.6nm,0.6s,mb4.6,baz=104,slow=7.2,SNR=82							
ASAR				PcP	PcP	04 18 22.1	+0.3
comp=Z,5.8nm,1.0s,baz=122,slow=5.0,SNR=4.9							
WRAB	**Tennant Creek**	**45.18**	**272**	eP	**P**	**04 16 43.8**	**-1.7**
WRAB				pmax	pmax		
comp=Z,15nm,0.7s,mb4.9							
WRAB	**Tennant Creek**	**45.18**	**272**	eP	**P**	**04 16 43.8**	**-1.7**
comp=Z,15nm,0.7s,mb4.9							
FORT	**Forrest**	**46.82**	**256**	eP	**P**	**04 16 57.4**	**-0.9**
comp=Z,11nm,0.6s,mb5.0							
FORT	**Forrest**	**46.82**	**256**	eP	**P**	**04 16 57.2**	**-1.1**
comp=Z,8.5nm,0.5s,mb4.9							
KAKA	**Kakadu**	**50.13**	**280**	eP	**P**	**04 17 22.1**	**-1.9**
comp=Z,25nm,0.7s,mb5.4							
WAKE	**Wake Island**	**52.80**	**340**	eP	**P**	**04 17 37.4**	**-6.3**
comp=Z,67nm,0.8s,mb5.6							
FITZ	**Fitzroy Crossi**	**53.41**	**270**	eP	**P**	**04 17 48.0**	**-0.4**
comp=Z,11nm,0.9s,mb4.8							
FITZ	**Fitzroy Crossi**	**53.41**	**270**	eP	**P**	**04 17 48.2**	**-0.2**
comp=Z,5.9nm,0.7s,mb4.6							
QSPA	**South Pole Qui**	**58.77**	**180**	P	**P**	**04 18 29.6**	**+3.8**
comp=Z,15nm,0.9s,mb5.0,baz=44,slow=2.8,SNR=38							
MAW	**Mawson**	**71.79**	**200**	eP	**P**	**04 19 53.3**	**+3.0**
comp=Z,4.2nm,0.8s,mb4.4							
MAW	**Mawson**	**71.79**	**200**	P	**P**	**04 19 52.5**	**+2.2**
comp=Z,5.8nm,0.8s,mb4.5,baz=138,slow=9.2,SNR=9.7							
MAW	**Mawson**	**71.79**	**200**	P	**P**	**04 19 50.6**	**+0.3**
MAW				pmax	pmax		
comp=Z,1.0nm,0.8s							
MAW	**Mawson**	**71.79**	**200**	P	**P**	**04 19 50.6**	**+0.3**
comp=Z,1.4nm,0.8s,mb3.9							
MAW				e		04 19 53.3	
SYO	**Syowa Base**	**76.43**	**193**	⇓eP	**P**	**04 20 18.0**	**+0.7**
VNA2	**Neumayer--Watz**	**77.73**	**176**	eP	**P**	**04 20 25.7**	**+1.1**
VNA2				e		04 20 52.2	
VNA1	**Neumayer--Stat**	**77.96**	**176**	eP	**P**	**04 20 27.5**	**+1.6**
VNA1				e		04 20 54.0	
MAIT	**Maitri**	**77.98**	**183**	eP	**P**	**04 20 28.0**	**+2.0**
KSRS	**Korea Array**	**85.75**	**319**	P	**P**	**04 21 05.6**	**-1.6**
comp=Z,2.3nm,0.8s,mb4.4,baz=146,slow=5.5,SNR=10							
KSRS	**Korea Array**	**85.75**	**319**	P	**P**	**04 21 05.6**	**-1.6**
KSRS				pmax	pmax		
comp=Z,2.0nm,0.8s,mb4.4							
BFSC	**Mount Baldy St**	**85.77**	**45**	⇑P	**P**	**04 21 07.2**	**-0.2**
baz=86							
EDW2	**Edwards Air Fo**	**86.00**	**45**	⇓P	**P**	**04 21 08.6**	**+0.1**
baz=86							
VES	**Vestal, Richgr**	**86.00**	**44**	⇑P	**P**	**04 21 08.3**	**-0.2**
baz=86							
YSS	**Yuzh-Sakhalins**	**86.06**	**334**	P	**P**	**04 21 08.2**	**-0.3**
CMB	**Columbia Colle**	**86.77**	**41**	eP	**P**	**04 21 11.7**	**-0.5**
HEC	**Hector,Ludlow**	**86.97**	**46**	⇓P	**P**	**04 21 13.1**	**-0.2**
baz=87							
PETK	**Petropavlovsk-**	**86.99**	**345**	P	**P**	**04 21 10.9**	**-2.0**
comp=Z,5.3nm,0.8s,mb4.8,baz=142,slow=5.1,SNR=6.7							
PETK	**Petropavlovsk-**	**86.99**	**345**	P	**P**	**04 21 10.9**	**-2.0**
PETK				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.8							
GSC	**Goldstone**	**87.00**	**45**	⇑P	**P**	**04 21 13.1**	**-0.3**
baz=87							
GSC	**Goldstone**	**87.00**	**45**	eP	**P**	**04 21 13.4**	**0.0**
GSC				pmax	pmax		
comp=Z,10.0nm,1.1s,mb5.0							
GSC	**Goldstone**	**87.00**	**45**	eP	**P**	**04 21 13.4**	**0.0**
comp=Z,10nm,1.1s,mb5.0							
MPMC	**Manual Prospec**	**87.10**	**44**	⇓P	**P**	**04 21 13.7**	**-0.2**
baz=87,SNR=6.9							
IRM	**Iron Mountain**	**87.26**	**47**	⇑P	**P**	**04 21 14.8**	**+0.1**
baz=88							
214A	**Organ Pipe Nat**	**87.33**	**50**	⇓P	**P**	**04 21 15.1**	**-0.1**
baz=88							
GMRC	**Granite Mounta**	**87.35**	**46**	⇓P	**P**	**04 21 14.8**	**-0.4**
baz=88							
WDC	**Whiskeytown Da**	**87.40**	**38**	eP	**P**	**04 21 14.9**	**-0.3**
Z13A	**Yuma Proving G**	**87.58**	**48**	⇓P	**P**	**04 21 15.9**	**-0.4**
baz=88							
WAKR	**Walker**	**87.64**	**41**	eP	**P**	**04 21 16.1**	**-0.3**
SHOC	**Shoshone**	**87.72**	**45**	⇑P	**P**	**04 21 16.9**	**0.0**
baz=88							
FURC	**Furnace Creek,**	**87.75**	**44**	⇑P	**P**	**04 21 17.0**	**0.0**
baz=88							
GRAC	**Grapevine Rang**	**87.80**	**44**	⇓P	**P**	**04 21 17.1**	**-0.2**
baz=88,SNR=8.3							
CFAA	**Coronel Fontan**	**87.83**	**126**	P	**P**	**04 21 19.2**	**+1.5**
comp=Z,0.3nm,1.1s,baz=224,slow=2.2,SNR=4.9							
Y13A	**Salome**	**87.87**	**48**	⇓P	**P**	**04 21 17.7**	**0.0**
baz=88							
LDFC	**Landfair**	**87.89**	**46**	eP	**P**	**04 21 18.5**	**+0.7**
comp=Z,8.2nm,0.8s,mb5.0							
WCN	**Washoe City**	**88.01**	**41**	⇓P	**P**	**04 21 18.0**	**-0.1**
baz=88							
U10A	**Ash Meadows, A**	**88.03**	**45**	⇑P	**P**	**04 21 18.8**	**+0.4**
baz=88							
BEKR	**Beckwourth**	**88.07**	**40**	⇑P	**P**	**04 21 18.2**	**-0.2**
baz=88							
W12A	**Cal Nev Ari**	**88.18**	**46**	⇑P	**P**	**04 21 19.3**	**+0.2**
baz=88							
V11A	**Goodsprings**	**88.19**	**46**	⇓P	**P**	**04 21 19.5**	**+0.4**
baz=88							
NVAR	**Mina Array Bea**	**88.23**	**42**	P	**P**	**04 21 18.9**	**-0.3**
comp=Z,2.3nm,0.8s,mb4.4,baz=219,slow=8.2,SNR=16							
NVAR	**Mina Array Bea**	**88.23**	**42**	P	**P**	**04 21 18.9**	**-0.3**
X13A	**Yucca**	**88.37**	**47**	⇓P	**P**	**04 21 19.8**	**-0.2**
baz=89							
Y14A	**Wickenburg**	**88.47**	**48**	⇓P	**P**	**04 21 20.6**	**+0.1**
baz=89							
217A	**Green Valley**	**88.54**	**51**	⇑P	**P**	**04 21 21.1**	**+0.2**
baz=89							
W13A	**Hualapai Mount**	**88.66**	**47**	⇑P	**P**	**04 21 21.8**	**+0.4**
baz=89							
S10A	**Tonopah Range,**	**88.88**	**43**	⇓P	**P**	**04 21 22.2**	**-0.1**
baz=89,SNR=6.6							
318A	**Bisbee**	**88.88**	**52**	⇓P	**P**	**04 21 22.6**	**+0.1**
baz=89							
TUC	**Tucson**	**88.89**	**51**	eP	**P**	**04 21 22.8**	**+0.3**
Y15A	**Casa Rosa Ranc**	**88.91**	**49**	⇓P	**P**	**04 21 22.7**	**+0.1**
baz=89							
117A	**Oracle**	**89.08**	**51**	⇓P	**P**	**04 21 23.5**	**+0.1**
baz=89							
V13A	**Grand Canyon W**	**89.09**	**46**	⇑P	**P**	**04 21 23.6**	**+0.2**
baz=89							
Z16A	**Peralta Trail,**	**89.11**	**50**	⇑P	**P**	**04 21 23.7**	**+0.2**
baz=89							
U12A	**Valley of Fire**	**89.12**	**46**	⇓P	**P**	**04 21 24.1**	**+0.6**
baz=89							
218A	**Dragoon**	**89.17**	**51**	⇑P	**P**	**04 21 24.1**	**+0.2**
baz=89							
S11A	**Rachel**	**89.19**	**44**	⇑P	**P**	**04 21 24.2**	**+0.4**
baz=89							
W14A	**Seligman**	**89.24**	**47**	⇑P	**P**	**04 21 24.5**	**+0.4**
baz=90,SNR=6.4							
T11A	**Corn Creek, Al**	**89.24**	**45**	⇓P	**P**	**04 21 24.1**	**0.0**
baz=90,SNR=8.9							
R10A	**Warm Springs**	**89.29**	**43**	⇓P	**P**	**04 21 24.7**	**+0.5**
baz=90							
X15A	**Humboldt**	**89.31**	**48**	⇑P	**P**	**04 21 24.9**	**+0.5**
baz=90							
319A	**Douglas**	**89.32**	**52**	⇑P	**P**	**04 21 24.6**	**0.0**
baz=90							
Y16A	**Circle Bar Ran**	**89.42**	**49**	⇑P	**P**	**04 21 25.3**	**+0.3**
baz=90,SNR=8.4							
U13A	**Pakoon Wash**	**89.47**	**46**	⇓P	**P**	**04 21 25.2**	**+0.1**
baz=90							
V14A	**Boquillas Ranc**	**89.50**	**47**	⇑P	**P**	**04 21 25.6**	**+0.3**
baz=90,SNR=6.9							
118A	**Homack Ranch,**	**89.64**	**51**	⇓P	**P**	**04 21 26.7**	**+0.7**
baz=90							
S12A	**Delamar Landin**	**89.71**	**44**	⇑P	**P**	**04 21 26.4**	**+0.2**
baz=90							
Y17A	**Roosevelt**	**89.71**	**50**	⇑P	**P**	**04 21 26.5**	**+0.2**
baz=90							
R11A	**Troy Canyon, C**	**89.75**	**44**	⇑P	**P**	**04 21 26.1**	**-0.3**
baz=90							
WHN	**Wuhan**	**89.75**	**306**	P	**P**	**04 21 36.5**	**+10**
X16A	**Lo Mia Camp, P**	**89.78**	**49**	⇓P	**P**	**04 21 27.2**	**+0.6**
baz=90,SNR=5.2							
K05A	**Summer Lake**	**89.79**	**38**	⇑P	**P**	**04 21 26.7**	**+0.2**
baz=90							
320A	**Kipp Ranch, An**	**89.81**	**53**	⇑P	**P**	**04 21 27.0**	**+0.1**
baz=90							
U14A	**Mt Trumbull**	**89.95**	**46**	⇑P	**P**	**04 21 27.7**	**+0.3**
baz=90,SNR=7.2							
MDJ	**Mudanjiang**	**90.00**	**325**	P	**P**	**04 21 27.0**	**-0.4**
MDJ				pP	pP	04 21 30.3	-8.2
MDJ				S	S	04 32 20.0	+2.4
MDJ				sS	sS	04 32 25.5	-11
MDJ				pmax	pmax		
comp=Z,13nm,1.2s,mb5.1							
MDJ				LR	LR		
comp=N,65nm,31.0s,MS4.0							
MDJ				LR	LR		
comp=E,47nm,27.6s,MS4.0							
MDJ				LR	LR		
comp=Z,91nm,23.6s,MS4.1							
W16A	**Flagstaff**	**90.15**	**48**	⇓P	**P**	**04 21 28.7**	**+0.4**
baz=90							
V15A	**Kaibab Nationa**	**90.20**	**47**	⇓P	**P**	**04 21 29.0**	**+0.4**
baz=90,SNR=6.7							
S13A	**Holt Ranch, En**	**90.28**	**45**	⇓P	**P**	**04 21 29.0**	**+0.1**
baz=90							
R12A	**Pony Springs,**	**90.32**	**44**	⇑P	**P**	**04 21 29.4**	**+0.3**
baz=91							
120A	**U Bar Ranch, L**	**90.47**	**52**	⇓P	**P**	**04 21 30.0**	**+0.1**
baz=91							
U15A	**North Rim**	**90.51**	**47**	⇑P	**P**	**04 21 30.7**	**+0.7**
baz=91,SNR=8.6							
CCUT	**Cedar City**	**90.57**	**45**	eP	**P**	**04 21 30.9**	**+0.7**
comp=Z,25nm,2.1s,mb5.2							
X18A	**Snowflake**	**90.81**	**49**	⇓P	**P**

baz=92,SNR=5.0
U19A Dine' College, 92.37 48 ⇓P **P 04 21 38.2 -0.4**
baz=93
K11A Parker Ranch, 92.43 40 ⇓P **P 04 21 38.7 0.0**
baz=93
T18A Mexican Hat 92.47 47 ⇓P **P 04 21 38.9 -0.1**
baz=93
M13A Montello 92.55 42 ⇑P **P 04 21 39.5 +0.1**
baz=93
628A Black Gap, Mar 92.67 57 ⇑P **P 04 21 39.8 -0.3**
baz=93
H09A Durkee 92.83 38 ⇑P **P 04 21 40.2 -0.3**
baz=93
GYA Guiyang 92.93 299 P **P 04 21 42.8 +1.3**
GYA PP PP 04 25 30.0 +5.3
GYA SKS 04 32 16.5
GYA SS SS 04 39 04.5 +4.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,450nm,19.8s,MS5.0
GYA LR LR
comp=E,420nm,20.7s,MS5.0
GYA LR LR
comp=Z,520nm,21.7s,MS5.0
427A Hayter Ranch, 93.08 56 ⇑P **P 04 21 41.9 -0.1**
baz=93
M14A Sheep Mountain 93.11 42 ⇓P **P 04 21 41.8 -0.1**
baz=93
R18A Canyonlands Na 93.22 46 ⇑P **P 04 21 42.4 -0.1**
baz=93
I11A Placerville 93.23 39 ⇓P **P 04 21 42.0 -0.4**
baz=94
H10A Noah's Angus R 93.26 38 ⇑P **P 04 21 41.7 -0.8**
baz=94
J12A Stokes Ranch, 93.26 40 ⇑P **P 04 21 42.2 -0.4**
baz=94
SRU San Rafael 93.28 46 P **P 04 21 42.4 -0.4**
baz=94
K13A Stover Farm, H 93.43 41 ⇑P **P 04 21 43.2 -0.2**
baz=94
L14A Malta 93.52 42 ⇑P **P 04 21 43.6 -0.1**
baz=94
G10A Bishop Farm, J 93.53 38 ⇓P **P 04 21 43.0 -0.8**
baz=94
Z25A Roswell 93.55 53 ⇓P **P 04 21 43.5 -0.6**
baz=94
I12A Atlanta 93.60 40 ⇓P **P 04 21 44.1 0.0**
baz=94
M15A Larsen Ranch, 93.61 43 ⇑P **P 04 21 44.0 -0.2**
baz=94
H11A Donnelly 93.72 39 ⇑P **P 04 21 43.7 -1.0**
baz=94
O17A Robinson Place 93.82 45 ⇓P **P 04 21 44.6 -0.6**
baz=94
HLID Hailey 93.84 40 P **P 04 21 45.2 0.0**
baz=94
HLID Hailey 93.84 40 *e*P **P 04 21 45.1 -0.1**
J13A Cove Ranch, Pi 93.87 40 ⇑P **P 04 21 45.3 -0.1**
baz=94
F10A Beach Ranch, E 93.94 37 ⇓P **P 04 21 44.6 -1.0**
baz=94
G11A Walters Elk Ra 94.05 38 ⇓P **P 04 21 45.7 -0.4**
baz=94
H12A Diamond D Ranc 94.25 39 ⇓P **P 04 21 46.4 -0.6**
baz=94
BJI Beijing 94.33 315 P **P 04 21 48.8 +1.2**
BJI pmax pmax
comp=Z,11nm,0.4s,mb5.6
BJI pmax pmax
comp=Z,150nm,8.1s
H13A Challis 94.58 40 ⇓P **P 04 21 48.4 -0.2**
baz=95
CMAR Chiang Mai Arr 94.70 289 P **P 04 21 51.2 +1.4**
comp=Z,0.8nm,0.4s,mb4.5,baz=127,slow=2.4,SNR=5.6
CMAR Chiang Mai Arr 94.70 289 P **P 04 21 51.2 +1.4**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
F12A Elk City 94.82 38 ⇓P **P 04 21 49.4 -0.2**
baz=95
G13A Cobalt 94.94 39 ⇑P **P 04 21 49.8 -0.4**
baz=95
KMI Kunming 95.18 296 P **P 04 21 53.8 +2.0**
KMI pP pP 04 21 57.0 -6.0
KMI sP sP 04 21 58.0 -9.0
KMI PP PP 04 25 47.0 +4.6
KMI SKS 04 32 28.5
KMI S S 04 33 06.5 +1.7
KMI sS sS 04 33 13.8 -10
KMI SS SS 04 39 37.5 +5.3
KMI pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
KMI LR LR
comp=N,340nm,14.3s,MS5.1
KMI LR LR
comp=E,310nm,13.1s,MS5.1
KMI LR LR
comp=Z,450nm,15.4s,MS5.0
K18A Toltan Ranch, 95.74 43 ⇓P **P 04 21 53.2 -0.7**
baz=96
G15A Dillon 95.93 40 ⇑P **P 04 21 54.8 0.0**
baz=96
PDAR Pinedale Array 96.10 43 P **P 04 21 54.1 -1.4**
comp=Z,0.3nm,0.6s,mb3.9,baz=156,slow=1.5,SNR=4.2
J18A Kendall Valley 96.11 43 ⇑P **P 04 21 55.4 -0.2**
baz=96
BOZ Bozeman (W) 96.70 40 ⇓P **P 04 21 58.0 -0.2**
baz=97
CD2 Chengdu 97.48 302 P **P 04 22 02.5 +0.4**
CD2 pP pP 04 22 07.5 -5.8
CD2 sP sP 04 22 09.5 -7.8
CD2 PP PP 04 26 06.0 +6.0
CD2 S S 04 33 24.0 -0.3
CD2 sS sS 04 33 35.8 -7.1
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,90nm,5.2s
CD2 LR LR
comp=N,240nm,16.1s
CD2 LR LR
comp=Z,240nm,13.7s,MS4.8
HHC Hu-ho-hao-te 97.65 313 *e*P **P 04 22 05.8 +3.2**
HHC pP pP 04 22 10.5 -3.3
HHC sP sP 04 22 12.8 -5.0
HHC PP PP 04 26 08.5 +7.4
HHC SKS 04 32 42.3
HHC S S 04 33 29.8 +4.5
HHC sS sS 04 33 37.5 -6.4
HHC pmax pmax
comp=Z,13nm,1.1s,mb5.4
HHC pmax pmax
comp=Z,110nm,5.5s
HHC LR LR
comp=N,180nm,17.3s,MS5.1
HHC LR LR
comp=E,540nm,18.8s,MS5.1
HHC LR LR
comp=Z,250nm,17.9s,MS4.8
D17A Six Diamond Ra 98.15 39 ⇑P **P 04 22 04.9 +0.2**
baz=98
WMQ Urumqi 114.64 308 *e*PKP PKiKP 04 27 08.0 -0.1
WMQ LR LR
comp=Z,100nm,25.0s,MS4.3
MK31 Makanchi Array 119.19 309 *e*PKIKP PKPdf 04 27 15.7 -1.1
MKAR Makanchi Array 119.19 309 PKP PKPdf 04 27 14.9 -1.8
comp=Z,1.1nm,0.7s,baz=60,slow=2.9,SNR=5.1
MKAR Makanchi Array 119.19 309 PKIKP PKPdf 04 27 15.0 -1.8
MKAR pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 119.44 318 PKP PKPdf 04 27 15.5 -1.5
comp=Z,0.4nm,0.3s,baz=93,slow=3.0,SNR=3.3
KURK Kurchatov 122.46 313*d* *i*PKIKP PKPdf 04 27 19.2 -3.7
AAK Ala-Archa 123.51 303*d* *i*PKIKP PKPdf 04 27 22.0 -3.2
BVAR Borovoye Array 127.82 315 PKP PKPdf 04 27 32.2 -0.9
comp=Z,1.9nm,0.9s,baz=90,slow=4.4,SNR=9.1
BVAR Borovoye Array 127.82 315 PKIKP PKPdf 04 27 32.2 -0.9
BVAR pmax pmax
comp=Z,2.0nm,0.9s
ARU Arti 134.49 320 *i* PKIKP PKPdf 04 27 44.6 -1.0
KEV Kevo 139.28 348 *e*pkp PKPdf 04 27 54.5 +0.4
ARCES ARCESS Array B 139.74 348 PKhKP 04 27 47.2
comp=Z,2.2nm,0.7s,baz=338,slow=1.3,SNR=7.2
ARCES PKP PKPdf 04 27 54.2 -0.8
comp=Z,2.3nm,0.5s,baz=74,slow=1.3,SNR=18
ARCES ARCESS Array B 139.74 348 PKHKP 04 27 47.2
ARCES 04 27 54.2
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 139.74 348 PKP PKPdf 04 27 54.2 -0.8
JOF Joensuu 143.68 339 *e*PKHKP 04 27 57.8
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 143.68 339 *e*pkp 04 27 57.8
comp=Z,3.8nm,0.6s
DGRG David-gareji 144.91 299 P PKPdf 04 28 04.6 -0.5
MTA Mtatsminda 145.33 299 P PKPbc 04 28 05.4 -0.3
TBLG Delisi 145.37 299 *e*PKIKP PKPdf 04 28 05.6 -0.2
TBLG Delisi 145.37 299 P PKPbc 04 28 05.7 -0.1
GNI Garni 145.44 296 *e*PKIKP PKPdf 04 28 06.7 +0.7
VRHR Novokhopersk 145.55 316 *e*PKP2 PKPdf 04 28 04.9 -0.9
VRHR pmax pmax
comp=Z,40nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
MOS Moscow 145.71 325 *e*PKP2 PKPdf 04 28 04.3 -1.6
MOS *e* 04 35 11.6
MOS pmax pmax
comp=Z,150nm,1.1s
KAF Kangasniemi 145.79 341 *e*PKP2 PKPdf 04 28 03.8 -2.1
KAF pmax pmax
comp=Z,33nm,0.8s
KAF Kangasniemi 145.79 341 *e*pkp PKPdf 04 28 03.8 -2.1
comp=Z,33nm,0.8s,baz=33,slow=3.0
ZEI Tsey 145.90 301 *e*PKIKP PKPdf 04 28 05.8 -0.9
ZEI pmax pmax
comp=Z,25nm,1.0s
ONI Oni 146.25 301 P PKPdf 04 28 08.6 +1.4
FINES FINESS Array B 146.39 340 PKPbc PKPdf 04 28 07.0 0.0
comp=Z,22nm,0.6s,baz=50,slow=3.0,SNR=86
FINES FINESS Array B 146.39 340 PKIKP PKPdf 04 28 07.0 +0.1
FINES pmax pmax
comp=Z,22nm,0.6s
OBN Obninsk 146.55 325*b* *i*PKP2 PKPdf 04 28 08.1 +0.7
OBN pmax pmax
comp=Z,96nm,1.7s
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.6
KIV Kislovodsk 146.63 303 *i* PKP2 PKPdf 04 28 08.8 +0.9
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,69nm,21.0s,MS4.4
VOR Voronezh 146.72 318 PKIKP PKPdf 04 28 08.0 +0.2
VOR pmax pmax
comp=Z,200nm,2.0s
VSR Storozhevoye 146.94 317 *e*PKIKP PKPdf 04 28 08.9 +0.7
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,20nm,1.9s
VORD Divnogorie 146.97 317 *e*PKP2 PKPdf 04 28 09.0 +0.8
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,1.0s
VSU Vasula 148.52 336*d* *i*PKP2 PKPdf 04 28 13.1 +2.6
NOA NORSAR Array B 149.84 352 PKPbc PKPbc 04 28 16.4 -1.1
comp=E,9.8nm,0.8s,baz=14,slow=4.2,SNR=20
NOA NORSAR Array B 149.84 352 PKHKP PKPbc 04 28 16.4 -1.0
NOA pmax pmax
comp=Z,10.0nm,0.8s
ANN Anapa 150.14 306 *i* PKHKP PKPbc 04 28 18.0 -0.7
ANN pmax pmax
comp=Z,32nm,0.9s
IZAR Zarasai 150.72 333 *e*P PKPbc 04 28 19.3 -0.4
IDID Didziasalis 150.84 332 *e*P PKPbc 04 28 19.4 -0.6
ISAL Salakas 150.89 333 *e*P PKPbc 04 28 19.5 -0.6
MICGM Minsk 150.93 330 *e* PKPdf 04 28 17.0 +2.5
MNK Minsk 150.95 330 *e*PKIKP PKPdf 04 28 17.0 +2.5
IIGN Ignalina 151.02 333 *e*P PKPbc 04 28 19.8 -0.6
NACGM Naroch 151.12 331 *e* PKPdf 04 28 18.0 +3.2
AKASG Malin Array Be 152.69 323 PKPbc PKPbc 04 28 23.6 -0.8
comp=Z,4.2nm,0.7s,baz=46,slow=3.0,SNR=15
AKASG Malin Array Be 152.69 323 PKIKP PKPbc 04 28 23.6 -0.8
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 152.69 323 *e*PKIKP PKPbc 04 28 23.6 -0.8
KIEV Kiev 152.70 323 *e*PKIKP PKPbc 04 28 23.5 -0.9
MMAI Mount Meron Ar 152.77 282 PKPbc PKPbc 04 28 25.4 +0.2
comp=Z,2.0nm,0.4s,baz=30,slow=10.0,SNR=3.1
SUW Suwalki 153.19 333 *e*PKP PKPbc 04 28 24.9 -0.5
SUW *e* 04 28 35.6
BRTR Keskin Array B 153.97 297 PKPbc PKPbc 04 28 27.0 -0.5
comp=Z,0.4nm,0.5s,baz=153,slow=3.9,SNR=4.6
KWP Kalwaria Pacla 156.60 327 *e*PKP PKPab 04 28 51.2 -0.7
KWP Kalwaria Pacla 156.60 327⇑*i*P PKPab 04 28 51.2 -0.7
BURAR Bucovina Array 156.63 320 ⇓PKP2 PKPab 04 28 51.9 -0.2
BURAR Bucovina Array 156.63 320 ⇓*i*P PKPab 04 28 51.9 -0.2
KOLS Kolonicke sedl 157.29 326 *e*PKP2 PKPab 04 28 54.1 -0.7
KOLS Kolonicke sedl 157.29 326 *e*PKP PKPab 04 28 54.1 -0.7
STHS Stebnicka Huta 157.43 328 *e*PKP2 PKPab 04 28 55.8 +0.4
STHS Stebnicka Huta 157.43 328 *e*PKP PKPab 04 28 55.8 +0.4
UZH Uzhgorod 157.49 326 *e*PKP2 PKPab 04 28 54.0 -1.7
KSP Ksiaz 158.24 337 *e*PKP PKPab 04 28 57.4 -1.4
KSP Ksiaz 158.24 337 *e*PKP2 PKPab 04 28 57.8 -1.0
KECS Kecovo 158.45 327 *e*PKP2 PKPab 04 28 58.9 -1.0
KECS Kecovo 158.45 327 *e*PKP PKPab 04 28 58.9 -1.0
DRGR 158.48 321 ⇑PKP2 PKPab 04 28 59.5 -0.6
DRGR 158.48 321 ⇑*i*P PKPab 04 28 59.5 -0.6
UPC Upice 158.62 337 *e*PKPAB PKPab 04 28 59.6 -0.9
DPC Dobruska-Polom 158.65 336 *e*PKP2 PKPab 04 29 00.0 -0.6
DPC MLR MLR
comp=Z,100nm,17.1s,MS4.7
DPC Dobruska-Polom 158.65 336 *e*PKPAB PKPab 04 29 00.0 -0.6
DPC AMS AMS 05 41 40.0
comp=Z,100nm,17.1s
CLL Collm 158.79 343 *i* pPKPab PKPab 04 29 03.9 +2.7
BRG Berggiesshubel 158.93 341 *e*PKP PKPab 04 29 00.7 -1.1
comp=Z,6.8nm,1.0s
PSZ Piszkesteto 159.13 327 ⇓PKP2 PKPab 04 29 02.3 -0.5
PSZ Piszkesteto 159.13 327 ⇓*i*P PKPab 04 29 02.3 -0.5
VYHS Vyhne 159.17 330 *e*PKP2 PKPab 04 29 02.2 -0.8
VYHS Vyhne 159.17 330 *e*PKP PKPab 04 29 02.2 -0.8
PRU Pruhonice 159.54 339 *e*PKP2 PKPab 04 29 04.5 0.0
PRU MLR MLR
comp=Z,100nm,20.8s,MS4.6
PRU Pruhonice 159.54 339 *e*PKPAB PKPab 04 29 04.5 0.0
PRU AMS AMS 05 40 40.0
comp=Z,100nm,20.8s
BZS Buzias 159.81 320 ⇓PKP2 PKPab 04 29 04.9 -1.0
BZS Buzias 159.81 320 ⇓*i*P PKPab 04 29 04.9 -1.0
TREC Trest 159.83 336 *e*PKPAB PKPab 04 29 05.1 -0.7
ZST Bratislava 160.13 332 *e*PKP2 PKPab 04 29 06.8 -0.4
ZST Bratislava 160.13 332 *e*PKP PKPab 04 29 06.8 -0.4
KHC Kasperske Hory 160.59 339 *e*PKP2 PKPab 04 29 08.3 -0.8
KHC MLR MLR
comp=Z,100nm,22.4s
KHC Kasperske Hory 160.59 339 *e*PKPAB PKPab 04 29 08.3 -0.8
KHC AMS AMS 05 42 50.0
comp=Z,100nm,22.4s
GERES GERESS Array B 160.81 339 PKPab PKPab 04 29 09.4 -0.6
comp=Z,1.3nm,0.8s,baz=45,slow=4.0,SNR=9.5
GERES GERESS Array B 160.81 339 PKP2 PKPab 04 29 09.4 -0.7
GERES pmax pmax
comp=Z,1.0nm,0.9s
CONA Conrad Observa 160.84 333 ⇓*i*PKPab PKPab 04 29 09.7 -0.5
comp=Z,7.8nm,1.1s
TORD Torodi Ar. Bea 161.83 175 PKPab PKPab 04 29 16.4 +1.1
comp=Z,5.1nm,0.8s,baz=193,slow=3.4,SNR=43

*IDC **26** 04:08:51.2±0.6,30.°89S×177.°77W,h0km,mb4.6/10, mb1 4.8/12,mb1mx4.6/17,mbtmp4.6/12,ML4.9/2,MS4.4/2, Ms1 4.4/2,ms1mx3.5/11,Error ellipse: s-maj=25.2km s-min=19.1km az=148.0*
*ISCJB **26** 04:08:54.9±0.6,31.°0S±0.°1×177.°9W±0.°1,h33km,mb4.4/11, MS4.5/2,Error ellipse: s-maj=20.0km s-min=12.1km az=44.3*

ISC 26 04:08:56.7±0.6,31.°0S±0.°1×177.°8W±0.°1,h35km,n36, σ0§88/13,mb4.4/11,MS4.5/2,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.41**	**208**	Pn	**Pn**	**04 10 56.2**	**+0.2**
	6.6nm,0.3s,baz=179,slow=8.4,SNR=4.0						
RPZ	**Rata Peaks**	**15.50**	**212**	Pn	**Pn**	**04 12 32.5**	**0.0**
	13nm,0.3s,baz=97,slow=1.6,SNR=7.9						
CTA	**Charters Tower**	**34.05**	**280**	P	**P**	**04 15 37.0**	**-0.7**
	8.5nm,0.6s,mb4.9,baz=109,slow=12,SNR=5.5						
STKA	**Stephens Creek**	**34.52**	**258**	P	**P**	**04 15 40.8**	**-0.9**
	7.7nm,0.6s,mb4.8,baz=80,slow=8.7,SNR=5.4						
ASAR	**Alice Springs**	**43.25**	**267**	P	**P**	**04 16 54.8**	**0.0**
	7.5nm,0.6s,mb4.6,baz=107,slow=7.7,SNR=10						
MAW	**Mawson**	**71.85**	**201**	P	**P**	**04 20 17.2**	**+1.7**
	5.3nm,0.7s,mb4.6,baz=206,slow=9.2,SNR=7.7						
ASAJ	**Asahikawa**	**83.00**	**332**	LR	LR	04 55 11.9	
	comp=Z,207nm,18.0s,MS4.5,baz=268,slow=34						
PETK	**Petropavlovsk-**	**86.38**	**345**	P	**P**	**04 21 36.6**	**+1.8**
	4.1nm,0.8s,mb4.7,baz=134,slow=8.5,SNR=4.0						
NVAR	**Mina Array Bea**	**88.53**	**43**	P	**P**	**04 21 45.8**	**+0.3**
	2.9nm,0.8s,mb4.7,baz=221,slow=8.4,SNR=9.7						
CFAA	**Coronel Fontan**	**88.78**	**126**	P	**P**	**04 21 45.9**	**-1.2**
	0.4nm,0.9s,mb3.8,baz=252,slow=5.5,SNR=6.2						
ELK	**Elko**	**91.83**	**42**	P	**P**	**04 22 00.4**	**-0.5**
	1.3nm,0.8s,mb4.3,baz=126,slow=12,SNR=2.2						
TXAR	**Lajitas Array**	**92.55**	**57**	P	**P**	**04 22 03.5**	**-0.9**
	0.7nm,0.8s,mb4.1,baz=310,slow=49,SNR=3.4						
CMIG	**Matias Romero**	**92.77**	**72**	LR	LR	04 57 11.5	
	comp=Z,132nm,19.8s,MS4.4,baz=153,slow=31						
PDAR	**Pinedale Array**	**96.42**	**43**	P	**P**	**04 22 22.6**	**+0.7**
	0.5nm,0.7s,mb4.0,baz=197,slow=1.5,SNR=3.6						
LPAZ	**La Paz**	**97.77**	**114**	P	**P**	**04 22 28.6**	**-0.2**
	1.0nm,0.9s,mb4.4,baz=262,slow=4.7,SNR=4.8						
MKAR	**Makanchi Array**	**118.25**	**310**	PKP	PKPdf	04 27 41.5	+1.6
	0.5nm,0.3s,baz=80,slow=2.7,SNR=5.7						
BVAR	**Borovoye Array**	**126.91**	**315**	PKP	PKPdf	04 27 57.2	+0.9
	2.4nm,0.9s,baz=112,slow=4.0,SNR=4.6						
ARCES	**ARCESS Array B**	**139.16**	**348**	PKP	PKPdf	04 28 19.5	+0.7
	3.9nm,0.6s,baz=33,slow=1.6,SNR=5.4						
FINES	**FINESS Array B**	**145.72**	**340**	PKPbc	PKPbc	04 28 32.0	+0.9
	27nm,0.6s,baz=45,slow=3.2,SNR=21						
NOA	**NORSAR Array B**	**149.32**	**351**	PKPbc	PKPbc	04 28 43.0	+2.0
	4.8nm,0.6s,baz=13,slow=4.1,SNR=11						
AKASG	**Malin Array Be**	**151.84**	**322**	PKPbc	PKPbc	04 28 45.0	-2.3
	4.0nm,0.7s,baz=49,slow=3.1,SNR=4.3						
AKASG				PKPab	PKPab	04 28 53.5	-2.9
	5.3nm,0.7s,baz=48,slow=3.4,SNR=6.8						
BRTR	**Keskin Array B**	**153.00**	**298**	PKP	PKPdf	04 28 40.3	-2.7
	1.3nm,0.6s,baz=119,slow=3.9,SNR=8.9						
BRTR				PKPbc	PKPbc	04 28 48.7	-1.6
	1.2nm,0.7s,baz=96,slow=3.7,SNR=5.2						
LIC	**Lamto**	**154.49**	**163**	*e*PKP1	PKPbc	04 28 55.0	+0.7
	75nm,1.5s						
KIC	**Kosan Boka**	**154.69**	**164**	*e*PKP1	PKPbc	04 28 55.1	+0.4
	113nm,1.8s						
TIC	**Toumodi**	**154.89**	**163**	*e*PKP1	PKPbc	04 28 56.0	+0.9
	43nm,1.3s						
KWP	**Kalwaria Pacla**	**155.78**	**326**	*e*	PKPab	04 29 18.4	+5.2
KSP	**Ksiaz**	**157.52**	**336**	*e*	PKPab	04 29 25.4	+4.7
KECS	**Kecovo**	**157.63**	**327**	*e*	PKPab	04 29 24.2	+3.0
UPC	**Upice**	**157.90**	**336**	*ex*	PKPab	04 29 27.0	+4.7
DPC	**Dobruska-Polom**	**157.92**	**335**	*ex*	PKPab	04 29 27.3	+4.9
BRG	**Berggiesshubel**	**158.26**	**340**	*e*	PKPab	04 29 26.9	+3.2
	4.7nm,0.8s						
VYHS	**Vyhne**	**158.38**	**329**	*e*	PKPab	04 29 28.5	+4.1
PRU	**Pruhonice**	**158.84**	**338**	*ex*	PKPab	04 29 32.1	+5.8
TREC	**Trest**	**159.10**	**335**	*ex*	PKPab	04 29 31.8	+4.3
KHC	**Kasperske Hory**	**159.90**	**338**	*ex*	PKPab	04 29 35.6	+4.6
TORD	**Torodi Ar. Bea**	**162.28**	**178**	PKPab	PKPab	04 29 42.2	+0.1
	4.0nm,0.7s,baz=178,slow=3.1,SNR=10.0						

*NIED **26** 04:49:00,20.°80N×122.°60E,h5km,Mw4.3 Best double couple: M0:3.54000×10^15 NP1:φ0:220.00000°,δ69.00000°, λ-98.00000°. NP2:φ0:62.00000°,δ22.00000°,λ-69.00000°.*
*IDC **26** 04:49:54.4±1.0,20.°32N×122.°74E,h0km,mb3.8/8, mb1 3.9/10,mb1mx3.8/24,mbtmp3.9/10,ML4.2/3,MS3.4/1, Ms1 3.4/1,ms1mx2.4/25,Error ellipse: s-maj=30.6km s-min=20.3km az=88.0*
*ISCJB **26** 04:49:57.5±0.6,20.°45N±0.°04×122.°65E±0.°05,h33km, mb3.7/9,Error ellipse: s-maj=7.0km s-min=4.7km az=27.7*
*NEIC **26** 04:49:58.8±0.7,20.°41N×122.°67E,h35km,mb3.9/2,Error ellipse: s-maj=15.9km s-min=9.2km az=78.0*
*JMA **26** 04:49:59.7±0.3,20.°79N×122.°63E,h0km,M4.6*

ISC 26 04:49:59.8±0.6,20.°46N±0.°04×122.°59E±0.°05,h35km,n33, σ1§25/45,mb3.7/9,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.74**	**329**	*e*Pn	**Pn**	**04 50 39.7**	**-1.5**
YULB	**Yu-li**	**3.15**	**338**	*e*Pn	**Pn**	**04 50 44.8**	**-2.1**
YULB				*e*S	**Sn**	**04 51 21.6**	**-1.8**
TPUB	**Ta-pu**	**3.36**	**327**	*e*Pn	**Pn**	**04 50 49.7**	**-0.1**
TPUB				*e*S	**Sn**	**04 51 29.8**	**+1.3**
HATJ	**Hateruma jima**	**3.75**	**17**	P	**Pn**	**04 50 55.9**	**+0.8**
HATJ				*e*S	**Sn**	**04 51 37.0**	**-1.0**
JKRS	**Kuro-shima**	**3.98**	**19**	P	**Pn**	**04 50 59.2**	**+0.9**
JKRS				*e*S	**Sn**	**04 51 42.9**	**-0.8**
IRIF	**Iriomote-Funau**	**4.00**	**15**	P	**Pn**	**04 50 59.4**	**+0.9**
IRIF				*e*S	**Sn**	**04 51 43.4**	**-0.7**
YOJ	**Yonaguni jima**	**4.00**	**5**	P	**Pn**	**04 50 59.4**	**+0.8**
YOJ				*e*S	**Sn**	**04 51 44.7**	**+0.5**
JIJ	**Ishigaki jima**	**4.14**	**20**	P	**Pn**	**04 51 01.2**	**+0.7**
JIJ				*e*S	**Sn**	**04 51 46.7**	**-0.9**
YHNB	**Yeheng**	**4.34**	**345**	*e*Pn	**Pn**	**04 51 02.8**	**-0.4**
YHNB				*e*S	**Sn**	**04 51 50.4**	**-2.1**
JTJ	**Tarama**	**4.59**	**25**	P	**Pn**	**04 51 08.4**	**+1.7**
JTJ				*e*S	**Sn**	**04 51 58.8**	**0.0**
TATO	**Taipei**	**4.61**	**347**	*e*Pn	**Pn**	**04 51 08.0**	**+1.1**
JMJ	**Miyako jima 2**	**5.00**	**29**	P	**Pn**	**04 51 14.1**	**+1.8**
JMJ				*e*S	**Sn**	**04 52 09.4**	**+0.6**
JOGS	**Gusukube**	**5.00**	**31**	P	**Pn**	**04 51 14.0**	**+1.6**
JOGS				*e*S	**Sn**	**04 52 10.1**	**+1.1**
TGY	**Tagaytay City**	**6.52**	**194**	Pn	**Pn**	**04 51 32.1**	**-1.2**
	29nm,0.3s,baz=30,slow=20,SNR=2.5						
JKE	**Kume jima 2**	**6.99**	**33**	*e*S	**Sn**	**04 52 56.2**	**-1.8**
JIH	**Iheya**	**8.19**	**36**	P	**Pn**	**04 51 56.3**	**+0.2**
JOW	**Kunigami**	**8.20**	**38**	P	**Pn**	**04 51 56.5**	**+0.2**
JOW				*e*S	**Sn**	**04 53 28.2**	**+0.4**
JOW	**Kunigami**	**8.20**	**38**	Pn	**Pn**	**04 51 55.4**	**-1.0**
	3.9nm,0.3s,baz=231,slow=15,SNR=9.5						
JTK	**Tokunoshima**	**9.32**	**37**	P	**Pn**	**04 52 11.2**	**-0.4**
JTK				*e*S	**Sn**	**04 53 52.1**	**-3.1**
ENH	**Enshi**	**15.34**	**312**	*e*P	**Pn**	**04 53 34.0**	**+0.4**
	4.9nm,0.3s						
KSRS	**Korea Array**	**17.55**	**14**	Pn	**Pn**	**04 54 00.4**	**-1.2**
	0.4nm,0.3s,baz=119,slow=38,SNR=5.0						
MJAR	**Matsushiro Arr**	**21.05**	**37**	P	**P**	**04 54 40.0**	**-0.6**
	0.7nm,0.3s,mb3.4,baz=216,slow=12,SNR=2.6						
KAPI	**Kappang**	**25.47**	**187**	LR	LR	05 05 33.7	
	comp=Z,90nm,18.9s,baz=91,slow=37						
WRAB	**Tennant Creek**	**41.76**	**163**	*e*P	**P**	**04 57 43.6**	**-2.2**
	1.0nm,0.8s,mb3.5						
MK31	**Makanchi Array**	**41.94**	**318**	*e*P	**P**	**04 57 47.0**	**-0.1**
MKAR	**Makanchi Array**	**41.94**	**318**	P	**P**	**04 57 47.3**	**+0.2**
	1.3nm,0.7s,mb3.7,baz=113,slow=9.3,SNR=6.7						
ZALV	**Zalesovo Beam**	**44.08**	**329**	P	**P**	**04 58 05.8**	**+1.6**
	1.5nm,0.6s,mb3.9,baz=120,slow=8.1,SNR=7.1						
ASAR	**Alice Springs**	**45.22**	**165**	P	**P**	**04 58 11.2**	**-2.4**
	0.1nm,0.3s,mb3.1,baz=60,slow=24,SNR=4.0						
BVAR	**Borovoye Array**	**51.39**	**322**	P	**P**	**04 59 02.7**	**+1.8**
	0.7nm,0.5s,mb3.9,baz=126,slow=7.5,SNR=4.6						
ARCES	**ARCESS Array B**	**73.46**	**339**	P	**P**	**05 01 30.8**	**+2.6**
	1.0nm,0.7s,mb3.9,baz=66,slow=6.0,SNR=5.0						
FINES	**FINESS Array B**	**75.31**	**330**	P	**P**	**05 01 39.0**	**-0.1**
	1.4nm,0.7s,mb4.0,baz=337,slow=9.1,SNR=3.9						
YKA	**Yellowknife Ar**	**85.87**	**23**	P	**P**	**05 02 37.2**	**+1.6**
	1.3nm,0.3s,mb4.2,baz=312,slow=4.7,SNR=15						
YKA	**Yellowknife Ar**	**85.87**	**23**	P	**P**	**05 02 37.2**	**+1.6**

*NIED **26** 05:58:00.44.°50N×149.°70E,h35km,Mw4.9 Best double couple: M0:2.25000×10^16 NP1:φ0:52.00000°,δ71.00000°, λ111.00000°. NP2:φ0:182.00000°,δ28.00000°,λ44.00000°.*
*ISCJB **26** 05:58:21.9±0.9,44.°29N±0.°04×149.°46E±0.°04,h20km±6km, mb4.7/115,MS4.4/44,Error ellipse: s-maj=6.8km s-min=3.5km az=153.7*
*MOS **26** 05:58:21.9±1.0,44.°35N×149.°43E,h20km,mb4.8/47, MS4.4/33,Error ellipse: s-maj=7.6km s-min=5.2km az=107.6*
*JMA **26** 05:58:22.8±0.5,44.°49N×149.°66E,h30km,M5.1*

BJI **26** 05:58:22.9, 44°.46N×149°.56E, h31km, mB4.9/26, mb4.7/42, Ms4.5/40, Ms7 4.4/38
SKHL **26** 05:58:22.5±0.5, 44°.29N×149°.86E, h49km±8km, mb5.5/1, Ms4.6/1
NEIC **26** 05:58:27.0±0.6, 44°.36N×149°.36E, h44km±5km, mb4.8/61, Error ellipse: s-maj=6.3km s-min=3.8km az=154.0
IDC **26** 05:58:26.9±2.3, 44°.42N×149°.28E, h45km±22km, mb4.0/21, mb1 4.1/25, mb1mx4.1/29, mbtmp4.0/25, ML3.9/4, MS4.4/14, Ms1 4.4/14, ms1mx4.1/28, Error ellipse: s-maj=17.9km s-min=12.3km az=143.0
ISC 26 05:58:24.8±0.9, 44°.32N±0°.04×149°.45E±0°.04, h26km±6km, h21km±1.4km: pP-P, n329, σ0s98/351, mb4.7/115, MS4.4/44, 20C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.45**	**309**	⇑*i*PN		**Pn**	**05 58 49.2**	**0.0**
KUR				*e*S		**Sn**	**05 59 09.5**	**+2.2**
KUR				pmax		pmax		
	comp=N,2μm,0.5s							
KUR				pmax		pmax		
	comp=E,1μm,0.5s							
KUR				pmax		pmax		
	comp=Z,3μm,0.5s							
KUR				pmax		pmax		
	comp=N,4μm,1.6s							
KUR				pmax		pmax		
	comp=E,6μm,1.6s							
KUR				pmax		pmax		
	comp=Z,10μm,1.6s							
KUR				smax				
	comp=N,48μm,1.6s							
KUR				smax				
	comp=E,20μm,1.6s							
KUR	**Kuril'sk**	**1.45**	**309**	⇑*i*P		**Pn**	**05 58 49.2**	**0.0**
KUR				AMB		AMB	05 58 52.2	
	comp=E,10μm,1.6s							
KUR				AMB		AMB	05 58 52.2	
	comp=E,4μm,1.6s							
KUR				AMB		AMB	05 58 52.2	
	comp=E,6μm,1.6s							
KUR				AMB		AMB	05 58 56.0	
	comp=E,2μm,0.5s							
KUR				AMB		AMB	05 58 56.0	
	comp=E,1μm,0.5s							
KUR				AMB		AMB	05 58 56.0	
	comp=E,3μm,0.5s							
KUR				*i*S		**Sn**	**05 59 09.5**	**+2.2**
KUR				A			05 59 10.0	
	comp=E,8μm,1.0s							
KUR				A			05 59 10.0	
	comp=E,25μm,1.0s							
KUR				A			05 59 14.0	
	comp=E,48μm,1.6s							
KUR				A			05 59 14.0	
	comp=E,32μm,1.6s							
YUK	**Yuzh-Kuril'sk**	**2.60**	**265**	*e*PN		**Pn**	**05 59 06.5**	**+1.5**
YUK				*e*S		**Sn**	**05 59 41.5**	**+5.8**
YUK	**Yuzh-Kuril'sk**	**2.60**	**265**	*e*P		**Pn**	**05 59 06.1**	**+1.1**
YUK				AMB		AMB	05 59 07.5	
	comp=E,370nm,0.5s							
YUK				AMB		AMB	05 59 08.5	
	comp=E,3μm,1.5s							
YUK				*i*S		**Sn**	**05 59 38.4**	**+2.7**
YUK				A			05 59 48.0	
	comp=E,4μm,0.5s							
YUK				A			05 59 48.0	
	comp=E,2μm,0.5s							
YUK				A			05 59 58.0	
	comp=E,18μm,1.5s							
YUK				A			05 59 58.0	
	comp=E,10μm,1.5s							
NEM2	**Nemuro 2**	**2.85**	**252**	P		**Pn**	**05 59 07.5**	**-1.0**
NEM2				*e*S		**Sn**	**05 59 39.6**	**-2.2**
JRA	**Rausu**	**3.14**	**264**	P		**Pn**	**05 59 14.0**	**+1.5**
JNK	**Nakash**	**3.49**	**259**	P		**Pn**	**05 59 17.7**	**+0.4**
JAK	**Akkeshi**	**3.69**	**251**	P		**Pn**	**05 59 19.7**	**-0.4**
JTKR	**Abashiri--Toko**	**4.00**	**267**	P		**Pn**	**05 59 25.9**	**+1.6**
JAR	**Ashorobuto**	**4.24**	**258**	P		**Pn**	**05 59 28.2**	**+0.6**
JOB	**Onbets**	**4.32**	**253**	P		**Pn**	**05 59 29.3**	**+0.6**
JOB				*e*S		**Sn**	**06 00 18.4**	**+0.3**
JMP	**Maruseppu**	**4.39**	**268**	P		**Pn**	**05 59 31.9**	**+2.2**
JCH	**Churui**	**4.75**	**251**	P		**Pn**	**05 59 35.2**	**+0.6**
JCH				*e*S		**Sn**	**06 00 29.1**	**+0.4**
ASAJ	**Asahikawa**	**4.93**	**270**	P		**Pn**	**05 59 40.1**	**+3.0**
ASAJ	**Asahikawa**	**4.93**	**270**	P		**Pn**	**05 59 36.9**	**-0.2**
	comp=E,8.0nm,0.3s,baz=87,slow=13,SNR=16							
ASAJ				LR		LR	06 01 47.3	
	comp=E,4μm,20.3s,baz=102,slow=42							
ASAJ	**Asahikawa**	**4.93**	**270**	PN		**Pn**	**05 59 36.9**	**-0.2**
ASAJ				pmax		pmax		
	comp=Z,8.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,4μm,20.3s							
ERM	**Erimo**	**5.15**	**246**	*e*Pn		**Pn**	**05 59 41.5**	**+1.4**
ERM				*e*Sg		**Sb**	**06 01 07.5**	**+12**
JEM	**Erimo**	**5.15**	**246**	P		**Pn**	**05 59 40.9**	**+0.8**
JAB	**Ashibetsu**	**5.28**	**264**	P		**Pn**	**05 59 45.2**	**+3.3**
JNBK	**Urakawa-nobuka**	**5.29**	**250**	P		**Pn**	**05 59 42.0**	**-0.1**
JBT2	**Biratori 2**	**5.38**	**256**	P		**Pn**	**05 59 44.1**	**+0.9**
YSS	**Yuzh-Sakhalins**	**5.38**	**302**	⇓*e*PN		**Pn**	**05 59 45.3**	**+2.1**
YSS				*e*S		**Sn**	**06 00 46.4**	**+2.1**
YSS				pmax		pmax		
	comp=Z,60nm,1.0s							
YSS				smax				
	comp=E,420nm,1.0s							
YSS				MLR		MLR		
	comp=Z,4μm,17.0s							
YSS				MLR		MLR		
	comp=N,1μm,15.0s							
YSS				MLR		MLR		
	comp=E,4μm,15.0s							
YSS	**Yuzh-Sakhalins**	**5.38**	**302**	*e*Pn		**Pn**	**05 59 45.8**	**+2.5**
	comp=E,52nm,0.4s							
YSS	**Yuzh-Sakhalins**	**5.38**	**302**	⇓*e*P		**Pn**	**05 59 45.3**	**+2.1**
YSS				AMB		AMB	05 59 46.8	
	comp=E,60nm,1.0s							
JNB	**Noboribetsu**	**6.40**	**256**	P		**Pn**	**05 59 58.1**	**+0.8**
JNB				*e*S		**Sn**	**06 01 09.5**	**0.0**
JKB	**Kayabe**	**6.62**	**251**	P		**Pn**	**06 00 00.4**	**+0.1**
JKB				*e*S		**Sn**	**06 01 11.6**	**-3.3**
JYM2	**Yakumo 2**	**6.99**	**255**	P		**Pn**	**06 00 05.9**	**+0.5**
JANG	**Nango**	**7.08**	**239**	P		**Pn**	**06 00 04.7**	**-1.9**
JANG				*e*S		**Sn**	**06 01 20.0**	**-6.1**
JTM	**Tenmabayashi**	**7.12**	**243**	P		**Pn**	**06 00 06.9**	**-0.3**
JTM				*e*S		**Sn**	**06 01 21.9**	**-5.4**
JTH	**Tanohata**	**7.14**	**235**	*e*S		**Sn**	**06 01 19.8**	**-7.8**
JSR	**Shiriuchi**	**7.19**	**250**	P		**Pn**	**06 00 08.4**	**+0.3**
SKR	**Severo-Kuril's**	**7.80**	**33**	*e*PN		**Pn**	**06 00 13.0**	**-3.4**
SKR				pmax		pmax		
	comp=N,30nm,0.5s							
SKR				pmax		pmax		
	comp=E,30nm,0.5s							
SKR				pmax		pmax		
	comp=Z,60nm,0.5s							
SKR				MLR		MLR		
	comp=Z,3μm,14.0s							
SKR				MLR		MLR		
	comp=E,3μm,16.0s							
SKR	**Severo-Kuril's**	**7.80**	**33**	*e*P		**Pn**	**06 00 13.0**	**-3.4**
SKR				AMB		AMB	06 00 16.4	
	comp=E,30nm,0.5s							
SKR				AMB		AMB	06 00 16.4	
	comp=E,60nm,0.5s							
SKR				*e*S		**Sn**	**06 01 36.0**	**-7.8**
SKR				A			06 01 47.1	
	comp=E,80nm,0.4s							
SKR				A			06 01 47.1	
	comp=E,110nm,0.9s							
SKR				A			06 01 47.1	
	comp=E,100nm,0.9s							
SKR				AMS		AMS	06 03 30.0	
	comp=E,3μm,14.0s							
SKR				AMS		AMS	06 03 30.0	
	comp=E,3μm,16.0s							
OFUJ	**Ofunato**	**7.83**	**231**	P		**Pn**	**06 00 15.4**	**-1.5**
OFUJ				*e*S		**Sn**	**06 01 37.2**	**-7.4**
TYV	**Tymovskoe**	**7.99**	**327**	*e*P		**Pn**	**06 00 19.8**	**+0.8**
TYV				AMB		AMB	06 00 25.0	
	comp=E,35nm,1.0s							
TYV				AMB		AMB	06 00 25.0	
	comp=E,17nm,0.8s							
TYV				AMB		AMB	06 00 25.0	
	comp=E,22nm,0.8s							
TYV				AMB		AMB	06 00 36.0	
	comp=E,500nm,3.0s							
TYV				AMB		AMB	06 00 36.0	
	comp=E,500nm,4.0s							
TYV				AMS		AMS	06 03 26.0	
	comp=E,2μm,17.0s							
TYV				AMS		AMS	06 03 26.0	
	comp=E,2μm,15.0s							
TYV				AMS		AMS	06 03 26.0	
	comp=E,2μm,8.0s							
JRG	**Rokugo**	**8.21**	**236**	P		**Pn**	**06 00 21.3**	**-0.9**
JRG				*e*S		**Sn**	**06 01 47.8**	**-6.3**
JIO	**Ouri**	**8.45**	**229**	P		**Pn**	**06 00 23.0**	**-2.4**
JIO				*e*S		**Sn**	**06 01 51.5**	**-8.4**
JFK	**Kawauchi**	**9.51**	**226**	*e*S		**Sn**	**06 02 16.8**	**-9.1**
PETK	**Petropavlovsk-**	**10.34**	**29**	P		**Pn**	**06 00 51.8**	**+0.6**
	comp=E,1.1nm,0.3s,baz=204,slow=11,SNR=10							
PETK	**Petropavlovsk-**	**10.34**	**29**	PN		**Pn**	**06 00 51.8**	**+0.6**
PETK				pmax		pmax		
	comp=Z,1.0nm,0.3s							
HABR	**Khabarovsk**	**10.77**	**298**	*e*PN		**Pn**	**06 01 01.8**	**+4.6**
HABR				pmax		pmax		
	comp=Z,127nm,2.0s							
HABR				pmax		pmax		
	comp=E,200nm,2.7s							
HABR				pmax		pmax		
	comp=N,34nm,1.8s							
HABR				MLR		MLR		
	comp=Z,2μm,16.0s							
MAJO	**Matsushiro**	**11.56**	**232**	*e*PN		**Pn**	**06 01 07.4**	**-0.6**
MAT	**Matsushiro**	**11.56**	**232**	P		**Pn**	**06 01 07.2**	**-0.8**
MAT				S		**Sn**	**06 03 22.0**	**+5.9**
MJAR	**Matsushiro Arr**	**11.56**	**232**	P		**Pn**	**06 01 07.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=29,slow=13,SNR=5.9							
VLA	**Vladivostok**	**12.76**	**271**	PN		**Pn**	**06 01 21.0**	**-3.4**
VLA				MLR		MLR		
	comp=Z,2μm,19.6s							
KLR	**Kul'dur**	**13.08**	**298**	*e*PN		**Pn**	**06 01 28.7**	**0.0**
KLR				MLR		MLR		
	comp=E,1μm,14.0s							
KLR				MLR		MLR		
	comp=Z,2μm,14.0s							
MDJ	**Mudanjiang**	**14.18**	**278**	P		**Pn**	**06 01 41.5**	**-2.3**
MDJ				S		**Sn**	**06 04 17.0**	**-3.2**
MDJ				ScP		ScP	06 10 35.3	+2.3
MDJ				PcS		PcS	06 10 37.0	+1.0
MDJ				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MDJ				LR		LR		
	comp=N,800nm,17.7s							
MDJ				LR		LR		
	comp=E,640nm,18.4s							
MDJ				LR		LR		
	comp=Z,1μm,20.5s							
MDJ	**Mudanjiang**	**14.18**	**278**	*e*Pn		**Pn**	**06 01 45.7**	**+1.9**
	comp=Z,7.1nm,0.6s							
CN2	**Changchun**	**17.25**	**277**	*e*P		**Pn**	**06 02 23.0**	**-0.6**
CN2				*e*pP		pP	06 02 26.3	-5.7
CN2				*e*S		**Sn**	**06 05 25.5**	**-9.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CN2				pmax		pmax		
	comp=Z,200nm,6.0s							
CN2				LR		LR		
	comp=N,660nm,18.0s							
CN2				LR		LR		
	comp=E,1μm,18.0s							
CN2				LR		LR		
	comp=Z,1μm,18.0s							
ZEA	**Zeya**	**17.27**	**311**	*e*P		**Pn**	**06 02 23.3**	**-0.6**
ZEA				AMB		AMB	06 02 25.2	
	comp=Z,23nm,1.0s							
KSRS	**Korea Array**	**17.64**	**255**	P		**Pn**	**06 02 27.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=62,slow=11,SNR=10.0							
KSRS				LR		LR	06 10 12.1	
	comp=Z,940nm,18.3s,baz=60,slow=40							
INCN	**Inchon**	**18.52**	**256**	P		**Pn**	**06 02 37.9**	**-1.4**
SEY	**Seymchan**	**18.72**	**4**	⇑*i*P		**Pn**	**06 02 39.4**	**-2.2**
YAK	**Yakutsk**	**21.17**	**334**	*e*P		**P**	**06 03 05.3**	**-2.4**
YAK				*e**PP			06 03 13.7	
YAK				*e*			06 03 23.9	
YAK				*e*S		**S**	**06 06 52.4**	**-9.1**
YAK				*e*SS			06 07 15.0	
YAK				*e*SSS			06 07 33.9	
YAK				*e*			06 14 29.0	
YAK				pmax		pmax		
	comp=Z,32nm,1.3s,mb4.5							
YAK				pmax		pmax		
	comp=E,14nm,1.5s							
YAK				pmax		pmax		
	comp=N,10.0nm,1.3s							
YAK				pmax		pmax		
	comp=Z,47nm,1.0s,mb4.8							
YAK				pmax		pmax		
	comp=N,28nm,1.0s							
YAK				pmax		pmax		
	comp=E,30nm,1.3s							
YAK				smax				
	comp=N,107nm,2.5s							
YAK				smax				
	comp=E,43nm,2.2s							
YAK				MLR		MLR		
	comp=Z,764nm,17.0s,MS4.2							
YAK				MLR		MLR		
	comp=E,465nm,16.0s,MS4.1							
YAK				MLR		MLR		
	comp=N,508nm,16.0s,MS4.1							
YAK	**Yakutsk**	**21.17**	**334**	P		**P**	**06 03 05.2**	**-2.5**
DL2	**Dalian**	**21.44**	**265**	*e*P		**P**	**06 03 16.5**	**+5.7**
DL2				LR		LR		
	comp=E,290nm,18.2s							
DL2				LR		LR		
	comp=Z,320nm,18.3s,MS3.8							
JOW	**Kunigami**	**24.40**	**231**	P		**P**	**06 03 41.3**	**+0.4**
	comp=Z,6.3nm,1.1s,mb4.0,baz=83,slow=7.0,SNR=3.7							
BJI	**Beijing**	**24.92**	**272**	P		**P**	**06 03 44.5**	**-1.1**
BJI				S		**S**	**06 08 07.5**	**+0.2**
BJI				pmax		pmax		
	comp=Z,29nm,1.4s,mb4.6							
BJI				pmax		pmax		
	comp=Z,180nm,3.5s							
BJI				LR		LR		
	comp=N,430nm,17.4s,MS4.3							
BJI				LR		LR		
	comp=E,760nm,19.6s,MS4.3							
BJI				LR		LR		
	comp=Z,640nm,20.8s,MS4.1							
BILL	**Bilibino**	**25.37**	**15**	⇑*e*P		**P**	**06 03 47.2**	**-2.1**
BILL				*e*		pP	06 03 54.5	-2.5
BILL				pmax		pmax		
	comp=Z,9.0nm,1.7s,mb4.0							
BILL				MLR		MLR		
	comp=Z,900nm,17.0s,MS4.3							
BILL	**Bilibino**	**25.37**	**15**	*e*P		**P**	**06 03 48.1**	**-1.2**
	comp=Z,3.5nm,0.5s,mb4.2							
BOD	**Bodaibo**	**25.69**	**314**	*e*P		**P**	**06 03 48.9**	**-3.5**
NJ2	**Nanjing**	**26.83**	**253**	*e*P		**P**	**06 04 06.8**	**+3.9**
NJ2				pP		pP	06 04 11.0	+0.5
NJ2				sP		sP	06 04 13.8	+0.1
NJ2				PP			06 04 51.8	
NJ2				S		**S**	**06 08 40.0**	**+2.5**
NJ2				sS		sS	06 08 49.0	-1.2
NJ2				pmax		pmax		
	comp=Z,30nm,1.0s,mb4.8							
NJ2				pmax		pmax		
	comp=Z,110nm,8.0s							
NJ2				LR		LR		
	comp=N,1μm,19.7s,MS4.5							
NJ2				LR		LR		
	comp=E,820nm,18.6s,MS4.5							
NJ2				LR		LR		
	comp=Z,1μm,16.8s,MS4.6							
HHC	**Hu-ho-hao-te**	**27.94**	**276**	⇑P		**P**	**06 04 13.8**	**+1.0**
HHC				pP		pP	06 04 21.0	+0.5
HHC				PP			06 05 03.8	
HHC				PcP		PcP	06 07 30.0	+2.4
HHC				S		**S**	**06 08 55.3**	**+0.3**
HHC				ScP		ScP	06 11 07.8	+1.3
HHC				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.5							
HHC				pmax		pmax		
	comp=Z,100nm,4.9s							
HHC				LR		LR		
	comp=N,550nm,14.7s,MS4.5							
HHC				LR		LR		
	comp=E,730nm,12.7s,MS4.5							
HHC				LR		LR		
	comp=Z,810nm,15.7s,MS4.4							
BTO	**Baotou**	**29.13**	**277**	*e*P		**P**	**06 04 24.0**	**+0.7**
TIXI	**Tiksi**	**29.16**	**347**	*e*P		**P**	**06 04 18.1**	**-5.2**
TIXI				*e*S		**S**	**06 09 12.2**	**-1.3**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.2							
TIXI				MLR		MLR		
	comp=Z,520nm,16.0s,MS4.2							
ULN	**Ulaanbaatar**	**29.34**	**292**	*e*P		**P**	**06 04 25.5**	**+0.3**
ULN				pmax		pmax		
	comp=Z,13nm,1.3s,mb4.5							
ULN	**Ulaanbaatar**	**29.34**	**292**	*e*P		**P**	**06 04 25.4**	**+0.3**
	comp=Z,13nm,1.3s,mb4.5							
SONM	**Songino Array**	**29.78**	**292**	P		**P**	**06 04 27.6**	**-1.5**
	comp=Z,1.9nm,0.3s,mb4.2,baz=80,slow=8.1,SNR=2.8							
SONM				LR		LR	06 17 36.5	
	comp=Z,1μm,19.7s,MS4.5,baz=249,slow=39							
SONM	**Songino Array**	**29.78**	**292**	P		**P**	**06 04 27.6**	**-1.5**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.4s							
SONM				MLR		MLR		
	comp=Z,1μm,19.7s							
TATO	**Taipei**	**29.80**	**239**	*e*P		**P**	**06 04 29.2**	**-0.3**
	comp=Z,14nm,0.4s,mb5.0							
WHN	**Wuhan**	**30.83**	**255**	P		**P**	**06 04 38.5**	**0.0**
WHN				LR		LR		
	comp=N,980nm,13.4s,MS4.8							
WHN				LR		LR		
	comp=E,1μm,17.2s,MS4.8							
WHN				LR		LR		
	comp=Z,2μm,16.7s,MS4.8							
TLY	**Talaya**	**31.08**	**300**	*e*P		**P**	**06 04 41.3**	**+0.8**
TLY				pmax		pmax		
	comp=Z,10.0nm,1.6s,mb4.4							
TLY				MLR		MLR		
	comp=Z,959nm,17.0s,MS4.5							
ZAK	**Zakamensk**	**31.45**	**298**	*e*P		**P**	**06 04 43.4**	**-0.3**
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.4s,mb4.2							
ENH	**Enshi**	**34.39**	**260**	*e*P		**P**	**06 05 09.3**	**-0.4**
	comp=Z,6.9nm,0.6s,mb4.8							
LZH	**Lanzhou**	**35.41**	**273**	*e*P		**P**	**06 05 19.0**	**+0.6**
LZH				pP		pP	06 05 23.8	-2.3
LZH				sP		sP	06 05 27.0	-2.3
LZH				PP		PP	06 06 38.0	-0.8
LZH				PcP		PcP	06 07 50.5	+2.7
LZH				*e*S		**S**	**06 10 52.0**	**+0.6**
LZH				SS		SS	06 13 05.5	-20
LZH				pmax		pmax		
	comp=Z,29nm,1.0s,mb5.2							
LZH				pmax		pmax		
	comp=Z,160nm,5.8s							
LZH				LR		LR		
	comp=N,1μm,14.0s							
LZH				LR		LR		
	comp=Z,2μm,15.5s,MS5.0							
GTA	**Gaotai**	**36.83**	**280**	P		**P**	**06 05 31.5**	**+1.0**
GTA				pP		pP	06 05 36.0	-2.3
GTA				PP		PP	06 06 57.5	+3.0
GTA				PcP		PcP	06 07 53.5	+1.5
GTA				S		**S**	**06 11 15.5**	**+2.4**
GTA				SS		SS	06 13 44.5	-10
GTA				pmax		pmax		
	comp=Z,21nm,1.5s,mb4.8							
GTA				pmax		pmax		
	comp=Z,170nm,6.3s							
GTA				LR		LR		
	comp=N,460nm,14.6s,MS4.5							
GTA				LR		LR		
	comp=E,340nm,13.7s,MS4.5							
GTA				LR		LR		
	comp=Z,610nm,14.0s,MS4.5							
CD2	**Chengdu**	**38.11**	**265**	P		**P**	**06 05 41.3**	**-0.1**
CD2				PP		PP	06 07 11.3	+2.7
CD2				S		**S**	**06 11 32.0**	**-0.7**
CD2				SS		SS	06 14 07.8	-13
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb4.8							
CD2				LR		LR		
	comp=N,360nm,16.0s							
CD2				LR		LR		
	comp=Z,390nm,17.2s,MS4.3							
KTH	**Kantishna Hill**	**38.27**	**39**	*e*P		**P**	**06 05 43.3**	**+0.9**
	comp=Z,8.4nm,0.6s,mb4.7							
GYA	**Guiyang**	**38.67**	**257**	P		**P**	**06 05 46.3**	**+0.1**
GYA				PP		PP	06 07 16.5	+1.7
GYA				PcP		PcP	06 08 01.3	+3.4
GYA				S		**S**	**06 11 38.5**	**-2.7**
GYA				SS		SS	06 14 23.5	-8.4
GYA				pmax		pmax		
	comp=Z,30nm,1.0s,mb5.0							
GYA				pmax		pmax		
	comp=Z,70nm,5.0s							
GYA				LR		LR		
	comp=N,620nm,14.9s,MS4.7							
GYA				LR		LR		
	comp=E,790nm,19.0s,MS4.7							
GYA				LR		LR		
	comp=Z,800nm,18.1s,MS4.6							
COLD	**Coldfoot**	**38.78**	**33**	*e*P		**P**	**06 05 47.0**	**+0.4**
	comp=Z,40nm,0.7s,mb5.3							
PMR	**Palmer**	**39.13**	**42**	*e*P		**P**	**06 05 49.7**	**+0.1**
PMR				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.2							
PMR	**Palmer**	**39.13**	**42**	*e*P		**P**	**06 05 49.7**	**0.0**
	comp=Z,1.8nm,0.4s,mb4.2							
MCK	**McKinley**	**39.16**	**38**	*e*P		**P**	**06 05 50.0**	**+0.2**
MCK				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.1							
MCK	**McKinley**	**39.16**	**38**	*e*P		**P**	**06 05 50.0**	**+0.1**
	comp=Z,3.4nm,0.7s,mb4.2							
COLA	**College**	**39.63**	**37**	*e*P		**P**	**06 05 53.9**	**+0.2**
COLA				pmax		pmax		
	comp=Z,20nm,1.2s,mb4.7							
COLA	**College**	**39.63**	**37**	*e*P		**P**	**06 05 53.9**	**+0.1**
	comp=Z,20nm,1.2s,mb4.7							
BMRM	**Bremner River**	**41.36**	**42**	*e*P		**P**	**06 06 09.6**	**+1.4**
	comp=Z,880nm,1.2s							
QIZ	**Qiongzhong**	**41.51**	**245**	P		**P**	**06 06 10.0**	**+0.2**
QIZ				pP		pP	06 06 14.5	-3.2
QIZ				sP		sP	06 06 18.5	-2.3
QIZ				S		**S**	**06 12 25.8**	**+1.9**
QIZ				pmax		pmax		
	comp=Z,8.0nm,1.5s,mb4.1							
QIZ				LR		LR		
	comp=N,350nm,20.4s,MS4.3							
QIZ				LR		LR		
	comp=E,150nm,19.5s,MS4.3							
QIZ				LR		LR		
	comp=Z,340nm,19.3s,MS4.2							
ZALV	**Zalesovo Beam**	**41.98**	**307**	P		**P**	**06 06 11.8**	**-1.4**
	comp=Z,0.5nm,0.3s,mb3.7,baz=101,slow=4.6,SNR=3.3							
ZALV				PcP		PcP	06 08 07.6	-0.4
	comp=Z,3.5nm,0.6s,baz=78,slow=2.8,SNR=12							
ZALV				LR		LR	06 24 54.2	
	comp=Z,408nm,18.4s,MS4.3,baz=62,slow=38							
ZALV	**Zalesovo Beam**	**41.98**	**307**	P		**P**	**06 06 11.8**	**-1.4**
ZALV							06 08 07.6	
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb3.9							
ZALV				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.2							
ZALV				MLR		MLR		
	comp=Z,408nm,18.4s,MS4.3							
KMI	**Kunming**	**42.26**	**259**	P		**P**	**06 06 17.0**	**+1.1**
KMI				PP		PP	06 07 56.5	+2.6
KMI				S		**S**	**06 12 36.5**	**+1.7**
KMI				SS		SS	06 15 37.5	-5.9
KMI				pmax		pmax		
	comp=Z,15nm,0.9s,mb4.6							
KMI				pmax		pmax		
	comp=Z,110nm,3.6s							
KMI				LR		LR		
	comp=N,340nm,14.0s,MS4.5							
KMI				LR		LR		
	comp=E,270nm,11.9s,MS4.5							
KMI				LR		LR		
	comp=Z,460nm,15.4s,MS4.5							
EGAK	**Eagle**	**42.49**	**36**	*e*P		**P**	**06 06 16.8**	**-0.5**
	comp=Z,7.3nm,0.8s,mb4.4							
DAWY	**Dawson**	**43.34**	**37**	*e*P		**P**	**06 06 25.0**	**+0.8**
WMQ	**Urumqi**	**43.42**	**292**	P		**P**	**06 06

comp=N,470nm,18.5s,MS4.6
WMQ LR LR
comp=E,560nm,18.5s,MS4.6
WMQ LR LR
comp=Z,550nm,18.5s,MS4.5
INK Inuvik 45.07 31 P **P 06 06 38.0 +0.1**
comp=Z,3.6nm,0.8s,mb4.3,baz=270,slow=6.6,SNR=9.8
INK Inuvik 45.07 31 P **P 06 06 38.1 +0.2**
INK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 45.07 31 *e*P **P 06 06 38.6 +0.7**
comp=Z,14nm,1.3s,mb4.6
MK31 Makanchi Array 45.78 298 *e*P **P 06 06 43.4 -0.5**
MKAR Makanchi Array 45.78 298 P **P 06 06 43.5 -0.4**
comp=Z,6.8nm,0.8s,mb4.6,baz=72,slow=9.1,SNR=41
MKAR PcP PcP 06 08 20.7 -0.4
comp=Z,1.4nm,0.6s,baz=76,slow=3.8,SNR=3.1
MKAR LR LR 06 27 12.5
comp=Z,1µm,18.4s,MS4.8,baz=65,slow=38
MKAR Makanchi Array 45.78 298 P **P 06 06 43.5 -0.4**
MKAR 06 08 20.7
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,1µm,18.5s
KURK Kurchatov 46.58 304 *e*P **P 06 06 49.3 -0.8**
KURK pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KURK Kurchatov 46.58 304 *e*P **P 06 06 49.2 -0.9**
comp=Z,6.0nm,0.7s,mb4.6
CHTO Chiang Mai 49.03 255 *e*P **P 06 07 10.5 +1.0**
CHTO pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
CHTO Chiang Mai 49.03 255 *e*P **P 06 07 10.5 +1.0**
comp=Z,7.1nm,1.2s,mb4.6
DLBC Dease Lake 49.13 43 P **P 06 07 10.7 +0.9**
comp=Z,2.5nm,1.0s,mb4.2,baz=211,slow=12,SNR=2.7
CMAR Chiang Mai Arr 49.27 255 P **P 06 07 10.6 -0.7**
comp=Z,1.0nm,0.3s,mb4.3,baz=25,slow=8.0,SNR=7.2
CMAR LR LR 06 30 48.6
comp=Z,341nm,18.4s,MS4.4,baz=228,slow=40
CMAR Chiang Mai Arr 49.27 255 P **P 06 07 10.6 -0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,341nm,18.4s
BVAR Borovoye Array 50.42 310 P **P 06 07 19.1 -0.5**
comp=Z,0.9nm,0.5s,mb4.1,baz=69,slow=8.1,SNR=5.5
BVAR LR LR 06 30 25.0
comp=Z,648nm,18.1s,MS4.7,baz=162,slow=38
BVAR Borovoye Array 50.42 310 P **P 06 07 19.1 -0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR MLR MLR
comp=Z,648nm,18.1s
BRVK Borovoye 50.46 310 *e*P **P 06 07 20.2 +0.3**
BRVK pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
BRVK Borovoye 50.46 310 *e*P **P 06 07 20.2 +0.2**
comp=Z,1.4nm,0.3s,mb4.5
TAPN Taplejung 51.65 273 *e*P **P 06 07 30.5 +1.3**
ULHL Ulahol 51.66 295 P **P 06 07 29.2 +0.1**
SNR=28
TKM2 Tokmak 2 51.75 296 P **P 06 07 30.3 +0.5**
SNR=18
TKM2 Tokmak 2 51.75 296 *e*P **P 06 07 30.2 +0.4**
TKM2 pmax pmax
comp=Z,28nm,0.6s,mb5.4
TKM2 Tokmak 2 51.75 296 *e*P **P 06 07 30.2 +0.4**
comp=Z,28nm,0.6s,mb5.4
USP Ospenovka 52.29 297 P **P 06 07 34.0 +0.3**
SNR=16
KZA Kyzart 52.38 295 P **P 06 07 36.0 +1.5**
SNR=21
FRU Bishkek 52.42 296 *e*P **P 06 07 34.0 -0.8**
FRU pmax pmax
comp=Z,57nm,1.8s,mb5.2
JIRN Jiri 52.55 274 *e*P **P 06 07 36.7 +0.8**
AAK Ala-Archa 52.60 296 P **P 06 07 36.7 +0.6**
SNR=5.9
AAK Ala-Archa 52.60 296 *c i*P **P 06 07 35.8 -0.3**
AAK pmax pmax
comp=Z,14nm,1.7s,mb4.6
AAK Ala-Archa 52.60 296 *e*P **P 06 07 36.1 +0.1**
comp=Z,19nm,1.2s,mb4.9
GUN Gumba 52.63 274 *e*P **P 06 07 37.2 +0.7**
comp=Z,106nm,1.3s,mb5.6
RAMN Ramite 52.68 273 *e*P **P 06 07 36.4 -0.5**
comp=Z,38nm,0.5s,mb5.5
UCH Uchtor 52.78 296 *e*P **P 06 07 38.8 +1.3**
comp=Z,516nm,0.6s
EKS2 Erkin-Say 53.05 297 P **P 06 07 39.7 +0.3**
SNR=11
EKS2 Erkin-Say 53.05 297 *e*P **P 06 07 39.5 +0.1**
comp=Z,11nm,0.9s,mb4.8
KKN Kakani 53.13 275 *e*P **P 06 07 39.8 -0.4**
comp=Z,54nm,1.1s,mb5.4
PKI Pulchoki 53.16 274 *e*P **P 06 07 40.0 -0.5**
PKIN Phulchoki 53.17 274 *e*P **P 06 07 40.8 +0.3**
comp=Z,10nm,0.5s,mb5.0
KSH Kashi 53.19 292 *e*P **P 06 07 44.5 +4.0**
KSH *e*PcP PcP 06 08 51.5 +3.3
KSH *e*PP PP 06 09 46.5 +6.2
KSH *e*ScP ScP 06 12 46.5 +2.6
KSH *e*PcS PcS 06 12 48.5 +1.5
KSH *e*S **S 06 15 14.0 +4.4**
KSH *e*ScS ScS 06 17 29.8 +1.7
KSH *e*SS SS 06 18 53.5 +4.7
KSH pmax pmax
comp=Z,17nm,1.3s,mb4.8
KSH LR LR
comp=N,280nm,12.4s,MS4.7
KSH LR LR
comp=E,360nm,13.7s,MS4.7
KSH LR LR
comp=Z,330nm,14.4s,MS4.5
DMN Daman 53.36 275 *e*P **P 06 07 42.0 +0.1**
comp=Z,23nm,0.6s,mb5.3
AML Almayashu 53.36 296 *e*P **P 06 07 41.3 -0.4**
comp=Z,11nm,0.4s,mb5.1
RES Resolute Bay 53.94 17 P **P 06 07 45.4 -0.1**
comp=Z,7.7nm,0.8s,mb4.7,baz=312,slow=7.9,SNR=15
RES Resolute Bay 53.94 17 P **P 06 07 45.4 -0.1**
RES pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
RES Resolute Bay 53.94 17 *e*P **P 06 07 45.6 +0.2**
comp=Z,24nm,1.3s,mb5.0
YKA Yellowknife Ar 54.40 35 P **P 06 07 48.7 -0.3**
comp=Z,1.8nm,0.7s,mb4.1,baz=301,slow=6.9,SNR=12
YKA LR LR 06 33 12.4
comp=Z,14nm,18.8s,MS3.1,baz=90,slow=38
YKA Yellowknife Ar 54.40 35 P **P 06 07 48.7 -0.3**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA MLR MLR
comp=Z,14nm,18.8s
ARU Arti 55.05 317 *c i*P **P 06 07 52.6 -1.2**
ARU *e* 06 09 52.8
ARU S **S 06 15 36.3 +2.0**
ARU SS SS 06 19 13.5 -4.0
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,670nm,17.0s,MS4.8
ARU Arti 55.05 317 *e*P **P 06 07 52.5 -1.3**
comp=Z,19nm,1.3s,mb5.0
ABKAR Akbulak array 57.99 309 *e*P **P 06 08 14.2 -0.6**
comp=Z,2.4nm,0.4s,mb4.6
KEV Kevo 58.75 340 *e*P **P 06 08 17.2 -2.6**
KEV Kevo 58.75 340 *e*p **P 06 08 17.2 -2.6**
ARCES ARCESS Array B 59.28 340 P **P 06 08 21.9 -1.5**
comp=Z,0.7nm,0.5s,mb4.0,baz=40,slow=8.3,SNR=8.1
ARCES ARCESS Array B 59.28 340 P **P 06 08 22.0 -1.5**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
EDM Edmonton 59.85 44 *e*P **P 06 08 27.8 +0.1**
KBL Kabul 60.54 291 *e*P **P 06 08 31.8 -0.9**
KBL pmax pmax
comp=Z,14nm,0.9s,mb5.1
KBL Kabul 60.54 291 *e*P **P 06 08 31.8 -0.9**
comp=Z,14nm,0.9s,mb5.1
JOF Joensuu 62.34 333 *e*P **P 06 08 42.3 -2.1**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
JOF Joensuu 62.34 333 *e*p **P 06 08 42.3 -2.1**
comp=Z,7.6nm,0.7s,mb4.9
SWMT Swartz Lake 62.85 49 *e*P **P 06 08 49.5 +1.5**
SUMG Summit 63.27 3 *e*P **P 06 08 50.8 +0.4**
comp=Z,16nm,1.1s,mb5.0
SLMT Seeley Lake 63.29 49 *e*P **P 06 08 51.5 +0.6**
comp=Z,10.0nm,1.1s,mb4.9
MSO Missoula 63.29 50 *e*P **P 06 08 51.3 +0.4**
comp=Z,3.6nm,0.9s,mb4.5
FFC Flin Flon 64.24 38 *e*P **P 06 08 57.2 +0.1**
FFC pmax pmax
comp=Z,24nm,1.8s,mb4.9
FFC Flin Flon 64.24 38 *e*P **P 06 08 57.2 +0.1**
comp=Z,24nm,1.8s,mb4.9
KAF Kangasniemi 64.53 334 *e*P **P 06 08 57.1 -1.8**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KAF Kangasniemi 64.53 334 *e*p **P 06 08 57.1 -1.8**
comp=Z,3.8nm,0.5s,mb4.7
FCC Fort Churchill 64.69 31 *e*P **P 06 09 01.4 +1.5**
FCC pmax pmax
comp=Z,1.0nm,1.9s,mb3.5
FCC Fort Churchill 64.69 31 *e*P **P 06 09 01.4 +1.4**
comp=Z,1.0nm,1.9s,mb3.5
LRM Limekiln Ridge 64.72 50 *e*P **P 06 09 01.0 +0.6**
CMB Columbia Colle 64.81 61 *e*P **P 06 09 01.4 +0.3**
CMB pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
CMB Columbia Colle 64.81 61 *e*P **P 06 09 01.4 +0.3**
comp=Z,0.9nm,0.8s,mb3.9
MOS Moscow 64.95 325 *e*P pP 06 09 10.9 +1.0
FINES FINESS Array B 65.11 334 P **P 06 09 01.0 -1.6**
comp=Z,5.7nm,0.5s,mb4.8,baz=42,slow=7.7,SNR=24
FINES FINESS Array B 65.11 334 P **P 06 09 01.0 -1.6**
FINES pmax pmax
comp=Z,6.0nm,0.5s
BOZ Bozeman (W) 65.28 50 *e*P **P 06 09 04.8 +0.8**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BOZ Bozeman (W) 65.28 50 *e*P **P 06 09 04.8 +0.7**
comp=Z,2.5nm,0.8s,mb4.3
WRAB Tennant Creek 65.42 196 *e*P **P 06 09 05.9 +0.8**
WRAB pmax pmax
comp=Z,14nm,1.5s,mb4.8
WRAB Tennant Creek 65.42 196 *e*P **P 06 09 05.9 +0.8**
comp=Z,14nm,1.5s,mb4.8
OBN Obninsk 65.82 325 ⇑ *i*P **P 06 09 07.4 0.0**
OBN *e* pP 06 09 14.2 -1.4
OBN pmax pmax
comp=Z,54nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.6
FITZ Fitzroy Crossi 65.82 205 P **P 06 09 07.2 -0.5**
comp=Z,4.2nm,0.9s,mb4.5,baz=107,slow=19,SNR=4.0
NVAR Mina Array Bea 65.87 59 P **P 06 09 09.5 +1.6**
baz=298,slow=7.8
GCMT Greycliff 66.26 49 *e*P **P 06 09 11.4 +1.0**
comp=Z,2.4nm,0.8s,mb4.3
VRHR Novokhopersk 66.30 319 *e*P **P 06 09 10.2 -0.3**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
VRHR pmax pmax
comp=E,10.0nm,0.7s
RRI2 Red Ridge 66.91 52 *e*P **P 06 09 15.8 +1.3**
comp=E,6.5nm,0.8s,mb4.7
TPAW Teton Pass 67.02 51 *e*P **P 06 09 16.7 +1.5**
comp=E,11nm,1.4s,mb4.7
VSU Vasula 67.14 331 *c i*P **P 06 09 15.1 -0.6**
VSU pmax pmax
comp=Z,15nm,1.1s,mb4.9
REDW Red Top Meadow 67.16 51 *e*P **P 06 09 17.2 +1.1**
comp=Z,10nm,1.4s,mb4.7
VSR Storozhevoye 67.36 320 *e*P **P 06 09 16.8 -0.5**
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,9.0nm,0.5s
VORD Divnogorie 67.48 320 *e*P **P 06 09 17.5 -0.5**
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.1
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.9s
DZM Mont Dzumac 67.88 163 *e*LR LR 06 30 12.1
comp=E,106nm,21.9s
BW06 Boulder Array 68.27 51 *e*P **P 06 09 22.5 -0.6**
comp=E,60nm,3.0s
PDAR Pinedale Array 68.27 51 P **P 06 09 22.7 -0.4**
comp=E,1.0nm,0.8s,mb3.9,baz=304,slow=3.7,SNR=6.2
MAK Makhachkala 68.67 310 *e*P **P 06 09 27.8 +2.2**
MAK MLR MLR
comp=Z,335nm,15.0s,MS4.7
ASAR Alice Springs 69.14 195 P **P 06 09 29.1 +0.5**
comp=Z,1.3nm,0.8s,mb3.9,baz=12,slow=5.8,SNR=11
ASAR Alice Springs 69.14 195 P **P 06 09 29.1 +0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
IZAR Zarasai 69.38 330 *e*P **P 06 09 30.1 +0.3**
MSU Marysvale 69.53 56 *e*P **P 06 09 31.5 +0.5**
MSU pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
MSU Marysvale 69.53 56 *e*P **P 06 09 31.5 +0.5**
comp=Z,9.2nm,1.7s,mb4.4
IDID Didziasalis 69.54 329 *e*P **P 06 09 30.6 -0.2**
ISAL Salakas 69.56 330 *e*P **P 06 09 30.7 -0.2**
NB2 NORSAR Subarra 69.65 340 P **P 06 09 30.3 -1.1**
comp=Z,6.2nm,0.6s,mb4.7,baz=28,slow=6.5
NOA NORSAR Array B 69.65 340 P **P 06 09 29.5 -1.9**
comp=Z,6.9nm,0.6s,mb4.7,baz=30,slow=6.4,SNR=21
NOA LR LR 06 43 46.8
comp=Z,108nm,18.9s,MS4.1,baz=25,slow=39
NOA NORSAR Array B 69.65 340 P **P 06 09 29.5 -1.9**
NOA pmax pmax
comp=Z,7.0nm,0.6s
NOA MLR MLR
comp=Z,108nm,18.9s
IIGN Ignalina 69.70 329 *e*P **P 06 09 31.6 -0.2**
SRU San Rafael 70.11 55 *e*P **P 06 09 34.9 +0.3**
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SRU San Rafael 70.11 55 *e*P **P 06 09 34.9 +0.3**
comp=Z,4.6nm,0.9s,mb4.4
RSSD Black Hills 70.36 47 *e*P **P 06 09 36.2 +0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RSSD Black Hills 70.36 47 *e*P **P 06 09 36.2 +0.1**
comp=Z,3.5nm,0.9s,mb4.3
KIV Kislovodsk 70.60 313 *e*P **P 06 09 36.9 -0.6**
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KIV Kislovodsk 70.60 313 *e*P **P 06 09 38.8 +1.2**
comp=Z,31nm,0.7s,mb5.3
ZEI Tsey 70.77 311 *e*P **P 06 09 37.7 -0.8**
ZEI pmax pmax
comp=Z,13nm,0.9s,mb4.9
SUW Suwalki 71.85 330 *e*P **P 06 09 42.5 -2.4**
SUW Suwalki 71.85 330 *e*P **P 06 09 44.5 -0.4**
SUW pmax pmax
comp=Z,15nm,0.6s,mb5.1
SUW Suwalki 71.85 330 *e*P **P 06 09 44.5 -0.4**
comp=Z,15nm,0.6s,mb5.1
AKASG Malin Array Be 72.08 325 P **P 06 09 44.9 -1.5**
comp=Z,7.0nm,0.7s,mb4.7,baz=38,slow=6.1,SNR=38
AKASG Malin Array Be 72.08 325 P **P 06 09 44.9 -1.4**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 72.08 325 *e*P **P 06 09 44.9 -1.4**
GNI Garni 72.09 309 *e*P **P 06 09 46.5 -0.1**
GNI pmax pmax
comp=Z,8.0nm,1.5s
KIEV Kiev 72.10 325 *e*P **P 06 09 45.7 -0.7**
KIEV pmax pmax
comp=Z,38nm,1.3s,mb5.2
KIEV Kiev 72.10 325 *e*P **P 06 09 45.7 -0.7**
comp=Z,38nm,1.3s,mb5.2
SOC Sochi 72.41 314 *e*P **P 06 09 44.6 -3.8**
SOC *e*S S 06 19 05.7 -4.6
SOC *e*SS SS 06 23 52.2 +4.2
ANN Anapa 72.70 316 *e*P **P 06 09 47.4 -2.7**
ANN *e*S S 06 19 13.5 -0.1
ANN pmax pmax
comp=Z,49nm,1.4s,mb5.2
LVV L'vov 74.87 327 *e*P **P 06 10 02.2 -0.5**
KIS Kishinev 75.09 322 *e*P **P 06 10 02.0 -2.1**
KIS *e* 06 10 16.0
KIS MLR MLR
comp=Z,300nm,17.0s,MS4.7
KIS MLR MLR
comp=Z,300nm,18.0s
ANMO Albuquerque 75.31 55 *e*P **P 06 10 04.6 -1.0**
ANMO pmax pmax
comp=Z,5.0nm,1.4s
ANMO Albuquerque 75.31 55 *e*P **P 06 10 04.5 -1.0**
comp=Z,5.2nm,1.4s,mb4.3
KWP Kalwaria Pacla 75.53 327 *e*P **P 06 10 07.2 +0.7**
KWP Kalwaria Pacla 75.53 327 *e*P **P 06 10 06.7 +0.1**
KWP pmax pmax
comp=Z,81nm,1.3s,mb5.5
KWP Kalwaria Pacla 75.53 327 *e*P **P 06 10 06.7 +0.1**
comp=Z,80nm,1.3s,mb5.5
KWP Kalwaria Pacla 75.53 327 ⇑ *i*P **P 06 10 07.9 +1.3**
BUR08 Bucovina Ar. S 76.12 325 *e*P **P 06 10 09.9 -0.1**
BURAR Bucovina Array 76.14 325 ⇑ *i*P **P 06 10 10.1 0.0**
OJC Ojcow 76.15 329 *e*P **P 06 10 09.5 -0.6**
STKA Stephens Creek 76.17 187 LR LR 06 38 20.2
comp=Z,132nm,21.9s,MS4.2,baz=25,slow=31
STKA Stephens Creek 76.17 187 *e*P **P 06 10 10.8 +0.6**
comp=Z,0.4nm,0.9s
KOLS Kolonicke sedl 76.26 327 *e*P **P 06 10 11.1 +0.3**
KOLS pmax pmax
comp=Z,12nm,1.1s,mb4.7
KOLS Kolonicke sedl 76.26 327 *e*P **P 06 10 11.1 +0.3**
comp=Z,12nm,1.1s,mb4.7
KOLS Kolonicke sedl 76.26 327 *e*P **P 06 10 11.1 +0.3**
STHS Stebnicka Huta 76.27 328 *e*P **P 06 10 11.6 +0.8**
STHS pmax pmax
comp=Z,14nm,1.2s,mb4.8
STHS Stebnicka Huta 76.27 328 *e*P **P 06 10 11.6 +0.8**
comp=Z,14nm,1.2s,mb4.8
STHS Stebnicka Huta 76.27 328 *e*P **P 06 10 11.6 +0.8**
SCHQ Schefferville 76.52 21 LR LR 06 48 04.7
comp=Z,174nm,18.9s,MS4.4,baz=13,slow=39
NIE Niedzica 76.61 329 *e*P **P 06 10 12.1 -0.6**
KSP Ksiaz 76.87 332 *e*P **P 06 10 14.6 +0.5**
KSP Ksiaz 76.87 332 *e*P **P 06 10 13.9 -0.2**
OKC Ostrava-Krasne 77.06 330 *e*P **P 06 10 15.6 +0.4**
OKC MLR MLR
comp=Z,200nm,11.5s,MS4.7
OKC Ostrava-Krasne 77.06 330 *e*P **P 06 10 15.6 +0.4**
OKC AMS AMS 06 51 50.0
comp=Z,200nm,11.5s
TIRR Tirgusor 77.23 321 ⇑ *i*P **P 06 10 21.9 +5.6**
DPC Dobruska-Polom 77.27 331 *e*P **P 06 10 16.4 0.0**
DPC *e*PCP PcP 06 10 23.3 -3.7
DPC *e*pP pP 06 10 30.5 +5.7
DPC AMS AMS 06 50 00.0
comp=Z,200nm,21.2s
KECS Kecovo 77.32 328 *e*P **P 06 10 17.3 +0.6**
KECS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
KECS Kecovo 77.32 328 *e*P **P 06 10 17.3 +0.6**
comp=Z,6.0nm,1.3s,mb4.4
KECS Kecovo 77.32 328 *e*P **P 06 10 17.2 +0.5**
MORC Moravsky Berou 77.33 330 *e*P **P 06 10 16.5 -0.2**
MORC pmax pmax
comp=Z,32nm,1.4s,mb5.1
MORC Moravsky Berou 77.33 330 *e*P **P 06 10 16.5 -0.3**
comp=Z,32nm,1.4s,mb5.1
MORC Moravsky Berou 77.33 330 ⇑ *i*P **P 06 10 17.7 +1.0**
MLR Muntele Rosu 77.51 323 ⇑ *i*P **P 06 10 18.8 +0.9**
CLL Collm 77.55 334 ⇓ *i*P **P 06 10 17.8 -0.2**
CLL *i* *PP pP 06 10 23.5 -2.8
CLL pmax pmax
comp=Z,34nm,1.2s,mb5.2
CLL MLR MLR
comp=Z,200nm,18.2s,MS4.5
CLL Collm 77.55 334 ⇓ *i*P **P 06 10 17.8 -0.2**
comp=Z,34nm,1.2s,mb5.2
CLL *i* pP pP 06 10 23.5 -2.8
CLL LR LR
comp=Z,200nm,18.2s,MS4.5
CLL Collm 77.55 334 ⇓ *i*P **P 06 10 17.8 -0.2**
comp=Z,34nm,1.2s,mb5.2
CLL *e*pP pP 06 10 31.0 +4.7
CLL LmV 06 48 00.0
comp=Z,200nm,18.2s
BRG Berggiesshubel 77.62 333 *e*P **P 06 10 17.4 -1.0**
comp=Z,16nm,1.5s,mb4.7
PVCC Panska Ves 77.71 332 *e*P **P 06 10 19.1 +0.2**
PVCC MLR MLR
comp=Z,200nm,18.7s,MS4.5
PVCC Panska Ves 77.71 332 *e*P **P 06 10 19.1 +0.2**
PVCC AMS AMS 06 51 20.0
comp=Z,200nm,18.7s
DRGR 77.82 326 ⇑ *i*P **P 06 10 19.8 +0.2**
VYHS Vyhne 77.93 329 *e*P **P 06 10 20.5 +0.4**
VYHS *e* pP 06 10 27.0 -1.5
VYHS pmax pmax
comp=Z,18nm,1.7s,mb4.7
VYHS Vyhne 77.93 329 *e*P **P 06 10 20.5 +0.4**
comp=Z,18nm,1.7s,mb4.7
VYHS *e*PcP PcP 06 10 27.0 -2.9
VYHS Vyhne 77.93 329 *e*P **P 06 10 20.5 +0.4**
VYHS *e*PCP PcP 06 10 27.0 -2.9
PSZ Piszkesteto 78.01 328 *e*P **P 06 10 20.5 -0.1**
PSZ pmax pmax
comp=Z,79nm,2.1s,mb5.3
PSZ Piszkesteto 78.01 328 *e*P **P 06 10 20.5 -0.1**
comp=Z,79nm,2.1s,mb5.3
PSZ Piszkesteto 78.01 328 ⇑ *e*P **P 06 10 20.9 +0.3**
PSZ Piszkesteto 78.01 328 ⇑ *i*P **P 06 10 20.8 +0.2**
PRU Pruhonice 78.19 332 *e*P **P 06 10 21.5 0.0**
PRU *e* pP 06 10 28.0 -1.9
PRU MLR MLR
comp=Z,200nm,21.3s,MS4.4
PRU Pruhonice 78.19 332 *e*P **P 06 10 21.5 0.0**
PRU *e*PCP PcP 06 10 28.0 -3.0
PRU AMS AMS 06 50 00.0
comp=Z,200nm,21.3s
BR131 Keskin Array S 78.33 315 *e*P **P 06 10 22.8 +0.3**
comp=Z,1.9nm,0.6s,mb4.2
BRTR Keskin Array B 78.33 315 P **P 06 10 21.9 -0.7**
comp=Z,2.6nm,0.7s,mb4.3,baz=64,slow=4.3,SNR=15
BRTR LR LR 06 51 02.1
comp=Z,119nm,18.1s,MS4.3,baz=197,slow=40
TREC Trest 78.45 331 *e*P **P 06 10 23.3 +0.3**
TREC *e*pP pP 06 10 36.8 +5.4
TREC AMS AMS 06 50 40.0
comp=Z,200nm,18.1s
MOX Moxa 78.57 334 *e*P **P 06 10 24.0 +0.4**
comp=Z,43nm,1.9s,mb5.0
MOX pmax pmax
comp=Z,100nm,19.0s
MOX Moxa 78.57 334 *e*P **P 06 10 24.0 +0.4**
MOX pmax pmax
comp=Z,43nm,1.9s,mb5.0
MOX MLR MLR
comp=Z,100nm,19.0s,MS4.2
ZST Bratislava 78.81 330 *e*PCP PcP 06 10 32.8 -0.9
BZS Buzias 79.22 326 ⇓ *i*P **P 06 10 27.3 0.0**
KHC Kasperske Hory 79.24 332 *e*P **P 06 10 27.0 -0.3**
KHC *e* pP 06 10 34.1 -1.6
KHC MLR MLR
comp=Z,300nm,14.0s,MS4.8
KHC Kasperske Hory 79.24 332 *e*P **P 06 10 27.1 -0.2**
comp=Z,8.2nm,0.6s,mb4.8
KHC Kasperske Hory 79.24 332 *e*P **P 06 10 27.0 -0.3**
KHC *e*PCP PcP 06 10 34.1 -1.5
KHC AMS AMS 06 49 10.0
comp=Z,300nm,14.0s
GERES GERESS Array B 79.45 332 P **P 06 10 28.2 -0.3**
comp=Z,1.7nm,0.5s,mb4.2,baz=37,slow=5.3,SNR=14
GERES LR LR 06 49 54.0
comp=Z,266nm,18.1s,MS4.6,baz=212,slow=39
GERES GERESS Array B 79.45 332 P **P 06 10 28.2 -0.3**
GERES pmax pmax
comp=Z,2.0nm,0.5s
GERES MLR MLR
comp=Z,266nm,18.1s
CSNA Conrad Observa 79.49 330 ⇓ *i*P **P 06 10 29.9 +1.2**
comp=Z,17nm,1.4s,mb4.8
MEM Membach 80.25 337 P **P 06 10 33.0 +0.2**
BCLA Clavier 80.62 338 P **P 06 10 34.4 -0.3**
comp=Z,20nm,2.3s,mb4.6
SOKA Soboth 80.85 330 ⇑ *i*P **P 06 10 35.8 -0.2**
comp=Z,15nm,1.2s,mb4.8

TXAR	Lajitas Array	80.95	58	P	P	06 10 35.8	-1.1
	comp=Z,1.3nm,0.7s,mb3.9,baz=301,slow=4.0,SNR=15						
TXAR	Lajitas Array	80.95	58	P	P	06 10 35.8	-1.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBA	Koelnbreinsper	81.09	331	⇑i P	P	06 10 38.7	+1.3
	comp=Z,22nm,1.3s,mb4.9						
WTTA	Wattenberg	81.51	332	⇑i P	P	06 10 40.7	+1.1
	comp=Z,11nm,0.9s,mb4.8						
CDF	Champ du Feu	81.86	336	eP	P	06 10 41.2	-0.2
MMAI	Mount Meron Ar	82.42	309	P	P	06 10 42.7	-2.0
	comp=Z,0.9nm,0.3s,mb4.2,baz=57,slow=11,SNR=3.7						
TAOE	Nuku Hiva Isla	82.45	110	eLR	LR	06 36 39.4	
	comp=Z,180nm,28.2s						
KRUS	Krusevo	82.86	323	eP	P	06 10 45.3	-1.4
PPT	Papeete	82.92	123	eLR	LR	06 36 52.5	
	comp=Z,80nm,20.5s						
PPT	Papeete	82.92	123	LR	LR	06 48 37.6	
	comp=Z,205nm,18.5s,MS4.5,baz=310,slow=36						
FLN	La Foliniere	83.62	341	eP	P	06 10 49.9	-0.6
FLN				eMLR	MLR		
	comp=Z,182nm,19.0s,MS4.2						
FLN	La Foliniere	83.62	341	eP	P	06 10 49.9	-0.6
FLN				LR	LR		
	comp=Z,180nm,19.0s,MS4.5						
LDF	La Druitiere	83.69	340	eP	P	06 10 51.0	+0.1
LOR	Lormes	83.88	337	eP	P	06 10 51.3	-0.6
LOR				eMLR	MLR		
	comp=Z,238nm,19.5s,MS4.3						
LOR	Lormes	83.88	337	eP	P	06 10 51.3	-0.6
LOR				LR	LR		
	comp=Z,240nm,19.5s,MS4.6						
GRR	Gorron	84.06	341	eP	P	06 10 52.4	-0.4
	comp=Z,35nm,0.8s,mb5.2						
GRR	Gorron	84.06	341	eP	P	06 10 52.4	-0.4
GRR				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
GRR	Gorron	84.06	341	eP	P	06 10 52.4	-0.4
	comp=Z,18nm,0.8s,mb5.2						
SMF	Signal de Mont	84.45	337	eP	P	06 10 54.5	-0.3
	comp=Z,24nm,0.9s,mb5.0						
SMF	Signal de Mont	84.45	337	eP	P	06 10 54.5	-0.3
SMF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0						
SMF	Signal de Mont	84.45	337	eP	P	06 10 54.5	-0.3
	comp=Z,12nm,0.9s,mb5.0						
AVF	Avril sur Loir	84.46	337	eP	P	06 10 54.6	-0.2
SGMF	Saint Gilles	84.58	342	eP	P	06 10 55.1	-0.3
LPL	La Plagne	84.63	335	eP	P	06 10 56.0	+0.3
LPG	La Plagne	84.64	335	eP	P	06 10 55.5	-0.3
	comp=Z,30nm,1.1s,mb5.0						
LPG	La Plagne	84.64	335	eP	P	06 10 55.5	-0.3
LPG				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
LPG	La Plagne	84.64	335	eP	P	06 10 55.5	-0.3
	comp=Z,15nm,1.1s,mb5.0						
TCF	Toulx Ste Croi	85.23	338	eP	P	06 10 58.6	-0.1
	comp=Z,12nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	85.23	338	eP	P	06 10 58.6	-0.1
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
TCF	Toulx Ste Croi	85.23	338	eP	P	06 10 58.6	-0.1
	comp=Z,6.2nm,0.9s,mb4.7						
MBDF	Montbardon	85.33	334	eP	P	06 10 59.1	-0.1
ORIF	Oris-en-Rattie	85.43	335	eP	P	06 10 59.7	0.0
ORIF				eMLR	MLR		
	comp=Z,160nm,20.5s,MS4.1						
MFF	Saint Martin d	85.56	340	eP	P	06 11 00.3	0.0
	comp=Z,19nm,0.7s,mb5.1						
MFF	Saint Martin d	85.56	340	eP	P	06 11 00.3	0.0
MFF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
MFF	Saint Martin d	85.56	340	eP	P	06 11 00.3	0.0
	comp=Z,9.7nm,0.7s,mb5.1						
RJF	Les Rejaudoux	86.33	338	eP	P	06 11 04.1	-0.1
	comp=Z,44nm,1.3s,mb5.2						
RJF				eMLR	MLR		
	comp=Z,253nm,20.2s,MS4.3						
RJF	Les Rejaudoux	86.33	338	eP	P	06 11 04.1	-0.1
RJF				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.2						
RJF				MLR	MLR		
	comp=Z,250nm,20.3s,MS4.6						
RJF	Les Rejaudoux	86.33	338	eP	P	06 11 04.1	-0.1
	comp=Z,22nm,1.3s,mb5.2						
RJF				LR	LR		
	comp=Z,250nm,20.3s,MS4.6						
CAF	Calviac	86.53	337	eP	P	06 11 05.7	+0.5
	comp=Z,13nm,0.7s,mb5.0						
CAF	Calviac	86.53	337	eP	P	06 11 05.7	+0.5
CAF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.0						
CAF	Calviac	86.53	337	eP	P	06 11 05.7	+0.5
	comp=Z,6.6nm,0.7s,mb5.0						
TIP	Timpagrande	86.57	325	eP	P	06 11 04.9	-0.6
	comp=Z,9.8nm,1.2s,mb4.9						
LFF	La Frestale	86.87	338	eP	P	06 11 07.3	+0.4
	comp=Z,22nm,0.7s,mb5.2						
LFF	La Frestale	86.87	338	eP	P	06 11 07.3	+0.4
LFF				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.2						
LFF	La Frestale	86.87	338	eP	P	06 11 07.3	+0.4
	comp=Z,11nm,0.7s,mb5.2						
KEST	Kesra	92.47	329	LR	LR	06 57 58.6	
	comp=Z,92nm,18.6s,MS4.3,baz=303,slow=39						
TORD	Torodi Ar. Bea	115.72	325	PKP	PKPdf	06 17 03.6	-1.5
	comp=Z,0.2nm,0.4s,baz=354,slow=1.4,SNR=3.2						
VNA2	Neumayer--Watz	150.99	195	ePKPdf	PKPbc	06 18 13.0	-0.8
VNA2				e		06 18 20.7	
VNA2				e		06 18 26.8	
VNA2				e		06 18 28.2	

NNC 26 06:01:28.2±6.5, 36°.55N×70°.61E, h0km, mb3.8, mpv3.6, 1C-3D, Error ellipse: s-maj=80.5km s-min=52.0km az=71.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.54	359	⇓P	Pn	06 03 07.2	+1.5
	1.6nm,0.3s,baz=176,slow=12,SNR=28						
KK31				⇓S	Sn	06 04 22.0	+1.1
	6.3nm,0.6s						
TKM2	Tokmak 2	7.43	30	⇑P	Pn	06 03 17.4	-0.4
	1.5nm,0.5s						
AB31	Akbulak array	14.89	332	⇓P	Pn	06 04 58.0	-1.8
	0.5nm,0.5s,baz=149,slow=11,SNR=19						

GUC 26 06:12:54.0±0.8, 22°.66S×68°.94W, h85km±13km, ML3.7, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	Pedro de Valdi	0.69	275	eP	Pn	06 13 10.6	+0.7
PECH				i S	Sn	06 13 23.2	+1.4
PECH				AML	AML	06 13 24.6	
	comp=N,7μm,0.2s						
MACH	Maria Elena	0.89	301	⇑iP	Pn	06 13 12.7	+0.6
MACH				i S	Sn	06 13 27.1	+1.4
CEN1	Los Morros	1.37	238	⇑iP	Pn	06 13 21.6	+3.7
CEN1				i S	Sn	06 13 41.4	+5.4
CEN1				AML	AML	06 13 45.6	
	comp=N,908nm,0.3s						
MECH	Mejillones	1.46	252	⇑iP	Pn	06 13 19.4	+0.4
MECH				i S	Sn	06 13 39.3	+1.2
MECH				AML	AML	06 13 47.6	
	comp=N,1μm,0.3s						
ANCH	Antofagasta	1.70	233	eP	Pn	06 13 22.5	+0.5
ANCH				i S	Sn	06 13 44.1	+0.7

MOS 26 06:15:01.3±0.9, 49°.85N×157°.29E, h78km, mb4.6/1, Error ellipse: s-maj=99.9km s-min=12.5km az=76.1

KRSC 26 06:15:01.1±0.8, 49°.93N×157°.36E, h49km±49km, ML4.6, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.10	314	⇓iPN	Pn	06 15 14.4	-5.7
SKR				pmax	pmax		
	comp=N,1μm,0.5s						
SKR				pmax	pmax		
	comp=E,570nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,1.0s						
ALID	Alaid	1.49	310	eP	Pn	06 15 24.3	-1.1
ALID				i S	Sn	06 15 40.8	-2.9
MIPR	Malaya Ipel'ka	2.38	351	eP	Pn	06 15 39.2	+1.6
MIPR				i S	Sn	06 16 07.3	+1.8
RUS	Russkaya	2.61	16	eP	Pn	06 15 42.9	+2.2
RUS				i S	Sn	06 16 12.7	+1.6
GRL	Gorelyy	2.66	9	eP	Pn	06 15 45.0	+3.5
GRL				i S	Sn	06 16 16.5	+4.0
PET	Petropavlovsk	3.20	14	ePN	Pn	06 15 52.2	+3.4
PET				eS	Sn	06 16 29.2	+3.5
PET				smax			
	comp=E,373nm,0.5s						
PET				smax			
	comp=N,390nm,0.5s						
PET				smax			
	comp=N,300nm,0.5s						
PET	Petropavlovsk	3.20	14	eP	Pn	06 15 52.0	+3.2
PET				i S	Sn	06 16 29.2	+3.5
AVH	Avacha	3.45	14	eP	Pn	06 15 56.5	+4.3
NLC	Nalytchevo	3.47	20	eP	Pn	06 15 54.9	+2.3
NLC				i S	Sn	06 16 33.6	+1.2
SPN	Mys Shipunski	3.58	27	eP	Pn	06 15 57.8	+3.8
SPN				i S	Sn	06 16 38.6	+3.6
GNL	Ganaly	3.79	5	eP	Pn	06 16 00.5	+3.6
KII	Karymskiy	4.31	17	eP	Pn	06 16 09.1	+5.1
KII				i S	Sn	06 16 58.5	+5.6
MKZ	Mys Kozlova	5.35	28	eP	Pn	06 16 21.0	+2.7
MKZ				i S	Sn	06 17 19.4	+0.8
TUMR	Tumrok	5.62	16	eP	Pn	06 16 26.8	+4.8
KMNR	Kamenistaya	6.09	16	eP	Pn	06 16 33.1	+4.7
KPT	Kopyto	6.29	15	P	Pn	06 16 37.1	+6.0
CIRR	Tsirk	6.52	17	P	Pn	06 16 38.8	+4.5
SRDR	Sredinnyy	6.55	12	P	Pn	06 16 40.3	+5.6
KBTR	Krutoberegovo	7.09	25	eP	Pn	06 16 45.4	+3.2
KBTR				eS	Sn	06 18 04.1	+2.8
SRKR	Sorokina	7.11	17	P	Pn	06 16 46.5	+4.1
BKI	Bering	7.44	42	eP	Pn	06 16 49.8	+2.9
BKI				i S	Sn	06 18 08.1	-1.8

ISCJB 26 06:21:21.8±1.2, 30°.21N±0°.04×51°.78E±0°.04, h11km±10km, Error ellipse: s-maj=7.8km s-min=5.4km az=140.9
KISR 26 06:21:22.2±0.8, 30°.28N×51°.70E, h27km±925km, ML2.9
TEH 26 06:21:22.5, 30°.32N×51°.70E, h4km
CSEM 26 06:21:24.2±0.3, 30°.15N×51°.84E, h20km, ML2.9, Error ellipse: s-maj=10.5km s-min=6.2km az=8.0

ISC 26 06:21:22.2±1.1, 30°.25N±0°.04×51°.79E±0°.04, h5km±9km, n25, σ1§06/37, 2C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	Sarvestan	1.44	126	ePg	Pn	06 21 48.3	-0.7
ISRV				e		06 22 21.4	
	comp=Z,5μm,0.2s						
IMOK	Mouk	1.45	146	⇓ePn	Pg	06 21 51.1	+1.2
IMOK				e		06 22 20.4	
	comp=Z,9μm,0.2s						
IGAR	Gharneh	2.16	6	ePn	Pn	06 21 58.4	-0.5
IGAR				eSg	Sn	06 22 27.8	+1.7
IGAR				e		06 22 36.0	
	comp=Z,2μm,0.4s						
GHIR	Ghir-Karzin	2.22	151	ePn	Pn	06 22 00.0	+0.3
ISAD	Sadrabad	2.33	44	ePn	Pn	06 22 02.2	+1.0
ISAD				eSg	Sg	06 22 35.1	-1.9
ISAD				e		06 22 41.3	
	comp=Z,2μm,0.4s						
IPIR	Pirpir	2.54	343	ePn	Pn	06 22 03.5	-0.7
IPIR				e		06 22 51.5	
	comp=Z,1μm,0.4s						
IZEF	Zefreh	2.68	10	e	Pg	06 22 12.1	-1.4
	comp=Z,625nm,0.3s						
IZEF				ePn	Pn	06 22 05.1	-0.9
IMEH	Mehriz	2.69	64	e	Pg	06 22 15.7	+2.0
	comp=Z,725nm,0.2s						
IMEH				ePn	Pn	06 22 07.0	+0.9
ICHK	Chekchek	3.00	48	⇑ePn	Pn	06 22 10.6	+0.1
ICHK				e		06 22 18.9	
	comp=Z,570nm,0.1s						
IKLH	Kolahrood	3.07	357	⇓ePn	Pn	06 22 10.6	-0.8
IKLH				e		06 23 19.9	
	comp=Z,555nm,0.4s						
IBAF	Bafgh	3.52	67	⇑ePn	Pn	06 22 17.6	+0.1
UMR	Umm Al-Rimmam	3.60	260	eP	Pn	06 22 18.9	+0.1
UMR				eS	Sn	06 23 01.5	-0.2
UMR	Umm Al-Rimmam	3.60	260	eP	Pn	06 22 18.9	+0.2
UMR				eS	Sn	06 23 01.5	-0.1
KBD	Kabd	3.72	254	eP	Pn	06 22 20.8	+0.5
KBD				eS	Sn	06 23 04.0	-0.5
KBD				AML	AML	06 23 06.8	
	comp=Z,19nm,0.3s						
KBD	Kabd	3.72	254	eP	Pn	06 22 20.8	+0.5
KBD				eS	Sn	06 23 04.0	-0.5
MIB	Mutribah	3.88	265	eP	Pn	06 22 22.2	-0.4
MIB				eS	Sn	06 23 08.2	-0.4
MIB				AML	AML	06 23 12.2	
	comp=Z,37nm,0.6s						
MIB	Mutribah	3.88	265	eP	Pn	06 22 22.2	-0.4
MIB				eS	Sn	06 23 08.2	-0.4
RDF	Al-Radifah	3.92	251	eP	Pn	06 22 23.3	+0.3
RDF	Al-Radifah	3.92	251	eP	Pn	06 22 23.3	+0.2
NAY	Al-Naaiem	4.07	257	eP	Pn	06 22 25.7	+0.5
NAY				eS	Sn	06 23 12.7	-0.7
NAY				AML	AML	06 23 16.6	
	comp=Z,12nm,0.4s						
NAY	Al-Naaiem	4.07	257	eP	Pn	06 22 25.7	+0.5
NAY				eS	Sn	06 23 12.6	-0.7
KRBR	Kerman	4.32	92	ePn	Pn	06 22 27.0	-1.6
ASAO	Ashtian	4.54	341	ePn	Pn	06 22 33.8	+2.2
BNDS	Bandar-Abbas	4.78	125	ePn	Pn	06 22 33.9	-1.1
SNGE	Sanandaj	6.11	323	ePn	Pn	06 22 56.2	+3.0

CASC 26 06:26:09.7±2.9, 13°.79N×89°.43W, h0km±5km, MD4.0, ML3.6
ISCJB 26 06:26:10.4±0.4, 13°.81N±0°.03×89°.42W±0°.02, h5km±4km, Error ellipse: s-maj=6.0km s-min=2.8km az=25.6
NEIC 26 06:26:12.7±1.2, 14°.16N×89°.19W, h10km, MD4.0(SNET), Error ellipse: s-maj=23.6km s-min=10.3km az=187.0
NEIC Felt [III] at Ciudad Arce.

ISC 26 06:26:10.7±0.3, 13°.82N±0°.03×89°.40W±0°.02, h7km±4km, n28, σ1§16/43, 2C-7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	Boqueron	0.14	127	⇓iP	Pg	06 26 14.0	+0.3
BOQS				eS	Sg	06 26 17.1	+1.4
SNJE	San Jose	0.21	283	⇓iP	Pg	06 26 14.3	-0.6
SNET	Serv Nac Est T	0.21	130	eP	Pg	06 26 14.8	-0.2
SNET				eS	Sg	06 26 18.9	+1.1
SNET				AML	AML	06 26 20.2	
	comp=Z,3μm,0.2s						
SBLS	San Blas	0.22	275	⇓iP	Pg	06 26 14.7	-0.5
RTR	El Retiro	0.25	287	⇓iP	Pg	06 26 15.4	-0.3
SONS		0.32	255	⇑eP	Pg	06 26 15.5	-1.5
SONS				eS	Sg	06 26 19.7	-1.6
SONS				AML	AML	06 26 20.8	
	comp=Z,7μm,0.1s						
LBRS	Las Brisas	0.35	104	⇑iP	Pg	06 26 17.8	+0.1
LFRS	El Faro	0.38	121	⇓iP	Pg	06 26 17.9	-0.2
RBDL	Robledal	0.40	316	⇓iP	Pg	06 26 18.2	-0.4
MTO2	Montecristo 2	0.58	3	⇓iP	Pg	06 26 21.6	-0.3
MTO2				eS	Sg	06 26 30.2	+0.8
SNVI	San Vicente	0.58	111	eP	Pg	06 26 22.0	0.0
SNVI				eS	Sg	06 26 31.5	+2.0
CAHU	Cacacuatique	1.15	92	eP	Pg	06 26 31.9	-1.0
CAHU				eS	Sg	06 26 48.8	+0.9
VSM	San Miguel	1.16	110	eP	Pg	06 26 33.3	+0.3
BLLM	Bellamira	1.19	108	eP	Pg	06 26 32.8	-0.7
NBG	Las Nubes	1.19	310	eP	Pg	06 26 33.5	-0.2
MRL	Marmol	1.27	347	eP	Pn	06 26 34.8	-0.2
MRL				eS	Sg	06 26 53.7	+2.1
FUG	Fuego 3	1.53	294	eP	Pn	06 26 38.5	-0.1
CNCH	Conchagua	1.61	109	eP	Pn	06 26 39.1	-0.6
FG6		1.62	297	eP	Pn	06 26 40.1	+0.3
FG6				eS	Sg	06 27 02.4	-0.3
TP2	Tecpan 2	1.84	301	eP	Pn	06 26 43.6	+0.7
TGUH	Tegucigalpa,Un	2.08	83	ePn	Pn	06 26 44.7	-1.3
TGUH				eSn	Sn	06 27 08.9	-3.3
TGUH	Tegucigalpa,Un	2.08	83	ePn	Pn	06 26 44.7	-1.3
TGUH				Sn	Sg	06 27 16.0	-1.5
JAT	Jato	2.23	283	eP	Pn	06 26 49.8	+1.7
CNGN	Cerro Negro	2.94	116	eP	Pn	06 26 58.8	+0.9
CNGN				eS	Sb	06 27 37.7	-2.0
CCIG	Comitan	3.60	313	i P	Pn	06 27 08.5	+1.4
CCIG				i S	Sb	06 27 55.3	-3.5
TEIG	Tepich	6.46	9	Pn	Pn	06 27 42.8	-3.6
	comp=Z,64nm,1.0s						
TEIG				eSg	Sg	06 29 36.9	-1.3
HUIG	Huatulco	6.77	287	eP	Pn	06 27 53.6	+2.9
HUIG				i S	Sn	06 29 13.2	+5.0
VHO	Vista Hermosa	7.78	295	i P	Pn	06 28 06.7	+2.2
VHO				i S	Sn	06 29 42.1	+9.3

ISCJB 26 06:27:53.6±2.0, 45°.87N±0°.09×152°.3E±0°.1, h20km±14km, mb4.0/13, Error ellipse: s-maj=19.4km s-min=5.9km az=141.3
MOS 26 06:27:53.7±1.0, 46°.12N×152°.15E, h19km, mb4.2/10, Error ellipse: s-maj=21.6km s-min=13.3km az=71.1
JMA 26 06:27:53.1±1.0, 46°.12N×152°.57E, h30km, M4.1
NEIC 26 06:27:58.2±1.9, 46°.00N×152°.15E, h39km±14km, mb4.2/2, Error ellipse: s-maj=17.6km s-min=10.4km az=173.0
IDC 26 06:27:59.5±3.8, 46°.08N×152°.18E, h48km±35km, mb3.7/12, mb1 3.9/13, mb1mx3.7/26, mbtmp3.7/13, ML3.3/1, Error ellipse: s-maj=26.9km s-min=17.6km az=162.0

ISC 26 06:27:57.8±1.9, 45°.9N±0°.1×152°.2E±0°.1, h35km±14km, n55, σ1§21/59, mb4.0/13, 2C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.11	259	ePN	Pn	06 28 42.0	-2.3
KUR				eS	Sn	06 29 24.0	+3.8
KUR				pmax	pmax		
	comp=Z,70nm,0.5s						
KUR				smax			
	comp=N,160nm,0.6s						
KUR				smax			
	comp=E,220nm,0.6s						
NEM2	Nemuro 2	5.26	243	P	Pn	06 29 13.0	-0.9
NEM2				eS	Sn	06 30 13.0	-0.2
JRA	Rausu	5.39	251	P	Pn	06 29 18.2	+2.5
SKR	Severo-Kuril's	5.43	27	ePN	Pn	06 29 11.5	-4.7
SKR				pmax	pmax		
	comp=Z,90nm,0.7s						
JNK	Nakash	5.81	249	P	Pn	06 29 22.9	+1.5
JAK	Akkeshi	6.11	244	P	Pn	06 29 25.1	-0.4
JTKR	Abashiri--Toko	6.19	255	P	Pn	06 29 28.8	+2.2
JAR	Ashorobuto	6.56	249	P	Pn	06 29 33.3	+1.7
JAR				eS	Sn	06 30 47.4	+2.3
JOB	Onbets	6.70	246	P	Pn	06 29 34.1	+0.5
JKK2	Kamakawa 2	7.01	256	P	Pn	06 29 41.6	+3.8
JCH	Churui	7.14	246	P	Pn	06 29 39.7	0.0
JCH				eS	Sn	06 30 58.0	-1.6
JNBK	Urakawa-nobuka	7.70	245	P	Pn	06 29 46.7	-0.7
JNBK				eS	Sn	06 31 11.1	-2.3
PEA0B	Petropavlovsk-	8.03	24	ePn	Pn	06 29 52.4	+0.6
PEA0B				eSn	Sn	06 31 25.9	+4.6
PETK	Petropavlovsk-	8.03	24	P	Pn	06 29 50.6	-1.2
	comp=Z,0.5nm,0.3s,baz=180,slow=12,SNR=16						
PETK	Petropavlovsk-	8.03	24	PN	Pn	06 29 50.6	-1.2
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JKB	Kayabe	9.01	247	P	Pn	06 30 02.1	-3.1
JANG	Nango	9.57	238	P	Pn	06 30 10.4	-2.5
JANG				eS	Sn	06 31 52.3	-6.8
KSRS	Korea Array	19.94	253	P	Pn	06 32 29.8	+1.3
	comp=Z,0.8nm,0.5s,baz=57,slow=7.9,SNR=5.4						
KSRS	Korea Array	19.94	253	P	Pn	06 32 29.8	+1.4
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EGAK	Eagle	40.05	38	eP	P	06 35 28.0	-1.0
	comp=Z,1.9nm,0.7s,mb3.9						
INK	Inuvik	42.69	32	P	P	06 35 50.1	-0.5
	comp=Z,2.2nm,0.8s,mb4.0,baz=291,slow=4.9,SNR=6.9						
INK	Inuvik	42.69	32	P	P	06 35 50.2	-0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	46.75	298	eP	P	06 36 23.1	-0.2
MKAR	Makanchi Array	46.75	298	P	P	06 36 22.8	-0.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=68,slow=8.0,SNR=6.4						
MKAR	Makanchi Array	46.75	298	P	P	06 36 22.8	-0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	47.29	304	P	P	06 36 27.0	-0.4
	comp=Z,0.6nm,0.4s,mb3.8,baz=72,slow=8.7,SNR=3.8						
KURK	Kurchatov	47.29	304	P	P	06 36 27.0	-0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
KURK	Kurchatov	47.29	304	P	P	06 36 27.0	-0.4
YKA	Yellowknife Ar	51.97	36	P	P	06 37 02.7	-0.1
	comp=Z,0.7nm,0.8s,mb3.6,baz=298,slow=7.2,SNR=6.7						
YKA	Yellowknife Ar	51.97	36	P	P	06 37 02.7	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	51.97	36	P	P	06 37 02.7	-0.1
SUMG	Summit	61.56	4	eP'P'		06 38 11.4	
FINES	FINESS Array B	64.51	335	P	P	06 38 29.1	-1.4
	comp=Z,2.6nm,0.6s,mb4.4,baz=28,slow=8.6,SNR=8.8						
FINES	FINESS Array B	64.51	335	P	P	06 38 29.1	-1.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TPAW	Teton Pass	64.51	53	eP	P	06 38 32.1	+1.3
	comp=Z,5.1nm,1.3s,mb4.4						
PDAR	Pinedale Array	65.75	53	P	P	06 38 39.0	+0.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=308,slow=2.8,SNR=10						
NB2	NORSAR Subarra	68.80	341	P	P	06 38 57.4	-0.4
	comp=Z,1.5nm,0.7s,mb4.0,baz=27,slow=6.5						
NOA	NORSAR Array B	68.80	341	P	P	06 38 57.8	-0.1
	comp=Z,2.5nm,0.7s,mb4.3,baz=28,slow=6.2,SNR=8.4						
NOA	NORSAR Array B	68.80	341	P	P	06 38 57.8	0.0
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	71.22	198	P	P	06 39 13.7	+0.6
	comp=Z,0.5nm,0.9s,mb3.5,baz=350,slow=6.4,SNR=4.6						
ASAR	Alice Springs	71.22	198	P	P	06 39 13.7	+0.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	71.87	326	P	P	06 39 16.3	-0.5
	comp=Z,2.6nm,0.6s,mb4.3,baz=31,slow=6.3,SNR=9.7						
AKASG	Malin Array Be	71.87	326	P	P	06 39 16.3	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BUR08	Bucovina Ar. S	75.90	326	eP	P	06 39 40.7	+0.3
BURAR	Bucovina Array	75.92	326	⇓iP	P	06 39 41.3	+0.8
MORC	Moravsky Berou	76.86	332	⇑iP	P	06

*TEH **26** 06:44:27.7, 31.′71N×50.′38E, h2km*
*ISCJB **26** 06:44:28.1±0.4, 31.′75N±0.′03×50.′49E±0.′05, h10km, Error ellipse: s-maj=6.7km s-min=3.5km az=39.1*
*KISR **26** 06:44:30.1±0.9, 31.′69N×50.′42E, h43km±821km, ML2.7*
*CSEM **26** 06:44:31.9±0.3, 31.′75N×50.′19E, h10km, ML3.0, Error ellipse: s-maj=9.9km s-min=4.1km az=115.0*

ISC 26 06:44:28.1±1.6, 31.′73N±0.′05×50.′47E±0.′05, h0km±13km, n25, σ0s84/33, 2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**1.01**	**20**	*e*Pg	**Pg**	**06 44 46.3**	**-1.3**
IPIR				*e*Sg	**Sg**	**06 45 01.9**	**+1.1**
IPIR				*e*		06 45 07.9	
	comp=Z,7μm,0.4s						
SHGR	**Shooshtar-Gavs**	**1.47**	**285**	*e*Pg	**Pn**	**06 44 56.1**	**+0.3**
IGAR	**Gharneh**	**1.49**	**63**	*e*Pg	**Pn**	**06 44 55.4**	**-0.7**
IGAR				*e*		06 44 56.9	
	comp=Z,6μm,0.1s						
IKLH	**Kolahrood**	**1.84**	**30**	*e*Pn	**Pn**	**06 45 00.7**	**-0.2**
IKLH				*e*		06 45 01.4	
	comp=Z,3μm,0.2s						
IKLH				*e*Sg	**Sg**	**06 45 27.0**	**-0.2**
IZEF	**Zefreh**	**1.95**	**53**	*e*	**Pn**	**06 45 04.7**	**+2.2**
	comp=Z,2μm,0.2s						
IZEF				*e*Pn	**Pn**	**06 45 02.2**	**-0.3**
IZEF				*e*Sg	**Sg**	**06 45 30.5**	**-0.4**
ISAD	**Sadrabad**	**2.74**	**85**	*e*Pn	**Pn**	**06 45 13.8**	**+0.5**
ISAD				*e*		06 46 00.4	
	comp=Z,1μm,0.4s						
GHVR	**GHOM**	**2.83**	**14**	*e*Pn	**Pb**	**06 45 18.1**	**-1.3**
ASAO	**Ashtian**	**2.83**	**353**	*e*Pn	**Pn**	**06 45 16.4**	**+1.8**
IPAR	**Pars**	**2.91**	**130**	*e*Pn	**Pn**	**06 45 16.0**	**+0.4**
IPAR				*e*		06 45 55.7	
	comp=Z,557nm,0.4s						
ISFB	**Sefidab**	**3.01**	**29**	*e*Pn	**Pn**	**06 45 16.3**	**-0.6**
ISFB				*e*		06 46 05.7	
	comp=Z,514nm,0.3s						
ISRV	**Sarvestan**	**3.27**	**135**	*e*Pn	**Pn**	**06 45 20.2**	**-0.3**
ISRV				*e*		06 46 08.0	
	comp=Z,598nm,0.2s						
MIB	**Mutribah**	**3.31**	**235**	*e*P	**Pn**	**06 45 21.4**	**+0.2**
MIB	**Mutribah**	**3.31**	**235**	*e*P	**Pn**	**06 45 21.4**	**+0.3**
KBD	**Kabd**	**3.50**	**224**	*e*P	**Pn**	**06 45 24.0**	**+0.3**
KBD				*e*S	**Sn**	**06 46 04.9**	**-0.9**
KBD				AML	AML	06 46 07.6	
	comp=Z,17nm,0.3s						
KBD	**Kabd**	**3.50**	**224**	*e*P	**Pn**	**06 45 24.0**	**+0.3**
KBD				*e*S	**Sn**	**06 46 04.9**	**-0.9**
IMEH	**Mehriz**	**3.55**	**94**	*e*Pn	**Pn**	**06 45 25.1**	**+0.7**
IMEH				*e*		06 46 05.1	
	comp=Z,140nm,0.2s						
IRAZ	**Razeghan**	**3.69**	**353**	*e*Pn	**Pn**	**06 45 25.4**	**-1.0**
IRAZ				*e*		06 46 26.4	
	comp=Z,499nm,0.3s						
QRN	**Al-Qurain**	**3.71**	**217**	*e*P	**Pn**	**06 45 26.6**	**0.0**
NAY	**Al-Naaiem**	**3.73**	**229**	*e*P	**Pn**	**06 45 27.5**	**+0.7**
NAY				*e*S	**Sn**	**06 46 10.1**	**-1.3**
NAY				AML	AML	06 46 11.8	
	comp=Z,11nm,0.6s						
NAY	**Al-Naaiem**	**3.73**	**229**	*e*P	**Pn**	**06 45 27.5**	**+0.6**
NAY				*e*S	**Sn**	**06 46 10.1**	**-1.3**
RDF	**Al-Radifah**	**3.77**	**223**	*e*P	**Pn**	**06 45 28.5**	**+1.1**
RDF	**Al-Radifah**	**3.77**	**223**	*e*P	**Pn**	**06 45 28.5**	**+1.1**
DAMV	**Damavand**	**4.08**	**17**	*e*Pn	**Pn**	**06 45 36.4**	**+4.6**
SNGE	**Sanandaj**	**4.25**	**323**	*e*Pn	**Pn**	**06 45 34.7**	**+0.6**
IBAF	**Bafgh**	**4.35**	**91**	*e*Pn	**Pn**	**06 45 35.1**	**-0.3**
IBAF				*e*		06 45 46.3	
	comp=Z,148nm,0.2s						

*CSEM **26** 06:45:22.5±0.1, 39.′99N×39.′98E, h8km, MD3.1, Error ellipse: s-maj=2.4km s-min=2.1km az=170.0*
*DDA **26** 06:45:22.6, 40.′03N×39.′95E, h7km±5km, Md3.1*
*ISK **26** 06:45:22.8, 40.′06N×39.′94E, h21km, MD2.8*
*ISCJB **26** 06:45:23.1±0.6, 40.′01N±0.′03×39.′96E±0.′04, h9km±5km, Error ellipse: s-maj=5.9km s-min=4.7km az=177.4*

ISC 26 06:45:23.5±0.6, 40.′01N±0.′04×39.′96E±0.′04, h10km±5km, n19, σ1s00/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.41**	**89**	*i* P	**Pg**	**06 45 30.8**	**-0.7**
KOPT				*i* S	**Sg**	**06 45 38.1**	**+1.1**
KOPT	**Kop Dagi**	**0.41**	**89**	*i* P	**Pg**	**06 45 30.8**	**-0.7**
KOPT				*i* S	**Sg**	**06 45 38.1**	**+1.1**
EZC	**Erzincan**	**0.54**	**242**	*e*PG	**Pg**	**06 45 33.5**	**-0.4**
EZC				*e*SG	**Sg**	**06 45 43.1**	**+2.2**
KELT	**Kelkit**	**0.56**	**285**	*i* P	**Pg**	**06 45 34.0**	**-0.4**
KELT				*i* S	**Sg**	**06 45 42.2**	**+0.5**
KELT	**Kelkit**	**0.56**	**285**	*i* P	**Pg**	**06 45 34.0**	**-0.4**
KELT				*i* S	**Sg**	**06 45 42.2**	**+0.5**
GUMT	**Gumushane**	**0.58**	**321**	*e*PG	**Pg**	**06 45 34.4**	**-0.4**
GUMT				*e*SG	**Sg**	**06 45 42.4**	**0.0**
GUMT	**Gumushane**	**0.58**	**321**	*e*Pg	**Pg**	**06 45 34.4**	**-0.4**
GUMT				*e*Sg	**Sg**	**06 45 42.4**	**-0.1**
MACK	**Trabzon**	**0.94**	**351**	*i* P	**Pg**	**06 45 41.4**	**-0.3**
MACK				*i* S	**Sg**	**06 45 53.6**	**-0.3**
MACK	**Trabzon**	**0.94**	**351**	*i* P	**Pg**	**06 45 41.3**	**-0.4**
MACK				*i* S	**Sg**	**06 45 53.7**	**-0.3**
PTK	**Pertek**	**1.20**	**202**	*e*PN	**Pn**	**06 45 45.2**	**-1.0**
PTK				*e*SN	**Sn**	**06 46 02.0**	**-0.5**
PTK	**Pertek**	**1.20**	**202**	*e*Pn	**Pn**	**06 45 45.2**	**-1.0**
PTK				*e*Sn	**Sn**	**06 46 02.1**	**-0.4**
ESPY	**Espiye-Giresun**	**1.31**	**314**	*e*PN	**Pn**	**06 45 45.8**	**-1.9**
ESPY	**Espiye-Giresun**	**1.31**	**314**	*e*Pn	**Pn**	**06 45 45.8**	**-1.9**
GRSN	**GIRESUNGRSN**	**1.58**	**306**	*i* P	**Pn**	**06 45 51.3**	**-0.2**
GRSN				*i* S	**Sn**	**06 46 13.9**	**+1.9**
GRSN	**GIRESUNGRSN**	**1.58**	**306**	*i* P	**Pn**	**06 45 51.3**	**-0.2**
GRSN				*i* S	**Sn**	**06 46 13.9**	**+1.9**
DDEM	**Demirkent**	**1.62**	**57**	*e*P	**Pn**	**06 45 52.1**	**0.0**
DDEM				*i* S	**Sn**	**06 46 14.7**	**+1.7**
DDEM	**Demirkent**	**1.62**	**57**	*e*P	**Pn**	**06 45 52.1**	**0.0**
DDEM				*i* S	**Sn**	**06 46 14.7**	**+1.7**
BCA	**Borcka**	**1.91**	**41**	*e*PN	**Pn**	**06 45 55.3**	**-0.7**
BCA	**Borcka**	**1.91**	**41**	*e*Pn	**Pn**	**06 45 55.3**	**-0.7**

CASC 26 06:46:08.5±2.0, 13.′78N×89.′42W, h0km±4km, MD3.6, 2C-6D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.14**	**109**	⇑*i*P	Pg	06 46 12.9	+1.7
BOQS				*e*S	Sg	06 46 16.3	+3.2
SNJE	**San Jose**	**0.20**	**295**	⇓*i*P	Pg	06 46 13.1	+0.7
SNET	**Serv Nac Est T**	**0.20**	**117**	⇓*i*P	Pg	06 46 13.6	+1.2
SNET				*e*S	Sg	06 46 17.3	+2.2
SBLS	**San Blas**	**0.21**	**286**	⇓*i*P	Pg	06 46 13.4	+1.0
SBLS				*e*S	Sg	06 46 17.5	+2.3
RTR	**El Retiro**	**0.25**	**298**	⇓*i*P	Pg	06 46 14.2	+0.9
LBRS	**Las Brisas**	**0.37**	**97**	⇑*i*P	Pg	06 46 16.7	+1.1
LFRS	**El Faro**	**0.38**	**114**	⇓*i*P	Pg	06 46 16.9	+1.0
LFRS				*e*S	Sg	06 46 23.6	+2.8
RBDL	**Robledal**	**0.42**	**322**	⇓*i*P	Pg	06 46 17.0	+0.4
CAHU	**Cacacuatique**	**1.17**	**90**	*e*P	Pg	06 46 30.9	-0.2
CAHU				*e*S	Sg	06 46 47.7	+1.5
NBG	**Las Nubes**	**1.21**	**312**	*e*P	Pg	06 46 32.1	+0.5
MRL	**Marmol**	**1.30**	**348**	*e*P	Pg	06 46 33.5	0.0
MRL				*e*S	Sg	06 46 52.1	+1.7
FUG	**Fuego 3**	**1.53**	**296**	*e*P	Pn	06 46 38.1	+1.0
FUG				*e*S	Sn	06 47 00.3	+2.6
FG6		**1.62**	**299**	*e*P	Pn	06 46 40.2	+1.9
FG6				*e*S	Sn	06 47 01.9	+2.0

*ROM **26** 07:19:34.6±0.9, 41.′60N×15.′99E, h10km, Md2.5/6, Ml2.4/4, Error ellipse: s-maj=12.7km s-min=5.4km az=63.0*
*ISCJB **26** 07:19:37.8±0.3, 41.′53N±0.′02×15.′76E±0.′03, h17km±4km, Error ellipse: s-maj=4.0km s-min=2.9km az=44.2*
*CSEM **26** 07:19:37.2±0.2, 41.′49N×15.′76E, h10km, MD2.7/26, Error ellipse: s-maj=4.0km s-min=2.8km az=55.0*

ISC 26 07:19:37.5±0.3, 41.′52N±0.′02×15.′77E±0.′03, h17km±3km, n68, σ0s82/93, 6D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGNG	**Rignano Grg**	**0.21**	**319**	⇓*i*Pg	**Pg**	**07 19 42.2**	**-0.2**
RGNG				Sg	**Sg**	**07 19 46.0**	**+0.2**
RGNG	**Rignano Grg**	**0.21**	**319**	⇓*i*Pg	**Pg**	**07 19 42.2**	**-0.2**
RGNG				Sg	**Sg**	**07 19 46.0**	**+0.2**
MSAG	**Monte S. Angel**	**0.22**	**28**	⇓*i*Pg	**Pg**	**07 19 42.4**	**-0.2**
MSAG				Sg	**Sg**	**07 19 46.2**	**+0.1**
	1μm,0.2s						
MSAG	**Monte S. Angel**	**0.22**	**28**	⇓*i*Pg	**Pg**	**07 19 42.4**	**-0.2**
MSAG				Sg	**Sg**	**07 19 46.2**	**+0.1**
	1μm,0.2s						
MS1	**Monte Sant'Ang**	**0.23**	**35**	*e*Pg	**Pg**	**07 19 42.5**	**-0.2**
MS1				*e*Sg	**Sg**	**07 19 46.2**	**-0.1**
SGRT	**San Giovanni R**	**0.24**	**355**	⇓*i*Pg	**Pg**	**07 19 42.4**	**-0.5**
SGRT				Sg	**Sg**	**07 19 46.5**	**0.0**
	773nm,0.2s						
SGRT	**San Giovanni R**	**0.24**	**355**	⇓*i*Pg	**Pg**	**07 19 42.4**	**-0.5**
SGRT				Sg	**Sg**	**07 19 46.5**	**0.0**
	773nm,0.2s						
FG5	**Orsara di Pugl**	**0.45**	**238**	Pg	**Pg**	**07 19 45.9**	**-0.6**
	23nm,0.2s						
FG5	**Orsara di Pugl**	**0.45**	**238**	Pg	**Pg**	**07 19 45.9**	**-0.6**
	23nm,0.2s						
MOCO	**Biccari - m.te**	**0.48**	**252**	Pg	**Pg**	**07 19 47.8**	**+0.7**
	68nm,0.5s						
SGTA	**Sant Agata di**	**0.49**	**219**	Pg	**Pg**	**07 19 47.7**	**+0.4**
	539nm,0.4s						
SGTA	**Sant Agata di**	**0.49**	**219**	Pg	**Pg**	**07 19 47.7**	**+0.4**
	539nm,0.4s						
MELA	**Melanico ??? S**	**0.52**	**291**	Pg	**Pg**	**07 19 47.5**	**-0.3**
MELA				Sg	**Sg**	**07 19 56.0**	**+1.3**
MELA	**Melanico ??? S**	**0.52**	**291**	Pg	**Pg**	**07 19 47.5**	**-0.3**
MELA				Sg	**Sg**	**07 19 56.0**	**+1.3**
FG2	**Serracapriola**	**0.54**	**302**	Pg	**Pg**	**07 19 47.9**	**-0.3**
FG2				Sg	**Sg**	**07 19 55.7**	**+0.3**
FG2	**Serracapriola**	**0.54**	**302**	Pg	**Pg**	**07 19 47.9**	**-0.3**
FG2				Sg	**Sg**	**07 19 55.7**	**+0.3**
MRVN	**Minervino Murg**	**0.56**	**145**	Pg	**Pg**	**07 19 48.0**	**-0.5**
MRVN				Sg	**Sg**	**07 19 56.2**	**+0.2**
MRVN	**Minervino Murg**	**0.56**	**145**	Pg	**Pg**	**07 19 48.0**	**-0.5**
MRVN				Sg	**Sg**	**07 19 56.2**	**+0.2**
VULT	**Monte Vulture**	**0.57**	**192**	Pg	**Pg**	**07 19 49.2**	**+0.4**
VULT				Sg	**Sg**	**07 19 58.3**	**+1.8**
VULT	**Monte Vulture**	**0.57**	**192**	Pg	**Pg**	**07 19 49.2**	**+0.4**
PALZ	**Palazzo San Ge**	**0.59**	**166**	Pg	**Pg**	**07 19 49.0**	**-0.1**
PALZ				Sg	**Sg**	**07 19 57.9**	**+0.9**
PALZ	**Palazzo San Ge**	**0.59**	**166**	Pg	**Pg**	**07 19 49.0**	**-0.1**
PALZ				Sg	**Sg**	**07 19 57.9**	**+0.9**
CIGN	**Sant'Elia a Pi**	**0.66**	**282**	Pg	**Pg**	**07 19 51.0**	**+0.5**
CIGN	**Sant'Elia a Pi**	**0.66**	**282**	Pg	**Pg**	**07 19 51.0**	**+0.5**
SNAL	**S. Angelo Dei**	**0.73**	**216**	Pg	**Pg**	**07 19 51.4**	**-0.3**
SNAL	**S. Angelo Dei**	**0.73**	**216**	Pg	**Pg**	**07 19 51.4**	**-0.3**
SACR	**S. Croce Del S**	**0.81**	**262**	Pg	**Pg**	**07 19 53.6**	**+0.4**
SACR	**S. Croce Del S**	**0.81**	**262**	Pg	**Pg**	**07 19 53.6**	**+0.4**
MCRV	**Calabrutti - M**	**0.86**	**212**	Pg	**Pg**	**07 19 53.6**	**-0.7**
	205nm,0.7s						
MCRV	**Calabrutti - M**	**0.86**	**212**	Pg	**Pg**	**07 19 53.6**	**-0.7**
	205nm,0.7s						
MCRV	**Calabrutti - M**	**0.86**	**212**	Pg	**Pg**	**07 19 53.6**	**-0.7**
	205nm,0.7s						
CSSN	**Cassano Irpino**	**0.86**	**221**	Pg	**Pg**	**07 19 54.5**	**+0.2**
	45nm,0.6s						
AMUR	**Altamura**	**0.88**	**134**	Pg	**Pg**	**07 19 53.5**	**-1.0**
	7.0nm,0.3s						
AMUR	**Altamura**	**0.88**	**134**	Pg	**Pg**	**07 19 53.5**	**-1.0**
	7.0nm,0.3s						
BAI	**Bari**	**0.93**	**116**	*e*Sg	**Sg**	**07 20 08.4**	**+0.6**
FRES	**Fresagrandinar**	**0.94**	**299**	Pg	**Pg**	**07 19 54.8**	**-0.9**
SG1	**Sgolgore (BA)**	**0.96**	**134**	*e*Sg	**Sg**	**07 20 09.8**	**+1.0**
MIGL	**Miglionico**	**1.04**	**151**	Pg	**Pg**	**07 19 56.1**	**-1.6**
	276nm,0.2s						
MIGL	**Miglionico**	**1.04**	**151**	Pg	**Pg**	**07 19 56.1**	**-1.6**
	276nm,0.2s						
CDRU	**Civita di Ruta**	**1.09**	**199**	Pg	**Pg**	**07 19 56.8**	**-1.7**
	28nm,0.3s						
CDRU	**Civita di Ruta**	**1.09**	**199**	Pg	**Pg**	**07 19 56.6**	**-1.9**
CDRU	**Civita di Ruta**	**1.09**	**199**	Pg	**Pg**	**07 19 56.6**	**-1.9**
MATE	**Matera**	**1.12**	**141**	Pg	**Pg**	**07 19 58.1**	**-1.0**
MATE				Sg	**Sg**	**07 20 13.5**	**-0.2**
	78nm,0.2s						
MATE	**Matera**	**1.12**	**141**	Pg	**Pg**	**07 19 58.1**	**-1.0**
MATE				Sg	**Sg**	**07 20 13.5**	**-0.2**
	78nm,0.2s						
MIDA	**Miranda**	**1.14**	**277**	Pg	**Pg**	**07 19 58.8**	**-0.8**
MIDA				Sg	**Sg**	**07 20 15.3**	**+0.8**
	51nm,0.4s						
VAGA	**Valle Agricola**	**1.16**	**265**	Pg	**Pn**	**07 19 58.7**	**-0.2**
VAGA	**Valle Agricola**	**1.16**	**265**	Pg	**Pn**	**07 19 58.7**	**-0.2**
MCEL	**Monticello**	**1.19**	**179**	Pg	**Pn**	**07 20 00.0**	**+0.7**
	35nm,0.2s						
MCEL	**Monticello**	**1.19**	**179**	Pg	**Pn**	**07 20 00.0**	**+0.7**
	35nm,0.2s						
LTRZ	**Laterza**	**1.21**	**139**	Pg	**Pn**	**07 19 59.5**	**-0.1**
LTRZ				Sg	**Sg**	**07 20 16.3**	**-0.3**
	181nm,0.2s						
LTRZ	**Laterza**	**1.21**	**139**	Pg	**Pn**	**07 19 59.5**	**-0.1**
LTRZ				Sg	**Sg**	**07 20 16.3**	**-0.3**
NOCI	**Noci**	**1.22**	**126**	Pg	**Pn**	**07 20 00.1**	**+0.4**
NOCI	**Noci**	**1.22**	**126**	Pg	**Pn**	**07 20 00.1**	**+0.4**
CRAC	**Craco**	**1.26**	**156**	Pg	**Pn**	**07 20 01.2**	**+1.0**
	150nm,0.3s						
CRAC	**Craco**	**1.26**	**156**	Pg	**Pn**	**07 20 01.2**	**+1.0**
	150nm,0.3s						
LPEL	**Lama dei Pelig**	**1.30**	**295**	Pg	**Pn**	**07 20 00.3**	**-0.5**
LPEL	**Lama dei Pelig**	**1.30**	**295**	Pg	**Pn**	**07 20 00.3**	**-0.5**
SIRI	**Monte Sirino -**	**1.34**	**177**	Pg	**Pn**	**07 20 00.2**	**-1.1**
	12nm,1.1s						
SIRI	**Monte Sirino -**	**1.34**	**177**	Pg	**Pn**	**07 20 00.2**	**-1.1**
	12nm,1.1s						
SCHR	**S. Chirico Rap**	**1.34**	**170**	Pg	**Pn**	**07 20 00.4**	**-0.9**
SCHR	**S. Chirico Rap**	**1.34**	**170**	Pg	**Pn**	**07 20 00.4**	**-0.9**
INTR	**Introdacqua**	**1.48**	**290**	Pg	**Pn**	**07 20 02.8**	**-0.5**
	62nm,0.6s						
SDI	**San Donato**	**1.48**	**278**	Pg	**Pn**	**07 20 03.3**	**0.0**
TAR1	**Taranto**	**1.52**	**130**	*e*Pn	**Pg**	**07 20 07.9**	**+1.3**
TAR1				*e*Sn	**Sg**	**07 20 26.0**	**-0.3**
STON	**Ston**	**1.97**	**46**	*e*Pn	**Pg**	**07 20 15.1**	**-0.2**
STON				Sn	**Sn**	**07 20 36.2**	**+1.9**
STON	**Ston**	**1.97**	**46**	*e*Pn	**Pg**	**07 20 15.0**	**-0.3**
STON				Sn	**Sn**	**07 20 36.2**	**+1.8**
NVLJ	**Novalja**	**3.11**	**348**	*e*Pn	**Pn**	**07 20 28.2**	**+2.4**
NVLJ				Sn	**Sn**	**07 20 59.3**	**-3.3**
NVLJ	**Novalja**	**3.11**	**348**	*e*Pn	**Pn**	**07 20 28.1**	**+2.3**

*CSEM **26** 07:29:15.2±0.3, 39.′97N×17.′25E, h5km, MD2.6/7, Error ellipse: s-maj=5.8km s-min=5.1km az=85.0*

ROM 26 07:29:14.9±0.2, 39.′98N×17.′25E, h5km, Md2.6/7, Ml2.4/7, Error ellipse: s-maj=3.2km s-min=2.7km az=19.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAR1	**Taranto**	**0.55**	**3**	*e*Pg	Pg	07 29 26.3	+0.9
TAR1				*e*Sg	Sg	07 29 36.5	+3.9
ORI	**Oriolo Calabro**	**0.62**	**278**	Pg	Pg	07 29 27.4	+0.6
ORI				Sg	Sg	07 29 37.3	+2.4
ORI	**Oriolo Calabro**	**0.62**	**278**	Pg	Pg	07 29 27.4	+0.6
ORI				Sg	Sg	07 29 37.3	+2.4
LTRZ	**Laterza**	**0.71**	**332**	Pg	Pg	07 29 28.3	-0.2
LTRZ				Sg	Sg	07 29 40.8	+3.1
	178nm,0.2s						
LTRZ	**Laterza**	**0.71**	**332**	Pg	Pg	07 29 28.3	-0.2
LTRZ				Sg	Sg	07 29 40.8	+3.1
	178nm,0.2s						
CRAC	**Craco**	**0.73**	**302**	Pg	Pg	07 29 29.4	+0.4
	112nm,0.2s						
CRAC	**Craco**	**0.73**	**302**	Pg	Pg	07 29 29.4	+0.4
	112nm,0.2s						
MATE	**Matera**	**0.79**	**328**	Pg	Pg	07 29 31.1	+1.0
	305nm,0.3s						
MATE	**Matera**	**0.79**	**328**	Pg	Pg	07 29 31.1	+1.0
	305nm,0.3s						
NOCI	**Noci**	**0.82**	**350**	Pg	Pg	07 29 31.7	+1.0
NOCI				Sg	Sg	07 29 44.0	+2.6
	215nm,0.1s						
NOCI	**Noci**	**0.82**	**350**	Pg	Pg	07 29 31.7	+1.0
NOCI				Sg	Sg	07 29 44.0	+2.6
	215nm,0.1s						
MIGL	**Miglionico**	**0.88**	**316**	Pg	Pg	07 29 31.3	-0.5
MIGL	**Miglionico**	**0.88**	**316**	Pg	Pg	07 29 31.3	-0.5
TIP	**Timpagrande**	**0.89**	**206**	Pg	Pg	07 29 33.1	+1.2
TIP	**Timpagrande**	**0.89**	**206**	Pg	Pg	07 29 33.1	+1.2
SCHR	**S. Chirico Rap**	**0.93**	**284**	Pg	Pg	07 29 32.6	-0.1
	10.0nm,0.2s						
SCHR	**S. Chirico Rap**	**0.93**	**284**	Pg	Pg	07 29 32.6	-0.1
	10.0nm,0.2s						
SCTE	**Santa Cesarea**	**0.94**	**84**	Pg	Pg	07 29 32.7	-0.2
SCTE				Sg	Sg	07 29 46.6	+1.5
	87nm,0.4s						
SCTE	**Santa Cesarea**	**0.94**	**84**	Pg	Pg	07 29 32.7	-0.2
SCTE				Sg	Sg	07 29 46.6	+1.5
	87nm,0.4s						
SG1	**Sgolgore (BA)**	**0.96**	**333**	*e*Pg	Pg	07 29 34.3	+0.9
SG1				*e*Sg	Sg	07 29 50.9	+4.9
SERS	**Sersale**	**1.04**	**205**	Pg	Pg	07 29 34.9	+0.1
SERS	**Sersale**	**1.04**	**205**	Pg	Pg	07 29 34.9	+0.1
AMUR	**Altamura**	**1.05**	**332**	Pg	Pg	07 29 34.5	-0.6
	61nm,0.1s						
AMUR	**Altamura**	**1.05**	**332**	Pg	Pg	07 29 34.5	-0.6
	61nm,0.1s						

*NEIC **26** 08:14:45.9±0.5, 57.′96S×25.′51W, h35km, Error ellipse: s-maj=16.5km s-min=14.4km az=65.0*
*IDC **26** 08:14:47.9±0.9, 57.′97S×25.′48W, h51km±8km, mb3.8/8, mb1 3.8/8, mb1mx3.7/16, mbtmp3.8/8, MS3.3/1, Ms1 3.2/1, ms1mx2.8/21, Error ellipse: s-maj=24.1km s-min=19.5km az=80.0*

ISC 26 08:14:45.2±7.7, 58.′0S±0.′1×25.′3W±0.′3, h25km±55km, n17, σ0s75/11, mb4.0/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.60**	**157**	*e*	**Pn**	**08 18 10.0**	**+0.2**
VNA2	**Neumayer--Watz**	**15.00**	**157**	*e*	**Pn**	**08 18 14.2**	**-0.9**
QSPA	**South Pole Qui**	**32.24**	**180**	P	**P**	**08 21 11.5**	**+0.7**
	1.4nm,0.9s,mb3.8,baz=196,slow=11,SNR=16						
QSPA	**South Pole Qui**	**32.24**	**180**	P	**P**	**08 21 11.5**	**+0.7**
MAW	**Mawson**	**37.98**	**142**	P	**P**	**08 22 01.2**	**+0.9**
	1.9nm,0.7s,mb4.0,baz=250,slow=12,SNR=3.6						
MAW				LR	LR	08 35 00.3	
	comp=Z,44nm,21.4s,baz=98,slow=32						
BOSA	**Boshof**	**45.54**	**72**	P	**P**	**08 23 02.5**	**0.0**
	1.0nm,0.6s,mb3.9,baz=207,slow=9.0,SNR=3.3						
LBTB	**Lobatse**	**48.67**	**70**	P	**P**	**08 23 27.9**	**+0.9**
	1.0nm,0.4s,mb4.2,baz=79,slow=16,SNR=2.9						
LPAZ	**La Paz**	**52.32**	**304**	P	**P**	**08 23 55.1**	**+0.5**
	0.6nm,0.4s,mb3.9,baz=87,slow=6.4,SNR=8.2						
DBIC	**Dimbokro**	**66.56**	**22**	P	**P**	**08 25 32.0**	**-0.9**
	2.0nm,0.4s,mb4.5,baz=167,slow=4.6,SNR=7.4						
TORD	**Torodi Ar. Bea**	**74.29**	**27**	P	**P**	**08 26 19.9**	**-0.1**
	1.4nm,0.4s,mb4.2,baz=199,slow=6.3,SNR=38						
ASAR	**Alice Springs**	**96.82**	**161**	P	**P**	**08 28 12.4**	**-1.3**
	0.3nm,0.8s,mb3.8,baz=178,slow=4.4,SNR=4.1						
ASAR				pP	pP	08 28 27.8	+5.8
	0.4nm,0.6s,baz=183,slow=5.3,SNR=3.1						
SRU	**San Rafael**	**119.80**	**297**	*e*Pdif	Pdif	08 29 55.4	-0.8
PDAR	**Pinedale Array**	**122.22**	**300**	PKP	PKPdf	08 33 35.0	-1.7
	0.1nm,0.4s,baz=97,slow=3.6,SNR=3.7						
ARCES	**ARCESS Array B**	**132.39**	**22**	PKP	PKPdf	08 33 54.2	-1.1
	0.8nm,0.7s,baz=235,slow=3.2,SNR=3.3						
YKA	**Yellowknife Ar**	**138.29**	**316**	PKP	PKPdf	08 34 05.1	-1.4
	0.2nm,0.3s,baz=133,slow=1.8,SNR=11						
YKA				pPKP	pPKPdf	08 34 20.2	+5.3
	0.9nm,0.6s,baz=124,slow=2.4,SNR=11						
YKA	**Yellowknife Ar**	**138.29**	**316**	PKP	PKPdf	08 34 05.1	-1.4
YKA				pPKP	pPKPdf	08 34 20.2	+5.3
INK	**Inuvik**	**147.94**	**318**	PKPbc	PKPbc	08 34 24.8	-1.6
	1.1nm,0.5s,baz=151,slow=6.5,SNR=3.7						
INK				pPKP	pPKPdf	08 34 37.8	+6.0
	1.0nm,0.5s,baz=80,slow=3.0,SNR=2.6						

BJI 26 08:20:46.7, 35.′88N×81.′17E, h10km, ML3.5/5, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.49**	**313**	Pg	Pg	08 22 24.3	-7.6
KSH				Sn	Sn	08 23 18.3	+6.6
KSH				smax			
	comp=N,42nm,0.9s						
KSH				sm

comp=Z,9.9nm,1.2s,mb4.7
ASAR Alice Springs 62.07 148 P **P 08 32 03.1 -1.4**
comp=Z,0.4nm,0.7s,mb3.6,baz=342,slow=6.9,SNR=5.6
COLA College 69.46 26 *e*P **P 08 32 53.5 +1.8**
comp=Z,1.6nm,1.1s,mb3.9

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*ISCJB **26** 08:36:37.9±0.9, 37°.35N±0°.03×27°.04E±0°.06, h14km±12km, Error ellipse: s-maj=8.3km s-min=4.5km az=155.0*
*CSEM **26** 08:36:37.9±0.3, 37°.35N×27°.01E, h2km, MD3.0, Error ellipse: s-maj=6.6km s-min=3.2km az=63.0*
*DDA **26** 08:36:37.6, 37°.34N×26°.99E, h3km±2km, Md3.0*
*ISK **26** 08:36:37.6, 37°.36N×27°.03E, h7km, MD2.9*
ISC 26 08:36:38.5±1.0, 37°.34N±0°.03×27°.02E±0°.06, h12km±12km, n22, σ0°81/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.39**	**25**	*i* P	**Pg**	**08 36 46.0**	**-0.3**
GCAM				*i* S	**Sg**	**08 36 52.2**	**+0.5**
GCAM	**G?zelcaml?**	**0.39**	**25**	*i* P	**Pg**	**08 36 46.0**	**-0.4**
GCAM				*i* S	**Sg**	**08 36 52.2**	**+0.5**
BDRM	**Kayabasi**	**0.44**	**129**	*i* P	**Pg**	**08 36 46.9**	**-0.2**
BDRM				*i* S	**Sg**	**08 36 54.0**	**+1.1**
BDRM	**Kayabasi**	**0.44**	**129**	*i* P	**Pg**	**08 36 46.9**	**-0.2**
BDRM				*i* S	**Sg**	**08 36 54.0**	**+1.0**
MLSB	**Milas**	**0.60**	**94**	*e*PG	**Pg**	**08 36 49.6**	**-0.7**
MLSB				*e*SG	**Sg**	**08 36 58.5**	**+0.3**
MLSB	**Milas**	**0.60**	**94**	*e*Pg	**Pg**	**08 36 49.6**	**-0.7**
MLSB				*e*Sg	**Sg**	**08 36 58.6**	**+0.4**
AYDN	**Tasoluk**	**0.75**	**65**	*i* P	**Pg**	**08 36 52.4**	**-0.7**
AYDN				*i* S	**Sg**	**08 37 01.4**	**-1.5**
AYDN	**Tasoluk**	**0.75**	**65**	*i* P	**Pg**	**08 36 52.4**	**-0.7**
AYDN				*i* S	**Sg**	**08 37 01.4**	**-1.6**
DAT	**Datca**	**0.76**	**144**	*e*PG	**Pg**	**08 36 52.5**	**-0.7**
DAT				*e*SG	**Sg**	**08 37 04.1**	**+1.0**
DAT	**Datca**	**0.76**	**144**	*e*Pg	**Pg**	**08 36 52.5**	**-0.7**
DAT				*e*Sg	**Sg**	**08 37 04.1**	**+1.0**
YER	**Yerkesik**	**1.03**	**101**	*e*PG	**Pg**	**08 36 57.6**	**-0.7**
YER				*e*SG	**Sg**	**08 37 12.1**	**+0.4**
YER	**Yerkesik**	**1.03**	**101**	*e*Pg	**Pg**	**08 36 57.6**	**-0.7**
YER				*e*Sg	**Sg**	**08 37 12.1**	**+0.4**
IZM	**Izmir**	**1.07**	**10**	*e*PG	**Pg**	**08 36 58.5**	**-0.7**
IZM	**Izmir**	**1.07**	**10**	*e*Pg	**Pg**	**08 36 58.5**	**-0.6**
URLA	**Izmir**	**1.07**	**342**	*i* P	**Pg**	**08 36 58.5**	**-0.7**
URLA				*i* S	**Sg**	**08 37 14.6**	**+1.5**
URLA	**Izmir**	**1.07**	**342**	*i* P	**Pg**	**08 36 58.5**	**-0.6**
URLA				*i* S	**Sg**	**08 37 14.6**	**+1.5**
DNZL	**Cakiroluk**	**1.65**	**77**	*i* P	**Pg**	**08 37 10.2**	**+0.1**
DNZL	**Cakiroluk**	**1.65**	**77**	*i* P	**Pg**	**08 37 10.2**	**+0.1**
MANT	**Manisa**	**1.67**	**46**	*i* P	**Pg**	**08 37 10.1**	**-0.5**
MANT				*i* S	**Sg**	**08 37 33.8**	**+1.5**
MANT	**Manisa**	**1.67**	**46**	*i* P	**Pg**	**08 37 10.1**	**-0.5**
KULA	**Kula-Manisa**	**1.75**	**47**	*e*PN	**Pn**	**08 37 09.0**	**+0.4**
KULA	**Kula-Manisa**	**1.75**	**47**	*e*Pn	**Pn**	**08 37 09.0**	**+0.4**

JMA 26 08:46:13.0±0.1, 28°.64N×140°.88E, h398km, M3.7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.92**	**143**	P	Pn	08 47 08.5	+0.1
CBIJ				S	S	08 47 51.9	-1.1
JHHJ	**Haha-jima-NKT**	**2.31**	**150**	P	Pn	08 47 11.1	+0.2
JHHJ				S	S	08 47 56.9	-0.7
BSO3	**Boso 3**	**6.15**	**357**	S	S	08 49 03.9	+0.1
JIE	**Ise**	**6.75**	**329**	P	Pn	08 47 54.3	+0.6
JRY	**Ryogami san**	**7.54**	**348**	P	Pn	08 48 03.6	+1.0

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*IDC **26** 08:52:16.8±1.6, 2°.64N×83°.97W, h0km, mb3.4/6, mb1 3.7/6, mb1mx3.7/18, mbtmp3.4/6, MS3.0/5, Ms1 3.0/5, ms1mx2.7/24, Error ellipse: s-maj=90.0km s-min=22.4km az=49.0*
*NEIC **26** 08:52:17.7±1.0, 2°.38N×84°.27W, h10km, mb3.7/1, Error ellipse: s-maj=37.8km s-min=10.5km az=47.0*
*ISCJB **26** 08:52:20.0±5.0, 2°.6N±0°.2×84°.1W±0°.2, h32km±36km, mb3.4/6, Error ellipse: s-maj=44.7km s-min=10.0km az=39.1*
ISC 26 08:52:22.7±2.9, 2°.5N±0°.3×84°.1W±0°.2, h42km±24km, n15, σ0°47/11, mb3.4/6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**6.13**	**112**	*e*Pn	**Pn**	**08 53 50.3**	**-0.4**
OTAV	11nm,1.0s						
				*e*Sn	**Sn**	**08 54 60.0**	**+0.4**
ATAH	**Atahualpa**	**11.07**	**149**	LR	LR	08 58 41.3	
	comp=Z,76nm,21.7s,baz=209,slow=34						
TGUH	**Tegucigalpa,Un**	**11.86**	**345**	Pn	**Pn**	**08 55 09.2**	**-0.1**
APG	**El Apazote**	**13.87**	**334**	LR	LR	09 00 07.1	
	comp=Z,59nm,20.0s,baz=52,slow=34						
SDV	**Santo Domingo**	**14.84**	**64**	LR	LR	09 01 22.6	
	comp=Z,38nm,20.8s,baz=173,slow=37						
CMIG	**Matias Romero**	**17.91**	**325**	LR	LR	09 01 39.4	
	comp=Z,47nm,20.4s,baz=12,slow=31						
TEIG	**Tepich**	**18.04**	**347**	LR	LR	09 02 55.2	
	comp=Z,56nm,20.5s,baz=133,slow=36						
LPAZ	**La Paz**	**24.50**	**140**	P	**P**	**08 57 38.3**	**+0.1**
	1.4nm,0.8s,mb3.4,baz=316,slow=12,SNR=6.2						
LPAZ	**La Paz**	**24.50**	**140**	*e*P	**P**	**08 57 38.0**	**-0.2**
	1.8nm,0.9s,mb3.5						
TXAR	**Lajitas Array**	**32.48**	**327**	P	**P**	**08 58 49.9**	**+0.6**
	0.3nm,0.9s,mb3.1,baz=139,slow=7.2,SNR=2.5						
PDAR	**Pinedale Array**	**46.03**	**334**	P	**P**	**09 00 42.6**	**+0.4**
	0.4nm,0.9s,mb3.3,baz=128,slow=5.8,SNR=3.3						
NVAR	**Mina Array Bea**	**47.43**	**323**	P	**P**	**09 00 53.4**	**+0.2**
	0.1nm,0.4s,mb3.1,baz=134,slow=5.1,SNR=3.2						
NVAR	**Mina Array Bea**	**47.43**	**323**	P	**P**	**09 00 53.4**	**+0.2**
YKA	**Yellowknife Ar**	**63.98**	**345**	P	**P**	**09 02 50.4**	**-1.0**
	0.5nm,0.8s,mb3.6,baz=136,slow=6.7,SNR=8.1						
TORD	**Torodi Ar. Bea**	**85.37**	**77**	P	**P**	**09 04 56.3**	**-0.1**
	0.4nm,0.6s,mb3.7,baz=280,slow=6.3,SNR=4.0						

CASC 26 09:11:45.6±1.3, 8°.88N×83°.66W, h13km±9km, MD3.5, 6C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**0.49**	**44**	⇑*i*P	Pg	09 11 55.6	+0.3
BAR1				*e*S	Sg	09 12 03.4	+1.4
ACR	**Cerro Adams**	**0.54**	**115**	⇑*e*P	Pg	09 11 55.3	-0.9
ACR				*e*S	Sg	09 12 03.6	+0.3
BUS	**Buena Vista**	**0.67**	**352**	*e*P	Pg	09 11 58.9	+0.2
QCR	**Quepos**	**0.73**	**317**	⇑*e*P	Pg	09 11 59.0	-0.8
QCR				*e*S	Sg	09 12 10.3	+0.8
URSC	**Urasca**	**0.95**	**353**	⇑*e*P	Pb	09 12 03.2	-0.8
URSC				*e*S	Sg	09 12 16.5	+0.1
BRU2	**Volcan**	**0.96**	**95**	*e*P	Pb	09 12 02.6	-1.5
BRU2				*e*S	Sg	09 12 16.4	-0.3
LAJ	**Bijagual**	**1.07**	**335**	*e*P	Pb	09 12 07.4	+1.3
CNI	**Changuinola**	**1.25**	**65**	⇑*i*P	Pn	09 12 07.8	-0.9
CNI				*e*S	Sb	09 12 24.3	-0.7
PRS1	**Puriscal**	**1.27**	**330**	*e*P	Pn	09 12 07.2	-1.9
PRS1				*e*S	Sb	09 12 23.3	-2.3
CGA2	**Cerro Gallo 2**	**1.38**	**325**	⇑*e*P	Pn	09 12 10.1	-0.4
CGA2				*e*S	Sn	09 12 28.4	-0.3
BCIP	**Isla Barro Col**	**3.79**	**85**	*e*P	Pn	09 12 44.2	+0.5

CASC 26 09:54:47.6±3.7, 8°.46N×82°.97W, h1km±11km, MD4.2, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**313**	⇑*i*P	Pg	09 54 53.4	+0.5
ACR				*e*S	Sg	09 54 58.3	+1.9
BRU2	**Volcan**	**0.42**	**40**	⇓*i*P	Pg	09 54 57.0	+1.2
BRU2				*e*S	Sg	09 55 04.8	+3.5
TBS2		**0.45**	**43**	*e*P	Pg	09 55 04.2	+8.0
TBS2				*e*S	Sg	09 55 12.8	+11
BAR1		**0.85**	**336**	⇓*e*P	Pg	09 55 03.7	-0.1
BAR1				*e*S	Sg	09 55 15.7	+0.9
CNI	**Changuinola**	**1.04**	**25**	⇑*i*P	Pg	09 55 07.7	0.0
BUS	**Buena Vista**	**1.34**	**324**	*e*P	Pg	09 55 11.9	-1.4
QCR	**Quepos**	**1.52**	**309**	*e*P	Pn	09 55 14.1	-1.8
LIO	**Limon**	**1.53**	**357**	*e*P	Pn	09 55 14.9	-1.3
URSC	**Urasca**	**1.58**	**330**	⇓*e*P	Pn	09 55 15.3	-1.5
URSC				*e*S	Sn	09 55 38.2	+0.3
LAJ	**Bijagual**	**1.80**	**321**	*e*P	Pn	09 55 21.8	+2.0
PRS1	**Puriscal**	**2.01**	**319**	*e*P	Pn	09 55 21.4	-1.3
PRS1				*e*S	Sn	09 55 49.3	+0.8
CGA2	**Cerro Gallo 2**	**2.14**	**316**	*e*P	Pn	09 55 24.8	+0.3
JCR	**Jicaral**	**2.53**	**303**	*e*P	Pn	09 55 30.9	+1.1
FORC	**Fortuna**	**2.60**	**320**	*e*P	Pn	09 55 33.9	+3.0
CHPA	**Chiripa**	**2.75**	**316**	*i* P	Pn	09 55 37.7	+4.9
CUI	**Cuipilapa**	**3.08**	**315**	*i* P	Pn	09 55 39.5	+2.2
CUI				*i* S	Sn	09 56 22.7	+7.9
MESS	**Mesas**	**3.15**	**316**	*i* P	Pn	09 55 40.7	+2.2
NY14	**Universidad de**	**3.34**	**311**	*i* P	Pn	09 55 43.1	+2.1
LAPC	**Finca la Perla**	**3.34**	**313**	*i* P	Pn	09 55 43.4	+2.4

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*ISCJB **26** 09:57:11.8±1.2, 37°.31N±0°.08×38°.17E±0°.05, h2km±10km, Error ellipse: s-maj=13.4km s-min=6.0km az=173.3*
*CSEM **26** 09:57:12.2±0.6, 37°.34N×38°.19E, h5km, MD2.9, Error ellipse: s-maj=15.0km s-min=7.9km az=1.0*
*ISK **26** 09:57:12.5, 37°.44N×38°.17E, h9km, MD2.9*
*DDA **26** 09:57:13.9, 37°.38N×38°.28E, h6km±1km, Md2.8*
ISC 26 09:57:12.5±1.2, 37°.32N±0°.08×38°.19E±0°.05, h10km±8km, n14, σ0°96/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.17**	**30**	*i* P	**Pg**	**09 57 15.3**	**-0.9**
ATAB				*i* S	**Sg**	**09 57 18.0**	**-0.8**
ATAB	**Bozova**	**0.17**	**30**	*i* P	**Pg**	**09 57 15.3**	**-0.9**
ATAB				*i* S	**Sg**	**09 57 18.0**	**-0.8**
URFA	**Urfa**	**0.52**	**77**	*e*PG	**Pg**	**09 57 23.1**	**+0.4**
URFA				*e*SG	**Sg**	**09 57 30.9**	**+1.5**
URFA	**Urfa**	**0.52**	**77**	*e*Pg	**Pg**	**09 57 23.1**	**+0.5**
URFA				*e*Sg	**Sg**	**09 57 30.9**	**+1.5**
AKCD	**Akcadag**	**0.99**	**348**	*i* P	**Pg**	**09 57 32.0**	**+0.4**
AKCD				*i* S	**Sg**	**09 57 46.3**	**+1.7**
AKCD	**Akcadag**	**0.99**	**348**	*i* P	**Pg**	**09 57 32.0**	**+0.3**
AKCD				*i* S	**Sg**	**09 57 46.3**	**+1.7**
MYA	**Malataya**	**1.02**	**11**	*e*PG	**Pg**	**09 57 30.4**	**-1.7**
MYA	**Malataya**	**1.02**	**11**	*e*Pg	**Pg**	**09 57 30.4**	**-1.8**
KMRS	**Kahramanmaras**	**1.04**	**281**	*e*PG	**Pg**	**09 57 32.1**	**-0.4**
KMRS				*e*SG	**Sg**	**09 57 46.7**	**+0.6**
KMRS	**Kahramanmaras**	**1.04**	**281**	*e*Pg	**Pg**	**09 57 32.2**	**-0.4**
KMRS				*e*Sg	**Sg**	**09 57 46.7**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.38**	**40**	*e*PN	**Pn**	**09 57 37.4**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.38**	**40**	*e*Pn	**Pn**	**09 57 37.4**	**-0.4**
PTK	**Pertek**	**1.83**	**31**	*e*PN	**Pn**	**09 57 43.8**	**-0.3**
PTK	**Pertek**	**1.83**	**31**	*e*Pn	**Pn**	**09 57 43.8**	**-0.2**

CASC 26 10:00:21.4±3.3, 8°.45N×82°.98W, h4km, MD4.1, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**317**	⇑*i*P	Pg	10 00 27.0	+0.3
ACR				*e*S	Sg	10 00 32.3	+2.0
BRU2	**Volcan**	**0.45**	**40**	⇓*i*P	Pg	10 00 30.6	+0.7
BRU2				*e*S	Sg	10 00 38.4	+2.6
TBS2		**0.47**	**43**	*i* P	Pg	10 00 37.8	+7.4
TBS2				*e*S	Sg	10 00 45.7	+9.2
BAR1		**0.85**	**337**	⇓*i*P	Pg	10 00 37.3	-0.5
BAR1				*e*S	Sg	10 00 49.9	+1.0
CNI	**Changuinola**	**1.06**	**25**	*e*P	Pg	10 00 41.2	-0.6
BUS	**Buena Vista**	**1.34**	**325**	*e*P	Pn	10 00 45.2	-1.7
QCR	**Quepos**	**1.52**	**310**	*e*P	Pn	10 00 47.4	-2.0
QCR				*e*S	Sn	10 01 09.0	-0.6
LIO	**Limon**	**1.55**	**358**	*e*P	Pn	10 00 50.0	+0.2
URSC	**Urasca**	**1.59**	**330**	*e*P	Pn	10 00 48.8	-1.5
URSC				*e*S	Sn	10 01 11.4	+0.2
LAJ	**Bijagual**	**1.80**	**321**	*e*P	Pn	10 00 55.8	+2.5
PRS1	**Puriscal**	**2.01**	**319**	*e*P	Pn	10 00 54.9	-1.3
CGA2	**Cerro Gallo 2**	**2.14**	**317**	*e*P	Pn	10 00 58.1	+0.2
CUI	**Cuipilapa**	**3.08**	**316**	*i* P	Pn	10 01 13.3	+2.6
MESS	**Mesas**	**3.15**	**316**	*i* P	Pn	10 01 14.4	+2.6
GPS3	**Bodega del ICE**	**3.28**	**314**	*i* P	Pn	10 01 16.5	+2.9
NY14	**Universidad de**	**3.33**	**311**	*i* P	Pn	10 01 17.3	+2.9
LAPC	**Finca la Perla**	**3.34**	**314**	*i* P	Pn	10 01 16.7	+2.2
GBS3	**Finca Las Im¨¡**	**3.37**	**314**	*i* P	Pn	10 01 17.3	+2.5
GBS3				*i* S	Sn	10 01 54.2	-1.0

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*IDC **26** 10:01:08.6±2.7, 54°.36N×86°.46E, h0km, mb1 3.4/3, mb1mx3.2/28, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=22.9km s-min=17.3km az=55.0*
*NNC **26** 10:01:11.2±4.6, 54°.13N×86°.40E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=61.1km s-min=29.5km az=165.0*
ISC 26 10:01:09.7±2.2, 54°.4N±0°.1×86°.4E±0°.2, h10km, n7, σ0°75/10, 3C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.06**	**244**	Pg	**Pg**	**10 01 26.9**	**-3.3**
	6.0nm,0.3s,baz=62,slow=17,SNR=32						
ZALV				Lg		10 01 43.9	
	5.8nm,0.3s,baz=55,slow=20,SNR=13						
KURK	**Kurchatov**	**6.04**	**235**	⇑Pn	**Pn**	**10 02 38.8**	**-0.2**
	0.7nm,0.4s						
KURK				⇓Sn	**Sn**	**10 03 48.9**	**+0.8**
	2.3nm,0.7s						
KURK	**Kurchatov**	**6.04**	**235**	Pn	**Pn**	**10 02 40.2**	**+1.3**
	0.5nm,0.3s,baz=49,slow=14,SNR=40						
KURBB	**Kurchatov Arra**	**6.14**	**235**	⇑Pn	**Pn**	**10 02 40.2**	**-0.2**
	0.5nm,0.3s,baz=54,slow=14						
KURBB				⇑Sn	**Sn**	**10 03 50.2**	**-0.5**
	1.0nm,0.6s						
MK31	**Makanchi Array**	**8.07**	**201**	⇓Pn	**Pn**	**10 03 06.7**	**-0.2**
	0.3nm,0.3s,baz=26,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**8.07**	**201**	Pn	**Pn**	**10 03 06.8**	**-0.2**
	0.4nm,0.3s,baz=21,slow=17,SNR=4.2						
MKAR				Sn	**Sn**	**10 04 38.4**	**+0.2**
	0.3nm,0.3s,baz=21,slow=25,SNR=12						
MKAR				Lg		10 05 24.2	
	baz=14,slow=25,SNR=2.9						
BVAR	**Borovoye Array**	**9.62**	**268**	Pn	**Pn**	**10 03 28.5**	**+0.4**
	0.3nm,0.3s,baz=65,slow=15,SNR=4.4						

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*IDC **26** 10:32:11.7±1.1, 30°.99N×103°.50E, h0km, mb3.7/9, mb1 3.7/9, mb1mx3.6/25, mbtmp3.7/9, Error ellipse: s-maj=38.3km s-min=18.1km az=36.0*
*ISCJB **26** 10:32:14.5±0.8, 31°.10N±0°.07×103°.59E±0°.06, h27km±6km, mb3.6/9, Error ellipse: s-maj=11.3km s-min=8.7km az=23.5*
*NEIC **26** 10:32:14.2±0.7, 31°.08N×103°.56E, h10km, Error ellipse: s-maj=16.0km s-min=11.1km az=49.0*
*BJI **26** 10:32:14.6, 31°.30N×103°.73E, h22km, mb4.3/1, ML3.7/12, Ms3.7/5, Ms7 3.8/5*
ISC 26 10:32:14.4±0.9, 31°.19N±0°.04×103°.59E±0°.06, h11km±6km, n20, σ1°00/25, mb3.6/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**153**	Pg	**Pg**	**10 32 20.0**	**-0.7**
CD2				Sg	**Sg**	**10 32 25.0**	**+0.1**
CD2				smax			
	comp=N,25μm,0.6s						
LZH	**Lanzhou**	**4.89**	**2**	*e*Pg	**Pb**	**10 33 36.8**	**-3.2**
LZH				Sg	**Sg**	**10 34 51.5**	**+0.2**
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,60nm,0.5s						
LZH				LR	LR		
	comp=N,750nm,7.0s						
LZH				LR	LR		
	comp=Z,810nm,7.7s						
ENH	**Enshi**	**5.16**	**99**	*e*Pn	**Pn**	**10 33 31.7**	**+0.2**
	comp=Z,32nm,0.6s						
ENH				*e*Sn	**Sn**	**10 34 31.0**	**-0.1**
XAN	**Xi'an**	**5.32**	**56**	Pn	**Pn**	**10 33 32.3**	**-1.5**
XAN				Pg	**Pb**	**10 33 48.5**	**+1.1**
XAN				Sn	**Sn**	**10 34 26.8**	**-8.3**
XAN				Sg	**Sg**	**10 34 59.3**	**-5.9**
XAN				smax			
	comp=N,180nm,0.7s						
XAN				smax			
	comp=E,81nm,0.7s						
GYA	**Guiyang**	**5.43**	**149**	Pn	**Pn**	**10 33 36.3**	**+1.0**
GYA				smax			
	comp=N,140nm,0.8s						
GYA				smax			
	comp=E,170nm,0.8s						
GTA	**Gaotai**	**8.76**	**340**	pmax		10 35 01.5	
GTA				pP		10 35 06.8	
GTA	**Gaotai**	**8.76**	**340**	P	Px	10 35 10.3	
WHN	**Wuhan**	**9.27**	**91**	*e*P	**Pn**	**10 34 30.5**	**+2.5**
WHN				S	**Sn**	**10 36 07.3**	**-5.1**
WHN				LR	LR		
	comp=N,240nm,5.0s						
WHN				LR	LR		
	comp=E,480nm,5.7s						
WHN				LR	LR		
	comp=Z,550nm,6.8s						
CMAR	**Chiang Mai Arr**	**13.36**	**199**	Pn	**Pn**	**10 35 24.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=19,slow=36,SNR=2.8						
SONM	**Songino Array**	**16.76**	**7**	Pn	**Pn**	**10 36 13.1**	**+4.1**
	comp=Z,1.0nm,0.3s,baz=308,slow=32,SNR=3.6						
KSRS	**Korea Array**	**21.02**	**66**	P	**P**	**10 36 58.2**	**+0.2**
	comp=Z,2.8nm,0.7s,mb3.7,baz=261,slow=11,SNR=16						
JOW	**Kunigami**	**22.00**	**95**	P	**P**	**10 37 08.6**	**-0.2**
	comp=Z,4.2nm,0.5s,mb4.1,baz=344,slow=3.6,SNR=5.0						
MK31	**Makanchi Array**	**22.63**	**320**	P	**P**	**10 37 16.0**	**+0.8**
MKAR	**Makanchi Array**	**22.63**	**320**	P	**P**	**10 37 16.2**	**+1.0**
	comp=Z,0.4nm,0.7s,mb3.0,baz=96,slow=12,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**10 37 51.5**	**+0.2**
	comp=Z,0.6nm,0.3s,mb3.5,baz=128,slow=12,SNR=4.1						
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**10 37 55.6**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.4,baz=129,slow=9.6,SNR=8.1						
BVAR	**Borovoye Array**	**32.45**	**322**	P	**P**	**10 38 45.1**	**+0.7**
	comp=Z,0.4nm,0.4s,mb3.6,baz=235,slow=41,SNR=3.0						
BVAR				PcP	PcP	10 41 30.4	-1.1
	comp=Z,0.8nm,0.6s,baz=172,slow=2.2,SNR=5.1						
AKASG	**Malin Array Be**	**57.01**	**313**	P	**P**	**10 41 58.4**	**-1.6**
	comp=Z,0.5nm,0.4s,mb3.9,baz=71,slow=6.4,SNR=3.1						
ASAR	**Alice Springs**	**61.79**	**148**	P	**P**	**10 42 31.8**	**-1.6**
	comp=Z,0.5nm,0.7s,mb3.8,baz=337,slow=6.7,SNR=6.9						
YKA	**Yellowknife Ar**	**81.74**	**17**	P	**P**	**10 44 32.5**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=329,slow=5.5,SNR=4.5						

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*ISCJB **26** 10:34:33.7±0.6, 13°.63N±0°.05×91°.53W±0°.03, h69km±5km, mb4.2/29, Error ellipse: s-maj=9.0km s-min=3.7km az=25.8*
*NEIC **26** 10:34:35.1±1.1, 13°.75N×91°.25W, h61km±9km, mb4.3/17, Error ellipse: s-maj=14.1km s-min=8.7km az=208.0*
*CASC **26** 10:34:35.1±1.0, 13°.62N×91°.32W, h10km±9km, MD4.0, ML3.7, mb4.3(NEIC)*
*IDC **26** 10:34:40.5±1.8, 13°.98N×90°.91W, h103km±13km, mb3.9/12, mb1 4.1/14, mb1mx3.8/27, mbtmp3.9/14, MS3.2/3, Ms1 3.1/3, ms1mx2.7/27, Error ellipse: s-maj=25.3km s-min=13.9km az=54.0*
ISC 26 10:34:35.2±0.5, 13°.66N±0°.05×91°.50W±0°.03, h64km±5km, n73, σ1°18/87, mb4.2/28, 2C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.67**	**348**	⇓*i*P	**Pn**	**10 34 49.5**	**+0.3**
FUG	**Fuego 3**	**1.01**	**39**	*e*P	**Pn**	**10 34 52.7**	**-0.8**
FG6		**1.07**	**34**	*e*P	**Pn**	**10 34 53.7**	**-0.6**
PCG	**Pacaya**	**1.13**	**50**	*e*P	**Pn**	**10 34 54.9**	**-0.2**
TP2	**Tecpan 2**	**1.21**	**22**	⇑*i*P	**Pn**	**10 34 56.5**	**+0.4**
NBG	**Las Nubes**	**1.45**	**50**	*e*P	**Pn**	**10 35 00.1**	**+0.9**
NBG				*e*S	**Sn**	**10 35 18.1**	**+0.8**
APG	**El Apazote**	**1.67**	**37**	P	**Pn**	**10 35 02.2**	**0.0**
	109nm,0.3s,baz=191,slow=6.2,SNR=1519						
APG				S	**Sn**	**10 35 23.3**	**+0.7**
	89nm,0.3s,baz=210,slow=20,SNR=5.7						
RTR	**El Retiro**	**1.81**	**82**	*e*P	**Pn**	**10 35 04.0**	**-0.2**
RTR				*e*S	**Sn**	**10 35 27.0**	**+0.8**
SBLS	**San Blas**	**1.83**	**84**	*e*P	**Pn**	**10 35 03.7**	**-0.7**
SBLS				*e*S	**Sn**	**10 35 26.7**	**+0.1**
SBLS				AML	AML	10 35 34.4	
	comp=Z,1μm,0.4s						
SNJE	**San Jose**	**1.85**	**83**	*e*P	**Pn**	**10 35 04.2**	**-0.5**
SNJE				*e*S	**Sn**	**10 35 27.7**	**+0.6**
BOQS	**Boqueron**	**2.16**	**88**	*e*P	**Pn**	**10 35 08.6**	**-0.2**
BOQS				*e*S	**Sn**	**10 35 35.0**	**+0.5**
BOQS				*e*S	**Sn**	**10 35 35.1**	**+0.6**
SNET	**Serv Nac Est T**	**2.20**	**89**	*e*P	**Pn**	**10 35 09.1**	**-0.4**
SNET				*e*S	**Sn**	**10 35 34.9**	**-0.8**
MRL	**Marmol**	**2.24**	**51**	⇑*i*P	**Pn**	**10 35 10.9**	**+0.9**
LFRS	**El Faro**	**2.37**	**91**	*e*P	**Pn**	**10 35 11.6**	**-0.1**
LBRS	**Las Brisas**	**2.39**	**88**	*e*P	**Pn**	**10 35 11.8**	**-0.2**
LBRS				*e*S	**Sn**	**10 35 40.6**	**+0.5**
SNVI	**San Vicente**	**2.58**	**91**	*e*P	**Pn**	**10 35 14.8**	**+0.2**
SNVI				*e*S	**Sn**	**10 35 45.5**	**+0.5**
CCIG	**Comitan**	**2.68**	**347**	*i* P	**Pn**	**10 35 17.4**	**+1.5**
CCIG				*i* S	**Sn**	**10 35 48.0**	**+0.8**
VSM	**San Miguel**	**3.14**	**94**	*e*P	**Pn**	**10 35 22.8**	**+0.5**
BLLM	**Bellamira**	**3.18**	**94**	*e*P	**Pn**	**10 35 23.1**	**+0.3

comp=Z,57nm,18.7s,baz=32,slow=39
WVOR Wild Horse Val 37.04 326 *e*P **P 10 41 41.2 +2.2**
comp=Z,5.9nm,1.0s,mb4.4
LBCM Butte Creek Ri 37.57 322 P **P 10 41 46.6 +3.2**
MOD Modoc 37.62 324 *e*P **P 10 41 45.8 +1.9**
comp=Z,2.5nm,0.7s,mb4.0
LASM Arnica Sink 38.17 323 P **P 10 41 51.7 +3.2**
HOOD Mount Hood Mea 40.59 327 *e*P **P 10 42 11.3 +2.7**
comp=Z,58nm,1.0s,mb5.2
SIV San Ignacio 42.10 133 P **P 10 42 21.1 -0.2**
comp=Z,0.5nm,0.5s,mb3.4,baz=232,slow=17,SNR=3.6
SCHQ Schefferville 45.37 20 P **P 10 42 44.3 -2.7**
comp=Z,4.2nm,0.5s,mb4.5,baz=225,slow=6.2,SNR=9.9
CFAA Coronel Fontan 50.24 154 P **P 10 43 25.9 +0.9**
comp=Z,0.2nm,0.6s,mb3.3,baz=280,slow=4.2,SNR=3.4
YKA Yellowknife Ar 51.47 347 P **P 10 43 32.8 -1.0**
comp=Z,2.4nm,0.5s,mb4.4,baz=147,slow=7.4,SNR=40
YKA PcP PcP 10 44 47.6 +0.3
comp=Z,0.3nm,0.6s,baz=154,slow=4.0,SNR=3.0
YKA Yellowknife Ar 51.47 347 P **P 10 43 32.8 -1.0**
YKA PcP PcP 10 44 47.6 +0.3
TRF Thorofare Moun 64.15 335 *e*P **P 10 45 03.2 +0.6**
comp=Z,2.2nm,0.5s,mb4.4
KTH Kantishna Hill 64.45 335 *e*P **P 10 45 04.7 +0.1**
EKA Eskdalemuir Ar 77.95 36 P **P 10 46 23.4 -3.0**
comp=Z,1.2nm,0.6s,mb4.0,baz=278,slow=6.7,SNR=4.0
ESDC Sonseca Array 79.54 52 P **P 10 46 32.0 -3.5**
comp=Z,4.6nm,0.3s,mb4.9,baz=73,slow=26,SNR=9.6
ASAR Alice Springs 136.01 250 PKP PKPdf 10 53 50.7 +0.9
comp=Z,0.3nm,0.7s,baz=59,slow=3.6,SNR=3.9
CMAR Chiang Mai Arr 146.47 342 PKPbc PKPbc 10 54 10.6 +0.5
comp=Z,2.1nm,0.4s,baz=340,slow=4.0,SNR=16

ISCJB ***26*** *10:37:35.4±4.3,55°.9S±0°.1×27°.7W±0°.2,h60km±41km, mb4.3/13, Error ellipse: s-maj=24.1km s-min=14.1km az=39.1*
NEIC ***26*** *10:37:40.5±3.6,55°.96S×27°.81W,h92km±31km,mb4.0/1, Error ellipse: s-maj=17.8km s-min=10.8km az=58.0*
IDC ***26*** *10:37:41.1±1.9,55°.97S×27°.82W,h95km±14km,mb4.2/11, mb1 4.2/11,mb1mx4.1/19,mbtmp4.2/11,MS3.5/4, Ms1 3.5/4,ms1mx3.2/17,Error ellipse: s-maj=21.2km s-min=14.4km az=54.0*
ISC 26 10:37:37.3±3.9,56°.0S±0°.1×27°.8W±0°.2,h62km±39km,n33, σ0.87/18,mb4.3/13,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.00 158**		*e*	**Pn**	**10 41 31.0**	**+0.5**
VNA2	**Neumayer--Watz**	**17.39 157**		*e*	**Pn**	**10 41 35.2**	**-0.2**
PMSA	**Palmer Station**	**19.71 229**		*e*P	**Pn**	**10 42 01.5**	**-1.7**
USHA	**Ushuaia**	**22.89 256**		P	**P**	**10 42 36.5**	**+1.1**
	5.3nm,0.7s,mb4.1,baz=139,slow=15,SNR=3.0						
USHA				LR	LR	10 49 01.4	
	comp=Z,185nm,19.1s,baz=126,slow=30						
TRQA	**Tornquist**	**28.99 294**		*e*P	**P**	**10 43 30.7**	**-0.2**
	2.4nm,0.6s,mb4.1						
PLCA	**Paso Flores**	**31.66 281**		LR	LR	10 57 08.2	
	comp=Z,74nm,18.7s,baz=15,slow=37						
QSPA	**South Pole Qui**	**34.28 180**		P	**P**	**10 44 18.3**	**+1.4**
	8.2nm,0.6s,mb4.8,baz=209,slow=1.8,SNR=83						
QSPA				ScP	ScP	10 50 26.1	-4.9
	1.5nm,0.8s,baz=301,slow=1.7,SNR=5.9						
QSPA	**South Pole Qui**	**34.28 180**		P	**P**	**10 44 18.3**	**+1.4**
QSPA				ScP	ScP	10 50 26.1	-4.9
CPUP	**Villa Florida**	**36.51 312**		P	**P**	**10 44 36.7**	**+0.2**
	3.1nm,0.6s,mb4.3,baz=134,slow=6.7,SNR=11						
CPUP				PcP	PcP	10 46 58.4	-0.6
	0.6nm,0.4s,baz=205,slow=1.3,SNR=3.3						
CPUP				LR	LR	10 57 01.5	
	comp=Z,56nm,21.6s,baz=288,slow=32						
CPUP	**Villa Florida**	**36.51 312**		P	**P**	**10 44 36.7**	**+0.2**
CPUP				PcP	PcP	10 46 58.4	-0.6
CPUP				LR	LR	10 57 01.5	
CFAA	**Coronel Fontan**	**37.23 294**		P	**P**	**10 44 41.5**	**-1.0**
	0.3nm,0.6s,mb3.3,baz=147,slow=8.7,SNR=10.0						
MAW	**Mawson**	**40.41 144**		P	**P**	**10 45 08.8**	**0.0**
	2.8nm,0.4s,mb4.3,baz=232,slow=8.0,SNR=10						
MAW				ScP	ScP	10 50 50.5	-3.6
	1.6nm,0.8s,baz=255,slow=3.2,SNR=3.9						
BOSA	**Boshof**	**46.27 76**		LR	LR	11 00 12.5	
	comp=Z,63nm,19.6s,baz=328,slow=29						
SIV	**San Ignacio**	**47.28 314**		P	**P**	**10 46 04.1**	**-0.3**
	1.3nm,0.5s,mb4.1,baz=170,slow=11,SNR=8.9						
LPAZ	**La Paz**	**50.06 306**		P	**P**	**10 46 27.4**	**+1.6**
	8.3nm,0.5s,mb5.0,baz=138,slow=5.5,SNR=49						
LPAZ				PcP	PcP	10 47 45.4	+0.7
	1.6nm,0.6s,baz=119,slow=3.4,SNR=2.4						
DBIC	**Dimbokro**	**65.23 25**		P	**P**	**10 48 11.6**	**-0.5**
	3.2nm,1.0s,mb4.3,baz=314,slow=13,SNR=3.6						
PCRV	**Puerto La Cruz**	**72.68 322**		P	**P**	**10 48 58.8**	**+0.4**
	8.8nm,0.7s,mb4.8,baz=232,slow=4.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**73.14 30**		P	**P**	**10 49 01.0**	**-0.1**
	2.9nm,0.5s,mb4.5,baz=200,slow=6.5,SNR=11						
TORD				PcP	PcP	10 49 18.9	+1.5
	0.9nm,0.5s,baz=199,slow=6.2,SNR=3.7						
SDV	**Santo Domingo**	**73.72 316**		P	**P**	**10 49 04.6**	**+0.1**
	3.8nm,0.5s,mb4.6,baz=58,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**99.17 163**		P	**P**	**10 51 10.5**	**-1.3**
	0.4nm,0.6s,mb4.2,baz=188,slow=4.0,SNR=6.4						
YKA	**Yellowknife Ar**	**135.89 318**		PKP	PKPdf	10 56 46.4	-3.0
	0.8nm,0.6s,baz=126,slow=2.4,SNR=11						
YKA				SKPbc	SKPbc	11 00 10.0	-5.5
	0.5nm,0.8s,baz=119,slow=1.5,SNR=6.2						
YKA	**Yellowknife Ar**	**135.89 318**		PKP	PKPdf	10 56 46.4	-3.0
YKA				SKPbc	SKPbc	11 00 10.0	-5.5
MKAR	**Makanchi Array**	**137.17 72**		PKP	PKPdf	10 56 53.4	+1.1
	0.2nm,0.4s,baz=186,slow=23,SNR=4.1						
INK	**Inuvik**	**145.53 321**		PKPbc	PKPbc	10 57 06.6	-0.4
	5.3nm,0.6s,baz=90,slow=4.3,SNR=21						
INK				SKPbc	SKPbc	11 00 37.6	-3.0
	3.1nm,1.1s,baz=181,slow=2.3,SNR=3.9						
INK	**Inuvik**	**145.53 321**		PKPbc	PKPbc	10 57 06.6	-0.4
INK				SKPbc	SKPbc	11 00 37.6	-3.0
DAWY	**Dawson**	**146.49 312**		*e*PKPdf	PKPdf	10 57 08.8	+0.4
COLA	**College**	**150.24 312**		*e*PKPdf	PKPdf	10 57 13.6	-0.9
COLA				*e*PKPbc	PKPbc	10 57 18.6	-1.1
COLA				*e*PKPab	PKPab	10 57 25.9	-0.3
MCK	**McKinley**	**150.46 309**		PKPdf	PKPdf	10 57 14.1	-0.7
MCK				*e*PKPbc	PKPbc	10 57 19.9	-0.4
KDAK	**Kodiak Island**	**150.49 297**		PKPbc	PKPbc	10 57 19.8	-0.7
TRF	**Thorofare Moun**	**150.99 309**		*e*PKPbc	PKPbc	10 57 21.1	-0.4
TRF				*e*PKPab	PKPab	10 57 28.9	-0.5
BPAW	**Bear Paw Mtn.**	**151.43 310**		*e*PKPbc	PKPbc	10 57 21.8	-0.7
BPAW				*e*PKPab	PKPab	10 57 30.6	-0.5
COLD	**Coldfoot**	**151.53 316**		*e*PKPbc	PKPbc	10 57 22.7	+0.1
PPLA	**Purkeypile**	**151.72 307**		*e*PKPbc	PKPbc	10 57 22.5	-0.8

ROM ***26*** *10:45:03.6±0.1,37°.99N×21°.34E,h10km,Ml3.7/24, Error ellipse: s-maj=6.8km s-min=0.0km az=20.0*
HLW ***26*** *10:45:07.7,38°.49N×20°.32E,h33km±35km,Ml3.9*
CSEM ***26*** *10:45:11.3±0.2,38°.18N×20°.37E,h5km,ML4.2/12,Error ellipse: s-maj=6.6km s-min=3.5km az=50.0*
NEIC ***26*** *10:45:11.6,38°.26N×20°.36E,h16km,ML3.3(ATH),After ATH.*
ATH ***26*** *10:45:12.3,38°.27N×20°.43E,h18km±1km,MD3.6/15*
THE ***26*** *10:45:13.2,38°.31N×20°.48E,h0km±1km,ML4.2/12,Error ellipse: s-maj=2.1km s-min=0.7km az=238.0*
PDG ***26*** *10:45:17.2±0.4,38°.56N×19°.62E,h11km±11km,ML3.5/10, Error ellipse: s-maj=160.2km s-min=15.8km az=90.0*
IDC ***26*** *10:45:20.6±2.8,38°.25N×20°.55E,h86km±29km,mb3.5/5, mb1 3.5/8,mb1mx3.3/28,mbtmp3.4/8,MS2.5/1,Ms1 2.6/1, ms1mx2.0/33,Error ellipse: s-maj=24.7km s-min=17.3km az=89.0*
TIR ***26*** *10:45:26.1±6.1,39°.72N×21°.36E,h4km±100km,ML3.8*
ISC 26 10:45:13.1±0.4,38°.34N±0°.02×20°.47E±0°.02,h1km±3km, n214,σ1.10/285,mb3.7/6,9C-17D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18 149**		*e*PB	**Pg**	**10 45 17.1**	**+0.4**
VLS				*e*SB	**Sg**	**10 45 20.1**	**+1.0**
VLS	**Valsamata**	**0.18 149**		P	**Pg**	**10 45 17.1**	**+0.4**
VLS	**Valsamata**	**0.18 149**		P	**Pg**	**10 45 17.1**	**+0.4**
VLS				*e*Sb	**Sg**	**10 45 20.1**	**+1.0**
KFL	**Anninata**	**0.34 132**		P	**Pg**	**10 45 19.4**	**-0.2**
KFL				S	**Sg**	**10 45 23.8**	**-0.2**
RLS	**Riolos of Patr**	**0.83 109**		*e*PB	**Pg**	**10 45 27.9**	**-1.2**
RLS	**Riolos of Patr**	**0.83 109**		*e*Pb	**Pg**	**10 45 27.9**	**-1.2**
UPR	**University Cam**	**1.04 93**		*e*PN	**Pg**	**10 45 32.5**	**-0.5**
UPR	**University Cam**	**1.04 93**		P	**Pg**	**10 45 32.0**	**-1.0**
UPR				S	**Sg**	**10 45 48.4**	**+2.0**
UPR	**University Cam**	**1.04 93**		P	**Pg**	**10 45 32.0**	**-1.0**
UPR	**University Cam**	**1.04 93**		*e*Pn	**Pg**	**10 45 32.5**	**-0.5**
UPR				S	**Sg**	**10 45 48.4**	**+2.0**
EFP	**Efpalio**	**1.13 85**		*e*PB	**Pg**	**10 45 33.3**	**-1.5**
EFP	**Efpalio**	**1.13 85**		P	**Pg**	**10 45 32.9**	**-1.9**
EFP				S	**Sg**	**10 45 50.5**	**+1.0**
EFP	**Efpalio**	**1.13 85**		P	**Pg**	**10 45 32.9**	**-1.9**
EFP	**Efpalio**	**1.13 85**		*e*Pb	**Pg**	**10 45 33.3**	**-1.5**
EFP				S	**Sg**	**10 45 50.5**	**+1.0**
IGT	**Igoumenitsa**	**1.20 355**		P	**Pg**	**10 45 35.9**	**-0.2**
IGT				S	**Sg**	**10 45 54.4**	**+2.7**
IGT	**Igoumenitsa**	**1.20 355**		P	**Pg**	**10 45 35.9**	**-0.2**
IGT				S	**Sg**	**10 45 54.4**	**+2.7**
JAN	**Janina**	**1.35 13**		*e*PN	**Pn**	**10 45 39.1**	**-0.1**
JAN				*e*SN	**Sn**	**10 45 58.7**	**+1.0**
JAN	**Janina**	**1.35 13**		*e*Pn	**Pn**	**10 45 39.1**	**-0.1**
JAN				*e*Sn	**Sn**	**10 45 58.7**	**+1.0**
KEK	**Kerkira**	**1.47 339**		*e*PN	**Pn**	**10 45 40.6**	**-0.2**
KEK	**Kerkira**	**1.47 339**		P	**Pn**	**10 45 40.6**	**-0.2**
KEK				S	**Sb**	**10 46 01.4**	**+0.9**
KEK	**Kerkira**	**1.47 339**		P	**Pn**	**10 45 40.6**	**-0.2**
KEK				S	**Sb**	**10 46 01.4**	**+0.9**
GUR	**Goura**	**1.53 105**		*e*PB	**Pn**	**10 45 40.0**	**-1.6**
GUR	**Goura**	**1.53 105**		P	**Pn**	**10 45 39.9**	**-1.7**
GUR				S	**Sn**	**10 46 02.4**	**+0.3**
GUR	**Goura**	**1.53 105**		P	**Pn**	**10 45 39.9**	**-1.7**
GUR				S	**Sn**	**10 46 02.4**	**+0.3**
SRN	**Sarande**	**1.58 347**		*e*PG	**Pg**	**10 45 43.4**	**-0.1**
SRN				*i* SG	**Sg**	**10 46 04.1**	**+0.1**
SRN	**Sarande**	**1.58 347**		*e*Pg	**Pg**	**10 45 43.4**	**-0.1**
SRN	SNR=90						
				i Sg	**Sg**	**10 46 04.1**	**+0.1**
	SNR=90						
AGG	**Agios Georgios**	**1.61 64**		P	**Pn**	**10 45 42.1**	**-0.6**
AGG				S	**Sn**	**10 46 05.2**	**+1.1**
AGG	**Agios Georgios**	**1.61 64**		P	**Pn**	**10 45 42.1**	**-0.6**
AGG				S	**Sn**	**10 46 05.2**	**+1.1**
DSF	**Desfina**	**1.62 87**		P	**Pn**	**10 45 41.7**	**-1.1**
DSF				S	**Sn**	**10 46 03.9**	**-0.4**
DSF	**Desfina**	**1.62 87**		P	**Pn**	**10 45 41.7**	**-1.1**
DSF				S	**Sn**	**10 46 03.9**	**-0.4**
ITM	**Ithomi**	**1.63 135**		*e*PN	**Pn**	**10 45 42.4**	**-0.6**
ITM	**Ithomi**	**1.63 135**		P	**Pn**	**10 45 42.6**	**-0.4**
ITM				S	**Sn**	**10 46 04.4**	**-0.3**
ITM	**Ithomi**	**1.63 135**		*e*Pn	**Pn**	**10 45 42.4**	**-0.6**
ITM				S	**Sn**	**10 46 04.4**	**-0.3**
THL	**Klokotos Trika**	**1.72 44**		*e*PN	**Pn**	**10 45 44.0**	**-0.2**
THL	**Klokotos Trika**	**1.72 44**		P	**Pn**	**10 45 44.6**	**+0.4**
THL				S	**Sn**	**10 46 07.5**	**+0.7**
THL	**Klokotos Trika**	**1.72 44**		*e*Pn	**Pn**	**10 45 44.0**	**-0.2**
THL	**Klokotos Trika**	**1.72 44**		P	**Pn**	**10 45 44.6**	**+0.4**
THL				S	**Sn**	**10 46 07.5**	**+0.7**
PYL	**PYLOS**	**1.76 145**		*e*PN	**Pn**	**10 45 43.7**	**-1.0**
PYL	**PYLOS**	**1.76 145**		P	**Pn**	**10 45 43.7**	**-1.0**
PYL	**PYLOS**	**1.76 145**		P	**Pn**	**10 45 43.7**	**-1.0**
VLX	**Vlachokerasia**	**1.79 122**		P	**Pn**	**10 45 44.6**	**-0.6**
VLX				S	**Sn**	**10 46 09.6**	**+1.0**
VLX	**Vlachokerasia**	**1.79 122**		P	**Pn**	**10 45 44.6**	**-0.6**
VLX				S	**Sn**	**10 46 09.6**	**+1.0**
LTK	**Loutraki**	**1.99 98**		*e*PN	**Pn**	**10 45 47.4**	**-0.6**
LTK	**Loutraki**	**1.99 98**		P	**Pn**	**10 45 47.5**	**-0.5**
LTK				S	**Sn**	**10 46 14.4**	**+0.9**
LTK	**Loutraki**	**1.99 98**		P	**Pn**	**10 45 47.5**	**-0.5**
LTK				S	**Sn**	**10 46 14.4**	**+0.9**
LKR	**Lokris**	**2.01 80**		*e*PN	**Pn**	**10 45 48.5**	**+0.3**
LKR	**Lokris**	**2.01 80**		P	**Pn**	**10 45 48.4**	**+0.2**
LKR				S	**Sn**	**10 46 14.3**	**+0.3**
LKR	**Lokris**	**2.01 80**		P	**Pn**	**10 45 48.4**	**+0.2**
LKR				S	**Sn**	**10 46 14.3**	**+0.3**
KZN	**Kozani**	**2.21 27**		*e*PN	**Pn**	**10 45 52.3**	**+1.3**
KZN				*e*SN	**Sg**	**10 46 21.8**	**-2.4**
KZN	**Kozani**	**2.21 27**		P	**Pn**	**10 45 51.5**	**+0.5**
KZN				S	**Sn**	**10 46 19.6**	**+0.7**
KZN	**Kozani**	**2.21 27**		P	**Pn**	**10 45 51.5**	**+0.5**
KZN	**Kozani**	**2.21 27**		*e*Pn	**Pn**	**10 45 52.3**	**+1.3**
KZN				S	**Sn**	**10 46 19.6**	**+0.7**
KZN				*e*Sn	**Sg**	**10 46 21.8**	**-2.4**
KBN	**Korca**	**2.30 6**		*e*PN	**Pg**	**10 45 57.9**	**+0.7**
SCTE	**Santa Cesarea**	**2.33 319**		*e*PN	**Pn**	**10 45 51.5**	**-1.1**
SCTE	**Santa Cesarea**	**2.33 319**		Pg	**Pn**	**10 45 51.8**	**-0.8**
	440nm,0.7s						
SCTE	**Santa Cesarea**	**2.33 319**		*e*Pb	**Pn**	**10 45 51.5**	**-1.1**
SCTE	**Santa Cesarea**	**2.33 319**		Pg	**Pn**	**10 45 51.8**	**-0.8**
	440nm,0.7s						
LIT	**Litokhoron**	**2.36 41**		P	**Pn**	**10 45 53.0**	**0.0**
LIT				S	**Sn**	**10 46 24.2**	**+1.6**
LIT	**Litokhoron**	**2.36 41**		P	**Pn**	**10 45 53.0**	**0.0**
LIT				S	**Sn**	**10 46 24.2**	**+1.6**
NEO	**Neokhori**	**2.36 65**		*e*PN	**Pn**	**10 45 53.1**	**+0.1**
NEO	**Neokhori**	**2.36 65**		*e*Pb	**Pn**	**10 45 53.1**	**+0.1**
XOR	**Xorichti**	**2.36 63**		P	**Pn**	**10 45 52.7**	**-0.3**
XOR				S	**Sn**	**10 46 23.9**	**+1.3**
XOR	**Xorichti**	**2.36 63**		P	**Pn**	**10 45 52.7**	**-0.3**
XOR				S	**Sn**	**10 46 23.9**	**+1.3**
FNA	**Florina**	**2.54 16**		P	**Pn**	**10 45 55.4**	**-0.1**
FNA				S	**Sn**	**10 46 28.7**	**+1.6**
FNA	**Florina**	**2.54 16**		P	**Pn**	**10 45 55.4**	**-0.1**
FNA				S	**Sn**	**10 46 28.7**	**+1.6**
VLY	**Voula,Athens**	**2.67 99**		*e*PN	**Pn**	**10 45 56.8**	**-0.4**
VLY	**Voula,Athens**	**2.67 99**		*e*Pn	**Pn**	**10 45 56.8**	**-0.4**
OHR	**Ohrid**	**2.78 5**		*e*Pn	**Pn**	**10 45 59.7**	**+0.9**
OHR				*e*Sg	**Sg**	**10 46 40.2**	**-2.3**
OHR	**Ohrid**	**2.78 5**		*e*Pn	**Pn**	**10 45 59.6**	**+0.8**
OHR				*e*Sg	**Sg**	**10 46 40.2**	**-2.3**
AOS	**Alonnisos**	**2.79 72**		P	**Pn**	**10 45 58.4**	**-0.6**
AOS				S	**Sn**	**10 46 35.0**	**+1.7**
AOS	**Alonnisos**	**2.79 72**		P	**Pn**	**10 45 58.4**	**-0.6**
AOS				S	**Sn**	**10 46 35.0**	**+1.7**
TIP	**Timpagrande**	**3.02 287**		Pg	**Pn**	**10 46 01.8**	**-0.3**
TIP	**Timpagrande**	**3.02 287**		Pg	**Pn**	**10 46 01.8**	**-0.3**
	53nm,0.7s						
TIP	**Timpagrande**	**3.02 287**		Pg	**Pn**	**10 46 01.8**	**-0.3**
	53nm,0.7s						
SERS	**Sersale**	**3.04 284**		Pg	**Pn**	**10 46 02.0**	**-0.4**
	41nm,0.5s						
SERS	**Sersale**	**3.04 284**		Pg	**Pn**	**10 46 02.0**	**-0.4**
	41nm,0.5s						
KRUS	**Krusevo**	**3.09 11**		*e*Pn	**Pn**	**10 46 03.3**	**+0.3**
KRUS				*e*Sg	**Sn**	**10 46 40.2**	**-0.3**
KRUS	**Krusevo**	**3.09 11**		*e*Pn	**Pn**	**10 46 03.2**	**+0.2**
PLAC	**Placanica**	**3.17 273**		⇓*i*Pg	**Pn**	**10 46 03.6**	**-0.6**
	17nm,0.5s						
PLAC	**Placanica**	**3.17 273**		⇓*i*Pg	**Pn**	**10 46 03.6**	**-0.6**
	17nm,0.5s						
PHP	**Peshkopia**	**3.34 360**		*e*PN	**Pn**	**10 46 08.3**	**+1.8**
PHP	**Peshkopia**	**3.34 360**		*e*Pn	**Pn**	**10 46 08.3**	**+1.8**
	SNR=57						
CARO	**Carolei**	**3.45 287**		Pg	**Pn**	**10 46 08.6**	**+0.7**
	139nm,0.5s						
CARO	**Carolei**	**3.45 287**		Pg	**Pn**	**10 46 08.6**	**+0.7**
	139nm,0.5s						
SOI	**Samo**	**3.49 267**		Pg	**Pn**	**10 46 08.8**	**+0.3**
SOI	**Samo**	**3.49 267**		Pg	**Pn**	**10 46 08.8**	**+0.3**
	39nm,0.7s						
SOI	**Samo**	**3.49 267**		Pg	**Pn**	**10 46 08.8**	**+0.3**
	39nm,0.7s						
MPAZ	**Palizzi**	**3.54 265**		Pg	**Pn**	**10 46 08.6**	**-0.6**
	60nm,0.5s						
MPAZ	**Palizzi**	**3.54 265**		Pg	**Pn**	**10 46 08.6**	**-0.6**
	60nm,0.5s						
ORI	**Oriolo Calabro**	**3.57 300**		Pg	**Pn**	**10 46 10.3**	**+0.7**
ORI	**Oriolo Calabro**	**3.57 300**		Pg	**Pn**	**10 46 10.3**	**+0.7**
	188nm,0.3s						
ORI	**Oriolo Calabro**	**3.57 300**		Pg	**Pn**	**10 46 10.3**	**+0.7**
	188nm,0.3s						
NOCI	**Noci**	**3.59 314**		Pg	**Pn**	**10 46 10.9**	**+0.9**
	198nm,0.8s						
NOCI	**Noci**	**3.59 314**		Pg	**Pn**	**10 46 10.9**	**+0.9**
	198nm,0.8s						
CEL	**Celeste**	**3.60 270**		*e*PN	**Pn**	**10 46 09.5**	**-0.6**
CEL	**Celeste**	**3.60 270**		Pg	**Pn**	**10 46 09.7**	**-0.4**
	77nm,0.5s						
CEL	**Celeste**	**3.60 270**		Pg	**Pn**	**10 46 09.7**	**-0.4**
	77nm,0.5s						
JOPP	**Joppolo**	**3.61 276**		Pg	**Pn**	**10 46 09.9**	**-0.3**
	69nm,0.6s						
JOPP	**Joppolo**	**3.61 276**		Pg	**Pn**	**10 46 09.9**	**-0.3**
	69nm,0.6s						
LTRZ	**Laterza**	**3.62 310**		Pg	**Pn**	**10 46 10.0**	**-0.3**
LTRZ	**Laterza**	**3.62 310**		Pg	**Pn**	**10 46 10.0**	**-0.3**
	131nm,0.7s						
LTRZ	**Laterza**	**3.62 310**		Pg	**Pn**	**10 46 10.0**	**-0.3**
	131nm,0.7s						
MSCL	**Scilla**	**3.68 270**		Pg	**Pn**	**10 46 11.0**	**-0.2**
	112nm,0.7s						
MSCL	**Scilla**	**3.68 270**		Pg	**Pn**	**10 46 11.0**	**-0.2**
	112nm,0.7s						
CRAC	**Craco**	**3.73 304**		Pg	**Pn**	**10 46 11.7**	**-0.1**
	344nm,1.0s						
CRAC	**Craco**	**3.73 304**		Pg	**Pn**	**10 46 11.7**	**-0.1**
	344nm,1.0s						
PUK	**Puka**	**3.73 353**		*e*PN	**Pn**	**10 46 10.6**	**-1.2**
PUK				*i* SG	**Sn**	**10 46 51.3**	**-5.1**
PUK	**Puka**	**3.73 353**		*e*Pn	**Pn**	**10 46 10.6**	**-1.2**
	SNR=57						
ULC	**Ulcinj**	**3.74 346**		⇓*i*Pn	**Pn**	**10 46 11.0**	**-1.0**
ULC				*e*Sn	**Sn**	**10 46 52.9**	**-3.8**
ULC	**Ulcinj**	**3.74 346**		⇓*i*Pn	**Pn**	**10 46 11.0**	**-1.0**
ULC				*e*Sn	**Sn**	**10 46 52.9**	**-3.8**
MTTG	**Motta San Giov**	**3.78 266**		Pg	**Pn**	**10 46 11.7**	**-0.8**
MTTG	**Motta San Giov**	**3.78 266**		Pg	**Pn**	**10 46 11.7**	**-0.8**
	117nm,0.7s						
MTTG	**Motta San Giov**	**3.78 266**		Pg	**Pn**	**10 46 11.7**	**-0.8**
	117nm,0.7s						
MIGL	**Miglionico**	**3.85 307**		Pg	**Pn**	**10 46 14.1**	**+0.6**
	169nm,0.7s						
MIGL	**Miglionico**	**3.85 307**		Pg	**Pn**	**10 46 14.1**	**+0.6**
	169nm,0.7s						
SCHR	**S. Chirico Rap**	**3.88 300**		Pg	**Pn**	**10 46 15.1**	**+1.1**
	77nm,1.2s						
SCHR	**S. Chirico Rap**	**3.88 300**		Pg	**Pn**	**10 46 15.1**	**+1.1**
	77nm,1.2s						
AMUR	**Altamura**	**3.94 312**		Pg	**Pn**	**10 46 14.5**	**-0.2**
	87nm,0.6s						
AMUR	**Altamura**	**3.94 312**		Pg	**Pn**	**10 46 14.5**	**-0.2**
	87nm,0.6s						
SIRI	**Monte Sirino -**	**4.02 299**		Pg	**Pn**	**10 46 16.7**	**+0.9**
	45nm,0.4s						
SIRI	**Monte Sirino -**	**4.02 299**		Pg	**Pn**	**10 46 16.7**	**+0.9**
	45nm,0.4s						
BCI	**Bajram Curri**	**4.04 356**		*e*PN	**Pn**	**10 46 16.8**	**+0.7**
BCI				*i* SG	**Sn**	**10 47 00.5**	**-3.5**
BCI	**Bajram Curri**	**4.04 356**		*e*Pn	**Pn**	**10 46 16.8**	**+0.7**
	SNR=57						
PTRP	**Pietrapertosa**	**4.05 304**		Pg	**Pn**	**10 46 17.1**	**+0.8**
PTRP	**Pietrapertosa**	**4.05 304**		Pg	**Pn**	**10 46 17.1**	**+0.8**
	149nm,0.8s						
PTRP	**Pietrapertosa**	**4.05 304**		Pg	**Pn**	**10 46 17.1**	**+0.8**
	149nm,0.8s						
MCEL	**Monticello**	**4.13 300**		Pg	**Pn**	**10 46 19.2**	**+1.9**
	54nm,0.6s						
MCEL	**Monticello**	**4.13 300**		Pg	**Pn**	**10 46 19.2**	**+1.9**
	54nm,0.6s						
BUM	**Brajici-Budva**	**4.14 344**		⇑*i*Pn	**Pn**	**10 46 17.3**	**-0.1**
BUM				*e*Sn	**Sn**	**10 47 01.8**	**-4.7**
BUM	**Brajici-Budva**	**4.14 344**		⇑*i*Pn	**Pn**	**10 46 17.3**	**-0.1**
PDG	**Podgorica**	**4.19 348**		⇓*i*Pn	**Pn**	**10 46 17.2**	**-1.0**
TTG	**Podgorica**	**4.19 348**		⇓*i*Pn	**Pn**	**10 46 17.2**	**-1.0**
TTG				*e*Sn	**Sn**	**10 47 04.5**	**-3.3**
TTG	**Podgorica**	**4.19 348**		⇓*i*Pn	**Pn**	**10 46 17.2**	**-1.0**
APE	**Apeiranthos**	**4.21 106**		⇓*i*P	**Pn**	**10 46 26.8**	**+8.4**
MGR	**Morigerati**	**4.22 297**		Pg	**Pn**	**10 46 19.1**	**+0.5**
MGR	**Morigerati**	**4.22 297**		Pg	**Pn**	**10 46 19.1**	**+0.5**
	59nm,1.0s						
MGR	**Morigerati**	**4.22 297**		Pg	**Pn**

baz=141
HMAT S Sn 10 48 54.3 -13
baz=141
HMAT Matruh 9.05 141 P Pn 10 47 20.2 -4.7
HMAT S Sn 10 48 54.3 -13
SWA2 9.97 154 P Pn 10 47 33.2 -4.4
baz=153
SWA2 S Sn 10 49 14.9 -15
baz=153
SWA2 AMP 10 50 00.0
comp=E,30μm,0.5s,logA/T=4.8,baz=153
SWA2 9.97 154 P Pn 10 47 33.2 -4.3
SWA2 S Sn 10 49 14.9 -15
BRTR Keskin Array B 10.34 78 P Pn 10 47 47.2 +4.6
comp=E,0.2nm,0.3s,baz=260,slow=11,SNR=5.9
GERES GERESS Array B 11.59 337 P Pn 10 47 59.2 -0.4
comp=E,0.2nm,0.3s,baz=161,slow=17,SNR=4.3
GERES GERESS Array B 11.59 337 P Pn 10 47 59.2 -0.4
HFRF Wahat Farafira 12.95 147 P Pn 10 48 14.1 -4.3
baz=147
HFRF Wahat Farafira 12.95 147 P Pn 10 48 14.1 -4.3
AMAG Maghara 13.00 122 P Pn 10 48 15.2 -3.8
baz=122
AMAG Maghara 13.00 122 P Pn 10 48 15.2 -3.8
ASF Jabal al Asfar 14.76 110 P Pn 10 48 41.2 -1.8
comp=E,1.1nm,0.3s,baz=265,slow=21,SNR=6.0
HFS Hagfors 22.24 351 P P 10 50 10.0 -1.0
comp=E,1.5nm,0.6s,mb3.6,baz=152,slow=13,SNR=6.6
EKA Eskdalemuir Ar 23.28 325 P P 10 50 25.3 +3.2
comp=E,1.6nm,0.7s,mb3.6,baz=122,slow=10,SNR=4.1
FINES FINESS Array B 23.39 7 P P 10 50 21.9 -1.4
comp=E,0.8nm,0.4s,mb3.6,baz=295,slow=31,SNR=3.9
NOA NORSAR Array B 23.45 349 LR LR 11 01 03.8
comp=E,12nm,19.2s,baz=130,slow=40
TORD Torodi Ar. Bea 30.13 219 P P 10 51 22.5 -2.1
comp=E,0.5nm,0.7s,mb3.5,baz=31,slow=7.9,SNR=3.3
MKAR Makanchi Array 45.25 59 P P 10 53 28.6 -3.4
comp=E,0.4nm,0.4s,mb3.7,baz=281,slow=7.6,SNR=8.8
ZALV Zalesovo Beam 45.62 49 P P 10 53 32.8 -1.9
comp=E,1.6nm,0.5s,mb4.3,baz=278,slow=11,SNR=2.7

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*IDC **26** 10:52:43.4±1.3, 31°.39N×104°.19E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, MS2.7/1, Ms1 2.7/1, ms1mx2.0/34, Error ellipse: s-maj=75.6km s-min=23.1km az=56.0*
*NEIC **26** 10:52:44.6±0.7, 31°.22N×103°.89E, h10km, Error ellipse: s-maj=28.5km s-min=9.9km az=41.0*
*ISCJB **26** 10:52:45.7±0.7, 31°.24N±0°.04×103°.91E±0°.10, h28km±6km, mb3.4/5, Error ellipse: s-maj=14.2km s-min=6.3km az=171.4*
*BJI **26** 10:52:45.6, 31°.31N×104°.11E, h16km, ML3.4/11, Ms3.6/1, Ms7 3.5/1*
ISC 26 10:52:45.6±0.9, 31°.29N±0°.04×103°.93E±0°.06, h12km±7km, n13, σ0°87/18, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**201**	Pg	**Pg**	10 52 52.5	-1.0
CD2				Sg	**Sg**	10 52 59.5	+0.6
CD2				smax			
	comp=N,19μm,0.4s						
LZH	**Lanzhou**	**4.79**	**359**	*e*Pg	**Pb**	10 54 10.5	+1.1
LZH				Sg	**Sb**	10 55 08.0	+1.1
LZH				smax			
	comp=N,59nm,0.5s						
LZH				smax			
	comp=E,43nm,0.7s						
ENH	**Enshi**	**4.89**	**101**	*e*Pn	**Pn**	10 53 58.7	-0.2
XAN	**Xi'an**	**5.03**	**56**	Pn	**Pn**	10 54 00.0	-0.8
XAN				Pg	**Pg**	10 54 16.5	-5.4
XAN				Sg	**Sg**	10 55 26.8	-0.2
XAN				smax			
	comp=N,61nm,0.9s						
XAN				smax			
	comp=E,36nm,1.0s						
GYA	**Guiyang**	**5.38**	**153**	Pg	**Pn**	10 54 07.0	+1.4
GYA				Sg	**Sn**	10 55 08.5	+1.1
GYA				smax			
	comp=N,80nm,0.9s						
GYA				smax			
	comp=E,110nm,1.0s						
KSRS	**Korea Array**	**20.72**	**66**	P	**P**	10 57 30.9	+5.2
	comp=E,1.0nm,0.6s,baz=256,slow=11,SNR=5.4						
MK31	**Makanchi Array**	**22.74**	**319**	*e*P	**P**	10 57 46.5	-0.9
MKAR	**Makanchi Array**	**22.74**	**319**	P	**P**	10 57 47.7	+0.4
	comp=E,1.4nm,0.9s,mb3.4,baz=125,slow=10,SNR=8.8						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	10 58 23.1	+0.6
	comp=E,1.0nm,0.7s,mb3.4,baz=138,slow=11,SNR=4.3						
ZALV				LR	LR	11 09 28.2	
	comp=E,15nm,18.7s,baz=168,slow=38						
KURK	**Kurchatov**	**27.01**	**323**	P	**P**	10 58 26.6	-0.6
	comp=E,0.7nm,0.7s,mb3.3,baz=132,slow=9.7,SNR=4.8						
WRAB	**Tennant Creek**	**58.71**	**146**	*e*P	**P**	11 02 41.8	-1.3
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	11 03 03.5	-0.3
	comp=E,0.3nm,0.5s,mb3.6,baz=335,slow=6.6,SNR=9.1						
YKA	**Yellowknife Ar**	**81.56**	**17**	P	**P**	11 05 01.8	-0.9
	comp=E,0.2nm,0.6s,mb3.2,baz=329,slow=5.7,SNR=3.3						

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*ISCJB **26** 10:54:44.6±0.4, 23°.15N±0°.02×121°.64E±0°.02, h33km±3km, Error ellipse: s-maj=4.1km s-min=2.8km az=146.3*
*TAP **26** 10:54:44.6, 23°.18N×121°.55E, h45km, ML3.1, C*
*JMA **26** 10:54:45.4±0.4, 23°.24N×121°.69E, h95km, M2.4*
ISC 26 10:54:45.0±0.4, 23°.16N±0°.02×121°.62E±0°.02, h31km±3km, n34, σ0°87/66, 3C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.24**	**256**	P	**Pb**	10 54 52.3	+0.5
	baz=246						
CHKT				S	**Sb**	10 54 58.0	+1.6
	baz=246						
TWF1	**Yuli**	**0.35**	**304**	*i* P	**Pb**	10 54 53.3	0.0
	baz=308						
TWF1				*e*S	**Sb**	10 54 59.6	+0.6
	baz=308						
EHY	**Hungye**	**0.44**	**322**	P	**Pb**	10 54 54.2	-0.4
	baz=317						
EHY				*e*S	**Sb**	10 55 00.7	-0.4
	baz=317						
ELDTW	**Lidau**	**0.55**	**273**	⇑*i*P	**Pb**	10 54 55.4	-1.0
	baz=268						
TTN	**Taitung**	**0.59**	**227**	*e*P	**Pb**	10 54 56.7	-0.3
	baz=233						
TTN				*e*S	**Sb**	10 55 07.1	+2.0
	baz=233						
TWG	**Pinlang**	**0.60**	**236**	⇑*i*P	**Pb**	10 54 56.1	-1.1
	baz=241						
TWG				S	**Sb**	10 55 04.3	-1.1
	baz=241						
ESL	**Shilin**	**0.67**	**346**	*e*P	**Pb**	10 54 57.5	-1.0
	baz=342						
ESL				*e*S	**Sb**	10 55 06.1	-1.4
	baz=342						
YUS	**Yu-Shan**	**0.69**	**299**	⇑*i*P	**Pn**	10 54 58.4	-0.3
	baz=302						
YUS				*e*S	**Sb**	10 55 07.1	-0.9
	baz=302						
ALS	**Alishan**	**0.82**	**295**	*i* P	**Pn**	10 55 00.4	-0.1
	baz=295						
ALS				S	**Sn**	10 55 11.4	-0.2
	baz=295						
ECL	**Taimali**	**0.83**	**228**	P	**Pn**	10 54 58.6	-1.9
	baz=225						
ECL				*e*S	**Sn**	10 55 08.9	-2.7
	baz=225						
TWD	**Chiawan**	**0.92**	**359**	P	**Pn**	10 55 00.9	-0.9
	baz=350						
TWD				S	**Sn**	10 55 12.9	-1.0
	baz=350						
WTP	**Ta-pu**	**0.93**	**276**	*i* P	**Pn**	10 55 02.0	+0.2
	baz=276						
WTP				S	**Sn**	10 55 14.4	+0.3
	baz=276						
SGST	**Jiashian**	**0.95**	**266**	P	**Pn**	10 55 02.5	+0.2
	baz=265						
SGST				S	**Sn**	10 55 15.8	+1.0
	baz=265						
CHN5	**Tsauling**	**0.96**	**297**	P	**Pn**	10 55 02.9	+0.4
	baz=310						
CHN5				S	**Sn**	10 55 15.7	+0.6
	baz=310						
SMLT	**Sun Moon Lake**	**0.97**	**318**	P	**Pn**	10 55 02.5	-0.1
	baz=326						
SMLT				*e*S	**Sn**	10 55 14.6	-0.8
	baz=326						
SSD	**Sandimen**	**0.99**	**246**	P	**Pn**	10 55 02.3	-0.5
	baz=243						
SSD				*e*S	**Sn**	10 55 15.0	-0.8
	baz=243						
CHN1	**Nanshi**	**1.00**	**272**	P	**Pn**	10 55 03.4	+0.5
	baz=272						
CHN1				S	**Sn**	10 55 17.2	+1.2
	baz=272						
TYC	**Yuchr**	**1.02**	**317**	*e*P	**Pn**	10 55 03.3	+0.2
	baz=325						
TYC				*e*S	**Sn**	10 55 16.3	-0.1
	baz=325						
WHF	**Hehuan Shan**	**1.03**	**342**	P	**Pn**	10 55 03.0	-0.4
	baz=354						
WHF				*e*S	**Sn**	10 55 15.5	-1.2
	baz=354						
TWK	**Hsinying**	**1.04**	**276**	P	**Pn**	10 55 03.9	+0.4
	baz=276						
TWK				*e*S	**Sn**	10 55 17.7	+0.8
	baz=276						
EAST	**Anshuo**	**1.05**	**223**	*e*P	**Pn**	10 55 04.4	+0.9
	baz=220						
EAST				*e*S	**Sn**	10 55 15.2	-1.9
	baz=220						
TWM1	**Shoushan**	**1.15**	**253**	*e*P	**Pn**	10 55 06.5	+1.6
	baz=253						
SCZT	**Fangliau**	**1.21**	**230**	P	**Pn**	10 55 05.7	-0.1
	baz=228						
SCZT				*e*S	**Sn**	10 55 20.6	-0.4
	baz=228						
NNS	**Nan Shan**	**1.29**	**350**	*e*P	**Pn**	10 55 08.2	+1.2
	baz=359						
NNS				*e*S	**Sn**	10 55 22.4	-0.8
	baz=359						
TWQ1	**Liyutan**	**1.41**	**327**	*e*P	**Pn**	10 55 09.7	+1.1
	baz=329						
TWQ1				*e*S	**Sn**	10 55 27.8	+1.7
	baz=329						
TWC	**Suao**	**1.46**	**8**	*e*P	**Pn**	10 55 09.5	+0.2
	baz=9.0						
TWC				*e*S	**Sn**	10 55 27.4	+0.1
	baz=9.0						
ENTT	**Nioudou**	**1.48**	**358**	*e*P	**Pn**	10 55 09.7	+0.2
	baz=353						
ENTT				*e*S	**Sn**	10 55 27.5	-0.2
	baz=353						
NSTT	**Nanjuang**	**1.57**	**339**	*e*P	**Pn**	10 55 12.3	+1.5
	baz=341						
NSTT				*e*S	**Sn**	10 55 30.2	+0.2
	baz=341						
YOJ	**Yonaguni jima**	**1.82**	**44**	P	**Pn**	10 55 14.7	+0.5
YOJ				*e*S	**Sn**	10 55 36.1	-0.1
HATJ	**Hateruma jima**	**2.20**	**66**	P	**Pn**	10 55 19.5	+0.1
HATJ				*e*S	**Sn**	10 55 45.7	+0.2
IRIF	**Iriomote-Funau**	**2.27**	**58**	P	**Pn**	10 55 20.6	+0.3
IRIF				*e*S	**Sn**	10 55 48.4	+1.2
JKRS	**Kuro-shima**	**2.44**	**63**	P	**Pn**	10 55 23.3	+0.5
JKRS				*e*S	**Sn**	10 55 51.7	+0.1
JIJ	**Ishigaki jima**	**2.61**	**62**	P	**Pn**	10 55 24.8	-0.2
JIJ				*e*S	**Sn**	10 55 54.5	-1.2
JTJ	**Tarama**	**3.19**	**62**	P	**Pn**	10 55 33.0	0.0
JTJ				*e*S	**Sn**	10 56 10.0	0.0

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*ISCJB **26** 11:01:51.9±0.6, 51°.5N±0°.1×75°.5E±0°.1, h10km, Error ellipse: s-maj=18.8km s-min=5.5km az=32.8*
*IDC **26** 11:01:51.5±1.1, 51°.69N×75°.49E, h0km, mb1 3.0/4, mb1mx2.9/29, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=31.8km s-min=9.8km az=31.0*
*NNC **26** 11:01:52.6±1.3, 51°.67N×75°.54E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=52.4km s-min=9.5km az=26.0*
ISC 26 11:01:53.5±0.6, 51°.6N±0°.1×75°.5E±0°.1, h10km, n10, σ1°12/15, 5C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.16**	**116**	⇓P	**Pn**	11 02 29.1	-0.4
	0.7nm,0.3s,baz=300,slow=15						
KURBB				⇑S	**Sn**	11 02 59.9	+3.6
	7.7nm,0.6s						
KURK	**Kurchatov**	**2.17**	**113**	⇑P	**Pn**	11 02 29.1	-0.5
	3.3nm,0.5s						
KURK				⇑S	**Sn**	11 02 58.1	+1.5
	20nm,0.7s						
KURK	**Kurchatov**	**2.17**	**113**	Pn	**Pn**	11 02 28.4	-1.3
	1.2nm,0.3s,baz=302,slow=18,SNR=45						
KURK				Pg	**Pg**	11 02 31.2	-3.8
	1.3nm,0.3s,baz=302,slow=19,SNR=61						
KURK				Lg		11 02 56.5	
	1.3nm,0.3s,baz=312,slow=30,SNR=11						
VOSK	**Vostochnaya**	**2.99**	**294**	⇑Pn	**Pn**	11 02 42.2	+1.3
	2.7nm,0.4s						
BVA0	**Borovoye Array**	**3.43**	**297**	⇑Pn	**Pn**	11 02 46.1	-0.9
	0.2nm,0.7s,baz=105,slow=14,SNR=8.7						
BVAR	**Borovoye Array**	**3.43**	**297**	Pn	**Pn**	11 02 45.5	-1.5
	0.7nm,0.3s,baz=109,slow=14,SNR=9.9						
BVAR				Lg		11 03 34.3	
	2.7nm,0.3s,baz=110,slow=26,SNR=8.0						
BRVK	**Borovoye**	**3.50**	**297**	⇓Pn	**Pn**	11 02 50.1	+2.2
	4.1nm,0.7s						
ZALV	**Zalesovo Beam**	**6.14**	**64**	Pn	**Pn**	11 03 23.7	-0.4
	1.2nm,0.3s,baz=254,slow=14,SNR=10						
MK31	**Makanchi Array**	**6.56**	**134**	⇓Pn	**Pn**	11 03 29.3	-0.6
	0.3nm,0.4s						
MK31				⇓Sn	**Sn**	11 04 44.9	+0.1
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**6.56**	**134**	Pn	**Pn**	11 03 29.9	-0.1
	0.2nm,0.3s,baz=316,slow=12,SNR=4.6						
MKAR				Sn	**Sn**	11 04 44.6	-0.2
	0.4nm,0.3s,baz=321,slow=21,SNR=6.3						
MKAR				Lg		11 05 16.4	
	0.5nm,0.3s,baz=314,slow=28,SNR=6.3						

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*NEIC **26** 11:13:21.6±1.0, 9°.33S×116°.26E, h51km±10km, mb4.7/9, Error ellipse: s-maj=13.0km s-min=6.8km az=61.0*
NEIC Felt [IV] at Ampenan and [III] at Mataram. Felt [IV] at Taliwang, Sumbawa. Also felt [III] at Denpasar and Tabanan, Bali.
*ISCJB **26** 11:13:25.1±0.5, 9°.28S±0°.04×116°.31E±0°.03, h101km±4km, mb4.5/26, Error ellipse: s-maj=7.4km s-min=5.3km az=11.1*
*DJA **26** 11:13:25, 9°.58S×116°.25E, h64km, mb5.0/37*
*IDC **26** 11:13:25.6±0.7, 9°.23S×116°.26E, h84km±6km, mb4.2/17, mb1 4.3/18, mb1mx4.2/24, mbtmp4.2/18, MS3.4/7, Ms1 3.4/7, ms1mx3.0/27, Error ellipse: s-maj=14.1km s-min=9.3km az=85.0*
ISC 26 11:13:25.9±0.4, 9°.35S±0°.04×116°.31E±0°.03, h90km±4km, n113, σ1°30/110, mb4.5/26, 2C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**1.19**	**325**	P	**Pn**	11 13 47.5	-0.4
KHKI				S	**Sn**	11 14 04.1	-0.3
DNP	**Denpasar**	**1.27**	**301**	P	**Pn**	11 13 48.7	-0.1
DNP				S	**Sn**	11 14 06.4	+0.3
SRBI	**Singaraja**	**1.66**	**319**	P	**Pn**	11 13 53.7	+0.1
SRBI				S	**Sn**	11 14 15.6	+0.9
NBBI	**Negara**	**1.93**	**300**	P	**Pn**	11 13 57.3	+0.2
NBBI				S	**Sn**	11 14 21.5	+0.5
BYJI	**Banyuwangi**	**2.23**	**300**	P	**Pn**	11 14 01.5	+0.4
ABJI	**Asem Bagus**	**2.56**	**307**	P	**Pn**	11 14 06.3	+0.7
GMJI	**Gumukmas**	**3.02**	**290**	P	**Pn**	11 14 10.9	-0.8
KMMI	**Kalianget**	**3.25**	**314**	P	**Pn**	11 14 16.7	+1.9
WSI	**Waingapu**	**3.95**	**95**	P	**Pn**	11 14 24.3	+0.1
KRKI	**Karangkates**	**3.99**	**287**	P	**Pn**	11 14 25.9	+1.1
GRJI	**Gresik**	**4.49**	**302**	P	**Pn**	11 14 32.4	+0.8
PWJI	**Pagerwojo**	**4.64**	**286**	P	**Pn**	11 14 32.6	-1.0
SJI	**Sawahan**	**4.77**	**289**	P	**Pn**	11 14 34.2	-1.1
NGJI	**Ngawi**	**5.18**	**292**	P	**Pn**	11 14 42.1	+1.1
	335nm,0.8s,1.1nm						
PCJI	**Pacitan**	**5.20**	**282**	P	**Pn**	11 14 40.1	-1.1
	397nm,1.2s						
KAPI	**Kappang**	**5.50**	**39**	P	**Pn**	11 14 45.4	+0.1
	48nm,0.3s,baz=203,slow=7.7,SNR=117						
KAPI				S	**Sn**	11 15 46.5	-0.7
	49nm,0.3s,baz=261,slow=24,SNR=25						
KAPI				LR	LR	11 17 21.1	
	comp=Z,217nm,19.1s,baz=229,slow=43						
KAPI	**Kappang**	**5.50**	**39**	*e*Pn	**Pn**	11 14 42.6	-2.7
KAPI				S	**Sn**	11 15 46.5	-0.7
KAPI				LR	LR	11 17 21.1	
UGM	**Wanagama**	**5.89**	**284**	P	**Pn**	11 14 50.2	-0.5
	362nm,0.8s,1.8nm						
MMRI	**Maumere**	**5.90**	**84**	P	**Pn**	11 14 49.6	-1.2
	352nm,1.0s,4μm1.4nm						
KBKI	**Kotabaru**	**6.01**	**359**	P	**Pn**	11 14 54.1	+1.8
	119nm,0.7s						
BBKI	**Banjar Baru**	**6.02**	**346**	P	**Pn**	11 14 55.1	+2.6
	131nm,0.7s,3μm0.7nm						
SMRI	**Semarang**	**6.24**	**291**	P	**Pn**	11 14 56.7	+1.3
	203nm,0.7s,0.9nm						
TTSI	**Tana Toraja**	**7.17**	**29**	P	**Pn**	11 15 11.6	+3.5
	72nm,0.7s						
PBKI	**Pangkalan Bun**	**8.05**	**325**	P	**Pn**	11 15 22.6	+2.5
LEM	**Lembang**	**8.96**	**286**	P	**Pn**	11 15 33.3	+0.8
	102nm,0.8s						
CBJI	**Citeko**	**9.81**	**287**	P	**Pn**	11 15 42.3	-1.8
	399nm,0.6s						
DBJI	**Dramaga**	**9.86**	**286**	P	**Pn**	11 15 44.3	-0.5
	110nm,0.9s						
STKI	**Sintang**	**10.51**	**333**	P	**Pn**	11 15 57.1	+3.4
	112nm,0.6s						
CGJI	**Cibinong**	**10.86**	**284**	P	**Pn**	11 15 56.0	-2.3
RBSI	**Rajabasa**	**11.03**	**288**	P	**Pn**	11 15 58.7	-2.1
	90nm,0.9s						
MBWA	**Marble Bar**	**12.20**	**165**	*e*P	**Pn**	11 16 09.4	-7.1
MBWA				*e*S	**Sn**	11 18 12.0	-19
MBWA	**Marble Bar**	**12.20**	**165**	*e*Pn	**Pn**	11 16 11.1	-5.4
	92nm,0.4s						
MBWA				*e*Sn	**Sn**	11 18 11.4	-19
MBWA	**Marble Bar**	**12.20**	**165**	P	**Pn**	11 16 11.7	-4.8
	124nm,0.6s,2μm						
KSM	**Kuching**	**12.30**	**331**	*e*Pn	**Pn**	11 16 14.9	-3.0
	33nm,1.1s						
KSM	**Kuching**	**12.30**	**331**	P	**Pn**	11 16 20.9	+3.1
	29nm,1.4s						
KASI	**Kota Agung**	**12.31**	**287**	P	**Pn**	11 16 17.4	-0.6
	87nm,0.5s,1μm						
PPBI	**Pangkal Pinang**	**12.38**	**305**	P	**Pn**	11 16 22.5	+3.6
	33nm,0.9s,2μm						
SBUM	**Sibu**	**12.40**	**341**	P	**Pn**	11 16 22.4	+3.1
	36nm,0.9s,370nm						
FITZ	**Fitzroy Crossi**	**12.56**	**135**	*e*P	**Pn**	11 16 16.6	-4.7
	61nm,0.5s						
FITZ				*e*S	**Sn**	11 18 28.0	-11
FITZ	**Fitzroy Crossi**	**12.56**	**135**	P	**Pn**	11 16 17.4	-3.9
	7.6nm,0.3s,baz=318,slow=8.1,SNR=129						
FITZ				S	**Sn**	11 18 28.1	-11
	6.4nm,0.3s,baz=202,slow=18,SNR=5.0						
FITZ				LR	LR	11 21 17.4	
	comp=Z,96nm,18.7s,baz=334,slow=37						
FITZ	**Fitzroy Crossi**	**12.56**	**135**	P	**Pn**	11 16 18.2	-3.1
	89nm,1.0s						
MDSI	**Maura Dua**	**12.97**	**291**	P	**Pn**	11 16 26.7	-0.1
	31nm,0.6s						
KNA	**Kununurra**	**13.72**	**119**	*e*P	**Pn**	11 16 32.2	-4.4
	46nm,0.4s						
KNA				*e*S	**Sn**	11 18 53.0	-15
MYLDM	**Lahad Datu**	**14.59**	**9**	P	**Pn**	11 16 57.4	+9.5
KSI	**Kapahiang**	**14.75**	**292**	P	**Pn**	11 16 47.3	-2.6
	185nm,0.3s						
KKM	**Kota Kinabalu**	**15.29**	**360**	*e*Pn	**Pn**	11 16 54.5	-2.3
	22nm,0.6s						
KKM	**Kota Kinabalu**	**15.29**	**360**	P	**Pn**	11 17 01.8	+5.0
	34nm,0.8s						
KAKA	**Kakadu**	**16.18**	**103**	*e*P	**Pn**	11 17 04.8	-3.2
	15nm,0.4s						
KAKA	**Kakadu**	**16.18**	**103**	*e*Pn	**Pn**	11 17 05.0	-3.0
	59nm,0.6s						
KAKA	**Kakadu**	**16.18**	**103**	P	**Pn**	11 17 05.3	-2.7
	50nm,0.8s,410nm						
SDSI	**Sungai Dareh**	**17.00**	**299**	P	**Pn**	11 17 18.6	+0.5
	20nm,0.7s						
PDSI	**Padang**	**17.86**	**297**	P	**Pn**	11 17 27.4	-1.1
	85nm,0.5s,3μm						
PPI	**Padang Panjang**	**18.13**	**298**	P	**Pn**	11 17 31.5	-0.4
	23nm,0.5s						
DAV	**Davao City (W)**	**18.74**	**30**	LR	LR	11 24 33.5	
	comp=Z,89nm,21.0s,baz=210,slow=36						
SISI	**Saibi**	**18.89**	**294**	P	**Pn**	11 17 39.8	-1.1
	56nm,0.6s						
COCO	**West Island**	**19.34**	**260**	P	**Pn**	11 17 44.6	-1.6
	107nm,2.0s						
MNSI	**Mandailing Nat**	**19.47**	**300**	P	**Pn**	11 17 42.5	-5.2
	20nm,0.7s,1μm						
WRAB	**Tennant Creek**	**20.36**	**123**	*e*P	**P**	11 17 55.0	-0.3
	11nm,0.6s						
IPM	**Ipoh**	**20.51**	**311**	P	**P**	11 17 57.2	+0.3
	28nm,0.7s						
PSI	**Prapat**	**21.11**	**304**	P	**P**	11 18 01.5	-1.9
	32nm,0.8s,mb4.7,baz=128,slow=5.8,SNR=11						
KULM	**Kulim**	**21.33**	**312**	*e*P	**P**	11 18 04.6	-1.1
	8.9nm,0.8s,mb4.2						
TSI	**Tuntungan**	**21.81**	**305**	P	**P**	11 18 12.1	+1.3
	134nm,0.9s,mb5.3						
ASAR	**Alice Springs**	**22.04**	**132**	P	**P**	11 18 13.2	0.0
	8.7nm,0.5s,mb4.3,baz=306,slow=9.3,SNR=108						
ASAR				PcP	PcP	11 22 09.2	+1.0
	3.5nm,0.7s,baz=358,slow=3.1,SNR=7.6						
ASAR				S	**S**	11 22 20.1	+9.0
	12nm,0.7s,baz=299,slow=22,SNR=15						
KLBR	**Kellerberrin**	**22.18**	**177**	*e*P	**P**	11 18 24.8	+10
	8.6nm,0.4s,mb4.4						
KLBR				*e*S	**S**	11 22 06.9	-6.2
NWAO	**Narrogin (SRO)**	**23.48**	**178**	P	**P**	11 18 27.5	0.0
	17nm,0.6s,mb4.6,baz=353,slow=10,SNR=18						
NWAO				S	**S**	11 22 39.0	+4.7
	31nm,0.5s,baz=259,slow=15,SNR=8.0						
FORT	**Forrest**	**23.98**	**154**	*e*P	**P**	11 18 32.4	+0.4
	39nm,0.8s,mb4.8						
FORT				*e*S	**S**	11 22 51.3	+8.9
FORT	**Forrest**	**23.98**	**154**	*e*P	**P**	11 18 31.7	-0.2
	36nm,0.6s,mb4.9						
CTA	**Charters Tower**	**30.82**	**114**	P	**P**	11 19 35.0	+1.6
	6.0nm,0.8s,mb4.4,baz=254,slow=6.4,SNR=3.6						
CTA				LR	LR	11 33 17.5	
	comp=Z,92nm,19.0s,baz=231,slow=39						
STKA	**Stephens Creek**	**32.44**	**137**	*e*P	**P**	11 19 48.0	+0.5
	7.3nm,0.7s,mb4.5						
STKA				*e*S	PcS	11 26 16.2	-1.8
STKA	**Stephens Creek**	**32.44**	**137**	P	**P**	11 19 48.4	+0.8
	11nm,0.8s,mb4.7,baz=304,slow=8.9,SNR=20						
STKA				PcP	PcP	11 22 33.8	+0.9
	4.7nm,0.5s,baz=329,slow=6.2,SNR=4.3						
STKA	**Stephens Creek**	**32.44**	**137**	*e*P	**P**	11 19 47.9	+0.4
STKA				PcP	PcP	11 22 33.8	+0.9
CMAR	**Chiang Mai Arr**	**32.51**	**328**	P	**P**	11 19 49.1	+0.9
	2.1nm,0.7s,mb4.1,baz=158,slow=8.2,SNR=9.4						
CMAR				PcP	PcP	11 22 34.5	+1.3
	1.1nm,0.7s,baz=172,slow=3.5,SNR=4.6						
CMAR				ScP	ScP	11 26 10.2	+1.0
	1.8nm,0.7s,baz=174,slow=2.6,SNR=4.5						
CMAR				LR	LR	11 33 27.9	
	comp=Z,64nm,18.8s,baz=160,slow=37						
**

2.8nm,0.5s,mb4.4,baz=143,slow=4.8,SNR=16
BVAR **Borovoye Array 73.37 333** P **P 11 24 46.7 -1.1**
3.7nm,0.8s,mb4.3,baz=148,slow=8.7,SNR=13
ABKAR **Akbulak array 76.33 326** *eP* **P 11 25 04.0 -0.9**
4.2nm,0.7s,mb4.3
SYO **Syowa Base 76.57 201⇑** *eP* **P 11 25 06.0 0.0**
SYO **Syowa Base 76.57 201⇑** *ePcP* PcP 11 25 16.2 -1.0
KMBO **Kilima Mbogo 79.02 271** P **P 11 25 21.9 +1.2**
2.8nm,1.1s,mb4.0,baz=180,slow=24,SNR=4.5
QSPA **South Pole Qui 80.65 180** *eP* **P 11 25 29.5 +1.2**
11nm,1.1s,mb4.6
LSZ **Lusaka 85.78 255** *eP* **P 11 25 56.9 +1.0**
12nm,0.8s,mb4.9
BOSA **Boshof 86.50 242** P **P 11 26 00.7 +1.5**
7.8nm,0.6s,mb4.8,baz=98,slow=3.8,SNR=20
BOSA pP pP 11 26 23.1 -0.2
3.4nm,0.7s,baz=123,slow=4.8,SNR=3.2
BRTR **Keskin Array B 90.32 310** P **P 11 26 18.4 +1.4**
1.6nm,0.8s,mb4.2,baz=128,slow=6.6,SNR=9.6
VNA2 **Neumayer--Watz 91.59 196** *e* **P 11 26 23.7 +1.4**
VNA1 **Neumayer--Stat 91.98 196** *e* **P 11 26 25.6 +1.5**
YKA **Yellowknife Ar 115.58 24** PKP PKPdf 11 31 57.1 0.0
0.8nm,0.6s,baz=310,slow=1.8,SNR=12
TORD **Torodi Ar. Bea 115.90 280** PKP PKPdf 11 31 58.9 -0.2
1.3nm,0.9s,baz=38,slow=2.6,SNR=5.2
TORD pPKP pPKPdf 11 32 21.8 -2.4
0.7nm,0.5s,baz=67,slow=1.7,SNR=4.2
NVAR **Mina Array Bea 123.28 50** PKP PKPdf 11 32 14.6 +1.9
1.2nm,0.7s,baz=263,slow=2.1,SNR=13
NVAR pPKP pPKPdf 11 32 37.1 -0.6
0.5nm,0.7s,baz=238,slow=2.9,SNR=3.1
NVAR **Mina Array Bea 123.28 50** PKP PKPdf 11 32 14.6 +1.9
NVAR pPKP pPKPdf 11 32 37.1 -0.6
1.3nm,0.4s,baz=178,slow=4.1,SNR=7.9
MSU **Marysvale 127.82 48** *e*PKPdf PKPdf 11 32 23.9 +2.6
PDAR **Pinedale Array 127.97 42** PKP PKPdf 11 32 22.9 +1.4
0.4nm,0.5s,baz=108,slow=3.3,SNR=4.7
TXAR **Lajitas Array 137.65 56** PKhKP 11 32 29.2
0.1nm,0.5s,baz=345,slow=19,SNR=4.3
CPUP **Villa Florida 144.00 190** PKP PKPdf 11 32 51.2 -0.4
1.3nm,0.4s,baz=178,slow=4.1,SNR=7.9
WCI **Wyandotte Cave 144.78 32** *e*PKPdf PKPdf 11 32 51.7 -0.9
WVT **Waverly 145.47 36** *e*PKPdf PKPdf 11 32 53.9 0.0
SSPA **Standing Stone 146.39 20** *e*PKPdf PKPdf 11 32 55.9 +0.6
TZTN **Tazewell 147.48 31** *e*PKPdf PKPbc 11 32 59.8 -0.1
LRAL **Lakeview Retre 148.09 39** *e*PKPdf PKPbc 11 33 01.6 0.0
LPAZ **La Paz 154.16 170** PKP PKPdf 11 33 10.2 +2.1
0.9nm,0.8s,baz=64,slow=10,SNR=3.2
LPAZ **La Paz 154.16 170** PKP PKPdf 11 33 10.2 +2.1
LPAZ *e*PKPbc PKPbc 11 33 18.8 +2.5

IDC 26 11:17:04.8±1.6, 10°.30N×94°.79E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/25, mbtmp3.8/4, ML4.0/1, MS3.6/2, Ms1 3.5/2, ms1mx2.6/32, Error ellipse: s-maj=58.4km s-min=28.6km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.51**	**151**	LR	LR	11 23 13.2	
	comp=Z,260nm,19.2s,baz=268,slow=43						
CMAR	**Chiang Mai Arr**	**9.05**	**26**	Pn	Pn	11 19 16.4	-0.5
	0.4nm,0.3s,baz=213,slow=15,SNR=6.7						
KURK	**Kurchatov**	**42.44**	**345**	P	P	11 25 01.3	0.0
	1.9nm,0.8s,baz=158,slow=7.1,SNR=4.7						
ASAR	**Alice Springs**	**51.01**	**132**	P	P	11 26 09.0	+0.2
	1.4nm,0.8s,baz=300,slow=6.0,SNR=4.0						
STKA	**Stephens Creek**	**61.33**	**135**	LR	LR	11 56 34.9	
	comp=Z,61nm,20.1s,baz=13,slow=39						
GERES	**GERESS Array B**	**76.46**	**318**	P	P	11 28 56.3	-0.3
	0.2nm,0.2s,baz=108,slow=8.3,SNR=4.3						

IDC 26 11:32:37.4±2.0, 8°.99S×127°.55E, h0km, mb3.8/4, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML3.6/2, Error ellipse: s-maj=91.6km s-min=28.6km az=76.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.24**	**191**	Pn	Pn	11 34 52.3	+0.2
	0.4nm,0.3s,baz=33,slow=9.9,SNR=13						
ASAR	**Alice Springs**	**15.81**	**158**	Pn	Pn	11 36 20.9	-0.6
	0.3nm,0.3s,baz=329,slow=12,SNR=26						
CMAR	**Chiang Mai Arr**	**39.25**	**314**	P	P	11 40 07.7	-0.3
	1.1nm,0.6s,baz=145,slow=6.6,SNR=9.0						
MKAR	**Makanchi Array**	**68.59**	**328**	P	P	11 43 42.1	0.0
	0.5nm,0.7s,baz=119,slow=9.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**72.32**	**335**	P	P	11 44 03.8	-0.9
	1.2nm,0.9s,baz=99,slow=7.4,SNR=4.6						
BVAR	**Borovoye Array**	**78.47**	**329**	P	P	11 44 41.5	+1.3
	0.3nm,0.4s,baz=129,slow=5.7,SNR=2.9						

*IDC **26** 11:45:20.2±1.6, 13°.17N×94°.87E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.5/24, mbtmp3.7/5, ML3.9/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/28, Error ellipse: s-maj=44.6km s-min=24.0km az=63.0*
*ISCJB **26** 11:45:29.0±3.3, 13°.6N±0°.2×95°.8E±0°.1, h71km±27km, mb3.7/5, Error ellipse: s-maj=42.9km s-min=13.3km az=29.7*

ISC 26 11:45:30.6±3.0, 13°.6N±0°.2×95°.8E±0°.2, h68km±25km, n22, σ0s56/17, mb3.7/5, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**4.66**	**63**	P	**Pn**	**11 46 37.8**	**-0.6**
BDT	**Bhumibol Dam**	**4.74**	**40**	P	**Pn**	**11 46 40.0**	**+0.4**
	11nm,0.8s						
CMAR	**Chiang Mai Arr**	**5.68**	**32**	Pn	**Pn**	**11 46 56.7**	**+4.3**
	0.6nm,0.3s,baz=223,slow=15,SNR=14						
CMAR				Sn	Sx	11 48 14.5	
	0.2nm,0.3s,baz=226,slow=32,SNR=6.0						
PSI	**Prapat**	**11.18**	**164**	LR	LR	11 52 42.9	
	comp=Z,208nm,18.2s,baz=54,slow=40						
SHL	**Shillong**	**12.44**	**343**	*eP*	**Pn**	**11 48 20.0**	**-4.8**
SHL				*eS*	x	11 49 35.0	
ODAN	**Odare**	**15.35**	**330**	*eP*	**Pn**	**11 49 04.0**	**+0.8**
	9.2nm,0.5s						
TAPN	**Taplejung**	**15.62**	**332**	*eP*	**Pn**	**11 49 07.2**	**+0.6**
	9.9nm,0.6s						
RAMN	**Ramite**	**15.81**	**328**	*eP*	**Pn**	**11 49 09.2**	**+0.1**
	67nm,1.1s						
PALK	**Pallekele**	**16.13**	**248**	LR	LR	11 54 53.0	
	comp=Z,60nm,19.4s,baz=86,slow=38						
PKI	**Pulchoki**	**16.94**	**327**	*eP*	**Pn**	**11 49 23.1**	**-0.1**
	12nm,0.6s						
PKIN	**Phulchoki**	**16.95**	**327**	*eP*	**Pn**	**11 49 23.2**	**-0.1**
	18nm,0.7s						
GUN	**Gumba**	**16.96**	**328**	*eP*	**Pn**	**11 49 23.4**	**-0.1**
	32nm,0.9s						
DMN	**Daman**	**17.13**	**326**	*eP*	**Pn**	**11 49 24.6**	**-1.0**
	33nm,0.9s						
KKN	**Kakani**	**17.18**	**327**	*eP*	**Pn**	**11 49 26.1**	**-0.1**
	23nm,0.8s						
MKAR	**Makanchi Array**	**34.96**	**344**	P	**P**	**11 52 15.2**	**-0.9**
	1.4nm,0.9s,mb3.8,baz=162,slow=8.7,SNR=6.0						
KSRS	**Korea Array**	**37.16**	**44**	LR	LR	12 08 30.1	
	comp=Z,60nm,18.5s,baz=185,slow=36						
KURK	**Kurchatov**	**39.55**	**343**	P	**P**	**11 52 54.7**	**-0.1**
	0.5nm,0.3s,mb3.8,baz=155,slow=8.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**41.16**	**350**	P	**P**	**11 53 08.8**	**+0.7**
	0.5nm,0.4s,mb3.7,baz=169,slow=8.4,SNR=3.1						
BVAR	**Borovoye Array**	**44.20**	**338**	LR	LR	12 17 14.5	
	comp=Z,41nm,18.3s,baz=257,slow=43						
ASAR	**Alice Springs**	**52.55**	**135**	P	**P**	**11 54 37.6**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=312,slow=6.6,SNR=7.9						
STKA	**Stephens Creek**	**63.01**	**137**	LR	LR	12 26 55.8	
	comp=Z,66nm,20.8s,baz=25,slow=39						
GERES	**GERESS Array B**	**74.70**	**317**	P	**P**	**11 57 11.0**	**+8.0**
	0.7nm,0.7s,mb3.5,baz=65,slow=6.3,SNR=4.8						

IGQ 26 11:58:44.7, 1°.33S×80°.32W, h9km±5km, Mb4.2, Ms4.0, 3C-8D, Error ellipse: s-maj=4.4km s-min=1.9km az=146.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.49**	**305**	⇓P	Pg	11 58 54.0	-0.3
JAMA	**Jama**	**1.07**	**6**	P	Pg	11 59 04.4	-0.8
JAMA	**Jama**	**1.07**	**6**	S	Sg	11 59 20.2	+1.1
IGUA	**Igualata**	**1.69**	**95**	S	Sn	11 59 39.5	+3.4
IGUA	**Igualata**	**1.69**	**95**	P	Pn	11 59 16.6	+2.3
RIOE	**Riobamba**	**1.74**	**104**	S	Sn	11 59 40.1	+2.7
RIOE	**Riobamba**	**1.74**	**104**	P	Pn	11 59 17.3	+2.3
ARRY	**Arrayan**	**1.87**	**95**	⇓S	Sn	11 59 43.8	+3.1
ARRY	**Arrayan**	**1.87**	**95**	⇓P	Pn	11 59 19.4	+2.5
PATA	**Patacocha**	**1.89**	**95**	S	Sn	11 59 44.2	+3.0
PATA	**Patacocha**	**1.89**	**95**	P	Pn	11 59 20.3	+3.1
RUN5	**Runtun**	**1.90**	**93**	P	Pn	11 59 19.8	+2.6
ULBA	**Ulba**	**1.92**	**94**	P	Pn	11 59 20.4	+3.0
CAMI	**Rancho Maria**	**1.93**	**70**	P	Pn	11 59 21.8	+4.2
PISA	**Pisayambo**	**1.95**	**82**	S	Sn	11 59 44.9	+2.3
PISA	**Pisayambo**	**1.95**	**82**	P	Pn	11 59 20.6	+2.6
NAS2	**Nasa**	**1.97**	**70**	⇓P	Pn	11 59 22.1	+3.9
MOV1	**Cotopaxi Vol s**	**1.98**	**72**	P	Pn	11 59 20.6	+2.3
VC1	**Cotopaxi 1**	**2.04**	**70**	P	Pn	11 59 22.6	+3.4
PITA	**Cotopaxi Volc**	**2.04**	**68**	⇑S	Sn	11 59 49.8	+5.1
PITA	**Cotopaxi Volc**	**2.04**	**68**	⇑P	Pn	11 59 22.2	+3.0
JUA2	**San Juan 2**	**2.04**	**57**	⇓P	Pn	11 59 20.5	+1.3
TAMB	**Tambo**	**2.05**	**72**	S	Sn	11 59 53.1	+8.1
TAMB	**Tambo**	**2.05**	**72**	P	Pn	11 59 22.7	+3.4
TERV	**Terraza Guagua**	**2.06**	**56**	P	Pn	11 59 21.5	+2.0
PINO	**Pino**	**2.07**	**56**	P	Pn	11 59 20.5	+0.9
GGP	**Refugio Guagua**	**2.07**	**56**	⇑P	Pn	11 59 20.8	+1.1
COV1	**Cotopaxi Volc**	**2.08**	**71**	S	Sn	11 59 48.2	+2.3
COV1	**Cotopaxi Volc**	**2.08**	**71**	P	Pn	11 59 21.3	+1.5
MACE	**Macas**	**2.31**	**113**	⇓P	Pn	11 59 26.8	+3.9
ANTI	**Antisana**	**2.33**	**68**	⇓P	Pn	11 59 26.9	+3.7
ANTI	**Antisana**	**2.33**	**68**	⇓S	Sn	11 59 56.2	+4.2
COTA	**Cotacachi**	**2.58**	**50**	S	Sn	12 00 02.3	+4.1
COTA	**Cotacachi**	**2.58**	**50**	P	Pn	11 59 28.9	+2.2
CAYA	**Cayambe**	**2.71**	**59**	S	Sn	12 00 08.7	+7.2
CAYA	**Cayambe**	**2.71**	**59**	P	Pn	11 59 32.4	+3.9

*ISK **26** 12:00:03.9, 38°.47N×37°.89E, h11km, MD3.1*
*ISCJB **26** 12:00:04.5±0.5, 38°.42N±0°.04×37°.89E±0°.05, h10km, Error ellipse: s-maj=5.4km s-min=5.2km az=160.7*
*CSEM **26** 12:00:04.1±0.3, 38°.43N×37°.90E, h5km, MD2.9, Error ellipse: s-maj=8.7km s-min=6.2km az=5.0*
*DDA **26** 12:00:04.1, 38°.40N×37°.87E, h7km±2km, Md2.9*

ISC 26 12:00:03.6±0.8, 38°.46N±0°.03×37°.83E±0°.05, h0km±8km, n29, σ1s15/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.18**	**157**	*i* P	**Pg**	**12 00 06.4**	**-0.7**
AKCD				*i* S	**Sg**	**12 00 09.3**	**-0.1**
AKCD	**Akcadag**	**0.18**	**157**	*i* P	**Pg**	**12 00 06.4**	**-0.7**
AKCD				*i* S	**Sg**	**12 00 09.3**	**-0.1**
MYA	**Malataya**	**0.48**	**106**	*e*PG	**Pg**	**12 00 13.1**	**+0.2**
MYA				*e*SG	**Sg**	**12 00 20.1**	**+0.9**
MYA	**Malataya**	**0.48**	**106**	*e*Pg	**Pg**	**12 00 13.1**	**+0.2**
MYA				*e*Sg	**Sg**	**12 00 20.1**	**+0.9**
DARE	**Darende-Malaty**	**0.49**	**357**	*e*PG	**Pg**	**12 00 10.7**	**-2.3**
DARE				*e*SG	**Sg**	**12 00 16.5**	**-2.8**
DARE	**Darende-Malaty**	**0.49**	**357**	*e*Pg	**Pg**	**12 00 10.7**	**-2.3**
DARE				*e*Sg	**Sg**	**12 00 16.5**	**-2.8**
ELZG	**Elazig**	**0.90**	**87**	*i* P	**Pg**	**12 00 20.7**	**-0.3**
ELZG				*i* S	**Sg**	**12 00 36.0**	**+3.3**
ELZG	**Elazig**	**0.90**	**87**	*i* P	**Pg**	**12 00 20.7**	**-0.3**
ELZG				*i* S	**Sg**	**12 00 36.0**	**+3.3**
SARI	**SarD1z-Kayseri**	**0.92**	**284**	*e*PN	**Pn**	**12 00 26.7**	**+3.0**
SARI	**SarD1z-Kayseri**	**0.92**	**284**	*e*Pn	**Pn**	**12 00 26.7**	**+3.0**
KEMA	**Kemaliye**	**0.95**	**32**	*i* P	**Pg**	**12 00 23.5**	**+1.6**
KEMA				*i* S	**Sg**	**12 00 40.2**	**+5.9**
KEMA	**Kemaliye**	**0.95**	**32**	*i* P	**Pg**	**12 00 23.5**	**+1.6**
KEMA				*i* S	**Sg**	**12 00 40.2**	**+5.9**
GZT	**Gaziantep**	**1.13**	**191**	*i* P	**Pg**	**12 00 24.9**	**-0.3**
GZT				*i* S	**Sg**	**12 00 39.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.16**	**94**	*e*PN	**Pn**	**12 00 25.5**	**-1.6**
SVRC	**Sivrice-ELAZID**	**1.16**	**94**	*e*Pn	**Pn**	**12 00 25.5**	**-1.6**
KMRS	**Kahramanmaras**	**1.21**	**218**	*e*PN	**Pn**	**12 00 27.4**	**-0.3**
KMRS	**Kahramanmaras**	**1.21**	**218**	*e*Pn	**Pn**	**12 00 27.4**	**-0.3**
URFA	**Urfa**	**1.28**	**142**	*e*PN	**Pn**	**12 00 28.1**	**-0.6**
URFA	**Urfa**	**1.28**	**142**	*e*Pn	**Pn**	**12 00 28.2**	**-0.6**
PTK	**Pertek**	**1.29**	**70**	*e*PN	**Pn**	**12 00 27.8**	**-1.1**
PTK	**Pertek**	**1.29**	**70**	*e*Pn	**Pn**	**12 00 27.8**	**-1.1**
GAZ	**Gaziantep**	**1.38**	**201**	*e*PN	**Pn**	**12 00 30.6**	**+0.5**
GAZ	**Gaziantep**	**1.38**	**201**	*e*Pn	**Pn**	**12 00 30.6**	**+0.5**
SVSK	**Karacayir**	**1.59**	**336**	*e*PN	**Pn**	**12 00 33.0**	**+0.1**
SVSK	**Karacayir**	**1.59**	**336**	*e*Pn	**Pn**	**12 00 33.1**	**+0.1**
BNN	**Bunyan**	**1.60**	**285**	*e*PN	**Pn**	**12 00 33.6**	**+0.5**
BNN	**Bunyan**	**1.60**	**285**	*e*Pn	**Pn**	**12 00 33.6**	**+0.4**
YOZ	**Yozgat**	**2.28**	**302**	*e*PN	**Pn**	**12 00 43.3**	**+0.8**
YOZ	**Yozgat**	**2.28**	**302**	*e*Pn	**Pn**	**12 00 43.3**	**+0.8**

*NEIC **26** 12:10:06.1, 60°.35N×141°.21W, h12km, ML2.5(AEIC), After AEIC.*

PGC 26 12:10:09.8±10.0, 60°.44N×141°.15W, h15km, ML2.5/3, 4D, 158km northwest of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	**Haines Junctio**	**1.84**	**76**	⇓Pn	Pn	12 10 41.1	+0.4
HYT				⇓Sg	Sg	12 11 06.8	-2.0
DIV	**Divide**	**2.37**	**289**	*e*Pn	Pn	12 10 43.5	-4.6
DIV				*e*Sn	Sn	12 11 13.7	-3.0
MENT	**Mentasta**	**2.79**	**335**	*e*Pn	Pn	12 10 53.0	-0.8
MENT				*e*Sn	Sn	12 11 31.0	+3.9
WHY	**Whitehorse**	**3.10**	**83**	⇑Pn	Pn	12 10 55.7	-2.4
WHY				⇑Sn	Sn	12 11 33.0	-1.9
DAWY	**Dawson**	**3.73**	**12**	*e*Pn	Pn	12 11 05.6	-1.0
DAWY	**Dawson**	**3.73**	**12**	⇓Pn	Pn	12 11 06.1	-0.6
DAWY				⇑Sn	Sn	12 11 50.0	-0.2
DAWY				⇓Sg	Sg	12 12 05.7	-3.7
EGAK	**Eagle**	**4.35**	**360**	*e*Pn	Pn	12 11 14.4	-0.8
EGAK				*e*Sg	Sg	12 12 28.1	-1.2

*IDC **26** 13:13:39.5±0.9, 31°.20N×103°.70E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/26, mbtmp3.8/9, ML4.0/2, MS3.0/4, Ms1 3.0/4, ms1mx2.6/29, Error ellipse: s-maj=32.8km s-min=17.8km az=62.0*
*NEIC **26** 13:13:41.4±0.5, 31°.23N×103°.69E, h10km, mb4.8/1, Error ellipse: s-maj=13.4km s-min=8.1km az=63.0*
*ISCJB **26** 13:13:42.2±0.9, 31°.23N±0°.05×103°.79E±0°.06, h30km±7km, mb3.9/8, MS2.8/3, Error ellipse: s-maj=9.2km s-min=8.8km az=10.3*
*MOS **26** 13:13:42.4±0.6, 31°.19N×103°.70E, h33km, mb3.9/5, Error ellipse: s-maj=27.5km s-min=14.4km az=99.6*
*BJI **26** 13:13:43.8, 31°.16N×103°.66E, h15km, mB4.3/2, mb4.3/2, ML3.9/19, Ms3.6/6, Ms7 3.3/7*

ISC 26 13:13:41.6±0.8, 31°.29N±0°.03×103°.71E±0°.06, h11km±6km, n32, σ1s01/41, mb3.9/8, MS2.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.38**	**173**	Pg	**Pg**	**13 13 49.5**	**+0.4**
CD2				Sg	**Sg**	**13 13 54.5**	**+0.2**
CD2				smax			
	comp=N,11μm,0.6s						
LZH	**Lanzhou**	**4.78**	**1**	*e*Pn	**Pn**	**13 15 00.5**	**+6.9**
LZH				Pg	**Pg**	**13 15 12.5**	**-0.7**
LZH				Sn	**Sn**	**13 15 57.3**	**+8.3**
LZH				Sg	**Sg**	**13 16 14.5**	**-0.7**
LZH				smax			
	comp=N,120nm,0.8s						
LZH				smax			
	comp=E,110nm,0.7s						
LZH				LR	LR		
	comp=N,720nm,6.2s						
LZH				LR	LR		
	comp=Z,940nm,8.3s						
ENH	**Enshi**	**5.08**	**100**	*e*Pn	**Pn**	**13 14 59.0**	**+1.4**
	comp=Z,68nm,0.8s						
XAN	**Xi'an**	**5.18**	**57**	Pn	**Pn**	**13 14 58.5**	**-0.6**
XAN				Pg	**Pg**	**13 15 15.8**	**-5.0**
XAN				Sn	**Sn**	**13 16 00.8**	**+1.9**
XAN				Sg	**Sg**	**13 16 21.3**	**-6.6**
XAN				smax			
	comp=N,240nm,0.7s						
XAN				smax			
	comp=E,120nm,1.0s						
XAN				LR	LR		
	comp=E,91nm,11.5s						
XAN				LR	LR		
	comp=Z,130nm,11.0s						
GYA	**Guiyang**	**5.47**	**151**	Pn	**Pn**	**13 15 06.5**	**+3.4**
GYA				smax			
	comp=N,210nm,0.7s						
GYA				smax			
	comp=E,290nm,0.8s						
KMI	**Kunming**	**6.20**	**188**	Pn	**Pn**	**13 15 13.5**	**+0.3**
KMI				Sn	**Sn**	**13 16 16.5**	**-7.6**
KMI				Sg	**Sb**	**13 16 43.5**	**-0.5**
KMI				smax			
	comp=N,46nm,0.9s						
KMI				smax			
	comp=E,50nm,1.3s						
KMI				LR	LR		
	comp=N,350nm,8.9s						
KMI				LR	LR		
	comp=E,390nm,12.5s						
GTA	**Gaotai**	**8.70**	**340**	P	Px	13 15 58.8	
GTA				pP		13 16 02.5	
GTA				sP		13 16 04.8	
GTA				S	**Sn**	**13 17 41.3**	**+16**
GTA				sS		13 17 46.8	
GTA				pmax	pmax		
	comp=Z,69nm,5.4s						
GTA				LR	LR		
	comp=N,250nm,13.4s						
GTA				LR	LR		
	comp=E,130nm,13.4s						
GTA				LR	LR		
	comp=Z,220nm,13.4s						
WHN	**Wuhan**	**9.18**	**92**	P	**Pn**	**13 16 00.0**	**+6.1**
WHN				S	**Sn**	**13 17 35.8**	**-1.4**
WHN				LR	LR		
	comp=Z,340nm,6.3s						
CMAR	**Chiang Mai Arr**	**13.49**	**200**	Pn	**Pn**	**13 16 53.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=13,slow=11,SNR=6.8						
CMAR	**Chiang Mai Arr**	**13.49**	**200**	P	**Pn**	**13 16 53.0**	**0.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**16.65**	**6**	Pn	**Pn**	**13 17 35.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=7.3						
SONM				LR	LR	13 24 26.0	
	comp=Z,118nm,18.8s,baz=250,slow=39						
ZAK	**Zakamensk**	**19.07**	**359**	*eP*	**Pn**	**13 18 02.4**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KSRS	**Korea Array**	**20.89**	**66**	P	**P**	**13 18 24.6**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=256,slow=10,SNR=12						
KSRS				LR	LR	13 27 20.7	
	comp=Z,25nm,19.2s,MS2.6,baz=300,slow=39						
KSRS	**Korea Array**	**20.89**	**66**	P	**P**	**13 18 24.6**	**+0.8**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,25nm,19.2s,MS2.6						
CN2	**Changchun**	**21.21**	**48**	*eP*	**P**	**13 18 32.8**	**+5.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.5						
MK31	**Makanchi Array**	**22.61**	**319**	*eP*	**P**	**13 18 43.1**	**+0.9**
MKAR	**Makanchi Array**	**22.61**	**319**	P	**P**	**13 18 43.2**	**+1.0**
	comp=Z,1.1nm,0.6s,mb3.4,baz=120,slow=12,SNR=10						
MKAR	**Makanchi Array**	**22.61**	**319**	P	**P**	**13 18 43.2**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**25.82**	**304**	LR	LR	13 30 02.5	
	comp=Z,43nm,18.1s,MS3.0,baz=189,slow=38						
ZAA0	**Zalesovo Array**	**26.41**	**335**	*eP*	**P**	**13 19 18.6**	**+0.6**
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**13 19 18.3**	**+0.4**
	comp=Z,1.1nm,0.6s,mb3.5,baz=139,slow=9.7,SNR=7.9						
ZALV				LR	LR	13 30 46.1	
	comp=Z,23nm,20.9s,MS2.7,baz=70,slow=39						
ZALV	**Zalesovo Beam**	**26.41**	**335**	P	**P**	**13 19 18.3**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ZALV				MLR	MLR		
	comp=Z,23nm,20.9s,MS2.7						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**13 19 22.3**	**-0.1**
	comp=Z,1.4nm,0.7s,mb3.6,baz=126,slow=11,SNR=12						
KURK	**Kurchatov**	**26.89**	**323**	P	**P**	**13 19 22.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KURK	**Kurchatov**	**26.89**	**323**	*eP*	**P**	**13 19 22.3**	**-0.1**
WRAB	**Tennant Creek**	**58.82**	**146**	*eP*	**P**	**13 23 38.9**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**58.82**	**146**	*eP*	**P**	**13 23 38.9**	**-1.3**
	comp=Z,9.1nm,1.1s,mb4.7						
ASAR	**Alice Springs**	**61.83**	**148**	P	**P**	**13 24 00.1**	**-0.6**
	comp=Z,0.7nm,0.6s,mb4.0,baz=339,slow=6.7,SNR=13						
ASAR	**Alice Springs**	**61.83**	**148**	P	**P**	**13 24 00.2**	**-0.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**72.35**	**147**	P	**P**	**13 25 05.8**	**-1.7**
	comp=Z,1.3nm,0.6s,mb4.0,baz=320,slow=10,SNR=4.6						
STKA	**Stephens Creek**	**72.35**	**147**	*eP*	**P**	**13 25 06.4**	**-1.1**
YKA	**Yellowknife Ar**	**81.61**	**17**	P	**P**	**13 25 58.9**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=325,slow=5.2,SNR=3.5						

MEX 26 13:17:53.1±0.7, 16°.73N×99°.72W, h9km±4km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.23**	**304**	*i* P	Pg	13 17 57.6	-0.3
ACX				*i* S	Sg	13 18 00.8	-0.2
CAIG	**El Cayaco**	**0.61**	**301**	*i* P	Pg	13 18 03.7	-1.3
CAIG				*i* S	Sg	13 18 12.6	-0.4
PNIG	**Pinotepa**	**1.56**	**102**	*i* P	Pn	13 18 18.2	-2.8
PNIG				*i* S	Sn	13 18 34.8	-6.7
UTMO	**Huajuapan**	**2.13**	**59**

MKAR Lg 13 29 30.0
3.1nm,0.3s,baz=324,slow=28,SNR=14
ZALV Zalesovo Beam 5.43 42 Pn **Pn 13 28 47.6 +2.0**
0.7nm,0.3s,baz=233,slow=13,SNR=12
ZALV Lg 13 30 12.2
0.2nm,0.3s,baz=242,slow=22,SNR=3.7
BVAR Borovoye Array 5.98 303 Pn **Pn 13 28 54.4 +1.4**
0.3nm,0.3s,baz=92,slow=16,SNR=3.4
BVAR Sn **Sn 13 30 01.9 +0.5**
0.8nm,0.3s,baz=111,slow=24,SNR=9.7
BVAR Lg 13 30 35.2
0.3nm,0.3s,baz=111,slow=34,SNR=4.2

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*ISCJB **26** 13:54:55.8±0.7,38°.71N±0°.04×43°.21E±0°.05,h10km, Error ellipse: s-maj=6.3km s-min=5.0km az=43.1*
*CSEM **26** 13:54:55.7±0.5,38°.72N×43°.19E,h2km,MD2.6, Error ellipse: s-maj=12.1km s-min=6.2km az=84.0*
*ISK **26** 13:54:55.1,38°.71N×43°.22E,h2km,MD2.6*
ISC 26 13:54:56.7±0.7,38°.70N±0°.04×43°.25E±0°.05,h10km,n10, σ0s94/16,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**135**	PG	**Pg**	**13 54 59.2**	**-0.8**
VANB				*e*SG	**Sg**	**13 55 02.7**	**+0.3**
VANB	**Van**	**0.15**	**135**	*i* Pg	**Pg**	**13 54 59.3**	**-0.7**
VANB				*e*Sg	**Sg**	**13 55 02.7**	**+0.4**
TVAN	**Van**	**0.21**	**145**	*i* P	**Pg**	**13 54 59.8**	**-1.2**
TVAN	**Van**	**0.21**	**145**	*i* P	**Pg**	**13 54 59.8**	**-1.2**
VANT	**Van**	**0.28**	**178**	*e*PG	**Pg**	**13 55 02.4**	**+0.1**
VANT				*e*SG	**Sg**	**13 55 06.5**	**+0.4**
CLDR	**Caldiran**	**0.68**	**49**	*e*PG	**Pg**	**13 55 09.7**	**-0.2**
CLDR				*e*SG	**Sg**	**13 55 19.9**	**+1.2**
CLDR	**Caldiran**	**0.68**	**49**	*e*Pg	**Pg**	**13 55 09.7**	**-0.1**
CLDR				*e*Sg	**Sg**	**13 55 19.9**	**+1.2**
AGRB	**Hanur-Agry**	**0.90**	**347**	*e*PG	**Pg**	**13 55 12.8**	**-1.2**
AGRB	**Hanur-Agry**	**0.90**	**347**	*e*Pg	**Pg**	**13 55 12.8**	**-1.1**
BEST	**Besiri**	**1.76**	**243**	*i* P	**Pg**	**13 55 32.4**	**+2.0**
BEST				*i* S	**Sg**	**13 55 52.7**	**-0.4**

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*NEIC **26** 14:02:04.4, 16°.89N×95°.33W,h128km, MD4.0(MEX), After MEX.*
MEX 26 14:02:04.4±0.8,16°.89N×95°.33W,h128km±12km,MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.34**	**214**	*i* P	Pn	14 02 29.4	-1.2
HUIG				*i* S	Sn	14 02 48.8	-1.7
HUIG	**Huatulco**	**1.34**	**214**	*i* P	Pn	14 02 29.4	-1.2
HUIG				*i* S	Sn	14 02 48.8	-1.7
VHO	**Vista Hermosa**	**1.36**	**278**	*i* P	Pn	14 02 30.2	-0.5
VHO				*i* S	Sn	14 02 49.1	-1.7
VHO	**Vista Hermosa**	**1.36**	**278**	*i* P	Pn	14 02 30.2	-0.5
VHO				*i* S	Sn	14 02 49.1	-1.7
TGIG		**2.12**	**93**	*i* P	Pn	14 02 39.0	-0.7
TGIG				*i* S	Sn	14 03 04.5	-2.2
PCIG		**2.34**	**120**	*i* P	Pn	14 02 41.7	-0.9
PCIG				*i* S	Sn	14 03 09.8	-2.1
UTMO	**Huajuapan**	**2.54**	**292**	*i* P	Pn	14 02 44.0	-1.0
UTMO				*i* S	Sn	14 03 15.7	-0.7
PNIG	**Pinotepa**	**2.73**	**260**	*i* P	Pn	14 02 45.7	-1.7
PNIG				*i* S	Sn	14 03 18.1	-2.4
PNIG	**Pinotepa**	**2.73**	**260**	*i* P	Pn	14 02 45.7	-1.7
PNIG				*i* S	Sn	14 03 18.1	-2.4
CCIG	**Comitan**	**3.12**	**101**	*i* P	Pn	14 02 52.2	-0.4
CCIG				*i* S	Sn	14 03 29.5	-0.1
CCIG	**Comitan**	**3.12**	**101**	*i* P	Pn	14 02 52.2	-0.4
CCIG				*i* S	Sn	14 03 29.5	-0.1

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*DDA **26** 14:07:04.3,38°.79N×26°.56E,h6km±6km,Md2.9*
*ISCJB **26** 14:07:05.4±0.4,38°.75N±0°.03×26°.58E±0.04,h23km±5km, Error ellipse: s-maj=5.4km s-min=4.4km az=157.8*
*CSEM **26** 14:07:05.1±0.2,38°.75N×26°.59E,h18km±2km,MD2.9, Error ellipse: s-maj=3.6km s-min=3.0km az=73.0*
*THE **26** 14:07:05.4,38°.74N×26°.57E,h12km±1km,ML3.2/4, Error ellipse: s-maj=1.5km s-min=0.7km az=154.0*
ISC 26 14:07:05.4±0.4,38°.76N±0°.03×26°.58E±0°.04,h17km±4km, n25,σ0s75/47,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.40**	**178**	*i* P	**Pg**	**14 07 13.1**	**-0.4**
URLA				*i* S	**Sg**	**14 07 19.7**	**+0.7**
URLA	**Izmir**	**0.40**	**178**	*i* P	**Pg**	**14 07 13.1**	**-0.4**
URLA				*i* S	**Sg**	**14 07 19.7**	**+0.7**
BLCB	**Balcova**	**0.52**	**135**	P	**Pg**	**14 07 15.6**	**-0.2**
BLCB				S	**Sg**	**14 07 22.9**	**+0.1**
BLCB	**Balcova**	**0.52**	**135**	P	**Pg**	**14 07 15.6**	**-0.2**
BLCB				S	**Sg**	**14 07 22.9**	**+0.1**
PRK	**Paraskevi**	**0.54**	**334**	P	**Pg**	**14 07 15.7**	**-0.5**
PRK				S	**Sg**	**14 07 24.6**	**+1.0**
PRK	**Paraskevi**	**0.54**	**334**	P	**Pg**	**14 07 15.7**	**-0.5**
PRK				S	**Sg**	**14 07 24.6**	**+1.0**
CHOS	**Chios island**	**0.55**	**228**	P	**Pg**	**14 07 16.2**	**-0.1**
CHOS				S	**Sg**	**14 07 23.5**	**-0.2**
CHOS	**Chios island**	**0.55**	**228**	P	**Pg**	**14 07 16.2**	**-0.1**
CHOS				S	**Sg**	**14 07 23.5**	**-0.2**
AYVA	**Ayvalik**	**0.56**	**9**	*i* P	**Pg**	**14 07 15.6**	**-0.9**
AYVA				*i* S	**Sg**	**14 07 23.6**	**-0.4**
AYVA	**Ayvalik**	**0.56**	**9**	*i* P	**Pg**	**14 07 15.6**	**-0.9**
AYVA				*i* S	**Sg**	**14 07 23.6**	**-0.4**
SIGR	**SIGRI**	**0.72**	**309**	P	**Pg**	**14 07 19.5**	**0.0**
SIGR				S	**Sg**	**14 07 30.5**	**+1.3**
SIGR	**SIGRI**	**0.72**	**309**	P	**Pg**	**14 07 19.5**	**0.0**
SIGR				S	**Sg**	**14 07 30.5**	**+1.3**
AKHS	**Akhisar**	**0.97**	**82**	*i* P	**Pb**	**14 07 23.3**	**-0.5**
AKHS				*i* S	**Sb**	**14 07 38.7**	**+2.4**
AKHS	**Akhisar**	**0.97**	**82**	*i* P	**Pb**	**14 07 23.3**	**-0.5**
BOZC	**Bozcaada**	**1.16**	**340**	*i* P	**Pn**	**14 07 26.5**	**-0.2**
BOZC				*i* S	**Sb**	**14 07 40.7**	**-0.9**
BALY	**Balya**	**1.27**	**39**	*i* P	**Pn**	**14 07 28.6**	**+0.2**
BALY				*i* S	**Sb**	**14 07 44.8**	**-0.2**
BALY	**Balya**	**1.27**	**39**	*i* P	**Pn**	**14 07 28.5**	**+0.2**
BALY				*i* S	**Sb**	**14 07 44.8**	**-0.2**
LIA	**Limnos Island**	**1.57**	**317**	P	**Pn**	**14 07 31.8**	**-0.6**
LIA				S	**Sn**	**14 07 52.9**	**+0.6**
LIA	**Limnos Island**	**1.57**	**317**	P	**Pn**	**14 07 31.8**	**-0.6**
LIA				S	**Sn**	**14 07 52.9**	**+0.6**
LOS	**Limnos**	**1.65**	**316**	P	**Pn**	**14 07 34.1**	**+0.6**
LOS				S	**Sn**	**14 07 54.7**	**+0.4**
LOS	**Limnos**	**1.65**	**316**	P	**Pn**	**14 07 34.1**	**+0.6**
LOS				S	**Sn**	**14 07 54.7**	**+0.4**
APE	**Apeiranthos**	**1.88**	**206**	P	**Pn**	**14 07 35.9**	**-0.7**
APE	**Apeiranthos**	**1.88**	**206**	P	**Pn**	**14 07 35.9**	**-0.7**
SART	**Tekirdag**	**1.99**	**13**	*i* P	**Pn**	**14 07 36.8**	**-1.3**
SART				*i* S	**Sn**	**14 08 03.0**	**+0.4**
SART	**Tekirdag**	**1.99**	**13**	*i* P	**Pn**	**14 07 36.8**	**-1.3**
SART				*i* S	**Sn**	**14 08 03.0**	**+0.4**

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*NEIC **26** 14:16:57.7±1.4, 60°.97S×27°.65W,h35km, mb4.1/1, Error ellipse: s-maj=65.2km s-min=25.3km az=28.0*
IDC 26 14:16:54.4±1.8,60°.61S×27°.65W,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.9/13,mbtmp4.0/4,Error ellipse: s-maj=78.4km s-min=32.2km az=26.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**39.80**	**316**	P	P	14 24 29.2	+0.3
0.8nm,0.3s,baz=163,slow=11,SNR=4.7							
SIV	**San Ignacio**	**50.65**	**317**	P	P	14 25 54.3	-0.8
0.8nm,0.6s,baz=181,slow=9.0,SNR=5.0							
LPAZ	**La Paz**	**52.93**	**309**	P	P	14 26 13.4	+1.2
0.9nm,0.5s,baz=100,slow=6.5,SNR=6.8							
LPAZ	**La Paz**	**52.93**	**309**	*e*P	P	14 26 13.6	+1.4
1.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**77.16**	**29**	P	P	14 28 49.7	+0.1
1.1nm,0.6s,baz=198,slow=6.0,SNR=7.4							
TORD	**Torodi Ar. Bea**	**77.16**	**29**	P	P	14 28 49.7	+0.1
ZALV	**Zalesovo Beam**	**144.39**	**70**	PKP	PKPdf	14 36 29.3	-1.7
0.8nm,0.4s,baz=214,slow=3.6,SNR=3.9							
SONM	**Songino Array**	**150.91**	**95**	PKP	PKPdf	14 36 39.1	-2.9
0.2nm,0.3s,baz=306,slow=4.1,SNR=2.1							
SONM				PKPbc	PKPbc	14 36 49.4	+1.7
1.0nm,0.4s,baz=210,slow=3.3,SNR=5.0							

JMA 26 14:34:12.5±0.1,30°.24N×140°.94E,h283km,M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.02**	**342**	P	Pn	14 35 07.8	+0.6
CBIJ	**Chichi jima**	**3.32**	**160**	P	Pn	14 35 10.3	-0.2
CBIJ				*e*S	S	14 35 56.9	+0.2
BSO1	**Boso 1**	**4.40**	**0**	P	Pn	14 35 25.0	+2.7
BSO1				*e*S	S	14 36 21.8	+3.6
BSO3	**Boso 3**	**4.56**	**356**	P	Pn	14 35 25.6	+1.4
BSO3				*e*S	S	14 36 21.9	+0.3
JOD2	**Odawara 2**	**5.25**	**343**	*e*S	S	14 36 35.5	-0.6
JHU	**Hanno**	**5.77**	**346**	*e*S	S	14 36 42.8	-4.7
JYT	**Yasato**	**6.00**	**354**	*e*S	S	14 36 50.3	-2.4
JRY	**Ryogami san**	**6.01**	**344**	P	Pn	14 35 41.2	-0.2
JRY				*e*S	S	14 36 49.1	-3.7
JAG	**Ashikaga**	**6.29**	**349**	P	Pn	14 35 45.1	+0.3
JAG				*e*S	S	14 36 53.5	-5.6
JHO	**Hitachi**	**6.36**	**357**	P	Pn	14 35 46.8	+1.2
JHO				*e*S	S	14 36 57.8	-2.8
JFK	**Kawauchi**	**7.11**	**360**	*e*S	S	14 37 16.8	-0.6
JMK	**Ichinoseki**	**8.69**	**1**	*e*S	S	14 37 52.7	-0.6

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*CSEM **26** 14:47:17.7, 46°.27N×6°.86E,h-0km,ML1.1, After ZUR*
ZUR 26 14:47:17.7,46°.27N×6°.86E,h-0km±1km,ML1.1/5,4C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIGLE	**Aigle**	**0.10**	**42**	⇑*i* Pg		14 47 20.0	
85nm,0.4s							
AIGLE				*i* Sg		14 47 21.8	
85nm,0.4s							
AIGLE	**Aigle**	**0.10**	**42**	⇑*i* Pg		14 47 20.0	
85nm,0.4s							
AIGLE				*i* Sg		14 47 21.8	
85nm,0.4s							
SALAN	**Lac Salanfe**	**0.15**	**147**	⇓*i* Pg		14 47 21.1	
49nm,0.3s							
SALAN				*i* Sg		14 47 23.3	
49nm,0.3s							
SALAN	**Lac Salanfe**	**0.15**	**147**	⇓*i* Pg		14 47 21.1	
49nm,0.3s							
SALAN				*i* Sg		14 47 23.3	
49nm,0.3s							
GRYON	**Gryon**	**0.18**	**96**	*i* Sg		14 47 22.1	
22nm,0.2s							
GRYON	**Gryon**	**0.18**	**96**	*i* Sg		14 47 22.1	
22nm,0.2s							
EMV	**Vieux Emosson**	**0.21**	**172**	*i* Sg		14 47 24.3	
156nm,0.2s							
EMV	**Vieux Emosson**	**0.21**	**172**	⇑*i* Pg		14 47 25.0	
156nm,0.2s							
EMV	**Vieux Emosson**	**0.21**	**172**	*i* Sg		14 47 24.3	
156nm,0.2s							
EMV	**Vieux Emosson**	**0.21**	**172**	⇑*i* Pg		14 47 25.0	
156nm,0.2s							
SENIN	**Lac Senin/Sane**	**0.32**	**73**	*e*Pg		14 47 24.4	
94nm,0.2s							
SENIN				*i* Sg		14 47 29.2	
94nm,0.2s							
SENIN	**Lac Senin/Sane**	**0.32**	**73**	*e*Pg		14 47 24.4	
94nm,0.2s							
SENIN				*i* Sg		14 47 29.2	
94nm,0.2s							
DIX	**Grande Dixence**	**0.43**	**116**	⇓*i* Pg		14 47 26.5	
27nm,0.3s							
DIX	**Grande Dixence**	**0.43**	**116**	⇓*i* Pg		14 47 26.5	
27nm,0.3s							

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*IDC **26** 15:01:31.0±0.5,8°.43N×82°.97W,h0km, mb4.8/18, mb1 5.0/23,mb1mx4.9/26,mbtmp4.9/23,ML4.3/4,MS5.1/21, Ms1 5.1/21,ms1mx5.0/29, Error ellipse: s-maj=19.3km s-min=11.8km az=59.0*
*CASC **26** 15:01:32.4±3.4,8°.44N×82°.92W,h1km±6km,MD5.3, mb5.3(NEIC)*
*MOS **26** 15:01:32.6±1.1,8°.48N×83°.01W,h15km,mb5.6/68, MS5.3/41, Error ellipse: s-maj=7.6km s-min=4.7km az=98.4*
*GCMT **26** 15:01:33.6±0.1,8°.38N×82°.88W,h12km,MW5.6/97, Moment Tensor Solution. s84,c148; s97,c221; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.12±.04; $M_{\theta\theta}$-1.64±.03; $M_{\phi\phi}$-0.47±.05; $M_{r\theta}$0.18±.10; $M_{\theta\phi}$2.15±.03; $M_{\phi r}$-0.25±.13; Best double couple: M_o2.72400×10^{17} NP1:ϕ_s302.00000°, δ42.00000°, λ82.00000°. NP2:ϕ_s132.00000°, δ48.00000°, λ97.00000°. Principal axes: T 2.1450, Plg84.0000°, Azm96.0000°; N 1.1590, Plg5.0000°, Azm308.0000°; P -3.3030, Plg3.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **26** 15:01:33.6±0.2,8°.42N×82°.97W,h13km,mb5.3/176, MS5.2/146,MW5.5,MW5.6,MD5.6(HDC) Error ellipse: s-maj=6.0km s-min=3.5km az=210.0,Moment Tensor Solution. s66 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.61; $M_{\theta\theta}$1.84; $M_{\phi\phi}$2.45; $M_{r\theta}$0.04; $M_{\theta\phi}$-0.74; $M_{\phi r}$0.07; Best double couple: M_o2.30000×10^{17} NP1:ϕ_s305.00000°, δ88.00000°, λ-179.00000°. NP2:ϕ_s215.00000°, δ89.00000°, λ-2.00000°. Principal axes: T 2.5800, Plg1.0000°, Azm260.0000°; N -0.6100, Plg87.0000°, Azm19.0000°; P -1.9700, Plg2.0000°, Azm170.0000°;*
NEIC Slight damage at Puerto Armuelles, Panama. Felt [III] at Bajo Boquete. Also felt at Bocas del Toro. Felt [VI] at Golfito, Costa Rica. Also felt at Cartago, Neily and San Vito.
*ISCJB **26** 15:01:34.2±0.6,8°.51N±0°.03×82°.92W±0°.02,h24km±3km, mb5.2/220,MS5.3/190 Error ellipse: s-maj=5.4km s-min=2.4km az=15.0*
*BJI **26** 15:01:36.6,8°.40N×83°.00W,h23km,mB5.6/21,Ms5.7/20, Ms7 5.5/23*
*SZGRF **26** 15:01:39.8,8°.15N×82°.62W,h33km,mb5.5,MS5.8, Panama-Costa Rica border region*
ISC 26 15:01:35.2±0.8,8°.47N±0°.03×82°.90W±0°.02,h19km±4km, h15km±1.8km:pP-P,n968,σ0s97/827,mb5.2/220,MS5.3/190, 183C-168D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.32**	**305**	⇑*i* P	**Pg**	**15 01 38.0**	**-4.3**
ACR				*e*S	**Sg**	**15 01 51.1**	**+4.0**
BRU2	**Volcan**	**0.39**	**32**	⇓*i* P	**Pg**	**15 01 41.9**	**-1.5**
BRU2				*e*S	**Sg**	**15 01 50.8**	**+1.9**
TBS2		**0.41**	**36**	*e*P	**Pg**	**15 01 49.6**	**+5.9**
TBS2				*e*S	**Sg**	**15 01 58.3**	**+8.8**
BAR1		**0.87**	**332**	⇓*i* P	**Pg**	**15 01 48.1**	**-4.2**
BAR1				*e*S	**Sg**	**15 02 10.6**	**+6.7**
CNI	**Changuinola**	**1.02**	**22**	*e*P	**Pg**	**15 01 52.2**	**-2.9**
CNI				*e*S	**Sg**	**15 02 07.4**	**-1.2**
BUS	**Buena Vista**	**1.38**	**322**	⇑*i* P	Pn	**15 01 56.4**	**-3.0**
LIO	**Limon**	**1.54**	**355**	*e*P	Pn	**15 02 00.5**	**-1.1**
QCR	**Quepos**	**1.57**	**307**	⇑*i* P	Pn	**15 01 58.2**	**-3.9**
QCR				*e*S	Sn	**15 02 23.5**	**+1.6**
URSC	**Urasca**	**1.61**	**328**	*e*P	Pn	**15 01 59.9**	**-2.8**
LAJ	**Bijagual**	**1.84**	**319**	⇓*i* P	Pn	**15 02 06.6**	**+0.8**
SJS	**Escuela Geolog**	**1.85**	**322**	⇓*i* P	Pn	**15 02 04.8**	**-1.2**
SJS				*e*S	Sn	**15 02 30.2**	**+1.3**
PRS1	**Puriscal**	**2.05**	**317**	⇑*i* P	Pn	**15 02 06.1**	**-2.7**
CGA2	**Cerro Gallo 2**	**2.18**	**315**	⇑*e*P	Pn	**15 02 08.7**	**-1.8**
JCR	**Jicaral**	**2.58**	**302**	*e*P	Pn	**15 02 14.8**	**-1.2**
FORC	**Fortuna**	**2.65**	**319**	*e*P	Pn	**15 02 14.6**	**-2.2**
PINA	**Piqa, Costa Ab**	**2.91**	**74**	⇑*i* P	Pn	**15 02 20.9**	**+0.4**
PINA				*e*S	Sn	**15 02 59.3**	**+4.3**
ZANG	**Zanguenga, Cho**	**3.04**	**81**	*e*P	Pn	**15 02 23.9**	**+1.6**
ZANG				*e*S	Sn	**15 03 00.3**	**+2.2**
BCIP	**Isla Barro Col**	**3.11**	**77**	*e*Pn	Pn	**15 02 22.2**	**-1.0**
BCIP	**Isla Barro Col**	**3.11**	**77**	⇓*e*P	Pn	**15 02 22.2**	**-1.0**
baz=245,slow=10							
BCIP				*e*S	Sn	**15 03 01.1**	**+1.3**
UPIG		**3.37**	**81**	⇓*i* P	Pn	**15 02 25.4**	**-1.4**
baz=255,slow=12							
UPIG				*e*S	Sn	**15 03 06.4**	**+0.1**
SSN	**San Juan del S**	**4.05**	**314**	*e*P	Pn	**15 02 37.0**	**+0.8**
CONN	**Concepcion**	**4.08**	**319**	*e*P	Pn	**15 02 38.3**	**+1.7**
MASN	**Masaya**	**4.74**	**318**	*e*P	Pn	**15 02 44.4**	**-1.4**
TICN	**Ticuantepe**	**4.83**	**318**	*e*P	Pn	**15 02 48.3**	**+1.4**
UPD1	**Univ de Panama**	**4.83**	**89**	*e*P	Pn	**15 02 46.8**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD1				*e*S	Sn	**15 03 44.8**	**+2.3**
WILN	**Americas 2**	**4.89**	**319**	*i* P	Pn	**15 02 48.9**	**+1.1**
MGAN	**Managua**	**4.92**	**318**	*e*P	Pn	**15 02 47.2**	**-1.0**
XAVN	**Gruta Xavier**	**4.98**	**318**	*e*P	Pn	**15 02 50.4**	**+1.5**
HUEN		**5.02**	**320**	*i* P	Pn	**15 02 50.6**	**+1.1**
APYN	**Apoyeque**	**5.05**	**318**	*i* P	Pn	**15 02 51.1**	**+1.1**
CSAN		**5.07**	**317**	*i* P	Pn	**15 02 50.7**	**+0.5**
COPN	**Copaltepe**	**5.18**	**316**	*i* P	Pn	**15 02 52.4**	**+0.7**
MOMN	**Momotombo**	**5.31**	**318**	*i* P	Pn	**15 02 54.9**	**+1.4**
MIRN	**Miramar**	**5.45**	**317**	*e*P	Pn	**15 02 56.8**	**+1.4**
CNGN	**Cerro Negro**	**5.48**	**317**	*i* P	Pn	**15 02 55.1**	**-0.8**
TELN	**Telica**	**5.64**	**317**	*e*P	Pn	**15 02 59.4**	**+1.3**
CNCH	**Conchagua**	**6.81**	**315**	*e*P	Pn	**15 03 14.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**7.02**	**323**	*e*Pn	Pn	**15 03 18.5**	**+1.5**
1um,1.0s							
BLLM	**Bellamira**	**7.21**	**314**	*e*P	Pn	**15 03 21.2**	**+1.6**
VSM	**San Miguel**	**7.22**	**314**	*e*P	Pn	**15 03 21.1**	**+1.3**
CAHU	**Cacacuatique**	**7.41**	**316**	*e*P	Pn	**15 03 22.5**	**+0.1**
SNVI	**San Vicente**	**7.75**	**312**	*e*P	Pn	**15 03 28.6**	**+1.5**
SNVI				*e*S	Sn	**15 04 54.9**	**+0.4**
LFRS	**El Faro**	**7.93**	**311**	*e*P	Pn	**15 03 30.7**	**+1.2**
LFRS				*e*S	Sn	**15 05 00.3**	**+1.6**
BOQS	**Boqueron**	**8.16**	**310**	*e*P	Pn	**15 03 33.2**	**+0.5**
SBLS	**San Blas**	**8.49**	**310**	*e*P	Pn	**15 03 38.4**	**+1.3**
SNJE	**San Jose**	**8.49**	**310**	*e*P	Pn	**15 03 38.5**	**+1.2**
RTR	**El Retiro**	**8.54**	**310**	*e*P	Pn	**15 03 39.9**	**+2.0**
MTO2	**Montecristo 2**	**8.65**	**314**	*e*P	Pn	**15 03 41.0**	**+1.6**
RBDL	**Robledal**	**8.70**	**311**	*e*P	Pn	**15 03 41.2**	**+1.0**
RBDL				*e*S	Sn	**15 05 17.5**	**-0.4**
ROSC	**El Rosal**	**9.24**	**112**	Pn	Pn	**15 03 51.2**	**+3.7**
0.5nm,0.3s,baz=295,slow=1.7,SNR=15							
ROSC				Lg		15 06 30.1	
0.8nm,0.3s,baz=254,slow=20,SNR=1.8							
ROSC	**El Rosal**	**9.24**	**112**	*e*P	Pn	**15 03 50.3**	**+2.8**
OTAV	**Otavalo**	**9.30**	**151**	*e*Pn	Pn	**15 03 48.2**	**-0.2**
144nm,1.4s							
APG	**El Apazote**	**9.85**	**312**	Pn	Pn	**15 03 57.0**	**+1.2**
5.3nm,0.3s,baz=133,slow=8.5,SNR=78							
MCJ	**Malvern**	**10.68**	**28**	⇑*i* P	Pn	**15 04 07.2**	**-0.1**
NEJ	**Negril**	**10.69**	**24**	*e*P	Pn	**15 04 08.4**	**+1.0**
MTDJ	**Mount Denham**	**11.02**	**28**	*e*Pn	Pn	**15 04 11.6**	**-0.3**
190nm,0.7s							
HOJ	**Hope**	**11.21**	**32**	⇑*e*P	Pn	**15 04 15.8**	**+1.3**
STH	**Stony Hill**	**11.24**	**31**	⇑*e*P	Pn	**15 04 15.5**	**+0.6**
STH				*e*S	Sn	**15 06 22.6**	**+2.5**
CMJ	**Castle Mountai**	**11.52**	**33**	⇑*e*P	Pn	**15 04 19.9**	**+1.2**
CCIG	**Comitan**	**11.90**	**312**	*i* P	Pn	**15 04 23.6**	**-0.4**
SDV	**Santo Domingo**	**12.13**	**87**	Pn	Pn	**15 04 27.8**	**+0.6**
1.1nm,0.3s,baz=287,slow=7.6,SNR=14							
SDV				Sn	**Sn**	**15 06 48.3**	**+6.2**
2.0nm,0.3s,baz=155,slow=19,SNR=3.1							
SDV	**Santo Domingo**	**12.13**	**87**	*e*Pn	Pn	**15 04 27.5**	**+0.3**
44nm,0.7s							
SDV	**Santo Domingo**	**12.13**	**87**	*e*P	Pn	**15 04 27.5**	**+0.3**
SCX	**San Cristobal**	**12.56**	**312**	*e*P	Pn	**15 04 36.1**	**+3.1**
TEIG	**Tepich**	**12.80**	**337**	Pn	Pn	**15 04 37.7**	**+1.5**
TEIG				LR	LR	15 09 15.7	
comp=Z,8μm,21.1s,baz=133,slow=36							
GTBY	**Guantanamo Bay**	**13.66**	**33**	*e*P	Pn	**15 04 48.0**	**-0.1**
552nm,1.5s							
GTBY	**Guantanamo Bay**	**13.66**	**33**	*e*P	Pn	**15 04 49.4**	**+1.4**
CMIG	**Matias Romero**	**14.49**	**307**	Pn	Pn	**15 04 59.0**	**-0.3**
2.3nm,0.3s,baz=107,slow=8.6,SNR=24							
HUIG	**Huatulco**	**14.81**	**301**	*e*P	Pn	**15 04 55.4**	**-8.3**
SDDR	**Presa de Saban**	**15.37**	**46**	*e*P	Pn	**15 05 11.0**	**-0.2**
179nm,0.9s							
SDDR	**Presa de Saban**	**15.37**	**46**	*e*P	Pn	**15 05 10.4**	**-0.7**
VHO	**Vista Hermosa**	**15.96**	**304**	*i* P	Pn	**15 05 15.6**	**-3.3**
ATAH	**Atahualpa**	**16.14**	**164**	Pn	Pn	**15 05 21.8**	**+0.7**
0.5nm,0.3s,baz=314,slow=14,SNR=18							
ATAH				Sn	**Sn**	**15 08 25.7**	**+6.0**
0.4nm,0.3s,baz=291,slow=15,SNR=2.2							
ATAH				LR	LR	15 10 50.5	
comp=Z,12μm,21.4s,baz=92,slow=35							
PNIG	**Pinotepa**	**16.82**	**299**	*i* P	Pn	**15 05 24.0**	**-5.8**
LVIG	**Laguna Verde**	**17.22**	**312**	*e*P	Pn	**15 05 29.4**	**-5.4**
GRTK	**Grand Turk**	**17.23**	**40**	P	Pn	**15 05 34.7**	**-0.2**
520nm,1.6s							
PCRV	**Puerto La Cruz**	**18.10**	**83**	P	Pn	**15 05 46.3**	**+0.5**
1.8nm,0.3s,baz=151,slow=3.5,SNR=14							
ACX	**Acapulco**	**18.52**	**298**	*i* P	Pn	**15 05 56.7**	**+5.8**
SJG	**San Juan**	**18.90**	**58**	P	Pn	**15 05 55.6**	**+0.1**
19nm,0.3s,baz=247,slow=7.5,SNR=14							
SJG				S	Sn	**15 09 38.8**	**+12**
11nm,0.3s,baz=132,slow=18,SNR=2.6							
SJG				LR	LR	15 12 33.7	
comp=Z,41μm,20.3s,baz=234,slow=35							
SJG	**San Juan**	**18.90**	**58**	*e*P	Pn	**15 05 56.3**	**+0.9**
SJG				pmax	pmax		
comp=Z,587nm,1.0s							
SJG	**San Juan**	**18.90**	**

PLAL LR LR
comp=Z,2µm,20.0s,MS4.7
CPCT Cooper Cave 26.90 357 eP **P 15 07 15.1 +0.1**
JCT Junction City 27.01 326 eP **P 15 07 15.1 -1.0**
JCT pmax pmax
comp=Z,22nm,0.7s,mb4.8
JCT MLR MLR
comp=Z,3µm,20.0s,MS4.8
JCT Junction City 27.01 326 eP **P 15 07 15.1 -1.0**
comp=Z,22nm,0.7s,mb4.8
JCT LR LR
comp=Z,3µm,20.0s,MS4.8
CNNC Cliffs of the 27.04 9 PFAKE 15 07 30.0 +14
CNNC LR LR
comp=Z,19µm,19.0s,MS5.7
TKL Tuckaleechee C 27.08 358 P **P 15 07 16.5 -0.2**
comp=Z,20nm,1.0s,mb4.6,baz=162,slow=10.0,SNR=14
TKL LR LR 15 18 28.8
comp=Z,5µm,18.5s,MS5.1,baz=179,slow=38
TKL Tuckaleechee C 27.08 358 eP **P 15 07 16.3 -0.3**
UALR University of 27.58 343 eP **P 15 07 20.0 -1.2**
comp=Z,70nm,1.0s,mb5.2
MIAR Mount Ida 27.75 341 eP **P 15 07 21.1 -1.6**
MIAR pmax pmax
comp=Z,88nm,1.1s,mb5.3
MIAR MLR MLR
comp=Z,2µm,20.0s,MS4.7
MIAR Mount Ida 27.75 341 eP **P 15 07 21.1 -1.6**
comp=Z,88nm,1.1s,mb5.3
MIAR LR LR
comp=Z,2µm,20.0s,MS4.7
WVT Waverly 27.90 351 eP **P 15 07 23.4 -0.6**
WVT pmax pmax
comp=Z,20nm,0.8s,mb4.8
WVT Waverly 27.90 351 eP **P 15 07 23.4 -0.7**
comp=Z,20nm,0.8s,mb4.8
TZTN Tazewell 27.96 359 eP **P 15 07 25.0 +0.5**
comp=Z,165nm,1.5s,mb5.4
628A Black Gap, Mar 28.09 321 ⇑P **P 15 07 24.7 -1.2**
baz=28,SNR=8.6
GNAR Gosnell 28.13 348 eP **P 15 07 26.2 +0.1**
comp=Z,4µm,1.5s
UTMT University of 28.28 350 eP **P 15 07 26.3 -1.0**
627A Terlingua Ranc 28.39 320 ⇓P **P 15 07 27.4 -1.1**
baz=28,SNR=20
TXAR Lajitas Array 28.48 320 P **P 15 07 27.8 -1.5**
comp=Z,2.1nm,0.8s,mb3.8,baz=149,slow=7.1,SNR=15
TXAR PcP PcP 15 10 40.5 -0.6
comp=Z,5.3nm,1.0s,baz=158,slow=2.3,SNR=5.8
TXAR LR LR 15 19 46.5
comp=Z,2µm,19.4s,MS4.6,baz=215,slow=38
TXAR Lajitas Array 28.48 320 P **P 15 07 27.8 -1.5**
TXAR 15 10 40.5
TXAR Lajitas Array 28.48 320 P **P 15 07 27.8 -1.5**
TXAR PcP PcP 15 10 40.5 -0.6
TXAR LR LR 15 19 46.5
528A Cox Ranch, San 28.50 322 ⇓P **P 15 07 28.4 -1.2**
baz=29,SNR=24
LPAZ La Paz 28.61 149 P **P 15 07 30.1 -0.5**
comp=Z,7.0nm,0.9s,mb4.4,baz=338,slow=8.5,SNR=17
LPAZ La Paz 28.61 149 eP **P 15 07 30.0 -0.5**
LPAZ pmax pmax
comp=Z,12nm,1.0s
LPAZ MLR MLR
comp=Z,3µm,21.0s
LPAZ La Paz 28.61 149 eP **P 15 07 30.0 -0.6**
comp=Z,12nm,1.0s,mb4.6
LPAZ LR LR
comp=Z,3µm,21.0s,MS4.9
ELN Prospectdale 28.70 4 eP **P 15 07 30.7 -0.5**
BLA Blacksburg 28.70 4 eP **P 15 07 32.0 +0.8**
BLA pmax pmax
comp=Z,42nm,1.1s,mb5.1
BLA MLR MLR
comp=Z,7µm,20.0s,MS5.3
BLA Blacksburg 28.70 4 eP **P 15 07 32.0 +0.8**
comp=Z,42nm,1.1s,mb5.1
BLA LR LR
comp=Z,7µm,20.0s,MS5.3
428A Kincaid Ranch, 28.84 323 ⇓P **P 15 07 31.5 -1.0**
baz=29,SNR=22
626A Big Bend Ranch 28.93 319 ⇑P **P 15 07 32.6 -0.7**
baz=29
527A Woodward Ranch 29.00 321 ⇑P **P 15 07 33.1 -0.8**
baz=29
BBSR BB Station 29.17 33 PFAKE 15 07 50.0 +15
BBSR LR LR
comp=Z,4µm,20.0s,MS5.1
427A Hayter Ranch, 29.36 322 ⇑P **P 15 07 36.5 -0.6**
baz=29,SNR=6.5
328A Wristen Ranch, 29.39 324 ⇑P **P 15 07 36.5 -0.9**
baz=30
426A McDonald Obser 29.62 321 ⇑P **P 15 07 38.8 -0.7**
baz=30,SNR=8.4
SIUC Southern Illin 29.68 350 eP **P 15 07 39.7 -0.1**
comp=Z,85nm,1.2s,mb5.3
USIN University of 29.68 352 eP **P 15 07 39.1 -0.7**
comp=Z,150nm,1.2s,mb5.6
WCI Wyandotte Cave 29.79 355 eP **P 15 07 39.8 -1.0**
WCI pmax pmax
comp=Z,123nm,1.0s,mb5.6
WCI Wyandotte Cave 29.79 355 eP **P 15 07 39.8 -1.0**
comp=Z,123nm,1.0s,mb5.6
WMOK Wichita Mounta 29.94 333 eP **P 15 07 37.1 -5.1**
WMOK pmax pmax
comp=Z,27nm,1.3s,mb4.8
WMOK MLR MLR
comp=Z,2µm,22.0s,MS4.7
WMOK Wichita Mounta 29.94 333 eP **P 15 07 37.1 -5.0**
comp=Z,27nm,1.3s,mb4.8
WMOK LR LR
comp=Z,2µm,22.0s,MS4.7
CBN Corbin 30.02 9 P **P 15 07 42.8 -0.1**
CBN LR LR
comp=Z,25µm,19.0s,MS5.9
326A Caldwell Ranch 30.04 322 ⇓P **P 15 07 42.3 -0.9**
baz=30,SNR=6.0
FVM French Village 30.16 348 eP **P 15 07 43.4 -0.7**
FVM pmax pmax
comp=Z,127nm,1.6s,mb5.4
FVM French Village 30.16 348 eP **P 15 07 43.4 -0.8**
comp=Z,128nm,1.6s,mb5.4
425A Indio Mountain 30.30 320 ⇓P **P 15 07 45.0 -0.5**
baz=30,SNR=16
CCM Cathedral Cave 30.41 347 eP **P 15 07 44.7 -1.6**
CCM pmax pmax
comp=Z,93nm,1.1s,mb5.4
CCM MLR MLR
comp=Z,3µm,19.0s,MS5.0
CCM Cathedral Cave 30.41 347 eP **P 15 07 44.7 -1.6**
comp=Z,93nm,1.1s,mb5.4
CCM LR LR
comp=Z,3µm,19.0s,MS5.0
OLIL Olney 30.50 352 eP **P 15 07 46.7 -0.4**
comp=Z,179nm,1.2s,mb5.7
226A Malaga, Loving 30.64 323 ⇑P **P 15 07 47.8 -0.6**
baz=31,SNR=7.7
CLNB Carlsbad 30.66 323 P **P 15 07 48.9 +0.3**
comp=Z,0.6nm,0.3s,mb3.9
325A Bean Ranch, Si 30.69 321 ⇓P **P 15 07 48.0 -0.9**
baz=31
BLO Bloomington 30.75 354 eP **P 15 07 48.2 -1.0**
BLO pmax pmax
comp=Z,121nm,1.1s,mb5.6
BLO Bloomington 30.75 354 eP **P 15 07 48.2 -1.1**
comp=Z,121nm,1.1s,mb5.6
SLM Saint Louis 30.76 349 eP **P 15 07 49.2 -0.1**
SLM pmax pmax
comp=Z,117nm,1.1s,mb5.6
SLM Saint Louis 30.76 349 eP **P 15 07 49.2 -0.1**
comp=Z,117nm,1.1s,mb5.6
GDL2 Guadalupe Moun 30.90 323 P **P 15 07 51.8 +1.1**
comp=Z,10nm,1.2s,mb4.5
Z27A Tatum 31.04 326 ⇑P **P 15 07 51.1 -0.8**
baz=31
324A Moseley Ranch, 31.06 320 ⇑P **P 15 07 51.9 -0.2**
baz=31,SNR=16
225A Deer Hill, Car 31.11 322 ⇑P **P 15 07 51.9 -0.7**
baz=31,SNR=7.4
MNTX Cornudas Mount 31.17 321 eP **P 15 07 52.4 -0.7**
comp=Z,21nm,1.3s,mb4.8
MNTX LR LR
comp=Z,1µm,20.0s,MS4.5
MCWV Mont Chateau 31.18 5 eP **P 15 07 52.3 -0.7**
comp=Z,44nm,1.1s,mb5.2
MCWV LR LR
comp=Z,15µm,19.0s,MS5.7

CPRX Cap Rock 31.20 325 eP **P 15 07 53.5 +0.2**
comp=Z,5.4nm,0.9s,mb4.4
MSTX Muleshoe 31.29 327 ⇓P **P 15 07 53.5 -0.7**
baz=31
125A Gardner Draw, 31.40 323 ⇓P **P 15 07 54.5 -0.6**
baz=32,SNR=14
AMTX Amarillo 31.43 330 P **P 15 07 52.4 -3.0**
AMTX LR LR
comp=Z,3µm,20.0s,MS5.0
Y27A Causey 31.44 326 ⇑P **P 15 07 54.9 -0.5**
baz=32
Z26A Caprock 31.44 325 ⇓P **P 15 07 54.9 -0.6**
baz=32
224A Corundas Mount 31.52 321 ⇓P **P 15 07 55.5 -0.7**
baz=32,SNR=11
ACSO Alum Creek Sta 31.63 360 eP **P 15 07 56.5 -0.6**
comp=Z,86nm,1.1s,mb5.5
ACSO LR LR
comp=Z,9µm,20.0s,MS5.4
124A Stringfield Ra 31.90 322 ⇓P **P 15 07 59.5 0.0**
baz=32,SNR=19
W27A Bowe Ranch, En 32.28 328 ⇑P **P 15 08 02.3 -0.5**
baz=32
Z24A Sheeppen Canyo 32.29 323 ⇑P **P 15 08 02.7 -0.3**
baz=32,SNR=8.1
Y25A Mesa, Roswell 32.32 325 ⇓P **P 15 08 02.6 -0.6**
baz=32
SSPA Standing Stone 32.34 7 eP **P 15 08 03.4 +0.1**
comp=Z,31nm,1.1s,mb5.0
HDIL Hopedale 32.46 351 eP **P 15 08 03.2 -1.1**
comp=Z,113nm,1.0s,mb5.7
HDIL LR LR
comp=Z,1µm,21.0s,MS4.6
Y24A Capitan 32.76 324 ⇑P **P 15 08 06.5 -0.5**
baz=33,SNR=8.7
KSU1 Kansas State U 32.89 340 eP **P 15 08 06.8 -1.3**
comp=Z,76nm,0.9s,mb5.6
KSU1 LR LR
comp=Z,2µm,20.0s,MS4.7
221A Mesquite Ranch 32.90 319 ⇑P **P 15 08 08.8 +0.5**
baz=33
320A Kipp Ranch, An 32.98 317 ⇓P **P 15 08 09.4 +0.4**
baz=33,SNR=32
Y23A Lovelace Mesa, 33.12 323 ⇑P **P 15 08 10.7 +0.5**
baz=33,SNR=8.7
W25A X Bar L Ranch, 33.15 327 ⇓P **P 15 08 11.0 +0.5**
baz=33
V26A Tequesquite Ra 33.22 328 ⇑P **P 15 08 11.9 +0.8**
baz=33,SNR=10
121A Cookes Peak, D 33.24 320 ⇓P **P 15 08 11.3 0.0**
baz=33,SNR=20
220A Playas Peak, P 33.33 318 ⇑P **P 15 08 13.2 +1.2**
baz=33,SNR=36
319A Douglas 33.51 316 ⇓P **P 15 08 14.0 +0.4**
baz=34,SNR=21
BNM Barren Site 33.62 323 eP **P 15 08 15.7 +1.2**
comp=Z,8.9nm,1.1s,mb4.6
ERPA Erie 33.62 4 PFAKE 15 08 30.0 +16
ERPA LR LR
comp=Z,14µm,19.0s,MS5.7
U26A Atchley Ranch, 33.66 329 ⇓P **P 15 08 16.1 +1.2**
baz=34,SNR=11
W24A Lazy 6 Ranch, 33.66 326 ⇓P **P 15 08 16.3 +1.4**
baz=34,SNR=5.9
Y22A Socorro 33.67 322 ⇓P **P 15 08 15.2 +0.2**
baz=34,SNR=9.7
Z21A St. Cloud Mine 33.68 321 ⇓P **P 15 08 16.5 +1.4**
baz=34,SNR=7.3
AAM Ann Arbor 33.71 359 eP **P 15 08 15.0 -0.2**
AAM pmax pmax
comp=Z,108nm,1.4s,mb5.6
AAM MLR MLR
comp=Z,9µm,20.0s,MS5.5
AAM Ann Arbor 33.71 359 eP **P 15 08 15.0 -0.2**
comp=Z,108nm,1.4s,mb5.6
AAM LR LR
comp=Z,9µm,20.0s,MS5.5
120A U Bar Ranch, L 33.80 319 ⇑P **P 15 08 17.2 +1.1**
baz=34,SNR=24
219A White Tail Can 33.88 317 ⇑P **P 15 08 18.0 +1.1**
baz=34,SNR=18
318A Bisbee 34.03 316 ⇓P **P 15 08 19.1 +0.9**
baz=34,SNR=16
W23A Wener Place, 34.05 325 ⇓P **P 15 08 19.2 +1.0**
baz=34
ANMO Albuquerque 34.08 324 eP **P 15 08 18.2 -0.3**
ANMO pmax pmax
comp=Z,6.0nm,0.8s
ANMO MLR MLR
comp=Z,2µm,20.0s
ANMO Albuquerque 34.08 324 eP **P 15 08 18.2 -0.3**
comp=Z,6.2nm,0.8s,mb4.6
ANMO LR LR
comp=Z,2µm,20.0s,MS4.8
X22A Bernardo 34.09 323 ⇑P **P 15 08 19.3 +0.7**
baz=34
LAZ Ladron 34.09 323 eP **P 15 08 20.4 +1.8**
comp=Z,8.2nm,1.3s,mb4.5
Z20A Nine Sixteen R 34.14 320 ⇑P **P 15 08 20.0 +1.0**
baz=34,SNR=24
BINY Binghamton 34.15 9 eP **P 15 08 19.6 +0.6**
comp=Z,102nm,1.7s,mb5.5
BINY LR LR
comp=Z,14µm,19.0s,MS5.7
Y21A Point of Rocks 34.15 322 ⇑P **P 15 08 20.4 +1.3**
baz=34,SNR=7.5
218A Dragoon 34.39 317 ⇑P **P 15 08 22.1 +0.9**
baz=34,SNR=12
X21A Alamocita Cree 34.51 322 ⇓P **P 15 08 23.3 +1.0**
baz=35,SNR=9.1
Y20A Horse Springs, 34.52 321 ⇓P **P 15 08 23.2 +0.9**
baz=35,SNR=26
SCIA State Center 34.53 346 eP **P 15 08 21.1 -1.2**
comp=Z,180nm,1.4s,mb5.8
118A Homack Ranch, 34.74 318 ⇑P **P 15 08 25.3 +1.0**
baz=35,SNR=14
217A Green Valley 34.80 316 ⇓P **P 15 08 25.4 +0.6**
baz=35,SNR=18
JFWS Jewell Farm 34.91 351 eP **P 15 08 23.4 -2.2**
JFWS pmax pmax
comp=Z,71nm,0.9s,mb5.6
JFWS MLR MLR
comp=Z,3µm,19.0s,MS5.1
JFWS Jewell Farm 34.91 351 eP **P 15 08 23.4 -2.2**
comp=Z,71nm,0.9s,mb5.6
JFWS LR LR
comp=Z,3µm,19.0s,MS5.1
X20A Quemado 35.01 322 ⇓P **P 15 08 27.5 +0.9**
baz=35
TUC Tucson 35.09 316 eP **P 15 08 27.5 +0.1**
TUC pmax pmax
comp=Z,44nm,1.4s,mb5.2
TUC Tucson 35.09 316 eP **P 15 08 27.5 +0.1**
comp=Z,44nm,1.4s,mb5.2
Y19A Nutrioso 35.10 320 ⇑P **P 15 08 28.6 +1.2**
baz=35,SNR=12
117A Oracle 35.22 317 ⇓P **P 15 08 29.3 +0.9**
baz=35,SNR=15
V21A Milan 35.36 324 ⇑P **P 15 08 30.2 +0.6**
baz=35,SNR=10
216A Three Points, 35.38 315 ⇓P **P 15 08 30.6 +0.8**
baz=35,SNR=10
X19A St. Johns 35.43 321 ⇑P **P 15 08 31.2 +1.0**
baz=36
Z17A San Carlos Hig 35.48 318 ⇓P **P 15 08 31.2 +0.5**
baz=36
SDCO Great Sand Dun 35.60 328 eP **P 15 08 32.5 +0.9**
comp=Z,24nm,0.7s,mb5.2
SDCO LR LR
comp=Z,2µm,19.0s,MS4.9
T22A Edith 35.80 326 ⇓P **P 15 08 33.9 +0.5**
baz=36
116A Eloy 35.87 316 ⇑P **P 15 08 34.6 +0.6**
baz=36,SNR=18
X18A Snowflake 35.91 320 ⇓P **P 15 08 35.3 +0.9**
baz=36,SNR=7.4
W19A Sanders 35.94 321 ⇓P **P 15 08 35.2 +0.6**
baz=36
Y17A Roosevelt 35.97 318 ⇑P **P 15 08 35.2 +0.4**
baz=36
Z16A Peralta Trail, 36.14 317 ⇑P **P 15 08 36.9 +0.6**
baz=36
W18A Petrified Fore 36.16 321 ⇓P **P 15 08 37.3 +0.8**
baz=36
NCB Newcomb 36.17 11 P **P 15 08 37.1 +0.6**
comp=Z,92nm,2.0s,mb5.4
NCB LR LR
comp=Z,5µm,19.0s,MS5.3

GLMI Grayling 36.25 358 eP **P 15 08 37.4 +0.2**
comp=Z,112nm,0.9s,mb5.8
GLMI LR LR
comp=Z,6µm,19.0s,MS5.4
214A Organ Pipe Nat 36.30 314 ⇓P **P 15 08 38.5 +0.8**
baz=36,SNR=5.7
115A Sonoran Desert 36.31 316 ⇑P **P 15 08 38.1 +0.3**
baz=36
X17A Forest Lakes 36.34 319 ⇓P **P 15 08 38.9 +0.9**
baz=36,SNR=5.3
Y16A Circle Bar Ran 36.50 318 ⇑P **P 15 08 40.2 +0.9**
baz=37,SNR=22
OGNE Ogallala 36.54 335 eP **P 15 08 40.0 +0.4**
comp=Z,214nm,1.4s,mb5.8
Z15A Gila River Ind 36.60 317 ⇓P **P 15 08 41.0 +0.7**
baz=37
R22A Saguache, Gunn 36.62 328 ⇓P **P 15 08 41.3 +1.0**
baz=37
U19A Dine' College, 36.62 323 ⇓P **P 15 08 40.9 +0.5**
baz=37
LONY Lake Ozonia 36.73 10 P **P 15 08 41.2 -0.1**
comp=Z,46nm,1.4s,mb5.1
LONY LR LR
comp=Z,7µm,19.0s,MS5.5
W17A Winslow 36.75 320 ⇓P **P 15 08 42.2 +0.7**
baz=37
S21A Coal Bank Pass 36.76 326 ⇓P **P 15 08 42.5 +1.0**
baz=37
114A Black Gap (USA 36.79 315 ⇓P **P 15 08 42.9 +1.0**
baz=37,SNR=21
X16A Lo Mia Camp, P 36.80 319 ⇑P **P 15 08 42.7 +0.8**
baz=37,SNR=16
MVCO Mesa Verde 36.84 325 ⇑P **P 15 08 42.7 +0.4**
baz=37,SNR=7.5
MVCO Mesa Verde 36.84 325 eP **P 15 08 42.3 0.0**
comp=Z,32nm,1.3s,mb5.0
MVCO LR LR
comp=Z,2µm,19.0s,MS4.8
T19A Beclabito 36.88 324 ⇑P **P 15 08 42.7 +0.2**
baz=37
LBNH Lisbon 36.90 13 eP **P 15 08 43.6 +1.0**
LBNH pmax pmax
comp=Z,307nm,2.4s,mb5.7
LBNH MLR MLR
comp=Z,4µm,21.0s,MS5.2
LBNH Lisbon 36.90 13 eP **P 15 08 43.6 +1.0**
comp=Z,307nm,2.4s,mb5.7
LBNH LR LR
comp=Z,4µm,21.0s,MS5.2
U18A Rough Rock, Ch 37.10 323 ⇑P **P 15 08 44.3 -0.1**
baz=37
Y15A Casa Rosa Ranc 37.11 317 ⇑P **P 15 08 44.6 0.0**
baz=37,SNR=6.5
ECSD EROS Data Cent 37.12 343 eP **P 15 08 41.8 -2.8**
comp=Z,58nm,1.2s,mb5.3
ECSD LR LR
comp=Z,4µm,20.0s,MS5.2
V17A Tonalea, Kykot 37.14 321 ⇑P **P 15 08 45.0 +0.2**
baz=37,SNR=37
Q22A Crested Butte, 37.17 328 ⇓P **P 15 08 46.0 +1.0**
baz=37,SNR=15
Z14A Wintersburg 37.18 316 ⇓P **P 15 08 45.8 +0.5**
baz=37,SNR=11
ISCO Idaho Springs 37.23 331 eP **P 15 08 46.0 +0.5**
ISCO pmax pmax
comp=Z,15nm,1.3s,mb4.7
ISCO MLR MLR
comp=Z,1µm,20.0s,MS4.8
ISCO Idaho Springs 37.23 331 eP **P 15 08 46.0 +0.5**
comp=Z,15nm,1.3s,mb4.7
ISCO LR LR
comp=Z,1µm,20.0s,MS4.8
W16A Flagstaff 37.28 320 ⇓P **P 15 08 46.8 +0.8**
baz=37
X15A Humboldt 37.37 318 ⇓P **P 15 08 47.2 +0.5**
baz=37,SNR=13
113A Mohawk Valley, 37.42 315 ⇑P **P 15 08 47.8 +0.5**
baz=38,SNR=26
SMCO Snowmass 37.43 329 P **P 15 08 47.8 +0.6**
comp=Z,24nm,0.9s,mb5.0
WUAZ Wupatki 37.44 320 ⇑P **P 15 08 47.8 +0.4**
baz=38,SNR=12
WUAZ Wupatki 37.44 320 eP **P 15 08 48.4 +1.0**
comp=Z,33nm,1.3s,mb5.0
R20A Redvale 37.46 326 ⇓P **P 15 08 48.5 +0.9**
baz=38
Q21A Lamborn Mesa, 37.49 328 ⇓P **P 15 08 48.3 +0.5**
baz=38
Y14A Wickenburg 37.55 317 ⇓P **P 15 08 48.8 +0.4**
baz=38,SNR=15
S19A Harvey Farm, M 37.57 325 ⇑P **P 15 08 48.6 +0.2**
baz=38
Z13A Yuma Proving G 37.58 315 ⇑P **P 15 08 49.3 +0.6**
baz=38,SNR=21
T18A Mexican Hat 37.58 324 ⇑P **P 15 08 48.9 +0.4**
baz=38
U17A Shonto 37.70 322 ⇓P **P 15 08 49.6 +0.1**
baz=38
X14A Yava 37.79 318 ⇓P **P 15 08 50.9 +0.6**
baz=38,SNR=15
W15A Williams 37.80 319 ⇓P **P 15 08 51.1 +0.6**
baz=38
COWI Conover 37.88 353 eP **P 15 08 48.8 -2.2**
comp=Z,24nm,0.9s,mb4.9
COWI LR LR
comp=Z,4µm,19.0s,MS5.2
Q20A Ridgley Place, 37.97 327 ⇑P **P 15 08 52.5 +0.7**
baz=38
R19A Curley Farm, L 38.02 325 ⇓P **P 15 08 53.1 +0.8**
baz=38
S18A Hurst Farm, Bl 38.03 324 ⇓P **P 15 08 53.0 +0.6**
baz=38
T17A Navajo Res., N 38.04 323 ⇑P **P 15 08 53.4 +1.0**
baz=38
Y13A Salome 38.05 316 ⇑P **P 15 08 53.3 +0.8**
baz=38,SNR=20
V15A Kaibab Nationa 38.14 320 ⇓P **P 15 08 54.4 +1.1**
baz=38,SNR=31
GLA Glamis 38.32 314 ⇑P **P 15 08 55.7 +0.8**
baz=38,SNR=26
GLA Glamis 38.32 314 eP **P 15 08 56.0 +1.1**
GLA pmax pmax
comp=Z,254nm,1.4s,mb5.8
GLA Glamis 38.32 314 eP **P 15 08 56.0 +1.1**
comp=Z,254nm,1.4s,mb5.8
PHWY Pilot Hill 38.33 332 eP **P 15 08 53.0 -1.8**
comp=Z,8.1nm,0.6s,mb4.6
W14A Seligman 38.36 318 ⇑P **P 15 08 56.3 +1.2**
baz=38,SNR=5.5
N22A Wattenberg Ran 38.41 331 ⇑P **P 15 08 55.9 +0.4**
baz=38
P20A De Beque 38.41 328 ⇓P **P 15 08 56.0 +0.5**
baz=38
R18A Canyonlands Na 38.45 325 ⇑P **P 15 08 56.6 +0.8**
baz=38
T16A Glen Canyon Da 38.46 322 ⇑P **P 15 08 56.2 +0.2**
baz=38
Y12C Blythe 38.49 315 ⇑P **P 15 08 57.1 +0.9**
baz=38,SNR=17
Q19A Hogan Spring (38.49 326 ⇓P **P 15 08 54.9 -1.3**
baz=39
PKME Peaks-Kenny Pk 38.51 15 eP **P 15 08 56.8 +0.6**
comp=Z,72nm,1.6s,mb5.2
PDMCI Parker Dam,Lak 38.53 316 ⇓P **P 15 08 57.1 +0.4**
baz=39,SNR=11
U15A North Rim 38.59 321 ⇑P **P 15 08 58.2 +1.1**
baz=39,SNR=20
V14A Boquillas Ranc 38.62 319 ⇑P **P 15 08 58.3 +1.0**
baz=39,SNR=17
O20A White River Ci 38.80 328 ⇑P **P 15 08 58.9 +0.1**
baz=39
W13A Hualapai Mount 38.82 318 ⇑P **P 15 08 60.0 +0.9**
baz=39,SNR=16
N21A Black Mountain 38.90 330 ⇑P **P 15 09 00.6 +1.0**
baz=39,SNR=7.2
R17A Hanksville Air 38.94 324 ⇓P **P 15 08 59.8 -0.1**
baz=39,SNR=9.1
SWSC Sam W. Stewart 38.96 313 ⇓P **P 15 09 00.6 +0.4**
baz=39
T15A Red Dirt Ranch 39.02 321 ⇓P **P 15 09 00.8 +0.2**
baz=39,SNR=5.3
LCO Las Campanas 39.07 163 PFAKE 15 09 10.0 +8.9
LCO LR LR
comp=Z,1µm,19.0s,MS4.8
Q18A Rafter H Ranch 39.08 326 ⇑P **P 15 09 01.2 0.0**
baz=39,SNR=6.1
BC3 Big Chuckw Mtn 39.09 315 ⇑P **P 15 09 01.3 0.0**
baz=39,SNR=29

U14A **Mt Trumbull** 39.15 320 ⇓P P 15 09 02.2 +0.5
baz=39,SNR=13
IRM **Iron Mountain** 39.15 316 ⇓P P 15 09 01.8 0.0
baz=39
R16A **Teasdale** 39.30 324 ⇓P P 15 09 03.1 +0.1
baz=39
SRU **San Rafael** 39.30 325 ⇑P P 15 09 03.4 +0.4
baz=39,SNR=12
SRU **San Rafael** 39.30 325 eP P 15 09 03.0 0.0
SRU pmax pmax
comp=Z,29nm,1.1s,mb4.9
SRU **San Rafael** 39.30 325 eP P 15 09 03.0 0.0
comp=Z,29nm,1.1s,mb4.9
V13A **Grand Canyon W** 39.33 319 ⇑P P 15 09 03.2 0.0
baz=39
N20A **Spence Gulch,** 39.33 329 ⇓P P 15 09 03.4 +0.3
baz=39,SNR=11
MONP **Monument Peak** 39.38 313 ⇑P P 15 09 03.7 -0.1
baz=39
RWWY **Rawlins** 39.45 331 eP P 15 09 04.5 +0.3
comp=Z,49nm,1.4s,mb5.0
BAR **Barrett** 39.46 312 eP P 15 09 04.9 +0.5
comp=Z,53nm,1.3s,mb5.1
M21A **Separation Pea** 39.47 331 ⇓P P 15 09 04.6 +0.3
baz=40
Q16A **Castle Valley** 39.54 325 ⇓P P 15 09 05.5 +0.5
baz=40
W12A **Cal Nev Ari** 39.59 317 ⇓P P 15 09 06.0 +0.5
baz=40
LDFC **Landfair** 39.63 317 eP P 15 09 07.2 +1.4
comp=Z,97nm,1.3s,mb5.4
U13A **Pakoon Wash** 39.65 319 ⇓P P 15 09 07.3 +1.3
baz=40,SNR=9.5
BELC **Belle Mtn.** 39.66 315 ⇑P P 15 09 06.9 +0.8
baz=40,SNR=48
P17A **Butcher Ranch,** 39.67 326 ⇓P P 15 09 06.8 +0.6
baz=40,SNR=11
R15A **Junction** 39.72 323 ⇑P P 15 09 07.1 +0.6
baz=40
L21A **Rawlins** 39.74 331 ⇑P P 15 09 06.7 +0.1
baz=40,SNR=8.6
PFO **Pinyon Flat Ob** 39.77 314 P P 15 09 08.9 +1.9
comp=Z,173nm,1.3s,mb5.6,SNR=12
PFO **Pinyon Flat Ob** 39.77 314 ⇑P P 15 09 07.4 +0.3
baz=40,SNR=17
PFO **Pinyon Flat Ob** 39.77 314 eP P 15 09 07.7 +0.7
PFO pmax pmax
comp=Z,120nm,1.4s,mb5.4
PFO MLR MLR
comp=Z,661nm,21.0s,MS4.5
PFO **Pinyon Flat Ob** 39.77 314 eP P 15 09 07.7 +0.6
comp=Z,120nm,1.4s,mb5.4
PFO LR LR
comp=Z,661nm,21.0s,MS4.5
V12A **Nelson** 39.83 318 ⇑P P 15 09 08.1 +0.7
baz=40,SNR=20
O18A **Roosevelt** 39.83 327 ⇓P P 15 09 08.2 +0.8
baz=40
GMRC **Granite Mounta** 39.84 316 ⇑P P 15 09 08.3 +0.8
baz=40,SNR=24
N19A **John Jarvie Ra** 39.84 328 ⇑P P 15 09 08.4 +1.0
baz=40
MSU **Marysvale** 39.86 323 eP P 15 09 08.5 +0.9
MSU pmax pmax
comp=Z,12nm,1.2s,mb4.5
MSU **Marysvale** 39.86 323 eP P 15 09 08.5 +0.8
comp=Z,12nm,1.2s,mb4.5
MVU **Marysvale** 39.87 323 PFAKE 15 09 20.0 +12
MVU LR LR
comp=Z,3µm,20.0s,MS5.1
109C **Camp Elliot, M** 39.88 312 ⇓P P 15 09 08.5 +0.6
baz=40
CCUT **Cedar City** 39.96 321 eP P 15 09 10.0 +1.4
comp=Z,11nm,1.3s,mb4.4
T13A **Saint George** 39.98 320 ⇓P P 15 09 09.4 +0.7
baz=40
RSSD **Black Hills** 40.00 336 eP P 15 09 08.1 -0.7
RSSD pmax pmax
comp=Z,44nm,1.4s,mb5.0
RSSD **Black Hills** 40.00 336 eP P 15 09 08.1 -0.7
comp=Z,44nm,1.4s,mb5.0
EYMN **Ely** 40.02 351 P P 15 09 06.2 -2.5
comp=Z,49nm,1.3s,mb5.1
EYMN LR LR
comp=Z,1µm,20.0s,MS4.8
U12A **Valley of Fire** 40.03 319 ⇓P P 15 09 09.3 +0.2
baz=40
TLL **Tololo Astrono** 40.13 164 eP P 15 09 11.7 +1.7
N18A **Larsen Ranch,** 40.16 328 ⇓P P 15 09 10.6 +0.5
baz=40
O17A **Robinson Place** 40.17 326 ⇓P P 15 09 11.0 +0.8
baz=40,SNR=7.9
L20A **Wamsutter** 40.24 330 ⇑P P 15 09 11.3 +0.5
baz=40
P16A **Fountain Green** 40.29 325 ⇓P P 15 09 12.3 +1.1
baz=40
S13A **Holt Ranch, En** 40.29 321 ⇑P P 15 09 12.2 +1.0
baz=40,SNR=14
Q15A **Fillmore** 40.30 324 ⇑P P 15 09 11.7 +0.5
baz=40
MURC **Murrieta** 40.30 313 ⇓P P 15 09 11.9 +0.5
baz=40,SNR=22
T12A **Moapa** 40.32 319 ⇑P P 15 09 12.3 +0.8
baz=40
HEC **Hector,Ludlow** 40.33 316 ⇑P P 15 09 12.2 +0.6
baz=40
TUQ **Turquoise Moun** 40.38 317 ⇓P P 15 09 12.6 +0.5
baz=40
MPU **Maple Canyon** 40.55 325 eP P 15 09 13.4 +0.1
comp=Z,36nm,1.2s,mb4.9
O16A **Springville** 40.61 326 ⇑P P 15 09 13.8 0.0
baz=41,SNR=5.3
DAU **Daniels Canyon** 40.61 326 eP P 15 09 13.1 -0.7
DAU pmax pmax
comp=Z,53nm,1.5s,mb5.0
DAU **Daniels Canyon** 40.61 326 eP P 15 09 13.1 -0.7
comp=Z,53nm,1.5s,mb5.0
M18A **Lyman** 40.69 328 ⇓P P 15 09 14.9 +0.5
baz=41
R13A **O'Grain Ranch,** 40.73 321 ⇑P P 15 09 16.0 +1.1
baz=41,SNR=20
K20A **Yellowstone Ra** 40.74 331 ⇑P P 15 09 14.6 -0.2
baz=41
N17A **Moffit Pass** 40.75 327 ⇑P P 15 09 15.4 +0.4
baz=41
NLU **North Lily Min** 40.76 325 P P 15 09 15.5 +0.5
comp=Z,13nm,1.3s,mb4.4
Q14A **Sevier Lake (B** 40.82 323 ⇑P P 15 09 16.4 +0.8
baz=41,SNR=19
JLU **Jordanelle** 40.85 326 eP P 15 09 16.0 +0.2
comp=Z,24nm,1.3s,mb4.7
SHOC **Shoshone** 40.88 317 ⇑P P 15 09 16.8 +0.6
baz=41
T11A **Corn Creek, Al** 40.95 319 ⇑P P 15 09 17.9 +1.2
baz=41,SNR=11
BFSC **Mount Baldy St** 40.95 314 ⇓P P 15 09 17.7 +0.9
baz=41,SNR=6.4
SCI **San Clemente I** 40.98 312 ⇓P P 15 09 16.6 -0.4
baz=41
L18A **Fontenelle, Gr** 41.03 329 ⇓P P 15 09 17.7 +0.3
baz=41,SNR=7.6
M17A **Scullys Gap (B** 41.04 328 ⇓P P 15 09 17.3 -0.1
baz=41,SNR=28
N16A **Rees Ranch, Co** 41.04 327 ⇑P P 15 09 18.2 +0.8
baz=41
CIS **Catalina Islan** 41.08 312 ⇑P P 15 09 16.9 -1.0
baz=41,SNR=6.9
P14A **Drum Mountains** 41.09 324 ⇑P P 15 09 18.4 +0.6
baz=41,SNR=32
K19A **Absolon Red Bu** 41.11 331 ⇓P P 15 09 17.3 -0.6
baz=41,SNR=21
AGMN **Agassiz Refuge** 41.18 347 eP P 15 09 15.1 -3.3
comp=Z,52nm,1.0s,mb5.1
AGMN LR LR
comp=Z,2µm,19.0s,MS5.0
U10A **Ash Meadows, A** 41.20 318 ⇑P P 15 09 19.9 +1.1
baz=41,SNR=14
R12A **Pony Springs,** 41.22 321 ⇓P P 15 09 19.4 +0.5
baz=41,SNR=7.9
MWC **Mount Wilson** 41.23 314 eP P 15 09 18.8 -0.3
MWC pmax pmax
comp=Z,127nm,1.7s,mb5.3
MWC **Mount Wilson** 41.23 314 eP P 15 09 18.8 -0.3
comp=Z,127nm,1.7s,mb5.3
Q13A **Wheeler Ranch,** 41.24 322 ⇓P P 15 09 19.9 +0.8
baz=41,SNR=25
NOQ **North Oquirrh** 41.25 326 eP P 15 09 19.4 +0.2
comp=Z,93nm,1.4s,mb5.2

PASC **Pasadena Art C** 41.30 313 eP P 15 09 19.8 +0.2
comp=Z,569nm,1.6s,mb6.0
DUG **Dugway** 41.34 325 ⇓P P 15 09 19.8 0.0
baz=41,SNR=8.5
DUG **Dugway** 41.34 325 eP P 15 09 18.8 -1.0
DUG pmax pmax
comp=Z,27nm,1.4s,mb4.7
DUG MLR MLR
comp=Z,2µm,19.0s,MS5.1
DUG **Dugway** 41.34 325 eP P 15 09 18.8 -1.1
comp=Z,27nm,1.4s,mb4.7
DUG LR LR
comp=Z,2µm,19.0s,MS5.1
PDAR **Pinedale Array** 41.41 330 P P 15 09 19.0 -1.4
comp=Z,4.1nm,0.8s,mb4.1,baz=140,slow=9.1,SNR=13
PDAR PcP PcP 15 11 19.4 +1.2
comp=Z,4.6nm,0.9s,baz=126,slow=3.3,SNR=4.7
PDAR LR LR 15 30 16.2
comp=Z,2µm,19.3s,MS4.9,baz=140,slow=42
BW06 **Boulder Array** 41.41 330 ⇓P P 15 09 20.8 +0.4
baz=42
BW06 **Boulder Array** 41.41 330 PFAKE 15 09 30.0 +10
BW06 LR LR
comp=Z,2µm,20.0s,MS5.0
M16A **Huntsville** 41.44 327 ⇑P P 15 09 20.8 +0.2
baz=42,SNR=6.8
DECC **Green Verdugo** 41.44 313 ⇑P P 15 09 20.9 +0.1
baz=42
EDW2 **Edwards Air Fo** 41.52 315 ⇓P P 15 09 21.7 +0.3
baz=42,SNR=33
S11A **Rachel** 41.52 320 ⇓P P 15 09 22.0 +0.6
baz=42
K18A **Toltan Ranch,** 41.56 330 ⇑P P 15 09 21.7 +0.1
baz=42,SNR=31
P13A **Bates Ranch, G** 41.56 323 ⇑P P 15 09 22.2 +0.5
baz=42,SNR=11
FURC **Furnace Creek,** 41.59 317 ⇑P P 15 09 22.2 +0.3
baz=42,SNR=5.2
HWUT **Hardware Ranch** 41.61 327 eP P 15 09 20.5 -1.6
comp=Z,32nm,1.1s,mb4.9
HWUT LR LR
comp=Z,2µm,20.0s,MS4.9
LRMC **Laurel Mountai** 41.62 315 ⇑P P 15 09 22.8 +0.5
baz=42,SNR=27
MPMC **Manual Prospec** 41.79 316 ⇓P P 15 09 24.0 +0.3
baz=42,SNR=42
Q12A **Willow Creek R** 41.79 322 ⇓P P 15 09 24.2 +0.6
baz=42,SNR=6.6
L16A **Fish Haven** 41.83 328 ⇓P P 15 09 23.9 +0.1
baz=42
R11A **Troy Canyon, C** 41.84 320 ⇑P P 15 09 24.1 +0.1
baz=42,SNR=16
SPUT **South Promonto** 41.88 326 eP P 15 09 24.3 0.0
comp=Z,53nm,1.3s,mb5.0
BGU **Big Grassy Mou** 41.95 325 eP P 15 09 22.8 -2.0
comp=Z,45nm,1.3s,mb4.9
J18A **Kendall Valley** 41.97 330 ⇓P P 15 09 24.9 0.0
baz=42,SNR=39
DAC **Darwin (Calif)** 41.98 317 PFAKE 15 09 40.0 +15
DAC LR LR
comp=Z,2µm,19.0s,MS5.1
N14A **Grayback Hills** 41.99 325 ⇓P P 15 09 25.3 +0.1
baz=42,SNR=29
M15A **Larsen Ranch,** 41.99 326 ⇑P P 15 09 25.3 +0.1
baz=42,SNR=6.9
K17A **Gardner Place,** 42.08 329 ⇑P P 15 09 26.1 +0.2
baz=42
P12A **McGill** 42.11 322 ⇑P P 15 09 26.7 +0.5
baz=42,SNR=9.9
Q11A **Duckwater** 42.18 321 ⇓P P 15 09 27.0 +0.2
baz=42,SNR=19
AHID **Auburn Hatcher** 42.19 329 PFAKE 15 09 40.0 +13
AHID LR LR
comp=Z,2µm,22.0s,MS5.0
GRAC **Grapevine Rang** 42.22 318 ⇓P P 15 09 28.1 +1.0
baz=42
I18A **Diamond G Ranc** 42.23 331 ⇑P P 15 09 27.1 0.0
baz=42
S10A **Tonopah Range,** 42.23 319 ⇓P P 15 09 27.8 +0.6
baz=42,SNR=38
ARVC **Arvin** 42.24 314 ⇓P P 15 09 28.1 +0.8
baz=42,SNR=6.3
CFAA **Coronel Fontan** 42.24 161 LR LR 15 26 41.1
comp=Z,38nm,18.7s,baz=160,slow=36
ISA **Isabella** 42.26 315 ⇓P P 15 09 27.4 -0.1
baz=42,SNR=8.5
ISA **Isabella** 42.26 315 eP P 15 09 28.6 +1.1
ISA pmax pmax
comp=Z,110nm,1.5s,mb5.3
ISA **Isabella** 42.26 315 eP P 15 09 28.6 +1.2
comp=Z,110nm,1.5s,mb5.3
BSC **Santa Cruz Isl** 42.26 312 ⇓P P 15 09 27.6 +0.1
baz=42
L15A **Malad City** 42.33 327 ⇑P P 15 09 27.3 -0.6
baz=42,SNR=9.7
J17A **Brown Place, J** 42.42 330 ⇑P P 15 09 28.5 -0.1
baz=42,SNR=21
K16A **Soda Springs** 42.48 328 ⇓P P 15 09 28.5 -0.7
baz=43
REDW **Red Top Meadow** 42.49 330 eP P 15 09 27.4 -1.8
comp=Z,82nm,1.4s,mb5.2
O12A **Currie** 42.51 323 ⇑P P 15 09 29.6 +0.2
baz=43,SNR=17
M14A **Sheep Mountain** 42.51 326 ⇑P P 15 09 29.8 +0.4
baz=43,SNR=19
SNOW **Snow King Moun** 42.52 330 P P 15 09 28.0 -1.4
comp=Z,31nm,1.0s,mb5.0
LOHW **Long Hollow** 42.55 330 eP P 15 09 28.3 -1.4
comp=Z,63nm,1.6s,mb5.1
N13A **Wendover, West** 42.57 324 ⇑P P 15 09 29.9 -0.1
baz=43,SNR=7.1
N13A **Wendover, West** 42.57 324 eP P 15 09 29.4 -0.5
comp=Z,71nm,1.1s,mb5.3
CPUP **Villa Florida** 42.58 145 P P 15 09 28.2 -2.0
comp=Z,7.5nm,1.0s,mb4.4,baz=300,slow=7.3,SNR=7.2
CPUP LR LR 15 30 29.7
comp=Z,2µm,18.1s,MS4.9,baz=304,slow=41
CPUP **Villa Florida** 42.58 145 P P 15 09 28.2 -2.0
CPUP LR LR 15 30 29.7
TPAW **Teton Pass** 42.63 330 eP P 15 09 30.2 -0.2
comp=Z,31nm,1.3s,mb4.9
Q10A **Clear Creek Ra** 42.63 320 ⇓P P 15 09 30.6 +0.1
baz=43,SNR=15
RRI2 **Red Ridge** 42.72 329 eP P 15 09 30.7 -0.4
comp=Z,67nm,1.6s,mb5.1
I17A **Pilgrim Ck.** 42.76 330 ⇓P P 15 09 31.9 +0.5
baz=43,SNR=6.2
VES **Vestal, Richgr** 42.78 315 ⇑P P 15 09 32.8 +1.2
baz=43,SNR=20
L14A **Malta** 42.81 326 ⇓P P 15 09 32.0 +0.1
baz=43
PKM **Peak Mountain** 42.83 313 ⇓P P 15 09 32.7 +0.6
baz=43,SNR=25
K15A **Arbon** 42.88 328 ⇑P P 15 09 32.6 +0.3
baz=43,SNR=6.5
M13A **Montello** 42.88 325 ⇑P P 15 09 32.6 +0.2
baz=43,SNR=10
M13A **Montello** 42.88 325 eP P 15 09 30.7 -1.7
comp=Z,47nm,1.2s,mb5.1
IMW **Indian Meadow** 42.92 330 eP P 15 09 32.0 -0.8
comp=Z,21nm,1.0s,mb4.8
O11A **Cowboy Ranch,** 42.97 323 ⇓P P 15 09 33.2 0.0
baz=43,SNR=8.0
LAO **LASA Array** 42.99 336 eP P 15 09 31.6 -1.6
comp=Z,59nm,1.1s,mb5.2
LAO LR LR
comp=Z,2µm,20.0s,MS5.0
ULM **Lac du Bonnet** 43.03 348 P P 15 09 31.4 -2.0
comp=Z,79nm,1.0s,mb5.4,baz=161,slow=7.8,SNR=29
ULM LR LR 15 28 48.9
comp=Z,2µm,18.7s,MS5.0,baz=350,slow=38
ULM **Lac du Bonnet** 43.03 348 eP P 15 09 30.8 -2.7
comp=Z,75nm,0.9s,mb5.4
N12A **Clover Valley,** 43.05 324 ⇓P P 15 09 34.2 +0.4
baz=43
N12A **Clover Valley,** 43.05 324 eP P 15 09 31.7 -2.1
comp=Z,32nm,1.1s,mb5.0
ELK **Elko** 43.10 324 PFAKE 15 09 50.0 +16
ELK LR LR
comp=Z,3µm,22.0s,MS5.1
K14A **Jones Ranch, D** 43.12 327 ⇓P P 15 09 34.3 -0.1
baz=43,SNR=38
RCTC **Rector, Farmer** 43.12 316 ⇑P P 15 09 34.7 +0.2
baz=43
LKWY **Lake** 43.16 331 PFAKE 15 09 50.0 +15
LKWY LR LR
comp=Z,4µm,22.0s,MS5.3
SMMC **Simmler** 43.16 314 ⇑P P 15 09 35.9 +1.1

baz=43,SNR=12
YFT **Old Faithful** 43.28 331 eP P 15 09 36.8 +1.2
comp=Z,47nm,1.3s,mb5.1
G18A **Lazy EL Ranch,** 43.33 333 ⇑P P 15 09 35.4 -0.6
baz=43,SNR=20
M12A **Wells** 43.34 324 ⇑P P 15 09 36.1 -0.1
baz=43,SNR=8.1
YMR **Madison River** 43.50 331 eP P 15 09 37.7 +0.3
comp=Z,80nm,1.4s,mb5.2
O10A **Cortez Mining,** 43.58 322 ⇓P P 15 09 38.1 0.0
baz=44
NVAR **Mina Array Bea** 43.63 319 P P 15 09 37.3 -1.2
comp=Z,12nm,0.8s,mb4.7,baz=125,slow=6.7,SNR=35
NVAR PcP PcP 15 11 25.8 0.0
comp=Z,3.3nm,0.8s,baz=156,slow=3.8,SNR=4.4
NVAR **Mina Array Bea** 43.63 319 P P 15 09 37.3 -1.2
NVAR PcP PcP 15 11 25.8 0.0
H16A **Russell Place,** 43.67 331 ⇑P P 15 09 39.1 +0.4
baz=44,SNR=7.0
RPN **Rapa Nui** 43.68 215 PFAKE 15 09 50.0 +11
RPN LR LR
comp=Z,8µm,20.0s,MS5.6
K13A **Stover Farm, H** 43.69 326 ⇑P P 15 09 38.5 -0.4
baz=44,SNR=6.8
DGMT **Dagmar** 43.73 340 ⇓P P 15 09 39.0 -0.2
baz=44,SNR=16
DGMT **Dagmar** 43.73 340 eP P 15 09 38.0 -1.2
comp=Z,106nm,1.1s,mb5.5
DGMT LR LR
comp=Z,3µm,20.0s,MS5.2
GCMT **Greycliff** 43.74 333 eP P 15 09 38.2 -1.1
comp=Z,41nm,1.4s,mb5.0
QLMT **Earthquake Lak** 43.85 331 eP P 15 09 40.8 +0.6
comp=Z,29nm,1.4s,mb4.8
M11A **Holland Ranch,** 43.86 324 ⇑P P 15 09 40.1 -0.2
baz=44
L12A **House Creek Ra** 43.87 325 ⇑P P 15 09 40.2 -0.2
baz=44,SNR=12
G17A **Pierce Place,** 43.88 332 ⇓P P 15 09 40.9 +0.5
baz=44,SNR=9.2
BMN **Battle Mountai** 44.10 322 PFAKE 15 09 50.0 +7.7
BMN LR LR
comp=Z,2µm,19.0s,MS5.1
K12A **Draper Farm, C** 44.13 326 ⇑P P 15 09 42.4 0.0
baz=44
I14A **Mackay** 44.22 328 ⇓P P 15 09 43.3 +0.2
baz=44,SNR=7.0
J13A **Cove Ranch, Pi** 44.24 327 ⇓P P 15 09 43.1 -0.2
baz=44,SNR=9.8
F17A **Fitzpatrick Pl** 44.28 332 ⇓P P 15 09 43.5 -0.1
baz=44,SNR=12
H15A **Lima** 44.29 330 ⇓P P 15 09 44.2 +0.4
baz=44,SNR=42
L11A **Cat Creek Ranc** 44.30 325 ⇑P P 15 09 43.5 -0.4
baz=44,SNR=12
G16A **Moss Hill, Enn** 44.32 331 ⇓P P 15 09 43.9 0.0
baz=44,SNR=21
M10A **I.L. Ranch, Tu** 44.35 323 ⇓P P 15 09 44.1 -0.2
baz=44
E18A **Harlowton** 44.44 333 ⇓P P 15 09 44.7 -0.2
baz=44
HLID **Hailey** 44.48 327 ⇑P P 15 09 45.1 -0.1
baz=45,SNR=18
HLID **Hailey** 44.48 327 eP P 15 09 43.6 -1.7
comp=Z,9.0nm,0.8s,mb4.5
HLID LR LR
comp=Z,2µm,20.0s,MS5.1
BOZ **Bozeman (W)** 44.54 331 ⇓P P 15 09 45.6 -0.1
baz=45,SNR=36
BOZ **Bozeman (W)** 44.54 331 eP P 15 09 44.5 -1.2
BOZ pmax pmax
comp=Z,56nm,1.4s,mb5.2
BOZ MLR MLR
comp=Z,2µm,21.0s,MS4.9
BOZ **Bozeman (W)** 44.54 331 eP P 15 09 44.5 -1.2
comp=Z,56nm,1.4s,mb5.2
BOZ LR LR
comp=Z,2µm,21.0s,MS4.9
MCMT **McKenzie Canyo** 44.55 330 eP P 15 09 45.2 -0.5
comp=Z,22nm,1.4s,mb4.8
I13A **Wildhorse Cree** 44.56 328 ⇑P P 15 09 46.2 +0.3
baz=45,SNR=40
G15A **Dillon** 44.61 330 ⇓P P 15 09 46.1 -0.2
baz=45,SNR=17
F16A **Kennard Place,** 44.64 331 ⇑P P 15 09 46.2 -0.3
baz=45,SNR=6.8
J12A **Stokes Ranch,** 44.64 326 ⇓P P 15 09 46.5 0.0
baz=45,SNR=48
H14A **Leadore** 44.66 329 ⇓P P 15 09 46.7 0.0
baz=45,SNR=21
L10A **Juniper Basin** 44.66 324 ⇓P P 15 09 46.5 -0.2
baz=45,SNR=12
E17A **Martinsdale** 44.79 333 ⇑P P 15 09 47.6 -0.1
baz=45,SNR=15
CMB **Columbia Colle** 44.80 317 eP P 15 09 48.2 +0.3
CMB pmax pmax
comp=Z,26nm,1.1s,mb5.0
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.0
CMB **Columbia Colle** 44.80 317 eP P 15 09 48.2 +0.2
comp=Z,26nm,1.1s,mb5.0
CMB LR LR
comp=Z,2µm,20.0s,MS5.0
DLMT **Dillon** 44.80 330 P P 15 09 47.1 -0.7
comp=Z,48nm,1.4s,mb5.1
K11A **Parker Ranch,** 44.85 325 ⇑P P 15 09 47.9 -0.3
baz=45,SNR=26
D18A **Linhart Farms,** 44.88 334 ⇓P P 15 09 48.3 -0.1
baz=45,SNR=5.6
SAO **San Andreas Ge** 44.89 315 eP P 15 09 47.5 -1.2
SAO pmax pmax
comp=Z,78nm,1.5s,mb5.3
SAO MLR MLR
comp=Z,1µm,20.0s,MS4.9
SAO **San Andreas Ge** 44.89 315 eP P 15 09 47.5 -1.2
comp=Z,78nm,1.5s,mb5.3
SAO LR LR
comp=Z,1µm,20.0s,MS4.9
I12A **Atlanta** 45.02 327 ⇓P P 15 09 49.4 -0.1
baz=45,SNR=28
WCN **Washoe City** 45.05 319 ⇓P P 15 09 48.7 -1.2
baz=45
LRM **Limekiln Ridge** 45.06 331 eP P 15 09 49.2 -0.6
comp=Z,255nm,1.4s,mb5.9
H13A **Challis** 45.08 328 ⇑P P 15 09 49.2 -0.8
baz=45,SNR=26
F15A **Butte** 45.10 331 ⇓P P 15 09 49.9 -0.3
baz=45,SNR=19
MFID **Camas Ranch** 45.15 326 ⇑P P 15 09 49.8 -0.8
baz=45,SNR=17
E16A **East Helena** 45.22 332 ⇑P P 15 09 50.6 -0.5
baz=45,SNR=6.4
D17A **Six Diamond Ra** 45.23 333 ⇓P P 15 09 50.6 -0.6
baz=45,SNR=8.1
K10A **MacKenzie Ranc** 45.33 325 ⇑P P 15 09 51.5 -0.6
baz=45,SNR=8.7
H12A **Diamond D Ranc** 45.38 328 ⇑P P 15 09 51.7 -0.7
baz=46,SNR=16
HRY **Holter Researc** 45.42 332 eP P 15 09 51.7 -1.0
comp=Z,27nm,1.1s,mb5.0
G13A **Cobalt** 45.43 329 ⇓P P 15 09 51.8 -1.0
baz=46
EGMT **Eagleton** 45.50 335 ⇓P P 15 09 52.8 -0.6
baz=46
EGMT **Eagleton** 45.50 335 eP P 15 09 50.7 -2.7
comp=Z,73nm,1.4s,mb5.4
EGMT LR LR
comp=Z,2µm,19.0s,MS5.0
D16A **Dana Ranch, Ca** 45.53 333 ⇑P P 15 09 52.8 -0.7
baz=46,SNR=24
I11A **Placerville** 45.55 326 ⇓P P 15 09 53.1 -0.7
baz=46,SNR=7.0
E15A **Deer Lodge** 45.59 331 ⇓P P 15 09 53.0 -1.0
baz=46,SNR=24
C17A **Wharram Farm,** 45.63 334 ⇑P P 15 09 53.3 -1.1
baz=46,SNR=21
BEKR **Beckwourth** 45.75 319 ⇓P P 15 09 55.4 0.0
baz=46,SNR=19
B18A **Beardsley Farm** 45.80 335 ⇓P P 15 09 55.5 -0.2
baz=46,SNR=20
F13A **Darby** 45.97 330 ⇓P P 15 09 56.4 -0.6
baz=46,SNR=17
D15A **Lincoln** 45.98 332 ⇑P P 15 09 56.3 -0.9
baz=46,SNR=20
E14A **Clinton** 45.99 331 ⇓P P 15 09 56.4 -0.8
baz=46
H11A **Donnelly** 46.10 327 ⇑P P 15 09 57.1 -1.0
baz=46,SNR=7.9

I10A Payette 46.12 326 ⇑P P **15 09 57.0 -1.3**
baz=46
WVOR Wild Horse Val 46.15 323 eP P **15 09 57.8 -0.7**
WVOR pmax pmax
comp=Z,50nm,0.9s,mb5.4
WVOR Wild Horse Val 46.15 323 eP P **15 09 57.8 -0.8**
comp=Z,50nm,0.9s,mb5.4
B17A L&G Farms, Che 46.15 334 ⇑P P **15 09 57.4 -1.1**
baz=46,SNR=17
J09A Fry Pan Ranch, 46.19 325 ⇑P P **15 09 57.9 -1.0**
baz=46,SNR=25
CHMT Chamberlain Mo 46.24 331 eP P **15 09 57.8 -1.3**
comp=Z,11nm,1.4s,mb4.6
A18A Metzger Ranch, 46.24 336 ⇑P P **15 09 58.3 -0.8**
baz=46,SNR=29
E13A Victor 46.35 330 ⇓P P **15 09 59.0 -1.1**
baz=46,SNR=18
F12A Elk City 46.41 329 ⇑P P **15 09 59.4 -1.1**
baz=46,SNR=32
H10A Noah's Angus R 46.42 327 ⇓P P **15 09 59.1 -1.5**
baz=46,SNR=12
D14A Greenough 46.48 331 ⇑P P **15 09 59.6 -1.4**
baz=47
MSO Missoula 46.50 331 eP P **15 10 00.5 -0.8**
comp=Z,28nm,1.4s,mb5.0
MSO LR LR
comp=Z,1µm,20.0s,MS4.9
MCCM Marconi Confer 46.56 316 eP P **15 10 02.1 +0.3**
comp=Z,121nm,1.4s,mb5.6
MCCM LR LR
comp=Z,2µm,21.0s,MS4.9
I09A Lost Marbles R 46.58 325 ⇓P P **15 10 00.9 -1.0**
baz=47,SNR=8.6
SLMT Seeley Lake 46.59 331 eP P **15 10 01.7 -0.2**
comp=Z,8.9nm,1.0s,mb4.7
J08A Circle Bar Ran 46.61 324 ⇓P P **15 10 01.0 -1.1**
baz=47,SNR=16
A17A Triple J Farms 46.62 335 ⇑P P **15 10 01.1 -0.9**
baz=47,SNR=53
B16A M & M Farms, S 46.64 334 ⇑P P **15 10 01.2 -1.1**
baz=47,SNR=12
G11A Walters Elk Ra 46.70 328 ⇑P P **15 10 01.5 -1.3**
baz=47,SNR=22
MOD Modoc 46.85 322 P P **15 10 02.9 -1.2**
comp=Z,8.7nm,0.9s,mb4.7
MOD LR LR
comp=Z,3µm,19.0s,MS5.3
LBCM Butte Creek Ri 46.91 320 P P **15 10 04.8 +0.3**
D13A Huson 46.94 331 ⇓P P **15 10 03.5 -1.2**
baz=47,SNR=9.6
F11A Grangeville 46.96 328 ⇓P P **15 10 03.6 -1.2**
baz=47,SNR=13
SWMT Swartz Lake 47.02 331 eP P **15 10 04.3 -0.9**
comp=Z,9.1nm,1.3s,mb4.5
E12A Beaver Dam Sad 47.02 329 ⇑P P **15 10 03.9 -1.3**
baz=47
G10A Bishop Farm, J 47.08 327 ⇑P P **15 10 04.0 -1.8**
baz=47,SNR=12
C14A Swan Lake 47.09 332 ⇑P P **15 10 04.2 -1.5**
baz=47
HOPS Hopland 47.10 317 PFAKE 15 10 20.0 +14
HOPS LR LR
comp=Z,1µm,20.0s,MS5.0
YBMT Yellow Bay 47.28 332 P P **15 10 09.4 +2.1**
comp=Z,25nm,1.6s,mb4.9
B14A Marquette Ranc 47.30 333 ⇓P P **15 10 07.0 -0.4**
baz=47,SNR=5.3
E11A Bogner Ranch, 47.30 329 ⇑P P **15 10 06.3 -1.2**
baz=47,SNR=27
D12A Red Ives Fores 47.35 330 ⇑P P **15 10 06.8 -1.1**
baz=47
C13A Hot Springs 47.41 331 ⇑P P **15 10 07.3 -1.1**
baz=48,SNR=8.0
G09A Cove 47.42 327 ⇓P P **15 10 07.4 -1.1**
baz=48
H08A Prairie City 47.44 325 ⇓P P **15 10 07.5 -1.1**
baz=48
A15A Johnson Ranch, 47.51 334 ⇓P P **15 10 08.0 -1.1**
baz=48,SNR=54
WDC Whiskeytown Da 47.55 319 eP P **15 10 07.5 -2.0**
WDC pmax pmax
comp=Z,25nm,1.6s,mb5.0
WDC Whiskeytown Da 47.55 319 eP P **15 10 07.5 -2.0**
comp=Z,25nm,1.6s,mb5.0
F10A Beach Ranch, E 47.58 328 ⇑P P **15 10 08.4 -1.3**
baz=48,SNR=6.5
BSMT Bassoo Peak 47.63 331 eP P **15 10 09.2 -0.8**
comp=Z,34nm,1.3s,mb5.2
I07A Izee 47.65 324 ⇓P P **15 10 09.2 -1.0**
baz=48,SNR=12
A14A Double T Ranch 47.81 333 ⇑P P **15 10 10.8 -0.6**
baz=48,SNR=30
D11A Klaveano Farm, 47.84 329 ⇑P P **15 10 10.6 -1.0**
baz=48,SNR=18
E10A Myers Farm, Un 47.85 328 ⇑P P **15 10 10.5 -1.3**
baz=48
B13A Whitefish 47.86 332 ⇑P P **15 10 11.1 -0.7**
baz=48,SNR=22
C12B Naegeli Ranch, 47.87 331 ⇑P P **15 10 11.5 -0.3**
baz=48,SNR=8.0
SCHQ Schefferville 47.99 12 P P **15 10 11.5 -1.2**
comp=Z,14nm,0.9s,mb5.0,baz=178,slow=5.4,SNR=11
SCHQ LR LR 15 29 08.8
comp=Z,5µm,21.9s,MS5.5,baz=18,slow=34
SCHQ Schefferville 47.99 12 eP P **15 10 11.0 -1.6**
comp=Z,67nm,1.5s,mb5.5
LNOR Lincton Mounta 48.08 327 eP P **15 10 15.6 +2.1**
LNOR pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
LNOR Lincton Mounta 48.08 327 eP P **15 10 15.6 +2.1**
comp=Z,10nm,1.4s,mb4.7
G08A Pilot Rock 48.08 326 ⇓P P **15 10 13.0 -0.6**
baz=48,SNR=7.0
WALA Waterton Lakes 48.10 333 eP P **15 10 12.6 -1.0**
comp=Z,0.7nm,0.9s
A13A Flathead Natio 48.23 332 ⇑P P **15 10 14.0 -0.7**
baz=48
BUOR Burton Butte 48.26 321 P P **15 10 15.3 +0.3**
YBH Yreka Blue Hor 48.26 320 eP P **15 10 13.5 -1.5**
YBH pmax pmax
comp=Z,6.0nm,0.8s
YBH Yreka Blue Hor 48.26 320 eP P **15 10 13.4 -1.6**
comp=Z,6.3nm,0.8s,mb4.7
D10A Wagner Farm, O 48.32 329 ⇓P P **15 10 14.2 -1.1**
baz=48
E09A Wood Farm, Sta 48.41 328 ⇑P P **15 10 15.1 -1.0**
baz=48
B12A Libby 48.45 331 ⇑P P **15 10 16.4 +0.1**
baz=48,SNR=5.1
FFC Flin Flon 48.59 345 eP P **15 10 16.0 -1.3**
FFC pmax pmax
comp=Z,39nm,1.0s,mb5.4
FFC MLR MLR
comp=Z,2µm,20.0s,MS5.1
FFC Flin Flon 48.59 345 eP P **15 10 16.0 -1.3**
comp=Z,39nm,1.0s,mb5.4
FFC LR LR
comp=Z,2µm,20.0s,MS5.1
B11A Sandpoint 48.80 331 ⇑P P **15 10 18.7 -0.3**
baz=49
D09A Jones Farm, Ri 48.86 328 ⇑P P **15 10 18.6 -0.9**
baz=49
HUMO Hull Mountain 48.88 321 PFAKE 15 10 30.0 +10
HUMO LR LR
comp=Z,2µm,20.0s,MS5.1
G06A Carlson Farm, 48.98 325 ⇓P P **15 10 20.3 -0.3**
baz=49
NEW Newport 49.05 330 eP P **15 10 20.0 -1.0**
NEW pmax pmax
comp=Z,28nm,1.3s
NEW MLR MLR
comp=Z,2µm,20.0s
NEW Newport 49.05 330 eP P **15 10 20.0 -0.9**
comp=Z,28nm,1.3s,mb5.1
NEW LR LR
comp=Z,2µm,20.0s,MS5.0
HAWA Hanford 49.08 327 eP P **15 10 20.9 -0.3**
comp=Z,28nm,1.2s,mb5.2
HAWA LR LR
comp=Z,1µm,22.0s,MS4.9
RSW Rattlesnake Hi 49.11 327 eP P **15 10 23.1 +1.7**
comp=Z,15nm,0.9s,mb5.0
A11A Hall Mountain, 49.16 331 ⇑P P **15 10 21.7 -0.1**
baz=49
D08A Wollman Farm, 49.17 328 ⇑P P **15 10 21.1 -0.8**
baz=49
IRO Indian Ridge 49.22 323 P P **15 10 21.6 -0.7**
VFP Flag Point 49.50 325 P P **15 10 25.3 +0.8**

H04A Detroit Lake 49.56 324 ⇓P P **15 10 23.9 -1.1**
baz=50,SNR=10
HOOD Mount Hood Mea 49.61 325 eP P **15 10 28.1 +2.8**
comp=Z,653nm,1.8s,mb6.4
B09A Rice 49.67 330 ⇓P P **15 10 24.8 -0.9**
baz=50
G04A Mulino 50.02 324 ⇑P P **15 10 27.4 -1.0**
baz=50,SNR=6.2
RNO Roman Nose 50.06 322 P P **15 10 31.3 +2.5**
COR Corvallis 50.16 323 PFAKE 15 10 40.0 +10
COR LR LR
comp=Z,1µm,19.0s,MS4.9
B08A Colville Reser 50.22 329 ⇑P P **15 10 29.1 -0.8**
baz=50,SNR=7.5
TRQA Tornquist 50.23 158 eP P **15 10 29.9 -0.1**
comp=Z,64nm,1.4s,mb5.5
PLCA Paso Flores 50.26 168 P P **15 10 29.3 -0.9**
comp=Z,19nm,0.8s,mb5.2,baz=348,slow=8.3,SNR=20
PLCA LR LR 15 27 54.6
comp=Z,750nm,18.8s,MS4.7,baz=254,slow=32
PLCA Paso Flores 50.26 168 eP P **15 10 29.5 -0.7**
PLCA pmax pmax
comp=Z,39nm,1.1s
PLCA MLR MLR
comp=Z,624nm,19.0s
PLCA Paso Flores 50.26 168 eP P **15 10 29.5 -0.7**
comp=Z,39nm,1.1s,mb5.3
PLCA LR LR
comp=Z,624nm,19.0s,MS4.6
F04A Amboy 50.41 325 ⇓P P **15 10 30.7 -0.7**
baz=50
LON Longmire 50.54 326 eP P **15 10 32.3 -0.1**
LON pmax pmax
comp=Z,13nm,1.0s,mb4.8
LON Longmire 50.54 326 eP P **15 10 32.3 0.0**
comp=Z,13nm,1.0s,mb4.8
D05A Enumclaw 50.90 326 ⇑P P **15 10 34.9 -0.1**
baz=51
FCC Fort Churchill 50.91 353 eP P **15 10 32.7 -2.2**
comp=Z,3.4nm,1.4s,mb4.1
EDM Edmonton 50.98 337 eP P **15 10 33.5 -2.0**
F03A Seaside 51.06 324 ⇓P P **15 10 35.7 -0.6**
baz=51
A07A Ashnola River, 51.20 329 ⇑P P **15 10 37.6 +0.3**
baz=51,SNR=23
E03A Lebam 51.41 325 ⇓P P **15 10 38.7 -0.2**
baz=52
RPW Rockport 51.41 328 eP P **15 10 38.6 -0.3**
comp=Z,11nm,1.1s,mb4.7
B06A Marblemount 51.44 328 ⇓P P **15 10 38.7 -0.3**
baz=52
JCW Jim Creek 51.47 327 P P **15 10 37.8 -1.6**
NLWA Neilton Lookou 52.06 326 ⇓P P **15 10 43.4 -0.3**
baz=52,SNR=7.1
NLWA Neilton Lookou 52.06 326 eP P **15 10 43.1 -0.6**
comp=Z,23nm,1.0s,mb5.1
NLWA LR LR
comp=Z,2µm,19.0s,MS5.2
YKA Yellowknife Ar 58.65 343 P P **15 11 29.7 -1.2**
comp=Z,21nm,0.8s,mb5.2,baz=140,slow=6.9,SNR=91
YKA LR LR 15 40 11.1
comp=Z,305nm,18.7s,MS4.5,baz=80,slow=40
CMLA Cha da Macela 59.21 51 PFAKE 15 11 50.0 +15
CMLA LR LR
comp=Z,2µm,20.0s,MS5.3
TAOE Nuku Hiva Isla 59.57 255 ePP PP 15 13 47.5 -2.4
comp=Z,2µm,34.0s
TAOE eS **S** **15 19 44.2 -3.4**
comp=Z,1µm,24.1s
TAOE eSS SS 15 23 38.8 -4.6
comp=Z,236nm,26.3s
TAOE eLQ 15 26 39.8
comp=Z,5µm,29.5s
TAOE eLR LR 15 29 07.3
comp=Z,2µm,25.0s,baz=79
RKT Rikitea 59.82 237 eS **S** **15 19 49.9 -0.7**
comp=Z,2µm,27.8s
RKT eLQ 15 26 49.0
comp=Z,1µm,29.0s
RKT eLR LR 15 29 21.5
comp=Z,8µm,26.5s,baz=56
DLBC Dease Lake 61.42 334 eP P **15 11 49.4 -0.6**
SFJD Kangerlussuaq 62.41 14 eP P **15 11 54.6 -1.9**
SFJD pmax pmax
comp=Z,12nm,1.0s,mb5.0
SFJD Kangerlussuaq 62.41 14 i P P **15 11 54.6 -1.9**
comp=Z,12nm,1.0s,mb5.0
SKAG Skagway 64.29 333 P P **15 12 10.2 +1.1**
comp=Z,39nm,1.4s,mb5.2
RES Resolute Bay 66.54 357 eP P **15 12 21.2 -2.2**
RES pmax pmax
comp=Z,53nm,1.1s,mb5.5
RES Resolute Bay 66.54 357 eP P **15 12 21.2 -2.2**
comp=Z,53nm,1.1s,mb5.5
DAWY Dawson 68.19 337 eP P **15 12 33.5 -0.6**
INK Inuvik 68.34 342 eP P **15 12 34.7 -0.2**
INK pmax pmax
comp=Z,120nm,1.4s
INK Inuvik 68.34 342 eP P **15 12 34.7 -0.2**
comp=Z,120nm,1.4s,mb5.7
BMRM Bremner River 69.12 333 eP P **15 12 40.6 +0.7**
comp=Z,1µm,1.0s,mb6.7
EGAK Eagle 69.20 337 eP P **15 12 39.9 -0.4**
comp=Z,38nm,1.0s,mb5.3
EGAK LR LR
comp=Z,2µm,20.0s,MS5.3
SUMG Summit 69.38 13 eP P **15 12 39.6 -1.7**
comp=Z,99nm,1.0s,mb5.7
MENT Mentasta 69.47 335 eP P **15 12 41.6 -0.5**
DIV Divide 69.71 333 eP P **15 12 43.0 -0.5**
comp=Z,16nm,0.8s,mb5.0
BORG Borgarnes 70.48 24 PFAKE 15 13 00.0 +12
BORG LR LR
comp=Z,3µm,20.0s,MS5.5
PPT Papeete 70.75 248 eS S 15 22 03.3 -1.5
comp=Z,1µm,24.0s
PPT eSS SS 15 26 31.7 -5.6
comp=Z,280nm,30.0s
PPT eLQ 15 31 20.7
comp=Z,1µm,28.2s
PPT eLR LR 15 34 19.2
comp=Z,2µm,24.0s,baz=60
PPT Papeete 70.75 248 LR LR 15 36 19.6
comp=Z,1µm,19.2s,MS5.1,baz=67,slow=30
SEW Seward 71.11 331 eP P **15 12 51.4 -0.7**
comp=Z,29nm,1.0s,mb5.2
PMR Palmer 71.39 332 eP P **15 12 52.6 -1.2**
PMR pmax pmax
comp=Z,71nm,1.6s,mb5.3
PMR Palmer 71.39 332 eP P **15 12 52.6 -1.2**
comp=Z,71nm,1.6s,mb5.3
RC01 Rabbit Creek A 71.52 332 eP P **15 12 54.6 0.0**
comp=Z,2µm,0.6s
COLA College 71.88 336 eP P **15 12 55.3 -1.4**
COLA pmax pmax
comp=Z,135nm,1.8s,mb5.6
COLA MLR MLR
comp=Z,1µm,19.0s,MS5.2
COLA College 71.88 336 eP P **15 12 55.2 -1.4**
comp=Z,135nm,1.8s,mb5.6
COLA LR LR
comp=Z,1µm,19.0s,MS5.2
MCK McKinley 71.95 335 eP P **15 12 56.9 -0.3**
MCK pmax pmax
comp=Z,79nm,1.4s,mb5.5
MCK McKinley 71.95 335 eP P **15 12 56.9 -0.2**
comp=Z,79nm,1.4s,mb5.5
PMAFR Mafra 71.99 52 eP P **15 13 05.1 +7.2**
comp=Z,118nm,2.1s,mb5.5
PMAFR eS S 15 22 21.8 +3.2
PMAFR eLR LR 15 35 00.5
comp=Z,2µm,20.0s
LIS Lisbon 72.08 52 eP P **15 12 57.6 -0.9**
LIS eS S 15 22 17.1 -2.6
LIS AMS AMS 15 38 27.2
comp=Z,2µm,26.4s,MS5.3
LIS Lisbon 72.08 52 eP P **15 12 57.6 -0.9**
LIS eS S 15 22 17.1 -2.6
PFVI Vila Bisbo 72.25 54 eP P **15 13 03.3 +3.8**
comp=Z,98nm,1.5s,mb5.5
PFVI eS S 15 22 37.2 +16
PFVI eLR LR 15 35 10.6
comp=Z,2µm,22.0s
OHAK Old Harbor 72.34 327 eP P **15 12 59.1 -0.5**
comp=Z,215nm,1.6s,mb5.8
PTEO Sao Teotonio 72.35 53 eP P **15 12 54.8 -5.3**
comp=Z,90nm,1.9s,mb5.4

MORF Marmelete 72.40 54 eP P **15 13 03.5 +3.1**
comp=Z,34nm,1.6s,mb5.0
MORF eS S 15 22 22.9 -0.5
MORF eLR LR 15 35 19.9
comp=Z,2µm,22.0s
MORF Marmelete 72.40 54 eP P **15 12 59.7 -0.7**
MORF eS S 15 22 20.9 -2.5
TRF Thorofare Moun 72.45 334 eP P **15 12 59.3 -0.8**
comp=Z,123nm,1.7s,mb5.6
SCO Scoresbysund 72.59 18 i P P **15 12 59.3 -1.6**
SCO i S S 15 22 29.5 +5.1
SCO pmax pmax
comp=Z,12nm,0.9s,mb4.8
SCO MLR MLR
comp=Z,2µm,19.0s,MS5.4
SCO Scoresbysund 72.59 18 i P P **15 12 59.3 -1.6**
comp=Z,12nm,0.9s,mb4.8
SCO i S S 15 22 29.5 +5.1
SCO
comp=Z,2µm,19.0s
KTH Kantishna Hill 72.75 334 eP P **15 13 00.8 -1.2**
comp=Z,2µm,0.7s
RSO Redoubt South 72.79 331 eP P **15 13 02.3 +0.1**
EVOP Sao Brissos 72.88 52 eP P **15 13 02.5 -0.7**
EVOP eS S 15 22 26.9 -1.8
EVOP eS S 15 22 27.1 -1.7
EVOP AMS AMS 15 38 50.3
comp=Z,2µm,15.1s,MS5.5
PCVE Castro Verde 72.90 53 eP P **15 13 08.1 +4.8**
comp=Z,32nm,1.7s,mb5.0
PCVE eS S 15 22 38.7 +10
PCVE eLR LR 15 35 33.2
comp=Z,3µm,22.0s
BPAW Bear Paw Mtn. 72.93 335 eP P **15 13 02.0 -0.9**
comp=Z,104nm,1.4s,mb5.6
EVO Evora 72.96 52 eP P **15 13 04.1 +0.4**
comp=Z,22nm,1.8s,mb4.8
PBDV Barranco-do-Ve 72.97 54 eP P **15 13 08.6 +4.8**
comp=Z,37nm,1.5s,mb5.1
PBDV eS S 15 22 29.9 0.0
PBDV eLR LR 15 35 35.6
comp=Z,3µm,20.0s
PPLA Purkeypile 73.13 333 eP P **15 13 03.6 -0.5**
comp=Z,130nm,1.5s,mb5.6
PVAQ Vaqueiros 73.15 54 eP P **15 13 09.1 +4.3**
comp=Z,34nm,1.4s,mb5.1
PVAQ eS S 15 22 34.9 +3.0
PVAQ eLR LR 15 35 50.6
comp=Z,3µm,20.0s
PESTR Estremoz 73.31 52 eP P **15 13 03.0 -2.7**
comp=Z,43nm,1.5s,mb5.2
PESTR eS S 15 22 31.5 -2.1
PESTR eLR LR 15 35 45.0
comp=Z,2µm,24.0s
MTE Manteigas 73.42 50 eP P **15 13 14.5 +8.2**
comp=Z,55nm,1.9s,mb5.2
MTE eS S 15 22 42.4 +7.6
MTE eLR LR 15 35 51.6
comp=Z,2µm,22.0s
MTE Manteigas 73.42 50 PFAKE 15 13 20.0 +14
MTE LR LR
comp=Z,2µm,20.0s,MS5.3
CHUM Lake Minchumin 73.44 334 eP P **15 13 04.4 -1.6**
comp=Z,66nm,1.5s,mb5.3
PCBR Castelo Branco 73.44 51 eP sP 15 13 20.0 +4.8
comp=Z,28nm,1.6s
PMRV Marv??o 73.49 51 eP P **15 13 08.7 +1.9**
comp=Z,34nm,1.8s,mb5.0
PMRV eS S 15 22 36.4 +0.7
PMRV eLR LR 15 35 49.6
comp=Z,2µm,20.0s
COLD Coldfoot 73.54 338 eP P **15 13 06.6 0.0**
comp=Z,33nm,1.1s,mb5.2
PBAR Barrancos 73.71 53 eP P **15 13 09.7 +1.6**
PBAR eS S 15 22 33.6 -4.7
PBAR eLR LR 15 35 56.8
comp=Z,2µm,22.0s
RTC Rabat Centre 73.76 57 PFAKE 15 13 20.0 +11
RTC LR LR
comp=Z,1µm,20.0s,MS5.3
MVO Moncorvo 73.85 50 eP P **15 13 12.3 +3.4**
comp=Z,42nm,1.7s,mb5.1
MVO eS S 15 22 55.1 +15
MVO eLR LR 15 35 59.8
comp=Z,1µm,20.0s
SVW2 Sparrevohn 74.28 331 eP P **15 13 08.0 -3.0**
SFS San Fernando 74.33 55 PFAKE 15 13 20.0 +8.2
SFS LR LR
comp=Z,1µm,20.0s,MS5.2
ALE Alert 74.54 3 P P **15 13 10.7 -1.5**
comp=Z,167nm,0.9s,mb6.0,SNR=9.2
TTA Tatalina 74.84 333 eP P **15 13 13.4 -0.8**
TTA pmax pmax
comp=Z,101nm,1.6s,mb5.5
TTA Tatalina 74.84 333 eP P **15 13 13.4 -0.7**
comp=Z,101nm,1.6s,mb5.5
CHGN Chignik 74.97 326 eP P **15 13 13.9 -1.2**
SDPT Sand Point 76.02 325 eP P **15 13 21.9 +0.8**
comp=Z,154nm,1.0s,mb5.9
DAG Danmarks Havn 76.04 12 ⇓eP P **15 13 18.3 -2.5**
DAG pmax pmax
comp=Z,26nm,1.0s,mb5.1
DAG MLR MLR
comp=Z,8µm,17.0s,MS6.1
DAG Danmarks Havn 76.04 12 ⇓i P P **15 13 18.3 -2.5**
comp=Z,26nm,1.0s,mb5.1
DAG
comp=Z,8µm,17.0s
ESDC Sonseca Array 76.14 51 P P **15 13 21.8 -0.4**
comp=Z,4.9nm,0.7s,mb4.6,baz=274,slow=5.4,SNR=16
ESDC LR LR 15 44 26.9
comp=Z,1µm,18.1s,MS5.3,baz=285,slow=34
ESLA Sonseca Array 76.14 51 eP P **15 13 21.0 -1.2**
comp=Z,24nm,1.6s,mb4.9
ESLA LR LR
comp=Z,10µm,19.0s,MS6.2
ROSF Rostrenen 76.83 42 eP P **15 13 26.2 +0.3**
QUIF Quistinic 76.89 43 eP P **15 13 27.5 +1.3**
TIC Toumodi 77.11 85 eP P **15 13 27.2 -0.9**
comp=Z,132nm,1.2s,mb5.8
LIC Lamto 77.15 86 ⇑i P P **15 13 27.6 -0.7**
comp=Z,175nm,1.2s,mb5.6,baz=267
LIC eMLR MLR
comp=Z,844nm,21.8s,MS4.7
LIC Lamto 77.15 86 eP P **15 13 27.5 -0.8**
comp=Z,198nm,1.2s,mb5.9
LIC Lamto 77.15 86 ⇑i P P **15 13 27.6 -0.7**
comp=Z,87nm,1.2s,mb5.6
LIC LR LR
comp=Z,420nm,21.8s,MS4.7
ESK Eskdalemuir 77.22 35 PFAKE 15 13 40.0 +12
ESK LR LR
comp=Z,1µm,20.0s,MS5.3
DBIC Dimbokro 77.27 85 P P **15 13 28.3 -0.7**
comp=Z,55nm,1.1s,mb5.4,baz=267,slow=6.2,SNR=19
DBIC LR LR 15 44 57.5
comp=Z,576nm,21.8s,MS4.9,baz=258,slow=34
DBIC Dimbokro 77.27 85 eP P **15 13 28.1 -0.9**
DBIC pmax pmax
comp=Z,80nm,1.2s
DBIC MLR MLR
comp=Z,743nm,22.0s
DBIC Dimbokro 77.27 85 eP P **15 13 28.1 -0.9**
comp=Z,80nm,1.2s,mb5.5
DBIC LR LR
comp=Z,743nm,22.0s,MS5.0
KIC Kosan Boka 77.42 85 eP P **15 13 29.1 -0.7**
comp=Z,207nm,1.3s,mb5.9
FALS False Pass 77.67 324 eP P **15 13 31.8 +1.4**
comp=Z,220nm,1.0s,mb6.0
SJPF Ste Jean 78.20 48 eP P **15 13 35.7 +2.1**
comp=Z,91nm,1.6s,mb5.2
SJPF Ste Jean 78.20 48 eP P **15 13 35.7 +2.1**
SJPF pmax pmax
comp=Z,46nm,1.6s,mb5.2
SJPF Ste Jean 78.20 48 eP P **15 13 35.7 +2.1**
comp=Z,46nm,1.6s,mb5.2
GRR Gorron 78.44 42 eP P **15 13 35.9 +1.0**
comp=Z,155nm,1.7s,mb5.4
GRR Gorron 78.44 42 eP P **15 13 35.9 +1.0**
GRR pmax pmax
comp=Z,77nm,1.7s,mb5.4
GRR Gorron 78.44 42 eP P **15 13 35.9 +1.0**
comp=Z,77nm,1.7s,mb5.4
ETSF Etsaut 78.69 48 eP P **15 13 37.1 +0.7**
comp=Z,55nm,1.5s,mb5.0
ETSF Etsaut 78.69 48 eP P **15 13 37.1 +0.7**

ETSF pmax pmax
comp=Z,27nm,1.5s,mb5.0
ETSF Etsaut 78.69 48 *e*P **P 15 13 37.1 +0.7**
comp=Z,27nm,1.5s,mb5.0
MFF Saint Martin d 78.93 44 *e*P **P 15 13 38.6 +1.0**
EPF Esparros 79.35 48 *e*P **P 15 13 40.6 +0.6**
UNV Unalaska Valle 79.45 323 *e*P **P 15 13 40.5 +0.2**
comp=Z,70nm,0.9s,mb5.6
LFF La Frestale 79.58 46 *e*P **P 15 13 41.0 -0.2**
SHEL Horse Pasture 80.12 108 PFAKE 15 14 00.0 +15
SHEL LR LR
comp=Z,1μm,20.0s,MS5.2
RJF Les Rejaudoux 80.12 45 *e*P **P 15 13 45.2 +1.1**
RJF *e*MLR MLR
comp=Z,2μm,21.2s,MS5.2
RJF Les Rejaudoux 80.12 45 *e*P **P 15 13 45.2 +1.1**
RJF LR LR
comp=Z,2μm,21.3s,MS5.5
TNA Tin City 80.29 335 *e*P **P 15 13 44.9 +0.4**
comp=Z,80nm,1.7s,mb5.4
TCF Toulx Ste Croi 80.57 44 *e*P **P 15 13 47.6 +1.1**
MTLF Montolieu 80.71 47 *e*P **P 15 13 48.5 +1.2**
comp=Z,146nm,1.8s,mb5.3
MTLF Montolieu 80.71 47 *e*P **P 15 13 48.5 +1.2**
MTLF pmax pmax
comp=Z,73nm,1.8s,mb5.3
MTLF Montolieu 80.71 47 *e*P **P 15 13 48.5 +1.2**
comp=Z,73nm,1.8s,mb5.3
NIKO Nikolski 80.87 322 P **P 15 13 48.8 +0.8**
AVF Avril sur Loir 81.33 44 *e*P **P 15 13 51.0 +0.4**
SSF Saint Saulge 81.42 44 *e*P **P 15 13 51.7 +0.7**
LOR Lormes 81.65 43 *e*P **P 15 13 52.8 +0.6**
LOR *e*MLR MLR
comp=Z,3μm,20.0s,MS5.4
LOR Lormes 81.65 43 *e*P **P 15 13 52.8 +0.6**
LOR LR LR
comp=Z,3μm,20.0s,MS5.7
SMF Signal de Mont 81.68 44 *e*P **P 15 13 53.4 +1.0**
BAIF Baives 81.72 41 *e*P **P 15 13 53.2 +0.7**
LASF Ste Croix 81.85 47 *e*P **P 15 13 54.0 +0.6**
comp=Z,87nm,1.6s,mb5.2
GAMB Gambell 81.94 333 *e*P **P 15 13 53.2 -0.2**
comp=Z,94nm,1.7s,mb5.4
GIVF Givet 82.11 41 *e*P **P 15 13 55.4 +0.8**
SSB Saint Sauveur 82.26 45 PFAKE 15 14 10.0 +15
SSB LR LR
comp=Z,1μm,20.0s,MS5.3
VIVF Saint-Julien-l 82.38 46 *e*P **P 15 13 56.7 +0.6**
comp=Z,74nm,1.5s,mb5.1
VIVF Saint-Julien-l 82.38 46 *e*P **P 15 13 56.7 +0.6**
VIVF pmax pmax
comp=Z,37nm,1.5s,mb5.1
VIVF Saint-Julien-l 82.38 46 *e*P **P 15 13 56.7 +0.6**
comp=Z,37nm,1.5s,mb5.1
KBS Kingsbay 82.68 11 *e*P **P 15 13 57.2 +0.1**
KBS pmax pmax
comp=Z,50nm,1.0s,mb5.5
KBS MLR MLR
comp=Z,3μm,21.0s,MS5.7
KBS Kingsbay 82.68 11 *e*P **P 15 13 57.2 +0.2**
comp=Z,50nm,1.0s,mb5.5
KBS LR LR
comp=Z,3μm,21.0s,MS5.7
TORD Torodi Ar. Bea 82.89 78 P **P 15 13 58.1 -1.2**
comp=Z,16nm,1.2s,mb4.9,baz=300,slow=6.4,SNR=13
TORD LR LR 15 48 26.7
comp=Z,670nm,20.9s,MS5.0,baz=285,slow=34
WLF Walferdange 83.00 41 P **P 15 13 59.8 +0.6**
comp=Z,22nm,2.2s,mb4.8
SMRF Simiane la Rot 83.10 47 *e*P **P 15 14 00.2 +0.3**
ORIF Oris-en-Rattie 83.23 46 *e*P **P 15 14 01.0 +0.5**
ORIF *e*MLR MLR
comp=Z,3μm,20.5s,MS5.3
HINF Hinteralfeld 83.63 43 *e*P **P 15 14 03.3 +0.8**
SPB4 Spitsbergen Ar 83.67 12 *e*P **P 15 14 02.2 0.0**
LPL La Plagne 83.77 45 *e*P **P 15 14 04.0 +0.7**
BNI Bardonecchia 83.78 45 PFAKE 15 14 10.0 +6.6
BNI LR LR
comp=Z,2μm,20.0s,MS5.5
LPG La Plagne 83.79 45 *e*P **P 15 14 04.3 +0.9**
ECH Echery 83.80 42 PFAKE 15 14 10.0 +6.6
ECH LR LR
comp=Z,2μm,21.0s,MS5.5
LMR La Mourre 83.83 47 *e*P **P 15 14 03.5 -0.2**
CDF Champ du Feu 83.86 42 *e*P **P 15 14 03.3 -0.4**
FRF La Foret Royal 83.91 47 *e*P **P 15 14 04.3 +0.3**
comp=Z,178nm,1.7s,mb5.6
FRF La Foret Royal 83.91 47 *e*P **P 15 14 04.3 +0.3**
FRF pmax pmax
comp=Z,89nm,1.7s,mb5.6
FRF La Foret Royal 83.91 47 *e*P **P 15 14 04.3 +0.3**
comp=Z,89nm,1.7s,mb5.6
KONO Kongsberg 84.03 31 PFAKE 15 14 20.0 +16
KONO LR LR
comp=Z,2μm,19.0s,MS5.4
MUD Monsted U'grnd 84.16 34⇓ *i*P **P 15 14 04.7 -0.3**
MUD pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
MUD MLR MLR
comp=Z,1μm,17.0s,MS5.4
MUD Monsted U'grnd 84.16 34⇓ *i*P **P 15 14 04.7 -0.3**
comp=Z,10nm,0.9s,mb5.0
MUD
comp=Z,1μm,17.0s
NAO01 NORSAR Array S 84.52 29 P **P 15 14 06.0 -0.8**
comp=Z,42nm,1.3s,mb5.4
NAO01 LR LR
comp=Z,2μm,20.0s,MS5.4
BFO Black Forest 84.56 42 PFAKE 15 14 20.0 +13
BFO LR LR
comp=Z,2μm,21.0s,MS5.5
NB2 NORSAR Subarra 84.65 29 P **P 15 14 06.1 -1.3**
comp=Z,83nm,1.7s,mb5.6,baz=281,slow=5.1
NOA NORSAR Array B 84.65 29 P **P 15 14 07.3 -0.1**
comp=Z,10.0nm,1.1s,mb4.9,baz=277,slow=5.1,SNR=14
NOA LR LR 15 48 55.2
comp=Z,1μm,20.7s,MS5.2,baz=275,slow=34
TAM Tamanrasset 85.33 68 *e*P **P 15 14 11.7 +0.1**
TAM pmax pmax
comp=Z,19nm,1.3s,mb5.1
TAM MLR MLR
comp=Z,812nm,20.0s,MS5.1
TAM Tamanrasset 85.33 68 *e*P **P 15 14 11.7 +0.1**
comp=Z,19nm,1.3s,mb5.1
TAM LR LR
comp=Z,812nm,20.0s,MS5.1
COP Copenhagen 86.08 34 *i*P **P 15 14 17.7 +3.1**
COP
comp=Z,890nm,18.0s
GRA1 Grafenberg Arr 86.27 40 *e*P **P 15 14 18.5 +2.7**
comp=Z,74nm,1.9s,mb5.6
GRA1 *e*S S 15 24 51.2 +1.1
GRA1 *e*SS SS 15 30 39.0 +10
GRA1 LR LR
comp=Z,4μm,20.5s,MS5.8
GRF Grafenberg Arr 86.27 40 *e*P **P 15 14 18.5 +2.7**
comp=Z,74nm,1.9s,mb5.6
GRF *e*S S 15 24 51.2 +1.1
GRF *e*SS SS 15 30 39.0 +10
GRF *e*L 15 47 58.3
comp=Z,4μm,20.5s
GRF Grafenberg Arr 86.27 40 *e*P **P 15 14 18.5 +2.7**
GRF *e*S S 15 24 51.2 +1.1
GRF pmax pmax
comp=Z,74nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,4μm,20.5s,MS5.8
GRF Grafenberg Arr 86.27 40 *e*P **P 15 14 18.5 +2.7**
GRF *e*S S 15 24 51.2 +1.1
GRF pmax pmax
comp=Z,74nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,4μm,20.5s,MS5.8
MOX Moxa 86.38 39 *e*P **P 15 14 18.8 +2.5**
comp=Z,44nm,1.9s,mb5.4
MOX *e*S S 15 24 46.0 -5.1
MOX *e*SS SS 15 30 40.0 +9.4
MOX
comp=Z,2μm,22.0s
MOX Moxa 86.38 39 *e*P **P 15 14 18.8 +2.5**
MOX *e*S S 15 24 46.0 -5.1
MOX pmax pmax
comp=Z,44nm,1.9s,mb5.4
MOX MLR MLR
comp=Z,2μm,22.0s,MS5.4
KEST Kesra 86.94 55 LR LR 15 48 45.8
comp=Z,308nm,19.2s,MS4.7,baz=354,slow=33
NKC Novy Kostel 86.97 40 *e*P **P 15 14 22.0 +2.8**
NKC *e* 15 24 50.3
NKC MLR MLR
comp=Z,2μm,20.1s,MS5.6
NKC Novy Kostel 86.97 40 *e*P **P 15 14 22.0 +2.8**
NKC *e*SKS 15 24 50.3
NKC *e*x x 15 30 58.9
NKC AMS AMS 15 49 00.0
comp=Z,2μm,20.1s
CLL Collm 87.14 39 *e*P **P 15 14 18.0 -1.9**
CLL *i* pP 15 14 22.0 -4.4
CLL *e*S S 15 24 53.0 -5.4
CLL pmax pmax
comp=Z,38nm,2.1s,mb5.3
CLL MLR MLR
comp=Z,2μm,18.5s,MS5.5
CLL Collm 87.14 39 *e*P **P 15 14 18.0 -1.9**
comp=Z,38nm,2.1s,mb5.3
CLL *i* pP 15 14 22.0 -4.4
CLL *e*S S 15 24 53.0 -5.4
CLL LR LR
comp=Z,2μm,18.5s,MS5.5
CLL Collm 87.14 39 *e*P **P 15 14 18.0 -1.9**
comp=Z,38nm,2.1s,mb5.3
CLL *i* pP pP 15 14 22.0 -4.4
comp=Z,49nm,1.6s
CLL *e* 15 14 59.0
CLL *e*PP PP 15 18 00.0 +17
CLL *e*S S 15 24 56.0 -2.4
CLL *e*PS 15 26 03.0
CLL *e* 15 27 42.0
CLL *e*SS SS 15 30 48.0 +6.4
CLL *e* 15 33 24.0
CLL *e*(SSS) 15 34 30.0
CLL *e* 15 36 30.0
CLL Lm 15 55 00.0
comp=N,500nm,19.5s
CLL Lm 15 55 00.0
comp=E,1μm,18.1s
CLL Lm 15 55 00.0
comp=Z,2μm,18.5s
BSD Bornholm Skovb 87.57 35 *i*P **P 15 14 20.9 -1.1**
BSD pmax pmax
comp=Z,28nm,1.0s,mb5.5
BSD MLR MLR
comp=Z,1μm,18.0s,MS5.3
BSD Bornholm Skovb 87.57 35 *i*P **P 15 14 20.9 -1.1**
comp=Z,28nm,1.0s,mb5.5
BSD
comp=Z,1μm,18.0s
BRG Berggiesshubel 87.80 39 *e*P **P 15 14 25.7 +2.5**
comp=Z,52nm,1.8s,mb5.5
BRG *i* 15 30 55.0
BRG
comp=N,75nm,13.5s
BRG
comp=E,134nm,18.2s
BRG
comp=Z,207nm,15.4s
KHC Kasperske Hory 87.88 41 *e*P **P 15 14 22.8 -0.8**
KHC *e* 15 14 26.5
KHC *e* 15 24 54.9
KHC MLR MLR
comp=Z,3μm,22.1s,MS5.7
KHC Kasperske Hory 87.88 41 *e*P **P 15 14 23.5 -0.1**
comp=Z,20nm,1.4s,mb5.2
KHC Kasperske Hory 87.88 41 *e*P **P 15 14 22.8 -0.8**
KHC *e*pP pP 15 14 26.5 -3.6
KHC *e*PP PP 15 18 00.7 +11
KHC *e*SKS 15 24 54.9
KHC *e*x x 15 31 12.9
KHC AMS AMS 15 48 00.0
comp=Z,3μm,22.1s
GEC2 GERESS Array S 88.01 41 *e*P **P 15 14 23.7 -0.5**
GEC2 pmax pmax
comp=Z,3μm,1.3s
GEC2 GERESS Array S 88.01 41 *e*P **P 15 14 23.7 -0.6**
comp=Z,3μm,1.3s
GERES GERESS Array B 88.01 41 P **P 15 14 23.9 -0.3**
comp=Z,1.7nm,0.8s,mb4.3,baz=256,slow=4.0,SNR=16
GERES LR LR 15 48 48.5
comp=Z,2μm,20.7s,MS5.6,baz=267,slow=32
PVCC Panska Ves 88.25 39 AMS AMS 15 48 30.0
comp=Z,2μm,20.3s
PRA Prague 88.25 40 P **P 15 14 30.0 +4.7**
PRU Pruhonice 88.34 40 *e*P **P 15 14 29.0 +3.3**
PRU *e* 15 18 01.4
PRU *e* 15 24 59.5
PRU MLR MLR
comp=Z,3μm,20.6s,MS5.7
PRU Pruhonice 88.34 40 *e*P **P 15 14 29.0 +3.3**
PRU *e*PP PP 15 18 01.4 +8.3
PRU *e*SKS 15 24 59.5
PRU *e*x x 15 31 17.7
PRU AMS AMS 15 49 00.0
comp=Z,3μm,20.6s
MYKA Terra Mystica 88.38 43⇑ *i*P **P 15 14 25.6 -0.4**
comp=Z,6.2nm,0.9s,mb4.8
ARCES ARCESS Array B 88.45 20 P **P 15 14 25.1 -0.8**
comp=Z,14nm,0.9s,mb5.2,baz=296,slow=3.9,SNR=26
JAVS Javornik 88.80 44 *e*P **P 15 14 27.0 -1.0**
KEV Kevo 88.86 19 *e*P **P 15 14 26.5 -1.3**
KEV pmax pmax
comp=Z,17nm,1.0s,mb5.3
KEV Kevo 88.86 19 PFAKE 15 14 40.0 +12
KEV LR LR
comp=Z,1μm,22.0s,MS5.2
KEV Kevo 88.86 19 *e*p **P 15 14 26.5 -1.3**
comp=Z,17nm,1.0s,mb5.3
AQU L'Aquila 88.99 47 PFAKE 15 14 40.0 +11
AQU LR LR
comp=Z,1μm,21.0s,MS5.3
TREC Trest 89.08 40 *e*P **P 15 14 32.6 +3.4**
TREC MLR MLR
comp=Z,3μm,21.3s,MS5.7
TREC Trest 89.08 40 *e*P **P 15 14 32.6 +3.4**
TREC AMS AMS 15 48 40.0
comp=Z,3μm,21.3s
LJU Ljubljana 89.09 44 *e*P **P 15 14 21.9 -7.5**
UPC Upice 89.16 39 *e*P **P 15 14 29.0 -0.6**
UPC *e*pP pP 15 14 32.6 -3.5
KSP Ksiaz 89.26 39⇑ *e*P **P 15 14 28.7 -1.4**
KSP *e* 15 24 58.0
KSP *e*SS SS 15 31 08.0 -4.6
KSP MLR MLR
comp=Z,4μm,18.4s,MS5.8
SOKA Soboth 89.31 43⇑ *i*P **P 15 14 31.8 +1.4**
comp=Z,11nm,1.3s,mb5.0
DPC Dobruska-Polom 89.39 39 *e*P **P 15 14 29.4 -1.3**
DPC *e*pP pP 15 14 33.4 -3.7
DPC *e*SKS 15 25 03.5
DPC AMS AMS 15 50 40.0
comp=Z,2μm,20.5s
BOJS Bojanci 89.70 44 *e*P **P 15 14 33.3 +1.1**
BOJS *e*SKSac SKSac 15 25 05.1 +3.2
BILL Bilibino 89.82 339α *i*P **P 15 14 31.6 -0.7**
BILL *e* pP 15 14 38.8 0.0
BILL *i* 15 25 24.8
BILL *e*PS PS 15 26 21.5 -10
BILL SS SS 15 31 26.0 +6.2
BILL *e*SSS 15 34 57.5
BILL pmax pmax
comp=Z,28nm,1.0s,mb5.5
BILL Bilibino 89.82 339 *e*P **P 15 14 31.4 -0.9**
comp=Z,83nm,1.4s,mb5.9
BILL LR LR
comp=Z,1μm,20.0s,MS5.4
ZST Bratislava 90.36 41 *e*S S 15 25 29.6 +0.6
ZST *e*SS SS 15 31 35.6 +6.9
OKC Ostrava-Krasne 90.65 39 *e*P **P 15 14 39.3 +2.7**
OKC *e* 15 25 21.7
OKC *e* 15 31 33.9
OKC MLR MLR
comp=Z,2μm,20.1s,MS5.6
OKC Ostrava-Krasne 90.65 39 *e*P **P 15 14 39.3 +2.7**
OKC *e*x x 15 25 21.7
OKC *e*SS SS 15 31 33.9 +1.2
OKC AMS AMS 15 51 20.0
comp=Z,2μm,20.1s
AFI Afiamalu 90.92 256 LR LR 15 47 16.5
comp=Z,423nm,19.0s,MS4.9,baz=104,slow=30
KAF Kangasniemi 91.37 26 *e*P **P 15 14 38.7 -1.0**
KAF pmax pmax
comp=Z,18nm,1.1s,mb5.3
KAF Kangasniemi 91.37 26 *e*p **P 15 14 38.7 -1.0**
comp=Z,18nm,1.1s,mb5.3
VYHS Vyhne 91.41 41 *e*P **P 15 14 40.8 +0.7**
VYHS *e*SS SS 15 31 45.1 +1.3
VYHS pmax pmax
comp=Z,23nm,2.2s,mb5.1
VYHS MLR MLR
comp=Z,1μm,21.8s,MS5.4
VYHS Vyhne 91.41 41 *e*P **P 15 14 40.8 +0.7**
comp=Z,23nm,2.2s,mb5.1
VYHS *e*S SKSac 15 25 17.6 +5.9
VYHS *e*SS SS 15 31 45.1 +1.3
VYHS LR LR
comp=Z,1μm,21.8s,MS5.4
VYHS Vyhne 91.41 41 *e*P **P 15 14 40.8 +0.7**
FINES FINESS Array B 91.51 27 P **P 15 14 39.9 -0.4**
comp=Z,9.6nm,1.0s,mb5.1,baz=264,slow=1.9,SNR=10.0
FINES LR LR 15 50 35.2
comp=Z,2μm,21.6s,MS5.4,baz=285,slow=32
OJC Ojcow 91.58 39 *e*P **P 15 14 43.1 +2.2**
OJC *e*SKS 15 25 15.5
OJC L 15 51 02.6
comp=Z,1.5nm,21.8s
OJC Ojcow 91.58 39 *e*P **P 15 14 43.1 +2.2**
OJC *e* 15 25 15.5
CEL Celeste 91.66 51 PFAKE 15 14 50.0 +8.5
CEL LR LR
comp=Z,1μm,19.0s,MS5.3
APA Apatity 91.90 20⇑ *e*P **P 15 14 33.3 -8.7**
APA *e*S SKSac 15 25 18.0 +4.3
APA pmax pmax
comp=Z,18nm,1.2s,mb5.3
APA MLR MLR
comp=Z,1μm,18.0s,MS5.3
LVZ Lovozero 92.17 20⇑ *e*P **P 15 14 44.0 +0.8**
LVZ pmax pmax
comp=Z,30nm,1.2s,mb5.5
LVZ Lovozero 92.17 20 PFAKE 15 14 50.0 +6.8
LVZ LR LR
comp=Z,935nm,21.0s,MS5.2
PSZ Piszkesteto 92.24 41 *e*P **P 15 14 43.7 -0.3**
PSZ pmax pmax
comp=Z,47nm,1.8s,mb5.5
PSZ MLR MLR
comp=Z,1μm,21.0s,MS5.4
PSZ Piszkesteto 92.24 41 *e*P **P 15 14 43.7 -0.3**
comp=Z,47nm,1.8s,mb5.5
PSZ LR LR
comp=Z,1μm,21.0s,MS5.4
KECS Kecovo 92.48 40 *e*P **P 15 14 45.9 +0.8**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
KECS Kecovo 92.48 40 *e*P **P 15 14 45.9 +0.8**
comp=Z,2.6nm,1.2s,mb4.4
KECS Kecovo 92.48 40 *e*P **P 15 14 45.9 +0.8**
STHS Stebnicka Huta 92.70 39 *e*P **P 15 14 50.0 +3.9**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
STHS Stebnicka Huta 92.70 39 *e*P **P 15 14 50.0 +3.9**
comp=Z,2.6nm,1.1s,mb4.6
STHS Stebnicka Huta 92.70 39 *e*P **P 15 14 50.0 +3.9**
VSU Vasula 92.88 30 *e*P **P 15 14 47.9 +1.2**
VSU pmax pmax
comp=Z,28nm,1.3s,mb5.5
VNA1 Neumayer--Stat 92.90 161 *e*P **P 15 14 47.3 +0.9**
JOF Joensuu 93.19 25 *e*P **P 15 14 47.3 -0.7**
JOF pmax pmax
comp=Z,14nm,1.0s,mb5.3
JOF Joensuu 93.19 25 *e*p **P 15 14 47.3 -0.7**
comp=Z,14nm,1.0s,mb5.3
VNA2 Neumayer--Watz 93.25 161 *e*P **P 15 14 47.8 -0.3**
VNA2 *e* 15 18 34.5
KOLS Kolonicke sedl 93.49 40 *e*P **P 15 14 52.7 +3.0**
KOLS *e*SS SS 15 32 23.4 +10
KOLS pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
KOLS MLR MLR
comp=Z,2μm,21.3s,MS5.5
KOLS Kolonicke sedl 93.49 40 *e*P **P 15 14 52.7 +3.0**
comp=Z,7.4nm,1.3s,mb5.0
KOLS *e*SS SS 15 32 23.4 +10
KOLS LR LR
comp=Z,2μm,21.3s,MS5.5
KOLS Kolonicke sedl 93.49 40 *e*P **P 15 14 52.7 +3.0**
KOLS *e*SS SS 15 32 23.4 +10
KWP Kalwaria Pacla 93.55 39 PFAKE 15 15 00.0 +10
KWP LR LR
comp=Z,1μm,19.0s,MS5.5
UZH Uzhgorod 93.59 40 *e*P **P 15 14 55.0 +4.8**
UZH *e* pP 15 15 00.0 +3.3
UZH *e* 15 18 41.0
UZH *e* 15 25 23.0
UZH *i*S S 15 26 04.0 +6.0
KIEV Kiev 97.12 36 PFAKE 15 15 20.0 +14
KIEV LR LR
comp=Z,2μm,21.0s,MS5.6
AKASG Malin Array Be 97.13 36 LR LR 15 56 00.3
comp=Z,2μm,21.2s,MS5.6,baz=285,slow=34
SEY Seymchan 97.34 338⇑ *i*P **P 15 15 06.7 -0.3**
TIXI Tiksi 97.34 350 *e*P **P 15 15 05.7 -1.1**
TIXI *e* 15 19 05.2
TIXI *e* 15 26 28.4
TIXI *e*PS PS 15 27 54.8 +1.1
TIXI *e*SS SS 15 33 01.9 -4.9
TIXI pmax pmax
comp=Z,19nm,1.6s,mb5.3
TIXI MLR MLR
comp=Z,1μm,20.0s,MS5.4
TIXI Tiksi 97.34 350 *e*P **P 15 15 05.3 -1.5**
comp=Z,9.0nm,0.9s,mb5.2
FUNA Funafuti 98.98 263 PFAKE 15 15 30.0 +15
FUNA LR LR
comp=Z,9μm,19.0s,MS6.3
OBN Obninsk 99.20 30⇑ *e*P **P 15 15 15.8 +0.3**
OBN 15 19 26.0
OBN *e* 15 25 56.6
OBN *e*PS PS 15 28 22.1 +7.6
OBN *e*SS SS 15 33 49.0 +15
OBN *e*SSS 15 37 29.1
OBN pmax pmax
comp=Z,10.0nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,1μm,18.0s,MS5.4
OBN Obninsk 99.20 30 PFAKE 15 15 30.0 +14
OBN LR LR
comp=Z,1μm,19.0s,MS5.5
ISP Isparta 102.83 48 PFAKE 15 15 40.0 +8.4
ISP LR LR
comp=Z,959nm,19.0s,MS5.3
BR131 Keskin Array S 104.35 45 PFAKE 15 15 50.0 +12
BR131 LR LR
comp=Z,484nm,19.0s,MS5.1
CSS Prodhromos 106.00 50 PFAKE 15 20 10.0 +12
CSS LR LR
comp=Z,400nm,21.0s,MS4.9
SUR Sutherland 106.04 121 PFAKE 15 20 10.0 +11
SUR LR LR
comp=Z,1μm,21.0s,MS5.5
ARU Arti 107.96 21 PFAKE 15 20 10.0 +8.5
ARU LR LR
comp=Z,2μm,19.0s,MS5.6
KIV Kislovodsk 108.34 38 PFAKE 15 20 10.0 +7.4
KIV LR LR
comp=Z,888nm,21.0s,MS5.3
BOSA Boshof 109.92 117 PFAKE 15 20 20.0 +14
BOSA LR LR
comp=Z,905nm,19.0s,MS5.4
LBTB Lobatse 110.26 113 PFAKE 15 20 20.0 +13
LBTB LR LR
comp=Z,1μm,21.0s,MS5.4
GNI Garni 111.66 41 PFAKE 15 20 20.0 +11
GNI LR LR
comp=Z,685nm,20.0s,MS5.2
MAK Makhachkala 111.80 37 *i*PKIKP PKiKP 15 20 19.8 +11
MAK *e* 15 26 55.2
MAK pmax pmax
comp=Z,96nm,1.2s
DZM Mont Dzumac 112.23 250 *e*PS PS 15 30 30.9 +1.3
comp=Z,172nm,27.7s
DZM *e*LR LR 15 53 38.4
comp=Z,411nm,23.7s
LSZ Lusaka 112.45 103 PFAKE 15 20 20.0 +9.0
LSZ LR LR
comp=Z,628nm,19.0s,MS5.2

ABKAR	Akbulak array	113.96	26	*e*PKiKP	PKiKP	15 20 12.2	-0.9
HABR	Khabarovsk	114.20	333	*i* PKIKP	PKiKP	15 20 11.7	-1.8
HABR				*e*		15 21 05.8	
HABR				*e*SS	SS	15 36 55.0	-2.4
HABR				*e*SSS		15 41 09.5	
HABR				pmax	pmax		
	comp=E,35nm,2.3s						
HABR				pmax	pmax		
	comp=N,35nm,2.5s						
HABR				pmax	pmax		
	comp=Z,52nm,2.4s						
HABR				MLR	MLR		
	comp=Z,371nm,19.0s,MS5.0						
BRVK	Borovoye	114.60	17	*i* PKIKP	PKiKP	15 20 14.5	+0.3
BRVK	Borovoye	114.60	17	PFAKE		15 20 30.0	+16
BRVK				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
BVAR	Borovoye Array	114.66	17	PP	PP	15 21 03.6	-7.2
	comp=Z,1.3nm,0.9s,baz=330,slow=5.1,SNR=4.0						
ZAA0	Zalesovo Array	116.96	8	PKPdf	PKPdf	15 20 17.1	-1.6
ZALV	Zalesovo Beam	116.96	8	PKP	PKPdf	15 20 17.0	-1.7
	comp=Z,1.0nm,0.7s,baz=336,slow=3.3,SNR=6.2						
ZALV				PP	PP	15 21 24.6	-2.3
	comp=Z,0.9nm,0.6s,baz=347,slow=4.6,SNR=4.3						
ZALV	Zalesovo Beam	116.96	8	PKP	PKPdf	15 20 17.0	-1.7
ZALV				PP	PP	15 21 24.6	-2.3
KURK	Kurchatov	118.92	13	PKP	PKPdf	15 20 21.5	-1.1
	comp=Z,1.8nm,0.9s,baz=331,slow=2.4,SNR=8.9						
KURK	Kurchatov	118.92	13	*i* PKIKP	PKPdf	15 20 22.2	-0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	118.92	13	*e*PKPdf	PKPdf	15 20 21.8	-0.8
KURK				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
HIA	Hailar	119.18	343	PFAKE		15 20 30.0	+6.9
HIA				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
MDJ	Mudanjiang	119.57	334	PKP	PKPdf	15 20 22.3	-1.7
MDJ	Mudanjiang	119.57	334	PFAKE		15 20 30.0	+6.0
MDJ				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
KMBO	Kilima Mbogo	119.98	86	PFAKE		15 20 40.0	+14
KMBO				LR	LR		
	comp=Z,610nm,20.0s,MS5.2						
MAJO	Matsushiro	120.90	322	PFAKE		15 20 40.0	+13
MAJO				LR	LR		
	comp=Z,499nm,20.0s,MS5.2						
MJAR	Matsushiro Arr	120.90	322	PKP	PKPdf	15 20 24.2	-2.6
	comp=Z,1.5nm,0.8s,baz=307,slow=42,SNR=5.0						
CASY	Casey	121.53	186	PFAKE		15 20 40.0	+13
CASY				LR	LR		
	comp=Z,870nm,22.0s,MS5.4						
CN2	Changchun	121.97	336	*e*PKP	PKPdf	15 20 27.0	-1.6
CN2				*es*PKP		15 20 41.3	
CN2				PP	PP	15 22 03.5	+1.8
CN2				AMB	AMB		
	comp=Z,100nm,8.0s						
CN2				LR	LR		
	comp=N,450nm,22.0s,MS5.1						
CN2				LR	LR		
	comp=E,260nm,22.0s,MS5.1						
ULN	Ulaanbaatar	123.23	352	*e*PKIKP	PKPdf	15 20 29.7	-1.2
SONM	Songino Array	123.35	353	PKP	PKPdf	15 20 29.8	-1.3
	comp=E,2.7nm,0.9s,baz=349,slow=1.5,SNR=11						
SONM				PP	PP	15 22 10.2	-0.5
	comp=E,3.2nm,1.0s,baz=358,slow=5.8,SNR=6.6						
SONM				PKKPbc	PKKPbc	15 30 22.1	-0.1
	comp=E,0.5nm,0.8s,baz=172,slow=3.0,SNR=4.1						
SONM	Songino Array	123.35	353	PKIKP	PKPdf	15 20 29.8	-1.4
SONM						15 22 10.2	
MKAR	Makanchi Array	123.43	12	PKP	PKPdf	15 20 28.8	-2.5
	comp=E,1.5nm,0.9s,baz=357,slow=2.4,SNR=9.5						
EKS2	Erkin-Say	124.84	21	*e*PKPdf	PKPdf	15 20 34.0	-0.2
EKS2				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
AAK	Ala-Archa	125.12	20	PKP	PKPdf	15 20 34.2	-0.5
	comp=Z,1.6nm,0.7s,baz=28,slow=2.1,SNR=9.3						
AAK	Ala-Archa	125.12	20	*e*PKPdf	PKPdf	15 20 33.6	-1.1
AAK				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
TKM2	Tokmak 2	125.23	19	*e*PKIKP	PKPdf	15 20 34.9	0.0
AML	Almayashu	125.28	21	PFAKE		15 20 50.0	+15
AML				LR	LR		
	comp=Z,181nm,20.0s,MS4.7						
UCH	Uchtor	125.48	21	*e*PKPdf	PKPdf	15 20 34.1	-1.4
CAN	Canberra	125.69	232	PFAKE		15 20 50.0	+14
CAN				LR	LR		
	comp=Z,831nm,19.0s,MS5.4						
KSRS	Korea Array	125.98	330	PKP	PKPdf	15 20 35.4	-1.1
	comp=Z,10nm,0.9s,baz=14,slow=0.9,SNR=41						
INCN	Inchon	126.59	331	PFAKE		15 20 50.0	+12
INCN				LR	LR		
	comp=Z,580nm,20.0s,MS5.2						
WMQ	Urumqi	127.27	9	*e*Pdif	Pdif	15 17 19.5	-0.8
WMQ				PKP	PKPdf	15 20 37.5	-1.3
WMQ				PP	PP	15 22 41.0	+4.2
WMQ				PKS		15 24 13.0	
WMQ				SKS	SKSdf	15 27 44.8	-4.9
WMQ				SKKS	SKKSac	15 29 28.5	-6.4
WMQ				S	Sdif	15 30 34.0	-6.1
WMQ				SS	SS	15 39 45.5	+1.3
WMQ				LR	LR		
	comp=N,1μm,30.0s,MS5.6						
WMQ				LR	LR		
	comp=E,1μm,26.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,2μm,24.0s,MS5.6						
WMQ	Urumqi	127.27	9	*e*P	PKPdf	15 20 37.8	-1.0
TOO	Toolangi	127.64	229	*e*PKP	PKPdf	15 20 36.7	-2.9
RMQ	Roma	127.94	243	*e*PKP	PKPdf	15 20 39.4	-1.1
	comp=Z,10nm,1.1s						
KSH	Kashi	128.40	21	*e*PKP	PKPdf	15 20 41.8	+0.7
KSH				*es*PKP		15 20 55.8	
KSH				*e*PKS		15 24 16.8	
KSH				*e*SKS	SKSdf	15 27 47.8	-4.2
KSH				*e*SKKS	SKKSac	15 29 39.8	-2.4
KSH				*e*SS	SS	15 40 05.5	+6.8
KSH				AMB	AMB		
	comp=Z,64nm,4.0s						
KSH				LR	LR		
	comp=Z,2μm,17.2s,MS5.9						
BJI	Beijing	128.61	341	PKP	PKPdf	15 20 40.0	-1.5
BJI				LR	LR		
	comp=N,180nm,24.8s						
BJI				LR	LR		
	comp=E,240nm,30.0s						
BJI				LR	LR		
	comp=Z,220nm,35.1s						
BJT	Baijiatuau	128.63	341	PFAKE		15 20 50.0	+8.5
BJT				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
HHC	Hu-ho-hao-te	129.15	346	*e*PKP	PKPdf	15 20 41.3	-1.2
HHC				PP	PP	15 22 53.3	+4.0
HHC				PKS		15 24 17.3	
HHC				SKS	SKSdf	15 27 48.0	-5.4
HHC				SKKS	SKKSac	15 29 40.8	-6.1
HHC				SS	SS	15 40 08.3	+0.6
HHC				AMB	AMB		
	comp=Z,220nm,9.6s						
HHC				LR	LR		
	comp=N,390nm,21.2s,MS5.5						
HHC				LR	LR		
	comp=E,1μm,23.5s,MS5.5						
HHC				LR	LR		
	comp=Z,570nm,22.4s,MS5.2						
CMSA	Cobar Meteorol	129.41	236	*e*PKP	PKPdf	15 20 41.7	-1.5
ABPO	Ambohimpanom	130.58	108	PFAKE		15 21 00.0	+14
ABPO				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
CTAO	Charters Tower	131.15	251	PFAKE		15 21 00.0	+13
CTAO				LR	LR		
	comp=Z,963nm,21.0s,MS5.5						
GTA	Gaotai	132.30	357	PKP	PKPdf	15 20 48.5	0.0
GTA				sPKP		15 21 03.0	
GTA				PP	PP	15 23 13.0	+3.4
GTA				PKS		15 24 21.5	
GTA				SKS	SKSdf	15 27 55.3	-3.8
GTA				SKKS	SKKSac	15 29 59.0	-7.3
GTA				AMB	AMB		
	comp=Z,260nm,7.2s						
GTA				LR	LR		
	comp=N,1μm,20.4s,MS5.7						
GTA				LR	LR		
	comp=E,1μm,18.0s,MS5.7						
GTA				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
STKA	Stephens Creek	132.62	234	PKP	PKPdf	15 20 47.8	-1.4
	comp=Z,2.5nm,0.9s,baz=11,slow=12,SNR=2.6						
NJ2	Nanjing	134.67	334	*e*PKP	PKPdf	15 20 51.3	-1.9
LZH	Lanzhou	135.24	352	*e*PKP	PKPdf	15 20 54.5	+0.4
LZH				sPKP		15 21 10.0	
LZH				PP	PP	15 23 37.8	+10
LZH				PKS		15 24 28.5	
LZH				SKKS	SKKSac	15 30 19.0	-5.2
LZH				AMB	AMB		
	comp=Z,210nm,5.0s						
LZH				LR	LR		
	comp=E,880nm,17.5s						
LZH				LR	LR		
	comp=Z,1μm,19.6s,MS5.7						
XAN	Xi'an	136.27	346	PKP	PKPdf	15 20 53.8	-2.3
KLP	Kalpa	136.33	24	*e*P	PKPdf	15 20 55.5	-0.8
JASL	Jaisalmer	136.61	35	*e*P	PKPdf	15 20 53.8	-3.1
JASL				AMS	AMS	15 27 54.6	
	comp=Z,634nm,19.4s,MS5.4						
DDI	Dehra Dun	137.32	25	*ex*	PKPdf	15 20 56.0	-2.1
WHN	Wuhan	137.83	338	PKPbc	PKPdf	15 20 47.3	-12
WHN				PP	PP	15 23 46.0	+1.1
WHN				PKS		15 24 35.8	
WHN				SS	SS	15 41 38.5	-15
WHN				LR	LR		
	comp=N,2μm,18.8s,MS6.0						
WHN				LR	LR		
	comp=E,1μm,17.1s,MS6.0						
WHN				LR	LR		
	comp=Z,2μm,21.0s,MS5.9						
KHET	Khetri	138.25	29	*e*P	PKPdf	15 20 57.6	-2.3
MSEY	Mahe Island	138.50	88	PFAKE		15 21 10.0	+9.3
MSEY				LR	LR		
	comp=Z,677nm,21.0s,MS5.4						
AYAN	Aya Nagar	138.51	27	*e*P	PKPdf	15 20 58.1	-2.3
ENH	Enshi	139.69	343	PFAKE		15 21 10.0	+7.5
ENH				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
AGRA	Agra	139.95	27	*e*P	PKPdf	15 21 00.3	-2.8
AGRA				AMS	AMS	15 27 30.3	
	comp=Z,350nm,20.0s,MS5.1						
CD2	Chengdu	140.33	351	PKP	PKPdf	15 21 01.3	-2.4
SSLB	Suanglung	140.37	324	*e*PKPdf	PKPdf	15 21 03.7	-0.2
LSA	Lhasa	141.63	8	PKP	PKPdf	15 21 07.5	+1.5
LSA	Lhasa	141.63	8	PFAKE		15 21 20.0	+14
LSA				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
ASAR	Alice Springs	141.69	242	PKhKP		15 20 59.7	
	comp=Z,1.8nm,1.1s,baz=110,slow=3.0,SNR=8.5						
ASAR				PKP	PKPdf	15 21 05.3	-0.9
	comp=Z,5.4nm,1.0s,baz=117,slow=3.1,SNR=28						
GKN	Gorkha	141.80	18	*e*P	PKPdf	15 21 00.4	-6.0
	comp=Z,0.1nm,0.2s						
KKN	Kakani	142.19	17	*e*P	PKPdf	15 21 01.5	-5.6
	comp=Z,30nm,1.0s						
WRAB	Tennant Creek	142.22	248	*e*PKHKP	PKPdf	15 21 00.1	-7.2
GUN	Gumba	142.25	16	*e*P	PKPdf	15 21 02.5	-4.7
	comp=Z,101nm,1.1s						
DMN	Daman	142.31	18	*e*P	PKPdf	15 21 00.8	-6.5
	comp=Z,54nm,1.1s						
PKIN	Phulchoki	142.42	17	*e*P	PKPdf	15 21 02.3	-5.2
	comp=Z,20nm,0.6s						
PKI	Pulchoki	142.43	17	*e*P	PKPdf	15 21 01.8	-5.7
	comp=Z,33nm,1.0s						
JIRN	Jiri	142.57	16	*e*P	PKPdf	15 21 02.9	-4.8
BHPL	Bhopal	143.07	31	*e*P	PKPdf	15 21 05.1	-3.7
TAPN	Taplejung	143.25	14	*e*P	PKPdf	15 21 05.1	-3.9
	comp=Z,79nm,1.3s						
RAMN	Ramite	143.35	16	*e*P	PKPdf	15 21 04.0	-5.2
	comp=Z,154nm,1.5s						
ODAN	Odare	143.64	15	*e*P	PKPdf	15 21 05.0	-4.7
	comp=Z,66nm,1.2s						
GYA	Guiyang	144.06	345	PKP	PKPdf	15 21 06.8	-3.6
GYA				pPKP	pPKPdf	15 21 17.3	+0.2
GYA				PKS		15 24 41.0	
GYA				SKS	SKSdf	15 28 11.0	-8.3
GYA				AMB	AMB		
	comp=Z,50nm,4.8s						
GYA				LR	LR		
	comp=N,570nm,24.2s,MS5.4						
GYA				LR	LR		
	comp=E,480nm,21.7s,MS5.4						
GYA				LR	LR		
	comp=Z,620nm,20.5s,MS5.4						
POO	Poona	144.71	40	*e*P	PKPdf	15 21 08.8	-3.0
KAKA	Kakadu	145.03	260	*e*PKP	PKPdf	15 21 03.2	-9.1
	comp=Z,44nm,0.9s						
KAKA	Kakadu	145.03	260	*e*PKPbc	PKPbc	15 21 11.2	-0.5
SHL	Shillong	145.79	8	*e*P	PKPdf	15 21 12.0	-1.4
KAD	Karad	145.81	41	*e*P	PKPdf	15 21 11.2	-2.5
KMI	Kunming	146.17	351	PKPbc	PKPbc	15 21 13.0	-2.0
KMI				PKPab	PKPab	15 21 15.8	+0.2
KMI				pPKP	pPKPdf	15 21 23.5	+2.8
KMI				sPKP		15 21 28.0	
KMI				PP	PP	15 24 39.3	+4.1
KMI				SKKS	SKKSac	15 31 25.0	-3.3
KMI				SS	SS	15 43 28.5	-0.9
KMI				AMB	AMB		
	comp=Z,100nm,3.8s						
KMI				LR	LR		
	comp=Z,1μm,18.3s,MS5.7						
TGY	Tagaytay City	147.41	313	PKPbc	PKPbc	15 21 19.4	+0.6
	comp=Z,104nm,0.3s,baz=160,slow=16,SNR=6.5						
KMBL	Kambalda	147.57	222	*e*PKP	PKPdf	15 21 14.1	-2.1
	comp=Z,81nm,1.1s						
DAV	Davao City (W)	147.69	298	PFAKE		15 21 30.0	+13
DAV				LR	LR		
	comp=Z,597nm,19.0s,MS5.4						
KNA	Kununurra	148.23	254	*e*PKP	PKPdf	15 21 17.4	-0.3
	comp=Z,42nm,1.2s						
HYB	Hyderabad	148.42	35	*i* PKP	PKPbc	15 21 20.0	-1.5
NWAO	Narrogin (SRO)	149.35	215	PFAKE		15 21 30.0	+11
NWAO				LR	LR		
	comp=Z,785nm,19.0s,MS5.5						
QIZ	Qiongzhong	149.93	335	PKPbc	PKPdf	15 21 18.5	-1.9
QIZ				SS	SS	15 44 10.8	-1.7
QIZ				AMB	AMB		
	comp=Z,230nm,9.7s						
QIZ				LR	LR		
	comp=N,770nm,19.2s						
QIZ				LR	LR		
	comp=Z,1μm,18.7s,MS5.7						
KLBR	Kellerberrin	150.02	217	*e*PKP	PKPdf	15 21 18.2	-2.0
	comp=Z,47nm,1.3s						
FITZ	Fitzroy Crossi	150.66	248	*e*PKPdf	PKPdf	15 21 20.8	-0.7
MEEK	Meekatharra	152.74	226	*e*PKP	PKPbc	15 21 28.1	-3.5
CHTO	Chiang Mai	152.83	356	PKIKP	PKPdf	15 21 24.2	-0.6
CHTO				MLR	MLR		
	comp=Z,891nm,20.0s,MS5.6						
CM31	Chiang Mai Arr	153.19	356	*e*PKPdf	PKPdf	15 21 24.7	-0.6
CM31				LR	LR		
	comp=Z,797nm,19.0s,MS5.5						
CMAR	Chiang Mai Arr	153.19	356	PKP	PKPdf	15 21 24.6	-0.8
	comp=Z,5.6nm,0.9s,baz=309,slow=2.2,SNR=31						
CMAR				PKPbc	PKPbc	15 21 31.0	-1.7
	comp=Z,8.6nm,1.0s,baz=34,slow=4.7,SNR=20						
MBWA	Marble Bar	154.79	237	PFAKE		15 21 40.0	+12
MBWA				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
KKM	Kota Kinabalu	156.10	306	PFAKE		15 21 40.0	+10
KKM				LR	LR		
	comp=Z,663nm,22.0s,MS5.4						
KAPI	Kappang	157.25	277	PFAKE		15 21 40.0	+9.0
KAPI				LR	LR		
	comp=Z,493nm,20.0s,MS5.3						
KSM	Kuching	163.54	306	PFAKE		15 21 50.0	+12
KSM				LR	LR		
	comp=Z,786nm,21.0s						
KULM	Kulim	165.88	345	PFAKE		15 21 50.0	+10
KULM				LR	LR		
	comp=Z,972nm,20.0s						
PSI	Prapat	168.66	351	PKP	PKPdf	15 21 38.9	-3.1
	comp=Z,1.5nm,0.3s,baz=180,slow=8.9,SNR=4.8						
PSI				PKPab	PKPab	15 22 52.4	+0.8
	comp=Z,9.2nm,1.0s,baz=329,slow=4.1,SNR=7.0						
COCO	West Island	176.29	176	PFAKE		15 22 00.0	+15
COCO				LR	LR		
	comp=Z,508nm,19.0s						

*KISR **26** 15:10:39.4±1.1, 31°.68N×50°.50E, h44km±617km, ML2.9*
*ISCJB **26** 15:10:41.8±0.4, 31°.69N±0°.04×50°.19E±0°.04, h10km, Error ellipse: s-maj=6.7km s-min=3.4km az=145.1*

*CSEM **26** 15:10:42.6±0.4, 31°.69N×50°.17E, h10km, ML2.9, Error ellipse: s-maj=11.8km s-min=5.8km az=108.0*
*TEH **26** 15:10:46.1, 31°.81N×50°.25E, h26km*
ISC 26 15:10:42.9±0.4, 31°.72N±0°.03×50°.19E±0°.04, h10km, n23, σ0°85/35, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	Pirpir	1.13	32	*e*	Sg	15 11 27.1	+7.9
	comp=Z,3μm,0.2s						
SHGR	Shooshtar-Gavs	1.24	288	*e*Pg	Pg	15 11 06.0	-0.7
SHGR				*e*Sg	Sg	15 11 23.8	+1.0
IGAR	Gharneh	1.71	66	*e*Pn	Pn	15 11 13.3	+0.5
IGAR				*e*Sg	Sg	15 11 37.9	-0.1
IGAR				*e*		15 11 40.8	
	comp=Z,2μm,0.2s						
IKLH	Kolahrood	1.98	36	*e*Pn	Pn	15 11 16.8	+0.4
IKLH				*e*		15 11 23.2	
	comp=Z,2μm,0.2s						
IKLH				*e*Sg	Sg	15 11 44.9	-1.5
IZEF	Zefreh	2.16	57	*e*Pn	Pn	15 11 19.5	+0.6
IZEF				*e*		15 11 52.9	
	comp=Z,996nm,0.2s						
ASAO	Ashtian	2.82	357	*e*Pn	Pn	15 11 29.3	+1.3
ASAO				*e*Sg	Sg	15 12 12.5	-0.9
GHVR	GHOM	2.90	18	*e*Pn	Pn	15 11 30.0	+0.9
ISAD	Sadrabad	2.98	85	*e*Pn	Pn	15 11 31.1	+0.9
ISAD				*e*		15 12 28.8	
	comp=Z,634nm,0.3s						
UMR	Umm Al-Rimmam	3.04	225	*e*P	Pn	15 11 29.9	-1.0
UMR	Umm Al-Rimmam	3.04	225	*e*P	Pn	15 11 29.9	-1.1
MIB	Mutribah	3.11	233	*e*P	Pn	15 11 31.1	-0.9
MIB				*e*S	Sn	15 12 10.5	+1.3
MIB				AML	AML	15 12 19.6	
	comp=Z,32nm,0.5s						
MIB	Mutribah	3.11	233	*e*P	Pn	15 11 31.0	-1.0
MIB				*e*S	Sn	15 12 10.5	+1.3
ISFB	Sefidab	3.14	33	*e*Pn	Pn	15 11 32.1	-0.2
ISFB				*e*		15 12 43.3	
	comp=Z,301nm,0.4s						
KBD	Kabd	3.33	221	*e*P	Pn	15 11 34.4	-0.6
KBD				*e*S	Sn	15 12 14.8	+0.2
KBD				AML	AML	15 12 24.0	
	comp=Z,22nm,0.6s						
KBD	Kabd	3.33	221	*e*P	Pn	15 11 34.4	-0.6
KBD				*e*S	Sn	15 12 14.8	+0.2
IVRN	Varamin	3.51	21	*e*Pn	Pn	15 11 37.8	+0.4
IVRN				*e*		15 11 51.7	
	comp=Z,322nm,0.2s						
NAY	Al-Naaiem	3.54	227	*e*P	Pn	15 11 37.2	-0.7
NAY				*e*S	Sn	15 12 20.6	+0.7
NAY				AML	AML	15 12 25.5	
	comp=Z,16nm,0.5s						
NAY	Al-Naaiem	3.54	227	*e*P	Pn	15 11 37.2	-0.7
NAY				*e*S	Sn	15 12 20.6	+0.7
QRN	Al-Qurain	3.56	214	*e*P	Pn	15 11 36.1	-2.0
RDF	Al-Radifah	3.60	220	*e*P	Pn	15 11 38.3	-0.4
RDF				*e*S	Sn	15 12 21.5	+0.2
RDF				AML	AML	15 12 30.7	
	comp=Z,31nm,0.7s						
RDF	Al-Radifah	3.60	220	*e*P	Pn	15 11 38.3	-0.4
RDF				*e*S	Sn	15 12 21.5	+0.2
ICHK	Chekchek	3.62	81	*e*Pn	Pn	15 11 38.9	-0.1
ICHK				*e*		15 12 42.6	
	comp=Z,318nm,0.4s						
IMEH	Mehriz	3.79	94	*e*Pn	Pn	15 11 41.9	+0.6
IMEH				*e*		15 11 42.1	
	comp=Z,194nm,0.1s						

*ISCJB **26** 15:11:36.9±1.4, 8°.32N±0°.06×82°.90W±0°.04, h12km±8km, mb4.4/19, Error ellipse: s-maj=10.9km s-min=6.3km az=22.6*
*IDC **26** 15:11:37.0±0.8, 8°.47N×82°.63W, h0km, mb4.1/8, mb1 4.3/10, mb1mx4.1/21, mbtmp4.1/10, ML3.8/2, Error ellipse: s-maj=44.1km s-min=17.9km az=58.0*
*CASC **26** 15:11:37.3±2.5, 8°.41N×82°.95W, h0km±8km, MD4.4, mb4.5(NEIC)*
*NEIC **26** 15:11:38.0±0.6, 8°.35N×82°.89W, h10km, mb4.5/10, MD4.8(HDC), Error ellipse: s-maj=12.7km s-min=9.5km az=221.0*
NEIC Felt at Golfito, Laurel and Neily, Costa Rica.
ISC 26 15:11:37.3±1.4, 8°.33N±0°.07×82°.92W±0°.04, h3km±7km, n54, σ1s29/49, mb4.4/19, 7C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.40	323	⇑*i*P	Pg	15 11 44.4	-0.6
BRU2	Volcan	0.51	27	⇑*i*P	Pg	15 11 47.9	+0.7
BRU2				*e*S	Sg	15 11 56.2	+2.4
TBS2		0.53	30	⇑*e*P	Pg	15 11 55.7	+8.2
TBS2				*e*S	Sg	15 12 04.2	+10
BAR1		0.98	337	||*i*P	Pg	15 11 54.7	-1.4
CNI	Changuinola	1.15	20	⇑*i*P	Pg	15 11 58.4	-1.0
BUS	Buena Vista	1.47	326	⇑*e*P	Pn	15 12 02.5	-2.2
QCR	Quepos	1.64	312	*e*P	Pn	15 12 04.7	-2.3
QCR				*e*S	Sn	15 12 28.8	+0.2
LIO	Limon	1.66	356	*e*P	Pn	15 12 06.5	-0.8
URSC	Urasca	1.71	331	⇑*e*P	Pn	15 12 06.3	-1.7
LAJ	Bijagual	1.93	322	*e*P	Pn	15 12 13.3	+2.3
PRS1	Puriscal	2.14	320	⇑*e*P	Pn	15 12 12.4	-1.5
CGA2	Cerro Gallo 2	2.26	318	*e*P	Pn	15 12 14.7	-0.8
JCR	Jicaral	2.63	305	*e*P	Pn	15 12 21.6	+0.9
FORC	Fortuna	2.73	321	*e*P	Pn	15 12 20.6	-1.4
BCIP	Isla Barro Col	3.16	75	*e*Pn	Pn	15 12 28.0	0.0
BCIP	Isla Barro Col	3.16	75	*e*P	Pn	15 12 27.9	-0.1
GPS3	Bodega del ICE	3.40	315	*i* P	Pn	15 12 33.1	+1.8
LAPC	Finca la Perla	3.46	315	*i* P	Pn	15 12 33.9	+1.8
LAPC				*i* S	Sn	15 13 15.1	+1.5
TGUH	Tegucigalpa,Un	7.11	324	P	Pn	15 13 24.4	+2.2
	54nm,0.9s						
APG	El Apazote	9.92	313	Pn	Pn	15 14 03.4	+2.6
	1.2nm,0.3s,baz=141,slow=15,SNR=7.4						
MTDJ	Mount Denham	11.14	28	*e*Pn	Pn	15 14 17.9	+0.3
	36nm,0.7s						
SDV	Santo Domingo	12.17	87	Pn	Pn	15 14 39.2	+7.6
	0.4nm,0.3s,baz=280,slow=12,SNR=4.0						
CMIG	Matias Romero	14.55	308	Pn	Pn	15 15 05.6	+1.4
	0.3nm,0.3s,baz=125,slow=8.4,SNR=4.3						
SDDR	Presa de Saban	15.48	46	*e*P	Pn	15 15 17.1	+0.4
	13nm,0.8s						
GOGA	Godfrey	24.96	359	*e*P	P	15 17 02.2	+0.2
	16nm,1.0s,mb4.5						
MIAR	Mount Ida	27.86	341	P	P	15 17 27.1	-1.2
	5.2nm,0.9s,mb4.2						
LPAZ	La Paz	28.51	149	P	P	15 17 35.2	+1.1
	0.9nm,0.4s,mb3.8,baz=333,slow

KSRS	**Korea Array**	**126.08 330**	PKP	PKPdf	15 30 40.9	-0.6
	1.4nm,0.8s,baz=23,slow=1.9,SNR=6.6					
BJI	**Beijing**	**128.73 341**	PKP	PKPdf	15 30 44.8	-1.7
HHC	**Hu-ho-hao-te**	**129.27 346**	*e*PKP	PKPdf	15 30 45.8	-1.7
HHC			PP	PP	15 32 58.5	+3.7
HHC			PKS		15 34 20.8	
HHC			SKS	SKSdf	15 37 52.3	-8.0
HHC			SKKS	SKKSac	15 39 45.3	-8.9
HHC			SS	SS	15 50 14.0	-1.6
HHC			AMB	AMB		
	comp=Z,59nm,7.9s					
HHC			LR	LR		
	comp=Z,170nm,20.1s					
NJ2	**Nanjing**	**134.77 334**	*e*PKP	PKPdf	15 30 56.5	-1.7
LZH	**Lanzhou**	**135.36 352**	*e*PKP	PKPdf	15 30 56.0	-3.2
XAN	**Xi'an**	**136.39 346**	PKP	PKPdf	15 31 04.5	+3.3
CD2	**Chengdu**	**140.46 351**	PKP	PKPdf	15 31 05.5	-3.2
ASAR	**Alice Springs**	**141.60 242**	PKP	PKPdf	15 31 10.8	-0.1
	comp=Z,1.0nm,0.9s,baz=120,slow=3.2,SNR=9.7					
CMAR	**Chiang Mai Arr**	**153.32 356**	PKP	PKPdf	15 31 28.4	-2.0
	comp=Z,0.2nm,0.3s,baz=38,slow=3.2,SNR=2.8					
CMAR			PKPbc	PKPbc	15 31 38.2	+0.4
	comp=Z,0.8nm,0.8s,baz=341,slow=3.0,SNR=5.5					
CMAR			PKPab	PKPab	15 31 48.2	-1.3
	comp=Z,0.8nm,0.8s,baz=338,slow=5.2,SNR=3.6					

*ISCJB **26** 15:15:51.7±1.1, 8.°32N±0.°06×82.°92W±0.°04, h12km±5km, mb3.9/7, Error ellipse: s-maj=9.5km s-min=5.5km az=14.3*
*CASC **26** 15:15:53.2±4.3, 8.°38N×82.°91W, h6km±15km, MD4.3, ML3.2*
*NEIC **26** 15:15:53.3±1.0, 8.°42N×82.°95W, h10km, mb4.3/3, MD4.6(HDC), Error ellipse: s-maj=23.9km s-min=10.4km az=196.0*
NEIC Felt at Golfito, Laurel and Neily, Costa Rica.
*IDC **26** 15:15:54.5±2.3, 9.°12N×82.°42W, h0km, mb3.9/5, mb1 4.2/7, mb1mx4.0/22, mbtmp4.0/7, ML3.9/2, Error ellipse: s-maj=82.9km s-min=27.6km az=30.0*

ISC 26 15:15:53.9±1.2, 8.°37N±0.°06×82.°89W±0.°04, h14km±6km, n45, σ1°35/53, mb3.9/7, 6C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.39**	**316**	⇑*i*P	**Pg**	**15 15 58.7**	**-3.0**
BRU2	**Volcan**	**0.47**	**25**	*i* P	**Pg**	**15 16 02.3**	**-0.9**
BRU2				*e*S	**Sg**	**15 16 10.5**	**+1.1**
TBS2		**0.48**	**29**	⇑*i*P	**Pg**	**15 16 10.2**	**+6.8**
TBS2				*e*S	**Sg**	**15 16 18.5**	**+8.6**
BAR1		**0.96**	**335**	⇓*i*P	**Pg**	**15 16 09.0**	**-3.5**
BAR1				*e*S	**Sg**	**15 16 27.0**	**+2.0**
CNI	**Changuinola**	**1.11**	**20**	*e*P	**Pb**	**15 16 12.9**	**-2.0**
BUS	**Buena Vista**	**1.46**	**324**	⇑*e*P	**Pn**	**15 16 16.8**	**-3.0**
LIO	**Limon**	**1.63**	**355**	⇑*e*P	**Pn**	**15 16 20.6**	**-1.6**
LIO				*e*S	**Sn**	**15 16 44.3**	**+1.2**
QCR	**Quepos**	**1.64**	**310**	*e*P	**Pn**	**15 16 18.5**	**-3.8**
QCR				*e*S	**Sn**	**15 16 43.6**	**+0.3**
URSC	**Urasca**	**1.70**	**329**	⇑*e*P	**Pn**	**15 16 20.6**	**-2.6**
URSC				*e*S	**Sn**	**15 16 42.4**	**-2.4**
PRS1	**Puriscal**	**2.13**	**319**	*e*P	**Pn**	**15 16 26.6**	**-2.5**
PRS1				*e*S	**Sn**	**15 16 53.6**	**-1.8**
CGA2	**Cerro Gallo 2**	**2.26**	**317**	*e*P	**Pn**	**15 16 29.9**	**-0.9**
CGA2				*e*S	**Sn**	**15 17 00.1**	**+1.6**
JCR	**Jicaral**	**2.64**	**304**	⇓*e*P	**Pn**	**15 16 36.0**	**-0.1**
FORC	**Fortuna**	**2.72**	**320**	⇓*e*P	**Pn**	**15 16 37.1**	**-0.2**
BCIP	**Isla Barro Col**	**3.12**	**75**	*e*Pn	**Pn**	**15 16 42.5**	**-0.2**
BCIP	**Isla Barro Col**	**3.12**	**75**	*e*P	**Pn**	**15 16 42.7**	**0.0**
UPIG		**3.38**	**79**	*e*P	**Pn**	**15 16 39.8**	**-6.5**
UPIG				*e*S	**Sn**	**15 17 26.9**	**+0.7**
LAPC	**Finca la Perla**	**3.46**	**314**	*i* P	**Pn**	**15 16 48.4**	**+1.0**
BUEV	**Buena Vista**	**3.46**	**314**	*i* P	**Pn**	**15 16 48.6**	**+1.2**
SSN	**San Juan del S**	**4.12**	**315**	*e*P	**Pn**	**15 16 56.4**	**-0.1**
SSN				*e*S	**Sn**	**15 17 43.6**	**-1.0**
SSN				AML	AML	15 17 44.4	
	comp=Z,54nm,0.7s						
CONN	**Concepcion**	**4.16**	**320**	*e*P	**Pn**	**15 16 58.3**	**+1.3**
MGAN	**Managua**	**5.00**	**319**	*e*P	**Pn**	**15 17 10.0**	**+1.4**
HUEN		**5.10**	**321**	*e*P	**Pn**	**15 17 11.4**	**+1.5**
APYN	**Apoyeque**	**5.13**	**319**	*e*P	**Pn**	**15 17 11.4**	**+1.0**
CSAN		**5.14**	**318**	*e*P	**Pn**	**15 17 11.4**	**+0.9**
COPN	**Copaltepe**	**5.25**	**316**	*e*P	**Pn**	**15 17 13.2**	**+1.1**
MOMN	**Momotombo**	**5.38**	**319**	*e*P	**Pn**	**15 17 15.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**7.10**	**323**	P	**Pn**	**15 17 37.0**	**-0.4**
SBLS	**San Blas**	**8.55**	**310**	*e*P	**Pn**	**15 17 58.5**	**+1.1**
APG	**El Apazote**	**9.92**	**312**	Pn	**Pn**	**15 18 18.2**	**+2.1**
	comp=Z,1.6nm,0.3s,baz=123,slow=7.4,SNR=10						
MTDJ	**Mount Denham**	**11.10**	**27**	*e*Pn	**Pn**	**15 18 32.3**	**0.0**
	comp=Z,39nm,1.0s						
SDV	**Santo Domingo**	**12.13**	**87**	Pn	**Pn**	**15 18 49.5**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=9.0,slow=19,SNR=2.1						
SDV	**Santo Domingo**	**12.13**	**87**	Pn	**Pn**	**15 18 49.5**	**+3.0**
CMIG	**Matias Romero**	**14.55**	**308**	Pn	**Pn**	**15 19 19.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=126,slow=10.0,SNR=6.5						
PDAR	**Pinedale Array**	**41.50**	**330**	P	**P**	**15 23 40.5**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.2,baz=128,slow=9.6,SNR=4.1						
ULM	**Lac du Bonnet**	**43.13**	**348**	P	**P**	**15 23 50.8**	**-3.0**
	comp=Z,10nm,1.1s,mb4.5,baz=191,slow=11,SNR=3.9						
ULM	**Lac du Bonnet**	**43.13**	**348**	*e*P	**P**	**15 23 50.8**	**-3.0**
	comp=Z,7.8nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**43.71**	**319**	P	**P**	**15 23 59.7**	**+1.0**
	comp=Z,1.5nm,0.7s,mb3.8,baz=134,slow=6.8,SNR=11						
NVAR	**Mina Array Bea**	**43.71**	**319**	P	**P**	**15 23 59.7**	**+1.0**
HLID	**Hailey**	**44.57**	**327**	*e*P	**P**	**15 24 05.9**	**+0.4**
	comp=Z,1.8nm,1.0s,mb3.9						
WVOR	**Wild Horse Val**	**46.23**	**323**	*e*P	**P**	**15 24 18.3**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.3						
EDM	**Edmonton**	**51.07**	**337**	*e*P	**P**	**15 24 54.6**	**-1.1**
YKA	**Yellowknife Ar**	**58.74**	**343**	P	**P**	**15 25 49.8**	**-1.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=138,slow=7.3,SNR=12						
TORD	**Torodi Ar. Bea**	**82.90**	**78**	P	**P**	**15 28 18.8**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.7,baz=284,slow=6.1,SNR=3.4						
ASAR	**Alice Springs**	**141.65**	**242**	PKhKP		15 35 25.2	
	comp=Z,0.3nm,0.7s,baz=125,slow=4.0,SNR=4.2						
ASAR				PKP	PKPdf	15 35 30.3	+4.5
	comp=Z,0.4nm,1.0s,baz=75,slow=1.6,SNR=4.7						
CMAR	**Chiang Mai Arr**	**153.28**	**356**	PKPbc	PKPbc	15 35 52.9	+0.4
	comp=Z,0.5nm,0.8s,baz=3.2,slow=3.2,SNR=3.5						
CMAR				PKPab	PKPab	15 36 05.2	+1.1
	comp=Z,1.1nm,0.9s,baz=352,slow=3.6,SNR=5.3						

CASC 26 15:19:55.2±2.2, 8.°40N×82.°95W, h4km, MD3.7, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.33**	**319**	⇑*i*P	Pg	15 20 02.1	+0.6
ACR				*e*S	Sg	15 20 07.5	+1.6
BRU2	**Volcan**	**0.47**	**33**	*e*P	Pg	15 20 05.8	+1.6
BRU2				*e*S	Sg	15 20 13.4	+3.1
TBS2		**0.48**	**37**	*i* P	Pg	15 20 13.8	+9.2
TBS2				*e*S	Sg	15 20 21.8	+11
BAR1		**0.91**	**337**	⇓*e*P	Pg	15 20 12.3	-0.4
BAR1				*e*S	Sg	15 20 26.4	+2.0
CNI	**Changuinola**	**1.09**	**23**	*e*P	Pg	15 20 16.4	+0.1
CNI				*e*S	Sg	15 20 28.7	-1.7
QCR	**Quepos**	**1.57**	**310**	*e*P	Pn	15 20 23.1	-0.8
QCR				*e*S	Sn	15 20 43.6	-1.1
URSC	**Urasca**	**1.64**	**330**	*e*P	Pn	15 20 24.1	-0.8
LAJ	**Bijagual**	**1.86**	**322**	*e*P	Pn	15 20 31.0	+3.2
PRS1	**Puriscal**	**2.07**	**320**	*e*P	Pn	15 20 30.9	+0.1
CGA2	**Cerro Gallo 2**	**2.19**	**317**	*e*P	Pn	15 20 33.8	+1.4

*MOS **26** 15:22:05.4±0.3, 55.°07N×162.°41E, h34km, mb4.3/1, Error ellipse: s-maj=28.1km s-min=12.1km az=73.4*

KRSC 26 15:22:04.7±0.1, 55.°09N×162.°36E, h37km±37km, ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.65**	**215**	*e*P	Pn	15 22 18.6	+1.3
MKZ				*i* S	Sn	15 22 28.3	+2.0
KBTR	**Krutoberegovo**	**1.15**	**13**	*e*P	Pn	15 22 25.6	+1.4
KBTR				*i* S	Sn	15 22 40.7	+2.0
ZLN	**Zelenaya**	**1.28**	**317**	*i* P	Pn	15 22 27.9	+1.8
ZLN				*i* S	Sn	15 22 45.2	+3.2
TUMR	**Tumrok**	**1.28**	**280**	*e*P	Pn	15 22 27.7	+1.6
TUMR				*i* S	Sn	15 22 45.4	+3.4
BZMR	**Bezymyannaya**	**1.36**	**309**	*e*P	Pn	15 22 28.6	+1.5
BZMR				*i* S	Sn	15 22 45.8	+1.9
CIRR	**Tsirk**	**1.38**	**319**	*e*P	Pn	15 22 29.0	+1.7
CIRR				*i* S	Sn	15 22 47.2	+2.9
KMNR	**Kamenistaya**	**1.38**	**300**	*e*P	Pn	15 22 28.9	+1.5
KMNR				*i* S	Sn	15 22 46.2	+1.8
KIRR	**Kirishev**	**1.44**	**308**	*e*P	Pn	15 22 29.6	+1.4
KIRR				*i* S	Sn	15 22 48.5	+2.7
KPT	**Kopyto**	**1.50**	**307**	*e*P	Pn	15 22 30.3	+1.3
KPT				*i* S	Sn	15 22 49.2	+1.9
KRSR	**Krestovskiy**	**1.52**	**319**	*e*P	Pn	15 22 30.6	+1.3
KRSR				*i* S	Sn	15 22 49.6	+1.8
KLY	**Klyuchi**	**1.56**	**322**	*e*P	Pn	15 22 30.2	+0.3
KLY				*i* S	Sn	15 22 49.1	+0.2
SMKR	**Semkarok**	**1.58**	**342**	*e*P	Pn	15 22 32.2	+2.1
SMKR				*i* S	Sn	15 22 53.1	+3.8
BDR	**Baidarnaya**	**1.62**	**337**	*e*P	Pn	15 22 33.0	+2.3
BDR				*i* S	Sn	15 22 53.6	+3.3
SRKR	**Sorokina**	**1.71**	**337**	*e*P	Pn	15 22 34.0	+2.1
SRKR				*i* S	Sn	15 22 55.5	+3.1
KOZR	**Kozyr**	**1.71**	**306**	PN	Pn	15 22 33.8	+1.9
KOZR				S	Sn	15 22 55.6	+3.1
KOZ	**Kozyrevsk**	**1.71**	**306**	*e*P	Pn	15 22 33.8	+1.8
KOZ				*i* S	Sn	15 22 55.6	+3.0
SRDR	**Sredinnyy**	**1.94**	**311**	*e*P	Pn	15 22 36.5	+1.5
SRDR				*i* S	Sn	15 23 00.1	+2.0
KII	**Karymskiy**	**2.00**	**239**	*e*P	Pn	15 22 37.8	+1.9
KII				*i* S	Sn	15 23 02.0	+2.4
BKI	**Bering**	**2.08**	**85**	*e*P	Pn	15 22 38.2	+1.2
BKI				*i* S	Sn	15 23 01.7	+0.1
SPN	**Mys Shipunski**	**2.42**	**216**	*e*P	Pn	15 22 43.0	+1.2
SPN				*i* S	Sn	15 23 10.4	+0.3
NLC	**Nalytchevo**	**2.62**	**224**	*e*P	Pn	15 22 46.3	+1.9
NLC				*i* S	Sn	15 23 16.9	+2.0
AVH	**Avacha**	**2.81**	**231**	*e*P	Pn	15 22 49.7	+2.7
AVH				*i* S	Sn	15 23 22.8	+3.3
GNL	**Ganaly**	**2.94**	**243**	*e*P	Pn	15 22 51.2	+2.4
PET	**Petropavlovsk**	**3.01**	**228**	*e*PN	Pn	15 22 51.9	+2.1
PET				*e*S	Sn	15 23 26.9	+2.3
PET				pmax	pmax		
	comp=Z,81nm,0.5s						
PET				smax			
	comp=N,200nm,0.7s						
PET				smax			
	comp=N,198nm,0.6s						
PET	**Petropavlovsk**	**3.01**	**228**	*e*P	Pn	15 22 52.3	+2.5
PET				*i* S	Sn	15 23 27.0	+2.4
RUS	**Russkaya**	**3.51**	**222**	*e*P	Pn	15 22 59.3	+2.7
RUS				*i* S	Sn	15 23 39.4	+2.6
MIPR	**Malaya Ipel'ka**	**4.36**	**232**	*e*P	Pn	15 23 12.8	+4.4

*NIED **26** 15:26:00, 43.°10N×147.°10E, h47km, Mw4.4 Best double couple: M0=5.22000×10^15 NP1:φ1=57.00000°, δ1=76.00000°, λ1=88.00000°. NP2:φ2=245.00000°, δ2=15.00000°, λ2=98.00000°.*
*MOS **26** 15:26:05.7±0.8, 43.°11N×147.°14E, h49km, mb5.0/41, Error ellipse: s-maj=9.1km s-min=5.7km az=115.8*
*BJI **26** 15:26:06.5, 43.°26N×147.°15E, h54km, mB4.8/22, mb4.7/34, Ms4.4/24, Ms7 3.8/24*
*NEIC **26** 15:26:07.9±0.2, 43.°14N×147.°14E, mb4.7/47, Error ellipse: s-maj=6.8km s-min=3.5km az=158.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido.
*IDC **26** 15:26:07.5±2.0, 43.°16N×147.°18E, h47km±18km, mb4.4/21, mb1 4.6/25, mb1mx4.4/31, mbtmp4.4/25, ML4.1/5, MS3.4/5, Ms1 3.4/5, ms1mx3.3/37, Error ellipse: s-maj=16.2km s-min=12.5km az=167.0*
*JMA **26** 15:26:07.3±0.2, 43.°08N×147.°12E, h57km±4km, M4.5*
JMA Felt II J1.
*ISCJB **26** 15:26:07.3±0.4, 43.°20N±0.°03×147.°10E±0.°03, h57km±3km, mb4.7/97, MS4.3/11, Error ellipse: s-maj=5.5km s-min=3.0km az=164.7*
*SKHL **26** 15:26:08.7±1.4, 43.°22N×147.°15E, h52km±1km, mb5.0/6, Ms3.9/2*

ISC 26 15:26:08.3±0.4, 43.°15N±0.°03×147.°11E±0.°03, h52km±3km, h53km±1.8km: pP-P, n479, σ0°63/500, mb4.7/97, MS4.3/11, 137C-110D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.02**	**283**	P	**Pn**	**15 26 26.1**	**-0.2**
NEM2				*e*S	**Sn**	**15 26 40.2**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**1.27**	**315**	⇓*i*PN	**Pn**	**15 26 29.1**	**-0.6**
YUK				*i* S	**Sn**	**15 26 45.5**	**-0.1**
YUK				pmax	pmax		
	comp=N,7.0nm,0.3s						
YUK				pmax	pmax		
	comp=E,9μm,0.3s						
YUK				pmax	pmax		
	comp=Z,16μm,0.3s						
YUK				pmax	pmax		
	comp=N,10μm,0.3s						
YUK				pmax	pmax		
	comp=E,12μm,0.3s						
YUK				pmax	pmax		
	comp=Z,25μm,0.3s						
YUK				smax			
	comp=N,55μm,0.5s						
YUK				smax			
	comp=E,68μm,0.5s						
YUK				smax			
	comp=N,22μm,0.5s						
YUK				smax			
	comp=E,26μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.27**	**315**	⇓*i*P	**Pn**	**15 26 29.1**	**-0.6**
YUK				⇓*i*P		15 26 29.1	
YUK				AMB	AMB	15 26 29.9	
	comp=E,25μm,0.3s						
YUK				AMB	AMB	15 26 29.9	
	comp=E,10μm,0.3s						
YUK				AMB	AMB	15 26 29.9	
	comp=E,12μm,0.3s						
YUK				AMB	AMB	15 26 29.9	
	comp=E,8μm,0.2s						
YUK				AMB	AMB	15 26 29.9	
	comp=E,9μm,0.2s						
YUK				AMB	AMB	15 26 29.9	
	comp=E,16μm,0.2s						
YUK				*i* S	**Sn**	**15 26 45.5**	**-0.1**
YUK				A		15 26 46.5	
	comp=E,55μm,0.5s						
YUK				A		15 26 46.5	
	comp=E,68μm,0.5s						
YUK				A		15 26 47.0	
	comp=E,22μm,0.5s						
YUK				A		15 26 47.0	
	comp=E,26μm,0.5s						
JRA	**Rausu**	**1.65**	**299**	P	**Pn**	**15 26 35.0**	**+0.2**
JRA				*e*S	**Sn**	**15 26 56.1**	**+1.3**
JAK	**Akkeshi**	**1.77**	**266**	P	**Pn**	**15 26 36.3**	**-0.2**
JAK				*e*S	**Sn**	**15 26 57.8**	**-0.1**
JNK	**Nakash**	**1.79**	**285**	P	**Pn**	**15 26 36.5**	**-0.4**
JNK				*e*S	**Sn**	**15 26 57.8**	**-0.7**
KUR	**Kuril'sk**	**2.16**	**14**	*i* PN	**Pn**	**15 26 40.9**	**-0.9**
KUR				*e*S	**Sn**	**15 27 04.0**	**-3.3**
KUR				pmax	pmax		
	comp=N,300nm,0.5s						
KUR				pmax	pmax		
	comp=E,230nm,0.5s						
KUR				pmax	pmax		
	comp=Z,530nm,0.5s						
KUR				smax			
	comp=N,3μm,0.9s						
KUR				smax			
	comp=E,5μm,0.9s						
KUR				smax			
	comp=N,5μm,1.0s						
KUR				smax			
	comp=E,3μm,1.0s						
KUR	**Kuril'sk**	**2.16**	**14**	⇑*i*P	**Pn**	**15 26 40.9**	**-0.9**
KUR				AMB	AMB	15 26 52.2	
	comp=E,300nm,0.5s						
KUR				AMB	AMB	15 26 52.2	
	comp=E,230nm,0.5s						
KUR				AMB	AMB	15 26 52.2	
	comp=E,530nm,0.5s						
KUR				*e*S	**Sn**	**15 27 04.0**	**-3.3**
KUR				A		15 27 10.2	
	comp=E,2μm,0.7s						
KUR				A		15 27 10.2	
	comp=E,3μm,0.7s						
KUR				A		15 27 21.0	
	comp=E,5μm,1.0s						
KUR				A		15 27 21.0	
	comp=E,3μm,1.0s						
JOB	**Onbets**	**2.41**	**265**	P	**Pn**	**15 26 45.2**	**-0.1**
JOB				*e*S	**Sn**	**15 27 13.2**	**-0.4**
JAR	**Ashorobuto**	**2.44**	**275**	P	**Pn**	**15 26 45.9**	**+0.2**
JAR				*e*S	**Sn**	**15 27 14.7**	**+0.3**
JTKR	**Abashiri--Toko**	**2.47**	**291**	P	**Pn**	**15 26 46.9**	**+0.9**
JTKR				*e*S	**Sn**	**15 27 16.1**	**+1.2**
JCH	**Churui**	**2.80**	**260**	P	**Pn**	**15 26 50.1**	**-0.5**
JCH				*e*S	**Sn**	**15 27 22.2**	**-1.0**
JMP	**Maruseppu**	**2.85**	**289**	P	**Pn**	**15 26 52.4**	**+1.0**
JEM	**Erimo**	**3.13**	**250**	P	**Pn**	**15 26 56.4**	**+1.3**
JKK2	**Kamakawa 2**	**3.25**	**284**	P	**Pn**	**15 26 58.2**	**+1.4**
JFR	**Furan**	**3.30**	**272**	P	**Pn**	**15 26 58.1**	**+0.6**
JFR				*e*S	**Sn**	**15 27 35.9**	**+0.4**
JNBK	**Urakawa-nobuka**	**3.32**	**256**	P	**Pn**	**15 26 57.7**	**-0.1**
JNBK				*e*S	**Sn**	**15 27 35.4**	**-0.6**
ASAJ	**Asahikawa**	**3.41**	**288**	P	**Pn**	**15 27 00.7**	**+1.6**
	comp=E,40nm,0.3s,baz=114,slow=12,SNR=188						
ASAJ				S	**Sn**	**15 27 43.5**	**+5.2**
	comp=E,33nm,0.3s,baz=119,slow=20,SNR=4.1						
ASAJ				LR	LR	15 28 43.7	
	comp=E,679nm,21.2s,baz=2.2,slow=45						
ASAJ	**Asahikawa**	**3.41**	**288**	P	**Pn**	**15 27 00.7**	**+1.7**
ASAJ				S	**Sn**	**15 27 43.5**	**+5.3**
ASAJ				pmax	pmax		
	comp=Z,41nm,0.3s						
ASAJ				smax			
	comp=N,33nm,0.3s						
JBT2	**Biratori 2**	**3.50**	**266**	P	**Pn**	**15 26 59.7**	**-0.5**
JAB	**Ashibetsu**	**3.58**	**277**	P	**Pn**	**15 27 03.5**	**+2.2**
JSE	**Soyaes**	**3.73**	**301**	P	**Pn**	**15 27 04.2**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.90**	**323**	⇓*i*PN	**Pn**	**15 27 20.0**	**+0.7**
YSS				*e*S	**Sn**	**15 28 15.8**	**+1.1**
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
YSS				smax			
	comp=N,160nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.90**	**323**	⇓*i*P	**Pn**	**15 27 20.0**	**+0.7**
YSS				AMB	AMB	15 27 21.0	
	comp=N,70nm,0.8s						
YSS				*e*S	**Sn**	**15 28 15.8**	**+1.1**
YSS				A		15 28 17.3	
	comp=N,160nm,1.0s						
YSS				AMS	AMS	15 29 26.0	
	comp=N,500nm,16.0s						
TYV	**Tymovskoe**	**8.29**	**340**	*e*P	**Pn**	**15 28 07.0**	**+1.1**
TYV				AMB	AMB	15 28 17.8	
	comp=N,9.0nm,0.8s						
TYV				AMB	AMB	15 28 17.8	
	comp=N,20nm,0.8s						
TYV				AMB	AMB	15 28 17.8	
	comp=N,22nm,1.0s						
TYV				*e*S	**Sn**	**15 29 38.8**	**+0.8**
TYV				A		15 29 40.0	
	comp=N,22nm,0.8s						
TYV				AMS	AMS	15 31 20.0	
	comp=N,500nm,18.0s						
TYV				AMS	AMS	15 31 20.0	
	comp=N,400nm,18.0s						
MAJO	**Matsushiro**	**9.50**	**229**	*e*PN	**Pn**	**15 28 21.1**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,13nm,0.6s						
MAJO	**Matsushiro**	**9.50**	**229**	*e*Pn	**Pn**	**15 28 21.1**	**-1.4**
	comp=Z,13nm,0.6s						
MAT	**Matsushiro**	**9.50**	**229**	P	**Pn**	**15 28 21.1**	**-1.3**
MAT				S	**Sn**	**15 30 12.2**	**+4.5**
MJAR	**Matsushiro Arr**	**9.50**	**229**	P	**Pn**	**15 28 22.0**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=310,slow=18,SNR=6.6						
MJAR				LR	LR	15 32 16.1	
	comp=Z,183nm,21.6s,baz=50,slow=39						
SKR	**Severo-Kuril's**	**9.73**	**36**	*e*PN	Px	15 28 35.5	
SKR				pmax	pmax		
	comp=E,70nm,0.8s						
SKR				pmax	pmax		
	comp=Z,100nm,0.8s						
HABR	**Khabarovsk**	**9.96**	**306**	*e*PN	**Pn**	**15 28 27.3**	**-1.3**
HABR				MLR	MLR		
	comp=Z,281nm,17.0s						
NKL	**Nikolayevsk**	**10.89**	**339**	*e*P	**Pn**	**15 28 39.0**	**-2.3**
NKL				AMB	AMB	15 28 40.0	
	comp=Z,10.0nm,1.0s						
NKL				*e*L		15 31 20.0	
NKL				AMS	AMS	15 33 10.0	
	comp=Z,400nm,17.0s						
NKL				AMS	AMS	15 33 10.0	
	comp=Z,500nm,17.0s						
VLA	**Vladivostok**	**11.12**	**275**	*e*PN	**Pn**	**15 28 46.3**	**+1.8**
VLA				pmax	pmax		
	comp=Z,19nm,1.6s						
JHJ	**Hachijo jima 2**	**11.55**	**212**	P	**Pn**	**15 28 48.7**	**-1.7**
	comp=Z,5.6nm,0.3s,baz=26,slow=18,SNR=7.0						
JHJ				S	**Sn**	**15 30 47.4**	**-10**
	comp=Z,34nm,0.3s,baz=102,slow=22,SNR=7.9						
PETK	**Petropavlovsk-**	**12.21**	**32**	P	**Pn**	**15 28 56.8**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=192,slow=9.7,SNR=24						
PETK				LR	LR	15 33 39.4	
	comp=Z,137nm,19.7s,baz=50,slow=37						
MDJ	**Mudanjiang**	**12.72**	**283**	P	**Pn**	**15 29 06.0**	**-0.4**
MDJ				pP		15 29 13.8	
MDJ				sP		15 29 21.5	
MDJ				S	**Sn**	**15 31 26.5**	**+0.1**
MDJ				ScP	ScP	15 38 07.5	-0.7
MDJ				PcS	PcS	15 38 13.5	-0.3
MDJ				ScS	ScS	15 41 43.5	-0.9
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,36nm,4.4s						
MDJ				LR	LR		
	comp=Z,150nm,14.7s						
KSRS	**Korea Array**	**15.69**	**255**	P	**Pn**	**15 29 44.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=4.8						
KSRS				PcP	PcP	15 34 44.4	+0.7
	comp=Z,0.1nm,0.3s,baz=318,slow=1.7,SNR=5.3						
KSRS				LR	LR	15 35 36.9	
	comp=Z,138nm,21.0s,baz=270,slow=36						
CBIJ	**

comp=Z,150nm,5.6s
HHC LR LR
comp=N,330nm,14.8s,MS4.6
HHC LR LR
comp=E,1µm,16.7s,MS4.6
HHC LR LR
comp=Z,160nm,13.9s,MS3.7
BILL Bilibino 26.95 16 P **P 15 31 43.0 -1.5**
BILL *e* pP 15 31 51.7 -5.9
BILL Bilibino 26.95 16 *e*P **P 15 31 43.3 -1.1**
comp=Z,2.9nm,0.6s,mb4.0
ULN Ulaanbaatar 28.23 294 *e*P **P 15 31 56.9 +0.7**
ULN pmax pmax
comp=Z,13nm,0.7s,mb4.7
ULN Ulaanbaatar 28.23 294 *e*P **P 15 31 56.9 +0.7**
comp=Z,13nm,0.7s,mb4.7
SONM Songino Array 28.68 294 P **P 15 32 00.7 +0.6**
comp=Z,27nm,0.7s,mb5.1,baz=88,slow=8.5,SNR=130
SONM PcP PcP 15 35 09.7 +0.3
comp=Z,1.1nm,0.7s,baz=121,slow=2.6,SNR=4.2
SONM LR LR 15 44 33.8
comp=Z,181nm,19.4s,MS3.7,baz=92,slow=38
SONM Songino Array 28.68 294 P **P 15 32 00.7 +0.6**
SONM 15 35 09.7
SONM pmax pmax
comp=Z,27nm,0.7s
SONM MLR MLR
comp=Z,181nm,19.4s
SONM Songino Array 28.68 294 P **P 15 32 00.7 +0.6**
SONM PcP PcP 15 35 09.7 +0.2
SONM LR LR 15 44 33.8
TIXI Tiksi 29.95 349 *e*P **P 15 32 08.6 -2.5**
TIXI pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
TIXI Tiksi 29.95 349 *e*P **P 15 32 08.6 -2.5**
comp=Z,1.8nm,0.5s,mb4.1
TLY Talaya 30.23 302 *e*P **P 15 32 13.8 -0.1**
TLY pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
ZAK Zakamensk 30.51 299⇑*i*P **P 15 32 17.2 +0.9**
ZAK *e* 15 35 14.2
ZAK pmax pmax
comp=Z,11nm,1.0s,mb4.6
MOY Mondy 31.88 302 *e*P **P 15 32 29.2 +0.8**
TNA Tin City 33.38 32 *e*P **P 15 32 41.6 +0.3**
comp=Z,23nm,1.1s,mb5.0
LZH Lanzhou 33.77 273 *e*P **P 15 32 48.5 +3.5**
LZH pP pP 15 33 03.0 +4.7
LZH sP sP 15 33 08.5 +4.1
LZH PP PP 15 34 03.0 +1.0
LZH PcP PcP 15 35 26.8 +3.5
LZH *e*S **S 15 38 07.0 +2.1**
LZH sS sS 15 38 28.5 +1.1
LZH SS SS 15 40 09.3 -23
LZH pmax pmax
comp=Z,24nm,1.2s,mb5.0
LZH pmax pmax
comp=Z,120nm,4.7s
LZH LR LR
comp=N,1µm,14.4s
LZH LR LR
comp=Z,1µm,15.6s,MS4.8
GTA Gaotai 35.37 280⇓*e*P **P 15 32 59.8 +1.0**
GTA pP pP 15 33 13.0 +0.9
GTA sP sP 15 33 18.5 +0.3
GTA PP PP 15 34 20.0 +0.3
GTA S **S 15 38 30.5 +1.0**
GTA sS sS 15 38 51.8 -0.2
GTA SS SS 15 40 51.3 -13
GTA pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
GTA pmax pmax
comp=Z,73nm,4.8s
GTA LR LR
comp=N,110nm,15.0s,MS3.9
GTA LR LR
comp=E,91nm,14.4s,MS3.9
GTA LR LR
comp=Z,85nm,16.2s,MS3.6
CD2 Chengdu 36.32 265 P **P 15 33 07.3 +0.3**
CD2 pP pP 15 33 19.5 -0.9
CD2 sP sP 15 33 24.8 -1.7
CD2 PP PP 15 34 31.0 +0.7
CD2 S **S 15 38 43.5 -0.7**
CD2 sS sS 15 39 04.0 -2.8
CD2 SS SS 15 41 09.3 -15
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,130nm,6.1s
CD2 LR LR
comp=N,270nm,8.3s
CD2 LR LR
comp=Z,170nm,7.7s
GYA Guiyang 36.74 256 P **P 15 33 10.8 +0.1**
GYA pP pP 15 33 25.3 +1.2
GYA sP sP 15 33 32.0 +1.9
GYA PP PP 15 34 37.5 +2.4
GYA PcP PcP 15 35 34.0 +1.8
GYA S **S 15 38 51.3 +0.5**
GYA sS sS 15 39 14.3 +0.9
GYA PcS PcS 15 39 21.5 +1.2
GYA ScS ScS 15 43 20.0 -1.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,470nm,16.5s,MS4.5
GYA LR LR
comp=E,450nm,17.2s,MS4.5
GYA LR LR
comp=Z,510nm,15.2s,MS4.4
TTA Tatalina 37.92 39 *e*P **P 15 33 20.6 +0.4**
TTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
TTA Tatalina 37.92 39 *e*P **P 15 33 20.6 +0.3**
comp=Z,3.5nm,0.7s,mb4.2
QIZ Qiongzhong 39.48 244 P **P 15 33 32.5 -1.2**
QIZ S **S 15 39 31.3 -0.9**
QIZ LR LR
comp=Z,87nm,20.6s,MS3.6
CHUM Lake Minchumin 39.63 37 *e*P **P 15 33 34.9 +0.4**
comp=Z,6.4nm,0.7s,mb4.5
KDAK Kodiak Island 39.68 47 P **P 15 33 34.0 -1.0**
comp=Z,9.7nm,0.6s,mb4.7
KDAK Kodiak Island 39.68 47 P **P 15 33 34.0 -1.0**
KDAK pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
BPAW Bear Paw Mtn. 40.22 37 *e*P **P 15 33 39.4 0.0**
comp=Z,3.7nm,0.8s,mb4.2
KTH Kantishna Hill 40.25 38 *e*P **P 15 33 39.6 0.0**
comp=Z,14nm,0.9s,mb4.7
KMI Kunming 40.36 258 P **P 15 33 40.5 -0.5**
KMI pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
TRF Thorofare Moun 40.53 38 *e*P **P 15 33 42.4 +0.4**
comp=Z,3.3nm,0.8s,mb4.0
COLD Coldfoot 40.68 32 *e*P **P 15 33 43.2 0.0**
comp=Z,7.1nm,0.8s,mb4.3
ZAA0 Zalesovo Array 41.34 308 *e*P **P 15 33 48.4 -0.4**
ZALV Zalesovo Beam 41.34 308 P **P 15 33 48.1 -0.6**
comp=Z,7.0nm,0.4s,mb4.6,baz=79,slow=9.6,SNR=28
ZALV PcP PcP 15 35 46.0 -0.2
comp=Z,8.5nm,0.6s,baz=91,slow=2.8,SNR=25
ZALV Zalesovo Beam 41.34 308 P **P 15 33 48.1 -0.6**
ZALV 15 35 46.0
ZALV pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
COLA College 41.58 36 *e*P **P 15 33 50.2 -0.4**
COLA pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
COLA College 41.58 36 *e*P **P 15 33 50.2 -0.4**
comp=Z,7.0nm,0.6s,mb4.5
NVS Novosibirsk 42.07 309 *e*P **P 15 33 54.5 -0.2**
NVS pmax pmax
comp=Z,12nm,1.0s,mb4.5
NVS pmax pmax
comp=E,13nm,0.9s
WMQ Urumqi 42.29 292 *e*P **P 15 33 57.5 +0.8**
WMQ pmax pmax
comp=Z,8.0nm,1.6s,mb4.1
WMQ LR LR
comp=N,170nm,26.0s,MS4.0
WMQ LR LR
comp=E,150nm,24.0s,MS4.0
WMQ LR LR
comp=Z,110nm,22.0s,MS3.7
BMRM Bremner River 43.37 41 *e*P **P 15 34 05.1 -0.1**
comp=Z,849nm,1.2s
MENT Mentasta 43.53 38 *e*P **P 15 34 06.9 +0.5**
EGAK Eagle 44.44 36 *e*P **P 15 34 12.9 -0.8**
comp=Z,3.9nm,0.6s,mb4.3
MK31 Makanchi Array 44.84 298 *e*P **P 15 34 17.3 +0.2**
MKAR Makanchi Array 44.84 298 P **P 15 34 17.3 +0.2**
comp=Z,15nm,0.6s,mb5.0,baz=81,slow=11,SNR=154
MKAR PcP PcP 15 35 57.9 -0.2
comp=Z,3.5nm,0.8s,baz=63,slow=5.7,SNR=4.6
MKAR Makanchi Array 44.84 298 P **P 15 34 17.3 +0.2**
MKAR 15 35 57.9
MKAR pmax pmax
comp=Z,15nm,0.6s
KURK Kurchatov 45.84 304 P **P 15 34 25.5 +0.5**
comp=Z,23nm,0.5s,mb5.3,baz=78,slow=8.7,SNR=78
KURK PcP PcP 15 36 01.4 -0.1
comp=Z,5.1nm,0.7s,baz=80,slow=3.4,SNR=5.5
KURK Kurchatov 45.84 304 P **P 15 34 25.5 +0.5**
KURK 15 36 01.4
KURK pmax pmax
comp=Z,23nm,0.5s,mb5.4
KURK Kurchatov 45.84 304 *e*P **P 15 34 25.1 +0.1**
comp=Z,29nm,0.6s,mb5.4
KURK *e*PcP PcP 15 36 01.1 -0.4
INK Inuvik 46.94 30 *e*P **P 15 34 33.4 0.0**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 46.94 30 *e*P **P 15 34 33.4 0.0**
comp=Z,8.2nm,0.8s,mb4.7
CHTO Chiang Mai 47.09 254 *e*P **P 15 34 35.5 +0.4**
CHTO pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CHTO Chiang Mai 47.09 254 *e*P **P 15 34 35.5 +0.3**
comp=Z,7.2nm,1.1s,mb4.5
CMAR Chiang Mai Arr 47.33 254 P **P 15 34 37.1 +0.2**
comp=Z,1.8nm,0.7s,mb4.1,baz=43,slow=7.7,SNR=16
CMAR Chiang Mai Arr 47.33 254 P **P 15 34 37.2 +0.2**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 49.86 310 P **P 15 34 55.8 -0.2**
comp=Z,5.9nm,0.5s,mb4.9,baz=83,slow=11,SNR=46
BVAR PcP PcP 15 36 15.8 -0.1
comp=Z,2.0nm,0.6s,baz=90,slow=3.0,SNR=4.5
BVAR Borovoye Array 49.86 310 P **P 15 34 55.8 -0.2**
BVAR 15 36 15.8
BVAR pmax pmax
comp=Z,6.0nm,0.5s
BRVK Borovoye 49.91 310 *e*P **P 15 34 56.6 +0.2**
BRVK pmax pmax
comp=Z,23nm,1.1s,mb5.1
BRVK Borovoye 49.91 310 *e*P **P 15 34 56.6 +0.2**
comp=Z,23nm,1.1s,mb5.1
TAPN Taplejung 50.00 272 *e*P **P 15 34 57.2 -0.2**
comp=Z,15nm,0.9s,mb5.0
ODAN Odare 50.51 272 *e*P **P 15 35 02.1 +0.8**
comp=Z,7.1nm,0.6s,mb4.8
TKM2 Tokmak 2 50.74 296 *e*P **P 15 35 03.6 +0.8**
TKM2 *e**PP pP 15 35 17.8 +1.1
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TKM2 Tokmak 2 50.74 296 *e*P **P 15 35 03.6 +0.8**
comp=Z,10nm,0.8s,mb4.8
TKM2 *e*pP pP 15 35 17.8 +1.1
JIRN Jiri 50.93 273 *e*P **P 15 35 04.9 +0.4**
comp=Z,3.8nm,0.3s,mb4.8
GUN Gumba 51.02 274 *e*P **P 15 35 05.3 +0.2**
comp=Z,28nm,0.5s,mb5.5
RAMN Ramite 51.04 272 *e*P **P 15 35 05.3 0.0**
comp=Z,57nm,0.9s,mb5.5
KKN Kakani 51.52 274 *e*P **P 15 35 08.9 0.0**
PKI Pulchoki 51.55 274 *e*P **P 15 35 08.5 -0.6**
comp=Z,5.1nm,0.4s,mb4.8
PKIN Phulchoki 51.56 274 *e*P **P 15 35 08.6 -0.6**
comp=Z,15nm,0.6s,mb5.1
AAK Ala-Archa 51.59 296 *e*P **P 15 35 09.4 +0.2**
AAK *e**PP pP 15 35 23.6 +0.4
AAK pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
AAK Ala-Archa 51.59 296 *e*P **P 15 35 09.4 +0.2**
comp=Z,2.8nm,0.4s,mb4.5
AAK *e*pP pP 15 35 23.6 +0.5
DMN Daman 51.75 274 *e*P **P 15 35 10.5 -0.1**
comp=Z,17nm,0.8s,mb5.0
EKS2 Erkin-Say 52.05 296 *e*P **P 15 35 12.9 +0.3**
comp=Z,6.2nm,0.5s,mb4.8
EKS2 *e* 15 35 16.6
EKS2 *e*pP pP 15 35 26.3 -0.3
KSH Kashi 52.05 292 *e*P **P 15 35 16.8 +4.1**
KSH *e*pP pP 15 35 31.5 +4.8
KSH *e*sP sP 15 35 38.5 +5.9
KSH *e*PcP PcP 15 36 26.8 +2.6
KSH PP PP 15 37 16.8 +5.8
KSH *e*ScP ScP 15 40 16.5 -0.2
KSH *e*PcS PcS 15 40 23.8 +1.4
KSH *e*S **S 15 42 36.0 +3.4**
KSH *e*ScS ScS 15 44 56.8 -1.2
KSH *e*SS SS 15 46 12.5 +2.7
KSH pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KSH LR LR
comp=N,1µm,17.6s,MS5.2
KSH LR LR
comp=E,2µm,18.5s,MS5.2
SVE Sverdlovsk 53.56 317 *e*P **P 15 35 23.4 -0.1**
SVE pmax pmax
comp=Z,25nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,1µm,22.0s,MS5.0
ARU Arti 54.77 317 *c i*P **P 15 35 31.6 -0.7**
ARU *e* 15 37 31.7
ARU S **S 15 43 09.9 +1.0**
ARU SS SS 15 46 49.8 -2.1
ARU pmax pmax
comp=Z,35nm,1.7s,mb5.1
ARU Arti 54.77 317 *e*P **P 15 35 31.8 -0.5**
comp=Z,10nm,0.8s,mb4.9
RES Resolute Bay 55.56 17 *e*P **P 15 35 37.3 -0.5**
RES *e**PP pP 15 35 51.7 -0.1
RES pmax pmax
comp=Z,26nm,0.7s,mb5.4
RES Resolute Bay 55.56 17 *e*P **P 15 35 37.3 -0.5**
comp=Z,26nm,0.7s,mb5.4
RES *e*pP pP 15 35 51.7 -0.2
YKA Yellowknife Ar 56.32 34 P **P 15 35 43.0 -0.4**
comp=Z,3.7nm,0.8s,mb4.5,baz=299,slow=7.1,SNR=24
YKA Yellowknife Ar 56.32 34 P **P 15 35 43.0 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 56.32 34 P **P 15 35 43.0 -0.4**
ABKAR Akbulak array 57.42 309 *e*P **P 15 35 51.4 0.0**
comp=Z,14nm,0.4s,mb5.3
AKTK Aktyubinsk 57.91 311 P **P 15 35 54.7 -0.1**
AKTO Aktyubinsk 57.91 311 P **P 15 35 54.7 -0.1**
comp=Z,11nm,0.7s,mb5.0,baz=72,slow=8.3,SNR=50
AKTO Aktyubinsk 57.91 311 P **P 15 35 54.7 -0.1**
AKTO pmax pmax
comp=Z,11nm,0.7s,mb5.0
KEV Kevo 59.27 339 *e*P **P 15 36 02.4 -1.5**
KEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KEV Kevo 59.27 339 *e*p **P 15 36 02.4 -1.5**
comp=Z,6.9nm,0.4s,mb5.0
KBL Kabul 59.37 290 *e*P **P 15 36 04.6 -0.6**
KBL pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KBL Kabul 59.37 290 *e*P **P 15 36 04.6 -0.6**
comp=Z,6.7nm,0.8s,mb4.7
NLWA Neilton Lookou 59.44 52⇑P **P 15 36 05.8 +0.3**
baz=59
ARCES ARCESS Array B 59.80 340 P **P 15 36 07.1 -0.5**
comp=Z,3.8nm,0.3s,mb4.8,baz=48,slow=7.2,SNR=71
ARCES ARCESS Array B 59.80 340 P **P 15 36 07.1 -0.5**
ARCES pmax pmax
comp=Z,4.0nm,0.4s
E03A Lebam 60.07 53⇑P **P 15 36 10.6 +0.8**
baz=60
F03A Seaside 60.40 53⇑P **P 15 36 12.3 +0.2**
baz=60
A07A Ashnola River, 60.52 49⇑P **P 15 36 12.8 -0.1**
baz=60
KTK1 Kautokeino 60.75 340 *e*P **P 15 36 13.9 -0.2**
F04A Amboy 61.07 53⇓P **P 15 36 17.0 +0.4**
baz=61
TRO Tromso 61.32 342 *e*P **P 15 36 17.5 -0.5**
G04A Mulino 61.43 54⇑P **P 15 36 18.9 -0.2**
baz=61
B08A Colville Reser 61.48 49⇓P **P 15 36 18.8 -0.6**
baz=61
H04A Detroit Lake 61.90 54⇑P **P 15 36 22.3 0.0**
baz=62
B09A Rice 62.10 49⇑P **P 15 36 23.1 -0.5**
baz=62
C09A Chrisman Ranch 62.39 49⇓P **P 15 36 24.9 -0.6**
baz=62
D08A Wollman Farm, 62.45 50⇑P **P 15 36 25.5 -0.3**
baz=62
F07A Phinny Hill Vi 62.53 52⇑P **P 15 36 26.6 +0.2**
baz=62
JOF Joensuu 62.61 332 *e*P **P 15 36 25.4 -1.3**
JOF pmax pmax
comp=Z,14nm,0.4s,mb5.4
JOF Joensuu 62.61 332 *e*p **P 15 36 25.4 -1.3**
comp=Z,14nm,0.4s,mb5.4
A11A Hall Mountain, 62.77 47⇑P **P 15 36 28.2 +0.2**
baz=62
C10A Spilker Farm, 62.91 49⇓P **P 15 36 28.7 -0.2**
baz=63
B11A Sandpoint 63.07 48⇓P **P 15 36 30.3 +0.3**
baz=63
E09A Wood Farm, Sta 63.19 50⇓P **P 15 36 30.9 0.0**
baz=63
D10A Wagner Farm, O 63.37 50⇓P **P 15 36 31.8 -0.2**
baz=63
G08A Pilot Rock 63.44 52⇑P **P 15 36 32.2 -0.3**
baz=63
K05A Summer Lake 63.78 55⇓P **P 15 36 35.4 +0.6**
baz=64,SNR=7.8
E10A Myers Farm, Un 63.79 50⇓P **P 15 36 34.5 -0.3**
baz=64
I07A Izee 63.82 53⇑P **P 15 36 35.1 +0.1**
baz=64
A13A Flathead Natio 63.83 47⇓P **P 15 36 34.8 -0.2**
baz=64
D11A Klaveano Farm, 63.90 49⇓P **P 15 36 34.6 -0.8**
baz=64
C12B Naegeli Ranch, 63.98 48⇑P **P 15 36 36.2 +0.1**
baz=64
H08A Prairie City 64.05 53⇑P **P 15 36 36.6 0.0**
baz=64
G09A Cove 64.12 51⇑P **P 15 36 36.8 -0.2**
baz=64
B13A Whitefish 64.13 47⇑P **P 15 36 37.3 +0.3**
baz=64,SNR=9.3
A14A Double T Ranch 64.33 46⇓P **P 15 36 38.1 -0.2**
baz=64
E11A Bogner Ranch, 64.37 50⇑P **P 15 36 38.3 -0.3**
baz=64
D12A Red Ives Fores 64.44 49⇑P **P 15 36 39.0 0.0**
baz=64
C13A Hot Springs 64.49 48⇑P **P 15 36 39.4 0.0**
baz=64
G10A Bishop Farm, J 64.49 51⇓P **P 15 36 39.9 +0.5**
baz=64
SUMG Summit 64.52 2 *e*P **P 15 36 39.4 +0.2**
comp=Z,15nm,0.8s,mb5.1
F11A Grangeville 64.68 50⇓P **P 15 36 40.6 0.0**
baz=64
A15A Johnson Ranch, 64.69 46⇑P **P 15 36 40.0 -0.6**
baz=64
E12A Beaver Dam Sad 64.69 49⇓P **P 15 36 40.7 0.0**
baz=64,SNR=12
B14A Marquette Ranc 64.78 47⇑P **P 15 36 41.1 -0.1**
baz=64,SNR=5.6
KAF Kangasniemi 64.84 333 *e*P **P 15 36 40.1 -1.3**
KAF pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KAF Kangasniemi 64.84 333 *e*p **P 15 36 40.1 -1.3**
comp=Z,7.8nm,0.5s,mb5.0,baz=43,slow=6.1
J08A Circle Bar Ran 64.85 53⇑P **P 15 36 41.8 +0.1**
baz=65,SNR=5.3
C14A Swan Lake 64.88 47⇑P **P 15 36 41.7 -0.2**
baz=65,SNR=6.7
D13A Huson 64.90 48⇓P **P 15 36 41.8 -0.2**
baz=65,SNR=7.9
SWMT Swartz Lake 64.90 48 *e*P **P 15 36 42.0 0.0**
comp=Z,9.3nm,1.0s,mb4.8
G11A Walters Elk Ra 64.91 51⇑P **P 15 36 41.8 -0.3**
baz=65,SNR=9.8
MOS Moscow 64.92 324 *e*P **P 15 36 38.9 -3.1**
MOR8 Moi Rana 65.10 341 *e*P **P 15 36 41.1 -1.8**
MOR8 *e*sP sP 15 37 02.8 -0.5
H10A Noah's Angus R 65.12 52⇑P **P 15 36 43.3 -0.2**
baz=65,SNR=6.1
F12A Elk City 65.27 50⇑P **P 15 36 45.2 +0.8**
baz=65,SNR=6.7
J09A Fry Pan Ranch, 65.28 53⇑P **P 15 36 44.6 +0.1**
baz=65
I10A Payette 65.39 52⇑P **P 15 36 45.8 +0.5**
baz=65
FINES FINESS Array B 65.40 333 P **P 15 36 44.4 -0.6**
comp=Z,16nm,0.5s,mb5.3,baz=39,slow=7.4,SNR=126
FINES FINESS Array B 65.40 333 P **P 15 36 44.4 -0.6**
FINES pmax pmax
comp=Z,17nm,0.5s
FINES FINESS Array B 65.40 333 P **P 15 36 44.4 -0.6**
D14A Greenough 65.43 48⇑P **P 15 36 45.2 -0.3**
baz=65,SNR=6.8
E13A Victor 65.44 49⇓P **P 15 36 45.5 -0.1**
baz=65
H11A Donnelly 65.47 51⇓P **P 15 36 45.2 -0.6**
baz=65,SNR=8.5
B16A M & M Farms, S 65.57 46⇓P **P 15 36 46.3 -0.1**
baz=65
F13A Darby 65.76 49⇑P **P 15 36 47.9 +0.3**
baz=66
A17A Triple J Farms 65.77 45⇓P **P 15 36 47.4 -0.2**
baz=66
OBN Obninsk 65.78 324⇓*e*P **P 15 36 47.4 -0.2**
OBN pmax pmax
comp=Z,13nm,0.6s,mb5.1
BEKR Beckwourth 65.79 57⇓P **P 15 36 48.1 +0.2**
baz=66
D15A Lincoln 65.98 47⇑P **P 15 36 49.1 0.0**
baz=66
B17A L&G Farms, Che 66.12 46⇓P **P 15 36 49.9 0.0**
baz=66
K10A MacKenzie Ranc 66.14 53⇑P **P 15 36 50.3 +0.2**
baz=66
FFC Flin Flon 66.20 36 *i*P **P 15 36 50.2 -0.1**
H12A Diamond D Ranc 66.22 51⇑P **P 15 36 50.2 -0.4**
baz=66,SNR=6.8
A18A Metzger Ranch, 66.22 45⇑P **P 15 36 50.3 -0.3**
baz=66
G13A Cobalt 66.24 50⇑P **P 15 36 50.2 -0.5**
baz=66,SNR=6.9
E15A Deer Lodge 66.30 48⇑P **P 15 36 50.9 -0.2**
baz=66
MFID Camas Ranch 66.36 52⇑P **P 15 36 51.8 +0.3**
baz=66
WCN Washoe City 66.50 58⇑P **P 15 36 52.4 0.0**
baz=66
D16A Dana Ranch, Ca 66.51 47⇑P **P 15 36 52.5 0.0**
baz=66
I12A Atlanta 66.53 51⇑P **P 15 36 52.5 -0.1**
baz=66,SNR=14
H13A Challis 66.55 50⇓P **P 15 36 52.3 -0.4**
baz=66,SNR=12
FCC Fort Churchill 66.56 30 *e*P **P 15 36 51.5 -1.1**
comp=Z,0.1nm,0.7s
B18A Beardsley Farm 66.59 45⇓P **P 15 36 52.9 0.0**
baz=66
K11A Parker Ranch, 66.63 53⇑P **P 15 36 53.4 +0.2**
baz=66
F15A Butte 66.74 48⇑P **P 15 36 53.9 0.0**
baz=66,SNR=9.4
LRM Limekiln Ridge 66.78 48 *e*P **P 15 36 53.6 -0.5**
comp=Z,18nm,0.4s,mb5.5
L10A Juniper Basin 66.80 54⇓P **P 15 36 54.5 +0.2**
baz=67
EGMT Eagleton 66.84 45⇓P **P 15 36 54.5 0.0**
baz=67
J12A Stokes Ranch, 66.88 52⇑P **P 15 36 54.9 0.0**
baz=67
H14A Leadore 67.02 50⇓P **P 15 36 55.4 -0.3**
baz=67
I13A Wildhorse Cree 67.03 51⇓P **P 15 36 55.8 +0.1**
baz=67,SNR=5.9
HLID Hailey 67.08 51⇑P **P 15 36 56.1 0.0**
baz=67,SNR=6.8
HLID Hailey 67.08 51 *e*P **P 15 36 55.6 -0.5**

comp=Z,1.8nm,0.8s,mb4.2
M10A I.L. Ranch, Tu 67.10 54 ⇑P P 15 36 56.4 +0.2
baz=67,SNR=5.6
L11A Cat Creek Ranc 67.16 53 ⇓P P 15 36 56.6 0.0
baz=67,SNR=6.1
G15A Dillon 67.17 49 ⇑P P 15 36 56.4 -0.2
baz=67,SNR=15
VSR Storozhevoye 67.17 320 eP P 15 36 56.2 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.5s
MCMT McKenzie Canyo 67.18 49 eP P 15 36 56.6 -0.1
comp=E,0.7nm,0.6s,mb3.9
F16A Kennard Place, 67.25 48 ⇑P P 15 36 57.0 -0.1
baz=67
VORD Divnogorie 67.28 319 eP P 15 36 55.8 -1.4
VORD pmax pmax
comp=Z,20nm,1.2s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.7s
J13A Cove Ranch, Pi 67.32 51 ⇓P P 15 36 57.8 +0.2
baz=67,SNR=5.3
BOZ Bozeman (W) 67.33 48 ⇑P P 15 36 57.8 +0.1
baz=67,SNR=7.3
BOZ Bozeman (W) 67.33 48 eP P 15 36 54.3 -3.4
BOZ pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
BOZ Bozeman (W) 67.33 48 eP P 15 36 54.3 -3.3
comp=Z,7.8nm,0.6s,mb4.9
I14A Mackay 67.40 51 ⇑P P 15 36 58.4 +0.3
baz=67
G16A Moss Hill, Enn 67.50 49 ⇑P P 15 36 58.5 -0.2
baz=67,SNR=6.0
ASAR Alice Springs 67.58 193 P P 15 36 59.2 -0.1
comp=Z,0.6nm,0.5s,mb3.9,baz=11,slow=6.6,SNR=17
ASAR PKP2bc 16 05 25.1
comp=Z,0.6nm,0.9s,baz=177,slow=3.1,SNR=5.0
ASAR Alice Springs 67.58 193 P P 15 36 59.2 -0.1
ASAR ⇑e 16 05 25.1
M11A Holland Ranch, 67.60 54 ⇑P P 15 36 59.7 +0.3
baz=67
L12A House Creek Ra 67.61 53 ⇓P P 15 36 59.8 +0.3
baz=67,SNR=6.3
NVAR Mina Array Bea 67.93 58 P P 15 37 01.9 +0.4
comp=Z,5.3nm,0.7s,mb4.7,baz=292,slow=6.8,SNR=38
NVAR Mina Array Bea 67.93 58 P P 15 37 01.9 +0.4
M12A Wells 68.12 53 ⇓P P 15 37 03.0 +0.3
baz=68,SNR=7.1
H16A Russell Place, 68.14 49 ⇑P P 15 37 02.9 +0.2
baz=68
L13A Double Diamond 68.27 52 ⇓P P 15 37 04.2 +0.6
baz=68
N12A Clover Valley, 68.40 54 ⇑P P 15 37 05.0 +0.6
baz=68
K14A Jones Ranch, D 68.42 52 ⇓P P 15 37 05.0 +0.4
baz=68
O11A Cowboy Ranch, 68.48 55 ⇓P P 15 37 05.4 +0.4
baz=68
K15A Arbon 68.70 51 ⇓P P 15 37 06.8 +0.5
baz=68
H17A Grant Village 68.71 49 ⇑P P 15 37 08.0 +1.7
baz=68
L14A Malta 68.71 52 ⇑P P 15 37 06.8 +0.4
baz=68
P11A Circle Ranch, 68.79 55 ⇑P P 15 37 07.3 +0.4
baz=69
Q10A Clear Creek Ra 68.85 56 ⇓P P 15 37 07.2 -0.1
baz=69,SNR=6.7
N13A Wendover, West 68.89 53 ⇑P P 15 37 07.7 +0.2
baz=69
RRI2 Red Ridge 68.97 50 eP P 15 37 08.8 +0.8
comp=Z,9.6nm,0.9s,mb4.7
L15A Malad City 69.22 52 ⇑P P 15 37 10.1 +0.5
baz=69
Q11A Duckwater 69.29 56 ⇑P P 15 37 10.1 +0.1
baz=69
J17A Brown Place, J 69.30 50 ⇓P P 15 37 10.8 +0.8
baz=69
S10A Tonopah Range, 69.30 57 ⇓P P 15 37 10.0 -0.1
baz=69,SNR=7.6
P12A McGill 69.35 55 ⇓P P 15 37 10.7 +0.3
baz=69
DGMT Dagmar 69.36 42 ⇑P P 15 37 10.3 0.0
baz=69
N14A Grayback Hills 69.49 53 ⇑P P 15 37 11.3 +0.1
baz=69
IZAR Zarasai 69.53 329 eP P 15 37 10.3 -0.8
M15A Larsen Ranch, 69.53 52 ⇓P P 15 37 11.9 +0.4
baz=69
R11A Troy Canyon, C 69.65 56 ⇓P P 15 37 12.1 -0.1
baz=69,SNR=11
IDID Didziasalis 69.66 328 eP P 15 37 11.9 -0.1
ISAL Salakas 69.71 329 eP P 15 37 12.0 -0.2
L16A Fish Haven 69.76 51 ⇓P P 15 37 13.4 +0.5
baz=70
IIGN Ignalina 69.83 329 eP P 15 37 12.9 -0.1
P13A Bates Ranch, G 69.89 55 ⇑P P 15 37 13.7 -0.1
baz=70
MPMC Manual Prospec 69.91 59 ⇓P P 15 37 14.0 +0.1
baz=70,SNR=6.3
NACGM Naroch 69.95 328 e P 15 37 12.0 -1.8
S11A Rachel 69.99 57 ⇑P P 15 37 15.1 +0.7
baz=70
M16A Huntsville 70.09 52 ⇑P P 15 37 14.7 -0.2
baz=70
DUG Dugway 70.13 53 ⇑P P 15 37 15.0 -0.2
baz=70,SNR=7.3
K18A Toltan Ranch, 70.14 50 ⇑P P 15 37 15.2 0.0
baz=70
KIV Kislovodsk 70.14 312 eP P 15 37 15.2 0.0
KIV pmax pmax
comp=Z,22nm,1.0s,mb5.0
KIV Kislovodsk 70.14 312 eP P 15 37 16.5 +1.3
comp=Z,13nm,0.7s,mb5.0
NB2 NORSAR Subarra 70.16 339 P P 15 37 14.2 -0.7
comp=Z,6.9nm,0.4s,mb4.9,baz=31,slow=6.5
NOA NORSAR Array B 70.16 339 P P 15 37 14.6 -0.4
comp=Z,12nm,0.8s,mb4.9,baz=33,slow=6.3,SNR=42
NOA NORSAR Array B 70.16 339 P P 15 37 14.6 -0.3
NOA pmax pmax
comp=Z,12nm,0.8s
NOA NORSAR Array B 70.16 339 P P 15 37 14.6 -0.4
Q13A Wheeler Ranch, 70.21 55 ⇑P P 15 37 15.9 +0.3
baz=70,SNR=5.8
ZEI Tsey 70.25 310 eP P 15 37 14.7 -1.2
ZEI pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
R12A Pony Springs, 70.25 56 ⇓P P 15 37 15.9 0.0
baz=70
BW06 Boulder Array 70.33 50 ⇑P P 15 37 16.0 -0.3
baz=70
PDAR Pinedale Array 70.33 50 P P 15 37 16.1 -0.2
comp=Z,4.1nm,0.6s,mb4.5,baz=280,slow=0.3,SNR=9.8
EDW2 Edwards Air Fo 70.34 60 ⇓P P 15 37 16.5 0.0
baz=70
P14A Drum Mountains 70.37 54 ⇓P P 15 37 16.6 -0.1
baz=70
M17A Scullys Gap (B 70.55 51 ⇓P P 15 37 17.9 +0.2
baz=70
S12A Delamar Landin 70.57 56 ⇓P P 15 37 18.1 +0.2
baz=70
T11A Corn Creek, Al 70.57 57 ⇓P P 15 37 18.0 0.0
baz=70,SNR=6.6
L18A Fontenelle, Gr 70.61 50 ⇑P P 15 37 18.3 +0.3
baz=70
Q14A Sevier Lake (B 70.63 55 ⇑P P 15 37 18.3 +0.1
baz=70,SNR=8.0
K19A Absolon Red Bu 70.68 49 ⇑P P 15 37 18.3 -0.2
baz=70
N17A Moffit Pass 70.79 52 ⇑P P 15 37 19.1 -0.1
baz=71
S13A Holt Ranch, En 71.19 56 ⇑P P 15 37 21.9 +0.3
baz=71
TUQ Turquoise Moun 71.29 59 ⇓P P 15 37 22.5 +0.2
baz=71
O17A Robinson Place 71.34 52 ⇓P P 15 37 22.6 +0.1
baz=71
HEC Hector,Ludlow 71.42 60 ⇓P P 15 37 23.3 +0.2
baz=71
T13A Saint George 71.52 56 ⇑P P 15 37 24.0 +0.3
baz=71
O18A Roosevelt 71.71 52 ⇑P P 15 37 25.6 +0.8
baz=72

P17A Butcher Ranch, 71.81 53 ⇑P P 15 37 25.3 -0.1
baz=72,SNR=5.8
U13A Pakoon Wash 71.87 57 ⇑P P 15 37 26.1 +0.3
baz=72,SNR=8.7
GMRC Granite Mounta 71.88 59 ⇓P P 15 37 26.0 +0.1
baz=72
Q16A Castle Valley 71.92 53 ⇓P P 15 37 26.4 +0.3
baz=72
M20A Sweetwater, Wa 71.93 50 ⇑P P 15 37 26.5 +0.4
baz=72
T14A Hurricane 71.99 56 ⇑P P 15 37 27.1 +0.6
baz=72
P18A Preston Nutter 72.00 52 ⇓P P 15 37 27.0 +0.6
baz=72
S15A Panguitch 72.03 55 ⇑P P 15 37 27.0 +0.3
baz=72
AKASG Malin Array Be 72.05 324 P P 15 37 25.9 -0.6
comp=Z,11nm,0.6s,mb5.0,baz=38,slow=6.0,SNR=32
AKASG Malin Array Be 72.05 324 P P 15 37 26.0 -0.6
AKASG pmax pmax
comp=Z,11nm,0.6s
AKBB Malin Array Si 72.05 324 eP P 15 37 25.3 -1.3
KIEV Kiev 72.06 324 eP P 15 37 26.1 -0.6
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KIEV Kiev 72.06 324 eP P 15 37 26.1 -0.6
comp=Z,8.8nm,0.8s,mb4.7
L21A Rawlins 72.07 49 ⇓P P 15 37 26.7 -0.2
baz=72
PFO Pinyon Flat Ob 72.13 61 ⇓P P 15 37 27.1 -0.3
baz=72
BELC Belle Mtn. 72.17 60 ⇑P P 15 37 27.1 -0.5
baz=72
SRU San Rafael 72.17 53 ⇑P P 15 37 27.6 0.0
baz=72,SNR=6.3
V13A Grand Canyon W 72.23 57 ⇓P P 15 37 28.0 +0.1
baz=72
M21A Separation Pea 72.31 49 ⇑P P 15 37 28.1 -0.2
baz=72
N20A Spence Gulch, 72.33 50 ⇑P P 15 37 28.7 +0.3
baz=72
U14A Mt Trumbull 72.35 57 ⇑P P 15 37 29.3 +0.6
baz=72
T15A Red Dirt Ranch 72.44 56 ⇓P P 15 37 28.9 -0.3
baz=72
R17A Hanksville Air 72.52 54 ⇑P P 15 37 29.6 -0.1
baz=72,SNR=5.5
L22A Ellis Ranch, M 72.54 49 ⇓P P 15 37 29.2 -0.5
baz=72
P19A Cripple Cowboy 72.72 52 ⇓P P 15 37 30.7 -0.1
baz=72
BC3 Big Chuckw Mtn 72.73 60 ⇓P P 15 37 30.7 -0.2
baz=72
N21A Black Mountain 72.80 50 ⇓P P 15 37 31.4 +0.2
baz=73
U15A North Rim 72.89 56 ⇑P P 15 37 32.1 +0.2
baz=73
V14A Boquillas Ranc 72.91 57 ⇓P P 15 37 32.1 +0.1
baz=73,SNR=9.4
S17A Black Ridge (B 72.99 54 ⇑P P 15 37 32.4 0.0
baz=73
R18A Canyonlands Na 73.02 53 ⇑P P 15 37 32.3 -0.3
baz=73
W14A Seligman 73.20 57 ⇑P P 15 37 34.0 +0.3
baz=73,SNR=6.6
Y12C Blythe 73.26 59 ⇑P P 15 37 34.1 0.0
baz=73
V15A Kaibab Nationa 73.36 56 ⇓P P 15 37 35.1 +0.5
baz=73
T17A Navajo Res., N 73.41 55 ⇑P P 15 37 35.2 +0.3
baz=73
S18A Hurst Farm, Bl 73.43 54 ⇑P P 15 37 34.6 -0.4
baz=73,SNR=5.5
R19A Curley Farm, L 73.46 53 ⇑P P 15 37 35.1 -0.1
baz=73
Q20A Ridgley Place, 73.57 52 ⇑P P 15 37 36.1 +0.3
baz=73
U17A Shonto 73.76 55 ⇓P P 15 37 37.4 +0.5
baz=74
T18A Mexican Hat 73.87 54 ⇑P P 15 37 37.0 -0.6
baz=74,SNR=5.2
S19A Harvey Farm, M 73.89 53 ⇓P P 15 37 37.7 -0.1
baz=74
R20A Redvale 74.04 53 ⇓P P 15 37 38.4 -0.2
baz=74
WUAZ Wupatki 74.05 56 ⇓P P 15 37 38.9 +0.2
baz=74
Q21A Lamborn Mesa, 74.07 52 ⇑P P 15 37 38.7 -0.1
baz=74
Y14A Wickenburg 74.09 58 ⇓P P 15 37 39.1 +0.1
baz=74
X15A Humboldt 74.20 58 ⇑P P 15 37 40.1 +0.5
baz=74
V17A Tonalea, Kykot 74.33 56 ⇑P P 15 37 40.7 +0.4
baz=74
U18A Rough Rock, Ch 74.35 55 ⇑P P 15 37 40.8 +0.3
baz=74
113A Mohawk Valley, 74.38 60 ⇓P P 15 37 40.6 -0.1
baz=74
Q22A Crested Butte, 74.43 51 ⇓P P 15 37 41.0 +0.2
baz=74
Y15A Casa Rosa Ranc 74.50 58 ⇑P P 15 37 41.7 +0.4
baz=74
T19A Beclabito 74.58 54 ⇓P P 15 37 41.9 +0.2
baz=74
MVCO Mesa Verde 74.63 53 ⇓P P 15 37 42.0 0.0
baz=74
S21A Coal Bank Pass 74.74 53 ⇓P P 15 37 43.1 +0.5
baz=74
X16A Lo Mia Camp, P 74.74 57 ⇓P P 15 37 43.0 +0.2
baz=74
V18A Ganado 74.79 55 ⇑P P 15 37 43.3 +0.4
baz=75
STKA Stephens Creek 74.83 185 LR LR 16 13 25.5
comp=Z,749nm,18.5s,MS5.0,baz=56,slow=38
U19A Dine' College, 74.83 54 ⇑P P 15 37 43.4 +0.2
baz=75
R22A Saguache, Gunn 74.95 52 ⇑P P 15 37 44.1 +0.2
baz=75
KIS Kishinev 74.97 321 eP P 15 37 43.0 -0.8
Y16A Circle Bar Ran 75.07 58 ⇓P P 15 37 45.2 +0.5
baz=75
Y17A Roosevelt 75.59 57 ⇑P P 15 37 47.9 +0.3
baz=75
KWP Kalwaria Pacla 75.59 326 eP P 15 37 48.0 +0.7
T22A Edith 75.70 53 ⇑P P 15 37 48.5 +0.3
baz=76
X19A St. Johns 76.04 56 ⇑P P 15 37 50.3 +0.1
baz=76
BUR08 Bucovina Ar. S 76.09 324 eP P 15 37 50.6 +0.4
OJC Ojcow 76.28 328 eP P 15 37 50.8 -0.4
KOLS Kolonicke sedl 76.32 326 eP P 15 37 51.5 0.0
KOLS e 15 38 00.1
KOLS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
KOLS Kolonicke sedl 76.32 326 eP P 15 37 51.5 0.0
comp=Z,4.3nm,1.3s,mb4.2
KOLS e 15 38 00.1
KOLS Kolonicke sedl 76.32 326 eP P 15 37 51.5 0.0
KOLS ePCP PcP 15 38 00.1 -3.1
STHS Stebnicka Huta 76.35 327 eP P 15 37 52.9 +1.2
STHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
STHS Stebnicka Huta 76.35 327 eP P 15 37 52.9 +1.2
comp=Z,5.2nm,1.4s,mb4.3
STHS Stebnicka Huta 76.35 327 eP P 15 37 52.9 +1.2
ECSD EROS Data Cent 76.44 42 eP P 15 37 50.8 -1.4
comp=Z,12nm,1.0s,mb4.8
X20A Quemado 76.44 55 ⇑P P 15 37 53.3 +0.9
baz=76
V22A San Miguel Ran 76.45 53 ⇑P P 15 37 52.7 +0.2
baz=76
NIE Niedzica 76.72 327 eP P 15 37 54.7 +1.0
118A Homack Ranch, 76.84 58 ⇓P P 15 37 55.1 +0.4
baz=77
217A Green Valley 76.90 59 ⇑P P 15 37 55.9 +0.8
baz=77
X21A Alamocita Cree 76.94 55 ⇑P P 15 37 55.9 +0.6
baz=77
Y20A Horse Springs, 76.95 56 ⇓P P 15 37 56.2 +0.9
baz=77
X22A Bernardo 77.36 54 ⇑P P 15 37 58.9 +1.2
baz=77
Z20A Nine Sixteen R 77.36 56 ⇑P P 15 37 58.2 +0.5
baz=77
KECS Kecovo 77.40 327 eP P 15 37 58.1 +0.5
KECS e 15 38 06.0

KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 77.40 327 eP P 15 37 58.1 +0.5
comp=Z,1.7nm,0.9s,mb4.0
KECS e 15 38 06.0
KECS Kecovo 77.40 327 eP P 15 37 58.1 +0.5
KECS ePCP PcP 15 38 06.0 -1.9
W23A Werner Place, 77.42 54 ⇑P P 15 37 58.9 +1.0
baz=77
DPC Dobruska-Polom 77.47 330 eP P 15 37 58.2 +0.3
DPC epP pP 15 38 11.1 -1.5
219A White Tail Can 77.72 58 ⇑P P 15 38 00.2 +0.5
baz=78
120A U Bar Ranch, L 77.73 57 ⇑P P 15 38 00.2 +0.5
baz=78
Y22A Socorro 77.78 55 ⇓P P 15 38 00.2 +0.2
baz=78
Z21A St. Cloud Mine 77.79 56 ⇓P P 15 38 00.8 +0.8
baz=78
W24A Lazy 6 Ranch, 77.82 53 ⇓P P 15 38 00.5 +0.4
baz=78,SNR=7.5
CLL Collm 77.84 333⇑i P 15 37 59.3 -0.7
CLL e*PP pP 15 38 14.0 -0.7
CLL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CLL Collm 77.84 333⇑i P 15 37 59.3 -0.7
comp=Z,7.0nm,0.8s,mb4.6
CLL i 15 38 02.2
CLL epP pP 15 38 14.0 -0.7
CLL Collm 77.84 333⇑i P 15 37 59.3 -0.7
comp=Z,7.0nm,0.8s,mb4.6
CLL i P(2) 15 38 02.2
CLL epP pP 15 38 14.0 -0.7
CLL i pP(2) pP 15 38 16.0 +1.3
CLL esP sP 15 38 21.0 +0.6
BR131 Keskin Array S 77.94 314 eP P 15 38 00.8 +0.1
BRTR Keskin Array B 77.94 314 P P 15 38 00.8 +0.1
comp=Z,1.0nm,0.6s,mb3.9,baz=97,slow=3.1,SNR=5.1
BRTR Keskin Array B 77.94 314 P P 15 38 00.9 +0.2
BRTR pmax pmax
comp=Z,1.0nm,0.6s
VYHS Vyhne 78.04 328 eP P 15 38 01.4 +0.3
VYHS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
VYHS Vyhne 78.04 328 eP P 15 38 01.4 +0.3
comp=Z,5.3nm,1.5s,mb4.2
VYHS Vyhne 78.04 328 eP P 15 38 01.4 +0.3
319A Douglas 78.13 58 ⇓P P 15 38 02.2 +0.3
baz=78
220A Playas Peak, P 78.23 57 ⇓P P 15 38 03.2 +0.6
baz=78
121A Cookes Peak, D 78.26 56 ⇑P P 15 38 03.3 +0.6
baz=78
Y23A Lovelace Mesa, 78.33 54 ⇓P P 15 38 03.3 +0.3
baz=78,SNR=7.9
V26A Tequesquite Ra 78.34 52 ⇑P P 15 38 02.8 -0.3
baz=78
W25A X Bar L Ranch, 78.36 52 ⇓P P 15 38 03.2 0.0
baz=78,SNR=8.8
Y24A Capitan 78.70 54 ⇓P P 15 38 05.0 0.0
baz=78
X25A Clemmons Ranch 78.73 53 ⇑P P 15 38 05.6 +0.3
baz=78
Y25A Mesa, Roswell 79.14 54 ⇑P P 15 38 07.3 -0.1
baz=79
X26A CR and CF Fran 79.21 53 ⇓P P 15 38 08.0 +0.1
baz=79
SCIA State Center 79.46 41 eP P 15 38 08.4 -0.7
comp=Z,20nm,0.6s,mb5.2
KHC Kasperske Hory 79.47 331 eP P 15 38 08.7 -0.3
KHC pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KHC Kasperske Hory 79.47 331 eP P 15 38 08.7 -0.3
comp=Z,3.3nm,0.6s,mb4.4
KHC Kasperske Hory 79.47 331 eP P 15 38 09.0 0.0
KHC epP pP 15 38 23.9 +0.2
124A Stringfield Ra 79.55 55 ⇑P P 15 38 09.8 +0.1
baz=79
Y26A Elida 79.65 53 ⇓P P 15 38 10.2 0.0
baz=79
GERES GERESS Array B 79.67 331 P P 15 38 09.4 -0.7
comp=Z,1.4nm,0.8s,mb4.0,baz=31,slow=5.4,SNR=7.5
GERES GERESS Array B 79.67 331 P P 15 38 09.4 -0.7
GERES pmax pmax
comp=Z,1.0nm,0.8s
224A Corundas Mount 79.94 55 ⇓P P 15 38 12.0 +0.1
baz=80
Z26A Caprock 80.02 54 ⇓P P 15 38 12.1 -0.1
baz=80,SNR=9.1
125A Gardner Draw, 80.05 54 ⇓P P 15 38 12.8 +0.4
baz=80
Y27A Causey 80.06 53 ⇓P P 15 38 12.5 0.0
baz=80
225A Deer Hill, Car 80.34 55 ⇑P P 15 38 14.4 +0.4
baz=80
324A Moseley Ranch, 80.41 56 ⇑P P 15 38 14.4 0.0
baz=80
Z27A Tatum 80.44 53 ⇑P P 15 38 14.4 -0.1
baz=80,SNR=14
126A Clayton Basin, 80.44 54 ⇓P P 15 38 14.5 0.0
baz=80
GDL2 Guadalupe Moun 80.55 55 eP P 15 38 15.0 -0.1
comp=Z,3.4nm,0.6s,mb4.5
MEM Membach 80.66 336 P P 15 38 14.8 -0.6
325A Bean Ranch, Si 80.77 56 ⇑P P 15 38 16.2 -0.1
baz=80
226A Malaga, Loving 80.81 55 ⇓P P 15 38 16.4 -0.1
baz=81,SNR=5.6
BCLA Clavier 81.04 336 P P 15 38 16.5 -0.9
comp=Z,23nm,2.9s,mb4.6
425A Indio Mountain 81.18 56 ⇓P P 15 38 18.5 0.0
baz=81
326A Caldwell Ranch 81.41 55 ⇓P P 15 38 19.7 0.0
baz=81,SNR=6.5
GIVF Givet 81.46 337 eP P 15 38 19.3 -0.3
BAIF Baives 81.68 337 eP P 15 38 20.2 -0.6
MMAI Mount Meron Ar 81.83 308 P P 15 38 22.9 +1.0
comp=Z,2.6nm,0.5s,mb4.4,baz=27,slow=5.6,SNR=6.0
426A McDonald Obser 81.84 55 ⇑P P 15 38 21.9 -0.1
baz=82
328A Wristen Ranch, 82.06 54 ⇑P P 15 38 22.9 -0.2
baz=82,SNR=7.5
427A Hayter Ranch, 82.09 55 ⇓P P 15 38 22.9 -0.4
baz=82
CDF Champ du Feu 82.21 334 eP P 15 38 23.2 -0.4
FETA Feichten 82.27 332⇓i P 15 38 25.4 +1.4
comp=Z,4.3nm,0.9s,mb4.4
HDIL Hopedale 82.37 40 eP P 15 38 23.9 -0.7
comp=Z,14nm,0.7s,mb5.0
527A Woodward Ranch 82.47 56 ⇑P P 15 38 25.0 -0.2
baz=82
626A Big Bend Ranch 82.57 56 ⇓P P 15 38 25.6 -0.2
baz=82
428A Kincaid Ranch, 82.61 55 ⇑P P 15 38 26.0 0.0
baz=82
MEZF Maizieres J'vi 82.82 336 eP P 15 38 26.4 -0.4
528A Cox Ranch, San 82.95 55 ⇓P P 15 38 28.0 +0.2
baz=83,SNR=6.8
TXAR Lajitas Array 83.01 56 P P 15 38 27.8 -0.3
comp=Z,3.1nm,0.9s,mb4.3,baz=296,slow=3.3,SNR=32
TXAR Lajitas Array 83.01 56 P P 15 38 27.8 -0.3
TXAR pmax pmax
comp=Z,3.0nm,0.9s
627A Terlingua Ranc 83.10 56 ⇑P P 15 38 28.5 -0.1
baz=83
628A Black Gap, Mar 83.38 56 ⇓P P 15 38 29.9 -0.1
baz=83
CABF La Chapelle 84.18 334 eP P 15 38 33.2 -0.6
LOR Lormes 84.28 336 eP P 15 38 33.7 -0.6
comp=Z,12nm,1.0s,mb4.7
LOR Lormes 84.28 336 eP P 15 38 33.7 -0.6
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
LOR Lormes 84.28 336 eP P 15 38 33.7 -0.6
comp=Z,6.3nm,1.0s,mb4.7
SSF Saint Saulge 84.58 336 eP P 15 38 35.2 -0.6
SIUC Southern Illin 84.65 42 eP P 15 38 35.2 -1.1
comp=Z,29nm,0.9s,mb5.4
SMF Signal de Mont 84.85 336 eP P 15 38 36.8 -0.4
comp=Z,14nm,0.8s,mb4.9
SMF Signal de Mont 84.85 336 eP P 15 38 36.8 -0.4
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
SMF Signal de Mont 84.85 336 eP P 15 38 36.8 -0.4
comp=Z,7.2nm,0.8s,mb4.8
AVF Avril sur Loir 84.87 336 eP P 15 38 36.9 -0.4
BGF Bois d'Agland 85.23 336 eP P 15 38 38.0 -1.1

TCF	Toulx Ste Croi	85.66	336	*e*P	P	15 38 40.4	-0.8
TKL	Tuckaleechee C	88.89	39	P	P	15 38 56.4	-0.6
	comp=Z,11nm,0.7s,mb5.3,baz=180,slow=1.0,SNR=21						
TKL	Tuckaleechee C	88.89	39	P	P	15 38 56.4	-0.6
TKL				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
TKL	Tuckaleechee C	88.89	39	*e*P	P	15 38 56.4	-0.6
TORD	Torodi Ar. Bea	115.66	322	PKP	PKPdf	15 44 43.6	-1.6
	comp=Z,0.3nm,0.4s,baz=15,slow=1.9,SNR=8.7						
TORD				PP	PP	15 45 42.4	-4.8
	comp=Z,1.4nm,1.0s,baz=38,slow=4.8,SNR=4.6						
TORD	Torodi Ar. Bea	115.66	322	PKP	PKPdf	15 44 43.6	-1.5
TORD				PP	PP	15 45 42.4	-4.8
DBIC	Dimbokro	124.27	326	PKP	PKPdf	15 45 00.9	-0.8
	comp=Z,1.6nm,0.7s,baz=94,slow=15,SNR=4.3						
DBIC	Dimbokro	124.27	326	PKIKP	PKPdf	15 45 00.9	-0.8
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNA2	Neumayer--Watz	149.40	196	*e*PKPdf	PKPbc	15 45 49.1	-1.1
CFAA	Coronel Fontan	149.85	79	PKPbc	PKPbc	15 45 51.6	-0.9
	comp=Z,0.4nm,0.5s,baz=261,slow=1.9,SNR=7.1						
PLCA	Paso Flores	152.04	98	PKPbc	PKPbc	15 45 56.7	-0.6
	comp=Z,1.6nm,0.7s,baz=269,slow=1.2,SNR=5.1						
PLCA	Paso Flores	152.04	98	PKIKP	PKPbc	15 45 56.7	-0.6
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA	Paso Flores	152.04	98	PKPbc	PKPbc	15 45 56.7	-0.6

MEX 26 15:34:46.1±0.6, 17°08N×101°10W, h14km±11km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.62	327	*i* P	Pg	15 34 56.5	-1.9
ZIIG				*i* S	Sg	15 35 04.9	-1.7
CAIG	El Cayaco	0.80	92	*i* P	Pg	15 34 58.9	-2.8
CAIG				*i* S	Sg	15 35 08.8	-3.3
ACX	Acapulco	1.16	100	*i* P	Pb	15 35 04.6	-3.3
ACX				*i* S	Sb	15 35 19.0	-3.8
MZVM		2.75	40	*e*P	Pn	15 35 27.9	-2.0
MZVM				*i* S	Sn	15 35 59.1	-3.9
UTMO	Huajuapan	3.24	76	*i* P	Pn	15 35 33.7	-2.8
UTMO				*i* S	Sn	15 36 11.1	-3.9

IDC ***26*** *15:37:59.9±0.5, 8°.53N×82°.93W, h0km, mb4.3/18, mb1 4.5/23, mb1mx4.5/27, mbtmp4.4/23, ML4.2/4, MS4.6/18, Ms1 4.6/18, ms1mx4.4/30, Error ellipse: s-maj=22.0km s-min=11.4km az=61.0*

CASC ***26*** *15:38:01.4±4.0, 8°.47N×82°.99W, h1km±9km, MD4.4, ML3.9, mb5.0(NEIC)*

GCMT ***26*** *15:38:01.5±0.2, 8°.47N×82°.89W, h12km, MW5.1/84, Moment Tensor Solution. s45,c55; s84,c145; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.01±.15; Mθθ-4.94±.11; Mφφ0.92±.17; Mrθ-2.36±.38; Mθφ2.82±.10; Mφr1.18±.53; Best double couple: Mo5.69600×10^16 NP1:φs106.00000°, δ31.00000°, λ82.00000°. NP2: φs296.00000°, δ59.00000°, λ95.00000°. Principal axes: T 4.6710, Plg76.0000°, Azm220.0000°; N 2.0470, Plg4.0000°, Azm113.0000°; P -6.7210, Plg14.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *15:38:01.6±0.3, 8°.45N×83°.03W, h10km, mb5.0/69, MD5.3(HDC) Error ellipse: s-maj=6.7km s-min=4.2km az=222.0*

NEIC Felt at Buenos Aires, Golfito, Laurel, Puerto Jimenez and Turrialba, Costa Rica.

MOS ***26*** *15:38:02.4±1.0, 8°.52N×82°.92W, h26km, mb5.1/28, Error ellipse: s-maj=15.2km s-min=6.2km az=110.0*

ISCJB ***26*** *15:38:03.3±0.6, 8°.54N±0°.04×82°.86W±0°.02, h29km±3km, mb4.8/88, MS4.8/27, Error ellipse: s-maj=7.0km s-min=3.1km az=26.2*

BJI ***26*** *15:38:05.5, 8°.40N×83°.00W, h30km, mB5.2/11, Ms5.3/14, Ms7 5.2/14*

ISC 26 15:38:04.8±0.7, 8°.56N±0°.04×82°.85W±0°.03, h26km±4km, h20km±1.6km: pP-P, n484, σ0s86/467, mb4.8/88, MS4.8/27, 123C-128D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.28	34	*e*P	Pb	15 38 10.5	-1.1
BRU2				*e*S	Sb	15 38 18.5	+2.2
TBS2		0.30	39	*e*P	Px	15 38 17.9	
TBS2				*e*S	Sx	15 38 27.3	
ACR	Cerro Adams	0.33	287	⇑*i*P	Pb	15 38 05.4	-6.8
ACR				*e*S	Sb	15 38 10.6	-6.8
BAR1		0.82	326	⇑*i*P	Pb	15 38 16.0	-4.4
BAR1				*e*S	Sb	15 38 30.9	-0.1
CNI	Changuinola	0.92	21	⇓*e*P	Pb	15 38 20.5	-1.6
BUS	Buena Vista	1.34	318	⇑*i*P	Pn	15 38 24.3	-3.5
LIO	Limon	1.45	353	⇑*i*P	Pn	15 38 28.4	-1.0
QCR	Quepos	1.56	304	⇑*i*P	Pn	15 38 26.0	-4.9
QCR				*e*S	Sn	15 38 47.5	-2.7
URSC	Urasca	1.57	324	*e*P	Pn	15 38 26.9	-4.0
LAJ	Bijagual	1.81	316	⇓*i*P	Pn	15 38 34.6	+0.3
SJS	Escuela Geolog	1.82	319	*e*P	Pn	15 38 32.6	-1.8
SJS				*e*S	Sn	15 38 57.4	+0.8
PRS1	Puriscal	2.02	315	⇑*i*P	Pn	15 38 34.0	-3.2
CGA2	Cerro Gallo 2	2.15	312	*e*P	Pn	15 38 36.5	-2.5
CGA2				*e*S	Sn	15 39 04.0	-1.0
JCR	Jicaral	2.58	300	*e*P	Pn	15 38 41.5	-3.4
FORC	Fortuna	2.61	317	*e*P	Pn	15 38 44.2	-1.1
CASO	Castillo	2.63	315	*i* P	Pn	15 38 45.2	-0.5
CHPA	Chiripa	2.76	313	*i* P	Pn	15 38 48.2	+0.8
CHPA				*i* S	Sb	15 39 25.8	-1.2
PTEN	Parque Tenorio	3.01	316	*i* P	Pn	15 38 49.5	-1.3
PTEN				*i* S	Sb	15 39 31.9	-2.0
BCIP	Isla Barro Col	3.04	78	*e*Pn	Pn	15 38 50.7	-0.5
BCIP	Isla Barro Col	3.04	78	*e*P	Pn	15 38 51.3	+0.1
CUI	Cuipilapa	3.09	313	*i* P	Pn	15 38 52.2	+0.2
CUI				*i* S	Sb	15 39 33.3	-3.1
COLC	Colonia	3.13	312	*i* P	Pn	15 38 52.7	+0.3
GUAB	Guayabo de Bag	3.17	313	*i* P	Pn	15 38 53.3	+0.2
LIM1	Limonal	3.18	312	*i* P	Pn	15 38 53.2	0.0
GPS2	Hotel Rinc^‡n	3.29	312	*i* P	Pn	15 38 55.2	+0.5
GPS3	Bodega del ICE	3.30	312	*i* P	Pn	15 38 55.8	+0.9
UPIG		3.31	82	⇑*i*P	Pn	15 38 55.4	+0.5
UPIG				*e*S	Sb	15 39 39.8	-2.8
LAPC	Finca la Perla	3.36	311	*i* P	Pn	15 38 56.0	+0.3
BUEV	Buena Vista	3.36	312	*i* P	Pn	15 38 56.4	+0.7
NY14	Universidad de	3.37	308	*i* P	Pn	15 38 56.1	+0.4
GBS3	Finca Las lm^¡	3.39	311	*i* P	Pn	15 38 56.1	0.0
GBS2	Las Lilas	3.42	312	*i* P	Pn	15 38 56.7	+0.1
SSN	San Juan del S	4.02	313	*e*P	Pn	15 39 04.6	-0.2
CONN	Concepcion	4.05	318	*e*P	Pn	15 39 05.8	+0.7
APON	Apoyo	4.60	317	*e*P	Pn	15 39 13.9	+1.2
TICN	Ticuantepe	4.80	316	*e*P	Pn	15 39 16.6	+1.2
CRUN	El Crucero	4.81	315	*e*P	Pn	15 39 17.2	+1.6
CRUN				*e*P		15 40 17.3	
WILN	Americas 2	4.86	318	*e*P	Pn	15 39 16.9	+0.6
MGAN	Managua	4.89	317	*e*P	Pn	15 39 14.7	-1.9
XAVN	Gruta Xavier	4.94	317	*e*P	Pn	15 39 18.0	+0.6
HUEN		4.98	319	*e*P	Pn	15 39 18.6	+0.6
APYN	Apoyeque	5.02	317	*e*P	Pn	15 39 19.1	+0.7
CSAN		5.03	316	*e*P	Pn	15 39 18.8	+0.1
COPN	Copaltepe	5.15	315	*e*P	Pn	15 39 20.3	0.0
MOMN	Momotombo	5.27	317	*e*P	Pn	15 39 22.7	+0.7
MIRN	Miramar	5.41	316	*e*P	Pn	15 39 25.1	+1.2
CNGN	Cerro Negro	5.45	316	*e*P	Pn	15 39 22.1	-2.3
TELN	Telica	5.61	316	*e*P	Pn	15 39 26.8	+0.2
CNCH	Conchagua	6.78	314	*e*P	Pn	15 39 43.6	+0.9
TGUH	Tegucigalpa,Un	6.98	322	*e*Pn	Pn	15 39 46.3	+0.9
	790nm,1.1s						
VSM	San Miguel	7.20	313	*e*P	Pn	15 39 49.3	+0.9
CAHU	Cacacuatique	7.38	315	*e*P	Pn	15 39 51.4	+0.4
TOLC	Tolima	8.44	117	*e*P	Pn	15 40 07.9	+2.4
SBLS	San Blas	8.47	309	*e*P	Pn	15 40 06.9	+1.1
ROSC	El Rosal	9.22	113	Pn	Pn	15 40 19.5	+3.2
	1.9nm,0.3s,baz=274,slow=23,SNR=8.0						
ROSC	El Rosal	9.22	113	*e*Pn	Pn	15 40 17.6	+1.4
OTAV	Otavalo	9.35	152	*e*P	Pn	15 40 18.0	0.0
	110nm,1.6s						
OTAV	Otavalo	9.35	152	*e*P	Pn	15 40 18.0	0.0
APG	El Apazote	9.83	311	Pn	Pn	15 40 24.2	-0.3
	4.3nm,0.3s,baz=136,slow=12,SNR=40						
MTDJ	Mount Denham	10.91	28	*e*P	Pn	15 40 40.0	+0.7
	59nm,0.7s						
CCIG	Comitan	11.88	311	*i* P	Pn	15 40 53.8	+1.1
SDV	Santo Domingo	12.08	88	Pn	Pn	15 40 58.7	+3.2
	0.5nm,0.3s,baz=276,slow=9.5,SNR=9.9						
SDV	Santo Domingo	12.08	88	*e*P	Pn	15 40 58.9	+3.5
	15nm,0.6s						
TEIG	Tepich	12.73	336	Pn	Pn	15 41 02.5	-1.8
	0.2nm,0.3s,baz=341,slow=0.0,SNR=2.2						
TEIG				LR	LR	15 45 50.9	
	comp=Z,3μm,19.5s,baz=313,slow=37						
GTBY	Guantanamo Bay	13.56	33	*e*P	Pn	15 41 17.0	+1.4
	35nm,0.6s						
CMIG	Matias Romero	14.47	307	Pn	Pn	15 41 24.4	-3.6
	1.0nm,0.3s,baz=127,slow=9.4,SNR=21						
SDDR	Presa de Saban	15.27	46	*e*P	Pn	15 41 41.1	+2.3
	245nm,1.6s						
ATAH	Atahualpa	16.21	164	Pn	Pn	15 41 49.5	-1.4
	0.2nm,0.3s,baz=338,slow=8.2,SNR=8.1						
ATAH				LR	LR	15 47 17.3	
	comp=Z,5μm,20.8s,baz=334,slow=34						
PNIG	Pinotepa	16.82	299	*i* P	Pn	15 42 00.8	+2.2
PCRV	Puerto La Cruz	18.05	83	P	Pn	15 42 15.0	+1.0
	1.0nm,0.3s,baz=252,slow=3.6,SNR=9.6						
SJG	San Juan	18.81	58	P	Pn	15 42 22.9	-0.3
	27nm,0.3s,baz=336,slow=20,SNR=3.9						
SJG				LR	LR	15 48 50.1	
	comp=Z,6μm,19.6s,baz=278,slow=34						
SJG	San Juan	18.81	58	*e*P	Pn	15 42 23.6	+0.4
SJG				pmax	pmax		
	comp=Z,744nm,1.4s						
SJG	San Juan	18.81	58	*e*P	Pn	15 42 23.6	+0.4
	comp=Z,744nm,1.4s						
NNA	Nana	21.27	164	P	P	15 42 47.5	-1.8
	comp=Z,23nm,0.7s,mb4.6,baz=342,slow=9.4,SNR=8.5						
BPA	Boggy Peak	22.12	66	*e*P	P	15 42 59.9	+1.3
BPA	Boggy Peak	22.12	66	*e*	P	15 42 59.9	+1.3
HKT	Hockley	24.52	332	*e*P	P	15 43 22.1	-0.1
HKT				pmax	pmax		
	comp=Z,88nm,1.5s,mb5.1						
HKT	Hockley	24.52	332	*e*P	P	15 43 22.1	-0.2
	comp=Z,88nm,1.5s,mb5.1						
VBMS	Vicksburg	24.60	344	*e*P	P	15 43 23.6	+0.6
	comp=Z,33nm,0.2s,mb5.5						
LRAL	Lakeview Retre	24.66	352	*e*P	P	15 43 24.4	+0.9
	comp=Z,89nm,1.4s,mb5.1						
GOGA	Godfrey	24.74	359	*e*P	P	15 43 25.2	+1.0
GOGA				pmax	pmax		
	comp=Z,101nm,1.1s,mb5.3						
GOGA	Godfrey	24.74	359	*e*P	P	15 43 25.2	+0.9
	comp=Z,101nm,1.1s,mb5.3						
JSC	Jenkinsville	25.64	3	P	P	15 43 33.7	+1.3
SWET	Sewanee	26.68	354	*e*P	P	15 43 42.6	+0.8
PLAL	Pickwick Lake	26.73	350	*e*P	P	15 43 41.9	-0.3
	comp=Z,41nm,1.4s,mb4.8						
CPCT	Cooper Cave	26.81	357	*e*P	P	15 43 44.2	+1.3
JCT	Junction City	26.96	326	*e*P	P	15 43 43.3	-1.1
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
JCT	Junction City	26.96	326	*e*P	P	15 43 43.3	-1.1
	comp=Z,5.9nm,0.6s,mb4.3						
TKL	Tuckaleechee C	26.99	358	P	P	15 43 44.6	0.0
	comp=Z,16nm,1.1s,mb4.5,baz=183,slow=10,SNR=5.1						
TKL				LR	LR	15 55 03.7	
	comp=Z,2μm,18.4s,MS4.7,baz=270,slow=38						
TKL	Tuckaleechee C	26.99	358	*e*P	P	15 43 45.2	+0.6
UALR	University of	27.51	343	*e*P	P	15 43 47.7	-1.6
	comp=Z,33nm,1.1s,mb4.9						
MIAR	Mount Ida	27.68	341	*e*P	P	15 43 49.8	-1.0
MIAR				pmax	pmax		
	comp=Z,72nm,1.6s,mb5.0						
MIAR	Mount Ida	27.68	341	*e*P	P	15 43 49.8	-1.0
	comp=Z,72nm,1.6s,mb5.0						
WVT	Waverly	27.82	351	*e*P	P	15 43 51.5	-0.5
WVT				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
WVT	Waverly	27.82	351	*e*P	P	15 43 51.5	-0.5
	comp=Z,31nm,1.4s,mb4.7						
TZTN	Tazewell	27.87	359	*e*P	P	15 43 53.6	+1.2
	comp=Z,116nm,1.7s,mb5.2						
628A	Black Gap, Mar	28.05	321	⇓P	P	15 43 53.9	-0.3
	baz=28,SNR=5.5						
627A	Terlingua Ranc	28.35	320	⇑P	P	15 43 56.9	0.0
	baz=28,SNR=9.1						
TXAR	Lajitas Array	28.45	319	P	P	15 43 55.5	-2.2
	comp=Z,1.0nm,0.7s,mb3.5,baz=150,slow=5.8,SNR=13						
TXAR				PcP	PcP	15 47 10.1	+0.5
	comp=Z,1.2nm,0.6s,baz=146,slow=5.4,SNR=10						
TXAR				ScP	ScP	15 50 52.8	+3.5
	comp=Z,0.9nm,1.0s,baz=165,slow=6.5,SNR=4.6						
TXAR				LR	LR	15 56 12.2	
	comp=Z,428nm,19.6s,MS4.0,baz=185,slow=38						
TXAR	Lajitas Array	28.45	319	P	P	15 43 55.6	-2.1
TXAR						15 47 10.1	
528A	Cox Ranch, San	28.46	322	⇑P	P	15 43 57.3	-0.5
	baz=28,SNR=9.8						
ELN	Prospectdale	28.61	4	P	P	15 44 01.5	+2.5
LPAZ	La Paz	28.66	149	P	P	15 43 59.5	-0.2
	comp=Z,3.4nm,0.9s,mb4.1,baz=339,slow=10,SNR=11						
LPAZ	La Paz	28.66	149	*e*P	P	15 43 59.4	-0.3
LPAZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LPAZ	La Paz	28.66	149	*e*P	P	15 43 59.4	-0.4
	comp=Z,8.8nm,1.3s,mb4.3						
428A	Kincaid Ranch,	28.80	323	⇓P	P	15 44 00.5	-0.3
	baz=29,SNR=7.4						
626A	Big Bend Ranch	28.90	319	⇓P	P	15 44 01.2	-0.5
	baz=29						
527A	Woodward Ranch	28.96	321	⇑P	P	15 44 02.0	-0.3
	baz=29,SNR=6.9						
328A	Wristen Ranch,	29.35	323	⇑P	P	15 44 05.0	-0.7
	baz=29						
426A	McDonald Obser	29.59	321	⇓P	P	15 44 06.9	-0.9
	baz=30						
SIUC	Southern Illin	29.59	350	*e*P	P	15 44 08.4	+0.7
WCI	Wyandotte Cave	29.70	355	*e*P	P	15 44 08.5	-0.2
WCI				pmax	pmax		
	comp=Z,86nm,1.4s,mb5.3						
WCI	Wyandotte Cave	29.70	355	*e*P	P	15 44 08.5	-0.3
	comp=Z,86nm,1.4s,mb5.3						
326A	Caldwell Ranch	30.00	322	⇑P	P	15 44 11.0	-0.5
	baz=30						
FVM	French Village	30.09	348	*e*P	P	15 44 11.7	-0.4
FVM				pmax	pmax		
	comp=Z,45nm,1.6s,mb5.0						
FVM	French Village	30.09	348	*e*P	P	15 44 11.7	-0.4
	comp=Z,45nm,1.6s,mb5.0						
425A	Indio Mountain	30.27	320	⇓P	P	15 44 13.6	-0.2
	baz=30,SNR=8.5						
CCM	Cathedral Cave	30.33	347	*e*P	P	15 44 13.2	-1.1
CCM				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
CCM	Cathedral Cave	30.33	347	*e*P	P	15 44 13.2	-1.1
	comp=Z,15nm,0.8s,mb4.8						
OLIL	Olney	30.41	352	*e*P	P	15 44 15.3	+0.3
	comp=Z,167nm,1.6s,mb5.5						
325A	Bean Ranch, Si	30.65	321	⇑P	P	15 44 16.8	-0.4
	baz=31						
BLO	Bloomington	30.66	354	*e*P	P	15 44 17.2	0.0
BLO				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
BLO	Bloomington	30.66	354	*e*P	P	15 44 17.2	0.0
	comp=Z,15nm,0.6s,mb5.0						
324A	Moseley Ranch,	31.02	320	⇓P	P	15 44 20.1	-0.4
	baz=31,SNR=9.3						
225A	Deer Hill, Car	31.07	322	⇑P	P	15 44 20.7	-0.2
	baz=31						
MCWV	Mont Chateau	31.09	4	*e*P	P	15 44 21.9	+0.9
	comp=Z,59nm,1.6s,mb5.2						
MNTX	Cornudas Mount	31.13	321	*e*P	P	15 44 19.6	-1.9
	comp=Z,27nm,1.8s,mb4.8						
MSTX	Muleshoe	31.25	327	⇓P	P	15 44 21.9	-0.5
	baz=31						
125A	Gardner Draw,	31.36	323	⇑P	P	15 44 22.6	-0.8
	baz=31						
224A	Corundas Mount	31.48	321	⇓P	P	15 44 24.5	0.0
	baz=32						
ACSO	Alum Creek Sta	31.54	360	*e*P	P	15 44 25.2	+0.2
	comp=Z,55nm,1.3s,mb5.2						
124A	Stringfield Ra	31.86	322	⇓P	P	15 44 27.6	-0.3
	baz=32						
SSPA	Standing Stone	32.25	7	P	P	15 44 33.1	+2.0
	comp=Z,35nm,1.9s,mb4.9						
Y25A	Mesa, Roswell	32.28	325	⇑P	P	15 44 31.5	0.0
	baz=32						
HDIL	Hopedale	32.38	351	*e*P	P	15 44 31.6	-0.7
	comp=Z,26nm,0.8s,mb5.1						
Y24A	Capitan	32.71	324	⇓P	P	15 44 35.5	+0.2
	baz=33						
KSU1	Kansas State U	32.83	340	*e*P	P	15 44 35.1	-1.1
	comp=Z,19nm,0.7s,mb5.1						
221A	Mesquite Ranch	32.87	319	⇓P	P	15 44 37.0	+0.3
	baz=33						
320A	Kipp Ranch, An	32.95	317	⇓P	P	15 44 38.5	+1.1
	baz=33,SNR=8.2						
Y23A	Lovelace Mesa,	33.08	323	⇓P	P	15 44 38.6	0.0
	baz=33						
V26A	Tequesquite Ra	33.17	328	⇑P	P	15 44 39.4	+0.1
	baz=33						
121A	Cookes Peak, D	33.21	319	⇑P	P	15 44 40.7	+1.0
	baz=33						
220A	Playas Peak, P	33.30	318	⇑P	P	15 44 41.8	+1.4
	baz=33,SNR=19						
319A	Douglas	33.48	316	⇓P	P	15 44 43.1	+1.1
	baz=34,SNR=8.5						
W24A	Lazy 6 Ranch,	33.62	325	⇑P	P	15 44 42.7	-0.5
	baz=34						
Y22A	Socorro	33.63	322	⇑P	P	15 44 44.0	+0.7
	baz=34						
Z21A	St. Cloud Mine	33.64	321	⇑P	P	15 44 44.6	+1.1
	baz=34						
120A	U Bar Ranch, L	33.77	319	⇓P	P	15 44 45.5	+0.9
	baz=34,SNR=7.8						
219A	White Tail Can	33.84	317	⇓P	P	15 44 46.3	+1.1
	baz=34,SNR=8.0						
318A	Bisbee	34.00	316	⇓P	P	15 44 47.5	+0.9
	baz=34,SNR=6.8						
ANMO	Albuquerque	34.03	324	*e*P	P	15 44 46.3	-0.5
ANMO				pmax	pmax		
	comp=Z,12nm,1.5s						
ANMO	Albuquerque	34.03	324	*e*P	P	15 44 46.3	-0.5
	comp=Z,12nm,1.5s,mb4.6						
Z20A	Nine Sixteen R	34.10	319	⇓P	P	15 44 48.5	+1.1
	baz=34,SNR=9.8						
Y21A	Point of Rocks	34.11	322	⇓P	P	15 44 48.1	+0.5
	baz=34						
218A	Dragoon	34.36	317	⇓P	P	15 44 50.1	+0.4
	baz=34						
SCIA	State Center	34.45	346	*e*P	P	15 44 49.6	-0.8
	comp=Z,64nm,1.3s,mb5.4						
X21A	Alamocita Cree	34.47	322	⇓P	P	15 44 51.5	+0.8
	baz=35,SNR=6.5						
Y20A	Horse Springs,	34.48	321	⇓P	P	15 44 51.6	+0.9
	baz=35,SNR=5.9						
118A	Homack Ranch,	34.71	318	⇓P	P	15 44 53.8	+1.1
	baz=35,SNR=5.7						
217A	Green Valley	34.77	316	⇓P	P	15 44 53.8	+0.5
	baz=35,SNR=8.2						
JFWS	Jewell Farm	34.83	350	*e*P	P	15 44 52.5	-1.1
JFWS				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
JFWS	Jewell Farm	34.83	350	*e*P	P	15 44 52.5	-1.2
	comp=Z,37nm,1.0s,mb5.3						
X20A	Quemado	34.98	321	⇑P	P	15 44 55.4	+0.4
	baz=35						
TUC	Tucson	35.06	316	*e*P	P	15 44 56.3	+0.5
TUC				pmax	pmax		
	comp=Z,25nm,1.6s,mb4.9						
TUC	Tucson	35.06	316	*e*P	P	15 44 56.2	+0.5
	comp=Z,24nm,1.6s,mb4.9						
Y19A	Nutrioso	35.07	320	⇑P	P	15 44 56.6	+0.8
	baz=35						
117A	Oracle	35.19	317	⇓P	P	15 44 57.8	+0.9
	baz=35,SNR=7.4						
V21A	Milan	35.32	324	⇑P	P	15 44 58.5	+0.6
	baz=35						
216A	Three Points,	35.35	315	⇓P	P	15 44 58.2	0.0
	baz=35						
X19A	St. Johns	35.39	321	⇑P	P	15 44 59.4	+0.8
	baz=36,SNR=7.9						
116A	Eloy	35.84	316	⇑P	P	15 45 03.1	+0.6
	baz=36,SNR=7.2						
Y17A	Roosevelt	35.93	318	⇓P	P	15 45 03.6	+0.3
	baz=36						
214A	Organ Pipe Nat	36.27	314	⇓P	P	15 45 06.7	+0.5
	baz=36,SNR=7.8						
115A	Sonoran Desert	36.28	316	⇑P	P	15 45 06.6	+0.3
	baz=36						
Y16A	Circle Bar Ran	36.46	318	⇓P	P	15 45 09.0	+1.2
	baz=36,SNR=12						
OGNE	Ogallala	36.48	335	*e*P	P	15 45 07.7	-0.1
	comp=Z,125nm,1.5s,mb5.6						
V18A	Ganado	36.63	322	⇑P	P	15 45 09.9	+0.7
	baz=37						
114A	Black Gap (USA	36.76	315	⇓P	P	15 45 11.0	+0.7
	baz=37,SNR=5.8						
X16A	Lo Mia Camp, P	36.77	319	⇓P	P	15 45 10.6	+0.2
	baz=37						
MVCO	Mesa Verde	36.79	325	⇓P	P	15 45 10.4	-0.1
	baz=37						
T19A	Beclabito	36.83	324	⇑P	P	15 45 11.2	+0.3
	baz=37						
ECSD	EROS Data Cent	37.05	343	*e*P	P	15 45 10.2	-2.4
	comp=Z,36nm,1.5s,mb5.0						
Y15A	Casa Rosa Ranc	37.08	317	⇓P	P	15 45 13.3	+0.3
	baz=37						
V17A	Tonalea, Kykot	37.10	321	⇓P	P	15 45 14.2	+0.9
	baz=37,SNR=16						
Q22A	Crested Butte,	37.12	328	⇓P	P	15 45 13.4	+0.2
	baz=37						
Z14A	Wintersburg	37.15	316	⇓P	P	15

Q18A **Rafter H Ranch** 39.03 326 ⇑P P 15 45 29.8 +0.4
baz=39
BC3 **Big Chuckw Mtn** 39.06 315 ⇑P P 15 45 30.5 +0.7
baz=39,SNR=12
U14A **Mt Trumbull** 39.11 320 ⇓P P 15 45 29.7 -0.4
baz=39
IRM **Iron Mountain** 39.12 315 ⇑P P 15 45 31.2 +1.0
baz=39,SNR=11
R16A **Teasdale** 39.26 323 ⇓P P 15 45 31.7 +0.4
baz=39
N20A **Spence Gulch,** 39.28 329 ⇑P P 15 45 32.1 +0.7
baz=39
O19A **Miners Draw (B** 39.33 328 ⇑P P 15 45 32.6 +0.7
baz=39
MONP **Monument Peak** 39.35 313 ⇓P P 15 45 32.9 +0.7
baz=39,SNR=6.1
M21A **Separation Pea** 39.41 331 ⇑P P 15 45 33.4 +0.9
baz=40
Q16A **Castle Valley** 39.50 324 ⇑P P 15 45 34.1 +0.8
baz=40
U13A **Pakoon Wash** 39.61 319 ⇑P P 15 45 35.3 +0.9
baz=40
BELC **Belle Mtn.** 39.63 315 ⇑P P 15 45 35.2 +0.7
baz=40,SNR=16
P17A **Butcher Ranch,** 39.63 325 ⇓P P 15 45 34.8 +0.4
baz=40
R15A **Junction** 39.68 323 ⇓P P 15 45 35.2 +0.4
baz=40
L21A **Rawlins** 39.69 331 ⇓P P 15 45 35.1 +0.3
baz=40,SNR=5.5
PFO **Pinyon Flat Ob** 39.75 314 ⇓P P 15 45 35.8 +0.3
baz=40,SNR=8.6
PFO **Pinyon Flat Ob** 39.75 314 *e*P P 15 45 34.9 -0.6
PFO pmax pmax
comp=Z,67nm,1.5s,mb5.2
PFO **Pinyon Flat Ob** 39.75 314 *e*P P 15 45 34.9 -0.6
comp=Z,67nm,1.5s,mb5.2
V12A **Nelson** 39.79 318 ⇑P P 15 45 36.3 +0.5
baz=40,SNR=5.8
GMRC **Granite Mounta** 39.81 316 ⇓P P 15 45 36.5 +0.5
baz=40,SNR=9.5
MSU **Marysvale** 39.81 323 *e*P P 15 45 35.1 -0.9
MSU pmax pmax
comp=Z,20nm,1.8s,mb4.5
MSU **Marysvale** 39.81 323 *e*P P 15 45 35.1 -0.9
comp=Z,20nm,1.8s,mb4.5
109C **Camp Elliot, M** 39.85 312 ⇓P P 15 45 36.9 +0.5
baz=40
EYMN **Ely** 39.93 351 P P 15 45 37.5 +0.7
comp=Z,43nm,1.6s,mb4.9
T13A **Saint George** 39.94 320 ⇓P P 15 45 38.3 +1.2
baz=40
RSSD **Black Hills** 39.94 336 *e*P P 15 45 36.3 -0.6
RSSD pmax pmax
comp=Z,15nm,1.4s,mb4.5
RSSD **Black Hills** 39.94 336 *e*P P 15 45 36.3 -0.6
comp=Z,15nm,1.4s,mb4.5
O17A **Robinson Place** 40.13 326 ⇑P P 15 45 38.6 0.0
baz=40
L20A **Wamsutter** 40.19 330 ⇑P P 15 45 39.4 +0.3
baz=40
V11A **Goodsprings** 40.24 317 ⇑P P 15 45 39.7 +0.1
baz=40
S13A **Holt Ranch, En** 40.25 321 ⇑P P 15 45 40.6 +1.0
baz=40,SNR=5.6
Q15A **Fillmore** 40.25 324 ⇑P P 15 45 40.5 +0.9
baz=40
MURC **Murrieta** 40.28 313 ⇓P P 15 45 40.5 +0.6
baz=40,SNR=9.3
HEC **Hector,Ludlow** 40.30 315 ⇑P P 15 45 41.0 +0.9
baz=40,SNR=9.7
TUQ **Turquoise Moun** 40.35 317 ⇑P P 15 45 41.0 +0.6
baz=40
DAU **Daniels Canyon** 40.56 326 *e*P P 15 45 42.6 +0.5
DAU pmax pmax
comp=Z,34nm,1.7s,mb4.7
DAU **Daniels Canyon** 40.56 326 *e*P P 15 45 42.6 +0.5
comp=Z,34nm,1.7s,mb4.7
R13A **O'Grain Ranch,** 40.69 321 ⇓P P 15 45 44.3 +1.0
baz=41
Q14A **Sevier Lake (B** 40.78 323 ⇑P P 15 45 44.0 +0.1
baz=41,SNR=5.2
T11A **Corn Creek, Al** 40.91 319 ⇑P P 15 45 45.8 +0.7
baz=41
BFSC **Mount Baldy St** 40.93 314 ⇑P P 15 45 45.3 0.0
baz=41
M17A **Scullys Gap (B** 40.99 328 ⇑P P 15 45 45.0 -0.7
baz=41,SNR=9.8
N16A **Rees Ranch, Co** 40.99 326 ⇓P P 15 45 46.4 +0.8
baz=41
P14A **Drum Mountains** 41.04 324 ⇓P P 15 45 46.1 0.0
baz=41,SNR=5.6
K19A **Absolon Red Bu** 41.05 331 ⇑P P 15 45 46.2 +0.1
baz=41
AGMN **Agassiz Refuge** 41.11 347 *e*P P 15 45 45.0 -1.5
comp=Z,37nm,1.4s,mb4.8
U10A **Ash Meadows, A** 41.17 317 ⇑P P 15 45 48.2 +1.0
baz=41,SNR=7.9
Q13A **Wheeler Ranch,** 41.20 322 ⇓P P 15 45 47.8 +0.3
baz=41
PASC **Pasadena Art C** 41.27 313 *e*P P 15 45 47.0 -1.1
DUG **Dugway** 41.29 325 ⇑P P 15 45 48.7 +0.6
baz=41
BW06 **Boulder Array** 41.36 330 ⇑P P 15 45 48.0 -0.7
baz=42
PDAR **Pinedale Array** 41.36 330 P P 15 45 46.9 -1.7
comp=Z,1.9nm,1.0s,mb3.7,baz=156,slow=4.7,SNR=14
PDAR PcP PcP 15 47 46.7 0.0
comp=Z,1.0nm,0.7s,baz=164,slow=4.6,SNR=4.0
M16A **Huntsville** 41.39 327 ⇓P P 15 45 49.6 +0.7
baz=42
EDW2 **Edwards Air Fo** 41.49 314 ⇑P P 15 45 50.2 +0.3
baz=42,SNR=13
K18A **Toltan Ranch,** 41.50 329 ⇑P P 15 45 50.1 +0.3
baz=42,SNR=5.7
P13A **Bates Ranch, G** 41.52 323 ⇑P P 15 45 50.6 +0.6
baz=42
L17A **Cokeville** 41.54 328 ⇓P P 15 45 49.8 -0.4
baz=42,SNR=7.1
FURC **Furnace Creek,** 41.55 317 ⇑P P 15 45 51.4 +1.1
baz=42,SNR=8.7
HWUT **Hardware Ranch** 41.56 327 *e*P P 15 45 49.8 -0.5
comp=Z,23nm,1.4s,mb4.6
LRMC **Laurel Mountai** 41.59 315 ⇑P P 15 45 51.5 +0.8
baz=42,SNR=7.7
MPMC **Manual Prospec** 41.76 316 ⇑P P 15 45 52.7 +0.6
baz=42,SNR=25
L16A **Fish Haven** 41.77 328 ⇑P P 15 45 51.9 -0.2
baz=42
R11A **Troy Canyon, C** 41.80 320 ⇓P P 15 45 53.2 +0.8
baz=42,SNR=6.3
BGU **Big Grassy Mou** 41.90 325 *e*P P 15 45 52.4 -0.7
comp=Z,14nm,1.3s,mb4.4
J18A **Kendall Valley** 41.91 330 ⇑P P 15 45 52.7 -0.5
baz=42,SNR=13
N14A **Grayback Hills** 41.94 325 ⇓P P 15 45 53.8 +0.3
baz=42,SNR=15
Q11A **Duckwater** 42.14 321 ⇓P P 15 45 55.6 +0.5
baz=42
GRAC **Grapevine Rang** 42.19 318 ⇑P P 15 45 56.0 +0.4
baz=42,SNR=5.7
S10A **Tonopah Range,** 42.20 319 ⇑P P 15 45 56.1 +0.5
baz=42,SNR=16
ARVC **Arvin** 42.21 314 ⇓P P 15 45 56.0 +0.3
baz=42
ISA **Isabella** 42.23 315 ⇓P P 15 45 56.4 +0.5
baz=42,SNR=10
ISA **Isabella** 42.23 315 *e*P P 15 45 56.8 +0.9
ISA pmax pmax
comp=Z,60nm,1.6s,mb5.0
ISA **Isabella** 42.23 315 *e*P P 15 45 56.8 +0.8
comp=Z,60nm,1.6s,mb5.0
L15A **Malad City** 42.28 327 ⇑P P 15 45 55.6 -0.6
baz=42,SNR=7.1
CFAA **Coronel Fontan** 42.31 161 P P 15 45 56.1 -0.4
comp=Z,1.0nm,0.8s,mb3.5,baz=318,slow=6.7,SNR=9.9
CFAA **Coronel Fontan** 42.31 161 P P 15 45 56.1 -0.4
J17A **Brown Place, J** 42.37 330 ⇓P P 15 45 57.2 +0.3
baz=42,SNR=6.2
REDW **Red Top Meadow** 42.44 330 *e*P P 15 45 56.6 -0.9
comp=Z,23nm,1.3s,mb4.6
M14A **Sheep Mountain** 42.47 326 ⇑P P 15 45 57.7 0.0
baz=43,SNR=11
O12A **Currie** 42.47 323 ⇑P P 15 45 57.9 +0.1
baz=42
LOHW **Long Hollow** 42.50 330 *e*P P 15 45 57.5 -0.4
comp=Z,28nm,1.8s,mb4.6
N13A **Wendover, West** 42.53 324 ⇑P P 15 45 58.6 +0.4
baz=43
N13A **Wendover, West** 42.53 324 *e*P P 15 45 56.6 -1.6
comp=Z,27nm,1.1s,mb4.9
TPAW **Teton Pass** 42.58 330 *e*P P 15 45 57.8 -0.9
comp=Z,25nm,1.6s,mb4.7
Q10A **Clear Creek Ra** 42.60 320 ⇑P P 15 45 59.2 +0.3
baz=43
CPUP **Villa Florida** 42.63 145 P P 15 45 57.4 -1.9
comp=Z,2.9nm,0.8s,mb4.0,baz=310,slow=6.5,SNR=5.0
CPUP LR LR 16 05 20.7
comp=Z,581nm,18.1s,MS4.5,baz=54,slow=38
VES **Vestal, Richgr** 42.75 315 ⇑P P 15 46 01.3 +1.2
baz=43,SNR=9.3
L14A **Malta** 42.76 326 ⇑P P 15 45 59.6 -0.5
baz=43,SNR=5.8
PKM **Peak Mountain** 42.80 313 ⇓P P 15 46 01.6 +1.0
baz=43,SNR=13
K15A **Arbon** 42.83 328 ⇑P P 15 46 00.9 +0.3
baz=43
M13A **Montello** 42.83 325 ⇓P P 15 46 01.1 +0.4
baz=43
M13A **Montello** 42.83 325 *e*P P 15 46 00.9 +0.2
comp=Z,12nm,1.1s,mb4.5
O11A **Cowboy Ranch,** 42.93 322 ⇓P P 15 46 01.7 +0.2
baz=43
LAO **LASA Array** 42.93 336 *e*P P 15 45 59.9 -1.5
comp=Z,23nm,1.3s,mb4.8
ULM **Lac du Bonnet** 42.95 348 P P 15 45 59.2 -2.3
comp=Z,14nm,0.8s,mb4.8,baz=157,slow=9.1,SNR=9.0
ULM LR LR 16 04 16.1
comp=Z,399nm,18.1s,MS4.3,baz=44,slow=37
ULM **Lac du Bonnet** 42.95 348 *e*P P 15 45 59.0 -2.5
comp=Z,17nm,0.9s,mb4.8
N12A **Clover Valley,** 43.01 324 ⇓P P 15 46 03.0 +0.9
baz=43
K14A **Jones Ranch, D** 43.08 327 ⇑P P 15 46 02.2 -0.5
baz=43,SNR=12
RCTC **Rector, Farmer** 43.09 315 ⇓P P 15 46 03.1 +0.2
baz=43
SMMC **Simmler** 43.13 314 ⇓P P 15 46 03.6 +0.4
baz=43
G18A **Lazy EL Ranch,** 43.27 332 ⇑P P 15 46 04.2 0.0
baz=43
NVAR **Mina Array Bea** 43.59 319 P P 15 46 07.2 +0.3
comp=Z,2.3nm,0.6s,mb4.1,baz=132,slow=6.7,SNR=32
NVAR **Mina Array Bea** 43.59 319 P P 15 46 07.2 +0.3
K13A **Stover Farm, H** 43.64 326 ⇑P P 15 46 06.8 -0.4
baz=44
DGMT **Dagmar** 43.67 339 ⇓P P 15 46 07.2 -0.1
baz=44
DGMT **Dagmar** 43.67 339 *e*P P 15 46 06.0 -1.3
comp=Z,11nm,0.6s,mb4.8
RPN **Rapa Nui** 43.79 215 LR LR 15 59 43.0
comp=Z,1μm,20.7s,MS4.8,baz=137,slow=30
QLMT **Earthquake Lak** 43.79 331 P P 15 46 08.9 +0.5
G17A **Pierce Place,** 43.82 332 ⇑P P 15 46 09.1 +0.5
baz=44
L12A **House Creek Ra** 43.83 325 ⇑P P 15 46 08.5 -0.2
baz=44
J13A **Cove Ranch, Pi** 44.19 327 ⇓P P 15 46 11.4 -0.2
baz=44
F17A **Fitzpatrick Pl** 44.22 332 ⇑P P 15 46 11.9 +0.1
baz=44
H15A **Lima** 44.24 329 ⇑P P 15 46 12.7 +0.7
baz=44,SNR=24
L11A **Cat Creek Ranc** 44.26 325 ⇓P P 15 46 12.2 0.0
baz=44
G16A **Moss Hill, Enn** 44.26 331 ⇑P P 15 46 12.5 +0.3
baz=44,SNR=7.7
E18A **Harlowton** 44.39 333 ⇑P P 15 46 13.0 -0.1
baz=44
HLID **Hailey** 44.43 327 ⇓P P 15 46 13.2 -0.4
baz=44,SNR=7.8
BOZ **Bozeman (W)** 44.49 331 ⇓P P 15 46 14.1 +0.2
baz=45,SNR=6.0
BOZ **Bozeman (W)** 44.49 331 *e*P P 15 46 13.7 -0.2
BOZ pmax pmax
comp=Z,16nm,1.5s,mb4.5
BOZ **Bozeman (W)** 44.49 331 *e*P P 15 46 13.7 -0.2
comp=Z,16nm,1.5s,mb4.5
MCMT **McKenzie Canyo** 44.49 329 *e*P P 15 46 13.9 -0.1
comp=Z,6.7nm,1.4s,mb4.2
I13A **Wildhorse Cree** 44.51 328 ⇑P P 15 46 14.2 0.0
baz=45,SNR=12
G15A **Dillon** 44.55 330 ⇓P P 15 46 14.5 0.0
baz=45
F16A **Kennard Place,** 44.59 331 ⇓P P 15 46 14.8 +0.1
baz=45,SNR=5.4
J12A **Stokes Ranch,** 44.59 326 ⇓P P 15 46 14.7 -0.2
baz=45,SNR=19
H14A **Leadore** 44.61 329 ⇑P P 15 46 14.8 -0.2
baz=45
L10A **Juniper Basin** 44.62 324 ⇓P P 15 46 14.9 -0.1
baz=45
E17A **Martinsdale** 44.73 333 ⇓P P 15 46 15.5 -0.4
baz=45
K11A **Parker Ranch,** 44.80 325 ⇑P P 15 46 16.2 -0.4
baz=45,SNR=8.7
D18A **Linhart Farms,** 44.82 334 ⇑P P 15 46 17.0 +0.4
baz=45
I12A **Atlanta** 44.97 327 ⇓P P 15 46 17.9 0.0
baz=45,SNR=9.1
LRM **Limekiln Ridge** 45.01 331 *e*P P 15 46 16.8 -1.4
comp=Z,16nm,0.6s,mb5.0
WCN **Washoe City** 45.02 319 ⇓P P 15 46 17.8 -0.5
baz=45
H13A **Challis** 45.03 328 ⇑P P 15 46 17.8 -0.5
baz=45,SNR=8.0
F15A **Butte** 45.04 331 ⇑P P 15 46 18.4 0.0
baz=45
MFID **Camas Ranch** 45.11 326 ⇓P P 15 46 18.7 -0.2
baz=45
D17A **Six Diamond Ra** 45.18 333 ⇓P P 15 46 19.2 -0.2
baz=45,SNR=8.0
K10A **MacKenzie Ranc** 45.29 325 ⇑P P 15 46 19.7 -0.6
baz=45
H12A **Diamond D Ranc** 45.33 328 ⇓P P 15 46 20.3 -0.4
baz=45,SNR=6.8
HRY **Holter Researc** 45.37 332 P P 15 46 21.2 +0.2
G13A **Cobalt** 45.38 329 ⇓P P 15 46 20.6 -0.4
baz=46
EGMT **Eagleton** 45.44 335 ⇓P P 15 46 21.7 +0.2
baz=46
D16A **Dana Ranch, Ca** 45.47 333 ⇓P P 15 46 21.5 -0.3
baz=46,SNR=8.3
E15A **Deer Lodge** 45.54 331 ⇑P P 15 46 21.6 -0.7
baz=46,SNR=8.6
C17A **Wharram Farm,** 45.58 334 ⇓P P 15 46 22.0 -0.6
baz=46,SNR=5.3
BEKR **Beckwourth** 45.72 319 ⇑P P 15 46 23.6 -0.3
baz=46,SNR=7.8
B18A **Beardsley Farm** 45.74 335 ⇑P P 15 46 24.1 +0.2
baz=46
F13A **Darby** 45.91 329 ⇑P P 15 46 24.9 -0.4
baz=46
D15A **Lincoln** 45.93 332 ⇓P P 15 46 25.4 +0.1
baz=46
E14A **Clinton** 45.94 331 ⇑P P 15 46 25.6 +0.1
baz=46
H11A **Donnelly** 46.05 327 ⇓P P 15 46 25.5 -0.9
baz=46,SNR=9.8
I10A **Payette** 46.08 326 ⇓P P 15 46 26.4 -0.2
baz=46
B17A **L&G Farms, Che** 46.09 334 ⇓P P 15 46 26.4 -0.2
baz=46,SNR=6.6
WVOR **Wild Horse Val** 46.11 323 *e*P P 15 46 26.1 -0.8
WVOR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
WVOR **Wild Horse Val** 46.11 323 *e*P P 15 46 26.1 -0.8
comp=Z,8.7nm,0.6s,mb4.9
J09A **Fry Pan Ranch,** 46.15 325 ⇓P P 15 46 26.8 -0.4
baz=46,SNR=8.7
A18A **Metzger Ranch,** 46.18 335 ⇓P P 15 46 26.7 -0.7
baz=46,SNR=8.6
E13A **Victor** 46.30 330 ⇓P P 15 46 27.6 -0.6
baz=46,SNR=5.7
F12A **Elk City** 46.36 329 ⇓P P 15 46 28.2 -0.6
baz=46,SNR=11
H10A **Noah's Angus R** 46.37 327 ⇓P P 15 46 28.1 -0.8
baz=46
D14A **Greenough** 46.42 331 ⇑P P 15 46 28.9 -0.4
baz=46
I09A **Lost Marbles R** 46.53 325 ⇓P P 15 46 29.5 -0.6
baz=47
A17A **Triple J Farms** 46.55 335 ⇑P P 15 46 29.6 -0.7
baz=47,SNR=13
J08A **Circle Bar Ran** 46.57 324 ⇓P P 15 46 29.7 -0.8
baz=47
G11A **Walters Elk Ra** 46.65 328 ⇓P P 15 46 30.2 -0.9
baz=47,SNR=5.9
D13A **Huson** 46.89 331 ⇓P P 15 46 32.8 -0.1
baz=47
F11A **Grangeville** 46.91 328 ⇓P P 15 46 33.1 0.0
baz=47
E12A **Beaver Dam Sad** 46.97 329 ⇓P P 15 46 32.1 -1.4
baz=47
G10A **Bishop Farm, J** 47.03 327 ⇓P P 15 46 33.0 -1.0
baz=47
B14A **Marquette Ranc** 47.24 333 ⇓P P 15 46 35.7 +0.1
baz=47,SNR=23
E11A **Bogner Ranch,** 47.25 329 ⇑P P 15 46 34.2 -1.6
baz=47,SNR=8.8
C13A **Hot Springs** 47.36 331 ⇓P P 15 46 35.6 -1.0
baz=48
G09A **Cove** 47.38 327 ⇓P P 15 46 35.7 -1.1
baz=48
H08A **Prairie City** 47.39 325 ⇓P P 15 46 36.1 -0.8
baz=48
A15A **Johnson Ranch,** 47.45 334 ⇑P P 15 46 37.0 -0.3
baz=48,SNR=18
F10A **Beach Ranch, E** 47.53 328 ⇓P P 15 46 37.2 -0.8
baz=48
I07A **Izee** 47.60 324 ⇓P P 15 46 37.6 -0.9
baz=48
A14A **Double T Ranch** 47.76 333 ⇓P P 15 46 39.1 -0.5
baz=48,SNR=8.9
D11A **Klaveano Farm,** 47.78 329 ⇑P P 15 46 38.8 -1.1
baz=48,SNR=7.6
B13A **Whitefish** 47.80 332 ⇑P P 15 46 40.3 +0.3
baz=48,SNR=6.2
C12B **Naegeli Ranch,** 47.81 331 ⇓P P 15 46 39.8 -0.3
baz=48,SNR=5.6
SCHQ **Schefferville** 47.89 12 LR LR 16 07 20.5
comp=Z,844nm,18.3s,MS4.8,baz=259,slow=37
A13A **Flathead Natio** 48.18 332 ⇑P P 15 46 42.9 0.0
baz=48
D10A **Wagner Farm, O** 48.27 329 ⇓P P 15 46 42.6 -1.0
baz=48
E09A **Wood Farm, Sta** 48.37 328 ⇓P P 15 46 43.9 -0.5
baz=48
FFC **Flin Flon** 48.51 345 *e*P P 15 46 44.1 -1.3
FFC pmax pmax
comp=Z,18nm,1.2s,mb5.0
FFC **Flin Flon** 48.51 345 *e*P P 15 46 44.1 -1.3
comp=Z,18nm,1.2s,mb5.0
B11A **Sandpoint** 48.75 331 ⇑P P 15 46 46.8 -0.5
baz=49
A11A **Hall Mountain,** 49.10 331 ⇑P P 15 46 49.9 -0.2
baz=49
B09A **Rice** 49.61 330 ⇑P P 15 46 52.5 -1.5
baz=50
B08A **Colville Reser** 50.17 329 ⇑P P 15 46 57.8 -0.4
baz=50
PLCA **Paso Flores** 50.34 168 P P 15 46 58.6 -0.8
comp=Z,7.1nm,0.8s,mb4.7,baz=334,slow=7.9,SNR=10
PLCA LR LR 16 04 14.9
comp=Z,297nm,20.5s,MS4.3,baz=106,slow=31
FCC **Fort Churchill** 50.83 352 *e*P P 15 47 01.4 -1.6
comp=Z,1.0nm,1.3s,mb3.6
EDM **Edmonton** 50.91 337 *e*P P 15 47 02.0 -1.7
A07A **Ashnola River,** 51.15 329 ⇓P P 15 47 05.1 -0.4
baz=51
RPW **Rockport** 51.36 328 *e*P P 15 47 06.0 -1.1
comp=Z,2.4nm,0.9s,mb4.1
YKA **Yellowknife Ar** 58.58 343 P P 15 47 57.9 -1.1
comp=Z,4.3nm,0.8s,mb4.5,baz=137,slow=7.3,SNR=56
YKA LR LR 16 16 28.5
comp=Z,39nm,18.6s,MS3.6,baz=100,slow=39
YKA **Yellowknife Ar** 58.58 343 P P 15 47 57.9 -1.1
YKA LR LR 16 16 28.5
BBTS **Babate** 65.06 78 LR LR 16 12 31.1
comp=Z,226nm,19.6s,MS4.4,baz=102,slow=32
DAWY **Dawson** 68.13 337 *e*P P 15 49 01.2 -1.1
EGAK **Eagle** 69.13 337 *e*P P 15 49 08.4 -0.1
comp=Z,15nm,1.1s,mb4.8
SUMG **Summit** 69.28 13 *e*P P 15 49 08.2 -1.2
comp=Z,7.0nm,0.6s,mb4.8
MENT **Mentasta** 69.41 335 *e*P P 15 49 10.2 -0.1
PPT **Papeete** 70.82 248 LR LR 16 12 12.3
comp=Z,286nm,18.3s,MS4.6,baz=162,slow=29
PMR **Palmer** 71.33 332 *e*P P 15 49 21.2 -0.9
PMR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
PMR **Palmer** 71.33 332 *e*P P 15 49 21.2 -0.9
comp=Z,8.0nm,1.1s,mb4.6
COLA **College** 71.81 336 P P 15 49 24.4 -0.5
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
COLA **College** 71.81 336 P P 15 49 24.4 -0.5
comp=Z,5.8nm,0.9s,mb4.5
MCK **McKinley** 71.89 335 *e*P P 15 49 25.0 -0.4
MCK pmax pmax
comp=Z,41nm,1.4s,mb5.2
MCK **McKinley** 71.89 335 *e*P P 15 49 25.0 -0.4
comp=Z,41nm,1.4s,mb5.2
KTH **Kantishna Hill** 72.69 334 *e*P P 15 49 29.6 -0.6
comp=Z,11nm,1.1s,mb4.7
PPLA **Purkeypile** 73.07 333 *e*P P 15 49 31.9 -0.6
comp=Z,42nm,1.4s,mb5.2
CHUM **Lake Minchumin** 73.38 334 *e*P P 15 49 33.1 -1.2
comp=Z,19nm,1.4s,mb4.8
SVW2 **Sparrevohn** 74.23 331 *e*P P 15 49 38.0 -1.3
TTA **Tatalina** 74.78 333 *e*P P 15 49 41.8 -0.7
TTA pmax pmax
comp=Z,11nm,1.1s,mb4.7
TTA **Tatalina** 74.78 333 *e*P P 15 49 41.8 -0.7
comp=Z,10nm,1.1s,mb4.7
CHGN **Chignik** 74.92 326 *e*P P 15 49 42.7 -0.7
ESDC **Sonseca Array** 76.05 51 P P 15 49 51.5 +1.3
comp=Z,0.3nm,0.2s,mb3.8,baz=281,slow=5.5,SNR=6.7
ESDC LR LR 16 21 02.2
comp=Z,296nm,18.5s,MS4.6,baz=215,slow=34
TIC **Toumodi** 77.05 85 *e*P P 15 49 56.2 -0.2
comp=Z,16nm,0.2s,mb5.6
LIC **Lamto** 77.10 86 *e*P P 15 49 57.4 +0.7
comp=Z,56nm,1.3s,mb5.3
DBIC **Dimbokro** 77.21 85 P P 15 49 56.9 -0.4
comp=Z,5.7nm,1.0s,mb4.5,baz=299,slow=3.2,SNR=5.9
KIC **Kosan Boka** 77.36 85 *e*P P 15 49 59.5 +1.4
comp=Z,82nm,1.5s,mb5.4
UNV **Unalaska Valle** 79.41 323 *e*P P 15 50 09.0 +0.4
comp=Z,45nm,1.2s,mb5.3
TNA **Tin City** 80.23 335 *e*P P 15 50 12.9 0.0
comp=Z,33nm,1.6s,mb5.0
TORD **Torodi Ar. Bea** 82.82 78 P P 15 50 26.6 -1.0
comp=Z,1.7nm,1.0s,mb4.0,baz=298,slow=6.1,SNR=7.6
NB2 **NORSAR Subarra** 84.55 29 P P 15 50 35.5 0.0
comp=Z,1.2nm,0.8s,mb4.1,baz=281,slow=5.1
NOA **NORSAR Array B** 84.55 29 P P 15 50 35.3 -0.2
comp=Z,2.2nm,0.9s,mb4.3,baz=276,slow=5.2,SNR=4.1
NOA LR LR 16 22 35.3
comp=Z,208nm,20.5s,MS4.5,baz=285,slow=32
KEST **Kesra** 86.84 55 LR LR 16 23 57.3
comp=Z,127nm,21.6s,MS4.3,baz=250,slow=32
CLL **Collm** 87.03 39 *e*P P 15 50 48.0 -0.1
CLL *e* 15 50 53.0
CLL pmax pmax
comp=Z,10.0nm,1.6s,mb4.8
CLL MLR MLR
comp=Z,400nm,17.4s,MS4.9
CLL **Collm** 87.03 39 *e*P P 15 50 48.0 -0.1
comp=Z,10.0nm,1.6s,mb4.8
CLL *e* 15 50 53.0
CLL LR LR
comp=Z,400nm,17.4s,MS4.9
CLL **Collm** 87.03 39 *e*P P 15 50 48.0 -0.1
comp=Z,10.0nm,1.6s,mb4.8
CLL *e*pP pP 15 50 53.0 -3.4
comp=Z,10.0nm,1.3s
BRG **Berggiesshubel** 87.69 39 *e*P P 15 50 56.1 +4.9
comp=Z,20nm,1.8s,mb5.1
KHC **Kasperske Hory** 87.78 41 *e*P P 15 50 47.3 -4.4
KHC *e*pP pP 15 50 53.3 -6.7
GERES **GERESS Array B** 87.91 41 P P 15 50 52.0 -0.4
comp=Z,0.2nm,0.3s,mb3.9,baz=318,slow=9.6,SNR=4.4
GERES LR LR 16 23 26.4
comp=Z,539nm,20.9s,MS4.9,baz=306,slow=31
ARCES **ARCESS Array B** 88.35 20 P P 15 50 52.5 -1.5
comp=Z,2.1nm,0.7s,mb4.5,baz=296,slow=3.4,SNR=9.5
ARCES **ARCESS Array B** 88.35 20 P P 15 50 52.5 -1.5
UPC **Upice** 89.06 39 *e*pP pP 15 51 03.1 -2.9
DPC **Dobruska-Polom** 89.28 39 *e*P P 15 50 53.0 -5.8
DPC *e*pP pP 15 50 59.9 -7.2
BILL **Bilibino** 89.75 339 *oe*P P 15 51 00.6 0.0
BILL *i* 15 51 05.0

BILL *i* 16 01 44.2
BILL pmax pmax
comp=Z,33nm,1.7s,mb5.4
BILL Bilibino 89.75 339 *e*P **P 15 51 00.2 -0.4**
comp=Z,29nm,1.3s,mb5.5
FINES FINESS Array B 91.41 27 P **P 15 51 07.4 -1.0**
comp=Z,3.6nm,1.0s,mb4.6,baz=210,slow=11,SNR=4.4
FINES LR LR 16 26 50.9
comp=Z,420nm,21.6s,MS4.8,baz=307,slow=32
APA Apatity 91.80 20⇑ *e*P **P 15 51 16.0 +5.9**
APA MLR MLR
comp=Z,300nm,18.0s,MS4.8
VNA2 Neumayer--Watz 93.32 161 *e*P **P 15 51 16.5 -0.5**
MICGM Minsk 94.83 33 *e*LR LR 15 51 55.0
AKASG Malin Array Be 97.03 36 LR LR 16 33 16.7
comp=Z,392nm,20.4s,MS4.9,baz=285,slow=34
TIXI Tiksi 97.26 350 *e*P **P 15 51 32.9 -2.1**
TIXI pmax pmax
comp=Z,7.0nm,1.5s,mb4.9
TIXI MLR MLR
comp=Z,343nm,19.0s,MS4.9
TIXI Tiksi 97.26 350 *e*P **P 15 51 33.8 -1.2**
comp=Z,4.2nm,0.9s,mb4.9
SEY Seymchan 97.27 338 *e*P **P 15 51 34.6 -0.7**
KURK Kurchatov 118.82 13 PKP PKPdf 15 56 50.4 -0.6
comp=Z,0.3nm,0.6s,baz=344,slow=2.5,SNR=3.3
MDJ Mudanjiang 119.52 334 PKP PKPdf 15 56 52.5 0.0
CN2 Changchun 121.91 336 *e*PKP PKPdf 15 56 57.0 -0.1
CN2 LR LR
comp=N,1μm,18.0s,MS5.6
CN2 LR LR
comp=E,660nm,18.0s,MS5.6
CN2 LR LR
comp=Z,2μm,17.0s,MS5.7
MKAR Makanchi Array 123.33 12 PKP PKPdf 15 56 58.9 -0.8
comp=Z,3.3nm,1.0s,baz=278,slow=3.2,SNR=13
AAK Ala-Archa 125.02 20⇑ *i*PKIKP PKPdf 15 57 01.5 -1.6
AAK pmax pmax
comp=Z,2.0nm,1.7s
KSRS Korea Array 125.93 330 PKP PKPdf 15 57 03.9 -1.1
comp=Z,2.3nm,0.7s,baz=35,slow=1.1,SNR=14
WMQ Urumqi 127.17 9 *e*PKP PKPdf 15 57 06.8 -0.4
KSH Kashi 128.30 21 *e*PKP PKPdf 15 57 10.0 +0.5
KSH *es*PKP 15 57 24.0
KSH *e*PKS 16 00 45.0
KSH *e*SKS SKSdf 16 04 16.3 -3.4
KSH *e*SKKS SKKSac 16 06 08.0 -1.5
KSH *e*SS SS 16 16 34.0 +8.5
KSH AMB AMB
comp=Z,42nm,5.0s
KSH LR LR
comp=N,74nm,5.1s
KSH LR LR
comp=E,66nm,5.3s
KSH LR LR
comp=Z,170nm,7.0s
BJI Beijing 128.54 341 PKP PKPdf 15 57 09.3 -0.6
BJI SS SS 16 16 28.3 -0.1
BJI LR LR
comp=N,2μm,18.6s,MS5.8
BJI LR LR
comp=E,760nm,19.1s,MS5.8
BJI LR LR
comp=Z,1μm,20.6s,MS5.6
HHC Hu-ho-hao-te 129.08 346 *e*PKP PKPdf 15 57 10.3 -0.6
HHC sPKP 15 57 24.8
HHC PP PP 15 59 22.3 +4.9
HHC PKS 16 00 45.3
HHC SKS SKSdf 16 04 16.3 -4.8
HHC SKKS SKKSac 16 06 10.0 -4.3
HHC SS SS 16 16 39.0 +4.2
HHC AMB AMB
comp=Z,180nm,8.5s
HHC LR LR
comp=N,210nm,20.0s,MS5.0
HHC LR LR
comp=E,200nm,19.0s,MS5.0
HHC LR LR
comp=Z,220nm,22.2s,MS4.8
LZH Lanzhou 135.15 352 *e*PKP PKPdf 15 57 22.0 -0.5
LZH sPKP 15 57 36.5
LZH PP PP 16 00 02.0 +5.6
LZH PKS 16 00 58.8
LZH SKS SKSdf 16 04 29.0 -3.2
LZH SS SS 16 17 50.0 +1.3
LZH AMB AMB
comp=Z,170nm,5.6s
LZH LR LR
comp=E,230nm,17.8s
LZH LR LR
comp=Z,320nm,18.9s,MS5.1
CD2 Chengdu 140.25 351 PKP PKPdf 15 57 30.3 -1.8
CD2 sPKP 15 57 44.5
CD2 PP PP 16 00 32.0 +3.8
CD2 PKS 16 01 04.8
CD2 SKS SKSdf 16 04 35.0 -6.1
CD2 SKKS SKKSac 16 07 17.8 -4.3
CD2 SS SS 16 18 49.0 -0.2
CD2 AMB AMB
comp=Z,160nm,4.7s
CD2 LR LR
comp=N,300nm,18.4s
CD2 LR LR
comp=Z,340nm,18.4s,MS5.1
ASAR Alice Springs 141.77 242 PKhKP 15 57 28.3
comp=Z,0.9nm,1.0s,baz=115,slow=3.5,SNR=6.9
ASAR PKP PKPdf 15 57 33.0 -1.9
comp=Z,1.5nm,0.7s,baz=114,slow=3.6,SNR=15
GYA Guiyang 143.99 345 *e*PKP PKPdf 15 57 37.0 -1.9
GYA pPKP pPKPdf 15 57 50.3 +2.9
GYA PP PP 16 00 54.8 +3.8
GYA PKS 16 01 11.5
GYA SKKS SKKSac 16 07 39.8 -4.0
GYA SS SS 16 19 32.0 -0.8
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,210nm,20.9s,MS5.0
GYA LR LR
comp=E,180nm,22.8s,MS5.0
GYA LR LR
comp=Z,170nm,23.1s,MS4.8
KMI Kunming 146.09 351 PKPbc PKPbc 15 57 40.5 -2.8
KMI sPKP 15 57 57.8
KMI PP PP 16 01 06.5 +3.1
KMI SKKS SKKSac 16 07 51.0 -4.7
KMI SS SS 16 20 03.5 +7.0
KMI AMB AMB
comp=Z,73nm,5.9s
KMI LR LR
comp=N,220nm,17.7s,MS5.1
KMI LR LR
comp=E,230nm,21.9s,MS5.1
KMI LR LR
comp=Z,320nm,16.0s
HYB Hyderabad 148.32 35 *i* PKP PKPdf 15 57 49.0 +2.6
QIZ Qiongzhong 149.87 336 PKPbc PKPdf 15 57 47.8 -1.1
QIZ PP PP 16 01 25.3 -0.6
QIZ SS SS 16 20 37.5 -2.3
QIZ LR LR
comp=N,730nm,18.8s,MS5.5
QIZ LR LR
comp=E,140nm,18.5s,MS5.5
QIZ LR LR
comp=Z,1μm,18.8s,MS5.7
CMAR Chiang Mai Arr 153.10 356 PKP PKPdf 15 57 53.1 -0.6
comp=Z,1.8nm,0.9s,baz=302,slow=2.0,SNR=12

*IDC **26** 15:51:59.2±1.0, 31°.53N×104°.19E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, ML3.2/2, Error ellipse: s-maj=32.9km s-min=19.2km az=56.0*
*ISCJB **26** 15:52:00.5±0.9, 31°.50N±0°.03×104°.23E±0°.05, h20km±7km, mb3.9/9, Error ellipse: s-maj=7.5km s-min=5.5km az=178.9*
*NEIC **26** 15:52:02.8±2.8, 31°.54N×104°.17E, h22km±22km, mb4.2/2, Error ellipse: s-maj=12.5km s-min=8.0km az=63.0*
*BJI **26** 15:52:02.8, 31°.40N×104°.32E, h26km, mB4.7/3, mb3.9/3, ML3.8/16, Ms3.8/8, Ms7 3.7/8*
ISC 26 15:52:00.2±0.8, 31°.53N±0°.03×104°.22E±0°.04, h4km±6km, n27, σ1s09/39, mb3.9/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.74**	**213**	Pg	**Pg**	**15 52 13.8**	**-0.5**
CD2				Sg	**Sg**	**15 52 23.5**	**-0.4**
CD2				smax			
comp=N,4μm,0.6s							
LZH	**Lanzhou**	**4.55**	**356**	Pg	**Pg**	**15 53 29.5**	**+2.0**
LZH				Sn	**Sb**	**15 54 14.0**	**-1.9**
LZH				Sg	**Sg**	**15 54 29.0**	**+2.5**
LZH				smax			
comp=N,96nm,0.8s							
LZH				smax			
comp=E,110nm,0.9s							
LZH				LR	LR		
comp=E,280nm,4.2s							
LZH				LR	LR		
comp=Z,410nm,5.4s							
LZH	**Lanzhou**	**4.55**	**356**	*e*Pn	**Pb**	**15 53 20.5**	**-0.2**
LZH				Pg	**Pg**	**15 53 29.5**	**+2.0**
LZH				Sn	**Sb**	**15 54 14.0**	**-1.9**
LZH				Sg	**Sg**	**15 54 29.0**	**+2.5**
LZH				smax			
comp=N,96nm,0.8s							
LZH				smax			
comp=E,110nm,0.9s							
LZH				LR	LR		
comp=E,280nm,4.2s							
LZH				LR	LR		
comp=Z,410nm,5.4s							
XAN	**Xi'an**	**4.68**	**56**	Pn	**Pn**	**15 53 11.5**	**-0.1**
XAN				Pg	**Pg**	**15 53 27.0**	**-2.9**
XAN				Sn	**Sn**	**15 54 09.0**	**+2.7**
XAN				Sg	**Sg**	**15 54 29.0**	**-1.6**
XAN				smax			
comp=N,170nm,0.8s							
XAN				smax			
comp=E,100nm,1.1s							
XAN				LR	LR		
comp=N,340nm,8.4s							
XAN				LR	LR		
comp=E,52nm,4.5s							
XAN				LR	LR		
comp=Z,50nm,5.0s							
ENH	**Enshi**	**4.70**	**104**	*e*Pn	**Pn**	**15 53 13.6**	**+1.9**
GYA	**Guiyang**	**5.49**	**156**	Pn	**Pn**	**15 53 23.8**	**+1.1**
GYA				Sn	**Sn**	**15 54 26.5**	**+0.3**
GYA				smax			
comp=N,100nm,0.8s							
GYA				smax			
comp=E,150nm,0.9s							
GTA	**Gaotai**	**8.64**	**337**	*e*P	**Pn**	**15 54 10.3**	**+4.3**
GTA				pP		15 54 13.8	
GTA				S	**Sn**	**15 55 50.3**	**+6.4**
GTA				pmax	pmax		
comp=Z,2.0nm,1.0s							
GTA				pmax	pmax		
comp=Z,130nm,4.5s							
GTA				LR	LR		
comp=N,260nm,10.8s							
GTA				LR	LR		
comp=E,220nm,8.9s							
GTA				LR	LR		
comp=Z,380nm,14.0s							
WHN	**Wuhan**	**8.74**	**94**	P	**Pn**	**15 54 08.3**	**+0.9**
WHN				S	**Sn**	**15 55 45.3**	**-1.1**
WHN				LR	LR		
comp=N,480nm,7.8s							
WHN				LR	LR		
comp=E,650nm,7.1s							
WHN				LR	LR		
comp=Z,810nm,8.8s							
CMAR	**Chiang Mai Arr**	**13.87**	**201**	Pn	**Pn**	**15 55 17.4**	**-0.1**
comp=Z,0.0nm,0.3s,baz=10,slow=9.8,SNR=2.9							
SONM	**Songino Array**	**16.37**	**5**	Pn	**Pn**	**15 55 50.1**	**-0.6**
comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=4.0							
KSRS	**Korea Array**	**20.39**	**67**	P	**P**	**15 56 38.1**	**+0.3**
comp=Z,3.6nm,0.9s,baz=255,slow=10,SNR=11							
KSRS	**Korea Array**	**20.39**	**67**	PKHKP	**P**	**15 56 38.2**	**+0.3**
KSRS				pmax	pmax		
comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	**22.73**	**318**	*e*PKIKP	**P**	**15 57 03.2**	**+0.3**
MK31	**Makanchi Array**	**22.73**	**318**	*e*P	**P**	**15 57 03.2**	**+0.2**
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**15 57 03.5**	**+0.6**
comp=Z,7.4nm,1.0s,mb4.0,baz=118,slow=12,SNR=31							
MKAR	**Makanchi Array**	**22.73**	**318**	PKIKP	**P**	**15 57 03.6**	**+0.7**
MKAR				pmax	pmax		
comp=Z,7.0nm,1.0s							
MKAR	**Makanchi Array**	**22.73**	**318**	P	**P**	**15 57 03.5**	**+0.6**
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**15 57 36.6**	**-0.8**
comp=Z,0.8nm,0.5s,mb3.5,baz=137,slow=11,SNR=6.8							
KURK	**Kurchatov**	**26.97**	**323**	P	**P**	**15 57 42.2**	**-0.4**
comp=Z,2.0nm,1.0s,mb3.6,baz=129,slow=9.2,SNR=14							
KURK	**Kurchatov**	**26.97**	**323**	*e*P	**P**	**15 57 42.8**	**+0.1**
comp=Z,4.6nm,1.3s,mb3.9							
ARCES	**ARCESS Array B**	**56.91**	**336**	P	**P**	**16 01 45.8**	**-0.1**
comp=Z,1.7nm,0.8s,mb4.1,baz=57,slow=8.8,SNR=4.0							
FINES	**FINESS Array B**	**57.27**	**326**	P	**P**	**16 01 48.2**	**-0.4**
comp=Z,0.7nm,0.5s,mb4.0,baz=193,slow=33,SNR=3.5							
WRAB	**Tennant Creek**	**58.77**	**146**	*e*P	**P**	**16 01 59.5**	**+0.1**
comp=Z,2.1nm,0.7s,mb4.3							
ASAR	**Alice Springs**	**61.80**	**149**	P	**P**	**16 02 20.0**	**-0.2**
comp=Z,0.4nm,0.7s,mb3.7,baz=331,slow=6.9,SNR=11							
NOA	**NORSAR Array B**	**64.36**	**327**	P	**P**	**16 02 35.7**	**-1.0**
comp=Z,0.7nm,0.6s,mb3.8,baz=73,slow=6.8,SNR=2.6							
YKA	**Yellowknife Ar**	**81.26**	**17**	P	**P**	**16 04 16.7**	**-0.4**
comp=Z,0.6nm,0.5s,mb3.8,baz=329,slow=5.4,SNR=7.3							
YKA	**Yellowknife Ar**	**81.26**	**17**	P	**P**	**16 04 16.7**	**-0.4**

CASC 26 15:53:06.9±1.4, 8°.47N×83°.00W, h4km, MD3.8, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**317⇓**	*i* P	Pg	15 53 12.2	+0.5
BAR1		**0.82**	**338⇑**	*i* P	Pg	15 53 22.6	-0.2
BAR1				*e*S	Sg	15 53 35.1	+1.6
CNI	**Changuinola**	**1.05**	**27**	*i* P	Pg	15 53 27.2	+0.1
BUS	**Buena Vista**	**1.31**	**325**	*e*P	Pn	15 53 31.0	-1.0
QCR	**Quepos**	**1.49**	**309**	*e*P	Pn	15 53 33.1	-1.4
QCR				*e*S	Sn	15 53 54.8	+0.4
URSC	**Urasca**	**1.56**	**330⇑**	*e*P	Pn	15 53 34.3	-1.1
URSC				*e*S	Sn	15 53 56.5	+0.5
LAJ	**Bijagual**	**1.77**	**321**	*e*P	Pn	15 53 42.1	+3.8
PRS1	**Puriscal**	**1.98**	**319**	*e*P	Pn	15 53 40.5	-0.8
CGA2	**Cerro Gallo 2**	**2.11**	**317**	*e*P	Pn	15 53 43.4	+0.4
CGA2				*e*S	Sn	15 54 11.9	+2.3

*ISCJB **26** 15:53:28.7±1.0, 17°.44S×69°.09×69°.37W±0°.09, h158km±9km, mb4.2/9, Error ellipse: s-maj=17.8km s-min=11.6km az=43.6*
*NEIC **26** 15:53:29.0±0.8, 17°.55S×69°.32W, h152km±8km, mb4.2/1, Error ellipse: s-maj=13.6km s-min=9.1km az=66.0*
*IDC **26** 15:53:30.2±1.5, 17°.43S×69°.20W, h158km±11km, mb4.0/8, mb1 4.2/9, mb1mx3.9/18, mbtmp4.1/9, MS4.3/2, Ms1 4.4/2, ms1mx3.4/25, Error ellipse: s-maj=22.9km s-min=17.5km az=51.0*
ISC 26 15:53:29.3±0.9, 17°.55S±0°.08×69°.3W±0°.1, h151km±10km, n29, σ0s98/26, mb4.2/9, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.70**	**43**	P	**Pn**	**15 54 02.5**	**+1.5**
baz=234,slow=4.9							
LPAZ				S	**Sn**	**15 54 25.2**	**-0.2**
46nm,0.3s,baz=87,slow=18,SNR=20							
LPAZ	**La Paz**	**1.70**	**43**	*e*Pn	**Pn**	**15 54 02.4**	**+1.3**
LPAZ				S	**Sn**	**15 54 25.2**	**-0.2**
LPAZ				*e*Sn	**Sn**	**15 54 25.6**	**+0.2**
SIV	**San Ignacio**	**8.06**	**80**	P	**Pn**	**15 55 22.9**	**-0.7**
53nm,0.3s,baz=273,slow=11,SNR=200							
NNA	**Nana**	**9.12**	**306**	P	**Pn**	**15 55 36.4**	**-1.3**
4.8nm,0.3s,baz=143,slow=12,SNR=6.2							
NNA				S	**Sn**	**15 57 13.4**	**-5.6**
2.8nm,0.3s,baz=230,slow=16,SNR=4.5							
NNA	**Nana**	**9.12**	**306**	*e*Pn	**Pn**	**15 55 36.8**	**-0.9**
NNA				S	**Sn**	**15 57 13.4**	**-5.6**
NNA				*e*Sn	**Sn**	**15 57 14.2**	**-4.8**
CFAA	**Coronel Fontan**	**14.03**	**176**	P	**Pn**	**15 56 39.5**	**-2.0**
0.0nm,0.3s,baz=39,slow=14,SNR=2.4							
CFAA	**Coronel Fontan**	**14.03**	**176**	P	**Pn**	**15 56 39.5**	**-2.0**
TRQA	**Tornquist**	**21.43**	**164**	*e*P	**P**	**15 58 06.3**	**+1.0**
PLCA	**Paso Flores**	**23.13**	**182**	P	**P**	**15 58 23.5**	**+1.5**
7.4nm,1.1s,mb4.0,baz=346,slow=10,SNR=7.5							
PLCA	**Paso Flores**	**23.13**	**182**	*e*P	**P**	**15 58 23.4**	**+1.4**
SDV	**Santo Domingo**	**26.29**	**357**	LR	LR	16 10 05.1	
comp=Z,825nm,19.6s,baz=302,slow=38							
APG	**El Apazote**	**38.48**	**326**	P	**P**	**16 00 37.7**	**+0.9**
1.5nm,0.4s,mb3.9,baz=117,slow=14,SNR=3.5							
TEIG	**Tepich**	**41.89**	**333**	P	**P**	**16 01 04.3**	**-0.5**
11nm,0.7s,mb4.6							
JCT	**Junction City**	**56.03**	**328**	*e*P	**P**	**16 02 52.9**	**+0.4**
TXAR	**Lajitas Array**	**57.19**	**324**	P	**P**	**16 03 00.5**	**-0.1**
0.5nm,0.8s,mb3.4,baz=142,slow=10,SNR=5.1							
SDCO	**Great Sand Dun**	**64.66**	**329**	*e*P	**P**	**16 03 51.6**	**+0.7**
3.4nm,1.0s,mb4.1							
ULM	**Lac du Bonnet**	**71.44**	**342**	P	**P**	**16 04 31.9**	**-1.1**
6.4nm,0.3s,mb4.8,baz=144,slow=4.8,SNR=9.2							
NVAR	**Mina Array Bea**	**72.16**	**322**	P	**P**	**16 04 38.2**	**+0.7**
1.3nm,0.8s,mb3.7,baz=141,slow=6.5,SNR=8.0							
TORD	**Torodi Ar. Bea**	**76.44**	**71**	P	**P**	**16 05 01.5**	**-1.3**
5.9nm,0.6s,mb4.4,baz=253,slow=5.1,SNR=52							
ESDC	**Sonseca Array**	**83.32**	**45**	LR	LR	16 38 59.7	
comp=Z,139nm,19.8s,baz=75,slow=33							
YKA	**Yellowknife Ar**	**87.34**	**341**	P	**P**	**16 05 58.5**	**-0.1**
5.3nm,0.7s,mb4.5,baz=134,slow=4.8,SNR=73							
YKA	**Yellowknife Ar**	**87.34**	**341**	P	**P**	**16 05 58.5**	**-0.1**
PETK	**Petropavlovsk-**	**129.13**	**325**	PKP	PKPdf	16 12 20.0	+0.8
1.8nm,0.8s,baz=116,slow=43,SNR=3.1							
ASAR	**Alice Springs**	**133.17**	**210**	PKP	PKPdf	16 12 26.9	-0.9
0.4nm,0.7s,baz=113,slow=1.4,SNR=4.2							
KURK	**Kurchatov**	**138.19**	**30**	PKP	PKPdf	16 12 35.1	-1.1
3.3nm,0.7s,baz=135,slow=9.2,SNR=19							
ZALV	**Zalesovo Beam**	**138.52**	**23**	PKP	PKPdf	16 12 36.2	-0.5
2.6nm,0.8s,baz=308,slow=1.4,SNR=11							
ZALV				SKPbc	SKPbc	16 15 57.0	-0.3
0.9nm,0.6s,baz=299,slow=2.6,SNR=5.9							
MKAR	**Makanchi Array**	**142.60**	**33**	SKPbc	SKPbc	16 16 08.0	-0.3
0.2nm,0.5s,baz=332,slow=2.2,SNR=3.9							
MJAR	**Matsushiro Arr**	**149.19**	**313**	PKPbc	PKPbc	16 13 00.1	-0.2
1.4nm,0.9s,baz=134,slow=3.5,SNR=4.6							
SONM	**Songino Array**	**149.59**	**6**	PKPbc	PKPbc	16 13 01.2	+0.4
1.1nm,0.4s,baz=337,slow=1.6,SNR=10							

*ISK **26** 15:54:40.5, 37°.52N×44°.31E, h21km, ML3.0*
*CSEM **26** 15:54:41.0±0.5, 37°.54N×44°.31E, h15km, ML3.0, Error ellipse: s-maj=12.5km s-min=3.9km az=129.0*
ISC 26 15:54:38.1±2.2, 37°.5N±0°.1×44°.6E±0°.1, h2km±15km, n19, σ0s84/24, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.66**	**280**	*e*PG	**Pg**	**15 54 50.4**	**-0.4**
HKR	**Hakkari**	**0.66**	**280**	*e*Pg	**Pg**	**15 54 50.4**	**-0.3**
HAKT	**HAKKARI**	**0.68**	**278**	*i* P	**Pg**	**15 54 50.9**	**-0.3**
HAKT	**HAKKARI**	**0.68**	**278**	*i* P	**Pg**	**15 54 50.9**	**-0.3**
HAKT				*i* S	**Sg**	**15 55 00.9**	**+0.9**
CUKT	**Cukurca**	**0.79**	**254**	*e*PG	**Pg**	**15 54 53.2**	**0.0**
CUKT				*e*SG	**Sg**	**15 55 02.8**	**-0.6**
CUKT	**Cukurca**	**0.79**	**254**	*e*Pg	**Pg**	**15 54 53.2**	**0.0**
CUKT				*e*Sg	**Sg**	**15 55 02.8**	**-0.6**
TVAN	**Van**	**1.40**	**320**	*i* P	**Pn**	**15 55 03.6**	**-1.0**
TVAN	**Van**	**1.40**	**320**	*i* P	**Pn**	**15 55 03.6**	**-1.0**
TVAN				*i* S	**Sb**	**15 55 23.7**	**+0.5**
VANB	**Van**	**1.46**	**321**	*e*PN	**Pn**	**15 55 04.4**	**-1.1**
VANB				*e*SN	**Sn**	**15 55 21.3**	**-3.8**
VANB	**Van**	**1.46**	**321**	*e*Pn	**Pn**	**15 55 04.4**	**-1.0**
VANB				*e*Sn	**Sn**	**15 55 21.3**	**-3.8**
MSL	**Mosul**	**1.57**	**228**	*e*Pn	Px	15 55 15.0	
MSL				*e*Sn	Sx	15 55 38.0	
CLDR	**Caldiran**	**1.75**	**343**	*e*PN	**Pn**	**15 55 09.1**	**-0.4**
CLDR	**Caldiran**	**1.75**	**343**	*e*Pn	**Pn**	**15 55 09.1**	**-0.3**
AGRB	**Hanur-Agry**	**2.44**	**330**	*e*PN	**Pn**	**15 55 18.9**	**0.0**
AGRB	**Hanur-Agry**	**2.44**	**330**	*e*Pn	**Pn**	**15 55 18.9**	**0.0**
BTMT	**Batman**	**2.54**	**288**	*e*PN	**Pn**	**15 55 20.4**	**+0.1**
BEST	**Besiri**	**2.64**	**280**	*i* P	**Pn**	**15 55 23.4**	**+1.7**
GNI	**Garni**	**2.68**	**3**	*e*PN	**Pn**	**15 55 23.5**	**+1.2**
GNI	**Garni**	**2.68**	**3**	*e*Pn	**Pn**	**15 55 23.5**	**+1.2**

*IDC **26** 16:01:09.0±0.5, 8°.56N×82°.82W, h0km, mb4.3/17, mb1 4.6/23, mb1mx4.5/28, mbtmp4.4/23, ML4.2/4, MS4.3/10, Ms1 4.3/10, ms1mx3.9/29, Error ellipse: s-maj=21.1km s-min=11.5km az=60.0*
*MOS **26** 16:01:10.8±1.2, 8°.51N×82°.95W, h21km, mb5.1/23, Error ellipse: s-maj=15.9km s-min=6.9km az=105.7*
*GCMT **26** 16:01:10.8±0.4, 8°.48N×82°.97W, h18km±2km, MW4.9/67, Moment Tensor Solution. s10,c11; s67,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.80±.30; $M_{\theta\theta}$-2.66±.20; $M_{\phi\phi}$0.86±.18; $M_{r\theta}$-1.50±.41; $M_{\theta\phi}$1.37±.12; $M_{\phi r}$0.11±.45; Best double couple: $M_0$2.93100×10^{16} NP1:ϕ_S133.00000°, δ34.00000°, λ126.00000°. NP2: ϕ_S272.00000°, δ63.00000°, λ68.00000°. Principal axes: T 2.3340, Plg65.0000°, Azm144.0000°; N 1.2040, Plg19.0000°, Azm282.0000°; P -3.5290, Plg15.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **26** 16:01:10.8±0.3, 8°.49N×82°.93W, h10km, mb5.0/50, MD5.4(HDC) Error ellipse: s-maj=7.7km s-min=4.7km az=46.0*
NEIC Felt in southern Costa Rica.
*CASC **26** 16:01:10.8±3.8, 8°.43N×82°.96W, h10km, MD4.5, ML3.8, mb5.0(NEIC)*
*ISCJB **26** 16:01:11.6±0.8, 8°.54N±0°.04×82°.82W±0°.03, h23km±4km, mb4.7/70, MS4.5/13, Error ellipse: s-maj=7.8km s-min=4.1km az=31.6*
ISC 26 16:01:13.6±0.8, 8°.56N±0°.04×82°.80W±0°.03, h23km±5km, n312, σ0s81/297, mb4.7/70, MS4.5/13, 68C-74D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.26**	**25⇓**	*i* P	**Pb**	**16 01 19.0**	**-0.7**
BRU2				*e*S	**Sb**	**16 01 27.4**	**+3.4**
TBS2		**0.27**	**31⇑**	*e*P	**Pb**	**16 01 20.6**	**+0.6**
TBS2				*e*S	**Sb**	**16 01 29.4**	**+5.0**
TBS2				*e*S	**Sb**	**16 01 29.4**	**+5.0**
ACR	**Cerro Adams**	**0.38**	**285⇓**	*e*P	**Pb**	**16 01 14.6**	**-7.0**
BAR1		**0.85**	**323⇑**	*i* P	**Pb**	**16 01 25.1**	**-4.5**
CNI	**Changuinola**	**0.90**	**18⇓**	*i* P	**Pb**	**16 01 29.4**	**-1.1**
BUS	**Buena Vista**	**1.37**	**316⇑**	*e*P	**Pn**	**16 01 33.0**	**-4.3**
LIO	**Limon**	**1.46**	**351**	*e*P	**Pn**	**16 01 37.2**	**-1.3**
URSC	**Urasca**	**1.59**	**323⇑**	*e*P	**Pn**	**16 01 36.8**	**-3.6**
QCR	**Quepos**	**1.60**	**303⇑**	*e*P	**Pn**	**16 01 34.9**	**-5.6**
LAJ	**Bijagual**	**1.84**	**315⇓**	*e*P	**Pn**	**16 01 43.4**	**-0.4**
SJS	**Escuela Geolog**	**1.85**	**318**	*e*P	**Pn**	**16 01 41.7**	**-2.2**
PRS1	**Puriscal**	**2.06**	**314⇑**	*e*P	**Pn**	**16 01 43.1**	**-3.7**
CGA2	**Cerro Gallo 2**	**2.19**	**312**	*e*P	**Pn**	**16 01 45.6**	**-3.0**
JCR	**Jicaral**	**2.62**	**300**	*e*P	**Pn**	**16 01 50.0**	**-4.5**
FORC	**Fortuna**	**2.65**	**316**	*e*P	**Pn**	**16 01 52.5**	**-2.4**
CHPA	**Chiripa**	**2.80**	**312**	*i* P	**Pn**	**16 01 56.5**	**-0.5**
CHPA				*e*P		16 03 37.9	
BCIP	**Isla Barro Col**	**2.99**	**78**	*e*Pn	**Pn**	**16 01 59.5**	**-0.1**
BCIP	**Isla Barro Col**	**2.99**	**78**	*e*P	**Pn**	**16 01 60.0**	**+0.4**
PTEN	**Parque Tenorio**	**3.04**	**315**	*i* P	**Pn**	**16 01 59.6**	**-0.7**
PTEN				*i* S	**Sn**	**16 02 40.6**	**+4.6**
CUI	**Cuipilapa**	**3.13**	**312**	*i* P	**Pn**	**16 02 00.9**	**-0.6**
UPIG		**3.26**	**82**	*e*P	**Pn**	**16 02 07.5**	**+4.2**
UPIG				*e*S	**Sn**	**16 02 53.3**	**+12**
SSN	**San Juan del S**	**4.06**	**312**	*e*P	**Pn**	**16 02 13.9**	**-0.4**
CONN	**Concepcion**	**4.08**	**317**	*e*P	**Pn**	**16 02 15.0**	**+0.4**
APON	**Apoyo**	**4.63**	**316**	*e*P	**Pn**	**16 02 23.6**	**+1.4**
TICN	**Ticuantepe**	**4.83**	**316**	*e*P	**Pn**	**16 02 25.4**	**+0.4**
CRUN	**El Crucero**	**4.84**	**315**	*e*P	**Sn**	**16 03 25.2**	**+4.7**
WILN	**Americas 2**	**4.89**	**317**	*e*P	**Pn**	**16 02 25.8**	**0.0**
MGAN	**Managua**	**4.92**	**317**	*e*P	**Pn**	**16 02 26.2**	**0.0**
XAVN	**Gruta Xavier**	**4.98**	**316**	*e*P	**Pn**	**16 02 26.8**	**-0.1**
HUEN		**5.01**	**319**	*e*P	**Pn**	**16 02 27.5**	**+0.1**
APYN	**Apoyeque**	**5.05**	**317**	*e*P	**Pn**	**16 02 28.2**	**+0.2**
CSAN		**5.07**	**316**	*e*P	**Pn**	**16 02 27.9**	**-0.3**
COPN	**Copaltepe**	**5.18**	**314**	*e*P	**Pn**	**16 02 29.5**	**-0.3**
MOMN	**Momotombo**	**5.31**	**316**	*e*P	**Pn**	**16 02 31.8**	**+0.3**
MIRN	**Miramar**	**

APG **El Apazote** 9.86 311 Pn Pn 16 03 34.1 0.0
3.4nm,0.3s,baz=139,slow=9.6,SNR=52
MTDJ **Mount Denham** 10.89 28 eP Pn 16 03 48.9 +0.8
236nm,0.9s
SDV **Santo Domingo** 12.03 88 Pn Pn 16 04 03.9 +0.2
0.2nm,0.3s,baz=310,slow=13,SNR=4.6
SDV **Santo Domingo** 12.03 88 eP Pn 16 04 06.9 +3.1
20nm,0.8s
TEIG **Tepich** 12.75 336 Pn Pn 16 04 14.9 +1.3
TEIG LR LR 16 08 59.6
comp=Z,1µm,18.8s,baz=133,slow=37
GTBY **Guantanamo Bay** 13.53 33 eP Pn 16 04 25.8 +1.6
84nm,1.0s
CMIG **Matias Romero** 14.51 307 Pn Pn 16 04 35.3 -2.4
1.5nm,0.3s,baz=132,slow=7.8,SNR=22
SDDR **Presa de Saban** 15.23 46 ePn Pn 16 04 47.4 +0.1
75nm,1.0s
ATAH **Atahualpa** 16.07 164 Pn Pn 16 04 58.7 +0.5
0.4nm,0.3s,baz=185,slow=17,SNR=4.5
ATAH LR LR 16 10 35.6
comp=Z,2µm,18.5s,baz=335,slow=35
PCRV **Puerto La Cruz** 17.99 83 P Pn 16 05 22.3 -0.1
0.6nm,0.3s,baz=359,slow=9.1,SNR=2.1
SJG **San Juan** 18.76 58 P Pn 16 05 29.7 -2.0
3.6nm,0.3s,baz=350,slow=21,SNR=2.3
SJG LR LR 16 11 25.9
comp=Z,2µm,21.8s,baz=99,slow=33
SJG **San Juan** 18.76 58 P Pn 16 05 34.0 +2.3
SJG LR LR 16 11 25.9
NNA **Nana** 21.25 164 P P 16 05 57.4 -1.0
62nm,1.0s,mb4.9,baz=350,slow=9.6,SNR=13
NNA **Nana** 21.25 164 eP P 16 05 58.0 -0.3
84nm,1.1s,mb5.0
HKT **Hockley** 24.54 332 eP P 16 06 31.2 -0.4
HKT pmax pmax
comp=Z,62nm,1.6s,mb4.9
HKT **Hockley** 24.54 332 eP P 16 06 31.2 -0.3
comp=Z,62nm,1.6s,mb4.9
VBMS **Vicksburg** 24.61 344 eP P 16 06 32.7 +0.5
comp=Z,104nm,1.2s,mb5.2
LRAL **Lakeview Retre** 24.66 352 eP P 16 06 33.1 +0.4
comp=Z,95nm,1.4s,mb5.1
GOGA **Godfrey** 24.74 359 eP P 16 06 34.0 +0.6
GOGA pmax pmax
comp=Z,121nm,1.1s,mb5.3
GOGA **Godfrey** 24.74 359 eP P 16 06 34.0 +0.6
comp=Z,121nm,1.1s,mb5.3
JSC **Jenkinsville** 25.64 3 eP P 16 06 43.2 +1.7
SWET **Sewanee** 26.69 354 eP P 16 06 51.0 0.0
PLAL **Pickwick Lake** 26.74 350 eP P 16 06 50.5 -1.0
comp=Z,20nm,1.3s,mb4.5
CPCT **Cooper Cave** 26.81 357 eP P 16 06 52.1 -0.1
TKL **Tuckaleechee C** 26.99 358 P P 16 06 53.4 -0.3
comp=Z,14nm,1.2s,mb4.4,baz=163,slow=9.0,SNR=5.7
TKL LR LR 16 17 43.4
comp=Z,542nm,18.0s,MS4.2,baz=90,slow=37
TKL **Tuckaleechee C** 26.99 358 P P 16 06 53.4 -0.4
UALR **University of** 27.52 343 eP P 16 06 57.0 -1.5
comp=Z,59nm,1.4s,mb5.0
MIAR **Mount Ida** 27.69 341 eP P 16 06 58.3 -1.8
MIAR pmax pmax
comp=Z,21nm,1.1s,mb4.7
MIAR **Mount Ida** 27.69 341 eP P 16 06 58.2 -1.8
comp=Z,21nm,1.1s,mb4.7
WVT **Waverly** 27.82 351 eP P 16 07 00.4 -0.8
WVT pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
WVT **Waverly** 27.82 351 eP P 16 07 00.4 -0.9
comp=Z,5.8nm,0.8s,mb4.3
TZTN **Tazewell** 27.87 359 eP P 16 07 02.6 +1.0
comp=Z,42nm,1.3s,mb4.9
628A **Black Gap, Mar** 28.09 320 ⇓P P 16 07 03.2 -0.5
baz=28
627A **Terlingua Ranc** 28.38 320 ⇑P P 16 07 06.5 +0.2
baz=28,SNR=5.1
TXAR **Lajitas Array** 28.48 319 P P 16 07 05.8 -1.4
comp=Z,0.7nm,0.7s,mb3.4,baz=143,slow=9.3,SNR=10
TXAR PcP PcP 16 10 19.1 +0.2
comp=Z,0.5nm,0.6s,baz=153,slow=5.5,SNR=4.7
TXAR LR LR 16 21 40.1
comp=Z,249nm,18.4s,MS3.9,baz=5.0,slow=43
TXAR **Lajitas Array** 28.48 319 P P 16 07 05.8 -1.4
TXAR 16 10 19.1
528A **Cox Ranch, San** 28.49 322 ⇑P P 16 07 06.6 -0.7
baz=28
LPAZ **La Paz** 28.64 150 P P 16 07 07.7 -1.0
comp=Z,4.8nm,1.1s,mb4.2,baz=347,slow=12,SNR=7.8
LPAZ **La Paz** 28.64 150 eP P 16 07 08.4 -0.3
LPAZ pmax pmax
comp=Z,8.0nm,1.2s
LPAZ **La Paz** 28.64 150 eP P 16 07 08.4 -0.3
comp=Z,8.1nm,1.2s,mb4.3
428A **Kincaid Ranch,** 28.83 323 ⇓P P 16 07 10.3 0.0
baz=29
626A **Big Bend Ranch** 28.93 319 ⇓P P 16 07 11.0 -0.1
baz=29
527A **Woodward Ranch** 28.99 321 ⇑P P 16 07 11.8 +0.1
baz=29
328A **Wristen Ranch,** 29.38 323 ⇑P P 16 07 15.3 +0.2
baz=29
426A **McDonald Obser** 29.61 321 ⇑P P 16 07 17.4 +0.2
baz=30
WCI **Wyandotte Cave** 29.71 354 eP P 16 07 16.7 -1.2
WCI pmax pmax
comp=Z,68nm,1.4s,mb5.2
WCI **Wyandotte Cave** 29.71 354 eP P 16 07 16.7 -1.2
comp=Z,68nm,1.4s,mb5.2
FVM **French Village** 30.09 348 eP P 16 07 20.8 -0.6
FVM pmax pmax
comp=Z,34nm,1.4s,mb4.9
FVM **French Village** 30.09 348 eP P 16 07 20.8 -0.6
comp=Z,34nm,1.4s,mb4.9
425A **Indio Mountain** 30.30 320 ⇑P P 16 07 23.2 -0.1
baz=30,SNR=6.5
CCM **Cathedral Cave** 30.34 347 eP P 16 07 23.1 -0.4
CCM pmax pmax
comp=Z,32nm,1.1s,mb5.0
CCM **Cathedral Cave** 30.34 347 eP P 16 07 23.1 -0.5
comp=Z,32nm,1.1s,mb5.0
OLIL **Olney** 30.42 352 eP P 16 07 23.9 -0.3
comp=Z,130nm,1.5s,mb5.4
226A **Malaga, Loving** 30.63 323 ⇓P P 16 07 25.8 -0.4
baz=31
BLO **Bloomington** 30.66 354 eP P 16 07 25.9 -0.5
BLO pmax pmax
comp=Z,19nm,0.8s,mb5.0
BLO **Bloomington** 30.66 354 eP P 16 07 25.9 -0.5
comp=Z,18nm,0.8s,mb5.0
325A **Bean Ranch, Si** 30.68 321 ⇓P P 16 07 26.6 -0.1
baz=31
324A **Moseley Ranch,** 31.05 320 ⇑P P 16 07 29.5 -0.4
baz=31,SNR=9.5
225A **Deer Hill, Car** 31.10 322 ⇓P P 16 07 30.7 +0.3
baz=31
125A **Gardner Draw,** 31.38 323 ⇓P P 16 07 33.2 +0.4
baz=31
224A **Corundas Mount** 31.51 321 ⇑P P 16 07 33.6 -0.3
baz=32
ACSO **Alum Creek Sta** 31.54 360 eP P 16 07 34.5 +0.4
comp=Z,58nm,1.3s,mb5.2
124A **Stringfield Ra** 31.89 322 ⇓P P 16 07 38.3 +1.0
baz=32
HDIL **Hopedale** 32.38 351 eP P 16 07 40.0 -1.5
comp=Z,30nm,0.8s,mb5.2
KSU1 **Kansas State U** 32.84 340 eP P 16 07 46.1 +0.6
comp=Z,26nm,0.7s,mb5.3
320A **Kipp Ranch, An** 32.98 317 ⇓P P 16 07 47.3 +0.5
baz=33
121A **Cookes Peak, D** 33.24 319 ⇑P P 16 07 49.6 +0.5
baz=33
220A **Playas Peak, P** 33.33 318 ⇓P P 16 07 50.0 +0.1
baz=33,SNR=6.8
319A **Douglas** 33.51 316 ⇓P P 16 07 52.0 +0.4
baz=34
Y22A **Socorro** 33.66 322 ⇓P P 16 07 53.2 +0.4
baz=34
120A **U Bar Ranch, L** 33.80 319 ⇓P P 16 07 53.6 -0.5
baz=34
219A **White Tail Can** 33.88 317 ⇓P P 16 07 55.0 +0.3
baz=34,SNR=6.1
318A **Bisbee** 34.04 316 ⇑P P 16 07 56.4 +0.3
baz=34
Z20A **Nine Sixteen R** 34.13 319 ⇑P P 16 07 57.5 +0.6
baz=34,SNR=5.8
218A **Dragoon** 34.39 316 ⇑P P 16 07 59.2 +0.1
baz=34
SCIA **State Center** 34.47 346 eP P 16 07 57.9 -1.8
comp=Z,64nm,1.3s,mb5.4
X21A **Alamocita Cree** 34.50 322 ⇑P P 16 08 00.2 +0.2
baz=35
Y20A **Horse Springs,** 34.51 321 ⇑P P 16 08 00.5 +0.4
baz=35
118A **Homack Ranch,** 34.74 317 ⇓P P 16 08 02.2 0.0
baz=35
217A **Green Valley** 34.80 315 ⇑P P 16 08 03.0 +0.2
baz=35,SNR=5.4
JFWS **Jewell Farm** 34.84 350 P P 16 08 00.7 -2.2
JFWS pmax pmax
comp=Z,23nm,1.1s,mb5.0
JFWS **Jewell Farm** 34.84 350 P P 16 08 00.7 -2.1
comp=Z,23nm,1.1s,mb5.0
TUC **Tucson** 35.09 316 P P 16 08 05.5 +0.3
TUC pmax pmax
comp=Z,34nm,2.0s,mb4.9
TUC **Tucson** 35.09 316 P P 16 08 05.5 +0.2
comp=Z,34nm,2.0s,mb4.9
117A **Oracle** 35.22 317 ⇓P P 16 08 06.3 0.0
baz=35,SNR=5.2
216A **Three Points,** 35.38 315 ⇑P P 16 08 07.9 +0.2
baz=35
X19A **St. Johns** 35.42 320 ⇑P P 16 08 08.5 +0.5
baz=36
Z17A **San Carlos Hig** 35.48 318 ⇑P P 16 08 09.0 +0.5
baz=36
116A **Eloy** 35.87 316 ⇓P P 16 08 12.3 +0.4
baz=36,SNR=7.0
214A **Organ Pipe Nat** 36.31 314 ⇓P P 16 08 15.9 +0.3
baz=36
115A **Sonoran Desert** 36.31 316 ⇑P P 16 08 16.2 +0.5
baz=36
Y16A **Circle Bar Ran** 36.50 318 ⇑P P 16 08 17.9 +0.6
baz=36,SNR=8.4
114A **Black Gap (USA** 36.80 315 ⇑P P 16 08 19.9 +0.1
baz=37
X16A **Lo Mia Camp, P** 36.80 319 ⇑P P 16 08 20.3 +0.5
baz=37
MVCO **Mesa Verde** 36.82 325 ⇓P P 16 08 20.5 +0.6
baz=37
ECSD **EROS Data Cent** 37.06 343 eP P 16 08 19.5 -2.3
comp=Z,22nm,1.4s,mb4.8
Y15A **Casa Rosa Ranc** 37.11 317 ⇓P P 16 08 22.9 +0.4
baz=37
Z14A **Wintersburg** 37.19 316 ⇓P P 16 08 23.5 +0.4
baz=37
X15A **Humboldt** 37.36 318 ⇓P P 16 08 24.9 +0.3
baz=37,SNR=5.2
113A **Mohawk Valley,** 37.43 314 ⇓P P 16 08 25.3 +0.2
baz=38
Y14A **Wickenburg** 37.56 317 ⇑P P 16 08 26.5 +0.2
baz=38,SNR=6.8
Z13A **Yuma Proving G** 37.59 315 ⇑P P 16 08 26.8 +0.3
baz=38
X14A **Yava** 37.79 317 ⇑P P 16 08 28.5 +0.3
baz=38,SNR=6.2
Y13A **Salome** 38.05 316 ⇓P P 16 08 30.9 +0.5
baz=38
V15A **Kaibab Nationa** 38.13 320 ⇑P P 16 08 31.7 +0.7
baz=38,SNR=8.4
GLA **Glamis** 38.33 314 ⇑P P 16 08 33.3 +0.5
baz=38
W14A **Seligman** 38.35 318 ⇓P P 16 08 33.9 +0.9
baz=38
Y12C **Blythe** 38.49 315 ⇓P P 16 08 34.6 +0.4
baz=38
PDMCI **Parker Dam,Lak** 38.53 316 ⇓P P 16 08 34.8 +0.3
baz=39
V14A **Boquillas Ranc** 38.62 319 ⇓P P 16 08 36.0 +0.8
baz=39,SNR=6.7
W13A **Hualapai Mount** 38.82 318 ⇓P P 16 08 37.6 +0.7
baz=39,SNR=5.2
R17A **Hanksville Air** 38.92 324 ⇑P P 16 08 38.2 +0.6
baz=39
SWSC **Sam W. Stewart** 38.97 313 ⇑P P 16 08 37.9 -0.3
baz=39
BC3 **Big Chuckw Mtn** 39.09 314 ⇓P P 16 08 39.3 +0.1
baz=39,SNR=6.3
U14A **Mt Trumbull** 39.14 320 ⇑P P 16 08 40.0 +0.5
baz=39
IRM **Iron Mountain** 39.15 315 ⇓P P 16 08 40.0 +0.3
baz=39
R16A **Teasdale** 39.28 323 ⇓P P 16 08 41.0 +0.3
baz=39
SRU **San Rafael** 39.29 325 ⇓P P 16 08 40.9 +0.2
baz=39
V13A **Grand Canyon W** 39.32 318 ⇑P P 16 08 41.1 +0.1
baz=39
MONP **Monument Peak** 39.39 313 ⇓P P 16 08 42.2 +0.5
baz=39
U13A **Pakoon Wash** 39.65 319 ⇓P P 16 08 44.5 +0.7
baz=40
BELC **Belle Mtn.** 39.66 315 ⇑P P 16 08 44.1 +0.1
baz=40,SNR=9.1
PFO **Pinyon Flat Ob** 39.78 314 ⇓P P 16 08 45.1 +0.1
baz=40,SNR=5.3
PFO **Pinyon Flat Ob** 39.78 314 eP P 16 08 45.2 +0.2
PFO pmax pmax
comp=Z,25nm,1.4s,mb4.8
PFO **Pinyon Flat Ob** 39.78 314 eP P 16 08 45.2 +0.2
comp=Z,25nm,1.4s,mb4.7
V12A **Nelson** 39.83 318 ⇑P P 16 08 45.7 +0.4
baz=40
MSU **Marysvale** 39.84 323 eP P 16 08 44.9 -0.5
MSU pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
MSU **Marysvale** 39.84 323 eP P 16 08 44.9 -0.5
comp=Z,2.7nm,1.0s,mb3.9
GMRC **Granite Mounta** 39.84 316 ⇓P P 16 08 46.3 +0.8
baz=40
T13A **Saint George** 39.97 320 ⇑P P 16 08 47.1 +0.6
baz=40
V11A **Goodsprings** 40.27 317 ⇓P P 16 08 49.3 +0.2
baz=40
S13A **Holt Ranch, En** 40.28 321 ⇓P P 16 08 49.6 +0.5
baz=40,SNR=5.7
MURC **Murrieta** 40.31 313 ⇑P P 16 08 49.6 +0.3
baz=40
HEC **Hector,Ludlow** 40.34 315 ⇑P P 16 08 50.3 +0.8
baz=40
TUQ **Turquoise Moun** 40.38 316 ⇓P P 16 08 50.5 +0.6
baz=40
R13A **O'Grain Ranch,** 40.72 321 ⇓P P 16 08 53.3 +0.7
baz=41
Q14A **Sevier Lake (B** 40.81 323 ⇓P P 16 08 53.8 +0.5
baz=41
SHOC **Shoshone** 40.88 317 ⇑P P 16 08 54.2 +0.2
baz=41
T11A **Corn Creek, Al** 40.94 319 ⇑P P 16 08 55.7 +1.2
baz=41
BFSC **Mount Baldy St** 40.96 314 ⇓P P 16 08 54.8 +0.1
baz=41
M17A **Scullys Gap (B** 41.01 328 ⇓P P 16 08 55.9 +0.9
baz=41
AGMN **Agassiz Refuge** 41.12 347 eP P 16 08 53.4 -2.3
comp=Z,39nm,1.4s,mb4.8
U10A **Ash Meadows, A** 41.20 317 ⇑P P 16 08 57.2 +0.5
baz=41
R12A **Pony Springs,** 41.21 321 ⇑P P 16 08 57.4 +0.8
baz=41
Q13A **Wheeler Ranch,** 41.23 322 ⇓P P 16 08 57.6 +0.7
baz=41
PDAR **Pinedale Array** 41.38 330 P P 16 08 56.5 -1.6
comp=Z,0.9nm,0.9s,mb3.4,baz=121,slow=11,SNR=5.0
PDAR PcP PcP 16 10 54.3 -1.7
comp=Z,1.6nm,1.1s,baz=140,slow=5.9,SNR=3.5
EDW2 **Edwards Air Fo** 41.52 314 ⇓P P 16 08 59.1 -0.2
baz=42,SNR=6.5
K18A **Toltan Ranch,** 41.53 329 ⇑P P 16 08 59.6 +0.3
baz=42
P13A **Bates Ranch, G** 41.55 323 ⇓P P 16 08 59.9 +0.5
baz=42
HWUT **Hardware Ranch** 41.59 327 P P 16 08 59.0 -0.7
comp=Z,9.7nm,1.1s,mb4.3
FURC **Furnace Creek,** 41.59 317 ⇓P P 16 09 00.0 +0.2
baz=42,SNR=6.8
LRMC **Laurel Mountai** 41.62 315 ⇑P P 16 09 00.4 +0.2
baz=42,SNR=7.8
MPMC **Manual Prospec** 41.79 316 ⇓P P 16 09 01.9 +0.4
baz=42,SNR=9.4
L16A **Fish Haven** 41.80 328 ⇑P P 16 09 02.1 +0.6
baz=42
R11A **Troy Canyon, C** 41.83 320 ⇓P P 16 09 02.1 +0.3
baz=42
J18A **Kendall Valley** 41.94 330 ⇑P P 16 09 03.1 +0.5
baz=42
N14A **Grayback Hills** 41.97 325 ⇑P P 16 09 03.0 +0.2
baz=42
Q11A **Duckwater** 42.17 321 ⇑P P 16 09 04.7 +0.1
baz=42
GRAC **Grapevine Rang** 42.22 317 ⇓P P 16 09 04.8 -0.2
baz=42
S10A **Tonopah Range,** 42.23 319 ⇑P P 16 09 05.6 +0.6
baz=42,SNR=9.8
ISA **Isabella** 42.27 315 ⇓P P 16 09 05.6 +0.2
baz=42
ISA **Isabella** 42.27 315 eP P 16 09 05.8 +0.4
ISA pmax pmax
comp=Z,18nm,1.4s,mb4.5
ISA **Isabella** 42.27 315 eP P 16 09 05.8 +0.4
comp=Z,18nm,1.4s,mb4.5
CFAA **Coronel Fontan** 42.30 161 P P 16 09 05.2 -0.4
comp=Z,1.3nm,1.0s,mb3.5,baz=334,slow=7.0,SNR=14
L15A **Malad City** 42.30 327 ⇑P P 16 09 06.1 +0.5
baz=42
J17A **Brown Place, J** 42.39 330 ⇓P P 16 09 06.7 +0.5
baz=42
M14A **Sheep Mountain** 42.49 326 ⇓P P 16 09 07.3 +0.2
baz=43
O12A **Currie** 42.49 323 ⇓P P 16 09 07.3 +0.1
baz=43
CPUP **Villa Florida** 42.60 145 P P 16 09 07.0 -1.2
comp=Z,2.9nm,0.8s,mb4.0,baz=306,slow=18,SNR=4.4
Q10A **Clear Creek Ra** 42.63 320 ⇓P P 16 09 08.7 +0.5
baz=43
VES **Vestal, Richgr** 42.78 315 ⇓P P 16 09 10.0 +0.4
baz=43,SNR=6.8
PKM **Peak Mountain** 42.84 313 ⇑P P 16 09 10.3 +0.2
baz=43
M13A **Montello** 42.86 325 eP P 16 09 08.6 -1.5
comp=Z,6.1nm,1.1s,mb4.2
ULM **Lac du Bonnet** 42.96 348 P P 16 09 08.8 -2.0
comp=Z,21nm,1.0s,mb4.8,baz=168,slow=7.6,SNR=12
ULM LR LR 16 28 16.1
comp=Z,198nm,20.9s,MS4.0,baz=132,slow=38
ULM **Lac du Bonnet** 42.96 348 eP P 16 09 08.2 -2.5
comp=Z,65nm,1.4s,mb5.2
N12A **Clover Valley,** 43.04 324 ⇓P P 16 09 12.2 +0.6
baz=43
K14A **Jones Ranch, D** 43.10 327 ⇓P P 16 09 12.3 +0.2
baz=43
SMMC **Simmler** 43.17 314 ⇑P P 16 09 12.7 0.0
baz=43
G18A **Lazy EL Ranch,** 43.30 332 ⇓P P 16 09 13.8 +0.2
baz=43
O10A **Cortez Mining,** 43.56 322 ⇓P P 16 09 16.0 +0.1
baz=44
NVAR **Mina Array Bea** 43.63 319 P P 16 09 16.2 -0.1
comp=Z,3.1nm,0.8s,mb4.1,baz=133,slow=7.1,SNR=22
NVAR PcP PcP 16 11 04.0 +0.4
comp=Z,1.0nm,0.8s,baz=131,slow=4.1,SNR=3.0
H16A **Russell Place,** 43.63 331 ⇓P P 16 09 16.7 +0.4
baz=44
RPN **Rapa Nui** 43.82 215 LR LR 16 22 50.2
comp=Z,472nm,18.6s,MS4.4,baz=358,slow=30
J13A **Cove Ranch, Pi** 44.22 327 ⇓P P 16 09 21.6 +0.6
baz=44
F17A **Fitzpatrick Pl** 44.24 332 ⇑P P 16 09 21.6 +0.4
baz=44
H15A **Lima** 44.26 329 ⇓P P 16 09 22.0 +0.7
baz=44
G16A **Moss Hill, Enn** 44.29 331 ⇑P P 16 09 21.9 +0.4
baz=44
L11A **Cat Creek Ranc** 44.29 325 ⇑P P 16 09 22.2 +0.6
baz=44
HLID **Hailey** 44.46 327 ⇑P P 16 09 22.9 0.0
baz=44
BOZ **Bozeman (W)** 44.51 331 ⇓P P 16 09 23.6 +0.2
baz=45
MCMT **McKenzie Canyo** 44.52 329 eP P 16 09 23.5 +0.1
comp=Z,1.7nm,0.7s,mb4.0
I13A **Wildhorse Cree** 44.54 328 ⇑P P 16 09 23.7 +0.1
baz=45
G15A **Dillon** 44.58 330 ⇑P P 16 09 24.1 +0.2
baz=45
J12A **Stokes Ranch,** 44.62 326 ⇓P P 16 09 24.1 -0.2
baz=45
L10A **Juniper Basin** 44.65 324 ⇓P P 16 09 24.6 +0.1
baz=45
K11A **Parker Ranch,** 44.83 325 ⇑P P 16 09 25.8 -0.1
baz=45
D18A **Linhart Farms,** 44.84 334 ⇑P P 16 09 26.2 +0.2
baz=45
I12A **Atlanta** 45.00 327 ⇓P P 16 09 27.6 +0.3
baz=45
LRM **Limekiln Ridge** 45.03 331 eP P 16 09 28.0 +0.5
comp=Z,28nm,0.6s,mb5.3
MFID **Camas Ranch** 45.13 326 ⇑P P 16 09 28.6 +0.3
baz=45
WVOR **Wild Horse Val** 46.14 323 eP P 16 09 34.9 -1.4
WVOR pmax pmax
comp=Z,15nm,1.2s,mb4.8
WVOR **Wild Horse Val** 46.14 323 eP P 16 09 34.9 -1.4
comp=Z,15nm,1.2s,mb4.8
SCHQ **Schefferville** 47.88 12 LR LR 16 30 50.3
comp=Z,342nm,18.6s,MS4.3,baz=285,slow=37
FFC **Flin Flon** 48.52 345 eP P 16 09 52.7 -2.0
FFC pmax pmax
comp=Z,11nm,1.0s,mb4.8
FFC **Flin Flon** 48.52 345 eP P 16 09 52.7 -2.0
comp=Z,11nm,1.0s,mb4.9
PLCA **Paso Flores** 50.33 168 P P 16 10 07.2 -1.4
comp=Z,9.5nm,0.9s,mb4.8,baz=340,slow=10,SNR=16
FCC **Fort Churchill** 50.83 352 eP P 16 10 10.3 -1.9
comp=Z,1.1nm,1.3s,mb3.6
EDM **Edmonton** 50.93 337 eP P 16 10 13.8 +0.8
YKA **Yellowknife Ar** 58.59 343 P P 16 11 07.1 -1.2
comp=Z,7.6nm,1.0s,mb4.7,baz=138,slow=7.0,SNR=29
YKA **Yellowknife Ar** 58.59 343 P P 16 11 07.1 -1.2
DLBC **Dease Lake** 61.38 334 eP P 16 11 27.1 -0.5
RES **Resolute Bay** 66.45 357 eP P 16 12 00.4 -0.3
RES pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
RES **Resolute Bay** 66.45 357 eP P 16 12 00.4 -0.3
comp=Z,6.7nm,0.8s,mb4.7
DAWY **Dawson** 68.15 337 P P 16 12 10.8 -0.8
INK **Inuvik** 68.28 342 eP P 16 12 12.3 -0.1
INK pmax pmax
comp=Z,24nm,1.2s
INK **Inuvik** 68.28 342 eP P 16 12 12.3 -0.1
comp=Z,24nm,1.2s,mb5.1
BMRM **Bremner River** 69.08 333 eP P 16 12 18.2 +0.7
EGAK **Eagle** 69.15 337 eP P 16 12 17.2 -0.6
comp=Z,11nm,1.0s,mb4.7
SUMG **Summit** 69.26 13 eP P 16 12 18.3 -0.2
comp=Z,13nm,0.8s,mb4.9
PPT **Papeete** 70.87 248 eLR LR 16 11 40.9
comp=Z,209nm,23.8s
RC01 **Rabbit Creek A** 71.49 332 P P 16 12 31.4 -0.9
comp=Z,12nm,1.1s,mb4.7
COLA **College** 71.83 336 eP P 16 12 33.3 -0.9
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA **College** 71.83 336 eP P 16 12 33.3 -0.9
comp=Z,4.3nm,0.8s,mb4.4
MCK **McKinley** 71.91 335 eP P 16 12 34.9 +0.2
MCK pmax pmax
comp=Z,16nm,1.1s,mb4.9
MCK **McKinley** 71.91 335 eP P 16 12 34.9 +0.2
comp=Z,16nm,1.1s,mb4.9
OHAK **Old Harbor** 72.32 327 eP P 16 12 37.0 -0.3
comp=Z,18nm,1.0s,mb5.0
TRF **Thorofare Moun** 72.41 334 eP P 16 12 37.2 -0.4
comp=Z,12nm,1.0s,mb4.8
KTH **Kantishna Hill** 72.71 334 eP P 16 12 38.9 -0.6
comp=Z,12nm,1.1s,mb4.8
BPAW **Bear Paw Mtn.** 72.89 335 eP P 16 12 39.5 -1.1
comp=Z,15nm,1.1s,mb4.8
PPLA **Purkeypile** 73.09 333 eP P 16 12 40.9 -0.8
comp=Z,6.9nm,0.7s,mb4.7
COLD **Coldfoot** 73.49 338 eP P 16 12 44.1 +0.1
comp=Z,15nm,1.2s,mb4.8
CHGN **Chignik** 74.95 326 eP P 16 12 51.5 -1.2
ESDC **Sonseca Array** 76.01 51 P P 16 12 57.6 -1.6
comp=Z,0.2nm,0.3s,mb3.6,baz=285,slow=7.3,SNR=2.1
TIC **Toumodi** 77.00 85 ePKP1 P 16 13 08.1 +2.8
comp=Z,13nm,0.2s,mb5.5
LIC **Lamto** 77.05 86 ePKP1 P 16 13 08.3 +2.7
comp=Z,39nm,0.9s,mb5.3
DBIC **Dimbokro** 77.16 85 P P 16 13 05.6 -0.6
comp=Z,8.1nm,1.0s,mb4.6,baz=254,slow=6.9,SNR=5.9
KIC **Kosan Boka** 77.31 85 ePKP1 P 16 13 07.4 +0.3
comp=Z,104nm,1.8s,mb5.5
UNV **Unalaska Valle** 79.43 323 eP P 16 13 18.0 0.0
KBS **Kingsbay** 82.57 11⇑eP P 16 13 37.6 +3.3

KBS pmax pmax
comp=Z,22nm,1.7s,mb4.9
TORD Torodi Ar. Bea 82.77 78 P P 16 13 36.9 +0.4
comp=Z,1.5nm,0.8s,mb4.0,baz=268,slow=6.3,SNR=6.8
NB2 NORSAR Subarra 84.52 29 P P 16 13 43.7 -0.9
comp=Z,13nm,1.2s,mb4.9,baz=276,slow=5.3
NOA NORSAR Array B 84.52 29 P P 16 13 43.8 -0.8
comp=Z,3.8nm,1.0s,mb4.5,baz=276,slow=5.0,SNR=4.0
NOA LR LR 16 50 37.2
comp=Z,80nm,18.8s,MS4.1,baz=285,slow=35
CLL Collm 87.00 39 *i* P P 16 13 58.6 +1.5
CLL pmax pmax
comp=Z,14nm,1.5s,mb5.0
CLL Collm 87.00 39 *i* P P 16 13 58.6 +1.5
comp=Z,14nm,1.5s,mb5.0
CLL Collm 87.00 39 *i* P P 16 13 58.6 +1.5
comp=Z,14nm,1.5s,mb5.0
GERES GERESS Array B 87.88 41 P P 16 14 00.5 -0.9
comp=Z,0.2nm,0.3s,mb3.8,baz=284,slow=8.8,SNR=2.9
GERES LR LR 16 46 12.3
comp=Z,232nm,19.5s,MS4.6,baz=330,slow=31
ARCES ARCESS Array B 88.33 20 P P 16 14 01.9 -1.2
comp=Z,3.8nm,0.9s,mb4.6,baz=258,slow=6.1,SNR=7.0
BILL Bilibino 89.77 339 *e*P P 16 14 10.0 +0.1
BILL *i* 16 14 14.4
BILL *e* 16 14 20.7
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
BILL Bilibino 89.77 339 *e*P P 16 14 09.7 -0.1
comp=Z,8.5nm,0.9s,mb5.1
APA Apatity 91.78 20⇑*e*P P 16 14 13.0 -6.3
APA pmax pmax
comp=Z,27nm,1.4s,mb5.4
APA MLR MLR
comp=Z,300nm,17.0s,MS4.8
VNA2 Neumayer--Watz 93.31 161 *e*P P 16 14 25.5 -0.6
TIXI Tiksi 97.26 350 *e*P P 16 14 43.3 -1.0
TIXI pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
TIXI Tiksi 97.26 350 *e*P P 16 14 43.2 -1.1
comp=Z,3.3nm,0.8s,mb4.8
MDJ Mudanjiang 119.53 334 PKP PKPdf 16 19 57.8 -3.9
CN2 Changchun 121.93 336 *e*PKP PKPdf 16 20 06.3 -0.1
CN2 PP PP 16 21 46.8 +7.6
CN2 LR LR
comp=N,290nm,17.0s,MS5.0
CN2 LR LR
comp=E,160nm,17.0s,MS5.0
CN2 LR LR
comp=Z,200nm,14.0s,MS4.9
SONM Songino Array 123.27 353 PKP PKPdf 16 20 09.8 +1.0
comp=Z,0.4nm,0.5s,baz=41,slow=1.9,SNR=2.9
MKAR Makanchi Array 123.31 12 PKP PKPdf 16 20 06.8 -2.1
comp=Z,0.3nm,0.8s,baz=345,slow=3.6,SNR=3.4
MKAR Makanchi Array 123.31 12 PKP PKPdf 16 20 06.8 -2.1
AAK Ala-Archa 125.00 20⇑*i*PKIKP PKPdf 16 20 12.4 +0.1
AAK pmax pmax
comp=Z,3.0nm,2.5s
KSRS Korea Array 125.95 330 PKP PKPdf 16 20 12.3 -2.0
comp=Z,2.0nm,0.8s,baz=1.9,slow=2.2,SNR=7.3
WMQ Urumqi 127.16 9 *e*PKP PKPdf 16 20 15.5 -0.9
BJI Beijing 128.56 341 PKP PKPdf 16 20 18.3 -0.9
BJI SS SS 16 39 37.5 -0.6
BJI LR LR
comp=N,390nm,20.3s,MS5.2
BJI LR LR
comp=E,230nm,19.4s,MS5.2
BJI LR LR
comp=Z,310nm,21.1s,MS5.0
HHC Hu-ho-hao-te 129.09 346 *e*PKP PKPdf 16 20 19.3 -0.9
HHC PP PP 16 22 31.3 +4.6
HHC PKS 16 23 55.0
HHC SKS SKSdf 16 27 25.3 -5.4
HHC SKKS SKKSac 16 29 20.0 -3.9
HHC SS SS 16 39 45.5 +1.1
HHC AMB AMB
comp=Z,630nm,9.0s
HHC LR LR
comp=N,220nm,20.0s,MS5.0
HHC LR LR
comp=E,200nm,22.0s,MS5.0
HHC LR LR
comp=Z,200nm,21.6s,MS4.8
NJ2 Nanjing 134.63 334 *e*PKP PKPdf 16 20 30.3 -0.6
LZH Lanzhou 135.16 352 *e*PKP PKPdf 16 20 30.0 -1.8
LZH PP PP 16 23 09.0 +3.4
LZH PKS 16 24 05.5
LZH SKS SKSdf 16 27 36.5 -5.3
LZH SKKS SKKSac 16 29 56.5 -4.7
LZH AMB AMB
comp=Z,94nm,6.2s
LZH LR LR
comp=E,180nm,18.8s
LZH LR LR
comp=Z,220nm,19.7s,MS4.9
CD2 Chengdu 140.26 351 PKP PKPdf 16 20 39.3 -2.0
CD2 PP PP 16 23 40.8 +3.4
CD2 PKS 16 24 13.8
CD2 SKS SKSdf 16 27 45.0 -5.6
CD2 SKKS SKKSac 16 30 26.8 -4.8
CD2 SS SS 16 41 58.3 -0.4
CD2 LR LR
comp=N,130nm,7.1s
CD2 LR LR
comp=Z,140nm,9.5s
ASAR Alice Springs 141.82 242 PKhKP 16 20 37.5
comp=Z,0.9nm,0.7s,baz=106,slow=3.1,SNR=5.3
ASAR PKP PKPdf 16 20 41.4 -2.9
comp=Z,1.9nm,1.0s,baz=107,slow=2.3,SNR=13
GYA Guiyang 144.00 345 PKP PKPdf 16 20 47.0 -1.1
GYA PP PP 16 24 03.0 +2.8
GYA PKS 16 24 20.5
GYA SKKS SKKSac 16 30 49.3 -4.1
GYA SS SS 16 42 41.0 -1.3
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,230nm,20.9s,MS5.0
GYA LR LR
comp=E,190nm,22.8s,MS5.0
GYA LR LR
comp=Z,200nm,23.1s,MS4.8
KMI Kunming 146.09 351 PKPbc PKPbc 16 20 52.0 -0.6
CMAR Chiang Mai Arr 153.10 356 PKP PKPdf 16 21 02.5 -0.6
comp=Z,1.1nm,0.9s,baz=338,slow=2.0,SNR=6.7
CMAR PKPab PKPab 16 21 19.5 -2.1
comp=Z,2.6nm,0.9s,baz=337,slow=3.8,SNR=8.6

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*CSEM **26** 16:02:12.5±0.1, 42.°67N×1.°45W, h10km, ML3.1/18, Error ellipse: s-maj=2.8km s-min=2.1km az=144.0*
*LDG **26** 16:02:13.7±0.1, 42.°69N×1.°45W, h2km, Md3.1/2, Ml3.2/16, Error ellipse: s-maj=1.5km s-min=1.2km az=142.0*
*MDD **26** 16:02:13.4±0.2, 42.°69N×1.°44W, h0km, mbLg2.6/37, Error ellipse: s-maj=1.8km s-min=1.3km az=9.0, PRIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*NEIC **26** 16:02:13.3, 42.°69N×1.°43W, h0km, ML3.2(STR), ML3.2(LDG), MN2.7(MDD), After MDD.*
*STR **26** 16:02:13.5±0.5, 42.°70N×1.°47W, h5km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*INMG **26** 16:02:14.4±1.6, 42.°68N×1.°47W, h11km±4km, Ml2.7, Error ellipse: s-maj=2.7km s-min=1.9km az=66.0*
ISC 26 16:02:12.7±0.2, **42.°70N**±0.°02×**1.°47W**±0.°02, **h15**km±1km, **n278**, σ1.°30/454, **5C-8D, Pyrenees**

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

IUNC Unciti 0.06 339 ⇑Pg **Pg** **16 02 15.0 -0.5**
5μm,0.3s,SNR=18
IUNC Lg 16 02 16.8
5μm,0.1s,SNR=7.9
IUNC Unciti 0.06 339 ⇑Pg **Pg** **16 02 15.0 -0.5**
5μm,0.3s,SNR=18
IUNC Lg 16 02 16.8
5μm,0.1s,SNR=7.9
IUNC Unciti 0.06 339 Pg **Pg** **16 02 15.0 -0.5**
5μm,0.3s,SNR=18
IUNC Lg 16 02 16.8
5μm,0.1s,SNR=7.9
EARA Aranguren 0.10 311 ⇓Pg **Pg** **16 02 15.8 -0.2**
1μm,0.1s,SNR=18
EARA Lg 16 02 18.2
6μm,0.1s,SNR=7.9
EARA Aranguren 0.10 311 ⇓Pg **Pg** **16 02 15.8 -0.2**
1μm,0.1s,SNR=18
EARA Lg 16 02 18.2
6μm,0.1s,SNR=7.9
EARA Aranguren 0.10 311 Pg **Pg** **16 02 15.8 -0.2**
1μm,0.1s,SNR=18
EARA Lg 16 02 18.2
6μm,0.1s,SNR=7.9
IPRE Itoiz 0.13 40 ⇓Pg **Pg** **16 02 15.7 -0.7**
194nm,0.1s,SNR=18
IPRE Lg 16 02 17.9
186nm,0.1s,SNR=7.9
IPRE Itoiz 0.13 40 ⇓Pg **Pg** **16 02 15.7 -0.7**
194nm,0.1s,SNR=18
IPRE Lg 16 02 17.9
186nm,0.1s,SNR=7.9
IPRE Itoiz 0.13 40 Pg **Pg** **16 02 15.6 -0.7**
194nm,0.1s,SNR=18
IPRE Lg 16 02 17.9
186nm,0.1s,SNR=7.9
IZUN Zunzarren 0.16 4 ⇓Pg **Pg** **16 02 16.5 -0.2**
101nm,0.1s,SNR=18
IZUN Lg 16 02 19.2
530nm,0.1s,SNR=7.9
IZUN Zunzarren 0.16 4 ⇓Pg **Pg** **16 02 16.5 -0.2**
101nm,0.1s,SNR=18
IZUN Lg 16 02 19.2
530nm,0.1s,SNR=7.9
IZUN Zunzarren 0.16 4 Pg **Pg** **16 02 16.5 -0.2**
101nm,0.1s,SNR=18
IZUN Lg 16 02 19.2
530nm,0.1s,SNR=7.9
IUSE Utxeti 0.25 347 ⇓Pg **Pg** **16 02 18.4 +0.3**
112nm,0.1s,SNR=18
IUSE Lg 16 02 22.7
130nm,0.1s,SNR=9.4
IUSE Utxeti 0.25 347 ⇓Pg **Pg** **16 02 18.4 +0.3**
112nm,0.1s,SNR=18
IUSE Lg 16 02 22.7
130nm,0.1s,SNR=9.4
IUSE Utxeti 0.25 347 Pg **Pg** **16 02 18.4 +0.3**
112nm,0.1s,SNR=18
IUSE Lg 16 02 22.7
130nm,0.1s,SNR=9.4
SJPF Ste Jean 0.45 24 *e*Pg **Pg** **16 02 21.9 +0.2**
SNR=1.0
SJPF *e*Sg **Sg** **16 02 28.0 +0.3**
277nm,0.3s
SJPF Ste Jean 0.45 24 Pg **Pg** **16 02 21.9 +0.2**
SJPF Lg 16 02 28.0
139nm,0.3s
SJPF Ste Jean 0.45 24 Pg **Pg** **16 02 21.9 +0.2**
SJPF Lg 16 02 28.0
139nm,0.3s
SJPF Ste Jean 0.45 24 *e*Pg **Pg** **16 02 21.9 +0.2**
SNR=1.0
SJPF *e*Sg **Sg** **16 02 28.0 +0.3**
139nm,0.3s
ELIZ Elizondo 0.46 355 ⇑Pg **Pg** **16 02 22.2 +0.3**
ELIZ Lg 16 02 28.5
ELIZ Elizondo 0.46 355 ⇑Pg **Pg** **16 02 22.2 +0.3**
48nm,0.1s,SNR=18
ELIZ Lg 16 02 28.5
55nm,0.2s
ELIZ Elizondo 0.46 355 ⇑Pg **Pg** **16 02 22.2 +0.3**
48nm,0.1s,SNR=18
ELIZ Lg 16 02 28.5
55nm,0.2s
ELIZ Elizondo 0.46 355 Pg **Pg** **16 02 22.2 +0.3**
48nm,0.1s,SNR=18
ELIZ Lg 16 02 28.5
55nm,0.2s
EALK Alkurruntz 0.52 357 Pg **Pg** **16 02 23.1 +0.2**
EALK Lg 16 02 30.5
EALK Alkurruntz 0.52 357 Pg **Pg** **16 02 23.1 +0.2**
21nm,0.1s,SNR=7.9
EALK Lg 16 02 30.5
28nm,0.1s
EALK Alkurruntz 0.52 357 Pg **Pg** **16 02 23.1 +0.2**
21nm,0.1s,SNR=7.9
EALK Lg 16 02 30.5
28nm,0.1s
EALK Alkurruntz 0.52 357 Pg **Pg** **16 02 23.1 +0.2**
21nm,0.1s,SNR=7.9
EALK Lg 16 02 30.5
28nm,0.1s
OSSF Osses 0.57 16 Pg **Pg** **16 02 23.9 -0.1**
OSSF Osses 0.57 16 Pg **Pg** **16 02 23.9 0.0**
OSSF Lg 16 02 32.0
OSSF Osses 0.57 16 Pg **Pg** **16 02 23.9 0.0**
OSSF Lg 16 02 32.0
OSSF Osses 0.57 16 Pg **Pg** **16 02 23.9 -0.1**
ORDF Ordiarp 0.64 37 Pg **Pg** **16 02 25.4 +0.1**
ORDF Sg **Sg** **16 02 34.9 +1.1**
ORDF Ordiarp 0.64 37 Pg **Pg** **16 02 25.6 +0.2**
ORDF Lg 16 02 33.4
ORDF Ordiarp 0.64 37 Pg **Pg** **16 02 25.6 +0.2**
ORDF Lg 16 02 33.4
ORDF Ordiarp 0.64 37 Pg **Pg** **16 02 25.4 +0.1**
ORDF Sg **Sg** **16 02 34.9 +1.1**
FDAF Les Forges d'A 0.68 80 Pg **Pg** **16 02 25.9 0.0**
FDAF Lg 16 02 37.1
FDAF Les Forges d'A 0.68 80 Pg **Pg** **16 02 25.9 0.0**
FDAF Lg 16 02 37.1
ATE Arette 0.68 56 Pg **Pg** **16 02 26.4 +0.3**
ATE Sg **Sg** **16 02 35.8 +0.7**
ATE Arette 0.68 56 Pg **Pg** **16 02 26.4 +0.3**
ATE Sg **Sg** **16 02 35.8 +0.7**
ETSF Etsaut 0.70 74 *e*Pg **Pg** **16 02 26.7 +0.3**
SNR=1.0
ETSF *e*Sg **Sg** **16 02 36.6 +1.0**
197nm,0.4s,SNR=1.0
ETSF Etsaut 0.70 74 Pg **Pg** **16 02 26.7 +0.3**
ETSF Lg 16 02 36.6
99nm,0.4s
ETSF Etsaut 0.70 74 Pg **Pg** **16 02 26.7 +0.3**
ETSF Lg 16 02 36.6
99nm,0.4s
ETSF Etsaut 0.70 74 *e*Pg **Pg** **16 02 26.7 +0.3**
SNR=1.0
ETSF *e*Sg **Sg** **16 02 36.6 +1.0**
99nm,0.4s,SNR=1.0
ECRI Cripan 0.77 263 Pg **Pg** **16 02 28.5 +0.8**
ECRI Lg 16 02 39.4
ECRI Cripan 0.77 263 Pg **Pg** **16 02 28.5 +0.8**
21nm,0.2s,SNR=7.9
ECRI Lg 16 02 39.4
18nm,0.1s,SNR=7.9
ECRI Cripan 0.77 263 Pg **Pg** **16 02 28.5 +0.8**
21nm,0.2s,SNR=7.9
ECRI Lg 16 02 39.4
18nm,0.1s,SNR=7.9
ECRI Cripan 0.77 263 Pg **Pg** **16 02 28.5 +0.8**
SNR=7.9
ECRI Lg 16 02 39.4
18nm,0.1s,SNR=7.9
REYF Montagne du Re 0.87 65 Pg **Pg** **16 02 29.4 -0.2**
REYF Sg **Sg** **16 02 42.4 +1.3**
REYF Montagne du Re 0.87 65 Pg **Pg** **16 02 29.4 -0.3**
REYF Lg 16 02 41.9
REYF Montagne du Re 0.87 65 Pg **Pg** **16 02 29.4 -0.3**
REYF Lg 16 02 41.9
REYF Montagne du Re 0.87 65 Pg **Pg** **16 02 29.4 -0.2**
REYF Sg **Sg** **16 02 42.4 +1.3**
VIEF Viey 1.11 80 Pg **Pg** **16 02 33.7 -0.5**
VIEF Viey 1.11 80 Pg **Pg** **16 02 33.7 -0.5**
VIEF Lg 16 02 49.4
VIEF Viey 1.11 80 Pg **Pg** **16 02 33.7 -0.5**
VIEF Lg 16 02 49.4
VIEF Viey 1.11 80 Pg **Pg** **16 02 33.7 -0.5**
LABF Labassere 1.19 73 Pg **Pg** **16 02 35.5 -0.1**
LABF Sg **Sg** **16 02 52.6 +1.5**
LABF Labassere 1.19 73 Pg **Pg** **16 02 35.6 0.0**
LABF Lg 16 02 52.7
LABF Labassere 1.19 73 Pg **Pg** **16 02 35.6 0.0**
LABF Lg 16 02 52.7
LABF Labassere 1.19 73 Pg **Pg** **16 02 35.5 -0.1**
LABF Sg **Sg** **16 02 52.6 +1.5**
EBIE Bielsa 1.19 90 Pg **Pg** **16 02 35.6 0.0**
EBIE Lg 16 02 53.1
EBIE Bielsa 1.19 90 Pg **Pg** **16 02 35.6 0.0**
6.7nm,0.2s,SNR=7.9
EBIE Lg 16 02 53.1
102nm,0.2s,SNR=7.9
EBIE Bielsa 1.19 90 Pg **Pg** **16 02 35.6 0.0**
6.7nm,0.2s,SNR=7.9
EBIE Lg 16 02 53.1
102nm,0.2s,SNR=7.9
EBIE Bielsa 1.19 90 Pg **Pg** **16 02 35.6 -0.1**
6.7nm,0.2s,SNR=7.9
EBIE Lg 16 02 53.1
102nm,0.2s,SNR=7.9
ESAC San Caprasio 1.23 142 Pg **Pg** **16 02 35.8 -0.6**
ESAC Lg 16 02 52.9
ESAC San Caprasio 1.23 142 Pg **Pg** **16 02 35.8 -0.6**
10nm,0.1s,SNR=69
ESAC Lg 16 02 52.8
61nm,0.2s,SNR=17
ESAC San Caprasio 1.23 142 Pg **Pg** **16 02 35.8 -0.6**
10nm,0.1s,SNR=69
ESAC Lg 16 02 52.8
61nm,0.2s,SNR=17
ESAC San Caprasio 1.23 142 Pg **Pg** **16 02 35.8 -0.6**
10nm,0.1s,SNR=69
ESAC Lg 16 02 52.8
61nm,0.2s,SNR=17
RESF Ens 1.34 85 Pg **Pg** **16 02 38.0 -0.4**
RESF Sg **Sg** **16 02 58.1 +2.3**
RESF Ens 1.34 85 Pg **Pg** **16 02 37.7 -0.7**
RESF Lg 16 02 57.8
RESF Ens 1.34 85 Pg **Pg** **16 02 37.7 -0.7**
RESF Lg 16 02 57.8
RESF Ens 1.34 85 Pg **Pg** **16 02 38.0 -0.4**
RESF Sg **Sg** **16 02 58.1 +2.3**
EPF Esparros 1.37 76 *e*Pn **Pn** **16 02 40.1 +2.8**
SNR=1.0
EPF *e*Sg **Sg** **16 02 57.0 +0.1**
318nm,0.4s,SNR=1.0
EPF Esparros 1.37 76 *e*Pg **Pg** **16 02 38.4 -0.7**
EPF *e*Pn **Pn** **16 02 40.1 +2.8**
EPF *e*Sg **Sg** **16 02 57.0 +0.1**
EPF Esparros 1.37 76 Pg **Pg** **16 02 38.4 -0.7**
EPF Lg 16 02 57.0
159nm,0.4s
EPF Esparros 1.37 76 Pg **Pg** **16 02 38.4 -0.7**
EPF Lg 16 02 57.0
159nm,0.4s
EPF Esparros 1.37 76 *e*Pg **Pg** **16 02 38.4 -0.7**
EPF Esparros 1.37 76 *e*Pn **Pn** **16 02 40.1 +2.8**
SNR=1.0
EPF *e*Sg **Sg** **16 02 57.0 +0.1**
159nm,0.4s,SNR=1.0
ELAN Lanestosa 1.53 291 Pg **Pg** **16 02 42.1 -0.1**
ELAN Lg 16 03 03.9
ELAN Lanestosa 1.53 291 Pg **Pg** **16 02 42.1 -0.1**
34nm,0.2s,SNR=7.9
ELAN Lg 16 03 03.9
9.9nm,0.2s,SNR=6.4
ELAN Lanestosa 1.53 291 Pg **Pg** **16 02 42.1 -0.1**
34nm,0.2s,SNR=7.9
ELAN Lg 16 03 03.9
9.9nm,0.2s,SNR=6.4
ELAN Lanestosa 1.53 291 Pg **Pg** **16 02 42.1 -0.1**
34nm,0.2s,SNR=7.9
ELAN Lg 16 03 03.9
9.9nm,0.2s,SNR=6.4
MELF Melles 1.65 83 Pg **Pg** **16 02 44.6 +0.2**
MELF Sg **Sg** **16 03 07.4 +1.5**
MELF Melles 1.65 83 Pg **Pg** **16 02 44.0 -0.4**
MELF Lg 16 03 06.3
MELF Melles 1.65 83 Pg **Pg** **16 02 44.0 -0.4**
MELF Lg 16 03 06.3
MELF Melles 1.65 83 Pg **Pg** **16 02 44.6 +0.2**
MELF Sg **Sg** **16 03 07.4 +1.5**
MLS Moulis 1.91 81 Lg 16 03 11.6
MLS Moulis 1.91 81 Lg 16 03 11.6
ETOR Torete 1.93 193 Pg **Pn** **16 02 47.5 +2.4**
ETOR Lg 16 03 14.3
ETOR Torete 1.93 193 Pg **Pn** **16 02 47.5 +2.4**
65nm,0.3s,SNR=7.9
ETOR Lg 16 03 14.3
168nm,0.5s,SNR=10
ETOR Torete 1.93 193 Pg **Pn** **16 02 47.5 +2.4**
65nm,0.3s,SNR=7.9
ETOR Lg 16 03 14.3
168nm,0.5s,SNR=10
ETOR Torete 1.93 193 Pg **Pn** **16 02 47.5 +2.4**
65nm,0.3s,SNR=7.9
ETOR Lg 16 03 14.3
168nm,0.5s,SNR=10
SALF Salau 1.96 87 Pg **Pn** **16 02 48.0 +2.6**
SALF Lg 16 03 15.8
SALF Salau 1.96 87 Pg **Pn** **16 02 48.0 +2.6**
SALF Lg 16 03 15.8
ERTA Horta de San J 2.21 142 Pn **Pn** **16 02 49.6 +0.8**
ERTA Sn **Sn** **16 03 16.2 +0.4**
ERTA Lg 16 03 22.0
ERTA Horta de San J 2.21 142 Pn **Pn** **16 02 49.6 +0.8**
5.9nm,0.3s,SNR=7.4
ERTA Sn **Sn** **16 03 16.2 +0.4**
8.7nm,0.4s,SNR=5.9
ERTA Lg 16 03 22.0
8.7nm,0.1s,SNR=7.9
ERTA Horta de San J 2.21 142 Pn **Pn** **16 02 49.6 +0.8**
5.9nm,0.3s,SNR=7.4
ERTA Sn **Sn** **16 03 16.2 +0.4**
8.7nm,0.4s,SNR=5.9
ERTA Lg 16 03 22.0
8.7nm,0.1s,SNR=7.9
ERTA Horta de San J 2.21 142 Pn **Pn** **16 02 49.6 +0.8**
5.9nm,0.3s,SNR=7.4
ERTA Sn **Sn** **16 03 16.2 +0.4**
8.7nm,0.4s,SNR=5.9
ERTA Lg 16 03 22.0
8.7nm,0.1s,SNR=7.9
GRBF Gourbit 2.22 85 Pg **Pg** **16 02 54.5 -0.8**
GRBF Lg 16 03 19.3
GRBF Gourbit 2.22 85 Pg **Pg** **16 02 54.5 -0.8**
GRBF Lg 16 03 19.3
EPOB Poblet 2.33 125 Pn **Pn** **16 02 51.3 +0.8**
EPOB Sn **Sn** **16 03 19.1 +0.2**
EPOB Lg 16 03 25.4
EPOB Poblet 2.33 125 Pn **Pn** **16 02 51.3 +0.8**
3.8nm,0.3s,SNR=26
EPOB Sn **Sn** **16 03 19.1 +0.2**
15nm,0.3s,SNR=7.0
EPOB Lg 16 03 26.2
11nm,0.2s,SNR=7.3
EPOB Poblet 2.33 125 Pn **Pn** **16 02 51.3 +0.8**
3.8nm,0.3s,SNR=26
EPOB Sn **Sn** **16 03 19.1 +0.2**
15nm,0.3s,SNR=7.0
EPOB Lg 16 03 26.2
11nm,0.2s,SNR=7.3
EPOB Poblet 2.33 125 Pn **Pn** **16 02 51.3 +0.8**
3.8nm,0.3s,SNR=26
EPOB Sn **Sn** **16 03 19.1 +0.2**
15nm,0.3s,SNR=7.0
EPOB Lg 16 03 25.4
11nm,0.2s,SNR=7.3
EMIR Miracle 2.36 109 Pn **Pn** **16 02 51.6 +0.7**
EMIR Pg **Pg** **16 02 56.1 -1.9**
EMIR Sn **Sn** **16 03 19.9 +0.3**
EMIR Lg 16 03 26.4
EMIR Miracle 2.36 109 Pn **Pn** **16 02 51.6 +0.7**
SNR=7.9
EMIR Pg **Pg** **16 02 56.1 -1.9**
SNR=7.9
EMIR Sn **Sn** **16 03 19.9 +0.3**
SNR=7.9
EMIR Lg 16 03 26.4
12nm,0.2s,SNR=7.9
EMIR Miracle 2.36 109 Pn **Pn** **16 02 51.6 +0.7**
SNR=7.9
EMIR Pg **Pg** **16 02 56.1 -1.9**
SNR=7.9
EMIR Sn **Sn** **16 03 19.9 +0.3**
SNR=7.9
EMIR Lg 16 03 26.4
12nm,0.2s,SNR=7.9
EMIR Miracle 2.36 109 Pn **Pn** **16 02 51.6 +0.7**
SNR=7.9
EMOS Mosqueruela 2.46 162 Pn **Pn** **16 02 54.2 +2.0**
EMOS Pg **Pg** **16 02 57.9 -1.9**
EMOS Lg 16 03 30.5
EMOS Mosqueruela 2.46 162 Pn **Pn** **16 02 53.4 +1.2**
7.5nm,0.3s,SNR=9.2
EMOS Pg **Pg** **16 02 57.9 -1.9**
1.4nm,0.2s,SNR=5.6
EMOS Lg 16 03 30.5
14nm,0.3s,SNR=5.0

EMOS Mosqueruela 2.46 162 Pn **Pn 16 02 53.4 +1.2**
7.5nm,0.3s,SNR=9.2
EMOS Pg **Pg 16 02 57.9 -1.9**
1.4nm,0.2s,SNR=5.6
EMOS Lg 16 03 30.5
14nm,0.3s,SNR=5.0
EMOS Mosqueruela 2.46 162 Pn **Pn 16 02 54.2 +2.0**
7.5nm,0.3s,SNR=9.2
EMOS Mosqueruela 2.46 162 Pg **Pg 16 02 57.9 -1.9**
1.4nm,0.2s,SNR=5.6
EMOS Lg 16 03 30.5
14nm,0.3s,SNR=5.0
VALF Valcebollere 2.59 96 Pg **Pg 16 02 57.8 -4.6**
VALF Lg 16 03 31.9
VALF Valcebollere 2.59 96 Pg **Pg 16 02 57.8 -4.6**
VALF Lg 16 03 31.9
LFF La Frestale 2.75 35 *e*Pn **Pn 16 02 57.9 +1.6**
SNR=1.0
LFF *e*Sn **Sn 16 03 28.5 -0.7**
LFF La Frestale 2.75 35 Pn **Pn 16 02 57.9 +1.6**
LFF Sn **Sn 16 03 28.5 -0.7**
LFF La Frestale 2.75 35 Pn **Pn 16 02 57.9 +1.6**
LFF Sn **Sn 16 03 28.5 -0.7**
LFF La Frestale 2.75 35 *e*Pn **Pn 16 02 57.9 +1.6**
SNR=1.0
LFF *e*Sn **Sn 16 03 28.5 -0.7**
MTLF Montolieu 2.78 76 *e*Pg **Pg 16 03 03.2 -2.8**
MTLF *e*Sn **Sn 16 03 29.1 -0.9**
MTLF *e*Sg **Sg 16 03 40.6 -1.4**
18nm,0.3s
MTLF Montolieu 2.78 76 *e*Pn **Pn 16 02 58.8 +2.1**
MTLF *e*Pg **Pg 16 03 03.2 -2.8**
MTLF *e*Sn **Sn 16 03 29.1 -0.9**
MTLF *e*Sg **Sg 16 03 40.6 -1.4**
MTLF Montolieu 2.78 76 Pn **Pn 16 02 58.8 +2.1**
MTLF Pg **Pg 16 03 03.2 -2.8**
MTLF Sn **Sn 16 03 29.1 -0.9**
MTLF Lg 16 03 40.6
8.8nm,0.3s
MTLF Montolieu 2.78 76 Pn **Pn 16 02 58.8 +2.1**
MTLF Pg **Pg 16 03 03.2 -2.8**
MTLF Sn **Sn 16 03 29.1 -0.9**
MTLF Lg 16 03 40.6
8.8nm,0.3s
MTLF Montolieu 2.78 76 *e*Pn **Pn 16 02 58.8 +2.1**
SNR=1.0
MTLF Montolieu 2.78 76 *e*Pg **Pg 16 03 03.2 -2.8**
MTLF *e*Sn **Sn 16 03 29.1 -0.9**
MTLF *e*Sg **Sg 16 03 40.6 -1.4**
8.8nm,0.3s
EARI Arriondas 2.81 284 Pn **Pn 16 02 59.7 +2.7**
EARI Pg **Pg 16 03 05.4 -1.1**
EARI Sn **Sn 16 03 33.2 +2.5**
EARI Lg 16 03 40.2
EARI Arriondas 2.81 284 Pn **Pn 16 02 59.7 +2.7**
0.9nm,0.1s,SNR=14
EARI Pg **Pg 16 03 05.4 -1.1**
0.7nm,0.1s,SNR=9.1
EARI Sn **Sn 16 03 33.2 +2.5**
11nm,0.6s,SNR=5.0
EARI Lg 16 03 40.2
1.7nm,0.1s,SNR=7.9
EARI Arriondas 2.81 284 Pn **Pn 16 02 59.7 +2.7**
0.9nm,0.1s,SNR=14
EARI Pg **Pg 16 03 05.4 -1.1**
0.7nm,0.1s,SNR=9.1
EARI Sn **Sn 16 03 33.2 +2.5**
11nm,0.6s,SNR=5.0
EARI Lg 16 03 40.2
1.7nm,0.1s,SNR=7.9
EARI Arriondas 2.81 284 Pn **Pn 16 02 59.7 +2.6**
0.9nm,0.1s,SNR=14
GUD Guadarrama 2.88 225 Pn **Pn 16 02 59.8 +1.7**
GUD Sn **Sn 16 03 31.4 -1.0**
GUD Lg 16 03 44.4
GUD Guadarrama 2.88 225 Pn **Pn 16 02 59.8 +1.7**
4.7nm,0.2s,SNR=7.9
GUD Sn **Sn 16 03 33.7 +1.3**
4.0nm,0.3s,SNR=7.9
GUD Lg 16 03 44.4
4.3nm,0.2s,SNR=7.9
GUD Guadarrama 2.88 225 Pn **Pn 16 02 59.8 +1.7**
4.7nm,0.2s,SNR=7.9
GUD Sn **Sn 16 03 33.7 +1.3**
4.0nm,0.3s,SNR=7.9
GUD Lg 16 03 44.4
4.3nm,0.2s,SNR=7.9
GUD Guadarrama 2.88 225 Pn **Pn 16 02 59.8 +1.8**
4.7nm,0.2s,SNR=7.9
GUD Lg 16 03 44.4
4.3nm,0.2s,SNR=7.9
EJON La Jonquera 3.23 93 Pn **Pn 16 03 05.2 +2.4**
EJON Pg **Pg 16 03 12.1 -2.5**
EJON Sn **Sn 16 03 39.9 -1.2**
EJON Lg 16 03 54.5
EJON La Jonquera 3.23 93 Pn **Pn 16 03 05.2 +2.4**
0.8nm,0.1s,SNR=7.9
EJON Pg **Pg 16 03 12.1 -2.5**
3.1nm,0.3s,SNR=7.9
EJON Sn **Sn 16 03 39.8 -1.2**
1.8nm,0.2s,SNR=7.9
EJON Lg 16 03 54.5
1.4nm,0.1s,SNR=7.9
EJON La Jonquera 3.23 93 Pn **Pn 16 03 05.2 +2.4**
0.8nm,0.1s,SNR=7.9
EJON Pg **Pg 16 03 12.1 -2.5**
3.1nm,0.3s,SNR=7.9
EJON Sn **Sn 16 03 39.8 -1.2**
1.8nm,0.2s,SNR=7.9
EJON Lg 16 03 54.5
1.4nm,0.1s,SNR=7.9
EJON La Jonquera 3.23 93 Pn **Pn 16 03 05.2 +2.3**
0.8nm,0.1s,SNR=7.9
RJF Les Rejaudoux 3.38 39 *e*Pn **Pn 16 03 05.9 +1.0**
SNR=1.0
RJF *e*Sn **Sn 16 03 43.7 -1.0**
SNR=1.0
RJF *e*Sg **Sg 16 03 59.7 -1.4**
11nm,0.3s,SNR=1.0
RJF Les Rejaudoux 3.38 39 Pn **Pn 16 03 05.9 +1.0**
RJF Sn **Sn 16 03 43.7 -1.0**
RJF Lg 16 03 59.7
5.4nm,0.3s
RJF Les Rejaudoux 3.38 39 Pn **Pn 16 03 05.9 +1.0**
RJF Sn **Sn 16 03 43.7 -1.0**
RJF Lg 16 03 59.7
5.4nm,0.3s
RJF Les Rejaudoux 3.38 39 *e*Pn **Pn 16 03 05.9 +1.0**
SNR=1.0
RJF *e*Sn **Sn 16 03 43.7 -1.0**
SNR=1.0
RJF *e*Sg **Sg 16 03 59.7 -1.4**
5.4nm,0.3s,SNR=1.0
CAF Calviac 3.39 48 *e*Pn **Pn 16 03 06.2 +1.1**
SNR=1.0
CAF *e*Sn **Sn 16 03 43.6 -1.4**
29nm,0.4s,SNR=1.0
CAF Calviac 3.39 48 Pn **Pn 16 03 06.2 +1.1**
CAF Sn **Sn 16 03 43.6 -1.4**
14nm,0.4s
CAF Calviac 3.39 48 Pn **Pn 16 03 06.2 +1.1**
CAF Sn **Sn 16 03 43.6 -1.4**
14nm,0.4s
CAF Calviac 3.39 48 *e*Pn **Pn 16 03 06.2 +1.1**
SNR=1.0
CAF *e*Sn **Sn 16 03 43.6 -1.4**
14nm,0.4s,SNR=1.0
ESDC Sonseca Array 3.56 213 Pg **Pg 16 03 18.8 -2.2**
ESDC Sn **Sn 16 03 48.3 -1.0**
ESDC Lg 16 04 06.2
ESDC Sonseca Array 3.56 213 Pg **Pg 16 03 18.8 -2.2**
1.4nm,0.2s,baz=31,slow=18,SNR=7.0
ESDC Sn **Sn 16 03 48.3 -1.0**
1.7nm,0.6s,baz=39,slow=17,SNR=5.4
ESDC Lg 16 04 06.2
2.3nm,0.3s,baz=34,slow=30,SNR=12
ESDC Sonseca Array 3.56 213 Pg **Pg 16 03 18.8 -2.2**
1.4nm,0.2s,baz=31,slow=18,SNR=7.0
ESDC Sn **Sn 16 03 48.3 -1.0**
1.7nm,0.6s,baz=39,slow=17,SNR=5.4
ESDC Lg 16 04 06.2
2.3nm,0.3s,baz=34,slow=30,SNR=12
ESDC Sonseca Array 3.56 213 Pg **Pg 16 03 18.8 -2.2**
1.4nm,0.2s,SNR=7.0
ESDC Sn **Sn 16 03 48.3 -1.0**
1.7nm,0.6s,SNR=5.4
ESDC Lg 16 04 06.2
2.3nm,0.3s,SNR=12
ESLA Sonseca Array 3.56 213 *e*Pg **Pg 16 03 19.9 -1.1**
ESLA Sonseca Array 3.56 213 *e*Pg **Pg 16 03 19.9 -1.1**
ECAL Calabor 3.98 261 Pn **Pn 16 03 14.9 +1.7**
ECAL Sn **Sn 16 04 01.0 +1.5**
ECAL Lg 16 04 16.8
ECAL Calabor 3.98 261 Pn **Pn 16 03 14.9 +1.7**
3.4nm,0.1s,SNR=12
ECAL Sn **Sn 16 04 01.0 +1.5**
9.6nm,0.3s,SNR=7.9
ECAL Lg 16 04 16.8
29nm,0.4s,SNR=5.0
ECAL Calabor 3.98 261 Pn **Pn 16 03 14.9 +1.7**
3.4nm,0.1s,SNR=12
ECAL Sn **Sn 16 04 01.0 +1.5**
9.6nm,0.3s,SNR=7.9
ECAL Lg 16 04 16.8
29nm,0.4s,SNR=5.0
ECAL Calabor 3.98 261 Pn **Pn 16 03 14.9 +1.7**
3.4nm,0.1s,SNR=12
ECAL Sn **Sn 16 04 01.0 +1.5**
9.6nm,0.3s,SNR=7.9
ECAL Lg 16 04 16.8
29nm,0.4s,SNR=5.0
MFF Saint Martin d 4.01 13 *e*Pn **Pn 16 03 14.3 +0.7**
SNR=1.0
MFF *e*Sn **Sn 16 03 59.5 -0.8**
4.0nm,0.2s,SNR=1.0
MFF Saint Martin d 4.01 13 Pn **Pn 16 03 14.3 +0.7**
MFF Sn **Sn 16 03 59.5 -0.8**
0.0nm,0.2s
MFF Saint Martin d 4.01 13 Pn **Pn 16 03 14.3 +0.7**
MFF Sn **Sn 16 03 59.5 -0.8**
0.0nm,0.2s
MFF Saint Martin d 4.01 13 *e*Pn **Pn 16 03 14.3 +0.7**
SNR=1.0
MFF *e*Sn **Sn 16 03 59.5 -0.8**
2.0nm,0.2s,SNR=1.0
PBRG Braganca 4.01 259 *e*Pn **Pn 16 03 15.0 +1.3**
PBRG *e*Sn **Sn 16 04 00.4 0.0**
PBRG *e*Sg **Sg 16 04 16.9 -4.7**
PBRG A 16 04 22.1
11nm,0.6s
PBRG Braganca 4.01 259 Pn **Pn 16 03 15.0 +1.3**
PBRG Sn **Sn 16 04 00.4 0.0**
PBRG Lg 16 04 16.9
5.6nm,0.6s
PBRG Braganca 4.01 259 Pn **Pn 16 03 15.0 +1.3**
PBRG Sn **Sn 16 04 00.4 0.0**
PBRG Lg 16 04 16.9
5.6nm,0.6s
PBRG Braganca 4.01 259 *e*Pn **Pn 16 03 15.0 +1.3**
PBRG *e*Sn **Sn 16 04 00.4 0.0**
ETOB Tobarra 4.05 181 Pn **Pn 16 03 16.4 +2.2**
ETOB Pg **Pg 16 03 26.6 -3.8**
ETOB Lg 16 04 20.7
ETOB Tobarra 4.05 181 Pn **Pn 16 03 16.4 +2.2**
1.0nm,0.2s,SNR=7.9
ETOB Pg **Pg 16 03 26.6 -3.8**
1.6nm,0.2s,SNR=7.9
ETOB Lg 16 04 20.7
0.9nm,0.1s,SNR=7.9
ETOB Tobarra 4.05 181 Pn **Pn 16 03 16.4 +2.2**
1.0nm,0.2s,SNR=7.9
ETOB Pg **Pg 16 03 26.6 -3.8**
1.6nm,0.2s,SNR=7.9
ETOB Lg 16 04 20.7
0.9nm,0.1s,SNR=7.9
ETOB Tobarra 4.05 181 Pn **Pn 16 03 16.4 +2.2**
1.0nm,0.2s,SNR=7.9
ETOB Tobarra 4.05 181 Pg **Pg 16 03 26.6 -3.8**
1.6nm,0.2s,SNR=7.9
ETOB Lg 16 04 20.7
0.9nm,0.1s,SNR=7.9
EBEN Beniarda 4.11 166 Lg 16 04 22.2
0.2nm,0.1s,SNR=7.9
EBEN Beniarda 4.11 166 Lg 16 04 22.2
0.2nm,0.1s,SNR=7.9
EBEN Beniarda 4.11 166 Lg 16 04 22.2
0.2nm,0.1s,SNR=7.9
LASF Ste Croix 4.12 69 *e*Pg **Pg 16 03 30.4 -1.2**
SNR=1.0
LASF *e*Sn **Sn 16 04 01.4 -1.6**
LASF *e*Sg **Sg 16 04 22.3 -2.6**
11nm,0.5s
LASF Ste Croix 4.12 69 *e*Pn **Pn 16 03 16.6 +1.5**
LASF *e*Pg **Pg 16 03 30.4 -1.2**
LASF *e*Sn **Sn 16 04 01.4 -1.6**
LASF *e*Sg **Sg 16 04 22.3 -2.6**
LASF Ste Croix 4.12 69 Pn **Pn 16 03 16.6 +1.5**
LASF Pg **Pg 16 03 30.4 -1.2**
LASF Sn **Sn 16 04 01.4 -1.6**
LASF Lg 16 04 22.3
5.5nm,0.5s
LASF Ste Croix 4.12 69 Pn **Pn 16 03 16.6 +1.5**
LASF Pg **Pg 16 03 30.4 -1.2**
LASF Sn **Sn 16 04 01.4 -1.6**
LASF Lg 16 04 22.3
5.5nm,0.5s
LASF Ste Croix 4.12 69 *e*Pn **Pn 16 03 16.6 +1.5**
SNR=1.0
LASF Ste Croix 4.12 69 *e*Pg **Pg 16 03 30.4 -1.2**
SNR=1.0
LASF *e*Sn **Sn 16 04 01.4 -1.6**
LASF *e*Sg **Sg 16 04 22.3 -2.6**
5.5nm,0.5s
EVIA Vianos 4.14 191 Pn **Pn 16 03 16.4 +1.1**
EVIA Pg **Pg 16 03 29.2 -2.7**
EVIA Sn **Sn 16 04 02.5 -1.0**
EVIA Lg 16 04 25.5
EVIA Vianos 4.14 191 Pn **Pn 16 03 16.4 +1.1**
6.4nm,0.4s,SNR=4.9
EVIA Pg **Pg 16 03 29.2 -2.7**
0.2nm,0.1s,SNR=7.9
EVIA Sn **Sn 16 04 02.5 -1.0**
3.8nm,0.4s,SNR=7.9
EVIA Lg 16 04 24.3
3.8nm,0.3s,SNR=5.0
EVIA Vianos 4.14 191 Pn **Pn 16 03 16.4 +1.1**
6.4nm,0.4s,SNR=4.9
EVIA Pg **Pg 16 03 29.2 -2.7**
0.2nm,0.1s,SNR=7.9
EVIA Sn **Sn 16 04 02.5 -1.0**
3.8nm,0.4s,SNR=7.9
EVIA Lg 16 04 24.3
3.8nm,0.3s,SNR=5.0
EVIA Vianos 4.14 191 Pn **Pn 16 03 16.4 +1.1**
6.4nm,0.4s,SNR=4.9
EVIA Vianos 4.14 191 Pg **Pg 16 03 29.2 -2.7**
0.2nm,0.1s,SNR=7.9
EVIA Sn **Sn 16 04 02.5 -0.9**
SNR=7.9
EVIA Lg 16 04 25.5
3.8nm,0.3s,SNR=5.0
EPON Pontenova 4.21 280 Pn **Pn 16 03 18.0 +1.7**
EPON Sn **Sn 16 04 05.1 -0.1**
EPON Lg 16 04 28.8
EPON Pontenova 4.21 280 Pn **Pn 16 03 18.0 +1.7**
1.4nm,0.3s,SNR=7.9
EPON Sn **Sn 16 04 05.1 -0.1**
3.7nm,0.3s,SNR=7.9
EPON Lg 16 04 28.8
8.2nm,0.3s,SNR=7.9
EPON Pontenova 4.21 280 Pn **Pn 16 03 18.0 +1.7**
1.4nm,0.3s,SNR=7.9
EPON Sn **Sn 16 04 05.1 -0.1**
3.7nm,0.3s,SNR=7.9
EPON Lg 16 04 28.8
8.2nm,0.3s,SNR=7.9
EPON Pontenova 4.21 280 Pn **Pn 16 03 18.0 +1.6**
1.4nm,0.3s,SNR=7.9
EPON Sn **Sn 16 04 05.1 -0.1**
3.7nm,0.3s,SNR=7.9
EPON Lg 16 04 28.8
8.2nm,0.3s,SNR=7.9
LBL Lubilhac 4.24 52 Pn **Pn 16 03 18.1 +1.3**
LBL Lubilhac 4.24 52 Pn **Pn 16 03 18.1 +1.3**
ETOS Mallorca 4.36 131 Pn **Pn 16 03 19.2 +0.7**
ETOS Sn **Sn 16 04 05.8 -3.2**
ETOS Mallorca 4.36 131 Pn **Pn 16 03 18.6 +0.2**
6.5nm,0.7s,SNR=7.9
ETOS Sn **Sn 16 04 05.8 -3.2**
7.9nm,0.7s,SNR=7.9
ETOS Mallorca 4.36 131 Pn **Pn 16 03 18.6 +0.2**
6.5nm,0.7s,SNR=7.9
ETOS Sn **Sn 16 04 05.8 -3.2**
7.9nm,0.7s,SNR=7.9
ETOS Mallorca 4.36 131 Pn **Pn 16 03 19.2 +0.7**
SNR=7.9
ETOS Sn **Sn 16 04 05.8 -3.3**
SNR=7.9
MVO Moncorvo 4.42 252 *e*Pn **Pn 16 03 21.1 +1.8**
MVO *e*Sn **Sn 16 04 10.6 +0.1**
MVO *e*Sg **Sg 16 04 30.2 -4.4**
MVO A 16 04 35.7
18nm,0.8s
MVO Moncorvo 4.42 252 *e*Pn **Pn 16 03 21.1 +1.8**
MVO *e*Sn **Sn 16 04 10.6 +0.1**
PYM Petit Puy Mans 4.43 45 Pn **Pn 16 03 20.3 +0.9**
PYM Petit Puy Mans 4.43 45 Pn **Pn 16 03 20.3 +0.9**
TCF Toulx Ste Croi 4.45 35 *e*Pn **Pn 16 03 19.5 -0.1**
SNR=1.0
TCF *e*Sn **Sn 16 04 09.8 -1.3**
5.7nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 4.45 35 Pn **Pn 16 03 19.5 -0.1**
TCF Sn **Sn 16 04 09.8 -1.3**
2.8nm,0.2s
TCF Toulx Ste Croi 4.45 35 Pn **Pn 16 03 19.5 -0.1**
TCF Sn **Sn 16 04 09.8 -1.3**
2.8nm,0.2s
TCF Toulx Ste Croi 4.45 35 *e*Pn **Pn 16 03 19.5 -0.1**
SNR=1.0
TCF *e*Sn **Sn 16 04 09.8 -1.3**
2.8nm,0.2s,SNR=1.0
PVRL Vila Real 4.87 255 *e*Sn **Sn 16 04 20.0 -1.5**
PVRL *e*Sg **Sg 16 04 43.4 -5.5**
PVRL A 16 04 50.9
8.0nm,0.2s
PVRL Vila Real 4.87 255 Sn **Sn 16 04 20.0 -1.5**
PVRL Lg 16 04 43.4
4.0nm,0.2s
PVRL Vila Real 4.87 255 Sn **Sn 16 04 20.0 -1.5**
PVRL Lg 16 04 43.4
4.0nm,0.2s
PVRL Vila Real 4.87 255 *e*Sn **Sn 16 04 20.0 -1.5**
PLDF La Plantade 4.90 46 Pn **Pn 16 03 27.5 +1.7**
PLDF La Plantade 4.90 46 Pn **Pn 16 03 27.5 +1.7**
BGF Bois d'Agland 4.93 37 *e*Pn **Pn 16 03 26.8 +0.5**
SNR=1.0
BGF *e*Sn **Sn 16 04 21.7 -1.4**
24nm,0.5s,SNR=1.0
BGF Bois d'Agland 4.93 37 Pn **Pn 16 03 26.8 +0.5**
BGF Sn **Sn 16 04 21.7 -1.4**
12nm,0.5s
BGF Bois d'Agland 4.93 37 Pn **Pn 16 03 26.8 +0.5**
BGF Sn **Sn 16 04 21.7 -1.4**
12nm,0.5s
BGF Bois d'Agland 4.93 37 *e*Pn **Pn 16 03 26.8 +0.5**
SNR=1.0
BGF *e*Sn **Sn 16 04 21.7 -1.4**
12nm,0.5s,SNR=1.0
VIVF Saint-Julien-I 4.94 62 *e*Pn **Pn 16 03 27.8 +1.4**
SNR=1.0
VIVF *e*Sn **Sn 16 04 20.7 -2.6**
VIVF *e*Sg **Sg 16 04 47.7 -3.6**
4.4nm,0.4s
VIVF Saint-Julien-I 4.94 62 Pn **Pn 16 03 27.8 +1.4**
VIVF Sn **Sn 16 04 20.7 -2.6**
VIVF Lg 16 04 47.7
2.2nm,0.4s
VIVF Saint-Julien-I 4.94 62 Pn **Pn 16 03 27.8 +1.4**
VIVF Sn **Sn 16 04 20.7 -2.6**
VIVF Lg 16 04 47.7
2.2nm,0.4s
VIVF Saint-Julien-I 4.94 62 *e*Pn **Pn 16 03 27.8 +1.4**
SNR=1.0
VIVF *e*Sn **Sn 16 04 20.7 -2.6**
VIVF *e*Sg **Sg 16 04 47.7 -3.6**
2.2nm,0.4s
ELOB Lobios 4.96 263 Pn **Pn 16 03 27.8 +1.1**
ELOB Sn **Sn 16 04 22.2 -1.5**
ELOB Lg 16 04 48.4
ELOB Lobios 4.96 263 Pn **Pn 16 03 27.8 +1.1**
0.6nm,0.1s,SNR=6.4
ELOB Sn **Sn 16 04 22.2 -1.5**
3.8nm,0.3s,SNR=7.9
ELOB Lg 16 04 48.4
3.5nm,0.2s,SNR=5.0
ELOB Lobios 4.96 263 Pn **Pn 16 03 27.8 +1.1**
0.6nm,0.1s,SNR=6.4
ELOB Sn **Sn 16 04 22.2 -1.5**
3.8nm,0.3s,SNR=7.9
ELOB Lg 16 04 48.4
3.5nm,0.2s,SNR=5.0
ELOB Lobios 4.96 263 Pn **Pn 16 03 27.8 +1.1**
0.6nm,0.1s,SNR=6.4
ELOB Sn **Sn 16 04 22.2 -1.5**
SNR=7.9
ELOB Lg 16 04 48.4
3.5nm,0.2s,SNR=5.0
PCAB Cabril 4.97 261 *e*Pn **Pn 16 03 27.9 +1.1**
PCAB *e*Sn **Sn 16 04 22.8 -1.2**
PCAB *e*Sg **Sg 16 04 45.5 -6.7**
PCAB A 16 04 57.6
9.3nm,0.7s
PCAB Cabril 4.97 261 Pn **Pn 16 03 27.9 +1.1**
PCAB Sn **Sn 16 04 22.8 -1.2**
PCAB Lg 16 04 45.5
4.7nm,0.7s
PCAB Cabril 4.97 261 Pn **Pn 16 03 27.9 +1.1**
PCAB Sn **Sn 16 04 22.8 -1.2**
PCAB Lg 16 04 45.5
4.7nm,0.7s
PCAB Cabril 4.97 261 *e*Pn **Pn 16 03 27.9 +1.1**
PCAB *e*Sn **Sn 16 04 22.8 -1.2**
EQES Quesada 5.05 195 Pn **Pn 16 03 28.0 +0.2**
EQES Pg **Pg 16 03 44.8 -4.5**
EQES Sn **Sn 16 04 24.7 -1.2**
EQES Lg 16 04 52.6
EQES Quesada 5.05 195 Pn **Pn 16 03 28.0 +0.1**
MTE Manteigas 5.11 245 *e*Sg **Sg 16 04 52.7 -3.8**
MTE A 16 04 58.0
11nm,0.4s
MTE Manteigas 5.11 245 *e*Sg **Sg 16 04 52.7 -3.8**
11nm,0.4s
EADA Adamuz 5.11 209 Pn **Pn 16 03 30.0 +1.2**
EADA Sn **Sn 16 04 25.0 -2.6**
EADA Lg 16 04 55.2
EADA Adamuz 5.11 209 Pn **Pn 16 03 30.0 +1.2**
0.6nm,0.1s,SNR=7.9
EADA Sn **Sn 16 04 25.0 -2.6**
1.5nm,0.4s,SNR=7.9
EADA Lg 16 04 55.2
1.5nm,0.2s,SNR=7.9
EADA Adamuz 5.11 209 Pn **Pn 16 03 30.0 +1.2**
0.6nm,0.1s,SNR=7.9
EADA Sn **Sn 16 04 25.0 -2.6**
1.5nm,0.4s,SNR=7.9
EADA Lg 16 04 55.2
1.5nm,0.2s,SNR=7.9
EADA Adamuz 5.11 209 Pn **Pn 16 03 30.0 +1.2**
0.6nm,0.1s,SNR=7.9
EADA Sn **Sn 16 04 25.0 -2.5**
SNR=7.9
EADA Lg 16 04 55.2
1.5nm,0.2s,SNR=7.9
PVIS Viseu 5.20 250 *e*Sg **Sg 16 04 54.7 -4.9**
PVIS A 16 04 59.0
4.9nm,0.1s
PVIS Viseu 5.20 250 Lg 16 04 54.7
2.5nm,0.1s
PVIS Viseu 5.20 250 Lg 16 04 54.7
2.5nm,0.1s
AVF Avril sur Loir 5.34 38 *e*Pn **Pn 16 03 32.2 +0.4**
SNR=1.0
AVF *e*Sn **Sn 16 04 30.9 -2.1**
1.8nm,0.3s
AVF Avril sur Loir 5.34 38 Pn **Pn 16 03 32.2 +0.4**
AVF Sn **Sn 16 04 30.9 -2.1**
0.9nm,0.3s
AVF Avril sur Loir 5.34 38 Pn **Pn 16 03 32.2 +0.4**
AVF Sn **Sn 16 04 30.9 -2.1**
0.9nm,0.3s
AVF Avril sur Loir 5.34 38 *e*Pn **Pn 16 03 32.2 +0.4**
SNR=1.0
AVF *e*Sn **Sn 16 04 30.9 -2.1**
0.9nm,0.3s
QUIF Quistinic 5.35 348 *e*Pn **Pn 16 03 33.1 +1.1**
SNR=1.0
QUIF *e*Sn **Sn 16 04 31.5 -1.8**
5.9nm,0.3s

QUIF	Quistinic	5.35	348	Pn		Pn	16 03 33.1 +1.1
QUIF				Sn		Sn	16 04 31.5 -1.8
3.0nm,0.3s							
QUIF	Quistinic	5.35	348	Pn		Pn	16 03 33.1 +1.1
QUIF				Sn		Sn	16 04 31.5 -1.8
3.0nm,0.3s							
QUIF	Quistinic	5.35	348	ePn		Pn	16 03 33.1 +1.1
SNR=1.0							
QUIF				eSn		Sn	16 04 31.5 -1.8
3.0nm,0.3s							
PCBR	Castelo Branco	5.35	240	eSg		Sg	16 05 01.0 -3.5
PCBR				A			16 05 09.3
7.2nm,0.7s							
PCBR	Castelo Branco	5.35	240	Lg			16 05 01.0
3.6nm,0.7s							
PCBR	Castelo Branco	5.35	240	Lg			16 05 01.0
3.6nm,0.7s							
PCBR	Castelo Branco	5.35	240	eSg		Sg	16 05 01.0 -3.5
7.2nm,0.7s							
SMF	Signal de Mont	5.46	42	ePn		Pn	16 03 34.4 +0.8
SNR=1.0							
SMF				eSn		Sn	16 04 34.1 -2.1
1.6nm,0.2s							
SMF	Signal de Mont	5.46	42	Pn		Pn	16 03 34.4 +0.8
SMF				Sn		Sn	16 04 34.1 -2.1
0.8nm,0.2s							
SMF	Signal de Mont	5.46	42	Pn		Pn	16 03 34.4 +0.8
SMF				Sn		Sn	16 04 34.1 -2.1
0.8nm,0.2s							
SMF	Signal de Mont	5.46	42	ePn		Pn	16 03 34.4 +0.8
SNR=1.0							
EMAZ	Mazaricos	5.53	275	Pn		Pn	16 03 35.9 +1.5
EMAZ				Sn		Sn	16 04 36.3 -1.3
EMAZ	Mazaricos	5.53	275	Pn		Pn	16 03 35.9 +1.5
1.8nm,0.2s,SNR=7.9							
EMAZ				Sn		Sn	16 04 36.3 -1.3
2.1nm,0.2s,SNR=7.9							
EMAZ	Mazaricos	5.53	275	Pn		Pn	16 03 35.9 +1.5
1.8nm,0.2s,SNR=7.9							
EMAZ				Sn		Sn	16 04 36.3 -1.3
2.1nm,0.2s,SNR=7.9							
EMAZ	Mazaricos	5.53	275	Pn		Pn	16 03 35.9 +1.5
SNR=7.9							
PMRV	Marv??o	5.54	236	ePn		Pn	16 03 36.4 +1.7
PMRV				eSn		Sn	16 04 37.4 -0.7
PMRV				eSg		Sg	16 05 08.8 -1.8
PMRV				A			16 05 11.4
7.3nm,0.5s							
PMRV	Marv??o	5.54	236	Pn		Pn	16 03 36.4 +1.7
PMRV				Sn		Sn	16 04 37.4 -0.7
PMRV				Lg			16 05 08.8
3.7nm,0.5s							
PMRV	Marv??o	5.54	236	Pn		Pn	16 03 36.4 +1.7
PMRV				Sn		Sn	16 04 37.4 -0.7
PMRV				Lg			16 05 08.8
3.7nm,0.5s							
PMRV	Marv??o	5.54	236	ePn		Pn	16 03 36.4 +1.7
SGMF	Saint Gilles	5.60	353	ePn		Pn	16 03 34.6 -0.9
SNR=1.0							
SGMF	Saint Gilles	5.60	353	Pn		Pn	16 03 34.6 -0.9
SGMF	Saint Gilles	5.60	353	Pn		Pn	16 03 34.6 -0.9
SGMF	Saint Gilles	5.60	353	ePn		Pn	16 03 34.6 -0.9
SNR=1.0							
SSF	Saint Saulge	5.61	37	ePn		Pn	16 03 35.4 -0.2
SNR=1.0							
SSF				eSn		Sn	16 04 38.1 -1.6
6.3nm,0.4s,SNR=1.0							
SSF	Saint Saulge	5.61	37	Pn		Pn	16 03 35.4 -0.2
SSF				Sn		Sn	16 04 38.1 -1.6
3.2nm,0.4s							
SSF	Saint Saulge	5.61	37	Pn		Pn	16 03 35.4 -0.2
SSF				Sn		Sn	16 04 38.1 -1.6
3.2nm,0.4s							
SSF	Saint Saulge	5.61	37	ePn		Pn	16 03 35.4 -0.2
SNR=1.0							
SSF				eSn		Sn	16 04 38.1 -1.6
3.2nm,0.4s,SNR=1.0							
GRR	Gorron	5.70	4	ePn		Pn	16 03 37.5 +0.7
GRR				eSn		Sn	16 04 40.3 -1.7
6.8nm,0.4s,SNR=1.0							
GRR	Gorron	5.70	4	Pn		Pn	16 03 37.5 +0.7
GRR				Sn		Sn	16 04 40.3 -1.7
3.4nm,0.4s							
GRR	Gorron	5.70	4	Pn		Pn	16 03 37.5 +0.7
GRR				Sn		Sn	16 04 40.3 -1.7
3.4nm,0.4s							
GRR	Gorron	5.70	4	ePn		Pn	16 03 37.5 +0.7
ROSF	Rostrenen	5.77	348	ePn		Pn	16 03 38.2 +0.4
ROSF				eSn		Sn	16 04 41.2 -2.5
6.6nm,0.3s							
ROSF	Rostrenen	5.77	348	Pn		Pn	16 03 38.2 +0.4
ROSF				Sn		Sn	16 04 41.2 -2.5
3.3nm,0.3s							
ROSF	Rostrenen	5.77	348	Pn		Pn	16 03 38.2 +0.4
ROSF				Sn		Sn	16 04 41.2 -2.5
3.3nm,0.3s							
ROSF	Rostrenen	5.77	348	ePn		Pn	16 03 38.2 +0.4
LDF	La Druitiere	5.97	9	ePn		Pn	16 03 41.2 +0.8
LDF	La Druitiere	5.97	9	ePn		Pn	16 03 41.2 +0.8
EMIN	Mina Concepcio	6.33	221	Pn		Pn	16 03 45.5 0.0
EMIN				Sn		Sn	16 04 52.7 -4.9
EMIN				Lg			16 05 33.8
EMIN	Mina Concepcio	6.33	221	Sn		Sn	16 04 52.7 -4.9
0.5nm,0.3s,SNR=7.9							
EMIN				Lg			16 05 33.8
0.1nm,0.2s,SNR=7.9							
EMIN	Mina Concepcio	6.33	221	Sn		Sn	16 04 52.7 -4.9
0.5nm,0.3s,SNR=7.9							
EMIN				Lg			16 05 33.8
0.1nm,0.2s,SNR=7.9							
EMIN	Mina Concepcio	6.33	221	Pn		Pn	16 03 45.5 -0.1
EMIN				Lg			16 05 33.8
0.1nm,0.2s,SNR=7.9							

*ISCJB **26** 16:03:57.9±0.6, 14°.56N±0°.04×119°.83E±0°.07, h63km±8km, mb4.1/14, Error ellipse: s-maj=11.7km s-min=5.9km az=178.4*
*NEIC **26** 16:04:01.1±0.7, 14°.46N×120°.10E, h90km±7km, mb4.4/4, Error ellipse: s-maj=13.0km s-min=8.2km az=60.0*
*IDC **26** 16:04:01.4±1.2, 14°.53N×120°.06E, h89km±15km, mb3.7/11, mb1 3.8/11, mb1mx3.6/23, mbtmp3.7/11, Error ellipse: s-maj=39.3km s-min=18.4km az=59.0*

ISC 26 16:03:59.1±0.6, 14°.55N±0°.04×119°.87E±0°.08, h59km±8km, n47, σ1°21/51, mb4.1/14, 4C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.89	156	eP	Pn	16 04 14.7	-0.9
LUBP				eS	Sn	16 04 24.6	-3.3
TGY	Tagaytay City	1.13	113	P	Pn	16 04 18.9	+0.2
2μm,0.3s,baz=278,slow=2.6,SNR=129							
TGY				S	Sn	16 04 35.6	+2.2
1μm,0.3s,baz=1.3,slow=20,SNR=24							
TGY	Tagaytay City	1.13	113	↑iP	Pn	16 04 18.9	+0.2
PGP	Puerto Galera	1.48	135	↑eP	Pn	16 04 22.3	-1.2
PCPH	Palayan	1.55	50	↓eP	Pn	16 04 22.6	-1.8
BOLP	Bolinao	1.82	1	eP	Pn	16 04 26.0	-2.1
BOLP				eS	Sn	16 04 44.2	-5.8
BCPH	Baguio City Da	1.94	21	↑iP	Pn	16 04 28.4	-1.4
BCPH				iS	Sn	16 04 52.1	-1.0
POLP	Polilio Island	2.01	85	eP	Pn	16 04 31.0	+0.4
BALP	Baler	2.03	54	eP	Pn	16 04 30.4	-0.5
BOAC	Boac	2.20	119	eP	Pn	16 04 33.9	+0.6
SJMP	San Jose	2.41	150	eP	Pn	16 04 37.9	+1.9
BUSP	Coron	2.55	173	eP	Pn	16 04 38.4	+0.3
GQP	Guinayangan	2.58	104	↑eP	Pn	16 04 31.5	-6.9
AUQP	San Andres	2.98	114	eP	Pn	16 04 46.4	+2.4
CAUP	Cauayan	3.03	38	eP	Pn	16 04 45.4	+0.8
ABRA	Dolores	3.19	15	eP	Pn	16 04 47.2	+0.5
ENPP	El Nido	3.35	187	eP	Pn	16 04 48.3	-0.8
PALP	Palanan	3.51	44	eP	Pn	16 04 52.4	+1.3
APYP	Conner	3.55	22	eP	Pn	16 04 52.3	+0.6
CUYO	Cuyo Island	3.84	163	eP	Pn	16 04 54.3	-1.5
PVCP	Virac	4.26	102	eP	Pn	16 05 02.4	+0.9
CNP	Catarman	5.08	113	eP	Pn	16 05 16.5	+3.8
YULB	Yu-li	8.90	9	eP	Pn	16 06 09.1	+4.1
CM31	Chiang Mai Arr	20.43	284	eP	P	16 08 34.4	+2.7
3.2nm,0.6s							
CMAR	Chiang Mai Arr	20.43	284	P	P	16 08 34.4	+2.7
4.9nm,0.8s,baz=95,slow=9.3,SNR=46							
CHTO	Chiang Mai	20.48	285	eP	P	16 08 34.2	+2.0
SONM	Songino Array	35.02	344	P	P	16 10 45.6	-0.3
0.7nm,0.6s,mb3.8,baz=152,slow=9.9,SNR=3.6							
WRAB	Tennant Creek	37.11	157	eP	P	16 11 01.6	-2.4
5.1nm,1.0s,mb4.3							
ASAR	Alice Springs	40.38	160	P	P	16 11 30.0	-1.4
2.2nm,0.6s,mb4.1,baz=337,slow=6.9,SNR=81							
MK31	Makanchi Array	44.87	324	eP	P	16 12 08.1	+0.5
MKAR	Makanchi Array	44.87	324	P	P	16 12 08.3	+0.7
1.0nm,0.8s,mb3.7,baz=126,slow=8.1,SNR=9.7							
MKAR	Makanchi Array	44.87	324	P	P	16 12 08.3	+0.7
ZAA0	Zalesovo Array	47.94	333	eP	P	16 12 31.0	-0.4
ZALV	Zalesovo Beam	47.94	333	P	P	16 12 30.9	-0.6
1.5nm,0.6s,mb4.2,baz=123,slow=8.7,SNR=9.6							
ZALV	Zalesovo Beam	47.94	333	P	P	16 12 30.9	-0.6
KURK	Kurchatov	49.04	326	P	P	16 12 40.5	+0.5
2.7nm,0.7s,mb4.4,baz=133,slow=7.8,SNR=32							
KURK	Kurchatov	49.04	326	eP	P	16 12 40.3	+0.4
6.1nm,0.6s,mb4.8							
BVAR	Borovoye Array	54.62	326	P	P	16 13 21.9	+0.4
1.5nm,0.6s,mb4.2,baz=117,slow=8.4,SNR=11							
ABKAR	Akbulak array	59.57	319	eP	P	16 13 56.9	+0.4
0.9nm,0.4s,mb4.2							
JOF	Joensuu	76.52	332	ep	P	16 15 42.2	-0.4
2.5nm,0.5s,mb4.4							
ARCES	ARCESS Array B	78.01	339	P	P	16 15 50.8	0.0
0.6nm,0.5s,mb3.8,baz=79,slow=6.3,SNR=5.6							
KAF	Kangasniemi	78.93	331	ep	P	16 15 55.1	-0.9
4.8nm,0.7s,mb4.5							
FINES	FINESS Array B	79.15	331	P	P	16 15 57.0	-0.2
2.4nm,0.5s,mb4.4,baz=49,slow=6.3,SNR=18							
AKASG	Malin Array Be	79.30	320	P	P	16 15 57.5	-0.7
0.3nm,0.4s,mb3.6,baz=65,slow=6.6,SNR=5.7							
BUR08	Bucovina Ar. S	82.50	317	eP	P	16 16 15.9	+0.6
NB2	NORSAR Subarra	86.14	332	P	P	16 16 32.6	-0.9
comp=Z,1.0nm,0.7s,mb4.2,baz=67,slow=5.6							
NOA	NORSAR Array B	86.14	332	P	P	16 16 32.8	-0.7
comp=Z,1.5nm,0.8s,mb4.3,baz=67,slow=5.0,SNR=5.6							

*ISCJB **26** 16:08:17.4±0.4, 38°.66N±0°.02×43°.23E±0°.03, h2km±7km, Error ellipse: s-maj=4.0km s-min=3.8km az=44.7*
*DDA **26** 16:08:17.9, 38°.61N×43°.23E, h3km±2km, Md3.4*
*CSEM **26** 16:08:17.7±0.3, 38°.62N×43°.22E, h5km, MD3.5, Error ellipse: s-maj=6.9km s-min=6.0km az=72.0*
*ISK **26** 16:08:17.1, 38°.65N×43°.20E, h5km, MD3.5*

ISC 26 16:08:18.2±0.4, 38°.64N±0°.02×43°.24E±0°.03, h6km±6km, n38, σ0°97/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.13	112	PG	Pg	16 08 20.9	0.0
VANB				eSG	Sg	16 08 23.8	+1.1
VANB	Van	0.13	112	i Pg	Pg	16 08 20.9	0.0
VANB				eSg	Sg	16 08 23.8	+1.1
TVAN	Van	0.18	130	i P	Pg	16 08 21.1	-0.6
TVAN	Van	0.18	130	i P	Pg	16 08 21.1	-0.6
VANT	Van	0.22	174	ePG	Pg	16 08 23.1	+0.5
CLDR	Caldiran	0.73	47	ePG	Pg	16 08 31.6	-0.6
CLDR				eSG	Sg	16 08 42.8	+1.0
CLDR	Caldiran	0.73	47	ePg	Pg	16 08 31.6	-0.6
CLDR				eSg	Sg	16 08 42.8	+1.1
TATV	Tatvan	0.77	260	i P	Pg	16 08 32.9	-0.1
TATV				i S	Sg	16 08 43.6	+0.6
TATV	Tatvan	0.77	260	i P	Pg	16 08 32.9	-0.1
TATV				i S	Sg	16 08 43.6	+0.6
AGRB	Hanur-Agry	0.95	349	ePG	Pg	16 08 35.5	-1.0
AGRB	Hanur-Agry	0.95	349	ePg	Pg	16 08 35.5	-0.9
HKR	Hakkari	1.14	159	ePN	Pg	16 08 38.7	-1.3
HKR				eSN	Sg	16 08 55.6	+0.9
HKR	Hakkari	1.14	159	ePn	Pg	16 08 38.7	-1.3
HKR				eSn	Sg	16 08 55.6	+0.9
HAKT	HAKKARI	1.15	161	i P	Pg	16 08 38.2	-1.9
HAKT				i S	Sg	16 08 55.5	+0.5
HAKT	HAKKARI	1.15	161	i P	Pg	16 08 38.2	-2.0
HAKT				i S	Sg	16 08 55.5	+0.5
CUKT	Cukurca	1.43	168	ePN	Pn	16 08 45.1	+0.6
CUKT	Cukurca	1.43	168	ePn	Pn	16 08 45.1	+0.5
BTMT	Batman	1.44	252	ePN	Pg	16 08 46.5	+0.7
BEST	Besiri	1.72	245	i P	Pg	16 08 50.7	-0.5
BEST				i S	Sg	16 09 14.5	+1.0
DIGO	Kars	1.77	3	i P	Pg	16 08 52.2	0.0
DIGO				i S	Sg	16 09 15.3	+0.2
DIGO	Kars	1.77	3	i P	Pg	16 08 52.2	0.0
DIGO				i S	Sg	16 09 15.4	+0.2
GNI	Garni	1.90	37	ePN	Pn	16 08 51.8	+0.6
GNI	Garni	1.90	37	ePn	Pn	16 08 51.8	+0.6
ERZM	Erzurum	1.92	312	i P	Pg	16 08 54.8	-0.3
ERZM				i S	Sg	16 09 22.4	+2.4
ERZM	Erzurum	1.92	312	i P	Pg	16 08 54.8	-0.2
EZM	Erzurum	1.92	312	ePN	Pn	16 08 50.7	-0.7
KARS	Kars	1.98	357	ePN	Pn	16 08 52.2	-0.1
MSL	Mosul	2.24	183	ePn	Px	16 09 18.0	
MSL				eSn	Sx	16 09 46.0	
DDEM	Demirkent	2.52	333	i P	Pg	16 09 04.7	-1.8
DDEM	Demirkent	2.52	333	i P	Pg	16 09 04.7	-1.8
DIYA	Diyarbakir	2.55	255	i P	Pg	16 09 04.6	-2.6
DIYA	Diyarbakir	2.55	255	i P	Pg	16 09 04.6	-2.5
BCA	Borcka	3.06	337	ePN	Pn	16 09 07.5	+0.4
BCA	Borcka	3.06	337	ePn	Pn	16 09 07.5	+0.4
SVRC	Sivrice-ELAZID	3.09	266	ePN	Pn	16 09 07.9	+0.3
SVRC	Sivrice-ELAZID	3.09	266	ePn	Pn	16 09 07.9	+0.4
GZT	Gaziantep	4.66	256	i P	Pg	16 09 42.6	-4.9
GZT				i S	Sg	16 10 54.4	+6.6
BHD	Baghdad	5.44	170	ePn	Pg	16 09 58.0	-4.4
BHD				eSn	Sg	16 11 02.0	-11

CASC 26 16:13:31.1±1.2, 8°.45N×83°.02W, h4km, MD3.5, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.25	323	↓iP	Pg	16 13 36.8	+0.8
BRU2	Volcan	0.47	43	eP	Pg	16 13 41.5	+1.3
BRU2				eS	Sg	16 13 49.2	+2.9
BAR1		0.84	340	↑eP	Pg	16 13 47.2	0.0
BAR1				eS	Sg	16 13 59.3	+1.1
BUS	Buena Vista	1.32	326	eP	Pn	16 13 55.4	-0.9
BUS				eS	Sg	16 14 14.3	+0.7
URSC	Urasca	1.57	331	eP	Pn	16 13 58.8	-1.0
URSC				eS	Sn	16 14 21.5	+0.9
PRS1	Puriscal	1.99	320	eP	Pn	16 14 05.3	-0.2
PRS1				eS	Sn	16 14 31.8	+0.9

*NEIC **26** 16:17:44.4±1.3, 8°.19N×82°.96W, h10km, mb4.4/1, Error ellipse: s-maj=38.3km s-min=15.1km az=195.0*
*CASC **26** 16:17:44.7±1.8, 8°.39N×83°.01W, h5km, MD4.2, mb4.4(NEIC)*
*IDC **26** 16:17:45.9±2.7, 8°.72N×82°.70W, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.7/21, mbtmp3.7/6, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.7/25, Error ellipse: s-maj=111.8km s-min=27.9km az=31.0*

ISC 26 16:17:45.4±1.3, 8°.37N±0°.06×83°.01W±0°.04, h10km±6km, n26, σ1°21/31, mb3.6/5, 4C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.33	331	↑iP	Pg	16 17 51.5	-0.3
BRU2	Volcan	0.53	37	↓iP	Pg	16 17 55.3	-0.4
BRU2				eS	Sg	16 18 03.3	+0.7
TBS2		0.55	39	↑iP	Pg	16 17 56.8	+0.7
TBS2				eS	Sg	16 18 04.9	+1.5
BAR1		0.92	341	↓iP	Pg	16 18 01.9	-1.2
CNI	Changuinola	1.15	25	↓iP	Pb	16 18 05.8	-1.7
BUS	Buena Vista	1.39	328	eP	Pn	16 18 10.2	-0.8
QCR	Quepos	1.55	313	eP	Pn	16 18 11.8	-1.3
QCR				eS	Sn	16 18 32.3	-1.1
LIO	Limon	1.63	359	eP	Pn	16 18 12.3	-1.8
LIO				eS	Sn	16 18 36.0	+0.8
URSC	Urasca	1.65	333	↑eP	Pn	16 18 13.4	-1.0
URSC				eS	Sn	16 18 35.4	-0.2
LAJ	Bijagual	1.85	324	eP	Pn	16 18 19.9	+2.7
SJS	Escuela Geolog	1.87	327	eP	Pn	16 18 17.7	+0.2
PRS1	Puriscal	2.06	321	eP	Pn	16 18 18.3	-1.8
CGA2	Cerro Gallo 2	2.18	319	↑eP	Pn	16 18 22.6	+0.9
CGA2				eS	Sn	16 18 49.4	+0.5
JCR	Jicaral	2.55	306	eP	Pn	16 18 27.0	+0.2
BCIP	Isla Barro Col	3.23	76	ePn	Pn	16 18 34.5	-1.8
UPIG		3.49	80	eP	Pn	16 18 38.9	-0.9
UPIG				eS	Sn	16 19 20.5	-0.8
APG	El Apazote	9.84	313	Pn	Pn	16 20 09.8	+2.8
0.8nm,0.3s,baz=145,slow=8.5,SNR=10.0							
APG				LR	LR	16 23 21.1	
comp=Z,51nm,19.9s,baz=234,slow=34							
SDV	Santo Domingo	12.25	87	Pn	Pn	16 20 43.4	+3.3
0.2nm,0.3s,baz=303,slow=11,SNR=4.6							
CMIG	Matias Romero	14.46	308	Pn	Pn	16 21 11.4	+1.2
0.2nm,0.3s,baz=108,slow=11,SNR=5.3							
PDAR	Pinedale Array	41.44	330	P	P	16 25 32.5	+0.3
0.2nm,0.6s,mb2.9,baz=127,slow=10,SNR=2.4							
NVAR	Mina Array Bea	43.63	319	P	P	16 25 53.5	+3.3
0.8nm,0.7s,mb3.6,baz=128,slow=7.7,SNR=8.7							
WVOR	Wild Horse Val	46.16	323	eP	P	16 26 11.4	+1.1
4.9nm,1.1s,mb4.3							
YKA	Yellowknife Ar	58.71	343	P	P	16 27 43.1	0.0
1.1nm,0.8s,mb4.0,baz=138,slow=7.2,SNR=13							
TORD	Torodi Ar. Bea	83.01	78	P	P	16 30 12.9	+1.2
0.3nm,0.7s,mb3.4,baz=292,slow=4.4,SNR=2.1							
ASAR	Alice Springs	141.54	242	PKhKP		16 37 15.1	
0.5nm,0.8s,baz=121,slow=1.7,SNR=4.8							
CMAR	Chiang Mai Arr	153.28	356	PKP	PKPdf	16 37 37.4	+0.1
0.1nm,0.5s,baz=21,slow=4.0,SNR=3.2							
CMAR				PKPbc	PKPbc	16 37 45.1	+0.4
0.6nm,0.9s,baz=316,slow=2.1,SNR=4.4							

IDC 26 16:22:08.0±3.3, 6°.56S×147°.85E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, Error ellipse: s-maj=95.2km s-min=32.8km az=82.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	21.66	217	P	P	16 26 59.5	-0.8
3.8nm,0.4s,baz=55,slow=8.7,SNR=151							
STKA	Stephens Creek	25.86	192	P	P	16 27 42.3	+0.9
1.6nm,0.5s,baz=24,slow=11,SNR=8.5							
CMAR	Chiang Mai Arr	54.26	298	P	P	16 31 36.6	+0.4
0.4nm,0.5s,baz=118,slow=5.3,SNR=4.9							
TORD	Torodi Ar. Bea	146.04	284	PKPbc	PKPbc	16 41 49.6	-1.4
1.2nm,0.5s,baz=68,slow=3.6,SNR=20							

CASC 26 16:27:11.4±1.4, 8°.47N×82°.93W, h3km, MD3.8, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.29	307	eP	Pg	16 27 17.5	+0.4
BAR1		0.85	334	eP	Pg	16 27 27.9	+0.1
BAR1				eS	Sg	16 27 40.1	+1.2
CNI	Changuinola	1.02	24	eS	Sg	16 27 45.5	+1.2
BUS	Buena Vista	1.35	323	eP	Pn	16 27 36.5	-0.7
URSC	Urasca	1.59	328	eP	Pn	16 27 40.4	-0.1
PRS1	Puriscal	2.03	318	eP	Pn	16 27 47.6	+1.1

CASC 26 16:35:46.8±2.5, 8°.45N×83°.03W, h3km, MD3.7, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.24	325	↓iP	Pg	16 35 52.5	+0.9
ACR				eS	Sg	16 35 56.5	+1.7
BRU2	Volcan	0.47	44	eP	Pg	16 35 56.8	+0.9
BRU2				eS	Sg	16 36 05.0	+2.9
TBS2		0.50	47	eP	Pg	16 35 57.3	+1.0
TBS2				eS	Sg	16 36 08.6	+5.7
BAR1		0.83	340	↑iP	Pg	16 36 02.9	+0.1
BAR1				eS	Sg	16 36 14.3	+0.7
CNI	Changuinola	1.08	28	eP	Pg	16 36 06.7	-0.9
BUS	Buena Vista	1.31	327	eP	Pg	16 36 11.0	-1.0
QCR	Quepos	1.48	311	eP	Pn	16 36 14.4	+0.1
QCR				eS	Sb	16 36 36.3	+2.0
URSC	Urasca	1.56	332	↓eP	Pn	16 36 14.7	-0.8
URSC				eS	Sn	16 36 37.0	+0.7
PRS1	Puriscal	1.98	320	eP	Pn	16 36 20.7	-0.6
CGA2	Cerro Gallo 2	2.11	318	eP	Pn	16 36 24.4	+1.5

*DDA **26** 16:39:44.7, 38°.53N×27°.26E, h14km±1km, Md2.9*
*ISK **26** 16:39:44.8, 38°.58N×27°.24E, h8km, MD2.9*
*ISCJB **26** 16:39:45.3±0.6, 38°.51N±0°.05×27°.23E±0°.05, h19km±6km, Error ellipse: s-maj=8.7km s-min=6.5km az=170.3*
*CSEM **26** 16:39:45.2±0.2, 38°.52N×27°.24E, h15km, MD2.9, Error ellipse: s-maj=5.4km s-min=3.6km az=145.0*

ISC 26 16:39:45.4±0.6, 38°.52N±0°.05×27°.25E±0°.05, h16km±5km, n23, σ0°61/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	Izmir	0.12	174	PG	Pg	16 39 49.6	+0.5
IZM				eSG	Sg	16 39 52.6	+1.1
IZM	Izmir	0.12	174	i Pg	Pg	16 39 49.6	+0.5
IZM				eSg	Sg	16 39 52.6	+1.1
BLCB	Balcova	0.21	230	PG	Pg	16 39 49.7	-0.5
BLCB	Balcova	0.21	230	i Pg	Pg	16 39 49.7	-0.6
URLA	Izmir	0.54	253	i P	Pg	16 39 55.3	-0.7
URLA	Izmir	0.54	253	i P	Pg	16 39 55.3	-0.7
AKHS	Akhisar	0.57	51	i P	Pg	16 39 56.0	-0.7
AKHS	Akhisar	0.57	51	i P	Pg	16 39 56.0	-0.6
AKS	Akhisar	0.57	51	ePG	Pg	16 39 56.0	-0.6
AKS				eSG	Sg	16 40 04.2	0.0
AKS	Akhisar	0.57	51	ePg	Pg	16 39 56.0	-0.6
AKS				eSg	Sg	16 40 04.2	-0.1
MANT	Manisa	1.03	91	i P	Pb	16 40 04.5	-0.3
MANT				i S	Sb	16 40 17.1	-0.9
MANT	Manisa	1.03	91	i P	Pb	16 40 04.5	-0.3
MANT				i S	Sb	16 40 17.1	-1.0
KULA	Kula-Manisa	1.11

BUS	**Buena Vista**	**1.32**	**326**	*e*P	Pn	16 53 45.5	-1.4
QCR	**Quepos**	**1.50**	**311**	*e*P	Pn	16 53 48.0	-1.3
QCR				*e*S	Sn	16 54 10.3	+1.2
LIO	**Limon**	**1.55**	**359**⇓	*e*P	Pn	16 53 49.0	-1.0
LIO				*e*S	Sn	16 54 10.8	+0.3
URSC	**Urasca**	**1.57**	**331**⇓	*e*P	Pn	16 53 49.1	-1.2
URSC				*e*S	Sn	16 54 10.8	-0.2
LAJ	**Bijagual**	**1.78**	**322**⇑	*e*P	Pn	16 53 57.1	+3.9
PRS1	**Puriscal**	**1.99**	**320**	*e*P	Pn	16 53 55.2	-0.9
CGA2	**Cerro Gallo 2**	**2.12**	**318**	*e*P	Pn	16 53 57.8	0.0
JCR	**Jicaral**	**2.50**	**304**	*e*P	Pn	16 54 03.0	-0.1
BCIP	**Isla Barro Col**	**3.22**	**77**⇑	*e*P	Pn	16 54 14.9	+1.9

PRE 26 17:08:00.3±0.4, 20′.49S×32′.99E, h5km, ML3.6, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.32**	**236**	*e*P	Pn	17 08 54.2	+1.2
MSNA				*e*S	Sn	17 09 34.0	+1.2
MSNA				AML	AML	17 09 52.8	
	comp=Z,128nm,0.5s						
POGA	**Pongola**	**6.96**	**190**	*e*P	Pn	17 09 43.5	+0.5
POGA				*e*S	Sn	17 10 58.6	-4.0
POGA				AML	AML	17 11 44.6	
	comp=Z,15nm,0.5s						
PRYS	**Parys**	**8.22**	**218**	*e*P	Pn	17 10 01.6	+1.4
PRYS				*e*S	Sn	17 11 29.9	-3.7
PRYS				AML	AML	17 12 00.3	
	comp=Z,3.5nm,0.7s						

*NEIC **26** 17:08:26.0, 17′.32N×99′.54W, h32km, MD3.7(MEX), After MEX.*

MEX 26 17:08:26.0±1.1, 17′.32N×99′.54W, h32km±19km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.58**	**219**	*i* P	Pb	17 08 34.7	-3.0
ACX				*i* S	Sb	17 08 43.8	-1.9
ACX	**Acapulco**	**0.58**	**219**	*i* P	Pb	17 08 34.7	-3.0
ACX				*i* S	Sb	17 08 43.8	-1.9
CAIG	**El Cayaco**	**0.75**	**249**	*i* P	Pn	17 08 38.1	-2.2
CAIG				*i* S	Sb	17 08 48.6	-1.9
CAIG	**El Cayaco**	**0.75**	**249**	*i* P	Pn	17 08 38.1	-2.2
CAIG				*i* S	Sb	17 08 48.6	-1.9
PLIG	**Platanillo**	**1.07**	**2**	*i* P	Pn	17 08 43.4	-1.5
PLIG				*i* S	Sn	17 08 56.0	-2.6
PLIG	**Platanillo**	**1.07**	**2**	*i* P	Pn	17 08 43.4	-1.5
PLIG				*i* S	Sn	17 08 56.0	-2.6
YAIG	**Yautepec**	**1.60**	**16**	*i* P	Pn	17 08 50.8	-1.3
YAIG				*i* S	Sn	17 09 08.1	-3.6
YAIG	**Yautepec**	**1.60**	**16**	*i* P	Pn	17 08 50.8	-1.3
YAIG				*i* S	Sn	17 09 08.1	-3.6
PNIG	**Pinotepa**	**1.63**	**124**	*i* P	Pn	17 08 51.5	-1.0
PNIG				*i* S	Sn	17 09 09.6	-2.8
PNIG	**Pinotepa**	**1.63**	**124**	*i* P	Pn	17 08 51.5	-1.0
PNIG				*i* S	Sn	17 09 09.6	-2.8
UTMO	**Huajuapan**	**1.73**	**73**	*i* P	Pn	17 08 52.3	-1.5
UTMO				*i* S	Sn	17 09 13.0	-1.8
ZIIG	**Zihuatanejo**	**1.86**	**279**	*i* P	Pn	17 08 53.4	-2.3
ZIIG				*i* S	Sn	17 09 16.3	-1.9
ZIIG	**Zihuatanejo**	**1.86**	**279**	*i* P	Pn	17 08 53.4	-2.3
ZIIG				*i* S	Sn	17 09 16.3	-1.9
IIO	**Organos**	**2.39**	**19**	*e*P	Pn	17 09 01.1	-1.9
IIO				*i* S	Sn	17 09 29.9	-1.3
IIO	**Organos**	**2.39**	**19**	*e*P	Pn	17 09 01.1	-1.9
IIO				*i* S	Sn	17 09 29.9	-1.3
VHO	**Vista Hermosa**	**2.69**	**95**	*e*P	Pn	17 09 05.8	-1.3
VHO				*i* S	Sn	17 09 36.6	-2.0
VHO	**Vista Hermosa**	**2.69**	**95**	*e*P	Pn	17 09 05.8	-1.3
VHO				*i* S	Sn	17 09 36.6	-2.0

CASC 26 17:10:17.6±1.8, 8′.36N×83′.02W, h14km±9km, MD3.6, 3C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.33**	**333**⇑	*e*P	Pg	17 10 24.1	-0.3
ACR				*e*S	Sg	17 10 30.0	+1.1
BRU2	**Volcan**	**0.54**	**36**⇓	*i*P	Pg	17 10 27.7	-0.5
BRU2				*e*S	Sg	17 10 35.9	+0.4
TBS2		**0.56**	**39**⇑	*i*P	Pg	17 10 29.4	+0.7
TBS2				*e*S	Sg	17 10 38.0	+1.9
BAR1		**0.93**	**342**⇓	*e*P	Pb	17 10 34.3	-1.2
BAR1				*e*S	Sg	17 10 47.5	-0.2
CNI	**Changuinola**	**1.16**	**25**⇑	*i*P	Pn	17 10 38.4	-1.2
BUS	**Buena Vista**	**1.40**	**328**	*e*P	Pn	17 10 42.6	-0.2
QCR	**Quepos**	**1.55**	**313**	*e*P	Pn	17 10 45.1	+0.2
URSC	**Urasca**	**1.65**	**333**	*e*P	Pn	17 10 45.6	-0.6
URSC				*e*S	Sn	17 11 07.3	0.0
PRS1	**Puriscal**	**2.06**	**322**	*e*P	Pn	17 10 52.1	+0.2

*IDC **26** 17:10:58.4±0.9, 32′.15N×104′.67E, h0km, mb3.8/9, mb1 3.8/12, mb1mx3.7/29, mbtmp3.7/12, ML3.4/3, Error ellipse: s-maj=30.9km s-min=17.1km az=48.0*
*NEIC **26** 17:11:00.4±0.5, 32′.19N×104′.67E, h10km, mb4.4/2, Error ellipse: s-maj=12.1km s-min=8.1km az=54.0*
*BJI **26** 17:11:01.1, 32′.24N×104′.71E, h10km, mB4.3/3, mb4.0/4, ML3.6/15, Ms3.3/4, Ms7 3.2/6*
*MOS **26** 17:11:01.1±1.1, 32′.17N×104′.73E, h33km, mb4.2/6, Error ellipse: s-maj=23.9km s-min=12.4km az=100.2*

ISC 26 17:10:59.7±0.9, 32′.23N±0′.04×104′.64E±0′.05, h4km±7km, n34, σ1°.03/41, mb3.9/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.52**	**210**	Pg	**Pg**	**17 11 27.8**	**-1.0**
CD2				Sg	**Sg**	**17 11 49.0**	**+0.5**
CD2				smax			
	comp=N,6μm,0.7s						
LZH	**Lanzhou**	**3.90**	**350**	*e*Pg	**Pg**	**17 12 08.3**	**-6.2**
LZH				Sn	**Sn**	**17 12 55.8**	**+9.1**
LZH				Sg	**Sg**	**17 13 04.3**	**-0.8**
LZH				smax			
	comp=N,170nm,0.8s						
LZH				smax			
	comp=E,250nm,0.6s						
LZH				LR	LR		
	comp=E,620nm,8.3s						
LZH				LR	LR		
	comp=Z,840nm,8.7s						
XAN	**Xi'an**	**4.02**	**62**	Pn	**Pn**	**17 12 02.0**	**-0.1**
XAN				Sn	**Sn**	**17 12 53.0**	**+3.4**
XAN				Sg	**Sg**	**17 13 09.8**	**+0.9**
XAN				smax			
	comp=N,180nm,0.7s						
XAN				smax			
	comp=E,110nm,0.6s						
XAN				LR	LR		
	comp=Z,110nm,9.0s						
ENH	**Enshi**	**4.59**	**114**	*e*P	**Pn**	**17 12 10.2**	**+0.4**
GYA	**Guiyang**	**6.02**	**162**	Pn	**Pn**	**17 12 31.0**	**+1.5**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,40nm,0.7s						
GTA	**Gaotai**	**8.16**	**333**	*e*P	**Pn**	**17 13 06.0**	**+7.0**
GTA				pP		17 13 09.5	
GTA				sP		17 13 12.0	
GTA				S	**Sn**	**17 14 45.5**	**+14**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,88nm,5.7s						
GTA				LR	LR		
	comp=N,93nm,9.6s						
GTA				LR	LR		
	comp=E,110nm,9.6s						
GTA				LR	LR		
	comp=Z,130nm,9.9s						
WHN	**Wuhan**	**8.47**	**99**	P	**Pn**	**17 12 59.0**	**-4.2**
WHN				S	**Sn**	**17 14 31.0**	**-8.2**
WHN				LR	LR		
	comp=N,300nm,3.0s						
WHN				LR	LR		
	comp=E,300nm,3.0s						
CMAR	**Chiang Mai Arr**	**14.64**	**202**	Pn	**Pn**	**17 14 27.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=202,slow=29,SNR=3.3						
CMAR	**Chiang Mai Arr**	**14.64**	**202**	Pn	**Pn**	**17 14 27.5**	**-0.2**
SONM	**Songino Array**	**15.64**	**4**	Pn	**Pn**	**17 14 42.1**	**+1.2**
	comp=E,0.2nm,0.3s,baz=358,slow=40,SNR=2.7						
KSRS	**Korea Array**	**19.79**	**68**	P	**Pn**	**17 15 30.7**	**-1.8**
	comp=E,0.1nm,0.3s,baz=258,slow=10,SNR=7.2						
JOW	**Kunigami**	**21.24**	**99**	P	**P**	**17 15 45.9**	**-0.9**
	comp=E,2.0nm,0.4s,mb3.8,baz=76,slow=23,SNR=5.6						
MK31	**Makanchi Array**	**22.45**	**317**	*e*P	**P**	**17 16 00.9**	**+1.3**
MKAR	**Makanchi Array**	**22.45**	**317**	P	**P**	**17 16 00.7**	**+1.1**
	comp=E,0.4nm,0.4s,mb3.2,baz=108,slow=9.7,SNR=8.9						
ZALV	**Zalesovo Beam**	**25.92**	**333**	P	**P**	**17 16 33.3**	**+0.6**
	comp=E,2.0nm,0.5s,mb3.9,baz=127,slow=9.7,SNR=13						
ZALV	**Zalesovo Beam**	**25.92**	**333**	P	**P**	**17 16 33.3**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
KURK	**Kurchatov**	**26.64**	**322**	P	**P**	**17 16 39.0**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.0,baz=123,slow=8.3,SNR=5.0						
KURK				PcP	PcP	17 20 01.9	-1.2
	comp=Z,0.5nm,0.7s,baz=112,slow=2.0,SNR=3.9						
KURK	**Kurchatov**	**26.64**	**322**	P	**P**	**17 16 39.1**	**-0.1**
KURK						17 20 01.9	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KURK	**Kurchatov**	**26.64**	**322**	P	**P**	**17 16 39.0**	**-0.2**
KURK				PcP	PcP	17 20 01.9	-1.2
TIXI	**Tiksi**	**41.56**	**11**	*e*P	**P**	**17 18 45.4**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
TIXI	**Tiksi**	**41.56**	**11**	*e*P	**P**	**17 18 46.7**	**-1.3**
	comp=Z,1.2nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**56.42**	**336**	P	**P**	**17 20 42.0**	**0.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=73,slow=8.1,SNR=9.8						
ARCES	**ARCESS Array B**	**56.42**	**336**	P	**P**	**17 20 42.0**	**0.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**56.89**	**326**	P	**P**	**17 20 45.2**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.2,baz=100,slow=8.2,SNR=15						
FINES	**FINESS Array B**	**56.89**	**326**	P	**P**	**17 20 45.2**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**56.89**	**326**	P	**P**	**17 20 45.2**	**-0.2**
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**17 21 21.4**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.9,baz=335,slow=6.5,SNR=15						
NOA	**NORSAR Array B**	**63.96**	**327**	P	**P**	**17 21 33.0**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=74,slow=5.2,SNR=3.3						
NOA	**NORSAR Array B**	**63.96**	**327**	P	**P**	**17 21 33.0**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PPLA	**Purkeypile**	**67.46**	**29**	*e*P	**P**	**17 21 56.3**	**0.0**
YKA	**Yellowknife Ar**	**80.48**	**17**	P	**P**	**17 23 11.9**	**-0.6**
	comp=Z,0.7nm,0.6s,mb3.8,baz=329,slow=5.0,SNR=8.0						
YKA	**Yellowknife Ar**	**80.48**	**17**	P	**P**	**17 23 11.9**	**-0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NEW	**Newport**	**91.58**	**26**	*e*P	**P**	**17 24 09.4**	**+1.7**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NEW	**Newport**	**91.58**	**26**	*e*P	**P**	**17 24 09.4**	**+1.7**
	comp=Z,3.9nm,0.6s,mb4.9						

MAN 26 17:23:45, 13′.57N×120′.58E, h50km, mb4.3, ML3.2, MS3.0, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**297**	*e*P	Pn	17 23 58.2	+3.5
LUBP				*e*S	Sn	17 24 04.5	+2.9
PGP	**Puerto Galera**	**0.37**	**100**	*e*P	Pn	17 23 57.9	+3.1
TGY	**Tagaytay City**	**0.64**	**34**⇓	*i*P	Pn	17 24 00.3	+2.4
SJMP	**San Jose**	**1.22**	**154**	*e*P	Pn	17 24 08.3	+2.5
SJMP				*e*S	Sn	17 24 16.9	-4.3
BOAC	**Boac**	**1.24**	**95**	*e*P	Pn	17 24 07.2	+1.2
BOAC				*e*S	Sn	17 24 22.8	+1.2
BUSP	**Coron**	**1.60**	**193**	*e*P	Pn	17 24 12.6	+1.7
BUSP				*e*S	Sn	17 24 28.4	-2.0
AUQP	**San Andres**	**2.06**	**97**	*e*P	Pn	17 24 21.1	+4.0
BALP	**Baler**	**2.37**	**24**	*e*P	Pn	17 24 22.9	+1.6
ENPP	**El Nido**	**2.60**	**206**	*e*P	Pn	17 24 26.1	+1.4
CUYO	**Cuyo Island**	**2.74**	**171**	*e*P	Pn	17 24 27.5	+1.0
APYP	**Conner**	**4.32**	**8**	*e*P	Pn	17 24 49.1	+1.0

*IDC **26** 17:28:24.4±1.4, 56′.18N×153′.66W, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.6/8, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=41.2km s-min=23.5km az=5.0*
*ISCJB **26** 17:28:26.9±0.8, 56′.12N±0′.07×153′.7W±0′.1, h33km, mb3.6/6, Error ellipse: s-maj=11.9km s-min=6.7km az=143.5*
*NEIC **26** 17:28:27.4, 56′.03N×153′.57W, h29km, ML3.2(AEIC), After AEIC.*

ISC 26 17:28:27.2±3.3, 56′.14N±0′.07×153′.7W±0′.1, h19km±21km, n18, σ0°.87/20, mb3.6/6, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.11**	**13**	P	**Pn**	**17 28 46.9**	**-0.7**
OHAK				S	**Sb**	**17 29 02.2**	**+0.5**
KDAK	**Kodiak Island**	**1.76**	**21**	P	**Pn**	**17 28 55.9**	**-0.7**
KDAK				S	**Sn**	**17 29 17.9**	**-0.5**
CHGN	**Chignik**	**2.62**	**275**	P	**Pn**	**17 29 07.5**	**-0.8**
CHGN				S	**Sn**	**17 29 39.1**	**-0.4**
RSO	**Redoubt South**	**4.36**	**6**	*e*Pn	**Pn**	**17 29 32.7**	**+0.5**
SEW	**Seward**	**4.58**	**28**	P	**Pn**	**17 29 33.4**	**-1.8**
SVW2	**Sparrevohn**	**5.06**	**350**	*e*Pn	**Pn**	**17 29 42.0**	**+0.2**
RC01	**Rabbit Creek A**	**5.38**	**21**	*e*Pn	**Pn**	**17 29 45.9**	**-0.4**
	8.2nm,0.3s						
TRF	**Thorofare Moun**	**7.54**	**12**	*e*Pn	**Pn**	**17 30 17.0**	**+1.2**
	5.1nm,0.7s						
DLBC	**Dease Lake**	**13.01**	**70**	LR	LR	17 35 58.8	
	comp=Z,64nm,20.7s,baz=357,slow=35						
INK	**Inuvik**	**15.30**	**29**	Pn	**Pn**	**17 32 03.1**	**+1.5**
	0.1nm,0.3s,baz=207,slow=9.0,SNR=2.6						
YKA	**Yellowknife Ar**	**20.69**	**56**	P	**P**	**17 33 05.3**	**-0.3**
	0.3nm,0.5s,baz=268,slow=8.9,SNR=6.2						
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**	**17 34 17.2**	**+2.5**
	1.5nm,0.8s,mb3.6,baz=74,slow=14,SNR=4.2						
TXAR	**Lajitas Array**	**44.14**	**106**	P	**P**	**17 36 34.4**	**+0.2**
	0.4nm,0.8s,mb3.2,baz=311,slow=6.5,SNR=5.2						
TXAR	**Lajitas Array**	**44.14**	**106**	P	**P**	**17 36 34.4**	**+0.2**
ZALV	**Zalesovo Beam**	**60.28**	**324**	P	**P**	**17 38 34.1**	**+0.4**
	0.2nm,0.2s,mb3.7,baz=19,slow=6.4,SNR=4.3						
FINES	**FINESS Array B**	**62.76**	**0**	P	**P**	**17 38 50.7**	**+0.3**
	1.0nm,0.7s,mb4.0,baz=6.7,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**67.22**	**322**	P	**P**	**17 39 19.2**	**-0.4**
	0.2nm,0.6s,mb3.3,baz=45,slow=8.4,SNR=3.6						
CMAR	**Chiang Mai Arr**	**84.11**	**294**	P	**P**	**17 40 56.2**	**-0.5**
	0.5nm,0.5s,mb3.9,baz=17,slow=4.9,SNR=6.6						

CASC 26 17:30:34.2±2.1, 8′.46N×83′.02W, h4km, MD3.6, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**324**⇑	*i*P	Pg	17 30 40.1	+1.1
ACR				*e*S	Sg	17 30 42.0	-0.1
BRU2	**Volcan**	**0.47**	**44**⇓	*i*P	Pg	17 30 44.4	+1.1
BRU2				*e*S	Sg	17 30 52.4	+3.0
TBS2		**0.49**	**47**	*e*P	Pg	17 30 46.3	+2.6
TBS2				*e*S	Sg	17 30 55.2	+5.0
BAR1		**0.83**	**340**⇓	*e*P	Pg	17 30 50.4	+0.2
BAR1				*e*S	Sg	17 31 03.5	+2.5
QCR	**Quepos**	**1.48**	**311**	*e*P	Pn	17 31 02.1	+0.4
QCR				*e*P		17 31 02.2	
QCR				*e*		17 31 02.2	
URSC	**Urasca**	**1.56**	**332**	*e*P	Pn	17 31 02.3	-0.5
URSC				*e*S	Sn	17 31 23.8	+0.4
PRS1	**Puriscal**	**1.98**	**320**	*e*P	Pn	17 31 08.5	0.0

CASC 26 17:32:44.0±2.5, 8′.41N×83′.02W, h3km, MD3.6, 2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**329**⇓	*e*P	Pg	17 32 50.4	+0.9
ACR				*e*S	Sg	17 32 55.8	+2.6
BRU2	**Volcan**	**0.50**	**40**⇓	*i*P	Pg	17 32 54.8	+1.1
BRU2				*e*S	Sg	17 33 03.5	+3.3
TBS2		**0.52**	**43**	*e*P	Pg	17 32 56.0	+2.0
TBS2				*e*S	Sg	17 33 05.8	+4.9
BAR1		**0.88**	**341**	*e*P	Pg	17 33 00.8	0.0
BAR1				*e*S	Sg	17 33 13.5	+1.2
URSC	**Urasca**	**1.60**	**332**	*e*P	Pn	17 33 12.7	-0.5
URSC				*e*S	Sn	17 33 34.6	+0.1
PRS1	**Puriscal**	**2.02**	**321**	*e*P	Pn	17 33 19.6	+0.6

IDC 26 17:35:30.9±1.6, 9′.37N×126′.13E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, Error ellipse: s-maj=84.4km s-min=21.2km az=61.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**27.86**	**292**	P	P	17 41 21.9	-0.6
	0.5nm,0.7s,baz=104,slow=7.6,SNR=6.4						
ASAR	**Alice Springs**	**33.70**	**167**	P	P	17 42 15.6	+1.6
	0.3nm,0.8s,baz=354,slow=7.5,SNR=2.7						
STKA	**Stephens Creek**	**43.60**	**161**	P	P	17 43 35.0	-1.9
	1.9nm,0.8s,baz=360,slow=14,SNR=3.5						
MKAR	**Makanchi Array**	**52.66**	**323**	P	P	17 44 48.3	+1.4
	0.7nm,0.4s,baz=110,slow=7.7,SNR=14						
BVAR	**Borovoye Array**	**62.33**	**326**	P	P	17 45 54.1	-0.9
	0.4nm,0.4s,baz=124,slow=7.2,SNR=3.2						

*ISK **26** 17:44:01.4, 37′.83N×29′.25E, h6km, MD3.0*
*ISCJB **26** 17:44:02.2±0.4, 37′.81N±0′.02×29′.26E±0′.04, h10km, Error ellipse: s-maj=4.5km s-min=3.1km az=6.6*
*CSEM **26** 17:44:02.0±0.1, 37′.82N×29′.27E, h5km, MD3.0, Error ellipse: s-maj=3.6km s-min=2.7km az=96.0*
*DDA **26** 17:44:02.0, 37′.83N×29′.29E, h7km±2km, Md2.8*

ISC 26 17:44:02.4±0.4, 37′.82N±0′.02×29′.26E±0′.04, h7km±5km, n36, σ0°.71/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**249**	*e*PG	**Pg**	**17 44 06.1**	**-0.2**
DENT				*e*SG	**Sg**	**17 44 08.8**	**-0.1**
DENT	**Denizli**	**0.19**	**249**	*e*Pg	**Pg**	**17 44 06.1**	**-0.1**
DENT				*e*Sg	**Sg**	**17 44 08.8**	**0.0**
DNZL	**Cakiroluk**	**0.21**	**232**	*i* P	**Pg**	**17 44 06.7**	**+0.1**
DNZL				*i* S	**Sg**	**17 44 10.5**	**+1.0**
DNZL	**Cakiroluk**	**0.21**	**232**	*i* P	**Pg**	**17 44 06.7**	**0.0**
DNZL				*i* S	**Sg**	**17 44 10.5**	**+1.0**
KHL	**Karahalli**	**0.54**	**23**	*e*PG	**Pg**	**17 44 11.9**	**-0.9**
KHL	**Karahalli**	**0.54**	**23**	*e*Pg	**Pg**	**17 44 12.0**	**-0.8**
KHAL	**Karahalli**	**0.58**	**19**	*i* P	**Pg**	**17 44 13.1**	**-0.5**
KHAL				*i* S	**Sg**	**17 44 22.0**	**+1.0**
KHAL	**Karahalli**	**0.58**	**19**	*i* P	**Pg**	**17 44 13.1**	**-0.4**
KHAL				*i* S	**Sg**	**17 44 22.0**	**+1.0**
GOLH	**Golhisar**	**0.63**	**158**	*i* P	**Pg**	**17 44 13.6**	**-1.0**
GOLH				*i* S	**Sg**	**17 44 23.9**	**+1.1**
GOLH	**Golhisar**	**0.63**	**158**	*i* P	**Pg**	**17 44 13.6**	**-1.0**
GOLH				*i* S	**Sg**	**17 44 23.9**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.69**	**164**	*e*PG	**Pg**	**17 44 14.5**	**-1.2**
GLHS				*e*SG	**Sg**	**17 44 25.3**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.69**	**164**	*e*Pg	**Pg**	**17 44 14.5**	**-1.2**
GLHS				*e*Sg	**Sg**	**17 44 25.3**	**+0.6**
KULA	**Kula-Manisa**	**0.83**	**326**	*e*PG	**Pg**	**17 44 18.1**	**-0.4**
KULA	**Kula-Manisa**	**0.83**	**326**	*e*Pg	**Pg**	**17 44 18.1**	**-0.3**
ISP	**Isparta**	**0.99**	**88**	*e*PG	**Pg**	**17 44 21.8**	**+0.4**
ISP	**Isparta**	**0.99**	**88**	*e*Pg	**Pg**	**17 44 21.8**	**+0.4**
YER	**Yerkesik**	**1.04**	**229**	*e*PG	**Pg**	**17 44 21.5**	**-0.8**
YER	**Yerkesik**	**1.04**	**229**	*e*Pg	**Pg**	**17 44 21.5**	**-0.8**
AYDN	**Tasoluk**	**1.10**	**262**	*i* P	**Pg**	**17 44 23.7**	**+0.1**
AYDN	**Tasoluk**	**1.10**	**262**	*i* P	**Pg**	**17 44 23.7**	**+0.1**
ELL	**Elmali**	**1.19**	**154**	*e*PN	**Pn**	**17 44 24.7**	**-0.7**
ELL	**Elmali**	**1.19**	**154**	*e*Pn	**Pn**	**17 44 24.7**	**-0.7**
FETY	**Fethiye**	**1.19**	**187**	*e*PN	**Pn**	**17 44 24.9**	**-0.6**
FETY	**Fethiye**	**1.19**	**187**	*e*Pn	**Pn**	**17 44 24.9**	**-0.6**
SHUT	**Suhut-Afyon**	**1.25**	**54**	*e*PN	**Pn**	**17 44 26.2**	**-0.1**
SHUT	**Suhut-Afyon**	**1.25**	**54**	*e*Pn	**Pn**	**17 44 26.2**	**-0.1**
GDZ	**Gediz**	**1.28**	**8**	*i* P	**Pn**	**17 44 26.1**	**-0.5**
GDZ				*i* S	**Sb**	**17 44 44.1**	**+0.8**
GDZ	**Gediz**	**1.28**	**8**	*i* P	**Pn**	**17 44 26.1**	**-0.5**
GDZ				*i* S	**Sb**	**17 44 44.1**	**+0.8**
DEMI	**Demirci**	**1.29**	**341**	*i* P	**Pn**	**17 44 26.8**	**0.0**
DEMI				*i* S	**Sb**	**17 44 44.3**	**+0.5**
DEMI	**Demirci**	**1.29**	**341**	*i* P	**Pn**	**17 44 26.8**	**0.0**
DEMI				*i* S	**Sb**	**17 44 44.3**	**+0.6**
ALT	**Altintas**	**1.40**	**28**	*e*PN	**Pn**	**17 44 28.0**	**-0.3**
ALT	**Altintas**	**1.40**	**28**	*e*Pn	**Pn**	**17 44 28.0**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.43**	**104**	*e*PN	**Pn**	**17 44 28.6**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.43**	**104**	*e*Pn	**Pn**	**17 44 28.6**	**-0.1**
AKAS	**Kas**	**1.61**	**170**	*i* P	**Pn**	**17 44 33.0**	**+1.8**
AKAS				*i* S	**Sn**	**17 44 57.4**	**+5.2**
AKAS	**Kas**	**1.61**	**170**	*i* P	**Pn**	**17 44 33.0**	**+1.8**

CASC 26 17:45:01.9±2.3, 8′.38N×83′.06W, h4km, MD3.6, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.29**	**338**⇓	*i*P	Pg	17 45 08.6	+1.0
ACR				*e*S	Sg	17 45 13.1	+1.6
BRU2	**Volcan**	**0.55**	**41**⇓	*i*P	Pg	17 45 12.9	+0.4
BRU2				*e*S	Sg	17 45 22.4	+2.8
TBS2		**0.57**	**

0.3nm,0.8s,baz=120,slow=14,SNR=2.5
ASAR Alice Springs 61.05 149 P P 18 38 19.1 +0.1
0.5nm,1.1s,baz=332,slow=7.0,SNR=4.4

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*UPA **26** 18:36:16.2, 8°.42N×82°.98W, h1km*
*UCR **26** 18:36:17.0, 8°.49N×82°.94W, h3km, MD3.8*
CASC 26 18:36:16.2±2.7, 8°.41N×82°.99W, h3km, MD3.8, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**325**	⇑*iP*	Pg	18 36 22.9	+0.8
ACR				*eS*	Sg	18 36 26.5	+0.5
BRU2	**Volcan**	**0.49**	**37**	⇓*iP*	Pg	18 36 26.6	+1.1
BRU2				*eS*	Sg	18 36 36.1	+4.2
TBS2		**0.51**	**41**	*eP*	Pg	18 36 28.5	+2.5
TBS2				*eS*	Sg	18 36 37.5	+4.9
BAR1		**0.89**	**339**	⇓*eP*	Pg	18 36 33.1	-0.2
CNI	**Changuinola**	**1.11**	**25**	*eP*	Pg	18 36 36.9	-0.6
BUS	**Buena Vista**	**1.37**	**327**	*eP*	Pn	18 36 41.0	-1.2
QCR	**Quepos**	**1.54**	**311**	*eP*	Pn	18 36 44.4	-0.2
QCR				*eS*	Sn	18 37 06.6	+1.5
PRS1	**Puriscal**	**2.04**	**320**	*eP*	Pn	18 36 51.4	0.0

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*ISCJB **26** 18:53:29.5±0.3, 55°.63N±0°.02×162°.35E±0°.05, h97km±2km, mb4.0/21, Error ellipse: s-maj=5.2km s-min=3.9km az=13.6*
*KRSC **26** 18:53:29.8±0.7, 55°.58N×162°.35E, h69km±68km, ML4.4*
*MOS **26** 18:53:29.7±1.0, 55°.69N×162°.16E, h96km, mb4.1/10, Error ellipse: s-maj=15.9km s-min=7.8km az=80.5*
*NEIC **26** 18:53:32.4±0.9, 55°.73N×161°.92E, h97km±10km, mb4.2/2, Error ellipse: s-maj=11.5km s-min=8.5km az=167.0*
*IDC **26** 18:53:33.0±2.1, 55°.82N×161°.91E, h99km±21km, mb3.6/15, mb1 3.8/16, mb1mx3.7/27, mbtmp3.6/16, Error ellipse: s-maj=18.3km s-min=12.2km az=162.0*
ISC 26 18:53:30.5±0.3, 55°.63N±0°.02×162°.37E±0°.05, h91km±3km, n75, σ1§04/103, mb4.0/21, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.63**	**24**	*eP*	**Pn**	**18 53 45.7**	**-0.6**
KBTR				*i* S	**Sn**	**18 53 57.1**	**-1.1**
ZLN	**Zelenaya**	**0.96**	**294**	*iP*	**Pn**	**18 53 49.9**	**+0.1**
ZLN				*i* S	**Sn**	**18 54 04.9**	**+0.7**
CIRR	**Tsirk**	**1.03**	**298**	*eP*	**Pn**	**18 53 50.5**	**-0.1**
CIRR				*i* S	**Sn**	**18 54 04.9**	**-0.7**
SMKR	**Semkarok**	**1.08**	**332**	*eP*	**Pn**	**18 53 51.1**	**0.0**
SMKR				*i* S	**Sn**	**18 54 06.6**	**+0.1**
BZMR	**Bezymyannaya**	**1.10**	**287**	*eP*	**Pn**	**18 53 51.6**	**+0.2**
BZMR				*i* S	**Sn**	**18 54 07.7**	**+0.6**
BDR	**Baidarnaya**	**1.14**	**326**	*eP*	**Pn**	**18 53 52.3**	**+0.5**
BDR				*i* S	**Sn**	**18 54 09.0**	**+1.2**
MKZ	**Mys Kozlova**	**1.14**	**199**	*eP*	**Pn**	**18 53 50.9**	**-0.9**
MKZ				*i* S	**Sn**	**18 54 06.5**	**-1.4**
KRSR	**Krestovskiy**	**1.17**	**301**	*eP*	**Pn**	**18 53 51.7**	**-0.5**
KRSR				*i* S	**Sn**	**18 54 07.8**	**-0.7**
KLY	**Klyuchi**	**1.18**	**306**	*eP*	**Pn**	**18 53 50.7**	**-1.6**
KLY				*i* S	**Sn**	**18 54 06.0**	**-2.7**
KIRR	**Kirishev**	**1.19**	**286**	*eP*	**Pn**	**18 53 52.4**	**0.0**
KIRR				*i* S	**Sn**	**18 54 09.0**	**+0.1**
KMNR	**Kamenistaya**	**1.21**	**277**	*iP*	**Pn**	**18 53 52.9**	**+0.2**
KMNR				*i* S	**Sn**	**18 54 10.6**	**+1.2**
SRKR	**Sorokina**	**1.22**	**327**	*eP*	**Pn**	**18 53 52.9**	**+0.1**
SRKR				*i* S	**Sn**	**18 54 10.0**	**+0.4**
KPT	**Kopyto**	**1.26**	**286**	*eP*	**Pn**	**18 53 53.2**	**0.0**
KPT				*i* S	**Sn**	**18 54 10.5**	**+0.2**
TUMR	**Tumrok**	**1.31**	**255**	*eP*	**Pn**	**18 53 54.3**	**+0.4**
TUMR				*i* S	**Sn**	**18 54 12.8**	**+1.2**
KOZR	**Kozyr**	**1.46**	**288**	PN	**Pn**	**18 53 56.1**	**+0.4**
KOZR				S	**Sn**	**18 54 15.6**	**+0.8**
KOZ	**Kozyrevsk**	**1.47**	**288**	*eP*	**Pn**	**18 53 56.1**	**+0.3**
KOZ				*i* S	**Sn**	**18 54 15.6**	**+0.6**
SRDR	**Sredinnyy**	**1.64**	**296**	*eP*	**Pn**	**18 53 57.7**	**-0.3**
SRDR				*i* S	**Sn**	**18 54 18.2**	**-0.7**
BKI	**Bering**	**2.10**	**100**	*eP*	**Pn**	**18 54 04.1**	**+0.2**
BKI				*i* S	**Sn**	**18 54 28.9**	**-0.6**
KII	**Karymskiy**	**2.33**	**228**	*eP*	**Pn**	**18 54 07.4**	**+0.4**
KII				*i* S	**Sn**	**18 54 34.9**	**0.0**
SPN	**Mys Shipunski**	**2.89**	**209**	*eP*	**Pn**	**18 54 13.1**	**-1.4**
SPN				*i* S	**Sn**	**18 54 44.9**	**-3.4**
NLC	**Nalytchevo**	**3.04**	**217**	*eP*	**Pn**	**18 54 16.5**	**+0.1**
NLC				*i* S	**Sn**	**18 54 50.1**	**-1.8**
AVH	**Avacha**	**3.18**	**223**	*eP*	**Pn**	**18 54 19.3**	**+0.9**
GNL	**Ganaly**	**3.22**	**235**	*eP*	**Pn**	**18 54 19.9**	**+0.9**
PET	**Petropavlovsk**	**3.40**	**221**	*e*PN	**Pn**	**18 54 21.8**	**+0.4**
PET				*e*S	**Sn**	**18 55 00.0**	**-0.7**
PET				pmax	pmax		
	comp=Z,192nm,0.5s						
PET				smax			
	comp=N,408nm,0.5s						
PET				smax			
	comp=N,300nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
PET	**Petropavlovsk**	**3.40**	**221**	*eP*	**Pn**	**18 54 21.9**	**+0.5**
PET				*i* S	**Sn**	**18 55 00.0**	**-0.7**
PET	**Petropavlovsk**	**3.40**	**221**	*eP*	**Pn**	**18 54 21.5**	**+0.1**
PEA0B	**Petropavlovsk-**	**3.72**	**229**	*eP*	**Pn**	**18 54 26.3**	**+0.6**
PETK	**Petropavlovsk-**	**3.72**	**229**	P	**Pn**	**18 54 26.4**	**+0.7**
	comp=Z,13nm,0.3s,baz=62,slow=17,SNR=307						
PETK				S	**Sn**	**18 55 10.8**	**+2.3**
	comp=Z,1.6nm,0.3s,baz=25,slow=18,SNR=2.6						
PETK	**Petropavlovsk-**	**3.72**	**229**	PN	**Pn**	**18 54 26.5**	**+0.8**
PETK				S	**Sn**	**18 55 10.8**	**+2.3**
PETK				pmax	pmax		
	comp=Z,13nm,0.3s						
PETK				smax			
	comp=N,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.72**	**229**	P	**Pn**	**18 54 26.4**	**+0.7**
PETK				S	**Sn**	**18 55 10.8**	**+2.3**
RUS	**Russkaya**	**3.93**	**217**	*eP*	**Pn**	**18 54 28.6**	**+0.1**
RUS				*i* S	**Sn**	**18 55 11.8**	**-1.7**
GRL	**Gorelyy**	**3.99**	**221**	*eP*	**Pn**	**18 54 31.2**	**+1.9**
GRL				*i* S	**Sn**	**18 55 16.7**	**+1.7**
SKR	**Severo-Kuril's**	**6.22**	**220**	*e*PN	**Pn**	**18 54 55.5**	**-4.2**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				pmax	pmax		
	comp=N,100nm,0.2s						
BILL	**Bilibino**	**12.58**	**7**	PN	**Pn**	**18 56 30.0**	**+4.2**
YAK	**Yakutsk**	**17.94**	**304**	*eP*	**Pn**	**18 57 31.9**	**-1.7**
YAK				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
ERM	**Erimo**	**18.50**	**231**	*eP*	**Pn**	**18 57 39.1**	**-1.5**
TIXI	**Tiksi**	**21.40**	**331**	*eP*	**P**	**18 58 10.9**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.4						
TIXI	**Tiksi**	**21.40**	**331**	*eP*	**P**	**18 58 11.2**	**+0.8**
	comp=Z,19nm,0.9s,mb4.4						
MJAR	**Matsushiro Arr**	**25.18**	**231**	P	**P**	**18 58 48.0**	**+0.7**
	comp=Z,2.1nm,0.7s,mb3.7,baz=32,slow=7.4,SNR=7.1						
MJAR	**Matsushiro Arr**	**25.18**	**231**	P	**P**	**18 58 48.0**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**25.18**	**231**	P	**P**	**18 58 48.0**	**+0.7**
INK	**Inuvik**	**31.05**	**40**	P	**P**	**18 59 40.9**	**+1.6**
	comp=Z,0.3nm,0.4s,mb3.4,baz=162,slow=7.1,SNR=2.8						
YKA	**Yellowknife Ar**	**40.41**	**45**	P	**P**	**19 01 01.1**	**+2.0**
	comp=Z,0.5nm,0.5s,mb3.6,baz=297,slow=8.5,SNR=4.1						
YKA	**Yellowknife Ar**	**40.41**	**45**	P	**P**	**19 01 01.1**	**+2.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.56**	**301**	P	**P**	**19 01 16.7**	**0.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=76,slow=6.1,SNR=2.4						
KURK	**Kurchatov**	**47.54**	**301**	P	**P**	**19 01 55.5**	**-0.8**
	comp=Z,1.7nm,0.4s,mb4.2,baz=56,slow=7.6,SNR=26						
KURK	**Kurchatov**	**47.54**	**301**	P	**P**	**19 01 55.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
MK31	**Makanchi Array**	**48.27**	**295**	*eP*	**P**	**19 02 00.2**	**-1.8**
MKAR	**Makanchi Array**	**48.27**	**295**	P	**P**	**19 02 00.5**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.0,baz=60,slow=7.3,SNR=18						
MKAR	**Makanchi Array**	**48.27**	**295**	P	**P**	**19 02 00.5**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**49.87**	**308**	P	**P**	**19 02 12.8**	**-1.2**
	comp=Z,2.8nm,0.6s,mb4.4,baz=66,slow=7.4,SNR=25						
BVAR	**Borovoye Array**	**49.87**	**308**	P	**P**	**19 02 12.8**	**-1.2**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**49.89**	**308**	*c iP*	**P**	**19 02 12.7**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRVK	**Borovoye**	**49.89**	**308**	*eP*	**P**	**19 02 12.6**	**-1.6**
NVAR	**Mina Array Bea**	**53.68**	**73**	P	**P**	**19 02 46.3**	**+3.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=302,slow=7.8,SNR=12						
PDAR	**Pinedale Array**	**55.16**	**64**	P	**P**	**19 02 56.0**	**+2.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=302,slow=2.4,SNR=9.4						
JOF	**Joensuu**	**55.82**	**335**	*eP*	**P**	**19 02 57.1**	**-0.5**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
JOF	**Joensuu**	**55.82**	**335**	*ep*	**P**	**19 02 57.1**	**-0.5**
	comp=Z,4.2nm,0.4s,mb4.8						
ABKAR	**Akbulak array**	**57.16**	**310**	*eP*	**P**	**19 03 06.2**	**-1.2**
	comp=Z,1.0nm,0.5s,mb4.1						
KAF	**Kangasniemi**	**57.66**	**337**	*eP*	**P**	**19 03 10.2**	**-0.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KAF	**Kangasniemi**	**57.66**	**337**	*ep*	**P**	**19 03 10.2**	**-0.5**
	comp=Z,2.5nm,0.4s,mb4.6						
FINES	**FINESS Array B**	**58.31**	**337**	P	**P**	**19 03 15.4**	**+0.2**
	comp=Z,5.3nm,0.6s,mb4.8,baz=34,slow=8.5,SNR=40						
FINES	**FINESS Array B**	**58.31**	**337**	P	**P**	**19 03 15.5**	**+0.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**60.00**	**259**	P	**P**	**19 03 27.9**	**+0.4**
	comp=Z,1.2nm,0.9s,mb3.9,baz=23,slow=7.2,SNR=12						
CMAR				PcP	PcP	19 04 13.6	+0.9
	comp=Z,0.6nm,0.6s,baz=7.2,slow=3.1,SNR=6.3						
CMAR	**Chiang Mai Arr**	**60.00**	**259**	P	**P**	**19 03 27.9**	**+0.4**
CMAR						19 04 13.6	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**61.46**	**344**	P	**P**	**19 03 36.5**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=19,slow=6.9						
NOA	**NORSAR Array B**	**61.46**	**344**	P	**P**	**19 03 36.7**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=18,slow=6.7,SNR=4.4						
NOA	**NORSAR Array B**	**61.46**	**344**	P	**P**	**19 03 36.7**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**61.46**	**344**	P	**P**	**19 03 36.7**	**-0.1**
AKASG	**Malin Array Be**	**67.10**	**330**	P	**P**	**19 04 13.2**	**-0.5**
	comp=Z,1.5nm,0.4s,mb4.2,baz=28,slow=6.8,SNR=6.4						
AKASG	**Malin Array Be**	**67.10**	**330**	P	**P**	**19 04 13.3**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TXAR	**Lajitas Array**	**68.45**	**69**	P	**P**	**19 04 25.1**	**+2.5**
	comp=Z,0.3nm,0.5s,mb3.4,baz=300,slow=5.2,SNR=6.6						
BRTR	**Keskin Array B**	**75.48**	**322**	P	**P**	**19 05 04.5**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.6,baz=56,slow=4.8,SNR=6.6						
BRTR	**Keskin Array B**	**75.48**	**322**	P	**P**	**19 05 04.5**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**82.63**	**206**	P	**P**	**19 05 44.8**	**+1.4**
	comp=Z,0.1nm,0.3s,mb3.1,baz=17,slow=4.5,SNR=12						

IDC 26 19:08:24.8±3.2, 42°.44S×75°.47W, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.9/16, mbtmp4.0/5, ML3.6/1, Error ellipse: s-maj=79.1km s-min=39.1km az=102.0, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**4.06**	**67**	Pn	Pn	19 09 29.0	+0.8
	0.9nm,0.3s,baz=238,slow=8.3,SNR=18						
PLCA				Sn	Sn	19 10 30.1	+14
	1.0nm,0.3s,baz=123,slow=22,SNR=6.0						
CPUP	**Villa Florida**	**21.89**	**49**	P	P	19 13 18.4	-0.9
	2.6nm,0.5s,baz=212,slow=8.9,SNR=11						
SIV	**San Ignacio**	**29.11**	**29**	P	P	19 14 26.9	-0.4
	0.3nm,0.4s,baz=148,slow=22,SNR=9.4						
BOSA	**Boshof**	**78.51**	**118**	P	P	19 20 27.3	-0.7
	2.5nm,0.8s,baz=234,slow=7.7,SNR=5.9						
DBIC	**Dimbokro**	**80.41**	**72**	P	P	19 20 40.3	+1.8
	2.1nm,0.5s,baz=186,slow=7.9,SNR=5.6						

CASC 26 19:11:33.1±2.1, 8°.41N×82°.98W, h3km, MD3.7, 1C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**323**	⇑*eP*	Pg	19 11 39.8	+0.9
ACR				*eS*	Sg	19 11 44.3	+1.5
BRU2	**Volcan**	**0.48**	**37**	⇓*iP*	Pg	19 11 43.5	+1.2
BAR1		**0.88**	**339**	*eP*	Pg	19 11 51.0	+0.9
BAR1				*eS*	Sg	19 12 02.2	+0.6
BUS	**Buena Vista**	**1.37**	**326**	*eP*	Pn	19 11 58.2	-0.9
PRS1	**Puriscal**	**2.04**	**320**	*eP*	Pn	19 12 09.8	+1.5

KRSC 26 19:27:09.8±1.3, 50°.58N×157°.91E, h37km±37km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.53**	**282**	*eP*	Pn	19 27 35.2	+0.7
ALID				S	Sn	19 27 53.6	+0.5
MIPR	**Malaya Ipel'ka**	**1.84**	**337**	*eP*	Pn	19 27 41.4	+2.5
RUS	**Russkaya**	**1.89**	**11**	*eP*	Pn	19 27 41.4	+1.8
RUS				*e*S	Sn	19 28 04.4	+2.2
GRL	**Gorelyy**	**1.98**	**3**	*eP*	Pn	19 27 43.3	+2.6
PET	**Petropavlovsk**	**2.49**	**10**	S	Sn	19 28 19.9	+3.0
AVH	**Avacha**	**2.74**	**10**	*eP*	Pn	19 27 54.8	+3.6
NLC	**Nalytchevo**	**2.74**	**18**	*e*S	Sn	19 28 26.1	+3.0
SPN	**Mys Shipunski**	**2.84**	**27**	S	Sn	19 28 28.3	+2.8
GNL	**Ganaly**	**3.12**	**0**	*eP*	Pn	19 27 59.8	+3.4
MKZ	**Mys Kozlova**	**4.61**	**29**	*eP*	Pn	19 28 19.2	+2.3
KBTR	**Krutoberegovo**	**6.36**	**26**	*eP*	Pn	19 28 44.0	+3.2

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*PGC **26** 19:29:09.1±0.6, 49°.14N×128°.50W, h10km, ML3.0/12, Mw3.6, 183km Wsw of Gold R., Bc Vancouver Island Region*
*IDC **26** 19:29:09.8±2.1, 49°.27N×128°.24W, h0km, mb3.8/1, mb1 3.7/7, mb1mx3.4/29, mbtmp3.5/7, ML3.4/6, MS3.2/5, Ms1 3.2/5, ms1mx2.7/44, Error ellipse: s-maj=43.7km s-min=10.8km az=73.0*
*ISCJB **26** 19:29:10.5±1.1, 49°.30N±0°.03×128°.37W±0°.09, h24km±8km, MS3.3/2, Error ellipse: s-maj=9.4km s-min=5.6km az=175.9*
*NEIC **26** 19:29:12.5±1.3, 49°.42N×128°.12W, h10km, ML3.0(PGC), Error ellipse: s-maj=22.9km s-min=8.8km az=77.0*
ISC 26 19:29:11.4±1.1, 49°.38N±0°.03×128°.30W±0°.08, h12km±6km, n43, σ1§17/60, MS3.3/2, 26D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**0.85**	**23**	⇓P	**Pg**	**19 29 28.3**	**+0.5**
BPBC	**Brooks Peninsu**	**0.85**	**23**	⇓P	**Pg**	**19 29 28.3**	**+0.5**
EDB	**Eliza Dome**	**0.91**	**57**	P	**Pg**	**19 29 28.5**	**-0.5**
EDB				⇑S	**Sg**	**19 29 42.3**	**+1.5**
EDB	**Eliza Dome**	**0.91**	**57**	P	**Pg**	**19 29 28.5**	**-0.5**
EDB				⇑S	**Sg**	**19 29 42.3**	**+1.5**
ETB	**Estevan Point**	**1.15**	**89**	⇑P	**Pb**	**19 29 30.9**	**-2.2**
ETB	**Estevan Point**	**1.15**	**89**	⇑P	**Pb**	**19 29 30.9**	**-2.2**
MAYB	**Maynard**	**1.26**	**35**	⇓Pn	**Pn**	**19 29 34.7**	**0.0**
MAYB				⇑Sn	**Sn**	**19 29 52.1**	**+0.6**
MAYB	**Maynard**	**1.26**	**35**	⇓Pn	**Pn**	**19 29 34.7**	**0.0**
MAYB				⇑Sn	**Sn**	**19 29 52.1**	**+0.6**
HOLB	**Holberg**	**1.27**	**5**	⇓Pn	**Pn**	**19 29 34.1**	**-0.8**
HOLB				⇓Sn	**Sn**	**19 29 50.0**	**-1.8**
HOLB	**Holberg**	**1.27**	**5**	⇓Pn	**Pn**	**19 29 34.1**	**-0.8**
HOLB				⇓Sn	**Sn**	**19 29 50.0**	**-1.8**
WOSB	**Woss**	**1.37**	**54**	⇑Pn	**Pn**	**19 29 35.8**	**-0.4**
WOSB				⇑Sn	**Sn**	**19 29 55.2**	**+1.0**
WOSB	**Woss**	**1.37**	**54**	⇑Pn	**Pn**	**19 29 35.8**	**-0.4**
WOSB				⇑Sn	**Sn**	**19 29 55.2**	**+1.0**
PHC	**Port Hardy**	**1.44**	**22**	⇑Pn	**Pn**	**19 29 37.1**	**-0.2**
PHC				⇑Sn	**Sn**	**19 29 56.6**	**+0.5**
PHC	**Port Hardy**	**1.44**	**22**	⇑Pn	**Pn**	**19 29 37.1**	**-0.2**
PHC				⇑Sn	**Sn**	**19 29 56.6**	**+0.5**
GDR	**Gold River**	**1.53**	**74**	⇑Pn	**Pn**	**19 29 36.7**	**-1.8**
GDR	**Gold River**	**1.53**	**74**	⇑Pn	**Pn**	**19 29 36.7**	**-1.8**
NCRB	**Newcastle Ridg**	**1.78**	**54**	⇑Pn	**Pn**	**19 29 42.0**	**+0.1**
NCRB				⇓Sn	**Sn**	**19 30 05.0**	**+0.7**
NCRB	**Newcastle Ridg**	**1.78**	**54**	⇑Pn	**Pn**	**19 29 42.0**	**+0.1**
NCRB				⇓Sn	**Sn**	**19 30 05.0**	**+0.7**
OZB	**Mount Ozzard**	**1.89**	**102**	⇓Pn	**Pn**	**19 29 40.2**	**-3.1**
OZB	**Mount Ozzard**	**1.89**	**102**	⇓Pn	**Pn**	**19 29 40.2**	**-3.1**
CBB	**Campbell River**	**2.01**	**70**	⇓Pn	**Pn**	**19 29 44.4**	**-0.7**
CBB				⇓Sn	**Sn**	**19 30 10.2**	**+0.1**
CBB	**Campbell River**	**2.01**	**70**	⇓Pn	**Pn**	**19 29 44.4**	**-0.7**
CBB				⇓Sn	**Sn**	**19 30 10.2**	**+0.1**
MGB	**Mount Grey**	**2.39**	**98**	⇓Pn	**Pn**	**19 29 47.8**	**-2.5**
MGB				⇓Sn	**Sn**	**19 30 15.3**	**-4.3**
MGB	**Mount Grey**	**2.39**	**98**	⇓Pn	**Pn**	**19 29 47.8**	**-2.5**
MGB				⇓Sn	**Sn**	**19 30 15.3**	**-4.3**
TXB	**Texada**	**2.54**	**81**	⇓Pn	**Pn**	**19 29 51.3**	**-1.0**
TXB	**Texada**	**2.54**	**81**	⇓Pn	**Pn**	**19 29 51.3**	**-1.0**
BBB	**Bella Bella**	**2.81**	**2**	Pn	**Pn**	**19 29 56.6**	**+0.6**
	6.4nm,0.3s,baz=195,slow=13,SNR=87						
BBB				Sn	**Sn**	**19 30 31.2**	**+1.3**
	14nm,0.3s,baz=23,slow=18,SNR=14						
BBB	**Bella Bella**	**2.81**	**2**	⇓Pn	**Pn**	**19 29 56.4**	**+0.3**
BBB				⇓Sn	**Sn**	**19 30 30.1**	**+0.2**
BBB	**Bella Bella**	**2.81**	**2**	⇓Pn	**Pn**	**19 29 56.4**	**+0.3**
BBB				⇓Sn	**Sn**	**19 30 30.1**	**+0.2**
YBH	**Yreka Blue Hor**	**8.59**	**151**	Pn	**Pn**	**19 31 16.9**	**+1.5**
	0.1nm,0.3s,baz=355,slow=16,SNR=4.5						
YBH				LR	LR	19 34 11.8	
	comp=Z,130nm,21.4s,baz=329,slow=36						
DLBC	**Dease Lake**	**9.13**	**354**	LR	LR	19 35 04.8	
	comp=Z,80nm,18.7s,baz=296,slow=38						
MOD	**Modoc**	**9.33**	**140**	*eP*	**Pn**	**19 31 27.6**	**+1.9**
	14nm,1.1s						
WDC	**Whiskeytown Da**	**9.69**	**153**	*eP*	**Pn**	**19 31 31.7**	**+1.2**
	19nm,1.6s						
NVAR	**Mina Array Bea**	**13.09**	**143**	Pn	**Pn**	**19 32 16.9**	**-0.1**
	0.2nm,0.3s,baz=24,slow=38,SNR=3.7						
PDAR	**Pinedale Array**	**14.57**	**110**	Pn	**Pn**	**19 32 38.5**	**+1.4**
	0.1nm,0.3s,baz=301,slow=9.3,SNR=9.2						
YKA	**Yellowknife Ar**	**15.17**	**25**	Pn	**Pn**	**19 32 44.3**	**-0.8**
	0.1nm,0.3s,baz=220,slow=13,SNR=2.9						
YKA	**Yellowknife Ar**	**15.17**	**25**	Pn	**Pn**	**19 32 44.3**	**-0.8**
FFC	**Flin Flon**	**16.99**	**62**	*eP*	**Pn**	**19 33 09.9**	**+1.3**
	36nm,0.9s						
RSSD	**Black Hills**	**17.40**	**98**	*eP*	**Pn**	**19 33 11.6**	**-2.3**
	1.3nm,0.7s						
INK	**Inuvik**	**19.16**	**354**	P	**Pn**	**19 33 35.8**	**+0.6**
	0.1nm,0.3s,baz=184,slow=7.6,SNR=4.2						
INK				LR	LR	19 41 00.5	
	comp=Z,52nm,19.3s,baz=31,slow=37						
ULM	**Lac du Bonnet**	**20.86**	**75**	P	**P**	**19 33 52.8**	**-0.1**
	4.6nm,0.9s,baz=287,slow=16,SNR=3.2						
ULM				LR	LR	19 42 14.2	
	comp=Z,90nm,20.8s,MS3.1,baz=283,slow=38						
FCC	**Fort Churchill**	**21.93**	**52**	*eP*	**P**	**19 34 05.6**	**+1.3**
	0.3nm,1.0s						
SCHQ	**Schefferville**	**37.06**	**57**	LR	LR	19 51 44.4	
	comp=Z,68nm,19.4s,MS3.5,baz=200,slow=36						

PRE 26 19:29:27.6±0.5, 20°.92S×32°.89E, h5km, ML4.3, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.02**	**241**	*eP*	Pn	19 30 17.6	+1.5
MSNA				*e*S	Sn	19 30 53.6	+0.9
MSNA				AML	AML	19 31 15.6	
	comp=Z,236nm,0.5s						
SLR	**Silverton**	**6.40**	**221**	*e*S	Sn	19 32 13.5	-2.5
SLR				AML	AML	19 32 55.9	
	comp=Z,54nm,0.4s						
POGA	**Pongola**	**6.53**	**190**	*eP*	Pn	19 31 04.7	+0.3
POGA				*e*S	Sn	19 32 15.7	-3.6
POGA				AML	AML	19 33 15.0	
	comp=Z,24nm,0.7s						
KSR	**Koster**	**7.38**	**227**	*eP*	Pn	19 31 17.3	+1.4
KSR				*e*S	Sn	19 32 37.0	-3.1
KSR				AML	AML	19 32 45.0	
	comp=Z,22nm,0.4s						
PRYS	**Parys**	**7.83**	**219**	*eP*	Pn	19 31 23.1	+0.9
PRYS				*e*S	Sn	19 32 47.7	-3.6
PRYS				AML	AML	19 33 48.9

KAKA Kakadu 6.74 161 ⇓*i*P **Pn 20 04 12.5 +0.5**
17nm,0.6s
KAKA *e*S **Sn 20 05 24.9 -2.9**
KAKA Kakadu 6.74 161 *e*P **Pn 20 04 12.4 +0.3**
52nm,0.4s
KAKA *e*S **Sn 20 05 24.9 -3.0**
KNA Kununurra 9.50 189 *e*P **Pn 20 04 49.2 +0.3**
9.7nm,0.3s
KNA *e*S **Sn 20 06 29.1 -5.3**
FITZ Fitzroy Crossi 12.56 201 P **Pn 20 05 28.1 -0.8**
0.4nm,0.3s,baz=52,slow=10,SNR=25
FITZ S **Sn 20 07 41.5 -6.5**
2.9nm,0.3s,baz=71,slow=22,SNR=9.2
DAV Davao City (W) 14.07 341 S **Sn 20 08 16.0 -8.2**
72nm,0.3s,baz=268,slow=2.1,SNR=4.1
WRAB Tennant Creek 14.13 164 *e*P **Pn 20 05 48.6 -0.2**
WRAB *e*S **Sn 20 08 16.9 -8.8**
COEN Coen 14.83 122 *e*P **Pn 20 05 59.7 +2.0**
ASAR Alice Springs 17.63 169 P **Pn 20 06 31.9 +0.4**
1.5nm,0.3s,baz=352,slow=9.8,SNR=82
ASAR S **S 20 09 44.0 -1.3**
0.4nm,0.3s,baz=339,slow=17,SNR=8.1
MBWA Marble Bar 17.94 214 *e*P **Pn 20 06 36.1 +0.9**
2.9nm,0.6s
STKA Stephens Creek 27.58 159 P **P 20 08 09.1 +1.1**
1.4nm,0.4s,mb4.0,baz=349,slow=5.8,SNR=6.6
STKA Stephens Creek 27.58 159 *e*P **P 20 08 08.4 +0.4**
CMSA Cobar Meteorol 28.98 152 *e*P **P 20 08 21.7 +1.2**
NWAO Narrogin (SRO) 29.13 203 P **P 20 08 23.1 +1.3**
16nm,1.2s,mb4.6,baz=233,slow=3.0,SNR=3.2
PSI Prapat 32.54 285 LR LR 20 22 31.2
comp=Z,103nm,18.1s,baz=21,slow=37
CMAR Chiang Mai Arr 39.46 309 P **P 20 09 50.8 0.0**
0.4nm,0.5s,mb3.3,baz=136,slow=6.6,SNR=7.6
MJAR Matsushiro Arr 43.26 9 P **P 20 10 19.9 -1.6**
1.1nm,0.6s,mb3.6,baz=184,slow=9.1,SNR=4.0
ULN Ulaanbaatar 57.67 342 *e*P **P 20 12 09.6 +0.1**
1.2nm,0.5s,mb4.0
MK31 Makanchi Array 67.77 327 *e*P **P 20 13 16.8 +0.5**
MKAR Makanchi Array 67.77 327 P **P 20 13 16.8 +0.5**
2.3nm,0.4s,mb4.2,baz=109,slow=8.9,SNR=50
EKS2 Erkin-Say 70.63 319 *e*P **P 20 13 33.5 -0.5**
ZALV Zalesovo Beam 71.06 334 P **P 20 13 35.8 -0.5**
0.4nm,0.4s,mb3.5,baz=157,slow=7.8,SNR=3.3
KURK Kurchatov 72.04 328 P **P 20 13 42.2 -0.1**
0.7nm,0.5s,mb3.6,baz=127,slow=5.0,SNR=8.0
BVAR Borovoye Array 77.59 328 P **P 20 14 14.1 -0.1**
0.3nm,0.5s,mb3.2,baz=138,slow=11,SNR=4.0
TIXI Tiksi 77.79 360 *e*P **P 20 14 13.6 -1.3**
2.0nm,0.7s,mb3.9

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*IDC **26** 20:03:24.5±1.9, 31.°23N×103.°79E, h0km, mb3.8/8, mb1 3.8/10, mb1mx3.6/26, mbtmp3.7/10, ML3.3/1, MS3.4/11, Ms1 3.4/11, ms1mx3.1/39, Error ellipse: s-maj=37.1km s-min=31.7km az=19.0*
*NEIC **26** 20:03:26.7±0.6, 31.°31N×103.°88E, h10km, mb4.0/2, Error ellipse: s-maj=13.8km s-min=8.1km az=86.0*
*BJI **26** 20:03:27.3, 31.°20N×104.°00E, h10km, mB4.4/1, mb4.3/3, ML3.8/16, Ms4.2/4, Ms7 3.8/3*
ISC 26 20:03:25.7±0.8, 31.°26N±0.°03×103.°88E±0.°05, h4km±6km, n30, σ1s14/34, mb3.9/9, MS3.3/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**197**	Pg	**Pg**	**20 03 32.3**	**-0.5**
CD2				Sg	**Sg**	**20 03 38.0**	**+0.4**
CD2				smax			
	comp=N,44µm,0.8s						
LZH	**Lanzhou**	**4.81**	**360**	*e*Pg	**Pg**	**20 04 58.0**	**+0.2**
LZH				Sg	**Sg**	**20 06 00.8**	**+0.6**
LZH				smax			
	comp=N,47nm,0.6s						
LZH				LR	LR		
	comp=E,2µm,5.8s						
LZH				LR	LR		
	comp=Z,3µm,6.4s						
ENH	**Enshi**	**4.92**	**100**	*e*P	**Pn**	**20 04 40.8**	**+0.3**
XAN	**Xi'an**	**5.07**	**56**	Pn	**Pn**	**20 04 42.0**	**-0.4**
XAN				Pg	**Pg**	**20 04 59.3**	**-3.5**
XAN				Sn	**Sn**	**20 05 45.0**	**+3.5**
XAN				Sg	**Sg**	**20 06 07.3**	**-1.3**
XAN				smax			
	comp=N,120nm,1.1s						
XAN				smax			
	comp=E,48nm,1.0s						
XAN				LR	LR		
	comp=Z,190nm,5.7s						
GYA	**Guiyang**	**5.37**	**152**	Pn	**Pn**	**20 04 50.5**	**+3.9**
GYA				Sg	**Sb**	**20 06 04.0**	**-1.0**
GYA				smax			
	comp=N,230nm,1.0s						
GYA				smax			
	comp=E,280nm,1.0s						
KMI	**Kunming**	**6.20**	**190**	Pn	**Pn**	**20 04 58.5**	**+0.5**
KMI				Sn	**Sn**	**20 06 07.5**	**-1.8**
KMI				Sg	**Sg**	**20 06 39.5**	**-5.3**
KMI				smax			
	comp=N,80nm,1.4s						
KMI				smax			
	comp=E,71nm,1.5s						
KMI				LR	LR		
	comp=N,860nm,5.9s						
KMI				LR	LR		
	comp=E,1µm,7.7s						
WHN	**Wuhan**	**9.02**	**92**	P	**Pn**	**20 05 46.3**	**+10**
WHN				S	**Sn**	**20 07 21.5**	**+2.7**
WHN				LR	LR		
	comp=N,790nm,5.2s						
WHN				LR	LR		
	comp=E,2µm,5.5s						
WHN				LR	LR		
	comp=Z,2µm,5.4s						
CHTO	**Chiang Mai**	**13.18**	**201**	*e*P	**Pn**	**20 06 35.7**	**+2.0**
	comp=Z,3.8nm,0.9s						
CM31	**Chiang Mai Arr**	**13.51**	**200**	P	**Pn**	**20 06 39.5**	**+1.3**
	comp=Z,3.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.51**	**200**	Pn	**Pn**	**20 06 38.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=12,slow=11,SNR=9.7						
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**20 07 21.7**	**+1.7**
	baz=176,slow=5.6,SNR=2.5						
KSRS	**Korea Array**	**20.76**	**66**	P	**P**	**20 08 07.3**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=259,slow=10,SNR=6.3						
KSRS				LR	LR	20 16 13.7	
	comp=Z,35nm,20.1s,MS2.7,baz=280,slow=37						
CN2	**Changchun**	**21.12**	**48**	*e*P	**P**	**20 08 11.0**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.5						
JOW	**Kunigami**	**21.76**	**96**	LR	LR	20 16 32.4	
	comp=Z,73nm,19.6s,MS3.1,baz=115,slow=36						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**20 08 29.3**	**+0.8**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**20 08 27.8**	**-0.7**
	comp=Z,5.0nm,1.1s,mb3.9,baz=118,slow=10,SNR=14						
MKAR				LR	LR	20 18 06.4	
	comp=Z,120nm,20.8s,MS3.3,baz=49,slow=39						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**20 08 27.8**	**-0.7**
MKAR				LR	LR	20 18 06.4	
UCH	**Uchtor**	**25.83**	**303**	*e*P	**P**	**20 08 59.6**	**+1.5**
	comp=Z,4.8nm,1.2s,mb3.9						
AAK	**Ala-Archa**	**25.96**	**304**	LR	LR	20 20 48.1	
	comp=Z,150nm,21.5s,MS3.5,baz=284,slow=40						
ZAA0	**Zalesovo Array**	**26.50**	**334**	*e*P	**P**	**20 09 02.5**	**-1.4**
ZALV	**Zalesovo Beam**	**26.50**	**334**	P	**P**	**20 09 04.2**	**+0.4**
	comp=Z,2.5nm,0.9s,mb3.8,baz=131,slow=6.7,SNR=10.0						
ZALV				LR	LR	20 20 36.3	
	comp=Z,44nm,21.7s,MS3.0,baz=308,slow=39						
KURK	**Kurchatov**	**27.00**	**323**	P	**P**	**20 09 08.1**	**-0.4**
	comp=Z,2.2nm,1.0s,mb3.6,baz=128,slow=9.2,SNR=12						
KURK				LR	LR	20 21 03.8	
	comp=Z,81nm,20.4s,MS3.3,baz=135,slow=39						
KURK	**Kurchatov**	**27.00**	**323**	*e*P	**P**	**20 09 08.2**	**-0.3**
	comp=Z,3.1nm,1.0s,mb3.8						
KURK				LR	LR	20 21 03.8	
BVAR	**Borovoye Array**	**32.55**	**322**	P	**P**	**20 09 56.7**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.4,baz=153,slow=9.7,SNR=3.0						
BVAR				LR	LR	20 23 45.4	
	comp=Z,47nm,20.8s,MS3.2,baz=164,slow=38						
GNI	**Garni**	**48.06**	**298**	LR	LR	20 34 54.9	
	comp=Z,31nm,20.8s,MS3.3,baz=276,slow=39						
ARCES	**ARCESS Array B**	**57.04**	**336**	P	**P**	**20 13 11.7**	**-0.6**
	comp=Z,0.6nm,0.5s,mb4.0,baz=87,slow=7.9,SNR=7.0						
FINES	**FINESS Array B**	**57.33**	**326**	P	**P**	**20 13 13.4**	**-1.1**
	comp=Z,1.6nm,0.9s,mb4.0,baz=101,slow=7.2,SNR=3.2						
NOA	**NORSAR Array B**	**64.42**	**327**	P	**P**	**20 14 01.1**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=54,slow=4.5,SNR=2.5						
NOA				LR	LR	20 43 41.8	
	comp=Z,17nm,19.3s,MS3.3,baz=245,slow=38						
VRAC	**Vranov**	**65.36**	**314**	LR	LR	20 44 07.9	
	comp=Z,59nm,20.8s,MS3.8,baz=222,slow=37						
DAVOX	**Davos/Dischmat**	**70.48**	**313**	LR	LR	20 47 26.0	
	comp=Z,47nm,20.8s,MS3.7,baz=83,slow=38						

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*ISCJB **26** 20:15:40.0±0.9, 40.°63N±0.°04×21.°41E±0.°05, h10km, Error ellipse: s-maj=6.5km s-min=4.2km az=135.7*
*CSEM **26** 20:15:41.0±0.4, 40.°67N×21.°37E, h2km, ML2.5, Error ellipse: s-maj=8.1km s-min=4.9km az=138.0*
*SKO **26** 20:15:41.7, 40.°67N×21.°35E, h10km, M2.1, ML2.5*
*TIR **26** 20:15:45.5±4.7, 40.°66N×21.°11E, h4km±42km*
ISC 26 20:15:41.2±0.9, 40.°66N±0.°04×21.°38E±0.°05, h10km, n14, σ0s99/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**0.36**	**353**	*e*Pg	**Pg**	**20 15 48.2**	**-0.2**
BIA				*e*Sg	**Sg**	**20 15 54.6**	**+1.3**
BIA				*e*Lg		20 15 54.7	
	comp=E,412nm,0.3s						
BIA				*e*Lg		20 15 54.8	
	comp=N,232nm,0.2s						
BIA	**Bitola**	**0.36**	**353**	*e*Pg	**Pg**	**20 15 48.1**	**-0.3**
BIA				*e*Sg	**Sg**	**20 15 54.5**	**+1.2**
BIA				*e*Lg		20 15 54.6	
	comp=N,412nm,0.3s						
KBN	**Korca**	**0.45**	**266**	*e*PG	**Pg**	**20 15 48.4**	**-1.7**
KBN				*i* SG	**Sg**	**20 15 55.1**	**-0.9**
KBN	**Korca**	**0.45**	**266**	*e*Pg	**Pg**	**20 15 48.4**	**-1.7**
	SNR=90						
KBN				*i* Sg	**Sg**	**20 15 55.1**	**-0.9**
	SNR=90						
OHR	**Ohrid**	**0.63**	**316**	*e*Pg	**Pg**	**20 15 52.6**	**-0.9**
OHR				*e*Sg	**Sg**	**20 16 02.3**	**+0.6**
OHR				*e*Lg		20 16 02.5	
	comp=N,256nm,0.4s						
OHR				*e*Lg		20 16 02.7	
	comp=E,308nm,0.3s						
OHR	**Ohrid**	**0.63**	**316**	*e*Pg	**Pg**	**20 15 52.5**	**-1.0**
OHR				*e*Sg	**Sg**	**20 16 02.3**	**+0.6**
OHR				*e*Lg		20 16 02.5	
	comp=E,256nm,0.4s						
KRUS	**Krusevo**	**0.72**	**352**	*e*Pg	**Pg**	**20 15 54.1**	**-0.9**
KRUS				*e*Sg	**Sg**	**20 16 04.8**	**+0.4**
KRUS				*e*Lg		20 16 05.2	
	comp=E,41nm,0.3s						
KRUS				*e*Lg		20 16 05.3	
	comp=N,41nm,0.2s						
KRUS	**Krusevo**	**0.72**	**352**	*e*Pg	**Pg**	**20 15 54.1**	**-1.0**
KRUS				*e*Sg	**Sg**	**20 16 04.8**	**+0.4**
KRUS				*e*Lg		20 16 05.1	
	comp=N,41nm,0.3s						
VAY	**Valandovo**	**1.12**	**53**	*e*Pg	**Pg**	**20 16 01.9**	**-0.8**
VAY				*e*Sg	**Sg**	**20 16 17.8**	**+0.6**
VAY				*e*Lg		20 16 18.3	
	comp=N,38nm,0.6s						
VAY				*e*Lg		20 16 18.5	
	comp=E,65nm,0.6s						
VAY	**Valandovo**	**1.12**	**53**	*e*Pg	**Pg**	**20 16 01.9**	**-0.8**
VAY				*e*Sg	**Sg**	**20 16 17.8**	**+0.6**
VAY				*e*Lg		20 16 18.2	
	comp=E,38nm,0.6s						
SRN	**Sarande**	**1.31**	**234**	*e*PN	**Pg**	**20 16 07.3**	**+0.9**
SRN				*i* SG	**Sg**	**20 16 25.1**	**+1.7**
SRN	**Sarande**	**1.31**	**234**	*e*Pn	**Pg**	**20 16 07.3**	**+0.9**
SRN				*i* Sg	**Sg**	**20 16 25.1**	**+1.7**
	SNR=90						
PUK	**Puka**	**1.78**	**321**	*e*PN	**Pg**	**20 16 20.0**	**+4.7**
BCI	**Bajram Curri**	**1.97**	**330**	*e*PN	**Pg**	**20 16 18.8**	**-0.2**
BCI				*i* SG	**Sg**	**20 16 48.5**	**+3.9**

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*NEIC **26** 20:16:34.4, 20.°13N×65.°05W, h25km, MD3.5(RSPR), After RSPR.*
RSPR 26 20:16:34.4, 20.°13N×65.°05W, h25km±23km, MD3.5/3, MD3.5/3, 5C-12D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**2.00**	**203**	⇓*e*P	Pn	20 17 04.9	-1.7
CBYP	**Canovanas**	**2.00**	**203**	⇓*e*P	Pn	20 17 04.9	-1.7
MTP	**Monte Pirata**	**2.08**	**193**	⇓*e*P	Pn	20 17 05.6	-2.1
MTP	**Monte Pirata**	**2.08**	**193**	⇓*e*P	Pn	20 17 05.6	-2.1
CPD	**Cerro la Pandu**	**2.24**	**202**	⇓*e*P	Pn	20 17 07.7	-2.2
CPD	**Cerro la Pandu**	**2.24**	**202**	⇓*e*P	Pn	20 17 07.7	-2.2
LRS	**Lares**	**2.50**	**223**	⇓*i*P	Pn	20 17 11.4	-2.0
LRS				*e*S	Sn	20 17 40.9	-2.2
LRS	**Lares**	**2.50**	**223**	⇓*i*P	Pn	20 17 11.4	-2.0
LRS				*e*S	Sn	20 17 40.9	-2.2
CELP	**Cerrillos**	**2.51**	**216**	⇓*i*P	Pn	20 17 11.6	-2.0
CELP	**Cerrillos**	**2.51**	**216**	⇓*i*P	Pn	20 17 11.6	-2.0
ICM	**Isla Caja Muer**	**2.63**	**212**	⇑*i*P	Pn	20 17 13.8	-1.4
ICM				*e*S	Sn	20 17 44.3	-2.0
ICM	**Isla Caja Muer**	**2.63**	**212**	⇑*i*P	Pn	20 17 13.8	-1.4
ICM				*e*S	Sn	20 17 44.3	-2.0
LSP	**Las Mesas**	**2.74**	**225**	⇑*i*P	Pn	20 17 15.3	-1.4
LSP	**Las Mesas**	**2.74**	**225**	⇑*i*P	Pn	20 17 15.3	-1.4
GBPR	**Guanica, Bosqu**	**2.76**	**219**	⇑*e*P	Pn	20 17 15.3	-1.7
GBPR	**Guanica, Bosqu**	**2.76**	**219**	⇑*e*P	Pn	20 17 15.3	-1.7
CRPR	**Cabo Rojo, PR**	**2.88**	**223**	⇓*e*P	Pn	20 17 17.4	-1.3
CRPR				*e*S	Sn	20 17 50.1	-2.4
CRPR	**Cabo Rojo, PR**	**2.88**	**223**	⇓*e*P	Pn	20 17 17.4	-1.3
CRPR				*e*S	Sn	20 17 50.8	-1.7
SDDR	**Presa de Saban**	**6.00**	**260**	*e*P	Pn	20 18 01.3	-0.2
	14nm,0.4s						
SDDR				*e*S	Sn	20 19 05.4	-4.1

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*ISCJB **26** 20:20:18.3±0.5, 22.°76S±0.°04×66.°33W±0.°05, h223km±5km, mb4.4/57, Error ellipse: s-maj=8.3km s-min=5.9km az=163.6*
*NEIC **26** 20:20:18.6±0.6, 22.°80S×66.°31W, h214km±5km, mb4.5/36, Error ellipse: s-maj=7.5km s-min=5.7km az=83.0*
*GUC **26** 20:20:20.2±0.4, 22.°54S×66.°74W, h250km, ML5.6*
*BJI **26** 20:20:20.5, 22.°80S×66.°30W, h213km, mB4.8/5*
*IDC **26** 20:20:21.0±0.8, 22.°68S×66.°15W, h232km±6km, mb4.0/12, mb1 4.1/17, mb1mx4.0/21, mbtmp4.0/17, Error ellipse: s-maj=16.9km s-min=11.6km az=55.0*
ISC 26 20:20:18.8±0.5, 22.°75S±0.°04×66.°28W±0.°06, h213km±5km, h240km±3.1km: pP-P, n123, σ0s94/107, mb4.4/57, 7C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**3.13**	**272**	*e*P	**Pn**	**20 21 12.1**	**+1.3**
PECH				*i* S	**S**	**20 21 51.2**	**-0.2**
PECH				AML	AML	20 21 52.8	
	comp=N,11µm,0.5s						
MACH	**Maria Elena**	**3.26**	**279**	*e*P	**Pn**	**20 21 13.3**	**+1.1**
MACH				*e*S	**S**	**20 21 53.5**	**-0.5**
PB01	**Plate Boundary**	**3.43**	**299**	⇑*i*P	**Pn**	**20 21 15.7**	**+1.5**
PB01				*i* S	**S**	**20 21 57.1**	**-0.5**
PB01				AML	AML	20 21 59.2	
	comp=E,4µm,0.5s						
CEN1	**Los Morros**	**3.66**	**259**	⇓*i*P	**Pn**	**20 21 20.2**	**+3.2**
CEN1				*i* S	**S**	**20 22 06.3**	**+3.6**
MECH	**Mejillones**	**3.86**	**264**	⇑*e*P	**Pn**	**20 21 20.6**	**+1.3**
MECH				*e*S	**S**	**20 22 06.5**	**-0.4**
ANCH	**Antofagasta**	**3.91**	**255**	⇑*i*P	**Pn**	**20 21 21.3**	**+1.4**
ANCH				*e*S	**S**	**20 22 06.4**	**-1.7**
HMBC	**Humberston**	**4.16**	**306**	⇑*i*P	**Pn**	**20 21 23.5**	**+0.4**
HMBC				*i* S	**S**	**20 22 11.1**	**-2.6**
HMBC				AML	AML	20 22 14.4	
	comp=N,4µm,0.6s						
MNMC	**Miæe Miæ**	**4.75**	**319**	⇑*i*P	**Pn**	**20 21 31.7**	**+1.3**
MNMC				*i* S	**S**	**20 22 25.8**	**-1.2**
PSGC	**Pisagua**	**4.76**	**311**	⇑*i*P	**Pn**	**20 21 29.8**	**-0.8**
PSGC				*i* S	**S**	**20 22 22.6**	**-4.7**
LPAZ	**La Paz**	**6.66**	**345**	P	**Pn**	**20 21 57.2**	**+2.3**
	comp=N,18nm,0.3s,baz=155,slow=7.6,SNR=240						
LPAZ				S	**S**	**20 23 11.2**	**0.0**
	comp=N,4.2nm,0.3s,baz=265,slow=22,SNR=9.6						
LPAZ	**La Paz**	**6.66**	**345**	*e*P	**Pn**	**20 21 56.9**	**+2.0**
	comp=N,55nm,0.5s						
LPAZ				*e*S	**S**	**20 23 09.1**	**-2.2**
LCO	**Las Campanas**	**7.39**	**212**	*e*P	**Pn**	**20 22 02.6**	**-1.6**
	comp=N,64nm,0.4s						
SIV	**San Ignacio**	**8.33**	**37**	P	**Pn**	**20 22 17.0**	**+0.6**
	comp=N,43nm,0.3s,baz=225,slow=13,SNR=757						
SIV				S	**S**	**20 23 43.7**	**-6.8**
	baz=246,slow=20,SNR=3.4						
CPUP	**Villa Florida**	**8.90**	**115**	P	**Pn**	**20 22 24.8**	**+1.2**
	comp=N,0.7nm,0.3s,baz=276,slow=12,SNR=15						
CPUP				S	**S**	**20 23 53.6**	**-10**
	comp=N,0.8nm,0.3s,baz=241,slow=17,SNR=1.3						
CFAA	**Coronel Fontan**	**8.99**	**191**	P	**Pn**	**20 22 23.8**	**-1.0**
	comp=N,1.2nm,0.3s,baz=25,slow=12,SNR=129						
CFAA				S	**S**	**20 23 59.0**	**-6.9**
	comp=N,5.0nm,0.3s,baz=296,slow=17,SNR=17						
NNA	**Nana**	**14.69**	**315**	P	**Pn**	**20 23 37.4**	**+0.5**
	comp=N,2.1nm,0.3s,baz=145,slow=10,SNR=5.9						
NNA				S	**S**	**20 26 12.1**	**-7.8**
	comp=N,0.8nm,0.3s,baz=240,slow=17,SNR=2.0						
NNA	**Nana**	**14.69**	**315**	P	**Pn**	**20 23 35.5**	**-1.3**
	comp=N,22nm,0.8s						
TRQA	**Tornquist**	**15.70**	**167**	*e*P	**Pn**	**20 23 47.6**	**-1.2**
	comp=N,26nm,0.6s						
PLCA	**Paso Flores**	**18.29**	**190**	P	**P**	**20 24 17.3**	**+0.6**
	comp=N,0.9nm,0.3s,baz=11,slow=12,SNR=20						
PLCA	**Paso Flores**	**18.29**	**190**	*e*P	**P**	**20 24 16.8**	**+0.1**
	comp=N,12nm,0.8s						
CAM4	**Nova Friburgo**	**21.91**	**94**	⇑*i*P	**P**	**20 24 54.7**	**-0.4**
CAM4				*i*		20 24 56.4	
CAM4				*i*		20 24 58.8	
CAM4				*i*		20 25 02.7	
CAM4				*i*		20 25 05.6	
CAM4				*i*		20 25 08.8	
CAM4				*i*		20 25 12.5	
CAM4				*i*		20 25 18.3	
CAM4				*i*		20 25 18.3	
CAM4				*i*		20 25 22.7	
CAM4				*i*		20 25 28.0	
CAM4				*i*		20 25 37.6	
CAM4				*i*		20 25 40.3	
USHA	**Ushuaia**	**32.08**	**182**	P	**P**	**20 26 29.1**	**+3.6**
	comp=N,5.0nm,0.4s,mb4.4,baz=317,slow=12,SNR=7.3						
RCBR	**Riachuelo**	**33.79**	**65**	*e*P	**P**	**20 26 40.3**	**-0.5**
	comp=N,38nm,1.1s,mb4.8						
VNA1	**Neumayer--Stat**	**58.30**	**161**	*e*	**P**	**20 29 51.5**	**+0.7**
VNA2	**Neumayer--Watz**	**58.67**	**161**	*e*	**P**	**20 29 53.5**	**+0.1**
SWET	**Sewanee**	**60.59**	**342**	*e*P	**P**	**20 30 06.6**	**-0.3**
ELN	**Prospectdale**	**61.20**	**347**	*e*P	**P**	**20 30 11.2**	**+0.2**
TXAR	**Lajitas Array**	**63.06**	**324**	P	**P**	**20 30 23.4**	**-0.1**
	comp=N,0.4nm,0.6s,mb3.2,baz=147,slow=8.7,SNR=7.6						
TXAR				pP	pP	20 31 19.4	+6.9
	comp=N,0.6nm,0.9s,baz=147,slow=7.0,SNR=2.9						
CCM	**Cathedral Cave**	**64.87**	**338**	*e*P	**P**	**20 30 33.7**	**-1.4**
	comp=N,4.3nm,0.6s,mb4.3						
LIC	**Lamto**	**66.43**	**72**	*e*P	**P**	**20 30 44.0**	**-1.6**
	comp=N,18nm,0.5s,mb4.9						
TIC	**Toumodi**	**66.63**	**72**	*e*P	**P**	**20 30 45.2**	**-1.7**
	comp=N,16nm,0.7s,mb4.7						
KIC	**Kosan Boka**	**66.74**	**72**	*e*P	**P**	**20 30 46.2**	**-1.4**
	comp=N,16nm,0.6s,mb4.8						
DBIC	**Dimbokro**	**66.78**	**72**	P	**P**	**20 30 46.5**	**-1.3**
	comp=N,12nm,0.8s,mb4.6,baz=216,slow=7.6,SNR=22						
DBIC	**Dimbokro**	**66.78**	**72**	*e*P	**P**	**20 30 46.2**	**-1.6**
	comp=N,15nm,0.9s,mb4.6						
LONY	**Lake Ozonia**	**67.47**	**354**	*e*P	**P**	**20 30 50.8**	**-0.7**
TOA0	**Torodi Ar. Sit**	**75.51**	**69**	*e*P	**P**	**20 31 38.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**75.51**	**69**	P	**P**	**20 31 38.8**	**-1.4**
	comp=N,16nm,0.6s,mb4.9,baz=257,slow=5.7,SNR=382						
TORD				pP	pP	20 32 35.7	+4.9
	comp=N,3.8nm,0.8s,baz=258,slow=5.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	**75.51**	**69**	P	**P**	**20 31 38.8**	**-1.4**
TORD				pP	pP	20 32 35.7	+4.9
SCHQ	**Schefferville**	**77.26**	**360**	P	**P**	**20 31 48.4**	**-0.7**
	comp=N,6.8nm,0.7s,mb4.4,baz=182,slow=3.3,SNR=9.8						
TSUM	**Tsumeb**	**77.36**	**106**	*e*P	**P**	**20 31 49.1**	**-1.4**
	comp=N,19nm,1.0s,mb4.7						
NVAR	**Mina Array Bea**	**77.98**	**321**	P	**P**	**20 31 54.7**	**+1.2**
	comp=N,0.5nm,0.5s,mb3.4,baz=143,slow=7.6,SNR=3.3						
NVAR				pP	pP	20 32 50.1	+5.6
	comp=N,0.2nm,0.3s,baz=126,slow=4.6,SNR=1.5						
NVAR	**Mina Array Bea**	**77.98**	**321**	P	**P**	**20 31 54.7**	**+1.2**
NVAR				pP	pP	20 32 50.1	+5.6
HLID	**Hailey**	**79.41**	**327**	*e*P	**P**	**20 32 02.8**	**+1.7**
	comp=N,3.9nm,0.8s,mb4.1						
MDT	**Midelt**	**80.71**	**49**	P	**P**	**20 32 08.3**	**0.0**
	comp=N,8.6nm,0.9s,mb4.4,baz=238,slow=5.1,SNR=11						
BOSA	**Boshof**	**80.71**	**117**	P	**P**	**20 32 07.2**	**-1.4**
	comp=N,4.3nm,0.6s,mb4.2,baz=206,slow=4.5,SNR=12						
BOSA	**Boshof**	**80.71**	**117**	*e*P	**P**	**20 32 07.5**	**-1.1**
	comp=N,4.0nm,0.7s,mb4.2						
PBDV	**Barranco-do-Ve**	**81.09**	**43**	*e*P	**P**	**20 32 10.8**	**+0.6**
	comp=N,32nm,1.5s,mb4.7						
PCVE	**Castro Verde**	**81.26**	**43**	*e*P	**P**	**20 32 11.9**	**+0.8**
	comp=N,19nm,0.8s,mb4.8						
PVAQ	**Vaqueiros**	**81.33**	**43**	*e*P	**P**	**20 32 11.2**	**-0.3**
	comp=N,21nm,1.4s,mb4.6						
EGRO	**El Granado**	**81.55**	**43**	P	**P**	**20 32 12.7**	**0.0**
	comp=N,5.9nm,0.7s,mb4.3						
PBEJ	**Beja**	**81.61**	**43**	*e*P	**P**	**20 32 13.3**	**+0.4**
	comp=N,20nm,2.0s,mb4.4						
EVO	**Evora**	**81.82**	**42**	*e*P	**P**	**20 32 12.9**	**-1.1**
	comp=N,22nm,1.9s,mb4.5						
ESPR	**Espera**	**82.20**	**45**	P	**P**	**20 32 15.7**	**-0.4**
	comp=N,5.2nm,0.5s,mb4.4						
EMIN	**Mina Concepcio**	**82.21**	**44**	P	**P**	**20 32 15.8**	**-0.2**
	comp=N,9.8nm,0.8s,mb4.

comp=N,21nm,1.4s,mb4.8
ERTA Horta de San J 88.49 44 P **P 20 32 48.1 +1.2**
comp=N,5.4nm,0.9s,mb4.4
CASY Casey 91.22 179 *e*P **P 20 33 00.4 +1.0**
KEST Kesra 92.13 52 P **P 20 33 04.7 +0.7**
comp=N,2.4nm,0.8s,mb4.2,baz=230,slow=13,SNR=4.0
YKA Yellowknife Ar 93.18 340 P **P 20 33 08.1 -0.1**
comp=N,0.6nm,0.7s,mb3.8,baz=131,slow=4.4,SNR=7.9
YKA pP pP 20 34 05.8 +5.0
comp=N,0.9nm,0.8s,baz=121,slow=5.0,SNR=4.0
AKTK Aktyubinsk 128.92 43 PKP PKPdf 20 39 00.2 -0.6
AKTO Aktyubinsk 128.92 43 PKP PKPdf 20 39 00.2 -0.6
comp=N,1.9nm,0.8s,baz=325,slow=3.2,SNR=6.6
ASAR Alice Springs 129.86 204 PKP PKPdf 20 39 03.0 -0.6
comp=N,1.6nm,0.7s,baz=142,slow=2.2,SNR=16
ASAR SKPbc 20 42 03.4
comp=N,2.3nm,0.8s,baz=144,slow=3.4,SNR=14
ABKAR Akbulak array 130.38 44 *e*PKPdf PKPdf 20 39 04.4 +0.8
PETK Petropavlovsk- 135.01 324 SKPbc SKPbc 20 42 20.1 -2.5
comp=N,3.3nm,0.8s,baz=78,slow=6.8,SNR=8.1
BVAR Borovoye Array 135.40 36 PKP PKPdf 20 39 13.6 +0.7
comp=N,1.7nm,0.7s,baz=278,slow=3.5,SNR=12
FITZ Fitzroy Crossi 137.76 197 SKPbc SKPbc 20 42 31.2 -0.9
comp=N,2.0nm,0.8s,baz=141,slow=6.8,SNR=3.8
KURK Kurchatov 140.98 35 SKPbc SKPbc 20 42 38.5 -1.3
comp=N,0.3nm,0.3s,baz=308,slow=3.0,SNR=6.4
EKS2 Erkin-Say 141.42 49 *e*PKPdf PKPdf 20 39 25.4 +1.1
AAK Ala-Archa 141.93 49 *e*PKPdf PKPdf 20 39 26.2 +1.1
ZAA0 Zalesovo Array 141.99 28 *e*PKPpre 20 39 20.5
ZALV Zalesovo Beam 141.99 28 PKhKP 20 39 19.5
comp=N,3.3nm,0.5s,baz=304,slow=5.0,SNR=9.6
ZALV PKP PKPdf 20 39 25.1 +0.2
comp=N,4.5nm,0.6s,baz=300,slow=2.6,SNR=17
ZALV SKPbc SKPbc 20 42 40.8 -1.4
comp=N,0.9nm,0.5s,baz=314,slow=4.2,SNR=3.6
UCH Uchtor 142.07 50 *e*PKPpre 20 39 22.3
TKM2 Tokmak 2 142.60 48 *e*PKPpre 20 39 22.6
KSH Kashi 143.93 54 *e*PKP PKPdf 20 39 26.5 -2.3
KSH *ep*PKP *p*PKPdf 20 40 22.5 -1.4
KSH *es*PKP 20 40 46.5
KSH *e*PKS 20 43 01.5
KSH *e*SKS SKSdf 20 46 14.5 -3.5
KSH AMB AMB
comp=Z,68nm,4.9s
KSH LR LR
comp=N,80nm,4.3s
KSH LR LR
comp=E,86nm,6.1s
KSH LR LR
comp=Z,130nm,5.5s
MK31 Makanchi Array 145.15 39 *e*PKPdf PKPdf 20 39 30.6 -0.1
MKAR Makanchi Array 145.15 39 PKPbc PKPbc 20 39 30.7 0.0
comp=Z,22nm,0.8s,baz=325,slow=3.0,SNR=208
MKAR SKPbc SKPbc 20 42 46.7 -3.2
comp=Z,1.1nm,1.0s,baz=305,slow=2.8,SNR=3.4
HYB Hyderabad 146.60 93 *i* PKP PKPab 20 39 36.0 -1.5
WMQ Urumqi 149.97 39 *e*PKPbc PKPdf 20 39 37.5 -1.2
DMN Daman 153.69 73 *e*P PKPbc 20 39 52.1 -0.7
comp=Z,28nm,0.9s
KKN Kakani 153.83 73 *e*P PKPbc 20 39 51.3 -1.8
comp=Z,19nm,0.8s
PKI Pulchoki 153.96 74 *e*P PKPbc 20 39 53.8 +0.4
SONM Songino Array 154.29 11 PKP PKPdf 20 39 45.9 +0.9
comp=Z,1.4nm,0.8s,baz=333,slow=1.7,SNR=5.2
SONM PKPbc PKPbc 20 39 53.4 -0.1
comp=Z,2.3nm,0.7s,baz=15,slow=1.5,SNR=7.8
SONM PKPab PKPab 20 40 08.8 +0.5
comp=Z,2.6nm,0.7s,baz=312,slow=4.6,SNR=7.5
GUN Gumba 154.35 73 *e*P PKPbc 20 39 53.3 -0.9
comp=Z,11nm,0.5s
ULN Ulaanbaatar 154.38 10 *e*PKPdf PKPdf 20 39 44.8 -0.3
ULN *e*PKPab PKPab 20 40 09.1 +0.5
LSA Lhasa 158.63 66 *e*PKPdf PKPdf 20 39 51.7 +0.5
GTA Gaotai 159.61 32 *e*PKP PKPdf 20 39 51.8 -0.3
HHC Hu-ho-hao-te 161.86 5 *e*PKP PKPdf 20 39 51.5 -2.9
HHC *p*PKP *p*PKPdf 20 40 50.0 +0.2
HHC *s*PKP 20 41 13.3
HHC PKS 20 43 24.0
HHC PP PP 20 44 26.5 +1.8
HHC SKS SKSdf 20 46 33.0 -6.0
HHC SKKS SKKSac 20 50 50.5 -2.1
HHC SS SS 21 04 25.5 +1.0
HHC AMB AMB
comp=Z,72nm,8.6s
HHC LR LR
comp=N,87nm,22.7s
HHC LR LR
comp=E,130nm,23.3s
HHC LR LR
comp=Z,65nm,22.3s
CMAR Chiang Mai Arr 165.53 104 PKP PKPdf 20 39 58.5 +0.1
comp=Z,0.7nm,0.8s,baz=262,slow=2.7,SNR=6.0
CMAR PKPab PKPab 20 40 57.8 -0.4
comp=Z,3.8nm,0.8s,baz=253,slow=5.5,SNR=24
CD2 Chengdu 167.96 45 PKP PKPdf 20 39 56.0 -4.0
GYA Guiyang 172.60 59 *e*PKP PKPdf 20 40 00.8 -1.9
GYA *p*PKP *p*PKPdf 20 40 54.8 -3.3
GYA *s*PKP 20 41 16.5
GYA PKPab PKPab 20 41 29.8 +0.5
GYA PKS 20 43 33.0
GYA PP PP 20 45 22.0 +0.9
GYA AMB AMB
comp=Z,80nm,8.7s

*IDC **26** 20:24:25.8±2.4, 18°.06N×122°.66E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=74.5km s-min=30.8km az=52.0*
*MAN **26** 20:24:28, 18°.21N×122°.51E, h12km, mb4.8, ML3.7, MS3.7*
ISC 26 20:24:27.8±1.4, 18°.16N±0°.05×122°.53E±0°.07, h8km±7km, n12, σ0°87/18, mb3.2/3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.47**	**280**	*e*P		**Pg**	**20 24 37.6**	**+0.7**
SGCP				*e*S		**Sg**	**20 24 42.4**	**-0.6**
PALP	**Palanan**	**1.09**	**185**	*e*P		**Pg**	**20 24 48.8**	**0.0**
PALP				*e*S		**Sg**	**20 25 03.1**	**0.0**
APYP	**Conner**	**1.26**	**257**	*e*P		**Pn**	**20 24 50.2**	**-1.6**
APYP				*e*S		**Sb**	**20 25 00.1**	**-8.1**
CAUP	**Cauayan**	**1.38**	**209**	*e*P		**Pn**	**20 24 54.0**	**+0.5**
CAUP				*e*S		**Sb**	**20 25 10.8**	**-1.0**
ABRA	**Dolores**	**1.80**	**254**	*e*P		**Pn**	**20 24 58.5**	**-0.7**
ABRA				*e*S		**Sn**	**20 25 13.8**	**-8.5**
BBP	**Basco**	**2.33**	**347**	*e*P		**Pn**	**20 25 06.4**	**-0.1**
BCPH	**Baguio City Da**	**2.57**	**227**	][*e*P		**Pn**	**20 25 10.4**	**+0.6**
BCPH				*e*S		**Sn**	**20 25 41.8**	**+0.6**
BALP	**Baler**	**2.57**	**201**	*e*P		**Pn**	**20 25 10.9**	**+1.1**
BOLP	**Bolinao**	**3.06**	**235**	*e*P		**Pn**	**20 25 17.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**22.39**	**274**	P		**P**	**20 29 27.3**	**+0.4**
	0.9nm,1.1s,mb3.1,baz=74,slow=8.5,SNR=6.7							
ASAR	**Alice Springs**	**43.03**	**165**	P		**P**	**20 32 26.1**	**-1.9**
	0.6nm,0.7s,mb3.5,baz=341,slow=6.7,SNR=4.3							
MKAR	**Makanchi Array**	**43.63**	**320**	P		**P**	**20 32 33.4**	**+0.5**
	0.2nm,0.4s,mb3.2,baz=105,slow=9.3,SNR=4.5							

DJA 26 20:27:26, 1°.76N×99°.07E, h10km, MLv3.7/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**0.29**	**337**	P		Pg	20 27 32.9	+1.1
MNSI	**Mandailing Nat**	**1.08**	**152**	P		Pb	20 27 42.9	-4.0
MNSI				S		Sg	20 27 59.0	-2.0
BKNI	**Bangkinang**	**2.43**	**126**	P		Pn	20 28 06.9	+1.1
BKNI				S		Sn	20 28 37.4	+1.8
SISI	**Saibi**	**3.07**	**180**	P		Pn	20 28 17.1	+2.6
IPM	**Ipoh**	**3.33**	**36**	P		Pn	20 28 19.2	+1.0
SDSI	**Sungai Dareh**	**3.56**	**139**	P		Pn	20 28 28.3	+6.9
SDSI				S		Sn	20 29 13.2	+10
KULM	**Kulim**	**3.84**	**24**	P		Pn	20 28 25.5	+0.2
KULM				S		Sn	20 29 25.4	+15

*NOU **26** 20:29:24.6±0.9, 19°.74S×169°.93E, h30km, MD3.2, ML2.7*
*IDC **26** 20:29:36.0±3.6, 20°.21S×168°.49E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/13, mbtmp3.9/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/20, Error ellipse: s-maj=126.6km s-min=43.8km az=135.0*
ISC 26 20:29:28.4±4.3, 20°.3S±0°.4×169°.7E±0°.4, h4km±35km, n22, σ0°94/13, mb3.8/3, MS3.6/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.23**	**235**	*e*S		**Sn**	**20 30 58.9**	**+0.1**
DZM	**Mont Dzumac**	**3.53**	**239**	*e*Pn		**Pn**	**20 30 25.1**	**+1.0**
	17nm,0.3s							
DZM				*e*Sn		**Sn**	**20 31 03.5**	**-2.8**
	48nm,0.2s							
DZM				*e*LR		LR	20 31 11.3	
	2μm,26.1s							
DZM	**Mont Dzumac**	**3.53**	**239**	*e*P		**Pn**	**20 30 23.4**	**-0.7**
DZM				*e*S		**Sn**	**20 31 06.2**	**-0.2**
DZM				AMP			20 31 11.4	
	comp=Z,866nm,6.2s							
NOUC	**Port Laguerre**	**3.66**	**240**	*e*P		**Pn**	**20 30 24.9**	**-1.0**
NOUC				*e*S		**Sn**	**20 31 10.3**	**+0.8**
NOUC				AMP			20 31 22.8	
	comp=Z,34nm,0.8s							
AFI	**Afiamalu**	**18.78**	**73**	LR		LR	20 39 24.3	
	comp=Z,206nm,20.8s,baz=70,slow=30							
URZ	**Urewera**	**19.01**	**162**	LR		LR	20 39 39.7	
	comp=Z,135nm,18.2s,baz=82,slow=31							
ARMA	**Armidale**	**19.18**	**235**	*e*P		**Pn**	**20 33 55.1**	**+1.1**
RMQ	**Roma**	**20.19**	**248**	*e*P		**P**	**20 34 05.6**	**+1.3**
	comp=Z,28nm,1.1s							
RPZ	**Rata Peaks**	**23.38**	**178**	LR		LR	20 42 09.0	
	comp=Z,133nm,20.3s,MS3.4,baz=154,slow=32							
CMSA	**Cobar Meteorol**	**24.29**	**238**	*e*P		**P**	**20 34 46.6**	**-0.3**
STKA	**Stephens Creek**	**27.69**	**240**	P		**P**	**20 35 17.2**	**-0.5**
	comp=Z,1.8nm,0.7s,mb3.8,baz=81,slow=12,SNR=5.2							
STKA				LR		LR	20 46 01.4	
	comp=Z,258nm,19.5s,MS3.8,baz=28,slow=37							
ASAR	**Alice Springs**	**33.33**	**258**	P		**P**	**20 36 06.5**	**-1.3**
	comp=Z,1.8nm,0.9s,mb4.0,baz=77,slow=8.4,SNR=11							
PPT	**Papeete**	**38.53**	**93**	*e*LQ			20 45 38.4	
	comp=Z,407nm,29.2s							
PPT				*e*LR		LR	20 47 21.7	
	comp=Z,119nm,26.2s							
FITZ	**Fitzroy Crossi**	**41.60**	**265**	LR		LR	20 53 14.8	
	comp=Z,115nm,22.0s,MS3.7,baz=101,slow=35							
GUMO	**Guam**	**41.61**	**322**	LR		LR	20 53 21.2	
	comp=Z,38nm,18.5s,MS3.3,baz=176,slow=35							
RKT	**Rikitea**	**51.20**	**104**	*e*LR		LR	20 53 12.4	
	comp=Z,301nm,36.2s							
KSRS	**Korea Array**	**69.63**	**326**	LR		LR	21 10 39.5	
	comp=Z,24nm,18.5s,MS3.5,baz=200,slow=36							
PETK	**Petropavlovsk-**	**73.84**	**352**	LR		LR	21 08 37.5	
	comp=Z,27nm,20.4s,MS3.5,baz=127,slow=32							
CMAR	**Chiang Mai Arr**	**79.35**	**294**	P		**P**	**20 41 36.5**	**+0.5**
	comp=Z,0.9nm,0.9s,mb3.7,baz=128,slow=3.7,SNR=4.2							
TXAR	**Lajitas Array**	**96.87**	**61**	LR		LR	21 16 42.6	
	comp=Z,51nm,20.0s,MS4.0,baz=180,slow=29							
NOA	**NORSAR Array B**	**136.58**	**345**	PKP		PKPdf	20 48 59.4	+8.0
	comp=Z,0.6nm,0.9s,baz=330,slow=9.3,SNR=3.3							
GERES	**GERESS Array B**	**145.64**	**332**	PKPbc		PKPbc	20 49 16.0	+7.7
	comp=Z,0.5nm,0.7s,baz=36,slow=5.2,SNR=5.1							

*PRU **26** 20:31:00.9, 50°.16N×19°.04E, h0km*
*CSEM **26** 20:31:00.6±0.3, 50°.15N×19°.06E, h2km, ML2.6/7, Error ellipse: s-maj=7.7km s-min=3.3km az=4.0*
*IPEC **26** 20:31:01.0±0.1, 50°.17N×19°.09E, h0km, ML1.8/3, Error ellipse: s-maj=2.6km s-min=0.7km az=166.0*
WAR 26 20:31:00.5, 50°.08N×19°.15E, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.44**	**71**	*e*Pg		Pg	20 31 09.3	+0.4
OJC				*e*Sg		Sg	20 31 15.8	+1.2
OJC	**Ojcow**	**0.44**	**71**	*e*Pg		Pg	20 31 09.2	+0.3
	baz=264							
OJC				*e*Sg		Sg	20 31 15.3	+0.7
	baz=264							
OKC	**Ostrava-Krasne**	**0.69**	**250**	*e*PG		Pg	20 31 13.8	0.0
OKC				*e*SG		Sg	20 31 22.3	-0.4
	comp=Z,12nm,0.4s							
OKC	**Ostrava-Krasne**	**0.69**	**250**	Pg		Pg	20 31 13.8	0.0
OKC				Sg		Sg	20 31 22.3	-0.4
	comp=Z,12nm,0.4s							
NIE	**Niedzica**	**1.00**	**131**	*e*Pg		Pg	20 31 20.5	+0.9
NIE				*e*Sg		Sg	20 31 35.2	+2.6
NIE	**Niedzica**	**1.00**	**131**	*e*Pg		Pg	20 31 20.5	+0.9
NIE				*e*Sg		Sg	20 31 35.2	+2.6
MORC	**Moravsky Berou**	**1.08**	**255**	*e*Pg		Pg	20 31 21.0	-0.2
	baz=68							
MORC				*e*Sg		Sg	20 31 35.0	-0.3
	comp=Z,18nm,0.4s,baz=68							
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*PN		Pn	20 31 30.7	+2.0
STHS				*e*SN		Sn	20 31 52.8	+3.7
STHS	**Stebnicka Huta**	**1.51**	**115**	*e*Pn		Pn	20 31 30.7	+2.0
STHS				*e*Sn		Sn	20 31 52.8	+3.7
KOLL	**Kolacno**	**1.58**	**198**	*e*SN		Sn	20 31 51.8	+1.0
KOLL	**Kolacno**	**1.58**	**198**	*e*Sn		Sn	20 31 51.8	+1.0
VYHS	**Vyhne**	**1.60**	**188**	*e*PN		Pn	20 31 29.8	-0.2
VYHS				*e*SN		Sn	20 31 51.2	-0.1
VYHS	**Vyhne**	**1.60**	**188**	*e*Pn		Pn	20 31 29.8	-0.2
VYHS				*e*Sn		Sn	20 31 51.2	-0.1
KECS	**Kecovo**	**1.82**	**151**	*e*PN		Pn	20 31 34.1	+1.1
KECS				*e*SN		Sn	20 31 57.9	+1.2
VRAC	**Vranov**	**1.83**	**246**	*e*Pn		Pn	20 31 33.9	+0.7
	baz=61							
VRAC				*e*Sg		Sg	20 31 57.3	-2.0
	comp=Z,5.3nm,0.3s,baz=61							
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*PG		Pg	20 31 33.0	-2.7
DPC				*e*SG		Sg	20 31 57.2	-2.4
	comp=Z,9.1nm,0.3s							
DPC	**Dobruska-Polom**	**1.84**	**280**	Pg		Pg	20 31 33.0	-2.7
DPC	**Dobruska-Polom**	**1.84**	**280**	*e*Pn		Pn	20 31 33.5	+0.2
	baz=95							
DPC				Sg		Sg	20 31 57.2	-2.4
	comp=Z,9.1nm,0.3s							
UPC	**Upice**	**2.06**	**283**	*e*SG		Sg	20 32 02.4	-4.3
UPC	**Upice**	**2.06**	**283**	Sg		Sg	20 32 02.4	-4.3
KRUC	**Moravsky**	**2.06**	**242**	*e*Pn		Pn	20 31 38.0	+1.6
	baz=57							
KRUC				*e*Sg		Sg	20 32 04.8	-1.9
	comp=Z,4.8nm,0.4s,baz=57							
KOLS	**Kolonicke sedl**	**2.33**	**118**	*e*		Pn	20 31 47.1	+7.0
KOLS	**Kolonicke sedl**	**2.33**	**118**	*e*SN		Sn	20 32 11.4	+2.0
KOLS	**Kolonicke sedl**	**2.33**	**118**	*e*Sn		Sn	20 32 11.4	+2.0
PRU	**Pruhonice**	**2.98**	**270**	*e*SG		Sg	20 32 32.3	-3.7
	comp=Z,2.3nm,0.3s							
PRU	**Pruhonice**	**2.98**	**270**	Sg		Sg	20 32 32.3	-3.7
	comp=Z,2.3nm,0.3s							
KHC	**Kasperske Hory**	**3.75**	**258**	*e*SG		Sg	20 32 58.4	-2.4
	comp=Z,2.2nm,0.4s							
KHC	**Kasperske Hory**	**3.75**	**258**	Sg		Sg	20 32 58.4	-2.4
	comp=Z,2.2nm,0.4s							

IDC 26 20:40:19.9±10.0, 8°.28S×127°.46E, h305km±98km, mb3.2/1, mb1 2.9/3, mb1mx2.7/17, mbtmp2.8/3, Error ellipse: s-maj=188.9km s-min=28.4km az=61.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.92**	**190**	P		Pn	20 42 36.8	-0.2
	0.2nm,0.3s,baz=18,slow=9.5,SNR=9.4							
ASAR	**Alice Springs**	**16.50**	**159**	P		P	20 43 53.4	+0.3
	0.1nm,0.3s,baz=339,slow=12,SNR=17							
MKAR	**Makanchi Array**	**67.95**	**328**	P		P	20 50 46.4	+0.1
	1.0nm,0.9s,baz=126,slow=6.2,SNR=7.2							
LPAZ	**La Paz**	**151.12**	**148**	PKPbc		PKPbc	20 59 38.6	+0.6
	5.8nm,0.3s,baz=256,slow=8.4,SNR=44							

*ISCJB **26** 20:41:59.2±0.5, 32°.34N±0°.04×104°.99E±0°.07, h10km, mb3.6/8, Error ellipse: s-maj=8.5km s-min=5.2km az=7.1*
*IDC **26** 20:41:59.2±1.3, 32°.47N×105°.29E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.5/27, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=75.4km s-min=21.7km az=61.0*
*NEIC **26** 20:42:00.9±0.5, 32°.42N×105°.20E, h10km, Error ellipse: s-maj=17.1km s-min=8.8km az=57.0*
*BJI **26** 20:42:01.7, 32°.37N×105°.01E, h8km, mB4.1/1, mb3.6/2, ML3.5/9, Ms3.6/2, Ms7 3.5/2*
ISC 26 20:42:00.9±0.6, 32°.33N±0°.04×105°.05E±0°.07, h10km, n15, σ1°08/20, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.80**	**218**	Pg		**Pg**	**20 42 33.5**	**-1.8**
CD2				Sg		**Sg**	**20 42 58.3**	**-0.3**
CD2				smax				
	comp=N,2μm,0.6s							
XAN	**Xi'an**	**3.66**	**61**	Pg		**Pb**	**20 43 05.3**	**-0.4**
XAN				smax				
	comp=N,37nm,0.8s							
XAN				smax				
	comp=E,23nm,0.8s							
LZH	**Lanzhou**	**3.88**	**345**	*e*Pn		**Pn**	**20 43 03.0**	**+2.5**
LZH				Pg		**Pg**	**20 43 14.0**	**-1.2**
LZH				Sn		**Sn**	**20 43 46.8**	**+0.6**
LZH				Sg		**Sg**	**20 44 02.3**	**-3.2**
LZH				smax				
	comp=N,200nm,0.8s							
LZH				smax				
	comp=E,560nm,0.6s							
LZH				LR		LR		
	comp=E,870nm,5.1s							
LZH				LR		LR		
	comp=Z,950nm,6.3s							
ENH	**Enshi**	**4.31**	**117**	*e*P		**Pn**	**20 43 05.9**	**-0.7**
GYA	**Guiyang**	**6.02**	**166**	Pn		**Pn**	**20 43 34.5**	**+4.6**
GYA				smax				
	comp=N,60nm,0.6s							
GYA				smax				
	comp=E,70nm,0.7s							
GTA	**Gaotai**	**8.24**	**330**	*e*P		**Pn**	**20 44 01.5**	**+1.0**
GTA				pP			20 44 06.0	
GTA				sP			20 44 08.5	
GTA				S		**Sn**	**20 45 33.5**	**-0.2**
GTA				pmax		pmax		
	comp=Z,1.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,41nm,3.9s							
GTA				LR		LR		
	comp=N,140nm,9.6s							
GTA				LR		LR		
	comp=E,82nm,10.2s							
GTA				LR		LR		
	comp=Z,110nm,9.0s							
CMAR	**Chiang Mai Arr**	**14.87**	**203**	Pn		**Pn**	**20 45 33.0**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=11,slow=10,SNR=4.1							
MKAR	**Makanchi Array**	**22.62**	**316**	P		**P**	**20 47 02.6**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.2,baz=114,slow=11,SNR=11							
ZALV	**Zalesovo Beam**	**26.00**	**332**	P		**P**	**20 47 34.2**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.4,baz=130,slow=20,SNR=4.1							
KURK	**Kurchatov**	**26.78**	**321**	P		**P**	**20 47 41.1**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.1,baz=130,slow=8.7,SNR=6.1							
BVAR	**Borovoye Array**	**32.35**	**320**	P		**P**	**20 48 30.5**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=113,slow=12,SNR=3.6							
FINES	**FINESS Array B**	**57.01**	**326**	P		**P**	**20 51 46.1**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=76,slow=8.0,SNR=4.6							
ASAR	**Alice Springs**	**62.13**	**150**	P		**P**	**20 52 22.6**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.6,baz=332,slow=6.6,SNR=6.0							
HFS	**Hagfors**	**63.21**	**326**	P		**P**	**20 52 28.2**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.2,baz=348,slow=11,SNR=7.0							
NOA	**NORSAR Array B**	**64.07**	**327**	P		**P**	**20 52 33.5**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=71,slow=6.6,SNR=2.8							

*DDA **26** 21:20:19.1, 37°.51N×35°.15E, h7km±7km, Md2.8*
ISC 26 21:20:14.9±2.5, 37°.8N±0°.1×34°.9E±0°.1, h10km, n5, σ1°02/8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.51**	**195**	*i* P		**Pg**	**21 20 25.8**	**+1.0**
GULE				*i* S		**Sg**	**21 20 33.2**	**+1.7**
KARA	**Karaisali**	**0.52**	**170**	*e*PG		**Pg**	**21 20 24.9**	**-0.1**
KARA				*e*SG		**Sg**	**21 20 30.6**	**-1.3**
KOZT	**Kozan**	**0.76**	**113**	*e*PG		**Pg**	**21 20 29.1**	**-0.5**
MERS	**Mersin**	**0.97**	**200**	*e*PG		**Pg**	**21 20 32.1**	**-1.4**
ANDN	**Andirin**	**1.13**	**100**	*i* P		**Pg**	**21 20 36.4**	**-0.3**
ANDN				*i* S		**Sg**	**21 20 52.2**	**+0.9**

*ISCJB **26** 21:52:24.9±1.1, 37°.5N±0°.1×35°.67E±0°.05, h10km, Error ellipse: s-maj=19.8km s-min=5.1km az=169.8*
*DDA **26** 21:52:25.0, 37°.53N×35°.67E, h7km±5km, Md2.8*
ISC 26 21:52:25.4±1.4, 37°.5N±0°.1×35°.67E±0°.07, h8km±20km, n5, σ1°32/8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.12**	**100**	*e*PG		**Pg**	**21 52 27.5**	**-0.7**
KOZT				*e*SG		**Sg**	**21 52 30.1**	**0.0**
CEYT	**Ceyhan**	**0.50**	**173**	*e*PG		**Pg**	**21 52 35.1**	**+0.1**
ANDN	**Andirin**	**0.54**	**82**	*i* P		**Pg**	**21 52 35.0**	**-0.8**
ANDN				*i* S		**Sg**	**21 52 44.4**	**+1.5**
KARA	**Karaisali**	**0.55**	**244**	*e*PG		**Pg**	**21 52 35.4**	**-0.6**
GULE	**Gulek**	**0.75**	**253**	*i* P		**Pg**	**21 52 38.8**	**-1.0**
GULE				*i* S		**Sg**	**21 52 51.1**	**+1.6**

*IDC **26** 21:59:02.0±1.2, 7°.99S×118°.73E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=113.4km s-min=23.9km az=63.0*
*ISCJB **26** 21:59:05.7±0.6, 8°.16S±0°.04×118°.59E±0°.04, h43km±7km, mb4.0/9, Error ellipse: s-maj=7.9km s-min=5.7km az=28.7*
*NEIC **26** 21:59:06.8±0.3, 8°.11S×118°.69E, h35km, mb4.0/5, Error ellipse: s-maj=11.3km s-min=5.6km az=63.0*
*DJA **26** 21:59:08, 8°.27S×118°.54E, h100km, MLv4.5/11*
ISC 26 21:59:07.5±0.6, 8°.15S±0°.05×118°.57E±0°.04, h38km±7km, n38, σ0°96/44, mb4.0/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.27**	**132**	P		**Pn**	**21 59 43.3**	**+0.7**
KHKI	**Kahang-Kahang**	**2.94**	**266**	P		**Pn**	**21 59 52.2**	**+0.4**
KAPI	**Kappang**	**3.33**	**21**	*e*Pn		**Pn**	**21 59 55.5**	**-1.6**
KAPI				*e*Sn		**Sn**	**22 00 29.4**	**-6.0**
SRBI	**Singaraja**	**3.33**	**271**	P		**Pn**	**21 59 56.2**	**-0.9**
SRBI				S		**Sn**	**22 00 32.6**	**-2.8**
IGBI	**Denpasar**	**3.46**	**259**	P		**Pn**	**21 59 59.0**	**+0.2**
IGBI				S		**Sn**	**22 00 39.0**	**+0.4**
MMRI	**Maumere**	**3.66**	**98**	P		**Pn**	**22 00 02.2**	**+0.6**
MMRI				S		**Sn**	**22 00 37.4**	**-6.1**
NBBI	**Negara**	**3.92**	**267**	P		**Pn**	**22 00 10.7**	**+5.5**
NBBI				S		**Sn**	**22 00 49.5**	**-0.5**
BYJI	**Banyuwangi**	**4.18**	**269**	P		**Pn**	**22 00 09.5**	**+0.7**
ABJI	**Asem Bagus**	**4.31**	**274**	P		**Pn**	**22 00 09.6**	**-1.0**
KMMI	**Kalianget**	**4.70**	**283**	P		**Pn**	**22 00 16.6**	**+0.7**
GMJI	**Gumukmas**	**5.08**	**268**	P		**Pn**	**22 00 21.7**	**+0.5**
	62nm,0.8s,0.3nm			

IDC 26 22:45:09.1±3.4, 13°.94S×167°.66E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=124.2km s-min=54.3km az=142.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**33.31**	**248**	P	P	22 51 48.8	-0.1
	0.1nm,0.3s,baz=70,slow=11,SNR=4.0						
CMAR	**Chiang Mai Arr**	**74.98**	**294**	P	P	22 56 53.2	+0.4
	0.7nm,0.6s,baz=132,slow=5.2,SNR=5.0						
MKAR	**Makanchi Array**	**96.89**	**316**	P	P	22 58 41.8	-0.5
	0.3nm,0.6s,baz=99,slow=5.8,SNR=4.6						
ARCES	**ARCESS Array B**	**119.59**	**346**	PKP	PKPdf	23 04 00.2	-0.1
	3.1nm,0.9s,baz=59,slow=2.4,SNR=11						

*ISCJB **26** 23:01:25.3±1.4, 31°.03N±0°.04×103°.21E±0°.07, h4km±9km, mb3.5/7, MS3.4/2, Error ellipse: s-maj=9.8km s-min=7.1km az=167.0*
*IDC **26** 23:01:26.6±1.2, 31°.01N×103°.29E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/25, mbtmp3.7/6, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/30, Error ellipse: s-maj=36.8km s-min=21.4km az=57.0*
*NEIC **26** 23:01:28.0±0.4, 31°.03N×103°.21E, h10km, mb3.7/4, Error ellipse: s-maj=9.3km s-min=7.6km az=49.0*
*BJI **26** 23:01:28.8, 30°.95N×103°.44E, h16km, ML3.6/16, Ms3.5/4, Ms7 3.3/4*
ISC 26 23:01:27.4±1.0, 31°.03N±0°.03×103°.27E±0°.05, h5km±7km, n25, σ0°62/34, mb3.5/7, MS3.4/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.44**	**106**	Pg	**Pg**	**23 01 36.0**	**+0.1**
CD2				Sg	**Sg**	**23 01 42.0**	**+0.4**
CD2				smax			
	comp=N,57μm,0.5s						
LZH	**Lanzhou**	**5.06**	**5**	*e*Pn	**Pn**	**23 02 51.3**	**+7.4**
LZH				Pg	**Pg**	**23 03 04.3**	**-0.1**
LZH				Sn	**Sn**	**23 03 53.8**	**+11**
LZH				Sg	**Sg**	**23 04 11.0**	**+1.0**
LZH				smax			
	comp=N,51nm,0.9s						
LZH				smax			
	comp=E,39nm,0.5s						
LZH				LR	LR		
	comp=N,310nm,6.8s						
LZH				LR	LR		
	comp=Z,570nm,7.9s						
ENH	**Enshi**	**5.41**	**96**	*e*Pn	**Pn**	**23 02 49.5**	**+0.7**
	comp=Z,34nm,0.6s						
ENH				*e*Sg	**Sg**	**23 04 21.1**	**-0.2**
GYA	**Guiyang**	**5.45**	**146**	Pn	**Pn**	**23 02 49.0**	**-0.2**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,80nm,0.7s						
XAN	**Xi'an**	**5.64**	**56**	Pn	**Pn**	**23 02 50.5**	**-1.4**
XAN				Pg	**Pg**	**23 03 09.5**	**-5.9**
XAN				Sn	**Sn**	**23 04 01.8**	**+4.8**
XAN				Sg	**Sg**	**23 04 24.5**	**-4.0**
XAN				smax			
	comp=N,85nm,1.1s						
XAN				smax			
	comp=E,33nm,0.7s						
XAN				LR	LR		
	comp=Z,29nm,9.7s						
KMI	**Kunming**	**5.91**	**185**	Pn	**Pn**	**23 02 55.8**	**+0.3**
KMI				Sn	**Sn**	**23 04 04.8**	**+1.2**
KMI				Sg	**Sg**	**23 04 36.5**	**-0.6**
KMI				smax			
	comp=N,32nm,1.2s						
KMI				smax			
	comp=E,25nm,1.1s						
KMI				LR	LR		
	comp=N,210nm,6.3s						
KMI				LR	LR		
	comp=E,880nm,7.4s						
WHN	**Wuhan**	**9.55**	**90**	P	**Pn**	**23 03 40.3**	**-5.2**
WHN				S	**Sn**	**23 05 23.5**	**-10**
WHN				LR	LR		
	comp=N,670nm,8.4s						
WHN				LR	LR		
	comp=E,94nm,3.2s						
WHN				LR	LR		
	comp=Z,380nm,6.1s						
CMAR	**Chiang Mai Arr**	**13.12**	**198**	Pn	**Pn**	**23 04 34.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=15,slow=11,SNR=3.2						
ULN	**Ulaanbaatar**	**17.06**	**9**	*e*P	**Pn**	**23 05 26.2**	**-0.4**
	comp=Z,0.6nm,0.5s						
KSRS	**Korea Array**	**21.34**	**66**	P	**P**	**23 06 14.8**	**-0.4**
	comp=Z,3.1nm,0.7s,mb3.8,baz=251,slow=9.6,SNR=7.8						
MK31	**Makanchi Array**	**22.57**	**320**	*e*P	**P**	**23 06 28.8**	**+0.4**
MKAR	**Makanchi Array**	**22.57**	**320**	P	**P**	**23 06 27.1**	**-1.3**
	comp=Z,0.1nm,0.3s,mb2.7,baz=114,slow=12,SNR=4.6						
UCH	**Uchtor**	**25.52**	**304**	*e*P	**P**	**23 06 56.6**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.5						
AAK	**Ala-Archa**	**25.65**	**305**	P	**P**	**23 06 57.9**	**-0.1**
	comp=Z,2.4nm,0.9s,mb3.7						
ZALV	**Zalesovo Beam**	**26.48**	**335**	P	**P**	**23 07 06.0**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.5,baz=133,slow=11,SNR=7.0						
KURK	**Kurchatov**	**26.88**	**324**	P	**P**	**23 07 09.9**	**+0.9**
	comp=Z,0.4nm,0.3s,mb3.5,baz=131,slow=8.7,SNR=2.7						
KURK	**Kurchatov**	**26.88**	**324**	*e*P	**P**	**23 07 08.5**	**-0.4**
	comp=Z,3.3nm,1.4s,mb3.7						
PSI	**Prapat**	**28.38**	**189**	LR	LR	23 21 09.5	
	comp=Z,136nm,18.1s,MS3.6,baz=74,slow=42						
DAV	**Davao City (W)**	**31.69**	**134**	LR	LR	23 20 03.1	
	comp=Z,53nm,20.1s,MS3.2,baz=214,slow=35						
YSS	**Yuzh-Sakhalins**	**34.16**	**51**	P	**P**	**23 08 13.7**	**+0.4**
YAK	**Yakutsk**	**35.43**	**21**	P	**P**	**23 08 24.4**	**+0.3**
KWP	**Kalwaria Pacla**	**61.23**	**313**	*e*P	**P**	**23 11 43.1**	**-0.1**
ASAR	**Alice Springs**	**61.81**	**148**	P	**P**	**23 11 47.1**	**-0.2**
ASAR	**Alice Springs**	**61.81**	**148**	P	**P**	**23 11 47.1**	**-0.2**
PSZ	**Piszkesteto**	**63.50**	**312**	P	**P**	**23 11 58.1**	**-0.4**

*NIED **26** 23:01:00, 45°.00N×149°.20E, h71km, Mw4.9 Best double couple: M0=2.88000×10^16 NP1:φs=107.00000°, δ54.00000°, λ-61.00000°. NP2:φs=244.00000°, δ45.00000°, λ-123.00000°.*
*SZGRF **26** 23:01:22.9, 44°.37N×149°.15E, h33km, mb5.1, Kuril Islands, Russia*
*MOS **26** 23:01:25.6±0.8, 44°.94N×149°.10E, h56km, mb5.0/61, Error ellipse: s-maj=7.0km s-min=5.0km az=97.7*
*ISCJB **26** 23:01:26.2±0.3, 44°.92N±0°.03×149°.06E±0°.02, h61km±3km, mb4.7/150, Error ellipse: s-maj=4.7km s-min=2.4km az=160.1*
*JMA **26** 23:01:26.2±0.5, 45°.00N×149°.19E, h30km, M5.2*
JMA Felt I J1.
*SKHL **26** 23:01:27.3±2.7, 45°.12N×149°.24E, h63km±15km, mb6.3/1, msh5.4/1*
*GCMT **26** 23:01:28.4±0.3, 44°.87N×149°.23E, h77km±3km, MW4.9/72, Moment Tensor Solution. s30,c38; s72,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.12±.11; Mθθ2.37±.09; Mφφ-1.25±.10; Mrθ-0.73±.07; Mrφ-0.05±.09; Mθφ1.15±.05; Best double couple: M0=2.46000×10^16 NP1:φs=234.00000°, δ49.00000°, λ-153.00000°. NP2: φs=126.00000°, δ70.00000°, λ-44.00000°. Principal axes: T 2.5370, Plg13.0000°, Azm185.0000°; N -0.1540, Plg43.0000°, Azm287.0000°; P -2.3830, Plg44.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **26** 23:01:28.5, 45°.29N×149°.25E, h86km, mB4.8/19, mb4.7/31, Ms4.3/25, Ms7 4.0/27*
*NEIC **26** 23:01:28.4±0.4, 45°.01N×149°.00E, h66km±3km, mb4.8/100, Error ellipse: s-maj=4.8km s-min=2.4km az=159.0*
NEIC Recorded [1 JMA] in southeastern Hokkaido.
*IDC **26** 23:01:29.8±1.9, 45°.11N×149°.00E, h75km±16km, mb4.1/28, mb1 4.2/30, mb1mx4.2/33, mbtmp4.1/30, MS3.8/23, Ms1 3.8/23, ms1mx3.6/36, Error ellipse: s-maj=15.0km s-min=9.3km az=158.0*
ISC 26 23:01:28.2±0.3, 44°.99N±0°.03×149°.00E±0°.02, h62km±3km, h73km±2.2km: pP-P, n733, σ0°76/755, mb4.7/150, 183C-152D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.84**	**287**	↓*i*PN	**Pn**	**23 01 44.0**	**-0.3**
KUR				*e*S	**Sn**	**23 01 55.0**	**-1.1**
KUR				pmax	pmax		
	comp=Z,18μm,1.0s						
KUR				smax			
	comp=N,225μm,1.0s						
KUR				smax			
	comp=E,82μm,1.0s						
KUR	**Kuril'sk**	**0.84**	**287**	↓*i*P	**Pn**	**23 01 44.0**	**-0.3**
KUR				AMB	AMB	23 01 45.0	
	comp=E,18μm,1.0s						
KUR				*e*S	**Sn**	**23 01 55.0**	**-1.1**
KUR				A		23 01 59.0	
	comp=E,88μm,1.5s						
KUR				A		23 01 59.0	
	comp=E,38μm,1.5s						
KUR				A		23 01 59.0	
	comp=E,225μm,1.0s						
KUR				A		23 01 59.0	
	comp=E,82μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**2.44**	**248**	↓*i*PN	**Pn**	**23 02 05.9**	**+0.2**
YUK				*i* S	**Sn**	**23 02 37.2**	**+2.8**
YUK				pmax	pmax		
	comp=N,1μm,0.5s						
YUK				pmax	pmax		
	comp=E,2μm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,0.5s						
YUK				pmax	pmax		
	comp=Z,6μm,0.3s						
YUK				smax			
	comp=N,30μm,0.6s						
YUK				smax			
	comp=E,22μm,0.6s						
YUK				smax			
	comp=N,13μm,0.5s						
YUK				smax			
	comp=E,16μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.44**	**248**	↓*i*P	**Pn**	**23 02 05.9**	**+0.2**
YUK				AMB	AMB	23 02 08.0	
	comp=E,6μm,0.3s						
YUK				AMB	AMB	23 02 08.0	
	comp=E,1μm,0.5s						
YUK				AMB	AMB	23 02 08.0	
	comp=E,2μm,0.5s						
YUK				AMB	AMB	23 02 08.0	
	comp=E,4μm,0.5s						
YUK				*i* S	**Sn**	**23 02 37.2**	**+2.8**
YUK				A		23 02 40.4	
	comp=E,30μm,0.6s						
YUK				A		23 02 40.4	
	comp=E,22μm,0.6s						
YUK				A		23 02 40.5	
	comp=E,13μm,0.5s						
YUK				A		23 02 40.5	
	comp=E,16μm,0.5s						
NEM2	**Nemuro 2**	**2.85**	**236**	P	**Pn**	**23 02 09.8**	**-1.5**
NEM2				*e*S	**Sn**	**23 02 42.3**	**-2.2**
JRA	**Rausu**	**2.97**	**251**	P	**Pn**	**23 02 13.9**	**+1.0**
JRA				*e*S	**Sn**	**23 02 49.7**	**+2.4**
JNK	**Nakash**	**3.38**	**247**	P	**Pn**	**23 02 19.2**	**+0.7**
JNK				*e*S	**Sn**	**23 02 58.9**	**+1.5**
JAK	**Akkeshi**	**3.69**	**239**	P	**Pn**	**23 02 22.0**	**-0.8**
JAK				*e*S	**Sn**	**23 03 03.2**	**-1.8**
JTKR	**Abashiri--Toko**	**3.79**	**256**	P	**Pn**	**23 02 25.4**	**+1.4**
JAR	**Ashorobuto**	**4.13**	**248**	P	**Pn**	**23 02 30.3**	**+1.6**
JAR				*e*S	**Sn**	**23 03 18.8**	**+3.1**
JMP	**Maruseppu**	**4.16**	**258**	P	**Pn**	**23 02 30.9**	**+1.8**
JOB	**Onbets**	**4.28**	**243**	P	**Pn**	**23 02 31.2**	**+0.5**
JOB				*e*S	**Sn**	**23 03 19.8**	**+0.5**
JSE	**Soyaes**	**4.55**	**272**	P	**Pn**	**23 02 36.4**	**+1.9**
JKK2	**Kamakawa 2**	**4.62**	**258**	P	**Pn**	**23 02 37.7**	**+2.3**
ASAJ	**Asahikawa**	**4.66**	**261**	P	**Pn**	**23 02 38.4**	**+2.4**
ASAJ	**Asahikawa**	**4.66**	**261**	P	**Pn**	**23 02 38.5**	**+2.5**
	comp=E,37nm,0.3s,baz=68,slow=20,SNR=100						
ASAJ				S	**Sn**	**23 03 32.2**	**+3.4**
	comp=E,22nm,0.3s,baz=61,slow=6.1,SNR=1.9						
ASAJ	**Asahikawa**	**4.66**	**261**	PN	**Pn**	**23 02 38.5**	**+2.5**
ASAJ				S	**Sn**	**23 03 32.2**	**+3.4**
ASAJ				pmax	pmax		
	comp=Z,37nm,0.3s						
ASAJ				smax			
	comp=N,22nm,0.3s						
JCH	**Churui**	**4.72**	**242**	P	**Pn**	**23 02 36.7**	**-0.2**
JCH				*e*S	**Sn**	**23 03 29.9**	**-0.4**
YSS	**Yuzh-Sakhalins**	**4.78**	**296**	↓*i*PN	**Pn**	**23 02 39.0**	**+1.4**
YSS				*e*S	**Sn**	**23 03 32.0**	**+0.5**
YSS				pmax	pmax		
	comp=E,110nm,0.5s						
YSS				pmax	pmax		
	comp=Z,160nm,0.5s						
YSS				smax			
	comp=E,280nm,0.7s						
YSS				MLR	MLR		
	comp=E,900nm,16.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	**Yuzh-Sakhalins**	**4.78**	**296**	*e*Pn	**Pn**	**23 02 39.1**	**+1.5**
YSS				*e*Sn	**Sn**	**23 03 32.1**	**+0.6**
YSS	**Yuzh-Sakhalins**	**4.78**	**296**	↓*i*P	**Pn**	**23 02 39.0**	**+1.4**
YSS				AMB	AMB	23 02 40.0	
	comp=Z,110nm,0.5s						
YSS				AMB	AMB	23 02 40.0	
	comp=Z,160nm,0.5s						
YSS				*e*S	**Sn**	**23 03 32.0**	**+0.5**
YSS				A		23 03 35.0	
	comp=Z,280nm,0.7s						
YSS				AMS	AMS	23 04 36.0	
	comp=Z,900nm,16.0s						
YSS				AMS	AMS	23 04 36.0	
	comp=Z,900nm,16.0s						
JFR	**Furan**	**4.97**	**251**	P	**Pn**	**23 02 43.2**	**+3.0**
JWK2	**Keihoku**	**5.04**	**276**	P	**Pn**	**23 02 45.3**	**+4.2**
JAB	**Ashibetsu**	**5.09**	**255**	P	**Pn**	**23 02 45.7**	**+3.8**
JSS	**Shosan**	**5.13**	**266**	P	**Pn**	**23 02 46.5**	**+4.1**
JEM	**Erimo**	**5.19**	**237**	P	**Pn**	**23 02 44.6**	**+1.4**
ERM	**Erimo**	**5.19**	**237**	*e*Pn	**Pn**	**23 02 44.7**	**+1.5**
ERM				*e*Sn	**Sn**	**23 03 44.2**	**+2.4**
JBT2	**Biratori 2**	**5.28**	**248**	P	**Pn**	**23 02 45.6**	**+1.1**
JNBK	**Urakawa-nobuka**	**5.28**	**241**	P	**Pn**	**23 02 44.6**	**+0.1**
JNBK				*e*S	**Sn**	**23 03 44.3**	**+0.3**
JHR	**Hokuryu**	**5.37**	**259**	P	**Pn**	**23 02 50.7**	**+5.1**
JEW	**Eniwo**	**5.86**	**251**	P	**Pn**	**23 02 55.5**	**+3.0**
JEW				*e*S	**Sn**	**23 04 07.1**	**+8.8**
UGL	**Uglegorsk**	**6.26**	**313**	PN	**Pn**	**23 03 00.5**	**+2.7**
UGL				S	**Sn**	**23 04 13.0**	**+5.1**
UGL				pmax	pmax		
	comp=Z,134nm,0.6s						
UGL				smax			
	comp=N,159nm,0.6s						
UGL				smax			
	comp=E,429nm,0.6s						
UGL				smax			
	comp=Z,221nm,0.7s						
UGL	**Uglegorsk**	**6.26**	**313**	*e*P	**Pn**	**23 03 00.5**	**+2.7**
UGL				AMB	AMB	23 03 01.7	
	comp=Z,134nm,0.6s						
UGL				*e*S	**Sn**	**23 04 13.0**	**+5.1**
UGL				A		23 04 16.5	
	comp=Z,221nm,0.7s						
UGL				A		23 04 16.5	
	comp=Z,159nm,0.6s						
UGL				A		23 04 16.5	
	comp=Z,429nm,0.6s						
JNB	**Noboribetsu**	**6.30**	**249**	P	**Pn**	**23 02 59.4**	**+1.0**
JNB				*e*S	**Sn**	**23 04 10.3**	**+1.4**
JSK	**Shakotan**	**6.35**	**258**	P	**Pn**	**23 03 03.8**	**+4.7**
JKB	**Kayabe**	**6.58**	**245**	P	**Pn**	**23 03 02.4**	**+0.1**
JKB				*e*S	**Sn**	**23 04 14.2**	**-1.6**
JOT	**Ohata**	**6.84**	**241**	P	**Pn**	**23 03 05.1**	**-0.8**
JSH	**Shimam**	**6.89**	**253**	P	**Pn**	**23 03 08.6**	**+2.1**
JYM2	**Yakumo 2**	**6.90**	**248**	P	**Pn**	**23 03 07.4**	**+0.8**
JYM2				*e*S	**Sn**	**23 04 23.7**	**+0.1**
JSR	**Shiriuchi**	**7.16**	**244**	P	**Pn**	**23 03 10.1**	**-0.1**
JSR				*e*S	**Sn**	**23 04 27.2**	**-2.8**
JTM	**Tenmabayashi**	**7.18**	**237**	P	**Pn**	**23 03 09.4**	**-1.1**
JTM				*e*S	**Sn**	**23 04 26.0**	**-4.6**
JANG	**Nango**	**7.19**	**233**	P	**Pn**	**23 03 08.2**	**-2.4**
JANG				*e*S	**Sn**	**23 04 24.5**	**-6.3**
JTH	**Tanohata**	**7.30**	**229**	P	**Pn**	**23 03 09.6**	**-2.6**
JTH				*e*S	**Sn**	**23 04 26.2**	**-7.4**
SKR	**Severo-Kuril's**	**7.44**	**38**	*e*PN	**Pn**	**23 03 10.0**	**-3.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				MLR	MLR		
	comp=N,2μm,14.0s						
SKR				MLR	MLR		
	comp=Z,2μm,14.0s						
SKR	**Severo-Kuril's**	**7.44**	**38**	*e*P	**Pn**	**23 03 10.0**	**-3.9**
SKR				AMB	AMB	23 03 14.0	
	comp=Z,2μm,2.0s						
SKR				*e*S	**Sn**	**23 04 35.1**	**-1.6**
SKR				A		23 04 41.5	
	comp=Z,80nm,0.5s						
SKR				A		23 04 41.5	
	comp=Z,60nm,0.5s						
SKR				A		23 04 48.0	
	comp=Z,3μm,8.0s						
SKR				AMS	AMS	23 06 20.0	
	comp=Z,2μm,14.0s						
SKR				AMS	AMS	23 06 20.0	
	comp=Z,2μm,14.0s						
JOSM	**Okushiri--Mats**	**7.51**	**251**	P	**Pn**	**23 03 15.8**	**+0.8**
JAH	**Hinai**	**7.82**	**235**	P	**Pn**	**23 03 17.7**	**-1.5**
OFUJ	**Ofunato**	**8.04**	**225**	P	**Pn**	**23 03 19.2**	**-3.1**
JRG	**Rokugo**	**8.36**	**231**	P	**Pn**	**23 03 24.7**	**-1.9**
JOG2	**Oga 2**	**8.49**	**236**	P	**Pn**	**23 03 27.5**	**-0.9**
JIO	**Ouri**	**8.68**	**224**	P	**Pn**	**23 03 27.7**	**-3.3**
JIO				*e*S	**Sn**	**23 04 57.1**	**-10**
TEY	**Ternei**	**8.79**	**275**	*e*P	**Pn**	**23 03 37.4**	**+5.0**
JYA	**Atsumi**	**9.43**	**231**	P	**Pn**	**23 03 39.8**	**-1.5**
JYS	**Shiratake**	**9.51**	**228**	P	**Pn**	**23 03 40.3**	**-2.1**
JFK	**Kawauchi**	**9.77**	**222**	P	**Pn**	**23 03 42.7**	**-3.2**
JFK				*e*S	**Sn**	**23 05 24.7**	**-9.4**
NKL	**Nikolayevsk**	**9.81**	**329**	*i* P	**Pn**	**23 03 44.2**	**-2.2**
NKL				AMB	AMB	23 03 45.8	
	comp=Z,60nm,1.1s						
NKL				AMB	AMB	23 03 45.8	
	comp=Z,50nm,1.1s						
NKL				*e*L		23 06 26.0	
PEA0B	**Petropavlovsk-**	**9.92**	**32**	*e*Pn	**Pn**	**23 03 48.4**	**+0.6**
PEA0B				*e*Sn	**Sn**	**23 05 36.7**	**-0.8**
PETK	**Petropavlovsk-**	**9.92**	**32**	P	**Pn**	**23 03 48.6**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=212,slow=10,SNR=29						
PETK				LR	LR	23 07 30.0	
	comp=Z,650nm,21.9s,baz=215,slow=37						
PETK	**Petropavlovsk-**	**9.92**	**32**	PN	**Pn**	**23 03 48.6**	**+0.8**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,650nm,21.9s						
PET	**Petropavlovsk**	**10.23**	**35**	*e*PN	**Pn**	**23 03 57.8**	**+5.7**
PET				*e*S	**Sn**	**23 05 49.3**	**+4.3**
PET				pmax	pmax		
	comp=Z,26nm,0.6s						
PET				pmax	pmax		
	comp=Z,400nm,5.2s						
PET				MLR	MLR		
	comp=Z,1μm,18.0s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
PET	**Petropavlovsk**	**10.23**	**35**	Pn	**Pn**	**23 03 52.0**	**-0.1**
PET				*e*Sn	**Sn**	**23 05 43.5**	**-1.5**
JFY	**Yanaizu**	**10.31**	**226**	P	**Pn**	**23 03 51.4**	**-1.9**
JAG	**Ashikaga**	**11.21**	**224**	P	**Pn**	**23 04 02.8**	**-2.7**
MAJO	**Matsushiro**	**11.75**	**228**	*e*PN	**Pn**	**23 04 11.0**	**-1.9**
MAT	**Matsushiro**	**11.75**	**228**	P	**Pn**	**23 04 10.7**	**-2.2**
MAT				S	**Sn**	**23 06 22.2**	**-0.1**
MJAR	**Matsushiro Arr**	**11.75**	**228**	P	**Pn**	**23 04 11.0**	**-1.9**
	comp=Z,2.5nm,0.3s,baz=26,slow=14,SNR=61						
MJAR				S	**Sn**	**23 06 22.1**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=45,slow=12,SNR=2.4						
MJAR				LR	LR	23 09 05.4	
	comp=Z,349nm,21.3s,baz=50,slow=39						
JNG	**Nsakai**	**11.91**	**228**	P	**Pn**	**23 04 13.2**	**-1.9**
KLR	**Kul'dur**	**12.49**	**296**	*e*PN	**Pn**	**23 04 23.3**	**+0.4**
KLR				*e*		23 06 56.0	
KLR				pmax	pmax		
	comp=E,100nm,1.8s						
KLR				MLR	MLR		
	comp=Z,700nm,15.5s						
MDJ	**Mudanjiang**	**13.79**	**275**	P	**Pn**	**23 04 40.0**	**-0.6**
MDJ				S	**Sn**	**23 07 11.3**	**-0.6**
MDJ				ScP	ScP	23 13 28.5	+1.0
MDJ				PcS	PcS	23 13 35.0	+0.9
MDJ				ScS	ScS	23 17 05.5	+1.1
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,25nm,3.8s						
MDJ				LR	LR		
	comp=N,340nm,18.8s						
MDJ				LR	LR		
	comp=E,210nm,22.0s						
MDJ				LR	LR		
	comp=Z,290nm,23.2s						
MDJ	**Mudanjiang**	**13.79**	**275**	*e*Pn	**Pn**	**23 04 40.7**	**+0.1**
	comp=Z,38nm,1.1s						
ZEA	**Zeya**	**16.60**	**310**	*e*P	**Pn**	**23 05 14.6**	**-2.0**
CN2	**Changchun**	**16.87**	**274**	*e*P	**Pn**	**23 05 20.5**	**+0.5**
CN2				*e*S	**S**	**23 08 25.0**	**-8.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,80nm,5.0s						
CN2				LR	LR		
	comp=N,520nm,25.0s						
CN2				LR	LR		
	comp=E,420nm,25.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
KSRS	**Korea Array**	**17.53**	**252**	P	**Pn**	**23 05 26.8**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=62,slow=11,SNR=19						
KSRS				LR	LR	23 11 49.1	
	comp=Z,298nm,18.1s,baz=52,slow=35						
KSRS	**Korea Array**	**17.53**	**252**	P	**Pn**	**23 05 26.8**	**-1.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,298nm,18.1s						
SEY	**Seymchan**	**18.08**	**5**	↑*e*P	**Pn**	**23 05 34.2**	**-0.5**
INCN	**Inchon**	**18.39**	**254**	P	**Pn**	**23 05 38.7**	**+0.1**
HIA	**Hailar**	**20.30**	**293**	*e*P	**P**	**23 05 59.4**	**+0.7**
HIA				*e*		23 06 18.9	
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
HIA	**Hailar**	**20.30**	**293**	*e*P	**P**	**23 05 59.4**	**+0.7**
	comp=Z,17nm,0.8s						
HIA				*e*		23 06 18.9	
YAK	**Yakutsk**	**20.43**	**333**	*e*P	**P**	**23 06 00.6**	**+0.6**
YAK				*e*		23 06 17.1	
YAK				*e*S	**S**	**23 09 43.4**	**-1.7**
YAK				*e*		23 10 13.6	
YAK				*e*		23 17 22.1	
YAK				pmax	pmax		
	comp=N,30nm,1.2s						
YAK				pmax	pmax		
	comp=Z,66nm,1.0s						
YAK				pmax	pmax		
	comp=E,21nm,1.2s						
YAK				pmax	pmax		
	comp=Z,31nm,0.7s						
YAK				pmax	pmax		
	comp=E,51nm,2.0s						
YAK				pmax	pmax		
	comp=N,60nm,1.9s						
YAK				smax			
	comp=N,71nm,2.0s						
YAK				smax			
	comp=E,68nm,2.8s						
YAK				MLR	MLR		
	comp=Z,181nm,12.0s						
YAK				MLR	MLR		
	comp=N,157nm,15.0s						
YAK				MLR	MLR		
	comp=E,171nm,15.0s						
YAK	**Yakutsk**	**20.43**	**333**	*e*P	**P**	**23 05 58.1**	**-1.9**
	comp=E,66nm,0.7s						
JOW	**Kunigami**	**24.58**	**229**	P	**P**	**23 06 42.7**	**+0.4**
	comp=E,30nm,0.9s,mb4.8,baz=23,slow=9.4,SNR=11						
JOW	**Kunigami**	**24.58**	**229**	P	**P**	**23 06 42.7**	**+0.4**
BJI	**Beijing**	**24.59**	**270**	P	**P**	**23 06 42.0**	**-0.4**
BJI				S

BJI pmax pmax
comp=Z,57nm,3.5s
BJI LR LR
comp=N,170nm,22.2s
BJI LR LR
comp=E,180nm,24.0s
BJI LR LR
comp=Z,250nm,32.9s
BILL Bilibino 24.80 15 P **P 23 06 43.0 -1.0**
BILL *e* 23 06 58.2
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
BILL MLR MLR
comp=Z,200nm,15.0s
BILL Bilibino 24.80 15 P **P 23 06 42.2 -1.7**
comp=Z,8.9nm,1.2s,mb4.2
NJ2 Nanjing 26.73 252 *e*P **P 23 07 05.5 +3.8**
NJ2 pP pP 23 07 22.5 +5.7
NJ2 sP sP 23 07 32.0 +7.9
NJ2 PP 23 07 48.8
NJ2 S **S 23 11 31.0 -1.9**
NJ2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
NJ2 pmax pmax
comp=Z,40nm,10.6s
NJ2 LR LR
comp=N,710nm,19.8s
NJ2 LR LR
comp=E,650nm,20.5s
NJ2 LR LR
comp=Z,280nm,13.6s
HHC Hu-ho-hao-te 27.56 275 *e*P **P 23 07 11.8 +2.7**
HHC PcP PcP 23 10 26.3 +0.8
HHC S **S 23 11 47.0 +1.1**
HHC sS sS 23 12 17.0 +5.3
HHC SS 23 13 12.3
HHC ScP ScP 23 13 59.0 -1.5
HHC pmax pmax
comp=Z,17nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,110nm,5.3s
HHC LR LR
comp=N,310nm,14.5s
HHC LR LR
comp=E,230nm,12.2s
HHC LR LR
comp=Z,240nm,11.4s
TIXI Tiksi 28.43 347 *e*P **P 23 07 17.5 +0.9**
TIXI pmax pmax
comp=Z,4.0nm,1.5s,mb3.8
TIXI MLR MLR
comp=Z,124nm,15.0s
ULN Ulaanbaatar 28.80 291 *e*P **P 23 07 19.3 -0.8**
SONM Songino Array 29.24 291 P **P 23 07 22.9 -1.1**
comp=Z,0.6nm,0.3s,mb3.8,baz=67,slow=11,SNR=2.5
SONM LR LR 23 20 07.8
comp=Z,178nm,20.3s,baz=74,slow=38
SONM Songino Array 29.24 291 P **P 23 07 22.9 -1.1**
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM MLR MLR
comp=Z,178nm,20.3s
ZAK Zakamensk 30.86 297 *e*P pP 23 07 54.3 +0.9
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb3.9
TNA Tin City 31.09 33 *e*P **P 23 07 39.6 -0.5**
comp=Z,22nm,1.2s,mb4.9
TPUB Ta-pu 31.66 236 *e*P **P 23 07 45.6 +0.1**
comp=Z,9.8nm,0.6s,mb4.8
LZH Lanzhou 35.06 271 *e*P **P 23 08 16.8 +1.7**
LZH pP pP 23 08 33.5 +3.1
LZH sP sP 23 08 42.5 +4.8
LZH PP PP 23 09 37.3 +1.8
LZH PcP PcP 23 10 47.0 +1.4
LZH *e*S **S 23 13 42.0 -1.0**
LZH SS SS 23 16 00.0 -17
LZH pmax pmax
comp=Z,30nm,1.5s,mb5.0
LZH pmax pmax
comp=Z,63nm,5.6s
LZH LR LR
comp=E,710nm,14.7s
LZH LR LR
comp=Z,990nm,15.9s
TTA Tatalina 35.63 40 *e*P **P 23 08 19.4 -0.2**
SVW2 Sparrevohn 35.75 43 *e*P **P 23 08 20.9 +0.3**
GTA Gaotai 36.41 279 P **P 23 08 28.0 +1.5**
GTA pP pP 23 08 43.3 +1.4
GTA PP PP 23 09 53.3 +3.1
GTA S **S 23 14 04.0 +0.5**
GTA SS SS 23 16 32.5 -12
GTA pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GTA pmax pmax
comp=Z,72nm,4.8s
GTA LR LR
comp=N,1μm,12.8s
GTA LR LR
comp=E,980nm,12.6s
GTA LR LR
comp=Z,1μm,12.8s
CHUM Lake Minchumin 37.34 39 *e*P **P 23 08 34.6 +0.5**
comp=Z,23nm,1.4s,mb4.8
PPLA Purkeypile 37.38 40 *e*P **P 23 08 34.6 +0.2**
comp=Z,20nm,0.6s,mb5.1
KDAK Kodiak Island 37.43 49 P **P 23 08 34.0 -1.0**
comp=Z,25nm,1.0s,mb5.0
KDAK PcP PcP 23 10 52.6 +0.3
KDAK Kodiak Island 37.43 49 P **P 23 08 34.0 -1.0**
KDAK 23 10 52.6
KDAK pmax pmax
comp=Z,25nm,1.0s,mb5.0
CD2 Chengdu 37.85 264 P **P 23 08 39.3 +0.4**
CD2 PP PP 23 10 09.3 +3.0
CD2 S **S 23 14 24.8 -0.8**
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.2
CD2 pmax pmax
comp=Z,90nm,5.5s
CD2 LR LR
comp=N,260nm,5.9s
CD2 LR LR
comp=Z,230nm,6.4s
BPAW Bear Paw Mtn. 37.93 38 *e*P **P 23 08 39.0 -0.1**
comp=Z,28nm,1.4s,mb4.8
KTH Kantishna Hill 37.95 39 *e*P **P 23 08 39.4 +0.1**
comp=Z,74nm,1.3s,mb5.3
TRF Thorofare Moun 38.24 39 *e*P **P 23 08 41.8 +0.1**
comp=Z,79nm,1.9s,mb5.1
TRF *e* pP 23 08 60.0 +2.8
COLD Coldfoot 38.39 33 *e*P **P 23 08 42.2 -0.7**
comp=Z,9.6nm,0.8s,mb4.6
COLD *e*PcP PcP 23 10 55.5 +0.4
GYA Guiyang 38.52 256 P **P 23 08 46.0 +1.5**
GYA pP pP 23 09 02.8 +2.8
GYA PP PP 23 10 19.3 +5.8
GYA PcP PcP 23 10 58.0 +1.8
GYA S **S 23 14 35.5 -0.2**
GYA ScP ScP 23 14 39.8 +1.1
GYA SS SS 23 17 18.5 -8.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.8
GYA LR LR
comp=N,470nm,17.2s
GYA LR LR
comp=E,420nm,18.0s
GYA LR LR
comp=Z,490nm,18.2s
RC01 Rabbit Creek A 38.59 43 *e*P **P 23 08 44.3 -0.4**
comp=Z,33nm,1.0s,mb5.0
MCK McKinley 38.84 39 *e*P **P 23 08 46.6 -0.1**
MCK pmax pmax
comp=Z,16nm,1.0s,mb4.7
MCK McKinley 38.84 39 *e*P **P 23 08 46.6 -0.1**
comp=Z,16nm,1.0s,mb4.7
PMR Palmer 38.85 42 *e*P **P 23 08 46.4 -0.4**
PMR *e* 23 10 56.1
COLA College 39.28 37 *e*P **P 23 08 50.3 -0.1**
COLA pmax pmax
comp=Z,46nm,1.2s,mb5.1
COLA College 39.28 37 *e*P **P 23 08 50.3 -0.2**
comp=Z,46nm,1.2s,mb5.1
DIV Divide 40.50 43 *e*P **P 23 09 01.0 +0.4**
comp=Z,34nm,1.0s,mb4.9
BMRM Bremner River 41.09 43 *e*P **P 23 09 05.0 -0.4**
comp=Z,568nm,0.8s

MENT Mentasta 41.24 40 *e*P **P 23 09 06.8 +0.2**
ZAA0 Zalesovo Array 41.32 306 *e*PcP PcP 23 11 04.6 -0.1
ZALV Zalesovo Beam 41.32 306 P **P 23 09 08.9 +1.5**
comp=Z,0.3nm,0.3s,mb3.5,baz=66,slow=4.9,SNR=3.3
ZALV PcP PcP 23 11 04.9 +0.2
comp=Z,4.5nm,0.6s,baz=83,slow=3.0,SNR=18
ZALV ScP ScP 23 14 48.4 -0.8
comp=Z,0.4nm,0.4s,baz=64,slow=5.1,SNR=3.6
ZALV Zalesovo Beam 41.32 306 P **P 23 09 08.9 +1.5**
ZALV 23 11 04.9
QIZ Qiongzhong 41.51 244 P **P 23 09 10.0 +0.7**
QIZ pP pP 23 09 28.8 +3.8
QIZ S **S 23 15 19.8 -0.7**
QIZ LR LR
comp=N,500nm,12.2s
QIZ LR LR
comp=E,240nm,9.0s
QIZ LR LR
comp=Z,730nm,11.4s
KMI Kunming 42.08 258 P **P 23 09 15.5 +1.5**
KMI PP PP 23 10 56.5 +4.2
KMI S **S 23 15 26.0 -2.9**
KMI SS SS 23 18 31.3 -6.8
KMI pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
KMI LR LR
comp=Z,71nm,30.8s
EGAK Eagle 42.14 37 *e*P **P 23 09 13.2 -0.8**
comp=Z,50nm,1.3s,mb5.0
WMQ Urumqi 42.88 291 *e*P **P 23 09 21.5 +1.2**
WMQ LR LR
comp=N,110nm,19.0s
WMQ LR LR
comp=E,78nm,17.0s
WMQ LR LR
comp=Z,110nm,18.0s
DAWY Dawson 43.00 38 *e*P **P 23 09 21.1 +0.1**
HYT Haines Junctio 44.52 42 *e*P **P 23 09 36.5 +3.3**
INK Inuvik 44.66 31 P **P 23 09 34.1 -0.1**
comp=Z,11nm,0.9s,mb4.7,baz=296,slow=6.7,SNR=31
INK Inuvik 44.66 31 P **P 23 09 34.1 -0.1**
INK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 44.66 31 *e*P **P 23 09 34.1 -0.1**
comp=Z,16nm,1.0s,mb4.8
MK31 Makanchi Array 45.19 297 *e*P **P 23 09 38.3 -0.4**
MK31 *e* 23 11 18.0
MKAR Makanchi Array 45.19 297 P **P 23 09 38.5 -0.2**
comp=Z,1.3nm,0.6s,mb3.9,baz=70,slow=8.4,SNR=13
MKAR PcP PcP 23 11 18.2 +0.3
comp=Z,2.4nm,0.6s,baz=76,slow=1.6,SNR=7.0
MKAR Makanchi Array 45.19 297 P **P 23 09 38.5 -0.2**
MKAR 23 11 18.2
MKAR pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 45.94 304 P **P 23 09 43.7 -0.9**
comp=Z,0.9nm,0.3s,mb4.2,baz=74,slow=8.2,SNR=11
KURK PcP PcP 23 11 20.9 +0.4
comp=Z,3.0nm,0.6s,baz=79,slow=3.6,SNR=7.0
KURK Kurchatov 45.94 304 P **P 23 09 43.7 -0.9**
KURK 23 11 20.9
KURK pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KURK Kurchatov 45.94 304 *e*P **P 23 09 42.8 -1.7**
comp=Z,2.8nm,0.8s,mb4.2
KURK *e*PcP PcP 23 11 20.4 0.0
LSA Lhasa 47.48 272 P **P 23 10 03.5 +6.6**
LSA Lhasa 47.48 272 P **P 23 09 58.3 +1.4**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LSA Lhasa 47.48 272 P **P 23 09 58.3 +1.4**
comp=Z,4.7nm,0.8s,mb4.5
DLBC Dease Lake 48.86 44 P **P 23 10 08.1 +1.0**
comp=Z,3.9nm,0.7s,mb4.5,baz=325,slow=7.3,SNR=4.7
CHTO Chiang Mai 48.90 255 *e*P **P 23 10 09.1 +1.2**
CHTO pmax pmax
comp=Z,18nm,1.1s,mb5.0
CHTO Chiang Mai 48.90 255 *e*P **P 23 10 09.1 +1.2**
comp=Z,18nm,1.1s,mb5.0
CM31 Chiang Mai Arr 49.15 254 *e*P **P 23 10 09.9 +0.1**
CMAR Chiang Mai Arr 49.15 254 P **P 23 10 10.3 +0.5**
comp=Z,0.7nm,0.3s,mb4.1,baz=41,slow=6.9,SNR=6.0
CMAR LR LR 23 32 16.2
comp=Z,139nm,18.3s,baz=47,slow=38
CMAR Chiang Mai Arr 49.15 254 P **P 23 10 10.3 +0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR MLR MLR
comp=Z,139nm,18.3s
SHL Shillong 49.43 267 *e*P **P 23 10 15.0 +3.1**
BVAR Borovoye Array 49.75 309 P **P 23 10 13.3 -0.7**
comp=Z,0.7nm,0.6s,mb3.9,baz=85,slow=9.1,SNR=5.2
BVAR PcP PcP 23 11 34.4 +0.4
comp=Z,2.3nm,0.7s,baz=64,slow=3.4,SNR=7.5
BVAR Borovoye Array 49.75 309 P **P 23 10 13.3 -0.6**
BVAR 23 11 34.4
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 49.79 309 P **P 23 10 13.9 -0.4**
TKM2 Tokmak 2 51.17 295 *e*P **P 23 10 24.7 -0.2**
AAK Ala-Archa 52.02 296 *e*P **P 23 10 32.8 +1.6**
UCH Uchtor 52.21 295 *e*P **P 23 10 33.2 +0.6**
UCH *e*PcP PcP 23 11 44.3 +0.9
GUN Gumba 52.27 274 *e*P **P 23 10 33.1 -0.1**
comp=Z,39nm,0.7s,mb5.5
KSH Kashi 52.64 291 *e*P **P 23 10 40.5 +4.7**
KSH *e*PcP PcP 23 11 48.5 +3.4
KSH *e*PP PP 23 12 41.8 +6.6
KSH *e*ScP ScP 23 15 39.5 +2.7
KSH *e*PcS PcS 23 15 45.8 +2.2
KSH *e*S **S 23 18 02.3 +3.7**
KSH *e*ScS ScS 23 20 20.5 +0.8
KSH *e*SS SS 23 21 41.0 +3.8
KSH pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSH LR LR
comp=N,130nm,8.6s
KSH LR LR
comp=E,150nm,6.5s
KSH LR LR
comp=Z,140nm,9.5s
KKN Kakani 52.76 274 *e*P **P 23 10 36.4 -0.5**
comp=Z,26nm,0.7s,mb5.2
PKI Pulchoki 52.80 273 *e*P **P 23 10 36.3 -0.9**
comp=Z,48nm,1.1s,mb5.3
PKIN Phulchoki 52.81 274 *e*P **P 23 10 36.7 -0.5**
comp=Z,19nm,0.6s,mb5.2
DMN Daman 53.00 274 *e*P **P 23 10 37.9 -0.7**
comp=Z,26nm,0.6s,mb5.3
RES Resolute Bay 53.39 17 P **P 23 10 39.5 -1.4**
comp=Z,12nm,0.9s,mb4.8,baz=315,slow=8.8,SNR=16
RES Resolute Bay 53.39 17 P **P 23 10 39.5 -1.3**
RES pmax pmax
comp=Z,12nm,1.0s,mb4.8
RES Resolute Bay 53.39 17 *e*P **P 23 10 39.7 -1.2**
KBS Kingsbay 53.78 351 *e*P **P 23 10 44.5 +0.9**
YKA Yellowknife Ar 54.03 35 P **P 23 10 45.2 -0.4**
comp=Z,12nm,1.0s,mb4.8,baz=300,slow=7.2,SNR=51
YKA PcP PcP 23 11 50.0 +0.1
comp=Z,2.0nm,0.9s,baz=300,slow=3.9,SNR=4.9
YKA LR LR 23 36 51.8
comp=Z,6.6nm,20.4s,baz=300,slow=39
YKA Yellowknife Ar 54.03 35 P **P 23 10 45.2 -0.4**
YKA PcP PcP 23 11 50.0 +0.1
YKA LR LR 23 36 51.8
ARU Arti 54.35 317 *c i*P **P 23 10 48.1 +0.1**
ARU *e* 23 11 50.1
ARU *e* 23 12 47.9
ARU S **S 23 18 25.5 +4.3**
ARU SS SS 23 22 06.0 +2.7
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ARU Arti 54.35 317 *e*P **P 23 10 46.9 -1.2**
comp=Z,3.6nm,0.6s,mb4.5
ARU *e*PcP PcP 23 11 51.3 0.0
DDI Dehra Dun 56.34 281 *ex* **P 23 11 01.0 -1.8**
NLWA Neilton Lookou 57.24 54 ⇑P **P 23 11 08.9 0.0**
baz=57
ABKAR Akbulak array 57.32 309 *e*P **P 23 11 07.8 -1.6**
comp=Z,2.7nm,0.5s,mb4.5
KULM Kulim 57.72 242 P **P 23 11 12.9 +0.2**
AKTK Aktyubinsk 57.73 311 P **P 23 11 11.8 -0.5**
AKTK PcP PcP 23 12 04.1 -0.4
AKTK LR LR 23 38 12.3
AKTO Aktyubinsk 57.73 311 P **P 23 11 11.8 -0.5**

comp=Z,0.5nm,0.5s,mb3.8,baz=87,slow=5.0,SNR=2.8
AKTO PcP PcP 23 12 04.1 -0.4
comp=Z,1.1nm,0.5s,baz=310,slow=0.8,SNR=3.8
AKTO LR LR 23 38 12.3
comp=Z,99nm,19.0s,baz=271,slow=38
AKTO Aktyubinsk 57.73 311 P **P 23 11 11.8 -0.5**
AKTO 23 12 04.1
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
AKTO MLR MLR
comp=Z,99nm,19.0s
E03A Lebam 57.87 55 ⇑P **P 23 11 13.6 +0.3**
baz=58
F03A Seaside 58.21 55 ⇑P **P 23 11 16.1 +0.3**
baz=58
A07A Ashnola River, 58.29 51 ⇓P **P 23 11 15.9 -0.3**
baz=58
D05A Enumclaw 58.42 53 ⇑P **P 23 11 17.7 +0.5**
baz=58
ARCES ARCESS Array B 58.54 340 P **P 23 11 16.7 -1.0**
comp=Z,2.7nm,1.0s,mb4.2,baz=44,slow=7.9,SNR=3.2
ARCES PcP PcP 23 12 06.5 -0.9
comp=Z,2.0nm,0.7s,baz=34,slow=6.6,SNR=4.5
ARCES ARCESS Array B 58.54 340 P **P 23 11 16.7 -1.0**
ARCES 23 12 06.5
ARCES pmax pmax
comp=Z,3.0nm,1.0s
F04A Amboy 58.87 55 ⇓P **P 23 11 20.5 +0.2**
baz=59
B08A Colville Reser 59.25 51 ⇑P **P 23 11 22.5 -0.4**
baz=59
EDM Edmonton 59.59 44 *e*P **P 23 11 24.6 -0.5**
EDM *e* 23 12 11.9
HOOD Mount Hood Mea 59.66 55 *e*P **P 23 11 26.4 +0.6**
comp=Z,77nm,1.1s,mb5.7
H04A Detroit Lake 59.72 56 ⇑P **P 23 11 26.0 -0.1**
baz=60
E07A Sunnyside 59.99 53 ⇑P **P 23 11 28.0 +0.1**
baz=60
KBL Kabul 60.01 290 *e*P **P 23 11 27.6 -0.8**
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.9
KBL Kabul 60.01 290 *e*P **P 23 11 27.6 -0.7**
comp=Z,12nm,0.9s,mb4.9
C09A Chrisman Ranch 60.15 51 ⇑P **P 23 11 29.2 +0.1**
baz=60
D08A Wollman Farm, 60.22 52 ⇓P **P 23 11 29.2 -0.3**
baz=60
G06A Carlson Farm, 60.30 54 ⇓P **P 23 11 30.4 +0.3**
baz=60
F07A Phinny Hill Vi 60.33 53 ⇓P **P 23 11 30.4 +0.1**
baz=60
E08A Dider Farm, El 60.47 53 ⇑P **P 23 11 30.8 -0.5**
baz=60
NEW Newport 60.52 50 *e*P **P 23 11 31.6 0.0**
NEW pmax pmax
comp=Z,5.0nm,1.0s
NEW Newport 60.52 50 *e*P **P 23 11 31.6 0.0**
comp=Z,4.8nm,1.0s,mb4.6
A11A Hall Mountain, 60.52 49 ⇓P **P 23 11 31.9 +0.3**
baz=60
D09A Jones Farm, Ri 60.56 52 ⇓P **P 23 11 31.7 -0.2**
baz=60
PSI Prapat 60.72 241 LR LR 23 39 04.5
comp=Z,152nm,19.0s,baz=170,slow=37
A12A Yaak River Ran 60.91 49 ⇓P **P 23 11 34.5 +0.3**
baz=61
E09A Wood Farm, Sta 60.97 52 ⇑P **P 23 11 34.7 0.0**
baz=61
YBH Yreka Blue Hor 61.11 59 P **P 23 11 36.1 +0.4**
comp=Z,8.7nm,1.2s,mb4.8,baz=264,slow=0.3,SNR=10
YBH Yreka Blue Hor 61.11 59 P **P 23 11 36.1 +0.4**
YBH pmax pmax
comp=Z,9.0nm,1.2s
YBH Yreka Blue Hor 61.11 59 *e*P **P 23 11 36.1 +0.4**
comp=Z,10nm,1.3s,mb4.8
D10A Wagner Farm, O 61.14 51 ⇓P **P 23 11 35.2 -0.6**
baz=61
G08A Pilot Rock 61.23 54 ⇑P **P 23 11 36.5 0.0**
baz=61
E10A Myers Farm, Un 61.57 52 ⇓P **P 23 11 38.2 -0.5**
baz=61
A13A Flathead Natio 61.57 48 ⇑P **P 23 11 38.5 -0.2**
baz=61
JOF Joensuu 61.60 333 *e*P **P 23 11 36.6 -2.1**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
JOF Joensuu 61.60 333 *e*p **P 23 11 36.6 -2.1**
comp=Z,2.8nm,0.4s,mb4.8
K05A Summer Lake 61.62 57 ⇑P **P 23 11 39.6 +0.5**
baz=61,SNR=11
I07A Izee 61.63 55 ⇑P **P 23 11 39.2 0.0**
baz=61
D11A Klaveano Farm, 61.66 51 ⇑P **P 23 11 38.8 -0.5**
baz=61
C12B Naegeli Ranch, 61.74 50 ⇑P **P 23 11 39.7 -0.2**
baz=62
F10A Beach Ranch, E 61.81 52 ⇓P **P 23 11 40.2 -0.1**
baz=62
H08A Prairie City 61.85 54 ⇑P **P 23 11 40.8 +0.1**
baz=62,SNR=7.2
B13A Whitefish 61.88 49 ⇓P **P 23 11 40.9 +0.1**
baz=62,SNR=8.6
WDC Whiskeytown Da 61.89 60 *e*P **P 23 11 40.7 -0.3**
WDC pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
WDC Whiskeytown Da 61.89 60 *e*P **P 23 11 40.7 -0.3**
comp=Z,10.0nm,1.3s,mb4.8
G09A Cove 61.91 53 ⇓P **P 23 11 41.1 +0.1**
baz=62
A14A Double T Ranch 62.07 48 ⇓P **P 23 11 41.5 -0.6**
baz=62,SNR=8.6
E11A Bogner Ranch, 62.15 51 ⇓P **P 23 11 42.1 -0.5**
baz=62,SNR=5.4
D12A Red Ives Fores 62.20 50 ⇑P **P 23 11 42.5 -0.5**
baz=62
C13A Hot Springs 62.24 49 ⇑P **P 23 11 42.7 -0.5**
baz=62
G10A Bishop Farm, J 62.27 53 ⇑P **P 23 11 43.5 0.0**
baz=62,SNR=6.5
G10A ⇑P 23 11 43.6
baz=62
H09A Durkee 62.34 54 ⇓P **P 23 11 44.3 +0.4**
baz=62
A15A Johnson Ranch, 62.43 47 ⇑P **P 23 11 43.8 -0.7**
baz=62,SNR=7.1
F11A Grangeville 62.46 52 ⇑P **P 23 11 44.5 -0.2**
baz=62,SNR=8.3
MOD Modoc 62.46 57 *e*P **P 23 11 44.7 0.0**
comp=Z,11nm,1.2s,mb4.9
MOD *e*PcP PcP 23 12 24.2 +0.6
E12A Beaver Dam Sad 62.46 51 ⇓P **P 23 11 44.8 +0.1**
baz=62
SUMG Summit 62.62 3 *e*P **P 23 11 45.3 0.0**
comp=Z,13nm,1.4s,mb4.9
C14A Swan Lake 62.63 49 ⇓P **P 23 11 45.9 +0.1**
baz=62
SWMT Swartz Lake 62.65 49 *e*P **P 23 11 45.9 -0.1**
comp=Z,13nm,1.1s,mb5.0
D13A Huson 62.66 50 ⇓P **P 23 11 45.7 -0.3**
baz=62,SNR=6.0
J08A Circle Bar Ran 62.66 55 ⇓P **P 23 11 46.2 +0.1**
baz=62,SNR=7.9
J08A ⇑P 23 11 46.4
baz=62
G11A Walters Elk Ra 62.69 52 ⇓P **P 23 11 46.2 0.0**
baz=62,SNR=16
I09A Lost Marbles R 62.71 54 ⇓P **P 23 11 46.1 -0.4**
baz=62
H10A Noah's Angus R 62.91 53 ⇓P **P 23 11 47.6 -0.2**
baz=63,SNR=11
B15A Bradely Ranch, 62.92 48 ⇑P **P 23 11 47.7 -0.1**
baz=63,SNR=8.2
A16A West Butte Ran 63.04 47 ⇑P **P 23 11 47.8 -0.7**
baz=63
F12A Elk City 63.04 51 ⇓P **P 23 11 48.8 +0.3**
baz=63,SNR=7.2
J09A Fry Pan Ranch, 63.09 55 ⇑P **P 23 11 49.4 +0.5**
baz=63,SNR=7.0
SLMT Seeley Lake 63.09 49 *e*P **P 23 11 48.3 -0.5**
comp=Z,21nm,1.1s,mb5.2
MSO Missoula 63.10 50 *e*P **P 23 11 48.8 -0.1**
comp=Z,13nm,1.2s,mb4.9
WVOR Wild Horse Val 63.12 56 *e*P **P 23 11 49.1 -0.1**
WVOR pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
WVOR Wild Horse Val 63.12 56 *e*P **P 23 11 49.1 -0.1**
comp=Z,9.8nm,1.0s,mb4.9

D14A **Greenough** 63.18 49 ⇓P P 23 11 49.3 -0.2
baz=63,SNR=13
I10A **Payette** 63.18 54 ⇓P P 23 11 50.0 +0.4
baz=63
E13A **Victor** 63.20 50 ⇑P P 23 11 49.3 -0.4
baz=63
C15A **Salmond Ranch,** 63.23 48 ⇑P P 23 11 49.9 +0.1
baz=63,SNR=12
H11A **Donnelly** 63.26 53 ⇑P P 23 11 49.5 -0.6
baz=63,SNR=7.7
G12A **Big Creek, Yel** 63.38 52 ⇓P P 23 11 50.8 0.0
baz=63
CHMT **Chamberlain Mo** 63.42 49 *eP* P 23 11 50.5 -0.5
comp=Z,1.6nm,0.8s,mb4.2
A17A **Triple J Farms** 63.50 46 ⇑P P 23 11 50.8 -0.8
baz=63,SNR=8.0
F13A **Darby** 63.53 51 ⇑P P 23 11 51.2 -0.6
baz=63,SNR=5.7
E14A **Clinton** 63.60 50 ⇑P P 23 11 51.7 -0.5
baz=63
BEKR **Beckwourth** 63.65 59 ⇑P P 23 11 52.3 -0.4
baz=63
D15A **Lincoln** 63.73 49 ⇑P P 23 11 52.7 -0.5
baz=64
I11A **Placerville** 63.77 53 ⇑P P 23 11 53.2 -0.2
baz=64
KAF **Kangasniemi** 63.79 334 *eP* P 23 11 49.3 -3.9
KAF **Kangasniemi** 63.79 334 *ep* P 23 11 49.3 -3.9
B17A **L&G Farms, Che** 63.86 47 ⇑P P 23 11 53.7 -0.2
baz=64,SNR=5.7
FFC **Flin Flon** 63.91 38 *eP* P 23 11 53.9 -0.2
FFC *e* pP 23 12 14.2 +3.5
FFC *e* 23 12 28.9
FFC pmax pmax
comp=Z,14nm,1.1s,mb4.9
FFC **Flin Flon** 63.91 38 *eP* P 23 11 53.9 -0.3
comp=Z,14nm,1.1s,mb4.9
FFC *e* pP 23 12 14.2 +3.5
FFC *ePcP* PcP 23 12 28.9 -0.4
K10A **MacKenzie Ranc** 63.95 55 ⇑P P 23 11 54.6 0.0
baz=64,SNR=10
A18A **Metzger Ranch,** 63.95 46 ⇓P P 23 11 54.1 -0.5
baz=64
H12A **Diamond D Ranc** 64.00 52 ⇑P P 23 11 54.3 -0.6
baz=64
G13A **Cobalt** 64.01 51 ⇓P P 23 11 54.3 -0.7
baz=64,SNR=8.3
F14A **Wisdom** 64.04 50 ⇓P P 23 11 54.5 -0.7
baz=64
E15A **Deer Lodge** 64.06 50 ⇑P P 23 11 54.9 -0.3
baz=64,SNR=10
MFID **Camas Ranch** 64.15 54 ⇑P P 23 11 56.0 0.0
baz=64
D16A **Dana Ranch, Ca** 64.26 49 ⇑P P 23 11 56.6 0.0
baz=64,SNR=7.8
FCC **Fort Churchill** 64.28 31 *eP* P 23 11 55.3 -1.2
comp=Z,0.6nm,1.2s,mb3.5
FCC *ePcP* PcP 23 12 30.7 0.0
C17A **Wharram Farm,** 64.30 48 ⇓P P 23 11 56.3 -0.5
baz=64
I12A **Atlanta** 64.31 53 ⇑P P 23 11 57.1 +0.1
baz=64,SNR=14
B18A **Beardsley Farm** 64.32 47 ⇓P P 23 11 56.6 -0.4
baz=64
H13A **Challis** 64.33 52 ⇓P P 23 11 56.8 -0.3
baz=64,SNR=17
FINES **FINESS Array B** 64.37 333 P P 23 11 55.7 -1.3
comp=Z,3.0nm,0.6s,mb4.5,baz=30,slow=8.1,SNR=12
FINES LR LR 23 42 54.8
comp=Z,132nm,20.2s,baz=274,slow=39
FINES **FINESS Array B** 64.37 333 P P 23 11 55.7 -1.3
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES MLR MLR
comp=Z,132nm,20.2s
FINES **FINESS Array B** 64.37 333 P P 23 11 55.7 -1.3
FINES LR LR 23 42 54.8
WCN **Washoe City** 64.37 59 ⇓P P 23 11 57.4 0.0
baz=64
K11A **Parker Ranch,** 64.44 54 ⇑P P 23 11 57.8 0.0
baz=64
F15A **Butte** 64.50 50 ⇓P P 23 11 58.2 0.0
baz=64,SNR=14
LRM **Limekiln Ridge** 64.54 50 *eP* P 23 11 58.6 +0.2
comp=Z,85nm,1.1s,mb5.7
EGMT **Eagleton** 64.57 47 ⇓P P 23 11 58.5 -0.1
baz=64
L10A **Juniper Basin** 64.61 55 ⇑P P 23 11 59.0 +0.1
baz=64
D17A **Six Diamond Ra** 64.64 48 ⇓P P 23 11 58.9 -0.2
baz=64
J12A **Stokes Ranch,** 64.67 54 ⇓P P 23 11 59.5 +0.2
baz=64,SNR=8.9
CMB **Columbia Colle** 64.76 61 *eP* P 23 11 59.7 -0.3
CMB pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CMB **Columbia Colle** 64.76 61 *eP* P 23 11 59.7 -0.3
comp=Z,8.6nm,1.1s,mb4.7
H14A **Leadore** 64.79 51 ⇓P P 23 11 59.9 -0.2
baz=64
I13A **Wildhorse Cree** 64.81 52 ⇑P P 23 12 00.4 +0.1
baz=65,SNR=7.2
HLID **Hailey** 64.87 53 ⇑P P 23 12 00.7 +0.2
baz=65,SNR=12
HLID **Hailey** 64.87 53 *eP* P 23 12 00.4 -0.2
comp=Z,9.6nm,1.2s,mb4.7
HLID *ePcP* PcP 23 12 33.8 +0.4
M10A **I.L. Ranch, Tu** 64.92 56 ⇓P P 23 12 01.4 +0.5
baz=65,SNR=6.9
G15A **Dillon** 64.93 51 ⇑P P 23 12 00.8 -0.2
baz=65,SNR=12
MCMT **McKenzie Canyo** 64.94 51 *eP* P 23 12 00.4 -0.7
comp=Z,2.5nm,1.0s,mb4.2
L11A **Cat Creek Ranc** 64.97 55 ⇓P P 23 12 01.7 +0.4
baz=65,SNR=16
E17A **Martinsdale** 64.99 49 ⇑P P 23 12 01.6 +0.2
baz=65,SNR=9.8
F16A **Kennard Place,** 65.01 50 ⇓P P 23 12 01.4 -0.1
baz=65
BOZ **Bozeman (W)** 65.09 50 ⇑P P 23 12 02.0 0.0
baz=65
OBN **Obninsk** 65.09 324⇑*eP* pP 23 12 13.7 -4.8
OBN *e* sP 23 12 31.4 +5.9
OBN pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
J13A **Cove Ranch, Pi** 65.11 53 ⇑P P 23 12 02.3 +0.2
baz=65,SNR=9.1
K12A **Draper Farm, C** 65.17 54 ⇑P P 23 12 02.8 +0.2
baz=65
I14A **Mackay** 65.18 52 ⇑P P 23 12 03.0 +0.4
baz=65,SNR=5.9
G16A **Moss Hill, Enn** 65.26 50 ⇓P P 23 12 03.2 +0.1
baz=65,SNR=5.5
L12A **House Creek Ra** 65.41 54 ⇓P P 23 12 04.6 +0.4
baz=65,SNR=7.4
M11A **Holland Ranch,** 65.41 55 ⇑P P 23 12 04.8 +0.6
baz=65,SNR=12
E18A **Harlowton** 65.42 48 ⇓P P 23 12 04.4 +0.3
baz=65
QLMT **Earthquake Lak** 65.72 50 *eP* P 23 12 06.0 -0.1
comp=Z,9.5nm,1.0s,mb4.8
G17A **Pierce Place,** 65.78 50 ⇑P P 23 12 07.0 +0.5
baz=66
NVAR **Mina Array Bea** 65.80 59 P P 23 12 07.0 +0.2
comp=Z,5.0nm,0.7s,mb4.6,baz=295,slow=6.9,SNR=34
H16A **Russell Place,** 65.90 50 ⇑P P 23 12 07.5 +0.2
baz=66
M12A **Wells** 65.93 55 ⇓P P 23 12 08.2 +0.7
baz=66,SNR=9.1
F18A **Big Timber** 65.95 49 ⇑P P 23 12 08.0 +0.4
baz=66,SNR=7.5
L13A **Double Diamond** 66.07 54 ⇑P P 23 12 09.1 +0.7
baz=66
K14A **Jones Ranch, D** 66.21 53 ⇓P P 23 12 10.0 +0.7
baz=66,SNR=6.1
N12A **Clover Valley,** 66.22 56 ⇑P P 23 12 09.9 +0.5
baz=66,SNR=5.2
N12A **Clover Valley,** 66.22 56 *eP* P 23 12 09.8 +0.4
comp=Z,7.2nm,1.1s,mb4.6
I16A **Newdale** 66.31 51 ⇑P P 23 12 10.2 +0.4
baz=66
O11A **Cowboy Ranch,** 66.31 56 ⇑P P 23 12 10.3 +0.3
baz=66
M13A **Montello** 66.40 55 ⇑P P 23 12 10.9 +0.4
baz=66,SNR=9.5
M13A **Montello** 66.40 55 *eP* P 23 12 10.1 -0.4
comp=Z,25nm,0.7s,mb5.3
H17A **Grant Village** 66.47 50 ⇓P P 23 12 12.0 +1.1
baz=66
K15A **Arbon** 66.49 53 ⇑P P 23 12 11.8 +0.7
baz=66,SNR=7.3
L14A **Malta** 66.50 54 ⇓P P 23 12 11.6 +0.4
baz=66,SNR=6.4
IMW **Indian Meadow** 66.59 51 *eP* P 23 12 12.8 +1.1
comp=Z,14nm,1.1s,mb4.9
J16A **Bone** 66.62 52 ⇓P P 23 12 12.4 +0.5
baz=66
DCID1 **Drake Creek** 66.65 51 *eP* P 23 12 11.7 -0.4
comp=Z,26nm,1.0s,mb5.2
Q10A **Clear Creek Ra** 66.70 58 ⇓P P 23 12 12.7 +0.2
baz=66,SNR=9.3
N13A **Wendover, West** 66.70 55 ⇑P P 23 12 12.4 0.0
baz=66
N13A **Wendover, West** 66.70 55 *eP* P 23 12 12.2 -0.2
comp=Z,12nm,1.1s,mb4.8
RRI2 **Red Ridge** 66.74 52 *eP* P 23 12 12.9 +0.3
comp=Z,26nm,1.2s,mb5.1
O12A **Currie** 66.76 56 ⇑P P 23 12 13.0 +0.2
baz=66,SNR=8.7
M14A **Sheep Mountain** 66.78 54 ⇓P P 23 12 13.2 +0.3
baz=66,SNR=6.8
TPAW **Teton Pass** 66.85 51 *eP* P 23 12 14.1 +0.7
comp=Z,24nm,1.1s,mb5.2
K16A **Soda Springs** 66.92 52 ⇓P P 23 12 14.6 +0.8
baz=67,SNR=5.6
VES **Vestal, Richgr** 66.95 62 ⇑P P 23 12 13.3 -0.9
baz=67
LOHW **Long Hollow** 66.96 51 *eP* P 23 12 14.6 +0.5
comp=Z,13nm,1.3s,mb4.8
SNOW **Snow King Moun** 66.98 51 *eP* P 23 12 13.6 -0.6
comp=Z,11nm,1.1s,mb4.8
REDW **Red Top Meadow** 66.99 51 *eP* P 23 12 15.0 +0.8
comp=Z,23nm,1.2s,mb5.1
L15A **Malad City** 67.01 53 ⇑P P 23 12 14.6 +0.2
baz=67,SNR=7.3
J17A **Brown Place, J** 67.06 51 ⇑P P 23 12 15.1 +0.4
baz=67,SNR=12
DGMT **Dagmar** 67.08 44 ⇓P P 23 12 14.1 -0.6
baz=67
PKM **Peak Mountain** 67.09 63 ⇑P P 23 12 15.0 0.0
baz=67
R10A **Warm Springs** 67.10 58 ⇑P P 23 12 15.2 +0.1
baz=67
Q11A **Duckwater** 67.14 58 ⇓P P 23 12 15.1 -0.1
baz=67,SNR=6.4
S10A **Tonopah Range,** 67.16 59 ⇓P P 23 12 15.6 +0.2
baz=67,SNR=14
P12A **McGill** 67.18 57 ⇑P P 23 12 15.7 +0.3
baz=67,SNR=7.1
N14A **Grayback Hills** 67.30 55 ⇑P P 23 12 16.4 +0.2
baz=67,SNR=5.8
M15A **Larsen Ranch,** 67.33 54 ⇑P P 23 12 16.5 +0.1
baz=67,SNR=8.4
R11A **Troy Canyon, C** 67.50 58 ⇓P P 23 12 17.6 +0.1
baz=67,SNR=17
Q12A **Willow Creek R** 67.50 57 ⇓P P 23 12 17.8 +0.3
baz=67,SNR=5.8
L16A **Fish Haven** 67.54 53 ⇓P P 23 12 18.0 +0.2
baz=67,SNR=5.9
P13A **Bates Ranch, G** 67.72 56 ⇓P P 23 12 18.8 -0.1
baz=68,SNR=6.2
HWUT **Hardware Ranch** 67.73 53 *eP* P 23 12 19.5 +0.5
comp=Z,9.5nm,1.1s,mb4.7
MPMC **Manual Prospec** 67.81 61 ⇓P P 23 12 19.7 +0.2
baz=68,SNR=19
S11A **Rachel** 67.85 59 ⇓P P 23 12 20.0 +0.2
baz=68,SNR=6.6
M16A **Huntsville** 67.89 53 ⇑P P 23 12 20.0 0.0
baz=68
K18A **Toltan Ranch,** 67.91 51 ⇓P P 23 12 20.6 +0.5
baz=68,SNR=8.8
FURC **Furnace Creek,** 67.93 60 ⇑P P 23 12 20.2 0.0
baz=68,SNR=13
DUG **Dugway** 67.94 55 ⇑P P 23 12 20.5 +0.2
baz=68,SNR=14
DUG **Dugway** 67.94 55 *eP* P 23 12 20.4 +0.1
DUG pmax pmax
comp=Z,16nm,1.2s,mb4.9
DUG **Dugway** 67.94 55 *eP* P 23 12 20.4 +0.1
comp=Z,16nm,1.2s,mb4.9
Q13A **Wheeler Ranch,** 68.04 57 ⇑P P 23 12 21.1 +0.2
baz=68,SNR=8.9
BW06 **Boulder Array** 68.09 51 ⇓P P 23 12 21.2 0.0
baz=68,SNR=15
BW06 **Boulder Array** 68.09 51 *eP* P 23 12 20.0 -1.2
comp=Z,12nm,1.1s,mb4.8
PDAR **Pinedale Array** 68.09 51 P P 23 12 21.1 -0.2
comp=Z,7.3nm,1.0s,mb4.7,baz=302,slow=2.8,SNR=40
PDAR LR LR 23 43 15.6
comp=Z,42nm,20.7s,baz=146,slow=37
R12A **Pony Springs,** 68.09 57 ⇑P P 23 12 20.9 -0.4
baz=68
P14A **Drum Mountains** 68.18 56 ⇓P P 23 12 22.1 +0.3
baz=68,SNR=7.5
EDW2 **Edwards Air Fo** 68.25 62 ⇓P P 23 12 22.1 -0.2
baz=68,SNR=8.3
U10A **Ash Meadows, A** 68.29 60 ⇑P P 23 12 22.6 0.0
baz=68
M17A **Scullys Gap (B** 68.33 53 ⇑P P 23 12 22.4 -0.3
baz=68,SNR=5.6
S12A **Delamar Landin** 68.42 58 ⇓P P 23 12 23.8 +0.5
baz=68,SNR=7.6
T11A **Corn Creek, Al** 68.43 59 ⇑P P 23 12 23.3 -0.1
baz=68
K19A **Absolon Red Bu** 68.45 51 ⇓P P 23 12 22.5 -0.9
baz=68
Q14A **Sevier Lake (B** 68.45 56 ⇓P P 23 12 23.8 +0.3
baz=68,SNR=12
JLU **Jordanelle** 68.46 54 *eP* P 23 12 23.5 0.0
comp=Z,8.7nm,1.2s,mb4.7
R13A **O'Grain Ranch,** 68.57 57 ⇑P P 23 12 24.2 -0.1
baz=68
N17A **Moffit Pass** 68.59 53 ⇓P P 23 12 24.4 +0.1
baz=68,SNR=5.3
DZM **Mont Dzumac** 68.61 163 *e*LR LR 23 32 49.5
comp=Z,105nm,27.4s
P15A **Leamington** 68.66 55 ⇓P P 23 12 25.1 +0.3
baz=68
DAU **Daniels Canyon** 68.69 54 *eP* P 23 12 25.7 +0.7
DAU pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
DAU **Daniels Canyon** 68.69 54 *eP* P 23 12 25.7 +0.7
comp=Z,10nm,1.2s,mb4.6
M18A **Lyman** 68.70 52 ⇑P P 23 12 24.5 -0.5
baz=68
BFSC **Mount Baldy St** 68.88 62 ⇑P P 23 12 25.8 -0.4
baz=69
NB2 **NORSAR Subarra** 68.92 339 P P 23 12 24.3 -1.7
comp=Z,1.2nm,0.5s,mb4.1,baz=28,slow=6.5
NOA **NORSAR Array B** 68.92 339 P P 23 12 24.4 -1.6
comp=Z,1.2nm,0.4s,mb4.1,baz=29,slow=6.5,SNR=8.8
NOA LR LR 23 49 29.5
comp=Z,44nm,18.5s,baz=20,slow=42
NOA **NORSAR Array B** 68.92 339 P P 23 12 24.4 -1.6
NOA pmax pmax
comp=Z,1.0nm,0.4s
NOA MLR MLR
comp=Z,44nm,18.5s
NOA **NORSAR Array B** 68.92 339 P P 23 12 24.4 -1.6
NOA LR LR 23 49 29.5
S13A **Holt Ranch, En** 69.03 58 ⇑P P 23 12 27.4 +0.3
baz=69,SNR=11
HFS **Hagfors** 69.05 338 LR LR 23 45 12.2
comp=Z,108nm,21.2s,baz=39,slow=38
T12A **Moapa** 69.08 59 ⇑P P 23 12 27.2 -0.2
baz=69
O17A **Robinson Place** 69.14 54 ⇑P P 23 12 28.1 +0.4
baz=69,SNR=6.2
TUQ **Turquoise Moun** 69.18 60 ⇓P P 23 12 28.2 +0.1
baz=69,SNR=7.7
V11A **Goodsprings** 69.22 60 ⇓P P 23 12 28.3 0.0
baz=69
L20A **Wamsutter** 69.27 51 ⇑P P 23 12 28.3 -0.3
baz=69
HEC **Hector,Ludlow** 69.32 61 ⇓P P 23 12 29.0 +0.1
baz=69,SNR=9.0
T13A **Saint George** 69.37 58 ⇓P P 23 12 29.9 +0.6
baz=69,SNR=10
U12A **Valley of Fire** 69.37 59 ⇓P P 23 12 29.3 0.0
baz=69
MSU **Marysvale** 69.42 56 *eP* P 23 12 29.5 0.0
MSU pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
MSU **Marysvale** 69.42 56 *eP* P 23 12 29.5 0.0
comp=Z,10nm,1.3s,mb4.6
O18A **Roosevelt** 69.50 53 ⇓P P 23 12 30.5 +0.5
baz=69
N19A **John Jarvie Ra** 69.55 52 ⇑P P 23 12 30.4 +0.1
baz=69
R15A **Junction** 69.56 56 ⇓P P 23 12 31.0 +0.7
baz=69
MURC **Murrieta** 69.58 63 ⇑P P 23 12 30.3 -0.3
baz=69
P17A **Butcher Ranch,** 69.61 54 ⇑P P 23 12 31.0 +0.3
baz=69,SNR=6.6
V12A **Nelson** 69.65 60 ⇑P P 23 12 30.9 0.0
baz=69
ASAR **Alice Springs** 69.70 195 P P 23 12 31.4 +0.1
comp=Z,2.6nm,1.0s,mb4.1,baz=10,slow=5.4,SNR=13
ASAR **Alice Springs** 69.70 195 P P 23 12 31.4 +0.2
ASAR pmax pmax
comp=Z,3.0nm,1.0s
ULM **Lac du Bonnet** 69.70 38 LR LR 23 45 45.5
comp=Z,65nm,21.8s,baz=350,slow=38
M20A **Sweetwater, Wa** 69.71 51 ⇑P P 23 12 31.6 +0.4
baz=69
U13A **Pakoon Wash** 69.73 59 ⇓P P 23 12 32.0 +0.6
baz=70,SNR=22
Q16A **Castle Valley** 69.73 55 ⇓P P 23 12 31.8 +0.3
baz=70,SNR=7.7
GMRC **Granite Mounta** 69.77 61 ⇑P P 23 12 31.6 -0.1
baz=70,SNR=7.5
P18A **Preston Nutter** 69.80 54 ⇑P P 23 12 32.0 +0.2
baz=70,SNR=6.7
L21A **Rawlins** 69.84 51 ⇑P P 23 12 31.7 -0.3
baz=70
T14A **Hurricane** 69.84 58 ⇑P P 23 12 32.4 +0.3
baz=70,SNR=7.0
KIV **Kislovodsk** 69.92 312 *eP* P 23 12 33.0 +0.5
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,112nm,19.0s
KIV **Kislovodsk** 69.92 312 *eP* P 23 12 32.4 -0.1
comp=Z,8.3nm,0.8s,mb4.7
R16A **Teasdale** 69.97 56 ⇑P P 23 12 34.0 +1.0
baz=70
SRU **San Rafael** 69.98 55 ⇓P P 23 12 33.1 +0.1
baz=70
SRU **San Rafael** 69.98 55 *eP* P 23 12 33.0 0.0
SRU pmax pmax
comp=Z,18nm,1.1s,mb4.9
SRU **San Rafael** 69.98 55 *eP* P 23 12 33.0 +0.1
comp=Z,18nm,1.1s,mb4.9
PFO **Pinyon Flat Ob** 70.04 62 ⇓P P 23 12 33.8 +0.4
baz=70
BELC **Belle Mtn.** 70.07 62 ⇑P P 23 12 33.0 -0.6
baz=70
M21A **Separation Pea** 70.08 51 ⇑P P 23 12 33.6 +0.1
baz=70
V13A **Grand Canyon W** 70.09 59 ⇓P P 23 12 33.8 +0.1
baz=70,SNR=12
N20A **Spence Gulch,** 70.11 52 ⇓P P 23 12 34.0 +0.3
baz=70
RSSD **Black Hills** 70.14 47 *eP* P 23 12 33.2 -0.6
RSSD pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
RSSD **Black Hills** 70.14 47 *eP* P 23 12 33.2 -0.6
comp=Z,9.0nm,1.1s,mb4.6
U14A **Mt Trumbull** 70.20 58 ⇓P P 23 12 34.7 +0.3
baz=70,SNR=12
T15A **Red Dirt Ranch** 70.28 57 ⇑P P 23 12 35.1 +0.2
baz=70
L22A **Ellis Ranch, M** 70.30 50 ⇓P P 23 12 35.2 +0.3
baz=70
R17A **Hanksville Air** 70.33 55 ⇓P P 23 12 34.8 -0.4
baz=70,SNR=5.9
IRM **Iron Mountain** 70.50 61 ⇓P P 23 12 36.3 +0.1
baz=70,SNR=11
P19A **Cripple Cowboy** 70.51 53 ⇓P P 23 12 36.2 0.0
baz=70
MONP **Monument Peak** 70.54 63 ⇓P P 23 12 36.4 -0.1
baz=70
N21A **Black Mountain** 70.57 52 ⇑P P 23 12 36.2 -0.3
baz=70
O20A **White River Ci** 70.59 52 ⇑P P 23 12 36.5 -0.2
baz=70
BC3 **Big Chuckw Mtn** 70.64 62 ⇓P P 23 12 36.9 -0.2
baz=70,SNR=8.2
W13A **Hualapai Mount** 70.65 60 ⇓P P 23 12 37.1 0.0
baz=70,SNR=7.6
U15A **North Rim** 70.73 58 ⇑P P 23 12 38.1 +0.5
baz=70,SNR=12
V14A **Boquillas Ranc** 70.77 59 ⇓P P 23 12 38.3 +0.5
baz=70,SNR=18
S17A **Black Ridge (B** 70.81 56 ⇓P P 23 12 37.7 -0.4
baz=71
R18A **Canyonlands Na** 70.83 55 ⇓P P 23 12 37.7 -0.5
baz=71
SWSC **Sam W. Stewart** 70.90 62 ⇑P P 23 12 38.2 -0.4
baz=71
O21A **Pagoda** 70.97 52 ⇓P P 23 12 39.0 0.0
baz=71
X13A **Yucca** 71.02 60 ⇓P P 23 12 39.3 -0.1
baz=71,SNR=16
PDMCI **Parker Dam,Lak** 71.03 60 ⇑P P 23 12 39.5 +0.1
baz=71
W14A **Seligman** 71.07 59 ⇑P P 23 12 39.9 +0.3
baz=71,SNR=19
N22A **Wattenberg Ran** 71.13 51 ⇓P P 23 12 40.5 +0.5
baz=71
AGMN **Agassiz Refuge** 71.14 40 *eP* P 23 12 38.8 -1.1
comp=Z,6.3nm,1.0s,mb4.5
Y12C **Blythe** 71.16 61 ⇓P P 23 12 40.5 +0.3
baz=71
V15A **Kaibab Nationa** 71.21 58 ⇑P P 23 12 40.9 +0.4
baz=71,SNR=6.4
S18A **Hurst Farm, Bl** 71.24 55 ⇓P P 23 12 40.2 -0.5
baz=71,SNR=7.3
AKASG **Malin Array Be** 71.36 324 P P 23 12 40.6 -0.5
comp=Z,2.9nm,0.6s,mb4.4,baz=40,slow=6.7,SNR=12
AKASG LR LR 23 46 58.2
comp=Z,86nm,18.5s,baz=40,slow=38
AKASG **Malin Array Be** 71.36 324 P P 23 12 40.6 -0.5
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG MLR MLR
comp=Z,86nm,18.5s
Q20A **Ridgley Place,** 71.36 53 ⇓P P 23 12 41.7 +0.3
baz=71
GNI **Garni** 71.42 308 *eP* P 23 12 42.6 +0.9
GNI pmax pmax
comp=Z,6.0nm,1.4s
GLA **Glamis** 71.43 62 ⇑P P 23 12 42.0 +0.1
baz=71
Y13A **Salome** 71.54 61 ⇑P P 23 12 42.8 +0.2
baz=71,SNR=6.1
W15A **Williams** 71.58 59 ⇑P P 23 12 43.8 +1.0
baz=71
U17A **Shonto** 71.59 57 ⇓P P 23 12 42.6 -0.2
baz=71,SNR=5.5
X14A **Yava** 71.68 59 ⇑P P 23 12 43.7 +0.4
baz=72,SNR=16
T18A **Mexican Hat** 71.69 56 ⇑P P 23 12 42.7 -0.7
baz=71,SNR=7.4
S19A **Harvey Farm, M** 71.70 55 ⇑P P 23 12 43.5 +0.1
baz=71
R20A **Redvale** 71.84 54 ⇓P P 23 12 44.5 +0.3
baz=72
Q21A **Lamborn Mesa,** 71.86 53 ⇑P P 23 12 44.7 +0.4
baz=72
WUAZ **Wupatki** 71.89 58 ⇑P P 23 12 45.1 +0.5
baz=72,SNR=5.9
SMCO **Snowmass** 71.96 52 *eP* P 23 12 44.8 -0.2
comp=Z,9.2nm,1.2s,mb4.6
Y14A **Wickenburg** 71.97 60 ⇑P P 23 12 45.1 0.0
baz=72,SNR=8.1
ANN **Anapa** 72.00 316 *eP* P 23 12 42.1 -3.0
ANN pmax pmax
comp=Z,27nm,1.3s,mb5.0
Z13A **Yuma Proving G** 72.06 61 ⇓P P 23 12 45.8 +0.1
baz=72,SNR=10
X15A **Humboldt** 72.07 59 ⇑P P 23 12 46.1 +0.4
baz=72,SNR=15
W16A **Flagstaff** 72.08 58 ⇓P P 23 12 46.2 +0.4
baz=72,SNR=5.6
V17A **Tonalea, Kykot** 72.17 57 ⇓P P 23 12 46.7 +0.5
baz=72,SNR=26
U18A **Rough Rock, Ch** 72.18 56 ⇑P P 23 12 46.7 +0.4
baz=72,SNR=5.2
R21A **Cimarron** 72.19 53 ⇑P P 23 12 46.8 +0.4
baz=72
Q22A **Crested Butte,** 72.21 53 ⇓P P 23 12 47.0 +0.5
baz=72

113A Mohawk Valley, 72.28 61 ⇑P P 23 12 47.1 +0.1
baz=72
ISCO Idaho Springs 72.29 51 eP P 23 12 47.2 +0.3
ISCO pmax pmax
comp=Z,11nm,1.2s,mb4.7
ISCO Idaho Springs 72.29 51 eP P 23 12 47.2 +0.3
comp=Z,11nm,1.2s,mb4.7
Y15A Casa Rosa Ranc 72.37 60 ⇑P P 23 12 47.9 +0.4
baz=72,SNR=5.8
Z14A Wintersburg 72.39 60 ⇓P P 23 12 47.7 +0.1
baz=72
T19A Beclabito 72.39 55 ⇑P P 23 12 47.5 -0.1
baz=72
MVCO Mesa Verde 72.44 55 ⇓P P 23 12 47.7 -0.1
baz=72
S21A Coal Bank Pass 72.54 54 ⇑P P 23 12 49.0 +0.5
baz=72,SNR=10
X16A Lo Mia Camp, P 72.60 59 ⇓P P 23 12 49.3 +0.5
baz=72,SNR=14
V18A Ganado 72.62 57 ⇑P P 23 12 49.3 +0.4
baz=72
R22A Saguache, Gunn 72.74 53 ⇑P P 23 12 50.1 +0.5
baz=72
114A Black Gap (USA 72.84 61 ⇓P P 23 12 50.6 +0.3
baz=73,SNR=5.9
Y16A Circle Bar Ran 72.94 59 ⇑P P 23 12 51.2 +0.4
baz=73,SNR=11
115A Sonoran Desert 73.28 60 ⇓P P 23 12 53.2 +0.2
baz=73,SNR=5.7
Z16A Peralta Trail, 73.34 60 ⇑P P 23 12 53.7 +0.5
baz=73
W19A Sanders 73.36 57 ⇑P P 23 12 54.3 +1.0
baz=73
X18A Snowflake 73.42 58 ⇓P P 23 12 54.4 +0.7
baz=73
OGNE Ogallala 73.42 48 eP P 23 12 53.2 -0.4
comp=Z,36nm,1.1s,mb5.2
OGNE e pP 23 13 12.7 +2.2
214A Organ Pipe Nat 73.43 61 ⇑P P 23 12 53.8 0.0
baz=73
V20A Brimhall 73.43 56 ⇓P P 23 12 54.2 +0.5
baz=73
Y17A Roosevelt 73.45 59 ⇑P P 23 12 54.0 +0.1
baz=73
T22A Edith 73.50 54 ⇓P P 23 12 54.4 +0.3
baz=73
116A Eloy 73.70 60 ⇑P P 23 12 55.3 -0.1
baz=74
SDCO Great Sand Dun 73.78 53 P P 23 12 56.8 +1.0
X19A St. Johns 73.89 57 ⇓P P 23 12 56.8 +0.4
baz=74,SNR=5.8
V21A Milan 73.91 55 ⇓P P 23 12 56.5 0.0
baz=74
Z17A San Carlos Hig 73.95 59 ⇓P P 23 12 57.6 +0.8
baz=74
ECSD EROS Data Cent 74.15 43 eP P 23 12 56.7 -1.1
comp=Z,24nm,1.4s,mb4.9
Y19A Nutrioso 74.23 58 ⇓P P 23 12 59.0 +0.6
baz=74
216A Three Points, 74.23 61 ⇑P P 23 12 58.4 -0.1
baz=74
V22A San Miguel Ran 74.26 55 ⇓P P 23 12 58.7 +0.1
baz=74
X20A Quemado 74.28 57 ⇑P P 23 12 59.3 +0.6
baz=74
117A Oracle 74.29 60 ⇓P P 23 12 59.0 +0.2
baz=74
118A Homack Ranch, 74.71 59 ⇑P P 23 13 01.4 +0.1
baz=74,SNR=14
X21A Alamocita Cree 74.77 56 ⇓P P 23 13 02.3 +0.7
baz=74,SNR=5.7
217A Green Valley 74.79 60 ⇑P P 23 13 02.2 +0.5
baz=75,SNR=7.2
Y20A Horse Springs, 74.79 57 ⇑P P 23 13 02.5 +0.8
baz=74,SNR=7.4
KWP Kalwaria Pacla 74.80 327 eP P 23 13 02.4 +0.9
KWP Kalwaria Pacla 74.80 327 eP P 23 13 01.0 -0.4
KWP pmax pmax
comp=Z,20nm,1.1s,mb5.0
KWP Kalwaria Pacla 74.80 327 eP P 23 13 01.0 -0.5
comp=Z,20nm,1.1s,mb5.0
KWP Kalwaria Pacla 74.80 327⇑iP P 23 13 02.4 +1.0
218A Dragoon 75.12 60 ⇓P P 23 13 04.0 +0.4
baz=75
Y21A Point of Rocks 75.14 57 ⇑P P 23 13 04.3 +0.6
baz=75,SNR=5.2
X22A Bernardo 75.19 56 ⇑P P 23 13 04.6 +0.6
baz=75
ANMO Albuquerque 75.20 55 eP P 23 13 03.6 -0.4
ANMO pmax pmax
comp=Z,7.0nm,1.1s
ANMO Albuquerque 75.20 55 eP P 23 13 03.6 -0.4
comp=Z,6.6nm,1.1s,mb4.5
Z20A Nine Sixteen R 75.22 58 ⇑P P 23 13 04.6 +0.4
baz=75,SNR=6.6
BUR08 Bucovina Ar. S 75.39 325 eP P 23 13 04.8 -0.1
BUR08 ePcP PcP 23 13 17.1 -0.7
BURAR Bucovina Array 75.41 324 ⇑P P 23 13 05.6 +0.6
BURAR Bucovina Array 75.41 324⇑iP P 23 13 05.6 +0.6
OJC Ojcow 75.41 329 eP P 23 13 04.0 -1.0
318A Bisbee 75.53 60 ⇑P P 23 13 06.1 +0.1
baz=75,SNR=10
KOLS Kolonicke sedl 75.53 327 eP P 23 13 06.1 +0.4
KOLS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
KOLS Kolonicke sedl 75.53 327 eP P 23 13 06.1 +0.4
comp=Z,7.1nm,1.3s,mb4.4
KOLS Kolonicke sedl 75.53 327 eP P 23 13 06.1 +0.4
STHS Stebnicka Huta 75.53 328 eP P 23 13 06.4 +0.7
STHS pmax pmax
comp=Z,12nm,1.5s,mb4.6
STHS Stebnicka Huta 75.53 328 eP P 23 13 06.4 +0.7
comp=Z,12nm,1.5s,mb4.6
STHS Stebnicka Huta 75.53 328 eP P 23 13 06.4 +0.7
120A U Bar Ranch, L 75.58 58 ⇓P P 23 13 06.8 +0.5
baz=75,SNR=5.6
219A White Tail Can 75.59 59 ⇓P P 23 13 06.6 +0.3
baz=75,SNR=11
W24A Lazy 6 Ranch, 75.62 55 ⇑P P 23 13 07.1 +0.7
baz=75,SNR=8.0
Z21A St. Cloud Mine 75.63 57 ⇓P P 23 13 07.2 +0.7
baz=75,SNR=7.5
TLCR 75.77 321 ⇓P P 23 13 07.7 +0.6
TLCR 75.77 321⇓iP P 23 13 07.7 +0.6
NIE Niedzica 75.88 328 eP P 23 13 08.5 +0.9
SCHQ Schefferville 76.00 20 P P 23 13 06.9 -1.4
comp=Z,4.5nm,1.0s,mb4.4,baz=300,slow=8.5,SNR=3.9
SCHQ LR LR 23 49 28.2
comp=Z,87nm,18.2s,baz=53,slow=38
SCHQ Schefferville 76.00 20 eP P 23 13 08.1 -0.1
319A Douglas 76.01 60 ⇑P P 23 13 08.7 0.0
baz=76,SNR=6.5
TRPA Tarpa 76.08 326⇓iP P 23 13 09.7 +0.9
220A Playas Peak, P 76.10 59 ⇑P P 23 13 09.4 +0.2
baz=76,SNR=8.4
121A Cookes Peak, D 76.11 58 ⇑P P 23 13 09.9 +0.7
baz=76,SNR=7.3
VRI Vrincioaia 76.15 323 ⇑P P 23 13 10.7 +1.4
VRI Vrincioaia 76.15 323⇑iP P 23 13 10.7 +1.4
W25A X Bar L Ranch, 76.16 54 ⇓P P 23 13 09.8 +0.3
baz=76,SNR=6.2
320A Kipp Ranch, An 76.49 59 ⇑P P 23 13 12.1 +0.6
baz=76
Y24A Capitan 76.52 55 ⇑P P 23 13 11.6 +0.1
baz=76,SNR=6.2
KECS Kecovo 76.58 328 eP P 23 13 11.7 0.0
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 76.58 328 eP P 23 13 11.7 0.0
comp=Z,2.2nm,1.1s,mb4.0
KECS Kecovo 76.58 328 eP P 23 13 11.7 0.0
MORC Moravsky Berou 76.59 330 eP P 23 13 11.4 -0.3
MORC Moravsky Berou 76.59 330⇑iP P 23 13 12.2 +0.5
W26A Owens Ranch, T 76.65 54 ⇑P P 23 13 12.7 +0.4
baz=76
STKA Stephens Creek 76.80 186 P P 23 13 13.8 +1.0
comp=Z,3.2nm,1.0s,mb4.2,baz=329,slow=9.8,SNR=3.2
STKA LR LR 23 46 35.9
comp=Z,94nm,19.1s,baz=26,slow=35
CLL Collm 76.81 333⇑iP P 23 13 12.6 -0.3
CLL i 23 13 21.9
CLL pmax pmax
comp=Z,11nm,0.6s,mb5.0
CLL MLR MLR
comp=Z,100nm,22.3s
CLL Collm 76.81 333⇑iP P 23 13 12.6 -0.3
comp=Z,11nm,0.6s,mb5.0
CLL i 23 13 18.4
CLL i 23 13 21.9
CLL LR LR
comp=Z,100nm,22.3s
CLL Collm 76.81 333⇑iP P 23 13 12.6 -0.3
comp=Z,11nm,0.6s,mb5.0
CLL i 23 13 18.4
CLL i (PcP) PcP 23 13 21.9 -2.0
CLL eSSS 23 31 30.0
BRG Berggiesshubel 76.89 333 eP P 23 13 13.0 -0.3
comp=Z,6.3nm,1.4s,mb4.4
Y25A Mesa, Roswell 76.95 55 ⇑P P 23 13 14.0 0.0
baz=77
Z24A Sheeppen Canyo 76.98 56 ⇓P P 23 13 14.7 +0.5
baz=77
X26A CR and CF Fran 77.01 54 ⇓P P 23 13 14.6 +0.3
baz=77
MIB Mutribah 77.07 299 eP P 23 13 14.5 -0.3
MIB AMb AMB 23 13 15.5
comp=Z,28nm,1.1s,mb5.1
W27A Bowe Ranch, En 77.07 53 ⇑P P 23 13 14.6 -0.1
baz=77
VYHS Vyhne 77.19 329 iP P 23 13 15.8 +0.7
VYHS pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
VYHS Vyhne 77.19 329 iP P 23 13 15.8 +0.7
comp=Z,5.9nm,1.4s,mb4.3
VYHS Vyhne 77.19 329 iP P 23 13 15.8 +0.7
PSZ Piszkesteto 77.27 328 eP P 23 13 15.0 -0.5
PSZ Piszkesteto 77.27 328⇓iP P 23 13 16.7 +1.2
KOLL Kolacno 77.28 329 eP P 23 13 16.2 +0.6
KOLL Kolacno 77.28 329 eP P 23 13 16.2 +0.6
Z25A Roswell 77.40 55 ⇓P P 23 13 16.4 -0.1
baz=77
PRU Pruhonice 77.44 332 eP P 23 13 16.9 +0.4
PRU e 23 13 22.8
PRU MLR MLR
comp=Z,100nm,13.0s
PRU Pruhonice 77.44 332 eP P 23 13 16.9 +0.4
PRU ePCP PcP 23 13 22.8 -3.9
PRU AMS AMS 23 50 40.0
comp=Z,100nm,13.0s
NAY Al-Naaiem 77.52 299 eP P 23 13 17.0 -0.2
NAY AMb AMB 23 13 18.0
comp=Z,15nm,1.2s,mb4.8
RDF Al-Radifah 77.55 298 eP P 23 13 17.8 +0.4
RDF AMb AMB 23 13 19.0
comp=Z,45nm,0.6s,mb5.6
BR131 Keskin Array S 77.64 314 eP P 23 13 17.5 -0.2
comp=Z,2.1nm,0.7s,mb4.2
BRTR Keskin Array B 77.64 314 P P 23 13 18.4 +0.6
comp=Z,2.9nm,0.7s,mb4.3,baz=86,slow=3.5,SNR=18
BRTR LR LR 23 50 10.3
comp=Z,29nm,21.1s,baz=266,slow=38
BRTR Keskin Array B 77.64 314 P P 23 13 18.4 +0.7
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR MLR MLR
comp=Z,29nm,21.2s
224A Corundas Mount 77.78 57 ⇓P P 23 13 18.6 0.0
baz=78
MOX Moxa 77.83 334 eP P 23 13 18.5 -0.1
Z26A Caprock 77.83 55 ⇑P P 23 13 18.8 -0.2
baz=78
Y27A Causey 77.86 54 ⇑P P 23 13 18.8 -0.3
baz=78
125A Gardner Draw, 77.88 56 ⇑P P 23 13 19.3 +0.1
baz=78
MSTX Muleshoe 78.03 54 ⇑P P 23 13 19.6 -0.4
baz=78
ZST Bratislava 78.08 329 eP P 23 13 21.2 +1.2
ZST pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ZST Bratislava 78.08 329 eP P 23 13 21.2 +1.2
comp=Z,5.2nm,0.9s,mb4.5
ZST Bratislava 78.08 329 eP P 23 13 21.2 +1.2
225A Deer Hill, Car 78.17 56 ⇓P P 23 13 20.6 -0.2
baz=78
Z27A Tatum 78.25 55 ⇓P P 23 13 20.8 -0.4
baz=78
324A Moseley Ranch, 78.26 57 ⇑P P 23 13 21.2 -0.1
baz=78
126A Clayton Basin, 78.26 56 ⇑P P 23 13 21.0 -0.3
baz=78
BZS Buzias 78.49 325 ⇓P P 23 13 22.3 0.0
BZS Buzias 78.49 325⇓iP P 23 13 22.3 0.0
KHC Kasperske Hory 78.50 332 eP P 23 13 22.9 +0.5
KHC pmax pmax
comp=Z,14nm,1.0s,mb4.8
KHC Kasperske Hory 78.50 332 eP P 23 13 22.9 +0.6
comp=Z,14nm,1.0s,mb4.8
KHC Kasperske Hory 78.50 332 eP P 23 13 22.8 +0.4
KHC AMS AMS 23 51 30.0
comp=Z,100nm,17.5s
325A Bean Ranch, Si 78.61 57 ⇓P P 23 13 22.9 -0.3
baz=78
226A Malaga, Loving 78.63 56 ⇑P P 23 13 23.1 -0.2
baz=78
GERES GERESS Array B 78.71 332 P P 23 13 23.1 -0.4
comp=Z,2.7nm,0.6s,mb4.3,baz=40,slow=5.7,SNR=30
GERES LR LR 23 52 13.1
comp=Z,104nm,19.2s,baz=32,slow=39
GERES GERESS Array B 78.71 332 P P 23 13 23.1 -0.4
GERES pmax pmax
comp=Z,3.0nm,0.6s
GERES MLR MLR
comp=Z,104nm,19.2s
CONA Conrad Observa 78.75 330⇑iP P 23 13 24.7 +0.9
comp=Z,11nm,1.1s,mb4.7
GRA1 Grafenberg Arr 78.78 334 eP P 23 13 24.2 +0.3
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 78.78 334 eP P 23 13 24.2 +0.3
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 78.78 334 eP P 23 13 24.2 +0.3
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.0
GRF Grafenberg Arr 78.78 334 eP P 23 13 24.2 +0.3
GRF pmax pmax
comp=Z,18nm,0.8s,mb5.0
425A Indio Mountain 79.02 57 ⇑P P 23 13 25.7 +0.1
baz=79
PKSM Moragy 79.17 327 ⇑P P 23 13 25.6 -0.5
PKSM Moragy 79.17 327⇑iP P 23 13 25.6 -0.5
326A Caldwell Ranch 79.24 56 ⇓P P 23 13 26.5 -0.2
baz=79
MEM Membach 79.51 337 P P 23 13 26.9 -1.0
426A McDonald Obser 79.68 57 ⇑P P 23 13 28.4 -0.7
baz=79
WMOK Wichita Mounta 79.70 51 eP P 23 13 28.5 -0.7
WMOK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
WMOK Wichita Mounta 79.70 51 eP P 23 13 28.5 -0.7
comp=Z,8.3nm,1.1s,mb4.6
BCLA Clavier 79.88 337 P P 23 13 29.6 -0.2
328A Wristen Ranch, 79.88 56 ⇓P P 23 13 30.1 -0.1
baz=80
427A Hayter Ranch, 79.92 56 ⇑P P 23 13 30.0 -0.4
baz=80
526A Mary Lane Ranc 80.08 57 ⇑P P 23 13 31.2 -0.1
baz=80
SOKA Soboth 80.11 330⇓iP P 23 13 30.9 -0.3
comp=Z,8.8nm,0.8s,mb4.8
STU Stuttgart 80.22 334 P P 23 13 31.8 +0.1
527A Woodward Ranch 80.30 57 ⇑P P 23 13 32.1 -0.3
baz=80
626A Big Bend Ranch 80.42 58 ⇑P P 23 13 32.9 -0.2
baz=80
428A Kincaid Ranch, 80.43 56 ⇑P P 23 13 33.3 +0.2
baz=80
LEGS Legarje 80.63 329 eP P 23 13 33.6 -0.3
WATA Walderalm 80.73 332⇑iP P 23 13 34.9 +0.4
comp=Z,7.3nm,0.5s,mb4.8
WTTA Wattenberg 80.77 332⇓iP P 23 13 35.1 +0.5
comp=Z,13nm,0.7s,mb5.0
528A Cox Ranch, San 80.78 56 ⇑P P 23 13 35.3 +0.3
baz=80
TXAR Lajitas Array 80.86 58 P P 23 13 35.4 -0.1
comp=Z,6.2nm,0.8s,mb4.6,baz=299,slow=3.7,SNR=74
TXAR Lajitas Array 80.86 58 P P 23 13 35.4 -0.1
TXAR pmax pmax
comp=Z,6.0nm,0.8s
MOTA Moosalm 80.88 332⇑iP P 23 13 35.6 +0.4
comp=Z,26nm,1.1s,mb5.0
627A Terlingua Ranc 80.94 57 ⇓P P 23 13 35.9 0.0
baz=81
SADO Sadowa 80.95 32 LR LR 23 52 29.9
comp=Z,52nm,19.1s,baz=310,slow=38
CCM Cathedral Cave 81.11 44 eP P 23 13 35.7 -1.0
CCM pmax pmax
comp=Z,11nm,1.1s,mb4.7
CCM Cathedral Cave 81.11 44 eP P 23 13 35.7 -0.9
comp=Z,10nm,1.1s,mb4.7
CDF Champ du Feu 81.12 335 eP P 23 13 35.9 -0.6
comp=Z,19nm,0.9s,mb4.7
CDF Champ du Feu 81.12 335 eP P 23 13 35.9 -0.6
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CDF Champ du Feu 81.12 335 eP P 23 13 35.9 -0.6
comp=Z,9.6nm,0.9s,mb4.7
628A Black Gap, Mar 81.21 57 ⇓P P 23 13 37.3 0.0
baz=81
ECH Echery 81.33 335 eP P 23 13 37.5 -0.2
ECH pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ECH Echery 81.33 335 eP P 23 13 37.5 -0.1
comp=Z,8.9nm,1.0s,mb4.7
CSS Prodhromos 81.40 312 eP P 23 13 38.1 -0.2
comp=Z,15nm,1.0s,mb4.9
MEZF Maizieres J'vi 81.69 337 eP P 23 13 39.0 -0.5
comp=Z,14nm,0.8s,mb4.7
MEZF Maizieres J'vi 81.69 337 eP P 23 13 39.0 -0.5
comp=Z,14nm,0.8s,mb5.0
MMAI Mount Meron Ar 81.75 309 P P 23 13 41.4 +1.2
comp=Z,5.4nm,0.5s,mb4.7,baz=36,slow=7.5,SNR=5.1
MMAI LR LR 23 52 40.8
comp=Z,49nm,19.4s,baz=115,slow=38
HAU Haudompre 81.76 336 eP P 23 13 39.7 -0.2
comp=Z,14nm,0.8s,mb4.6
HAU eMLR MLR
comp=Z,88nm,22.8s
HAU Haudompre 81.76 336 eP P 23 13 39.7 -0.2
HAU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
HAU MLR MLR
comp=Z,90nm,22.8s
HAU Haudompre 81.76 336 eP P 23 13 39.7 -0.2
comp=Z,6.9nm,0.8s,mb4.6
HAU LR LR
comp=Z,90nm,22.8s
HINF Hinteralfeld 81.78 335 eP P 23 13 39.6 -0.4
JCT Junction City 82.29 54 eP P 23 13 42.2 -0.8
JCT pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
JCT Junction City 82.29 54 eP P 23 13 42.2 -0.8
comp=Z,3.7nm,0.3s,mb4.8
SIUC Southern Illin 82.36 43 eP P 23 13 42.6 -0.7
comp=Z,8.9nm,0.8s,mb4.8
PMOR Pomariorio Ree 82.59 120 eT 00 44 37.2
comp=Z,71nm,0.2s
MIAR Mount Ida 82.65 48 eP P 23 13 44.4 -0.4
MIAR pmax pmax
comp=Z,15nm,1.0s,mb5.0
MIAR Mount Ida 82.65 48 eP P 23 13 44.4 -0.4
comp=Z,15nm,1.0s,mb5.0
FLN La Foliniere 82.89 340 eP P 23 13 44.9 -0.9
FLN eMLR MLR
comp=Z,93nm,19.0s
FLN La Foliniere 82.89 340 eP P 23 13 44.9 -0.9
FLN LR LR
comp=Z,90nm,19.0s
XOR Xorichti 82.92 321 P P 23 13 44.9 -1.2
CABF La Chapelle 83.10 335 eP P 23 13 46.9 0.0
comp=Z,10nm,0.7s,mb4.7
CABF La Chapelle 83.10 335 eP P 23 13 46.9 0.0
CABF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CABF La Chapelle 83.10 335 eP P 23 13 46.9 0.0
comp=Z,5.3nm,0.7s,mb4.7
LOR Lormes 83.14 337 eP P 23 13 46.2 -0.9
comp=Z,13nm,0.8s,mb4.7
LOR eMLR MLR
comp=Z,87nm,19.2s
LOR Lormes 83.14 337 eP P 23 13 46.2 -0.9
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LOR MLR MLR
comp=Z,90nm,19.3s
LOR Lormes 83.14 337 eP P 23 13 46.2 -0.9
comp=Z,6.7nm,0.8s,mb4.7
LOR LR LR
comp=Z,90nm,19.3s
GRR Gorron 83.33 340 eP P 23 13 47.5 -0.5
comp=Z,76nm,1.2s,mb5.3
GRR Gorron 83.33 340 eP P 23 13 47.5 -0.5
GRR pmax pmax
comp=Z,38nm,1.2s,mb5.3
GRR Gorron 83.33 340 eP P 23 13 47.5 -0.5
comp=Z,38nm,1.2s,mb5.3
SSF Saint Saulge 83.43 337 eP P 23 13 47.8 -0.8
PPT Papeete 83.55 123 eLR LR 23 40 03.8
comp=Z,94nm,26.5s
LKR Lokris 83.59 320 P P 23 13 48.0 -1.6
SMF Signal de Mont 83.72 337 eP P 23 13 49.4 -0.7
comp=Z,26nm,0.8s,mb5.1
SMF Signal de Mont 83.72 337 eP P 23 13 49.4 -0.7
SMF pmax pmax
comp=Z,13nm,0.8s,mb5.1
SMF Signal de Mont 83.72 337 eP P 23 13 49.4 -0.7
comp=Z,13nm,0.8s,mb5.1
AVF Avril sur Loir 83.72 337 eP P 23 13 49.4 -0.7
comp=Z,7.0nm,0.8s,mb4.5
AVF Avril sur Loir 83.72 337 eP P 23 13 49.4 -0.7
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
AVF Avril sur Loir 83.72 337 eP P 23 13 49.4 -0.7
comp=Z,3.5nm,0.8s,mb4.5
SGMF Saint Gilles 83.85 341 eP P 23 13 50.3 -0.4
LPL La Plagne 83.89 334 eP P 23 13 51.0 0.0
comp=Z,20nm,0.9s,mb4.9
LPL La Plagne 83.89 334 eP P 23 13 51.0 0.0
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LPL La Plagne 83.89 334 eP P 23 13 51.0 0.0
comp=Z,10nm,0.9s,mb5.0
LPG La Plagne 83.90 334 eP P 23 13 51.2 +0.2
comp=Z,38nm,1.1s,mb5.1
LPG La Plagne 83.90 334 eP P 23 13 51.2 +0.2
LPG pmax pmax
comp=Z,19nm,1.1s,mb5.1
LPG La Plagne 83.90 334 eP P 23 13 51.2 +0.2
comp=Z,19nm,1.1s,mb5.1
ROSF Rostrenen 83.93 342 eP P 23 13 50.8 -0.3
comp=Z,67nm,1.2s,mb5.3
ROSF Rostrenen 83.93 342 eP P 23 13 50.8 -0.3
ROSF pmax pmax
comp=Z,33nm,1.2s,mb5.3
ROSF Rostrenen 83.93 342 eP P 23 13 50.8 -0.3
comp=Z,33nm,1.2s,mb5.3
BGF Bois d'Agland 84.07 337 eP P 23 13 51.2 -0.7
AQU L'Aquila 84.42 329 eP P 23 13 53.0 -0.8
AQU pmax pmax
comp=Z,11nm,0.8s,mb5.0
AQU L'Aquila 84.42 329 eP P 23 13 53.0 -0.8
comp=Z,11nm,0.8s,mb5.0
AQU L'Aquila 84.42 329⇑iP P 23 13 54.9 +1.1
TCF Toulx Ste Croi 84.49 338 eP P 23 13 53.7 -0.3
ORIF Oris-en-Rattie 84.69 335 eP P 23 13 55.6 +0.6
comp=Z,19nm,0.7s,mb5.0
ORIF eMLR MLR
comp=Z,89nm,22.5s
ORIF Oris-en-Rattie 84.69 335 eP P 23 13 55.6 +0.6
ORIF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
ORIF Oris-en-Rattie 84.69 335 eP P 23 13 55.6 +0.6
comp=Z,9.6nm,0.7s,mb5.0
MEH Mehetia 84.69 122 eT 00 47 14.8
comp=Z,112nm,0.2s
MFF Saint Martin d 84.82 339 eP P 23 13 55.5 -0.2
comp=Z,15nm,0.7s,mb4.9
MFF Saint Martin d 84.82 339 eP P 23 13 55.5 -0.2
MFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
MFF Saint Martin d 84.82 339 eP P 23 13 55.5 -0.2
comp=Z,7.6nm,0.7s,mb4.9
VLS Valsamata 85.05 322 P P 23 13 55.7 -1.3
LAST Lasithi 85.25 317 P P 23 13 58.0 0.0
RJF Les Rejaudoux 85.59 338 eP P 23 13 59.4 -0.1
comp=Z,40nm,1.3s,mb5.2
RJF eMLR MLR
comp=Z,114nm,20.2s
RJF Les Rejaudoux 85.59 338 eP P 23 13 59.4 -0.1
RJF pmax pmax
comp=Z,20nm,1.3s,mb5.2

RJF				MLR	MLR			
	comp=Z,110nm,20.3s							
RJF	**Les Rejaudoux**	**85.59**	**338**	*e*P	**P**	**23 13 59.4**	**-0.1**	
	comp=Z,20nm,1.3s,mb5.2							
RJF				LR	LR			
	comp=Z,110nm,20.3s							
SIVA	**Sivas**	**85.69**	**317**	P	**P**	**23 13 58.9**	**-1.3**	
CAF	**Calviac**	**85.79**	**337**	*e*P	**P**	**23 14 00.9**	**+0.4**	
	comp=Z,34nm,1.1s,mb5.2							
CAF	**Calviac**	**85.79**	**337**	*e*P	**P**	**23 14 00.9**	**+0.4**	
CAF				pmax	pmax			
	comp=Z,17nm,1.1s,mb5.2							
CAF	**Calviac**	**85.79**	**337**	*e*P	**P**	**23 14 00.9**	**+0.4**	
	comp=Z,17nm,1.1s,mb5.2							
KARN	**Karanos**	**85.80**	**318**	P	**P**	**23 13 59.7**	**-1.1**	
LFF	**La Frestale**	**86.13**	**338**	*e*P	**P**	**23 14 02.3**	**+0.1**	
	comp=Z,50nm,1.1s,mb5.4							
LFF	**La Frestale**	**86.13**	**338**	*e*P	**P**	**23 14 02.3**	**+0.1**	
LFF				pmax	pmax			
	comp=Z,25nm,1.1s,mb5.4							
LFF	**La Frestale**	**86.13**	**338**	*e*P	**P**	**23 14 02.3**	**+0.1**	
	comp=Z,25nm,1.1s,mb5.4							
TKL	**Tuckaleechee C**	**86.60**	**41**	LR	LR	23 51 24.6		
	comp=Z,48nm,19.3s,baz=95,slow=35							
KEST	**Kesra**	**91.74**	**328**	LR	LR	23 56 39.3		
	comp=Z,41nm,20.2s,baz=301,slow=36							
ESDC	**Sonseca Array**	**92.28**	**339**	P	**P**	**23 14 30.4**	**-0.9**	
	comp=Z,0.4nm,0.5s,mb4.0,baz=4,4,slow=4.9,SNR=3.2							
CMIG	**Matias Romero**	**95.33**	**60**	LR	LR	00 02 16.8		
	comp=Z,39nm,18.7s,baz=353,slow=38							
TEIG	**Tepich**	**96.78**	**53**	LR	LR	00 03 01.9		
	comp=Z,38nm,18.2s,baz=132,slow=38							
TORD	**Torodi Ar. Bea**	**114.99**	**325**	PKP	PKiKP	23 20 00.9	-1.5	
	comp=Z,0.3nm,0.5s,baz=23,slow=2.1,SNR=7.3							
DBIC	**Dimbokro**	**123.47**	**328**	PKP	PKPdf	23 20 17.8	-1.0	
	comp=Z,1.8nm,0.6s,baz=154,slow=17,SNR=3.7							
DBIC	**Dimbokro**	**123.47**	**328**	PKIKP	PKPdf	23 20 17.8	-0.9	
DBIC				pmax	pmax			
	comp=Z,2.0nm,0.6s							
DBIC	**Dimbokro**	**123.47**	**328**	PKP	PKPdf	23 20 17.8	-1.0	
LPAZ	**La Paz**	**137.70**	**59**	PKP	PKPdf	23 20 46.9	+1.4	
	comp=Z,1.1nm,0.8s,baz=6.6,slow=10,SNR=5.1							
LPAZ	**La Paz**	**137.70**	**59**	PKIKP	PKPdf	23 20 46.9	+1.4	
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.8s							
LPAZ	**La Paz**	**137.70**	**59**	*e*PKPdf	PKPdf	23 20 46.5	+1.0	
PLCA	**Paso Flores**	**150.90**	**96**	PKPbc	PKPbc	23 21 13.0	-0.2	
	comp=Z,5.4nm,0.9s,baz=322,slow=4.6,SNR=7.5							
PLCA	**Paso Flores**	**150.90**	**96**	PKIKP	PKPbc	23 21 13.0	-0.2	
PLCA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
PLCA	**Paso Flores**	**150.90**	**96**	PKPbc	PKPbc	23 21 13.0	-0.2	
VNA2	**Neumayer--Watz**	**151.55**	**196**	*e*PKPdf	PKPbc	23 21 13.0	-0.8	
CPUP	**Villa Florida**	**151.83**	**57**	PKPbc	PKPbc	23 21 15.9	0.0	
	comp=Z,1.2nm,0.6s,baz=233,slow=3.3,SNR=4.5							
CPUP	**Villa Florida**	**151.83**	**57**	PKIKP	PKPbc	23 21 15.9	0.0	
CPUP				pmax	pmax			
	comp=Z,1.0nm,0.6s							

*IDC **26** 23:21:10.7±1.1, 36°.29N×21°.86E, h0km, mb3.6/7, mb1 3.5/14, mb1mx3.5/34, mbtmp3.4/14, ML3.4/6, Error ellipse: s-maj=19.4km s-min=12.9km az=35.0*
*HLW **26** 23:21:14.1, 36°.35N×22°.52E, h33km±33km, Ml3.3*
*ROM **26** 23:21:14.1±0.6, 36°.18N×22°.09E, h10km, Md3.6/7, Ml3.6/7, Error ellipse: s-maj=11.5km s-min=7.1km az=177.0*
*ISCJB **26** 23:21:15.3±0.3, 36°.11N±0°.03×22°.04E±0°.03, h73km±5km, mb3.3/7, Error ellipse: s-maj=5.2km s-min=3.2km az=32.9*
*NEIC **26** 23:21:15.8, 36°.16N×22°.12E, h28km, ML3.6(ROM), ML3.4(ATH), ML4.1(THE), After ATH.*
*ATH **26** 23:21:15.8, 36°.16N×22°.12E, h28km±2km, MD3.9/28, ML3.4*
*CSEM **26** 23:21:16.8±0.1, 36°.12N×22°.09E, h60km, ML4.1/18, Error ellipse: s-maj=4.6km s-min=2.9km az=37.0*
*THE **26** 23:21:17.3, 36°.20N×22°.05E, h61km±4km, ML4.1/18, Error ellipse: s-maj=4.2km s-min=1.1km az=351.0*

ISC 26 23:21:16.9±0.3, **36°.13N**±0°.03×**22°.09E**±0°.03, **h64**km±5km, **n273**, σ=**12**/**314**, **mb3.4**/7, **1C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**340**	*e*PN	Pn	**23 21 31.8**	**-0.9**
PYL				*e*SN	Sn	**23 21 43.8**	**-0.6**
PYL	**PYLOS**	**0.81**	**340**	P	Pn	**23 21 31.7**	**-1.0**
PYL				S	Sn	**23 21 42.5**	**-1.9**
PYL	**PYLOS**	**0.81**	**340**	*e*Pn	Pn	**23 21 31.8**	**-0.9**
PYL				S	Sn	**23 21 42.5**	**-1.9**
PYL				*e*Sn	Sn	**23 21 43.8**	**-0.6**
VLI	**Veliai**	**0.90**	**49**	*e*PN	Pn	**23 21 32.8**	**-1.1**
VLI				*e*SN	Sn	**23 21 45.0**	**-1.4**
VLI	**Veliai**	**0.90**	**49**	*e*Pn	Pn	**23 21 32.8**	**-1.1**
VLI				*e*Sn	Sn	**23 21 45.0**	**-1.4**
ITM	**Ithomi**	**1.06**	**353**	*e*PN	Pn	**23 21 35.5**	**-0.3**
ITM				*e*SN	Sn	**23 21 50.7**	**+0.9**
ITM	**Ithomi**	**1.06**	**353**	P	Pn	**23 21 35.3**	**-0.5**
ITM				S	Sn	**23 21 49.0**	**-0.8**
ITM	**Ithomi**	**1.06**	**353**	*e*Pn	Pn	**23 21 35.5**	**-0.3**
ITM				S	Sn	**23 21 49.0**	**-0.8**
ITM				*e*Sn	Sn	**23 21 50.7**	**+0.9**
VLX	**Vlachokerasia**	**1.26**	**11**	*e*PN	Pn	**23 21 38.7**	**+0.2**
VLX	**Vlachokerasia**	**1.26**	**11**	P	Pn	**23 21 38.5**	**0.0**
VLX				S	Sn	**23 21 54.4**	**-0.2**
VLX	**Vlachokerasia**	**1.26**	**11**	P	Pn	**23 21 38.5**	**0.0**
VLX				S	Sn	**23 21 54.4**	**-0.2**
KARN	**Karanos**	**1.66**	**115**	*e*PB	Pn	**23 21 44.5**	**+0.7**
KARN	**Karanos**	**1.66**	**115**	P	Pn	**23 21 44.5**	**+0.7**
KARN	**Karanos**	**1.66**	**115**	P	Pn	**23 21 44.5**	**+0.7**
GUR	**Goura**	**1.81**	**6**	*e*PN	Pn	**23 21 46.7**	**+0.8**
GUR	**Goura**	**1.81**	**6**	P	Pn	**23 21 46.6**	**+0.7**
GUR	**Goura**	**1.81**	**6**	P	Pn	**23 21 46.6**	**+0.7**
VAM	**Vamos**	**1.86**	**112**	*e*PB	Pn	**23 21 47.3**	**+0.7**
VAM	**Vamos**	**1.86**	**112**	*e*Pb	Pn	**23 21 47.3**	**+0.7**
NAIG	**Nisos Aigina**	**1.98**	**34**	*e*PN	Pn	**23 21 47.7**	**-0.4**
NAIG	**Nisos Aigina**	**1.98**	**34**	*e*Pn	Pn	**23 21 47.7**	**-0.4**
RLS	**Riolos of Patr**	**1.99**	**346**	*e*PB	Pn	**23 21 49.5**	**+1.3**
RLS				*e*SN	Sn	**23 22 14.3**	**+2.2**
RLS	**Riolos of Patr**	**1.99**	**346**	*e*Pb	Pn	**23 21 49.5**	**+1.3**
RLS				*e*Sn	Sn	**23 22 14.3**	**+2.2**
LTK	**Loutraki**	**2.02**	**20**	*e*PN	Pn	**23 21 48.7**	**+0.1**
LTK	**Loutraki**	**2.02**	**20**	P	Pn	**23 21 48.7**	**+0.1**
LTK	**Loutraki**	**2.02**	**20**	P	Pn	**23 21 48.7**	**+0.1**
GVD	**Gavdhos**	**2.08**	**128**	*e*PB	Pn	**23 21 51.2**	**+1.7**
GVD	**Gavdhos**	**2.08**	**128**	P	Pn	**23 21 51.0**	**+1.5**
GVD	**Gavdhos**	**2.08**	**128**	P	Pn	**23 21 51.0**	**+1.5**
LAKA	**Lakka**	**2.11**	**358**	P	Pn	**23 21 51.2**	**+1.3**
LAKA	**Lakka**	**2.11**	**358**	P	Pn	**23 21 51.2**	**+1.3**
UPR	**University Cam**	**2.16**	**354**	P	Pn	**23 21 53.4**	**+2.8**
VLY	**Voula,Athens**	**2.20**	**38**	*e*PB	Pn	**23 21 53.3**	**+2.2**
VLY	**Voula,Athens**	**2.20**	**38**	*e*Pb	Pn	**23 21 53.3**	**+2.2**
KFL	**Anninata**	**2.23**	**333**	P	Pn	**23 21 52.0**	**+0.5**
TRIZ	**Trizonia**	**2.23**	**360**	P	Pn	**23 21 52.8**	**+1.3**
TRIZ	**Trizonia**	**2.23**	**360**	P	Pn	**23 21 52.8**	**+1.3**
ATH	**Athens Observa**	**2.25**	**35**	*e*PB	Pn	**23 21 54.3**	**+2.4**
ATH	**Athens Observa**	**2.25**	**35**	*e*Pb	Pn	**23 21 54.3**	**+2.4**
KALE	**Kalithea**	**2.26**	**1**	P	Pn	**23 21 52.4**	**+0.5**
KALE	**Kalithea**	**2.26**	**1**	P	Pn	**23 21 52.4**	**+0.5**
ATHU	**Athens Univers**	**2.28**	**36**	P	Pn	**23 21 51.4**	**-0.8**
ATHU				S	Sn	**23 22 20.2**	**+1.0**
ATHU	**Athens Univers**	**2.28**	**36**	P	Pn	**23 21 51.4**	**-0.8**
ATHU				S	Sn	**23 22 20.2**	**+1.0**
EFP	**Efpalio**	**2.30**	**356**	*e*PB	Pn	**23 21 54.4**	**+2.0**
EFP	**Efpalio**	**2.30**	**356**	P	Pn	**23 21 54.3**	**+1.9**
EFP	**Efpalio**	**2.30**	**356**	P	Pn	**23 21 54.3**	**+1.9**
DSF	**Desfina**	**2.30**	**9**	P	Pn	**23 21 52.5**	**0.0**
DSF	**Desfina**	**2.30**	**9**	P	Pn	**23 21 52.5**	**0.0**
VLS	**Valsamata**	**2.37**	**330**	*e*PN	Pn	**23 21 53.8**	**+0.4**
VLS	**Valsamata**	**2.37**	**330**	P	Pn	**23 21 53.4**	**0.0**
VLS	**Valsamata**	**2.37**	**330**	P	Pn	**23 21 53.4**	**0.0**
VLS	**Valsamata**	**2.37**	**330**	*e*Pn	Pn	**23 21 53.8**	**+0.4**
PTL	**Penteli**	**2.39**	**36**	*e*PN	Pn	**23 21 53.2**	**-0.4**
PTL	**Penteli**	**2.39**	**36**	*e*Pn	Pn	**23 21 53.2**	**-0.4**
IDI	**Anoyia**	**2.43**	**109**	Pn	**Pn**	**23 21 55.4**	**+1.2**
	1.0nm,0.3s,baz=288,slow=14,SNR=26						
IDI				Pg	**Pn**	**23 22 03.5**	**+9.2**
	4.7nm,0.3s,baz=298,slow=16,SNR=23						
IDI				Lg		23 22 37.8	
	11nm,0.3s,baz=49,slow=19,SNR=6.2						
IDI	**Anoyia**	**2.43**	**109**	Pn	**Pn**	**23 21 55.4**	**+1.1**
IDI	**Anoyia**	**2.43**	**109**	Pg	**Pn**	**23 22 03.5**	**+9.2**
SIVA	**Sivas**	**2.48**	**116**	P	**Pn**	**23 21 56.8**	**+1.8**
SIVA	**Sivas**	**2.48**	**116**	P	**Pn**	**23 21 56.8**	**+1.8**
SIVA	**Sivas**	**2.48**	**116**	P	**Pn**	**23 21 56.8**	**+1.8**
LKR	**Lokris**	**2.62**	**16**	*e*PN	**Pn**	**23 21 56.8**	**0.0**
LKR	**Lokris**	**2.62**	**16**	P	**Pn**	**23 21 56.3**	**-0.5**
LKR	**Lokris**	**2.62**	**16**	P	**Pn**	**23 21 56.3**	**-0.5**
LKR	**Lokris**	**2.62**	**16**	*e*Pn	**Pn**	**23 21 56.8**	**0.0**
THR5	**Thira Island,**	**2.65**	**83**	P	**Pn**	**23 21 56.7**	**-0.6**
THR5	**Thira Island,**	**2.65**	**83**	P	**Pn**	**23 21 56.7**	**-0.6**
THR5	**Thira Island,**	**2.65**	**83**	P	**Pn**	**23 21 56.7**	**-0.6**
ATAL	**Atalanti**	**2.66**	**16**	P	**Pn**	**23 21 56.9**	**-0.5**
ATAL	**Atalanti**	**2.66**	**16**	P	**Pn**	**23 21 56.9**	**-0.5**
THR3	**Thira Island,**	**2.69**	**83**	P	**Pn**	**23 21 57.2**	**-0.6**
THR3	**Thira Island,**	**2.69**	**83**	P	**Pn**	**23 21 57.2**	**-0.6**
THR3	**Thira Island,**	**2.69**	**83**	P	**Pn**	**23 21 57.2**	**-0.6**
THR4	**Thira Island,**	**2.70**	**82**	P	**Pn**	**23 21 57.7**	**-0.2**
THR4	**Thira Island,**	**2.70**	**82**	P	**Pn**	**23 21 57.7**	**-0.2**
THR4	**Thira Island,**	**2.70**	**82**	P	**Pn**	**23 21 57.7**	**-0.2**
THR1	**Thera Island**	**2.74**	**84**	P	**Pn**	**23 21 58.2**	**-0.2**
THR1	**Thera Island**	**2.74**	**84**	P	**Pn**	**23 21 58.2**	**-0.2**
EVR	**Evrytania**	**2.79**	**356**	*e*PN	**Pn**	**23 22 01.5**	**+2.3**
EVR	**Evrytania**	**2.79**	**356**	*e*Pn	**Pn**	**23 22 01.5**	**+2.3**
AGG	**Agios Georgios**	**2.89**	**4**	*e*PN	**Pn**	**23 22 02.8**	**+2.2**
AGG	**Agios Georgios**	**2.89**	**4**	P	**Pn**	**23 22 01.9**	**+1.3**
AGG	**Agios Georgios**	**2.89**	**4**	P	**Pn**	**23 22 01.9**	**+1.3**
AGG	**Agios Georgios**	**2.89**	**4**	*e*Pn	**Pn**	**23 22 02.8**	**+2.2**
APE	**Apeiranthos**	**2.93**	**70**	*e*PN	**Pn**	**23 22 02.8**	**+1.8**
APE	**Apeiranthos**	**2.93**	**70**	P	**Pn**	**23 21 59.7**	**-1.3**
APE				*e*Pn	**Pn**	**23 22 02.8**	**+1.8**
APE	**Apeiranthos**	**2.93**	**70**	P	**Pn**	**23 21 59.7**	**-1.3**
APE	**Apeiranthos**	**2.93**	**70**	P	**Pn**	**23 21 59.7**	**-1.3**
APE	**Apeiranthos**	**2.93**	**70**	*e*Pn	**Pn**	**23 22 02.8**	**+1.8**
LAST	**Lasithi**	**2.93**	**108**	P	**Pn**	**23 22 02.9**	**+1.9**
LAST	**Lasithi**	**2.93**	**108**	P	**Pn**	**23 22 02.9**	**+1.9**
LAST	**Lasithi**	**2.93**	**108**	P	**Pn**	**23 22 02.9**	**+1.9**
NPS	**Neapolis**	**3.00**	**106**	*e*PN	**Pn**	**23 22 04.2**	**+2.2**
NPS	**Neapolis**	**3.00**	**106**	*e*Pn	**Pn**	**23 22 04.2**	**+2.2**
NEO	**Neokhori**	**3.30**	**16**	*e*PN	**Pn**	**23 22 06.5**	**+0.4**
NEO	**Neokhori**	**3.30**	**16**	*e*Pn	**Pn**	**23 22 06.5**	**+0.4**
XOR	**Xorichti**	**3.35**	**15**	P	**Pn**	**23 22 06.2**	**-0.5**
XOR	**Xorichti**	**3.35**	**15**	P	**Pn**	**23 22 06.2**	**-0.5**
XOR	**Xorichti**	**3.35**	**15**	P	**Pn**	**23 22 06.2**	**-0.5**
AOS	**Alonnisos**	**3.35**	**25**	P	**Pn**	**23 22 06.0**	**-0.8**
AOS	**Alonnisos**	**3.35**	**25**	P	**Pn**	**23 22 06.0**	**-0.8**
AOS	**Alonnisos**	**3.35**	**25**	P	**Pn**	**23 22 06.0**	**-0.8**
THL	**Klokotos Trika**	**3.43**	**359**	*e*PN	**Pn**	**23 22 08.7**	**+0.8**
THL	**Klokotos Trika**	**3.43**	**359**	P	**Pn**	**23 22 08.5**	**+0.6**
THL	**Klokotos Trika**	**3.43**	**359**	P	**Pn**	**23 22 08.5**	**+0.6**
JAN	**Janina**	**3.65**	**345**	*e*PN	**Pn**	**23 22 11.5**	**+0.6**
JAN	**Janina**	**3.65**	**345**	*e*Pn	**Pn**	**23 22 11.5**	**+0.6**
IGT	**Igoumenitsa**	**3.67**	**338**	P	**Pn**	**23 22 10.9**	**-0.2**
IGT				S	**Sn**	**23 22 52.9**	**-0.2**
IGT	**Igoumenitsa**	**3.67**	**338**	P	**Pn**	**23 22 10.9**	**-0.2**
IGT				S	**Sn**	**23 22 52.9**	**-0.2**
IGT	**Igoumenitsa**	**3.67**	**338**	P	**Pn**	**23 22 10.9**	**-0.2**
IGT				S	**Sn**	**23 22 52.9**	**-0.2**
CHOS	**Chios island**	**3.89**	**53**	*e*PN	**Pn**	**23 22 17.5**	**+3.4**
CHOS	**Chios island**	**3.89**	**53**	*e*Pn	**Pn**	**23 22 17.5**	**+3.4**
LIT	**Litokhoron**	**3.98**	**4**	*e*PN	**Pn**	**23 22 16.3**	**+0.9**
LIT	**Litokhoron**	**3.98**	**4**	P	**Pn**	**23 22 15.9**	**+0.5**
LIT	**Litokhoron**	**3.98**	**4**	P	**Pn**	**23 22 15.9**	**+0.5**
LIT	**Litokhoron**	**3.98**	**4**	*e*Pn	**Pn**	**23 22 16.3**	**+0.9**
PAIG	**Paliouri**	**3.99**	**18**	P	**Pn**	**23 22 16.0**	**+0.4**
PAIG	**Paliouri**	**3.99**	**18**	P	**Pn**	**23 22 16.0**	**+0.4**
PAIG	**Paliouri**	**3.99**	**18**	P	**Pn**	**23 22 16.0**	**+0.4**
KEK	**Kerkira**	**4.01**	**334**	*e*Pn	**Pn**	**23 22 15.6**	**-0.2**
KEK				P		23 22 19.4	
KEK	**Kerkira**	**4.01**	**334**	P	**Pn**	**23 22 15.4**	**-0.4**
KEK	**Kerkira**	**4.01**	**334**	*e*Pn	**Pn**	**23 22 15.6**	**-0.2**
SRN	**Sarande**	**4.09**	**337**	*e*PN	**Pn**	**23 22 17.3**	**+0.4**
SRN	**Sarande**	**4.09**	**337**	*e*Pn	**Pn**	**23 22 17.3**	**+0.4**
KARP	**Karpathos**	**4.16**	**97**	P	**Pn**	**23 22 16.0**	**-1.9**
KARP	**Karpathos**	**4.16**	**97**	P	**Pn**	**23 22 16.0**	**-1.9**
KZN	**Kozani**	**4.18**	**357**	*e*PN	**Pn**	**23 22 19.2**	**+1.1**
KZN	**Kozani**	**4.18**	**357**	P	**Pn**	**23 22 19.1**	**+1.0**
KZN	**Kozani**	**4.18**	**357**	P	**Pn**	**23 22 19.1**	**+1.0**
OUR	**Ouranopolis**	**4.46**	**19**	P	**Pn**	**23 22 21.4**	**-0.5**
OUR	**Ouranopolis**	**4.46**	**19**	P	**Pn**	**23 22 21.4**	**-0.5**
OUR	**Ouranopolis**	**4.46**	**19**	P	**Pn**	**23 22 21.4**	**-0.5**
HORT	**Hortiatis**	**4.53**	**10**	P	**Pn**	**23 22 22.7**	**-0.2**
HORT	**Hortiatis**	**4.53**	**10**	P	**Pn**	**23 22 22.7**	**-0.2**
HORT	**Hortiatis**	**4.53**	**10**	P	**Pn**	**23 22 22.7**	**-0.2**
KBN	**Korca**	**4.60**	**348**	*e*PN	**Pn**	**23 22 23.4**	**-0.5**
KBN	**Korca**	**4.60**	**348**	*e*Pn	**Pn**	**23 22 23.4**	**-0.5**
FNA	**Florina**	**4.68**	**353**	P	**Pn**	**23 22 25.0**	**0.0**
FNA	**Florina**	**4.68**	**353**	P	**Pn**	**23 22 25.0**	**0.0**
FNA	**Florina**	**4.68**	**353**	P	**Pn**	**23 22 25.0**	**0.0**
SOH	**Sokhos**	**4.79**	**12**	P	**Pn**	**23 22 27.1**	**+0.7**
SOH	**Sokhos**	**4.79**	**12**	P	**Pn**	**23 22 27.1**	**+0.7**
SOH	**Sokhos**	**4.79**	**12**	P	**Pn**	**23 22 27.1**	**+0.7**
SCTE	**Santa Cesarea**	**4.86**	**325**	Pn	**Pn**	**23 22 26.9**	**-0.5**
	40nm,0.5s						
SCTE	**Santa Cesarea**	**4.86**	**325**	Pn	**Pn**	**23 22 26.9**	**-0.5**
	40nm,0.5s						
BIA	**Bitola**	**4.92**	**353**	*e*Pn	**Pn**	**23 22 27.6**	**-0.6**
BIA				*e*Sg	**Sn**	**23 23 18.9**	**-4.9**
BIA	**Bitola**	**4.92**	**353**	*e*Pn	**Pn**	**23 22 27.6**	**-0.6**
PLAC	**Placanica**	**5.06**	**299**	Pn	**Pn**	**23 22 30.0**	**-0.2**
PLAC				Sn	**Sn**	**23 23 25.6**	**-1.7**
	17nm,0.3s						
PLAC	**Placanica**	**5.06**	**299**	Pn	**Pn**	**23 22 30.0**	**-0.2**
PLAC				Sn	**Sn**	**23 23 25.6**	**-1.7**
	17nm,0.3s						
KNT	**Kendrikon**	**5.07**	**7**	P	**Pn**	**23 22 29.9**	**-0.3**
KNT	**Kendrikon**	**5.07**	**7**	P	**Pn**	**23 22 29.9**	**-0.3**
KNT	**Kendrikon**	**5.07**	**7**	P	**Pn**	**23 22 29.9**	**-0.3**
SRS	**Serrai**	**5.12**	**13**	P	**Pn**	**23 22 30.8**	**-0.1**
SRS	**Serrai**	**5.12**	**13**	P	**Pn**	**23 22 30.8**	**-0.1**
SRS	**Serrai**	**5.12**	**13**	P	**Pn**	**23 22 30.8**	**-0.1**
SERS	**Sersale**	**5.17**	**306**	Pn	**Pn**	**23 22 31.9**	**+0.2**
	20nm,0.5s						
SERS	**Sersale**	**5.17**	**306**	Pn	**Pn**	**23 22 31.9**	**+0.2**
	20nm,0.5s						
MPAZ	**Palizzi**	**5.19**	**292**	Pn	**Pn**	**23 22 32.1**	**+0.1**
	56nm,0.4s						
MPAZ	**Palizzi**	**5.19**	**292**	Pn	**Pn**	**23 22 32.1**	**+0.1**
	56nm,0.4s						
SOI	**Samo**	**5.20**	**294**	Pn	**Pn**	**23 22 31.9**	**-0.1**
SOI	**Samo**	**5.20**	**294**	Pn	**Pn**	**23 22 31.9**	**-0.1**
	18nm,0.4s						
SOI	**Samo**	**5.20**	**294**	Pn	**Pn**	**23 22 31.9**	**-0.1**
	18nm,0.4s						
VAY	**Valandovo**	**5.20**	**4**	*e*Pn	**Pn**	**23 22 30.1**	**-2.0**
VAY				*e*Sg	**Sn**	**23 23 21.1**	**-9.5**
VAY	**Valandovo**	**5.20**	**4**	*e*Pn	**Pn**	**23 22 30.0**	**-2.0**
TIP	**Timpagrande**	**5.21**	**307**	Pn	**Pn**	**23 22 32.1**	**-0.1**
TIP				Sn	**Sn**	**23 23 25.0**	**-5.9**
TIP	**Timpagrande**	**5.21**	**307**	Pn	**Pn**	**23 22 32.1**	**-0.1**
	20nm,0.7s						
TIP	**Timpagrande**	**5.21**	**307**	Pn	**Pn**	**23 22 32.1**	**-0.1**
	20nm,0.7s						
KRUS	**Krusevo**	**5.27**	**353**	*e*Pn	**Pn**	**23 22 31.5**	**-1.5**
KRUS				*e*Sg	**Sn**	**23 23 28.2**	**-4.2**
KRUS	**Krusevo**	**5.27**	**353**	*e*Pn	**Pn**	**23 22 31.5**	**-1.6**
SLUM		**5.31**	**150**	P	**Pn**	**23 22 32.4**	**-1.2**
	baz=154						
SLUM				AMP		23 23 00.0	
	comp=E,20μm,0.3s,logA/T=4.8,baz=154						
SLUM				S	**Sn**	**23 23 27.3**	**-6.1**
	baz=154						
SLUM		**5.31**	**150**	P	**Pn**	**23 22 32.4**	**-1.2**
SLUM				S	**Sn**	**23 23 27.3**	**-6.1**
CEL	**Celeste**	**5.38**	**295**	Pn	**Pn**	**23 22 34.7**	**+0.1**
CEL				Sn	**Sn**	**23 23 34.2**	**-0.9**
CEL	**Celeste**	**5.38**	**295**	Pn	**Pn**	**23 22 34.7**	**+0.1**
CEL				Sn	**Sn**	**23 23 34.2**	**-0.9**
	comp=E,45nm,0.4s						
CEL	**Celeste**	**5.38**	**295**	Pn	**Pn**	**23 22 34.7**	**+0.1**
CEL				Sn	**Sn**	**23 23 34.2**	**-0.9**
	comp=E,45nm,0.4s						
TIR	**Tirane**	**5.49**	**342**	*e*Pn	**Pn**	**23 22 36.2**	**+0.2**
TIR				*e*Sn	**Sn**	**23 23 35.0**	**-2.9**
TIR	**Tirane**	**5.49**	**342**	*e*Pn	**Pn**	**23 22 36.2**	**+0.1**
STIP	**Stip**	**5.56**	**1**	*e*Pn	**Pn**	**23 22 36.1**	**-0.9**
STIP	**Stip**	**5.56**	**1**	*e*Pn	**Pn**	**23 22 36.1**	**-0.9**
CARO	**Carolei**	**5.60**	**306**	Pn	**Pn**	**23 22 38.2**	**+0.6**
	comp=E,109nm,0.6s						
CARO	**Carolei**	**5.60**	**306**	Pn	**Pn**	**23 22 38.2**	**+0.6**
	comp=E,109nm,0.6s						
SSY	**Sortino**	**5.73**	**282**	Pn	**Pn**	**23 22 39.3**	**-0.1**
SSY	**Sortino**	**5.73**	**282**	Pn	**Pn**	**23 22 39.3**	**-0.1**
SSY	**Sortino**	**5.73**	**282**	Pn	**Pn**	**23 22 39.3**	**-0.1**
TAR1	**Taranto**	**5.79**	**321**	*e*Pn	**Pn**	**23 22 42.2**	**+2.1**
ORI	**Oriolo Calabro**	**5.93**	**313**	Pn	**Pn**	**23 22 42.0**	**-0.1**
ORI	**Oriolo Calabro**	**5.93**	**313**	Pn	**Pn**	**23 22 42.0**	**-0.1**
ORI	**Oriolo Calabro**	**5.93**	**313**	Pn	**Pn**	**23 22 42.0**	**-0.1**
LTRZ	**Laterza**	**6.09**	**319**	Pn	**Pn**	**23 22 43.3**	**-0.9**
	comp=E,34nm,1.7s						
LTRZ	**Laterza**	**6.09**	**319**	Pn	**Pn**	**23 22 43.3**	**-0.9**
	comp=E,34nm,1.7s						
LTRZ	**Laterza**	**6.09**	**319**	Pn	**Pn**	**23 22 43.3**	**-0.9**
	comp=E,34nm,1.7s						
NOCI	**Noci**	**6.09**	**321**	Pn	**Pn**	**23 22 43.5**	**-0.8**
	comp=E,11nm,0.4s						
NOCI	**Noci**	**6.09**	**321**	Pn	**Pn**	**23 22 43.5**	**-0.8**
	comp=E,11nm,0.4s						
CRAC	**Craco**	**6.13**	**315**	Pn	**Pn**	**23 22 45.1**	**+0.2**
	comp=E,24nm,0.4s						
CRAC	**Craco**	**6.13**	**315**	Pn	**Pn**	**23 22 45.1**	**+0.2**
	comp=E,24nm,0.4s						
PUK	**Puka**	**6.15**	**345**	*e*PN	**Pn**	**23 22 44.2**	**-0.8**
PUK	**Puka**	**6.15**	**345**	*e*Pn	**Pn**	**23 22 44.2**	**-0.8**
SCHR	**S. Chirico Rap**	**6.24**	**312**	Pn	**Pn**	**23 22 47.6**	**+1.3**
	comp=E,17nm,1.1s						
SCHR	**S. Chirico Rap**	**6.24**	**312**	Pn	**Pn**	**23 22 47.6**	**+1.3**
	comp=E,17nm,1.1s						
MIGL	**Miglionico**	**6.29**	**317**	Pn	**Pn**	**23 22 48.0**	**+1.0**
	comp=E,63nm,1.1s						
MIGL	**Miglionico**	**6.29**	**317**	Pn	**Pn**	**23 22 48.0**	**+1.0**
	comp=E,63nm,1.1s						
VAE	**Valguarnera**	**6.30**	**285**	Pn	**Pn**	**23 22 42.8**	**-4.4**
	comp=E,0.7nm,0.3s,baz=72,slow=9.6,SNR=2.0						
VAE				Sn	**Sn**	**23 23 53.8**	**-3.9**
	comp=E,1.2nm,0.3s,baz=288,slow=20,SNR=2.7						
VAE	**Valguarnera**	**6.30**	**285**	Pn	**Pn**	**23 22 42.8**	**-4.4**
VAE				Sn	**Sn**	**23 23 53.8**	**-3

ellipse: s-maj=11.4km s-min=6.7km az=104.9
*BJI **26** 23:22:06.0,31°.34N×104°.06E,h15km,mB4.6/13,mb4.5/20,*
ML4.3/18,Ms4.2/16,Ms7 4.0/16
ISC 26 23:22:04.9±0.8,**31°.35N**±0°.03×**103°.98E**±0°.03,**h6**km±5km,
n118,σ0°.96/124,**mb4.3**/41,**MS3.5**/9,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**203**	Pg	**Pg**	**23 22 14.3**	**+0.2**
CD2				Sg	**Sg**	**23 22 21.0**	**+0.6**
CD2				smax			
	comp=N,9μm,0.8s						
LZH	**Lanzhou**	**4.72**	**359**	*e*Pn	**Pn**	**23 23 20.0**	**+3.4**
LZH				Sn	**Sn**	**23 24 20.5**	**+8.8**
LZH				Sg	**Sg**	**23 24 36.8**	**+0.2**
LZH				smax			
	comp=N,470nm,0.9s						
LZH				smax			
	comp=E,430nm,0.6s						
LZH				LR	LR		
	comp=E,2μm,6.6s						
LZH				LR	LR		
	comp=Z,3μm,9.6s						
ENH	**Enshi**	**4.86**	**101**	*e*Pn	**Pn**	**23 23 19.4**	**+0.9**
ENH				*e*Sg	**Sg**	**23 24 39.9**	**-1.0**
XAN	**Xi'an**	**4.95**	**56**	Pn	**Pn**	**23 23 20.3**	**+0.5**
XAN				Sn	**Sn**	**23 24 17.3**	**-0.1**
XAN				Sg	**Sg**	**23 24 41.8**	**-2.2**
XAN				smax			
	comp=N,590nm,1.0s						
XAN				smax			
	comp=E,320nm,1.0s						
XAN				LR	LR		
	comp=Z,250nm,6.7s						
GYA	**Guiyang**	**5.41**	**154**	Pn	**Pn**	**23 23 29.5**	**+3.4**
GYA				smax			
	comp=N,690nm,1.1s						
GYA				smax			
	comp=E,660nm,1.1s						
KMI	**Kunming**	**6.30**	**190**	Pn	**Pn**	**23 23 39.8**	**+1.5**
KMI				Sn	**Sn**	**23 24 58.5**	**+7.9**
KMI				smax			
	comp=N,65nm,1.5s						
KMI				smax			
	comp=E,69nm,2.0s						
KMI				LR	LR		
	comp=N,690nm,8.3s						
KMI				LR	LR		
	comp=E,1μm,9.1s						
GTA	**Gaotai**	**8.73**	**338**	*e*P	**Pn**	**23 24 17.3**	**+5.7**
GTA				pP		23 24 21.0	
GTA				sP		23 24 23.5	
GTA				S	**Sn**	**23 25 57.5**	**+7.3**
GTA				sS		23 26 02.5	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,85nm,4.8s						
GTA				LR	LR		
	comp=N,1μm,12.5s						
GTA				LR	LR		
	comp=E,980nm,12.5s						
GTA				LR	LR		
	comp=Z,1μm,13.1s						
WHN	**Wuhan**	**8.94**	**92**	P	**Pn**	**23 24 19.5**	**+4.9**
WHN				S	**Sn**	**23 25 51.0**	**-4.6**
WHN				LR	LR		
	comp=N,900nm,11.6s						
WHN				LR	LR		
	comp=E,3μm,8.1s						
WHN				LR	LR		
	comp=Z,3μm,8.4s						
LSA	**Lhasa**	**11.18**	**265**	P	**Pn**	**23 24 45.3**	**0.0**
LSA				LR	LR		
	comp=E,620nm,12.7s						
LSA				LR	LR		
	comp=Z,460nm,12.3s						
NJ2	**Nanjing**	**12.69**	**83**	*e*P	**Pn**	**23 25 09.3**	**+3.5**
NJ2				pP		23 25 12.5	
NJ2				sP		23 25 15.8	
NJ2				PP		23 25 19.5	
NJ2				S	**Sn**	**23 27 32.0**	**+4.6**
NJ2				sS		23 27 38.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,6.0s						
NJ2				LR	LR		
	comp=N,1μm,16.5s						
NJ2				LR	LR		
	comp=E,890nm,10.6s						
NJ2				LR	LR		
	comp=Z,1μm,11.5s						
CHTO	**Chiang Mai**	**13.29**	**201**	*e*P	**Pn**	**23 25 13.4**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CHTO	**Chiang Mai**	**13.29**	**201**	*e*Pn	**Pn**	**23 25 13.4**	**-0.7**
	comp=Z,9.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**13.62**	**201**	Pn	**Pn**	**23 25 20.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=10,slow=11,SNR=14						
GUN	**Gumba**	**16.11**	**262**	*e*P	**Pn**	**23 25 50.3**	**-1.6**
	comp=Z,38nm,1.0s						
SONM	**Songino Array**	**16.57**	**6**	Pn	**Pn**	**23 25 58.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=7.2						
PKI	**Pulchoki**	**16.60**	**262**	*e*P	**Pn**	**23 25 55.1**	**-3.2**
	comp=Z,28nm,0.9s						
PKIN	**Phulchoki**	**16.61**	**262**	*e*P	**Pn**	**23 25 55.0**	**-3.4**
	comp=Z,21nm,0.6s						
KKN	**Kakani**	**16.65**	**262**	*e*P	**Pn**	**23 25 57.4**	**-1.4**
	comp=Z,29nm,0.9s						
ULN	**Ulaanbaatar**	**16.66**	**7**	*e*P	**Pn**	**23 25 59.7**	**+0.9**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ULN	**Ulaanbaatar**	**16.66**	**7**	*e*Pn	**Pn**	**23 25 59.7**	**+0.9**
	comp=Z,3.4nm,0.3s						
SSLB	**Suanglung**	**16.82**	**112**	*e*Pn	**Pn**	**23 26 01.1**	**+0.1**
	comp=Z,28nm,0.9s						
DMN	**Daman**	**16.85**	**262**	*e*P	**Pn**	**23 25 59.3**	**-2.1**
	comp=Z,22nm,0.8s						
ZAK	**Zakamensk**	**19.02**	**359**	*e*P	**Pn**	**23 26 29.2**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**23 26 45.5**	**+0.4**
	comp=Z,10nm,0.8s,baz=261,slow=11,SNR=36						
KSRS				LR	LR	23 36 15.7	
	comp=Z,64nm,20.5s,MS3.0,baz=208,slow=41						
KSRS	**Korea Array**	**20.65**	**66**	P	**P**	**23 26 45.6**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,65nm,20.5s,MS3.0						
CN2	**Changchun**	**21.00**	**48**	*e*P	**P**	**23 26 50.3**	**+1.4**
CN2				*e*pP		23 26 54.0	
CN2				*e*sP	sP	23 26 57.0	+5.5
CN2				*e*S	**S**	**23 30 31.0**	**-12**
CN2				pmax	pmax		
	comp=Z,90nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=N,270nm,20.0s,MS3.7						
CN2				LR	LR		
	comp=E,170nm,20.0s,MS3.7						
CN2				LR	LR		
	comp=Z,200nm,8.0s						
HIA	**Hailar**	**21.48**	**29**	*e*P	**P**	**23 26 54.4**	**+0.4**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HIA	**Hailar**	**21.48**	**29**	*e*P	**P**	**23 26 54.4**	**+0.4**
	comp=Z,7.6nm,0.5s,mb4.3						
JOW	**Kunigami**	**21.69**	**96**	LR	LR	23 35 15.9	
	comp=Z,112nm,18.2s,MS3.3,baz=247,slow=37						
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**	**23 27 07.1**	**-0.2**
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**23 27 08.9**	**+1.7**
	comp=Z,12nm,1.1s,mb4.2,baz=116,slow=11,SNR=26						
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**23 27 09.0**	**+1.7**
MKAR				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ	**Mudanjiang**	**24.03**	**49**	*e*P	**P**	**23 27 20.5**	**+0.1**
	comp=Z,30nm,1.2s,mb4.6						
VLA	**Vladivostok**	**25.02**	**54**	*e*P	**P**	**23 27 29.6**	**+0.1**
VLA				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.0						
TKM2	**Tokmak 2**	**25.28**	**305**	*e*P	**P**	**23 27 33.8**	**+1.9**
TKM2				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
TKM2	**Tokmak 2**	**25.28**	**305**	*e*P	**P**	**23 27 33.8**	**+1.9**
	comp=Z,3.3nm,1.1s,mb3.8						
UCH	**Uchtor**	**25.85**	**303**	*e*P	**P**	**23 27 36.2**	**-0.8**
	comp=Z,5.9nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**25.98**	**304**	P	**P**	**23 27 39.7**	**+1.6**
	comp=Z,0.5nm,0.3s,mb3.5,baz=108,slow=13,SNR=2.6						
AAK				LR	LR	23 39 36.0	
	comp=Z,208nm,19.2s,MS3.7,baz=31,slow=40						
AAK	**Ala-Archa**	**25.98**	**304**	P	**P**	**23 27 39.7**	**+1.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK				MLR	MLR		
	comp=Z,208nm,19.2s,MS3.7						
AAK	**Ala-Archa**	**25.98**	**304**	*e*P	**P**	**23 27 37.9**	**-0.2**
AAK				LR	LR	23 39 36.0	
ZAA0	**Zalesovo Array**	**26.45**	**334**	*e*P	**P**	**23 27 41.8**	**-0.6**
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**23 27 42.8**	**+0.4**
	comp=Z,8.5nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=24						
ZALV				LR	LR	23 39 09.4	
	comp=Z,82nm,20.7s,MS3.3,baz=122,slow=39						
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**	**23 27 42.8**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,83nm,20.7s,MS3.3						
EKS2	**Erkin-Say**	**26.49**	**304**	*e*P	**P**	**23 27 42.5**	**-0.3**
	comp=Z,1.4nm,0.9s,mb3.5						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**23 27 47.6**	**+0.5**
	comp=Z,3.7nm,0.8s,mb4.0,baz=130,slow=8.8,SNR=18						
KURK				LR	LR	23 39 23.3	
	comp=Z,119nm,18.2s,MS3.5,baz=140,slow=38						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**23 27 47.7**	**+0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
KURK				MLR	MLR		
	comp=Z,119nm,18.2s,MS3.5						
KURK	**Kurchatov**	**26.98**	**323**	*e*P	**P**	**23 27 47.6**	**+0.4**
	comp=Z,5.6nm,1.0s,mb4.0						
KURK				LR	LR	23 39 23.3	
KLR	**Kul'dur**	**27.48**	**41**	*e*P	**P**	**23 27 49.6**	**-2.0**
KBL	**Kabul**	**29.40**	**286**	*e*P	**P**	**23 28 09.6**	**+0.6**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
KBL	**Kabul**	**29.40**	**286**	*e*P	**P**	**23 28 09.6**	**+0.7**
	comp=Z,1.9nm,0.6s,mb4.0						
JHJ	**Hachijo jima 2**	**30.25**	**77**	LR	LR	23 41 56.4	
	comp=Z,133nm,18.2s,MS3.6,baz=241,slow=39						
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**23 28 37.2**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=108,slow=9.8,SNR=6.8						
BVAR				PcP	PcP	23 31 22.4	-0.4
	comp=Z,1.3nm,0.7s,baz=126,slow=2.0,SNR=6.2						
BVAR				LR	LR	23 42 43.7	
	comp=Z,99nm,20.6s,MS3.5,baz=173,slow=38						
BVAR	**Borovoye Array**	**32.53**	**322**	P	**P**	**23 28 37.2**	**+0.9**
BVAR						23 31 22.4	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,99nm,20.6s						
BRVK	**Borovoye**	**32.60**	**322**	*e*P	**P**	**23 28 37.8**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BRVK	**Borovoye**	**32.60**	**322**	*e*P	**P**	**23 28 37.8**	**+0.8**
	comp=Z,4.9nm,1.2s,mb4.3						
ABKAR	**Akbulak array**	**37.43**	**311**	*e*P	**P**	**23 29 18.7**	**+0.1**
	comp=Z,2.1nm,0.9s,mb4.0						
AKTK	**Aktyubinsk**	**38.89**	**313**	P	**P**	**23 29 31.6**	**+0.7**
AKTO	**Aktyubinsk**	**38.89**	**313**	P	**P**	**23 29 31.6**	**+0.7**
	comp=Z,1.0nm,0.9s,mb3.6,baz=97,slow=16,SNR=2.7						
AKTO	**Aktyubinsk**	**38.89**	**313**	P	**P**	**23 29 31.6**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
ARU	**Arti**	**40.17**	**322**	P	**P**	**23 29 42.3**	**+0.8**
ARU	**Arti**	**40.17**	**322**	*e*P	**P**	**23 29 40.8**	**-0.7**
	comp=Z,5.1nm,0.8s,mb4.3						
TIXI	**Tiksi**	**42.53**	**11**	*e*P	**P**	**23 30 07.0**	**+6.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
KIV	**Kislovodsk**	**49.09**	**303**	*e*P	**P**	**23 30 52.0**	**-0.9**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KIV	**Kislovodsk**	**49.09**	**303**	*e*P	**P**	**23 30 52.0**	**-0.9**
	comp=Z,4.2nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.39**	**154**	*e*P	**P**	**23 31 24.9**	**-0.5**
JOF	**Joensuu**	**54.76**	**328**	*e*P	**P**	**23 31 34.6**	**-0.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
JOF	**Joensuu**	**54.76**	**328**	*e*p	**P**	**23 31 34.6**	**-0.3**
	comp=Z,3.3nm,0.6s,mb4.5						
ASF	**Jabal al Asfar**	**56.16**	**290**	P	**P**	**23 31 46.5**	**+1.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=295,slow=3.4,SNR=4.8						
ASF	**Jabal al Asfar**	**56.16**	**290**	P	**P**	**23 31 46.5**	**+1.0**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KEV	**Kevo**	**56.46**	**336**	*e*P	**P**	**23 31 46.8**	**-0.2**
KEV				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
KEV	**Kevo**	**56.46**	**336**	*e*P	**P**	**23 31 46.5**	**-0.5**
KEV	**Kevo**	**56.46**	**336**	*e*p	**P**	**23 31 46.8**	**-0.2**
	comp=Z,13nm,1.1s,mb4.9						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**23 31 51.0**	**+0.2**
	comp=Z,2.7nm,0.8s,mb4.3,baz=81,slow=7.5,SNR=7.0						
ARCES				PcP	PcP	23 32 45.9	+0.1
	comp=Z,3.2nm,1.1s,baz=73,slow=4.2,SNR=4.1						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**23 31 51.0**	**+0.2**
ARCES						23 32 45.9	
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**23 31 51.0**	**+0.2**
ARCES				PcP	PcP	23 32 45.9	+0.1
KAF	**Kangasniemi**	**57.12**	**327**	*e*P	**P**	**23 31 50.6**	**-1.2**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**57.12**	**327**	*e*p	**P**	**23 31 50.6**	**-1.2**
	comp=Z,3.9nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**23 31 53.0**	**0.0**
	comp=Z,2.6nm,0.8s,mb4.3,baz=103,slow=8.2,SNR=6.2						
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**23 31 53.1**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**23 32 03.8**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**23 32 03.8**	**+0.2**
	comp=Z,16nm,0.8s,mb5.1						
KWP	**Kalwaria Pacla**	**61.46**	**313**	*e*P	**P**	**23 32 21.9**	**-0.1**
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**23 32 24.0**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.3,baz=337,slow=6.4,SNR=12						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**23 32 24.0**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**63.51**	**326**	P	**P**	**23 32 34.6**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.2,baz=93,slow=7.4,SNR=9.4						
HFS	**Hagfors**	**63.51**	**326**	P	**P**	**23 32 34.6**	**-0.9**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**64.39**	**327**	P	**P**	**23 32 40.3**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**23 32 40.7**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.8,SNR=5.8						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**23 32 40.7**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**64.39**	**327**	P	**P**	**23 32 40.7**	**-0.7**
IDI	**Anoyia**	**64.52**	**297**	P	**P**	**23 32 41.7**	**-0.9**
	comp=Z,3.1nm,0.9s,mb4.3,baz=15,slow=12,SNR=4.4						
COLD	**Coldfoot**	**67.29**	**24**	*e*P	**P**	**23 32 59.7**	**-0.3**
	comp=Z,5.5nm,0.9s,mb4.6						
GERES	**GERESS Array B**	**67.30**	**314**	P	**P**	**23 33 00.1**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.6,baz=99,slow=8.8,SNR=4.4						
BPAW	**Bear Paw Mtn.**	**68.43**	**27**	*e*P	**P**	**23 33 06.5**	**-0.7**
	comp=Z,3.1nm,0.8s,mb4.4						
PPLA	**Purkeypile**	**68.50**	**29**	*e*P	**P**	**23 33 07.8**	**+0.2**
	comp=Z,19nm,1.7s,mb4.8						
COLA	**College**	**69.25**	**26**	*e*P	**P**	**23 33 12.0**	**-0.3**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
COLA	**College**	**69.25**	**26**	*e*P	**P**	**23 33 12.0**	**-0.2**
	comp=Z,6.3nm,0.8s,mb4.6						
AQU	**L'Aquila**	**70.05**	**308**	*e*P	**P**	**23 33 16.8**	**-0.8**
AQU				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
AQU	**L'Aquila**	**70.05**	**308**	*e*P	**P**	**23 33 16.8**	**-0.8**
	comp=Z,4.5nm,0.4s,mb4.8						
PMR	**Palmer**	**70.38**	**29**	*e*P	**P**	**23 33 18.6**	**-0.6**
PMR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
PMR	**Palmer**	**70.38**	**29**	*e*P	**P**	**23 33 18.6**	**-0.6**
	comp=Z,10nm,1.0s,mb4.7						
DAVOX	**Davos/Dischmat**	**70.48**	**313**	P	**P**	**23 33 19.9**	**-0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=150,slow=20,SNR=3.5						
INK	**Inuvik**	**71.96**	**19**	*e*P	**P**	**23 33 28.2**	**-0.5**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**71.96**	**19**	*e*P	**P**	**23 33 28.2**	**-0.5**
	comp=Z,5.4nm,0.9s,mb4.5						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.2**	**+0.9**
	comp=Z,7.3nm,0.7s,mb4.4						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.2**	**+0.9**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.2**	**+0.9**
	comp=Z,3.7nm,0.7s,mb4.4						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.1**	**+0.7**
	comp=Z,5.5nm,0.5s,mb4.4						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.1**	**+0.7**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**23 33 36.1**	**+0.7**
	comp=Z,2.8nm,0.5s,mb4.5						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	**P**	**23 34 22.4**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.0,baz=330,slow=5.3,SNR=12						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	**P**	**23 34 22.4**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**81.49**	**17**	P	**P**	**23 34 22.4**	**-0.2**
LBTB	**Lobatse**	**93.52**	**243**	P	**P**	**23 35 21.4**	**-0.3**
BOSA	**Boshof**	**95.71**	**240**	LR	LR	00 20 30.0	
	comp=Z,61nm,18.5s,MS4.1,baz=151,slow=37						
TSUM	**Tsumeb**	**96.80**	**252**	*e*P	**P**	**23 35 35.8**	**-1.0**
TXAR	**Lajitas Array**	**114.17**	**26**	PKP	PKiKP	23 40 45.1	-0.4
	comp=Z,0.1nm,0.6s,baz=46,slow=6.4,SNR=2.6						
TXAR	**Lajitas Array**	**114.17**	**26**	PKP	PKiKP	23 40 45.1	-0.4

*ISCJB **26** 23:38:16.0±2.2,36°.0N±0°.1×22°.0E±0°.2,h23km±10km,*
Error ellipse: s-maj=24.5km s-min=10.9km az=142.0
*CSEM **26** 23:38:15.1±0.8,36°.01N×21°.99E,h15km,MD3.2,Error*
ellipse: s-maj=17.7km s-min=8.2km az=44.0
*THE **26** 23:38:17.9,36°.09N×21°.79E,h23km±2km,ML2.9/1,Error*
ellipse: s-maj=8.0km s-min=1.8km az=253.0
*ATH **26** 23:38:17.6,36°.16N×22°.09E,h34km±17km,MD3.2/5*
ISC 26 23:38:15.3±2.6,**36°.0N**±0°.1×**22°.0E**±0°.2,**h16**km±21km,**n17**,
σ0°.60/25,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.89**	**72**	*e*PN	**Pn**	**23 38 33.6**	**+0.4**
KYTH	**Kithira**	**0.89**	**72**	*e*Pn	**Pn**	**23 38 33.6**	**+0.4**
PYL	**PYLOS**	**0.91**	**348**	*e*PN	**Pn**	**23 38 32.9**	**-0.5**
PYL				*e*SN	**Sn**	**23 38 45.5**	**-0.6**
PYL	**PYLOS**	**0.91**	**348**	P	**Pb**	**23 38 32.7**	**0.0**
PYL				S	**Sb**	**23 38 44.9**	**+0.4**
PYL	**PYLOS**	**0.91**	**348**	*e*Pn	**Pn**	**23 38 32.9**	**-0.5**
PYL				S	**Sb**	**23 38 44.9**	**+0.4**
PYL				*e*Sn	**Sn**	**23 38 45.5**	**-0.6**
VLI	**Veliai**	**1.05**	**47**	*e*PB	**Pb**	**23 38 34.0**	**-1.0**
VLI	**Veliai**	**1.05**	**47**	*e*Pb	**Pb**	**23 38 34.0**	**-1.0**
ITM	**Ithomi**	**1.17**	**358**	*e*PB	**Pn**	**23 38 36.5**	**-0.5**
ITM	**Ithomi**	**1.17**	**358**	P	**Pn**	**23 38 36.5**	**-0.5**
ITM				S	**Sb**	**23 38 52.7**	**+0.6**
ITM	**Ithomi**	**1.17**	**358**	P	**Pn**	**23 38 36.5**	**-0.5**
ITM				S	**Sb**	**23 38 52.7**	**+0.6**
VLX	**Vlachokerasia**	**1.40**	**13**	*e*PN	**Pn**	**23 38 40.3**	**+0.2**
VLX	**Vlachokerasia**	**1.40**	**13**	P	**Pn**	**23 38 40.4**	**+0.3**
VLX				S	**Sn**	**23 38 58.1**	**-0.1**
VLX	**Vlachokerasia**	**1.40**	**13**	*e*Pn	**Pn**	**23 38 40.3**	**+0.2**
VLX				S	**Sn**	**23 38 58.1**	**-0.1**
KARN	**Karanos**	**1.69**	**110**	P	**Pn**	**23 38 48.2**	**+4.1**
KARN	**Karanos**	**1.69**	**110**	P	**Pn**	**23 38 48.2**	**+4.1**
GUR	**Goura**	**1.95**	**8**	P	**Pn**	**23 38 48.5**	**+0.8**
GUR	**Goura**	**1.95**	**8**	P	**Pn**	**23 38 48.5**	**+0.8**

ECX 27 00:02:21.8±0.8,**32°.41N**×**115°.33W**,**h4**km,**MD3.4**,**ML3.6**,
3C-6D,**California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.03**	**71⇑**	*e*P	Pg	00 02 22.1	-0.5
CPBX				*e*S	Sg	00 02 23.4	+0.1
SGL	**Mount Signal**	**0.41**	**306⇓**	*i*P	Pg	00 02 28.7	-1.0
EMX	**El Mayor**	**0.43**	**169⇓**	*e*P	Pg	00 02 29.4	-0.6
EMX				*e*S	Sg	00 02 35.8	+0.2
EMX			⇓	*e*		00 02 36.3	
	comp=N,4μm,0.4s						
EMX			⇓	*e*		00 02 38.8	
	comp=E,2μm,0.2s						
SNR	**Schaffner Ranc**	**0.46**	**349⇓**	*i*P	Pg	00 02 30.5	-0.2
COA	**Coachella**	**0.49**	**21**	*e*P	Pg	00 02 30.9	-0.2
COK	**Cook Ranch**	**0.55**	**323**	*e*P	Pg	00 02 31.2	-1.0
YUH	**Yuha Desert**	**0.55**	**296⇑**	*i*P	Pg	00 02 31.2	-1.2
RMX	**La Rumorosa**	**0.66**	**287**	*e*P	Pg	00 02 33.9	-0.6
YMD	**Yuma Desert**	**0.68**	**77**	*e*P	Pg	00 02 33.8	-1.1
RDX	**Rancho Dawling**	**0.70**	**227⇑**	*e*P	Pg	00 02 34.4	-0.9
RDX				*e*		00 02 46.0	
	comp=N,2μm,0.4s						
ECBX	**El Chinero**	**0.96**	**165**	*e*P	Pg	00 02 39.4	-0.9
ECBX

ASAR			S		S	00 20 56.8	-1.2
	0.5nm,0.3s,baz=342,slow=21,SNR=6.1						
ASAR	Alice Springs	16.93 162	P		Pn	00 17 53.0	+3.9
ASAR			S		S	00 20 56.8	-1.2
KKM	Kota Kinabalu	18.02 318	P		P	00 18 01.0	-0.4
CTAO	Charters Tower	21.50 127	P		P	00 18 40.7	+1.8
STKA	Stephens Creek	27.23 154	P		P	00 19 32.7	+0.3
TAU	Tasmania Unive	39.03 157	*e*P		P	00 21 15.5	+1.0
SONM	Songino Array	58.42 343	LR		LR	00 50 26.5	
	comp=Z,23nm,21.2s,baz=11,slow=37						
MKAR	Makanchi Array	67.72 328	P		P	00 24 44.4	+0.2
	0.3nm,0.4s,mb3.4,baz=126,slow=7.0,SNR=4.6						
ZALV	Zalesovo Beam	71.30 335	P		P	00 25 05.2	-0.8
	1.0nm,0.6s,mb3.8,baz=106,slow=3.6,SNR=5.0						
KURK	Kurchatov	72.06 329	P		P	00 25 10.0	-0.7
	0.9nm,0.4s,mb4.0,baz=129,slow=5.0,SNR=6.0						
KURK	Kurchatov	72.06 329	*e*P		P	00 25 10.3	-0.4
	1.4nm,0.7s,mb3.9						
BVAR	Borovoye Array	77.58 328	P		P	00 25 41.9	-0.5
	0.5nm,0.6s,mb3.4,baz=127,slow=3.9,SNR=4.3						
LPAZ	La Paz	151.33 146	PKPbc		PKPbc	00 33 41.8	+1.4
	0.7nm,0.4s,baz=225,slow=4.3,SNR=7.5						

*IDC **27** 00:15:06.2±2.2, 32°.47N×104°.95E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.6/27, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=48.5km s-min=40.9km az=80.0*
*NEIC **27** 00:15:07.6±0.5, 32°.49N×104°.91E, h10km, mb3.3/1, Error ellipse: s-maj=11.8km s-min=8.7km az=70.0*
*BJI **27** 00:15:08.4, 32°.24N×104°.54E, h21km, ML3.5/9, Ms3.5/1, Ms7 3.0/3*

ISC 27 00:15:05.9±0.8, 32°.09N±0°.03×104°.69E±0°.04, h5km±6km, n20, σ0.99/27, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.42	214	Pg	Pg	00 15 32.8	-0.4
CD2				Sg	Sg	00 15 51.0	-0.6
CD2				smax			
	comp=N,2μm,0.6s						
LZH	Lanzhou	4.04	350	*e*Pn	Pb	00 16 17.5	-0.1
LZH				Pg	Pg	00 16 25.0	+1.6
LZH				Sn	Sb	00 17 06.5	-0.3
LZH				Sg	Sg	00 17 15.8	-0.1
LZH				smax			
	comp=N,72nm,0.7s						
LZH				smax			
	comp=E,120nm,0.8s						
LZH				LR	LR		
	comp=N,170nm,5.6s						
LZH				LR	LR		
	comp=Z,270nm,6.4s						
XAN	Xi'an	4.05	60	Pg	Pg	00 16 23.8	+0.3
XAN				Sn	Sb	00 17 06.5	-0.4
XAN				Sg	Sg	00 17 15.3	-0.6
XAN				smax			
	comp=N,100nm,0.9s						
XAN				smax			
	comp=E,39nm,0.7s						
XAN				LR	LR		
	comp=Z,36nm,9.2s						
ENH	Enshi	4.49	113	*e*Pn	Pn	00 16 16.4	+1.8
ENH				*e*S	Sg	00 17 30.2	-0.1
GYA	Guiyang	5.87	162	Pn	Pn	00 16 33.3	-0.3
GYA				smax			
	comp=N,30nm,0.7s						
GYA				smax			
	comp=E,30nm,0.8s						
CMAR	Chiang Mai Arr	14.53	202	Pn	Pn	00 18 39.0	+6.7
	baz=16,slow=10,SNR=3.3						
CMAR	Chiang Mai Arr	14.53	202	Pn	Pn	00 18 39.0	+6.7
SONM	Songino Array	15.78	4	Pn	Pn	00 18 44.3	-4.4
	comp=E,0.3nm,0.3s,baz=156,slow=7.6,SNR=3.1						
WMQ	Urumqi	17.76	316	P	Pn	00 19 17.0	+3.2
MK31	Makanchi Array	22.58	317	*e*P	P	00 20 05.8	-1.2
MKAR	Makanchi Array	22.58	317	P	P	00 20 07.2	+0.2
	comp=E,0.5nm,0.8s,mb3.0,baz=119,slow=11,SNR=5.1						
ZALV	Zalesovo Beam	26.06	333	P	P	00 20 39.5	-0.5
	comp=E,1.9nm,0.6s,mb3.8,baz=129,slow=10,SNR=11						
KURK	Kurchatov	26.77	322	P	P	00 20 46.1	-0.4
	comp=E,0.2nm,0.3s,mb3.1,baz=132,slow=8.4,SNR=2.6						
KURK	Kurchatov	26.77	322	*e*P	P	00 20 45.8	-0.7
	comp=E,0.3nm,0.5s,mb3.1						
YAK	Yakutsk	34.01	21	*e*P	P	00 21 46.2	-4.1
ARCES	ARCESS Array B	56.57	336	P	P	00 24 47.9	-1.1
	comp=E,1.2nm,0.7s,mb4.0,baz=81,slow=7.5,SNR=7.8						
CSS	Prodhromos	58.37	294	P	P	00 25 03.6	+1.4
TIRR	Tirgusor	59.12	306	*e*P	P	00 25 07.0	-0.3
YKA	Yellowknife Ar	80.60	17	P	P	00 27 18.3	-0.8
	comp=E,0.3nm,0.6s,mb3.4,baz=351,slow=28,SNR=4.1						
BOSA	Boshof	96.61	240	P	P	00 28 39.5	+2.5

CASC 27 00:23:49.0±2.9, 8°.41N×82°.97W, h11km±22km, MD4.0, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.47	36	⇓*i*P	Pg	00 23 58.6	+0.3
BRU2				*e*S	Sg	00 24 06.5	+2.1
TBS2		0.49	39	⇑*e*P	Pg	00 24 00.5	+1.9
TBS2				*e*S	Sg	00 24 07.8	+2.7
BAR1		0.90	338	⇓*e*P	Pg	00 24 04.9	-1.4
BAR1				*e*S	Sg	00 24 18.0	0.0
CNI	Changuinola	1.10	24	⇑*e*P	Pb	00 24 09.2	-0.8
BUS	Buena Vista	1.38	326	*e*P	Pn	00 24 13.2	-1.1
BUS				*e*S	Sb	00 24 31.8	-0.8
QCR	Quepos	1.56	311	⇓*e*P	Pn	00 24 16.9	+0.3
QCR				*e*S	Sn	00 24 38.2	+1.4
URSC	Urasca	1.63	331	*e*P	Pn	00 24 16.8	-0.9
URSC				*e*S	Sn	00 24 38.7	+0.1
LAJ	Bijagual	1.84	322	*e*P	Pn	00 24 23.8	+3.2
PRS1	Puriscal	2.05	320	*e*P	Pn	00 24 23.3	-0.2
CGA2	Cerro Gallo 2	2.18	317	*e*P	Pn	00 24 27.2	+2.0
CGA2				*e*S	Sn	00 24 53.0	+0.8
JCR	Jicaral	2.56	304	*e*P	Pn	00 24 30.8	+0.4
VCR	Vista de Mar	3.13	303	*e*P	Pn	00 24 39.7	+1.3

*ISCJB **27** 00:28:59.9±0.6, 24°.94N±0°.05×122°.81E±0°.04, h35km, Error ellipse: s-maj=8.2km s-min=4.4km az=23.1*
*JMA **27** 00:28:59.6±0.5, 24°.08N×122°.68E, h0km, M2.2*
*TAP **27** 00:29:01.0, 24°.97N×122°.60E, h35km±2km, ML3.1, D*

ISC 27 00:29:00.3±0.6, 24°.96N±0°.06×122°.80E±0°.04, h35km, n20, σ1.35/28, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	159	P	Pn	00 29 09.5	-2.0
YOJ				S	Sb	00 29 16.4	-2.9
TWB1	Santiao Chiao	0.74	274	*e*P	Pn	00 29 12.5	-1.8
	baz=273						
NWF	Wu-fen Shan	0.93	277	*e*P	Pn	00 29 16.6	-0.4
	baz=277						
TWC	Suao	0.93	248	*e*P	Pn	00 29 14.6	-2.3
	baz=241						
TWC				*e*S	Sn	00 29 25.2	-3.9
	baz=241						
PCYT	Pengchaiyu	0.94	315	P	Pn	00 29 16.8	-0.3
	baz=324						
PCYT				*e*S	Sn	00 29 28.7	-0.5
	baz=324						
IRIF	Iriomote-Funau	1.05	126	P	Pn	00 29 18.1	-0.5
IRIF				S	Sn	00 29 32.5	+0.4
ENA	Nanau	1.10	241	*e*P	Pn	00 29 18.0	-1.3
	baz=234						
ENA				*e*S	Sn	00 29 30.1	-3.1
	baz=234						
TWA	Mucha	1.10	271	*e*P	Pn	00 29 19.5	+0.2
	baz=263						
ENTT	Nioudou	1.16	254	*e*P	Pn	00 29 20.7	+0.6
	baz=249						
HATJ	Hateruma jima	1.29	134	P	Pn	00 29 19.6	-2.2
JKRS	Kuro-shima	1.32	123	P	Pn	00 29 23.0	+0.7
NSK	Sanguang	1.34	258	*e*P	Pn	00 29 22.5	-0.1
	baz=259						
JIJ	Ishigaki jima	1.36	116	P	Pn	00 29 26.1	+3.2
JIJ				S	Sn	00 29 44.9	+5.2
NNS	Nan Shan	1.40	248	*e*P	Pn	00 29 24.2	+0.9
	baz=243						
NNS				*e*S	Sn	00 29 40.8	+0.2
	baz=243						
WHF	Hehuan Shan	1.61	240	P	Pn	00 29 27.2	+0.9
	baz=241						
WHF				*e*S	Sn	00 29 47.4	+1.4
	baz=241						
ESL	Shilin	1.69	228	*e*P	Pn	00 29 27.3	-0.1
	baz=207						
TWQ1	Liyutan	1.94	252	*e*P	Pn	00 29 33.1	+2.3
	baz=247						
SMLT	Sun Moon Lake	2.04	239	*e*P	Pn	00 29 33.9	+1.7
	baz=220						
TYC	Yuchr	2.06	240	*e*P	Pn	00 29 33.6	+1.2
	baz=221						
CHN5	Tsauling	2.36	235	*e*P	Pn	00 29 37.9	+1.2
	baz=216						

*TIR **27** 00:44:03.6±2.6, 41°.95N×20°.18E, h25km±28km, ML2.9*
*CSEM **27** 00:44:04.7±0.1, 41°.95N×20°.30E, h2km, ML2.9, Error ellipse: s-maj=4.9km s-min=2.6km az=48.0*
*ISCJB **27** 00:44:05.0±0.3, 41°.97N±0°.02×20°.31E±0°.02, h10km, Error ellipse: s-maj=3.1km s-min=1.8km az=140.5*
*PDG **27** 00:44:04.9±0.2, 41°.97N×20°.29E, h10km, ML2.3/9, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*BEO **27** 00:44:06.9±0.3, 41°.98N×20°.32E, h6km±6km, ML2.0/7*
*SKO **27** 00:44:07.1, 41°.83N×20°.42E, h32km, M1.7, ML2.0*
*THE **27** 00:44:07.2, 42°.00N×20°.48E, h6km±2km, ML2.8/2, Error ellipse: s-maj=3.3km s-min=1.5km az=75.0*

ISC 27 00:44:05.5±0.3, 41°.96N±0°.02×20°.32E±0°.03, h3km±3km, n76, σ1.20/133, 2C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	Puka	0.33	285	*e*PG	Pg	00 44 10.2	-1.6
PUK				*i* SG	Sg	00 44 14.5	-1.5
PUK	Puka	0.33	285	*e*Pg	Pg	00 44 10.2	-1.6
	SNR=131						
PUK				*i* Sg	Sg	00 44 14.5	-1.5
	SNR=131						
BCI	Bajram Curri	0.45	336	*e*PN	Pg	00 44 12.7	-1.4
BCI				*i* SG	Sg	00 44 19.8	-0.1
BCI	Bajram Curri	0.45	336	*e*Pn	Pg	00 44 12.7	-1.4
BCI				*i* Sg	Sg	00 44 19.8	-0.1
	SNR=112						
PVY	Plav	0.69	338	*e*PN	Pg	00 44 17.4	-1.2
PVY				*i* SN	Sg	00 44 28.2	+0.7
PVY	Plav	0.69	338	⇓*i*Pg	Pg	00 44 17.4	-1.2
PVY				*e*Sg	Sg	00 44 28.2	+0.7
PVY	Plav	0.69	338	⇓*i*Pg	Pg	00 44 17.4	-1.2
PVY				*e*Sg	Sg	00 44 28.2	+0.7
TIR	Tirane	0.70	209	*e*Pg	Pg	00 44 19.7	+0.9
TIR				*e*Sg	Sg	00 44 30.3	+2.4
TIR	Tirane	0.70	209	P	Pg	00 44 19.8	+1.0
TIR				S	Sg	00 44 31.0	+3.1
TIR	Tirane	0.70	209	*e*Pg	Pg	00 44 19.7	+0.9
ULC	Ulcinj	0.80	271	*e*PN	Pg	00 44 19.6	-1.1
ULC				*i* SN	Sg	00 44 31.3	+0.2
ULC	Ulcinj	0.80	271	⇓*i*Pg	Pg	00 44 19.6	-1.1
ULC				*e*Sg	Sg	00 44 31.3	+0.2
ULC	Ulcinj	0.80	271	⇓*i*Pg	Pg	00 44 19.6	-1.1
ULC				*e*Sg	Sg	00 44 31.3	+0.2
SKO	Skopje	0.84	89	*e*Pg	Pg	00 44 21.9	+0.4
SKO				*e*Sg	Sg	00 44 34.3	+1.9
SKO	Skopje	0.84	89	*e*Pg	Pg	00 44 21.8	+0.3
SKO				*e*Sg	Sg	00 44 34.0	+1.7
SKO				*e*Lg		00 44 34.9	
	comp=E,40nm,0.3s						
SKO				*e*Lg		00 44 35.0	
	comp=N,47nm,0.3s						
SKO	Skopje	0.84	89	P	Pg	00 44 21.8	+0.3
SKO				S	Sg	00 44 34.2	+1.8
SKO	Skopje	0.84	89	P	Pg	00 44 21.8	+0.3
SKO				*e*Sg	Sg	00 44 34.0	+1.6
SKO				*e*Lg		00 44 34.8	
	comp=N,40nm,0.3s						
KRUS	Krusevo	0.91	130	*e*Pg	Pg	00 44 22.1	-0.9
KRUS				*e*Sg	Sg	00 44 33.9	-0.9
KRUS				*e*Lg		00 44 36.3	
	comp=Z,12nm,0.4s						
KRUS				*e*Lg		00 44 36.4	
	comp=N,24nm,0.4s						
KRUS	Krusevo	0.91	130	*e*Pg	Pg	00 44 22.0	-1.0
KRUS				*e*Sg	Sg	00 44 33.8	-1.0
KRUS				*e*Lg		00 44 36.3	
	comp=N,24nm,0.4s						
PDG	Podgorica	0.92	301	*e*PN	Pg	00 44 22.9	-0.1
PDG				*i* SN	Sg	00 44 35.8	+0.9
PDG	Podgorica	0.92	301	⇓*i*Pg	Pg	00 44 22.9	-0.1
PDG				*e*Sg	Sg	00 44 35.8	+0.9
PDG	Podgorica	0.92	301	⇓*i*Pg	Pg	00 44 22.9	-0.1
TTG				*e*Sg	Sg	00 44 35.8	+0.9
OHR	Ohrid	0.92	157	*e*Pg	Pg	00 44 21.9	-1.2
OHR				*e*Sg	Sg	00 44 33.8	-1.2
OHR				*e*Lg		00 44 35.6	
	comp=N,56nm,0.5s						
OHR				*e*Lg		00 44 35.6	
	comp=E,56nm,0.8s						
OHR	Ohrid	0.92	157	*e*Pg	Pg	00 44 21.9	-1.2
OHR				*e*Sg	Sg	00 44 33.7	-1.3
OHR				*e*Lg		00 44 35.6	
	comp=E,56nm,0.8s						
BEY	Berane	0.96	341	*e*PN	Pg	00 44 22.8	-1.2
BEY				*i* SN	Sg	00 44 37.6	+1.1
BEY	Berane	0.96	341	⇓*i*Pg	Pg	00 44 22.8	-1.2
BEY				*e*Sg	Sg	00 44 37.6	+1.1
IVA	Berane	0.96	341	⇓*i*Pg	Pg	00 44 22.8	-1.2
IVA				*e*Sg	Sg	00 44 37.6	+1.1
BUM	Brajici-Budva	1.11	288	*e*PN	Pg	00 44 25.0	-1.7
BUM				*i* SN	Sg	00 44 42.3	+1.2
BUM	Brajici-Budva	1.11	288	⇓*i*Pg	Pg	00 44 25.0	-1.7
BUM				*e*Sg	Sg	00 44 42.3	+1.2
BUM	Brajici-Budva	1.11	288	⇓*i*Pg	Pg	00 44 25.0	-1.7
BUM				*e*Sg	Sg	00 44 42.3	+1.2
BIA	Bitola	1.21	141	*e*Pg	Pg	00 44 26.6	-1.9
BIA	Bitola	1.21	141	P	Pg	00 44 29.0	+0.4
BIA				S	Sg	00 44 45.7	+1.5
BIA	Bitola	1.21	141	*e*Pg	Pn	00 44 26.6	-2.6
BIA	Bitola	1.21	141	P	Pg	00 44 29.0	+0.4
BIA				S	Sg	00 44 45.7	+1.5
NKY	Niksic	1.30	312	⇑*i*Pg	Pn	00 44 28.3	-2.2
NKY				*e*Sg	Sg	00 44 48.7	+1.5
NKY	Niksic	1.30	312	⇑*i*Pg	Pn	00 44 28.3	-2.2
NKY				*e*Sg	Sg	00 44 48.7	+1.5
SJES	Sjenica	1.33	349	*e*Pg	Pg	00 44 30.8	-0.1
SJES				*e*Sg	Sg	00 44 49.6	+1.5
KBN	Korca	1.38	165	*e*PN	Pn	00 44 28.3	-3.3
KBN				*i* SG	Sg	00 44 50.3	+0.5
KBN	Korca	1.38	165	*e*Pn	Pn	00 44 28.3	-3.3
	SNR=63						
KBN				*i* Sg	Sg	00 44 50.3	+0.5
	SNR=93						
BARS	Barje	1.40	52	*e*Pg	Pn	00 44 31.3	-0.6
BARS				*e*Sg	Sg	00 44 51.4	+0.9
FNA	Florina	1.42	145	P	Pn	00 44 31.1	-1.0
FNA				S	Sb	00 44 52.4	+1.4
FNA	Florina	1.42	145	P	Pn	00 44 31.1	-1.0
FNA				S	Sb	00 44 52.4	+1.4
STIP	Stip	1.42	100	*e*Pg	Pn	00 44 31.5	-0.7
STIP	Stip	1.42	100	*e*Pg	Pn	00 44 31.4	-0.8
HCY	Herceg Novi	1.44	290	⇓*i*Pg	Pn	00 44 30.6	-1.8
HCY				*e*Sg	Sg	00 44 52.9	+1.3
HCY	Herceg Novi	1.44	290	⇓*i*Pg	Pn	00 44 30.6	-1.8
HCY				*e*Sg	Sg	00 44 52.9	+1.3
PLE	Pljevlja	1.53	334	⇓*i*Pg	Pn	00 44 32.7	-1.0
PLE				*e*Sg	Sg	00 44 55.5	+0.8
PLE	Pljevlja	1.53	334	⇓*i*Pg	Pn	00 44 32.7	-1.0
PLE				*e*Sg	Sg	00 44 55.5	+0.8
BRY	Bratogost	1.62	306	⇓*i*Pn	Pn	00 44 34.5	-0.4
BRY				*e*Sn	Sn	00 44 57.7	+1.5
BRY	Bratogost	1.62	306	⇓*i*Pn	Pn	00 44 34.5	-0.4
BRY				*e*Sn	Sn	00 44 57.7	+1.5
UPM	Unac-Piva	1.62	321	⇓*i*Pn	Pn	00 44 34.4	-0.5
UPM				*e*Sn	Sn	00 44 57.8	+1.5
UPM	Unac-Piva	1.62	321	⇓*i*Pn	Pn	00 44 34.4	-0.5
UPM				*e*Sn	Sn	00 44 57.8	+1.5
VAY	Valandovo	1.80	110	P	Pn	00 44 36.2	-1.3
VAY	Valandovo	1.80	110	P	Pn	00 44 36.2	-1.3
KZN	Kozani	1.98	146	P	Pn	00 44 40.1	+0.2
KZN	Kozani	1.98	146	P	Pn	00 44 40.1	+0.2
BBLS	Lazići	2.02	341	*e*Pn	Pn	00 44 41.0	+0.6
BBLS				*e*Sg	Sg	00 45 10.5	+0.1
BBLS	Lazići	2.02	341	*e*Pn	Pn	00 44 41.0	+0.6
BBLS				*e*Sg	Sg	00 45 10.5	+0.1
KNT	Kendrikon	2.09	111	P	Pn	00 44 41.7	+0.3
KNT	Kendrikon	2.09	111	P	Pn	00 44 41.7	+0.3
STON	Ston	2.14	296	*e*Pn	Pn	00 44 42.7	+0.6
STON				Sn	Sn	00 45 13.4	+4.2
STON	Ston	2.14	296	*e*Pn	Pn	00 44 42.7	+0.6
DIVS	Divibare	2.15	354	*e*Pn	Pn	00 44 43.3	+1.1
DIVS				*e*Sg	Sg	00 45 13.9	-0.7
DIVS	Divibare	2.15	354	*e*Pn	Pn	00 44 43.3	+1.1
DIVS				*e*Sg	Sg	00 45 13.9	-0.7
KEK	Kerkira	2.28	190	P	Pn	00 44 46.3	+2.3
KEK	Kerkira	2.28	190	P	Pn	00 44 46.3	+2.3
IGT	Igoumenitsa	2.42	180	P	Pn	00 44 47.6	+1.6
IGT				S	Sn	00 45 19.8	+3.7
IGT	Igoumenitsa	2.42	180	P	Pn	00 44 47.6	+1.6
LIT	Litokhoron	2.48	138	P	Pn	00 44 46.7	0.0
LIT	Litokhoron	2.48	138	P	Pn	00 44 46.7	0.0
THL	Klokotos Trika	2.72	151	P	Pn	00 44 50.7	+0.7
THL				S	Sn	00 45 23.8	+0.5
THL	Klokotos Trika	2.72	151	P	Pn	00 44 50.7	+0.7
THL				S	Sn	00 45 23.8	+0.5
AGG	Agios Georgios	3.31	152	P	Pn	00 44 58.7	+0.5
AGG	Agios Georgios	3.31	152	P	Pn	00 44 58.7	+0.5
NVLJ	Novalja	4.75	305	*e*Pn	Pn	00 45 17.4	-0.6
NVLJ				Sn	Sn	00 46 11.4	-2.1
NVLJ	Novalja	4.75	305	*e*Pn	Pn	00 45 17.3	-0.7
NVLJ				Sn	Sn	00 46 11.4	-2.2

*ISCJB **27** 00:53:45.4±0.9, 37°.93N±0°.04×27°.16E±0°.09, h13km±7km, Error ellipse: s-maj=12.3km s-min=5.7km az=165.7*
*CSEM **27** 00:53:45.9±0.3, 37°.94N×27°.21E, h2km, MD2.6, Error ellipse: s-maj=9.0km s-min=6.2km az=55.0*
*DDA **27** 00:53:45.4, 37°.94N×27°.22E, h7km±4km, Md2.6*

ISC 27 00:53:45.4±1.2, 37°.92N±0°.04×27°.2E±0°.1, h17km±10km, n12, σ0.95/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.23	165	*i* P	Pg	00 53 50.5	-0.1
GCAM				*i* S	Sg	00 53 54.0	-0.2
GCAM	G?zelcaml?	0.23	165	*i* P	Pg	00 53 50.5	-0.1
GCAM				*i* S	Sg	00 53 54.0	-0.1
BLCB	Balcova	0.48	349	*e*PG	Pg	00 53 54.1	-0.9
BLCB				*e*SG	Sg	00 54 00.1	-1.4
BLCB	Balcova	0.48	349	*e*Pg	Pg	00 53 54.1	-0.9
BLCB				*e*Sg	Sg	00 54 00.0	-1.4
IZM	Izmir	0.48	9	*e*PG	Pg	00 53 56.1	+0.9
IZM				*e*SG	Sg	00 54 03.2	+1.5
IZM	Izmir	0.48	9	*e*Pg	Pg	00 53 56.1	+0.9
IZM				*e*Sg	Sg	00 54 03.2	+1.5
AYDN	Tasoluk	0.62	114	*i* P	Pg	00 53 57.8	+0.1
AYDN	Tasoluk	0.62	114	*i* P	Pg	00 53 57.8	+0.1
URLA	Izmir	0.63	315	*i* P	Pg	00 53 58.0	+0.3
URLA	Izmir	0.63	315	*i* P	Pg	00 53 58.0	+0.2
MANT	Manisa	1.24	62	*i* P	Pn	00 54 09.1	+1.2
MANT				*i* S	Sb	00 54 22.7	-1.3
MANT	Manisa	1.24	62	*i* P	Pn	00 54 09.1	+1.2
MANT				*i* S	Sb	00 54 22.7	-1.3

*ISCJB **27** 00:53:56.8±0.8, 31°.33N±0°.03×104°.10E±0°.04, h4km±6km, mb3.8/10, Error ellipse: s-maj=6.5km s-min=5.0km az=13.8*
*IDC **27** 00:53:58.5±1.0, 31°.30N×103°.95E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.7/25, mbtmp3.7/11, ML3.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/32, Error ellipse: s-maj=33.0km s-min=19.5km az=57.0*
*NEIC **27** 00:53:59.8±0.3, 31°.31N×103°.99E, h10km, mb4.2/2, Error ellipse: s-maj=7.1km s-min=5.1km az=70.0*
*BJI **27** 00:54:02.9, 31°.30N×104°.04E, h11km, mB4.8/2, mb4.3/6, ML3.5/12, Ms3.7/2, Ms7 3.8/2*

ISC 27 00:53:59.8±0.8, 31°.29N±0°.03×104°.05E±0°.04, h10km±5km, n34, σ0.93/41, mb3.8/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.45	214	Pg	Pg	00 54 07.8	-0.8
CD2				Sg	Sg	00 54 14.8	+0.2
CD2				smax			
	comp=N,6μm,0.4s						
ENH	Enshi	4.79	101	*e*Pn	Pn	00 55 12.4	+0.5
ENH				*e*S	Sg	00 56 34.0	+0.5
LZH	Lanzhou	4.79	358	*e*Pg	Pb	00 55 25.0	+1.2
LZH				Sn	Sb	00 56 17.3	-4.2
LZH				Sg	Sg	00 56 34.8	+1.1
LZH				smax			
	comp=N,61nm,0.5s						
LZH				smax			
	comp=E,52nm,0.6s						
LZH				LR	LR		
	comp=E,390nm,6.1s						
LZH				LR	LR		
	comp=Z,480nm,7.9s						
XAN	Xi'an	4.94	55	Pn	Pn	00 55 18.3	+4.3
XAN				Pg	Pg	00 55 33.0	-1.4
XAN				Sn	Sn	00 56 17.5	+6.3
XAN				Sg	Sg	00 56 35.5	-2.9
XAN				smax			
	comp=N,80nm,0.7s						
XAN				smax			
	comp=E,34nm,0.8s						
GYA	Guiyang	5.33	154	Pg	Pb	00 55 28.3	-4.7
GYA				Sg	Sn	00 56 28.0	+7.2
GYA				smax			
	comp=N,160nm,0.8s						
GYA				smax			
	comp=E,220nm,0.9s						
WHN	Wuhan	8.88	92	*e*P	Px	00 56 18.0	
WHN				S	Sn	00 57 45.8	-2.4
WHN				LR	LR		
	comp=N,170nm,4.4s						
WHN				LR	LR		
	comp=E,490nm,8.5s						
WHN				LR	LR		
	comp=Z,530nm,6.5s						
CM31	Chiang Mai Arr	13.58	201	Pn	Pn	00 57 12.4	-0.2
CMAR	Chiang Mai Arr	13.58	201	Pn	Pn	00 57 13.9	+1.4
	comp=Z,0.2nm,0.3s,baz=7.0,slow=9.0,SNR=2.7						
SONM	Songino Array	16.62	6	Pn	Pn	00 57 52.9	+0.1
	comp=Z,0.2nm,0.3s,baz=174,slow=14,SNR=3.4						
ULN	Ulaanbaatar	16.72	7	*e*Pn	Pn	00 57 54.3	+0.4
NACB	Ninganchiao	17.06	110	*e*Pn	Pn	00

CASC 27 00:57:06.9±3.1, 13°.80N×89°.42W, h0km±6km, MD3.7, ML3.4, 1C-5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOQS	Boqueron	0.15	116	eP	Pg	00 57 11.2	+1.5
BOQS				AML	AML	00 57 22.6	
	comp=Z,4μm,0.4s						
SNJE	San Jose	0.20	290	||iP	Pg	00 57 11.5	+0.8
SBLS	San Blas	0.21	281	||iP	Pg	00 57 11.8	+0.9
SNET	Serv Nac Est T	0.21	122	||iP	Pg	00 57 11.9	+1.0
SNET				eS	Sg	00 57 15.4	+1.7
RTR	El Retiro	0.24	294	eP	Pg	00 57 12.6	+1.0
LBRS	Las Brisas	0.37	99	⇑iP	Pg	00 57 14.9	+1.0
LFRS	El Faro	0.39	117	||iP	Pg	00 57 15.1	+0.8
RBDL	Robledal	0.41	320	||iP	Pg	00 57 15.4	+0.6
SNVI	San Vicente	0.59	108	eP	Pg	00 57 19.1	+0.9
MTO2	Montecristo 2	0.60	5	eP	Pg	00 57 18.8	+0.3
MTO2				eS	Sg	00 57 27.4	+1.1
CAHU	Cacacuatique	1.17	91	eP	Pg	00 57 29.1	-0.2
CAHU				eS	Sg	00 57 46.0	+1.5
NBG	Las Nubes	1.20	311	eP	Pg	00 57 30.7	+0.9
MRL	Marmol	1.29	348	eP	Pg	00 57 32.0	+0.4
MRL				eS	Sg	00 57 50.5	+2.2
FUG	Fuego 3	1.53	295	eP	Pn	00 57 36.4	+1.0
FUG				eS	Sb	00 57 58.4	+2.4
CNCH	Conchagua	1.62	108	eP	Pn	00 57 36.1	-0.7
TGUH	Tegucigalpa,Un	2.10	83	eP	Pn	00 57 44.3	+1.1
TGUH				eS	Sn	00 58 13.6	+3.5

IGQ 27 01:29:49.0, 1°.62S×77°.92W, h186km±2km, Mb4.2, Ms4.0, 10C-7D, Error ellipse: s-maj=2.7km s-min=1.9km az=12.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	Ulba	0.52	288	⇑S	Sn	01 30 33.2	-1.1
ULBA	Ulba	0.52	288	⇑P	Pn	01 30 15.1	+0.4
PATA	Patacocha	0.53	282	⇑S	Sn	01 30 35.0	+0.6
PATA	Patacocha	0.53	282	⇑P	Pn	01 30 15.4	+0.7
RUN5	Runtun	0.55	291	P	Pn	01 30 15.2	+0.5
ARRY	Arrayan	0.55	281	⇑P	Pn	01 30 15.2	+0.4
ARRY	Arrayan	0.55	281	⇑S	Sn	01 30 33.8	-0.7
MACE	Macas	0.70	204	⇑P	Pn	01 30 16.0	+0.5
PISA	Pisayambo	0.72	320	S	Sn	01 30 35.9	-0.3
PISA	Pisayambo	0.72	320	P	Pn	01 30 16.5	+0.9
RIOE	Riobamba	0.73	259	⇑P	Pn	01 30 16.3	+0.6
IGUA	Igualata	0.73	280	P	Pn	01 30 17.2	+1.5
TAMB	Tambo	1.02	334	P	Pn	01 30 18.4	+0.8
COV1	Cotopaxi Volc	1.04	336	||P	Pn	01 30 19.6	+1.9
MOV1	Cotopaxi Vol s	1.04	330	P	Pn	01 30 18.8	+1.1
VC1	Cotopaxi 1	1.08	333	||P	Pn	01 30 19.0	+0.9
CAMI	Rancho Maria	1.10	328	P	Pn	01 30 19.9	+1.7
NAS2	Nasa	1.11	330	P	Pn	01 30 19.6	+1.4
PITA	Cotopaxi Volc	1.17	334	P	Pn	01 30 19.9	+1.2
ANTI	Antisana	1.18	348	P	Pn	01 30 19.8	+1.0
CHAR	Charly	1.54	9	⇑P	Pn	01 30 23.0	+1.1
CONE	Cono NE Rev Vo	1.56	10	||P	Pn	01 30 23.4	+1.3
GGP	Refugio Guagua	1.58	335	||P	Pn	01 30 23.3	+0.9
TERV	Terraza Guagua	1.59	334	P	Pn	01 30 23.6	+1.2
PINO	Pino	1.60	334	||P	Pn	01 30 23.5	+0.9
CAYR	Refugio Cayamb	1.62	357	P	Pn	01 30 23.2	+0.4
YANA	Yana	1.62	336	P	Pn	01 30 24.6	+1.8
CAYA	Cayambe	1.68	357	||P	Pn	01 30 24.6	+1.4
CAYA	Cayambe	1.68	357	||S	Sn	01 30 50.4	+0.6
COTA	Cotacachi	1.98	348	⇑P	Pn	01 30 27.9	+1.5
JAMA	Jama	2.66	300	S	Sn	01 31 07.0	-1.8
JAMA	Jama	2.66	300	P	Pn	01 30 34.2	+0.3

*IDC **27** 01:46:09.7±0.9, 22°.17N×93°.92E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, ML3.6/1, Error ellipse: s-maj=47.5km s-min=19.8km az=54.0*
*ISCJB **27** 01:46:15.6±1.3, 22°.3N±0°.2×94°.2E±0°.2, h57km±11km, mb3.8/13, Error ellipse: s-maj=43.1km s-min=8.9km az=140.8*
*NEIC **27** 01:46:18.1±1.4, 22°.26N×94°.22E, h66km±14km, mb3.9/2, Error ellipse: s-maj=25.6km s-min=9.9km az=56.0*
ISC 27 01:46:17.6±1.2, 22°.3N±0°.2×94°.2E±0°.2, h57km±10km, n20, σ0°.66/19, mb3.8/13, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	3.89	327	ePN	Pn	01 47 14.0	-0.8
SHL				eSN	Sn	01 47 59.5	+0.3
CM31	Chiang Mai Arr	5.85	130	Pn	Pn	01 47 41.7	0.0
CMAR	Chiang Mai Arr	5.85	130	Pn	Pn	01 47 41.7	0.0
	0.4nm,0.3s,baz=308,slow=14,SNR=12						
CMAR				Lg		01 49 31.0	
	0.7nm,0.3s,baz=300,slow=31,SNR=4.1						
AAK	Ala-Archa	26.11	326	P	P	01 51 47.4	+1.4
	0.9nm,0.4s,mb3.7,baz=160,slow=12,SNR=2.6						
MK31	Makanchi Array	26.27	341	eP	P	01 51 47.5	+0.1
MKAR	Makanchi Array	26.27	341	P	P	01 51 47.8	+0.4
	1.0nm,0.6s,mb3.5,baz=158,slow=10,SNR=13						
ZALV	Zalesovo Beam	32.38	350	P	P	01 52 41.8	+0.2
	0.7nm,0.5s,mb3.7,baz=169,slow=9.1,SNR=4.6						
BVAR	Borovoye Array	35.66	335	P	P	01 53 11.0	+1.0
	0.3nm,0.4s,mb3.6,baz=153,slow=13,SNR=2.6						
ABKAR	Akbulak array	38.15	323	eP	P	01 53 31.4	+0.3
	0.6nm,0.4s,mb3.7						
AKASG	Malin Array Be	57.31	317	P	P	01 55 58.1	-1.3
	1.0nm,0.5s,mb4.1,baz=83,slow=6.4,SNR=5.8						
ASAR	Alice Springs	59.81	137	P	P	01 56 18.0	+0.8
	0.3nm,0.4s,mb3.6,baz=322,slow=7.1,SNR=4.3						
FINES	FINESS Array B	60.23	329	P	P	01 56 18.6	-0.9
	0.8nm,0.7s,mb3.9,baz=90,slow=3.8,SNR=5.0						
ARCES	ARCESS Array B	61.87	338	P	P	01 56 30.4	-0.1
	2.4nm,0.9s,mb4.3,baz=97,slow=6.5,SNR=4.0						
GERES	GERESS Array B	67.42	315	P	P	01 57 06.9	-0.2
	1.2nm,0.5s,mb4.2,baz=70,slow=6.5,SNR=15						
BPAW	Bear Paw Mtn.	80.29	24	P	P	01 58 21.3	-0.7
	1.6nm,1.1s,mb3.9						
TORD	Torodi Ar. Bea	87.40	283	P	P	01 58 59.2	0.0
	0.3nm,0.6s,mb3.7,baz=95,slow=4.2,SNR=5.7						
TORD	Torodi Ar. Bea	87.40	283	P	P	01 58 59.2	0.0
YKA	Yellowknife Ar	92.43	13	P	P	01 59 21.2	-0.6
	0.6nm,0.9s,mb3.9,baz=317,slow=4.6,SNR=4.1						
TXAR	Lajitas Array	125.84	19	PKP	PKPdf	02 05 13.5	0.0
	0.1nm,0.4s,baz=211,slow=1.1,SNR=3.9						
CPUP	Villa Florida	153.80	255	PKPbc	PKPbc	02 06 09.6	-1.3
	2.0nm,0.9s,baz=39,slow=6.5,SNR=4.5						

*NIED **27** 01:54:00, 26°.20N×128°.40E, h20km, Mw4.0 Best double couple: M0=9.75000×10^14 NP1:φ=43.00000°, δ=72.00000°, λ=84.00000°. NP2:φ=242.00000°, δ=19.00000°, λ=108.00000°.*
*IDC **27** 01:54:09.7±1.2, 26°.30N×128°.33E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/23, mbtmp3.8/7, MS3.0/1, Ms1 3.0/1, ms1mx2.4/27, Error ellipse: s-maj=39.3km s-min=16.6km az=86.0*
*ISCJB **27** 01:54:11.8±0.7, 26°.14N±0°.05×128°.45E±0°.04, h35km±7km, mb3.8/9, Error ellipse: s-maj=8.3km s-min=5.3km az=158.6*
*JMA **27** 01:54:12.8±0.2, 26°.20N×128°.41E, h34km±3km, M3.6*
*NEIC **27** 01:54:14.6±1.0, 26°.21N×128°.14E, h35km, mb4.0/1, Error ellipse: s-maj=22.3km s-min=14.3km az=115.0*
ISC 27 01:54:12.7±1.0, 26°.20N±0°.04×128°.41E±0°.05, h26km±6km, n23, σ0°.77/32, mb3.8/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	0.60	264	P	Pb	01 54 24.6	0.0
JJT2				eS	Sb	01 54 33.1	+0.5
JOW	Kunigami	0.64	349	P	Pb	01 54 25.3	+0.1
JOW				eS	Sb	01 54 33.6	-0.2
JOW	Kunigami	0.64	349	Pn	Pn	01 54 25.4	-0.7
	1μm,0.3s,baz=155,slow=18,SNR=6292						
JOW				Sn	Sn	01 54 33.6	-1.7
	baz=90,slow=20						
NAH1	Naha	0.65	270	P	Pb	01 54 25.2	-0.2
NAH1				eS	Sb	01 54 34.3	+0.3
JIH	Iheya	0.92	334	P	Pb	01 54 29.8	-0.1
JIH				eS	Sb	01 54 41.9	+0.1
JAGN	Aguni-jima	1.12	290	P	Pn	01 54 32.7	+0.1
JAGN				eS	Sn	01 54 47.1	0.0
JKE	Kume jima 2	1.46	275	P	Pn	01 54 36.7	-0.7
JTK	Tokunoshima	1.65	17	P	Pn	01 54 39.8	-0.1
JTK				eS	Sn	01 55 00.6	+0.4
JAM	Amami Oshima	2.44	26	P	Pn	01 54 50.9	+0.1
JAM				eS	Sn	01 55 20.0	+0.1
JZK	Kikaishima	2.52	33	P	Pn	01 54 53.3	+1.4
JZK				eS	Sn	01 55 22.6	+0.8
JMZ	Minamidaito 2	2.56	98	P	Pn	01 54 50.5	-1.9
JMZ				eS	Sn	01 55 18.7	-4.0
YULB	Yu-li	7.04	248	ePn	Pn	01 55 50.5	-3.6
KSRS	Korea Array	11.22	358	LR	LR	02 01 30.9	
	comp=Z,65nm,18.6s,baz=185,slow=40						
GTA	Gaotai	27.28	306	eP	P	01 59 54.5	-0.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.5						
SONM	Songino Array	27.66	327	P	P	01 59 59.4	+1.2
	comp=Z,0.9nm,0.5s,mb3.7,baz=134,slow=9.9,SNR=3.4						
MKAR	Makanchi Array	41.67	312	P	P	02 01 58.3	-0.6
	comp=Z,1.0nm,0.6s,mb3.6,baz=97,slow=11,SNR=9.7						
ZALV	Zalesovo Beam	42.37	323	P	P	02 02 04.6	+0.2
	comp=Z,0.7nm,0.4s,mb3.6,baz=116,slow=11,SNR=2.6						
ASAR	Alice Springs	49.86	173	P	P	02 03 05.3	+1.6
	comp=Z,0.5nm,0.6s,mb3.7,baz=8.0,slow=12,SNR=4.6						
BVAR	Borovoye Array	50.40	318	P	P	02 03 07.5	-0.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=81,slow=8.9,SNR=8.4						
ABKAR	Akbulak array	56.78	313	eP	P	02 03 54.4	-0.1
	comp=Z,1.3nm,0.8s,mb4.0						
FINES	FINESS Array B	72.97	331	P	P	02 05 39.4	-0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=70,slow=6.3,SNR=8.0						
FINES	FINESS Array B	72.97	331	P	P	02 05 39.4	-0.1
YKA	Yellowknife Ar	78.48	25	P	P	02 06 12.0	+0.9
	comp=Z,0.1nm,0.5s,mb3.0,baz=297,slow=5.6,SNR=3.2						

*IDC **27** 01:57:17.6±1.1, 13°.14N×125°.23E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, MS3.1/3, Ms1 3.1/3, ms1mx2.5/29, Error ellipse: s-maj=45.1km s-min=18.0km az=69.0*
*MAN **27** 01:57:21, 13°.28N×125°.23E, h28km, mb4.8, ML3.7, MS3.7*
*ISCJB **27** 01:57:22.3±1.7, 13°.25N±0°.08×125°.2E±0°.2, h48km±15km, mb3.8/8, MS3.0/3, Error ellipse: s-maj=28.5km s-min=10.7km az=160.6*
*NEIC **27** 01:57:23.0±0.8, 13°.07N×125°.14E, h35km, mb4.4/1, Error ellipse: s-maj=41.0km s-min=10.5km az=64.0*
ISC 27 01:57:22.8±5.1, 13°.26N±0°.08×125°.3E±0°.2, h34km±37km, n19, σ0°.98/17, mb3.8/8, MS3.0/3, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Cataman	0.95	218	eP	Pn	01 57 39.1	-0.6
CNP				eS	Sn	01 57 46.5	-5.6
PVCP	Virac	1.14	287	eP	Pn	01 57 41.0	-1.3
PLP	Palo	2.10	188	||eP	Pn	01 57 55.8	+0.2
GQP	Guinayangan	2.82	283	eP	Px	01 58 17.0	
RCP	Roxas	2.99	236	||eP	Pn	01 58 08.5	+0.7
MSLP	Maasin	3.13	187	eP	Pn	01 58 11.6	+1.8
GUIM	Jordan	3.71	225	eP	Pn	01 58 18.4	+0.8
CAUP	Cauayan	4.95	318	eP	Pn	01 58 33.5	-1.2
KSRS	Korea Array	24.21	5	P	P	02 02 36.7	+0.5
	2.1nm,1.0s,mb3.5,baz=187,slow=10,SNR=5.7						
KSRS				LR	LR	02 11 38.8	
	comp=Z,25nm,19.1s,MS2.7,baz=190,slow=35						
CMAR	Chiang Mai Arr	25.83	285	P	P	02 02 50.7	-0.4
	0.5nm,0.2s,mb3.6,baz=92,slow=8.4,SNR=3.2						
MJAR	Matsushiro Arr	25.93	24	LR	LR	02 12 28.6	
	comp=Z,41nm,20.8s,MS3.0,baz=185,slow=35						
PSI	Prapat	28.04	251	LR	LR	02 14 24.7	
	comp=Z,74nm,21.7s,MS3.2,baz=274,slow=37						
FITZ	Fitzroy Crossi	31.16	179	P	P	02 03 36.8	-1.9
	1.5nm,0.7s,mb3.9,baz=10,slow=11,SNR=4.3						
ASAR	Alice Springs	37.66	167	P	P	02 04 34.5	-0.4
	0.3nm,0.3s,mb3.4,baz=345,slow=6.9,SNR=5.1						
STKA	Stephens Creek	47.53	161	P	P	02 05 53.5	-1.3
	2.0nm,0.7s,mb4.3,baz=332,slow=11,SNR=3.5						
MK31	Makanchi Array	49.08	322	eP	P	02 06 07.5	+0.8
MKAR	Makanchi Array	49.08	322	P	P	02 06 07.5	+0.8
	0.6nm,0.6s,mb3.8,baz=110,slow=9.4,SNR=5.7						
KURK	Kurchatov	53.07	325	eP	P	02 06 37.1	+0.5
	4.0nm,1.0s,mb4.3						
KURK				epP	pP	02 06 47.3	+0.3
BVAR	Borovoye Array	58.67	325	P	P	02 07 17.5	+0.9
	0.4nm,0.7s,mb3.6,baz=92,slow=12,SNR=3.2						

*CSEM **27** 01:58:44.7±0.2, 38°.81N×21°.21E, h15km, MD3.1, Error ellipse: s-maj=3.8km s-min=3.2km az=45.0*
*THE **27** 01:58:44.9, 38°.82N×21°.22E, h10km±1km, ML2.4/6, Error ellipse: s-maj=1.1km s-min=0.6km az=220.0*
*NEIC **27** 01:58:44.2, 38°.78N×21°.30E, h40km, MD3.1(ATH), After ATH.*
*ATH **27** 01:58:44.2, 38°.78N×21°.30E, h40km±14km, MD3.1/4*
ISC 27 01:58:45.1±0.6, 38°.81N±0°.04×21°.21E±0°.04, h16km±6km, n31, σ0°.79/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	Evrytania	0.48	77	eP	Pg	01 58 54.2	-0.5
EVR				eS	Sg	01 59 01.7	+0.5
EVR	Evrytania	0.48	77	eP	Pg	01 58 54.2	-0.5
EVR				eS	Sg	01 59 01.7	+0.5
EFP	Efpalio	0.67	124	P	Pg	01 58 57.5	-0.6
EFP	Efpalio	0.67	124	P	Pg	01 58 57.5	-0.6
KFL	Anninata	0.77	205	P	Pg	01 58 59.8	-0.3
VLS	Valsamata	0.79	218	eP	Pg	01 58 59.8	-0.7
VLS				eS	Sg	01 59 13.5	+2.5
VLS	Valsamata	0.79	218	P	Pg	01 58 59.9	-0.6
VLS	Valsamata	0.79	218	P	Pg	01 58 59.9	-0.6
VLS				eS	Sg	01 59 13.5	+2.5
TRIZ	Trizonia	0.81	123	P	Pg	01 59 00.1	-0.7
TRIZ				S	Sg	01 59 12.5	+1.0
TRIZ	Trizonia	0.81	123	P	Pg	01 59 00.1	-0.7
TRIZ				S	Sg	01 59 12.5	+1.0
LAKA	Lakka	0.83	133	P	Pb	01 59 01.1	0.0
LAKA				S	Sg	01 59 12.5	+0.4
LAKA	Lakka	0.83	133	P	Pb	01 59 01.1	0.0
LAKA				S	Sg	01 59 12.5	+0.4
KALE	Kalithea	0.84	119	P	Pb	01 59 01.0	-0.3
KALE				S	Sg	01 59 12.8	+0.3
KALE	Kalithea	0.84	119	P	Pb	01 59 01.0	-0.3
KALE				S	Sg	01 59 12.8	+0.3
JAN	Janina	0.89	342	eP	Pb	01 59 01.6	-0.6
JAN				eS	Sb	01 59 15.7	+1.8
JAN	Janina	0.89	342	eP	Pb	01 59 01.6	-0.6
JAN				eS	Sb	01 59 15.7	+1.8
AGG	Agios Georgios	0.90	76	eP	Pb	01 59 01.4	-1.0
AGG	Agios Georgios	0.90	76	P	Pb	01 59 01.5	-0.9
AGG				S	Sb	01 59 15.0	+0.8
AGG	Agios Georgios	0.90	76	P	Pb	01 59 01.5	-0.9
AGG				S	Sb	01 59 15.0	+0.8
THL	Klokotos Trika	0.98	39	P	Pb	01 59 02.8	-1.0
THL				S	Sb	01 59 17.1	+0.6
THL	Klokotos Trika	0.98	39	P	Pb	01 59 02.8	-1.0
THL				S	Sb	01 59 17.1	+0.6
IGT	Igoumenitsa	0.99	317	P	Pb	01 59 03.6	-0.3
IGT	Igoumenitsa	0.99	317	P	Pb	01 59 03.6	-0.3
DSF	Desfina	1.11	110	P	Pb	01 59 05.2	-0.7
DSF	Desfina	1.11	110	P	Pb	01 59 05.2	-0.7
GUR	Goura	1.25	134	P	Pn	01 59 07.6	-0.3
GUR	Goura	1.25	134	P	Pn	01 59 07.6	-0.3
LKR	Lokris	1.41	96	P	Pn	01 59 10.1	0.0
LKR				S	Sn	01 59 28.9	+0.5
LKR	Lokris	1.41	96	P	Pn	01 59 10.1	0.0
LKR				S	Sn	01 59 28.9	+0.5
XOR	Xorichti	1.64	70	P	Pn	01 59 12.8	-0.5
XOR	Xorichti	1.64	70	P	Pn	01 59 12.8	-0.5

*ISCJB **27** 02:22:58.4±1.3, 23°.86S±0°.08×179°.8W±0°.2, h510km±16km, mb3.8/10, Error ellipse: s-maj=24.2km s-min=11.7km az=5.7*
*IDC **27** 02:22:58.4±3.8, 23°.85S×179°.70W, h505km±40km, mb3.4/10, mb1 3.7/11, mb1mx3.6/17, mbtmp3.5/11, Error ellipse: s-maj=23.2km s-min=17.3km az=57.0*
*NEIC **27** 02:22:59.1±1.1, 23°.89S×179°.71W, h518km±11km, mb4.6/3, Error ellipse: s-maj=20.0km s-min=12.8km az=100.0*
ISC 27 02:22:58.7±1.2, 23°.94S±0°.08×179°.7W±0°.2, h504km±15km, n29, σ0°.69/17, mb3.9/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.52	341	ePn	P	02 24 40.9	+0.4
	52nm,0.8s						
URZ	Urewera	14.53	190	P	P	02 26 03.1	-0.6
	5.2nm,0.3s,baz=268,slow=2.4,SNR=21						
URZ				S	S	02 28 36.0	-0.3
	0.6nm,0.3s,baz=90,slow=20,SNR=5.0						
URZ	Urewera	14.53	190	ePn	P	02 26 03.4	-0.4
URZ				eS	S	02 28 36.2	-0.1
RPZ	Rata Peaks	21.14	199	P	P	02 27 06.6	-0.7
	13nm,0.4s,mb4.8,baz=32,slow=2.5,SNR=19						
RPZ	Rata Peaks	21.14	199	eP	P	02 27 06.9	-0.3
	46nm,1.4s,mb4.8						
CTA	Charters Tower	31.75	270	P	P	02 28 41.4	+0.4
	4.3nm,0.3s,mb4.4,baz=94,slow=11,SNR=11						
ASAR	Alice Springs	42.29	261	P	P	02 30 07.7	-0.1
	0.6nm,0.3s,mb3.5,baz=96,slow=7.6,SNR=11						
QSPA	South Pole Qui	66.14	180	P	P	02 32 56.7	+1.6
	2.8nm,0.8s,mb4.0,baz=64,slow=7.0,SNR=16						
QSPA	South Pole Qui	66.14	180	eP	P	02 32 57.1	+2.0
	9.1nm,1.3s,mb4.2						
KSRS	Korea Array	78.45	320	P	P	02 34 06.4	-0.6
	0.9nm,0.6s,mb3.4,baz=147,slow=8.4,SNR=4.1						
PETK	Petropavlovsk-	79.20	346	P	P	02 34 09.4	-1.3
	2.2nm,0.7s,mb3.8,baz=105,slow=6.9,SNR=4.1						
NVAR	Mina Array Bea	84.59	44	P	P	02 34 38.5	0.0
	0.3nm,0.5s,mb3.2,baz=225,slow=6.9,SNR=4.5						
CMAR	Chiang Mai Arr	89.79	290	P	P	02 35 04.2	+0.7
	0.6nm,0.4s,mb3.8,baz=111,slow=2.1,SNR=4.4						
TXAR	Lajitas Array	90.22	58	P	P	02 35 05.5	+0.1
	1.2nm,0.7s,mb3.8,baz=212,slow=6.5,SNR=19						
PDAR	Pinedale Array	92.53	44	P	P	02 35 15.5	-0.1
	0.5nm,0.6s,mb3.7,baz=194,slow=2.4,SNR=5.1						
MKAR	Makanchi Array	112.38	313	PKiKP	PKiKP	02 40 35.4	-1.4
	0.2nm,0.4s,baz=230,slow=1.1,SNR=3.8						
KURK	Kurchatov	115.42	316	PKP	PKPdf	02 40 40.8	-1.8
	0.6nm,0.7s,baz=88,slow=2.6,SNR=2.7						
BVAR	Borovoye Array	120.65	319	PKP	PKPdf	02 40 50.8	-1.8
	0.6nm,0.4s,baz=187,slow=2.6,SNR=4.1						
ARCES	ARCESS Array B	131.98	348	PKP	PKPdf	02 41 11.5	-2.2
	2.1nm,0.6s,baz=15,slow=3.7,SNR=6.2						
ARCES	ARCESS Array B	131.98	348	PKP	PKPdf	02 41 11.5	-2.2
FINES	FINESS Array B	138.57	342	PKP	PKPdf	02 41 24.7	-1.5
	1.4nm,0.8s,baz=84,slow=4.3,SNR=3.6						
NOA	NORSAR Array B	142.16	351	PKhKP		02 41 26.4	
	0.3nm,0.6s,baz=21,slow=1.3,SNR=4.0						
AKASG	Malin Array Be	145.15	327	PKPbc	PKPbc	02 41 36.9	-2.1
	1.6nm,0.5s,baz=44,slow=4.2,SNR=12						
BRTR	Keskin Array B	147.82	307	PKPbc	PKPbc	02 41 45.4	-1.3
	0.7nm,0.7s,baz=156,slow=5.2,SNR=5.4						
MMAI	Mount Meron Ar	147.96	294	PKPbc	PKPbc	02 41 47.0	-0.3
	1.9nm,0.4s,baz=82,slow=6.2,SNR=9.7						
CLL	Collm	150.97	343	i PKPbc	PKPbc	02 41 52.8	-1.1
	comp=Z,7.0nm,0.8s						
BRG	Berggiesshubel	151.11	342	i PKPbc	PKPbc	02 41 53.1	-1.1
	comp=Z,5.2nm,0.6s						
GERES	GERESS Array B	152.99	340	PKPbc	PKPbc	02 41 57.0	-1.4
	comp=Z,0.4nm,0.7s,baz=35,slow=4.9,SNR=4.4						
GERES				PKPab	PKPab	02 42 10.8	-1.5
	comp=Z,0.2nm,0.4s,baz=340,slow=2.6,SNR=3.0						
TORD	Torodi Ar. Bea	169.18	187	PKPdf	PKPdf	02 42 06.8	-1.7
	comp=Z,0.4nm,0.9s,baz=105,slow=0.5,SNR=3.1						
TORD				PKPab	PKPab	02 43 23.5	-0.2
	comp=Z,0.2nm,0.6s,baz=180,slow=4.4,SNR=5.9						

NEIC 27 02:26:33.9, 60°.11N×152°.68W, h109km, mb4.0/2, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSO	Redoubt South	0.36	354	ePg	Pn	02 26 49.3	-0.5
AUL	Augustine Lava	0.82	208	P	Pn	02 26 53.0	-0.3
AUL				S	Sn	02 27 08.0	+0.2
SLKM	Skilak Lake	1.29	71	P	Pn	02 26 57.5	-0.6
SEW	Seward	1.62	89	P	Pn	02 27 00.9	-1.2
FIB	Fire Island	1.63	48	P	Pn	02 27 02.5	+0.4
FIB				S	Sn	02 27 24.6	+1.0
SVW2	Sparrevohn	1.74	306	P	Pn	02 27 02.1	-1.4
RC01	Rabbit Creek A	1.75	55	P	Pn	02 27 02.9	-0.8
RC01				S	Sn	02 27 25.6	-0.8
SKT	Skwentna	1.96	16	P	Pn	02 27 05.4	-0.9
PMR	Palmer	2.29	48	P	Pn	02 27 09.0	-1.5
PMR				S	Sn	02 27 35.9	-2.6
KDAK	Kodiak Island	2.33	179	P	Pn	02 27 09.2	-1.8
KDAK				S	Sn	02 27 37.0	-2.6
KNK	Knik Glacier	2.45	56	P	Pn	02 27 11.1	-1.5
GHO	Glory Hole Cre	2.48	46	P	Pn	02 27 11.6	-1.4
SML	Sawmill	2.72	49	P	Pn	02 27 14.6	-1.5
SML				S	Sn	02 27 45.9	-2.6
PPLA	Purkeypile	2.81	5	P	Pn	02 27 17.1	-0.1
PPLA				S	Sn	02 27 50.0	-0.6
OHAK	Old Harbor	2.91	187	P	Pn	02 27 16.4	-2.3
TT01	Tatalina	3

WHN				LR	LR		
	comp=N,350nm,1.9s						
WHN				LR	LR		
	comp=E,440nm,6.2s						
WHN				LR	LR		
	comp=Z,280nm,6.4s						
GTA	**Gaotai**	**8.21**	**328**	*e*P	**Pn**	**02 35 57.3**	**+0.9**
GTA				pP		02 36 00.3	
GTA				sP		02 36 02.8	
GTA				S	**Sn**	**02 37 29.0**	**-0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				LR	LR		
	comp=N,220nm,9.2s						
GTA				LR	LR		
	comp=E,170nm,11.6s						
GTA				LR	LR		
	comp=Z,180nm,10.1s						
CMAR	**Chiang Mai Arr**	**15.22**	**204**	Pn	**Pn**	**02 37 32.4**	**+0.1**
	baz=17,slow=9.4,SNR=3.1						
SONM	**Songino Array**	**15.27**	**2**	Pn	**Pn**	**02 37 33.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=2.1						
KSRS	**Korea Array**	**19.03**	**69**	P	**Pn**	**02 38 20.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=250,slow=10,SNR=4.8						
MK31	**Makanchi Array**	**22.68**	**316**	*e*P	**P**	**02 38 59.3**	**+0.6**
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**02 38 59.9**	**+1.2**
	comp=Z,1.1nm,0.8s,mb3.4,baz=110,slow=11,SNR=12						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**02 38 59.9**	**+1.2**
ZALV	**Zalesovo Beam**	**25.95**	**332**	P	**P**	**02 39 29.7**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.5,baz=129,slow=11,SNR=3.1						
UCH	**Uchtor**	**26.28**	**300**	*e*P	**P**	**02 39 32.9**	**+0.2**
	comp=Z,2.2nm,1.2s,mb3.6						
KURK	**Kurchatov**	**26.81**	**320**	P	**P**	**02 39 37.3**	**0.0**
	comp=Z,0.6nm,0.8s,mb3.2,baz=129,slow=8.5,SNR=5.7						
KURK	**Kurchatov**	**26.81**	**320**	*e*P	**P**	**02 39 36.3**	**-1.0**
	comp=Z,0.9nm,0.8s,mb3.4						
TIXI	**Tiksi**	**41.10**	**11**	*e*P	**P**	**02 41 40.2**	**-0.6**
	comp=Z,1.9nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**02 43 42.5**	**-0.2**
	comp=Z,1.9nm,0.8s,mb4.2,baz=101,slow=6.0,SNR=4.4						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**02 43 42.5**	**-0.2**
BRTR	**Keskin Array B**	**57.02**	**299**	P	**P**	**02 43 42.9**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=30,slow=8.9,SNR=3.2						
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**02 43 43.7**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=64,slow=8.4,SNR=4.3						
AKASG	**Malin Array Be**	**57.23**	**313**	P	**P**	**02 43 43.7**	**-0.8**
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**02 44 18.9**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.3,baz=334,slow=6.7,SNR=16						
NOA	**NORSAR Array B**	**64.05**	**327**	P	**P**	**02 44 30.2**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.8,baz=71,slow=6.6,SNR=2.6						
YKA	**Yellowknife Ar**	**79.96**	**18**	P	**P**	**02 46 05.8**	**-0.4**
	comp=Z,0.1nm,0.5s,mb3.0,baz=331,slow=5.0,SNR=3.3						
YKA	**Yellowknife Ar**	**79.96**	**18**	P	**P**	**02 46 05.8**	**-0.4**

KRSC 27 02:53:40.5±0.4, 54°.63N×163°.72E, h42km±41km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.16**	**267**	*e*P	Pn	02 54 01.2	+1.0
MKZ				*i* S	Sn	02 54 15.9	+1.1
KBTR	**Krutoberegovo**	**1.66**	**342**	*e*P	Pn	02 54 07.4	+0.3
KBTR				*i* S	Sn	02 54 27.5	+0.3
TUMR	**Tumrok**	**2.16**	**289**	*e*P	Pn	02 54 16.1	+2.2
ZLN	**Zelenaya**	**2.17**	**311**	*e*P	Pn	02 54 17.0	+2.9
ZLN				*i* S	Sn	02 54 43.3	+3.6
BZGR	**Bezymyannyi-Gr**	**2.17**	**308**	*e*P	Pn	02 54 17.1	+3.0
BZGR				*i* S	Sn	02 54 43.4	+3.7
CIRR	**Tsirk**	**2.26**	**312**	*e*P	Pn	02 54 18.6	+3.4
CIRR				*e*S	Sn	02 54 45.5	+3.7
KMNR	**Kamenistaya**	**2.29**	**301**	*e*P	Pn	02 54 18.7	+3.0
KMNR				*i* S	Sn	02 54 46.2	+3.5
SMKR	**Semkarok**	**2.34**	**328**	*e*P	Pn	02 54 18.1	+1.8
SMKR				*i* S	Sn	02 54 46.4	+2.6
KIRR	**Kirishev**	**2.34**	**306**	P	Pn	02 54 20.3	+3.9
KIRR				*i* S	Sn	02 54 49.3	+5.4
KPT	**Kopyto**	**2.41**	**305**	*e*P	Pn	02 54 19.6	+2.3
KLY	**Klyuchi**	**2.43**	**315**	*e*P	Pn	02 54 18.9	+1.3
KLY				*i* S	Sn	02 54 47.1	+1.1
KII	**Karymskiy**	**2.57**	**258**	*e*P	Pn	02 54 21.5	+1.9
KII				*i* S	Sn	02 54 51.7	+2.2
SRDR	**Sredinnyy**	**2.84**	**308**	*e*P	Pn	02 54 26.0	+2.8
SRDR				*i* S	Sn	02 54 59.2	+3.1
AVH	**Avacha**	**3.25**	**247**	*e*P	Pn	02 54 31.4	+2.6
AVH				*i* S	Sn	02 55 08.9	+2.7
GNL	**Ganaly**	**3.52**	**257**	*e*P	Pn	02 54 35.8	+3.2
RUS	**Russkaya**	**3.81**	**237**	*e*P	Pn	02 54 38.6	+2.1
RUS				*i* S	Sn	02 55 20.7	+0.7

CSEM ***27*** *03:11:20.0±0.3, 39°.87N×17°.26E, h20km, ML3.9/5, Error ellipse: s-maj=5.3km s-min=4.6km az=93.0*
ROM ***27*** *03:11:20.1±0.2, 39°.88N×17°.27E, h5km, Md2.7/11, Ml2.2/10, Error ellipse: s-maj=2.7km s-min=2.4km az=48.0*
ISC 27 03:11:20.4±0.7, 39°.85N±0°.03×17°.28E±0°.04, h17km±6km, n31, σ0s91/47, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORI	**Oriolo Calabro**	**0.68**	**289**	Pg	**Pg**	**03 11 33.1**	**-0.5**
ORI				Sg	**Sg**	**03 11 43.7**	**+1.1**
ORI	**Oriolo Calabro**	**0.68**	**289**	Pg	**Pg**	**03 11 33.1**	**-0.5**
ORI				Sg	**Sg**	**03 11 43.7**	**+1.1**
TAR1	**Taranto**	**0.68**	**0**	*e*Pg	**Pg**	**03 11 32.7**	**-1.0**
TAR1				*e*Sg	**Sg**	**03 11 42.8**	**0.0**
TIP	**Timpagrande**	**0.78**	**211**	Pg	**Pg**	**03 11 36.1**	**+0.5**
	14nm,0.5s						
TIP	**Timpagrande**	**0.78**	**211**	Pg	**Pg**	**03 11 36.1**	**+0.5**
	14nm,0.5s						
CRAC	**Craco**	**0.83**	**309**	Pg	**Pg**	**03 11 35.7**	**-0.9**
CRAC				Sg	**Sg**	**03 11 48.9**	**+1.4**
	106nm,0.2s						
CRAC	**Craco**	**0.83**	**309**	Pg	**Pg**	**03 11 35.7**	**-0.9**
CRAC				Sg	**Sg**	**03 11 48.9**	**+1.4**
	106nm,0.2s						
LTRZ	**Laterza**	**0.84**	**335**	Pg	**Pg**	**03 11 35.7**	**-0.9**
LTRZ				Sg	**Sg**	**03 11 47.9**	**+0.2**
	147nm,0.3s						
LTRZ	**Laterza**	**0.84**	**335**	Pg	**Pg**	**03 11 35.7**	**-0.9**
LTRZ				Sg	**Sg**	**03 11 47.9**	**+0.2**
	147nm,0.3s						
MATE	**Matera**	**0.92**	**331**	Pg	**Pg**	**03 11 37.4**	**-0.8**
MATE				Sg	**Sg**	**03 11 50.6**	**+0.4**
	245nm,0.3s						
MATE	**Matera**	**0.92**	**331**	Pg	**Pg**	**03 11 37.4**	**-0.8**
MATE				Sg	**Sg**	**03 11 50.6**	**+0.4**
	245nm,0.3s						
SERS	**Sersale**	**0.93**	**210**	Pg	**Pg**	**03 11 39.5**	**+1.1**
	14nm,0.8s						
SERS	**Sersale**	**0.93**	**210**	Pg	**Pg**	**03 11 39.5**	**+1.1**
	14nm,0.8s						
SCTE	**Santa Cesarea**	**0.94**	**76**	Pg	**Pg**	**03 11 38.8**	**+0.2**
SCTE				Sg	**Sg**	**03 11 52.0**	**+1.1**
SCTE	**Santa Cesarea**	**0.94**	**76**	Pg	**Pg**	**03 11 38.8**	**+0.2**
SCTE				Sg	**Sg**	**03 11 52.0**	**+1.1**
NOCI	**Noci**	**0.96**	**350**	Pg	**Pg**	**03 11 37.5**	**-1.4**
NOCI				Sg	**Sg**	**03 11 51.8**	**+0.3**
	144nm,0.1s						
NOCI	**Noci**	**0.96**	**350**	Pg	**Pg**	**03 11 37.5**	**-1.4**
NOCI				Sg	**Sg**	**03 11 51.8**	**+0.3**
	144nm,0.1s						
SCHR	**S. Chirico Rap**	**0.99**	**291**	Pg	**Pg**	**03 11 39.0**	**-0.6**
	9.0nm,0.2s						
SCHR	**S. Chirico Rap**	**0.99**	**291**	Pg	**Pg**	**03 11 39.0**	**-0.6**
	9.0nm,0.2s						
MIGL	**Miglionico**	**0.99**	**320**	Pg	**Pg**	**03 11 37.6**	**-2.0**
MIGL				Sg	**Sg**	**03 11 53.8**	**+1.1**
	171nm,0.1s						
MIGL	**Miglionico**	**0.99**	**320**	Pg	**Pg**	**03 11 37.6**	**-2.0**
MIGL				Sg	**Sg**	**03 11 53.8**	**+1.1**
	171nm,0.1s						
SG1	**Sgolgore (BA)**	**1.09**	**335**	*e*Pg	**Pg**	**03 11 40.6**	**-0.9**
SG1				*e*Sg	**Sg**	**03 11 57.5**	**+1.6**
SIRI	**Monte Sirino -**	**1.14**	**288**	Pg	**Pg**	**03 11 41.5**	**-0.8**
	16nm,0.3s						
SIRI	**Monte Sirino -**	**1.14**	**288**	Pg	**Pg**	**03 11 41.5**	**-0.8**
	16nm,0.3s						
AMUR	**Altamura**	**1.18**	**334**	Pg	**Pn**	**03 11 42.2**	**+0.1**
	48nm,0.1s						
AMUR	**Altamura**	**1.18**	**334**	Pg	**Pn**	**03 11 42.2**	**+0.1**
	48nm,0.1s						
MCEL	**Monticello**	**1.23**	**293**	Pg	**Pn**	**03 11 42.2**	**-0.6**
MCEL	**Monticello**	**1.23**	**293**	Pg	**Pn**	**03 11 42.2**	**-0.6**
MRVN	**Minervino Murg**	**1.47**	**326**	Pg	**Pn**	**03 11 46.7**	**+0.6**
MRVN	**Minervino Murg**	**1.47**	**326**	Pg	**Pn**	**03 11 46.7**	**+0.6**
MORC	**Moravsky Berou**	**9.93**	**1**	*e*Sg	**Sn**	**03 15 33.7**	**+0.5**

IDC ***27*** *03:44:31.3±1.1, 8°.83N×138°.31E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.8/22, mbtmp4.1/6, ML5.2/1, Error ellipse: s-maj=33.0km s-min=22.7km az=80.0*
ISCJB ***27*** *03:44:34.4±4.3, 8°.8N±0°.1×138°.5E±0°.2, h44km±44km, mb4.2/9, Error ellipse: s-maj=28.3km s-min=18.5km az=12.2*
NEIC ***27*** *03:44:36.3±0.6, 8°.85N×138°.34E, h35km, mb4.3/3, Error ellipse: s-maj=15.4km s-min=13.9km az=97.0*
ISC 27 03:44:35.3±6.1, 8°.8N±0°.1×138°.39E±0°.10, h30km±45km, n15, σ0s71/15, mb4.2/9, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.91**	**53**	Pn	**Pn**	**03 46 28.6**	**+0.2**
	34nm,0.3s,baz=202,slow=5.4,SNR=7.9						
GUMO	**Guam**	**7.91**	**53**	*e*Pn	**Pn**	**03 46 28.8**	**+0.4**
GUMO				*e*Sn	**Sn**	**03 47 56.8**	**-0.2**
YHNB	**Yeheng**	**22.61**	**316**	P	**P**	**03 49 32.8**	**-0.9**
	17nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**32.60**	**188**	P	**P**	**03 51 05.2**	**+0.8**
	0.6nm,0.6s,mb3.7,baz=15,slow=14,SNR=7.7						
CMAR	**Chiang Mai Arr**	**39.43**	**288**	P	**P**	**03 52 03.6**	**+0.7**
	1.6nm,0.3s,mb4.2,baz=94,slow=6.8,SNR=11						
NWAO	**Narrogin (SRO)**	**46.17**	**205**	P	**P**	**03 52 55.9**	**-1.5**
	4.7nm,0.7s,mb4.5,baz=34,slow=3.6,SNR=3.4						
NWAO	**Narrogin (SRO)**	**46.17**	**205**	P	**P**	**03 52 55.9**	**-1.5**
KHZ	**Kahutara**	**60.28**	**151**	*e*P	**P**	**03 54 46.0**	**+4.9**
	35nm,0.3s						
MK31	**Makanchi Array**	**60.68**	**319**	*e*P	**P**	**03 54 44.7**	**+0.9**
MKAR	**Makanchi Array**	**60.68**	**319**	P	**P**	**03 54 44.5**	**+0.7**
	1.8nm,0.8s,mb4.2,baz=103,slow=10,SNR=17						
ZALV	**Zalesovo Beam**	**61.96**	**327**	P	**P**	**03 54 51.6**	**-0.8**
	0.9nm,0.6s,mb4.1,baz=120,slow=5.8,SNR=4.5						
KURK	**Kurchatov**	**64.27**	**322**	*e*P	**P**	**03 55 07.4**	**-0.3**
	6.5nm,1.1s,mb4.6						
BVAR	**Borovoye Array**	**69.80**	**323**	P	**P**	**03 55 43.0**	**+0.2**
	1.4nm,0.7s,mb4.0,baz=110,slow=8.3,SNR=8.3						
ABKAR	**Akbulak array**	**75.82**	**319**	*e*P	**P**	**03 56 18.7**	**+0.1**
	0.2nm,0.3s,mb3.5						
LPAZ	**La Paz**	**153.10**	**109**	PKPbc	PKPbc	04 04 33.6	+2.5
	1.0nm,0.7s,baz=353,slow=0.5,SNR=4.8						

PGC ***27*** *03:44:41.6±11.0, 58°.54N×133°.33W, h15km, ML3.2/4, 68km Ene of Juneau, Ak Southeastern Alaska*
NEIC 27 03:44:41.0, 58°.54N×133°.33W, h15km, ML2.8(AEIC), **ML3.2**(PGC), **6D, After PGC., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.80**	**273**	P	Pg	03 44 51.1	-5.4
BESE				S	Sg	03 45 01.2	-5.9
SKAG	**Skagway**	**1.39**	**313**	*e*Pn	Pn	03 45 03.9	-1.9
SKAG				*e*S	Sn	03 45 24.0	+0.2
DLBC	**Dease Lake**	**1.74**	**92**	*e*Pn	Pn	03 45 09.1	-1.5
DLBC				*e*S	Sn	03 45 35.2	+2.8
DLBC	**Dease Lake**	**1.74**	**92**	⇓Pn	Pn	03 45 10.4	-0.2
DLBC				⇑Sg	Sg	03 45 35.0	-1.8
PLBC	**Pleasant Camp**	**1.82**	**302**	⇓Pn	Pn	03 45 10.9	-0.8
PLBC				⇓Sg	Sg	03 45 35.1	-4.4
SIT	**Sitka**	**1.83**	**217**	*e*Pn	Pn	03 45 06.0	-5.8
SIT				*e*S	Sn	03 45 28.8	-5.9
WHY	**Whitehorse**	**2.27**	**340**	P	Pn	03 45 17.4	-0.5
WHY	**Whitehorse**	**2.27**	**340**	⇑Pn	Pn	03 45 17.7	-0.2
WHY				⇑Pg	Pg	03 45 21.1	-3.3
WHY				⇓Sg	Sg	03 45 49.1	-4.7
CRAG	**Craig**	**3.08**	**178**	*e*Pn	Pn	03 45 23.4	-5.7
HYT	**Haines Junctio**	**3.12**	**319**	⇑Pn	Pn	03 45 31.5	+2.0
HYT				⇓Pg	Pg	03 45 37.8	-2.9
HYT				⇑Sg	Sg	03 46 18.8	-2.3
PNL	**Peninsula**	**3.33**	**292**	*e*Pn	Pn	03 45 29.9	-2.6
DAWY	**Dawson**	**6.26**	**335**	*e*Pn	Pn	03 46 12.4	-0.3
DAWY				*e*Sn	Sn	03 47 25.8	+1.9
DAWY				*e*Sg	Sg	03 48 00.5	-1.3
DAWY	**Dawson**	**6.26**	**335**	⇑Pn	Pn	03 46 12.9	+0.2
DAWY				⇑Pg	Pg	03 46 34.3	-6.5
DAWY				⇓Sg	Sg	03 47 55.9	-5.8

CSEM ***27*** *04:32:43.7, 45°.63N×26°.56E, h150km, After NEIC*
NEIC 27 04:32:43.7, 45°.63N×26°.56E, h150km, MG3.7(BUC), **After BUC., Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODB	**Odobesti**	**0.38**	**67**	P	Pn	04 33 04.9	+0.5
ODB	**Odobesti**	**0.38**	**67**	P	Pn	04 33 04.9	+0.5
MLR	**Muntele Rosu**	**0.45**	**253**	P	Pn	04 33 04.7	0.0
MLR	**Muntele Rosu**	**0.45**	**253**	P	Pn	04 33 04.7	0.0
CFR	**Carcaliu**	**1.20**	**111**	P	Pn	04 33 09.6	-0.5
CFR	**Carcaliu**	**1.20**	**111**	P	Pn	04 33 09.6	-0.6
BUC1	**Bucharest**	**1.33**	**197**	P	Pn	04 33 11.9	+0.4
BUC1				S	Sn	04 33 32.3	-0.4
BUC1	**Bucharest**	**1.33**	**197**	P	Pn	04 33 11.9	+0.4
BUC1				S	Sn	04 33 32.3	-0.4
TIRR	**Tirgusor**	**1.76**	**131**	P	Pn	04 33 16.0	0.0
TIRR	**Tirgusor**	**1.76**	**131**	P	Pn	04 33 16.0	0.0
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	Pn	04 33 21.3	+0.3
BUR01	**Bucovina Ar. S**	**2.19**	**336**	P	Pn	04 33 21.3	+0.3
BURAR	**Bucovina Array**	**2.19**	**336**	P	Pn	04 33 21.7	+0.8
BURAR	**Bucovina Array**	**2.19**	**336**	P	Pn	04 33 21.7	+0.7
GZR	**Gura Zlata**	**2.67**	**266**	P	Pn	04 33 27.1	+0.3
GZR	**Gura Zlata**	**2.67**	**266**	P	Pn	04 33 27.1	+0.3
DRGR		**2.91**	**295**	P	Pn	04 33 29.1	-0.7
DRGR		**2.91**	**295**	P	Pn	04 33 29.1	-0.7

ISCJB ***27*** *04:49:23.5±0.8, 35°.21N±0°.04×137°.39E±0°.06, h47km±9km, Error ellipse: s-maj=7.6km s-min=7.2km az=179.8*
JMA ***27*** *04:49:23.4, 35°.24N×137°.43E, h45km, M2.8 Broadband fault plane solution: P waves. NP1:ϕ₁262.00000°, δ33.00000°, λ-27.00000°. NP2:ϕ₂15.00000°, δ76.00000°, λ-120.00000°. Principal axes: T Plg25.0000°, Azm128.0000°; N Plg29.0000°, Azm23.0000°; P Plg50.0000°, Azm252.0000°;*
JMA Felt I J1.
ISC 27 04:49:23.8±0.8, 35°.21N±0°.04×137°.39E±0°.06, h45km±10km, n8, σ0s49/14, 3C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.12**	**298**	⇑P	**Pn**	**04 49 30.9**	**-0.2**
JAO				S	**Sn**	**04 49 36.4**	**+0.2**
SHZ3	**Shizuoka 3**	**0.69**	**102**	P	**Pn**	**04 49 36.2**	**-1.0**
SHZ3				*e*S	**Sn**	**04 49 46.5**	**-0.3**
JGM	**Miyama**	**0.73**	**312**	⇑P	**Pn**	**04 49 37.6**	**-0.2**
JGM				*e*S	**Sn**	**04 49 48.0**	**0.0**
TK04	**Tokai 4**	**0.91**	**154**	⇑P	**Pn**	**04 49 40.3**	**0.0**
TK04				*e*S	**Sn**	**04 49 53.4**	**+1.1**
TSUJ	**Tsu 2**	**0.94**	**238**	P	**Pn**	**04 49 40.5**	**-0.1**
JYN	**Shimob**	**0.99**	**73**	P	**Pn**	**04 49 40.8**	**-0.4**
JIE	**Ise**	**0.99**	**215**	⇓P	**Pn**	**04 49 41.3**	**0.0**
JIE				*e*S	**Sn**	**04 49 54.0**	**-0.1**
MAT	**Matsushiro**	**1.49**	**26**	P	**Pn**	**04 49 48.6**	**+0.5**
MAT				S	**Sn**	**04 50 06.9**	**+0.6**

GUC 27 05:09:06.2±0.8, 34°.71S×71°.50W, h44km±2km, MD3.5, ML3.1, 5C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.75**	**6**	⇓*i*P	Pn	05 09 20.6	+0.2
LNV				*i* S	Sn	05 09 32.0	+1.3
CACH	**El Canelo**	**0.95**	**52**	⇓*i*P	Pn	05 09 24.1	+1.0
CACH				*i* S	Sn	05 09 38.4	+2.9
CHCH	**Chadas Angostu**	**1.04**	**43**	⇑*i*P	Pn	05 09 25.2	+0.8
CHCH				*i* S	Sn	05 09 39.9	+2.1
ANTU	**Antumapu**	**1.34**	**33**	⇑*i*P	Pn	05 09 29.1	+0.6
ANTU				*i* S	Sn	05 09 47.3	+2.1
ANTU				AML	AML	05 09 48.9	
	comp=E,604nm,0.6s						
PCH	**Pirque**	**1.36**	**37**	⇑*i*P	Pn	05 09 29.5	+0.8
PCH				*i* S	Sn	05 09 47.3	+1.8
CLCH	**Cerro Calan**	**1.53**	**32**	⇑*i*P	Pn	05 09 31.6	+0.6
CLCH				*i* S	Sn	05 09 52.0	+2.2
CLCH				AML	AML	05 09 53.6	
	comp=N,761nm,0.7s						
PEL	**Peldehue**	**1.70**	**24**	⇑*i*P	Pn	05 09 34.2	+0.8
PEL				*i* S	Sn	05 09 55.9	+2.0
PEL				AML	AML	05 10 03.0	
	comp=E,448nm,0.3s						
FCH	**Farellones**	**1.71**	**37**	⇓*i*P	Pn	05 09 34.5	+1.1
FCH				*i* S	Sn	05 09 57.1	+3.1
COCH	**Cobquecura**	**1.77**	**216**	*e*P	Pn	05 09 35.3	+1.0
COCH				*i* S	Sn	05 09 57.0	+1.5
COCH				AML	AML	05 10 01.5	
	comp=N,137nm,0.4s						

KRSC ***27*** *05:34:47.1±0.2, 54°.69N×163°.69E, h41km±41km, ML3.9*
IDC ***27*** *05:34:48.5±1.2, 55°.02N×163°.04E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.5/5, Error ellipse: s-maj=41.0km s-min=24.7km az=163.0*
ISC 27 05:34:48.2±1.4, 54°.66N±0°.04×163°.7E±0°.1, h19km±12km, n26, σ0s93/43, mb3.5/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.12**	**266**	*e*P	**Pb**	**05 35 08.1**	**-0.9**
MKZ				*e*S	**Sb**	**05 35 22.3**	**-0.8**
KBTR	**Krutoberegovo**	**1.62**	**343**	*e*P	**Pn**	**05 35 13.7**	**-2.1**
KBTR				*e*S	**Sn**	**05 35 32.9**	**-3.3**
TUMR	**Tumrok**	**2.11**	**289**	*e*P	**Pn**	**05 35 22.9**	**+0.4**
ZLN	**Zelenaya**	**2.12**	**311**	*e*P	**Pn**	**05 35 22.0**	**-0.6**
ZLN				*e*S	**Sn**	**05 35 47.9**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**2.12**	**308**	*e*P	**Pn**	**05 35 22.9**	**+0.3**
BZGR				*e*S	**Sn**	**05 35 49.0**	**+0.6**
CIRR	**Tsirk**	**2.21**	**313**	*e*P	**Pn**	**05 35 24.4**	**+0.6**
CIRR				*e*S	**Sn**	**05 35 51.3**	**+0.8**
LGNR	**Loginova**	**2.21**	**311**	*e*P	**Pn**	**05 35 24.3**	**+0.4**
LGNR				*e*S	**Sn**	**05 35 51.6**	**+1.0**
KMNR	**Kamenistaya**	**2.24**	**301**	*e*P	**Pn**	**05 35 24.4**	**+0.1**
SMKR	**Semkarok**	**2.29**	**328**	*e*P	**Pn**	**05 35 24.5**	**-0.5**
SMKR				*e*S	**Sn**	**05 35 52.7**	**+0.1**
KIRR	**Kirishev**	**2.29**	**306**	*e*P	**Pn**	**05 35 25.3**	**+0.3**
KIRR				*e*S	**Sn**	**05 35 53.5**	**+0.9**
KRSR	**Krestovskiy**	**2.35**	**313**	*e*P	**Pn**	**05 35 25.6**	**-0.2**
KPT	**Kopyto**	**2.36**	**305**	*e*P	**Pn**	**05 35 26.3**	**+0.4**
KPT				*e*S	**Sn**	**05 35 55.2**	**+1.0**
KLY	**Klyuchi**	**2.38**	**315**	*e*P	**Pn**	**05 35 24.9**	**-1.3**
KLY				*e*S	**Sn**	**05 35 52.7**	**-2.1**
SRKR	**Sorokina**	**2.44**	**326**	*e*P	**Pn**	**05 35 26.3**	**-0.8**
SRKR				*e*S	**Sn**	**05 35 55.9**	**-0.5**
KOZ	**Kozyrevsk**	**2.57**	**305**	*e*P	**Pn**	**05 35 29.5**	**+0.7**
KOZ				*e*S	**Sn**	**05 36 00.1**	**+0.6**
SRDR	**Sredinnyy**	**2.79**	**308**	*e*P	**Pn**	**05 35 32.0**	**+0.2**
SRDR				*e*S	**Sn**	**05 36 04.8**	**0.0**
SDLR	**Sedlovina**	**3.13**	**246**	*e*P	**Pn**	**05 35 37.2**	**+0.7**
SDLR				*e*S	**Sn**	**05 36 12.8**	**-0.6**
SMAR	**Somma**	**3.19**	**246**	*e*P	**Pn**	**05 35 38.4**	**+1.2**
SMAR				*e*S	**Sn**	**05 36 14.6**	**-0.1**
PET	**Petropavlovsk**	**3.38**	**243**	*e*S	**Sn**	**05 36 18.4**	**-1.1**
GNL	**Ganaly**	**3.49**	**256**	*e*P	**Pn**	**05 35 43.0**	**+1.6**
RUS	**Russkaya**	**3.79**	**236**	*e*P	**Pn**	**05 35 44.5**	**-1.0**
RUS				*e*S	**Sn**	**05 36 27.4**	**-2.1**
PETK	**Petropavlovsk-**	**3.85**	**249**	Pn	**Pn**	**05 35 47.7**	**+1.4**
	1.0nm,0.3s,baz=79,slow=17,SNR=9.0						
PETK				Sn	**Sn**	**05 36 31.6**	**+0.7**
	1.0nm,0.3s,baz=28,slow=12,SNR=6.9						
MKAR	**Makanchi Array**	**49.36**	**296**	P	**P**	**05 43 35.6**	**-0.4**
	0.4nm,0.6s,mb3.6,baz=60,slow=7.3,SNR=6.1						
BVAR	**Borovoye Array**	**51.05**	**309**	P	**P**	**05 43 47.9**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=52,slow=9.7,SNR=4.5						
TXAR	**Lajitas Array**	**68.11**	**70**	P	**P**	**05 45 51.6**	**+5.0**
	0.2nm,0.8s,mb3.2,baz=306,slow=5.1,SNR=2.7						
ASAR	**Alice Springs**	**82.08**	**207**	P	**P**	**05 47 11.0**	**+3.9**
	0.1nm,0.3s,mb3.2,baz=15,slow=5.0,SNR=4.0						

BJI ***27*** *05:51:09.0, 56°.60S×147°.40E, h10km, mB5.9/27, mb5.5/19, Ms5.6/30, Ms7 5.4/27*
ISCJB ***27*** *05:51:10.9±0.2, 56°.61S±0°.04×147°.52E±0°.08, h13km, mb5.4/52, MS5.6/240, Error ellipse: s-maj=6.7km s-min=4.7km az=23.6*
IDC ***27*** *05:51:10.5±0.4, 56°.60S×147°.48E, h0km, mb4.9/12, mb1 5.0/13

STKA Stephens Creek 25.08 348 *eP* **P 05 56 36.6 0.0**
comp=Z,110nm,0.9s,mb5.4
STKA *eS* **S 06 01 03.1 +1.9**
STKA Stephens Creek 25.08 348 P **P 05 56 36.8 +0.2**
comp=Z,110nm,0.8s,mb5.4,baz=163,slow=9.5,SNR=91
STKA S **S 06 01 01.6 +0.4**
comp=Z,2.9nm,0.9s,baz=168,slow=23,SNR=1.8
STKA LR LR 06 04 00.6
comp=Z,8μm,19.8s,MS5.2,baz=172,slow=31
STKA Stephens Creek 25.08 348 *eP* **P 05 56 36.6 +0.1**
comp=Z,52nm,1.1s,mb5.0
ARMA Armidale 26.35 8 *eP* **P 05 56 48.2 +0.1**
ARMA *eS* **S 06 01 26.9 +5.5**
ARMA Armidale 26.35 8 *eP* **P 05 56 48.5 +0.4**
comp=Z,184nm,1.7s,mb5.3
URZ Urewera 26.85 59 P **P 05 56 50.9 -1.6**
comp=Z,121nm,1.3s,mb5.3,baz=245,slow=6.0,SNR=14
URZ S **S 06 01 36.6 +7.5**
comp=Z,7.3nm,1.0s,baz=180,slow=7.0,SNR=1.7
URZ LR LR 06 07 19.4
comp=Z,13μm,18.0s,MS5.5,baz=214,slow=36
URZ Urewera 26.85 59 *eP* **P 05 56 51.1 -1.4**
comp=Z,280nm,1.5s,mb5.6
MIR Mirnyy 26.85 226⇑ *iP* **P 05 56 53.0 +0.7**
MIR *i* 05 57 34.0
MIR *eS* **S 06 01 24.0 -4.7**
MIR pmax pmax
comp=Z,82nm,1.4s,mb5.1
MIR pmax pmax
comp=Z,2μm,10.0s
MIR pmax pmax
comp=E,2μm,11.0s
MIR smax
comp=N,2μm,11.0s
MIR smax
comp=E,4μm,14.0s
MIR MLR MLR
comp=N,10μm,14.0s,MS5.7
MIR MLR MLR
comp=E,9μm,14.0s,MS5.7
MIR MLR MLR
comp=Z,10μm,14.0s,MS5.5
OUZ Omahuta 27.76 51 *eP* **P 05 57 01.2 +0.5**
comp=Z,406nm,2.2s,mb5.7
FORT Forrest 29.20 324⇑ *iP* **P 05 57 12.6 -1.0**
comp=Z,78nm,0.9s,mb5.4
FORT Forrest 29.20 324 *eP* **P 05 57 12.8 -0.8**
comp=Z,672nm,1.8s,mb6.1
EIDS Eidsvold 31.33 6 *eP* **P 05 57 32.2 -0.3**
comp=Z,433nm,1.8s,mb6.0
NWAO Narrogin (SRO) 31.53 306 LR LR 06 07 21.2
comp=Z,102nm,21.5s,baz=190,slow=31
NWAO Narrogin (SRO) 31.53 306 PFAKE 05 57 50.0 +16
NWAO LR LR
comp=Z,15μm,20.0s,MS5.7
KLBR Kellerberrin 32.44 308 *eP* **P 05 57 40.6 -1.6**
comp=Z,42nm,0.7s,mb5.4
QSPA South Pole Qui 33.48 180 P **P 05 57 50.3 -0.5**
comp=Z,11nm,0.9s,mb4.8,baz=336,slow=2.0,SNR=13
QSPA S **S 06 03 02.2 -10**
comp=Z,0.9nm,0.9s,baz=338,slow=20,SNR=1.9
QSPA LR LR 06 11 31.6
comp=Z,10μm,20.5s,MS5.5,baz=197,slow=36
QSPA South Pole Qui 33.48 180 *eP* **P 05 57 49.7 -1.1**
comp=Z,34nm,1.1s,mb5.2
QSPA LR LR
comp=Z,12μm,21.0s,MS5.6
ASAR Alice Springs 34.39 338 P **P 05 57 58.3 -0.9**
comp=Z,20nm,0.8s,mb5.1,baz=166,slow=9.4,SNR=145
ASAR PcP PcP 06 00 34.0 -0.9
comp=Z,8.4nm,1.0s,baz=154,slow=3.3,SNR=7.9
CTA Charters Tower 36.49 358⇑ *iP* **P 05 58 17.1 -0.2**
comp=Z,44nm,0.9s,mb5.4
CTA *e*PP PP 05 59 42.4 +2.2
CTA *eS* **S 06 04 00.6 +1.0**
CTA Charters Tower 36.49 358 LR LR 06 12 03.4
comp=Z,28μm,18.3s,MS6.1,baz=181,slow=34
CTAO Charters Tower 36.49 358 *eP* **P 05 58 17.3 0.0**
CTAO pmax pmax
comp=Z,86nm,1.0s,mb5.6
CTAO MLR MLR
comp=Z,27μm,19.0s,MS6.0
CTAO Charters Tower 36.49 358 *eP* **P 05 58 17.3 0.0**
comp=Z,86nm,1.0s,mb5.6
CTAO LR LR
comp=Z,27μm,19.0s,MS6.0
DZM Mont Dzumac 37.22 30 *eP* **P 05 58 24.2 +0.7**
comp=Z,259nm,1.6s,mb5.8
DZM *eS* **S 06 04 09.8 -0.9**
comp=Z,3μm,25.1s
DZM *e*LQ 06 06 51.9
comp=Z,5μm,28.4s
DZM *e*LR LR 06 08 25.0
comp=Z,39μm,25.8s,baz=206
DZM Mont Dzumac 37.22 30 *eP* **P 05 58 23.5 -0.1**
DZM Mont Dzumac 37.22 30 *eP* **P 05 58 23.4 -0.1**
comp=Z,243nm,1.6s,mb5.8
MAW Mawson 37.86 218 *eP* **P 05 58 28.6 +0.2**
comp=Z,10nm,0.8s,mb4.6
MAW *eS* **S 06 04 20.4 +0.8**
MAW Mawson 37.86 218 P **P 05 58 29.3 +0.8**
comp=Z,16nm,0.9s,mb4.7,baz=127,slow=9.5,SNR=8.1
MAW LR LR 06 13 34.5
comp=Z,13μm,18.3s,MS5.8,baz=88,slow=36
MAW Mawson 37.86 218 *eP* **P 05 58 29.6 +1.2**
MAW pmax pmax
comp=Z,5.0nm,0.9s
MAW MLR MLR
comp=Z,23μm,22.0s
MAW Mawson 37.86 218 *eP* **P 05 58 29.6 +1.2**
comp=Z,4.9nm,0.9s,mb4.2
MAW LR LR
comp=Z,23μm,22.0s,MS5.9
WRAB Tennant Creek 37.92 340 P **P 05 58 28.0 -1.5**
comp=Z,514nm,0.7s,mb6.4,SNR=46
WRAB Tennant Creek 37.92 340 *eP* **P 05 58 28.2 -1.3**
WRAB pmax pmax
comp=Z,498nm,2.0s,mb5.9
WRAB MLR MLR
comp=Z,7μm,19.0s,MS5.5
WRAB Tennant Creek 37.92 340 *eP* **P 05 58 28.2 -1.3**
comp=Z,498nm,2.0s,mb5.9
WRAB LR LR
comp=Z,7μm,19.0s,MS5.5
MBWA Marble Bar 40.93 318 *eP* **P 05 58 53.3 -1.3**
comp=Z,100nm,1.2s,mb5.3
MBWA LR LR
comp=Z,11μm,20.0s,MS5.7
FITZ Fitzroy Crossi 41.82 328⇑ *iP* **P 05 59 00.9 -0.9**
comp=Z,66nm,1.1s,mb5.2
FITZ *e*PP PP 06 00 39.1 +0.7
FITZ *eS* **S 06 05 17.3 -2.4**
FITZ *e*SS SS 06 08 11.4 -14
FITZ Fitzroy Crossi 41.82 328 LR LR 06 14 37.5
comp=Z,6μm,18.4s,MS5.5,baz=167,slow=34
FITZ Fitzroy Crossi 41.82 328 *eP* **P 05 59 01.0 -0.8**
comp=Z,81nm,1.2s,mb5.2
COEN Coen 42.71 354 *eP* **P 05 59 08.5 -0.6**
comp=Z,2μm,1.8s,mb6.4
PAF Port-aux-Franc 44.77 245 PFAKE 05 59 40.0 +15
PAF LR LR
comp=Z,11μm,20.0s,MS5.8
MSVF Nonsavu 45.09 43 PFAKE 05 59 40.0 +12
MSVF LR LR
comp=Z,6μm,21.0s,MS5.5
KAKA Kakadu 45.33 339 *eP* **P 05 59 27.3 -2.9**
comp=Z,54nm,0.8s,mb5.4
KAKA Kakadu 45.33 339 *eP* **P 05 59 28.3 -1.8**
comp=Z,200nm,0.9s,mb6.0
NVL N'lazarevskaya 49.06 198⇓ *iP* **P 06 00 02.6 +3.9**
NVL *e**PP pP 06 00 08.0 +7.5
NVL *e* 06 01 53.3
NVL *e*SS SS 06 10 26.7 -6.7
NVL pmax pmax
comp=Z,66nm,1.1s,mb5.6
NVL MLR MLR
comp=Z,30μm,17.0s,MS6.3
MAIT Maitri 49.07 198 *eP* **P 05 59 58.1 -0.7**
VNA2 Neumayer--Watz 51.51 190 *eP* **P 06 00 19.6 +2.4**
VNA2 *e* pP 06 00 20.8 +1.8
VNA2 *e* 06 00 23.8
VNA1 Neumayer--Stat 51.85 190 *eP* **P 06 00 18.3 -1.5**
RAR Rarotonga 52.26 70 PFAKE 06 00 40.0 +17
RAR LR LR
comp=Z,5μm,20.0s,MS5.6
AFI Afiamalu 52.71 53 LR LR 06 21 06.1
comp=Z,2μm,18.1s,MS5.1,baz=204,slow=34
AFI Afiamalu 52.71 53 PFAKE 06 00 40.0 +13
AFI LR LR
comp=Z,3μm,21.0s,MS5.3
FUNA Funafuti 53.99 40 PFAKE 06 00 50.0 +14
FUNA LR LR
comp=Z,13μm,20.0s,MS6.0
KAPI Kappang 55.97 326 P **P 06 00 49.7 -0.8**
comp=Z,378nm,1.3s,mb6.3,SNR=5.5
KAPI Kappang 55.97 326 LR LR 06 25 31.5
comp=Z,4μm,18.4s,MS5.5,baz=272,slow=37
KAPI Kappang 55.97 326 PFAKE 06 01 00.0 +10
KAPI LR LR
comp=Z,4μm,19.0s,MS5.5
PMSA Palmer Station 56.56 164 PFAKE 06 01 10.0 +16
PMSA LR LR
comp=Z,6μm,19.0s,MS5.7
COCO West Island 58.84 298 PFAKE 06 01 20.0 +9.2
COCO LR LR
comp=Z,4μm,19.0s,MS5.6
PPT Papeete 60.66 77 *eS* **S 06 09 38.3 -1.8**
comp=Z,3μm,26.2s
PPT *e*SS SS 06 13 39.2 +1.0
comp=Z,404nm,26.5s
PPT *e*LQ 06 16 41.4
comp=Z,8μm,26.0s
PPT *e*LR LR 06 19 16.0
comp=Z,3μm,23.2s,baz=219
PPT Papeete 60.66 77 LR LR 06 21 14.8
comp=Z,2μm,20.1s,MS5.2,baz=220,slow=30
TIAR Tiarei 60.79 77 *eP* **P 06 01 25.9 +1.7**
comp=Z,83nm,1.3s,mb5.7
TARA Tarawa 61.34 29 *eP* **P 06 01 27.9 -0.1**
comp=Z,44nm,0.6s,mb5.8
TARA LR LR
comp=Z,7μm,20.0s,MS5.8
RKT Rikitea 64.20 93 *eS* **S 06 10 25.2 +0.7**
comp=Z,2μm,26.5s
RKT *e*SS SS 06 14 34.4 +1.1
comp=Z,870nm,29.5s
RKT *e*LQ 06 18 02.7
comp=Z,7μm,30.2s
RKT *e*LR LR 06 20 39.7
comp=Z,5μm,30.2s,baz=217
KSM Kuching 65.23 318 P **P 06 01 54.8 +1.1**
KSM Kuching 65.23 318 *eP* **P 06 01 53.4 -0.4**
comp=Z,48nm,0.9s,mb5.5
KSM LR LR
comp=Z,3μm,20.0s,MS5.4
TSM Tawau 65.34 327 P **P 06 01 55.5 +1.1**
SBUM Sibu 65.45 321 P **P 06 01 55.5 +0.3**
DAV Davao City (W) 65.98 336 LR LR 06 30 55.6
comp=Z,2μm,18.0s,MS5.3,baz=130,slow=36
DAV Davao City (W) 65.98 336 PFAKE 06 02 10.0 +12
DAV LR LR
comp=Z,2μm,19.0s,MS5.3
DAV Davao City (W) 65.98 336⇓ *eP* **P 06 01 59.4 +1.0**
SDKM Sandakan 66.82 327 P **P 06 02 05.2 +1.3**
KKM Kota Kinabalu 67.50 326 *eP* **P 06 02 06.8 -1.4**
comp=Z,79nm,1.4s,mb5.5
KKM LR LR
comp=Z,3μm,19.0s,MS5.5
MYKOM Kota Tinggi 68.04 312 P **P 06 02 13.0 +1.3**
GUMO Guam 69.98 357 LR LR 06 29 07.0
comp=Z,2μm,20.3s,MS5.3,baz=182,slow=32
GUMO Guam 69.98 357 *eP* **P 06 02 23.1 -0.4**
GUMO pmax pmax
comp=Z,209nm,1.3s,mb5.9
GUMO MLR MLR
comp=Z,2μm,21.0s,MS5.4
GUMO Guam 69.98 357 *eP* **P 06 02 23.1 -0.4**
comp=Z,209nm,1.3s,mb5.9
GUMO LR LR
comp=Z,2μm,21.0s,MS5.4
PSI Prapat 71.05 308 LR LR 06 32 45.5
comp=Z,3μm,18.3s,MS5.7,baz=144,slow=35
IPM Ipoh 71.65 310 P **P 06 02 35.4 +1.5**
KULM Kulim 72.54 310 P **P 06 02 40.7 +1.6**
KULM Kulim 72.54 310 *eP* **P 06 02 38.3 -0.8**
comp=Z,94nm,1.1s,mb5.6
KULM LR LR
comp=Z,4μm,22.0s,MS5.6
TAOE Nuku Hiva Isla 72.96 80 *eS* S 06 12 06.5 -2.4
comp=Z,190nm,30.4s
TAOE *e*LQ 06 21 32.8
comp=Z,4μm,26.7s
TAOE *e*LR LR 06 25 02.2
comp=Z,3μm,26.0s,baz=228
XMAS Kiritimati 73.33 59 PFAKE 06 03 00.0 +16
XMAS LR LR
comp=Z,3μm,20.0s,MS5.6
RER Riviere de l'E 73.55 257 PFAKE 06 03 00.0 +15
RER LR LR
comp=Z,3μm,20.0s,MS5.6
RPN Rapa Nui 74.59 116 LR LR 06 28 28.9
comp=Z,2μm,18.5s,MS5.5,baz=38,slow=30
DGAR Diego Garcia 75.63 278 PFAKE 06 03 10.0 +13
DGAR LR LR
comp=Z,2μm,20.0s,MS5.4
WAKE Wake Island 77.31 19 PFAKE 06 03 20.0 +13
WAKE LR LR
comp=Z,2μm,21.0s,MS5.4
PLCA Paso Flores 77.82 151 P **P 06 03 07.8 -1.6**
comp=Z,11nm,1.2s,mb4.7,baz=184,slow=7.5,SNR=5.6
PLCA Paso Flores 77.82 151 *eP* **P 06 03 08.4 -1.0**
PLCA pmax pmax
comp=Z,160nm,2.2s
PLCA MLR MLR
comp=Z,4μm,19.0s
PLCA Paso Flores 77.82 151 *eP* **P 06 03 08.4 -0.9**
comp=Z,160nm,2.2s,mb5.6
PLCA LR LR
comp=Z,4μm,19.0s,MS5.8
ABPO Ambohimpanom 79.83 251 *eP* **P 06 03 22.8 +2.1**
ABPO pmax pmax
comp=Z,51nm,1.3s,mb5.3
ABPO MLR MLR
comp=Z,2μm,21.0s,MS5.5
ABPO Ambohimpanom 79.83 251 *eP* **P 06 03 22.8 +2.1**
comp=Z,51nm,1.3s,mb5.3
ABPO LR LR
comp=Z,2μm,21.0s,MS5.5
SUR Sutherland 80.52 223 *eP* **P 06 03 25.1 +0.9**
comp=Z,56nm,1.0s,mb5.5
SUR LR LR
comp=Z,4μm,20.0s,MS5.8
JOHN Johnston Islan 81.42 41 PFAKE 06 03 40.0 +11
JOHN LR LR
comp=Z,4μm,20.0s,MS5.8
QIZ Qiongzhong 81.73 324 P **P 06 03 29.5 -1.1**
QIZ pP pP 06 03 33.0 +0.5
QIZ sP sP 06 03 41.5 +8.3
QIZ S S 06 13 34.0 -10
QIZ pmax pmax
comp=Z,15nm,1.6s,mb4.7
QIZ pmax pmax
comp=Z,480nm,7.7s
QIZ LR LR
comp=N,750nm,18.5s
QIZ LR LR
comp=Z,2μm,24.1s
BOSA Boshof 82.08 229 P **P 06 03 32.8 +0.1**
comp=Z,14nm,0.9s,mb4.9,baz=144,slow=5.3,SNR=9.1
BOSA LR LR 06 35 13.3
comp=Z,2μm,18.8s,MS5.6,baz=156,slow=32
BOSA Boshof 82.08 229 *eP* **P 06 03 32.6 0.0**
BOSA pmax pmax
comp=Z,34nm,1.3s,mb5.1
BOSA MLR MLR
comp=Z,2μm,20.0s,MS5.5
BOSA Boshof 82.08 229 *eP* **P 06 03 32.6 -0.1**
comp=Z,34nm,1.3s,mb5.1
BOSA LR LR
comp=Z,2μm,20.0s,MS5.5
NST Nakhon Sawan 82.13 314 P **P 06 03 31.2 -1.6**
TRQA Tornquist 82.43 157 *eP* **P 06 03 33.5 -0.8**
comp=Z,34nm,1.5s,mb5.1
TRQA LR LR
comp=Z,3μm,21.0s,MS5.6
YULB Yu-li 82.72 336 *eP* **P 06 03 34.5 -1.2**
TPUB Ta-pu 82.79 335 *eP* **P 06 03 34.7 -1.3**
comp=Z,55nm,1.3s,mb5.4
CBIJ Chichi jima 83.50 355 LR LR 06 40 13.0
comp=Z,1μm,21.5s,MS5.2,baz=296,slow=35
PALK Pallekele 83.61 293 *i* P **P 06 03 45.4 +4.8**
GZH Guangzhou 84.47 329 P **P 06 03 45.5 +0.8**
GZH S S 06 14 12.3 +0.9
GZH LR LR
comp=N,1μm,22.6s,MS5.3
GZH LR LR
comp=E,440nm,17.7s,MS5.3
GZH LR LR
comp=Z,2μm,23.8s
JOW Kunigami 84.71 343 P **P 06 03 45.0 -0.8**
comp=Z,9.1nm,0.8s,mb5.0,baz=130,slow=7.9,SNR=3.1
JOW Kunigami 84.71 343 P **P 06 03 45.0 -0.8**
QZH Quanzhou 84.85 334⇓ *iP* **P 06 03 49.3 +2.7**
QZH PP PP 06 07 02.3 -1.1
QZH S S 06 14 17.3 +2.3
QZH SS SS 06 19 41.0 -7.1
QZH pmax pmax
comp=Z,1μm,4.3s
QZH LR LR
comp=N,1μm,16.1s,MS5.5
QZH LR LR
comp=E,1μm,17.8s,MS5.5
QZH LR LR
comp=Z,2μm,22.4s,MS5.4
LBTB Lobatse 85.10 231 *eP* **P 06 03 48.4 +0.2**
LBTB pmax pmax
comp=Z,23nm,1.1s,mb5.2
LBTB MLR MLR
comp=Z,2μm,19.0s,MS5.6
LBTB Lobatse 85.10 231 *eP* **P 06 03 48.4 +0.3**
comp=Z,23nm,1.1s,mb5.2
LBTB LR LR
comp=Z,2μm,19.0s,MS5.6
CM31 Chiang Mai Arr 85.12 314 PFAKE 06 04 00.0 +12
CM31 LR LR
comp=Z,3μm,20.0s,MS5.6
CMAR Chiang Mai Arr 85.12 314 P **P 06 03 48.0 0.0**
comp=Z,10nm,1.0s,mb4.9,baz=180,slow=3.9,SNR=25
CMAR PP PP 06 07 06.9 +1.3
comp=Z,0.8nm,0.3s,baz=169,slow=7.0,SNR=4.5
CMAR LR LR 06 39 31.4
comp=Z,3μm,20.2s,MS5.7,baz=165,slow=34
CMAR Chiang Mai Arr 85.12 314 P **P 06 03 48.1 0.0**
CMAR 06 07 06.9
CHG Chiang Mai 85.44 315⇑ P **P 06 03 49.1 -0.6**
comp=Z,30nm,1.5s,mb5.2
CHTO Chiang Mai 85.44 315 *eP* **P 06 03 48.8 -0.9**
CHTO pmax pmax
comp=Z,33nm,1.1s,mb5.4
CHTO MLR MLR
comp=Z,2μm,20.0s,MS5.6
CHTO Chiang Mai 85.44 315 *eP* **P 06 03 48.8 -0.9**
comp=Z,33nm,1.1s,mb5.4
CHTO LR LR
comp=Z,2μm,20.0s,MS5.6
MSEY Mahe Island 87.25 266 PFAKE 06 04 10.0 +11
MSEY LR LR
comp=Z,2μm,19.0s,MS5.5
LCO Las Campanas 88.76 147 PFAKE 06 04 20.0 +14
LCO LR LR
comp=Z,1μm,20.0s,MS5.4
MIDW Midway 89.60 31 PFAKE 06 04 20.0 +11
MIDW LR LR
comp=Z,3μm,22.0s,MS5.7
JHJ Hachijo jima 2 89.63 354 LR LR 06 40 16.4
comp=Z,3μm,21.8s,MS5.7,baz=256,slow=33
GYA Guiyang 89.68 324 P **P 06 04 09.3 -0.6**
GYA PP PP 06 07 40.8 -1.5
GYA SKS 06 14 37.8
GYA S S 06 15 00.0 -1.5
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.9
GYA pmax pmax
comp=Z,340nm,6.3s
GYA LR LR
comp=N,810nm,28.3s,MS5.2
GYA LR LR
comp=E,930nm,31.1s,MS5.2
GYA LR LR
comp=Z,2μm,27.1s,MS5.3
KMI Kunming 89.78 320 P **P 06 04 11.3 +0.9**
KMI pP pP 06 04 15.5 +3.2
KMI sP sP 06 04 17.3 +4.3
KMI PP PP 06 07 46.3 +3.2
KMI SKS 06 14 40.5
KMI S S 06 15 04.3 +1.9
KMI sS sS 06 15 11.3 +5.6
KMI pmax pmax
comp=Z,18nm,1.5s,mb5.2
KMI pmax pmax
comp=Z,420nm,6.3s
KMI LR LR
comp=N,2μm,21.3s,MS5.7
KMI LR LR
comp=E,1μm,21.3s,MS5.7
KMI LR LR
comp=Z,4μm,16.7s,MS5.9
POHA Pohakuloa 89.78 52 PFAKE 06 04 20.0 +9.4
POHA LR LR
comp=Z,4μm,22.0s,MS5.8
SSE Sheshan 90.19 338 P **P 06 04 14.5 +2.3**
SSE PP PP 06 07 47.5 +1.2
SSE S S 06 15 09.8 +3.8
SSE pmax pmax
comp=Z,21nm,0.7s,mb5.6
SSE pmax pmax
comp=Z,200nm,6.7s
SSE LR LR
comp=N,1μm,19.8s,MS5.4
SSE LR LR
comp=E,500nm,20.2s,MS5.4
SSE LR LR
comp=Z,2μm,19.8s,MS5.5
KIP Kipapa 90.19 49 PFAKE 06 04 20.0 +7.5
KIP LR LR
comp=Z,2μm,19.0s,MS5.6
NJ2 Nanjing 91.61 336 *eP* **P 06 04 16.3 -2.5**
NJ2 pP pP 06 04 20.5 -0.2
NJ2 sP sP 06 04 23.5 +2.1
NJ2 PP PP 06 07 56.5 -1.1
NJ2 SKS 06 14 51.5
NJ2 S S 06 15 13.0 -6.0
NJ2 SS SS 06 21 20.0 -6.6
NJ2 pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
NJ2 pmax pmax
comp=Z,310nm,4.4s
NJ2 LR LR
comp=N,1μm,16.9s,MS5.5
NJ2 LR LR
comp=E,940nm,19.6s,MS5.5
LSZ Lusaka 92.46 237 LR LR 06 38 51.7
comp=E,6μm,22.0s,MS6.0,baz=141,slow=31
LSZ Lusaka 92.46 237 *eP* **P 06 04 24.9 +1.6**
LSZ pmax pmax
comp=Z,18nm,1.2s,mb5.3
LSZ MLR MLR
comp=Z,5μm,22.0s,MS6.0
LSZ Lusaka 92.46 237 *eP* **P 06 04 24.9 +1.6**
comp=Z,18nm,1.2s,mb5.3
LSZ LR LR
comp=Z,5μm,22.0s,MS6.0
MJAR Matsushiro Arr 93.14 353 P **P 06 04 25.0 -0.7**
comp=Z,2.5nm,0.9s,mb4.7,baz=188,slow=5.9,SNR=6.1
MJAR LR LR 06 43 28.1
comp=Z,992nm,21.2s,MS5.2,baz=160,slow=34
MAJO Matsushiro 93.14 353 *eP* **P 06 04 25.7 0.0**
MAJO pmax pmax
comp=Z,11nm,1.0s,mb5.2
MAJO MLR MLR
comp=Z,2μm,21.0s,MS5.5
MAJO Matsushiro 93.14 353 *eP* **P 06 04 25.7 0.0**
comp=Z,11nm,1.0s,mb5.2
MAJO LR LR
comp=Z,2μm,21.0s,MS5.5
MAT Matsushiro 93.14 353 P **P 06 04 25.0 -0.7**
MAT S S 06 15 36.0 +3.6
CAL Calcutta 93.19 307 *ex* **P 06 04 26.0 -0.3**
CAL *i x* x 06 07 54.1
HYB Hyderabad 93.35 297 *i* P **P 06 04 28.0 +0.9**
TSUM Tsumeb 93.60 227 PFAKE 06 04 40.0 +12
TSUM LR LR
comp=Z,3μm,20.0s,MS5.8
SHL Shillong 94.34 312 *eP* **P 06 04 32.0 +0.4**
SHL *eS* PP 06 08 19.0 -0.1
CPUP Villa Florida 94.74 158 P **P 06 04 32.7 -1.0**
comp=Z,1.0nm,0.7s,mb4.4,baz=166,slow=5.7,SNR=4.8
CPUP Villa Florida 94.74 158 *eP* **P 06 04 32.4 -1.2**
CPUP pmax pmax
comp=Z,21nm,1.1s

CPUP MLR MLR
comp=Z,409nm,19.0s
CPUP Villa Florida 94.74 158 *e*P **P 06 04 32.4 -1.2**
comp=Z,21nm,1.1s,mb5.5
CPUP LR LR
comp=Z,409nm,19.0s,MS4.9
CD2 Chengdu 94.75 323 P **P 06 04 36.0 +2.7**
CD2 pP pP 06 04 40.8 +5.6
CD2 sP sP 06 04 42.0 +6.1
CD2 PP PP 06 08 27.0 +4.8
CD2 SKS 06 15 09.8
CD2 S S 06 15 47.5 +0.7
CD2 sS sS 06 15 55.0 +5.0
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.9
CD2 pmax pmax
comp=Z,280nm,6.0s
CD2 LR LR
comp=N,1μm,20.2s
CD2 LR LR
comp=Z,2μm,20.2s,MS5.5
KSRS Korea Array 95.17 344 P **P 06 04 35.4 +0.3**
comp=Z,1.3nm,0.9s,mb4.4,baz=64,slow=16,SNR=3.3
KSRS LR LR 06 46 44.4
comp=Z,1μm,20.5s,MS5.4,baz=168,slow=35
INCN Inchon 95.40 343 PFAKE 06 04 50.0 +14
INCN LR LR
comp=Z,2μm,20.0s,MS5.5
XAN Xi'an 96.06 329 P **P 06 04 40.8 +1.6**
XAN pP pP 06 04 44.0 +2.9
XAN sP sP 06 04 45.5 +3.7
XAN PP PP 06 08 34.0 +1.7
XAN S S 06 16 00.8 +2.8
XAN sS sS 06 16 06.5 +5.3
XAN pmax pmax
comp=Z,51nm,6.0s
XAN LR LR
comp=N,750nm,18.6s,MS5.2
XAN LR LR
comp=E,250nm,19.1s,MS5.2
XAN LR LR
comp=Z,430nm,18.6s,MS5.0
DL2 Dalian 97.65 340 P **P 06 04 45.5 -0.8**
DL2 PP PP 06 08 48.0 +3.4
DL2 SKS 06 15 23.5
DL2 S S 06 16 07.8 -3.7
DL2 pmax pmax
comp=Z,30nm,1.0s,mb5.8
DL2 pmax pmax
comp=Z,170nm,5.8s
DL2 LR LR
comp=N,500nm,24.7s,MS5.0
DL2 LR LR
comp=E,340nm,20.5s,MS5.0
DL2 LR LR
comp=Z,720nm,22.4s,MS5.1
ERM Erimo 98.33 357 PFAKE 06 05 00.0 +11
ERM LR LR
comp=Z,2μm,21.0s,MS5.6
LZH Lanzhou 99.48 325 *e*P **P 06 04 56.3 +1.7**
LZH pP pP 06 05 00.8 +4.3
LZH sP sP 06 05 03.5 +6.3
LZH PP PP 06 09 01.3 +2.6
LZH *e*S S 06 16 26.5 -0.6
LZH sS sS 06 16 34.0 +3.6
LZH pmax pmax
comp=Z,37nm,1.5s,mb5.7
LZH pmax pmax
comp=Z,140nm,4.4s
LZH LR LR
comp=N,1μm,16.0s
LZH LR LR
comp=Z,2μm,17.5s,MS5.6
BJI Beijing 99.88 336 P Pdif 06 04 58.0 +1.0
BJI LR LR
comp=N,1μm,21.9s,MS5.4
BJI LR LR
comp=E,850nm,20.4s,MS5.4
BJI LR LR
comp=Z,1μm,22.8s,MS5.3
KMBO Kilima Mbogo 100.08 252 PFAKE 06 05 10.0 +12
KMBO LR LR
comp=Z,2μm,20.0s,MS5.5
LPAZ La Paz 101.49 145 *e*P Pdif 06 05 04.9 +0.7
LPAZ pmax pmax
comp=Z,6.0nm,1.5s
LPAZ MLR MLR
comp=Z,2μm,22.0s
LPAZ La Paz 101.49 145 *e*Pdif Pdif 06 05 04.8 +0.7
comp=Z,5.5nm,1.5s
LPAZ LR LR
comp=Z,2μm,22.0s,MS5.5
HHC Hu-ho-hao-te 101.74 333 *e*P Pdif 06 05 08.0 +2.7
HHC pP 06 05 13.0
HHC SKS 06 15 46.0
HHC S Sdif 06 16 47.5 +0.3
HHC sS 06 16 55.8
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.9s
HHC LR LR
comp=N,1μm,18.4s,MS5.6
HHC LR LR
comp=E,1μm,19.6s,MS5.6
HHC LR LR
comp=Z,1μm,18.8s,MS5.5
CN2 Changchun 101.76 344 *e*P Pdif 06 05 03.5 -1.9
CN2 *es*P 06 05 10.0
CN2 *e*S Sdif 06 16 42.0 -5.4
CN2 *e*SS SS 06 23 50.8 +1.0
CN2 pmax pmax
comp=Z,90nm,9.8s
CN2 pmax pmax
comp=Z,200nm,9.0s
CN2 LR LR
comp=N,1μm,23.0s,MS5.4
CN2 LR LR
comp=E,640nm,23.0s,MS5.4
CN2 LR LR
comp=Z,1μm,23.0s,MS5.4
MDJ Mudanjiang 101.98 347 P Pdif 06 05 07.5 +1.1
MDJ PP PP 06 09 17.8 +0.3
MDJ S Sdif 06 16 51.0 +1.7
MDJ pmax pmax
comp=Z,4.0nm,0.6s
MDJ pmax pmax
comp=Z,77nm,3.6s
MDJ LR LR
comp=N,840nm,34.6s
MDJ LR LR
comp=E,1μm,41.2s
MDJ LR LR
comp=Z,1μm,36.3s,MS5.2
NNA Nana 102.41 136 PFAKE 06 05 20.0 +12
NNA LR LR
comp=Z,1μm,19.0s,MS5.5
YSS Yuzh-Sakhalins 103.28 357 PFAKE 06 05 20.0 +7.9
YSS LR LR
comp=Z,621nm,20.0s,MS5.1
SHEL Horse Pasture 104.31 207 PFAKE 06 05 30.0 +13
SHEL LR LR
comp=Z,3μm,20.0s,MS5.8
PAYG Puerto Ayora 106.55 118 PFAKE 06 09 50.0 +13
PAYG LR LR
comp=Z,3μm,19.0s,MS5.9
ULN Ulaanbaatar 109.44 332 PFAKE 06 09 50.0 +8.4
ULN LR LR
comp=Z,1μm,20.0s,MS5.5
NIL Nilore 109.54 302 PFAKE 06 09 50.0 +7.7
NIL LR LR
comp=Z,109nm,21.0s,MS4.4
SONM Songino Array 109.58 332 PP PP 06 10 13.0 -0.6
comp=Z,1.1nm,0.8s,baz=149,slow=3.1,SNR=4.4
PET Petropavlovsk 109.67 7 PFAKE 06 09 50.0 +8.2
PET LR LR
comp=Z,1μm,20.0s,MS5.5
WMQ Urumqi 111.95 318 *e*Pdif Pdif 06 05 51.5 +0.8
WMQ PKP PKiKP 06 09 47.3 +0.8
WMQ PP PP 06 10 34.5 +3.8
WMQ PKS 06 13 21.5
WMQ SKS SKSdf 06 16 58.5 -0.1
WMQ SKKS SKKSac 06 17 26.8 -5.6
WMQ S Sdif 06 18 09.3 -3.1
WMQ SS SS 06 26 08.3 0.0

WMQ AMB AMB
comp=Z,580nm,6.0s
WMQ LR LR
comp=N,1μm,23.0s,MS5.4
WMQ LR LR
comp=E,580nm,20.0s,MS5.4
WMQ LR LR
comp=Z,1μm,24.0s,MS5.4
ADK Adak 112.09 23 PFAKE 06 10 00.0 +14
ADK LR LR
comp=Z,3μm,22.0s,MS5.8
ZAK Zakamensk 112.74 331 *e*PKIKP PKiKP 06 09 47.1 -0.7
ZAK *e* 06 10 36.3
ZAK *e* 06 13 01.4
ZAK pmax pmax
comp=Z,2.0nm,1.4s
OTAV Otavalo 112.81 129 PFAKE 06 10 00.0 +11
OTAV LR LR
comp=Z,873nm,21.0s,MS5.3
KSH Kashi 113.12 307 PKP PKiKP 06 09 41.8 -7.1
TLY Talaya 113.83 332 *i* PKIKP PKiKP 06 09 40.9 -8.9
TLY *e*PPP 06 13 09.6
TLY pmax pmax
comp=Z,4.0nm,0.9s
TLY MLR MLR
comp=Z,967nm,21.0s,MS5.4
TLY Talaya 113.83 332 PFAKE 06 10 00.0 +10
TLY LR LR
comp=Z,870nm,20.0s,MS5.3
ASCN Ascension 113.96 200 PFAKE 06 10 00.0 +8.6
ASCN LR LR
comp=Z,1μm,20.0s,MS5.4
UCH Uchtor 115.97 308 PFAKE 06 10 10.0 +16
UCH LR LR
comp=Z,995nm,21.0s,MS5.4
TKM2 Tokmak 2 116.06 309 PFAKE 06 10 10.0 +16
TKM2 LR LR
comp=Z,2μm,20.0s,MS5.6
AML Almayashu 116.25 307 PFAKE 06 10 10.0 +15
AML LR LR
comp=Z,213nm,22.0s,MS4.7
AAK Ala-Archa 116.31 308 *i* PKIKP PKPdf 06 09 57.1 +2.2
AAK Ala-Archa 116.31 308 PFAKE 06 10 10.0 +15
AAK LR LR
comp=Z,1μm,19.0s,MS5.5
MKAR Makanchi Array 116.50 316 PKP PKPdf 06 09 54.7 -0.4
comp=Z,1.3nm,0.5s,baz=154,slow=2.0,SNR=12
MKAR PP PP 06 11 04.8 +1.9
comp=Z,0.9nm,0.7s,baz=124,slow=6.0,SNR=3.7
EKS2 Erkin-Say 116.64 308 PFAKE 06 10 10.0 +14
EKS2 LR LR
comp=Z,2μm,22.0s,MS5.6
RCBR Riachuelo 117.70 176 PFAKE 06 10 10.0 +11
RCBR LR LR
comp=Z,2μm,19.0s,MS5.7
JTS JuntasAbangare 118.65 117 PFAKE 06 10 10.0 +10
JTS LR LR
comp=Z,2μm,19.0s,MS5.8
YAK Yakutsk 119.13 350 PFAKE 06 10 10.0 +10
YAK LR LR
comp=Z,943nm,19.0s,MS5.4
SEY Seymchan 119.28 3 *i* PKIKP PKPdf 06 10 02.1 +2.2
BCIP Isla Barro Col 120.11 123 PFAKE 06 10 10.0 +6.9
BCIP LR LR
comp=Z,1μm,19.0s,MS5.5
SAO San Andreas Ge 120.31 68 PFAKE 06 10 10.0 +7.2
SAO LR LR
comp=Z,2μm,20.0s,MS5.7
PFO Pinyon Flat Ob 120.51 74 PFAKE 06 10 20.0 +17
PFO LR LR
comp=Z,669nm,19.0s,MS5.3
MCCM Marconi Confer 120.64 66 PFAKE 06 10 10.0 +6.6
MCCM LR LR
comp=Z,2μm,20.0s,MS5.7
EDW2 Edwards Air Fo 120.67 72 ⇓P PKPdf 06 10 05.4 +1.9
baz=121
112A Yuma 120.69 77 ⇓P PKPdf 06 10 05.8 +2.2
baz=121
TGUH Tegucigalpa,Un 120.70 113 PFAKE 06 10 20.0 +16
TGUH LR LR
comp=Z,799nm,20.0s,MS5.4
BBRC Big Bear Sol-O 120.76 74 ⇑P PKPdf 06 10 05.8 +2.1
baz=121
VES Vestal, Richgr 120.83 71 ⇑P PKPdf 06 10 05.7 +1.9
ISA Isabella 121.02 71 ⇑P PKPdf 06 10 06.6 +2.4
baz=121
BELC Belle Mtn. 121.05 74 ⇑P PKPdf 06 10 06.5 +2.2
baz=121
BC3 Big Chuckw Mtn 121.08 75 ⇓P PKPdf 06 10 06.4 +2.1
baz=121
KURK Kurchatov 121.11 316 PKP PKPdf 06 10 03.8 -0.1
comp=Z,1.0nm,0.3s,baz=133,slow=1.6,SNR=8.9
KURK Kurchatov 121.11 316 *i* PKIKP PKPdf 06 10 03.6 -0.2
KURK MLR MLR
comp=Z,2μm,26.0s,MS5.7
KURK Kurchatov 121.11 316 *e*PKPdf PKPdf 06 10 02.1 -1.7
KURK LR LR
comp=Z,1μm,22.0s,MS5.5
RCTC Rector, Farmer 121.11 70 ⇑P PKPdf 06 10 06.7 +2.3
baz=121
HOPS Hopland 121.19 66 PFAKE 06 10 20.0 +16
HOPS LR LR
comp=Z,2μm,21.0s,MS5.7
ZALV Zalesovo Beam 121.48 322 PKP PKPdf 06 10 04.5 +0.1
comp=Z,1.0nm,0.4s,baz=207,slow=1.7,SNR=2.9
IRM Iron Mountain 121.63 75 ⇓P PKPdf 06 10 07.7 +2.3
baz=122
Y12C Blythe 121.65 76 ⇑P PKPdf 06 10 07.4 +2.0
baz=122
Z13A Yuma Proving G 121.69 77 ⇓P PKPdf 06 10 07.9 +2.3
baz=122
GMRC Granite Mounta 121.83 74 ⇓P PKPdf 06 10 07.8 +2.0
baz=122
CMB Columbia Colle 121.83 68 PFAKE 06 10 20.0 +14
CMB LR LR
comp=Z,1μm,20.0s,MS5.6
DAC Darwin (Calif) 121.94 72 PFAKE 06 10 20.0 +14
DAC LR LR
comp=Z,2μm,19.0s,MS5.7
216A Three Points, 121.97 79 ⇑P PKPdf 06 10 08.3 +2.2
baz=122
Y13A Salome 122.07 76 ⇓P PKPdf 06 10 08.3 +2.1
baz=122
115A Sonoran Desert 122.08 78 ⇓P PKPdf 06 10 08.4 +2.0
baz=122
217A Green Valley 122.14 80 ⇓P PKPdf 06 10 08.4 +1.9
baz=122
Z14A Wintersburg 122.20 77 ⇑P PKPdf 06 10 08.7 +2.2
baz=122
116A Eloy 122.26 79 ⇓P PKPdf 06 10 08.8 +2.2
baz=122
318A Bisbee 122.33 81 ⇑P PKPdf 06 10 09.1 +2.2
baz=123
FURC Furnace Creek, 122.48 72 ⇑P PKPdf 06 10 09.3 +2.3
baz=123
TUC Tucson 122.57 80 PFAKE 06 10 20.0 +13
TUC LR LR
comp=Z,2μm,20.0s,MS5.7
Y14A Wickenburg 122.61 77 ⇑P PKPdf 06 10 09.6 +2.3
baz=123
WDC Whiskeytown Da 122.66 65 *e*PKIKP PKPdf 06 10 07.6 +0.4
WDC MLR MLR
comp=Z,1μm,19.0s,MS5.6
X13A Yucca 122.66 76 ⇓P PKPdf 06 10 09.6 +2.2
baz=123
319A Douglas 122.67 82 ⇑P PKPdf 06 10 09.4 +1.9
baz=123
V11A Goodsprings 122.75 73 ⇑P PKPdf 06 10 09.9 +2.4
baz=123
117A Oracle 122.79 80 ⇑P PKPdf 06 10 10.0 +2.3
baz=123
V12A Nelson 122.98 74 ⇓P PKPdf 06 10 10.2 +2.2
baz=123
Y15A Casa Rosa Ranc 122.98 77 ⇑P PKPdf 06 10 10.1 +2.1
baz=123
Z16A Peralta Trail, 123.00 78 ⇑P PKPdf 06 10 10.2 +2.1
baz=123
W13A Hualapai Mount 123.02 75 ⇓P PKPdf 06 10 10.3 +2.3
baz=123
320A Kipp Ranch, An 123.06 82 ⇓P PKPdf 06 10 10.3 +2.1
baz=123
X14A Yava 123.07 76 ⇑P PKPdf 06 10 10.5 +2.3
baz=123
219A White Tail Can 123.16 81 ⇑P PKPdf 06 10 10.7 +2.2
baz=123
NVAR Mina Array Bea 123.20 69 PKP PKPdf 06 10 09.4 +1.1

comp=Z,1.0nm,0.7s,baz=221,slow=2.3,SNR=7.9
BEKR Beckwourth 123.22 67 ⇓P PKPdf 06 10 10.4 +2.1
baz=124
118A Homack Ranch, 123.26 80 ⇑P PKPdf 06 10 10.6 +2.0
baz=124
Y16A Circle Bar Ran 123.39 78 ⇑P PKPdf 06 10 10.9 +2.1
baz=124
X15A Humboldt 123.44 77 ⇓P PKPdf 06 10 11.1 +2.2
baz=124
YBH Yreka Blue Hor 123.44 64 *e*PKIKP PKPdf 06 10 08.3 -0.3
YBH MLR MLR
comp=Z,2μm,20.0s
220A Playas Peak, P 123.49 82 ⇑P PKPdf 06 10 10.9 +1.9
baz=124
TPH Tonopah 123.50 70 PFAKE 06 10 20.0 +11
TPH LR LR
comp=Z,1μm,21.0s,MS5.5
W14A Seligman 123.53 76 ⇓P PKPdf 06 10 11.1 +2.1
baz=124
V13A Grand Canyon W 123.53 75 ⇓P PKPdf 06 10 11.1 +2.1
baz=124
Y17A Roosevelt 123.59 79 ⇑P PKPdf 06 10 11.1 +1.9
baz=124
U12A Valley of Fire 123.67 74 ⇑P PKPdf 06 10 11.7 +2.4
baz=124
S10A Tonopah Range, 123.71 71 ⇑P PKPdf 06 10 11.5 +2.2
baz=124
X16A Lo Mia Camp, P 123.81 78 ⇑P PKPdf 06 10 11.9 +2.3
baz=124
V14A Boquillas Ranc 123.84 75 ⇑P PKPdf 06 10 11.8 +2.2
baz=124
SDV Santo Domingo 123.88 133 PFAKE 06 10 20.0 +10
SDV LR LR
comp=Z,622nm,21.0s,MS5.2
T11A Corn Creek, Al 123.92 73 ⇑P PKPdf 06 10 12.2 +2.5
baz=124
120A U Bar Ranch, L 123.92 81 ⇓P PKPdf 06 10 12.1 +2.3
baz=124
S11A Rachel 123.94 72 ⇑P PKPdf 06 10 12.0 +2.3
baz=124
U13A Pakoon Wash 123.97 74 ⇓P PKPdf 06 10 12.2 +2.4
baz=124
HUMO Hull Mountain 123.97 63 *e*PKPdf PKPdf 06 10 09.2 -0.4
HUMO LR LR
comp=Z,2μm,20.0s,MS5.7
221A Mesquite Ranch 123.98 82 ⇑P PKPdf 06 10 12.1 +2.1
baz=124
X17A Forest Lakes 124.10 78 ⇓P PKPdf 06 10 12.6 +2.4
baz=124
626A Big Bend Ranch 124.10 87 ⇑P PKPdf 06 10 12.2 +1.9
baz=124
TXAR Lajitas Array 124.19 88 PKP PKPdf 06 10 11.8 +1.3
comp=Z,1.7nm,0.8s,baz=183,slow=5.4,SNR=17
TXAR Lajitas Array 124.19 88 PKP PKPdf 06 10 11.8 +1.3
Z20A Nine Sixteen R 124.37 81 ⇑P PKPdf 06 10 13.0 +2.3
baz=125
121A Cookes Peak, D 124.37 82 ⇓P PKPdf 06 10 13.0 +2.2
baz=125
U14A Mt Trumbull 124.39 75 ⇑P PKPdf 06 10 13.0 +2.4
baz=125
S12A Delamar Landin 124.39 73 ⇓P PKPdf 06 10 12.6 +2.0
baz=125
222A Williams Famil 124.42 83 ⇑P PKPdf 06 10 12.7 +1.9
baz=125
627A Terlingua Ranc 124.44 88 ⇓P PKPdf 06 10 12.7 +1.8
baz=125
T13A Saint George 124.45 74 ⇓P PKPdf 06 10 12.9 +2.1
baz=125
V15A Kaibab Nationa 124.47 76 ⇑P PKPdf 06 10 13.4 +2.6
baz=125
526A Mary Lane Ranc 124.52 87 ⇑P PKPdf 06 10 12.9 +1.8
baz=125
R11A Troy Canyon, C 124.56 71 ⇓P PKPdf 06 10 13.3 +2.4
baz=125
425A Indio Mountain 124.58 85 ⇓P PKPdf 06 10 13.2 +2.1
baz=125
Y19A Nutrioso 124.65 80 ⇑P PKPdf 06 10 13.5 +2.3
baz=125
WUAZ Wupatki 124.68 77 PFAKE 06 10 20.0 +8.8
WUAZ LR LR
comp=Z,1μm,19.0s,MS5.6
X18A Snowflake 124.70 79 ⇑P PKPdf 06 10 13.7 +2.4
baz=125
628A Black Gap, Mar 124.74 88 ⇑P PKPdf 06 10 13.4 +1.9
baz=125
MOD Modoc 124.77 65 *e*PKPdf PKPdf 06 10 12.8 +1.7
MOD LR LR
comp=Z,1μm,20.0s,MS5.6
324A Moseley Ranch, 124.81 85 ⇑P PKPdf 06 10 13.5 +1.9
baz=125
527A Woodward Ranch 124.85 87 ⇑P PKPdf 06 10 13.2 +1.5
baz=125,SNR=6.2
U15A North Rim 124.87 75 ⇑P PKPdf 06 10 14.2 +2.6
baz=125
Q11A Duckwater 124.89 71 ⇓P PKPdf 06 10 13.7 +2.2
baz=125
S13A Holt Ranch, En 124.89 73 ⇑P PKPdf 06 10 14.1 +2.5
baz=125
T14A Hurricane 124.92 74 ⇓P PKPdf 06 10 13.8 +2.1
baz=125
426A McDonald Obser 125.02 86 ⇑P PKPdf 06 10 13.8 +1.8
baz=125,SNR=6.7
Z21A St. Cloud Mine 125.02 81 ⇓P PKPdf 06 10 14.3 +2.4
baz=125
325A Bean Ranch, Si 125.03 85 ⇑P PKPdf 06 10 13.6 +1.6
baz=125
R12A Pony Springs, 125.05 72 ⇑P PKPdf 06 10 14.3 +2.4
baz=125
MNTX Cornudas Mount 125.06 84 *e*PKPdf PKPdf 06 10 11.1 -1.0
MNTX LR LR
comp=Z,674nm,20.0s,MS5.3
V17A Tonalea, Kykot 125.07 77 ⇑P PKPdf 06 10 14.2 +2.2
baz=125
K05A Summer Lake 125.08 64 ⇑P PKPdf 06 10 14.2 +2.4
baz=125,SNR=7.0
Y20A Horse Springs, 125.09 80 ⇓P PKPdf 06 10 14.3 +2.3
baz=125
BILL Bilibino 125.12 9 *i* PKIKP PKPdf 06 10 10.0 -1.0
BILL *e* 06 12 08.0
BILL *i* PS PS 06 22 00.0 -0.8
BILL pmax pmax
comp=Z,11nm,1.7s
BILL MLR MLR
comp=Z,900nm,21.0s,MS5.4
BILL Bilibino 125.12 9 *e*PKPdf PKPdf 06 10 11.4 +0.4
BILL LR LR
comp=Z,892nm,20.0s,MS5.4
BMN Battle Mountai 125.25 69 PFAKE 06 10 20.0 +7.9
BMN LR LR
comp=Z,1μm,20.0s,MS5.6
T15A Red Dirt Ranch 125.26 75 ⇑P PKPdf 06 10 14.4 +2.1
baz=126
224A Corundas Mount 125.27 84 ⇑P PKPdf 06 10 14.5 +2.1
baz=126,SNR=8.9
COR Corvallis 125.27 61 PFAKE 06 10 20.0 +8.0
COR LR LR
comp=Z,2μm,19.0s,MS5.7
R13A O'Grain Ranch, 125.28 73 ⇑P PKPdf 06 10 14.5 +2.2
baz=126
528A Cox Ranch, San 125.31 88 ⇓P PKPdf 06 10 14.3 +1.7
baz=126
P11A Circle Ranch, 125.36 70 ⇓P PKPdf 06 10 15.0 +2.7
baz=126
Z22A Elephant Butte 125.37 82 ⇑P PKPdf 06 10 14.8 +2.2
baz=126
W19A Sanders 125.45 79 ⇓P PKPdf 06 10 14.9 +2.2
baz=126
Q12A Willow Creek R 125.46 71 ⇑P PKPdf 06 10 15.3 +2.7
baz=126
427A Hayter Ranch, 125.50 87 ⇑P PKPdf 06 10 14.7 +1.8
baz=126,SNR=5.1
X20A Quemado 125.50 80 ⇓P PKPdf 06 10 15.1 +2.3
baz=126
O10A Cortez Mining, 125.52 69 ⇓P PKPdf 06 10 14.9 +2.2
baz=126
Y21A Point of Rocks 125.55 81 ⇓P PKPdf 06 10 15.3 +2.4
baz=126
SVW2 Sparrevohn 125.58 30 *e*P PKPdf 06 10 13.4 +1.3
V18A Ganado 125.60 78 ⇑P PKPdf 06 10 15.2 +2.2
baz=126
DBIC Dimbokro 125.63 215 PFAKE 06 10 30.0 +16
DBIC LR LR
comp=Z,2μm,19.0s,MS5.8
P12A McGill 125.74 71 ⇓P PKPdf 06 10 15.6 +2.5
baz=126
Z23A Rita Site, Whi 125.78 82 ⇑P PKPdf 06 10 15.7 +2.3
baz=126
124A Stringfield Ra 125.78 84 ⇑P PKPdf 06 10 15.4 +2.0

baz=126
428A Kincaid Ranch, 125.80 87 ⇓P PKPdf 06 10 15.3 +1.8
baz=126,SNR=8.5
X21A Alamocita Cree 125.82 80 ⇓P PKPdf 06 10 15.7 +2.3
baz=126
Q13A Wheeler Ranch, 125.83 72 ⇑P PKPdf 06 10 15.9 +2.6
baz=126
O11A Cowboy Ranch, 125.84 70 ⇑P PKPdf 06 10 15.9 +2.7
baz=126
U17A Shonto 125.87 76 ⇓P PKPdf 06 10 16.1 +2.6
baz=126
H04A Detroit Lake 125.88 62 ⇓P PKPdf 06 10 15.9 +2.7
baz=126
KVTX Kingsville 125.99 94 PFAKE 06 10 30.0 +16
KVTX LR LR
comp=Z,1μm,19.0s,MS5.6
WVOR Wild Horse Val 126.00 66 *e*PKIKP PKPdf 06 10 13.2 -0.3
WVOR MLR MLR
comp=Z,1μm,20.0s,MS5.5
T17A Navajo Res., N 126.09 76 ⇑P PKPdf 06 10 16.5 +2.6
baz=126
BVAR Borovoye Array 126.13 313 PKP PKPdf 06 10 14.1 +0.7
comp=Z,1.9nm,0.6s,baz=165,slow=2.3,SNR=13
LAZ Ladron 126.14 81 *e*PKPdf PKPdf 06 10 15.3 +1.3
U18A Rough Rock, Ch 126.16 77 ⇑P PKPdf 06 10 16.2 +2.2
baz=126
125A Gardner Draw, 126.19 84 ⇑P PKPdf 06 10 16.2 +2.0
baz=126
P13A Bates Ranch, G 126.20 72 ⇓P PKPdf 06 10 16.2 +2.2
baz=126,SNR=9.0
BRVK Borovoye 126.20 313 *i* PKIKP PKPdf 06 10 14.0 +0.5
BRVK MLR MLR
comp=Z,2μm,23.0s,MS5.7
BRVK Borovoye 126.20 313 *e*PKPdf PKPdf 06 10 12.7 -0.8
BRVK LR LR
comp=Z,2μm,20.0s,MS5.7
Q14A Sevier Lake (B 126.24 73 ⇓P PKPdf 06 10 16.4 +2.4
baz=126
N11A Elko Archery C 126.30 69 ⇓P PKPdf 06 10 16.6 +2.5
baz=127
Z24A Sheeppen Canyo 126.30 83 ⇓P PKPdf 06 10 16.4 +2.0
baz=126,SNR=5.4
Y23A Lovelace Mesa, 126.38 82 ⇓P PKPdf 06 10 16.8 +2.3
baz=127
O12A Currie 126.41 70 ⇓P PKPdf 06 10 16.6 +2.2
baz=127,SNR=12
U19A Dine' College, 126.42 78 ⇓P PKPdf 06 10 16.7 +2.1
baz=127
TNA Tin City 126.44 21 *e*PKPdf PKPdf 06 10 14.0 +0.4
MVU Marysvale 126.45 74 PFAKE 06 10 30.0 +15
MVU LR LR
comp=Z,2μm,19.0s,MS5.7
V20A Brimhall 126.46 79 ⇓P PKPdf 06 10 16.3 +1.7
baz=127
MSU Marysvale 126.47 74 *e*PKIKP PKPdf 06 10 15.1 +0.6
ELK Elko 126.50 70 PFAKE 06 10 30.0 +15
ELK LR LR
comp=Z,1μm,20.0s,MS5.6
126A Clayton Basin, 126.53 85 ⇓P PKPdf 06 10 16.5 +1.6
baz=127
S17A Black Ridge (B 126.56 75 ⇓P PKPdf 06 10 17.1 +2.4
baz=127
Z25A Roswell 126.62 84 ⇓P PKPdf 06 10 17.1 +2.1
baz=127
R16A Teasdale 126.67 74 ⇓P PKPdf 06 10 17.4 +2.5
baz=127
N12A Clover Valley, 126.69 70 ⇓P PKPdf 06 10 17.2 +2.3
baz=127,SNR=11
N12A Clover Valley, 126.69 70 *e*PKPdf PKPdf 06 10 15.5 +0.7
T18A Mexican Hat 126.69 77 ⇑P PKPdf 06 10 17.2 +2.2
baz=127
O13A Hicks Ranch, I 126.71 71 ⇓P PKPdf 06 10 17.3 +2.3
baz=127
Y24A Capitan 126.71 83 ⇓P PKPdf 06 10 17.4 +2.3
baz=127
M11A Holland Ranch, 126.72 69 ⇑P PKPdf 06 10 17.2 +2.3
baz=127,SNR=7.3
Q15A Fillmore 126.72 73 ⇑P PKPdf 06 10 17.6 +2.6
baz=127
J08A Circle Bar Ran 126.75 65 ⇓P PKPdf 06 10 17.5 +2.6
baz=127,SNR=6.4
I07A Izee 126.76 64 ⇑P PKPdf 06 10 17.4 +2.5
baz=127
P14A Drum Mountains 126.79 72 ⇑P PKPdf 06 10 17.7 +2.6
baz=127,SNR=5.6
L10A Juniper Basin 126.84 68 ⇓P PKPdf 06 10 17.6 +2.5
baz=127,SNR=11
CPRX Cap Rock 126.90 85 *e*PKPdf PKPdf 06 10 15.9 +0.4
V21A Milan 126.91 79 ⇑P PKPdf 06 10 17.4 +2.0
baz=127
ANMO Albuquerque 126.92 81 PFAKE 06 10 30.0 +14
ANMO LR LR
comp=Z,2μm,20.0s,MS5.7
T19A Beclabito 126.92 77 ⇑P PKPdf 06 10 17.8 +2.4
baz=127
Z26A Caprock 127.02 84 ⇑P PKPdf 06 10 17.3 +1.5
baz=127,SNR=6.9
S18A Hurst Farm, Bl 127.03 76 ⇑P PKPdf 06 10 17.8 +2.1
baz=127,SNR=11
NLWA Neilton Lookou 127.05 58 PFAKE 06 10 30.0 +15
NLWA LR LR
comp=Z,1μm,19.0s,MS5.6
J09A Fry Pan Ranch, 127.11 66 ⇑P PKPdf 06 10 17.4 +1.8
baz=127
Y25A Mesa, Roswell 127.12 83 ⇓P PKPdf 06 10 17.8 +1.9
baz=127
N13A Wendover, West 127.12 70 ⇑P PKPdf 06 10 17.9 +2.2
baz=127
K10A MacKenzie Ranc 127.14 67 ⇑P PKPdf 06 10 18.0 +2.3
baz=127
M12A Wells 127.16 69 ⇓P PKPdf 06 10 18.1 +2.4
baz=127,SNR=7.7
R17A Hanksville Air 127.19 75 ⇑P PKPdf 06 10 18.3 +2.4
baz=127,SNR=7.8
JCT Junction City 127.21 90 *e*PKIKP PKPdf 06 10 16.4 +0.2
JCT MLR MLR
comp=Z,957nm,22.0s,MS5.4
W23A Werner Place, 127.24 81 ⇓P PKPdf 06 10 18.1 +1.9
baz=128
L11A Cat Creek Ranc 127.27 68 ⇑P PKPdf 06 10 18.4 +2.4
baz=128,SNR=9.3
Q16A Castle Valley 127.31 74 ⇑P PKPdf 06 10 18.7 +2.6
baz=128,SNR=6.7
DUG Dugway 127.37 72 ⇑P PKPdf 06 10 18.7 +2.5
baz=128,SNR=13
DUG Dugway 127.37 72 *e*PKIKP PKPdf 06 10 16.9 +0.7
DUG MLR MLR
comp=Z,1μm,21.0s,MS5.6
DUG Dugway 127.37 72 *e*PKPdf PKPdf 06 10 16.9 +0.7
DUG LR LR
comp=Z,1μm,21.0s,MS5.6
V22A San Miguel Ran 127.39 80 ⇓P PKPdf 06 10 18.2 +1.8
baz=128,SNR=10
Z27A Tatum 127.47 85 ⇑P PKPdf 06 10 18.4 +1.8
baz=128
MVCO Mesa Verde 127.48 77 ⇓P PKPdf 06 10 18.9 +2.4
baz=128,SNR=17
MVCO Mesa Verde 127.48 77 *e*PKPdf PKPdf 06 10 17.7 +1.2
MVCO LR LR
comp=Z,901nm,20.0s,MS5.5
H08A Prairie City 127.49 64 ⇓P PKPdf 06 10 18.1 +1.8
baz=128
M13A Montello 127.51 70 ⇓P PKPdf 06 10 18.7 +2.3
baz=128,SNR=5.7
M13A Montello 127.51 70 *e*PKPdf PKPdf 06 10 17.1 +0.7
S19A Harvey Farm, M 127.53 77 ⇓P PKPdf 06 10 19.0 +2.4
baz=128,SNR=35
P16A Fountain Green 127.55 73 ⇑P PKPdf 06 10 18.6 +2.1
baz=128
K11A Parker Ranch, 127.57 67 ⇑P PKPdf 06 10 19.0 +2.5
baz=128,SNR=11
R18A Canyonlands Na 127.60 75 ⇓P PKPdf 06 10 19.0 +2.3
baz=128,SNR=12
O15A The Old Anders 127.61 72 ⇑P PKPdf 06 10 19.2 +2.6
baz=128
L12A House Creek Ra 127.64 69 ⇓P PKPdf 06 10 18.9 +2.3
baz=128
N14A Grayback Hills 127.65 71 ⇑P PKPdf 06 10 18.7 +2.0
baz=128,SNR=12
V23A Ortiz Mt. (NFS 127.66 80 ⇓P PKPdf 06 10 19.2 +2.3
baz=128
W24A Lazy 6 Ranch, 127.69 82 ⇑P PKPdf 06 10 19.3 +2.3
baz=128
BGU Big Grassy Mou 127.78 71 *e*PKPdf PKPdf 06 10 17.1 +0.2
D05A Enumclaw 127.79 60 ⇓P PKPdf 06 10 19.5 +2.8
baz=128
SRU San Rafael 127.79 74 ⇑P PKPdf 06 10 19.2 +2.2
baz=128,SNR=7.2
SRU San Rafael 127.79 74 *e*PKPdf PKPdf 06 10 18.5 +1.4
F07A Phinny Hill Vi 127.86 62 ⇓P PKPdf 06 10 19.3 +2.4
baz=128
R19A Curley Farm, L 127.87 76 ⇑P PKPdf 06 10 19.4 +2.1
baz=128
ABKAR Akbulak array 127.89 304 *e*PKPdf PKPdf 06 10 16.9 +0.1
G08A Pilot Rock 127.90 63 ⇓P PKPdf 06 10 19.3 +2.2
baz=128
Y27A Causey 127.93 84 ⇓P PKPdf 06 10 19.4 +1.9
baz=128
P17A Butcher Ranch, 127.94 74 ⇓P PKPdf 06 10 19.5 +2.2
baz=128
Q18A Rafter H Ranch 127.99 75 ⇓P PKPdf 06 10 20.0 +2.5
baz=128
M14A Sheep Mountain 128.04 70 ⇑P PKPdf 06 10 19.6 +2.2
baz=128,SNR=7.8
O16A Springville 128.07 73 ⇑P PKPdf 06 10 19.7 +2.2
baz=129
I10A Payette 128.12 66 ⇓P PKPdf 06 10 19.6 +2.1
baz=128
PV01 Paradox Valley 128.12 77 *e*PKPdf PKPdf 06 10 18.9 +1.2
MFID Camas Ranch 128.13 67 ⇓P PKPdf 06 10 19.7 +2.2
baz=128,SNR=7.4
PV04 Paradox Valley 128.13 76 *e*PKPdf PKPdf 06 10 18.6 +0.8
L13A Double Diamond 128.15 69 ⇓P PKPdf 06 10 19.8 +2.1
baz=128
S21A Coal Bank Pass 128.20 78 ⇓P PKPdf 06 10 20.0 +2.1
baz=128,SNR=8.6
T22A Edith 128.20 79 ⇓P PKPdf 06 10 20.4 +2.5
baz=128,SNR=19
MSTX Muleshoe 128.21 85 ⇑P PKPdf 06 10 19.9 +1.9
baz=128
W25A X Bar L Ranch, 128.21 82 ⇑P PKPdf 06 10 20.3 +2.3
baz=128,SNR=17
R20A Redvale 128.27 77 ⇓P PKPdf 06 10 20.4 +2.4
baz=128,SNR=10
P18A Preston Nutter 128.31 74 ⇓P PKPdf 06 10 20.5 +2.5
baz=129
DAU Daniels Canyon 128.35 73 *e*PKIKP PKPdf 06 10 19.1 +1.0
Q19A Hogan Spring (128.35 75 ⇑P PKPdf 06 10 20.5 +2.4
baz=129,SNR=7.8
J12A Stokes Ranch, 128.39 68 ⇓P PKPdf 06 10 20.6 +2.6
baz=129,SNR=9.8
HAWA Hanford 128.41 62 PFAKE 06 10 30.0 +12
HAWA LR LR
comp=Z,1μm,19.0s,MS5.7
I11A Placerville 128.42 66 ⇑P PKPdf 06 10 20.1 +2.0
baz=129
O17A Robinson Place 128.46 73 ⇓P PKPdf 06 10 20.4 +2.1
baz=129
L14A Malta 128.47 70 ⇑P PKPdf 06 10 20.5 +2.3
baz=129,SNR=8.8
M15A Larsen Ranch, 128.48 71 ⇑P PKPdf 06 10 20.5 +2.2
baz=129
K13A Stover Farm, H 128.48 69 ⇑P PKPdf 06 10 20.1 +1.9
baz=129
W26A Owens Ranch, T 128.50 83 ⇑P PKPdf 06 10 20.6 +2.0
baz=129
H10A Noah's Angus R 128.50 65 ⇑P PKPdf 06 10 20.2 +2.0
baz=129
TIXI Tiksi 128.65 353 *i* PKIKP PKPdf 06 10 16.6 -1.1
TIXI *e*PPP 06 15 08.5
TIXI *e* 06 17 28.2
TIXI *e*SP SP 06 22 25.8 -4.7
TIXI *e*SS SS 06 29 42.5 +0.6
TIXI pmax pmax
comp=Z,15nm,1.4s
TIXI Tiksi 128.65 353 *e*PKPdf PKPdf 06 10 17.6 -0.1
TIXI LR LR
comp=Z,1μm,21.0s,MS5.5
I12A Atlanta 128.76 67 ⇑P PKPdf 06 10 20.8 +2.0
baz=129
W27A Bowe Ranch, En 128.86 83 ⇓P PKPdf 06 10 21.3 +2.0
baz=129
Q20A Ridgley Place, 128.87 76 ⇓P PKPdf 06 10 21.3 +2.2
baz=129,SNR=8.2
K14A Jones Ranch, D 128.87 70 ⇑P PKPdf 06 10 21.1 +2.1
baz=129
L15A Malad City 128.90 71 ⇑P PKPdf 06 10 21.4 +2.3
baz=129,SNR=7.7
TRF Thorofare Moun 128.95 31 *e*PKPdf PKPdf 06 10 16.9 -1.5
HLID Hailey 128.96 68 ⇓P PKPdf 06 10 21.5 +2.4
baz=129
HLID Hailey 128.96 68 PFAKE 06 10 30.0 +11
HLID LR LR
comp=Z,999nm,21.0s,MS5.5
GNI Garni 128.96 286 PKP PKPdf 06 10 19.6 +0.3
comp=Z,3.6nm,0.4s,baz=39,slow=14,SNR=2.2
GNI Garni 128.96 286 *e*PKPdf PKPdf 06 10 18.4 -0.8
GNI LR LR
comp=Z,1μm,20.0s,MS5.5
J13A Cove Ranch, Pi 128.96 68 ⇓P PKPdf 06 10 21.4 +2.3
baz=129
P19A Cripple Cowboy 128.99 75 ⇑P PKPdf 06 10 21.6 +2.3
baz=129,SNR=9.6
HKT Hockley 128.99 94 PFAKE 06 10 30.0 +10
HKT LR LR
comp=Z,870nm,20.0s,MS5.4
V26A Tequesquite Ra 129.01 82 ⇑P PKPdf 06 10 21.6 +2.1
baz=129
HWUT Hardware Ranch 129.04 71 *e*PKPdf PKPdf 06 10 20.3 +0.9
HWUT LR LR
comp=Z,2μm,21.0s,MS5.8
MTDJ Mount Denham 129.07 120 PFAKE 06 10 30.0 +10
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.5
R22A Saguache, Gunn 129.17 78 ⇑P PKPdf 06 10 21.9 +2.2
baz=129
BPAW Bear Paw Mtn. 129.26 30 *e*PKPdf PKPdf 06 10 17.9 -1.1
K15A Arbon 129.31 70 ⇓P PKPdf 06 10 22.3 +2.5
baz=130
G11A Walters Elk Ra 129.32 65 ⇓P PKPdf 06 10 22.2 +2.5
baz=130
TOA0 Torodi Ar. Sit 129.33 225 *e*PKPdf PKPdf 06 10 18.7 -2.0
TORD Torodi Ar. Bea 129.33 225 PKP PKPdf 06 10 20.6 -0.1
comp=Z,3.4nm,1.0s,baz=162,slow=1.3,SNR=9.0
I13A Wildhorse Cree 129.36 68 ⇑P PKPdf 06 10 22.1 +2.3
baz=130
O19A Miners Draw (B 129.39 74 ⇓P PKPdf 06 10 22.4 +2.4
baz=130,SNR=14
L16A Fish Haven 129.40 71 ⇑P PKPdf 06 10 22.2 +2.2
baz=130
M17A Scullys Gap (B 129.42 72 ⇑P PKPdf 06 10 22.4 +2.3
baz=130
H12A Diamond D Ranc 129.43 67 ⇑P PKPdf 06 10 22.4 +2.4
baz=130
U26A Atchley Ranch, 129.47 82 ⇑P PKPdf 06 10 22.3 +2.0
baz=130
AMTX Amarillo 129.49 85 *e*PKPdf PKPdf 06 10 22.0 +1.6
AMTX LR LR
comp=Z,1μm,21.0s,MS5.6
SDCO Great Sand Dun 129.50 79 *e*PKPdf PKPdf 06 10 20.7 +0.3
SDCO LR LR
comp=Z,1μm,20.0s,MS5.5
Q22A Crested Butte, 129.55 77 ⇑P PKPdf 06 10 22.8 +2.4
baz=130
MCK McKinley 129.55 31 *e*PKIKP PKPdf 06 10 18.8 -0.8
AKTK Aktyubinsk 129.60 304 PKP PKPdf 06 10 19.9 -0.2
AKTO Aktyubinsk 129.60 304 PKP PKPdf 06 10 19.9 -0.2
comp=Z,6.6nm,1.3s,baz=126,slow=3.8,SNR=7.2
M18A Lyman 129.70 73 ⇓P PKPdf 06 10 23.4 +2.8
baz=130
I14A Mackay 129.71 68 ⇑P PKPdf 06 10 23.1 +2.6
baz=130
F11A Grangeville 129.72 64 ⇑P PKPdf 06 10 22.9 +2.5
baz=130
SMCO Snowmass 129.74 77 *e*PKPdf PKPdf 06 10 23.4 +2.6
H13A Challis 129.75 67 ⇓P PKPdf 06 10 23.0 +2.4
baz=130
O20A White River Ci 129.75 75 ⇑P PKPdf 06 10 23.2 +2.4
baz=130
L17A Cokeville 129.75 71 ⇓P PKPdf 06 10 22.9 +2.2
baz=130
A07A Ashnola River, 129.86 59 ⇑P PKPdf 06 10 23.4 +2.8
baz=130
D10A Wagner Farm, O 129.98 63 ⇑P PKPdf 06 10 23.7 +2.7
baz=130
L18A Fontenelle, Gr 130.07 72 ⇑P PKPdf 06 10 23.3 +2.0
baz=130
AHID Auburn Hatcher 130.11 71 PFAKE 06 10 30.0 +8.7
AHID LR LR
comp=Z,1μm,21.0s,MS5.6
G13A Cobalt 130.13 66 ⇑P PKPdf 06 10 23.6 +2.3
baz=130
K17A Gardner Place, 130.19 71 ⇑P PKPdf 06 10 23.7 +2.2
baz=130
J16A Bone 130.20 70 ⇑P PKPdf 06 10 24.2 +2.8
baz=130
N20A Spence Gulch, 130.24 74 ⇓P PKPdf 06 10 24.3 +2.6
baz=130
M19A Rock Springs 130.24 73 ⇑P PKPdf 06 10 24.4 +2.8
baz=130
GRGR Grenville 130.25 141 PFAKE 06 10 30.0 +7.5
GRGR LR LR
comp=Z,1μm,20.0s,MS5.6
I15A Monteview 130.26 69 ⇓P PKPdf 06 10 24.3 +2.8
baz=130
RRI2 Red Ridge 130.40 70 *e*PKPdf PKPdf 06 10 23.9 +2.1
L19A Farson 130.55 73 ⇓P PKPdf 06 10 24.5 +2.3
baz=131
K18A Toltan Ranch, 130.57 72 ⇓P PKPdf 06 10 24.4 +2.2
baz=131
N21A Black Mountain 130.58 75 ⇑P PKPdf 06 10 25.1 +2.8
baz=131
H15A Lima 130.61 68 ⇑P PKPdf 06 10 24.8 +2.5
baz=131
REDW Red Top Meadow 130.66 70 *e*PKPdf PKPdf 06 10 24.0 +1.7
I16A Newdale 130.69 69 ⇓P PKPdf 06 10 25.3 +2.9
baz=131
TPAW Teton Pass 130.69 70 *e*PKPdf PKPdf 06 10 23.5 +1.1
J17A Brown Place, J 130.73 70 ⇑P PKPdf 06 10 25.1 +2.6
baz=131
COLA College 130.73 31 *e*PKIKP PKPdf 06 10 22.4 +0.6
COLA MLR MLR
comp=Z,2μm,19.0s,MS5.8
M20A Sweetwater, Wa 130.74 74 ⇑P PKPdf 06 10 25.3 +2.7
baz=131
NEW Newport 130.89 62 PFAKE 06 10 30.0 +7.4
NEW LR LR
comp=Z,2μm,19.0s,MS5.7
BW06 Boulder Array 130.91 72 ⇑P PKPdf 06 10 24.8 +2.0
baz=131
BW06 Boulder Array 130.91 72 PFAKE 06 10 30.0 +7.1
BW06 LR LR
comp=Z,1μm,19.0s,MS5.7
PDAR Pinedale Array 130.91 72 PKP PKPdf 06 10 23.3 +0.4
comp=Z,0.9nm,0.7s,baz=197,slow=0.8,SNR=9.6
ISCO Idaho Springs 130.92 77 *e*PKIKP PKPdf 06 10 22.8 -0.2
ISCO MLR MLR
comp=Z,1μm,21.0s,MS5.6
WMOK Wichita Mounta 130.98 87 *e*PKIKP PKPdf 06 10 23.5 +0.2
WMOK MLR MLR
comp=Z,997nm,20.0s,MS5.5
IMW Indian Meadow 130.98 70 *e*PKPdf PKPdf 06 10 23.8 +0.9
J18A Kendall Valley 130.98 71 ⇑P PKPdf 06 10 25.5 +2.5
baz=131
NATX Nacogdoches 131.02 93 PFAKE 06 10 40.0 +17
NATX LR LR
comp=Z,900nm,22.0s,MS5.4
L20A Wamsutter 131.02 73 ⇑P PKPdf 06 10 25.6 +2.5
baz=131
G15A Dillon 131.07 68 ⇓P PKPdf 06 10 25.9 +2.8
baz=131
DLMT Dillon 131.15 67 *e*PKPdf PKPdf 06 10 24.9 +1.7
MSO Missoula 131.48 65 *e*PKPdf PKPdf 06 10 24.0 +0.2
MSO LR LR
comp=Z,1μm,20.0s,MS5.7
L21A Rawlins 131.51 74 ⇓P PKPdf 06 10 26.6 +2.6
baz=132
F15A Butte 131.53 67 ⇓P PKPdf 06 10 26.7 +2.8
baz=132
GTBY Guantanamo Bay 131.69 121 PFAKE 06 10 40.0 +15
GTBY LR LR
comp=Z,2μm,21.0s,MS5.7
LKWY Lake 131.73 69 PFAKE 06 10 40.0 +16
LKWY LR LR
comp=Z,2μm,20.0s,MS5.7
BOZ Bozeman (W) 131.84 68 PFAKE 06 10 40.0 +15
BOZ LR LR
comp=Z,1μm,21.0s,MS5.5
E15A Deer Lodge 131.85 66 ⇑P PKPdf 06 10 27.0 +2.4
baz=132
D14A Greenough 131.87 65 ⇑P PKPdf 06 10 26.9 +2.3
baz=132
COLD Coldfoot 131.88 28 *e*PKPdf PKPdf 06 10 21.4 -2.5
CHMT Chamberlain Mo 131.88 65 *e*PKPdf PKPdf 06 10 25.0 +0.4
BBGH Gun Hill 131.90 143 PFAKE 06 10 40.0 +14
BBGH LR LR
comp=Z,2μm,22.0s,MS5.8
B13A Whitefish 132.26 63 ⇑P PKPdf 06 10 27.7 +2.5
baz=132
D15A Lincoln 132.34 66 ⇑P PKPdf 06 10 27.7 +2.3
baz=133
F17A Fitzpatrick Pl 132.51 68 ⇑P PKPdf 06 10 28.4 +2.7
baz=133
SDDR Presa de Saban 132.62 126 PFAKE 06 10 40.0 +13
SDDR LR LR
comp=Z,737nm,20.0s,MS5.4
EGAK Eagle 132.62 33 *e*PKPdf PKPdf 06 10 24.8 -0.6
EGAK *e*PP PP 06 12 44.3 -6.4
EGAK LR LR
comp=Z,1μm,22.0s,MS5.7
DAWY Dawson 132.67 35 *e*PKPdf PKPdf 06 10 24.9 -0.6
KIV Kislovodsk 132.72 288 *i* PKIKP PKPdf 06 10 27.9 +1.7
KIV *e* 06 12 50.9
KIV *e*PS PS 06 23 03.8 -3.7
KIV *e*SS SS 06 30 33.1 +0.3
KIV pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 132.72 288 PFAKE 06 10 40.0 +14
KIV LR LR
comp=Z,597nm,21.0s,MS5.3
C15A Salmond Ranch, 132.78 65 ⇓P PKPdf 06 10 28.9 +2.7
baz=133
FDF Fort de France 132.84 141 PFAKE 06 10 40.0 +13
FDF LR LR
comp=Z,790nm,20.0s,MS5.4
B14A Marquette Ranc 132.85 64 ⇓P PKPdf 06 10 29.0 +2.7
baz=133
F18A Big Timber 132.99 69 ⇓P PKPdf 06 10 30.2 +3.5
baz=133
B15A Bradely Ranch, 133.17 64 ⇓P PKPdf 06 10 29.3 +2.4
baz=133
ARU Arti 133.41 310 *i* PKIKP PKPdf 06 10 27.7 +0.6
ARU 06 12 54.4
ARU SS SS 06 30 38.6 -2.2
ARU MLR MLR
comp=Z,1μm,20.0s,MS5.6
ARU Arti 133.41 310 *e*PKPdf PKPdf 06 10 28.0 +0.9
ARU LR LR
comp=Z,1μm,19.0s,MS5.6
CBKS Cedar Bluff 133.41 83 PFAKE 06 10 40.0 +12
CBKS LR LR
comp=Z,1μm,19.0s,MS5.7
A15A Johnson Ranch, 133.52 64 ⇓P PKPdf 06 10 29.4 +1.9
baz=134
VBMS Vicksburg 133.65 96 PFAKE 06 10 40.0 +12
VBMS LR LR
comp=Z,559nm,20.0s,MS5.3
OGNE Ogallala 133.66 79 PFAKE 06 10 40.0 +12
OGNE LR LR
comp=Z,1μm,19.0s,MS5.6
MIAR Mount Ida 133.72 92 PFAKE 06 10 40.0 +12
MIAR LR LR
comp=Z,708nm,20.0s,MS5.4
EGMT Eagleton 134.39 66 PFAKE 06 10 40.0 +11
EGMT LR LR
comp=Z,1μm,20.0s,MS5.6
A17A Triple J Farms 134.51 65 ⇓P PKPdf 06 10 32.3 +2.8
baz=135
UALR University of 134.56 92 *e*PKPdf PKPdf 06 10 31.2 +1.2
BRAL Brewton 134.62 101 PFAKE 06 10 40.0 +10
BRAL LR LR
comp=Z,1μm,20.0s,MS5.6
BR131 Keskin Array S 134.66 277 *e*PKPdf PKPdf 06 10 31.1 +1.0
BR131 LR LR
comp=Z,518nm,21.0s,MS5.2
BRTR Keskin Array B 134.66 277 PKP PKPdf 06 10 30.7 +0.7
comp=Z,1.3nm,0.7s,baz=150,slow=6.9,SNR=6.3
BRTR Keskin Array B 134.66 277 *i* PKIKP PKPdf 06 10 31.6 +1.6
BRTR pmax pmax
comp=Z,1.0nm,0.7s
RSSD Black Hills 134.76 74 *e*PKIKP PKPdf 06 10 30.4 +0.3
RSSD MLR MLR
comp=Z,1μm,20.0s,MS5.7
GRTK Grand Turk 134.90 125 PFAKE 06 10 40.0 +8.9
GRTK LR LR
comp=Z,816nm,20.0s,MS5.5
ISP Isparta 135.03 273 PFAKE 06 10 40.0 +9.2
ISP LR LR
comp=Z,657nm,20.0s,MS5.3
ANWB Willy Bob 135.32 138 PFAKE 06 10 40.0 +8.1

ANWB LR LR
comp=Z,738nm,21.0s,MS5.4
LAO LASA Array 135.32 70 PFAKE 06 10 40.0 +9.0
LAO LR LR
comp=Z,1µm,19.0s,MS5.7
KSU1 Kansas State U 135.34 85 PFAKE 06 10 40.0 +8.7
KSU1 LR LR
comp=Z,1µm,19.0s,MS5.7
DWPF Disney 135.34 109 PFAKE 06 10 40.0 +8.3
DWPF LR LR
comp=Z,1µm,20.0s,MS5.6
ANN Anapa 136.07 285 *i* PKIKP PKPdf 06 10 28.1 -4.4
ANN *e* 06 17 37.7
ANN pmax pmax
comp=Z,43nm,1.2s
ANN MLR MLR
comp=N,819nm,23.0s,MS5.5
ANN MLR MLR
comp=E,754nm,23.0s,MS5.5
ANN MLR MLR
comp=Z,965nm,23.0s,MS5.5
LRAL Lakeview Retre 136.20 99 PFAKE 06 10 40.0 +6.9
LRAL LR LR
comp=Z,640nm,19.0s,MS5.4
TAM Tamanrasset 136.29 235 *e*PKIKP PKPdf 06 10 36.4 +2.8
TAM MLR MLR
comp=Z,1µm,20.0s,MS5.7
PLAL Pickwick Lake 137.07 96 *e*PKPdf PKPdf 06 10 33.7 -0.9
PLAL LR LR
comp=Z,885nm,20.0s,MS5.5
INK Inuvik 137.25 33 *e*PKIKP PKPdf 06 10 33.0 -0.9
DGMT Dagmar 137.52 69 PFAKE 06 10 50.0 +15
DGMT LR LR
comp=Z,1µm,19.0s,MS5.7
CCM Cathedral Cave 137.56 90 PFAKE 06 10 50.0 +15
CCM LR LR
comp=Z,1µm,19.0s,MS5.6
SIM Simferopol' 137.95 283 *i* PKIKP PKPdf 06 10 48.6 +13
SIM *e* 06 13 25.0
SIM pmax pmax
comp=Z,16nm,0.5s
SIM pmax pmax
comp=Z,60nm,10.4s
SIM MLR MLR
comp=Z,400nm,18.3s,MS5.2
WVT Waverly 138.05 95 *e*PKIKP PKPdf 06 10 36.2 -0.2
WVT MLR MLR
comp=Z,791nm,20.0s,MS5.5
GOGA Godfrey 138.41 102 PFAKE 06 10 50.0 +13
GOGA LR LR
comp=Z,685nm,19.0s,MS5.4
ECSD EROS Data Cent 138.50 80 PFAKE 06 10 50.0 +13
ECSD LR LR
comp=Z,2µm,19.0s,MS5.8
SCIA State Center 139.14 84 PFAKE 06 10 50.0 +12
SCIA LR LR
comp=Z,2µm,20.0s,MS5.8
CPCT Cooper Cave 139.36 99 *e*PKPdf PKPdf 06 10 39.8 +0.9
NHSC New Hope 139.94 105 PFAKE 06 10 50.0 +10
NHSC LR LR
comp=Z,952nm,20.0s,MS5.5
JSC Jenkinsville 140.26 103 *e*PKIKP PKPdf 06 10 41.2 +0.7
HDIL Hopedale 140.39 89 PFAKE 06 10 50.0 +9.4
HDIL LR LR
comp=Z,1µm,19.0s,MS5.7
WCI Wyandotte Cave 140.41 94 *e*PKIKP PKPdf 06 10 39.8 -0.9
WCI MLR MLR
comp=Z,717nm,19.0s,MS5.4
YKA Yellowknife Ar 140.65 46 PKhKP 06 10 34.4
comp=Z,0.6nm,0.6s,baz=238,slow=2.9,SNR=9.5
YKA PKP PKPdf 06 10 39.5 -0.8
comp=Z,1.1nm,0.6s,baz=231,slow=2.8,SNR=16
YKA PP PP 06 13 40.7 -0.3
comp=Z,0.5nm,0.8s,baz=241,slow=6.1,SNR=4.9
YKA Yellowknife Ar 140.65 46 PKP 06 10 34.4
YKA PKP PKPdf 06 10 39.5 -0.8
YKA PP PP 06 13 40.7 -0.3
BLO Bloomington 140.96 93 *e*PKIKP PKPdf 06 10 41.9 +0.3
JFWS Jewell Farm 141.45 86 PFAKE 06 10 50.0 +7.6
JFWS LR LR
comp=Z,2µm,19.0s,MS5.9
AGMN Agassiz Refuge 141.79 75 *e*PKPpre 06 10 37.6
AGMN *e*PKPdf PKPdf 06 10 44.0 +1.1
AGMN LR LR
comp=Z,2µm,20.0s,MS5.8
KIS Kishinev 142.10 282 *e*PKIKP PKPdf 06 11 00.0 +17
KIS MLR MLR
comp=Z,1µm,20.0s,MS5.7
KIS MLR MLR
comp=Z,1µm,20.0s
FFC Flin Flon 142.30 63 *e*PKIKP PKPdf 06 10 43.5 0.0
FFC MLR MLR
comp=Z,2µm,20.0s,MS6.0
WDD Wield Dalam 142.39 257 PFAKE 06 11 00.0 +16
WDD LR LR
comp=Z,2µm,19.0s,MS5.8
VRI Vrincioaia 142.54 279 ⇓PKIKP PKPdf 06 10 42.6 -1.6
VRI Vrincioaia 142.54 279 ⇓*i*P PKPdf 06 10 42.6 -1.6
OBN Obninsk 142.71 298 *i* PKIKP PKPdf 06 10 43.6 -0.6
OBN *i* 06 13 57.8
OBN pmax pmax
comp=Z,48nm,1.5s
OBN Obninsk 142.71 298 PFAKE 06 11 00.0 +16
OBN LR LR
comp=Z,786nm,22.0s,MS5.4
MLR Muntele Rosu 142.73 278 ⇓PKHKP 06 10 40.8
MLR Muntele Rosu 142.73 278 ⇓*i*P 06 10 40.8
CNNC Cliffs of the 142.79 105 PFAKE 06 11 00.0 +15
CNNC LR LR
comp=Z,1µm,20.0s,MS5.6
BLA Blacksburg 142.90 101 PFAKE 06 11 00.0 +15
BLA LR LR
comp=Z,1µm,20.0s,MS5.6
ULM Lac du Bonnet 142.94 72 PKP PKPdf 06 10 42.2 -2.6
comp=Z,4.8nm,0.7s,baz=254,slow=3.2,SNR=6.2
ULM Lac du Bonnet 142.94 72 *e*PKPdf PKPdf 06 10 40.5 -4.3
ULM LR LR
comp=Z,2µm,19.0s,MS5.9
PHP Peshkopia 143.29 269 *e*P PKPdf 06 10 42.8 -2.9
TIR Tirane 143.38 268 PFAKE 06 11 00.0 +14
TIR LR LR
comp=Z,946nm,21.0s,MS5.5
CEL Celeste 143.40 261 PFAKE 06 11 00.0 +14
CEL LR LR
comp=Z,1µm,21.0s,MS5.6
TIP Timpagrande 143.59 263 *e*PKPdf PKPdf 06 10 43.2 -3.1
TIP PKP PKPdf 06 10 48.0 +1.7
TIP LR LR
comp=Z,1µm,19.0s,MS5.6
ACSO Alum Creek Sta 143.65 95 *e*PKPdf PKPdf 06 10 43.9 -2.5
ACSO LR LR
comp=Z,1µm,21.0s,MS5.6
PUK Puka 143.83 269 *e*P PKPdf 06 10 43.8 -2.9
EYMN Ely 143.93 78 *e*PKPdf PKPdf 06 10 43.8 -2.8
EYMN LR LR
comp=Z,2µm,21.0s,MS5.7
BCI Bajram Curri 143.95 270 *e*P PKPdf 06 10 44.2 -2.6
AKASG Malin Array Be 144.06 287 PKP PKPdf 06 10 44.2 -2.6
comp=Z,11nm,0.8s,baz=105,slow=2.3,SNR=14
AKBB Malin Array Si 144.06 287 *e*PKIKP PKPdf 06 10 44.0 -2.8
KIEV Kiev 144.07 287 *e*PKHKP 06 10 43.8
KIEV MLR MLR
comp=Z,955nm,22.0s,MS5.5
COWI Conover 144.10 82 *e*PKPdf PKPdf 06 10 44.4 -2.6
COWI LR LR
comp=Z,2µm,20.0s,MS5.8
GZR Gura Zlata 144.41 276 ⇓PKHKP PKPdf 06 10 46.1 -1.4
GZR Gura Zlata 144.41 276 ⇓*i*P PKPdf 06 10 46.1 -1.4
BURAR Bucovina Array 144.43 280 ⇑PKIKP PKPdf 06 10 46.6 -0.9
BURAR Bucovina Array 144.43 280 ⇑*i*P PKPdf 06 10 46.6 -0.9
BUR08 Bucovina Ar. S 144.46 281 *e*PKPdf PKPdf 06 10 46.5 -1.0
LTRZ Laterza 144.55 265 PKP PKPdf 06 10 46.6 -1.4
AAM Ann Arbor 144.68 92 *e*PKIKP PKPdf 06 10 47.8 -0.3
AAM MLR MLR
comp=Z,1µm,22.0s,MS5.7
MGR Morigerati 144.92 263 PKP PKPdf 06 10 44.9 -3.7
MCWV Mont Chateau 144.97 98 *e*PKPdf PKPdf 06 10 48.3 -0.4
MCWV LR LR
comp=Z,2µm,21.0s,MS5.8
KEST Kesra 145.04 251 PKPbc PKPbc 06 10 49.4 +1.0
comp=Z,26nm,1.1s,baz=238,slow=1.7,SNR=8.7
BZS Buzias 145.19 275 ⇓PKIKP PKPdf 06 10 48.7 -0.2
BZS Buzias 145.19 275 ⇓*i*P PKPbc 06 10 48.7 +0.1
CBN Corbin 145.27 103 *e*PKPdf PKPdf 06 10 50.0 +0.8
CBN LR LR
comp=Z,1µm,19.0s,MS5.6
DRGR 145.30 278 ⇓PKP2 PKPab 06 10 48.7 -0.3
DRGR 145.30 278 ⇓*i*P PKPbc 06 10 48.7 -0.2
CSSN Cassano Irpino 145.71 263 PKP PKPdf 06 10 49.8 -0.2
GLMI Grayling 145.79 88 *e*PKPdf PKPdf 06 10 51.5 +1.6
GLMI LR LR
comp=Z,1µm,20.0s,MS5.7
MRB1 Monte Rocchett 145.92 264 PKP PKPab 06 10 54.9 +3.4
LVV L'vov 146.34 283 *e*PKP2 PKPab 06 10 51.8 -1.0
SGG Gregorio Mates 146.43 263 PKP PKPdf 06 10 49.8 -1.3
ERPA Erie 146.58 95 PFAKE 06 11 00.0 +8.6
ERPA LR LR
comp=Z,1µm,19.0s,MS5.7
UZH Uzhgorod 146.61 280 *e*PKIKP PKPdf 06 10 49.6 -1.6
MIDA Miranda 146.67 264 PKP PKPdf 06 10 52.9 +1.4
SSPA Standing Stone 146.72 99 *e*PKPbc PKPbc 06 10 53.9 +0.5
SSPA LR LR
comp=Z,955nm,19.0s,MS5.6
MICGM Minsk 146.75 292 *e*P PKPdf 06 10 51.0 -0.2
RNI2 Rionero Sannit 146.77 264 PKP PKPab 06 10 56.5 +1.7
MNK Minsk 146.77 292 *e*PKIKP PKPdf 06 10 51.0 -0.3
KOLS Kolonicke sedl 146.80 280 *e*PKP2 PKPbc 06 10 53.6 +0.3
KOLS Kolonicke sedl 146.80 280 *e*PKP PKPbc 06 10 53.6 +0.3
KWP Kalwaria Pacla 146.95 282 *e*PKP PKPbc 06 10 53.5 -0.2
KWP Kalwaria Pacla 146.95 282 *e*PKP2 PKPbc 06 10 53.2 -0.6
KWP MLR MLR
comp=Z,2µm,21.0s,MS5.8
KWP Kalwaria Pacla 146.95 282 *e*PKPbc PKPbc 06 10 53.2 -0.6
KWP LR LR
comp=Z,2µm,21.0s,MS5.8
KWP Kalwaria Pacla 146.95 282 ⇓*i*P PKPbc 06 10 54.5 +0.7
INTR Introdacqua 147.11 264 PKP PKPdf 06 10 54.1 +1.8
BBSR BB Station 147.12 124 PFAKE 06 11 00.0 +7.4
BBSR LR LR
comp=Z,951nm,19.0s,MS5.6
VVLD Villa Vallelon 147.17 263 PKP PKPbc 06 10 55.0 +0.4
PKSM Moragy 147.19 274 ⇑PKP2 PKPab 06 10 55.8 -0.5
PKSM Moragy 147.19 274 ⇑*i*P PKPab 06 10 55.8 -0.5
NACGM Naroch 147.50 292 *e* PKPdf 06 10 52.0 -0.5
PSZ Piszkesteto 147.51 277 *e*PKP2 PKPbc 06 10 55.2 -0.2
PSZ MLR MLR
comp=Z,1µm,22.0s,MS5.6
PSZ Piszkesteto 147.51 277 *e*PKPbc PKPbc 06 10 55.2 -0.2
PSZ LR LR
comp=Z,1µm,22.0s,MS5.6
PSZ Piszkesteto 147.51 277 ⇓*e*pPKP pPKPdf 06 10 54.4 -0.3
PSZ Piszkesteto 147.51 277 ⇓*i*P PKPbc 06 10 56.0 +0.6
KECS Kecovo 147.52 278 *e*PKP2 PKPbc 06 10 55.7 +0.3
KECS Kecovo 147.52 278 *e*PKP PKPbc 06 10 55.7 +0.3
AQU L'Aquila 147.62 264 PFAKE 06 11 00.0 +6.9
AQU LR LR
comp=Z,1µm,19.0s,MS5.7
TERO Teramo 147.69 264 PKP PKPdf 06 10 55.3 +2.1
IDID Didziasalis 147.71 293 *e*P PKPbc 06 10 56.0 +0.3
BUD Budapest 147.74 276 ⇓*e*pPKP pPKPdf 06 10 58.3 +3.2
VSL Villasalto 147.82 256 PFAKE 06 11 00.0 +6.5
VSL LR LR
comp=Z,2µm,21.0s,MS5.8
IIGN Ignalina 147.99 293 *e*P PKPbc 06 10 56.6 +0.2
FCC Fort Churchill 148.03 60 *e*PKHKP 06 10 51.7
FCC *e* PKPbc 06 10 57.0 +0.6
NRCA Norcia 148.10 264 PKP PKPbc 06 10 56.9 -0.2
NIE Niedzica 148.13 280 *e*PKP2 PKPab 06 11 02.6 +2.7
ISAL Salakas 148.14 293 *e*P PKPbc 06 10 56.9 +0.1
IZAR Zarasai 148.16 294 *e*P PKPbc 06 10 56.6 -0.2
AOI Ancona 148.30 266 PKP PKPbc 06 10 58.1 +0.5
VYHS Vyhne 148.43 277 *e*PKP2 PKPbc 06 10 57.7 -0.1
VYHS Vyhne 148.43 277 *e*PKP PKPbc 06 10 57.7 -0.1
JOF Joensuu 148.50 308 *e*PKP2 PKPbc 06 10 57.1 -0.4
JOF pmax pmax
comp=Z,15nm,0.7s
JOF Joensuu 148.50 308 *e*pkp PKPbc 06 10 57.1 -0.4
comp=Z,15nm,0.7s
LVZ Lovozero 148.50 318 PFAKE 06 11 10.0 +16
LVZ LR LR
comp=Z,1µm,21.0s,MS5.7
BOJS Bojanci 148.63 270 *e*PKPdf PKPbc 06 10 58.5 +0.1
KOGS Kog 148.65 272 *e*PKPdf PKPbc 06 10 58.0 -0.5
KOLL Kolacno 148.71 277 *e*PKP2 PKPbc 06 10 59.5 +1.0
KOLL Kolacno 148.71 277 *e*PKP PKPbc 06 10 59.5 +1.0
BINY Binghamton 148.84 99 *e*PKPbc PKPbc 06 10 59.0 -0.1
BINY LR LR
comp=Z,1µm,19.0s,MS5.7
FSSB Fossombrone 148.85 265 PKP PKPbc 06 10 59.2 +0.2
OJC Ojcow 148.85 281 *e*PKPdf PKPdf 06 10 57.8 +2.9
OJC *e*PKPbc PKPbc 06 11 00.9 +2.1
OJC *e*pPKPbc pPKPbc 06 11 03.2 +2.4
APA Apatity 148.89 317 ⇓*e*PKP2 PKPbc 06 10 57.6 -0.8
APA *i* 06 14 39.0
APA *e*PPS 06 34 26.0
APA pmax pmax
comp=Z,58nm,1.5s
APA MLR MLR
comp=Z,2µm,21.0s,MS5.9
SUW Suwalki 148.94 289 *e*PKP PKPdf 06 10 57.5 +2.7
SUW Suwalki 148.94 289 *e*PKPbc PKPbc 06 10 59.0 +0.1
VSU Vasula 149.04 299 *c i*PKP2 PKPbc 06 10 59.5 +0.5
KNDS Knezji Dol 149.13 269 *i* PKPdf PKPbc 06 10 59.5 -0.2
CEY Cerknica 149.23 270 *i* PKPdf PKPbc 06 10 59.7 -0.2
WAR Warsaw 149.23 285 *e*PKP PKPab 06 11 05.3 +1.0
SOKA Soboth 149.47 272 ⇓*i*PKPbc PKPbc 06 11 00.8 +0.3
comp=Z,40nm,1.1s
ARSA Arzberg 149.53 273 *i* PKPbc PKPbc 06 11 00.8 +0.2
comp=Z,33nm,1.1s,SNR=10
OKC Ostrava-Krasne 149.54 279 *e*PKP2 PKPbc 06 11 00.9 +0.4
OKC MLR MLR
comp=Z,1µm,19.2s,MS5.6
OKC Ostrava-Krasne 149.54 279 ⇑*e*PKP PKPbc 06 11 00.9 +0.4
OKC AMS AMS 07 30 20.0
comp=Z,1µm,19.2s
TRI Trieste 149.58 269 PKP2 PKPbc 06 11 00.6 -0.2
TRI MLR MLR
comp=Z,1µm,21.0s,MS5.7
VOY Vojsko 149.71 270 *e*PKPdf PKPbc 06 11 00.6 -0.5
VOY *e* 06 11 17.8
CONA Conrad Observa 149.74 274 ⇑*p*PKPdf pPKPdf 06 11 00.6 +2.3
comp=Z,19nm,1.2s,SNR=5.7
MORC Moravsky Berou 149.84 278 *e*PKP2 PKPbc 06 11 01.5 +0.2
MORC Moravsky Berou 149.84 278 ⇓*i*P PKPbc 06 11 02.3 +1.0
VRAC Vranov 150.11 277 ⇓PKIKP PKPbc 06 11 02.7 +0.8
VRAC Vranov 150.11 277 ⇓*i*P PKPbc 06 11 02.7 +0.8
PGF Pioggiola 150.16 260 *e*PKP1 PKPbc 06 11 01.3 -1.0
comp=Z,38nm,0.8s
MYKA Terra Mystica 150.21 270 ⇑*i*PKPbc PKPbc 06 11 02.5 +0.3
comp=Z,38nm,1.5s
FINES FINESS Array B 150.38 304 PKPbc PKPbc 06 11 00.5 -1.7
comp=Z,24nm,0.7s,baz=106,slow=4.2,SNR=29
FINES PKPab PKPab 06 11 06.7 -2.1
comp=Z,33nm,0.8s,baz=96,slow=3.8,SNR=20
VLC Villacollemand 150.47 264 PFAKE 06 11 10.0 +12
VLC LR LR
comp=Z,1µm,20.0s,MS5.6
KAF Kangasniemi 150.47 305 *e*PKIKP PKPbc 06 11 01.9 -0.5
KAF pmax pmax
comp=Z,40nm,1.3s
KAF Kangasniemi 150.47 305 *e*pkp PKPbc 06 11 01.9 -0.5
comp=Z,40nm,1.3s,baz=130,slow=2.8
MOA Molln 150.57 273 ⇑*p*PKPdf pPKPdf 06 11 02.5 +2.8
comp=Z,30nm,1.3s
RES Resolute Bay 150.62 29 *e*PKIKP PKPdf 06 11 00.2 +3.2
TREC Trest 150.71 276 *e*PKIKP PKPbc 06 11 03.7 +0.3
TREC MLR MLR
comp=Z,1µm,18.3s,MS5.7
TREC Trest 150.71 276 ⇑*e*PKP PKPbc 06 11 03.7 +0.3
TREC AMS AMS 07 32 50.0
comp=Z,1µm,18.3s
DPC Dobruska-Polom 150.81 279 *e*PKIKP PKPbc 06 11 04.0 +0.4
DPC MLR MLR
comp=Z,1µm,22.8s,MS5.6
DPC Dobruska-Polom 150.81 279 ⇑*e*PKP PKPbc 06 11 04.0 +0.4
DPC *e*PKPAB PKPab 06 11 14.5 +3.6
DPC AMS AMS 07 28 40.0
comp=Z,1µm,22.8s
ABTA Abfaltersbach 150.90 270 ⇑*i*PKPbc PKPbc 06 11 03.8 -0.1
comp=Z,19nm,0.8s
NCB Newcomb 150.98 98 *e*PKPbc PKPbc 06 11 04.1 -0.1
NCB LR LR
comp=Z,1µm,20.0s,MS5.7
UPC Upice 151.06 279 ⇑*e*PKP PKPbc 06 11 04.1 -0.1
UPC *e*PKPAB PKPab 06 11 16.5 +4.6
KSP Ksiaz 151.08 279 *e*PKP PKPbc 06 11 04.0 -0.2
KSP Ksiaz 151.08 279 ⇓*e*PKIKP PKPbc 06 11 03.5 -0.7
LONY Lake Ozonia 151.20 97 *e*PKPbc PKPbc 06 11 03.9 -0.7
LONY LR LR
comp=Z,2µm,19.0s,MS5.8
RJOB Jochberg 151.32 271 *e*PKPdf PKPbc 06 11 03.7 -1.2
RTC Rabat Centre 151.37 229 PFAKE 06 11 10.0 +11
RTC LR LR
comp=Z,3µm,20.0s,MS6.0
GEC2 GERESS Array S 151.44 274 *e*PKPdf PKPbc 06 11 04.3 -0.8
GERES GERESS Array B 151.44 274 PKPbc PKPbc 06 11 04.4 -0.7
comp=Z,9.8nm,0.8s,baz=146,slow=2.6,SNR=30
GERES PKPab PKPab 06 11 12.1 -1.5
comp=Z,11nm,1.0s,baz=150,slow=2.9,SNR=9.8
GERES PKKPbc 06 17 50.0
comp=Z,0.4nm,0.2s,baz=189,slow=2.6,SNR=4.0
GERES GERESS Array B 151.44 274 PKIKP PKPbc 06 11 04.4 -0.7
GERES 06 11 12.1
KEV Kevo 151.51 321 *e*PKIKP PKPbc 06 11 05.4 +0.8
KEV MLR MLR
comp=Z,1µm,22.0s,MS5.6
KEV Kevo 151.51 321 *e*pkp PKPbc 06 11 05.1 +0.5
comp=Z,19nm,0.7s
PRU Pruhonice 151.60 277 *e*PKIKP PKPbc 06 11 06.2 +0.8
PRU *e* 06 11 15.5
PRU MLR MLR
comp=Z,1µm,20.8s,MS5.6
PRU Pruhonice 151.60 277 ⇑*e*PKP PKPbc 06 11 06.2 +0.8
PRU *e*PKPAB PKPab 06 11 15.5 +1.3
PRU AMS AMS 07 27 40.0
comp=Z,1µm,20.8s
KHC Kasperske Hory 151.67 274 *e*PKPdf PKPdf 06 10 59.9 +0.6
KHC *e*PKPbc PKPbc 06 11 04.6 -1.0
KHC *e*PKPab PKPab 06 11 14.7 +0.2
KHC Kasperske Hory 151.67 274 ⇑*e*PKP PKPbc 06 11 03.8 -1.8
KHC *e*PKPAB PKPab 06 11 14.9 +0.4
KHC AMS AMS 07 30 20.0
comp=Z,1µm,22.0s
WTTA Wattenberg 151.69 270 ⇑*i*PKPbc PKPbc 06 11 05.9 +0.2
comp=Z,34nm,1.2s,SNR=6.8
PRA Prague 151.70 277 ⇑PKP PKPbc 06 11 06.0 +0.4
PRA PKPAB PKPab 06 11 16.0 +1.4
CART Cartagena 151.71 241 *e*PKPdf PKPdf 06 10 59.8 +0.1
CART *e*PKPbc PKPbc 06 11 06.4 +0.3
GKP Gorka Klasztor 151.75 284 *e*PKP PKPbc 06 11 05.7 0.0
PVCC Panska Ves 151.87 278 *e*PKIKP PKPbc 06 11 06.4 +0.4
PVCC MLR MLR
comp=Z,1µm,21.6s,MS5.7
PVCC Panska Ves 151.87 278 ⇑*e*PKP PKPbc 06 11 06.4 +0.4
PVCC AMS AMS 07 32 50.0
comp=Z,1µm,21.6s
SBF Sospel 151.89 260 *e*PKP1 PKPbc 06 11 05.5 -0.8
comp=Z,68nm,0.8s
BRMO Bormio 151.92 267 PKP PKPbc 06 11 04.5 -1.8
ARCES ARCESS Array B 152.02 321 PKPbc PKPbc 06 11 06.8 +1.0
comp=Z,18nm,0.8s,baz=129,slow=2.8,SNR=22
ARCES PKPab PKPab 06 11 15.4 +0.1
comp=Z,15nm,0.8s,baz=90,slow=1.2,SNR=8.0
MOTA Moosalm 152.03 269 ⇑*i*PKPbc PKPbc 06 11 06.1 -0.4
comp=Z,36nm,1.2s
FETA Feichten 152.05 268 ⇑*i*PKPbc PKPbc 06 11 06.7 +0.2
comp=Z,38nm,0.9s,SNR=13
WET Wettzell 152.06 274 *e*PKPdf PKPbc 06 11 05.6 -0.9
FRF La Foret Royal 152.12 259 *e*PKP1 PKPbc 06 11 07.0 +0.2
comp=Z,143nm,1.5s
BRG Berggiesshubel 152.38 278 *e*PKPdf PKPbc 06 11 05.6 -1.6
BRG Berggiesshubel 152.38 278 *e*PKP PKPbc 06 11 06.8 -0.4
comp=Z,10nm,1.2s
BRG *i* 06 11 16.9
comp=Z,16nm,0.9s
BRG SS 06 35 40.0
comp=N,628nm,22.0s
BRG
comp=E,710nm,17.9s
BRG
comp=Z,1µm,20.7s
LBNH Lisbon 152.41 100 PFAKE 06 11 10.0 +9.4
LBNH LR LR
comp=Z,2µm,20.0s,MS5.8
ROTZ Rotzenmuhle 152.77 275 *e*PKPdf PKPbc 06 11 06.5 -1.6
MBDF Montbardon 152.81 261 *e*PKP1 PKPbc 06 11 08.8 +0.5
comp=Z,55nm,1.0s
NKC Novy Kostel 152.88 276 ⇑*e*PKP PKPbc 06 11 08.4 +0.1
NKC *e*PKPAB PKPab 06 11 20.1 +0.6
SPB4 Spitsbergen Ar 152.93 340 *e*PKPbc PKPbc 06 11 08.2 +0.5
BNI Bardonecchia 153.07 261 PFAKE 06 11 10.0 +8.5
BNI LR LR
comp=Z,2µm,21.0s,MS5.9
CLL Collm 153.11 278 *e*PKPdf PKPbc 06 11 06.5 -2.3
CLL Collm 153.11 278 *e*PKIKP PKPbc 06 11 08.0 -0.8
CLL *i* 06 11 11.5
CLL *i* 06 11 18.5
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL pmax pmax
comp=Z,99nm,2.4s
CLL MLR MLR
comp=Z,800nm,18.5s,MS5.6
CLL Collm 153.11 278 *e*PKPbc PKPbc 06 11 08.0 -0.8
comp=Z,7.0nm,0.8s
CLL *i* 06 11 11.5
CLL *i* PKPab PKPab 06 11 18.5 -2.0
comp=Z,99nm,2.4s
CLL *i* 06 11 24.1
comp=Z,26nm,1.2s
CLL *e* 06 14 14.0
CLL *e* 06 16 09.0
CLL *e* 06 19 29.0
CLL *e*PPS 06 27 57.0
CLL *e*(SS) 06 34 21.0
CLL *e*(PSS) 06 35 25.0
CLL *e*(PSPS) 06 35 44.0
CLL LV 06 39 00.0
comp=Z,800nm,18.5s
CLL *e*SSS 06 40 24.0
CLL *e*SSSS 06 44 36.0
SFS San Fernando 153.21 232 PFAKE 06 11 10.0 +8.0
SFS LR LR
comp=Z,5µm,19.0s,MS6.3
GRF Grafenberg Arr 153.27 274 *e*PKPdf PKPbc 06 11 06.6 -2.6
GRF *e*L 07 27 22.6
comp=Z,2µm,22.0s
GRF Grafenberg Arr 153.27 274 *e*PKP PKPbc 06 11 06.6 -2.6
GRF LR LR
comp=Z,2µm,22.0s,MS5.8
LPG La Plagne 153.31 262 *e*PKP1 PKPbc 06 11 09.5 +0.1
comp=Z,19nm,0.8s
LPL La Plagne 153.33 262 *e*PKP1 PKPbc 06 11 09.5 +0.1
comp=Z,14nm,0.8s
KBS Kingsbay 153.37 342 *e*PKPdf PKPdf 06 11 02.5 +1.5
KBS *e*SS SS 06 34 26.7 -3.2
KBS AMS AMS 07 14 40.2
comp=Z,801nm,25.9s,MS5.4
KBS Kingsbay 153.37 342 PFAKE 06 11 10.0 +9.0
KBS LR LR
comp=Z,1µm,20.0s,MS5.7
ORIF Oris-en-Rattie 153.42 260 *e*PKP1 PKPbc 06 11 07.2 -2.5
MOX Moxa 153.55 276 *e*PKP PKPbc 06 11 11.0 +1.3
comp=Z,24nm,1.5s
MOX
comp=Z,1µm,21.0s
LASF Ste Croix 153.97 257 *e*PKP1 PKPbc 06 11 10.5 -0.4
comp=Z,93nm,1.3s
BFO Black Forest 154.13 269 *e*PKIKP PKPdf 06 11 02.3 -0.6
BFO *e* 06 11 24.6
BFO MLR MLR
comp=Z,1µm,21.0s,MS5.7
TRO Tromso 154.32 321 *e*PKPdf PKPdf 06 11 03.5 +0.9
TRO *e*SS SS 06 34 39.2 -1.5
TRO AMS AMS 07 13 26.9
comp=Z,705nm,25.3s,MS5.4
SSB Saint Sauveur 154.38 260 PFAKE 06 11 10.0 +6.6
SSB LR LR
comp=Z,1µm,20.0s,MS5.7
PKME Peaks-Kenny Pk 154.50 101 PFAKE 06 11 10.0 +6.4
PKME LR LR
comp=Z,2µm,21.0s,MS5.8
ECH Echery 154.71 268 *e*PKIKP PKPdf 06 11 10.9 +7.2
ECH MLR MLR
comp=Z,1µm,21.0s,MS5.7
ESDC Sonseca Array 154.78 240 PKPbc PKPbc 06 11 13.3 +0.5
comp=Z,2.1nm,0.7s,baz=108,slow=0.9,SNR=7.1
ESDC PKPab PKPab 06 11 28.4 +0.5
comp=Z,3.5nm,0.8s,baz=144,slow=2.6,SNR=6.7
ESLA Sonseca Array 154.78 240 *e*PKPdf PKPdf 06 11 03.4 -0.8
ESLA LR LR
comp=Z,9µm,19.0s,MS6.6

CLZ	**Clausthal**	**154.81 277**	*e*PKPdf	PKPdf	06 11 08.1	+4.3
PAB	**San Pablo**	**154.87 239**	PFAKE		06 11 20.0	+16
PAB			LR	LR		
comp=Z,1μm,20.0s,MS5.8						
BSEG	**Bad Segeberg**	**155.76 282**	*e*PKIKP	PKPdf	06 11 08.1	+3.1
HFS	**Hagfors**	**155.92 298**	PKPab	PKPab	06 11 32.4	+0.2
comp=Z,5.6nm,0.7s,baz=149,slow=6.9,SNR=9.9						
WLF	**Walferdange**	**156.06 270**	PFAKE		06 11 20.0	+14
WLF			LR	LR		
comp=Z,2μm,21.0s,MS5.8						
BCLA	**Clavier**	**156.91 271**	PKPab	PKPab	06 11 37.6	+0.8
MTE	**Manteigas**	**157.03 236**	PFAKE		06 11 20.0	+13
MTE			LR	LR		
comp=Z,2μm,21.0s,MS5.9						
DOU	**Dourbes**	**157.14 269**	PKPab	PKPab	06 11 37.9	+0.2
NOA	**NORSAR Array B**	**157.29 299**	PKPab	PKPab	06 11 38.0	-0.1
comp=Z,4.5nm,0.8s,baz=97,slow=4.6,SNR=11						
NAO01	**NORSAR Array S**	**157.41 299**	PFAKE		06 11 20.0	+13
NAO01			LR	LR		
comp=Z,2μm,22.0s,MS5.8						
KONO	**Kongsberg**	**157.85 295**	*e*PKPdf	PKPdf	06 11 09.2	+1.8
KONO			*e*SS	SS	06 35 18.8	-0.4
KONO	**Kongsberg**	**157.85 295**	PFAKE		06 11 20.0	+13
KONO			LR	LR		
comp=Z,1μm,20.0s,MS5.8						
DAG	**Danmarks Havn**	**159.16 351**	⇑*i*P	PKPab	06 11 44.0	-1.8
comp=Z,114nm,2.8s						
BER	**Bergen**	**160.07 297**	*e*PKPdf	PKPdf	06 11 10.1	+0.1
BER			*e*SS	SS	06 35 45.0	+2.2
FOO	**Floro**	**160.30 300**	*e*PKPdf	PKPdf	06 11 11.0	+0.7
FOO			*e*PP	PP	06 15 35.6	+1.4
FOO			*e*SS	SS	06 35 45.4	+0.3
FOO			AMS	AMS	07 15 25.4	
comp=Z,569nm,20.9s						
CMLA	**Cha da Macela**	**160.57 197**	PFAKE		06 11 20.0	+8.6
CMLA			LR	LR		
comp=Z,2μm,21.0s						
SCHQ	**Schefferville**	**160.70 81**	PKPab	PKPab	06 11 54.0	+0.9
comp=Z,3.1nm,0.8s,baz=245,slow=6.9,SNR=5.2						
SCHQ	**Schefferville**	**160.70 81**	PFAKE		06 11 20.0	+9.1
SCHQ			LR	LR		
comp=Z,2μm,20.0s						
JMIC	**Jan Mayen**	**162.33 334**	*e*PKPdf	PKPdf	06 11 10.8	-1.4
ESK	**Eskdalemuir**	**163.60 278**	PFAKE		06 11 20.0	+6.1
ESK			LR	LR		
comp=Z,1μm,19.0s						
SFJD	**Kangerlussuaq**	**166.59 32**	PFAKE		06 11 30.0	+14
SFJD			LR	LR		
comp=Z,3μm,22.0s						
BORG	**Borgarnes**	**170.20 331**	PFAKE		06 11 30.0	+11
BORG			LR	LR		
comp=Z,1μm,20.0s						

ISCJB ***27*** *06:09:29.9±0.5, 36.°23S±0.°04×69.°68W±0.°08, h201km±5km, mb3.7/9, Error ellipse: s-maj=11.4km s-min=5.7km az=12.6*

NEIC ***27*** *06:09:30.7±0.8, 36.°20S×69.°60W, h196km±8km, mb4.2/7, Error ellipse: s-maj=12.8km s-min=9.0km az=82.0*

GUC ***27*** *06:09:31.2±0.8, 36.°07S×70.°02W, h225km±9km, ML4.8*

IDC ***27*** *06:09:33.0±2.0, 36.°29S×69.°56W, h215km±20km, mb3.5/7, mb1 3.6/10, mb1mx3.6/16, mbtmp3.4/10, Error ellipse: s-maj=24.7km s-min=13.6km az=87.0*

ISC 27 06:09:30.8±0.5, 36.°24S±0.°04×69.°66W±0.°08, h196km±5km, n36, σ0.°82/51, mb3.7/9, 7C-2D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**1.98**	**259**	*e*P	**Pn**	**06 10 09.6**	**+0.9**
CCHI				*i* S	**Sn**	**06 10 39.4**	**+1.2**
CACH	**El Canelo**	**2.25**	**340**	⇑*i*P	**Pn**	**06 10 12.5**	**+0.8**
CACH				*i* S	**Sn**	**06 10 44.5**	**+1.1**
CHCH	**Chadas Angostu**	**2.44**	**340**	⇓*i*P	**Pn**	**06 10 14.1**	**+0.4**
CHCH				*i* S	**Sn**	**06 10 47.1**	**0.0**
COCH	**Cobquecura**	**2.53**	**271**	*e*P	**Pn**	**06 10 15.2**	**+0.5**
COCH				*i* S	**Sn**	**06 10 47.5**	**-1.5**
PCH	**Pirque**	**2.70**	**345**	⇑*i*P	**Pn**	**06 10 17.6**	**+0.9**
PCH				*i* S	**Sn**	**06 10 52.4**	**0.0**
ANTU	**Antumapu**	**2.78**	**343**	⇑*i*P	**Pn**	**06 10 18.1**	**+0.5**
ANTU				*i* S	**Sn**	**06 10 54.0**	**-0.1**
ANTU				AML	AML	06 10 55.3	
comp=N,2μm,0.6s							
TACH	**Talagante**	**2.78**	**337**	⇑*i*P	**Pn**	**06 10 17.9**	**+0.2**
TACH				*i* S	**Sn**	**06 10 53.5**	**-0.7**
FSR	**Penalolen**	**2.84**	**345**	⇑*i*P	**Pn**	**06 10 19.2**	**+0.8**
FSR				*i* S	**Sn**	**06 10 55.4**	**0.0**
SAN	**Santiago**	**2.90**	**343**	*e*P	**Pn**	**06 10 19.3**	**+0.3**
SAN				*i* S	**Sn**	**06 10 56.0**	**-0.5**
CLCH	**Cerro Calan**	**2.92**	**345**	⇑*i*P	**Pn**	**06 10 19.8**	**+0.5**
CLCH				*i* S	**Sn**	**06 10 57.3**	**+0.2**
CLCH				AML	AML	06 10 59.0	
comp=E,1μm,0.4s							
FCH	**Farellones**	**2.95**	**350**	⇑*i*P	**Pn**	**06 10 39.0**	**+19**
FCH				*i* S	**Sn**	**06 11 16.6**	**+19**
FCH				AML	AML	06 11 23.7	
comp=N,1μm,0.6s							
PEL	**Peldehue**	**3.20**	**344**	⇓*i*P	**Pn**	**06 10 22.9**	**+0.3**
PEL				*i* S	**Sn**	**06 11 02.0**	**-1.0**
PEL				AML	AML	06 11 04.3	
comp=E,2μm,0.4s							
TMU	**Temuco**	**3.42**	**222**	*e*P	**Pn**	**06 10 24.5**	**-0.6**
TMU				*e*S	**Sn**	**06 11 05.9**	**-1.8**
IHA	**Instituto Hidr**	**3.59**	**332**	*e*P	**Pn**	**06 10 27.2**	**-0.2**
PLCA	**Paso Flores**	**4.54**	**189**	P	**Pn**	**06 10 40.0**	**+0.9**
comp=E,1.0nm,0.3s,baz=7.1,slow=12,SNR=24							
PLCA				S	**Sn**	**06 11 41.9**	**+8.8**
comp=E,0.1nm,0.3s,baz=312,slow=9.8,SNR=1.2							
CMCH	**Combarbala**	**5.17**	**347**	*e*P	**Pn**	**06 10 45.5**	**-1.8**
TLL	**Tololo Astrono**	**6.13**	**351**	*e*P	**Pn**	**06 10 58.7**	**-1.0**
TRQA	**Tornquist**	**6.40**	**109**	*e*Pn	**Pn**	**06 11 02.3**	**-0.7**
comp=E,21nm,1.1s							
LCO	**Las Campanas**	**7.26**	**353**	*e*Pn	**Pn**	**06 11 12.9**	**-1.4**
comp=E,40nm,0.3s							
LCO				*e*Sn	**Sn**	**06 12 31.8**	**-4.7**
CPUP	**Villa Florida**	**14.43**	**50**	P	**Pn**	**06 12 46.6**	**+0.4**
comp=E,0.3nm,0.3s,baz=202,slow=9.6,SNR=3.9							
LPAZ	**La Paz**	**19.91**	**4**	P	**P**	**06 13 50.9**	**+3.3**
comp=E,0.8nm,0.3s,baz=144,slow=6.9,SNR=26							
LPAZ	**La Paz**	**19.91**	**4**	*e*P	**P**	**06 13 48.7**	**+1.1**
comp=E,6.3nm,0.6s							
QSPA	**South Pole Qui**	**54.01**	**180**	P	**P**	**06 18 35.3**	**+1.2**
comp=E,2.4nm,0.5s,mb4.0,baz=170,slow=1.5,SNR=24							
QSPA	**South Pole Qui**	**54.01**	**180**	*e*P	**P**	**06 18 34.9**	**+0.9**
comp=E,3.7nm,0.9s,mb3.9							
TXAR	**Lajitas Array**	**72.64**	**329**	P	**P**	**06 20 37.2**	**+0.4**
comp=E,0.7nm,0.4s,mb3.6,baz=157,slow=8.2,SNR=32							
SWET	**Sewanee**	**72.69**	**346**	*e*P	**P**	**06 20 36.4**	**-0.6**
DBIC	**Dimbokro**	**74.10**	**69**	P	**P**	**06 20 45.0**	**-0.7**
comp=E,2.2nm,0.5s,mb4.0,baz=182,slow=6.5,SNR=6.1							
DBIC	**Dimbokro**	**74.10**	**69**	*e*P	**P**	**06 20 44.7**	**-1.0**
comp=E,2.7nm,0.6s,mb4.0							
BOSA	**Boshof**	**77.32**	**116**	P	**P**	**06 21 03.0**	**-0.9**
comp=E,1.1nm,0.5s,mb3.8,baz=296,slow=20,SNR=3.8							
TORD	**Torodi Ar. Bea**	**83.18**	**68**	P	**P**	**06 21 35.0**	**-0.2**
comp=E,0.7nm,0.7s,mb3.5,baz=217,slow=5.2,SNR=5.5							
TORD	**Torodi Ar. Bea**	**83.18**	**68**	P	**P**	**06 21 35.0**	**-0.2**
RSSD	**Black Hills**	**85.85**	**336**	*e*P	**P**	**06 21 47.9**	**0.0**
comp=E,1.9nm,0.8s,mb3.9							
HWUT	**Hardware Ranch**	**86.45**	**330**	*e*P	**P**	**06 21 51.9**	**+1.0**
comp=E,1.6nm,0.7s,mb3.9							
PDAR	**Pinedale Array**	**86.64**	**332**	P	**P**	**06 21 52.0**	**+0.2**
comp=E,0.2nm,0.6s,mb3.0,baz=163,slow=3.8,SNR=3.0							
NVAR	**Mina Array Bea**	**86.83**	**324**	P	**P**	**06 21 52.9**	**+0.1**
comp=E,0.6nm,0.8s,mb3.4,baz=150,slow=3.6,SNR=4.0							
NVAR	**Mina Array Bea**	**86.83**	**324**	P	**P**	**06 21 52.9**	**+0.1**

IDC ***27*** *06:12:39.8±0.7, 31.°33N×104.°00E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/29, mbtmp4.1/15, ML3.9/2, MS4.8/2, Ms1 4.8/2, ms1mx3.5/39, Error ellipse: s-maj=31.0km s-min=14.0km az=61.0*

ISCJB ***27*** *06:12:41.7±1.0, 31.°29N±0.°05×104.°04E±0.°06, h26km±8km, mb4.2/16, MS4.9/2, Error ellipse: s-maj=8.2km s-min=8.0km az=12.1*

NEIC ***27*** *06:12:41.3±0.4, 31.°33N×104.°06E, h10km, mb4.5/8, Error ellipse: s-maj=8.3km s-min=7.2km az=85.0*

BJI ***27*** *06:12:42.7, 31.°28N×104.°16E, h18km, mB4.6/6, mb4.4/10, ML4.0/15, Ms4.0/11, Ms7 3.9/10*

MOS ***27*** *06:12:43.8±0.7, 31.°31N×104.°01E, h44km, mb4.4/11, Error ellipse: s-maj=14.7km s-min=10.5km az=107.3*

ISC 27 06:12:41.8±0.8, 31.°31N±0.°03×104.°06E±0.°05, h11km±5km, n57, σ0.°74/63, mb4.2/15, MS4.9/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.48**	**213**	Pg	**Pg**	**06 12 51.0**	**-0.1**
CD2				Sg	**Sg**	**06 12 57.3**	**-0.1**
CD2				smax			
comp=N,15μm,0.7s							
LZH	**Lanzhou**	**4.77**	**358**	*e*Pn	**Pn**	**06 13 58.3**	**+4.7**
LZH				Sn	**Sn**	**06 14 59.3**	**+10**
LZH				Sg	**Sg**	**06 15 15.5**	**+0.7**
LZH				smax			
comp=N,160nm,0.8s							
LZH				smax			
comp=E,440nm,1.0s							
LZH				LR	LR		
comp=N,1μm,6.0s							
LZH				LR	LR		
comp=Z,2μm,7.8s							
XAN	**Xi'an**	**4.92**	**55**	Pn	**Pn**	**06 13 56.5**	**+0.8**
XAN				Sn	**Sn**	**06 14 57.0**	**+4.4**
XAN				Sg	**Sg**	**06 15 18.0**	**-1.7**
XAN				smax			
comp=N,270nm,1.0s							
XAN				smax			
comp=E,110nm,1.0s							
XAN				LR	LR		
comp=N,480nm,9.2s							
XAN				LR	LR		
comp=E,130nm,9.2s							
GYA	**Guiyang**	**5.35**	**154**	Pg	**Pb**	**06 14 10.0**	**-5.2**
GYA				Sg	**Sn**	**06 15 08.5**	**+5.3**
GYA				smax			
comp=N,520nm,0.8s							
GYA				smax			
comp=E,320nm,0.9s							
KMI	**Kunming**	**6.27**	**191**	Pn	**Pn**	**06 14 14.3**	**0.0**
KMI				Sn	**Sn**	**06 15 32.5**	**+6.5**
KMI				smax			
comp=N,31nm,0.8s							
KMI				smax			
comp=E,40nm,0.8s							
KMI				LR	LR		
comp=N,820nm,12.1s							
KMI				LR	LR		
comp=E,560nm,12.1s							
KMI				LR	LR		
comp=Z,400nm,11.3s							
GTA	**Gaotai**	**8.79**	**338**	*e*P	**Pn**	**06 14 56.0**	**+7.2**
GTA				pP		06 15 00.0	
GTA				sP		06 15 02.8	
GTA				S	**Sn**	**06 16 29.0**	**+1.1**
GTA				pmax	pmax		
comp=Z,2.0nm,0.8s							
GTA				LR	LR		
comp=N,340nm,12.3s							
GTA				LR	LR		
comp=E,380nm,12.3s							
GTA				LR	LR		
comp=Z,450nm,14.1s							
WHN	**Wuhan**	**8.87**	**92**	P	**Pn**	**06 14 51.5**	**+1.5**
WHN				S	**Sn**	**06 16 25.8**	**-4.2**
WHN				LR	LR		
comp=Z,1μm,7.1s							
CMAR	**Chiang Mai Arr**	**13.61**	**201**	Pn	**Pn**	**06 15 55.8**	**+0.9**
comp=Z,0.4nm,0.3s,baz=9.0,slow=10,SNR=7.9							
CMAR				LR	LR	06 21 33.4	
comp=Z,170nm,18.8s,baz=270,slow=39							
GUN	**Gumba**	**16.17**	**263**	*e*P	**Pn**	**06 16 29.3**	**+0.2**
comp=Z,26nm,0.8s							
SONM	**Songino Array**	**16.60**	**6**	Pn	**Pn**	**06 16 34.7**	**+0.4**
comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=4.8							
PKI	**Pulchoki**	**16.67**	**262**	*e*P	**Pn**	**06 16 35.2**	**-0.2**
PKI	**Pulchoki**	**16.67**	**262**	*e*P	**Pn**	**06 16 35.9**	**+0.5**
PKIN	**Phulchoki**	**16.68**	**262**	*e*P	**Pn**	**06 16 35.9**	**+0.4**
KKN	**Kakani**	**16.71**	**263**	*e*P	**Pn**	**06 16 35.7**	**-0.3**
comp=Z,35nm,0.9s							
KKN	**Kakani**	**16.71**	**263**	*e*P	**Pn**	**06 16 35.7**	**-0.3**
KKN				pmax	pmax		
comp=Z,35nm,0.9s							
DMN	**Daman**	**16.91**	**262**	*e*P	**Pn**	**06 16 38.2**	**-0.3**
comp=Z,39nm,0.9s							
ZAK	**Zakamensk**	**19.06**	**358**	*e*P	**Pn**	**06 16 59.2**	**-5.6**
ZAK				pmax	pmax		
comp=Z,2.0nm,1.2s							
KSRS	**Korea Array**	**20.60**	**66**	P	**P**	**06 17 21.2**	**+0.3**
comp=Z,5.0nm,0.8s,baz=262,slow=11,SNR=17							
KSRS	**Korea Array**	**20.60**	**66**	P	**P**	**06 17 21.2**	**+0.3**
KSRS				pmax	pmax		
comp=Z,5.0nm,0.8s							
CN2	**Changchun**	**20.98**	**48**	*e*P	**P**	**06 17 26.8**	**+1.9**
CN2				pmax	pmax		
comp=Z,40nm,0.7s							
MK31	**Makanchi Array**	**22.80**	**319**	*e*P	**P**	**06 17 44.5**	**+0.1**
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**06 17 44.5**	**+0.2**
comp=Z,5.9nm,1.0s,mb4.0,baz=117,slow=10,SNR=18							
MKAR	**Makanchi Array**	**22.80**	**319**	P	**P**	**06 17 44.6**	**+0.2**
MKAR				pmax	pmax		
comp=Z,6.0nm,1.0s							
ZAA0	**Zalesovo Array**	**26.52**	**334**	*e*P	**P**	**06 18 19.2**	**0.0**
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**06 18 19.0**	**-0.2**
comp=Z,3.2nm,0.7s,mb4.0,baz=133,slow=10,SNR=14							
ZALV	**Zalesovo Beam**	**26.52**	**334**	P	**P**	**06 18 19.0**	**-0.2**
ZALV				pmax	pmax		
comp=Z,3.0nm,0.7s,mb3.9							
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**06 18 23.9**	**-0.2**
comp=Z,2.9nm,0.8s,mb3.9,baz=126,slow=10,SNR=16							
KURK	**Kurchatov**	**27.06**	**323**	*e*P	**P**	**06 18 24.0**	**-0.1**
KURK				pmax	pmax		
comp=Z,5.0nm,1.0s,mb4.0							
KURK	**Kurchatov**	**27.06**	**323**	*e*P	**P**	**06 18 24.0**	**-0.1**
comp=Z,5.2nm,1.0s,mb4.0							
FITZ	**Fitzroy Crossi**	**53.32**	**154**	P	**P**	**06 22 01.0**	**-0.1**
comp=Z,3.3nm,0.9s,mb4.3,baz=3.3,slow=6.1,SNR=4.7							
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**06 22 26.6**	**-0.8**
comp=Z,3.3nm,0.9s,mb4.3,baz=82,slow=8.7,SNR=7.2							
ARCES	**ARCESS Array B**	**57.06**	**336**	P	**P**	**06 22 26.6**	**-0.9**
ARCES				pmax	pmax		
comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**06 22 29.4**	**-0.5**
comp=Z,2.9nm,0.9s,mb4.3,baz=76,slow=8.7,SNR=2.9							
FINES	**FINESS Array B**	**57.38**	**326**	P	**P**	**06 22 29.4**	**-0.4**
FINES				pmax	pmax		
comp=Z,3.0nm,0.9s							
WRAB	**Tennant Creek**	**58.66**	**146**	*e*P	**P**	**06 22 39.4**	**+0.1**
WRAB				pmax	pmax		
comp=Z,13nm,0.6s,mb5.1							
WRAB	**Tennant Creek**	**58.66**	**146**	*e*P	**P**	**06 22 39.4**	**+0.1**
comp=Z,12nm,0.6s,mb5.1							
SPITS	**Spitsbergen Ar**	**59.13**	**346**	P	**P**	**06 22 41.5**	**-0.4**
comp=Z,1.1nm,0.5s,mb4.2,baz=94,slow=11,SNR=6.8							
SPITS	**Spitsbergen Ar**	**59.13**	**346**	P	**P**	**06 22 41.5**	**-0.4**
SPITS				pmax	pmax		
comp=Z,1.0nm,0.5s							
SPITS	**Spitsbergen Ar**	**59.13**	**346**	P	**P**	**06 22 41.5**	**-0.4**
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**06 23 00.3**	**+0.4**
comp=Z,1.1nm,0.4s,mb4.3,baz=338,slow=6.6,SNR=19							
ASAR	**Alice Springs**	**61.69**	**149**	P	**P**	**06 23 00.4**	**+0.4**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
UZH	**Uzhgorod**	**62.08**	**312**	*e*P	**P**	**06 23 02.2**	**-0.2**
UZH				*e*		06 23 10.0	
UZH				*e*		06 23 22.0	
HFS	**Hagfors**	**63.58**	**326**	P	**P**	**06 23 10.9**	**-1.3**
comp=Z,1.5nm,0.7s,mb4.1,baz=91,slow=6.4,SNR=5.3							
HFS	**Hagfors**	**63.58**	**326**	P	**P**	**06 23 10.9**	**-1.3**
HFS				pmax	pmax		
comp=Z,2.0nm,0.7s							
NB2	**NORSAR Subarra**	**64.47**	**327**	P	**P**	**06 23 16.5**	**-1.5**
comp=Z,0.8nm,0.5s,mb4.0,baz=74,slow=6.9							
NOA	**NORSAR Array B**	**64.47**	**327**	P	**P**	**06 23 16.3**	**-1.7**
comp=Z,0.4nm,0.6s,mb3.6,baz=62,slow=5.6,SNR=4.1							
COLA	**College**	**69.26**	**26**	*e*P	**P**	**06 23 48.6**	**+0.1**
COLA				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.4							
COLA	**College**	**69.26**	**26**	*e*P	**P**	**06 23 48.6**	**+0.1**
comp=Z,3.6nm,0.8s,mb4.3							
INK	**Inuvik**	**71.97**	**19**	*e*P	**P**	**06 24 04.3**	**-0.7**
INK				pmax	pmax		
comp=Z,3.0nm,0.8s							
INK	**Inuvik**	**71.97**	**19**	*e*P	**P**	**06 24 04.3**	**-0.7**
comp=Z,3.3nm,0.8s,mb4.3							
STKA	**Stephens Creek**	**72.20**	**147**	P	**P**	**06 24 06.3**	**-0.5**
comp=Z,0.9nm,0.3s,mb4.1,baz=330,slow=8.1,SNR=4.6							
STKA	**Stephens Creek**	**72.20**	**147**	*e*P	**P**	**06 24 06.4**	**-0.4**
comp=Z,0.8nm,0.7s,mb3.8							
YKA	**Yellowknife Ar**	**81.51**	**17**	P	**P**	**06 24 58.6**	**-0.3**
comp=Z,1.1nm,0.6s,mb4.0,baz=330,slow=5.2,SNR=15							
YKA				LR	LR	07 03 43.8	
comp=Z,292nm,21.0s,MS4.6,baz=15,slow=38							
YKA	**Yellowknife Ar**	**81.51**	**17**	P	**P**	**06 24 58.6**	**-0.3**
YKA				pmax	pmax		
comp=Z,1.0nm,0.6s							
YKA				MLR	MLR		
comp=Z,292nm,21.0s							
MDT	**Midelt**	**87.24**	**307**	LR	LR	07 12 01.6	
comp=Z,906nm,20.2s,MS5.2,baz=142,slow=41							
QSPA	**South Pole Qui**	**121.08**	**180**	*e*PKPdf	PKPdf	06 31 31.3	-2.0
OTAV	**Otavalo**	**148.53**	**5**	*e*PKPbc	PKPbc	06 32 30.1	+0.7

ISCJB ***27*** *06:18:03.5±0.1, 36.°46N±0.°02×48.°69E±0.°02, h10km, mb4.7/117, MS4.3/23, Error ellipse: s-maj=2.3km s-min=1.9km az=20.2*

IDC ***27*** *06:18:03.1±0.5, 36.°50N×48.°76E, h0km, mb4.5/28, mb1 4.5/34, mb1mx4.5/37, mbtmp4.5/34, ML4.6/2, MS3.9/11, Ms1 3.9/11, ms1mx3.7/43, Error ellipse: s-maj=11.3km s-min=7.2km az=169.0*

THR ***27*** *06:18:04.1±1.7, 36.°59N×48.°76E, h14km±8km, ML5.4*

BJI ***27*** *06:18:04.2, 36.°54N×48.°44E, h36km, mB5.0/22, mb4.8/29, Ms5.0/21, Ms7 4.8/21*

CSEM ***27*** *06:18:05.5±0.1, 36.°54N×48.°66E, h10km, mb4.8/48, Ms4.8, Error ellipse: s-maj=3.9km s-min=3.0km az=36.0*

MOS ***27*** *06:18:06.0±1.2, 36.°42N×48.°62E, h33km, mb5.0/53, Error ellipse: s-maj=6.6km s-min=3.8km az=120.7*

NEIC ***27*** *06:18:08.3, 36.°65N×48.°66E, h23km, mb4.9/67, ML5.4(THR), MN5.3(TEH), After TEH.*

TEH ***27*** *06:18:08.3, 36.°65N×48.°66E, h23km*

NNC ***27*** *06:18:12.7±2.8, 37.°29N×49.°30E, h0km, mb4.5, Error ellipse: s-maj=40.6km s-min=30.8km az=123.0*

ISC 27 06:18:04.7±0.5, 36.°51N±0.°02×48.°68E±0.°02, h5km±3km, h33km±2.0km: pP-P, n649, σ1.°33/711, mb4.7/117, MS4.3/23, 41C-24D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**0.16**	**0**	*e*Pg	**Pg**	**06 18 07.7**	**-0.2**
ZNJK	**Zanjan**	**0.16**	**0**	*e*Pg	**Pg**	**06 18 07.7**	**-0.2**
IRAZ	**Razeghan**	**1.50**	**137**	*e*	**Pn**	**06 18 34.0**	**+1.8**
comp=Z,45μm,0.2s							
ISRB	**Sarab**	**1.54**	**329**	Pn	**Pn**	**06 18 31.9**	**-1.0**
ISRB				Sg	**Sg**	**06 18 53.2**	**-1.2**
ISRB	**Sarab**	**1.54**	**329**	⇓*e*Pn	**Pn**	**06 18 31.9**	**-1.0**
ISRB				*e*Sg	**Sg**	**06 18 53.3**	**-1.1**
ISRB				*e*		06 19 01.3	
comp=Z,34μm,0.5s							
ISRB	**Sarab**	**1.54**	**329**	Pn	**Pn**	**06 18 31.9**	**-1.0**
ISRB				*e*Sg	**Sg**	**06 18 53.3**	**-1.1**
SNGE	**Sanandaj**	**1.78**	**218**	Pn	**Pn**	**06 18 37.0**	**+0.8**
SNGE				Sg	**Sg**	**06 19 03.0**	**+1.0**
SNGE	**Sanandaj**	**1.78**	**218**	*e*Pg	**Pg**	**06 18 38.0**	**-0.9**
SNGE				*e*Sg	**Sg**	**06 19 03.6**	**+1.6**
SNGE				AML	AML	06 19 05.3	
comp=N,30μm,0.6s							
SNGE				AML	AML	06 19 05.6	
comp=E,36μm,0.6s							
SNGE	**Sanandaj**	**1.78**	**218**	Pn	**Pn**	**06 18 37.0**	**+0.8**
SNGE				*e*Sg	**Sg**	**06 19 03.6**	**+1.6**
IMHD	**Mahdasht**	**1.81**	**117**	*e*	**Sg**	**06 19 06.0**	**+3.3**
comp=Z,98μm,0.2s							
IBST	**Bostanabad**	**1.86**	**310**	Pn	**Pn**	**06 18 37.2**	**-0.1**
IBST	**Bostanabad**	**1.86**	**310**	⇓*e*Pn	**Pn**	**06 18 37.2**	**-0.1**
IBST				*e*		06 19 04.3	
comp=Z,25μm,0.2s							
IBST	**Bostanabad**	**1.86**	**310**	Pn	**Pn**	**06 18 37.2**	**-0.1**
THKV	**Tehran--Karaj**	**1.87**	**108**	Pn	**Pn**	**06 18 37.0**	**-0.4**
THKV				Sg	**Sg**	**06 19 02.0**	**-2.9**
THKV	**Tehran--Karaj**	**1.87**	**108**	*e*Pg	**Pg**	**06 18 37.5**	**-3.1**
THKV				*e*Sg	**Sg**	**06 19 02.9**	**-1.9**
THKV				AML	AML	06 19 04.9	
comp=N,35μm,0.4s							
THKV				AML	AML	06 19 07.0	
comp=E,42μm,0.6s							
THKV	**Tehran--Karaj**	**1.87**	**108**	*e*Pn	**Pn**	**06 18 37.6**	**+0.2**
THKV				Sg	**Sg**	**06 19 02.0**	**-2.9**
CHTH	**Charan**	**2.06**	**106**	Pn	**Pn**	**06 18 40.0**	**-0.1**
CHTH	**Charan**	**2.06**	**106**	*e*Pg	**Pg**	**06 18 40.4**	**-3.9**
CHTH	**Charan**	**2.06**	**106**	*e*Pn	**Pn**	**06 18 40.4**	**+0.3**
ILIN	**Lien**	**2.12**	**222**	Pn	**Pn**	**06 18 43.8**	**+3.0**
ILIN	**Lien**	**2.12**	**222**	*e*Pn	**Pn**	**06 18 43.8**	**+3.0**
ILIN				*e*		06 19 20.2	
comp=Z,58μm,0.3s							
ILIN	**Lien**	**2.12**	**222**	Pn	**Pn**	**06 18 43.8**	**+3.0**
IHRS	**Heris**	**2.23**	**325**	Pn	**Pn**	**06 18 42.2**	**-0.1**
IHRS	**Heris**	**2.23**	**325**	⇑*e*Pn	**Pn**	**06 18 42.3**	**0.0**
IHRS				*e*		06 18 45.6	
comp=Z,68μm,0.1s							
ASAO	**Ashtian**	**2.24**	**150**	Pn	**Pn**	**06 18 44.0**	**+1.5**
ASAO	**Ashtian**	**2.24**	**150**	*e*Pn	**Pn**	**06 18 44.1**	**+1.6**
ASAO	**Ashtian**	**2.24**	**150**	Pn	**Pn**	**06 18 44.0**	**+1.5**
**

IMRD	**Marand**	**3.23 314**	Pn		**Pn**	**06 18 56.7 +0.6**
IMRD	**Marand**	**3.23 314**	*e*Pn		**Pn**	**06 18 56.8 +0.7**
IMRD			*e*			06 19 51.9
	comp=Z,40μm,0.3s					
IMRD	**Marand**	**3.23 314**	Pn		**Pn**	**06 18 56.7 +0.6**
IALA	**Alasht**	**3.36 96**	Pn		**Pn**	**06 18 58.1 +0.2**
IALA	**Alasht**	**3.36 96**	*e*Pn		**Pn**	**06 18 58.2 +0.3**
IALA			*e*Pn		**Pn**	**06 18 58.2 +0.3**
IFIR	**Firoozkooh**	**3.41 104**	Pn		**Pn**	**06 19 00.9 +2.3**
IFIR	**Firoozkooh**	**3.41 104**	*e*Pn		**Pn**	**06 19 00.9 +2.3**
IFIR			*e*			06 19 54.7
	comp=Z,32μm,0.1s					
IFIR	**Firoozkooh**	**3.41 104**	Pn		**Pn**	**06 19 00.9 +2.3**
ALIB	**Ii-Bayrami**	**3.45 4**	P		**Pn**	**06 18 59.6 +0.4**
	SNR=8.8					
NAX	**Nakhchivan**	**3.67 317**	P		**Pn**	**06 19 06.8 +4.7**
	SNR=11					
ISHM	**Shahmirzad**	**3.79 99**	Pn		**Pn**	**06 19 06.1 +2.2**
ISHM	**Shahmirzad**	**3.79 99**	*e*		**Pg**	**06 19 19.9 +2.4**
	comp=Z,50μm,0.2s					
ISHM			*e*Pn		**Pn**	**06 19 06.1 +2.2**
BRDA	**Brd**	**3.93 343**	P		**Pn**	**06 19 08.8 +3.1**
	SNR=263					
GOBA	**Gobu**	**3.97 12**	P		**Pn**	**06 19 07.8 +1.5**
	SNR=4.9					
GOBA			S		**Sn**	**06 19 55.2 +2.0**
IKLH	**Kolahrood**	**3.97 142**	Pn		**Pn**	**06 19 09.0 +2.7**
IKLH	**Kolahrood**	**3.97 142**	*e*Pn		**Pn**	**06 19 09.1 +2.8**
IKLH			*e*			06 20 09.7
	comp=Z,32μm,0.2s					
IKLH	**Kolahrood**	**3.97 142**	Pn		**Pn**	**06 19 09.0 +2.7**
IKIA	**Kiasar**	**4.05 93**	Pn		**Pn**	**06 19 10.0 +2.7**
IKIA	**Kiasar**	**4.05 93**	*e*Pn		**Pn**	**06 19 10.0 +2.7**
IKIA			*e*			06 19 22.3
	comp=Z,38μm,0.3s					
IKIA	**Kiasar**	**4.05 93**	Pn		**Pn**	**06 19 10.0 +2.7**
HKR	**Hakkari**	**4.10 287**	*e*PN		**Pn**	**06 19 09.9 +1.9**
HAKT	**HAKKARI**	**4.12 286**	*i* P		**Pn**	**06 19 10.4 +2.1**
HAKT	**HAKKARI**	**4.12 286**	*i* P		**Pn**	**06 19 10.4 +2.1**
CUKT	**Cukurca**	**4.14 282**	*e*PN		**Pn**	**06 19 10.1 +1.5**
IGLO	**Ghaloghah**	**4.15 89**	Pn		**Pn**	**06 19 09.8 +1.1**
IGLO	**Ghaloghah**	**4.15 89**	*e*Pn		**Pn**	**06 19 09.8 +1.1**
IGLO			*e*			06 20 28.4
	comp=Z,61μm,0.4s					
IGLO	**Ghaloghah**	**4.15 89**	Pn		**Pn**	**06 19 09.8 +1.1**
NDR	**Nardaran**	**4.19 14**	P		**Pn**	**06 19 10.0 +0.7**
	SNR=3.9					
NDR			S		**Sn**	**06 20 00.5 +1.8**
MAKU	**Maku**	**4.25 313**	Pn		**Pn**	**06 19 10.0 -0.1**
MAKU	**Maku**	**4.25 313**	*e*Pn		**Pn**	**06 19 10.7 +0.5**
MAKU	**Maku**	**4.25 313**	Pn		**Pn**	**06 19 10.0 -0.1**
PQL	**Pirkuli**	**4.27 359**	P		**Pn**	**06 19 10.5 +0.1**
	SNR=26					
PQL			S		**Sn**	**06 20 02.1 +1.4**
IML	**Ismayilli**	**4.29 355**	P		**Pn**	**06 19 10.4 -0.3**
	SNR=24					
MSL	**Mosul**	**4.50 270**	*e*Pn		**Pn**	**06 19 13.0 -0.5**
MSL			*e*Sn		**Sn**	**06 20 06.0 -0.1**
GANJ	**Ganja**	**4.53 337**	P		**Pn**	**06 19 14.5 +0.6**
	SNR=125					
SIZA	**Siyzn**	**4.56 2**	P		**Pn**	**06 19 14.4 0.0**
	SNR=15					
CLDR	**Caldiran**	**4.60 306**	*e*PN		**Pn**	**06 19 16.1 +1.2**
TVAN	**Van**	**4.66 297**	*i* P		**Pn**	**06 19 19.9 +4.2**
TVAN	**Van**	**4.66 297**	*i* P		**Pn**	**06 19 19.9 +4.2**
IZEF	**Zefreh**	**4.69 139**	Pn		**Pn**	**06 19 18.1 +1.9**
IZEF	**Zefreh**	**4.69 139**	⇑*e*Pn		**Pn**	**06 19 18.2 +2.0**
IZEF			*e*			06 20 40.6
	comp=Z,14μm,0.4s					
IZEF	**Zefreh**	**4.69 139**	Pn		**Pn**	**06 19 18.1 +1.9**
VANB	**Van**	**4.69 298**	*e*PN		**Pn**	**06 19 18.5 +2.3**
GNI	**Garni**	**4.78 321**	*e*PN		**Pn**	**06 19 20.0 +2.7**
GNI	**Garni**	**4.78 321**	Pn		**Pn**	**06 19 19.9 +2.5**
	comp=Z,3.3nm,0.3s,baz=185,slow=7.9,SNR=7.4					
GNI			Pg		**Pg**	**06 19 31.8 -4.5**
	comp=Z,28nm,0.3s,baz=220,slow=2.8,SNR=30					
GNI			Lg			06 20 37.2
	comp=Z,24nm,0.3s,baz=29,slow=22,SNR=5.9					
GNI			LR		LR	06 21 33.8
	comp=Z,1μm,19.4s,baz=326,slow=44					
GNI	**Garni**	**4.78 321**	*e*Pn		**Pn**	**06 19 19.8 +2.5**
GNI			*e*S		**Sg**	**06 20 37.1 -1.0**
GNI	**Garni**	**4.78 321**	Pn		**Pn**	**06 19 19.8 +2.4**
	SNR=118					
GNI			Pn		**Pn**	**06 19 19.8 +2.4**
	SNR=118					
GNI	**Garni**	**4.78 321**	P		**Pn**	**06 19 19.0 +1.7**
	SNR=76					
GNI	**Garni**	**4.78 321**	*e*Pn		**Pn**	**06 19 19.8 +2.5**
BHD	**Baghdad**	**4.79 229**	*e*Pn		**Pn**	**06 19 16.0 -1.6**
BHD			*e*Sn		**Sn**	**06 20 13.0 -0.5**
BHD	**Baghdad**	**4.79 229**	*e*Pn		**Pn**	**06 19 16.0 -1.6**
BHD			*e*Sn		**Sn**	**06 20 13.0 -0.5**
SEKA	**Sheki**	**4.83 347**	P		**Pn**	**06 19 18.7 +0.6**
	SNR=56					
IGAR	**Gharneh**	**4.95 145**	*e*Pn		**Pn**	**06 19 22.0 +2.3**
IGAR			*e*			06 20 53.4
	comp=Z,7μm,0.4s					
DYDN	**Diyadin**	**4.97 309**	*i* P		**Pg**	**06 19 35.3 -4.7**
AGRB	**Hanur-Agry**	**5.44 306**	*e*PN		**Pn**	**06 19 29.9 +3.5**
DGRG	**David-gareji**	**5.57 333**	P		**Pn**	**06 19 32.6 +4.4**
DGRG			S		**Sg**	**06 20 59.5 -4.0**
DIGO	**Kars**	**5.71 315**	*i* P		**Pn**	**06 19 34.2 +4.1**
BTMT	**Batman**	**5.97 288**	*e*PN		**Pn**	**06 19 39.3 +5.5**
MTA	**Mtatsminda**	**6.00 331**	P		**Pb**	**06 19 48.7 -1.0**
MTA			S		**Sg**	**06 21 09.4 -7.9**
KARS	**Kars**	**6.01 315**	*e*PN		**Pn**	**06 19 38.0 +3.6**
TBLG	**Delisi**	**6.05 331**	*e*P		**Pb**	**06 19 49.7 -0.9**
TBLG	**Delisi**	**6.05 331**	P		**Pb**	**06 19 49.7 -0.9**
TBLG			S		**Sg**	**06 21 11.8 -7.1**
BEST	**Besiri**	**6.08 285**	*i* P		**Pn**	**06 19 35.5 +0.3**
HOMI	**Horasan**	**6.39 306**	*i* P		**Pn**	**06 19 43.5 +3.9**
MAK	**Makhachkala**	**6.51 352**	*e*P		**Pn**	**06 19 43.1 +2.0**
MAK			*e*			06 20 57.0
MAK			pmax	pmax		
	comp=Z,80nm,0.2s					
MAK			smax			
	comp=E,2μm,1.0s					
MAK			smax			
	comp=N,1μm,0.9s					
MAK			MLR	MLR		
	comp=Z,2μm,11.0s					
MAK	**Makhachkala**	**6.51 352**	*e*P		**Pn**	**06 19 43.1 +2.0**
	comp=Z,80nm,0.2s					
MAK			*e*S		**Sn**	**06 20 57.0 +1.3**
	comp=Z,2μm,11.0s					
GOR	**Gori**	**6.52 328**	P		**Pn**	**06 19 32.0 -9.3**
GOR			S		**Sg**	**06 21 31.2 -2.8**
ERZM	**Erzurum**	**6.69 303**	*i* P		**Pn**	**06 19 48.2 +4.7**
EZM	**Erzurum**	**6.69 303**	*e*PN		**Pn**	**06 19 47.5 +3.9**
KEH	**Kehvi**	**6.86 329**	P		**Pn**	**06 19 48.4 +2.5**
KEH			S		**Sg**	**06 21 34.8 -10**
DIY	**Diyarbakir**	**6.89 284**	*e*PN		**Pn**	**06 19 49.4 +3.0**
BINT	**Bingol**	**6.91 292**	*e*PN		**Pn**	**06 19 50.0 +3.3**
DDEM	**Demirkent**	**6.97 311**	*i* P		**Pn**	**06 19 51.2 +3.8**
DIYA	**Diyarbakir**	**6.98 284**	*i* P		**Pg**	**06 20 13.5 -4.9**
UMR	**Umm Al-Rimmam**	**6.99 187**	*e*P		**Pn**	**06 19 48.0 +0.3**
UMR	**Umm Al-Rimmam**	**6.99 187**	*e*P		**Pn**	**06 19 48.0 +0.3**
ARTV	**Artvin**	**7.04 314**	*i* P		**Pn**	**06 19 52.5 +4.1**
ZEI	**Tsey**	**7.26 331**	*e*P		**Pn**	**06 19 54.2 +2.8**
ZEI			pmax	pmax		
	comp=Z,39nm,0.9s					
ONI	**Oni**	**7.29 328**	P		**Pn**	**06 19 55.3 +3.4**
ONI			S		**Sg**	**06 21 48.7 -10**
KOPT	**Kop Dagi**	**7.33 301**	*i* P		**Pn**	**06 19 56.9 +4.4**
NAY	**Al-Naaiem**	**7.34 190**	*e*P		**Pn**	**06 19 53.1 +0.5**
NAY			AML	AML		06 21 21.5
	comp=Z,75nm,0.7s					
NAY	**Al-Naaiem**	**7.34 190**	*e*P		**Pn**	**06 19 53.1 +0.5**
KBD	**Kabd**	**7.36 187**	*e*P		**Pn**	**06 19 53.3 +0.5**
KBD			AML	AML		06 21 01.1
	comp=Z,41nm,0.5s					
KBD	**Kabd**	**7.36 187**	*e*P		**Pn**	**06 19 53.3 +0.4**
BCA	**Borcka**	**7.38 314**	*e*PN		**Pn**	**06 19 56.4 +3.3**
RDF	**Al-Radifah**	**7.62 188**	*e*P		**Pn**	**06 19 57.5 +1.1**
RDF	**Al-Radifah**	**7.62 188**	*e*P		**Pn**	**06 19 57.5 +1.0**
VAN	**Vannovskaya**	**7.65 76**	*e*P		**Pn**	**06 19 55.2 -1.7**
VAN	**Vannovskaya**	**7.65 76**	*e*P		**Pn**	**06 19 55.2 -1.7**
SVRC	**Sivrice-ELAZID**	**7.69 287**	*e*PN		**Pn**	**06 20 00.7 +3.4**
PTK	**Pertek**	**7.74 291**	*e*PN		**Pn**	**06 20 01.1 +3.0**
QRN	**Al-Qurain**	**7.77 185**	*e*P		**Pn**	**06 19 59.0 +0.5**
ELZG	**Elazig**	**7.96 287**	*i* P		**Pg**	**06 20 28.4 -8.8**
EZC	**Erzincan**	**8.03 297**	*e*PN		**Pn**	**06 20 05.7 +3.7**

GUMT	**Gumushane**	**8.22 301**	*e*PN		**Pn**	**06 20 07.7 +3.0**
KFJS		**8.32 185**	P		**Pn**	**06 20 05.5 -0.6**
KFJS		**8.32 185**	P		**Pn**	**06 20 05.5 -0.6**
ATAB	**Bozova**	**8.37 280**	*i* P		**Pn**	**06 20 09.7 +3.0**
KEMA	**Kemaliye**	**8.52 292**	*i* P		**Pn**	**06 20 14.0 +5.3**
KIV	**Kislovodsk**	**8.73 330**	*e*P		**Pn**	**06 20 16.0 +4.3**
KIV			*e*S		**Sn**	**06 21 55.8 +5.3**
KIV			pmax	pmax		
	comp=Z,22nm,1.0s					
KIV			MLR	MLR		
	comp=Z,412nm,9.0s					
KIV	**Kislovodsk**	**8.73 330**	*e*Pn		**Pn**	**06 20 14.5 +2.8**
GZT	**Gaziantep**	**8.95 279**	*i* P		**Pn**	**06 20 14.2 -0.4**
KRBR	**Kerman**	**9.38 132**	Pn		**Pn**	**06 20 22.0 +1.4**
KRBR	**Kerman**	**9.38 132**	*e*Pn		**Pn**	**06 20 22.4 +1.7**
KRBR	**Kerman**	**9.38 132**	Pn		**Pn**	**06 20 22.0 +1.4**
ASYS		**9.70 204**	P		**Pn**	**06 20 23.4 -1.6**
ASYS		**9.70 204**	P		**Pn**	**06 20 23.4 -1.6**
SOC	**Sochi**	**9.85 319**	*e*P		**Pn**	**06 20 26.7 -0.3**
SOC			*e*			06 22 18.7
SOC			pmax	pmax		
	comp=Z,1μm,1.6s					
SOC			MLR	MLR		
	comp=Z,64μm,16.0s					
SOC	**Sochi**	**9.85 319**	*e*P		**Pn**	**06 20 26.7 -0.3**
	comp=Z,1μm,1.6s					
SOC			*e*S		**Sn**	**06 22 18.7 +0.7**
	comp=Z,64μm,16.0s					
BOQSS		**10.62 177**	P		**Pn**	**06 20 35.9 -1.7**
ASF	**Jabal al Asfar**	**10.66 249**	Lg			06 23 37.6
	baz=132,slow=18,SNR=3.9					
ASF			LR		LR	06 25 08.1
	comp=Z,407nm,21.0s,baz=101,slow=40					
MMAI	**Mount Meron Ar**	**11.46 256**	Lg			06 24 04.5
	comp=Z,2.3nm,0.3s,baz=64,slow=26,SNR=3.8					
MMAI			LR		LR	06 25 32.0
	comp=Z,223nm,21.2s,baz=5.0,slow=39					
CTKT	**Corum**	**11.62 295**	*i* P		**Pn**	**06 20 55.8 +4.6**
CDAG	**Cicekdag**	**11.70 290**	*i* P		**Pn**	**06 20 55.4 +3.0**
SLWS		**11.79 171**	P		**Pn**	**06 20 50.8 -2.9**
BR131	**Keskin Array S**	**12.28 290**	*e*Pn		**Pn**	**06 21 03.4 +3.2**
BRTR	**Keskin Array B**	**12.28 290**	Pn		**Pn**	**06 21 01.6 +1.5**
	comp=Z,0.1nm,0.3s,baz=98,slow=13,SNR=15					
BRTR			LR		LR	06 26 06.9
	comp=Z,83nm,21.4s,baz=242,slow=39					
BRTR	**Keskin Array B**	**12.28 290**	*i* P		**Pn**	**06 21 03.7 +3.5**
BRTR			pmax	pmax		
	comp=Z,5.0nm,1.0s					
BRTR	**Keskin Array B**	**12.28 290**	Pn		**Pn**	**06 21 01.6 +1.4**
NAZ	**Nazwa, Dubai**	**12.95 151**	Pn		**Pn**	**06 21 07.9 -1.5**
	SNR=10					
NAZ	**Nazwa, Dubai**	**12.95 151**	Pn		**Pn**	**06 21 07.9 -1.6**
	SNR=10					
ASUD	**Al Ashush, Dub**	**13.15 152**	Pn		**Pn**	**06 21 11.2 -1.0**
	SNR=12					
ASUD	**Al Ashush, Dub**	**13.15 152**	P		**Pn**	**06 21 10.2 -2.0**
	SNR=11					
ASUD	**Al Ashush, Dub**	**13.15 152**	Pn		**Pn**	**06 21 11.2 -1.0**
	SNR=12					
EIL	**Elat**	**13.38 243**	LR		LR	06 26 56.7
	comp=Z,347nm,19.1s,baz=84,slow=40					
AB31	**Akbulak array**	**15.15 29**	⇑Pn		**Pn**	**06 21 34.1 -5.3**
	comp=Z,14nm,0.5s,baz=217,slow=11,SNR=160					
AB31			⇑Sn		**Sn**	**06 24 12.2 -15**
	comp=Z,31nm,0.8s,baz=219,slow=24,SNR=4.4					
ABKAR	**Akbulak array**	**15.15 29**	*e*P		**Pn**	**06 21 33.5 -5.9**
	comp=Z,22nm,0.5s					
VRHR	**Novokhopersk**	**15.43 343**	*e*P		**Pn**	**06 21 43.4 +0.4**
VRHR			pmax	pmax		
	comp=Z,30nm,0.6s					
VRHR			pmax	pmax		
	comp=N,20nm,0.5s					
VRHR			pmax	pmax		
	comp=E,20nm,0.6s					
AKTK	**Aktyubinsk**	**15.46 23**	Pn		**Pn**	**06 21 38.5 -4.9**
AKTK			Sn		**Sn**	**06 24 22.1 -13**
AKTK			LR		LR	06 29 45.1
AKTO	**Aktyubinsk**	**15.46 23**	⇓Pn		**Pn**	**06 21 38.4 -5.0**
	comp=E,4.4nm,0.5s					
AKTO			⇓Sn		**Sn**	**06 24 19.2 -16**
	comp=E,9.9nm,0.7s					
AKTO	**Aktyubinsk**	**15.46 23**	Pn		**Pn**	**06 21 38.5 -4.9**
	comp=E,6.3nm,0.3s,baz=205,slow=13,SNR=64					
AKTO			Sn		**Sn**	**06 24 22.1 -13**
	comp=E,4.8nm,0.3s,baz=0.2,slow=19,SNR=11					
AKTO			LR		LR	06 29 45.1
	comp=E,528nm,18.7s,baz=27,slow=46					
VORD	**Divnogorie**	**15.94 338**	*e*P		**Pn**	**06 21 50.5 +0.8**
VORD			pmax	pmax		
	comp=Z,6.0nm,0.9s					
VORD			pmax	pmax		
	comp=N,40nm,0.8s					
VORD			pmax	pmax		
	comp=E,20nm,1.6s					
VSR	**Storozhevoye**	**16.20 338**	*e*P		**Pn**	**06 21 51.7 -1.3**
VSR			pmax	pmax		
	comp=N,10.0nm,0.5s					
VSR			pmax	pmax		
	comp=Z,10.0nm,0.5s					
VSR			pmax	pmax		
	comp=E,40nm,1.2s					
KBL	**Kabul**	**16.69 91**	*e*P		**Pn**	**06 22 04.0 +4.6**
KBL			pmax	pmax		
	comp=Z,18nm,0.8s					
KBL	**Kabul**	**16.69 91**	*e*P		**Pn**	**06 22 04.0 +4.6**
	comp=Z,18nm,0.8s					
KBL	**Kabul**	**16.69 91**	*e*P		**Pn**	**06 22 04.0 +4.6**
	comp=Z,18nm,0.8s					
PSN	**Preselentsi**	**17.22 301**	P		**Pn**	**06 22 08.2 +2.3**
PSN	**Preselentsi**	**17.22 301**	P		**Pn**	**06 22 08.2 +2.3**
TIRR	**Tirgusor**	**17.32 304**	⇑P		**Pn**	**06 22 10.3 +3.2**
TIRR	**Tirgusor**	**17.32 304**	⇑*i*P		**Pn**	**06 22 10.3 +3.2**
TIRR	**Tirgusor**	**17.32 304**	P		**Pn**	**06 22 10.3 +3.2**
PRD	**Provadia**	**17.63 299**	P		**Pn**	**06 22 15.0 +3.9**
HARR	**Harsova**	**17.72 304**	⇓P		**Pn**	**06 22 12.7 +0.6**
HARR	**Harsova**	**17.72 304**	⇓*i*P		**Pn**	**06 22 12.7 +0.6**
HARR	**Harsova**	**17.72 304**	P		**Pn**	**06 22 12.7 +0.6**
KK31	**Karatay Array**	**17.99 62**	⇑P		**Pn**	**06 22 13.1 -2.4**
	comp=Z,39nm,0.9s,baz=250,slow=16,SNR=159					
KK31			⇓S		**Sn**	**06 25 26.7 -10**
	comp=Z,15nm,0.6s					
JMB	**Yambol**	**18.05 296**	P		**Pn**	**06 22 20.8 +4.6**
KIS	**Kishinev**	**18.10 312**	*e*P		**Pn**	**06 22 14.0 -2.9**
KIS			*e*			06 25 42.0
SZH	**Strazhica**	**18.69 298**	P		**Pn**	**06 22 23.2 -0.8**
SZH	**Strazhica**	**18.69 298**	P		**Pn**	**06 22 23.2 -0.8**
KDZ	**Kurdzhali**	**18.76 293**	P		**Pn**	**06 22 26.2 +1.3**
KDZ	**Kurdzhali**	**18.76 293**	P		**Pn**	**06 22 26.2 +1.3**
LAST	**Lasithi**	**18.86 273**	*e*Pn		**Pn**	**06 22 27.6 +1.4**
LAST	**Lasithi**	**18.86 273**	*e*Pn		**Pn**	**06 22 27.6 +1.4**
VRI	**Vrincioaia**	**18.93 306**	⇓P		**Pn**	**06 22 26.3 -0.7**
VRI	**Vrincioaia**	**18.93 306**	⇓*i*P		**Pn**	**06 22 26.3 -0.7**
VRI	**Vrincioaia**	**18.93 306**	P		**Pn**	**06 22 26.3 -0.7**
PLOR	**Plostina**	**18.98 306**	⇑P		**Pn**	**06 22 27.9 +0.3**
PLOR	**Plostina**	**18.98 306**	⇑*i*P		**Pn**	**06 22 27.9 +0.3**
PLOR	**Plostina**	**18.98 306**	P		**Pn**	**06 22 27.9 +0.3**
PVL	**Pavlikeni**	**19.10 298**	P		**Pn**	**06 22 31.6 +2.5**
RZN	**Rozhen**	**19.28 293**	P		**Pn**	**06 22 30.0 -1.3**
RZN	**Rozhen**	**19.28 293**	P		**Pn**	**06 22 30.0 -1.3**
IDI	**Anoyia**	**19.31 273**	P		**Pn**	**06 22 30.0 -1.6**
	comp=Z,1.2nm,0.3s,baz=15,slow=12,SNR=16					
IDI			S		**Sn**	**06 26 11.0 +2.6**
	comp=Z,0.3nm,0.3s,baz=108,slow=23,SNR=2.0					
IDI	**Anoyia**	**19.31 273**	P		**Pn**	**06 22 30.0 -1.6**
MLR	**Muntele Rosu**	**19.32 305**	P		**Pn**	**06 22 31.3 -0.3**
	comp=Z,0.4nm,0.3s,baz=91,slow=13,SNR=6.6					
MLR			S		**Sn**	**06 26 00.1 -8.2**
	comp=Z,0.6nm,0.3s,baz=158,slow=14,SNR=3.5					
MLR	**Muntele Rosu**	**19.32 305**	P		**Pn**	**06 22 31.3 -0.3**
MLR			S		**Sn**	**06 26 00.1 -8.3**
MLR			smax			
	comp=N,1.0nm,0.3s					
MLR	**Muntele Rosu**	**19.32 305**	P		**Pn**	**06 22 32.1 +0.5**
MLR	**Muntele Rosu**	**19.32 305**	⇑*i*P		**Pn**	**06 22 31.7 +0.1**
MLR	**Muntele Rosu**	**19.32 305**	P		**Pn**	**06 22 31.3 -0.3**
	comp=N,1.0nm,0.3s					
SIVA	**Sivas**	**19.43 273**	*e*Pn		**Pn**	**06 22 32.9 -0.1**
SIVA	**Sivas**	**19.43 273**	P		**Pn**	**06 22 32.9 -0.1**
SIVA	**Sivas**	**19.43 273**	P		**Pn**	**06 22 32.9 -0.1**
SIVA	**Sivas**	**19.43 273**	*e*Pn		**Pn**	**06 22 32.9 -0.1**
PGB	**Panagyurishte**	**19.82 295**	P		**Pn**	**06 22 37.3 -0.3**
PGB	**Panagyurishte**	**19.82 295**	P		**Pn**	**06 22 37.3 -0.3**
VLY	**Voula,Athens**	**19.87 281**	*e*Pb		**Pn**	**06 22 37.8 -0.4**
VLY	**Voula,Athens**	**19.87 281**	*e*Pb		**Pn**	**06 22 37.8 -0.4**

AKASG	**Malin Array Be**	**19.91 322**	P		**Pn**	**06 22 35.6 -3.0**
	comp=N,1.2nm,0.3s,baz=123,slow=11,SNR=15					
AKASG	**Malin Array Be**	**19.91 322**	P		**Pn**	**06 22 35.6 -3.0**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.3s					
AKASG	**Malin Array Be**	**19.91 322**	P		**Pn**	**06 22 35.6 -3.0**
	comp=Z,1.0nm,0.3s					
AKBB	**Malin Array Si**	**19.91 322**	*e*P		**Pn**	**06 22 35.4 -3.2**
AKBB	**Malin Array Si**	**19.91 322**	*e*P		**Pn**	**06 22 35.4 -3.2**
KIEV	**Kiev**	**19.91 321**	*e*P		**Pn**	**06 22 35.2 -3.5**
KIEV			pmax	pmax		
	comp=Z,20nm,0.7s					
KIEV	**Kiev**	**19.91 321**	*e*P		**Pn**	**06 22 35.2 -3.4**
	comp=Z,20nm,0.7s					
KIEV	**Kiev**	**19.91 321**	*e*P		**Pn**	**06 22 35.2 -3.5**
	comp=Z,20nm,0.7s					
MMB	**Musomiste**	**20.01 292**	P		**P**	**06 22 38.5 +0.3**
MMB	**Musomiste**	**20.01 292**	P		**P**	**06 22 38.5 +0.3**
GVD	**Gavdhos**	**20.04 273**	*e*P		**P**	**06 22 39.0 +0.4**
	comp=Z,283nm,1.2s					
GVD	**Gavdhos**	**20.04 273**	*e*P		**P**	**06 22 39.0 +0.4**
	comp=Z,283nm,1.2s					
SRS	**Serrai**	**20.06 291**	P		**P**	**06 22 39.2 +0.4**
SRS	**Serrai**	**20.06 291**	P		**P**	**06 22 39.2 +0.4**
KARN	**Karanos**	**20.07 274**	P		**P**	**06 22 38.4 -0.5**
KARN	**Karanos**	**20.07 274**	*e*Pb		**P**	**06 22 39.8 +0.9**
NAIG	**Nisos Aigina**	**20.11 281**	*e*Pb		**P**	**06 22 42.2 +2.8**
SOH	**Sokhos**	**20.22 290**	P		**P**	**06 22 40.7 +0.2**
SOH	**Sokhos**	**20.22 290**	P		**P**	**06 22 40.7 +0.2**
EKS2	**Erkin-Say**	**20.25 65**	*e*P		**P**	**06 22 42.1 +1.3**
	comp=Z,18nm,0.7s					
EKS2	**Erkin-Say**	**20.25 65**	*e*P		**P**	**06 22 42.1 +1.2**
	comp=Z,18nm,0.7s					
XOR	**Xorichti**	**20.29 286**	P		**P**	**06 22 40.1 -1.2**
XOR	**Xorichti**	**20.29 286**	P		**P**	**06 22 40.1 -1.2**
OBN	**Obninsk**	**20.38 340**	*c i*P		**P**	**06 22 43.4 +1.3**
OBN			*i*			06 22 58.6
OBN			*e*S		**S**	**06 26 30.7 +0.1**
OBN			pmax	pmax		
	comp=Z,69nm,1.0s					
OBN			MLR	MLR		
	comp=Z,400nm,20.0s,MS3.8					
OBN	**Obninsk**	**20.38 340**	*e*P		**P**	**06 22 42.6 +0.6**
	comp=Z,53nm,0.9s					
OBN	**Obninsk**	**20.38 340**	*e*P		**P**	**06 22 42.7 +0.6**
	comp=Z,53nm,0.9s					
LKR	**Lokris**	**20.45 284**	*e*Pn		**P**	**06 22 46.2 +3.2**
LKR	**Lokris**	**20.45 284**	P		**P**	**06 22 46.8 +3.8**
LKR	**Lokris**	**20.45 284**	*e*Pn		**P**	**06 22 46.2 +3.2**
LTK	**Loutraki**	**20.51 282**	P		**P**	**06 22 45.2 +1.5**
LTK	**Loutraki**	**20.51 282**	*e*Pn		**P**	**06 22 45.2 +1.5**
KKB	**Krupnik**	**20.52 293**	P		**P**	**06 22 43.6 -0.1**
KKB	**Krupnik**	**20.52 293**	P		**P**	**06 22 43.6 -0.1**
VTS	**Vitosha**	**20.52 295**	P		**P**	**06 22 43.9 +0.1**
VTS	**Vitosha**	**20.52 295**	P		**P**	**06 22 44.0 +0.2**
VTS	**Vitosha**	**20.52 295**	P		**P**	**06 22 43.9 +0.1**
BURAR	**Bucovina Array**	**20.57 310**	⇓*i*P		**P**	**06 22 43.9 -0.4**
BURAR	**Bucovina Array**	**20.57 310**	P		**P**	**06 22 44.2 -0.1**
BUR08	**Bucovina Ar. S**	**20.60 310**	*e*P		**P**	**06 22 43.8 -0.7**
BUR08	**Bucovina Ar. S**	**20.60 310**	*e*P		**P**	**06 22 43.8 -0.7**
KYTH	**Kithira**	**20.63 277**	*e*Pn		**P**	**06 22 43.7 -1.4**
KYTH	**Kithira**	**20.63 277**	*e*Pn		**P**	**06 22 43.7 -1.4**
MOS	**Moscow**	**20.66 342**	*e*P		**P**	**06 22 44.2 -0.9**
MOS			*e*			06 23 03.2
MOS			*e*S		**S**	**06 26 37.0 +0.9**
MOS			pmax	pmax		
	comp=Z,155nm,1.1s					
MOS			pmax	pmax		
	comp=Z,400nm,2.0s					
MOS	**Moscow**	**20.66 342**	*e*P		**P**	**06 22 44.2 -0.9**
	comp=Z,400nm,2.0s					
VLI	**Veliai**	**20.66 278**	*e*Pn		**P**	**06 22 43.9 -1.4**
VLI	**Veliai**	**20.66 278**	*e*Pn		**

KSH LR LR
comp=Z,230nm,7.9s
FNA Florina 21.71 290 P **P 06 22 57.1 +0.4**
FNA Florina 21.71 290 P **P 06 22 57.1 +0.4**
ZRNK Zerenda 21.75 35 ⇓P **P 06 22 56.5 -0.5**
comp=Z,0.6nm,0.8s
KRUS Krusevo 21.84 291 *e*P **P 06 22 52.5 -5.6**
SVE Sverdlovsk 21.85 18⇑*e*P **P 06 22 59.2 +1.2**
SVE *e*S **S 06 26 52.3 -7.4**
SVE pmax pmax
comp=Z,37nm,0.8s,mb4.9
SVE MLR MLR
comp=Z,405nm,15.0s,MS4.0
SVE Sverdlovsk 21.85 18 *e*P **P 06 22 59.2 +1.2**
comp=Z,37nm,0.8s,mb4.9
DRGR 21.87 306⇓*i*P **P 06 22 58.5 +0.3**
DRGR 21.87 306 P **P 06 22 58.5 +0.3**
MUKL Al Mukalla 21.94 179 *e*P **P 06 22 58.8 -0.4**
OHR Ohrid 22.17 290 *e*P **P 06 22 58.1 -3.4**
DHBB Dhamar BB 22.18 191⇑*e*P **P 06 23 01.6 -0.2**
DHBB AMb AMB 06 23 03.7
comp=Z,25nm,0.8s,mb4.7
DHBB *i* S **S 06 27 08.7 +2.0**
DHBB Dhamar BB 22.18 191⇑*e*P **P 06 23 01.6 -0.2**
comp=Z,12nm,0.8s,mb4.4
DHBB *i* S **S 06 27 08.7 +2.0**
SVIS Svilajnac 22.24 299 *i* P **P 06 23 01.7 -0.5**
LVV L'vov 22.24 314 *e*P **P 06 23 00.8 -1.4**
LVV *e* 06 23 32.6
LVV *e*S **S 06 26 58.4 -9.0**
LVV *e* 06 27 42.4
LVV MLR MLR
comp=N,200nm,13.0s,MS3.9
LVV MLR MLR
comp=E,220nm,13.0s,MS3.9
LVV MLR MLR
comp=Z,300nm,13.0s,MS3.9
LVV L'vov 22.24 314 *e*P **P 06 23 00.8 -1.4**
VLS Valsamata 22.37 283 P **P 06 23 03.5 -0.2**
VLS Valsamata 22.37 283 P **P 06 23 03.5 -0.2**
BRVK Borovoye 22.42 36 *e*P **P 06 23 03.8 -0.2**
BRVK *e*S **S 06 27 06.6 -4.1**
BRVK pmax pmax
comp=Z,93nm,0.7s,mb5.3
BRVK Borovoye 22.42 36 *e*P **P 06 23 03.8 -0.3**
comp=Z,93nm,0.7s,mb5.3
BRVK *e*S **S 06 27 06.6 -4.1**
BRVK Borovoye 22.42 36 P **P 06 23 03.7 -0.4**
SNR=43
BRVK P 06 23 03.7
SNR=43
BRVK Borovoye 22.42 36 *e*P **P 06 23 03.8 -0.2**
comp=Z,93nm,0.7s,mb5.3
TRPA Tarpa 22.44 309⇓*e*P **P 06 23 05.1 +0.8**
BVA0 Borovoye Array 22.45 36 P **P 06 23 05.3 +1.0**
comp=Z,18nm,0.8s,mb4.5,baz=225,slow=8.4,SNR=326
BVA0 ⇓S **S 06 27 05.8 -5.4**
comp=Z,5.7nm,0.8s
BVAR Borovoye Array 22.45 36 P **P 06 23 04.8 +0.5**
comp=Z,64nm,0.7s,mb5.1,baz=228,slow=9.6,SNR=128
BVAR S **S 06 27 07.7 -3.6**
comp=Z,8.1nm,0.7s,baz=235,slow=25,SNR=5.2
BVAR Borovoye Array 22.45 36 P **P 06 23 04.8 +0.5**
BVAR S **S 06 27 07.7 -3.6**
BVAR pmax pmax
comp=Z,64nm,0.7s
BVAR smax
comp=N,8.0nm,0.7s
BVAR Borovoye Array 22.45 36 P **P 06 23 04.8 +0.5**
comp=N,64nm,0.7s,mb5.2
GRUS Gruza 22.53 298⇓*i*P **P 06 23 05.3 0.0**
VOSK Vostochnaya 22.54 37⇑P **P 06 23 04.4 -1.0**
comp=N,36nm,0.8s,mb4.8
VOSK Vostochnaya 22.54 37 P **P 06 23 04.4 -1.0**
comp=N,36nm,0.8s,mb4.8
LBOS 22.75 189⇓*e*P **P 06 23 07.7 -0.2**
LBOS AMb AMB 06 23 09.6
comp=Z,141nm,1.1s,mb5.3
UZH Uzhgorod 22.78 310 *e*P **P 06 23 07.0 -0.9**
UZH *e*S **S 06 27 09.0 -8.5**
UZH MLR MLR
comp=Z,600nm,18.0s,MS4.1
UZH Uzhgorod 22.78 310 *e*P **P 06 23 07.0 -0.9**
comp=Z,600nm,18.0s
TIR Tirane 22.88 291 *e*P **P 06 23 11.6 +2.5**
TIR pmax pmax
comp=Z,26nm,0.6s,mb4.8
TIR Tirane 22.88 291 *e*P **P 06 23 11.6 +2.5**
comp=Z,26nm,0.6s,mb4.8
KOLS Kolonicke sedl 22.91 311 *e*P **P 06 23 09.0 -0.3**
KOLS pmax pmax
comp=Z,43nm,1.2s,mb4.8
KOLS Kolonicke sedl 22.91 311 *e*P **P 06 23 09.0 -0.3**
comp=Z,43nm,1.2s,mb4.8
KOLS Kolonicke sedl 22.91 311 *e*P **P 06 23 09.0 -0.3**
KOLS Kolonicke sedl 22.91 311 *e*P **P 06 23 09.0 -0.3**
comp=Z,43nm,1.2s,mb4.8
KWP Kalwaria Pacla 22.93 313 *e*P **P 06 23 09.5 0.0**
KWP Kalwaria Pacla 22.93 313 *e*P **P 06 23 09.2 -0.3**
KWP pmax pmax
comp=Z,57nm,1.1s,mb4.9
KWP Kalwaria Pacla 22.93 313 *e*P **P 06 23 09.2 -0.3**
comp=Z,57nm,1.1s,mb4.9
KWP Kalwaria Pacla 22.93 313⇓*i*P **P 06 23 09.9 +0.4**
KWP Kalwaria Pacla 22.93 313 *e*P **P 06 23 09.2 -0.3**
comp=Z,57nm,1.1s,mb4.9
MICGM Minsk 23.01 328 *e*P **P 06 23 08.0 -2.3**
MNK Minsk 23.03 328 *e*P **P 06 23 08.0 -2.5**
MNK Minsk 23.03 328 *e*P **P 06 23 08.0 -2.5**
DIVS Divibare 23.08 298 P **P 06 23 10.7 -0.4**
DIVS Divibare 23.08 298⇓*i*P **P 06 23 09.4 -1.7**
BBLS Lazići 23.46 297⇑*i*P **P 06 23 15.2 0.0**
SOKR Solikamsk 23.67 10*c i*P **P 06 23 18.5 +1.5**
SOKR S **S 06 27 36.2 +4.4**
SOKR pmax pmax
comp=Z,40nm,1.5s,mb4.6
SOKR MLR MLR
comp=Z,290nm,18.0s,MS3.8
SOKR Solikamsk 23.67 10 *i* P **P 06 23 18.5 +1.5**
comp=Z,40nm,1.5s,mb4.6
STHS Stebnicka Huta 23.71 312 *e*P **P 06 23 23.9 +6.3**
STHS *e* 06 23 29.8
STHS Stebnicka Huta 23.71 312 *e*pP pP 06 23 23.9 +4.9
STHS *e*sP sP 06 23 29.8 +10
NACGM Naroch 23.75 328 *e* **P 06 23 15.0 -2.8**
KECS Kecovo 23.84 309 *e*P **P 06 23 19.6 +0.8**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
KECS Kecovo 23.84 309 *e*P **P 06 23 19.6 +0.8**
comp=Z,3.9nm,0.9s,mb3.8
KECS *e*PP 06 23 23.0
KECS Kecovo 23.84 309 *e*P **P 06 23 19.6 +0.8**
KECS *e*pP 06 23 23.0
PSZ Piszkesteto 24.04 307 *e*P **P 06 23 20.6 +0.1**
PSZ pmax pmax
comp=Z,15nm,1.0s,mb4.4
PSZ Piszkesteto 24.04 307 *e*P **P 06 23 20.6 0.0**
comp=Z,16nm,1.0s,mb4.4
PSZ Piszkesteto 24.04 307⇓*e*P **P 06 23 22.5 +1.9**
PSZ Piszkesteto 24.04 307⇑*i*P **P 06 23 22.6 +2.0**
PSZ Piszkesteto 24.04 307 *e*P **P 06 23 20.6 +0.1**
comp=Z,16nm,1.0s,mb4.4
IDID Didziasalis 24.05 328 *e*P **P 06 23 19.1 -1.4**
IDID Didziasalis 24.05 328 *e*P **P 06 23 19.1 -1.4**
NIE Niedzica 24.28 311 *e*P **P 06 23 23.1 +0.4**
NIE Niedzica 24.28 311 *e*P **P 06 23 23.1 +0.4**
IIGN Ignalina 24.29 328 *e*P **P 06 23 22.6 -0.2**
IIGN Ignalina 24.29 328 *e*P **P 06 23 22.6 -0.1**
PKSM Moragy 24.42 303 P **P 06 23 23.9 -0.1**
PKSM Moragy 24.42 303 P **P 06 23 23.9 -0.1**
ISAL Salakas 24.48 328 *e*P **P 06 23 25.3 +0.8**
ISAL Salakas 24.48 328 *e*P **P 06 23 25.3 +0.8**
IZAR Zarasai 24.55 329 *e*P **P 06 23 26.3 +1.2**
IZAR Zarasai 24.55 329 *e*P **P 06 23 26.3 +1.2**
SUW Suwalki 24.86 323 *e*P **P 06 23 27.8 -0.1**
SUW Suwalki 24.86 323 *e*P **P 06 23 27.1 -0.8**
SUW pmax pmax
comp=Z,189nm,1.0s,mb5.6
SUW Suwalki 24.86 323 *e*P **P 06 23 27.1 -0.8**
comp=Z,189nm,1.0s,mb5.6
SUW Suwalki 24.86 323 *e*P **P 06 23 27.1 -0.8**
comp=Z,189nm,1.0s,mb5.6
PKSG 24.87 305⇑*e*P **P 06 23 28.0 -0.1**
OJC Ojcow 24.89 312 *e*P **P 06 23 26.9 -1.4**
OJC Ojcow 24.89 312 *e*P **P 06 23 26.9 -1.4**
VYHS Vyhne 24.89 308 *e*P **P 06 23 28.3 0.0**
VYHS *e* 06 23 33.5
VYHS pmax pmax
comp=Z,34nm,2.0s,mb4.5
VYHS Vyhne 24.89 308 *e*P **P 06 23 28.3 0.0**
comp=Z,34nm,2.0s,mb4.5
VYHS *e*PP 06 23 33.5
VYHS Vyhne 24.89 308 *e*P **P 06 23 28.3 0.0**
VYHS *e*pP 06 23 33.5
VYHS Vyhne 24.89 308 *e*P **P 06 23 28.3 0.0**
comp=Z,34nm,2.0s,mb4.5
DDI Dehra Dun 25.22 96 *ex* **P 06 23 35.0 +3.5**
TIP Timpagrande 25.29 286 *e*P **P 06 23 30.5 -1.6**
comp=Z,17nm,1.0s,mb4.5
KURBB Kurchatov Arra 25.61 47⇑P **P 06 23 34.6 -0.2**
comp=Z,4.3nm,1.2s,mb3.9
KURBB Kurchatov Arra 25.61 47 P **P 06 23 34.6 -0.2**
comp=Z,4.3nm,1.2s,mb3.9
KURK Kurchatov 25.70 47⇑P **P 06 23 35.3 -0.3**
comp=Z,36nm,1.0s,mb4.9
KURK Kurchatov 25.70 47 P **P 06 23 34.5 -1.1**
comp=Z,9.5nm,0.8s,mb4.4,baz=252,slow=9.2,SNR=24
KURK Kurchatov 25.70 47*c i*P **P 06 23 35.3 -0.3**
KURK pmax pmax
comp=Z,59nm,1.7s,mb4.8
KURK MLR MLR
comp=Z,263nm,18.0s,MS3.8
KURK Kurchatov 25.70 47 *e*P **P 06 23 35.5 -0.2**
comp=Z,36nm,1.0s,mb4.9
KURK Kurchatov 25.70 47 P **P 06 23 35.7 0.0**
SNR=23
KURK P pP 06 23 35.7 -1.4
SNR=23
KURK Kurchatov 25.70 47 *e*P **P 06 23 35.5 -0.1**
comp=Z,36nm,1.0s,mb4.9
CEL Celeste 26.04 284 *e*P **P 06 23 37.9 -1.0**
comp=Z,34nm,0.8s,mb4.9
CEL Celeste 26.04 284 *e*P **P 06 23 37.9 -1.0**
comp=Z,34nm,0.8s,mb4.9
KOGS Kog 26.09 303 *i* P **P 06 23 40.3 +1.1**
KOGS Kog 26.09 303 *i* P **P 06 23 40.3 +1.1**
MORC Moravsky Berou 26.09 310 *e*P **P 06 23 37.9 -1.3**
MORC pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
MORC Moravsky Berou 26.09 310 *e*P **P 06 23 37.9 -1.4**
comp=Z,4.5nm,0.8s,mb4.0
MORC Moravsky Berou 26.09 310⇑*i*P **P 06 23 38.7 -0.5**
MORC Moravsky Berou 26.09 310 *e*P **P 06 23 37.9 -1.3**
comp=Z,4.5nm,0.8s,mb4.0
VSU Vasula 26.27 334⇑*e*P **P 06 23 42.6 +1.9**
VSU pmax pmax
comp=Z,20nm,0.6s,mb4.8
VSU MLR MLR
comp=Z,400nm,16.0s,MS4.0
VSU Vasula 26.27 334 *e*P **P 06 23 42.6 +1.9**
comp=Z,400nm,16.0s
VRAC Vranov 26.54 309 P **P 06 23 44.2 +0.9**
comp=Z,2.4nm,0.4s,mb4.1,baz=112,slow=7.0,SNR=2.9
VRAC Vranov 26.54 309 P **P 06 23 44.2 +0.9**
VRAC pmax pmax
comp=Z,2.0nm,0.4s
VRAC Vranov 26.54 309 P **P 06 23 44.2 +0.9**
comp=Z,2.0nm,0.4s,mb4.0
GROS Grobnik 26.60 302 *i* P **P 06 23 46.3 +2.5**
GROS Grobnik 26.60 302 *i* P **P 06 23 46.3 +2.5**
BOJS Bojanci 26.62 300 *i* P **P 06 23 44.1 0.0**
BOJS Bojanci 26.62 300 *i* P **P 06 23 44.1 0.0**
CONA Conrad Observa 26.65 306⇑*i*P **P 06 23 43.8 -0.6**
comp=Z,22nm,1.4s,mb4.5
CONA Conrad Observa 26.65 306 P **P 06 23 43.8 -0.5**
comp=Z,22nm,1.4s,mb4.5
ARSA Arzberg 26.73 304⇑*i*P **P 06 23 44.8 -0.2**
comp=Z,25nm,1.5s,mb4.5
ARSA Arzberg 26.73 304 P **P 06 23 44.8 -0.2**
comp=Z,25nm,1.5s,mb4.5
MK31 Makanchi Array 26.95 57⇑P **P 06 23 46.8 -0.1**
comp=Z,17nm,0.8s,mb4.6,baz=256,slow=6.6,SNR=98
MK31 Makanchi Array 26.95 57 *e*P **P 06 23 47.0 +0.1**
MK31 Makanchi Array 26.95 57 P **P 06 23 46.8 -0.1**
comp=Z,17nm,0.8s,mb4.6,SNR=98
MKAR Makanchi Array 26.95 57 P **P 06 23 46.9 0.0**
comp=Z,14nm,0.8s,mb4.5,baz=256,slow=7.3,SNR=50
MKAR Makanchi Array 26.95 57 P **P 06 23 46.9 0.0**
MKAR pmax pmax
comp=Z,14nm,0.8s
MKAR Makanchi Array 26.95 57 P **P 06 23 46.9 0.0**
comp=Z,14nm,0.8s,mb4.5
SOKA Soboth 26.96 303⇓*i*P **P 06 23 47.2 +0.2**
comp=Z,21nm,2.0s,mb4.3
SOKA Soboth 26.96 303 P **P 06 23 47.2 +0.2**
comp=Z,21nm,2.0s,mb4.3
DPC Dobruska-Polom 27.02 311 *e*P **P 06 23 45.7 -1.9**
AQU L'Aquila 27.73 293 *e*P **P 06 23 53.8 -0.3**
comp=Z,51nm,1.0s,mb5.1
AQU L'Aquila 27.73 293 *e*P **P 06 23 53.8 -0.3**
comp=Z,51nm,1.0s,mb5.1
PRU Pruhonice 28.01 310 *e*P **P 06 23 55.6 -0.9**
GERES GERESS Array B 28.26 307 P **P 06 23 58.0 -0.7**
comp=Z,1.9nm,0.7s,mb3.9,baz=105,slow=9.8,SNR=11
GERES GERESS Array B 28.26 307 P **P 06 23 58.0 -0.7**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 28.26 307 P **P 06 23 58.0 -0.7**
comp=Z,2.0nm,0.7s,mb3.9
KHC Kasperske Hory 28.41 307 *e*P **P 06 23 59.8 -0.2**
KHC pmax pmax
comp=Z,23nm,1.7s,mb4.5
KHC Kasperske Hory 28.41 307 *e*P **P 06 23 59.8 -0.2**
comp=Z,24nm,1.7s,mb4.5
KHC Kasperske Hory 28.41 307 *e*P **P 06 23 59.8 -0.2**
comp=Z,24nm,1.7s,mb4.5
FINES FINESS Array B 28.73 337 P **P 06 24 03.4 +0.6**
comp=Z,2.3nm,0.9s,mb3.9,baz=190,slow=29,SNR=3.2
FINES LR LR 06 35 28.2
comp=Z,350nm,19.4s,MS4.0,baz=334,slow=36
FINES FINESS Array B 28.73 337 P **P 06 24 03.4 +0.7**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES MLR MLR
comp=Z,350nm,19.4s
FINES FINESS Array B 28.73 337 P **P 06 24 03.3 +0.6**
CLL Collm 29.32 312 *e*P **P 06 24 07.0 -1.1**
CLL *e* 06 24 13.0
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
CLL MLR MLR
comp=Z,300nm,18.1s,MS4.0
CLL Collm 29.32 312 *e*P **P 06 24 07.0 -1.1**
comp=Z,5.0nm,1.0s,mb4.2
CLL *e* 06 24 11.0
CLL *e* 06 24 13.0
CLL LR LR
comp=Z,300nm,18.1s,MS4.0
CLL Collm 29.32 312 *e*P **P 06 24 07.0 -1.1**
comp=Z,5.0nm,1.0s,mb4.2
CLL *e* 06 24 11.0
CLL *e*pP pP 06 24 13.0 +3.5
CLL *e* 06 24 21.0
CLL *e*PPP PP 06 25 18.0 +3.9
CLL *e*S **S 06 28 54.0 -7.7**
CLL LmV 06 38 00.0
comp=Z,300nm,18.1s
CLL Collm 29.32 312 *e*P **P 06 24 07.0 -1.1**
comp=Z,300nm,18.1s
WTTA Wattenberg 29.34 303⇑*i*P **P 06 24 06.2 -2.2**
comp=Z,11nm,1.0s,mb4.5
WTTA Wattenberg 29.34 303 P **P 06 24 06.2 -2.2**
comp=Z,11nm,1.0s,mb4.5
NVS Novosibirsk 29.88 41 *e*P **P 06 24 11.8 -1.2**
NVS pmax pmax
comp=Z,24nm,1.6s,mb4.7
NVS pmax pmax
comp=N,15nm,1.4s
NVS Novosibirsk 29.88 41 *e*P **P 06 24 11.8 -1.2**
comp=N,15nm,1.4s,mb4.5
ZAA0 Zalesovo Array 30.41 44 *e*P **P 06 24 16.5 -1.2**
ZALV Zalesovo Beam 30.41 44 P **P 06 24 16.8 -0.9**
comp=N,3.6nm,0.6s,mb4.3,baz=260,slow=8.9,SNR=14
ZALV Zalesovo Beam 30.41 44 P **P 06 24 16.8 -0.9**
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
WMQ Urumqi 30.47 64 *e*P **P 06 24 18.5 +0.1**
WMQ pmax pmax
comp=Z,12nm,1.0s,mb4.6
WMQ LR LR
comp=N,880nm,33.0s
WMQ LR LR
comp=E,700nm,40.0s
WMQ LR LR
comp=Z,980nm,29.0s,MS4.3
DAVOX Davos/Dischmat 30.48 302 P **P 06 24 17.4 -1.1**
comp=Z,4.0nm,0.5s,mb4.4,baz=110,slow=7.1,SNR=5.8
DAVOX LR LR 06 38 22.5
comp=Z,313nm,20.7s,MS3.9,baz=268,slow=40
VSL Villasalto 30.95 288 *e*P **P 06 24 22.1 -0.5**
comp=Z,54nm,1.1s,mb5.3
PGF Pioggiola 30.99 294 *e*P **P 06 24 22.2 -0.8**
PGF Pioggiola 30.99 294 *e*P **P 06 24 22.2 -0.8**
KEST Kesra 31.64 281 P **P 06 24 29.2 +0.5**
comp=Z,5.6nm,0.8s,mb4.5,baz=48,slow=4.2,SNR=6.8
DMN Daman 31.96 96 *e*P **P 06 24 30.5 -1.2**
comp=Z,50nm,0.8s,mb5.4
KKN Kakani 32.03 95 *e*P **P 06 24 32.0 -0.3**
comp=Z,24nm,0.7s,mb5.1
KKN Kakani 32.03 95 *e*P **P 06 24 32.0 -0.3**
KKN pmax pmax
comp=Z,24nm,0.7s,mb5.1
PKI Pulchoki 32.22 95 *e*P **P 06 24 32.5 -1.5**
comp=Z,32nm,0.8s,mb5.2
PKI Pulchoki 32.22 95 *e*P **P 06 24 32.5 -1.5**
PKI pmax pmax
comp=Z,33nm,0.8s,mb5.2
APA Apatity 32.30 349⇑*i*P **P 06 24 34.7 +0.5**
APA pmax pmax
comp=Z,15nm,0.9s,mb4.8
APA MLR MLR
comp=Z,300nm,12.0s,MS4.2
GUN Gumba 32.46 95 *e*P **P 06 24 34.7 -1.3**
comp=Z,52nm,0.8s,mb5.4
HFS Hagfors 32.52 328 P **P 06 24 35.1 -1.1**
comp=Z,4.1nm,0.6s,mb4.5,baz=133,slow=6.3,SNR=8.3
HFS Hagfors 32.52 328 P **P 06 24 35.1 -1.1**
HFS pmax pmax
comp=Z,4.0nm,0.6s
MBDF Montbardon 32.56 298 *e*P **P 06 24 34.5 -2.3**
comp=Z,48nm,0.8s,mb5.2
MBDF Montbardon 32.56 298 *e*P **P 06 24 34.5 -2.3**
MBDF pmax pmax
comp=Z,24nm,0.8s,mb5.2
MBDF Montbardon 32.56 298 *e*P **P 06 24 34.5 -2.3**
comp=Z,24nm,0.8s,mb5.2
MBDF Montbardon 32.56 298 *e*P **P 06 24 34.5 -2.3**
comp=Z,24nm,0.8s,mb5.2
LPG La Plagne 32.58 299 *e*P **P 06 24 35.5 -1.4**
comp=Z,19nm,0.7s,mb4.8
LPG La Plagne 32.58 299 *e*P **P 06 24 35.5 -1.4**
LPG pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LPG La Plagne 32.58 299 *e*P **P 06 24 35.5 -1.4**
comp=Z,9.4nm,0.7s,mb4.8
LPG La Plagne 32.58 299 *e*P **P 06 24 35.5 -1.4**
comp=Z,9.4nm,0.7s,mb4.8
LPL La Plagne 32.59 299 *e*P **P 06 24 35.3 -1.7**
comp=Z,23nm,0.9s,mb4.8
LPL La Plagne 32.59 299 *e*P **P 06 24 35.3 -1.7**
LPL pmax pmax
comp=Z,11nm,0.9s,mb4.8
LPL La Plagne 32.59 299 *e*P **P 06 24 35.3 -1.7**
comp=Z,11nm,0.9s,mb4.8
LPL La Plagne 32.59 299 *e*P **P 06 24 35.3 -1.7**
comp=Z,11nm,0.9s,mb4.8
BNI Bardonecchia 32.63 298 *e*P **P 06 24 36.6 -0.7**
BNI pmax pmax
comp=Z,25nm,0.9s,mb5.1
BNI Bardonecchia 32.63 298 *e*P **P 06 24 36.6 -0.8**
comp=Z,24nm,0.9s,mb5.1
CABF La Chapelle 33.07 301 *e*P **P 06 24 40.5 -0.7**
comp=Z,64nm,1.1s,mb5.2
CABF La Chapelle 33.07 301 *e*P **P 06 24 40.5 -0.7**
CABF pmax pmax
comp=Z,32nm,1.1s,mb5.2
CABF La Chapelle 33.07 301 *e*P **P 06 24 40.5 -0.7**
comp=Z,32nm,1.1s,mb5.2
CABF La Chapelle 33.07 301 *e*P **P 06 24 40.5 -0.7**
comp=Z,32nm,1.1s,mb5.2
ORIF Oris-en-Rattie 33.19 298 *e*P **P 06 24 40.2 -2.1**
comp=Z,24nm,0.9s,mb4.8
ORIF Oris-en-Rattie 33.19 298 *e*P **P 06 24 40.2 -2.1**
ORIF pmax pmax
comp=Z,12nm,0.9s,mb4.8
ORIF Oris-en-Rattie 33.19 298 *e*P **P 06 24 40.2 -2.1**
comp=Z,12nm,0.9s,mb4.8
ORIF Oris-en-Rattie 33.19 298 *e*P **P 06 24 40.2 -2.1**
comp=Z,12nm,0.9s,mb4.8
NB2 NORSAR Subarra 34.04 328 P **P 06 24 47.4 -2.0**
comp=Z,16nm,1.7s,mb4.7,baz=120,slow=8.6
NB2 NORSAR Subarra 34.04 328 P **P 06 24 47.4 -2.0**
comp=Z,16nm,1.7s,mb4.7,SNR=8.4
NOA NORSAR Array B 34.04 328 P **P 06 24 47.6 -1.8**
comp=Z,1.4nm,0.6s,mb4.1,baz=119,slow=8.2,SNR=6.3
NOA LR LR 06 39 42.8
comp=Z,300nm,18.0s,MS4.1,baz=140,slow=38
NOA NORSAR Array B 34.04 328 P **P 06 24 47.6 -1.8**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,300nm,18.0s
VIVF Saint-Julien-I 34.05 298 *e*P **P 06 24 47.2 -2.6**
comp=Z,25nm,0.8s,mb4.9
VIVF Saint-Julien-I 34.05 298 *e*P **P 06 24 47.2 -2.6**
VIVF pmax pmax
comp=Z,13nm,0.8s,mb4.9
VIVF Saint-Julien-I 34.05 298 *e*P **P 06 24 47.2 -2.6**
comp=Z,13nm,0.8s,mb4.9
VIVF Saint-Julien-I 34.05 298 *e*P **P 06 24 47.2 -2.6**
comp=Z,13nm,0.8s,mb4.9
SSB Saint Sauveur 34.14 299 *e*P **P 06 24 50.0 -0.5**
SSB pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SSB Saint Sauveur 34.14 299 *e*P **P 06 24 50.0 -0.5**
comp=Z,5.7nm,0.6s,mb4.7
SMF Signal de Mont 34.62 301 *e*P **P 06 24 53.3 -1.4**
comp=Z,14nm,0.8s,mb4.6
SMF Signal de Mont 34.62 301 *e*P **P 06 24 53.3 -1.4**
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SMF Signal de Mont 34.62 301 *e*P **P 06 24 53.3 -1.4**
comp=Z,7.0nm,0.8s,mb4.6
SMF Signal de Mont 34.62 301 *e*P **P 06 24 53.3 -1.4**
comp=Z,7.0nm,0.8s,mb4.6
AVF Avril sur Loir 34.96 301 *e*P **P 06 24 55.6 -2.0**
comp=Z,36nm,1.3s,mb4.9
AVF Avril sur Loir 34.96 301 *e*P **P 06 24 55.6 -2.0**
AVF pmax pmax
comp=Z,18nm,1.3s,mb4.8
AVF Avril sur Loir 34.96 301 *e*P **P 06 24 55.6 -2.0**
comp=Z,18nm,1.3s,mb4.8
AVF Avril sur Loir 34.96 301 *e*P **P 06 24 55.6 -2.0**
comp=Z,18nm,1.3s,mb4.9
ARCES ARCESS Array B 35.41 346 P **P 06 25 01.7 +0.5**
comp=Z,4.8nm,0.8s,mb4.5,baz=148,slow=9.5,SNR=12
ARCES ARCESS Array B 35.41 346 P **P 06 25 01.7 +0.5**
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 35.41 346 P **P 06 25 01.7 +0.5**
LDF La Druitiere 37.32 305 *e*P **P 06 25 15.8 -2.0**
LDF La Druitiere 37.32 305 *e*P **P 06 25 15.8 -2.0**
MFF Saint Martin d 37.37 301 *e*P **P 06 25 16.5 -1.7**
comp=Z,43nm,1.2s,mb4.8
MFF Saint Martin d 37.37 301 *e*P **P 06 25 16.5 -1.7**
MFF pmax pmax
comp=Z,21nm,1.3s,mb4.8
MFF Saint Martin d 37.37 301 *e*P **P 06 25 16.5 -1.7**
comp=Z,21nm,1.3s,mb4.8
MFF Saint Martin d 37.37 301 *e*P **P 06 25 16.5 -1.7**
comp=Z,21nm,1.2s,mb4.8
GRR Gorron 37.81 304 *e*P **P 06 25 20.3 -1.6**
comp=Z,57nm,0.8s,mb5.0
GRR Gorron 37.81 304 *e*P **P 06 25 20.3 -1.6**
GRR pmax pmax
comp=Z,29nm,0.8s,mb5.1
GRR Gorron 37.81 304 *e*P **P 06 25 20.3 -1.6**
comp=Z,28nm,0.8s,mb5.0
GRR Gorron 37.81 304 *e*P **P 06 25 20.3 -1.6**
comp=Z,28nm,0.8s,mb5.0
KMBO Kilima Mbogo 38.92 198 LR LR 06 42 32.3
comp=Z,2µm,20.3s,MS4.8,baz=129,slow=38
EKA Eskdalemuir Ar 39.60 315 P **P 06 25 34.9 -1.9**
comp=Z,2.3nm,0.6s,mb4.1,baz=102,slow=8.8,SNR=6.8
EKA Eskdalemuir Ar 39.60 315 P **P 06 25 34.9 -1.9**
EKA pmax pmax
comp=Z,2.0nm,0.6s

TAM	**Tamanrasset**	**39.60**	**262**	*e*P	**P**	**06 25 38.8**	**+1.5**
TAM				pmax	pmax		
comp=Z,31nm,1.3s,mb4.9							
TAM	**Tamanrasset**	**39.60**	**262**	*e*P	**P**	**06 25 38.8**	**+1.5**
comp=Z,31nm,1.3s,mb4.9							
MOY	**Mondy**	**39.62**	**51**	*e*P	**P**	**06 25 38.6**	**+1.5**
GTA	**Gaotai**	**39.98**	**70**	*e*P	**P**	**06 25 40.5**	**+0.3**
GTA				pP	pP	06 25 50.5	+8.8
GTA				sP	sP	06 25 54.5	+12
GTA				PP	PP	06 27 17.5	+5.5
GTA				S	**S**	**06 31 39.5**	**-6.6**
GTA				sS	sS	06 31 56.3	+7.7
GTA				pmax	pmax		
comp=Z,3.0nm,1.2s,mb3.9							
GTA				pmax	pmax		
comp=Z,180nm,7.8s							
GTA				LR	LR		
comp=N,810nm,21.3s,MS4.6							
GTA				LR	LR		
comp=E,520nm,26.1s,MS4.6							
GTA				LR	LR		
comp=Z,990nm,24.3s,MS4.6							
ESDC	**Sonseca Array**	**41.07**	**291**	P	**P**	**06 25 48.3**	**-0.9**
comp=Z,3.0nm,0.6s,mb4.1,baz=65,slow=9.1,SNR=6.1							
ZAK	**Zakamensk**	**41.07**	**53**	*e*P	**P**	**06 25 51.0**	**+1.9**
ZAK				*e*		06 27 31.2	
ZAK				pmax	pmax		
comp=Z,4.0nm,1.8s,mb3.8							
MVO	**Moncorvo**	**43.02**	**294**	*e*P	**P**	**06 26 06.9**	**+1.7**
comp=Z,36nm,2.2s,mb4.7							
MVO	**Moncorvo**	**43.02**	**294**	*e*P	**P**	**06 26 06.9**	**+1.7**
comp=Z,36nm,2.2s,mb4.7							
SONM	**Songino Array**	**43.31**	**56**	P	**P**	**06 26 06.9**	**-0.4**
comp=Z,1.5nm,0.8s,mb3.8,baz=270,slow=11,SNR=5.6							
SONM	**Songino Array**	**43.31**	**56**	P	**P**	**06 26 06.9**	**-0.5**
SONM				pmax	pmax		
comp=Z,2.0nm,0.8s							
PVRL	**Vila Real**	**43.50**	**294**	*e*P	**P**	**06 26 09.1**	**0.0**
comp=Z,38nm,1.6s,mb4.9							
PVRL	**Vila Real**	**43.50**	**294**	*e*P	**P**	**06 26 09.1**	**0.0**
comp=Z,38nm,1.6s,mb4.9							
MTE	**Manteigas**	**43.58**	**293**	*e*P	**P**	**06 26 09.6**	**-0.1**
comp=Z,22nm,1.3s,mb4.7							
MTE	**Manteigas**	**43.58**	**293**	*e*P	**P**	**06 26 09.6**	**-0.1**
comp=Z,22nm,1.3s,mb4.7							
PCBR	**Castelo Branco**	**43.66**	**292**	*e*P	**P**	**06 26 10.3**	**-0.1**
comp=Z,41nm,1.2s,mb5.0							
PCBR	**Castelo Branco**	**43.66**	**292**	*e*P	**P**	**06 26 10.3**	**-0.1**
comp=Z,41nm,1.2s,mb5.0							
PMRV	**Marv??o**	**43.70**	**292**	*e*P	**P**	**06 26 14.1**	**+3.4**
comp=Z,33nm,1.4s,mb4.9							
ULN	**Ulaanbaatar**	**43.74**	**56**	*e*P	**P**	**06 26 10.9**	**0.0**
ULN				pmax	pmax		
comp=Z,12nm,0.9s,mb4.6							
ULN	**Ulaanbaatar**	**43.74**	**56**	*e*P	**P**	**06 26 10.9**	**0.0**
comp=Z,12nm,0.9s,mb4.6							
PBAR	**Barrancos**	**43.76**	**290**	*e*P	**P**	**06 26 10.3**	**-0.9**
comp=Z,42nm,1.8s,mb4.9							
PBAR	**Barrancos**	**43.76**	**290**	*e*P	**P**	**06 26 10.3**	**-0.9**
comp=Z,42nm,1.8s,mb4.9							
LZH	**Lanzhou**	**43.93**	**73**	*e*P	**P**	**06 26 13.5**	**+0.9**
LZH				pP	pP	06 26 23.5	+9.4
LZH				sP	sP	06 26 28.0	+13
LZH				PcP	PcP	06 27 59.0	+0.5
LZH				PP	PP	06 28 01.0	+6.3
LZH				*e*S	**S**	**06 32 44.8**	**+0.2**
LZH				sS	sS	06 33 00.0	+13
LZH				SS	SS	06 35 48.0	-13
LZH				pmax	pmax		
comp=Z,18nm,1.1s,mb4.7							
LZH				pmax	pmax		
comp=Z,80nm,4.3s							
LZH				LR	LR		
comp=N,880nm,15.1s							
LZH				LR	LR		
comp=Z,2μm,16.9s,MS5.0							
SPITS	**Spitsbergen Ar**	**43.94**	**351**	P	**P**	**06 26 12.7**	**+0.6**
comp=Z,22nm,0.7s,mb5.0,baz=131,slow=10,SNR=42							
SPITS	**Spitsbergen Ar**	**43.94**	**351**	P	**P**	**06 26 12.7**	**+0.6**
SPITS				pmax	pmax		
comp=Z,22nm,0.7s							
SPB4	**Spitsbergen Ar**	**43.95**	**351**	*e*P	**P**	**06 26 14.2**	**+2.0**
CD2	**Chengdu**	**45.63**	**80**	P	**P**	**06 26 26.0**	**-0.2**
CD2				pP	pP	06 26 36.0	+8.3
CD2				sP	sP	06 26 39.8	+11
CD2				PP	PP	06 28 13.3	+0.4
CD2				S	**S**	**06 33 04.8**	**-4.6**
CD2				sS	sS	06 33 22.0	+10
CD2				SS	SS	06 36 18.0	-15
CD2				pmax	pmax		
comp=Z,30nm,0.9s,mb5.2							
CD2				pmax	pmax		
comp=Z,420nm,11.9s							
CD2				LR	LR		
comp=N,1μm,21.0s							
CD2				LR	LR		
comp=Z,810nm,21.4s,MS4.6							
KMI	**Kunming**	**47.25**	**88**	P	**P**	**06 26 38.3**	**-0.7**
KMI				pP	pP	06 26 48.5	+8.0
KMI				sP	sP	06 26 52.3	+11
KMI				PP	PP	06 28 30.5	+0.6
KMI				pmax	pmax		
comp=Z,19nm,1.0s,mb5.0							
KMI				pmax	pmax		
comp=Z,130nm,5.7s							
CHTO	**Chiang Mai**	**47.33**	**98**	*e*P	**P**	**06 26 37.9**	**-1.8**
CHTO				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.5							
CHTO	**Chiang Mai**	**47.33**	**98**	*e*P	**P**	**06 26 37.9**	**-1.7**
comp=Z,5.2nm,0.7s,mb4.6							
CMAR	**Chiang Mai Arr**	**47.52**	**98**	P	**P**	**06 26 39.5**	**-1.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=299,slow=8.2,SNR=18							
CMAR	**Chiang Mai Arr**	**47.52**	**98**	P	**P**	**06 26 39.5**	**-1.6**
CMAR				pmax	pmax		
comp=Z,3.0nm,0.6s							
TOA0	**Torodi Ar. Sit**	**47.99**	**253**	*e*P	**P**	**06 26 43.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**47.99**	**253**	P	**P**	**06 26 43.5**	**-1.4**
comp=Z,12nm,1.1s,mb4.9,baz=55,slow=5.8,SNR=37							
HHC	**Hu-ho-hao-te**	**48.35**	**65**	*e*P	**P**	**06 26 49.0**	**+1.7**
HHC				pP	pP	06 26 56.8	+8.0
HHC				sP	sP	06 27 00.0	+11
HHC				PcP	PcP	06 28 15.8	+1.9
HHC				PP	PP	06 28 42.0	+2.3
HHC				S	**S**	**06 33 46.5**	**-1.5**
HHC				sS	sS	06 33 59.5	+9.0
HHC				ScS	ScS	06 36 37.3	-3.7
HHC				SS	SS	06 37 11.5	-5.7
HHC				pmax	pmax		
comp=Z,16nm,1.0s,mb5.0							
HHC				pmax	pmax		
comp=Z,120nm,5.3s							
HHC				LR	LR		
comp=N,1μm,16.9s,MS5.1							
HHC				LR	LR		
comp=E,1μm,17.8s,MS5.1							
HHC				LR	LR		
comp=Z,1μm,16.2s,MS5.0							
GYA	**Guiyang**	**49.80**	**84⇑**	*i*P	**P**	**06 26 57.0**	**-1.6**
GYA				pP	pP	06 27 07.0	+6.9
GYA				PcP	PcP	06 28 18.5	-0.9
GYA				PP	PP	06 28 52.0	-1.2
GYA				ScP	ScP	06 32 09.3	-6.4
GYA				S	**S**	**06 34 04.3**	**-4.4**
GYA				sS	sS	06 34 18.3	+7.1
GYA				SS	SS	06 37 30.3	-11
GYA				pmax	pmax		
comp=Z,10.0nm,0.9s,mb4.8							
GYA				pmax	pmax		
comp=Z,80nm,7.6s							
GYA				LR	LR		
comp=N,960nm,19.2s,MS5.0							
GYA				LR	LR		
comp=E,920nm,19.2s,MS5.0							
GYA				LR	LR		
comp=Z,830nm,19.2s,MS4.8							
BJI	**Beijing**	**51.95**	**64**	P	**P**	**06 27 13.8**	**-0.8**
BJI				S	**S**	**06 34 34.0**	**-4.2**
BJI				SS	SS	06 38 10.5	-4.2
BJI				pmax	pmax		
comp=Z,13nm,0.9s,mb4.9							
BJI				pmax	pmax		
comp=Z,280nm,11.2s							
BJI				LR	LR		
comp=N,1μm,21.8s,MS5.0							
BJI				LR	LR		
comp=E,850nm,19.5s,MS5.0							
BJI				LR	LR		
comp=Z,1μm,21.7s,MS4.9							
TIXI	**Tiksi**	**52.74**	**23**	*e*P	**P**	**06 27 18.6**	**-1.5**
TIXI				pmax	pmax		
comp=Z,17nm,1.4s,mb4.8							
TIXI	**Tiksi**	**52.74**	**23**	*e*P	**P**	**06 27 19.5**	**-0.5**
comp=Z,23nm,1.4s,mb4.9							
YAK	**Yakutsk**	**54.42**	**35**	*e*P	**P**	**06 27 32.5**	**0.0**
YAK				pmax	pmax		
comp=Z,14nm,1.0s,mb4.8							
SUMG	**Summit**	**54.76**	**338**	*e*P	**P**	**06 27 36.2**	**+1.3**
comp=Z,12nm,1.0s,mb4.9							
LSZ	**Lusaka**	**55.02**	**204**	P	**P**	**06 27 37.4**	**+0.1**
comp=Z,12nm,0.7s,mb5.0,baz=31,slow=6.6,SNR=10							
LSZ	**Lusaka**	**55.02**	**204**	*e*P	**P**	**06 27 37.9**	**+0.6**
LSZ				pmax	pmax		
comp=Z,17nm,0.9s,mb5.1							
LSZ	**Lusaka**	**55.02**	**204**	*e*P	**P**	**06 27 37.9**	**+0.6**
comp=Z,17nm,0.9s,mb5.1							
NJ2	**Nanjing**	**56.98**	**72**	*e*P	**P**	**06 27 53.8**	**+2.5**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s,mb5.4							
DBIC	**Dimbokro**	**57.05**	**252**	P	**P**	**06 27 51.0**	**-1.0**
comp=Z,14nm,0.7s,mb5.1,baz=22,slow=7.9,SNR=16							
DBIC	**Dimbokro**	**57.05**	**252**	P	**P**	**06 27 51.0**	**-1.0**
DBIC				pmax	pmax		
comp=Z,14nm,0.7s							
DBIC	**Dimbokro**	**57.05**	**252**	*e*P	**P**	**06 27 50.8**	**-1.3**
comp=Z,16nm,0.8s,mb5.1							
KIC	**Kosan Boka**	**57.16**	**252**	*e*P	**P**	**06 27 51.6**	**-1.2**
comp=Z,142nm,1.2s,mb5.9							
CN2	**Changchun**	**57.17**	**57**	*e*P	**P**	**06 27 54.3**	**+1.8**
CN2				PcP	PcP	06 28 49.0	+1.9
CN2				*e*S	**S**	**06 35 44.5**	**-3.9**
CN2				LR	LR		
comp=N,970nm,18.0s,MS5.0							
CN2				LR	LR		
comp=E,660nm,18.0s,MS5.0							
CN2				LR	LR		
comp=Z,1μm,19.0s,MS5.0							
TIC	**Toumodi**	**57.19**	**252**	*e*P	**P**	**06 27 51.5**	**-1.5**
comp=Z,116nm,1.3s,mb5.7							
LIC	**Lamto**	**57.46**	**252⇑**	*i*P	**P**	**06 27 53.7**	**-1.2**
comp=Z,59nm,0.8s,mb5.4							
LIC	**Lamto**	**57.46**	**252**	*e*P	**P**	**06 27 53.6**	**-1.3**
comp=Z,164nm,1.3s,mb5.9							
LIC	**Lamto**	**57.46**	**252⇑**	*i*P	**P**	**06 27 53.7**	**-1.2**
comp=Z,30nm,0.8s,mb5.4							
LIC	**Lamto**	**57.46**	**252⇑**	*i*P	**P**	**06 27 53.7**	**-1.2**
comp=Z,30nm,0.8s,mb5.4							
KLR	**Kul'dur**	**59.26**	**49**	*e*P	**P**	**06 28 02.2**	**-4.9**
KSRS	**Korea Array**	**61.42**	**63**	P	**P**	**06 28 20.6**	**-1.4**
comp=Z,3.8nm,0.8s,mb4.6,baz=283,slow=7.1,SNR=12							
KSRS	**Korea Array**	**61.42**	**63**	P	**P**	**06 28 20.7**	**-1.3**
KSRS				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.6							
TSUM	**Tsumeb**	**62.72**	**213**	*e*P	**P**	**06 28 30.1**	**-0.7**
comp=Z,5.0nm,0.7s,mb4.8							
SEY	**Seymchan**	**63.93**	**30⇓**	*e*P	**P**	**06 28 38.4**	**+0.1**
LBTB	**Lobatse**	**64.95**	**203**	*e*P	**P**	**06 28 45.0**	**-0.4**
LBTB				pmax	pmax		
comp=Z,17nm,1.0s,mb5.0							
LBTB	**Lobatse**	**64.95**	**203**	*e*P	**P**	**06 28 45.0**	**-0.4**
comp=Z,17nm,1.0s,mb5.0							
BILL	**Bilibino**	**65.89**	**21**	*e*P	**P**	**06 28 50.5**	**-0.5**
BILL				pmax	pmax		
comp=Z,24nm,1.6s,mb5.0							
BILL	**Bilibino**	**65.89**	**21**	*e*P	**P**	**06 28 50.3**	**-0.7**
comp=Z,12nm,0.9s,mb4.9							
BOSA	**Boshof**	**68.42**	**202**	P	**P**	**06 29 06.5**	**-1.0**
comp=Z,7.6nm,0.8s,mb4.8,baz=46,slow=7.3,SNR=8.6							
BOSA	**Boshof**	**68.42**	**202**	P	**P**	**06 29 06.5**	**-1.0**
BOSA				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.8							
BOSA	**Boshof**	**68.42**	**202**	*e*P	**P**	**06 29 06.2**	**-1.3**
comp=Z,12nm,1.2s,mb4.8							
MJAR	**Matsushiro Arr**	**69.11**	**60**	P	**P**	**06 29 11.8**	**-0.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=291,slow=11,SNR=5.6							
MJAR	**Matsushiro Arr**	**69.11**	**60**	P	**P**	**06 29 11.8**	**-0.1**
MJAR				pmax	pmax		
comp=Z,1.0nm,0.7s							
MJAR	**Matsushiro Arr**	**69.11**	**60**	P	**P**	**06 29 11.8**	**-0.2**
PETK	**Petropavlovsk-**	**71.68**	**37**	P	**P**	**06 29 27.3**	**0.0**
comp=Z,2.8nm,0.8s,mb4.3,baz=130,slow=1.2,SNR=5.8							
PETK	**Petropavlovsk-**	**71.68**	**37**	P	**P**	**06 29 27.3**	**0.0**
PETK				pmax	pmax		
comp=Z,3.0nm,0.8s,mb4.3							
SCHQ	**Schefferville**	**73.60**	**327**	P	**P**	**06 29 39.5**	**+0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=93,slow=12,SNR=3.8							
INK	**Inuvik**	**75.49**	**1**	*e*P	**P**	**06 29 48.8**	**-0.7**
INK				pmax	pmax		
comp=Z,4.0nm,0.9s							
INK	**Inuvik**	**75.49**	**1**	*e*P	**P**	**06 29 48.8**	**-0.7**
comp=Z,3.9nm,0.9s,mb4.3							
COLD	**Coldfoot**	**75.59**	**7**	*e*P	**P**	**06 29 49.0**	**-1.0**
comp=Z,22nm,1.4s,mb4.9							
COLA	**College**	**78.12**	**7**	*e*P	**P**	**06 30 04.1**	**-0.3**
COLA				pmax	pmax		
comp=Z,25nm,0.8s,mb5.2							
COLA	**College**	**78.12**	**7**	*e*P	**P**	**06 30 04.0**	**-0.3**
comp=Z,25nm,0.8s,mb5.2							
BPAW	**Bear Paw Mtn.**	**78.52**	**9**	*e*P	**P**	**06 30 06.2**	**-0.4**
comp=Z,39nm,1.4s,mb5.2							
CHUM	**Lake Minchumin**	**78.56**	**9**	*e*P	**P**	**06 30 06.4**	**-0.5**
comp=Z,14nm,0.8s,mb5.0							
EGAK	**Eagle**	**78.75**	**4**	*e*P	**P**	**06 30 07.0**	**-0.9**
comp=Z,16nm,0.9s,mb4.9							
TTA	**Tatalina**	**78.94**	**11**	*e*P	**P**	**06 30 10.7**	**+1.8**
TTA				pmax	pmax		
comp=Z,16nm,1.3s,mb4.8							
TTA	**Tatalina**	**78.94**	**11**	*e*P	**P**	**06 30 10.7**	**+1.8**
comp=Z,16nm,1.3s,mb4.8							
KTH	**Kantishna Hill**	**79.06**	**9**	*e*P	**P**	**06 30 08.5**	**-1.1**
comp=Z,15nm,0.8s,mb5.0							
MCK	**McKinley**	**79.12**	**8**	*e*P	**P**	**06 30 08.4**	**-1.5**
MCK				pmax	pmax		
comp=Z,16nm,1.0s,mb4.9							
MCK	**McKinley**	**79.12**	**8**	*e*P	**P**	**06 30 08.4**	**-1.4**
comp=Z,16nm,1.0s,mb4.9							
TRF	**Thorofare Moun**	**79.23**	**9**	*e*P	**P**	**06 30 12.3**	**+1.8**
comp=Z,29nm,1.5s,mb5.0							
PPLA	**Purkeypile**	**79.53**	**10**	*e*P	**P**	**06 30 12.4**	**+0.3**
comp=Z,24nm,1.3s,mb5.0							
DAWY	**Dawson**	**79.56**	**4**	*e*P	**P**	**06 30 10.9**	**-1.4**
FCC	**Fort Churchill**	**80.14**	**341**	*e*P	**P**	**06 30 15.6**	**0.0**
comp=Z,0.3nm,1.5s							
MENT	**Mentasta**	**80.39**	**6**	*e*P	**P**	**06 30 18.7**	**+1.9**
YKA	**Yellowknife Ar**	**80.42**	**352**	P	**P**	**06 30 15.4**	**-1.5**
comp=Z,3.7nm,0.8s,mb4.4,baz=12,slow=6.2,SNR=32							
YKA	**Yellowknife Ar**	**80.42**	**352**	P	**P**	**06 30 15.4**	**-1.6**
YKA				pmax	pmax		
comp=Z,4.0nm,0.8s							
YKA	**Yellowknife Ar**	**80.42**	**352**	P	**P**	**06 30 15.4**	**-1.6**
PMR	**Palmer**	**81.17**	**9**	*e*P	**P**	**06 30 19.7**	**-1.3**
PMR				pmax	pmax		
comp=Z,17nm,0.9s,mb5.0							
PMR	**Palmer**	**81.17**	**9**	*e*P	**P**	**06 30 19.7**	**-1.3**
comp=Z,17nm,0.9s,mb5.0							
DIV	**Divide**	**81.99**	**7**	*e*P	**P**	**06 30 25.0**	**-0.4**
comp=Z,11nm,0.8s,mb4.8							
KDAK	**Kodiak Island**	**84.38**	**11**	*i*P	**P**	**06 30 40.3**	**+2.6**
DLBC	**Dease Lake**	**85.40**	**359**	*e*P	**P**	**06 30 44.0**	**+1.1**
FFC	**Flin Flon**	**85.69**	**343**	*i*P	**P**	**06 30 46.1**	**+1.7**
EDM	**Edmonton**	**89.28**	**349**	*e*P	**P**	**06 31 00.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**90.57**	**112**	P	**P**	**06 31 05.9**	**-2.4**
comp=Z,5.8nm,0.9s,mb4.9,baz=273,slow=3.7,SNR=4.8							
QSPA	**South Pole Qui**	**126.33**	**180**	PKP	PKPdf	06 37 04.5	-2.7
comp=Z,0.8nm,0.7s,baz=313,slow=1.3,SNR=7.9							

*GII **27** 06:19:37.6±1.0, 33°.27N×35°.45E, h1km±2km, Md3.0/12, Mm2.4/9*
*NEIC **27** 06:19:37.7, 33°.27N×35°.45E, h1km, MD2.9(GII), After GII.*
*GRAL **27** 06:19:37.8±0.3, 33°.30N×35°.40E, h4km±3km, MD3.1*
*CSEM **27** 06:19:37.7±0.2, 33°.31N×35°.43E, h2km, MD2.9, Error ellipse: s-maj=5.2km s-min=3.0km az=125.0*
*ISCJB **27** 06:19:37.6±0.4, 33°.31N±0°.02×35°.46E±0°.03, h7km±4km, Error ellipse: s-maj=5.2km s-min=3.1km az=29.0*
*NSSC **27** 06:19:39, 33°.29N×35°.56E, h10km±3km*
ISC 27 06:19:38.0±0.4**, 33°.32N**±0°.02×**35°.47E**±0°.03, **h7**km±4km**,**
n37, σ0°**81**/49**, 3D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.20**	**128**	Pg	**Pg**	**06 19 42.3**	**+0.3**
MATL	**Matirih**	**0.20**	**326**	*e*P	**Pg**	**06 19 41.5**	**-0.6**
MATL	**Matirih**	**0.20**	**326**	*e*P	**Pg**	**06 19 41.5**	**-0.6**
HRI	**Mount Hermon**	**0.23**	**103**	Pg	**Pg**	**06 19 42.7**	**+0.2**
RCY	**Rachaya**	**0.34**	**61**	*e*P	**Pg**	**06 19 45.2**	**+0.6**
RCY				*e*S	**Sg**	**06 19 50.9**	**+1.9**
RCY	**Rachaya**	**0.34**	**61**	*e*P	**Pg**	**06 19 45.2**	**+0.7**
HNTI	**Hanita**	**0.34**	**226**	Pg	**Pg**	**06 19 44.0**	**-0.6**
HNTI				Sg	**Sg**	**06 19 49.4**	**+0.4**
HNTI	**Hanita**	**0.34**	**226**	Pg	**Pg**	**06 19 44.0**	**-0.6**
KSHT	**Keshet**	**0.44**	**139**	Pg	**Pg**	**06 19 47.2**	**+0.7**
BEYL	**Beyrouth**	**0.55**	**2**	*e*P	**Pg**	**06 19 48.2**	**-0.4**
BHL	**Bhannes**	**0.60**	**15**	*e*P	**Pg**	**06 19 49.5**	**-0.1**
BHL				*e*S	**Sg**	**06 19 58.1**	**+0.6**
QASN	**Qassioun**	**0.71**	**72**	⇑P	**Pg**	**06 19 52.0**	**+0.4**
QASN				⇑S	**Sg**	**06 20 01.0**	**+0.1**
QASN	**Qassioun**	**0.71**	**72**	⇑*i*P	**Pg**	**06 19 52.3**	**+0.7**
TCHB	**Talchebab**	**0.77**	**147**	⇑P	**Pg**	**06 19 53.0**	**+0.2**
TCHB				⇑S	**Sg**	**06 20 03.0**	**+0.2**
TCHB	**Talchebab**	**0.77**	**147**	⇑*i*P	**Pg**	**06 19 53.1**	**+0.3**
OFRI	**'Ofer**	**0.81**	**210**	Pg	**Pg**	**06 19 52.7**	**-0.7**
OFRI	**'Ofer**	**0.81**	**210**	Pg	**Pg**	**06 19 52.7**	**-0.7**
TOTH	**TOTAH**	**0.81**	**87**	⇑P	**Pg**	**06 19 54.0**	**+0.6**
TOTH				⇑S	**Sg**	**06 20 03.0**	**-0.9**
TOTH	**TOTAH**	**0.81**	**87**	⇑*i*P	**Pg**	**06 19 54.0**	**+0.6**
MMLI	**Mount Malkishu**	**0.88**	**182**	Pg	**Pg**	**06 19 54.1**	**-0.7**
HWQ	**Hawqa**	**1.04**	**23**	*e*P	**Pg**	**06 19 57.2**	**-0.7**
HWQ	**Hawqa**	**1.04**	**23**	*e*Pn	**Sn**	**06 20 13.2**	**-0.5**
MARH	**Ras Al Marh**	**1.10**	**50**	⇑P	**Pg**	**06 20 00.0**	**+0.9**
MARH				⇑S	**Sg**	**06 20 14.0**	**+0.6**
SLTI	**Sal'it**	**1.13**	**199**	Pg	**Pg**	**06 19 58.9**	**-0.8**
SLTI				Sg	**Sg**	**06 20 14.2**	**-0.2**
SLTI	**Sal'it**	**1.13**	**199**	Pg	**Pg**	**06 19 58.9**	**-0.8**
FKH	**Fakeheh**	**1.20**	**40**	*e*P	**Pg**	**06 20 00.2**	**-0.8**
SALA	**Sala**	**1.22**	**119**	⇓P	**Pb**	**06 20 00.0**	**-1.4**
SALA				⇓S	**Sg**	**06 20 15.0**	**-2.3**
SALA	**Sala**	**1.22**	**119**	⇓*i*P	**Pb**	**06 20 00.8**	**-0.6**
ZALF	**Zalf**	**1.62**	**104**	⇑P	**Pn**	**06 20 07.0**	**+0.1**
ZALF				⇑S	**Sn**	**06 20 27.0**	**-1.0**
ZALF	**Zalf**	**1.62**	**104**	⇑*i*P	**Pn**	**06 20 07.6**	**+0.7**
ROOS	**tl_alroos**	**1.74**	**60**	⇑P	**Pn**	**06 20 09.0**	**+0.4**
ROOS				⇑S	**Sn**	**06 20 30.0**	**-1.0**
YTIR	**Yattir**	**1.97**	**189**	Pn	**Pn**	**06 20 12.5**	**+0.7**
MZDA	**Masada**	**2.00**	**183**	Pn	**Pn**	**06 20 12.6**	**+0.4**
MZDA				S	**Sn**	**06 20 39.5**	**+2.0**
SLNF	**Slenfeh**	**2.36**	**15**	⇑P	**Pn**	**06 20 17.0**	**-0.1**
ZFRI	**Zfri**	**2.77**	**185**	Pn	**Pn**	**06 20 23.1**	**+0.4**
PRNI	**Paran**	**2.98**	**188**	Pn	**Pn**	**06 20 26.3**	**+0.6**
KUZU	**Kuzuini**	**3.69**	**20**	*i*P	**Pn**	**06 20 31.7**	**-3.7**

*ISCJB **27** 06:24:29.0±0.4, 39°.80N±0°.02×25°.59E±0°.02, h6km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=14.3*
*SOF **27** 06:24:29.2, 39°.92N×25°.51E, h8km, MD2.8*
*NEIC **27** 06:24:29.5, 39°.82N×25°.75E, h5km, MD3.4(ATH), After ATH.*
*ISK **27** 06:24:29.0, 39°.79N×25°.64E, h9km, MD3.3*
*CSEM **27** 06:24:29.7±0.1, 39°.81N×25°.60E, h10km, ML3.5/8, Error ellipse: s-maj=2.5km s-min=2.1km az=22.0*
*ATH **27** 06:24:29.4, 39°.82N×25°.60E, h23km±1km, MD3.2/9*
*THE **27** 06:24:30.0, 39°.80N×25°.62E, h11km, ML3.5/8, Error ellipse: s-maj=0.9km s-min=0.4km az=195.0*
*DDA **27** 06:24:30.1, 39°.78N×25°.57E, h11km, Md3.4*
ISC 27 06:24:29.8±0.4**, 39°.81N**±0°.02×**25°.59E**±0°.02**, h10**km±3km**,**
n103, σ0°**85**/134**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.32**	**286**	*e*PB	**Pg**	**06 24 36.9**	**+0.7**
LIA				*e*SB	**Sg**	**06 24 41.9**	**+1.4**
LIA	**Limnos Island**	**0.32**	**286**	P	**Pg**	**06 24 36.9**	**+0.7**
LIA				S	**Sg**	**06 24 42.1**	**+1.6**
LIA	**Limnos Island**	**0.32**	**286**	P	**Pg**	**06 24 36.9**	**+0.7**
LIA				S	**Sg**	**06 24 42.1**	**+1.6**
BOZC	**Bozcaada**	**0.36**	**85**	*i*P	**Pg**	**06 24 36.4**	**-0.4**
BOZC				*i*S	**Sg**	**06 24 41.7**	**0.0**
LOS	**Limnos**	**0.41**	**288**	P	**Pg**	**06 24 38.8**	**+1.0**
LOS	**Limnos**	**0.41**	**288**	P	**Pg**	**06 24 38.8**	**+1.0**
GADA	**Gvkgeada**	**0.45**	**32**	*e*PG	**Pg**	**06 24 38.4**	**-0.2**
GADA				*e*SG	**Sg**	**06 24 44.7**	**+0.2**
GADA	**Gvkgeada**	**0.45**	**32**	*e*Pg	**Pg**	**06 24 38.4**	**-0.2**
GADA				*e*Sg	**Sg**	**06 24 44.7**	**+0.2**
EZN	**Ezine**	**0.57**	**88**	*e*PG	**Pg**	**06 24 39.8**	**-1.0**
EZN				*e*SG	**Sg**	**06 24 47.8**	**-0.5**
EZN	**Ezine**	**0.57**	**88**	*e*Pg	**Pg**	**06 24 39.8**	**-1.0**
EZN				*e*Sg	**Sg**	**06 24 47.8**	**-0.5**
SIGR	**SIGRI**	**0.63**	**161**	P	**P

AKS	**Akhisar**	**1.96**	**118**	*e*PN	**Pn**	**06 25 02.2 -0.9**
AKS	**Akhisar**	**1.96**	**118**	*e*Pn	**Pn**	**06 25 02.2 -0.9**
SOH	**Sokhos**	**1.98**	**301**	*e*PB	**Pb**	**06 25 03.7 -2.3**
SOH	**Sokhos**	**1.98**	**301**	*e*Pn	**Pn**	**06 25 07.5 +4.1**
SOH	**Sokhos**	**1.98**	**301**	P	**Pn**	**06 25 02.9 -0.5**
SOH	**Sokhos**	**1.98**	**301**	P	**Pn**	**06 25 02.9 -0.5**
SOH	**Sokhos**	**1.98**	**301**	*e*Pn	**Pn**	**06 25 07.5 +4.1**
RZN	**Rozhen**	**1.99**	**341**	P	**Pn**	**06 25 03.0 -0.5**
RZN	**Rozhen**	**1.99**	**341**	P	**Pn**	**06 25 03.0 -0.5**
SRS	**Serrai**	**2.00**	**311**	P	**Pn**	**06 25 03.9 +0.2**
SRS	**Serrai**	**2.00**	**311**	P	**Pn**	**06 25 03.9 +0.2**
NVR	**Nevrokopi**	**2.02**	**320**	*e*PB	**Pb**	**06 25 04.2 -2.4**
EDRB	**Edirne**	**2.22**	**23**	*e*Pn	**Pn**	**06 25 07.0 +0.4**
EDRB	**Edirne**	**2.22**	**23**	*e*Pn	**Pn**	**06 25 07.0 +0.4**
DURS	**Dursunbey**	**2.24**	**94**	*i* P	**Pn**	**06 25 06.6 -0.3**
DURS				*i* S	**Sn**	**06 25 35.9 +1.3**
DURS	**Dursunbey**	**2.24**	**94**	*i* P	**Pn**	**06 25 06.6 -0.3**
DURS				*i* S	**Sn**	**06 25 35.8 +1.2**
MMB	**Musomiste**	**2.27**	**322**	P	**Pn**	**06 25 09.4 +2.1**
MMB	**Musomiste**	**2.27**	**322**	P	**Pn**	**06 25 09.4 +2.1**
SMG	**Samos**	**2.31**	**155**	*e*PN	**Pn**	**06 25 08.3 +0.4**
SMG	**Samos**	**2.31**	**155**	*e*Pb	**Pn**	**06 25 08.3 +0.4**
LKR	**Lokris**	**2.32**	**241**	*e*PN	**Pn**	**06 25 08.9 +0.9**
LKR	**Lokris**	**2.32**	**241**	*e*Pg	**Pg**	**06 25 14.6 +0.4**
LKR	**Lokris**	**2.32**	**241**	*e*Pg	**Pg**	**06 25 14.6 +0.4**
DST	**Dursunbey**	**2.35**	**94**	*e*PN	**Pn**	**06 25 08.8 +0.3**
DST	**Dursunbey**	**2.35**	**94**	*e*Pn	**Pn**	**06 25 08.8 +0.3**
NAIG	**Nisos Aigina**	**2.62**	**219**	*e*Pg	**Pg**	**06 25 20.5 +0.5**
AGG	**Agios Georgios**	**2.64**	**254**	*e*PB	**Pb**	**06 25 14.4 -2.8**
KULA	**Kula-Manisa**	**2.72**	**117**	*e*PN	**Pn**	**06 25 13.1 -0.4**
KULA	**Kula-Manisa**	**2.72**	**117**	*e*Pn	**Pn**	**06 25 13.1 -0.4**
KKB	**Krupnik**	**2.80**	**318**	P	**Pn**	**06 25 22.0 +7.4**
KLYT	**Kilyos**	**3.00**	**60**	*e*PN	**Pn**	**06 25 18.2 +0.8**
KLYT	**Kilyos**	**3.00**	**60**	*e*Pn	**Pn**	**06 25 18.2 +0.8**
ADVT	**Abdulvahap**	**3.24**	**78**	*e*PN	**Pn**	**06 25 20.9 +0.2**
ADVT	**Abdulvahap**	**3.24**	**78**	*e*Pn	**Pn**	**06 25 20.9 +0.2**
VTS	**Vitosha**	**3.31**	**328**	Pg	**Pg**	**06 25 32.7 -0.4**
VTS	**Vitosha**	**3.31**	**328**	Pg	**Pg**	**06 25 32.7 -0.4**
SZH	**Strazhica**	**3.46**	**4**	P	**Pn**	**06 25 25.7 +2.0**
SZH	**Strazhica**	**3.46**	**4**	P	**Pn**	**06 25 25.7 +2.0**
ALT	**Altintas**	**3.58**	**101**	*e*PN	**Pn**	**06 25 25.3 -0.1**
ALT	**Altintas**	**3.58**	**101**	*e*Pn	**Pn**	**06 25 25.3 -0.1**
GULT	**Gulveren**	**3.83**	**79**	*e*PN	**Pn**	**06 25 29.6 +0.8**
GULT	**Gulveren**	**3.83**	**79**	*e*Pn	**Pn**	**06 25 29.6 +0.8**

*NEIC **27** 06:28:53.1, 17°.23N×100°.00W, h27km, MD3.8(MEX), After MEX.*

MEX 27 06:28:53.1±1.3, **17°.23N×100°.00W, h27**km±17km, **MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.31**	**234**	*i* P	**Pb**	06 28 59.0	-1.5
CAIG				*i* S	Sb	06 29 04.7	-0.8
CAIG	**El Cayaco**	**0.31**	**234**	*i* P	**Pb**	06 28 59.0	-1.5
CAIG				*i* S	Sb	06 29 04.7	-0.8
ACX	**Acapulco**	**0.37**	**167**	*i* P	**Pb**	06 28 59.5	-1.9
ACX				*i* S	Sb	06 29 05.5	-1.6
ACX	**Acapulco**	**0.37**	**167**	*i* P	**Pb**	06 28 59.5	-1.9
ACX				*i* S	Sb	06 29 05.5	-1.6
PLIG	**Platanillo**	**1.25**	**22**	*i* P	**Pn**	06 29 12.2	-2.6
PLIG				*i* S	Sn	06 29 27.7	-3.0
PLIG	**Platanillo**	**1.25**	**22**	*i* P	**Pn**	06 29 12.2	-2.6
PLIG				*i* S	Sn	06 29 27.7	-3.0
ZIIG	**Zihuatanejo**	**1.45**	**285**	*i* P	**Pn**	06 29 14.3	-3.2
ZIIG				*i* S	Sn	06 29 32.9	-2.6
ZIIG	**Zihuatanejo**	**1.45**	**285**	*i* P	**Pn**	06 29 14.3	-3.2
ZIIG				*i* S	Sn	06 29 32.9	-2.6
PNIG	**Pinotepa**	**1.98**	**115**	*i* P	**Pn**	06 29 23.5	-1.3
PNIG				*i* S	Sn	06 29 47.1	-1.7
PNIG	**Pinotepa**	**1.98**	**115**	*i* P	**Pn**	06 29 23.5	-1.3
PNIG				*i* S	Sn	06 29 47.1	-1.7
MZVM		**2.08**	**21**	*i* P	**Pn**	06 29 24.7	-1.5
MZVM				*i* S	Sn	06 29 48.9	-2.4
UTMO	**Huajuapan**	**2.18**	**74**	*e*P	**Pn**	06 29 25.0	-2.6
UTMO				*i* S	Sn	06 29 51.1	-2.7
PBVM	**Pinon**	**2.36**	**22**	*i* P	**Pn**	06 29 29.8	-0.4
PBVM				*i* S	Sn	06 29 56.5	-1.8
PBVM	**Pinon**	**2.36**	**22**	*i* P	**Pn**	06 29 29.8	-0.4
PBVM				*i* S	Sn	06 29 56.5	-1.8
PTVM	**Pico Tres Padr**	**2.49**	**20**	*e*P	**Pn**	06 29 30.3	-1.7
PTVM				*i* S	Sn	06 29 59.9	-1.6
PTVM	**Pico Tres Padr**	**2.49**	**20**	*e*P	**Pn**	06 29 30.3	-1.7
PTVM				*i* S	Sn	06 29 59.9	-1.6
IIO	**Organos**	**2.64**	**27**	*i* P	**Pn**	06 29 33.1	-0.8
IIO				*i* S	Sn	06 30 04.0	-1.1
IIO	**Organos**	**2.64**	**27**	*i* P	**Pn**	06 29 33.1	-0.8
IIO				*i* S	Sn	06 30 04.0	-1.1
TPIG	**Tehuac#an**	**2.78**	**64**	*i* P	**Pn**	06 29 33.0	-2.9
TPIG				*i* S	Sn	06 30 05.1	-3.4
VHO	**Vista Hermosa**	**3.13**	**92**	*i* P	**Pn**	06 29 37.2	-3.5
VHO				*i* S	Sn	06 30 12.0	-5.2
VHO	**Vista Hermosa**	**3.13**	**92**	*i* P	**Pn**	06 29 37.2	-3.5
VHO				*i* S	Sn	06 30 12.0	-5.2

*IDC **27** 06:32:11.2±5.8, 36°.55N×71°.21E, h160km±55km, mb3.4/3, mb1 3.2/8, mb1mx3.0/29, mbtmp3.2/8, Error ellipse: s-maj=55.4km s-min=41.1km az=130.0*
*ISCJB **27** 06:32:13.0±0.8, 36°.73N±0°.05×71°.34E±0°.08, h188km±10km, mb3.5/3, Error ellipse: s-maj=10.9km s-min=7.1km az=159.7*
*NEIC **27** 06:32:14.0±0.7, 36°.67N×71°.35E, h190km±9km, mb4.3/4, Error ellipse: s-maj=10.0km s-min=7.9km az=84.0*
*NNC **27** 06:32:21.0±9.0, 37°.35N×71°.41E, h224km±78km, mb2.2, mpv3.5, Error ellipse: s-maj=81.1km s-min=53.2km az=16.0*

ISC 27 06:32:13.8±0.7, **36°.73N**±0°.05×**71°.34E**±0°.08, **h182**km±10km, **n25**, σ1§**13**/33, **mb3.5**/3, **5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.87**	**221**	*e*Pn	**Pn**	**06 33 01.6**	**+0.7**
KSH	**Kashi**	**4.60**	**51**	Pn	**Pn**	**06 33 20.5**	**-2.0**
KSH				Sn	**Sn**	**06 34 07.0**	**-9.4**
KSH				smax			
	comp=N,260nm,0.6s						
KSH				smax			
	comp=E,240nm,0.3s						
UCH	**Uchtor**	**6.02**	**23**	*e*Pn	**Pn**	**06 33 42.0**	**+1.0**
	comp=E,4.6nm,0.6s						
UCH				*e*Sn	**Sn**	**06 34 48.4**	**-1.2**
AAK	**Ala-Archa**	**6.38**	**21**	P	**Pn**	**06 33 47.8**	**+2.1**
	comp=E,0.0nm,0.3s,baz=98,slow=4.4,SNR=5.3						
AAK				S	**Sn**	**06 34 58.7**	**+0.5**
	comp=E,0.0nm,0.3s,baz=101,slow=23,SNR=8.8						
AAK	**Ala-Archa**	**6.38**	**21**	*e*Pn	**Pn**	**06 33 47.1**	**+1.4**
AAK				*e*Sn	**Sn**	**06 35 00.2**	**+2.0**
KK31	**Karatay Array**	**6.40**	**355**	⇑P	**Pn**	**06 33 46.1**	**+0.1**
	comp=E,1.9nm,0.4s,baz=178,slow=13,SNR=41						
KK31				⇓S	**Sn**	**06 34 55.8**	**-2.9**
	comp=E,4.6nm,0.4s,baz=177,slow=22,SNR=5.2						
TKM2	**Tokmak 2**	**7.00**	**27**	⇑P	**Pn**	**06 33 54.9**	**+1.1**
	comp=E,2.2nm,0.6s						
TKM2				⇑S	**Sn**	**06 35 05.4**	**-7.5**
	comp=E,2.8nm,0.7s						
TKM2	**Tokmak 2**	**7.00**	**27**	*e*Pn	**Pn**	**06 33 55.2**	**+1.5**
	comp=E,3.5nm,0.7s						
MKAR	**Makanchi Array**	**12.95**	**36**	P	**Pn**	**06 35 11.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=231,slow=16,SNR=4.9						
KKN	**Kakani**	**14.77**	**123**	*e*P	**Pn**	**06 35 33.8**	**-0.2**
DMN	**Daman**	**14.77**	**124**	*e*P	**Pn**	**06 35 33.1**	**-0.9**
	comp=E,15nm,0.4s						
KURK	**Kurchatov**	**14.93**	**18**	P	**Pn**	**06 35 35.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=204,slow=10.0,SNR=4.5						
PKI	**Pulchoki**	**15.00**	**123**	*e*P	**Pn**	**06 35 37.0**	**+0.2**
	comp=E,16nm,0.4s						
AB31	**Akbulak array**	**15.02**	**330**	⇓P	**Pn**	**06 35 37.5**	**+0.7**
	comp=E,0.3nm,0.3s,baz=161,slow=11,SNR=3.7						
AB31				S	**S**	**06 38 14.6**	**-9.2**
	comp=E,1.6nm,0.7s,baz=139,slow=24,SNR=6.5						
GUN	**Gumba**	**15.10**	**121**	*e*P	**Pn**	**06 35 37.7**	**-0.3**
	comp=E,9.8nm,0.4s						
AKTK	**Aktyubinsk**	**16.72**	**329**	P	**Pn**	**06 35 56.9**	**-0.5**
AKTO	**Aktyubinsk**	**16.72**	**329**	⇑P	**Pn**	**06 35 54.3**	**-3.1**
	comp=E,0.1nm,0.5s						
AKTO				⇑S	**S**	**06 38 57.2**	**-4.6**
	comp=E,0.1nm,0.6s						
AKTO	**Aktyubinsk**	**16.72**	**329**	P	**Pn**	**06 35 56.9**	**-0.5**
	comp=E,0.3nm,0.3s,baz=140,slow=11,SNR=3.1						
ZALV	**Zalesovo Beam**	**19.60**	**24**	P	**P**	**06 36 29.3**	**+1.4**
	comp=E,0.6nm,0.3s,baz=221,slow=10,SNR=5.9						
ZALV	**Zalesovo Beam**	**19.60**	**24**	P	**P**	**06 36 29.3**	**+1.4**
HFS	**Hagfors**	**43.06**	**322**	P	**P**	**06 39 56.6**	**+1.3**
	comp=E,1.5nm,0.5s,mb3.9,baz=81,slow=8.9,SNR=5.5						
NB2	**NORSAR Subarra**	**44.36**	**323**	P	**P**	**06 40 06.6**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.4,baz=98,slow=7.4						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**06 40 04.8**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.1,baz=102,slow=7.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**06 42 39.7**	**-1.3**
	comp=Z,0.5nm,0.6s,mb3.5,baz=50,slow=4.8,SNR=11						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**06 42 39.7**	**-1.3**

*ISCJB **27** 06:36:22.5±0.5, 39°.83N±0°.03×25°.66E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=4.0km az=0.5*
*CSEM **27** 06:36:22.6±0.2, 39°.84N×25°.66E, h2km, ML2.7/4, Error ellipse: s-maj=3.3km s-min=3.0km az=81.0*
*ISK **27** 06:36:22.0, 39°.87N×25°.72E, h5km, MD3.1*
*THE **27** 06:36:23.0, 39°.72N×25°.45E, h30km±2km, ML2.7/4, Error ellipse: s-maj=3.0km s-min=0.8km az=266.0*

ISC 27 06:36:22.8±0.5, **39°.84N**±0°.03×**25°.65E**±0°.04, **h5**km±7km, **n28**, σ0§**67**/40, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.36**	**279**	P	**Pg**	**06 36 29.7**	**-0.2**
LIA				S	**Sg**	**06 36 35.1**	**+0.5**
LIA	**Limnos Island**	**0.36**	**279**	P	**Pg**	**06 36 29.7**	**-0.2**
LIA				S	**Sg**	**06 36 35.1**	**+0.5**
GADA	**Gvkgeada**	**0.40**	**28**	*e*PG	**Pg**	**06 36 30.4**	**-0.1**
GADA				*e*SG	**Sg**	**06 36 35.8**	**0.0**
GADA	**Gvkgeada**	**0.40**	**28**	*e*Pg	**Pg**	**06 36 30.4**	**-0.1**
GADA				*e*Sg	**Sg**	**06 36 35.8**	**0.0**
LOS	**Limnos**	**0.45**	**282**	P	**Pg**	**06 36 31.6**	**+0.1**
LOS	**Limnos**	**0.45**	**282**	P	**Pg**	**06 36 31.6**	**+0.1**
EZN	**Ezine**	**0.52**	**91**	*e*PG	**Pg**	**06 36 32.4**	**-0.5**
EZN	**Ezine**	**0.52**	**91**	*e*Pg	**Pg**	**06 36 32.4**	**-0.4**
SIGR	**SIGRI**	**0.65**	**166**	P	**Pg**	**06 36 34.3**	**-0.9**
SIGR				S	**Sg**	**06 36 44.1**	**+0.5**
SIGR	**SIGRI**	**0.65**	**166**	P	**Pg**	**06 36 34.3**	**-0.9**
SIGR				S	**Sg**	**06 36 44.1**	**+0.5**
PRK	**Paraskevi**	**0.76**	**141**	P	**Pg**	**06 36 37.1**	**-0.3**
PRK				S	**Sg**	**06 36 48.4**	**+1.1**
PRK	**Paraskevi**	**0.76**	**141**	P	**Pg**	**06 36 37.1**	**-0.3**
PRK				S	**Sg**	**06 36 48.4**	**+1.1**
ENEZ	**Enez**	**0.97**	**23**	*e*PG	**Pg**	**06 36 41.0**	**-0.6**
ENEZ	**Enez**	**0.97**	**23**	*e*Pg	**Pg**	**06 36 41.0**	**-0.5**
LPK	**Lapseki**	**1.00**	**58**	*e*PG	**Pg**	**06 36 40.5**	**-1.5**
LPK				*e*SG	**Sg**	**06 36 55.6**	**+0.5**
LPK	**Lapseki**	**1.00**	**58**	*e*Pg	**Pg**	**06 36 40.5**	**-1.6**
LPK				*e*Sg	**Sg**	**06 36 55.6**	**+0.5**
ALN	**Alexandroupoli**	**1.10**	**16**	P	**Pg**	**06 36 43.7**	**-0.2**
ALN				S	**Sg**	**06 36 59.5**	**+1.3**
ALN	**Alexandroupoli**	**1.10**	**16**	P	**Pg**	**06 36 43.7**	**-0.2**
ALN				S	**Sg**	**06 36 59.5**	**+1.3**
RDO	**Rodhopi**	**1.31**	**356**	P	**Pn**	**06 36 47.0**	**-0.7**
RDO	**Rodhopi**	**1.31**	**356**	P	**Pn**	**06 36 47.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.44**	**54**	*e*PN	**Pn**	**06 36 49.2**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.44**	**54**	*e*Pn	**Pn**	**06 36 49.2**	**-0.4**
AOS	**Alonnisos**	**1.52**	**245**	P	**Pn**	**06 36 44.9**	**-5.8**
BNT	**Bandirma**	**1.81**	**73**	*e*PN	**Pn**	**06 36 54.6**	**-0.1**
EDRB	**Edirne**	**2.17**	**22**	*e*PN	**Pn**	**06 37 00.1**	**+0.6**
EDRB	**Edirne**	**2.17**	**22**	*e*Pn	**Pn**	**06 37 00.1**	**+0.5**
YLV	**Yalova**	**2.94**	**75**	*e*PN	**Pn**	**06 37 10.9**	**+0.8**
YLV	**Yalova**	**2.94**	**75**	*e*Pn	**Pn**	**06 37 11.0**	**+0.8**

*ISCJB **27** 06:37:44.0±0.3, 51°.46N±0°.02×16°.18E±0°.03, h0km, Error ellipse: s-maj=2.8km s-min=2.2km az=28.4*
*CSEM **27** 06:37:46.3±0.2, 51°.46N×16°.10E, h2km, ML3.4/8, Error ellipse: s-maj=4.8km s-min=3.1km az=20.0*
*WAR **27** 06:37:47.9, 51°.45N×16°.12E, ML2.7, Mining Induced*
*IPEC **27** 06:37:47.8±0.3, 51°.43N×16°.45E, h0km, ML2.3/4, Error ellipse: s-maj=3.2km s-min=1.9km az=94.0*
*PRU **27** 06:37:48.1, 51°.40N×16°.11E, h0km*
*VIE **27** 06:37:49.0±0.7, 51°.25N×16°.15E, h0km, mb2.5/3, ML2.9/3, Error ellipse: s-maj=5.3km s-min=4.2km az=35.0 62 km WNW of Wroclaw Suspected Mining induced.*
*NEIC **27** 06:37:48.4, 51°.35N×16°.11E, h1km, ML2.7(SZGRF), After SZGRF.*
*UPP **27** 06:38:37.4, 55°.26N×15°.31E, h0km, ML2.3, Mining explosion.*

ISC 27 06:37:46.1±0.3, **51°.46N**±0°.02×**16°.15E**±0°.03, **h0**km, **n61**, σ0§**85**/114, **2C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**171**	*e*Pg	**Pg**	**06 37 59.1**	**+1.1**
KSP				*e*Sg	**Sg**	**06 38 07.0**	**+0.8**
KSP	**Ksiaz**	**0.63**	**171**	*e*Pg	**Pg**	**06 37 59.1**	**+1.0**
	baz=9.5						
KSP				*e*Sg	**Sg**	**06 38 06.3**	**+0.1**
	baz=9.5						
UPC	**Upice**	**0.96**	**185**	*e*PG	**Pg**	**06 38 05.0**	**+0.6**
UPC	**Upice**	**0.96**	**185**	Pg	**Pg**	**06 38 05.0**	**+0.6**
DPC	**Dobruska-Polom**	**1.12**	**174**	*e*PG	**Pg**	**06 38 07.8**	**+0.3**
DPC				*e*SG	**Sg**	**06 38 21.9**	**-0.1**
	comp=Z,37nm,0.4s						
DPC	**Dobruska-Polom**	**1.12**	**174**	*e*Pg	**Pg**	**06 38 07.8**	**+0.3**
	baz=4.3						
DPC				*e*Sg	**Sg**	**06 38 22.3**	**+0.3**
	baz=4.3						
PVCC	**Panska Ves**	**1.37**	**227**	*e*PG	**Pg**	**06 38 12.5**	**+0.3**
PVCC				*e*SG	**Sg**	**06 38 30.7**	**+0.8**
	comp=Z,110nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**227**	Pg	**Pg**	**06 38 12.5**	**+0.3**
PVCC				Sg	**Sg**	**06 38 30.7**	**+0.8**
	comp=Z,110nm,0.3s						
BRG	**Berggiesshubel**	**1.51**	**248**	PN	**Pn**	**06 38 13.7**	**-0.6**
BRG				PG	**Pg**	**06 38 14.8**	**-0.1**
BRG				SG	**Sg**	**06 38 35.0**	**+0.5**
	comp=Z,31nm,0.3s						
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**06 38 18.4**	**+0.2**
PRU				*e*PG	**Pg**	**06 38 20.1**	**-0.3**
PRU				*e*SG	**Sg**	**06 38 42.9**	**-0.8**
	comp=Z,26nm,0.2s						
PRU	**Pruhonice**	**1.79**	**215**	Pn	**Pn**	**06 38 18.4**	**+0.2**
PRU	**Pruhonice**	**1.79**	**215**	Pg	**Pg**	**06 38 20.1**	**-0.3**
PRU				Sg	**Sg**	**06 38 42.9**	**-0.8**
	comp=Z,26nm,0.2s						
MORC	**Moravsky Berou**	**1.91**	**152**	*e*Pn	**Pn**	**06 38 19.9**	**+0.1**
MORC				*e*Sg	**Sg**	**06 38 47.2**	**-0.1**
MORC	**Moravsky Berou**	**1.91**	**152**	*e*Pn	**Pn**	**06 38 20.0**	**+0.2**
	baz=338						
MORC				*e*Sg	**Sg**	**06 38 47.2**	**-0.1**
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**06 38 20.0**	**-0.7**
CLL				*i* Pg	**Pg**	**06 38 23.2**	**-0.7**
CLL				*e*Sg	**Sg**	**06 38 50.0**	**+0.5**
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**06 38 20.0**	**-0.7**
CLL				*i* Pg	**Pg**	**06 38 23.2**	**-0.7**
CLL				*e*Sg	**Sg**	**06 38 50.0**	**+0.5**
	comp=Z,14nm,0.4s						
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**06 38 20.0**	**-0.7**
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*SG	**Sg**	**06 38 50.8**	**-1.6**
OKC	**Ostrava-Krasne**	**2.07**	**141**	Sg	**Sg**	**06 38 50.8**	**-1.6**
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**06 38 24.8**	**+1.3**
	baz=358						
VRAC				*e*Sg	**Sg**	**06 38 54.4**	**-1.5**
	comp=Z,16nm,0.2s,baz=358						
TREC	**Trest**	**2.21**	**191**	*e*PN	**Pn**	**06 38 24.9**	**+0.9**
TREC				*e*PG	**Pg**	**06 38 27.9**	**-0.5**
TREC	**Trest**	**2.21**	**191**	Pn	**Pn**	**06 38 24.9**	**+0.9**
KRUC	**Moravsky**	**2.41**	**176**	*e*Pn	**Pn**	**06 38 28.7**	**+2.0**
	baz=0.9						
KRUC				*e*Sg	**Sg**	**06 39 02.8**	**-0.6**
	comp=Z,8.2nm,0.3s,baz=0.9						
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**06 38 35.5**	**-0.9**
OJC				*e*Sg	**Sg**	**06 39 10.8**	**+0.3**
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**06 38 35.5**	**-0.9**
OJC				*e*Sg	**Sg**	**06 39 10.8**	**+0.3**
NKC	**Novy Kostel**	**2.65**	**244**	*e*PN	**Pn**	**06 38 30.4**	**+0.4**
NKC				*e*PG	**Pg**	**06 38 36.0**	**-0.8**
NKC				*e*SG	**Sg**	**06 39 11.6**	**+0.5**
	comp=Z,20nm,0.2s						
NKC	**Novy Kostel**	**2.65**	**244**	Pn	**Pn**	**06 38 30.4**	**+0.4**
NKC	**Novy Kostel**	**2.65**	**244**	Pg	**Pg**	**06 38 36.0**	**-0.8**
NKC				Sg	**Sg**	**06 39 11.6**	**+0.5**
	comp=Z,20nm,0.2s						
JAVC	**Velka Javorina**	**2.79**	**159**	*e*Sg	**Sg**	**06 39 16.5**	**+1.0**
	comp=Z,22nm,0.7s						
KHC	**Kasperske Hory**	**2.86**	**216**	*e*Pn	**Pn**	**06 38 32.8**	**0.0**
KHC				*e*Pg	**Pg**	**06 38 39.1**	**-1.7**
KHC				*e*Sn	**Sn**	**06 39 08.1**	**+0.2**
KHC				*e*Sg	**Sg**	**06 39 20.2**	**+2.4**
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**06 38 33.2**	**+0.4**
KHC				*e*PG	**Pg**	**06 38 39.2**	**-1.6**
KHC				*e*SN	**Sn**	**06 39 07.5**	**-0.4**
KHC				*e*SG	**Sg**	**06 39 16.7**	**-1.1**
	comp=Z,8.9nm,0.3s						
KHC	**Kasperske Hory**	**2.86**	**216**	*e*Pn	**Pn**	**06 38 32.8**	**0.0**
KHC	**Kasperske Hory**	**2.86**	**216**	Pg	**Pg**	**06 38 39.2**	**-1.6**
KHC				Sn	**Sn**	**06 39 07.5**	**-0.4**
KHC				Sg	**Sg**	**06 39 16.7**	**-1.1**
	comp=Z,8.9nm,0.3s						
MOX	**Moxa**	**2.97**	**256**	*e*PN	**Pn**	**06 38 33.4**	**-1.0**
MOX				*e*PG	**Pg**	**06 38 42.7**	**-0.3**
MOX				*e*SG	**Sg**	**06 39 22.4**	**+0.8**
MOX	**Moxa**	**2.97**	**256**	*e*Pn	**Pn**	**06 38 33.4**	**-1.0**
GEC2	**GERESS Array S**	**3.06**	**212**	*e*Pn	**Pn**	**06 38 36.3**	**+0.7**
GEC2	**GERESS Array S**	**3.06**	**212**	*e*Pn	**Pn**	**06 38 36.3**	**+0.7**
KOLL	**Kolacno**	**3.23**	**152**	*e*Pg	**Pg**	**06 38 48.1**	**+0.1**
KOLL				*e*Sg	**Sg**	**06 39 28.3**	**-1.6**
KOLL	**Kolacno**	**3.23**	**152**	*e*PG	**Pg**	**06 38 48.1**	**+0.1**
KOLL				*e*SG	**Sg**	**06 39 28.3**	**-1.6**
KOLL	**Kolacno**	**3.23**	**152**	*e*Pg	**Pg**	**06 38 48.1**	**+0.1**
KOLL				*e*Sg	**Sg**	**06 39 28.3**	**-1.6**
NIE	**Niedzica**	**3.36**	**126**	*e*P	**Pg**	**06 38 49.7**	**-0.7**
NIE				*e*S	**Sg**	**06 39 33.1**	**-0.8**
VYHS	**Vyhne**	**3.44**	**149**	*e*Pg	**Pg**	**06 38 51.7**	**-0.3**
VYHS				*e*Sg	**Sg**	**06 39 38.1**	**+1.5**
VYHS	**Vyhne**	**3.44**	**149**	*e*PG	**Pg**	**06 38 51.7**	**-0.3**
VYHS				*e*SG	**Sg**	**06 39 38.1**	**+1.5**
VYHS	**Vyhne**	**3.44**	**149**	*e*Pg	**Pg**	**06 38 51.7**	**-0.3**
VYHS				*e*Sg	**Sg**	**06 39 38.1**	**+1.5**
GRF	**Grafenberg Arr**	**3.60**	**242**	*e*Sg	**Sg**	**06 39 40.7**	**-1.1**
BSD	**Bornholm Skovb**	**3.73**	**349**	*i* P	**Pn**	**06 38 44.2**	**-0.7**
BSD				*i* S	**Sn**	**06 39 25.0**	**-4.5**
BSD	**Bornholm Skovb**	**3.73**	**349**	*i* P	**Pn**	**06 38 44.2**	**-0.7**
MOA	**Molln**	**3.82**	**199**	⇑*i*Pn	**Pn**	**06 38 46.6**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**06 39 48.9**	**+0.3**
	comp=Z,9.5nm,0.5s						
MOA	**Molln**	**3.82**	**199**	Pn	**Pn**	**06 38 46.6**	**+0.6**
MOA				Sg	**Sg**	**06 39 48.9**	**+0.3**
	comp=Z,9.5nm,0.5s						
STHS	**Stebnicka Huta**	**3.85**	**120**	*e*Pn	**Pn**	**06 38 47.6**	**+1.1**
STHS				*e*Pg	**Pg**	**06 39 00.7**	**+0.9**
STHS				*e*Sg	**Sg**	**06 39 53.6**	**+4.0**
STHS	**Stebnicka Huta**	**3.85**	**120**	*e*PN	**Pn**	**06 38 47.6**	**+1.1**
STHS				*e*PG	**Pg**	**06 39 00.7**	**+0.9**
STHS				*e*SG	**Sg**	**06 39 53.6**	**+4.0**
STHS	**Stebnicka Huta**	**3.85**	**120**	*e*Pn	**Pn**	**06 38 47.6**	**+1.1**
KECS	**Kecovo**	**4.09**	**135**	*e*Pg	**Pg**	**06 39 06.2**	**+1.8**
KECS				*e*Sn	**Sn**	**06 39 36.6**	**-1.7**
KECS				*e*Sg	**Sg**

KHAL				*i* S		Sg	06 42 59.3	+1.9
KHAL	**Karahalli**	1.42	8	*i* P		Pn	06 42 38.2	-0.4
KHAL				*i* S		Sg	06 42 59.3	+1.9
BDRM	**Kayabasi**	1.43	274	*i* P		Pn	06 42 37.5	-1.4
BDRM				*i* S		Sb	06 42 58.9	+1.0
BDRM	**Kayabasi**	1.43	274	*i* P		Pn	06 42 37.5	-1.3
BDRM				*i* S		Sb	06 42 58.9	+1.0
SUTC	**Sutluce-Ispart**	1.50	70	*e*PN		Pn	06 42 39.2	-0.6
SUTC	**Sutluce-Ispart**	1.50	70	*e*Pn		Pn	06 42 39.2	-0.6
KULA	**Kula-Manisa**	1.61	344	*e*PN		Pn	06 42 40.8	-0.4
KULA	**Kula-Manisa**	1.61	344	*e*Pn		Pn	06 42 40.8	-0.5
MANT	**Manisa**	1.61	341	*i* P		Pn	06 42 40.1	-1.2
MANT				*i* S		Sn	06 43 02.2	-0.3
MANT	**Manisa**	1.61	341	*i* P		Pn	06 42 40.1	-1.2
MANT				*i* S		Sn	06 43 02.2	-0.4
GCAM	**G?zelcaml?**	1.75	295	*i* P		Pn	06 42 42.0	-1.2
GCAM				*i* S		Sn	06 43 07.2	+1.2
GCAM	**G?zelcaml?**	1.75	295	*i* P		Pn	06 42 42.0	-1.2
GCAM				*i* S		Sn	06 43 07.2	+1.2
SHUT	**Suhut-Afyon**	1.90	33	*e*PN		Pn	06 42 44.9	-0.4
SHUT	**Suhut-Afyon**	1.90	33	*e*Pn		Pn	06 42 44.9	-0.4
SMG	**Samos**	2.04	292	*e*P		Pn	06 42 46.4	-0.8
SMG	**Samos**	2.04	292	P		Pn	06 42 47.0	-0.2
DEMI	**Demirci**	2.11	349	*i* P		Pn	06 42 47.4	-0.7
DEMI				*i* S		Sn	06 43 16.0	+1.1
DEMI	**Demirci**	2.11	349	*i* P		Pn	06 42 47.4	-0.8
DEMI				*i* S		Sn	06 43 16.0	+1.1
IZM	**Izmir**	2.11	313	*e*PN		Pn	06 42 47.9	-0.3
IZM	**Izmir**	2.11	313	*e*Pn		Pn	06 42 47.9	-0.3
GDZ	**Gediz**	2.13	5	*i* P		Pn	06 42 49.2	+0.8
GDZ				*i* S		Sn	06 43 15.2	-0.1
GDZ	**Gediz**	2.13	5	*i* P		Pn	06 42 49.2	+0.8
GDZ				*i* S		Sn	06 43 15.2	-0.1
KARP	**Karpathos**	2.19	230	*e*P		Pn	06 42 50.2	+0.9
KARP	**Karpathos**	2.19	230	P		Pn	06 42 50.7	+1.4
KARP	**Karpathos**	2.19	230	P		Pn	06 42 50.7	+1.4
AKHS	**Akhisar**	2.21	330	*i* P		Pn	06 42 48.7	-0.9
AKHS				*i* S		Sn	06 43 16.1	-1.3
AKHS	**Akhisar**	2.21	330	*i* P		Pn	06 42 48.7	-0.8
AKHS				*i* S		Sn	06 43 16.1	-1.3
AKS	**Akhisar**	2.21	330	*e*PN		Pn	06 42 49.4	-0.2
AKS	**Akhisar**	2.21	330	*e*Pn		Pn	06 42 49.4	-0.2
BOLV	**Bolvadin**	2.22	37	*i* P		Pn	06 42 49.4	-0.3
BOLV				*i* S		Sn	06 43 22.1	+4.6
BLCB	**Balcova**	2.24	310	*e*PN		Pn	06 42 49.3	-0.6
BLCB	**Balcova**	2.24	310	*e*Pn		Pn	06 42 49.3	-0.6
GAZI	**Gazipasa**	2.59	106	*i* P		Pn	06 42 56.4	+1.6
GAZI				*i* S		Sn	06 43 32.8	+6.0
GAZI	**Gazipasa**	2.59	106	*i* P		Pn	06 42 56.4	+1.6
HDMB	**Hadim**	2.61	89	*e*PN		Pn	06 42 55.0	-0.1
HDMB	**Hadim**	2.61	89	*e*Pn		Pn	06 42 55.0	-0.1
DST	**Dursunbey**	2.67	350	*e*PN		Pn	06 42 55.9	0.0
DST	**Dursunbey**	2.67	350	*e*Pn		Pn	06 42 55.9	0.0
KONT	**Konya--Tatoy**	2.68	68	*e*PN		Pn	06 42 56.0	0.0
KONT	**Konya--Tatoy**	2.68	68	*e*Pn		Pn	06 42 56.0	0.0
DURS	**Dursunbey**	2.69	348	*i* P		Pn	06 42 55.6	-0.6
DURS				*i* S		Sn	06 43 31.5	+2.2
DURS	**Dursunbey**	2.69	348	*i* P		Pn	06 42 55.6	-0.6
DURS				*i* S		Sn	06 43 31.5	+2.2
LADK	**Ladik-KONYA**	2.78	63	*e*PN		Pn	06 42 57.5	+0.1
LADK	**Ladik-KONYA**	2.78	63	*e*Pn		Pn	06 42 57.5	+0.1
KIZT	**Kizilcal**	2.84	47	*e*PN		Pn	06 42 58.3	+0.1
KIZT	**Kizilcal**	2.84	47	*e*Pn		Pn	06 42 58.3	+0.1
CHOS	**Chios island**	2.89	300	P		Pn	06 42 59.8	+0.9
CHOS				S		Sn	06 43 32.9	-1.2
CHOS	**Chios island**	2.89	300	P		Pn	06 42 59.8	+0.9
CHOS				S		Sn	06 43 32.9	-1.2
ZKR	**Zakros**	3.06	234	P		Pn	06 43 03.7	+2.5
ZKR	**Zakros**	3.06	234	P		Pn	06 43 02.7	+1.4
ZKR	**Zakros**	3.06	234	P		Pn	06 43 02.7	+1.4
SVRH	**Sivrihisar-ESK**	3.06	35	*e*PN		Pn	06 43 01.6	+0.3
SVRH	**Sivrihisar-ESK**	3.06	35	*e*Pn		Pn	06 43 01.6	+0.3
LAST	**Lasithi**	3.53	240	*e*P		Pn	06 43 09.2	+1.5
LAST	**Lasithi**	3.53	240	P		Pn	06 43 08.8	+1.1
LAST				S		Sn	06 43 50.6	+0.6
IDI	**Anoyia**	3.89	246	Pn		Pn	06 43 14.0	+1.4
	2.2nm,0.3s,baz=65,slow=15,SNR=13							
IDI				Sn		Sn	06 43 58.6	-0.2
	7.7nm,0.3s,baz=285,slow=22,SNR=8.5							
IDI	**Anoyia**	3.89	246	*e*P		Pn	06 43 14.3	+1.6
IDI	**Anoyia**	3.89	246	Pn		Pn	06 43 14.0	+1.4
IDI				Sn		Sn	06 43 58.6	-0.3
LPK	**Lapseki**	3.91	331	*e*PN		Pn	06 43 13.6	+0.7
LPK	**Lapseki**	3.91	331	*e*Pn		Pn	06 43 13.6	+0.7
SIVA	**Sivas**	4.08	243	P		Pn	06 43 15.9	+0.7
SIVA	**Sivas**	4.08	243	P		Pn	06 43 15.9	+0.7
BRTR	**Keskin Array B**	4.43	50	Pn		Pn	06 43 20.9	+0.9
	0.7nm,0.3s,baz=227,slow=14,SNR=12							
BRTR				Sn		Sn	06 44 15.6	+3.5
	0.5nm,0.3s,baz=225,slow=24,SNR=8.1							
BRTR	**Keskin Array B**	4.43	50	Pn		Pn	06 43 21.0	+1.0
VLI	**Veliai**	5.05	269	*e*P		Pn	06 43 30.5	+1.9
MMAI	**Mount Meron Ar**	6.42	126	Pn		Pn	06 43 46.7	-0.8
	2.6nm,0.3s,baz=314,slow=13,SNR=5.5							
EIL	**Elat**	8.71	145	Pn		Pn	06 44 17.5	-1.4
	0.9nm,0.3s,baz=338,slow=17,SNR=5.1							
EIL	**Elat**	8.71	145	Pn		Pn	06 44 17.5	-1.4
TORD	**Torodi Ar. Bea**	34.19	233	P		P	06 48 57.7	-1.1
	1.4nm,0.5s,mb4.2,baz=32,slow=8.7,SNR=35							
TORD	**Torodi Ar. Bea**	34.19	233	P		P	06 48 57.7	-1.1
MKAR	**Makanchi Array**	40.03	59	P		P	06 49 49.3	+1.2
	0.2nm,0.7s,mb3.0,baz=293,slow=7.4,SNR=3.1							

IGQ 27 06:48:33.6,0.43S×80.83W,h45km±3km,Mb4.5,Ms4.3, 4C-34D,Error ellipse: s-maj=4.5km s-min=4.0km az=179.0,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	0.65	75	⇓S	Sn	06 48 55.3	-0.4
JAMA	**Jama**	0.65	75	⇓P	Pn	06 48 47.6	+1.2
JUA2	**San Juan 2**	2.24	85	⇓P	Pn	06 49 10.0	+1.9
PINO	**Pino**	2.24	83	⇓P	Pn	06 49 09.5	+1.3
TERV	**Terraza Guagua**	2.24	84	P	Pn	06 49 09.8	+1.6
GGP	**Refugio Guagua**	2.25	84	⇓P	Pn	06 49 09.7	+1.3
YANA	**Yana**	2.28	82	⇑P	Pn	06 49 10.3	+1.6
CAMI	**Rancho Maria**	2.34	96	⇓P	Pn	06 49 11.5	+1.9
BNAS	**Cotopaxi Volca**	2.36	96	⇓S	Sn	06 49 38.7	+1.0
BNAS	**Cotopaxi Volca**	2.36	96	⇓P	Pn	06 49 11.8	+1.9
NAS2	**Nasa**	2.37	95	⇓P	Pn	06 49 12.3	+2.3
BMOR	**Cotopaxi Volca**	2.39	97	⇓P	Pn	06 49 11.9	+1.6
PITA	**Cotopaxi Volc**	2.40	93	⇓P	Pn	06 49 12.4	+2.0
BREF	**Cotopaxi Volca**	2.40	96	⇓P	Pn	06 49 12.9	+2.4
MOV1	**Cotopaxi Vol s**	2.41	97	P	Pn	06 49 12.3	+1.8
BVC2	**Cotopaxi Volca**	2.43	95	⇓P	Pn	06 49 13.1	+2.2
IGUA	**Igualata**	2.44	116	⇓P	Pn	06 49 11.8	+0.9
VC1	**Cotopaxi 1**	2.44	95	⇓P	Pn	06 49 13.2	+2.3
BTAM	**Cotopaxi Volca**	2.45	96	⇓P	Pn	06 49 13.2	+2.2
TAMB	**Tambo**	2.48	96	⇓P	Pn	06 49 13.5	+2.0
COV1	**Cotopaxi Volc**	2.50	95	⇓S	Sn	06 49 39.4	-1.7
COV1	**Cotopaxi Volc**	2.50	95	⇓P	Pn	06 49 12.9	+1.1
PISA	**Pisayambo**	2.53	104	⇓P	Pn	06 49 13.6	+1.4
BIL2	**Estacion Bilba**	2.54	114	P	Pn	06 49 15.5	+3.1
JUI6	**Juive**	2.56	113	P	Pn	06 49 14.4	+1.8
RIOE	**Riobamba**	2.57	121	⇓S	Sn	06 49 41.5	-1.1
RIOE	**Riobamba**	2.57	121	⇓P	Pn	06 49 13.1	+0.4
BMAS	**Trigal station**	2.58	114	⇓S	Sn	06 49 44.8	+1.6
BMAS	**Trigal station**	2.58	114	⇓P	Pn	06 49 14.2	+1.2
RETU	**Refugio**	2.59	113	P	Pn	06 49 14.7	+1.6
RUN5	**Runtun**	2.60	112	⇓S	Sn	06 49 44.0	+0.5
RUN5	**Runtun**	2.60	112	⇓P	Pn	06 49 14.9	+1.7
COTA	**Cotacachi**	2.61	73	⇓P	Pn	06 49 16.4	+3.2
ARRY	**Arrayan**	2.61	114	⇓P	Pn	06 49 14.3	+1.1
BRUN	**Tungurahua Vol**	2.62	112	⇓S	Sn	06 49 44.5	+0.6
BRUN	**Tungurahua Vol**	2.62	112	⇓P	Pn	06 49 14.9	+1.6
BPAT	**Tungurahua Vol**	2.63	114	⇓S	Sn	06 49 44.1	-0.1
BPAT	**Tungurahua Vol**	2.63	114	⇓P	Pn	06 49 14.9	+1.4
PATA	**Patacocha**	2.63	114	⇓P	Pn	06 49 14.9	+1.4
ULBA	**Ulba**	2.63	113	P	Pn	06 49 15.0	+1.5
ANTI	**Antisana**	2.67	91	⇓P	Pn	06 49 16.6	+2.5
CAYA	**Cayambe**	2.88	80	⇑P	Pn	06 49 20.9	+3.8
CHAR	**Charly**	3.18	84	P	Pn	06 49 26.6	+5.5
MACE	**Macas**	3.20	125	⇑S	Sn	06 49 59.9	+1.6
MACE	**Macas**	3.20	125	⇑P	Pn	06 49 24.1	+2.7
CONE	**Cono NE Rev Vo**	3.21	84	P	Pn	06 49 27.9	+6.3
LAV3	**Lava3-Reventad**	3.22	84	P	Pn	06 49 27.3	+5.7

*DDA **27** 06:53:55.2,36.80N×34.73E,h8km±6km,Md3.1*

*CSEM **27** 06:53:56.9±0.2,36.91N×34.80E,h20km,MD3.1, Error ellipse: s-maj=4.1km s-min=3.3km az=172.0*
*ISK **27** 06:53:56.4,36.91N×34.79E,h24km,MD3.1*
*ISCJB **27** 06:53:57.0±0.5,36.92N±0.04×34.76E±0.04,h28km±4km, Error ellipse: s-maj=7.2km s-min=5.3km az=160.0*
ISC 27 06:53:57.3±0.5,36.92N±0.04×34.77E±0.04,h25km±5km, n33,σ0=78/49,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	**Mersin**	0.21	255	*e*PG	Pb	06 54 02.8	-0.3
MERS				*e*SG	Sb	06 54 07.0	+0.1
MERS	**Mersin**	0.21	255	*e*Pg	Pb	06 54 02.8	-0.2
MERS				*e*Sg	Sb	06 54 07.0	+0.1
GULE	**Gulek**	0.36	1	*i* P	Pb	06 54 05.1	-0.2
GULE				*i* S	Sb	06 54 11.1	+0.3
GULE	**Gulek**	0.36	1	*i* P	Pb	06 54 05.1	-0.2
GULE				*i* S	Sb	06 54 11.1	+0.4
KARA	**Karaisali**	0.41	34	*e*PG	Pb	06 54 05.2	-0.9
KARA				*e*SG	Sb	06 54 12.4	+0.5
KARA	**Karaisali**	0.41	34	*e*Pg	Pb	06 54 05.2	-0.8
KARA				*e*Sg	Sb	06 54 12.4	+0.4
KRTS	**Karatas**	0.60	125	*e*PG	Pb	06 54 09.1	0.0
KRTS	**Karatas**	0.60	125	*e*Pg	Pb	06 54 09.1	0.0
YURE	**YUREGIR**	0.70	97	*i* P	Pb	06 54 10.6	-0.3
YURE				*i* S	Sb	06 54 22.3	+2.2
YURE	**YUREGIR**	0.70	97	*i* P	Pb	06 54 10.6	-0.2
YURE				*i* S	Sb	06 54 22.3	+2.2
CEYT	**Ceyhan**	0.79	83	*e*PG	Pb	06 54 11.3	-1.0
CEYT	**Ceyhan**	0.79	83	*e*Pg	Pb	06 54 11.3	-1.1
KOZT	**Kozan**	1.01	56	*e*PG	Pn	06 54 15.3	-0.6
IKL	**Isikli**	1.11	232	*e*PN	Pn	06 54 16.3	-0.9
IKL	**Isikli**	1.11	232	*e*Pn	Pn	06 54 16.3	-0.9
COBT	**Iskenderun**	1.26	108	*i* P	Pn	06 54 19.2	-0.1
COBT				*i* S	Sn	06 54 35.7	+0.3
COBT	**Iskenderun**	1.26	108	*i* P	Pn	06 54 19.2	-0.1
COBT				*i* S	Sn	06 54 35.7	+0.3
HTY	**Hatay**	1.36	125	*e*PN	Pn	06 54 20.9	+0.2
HTY	**Hatay**	1.36	125	*e*Pn	Pn	06 54 20.9	+0.2
YAYL	**Yayladag**	1.39	129	*i* P	Pn	06 54 20.4	-0.8
YAYL				*i* S	Sn	06 54 39.9	+1.2
YAYL	**Yayladag**	1.39	129	*i* P	Pn	06 54 20.4	-0.8
YAYL				*i* S	Sn	06 54 39.9	+1.1
ANDN	**Andirin**	1.42	62	*i* P	Pn	06 54 21.6	+0.1
ANDN				*i* S	Sn	06 54 40.1	+0.7
ANDN	**Andirin**	1.42	62	*i* P	Pn	06 54 21.6	+0.1
ANDN				*i* S	Sn	06 54 40.1	+0.7
HDMB	**Hadim**	1.83	272	*e*PN	Pn	06 54 27.9	+0.8
HDMB	**Hadim**	1.83	272	*e*Pn	Pn	06 54 27.9	+0.7
KUZU	**Kuzuini**	1.85	94	*i* P	Pn	06 54 26.6	-0.9
KUZU				*i* S	Sn	06 54 49.3	-0.8
KUZU	**Kuzuini**	1.85	94	*i* P	Pn	06 54 26.6	-0.9
KUZU				*i* S	Sn	06 54 49.3	-0.8
GAZI	**Gazipasa**	2.09	252	*i* P	Pn	06 54 32.4	+1.7
GAZI	**Gazipasa**	2.09	252	*i* P	Pn	06 54 32.4	+1.6
HWQ	**Hawqa**	2.81	160	*e*Pn	Pn	06 54 39.9	-0.7
HWQ	**Hawqa**	2.81	160	*e*Pn	Pn	06 54 39.9	-0.7
FKH	**Fakeheh**	2.99	153	*e*Pn	Pn	06 54 43.1	0.0
FKH	**Fakeheh**	2.99	153	*e*Pn	Pn	06 54 43.2	+0.1

*ISK **27** 07:32:22.5,36.97N×29.20E,h4km,MD3.4*
*IDC **27** 07:32:23.3±1.4,36.93N×29.22E,h0km,mb3.8/1, mb1 3.8/6,mb1mx3.5/27,mbtmp3.7/6,ML3.6/5,MS3.1/1, Ms1 3.1/1,ms1mx2.7/44,Error ellipse: s-maj=24.9km s-min=20.1km az=142.0*
*CSEM **27** 07:32:23.6±0.1,36.99N×29.22E,h2km,MD3.4,Error ellipse: s-maj=3.4km s-min=2.9km az=163.0*
*ISCJB **27** 07:32:23.4±0.5,36.97N±0.02×29.22E±0.02,h4km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=139.7*
*NEIC **27** 07:32:23.0,37.02N×29.21E,h5km,MD3.4(ISK),After ISK.*
*DDA **27** 07:32:25.0,37.02N×29.30E,h12km,Md3.3*
ISC 27 07:32:24.0±0.4,36.98N±0.02×29.21E±0.02,h4km±3km, n104,σ0=16/139,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	0.29	52	*e*PG	Pg	07 32 28.9	-0.8
GLHS				*e*SG	Sg	07 32 34.4	+0.8
GLHS	**Glhisar (BURDU**	0.29	52	*e*Pg	Pg	07 32 28.9	-0.8
GLHS				*e*Sg	Sg	07 32 34.4	+0.9
FETY	**Fethiye**	0.35	196	*e*PG	Pg	07 32 29.8	-1.1
FETY				*e*SG	Sg	07 32 35.3	-0.1
FETY	**Fethiye**	0.35	196	*e*Pg	Pg	07 32 29.8	-1.0
FETY				*e*Sg	Sg	07 32 35.3	-0.2
GOLH	**Golhisar**	0.38	47	*i* P	Pg	07 32 30.9	-0.6
GOLH				*i* S	Sg	07 32 37.9	+1.5
GOLH	**Golhisar**	0.38	47	*i* P	Pg	07 32 30.9	-0.5
GOLH				*i* S	Sg	07 32 37.9	+1.5
TURN	**Turunc**	0.50	258	*i* P	Pg	07 32 38.4	+4.8
TURN				*i* S	Sg	07 32 50.9	+11
ELL	**Elmali**	0.61	112	*e*PG	Pg	07 32 34.6	-1.1
ELL	**Elmali**	0.61	112	*e*Pg	Pg	07 32 34.6	-1.1
DNZL	**Cakiroluk**	0.72	350	*i* P	Pg	07 32 36.8	-1.1
DNZL				*i* S	Sg	07 32 48.8	+1.5
DNZL	**Cakiroluk**	0.72	350	*i* P	Pg	07 32 36.8	-1.1
DNZL				*i* S	Sg	07 32 48.8	+1.5
YER	**Yerkesik**	0.76	282	*e*PG	Pg	07 32 38.0	-0.5
YER	**Yerkesik**	0.76	282	*e*Pg	Pg	07 32 38.1	-0.4
DENT	**Denizli**	0.79	350	*e*PG	Pg	07 32 37.9	-1.3
DENT	**Denizli**	0.79	350	*e*Pg	Pg	07 32 37.9	-1.3
AKAS	**Kas**	0.81	157	*i* P	Pg	07 32 39.3	-0.2
AKAS				*i* S	Sg	07 32 52.3	+2.4
AKAS	**Kas**	0.81	157	*i* P	Pg	07 32 39.3	-0.2
AKAS				*i* S	Sg	07 32 52.3	+2.3
KSL	**Kastellorizon**	0.88	160	*e*P	Pg	07 32 40.9	0.0
KORT	**Korkueli**	0.92	88	*i* P	Pg	07 32 39.8	-1.8
KORT				*i* S	Sg	07 32 56.2	+2.8
KORT	**Korkueli**	0.92	88	*i* P	Pg	07 32 39.8	-1.8
KORT				*i* S	Sg	07 32 56.2	+2.8
ARG	**Arkhangelos**	1.16	229	*e*P	Pg	07 32 44.9	-1.3
ARG	**Arkhangelos**	1.16	229	P	Pg	07 32 45.9	-0.3
ARG	**Arkhangelos**	1.16	229	P	Pg	07 32 45.9	-0.3
ANTB	**Antalya**	1.16	93	*e*PN	Pn	07 32 45.8	-1.3
ANTB	**Antalya**	1.16	93	*e*Pn	Pn	07 32 45.8	-1.3
MLSB	**Milas**	1.19	286	*e*PN	Pn	07 32 46.2	-1.2
MLSB	**Milas**	1.19	286	*e*Pn	Pn	07 32 46.3	-1.1
BCK	**Bucak**	1.20	66	*e*PN	Pn	07 32 46.1	-1.6
BCK	**Bucak**	1.20	66	*e*Pn	Pn	07 32 46.1	-1.6
AYDN	**Tasoluk**	1.26	303	*i* P	Pg	07 32 47.7	-0.5
AYDN				*i* S	Sg	07 33 07.4	+2.9
AYDN	**Tasoluk**	1.26	303	*i* P	Pg	07 32 47.7	-0.5
AYDN				*i* S	Sg	07 33 07.4	+2.9
DAT	**Datca**	1.33	260	*e*PN	Pn	07 32 48.6	-0.8
DAT	**Datca**	1.33	260	*e*Pn	Pn	07 32 48.6	-0.8
ISP	**Isparta**	1.35	50	*e*PN	Pn	07 32 48.6	-1.1
ISP	**Isparta**	1.35	50	P	Pn	07 32 49.5	-0.2
ISP	**Isparta**	1.35	50	*e*Pn	Pn	07 32 48.6	-1.1
ISP	**Isparta**	1.35	50	P	Pn	07 32 49.5	-0.2
KHL	**Karahalli**	1.37	10	*e*PN	Pn	07 32 48.6	-1.3
KHL	**Karahalli**	1.37	10	*e*Pn	Pn	07 32 48.6	-1.3
KHAL	**Karahalli**	1.41	9	*i* P	Pn	07 32 49.1	-1.4
KHAL				*i* S	Sg	07 33 10.6	+1.3
KHAL	**Karahalli**	1.41	9	*i* P	Pn	07 32 49.1	-1.4
KHAL				*i* S	Sg	07 33 10.6	+1.3
BDRM	**Kayabasi**	1.41	274	*i* P	Pn	07 32 50.5	0.0
BDRM				*i* S	Sg	07 33 10.4	+0.9
BDRM	**Kayabasi**	1.41	274	*i* P	Pn	07 32 50.5	-0.1
BDRM				*i* S	Sg	07 33 10.4	+0.9
SUTC	**Sutluce-Ispart**	1.52	70	*e*PN	Pn	07 32 51.6	-0.3
SUTC	**Sutluce-Ispart**	1.52	70	*e*Pn	Pn	07 32 51.6	-0.3
KULA	**Kula-Manisa**	1.59	344	*e*PN	Pn	07 32 52.2	-0.8
KULA	**Kula-Manisa**	1.59	344	*e*Pn	Pn	07 32 52.2	-0.8
MANT	**Manisa**	1.60	341	*i* P	Pn	07 32 52.6	-0.4
MANT				*i* S	Sn	07 33 11.4	-2.8
MANT	**Manisa**	1.60	341	*i* P	Pn	07 32 52.6	-0.5
MANT				*i* S	Sn	07 33 11.4	-2.8
GCAM	**G?zelcaml?**	1.73	295	*i* P	Pn	07 32 55.0	+0.1
GCAM				*i* S	Sn	07 33 18.7	+1.3
GCAM	**G?zelcaml?**	1.73	295	*i* P	Pn	07 32 55.0	+0.1
GCAM				*i* S	Sn	07 33 18.7	+1.2
SHUT	**Suhut-Afyon**	1.90	34	*e*PN	Pn	07 32 56.3	-0.9
SHUT	**Suhut-Afyon**	1.90	34	*e*Pn	Pn	07 32 56.3	-0.9
SMG	**Samos**	2.03	292	*e*P	Pn	07 32 58.6	-0.4
SMG	**Samos**	2.03	292	P	Pn	07 32 59.1	+0.1
SMG	**Samos**	2.03	292	P	Pn	07 32 59.1	+0.1
IZM	**Izmir**	2.10	313	*e*PN	Pn	07 32 59.7	-0.2
DEMI	**Demirci**	2.10	349	*i* P	Pn	07 32 59.6	-0.3
DEMI	**Demirci**	2.10	349	*i* P	Pn	07 32 59.6	-0.4
GDZ	**Gediz**	2.12	6	*i* P	Pn	07 33 00.8	+0.5
GDZ				*i* S	Sn	07 33 27.0	0.0
GDZ	**Gediz**	2.12	6	*i* P	Pn	07 33 00.8	+0.5
GDZ				*i* S	Sn	07 33 27.0	-0.1
KARP	**Karpathos**	2.18	230	*e*P	Pn	07 33 02.0	+0.9
KARP	**Karpathos**	2.18	230	P	Pn	07 33 03.4	+2.3
KARP	**Karpathos**	2.18	230	P	Pn	07 33 03.4	+2.3
ALT	**Altintas**	2.19	19	*e*PN	Pn	07 32 59.9	-1.4
ALT	**Altintas**	2.19	19	*e*Pn	Pn	07 32 59.9	-1.4
AKHS	**Akhisar**	2.20	330	*i* P	Pn	07 33 00.8	-0.5
AKHS				*i* S	Sn	07 33 29.9	+1.0
AKHS	**Akhisar**	2.20	330	*i* P	Pn	07 33 00.8	-0.5
AKHS				*i* S	Sn	07 33 29.9	+1.0
AKS	**Akhisar**	2.20	330	*e*PN	Pn	07 33 00.6	-0.7
AKS	**Akhisar**	2.20	330	*e*Pn	Pn	07 33 00.6	-0.7
BOLV	**Bolvadin**	2.22	38	*i* P	Pn	07 33 02.3	+0.7
BOLV				*i* S	Sn	07 33 31.1	+1.6
BOLV	**Bolvadin**	2.22	38	*i* P	Pn	07 33 02.3	+0.7
BOLV				*i* S	Sn	07 33 31.1	+1.6
BLCB	**Balcova**	2.22	310	*e*PN	Pn	07 33 01.0	-0.6
BLCB	**Balcova**	2.22	310	*e*Pn	Pn	07 33 01.0	-0.6
HDMB	**Hadim**	2.62	89	*e*PN	Pn	07 33 07.6	+0.4
HDMB	**Hadim**	2.62	89	*e*Pn	Pn	07 33 07.6	+0.4
KONT	**Konya--Tatoy**	2.69	68	*e*PN	Pn	07 33 08.2	+0.1
KONT	**Konya--Tatoy**	2.69	68	*e*Pn	Pn	07 33 08.2	+0.1
LADK	**Ladik-KONYA**	2.79	63	*e*PN	Pn	07 33 09.7	+0.3
LADK	**Ladik-KONYA**	2.79	63	*e*

GTA pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
CMAR Chiang Mai Arr 40.64 264 P **P** **07 57 27.7 -1.0**
comp=Z,0.8nm,0.4s,mb3.7,baz=45,slow=8.8,SNR=4.8
CMAR Chiang Mai Arr 40.64 264 P **P** **07 57 27.7 -1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 47.40 318 P **P** **07 58 22.3 -0.1**
comp=Z,1.2nm,0.3s,mb4.2,baz=89,slow=6.5,SNR=9.6
ZALV Zalesovo Beam 47.40 318 P **P** **07 58 22.3 -0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
NVS Novosibirsk 48.42 319 *e*P **P** **07 58 30.2 -0.1**
NVS pmax pmax
comp=Z,18nm,2.2s,mb4.7
NVS pmax pmax
comp=E,6.0nm,1.1s
MK31 Makanchi Array 48.68 308 *e*P **P** **07 58 32.0 -0.4**
MKAR Makanchi Array 48.68 308 P **P** **07 58 32.7 +0.2**
comp=E,2.4nm,0.7s,mb4.3,baz=88,slow=9.4,SNR=29
MKAR Makanchi Array 48.68 308 P **P** **07 58 32.7 +0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 48.68 308 P **P** **07 58 32.7 +0.2**
WRAB Tennant Creek 49.93 189 *e*P **P** **07 58 40.6 -1.5**
WRAB pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
WRAB Tennant Creek 49.93 189 *e*P **P** **07 58 40.6 -1.5**
comp=Z,4.8nm,0.7s,mb4.6
KURK Kurchatov 51.03 313 *e*P **P** **07 58 50.1 -0.1**
KURK pmax pmax
comp=Z,19nm,1.1s,mb4.9
KURK Kurchatov 51.03 313 *e*P **P** **07 58 50.1 -0.1**
comp=Z,19nm,1.1s,mb4.9
ASAR Alice Springs 53.66 189 P **P** **07 59 08.8 -1.1**
comp=Z,1.4nm,0.5s,mb4.2,baz=2.1,slow=5.5,SNR=19
ASAR Alice Springs 53.66 189 P **P** **07 59 08.9 -1.0**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
TKM2 Tokmak 2 53.78 303 *e*P **P** **07 59 10.1 -0.6**
TKM2 pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
TKM2 Tokmak 2 53.78 303 *e*P **P** **07 59 10.1 -0.6**
comp=Z,1.4nm,0.5s,mb4.2
UCH Uchtor 54.68 303 *e*P **P** **07 59 17.5 +0.2**
comp=Z,2.1nm,0.8s,mb4.2
BVAR Borovoye Array 55.99 316 P **P** **07 59 27.4 +0.9**
comp=Z,3.1nm,0.5s,mb4.6,baz=97,slow=7.6,SNR=14
BVAR Borovoye Array 55.99 316 P **P** **07 59 27.4 +0.8**
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 56.05 316 *e*P **P** **07 59 28.2 +1.2**
BRVK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BRVK Borovoye 56.05 316 *e*P **P** **07 59 28.2 +1.2**
comp=Z,6.0nm,0.9s,mb4.6
INK Inuvik 60.72 25 P **P** **07 59 59.4 +0.1**
comp=Z,1.0nm,0.5s,mb4.2,baz=298,slow=2.0,SNR=7.5
INK Inuvik 60.72 25 P **P** **07 59 59.4 +0.1**
INK pmax pmax
comp=Z,1.0nm,0.5s
STKA Stephens Creek 61.28 180 P **P** **08 00 02.5 -0.9**
comp=Z,1.6nm,0.8s,mb4.2,baz=38,slow=9.4,SNR=4.1
ARU Arti 62.24 321 P **P** **08 00 09.6 -0.2**
ABKAR Akbulak array 63.14 313 *e*P **P** **08 00 16.5 +0.6**
comp=Z,3.5nm,0.4s,mb4.8
YKA Yellowknife Ar 69.92 29 P **P** **08 00 58.7 -0.3**
comp=Z,0.3nm,0.6s,mb3.4,baz=294,slow=6.3,SNR=5.0
YKA Yellowknife Ar 69.92 29 P **P** **08 00 58.7 -0.3**
ARCES ARCESS Array B 70.99 341 P **P** **08 01 07.0 +1.6**
comp=Z,2.4nm,0.8s,mb4.2,baz=61,slow=9.9,SNR=4.7
ARCES ARCESS Array B 70.99 341 P **P** **08 01 07.0 +1.6**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 70.99 341 P **P** **08 01 07.0 +1.6**
MOS Moscow 73.43 325 *e*P **P** **08 01 12.8 -7.4**
FINES FINESS Array B 75.50 333 P **P** **08 01 32.4 +0.2**
comp=Z,2.3nm,0.6s,mb4.3,baz=81,slow=3.8,SNR=8.4
FINES FINESS Array B 75.50 333 P **P** **08 01 32.4 +0.2**
FINES pmax pmax
comp=Z,2.0nm,0.6s
ZEI Tsey 75.88 311 *e*P **P** **08 01 35.0 +0.3**
ZEI pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
NVAR Mina Array Bea 79.04 52 P **P** **08 01 52.4 0.0**
comp=Z,0.7nm,0.7s,mb3.7,baz=286,slow=5.8,SNR=5.4
NVAR Mina Array Bea 79.04 52 P **P** **08 01 52.4 0.0**
MIB Mutribah 79.46 298 *e*P **P** **08 01 55.0 +0.1**
MIB AMb AMB 08 01 56.1
comp=Z,44nm,0.8s,mb5.5
RDF Al-Radifah 79.71 297 *e*P **P** **08 01 56.9 +0.6**
RDF AMb AMB 08 01 58.0
comp=Z,17nm,1.3s,mb4.8
NAY Al-Naaiem 79.79 298 *e*P **P** **08 01 56.7 0.0**
NAY AMb AMB 08 01 58.0
comp=Z,23nm,1.0s,mb5.1
AKASG Malin Array Be 80.39 324 P **P** **08 01 58.0 -1.5**
comp=Z,0.9nm,0.4s,mb4.0,baz=50,slow=5.4,SNR=5.3
AKASG Malin Array Be 80.39 324 P **P** **08 01 58.0 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 81.10 338 P **P** **08 02 03.1 0.0**
comp=Z,2.4nm,0.7s,mb4.2,baz=42,slow=4.8
NOA NORSAR Array B 81.10 338 P **P** **08 02 03.4 +0.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=42,slow=5.2,SNR=9.3
NOA NORSAR Array B 81.10 338 P **P** **08 02 03.4 +0.3**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 81.10 338 P **P** **08 02 03.4 +0.3**
PDAR Pinedale Array 82.47 45 P **P** **08 02 11.4 +0.6**
comp=Z,0.3nm,0.8s,mb3.3,baz=302,slow=6.8,SNR=3.1
BR131 Keskin Array S 84.08 313 *e*P **P** **08 02 19.8 +0.8**
comp=Z,5.9nm,0.8s,mb4.8
BRTR Keskin Array B 84.08 313 P **P** **08 02 20.1 +1.0**
comp=Z,6.3nm,0.9s,mb4.8,baz=112,slow=4.1,SNR=17
BRTR Keskin Array B 84.08 313 P **P** **08 02 20.1 +1.0**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
PV10 Paradox Valley 85.26 48 *e*P **P** **08 02 26.1 +1.1**
comp=Z,86nm,0.8s
TXAR Lajitas Array 94.17 53 P **P** **08 03 08.6 +1.3**
comp=Z,0.6nm,0.8s,mb4.1,baz=300,slow=2.6,SNR=9.4
TXAR Lajitas Array 94.17 53 P **P** **08 03 08.6 +1.3**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TORD Torodi Ar. Bea 122.69 312 PKP PKPdf 08 08 44.2 -0.4
comp=Z,0.4nm,0.5s,baz=48,slow=1.5,SNR=9.4
LPAZ La Paz 149.34 71 PKPbc PKPbc 08 09 39.2 +1.6
comp=Z,1.2nm,0.8s,baz=310,slow=1.1,SNR=5.6
LPAZ PKPab PKPab 08 09 44.0 +1.7
comp=Z,1.3nm,0.8s,baz=218,slow=6.5,SNR=4.5
LPAZ La Paz 149.34 71 *e*PKPdf PKPdf 08 09 33.1 -0.1
LPAZ PKPbc PKPbc 08 09 39.2 +1.6
LPAZ PKPab PKPab 08 09 44.0 +1.7

ISCJB ***27*** *08:03:20.7±0.1,32°.70N±0°.02×105°.60E±0°.02,h10km, mb5.1/173,MS4.8/51,Error ellipse: s-maj=2.6km s-min=2.4km az=159.7*
IDC ***27*** *08:03:20.8±0.4,32°.70N×105°.65E,h0km,mb4.8/32, mb1 4.9/35,mb1mx4.8/40,mbtmp4.8/35,ML4.4/3,MS4.7/21, Ms1 4.7/21,ms1mx4.4/47,Error ellipse: s-maj=13.6km s-min=9.6km az=50.0*
BJI ***27*** *08:03:21.6,32°.76N×105°.65E,h15km,mB5.1/15,mb5.2/33, ML5.6/19,Ms5.3/59,Ms7 4.9/44*
GCMT ***27*** *08:03:22.7±0.2,32°.71N×105°.65E,h26km,MW5.2/86, Moment Tensor Solution. s44,c58; s86,c141; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.23±.19; Mθθ5.63±.15; Mφφ-4.40±.16; Mrθ-2.29±.31; Mφθ-4.11±.14; Mφr-0.05±.34; Best double couple: M=6.82000×10^16 NP1:φs335.00000°,δ73.00000°,λ2.00000°. NP2: φs245.00000°,δ88.00000°,λ163.00000°. Principal axes: T 7.6190, Plg14.0000°, Azm199.0000°; N -1.5990, Plg73.0000°, Azm58.0000°; P -6.0200, Plg10.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***27*** *08:03:22.7±0.1,32°.70N×105°.53E,h10km,mb5.2/119 Error ellipse: s-maj=3.8km s-min=3.0km az=204.0*
NEIC Felt at Chongqing.
MOS ***27*** *08:03:23.4±0.8,32°.70N×105°.65E,h29km,mb5.3/90, MS4.8/44,Error ellipse: s-maj=6.9km s-min=3.8km az=119.3*

TEH ***27*** *08:03:23.0,32°.73N×105°.55E,h10km*
SZGRF ***27*** *08:03:35.5,33°.70N×104°.17E,h33km,mb5.3,MS4.8, Gansu, China*
ISC 27 08:03:22.7±0.1,32°.70N±0°.02×105°.60E±0°.02,h10km, (h22km±1.5km:pP-P),n545,s0°96/567,mb5.1/173, MS4.8/51,16C-25D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.38**	**222**	Pn	**Pn**	**08 04 02.0**	**+0.3**
CD2				Pg	**Pg**	**08 04 07.0**	**-1.3**
CD2				Sg	**Sg**	**08 04 38.5**	**-0.6**
CD2				smax			
comp=N,106μm,0.8s							
XAN	**Xi'an**	**3.08**	**63**	Pn	**Pn**	**08 04 12.3**	**+0.9**
XAN				Pg	**Pg**	**08 04 18.0**	**-3.7**
XAN				Sn	**Sn**	**08 04 50.5**	**+2.2**
XAN				Sg	**Sg**	**08 04 56.0**	**-5.7**
XAN				smax			
comp=N,30μm,0.8s							
XAN				smax			
comp=E,25μm,0.9s							
XAN				LR	LR		
comp=N,67μm,11.3s							
XAN				LR	LR		
comp=E,12μm,9.2s							
XAN				LR	LR		
comp=Z,7μm,10.8s							
LZH	**Lanzhou**	**3.67**	**337**	*e*Pn	**Pn**	**08 04 21.5**	**+2.0**
LZH				Sn	**Sn**	**08 05 08.5**	**+5.6**
LZH				Sg	**Sg**	**08 05 17.5**	**-3.2**
LZH				LR	LR		
comp=E,39μm,4.3s							
LZH				LR	LR		
comp=Z,48μm,6.0s							
GYA	**Guiyang**	**6.29**	**171**	Pn	**Pn**	**08 04 56.5**	**+1.0**
GYA				smax			
comp=N,6μm,0.9s							
GYA				smax			
comp=E,9μm,0.9s							
GYA				LR	LR		
comp=N,22μm,4.3s							
GYA				LR	LR		
comp=E,23μm,4.2s							
GYA				LR	LR		
comp=Z,23μm,4.4s							
TIY	**Taiyuan**	**7.50**	**46**	*e*Pn	**Pn**	**08 05 11.3**	**-0.8**
TIY				Sn	**Sn**	**08 06 31.5**	**-5.6**
TIY				LR	LR		
comp=N,6μm,3.9s							
TIY				LR	LR		
comp=E,4μm,1.9s							
TIY				LR	LR		
comp=Z,4μm,4.2s							
WHN	**Wuhan**	**7.76**	**104**	Pn	**Pn**	**08 05 14.8**	**-0.9**
WHN				Sn	**Sn**	**08 06 40.8**	**-2.9**
WHN				LR	LR		
comp=N,48μm,4.9s							
WHN				LR	LR		
comp=E,48μm,6.1s							
WHN				LR	LR		
comp=Z,19μm,6.5s							
KMI	**Kunming**	**7.96**	**199**	P	**Pn**	**08 05 18.8**	**+0.4**
KMI				S	**Sn**	**08 06 49.0**	**+0.5**
KMI				smax			
comp=N,610nm,0.9s							
KMI				smax			
comp=E,830nm,0.9s							
KMI				LR	LR		
comp=N,6μm,8.0s							
KMI				LR	LR		
comp=E,9μm,9.1s							
KMI				LR	LR		
comp=Z,5μm,13.1s							
GTA	**Gaotai**	**8.17**	**327**	⇓P	**Pn**	**08 05 21.0**	**-0.2**
GTA				pP		08 05 24.3	
GTA				sP		08 05 27.0	
GTA				S	**Sn**	**08 06 53.8**	**+0.2**
GTA				pmax	pmax		
comp=Z,120nm,0.8s							
GTA				pmax	pmax		
comp=Z,140nm,3.9s							
GTA				LR	LR		
comp=N,26μm,13.5s							
GTA				LR	LR		
comp=E,24μm,9.6s							
GTA				LR	LR		
comp=Z,14μm,9.0s							
BTO	**Baotou**	**8.65**	**23**	*e*P	**Pn**	**08 05 26.0**	**-1.8**
BTO				LR	LR		
comp=N,3μm,9.0s							
HHC	**Hu-ho-hao-te**	**9.43**	**29**	⇑P	**Pn**	**08 05 38.3**	**-0.2**
HHC				pP		08 05 45.3	
HHC				sP		08 05 50.0	
HHC				S	**Sn**	**08 07 24.0**	**-0.6**
HHC				sS		08 07 34.3	
HHC				pmax	pmax		
comp=Z,77nm,1.0s							
HHC				pmax	pmax		
comp=Z,310nm,4.7s							
HHC				LR	LR		
comp=N,15μm,5.8s							
HHC				LR	LR		
comp=E,9μm,5.3s							
HHC				LR	LR		
comp=Z,8μm,6.1s							
TIA	**Tai'an**	**10.14**	**67**	*e*P	**Pn**	**08 05 48.8**	**+0.6**
TIA				LR	LR		
comp=N,4μm,9.0s							
TIA				LR	LR		
comp=E,4μm,9.0s							
NJ2	**Nanjing**	**11.23**	**90**	*e*P	**Pn**	**08 06 02.5**	**-0.7**
NJ2				pP		08 06 09.5	
NJ2				PP		08 06 13.0	
NJ2				sP		08 06 14.8	
NJ2				S	**Sn**	**08 08 06.8**	**-1.9**
NJ2				sS		08 08 17.8	
NJ2				pmax	pmax		
comp=Z,70nm,0.7s							
NJ2				pmax	pmax		
comp=Z,150nm,3.9s							
NJ2				LR	LR		
comp=N,11μm,8.2s							
NJ2				LR	LR		
comp=E,4μm,11.0s							
NJ2				LR	LR		
comp=Z,11μm,10.5s							
BJI	**Beijing**	**11.23**	**46**	P	**Pn**	**08 06 02.5**	**-0.7**
BJI				pmax	pmax		
comp=Z,43nm,0.7s							
BJI				pmax	pmax		
comp=Z,170nm,4.0s							
BJI				LR	LR		
comp=N,15μm,15.6s							
BJI				LR	LR		
comp=E,15μm,16.5s							
BJI				LR	LR		
comp=Z,2μm,16.4s							
GZH	**Guangzhou**	**11.77**	**143**	P	**Pn**	**08 06 05.0**	**-5.7**
GZH				S	**Sn**	**08 08 10.3**	**-12**
GZH				LR	LR		
comp=N,9μm,6.2s							
GZH				LR	LR		
comp=E,10μm,6.3s							
LSA	**Lhasa**	**12.73**	**260**	P	**Pn**	**08 06 25.3**	**+1.6**
LSA				LR	LR		
comp=N,6μm,22.0s							
LSA				LR	LR		
comp=E,2μm,19.6s							
LSA				LR	LR		
comp=Z,3μm,11.8s							
IMP	**Imphal**	**12.92**	**235**	*e*P	**Pn**	**08 06 25.0**	**-1.3**
IMP				*ex*	x	08 08 19.0	
SSE	**Sheshan**	**13.34**	**93**	P	**Pn**	**08 06 31.5**	**-0.6**
SSE				S	**Sn**	**08 09 08.0**	**+7.5**
SSE				pmax	pmax		
comp=Z,34nm,0.8s							
SSE				pmax	pmax		
comp=Z,63nm,4.1s							
SSE				LR	LR		
comp=N,8μm,11.5s							
SSE				LR	LR		
comp=E,3μm,11.7s							
SSE				LR	LR		
comp=Z,3μm,8.5s							
QZH	**Quanzhou**	**13.76**	**121**	P	**Pn**	**08 06 35.5**	**-2.3**
QZH				S	**Sn**	**08 09 11.0**	**+0.3**
QZH				LR	LR		
comp=Z,7μm,10.4s							
SHL	**Shillong**	**13.93**	**243**	⇓*i*P	**Pn**	**08 06 38.0**	**-2.2**
SHL				*ex*	x	08 10 51.0	
QIZ	**Qiongzhong**	**14.14**	**163**	P	**Pn**	**08 06 40.5**	**-2.5**
QIZ				S	**Sn**	**08 09 23.3**	**+3.2**
QIZ				pmax	pmax		
comp=Z,53nm,0.9s							
QIZ				LR	LR		
comp=N,6μm,8.1s							
QIZ				LR	LR		
comp=E,3μm,8.5s							
QIZ				LR	LR		
comp=Z,5μm,12.3s							
DL2	**Dalian**	**14.40**	**60**	P	**Pn**	**08 06 54.5**	**+8.1**
DL2				S	**Sn**	**08 09 39.5**	**+13**
DL2				pmax	pmax		
comp=Z,40nm,1.0s							
DL2				LR	LR		
comp=N,4μm,20.6s							
DL2				LR	LR		
comp=E,3μm,18.5s							
DL2				LR	LR		
comp=Z,3μm,11.7s							
TURI	**Tura**	**15.12**	**246**	*ex*	x	08 07 45.0	
TURI				*ex*	x	08 08 06.0	
SONM	**Songino Array**	**15.13**	**2**	Pn	**Pn**	**08 06 54.5**	**-1.8**
comp=Z,0.6nm,0.3s,baz=185,slow=13,SNR=38							
SONM				LR	LR	08 13 06.4	
comp=Z,2μm,18.8s,baz=185,slow=39							
SONM	**Songino Array**	**15.13**	**2**	P	**Pn**	**08 06 54.5**	**-1.8**
SONM				pmax	pmax		
comp=Z,1.0nm,0.3s							
SONM				MLR	MLR		
comp=Z,2μm,18.8s							
ULN	**Ulaanbaatar**	**15.19**	**4**	*e*P	**Pn**	**08 06 56.7**	**-0.4**
ULN				pmax	pmax		
comp=Z,78nm,0.9s							
ULN	**Ulaanbaatar**	**15.19**	**4**	*e*P	**Pn**	**08 06 56.7**	**-0.4**
comp=Z,78nm,0.9s							
ULN	**Ulaanbaatar**	**15.19**	**4**	Pn	**Pn**	**08 06 55.3**	**-1.8**
SNR=44							
ULN				Pn	**Pn**	**08 06 55.3**	**-1.8**
SNR=44							
CM31	**Chiang Mai Arr**	**15.40**	**204**	*e*P	**Pn**	**08 06 60.0**	**-0.1**
comp=Z,73nm,0.7s							
CMAR	**Chiang Mai Arr**	**15.40**	**204**	Pn	**Pn**	**08 07 00.1**	**+0.1**
comp=Z,1.0nm,0.3s,baz=14,slow=11,SNR=181							
CMAR	**Chiang Mai Arr**	**15.40**	**204**	P	**Pn**	**08 07 00.2**	**+0.2**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
TATO	**Taipei**	**15.90**	**115**	*e*P	**Pn**	**08 07 09.5**	**+3.0**
comp=Z,161nm,0.9s							
YHNB	**Yeheng**	**15.98**	**116**	*e*P	**Pn**	**08 07 12.4**	**+4.8**
comp=Z,204nm,0.9s							
SSLB	**Suanglung**	**16.17**	**119**	*e*P	**Pn**	**08 07 09.8**	**-0.2**
comp=Z,193nm,0.9s							
TPUB	**Ta-pu**	**16.23**	**121**	*e*P	**Pn**	**08 07 11.2**	**+0.4**
comp=Z,274nm,1.4s							
TAPN	**Taplejung**	**16.38**	**256**	*e*P	**Pn**	**08 07 11.2**	**-1.6**
comp=Z,850nm,1.2s							
NACB	**Ninganchiao**	**16.42**	**117**	*e*P	**Pn**	**08 07 14.7**	**+1.5**
comp=Z,140nm,0.9s							
KKTK	**Khon Kaen**	**16.49**	**189**	P	**Pn**	**08 07 14.2**	**+0.1**
comp=Z,741nm,0.5s							
YULB	**Yu-li**	**16.66**	**120**	*e*P	**Pn**	**08 07 17.6**	**+1.4**
comp=Z,77nm,0.8s							
TWG	**Pinlang**	**16.85**	**122**	*e*P	**Pn**	**08 07 19.6**	**+1.0**
comp=Z,62nm,0.8s							
SNY	**Shenyang**	**16.94**	**52**	⇓P	**Pn**	**08 07 20.5**	**+0.8**
SNY				S	**Sn**	**08 10 33.3**	**+5.4**
SNY				pmax	pmax		
comp=Z,30nm,1.3s							
SNY				pmax	pmax		
comp=Z,490nm,3.5s							
SNY				LR	LR		
comp=N,3μm,16.3s							
SNY				LR	LR		
comp=E,4μm,16.7s							
SNY				LR	LR		
comp=Z,2μm,15.2s							
UBT	**Ubonrachathani**	**17.39**	**182**	P	**Pn**	**08 07 29.0**	**+3.5**
RAMN	**Ramite**	**17.45**	**256**	*e*P	**Pn**	**08 07 23.7**	**-2.5**
comp=Z,404nm,0.8s							
NST	**Nakhon Sawan**	**17.67**	**198**	P	**Pn**	**08 07 29.0**	**+0.1**
comp=Z,58nm,0.9s							
GUN	**Gumba**	**17.68**	**259**	*e*P	**Pn**	**08 07 27.7**	**-1.4**
comp=Z,783nm,1.1s							
ZAK	**Zakamensk**	**17.75**	**355**	*e*P	**Pn**	**08 07 29.6**	**-0.1**
ZAK				pmax	pmax		
comp=Z,31nm,1.3s							
INCN	**Inchon**	**17.85**	**69**	*e*P	**Pn**	**08 07 34.0**	**+2.9**
comp=Z,51nm,0.9s							
WMQ	**Urumqi**	**17.88**	**314**	P	**Pn**	**08 07 31.0**	**-0.3**
WMQ				pP	pP	08 07 34.0	-0.8
WMQ				PP		08 07 45.0	
WMQ				S	**Sn**	**08 10 47.0**	**-3.6**
WMQ				sS	sS	08 10 52.8	-8.9
WMQ				SS		08 11 09.8	
WMQ				PcP	PcP	08 12 09.0	+1.4
WMQ				pmax	pmax		
comp=Z,100nm,1.0s							
WMQ				LR	LR		
comp=N,13μm,17.0s							
WMQ				LR	LR		
comp=E,7μm,10.0s							
WMQ				LR	LR		
comp=Z,3μm,17.5s							
PKI	**Pulchoki**	**18.19**	**259**	*e*P	**Pn**	**08 07 33.3**	**-2.1**
comp=Z,362nm,1.0s							
PKIN	**Phulchoki**	**18.20**	**259**	*e*P	**Pn**	**08 07 33.3**	**-2.2**
KKN	**Kakani**	**18.22**	**260**	*e*P	**Pn**	**08 07 33.8**	**-1.9**
comp=Z,261nm,0.8s							
KKN	**Kakani**	**18.22**	**260**	*e*P	**Pn**	**08 07 33.8**	**-1.9**
KKN				pmax	pmax		
comp=Z,261nm,0.8s							
CAL	**Calcutta**	**18.33**	**241**	*e*P	**Pn**	**08 07 27.9**	**-9.2**
CAL				*e*S	**Sn**	**08 10 54.8**	**-6.9**
DMN	**Daman**	**18.43**	**259**	*e*P	**Pn**	**08 07 36.0**	**-2.3**
comp=Z,253nm,0.8s							
KSRS	**Korea Array**	**18.86**	**69**	P	**Pn**	**08 07 43.5**	**0.0**
comp=Z,1.1nm,0.3s,baz=255,slow=10,SNR=67							
KSRS				LR	LR	08 15 28.6	
comp=Z,1μm,18.9s,baz=264,slow=39							
KSRS	**Korea Array**	**18.86**	**69**	P	**Pn**	**08 07 43.5**	**0.0**
KSRS				pmax	pmax		
comp=Z,1.0nm,0.3s							
KSRS				MLR	MLR		
comp=Z,1μm,18.9s							
TLY	**Talaya**	**19.02**	**356**	Pn	**Pn**	**08 07 47.5**	**+2.3**
comp=Z,180nm,1.2s,SNR=9.9							
TLY	**Talaya**	**19.02**	**356**	*e*P	**Pn**	**08 07 45.7**	**+0.5**
TLY				*e*S	**Sn**	**08 11 11.7**	**-6.4**
TLY				pmax	pmax		
comp=Z,63nm,1.4s							
TLY				MLR	MLR		
comp=Z,1μm,12.0s							
TLY	**Talaya**	**19.02**	**356**	*e*P	**Pn**	**08 07 45.6**	**+0.4**
comp=Z,59nm,1.3s							
TLY	**Talaya**	**19.02**	**356**	P	**Pn**	**08 07 47.8**	**+2.5**
SNR=30							
TLY				P		08 07 47.8	
SNR=30							
CN2	**Changchun**	**19.07**	**49**	*e*P	**Pn**	**08 07 46.3**	**+0.3**
CN2				*es*P	sP	08 07 53.0	+3.7
CN2				*e*S	**Sn**	**08 11 15.8**	**-3.8**
CN2				pmax	pmax		
comp=Z,80nm,1.0s							
CN2				pmax	pmax		
comp=Z,600nm,5.0s							
CN2				LR	LR		
comp=N,4μm,16.0s							
CN2				LR	LR		
comp=E,4μm,16.0s							
CN2				LR	LR		
comp=Z,3μm,16.0s							
MOY	**Mondy**	**19.25**	**351**	*e*P	**Pn**	**08 07 50.5**	**+2.5**
MOY				pmax	pmax		
comp=Z,80nm,3.1s							
IRK	**Irkutsk**	**19.55**	**358**	*e*P	**Pn**	**08 07 52.2**	**+0.6**
IRK				pmax	pmax		
comp=Z,172nm,2.1s							
CIT	**Chita**	**20.16**	**14**	*e*P	**P**	**08 07 56.8**	**-0.1**
CIT				*e*		08 08 18.7	
CIT				pmax	pmax		

comp=Z,117nm,2.4s
JOW Kunigami 20.52 101 LR LR 08 15 51.7
comp=Z,840nm,20.7s,MS4.1,baz=309,slow=37
PTH Pithoragarh 21.94 269 *ex* **P** **08 08 18.0 +1.6**
PTH *ex* x 08 10 25.0
MDJ Mudanjiang 22.10 51 P **P** **08 08 19.0 +1.0**
MDJ pP 08 08 22.0
MDJ sP sP 08 08 23.5 +1.3
MDJ S **S** **08 12 24.0 +2.4**
MDJ ScP ScP 08 15 51.0 -1.7
MDJ ScS ScS 08 19 35.8 -1.5
MDJ LR LR
comp=N,3μm,15.1s,MS4.9
MDJ LR LR
comp=E,2μm,16.0s,MS4.9
MDJ LR LR
comp=Z,2μm,14.1s,MS4.7
JOSI Joshimath 22.26 271 *e*P **P** **08 08 20.6 +0.8**
MK31 Makanchi Array 22.68 315 *e*P **P** **08 08 24.0 -0.1**
MKAR Makanchi Array 22.68 315 P **P** **08 08 24.0 -0.1**
comp=Z,72nm,1.0s,mb5.1,baz=113,slow=13,SNR=256
MKAR LR LR 08 16 54.8
comp=Z,3μm,19.3s,MS4.7,baz=110,slow=36
MKAR Makanchi Array 22.68 315 P **P** **08 08 24.0 -0.1**
MKAR pmax pmax
comp=Z,72nm,1.0s
MKAR MLR MLR
comp=Z,3μm,19.3s
VLA Vladivostok 23.12 56 P **P** **08 08 27.0 -1.8**
VLA MLR MLR
comp=Z,2μm,13.5s,MS4.7
KLP Kalpa 23.18 275 *e*P **P** **08 08 29.7 +0.2**
KLP AMb AMB 08 08 37.3
comp=Z,121nm,0.9s,mb5.3
DDI Dehra Dun 23.58 272 *e*P **P** **08 08 36.7 +3.0**
DDI *e*S **S** **08 12 53.7 +6.0**
SMLA Simla 24.16 274 *i* P **P** **08 08 37.5 -1.5**
SMLA AMb AMB 08 08 41.2
comp=Z,132nm,1.5s,mb5.2
SDNR Sundarnagar 24.26 275 *e*P **P** **08 08 41.1 +1.2**
JBP Jabalpur 24.49 254⇑ *e*P **P** **08 08 42.9 +0.7**
JBP *e*S **S** **08 13 03.7 +1.1**
AGRA Agra 24.54 264 *e*P **P** **08 08 42.3 -0.2**
BISR Bishrakh 24.55 268 *e*P **P** **08 08 41.5 -1.0**
KKR Kurukshetra 24.70 271 *e*P **P** **08 08 44.2 +0.2**
KKR AMb AMB 08 08 50.4
comp=Z,135nm,0.1s,mb6.3
BHK Bhakra 24.74 275 *ex* x 08 08 49.8
KSH Kashi 24.81 294⇓ *i*P **P** **08 08 48.8 +3.9**
KSH *e*pP 08 08 52.8
KSH *e*sP sP 08 08 56.5 +7.3
KSH *e*PP 08 09 25.8
KSH *e*PcP PcP 08 12 23.8 +2.7
KSH *e*S **S** **08 13 09.3 +1.9**
KSH *e*sS sS 08 13 15.8 +3.4
KSH *e*SS 08 14 07.8
KSH pmax pmax
comp=Z,33nm,0.9s,mb4.9
KSH LR LR
comp=N,2μm,13.2s,MS5.0
KSH LR LR
comp=E,2μm,12.9s,MS5.0
KSH LR LR
comp=Z,1μm,13.4s,MS4.7
AAA Alma-Ata 24.82 303 *e*P **P** **08 08 46.5 +1.6**
AAA *e*S **S** **08 13 12.4 +5.0**
AAA pmax pmax
comp=Z,800nm,3.5s
AAA smax
comp=E,1μm,13.5s
AAA MLR MLR
comp=Z,2μm,12.0s,MS4.9
AYAN Aya Nagar 24.84 268 *e*P **P** **08 08 45.0 -0.2**
ULHL Ulahol 25.07 301 P **P** **08 08 48.6 +1.4**
SNR=46
THN Thein Dam 25.15 278 *ex* **P** **08 08 45.4 -2.6**
KLR Kul'dur 25.55 42 *e*P **P** **08 08 48.3 -3.2**
KLR *e*S **S** **08 13 24.0 +5.0**
KLR pmax pmax
comp=E,300nm,1.6s
KLR pmax pmax
comp=Z,200nm,1.6s,mb5.4
KLR smax
comp=N,2μm,11.0s
KLR smax
comp=E,1μm,11.0s
KLR MLR MLR
comp=Z,3μm,12.0s,MS5.1
TKM2 Tokmak 2 25.68 302 P **P** **08 08 54.1 +1.3**
SNR=33
TKM2 Tokmak 2 25.68 302 *e*P **P** **08 08 53.8 +1.0**
TKM2 pmax pmax
comp=Z,43nm,0.8s,mb5.0
TKM2 Tokmak 2 25.68 302 *e*P **P** **08 08 53.8 +1.0**
comp=Z,43nm,0.8s,mb5.0
KZA Kyzart 25.75 300 P **P** **08 08 55.6 +2.1**
SNR=36
BOD Bodaibo 25.76 10 *e*P **P** **08 08 54.2 +0.9**
BOD pmax pmax
comp=Z,41nm,1.1s,mb4.9
ZAA0 Zalesovo Array 25.89 331 *e*P **P** **08 08 54.0 -0.4**
ZALV Zalesovo Beam 25.89 331 P **P** **08 08 54.3 -0.2**
comp=Z,9.1nm,0.8s,mb4.3,baz=132,slow=8.4,SNR=24
ZALV Zalesovo Beam 25.89 331 P **P** **08 08 54.3 -0.2**
ZALV pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
KHET Khetri 26.07 268 *e*P **P** **08 08 56.5 +0.1**
KBK Karagaybulak 26.09 301 P **P** **08 08 58.0 +1.5**
SNR=95
CHMS Chumysh 26.31 302 P **P** **08 08 59.3 +0.9**
SNR=16
UCH Uchtor 26.32 300 P **P** **08 09 00.3 +1.8**
SNR=136
UCH Uchtor 26.32 300 *e*P **P** **08 09 00.3 +1.8**
comp=Z,138nm,1.1s,mb5.4
FRU Bishkek 26.37 301 *e*P **P** **08 08 59.0 0.0**
FRU *e* 08 09 50.0
FRU pmax pmax
comp=Z,100nm,1.4s,mb5.2
AAK Ala-Archa 26.41 301 P **P** **08 09 00.3 +0.9**
comp=Z,337nm,1.0s,mb5.8,SNR=22
AAK Ala-Archa 26.41 301 P **P** **08 09 01.1 +1.7**
comp=Z,30nm,0.9s,mb4.8,baz=106,slow=6.2,SNR=20
AAK LR LR 08 20 17.8
comp=Z,2μm,20.4s,MS4.6,baz=84,slow=38
AAK Ala-Archa 26.41 301 P **P** **08 09 01.1 +1.7**
AAK pmax pmax
comp=Z,30nm,0.9s,mb4.8
AAK MLR MLR
comp=Z,2μm,20.4s,MS4.6
AAK Ala-Archa 26.41 301 *e*P **P** **08 09 00.5 +1.1**
comp=Z,61nm,1.0s,mb5.1
AAK Ala-Archa 26.41 301 P **P** **08 09 00.9 +1.5**
SNR=42
AAK P 08 09 00.9
SNR=42
BHPL Bhopal 26.54 256 *e*P **P** **08 08 58.5 -2.3**
USP Ospenovka 26.55 302 P **P** **08 09 01.4 +0.8**
SNR=142
KURK Kurchatov 26.78 320 P **P** **08 09 02.4 -0.2**
comp=Z,415nm,0.7s,mb6.1,SNR=50
KURK Kurchatov 26.78 320 P **P** **08 09 02.2 -0.4**
comp=Z,51nm,1.1s,mb5.0,baz=139,slow=8.3,SNR=84
KURK LR LR 08 19 48.4
comp=Z,1μm,18.2s,MS4.5,baz=130,slow=37
KURK Kurchatov 26.78 320 P **P** **08 09 02.2 -0.4**
KURK pmax pmax
comp=Z,51nm,1.1s,mb5.0
KURK MLR MLR
comp=Z,1μm,18.2s,MS4.5
KURK Kurchatov 26.78 320 *e*P **P** **08 09 02.6 0.0**
comp=Z,51nm,0.8s,mb5.1
KURK Kurchatov 26.78 320 P **P** **08 09 03.0 +0.4**
SNR=49
KURK P 08 09 03.0
SNR=49
EKS2 Erkin-Say 26.94 301 P **P** **08 09 05.0 +0.9**
SNR=19
EKS2 Erkin-Say 26.94 301 *e*P **P** **08 09 04.7 +0.6**
comp=Z,34nm,1.1s,mb4.8
MAJO Matsushiro 27.03 73 *e*P **P** **08 09 04.8 -0.2**
MAJO pmax pmax
comp=Z,29nm,1.1s,mb4.7
MAJO Matsushiro 27.03 73 *e*P **P** **08 09 04.8 -0.2**
comp=Z,29nm,1.1s,mb4.7
MAT Matsushiro 27.03 73 P **P** **08 09 03.5 -1.5**
MJAR Matsushiro Arr 27.03 73 P **P** **08 09 04.1 -0.9**
comp=Z,6.8nm,0.9s,mb4.2,baz=276,slow=11,SNR=14
MJAR Matsushiro Arr 27.03 73 P **P** **08 09 04.1 -0.9**
MJAR pmax pmax
comp=Z,7.0nm,0.9s
HABR Khabarovsk 27.13 46 P **P** **08 09 03.5 -2.3**
HABR *SP sP 08 09 10.5 +0.4
HABR PPP 08 09 55.7
HABR *e*S **S** **08 13 42.1 -1.9**
HABR *e*SS 08 14 50.9
HABR *e* 08 19 55.0
HABR MLR MLR
comp=Z,3μm,10.0s,MS5.1
NVS Novosibirsk 27.17 331⇑ *i*P **P** **08 09 05.8 -0.3**
NVS pmax pmax
comp=Z,36nm,1.3s,mb4.7
NVS pmax pmax
comp=N,17nm,1.1s
NVS pmax pmax
comp=E,37nm,1.2s
NRGR Nerungri 27.35 23 *e*P **P** **08 08 59.8 -7.9**
CLNS Chul'man 27.55 23 *e*P **P** **08 09 08.8 -0.7**
CLNS *e*PP pP 08 09 17.6 +5.1
CLNS *e* 08 09 55.5
CLNS *e* 08 12 23.0
CLNS *e*S **S** **08 13 50.7 +0.3**
CLNS pmax pmax
comp=Z,18nm,1.0s,mb4.7
CLNS pmax pmax
comp=E,13nm,1.2s
CLNS pmax pmax
comp=N,16nm,0.9s
CLNS pmax pmax
comp=N,16nm,0.8s
CLNS pmax pmax
comp=E,16nm,1.0s
CLNS pmax pmax
comp=Z,18nm,0.8s,mb4.8
CLNS smax
comp=N,280nm,15.5s
CLNS smax
comp=E,220nm,14.2s
CLNS MLR MLR
comp=N,1μm,11.0s,MS5.0
CLNS MLR MLR
comp=Z,2μm,12.0s,MS5.0
CLNS MLR MLR
comp=E,2μm,13.0s,MS5.0
AJM Ajmer 27.56 265 *e*P **P** **08 09 09.7 -0.2**
KKM Kota Kinabalu 28.31 157 *e*P **P** **08 09 16.6 0.0**
comp=E,28nm,0.9s,mb4.9
JHJ Hachijo jima 2 28.63 80 LR LR 08 20 36.4
comp=E,1μm,19.5s,MS4.5,baz=261,slow=36
HYB Hyderabad 28.73 245 *i* P **P** **08 09 20.0 -0.4**
LATR Latur 29.69 248 *e*P **P** **08 09 30.0 +1.1**
KBL Kabul 30.40 284 *e*P **P** **08 09 36.5 +1.5**
KBL pmax pmax
comp=Z,40nm,1.1s,mb5.1
KBL Kabul 30.40 284 *e*P **P** **08 09 36.5 +1.5**
comp=Z,40nm,1.1s,mb5.1
PSI Prapat 30.40 193 P **P** **08 09 35.9 +0.8**
comp=Z,64nm,0.8s,mb5.4,baz=351,slow=8.3,SNR=12
PSI Prapat 30.40 193 P **P** **08 09 35.9 +0.8**
PSI pmax pmax
comp=Z,64nm,0.8s,mb5.4
JASL Jaisalmer 30.56 268 *e*P **P** **08 09 36.7 +0.2**
JASL AMb AMB 08 09 40.0
comp=Z,25nm,0.2s,mb5.8
KSM Kuching 31.38 171 *e*P **P** **08 09 44.7 +0.9**
comp=Z,25nm,0.9s,mb5.0
YSS Yuzh-Sakhalins 31.56 52 *e*P pP 08 09 55.7 +7.5
YSS pmax pmax
comp=Z,107nm,2.5s,mb5.2
POO Poona 31.78 251 *e*P **P** **08 09 46.5 -0.8**
POO AMb AMB 08 09 55.6
comp=Z,38nm,0.9s,mb5.2
BVAR Borovoye Array 32.37 319 P **P** **08 09 52.4 +0.2**
comp=Z,6.7nm,0.7s,mb4.6,baz=112,slow=9.9,SNR=31
BVAR LR LR 08 23 02.4
comp=Z,1μm,18.3s,MS4.7,baz=110,slow=36
BVAR Borovoye Array 32.37 319 P **P** **08 09 52.4 +0.3**
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BVAR MLR MLR
comp=Z,1μm,18.3s
BRVK Borovoye 32.44 319 *e*P **P** **08 09 53.1 +0.3**
BRVK pmax pmax
comp=Z,29nm,1.1s,mb5.0
BRVK Borovoye 32.44 319 *e*P **P** **08 09 53.1 +0.3**
comp=Z,29nm,1.1s,mb5.0
BRVK Borovoye 32.44 319 P **P** **08 09 53.5 +0.7**
SNR=16
BRVK P 08 09 53.5
SNR=16
YAK Yakutsk 33.16 21 *e*P **P** **08 09 58.3 -0.7**
YAK *e*PP pP 08 10 07.0 +5.0
YAK *e* 08 11 09.5
YAK *e*S **S** **08 15 16.4 -1.8**
YAK *e*SS SS 08 17 14.5 -26
YAK *e*SSS 08 17 44.4
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=N,6.0nm,0.8s
YAK pmax pmax
comp=Z,46nm,0.9s,mb5.4
YAK pmax pmax
comp=Z,19nm,0.7s,mb5.1
YAK smax
comp=N,123nm,4.3s
YAK smax
comp=E,100nm,3.8s
YAK MLR MLR
comp=E,2μm,16.0s,MS5.0
YAK MLR MLR
comp=N,1μm,12.0s,MS5.0
YAK MLR MLR
comp=Z,2μm,11.0s,MS5.0
YAK Yakutsk 33.16 21 *e*P **P** **08 09 59.2 +0.2**
comp=Z,56nm,0.6s,mb5.7
PALK Pallekele 34.28 228 P **P** **08 10 09.8 +0.6**
comp=Z,32nm,0.9s,mb5.2,baz=48,slow=8.8,SNR=9.7
PALK Pallekele 34.28 228 P **P** **08 10 09.8 +0.6**
PALK pmax pmax
comp=Z,32nm,0.9s,mb5.2
PALK Pallekele 34.28 228 *e*P **P** **08 10 09.8 +0.6**
comp=Z,39nm,1.1s,mb5.2
IMYA Miami 37.40 289 *e*P **P** **08 10 35.7 -0.1**
ABKAR Akbulak array 37.60 310 *e*P **P** **08 10 37.6 +0.4**
comp=Z,28nm,0.8s,mb5.0
ISRO Mashad 37.91 289 *e*P **P** **08 10 41.4 +1.3**
IMOG Moghan 38.05 288 *e*P **P** **08 10 42.0 +0.7**
IDAH Dahanechah 38.24 283 *e*P **P** **08 10 43.4 +0.5**
IAKL Akhelmad 38.44 289 *e*Pn **P** **08 10 46.3 +1.7**
IKRD Kardeh 38.60 290 *e*P **P** **08 10 40.0 -6.0**
ABKT Ailbek 38.77 291 P **P** **08 10 48.6 +1.3**
comp=Z,221nm,1.0s,mb5.8,SNR=9.2
ISFR Sfrayin 38.97 290 *e*P **P** **08 10 50.0 +1.0**
SVE Sverdlovsk 39.00 322⇓ *e*P **P** **08 10 49.6 +0.6**
SVE *e*S **S** **08 16 49.1 +1.4**
SVE pmax pmax
comp=Z,86nm,1.1s,mb5.4
SVE MLR MLR
comp=Z,945nm,16.0s,MS4.7
AKTK Aktyubinsk 39.01 311 P **P** **08 10 49.5 +0.4**
AKTO Aktyubinsk 39.01 311 P **P** **08 10 49.5 +0.4**
comp=Z,14nm,0.8s,mb4.7,baz=93,slow=9.1,SNR=33
AKTO Aktyubinsk 39.01 311 P **P** **08 10 49.6 +0.5**
AKTO pmax pmax
comp=Z,14nm,0.8s,mb4.7
ISHV Shirvan 39.14 291 *e*P **P** **08 10 50.6 +0.1**
KAPI Kappang 39.84 158 P **P** **08 10 55.9 -0.6**
comp=Z,52nm,0.9s,mb5.2,baz=312,slow=10,SNR=11
KAPI Kappang 39.84 158 P **P** **08 10 55.9 -0.6**
ARU Arti 39.98 321 P **P** **08 10 57.9 +0.8**
comp=Z,578nm,1.0s,mb6.3,SNR=16
ARU Arti 39.98 321 *d i*P **P** **08 10 57.4 +0.3**
ARU 08 12 31.1
ARU S **S** **08 17 05.0 +2.7**
ARU pmax pmax
comp=Z,116nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,816nm,17.0s,MS4.6
ARU Arti 39.98 321 *e*P **P** **08 10 57.2 +0.1**
comp=Z,106nm,1.0s,mb5.5
GUMO Guam 40.51 109 P **P** **08 11 01.8 -0.2**
comp=Z,29nm,0.8s,mb5.0,baz=217,slow=21,SNR=2.7
GUMO Guam 40.51 109 P **P** **08 11 01.8 -0.3**
GUMO pmax pmax
comp=Z,29nm,0.8s,mb5.0
TIXI Tiksi 40.94 11 *e*P **P** **08 11 04.0 -0.9**
TIXI *e*S **S** **08 17 11.8 -4.6**
TIXI *e*SS SS 08 20 12.3 -5.5
TIXI pmax pmax
comp=Z,52nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,1μm,15.0s,MS4.9
TIXI Tiksi 40.94 11 *e*P **P** **08 11 04.2 -0.7**
comp=Z,50nm,1.2s,mb5.0
SOKR Solikamsk 41.80 325 *d i*P **P** **08 11 12.5 +0.4**
SOKR PPP 08 13 14.8
SOKR pmax pmax
comp=Z,110nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,930nm,16.0s,MS4.8
SEY Seymchan 42.08 30⇑ *e*P **P** **08 11 14.5 +0.2**
PETK Petropavlovsk- 42.16 45 P **P** **08 11 14.9 -0.2**
comp=Z,10nm,0.8s,mb4.5,baz=216,slow=4.8,SNR=13
PETK LR LR 08 30 34.2
comp=Z,777nm,18.7s,MS4.6,baz=68,slow=39
PETK Petropavlovsk- 42.16 45 P **P** **08 11 15.0 -0.2**
PETK pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
PETK MLR MLR
comp=Z,777nm,18.7s,MS4.6
IMEH Mehriz 42.90 283 *e*P **P** **08 11 20.2 -1.3**
ISHM Shahmirzad 42.93 289 *e*P **P** **08 11 22.3 +0.6**
IPAR Pars 44.63 281 *e*P **P** **08 11 35.7 +0.3**
ISRV Sarvestan 44.72 280 *e*P **P** **08 11 34.6 -1.6**
IMOK Mouk 45.16 280 *e*P **P** **08 11 38.2 -1.4**
MAK Makhachkala 46.19 300 *e*P **P** **08 11 39.1 -8.5**
MAK MLR MLR
comp=Z,923nm,15.0s,MS4.8
DGRG David-gareji 47.99 299 P **P** **08 12 01.4 -0.2**
TBLG Delisi 48.41 299 *e*P **P** **08 12 04.8 -0.1**
TBLG Delisi 48.41 299 P **P** **08 12 04.8 -0.1**
GNI Garni 48.70 297 P **P** **08 12 07.5 +0.4**
comp=Z,4.2nm,0.3s,mb5.0,baz=1.6,slow=19,SNR=6.8
GNI Garni 48.70 297 P **P** **08 12 07.5 +0.3**
GNI pmax pmax
comp=Z,4.0nm,0.3s
GNI Garni 48.70 297 *e*P **P** **08 12 08.4 +1.2**
comp=Z,22nm,0.8s,mb5.2
GNI Garni 48.70 297 P **P** **08 12 08.8 +1.6**
SNR=9.4
GNI P 08 12 08.8
SNR=9.4
GOR Gori 48.83 299 P **P** **08 12 02.6 -5.5**
ZEI Tsey 48.84 301 *e*P **P** **08 12 06.3 -2.0**
ZEI pmax pmax
comp=Z,30nm,1.3s,mb5.2
KEH Kehvi 48.90 300 P **P** **08 12 08.2 -0.4**
BILL Bilibino 49.19 26⇑ *i*P **P** **08 12 10.3 -0.2**
BILL *i* 08 12 16.3
BILL *e* 08 14 05.3
BILL pmax pmax
comp=Z,28nm,0.9s,mb5.3
BILL MLR MLR
comp=Z,500nm,17.0s,MS4.6
BILL Bilibino 49.19 26 *e*P **P** **08 12 10.2 -0.4**
comp=Z,23nm,0.8s,mb5.3
ONI Oni 49.20 300 P **P** **08 12 11.7 +0.8**
MIB Mutribah 49.35 283 *e*P **P** **08 12 11.7 -0.7**
MIB AMb AMB 08 12 14.7
comp=Z,97nm,0.8s,mb5.9
VRHR Novokhopersk 49.41 312 *e*P **P** **08 12 12.1 -0.4**
VRHR *e*PP pP 08 12 20.8 +5.2
VRHR *e*S **S** **08 19 13.5 -5.8**
VRHR pmax pmax
comp=Z,90nm,1.1s,mb5.7
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,80nm,1.1s
VRHR smax
comp=N,50nm,9.0s
VRHR smax
comp=Z,10.0nm,5.9s
VRHR smax
comp=E,20nm,6.2s
VRHR MLR MLR
comp=Z,590nm,13.0s,MS4.8
VRHR MLR MLR
comp=N,190nm,14.0s,MS4.5
VRHR MLR MLR
comp=E,240nm,12.0s,MS4.5
RDF Al-Radifah 49.47 282 *e*P **P** **08 12 13.0 -0.2**
RDF AMb AMB 08 12 26.1
comp=Z,99nm,0.9s,mb5.9
KIV Kislovodsk 49.52 302 P **P** **08 12 14.8 +1.4**
comp=Z,262nm,1.0s,mb6.2,SNR=5.5
KIV Kislovodsk 49.52 302 *e*P **P** **08 12 14.2 +0.8**
KIV *e*S **S** **08 19 21.9 +0.8**
KIV pmax pmax
comp=Z,54nm,1.1s,mb5.5
KIV pmax pmax
comp=Z,36nm,5.4s
KIV MLR MLR
comp=Z,516nm,17.0s,MS4.6
KIV Kislovodsk 49.52 302 *e*P **P** **08 12 14.4 +1.0**
comp=Z,69nm,1.2s,mb5.6
KIV Kislovodsk 49.52 302 P **P** **08 12 14.8 +1.4**
SNR=11
KIV P 08 12 14.8
SNR=11
NAY Al-Naaiem 49.62 282 *e*P **P** **08 12 14.1 -0.2**
NAY AMb AMB 08 12 17.0
comp=Z,94nm,0.7s,mb5.9
VORD Divnogorie 50.89 312 *e*P **P** **08 12 23.1 -0.6**
VORD *e*PP pP 08 12 30.8 +3.9
VORD *e*S **S** **08 19 34.4 -5.5**
VORD pmax pmax
comp=Z,30nm,1.2s,mb5.1
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,60nm,0.8s
VORD smax
comp=N,10.0nm,4.9s
VORD smax
comp=Z,10.0nm,7.2s
VORD smax
comp=E,10.0nm,4.9s
VORD MLR MLR
comp=N,460nm,13.0s,MS4.8
VORD MLR MLR
comp=Z,580nm,13.0s,MS4.8
VORD MLR MLR
comp=E,290nm,12.0s,MS4.8
VSR Storozhevoye 50.95 312 *e*P **P** **08 12 23.6 -0.5**
VSR *e*PP pP 08 12 32.0 +4.7
VSR *e*S **S** **08 19 33.2 -7.5**
VSR *e*SS SS 08 23 16.5 +1.3
VSR pmax pmax
comp=Z,80nm,1.1s,mb5.6
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,70nm,1.0s
VSR smax
comp=N,40nm,8.0s
VSR smax
comp=Z,6.0nm,7.7s
VSR smax
comp=E,7.0nm,3.9s
MOS Moscow 51.52 318 *e*P **P** **08 12 27.2 -1.1**
MOS *e*S **S** **08 19 45.2 -3.3**
MOS pmax pmax
comp=Z,149nm,1.0s,mb5.9
MOS pmax pmax
comp=Z,200nm,1.2s,mb5.9
SOC Sochi 51.70 302 *e*P **P** **08 12 28.8 -1.1**
SOC *e*PP pP 08 12 33.3 +0.2
SOC *e* 08 13 39.4
SOC *e*S **S** **08 19 46.5 -4.9**
SOC *e* 08 22 15.4
SOC pmax pmax
comp=Z,926nm,1.1s
SOC MLR MLR
comp=Z,29μm,22.0s,MS6.3
KAKA Kakadu 51.94 146 *e*P **P** **08 12 33.8 +1.9**
comp=Z,27nm,1.1s,mb5.1

SMY Shemya 52.06 46 eP P 08 12 32.3 -0.1
SMY pmax pmax
comp=Z,75nm,0.8s,mb5.7
SMY Shemya 52.06 46 eP P 08 12 32.3 -0.1
comp=Z,75nm,0.8s,mb5.7
OBN Obninsk 52.16 317 eP P 08 12 33.0 -0.1
OBN i 08 13 42.2
OBN i 08 14 31.6
OBN pmax pmax
comp=Z,76nm,1.2s,mb5.5
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.5
OBN Obninsk 52.16 317 eP P 08 12 33.0 -0.1
comp=Z,54nm,1.0s,mb5.4
KNA Kununurra 53.03 152 eP P 08 12 39.5 -0.4
comp=Z,35nm,0.7s,mb5.4
ANN Anapa 53.07 304 eP P 08 12 37.1 -2.9
ANN e*PP pP 08 12 41.5 -1.7
ANN e 08 13 45.0
ANN e 08 14 37.3
ANN eS S 08 20 05.2 -4.9
ANN pmax pmax
comp=Z,33nm,1.1s,mb5.2
ANN MLR MLR
comp=N,431nm,20.0s,MS4.8
ANN MLR MLR
comp=E,840nm,20.0s,MS4.8
ANN MLR MLR
comp=Z,922nm,20.0s,MS4.8
APA Apatity 53.45 333⇑ eP P 08 12 46.0 +3.5
APA pmax pmax
comp=Z,22nm,1.2s,mb5.0
APA MLR MLR
comp=Z,2µm,13.0s,MS5.2
JOF Joensuu 54.37 327 eP P 08 12 48.0 -1.2
JOF pmax pmax
comp=Z,38nm,0.8s,mb5.4
JOF Joensuu 54.37 327 ep P 08 12 48.0 -1.2
comp=Z,38nm,0.8s,mb5.4
MBWA Marble Bar 55.23 164 eP P 08 12 55.5 -0.4
MBWA Marble Bar 55.23 164 eP P 08 12 55.5 -0.5
comp=Z,22nm,1.1s,mb5.1
SIM Simferopol' 55.34 305 eP P 08 12 57.0 +0.4
SIM pmax pmax
comp=Z,26nm,0.7s,mb5.4
SIM MLR MLR
comp=Z,500nm,17.6s,MS4.7
GIRL Giralia 55.65 170 eP P 08 12 59.3 +0.4
comp=Z,221nm,1.0s,mb6.1
KEV Kevo 55.80 336 eP P 08 12 57.1 -2.4
KEV Kevo 55.80 336 ep P 08 12 57.1 -2.4
ARCES ARCESS Array B 56.33 335 P P 08 13 03.0 -0.3
comp=Z,6.0nm,0.7s,mb4.7,baz=76,slow=6.6,SNR=12
ARCES ARCESS Array B 56.33 335 P P 08 13 03.0 -0.3
ARCES pmax pmax
comp=Z,6.0nm,0.7s
KAF Kangasniemi 56.76 326 eP P 08 13 05.1 -1.3
KAF pmax pmax
comp=Z,30nm,1.1s,mb5.2
KAF Kangasniemi 56.76 326 ep P 08 13 05.1 -1.3
comp=Z,30nm,1.1s,mb5.2,baz=82,slow=6.6
FINES FINESS Array B 56.96 326 P P 08 13 07.7 -0.2
comp=Z,21nm,0.7s,mb5.3,baz=84,slow=7.9,SNR=55
FINES LR LR 08 39 05.9
comp=Z,551nm,19.3s,MS4.7,baz=100,slow=38
FINES FINESS Array B 56.96 326 P P 08 13 07.7 -0.2
FINES pmax pmax
comp=Z,21nm,0.7s
FINES MLR MLR
comp=Z,551nm,19.3s
BR131 Keskin Array S 57.07 299 eP P 08 13 09.2 +0.2
BRTR Keskin Array B 57.07 299 P P 08 13 08.7 -0.4
comp=Z,6.8nm,0.9s,mb4.7,baz=99,slow=7.6,SNR=26
BRTR Keskin Array B 57.07 299 P P 08 13 08.7 -0.3
BRTR pmax pmax
comp=Z,7.0nm,0.9s
VSU Vasula 57.11 322 d iP P 08 13 08.7 -0.3
AKASG Malin Array Be 57.23 313 P P 08 13 09.3 -0.7
comp=Z,21nm,0.8s,mb5.2,baz=69,slow=6.5,SNR=58
AKASG LR LR 08 38 13.5
comp=Z,780nm,18.1s,MS4.8,baz=65,slow=36
AKASG Malin Array Be 57.23 313 P P 08 13 09.3 -0.7
AKASG pmax pmax
comp=Z,21nm,0.8s
AKASG MLR MLR
comp=Z,780nm,18.1s
AKBB Malin Array Si 57.23 313 eP P 08 13 09.1 -0.9
KIEV Kiev 57.24 313 eP P 08 13 09.2 -0.9
KIEV pmax pmax
comp=Z,23nm,0.9s,mb5.2
KIEV Kiev 57.24 313 eP P 08 13 09.2 -0.9
comp=Z,23nm,0.9s,mb5.2
IDID Didziasalis 57.70 318 eP P 08 13 13.7 +0.4
NACGM Naroch 57.77 318 e P 08 13 12.0 -1.7
MMAI Mount Meron Ar 57.89 291 P P 08 13 14.4 -0.5
comp=Z,9.1nm,0.9s,mb4.8,baz=75,slow=9.6,SNR=10
IZAR Zarasai 57.89 319 eP P 08 13 14.9 +0.4
IIGN Ignalina 57.99 319 eP P 08 13 15.8 +0.6
ISAL Salakas 57.99 319 eP P 08 13 15.6 +0.3
GAMB Gambell 58.04 31 eP P 08 13 14.1 -1.4
comp=Z,31nm,1.2s,mb5.2
SPITS Spitsbergen Ar 58.10 346 LR LR 08 42 22.1
comp=Z,567nm,18.2s,MS4.7,baz=85,slow=40
SPB4 Spitsbergen Ar 58.10 346 eP P 08 13 15.5 -0.2
KIS Kishinev 58.40 309 eP P 08 13 15.0 -3.3
KIS LRM 08 39 08.0
comp=Z,500nm,14.0s
COEN Coen 58.67 136 eP P 08 13 20.7 +0.2
comp=Z,230nm,1.1s,mb6.1
CSS Prodhromos 58.83 294 eP P 08 13 20.8 -0.6
comp=Z,19nm,0.8s,mb5.2
WRAB Tennant Creek 59.12 148 P P 08 13 23.0 -0.5
comp=Z,330nm,0.9s,SNR=19
WRAB Tennant Creek 59.12 148 eP P 08 13 22.9 -0.6
WRAB pmax pmax
comp=Z,35nm,0.7s,mb5.5
WRAB Tennant Creek 59.12 148 eP P 08 13 22.9 -0.5
comp=Z,35nm,0.7s,mb5.5
TNA Tin City 59.30 29 eP P 08 13 23.4 -0.8
comp=Z,29nm,1.1s,mb5.2
TIRR Tirgusor 59.39 306 eP P 08 13 24.4 -0.8
TIRR pmax pmax
comp=Z,14nm,0.9s,mb5.0
TIRR Tirgusor 59.39 306 eP P 08 13 24.4 -0.8
comp=Z,14nm,0.9s,mb5.0
HARR Harsova 59.65 306 ⇓P P 08 13 27.2 +0.2
HARR Harsova 59.65 306 ⇓ iP P 08 13 27.2 +0.2
SUW Suwalki 60.02 318 eP P 08 13 29.1 -0.3
SUW Suwalki 60.02 318 eP P 08 13 28.6 -0.7
SUW pmax pmax
comp=Z,47nm,0.3s,mb6.0
SUW Suwalki 60.02 318 eP P 08 13 28.6 -0.8
comp=Z,47nm,0.3s,mb6.0
VRI Vrincioaia 60.11 308 P P 08 13 31.0 +0.9
VRI Vrincioaia 60.11 308⇑ iP P 08 13 30.6 +0.5
PLOR Plostina 60.17 308 P P 08 13 31.4 +0.9
PLOR Plostina 60.17 308⇓ iP P 08 13 31.1 +0.6
BUR01 Bucovina Ar. S 60.58 310 P P 08 13 34.4 +1.1
BURAR Bucovina Array 60.58 310 ⇑P P 08 13 33.7 +0.4
BURAR Bucovina Array 60.58 310⇑ iP P 08 13 33.7 +0.4
BUR08 Bucovina Ar. S 60.58 310 eP P 08 13 33.0 -0.3
LVV L'vov 60.68 313 i P P 08 13 33.6 -0.3
LVV e 08 13 41.0
LVV MLR MLR
comp=N,240nm,15.0s,MS4.8
LVV MLR MLR
comp=E,400nm,15.0s,MS4.8
LVV MLR MLR
comp=Z,300nm,15.0s,MS4.6
MLR Muntele Rosu 60.75 308 LR LR 08 42 03.0
comp=Z,980nm,21.5s,MS4.9,baz=65,slow=38
MLR Muntele Rosu 60.75 308 P P 08 13 35.3 +0.9
MLR Muntele Rosu 60.75 308 ⇓ iP P 08 13 34.8 +0.3
ATD Arta Tunnel 60.98 265 P P 08 13 36.4 -0.1
comp=Z,23nm,0.9s,mb5.3,baz=334,slow=6.1,SNR=10.0
ATD Arta Tunnel 60.98 265 P P 08 13 36.4 -0.1
JMB Yambol 61.28 304 P P 08 13 38.6 +0.5
SZH Strazhica 61.47 305 P P 08 13 39.5 +0.1
KWP Kalwaria Pacla 61.55 313 eP P 08 13 40.4 +0.5
KWP Kalwaria Pacla 61.55 313 eP P 08 13 40.4 +0.6
comp=Z,96nm,1.0s,mb5.9
KWP Kalwaria Pacla 61.55 313⇑ iP P 08 13 40.7 +0.8
BMR Baia Mare 61.67 310 P P 08 13 42.4 +1.7
KOLS Kolonicke sedl 62.04 312 eP P 08 13 42.9 -0.3
KOLS pmax pmax
comp=Z,15nm,1.1s,mb5.0
KOLS Kolonicke sedl 62.04 312 eP P 08 13 42.9 -0.3
comp=Z,15nm,1.1s,mb5.0
KOLS ePP PP 08 16 21.8 +22
KOLS Kolonicke sedl 62.04 312 eP P 08 13 42.9 -0.3
KOLS ePP PP 08 16 21.8 +22
UZH Uzhgorod 62.13 312 ⇓ iP P 08 13 43.6 -0.1
UZH e 08 16 03.2
UZH eS S 08 22 06.0 -2.8
UZH e 08 26 11.0
UZH MLR MLR
comp=N,430nm,12.0s,MS5.0
UZH MLR MLR
comp=E,560nm,12.0s,MS5.0
UZH MLR MLR
comp=Z,410nm,12.0s,MS4.8
ASAR Alice Springs 62.22 151 P P 08 13 42.9 -1.7
comp=Z,12nm,0.9s,mb5.0,baz=327,slow=6.4,SNR=54
ASAR Alice Springs 62.22 151 P P 08 13 42.9 -1.7
ASAR pmax pmax
comp=Z,12nm,0.9s
ASAR Alice Springs 62.22 151 P P 08 13 42.9 -1.7
MORW Morawa 62.23 170 eP P 08 13 45.1 +0.6
KDZ Kurdzhali 62.37 304 P P 08 13 45.6 +0.1
DRGR 62.46 310 P P 08 13 47.1 +1.1
DRGR 62.46 310 ⇓ iP P 08 13 46.3 +0.3
STHS Stebnicka Huta 62.53 313 eP P 08 13 46.7 +0.3
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.9
STHS Stebnicka Huta 62.53 313 eP P 08 13 46.7 +0.3
comp=Z,11nm,1.0s,mb4.9
STHS Stebnicka Huta 62.53 313 eP P 08 13 46.7 +0.3
RZN Rozhen 62.85 304 P P 08 13 49.0 +0.3
GZR Gura Zlata 62.89 308 P P 08 13 49.8 +0.9
GZR Gura Zlata 62.89 308⇑ iP P 08 13 49.4 +0.5
OJC Ojcow 63.15 314 eP P 08 13 50.1 -0.4
HFS Hagfors 63.16 326 LR LR 08 41 58.3
comp=Z,769nm,19.2s,MS4.9,baz=68,slow=37
KECS Kecovo 63.31 312 eP P 08 13 52.0 +0.4
KECS pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
KECS Kecovo 63.31 312 eP P 08 13 52.0 +0.4
comp=Z,5.7nm,1.2s,mb4.6
KECS ePP PP 08 16 19.9 +9.4
KECS Kecovo 63.31 312 eP P 08 13 52.0 +0.4
KECS ePP PP 08 16 19.8 +9.3
BZS Buzias 63.58 309 P P 08 13 53.9 +0.5
BZS Buzias 63.58 309 ⇓ iP P 08 13 53.2 -0.2
PSZ Piszkesteto 63.88 312 eP P 08 13 54.8 -0.6
PSZ pmax pmax
comp=Z,33nm,1.3s,mb5.2
PSZ Piszkesteto 63.88 312 eP P 08 13 54.8 -0.6
comp=Z,33nm,1.3s,mb5.2
PSZ Piszkesteto 63.88 312 ⇓ eP P 08 13 55.3 -0.1
PSZ Piszkesteto 63.88 312⇑ iP P 08 13 55.0 -0.4
NB2 NORSAR Subarra 64.00 327 P P 08 13 54.8 -1.2
comp=Z,31nm,1.0s,mb5.3,baz=70,slow=6.5
NOA NORSAR Array B 64.00 327 P P 08 13 54.8 -1.2
comp=Z,17nm,0.9s,mb5.1,baz=70,slow=6.6,SNR=23
NOA NORSAR Array B 64.00 327 P P 08 13 54.8 -1.2
NOA pmax pmax
comp=Z,17nm,0.9s
NAO01 NORSAR Array S 64.22 327 eP P 08 13 55.6 -1.8
comp=Z,26nm,1.1s,mb5.2
OKC Ostrava-Krasne 64.28 314 eP P 08 13 58.3 +0.3
OKC epP pP 08 14 03.0 +1.8
OKC AMS AMS 08 41 50.0
comp=Z,600nm,14.1s
VYHS Vyhne 64.33 313 eP P 08 13 58.7 +0.3
VYHS pmax pmax
comp=Z,18nm,1.2s,mb5.0
VYHS Vyhne 64.33 313 eP P 08 13 58.7 +0.3
comp=Z,18nm,1.2s,mb5.0
VYHS eSP 08 14 06.5
VYHS ePP PP 08 16 36.0 +16
VYHS Vyhne 64.33 313 eP P 08 13 58.7 +0.3
VYHS eSP sP 08 14 06.5 +3.7
VYHS ePP PP 08 16 36.0 +16
KOLL Kolacno 64.57 313 eP P 08 14 00.3 +0.4
KOLL eSP 08 14 08.3
KOLL Kolacno 64.57 313 eP P 08 14 00.3 +0.4
KOLL eSP sP 08 14 08.3 +3.9
MORC Moravsky Berou 64.67 314 eP P 08 14 00.4 -0.1
MORC pmax pmax
comp=Z,22nm,1.1s,mb5.1
MORC Moravsky Berou 64.67 314 eP P 08 14 00.3 -0.2
comp=Z,22nm,1.1s,mb5.1
ALE Alert 64.86 358 P P 08 14 03.0 +1.6
comp=Z,66nm,0.5s,mb5.9,SNR=5.7
KLBR Kellerberrin 64.97 169 eP P 08 14 02.3 -0.3
comp=Z,14nm,0.8s,mb5.1
KSP Ksiaz 65.02 316 eP P 08 14 03.2 +0.3
KSP Ksiaz 65.02 316 eP P 08 14 03.0 +0.2
KSP e*PP pP 08 14 08.4 +2.3
KSP MLR MLR
comp=Z,1µm,18.5s,MS5.2
TTA Tatalina 65.05 30 eP P 08 14 02.6 -0.2
TTA pmax pmax
comp=Z,32nm,1.2s,mb5.2
TTA Tatalina 65.05 30 eP P 08 14 02.6 -0.2
comp=Z,32nm,1.2s,mb5.2
DPC Dobruska-Polom 65.19 315 eP P 08 14 04.3 +0.4
DPC epP pP 08 14 10.0 +2.8
DPC AMS AMS 08 42 30.0
comp=Z,1µm,15.6s
KONO Kongsberg 65.26 326 eP P 08 14 03.1 -1.1
KONO pmax pmax
comp=Z,33nm,1.3s,mb5.2
KONO Kongsberg 65.26 326 eP P 08 14 03.1 -1.1
comp=Z,33nm,1.3s,mb5.2
PKSM Moragy 65.29 310 ⇓P P 08 14 04.8 +0.1
PKSM Moragy 65.29 310 ⇓ iP P 08 14 04.8 +0.1
UPC Upice 65.31 315 eP P 08 14 05.3 +0.6
UPC epP pP 08 14 10.2 +2.2
CTA Charters Tower 65.31 138 eP P 08 14 08.0 +3.0
comp=Z,11nm,1.0s,mb4.8
CTA Charters Tower 65.31 138 P P 08 14 05.5 +0.5
comp=Z,6.2nm,0.8s,mb4.7,baz=324,slow=8.6,SNR=2.4
CTA Charters Tower 65.31 138 P P 08 14 05.5 +0.5
CTA pmax pmax
comp=Z,6.0nm,0.8s
COP Copenhagen 65.37 322 eP P 08 14 06.4 +1.4
COP pmax pmax
comp=Z,19nm,1.0s,mb5.1
COP Copenhagen 65.37 322 i P P 08 14 06.4 +1.4
comp=Z,19nm,1.0s,mb5.1
VRAC Vranov 65.41 314 LR LR 08 43 41.5
comp=Z,669nm,18.6s,MS4.9,baz=334,slow=37
VRAC Vranov 65.41 314 P P 08 14 06.5 +1.1
VRAC Vranov 65.41 314 ⇓ iP P 08 14 05.8 +0.4
COLD Coldfoot 65.49 25 eP P 08 14 05.6 0.0
comp=Z,25nm,1.1s,mb5.2
ZST Bratislava 65.52 313 eP P 08 14 07.9 +1.8
ZST Bratislava 65.52 313 eP P 08 14 07.9 +1.8
DAG Danmarks Havn 65.55 348 eP P 08 14 02.0 -3.8
DAG Danmarks Havn 65.55 348 i P P 08 14 02.0 -3.8
RUE Ruedersdorf 65.86 318 eP P 08 14 08.1 -0.1
comp=Z,25nm,0.6s,mb5.4
SVW2 Sparrevohn 65.97 32 eP P 08 14 09.6 +0.8
TREC Trest 66.09 314 eP P 08 14 10.0 +0.3
TREC MLR MLR
comp=Z,900nm,17.5s,MS5.0
TREC Trest 66.09 314 eP P 08 14 10.0 +0.3
TREC AMS AMS 08 43 10.0
comp=Z,900nm,17.5s
PVCC Panska Ves 66.16 316 eP P 08 14 10.7 +0.5
PVCC epP pP 08 14 16.8 +3.4
PVCC AMS AMS 08 43 00.0
comp=Z,600nm,14.6s
CHUM Lake Minchumin 66.17 28 eP P 08 14 10.7 +0.6
comp=Z,33nm,1.0s,mb5.3
NWAO Narrogin (SRO) 66.19 169 P P 08 14 09.5 -0.9
comp=Z,23nm,1.0s,mb5.2,baz=7.7,slow=6.9,SNR=7.8
NWAO Narrogin (SRO) 66.19 169 eP P 08 14 09.9 -0.5
NWAO pmax pmax
comp=Z,11nm,0.7s
NWAO Narrogin (SRO) 66.19 169 eP P 08 14 09.9 -0.5
comp=Z,11nm,0.7s,mb5.0
PRU Pruhonice 66.38 315 eP P 08 14 12.3 +0.7
PRU epP pP 08 14 18.0 +3.1
PRU AMS AMS 08 43 30.0
comp=Z,900nm,14.9s
BRG Berggiesshubel 66.39 316 eP P 08 14 11.5 -0.1
comp=Z,16nm,1.1s,mb5.0
BRG Berggiesshubel 66.39 316 eP P 08 14 11.9 +0.3
comp=Z,16nm,1.1s,mb5.0
BRG e 08 14 18.3
comp=Z,16nm,1.2s
BRG
comp=N,438nm,10.4s
BRG
comp=E,446nm,15.1s
BRG
comp=Z,620nm,15.2s
CONA Conrad Observa 66.39 313⇑ iP P 08 14 12.4 +0.7
comp=Z,24nm,1.3s,mb5.0
CHGN Chignik 66.58 37 eP P 08 14 12.3 -0.4
BPAW Bear Paw Mtn. 66.60 28 eP P 08 14 12.8 +0.1
comp=Z,58nm,1.2s,mb5.5
FORT Forrest 66.62 159 eP P 08 14 13.2 0.0
comp=Z,63nm,0.9s,mb5.6
PPLA Purkeypile 66.65 29 eP P 08 14 13.2 +0.1
comp=Z,56nm,0.9s,mb5.6
JMIC Jan Mayen 66.73 341 LR LR 08 45 49.2
comp=Z,439nm,20.1s,MS4.7,baz=245,slow=38
MUD Monsted U'grnd 66.75 323 i P P 08 14 11.5 -2.3
MUD pmax pmax
comp=Z,26nm,1.0s,mb5.2
MUD Monsted U'grnd 66.75 323 i P P 08 14 11.5 -2.3
comp=Z,26nm,1.0s,mb5.2
CLL Collm 66.76 317 eP P 08 14 13.4 -0.6
comp=Z,22nm,1.2s,mb5.1
CLL Collm 66.76 317 ⇓ iP P 08 14 13.5 -0.5
CLL i 08 14 19.5
CLL i 08 14 40.5
CLL pmax pmax
comp=Z,23nm,1.3s,mb5.0
CLL MLR MLR
comp=Z,700nm,17.0s,MS4.9
CLL Collm 66.76 317 ⇓ iP P 08 14 13.5 -0.5
comp=Z,23nm,1.3s,mb5.0
CLL i 08 14 19.5
CLL i PcP PcP 08 14 40.5 -2.4
CLL LR LR
comp=Z,700nm,17.0s,MS4.9
CLL Collm 66.76 317 ⇓ iP P 08 14 13.5 -0.5
comp=Z,23nm,1.3s,mb5.0
CLL i pP pP 08 14 19.5 +2.2
CLL i 08 14 26.5
CLL i (PcP) PcP 08 14 40.5 -2.4
comp=Z,7.0nm,0.7s
CLL eSSS 08 30 42.0
KTH Kantishna Hill 66.87 28 eP P 08 14 14.7 +0.2
comp=Z,64nm,1.3s,mb5.5
TRF Thorofare Moun 67.17 28 eP P 08 14 17.1 +0.7
comp=Z,14nm,1.0s,mb5.0
BSEG Bad Segeberg 67.19 320 eP P 08 14 16.9 +0.2
comp=Z,36nm,0.9s,mb5.4
KHC Kasperske Hory 67.30 315 eP P 08 14 17.8 +0.3
comp=Z,6.3nm,0.9s,mb4.7
KHC Kasperske Hory 67.30 315 eP P 08 14 17.8 +0.3
KHC epP pP 08 14 25.0 +4.2
KHC AMS AMS 08 43 50.0
comp=Z,1µm,15.5s
GEC2 GERESS Array S 67.34 314 eP P 08 14 17.7 -0.1
comp=Z,19nm,1.3s,mb5.0
GEC2 GERESS Array S 67.34 314 eP P 08 14 17.7 -0.1
GEC2 pmax pmax
comp=Z,19nm,1.3s,mb5.0
GERES GERESS Array B 67.34 314 P P 08 14 18.1 +0.3
comp=Z,8.1nm,1.0s,mb4.7,baz=58,slow=5.0,SNR=31
GERES LR LR 08 44 38.4
comp=Z,789nm,18.6s,MS5.0,baz=66,slow=37
GERES GERESS Array B 67.34 314 P P 08 14 18.1 +0.3
GERES pmax pmax
comp=Z,8.0nm,1.0s
GERES MLR MLR
comp=Z,789nm,18.6s
MOA Molln 67.41 313⇑ iP P 08 14 18.8 +0.6
comp=Z,23nm,1.3s,mb5.0
SOKA Soboth 67.41 312⇑ iP P 08 14 18.4 +0.2
comp=Z,23nm,1.1s,mb5.1
TANN Tannenbergstha 67.44 316 eP P 08 14 18.5 +0.2
comp=Z,16nm,1.3s,mb4.9
COLA College 67.44 26 eP P 08 14 17.9 -0.2
COLA pmax pmax
comp=Z,56nm,1.1s,mb5.5
COLA College 67.44 26 eP P 08 14 17.9 -0.2
comp=Z,56nm,1.1s,mb5.5
RSO Redoubt South 67.50 32 eP P 08 14 19.0 +0.4
NKC Novy Kostel 67.52 316 eP P 08 14 19.3 +0.4
NKC epP pP 08 14 24.9 +2.8
MCK McKinley 67.57 28 eP P 08 14 18.8 -0.2
MCK pmax pmax
comp=Z,13nm,0.9s,mb5.0
MCK McKinley 67.57 28 eP P 08 14 18.8 -0.1
comp=Z,14nm,0.9s,mb5.0
WET Wettzell 67.72 315 eP P 08 14 20.2 +0.1
comp=Z,15nm,1.4s,mb4.8
WET Wettzell 67.72 315 eP P 08 14 20.2 +0.1
WET pmax pmax
comp=Z,15nm,1.4s,mb4.8
BOJS Bojanci 67.75 311 i P P 08 14 20.9 +0.5
MOX Moxa 67.83 317 eP P 08 14 21.6 +0.8
comp=Z,20nm,1.5s,mb4.9
MOX
comp=Z,600nm,17.0s
MOX Moxa 67.83 317 eP P 08 14 20.8 0.0
comp=Z,18nm,1.4s,mb4.9
MOX Moxa 67.83 317 eP P 08 14 21.6 +0.8
MOX pmax pmax
comp=Z,20nm,1.5s,mb4.9
MOX MLR MLR
comp=Z,600nm,17.0s,MS4.9
ROTZ Rotzenmuhle 67.85 316 eP P 08 14 21.5 +0.5
NRDL Niedersach Rie 67.91 319 eP P 08 14 21.7 +0.4
LJU Ljubljana 67.99 311 eP P 08 14 21.9 0.0
CLZ Clausthal 68.03 318 eP P 08 14 22.5 +0.4
comp=Z,34nm,1.2s,mb5.2
CLZ Clausthal 68.03 318 eP P 08 14 22.5 +0.4
CLZ pmax pmax
comp=Z,34nm,1.2s,mb5.2
RJOB Jochberg 68.35 314 eP P 08 14 24.7 +0.5
CADS Cadrg 68.41 312 eP P 08 14 23.9 -0.6
GRA1 Grafenberg Arr 68.47 316 eP P 08 14 25.2 +0.4
comp=Z,50nm,1.2s,mb5.4
GRA1 LR LR
comp=Z,600nm,18.9s,MS4.8
GRF Grafenberg Arr 68.47 316 eP P 08 14 25.2 +0.4
comp=Z,50nm,1.2s,mb5.4
GRF eL 08 41 27.6
comp=Z,552nm,18.9s
GRF Grafenberg Arr 68.47 316 eP P 08 14 25.2 +0.4
GRF pmax pmax
comp=Z,50nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,600nm,18.9s,MS4.8
GRF Grafenberg Arr 68.47 316 eP P 08 14 25.2 +0.4
GRF pmax pmax
comp=Z,50nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,600nm,18.9s,MS4.8
SKDS Skadanscina 68.52 311 i P P 08 14 24.6 -0.7
PMR Palmer 68.53 30 eP P 08 14 23.9 -1.1
PMR pmax pmax
comp=Z,16nm,0.8s,mb5.0
PMR Palmer 68.53 30 eP P 08 14 23.9 -1.1
comp=Z,16nm,0.8s,mb5.0
TRI Trieste 68.61 311 eP P 08 14 25.0 -0.8
TRI pmax pmax
comp=Z,23nm,1.0s,mb5.1
TRI Trieste 68.61 311 eP P 08 14 25.0 -0.8
comp=Z,23nm,1.0s,mb5.1
OHAK Old Harbor 68.73 35 eP P 08 14 26.1 -0.3
comp=Z,26nm,0.8s,mb5.2
KDAK Kodiak Island 68.80 34 i P P 08 14 26.7 -0.1
FUR Furstenfeldbru 69.09 314 eP P 08 14 29.1 +0.3
comp=Z,56nm,1.2s,mb5.4
FUR Furstenfeldbru 69.09 314 eP P 08 14 29.1 +0.3
FUR pmax pmax
comp=Z,56nm,1.2s,mb5.4
SEW Seward 69.12 31 eP P 08 14 27.6 -1.1
comp=Z,33nm,1.1s,mb5.2
WTTA Wattenberg 69.27 313⇑ iP P 08 14 30.2 +0.3
comp=Z,37nm,1.2s,mb5.2
IBBN Ibbenburen 69.28 319 eP P 08 14 30.1 +0.2
TIP Timpagrande 69.42 304 eP P 08 14 29.4 -1.6
comp=Z,10nm,0.9s,mb4.8
MOTA Moosalm 69.56 314 ⇓ iP P 08 14 31.8 +0.1
comp=Z,12nm,1.0s,mb4.8

EGAK Eagle 69.92 25 *e*P **P 08 14 33.5 -0.1**
comp=Z,8.4nm,0.9s,mb4.7
FETA Feichten 69.93 313 ‖*i*P **P 08 14 33.6 -0.4**
comp=Z,21nm,1.1s,mb5.0
BUG Bochum-Univer 69.95 319 *e*P **P 08 14 34.7 +0.7**
comp=Z,40nm,1.3s,mb5.2
MENT Mentasta 70.00 27 *e*P **P 08 14 34.5 +0.4**
DIV Divide 70.16 29 *e*P **P 08 14 35.8 +0.7**
comp=Z,19nm,0.9s,mb5.0
INK Inuvik 70.23 20 *e*P **P 08 14 34.8 -0.6**
INK pmax pmax
comp=Z,18nm,0.7s
INK Inuvik 70.23 20 *e*P **P 08 14 34.8 -0.6**
comp=Z,18nm,0.7s,mb5.1
AQU L'Aquila 70.31 308 *e*P **P 08 14 36.3 -0.1**
AQU pmax pmax
comp=Z,17nm,0.7s,mb5.1
AQU L'Aquila 70.31 308 *e*P **P 08 14 36.3 -0.1**
comp=Z,17nm,0.7s,mb5.1
BFO Black Forest 70.78 315 *e*P **P 08 14 38.6 -0.5**
comp=Z,19nm,1.4s,mb4.8
BFO Black Forest 70.78 315 *e*P **P 08 14 38.6 -0.5**
BFO pmax pmax
comp=Z,19nm,1.4s,mb4.8
DAWY Dawson 70.96 25 *e*P **P 08 14 38.9 -1.0**
BBOO Buckleboo 71.21 153 *e*P **P 08 14 41.6 -0.2**
comp=Z,8.1nm,1.1s,mb4.6
CDF Champ du Feu 71.36 316 *e*P **P 08 14 42.3 -0.3**
WLF Walferdange 71.41 317 P **P 08 14 43.2 +0.3**
comp=Z,34nm,1.6s,mb5.0
WLF Walferdange 71.41 317 *e*P **P 08 14 43.8 +0.9**
comp=Z,58nm,1.3s,mb5.3
WLF Walferdange 71.41 317 *e*P **P 08 14 43.9 +1.0**
WLF pmax pmax
comp=Z,44nm,1.1s,mb5.3
WLF Walferdange 71.41 317 *e*P **P 08 14 43.9 +1.0**
comp=Z,44nm,1.1s,mb5.3
ECH Echery 71.52 316 *e*P **P 08 14 44.0 +0.4**
ECH pmax pmax
comp=Z,16nm,1.3s,mb4.8
ECH Echery 71.52 316 *e*P **P 08 14 44.0 +0.4**
comp=Z,16nm,1.3s,mb4.8
BCLA Clavier 71.53 318 P **P 08 14 43.4 -0.2**
comp=Z,16nm,2.1s,mb4.6
HINF Hinteralfeld 71.89 316 *e*P **P 08 14 45.1 -0.8**
GIVF Givet 71.95 318 *e*P **P 08 14 46.0 -0.2**
RES Resolute Bay 72.03 6 LR LR 08 44 54.0
comp=Z,258nm,21.2s,MS4.5,baz=2.1,slow=35
RES Resolute Bay 72.03 6 *e*P **P 08 14 46.5 +0.2**
RES pmax pmax
comp=Z,13nm,0.9s,mb4.9
RES Resolute Bay 72.03 6 *e*P **P 08 14 46.5 +0.3**
comp=Z,13nm,0.9s,mb4.8
SNF Seneffe 72.05 319 P **P 08 14 47.9 +1.2**
DOU Dourbes 72.08 318 P **P 08 14 47.0 +0.1**
comp=Z,12nm,2.1s,mb4.5
SUMG Summit 72.12 349 *e*P **P 08 14 46.6 -0.2**
comp=Z,21nm,1.0s,mb5.0
EIDS Eidsvold 72.20 137 *e*P **P 08 14 50.4 +2.5**
comp=Z,20nm,1.1s,mb5.0
BAIF Baives 72.32 318 *e*P **P 08 14 48.2 -0.2**
KMBO Kilima Mbogo 72.51 257 P **P 08 14 51.1 +1.0**
comp=Z,5.4nm,0.5s,mb4.8,baz=358,slow=23,SNR=19
KMBO LR LR 08 44 30.2
comp=Z,343nm,19.9s,MS4.6,baz=91,slow=34
KMBO Kilima Mbogo 72.51 257 *e*P **P 08 14 50.5 +0.4**
comp=Z,21nm,0.4s,mb5.4
STKA Stephens Creek 72.67 148 *e*P **P 08 14 50.0 -0.6**
comp=Z,8.7nm,0.8s,mb4.7
STKA Stephens Creek 72.67 148 P **P 08 14 50.4 -0.2**
comp=Z,4.3nm,0.6s,mb4.6,baz=353,slow=7.7,SNR=9.2
STKA Stephens Creek 72.67 148 *e*P **P 08 14 49.8 -0.8**
comp=Z,2.7nm,0.8s,mb4.2
CABF La Chapelle 72.94 315 *e*P **P 08 14 51.8 -0.3**
LPG La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
comp=Z,98nm,0.9s,mb5.5
LPG La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
LPG pmax pmax
comp=Z,49nm,0.9s,mb5.4
LPG La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
comp=Z,49nm,0.9s,mb5.4
LPL La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
comp=Z,58nm,0.8s,mb5.3
LPL La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
LPL pmax pmax
comp=Z,29nm,0.8s,mb5.3
LPL La Plagne 73.08 313 *e*P **P 08 14 53.4 +0.4**
comp=Z,29nm,0.8s,mb5.3
PGF Pioggiola 73.10 310 *e*P **P 08 14 53.2 0.0**
comp=Z,65nm,0.8s,mb5.3
PGF Pioggiola 73.10 310 *e*P **P 08 14 53.2 0.0**
PGF pmax pmax
comp=Z,33nm,0.8s,mb5.3
PGF Pioggiola 73.10 310 *e*P **P 08 14 53.2 0.0**
comp=Z,32nm,0.8s,mb5.3
BNI Bardonecchia 73.35 313 *e*P **P 08 14 54.3 -0.3**
BNI pmax pmax
comp=Z,13nm,0.8s,mb4.9
BNI Bardonecchia 73.35 313 *e*P **P 08 14 54.3 -0.3**
comp=Z,13nm,0.8s,mb4.9
MBDF Montbardon 73.45 313 *e*P **P 08 14 54.6 -0.6**
comp=Z,28nm,0.8s,mb4.9
MBDF Montbardon 73.45 313 *e*P **P 08 14 54.6 -0.6**
MBDF pmax pmax
comp=Z,14nm,0.8s,mb4.9
MBDF Montbardon 73.45 313 *e*P **P 08 14 54.6 -0.6**
comp=Z,14nm,0.8s,mb4.9
SBF Sospel 73.46 312 *e*P **P 08 14 54.9 -0.4**
comp=Z,112nm,0.9s,mb5.5
SBF Sospel 73.46 312 *e*P **P 08 14 54.9 -0.4**
SBF pmax pmax
comp=Z,56nm,0.9s,mb5.5
SBF Sospel 73.46 312 *e*P **P 08 14 54.9 -0.4**
comp=Z,56nm,0.9s,mb5.5
PNL Peninsula 73.59 29 *e*P **P 08 14 57.2 +1.5**
comp=Z,24nm,0.8s,mb5.2
ORIF Oris-en-Rattie 73.91 313 *e*P **P 08 14 57.7 -0.2**
comp=Z,40nm,0.8s,mb5.1
ORIF *e*MLR MLR
comp=Z,1μm,18.5s,MS4.9
ORIF Oris-en-Rattie 73.91 313 *e*P **P 08 14 57.7 -0.2**
ORIF pmax pmax
comp=Z,20nm,0.8s,mb5.1
ORIF Oris-en-Rattie 73.91 313 *e*P **P 08 14 57.7 -0.2**
comp=Z,20nm,0.8s,mb5.1
FRF La Foret Royal 74.11 312 *e*P **P 08 14 58.7 -0.4**
SSF Saint Saulge 74.24 316 *e*P **P 08 14 59.0 -0.8**
SMF Signal de Mont 74.26 316 *e*P **P 08 14 59.4 -0.5**
comp=Z,90nm,1.4s,mb5.2
SMF Signal de Mont 74.26 316 *e*P **P 08 14 59.4 -0.5**
SMF pmax pmax
comp=Z,45nm,1.4s,mb5.2
SMF Signal de Mont 74.26 316 *e*P **P 08 14 59.4 -0.5**
comp=Z,45nm,1.4s,mb5.2
LMR La Mourre 74.31 312 *e*P **P 08 14 59.8 -0.4**
BORG Borgarnes 74.43 339 LR LR 08 48 19.8
comp=Z,279nm,19.6s,MS4.6,baz=74,slow=36
AVF Avril sur Loir 74.47 316 *e*P **P 08 15 00.5 -0.6**
comp=Z,70nm,1.4s,mb5.1
AVF Avril sur Loir 74.47 316 *e*P **P 08 15 00.5 -0.6**
AVF pmax pmax
comp=Z,35nm,1.4s,mb5.1
AVF Avril sur Loir 74.47 316 *e*P **P 08 15 00.5 -0.6**
comp=Z,35nm,1.4s,mb5.1
VIVF Saint-Julien-l 74.68 314 *e*P **P 08 15 02.0 -0.4**
comp=Z,27nm,0.9s,mb4.9
VIVF Saint-Julien-l 74.68 314 *e*P **P 08 15 02.0 -0.4**
VIVF pmax pmax
comp=Z,14nm,0.9s,mb4.9
VIVF Saint-Julien-l 74.68 314 *e*P **P 08 15 02.0 -0.4**
comp=Z,14nm,0.9s,mb4.9
SKAG Skagway 75.34 27 *e*P **P 08 15 07.2 +1.3**
comp=Z,44nm,1.0s,mb5.3
TCF Toulx Ste Croi 75.40 316 *e*P **P 08 15 06.2 -0.3**
comp=Z,34nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.40 316 *e*P **P 08 15 06.2 -0.3**
TCF pmax pmax
comp=Z,17nm,1.1s,mb4.9
TCF Toulx Ste Croi 75.40 316 *e*P **P 08 15 06.2 -0.3**
comp=Z,17nm,1.1s,mb4.9
LDF La Druitiere 75.50 319 *e*P **P 08 15 06.5 -0.5**
LASF Ste Croix 75.58 313 *e*P **P 08 15 07.5 -0.1**
comp=Z,39nm,1.1s,mb5.0
OPO Ambohidratompo 75.60 237 P **P 08 15 07.4 -0.5**
comp=Z,6.9nm,0.8s,mb4.7,baz=15,slow=5.1,SNR=7.0
FLN La Foliniere 75.61 319 *e*P **P 08 15 07.1 -0.5**
FLN *e*MLR MLR
comp=Z,741nm,20.8s,MS4.7
FLN La Foliniere 75.61 319 *e*P **P 08 15 07.1 -0.5**
FLN LR LR
comp=Z,740nm,20.8s,MS5.0
GRR Gorron 76.02 319 *e*P **P 08 15 09.6 -0.4**
CAF Calviac 76.22 315 *e*P **P 08 15 11.4 +0.2**
RJF Les Rejaudoux 76.34 315 *e*P **P 08 15 12.0 +0.1**
RJF *e*MLR MLR
comp=Z,495nm,21.8s,MS4.5
RJF Les Rejaudoux 76.34 315 *e*P **P 08 15 12.0 +0.1**
RJF LR LR
comp=Z,500nm,21.8s,MS4.8
MFF Saint Martin d 76.60 317 *e*P **P 08 15 13.2 -0.2**
comp=Z,51nm,1.1s,mb5.0
MFF Saint Martin d 76.60 317 *e*P **P 08 15 13.2 -0.2**
MFF pmax pmax
comp=Z,25nm,1.1s,mb5.1
MFF Saint Martin d 76.60 317 *e*P **P 08 15 13.2 -0.2**
comp=Z,25nm,1.1s,mb5.1
MTLF Montolieu 76.98 313 *e*P **P 08 15 15.2 -0.3**
DLBC Dease Lake 78.06 26 *e*P **P 08 15 22.4 +1.1**
ETSF Etsaut 78.92 314 *e*P **P 08 15 26.7 +0.4**
comp=Z,27nm,1.0s,mb4.8
ETSF Etsaut 78.92 314 *e*P **P 08 15 26.7 +0.4**
ETSF pmax pmax
comp=Z,13nm,1.0s,mb4.8
ETSF Etsaut 78.92 314 *e*P **P 08 15 26.7 +0.4**
comp=Z,13nm,1.0s,mb4.8
SJPF Ste Jean 79.20 314 *e*P **P 08 15 28.6 +0.7**
comp=Z,33nm,1.2s,mb4.9
SJPF Ste Jean 79.20 314 *e*P **P 08 15 28.6 +0.7**
SJPF pmax pmax
comp=Z,17nm,1.2s,mb4.8
SJPF Ste Jean 79.20 314 *e*P **P 08 15 28.6 +0.7**
comp=Z,17nm,1.2s,mb4.8
YKA Yellowknife Ar 79.79 18 P **P 08 15 30.1 -0.6**
comp=Z,4.2nm,0.7s,mb4.5,baz=330,slow=5.1,SNR=34
YKA Yellowknife Ar 79.79 18 P **P 08 15 30.1 -0.6**
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 79.79 18 P **P 08 15 30.1 -0.6**
ESDC Sonseca Array 82.88 313 P **P 08 15 47.5 0.0**
comp=Z,0.4nm,0.4s,baz=44,slow=3.9,SNR=4.5
FRB Frobisher Bay 83.77 357 LR LR 08 57 56.7
comp=Z,284nm,19.2s,MS4.7,baz=212,slow=39
FCC Fort Churchill 87.41 10 *e*P **P 08 16 09.8 0.0**
comp=Z,0.7nm,1.0s,mb3.9
LSZ Lusaka 87.91 250 P **P 08 16 13.6 +0.7**
comp=Z,6.7nm,0.8s,mb4.9,baz=47,slow=7.3,SNR=6.9
LSZ Lusaka 87.91 250 P **P 08 16 13.6 +0.7**
LSZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
LSZ Lusaka 87.91 250 *e*P **P 08 16 13.3 +0.4**
comp=Z,20nm,1.3s,mb5.2
FFC Flin Flon 89.74 16 *e*P **P 08 16 20.3 -0.7**
FFC pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
FFC Flin Flon 89.74 16 *e*P **P 08 16 20.3 -0.7**
comp=Z,10nm,0.9s,mb5.2
NEW Newport 90.79 27 *e*P **P 08 16 26.9 +0.9**
NEW pmax pmax
comp=Z,10.0nm,0.9s
NEW Newport 90.79 27 *e*P **P 08 16 26.9 +0.9**
comp=Z,10nm,0.9s,mb5.2
WALA Waterton Lakes 91.31 25 *e*P **P 08 16 28.4 0.0**
comp=Z,0.3nm,0.9s
SCHQ Schefferville 92.58 356 *e*P **P 08 16 32.9 -1.2**
comp=Z,11nm,1.1s,mb5.2
HUMO Hull Mountain 92.83 34 *e*P **P 08 16 37.4 +1.9**
comp=Z,12nm,1.3s,mb5.2
SLMT Seeley Lake 93.00 25 *e*P **P 08 16 36.6 +0.4**
comp=Z,7.8nm,0.8s,mb5.2
EGMT Eagleton 93.62 23 *e*P **P 08 16 38.4 -0.7**
comp=Z,6.5nm,0.8s,mb5.1
TORD Torodi Ar. Bea 94.35 289 P **P 08 16 43.3 +0.3**
comp=Z,0.7nm,0.8s,mb4.2,baz=54,slow=4.0,SNR=9.4
DLMT Dillon 94.92 26 *e*P **P 08 16 47.2 +2.1**
comp=Z,6.2nm,1.1s,mb5.0
MCMT McKenzie Canyo 95.28 26 *e*P **P 08 16 50.3 +3.5**
comp=Z,3.1nm,1.1s,mb4.7
HLID Hailey 95.75 28 *e*P **P 08 16 49.7 +0.8**
comp=Z,3.0nm,1.0s,mb4.7
PDAR Pinedale Array 98.27 25 P **P 08 17 00.6 +0.2**
comp=Z,0.2nm,0.6s,baz=316,slow=5.1,SNR=3.6
RSSD Black Hills 98.90 21 *e*P **P 08 17 02.8 -0.4**
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb5.0
RSSD Black Hills 98.90 21 *e*P **P 08 17 02.8 -0.3**
comp=Z,4.0nm,0.9s,mb5.0
MCWV Mont Chateau 107.83 4 *e*PKPdf PKiKP 08 21 50.8 +0.4
JCT Junction City 112.71 24 *e*PKIKP PKiKP 08 22 01.0 +1.1
QSPA South Pole Qui 122.47 180 *e*PKPdf PKPdf 08 22 15.8 -1.2
ROSC El Rosal 142.65 360 PKP PKPdf 08 22 54.3 -2.5
comp=Z,3.7nm,0.8s,baz=123,slow=22,SNR=2.5
OTAV Otavalo 147.01 7 *e*PKPbc PKPbc 08 23 08.1 +1.8
CAM4 Nova Friburgo 150.05 282 ‖*i*P PKPdf 08 23 07.6 -1.4
CAM4 *i* 08 23 13.9
CAM4 *i* 08 23 19.2
CAM4 *i* 08 23 30.8
CAM4 *i* 08 23 34.0
LPAZ La Paz 162.70 339 PKP PKPdf 08 23 27.7 +2.2
comp=Z,2.0nm,1.0s,baz=38,slow=7.8,SNR=5.2
LPAZ La Paz 162.70 339 PKIKP PKPdf 08 23 27.7 +2.2
LPAZ pmax pmax
comp=Z,2.0nm,1.0s
CPUP Villa Florida 163.85 289 PKP PKPdf 08 23 27.0 +0.6
comp=Z,0.3nm,0.5s,baz=88,slow=20,SNR=2.9

*IDC **27** 08:06:25.6±1.2,3.°58S×100.°78E,h0km,mb4.5/15,*
mb1 4.5/17,mb1mx4.4/27,mbtmp4.5/17,ML4.3/2,MS4.5/2,
Ms1 4.4/2,ms1mx3.6/40,Error ellipse: s-maj=33.0km
s-min=20.0km az=37.0
*ISCJB **27** 08:06:29.5±0.9,3.°67S±0.°08×100.°75E±0.°08,h48km±7km,*
mb4.6/17,MS4.5/2,Error ellipse: s-maj=18.0km
s-min=6.1km az=42.7
*DJA **27** 08:06:29,3.°74S×100.°67E,h24km,Mw5.2/4*
*NEIC **27** 08:06:30.9±0.6,3.°58S×100.°80E,h35km,mb4.8/5,Error*
ellipse: s-maj=20.0km s-min=9.1km az=52.0
ISC 27 08:06:30.5±0.9,3.70S±0.°09×100.71E±0.°08,h38km±7km,
n57,σ0.92/48,mb4.6/17,MS4.5/2,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.16**	**323**	P	**Pn**	**08 06 49.6**	**-0.7**
KSI	**Kapahiang**	**1.88**	**89**	P	**Pn**	**08 07 00.6**	**+0.4**
MNAI	**Manna**	**2.34**	**106**	P	**Pn**	**08 07 07.1**	**+0.6**
PDSI	**Padang**	**2.78**	**355**	P	**Pn**	**08 07 11.5**	**-1.0**
SDSI	**Sungai Dareh**	**2.84**	**15**	P	**Pn**	**08 07 13.6**	**+0.2**
SISI	**Saibi**	**2.85**	**325**	P	**Pn**	**08 07 13.6**	**0.0**
PPI	**Padang Panjang**	**3.23**	**354**	P	**Pn**	**08 07 18.7**	**-0.1**
MDSI	**Maura Dua**	**3.55**	**103**	P	**Pn**	**08 07 23.5**	**+0.3**
LWLI	**Liwa**	**3.59**	**112**	P	**Pn**	**08 07 24.1**	**+0.4**
BKNI	**Bangkinang**	**4.01**	**5**	P	**Pn**	**08 07 33.2**	**+3.7**
KASI	**Kota Agung**	**4.19**	**116**	P	**Pn**	**08 07 31.7**	**-0.3**
MNSI	**Mandailing Nat**	**4.60**	**346**	P	**Pn**	**08 07 39.2**	**+1.5**
PPBI	**Pangkal Pinang** 39nm,0.7s,5μm0.7nm	**5.63**	**74**	P	**Pn**	**08 07 53.1**	**+1.3**
CGJI	**Cibinong** 208nm,0.6s,4μm	**5.75**	**120**	P	**Pn**	**08 07 52.1**	**-1.3**
GSI	**Gunungsitoli** 52nm,0.8s,2μm0.5nm	**5.87**	**328**	P	**Pn**	**08 07 56.9**	**+1.8**
MYKOM	**Kota Tinggi** 43nm,1.4s,650nm0.5nm	**6.29**	**30**	P	**Pn**	**08 08 01.8**	**+1.0**
PSI	**Prapat** 2.7nm,0.3s,baz=176,slow=9.7,SNR=11	**6.70**	**345**	Pn	**Pn**	**08 08 04.6**	**-1.9**
PSI	**Prapat**	**6.70**	**345**	Pn	**Pn**	**08 08 04.6**	**-1.9**
KULM	**Kulim** 25nm,0.9s	**8.93**	**360**	*e*Pn	**Pn**	**08 08 36.5**	**-0.6**
BSI	**Banda Aceh** 42nm,0.9s	**10.61**	**329**	P	**Pn**	**08 08 59.1**	**-1.1**
UGM	**Wanagama**	**10.62**	**114**	P	**Pn**	**08 09 00.6**	**+0.3**
KAPI	**Kappang** 1.8nm,0.3s,baz=278,slow=15,SNR=5.7	**19.03**	**95**	Pn	**Pn**	**08 10 48.9**	**-1.6**
KAPI	**Kappang** 50nm,0.9s	**19.03**	**95**	*e*P	**Pn**	**08 10 49.1**	**-1.5**
CMAR	**Chiang Mai Arr** 8.4nm,0.9s,mb4.2,baz=185,slow=7.7,SNR=6.2	**22.08**	**356**	P	**P**	**08 11 19.9**	**-2.6**
CMAR	**Chiang Mai Arr**	**22.08**	**356**	P	**P**	**08 11 19.9**	**-2.6**
FITZ	**Fitzroy Crossi** 16nm,0.6s,mb4.8	**28.30**	**122**	*e*P	**P**	**08 12 20.0**	**-0.8**
FITZ	**Fitzroy Crossi** 3.9nm,0.7s,mb4.2,baz=345,slow=2.0,SNR=5.6	**28.30**	**122**	P	**P**	**08 12 20.5**	**-0.3**
FITZ	**Fitzroy Crossi** 16nm,0.9s,mb4.7	**28.30**	**122**	*e*P	**P**	**08 12 20.6**	**-0.2**
GUMO	**Guam** 19nm,0.5s,mb5.3,baz=183,slow=18,SNR=2.8	**47.06**	**68**	P	**P**	**08 14 54.7**	**-4.3**
STKA	**Stephens Creek**	**47.51**	**131**	LR	LR	08 34 05.1	
KSRS	**Korea Array** 10nm,0.8s,mb4.9,baz=222,slow=9.0,SNR=8.3	**48.13**	**29**	P	**P**	**08 15 06.5**	**-0.3**
SONM	**Songino Array** 5.8nm,0.7s,mb4.6,baz=190,slow=8.9,SNR=4.4	**51.56**	**5**	P	**P**	**08 15 33.6**	**+0.9**
TKM2	**Tokmak 2**	**51.66**	**337**	*e*P	**P**	**08 15 34.4**	**+0.8**
AAK	**Ala-Archa** 1.5nm,0.4s,mb4.3,baz=231,slow=6.5,SNR=3.6	**51.87**	**336**	P	**P**	**08 15 35.7**	**+0.5**
EKS2	**Erkin-Say**	**52.19**	**335**	*e*P	**P**	**08 15 38.7**	**+1.2**
MKAR	**Makanchi Array** 7.1nm,0.8s,mb4.7,baz=139,slow=7.8,SNR=9.9	**52.84**	**344**	P	**P**	**08 15 42.8**	**+0.5**
MJAR	**Matsushiro Arr** 4.9nm,0.8s,mb4.5,baz=220,slow=7.3,SNR=12	**53.16**	**38**	P	**P**	**08 15 43.7**	**-1.2**
KURK	**Kurchatov** 5.8nm,0.8s,mb4.7,baz=167,slow=6.5,SNR=6.9	**57.42**	**344**	P	**P**	**08 16 14.9**	**-0.4**
KURK	**Kurchatov** 22nm,1.1s,mb5.1	**57.42**	**344**	*e*P	**P**	**08 16 14.8**	**-0.6**
ZAA0	**Zalesovo Array**	**58.95**	**349**	*e*P	**P**	**08 16 26.0**	**+0.1**
ZALV	**Zalesovo Beam** 5.2nm,0.4s,mb5.0,baz=160,slow=4.7,SNR=12	**58.95**	**349**	P	**P**	**08 16 26.1**	**+0.1**
BVAR	**Borovoye Array** 6.4nm,0.7s,mb4.9,baz=146,slow=8.5,SNR=9.8	**62.01**	**340**	P	**P**	**08 16 46.3**	**-0.5**
BRVK	**Borovoye** 7.0nm,0.8s,mb4.8	**62.07**	**340**	*e*P	**P**	**08 16 46.3**	**-1.0**
MMAI	**Mount Meron Ar** 1.2nm,0.3s,mb4.2,baz=160,slow=4.6,SNR=4.3	**71.60**	**306**	P	**P**	**08 17 49.2**	**+0.8**
PETK	**Petropavlovsk-** 1.8nm,0.7s,mb4.1,baz=149,slow=3.0,SNR=3.1	**73.94**	**32**	P	**P**	**08 18 01.8**	**0.0**
BR131	**Keskin Array S** 1.6nm,0.6s,mb4.1	**74.98**	**313**	*e*P	**P**	**08 18 08.2**	**+0.1**
BRTR	**Keskin Array B** 2.2nm,0.8s,mb4.2,baz=110,slow=6.1,SNR=3.8	**74.98**	**313**	P	**P**	**08 18 08.1**	**-0.1**
BOSA	**Boshof** comp=Z,260nm,19.8s,MS4.5,baz=334,slow=30	**75.47**	**242**	LR	LR	08 44 08.2	
FINES	**FINESS Array B** 2.2nm,0.8s,mb4.4,baz=298,slow=3.0,SNR=3.6	**85.93**	**332**	P	**P**	**08 19 07.2**	**+0.7**
ARCES	**ARCESS Array B** 1.8nm,0.7s,mb4.4,baz=76,slow=5.1,SNR=4.2	**88.30**	**340**	P	**P**	**08 19 18.1**	**+0.4**
NVAR	**Mina Array Bea** 0.6nm,0.7s,baz=258,slow=0.8,SNR=4.8	**130.44**	**41**	PKP	PKPdf	08 25 40.5	+3.0
WCI	**Wyandotte Cave**	**145.04**	**10**	*e*PKPdf	PKPdf	08 26 02.4	-1.9
TXAR	**Lajitas Array** 12nm,0.7s,baz=282,slow=1.2,SNR=89	**145.58**	**40**	PKPbc	PKPbc	08 26 07.0	+1.3
MIAR	**Mount Ida**	**146.56**	**22**	*e*PKPdf	PKPdf	08 26 08.4	+1.4
WVT	**Waverly**	**146.78**	**13**	*e*PKPdf	PKPdf	08 26 08.1	+0.8
JCT	**Junction City**	**147.06**	**34**	*e*PKPdf	PKPdf	08 26 09.2	+1.1
JCT				*e*PKPbc	PKPbc	08 26 10.7	+0.6
PLAL	**Pickwick Lake**	**147.82**	**14**	*e*PKPdf	PKPdf	08 26 10.6	+1.4

*IDC **27** 08:12:05.5±1.0,32.°70N×105.°01E,h0km,mb3.9/6,*
mb1 4.1/9,mb1mx3.8/28,mbtmp3.9/9,ML3.8/2,Error
ellipse: s-maj=34.7km s-min=20.7km az=54.0
*BJI **27** 08:12:06.9,32.°70N×105.°57E,h15km,ML4.3/10,Ms4.1/3,*
Ms7 3.7/3
*NEIC **27** 08:12:07.1±0.7,32.°66N×104.°96E,h10km,mb4.7/3,Error*
ellipse: s-maj=25.2km s-min=12.3km az=81.0
ISC 27 08:12:07.2±1.3,32.78N±0.°04×105.25E±0.°08,h7km±9km,
n18,σ1.10/24,mb4.0/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.26**	**215**	Pn	**Pn**	**08 12 45.5**	**+0.5**
CD2				Pg	**Pg**	**08 12 49.0**	**-1.5**
CD2				Sg	**Sg**	**08 13 21.3**	**+1.6**
CD2				smax			
	comp=N,2μm,0.7s						
XAN	**Xi'an**	**3.31**	**67**	Pg	**Pn**	**08 13 00.3**	**+0.8**
XAN				Sg	**Sn**	**08 13 38.8**	**-0.4**
XAN				smax			
	comp=N,600nm,0.9s						
XAN				smax			
	comp=E,310nm,1.0s						
LZH	**Lanzhou**	**3.50**	**341**	*e*Pn	**Pn**	**08 13 04.0**	**+1.9**
LZH				Pg	**Pg**	**08 13 13.3**	**-0.9**
LZH				Sn	**Sn**	**08 13 50.0**	**+6.3**
LZH				Sg	**Sg**	**08 13 59.8**	**+0.2**
LZH				smax			
	comp=N,690nm,0.5s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=E,2μm,5.4s						
LZH				LR	LR		
	comp=Z,3μm,7.6s						
GYA	**Guiyang**	**6.42**	**169**	Pn	**Pn**	**08 13 38.3**	**-3.9**
GYA				smax			
	comp=N,150nm,0.8s						
GYA				smax			
	comp=E,220nm,0.8s						
SONM	**Songino Array**	**15.06**	**3**	Pn	**Pn**	**08 15 41.0**	**+0.6**
	comp=E,0.5nm,0.3s,baz=180,slow=9.4,SNR=7.8						
SONM	**Songino Array**	**15.06**	**3**	Pn	**Pn**	**08 15 41.0**	**+0.6**
ULN	**Ulaanbaatar**	**15.13**	**5**	*e*P	**Pn**	**08 15 34.5**	**-6.9**
	comp=E,23nm,1.0s						
CMAR	**Chiang Mai Arr** baz=11,slow=9.9,SNR=2.6	**15.35**	**203**	Pn	**Pn**	**08 15 40.5**	**-3.8**
KSRS	**Korea Array** comp=E,0.2nm,0.3s,baz=196,slow=36,SNR=3.1	**19.11**	**70**	P	**Pn**	**08 16 31.6**	**+0.2**
MKAR	**Makanchi Array** comp=E,2.0nm,0.6s,mb3.8,baz=115,slow=12,SNR=5.4	**22.41**	**315**	P	**P**	**08 17 06.3**	**0.0**
KURK	**Kurchatov** comp=E,0.8nm,0.5s,mb3.5,baz=122,slow=10,SNR=5.1	**26.54**	**320**	P	**P**	**08 17 45.7**	**+0.3**
KURK	**Kurchatov** comp=E,35nm,1.4s,mb4.7	**26.54**	**320**	*e*P	**P**	**08 17 45.2**	**-0.2**
FINES	**FINESS Array B** comp=E,1.9nm,0.5s,mb4.3,baz=95,slow=8.8,SNR=9.8	**56.73**	**326**	P	**P**	**08 21 49.7**	**-1.6**
FINES	**FINESS Array B**	**56.73**	**326**	P	**P**	**08 21 49.7**	**-1.6**
WRAB	**Tennant Creek** comp=E,4.9nm,0.9s,mb4.5	**59.34**	**148**	*e*P	**P**	**08 22 10.2**	**+0.1**
ASAR	**Alice Springs** comp=E,0.7nm,0.4s,mb4.1,baz=333,slow=6.2,SNR=10	**62.44**	**150**	P	**P**	**08 22 31.1**	**+0.1**
NOA	**NORSAR Array B** comp=E,0.6nm,0.6s,mb3.8,baz=131,slow=4.2,SNR=2.5	**63.78**	**327**	P	**P**	**08 22 36.9**	**-2.7**
YKA	**Yellowknife Ar** comp=E,0.5nm,0.7s,mb3.5,baz=332,slow=5.3,SNR=4.1	**79.81**	**18**	P	**P**	**08 24 17.0**	**+1.1**

*NEIC **27** 08:13:04.6,17.°24N×100.°00W,h44km,MD3.7(MEX),After*
MEX.
MEX 27 08:13:04.6±1.3,17.24N×100.00W,h44km±17km,MD3.7,
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.32**	**233**	*i* P	Pn	08 13 11.7	-1.7
CAIG				*i* S	Sn	08 13 18.1	-1.4
CAIG	**El Cayaco**	**0.32**	**233**	*i* P	Pn	08 13 11.7	-1.7
CAIG				*i* S	Sn	08 13 18.1	-1.4
ACX	**Acapulco**	**0.38**	**168**	*i* P	Pn	08 13 12.2	-1.8
ACX				*i* S	Sn	08 13 18.8	-1.9
ACX	**Acapulco**	**0.38**	**168**	*i* P	Pn	08 13 12.2	-1.8
ACX				*i* S	Sn	08 13 18.8	-1.9
PLIG	**Platanillo**	**1.24**	**22**	*i* P	Pn	08 13 23.9	-1.6
PLIG				*i* S	Sn	08 13 39.4	-1.7
PLIG	**Platanillo**	**1.24**	**22**	*i* P	Pn	08 13 23.9	-1.6
PLIG				*i* S	Sn	08 13 39.4	-1.7
ZIIG	**Zihuatanejo**	**1.45**	**285**	*i* P	Pn	08 13 25.6	-2.7
ZIIG				*i* S	Sn	08 13 45.7	-0.3
ZIIG	**Zihuatanejo**	**1.45**	**285**	*i* P	Pn	08 13 25.6	-2.7
ZIIG				*i* S	Sn	08 13 45.7	-0.3
PNIG	**Pinotepa**	**1.98**	**115**	*i* P	Pn	08 13 35.2	-0.5
PNIG				*i* S	Sn	08 13 58.9	-0.4
PNIG	**Pinotepa**	**1.98**	**115**	*i* P	Pn	08 13 35.2	-0.5
PNIG				*i* S	Sn	08 13 58.9	-0.4
MZVM		**2.07**	**21**	*i* P	Pn	08 13 36.0	-0.9
MZVM				*i* S	Sn	08 13 59.8	-1.7
UTMO	**Huajuapan**	**2.17**	**74**	*i* P	Pn	08 13 37.6	-0.7
UTMO				*i* S	Sn	08 14 03.

BJI 27 08:30:07.7, 32°.67N×105°.62E, h16km, ML3.6/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.37**	**223**	Pn	Pn	08 30 46.3	+0.5
CD2				Pg	Pg	08 30 50.5	-2.6
CD2				Sg	Sg	08 31 22.0	-1.8
CD2				smax			
	comp=N,400nm,0.7s						
XAN	**Xi'an**	**3.08**	**63**	Pn	Pn	08 30 55.8	+0.1
XAN				Pg	Pg	08 31 00.5	-6.3
XAN				Sn	Sn	08 31 32.5	+0.3
XAN				Sg	Sg	08 31 38.8	-7.9
XAN				smax			
	comp=N,70nm,0.5s						
XAN				smax			
	comp=E,51nm,0.9s						
LZH	**Lanzhou**	**3.71**	**337**	*e*Pg	Pg	08 31 11.0	-7.8
LZH				Sg	Sg	08 31 58.3	-8.6
LZH				smax			
	comp=N,110nm,0.5s						
LZH				smax			
	comp=E,170nm,0.7s						
KMI	**Kunming**	**7.93**	**199**	Pg	Pn	08 31 47.0	-15
KMI				Sg		08 32 11.0	
KMI				smax			
	comp=N,19nm,0.7s						
KMI				smax			
	comp=E,26nm,0.7s						

*IDC **27** 08:35:30.9±2.5, 53°.51N×87°.87E, h0km, mb1 3.4/3, mb1mx3.2/28, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=23.2km s-min=13.5km az=56.0*
*NNC **27** 08:35:34.8±2.4, 53°.42N×87°.43E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=18.8km s-min=15.3km az=13.0*

ISC 27 08:35:35.8±2.0, 53°.60N±0°.08×87°.7E±0°.2, h35km, n7, σ0s57/13, 5C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.73**	**283**	Pn	Pn	08 36 02.9	-0.4
	3.5nm,0.3s,baz=103,slow=14,SNR=34						
ZALV				Lg		08 36 27.6	
	8.4nm,0.3s,baz=114,slow=29,SNR=26						
KURK	**Kurchatov**	**6.27**	**246**	⇑Pn	Pn	08 37 05.9	+0.2
	1.4nm,0.6s						
KURK				⇑Sn	Sn	08 38 16.0	+0.1
	2.7nm,0.6s						
KURK				⇑Lg		08 38 51.4	
	5.4nm,0.7s						
KURK	**Kurchatov**	**6.27**	**246**	Pn	Pn	08 37 07.3	+1.7
	0.5nm,0.3s,baz=62,slow=14,SNR=60						
KURK				Sn	Sn	08 38 21.6	+5.7
	0.2nm,0.3s,baz=7.5,slow=6.0,SNR=5.6						
KURK				Lg		08 38 56.5	
	0.1nm,0.3s,baz=62,slow=32,SNR=4.0						
KURBB	**Kurchatov Arra**	**6.37**	**246**	⇓Pn	Pn	08 37 07.2	+0.2
	0.6nm,0.4s						
KURBB				⇑Sn	Sn	08 38 18.9	+0.6
	0.9nm,0.6s						
KURBB				⇓Lg		08 38 53.4	
	1.9nm,0.6s						
MK31	**Makanchi Array**	**7.63**	**209**	⇑Pn	Pn	08 37 24.4	0.0
	0.4nm,0.5s,baz=31,slow=14,SNR=15						
MK31				⇓Sn	Sn	08 38 49.8	+0.3
	1.2nm,0.8s,baz=27,slow=23,SNR=5.0						
MK31				⇓Lg		08 39 31.3	
	1.2nm,0.6s,baz=27,slow=34,SNR=2.7						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	Pn	08 37 23.9	-0.5
	0.4nm,0.3s,baz=30,slow=14,SNR=19						
MKAR				Sn	Sn	08 38 48.9	-0.7
	0.2nm,0.3s,baz=30,slow=26,SNR=11						
MKAR				Lg		08 39 36.4	
	0.2nm,0.3s,baz=26,slow=33,SNR=3.7						
BVAR	**Borovoye Array**	**10.36**	**274**	Pn	Pn	08 38 02.1	+0.4
	0.2nm,0.3s,baz=81,slow=15,SNR=2.9						
BVAR				Sn	Sn	08 39 55.6	-0.8
	0.4nm,0.3s,baz=83,slow=25,SNR=3.7						

*IDC **27** 08:37:49.6±0.3, 32°.73N×105°.66E, h0km, mb5.4/47, mb1 5.4/50, mb1mx5.4/50, mbtmp5.3/50, ML4.6/3, MS5.0/35, Ms1 5.0/35, ms1mx5.0/42, Error ellipse: s-maj=11.2km s-min=7.5km az=51.0*
*MOS **27** 08:37:50.9±0.9, 32°.72N×105°.56E, h18km, mb5.6/126, MS5.2/105, Error ellipse: s-maj=5.9km s-min=3.2km az=120.6*
*NEIC **27** 08:37:51.5±0.1, 32°.71N×105°.54E, h10km, mb5.5/230, MS5.2/173, MW5.7, Error ellipse: s-maj=2.9km s-min=2.2km az=201.0*
NEIC About 20,000 additional houses destroyed in Shaanxi and Sichuan. Felt [III] at Chengdu and Xi'an. Also felt at Baoji, Chongqing, Hanzhong, Lanzhou, Pingliang and Xianyang.
*BJI **27** 08:37:51.3, 32°.78N×105°.70E, h15km, mB5.6/22, mb5.4/37, ML5.7/22, Ms5.7/79, Ms7 5.6/46*
*GCMT **27** 08:37:51.5±0.1, 32°.74N×105°.66E, h24km, MW5.5/99, Moment Tensor Solution. s81,c138; s99,c240; Duration: 1s3 Moment tensor: Scale 10^17^Nm; M_{rr}-0.15±.03; $M_{\theta\theta}$0.31±.02; $M_{\phi\phi}$-0.15±.03; $M_{r\theta}$-0.54±.04; $M_{\theta\phi}$-1.87±.03; $M_{\phi r}$-0.65±.04; Best double couple: $M_0$2.06200×10^17^ NP1:ϕ_s89.00000°, δ73.00000°, λ-164.00000°. NP2:ϕ_s354.00000°, δ75.00000°, λ-17.00000°. Principal axes: T 1.9620, Plg1.0000°, Azm42.0000°; N 0.1990, Plg67.0000°, Azm134.0000°; P -2.1610, Plg23.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*ISCJB **27** 08:37:51.0±0.1, 32°.71N±0°.02×105°.49E±0°.02, h17km, mb5.4/329, MS5.2/235 Error ellipse: s-maj=2.3km s-min=1.9km az=12.1*
*TEH **27** 08:37:52.0, 32°.73N×105°.62E, h10km*
*DJA **27** 08:37:55, 32°.75N×105°.61E, h25km, Mw5.9/30*
*SZGRF **27** 08:37:57.5, 32°.45N×104°.97E, h33km, mb5.8, MS5.5, Sichuan, China*

ISC 27 08:37:51.1±0.5, 32°.74N±0°.02×105°.56E±0°.01, h6km±3km, h13km±2.0km: pP-P, n1275, σ0s88/1197, mb5.4/329, MS5.2/235, 113C-161D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.38**	**220**	Pn	Pn	08 38 31.0	+0.4
CD2				Pg	Pg	08 38 36.0	-0.8
CD2				Sg	Sg	08 39 08.0	+0.3
CD2				smax			
	comp=N,160μm,0.8s						
XAN	**Xi'an**	**3.10**	**64**	Pn	Pn	08 38 40.8	+0.3
XAN				Pg	Pg	08 38 48.5	-2.0
XAN				Sn	Sn	08 39 19.3	+1.5
XAN				Sg	Sg	08 39 29.5	-1.2
XAN				smax			
	comp=N,34μm,0.8s						
XAN				smax			
	comp=E,21μm,1.1s						
LZH	**Lanzhou**	**3.62**	**337**	*e*Pn	Pn	08 38 50.5	+2.8
LZH				Sn	Sn	08 39 38.0	+7.2
LZH				Sg	Sg	08 39 46.8	-0.7
LZH				smax			
	comp=N,66μm,1.0s						
LZH				smax			
	comp=E,91μm,1.1s						
LZH				LR	LR		
	comp=E,117μm,5.2s						
LZH				LR	LR		
	comp=Z,121μm,6.5s						
GYA	**Guiyang**	**6.33**	**171**	Pn	Pn	08 39 25.3	+0.3
GYA				smax			
	comp=N,8μm,0.9s						
GYA				smax			
	comp=E,12μm,0.9s						
GYA				LR	LR		
	comp=N,51μm,10.2s						
GYA				LR	LR		
	comp=E,88μm,10.1s						
GYA				LR	LR		
	comp=Z,59μm,10.9s						
TIY	**Taiyuan**	**7.50**	**47**	*e*Pn	Pn	08 39 38.5	-2.4
TIY				Sn	Sn	08 41 01.3	-5.0
TIY				LR	LR		
	comp=N,22μm,5.1s						
TIY				LR	LR		
	comp=E,15μm,6.3s						
TIY				LR	LR		
	comp=Z,9μm,6.1s						
WHN	**Wuhan**	**7.81**	**104**	Pn	Pn	08 39 44.0	-1.3
WHN				Sn	Sn	08 41 10.0	-4.0
WHN				LR	LR		
	comp=Z,124μm,4.4s						
KMI	**Kunming**	**7.98**	**199**	P	Pn	08 39 47.5	-0.1
KMI				S	Sn	08 41 15.5	-2.7
KMI				smax			
	comp=N,2μm,1.6s						
KMI				smax			
	comp=E,2μm,1.7s						
KMI				LR	LR		
	comp=N,33μm,7.6s						
KMI				LR	LR		
	comp=E,37μm,7.2s						
KMI				LR	LR		
	comp=Z,20μm,8.0s						
GTA	**Gaotai**	**8.12**	**327**	⇓P	Pn	08 39 50.0	+0.6
GTA				pP		08 39 53.8	
GTA				S	Sn	08 41 23.3	+1.9
GTA				pmax	pmax		
	comp=Z,350nm,0.9s						
GTA				pmax	pmax		
	comp=Z,700nm,5.4s						
GTA				LR	LR		
	comp=N,63μm,13.5s						
GTA				LR	LR		
	comp=E,59μm,9.0s						
GTA				LR	LR		
	comp=Z,68μm,9.9s						
BTO	**Baotou**	**8.63**	**23**	*e*P	Pn	08 39 55.5	-0.9
BTO				S	Sn	08 41 30.5	-3.5
BTO				LR	LR		
	comp=N,8μm,7.5s						
BTO				LR	LR		
	comp=E,8μm,9.0s						
HHC	**Hu-ho-hao-te**	**9.41**	**29**	*e*P	Pn	08 40 06.8	-0.4
HHC				pP		08 40 13.8	
HHC				sP		08 40 18.5	
HHC				S	Sn	08 41 51.5	-1.8
HHC				sS		08 42 02.3	
HHC				pmax	pmax		
	comp=Z,78nm,1.3s						
HHC				pmax	pmax		
	comp=Z,900nm,5.4s						
HHC				LR	LR		
	comp=N,26μm,5.8s						
HHC				LR	LR		
	comp=E,20μm,5.2s						
HHC				LR	LR		
	comp=Z,18μm,6.0s						
TIA	**Tai'an**	**10.16**	**67**	*e*P	Pn	08 40 17.8	+0.4
TIA				S	Sn	08 42 19.8	+8.2
TIA				LR	LR		
	comp=N,22μm,9.0s						
TIA				LR	LR		
	comp=E,15μm,9.0s						
BJI	**Beijing**	**11.23**	**47**	P	Pn	08 40 32.3	+0.2
BJI				pmax	pmax		
	comp=Z,62nm,1.0s						
BJI				pmax	pmax		
	comp=Z,360nm,3.5s						
BJI				LR	LR		
	comp=N,28μm,25.9s						
BJI				LR	LR		
	comp=E,26μm,25.9s						
NJ2	**Nanjing**	**11.26**	**90**	*e*P	Pn	08 40 32.0	-0.6
NJ2				pP		08 40 36.3	
NJ2				sP		08 40 37.8	
NJ2				PP		08 40 41.3	
NJ2				S	Sn	08 42 37.3	-1.5
NJ2				pmax	pmax		
	comp=Z,60nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,780nm,4.3s						
NJ2				LR	LR		
	comp=N,16μm,9.4s						
NJ2				LR	LR		
	comp=E,23μm,10.2s						
GZH	**Guangzhou**	**11.82**	**142**	P	Pn	08 40 34.3	-6.0
GZH				S	Sn	08 42 37.0	-16
GZH				LR	LR		
	comp=N,52μm,8.9s						
GZH				LR	LR		
	comp=E,44μm,8.8s						
GZH				LR	LR		
	comp=Z,82μm,9.7s						
LSA	**Lhasa**	**12.70**	**260**	P	Pn	08 40 54.8	+2.6
LSA				S	Sn	08 43 15.0	+1.1
LSA				LR	LR		
	comp=N,18μm,20.6s						
LSA				LR	LR		
	comp=E,15μm,10.3s						
LSA				LR	LR		
	comp=Z,16μm,11.0s						
HKC	**Hong Kong Obse**	**12.90**	**142**	P	Pn	08 40 58.0	+3.0
IMP	**Imphal**	**12.91**	**235**	*e*P	Pn	08 40 53.0	-2.1
IMP				*ex*	x	08 41 07.0	
SSE	**Sheshan**	**13.38**	**93**	P	Pn	08 41 00.5	-1.0
SSE				S	Sn	08 43 29.8	-0.8
SSE				pmax	pmax		
	comp=Z,40nm,0.8s						
SSE				pmax	pmax		
	comp=Z,520nm,9.4s						
SSE				LR	LR		
	comp=N,33μm,14.1s						
SSE				LR	LR		
	comp=E,12μm,14.2s						
SSE				LR	LR		
	comp=Z,28μm,9.8s						
QZH	**Quanzhou**	**13.81**	**121**	⇓*i*P	Pn	08 41 06.8	-0.6
QZH				S	Sn	08 43 41.5	+0.4
QZH				LR	LR		
	comp=N,60μm,7.6s						
QZH				LR	LR		
	comp=E,41μm,5.5s						
QZH				LR	LR		
	comp=Z,64μm,11.5s						
SHL	**Shillong**	**13.91**	**243**	⇓*i*P	Pn	08 41 07.0	-1.8
SHL				*ex*	x	08 45 08.0	
QIZ	**Qiongzhong**	**14.19**	**163**	P	Pn	08 41 09.8	-2.8
QIZ				pmax	pmax		
	comp=Z,110nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,720nm,9.4s						
QIZ				LR	LR		
	comp=N,29μm,12.4s						
QIZ				LR	LR		
	comp=Z,43μm,11.7s						
DL2	**Dalian**	**14.41**	**60**	P	Pn	08 41 17.5	+2.0
DL2				S	Sn	08 43 59.0	+3.4
DL2				pmax	pmax		
	comp=Z,190nm,1.3s						
DL2				pmax	pmax		
	comp=Z,660nm,6.2s						
DL2				LR	LR		
	comp=N,10μm,17.4s						
DL2				LR	LR		
	comp=E,8μm,16.9s						
DL2				LR	LR		
	comp=Z,9μm,12.9s						
CHG	**Chiang Mai**	**15.09**	**205**	⇑P	Pn	08 41 24.1	-0.7
	comp=Z,342nm,0.9s						
SONM	**Songino Array**	**15.09**	**2**	Pn	Pn	08 41 25.0	+0.3
	comp=Z,1.5nm,0.3s,baz=179,slow=11,SNR=48						
SONM				Lg		08 45 48.8	
	comp=Z,2.6nm,0.3s,baz=174,slow=28,SNR=4.0						
SONM				LR	LR	08 47 36.3	
	comp=Z,8μm,18.6s,baz=182,slow=39						
TURI	**Tura**	**15.10**	**246**	*e*P	Pn	08 41 25.0	0.0
TURI				*ex*	x	08 42 35.0	
ULN	**Ulaanbaatar**	**15.15**	**4**	*e*P	Pn	08 41 24.2	-1.3
ULN				pmax	pmax		
	comp=Z,149nm,1.0s						
ULN	**Ulaanbaatar**	**15.15**	**4**	*e*P	Pn	08 41 24.1	-1.3
	comp=Z,149nm,1.0s						
ULN	**Ulaanbaatar**	**15.15**	**4**	Pn	Pn	08 41 24.5	-1.0
ULN	SNR=84						
				Pn	Pn	08 41 24.5	-1.0
ULN	SNR=84						
CM31	**Chiang Mai Arr**	**15.42**	**204**	*e*P	Pn	08 41 29.4	+0.3
	comp=Z,103nm,0.8s						
CMAR	**Chiang Mai Arr**	**15.42**	**204**	Pn	Pn	08 41 29.1	0.0
	comp=Z,1.0nm,0.3s,baz=14,slow=11,SNR=169						
CMAR				PcP	PcP	08 46 33.6	+0.4
	comp=Z,1.1nm,0.3s,baz=311,slow=2.8,SNR=4.9						
CMAR				LR	LR	08 48 18.2	
	comp=Z,4μm,18.9s,baz=21,slow=41						
CMAR				ScP	ScP	08 50 06.5	-1.4
	comp=Z,0.5nm,0.3s,baz=328,slow=2.6,SNR=6.7						
TATO	**Taipei**	**15.95**	**115**	*e*P	Pn	08 41 41.2	+5.1
	comp=Z,300nm,0.9s						
TATO	**Taipei**	**15.95**	**115**	Pn	Pn	08 41 42.3	+6.2
	SNR=6.9						
TATO				Pn	Pn	08 41 42.3	+6.2
	SNR=6.9						
YHNB	**Yeheng**	**16.03**	**116**	*e*P	Pn	08 41 39.4	+2.2
	comp=Z,475nm,0.8s						
SSLB	**Suanglung**	**16.22**	**119**	*e*P	Pn	08 41 40.6	+1.0
	comp=Z,488nm,0.9s						
TPUB	**Ta-pu**	**16.28**	**121**	*e*P	Pn	08 41 40.4	0.0
	comp=Z,185nm,0.9s						
TAPN	**Taplejung**	**16.36**	**255**	*e*P	Pn	08 41 40.2	-1.1
	comp=Z,914nm,1.1s						
NACB	**Ninganchiao**	**16.47**	**117**	*e*P	Pn	08 41 43.9	+1.1
	comp=Z,150nm,0.8s						
KKTK	**Khon Kaen**	**16.52**	**189**	P	Pn	08 41 43.1	-0.3
	comp=Z,926nm,0.8s						
YULB	**Yu-li**	**16.71**	**120**	*e*P	Pn	08 41 47.9	+2.0
	comp=Z,179nm,0.9s						
ODAN	**Odare**	**16.81**	**254**	*e*P	Pn	08 41 46.0	-1.1
TWG	**Pinlang**	**16.90**	**122**	*e*P	Pn	08 41 49.7	+1.5
	comp=Z,264nm,1.0s						
SNY	**Shenyang**	**16.94**	**53**	⇑P	Pn	08 41 49.5	+0.8
SNY				S	Sn	08 44 55.3	-1.9
SNY				pmax	pmax		
	comp=Z,90nm,1.9s						
SNY				pmax	pmax		
	comp=Z,2μm,5.0s						
SNY				LR	LR		
	comp=N,9μm,12.8s						
SNY				LR	LR		
	comp=E,8μm,15.3s						
SNY				LR	LR		
	comp=Z,11μm,16.1s						
RAMN	**Ramite**	**17.42**	**256**	*e*P	Pn	08 41 52.8	-1.9
	comp=Z,780nm,0.9s						
UBT	**Ubonrachathani**	**17.43**	**182**	P	Pn	08 41 57.0	+2.2
GUN	**Gumba**	**17.65**	**259**	*e*P	Pn	08 41 56.4	-1.2
	comp=Z,970nm,0.9s						
NST	**Nakhon Sawan**	**17.69**	**197**	P	Pn	08 41 58.1	-0.1
	comp=Z,124nm,0.8s						
ZAK	**Zakamensk**	**17.71**	**355**	*e*P	Pn	08 41 58.6	+0.5
ZAK				*e*		08 45 19.6	
ZAK				pmax	pmax		
	comp=Z,90nm,1.3s						
WMQ	**Urumqi**	**17.82**	**313**	P	Pn	08 42 00.0	+0.4
WMQ				pP	pP	08 42 03.0	+0.9
WMQ				S	Sn	08 45 16.0	-2.4
WMQ				SS		08 45 38.5	
WMQ				PcP	PcP	08 46 37.5	+1.0
WMQ				pmax	pmax		
	comp=Z,180nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,2μm,3.6s						
WMQ				LR	LR		
	comp=N,2μm,6.0s						
WMQ				LR	LR		
	comp=E,2μm,6.0s						
WMQ				LR	LR		
	comp=Z,7μm,17.0s						
INCN	**Inchon**	**17.87**	**69**	*e*P	Pn	08 42 01.2	+0.9
	comp=Z,623nm,1.8s						
INCN	**Inchon**	**17.87**	**69**	Pn	Pn	08 42 01.8	+1.5
	SNR=17						
INCN				Pn	Pn	08 42 01.8	+1.5
	SNR=17						
PKI	**Pulchoki**	**18.16**	**259**	*e*P	Pn	08 42 02.2	-1.7
	comp=Z,221nm,0.6s						
PKI	**Pulchoki**	**18.16**	**259**	*e*P	Pn	08 42 02.2	-1.7
PKI				pmax	pmax		
	comp=Z,221nm,0.6s						
KKN	**Kakani**	**18.19**	**260**	*e*P	Pn	08 42 03.0	-1.3
	comp=Z,678nm,1.0s						
KKN	**Kakani**	**18.19**	**260**	*e*P	Pn	08 42 03.0	-1.3
KKN				pmax	pmax		
	comp=Z,678nm,1.0s						
CAL	**Calcutta**	**18.31**	**241**	*e*P	Pn	08 42 04.1	-1.7
CAL				*e*S	Sn	08 45 31.1	+0.5
DMN	**Daman**	**18.40**	**259**	*e*P	Pn	08 42 05.0	-1.8
	comp=Z,717nm,0.9s						
KSRS	**Korea Array**	**18.88**	**69**	P	Pn	08 42 11.4	-1.2
	comp=Z,2.9nm,0.3s,baz=257,slow=11,SNR=98						
KSRS				Lg		08 47 47.7	
	baz=269,slow=28,SNR=4.8						
KSRS				LR	LR	08 49 21.3	
	comp=Z,3μm,18.5s,baz=263,slow=37						
KSRS	**Korea Array**	**18.88**	**69**	P	Pn	08 42 11.5	-1.2
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,3μm,18.5s						
TLY	**Talaya**	**18.98**	**356**	Pn	Pn	08 42 14.6	+1.0
	comp=Z,424nm,1.3s,SNR=13						
TLY	**Talaya**	**18.98**	**356**	*e*P	Pn	08 42 14.0	+0.4
TLY				*e*S	Sn	08 45 41.3	-4.9
TLY				pmax	pmax		
	comp=Z,171nm,1.6s						
TLY				MLR	MLR		
	comp=Z,4μm,12.0s						
TLY	**Talaya**	**18.98**	**356**	*e*P	Pn	08 42 14.4	+0.8
	comp=Z,168nm,1.4s						
TLY	**Talaya**	**18.98**	**356**	P	Pn	08 42 14.7	+1.0
	SNR=41						
TLY				P		08 42 14.7	
	SNR=41						
CN2	**Changchun**	**19.08**	**49**	*e*P	Pn	08 42 15.0	+0.1
CN2				*es*P	sP	08 42 22.0	+5.2
CN2				*e*S	Sn	08 45 43.0	-5.8
CN2				pmax	pmax		
	comp=Z,120nm,0.8s						
CN2				LR	LR		
	comp=N,8μm,14.0s						
CN2				LR	LR		
	comp=E,9μm,14.0s						
CN2				LR	LR		
	comp=Z,11μm,16.0s						
BBP	**Basco**	**19.09**	**126**	*e*P	Pn	08 42 15.7	+0.5
MOY	**Mondy**	**19.20**	**351**	*e*P	Pn	08 42 16.5	+0.1
MOY				pmax	pmax		
	comp=Z,244nm,2.8s						
IRK	**Irkutsk**	**19.51**	**358**	⇑*i*P	Pn	08 42 20.3	+0.2
IRK				pmax	pmax		
	comp=Z,406nm,2.4s						
PIP	**Pasuquin**	**19.73**	**133**	⇓*e*P	Pn	08 42 23.0	0.0
CIT	**Chita**	**20.13**	**14**	*e*P	P	08 42 27.5	+1.9
CIT				*e*		08 42 43.2	
CIT				*e*		08 42 56.6	
CIT				pmax	pmax		
	comp=Z,269nm,2.2s						
APYP	**Conner**	**20.47**	**133**	*e*P	P	08 42 31.5	+2.0
JOW	**Kunigami**	**20.56**	**101**	P	P	08 42 30.3	-0.2
	comp=Z,108nm,0.6s,baz=285,slow=7.4,SNR=14						
JOW				LR	LR	08 50 39.4	
	comp=Z,4μm,20.2s,MS4.8,baz=128,slow=38						
JOW	**Kunigami**	**20.56**	**101**	P	P	08 42 30.3	-0.2
JOW				LR	LR	08 50 39.4	
BOLP	**Bolinao**	**20.84**	**138**	*e*P	P	08 42 39.9	+6.3
BCPH	**Baguio City Da**	**21.22**	**137**	⇓*e*P	P	08 42 38.4	+0.8
CAUP	**Cauayan**	**21.52**	**133**	*e*P	P	08 42 43.2	+2.2
PTH	**Pithoragarh**	**21.90**	**268**	*e*P	P	08 42 46.0	+1.0
PTH				*ex*	x	08 46 09.0	
MDJ	**Mudanjiang**	**22.11**	**51**	P	P	08 42 48.0	+1.0
MDJ				pP		08 42 51.0	
MDJ				sP	sP	08 42 52.3	+2.7
MDJ				S	S	08 46 52.5	+1.5
MDJ				sS	sS	08 46 58.0	+4.1
MDJ				ScP	ScP	08 50 22.3	+0.1
MDJ				pmax	pmax		
	comp=Z,230nm,1.5s,mb5.4						
MDJ				pmax	pmax		
	comp=Z,680nm,5.3s						
MDJ				LR	LR		
	comp=N,7μm,15.0s,MS5.3						
MDJ				LR	LR		
	comp=E,6μm,15.0s,MS5.3						
MDJ				LR	LR		
	comp=Z,5μm,11.9s,MS5.2						
MK31	**Makanchi Array**	**22.62**	**315**	*e*P	P	08 42 52.7	+0.3
MKAR	**Makanchi Array**	**22.62**	**315**	P	P	08 42 52.7	+0.3

comp=Z,206nm,0.9s,mb5.6,baz=112,slow=13,SNR=397
MKAR ScP ScP 08 50 22.1 -1.4
comp=Z,10nm,1.0s,baz=116,slow=2.8,SNR=6.0
MKAR LR LR 08 52 46.5
comp=Z,8μm,18.6s,MS5.2,baz=114,slow=40
MKAR P3KPbc 09 16 28.7
comp=Z,1.1nm,0.8s,baz=274,slow=3.5,SNR=11
MKAR Makanchi Array 22.62 315 P **P 08 42 52.7 +0.3**
MKAR ScP ScP 08 50 22.1 -1.4
MKAR LR LR 08 52 46.5
VLA Vladivostok 23.13 56 *i* P **P 08 42 58.0 +0.2**
VLA *e*S **S 08 47 06.8 -2.6**
VLA *e**SS sS 08 47 14.1 +1.5
VLA pmax pmax
comp=Z,122nm,1.1s,mb5.2
VLA MLR MLR
comp=Z,7μm,14.7s,MS5.2
LUBP Lubang 23.19 141 *e*P **P 08 43 00.5 +1.8**
TGY Tagaytay City 23.26 139 P **P 08 43 00.4 +1.0**
comp=Z,574nm,0.8s,mb6.1,baz=338,slow=13,SNR=7.5
TGY LR LR 08 51 53.8
comp=Z,10nm,19.7s,baz=192,slow=36
TGY Tagaytay City 23.26 139 P **P 08 43 00.4 +1.0**
TGY LR LR 08 51 53.8
DDI Dehra Dun 23.54 272 *e*P **P 08 43 04.0 +1.7**
DDI *e*x x 08 47 14.8
SMLA Simla 24.12 274 *i* P **P 08 43 06.3 -1.3**
SMLA *i* x x 08 47 21.2
SDNR Sundarnagar 24.21 275 *e*P **P 08 43 09.1 +0.6**
JBP Jabalpur 24.47 254⇓ *i*P **P 08 43 10.1 -0.8**
JBP *e*x x 08 47 36.1
NDI New Delhi 24.66 268 *e*x **P 08 43 09.0 -3.6**
NDI *e*x **S 08 47 40.0 +5.4**
BHK Bhakra 24.70 275 *e*x **P 08 43 09.6 -3.3**
SJMP San Jose 24.72 141 *e*P **P 08 43 12.5 -0.6**
KSH Kashi 24.76 294⇓ *i*P **P 08 43 17.5 +4.1**
KSH *e*pP 08 43 21.5
KSH *e*sP sP 08 43 24.5 +8.4
KSH *e*PP 08 43 57.5
KSH *e*PcP PcP 08 46 52.5 +2.5
KSH *e*S **S 08 47 38.5 +2.5**
KSH *e*SS 08 48 36.5
KSH pmax pmax
comp=Z,190nm,0.9s,mb5.6
KSH LR LR
comp=N,6μm,10.7s,MS5.6
KSH LR LR
comp=E,9μm,11.3s,MS5.6
KSH LR LR
comp=Z,14μm,13.7s,MS5.6
AAA Alma-Ata 24.76 303 *i* P **P 08 43 15.2 +1.8**
AAA *e*S **S 08 47 33.8 -2.1**
AAA pmax pmax
comp=Z,3μm,3.9s
AAA MLR MLR
comp=Z,7μm,18.0s,MS5.2
VIS Vishakhapatnam 24.98 239 *i* P **P 08 43 16.1 +0.5**
VIS *e*x x 08 43 31.6
comp=Z,118nm,1.1s
VIS *i* S **S 08 47 38.9 -0.9**
VIS *i* S **S 08 47 40.5 +0.6**
ULHL Ulahol 25.02 301 P **P 08 43 17.7 +2.0**
SNR=10
THN Thein Dam 25.11 277 *e*x **P 08 43 13.0 -3.6**
OTRP Odiongan 25.28 140 *e*P **P 08 43 19.3 +1.0**
KLR Kul'dur 25.55 42⇑ *i*P **P 08 43 17.0 -3.5**
KLR *e*S **S 08 47 51.0 +2.7**
KLR pmax pmax
comp=Z,1μm,1.8s,mb6.0
KLR smax
comp=N,5μm,12.0s
KLR smax
comp=E,3μm,12.0s
KLR MLR MLR
comp=E,5μm,12.0s
KLR MLR MLR
comp=Z,21μm,12.0s,MS5.9
TKM2 Tokmak 2 25.63 302 P **P 08 43 22.7 +1.4**
SNR=199
TKM2 Tokmak 2 25.63 302 *e*P **P 08 43 22.6 +1.3**
TKM2 pmax pmax
comp=Z,85nm,0.6s,mb5.5
TKM2 MLR MLR
comp=Z,7μm,19.0s,MS5.2
TKM2 Tokmak 2 25.63 302 *e*P **P 08 43 22.6 +1.3**
comp=Z,85nm,0.6s,mb5.5
TKM2 LR LR
comp=Z,7μm,19.0s,MS5.2
KZA Kyzart 25.70 300 P **P 08 43 24.3 +2.4**
SNR=259
BOD Bodaibo 25.73 10 *e*P **P 08 43 22.4 +0.4**
ZAA0 Zalesovo Array 25.83 331 *e*P **P 08 43 22.9 -0.1**
ZALV Zalesovo Beam 25.83 331 P **P 08 43 23.1 +0.1**
comp=Z,40nm,0.7s,mb5.1,baz=133,slow=9.4,SNR=86
ZALV LR LR 08 54 07.0
comp=Z,3μm,20.4s,MS4.8,baz=138,slow=38
ZALV Zalesovo Beam 25.83 331 P **P 08 43 23.1 +0.1**
ZALV pmax pmax
comp=Z,40nm,0.7s,mb5.1
ZALV MLR MLR
comp=Z,3μm,20.4s,MS4.8
KBK Karagaybulak 26.04 301 P **P 08 43 26.9 +1.9**
SNR=241
CHMS Chumysh 26.25 302 P **P 08 43 28.2 +1.3**
SNR=44
UCH Uchtor 26.27 300 P **P 08 43 29.5 +2.4**
SNR=213
UCH Uchtor 26.27 300 *e*P **P 08 43 29.3 +2.3**
comp=Z,418nm,1.1s,mb5.9
UCH LR LR
comp=Z,7μm,20.0s,MS5.2
FRU Bishkek 26.32 301 *i* P **P 08 43 30.0 +2.5**
FRU pmax pmax
comp=Z,240nm,2.0s,mb5.4
AAK Ala-Archa 26.36 301 P **P 08 43 29.3 +1.4**
SNR=71
AAK Ala-Archa 26.36 301 P **P 08 43 29.6 +1.7**
comp=Z,86nm,0.9s,mb5.3,baz=106,slow=6.1,SNR=55
AAK LR LR 08 55 53.4
comp=Z,9μm,18.3s,MS5.3,baz=115,slow=41
AAK Ala-Archa 26.36 301 P **P 08 43 29.6 +1.7**
AAK pmax pmax
comp=Z,86nm,0.9s,mb5.3
AAK MLR MLR
comp=Z,9μm,18.3s,MS5.3
AAK Ala-Archa 26.36 301 *e*P **P 08 43 29.3 +1.4**
comp=Z,153nm,1.0s,mb5.5
AAK Ala-Archa 26.36 301 P **P 08 43 29.7 +1.8**
SNR=81
AAK P pP 08 43 29.7 -0.1
SNR=81
BATP Bataraza 26.39 152 *e*P **P 08 43 28.4 +0.1**
USP Ospenovka 26.49 302 P **P 08 43 30.1 +1.0**
SNR=279
KURK Kurchatov 26.73 320 P **P 08 43 31.0 -0.1**
comp=Z,1μm,0.9s,mb6.3
KURK Kurchatov 26.73 320 P **P 08 43 31.1 0.0**
comp=Z,116nm,0.9s,mb5.4,baz=138,slow=8.5,SNR=127
KURK ScP ScP 08 50 32.9 -2.0
comp=Z,18nm,1.1s,baz=118,slow=2.6,SNR=9.7
KURK LR LR 08 54 46.6
comp=Z,6μm,19.4s,MS5.2,baz=125,slow=38
KURK Kurchatov 26.73 320 P **P 08 43 31.1 0.0**
KURK pmax pmax
comp=Z,116nm,0.9s,mb5.4
KURK pmax pmax
comp=N,18nm,1.1s
KURK MLR MLR
comp=Z,6μm,19.4s,MS5.2
KURK Kurchatov 26.73 320 *e*P **P 08 43 31.3 +0.2**
comp=Z,147nm,0.9s,mb5.5
KURK LR LR
comp=Z,4μm,19.0s,MS5.0
KURK Kurchatov 26.73 320 P **P 08 43 31.7 +0.6**
SNR=109
KURK P pP 08 43 31.7 -1.3
SNR=109
EKS2 Erkin-Say 26.89 301 P **P 08 43 34.0 +1.4**
SNR=55
EKS2 Erkin-Say 26.89 301 *e*P **P 08 43 33.8 +1.2**
comp=Z,50nm,0.8s,mb5.1
EKS2 LR LR
comp=Z,7μm,19.0s,MS5.2
MAJO Matsushiro 27.06 73 *e*P **P 08 43 32.3 -1.9**
MAJO pmax pmax
comp=Z,44nm,0.9s,mb5.0
MAJO MLR MLR
comp=Z,3μm,22.0s,MS4.8
MAJO Matsushiro 27.06 73 *e*P **P 08 43 32.3 -1.9**
comp=Z,44nm,0.9s,mb5.0
MAJO LR LR
comp=Z,3μm,22.0s,MS4.8
MAT Matsushiro 27.06 73 P **P 08 43 32.0 -2.2**
MAT S **S 08 48 13.0 +0.6**
MJAR Matsushiro Arr 27.06 73 P **P 08 43 33.1 -1.1**
comp=Z,56nm,1.1s,mb5.0,baz=273,slow=9.5,SNR=34
MJAR PcP PcP 08 46 54.4 -0.9
comp=Z,4.3nm,0.7s,baz=245,slow=1.6,SNR=5.1
MJAR ScP ScP 08 50 33.9 -2.3
comp=Z,7.1nm,1.0s,baz=274,slow=4.4,SNR=8.7
MJAR LR LR 08 54 48.1
comp=Z,3μm,18.1s,MS4.9,baz=285,slow=38
NVS Novosibirsk 27.12 331⇓ *i*P **P 08 43 34.1 -0.5**
NVS *e*S **S 08 48 20.8 +7.8**
NVS pmax pmax
comp=Z,128nm,1.4s,mb5.3
NVS pmax pmax
comp=N,100nm,1.5s
NVS pmax pmax
comp=E,79nm,1.3s
NVS smax
comp=E,181nm,2.6s
NVS smax
comp=N,73nm,1.8s
HABR Khabarovsk 27.14 46 *i* P **P 08 43 35.5 +0.7**
HABR *e**SP sP 08 43 38.9 +1.4
HABR *e* 08 44 14.9
HABR 08 46 52.8
HABR *e*S **S 08 48 13.4 0.0**
HABR *e**SS sS 08 48 19.9 +3.3
HABR SS 08 49 19.1
HABR *e* 08 54 23.7
HABR pmax pmax
comp=N,6.0nm,0.4s
HABR pmax pmax
comp=Z,106nm,1.4s,mb5.2
HABR pmax pmax
comp=E,74nm,1.2s
HABR MLR MLR
comp=Z,9μm,11.0s,MS5.6
HABR MLR MLR
comp=E,8μm,11.0s
NRGR Nerungri 27.33 23 *i* P **P 08 43 38.9 +2.4**
KTGM Kuala Trenggan 27.37 185 P **P 08 43 37.9 +0.7**
AJM Ajmer 27.53 265 *i* P **P 08 43 39.0 +0.4**
CLNS Chul'man 27.53 23 *e*P **P 08 43 39.8 +1.5**
CLNS *e**PP pP 08 43 44.9 +4.7
CLNS *e* 08 44 24.0
CLNS *e* 08 46 56.0
CLNS *e*S **S 08 48 19.3 -0.2**
CLNS *e*SSS 08 49 49.1
CLNS pmax pmax
comp=Z,80nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,51nm,1.2s
CLNS pmax pmax
comp=N,64nm,1.2s
CLNS pmax pmax
comp=E,31nm,1.1s
CLNS pmax pmax
comp=N,59nm,1.3s
CLNS pmax pmax
comp=Z,40nm,1.1s,mb5.0
CLNS smax
comp=E,648nm,16.5s
CLNS smax
comp=N,860nm,16.2s
CLNS MLR MLR
comp=N,4μm,13.0s,MS5.5
CLNS MLR MLR
comp=E,6μm,13.0s,MS5.5
CLNS MLR MLR
comp=Z,7μm,13.0s,MS5.4
KULM Kulim 27.69 191 P **P 08 43 40.9 +0.8**
KULM Kulim 27.69 191 *e*P **P 08 43 39.5 -0.6**
comp=Z,84nm,1.3s,mb5.2
KULM LR LR
comp=Z,5μm,20.0s,MS5.1
KDM Kudat 27.75 155 P **P 08 43 40.9 +0.3**
KKM Kota Kinabalu 28.36 157 P **P 08 43 46.4 +0.3**
KKM Kota Kinabalu 28.36 157 *e*P **P 08 43 45.9 -0.1**
comp=Z,451nm,1.8s,mb5.8
KKM LR LR
comp=Z,4μm,19.0s,MS5.0
IPM Ipoh 28.43 190 P **P 08 43 46.2 -0.4**
TBP Tagbilaran 28.49 140 *e*P **P 08 43 47.0 -0.3**
JHJ Hachijo jima 2 28.66 80 P **P 08 43 46.9 -1.7**
comp=Z,41nm,0.6s,mb5.3,baz=223,slow=18,SNR=1.8
JHJ LR LR 08 56 23.8
comp=Z,2μm,18.1s,MS4.8,baz=254,slow=39
HYB Hyderabad 28.71 244 *i* P **P 08 43 49.0 -0.2**
HYB *e*S **S 08 48 36.0 -2.8**
SDKM Sandakan 29.07 156 P **P 08 43 52.6 +0.3**
FRIM Kepong 29.58 188 P **P 08 43 57.3 +0.4**
LATR Latur 29.67 248 *e*x x 08 44 00.0
MYLDM Lahad Datu 29.97 153 P **P 08 44 02.1 +1.8**
BTM Bintulu 30.22 165 P **P 08 44 03.5 +0.9**
KBL Kabul 30.35 284 *e*P **P 08 44 05.3 +1.7**
KBL pmax pmax
comp=Z,169nm,1.0s,mb5.7
KBL Kabul 30.35 284 *e*P **P 08 44 05.3 +1.7**
comp=Z,169nm,1.0s,mb5.7
PSI Prapat 30.43 193 P **P 08 44 04.4 0.0**
comp=Z,96nm,0.9s,mb5.5,baz=350,slow=7.5,SNR=68
PSI ScP ScP 08 50 45.0 -2.0
comp=Z,19nm,0.8s,baz=260,slow=2.7,SNR=11
PSI Prapat 30.43 193 P **P 08 44 04.4 0.0**
PSI 08 50 45.0
PSI pmax pmax
comp=Z,96nm,0.9s,mb5.5
TSM Tawau 30.56 155 P **P 08 44 06.4 +0.9**
KGM Kluang 30.64 184 P **P 08 44 07.0 +0.8**
SBUM Sibu 30.78 167 P **P 08 44 08.8 +1.4**
MYKOM Kota Tinggi 30.83 183 P **P 08 44 08.7 +0.8**
ASAJ Asahikawa 30.92 58 P **P 08 44 07.5 -0.9**
comp=Z,43nm,1.0s,mb5.2,baz=270,slow=12,SNR=9.1
ASAJ LR LR 08 56 10.2
comp=Z,3μm,19.9s,MS5.0,baz=274,slow=36
ASAJ Asahikawa 30.92 58 P **P 08 44 07.6 -0.9**
ASAJ pmax pmax
comp=Z,43nm,1.0s
ASAJ MLR MLR
comp=Z,3μm,19.9s
ERM Erimo 31.07 62 PFAKE 08 44 20.0 +10
ERM LR LR
comp=Z,4μm,20.0s,MS5.0
KSM Kuching 31.42 171 P **P 08 44 13.8 +0.6**
KSM Kuching 31.42 171 *e*P **P 08 44 13.1 0.0**
comp=Z,51nm,0.9s,mb5.4
KSM LR LR
comp=Z,3μm,21.0s,MS4.9
YSS Yuzh-Sakhalins 31.57 52/ *e*P **P 08 44 13.0 -1.2**
YSS *e*S **S 08 49 20.0 -3.1**
YSS pmax pmax
comp=Z,170nm,1.0s,mb5.8
YSS MLR MLR
comp=N,8μm,16.0s,MS5.5
YSS MLR MLR
comp=Z,3μm,16.0s,MS5.0
YSS MLR MLR
comp=E,4μm,18.0s,MS5.5
YSS Yuzh-Sakhalins 31.57 52 *e*P **P 08 44 13.6 -0.6**
comp=E,169nm,1.0s,mb5.8
YSS LR LR
comp=Z,2μm,20.0s,MS4.7
DAV Davao City (W) 31.60 140 PFAKE 08 44 30.0 +15
DAV LR LR
comp=Z,4μm,20.0s,MS5.1
DAV Davao City (W) 31.60 140⇑ *e*P **P 08 44 13.9 -0.9**
POO Poona 31.75 251⇓ *i*P **P 08 44 14.0 -2.1**
comp=Z,110nm,1.0s,mb5.6
CBIJ Chichi jima 32.13 90 LR LR 08 56 07.1
comp=Z,2μm,19.1s,MS4.8,baz=295,slow=34
BVAR Borovoye Array 32.31 319 P **P 08 44 21.3 +0.7**
comp=Z,28nm,0.7s,mb5.2,baz=114,slow=9.9,SNR=168
BVAR PcP PcP 08 47 08.2 -0.3
comp=Z,13nm,0.8s,baz=139,slow=3.8,SNR=4.2
BVAR ScP ScP 08 50 50.8 -1.9
comp=Z,12nm,0.7s,baz=114,slow=3.7,SNR=9.5
BVAR LR LR 08 59 13.7
comp=Z,3μm,20.2s,MS5.0,baz=111,slow=40
BRVK Borovoye 32.38 319 *e*P **P 08 44 21.2 -0.1**
BRVK pmax pmax
comp=Z,62nm,0.8s,mb5.5
BRVK MLR MLR
comp=Z,3μm,21.0s,MS5.0
BRVK Borovoye 32.38 319 *e*P **P 08 44 21.2 -0.1**
comp=Z,62nm,0.8s,mb5.5
BRVK LR LR
comp=Z,3μm,21.0s,MS5.0
BRVK Borovoye 32.38 319 P **P 08 44 22.0 +0.7**
SNR=48
BRVK P pP 08 44 22.0 -1.2
SNR=48
YAK Yakutsk 33.14 21d *i*P **P 08 44 27.6 -0.2**
YAK *e**PP pP 08 44 33.7 +4.0
YAK *e* 08 45 37.4
YAK *e*S **S 08 49 44.8 -2.4**
YAK *e**SS sS 08 49 56.2 +5.8
YAK *e*SS SS 08 51 51.9 -18
YAK *e*SSS 08 52 07.3
YAK *e* 08 54 50.0
YAK pmax pmax
comp=E,85nm,1.1s
YAK pmax pmax
comp=N,56nm,1.0s
YAK pmax pmax
comp=Z,293nm,0.8s,mb6.3
YAK pmax pmax
comp=Z,57nm,1.4s,mb5.3
YAK smax
comp=E,627nm,5.6s
YAK smax
comp=N,422nm,5.0s
YAK MLR MLR
comp=E,3μm,11.0s,MS5.4
YAK MLR MLR
comp=N,2μm,11.0s,MS5.4
YAK MLR MLR
comp=Z,4μm,10.0s,MS5.4
YAK Yakutsk 33.14 21 *e*P **P 08 44 28.1 +0.3**
comp=Z,376nm,0.9s,mb6.3
YAK LR LR
comp=Z,2μm,19.0s,MS4.8
PALK Pallekele 34.28 228 P **P 08 44 39.1 +1.0**
comp=Z,44nm,1.0s,mb5.4,baz=36,slow=9.2,SNR=12
PALK Pallekele 34.28 228 *e*P **P 08 44 38.7 +0.6**
PALK pmax pmax
comp=Z,51nm,0.9s,mb5.5
PALK Pallekele 34.28 228 *e*P **P 08 44 38.6 +0.5**
comp=Z,51nm,0.9s,mb5.5
ABKAR Akbulak array 37.54 310 *e*P **P 08 45 06.8 +1.0**
comp=Z,107nm,0.8s,mb5.6
IDAH Dahanechah 38.20 283 *e*P **P 08 45 12.5 +0.9**
IEMG Emamgholi 38.36 290 *e*P **P 08 45 14.1 +1.2**
IAKL Akhelmad 38.39 289 *e*P **P 08 45 14.4 +1.3**
ABKT Ailbek 38.72 291 P **P 08 45 17.3 +1.4**
comp=Z,954nm,0.8s,mb6.6,SNR=44
VAN Vannovskaya 38.72 291⇓ *i*P **P 08 45 17.0 +1.1**
VAN S **S 08 51 05.0 -8.3**
SVE Sverdlovsk 38.95 322⇑ *e*P **P 08 45 18.4 +0.9**
SVE *e* 08 46 52.1
SVE *e*S **S 08 51 15.2 -1.0**
SVE *e*SS SS 08 54 00.4 -7.1
SVE pmax pmax
comp=Z,282nm,1.0s,mb6.0
SVE MLR MLR
comp=Z,3μm,13.0s,MS5.3
AKTK Aktyubinsk 38.95 311 P **P 08 45 18.3 +0.6**
AKTO Aktyubinsk 38.95 311 P **P 08 45 18.3 +0.6**
comp=Z,42nm,0.9s,mb5.2,baz=96,slow=8.9,SNR=99
AKTO Aktyubinsk 38.95 311 P **P 08 45 18.3 +0.6**
AKTO pmax pmax
comp=Z,43nm,0.9s,mb5.2
ITEG Tejag 39.08 283 *e*P **P 08 45 18.9 -0.1**
ISHV Shirvan 39.09 291 *e*P **P 08 45 21.0 +2.0**
KAPI Kappang 39.90 158 P **P 08 45 24.6 -1.3**
comp=Z,1μm,0.9s,mb6.6,SNR=15
KAPI Kappang 39.90 158 P **P 08 45 24.9 -1.0**
comp=Z,151nm,0.9s,mb5.7,baz=336,slow=5.5,SNR=39
KAPI Kappang 39.90 158 P **P 08 45 24.9 -1.0**
KAPI LR LR
comp=Z,797nm,20.0s,MS4.6
ARU Arti 39.92 321 P **P 08 45 26.6 +0.9**
comp=Z,2μm,1.0s,mb6.9,SNR=28
ARU Arti 39.92 321d *i*P **P 08 45 26.1 +0.4**
ARU *e* 08 46 59.6
ARU S **S 08 51 33.0 +2.1**
ARU SS SS 08 54 27.4 +0.3
ARU SSS 08 54 49.0
ARU pmax pmax
comp=Z,405nm,1.0s,mb6.1
ARU MLR MLR
comp=Z,1μm,15.0s,MS4.9
ARU Arti 39.92 321 *e*P **P 08 45 26.2 +0.5**
comp=Z,340nm,0.9s,mb6.1
GUMO Guam 40.56 109 P **P 08 45 30.5 -0.9**
comp=Z,97nm,0.9s,mb5.5,baz=161,slow=4.9,SNR=6.1
GUMO LR LR 09 02 28.3
comp=Z,2μm,18.2s,MS5.0,baz=95,slow=36
GUMO Guam 40.56 109 P **P 08 45 30.5 -1.0**
GUMO pmax pmax
comp=Z,97nm,0.9s,mb5.4
GUMO MLR MLR
comp=Z,2μm,18.2s,MS5.0
GUMO Guam 40.56 109 *e*P **P 08 45 31.3 -0.2**
comp=Z,268nm,1.2s,mb5.8
GUMO LR LR
comp=Z,2μm,19.0s,MS5.0
TIXI Tiksi 40.91 11⇑ *i*P **P 08 45 32.9 -0.8**
TIXI *e* 08 47 16.9
TIXI *e*S **S 08 51 40.6 -4.7**
TIXI *e*SS SS 08 54 42.8 -3.6
TIXI *e* 08 55 35.6
TIXI pmax pmax
comp=Z,144nm,0.9s,mb5.6
TIXI MLR MLR
comp=Z,2μm,11.0s,MS5.3
TIXI Tiksi 40.91 11 *e*P **P 08 45 33.0 -0.7**
comp=Z,101nm,0.8s,mb5.5
TIXI LR LR
comp=Z,3μm,19.0s,MS5.2
SOKR Solikamsk 41.75 325d *i*P **P 08 45 41.2 +0.5**
SOKR S **S 08 51 56.8 -1.1**
SOKR pmax pmax
comp=Z,460nm,1.2s,mb6.0
SOKR MLR MLR
comp=Z,2μm,16.0s,MS5.0
IBAF Bafgh 42.01 282 *e*P **P 08 45 43.7 +0.4**
SEY Seymchan 42.06 30d *i*P **P 08 45 43.6 +0.4**
PEA0B Petropavlovsk- 42.16 45 *e*P **P 08 45 43.3 -0.9**
PETK Petropavlovsk- 42.16 45 P **P 08 45 43.7 -0.5**
comp=Z,66nm,0.9s,mb5.3,baz=233,slow=3.1,SNR=71
PETK LR LR 09 05 02.7
comp=Z,2μm,19.8s,MS5.1,baz=247,slow=39
PETK Petropavlovsk- 42.16 45 P **P 08 45 43.7 -0.5**
PETK pmax pmax
comp=Z,66nm,0.9s,mb5.3
PETK MLR MLR
comp=Z,2μm,19.8s,MS5.1
PET Petropavlovsk 42.72 45 *e*P **P 08 45 45.4 -3.3**
PET *e*S **S 08 52 02.5 -10**
PET *e*SS SS 08 55 15.9 -6.8
PET pmax pmax
comp=Z,500nm,8.9s
PET pmax pmax
comp=Z,166nm,1.1s,mb5.7
PET pmax pmax
comp=Z,300nm,11.4s
PET MLR MLR
comp=Z,5μm,16.0s,MS5.5
PET MLR MLR
comp=Z,4μm,19.0s
PET Petropavlovsk 42.72 45 *e*P **P 08 45 48.5 -0.2**
comp=Z,156nm,1.0s,mb5.7
PET LR LR
comp=Z,4μm,19.0s,MS5.3
IMEH Mehriz 42.85 282 *e*P **P 08 45 50.5 +0.4**
ISHM Shahmirzad 42.88 289 *e*P **P 08 45 51.2 +0.9**
IDMV Damavand 43.93 289 *e*P **P 08 45 59.6 +0.9**
ISFB Sefidab 44.04 287 *e*P **P 08 46 00.3 +0.7**
IZEF Zefreh 44.32 285 *e*P **P 08 46 02.5 +0.6**
ASUD Al Ashush, Dub 44.46 273 P **P 08 46 05.5 +2.4**
SNR=7.7
IR3 Iran Long-Peri 44.75 289 *e*P **P 08 46 05.6 +0.3**
COCO West Island 45.45 192 PFAKE 08 46 20.0 +9.1
COCO LR LR
comp=Z,1μm,20.0s,MS4.9

IPIR Pirpir 45.55 285 *e*P **P 08 46 12.7 +1.0**
MAK Makhachkala 46.14 300 *e*P **P 08 46 14.5 -1.7**
MAK *i* 08 48 04.1
MAK *e*PPP 08 48 51.3
MAK *e*S **S 08 52 56.1 -6.4**
MAK *e*SSS 08 57 16.4
MAK pmax pmax
comp=Z,174nm,1.5s,mb5.8
MAK MLR MLR
comp=Z,4μm,13.0s,MS5.6
DGRG David-gareji 47.93 299 P **P 08 46 37.6 +7.3**
TBLG Delisi 48.35 299 *e*P **P 08 46 33.2 -0.3**
TBLG Delisi 48.35 299 P **P 08 46 33.2 -0.3**
GNI Garni 48.65 297 *e*P **P 08 46 36.6 +0.9**
GNI Garni 48.65 297 P **P 08 46 35.7 0.0**
comp=Z,27nm,0.8s,mb5.3,baz=4.8,slow=5.8,SNR=11
GNI Garni 48.65 297*d* iP **P 08 46 37.2 +1.4**
GNI pmax pmax
comp=Z,88nm,1.2s
GNI MLR MLR
comp=Z,2μm,18.0s
GNI Garni 48.65 297 *e*P **P 08 46 37.4 +1.6**
comp=Z,81nm,1.0s,mb5.7
GNI LR LR
comp=Z,2μm,19.0s,MS5.1
GNI Garni 48.65 297 P **P 08 46 37.7 +2.0**
SNR=16
GNI P pP 08 46 37.7 0.0
SNR=16
GOR Gori 48.77 299 P **P 08 46 38.3 +1.6**
ZEI Tsey 48.79 301 *e*P **P 08 46 35.8 -1.1**
ZEI pmax pmax
comp=Z,70nm,1.3s,mb5.5
KEH Kehvi 48.84 300 P **P 08 46 37.6 +0.4**
UMR Umm Al-Rimmam 49.08 283 *e*P **P 08 46 39.2 0.0**
UMR AMb AMB 08 46 40.5
comp=Z,231nm,0.9s,mb6.2
ONI Oni 49.15 300 P **P 08 46 41.1 +1.5**
BILL Bilibino 49.17 26*d* iP **P 08 46 39.0 -0.4**
BILL *e* 08 48 06.3
BILL *i* 08 48 34.0
BILL pmax pmax
comp=Z,287nm,1.6s,mb6.0
BILL MLR MLR
comp=Z,5μm,20.0s,MS5.5
BILL Bilibino 49.17 26 *e*P **P 08 46 39.1 -0.2**
comp=Z,188nm,1.1s,mb6.0
BILL LR LR
comp=Z,6μm,19.0s,MS5.6
QRN Al-Qurain 49.18 281 *e*P **P 08 46 39.9 -0.2**
QRN AMb AMB 08 46 41.0
comp=Z,210nm,0.8s,mb6.2
KBD Kabd 49.22 282 *e*P **P 08 46 40.1 -0.3**
KBD AMb AMB 08 46 47.3
comp=Z,146nm,1.2s,mb5.9
MIB Mutribah 49.31 283 *e*P **P 08 46 41.0 0.0**
MIB AMb AMB 08 46 48.4
comp=Z,492nm,1.2s,mb6.4
VRHR Novokhopersk 49.36 312 *e*P **P 08 46 41.1 0.0**
VRHR *e**PP pP 08 46 49.4 +6.3
VRHR *i* PPP 08 49 27.9
VRHR *e*S **S 08 53 42.6 -5.4**
VRHR smax
comp=E,150nm,9.1s
VRHR smax
comp=Z,70nm,8.8s
VRHR smax
comp=N,50nm,4.4s
RDF Al-Radifah 49.42 282 *e*P **P 08 46 42.3 +0.4**
RDF AMb AMB 08 46 43.7
comp=Z,527nm,0.8s,mb6.6
KIV Kislovodsk 49.47 302 P **P 08 46 42.7 +0.7**
comp=Z,809nm,0.9s,mb6.8,SNR=18
KIV Kislovodsk 49.47 302*d* iP **P 08 46 42.9 +0.9**
KIV *e*S **S 08 53 50.7 +1.0**
KIV pmax pmax
comp=Z,153nm,1.1s,mb5.9
KIV pmax pmax
comp=Z,61nm,3.4s
KIV MLR MLR
comp=Z,3μm,16.0s,MS5.3
KIV Kislovodsk 49.47 302 *e*P **P 08 46 43.0 +0.9**
comp=Z,167nm,1.1s,mb6.0
KIV Kislovodsk 49.47 302 P **P 08 46 43.2 +1.1**
SNR=31
KIV P pP 08 46 43.2 -0.9
SNR=31
NAY Al-Naaiem 49.57 282 *e*P **P 08 46 43.1 0.0**
NAY AMb AMB 08 46 44.2
comp=Z,461nm,0.8s,mb6.6
VANB Van 50.00 295 *e*P **P 08 46 47.0 +0.8**
AGRB Hanur-Agry 50.08 297 *e*P **P 08 46 45.9 -0.9**
CUKT Cukurca 50.16 293 *e*P **P 08 46 45.5 -1.9**
BCA Borcka 50.70 299 *e*P **P 08 46 49.5 -2.0**
MSL Mosul 50.76 293 *e*P **P 08 46 51.0 -0.9**
MSL *e*S **S 08 54 09.0 +1.1**
VORD Divnogorie 50.84 312 *e*P **P 08 46 52.2 -0.1**
VORD *e**PP pP 08 46 59.6 +5.3
VORD *i* PPP 08 49 45.6
VORD *e*S **S 08 54 03.2 -5.4**
VORD pmax pmax
comp=Z,70nm,0.8s,mb5.6
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,70nm,0.9s
VORD smax
comp=E,150nm,7.6s
VORD smax
comp=Z,40nm,6.6s
VORD smax
comp=N,60nm,4.9s
VORD MLR MLR
comp=N,610nm,13.0s,MS5.3
VORD MLR MLR
comp=E,2μm,13.0s,MS5.3
VORD MLR MLR
comp=Z,3μm,13.0s,MS5.4
DGAR Diego Garcia 50.86 224 PFAKE 08 47 00.0 +7.1
DGAR LR LR
comp=Z,1μm,19.0s,MS4.9
VSR Storozhevoye 50.89 312 *e*P **P 08 46 52.6 -0.1**
VSR *e**PP pP 08 47 00.1 +5.4
VSR *i* PPP 08 49 49.9
VSR *e*S **S 08 54 02.7 -6.6**
VSR *e*SS SS 08 57 35.3 -8.4
VSR pmax pmax
comp=N,60nm,0.9s
VSR pmax pmax
comp=E,240nm,0.9s
VSR pmax pmax
comp=Z,240nm,0.9s,mb6.1
VSR smax
comp=E,140nm,9.4s
VSR smax
comp=Z,120nm,10.4s
VSR smax
comp=N,30nm,4.7s
VSR MLR MLR
comp=Z,3μm,12.0s,MS5.5
EZM Erzurum 51.23 297 *e*P **P 08 46 53.9 -1.5**
MOS Moscow 51.46 318 *e*P **P 08 46 55.7 -1.2**
MOS *i* S **S 08 54 14.5 -2.6**
MOS pmax pmax
comp=Z,500nm,1.0s,mb6.4
MOS pmax pmax
comp=Z,458nm,0.8s,mb6.5
MOS MLR MLR
comp=Z,2μm,15.0s,MS5.3
BTMT Batman 51.55 295 *e*P **P 08 46 56.5 -1.3**
SOC Sochi 51.65 302*d* iP **P 08 46 58.4 -0.1**
SOC *e**PP pP 08 47 01.5 +1.0
SOC *e* 08 48 58.7
SOC *e*PPP 08 49 52.9
SOC *e*S **S 08 54 08.3 -12**
KAKA Kakadu 51.99 146 *e*P **P 08 46 59.6 -1.7**
comp=Z,64nm,0.9s,mb5.5
KAKA Kakadu 51.99 146 *e*P **P 08 46 59.3 -2.0**
comp=Z,178nm,0.8s,mb6.0
SMY Shemya 52.06 46 *e*P **P 08 47 00.9 -0.6**
SMY pmax pmax
comp=Z,507nm,0.9s,mb6.5
SMY Shemya 52.06 46 *e*P **P 08 47 00.9 -0.6**
comp=Z,507nm,0.9s,mb6.5
OBN Obninsk 52.11 317 P **P 08 47 01.5 -0.2**
comp=Z,1μm,0.8s,mb6.8,SNR=6.1
OBN Obninsk 52.11 317*d* iP **P 08 47 01.6 -0.1**
OBN *i* 08 49 00.0
OBN pmax pmax
comp=Z,221nm,1.2s,mb6.0
OBN MLR MLR
comp=Z,3μm,15.0s,MS5.4
OBN Obninsk 52.11 317 *e*P **P 08 47 01.7 0.0**
comp=Z,134nm,0.8s,mb5.9
EZC Erzincan 52.77 298 *e*P **P 08 47 00.8 -6.1**
LVZ Lovozero 52.95 333 P **P 08 47 07.5 -0.3**
comp=Z,244nm,1.0s,mb6.1,SNR=5.2
LVZ Lovozero 52.95 333*d* iP **P 08 47 07.2 -0.6**
LVZ MLR MLR
comp=Z,5μm,17.0s,MS5.6
PTK Pertek 52.96 297 *e*P **P 08 47 04.2 -4.1**
ANN Anapa 53.02 304*c* iP **P 08 47 07.0 -1.7**
ANN *i* *PP pP 08 47 12.1 +1.4
ANN *i* 08 48 15.3
ANN *e* 08 49 04.9
ANN *e*PPP 08 50 11.5
ANN *i* S **S 08 54 37.6 -1.1**
ANN *e*SS SS 08 58 18.2 +0.7
ANN *e*SSS 09 00 04.2
ANN pmax pmax
comp=N,58nm,1.2s
ANN pmax pmax
comp=E,79nm,1.2s
ANN pmax pmax
comp=Z,277nm,1.2s,mb6.1
KNA Kununurra 53.08 152 *e*P **P 08 47 08.6 -0.7**
comp=Z,156nm,0.6s,mb6.1
APA Apatity 53.40 333⇓ iP **P 08 47 11.0 -0.1**
APA *i* 08 47 15.0
APA *e*S **S 08 54 40.0 -3.3**
APA pmax pmax
comp=Z,64nm,1.3s,mb5.4
APA MLR MLR
comp=Z,5μm,13.0s,MS5.8
URFA Urfa 53.78 295 *e*P **P 08 47 12.2 -2.2**
FITZ Fitzroy Crossi 54.08 156 *e*P **P 08 47 15.7 -0.9**
comp=Z,60nm,0.9s,mb5.5
FITZ *e*S **S 08 54 53.2 -0.3**
FITZ Fitzroy Crossi 54.08 156 P **P 08 47 15.7 -0.9**
comp=Z,34nm,0.8s,mb5.3,baz=351,slow=5.1,SNR=32
FITZ Fitzroy Crossi 54.08 156 *e*P **P 08 47 15.6 -1.1**
comp=Z,59nm,1.1s,mb5.4
JOF Joensuu 54.31 327 *e*P **P 08 47 17.0 -0.9**
JOF pmax pmax
comp=Z,190nm,0.8s,mb6.1
JOF Joensuu 54.31 327 *e*p **P 08 47 17.0 -0.9**
comp=Z,190nm,0.8s,mb6.1
SVSK Karacayir 54.48 298 *e*P **P 08 47 17.0 -2.5**
KVT Kavak 54.87 300 *e*P **P 08 47 20.3 -2.0**
PUL Pulkovo 55.05 323⇑ *e*P **P 08 47 24.1 +0.9**
PUL pmax pmax
comp=Z,292nm,0.7s,mb6.4
PUL MLR MLR
comp=Z,3μm,18.0s,MS5.3
SARI SarD1z-Kayseri 55.05 297 *e*P **P 08 47 26.3 +2.8**
KMRS Kahramanmaras 55.23 296 *e*P **P 08 47 22.3 -2.6**
MBWA Marble Bar 55.28 164 *e*P **P 08 47 24.6 -0.7**
MBWA Marble Bar 55.28 164 *e*P **P 08 47 24.5 -0.8**
comp=Z,52nm,0.9s,mb5.6
MBWA LR LR
comp=Z,646nm,19.0s,MS4.7
SIM Simferopol' 55.29 305*d* iP **P 08 47 26.3 +1.1**
SIM *i* S **S 08 55 11.2 +1.8**
SIM pmax pmax
comp=Z,161nm,0.8s,mb6.1
SIM MLR MLR
comp=Z,2μm,18.1s,MS5.2
GIRL Giralia 55.69 170 *e*P **P 08 47 29.1 +0.9**
comp=Z,424nm,0.9s,mb6.5
KEV Kevo 55.75 336 *e*P **P 08 47 27.9 -0.2**
KEV pmax pmax
comp=Z,54nm,0.8s,mb5.6
KEV MLR MLR
comp=Z,3μm,20.0s,MS5.4
KEV Kevo 55.75 336 *e*P **P 08 47 27.9 -0.3**
comp=Z,54nm,0.8s,mb5.6
KEV LR LR
comp=Z,3μm,20.0s,MS5.4
KEV Kevo 55.75 336 *e*p **P 08 47 27.4 -0.7**
comp=Z,55nm,0.7s,mb5.7
WAKE Wake Island 55.84 88 PFAKE 08 47 40.0 +10
WAKE LR LR
comp=Z,1μm,21.0s,MS4.9
KOZT Kozan 56.05 296 *e*P **P 08 47 30.4 -0.4**
ARCES ARCESS Array B 56.28 335 P **P 08 47 31.8 -0.1**
comp=Z,35nm,0.7s,mb5.5,baz=76,slow=6.8,SNR=72
ARCES ARCESS Array B 56.28 335 P **P 08 47 31.8 -0.2**
ARCES pmax pmax
comp=Z,35nm,0.7s
TOS Tosya 56.36 300 *e*P **P 08 47 31.8 -1.2**
KAF Kangasniemi 56.70 326 *e*P **P 08 47 33.8 -1.3**
KAF pmax pmax
comp=Z,99nm,0.7s,mb6.0
KAF Kangasniemi 56.70 326 *e*p **P 08 47 33.8 -1.3**
comp=Z,99nm,0.7s,mb6.0,baz=81,slow=6.7
FINES FINESS Array B 56.91 326 P **P 08 47 36.4 -0.1**
comp=Z,134nm,0.8s,mb6.0,baz=89,slow=7.8,SNR=289
FINES LR LR 09 14 08.3
comp=Z,2μm,19.3s,MS5.3,baz=89,slow=38
FINES FINESS Array B 56.91 326 P **P 08 47 36.4 -0.1**
FINES pmax pmax
comp=Z,134nm,0.8s
FINES MLR MLR
comp=Z,2μm,19.3s
FINES FINESS Array B 56.91 326 P **P 08 47 36.4 -0.1**
FINES LR LR 09 14 08.3
HWQ Hawqa 56.98 292 *e*P **P 08 47 38.1 +0.6**
BR131 Keskin Array S 57.02 299 *e*P **P 08 47 37.5 -0.2**
comp=Z,26nm,0.8s,mb5.3
BR131 LR LR
comp=Z,1μm,19.0s,MS5.0
BRTR Keskin Array B 57.02 299 P **P 08 47 37.9 +0.2**
comp=Z,30nm,0.8s,mb5.4,baz=99,slow=7.6,SNR=113
BRTR PcP PcP 08 48 32.5 -0.3
comp=Z,9.7nm,0.8s,baz=68,slow=6.0,SNR=4.1
BRTR LR LR 09 16 14.0
comp=Z,1μm,20.4s,MS5.0,baz=250,slow=40
BRTR Keskin Array B 57.02 299 P **P 08 47 37.9 +0.2**
BRTR 08 48 32.5
BRTR pmax pmax
comp=Z,30nm,0.8s
BRTR MLR MLR
comp=Z,1μm,20.5s
VSU Vasula 57.06 322*d* iP **P 08 47 37.6 0.0**
VSU pmax pmax
comp=Z,389nm,0.9s,mb6.4
VSU MLR MLR
comp=Z,4μm,18.0s,MS5.5
MICGM Minsk 57.17 317⇓ *i*P **P 08 47 37.0 -1.5**
AKASG Malin Array Be 57.18 313 P **P 08 47 38.3 -0.3**
comp=Z,104nm,0.7s,mb6.0,baz=69,slow=6.5,SNR=269
AKASG LR LR 09 13 37.6
comp=Z,2μm,21.4s,MS5.2,baz=70,slow=38
AKASG Malin Array Be 57.18 313 P **P 08 47 38.3 -0.3**
AKASG pmax pmax
comp=Z,104nm,0.7s
AKASG MLR MLR
comp=Z,2μm,21.4s
AKBB Malin Array Si 57.18 313 *e*P **P 08 47 37.9 -0.7**
KIEV Kiev 57.19 313 *e*P **P 08 47 38.1 -0.6**
KIEV pmax pmax
comp=Z,94nm,0.8s,mb5.9
KIEV MLR MLR
comp=Z,3μm,19.0s,MS5.4
KIEV Kiev 57.19 313 *e*P **P 08 47 38.0 -0.6**
comp=Z,94nm,0.8s,mb5.9
KIEV LR LR
comp=Z,3μm,19.0s,MS5.4
MNK Minsk 57.20 317⇓ *i*P **P 08 47 37.0 -1.7**
MNK *e*S **S 08 55 30.0 -4.4**
MNK pmax pmax
comp=Z,530nm,0.8s,mb6.6
MNK MLR MLR
comp=Z,8μm,12.0s,MS6.0
BHL Bhannes 57.34 292 *e*P **P 08 47 40.5 +0.5**
RCY Rachaya 57.35 291 *e*P **P 08 47 41.1 +1.0**
IDID Didziasalis 57.65 318 *e*P **P 08 47 42.3 +0.4**
NACGM Naroch 57.71 318 *e*P **P 08 47 39.0 -3.3**
IZAR Zarasai 57.83 319 *e*P **P 08 47 43.4 +0.3**
MMAI Mount Meron Ar 57.84 291 P **P 08 47 44.6 +1.1**
comp=Z,23nm,0.8s,mb5.2,baz=70,slow=8.1,SNR=25
MMAI LR LR 09 15 15.3
comp=Z,1μm,18.3s,MS5.0,baz=95,slow=39
IIGN Ignalina 57.93 319 *e*P **P 08 47 44.4 +0.5**
ISAL Salakas 57.94 319 *e*P **P 08 47 44.3 +0.4**
GAMB Gambell 58.03 31 *e*P **P 08 47 43.7 -0.7**
comp=Z,74nm,1.0s,mb5.7
SPITS Spitsbergen Ar 58.05 346 P **P 08 47 44.2 -0.1**
comp=Z,18nm,0.8s,mb5.2,baz=95,slow=9.6,SNR=41
SPITS PcP PcP 08 48 36.2 +0.1
comp=Z,17nm,0.6s,baz=72,slow=2.5,SNR=6.0
SPITS Spitsbergen Ar 58.05 346 P **P 08 47 44.2 -0.2**
SPITS 08 48 36.2
SPITS pmax pmax
comp=Z,18nm,0.8s
SPITS Spitsbergen Ar 58.05 346 P **P 08 47 44.2 -0.2**
SPITS PcP PcP 08 48 36.2 +0.1
SPB4 Spitsbergen Ar 58.05 346 *e*P **P 08 47 44.3 -0.1**
KIS Kishinev 58.35 308 *e*PP PP 08 49 30.0 -26
KIS Kishinev 58.35 308 *e*P **P 08 47 43.0 -3.9**
KIS *e*PPP 08 51 22.0
KIS *e*S **S 08 55 45.0 -4.8**
KIS MLR MLR
comp=N,2μm,13.0s,MS5.6
KIS MLR MLR
comp=Z,3μm,13.0s,MS5.6
KIS MLR MLR
comp=E,1μm,12.0s,MS5.6
KIS MLR MLR
comp=Z,2μm,14.0s
COEN Coen 58.73 136 *e*P **P 08 47 48.9 -1.0**
comp=Z,491nm,0.9s,mb6.5
CSS Prodhromos 58.78 294 *e*P **P 08 47 49.2 -0.9**
comp=Z,59nm,0.9s,mb5.6
KBS Kingsbay 58.81 347 *e*P **P 08 47 48.7 -1.0**
KBS pmax pmax
comp=Z,21nm,1.0s,mb5.1
KBS MLR MLR
comp=Z,3μm,19.0s,MS5.4
KBS Kingsbay 58.81 347 *e*P **P 08 47 48.7 -0.9**
comp=Z,21nm,1.0s,mb5.1
KBS LR LR
comp=Z,3μm,19.0s,MS5.4
TLCR 58.85 306⇓ P **P 08 47 50.8 +0.4**
TLCR 58.85 306⇓ *i*P **P 08 47 50.8 +0.4**
LEOM Leova 58.87 308⇑ *i*P **P 08 47 51.1 +0.6**
LEOM Leova 58.87 308⇑ *i*P **P 08 47 51.1 +0.6**
WRAB Tennant Creek 59.17 148 P **P 08 47 52.0 -0.9**
comp=Z,1μm,1.0s,mb6.9,SNR=72
WRAB Tennant Creek 59.17 148 *e*P **P 08 47 51.8 -1.1**
WRAB pmax pmax
comp=Z,139nm,0.8s,mb6.0
WRAB MLR MLR
comp=Z,877nm,19.0s,MS4.9
WRAB Tennant Creek 59.17 148 *e*P **P 08 47 51.8 -1.0**
comp=Z,139nm,0.8s,mb6.0
WRAB LR LR
comp=Z,877nm,19.0s,MS4.9
TNA Tin City 59.29 29 *e*P **P 08 47 52.3 -0.8**
comp=Z,157nm,1.3s,mb5.9
CFR Carcaliu 59.31 307 P **P 08 47 53.8 +0.2**
CFR Carcaliu 59.31 307⇑ *i*P **P 08 47 53.7 +0.1**
TIRR Tirgusor 59.34 306 *e*P **P 08 47 53.6 -0.2**
TIRR pmax pmax
comp=Z,59nm,0.8s,mb5.7
TIRR Tirgusor 59.34 306 *e*P **P 08 47 53.6 -0.2**
comp=Z,59nm,0.8s,mb5.7
TIRR Tirgusor 59.34 306⇑ *i*P **P 08 47 53.9 +0.1**
HARR Harsova 59.60 306⇓ P **P 08 47 56.0 +0.4**
HARR Harsova 59.60 306⇓ *i*P **P 08 47 56.0 +0.4**
PSN Preselentsi 59.73 305 P **P 08 47 57.3 +0.8**
PSN Preselentsi 59.73 305 P **P 08 47 57.3 +0.8**
ISP Isparta 59.93 298 *e*P **P 08 47 57.6 -0.4**
ISP pmax pmax
comp=Z,100nm,0.9s,mb5.8
ISP MLR MLR
comp=Z,1μm,20.0s,MS5.0
ISP Isparta 59.93 298 *e*P **P 08 47 57.6 -0.4**
comp=Z,100nm,0.9s,mb5.8
ISP LR LR
comp=Z,1μm,20.0s,MS5.0
ISP Isparta 59.93 298⇑ *i*P **P 08 47 57.5 -0.5**
SUW Suwalki 59.97 317 *e*P **P 08 47 57.6 -0.4**
SUW *e*pP pP 08 47 60.0 0.0
SUW *e*S **S 08 56 10.3 -0.2**
SUW LMZ 09 14 54.5
comp=Z,3μm,20.8s
SUW Suwalki 59.97 317 *e*P **P 08 47 58.0 0.0**
comp=Z,170nm,0.8s,mb6.1
VRI Vrincioaia 60.05 308 P **P 08 47 59.3 +0.6**
VRI Vrincioaia 60.05 308⇓ *i*P **P 08 47 59.5 +0.8**
PLOR Plostina 60.11 308⇓ P **P 08 47 59.9 +0.8**
PLOR Plostina 60.11 308⇓ *i*P **P 08 47 59.9 +0.8**
MSEY Mahe Island 60.30 242 PFAKE 08 48 10.0 +9.2
MSEY LR LR
comp=Z,782nm,22.0s,MS4.8
MEEK Meekatharra 60.34 167 *e*P **P 08 48 00.1 -0.7**
PRD Provadia 60.42 305 P **P 08 48 01.8 +0.5**
PRD Provadia 60.42 305 P **P 08 48 01.8 +0.5**
BUR01 Bucovina Ar. S 60.52 310 P **P 08 48 02.5 +0.6**
BURAR Bucovina Array 60.52 310 P **P 08 48 02.4 +0.5**
BUR08 Bucovina Ar. S 60.53 310 *e*P **P 08 48 02.2 +0.3**
LVV L'vov 60.62 313 *i* P **P 08 48 02.6 0.0**
LVV *e* 08 50 17.8
LVV *e* 08 51 44.0
LVV *e*S **S 08 56 13.8 -5.3**
LVV MLR MLR
comp=N,1μm,15.0s,MS5.2
LVV MLR MLR
comp=E,700nm,15.0s,MS5.2
LVV MLR MLR
comp=Z,1μm,15.0s,MS5.2
MLR Muntele Rosu 60.69 307 P **P 08 48 03.2 +0.1**
comp=Z,38nm,0.8s,mb5.6,baz=357,slow=4.6,SNR=33
MLR Muntele Rosu 60.69 307 P **P 08 48 03.2 +0.1**
MLR pmax pmax
comp=Z,39nm,0.8s
MLR Muntele Rosu 60.69 307 P **P 08 48 04.0 +0.8**
MLR Muntele Rosu 60.69 307⇑ *i*P **P 08 48 03.8 +0.7**
LOF Lofoten 60.79 335 *e*P **P 08 48 04.6 +1.2**
MOR8 Moi Rana 60.98 332 *e*P **P 08 48 03.0 -1.7**
MOR8 AMB AMB 08 48 03.3
comp=Z,52nm,0.8s,mb5.7
JMB Yambol 61.23 304 P **P 08 48 07.8 +1.0**
JMB Yambol 61.23 304 P **P 08 48 07.8 +1.0**
SZH Strazhica 61.41 305 P **P 08 48 07.9 -0.1**
SZH Strazhica 61.41 305 P **P 08 48 07.9 -0.1**
KWP Kalwaria Pacla 61.50 313 *e*P **P 08 48 09.2 +0.7**
KWP *e*pP pP 08 48 12.9 +2.3
KWP *e*S **S 08 56 32.0 +1.8**
KWP LMZ 09 16 19.0
comp=Z,2μm,20.6s
KWP Kalwaria Pacla 61.50 313 *e*P **P 08 48 09.2 +0.7**
KWP *e**PP pP 08 48 12.9 +2.4
KWP *e*S **S 08 56 32.0 +1.8**
KWP MLR MLR
comp=Z,2μm,20.6s,MS5.2
KWP Kalwaria Pacla 61.50 313 *e*P **P 08 48 09.1 +0.6**
comp=Z,366nm,0.9s,mb6.5
KWP LR LR
comp=Z,2μm,20.0s,MS5.3
KWP Kalwaria Pacla 61.50 313⇑ *i*P **P 08 48 09.2 +0.7**
BMR Baia Mare 61.61 310 P **P 08 48 10.9 +1.6**
KOLS Kolonicke sedl 61.99 312 *e*P **P 08 48 11.9 +0.1**
KOLS pmax pmax
comp=Z,35nm,0.9s,mb5.5
KOLS Kolonicke sedl 61.99 312 *e*P **P 08 48 11.9 +0.1**
comp=Z,35nm,0.9s,mb5.5
KOLS *e*PcP PcP 08 48 47.7 -4.7
KOLS Kolonicke sedl 61.99 312 *e*P **P 08 48 11.9 +0.1**
KOLS *e*PCP PcP 08 48 47.7 -4.7
UZH Uzhgorod 62.07 312⇓ *i*P **P 08 48 12.8 +0.4**
UZH *e* 08 51 57.6
UZH *e*S **S 08 56 35.6 -1.9**
UZH *e* 08 57 59.8
UZH *e* 09 00 41.2
UZH *e* 09 03 15.6
ALN Alexandroupoli 62.14 303 *e*P **P 08 48 12.9 -0.1**
ALN Alexandroupoli 62.14 303 P **P 08 48 12.8 -0.2**
ASAR Alice Springs 62.28 151 P **P 08 48 13.4 -0.5**
comp=Z,58nm,0.8s,mb5.8,baz=334,slow=6.6,SNR=354
ASAR S **S 08 56 40.0 -0.5**
comp=Z,3.9nm,1.0s,baz=353,slow=29,SNR=11
ASAR PKPPKP 09 17 15.1
comp=Z,0.7nm,0.9s,baz=145,slow=3.0,SNR=5.2

ASAR PKP2bc 09 17 31.1
comp=Z,1.7nm,0.9s,baz=147,slow=2.9,SNR=7.4
ASAR Alice Springs 62.28 151 P P 08 48 13.4 -0.5
ASAR S S 08 56 40.0 -0.5
ASAR P'P' 09 17 15.1
ASAR ⇑e 09 17 31.1
ARG Arkhangelos 62.29 297 eP **P 08 48 14.5 +0.4**
KDZ Kurdzhali 62.32 304 P **P 08 48 14.7 +0.5**
KDZ Kurdzhali 62.32 304 P **P 08 48 14.7 +0.5**
DRGR 62.41 310 P **P 08 48 15.4 +0.7**
DRGR 62.41 310⇑iP **P 08 48 15.3 +0.6**
RDO Rodhopi 62.41 303 eP **P 08 48 14.8 0.0**
STHS Stebnicka Huta 62.47 313 eP **P 08 48 15.6 +0.5**
STHS pmax pmax
comp=Z,37nm,0.9s,mb5.5
STHS Stebnicka Huta 62.47 313 eP **P 08 48 15.6 +0.5**
comp=Z,37nm,0.9s,mb5.5
STHS ePcP PcP 08 48 53.2 -1.1
STHS Stebnicka Huta 62.47 313 eP **P 08 48 15.6 +0.5**
STHS ePCP PcP 08 48 53.2 -1.1
SMG Samos 62.70 299 eP **P 08 48 16.6 -0.2**
RZN Rozhen 62.80 304 P **P 08 48 18.0 +0.6**
RZN Rozhen 62.80 304 P **P 08 48 18.0 +0.6**
GZR Gura Zlata 62.83 308 P **P 08 48 18.2 +0.7**
GZR Gura Zlata 62.83 308⇑iP **P 08 48 18.4 +0.9**
PGB Panagyurishte 62.88 305 P **P 08 48 18.5 +0.6**
PGB Panagyurishte 62.88 305 P **P 08 48 18.5 +0.6**
CHOS Chios island 63.03 300 eP **P 08 48 19.0 0.0**
CHOS Chios island 63.03 300 P **P 08 48 18.9 -0.1**
NIE Niedzica 63.05 313 eP **P 08 48 20.2 +1.3**
NIE e 08 48 26.2
OJC Ojcow 63.09 314 iP **P 08 48 18.8 -0.4**
OJC L 09 16 40.3
comp=Z,2.8nm,19.4s
OJC Ojcow 63.09 314⇓iP **P 08 48 18.8 -0.4**
OJC eS **S 08 56 48.2 -2.1**
OJC MLR MLR
comp=Z,3μm,19.4s,MS5.5
LIA Limnos Island 63.11 302 eP **P 08 48 19.1 -0.4**
HFS Hagfors 63.11 326 P **P 08 48 18.8 -0.3**
comp=Z,66nm,0.8s,mb5.8,baz=83,slow=6.1,SNR=106
HFS Hagfors 63.11 326 P **P 08 48 18.8 -0.3**
HFS pmax pmax
comp=Z,67nm,0.8s
UNV Unalaska Valle 63.16 42 eP **P 08 48 18.1 -1.5**
comp=Z,20nm,0.7s,mb5.4
KECS Kecovo 63.25 312 eP **P 08 48 20.9 +0.6**
KECS pmax pmax
comp=Z,15nm,0.9s,mb5.1
KECS Kecovo 63.25 312 eP **P 08 48 20.9 +0.6**
comp=Z,15nm,0.9s,mb5.1
KECS Kecovo 63.25 312 eP **P 08 48 20.9 +0.6**
KARP Karpathos 63.27 297 eP **P 08 48 20.1 -0.5**
AKUT Akutan 63.47 41 eP **P 08 48 20.6 -1.0**
comp=Z,34nm,0.8s,mb5.5
NVR Nevrokopi 63.52 304 eP **P 08 48 27.4 +5.2**
BZS Buzias 63.52 309 P **P 08 48 22.3 +0.2**
VTS Vitosha 63.52 305 P **P 08 48 22.7 +0.5**
VTS Vitosha 63.52 305 P **P 08 48 22.7 +0.5**
MMB Musomiste 63.52 304 P **P 08 48 22.1 -0.1**
MMB Musomiste 63.52 304 P **P 08 48 22.1 -0.1**
GKP Gorka Klasztor 63.56 318 eP **P 08 48 22.2 -0.1**
GKP epP pP 08 48 24.4 +0.1
GKP LMZ 09 17 18.7
comp=Z,3μm,20.3s
SRS Serrai 63.79 304 P **P 08 48 23.2 -0.8**
OUR Ouranopolis 63.80 303 P **P 08 48 23.4 -0.7**
PSZ Piszkesteto 63.82 312 eP **P 08 48 24.8 +0.8**
PSZ pmax pmax
comp=Z,74nm,1.3s,mb5.6
PSZ MLR MLR
comp=Z,2μm,20.0s,MS5.3
PSZ Piszkesteto 63.82 312 eP **P 08 48 24.8 +0.8**
comp=Z,74nm,1.3s,mb5.6
PSZ LR LR
comp=Z,2μm,20.0s,MS5.3
PSZ Piszkesteto 63.82 312⇓eP **P 08 48 24.4 +0.4**
PSZ Piszkesteto 63.82 312⇓iP **P 08 48 24.5 +0.5**
KKB Krupnik 63.87 304 P **P 08 48 24.4 -0.1**
KKB Krupnik 63.87 304 P **P 08 48 24.4 -0.1**
LIKS Likavka 63.91 313 eP **P 08 48 25.2 +0.6**
LIKS Likavka 63.91 313 eP **P 08 48 25.2 +0.6**
NB2 NORSAR Subarra 63.95 327 P **P 08 48 23.8 -0.9**
comp=Z,107nm,0.9s,mb5.9,baz=71,slow=6.9
NOA NORSAR Array B 63.95 327 P **P 08 48 23.7 -0.9**
comp=Z,76nm,0.8s,mb5.8,baz=70,slow=6.6,SNR=171
NOA LR LR 09 16 25.4
comp=Z,1μm,21.7s,MS5.0,baz=70,slow=36
NOA NORSAR Array B 63.95 327 P **P 08 48 23.7 -1.0**
NOA pmax pmax
comp=Z,76nm,0.8s
NOA MLR MLR
comp=Z,1μm,21.7s
SOH Sokhos 64.07 303 eP **P 08 48 31.1 +5.3**
SOH Sokhos 64.07 303 P **P 08 48 25.4 -0.4**
ZKR Zakros 64.15 296 eP **P 08 48 26.2 -0.2**
NAO01 NORSAR Array S 64.17 327 eP **P 08 48 24.9 -1.2**
comp=Z,53nm,0.9s,mb5.6
NAO01 LR LR
comp=Z,1μm,19.0s,MS5.1
PLG Polygyros 64.17 303 eP **P 08 48 28.4 +1.9**
PLG Polygyros 64.17 303 P **P 08 48 28.2 +1.7**
PAIG Paliouri 64.17 302 P **P 08 48 25.8 -0.7**
BSD Bornholm Skovb 64.20 320 iP **P 08 48 24.9 -1.5**
BSD pmax pmax
comp=Z,62nm,0.8s,mb5.7
BSD MLR MLR
comp=Z,2μm,18.0s,MS5.3
BSD Bornholm Skovb 64.20 320 iP **P 08 48 21.9 -4.5**
BSD Bornholm Skovb 64.20 320 iP **P 08 48 24.9 -1.5**
comp=Z,62nm,0.8s,mb5.7
BSD
comp=Z,2μm,18.0s
OKC Ostrava-Krasne 64.22 314 eP **P 08 48 27.0 +0.4**
OKC epP pP 08 48 32.0 +3.3
OKC AMS AMS 09 17 00.0
comp=Z,2μm,13.2s
THR1 Thera Island 64.23 298 P **P 08 48 25.4 -1.5**
VYHS Vyhne 64.28 313 eP **P 08 48 27.7 +0.7**
VYHS pmax pmax
comp=Z,50nm,1.2s,mb5.4
VYHS Vyhne 64.28 313 eP **P 08 48 27.7 +0.7**
comp=Z,50nm,1.2s,mb5.4
VYHS Vyhne 64.28 313 eP **P 08 48 27.7 +0.7**
AOS Alonnisos 64.31 301 P **P 08 48 26.9 -0.5**
HORT Hortiatis 64.33 303 P **P 08 48 26.7 -0.8**
THE Thessaloniki 64.41 303 P **P 08 48 26.5 -1.6**
VAY Valandovo 64.43 304 eP **P 08 48 26.5 -1.7**
FALS False Pass 64.51 40 eP **P 08 48 27.4 -1.0**
comp=Z,27nm,0.5s,mb5.5
KOLL Kolacno 64.52 313 eP **P 08 48 29.6 +1.0**
KOLL Kolacno 64.52 313 eP **P 08 48 29.5 +0.9**
BUD Budapest 64.53 311⇓eP **P 08 48 28.9 +0.2**
NPS Neapolis 64.55 297 eP **P 08 48 26.0 -3.0**
STIP Stip 64.56 305 eP **P 08 48 28.0 -1.0**
OSL Oslo 64.58 326 eP **P 08 48 27.9 -0.9**
OSL AMB AMB 08 48 29.5
comp=Z,157nm,1.0s,mb6.0
MORC Moravsky Berou 64.61 314 eP **P 08 48 29.5 +0.3**
MORC pmax pmax
comp=Z,76nm,1.0s,mb5.7
MORC Moravsky Berou 64.61 314 eP **P 08 48 29.5 +0.3**
comp=Z,76nm,1.0s,mb5.7
MORC Moravsky Berou 64.61 314⇓iP **P 08 48 29.5 +0.3**
XRY Khrisi 64.64 296 eP **P 08 48 29.4 -0.2**
LAST Lasithi 64.69 297 eP **P 08 48 30.0 +0.1**
NEO Neokhori 64.73 302 eP **P 08 48 29.5 -0.7**
XOR Xorichti 64.73 302 P **P 08 48 28.6 -1.6**
PTL Penteli 64.75 300 eP **P 08 48 29.6 -0.7**
ALE Alert 64.83 358 P **P 08 48 30.0 -0.1**
comp=Z,154nm,0.8s,mb6.1,SNR=15
VLY Voula,Athens 64.88 300 eP **P 08 48 29.8 -1.4**
LIT Litokhoron 64.95 303 eP **P 08 48 30.6 -1.0**
LIT Litokhoron 64.95 303 P **P 08 48 30.3 -1.3**
KSP Ksiaz 64.97 316 eP **P 08 48 31.8 +0.3**
KSP eS **S 08 57 14.5 +1.0**
KSP LMZ 09 18 12.2
comp=Z,5μm,18.3s
KSP Ksiaz 64.97 316 eP **P 08 48 31.3 -0.2**
KSP e*PP pP 08 48 37.8 +4.3
KSP eS **S 08 57 11.0 -2.5**
KSP MLR MLR
comp=Z,6μm,18.3s,MS5.8

SKO Skopje 64.97 305 eP **P 08 48 32.1 +0.4**
KLBR Kellerberrin 65.02 169 eP **P 08 48 31.6 -0.3**
comp=Z,35nm,0.9s,mb5.4
TTA Tatalina 65.03 30 eP **P 08 48 31.6 -0.1**
IDI Anoyia 65.08 297 eP **P 08 48 31.4 -1.1**
DPC Dobruska-Polom 65.13 315 eP **P 08 48 33.3 +0.7**
DPC eS S 08 57 13.4 -2.2
DPC MLR MLR
comp=Z,2μm,19.5s,MS5.4
DPC Dobruska-Polom 65.13 315 eP **P 08 48 33.3 +0.7**
DPC eS S 08 57 13.4 -2.2
DPC AMS AMS 09 18 10.0
comp=Z,2μm,19.5s
NAIG Nisos Aigina 65.14 300 eP **P 08 48 30.9 -2.0**
SMOL Smolenice 65.14 313 eP **P 08 48 33.8 +1.1**
SMOL Smolenice 65.14 313 eP **P 08 48 33.8 +1.1**
LKR Lokris 65.15 301 eP **P 08 48 31.6 -1.3**
KONO Kongsberg 65.21 326 eP **P 08 48 32.3 -0.6**
KONO pmax pmax
comp=Z,64nm,1.0s,mb5.6
KONO MLR MLR
comp=Z,1μm,20.0s,MS5.2
KONO Kongsberg 65.21 326 eP **P 08 48 32.3 -0.7**
comp=Z,64nm,1.0s,mb5.6
KONO LR LR
comp=Z,1μm,20.0s,MS5.2
PKSM Moragy 65.24 310 P **P 08 48 33.6 +0.2**
PKSM Moragy 65.24 310⇓iP **P 08 48 33.3 -0.1**
SIVA Sivas 65.25 297 eP **P 08 48 33.3 -0.3**
UPC Upice 65.26 315 eP **P 08 48 33.7 +0.3**
UPC epP pP 08 48 37.8 +2.4
COP Copenhagen 65.31 322⇓iP **P 08 48 33.7 0.0**
COP pmax pmax
comp=Z,82nm,0.9s,mb5.8
COP MLR MLR
comp=Z,620nm,18.0s,MS4.8
COP Copenhagen 65.31 322 iP **P 08 48 28.5 -5.2**
COP Copenhagen 65.31 322⇓iP **P 08 48 33.7 0.0**
comp=Z,82nm,0.9s,mb5.8
COP
comp=Z,620nm,18.0s
KRUS Krusevo 65.33 304 eP **P 08 48 32.5 -1.6**
VRAC Vranov 65.36 314 P **P 08 48 34.8 +0.7**
comp=Z,48nm,1.0s,mb5.5,baz=72,slow=7.3,SNR=34
VRAC Vranov 65.36 314 P **P 08 48 34.8 +0.7**
VRAC pmax pmax
comp=Z,48nm,1.0s
VRAC Vranov 65.36 314 P **P 08 48 34.8 +0.8**
VRAC Vranov 65.36 314⇑iP **P 08 48 35.0 +0.9**
CTA Charters Tower 65.37 138 eP **P 08 48 33.2 -1.2**
comp=Z,13nm,0.9s,mb5.0
CTA Charters Tower 65.37 138 P **P 08 48 33.8 -0.6**
comp=Z,13nm,0.8s,mb5.0,baz=328,slow=11,SNR=7.3
CTA Charters Tower 65.37 138 P **P 08 48 33.8 -0.6**
CTA pmax pmax
comp=Z,13nm,0.8s
CTAO Charters Tower 65.37 138 eP **P 08 48 33.3 -1.1**
CTAO pmax pmax
comp=Z,26nm,0.9s,mb5.3
CTAO MLR MLR
comp=Z,1μm,20.0s,MS5.1
CTAO Charters Tower 65.37 138 eP **P 08 48 33.3 -1.1**
comp=Z,26nm,0.9s,mb5.2
CTAO LR LR
comp=Z,1μm,20.0s,MS5.1
KZN Kozani 65.38 303 eP **P 08 48 33.7 -0.7**
LTK Loutraki 65.42 301 eP **P 08 48 32.2 -2.4**
ZST Bratislava 65.46 313 eP **P 08 48 34.0 -0.8**
ZST pmax pmax
comp=Z,14nm,0.7s,mb5.1
ZST Bratislava 65.46 313 eP **P 08 48 34.0 -0.8**
comp=Z,14nm,0.7s,mb5.1
ZST Bratislava 65.46 313 eP **P 08 48 34.0 -0.8**
FNA Florina 65.47 304 P **P 08 48 33.6 -1.4**
COLD Coldfoot 65.47 25 eP **P 08 48 34.2 -0.3**
comp=Z,116nm,1.2s,mb5.8
AGG Agios Georgios 65.48 302 eP **P 08 48 33.8 -1.3**
AGG Agios Georgios 65.48 302 P **P 08 48 33.5 -1.6**
THL Klokotos Trika 65.50 302 eP **P 08 48 33.5 -1.6**
VAM Vamos 65.55 297 eP **P 08 48 35.7 +0.2**
IVA Berane 65.68 306⇑iP **P 08 48 36.8 +0.5**
PVY Plav 65.74 306⇑iP **P 08 48 36.4 -0.2**
KARN Karanos 65.76 298 eP **P 08 48 36.4 -0.5**
BCI Bajram Curri 65.76 306 eP **P 08 48 37.2 +0.4**
PHP Peshkopia 65.77 305 eP **P 08 48 35.2 -1.7**
RUE Ruedersdorf 65.80 318 eP **P 08 48 37.2 +0.3**
comp=Z,152nm,1.2s,mb5.9
RUE Ruedersdorf 65.80 318 eP **P 08 48 37.0 +0.2**
comp=Z,85nm,0.9s,mb5.8
PLE Pljevlja 65.84 307⇑iP **P 08 48 38.4 +1.1**
PLE Pljevlja 65.84 307⇑iP **P 08 48 38.4 +1.1**
GVD Gavdhos 65.86 297 eP **P 08 48 36.8 -0.8**
GVD Gavdhos 65.86 297 eP **P 08 48 36.6 -1.0**
comp=Z,128nm,0.9s,mb6.0
SDPT Sand Point 65.89 39 eP **P 08 48 36.9 -0.5**
comp=Z,122nm,1.5s,mb5.7
EVR Evrytania 65.90 302 eP **P 08 48 38.9 +1.2**
GUR Goura 65.90 301 eP **P 08 48 35.7 -2.1**
KBN Korca 65.95 304 eP **P 08 48 36.0 -2.0**
VLI Veliai 65.96 299 eP **P 08 48 35.6 -2.6**
SVW2 Sparrevohn 65.96 32 eP **P 08 48 38.3 +0.6**
PUK Puka 66.01 306 eP **P 08 48 46.4 +8.0**
EFP Efpalio 66.02 301 eP **P 08 48 37.3 -1.3**
TREC Trest 66.03 314 eP **P 08 48 38.9 +0.5**
TREC epP pP 08 48 43.6 +3.1
TREC AMS AMS 09 18 20.0
comp=Z,2μm,18.0s
KYTH Kithira 66.06 299 eP **P 08 48 37.3 -1.5**
PVCC Panska Ves 66.10 316 eP **P 08 48 39.3 +0.5**
PVCC MLR MLR
comp=Z,2μm,14.8s,MS5.5
PVCC Panska Ves 66.10 316 eP **P 08 48 39.3 +0.5**
PVCC AMS AMS 09 18 40.0
comp=Z,2μm,14.8s
VLX Vlachokerasia 66.10 300 eP **P 08 48 37.1 -2.0**
CHUM Lake Minchumin 66.15 28 eP **P 08 48 39.2 +0.3**
comp=Z,107nm,0.8s,mb5.9
UPM Unac-Piva 66.22 307⇑iP **P 08 48 39.6 -0.1**
UPM Unac-Piva 66.22 307⇑iP **P 08 48 39.6 -0.1**
NWAO Narrogin (SRO) 66.24 169 eP **P 08 48 39.7 0.0**
comp=Z,292nm,0.7s,mb6.4
NWAO Narrogin (SRO) 66.24 169 P **P 08 48 39.7 0.0**
comp=Z,59nm,0.9s,mb5.6,baz=352,slow=6.6,SNR=26
NWAO Narrogin (SRO) 66.24 169 eP **P 08 48 39.2 -0.5**
NWAO pmax pmax
comp=Z,55nm,1.0s
NWAO MLR MLR
comp=Z,1μm,21.0s
NWAO Narrogin (SRO) 66.24 169 eP **P 08 48 39.2 -0.6**
comp=Z,55nm,1.0s,mb5.5
NWAO LR LR
comp=Z,1μm,21.0s,MS5.0
TTG Podgorica 66.29 306⇑iP **P 08 48 39.4 -0.8**
TTG Podgorica 66.29 306⇑iP **P 08 48 39.5 -0.7**
TIR Tirane 66.30 305 PFAKE 08 48 50.0 +10
TIR LR LR
comp=Z,2μm,21.0s,MS5.2
NKY Niksic 66.31 307⇑iP **P 08 48 39.6 -0.7**
NKY Niksic 66.31 307⇑iP **P 08 48 39.6 -0.7**
PRU Pruhonice 66.33 315 eP **P 08 48 41.0 +0.7**
PRU epP pP 08 48 46.0 +3.7
PRU eS S 08 57 27.8 -2.4
PRU AMS AMS 09 18 50.0
comp=Z,3μm,18.8s
BRG Berggiesshubel 66.33 316 eP **P 08 48 40.5 +0.2**
comp=Z,44nm,0.8s,mb5.5
BRG Berggiesshubel 66.33 316 iP **P 08 48 40.5 +0.2**
comp=Z,44nm,0.8s,mb5.5
BRG ePCP PcP 08 49 11.6 +1.4
comp=Z,11nm,1.1s
BRG ePP PP 08 51 04.0 -1.9
comp=Z,29nm,1.5s
BRG e 08 55 01.0
comp=Z,4.7nm,1.1s
BRG S S 08 57 29.0 -1.2
BRG
comp=N,2μm,11.6s
BRG
comp=E,2μm,14.0s
BRG
comp=Z,2μm,17.8s
CONA Conrad Observa 66.33 313 iP **P 08 48 41.0 +0.7**
comp=Z,59nm,1.3s,mb5.5,SNR=6.7
PRA Prague 66.36 315 P **P 08 48 41.0 +0.5**

ULC Ulcinj 66.48 306⇑iP **P 08 48 41.1 -0.3**
ULC Ulcinj 66.48 306⇑iP **P 08 48 41.2 -0.2**
RLS Riolos of Patr 66.49 301 eP **P 08 48 40.1 -1.4**
ITM Ithomi 66.51 300 eP **P 08 48 39.8 -1.9**
CHGN Chignik 66.58 37 eP **P 08 48 40.1 -1.7**
BPAW Bear Paw Mtn. 66.58 28 eP **P 08 48 41.2 -0.4**
comp=Z,78nm,0.8s,mb5.8
BUM Brajici-Budva 66.58 306⇑iP **P 08 48 41.5 -0.6**
BUM Brajici-Budva 66.58 306⇑iP **P 08 48 41.6 -0.5**
BRY Bratogost 66.59 307 eP **P 08 48 41.2 -0.9**
PPLA Purkeypile 66.64 29 eP **P 08 48 42.4 +0.3**
comp=Z,173nm,0.8s,mb6.1
FORT Forrest 66.67 159 eP **P 08 48 42.1 -0.5**
comp=Z,126nm,0.8s,mb6.0
FORT Forrest 66.67 159 eP **P 08 48 41.9 -0.7**
comp=Z,170nm,0.8s,mb6.1
KOGS Kog 66.68 311 iP **P 08 48 42.4 -0.2**
MUD Monsted U'grnd 66.69 323⇓iP **P 08 48 42.5 0.0**
MUD pmax pmax
comp=Z,91nm,1.0s,mb5.8
MUD MLR MLR
comp=Z,2μm,18.0s,MS5.4
MUD Monsted U'grnd 66.69 323 iP **P 08 48 39.2 -3.3**
MUD Monsted U'grnd 66.69 323⇓iP **P 08 48 42.5 0.0**
comp=Z,91nm,1.0s,mb5.8
MUD
comp=Z,2μm,18.0s
CLL Collm 66.70 317 eP **P 08 48 42.6 -0.1**
comp=Z,54nm,1.0s,mb5.5
CLL Collm 66.70 317⇓iP **P 08 48 42.4 -0.3**
CLL i 08 48 48.8
CLL eS S 08 57 40.0 +5.3
CLL pmax pmax
comp=Z,54nm,1.0s,mb5.5
CLL MLR MLR
comp=Z,2μm,18.7s,MS5.5
CLL Collm 66.70 317⇓iP **P 08 48 42.4 -0.3**
comp=Z,54nm,1.0s,mb5.5
CLL i 08 48 48.8
CLL eS S 08 57 40.0 +5.3
CLL LR LR
comp=Z,2μm,18.7s,MS5.5
CLL Collm 66.70 317⇓iP **P 08 48 42.4 -0.3**
comp=Z,54nm,1.0s,mb5.5
CLL iP pP 08 48 48.8 +4.1
CLL i 08 48 56.0
CLL e(PP) 08 51 03.0
CLL e 08 51 13.0
CLL eS S 08 57 40.0 +5.3
CLL e(SS) 09 02 18.0
CLL eSSS 09 05 18.0
CLL LmH 09 14 00.0
comp=N,3μm,19.9s
CLL LmH 09 14 00.0
comp=E,2μm,21.5s
PYL PYLOS 66.76 300 eP **P 08 48 41.2 -2.1**
HCY Herceg Novi 66.80 306⇑iP **P 08 48 43.0 -0.4**
HCY Herceg Novi 66.80 306⇑iP **P 08 48 43.1 -0.4**
ARSA Arzberg 66.81 312⇓iP **P 08 48 43.4 0.0**
comp=E,30nm,1.2s,mb5.2
KTH Kantishna Hill 66.86 28 eP **P 08 48 43.2 -0.2**
comp=E,133nm,1.2s,mb5.8
KEK Kerkira 67.00 303 eP **P 08 48 43.2 -1.6**
VLS Valsamata 67.07 302 eP **P 08 48 43.4 -1.9**
BSEG Bad Segeberg 67.13 320 eP **P 08 48 46.1 +0.7**
comp=Z,125nm,0.9s,mb5.9
TRF Thorofare Moun 67.16 28 eP **P 08 48 44.7 -0.6**
comp=Z,58nm,0.8s,mb5.7
KHC Kasperske Hory 67.25 315 eP **P 08 48 46.5 +0.3**
comp=Z,15nm,0.9s,mb5.0
KHC Kasperske Hory 67.25 315 eP **P 08 48 46.0 -0.2**
KHC epP pP 08 48 51.0 +2.8
KHC eS S 08 57 41.0 -0.3
KHC AMS AMS 09 18 50.0
comp=Z,3μm,14.6s
GEC2 GERESS Array S 67.29 314 eP **P 08 48 46.9 +0.5**
comp=Z,47nm,1.1s,mb5.4
GEC2 GERESS Array S 67.29 314 eP **P 08 48 46.9 +0.5**
GEC2 pmax pmax
comp=Z,47nm,1.1s,mb5.4
GERES GERESS Array B 67.29 314 P **P 08 48 45.5 -0.9**
comp=Z,23nm,0.9s,mb5.2,baz=72,slow=5.7,SNR=101
GERES LR LR 09 19 29.4
comp=Z,2μm,18.7s,MS5.3,baz=65,slow=37
GERES GERESS Array B 67.29 314 P **P 08 48 45.6 -0.8**
GERES pmax pmax
comp=Z,23nm,0.9s
GERES MLR MLR
comp=Z,2μm,18.7s
MOA Molln 67.35 313⇓iP **P 08 48 47.4 +0.5**
comp=Z,51nm,1.2s,mb5.4,SNR=14
SOKA Soboth 67.35 312⇓iP **P 08 48 47.0 +0.1**
comp=Z,57nm,1.1s,mb5.5
TANN Tannenbergstha 67.38 316 eP **P 08 48 47.3 +0.3**
comp=Z,44nm,1.0s,mb5.4
COLA College 67.42 26 eP **P 08 48 46.8 -0.2**
COLA pmax pmax
comp=Z,98nm,0.8s,mb5.9
COLA MLR MLR
comp=Z,1μm,19.0s,MS5.1
COLA College 67.42 26 eP **P 08 48 46.8 -0.2**
comp=Z,98nm,0.8s,mb5.9
COLA LR LR
comp=Z,1μm,19.0s,MS5.1
NEUB Neuenburg 67.45 317 eP **P 08 48 47.6 +0.2**
comp=Z,105nm,0.9s,mb5.9
WERD Werda 67.46 316 eP **P 08 48 47.7 +0.2**
comp=Z,33nm,0.9s,mb5.4
NKC Novy Kostel 67.46 316 eP **P 08 48 47.6 +0.1**
NKC MLR MLR
comp=Z,3μm,17.5s,MS5.5
NKC Novy Kostel 67.46 316 eP **P 08 48 47.6 +0.1**
NKC AMS AMS 09 19 20.0
comp=Z,3μm,17.5s
GUNZ Gunzen 67.48 316 eP **P 08 48 47.9 +0.3**
comp=Z,59nm,0.9s,mb5.6
WERN Wernitzgruen 67.48 316 eP **P 08 48 48.0 +0.3**
comp=Z,44nm,0.9s,mb5.5
RSO Redoubt South 67.48 32 eP **P 08 48 47.9 +0.4**
PLN Plauen 67.53 316 eP **P 08 48 48.2 +0.3**
comp=Z,167nm,1.1s,mb6.0
ROHR Rohrbach 67.54 316 eP **P 08 48 48.2 +0.2**
MCK McKinley 67.56 28 eP **P 08 48 47.4 -0.5**
MCK pmax pmax
comp=Z,49nm,0.8s,mb5.6
MCK McKinley 67.56 28 eP **P 08 48 47.4 -0.5**
comp=Z,49nm,0.8s,mb5.6
WET Wettzell 67.66 315 eP **P 08 48 49.4 +0.6**
comp=Z,37nm,1.2s,mb5.3
WET Wettzell 67.66 315 eP **P 08 48 49.4 +0.6**
WET pmax pmax
comp=Z,37nm,1.2s,mb5.3
BOJS Bojanci 67.69 311 eP **P 08 48 49.4 +0.3**
BOJS eS S 08 57 46.4 -0.4
OBKA Obir 67.73 312⇓iP **P 08 48 49.0 -0.3**
comp=Z,30nm,1.1s,mb5.2
MOX Moxa 67.78 317 eP **P 08 48 49.6 +0.1**
comp=Z,47nm,1.4s,mb5.3
MOX
comp=Z,2μm,17.0s
MOX Moxa 67.78 317 eP **P 08 48 49.8 +0.3**
comp=Z,36nm,1.1s,mb5.3
MOX Moxa 67.78 317 eP **P 08 48 49.6 +0.1**
MOX pmax pmax
comp=Z,47nm,1.4s,mb5.3
MOX MLR MLR
comp=Z,2μm,17.0s,MS5.5
ROTZ Rotzenmuhle 67.80 316 eP **P 08 48 50.5 +0.8**
comp=Z,66nm,1.0s,mb5.6
NRDL Niedersach Rie 67.85 319 eP **P 08 48 50.7 +0.8**
comp=Z,103nm,1.0s,mb5.8
LJU Ljubljana 67.93 311 iP **P 08 48 50.5 -0.1**
CLZ Clausthal 67.98 318 eP **P 08 48 51.4 +0.6**
comp=Z,103nm,0.9s,mb5.9
CLZ Clausthal 67.98 318 eP **P 08 48 51.4 +0.6**
CLZ pmax pmax
comp=Z,103nm,0.9s,mb5.9
KNDS Knezji Dol 68.24 311 iP **P 08 48 52.5 0.0**
MYKA Terra Mystica 68.25 312⇓iP **P 08 48 52.2 -0.3**
comp=Z,10nm,1.0s,mb4.8
VOY Vojsko 68.34 311 eP **P 08 48 52.5 -0.6**
VOY e 08 50 00.3
CADS Cadrg 68.35 312 iP **P 08 48 52.5 -0.7**
CADS eS S 08 57 52.8 -1.9
GRA1 Grafenberg Arr 68.41 316 eP **P 08 48 54.2 +0.7**
comp=Z,107nm,1.0s,mb5.8

GRA1 LR LR
comp=Z,2µm,18.3s,MS5.5
GRF Grafenberg Arr 68.41 316 *eP* **P 08 48 54.2 +0.7**
comp=Z,107nm,1.0s,mb5.8
GRF *eL* 09 20 40.9
comp=Z,2µm,18.3s
GRF Grafenberg Arr 68.41 316 *eP* **P 08 48 54.2 +0.7**
GRF pmax pmax
comp=Z,107nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,2µm,18.3s,MS5.5
GRF Grafenberg Arr 68.41 316 *eP* **P 08 48 54.2 +0.7**
GRF pmax pmax
comp=Z,107nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,2µm,18.3s,MS5.5
PMR Palmer 68.51 30 *eP* **P 08 48 53.1 -0.8**
PMR pmax pmax
comp=Z,122nm,0.8s,mb5.9
PMR Palmer 68.51 30 *eP* **P 08 48 53.1 -0.8**
comp=Z,122nm,0.8s,mb5.9
PTCC Patocco-Chiusa 68.52 312 P **P 08 48 53.6 -0.6**
comp=Z,6.8nm,0.6s,mb4.8
TRI Trieste 68.56 311 *eP* **P 08 48 54.0 -0.5**
TRI pmax pmax
comp=Z,21nm,0.8s,mb5.1
TRI MLR MLR
comp=Z,1µm,19.0s,MS5.2
TRI Trieste 68.56 311 *eP* **P 08 48 54.0 -0.5**
comp=Z,21nm,0.8s,mb5.1
TRI LR LR
comp=Z,1µm,19.0s,MS5.2
UBBA Unterbreizbach 68.63 317 *eP* **P 08 48 55.0 +0.1**
comp=Z,53nm,1.5s,mb5.2
OHAK Old Harbor 68.72 35 *eP* **P 08 48 55.3 0.0**
comp=Z,137nm,0.9s,mb5.9
KDAK Kodiak Island 68.79 34 LR LR 09 21 32.9
comp=Z,1µm,18.8s,MS5.2,slow=38
KDAK Kodiak Island 68.79 34 *i P* **P 08 48 55.1 -0.6**
ABTA Abfaltersbach 68.90 313 ⇓*iP* **P 08 48 55.9 -0.7**
comp=Z,16nm,1.0s,mb4.9,SNR=7.3
FUR Furstenfeldbru 69.04 314 *eP* **P 08 48 58.3 +0.9**
comp=Z,173nm,1.2s,mb5.9
FUR Furstenfeldbru 69.04 314 *eP* **P 08 48 58.3 +0.9**
FUR pmax pmax
comp=Z,173nm,1.2s,mb5.9
RGNG Rignano Grg 69.09 307 P **P 08 48 57.8 -0.1**
SEW Seward 69.11 31 *eP* **P 08 48 56.4 -1.2**
comp=Z,51nm,0.8s,mb5.5
WTTA Wattenberg 69.21 313 ⇓*iP* **P 08 48 58.5 0.0**
comp=Z,72nm,1.3s,mb5.5,SNR=14
WATA Walderalm 69.22 313 ⇑*iP* **P 08 48 58.7 +0.1**
comp=Z,23nm,0.8s,mb5.2
IBBN Ibbenburen 69.23 319 *eP* **P 08 48 59.0 +0.5**
TIP Timpagrande 69.36 304 *eP* **P 08 48 59.6 0.0**
comp=Z,73nm,1.3s,mb5.5
TIP LR LR
comp=Z,2µm,20.0s,MS5.3
MOTA Moosalm 69.50 314 ⇓*iP* **P 08 49 00.1 -0.2**
comp=Z,39nm,1.0s,mb5.3,SNR=12
RETA Reutte 69.65 314 ⇓*iP* **P 08 49 01.2 0.0**
comp=Z,20nm,0.9s,mb5.0
TNS Taunus Mts 69.78 317 *eP* **P 08 49 02.4 +0.4**
comp=Z,52nm,1.2s,mb5.3
TNS Taunus Mts 69.78 317 *eP* **P 08 49 02.4 +0.4**
TNS pmax pmax
comp=Z,52nm,1.2s,mb5.3
TOD Tromm 69.86 317 *eP* **P 08 49 02.7 +0.2**
FETA Feichten 69.88 313 ⇓*iP* **P 08 49 02.5 -0.1**
comp=Z,68nm,1.3s,mb5.4,SNR=19
BUG Bochum--Univer 69.89 319 *eP* **P 08 49 03.1 +0.4**
comp=Z,66nm,0.9s,mb5.6
EGAK Eagle 69.90 25 *eP* **P 08 49 01.5 -1.0**
comp=Z,19nm,0.8s,mb5.1
EGAK LR LR
comp=Z,2µm,20.0s,MS5.3
WTSB Winterswijk 69.91 319 *eP* **P 08 49 03.0 +0.2**
comp=Z,65nm,1.2s,mb5.4
CING Cingoli 69.94 309 P **P 08 49 03.2 +0.1**
MENT Mentasta 69.99 27 *eP* **P 08 49 02.7 -0.3**
MIDA Miranda 70.00 307 P **P 08 49 03.8 +0.3**
STU Stuttgart 70.01 316 *eP* **P 08 49 03.5 +0.1**
comp=Z,59nm,1.3s,mb5.4
STU Stuttgart 70.01 316 *eP* **P 08 49 03.4 0.0**
STU pmax pmax
comp=Z,16nm,0.4s,mb5.3
STU Stuttgart 70.01 316 *eP* **P 08 49 03.4 0.0**
comp=Z,16nm,0.4s,mb5.3
DIV Divide 70.14 29 *eP* **P 08 49 04.0 -0.1**
comp=Z,58nm,0.8s,mb5.6
INK Inuvik 70.20 20 LR LR 09 24 35.5
comp=Z,2µm,18.4s,MS5.3,baz=106,slow=40
INK Inuvik 70.20 20 *eP* **P 08 49 03.7 -0.6**
INK pmax pmax
comp=Z,103nm,0.9s
INK Inuvik 70.20 20 *eP* **P 08 49 03.7 -0.6**
comp=Z,103nm,0.9s,mb5.8
AQU L'Aquila 70.25 308 *eP* **P 08 49 05.3 +0.2**
AQU pmax pmax
comp=Z,58nm,1.0s,mb5.5
AQU MLR MLR
comp=Z,2µm,19.0s,MS5.4
AQU L'Aquila 70.25 308 *eP* **P 08 49 05.3 +0.3**
comp=Z,58nm,1.0s,mb5.5
AQU LR LR
comp=Z,2µm,19.0s,MS5.4
DAVA Damuels 70.27 314 ⇓*iP* **P 08 49 05.0 -0.1**
comp=Z,18nm,0.9s,mb5.0
CEL Celeste 70.38 303 *eP* **P 08 49 05.7 -0.1**
comp=Z,69nm,0.9s,mb5.6
CEL LR LR
comp=Z,901nm,20.0s,MS5.0
MURB Monte Urbino 70.43 309 P **P 08 49 06.9 +0.8**
ABH Alteburg 70.46 317 *eP* **P 08 49 06.5 +0.3**
SCO Scoresbysund 70.46 344 *i P* **P 08 49 05.7 -0.1**
SCO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SCO MLR MLR
comp=Z,910nm,18.0s,MS5.1
SCO Scoresbysund 70.46 344 *i P* **P 08 49 05.7 -0.1**
comp=Z,8.1nm,0.9s,mb4.7
SCO
comp=Z,910nm,18.0s
BADI Badiali 70.50 310 P **P 08 49 07.5 +1.0**
DAVOX Davos/Dischmat 70.50 313 P **P 08 49 06.7 +0.2**
comp=Z,33nm,0.9s,mb5.3,baz=80,slow=4.4,SNR=26
SPAK Spaichingen-Ko 70.56 315 *eP* **P 08 49 07.1 +0.3**
GUAR Guarcino 70.57 308 P **P 08 49 06.8 -0.2**
BMRM Bremner River 70.71 29 *eP* **P 08 49 07.3 -0.2**
comp=Z,188nm,0.9s,mb6.0
BFO Black Forest 70.72 315 P **P 08 49 08.6 +0.8**
comp=Z,135nm,1.3s,mb5.7,SNR=7.2
BFO Black Forest 70.72 315 *eP* **P 08 49 07.8 0.0**
comp=Z,43nm,1.3s,mb5.2
BFO Black Forest 70.72 315 *eP* **P 08 49 07.8 0.0**
BFO pmax pmax
comp=Z,43nm,1.3s,mb5.2
LANF Langenberg 70.73 316 *eP* **P 08 49 07.7 -0.1**
VMG Vicchio 70.75 310 P **P 08 49 09.7 +1.7**
comp=Z,114nm,1.1s,mb5.7
RUP Ruppelstein 70.82 317 *eP* **P 08 49 08.9 +0.5**
DAWY Dawson 70.94 25 *eP* **P 08 49 08.1 -0.7**
HGN Heimansgroeve 70.95 319 *eP* **P 08 49 09.1 -0.1**
comp=Z,38nm,1.4s,mb5.2
MEM Membach 70.99 318 P **P 08 49 09.7 +0.3**
comp=Z,20nm,1.6s,mb4.8
FELD Feldberg im Sc 71.13 315 *eP* **P 08 49 08.9 -1.4**
CSNT Castellina Chi 71.13 310 P **P 08 49 09.8 -0.6**
BBOO Buckleboo 71.26 153 *eP* **P 08 49 10.1 -1.0**
comp=Z,26nm,1.1s,mb5.1
CDF Champ du Feu 71.30 316 *eP* **P 08 49 11.0 -0.3**
comp=Z,73nm,1.1s,mb5.2
CDF Champ du Feu 71.30 316 *eP* **P 08 49 11.0 -0.3**
CDF pmax pmax
comp=Z,36nm,1.1s,mb5.2
CDF Champ du Feu 71.30 316 *eP* **P 08 49 11.0 -0.3**
comp=Z,36nm,1.1s,mb5.2
WLF Walferdange 71.36 317 P **P 08 49 12.7 +1.1**
comp=Z,69nm,1.4s,mb5.4
WLF Walferdange 71.36 317 *eP* **P 08 49 12.5 +0.9**
comp=Z,120nm,1.2s,mb5.7
WLF Walferdange 71.36 317 *eP* **P 08 49 12.5 +0.9**
WLF pmax pmax
comp=Z,125nm,1.3s,mb5.7
WLF MLR MLR
comp=Z,2µm,19.0s,MS5.4
WLF Walferdange 71.36 317 *eP* **P 08 49 12.5 +0.9**
comp=Z,126nm,1.3s,mb5.7
WLF LR LR
comp=Z,2µm,19.0s,MS5.4
VLC Villacollemand 71.39 311 P **P 08 49 13.3 +1.3**
VLC LR LR
comp=Z,2µm,22.0s,MS5.2
ECH Echery 71.47 316 *eP* **P 08 49 11.9 -0.4**
ECH Echery 71.47 316 *eP* **P 08 49 11.6 -0.7**
ECH pmax pmax
comp=Z,28nm,1.3s,mb5.0
ECH MLR MLR
comp=Z,1µm,22.0s,MS5.1
ECH Echery 71.47 316 *eP* **P 08 49 11.6 -0.7**
comp=Z,28nm,1.3s,mb5.0
ECH LR LR
comp=Z,1µm,22.0s,MS5.1
BCLA Clavier 71.47 318 P **P 08 49 11.6 -0.7**
comp=Z,22nm,1.3s,mb4.9
VAI Varese 71.61 313 P **P 08 49 12.6 -0.6**
VAI pmax pmax
comp=Z,60nm,0.9s,mb5.5
VAI Varese 71.61 313 P **P 08 49 12.6 -0.6**
comp=Z,60nm,0.9s,mb5.5
BBS Basel-Blauen 71.62 315 *eP* **P 08 49 13.1 -0.1**
MOF Molkenrain 71.66 315 *eP* **P 08 49 11.6 -1.9**
UCC Uccle 71.81 319 P **P 08 49 14.0 -0.4**
HINF Hinteralfeld 71.84 315 *eP* **P 08 49 14.0 -0.6**
GIVF Givet 71.90 318 *eP* **P 08 49 14.7 -0.2**
RES Resolute Bay 72.00 6 P **P 08 49 15.0 -0.1**
comp=Z,29nm,0.8s,mb5.2,baz=352,slow=6.7,SNR=72
RES Resolute Bay 72.00 6 P **P 08 49 15.0 -0.1**
RES pmax pmax
comp=Z,29nm,0.9s,mb5.2
RES Resolute Bay 72.00 6 *eP* **P 08 49 15.0 -0.1**
comp=Z,46nm,1.0s,mb5.4
SNF Seneffe 72.00 319 P **P 08 49 15.9 +0.5**
comp=Z,21nm,1.6s,mb4.8
DOU Dourbes 72.03 318 P **P 08 49 15.7 +0.1**
HAU Haudompre 72.04 316 *eP* **P 08 49 15.2 -0.6**
HAU *e*MLR MLR
comp=Z,2µm,18.5s,MS5.2
HAU Haudompre 72.04 316 *eP* **P 08 49 15.2 -0.6**
HAU LR LR
comp=Z,2µm,18.5s,MS5.5
SUMG Summit 72.07 349 *eP* **P 08 49 15.8 +0.2**
comp=Z,17nm,0.6s,mb5.2
THEF They Montfort 72.15 316 *eP* **P 08 49 16.0 -0.4**
EIDS Eidsvold 72.25 137 *eP* **P 08 49 16.4 -0.9**
comp=Z,22nm,0.9s,mb5.1
BAIF Baives 72.26 318 *eP* **P 08 49 17.1 0.0**
WDD Wield Dalam 72.44 302 PFAKE 08 49 30.0 +12
WDD LR LR
comp=Z,518nm,20.0s,MS4.8
KMBO Kilima Mbogo 72.48 257 P **P 08 49 20.1 +1.1**
comp=Z,14nm,0.9s,mb4.9,baz=182,slow=24,SNR=19
KMBO LR LR 09 23 36.5
comp=Z,571nm,18.2s,MS4.9,baz=273,slow=38
KMBO Kilima Mbogo 72.48 257 *eP* **P 08 49 19.9 +1.0**
KMBO pmax pmax
comp=Z,47nm,1.1s
KMBO MLR MLR
comp=Z,464nm,19.0s
KMBO Kilima Mbogo 72.48 257 *eP* **P 08 49 19.9 +0.9**
comp=Z,47nm,1.1s,mb5.3
KMBO LR LR
comp=Z,464nm,19.0s,MS4.8
KMBO Kilima Mbogo 72.48 257 P **P 08 49 20.5 +1.6**
SNR=11
KMBO P pP 08 49 20.5 -0.5
SNR=11
MEZF Maizieres J'vi 72.56 317 *eP* **P 08 49 18.7 -0.1**
STKA Stephens Creek 72.73 148 *eP* **P 08 49 18.9 -1.0**
comp=Z,24nm,0.9s,mb5.1
STKA Stephens Creek 72.73 148 P **P 08 49 19.2 -0.7**
comp=Z,30nm,0.9s,mb5.2,baz=330,slow=7.0,SNR=45
STKA LR LR 09 21 57.9
comp=Z,590nm,21.9s,MS4.8,baz=148,slow=36
STKA Stephens Creek 72.73 148 *eP* **P 08 49 18.8 -1.1**
comp=Z,4.6nm,0.7s,mb4.5
CABF La Chapelle 72.88 315 *eP* **P 08 49 19.6 -1.2**
comp=Z,45nm,1.0s,mb5.1
CABF La Chapelle 72.88 315 *eP* **P 08 49 19.6 -1.2**
CABF pmax pmax
comp=Z,22nm,1.0s,mb5.0
CABF La Chapelle 72.88 315 *eP* **P 08 49 19.6 -1.2**
comp=Z,22nm,1.0s,mb5.0
LPG La Plagne 73.03 313 *eP* **P 08 49 22.3 +0.6**
comp=Z,211nm,0.8s,mb5.8
LPG La Plagne 73.03 313 *eP* **P 08 49 22.3 +0.6**
LPG pmax pmax
comp=Z,106nm,0.8s,mb5.8
LPG La Plagne 73.03 313 *eP* **P 08 49 22.3 +0.6**
comp=Z,106nm,0.8s,mb5.8
LPL La Plagne 73.03 313 *eP* **P 08 49 22.2 +0.5**
comp=Z,189nm,0.9s,mb5.7
LPL La Plagne 73.03 313 *eP* **P 08 49 22.2 +0.5**
LPL pmax pmax
comp=Z,94nm,0.9s,mb5.7
LPL La Plagne 73.03 313 *eP* **P 08 49 22.2 +0.5**
comp=Z,94nm,0.9s,mb5.7
PGF Pioggiola 73.05 310 *eP* **P 08 49 22.1 +0.2**
comp=Z,205nm,1.1s,mb5.7
PGF Pioggiola 73.05 310 *eP* **P 08 49 22.1 +0.2**
PGF pmax pmax
comp=Z,103nm,1.1s,mb5.7
PGF Pioggiola 73.05 310 *eP* **P 08 49 22.1 +0.2**
comp=Z,103nm,1.1s,mb5.7
MENF Mencas 73.14 320 *eP* **P 08 49 22.7 +0.4**
SAOF Saorge 73.27 312 *eP* **P 08 49 23.0 -0.2**
BNI Bardonecchia 73.29 313 *eP* **P 08 49 22.9 -0.4**
BNI pmax pmax
comp=Z,32nm,0.8s,mb5.3
BNI MLR MLR
comp=Z,2µm,19.0s,MS5.5
BNI Bardonecchia 73.29 313 *eP* **P 08 49 22.9 -0.3**
comp=Z,32nm,0.8s,mb5.3
BNI LR LR
comp=Z,2µm,19.0s,MS5.5
EKA Eskdalemuir Ar 73.31 326 P **P 08 49 22.7 -0.5**
comp=Z,16nm,0.9s,mb5.0,baz=61,slow=5.8,SNR=24
EKA PP PP 08 52 01.2 -4.7
comp=Z,3.5nm,0.8s,baz=67,slow=8.6,SNR=4.0
EKA Eskdalemuir Ar 73.31 326 P **P 08 49 22.7 -0.5**
EKA pmax pmax
comp=Z,17nm,0.9s
EKA pmax pmax
comp=Z,4.0nm,0.8s
ESK Eskdalemuir 73.34 326 *eP* **P 08 49 22.8 -0.6**
ESK pmax pmax
comp=Z,39nm,1.0s,mb5.3
ESK MLR MLR
comp=Z,1µm,20.0s,MS5.2
ESK Eskdalemuir 73.34 326 *eP* **P 08 49 22.8 -0.6**
comp=Z,39nm,1.0s,mb5.3
ESK LR LR
comp=Z,1µm,20.0s,MS5.2
AUTN L'Aution 73.35 312 *eP* **P 08 49 25.4 +1.8**
MBDF Montbardon 73.39 313 *eP* **P 08 49 23.6 -0.3**
comp=Z,43nm,0.8s,mb5.1
MBDF Montbardon 73.39 313 *eP* **P 08 49 23.6 -0.3**
MBDF pmax pmax
comp=Z,21nm,0.8s,mb5.1
MBDF Montbardon 73.39 313 *eP* **P 08 49 23.6 -0.3**
comp=Z,21nm,0.8s,mb5.1
SBF Sospel 73.41 312 *eP* **P 08 49 23.7 -0.3**
comp=Z,179nm,0.8s,mb5.7
SBF Sospel 73.41 312 *eP* **P 08 49 23.7 -0.3**
SBF pmax pmax
comp=Z,90nm,0.8s,mb5.8
SBF Sospel 73.41 312 *eP* **P 08 49 23.7 -0.3**
comp=Z,90nm,0.8s,mb5.8
LUCF Luceram 73.45 312 *eP* **P 08 49 24.5 +0.3**
TOUF Mont Tournerai 73.45 312 *eP* **P 08 49 24.7 +0.5**
PNL Peninsula 73.58 29 *eP* **P 08 49 24.9 +0.2**
comp=Z,85nm,0.8s,mb5.7
HYT Haines Junctio 73.61 27 *eP* **P 08 49 27.2 +2.3**
ORIF Oris-en-Rattie 73.85 313 *eP* **P 08 49 26.5 -0.1**
comp=Z,70nm,0.7s,mb5.4
ORIF *e*MLR MLR
comp=Z,2µm,19.0s,MS5.2
ORIF Oris-en-Rattie 73.85 313 *eP* **P 08 49 26.5 -0.1**
ORIF pmax pmax
comp=Z,35nm,0.7s,mb5.4
ORIF Oris-en-Rattie 73.85 313 *eP* **P 08 49 26.5 -0.1**
comp=Z,35nm,0.7s,mb5.4
FRF La Foret Royal 74.05 312 *eP* **P 08 49 27.2 -0.6**
comp=Z,52nm,0.9s,mb5.1
FRF La Foret Royal 74.05 312 *eP* **P 08 49 27.2 -0.6**
FRF pmax pmax
comp=Z,26nm,0.9s,mb5.2
FRF La Foret Royal 74.05 312 *eP* **P 08 49 27.2 -0.6**
comp=Z,26nm,0.9s,mb5.2
SSF Saint Saulge 74.18 316 *eP* **P 08 49 27.8 -0.7**
comp=Z,31nm,0.9s,mb4.9
SSF Saint Saulge 74.18 316 *eP* **P 08 49 27.8 -0.7**
SSF pmax pmax
comp=Z,16nm,0.9s,mb5.0
SSF Saint Saulge 74.18 316 *eP* **P 08 49 27.8 -0.7**
comp=Z,16nm,0.9s,mb4.9
SMF Signal de Mont 74.20 315 *eP* **P 08 49 28.0 -0.6**
comp=Z,60nm,0.8s,mb5.3
SMF Signal de Mont 74.20 315 *eP* **P 08 49 28.0 -0.6**
SMF pmax pmax
comp=Z,30nm,0.8s,mb5.3
SMF Signal de Mont 74.20 315 *eP* **P 08 49 28.0 -0.6**
comp=Z,30nm,0.8s,mb5.3
LMR La Mourre 74.25 312 *eP* **P 08 49 28.6 -0.4**
comp=Z,76nm,1.0s,mb5.3
LMR La Mourre 74.25 312 *eP* **P 08 49 28.6 -0.4**
LMR pmax pmax
comp=Z,38nm,1.0s,mb5.3
LMR La Mourre 74.25 312 *eP* **P 08 49 28.6 -0.4**
comp=Z,38nm,1.0s,mb5.3
VSL Villasalto 74.29 307 PFAKE 08 49 40.0 +11
VSL LR LR
comp=Z,1µm,21.0s,MS5.2
BORG Borgarnes 74.38 339 P **P 08 49 30.6 +1.3**
comp=Z,30nm,0.9s,mb5.2,baz=58,slow=2.7,SNR=4.9
BORG Borgarnes 74.38 339 *eP* **P 08 49 29.7 +0.4**
BORG pmax pmax
comp=Z,59nm,1.1s
BORG MLR MLR
comp=Z,999nm,19.0s
BORG Borgarnes 74.38 339 *eP* **P 08 49 29.7 +0.4**
comp=Z,59nm,1.1s,mb5.4
BORG LR LR
comp=Z,999nm,19.0s,MS5.1
AVF Avril sur Loir 74.41 316 *eP* **P 08 49 29.2 -0.6**
comp=Z,61nm,1.0s,mb5.2
AVF Avril sur Loir 74.41 316 *eP* **P 08 49 29.2 -0.6**
AVF pmax pmax
comp=Z,31nm,1.0s,mb5.2
AVF Avril sur Loir 74.41 316 *eP* **P 08 49 29.2 -0.6**
comp=Z,31nm,1.0s,mb5.2
SSB Saint Sauveur 74.48 314 PFAKE 08 49 40.0 +10
SSB LR LR
comp=Z,1µm,22.0s,MS5.1
SMRF Simiane la Rot 74.51 312 *eP* **P 08 49 29.7 -0.8**
HYF Humbligny 74.58 316 *eP* **P 08 49 30.8 0.0**
VIVF Saint-Julien-l 74.62 314 *eP* **P 08 49 30.7 -0.4**
comp=Z,47nm,0.9s,mb5.1
VIVF Saint-Julien-l 74.62 314 *eP* **P 08 49 30.7 -0.4**
VIVF pmax pmax
comp=Z,24nm,0.9s,mb5.1
VIVF Saint-Julien-l 74.62 314 *eP* **P 08 49 30.7 -0.4**
comp=Z,24nm,0.9s,mb5.1
BGF Bois d'Agland 74.83 316 *eP* **P 08 49 31.7 -0.6**
SKAG Skagway 75.32 27 *eP* **P 08 49 35.2 +0.4**
comp=Z,116nm,0.8s,mb5.9
TCF Toulx Ste Croi 75.35 316 *eP* **P 08 49 34.9 -0.3**
comp=Z,68nm,1.2s,mb5.2
TCF Toulx Ste Croi 75.35 316 *eP* **P 08 49 34.9 -0.3**
TCF pmax pmax
comp=Z,34nm,1.2s,mb5.2
TCF Toulx Ste Croi 75.35 316 *eP* **P 08 49 34.9 -0.3**
comp=Z,34nm,1.2s,mb5.2
LDF La Drutiiere 75.44 319 *eP* **P 08 49 35.2 -0.5**
LASF Ste Croix 75.53 313 *eP* **P 08 49 36.3 0.0**
FLN La Foliniere 75.55 319 *eP* **P 08 49 35.8 -0.5**
FLN *e*MLR MLR
comp=Z,2µm,20.0s,MS5.2
FLN La Foliniere 75.55 319 *eP* **P 08 49 35.8 -0.5**
FLN LR LR
comp=Z,2µm,20.0s,MS5.5
GRR Gorron 75.97 319 *eP* **P 08 49 38.3 -0.4**
comp=Z,62nm,0.9s,mb5.2
GRR Gorron 75.97 319 *eP* **P 08 49 38.3 -0.4**
GRR pmax pmax
comp=Z,31nm,0.9s,mb5.2
GRR Gorron 75.97 319 *eP* **P 08 49 38.3 -0.4**
comp=Z,31nm,0.9s,mb5.2
CAF Calviac 76.16 315 *eP* **P 08 49 40.1 +0.2**
comp=Z,23nm,0.8s,mb4.8
CAF Calviac 76.16 315 *eP* **P 08 49 40.1 +0.2**
CAF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CAF Calviac 76.16 315 *eP* **P 08 49 40.1 +0.2**
comp=Z,12nm,0.8s,mb4.9
KEST Kesra 76.19 304 P **P 08 49 40.0 -0.2**
comp=Z,6.6nm,0.9s,mb4.6,baz=290,slow=6.8,SNR=6.2
KEST LR LR 09 26 44.2
comp=Z,354nm,20.5s,MS4.7,baz=183,slow=38
RJF Les Rejaudoux 76.29 315 *eP* **P 08 49 40.7 +0.1**
comp=Z,56nm,1.1s,mb5.1
RJF *e*MLR MLR
comp=Z,2µm,18.8s,MS5.0
RJF Les Rejaudoux 76.29 315 *eP* **P 08 49 40.7 +0.1**
RJF pmax pmax
comp=Z,28nm,1.1s,mb5.1
RJF MLR MLR
comp=Z,2µm,18.8s,MS5.3
RJF Les Rejaudoux 76.29 315 *eP* **P 08 49 40.7 +0.1**
comp=Z,28nm,1.1s,mb5.1
RJF LR LR
comp=Z,2µm,18.8s,MS5.3
ARMA Armidale 76.47 140 *eP* **P 08 49 41.9 +0.2**
ARMA Armidale 76.47 140 *eP* **P 08 49 42.1 +0.4**
comp=Z,17nm,1.0s,mb4.9
MFF Saint Martin d 76.55 317 *eP* **P 08 49 42.0 -0.1**
comp=Z,86nm,1.0s,mb5.3
MFF Saint Martin d 76.55 317 *eP* **P 08 49 42.0 -0.1**
MFF pmax pmax
comp=Z,43nm,1.0s,mb5.3
MFF Saint Martin d 76.55 317 *eP* **P 08 49 42.0 -0.1**
comp=Z,43nm,1.0s,mb5.3
MTLF Montolieu 76.92 313 *eP* **P 08 49 44.1 -0.2**
comp=Z,22nm,1.0s,mb4.7
MTLF Montolieu 76.92 313 *eP* **P 08 49 44.1 -0.2**
MTLF pmax pmax
comp=Z,11nm,1.0s,mb4.7
MTLF Montolieu 76.92 313 *eP* **P 08 49 44.1 -0.2**
comp=Z,11nm,1.0s,mb4.8
LFF La Frestale 76.95 315 *eP* **P 08 49 44.6 +0.2**
comp=Z,38nm,0.9s,mb5.0
LFF La Frestale 76.95 315 *eP* **P 08 49 44.6 +0.2**
LFF pmax pmax
comp=Z,19nm,0.9s,mb5.0
LFF La Frestale 76.95 315 *eP* **P 08 49 44.6 +0.2**
comp=Z,19nm,0.9s,mb5.0
SGMF Saint Gilles 76.98 319 *eP* **P 08 49 44.4 -0.1**
comp=Z,36nm,0.7s,mb5.1
SGMF Saint Gilles 76.98 319 *eP* **P 08 49 44.4 -0.1**
SGMF pmax pmax
comp=Z,18nm,0.7s,mb5.1
SGMF Saint Gilles 76.98 319 *eP* **P 08 49 44.4 -0.1**
comp=Z,18nm,0.7s,mb5.1
EJON La Jonquera 76.99 312 P **P 08 49 44.8 +0.2**
comp=Z,3.7nm,0.7s,mb4.4
ROSF Rostrenen 77.33 320 *eP* **P 08 49 46.3 -0.1**
QUIF Quistinic 77.51 319 *eP* **P 08 49 47.2 -0.2**
VALF Valcebollere 77.56 312 *eP* **P 08 49 48.4 +0.6**
DLBC Dease Lake 78.04 26 LR LR 09 32 01.1
comp=Z,1µm,18.0s,MS5.2,baz=320,slow=42
DLBC Dease Lake 78.04 26 *eP* **P 08 49 50.7 +0.5**
EMIR Miracle 78.13 312 P **P 08 49 51.9 +0.8**
comp=Z,8.6nm,0.6s,mb4.9
EPF Esparros 78.24 314 *eP* **P 08 49 52.6 +1.0**
RESF Ens 78.37 314 *eP* **P 08 49 53.3 +1.0**
ETOS Mallorca 78.48 310 P **P 08 49 54.2 +1.2**
comp=Z,9.9nm,0.8s,mb4.8
EBIE Bielsa 78.55 314 P **P 08 49 54.0 +0.7**
comp=Z,3.6nm,0.7s,mb4.4
EPOB Poblet 78.72 312 P **P 08 49 54.4 +0.1**
comp=Z,7.3nm,0.8s,mb4.7
ETSF Etsaut 78.86 314 *eP* **P 08 49 55.6 +0.5**
comp=Z,28nm,0.7s,mb5.0
ETSF Etsaut 78.86 314 *eP* **P 08 49 55.6 +0.5**
ETSF pmax pmax
comp=Z,14nm,0.7s,mb5.0
ETSF Etsaut 78.86 314 *eP* **P 08 49 55.6 +0.5**
comp=Z,14nm,0.7s,mb5.0
SFJD Kangerlussuaq 78.93 351 P **P 08 49 54.5 -0.5**
comp=Z,56nm,0.8s,mb5.6,baz=6.8,slow=4.9,SNR=28
SFJD Kangerlussuaq 78.93 351 *eP* **P 08 49 54.5 -0.5**

comp=Z,53nm,0.8s,mb5.5
SFJD LR LR
comp=Z,1µm,19.0s,MS5.3
CAN Canberra 79.01 145 *eP* **P 08 49 55.3 -0.5**
CAN pmax pmax
comp=Z,15nm,0.8s,mb5.0
CAN MLR MLR
comp=Z,798nm,22.0s,MS5.0
CAN Canberra 79.01 145 *eP* **P 08 49 55.2 -0.5**
comp=Z,15nm,0.8s,mb5.0
CAN LR LR
comp=Z,798nm,22.0s,MS5.0
SJPF Ste Jean 79.14 314 *eP* **P 08 49 57.4 +0.8**
comp=Z,28nm,0.8s,mb4.9
SJPF Ste Jean 79.14 314 *eP* **P 08 49 57.4 +0.8**
SJPF pmax pmax
comp=Z,14nm,0.8s,mb4.9
SJPF Ste Jean 79.14 314 *eP* **P 08 49 57.4 +0.8**
comp=Z,14nm,0.8s,mb4.9
CNB Canberra Magne 79.19 145 *eP* **P 08 49 56.4 -0.3**
TOO Toolangi 79.24 149 *eP* **P 08 49 55.3 -1.7**
ERTA Horta de San J 79.40 312 P **P 08 49 58.4 +0.3**
comp=Z,6.7nm,0.6s,mb4.8
DZM Mont Dzumac 79.67 125 *eP* **P 08 50 00.5 +0.8**
comp=Z,184nm,1.1s,mb5.9
DZM *e*LR LR 09 14 51.4
comp=Z,2µm,25.1s,baz=304
DZM Mont Dzumac 79.67 125 *eP* **P 08 49 58.6 -1.1**
DZM Mont Dzumac 79.67 125 *eP* **P 08 49 59.8 +0.2**
comp=Z,90nm,1.1s,mb5.6
YKA Yellowknife Ar 79.77 18 P **P 08 49 59.0 -0.6**
comp=Z,27nm,0.7s,mb5.3,baz=330,slow=5.2,SNR=130
YKA PKKP PKKPbc 09 08 40.3 -6.2
comp=Z,1.0nm,0.5s,baz=151,slow=2.0,SNR=13
YKA LR LR 09 28 46.9
comp=Z,66nm,19.8s,MS4.0,baz=315,slow=38
YKA Yellowknife Ar 79.77 18 P **P 08 49 59.0 -0.6**
YKA 09 08 40.3
YKA pmax pmax
comp=Z,27nm,0.7s
YKA MLR MLR
comp=Z,66nm,19.8s
YKA Yellowknife Ar 79.77 18 P **P 08 49 59.0 -0.6**
YKA PKKP PKKPbc 09 08 40.4 -6.2
YKA LR LR 09 28 46.9
EIBI Ibiza 79.84 310 P **P 08 50 00.4 -0.1**
comp=Z,7.4nm,0.7s,mb4.7
ECRI Cripan 80.20 315 P **P 08 50 03.6 +1.2**
ECRI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ECRI Cripan 80.20 315 P **P 08 50 03.6 +1.2**
comp=Z,6.8nm,0.9s,mb4.6
EMOS Mosqueruela 80.24 312 P **P 08 50 03.5 +0.8**
comp=Z,6.6nm,0.7s,mb4.7
ELAN Lanestosa 80.39 315 P **P 08 50 04.3 +0.9**
comp=Z,12nm,0.8s,mb4.9
ETOR Torete 80.97 313 P **P 08 50 05.8 -0.7**
ETOR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
ETOR Torete 80.97 313 P **P 08 50 05.8 -0.7**
comp=Z,8.5nm,0.6s,mb4.8
FUNA Funafuti 81.05 106 PFAKE 08 50 20.0 +13
FUNA LR LR
comp=Z,7µm,19.0s,MS6.0
EARI Arriondas 81.39 316 P **P 08 50 09.0 +0.3**
comp=Z,3.5nm,0.7s,mb4.4
ETOB Tobarra 81.91 311 P **P 08 50 12.5 +0.9**
comp=Z,13nm,0.8s,mb4.9
EMUR La Murta 82.18 310 P **P 08 50 12.1 -0.9**
comp=Z,5.8nm,0.4s,mb4.9
EPON Pontenova 82.49 317 P **P 08 50 14.6 +0.1**
comp=Z,6.4nm,0.9s,mb4.5
EVIA Vianos 82.52 311 P **P 08 50 15.4 +0.6**
EVIA pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
EVIA Vianos 82.52 311 P **P 08 50 15.4 +0.6**
comp=Z,6.1nm,0.7s,mb4.7
ESDC Sonseca Array 82.82 313 P **P 08 50 16.3 0.0**
comp=Z,6.4nm,0.7s,mb4.8,baz=41,slow=5.3,SNR=19
ESDC LR LR 09 29 26.0
comp=Z,627nm,19.4s,MS5.0,baz=35,slow=37
ESDC Sonseca Array 82.82 313 P **P 08 50 16.7 +0.4**
comp=Z,6.0nm,0.4s,mb5.0
ESLA Sonseca Array 82.82 313 *eP* **P 08 50 16.2 -0.1**
comp=Z,0.9nm,0.7s,mb3.9
ESLA LR LR
comp=Z,6µm,22.0s,MS5.9
EHUE Huescar 83.07 311 P **P 08 50 18.9 +1.3**
EHUE pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
EHUE Huescar 83.07 311 P **P 08 50 18.9 +1.3**
comp=Z,5.1nm,0.8s,mb4.6
ECAL Calabor 83.11 316 P **P 08 50 17.3 -0.5**
comp=Z,3.2nm,0.5s,mb4.6
PAB San Pablo 83.14 313 *eP* **P 08 50 17.8 -0.1**
PAB pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
PAB MLR MLR
comp=Z,993nm,19.0s,MS5.2
PAB San Pablo 83.14 313 *eP* **P 08 50 17.8 -0.1**
comp=Z,4.4nm,0.9s,mb4.5
PAB LR LR
comp=Z,993nm,19.0s,MS5.2
BBB Bella Bella 83.30 30 LR LR 09 30 45.0
comp=Z,763nm,18.3s,MS5.1,baz=162,slow=38
EQES Quesada 83.38 311 P **P 08 50 19.6 +0.4**
comp=Z,6.3nm,0.7s,mb4.8
EBAN Banos Encina 83.61 312 P **P 08 50 20.4 0.0**
EBAN pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
EBAN Banos Encina 83.61 312 P **P 08 50 20.4 0.0**
comp=Z,7.4nm,0.6s,mb5.0
FRB Frobisher Bay 83.73 357 P **P 08 50 19.8 -0.7**
comp=Z,40nm,0.6s,mb5.7,baz=10,slow=6.8,SNR=122
FRB Frobisher Bay 83.73 357 P **P 08 50 19.8 -0.7**
FRB pmax pmax
comp=Z,41nm,0.6s
MVO Moncorvo 83.77 315 *eP* **P 08 50 21.6 +0.5**
comp=Z,28nm,1.9s,mb5.1
MVO *e*LQ 09 19 08.8
MVO *e*LR LR 09 23 14.7
comp=Z,944nm,16.3s
ELOB Lobios 83.93 317 P **P 08 50 22.6 +0.7**
comp=Z,2.6nm,0.7s,mb4.5
EADA Adamuz 84.11 312 P **P 08 50 23.2 +0.2**
comp=Z,4.1nm,0.7s,mb4.7
ERON Agron 84.31 311 P **P 08 50 23.5 -0.5**
comp=Z,4.3nm,0.5s,mb4.8
MTE Manteigas 84.55 315 *eP* **P 08 50 25.9 +0.8**
comp=Z,57nm,1.8s,mb5.4
MTE Manteigas 84.55 315 PFAKE 08 50 40.0 +15
MTE LR LR
comp=Z,1µm,21.0s,MS5.3
PVIS Viseu 84.56 316 *eP* **P 08 50 25.8 +0.6**
comp=Z,59nm,1.5s,mb5.5
PCBR Castelo Branco 84.86 315 *eP* **P 08 50 26.4 -0.3**
comp=Z,36nm,1.6s,mb5.2
PMRV Marv??o 85.07 314 *eP* **P 08 50 26.9 -0.9**
comp=Z,31nm,1.1s,mb5.3
PMRV *e*LQ 09 23 24.9
PMRV *e*LR LR 09 25 25.0
comp=Z,923nm,10.3s
EMIJ Mijas 85.21 311 P **P 08 50 26.7 -1.8**
comp=Z,5.2nm,0.6s,mb4.8
EBAD Badajoz 85.26 314 P **P 08 50 28.6 -0.1**
comp=Z,2.7nm,0.6s,mb4.5
MSVF Nonsavu 85.49 114 P **P 08 50 32.0 +1.9**
comp=Z,474nm,0.9s,mb6.6,SNR=11
MSVF Nonsavu 85.49 114 *eP* **P 08 50 31.6 +1.5**
comp=Z,80nm,0.9s,mb5.8
PBAR Barrancos 85.64 313 *eP* **P 08 50 31.0 +0.4**
comp=Z,29nm,1.3s,mb5.3
PBAR *e*LQ 09 20 56.6
PBAR *e*LR LR 09 25 02.6
comp=Z,842nm,18.9s
EMIN Mina Concepcio 85.66 313 P **P 08 50 31.2 +0.4**
comp=Z,3.0nm,0.6s,mb4.7
ESPR Espera 85.71 312 P **P 08 50 31.0 -0.1**
comp=Z,5.9nm,0.6s,mb5.0
TAM Tamanrasset 85.88 294 *eP* **P 08 50 32.9 +0.8**
TAM pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
TAM MLR MLR
comp=Z,1µm,20.0s,MS5.2
TAM Tamanrasset 85.88 294 *eP* **P 08 50 32.9 +0.8**
comp=Z,4.8nm,0.6s,mb4.9
TAM LR LR
comp=Z,1µm,20.0s,MS5.2
EVO Evora 86.01 314 *eP* **P 08 50 31.4 -1.1**
comp=Z,52nm,1.2s,mb5.3
EVO *e*MLR MLR
comp=Z,1µm,18.8s,MS5.1
EVO Evora 86.01 314 *eP* **P 08 50 33.1 +0.6**
comp=Z,44nm,1.9s,mb5.4
SFS San Fernando 86.18 311 PFAKE 08 50 40.0 +6.6
SFS LR LR
comp=Z,2µm,19.0s,MS5.5
PBEJ Beja 86.24 313 *eP* **P 08 50 34.6 +1.0**
comp=Z,30nm,1.2s,mb5.4
PVAQ Vaqueiros 86.54 313 *eP* **P 08 50 35.9 +0.8**
comp=Z,35nm,1.5s,mb5.4
PCVE Castro Verde 86.59 313 *eP* **P 08 50 36.9 +1.5**
comp=Z,36nm,1.6s,mb5.3
PCVE *e*LQ 09 20 08.2
PCVE *e*LR LR 09 26 53.6
comp=Z,884nm,23.1s
POHA Pohakuloa 86.68 69 *eP* **P 08 50 36.3 +0.2**
comp=Z,120nm,1.1s,mb6.0
PBDV Barranco-do-Ve 86.77 313 *eP* **P 08 50 37.0 +0.7**
comp=Z,62nm,1.6s,mb5.6
PBDV *e*LQ 09 19 46.1
PBDV *e*LR LR 09 22 49.4
comp=Z,661nm,20.0s
MORF Marmelete 87.17 313 *eP* **P 08 50 39.6 +1.4**
comp=Z,77nm,1.3s,mb5.8
MORF *e*LQ 09 21 17.5
MORF *e*LR LR 09 27 10.5
comp=Z,943nm,22.5s
FCC Fort Churchill 87.38 10 *eP* **P 08 50 38.1 -0.7**
comp=Z,2.1nm,1.1s,mb4.3
LSZ Lusaka 87.88 250 *eP* **P 08 50 42.3 +0.5**
LSZ pmax pmax
comp=Z,42nm,1.2s,mb5.5
LSZ MLR MLR
comp=Z,640nm,21.0s,MS5.0
LSZ Lusaka 87.88 250 *eP* **P 08 50 42.3 +0.4**
comp=Z,42nm,1.2s,mb5.5
LSZ LR LR
comp=Z,640nm,21.0s,MS5.0
LSZ Lusaka 87.88 250 P **P 08 50 43.0 +1.2**
SNR=8.2
LSZ P pP 08 50 43.0 -0.9
SNR=8.2
PGC Sidney 87.92 30 *eP* **P 08 50 41.3 -0.3**
comp=Z,1.0nm,0.8s,mb4.1
EDM Edmonton 87.95 22 *eP* **P 08 50 41.4 -0.2**
OBC Olympics--Boni 88.13 31 P **P 08 50 44.0 +1.4**
RTC Rabat Centre 88.14 310 PFAKE 08 50 50.0 +7.1
RTC LR LR
comp=Z,542nm,19.0s,MS5.0
A05A Maple Falls 88.22 29 ⇓P **P 08 50 42.7 -0.2**
baz=88
NLWA Neilton Lookou 88.71 31 ⇓P **P 08 50 45.8 +0.4**
baz=88
NLWA Neilton Lookou 88.71 31 *eP* **P 08 50 46.4 +1.1**
comp=Z,58nm,1.2s,mb5.8
NLWA LR LR
comp=Z,813nm,21.0s,MS5.1
B06A Marblemount 88.84 29 ⇑P **P 08 50 45.6 -0.3**
baz=88
A07A Ashnola River, 88.87 28 ⇓P **P 08 50 46.0 0.0**
baz=89
RPW Rockport 88.89 29 *eP* **P 08 50 46.1 0.0**
comp=Z,5.3nm,0.8s,mb4.9
JCW Jim Creek 88.91 30 P **P 08 50 46.8 +0.5**
GNW Green Mountain 89.03 30 *eP* **P 08 50 48.1 +1.3**
comp=Z,49nm,1.7s,mb5.6
E03A Lebam 89.50 31 ⇓P **P 08 50 50.0 +0.9**
baz=89
D05A Enumclaw 89.68 30 ⇑P **P 08 50 50.7 +0.8**
baz=89
FFC Flin Flon 89.72 16 *eP* **P 08 50 49.3 -0.6**
FFC pmax pmax
comp=Z,40nm,0.8s,mb5.8
FFC MLR MLR
comp=Z,1µm,20.0s,MS5.3
FFC Flin Flon 89.72 16 *eP* **P 08 50 49.3 -0.6**
comp=Z,40nm,0.8s,mb5.8
FFC LR LR
comp=Z,1µm,20.0s,MS5.3
B08A Colville Reser 89.84 28 ⇑P **P 08 50 51.0 +0.4**
baz=90
F03A Seaside 89.97 32 ⇓P **P 08 50 52.2 +0.9**
baz=90
A10A Northport 90.02 27 ⇓P **P 08 50 51.6 +0.2**
baz=90
ETW Entiat 90.04 29 *eP* **P 08 50 53.2 +1.6**
comp=Z,53nm,1.5s,mb5.6
LON Longmire 90.10 30 *eP* **P 08 50 51.5 -0.4**
LON pmax pmax
comp=Z,20nm,1.1s,mb5.4
LON Longmire 90.10 30 *eP* **P 08 50 51.5 -0.4**
comp=Z,20nm,1.1s,mb5.4
B09A Rice 90.25 27 ⇑P **P 08 50 53.3 +0.8**
baz=90,SNR=14
SHW Mount Saint He 90.35 31 P **P 08 50 54.7 +1.7**
F04A Amboy 90.47 31 ⇓P **P 08 50 54.1 +0.5**
baz=90,SNR=17
A11A Hall Mountain, 90.49 26 ⇓P **P 08 50 54.6 +1.0**
baz=90,SNR=10.0
B10A Chitwood Farm, 90.71 27 ⇑P **P 08 50 54.9 +0.3**
baz=90
C09A Chrisman Ranch 90.71 28 ⇓P **P 08 50 55.2 +0.5**
baz=90,SNR=15
A12A Yaak River Ran 90.77 26 ⇓P **P 08 50 55.5 +0.5**
baz=90
NEW Newport 90.78 27 *eP* **P 08 50 55.6 +0.6**
NEW pmax pmax
comp=Z,26nm,0.9s
NEW MLR MLR
comp=Z,726nm,19.0s
NEW Newport 90.78 27 *eP* **P 08 50 55.6 +0.6**
comp=Z,26nm,0.9s,mb5.6
NEW LR LR
comp=Z,726nm,19.0s,MS5.1
OD2 Odessa Site #2 90.87 28 *eP* **P 08 50 55.4 0.0**
comp=Z,60nm,1.5s,mb5.7
B11A Sandpoint 90.92 26 ⇓P **P 08 50 56.5 +0.8**
baz=91,SNR=12
G04A Mulino 91.01 32 ⇑P **P 08 50 56.9 +0.7**
baz=91,SNR=14
D08A Wollman Farm, 91.05 29 ⇑P **P 08 50 56.6 +0.3**
baz=91,SNR=9.1
C10A Spilker Farm, 91.07 27 ⇑P **P 08 50 56.6 +0.3**
baz=91
E07A Sunnyside 91.07 29 ⇑P **P 08 50 56.5 +0.1**
baz=91
COR Corvallis 91.13 33 *eP* **P 08 50 58.1 +1.4**
COR pmax pmax
comp=Z,62nm,0.9s,mb5.9
COR MLR MLR
comp=Z,717nm,20.0s,MS5.1
COR Corvallis 91.13 33 *eP* **P 08 50 58.1 +1.4**
comp=Z,62nm,0.9s,mb5.9
COR LR LR
comp=Z,717nm,20.0s,MS5.1
WRD Warden 91.17 29 P **P 08 50 57.1 +0.3**
B12A Libby 91.18 26 ⇑P **P 08 50 57.4 +0.5**
baz=91
A13A Flathead Natio 91.22 25 ⇓P **P 08 50 57.5 +0.5**
baz=91
HOOD Mount Hood Mea 91.29 31 *eP* **P 08 50 58.7 +1.3**
comp=Z,235nm,1.2s,mb6.4
WALA Waterton Lakes 91.29 25 *eP* **P 08 50 57.6 +0.3**
comp=Z,1.0nm,1.0s,mb4.1
D09A Jones Farm, Ri 91.29 28 ⇑P **P 08 50 57.8 +0.4**
baz=91,SNR=8.7
RSW Rattlesnake Hi 91.31 29 *eP* **P 08 50 58.6 +1.1**
comp=Z,31nm,1.0s,mb5.6
HAWA Hanford 91.34 29 *eP* **P 08 50 58.3 +0.6**
comp=Z,32nm,1.0s,mb5.6
HAWA LR LR
comp=Z,697nm,19.0s,MS5.1
AFI Afiamalu 91.38 106 LR LR 09 26 32.5
comp=Z,359nm,20.8s,MS4.8,baz=306,slow=32
E08A Dider Farm, El 91.45 29 ⇓P **P 08 50 58.7 +0.5**
baz=91
A14A Double T Ranch 91.54 24 ⇓P **P 08 50 58.3 -0.2**
baz=91,SNR=14
H04A Detroit Lake 91.55 32 ⇓P **P 08 50 58.9 +0.2**
baz=91,SNR=22
F07A Phinny Hill Vi 91.57 30 ⇑P **P 08 50 59.2 +0.5**
baz=91
B13A Whitefish 91.67 25 ⇓P **P 08 50 59.9 +0.7**
baz=91,SNR=12
D10A Wagner Farm, O 91.71 28 ⇑P **P 08 50 59.5 +0.2**
baz=91,SNR=13
A15A Johnson Ranch, 91.77 24 ⇓P **P 08 50 59.0 -0.6**
baz=91,SNR=8.6
G06A Carlson Farm, 91.80 31 ⇑P **P 08 51 00.5 +0.7**
baz=92,SNR=15
E09A Wood Farm, Sta 91.81 29 ⇓P **P 08 51 00.2 +0.4**
baz=92,SNR=6.1
C12B Naegeli Ranch, 91.86 26 ⇑P **P 08 51 00.6 +0.6**
baz=92,SNR=7.8
BSMT Bassoo Peak 91.99 26 *eP* **P 08 51 01.8 +1.1**
comp=Z,23nm,1.0s,mb5.5
D11A Klaveano Farm, 92.08 27 ⇓P **P 08 51 01.3 +0.2**
baz=92,SNR=28
B14A Marquette Ranc 92.11 25 ⇓P **P 08 51 01.3 +0.1**
baz=92,SNR=9.7
F08A Pendleton 92.13 29 ⇑P **P 08 51 01.9 +0.6**
baz=92
C13A Hot Springs 92.22 26 ⇑P **P 08 51 02.1 +0.4**
baz=92,SNR=9.2
E10A Myers Farm, Un 92.24 28 ⇑P **P 08 51 01.8 0.0**
baz=92,SNR=5.4
JTMT Jette 92.27 26 *eP* **P 08 51 03.4 +1.5**
LNOR Lincton Mounta 92.27 29 *eP* **P 08 51 02.5 +0.5**
LNOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
LNOR Lincton Mounta 92.27 29 *eP* **P 08 51 02.5 +0.6**
comp=Z,4.4nm,0.8s,mb4.8
VIPM Ingram Point 92.38 31 P **P 08 51 03.5 +1.0**
B15A Bradely Ranch, 92.40 24 ⇓P **P 08 51 02.1 -0.4**
baz=92,SNR=17
C14A Swan Lake 92.44 25 ⇓P **P 08 51 03.1 +0.4**
baz=92
D12A Red Ives Fores 92.45 27 ⇓P **P 08 51 02.6 -0.1**
baz=92,SNR=8.9
G08A Pilot Rock 92.46 30 ⇑P **P 08 51 03.4 +0.6**
baz=92,SNR=7.6
A17A Triple J Farms 92.48 23 ⇓P **P 08 51 02.4 -0.4**
baz=92,SNR=26
SCHQ Schefferville 92.54 356 P **P 08 51 02.5 -0.5**
comp=Z,20nm,0.7s,mb5.6,baz=15,slow=5.9,SNR=33
SCHQ LR LR 09 37 46.1
comp=Z,854nm,19.0s,MS5.2,baz=176,slow=39
SCHQ Schefferville 92.54 356 *eP* **P 08 51 02.2 -0.8**
comp=Z,15nm,0.7s,mb5.5
SCHQ LR LR
comp=Z,1µm,19.0s,MS5.3
F09A S2 Ranch, Elgi 92.56 29 ⇑P **P 08 51 03.2 0.0**
baz=92
SWMT Swartz Lake 92.57 26 *eP* **P 08 51 03.6 +0.3**
comp=Z,31nm,1.4s,mb5.5
B16A M & M Farms, S 92.61 24 ⇑P **P 08 51 02.9 -0.6**
baz=92,SNR=7.2
F10A Beach Ranch, E 92.61 28 ⇑P **P 08 51 04.1 +0.6**
baz=92,SNR=11
E11A Bogner Ranch, 92.70 28 ⇑P **P 08 51 04.0 0.0**
baz=92,SNR=29
D13A Huson 92.75 26 ⇑P **P 08 51 04.0 -0.2**
baz=92,SNR=12
A18A Metzger Ranch, 92.78 22 ⇓P **P 08 51 04.0 -0.3**
baz=92,SNR=29
HUMO Hull Mountain 92.82 34 *eP* **P 08 51 05.7 +1.2**
comp=Z,52nm,1.4s,mb5.8
HUMO LR LR
comp=Z,502nm,19.0s,MS5.0
C15A Salmond Ranch, 92.84 25 ⇓P **P 08 51 04.8 +0.3**
baz=92
E12A Beaver Dam Sad 92.90 27 ⇓P **P 08 51 04.4 -0.4**
baz=93
SLMT Seeley Lake 92.98 25 *eP* **P 08 51 05.5 +0.3**
comp=Z,27nm,0.7s,mb5.8
B17A L&G Farms, Che 93.02 23 ⇑P **P 08 51 05.1 -0.2**
baz=93,SNR=14
F11A Grangeville 93.11 28 ⇑P **P 08 51 05.7 -0.1**
baz=93,SNR=15
D14A Greenough 93.11 26 ⇓P **P 08 51 05.4 -0.4**
baz=93,SNR=10
MSO Missoula 93.17 26 *eP* **P 08 51 06.2 +0.2**
comp=Z,8.9nm,0.9s,mb5.2
MSO *e*PP PP 08 54 47.5 -0.9
MSO LR LR
comp=Z,656nm,19.0s,MS5.1
I07A Izee 93.20 31 ⇓P **P 08 51 07.2 +0.9**
baz=93,SNR=19
H08A Prairie City 93.21 30 ⇑P **P 08 51 06.9 +0.6**
baz=93,SNR=14
G10A Bishop Farm, J 93.22 29 ⇓P **P 08 51 06.1 -0.2**
baz=93,SNR=23
B18A Beardsley Farm 93.27 23 ⇓P **P 08 51 06.0 -0.5**
baz=93,SNR=10
CHMT Chamberlain Mo 93.34 25 *eP* **P 08 51 06.6 -0.3**
comp=Z,6.2nm,0.8s,mb5.1
CHMT *e*PP PP 08 54 48.3 -1.6
E13A Victor 93.40 26 ⇑P **P 08 51 06.7 -0.4**
baz=93,SNR=17
G11A Walters Elk Ra 93.47 28 ⇓P **P 08 51 07.2 -0.3**
baz=93,SNR=6.2
D15A Lincoln 93.50 25 ⇑P **P 08 51 07.1 -0.5**
baz=93
H09A Durkee 93.51 29 ⇓P **P 08 51 07.5 -0.2**
baz=93
F12A Elk City 93.57 27 ⇓P **P 08 51 07.1 -0.9**
baz=93,SNR=11
EGMT Eagleton 93.60 23 ⇑P **P 08 51 07.9 -0.2**
baz=93,SNR=9.8
EGMT Eagleton 93.60 23 *eP* **P 08 51 07.7 -0.4**
comp=Z,29nm,1.1s,mb5.6
EGMT LR LR
comp=Z,740nm,22.0s,MS5.1
C17A Wharram Farm, 93.60 24 ⇑P **P 08 51 07.6 -0.4**
baz=93
YBH Yreka Blue Hor 93.61 34 *eP* **P 08 51 08.8 +0.6**
YBH *e* 08 54 53.4
YBH pmax pmax
comp=Z,10.0nm,1.3s
YBH MLR MLR
comp=Z,428nm,20.0s
YBH Yreka Blue Hor 93.61 34 *eP* **P 08 51 08.8 +0.6**
comp=Z,9.5nm,1.3s,mb5.1
YBH *e*PP PP 08 54 53.4 +1.3
YBH LR LR
comp=Z,428nm,20.0s,MS4.9
K05A Summer Lake 93.67 32 ⇓P **P 08 51 09.1 +0.7**
baz=93,SNR=24
E14A Clinton 93.68 26 ⇑P **P 08 51 08.3 -0.2**
baz=93
D16A Dana Ranch, Ca 93.85 24 ⇑P **P 08 51 08.9 -0.3**
baz=94,SNR=7.5
F13A Darby 93.89 27 ⇑P **P 08 51 08.8 -0.7**
baz=94
H10A Noah's Angus R 93.94 29 ⇑P **P 08 51 09.2 -0.5**
baz=94,SNR=7.4
E15A Deer Lodge 93.98 25 ⇑P **P 08 51 09.7 -0.1**
baz=94,SNR=14
HRY Holter Researc 94.03 25 *eP* **P 08 51 10.4 +0.4**
comp=Z,18nm,0.7s,mb5.6
I09A Lost Marbles R 94.04 30 ⇓P **P 08 51 10.1 -0.1**
baz=94
D17A Six Diamond Ra 94.04 24 ⇓P **P 08 51 09.9 -0.2**
baz=94
H11A Donnelly 94.15 28 ⇓P **P 08 51 10.5 -0.1**
baz=94,SNR=8.8
J08A Circle Bar Ran 94.23 31 ⇓P **P 08 51 11.5 +0.5**
baz=94,SNR=31
E16A East Helena 94.23 25 ⇓P **P 08 51 11.1 +0.1**
baz=94,SNR=10
F14A Wisdom 94.24 26 ⇓P **P 08 51 10.9 -0.1**
baz=94,SNR=14
TOA0 Torodi Ar. Sit 94.30 288 *eP* **P 08 51 11.1 -0.8**
TORD Torodi Ar. Bea 94.30 288 P **P 08 51 11.4 -0.4**
comp=Z,2.9nm,0.7s,mb4.8,baz=53,slow=4.2,SNR=34
TORD LR LR 09 39 04.5
comp=Z,711nm,18.1s,MS5.2,baz=15,slow=39
D18A Linhart Farms, 94.30 23 ⇓P **P 08 51 11.3 0.0**
baz=94
I10A Payette 94.33 29 ⇓P **P 08 51 11.2 -0.3**
baz=94
G13A Cobalt 94.52 27 ⇓P **P 08 51 11.4 -1.0**
baz=94
F15A Butte 94.53 26 ⇓P **P 08 51 12.3 -0.1**
baz=94,SNR=9.6
J09A Fry Pan Ranch, 94.54 30 ⇓P **P 08 51 12.6 +0.1**
baz=94,SNR=14
LRM Limekiln Ridge 94.56 26 *eP* **P 08 51 12.3 -0.2**
comp=Z,28nm,0.9s,mb5.7
LRM *e*PP PP 08 54 59.9 +0.5
E17A Martinsdale 94.58 24 ⇑P **P 08 51 12.9 +0.3**
baz=94,SNR=5.9

WDC Whiskeytown Da 94.58 35 PFAKE 08 51 20.0 +7.3
WDC LR LR
comp=Z,617nm,22.0s,MS5.0
MOD Modoc 94.59 33 *e*P **P 08 51 13.5 +0.8**
comp=Z,39nm,1.4s,mb5.6
MOD LR LR
comp=Z,737nm,20.0s,MS5.2
G14A Jackson 94.68 27 ⇓P **P 08 51 12.6 -0.5**
baz=94
H12A Diamond D Ranc 94.73 28 ⇑P **P 08 51 13.3 0.0**
baz=94
E18A Harlowton 94.81 24 ⇑P **P 08 51 13.6 0.0**
baz=94,SNR=6.2
I11A Placerville 94.82 29 ⇓P **P 08 51 13.4 -0.4**
baz=94,SNR=7.6
DGMT Dagmar 94.89 19 ⇑P **P 08 51 13.5 -0.5**
baz=94
DGMT Dagmar 94.89 19 *e*P **P 08 51 13.6 -0.3**
comp=Z,25nm,0.9s,mb5.6
DGMT LR LR
comp=Z,1μm,20.0s,MS5.4
J10A Berg Farm, Mel 94.89 29 ⇓P **P 08 51 13.6 -0.5**
baz=95
F16A Kennard Place, 94.90 25 ⇓P **P 08 51 13.6 -0.5**
baz=95,SNR=10.0
WVOR Wild Horse Val 94.90 31 *e*P **P 08 51 14.4 +0.2**
WVOR *e* 08 55 02.7
WVOR pmax pmax
comp=Z,13nm,1.3s,mb5.2
WVOR MLR MLR
comp=Z,490nm,19.0s,MS5.0
WVOR Wild Horse Val 94.90 31 *e*P **P 08 51 14.4 +0.3**
comp=Z,14nm,1.3s,mb5.2
WVOR *e*PP PP 08 55 02.7 +0.6
WVOR LR LR
comp=Z,490nm,19.0s,MS5.0
DLMT Dillon 94.91 26 *e*P **P 08 51 14.4 +0.3**
comp=Z,9.7nm,0.9s,mb5.2
DLMT *e*PP PP 08 55 02.7 +0.7
H13A Challis 94.95 27 ⇓P **P 08 51 13.4 -1.0**
baz=95
BOZ Bozeman (W) 95.01 25 ⇑P **P 08 51 14.4 -0.2**
baz=95,SNR=11
BOZ Bozeman (W) 95.01 25 *e*P **P 08 51 14.4 -0.2**
BOZ *e* 08 55 05.4
BOZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
BOZ MLR MLR
comp=Z,568nm,20.0s,MS5.0
BOZ Bozeman (W) 95.01 25 *e*P **P 08 51 14.4 -0.2**
comp=Z,5.0nm,1.0s,mb4.9
BOZ *e*PP PP 08 55 05.4 +2.6
BOZ LR LR
comp=Z,568nm,20.0s,MS5.0
G15A Dillon 95.11 26 ⇓P **P 08 51 15.1 0.0**
baz=95,SNR=19
F17A Fitzpatrick Pl 95.13 24 ⇑P **P 08 51 15.3 +0.1**
baz=95,SNR=20
ULM Lac du Bonnet 95.22 14 P **P 08 51 13.7 -1.7**
comp=Z,6.5nm,0.7s,mb5.2,baz=340,slow=4.8,SNR=3.8
ULM PKKP PKKPbc 09 08 07.0 -2.1
comp=Z,2.5nm,0.8s,baz=128,slow=3.9,SNR=3.6
ULM LR LR 09 36 21.5
comp=Z,885nm,19.5s,MS5.2,baz=176,slow=37
ULM Lac du Bonnet 95.22 14 *e*P **P 08 51 13.7 -1.7**
comp=Z,24nm,1.4s,mb5.4
ULM LR LR
comp=Z,1μm,20.0s,MS5.3
H14A Leadore 95.25 27 ⇓P **P 08 51 15.6 -0.1**
baz=95
I12A Atlanta 95.25 28 ⇑P **P 08 51 16.3 +0.6**
baz=95,SNR=12
MCMT McKenzie Canyo 95.27 26 *e*P **P 08 51 16.2 +0.5**
comp=Z,8.2nm,1.2s,mb5.0
MCMT *e*PP PP 08 55 06.9 +2.0
MFID Camas Ranch 95.29 29 ⇓P **P 08 51 15.9 0.0**
baz=95
G16A Moss Hill, Enn 95.31 26 ⇓P **P 08 51 15.8 -0.2**
baz=95,SNR=6.3
LBTB Lobatse 95.34 244 *e*P **P 08 51 14.9 -1.4**
LBTB pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LBTB MLR MLR
comp=Z,517nm,20.0s,MS5.0
LBTB Lobatse 95.34 244 *e*P **P 08 51 14.9 -1.4**
comp=Z,5.3nm,0.7s,mb5.1
LBTB LR LR
comp=Z,517nm,20.0s,MS5.0
K10A MacKenzie Ranc 95.38 30 ⇑P **P 08 51 16.7 +0.4**
baz=95,SNR=5.4
F18A Big Timber 95.46 24 ⇓P **P 08 51 16.7 +0.1**
baz=95,SNR=19
H15A Lima 95.52 26 ⇑P **P 08 51 16.9 0.0**
baz=95,SNR=8.2
HOPS Hopland 95.55 36 PFAKE 08 51 30.0 +13
HOPS LR LR
comp=Z,549nm,21.0s,MS5.0
I13A Wildhorse Cree 95.55 28 ⇓P **P 08 51 16.7 -0.4**
baz=95
GCMT Greycliff 95.58 24 *e*P **P 08 51 17.2 0.0**
comp=Z,5.0nm,0.7s,mb5.0
GCMT *e*PP PP 08 55 06.4 -0.8
G17A Pierce Place, 95.61 25 ⇓P **P 08 51 16.8 -0.5**
baz=95
J12A Stokes Ranch, 95.72 29 ⇓P **P 08 51 18.4 +0.5**
baz=95,SNR=10
HLID Hailey 95.73 28 ⇑P **P 08 51 18.6 +0.7**
baz=95,SNR=21
HLID Hailey 95.73 28 *e*P **P 08 51 18.7 +0.8**
comp=Z,21nm,1.3s,mb5.4
HLID LR LR
comp=Z,894nm,19.0s,MS5.3
K11A Parker Ranch, 95.74 29 ⇑P **P 08 51 17.7 -0.3**
baz=95
I14A Mackay 95.80 27 ⇑P **P 08 51 18.6 +0.4**
baz=96,SNR=5.6
LAO LASA Array 95.90 21 PFAKE 08 51 30.0 +11
LAO LR LR
comp=Z,737nm,19.0s,MS5.2
H16A Russell Place, 95.96 25 ⇓P **P 08 51 18.3 -0.6**
baz=96
J13A Cove Ranch, Pi 95.97 28 ⇑P **P 08 51 19.6 +0.6**
baz=96,SNR=20
G18A Lazy EL Ranch, 96.02 24 ⇓P **P 08 51 18.9 -0.3**
baz=96
I15A Monteview 96.11 27 ⇑P **P 08 51 20.1 +0.5**
baz=96,SNR=6.4
L10A Juniper Basin 96.12 30 ⇑P **P 08 51 20.3 +0.6**
baz=96,SNR=14
BEKR Beckwourth 96.18 34 ⇓P **P 08 51 19.9 -0.2**
baz=96
MCCM Marconi Confer 96.30 36 PFAKE 08 51 30.0 +9.4
MCCM LR LR
comp=Z,840nm,22.0s,MS5.2
K12A Draper Farm, C 96.31 29 ⇓P **P 08 51 20.1 -0.4**
baz=96
L11A Cat Creek Ranc 96.35 30 ⇑P **P 08 51 21.1 +0.4**
baz=96,SNR=12
LKWY Lake 96.39 25 *e*P **P 08 51 23.1 +2.2**
LKWY *e* 08 55 16.2
LKWY pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
LKWY MLR MLR
comp=Z,2μm,20.0s,MS5.5
LKWY Lake 96.39 25 *e*P **P 08 51 23.1 +2.3**
comp=Z,4.4nm,0.8s,mb4.9
LKWY *e*PP PP 08 55 16.2 +2.7
LKWY LR LR
comp=Z,2μm,20.0s,MS5.5
H17A Grant Village 96.47 25 ⇑P **P 08 51 21.2 0.0**
baz=96
M10A I.L. Ranch, Tu 96.55 30 ⇓P **P 08 51 22.3 +0.6**
baz=96,SNR=8.2
I16A Newdale 96.59 26 ⇓P **P 08 51 21.7 0.0**
baz=96
K13A Stover Farm, H 96.63 28 ⇓P **P 08 51 22.7 +0.7**
baz=96
L12A House Creek Ra 96.67 29 ⇑P **P 08 51 22.7 +0.4**
baz=96,SNR=5.4
IMW Indian Meadow 96.77 26 *e*P **P 08 51 23.7 +1.1**
comp=Z,19nm,1.5s,mb5.3
IMW *e*PP PP 08 55 13.9 -2.6
WCN Washoe City 96.91 34 ⇓P **P 08 51 23.9 +0.6**
baz=97
M11A Holland Ranch, 96.94 30 ⇓P **P 08 51 24.7 +1.2**
baz=97,SNR=11
AGMN Agassiz Refuge 97.08 14 *e*P **P 08 51 22.6 -1.4**
comp=Z,38nm,1.8s,mb5.5
AGMN LR LR
comp=Z,688nm,20.0s,MS5.1
K14A Jones Ranch, D 97.08 28 ⇑P **P 08 51 24.3 +0.3**
baz=97
TPAW Teton Pass 97.12 26 *e*P **P 08 51 24.1 -0.1**
comp=Z,2.1nm,0.8s,mb4.6
TPAW *e*PP PP 08 55 13.6 -5.5
BMN Battle Mountai 97.15 31 PFAKE 08 51 40.0 +16
BMN LR LR
comp=Z,542nm,21.0s,MS5.0
J17A Brown Place, J 97.31 26 ⇑P **P 08 51 24.8 -0.3**
baz=97
M12A Wells 97.33 29 ⇓P **P 08 51 25.2 0.0**
baz=97
SNZO South Karori 97.35 135 PFAKE 08 51 40.0 +15
SNZO LR LR
comp=Z,480nm,19.0s,MS5.0
K16A Soda Springs 97.44 27 ⇑P **P 08 51 25.8 +0.2**
baz=97
L14A Malta 97.48 28 ⇓P **P 08 51 25.3 -0.6**
baz=97
BOSA Boshof 97.56 241 P **P 08 51 25.0 -1.3**
comp=Z,4.8nm,0.9s,mb5.0,baz=82,slow=1.5,SNR=4.5
BOSA LR LR 09 37 50.6
comp=Z,407nm,18.1s,MS5.0,baz=48,slow=37
BOSA Boshof 97.56 241 P **P 08 51 25.0 -1.3**
BOSA pmax pmax
comp=Z,5.0nm,0.9s,mb5.0
BOSA MLR MLR
comp=Z,407nm,18.1s,MS5.0
O10A Cortez Mining, 97.58 31 ⇑P **P 08 51 26.5 +0.1**
baz=97
CMB Columbia Colle 97.61 35 *e*P **P 08 51 26.4 -0.2**
CMB *e* 08 55 20.8
CMB pmax pmax
comp=Z,4.0nm,1.0s,mb4.9
CMB MLR MLR
comp=Z,626nm,21.0s,MS5.1
CMB Columbia Colle 97.61 35 *e*P **P 08 51 26.4 -0.1**
comp=Z,4.2nm,1.0s,mb4.9
CMB *e*PP PP 08 55 20.8 -2.5
CMB LR LR
comp=Z,626nm,21.0s,MS5.1
M13A Montello 97.68 29 ⇓P **P 08 51 26.8 0.0**
baz=97
AHID Auburn Hatcher 97.69 26 *e*P **P 08 51 27.1 +0.3**
comp=Z,2.4nm,0.8s,mb4.8
AHID *e*PP PP 08 55 22.6 -1.0
AHID LR LR
comp=Z,635nm,20.0s,MS5.1
J18A Kendall Valley 97.70 25 ⇓P **P 08 51 26.8 0.0**
baz=97
N12A Clover Valley, 97.74 30 ⇑P **P 08 51 27.0 0.0**
baz=97,SNR=6.6
N12A Clover Valley, 97.74 30 *e*P **P 08 51 27.6 +0.6**
comp=Z,12nm,1.1s,mb5.3
N12A *e*PP PP 08 55 25.6 +1.6
ELK Elko 97.75 30 PFAKE 08 51 40.0 +13
ELK LR LR
comp=Z,698nm,19.0s,MS5.2
K17A Gardner Place, 97.77 26 ⇓P **P 08 51 27.3 +0.1**
baz=97
L15A Malad City 97.85 28 ⇓P **P 08 51 27.5 0.0**
baz=98
M14A Sheep Mountain 97.89 28 ⇓P **P 08 51 27.7 0.0**
baz=98
O11A Cowboy Ranch, 98.08 31 ⇓P **P 08 51 28.5 -0.1**
baz=98
N13A Wendover, West 98.09 29 ⇑P **P 08 51 28.6 0.0**
baz=98
N13A Wendover, West 98.09 29 *e*P **P 08 51 29.5 +0.9**
comp=Z,8.8nm,0.8s,mb5.3
SAO San Andreas Ge 98.09 36 PFAKE 08 51 40.0 +11
SAO LR LR
comp=Z,615nm,22.0s,MS5.0
EYMN Ely 98.23 11 PFAKE 08 51 40.0 +11
EYMN LR LR
comp=Z,861nm,21.0s,MS5.2
BW06 Boulder Array 98.25 25 ⇓P **P 08 51 28.9 -0.4**
baz=98
BW06 Boulder Array 98.25 25 *e*P **P 08 51 29.7 +0.4**
comp=Z,2.3nm,0.8s,mb4.8
BW06 LR LR
comp=Z,639nm,20.0s,MS5.1
PDAR Pinedale Array 98.25 25 P **P 08 51 28.1 -1.2**
comp=Z,1.7nm,0.7s,mb4.7,baz=8.9,slow=2.3,SNR=18
PDAR PKKP PKKPbc 09 07 58.4 -2.4
comp=Z,0.9nm,1.0s,baz=149,slow=3.5,SNR=4.8
PDAR LR LR 09 39 49.3
comp=Z,673nm,18.0s,MS5.2,baz=155,slow=38
M15A Larsen Ranch, 98.28 28 ⇓P **P 08 51 29.6 +0.1**
baz=98
NVAR Mina Array Bea 98.28 33 P **P 08 51 30.9 +1.3**
comp=Z,1.6nm,0.7s,mb4.7,baz=319,slow=3.7,SNR=15
NVAR PKKP PKKPbc 09 08 01.0 +0.5
comp=Z,1.3nm,0.9s,baz=147,slow=4.0,SNR=8.9
NVAR PKPPKP 09 16 11.1
comp=Z,0.3nm,0.9s,baz=164,slow=6.0,SNR=3.7
NVAR Mina Array Bea 98.28 33 P **P 08 51 30.9 +1.3**
NVAR PKKP PKKPbc 09 08 01.0 +0.5
NVAR P'P' 09 16 11.1
L17A Cokeville 98.34 27 ⇑P **P 08 51 29.9 +0.1**
baz=98
O12A Currie 98.35 30 ⇓P **P 08 51 30.1 +0.2**
baz=98
TSUM Tsumeb 98.50 253 PFAKE 08 51 40.0 +9.3
TSUM LR LR
comp=Z,558nm,22.0s,MS5.0
HWUT Hardware Ranch 98.50 27 *e*P **P 08 51 30.9 +0.4**
comp=Z,39nm,2.0s,mb5.6
HWUT *e*PP PP 08 55 31.0 +1.2
HWUT LR LR
comp=Z,713nm,21.0s,MS5.1
N14A Grayback Hills 98.51 29 ⇑P **P 08 51 30.9 +0.4**
baz=98
M16A Huntsville 98.73 27 ⇑P **P 08 51 31.5 0.0**
baz=98
N15A Stansbury Isla 98.74 28 ⇓P **P 08 51 31.5 0.0**
baz=98
CASY Casey 98.78 178 PFAKE 08 51 40.0 +9.2
CASY LR LR
comp=Z,632nm,20.0s,MS5.1
K20A Yellowstone Ra 98.78 25 ⇓P **P 08 51 31.5 -0.2**
baz=98
O13A Hicks Ranch, I 98.79 30 ⇓P **P 08 51 31.9 +0.1**
baz=98
L18A Fontenelle, Gr 98.81 26 ⇓P **P 08 51 31.0 -0.8**
baz=98
RSSD Black Hills 98.88 21 *e*P **P 08 51 32.2 +0.1**
RSSD pmax pmax
comp=Z,12nm,1.0s,mb5.4
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.4
RSSD Black Hills 98.88 21 *e*P **P 08 51 32.2 +0.1**
comp=Z,12nm,1.0s,mb5.4
RSSD LR LR
comp=Z,1μm,21.0s,MS5.4
P12A McGill 98.94 31 ⇓P **P 08 51 32.5 0.0**
baz=99
M17A Scullys Gap (B 98.96 27 ⇓P **P 08 51 32.1 -0.4**
baz=99
TPH Tonopah 99.07 33 PFAKE 08 51 40.0 +6.9
TPH LR LR
comp=Z,554nm,20.0s,MS5.1
Q11A Duckwater 99.14 31 ⇓P **P 08 51 33.6 +0.2**
baz=99
N16A Rees Ranch, Co 99.17 28 ⇓P **P 08 51 33.7 +0.2**
baz=99
DUG Dugway 99.21 29 ⇓P **P 08 51 33.7 +0.1**
baz=99
DUG Dugway 99.21 29 *e*P **P 08 51 34.0 +0.3**
DUG pmax pmax
comp=Z,5.0nm,1.2s,mb4.9
DUG MLR MLR
comp=Z,617nm,20.0s,MS5.1
DUG Dugway 99.21 29 *e*P **P 08 51 34.0 +0.3**
comp=Z,4.7nm,1.2s,mb4.9
DUG LR LR
comp=Z,617nm,20.0s,MS5.1
M18A Lyman 99.23 26 ⇓P **P 08 51 33.8 +0.1**
baz=99
R10A Warm Springs 99.31 32 ⇓P **P 08 51 34.2 +0.1**
baz=99
P13A Bates Ranch, G 99.34 30 ⇓P **P 08 51 33.7 -0.6**
baz=99
L20A Wamsutter 99.35 25 ⇓P **P 08 51 33.8 -0.4**
baz=99
S10A Tonopah Range, 99.48 33 ⇑P **P 08 51 34.9 -0.1**
baz=99
R11A Troy Canyon, C 99.58 32 ⇑P **P 08 51 35.0 -0.3**
baz=99
P14A Drum Mountains 99.62 29 ⇓P **P 08 51 35.1 -0.4**
baz=99
O16A Springville 99.73 28 ⇑P Pdif 08 51 35.8 -0.1
baz=99
L21A Rawlins 99.73 24 ⇑P Pdif 08 51 35.6 -0.3
baz=99
Q13A Wheeler Ranch, 99.76 30 ⇓P Pdif 08 51 35.8 -0.2
baz=99
R12A Pony Springs, 100.03 31 ⇓P Pdif 08 51 36.8 -0.4
baz=100
O17A Robinson Place 100.04 27 ⇓P Pdif 08 51 37.3 0.0
baz=100
Q14A Sevier Lake (B 100.04 30 ⇑P Pdif 08 51 36.7 -0.6
baz=100
O18A Roosevelt 100.26 27 ⇑P Pdif 08 51 37.6 -0.6
baz=100
DAC Darwin (Calif) 100.36 34 PFAKE 08 51 50.0 +11
DAC LR LR
comp=Z,593nm,22.0s,MS5.0
N20A Spence Gulch, 100.41 25 ⇓P Pdif 08 51 38.6 -0.3
baz=100
MPMC Manual Prospec 100.58 34 ⇓P Pdif 08 51 39.5 -0.1
baz=100
T11A Corn Creek, Al 100.66 32 ⇑P Pdif 08 51 39.7 -0.3
baz=100
MVU Marysvale 100.89 29 PFAKE 08 51 50.0 +8.9
MVU LR LR
comp=Z,488nm,20.0s,MS5.0
MSU Marysvale 100.90 29 *e*P Pdif 08 51 42.1 +1.0
MSU *e* 08 55 44.1
MSU pmax pmax
comp=Z,12nm,1.5s
MSU Marysvale 100.90 29 *e*Pdif Pdif 08 51 42.1 +1.0
comp=Z,12nm,1.5s
MSU *e*PP PP 08 55 44.1 -4.0
PHWY Pilot Hill 100.97 23 *e*Pdif Pdif 08 51 42.3 +0.9
comp=Z,5.2nm,0.9s
O20A White River Ci 101.03 26 ⇑P Pdif 08 51 41.3 -0.4
baz=101
P19A Cripple Cowboy 101.19 27 ⇓P Pdif 08 51 41.9 -0.5
baz=101
ECSD EROS Data Cent 101.24 16 PFAKE 08 51 50.0 +7.4
ECSD LR LR
comp=Z,796nm,20.0s,MS5.2
SHOC Shoshone 101.28 34 ⇓P Pdif 08 51 42.9 +0.1
baz=101
EDW2 Edwards Air Fo 101.29 35 ⇓P Pdif 08 51 42.9 +0.1
baz=101
R16A Teasdale 101.38 29 ⇓P Pdif 08 51 43.2 0.0
baz=101
R17A Hanksville Air 101.58 28 ⇓P Pdif 08 51 43.7 -0.4
baz=101
HEC Hector,Ludlow 102.13 34 ⇑P Pdif 08 51 46.3 -0.3
baz=102
PKME Peaks-Kenny Pk 102.22 356 PFAKE 08 52 00.0 +13
PKME LR LR
comp=Z,1μm,20.0s,MS5.3
U14A Mt Trumbull 102.25 31 ⇑P Pdif 08 51 47.5 +0.4
baz=102
GLMI Grayling 102.25 7 PFAKE 08 52 00.0 +13
GLMI LR LR
comp=Z,904nm,19.0s,MS5.3
R19A Curley Farm, L 102.26 27 ⇑P Pdif 08 51 47.5 +0.4
baz=102
ISCO Idaho Springs 102.26 24 PFAKE 08 52 00.0 +13
ISCO LR LR
comp=Z,784nm,20.0s,MS5.2
PV10 Paradox Valley 102.27 27 *e*Pdif Pdif 08 51 48.8 +1.6
comp=Z,62nm,0.8s
SMCO Snowmass 102.33 25 *e*Pdif Pdif 08 51 48.1 +0.6
comp=Z,3.6nm,1.0s
SMCO *e*PP PP 08 56 02.8 +3.9
OGNE Ogallala 102.38 21 PFAKE 08 52 00.0 +12
OGNE LR LR
comp=Z,1μm,19.0s,MS5.4
PV01 Paradox Valley 102.66 27 *e*Pdif Pdif 08 51 50.2 +1.3
comp=Z,226nm,0.9s
PV01 *e*PP PP 08 56 00.9 -0.5
PV01 *e*PKPdf PKiKP 08 56 09.1 -0.9
SUR Sutherland 102.80 240 PFAKE 08 52 00.0 +10
SUR LR LR
comp=Z,779nm,19.0s,MS5.2
LONY Lake Ozonia 103.01 0 PFAKE 08 52 00.0 +10
LONY LR LR
comp=Z,1μm,20.0s,MS5.3
PFO Pinyon Flat Ob 103.06 35 PFAKE 08 52 00.0 +9.3
PFO LR LR
comp=Z,208nm,19.0s,MS4.7
DBIC Dimbokro 103.29 287 PFAKE 08 52 00.0 +8.3
DBIC LR LR
comp=Z,687nm,19.0s,MS5.2
JFWS Jewell Farm 103.33 12 PFAKE 08 52 00.0 +8.1
JFWS LR LR
comp=Z,860nm,19.0s,MS5.3
LBNH Lisbon 103.35 358 PFAKE 08 52 00.0 +8.0
LBNH LR LR
comp=Z,1μm,19.0s,MS5.5
KIC Kosan Boka 103.38 287 *e*P PKiKP 08 56 06.4 -5.4
comp=Z,49nm,1.2s
TIC Toumodi 103.44 287 *e*P PKiKP 08 56 09.3 -2.6
comp=Z,22nm,0.7s
MVCO Mesa Verde 103.49 27 PFAKE 08 52 00.0 +7.4
MVCO LR LR
comp=Z,850nm,20.0s,MS5.3
NCB Newcomb 103.66 360 PFAKE 08 52 00.0 +6.7
NCB LR LR
comp=Z,853nm,20.0s,MS5.3
LIC Lamto 103.69 287 *e*P PKiKP 08 56 08.9 -3.5
comp=Z,60nm,1.2s
SCIA State Center 103.74 14 PFAKE 08 52 00.0 +6.3
SCIA LR LR
comp=Z,914nm,21.0s,MS5.3
WUAZ Wupatki 103.78 30 PFAKE 08 52 10.0 +16
WUAZ LR LR
comp=Z,541nm,20.0s,MS5.1
SDCO Great Sand Dun 104.14 25 PFAKE 08 52 10.0 +15
SDCO LR LR
comp=Z,777nm,19.0s,MS5.3
AAM Ann Arbor 104.85 7 PFAKE 08 52 10.0 +11
AAM LR LR
comp=Z,612nm,20.0s,MS5.1
CBKS Cedar Bluff 105.03 20 PFAKE 08 56 30.0 +16
CBKS LR LR
comp=Z,751nm,19.0s,MS5.2
ERPA Erie 105.33 4 PFAKE 08 56 30.0 +15
ERPA LR LR
comp=Z,689nm,19.0s,MS5.2
BINY Binghamton 105.41 1 PFAKE 08 56 30.0 +15
BINY LR LR
comp=Z,794nm,19.0s,MS5.3
KSU1 Kansas State U 105.62 18 PFAKE 08 56 30.0 +15
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.5
HDIL Hopedale 105.79 12 PFAKE 08 56 30.0 +14
HDIL LR LR
comp=Z,818nm,19.0s,MS5.3
ANMO Albuquerque 106.26 27 PFAKE 08 56 30.0 +13
ANMO LR LR
comp=Z,767nm,21.0s,MS5.2
TUC Tucson 106.77 32 PFAKE 08 56 30.0 +12
TUC LR LR
comp=Z,768nm,19.0s,MS5.3
SSPA Standing Stone 106.92 3 PFAKE 08 56 30.0 +12
SSPA LR LR
comp=Z,623nm,22.0s,MS5.1
ACSO Alum Creek Sta 106.96 7 PFAKE 08 56 30.0 +12
ACSO LR LR
comp=Z,822nm,19.0s,MS5.3
MCWV Mont Chateau 107.79 4 PFAKE 08 56 30.0 +11
MCWV LR LR
comp=Z,2μm,19.0s,MS5.7
CCM Cathedral Cave 107.85 14 PFAKE 08 56 30.0 +10
CCM LR LR
comp=Z,1μm,21.0s,MS5.3
AMTX Amarillo 108.03 23 PFAKE 08 56 30.0 +10
AMTX LR LR
comp=Z,589nm,19.0s,MS5.2
WCI Wyandotte Cave 108.54 10 PFAKE 08 56 30.0 +9.2
WCI LR LR
comp=Z,788nm,20.0s,MS5.3
WMOK Wichita Mounta 109.09 21 PFAKE 08 56 30.0 +8.1

WMOK LR LR
comp=Z,971nm,20.0s,MS5.4
CBN Corbin 109.36 2 PFAKE 08 56 30.0 +7.6
CBN LR LR
comp=Z,734nm,20.0s,MS5.2
MNTX Cornudas Mount 109.56 28 *e*PKPdf PKiKP 08 56 23.0 +0.1
MNTX LR LR
comp=Z,528nm,21.0s,MS5.1
BLA Blacksburg 110.19 5 PFAKE 08 56 40.0 +16
BLA LR LR
comp=Z,1μm,19.0s,MS5.6
WVT Waverly 110.35 12 *e*PKIKP PKiKP 08 56 23.6 -0.7
WVT MLR MLR
comp=Z,748nm,19.0s,MS5.3
MIAR Mount Ida 110.70 17 PFAKE 08 56 40.0 +15
MIAR LR LR
comp=Z,976nm,20.0s,MS5.4
PLAL Pickwick Lake 111.43 12 PFAKE 08 56 40.0 +14
PLAL LR LR
comp=Z,780nm,21.0s,MS5.3
PPT Papeete 111.58 97 *e*LQ 09 24 52.5
comp=Z,2μm,35.2s
PPT *e*LR LR 09 29 35.4
comp=Z,917nm,23.8s,baz=301
CNNC Cliffs of the 112.30 3 PFAKE 08 56 40.0 +12
CNNC LR LR
comp=Z,1μm,19.0s,MS5.5
TXAR Lajitas Array 112.33 27 PKiKP PKiKP 08 56 28.3 +0.1
comp=Z,0.6nm,0.6s,baz=162,slow=0.3,SNR=12
TXAR PKKPab PKKPab 09 07 24.9 -4.7
comp=Z,1.7nm,1.0s,baz=145,slow=4.6,SNR=6.4
TXAR Lajitas Array 112.33 27 *i* PKIKP PKiKP 08 56 28.3 +0.1
TXAR pmax pmax
comp=Z,1.0nm,0.6s
JCT Junction City 112.69 24 *e*PKIKP PKiKP 08 56 27.9 -1.0
JCT MLR MLR
comp=Z,865nm,20.0s,MS5.3
NATX Nacogdoches 113.06 19 PFAKE 08 56 40.0 +10
NATX LR LR
comp=Z,2μm,19.0s,MS5.6
LRAL Lakeview Retre 113.51 11 PFAKE 08 56 40.0 +10
LRAL LR LR
comp=Z,981nm,19.0s,MS5.4
VBMS Vicksburg 113.63 15 PFAKE 08 56 40.0 +9.4
VBMS LR LR
comp=Z,850nm,21.0s,MS5.3
GOGA Godfrey 113.65 8 PFAKE 08 56 40.0 +9.4
GOGA LR LR
comp=Z,849nm,19.0s,MS5.4
NHSC New Hope 114.28 5 PFAKE 08 56 40.0 +8.2
NHSC LR LR
comp=Z,849nm,19.0s,MS5.4
HKT Hockley 114.44 20 PFAKE 08 56 40.0 +7.8
HKT LR LR
comp=Z,945nm,21.0s,MS5.4
BBSR BB Station 114.59 351 PFAKE 08 56 40.0 +7.6
BBSR LR LR
comp=Z,595nm,20.0s,MS5.2
TAOE Nuku Hiva Isla 115.15 84 *e*LR LR 09 31 12.5
comp=Z,515nm,23.5s
BRAL Brewton 115.48 12 PFAKE 08 56 50.0 +16
BRAL LR LR
comp=Z,906nm,20.0s,MS5.4
KVTX Kingsville 116.03 23 PFAKE 08 56 50.0 +15
KVTX LR LR
comp=Z,1μm,19.0s,MS5.5
SBA Scott Base 116.11 168 *e*PKIKP PKPdf 08 56 33.0 -0.9
DWPF Disney 119.12 7 PFAKE 08 56 50.0 +8.7
DWPF LR LR
comp=Z,1μm,20.0s,MS5.5
NVL N'lazarevskaya 121.73 203 *e*PKIKP PKPdf 08 56 43.5 -1.3
NVL pmax pmax
comp=Z,44nm,1.3s
MAIT Maitri 121.77 203 *e*PKPab PKPdf 08 56 44.6 -0.3
QSPA South Pole Qui 122.51 180 PKP PKPdf 08 56 45.2 -0.9
comp=Z,18nm,0.9s,baz=308,slow=1.7,SNR=31
QSPA South Pole Qui 122.51 180 *e*PKPdf PKPdf 08 56 44.6 -1.5
QSPA LR LR
comp=Z,807nm,22.0s,MS5.3
GRTK Grand Turk 125.96 356 PFAKE 08 57 10.0 +15
GRTK LR LR
comp=Z,742nm,22.0s,MS5.3
RKT Rikitea 126.29 96 *e*LR LR 09 36 15.7
comp=Z,469nm,28.5s
GTBY Guantanamo Bay 127.63 1 PFAKE 08 57 10.0 +12
GTBY LR LR
comp=Z,697nm,21.0s,MS5.3
ANWB Willy Bob 128.43 345 PFAKE 08 57 10.0 +11
ANWB LR LR
comp=Z,319nm,20.0s,MS5.0
SDDR Presa de Saban 128.48 356 PFAKE 08 57 10.0 +11
SDDR LR LR
comp=Z,673nm,20.0s,MS5.3
MTDJ Mount Denham 129.24 4 PFAKE 08 57 10.0 +9.1
MTDJ LR LR
comp=Z,859nm,21.0s,MS5.4
FDF Fort de France 131.11 343 PFAKE 08 57 20.0 +16
FDF LR LR
comp=Z,587nm,20.0s,MS5.3
TGUH Tegucigalpa,Un 131.88 17 *e*PKPdf PKPdf 08 57 05.1 -0.8
TGUH *e*SKPbc SKPbc 09 00 30.5 -1.8
TGUH LR LR
comp=Z,535nm,20.0s,MS5.2
BBGH Gun Hill 132.21 340 PFAKE 08 57 20.0 +13
BBGH LR LR
comp=Z,592nm,20.0s,MS5.3
GRGR Grenville 133.74 343 PFAKE 08 57 20.0 +11
GRGR LR LR
comp=Z,326nm,20.0s,MS5.0
RCBR Riachuelo 135.24 298 PFAKE 08 57 20.0 +7.7
RCBR LR LR
comp=Z,557nm,19.0s,MS5.3
JTS JuntasAbangare 136.05 15 PFAKE 08 57 30.0 +16
JTS LR LR
comp=Z,568nm,21.0s,MS5.3
BCIP Isla Barro Col 138.01 8 PFAKE 08 57 30.0 +13
BCIP LR LR
comp=Z,443nm,19.0s,MS5.2
SDV Santo Domingo 138.45 354 *e*PKPpre 08 57 08.0
SDV *e*PKPdf PKPdf 08 57 17.9 -0.3
SDV *e*SKPbc SKPbc 09 00 49.9 -3.3
SDV LR LR
comp=Z,223nm,21.0s,MS4.9
ROSC El Rosal 142.61 360 PKP PKPdf 08 57 23.3 -2.5
comp=Z,16nm,0.8s,baz=90,slow=14,SNR=8.4
ROSC El Rosal 142.61 360 *e*PKPdf PKPdf 08 57 23.6 -2.2
OTAV Otavalo 146.98 7 *e*PKPbc PKPbc 08 57 35.1 -0.2
OTAV LR LR
comp=Z,325nm,19.0s,MS5.1
CAM4 Nova Friburgo 150.00 282 ⇑ *i*P PKPdf 08 57 38.0 +0.1
CAM4 *i* 08 57 42.0
CAM4 *i* 08 57 47.3
CAM4 *i* 08 57 49.4
CAM4 *i* 08 57 55.8
CAM4 *i* 08 58 02.6
CAM4 *i* 08 58 05.6
ATAH Atahualpa 154.26 9 PKP PKPdf 08 57 46.4 +1.8
comp=Z,5.0nm,0.7s,baz=54,slow=6.9,SNR=3.6
NNA Nana 159.23 7 PFAKE 08 58 00.0 +9.1
NNA LR LR
comp=Z,408nm,19.0s,MS5.3
SIV San Ignacio 159.38 321 PKP PKPdf 08 57 51.4 +0.3
comp=Z,2.8nm,0.9s,baz=80,slow=2.6,SNR=18
SIV PKPab PKPab 08 58 28.4 -0.1
comp=Z,10nm,0.9s,baz=63,slow=5.6,SNR=15
LPAZ La Paz 162.65 339 PKP PKPdf 08 57 55.4 +0.9
comp=Z,6.2nm,1.0s,baz=35,slow=4.4,SNR=16
LPAZ La Paz 162.65 339 *e*PKPdf PKPdf 08 57 55.5 +1.0
LPAZ LR LR
comp=Z,561nm,19.0s
CPUP Villa Florida 163.80 289 PKP PKPdf 08 57 55.9 +0.5
comp=Z,5.3nm,1.1s,baz=8.4,slow=4.7,SNR=6.9
CPUP Villa Florida 163.80 289 PKIKP PKPdf 08 57 55.9 +0.5
CPUP pmax pmax
comp=Z,5.0nm,1.1s
PLCA Paso Flores 171.44 200 PKP PKPdf 08 58 00.6 +0.2
comp=Z,12nm,1.1s,baz=244,slow=2.1,SNR=12
PLCA Paso Flores 171.44 200 PKIKP PKPdf 08 58 00.6 +0.3
PLCA pmax pmax
comp=Z,12nm,1.1s
CFAA Coronel Fontan 174.62 280 PKP PKPdf 08 58 02.6 +0.7
comp=Z,1.5nm,1.0s,baz=318,slow=2.3,SNR=17
LCO Las Campanas 175.08 318 PFAKE 08 58 10.0 +7.9
LCO LR LR
comp=Z,543nm,19.0s

*ISCJB **27** 08:38:06.1±0.8, 71°.90N±0°.06×0°.7W±0°.3, h10km, Error ellipse: s-maj=13.0km s-min=8.2km az=157.9*
*CSEM **27** 08:38:08.4±0.4, 71°.88N×0°.79W, h10km, ML2.2, Error ellipse: s-maj=14.8km s-min=8.6km az=70.0*
*NEIC **27** 08:38:08.9±0.7, 71°.86N×0°.78W, h10km, Error ellipse: s-maj=11.5km s-min=7.2km az=67.0*
*IDC **27** 08:38:08.7±2.5, 71°.74N×0°.38W, h0km, mb3.4/1, mb1 3.7/6, mb1mx3.4/30, mbtmp3.6/6, ML3.2/5, MS3.4/1, Ms1 3.5/1, ms1mx2.9/41, Error ellipse: s-maj=39.1km s-min=25.8km az=104.0*
*BER **27** 08:38:14.6±3.0, 72°.09N×0°.90E, h0km±80km, ML2.2*
ISC 27 08:38:09.0±0.8, 71°.88N±0°.06×0°.7W±0°.3, h10km, n27, σ0°.83/30, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOF	**Lofoten**	**6.16**	**121**	*e*P	**Pn**	**08 39 41.4**	**+1.6**
LOF	**Lofoten**	**6.16**	**121**	*e*P	**Pn**	**08 39 41.4**	**+1.6**
SNR=49							
STOK	**Stokkvaagen**	**7.41**	**132**	*e*P	**Pn**	**08 39 56.6**	**-0.3**
STOK				*e*S	**Sn**	**08 41 13.5**	**-7.3**
STOK				AML	AML	08 41 22.9	
comp=Z,4.8nm,0.6s							
STOK	**Stokkvaagen**	**7.41**	**132**	*e*P	**Pn**	**08 39 56.6**	**-0.3**
STOK				*e*Sg	**Sn**	**08 41 14.4**	**-6.5**
STOK	**Stokkvaagen**	**7.41**	**132**	*e*P	**Pn**	**08 39 56.6**	**-0.3**
SPB4	**Spitsbergen Ar**	**7.67**	**27**	*e*Pn	**Pn**	**08 40 01.0**	**+0.5**
SPB4	**Spitsbergen Ar**	**7.67**	**27**	*e*Pn	**Pn**	**08 40 01.0**	**+0.5**
SPITS	**Spitsbergen Ar**	**7.67**	**27**	Pn	**Pn**	**08 40 00.8**	**+0.3**
baz=209,slow=15,SNR=102							
SPITS	**Spitsbergen Ar**	**7.67**	**27**	Pn	**Pn**	**08 40 00.9**	**+0.4**
KBS	**Kingsbay**	**7.74**	**18**	*e*P	**Pn**	**08 39 59.8**	**-1.7**
KBS	**Kingsbay**	**7.74**	**18**	*e*Pn	**Pn**	**08 40 01.9**	**+0.5**
comp=Z,3μm,2.1s							
KBS	**Kingsbay**	**7.74**	**18**	*e*P	**Pn**	**08 39 59.8**	**-1.6**
SNR=47							
KBS	**Kingsbay**	**7.74**	**18**	*e*Pn	**Pn**	**08 40 01.9**	**+0.5**
comp=Z,3μm,2.1s							
MOR8	**Moi Rana**	**7.88**	**129**	*e*P	**Pn**	**08 40 04.5**	**+1.1**
MOR8				AML	AML	08 41 30.0	
comp=Z,2.6nm,0.3s							
MOR8	**Moi Rana**	**7.88**	**129**	*e*P	**Pn**	**08 40 04.5**	**+1.1**
MOR8				*e*Sg	**Sn**	**08 41 27.5**	**-4.9**
MOR8	**Moi Rana**	**7.88**	**129**	*e*P	**Pn**	**08 40 04.5**	**+1.2**
SNR=47							
ARCES	**ARCESS Array B**	**8.95**	**93**	Pn	**Pn**	**08 40 17.0**	**-1.0**
comp=Z,0.4nm,0.3s,baz=299,slow=12,SNR=19							
ARCES	**ARCESS Array B**	**8.95**	**93**	Pn	**Pn**	**08 40 17.0**	**-1.0**
SUMG	**Summit**	**11.42**	**291**	*e*Pn	**Pn**	**08 40 51.7**	**-0.1**
comp=Z,3.8nm,0.9s							
SUMG	**Summit**	**11.42**	**291**	*e*Pn	**Pn**	**08 40 51.7**	**-0.1**
comp=Z,3.8nm,0.9s							
NOA	**NORSAR Array B**	**11.85**	**151**	Pn	**Pn**	**08 40 57.6**	**-0.1**
comp=Z,0.2nm,0.3s,baz=336,slow=13,SNR=3.0							
NOA				LR	LR	08 44 45.5	
comp=Z,167nm,18.9s,baz=75,slow=34							
NOA	**NORSAR Array B**	**11.85**	**151**	Pn	**Pn**	**08 40 57.6**	**-0.1**
HFS	**Hagfors**	**13.11**	**147**	Pn	**Pn**	**08 41 14.6**	**-0.3**
comp=Z,0.3nm,0.3s,baz=345,slow=16,SNR=7.0							
HFS	**Hagfors**	**13.11**	**147**	Pn	**Pn**	**08 41 14.6**	**-0.3**
FINES	**FINESS Array B**	**14.72**	**122**	Pn	**Pn**	**08 41 35.6**	**-1.3**
comp=Z,0.1nm,0.3s,baz=319,slow=15,SNR=4.6							
FINES	**FINESS Array B**	**14.72**	**122**	Pn	**Pn**	**08 41 35.6**	**-1.3**
TORD	**Torodi Ar. Bea**	**58.72**	**177**	P	**P**	**08 48 06.7**	**+0.1**
comp=Z,0.7nm,0.8s,baz=356,slow=7.1,SNR=4.3							

*IDC **27** 08:54:44.5±4.9, 36°.34N×142°.42E, h0km, mb4.0/4, mb1 3.9/6, mb1mx3.6/25, mbtmp4.0/6, ML3.6/2, Error ellipse: s-maj=88.7km s-min=38.3km az=101.0*
*ISCJB **27** 08:54:50.4±1.0, 36°.28N±0°.03×142°.02E±0°.08, h40km±10km, mb3.9/4, Error ellipse: s-maj=11.1km s-min=5.6km az=174.8*
*NEIC **27** 08:54:51.1, 36°.31N×141°.88E, h62km, mb4.4/2, After JMA.*
*JMA **27** 08:54:51.0±0.2, 36°.31N×141°.88E, h62km±4km, M3.3*
ISC 27 08:54:50.7±1.9, 36°.28N±0°.03×142°.01E±0°.08, h29km±17km, n22, σ0°.94/34, mb3.9/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.09**	**239**	P	**Pn**	**08 55 09.8**	**-0.3**
CHOJ				*e*S	**Sn**	**08 55 23.2**	**-1.0**
JHO	**Hitachi**	**1.21**	**287**	P	**Pn**	**08 55 10.4**	**-1.2**
JHO				*e*S	**Sn**	**08 55 25.2**	**-1.8**
ONAJ	**Iwakimizuishiy**	**1.27**	**311**	P	**Pn**	**08 55 11.6**	**-1.0**
JFK	**Kawauchi**	**1.42**	**321**	P	**Pn**	**08 55 14.1**	**-0.4**
JFK				*e*S	**Sn**	**08 55 31.6**	**-0.6**
BSO1	**Boso 1**	**1.82**	**208**	P	**Pn**	**08 55 20.3**	**+0.2**
BSO1				*e*S	**Sn**	**08 55 43.5**	**+1.3**
JFT	**Otama**	**1.82**	**313**	P	**Pn**	**08 55 20.1**	**0.0**
JFT				*e*S	**Sn**	**08 55 43.1**	**+0.8**
JMM	**Marumori**	**1.86**	**329**	P	**Pn**	**08 55 20.7**	**+0.1**
JMM				*e*S	**Sn**	**08 55 42.7**	**-0.4**
BSO3	**Boso 3**	**1.91**	**220**	P	**Pn**	**08 55 21.7**	**+0.4**
BSO3				*e*S	**Sn**	**08 55 44.9**	**+0.5**
JAG	**Ashikaga**	**2.07**	**275**	P	**Pn**	**08 55 22.9**	**-0.5**
JAG				*e*S	**Sn**	**08 55 46.5**	**-1.7**
JFY	**Yanaizu**	**2.16**	**302**	P	**Pn**	**08 55 24.9**	**+0.1**
JFY				*e*S	**Sn**	**08 55 52.3**	**+1.7**
JKT	**Katashina**	**2.27**	**283**	P	**Pn**	**08 55 26.6**	**+0.3**
JKT				*e*S	**Sn**	**08 55 54.0**	**+0.6**
MJAR	**Matsushiro Arr**	**3.08**	**276**	Pn	**Pn**	**08 55 38.0**	**+0.7**
4.9nm,0.3s,baz=115,slow=8.4,SNR=41							
MAJO	**Matsushiro**	**3.08**	**276**	*e*Pn	**Pn**	**08 55 37.7**	**+0.4**
MAT	**Matsushiro**	**3.08**	**276**	P	**Pn**	**08 55 38.3**	**+1.0**
MAT				*e*S	**Sn**	**08 56 15.1**	**+2.0**
JHJ	**Hachijo jima 2**	**3.64**	**211**	Pn	**Pn**	**08 55 45.3**	**+0.2**
14nm,0.3s,baz=208,slow=14,SNR=11							
JHJ				Sn	**Sn**	**08 56 25.1**	**-2.0**
45nm,0.3s,baz=256,slow=23,SNR=12							
PET	**Petropavlovsk**	**20.43**	**30**	*e*P	**P**	**08 59 18.5**	**-6.9**
38nm,1.1s							
SONM	**Songino Array**	**28.61**	**305**	P	**P**	**09 00 45.4**	**+1.2**
2.1nm,0.8s,mb3.9,baz=99,slow=9.6,SNR=6.6							
ZALV	**Zalesovo Beam**	**42.78**	**313**	P	**P**	**09 02 45.4**	**0.0**
0.6nm,0.3s,mb3.8,baz=91,slow=6.7,SNR=4.7							
MK31	**Makanchi Array**	**44.93**	**303**	*e*P	**P**	**09 03 02.9**	**+0.1**
MKAR	**Makanchi Array**	**44.93**	**303**	P	**P**	**09 03 03.1**	**+0.4**
1.1nm,0.6s,mb3.8,baz=84,slow=9.9,SNR=9.6							
KURK	**Kurchatov**	**46.78**	**309**	P	**P**	**09 03 16.3**	**-1.0**
1.4nm,0.6s,mb4.0,baz=88,slow=7.7,SNR=7.3							
KURK	**Kurchatov**	**46.78**	**309**	*e*P	**P**	**09 03 15.7**	**-1.6**
2.2nm,0.7s,mb4.2							

*CSEM **27** 08:58:21.7±0.2, 37°.25N×28°.27E, h8km, MD2.7, Error ellipse: s-maj=4.0km s-min=3.1km az=31.0*
*ISK **27** 08:58:21.5, 37°.24N×28°.22E, h10km, MD2.7*
*ISCJB **27** 08:58:22.3±0.5, 37°.23N±0°.03×28°.21E±0°.03, h2km±8km, Error ellipse: s-maj=6.1km s-min=3.9km az=32.7*
*DDA **27** 08:58:22.1, 37°.22N×28°.21E, h7km±7km, Md2.9*
ISC 27 08:58:22.7±0.5, 37°.22N±0°.03×28°.22E±0°.04, h6km±7km, n23, σ1°.10/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**148**	*e*PG	**Pg**	**08 58 24.7**	**-0.2**
YER				*e*SG	**Sg**	**08 58 27.0**	**+0.6**
YER	**Yerkesik**	**0.10**	**148**	*e*Pg	**Pg**	**08 58 24.7**	**-0.2**
YER				*e*Sg	**Sg**	**08 58 27.0**	**+0.6**
MLSB	**Milas**	**0.36**	**282**	*e*PG	**Pg**	**08 58 29.1**	**-0.5**
MLSB				*e*SG	**Sg**	**08 58 34.5**	**+0.2**
MLSB	**Milas**	**0.36**	**282**	*e*Pg	**Pg**	**08 58 29.1**	**-0.5**
MLSB				*e*Sg	**Sg**	**08 58 34.5**	**+0.2**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**08 58 30.8**	**-0.9**
TURN				*i* S	**Sg**	**08 58 38.1**	**+0.3**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**08 58 30.8**	**-0.9**
TURN				*i* S	**Sg**	**08 58 38.1**	**+0.3**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**08 58 31.8**	**-0.8**
AYDN				*i* S	**Sg**	**08 58 39.1**	**-0.2**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**08 58 31.8**	**-0.8**
AYDN				*i* S	**Sg**	**08 58 39.1**	**-0.2**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**08 58 34.0**	**-0.9**
BDRM				*i* S	**Sg**	**08 58 44.7**	**+1.5**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**08 58 34.0**	**-0.9**
BDRM				*i* S	**Sg**	**08 58 44.7**	**+1.5**
DAT	**Datca**	**0.71**	**226**	*e*PG	**Pg**	**08 58 36.2**	**-0.1**
DAT	**Datca**	**0.71**	**226**	*e*Pg	**Pg**	**08 58 36.3**	**0.0**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**08 58 35.7**	**-2.5**
DNZL				*i* S	**Sg**	**08 58 51.1**	**+2.3**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**08 58 35.7**	**-2.6**
GCAM	**G?zelcaml?**	**0.92**	**302**	*i* P	**Pg**	**08 58 40.5**	**+0.2**
GCAM				*i* S	**Sg**	**08 58 52.4**	**+0.3**
GCAM	**G?zelcaml?**	**0.92**	**302**	*i* P	**Pg**	**08 58 40.5**	**+0.2**
GCAM				*i* S	**Sg**	**08 58 52.4**	**+0.3**
MANT	**Manisa**	**1.29**	**12**	*i* P	**Pn**	**08 58 36.5**	**-11**
MANT				*i* S	**Sb**	**08 59 05.9**	**+1.5**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*PN	**Pn**	**08 58 46.7**	**-1.3**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*Pn	**Pn**	**08 58 46.7**	**-1.3**
ELL	**Elmali**	**1.44**	**109**	*e*PN	**Pn**	**08 58 48.1**	**-1.2**
ELL	**Elmali**	**1.44**	**109**	*e*Pn	**Pn**	**08 58 48.1**	**-1.2**
AKAS	**Kas**	**1.49**	**131**	*i* P	**Pn**	**08 58 52.0**	**+1.9**
AKAS				*i* S	**Sn**	**08 59 17.8**	**+7.9**
AKAS	**Kas**	**1.49**	**131**	*i* P	**Pn**	**08 58 52.0**	**+1.9**

BJI 27 09:02:57.1, 32°.77N×105°.54E, h11km, mb3.6/1, ML3.8/6, Ms4.0/2, Ms7 4.0/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.40**	**220**	Pg	Pg	09 03 39.0	-4.0
CD2				Sg	Sg	09 04 10.8	-3.3
CD2				smax			
comp=N,1μm,0.6s							
XAN	**Xi'an**	**3.10**	**65**	Pn	Pn	09 03 44.5	-1.4
XAN				Pg	Pg	09 03 49.8	-6.7
XAN				Sn	Sn	09 04 19.8	-3.1
XAN				Sg	Sg	09 04 27.5	-9.1
XAN				smax			
comp=N,170nm,0.6s							
XAN				smax			
comp=E,100nm,0.8s							
LZH	**Lanzhou**	**3.59**	**338**	*e*Pn	Pn	09 03 56.5	+3.8
LZH				Pg	Pg	09 04 03.5	-2.4
LZH				Sn	Sn	09 04 40.8	+5.7
LZH				Sg	Sg	09 04 48.0	-4.5
LZH				smax			
comp=N,370nm,0.5s							
LZH				smax			
comp=E,440nm,0.6s							
LZH				LR	LR		
comp=N,2μm,7.2s							
LZH				LR	LR		
comp=Z,2μm,8.5s							
WHN	**Wuhan**	**7.83**	**104**	Pn	Pn	09 04 52.3	+1.3
WHN				Sn	Sn	09 06 13.3	-6.3
GTA	**Gaotai**	**8.08**	**327**	*e*P	Pn	09 04 55.5	+1.1
GTA				pP		09 04 58.8	
GTA				sP		09 05 01.3	
GTA				S	Sn	09 06 29.3	+3.5
GTA				pmax	pmax		
comp=Z,2.0nm,0.7s							

*ISCJB **27** 09:15:37.9±2.4, 43°.14N±0°.05×126°.4W±0°.1, h15km±22km, mb3.6/3, Error ellipse: s-maj=14.8km s-min=7.1km az=164.6*
*NEIC **27** 09:15:38.1±1.6, 43°.11N×126°.49W, h10km, mb3.8/3, Error ellipse: s-maj=19.7km s-min=8.8km az=68.0*
*IDC **27** 09:15:41.4±3.2, 43°.32N×125°.75W, h0km, mb3.1/3, mb1 3.5/8, mb1mx3.4/29, mbtmp3.3/8, ML3.1/5, Error ellipse: s-maj=44.6km s-min=19.3km az=69.0*
ISC 27 09:15:41.0±2.6, 43°.15N±0°.05×126°.3W±0°.1, h17km±21km, n48, σ1°.29/52, mb3.6/3, 2D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.46**	**100**	P	**Pn**	**09 16 04.4**	**-2.1**
TAKO	**Tahkenitch**	**1.72**	**69**	P	**Pn**	**09 16 08.6**	**-1.4**
KBO	**Bosley Butte**	**1.79**	**121**	P	**Pn**	**09 16 08.4**	**-2.5**
RNO	**Roman Nose**	**2.01**	**67**	P	**Pn**	**09 16 13.1**	**-0.9**
DBO	**Dodson Butte**	**2.23**	**90**	P	**Pn**	**09 16 15.9**	**-1.2**
HSO	**Harness Mounta**	**2.37**	**80**	P	**Pn**	**09 16 18.0**	**-0.9**
MPOR	**Mary's Peak**	**2.40**	**55**	P	**Pn**	**09 16 18.3**	**-1.1**
EUO	**Eugene**	**2.50**	**68**	P	**Pn**	**09 16 20.2**	**-0.6**
HUMO	**Hull Mountain**	**2.51**	**101**	P	**Pn**	**09 16 19.5**	**-1.4**
COR	**Corvallis**	**2.60**	**55**	P	**Pn**	**09 16 21.4**	**-0.6**
BBOR	**Butler Butte**	**2.66**	**94**	⇓P	**Pn**	**09 16 22.6**	**-0.4**
HEBO	**Mount Hebo**	**2.76**	**41**	*e*Pn	**Pn**	**09 16 23.6**	**-0.7**
HEBO				*e*Sn	**Sn**	**09 16 56.8**	**-0.3**
YBH	**Yreka Blue Hor**	**3.00**	**117**	Pn	**Pn**	**09 16 26.4**	**-1.3**
1.8nm,0.3s,baz=314,slow=15,SNR=79							
YBH				Sn	**Sn**	**09 17 02.3**	**-0.9**
2.2nm,0.3s,baz=307,slow=9.2,SNR=4.5							
YBH	**Yreka Blue Hor**	**3.00**	**117**	Pn	**Pn**	**09 16 26.4**	**-1.3**
YBH				⇓ *i*P		09 16 27.2	
YBH				Sn	**Sn**	**09 17 02.3**	**-1.0**
YBH				*e*Sn	**Sn**	**09 17 05.4**	**+2.1**
IRO	**Indian Ridge**	**3.06**	**72**	P	**Pn**	**09 16 28.5**	**+0.1**
BUOR	**Burton Butte**	**3.11**	**105**	P	**Pn**	**09 16 29.4**	**+0.3**
WIFE	**Three Sisters-**	**3.38**	**73**	P	**Pn**	**09 16 33.1**	**+0.4**
BKCOR	**Black Crater**	**3.52**	**69**	P	**Pn**	**09 16 35.2**	**+0.3**
WDC	**Whiskeytown Da**	**3.80**	**131**	*e*Pn	**Pn**	**09 16 38.1**	**-0.5**
HOOD	**Mount Hood Mea**	**3.98**	**55**	*e*Pn	**Pn**	**09 16 42.1**	**+1.0**
GMO	**Grizzlie Mount**	**4.07**	**70**	P	**Pn**	**09 16 42.4**	**0.0**
MTMW	**Mount Mitchell**	**4.09**	**44**	P	**Pn**	**09 16 42.7**	**+0.1**
VIPM	**Ingram Point**	**4.32**	**70**	P	**Pn**	**09 16 46.0**	**+0.1**
MOD	**Modoc**	**4.60**	**104**	*e*Pn	**Pn**	**09 16 47.8**	**-1.8**
LON	**Longmire**	**4.80**	**40**	*e*Pn	**Pn**	**09 16 53.1**	**+0.7**
WVOR	**Wild Horse Val**	**5.68**	**95**	*e*Pn	**Pn**	**09 17 03.6**	**-0.8**
3.3nm,0.7s							
JCW	**Jim Creek**	**5.90**	**30**	*e*Pn	**Pn**	**09 17 07.9**	**+0.5**
RPW	**Rockport**	**6.26**	**31**	*e*Pn	**Pn**	**09 17 12.9**	**+0.5**
2.4nm,0.4s							
CMB	**Columbia Colle**	**6.80**	**137**	*e*Pn	**Pn**	**09 17 21.9**	**+2.0**
2.2nm,0.9s							
NVAR	**Mina Array Bea**	**7.68**	**125**	Pn	**Pn**	**09 17 33.5**	**+1.7**
0.1nm,0.3s,baz=300,slow=13,SNR=9.4							
ELK	**Elko**	**8.58**	**103**	Pn	**Pn**	**09 17 44.1**	**-0.1**
0.0nm,0.3s,baz=269,slow=12,SNR=4.4							
MCMT	**McKenzie Canyo**	**9.84**	**76**	*e*Pn	**Pn**	**09 18 04.4**	**+3.0**
1.4nm,0.9s							
DLMT	**Dillon**	**10.07**	**73**	*e*Pn	**Pn**	**09 18 06.7**	**+2.0**
5.5nm,1.1s							
BOZ	**Bozeman (W)**	**10.79**	**72**	*e*Pn	**Pn**	**09 18 15.7**	**+1.3**
2.1nm,0.6s							
IMW	**Indian Meadow**	**11.18**	**81**	*e*Pn	**Pn**	**09 18 23.6**	**+3.8**
4.3nm,1.0s							
TPAW	**Teton Pass**	**11.19**	**83**	*e*Pn	**Pn**	**09 18 23.5**	**+3.5**
9.9nm,0.9s							
REDW	**Red Top Meadow**	**11.27**	**84**	*e*Pn	**Pn**	**09 18 24.0**	**+2.9**
7.0nm,1.3s							
LOHW	**Long Hollow**	**11.43**	**82**	*e*Pn	**Pn**	**09 18 26.4**	**+3.1**
5.4nm,1.4s							
MSU	**Marysvale**	**11.65**	**109**	*e*Pn	**Pn**	**09 18 29.4**	**+3.1**
2.1nm,0.9s							
PDAR	**Pinedale Array**	**12.27**	**86**	Pn	**Pn**	**09 18 36.0**	**+1.2**
0.0nm,0.3s,baz=282,slow=13,SNR=7.7							
SIT	**Sitka**	**15.06**	**341**	*e*P	**Pn**	**09 19 09.3**	**-3.4**
167nm,0.8s							
ISCO	**Idaho Springs**	**15.85**	**95**	*e*P	**Pn**	**09 19 24.1**	**+0.9**
1.7nm,0.8s							
ANMO	**Albuquerque**	**17.42**	**111**	P	**Pn**	**09 19 42.5

0.2nm,0.6s,baz=75,slow=1.1,SNR=3.1

*NEIC **27** 09:18:19.0, 58°38N×133°43W, h10km, ML2.9(AEIC), ML3.3(PGC), After PGC.*

PGC 27 09:18:19.0±2.7, 58°38N×133°43W, h10km, ML3.3/5, 12D, 58km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.77**	**285**	P	Pg	09 18 30.6	-3.3
BESE				S	Sg	09 18 40.6	-3.3
SKAG	**Skagway**	**1.46**	**319**	P	Pn	09 18 43.2	-2.1
SKAG				S	Sn	09 19 04.8	+0.3
SIT	**Sitka**	**1.67**	**218**	P	Pn	09 18 44.9	-3.4
SIT				S	Sn	09 19 08.3	-1.4
DLBC	**Dease Lake**	**1.79**	**87**	P	Pn	09 18 50.0	0.0
DLBC				S	Sn	09 19 15.2	+2.5
DLBC	**Dease Lake**	**1.79**	**87**	⇑Pn	Pn	09 18 48.5	-1.4
DLBC				⇓Sg	Sg	09 19 14.0	-2.6
PLBC	**Pleasant Camp**	**1.86**	**307**	*e*Pn	Pn	09 18 50.2	-0.6
PLBC				*e*Sg	Sg	09 19 15.2	-3.7
PLBC	**Pleasant Camp**	**1.86**	**307**	⇓Pn	Pn	09 18 50.2	-0.6
PLBC				⇓Sg	Sg	09 19 15.2	-3.7
WHY	**Whitehorse**	**2.40**	**343**	P	Pn	09 18 56.9	-1.3
WHY				S	Sn	09 19 31.3	+3.6
WHY	**Whitehorse**	**2.40**	**343**	⇑Pn	Pn	09 18 56.6	-1.6
WHY				⇑Pg	Pg	09 19 01.6	-3.3
WHY				⇓Sn	Sn	09 19 25.5	-2.2
WHY				⇓Sg	Sg	09 19 31.2	-4.9
HYT	**Haines Junctio**	**3.21**	**322**	*e*Pn	Pn	09 19 11.3	+2.0
HYT				*e*Sg	Sg	09 19 59.1	-2.7
HYT	**Haines Junctio**	**3.21**	**322**	⇓Pn	Pn	09 19 11.3	+2.0
HYT				⇑Pg	Pg	09 19 17.0	-3.3
HYT				⇓Sg	Sg	09 19 59.1	-2.7
PNL	**Peninsula**	**3.34**	**295**	P	Pn	09 19 11.4	+0.2
RUBB	**Prince Rupert**	**4.43**	**155**	⇑Sg	Sg	09 20 34.9	-6.3
FNBB	**Fort Nelson**	**5.47**	**80**	⇑Pg	Pg	09 19 58.8	-4.8
FNBB				⇓Sg	Sg	09 21 10.4	-4.0
DAWY	**Dawson**	**6.38**	**336**	*e*Pn	Pn	09 19 52.1	-0.8
DAWY				*e*Sg	Sg	09 21 40.4	-3.2
DAWY	**Dawson**	**6.38**	**336**	⇑Pn	Pn	09 19 51.7	-1.2
DAWY				⇓Pg	Pg	09 20 13.9	-7.2
DAWY				⇓Sg	Sg	09 21 38.9	-4.8
BMBC	**Bull Mountain**	**6.57**	**106**	⇑Sg	Sg	09 21 40.6	-9.1
EGAK	**Eagle**	**7.39**	**333**	*e*Pn	Pn	09 20 06.9	+0.1
	7.0nm,0.8s						
INK	**Inuvik**	**9.96**	**360**	*e*Pn	Pn	09 20 41.4	-0.6
INK				*e*Sg	Sn	09 23 32.3	+59
INK	**Inuvik**	**9.96**	**360**	⇓Pn	Pn	09 20 41.4	-0.6
INK				⇓Sg	Sn	09 23 32.3	+59

*ISCJB **27** 09:22:01.0±0.4, 37°34N±0°03×28°05E±0°03, h6km±7km, Error ellipse: s-maj=5.3km s-min=4.0km az=24.0*
*DDA **27** 09:22:00.7, 37°33N×28°06E, h7km±5km, Md2.7*
*ISK **27** 09:22:00.5, 37°36N×28°03E, h8km, MD2.8*
*CSEM **27** 09:22:01.1±0.2, 37°36N×28°05E, h5km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.8km az=170.0*

ISC 27 09:22:01.4±0.4, 37°34N±0°03×28°04E±0°03, h10km±5km, n28, σ0°84/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.21**	**259**	*e*PG	**Pg**	**09 22 05.2**	**-0.7**
MLSB				*e*SG	**Sg**	**09 22 08.7**	**-0.2**
MLSB	**Milas**	**0.21**	**259**	*e*Pg	**Pg**	**09 22 05.2**	**-0.6**
MLSB				*e*Sg	**Sg**	**09 22 08.7**	**-0.1**
YER	**Yerkesik**	**0.28**	**136**	*e*PG	**Pg**	**09 22 06.7**	**-0.3**
YER				*e*SG	**Sg**	**09 22 12.4**	**+1.6**
YER	**Yerkesik**	**0.28**	**136**	*e*Pg	**Pg**	**09 22 06.7**	**-0.3**
YER				*e*Sg	**Sg**	**09 22 12.4**	**+1.6**
AYDN	**Tasoluk**	**0.35**	**339**	*i* P	**Pg**	**09 22 08.2**	**0.0**
AYDN				*i* S	**Sg**	**09 22 13.3**	**+0.3**
AYDN	**Tasoluk**	**0.35**	**339**	*i* P	**Pg**	**09 22 08.2**	**-0.1**
AYDN				*i* S	**Sg**	**09 22 13.3**	**+0.3**
BDRM	**Kayabasi**	**0.55**	**241**	*i* P	**Pg**	**09 22 11.8**	**-0.2**
BDRM				*i* S	**Sg**	**09 22 20.3**	**+1.2**
BDRM	**Kayabasi**	**0.55**	**241**	*i* P	**Pg**	**09 22 11.8**	**-0.2**
BDRM				*i* S	**Sg**	**09 22 20.3**	**+1.1**
TURN	**Turunc**	**0.65**	**136**	*i* P	**Pg**	**09 22 12.2**	**-1.7**
TURN				*i* S	**Sg**	**09 22 21.2**	**-1.1**
TURN	**Turunc**	**0.65**	**136**	*i* P	**Pg**	**09 22 12.2**	**-1.6**
TURN				*i* S	**Sg**	**09 22 21.2**	**-1.1**
DAT	**Datca**	**0.71**	**211**	*e*PG	**Pg**	**09 22 15.0**	**0.0**
DAT	**Datca**	**0.71**	**211**	*e*Pg	**Pg**	**09 22 15.0**	**-0.1**
GCAM	**G?zelcaml?**	**0.74**	**300**	*i* P	**Pg**	**09 22 15.4**	**-0.2**
GCAM				*i* S	**Sg**	**09 22 25.5**	**+0.3**
GCAM	**G?zelcaml?**	**0.74**	**300**	*i* P	**Pg**	**09 22 15.4**	**-0.2**
GCAM				*i* S	**Sg**	**09 22 25.5**	**+0.3**
DNZL	**Cakiroluk**	**0.88**	**66**	*i* P	**Pg**	**09 22 17.9**	**-0.3**
DNZL				*i* S	**Sg**	**09 22 30.8**	**+1.2**
DNZL	**Cakiroluk**	**0.88**	**66**	*i* P	**Pg**	**09 22 17.9**	**-0.3**
DNZL				*i* S	**Sg**	**09 22 30.8**	**+1.2**
DENT	**Denizli**	**0.89**	**62**	*e*PG	**Pg**	**09 22 18.0**	**-0.5**
DENT	**Denizli**	**0.89**	**62**	*e*Pg	**Pg**	**09 22 18.0**	**-0.6**
MANT	**Manisa**	**1.22**	**19**	*i* P	**Pn**	**09 22 24.2**	**-0.2**
MANT				*i* S	**Sb**	**09 22 40.8**	**+0.5**
MANT	**Manisa**	**1.22**	**19**	*i* P	**Pn**	**09 22 24.2**	**-0.3**
MANT				*i* S	**Sb**	**09 22 40.8**	**+0.4**
IZM	**Izmir**	**1.23**	**330**	*e*PN	**Pn**	**09 22 24.4**	**0.0**
IZM	**Izmir**	**1.23**	**330**	*e*Pn	**Pn**	**09 22 24.4**	**-0.1**
KHAL	**Karahalli**	**1.54**	**48**	*i* P	**Pn**	**09 22 29.1**	**+0.2**
KHAL				*i* S	**Sn**	**09 22 48.7**	**-0.2**
KHAL	**Karahalli**	**1.54**	**48**	*i* P	**Pn**	**09 22 29.1**	**+0.2**
KHAL				*i* S	**Sn**	**09 22 48.7**	**-0.3**
AKHS	**Akhisar**	**1.55**	**353**	*i* P	**Pn**	**09 22 27.8**	**-1.2**
AKHS	**Akhisar**	**1.55**	**353**	*i* P	**Pn**	**09 22 27.8**	**-1.1**
AKAS	**Kas**	**1.67**	**131**	*i* P	**Pn**	**09 22 33.5**	**+2.9**
AKAS				*i* S	**Sn**	**09 22 58.9**	**+6.8**
AKAS	**Kas**	**1.67**	**131**	*i* P	**Pn**	**09 22 33.5**	**+2.9**
AKAS				*i* S	**Sn**	**09 22 58.9**	**+6.9**

*CSEM **27** 09:22:18.1, 37°02N×21°26E, h34km, MD3.4, After ATH*
*ATH **27** 09:22:18.1, 37°02N×21°26E, h34km±4km, MD3.4/15*
*NEIC **27** 09:22:18.1, 37°02N×21°26E, h34km, MD3.4(ATH), After ATH.*

ISC 27 09:22:18.9±1.9, 37°1N±0°1×21°2E±0°2, h26km±10km, n33, σ0°91/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.46**	**117**	*e*PB	**Pb**	**09 22 27.5**	**-1.0**
PYL	**PYLOS**	**0.46**	**117**	*e*Pb	**Pb**	**09 22 27.5**	**-1.0**
ITM	**Ithomi**	**0.56**	**83**	*e*PN	**Pn**	**09 22 29.8**	**-1.4**
ITM	**Ithomi**	**0.56**	**83**	*e*Pn	**Pn**	**09 22 29.8**	**-1.4**
VLX	**Vlachokerasia**	**0.95**	**74**	*e*PN	**Pn**	**09 22 37.0**	**+0.4**
VLX	**Vlachokerasia**	**0.95**	**74**	*e*Pn	**Pn**	**09 22 37.0**	**+0.4**
RLS	**Riolos of Patr**	**0.96**	**11**	*e*PN	**Pn**	**09 22 37.9**	**+1.1**
RLS	**Riolos of Patr**	**0.96**	**11**	*e*Pn	**Pn**	**09 22 37.9**	**+1.1**
VLS	**Valsamata**	**1.18**	**335**	*e*PB	**Pb**	**09 22 41.1**	**+0.4**
VLS	**Valsamata**	**1.18**	**335**	*e*Pb	**Pb**	**09 22 41.1**	**+0.4**
GUR	**Goura**	**1.21**	**47**	*e*PN	**Pn**	**09 22 41.1**	**+0.9**
GUR	**Goura**	**1.21**	**47**	*e*Pn	**Pn**	**09 22 41.1**	**+0.9**
EFP	**Efpalio**	**1.42**	**22**	*e*PN	**Pn**	**09 22 44.5**	**+1.4**
EFP	**Efpalio**	**1.42**	**22**	*e*Pn	**Pn**	**09 22 44.5**	**+1.4**
VLI	**Veliai**	**1.42**	**105**	*e*PN	**Pn**	**09 22 43.5**	**+0.4**
VLI	**Veliai**	**1.42**	**105**	*e*Pn	**Pn**	**09 22 43.5**	**+0.4**
LTK	**Loutraki**	**1.65**	**56**	*e*PN	**Pn**	**09 22 46.9**	**+0.6**
LTK	**Loutraki**	**1.65**	**56**	*e*Pn	**Pn**	**09 22 46.9**	**+0.6**
KYTH	**Kithira**	**1.67**	**119**	*e*PB	**Pn**	**09 22 46.2**	**-0.3**
KYTH	**Kithira**	**1.67**	**119**	*e*Pb	**Pn**	**09 22 46.2**	**-0.3**
EVR	**Evrytania**	**1.86**	**14**	*e*PB	**Pb**	**09 22 52.9**	**+0.7**
EVR	**Evrytania**	**1.86**	**14**	*e*Pb	**Pb**	**09 22 52.9**	**+0.7**
NAIG	**Nisos Aigina**	**1.91**	**69**	*e*PN	**Pn**	**09 22 49.6**	**-0.2**
NAIG	**Nisos Aigina**	**1.91**	**69**	*e*Pn	**Pn**	**09 22 49.6**	**-0.2**
LKR	**Lokris**	**2.08**	**42**	*e*PN	**Pn**	**09 22 53.1**	**+1.0**
LKR	**Lokris**	**2.08**	**42**	*e*Pn	**Pn**	**09 22 53.1**	**+1.0**
AGG	**Agios Georgios**	**2.10**	**24**	*e*PB	**Pb**	**09 22 55.1**	**-1.2**
AGG	**Agios Georgios**	**2.10**	**24**	*e*Pb	**Pb**	**09 22 55.1**	**-1.2**
VLY	**Voula,Athens**	**2.17**	**69**	*e*PN	**Pn**	**09 22 52.7**	**-0.7**
VLY	**Voula,Athens**	**2.17**	**69**	*e*Pn	**Pn**	**09 22 52.7**	**-0.7**
KRUS	**Krusevo**	**4.25**	**0**	*e*Pn	**Pn**	**09 23 21.5**	**-0.5**
KRUS				*e*Sg	**Sn**	**09 24 09.2**	**-1.6**
STON	**Ston**	**6.36**	**336**	Sn	**Sn**	**09 24 56.0**	**-6.7**
NVLJ	**Novalja**	**8.87**	**329**	Sn	**Sn**	**09 25 58.7**	**-5.7**

*CSEM **27** 09:24:49.9±0.2, 37°35N×28°04E, h2km, MD2.6, Error ellipse: s-maj=4.1km s-min=3.6km az=4.0*
*DDA **27** 09:24:49.7, 37°38N×28°05E, h7km±6km, Md2.6*
*ISCJB **27** 09:24:50.1±0.4, 37°35N±0°03×28°02E±0°03, h10km, Error ellipse: s-maj=4.2km s-min=3.6km az=161.4*

ISC 27 09:24:50.2±0.5, 37°36N±0°03×28°04E±0°03, h4km±7km, n26, σ0°85/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.22**	**252**	*e*PG	**Pg**	**09 24 53.9**	**-0.6**
MLSB				*e*SG	**Sg**	**09 24 57.5**	**+0.2**
MLSB	**Milas**	**0.22**	**252**	*e*Pg	**Pg**	**09 24 53.9**	**-0.6**
MLSB				*e*Sg	**Sg**	**09 24 57.5**	**+0.2**
YER	**Yerkesik**	**0.30**	**139**	*e*PG	**Pg**	**09 24 55.5**	**-0.6**
YER	**Yerkesik**	**0.30**	**139**	*e*Pg	**Pg**	**09 24 55.5**	**-0.6**
AYDN	**Tasoluk**	**0.32**	**337**	*i* P	**Pg**	**09 24 57.0**	**+0.6**
AYDN				*i* S	**Sg**	**09 25 01.2**	**+0.5**
AYDN	**Tasoluk**	**0.32**	**337**	*i* P	**Pg**	**09 24 57.0**	**+0.5**
AYDN				*i* S	**Sg**	**09 25 01.2**	**+0.5**
BDRM	**Kayabasi**	**0.56**	**238**	*i* P	**Pg**	**09 25 00.1**	**-0.8**
BDRM				*i* S	**Sg**	**09 25 09.8**	**+1.7**
BDRM	**Kayabasi**	**0.56**	**238**	*i* P	**Pg**	**09 25 00.1**	**-0.8**
BDRM				*i* S	**Sg**	**09 25 09.8**	**+1.6**
TURN	**Turunc**	**0.67**	**137**	*i* P	**Pg**	**09 25 01.1**	**-1.9**
TURN				*i* S	**Sg**	**09 25 12.4**	**+0.7**
TURN	**Turunc**	**0.67**	**137**	*i* P	**Pg**	**09 25 01.1**	**-1.9**
TURN				*i* S	**Sg**	**09 25 12.4**	**+0.7**
GCAM	**G?zelcaml?**	**0.72**	**298**	*i* P	**Pg**	**09 25 04.2**	**+0.2**
GCAM				*i* S	**Sg**	**09 25 12.4**	**-1.1**
GCAM	**G?zelcaml?**	**0.72**	**298**	*i* P	**Pg**	**09 25 04.2**	**+0.1**
GCAM				*i* S	**Sg**	**09 25 12.4**	**-1.0**
DAT	**Datca**	**0.73**	**210**	*e*PG	**Pg**	**09 25 04.0**	**-0.3**
DAT	**Datca**	**0.73**	**210**	*e*Pg	**Pg**	**09 25 04.0**	**-0.2**
DNZL	**Cakiroluk**	**0.87**	**68**	*i* P	**Pg**	**09 24 59.0**	**-7.9**
DNZL				*i* S	**Sg**	**09 25 19.0**	**+0.8**
DNZL	**Cakiroluk**	**0.87**	**68**	*i* P	**Pg**	**09 24 59.0**	**-7.9**
DNZL				*i* S	**Sg**	**09 25 19.0**	**+0.8**
MANT	**Manisa**	**1.20**	**20**	*i* P	**Pg**	**09 25 12.8**	**-0.5**
MANT				*i* S	**Sg**	**09 25 29.3**	**+0.5**
MANT	**Manisa**	**1.20**	**20**	*i* P	**Pg**	**09 25 12.8**	**-0.5**
MANT				*i* S	**Sg**	**09 25 29.3**	**+0.5**
GOLH	**Golhisar**	**1.22**	**95**	*i* P	**Pg**	**09 25 13.3**	**-0.4**
GOLH				*i* S	**Sg**	**09 25 35.2**	**+5.6**
GOLH	**Golhisar**	**1.22**	**95**	*i* P	**Pg**	**09 25 13.3**	**-0.4**
GOLH				*i* S	**Sg**	**09 25 35.2**	**+5.6**
URLA	**Izmir**	**1.51**	**312**	*i* P	**Pn**	**09 25 18.1**	**+0.1**
URLA				*i* S	**Sn**	**09 25 30.6**	**-7.5**
URLA	**Izmir**	**1.51**	**312**	*i* P	**Pn**	**09 25 18.1**	**+0.1**
URLA				*i* S	**Sn**	**09 25 30.6**	**-7.6**
KHAL	**Karahalli**	**1.53**	**48**	*i* P	**Pn**	**09 25 18.4**	**+0.1**
KHAL				*i* S	**Sn**	**09 25 37.6**	**-1.0**
KHAL	**Karahalli**	**1.53**	**48**	*i* P	**Pn**	**09 25 18.4**	**+0.1**
KHAL				*i* S	**Sn**	**09 25 37.6**	**-1.0**
AKAS	**Kas**	**1.69**	**131**	*i* P	**Pn**	**09 25 22.2**	**+1.8**
AKAS				*i* S	**Sn**	**09 25 49.8**	**+7.3**
AKAS	**Kas**	**1.69**	**131**	*i* P	**Pn**	**09 25 22.2**	**+1.7**
AKAS				*i* S	**Sn**	**09 25 49.8**	**+7.3**

*ISCJB **27** 09:52:04.2±0.3, 46°30N±0°02×13°27E±0°02, h15km±2km, Error ellipse: s-maj=3.6km s-min=2.4km az=31.4*
*CSEM **27** 09:52:04.3±0.1, 46°30N×13°27E, h15km, ML2.8/12, Error ellipse: s-maj=2.2km s-min=1.5km az=28.0*
*ROM **27** 09:52:04.5±0.1, 46°33N×13°26E, h9km±1km, Md2.4/4, Ml2.0/1, Error ellipse: s-maj=2.0km s-min=1.5km az=138.0*
*LJU **27** 09:52:04.6, 46°31N×13°29E, h10km, ML2.0*
*VIE **27** 09:52:04.3±0.2, 46°30N×13°27E, h10km±2km, mb1.6/7, ML2.4/7, Error ellipse: s-maj=1.6km s-min=1.2km az=32.0*
10 km ESE of Venzone

ISC 27 09:52:04.7±0.3, 46°30N±0°02×13°26E±0°02, h14km±2km, n68, σ0°65/117, 14C-17D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMNA	**Gemona**	**0.03**	**217**	⇓*i*Pg	**Pg**	**09 52 07.6**	**+0.5**
GMNA				Sg	**Sg**	**09 52 09.4**	**+0.6**
GMNA	**Gemona**	**0.03**	**217**	⇓*i*Pg	**Pg**	**09 52 07.6**	**+0.5**
GMNA				Sg	**Sg**	**09 52 09.4**	**+0.6**
VINO	**Villanova**	**0.04**	**161**	⇑*i*Pg	**Pg**	**09 52 07.1**	**-0.2**
VINO				*i* Sg	**Sg**	**09 52 08.8**	**-0.2**
VINO	**Villanova**	**0.04**	**161**	*i* Pg	**Pg**	**09 52 07.1**	**-0.1**
VINO				*i* Sg	**Sg**	**09 52 08.8**	**-0.2**
BAD	**Bernadia**	**0.06**	**191**	⇑*e*Pg	**Pg**	**09 52 07.3**	**0.0**
BAD				*e*Sg	**Sg**	**09 52 09.3**	**0.0**
BAD	**Bernadia**	**0.06**	**191**	*e*Pg	**Pg**	**09 52 07.3**	**-0.1**
BAD				*e*Sg	**Sg**	**09 52 09.3**	**0.0**
BOO	**Bordano**	**0.11**	**281**	⇓*i*Pg	**Pg**	**09 52 08.5**	**+0.6**
BOO	**Bordano**	**0.11**	**281**	*i* Pg	**Pg**	**09 52 08.5**	**+0.6**
BUA	**Buia**	**0.12**	**230**	⇑*e*Pg	**Pg**	**09 52 08.1**	**0.0**
BUA	**Buia**	**0.12**	**230**	*e*Pg	**Pg**	**09 52 08.1**	**0.0**
PTCC	**Patocco-Chiusa**	**0.12**	**31**	⇓*i*Pg	**Pg**	**09 52 07.8**	**-0.3**
PTCC				Sg	**Sg**	**09 52 09.2**	**-1.3**
PTCC	**Patocco-Chiusa**	**0.12**	**31**	⇓*i*Pg	**Pg**	**09 52 07.8**	**-0.3**
PTCC				Sg	**Sg**	**09 52 09.2**	**-1.3**
ROBS	**Robic**	**0.18**	**107**	⇓*i*Pg	**Pg**	**09 52 08.5**	**-0.4**
ROBS				*i* Sg	**Sg**	**09 52 11.4**	**-0.4**
ROBS							
	comp=Z,320nm,0.1s						
ROBS	**Robic**	**0.18**	**107**	⇓*i*Pg	**Pg**	**09 52 08.5**	**-0.4**
ROBS				*i* Sg	**Sg**	**09 52 11.4**	**-0.4**
	comp=Z,320nm,0.1s						
COLI	**Coloredo**	**0.18**	**154**	⇓*i*Pg	**Pg**	**09 52 09.0**	**+0.1**
COLI				*i* Sg	**Sg**	**09 52 12.7**	**+0.8**
COLI	**Coloredo**	**0.18**	**154**	*i* Pg	**Pg**	**09 52 09.0**	**+0.1**
COLI				*i* Sg	**Sg**	**09 52 12.7**	**+0.8**
FUSE	**Fusea**	**0.21**	**303**	⇓*i*Pg	**Pg**	**09 52 09.2**	**-0.2**
FUSE				*i* Sg	**Sg**	**09 52 13.3**	**+0.6**
FUSE	**Fusea**	**0.21**	**303**	*i* Pg	**Pg**	**09 52 09.2**	**-0.3**
FUSE				*i* Sg	**Sg**	**09 52 13.3**	**+0.6**
LSR	**Lussari**	**0.26**	**46**	⇑*e*Pg	**Pg**	**09 52 09.9**	**-0.2**
LSR				*e*Sg	**Sg**	**09 52 14.4**	**+0.5**
LSR	**Lussari**	**0.26**	**46**	*e*Pg	**Pg**	**09 52 09.9**	**-0.3**
LSR				*e*Sg	**Sg**	**09 52 14.4**	**+0.5**
PLRO	**Paularo**	**0.26**	**343**	⇓*e*Pg	**Pg**	**09 52 10.2**	**-0.2**
PLRO				*e*Sg	**Sg**	**09 52 14.7**	**+0.6**
PLRO	**Paularo**	**0.26**	**343**	*e*Pg	**Pg**	**09 52 10.1**	**-0.2**
PLRO				*e*Sg	**Sg**	**09 52 14.6**	**+0.5**
DRE	**Drenchia**	**0.29**	**115**	⇓*i*Pg	**Pg**	**09 52 10.5**	**-0.3**
DRE				*i* Sg	**Sg**	**09 52 15.3**	**+0.5**
DRE	**Drenchia**	**0.29**	**115**	*i* Pg	**Pg**	**09 52 10.5**	**-0.3**
DRE				*i* Sg	**Sg**	**09 52 15.4**	**+0.5**
ACOM	**Acomizza, Ital**	**0.30**	**35**	⇑*i*Pg	**Pg**	**09 52 10.8**	**-0.2**
ACOM				*i* Sg	**Sg**	**09 52 15.9**	**+0.6**
ACOM	**Acomizza, Ital**	**0.30**	**35**	*i* Pg	**Pg**	**09 52 10.9**	**-0.1**
ACOM				*i* Sg	**Sg**	**09 52 15.9**	**+0.6**
CADS	**Cadrg**	**0.34**	**102**	*i* Pg	**Pg**	**09 52 11.0**	**-0.6**
CADS				*i* Sg	**Sg**	**09 52 16.6**	**+0.4**
CADS							
	comp=Z,102nm,0.1s						
CADS	**Cadrg**	**0.34**	**102**	*i* Pg	**Pg**	**09 52 11.0**	**-0.6**
CADS				*i* Sg	**Sg**	**09 52 16.6**	**+0.4**
	comp=Z,102nm,0.1s						
SABO	**M.te Sabotino**	**0.40**	**143**	⇑*i*Pg	**Pg**	**09 52 12.7**	**0.0**
SABO	**M.te Sabotino**	**0.40**	**143**	*i* Pg	**Pg**	**09 52 12.7**	**+0.1**
MYKA	**Terra Mystica**	**0.42**	**38**	⇑*i*Pg	**Pg**	**09 52 13.0**	**-0.2**
MYKA				*i* Sg	**Sg**	**09 52 18.5**	**-0.4**
	comp=Z,68nm,0.2s						
MYKA	**Terra Mystica**	**0.42**	**38**	Pg	**Pg**	**09 52 13.0**	**-0.2**
MYKA				Sg	**Sg**	**09 52 18.5**	**-0.4**
	comp=Z,68nm,0.2s						
FVI	**Forni Avoltri**	**0.45**	**312**	Pg	**Pg**	**09 52 13.4**	**-0.2**
FVI				Sg	**Sg**	**09 52 20.0**	**+0.4**
	comp=Z,105nm,0.5s						
FVI	**Forni Avoltri**	**0.45**	**312**	Pg	**Pg**	**09 52 13.4**	**-0.2**
FVI				Sg	**Sg**	**09 52 20.0**	**+0.4**
	comp=Z,105nm,0.5s						
MLNI	**Malnisio**	**0.47**	**252**	*e*Pg	**Pg**	**09 52 14.2**	**0.0**
MLNI	**Malnisio**	**0.47**	**252**	*e*Pg	**Pg**	**09 52 14.1**	**0.0**
VOJS	**Vojsko**	**0.51**	**121**	*i* Pg	**Pg**	**09 52 14.0**	**-0.7**
VOJS				*i* Sg	**Sg**	**09 52 22.6**	**+1.2**
VOJS							
	comp=Z,20nm,0.1s						
VOJS	**Vojsko**	**0.51**	**121**	*i* Pg	**Pg**	**09 52 14.0**	**-0.7**
VOJS				*i* Sg	**Sg**	**09 52 22.6**	**+1.1**
	comp=Z,20nm,0.1s						
GORS	**Gorjuse**	**0.51**	**88**	*i* Pg	**Pg**	**09 52 14.0**	**-0.8**
GORS				*i* Sg	**Sg**	**09 52 21.7**	**+0.2**
GORS							
	comp=Z,26nm,0.1s						
GORS	**Gorjuse**	**0.51**	**88**	*i* Pg	**Pg**	**09 52 14.0**	**-0.7**
GORS				*i* Sg	**Sg**	**09 52 21.7**	**+0.2**
	comp=Z,26nm,0.1s						
CIMO	**Cimolais**	**0.57**	**272**	⇑*i*Pg	**Pg**	**09 52 15.0**	**-0.8**
CIMO	**Cimolais**	**0.57**	**272**	*i* Pg	**Pg**	**09 52 15.0**	**-0.9**
TRI	**Trieste**	**0.69**	**149**	⇑*e*Pg	**Pg**	**09 52 18.3**	**+0.3**
TRI	**Trieste**	**0.69**	**149**	Pg	**Pg**	**09 52 18.3**	**+0.3**
TRI	**Trieste**	**0.69**	**149**	Pg	**Pg**	**09 52 18.3**	**+0.3**
ABTA	**Abfaltersbach**	**0.69**	**311**	⇓*i*Pg	**Pg**	**09 52 18.0**	**0.0**
ABTA				⇓*i*Sg	**Sg**	**09 52 27.5**	**+0.4**
	comp=Z,39nm,0.2s						
ABTA	**Abfaltersbach**	**0.69**	**311**	Pg	**Pg**	**09 52 18.0**	**-0.1**
ABTA				Sg	**Sg**	**09 52 27.5**	**+0.4**
	comp=Z,39nm,0.2s						
JAVS	**Javornik**	**0.69**	**126**	*i* Pg	**Pg**	**09 52 17.0**	**-1.1**
JAVS				*i* Sg	**Sg**	**09 52 28.3**	**+1.1**
JAVS							
	comp=Z,10.0nm,0.1s						
JAVS	**Javornik**	**0.69**	**126**	*i* Pg	**Pg**	**09 52 17.0**	**-1.1**
JAVS				*i* Sg	**Sg**	**09 52 28.3**	**+1.1**
	comp=Z,10.0nm,0.1s						
CRNS	**Crni Vrh**	**0.73**	**107**	*i* Pg	**Pg**	**09 52 18.0**	**-0.9**
CRNS				*i* Sg	**Sg**	**09 52 29.5**	**+1.1**
CRNS							
	comp=Z,16nm,0.1s						
MOZS	**Mozjanca**	**0.82**	**90**	*i* Pg	**Pg**	**09 52 20.3**	**-0.3**
MOZS				*i* Sg	**Sg**	**09 52 31.9**	**+0.6**
MOZS							
	comp=Z,9.0nm,0.1s						
OBKA	**Obir**	**0.92**	**76**	⇑*i*Pg	**Pg**	**09 52 21.7**	**-0.7**
OBKA				⇓*i*Sg	**Sg**	**09 52 35.0**	**+0.6**
	comp=Z,19nm,0.3s						
OBKA	**Obir**	**0.92**	**76**	Pg	**Pg**	**09 52 21.7**	**-0.7**
OBKA				Sg	**Sg**	**09 52 35.0**	**+0.6**
	comp=Z,19nm,0.3s						
CEY	**Cerknica**	**0.99**	**124**	*i* Pg	**Pg**	**09 52 22.4**	**-1.4**
CEY							
	comp=Z,16nm,0.1s						
CEY	**Cerknica**	**0.99**	**124**	*i* Pg	**Pg**	**09 52 22.4**	**-1.3**
	comp=Z,16nm,0.1s						
VNDS	**Vrh nad Dolski**	**1.02**	**101**	*i* Pg	**Pg**	**09 52 23.5**	**-0.8**
VISS	**Visnje**	**1.21**	**114**	*i* Pg	**Pg**	**09 52 27.4**	**-0.5**
VISS				*i* Sg	**Sg**	**09 52 45.0**	**+1.4**
VISS							
	comp=Z,10.0nm,0.1s						
VISS	**Visnje**	**1.21**	**114**	*i* Pg	**Pg**	**09 52 27.4**	**-0.5**
VISS				*i* Sg	**Sg**	**09 52 45.0**	**+1.4**
	comp=Z,10.0nm,0.1s						
ZAVS	**Zavodnje**	**1.23**	**83**	*i* Pg	**Pn**	**09 52 27.1**	**-0.3**
ZAVS							
	comp=Z,13nm,0.2s						
PDKS	**Podkum**	**1.23**	**100**	*i* Pg	**Pn**	**09 52 27.2**	**-0.3**
PDKS				*i* Sg	**Sg**	**09 52 45.8**	**+1.4**
PDKS							
	comp=Z,14nm,0.2s						
PDKS	**Podkum**	**1.23**	**100**	*i* Pg	**Pn**	**09 52 27.2**	**-0.3**
PDKS				*i* Sg	**Sg**	**09 52 45.8**	**+1.4**
	comp=Z,14nm,0

CEL	**Celeste**	**9.23**	**300**	*e*Pn	**Pn**	**10 01 11.6**	**-0.9**
	comp=Z,13nm,0.5s						
ASF	**Jabal al Asfar**	**9.29**	**98**	Pn	**Pn**	**10 01 12.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=126,slow=9.2,SNR=2.7						
ASF				Sn	**Sn**	**10 02 59.4**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=232,slow=20,SNR=6.6						
ASF	**Jabal al Asfar**	**9.29**	**98**	P	**Pn**	**10 01 12.2**	**-1.2**
ASF						10 02 59.4	
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF				smax			
	comp=N,1.0nm,0.3s						
HAVL	**Avola**	**9.37**	**291**	Pn	**Pn**	**10 01 13.1**	**-1.3**
HAVL	**Avola**	**9.37**	**291**	Pn	**Pn**	**10 01 13.1**	**-1.3**
HVZN	**Vizzini**	**9.74**	**292**	Pn	**Pn**	**10 01 22.2**	**+2.7**
	comp=N,193nm,1.2s						
ANN	**Anapa**	**13.89**	**36**	*e*P	**Pn**	**10 02 13.6**	**-2.6**
ANN				*e*S	**Sn**	**10 04 43.9**	**-6.6**
ANN				pmax	pmax		
	comp=Z,22nm,0.9s						
ANN				MLR	MLR		
	comp=N,82nm,11.0s						
ANN				MLR	MLR		
	comp=E,88nm,11.0s						
ANN				MLR	MLR		
	comp=Z,123nm,11.0s						
ANN	**Anapa**	**13.89**	**36**	*e*P	**Pn**	**10 02 13.6**	**-2.6**
	comp=Z,22nm,0.9s						
KIV	**Kislovodsk**	**16.27**	**48**	*e*P	**Pn**	**10 02 46.6**	**-1.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKASG	**Malin Array Be**	**16.82**	**7**	Pn	**Pn**	**10 02 55.5**	**+0.6**
	comp=Z,2.3nm,0.3s,baz=197,slow=11,SNR=9.6						
AKASG	**Malin Array Be**	**16.82**	**7**	P	**Pn**	**10 02 55.5**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	**Malin Array Be**	**16.82**	**7**	P	**Pn**	**10 02 55.5**	**+0.6**
	comp=Z,2.0nm,0.3s						
AKBB	**Malin Array Si**	**16.82**	**7**	*e*P	**Pn**	**10 02 56.1**	**+1.2**
AKBB	**Malin Array Si**	**16.82**	**7**	*e*P	**Pn**	**10 02 56.1**	**+1.2**
GERES	**GERESS Array B**	**17.42**	**332**	P	**Pn**	**10 03 03.2**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=158,slow=11,SNR=5.3						
GERES	**GERESS Array B**	**17.42**	**332**	P	**Pn**	**10 03 03.2**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	**GERESS Array B**	**17.42**	**332**	P	**Pn**	**10 03 03.2**	**+0.8**
	comp=Z,1.0nm,0.3s						
VSR	**Storozhevoye**	**19.65**	**25**	*e*P	**Pn**	**10 03 23.3**	**-6.3**
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
CLL	**Collm**	**19.70**	**335**	*e*P	**Pn**	**10 03 31.0**	**+0.9**
TAM	**Tamanrasset**	**21.19**	**243**	*e*P	**P**	**10 03 47.4**	**+2.2**
TAM				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
TAM	**Tamanrasset**	**21.19**	**243**	*e*P	**P**	**10 03 47.4**	**+2.2**
	comp=Z,5.8nm,0.8s,mb4.0						
TAM	**Tamanrasset**	**21.19**	**243**	*e*P	**P**	**10 03 47.4**	**+2.2**
	comp=Z,5.8nm,0.8s,mb4.0						
OBN	**Obninsk**	**22.33**	**16**	*e*P	**P**	**10 03 54.4**	**-2.6**
OBN				*e*		10 04 18.6	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
OBN	**Obninsk**	**22.33**	**16**	*e*P	**P**	**10 03 54.4**	**-2.6**
	comp=Z,9.0nm,1.0s,mb4.2						
VSU	**Vasula**	**24.44**	**1**	*i* P	**P**	**10 04 17.3**	**-0.8**
VSU				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
VSU	**Vasula**	**24.44**	**1**	*i* P	**P**	**10 04 17.3**	**-0.8**
	comp=Z,17nm,1.1s,mb4.4						
ESDC	**Sonseca Array**	**24.59**	**292**	P	**P**	**10 04 18.9**	**-0.7**
	comp=Z,1.2nm,0.5s,mb3.7,baz=82,slow=9.4,SNR=8.9						
ESDC	**Sonseca Array**	**24.59**	**292**	P	**P**	**10 04 19.0**	**-0.7**
MDT	**Midelt**	**25.57**	**276**	P	**P**	**10 04 26.4**	**-2.2**
	comp=Z,3.5nm,0.8s,mb3.9,baz=257,slow=7.7,SNR=3.7						
MDT	**Midelt**	**25.57**	**276**	P	**P**	**10 04 26.4**	**-2.2**
HFS	**Hagfors**	**27.34**	**347**	P	**P**	**10 04 42.1**	**-2.2**
	comp=Z,1.7nm,0.7s,mb3.7,baz=170,slow=12,SNR=3.6						
HFS	**Hagfors**	**27.34**	**347**	P	**P**	**10 04 42.1**	**-2.2**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**27.34**	**347**	P	**P**	**10 04 42.1**	**-2.2**
	comp=Z,2.0nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**27.43**	**0**	P	**P**	**10 04 42.8**	**-2.3**
	comp=Z,1.2nm,0.4s,mb3.8,baz=163,slow=11,SNR=7.2						
FINES	**FINESS Array B**	**27.43**	**0**	P	**P**	**10 04 42.8**	**-2.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**27.43**	**0**	P	**P**	**10 04 42.8**	**-2.3**
	comp=Z,1.0nm,0.4s,mb3.7						
ABKAR	**Akbulak array**	**29.26**	**48**	*e*P	**P**	**10 05 02.0**	**+0.5**
	comp=Z,0.8nm,0.3s,mb3.9						
ABKAR	**Akbulak array**	**29.26**	**48**	*e*P	**P**	**10 05 02.0**	**+0.5**
	comp=Z,0.8nm,0.3s,mb3.9						
TOA0	**Torodi Ar. Sit**	**30.35**	**233**	*e*P	**P**	**10 05 12.1**	**+0.7**
TOA0	**Torodi Ar. Sit**	**30.35**	**233**	*e*P	**P**	**10 05 12.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**30.35**	**233**	P	**P**	**10 05 11.8**	**+0.3**
	comp=Z,4.1nm,0.7s,mb4.3,baz=35,slow=9.5,SNR=32						
ARU	**Arti**	**31.55**	**35**	*d i* P	**P**	**10 05 22.6**	**+0.9**
ARU						10 06 22.6	
ARU				S	**S**	**10 10 28.8**	**-1.5**
ARU				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.3						
ARU	**Arti**	**31.55**	**35**	*i* P	**P**	**10 05 22.6**	**+0.9**
	comp=Z,12nm,2.5s,mb4.3						
ARU				S	**S**	**10 10 28.8**	**-1.5**
ARCES	**ARCESS Array B**	**35.56**	**360**	P	**P**	**10 05 54.0**	**-2.5**
	comp=Z,2.3nm,0.8s,mb4.2,baz=186,slow=9.8,SNR=7.1						
ARCES	**ARCESS Array B**	**35.56**	**360**	P	**P**	**10 05 54.0**	**-2.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**35.56**	**360**	P	**P**	**10 05 54.0**	**-2.4**
	comp=Z,2.0nm,0.8s,mb4.1						
BRVK	**Borovoye**	**36.56**	**45**	*ce*P	**P**	**10 06 05.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
BRVK				MLR	MLR		
	comp=Z,52nm,15.0s,MS3.4						
BRVK	**Borovoye**	**36.56**	**45**	*e*P	**P**	**10 06 05.8**	**+0.6**
	comp=Z,52nm,15.0s						
BVAR	**Borovoye Array**	**36.62**	**45**	P	**P**	**10 06 04.6**	**-1.1**
	comp=Z,2.2nm,0.8s,mb4.0,baz=236,slow=8.0,SNR=9.4						
BVAR				LR	LR	10 23 54.6	
	comp=Z,100nm,18.6s,MS3.6,baz=138,slow=41						
BVAR	**Borovoye Array**	**36.62**	**45**	P	**P**	**10 06 04.6**	**-1.1**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR				MLR	MLR		
	comp=Z,100nm,18.6s						
BVAR	**Borovoye Array**	**36.62**	**45**	P	**P**	**10 06 04.6**	**-1.1**
	comp=Z,100nm,18.6s						
AAK	**Ala-Archa**	**38.52**	**62**	⇑*e*P	**P**	**10 06 22.9**	**+0.9**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
AAK	**Ala-Archa**	**38.52**	**62**	*e*P	**P**	**10 06 22.9**	**+0.9**
	comp=Z,1.0nm,1.2s,mb3.4						
DBIC	**Dimbokro**	**39.45**	**233**	P	**P**	**10 06 30.0**	**0.0**
	comp=Z,3.7nm,0.9s,mb4.1,baz=21,slow=6.8,SNR=3.6						
DBIC	**Dimbokro**	**39.45**	**233**	P	**P**	**10 06 30.0**	**0.0**
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	**Dimbokro**	**39.45**	**233**	P	**P**	**10 06 30.0**	**0.0**
	comp=Z,4.0nm,0.9s,mb4.2						
TIC	**Toumodi**	**39.58**	**234**	*e*P	**P**	**10 06 31.9**	**+0.8**
	comp=Z,16nm,0.3s,mb5.3						
KIC	**Kosan Boka**	**39.60**	**233**	*e*P	**P**	**10 06 30.5**	**-0.8**
	comp=Z,15nm,1.0s,mb4.7						
LIC	**Lamto**	**39.89**	**233**	*e*P	**P**	**10 06 34.7**	**+1.0**
	comp=Z,52nm,1.6s,mb5.0						
KURK	**Kurchatov**	**41.34**	**50**	P	**P**	**10 06 45.0**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.1,baz=276,slow=8.8,SNR=5.3						
KURK	**Kurchatov**	**41.34**	**50**	⇓*e*P	**P**	**10 06 45.9**	**+0.6**
KURK				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.2						
KURK	**Kurchatov**	**41.34**	**50**	P	**P**	**10 06 45.0**	**-0.3**
MKAR	**Makanchi Array**	**43.80**	**56**	P	**P**	**10 07 05.7**	**+0.4**
	comp=Z,1.8nm,0.7s,mb3.9,baz=275,slow=6.6,SNR=18						
MKAR	**Makanchi Array**	**43.80**	**56**	P	**P**	**10 07 05.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**43.80**	**56**	P	**P**	**10 07 05.7**	**+0.4**
SPITS	**Spitsbergen Ar**	**44.45**	**357**	P	**P**	**10 07 10.3**	**+0.2**
	comp=Z,2.6nm,0.9s,mb4.0,baz=187,slow=14,SNR=3.4						
SPITS	**Spitsbergen Ar**	**44.45**	**357**	P	**P**	**10 07 10.3**	**+0.1**
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**44.45**	**357**	P	**P**	**10 07 10.3**	**+0.1**
	comp=Z,3.0nm,0.9s,mb4.0						
ZAA0	**Zalesovo Array**	**45.27**	**45**	*e*P	**P**	**10 07 16.9**	**-0.1**
ZAA0	**Zalesovo Array**	**45.27**	**45**	*e*P	**P**	**10 07 16.9**	**-0.1**
ZALV	**Zalesovo Beam**	**45.27**	**45**	P	**P**	**10 07 16.6**	**-0.4**
	comp=Z,4.7nm,0.5s,mb4.6,baz=271,slow=8.9,SNR=16						
ZALV	**Zalesovo Beam**	**45.27**	**45**	P	**P**	**10 07 16.6**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
ZAK	**Zakamensk**	**56.95**	**48**	*e*P	**P**	**10 08 45.6**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb4.0						
ZAK	**Zakamensk**	**56.95**	**48**	*e*P	**P**	**10 08 45.6**	**+0.8**
	comp=Z,2.0nm,1.4s,mb4.0						
SONM	**Songino Array**	**59.65**	**50**	P	**P**	**10 09 04.3**	**+0.7**
	comp=Z,1.1nm,0.5s,mb4.1,baz=280,slow=7.8,SNR=5.0						
SONM	**Songino Array**	**59.65**	**50**	P	**P**	**10 09 04.3**	**+0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**59.65**	**50**	P	**P**	**10 09 04.3**	**+0.6**
	comp=Z,1.0nm,0.5s,mb4.1						
SCHQ	**Schefferville**	**64.52**	**320**	P	**P**	**10 09 35.9**	**-0.4**
	comp=Z,3.9nm,0.5s,mb4.7,baz=34,slow=6.7,SNR=13						
SCHQ	**Schefferville**	**64.52**	**320**	P	**P**	**10 09 35.9**	**-0.4**
SCHQ	**Schefferville**	**64.52**	**320**	P	**P**	**10 09 35.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**65.98**	**83**	P	**P**	**10 09 46.0**	**-0.3**
	comp=Z,1.1nm,0.3s,mb4.3,baz=284,slow=7.3,SNR=2.9						
CMAR	**Chiang Mai Arr**	**65.98**	**83**	P	**P**	**10 09 46.0**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**65.98**	**83**	P	**P**	**10 09 46.0**	**-0.4**
	comp=Z,1.0nm,0.3s,mb4.3						
BILL	**Bilibino**	**73.98**	**14**	⇓*e*P	**P**	**10 10 35.2**	**+0.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb4.2						
BILL	**Bilibino**	**73.98**	**14**	*e*P	**P**	**10 10 35.2**	**+0.5**
	comp=Z,7.0nm,2.5s,mb4.2						
SEY	**Seymchan**	**74.33**	**23**	⇓*e*P	**P**	**10 10 37.1**	**+0.3**
SEY	**Seymchan**	**74.33**	**23**	*e*P	**P**	**10 10 37.1**	**+0.3**
KSRS	**Korea Array**	**78.39**	**53**	P	**P**	**10 10 59.7**	**-0.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=300,slow=4.3,SNR=3.3						
KSRS	**Korea Array**	**78.39**	**53**	P	**P**	**10 10 59.7**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KSRS	**Korea Array**	**78.39**	**53**	P	**P**	**10 10 59.7**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**78.75**	**343**	P	**P**	**10 11 01.0**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=30,slow=5.5,SNR=12						
YKA	**Yellowknife Ar**	**78.75**	**343**	P	**P**	**10 11 01.0**	**-0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**78.75**	**343**	P	**P**	**10 11 01.0**	**-0.8**
YKA	**Yellowknife Ar**	**78.75**	**343**	P	**P**	**10 11 01.0**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9						

BJI ***27*** *10:04:10.5, 4°.74N×94°.62E, h32km, mB4.9/7, mb4.9/17, Ms4.0/3, Ms7 4.0/2*
ISCJB ***27*** *10:04:18.4±0.2, 5°.41N±0°.04×94°.56E±0°.04, h51km, mb4.7/73, MS3.5/8, Error ellipse: s-maj=7.1km s-min=3.9km az=32.6*
MOS ***27*** *10:04:19.6±0.8, 5°.55N×94°.63E, h58km, mb4.9/43, Error ellipse: s-maj=12.9km s-min=5.5km az=120.6*
DJA ***27*** *10:04:20, 5°.30N×94°.58E, h27km, Mw5.5/4*
IDC ***27*** *10:04:20.3±0.6, 5°.47N×94°.55E, h52km±4km, mb4.4/24, mb1 4.4/26, mb1mx4.3/34, mbtmp4.4/26, MS3.5/9, Ms1 3.5/9, ms1mx3.2/33, Error ellipse: s-maj=22.0km s-min=10.2km az=46.0*
NEIC ***27*** *10:04:20.5±0.2, 5°.49N×94°.52E, mb4.9/33, Error ellipse: s-maj=8.0km s-min=4.6km az=219.0*
NEIC Felt [II] at Banda Aceh.
ISC 27 10:04:20.4±0.2, 5°.43N±0°.04×94°.56E±0°.03, h53km, h53km±1.6km:pP-P, n208, σ0s85/195, mb4.7/72, MS3.5/8, 10C-8D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.74**	**85**	P	**Pn**	**10 04 34.7**	**0.0**
BSI				S	**Sn**	**10 04 45.3**	**+0.1**
PSI	**Prapat**	**5.08**	**121**	P	**Pn**	**10 05 36.3**	**+2.3**
	21nm,0.3s,baz=297,slow=14,SNR=57						
PSI				LR	LR	10 07 57.2	
	comp=Z,456nm,21.1s,baz=304,slow=42						
PSI	**Prapat**	**5.08**	**121**	P	**Pn**	**10 05 36.3**	**+2.3**
PSI				pmax	pmax		
	comp=Z,21nm,0.3s						
PSI				MLR	MLR		
	comp=Z,456nm,21.2s						
GSI	**Gunungsitoli**	**5.09**	**144**	P	**Pn**	**10 05 32.6**	**-1.5**
KULM	**Kulim**	**6.07**	**91**	*e*Pn	**Pn**	**10 05 48.1**	**+0.6**
	comp=Z,31nm,0.3s						
KULM				*e*Sn	**Sn**	**10 06 55.6**	**-0.1**
KULM	**Kulim**	**6.07**	**91**	P	**Pn**	**10 05 48.3**	**+0.8**
	comp=Z,51nm,0.6s,comp=Z,1μmcomp=Z,0.4nm						
IPM	**Ipoh**	**6.51**	**98**	P	**Pn**	**10 05 53.4**	**-0.2**
	comp=Z,43nm,0.6s,comp=Z,1μmcomp=Z,0.3nm						
MNSI	**Mandailing Nat**	**6.81**	**132**	P	**Pn**	**10 05 57.4**	**-0.3**
	comp=Z,88nm,0.4s,comp=Z,1.1nm						
SISI	**Saibi**	**8.10**	**146**	P	**Pn**	**10 06 13.8**	**-1.6**
	comp=Z,48nm,0.8s,comp=Z,0.2nm						
PPI	**Padang Panjang**	**8.26**	**135**	P	**Pn**	**10 06 18.0**	**+0.4**
	comp=Z,29nm,1.1s						
PDSI	**Padang**	**8.63**	**137**	P	**Pn**	**10 06 22.2**	**-0.5**
CM31	**Chiang Mai Arr**	**13.63**	**18**	*e*Pn	**Pn**	**10 07 30.6**	**-0.4**
	comp=Z,14nm,0.3s						
CMAR	**Chiang Mai Arr**	**13.63**	**18**	P	**Pn**	**10 07 33.7**	**+2.6**
	comp=Z,3.9nm,0.3s,baz=208,slow=14,SNR=40						
CMAR				LR	LR	10 12 46.9	
	comp=Z,110nm,18.6s,baz=33,slow=37						
CMAR	**Chiang Mai Arr**	**13.63**	**18**	P	**Pn**	**10 07 33.7**	**+2.6**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,110nm,18.6s						
PALK	**Pallekele**	**13.89**	**278**	P	**Pn**	**10 07 35.8**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=127,slow=20,SNR=4.4						
KSM	**Kuching**	**16.20**	**103**	*e*P	**Pn**	**10 08 07.1**	**+2.4**
	comp=Z,11nm,0.9s						
HYB	**Hyderabad**	**19.68**	**309**	*i* P	**Pn**	**10 08 46.5**	**-0.5**
ODAN	**Odare**	**22.38**	**343**	*e*P	**P**	**10 09 13.8**	**-0.4**
	comp=Z,54nm,0.5s,mb5.2						
RAMN	**Ramite**	**22.70**	**341**	*e*P	**P**	**10 09 16.5**	**-1.2**
	comp=Z,44nm,0.5s,mb5.1						
TAPN	**Taplejung**	**22.75**	**344**	*e*P	**P**	**10 09 16.9**	**-1.3**
	comp=Z,52nm,0.4s,mb5.3						
JIRN	**Jiri**	**23.50**	**341**	*e*P	**P**	**10 09 24.1**	**-1.5**
PKI	**Pulchoki**	**23.68**	**339**	*e*P	**P**	**10 09 26.1**	**-1.2**
	comp=Z,19nm,0.3s,mb5.0						
PKI	**Pulchoki**	**23.68**	**339**	*e*P	**P**	**10 09 26.1**	**-1.2**
PKI				pmax	pmax		
	comp=Z,19nm,0.3s,mb5.0						
DMN	**Daman**	**23.82**	**339**	*e*P	**P**	**10 09 26.5**	**-2.1**
	comp=Z,53nm,0.7s,mb5.1						
GUN	**Gumba**	**23.83**	**341**	*e*P	**P**	**10 09 27.5**	**-1.2**
	comp=Z,93nm,0.7s,mb5.3						
GYA	**Guiyang**	**23.89**	**28**	P	**P**	**10 09 30.5**	**+1.2**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.7						
KKN	**Kakani**	**23.92**	**339**	*e*P	**P**	**10 09 28.0**	**-1.5**
	comp=Z,30nm,0.4s,mb5.1						
KKN	**Kakani**	**23.92**	**339**	*e*P	**P**	**10 09 28.0**	**-1.5**
KKN				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.1						
LSA	**Lhasa**	**24.35**	**353**	P	**P**	**10 09 35.3**	**+1.9**
KAPI	**Kappang**	**27.21**	**112**	P	**P**	**10 09 59.3**	**-0.2**
	comp=Z,5.5nm,0.4s,mb4.4,baz=93,slow=13,SNR=5.7						
KAPI				LR	LR	10 21 26.6	
	comp=Z,72nm,20.0s,MS3.2,baz=120,slow=38						
XAN	**Xi'an**	**31.43**	**23**	P	**P**	**10 10 35.8**	**-0.9**
XAN				pP	pP	10 10 49.3	-0.9
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
GTA	**Gaotai**	**34.16**	**7**	⇑P	**P**	**10 11 00.5**	**+0.1**
GTA				pP	pP	10 11 09.5	-4.5
GTA				sP	sP	10 11 13.5	-6.8
GTA				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,70nm,24.0s,MS3.6						
GTA				LR	LR		
	comp=E,100nm,22.2s,MS3.6						
GTA				LR	LR		
	comp=Z,190nm,16.5s						
NJ2	**Nanjing**	**34.90**	**38**	*e*P	**P**	**10 11 04.0**	**-2.9**
NJ2				pP	pP	10 11 14.5	-6.1
NJ2				sP	sP	10 11 17.3	-10
NJ2				S	**S**	**10 16 37.5**	**+2.9**
NJ2				sS	sS	10 16 53.3	-4.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,80nm,3.8s						
NJ2				LR	LR		
	comp=N,270nm,11.1s						
NJ2				LR	LR		
	comp=E,100nm,8.2s						
FITZ	**Fitzroy Crossi**	**38.56**	**128**	P	**P**	**10 11 37.9**	**-0.4**
	comp=E,2.7nm,0.6s,mb4.1,baz=301,slow=2.7,SNR=15						
ULHL	**Ulahol**	**40.12**	**339**	P	**P**	**10 11 52.1**	**+1.2**
	SNR=6.5						
KZA	**Kyzart**	**40.34**	**338**	P	**P**	**10 11 54.0**	**+1.2**
	SNR=8.6						
UCH	**Uchtor**	**40.75**	**337**	P	**P**	**10 11 57.3**	**+1.1**
	SNR=12						
UCH	**Uchtor**	**40.75**	**337**	*e*P	**P**	**10 11 57.5**	**+1.4**
UCH				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
UCH	**Uchtor**	**40.75**	**337**	*e*P	**P**	**10 11 57.5**	**+1.3**
	comp=Z,4.3nm,0.6s,mb4.3						
TKM2	**Tokmak 2**	**40.94**	**339**	P	**P**	**10 11 58.9**	**+1.2**
	SNR=14						
TKM2	**Tokmak 2**	**40.94**	**339**	*e*P	**P**	**10 11 58.5**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**40.94**	**339**	*e*P	**P**	**10 11 58.5**	**+0.8**
	comp=Z,5.7nm,0.5s,mb4.5						
KBK	**Karagaybulak**	**40.95**	**338**	P	**P**	**10 11 59.3**	**+1.5**
	SNR=10						
AAK	**Ala-Archa**	**41.10**	**337**	LR	LR	10 30 30.5	
	comp=Z,79nm,19.1s,MS3.6,baz=294,slow=38						
AAK	**Ala-Archa**	**41.10**	**337**	*e*P	**P**	**10 12 00.7**	**+1.7**
AAK				pmax	pmax		
	comp=Z,16nm,0.3s,mb5.1						
AAK	**Ala-Archa**	**41.10**	**337**	*e*P	**P**	**10 12 00.7**	**+1.7**
	comp=Z,16nm,0.3s,mb5.1						
EKS2	**Erkin-Say**	**41.40**	**337**	P	**P**	**10 12 02.8**	**+1.2**
	SNR=7.6						
EKS2	**Erkin-Say**	**41.40**	**337**	*e*P	**P**	**10 12 02.7**	**+1.2**
EKS2				*e**PP	pP	10 12 15.6	+0.2
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.6						
EKS2	**Erkin-Say**	**41.40**	**337**	*e*P	**P**	**10 12 02.7**	**+1.2**
	comp=Z,5.3nm,0.3s,mb4.7						
EKS2				*e*pP	pP	10 12 15.6	+0.1
USP	**Ospenovka**	**41.64**	**338**	P	**P**	**10 12 03.9**	**+0.4**
	SNR=17						
MKAR	**Makanchi Array**	**42.55**	**348**	P	**P**	**10 12 11.1**	**+0.3**
	comp=Z,25nm,0.6s,mb5.1,baz=166,slow=7.9,SNR=305						
MKAR				LR	LR	10 31 57.1	
	comp=Z,80nm,20.7s,MS3.6,baz=152,slow=39						
MKAR	**Makanchi Array**	**42.55**	**348**	P	**P**	**10 12 11.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,25nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,80nm,20.7s						
SONM	**Songino Array**	**43.45**	**12**	P	**P**	**10 12 18.0**	**-0.1**
	comp=Z,7.1nm,0.6s,mb4.6,baz=190,slow=8.3,SNR=32						
SONM				pP	pP	10 12 30.9	-1.1
	comp=Z,3.1nm,0.7s,baz=190,slow=7.8,SNR=4.3						
SONM				PcP	PcP	10 14 06.0	+0.5
	comp=Z,1.8nm,0.4s,baz=197,slow=3.9,SNR=6.8						
SONM	**Songino Array**	**43.45**	**12**	P	**P**	**10 12 18.0**	**-0.1**
SONM				*PP	pP	10 12 30.9	-1.1
SONM						10 14 06.0	
SONM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ULN	**Ulaanbaatar**	**43.61**	**12**	*e*P	**P**	**10 12 19.1**	**-0.3**
ULN				*e**PP	pP	10 12 34.4	+1.1
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**43.61**	**12**	*e*P	**P**	**10 12 19.1**	**-0.3**
	comp=Z,6.0nm,0.6s,mb4.5						
ULN				*e*pP	pP	10 12 34.4	+1.1
KSRS	**Korea Array**	**44.06**	**39**	P	**P**	**10 12 22.4**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.1,baz=216,slow=9.1,SNR=9.7						
KSRS				LR	LR	10 31 15.0	
	comp=Z,

NAY				AMb	AMB	10 13 15.1	
	comp=Z,12nm,1.3s,mb4.7						
MIB	**Mutribah**	**50.64**	**304**	*eP*	**P**	**10 13 15.0**	**+0.5**
MIB				AMb	AMB	10 13 15.9	
	comp=Z,33nm,0.8s,mb5.3						
BVAR	**Borovoye Array**	**51.42**	**342**	P	**P**	**10 13 19.9**	**0.0**
	comp=Z,7.5nm,0.6s,mb4.8,baz=148,slow=8.6,SNR=34						
BVAR				pP	pP	10 13 33.6	-0.6
	comp=Z,10nm,0.7s,baz=143,slow=8.4,SNR=12						
BVAR	**Borovoye Array**	**51.42**	**342**	P	**P**	**10 13 19.9**	**0.0**
BVAR				*PP	pP	10 13 33.6	-0.6
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRVK	**Borovoye**	**51.48**	**342**	*cePP*	**P**	**10 13 20.4**	**0.0**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
ABKAR	**Akbulak array**	**52.56**	**332**	*eP*	**P**	**10 13 28.6**	**+0.1**
	comp=Z,6.3nm,0.3s,mb5.0						
ABKAR				*ep*P	pP	10 13 43.2	+0.4
AKTK	**Aktyubinsk**	**54.28**	**332**	P	**P**	**10 13 39.8**	**-1.3**
AKTK				LR	LR	10 41 40.1	
AKTO	**Aktyubinsk**	**54.28**	**332**	P	**P**	**10 13 39.8**	**-1.3**
	comp=Z,2.4nm,0.3s,mb4.6,baz=132,slow=8.4,SNR=14						
AKTO				LR	LR	10 41 40.1	
	comp=Z,37nm,19.7s,MS3.5,baz=163,slow=41						
AKTO	**Aktyubinsk**	**54.28**	**332**	P	**P**	**10 13 39.8**	**-1.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
AKTO				MLR	MLR		
	comp=Z,37nm,19.7s,MS3.5						
SVE	**Sverdlovsk**	**57.81**	**339**	*eP*	**P**	**10 14 06.4**	**+0.2**
SVE				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**58.14**	**133**	P	**P**	**10 14 09.1**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.4,baz=316,slow=10,SNR=5.4						
STKA	**Stephens Creek**	**58.14**	**133**	P	**P**	**10 14 09.1**	**+0.2**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	**Arti**	**58.29**	**337**	*diP*	**P**	**10 14 09.2**	**-0.3**
ARU				*e*		10 16 18.6	
ARU				S	**S**	**10 22 18.4**	**+11**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
KIV	**Kislovodsk**	**59.41**	**319**	*eP*	**P**	**10 14 16.3**	**-1.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MMAI	**Mount Meron Ar**	**61.33**	**305**	P	**P**	**10 14 31.1**	**+0.3**
	comp=Z,4.3nm,0.7s,mb4.7,baz=116,slow=3.8,SNR=4.7						
BR131	**Keskin Array S**	**64.34**	**312**	*eP*	**P**	**10 14 50.2**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	**64.34**	**312**	P	**P**	**10 14 50.0**	**-0.7**
	comp=Z,4.2nm,0.7s,mb4.6,baz=126,slow=7.1,SNR=25						
BRTR	**Keskin Array B**	**64.34**	**312**	P	**P**	**10 14 50.1**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN	**Obninsk**	**67.66**	**328**	*eP*	**P**	**10 15 10.8**	**-0.9**
OBN				*i*	pP	10 15 25.8	-0.7
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
TIRR	**Tirgusor**	**69.27**	**316**	⇑P	**P**	**10 15 21.4**	**-0.7**
TIRR	**Tirgusor**	**69.27**	**316**	⇑*iP*	**P**	**10 15 21.4**	**-0.7**
TIXI	**Tiksi**	**69.53**	**11**	*eP*	**P**	**10 15 22.0**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
TIXI	**Tiksi**	**69.53**	**11**	*eP*	**P**	**10 15 22.0**	**-1.1**
	comp=Z,7.3nm,0.6s,mb4.8						
PET	**Petropavlovsk**	**70.26**	**35**	*eP*	**P**	**10 15 26.2**	**-1.8**
PET				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
AKASG	**Malin Array Be**	**70.32**	**322**	P	**P**	**10 15 27.0**	**-1.4**
	comp=Z,6.5nm,0.6s,mb4.7,baz=95,slow=5.3,SNR=14						
AKASG				pP	pP	10 15 41.7	-1.5
	comp=Z,0.7nm,0.3s,baz=90,slow=5.3,SNR=3.0						
AKASG	**Malin Array Be**	**70.32**	**322**	P	**P**	**10 15 27.0**	**-1.4**
AKASG				*PP	pP	10 15 41.7	-1.5
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**70.32**	**322**	P	**P**	**10 15 27.0**	**-1.4**
AKASG				pP	pP	10 15 41.7	-1.5
VRI	**Vrincioaia**	**70.75**	**317**	⇑P	**P**	**10 15 31.6**	**+0.5**
VRI	**Vrincioaia**	**70.75**	**317**	⇑*iP*	**P**	**10 15 31.6**	**+0.5**
PLOR	**Plostina**	**70.80**	**317**	⇓P	**P**	**10 15 32.1**	**+0.7**
PLOR	**Plostina**	**70.80**	**317**	⇓*iP*	**P**	**10 15 32.1**	**+0.7**
SEY	**Seymchan**	**70.97**	**24**	*eP*	**P**	**10 15 32.0**	**0.0**
MLR	**Muntele Rosu**	**71.20**	**316**	P	**P**	**10 15 34.2**	**+0.3**
	comp=Z,7.7nm,0.8s,mb4.7,baz=103,slow=0.5,SNR=14						
MLR	**Muntele Rosu**	**71.20**	**316**	P	**P**	**10 15 34.2**	**+0.3**
MLR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MLR	**Muntele Rosu**	**71.20**	**316**	⇑*iP*	**P**	**10 15 34.0**	**+0.1**
BUR08	**Bucovina Ar. S**	**72.15**	**318**	*eP*	**P**	**10 15 39.8**	**+0.4**
JOF	**Joensuu**	**73.22**	**335**	*eP*	**P**	**10 15 44.8**	**-0.7**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
JOF	**Joensuu**	**73.22**	**335**	*ep*	**P**	**10 15 44.8**	**-0.7**
	comp=Z,6.0nm,0.8s,mb4.6						
DRGR		**73.66**	**317**	⇓P	**P**	**10 15 48.7**	**+0.3**
DRGR		**73.66**	**317**	⇓*iP*	**P**	**10 15 48.7**	**+0.3**
KOLS	**Kolonicke sedl**	**74.31**	**319**	*eP*	**P**	**10 15 52.0**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KOLS	**Kolonicke sedl**	**74.31**	**319**	*eP*	**P**	**10 15 52.0**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.4						
KOLS	**Kolonicke sedl**	**74.31**	**319**	*eP*	**P**	**10 15 52.0**	**-0.2**
FINES	**FINESS Array B**	**75.05**	**332**	P	**P**	**10 15 55.5**	**-0.8**
	comp=Z,3.6nm,0.5s,mb4.6,baz=98,slow=5.8,SNR=17						
FINES				pP	pP	10 16 10.7	-0.6
	comp=Z,1.7nm,0.4s,baz=92,slow=5.9,SNR=3.6						
FINES	**FINESS Array B**	**75.05**	**332**	P	**P**	**10 15 55.5**	**-0.7**
FINES				*PP	pP	10 16 10.7	-0.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	**FINESS Array B**	**75.05**	**332**	P	**P**	**10 15 55.5**	**-0.8**
FINES				pP	pP	10 16 10.7	-0.6
STHS	**Stebnicka Huta**	**75.06**	**320**	*eP*	**P**	**10 15 57.4**	**+0.9**
STHS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
STHS	**Stebnicka Huta**	**75.06**	**320**	*eP*	**P**	**10 15 57.4**	**+0.9**
	comp=Z,6.5nm,0.7s,mb4.7						
STHS	**Stebnicka Huta**	**75.06**	**320**	*eP*	**P**	**10 15 57.4**	**+0.9**
KAF	**Kangasniemi**	**75.14**	**333**	*eP*	**P**	**10 15 55.8**	**-0.9**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
KAF	**Kangasniemi**	**75.14**	**333**	*ep*	**P**	**10 15 55.8**	**-0.9**
	comp=Z,4.3nm,0.7s,mb4.5						
KECS	**Kecovo**	**75.41**	**319**	*eP*	**P**	**10 15 58.5**	**-0.1**
KECS				*e*	pP	10 16 13.6	0.0
KECS				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
KECS	**Kecovo**	**75.41**	**319**	*eP*	**P**	**10 15 58.5**	**-0.1**
	comp=Z,3.9nm,0.7s,mb4.5						
KECS				*e*PcP	PcP	10 16 13.6	+2.1
KECS	**Kecovo**	**75.41**	**319**	*eP*	**P**	**10 15 58.5**	**-0.1**
KECS				*ep*P	pP	10 16 13.6	0.0
PSZ	**Piszkesteto**	**75.72**	**318**	⇑P	**P**	**10 16 00.5**	**+0.2**
PSZ	**Piszkesteto**	**75.72**	**318**	⇑*iP*	**P**	**10 16 00.5**	**+0.2**
OJC	**Ojcow**	**76.10**	**320**	*eP*	**P**	**10 16 02.0**	**-0.5**
VYHS	**Vyhne**	**76.50**	**318**	*eP*	**P**	**10 16 04.8**	**0.0**
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
VYHS	**Vyhne**	**76.50**	**318**	*eP*	**P**	**10 16 04.8**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.2						
VYHS	**Vyhne**	**76.50**	**318**	*eP*	**P**	**10 16 04.8**	**0.0**
KEV	**Kevo**	**77.26**	**341**	*eP*	**P**	**10 16 07.1**	**-1.6**
KEV	**Kevo**	**77.26**	**341**	*ep*	**P**	**10 16 07.1**	**-1.6**
MORC	**Moravsky Berou**	**77.49**	**320**	⇓P	**P**	**10 16 10.7**	**+0.4**
MORC	**Moravsky Berou**	**77.49**	**320**	⇓*iP*	**P**	**10 16 10.7**	**+0.4**
ZST	**Bratislava**	**77.61**	**318**	*eP*	**P**	**10 16 11.7**	**+0.7**
ZST				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
ZST	**Bratislava**	**77.61**	**318**	*eP*	**P**	**10 16 11.7**	**+0.7**
	comp=Z,14nm,0.7s,mb5.0						
ZST	**Bratislava**	**77.61**	**318**	*eP*	**P**	**10 16 11.7**	**+0.7**
ARCES	**ARCESS Array B**	**77.69**	**340**	P	**P**	**10 16 11.3**	**+0.3**
	comp=Z,2.0nm,0.3s,mb4.5,baz=102,slow=6.8,SNR=29						
ARCES	**ARCESS Array B**	**77.69**	**340**	P	**P**	**10 16 11.3**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BILL	**Bilibino**	**78.19**	**21**	*eP*	**P**	**10 16 14.2**	**+0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
GEC2	**GERESS Array S**	**79.92**	**319**	*eP*	**P**	**10 16 24.0**	**+0.3**
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**10 16 24.1**	**+0.4**
	comp=Z,7.3nm,0.7s,mb4.7,baz=90,slow=5.3,SNR=31						
GERES				pP	pP	10 16 39.3	+0.5
	comp=Z,3.0nm,0.7s,baz=97,slow=5.5,SNR=3.4						
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**10 16 24.1**	**+0.4**
GERES				*PP	pP	10 16 39.3	+0.5
GERES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WET	**Wettzell**	**80.47**	**319**	*eP*	**P**	**10 16 27.0**	**+0.3**
HFS	**Hagfors**	**80.76**	**330**	P	**P**	**10 16 27.0**	**-1.0**
	comp=Z,1.2nm,0.4s,mb4.2,baz=90,slow=4.7,SNR=7.1						
HFS	**Hagfors**	**80.76**	**330**	P	**P**	**10 16 27.0**	**-1.0**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GRA1	**Grafenberg Arr**	**81.58**	**319**	*eP*	**P**	**10 16 33.2**	**+0.7**
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**81.58**	**319**	*eP*	**P**	**10 16 33.2**	**+0.7**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**81.58**	**319**	*eP*	**P**	**10 16 33.2**	**+0.7**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**81.58**	**319**	*eP*	**P**	**10 16 33.2**	**+0.7**
	comp=Z,14nm,1.0s,mb4.8						
SPITS	**Spitsbergen Ar**	**82.30**	**348**	P	**P**	**10 16 35.8**	**0.0**
	comp=Z,4.4nm,0.6s,mb4.6,baz=99,slow=11,SNR=33						
SPITS				pP	pP	10 16 50.2	-0.7
	comp=Z,3.2nm,0.5s,baz=95,slow=10,SNR=4.7						
SPITS	**Spitsbergen Ar**	**82.30**	**348**	P	**P**	**10 16 35.8**	**0.0**
SPITS				*PP	pP	10 16 50.2	-0.8
SPITS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DAVOX	**Davos/Dischmat**	**82.43**	**316**	P	**P**	**10 16 37.7**	**+0.6**
	comp=Z,12nm,0.6s,mb5.0,baz=123,slow=3.7,SNR=15						
DAVOX	**Davos/Dischmat**	**82.43**	**316**	P	**P**	**10 16 37.7**	**+0.6**
KEST	**Kesra**	**82.98**	**305**	P	**P**	**10 16 40.8**	**+0.6**
	comp=Z,2.7nm,0.8s,mb4.3,baz=219,slow=12,SNR=5.2						
SBF	**Sospel**	**84.20**	**313**	*eP*	**P**	**10 16 46.4**	**+0.1**
	comp=Z,53nm,0.8s,mb5.4						
SBF	**Sospel**	**84.20**	**313**	*eP*	**P**	**10 16 46.4**	**+0.1**
SBF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
SBF	**Sospel**	**84.20**	**313**	*eP*	**P**	**10 16 46.4**	**+0.1**
	comp=Z,27nm,0.8s,mb5.4						
LPG	**La Plagne**	**84.63**	**315**	*eP*	**P**	**10 16 48.9**	**+0.5**
	comp=Z,17nm,0.8s,mb4.9						
LPG	**La Plagne**	**84.63**	**315**	*eP*	**P**	**10 16 48.9**	**+0.5**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
LPG	**La Plagne**	**84.63**	**315**	*eP*	**P**	**10 16 48.9**	**+0.5**
	comp=Z,8.7nm,0.8s,mb4.9						
LPL	**La Plagne**	**84.64**	**315**	*eP*	**P**	**10 16 48.8**	**+0.4**
	comp=Z,22nm,0.8s,mb5.0						
LPL	**La Plagne**	**84.64**	**315**	*eP*	**P**	**10 16 48.8**	**+0.4**
LPL				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
LPL	**La Plagne**	**84.64**	**315**	*eP*	**P**	**10 16 48.8**	**+0.4**
	comp=Z,11nm,0.8s,mb5.0						
FRF	**La Foret Royal**	**84.78**	**313**	*eP*	**P**	**10 16 49.5**	**+0.3**
HAU	**Haudompre**	**84.81**	**318**	*eP*	**P**	**10 16 48.9**	**-0.3**
	comp=Z,12nm,0.6s,mb4.9						
HAU	**Haudompre**	**84.81**	**318**	*eP*	**P**	**10 16 48.9**	**-0.3**
HAU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
HAU	**Haudompre**	**84.81**	**318**	*eP*	**P**	**10 16 48.9**	**-0.3**
	comp=Z,5.8nm,0.6s,mb4.9						
CABF	**La Chapelle**	**85.04**	**316**	*eP*	**P**	**10 16 50.7**	**+0.3**
ORIF	**Oris-en-Rattie**	**85.27**	**315**	*eP*	**P**	**10 16 51.6**	**0.0**
	comp=Z,12nm,0.7s,mb4.8						
ORIF	**Oris-en-Rattie**	**85.27**	**315**	*eP*	**P**	**10 16 51.6**	**0.0**
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
ORIF	**Oris-en-Rattie**	**85.27**	**315**	*eP*	**P**	**10 16 51.6**	**0.0**
	comp=Z,5.8nm,0.7s,mb4.8						
SMRF	**Simiane la Rot**	**85.54**	**314**	*eP*	**P**	**10 16 52.4**	**-0.6**
BAIF	**Baives**	**86.10**	**320**	*eP*	**P**	**10 16 55.7**	**+0.1**
VIVF	**Saint-Julien-l**	**86.13**	**315**	*eP*	**P**	**10 16 56.0**	**+0.1**
SMF	**Signal de Mont**	**86.59**	**316**	*eP*	**P**	**10 16 57.9**	**-0.2**
	comp=Z,19nm,1.0s,mb5.0						
SMF	**Signal de Mont**	**86.59**	**316**	*eP*	**P**	**10 16 57.9**	**-0.2**
SMF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
SMF	**Signal de Mont**	**86.59**	**316**	*eP*	**P**	**10 16 57.9**	**-0.2**
	comp=Z,9.4nm,1.0s,mb5.0						
SSF	**Saint Saulge**	**86.78**	**317**	*eP*	**P**	**10 16 59.5**	**+0.5**
AVF	**Avril sur Loir**	**86.91**	**317**	*eP*	**P**	**10 16 59.5**	**-0.2**
	comp=Z,16nm,1.1s,mb4.9						
AVF	**Avril sur Loir**	**86.91**	**317**	*eP*	**P**	**10 16 59.5**	**-0.2**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.9						
AVF	**Avril sur Loir**	**86.91**	**317**	*eP*	**P**	**10 16 59.5**	**-0.2**
	comp=Z,8.3nm,1.1s,mb4.9						
TCF	**Toulx Ste Croi**	**87.74**	**316**	*eP*	**P**	**10 17 04.1**	**+0.4**
LDF	**La Druitiere**	**89.06**	**319**	*eP*	**P**	**10 17 10.1**	**+0.2**
FLN	**La Foliniere**	**89.28**	**319**	*eP*	**P**	**10 17 11.0**	**+0.1**
MFF	**Saint Martin d**	**89.32**	**317**	*eP*	**P**	**10 17 11.6**	**+0.5**
GRR	**Gorron**	**89.57**	**318**	*eP*	**P**	**10 17 12.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**91.56**	**283**	P	**P**	**10 17 22.7**	**+0.5**
	comp=Z,0.5nm,0.7s,mb4.0,baz=88,slow=4.0,SNR=4.7						
BPAW	**Bear Paw Mtn.**	**95.54**	**24**	*eP*	**P**	**10 17 39.8**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.6						
RES	**Resolute Bay**	**99.81**	**3**	P	Pdif	10 17 58.9	0.0
	comp=Z,1.8nm,0.7s,baz=332,slow=6.1,SNR=10						
MSO	**Missoula**	**122.17**	**23**	*e*PKPdf	PKPdf	10 23 09.3	-0.2
ULM	**Lac du Bonnet**	**123.81**	**8**	PKP	PKPdf	10 23 12.1	-0.4
	comp=Z,2.9nm,0.6s,baz=7.7,slow=3.9,SNR=5.0						
TAOE	**Nuku Hiva Isla**	**125.65**	**97**	*e*PKPdf	PKPdf	10 23 17.5	+0.5
NVAR	**Mina Array Bea**	**126.77**	**32**	PKP	PKPdf	10 23 19.7	+1.2
	comp=Z,1.0nm,0.5s,baz=300,slow=2.2,SNR=14						
NVAR	**Mina Array Bea**	**126.77**	**32**	PKP	PKPdf	10 23 19.7	+1.1
PDAR	**Pinedale Array**	**127.27**	**22**	PKP	PKPdf	10 23 19.4	0.0
	comp=Z,1.3nm,0.5s,baz=86,slow=2.2,SNR=14						
HWUT	**Hardware Ranch**	**127.45**	**25**	*e*PKPdf	PKPdf	10 23 20.6	+0.9
DUG	**Dugway**	**128.08**	**27**	*e*PKIKP	PKPdf	10 23 22.0	+1.0
MSU	**Marysvale**	**129.73**	**27**	*e*PKIKP	PKPdf	10 23 26.2	+2.0
MNTX	**Cornudas Mount**	**138.47**	**26**	*e*PKPdf	PKPdf	10 23 41.7	+1.0
TXAR	**Lajitas Array**	**141.25**	**26**	PKhKP		10 23 39.6	
	comp=Z,0.2nm,0.4s,baz=20,slow=1.8,SNR=10						
TXAR				PKP	PKPdf	10 23 46.0	+0.1
	comp=Z,1.2nm,0.4s,baz=16,slow=0.7,SNR=30						
TXAR	**Lajitas Array**	**141.25**	**26**	PKHKP		10 23 39.7	
TXAR						10 23 46.0	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**141.25**	**26**	PKP		10 23 39.6	
TXAR				PKP	PKPdf	10 23 46.0	+0.1
JCT	**Junction City**	**141.74**	**20**	*e*PKIKP	PKPdf	10 23 47.5	+0.8

*NEIC **27** 10:08:55.1, 16°.76N×99°.79W, h20km, MD3.6(MEX), After MEX.*

MEX 27 10:08:55.1±1.4, 16°.76N×99°.79W, h20km±23km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.16**	**311**	*i* P	Pb	10 08 58.7	-1.1
ACX				*i* S	Sb	10 09 02.0	-0.9
ACX	**Acapulco**	**0.16**	**311**	*i* P	Pb	10 08 58.7	-1.1
ACX				*i* S	Sb	10 09 02.0	-0.9
CAIG	**El Cayaco**	**0.54**	**302**	*i* P	Pb	10 09 04.9	-1.0
CAIG				*i* S	Sb	10 09 10.4	-2.9
CAIG	**El Cayaco**	**0.54**	**302**	*i* P	Pb	10 09 04.9	-1.0
CAIG				*i* S	Sb	10 09 10.4	-2.9
PNIG	**Pinotepa**	**1.64**	**103**	*i* P	Pn	10 09 19.3	-3.4
PNIG				*i* S	Sn	10 09 39.5	-3.7
PNIG	**Pinotepa**	**1.64**	**103**	*i* P	Pn	10 09 19.3	-3.4
PNIG				*i* S	Sn	10 09 39.5	-3.7
UTMO	**Huajuapan**	**2.17**	**60**	*eP*	Pn	10 09 28.4	-1.8
UTMO				*i* S	Sn	10 09 52.7	-3.9
MZVM		**2.48**	**12**	*eP*	Pn	10 09 31.8	-2.5
MZVM				*i* S	Sn	10 10 00.1	-3.9
VHO	**Vista Hermosa**	**2.94**	**83**	*eP*	Pn	10 09 39.5	-1.2
VHO				*i* S	Sn	10 10 11.3	-4.1
VHO	**Vista Hermosa**	**2.94**	**83**	*eP*	Pn	10 09 39.5	-1.2
VHO				*i* S	Sn	10 10 11.3	-4.1
IIO	**Organos**	**2.99**	**20**	*eP*	Pn	10 09 39.9	-1.6
IIO				*i* S	Sn	10 10 13.6	-3.1
IIO	**Organos**	**2.99**	**20**	*eP*	Pn	10 09 39.9	-1.6
IIO				*i* S	Sn	10 10 13.6	-3.1

*KISR **27** 10:20:45.0±0.7, 30°.92N×45°.21E, h34km±999km, ML2.9*
*CSEM **27** 10:20:51.3±0.5, 31°.84N×47°.85E, h2km, ML3.2, Error ellipse: s-maj=26.0km s-min=11.1km az=112.0*

TEH 27 10:20:52.1, 31°.96N×47°.82E, h2km, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.84**	**79**	*e*Pg	Pg	10 21 07.6	-0.7
MIB	**Mutribah**	**2.19**	**191**	*e*P	Pn	10 21 25.8	-3.7
MIB				*e*S	Sn	10 21 56.3	-0.8
MIB				AML	AML	10 21 58.4	
	comp=Z,75nm,0.5s						
MIB	**Mutribah**	**2.19**	**191**	*e*P	Pn	10 21 25.8	-3.7
MIB				*e*S	Sn	10 21 56.3	-0.8
UMR	**Umm Al-Rimmam**	**2.40**	**182**	*e*P	Pn	10 21 31.5	-0.9
UMR				*e*S	Sn	10 22 06.0	+3.6
UMR				AML	AML	10 22 09.0	
	comp=Z,107nm,0.4s						
UMR	**Umm Al-Rimmam**	**2.40**	**182**	*e*P	Pn	10 21 31.5	-0.9
UMR				*e*S	Sn	10 22 05.9	+3.6
IGHG	**Ghaleghazi**	**2.59**	**336**	*e*Pn	Pn	10 21 34.5	-0.5
IGHG				*e*		10 22 24.8	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**2.70**	**74**	*e*Pn	Pn	10 21 36.1	-0.4
IPIR				*e*Sg	Sg	10 22 16.3	-2.5
IPIR				*e*		10 22 24.5	
	comp=N,2μm,0.3s						
KBD	**Kabd**	**2.77**	**182**	*e*P	Pn	10 21 34.2	-3.4
KBD				*e*S	Sn	10 22 11.6	0.0
KBD				AML	AML	10 22 16.8	
	comp=Z,24nm,0.5s						
KBD	**Kabd**	**2.77**	**182**	*e*P	Pn	10 21 34.2	-3.3
KBD				*e*S	Sn	10 22 11.6	0.0
	comp=Z,25nm,0.5s						
SNGE	**Sanandaj**	**3.15**	**353**	*e*Pn	Pn	10 21 43.7	+1.0
ASAO	**Ashtian**	**3.17**	**35**	*e*Pn	Pn	10 21 44.1	+1.1
BHD	**Baghdad**	**3.19**	**295**	*e*Pn	Sn	10 22 15.0	-6.8
BHD				*e*Sn	Sb	10 22 36.0	+7.3
IKLH	**Kolahrood**	**3.45**	**66**	*e*Pn	Pn	10 21 46.3	-0.5
IKLH				*e*		10 21 49.9	
	comp=Z,575nm,0.1s						
GHVR	**GHOM**	**3.85**	**48**	*e*Pn	Pn	10 21 52.8	+0.5
IRAZ	**Razeghan**	**3.86**	**26**	*e*Pn	Pn	10 21 51.8	-0.7
IRAZ				*e*		10 23 24.0	
	comp=Z,624nm,0.4s						
ISRV	**Sarvestan**	**5.23**	**118**	*e*Pn	Pn	10 22 11.0	-0.3
ISRV				*e*		10 23 21.5	
	comp=E,406nm,0.1s						

*IDC **27** 10:26:47.0±1.2, 31°.12N×103°.71E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.2/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/29, Error ellipse: s-maj=34.1km s-min=20.8km az=58.0*
*ISCJB **27** 10:26:47.2±0.4, 31°.15N±0°.03×104°.00E±0°.05, h10km, mb3.8/5, MS3.2/3, Error ellipse: s-maj=6.2km s-min=4.4km az=11.7*
*NEIC **27** 10:26:48.5±0.9, 31°.17N×103°.89E, h10km, Error ellipse: s-maj=25.9km s-min=11.2km az=84.0*
*BJI **27** 10:26:48.6, 31°.03N×103°.90E, h15km, mB4.5/2, mb4.2/5, ML3.9/17, Ms3.8/7, Ms7 3.6/7*
*MOS **27** 10:26:50.1±2.1, 31°.03N×103°.73E, h33km, mb4.0/5, Error ellipse: s-maj=28.1km s-min=13.0km az=96.4*

ISC 27 10:26:48.9±0.4, 31°.11N±0°.03×103°.95E±0°.05, h10km, n26, σ1°61/34, mb3.8/5, MS3.2/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.26**	**220**	Pg	**Pg**	**10 26 53.5**	**-0.6**
CD2				Sg

comp=Z,10.0nm,1.0s,mb4.1
MK31 Makanchi Array 22.89 319 *e*P **P** **10 31 52.5 0.0**
MKAR Makanchi Array 22.89 319 P **P** **10 31 50.3 -2.3**
comp=Z,2.0nm,0.8s,mb3.6,baz=119,slow=9.9,SNR=16
MKAR Makanchi Array 22.89 319 P **P** **10 31 50.3 -2.2**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 22.89 319 P **P** **10 31 50.3 -2.3**
AAK Ala-Archa 26.09 304 LR LR 10 43 28.8
comp=Z,80nm,18.6s,MS3.3,baz=19,slow=39
ZALV Zalesovo Beam 26.66 334 P **P** **10 32 27.0 -0.7**
comp=Z,1.4nm,0.3s,mb3.9,baz=116,slow=14,SNR=5.1
ZALV LR LR 10 43 11.6
comp=Z,23nm,18.5s,MS2.8,baz=20,slow=37
ZALV Zalesovo Beam 26.66 334 P **P** **10 32 27.0 -0.7**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
ZALV MLR MLR
comp=Z,23nm,18.5s,MS2.8
KURK Kurchatov 27.16 323 P **P** **10 32 30.5 -1.7**
comp=Z,1.1nm,0.5s,mb3.7,baz=128,slow=9.5,SNR=8.2
KURK Kurchatov 27.16 323 P **P** **10 32 30.5 -1.7**
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb3.6
ASAR Alice Springs 61.56 149 P **P** **10 37 06.3 0.0**
comp=Z,0.5nm,0.5s,mb3.9,baz=334,slow=6.1,SNR=7.7
ASAR Alice Springs 61.56 149 P **P** **10 37 06.4 0.0**
ASAR pmax pmax
comp=Z,1.0nm,0.5s
BORG Borgarnes 75.41 339 LR LR 11 13 07.1
comp=Z,35nm,21.5s,MS3.6,baz=142,slow=37

IDC ***27*** *10:55:32.3±1.1, 31°.30S×176°.67W, h0km, mb4.3/5, mb1 4.5/6, mb1mx4.2/15, mbtmp4.3/6, ML4.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/18, Error ellipse: s-maj=37.9km s-min=23.9km az=141.0*
NEIC ***27*** *10:55:33.1±0.8, 31°.41S×176°.55W, h10km, Error ellipse: s-maj=26.8km s-min=12.8km az=123.0*
ISCJB ***27*** *10:55:35.1±1.4, 31°.5S±0°.1×176°.6W±0°.3, h33km, mb4.1/5, Error ellipse: s-maj=34.6km s-min=11.8km az=26.5*
ISC 27 10:55:36.7±1.4, 31°.4S±0°.1×176°.5W±0°.3, h35km, n11, σ0=91/8, mb4.1/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.60**	**216**	Pn	**Pn**	**10 57 38.2**	**-0.5**
	0.7nm,0.3s,baz=101,slow=14,SNR=7.9						
URZ				Sn	**Sn**	**10 59 15.6**	**+1.2**
	3.9nm,0.3s,baz=185,slow=21,SNR=13						
URZ				LR	LR	11 00 36.4	
	comp=Z,146nm,20.4s,baz=130,slow=35						
RPZ	**Rata Peaks**	**15.72**	**215**	Pn	**Pn**	**10 59 13.6**	**-1.8**
	1.3nm,0.3s,baz=56,slow=9.4,SNR=9.8						
PPT	**Papeete**	**28.05**	**67**	LR	LR	11 09 27.6	
	comp=Z,75nm,20.2s,baz=218,slow=30						
CTA	**Charters Tower**	**35.20**	**280**	P	**P**	**11 02 27.6**	**-0.1**
	2.8nm,0.4s,mb4.5,baz=95,slow=11,SNR=4.9						
STKA	**Stephens Creek**	**35.49**	**258**	P	**P**	**11 02 31.0**	**+0.9**
	2.9nm,0.9s,mb4.2,baz=100,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**44.31**	**267**	P	**P**	**11 03 43.0**	**-0.4**
	2.0nm,0.6s,mb4.0,baz=102,slow=7.3,SNR=37						
NVAR	**Mina Array Bea**	**88.13**	**42**	P	**P**	**11 08 24.6**	**+0.9**
	0.4nm,0.9s,mb3.7,baz=238,slow=5.2,SNR=3.6						
CMAR	**Chiang Mai Arr**	**94.91**	**288**	P	**P**	**11 08 55.1**	**-0.5**
	0.5nm,0.4s,mb4.3,baz=270,slow=1.8,SNR=2.8						
FINES	**FINESS Array B**	**146.51**	**340**	PKPbc	PKPbc	11 15 13.9	+0.5
	3.3nm,0.6s,baz=22,slow=2.1,SNR=6.1						
NOA	**NORSAR Array B**	**149.92**	**352**	PKPbc	PKPbc	11 15 23.2	+0.8
	1.1nm,0.6s,baz=14,slow=4.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**161.76**	**174**	PKPab	PKPab	11 16 22.3	+2.4
	0.5nm,0.7s,baz=178,slow=4.7,SNR=5.2						

BJI 27 11:24:31.6, 25°.93N×100°.13E, h20km, ML3.5/5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.49**	**108**	Pg	Pn	11 25 17.0	+6.0
KMI				Sg	Sn	11 25 49.5	+8.7
KMI				smax			
	comp=N,97nm,0.8s						
KMI				smax			
	comp=E,71nm,0.8s						

BJI ***27*** *11:27:52.0, 13°.60N×91°.00W, h26km, mB5.5/15, Ms5.5/20, Ms7 5.2/20*
NEIC ***27*** *11:27:55.8±0.2, 13°.62N×91°.02W, h26km, mb5.3/154, MS5.1/155, MW5.5, MW5.7, MD5.4(SNET), Error ellipse: s-maj=6.3km s-min=4.1km az=217.0, Moment Tensor Solution. s64 Moment tensor: Scale 10^{17}Nm; M_{rr}2.02; $M_{\theta\theta}$0.38; $M_{\phi\phi}$-2.40; $M_{r\theta}$0.19; $M_{\theta\phi}$0.70; $M_{\phi r}$-0.19; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s161.00000°, δ48.00000°, λ83.00000°. NP2:ϕ_s352.00000°, δ42.00000°, λ98.00000°. Principal axes: T 2.0400, Plg83.0000°, Azm14.0000°; N 0.5300, Plg5.0000°, Azm166.0000°; P -2.5800, Plg2.0000°, Azm256.0000°;*
NEIC Felt [II] at Guatemala. Also felt at Antigua Guatemala and Ciudad Vieja. Felt [III] at San Salvador, El Salvador.
MOS ***27*** *11:27:55.9±1.3, 13°.82N×90°.92W, h33km, mb5.3/42, MS5.0/44 Error ellipse: s-maj=10.4km s-min=4.7km az=108.1*
GCMT ***27*** *11:27:55.8±0.1, 13°.45N×91°.39W, h29km, MW5.7/95, Moment Tensor Solution. s95,c179; s87,c232; Duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.96±.05; $M_{\theta\theta}$-2.65±.04; $M_{\phi\phi}$-0.31±.04; $M_{r\theta}$1.96±.07; $M_{\theta\phi}$1.32±.03; $M_{\phi r}$-1.37±.09; Best double couple: $M_0$3.91900×10^{17} NP1:ϕ_s287.00000°, δ27.00000°, λ77.00000°. NP2:ϕ_s121.00000°, δ64.00000°, λ97.00000°. Principal axes: T 3.8000, Plg70.0000°, Azm45.0000°; N 0.2340, Plg6.0000°, Azm298.0000°; P -4.0390, Plg19.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
CASC ***27*** *11:27:57.2±2.1, 13°.59N×91°.12W, h22km±14km, MD4.8, ML5.1, mb5.7(NEIC)*
ISCJB ***27*** *11:27:59.6±0.3, 13°.69N±0°.03×90°.97W±0°.02, h76km±3km, mb5.1/179, Error ellipse: s-maj=5.5km s-min=2.6km az=33.6*
IDC ***27*** *11:28:01.5±1.7, 13°.77N×90°.74W, h76km±14km, mb4.5/21, mb1 4.7/23, mb1mx4.6/26, mbtmp4.5/23, MS5.0/25, Ms1 5.0/25, ms1mx4.9/34, Error ellipse: s-maj=19.8km s-min=9.1km az=55.0*
ISC 27 11:28:01.2±0.3, 13°.75N±0°.03×90°.92W±0°.02, h71km±2km, h65km±11.0km; pP-P, n967, σ0=91/836, mb5.1/178, 193C-224D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.70**	**6**	*e*P	**Pn**	**11 28 14.3**	**-1.9**
PCG	**Pacaya**	**0.71**	**25**	*e*P	**Pn**	**11 28 15.2**	**-1.1**
FG6		**0.81**	**2**	*e*P	**Pn**	**11 28 15.4**	**-2.0**
JAT	**Jato**	**0.90**	**309**	*e*P	**Pn**	**11 28 13.1**	**-5.5**
GCG	**Guatemala City**	**0.91**	**24**	*e*P	**Pn**	**11 28 18.2**	**-0.5**
NBG	**Las Nubes**	**1.00**	**34**	*e*P	**Pn**	**11 28 20.4**	**+0.7**
NBG				*e*S	**Sn**	**11 28 37.5**	**+4.0**
TP2	**Tecpan 2**	**1.03**	**354**	*e*P	**Pn**	**11 28 18.8**	**-1.4**
SONS		**1.17**	**90**	*e*P	**Pn**	**11 28 20.3**	**-1.5**
SONS				*e*S	**Sn**	**11 28 40.6**	**+3.3**
SONS				AML	AML	11 28 49.6	
	comp=Z,25μm,0.3s						
RTR	**El Retiro**	**1.25**	**83**	*e*P	**Pn**	**11 28 22.1**	**-0.8**
RBDL	**Robledal**	**1.25**	**73‖**	*e*P	**Pn**	**11 28 22.7**	**-0.3**
SBLS	**San Blas**	**1.26**	**86**	*e*P	**Pn**	**11 28 21.9**	**-1.2**
SNJE	**San Jose**	**1.28**	**85‖**	*e*P	**Pn**	**11 28 22.4**	**-0.9**
APG	**El Apazote**	**1.32**	**19**	P	**Pn**	**11 28 24.3**	**+0.4**
	comp=Z,3μm,0.3s,baz=183,slow=5.5,SNR=7607						
APG				S	**Sn**	**11 28 47.8**	**+6.9**
	comp=Z,937nm,0.3s,baz=52,slow=19,SNR=4.4						
APG				LR	LR	11 29 00.7	
	comp=Z,33μm,21.5s,baz=295,slow=47						
BOQS	**Boqueron**	**1.59**	**90⇑**	*e*P	**Pn**	**11 28 26.5**	**-0.9**
SNET	**Serv Nac Est T**	**1.64**	**92**	*e*P	**Pn**	**11 28 27.4**	**-0.6**
SNET				*e*S	**Sn**	**11 28 50.9**	**+2.5**
SNET				AML	AML	11 29 02.7	
	comp=Z,35μm,0.7s						
MTO2	**Montecristo 2**	**1.64**	**67**	*e*P	**Pn**	**11 28 28.4**	**+0.2**
MTO2				*e*S	**Sn**	**11 28 50.9**	**+2.5**
MRL	**Marmol**	**1.77**	**42**	*e*P	**Pn**	**11 28 31.9**	**+2.1**
LFRS	**El Faro**	**1.81**	**94**	*e*P	**Pn**	**11 28 29.0**	**-1.3**
LBRS	**Las Brisas**	**1.82**	**90**	*e*P	**Pn**	**11 28 30.3**	**-0.2**
SNVI	**San Vicente**	**2.03**	**94**	*e*P	**Pn**	**11 28 33.4**	**+0.2**
BLLM	**Bellamira**	**2.62**	**96**	*e*P	**Pn**	**11 28 41.4**	**+0.1**
BLLM				*e*S	**Sn**	**11 29 14.7**	**+2.6**
CAHU	**Cacacuatique**	**2.63**	**89**	*e*P	**Pn**	**11 28 41.7**	**+0.2**
CAHU				*e*S	**Sn**	**11 29 17.6**	**+5.3**
CCIG	**Comitan**	**2.78**	**335**	*e*P	**Pn**	**11 28 42.4**	**-1.0**
CCIG				*e*S	**Sn**	**11 29 20.6**	**+4.7**
CNCH	**Conchagua**	**3.04**	**99**	*e*P	**Pn**	**11 28 46.8**	**-0.1**
CNCH				*e*S	**Sn**	**11 29 25.1**	**+2.9**
CNCH				AML	AML	11 29 46.7	
	comp=Z,7μm,0.6s						
SCX	**San Cristobal**	**3.40**	**331**	*e*P	**Pn**	**11 28 50.0**	**-1.9**
TGUH	**Tegucigalpa,Un**	**3.55**	**85**	*e*Pn	**Pn**	**11 28 54.0**	**0.0**
TGUH				*e*Sn	**Sn**	**11 29 42.1**	**+7.3**
CRIN	**San Cristobal**	**3.91**	**105**	*e*P	**Pn**	**11 28 59.2**	**+0.4**
CRIN				*e*S	**Sn**	**11 29 45.9**	**+2.4**
CRIN				AML	AML	11 30 04.1	
	comp=E,11μm,0.6s						
CRIN				AML	AML	11 30 06.8	
	comp=N,8μm,0.4s						
CNGN	**Cerro Negro**	**4.29**	**106**	*e*P	**Pn**	**11 29 02.9**	**-1.2**
CNGN				AML	AML	11 30 27.6	
	comp=N,3μm,0.4s						
CSAN		**4.65**	**109**	*e*P	**Pn**	**11 29 07.5**	**-1.5**
APYN	**Apoyeque**	**4.70**	**108**	*e*P	**Pn**	**11 29 09.4**	**-0.3**
MGAN	**Managua**	**4.82**	**109**	*e*P	**Pn**	**11 29 10.0**	**-1.4**
HUEN		**4.83**	**106**	*e*P	**Pn**	**11 29 10.4**	**-1.1**
APON	**Apoyo**	**5.07**	**111**	*e*P	**Pn**	**11 29 14.1**	**-0.6**
HUIG	**Huatulco**	**5.41**	**292**	*e*P	**Pn**	**11 29 12.7**	**-6.6**
HUIG				*e*S	**Sn**	**11 30 01.6**	**-19**
SSN	**San Juan del S**	**5.51**	**116**	*e*P	**Pn**	**11 29 19.8**	**-1.0**
CONN	**Concepcion**	**5.60**	**112**	*e*P	**Pn**	**11 29 22.2**	**+0.1**
VCR	**Vista de Mar**	**6.30**	**124**	*e*P	**Pn**	**11 29 30.6**	**-1.0**
VHO	**Vista Hermosa**	**6.51**	**301**	*e*P	**Pn**	**11 29 30.8**	**-3.6**
VHO				*e*S	**Sn**	**11 30 49.3**	**+2.1**
JTS	**JuntasAbangare**	**6.77**	**120**	Pn	**Pn**	**11 29 37.1**	**-0.9**
	comp=N,2μm,0.5s,SNR=47						
JTS	**JuntasAbangare**	**6.77**	**120**	P	**Pn**	**11 29 38.0**	**0.0**
	comp=N,14nm,0.3s,baz=336,slow=9.7,SNR=41						
JTS				S	**Sn**	**11 30 50.5**	**-3.3**
	baz=15,slow=22,SNR=1.9						
JTS				LR	LR	11 32 29.9	
	comp=N,14μm,18.9s,baz=296,slow=40						
JTS	**JuntasAbangare**	**6.77**	**120**	P	**Pn**	**11 29 38.0**	**0.0**
JTS				S	**Sn**	**11 30 50.5**	**-3.2**
JCR	**Jicaral**	**6.88**	**124**	*e*P	**Pn**	**11 29 38.9**	**-0.6**
TEIG	**Tepich**	**6.92**	**21**	S	**Sn**	**11 31 09.9**	**+13**
TEIG				LR	LR	11 32 05.3	
	comp=N,3μm,21.3s,baz=312,slow=36						
TEIG	**Tepich**	**6.92**	**21**	*e*Pn	**Pn**	**11 29 41.5**	**+1.5**
	comp=N,2μm,0.7s						
CGA2	**Cerro Gallo 2**	**7.32**	**120**	*e*P	**Pn**	**11 29 47.2**	**+1.6**
PNIG	**Pinotepa**	**7.44**	**292**	*e*P	**Pn**	**11 29 40.9**	**-6.2**
PNIG				*e*S	**Sn**	**11 30 55.1**	**-15**
PRS1	**Puriscal**	**7.47**	**119**	*e*P	**Pn**	**11 29 49.3**	**+1.7**
LAJ	**Bijagual**	**7.69**	**119**	*e*P	**Pn**	**11 29 46.6**	**-4.0**
QCR	**Quepos**	**7.89**	**122**	*e*P	**Pn**	**11 29 53.9**	**+0.6**
URSC	**Urasca**	**8.00**	**118**	*e*P	**Pn**	**11 29 55.4**	**+0.6**
BUS	**Buena Vista**	**8.16**	**120**	*e*P	**Pn**	**11 29 58.5**	**+1.6**
LIO	**Limon**	**8.56**	**115**	*e*P	**Pn**	**11 30 04.6**	**+2.0**
BAR1		**8.70**	**120⇑**	*e*P	**Pn**	**11 30 04.9**	**+0.6**
ACX	**Acapulco**	**9.22**	**291**	*e*P	**Pn**	**11 30 06.0**	**-5.4**
SOR	**Soroa**	**11.71**	**39**	*e*P	**Pn**	**11 30 47.2**	**+1.7**
SOR				*e*S	**Sn**	**11 33 05.3**	**+11**
BCIP	**Isla Barro Col**	**11.78**	**112**	*e*Pn	**Pn**	**11 30 45.6**	**-0.7**
MTDJ	**Mount Denham**	**13.62**	**69**	*e*Pn	**Pn**	**11 31 14.4**	**+3.2**
PAYG	**Puerto Ayora**	**14.34**	**177**	*e*Pn	**Pn**	**11 31 18.8**	**-2.0**
	comp=N,1μm,2.3s						
LMGC	**Las Mercedes**	**14.71**	**63**	*e*P	**Pn**	**11 31 27.0**	**+1.4**
	baz=249						
LMGC				*e*S	**Sn**	**11 34 27.4**	**+20**
	comp=N,4μm,17.6s						
LMGC				*e*			
	comp=E,3μm,20.6s						
RCC	**Rio Carpintero**	**15.83**	**65**	*e*P	**Pn**	**11 31 39.6**	**-0.3**
GTBY	**Guantanamo Bay**	**16.32**	**66**	*e*P	**Pn**	**11 31 46.5**	**+0.4**
	comp=E,202nm,1.4s						
MOAC	**Moa**	**16.71**	**64**	*e*P	**Pn**	**11 31 58.5**	**+7.6**
HKT	**Hockley**	**16.75**	**345**	*e*P	**Pn**	**11 31 52.3**	**+1.0**
HKT				pmax	pmax		
	comp=Z,366nm,1.6s						
HKT	**Hockley**	**16.75**	**345**	*e*P	**Pn**	**11 31 52.3**	**+1.0**
	comp=Z,366nm,1.6s						
DWPF	**Disney**	**16.80**	**30**	*e*P	**Pn**	**11 31 56.4**	**+4.5**
	comp=Z,308nm,1.2s						
MASC	**Masc**	**17.19**	**66**	*e*P	**Pn**	**11 31 58.7**	**+1.9**
BRAL	**Brewton**	**17.54**	**11**	*e*P	**Pn**	**11 32 00.7**	**-0.4**
	comp=Z,240nm,0.9s						
OTAV	**Otavalo**	**18.24**	**136**	*e*P	**Pn**	**11 32 10.1**	**+0.4**
	comp=Z,24nm,1.0s						
OTAV				*e*Sn		11 32 10.2	
NATX	**Nacogdoches**	**18.25**	**350**	*e*P	**Pn**	**11 32 11.0**	**+1.4**
	comp=Z,1μm,2.3s						
JCT	**Junction City**	**18.56**	**335**	*e*P	**Pn**	**11 32 12.9**	**-0.4**
JCT				pmax	pmax		
	comp=Z,216nm,1.6s						
JCT	**Junction City**	**18.56**	**335**	*e*P	**Pn**	**11 32 12.9**	**-0.4**
	comp=Z,216nm,1.6s						
ROSC	**El Rosal**	**18.59**	**117**	P	**Pn**	**11 32 16.2**	**+2.3**
	comp=Z,2.7nm,0.3s,baz=84,slow=24,SNR=20						
ROSC				S	**S**	**11 35 49.7**	**+8.5**
	comp=Z,1.0nm,0.3s,baz=278,slow=22,SNR=2.2						
ROSC	**El Rosal**	**18.59**	**117**	*e*P	**Pn**	**11 32 17.2**	**+3.3**
628A	**Black Gap, Mar**	**19.19**	**327**	⇓P	**Pn**	**11 32 20.0**	**-0.8**
	baz=19,SNR=75						
628A				⇑S	**S**	**11 35 58.4**	**+5.4**
	baz=19						
627A	**Terlingua Ranc**	**19.43**	**326**	⇑P	**Pn**	**11 32 22.8**	**-1.0**
	baz=20,SNR=120						
627A				⇑S	**S**	**11 36 04.1**	**+6.2**
	baz=20						
TXAR	**Lajitas Array**	**19.50**	**325**	P	**Pn**	**11 32 23.1**	**-1.5**
	comp=Z,3.5nm,0.3s,baz=152,slow=12,SNR=308						
TXAR				PcP	PcP	11 36 43.4	+2.4
	comp=Z,0.3nm,0.3s,baz=172,slow=2.5,SNR=4.6						
LRAL	**Lakeview Retre**	**19.53**	**10**	*e*P	**Pn**	**11 32 24.4**	**-0.5**
	comp=Z,104nm,1.0s						
SDDR	**Presa de Saban**	**19.54**	**72**	*e*P	**Pn**	**11 32 26.7**	**+1.6**
	comp=Z,53nm,1.0s						
528A	**Cox Ranch, San**	**19.67**	**328**	⇓P	**Pn**	**11 32 24.6**	**-2.0**
	baz=20,SNR=48						
528A				⇑S	**S**	**11 36 07.6**	**+5.0**
	baz=20						
626A	**Big Bend Ranch**	**19.93**	**324**	⇑P	**Pn**	**11 32 27.7**	**-1.8**
	baz=20,SNR=183						
428A	**Kincaid Ranch,**	**20.07**	**329**	⇓P	**P**	**11 32 28.9**	**0.0**
	baz=20,SNR=66						
428A				⇓S	**S**	**11 36 16.4**	**+5.7**
	baz=20						
527A	**Woodward Ranch**	**20.09**	**326**	⇑P	**P**	**11 32 29.1**	**0.0**
	baz=20,SNR=190						
526A	**Mary Lane Ranc**	**20.29**	**325**	⇓P	**P**	**11 32 31.6**	**+0.4**
	baz=20,SNR=95						
GRTK	**Grand Turk**	**20.36**	**65**	PFAKE		11 32 40.0	+7.9
GRTK				LR	LR		
	comp=Z,3μm,20.0s						
SDV	**Santo Domingo**	**20.46**	**102**	P	**P**	**11 32 32.2**	**-1.1**
	comp=Z,20nm,0.6s,baz=324,slow=9.0,SNR=32						
SDV				LR	LR	11 41 40.3	
	comp=Z,3μm,18.6s,baz=306,slow=40						
SDV	**Santo Domingo**	**20.46**	**102**	*e*P	**P**	**11 32 32.4**	**-0.9**
	comp=Z,62nm,0.9s						
SDV				LR	LR		
	comp=Z,1μm,19.0s						
427A	**Hayter Ranch,**	**20.54**	**328**	⇓P	**P**	**11 32 33.8**	**-0.1**
	baz=21,SNR=91						
328A	**Wristen Ranch,**	**20.67**	**330**	⇑P	**P**	**11 32 35.3**	**-0.1**
	baz=21,SNR=166						
GOGA	**Godfrey**	**20.72**	**18**	*e*P	**P**	**11 32 36.1**	**+0.3**
GOGA				pmax	pmax		
	comp=Z,113nm,1.0s						
GOGA				MLR	MLR		
	comp=Z,4μm,21.0s						
GOGA	**Godfrey**	**20.72**	**18**	*e*P	**P**	**11 32 36.1**	**+0.3**
	comp=Z,113nm,1.0s						
GOGA				LR	LR		
	comp=Z,4μm,21.0s						
426A	**McDonald Obser**	**20.72**	**326**	⇑P	**P**	**11 32 36.0**	**0.0**
	baz=21,SNR=185						
MIAR	**Mount Ida**	**20.84**	**354**	*e*P	**P**	**11 32 36.2**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,169nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,3μm,19.0s						
MIAR	**Mount Ida**	**20.84**	**354**	*e*P	**P**	**11 32 36.2**	**-1.0**
	comp=Z,169nm,1.2s						
MIAR				LR	LR		
	comp=Z,3μm,19.0s						
UALR	**University of**	**20.97**	**357**	*e*P	**P**	**11 32 38.5**	**-0.1**
	comp=Z,183nm,1.3s						
327A	**Balmorhea Ranc**	**21.00**	**329**	⇑P	**P**	**11 32 38.4**	**-0.5**
	baz=21,SNR=19						
326A	**Caldwell Ranch**	**21.21**	**328**	⇑P	**P**	**11 32 41.0**	**-0.1**
	baz=21,SNR=504						
PLAL	**Pickwick Lake**	**21.30**	**6**	*e*P	**P**	**11 32 41.4**	**-0.6**
	comp=Z,176nm,1.4s,mb5.2						
PLAL				LR	LR		
	comp=Z,4μm,20.0s						
425A	**Indio Mountain**	**21.34**	**325**	⇓P	**P**	**11 32 41.5**	**-1.0**
	baz=21,SNR=389						
227A	**Bennet, Jal**	**21.42**	**330**	⇑P	**P**	**11 32 42.7**	**-0.7**
	baz=22,SNR=74						
NHSC	**New Hope**	**21.61**	**25**	*e*P	**P**	**11 32 47.8**	**+2.4**
	comp=Z,286nm,1.1s,mb5.5						
NHSC				LR	LR		
	comp=Z,5μm,20.0s						
COW	**Cow Castle Cre**	**21.64**	**24**	*e*P	**P**	**11 32 49.5**	**+3.7**
HBAR	**Harrisburg**	**21.71**	**1**	*e*P	**P**	**11 32 46.7**	**+0.2**
325A	**Bean Ranch, Si**	**21.78**	**326**	⇑P	**P**	**11 32 46.2**	**-1.0**
	baz=22,SNR=138						
SWET	**Sewanee**	**21.84**	**11**	*e*P	**P**	**11 32 48.4**	**+0.6**
226A	**Malaga, Loving**	**21.86**	**329**	⇑P	**P**	**11 32 47.2**	**-0.9**
	baz=22,SNR=137						
CLNB	**Carlsbad**	**21.91**	**329**	*e*P	**P**	**11 32 48.5**	**-0.2**
	comp=Z,34nm,0.7s,mb4.8						
127A	**Arkansas Junct**	**22.00**	**331**	⇓P	**P**	**11 32 47.4**	**-2.1**
	baz=22,SNR=24						
WMOK	**Wichita Mounta**	**22.07**	**343**	*e*P	**P**	**11 32 48.6**	**-1.7**
WMOK				pmax	pmax		
	comp=Z,178nm,1.4s,mb5.2						
WMOK				MLR	MLR		
	comp=Z,4μm,20.0s						
WMOK	**Wichita Mounta**	**22.07**	**343**	*e*P	**P**	**11 32 48.5**	**-1.8**
	comp=Z,178nm,1.4s,mb5.2						
WMOK				LR	LR		
	comp=Z,4μm,20.0s						
GDL2	**Guadalupe Moun**	**22.11**	**328**	*e*P	**P**	**11 32 50.2**	**-0.5**
324A	**Moseley Ranch,**	**22.11**	**325**	⇓P	**P**	**11 32 49.7**	**-1.1**
	baz=22,SNR=190						
GNAR	**Gosnell**	**22.14**	**2**	*e*P	**P**	**11 32 52.5**	**+1.6**
	comp=Z,1μm,1.0s,mb6.2						
JSC	**Jenkinsville**	**22.24**	**22**	*e*P	**P**	**11 32 53.2**	**+1.1**
MNTX	**Cornudas Mount**	**22.25**	**326**	*e*P	**P**	**11 32 50.4**	**-1.9**
	comp=Z,104nm,0.8s,mb5.2						
MNTX				LR	LR		
	comp=Z,2μm,20.0s						
225A	**Deer Hill, Car**	**22.27**	**327**	⇓P	**P**	**11 32 51.8**	**-0.7**
	baz=22,SNR=215						
126A	**Clayton Basin,**	**22.29**	**330**	⇑P	**P**	**11 32 50.7**	**-2.0**
	baz=22,SNR=42						
CPCT	**Cooper Cave**	**22.36**	**14**	*e*P	**P**	**11 32 53.9**	**+0.5**
WVT	**Waverly**	**22.46**	**7**	*e*P	**P**	**11 32 52.8**	**-1.6**
WVT				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.0						
WVT				MLR	MLR		
	comp=Z,6μm,22.0s						
WVT	**Waverly**	**22.46**	**7**	*e*P	**P**	**11 32 52.8**	**-1.6**
	comp=Z,76nm,1.0s,mb5.0						
WVT				LR	LR		
	comp=Z,6μm,22.0s						
Z27A	**Tatum**	**22.47**	**332**	⇑P	**P**	**11 32 51.7**	**-2.8**
	baz=23,SNR=62						
GLAT	**Glass**	**22.47**	**3**	*e*P	**P**	**11 32 55.2**	**+0.7**
CPRX	**Cap Rock**	**22.53**	**331**	*e*P	**P**	**11 32 53.2**	**-2.0**
	comp=Z,129nm,1.0s,mb5.2						
224A	**Corundas Mount**	**22.62**	**326**	⇑P	**P**	**11 32 54.6**	**-1.5**
	baz=23,SNR=276						
125A	**Gardner Draw,**	**22.62**	**329**	⇓P	**P**	**11 32 54.7**	**-1.5**
	baz=23,SNR=88						
TKL	**Tuckaleechee C**	**22.74**	**15**	P	**P**	**11 32 58.0**	**+0.6**
	comp=Z,44nm,0.5s,mb5.0,baz=185,slow=11,SNR=46						
TKL				S	**S**	**11 37 09.9**	**+9.0**
	comp=Z,8.2nm,0.9s,baz=134,slow=23,SNR=2.3						
TKL				LR	LR	11 42 22.7	
	comp=Z,5μm,21.8s,baz=235,slow=38						
TKL	**Tuckaleechee C**	**22.74**	**15**	*e*P	**P**	**11 32 57.8**	**+0.4**
MSTX	**Muleshoe**	**22.83**	**334**	⇑P	**P**	**11 32 55.4**	**-2.9**
	baz=23,SNR=26						
PARMO	**Parma**	**22.84**	**2**	*e*P	**P**	**11 32 59.3**	**+0.9**
Y27A	**Causey**	**22.92**	**333**	⇓P	**P**	**11 32 56.1**	**-3.2**
	baz=23,SNR=52						
124A	**Stringfield Ra**	**23.07**	**327**	⇓P	**P**	**11 33 00.6**	**-0.3**
	baz=23,SNR=582						
223A	**Chaparral, Ant**	**23.07**	**325**	⇑P	**P**	**11 32 59.0**	**-1.8**
	baz=23,SNR=12						
Z25A	**Roswell**	**23.15**	**329**	⇓P	**P**	**11 32 59.9**	**-1.7**
	baz=23						
AMTX	**Amarillo**	**23.18**	**337**	*e*P	**P**	**11 33 00.6**	**-1.2**
	comp=Z,115nm,0.6s,mb5.4						
AMTX				LR	LR		
	comp=Z,3μm,21.0s						
Y26A	**Elida**	**23.25**	**332**	⇓P	**P**	**11 33 00.1**	**-2.4**
	baz=23,SNR=22						
123A	**Bell Site, Whi**	**23.45**	**326**	⇓P

X24A Lazy VL Ranch, 24.54 330 ⇑P P 11 33 13.9 -0.3
baz=25,SNR=19
W25A X Bar L Ranch, 24.62 333 ⇑P P 11 33 14.4 -0.6
baz=25,SNR=44
WCI Wyandotte Cave 24.73 9 eP P 11 33 15.5 -0.4
WCI pmax pmax
comp=Z,115nm,0.8s,mb5.4
WCI MLR MLR
comp=Z,4µm,20.0s
WCI Wyandotte Cave 24.73 9 eP P 11 33 15.5 -0.3
comp=Z,115nm,0.8s,mb5.4
WCI LR LR
comp=Z,4µm,20.0s
Z21A St. Cloud Mine 24.73 325 ⇑P P 11 33 16.5 +0.5
baz=25,SNR=93
120A U Bar Ranch, L 24.74 322 ⇑P P 11 33 17.0 +0.9
baz=25,SNR=84
219A White Tail Can 24.74 320 ⇓P P 11 33 16.6 +0.5
baz=25,SNR=91
MTP Monte Pirata 24.76 77 eP P 11 33 14.1 -2.4
comp=Z,24nm,0.7s,mb4.7
SLM Saint Louis 24.80 1 eP P 11 33 17.6 +1.1
SLM pmax pmax
comp=Z,58nm,0.6s,mb5.2
SLM Saint Louis 24.80 1 eP P 11 33 17.6 +1.1
comp=Z,58nm,0.6s,mb5.2
BNM Barren Site 24.81 328 eP P 11 33 17.6 +0.9
comp=Z,92nm,0.9s,mb5.2
V26A Tequesquite Ra 24.82 334 ⇓P P 11 33 16.2 -0.6
baz=25,SNR=37
Y22A Socorro 24.82 327 ⇓P P 11 33 17.3 +0.5
baz=25,SNR=95
318A Bisbee 24.83 318 ⇓P P 11 33 17.0 +0.1
baz=25,SNR=142
Y22D IRIS PASSCAL I 24.90 327 ⇓P P 11 33 18.0 +0.5
baz=25,SNR=19
LPM Los Pinos Moun 24.93 328 eP P 11 33 18.4 +0.6
LENM Lemitar 25.00 327 eP P 11 33 19.7 +1.2
OLIL Olney 25.01 5 eP P 11 33 18.9 +0.4
comp=Z,266nm,1.6s,mb5.4
W24A Lazy 6 Ranch, 25.05 331 ⇓P P 11 33 18.8 -0.1
baz=25,SNR=40
ELN Prospectdale 25.08 19 eP P 11 33 19.3 +0.2
Z20A Nine Sixteen R 25.12 323 ⇓P P 11 33 20.5 +0.9
baz=25,SNR=67
BLA Blacksburg 25.18 20 eP P 11 33 20.6 +0.6
BLA pmax pmax
comp=Z,75nm,0.9s,mb5.1
BLA MLR MLR
comp=Z,3µm,19.0s
BLA Blacksburg 25.18 20 eP P 11 33 20.6 +0.6
comp=Z,75nm,0.9s,mb5.1
BLA LR LR
comp=Z,3µm,19.0s
218A Dragoon 25.22 319 ⇑P P 11 33 20.9 +0.5
baz=25,SNR=46
Y21A Point of Rocks 25.26 326 ⇓P P 11 33 22.0 +1.2
baz=25,SNR=122
LAZ Ladron 25.27 327 eP P 11 33 21.6 +0.7
comp=Z,35nm,0.9s,mb4.8
X22A Bernardo 25.28 328 ⇓P P 11 33 21.9 +0.9
baz=25,SNR=49
U26A Atchley Ranch, 25.31 335 ⇓P P 11 33 20.4 -0.9
baz=25,SNR=62
ANMO Albuquerque 25.35 329 P P 11 33 21.9 +0.2
comp=Z,22nm,0.7s,mb4.7,baz=146,slow=11,SNR=63
ANMO PcP PcP 11 36 53.9 +1.1
comp=Z,3.0nm,0.7s,baz=180,slow=5.1,SNR=4.0
ANMO Albuquerque 25.35 329 eP P 11 33 21.9 +0.3
ANMO pmax pmax
comp=Z,22nm,0.8s
ANMO MLR MLR
comp=Z,2µm,19.0s
ANMO Albuquerque 25.35 329 eP P 11 33 21.9 +0.3
comp=Z,22nm,0.8s,mb4.6
ANMO LR LR
comp=Z,2µm,19.0s
VWCC Virginia Weste 25.36 21 eP P 11 33 22.8 +1.1
W23A Werner Place, 25.36 330 ⇑P P 11 33 21.4 -0.4
baz=26,SNR=44
Y20A Horse Springs, 25.57 325 ⇑P P 11 33 24.6 +1.0
baz=26,SNR=264
217A Green Valley 25.58 318 ⇑P P 11 33 23.8 +0.1
baz=26,SNR=66
118A Homack Ranch, 25.61 320 ⇓P P 11 33 24.5 +0.4
baz=26,SNR=44
BLO Bloomington 25.62 8 eP P 11 33 22.2 -1.8
BLO pmax pmax
comp=Z,23nm,0.6s,mb4.8
BLO Bloomington 25.62 8 eP P 11 33 22.1 -1.8
comp=Z,23nm,0.6s,mb4.8
Z19A T-Link Ranch, 25.64 322 ⇑P P 11 33 24.9 +0.6
baz=26,SNR=8.0
X21A Alamocita Cree 25.65 326 ⇑P P 11 33 25.1 +0.8
baz=26,SNR=325
W22A Albuquerque 25.65 329 ⇓P P 11 33 24.8 +0.5
baz=26,SNR=48
KSU1 Kansas State U 25.75 350 eP P 11 33 24.2 -0.9
comp=Z,58nm,1.0s,mb5.0
KSU1 LR LR
comp=Z,3µm,21.0s
V23A Ortiz Mt. (NFS 25.85 331 ⇑P P 11 33 26.4 +0.3
baz=26,SNR=46
TUC Tucson 25.91 319 eP P 11 33 26.7 0.0
TUC pmax pmax
comp=Z,51nm,1.0s,mb4.9
TUC MLR MLR
comp=Z,9µm,19.0s
TUC Tucson 25.91 319 eP P 11 33 26.7 0.0
comp=Z,51nm,1.0s,mb4.9
TUC LR LR
comp=Z,9µm,19.0s
PCRV Puerto La Cruz 25.95 95 P P 11 33 27.5 +0.3
comp=Z,6.7nm,0.6s,mb4.2,baz=290,slow=8.4,SNR=3.3
117A Oracle 26.05 319 ⇑P P 11 33 27.9 -0.1
baz=26,SNR=46
W21A San Fidel 26.09 328 ⇓P P 11 33 28.7 +0.4
baz=26,SNR=36
Y19A Nutrioso 26.11 324 ⇓P P 11 33 29.2 +0.8
baz=26,SNR=73
X20A Quemado 26.11 325 ⇑P P 11 33 29.5 +1.0
baz=26,SNR=92
216A Three Points, 26.15 317 ⇑P P 11 33 28.7 -0.2
baz=26,SNR=33
CBKS Cedar Bluff 26.16 344 PFAKE 11 33 40.0 +11
CBKS LR LR
comp=Z,3µm,22.0s
V22A San Miguel Ran 26.34 330 ⇑P P 11 33 30.7 +0.2
baz=26,SNR=29
Z17A San Carlos Hig 26.37 321 ⇓P P 11 33 31.1 +0.2
baz=26
X19A St. Johns 26.47 324 ⇑P P 11 33 32.5 +0.8
baz=27,SNR=68
V21A Milan 26.61 329 ⇓P P 11 33 33.9 +0.9
baz=27,SNR=45
116A Eloy 26.66 318 ⇓P P 11 33 33.4 -0.1
baz=27,SNR=41
HDIL Hopedale 26.74 3 PFAKE 11 33 50.0 +16
HDIL LR LR
comp=Z,3µm,20.0s
Y17A Roosevelt 26.87 321 ⇓P P 11 33 35.7 +0.3
baz=27,SNR=15
X18A Snowflake 26.92 324 ⇓P P 11 33 36.3 +0.5
baz=27,SNR=60
Z16A Peralta Trail, 26.99 320 ⇑P P 11 33 36.2 -0.2
baz=27,SNR=26
W19A Sanders 27.02 325 ⇓P P 11 33 37.2 +0.5
baz=27,SNR=21
214A Organ Pipe Nat 27.02 316 ⇓P P 11 33 36.7 -0.1
baz=27,SNR=43
V20A Brimhall 27.04 327 ⇓P P 11 33 37.1 +0.3
baz=27,SNR=25
115A Sonoran Desert 27.09 318 ⇓P P 11 33 37.3 -0.1
baz=27,SNR=28
CBN Corbin 27.16 24 PFAKE 11 33 50.0 +12
CBN LR LR
comp=Z,4µm,20.0s
SDCO Great Sand Dun 27.20 334 eP P 11 33 39.1 +0.8
comp=Z,18nm,1.3s,mb4.4
SDCO LR LR
comp=Z,2µm,21.0s
T22A Edith 27.22 331 ⇓P P 11 33 38.5 +0.1
baz=27,SNR=12
V19A Window Rock 27.28 326 ⇓P P 11 33 39.5 +0.5
baz=27,SNR=13
X17A Forest Lakes 27.29 322 ⇑P P 11 33 40.0 +0.9
baz=27,SNR=32
ACSO Alum Creek Sta 27.29 13 eP P 11 33 38.7 -0.3
comp=Z,293nm,1.6s,mb5.6
ACSO LR LR
comp=Z,4µm,21.0s
Y16A Circle Bar Ran 27.38 321 ⇓P P 11 33 40.0 0.0
baz=28,SNR=19
Z15A Gila River Ind 27.42 319 ⇑P P 11 33 40.1 -0.2
baz=28
U20A Newcomb 27.51 328 ⇑P P 11 33 41.2 +0.1
baz=28,SNR=22
114A Black Gap (USA 27.56 317 ⇓P P 11 33 41.6 +0.1
baz=28,SNR=31
MCWV Mont Chateau 27.59 19 PFAKE 11 33 50.0 +8.3
MCWV LR LR
comp=Z,5µm,19.0s
X16A Lo Mia Camp, P 27.72 321 ⇓P P 11 33 43.2 +0.3
baz=28,SNR=54
V18A Ganado 27.76 325 ⇓P P 11 33 43.3 0.0
baz=28,SNR=40
U19A Dine' College, 27.80 327 ⇑P P 11 33 43.6 -0.1
baz=28,SNR=64
Y15A Casa Rosa Ranc 27.96 320 ⇑P P 11 33 45.3 +0.1
baz=28,SNR=27
Z14A Wintersburg 27.98 318 ⇓P P 11 33 45.2 -0.1
baz=28,SNR=12
T19A Beclabito 28.11 328 ⇑P P 11 33 46.4 0.0
baz=28,SNR=29
SCIA State Center 28.13 356 PFAKE 11 34 00.0 +14
SCIA LR LR
comp=Z,2µm,22.0s
MVCO Mesa Verde 28.14 329 ⇑P P 11 33 46.9 +0.2
baz=28,SNR=52
MVCO Mesa Verde 28.14 329 eP P 11 33 47.1 +0.4
comp=Z,61nm,1.1s,mb5.0
MVCO LR LR
comp=Z,2µm,19.0s
113A Mohawk Valley, 28.16 316 ⇑P P 11 33 46.5 -0.3
baz=28,SNR=29
S21A Coal Bank Pass 28.16 331 ⇑P P 11 33 46.9 +0.1
baz=28,SNR=17
V17A Tonalea, Kykot 28.18 324 ⇑P P 11 33 47.8 +0.8
baz=28,SNR=114
W16A Flagstaff 28.24 322 ⇑P P 11 33 48.1 +0.6
baz=28,SNR=11
U18A Rough Rock, Ch 28.25 326 ⇑P P 11 33 47.9 +0.2
baz=28,SNR=34
X15A Humboldt 28.25 321 ⇓P P 11 33 48.2 +0.5
baz=28,SNR=18
ANWB Willy Bob 28.30 78 PFAKE 11 34 00.0 +12
ANWB LR LR
comp=Z,4µm,19.0s
Z13A Yuma Proving G 28.34 317 ⇓P P 11 33 48.5 0.0
baz=28,SNR=33
Y14A Wickenburg 28.38 319 ⇑P P 11 33 48.7 -0.2
baz=28,SNR=16
SDMD Soldier's Deli 28.41 23 eP P 11 33 49.4 +0.3
comp=Z,27nm,0.6s,mb5.0
WUAZ Wupatki 28.44 323 ⇓P P 11 33 49.9 +0.6
baz=28,SNR=57
WUAZ Wupatki 28.44 323 eP P 11 33 50.0 +0.7
comp=Z,61nm,0.9s,mb5.1
WUAZ LR LR
comp=Z,5µm,19.0s
GRGR Grenville 28.56 90 PFAKE 11 34 00.0 +9.3
GRGR LR LR
comp=Z,1µm,19.0s
112A Yuma 28.57 315 ⇑P P 11 33 50.1 -0.5
baz=29
R21A Cimarron 28.61 332 ⇑P P 11 33 51.1 +0.2
baz=29
X14A Yava 28.65 320 ⇑P P 11 33 51.3 0.0
baz=29,SNR=12
Q22A Crested Butte, 28.73 333 ⇓P P 11 33 51.8 -0.1
baz=29
W15A Williams 28.74 322 ⇓P P 11 33 52.8 +0.8
baz=29,SNR=9.1
OGNE Ogallala 28.78 342 PFAKE 11 34 00.0 +7.7
OGNE LR LR
comp=Z,1µm,19.0s
T18A Mexican Hat 28.79 327 ⇑P P 11 33 52.5 0.0
baz=29,SNR=51
U17A Shonto 28.81 326 ⇓P P 11 33 53.4 +0.7
baz=29,SNR=58
Y13A Salome 28.83 318 ⇑P P 11 33 52.9 0.0
baz=29,SNR=20
R20A Redvale 28.86 331 ⇓P P 11 33 53.4 +0.4
baz=29,SNR=17
FDF Fort de France 28.86 84 PFAKE 11 34 10.0 +17
FDF LR LR
comp=Z,5µm,19.0s
S19A Harvey Farm, M 28.88 329 ⇑P P 11 33 53.5 +0.3
baz=29,SNR=47
PV01 Paradox Valley 28.91 330 eP P 11 33 55.0 +1.5
comp=Z,2µm,1.0s
ISCO Idaho Springs 28.99 336 eP P 11 33 55.4 +1.2
ISCO pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
ISCO MLR MLR
comp=Z,2µm,21.0s
ISCO Idaho Springs 28.99 336 eP P 11 33 55.4 +1.2
comp=Z,7.4nm,0.9s,mb4.3
ISCO LR LR
comp=Z,2µm,21.0s
Q21A Lamborn Mesa, 29.01 333 ⇓P P 11 33 54.4 +0.1
baz=29
SMCO Snowmass 29.02 334 eP P 11 33 55.2 +0.7
comp=Z,13nm,1.1s,mb4.5
GLA Glamis 29.04 315 ⇓P P 11 33 54.7 -0.1
baz=29,SNR=14
GLA Glamis 29.04 315 eP P 11 33 54.7 -0.1
GLA pmax pmax
comp=Z,48nm,1.1s,mb5.0
GLA Glamis 29.04 315 eP P 11 33 54.7 0.0
comp=Z,48nm,1.1s,mb5.0
JFWS Jewell Farm 29.07 1 eP P 11 33 54.5 -0.3
JFWS pmax pmax
comp=Z,32nm,0.8s,mb5.0
JFWS MLR MLR
comp=Z,3µm,20.0s
JFWS Jewell Farm 29.07 1 eP P 11 33 54.5 -0.3
comp=Z,32nm,0.8s,mb5.0
JFWS LR LR
comp=Z,3µm,20.0s
SSPA Standing Stone 29.11 21 eP P 11 33 55.2 0.0
comp=Z,9.9nm,0.6s,mb4.6
SSPA LR LR
comp=Z,3µm,19.0s
MVL Millersville 29.11 23 eP P 11 33 56.5 +1.2
comp=Z,12nm,0.8s,mb4.6
V15A Kaibab Nationa 29.12 323 ⇓P P 11 33 56.3 +0.9
baz=29,SNR=84
NNA Nana 29.13 151 LR LR 11 43 24.2
comp=Z,3µm,20.8s,baz=335,slow=32
AAM Ann Arbor 29.14 11 PFAKE 11 34 10.0 +15
AAM LR LR
comp=Z,3µm,21.0s
T17A Navajo Res., N 29.18 326 ⇓P P 11 33 56.6 +0.6
baz=29,SNR=117
Y12C Blythe 29.25 317 ⇓P P 11 33 56.6 0.0
baz=29,SNR=11
W14A Seligman 29.26 321 ⇓P P 11 33 56.9 +0.3
baz=29,SNR=25
PV04 Paradox Valley 29.27 330 eP P 11 33 57.5 +0.8
S18A Hurst Farm, Bl 29.27 328 ⇑P P 11 33 56.8 +0.1
baz=29
PV10 Paradox Valley 29.32 330 eP P 11 33 57.2 0.0
comp=Z,508nm,1.0s,mb6.1
X13A Yucca 29.32 319 ⇓P P 11 33 57.2 0.0
baz=29,SNR=18
PDMCI Parker Dam,Lak 29.34 318 ⇓P P 11 33 57.3 -0.1
baz=29,SNR=13
R19A Curley Farm, L 29.36 330 ⇑P P 11 33 57.3 -0.3
baz=30,SNR=24
Q20A Ridgley Place, 29.43 332 ⇓P P 11 33 58.0 -0.1
baz=30
V14A Boquillas Ranc 29.55 321 ⇓P P 11 33 59.8 +0.6
baz=30,SNR=43
T16A Glen Canyon Da 29.56 325 ⇑P P 11 34 00.1 +0.9
baz=30,SNR=21
U15A North Rim 29.61 323 ⇓P P 11 34 00.7 +0.9
baz=30,SNR=75
SWSC Sam W. Stewart 29.65 314 ⇑P P 11 34 00.3 +0.2
baz=30,SNR=8.3
S17A Black Ridge (B 29.65 327 ⇑P P 11 34 00.3 +0.2
baz=30,SNR=55
W13A Hualapai Mount 29.68 320 ⇑P P 11 34 01.3 +0.9
baz=30,SNR=9.0
DVTC Desert V Tower 29.70 314 ⇓P P 11 34 00.5 -0.1
baz=30,SNR=7.7
R18A Canyonlands Na 29.75 329 ⇓P P 11 34 00.7 -0.3
baz=30,SNR=33
ERPA Erie 29.81 16 PFAKE 11 34 10.0 +8.6
ERPA LR LR
comp=Z,4µm,19.0s
BC3 Big Chuckw Mtn 29.82 316 ⇓P P 11 34 01.8 +0.2
baz=30,SNR=48
Q19A Hogan Spring (29.89 330 ⇑P P 11 34 02.1 -0.1
baz=30,SNR=15
IRM Iron Mountain 29.91 317 ⇑P P 11 34 02.4 -0.1
baz=30,SNR=27
NEE2 Needles Airpor 29.94 318 ⇑P P 11 34 02.4 -0.3
baz=30
MONP Monument Peak 30.05 314 ⇓P P 11 34 03.7 0.0
baz=30,SNR=5.2
T15A Red Dirt Ranch 30.07 324 ⇑P P 11 34 04.8 +1.0
baz=30,SNR=65
O21A Pagoda 30.10 334 ⇑P P 11 34 04.2 +0.2
baz=30
BAR Barrett 30.12 313 eP P 11 34 05.5 +1.2
comp=Z,24nm,1.4s,mb4.6
U14A Mt Trumbull 30.12 322 ⇑P P 11 34 04.8 +0.5
baz=30,SNR=81
N22A Wattenberg Ran 30.18 336 ⇑P P 11 34 04.7 0.0
baz=30,SNR=13
R17A Hanksville Air 30.19 328 ⇑P P 11 34 05.2 +0.3
baz=30,SNR=91
V13A Grand Canyon W 30.23 321 ⇓P P 11 34 05.6 +0.4
baz=30,SNR=27
ECSD EROS Data Cent 30.28 352 eP P 11 34 04.5 -1.0
comp=Z,61nm,1.7s,mb5.0
ECSD LR LR
comp=Z,2µm,20.0s
BBSR BB Station 30.29 48 eP P 11 34 06.3 +0.5
comp=Z,49nm,0.8s,mb5.2
BBSR LR LR
comp=Z,2µm,20.0s
P19A Cripple Cowboy 30.29 332 ⇓P P 11 34 05.2 -0.5
baz=30,SNR=7.0
O20A White River Ci 30.37 333 ⇓P P 11 34 06.5 +0.2
baz=30,SNR=14
BELC Belle Mtn. 30.39 316 ⇓P P 11 34 06.9 +0.3
baz=30,SNR=17
Q18A Rafter H Ranch 30.42 330 ⇓P P 11 34 06.9 0.0
baz=30,SNR=22
W12A Cal Nev Ari 30.43 319 ⇑P P 11 34 06.8 -0.2
baz=30
PFO Pinyon Flat Ob 30.48 315 ⇓P P 11 34 07.9 +0.5
baz=30,SNR=9.1
R16A Teasdale 30.49 327 ⇓P P 11 34 08.4 +0.9
baz=31,SNR=194
BBGH Gun Hill 30.50 87 PFAKE 11 34 20.0 +12
BBGH LR LR
comp=Z,5µm,20.0s
T14A Hurricane 30.50 324 ⇑P P 11 34 08.6 +0.9
baz=31,SNR=126
S15A Panguitch 30.53 325 ⇓P P 11 34 09.1 +1.2
baz=31,SNR=92
N21A Black Mountain 30.57 335 ⇓P P 11 34 08.9 +0.7
baz=31,SNR=12
U13A Pakoon Wash 30.59 322 ⇓P P 11 34 09.0 +0.6
baz=31,SNR=63
GMRC Granite Mounta 30.62 317 ⇑P P 11 34 09.3 +0.6
baz=31,SNR=34
SRU San Rafael 30.62 329 ⇓P P 11 34 09.1 +0.4
baz=31,SNR=27
SRU San Rafael 30.62 329 eP P 11 34 09.1 +0.5
SRU pmax pmax
comp=Z,53nm,1.4s,mb5.1
SRU San Rafael 30.62 329 eP P 11 34 09.1 +0.4
comp=Z,54nm,1.4s,mb5.1
V12A Nelson 30.69 320 ⇑P P 11 34 09.8 +0.6
baz=31,SNR=37
Q16A Castle Valley 30.80 328 ⇓P P 11 34 10.9 +0.7
baz=31,SNR=48
R15A Junction 30.86 326 ⇑P P 11 34 11.8 +1.0
baz=31,SNR=63
P18A Preston Nutter 30.89 330 ⇓P P 11 34 11.7 +0.7
baz=31,SNR=20
O19A Miners Draw (B 30.89 332 ⇑P P 11 34 10.9 -0.1
baz=31
U12A Valley of Fire 30.95 321 ⇓P P 11 34 12.3 +0.8
baz=31,SNR=7.3
N20A Spence Gulch, 30.95 334 ⇑P P 11 34 12.1 +0.6
baz=31,SNR=22
T13A Saint George 30.96 323 ⇓P P 11 34 12.8 +1.2
baz=31,SNR=78
MURC Murrieta 30.99 314 ⇓P P 11 34 12.3 +0.4
baz=31,SNR=5.6
CCUT Cedar City 31.00 324 eP P 11 34 13.3 +1.3
comp=Z,76nm,1.0s,mb5.4
P17A Butcher Ranch, 31.01 329 ⇓P P 11 34 12.4 +0.3
baz=31,SNR=37
S14A Cedar City 31.04 324 ⇓P P 11 34 13.6 +1.2
baz=31,SNR=66
MVU Marysvale 31.04 326 PFAKE 11 34 20.0 +7.6
MVU LR LR
comp=Z,5µm,19.0s
HEC Hector,Ludlow 31.09 317 ⇓P P 11 34 13.6 +0.8
baz=31,SNR=22
TMUT Trail Mountain 31.11 329 eP P 11 34 14.1 +1.1
comp=Z,28nm,0.9s,mb5.0
V11A Goodsprings 31.12 319 ⇑P P 11 34 13.8 +0.7
baz=31,SNR=14
BINY Binghamton 31.16 22 eP P 11 34 13.4 +0.1
comp=Z,106nm,1.7s,mb5.3
BINY LR LR
comp=Z,3µm,20.0s
BBRC Big Bear Sol-O 31.16 315 ⇓P P 11 34 14.1 +0.6
baz=31,SNR=10
TUQ Turquoise Moun 31.19 318 ⇓P P 11 34 14.3 +0.6
baz=31,SNR=16
M21A Separation Pea 31.23 336 ⇑P P 11 34 13.8 -0.1
baz=31,SNR=15
L22A Ellis Ranch, M 31.23 337 ⇑P P 11 34 13.9 0.0
baz=31
RWWY Rawlins 31.23 336 eP P 11 34 15.0 +1.1
comp=Z,30nm,1.2s,mb4.9
T12A Moapa 31.25 321 ⇓P P 11 34 14.8 +0.6
baz=31
O18A Roosevelt 31.27 331 ⇓P P 11 34 14.6 +0.3
baz=31,SNR=19
S13A Holt Ranch, En 31.31 323 ⇑P P 11 34 16.2 +1.5
baz=31,SNR=162
R14A James Farms, M 31.34 325 ⇓P P 11 34 15.2 +0.2
baz=31,SNR=8.4
SHPR Sheep Range 31.38 321 eP P 11 34 16.1 +0.8
N19A John Jarvie Ra 31.40 333 ⇑P P 11 34 15.1 -0.3
baz=32,SNR=9.8
GLMI Grayling 31.43 9 PFAKE 11 34 30.0 +14
GLMI LR LR
comp=Z,2µm,22.0s
M20A Sweetwater, Wa 31.46 335 ⇑P P 11 34 15.6 -0.4
baz=32,SNR=7.8
U11A Corn Creek 31.46 320 ⇓P P 11 34 17.1 +1.0
baz=32
Q15A Fillmore 31.49 327 ⇑P P 11 34 16.6 +0.3
baz=32,SNR=90
L21A Rawlins 31.53 336 ⇑P P 11 34 15.9 -0.7
baz=32,SNR=25
O17A Robinson Place 31.56 330 ⇓P P 11 34 17.3 +0.4
baz=32,SNR=41
RRX Edison Barstow 31.57 316 ⇓P P 11 34 16.7 -0.3
baz=32
P16A Fountain Green 31.57 328 ⇓P P 11 34 18.0 +0.9
baz=32,SNR=12
SCI San Clemente I 31.62 312 ⇓P P 11 34 17.4 -0.1
baz=32
BFSC Mount Baldy St 31.66 315 ⇑P P 11 34 18.1 +0.2
baz=32,SNR=6.5
N18A Larsen Ranch, 31.68 332 ⇑P P 11 34 17.9 -0.1
baz=32,SNR=20
SHOC Shoshone 31.70 319 ⇑P P 11 34 18.3 +0.1
baz=32,SNR=10
CIS Catalina Islan 31.73 313 ⇑P P 11 34 18.8 +0.3
baz=32
R13A O'Grain Ranch, 31.79 324 ⇓P P 11 34 20.3 +1.4
baz=32,SNR=85
FMP Fort Macarthur 31.82 313 ⇓P P 11 34 19.3 +0.1
baz=32
P15A Leamington 31.86 328 ⇓P P 11 34 20.1 +0.6
baz=32,SNR=23
MPU Maple Canyon 31.87 329 eP P 11 34 20.1 +0.6
comp=Z,52nm,1.0s,mb5.2
M19A Rock Springs 31.89 334 ⇑P P 11 34 20.2 +0.5
baz=32
T11A Corn Creek, Al 31.89 322 ⇑P P 11 34 20.7 +0.9
baz=32,SNR=13

S12A **Delamar Landin** 31.91 322 ⇓P P 11 34 21.0 +1.1
baz=32,SNR=34
MWC **Mount Wilson** 31.93 314 eP P 11 34 21.1 +0.9
MWC pmax pmax
comp=Z,54nm,1.5s,mb5.1
MWC **Mount Wilson** 31.93 314 eP P 11 34 21.1 +0.9
comp=Z,54nm,1.5s,mb5.0
O16A **Springville** 31.95 329 ⇓P P 11 34 20.8 +0.5
baz=32,SNR=70
L20A **Wamsutter** 31.96 335 ⇑P P 11 34 19.6 -0.7
baz=32,SNR=10
Q14A **Sevier Lake (B** 31.97 326 ⇓P P 11 34 21.5 +1.0
baz=32,SNR=82
DAU **Daniels Canyon** 31.98 330 eP P 11 34 21.9 +1.3
PASC **Pasadena Art C** 31.99 314 eP P 11 34 22.4 +1.6
comp=Z,167nm,1.4s,mb5.6
NLU **North Lily Min** 32.04 328 eP P 11 34 22.0 +0.9
comp=Z,19nm,1.0s,mb4.8
U10A **Ash Meadows, A** 32.05 319 ⇓P P 11 34 22.3 +1.1
baz=32,SNR=31
DECC **Green Verdugo** 32.13 314 ⇑P P 11 34 22.3 +0.3
baz=32
N17A **Moffit Pass** 32.19 331 ⇓P P 11 34 22.9 +0.5
baz=32,SNR=8.4
JLU **Jordanelle** 32.22 330 eP P 11 34 23.5 +0.8
comp=Z,30nm,1.2s,mb4.9
M18A **Lyman** 32.22 332 ⇑P P 11 34 22.0 -0.7
baz=32,SNR=5.9
EDW2 **Edwards Air Fo** 32.24 315 ⇑P P 11 34 23.0 +0.1
baz=32,SNR=12
R12A **Pony Springs,** 32.25 324 ⇑P P 11 34 24.3 +1.4
baz=32,SNR=153
RSSD **Black Hills** 32.28 342 eP P 11 34 23.4 +0.2
RSSD pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
RSSD MLR MLR
comp=Z,1µm,20.0s
RSSD **Black Hills** 32.28 342 eP P 11 34 23.4 +0.2
comp=Z,4.0nm,0.6s,mb4.3
RSSD LR LR
comp=Z,1µm,20.0s
P14A **Drum Mountains** 32.29 327 ⇓P P 11 34 24.4 +1.1
baz=32,SNR=90
Q13A **Wheeler Ranch,** 32.35 325 ⇓P P 11 34 24.9 +1.0
baz=32,SNR=132
LRMC **Laurel Mountai** 32.38 317 ⇑P P 11 34 24.8 +0.7
baz=32,SNR=20
FURC **Furnace Creek,** 32.42 319 ⇓P P 11 34 24.9 +0.4
baz=32,SNR=12
N16A **Rees Ranch, Co** 32.44 330 ⇑P P 11 34 25.3 +0.7
baz=32,SNR=24
L19A **Farson** 32.46 334 ⇑P P 11 34 25.2 +0.5
baz=33
SNCC **San Nicolas Is** 32.46 312 ⇑P P 11 34 24.5 -0.3
baz=32
S11A **Rachel** 32.47 322 ⇑P P 11 34 26.1 +1.2
baz=32,SNR=17
O15A **The Old Anders** 32.49 328 ⇓P P 11 34 25.6 +0.6
baz=33,SNR=13
TRY **Troy** 32.49 24 eP P 11 34 26.3 +1.3
K20A **Yellowstone Ra** 32.50 336 ⇓P P 11 34 25.5 +0.4
baz=33
M17A **Scullys Gap (B** 32.53 332 ⇑P P 11 34 24.6 -0.8
baz=33,SNR=17
BLG **Laguna Peak** 32.57 313 ⇓P P 11 34 26.0 +0.2
baz=33
MPMC **Manual Prospec** 32.58 318 ⇑P P 11 34 26.0 +0.1
baz=33,SNR=70
NOQ **North Oquirrh** 32.59 329 eP P 11 34 26.9 +0.9
comp=Z,101nm,1.0s,mb5.6
DUG **Dugway** 32.60 328 ⇑P P 11 34 26.1 +0.1
baz=33,SNR=36
DUG **Dugway** 32.60 328 eP P 11 34 26.8 +0.8
DUG MLR MLR
comp=Z,4µm,20.0s
DUG **Dugway** 32.60 328 eP P 11 34 26.8 +0.8
DUG LR LR
comp=Z,4µm,20.0s
L18A **Fontenelle, Gr** 32.61 333 ⇓P P 11 34 25.6 -0.4
baz=33,SNR=15
P13A **Bates Ranch, G** 32.70 326 ⇓P P 11 34 28.2 +1.3
baz=33,SNR=197
DAC **Darwin (Calif)** 32.78 318 PFAKE 11 34 40.0 +12
DAC LR LR
comp=Z,5µm,20.0s
R11A **Troy Canyon, C** 32.84 323 ⇑P P 11 34 28.9 +0.9
baz=33,SNR=77
K19A **Absolon Red Bu** 32.84 335 ⇑P P 11 34 27.6 -0.5
baz=33,SNR=12
M16A **Huntsville** 32.86 331 ⇑P P 11 34 28.3 +0.1
baz=33,SNR=15
Q12A **Willow Creek R** 32.87 324 ⇓P P 11 34 29.2 +0.8
baz=33,SNR=54
BSC **Santa Cruz Isl** 32.91 313 ⇑P P 11 34 29.2 +0.3
baz=33
ARVC **Arvin** 32.95 315 ⇓P P 11 34 29.5 +0.4
baz=33,SNR=11
N15A **Stansbury Isla** 32.97 329 ⇓P P 11 34 29.4 +0.2
baz=33,SNR=41
ISA **Isabella** 33.01 316 ⇓P P 11 34 30.5 +0.9
baz=33,SNR=12
ISA **Isabella** 33.01 316 eP P 11 34 30.5 +0.9
ISA pmax pmax
comp=Z,48nm,1.5s,mb5.1
ISA **Isabella** 33.01 316 eP P 11 34 30.5 +0.8
comp=Z,48nm,1.5s,mb5.1
ACCN **Adirondack Com** 33.05 23 eP P 11 34 30.2 +0.3
comp=Z,260nm,3.0s
HWUT **Hardware Ranch** 33.05 331 eP P 11 34 30.4 +0.5
comp=Z,56nm,1.0s,mb5.3
HWUT LR LR
comp=Z,1µm,21.0s
GRAC **Grapevine Rang** 33.07 319 ⇑P P 11 34 31.1 +1.0
baz=33,SNR=27
BW06 **Boulder Array** 33.09 334 ⇓P P 11 34 29.9 -0.3
baz=33,SNR=22
BW06 **Boulder Array** 33.09 334 eP P 11 34 30.6 +0.3
BW06 LR LR
comp=Z,3µm,21.0s
PDAR **Pinedale Array** 33.09 334 P P 11 34 30.4 +0.2
comp=Z,8.0nm,0.9s,mb4.6,baz=134,slow=8.5,SNR=35
PDAR PcP PcP 11 37 12.2 0.0
comp=Z,5.7nm,0.9s,baz=143,slow=5.1,SNR=11
PDAR LR LR 11 50 33.5
comp=Z,2µm,20.5s,baz=151,slow=41
PDAR **Pinedale Array** 33.09 334 P P 11 34 30.4 +0.2
PDAR PcP PcP 11 37 12.2 0.0
PDAR LR LR 11 50 33.5
L17A **Cokeville** 33.12 332 ⇓P P 11 34 30.0 -0.5
baz=33,SNR=11
S10A **Tonopah Range,** 33.16 321 ⇓P P 11 34 31.9 +0.9
baz=33,SNR=51
O13A **Hicks Ranch, I** 33.17 327 ⇑P P 11 34 31.6 +0.7
baz=33,SNR=22
K18A **Toltan Ranch,** 33.19 334 ⇓P P 11 34 31.3 +0.2
baz=33,SNR=37
SBC **Santa Barbara** 33.20 313 ⇑P P 11 34 31.5 +0.1
baz=33
Q11A **Duckwater** 33.21 323 ⇑P P 11 34 32.4 +1.0
baz=33,SNR=123
P12A **McGill** 33.21 325 ⇓P P 11 34 32.4 +1.1
baz=33,SNR=99
R10A **Warm Springs** 33.22 322 ⇓P P 11 34 32.8 +1.4
baz=33,SNR=32
SPUT **South Promonto** 33.25 330 eP P 11 34 32.7 +1.0
comp=Z,49nm,1.1s,mb5.2
BGU **Big Grassy Mou** 33.25 329 eP P 11 34 32.3 +0.6
comp=Z,45nm,1.1s,mb5.2
N14A **Grayback Hills** 33.28 328 ⇓P P 11 34 32.1 +0.2
baz=33,SNR=148
L16A **Fish Haven** 33.31 332 ⇓P P 11 34 32.0 -0.2
baz=33,SNR=37
NCB **Newcomb** 33.34 22 eP P 11 34 32.0 -0.4
NCB LR LR
comp=Z,3µm,20.0s
M15A **Larsen Ranch,** 33.37 330 ⇓P P 11 34 32.7 0.0
baz=34,SNR=52
PKM **Peak Mountain** 33.51 314 ⇑P P 11 34 34.2 +0.2
baz=34,SNR=6.5
VES **Vestal, Richgr** 33.52 316 ⇑P P 11 34 34.6 +0.5
baz=34,SNR=24
Q10A **Clear Creek Ra** 33.63 323 ⇑P P 11 34 36.2 +1.2
baz=34,SNR=108
TPH **Tonopah** 33.64 321 PFAKE 11 34 50.0 +15
TPH LR LR
comp=Z,6µm,19.0s
J18A **Kendall Valley** 33.65 334 ⇓P P 11 34 34.4 -0.7
baz=34,SNR=23
TIN **Tinemaha** 33.65 319 ⇓P P 11 34 36.0 +0.8
baz=34
K17A **Gardner Place,** 33.66 333 ⇓P P 11 34 34.5 -0.7
baz=34,SNR=34
O12A **Currie** 33.67 326 ⇓P P 11 34 36.2 +0.8
baz=34,SNR=110
P11A **Circle Ranch,** 33.74 324 ⇑P P 11 34 36.5 +0.6
baz=34,SNR=25
L15A **Malad City** 33.75 331 ⇑P P 11 34 36.0 -0.1
baz=34,SNR=79
AHID **Auburn Hatcher** 33.76 333 eP P 11 34 35.7 -0.3
comp=Z,35nm,1.0s,mb5.1
AHID LR LR
comp=Z,2µm,20.0s
HVU **Hansel Valley** 33.77 330 eP P 11 34 37.0 +0.8
HVU pmax pmax
comp=Z,63nm,1.2s,mb5.3
HVU **Hansel Valley** 33.77 330 eP P 11 34 37.0 +0.8
comp=Z,63nm,1.2s,mb5.3
LONY **Lake Ozonia** 33.77 21 eP P 11 34 35.8 -0.3
LONY LR LR
comp=Z,3µm,19.0s
N13A **Wendover, West** 33.81 327 ⇓P P 11 34 37.0 +0.5
baz=34,SNR=39
N13A **Wendover, West** 33.81 327 eP P 11 34 37.3 +0.8
comp=Z,112nm,1.0s,mb5.7
M14A **Sheep Mountain** 33.84 329 ⇑P P 11 34 37.1 +0.3
baz=34,SNR=288
SMMC **Simmler** 33.86 314 ⇓P P 11 34 37.5 +0.4
baz=34,SNR=9.2
RCTC **Rector, Farmer** 33.88 317 ⇓P P 11 34 37.7 +0.4
baz=34,SNR=20
I18A **Diamond G Ranc** 33.97 335 ⇑P P 11 34 37.4 -0.4
baz=34,SNR=7.9
K16A **Soda Springs** 34.03 332 ⇑P P 11 34 38.5 +0.1
baz=34,SNR=13
MTUM **Tungsten Hills** 34.04 319 eP P 11 34 40.2 +1.6
J17A **Brown Place, J** 34.06 334 ⇑P P 11 34 38.5 -0.2
baz=34,SNR=95
O11A **Cowboy Ranch,** 34.08 325 ⇓P P 11 34 39.5 +0.6
baz=34,SNR=75
EYMN **Ely** 34.10 359 eP P 11 34 37.1 -1.8
EYMN LR LR
comp=Z,3µm,19.0s
REDW **Red Top Meadow** 34.12 334 eP P 11 34 38.0 -1.2
comp=Z,92nm,1.0s,mb5.6
M13A **Montello** 34.15 328 ⇓P P 11 34 39.7 +0.2
baz=34,SNR=154
M13A **Montello** 34.15 328 eP P 11 34 40.1 +0.7
comp=Z,92nm,1.0s,mb5.6
SNOW **Snow King Moun** 34.16 334 eP P 11 34 39.7 +0.1
comp=Z,108nm,1.0s,mb5.6
L14A **Malta** 34.19 330 ⇓P P 11 34 39.8 0.0
baz=34,SNR=75
LOHW **Long Hollow** 34.22 334 eP P 11 34 39.6 -0.5
comp=Z,28nm,1.0s,mb5.0
N12A **Clover Valley,** 34.24 327 eP P 11 34 40.8 +0.5
comp=Z,71nm,1.2s,mb5.4
TPAW **Teton Pass** 34.27 334 eP P 11 34 41.2 +0.7
comp=Z,59nm,1.1s,mb5.3
TPAW *e*PcP PcP 11 37 17.4 +1.9
ELK **Elko** 34.28 326 eP P 11 34 41.1 +0.5
ELK *e* 11 37 17.8
ELK pmax pmax
comp=Z,41nm,1.0s
ELK MLR MLR
comp=Z,4µm,20.0s
ELK **Elko** 34.28 326 eP P 11 34 41.1 +0.6
comp=Z,42nm,1.0s,mb5.2
ELK *e*PcP PcP 11 37 17.8 +2.2
ELK LR LR
comp=Z,4µm,20.0s
FRNY **Flat Rock** 34.31 22 eP P 11 34 40.7 -0.2
comp=Z,68nm,1.7s,mb5.2
RRI2 **Red Ridge** 34.32 333 eP P 11 34 41.7 +0.8
comp=Z,88nm,1.5s,mb5.4
K15A **Arbon** 34.34 331 ⇑P P 11 34 41.0 -0.1
baz=34,SNR=38
MLAC **Mammoth Lakes** 34.38 319 ⇓P P 11 34 42.5 +1.0
baz=34
LBNH **Lisbon** 34.45 24 PFAKE 11 34 50.0 +8.0
LBNH LR LR
comp=Z,3µm,19.0s
DCID1 **Drake Creek** 34.45 334 eP P 11 34 42.8 +0.7
comp=Z,63nm,1.2s,mb5.3
I17A **Pilgrim Ck.** 34.46 335 ⇑P P 11 34 42.6 +0.5
baz=35,SNR=5.7
NVAR **Mina Array Bea** 34.53 320 P P 11 34 44.1 +1.3
comp=Z,54nm,0.7s,mb5.5,baz=133,slow=7.9,SNR=189
NVAR PcP PcP 11 37 17.4 +1.0
comp=Z,14nm,0.7s,baz=124,slow=2.2,SNR=13
K14A **Jones Ranch, D** 34.54 330 ⇑P P 11 34 43.2 +0.4
baz=35,SNR=105
L13A **Double Diamond** 34.58 329 ⇓P P 11 34 43.6 +0.4
baz=35,SNR=42
M12A **Wells** 34.58 327 ⇓P P 11 34 43.8 +0.6
baz=35,SNR=124
IMW **Indian Meadow** 34.59 334 eP P 11 34 43.3 0.0
comp=Z,12nm,0.9s,mb4.7
N11A **Elko Archery C** 34.60 326 ⇓P P 11 34 43.9 +0.5
baz=35,SNR=11
O10A **Cortez Mining,** 34.66 324 ⇓P P 11 34 44.8 +0.9
baz=35,SNR=17
AGMN **Agassiz Refuge** 34.69 354 eP P 11 34 42.5 -1.6
comp=Z,29nm,1.2s,mb5.0
AGMN LR LR
comp=Z,2µm,19.0s
H17A **Grant Village** 34.85 335 ⇑P P 11 34 46.0 +0.6
baz=35,SNR=9.4
LKWY **Lake** 34.92 335 eP P 11 34 48.9 +2.8
LKWY pmax pmax
comp=Z,157nm,2.8s,mb5.3
LKWY MLR MLR
comp=Z,3µm,22.0s
LKWY **Lake** 34.92 335 eP P 11 34 48.9 +2.8
comp=Z,158nm,2.8s,mb5.3
LKWY LR LR
comp=Z,3µm,22.0s
N10A **Dunphy** 34.95 325 ⇓P P 11 34 46.8 +0.3
baz=35
YFT **Old Faithful** 35.00 335 eP P 11 34 49.8 +3.0
comp=Z,26nm,1.1s,mb5.0
M11A **Holland Ranch,** 35.06 327 ⇓P P 11 34 47.8 +0.5
baz=35,SNR=188
K13A **Stover Farm, H** 35.06 330 ⇑P P 11 34 46.9 -0.5
baz=35,SNR=34
L12A **House Creek Ra** 35.16 328 ⇑P P 11 34 48.3 +0.1
baz=35
BMN **Battle Mountai** 35.16 324 PFAKE 11 35 00.0 +12
BMN LR LR
comp=Z,3µm,19.0s
G18A **Lazy EL Ranch,** 35.22 337 ⇓P P 11 34 48.3 -0.3
baz=35,SNR=21
YMR **Madison River** 35.23 335 eP P 11 34 50.0 +1.2
comp=Z,36nm,1.0s,mb5.2
LAO **LASA Array** 35.26 342 eP P 11 34 49.0 0.0
comp=Z,16nm,1.1s,mb4.8
LAO *e*PcP PcP 11 37 19.9 +1.6
LAO LR LR
comp=Z,2µm,21.0s
WAKR **Walker** 35.28 320 eP P 11 34 50.5 +1.2
I15A **Monteview** 35.35 333 ⇓P P 11 34 49.8 +0.1
baz=36,SNR=9.8
H16A **Russell Place,** 35.38 335 ⇑P P 11 34 50.1 +0.1
baz=36,SNR=6.8
K12A **Draper Farm, C** 35.46 329 ⇑P P 11 34 51.0 +0.2
baz=36,SNR=34
M10A **I.L. Ranch, Tu** 35.52 326 ⇓P P 11 34 51.9 +0.6
baz=36,SNR=97
L11A **Cat Creek Ranc** 35.56 328 ⇓P P 11 34 52.1 +0.6
baz=36,SNR=91
QLMT **Earthquake Lak** 35.56 335 eP P 11 34 53.0 +1.4
comp=Z,15nm,1.0s,mb4.9
CMB **Columbia Colle** 35.62 318 eP P 11 34 52.0 -0.2
CMB pmax pmax
comp=Z,23nm,0.9s,mb5.1
CMB MLR MLR
comp=Z,2µm,20.0s
CMB **Columbia Colle** 35.62 318 eP P 11 34 52.0 -0.2
comp=Z,24nm,0.9s,mb5.1
CMB LR LR
comp=Z,2µm,20.0s
SAO **San Andreas Ge** 35.62 316 eP P 11 34 52.5 +0.3
SAO pmax pmax
comp=Z,59nm,1.6s,mb5.3
SAO MLR MLR
comp=Z,4µm,19.0s
SAO **San Andreas Ge** 35.62 316 eP P 11 34 52.5 +0.3
comp=Z,59nm,1.6s,mb5.3
SAO LR LR
comp=Z,4µm,19.0s
GCMT **Greycliff** 35.66 337 eP P 11 34 51.6 -0.8
comp=Z,12nm,1.0s,mb4.8
J13A **Cove Ranch, Pi** 35.67 330 ⇓P P 11 34 52.4 -0.1
baz=36,SNR=21
G17A **Pierce Place,** 35.68 336 ⇓P P 11 34 52.8 +0.2
baz=36,SNR=9.7
I14A **Mackay** 35.73 332 ⇑P P 11 34 53.4 +0.3
baz=36,SNR=52
F18A **Big Timber** 35.77 337 ⇑P P 11 34 52.9 -0.4
baz=36,SNR=23
L10A **Juniper Basin** 35.87 327 ⇓P P 11 34 54.4 +0.1
baz=36,SNR=76
H15A **Lima** 35.91 333 ⇓P P 11 34 55.5 +1.0
baz=36,SNR=44
HLID **Hailey** 35.91 330 ⇑P P 11 34 54.6 +0.1
baz=36,SNR=60
HLID **Hailey** 35.91 330 eP P 11 34 54.9 +0.3
comp=Z,26nm,0.8s,mb5.2
HLID LR LR
comp=Z,2µm,21.0s
WCN **Washoe City** 35.96 320 ⇓P P 11 34 56.1 +1.0
baz=36,SNR=15
PAHR **Pah Rah Range** 35.98 321 eP P 11 34 56.5 +1.3
comp=Z,332nm,2.6s,mb5.8
J12A **Stokes Ranch,** 36.01 329 ⇓P P 11 34 55.5 +0.1
baz=36,SNR=49
I13A **Wildhorse Cree** 36.03 331 ⇑P P 11 34 55.7 +0.1
baz=36,SNR=92
G16A **Moss Hill, Enn** 36.03 335 ⇑P P 11 34 56.0 +0.4
baz=36,SNR=19
F17A **Fitzpatrick Pl** 36.13 336 ⇓P P 11 34 57.2 +0.8
baz=36,SNR=37
K11A **Parker Ranch,** 36.13 328 ⇓P P 11 34 56.6 +0.1
baz=36,SNR=59
MCMT **McKenzie Canyo** 36.16 333 eP P 11 34 57.6 +0.9
comp=Z,39nm,0.8s,mb5.4
H14A **Leadore** 36.23 333 ⇓P P 11 34 58.5 +1.2
baz=36,SNR=54
G15A **Dillon** 36.27 334 ⇓P P 11 34 57.9 +0.2
baz=36,SNR=45
BOZ **Bozeman (W)** 36.30 335 ⇓P P 11 34 57.4 -0.5
baz=36,SNR=16
BOZ **Bozeman (W)** 36.30 335 eP P 11 34 57.6 -0.3
BOZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BOZ MLR MLR
comp=Z,2µm,20.0s
BOZ **Bozeman (W)** 36.30 335 eP P 11 34 57.6 -0.3
comp=Z,10nm,1.0s,mb4.7
BOZ LR LR
comp=Z,2µm,20.0s
DGMT **Dagmar** 36.33 345 ⇑P P 11 34 57.1 -0.9
baz=36
DGMT **Dagmar** 36.33 345 eP P 11 34 58.3 +0.2
comp=Z,24nm,0.8s,mb5.2
DGMT LR LR
comp=Z,1µm,19.0s
PKME **Peaks-Kenny Pk** 36.38 26 eP P 11 34 59.0 +0.4
comp=Z,7.3nm,0.6s,mb4.8
PKME LR LR
comp=Z,2µm,20.0s
E18A **Harlowton** 36.40 338 ⇓P P 11 34 58.0 -0.8
baz=36,SNR=16
F16A **Kennard Place,** 36.41 335 ⇓P P 11 34 58.6 -0.3
baz=36,SNR=12
I12A **Atlanta** 36.43 330 ⇑P P 11 34 59.3 +0.3
baz=36,SNR=136
DLMT **Dillon** 36.48 334 eP P 11 34 59.8 +0.4
comp=Z,36nm,1.1s,mb5.2
MFID **Camas Ranch** 36.49 329 ⇓P P 11 34 59.5 -0.1
baz=37,SNR=55
LCCM **Lewis and Clar** 36.56 335 P P 11 35 01.0 +0.9
K10A **MacKenzie Ranc** 36.57 327 ⇑P P 11 35 00.2 0.0
baz=37,SNR=51
H13A **Challis** 36.59 332 ⇑P P 11 35 00.5 +0.1
baz=37,SNR=126
ULM **Lac du Bonnet** 36.62 355 P P 11 34 58.5 -2.0
comp=Z,17nm,0.7s,mb5.1,baz=177,slow=10,SNR=16
ULM LR LR 11 53 36.6
comp=Z,1µm,18.6s,baz=176,slow=42
E17A **Martinsdale** 36.67 337 ⇑P P 11 35 00.9 -0.1
baz=37,SNR=11
BEKR **Beckwourth** 36.67 321 ⇑P P 11 35 01.8 +0.7
baz=37,SNR=62
G14A **Jackson** 36.76 333 ⇓P P 11 35 01.3 -0.5
baz=37
LRM **Limekiln Ridge** 36.78 335 eP P 11 35 02.7 +0.7
comp=Z,147nm,0.9s,mb5.9
F15A **Butte** 36.81 335 ⇓P P 11 35 02.1 -0.2
baz=37,SNR=35
H12A **Diamond D Ranc** 36.86 331 ⇓P P 11 35 02.7 +0.1
baz=37,SNR=82
D18A **Linhart Farms,** 36.90 338 ⇓P P 11 35 02.9 0.0
baz=37
I11A **Placerville** 36.92 329 ⇓P P 11 35 03.6 +0.4
baz=37,SNR=237
J10A **Berg Farm, Mel** 36.98 328 ⇑P P 11 35 03.6 -0.1
baz=37,SNR=16
G13A **Cobalt** 36.98 332 ⇓P P 11 35 03.5 -0.3
baz=37,SNR=18
E16A **East Helena** 37.05 336 ⇑P P 11 35 03.7 -0.5
baz=37,SNR=17
OHCM **Honcut** 37.06 319 eP P 11 35 04.9 +0.5
F14A **Wisdom** 37.16 334 ⇓P P 11 35 04.9 -0.3
baz=37,SNR=6.1
D17A **Six Diamond Ra** 37.18 338 ⇓P P 11 35 04.8 -0.5
baz=37,SNR=18
HRY **Holter Researc** 37.25 336 eP P 11 35 06.9 +0.9
WVOR **Wild Horse Val** 37.29 325 eP P 11 35 06.6 +0.3
WVOR *e* 11 37 25.7
WVOR pmax pmax
comp=Z,80nm,1.0s,mb5.6
WVOR MLR MLR
comp=Z,3µm,19.0s
WVOR **Wild Horse Val** 37.29 325 eP P 11 35 06.6 +0.2
comp=Z,80nm,1.0s,mb5.6
WVOR *e*PcP PcP 11 37 25.7 +1.3
WVOR LR LR
comp=Z,3µm,19.0s
MCCM **Marconi Confer** 37.32 316 eP P 11 35 05.5 -1.2
comp=Z,64nm,1.0s,mb5.5
MCCM LR LR
comp=Z,3µm,19.0s
E15A **Deer Lodge** 37.35 335 ⇓P P 11 35 06.4 -0.4
baz=38,SNR=20
LPAZ **La Paz** 37.39 142 P P 11 35 07.2 -0.3
comp=Z,6.4nm,0.7s,mb4.7,baz=330,slow=7.8,SNR=19
LPAZ LR LR 11 50 22.6
comp=Z,3µm,20.9s,baz=324,slow=36
LPAZ **La Paz** 37.39 142 P P 11 35 07.2 -0.3
LPAZ *e*P 11 35 07.4
LPAZ LR LR 11 50 22.6
D16A **Dana Ranch, Ca** 37.41 337 ⇓P P 11 35 06.9 -0.3
baz=38,SNR=12
J09A **Fry Pan Ranch,** 37.43 327 ⇓P P 11 35 07.9 +0.3
baz=38,SNR=195
I10A **Payette** 37.46 329 ⇓P P 11 35 08.0 +0.2
baz=38,SNR=15
H11A **Donnelly** 37.52 330 ⇑P P 11 35 08.1 -0.2
baz=38,SNR=88
F13A **Darby** 37.57 333 ⇑P P 11 35 08.3 -0.3
baz=38,SNR=32
EGMT **Eagleton** 37.59 339 ⇓P P 11 35 07.7 -1.0
baz=38,SNR=12
EGMT **Eagleton** 37.59 339 PFAKE 11 35 20.0 +11
EGMT LR LR
comp=Z,2µm,19.0s
C17A **Wharram Farm,** 37.61 338 ⇑P P 11 35 08.4 -0.6
baz=38
E14A **Clinton** 37.69 334 ⇓P P 11 35 08.9 -0.8
baz=38,SNR=11
D15A **Lincoln** 37.80 336 ⇓P P 11 35 10.2 -0.4
baz=38,SNR=19
H10A **Noah's Angus R** 37.80 329 ⇑P P 11 35 09.8 -0.8
baz=38,SNR=59
J08A **Circle Bar Ran** 37.82 327 ⇓P P 11 35 10.8 -0.1
baz=38,SNR=246
I09A **Lost Marbles R** 37.86 328 ⇓P P 11 35 10.8 -0.4
baz=38,SNR=176
MOD **Modoc** 37.89 323 eP P 11 35 11.2 -0.2
comp=Z,52nm,1.0s,mb5.3
MOD LR LR
comp=Z,5µm,19.0s
HOPS **Hopland** 37.90 318 eP P 11 35 12.0 +0.4
comp=Z,62nm,1.2s,mb5.3

HOPS LR LR
comp=Z,4μm,20.0s
B18A Beardsley Farm 37.91 339 ⇓P P 11 35 10.8 -0.8
baz=38
F12A Elk City 37.95 332 ⇑P P 11 35 11.5 -0.4
baz=38,SNR=110
CHMT Chamberlain Mo 37.99 335 *e*P **P 11 35 12.3 +0.1**
E13A Victor 38.01 334 ⇑P P 11 35 11.5 -0.9
baz=38,SNR=44
G11A Walters Elk Ra 38.16 331 ⇑P P 11 35 12.7 -1.0
baz=38,SNR=89
B17A L&G Farms, Che 38.18 338 ⇑P P 11 35 12.7 -1.1
baz=38
MSO Missoula 38.21 334 *e*P **P 11 35 14.0 0.0**
MSO LR LR
comp=Z,1μm,20.0s
D14A Greenough 38.23 335 ⇓P P 11 35 13.4 -0.8
baz=38,SNR=12
SLMT Seeley Lake 38.35 335 *e*P **P 11 35 15.5 +0.3**
comp=Z,9.2nm,0.8s,mb4.7
A18A Metzger Ranch, 38.39 340 ⇓P P 11 35 14.5 -1.0
baz=38,SNR=8.8
WDC Whiskeytown Da 38.44 320 *e*P **P 11 35 14.3 -1.8**
WDC MLR MLR
comp=Z,2μm,20.0s
F11A Grangeville 38.47 331 ⇓P P 11 35 15.4 -0.8
baz=39,SNR=11
G10A Bishop Farm, J 38.49 330 ⇓P P 11 35 15.5 -0.9
baz=39,SNR=49
E12A Beaver Dam Sad 38.60 332 ⇑P P 11 35 16.3 -1.0
baz=39
KCPM Cahto Peak 38.61 318 *e*P **P 11 35 18.7 +1.2**
B16A M & M Farms, S 38.61 338 ⇑P P 11 35 16.7 -0.7
baz=39,SNR=7.0
D13A Huson 38.64 334 ⇑P P 11 35 17.0 -0.6
baz=39,SNR=19
A17A Triple J Farms 38.70 339 ⇑P P 11 35 17.0 -1.1
baz=39,SNR=11
H08A Prairie City 38.72 328 ⇓P P 11 35 18.1 -0.3
baz=39,SNR=61
K05A Summer Lake 38.75 324 ⇓P P 11 35 18.1 -0.5
baz=39,SNR=24
SWMT Swartz Lake 38.77 335 *e*P **P 11 35 18.4 -0.4**
comp=Z,7.2nm,0.9s,mb4.5
E11A Bogner Ranch, 38.84 332 ⇑P P 11 35 17.9 -1.5
baz=39,SNR=33
B15A Bradely Ranch, 38.85 337 ⇑P P 11 35 18.3 -1.1
baz=39,SNR=5.5
I07A Izee 38.86 327 ⇑P P 11 35 18.8 -0.7
baz=39,SNR=97
D12A Red Ives Fores 38.99 333 ⇑P P 11 35 19.2 -1.4
baz=39
F10A Beach Ranch, E 39.04 331 ⇓P P 11 35 20.6 -0.4
baz=39,SNR=92
C13A Hot Springs 39.15 335 ⇑P P 11 35 21.0 -0.9
baz=39
B14A Marquette Ranc 39.16 336 ⇑P P 11 35 21.3 -0.7
baz=39
F09A S2 Ranch, Elgi 39.17 330 ⇑P P 11 35 21.4 -0.7
baz=39,SNR=6.1
YBH Yreka Blue Hor 39.21 321 *e*P **P 11 35 20.9 -1.6**
YBH pmax pmax
comp=Z,5.0nm,0.6s
YBH MLR MLR
comp=Z,3μm,20.0s
YBH Yreka Blue Hor 39.21 321 *e*P **P 11 35 20.9 -1.6**
comp=Z,5.2nm,0.6s,mb4.5
YBH LR LR
comp=Z,3μm,20.0s
BUOR Burton Butte 39.26 322 P **P 11 35 23.7 +0.8**
KHMM Horse Mountain 39.35 320 *e*P **P 11 35 24.3 +0.6**
E10A Myers Farm, Un 39.36 331 ⇑P P 11 35 22.0 -1.6
baz=40,SNR=8.7
G08A Pilot Rock 39.40 328 ⇓P P 11 35 22.9 -1.1
baz=40,SNR=14
D11A Klaveano Farm, 39.42 332 ⇓P P 11 35 22.6 -1.6
baz=40,SNR=25
A15A Johnson Ranch, 39.46 337 ⇓P P 11 35 23.7 -0.7
baz=40,SNR=13
LNOR Lincton Mounta 39.48 330 *e*P **P 11 35 25.0 +0.4**
LNOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
LNOR Lincton Mounta 39.48 330 *e*P **P 11 35 25.0 +0.4**
comp=Z,9.3nm,1.1s,mb4.5
C12B Naegeli Ranch, 39.55 334 ⇓P P 11 35 24.2 -1.0
baz=40,SNR=8.5
B13A Whitefish 39.65 335 ⇓P P 11 35 25.7 -0.3
baz=40,SNR=6.7
F08A Pendleton 39.67 329 ⇑P P 11 35 24.7 -1.6
baz=40
A14A Double T Ranch 39.72 337 ⇑P P 11 35 26.0 -0.7
baz=40,SNR=19
VIPM Ingram Point 39.74 326 P **P 11 35 26.5 -0.4**
D10A Wagner Farm, O 39.85 332 ⇓P P 11 35 26.6 -1.1
baz=40,SNR=7.0
E09A Wood Farm, Sta 39.87 330 ⇑P P 11 35 26.6 -1.3
baz=40
HUMO Hull Mountain 39.88 322 *e*P **P 11 35 27.2 -0.9**
HUMO LR LR
comp=Z,8.2nm,0.8s,mb4.6
comp=Z,4μm,19.0s
BBOR Butler Butte 39.88 323 P **P 11 35 27.1 -1.0**
WALA Waterton Lakes 39.98 336 *e*P **P 11 35 29.2 +0.5**
comp=Z,0.7nm,1.3s
A13A Flathead Natio 40.07 336 ⇑P P 11 35 29.2 -0.3
baz=40
B12A Libby 40.19 335 ⇓P P 11 35 30.4 -0.1
baz=40
G06A Carlson Farm, 40.23 327 ⇑P P 11 35 31.0 0.0
baz=40,SNR=18
E08A Dider Farm, El 40.29 330 ⇓P P 11 35 30.2 -1.2
baz=40
F07A Phinny Hill Vi 40.31 328 ⇑P P 11 35 30.6 -1.0
baz=40
D09A Jones Farm, Ri 40.34 331 ⇑P P 11 35 31.2 -0.6
baz=40,SNR=20
C10A Spilker Farm, 40.44 332 ⇑P P 11 35 31.3 -1.3
baz=40
HAWA Hanford 40.46 329 PFAKE 11 35 40.0 +7.2
HAWA LR LR
comp=Z,2μm,21.0s
RSW Rattlesnake Hi 40.49 329 *e*P **P 11 35 33.5 +0.5**
comp=Z,5.8nm,0.6s,mb4.6
B11A Sandpoint 40.49 334 ⇑P P 11 35 32.4 -0.6
baz=41,SNR=15
A12A Yaak River Ran 40.58 335 ⇓P P 11 35 32.9 -0.8
baz=41
D08A Wollman Farm, 40.63 330 ⇓P P 11 35 33.0 -1.2
baz=41,SNR=12
NEW Newport 40.69 333 *e*P **P 11 35 34.0 -0.6**
NEW pmax pmax
comp=Z,10.0nm,0.8s
NEW MLR MLR
comp=Z,3μm,19.0s
NEW Newport 40.69 333 *e*P **P 11 35 34.0 -0.6**
comp=Z,10nm,0.8s,mb4.7
NEW LR LR
comp=Z,3μm,19.0s
H04A Detroit Lake 40.71 325 ⇓P P 11 35 34.4 -0.5
baz=41,SNR=72
VFP Flag Point 40.73 327 P **P 11 35 35.1 +0.1**
E07A Sunnyside 40.73 329 ⇑P P 11 35 33.9 -1.1
baz=41
B10A Chitwood Farm, 40.76 333 ⇓P P 11 35 34.1 -1.1
baz=41
OD2 Odessa Site #2 40.77 331 *e*P **P 11 35 35.4 0.0**
HOOD Mount Hood Mea 40.83 327 *e*P **P 11 35 36.9 +1.0**
comp=Z,775nm,1.0s,mb6.5
C09A Chrisman Ranch 40.86 332 ⇑P P 11 35 35.4 -0.7
baz=41,SNR=17
A11A Hall Mountain, 40.89 334 ⇓P P 11 35 36.2 -0.1
baz=41,SNR=8.5
G04A Mulino 41.20 326 ⇓P P 11 35 38.4 -0.5
baz=41,SNR=14
B09A Rice 41.26 332 ⇑P P 11 35 38.9 -0.5
baz=41,SNR=12
COR Corvallis 41.27 325 *e*P **P 11 35 40.1 +0.6**
COR pmax pmax
comp=Z,104nm,1.1s,mb5.6
COR MLR MLR
comp=Z,3μm,19.0s
COR Corvallis 41.27 325 *e*P **P 11 35 40.1 +0.6**
comp=Z,104nm,1.1s,mb5.6
COR LR LR
comp=Z,3μm,19.0s
A10A Northport 41.42 333 ⇑P P 11 35 39.8 -0.8
baz=42
F04A Amboy 41.64 327 ⇑P P 11 35 41.9 -0.6
baz=42
B08A Colville Reser 41.76 332 ⇑P P 11 35 42.7 -0.7
baz=42,SNR=12
LON Longmire 41.85 328 P **P 11 35 44.1 -0.1**
HEBO Mount Hebo 41.91 325 *e*P **P 11 35 46.5 +1.8**
comp=Z,118nm,1.1s,mb5.5
D05A Enumclaw 42.24 328 ⇓P P 11 35 47.2 -0.1
baz=42,SNR=14
F03A Seaside 42.25 326 ⇓P P 11 35 47.8 +0.3
baz=42,SNR=11
E03A Lebam 42.64 327 ⇓P P 11 35 50.5 -0.1
baz=43,SNR=40
A07A Ashnola River, 42.74 332 ⇓P P 11 35 51.3 -0.1
baz=43,SNR=24
RPW Rockport 42.85 330 *e*P **P 11 35 51.6 -0.7**
comp=Z,10nm,0.9s,mb4.6
JCW Jim Creek 42.88 330 P **P 11 35 51.4 -1.1**
B06A Marblemount 42.89 330 ⇓P P 11 35 51.7 -0.9
baz=43,SNR=7.8
GNW Green Mountain 42.91 328 *e*P **P 11 35 51.5 -1.3**
comp=Z,23nm,1.1s,mb4.8
GNW *e*PcP PcP 11 37 43.1 +0.7
CMW Cultus Mountai 43.13 330 P **P 11 35 53.8 -0.7**
EDM Edmonton 43.22 340 *e*P **P 11 35 54.1 -1.0**
NLWA Neilton Lookou 43.34 327 ⇓P P 11 35 56.3 +0.1
baz=43,SNR=46
NLWA Neilton Lookou 43.34 327 *e*P **P 11 35 56.2 0.0**
comp=Z,116nm,1.2s,mb5.5
NLWA LR LR
comp=Z,3μm,19.0s
A05A Maple Falls 43.51 330 ⇑P P 11 35 56.8 -0.8
baz=44,SNR=11
MCW Mount Constitu 43.65 329 P **P 11 35 58.3 -0.5**
PGC Sidney 43.94 329 *e*P **P 11 36 00.6 -0.4**
comp=Z,5.9nm,1.1s,mb4.2
FCC Fort Churchill 44.99 358 *e*P **P 11 36 07.6 -1.7**
comp=Z,0.8nm,0.9s
FCC *e*PP PP 11 37 57.9 +2.4
SCHQ Schefferville 45.10 19 P **P 11 36 08.9 -1.2**
comp=Z,74nm,0.8s,mb5.5,baz=210,slow=6.8,SNR=52
SCHQ PcP PcP 11 37 49.7 0.0
comp=Z,8.0nm,0.5s,baz=243,slow=6.9,SNR=5.7
SCHQ LR LR 11 56 13.6
comp=Z,4μm,19.1s,baz=211,slow=38
SCHQ Schefferville 45.10 19 *e*P **P 11 36 09.0 -1.1**
comp=Z,102nm,0.9s,mb5.5
SCHQ *e* 11 36 17.7
SCHQ *e* pP 11 36 27.8 -0.1
SCHQ LR LR
comp=Z,5μm,20.0s
LCO Las Campanas 46.78 155 *e*P **P 11 36 23.3 -0.5**
comp=Z,24nm,0.9s,mb4.9
LCO *e* pP 11 36 36.9 -4.6
LCO *e*PcP PcP 11 37 57.0 +1.0
LCO LR LR
comp=Z,2μm,19.0s
YKA Yellowknife Ar 51.51 346 P **P 11 36 58.0 -1.4**
comp=Z,5.7nm,0.5s,mb4.9,baz=150,slow=7.5,SNR=67
YKA PcP PcP 11 38 11.9 -0.8
comp=Z,2.6nm,0.6s,baz=149,slow=3.9,SNR=7.9
YKA LR LR 12 04 42.3
comp=Z,184nm,18.3s,baz=55,slow=43
YKA Yellowknife Ar 51.51 346 P **P 11 36 58.0 -1.4**
YKA 11 38 11.9
YKA Yellowknife Ar 51.51 346 P **P 11 36 58.0 -1.4**
YKA PcP PcP 11 38 11.9 -0.8
YKA LR LR 12 04 42.3
CPUP Villa Florida 51.52 141 P **P 11 36 57.2 -2.8**
comp=Z,4.8nm,0.7s,mb4.6,baz=302,slow=6.7,SNR=14
CPUP PKKP 11 59 13.2
comp=Z,0.3nm,0.3s,baz=302,slow=6.0,SNR=3.0
CPUP LR LR 12 00 25.3
comp=Z,2μm,18.2s,baz=307,slow=38
CPUP Villa Florida 51.52 141 *e*P **P 11 36 57.6 -2.3**
CPUP *e*PcP PcP 11 38 14.8 +1.5
CPUP LR LR
comp=Z,551nm,19.0s
DLBC Dease Lake 53.31 336 *e*P **P 11 37 13.3 +0.5**
DLBC *e*PcP PcP 11 38 21.0 +1.5
TAOE Nuku Hiva Isla 53.77 248 *e*S **S 11 44 52.2 +5.7**
comp=Z,1μm,25.1s
TAOE *e*SS SS 11 48 36.3 +7.8
comp=Z,2μm,30.3s
TAOE *e*LR LR 11 52 40.0
comp=Z,3μm,24.8s,baz=64
SKAG Skagway 56.12 335 *e*P **P 11 37 34.3 +1.2**
comp=Z,11nm,0.8s,mb4.9
RKT Rikitea 56.58 230 *e*S **S 11 45 31.4 +7.7**
comp=Z,2μm,28.8s
RKT *e*LQ 11 51 40.6
comp=Z,955nm,35.5s
RKT *e*LR LR 11 54 16.7
comp=Z,3μm,25.8s,baz=46
PLCA Paso Flores 57.40 162 P **P 11 37 40.2 -2.2**
comp=Z,4.8nm,0.8s,mb4.6,baz=335,slow=7.9,SNR=6.4
PLCA LR LR 11 57 59.3
comp=Z,2μm,18.1s,baz=19,slow=31
PLCA Paso Flores 57.40 162 *e*P **P 11 37 42.1 -0.3**
PLCA pmax pmax
comp=Z,25nm,1.4s
PLCA MLR MLR
comp=Z,3μm,20.0s
PLCA Paso Flores 57.40 162 *e*P **P 11 37 42.1 -0.2**
comp=Z,25nm,1.4s,mb5.1
PLCA LR LR
comp=Z,3μm,20.0s
RCBR Riachuelo 57.96 106 *e*P **P 11 37 46.9 0.0**
comp=Z,100nm,1.0s,mb5.8
RCBR LR LR
comp=Z,2μm,20.0s
CAM4 Nova Friburgo 59.44 127 ⇑ *i*P **P 11 37 58.1 +1.1**
CAM4 *i* 11 38 00.2
CAM4 *i* 11 38 04.5
CAM4 *i* pP 11 38 11.5 -3.9
CAM4 *i* pP 11 38 14.7 -0.6
CAM4 *i* pP 11 38 19.4 +4.1
CAM4 *i* 11 38 26.7
SFJD Kangerlussuaq 59.44 17 PFAKE 11 38 10.0 +14
SFJD LR LR
comp=Z,3μm,19.0s
DAWY Dawson 60.30 338 *e*P **P 11 38 00.9 -1.3**
BMRM Bremner River 60.86 333 *e*P **P 11 38 06.7 +0.7**
comp=Z,400nm,0.6s
RES Resolute Bay 60.97 359 *e*P **P 11 38 04.6 -2.0**
RES pmax pmax
comp=Z,22nm,0.7s,mb5.3
RES Resolute Bay 60.97 359 *e*P **P 11 38 04.6 -1.9**
comp=Z,22nm,0.7s,mb5.3
INK Inuvik 60.98 343 *e*P **P 11 38 05.7 -1.0**
INK pmax pmax
comp=Z,57nm,1.4s
INK Inuvik 60.98 343 *e*P **P 11 38 05.7 -1.0**
comp=Z,57nm,1.4s,mb5.4
EGAK Eagle 61.34 338 *e*P **P 11 38 08.1 -1.1**
comp=Z,20nm,1.1s,mb5.0
EGAK LR LR
comp=Z,2μm,20.0s
MENT Mentasta 61.40 335 *e*P **P 11 38 09.8 +0.2**
DIV Divide 61.45 333 *e*P **P 11 38 09.9 -0.1**
comp=Z,42nm,1.0s,mb5.4
DIV *e* 11 38 19.2
POHA Pohakuloa 61.85 285 PFAKE 11 38 30.0 +16
POHA LR LR
comp=Z,1μm,19.0s
SEW Seward 62.71 331 *e*P **P 11 38 18.1 -0.3**
comp=Z,66nm,1.0s,mb5.5
SEW *e* 11 38 26.8
PMR Palmer 63.12 333 *e*P **P 11 38 20.6 -0.5**
PMR pmax pmax
comp=Z,21nm,0.5s,mb5.3
PMR Palmer 63.12 333 *e*P **P 11 38 20.6 -0.6**
comp=Z,21nm,0.5s,mb5.3
PMOR Pomariorio Ree 63.19 245 *e*P **P 11 38 29.8 +7.4**
comp=Z,62nm,1.3s,mb5.4
OHAK Old Harbor 63.69 327 *e*P **P 11 38 26.4 +1.4**
comp=Z,86nm,1.1s,mb5.5
MCK McKinley 63.86 335 *e*P **P 11 38 25.8 -0.2**
MCK pmax pmax
comp=Z,46nm,1.2s,mb5.2
MCK McKinley 63.86 335 *e*P **P 11 38 25.8 -0.3**
comp=Z,46nm,1.2s,mb5.2
COLA College 63.90 337 *e*P **P 11 38 25.5 -0.8**
COLA pmax pmax
comp=Z,27nm,0.9s,mb5.1
COLA MLR MLR
comp=Z,2μm,21.0s
COLA College 63.90 337 *e*P **P 11 38 25.5 -0.8**
comp=Z,27nm,0.9s,mb5.1
COLA LR LR
comp=Z,2μm,21.0s
TRF Thorofare Moun 64.31 335 *e*P **P 11 38 28.9 -0.1**
comp=Z,45nm,0.9s,mb5.3
RSO Redoubt South 64.38 331 *e*P **P 11 38 29.2 -0.3**
MEH Mehetia 64.54 242 *e*P **P 11 38 38.2 +7.0**
comp=Z,65nm,1.2s,mb5.3
KTH Kantishna Hill 64.61 335 *e*P **P 11 38 30.5 -0.5**
comp=Z,28nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 64.84 335 *e*P **P 11 38 31.5 -1.0**
comp=Z,61nm,1.2s,mb5.3
PPLA Purkeypile 64.92 334 *e*P **P 11 38 32.5 -0.5**
comp=Z,58nm,1.1s,mb5.3
CHUM Lake Minchumin 65.31 335 *e*P **P 11 38 35.0 -0.5**
comp=Z,7.1nm,0.6s,mb4.7
TIAR Tiarei 65.51 243 *e*P **P 11 38 44.3 +6.8**
comp=Z,58nm,1.2s,mb5.3
PPT Papeete 65.71 243 *e*P **P 11 38 46.2 +7.4**
comp=Z,21nm,1.5s,mb4.7
PPT *e*S S 11 47 29.0 +9.1
comp=Z,2μm,32.8s
PPT *e*SS SS 11 51 39.0 +3.3
comp=Z,370nm,29.5s
PPT *e*LQ 11 55 39.0
comp=Z,1μm,28.5s
PPT *e*LR LR 11 58 15.4
comp=Z,3μm,24.2s,baz=57
PPT Papeete 65.71 243 LR LR 11 59 54.0
comp=Z,2μm,18.1s,baz=68,slow=29
PPT Papeete 65.71 243 *e*P **P 11 38 46.2 +7.4**
PPT *e*S S 11 47 29.0 +9.1
PPT *e*SS SS 11 51 39.0 +3.3
PPT pmax pmax
comp=Z,21nm,1.5s
PPT Papeete 65.71 243 *e*P **P 11 38 46.2 +7.4**
comp=Z,21nm,1.5s,mb4.7
PPT *e*S S 11 47 29.0 +9.1
PPT *e*SS SS 11 51 39.0 +3.3
PPT *e*LQ 11 55 39.0
COLD Coldfoot 65.75 338 *e*P **P 11 38 38.3 +0.1**
comp=Z,23nm,1.1s,mb4.9
SVW2 Sparrevohn 65.89 331 *e*P **P 11 38 38.1 -1.2**
SUMG Summit 66.20 15 *e*P **P 11 38 37.9 -3.2**
comp=Z,22nm,0.7s,mb5.1
CHGN Chignik 66.21 326 *e*P **P 11 38 40.4 -1.0**
TTA Tatalina 66.59 333 *e*P **P 11 38 42.3 -1.4**
TTA pmax pmax
comp=Z,45nm,1.0s,mb5.2
TTA Tatalina 66.59 333 *e*P **P 11 38 42.3 -1.5**
comp=Z,45nm,1.0s,mb5.2
XMAS Kiritimati 66.72 266 PFAKE 11 39 00.0 +15
XMAS LR LR
comp=Z,2μm,20.0s
SDPT Sand Point 67.19 325 *e*P **P 11 38 47.3 -0.4**
comp=Z,94nm,1.0s,mb5.6
FALS False Pass 68.80 324 *e*P **P 11 38 57.2 -0.6**
comp=Z,148nm,0.9s,mb5.8
ALE Alert 69.75 4 P **P 11 39 01.0 -2.2**
comp=Z,121nm,0.5s,mb6.0,SNR=13
UNV Unalaska Valle 70.51 322 *e*P **P 11 39 08.8 +0.5**
comp=Z,127nm,1.2s,mb5.6
TNA Tin City 72.20 335 *e*P **P 11 39 19.6 +1.3**
comp=Z,30nm,1.3s,mb5.0
DAG Danmarks Havn 72.66 13 ⇑ *i*P **P 11 39 19.0 -1.9**
DAG pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
DAG Danmarks Havn 72.66 13 ⇑ *i*P **P 11 39 19.0 -1.9**
comp=Z,10.0nm,0.9s,mb4.7
JMIC Jan Mayen 74.62 20 *e*P **P 11 39 33.7 +1.3**
JOHN Johnston Islan 75.44 284 PFAKE 11 39 50.0 +12
JOHN LR LR
comp=Z,2μm,19.0s
PFVI Vila Bisbo 75.59 55 *e*P **P 11 39 40.4 +1.7**
comp=Z,70nm,1.6s,mb5.1
MORF Marmelete 75.71 55 *e*P **P 11 39 43.8 +4.4**
comp=Z,42nm,1.3s,mb5.0
PVIS Viseu 75.93 51 *e*P **P 11 39 40.7 +0.2**
comp=Z,40nm,1.6s,mb4.9
EVOP Sao Brissos 75.99 53 *e*P **P 11 39 41.1 +0.2**
EVO Evora 76.08 53 *e*P **P 11 39 34.9 -6.5**
comp=Z,7.1nm,0.6s,mb4.3
EVO Evora 76.08 53 *e*P **P 11 39 45.8 +4.4**
comp=Z,26nm,2.0s,mb4.6
PCVE Castro Verde 76.16 54 *e*P **P 11 39 45.1 +3.2**
comp=Z,12nm,1.5s,mb4.4
MTE Manteigas 76.23 51 *e*P **P 11 39 46.8 +4.6**
comp=Z,31nm,1.5s,mb4.8
MTE Manteigas 76.23 51 PFAKE 11 39 50.0 +7.8
MTE LR LR
comp=Z,950nm,20.0s
PBDV Barranco-do-Ve 76.29 55 *e*P **P 11 39 47.1 +4.5**
comp=Z,44nm,1.5s,mb5.0
PESTR Estremoz 76.37 53 *e*P **P 11 39 40.2 -2.8**
comp=Z,38nm,1.7s,mb4.8
PVAQ Vaqueiros 76.44 54 *e*P **P 11 39 48.2 +4.7**
comp=Z,29nm,1.7s,mb4.7
PMRV Marv??o 76.45 52 *e*P **P 11 39 48.4 +4.9**
MVO Moncorvo 76.53 51 *e*P **P 11 39 46.4 +2.5**
comp=Z,11nm,1.3s,mb4.4
PBAR Barrancos 76.88 54 *e*P **P 11 39 47.0 +1.1**
comp=Z,24nm,1.6s,mb4.7
RTC Rabat Centre 77.59 58 PFAKE 11 40 00.0 +10
RTC LR LR
comp=Z,1μm,20.0s
SFS San Fernando 77.76 55 PFAKE 11 40 00.0 +9.1
SFS LR LR
comp=Z,1μm,20.0s
PAB San Pablo 78.77 52 PFAKE 11 40 10.0 +14
PAB LR LR
comp=Z,852nm,20.0s
ESDC Sonseca Array 79.05 52 P **P 11 39 56.0 -2.0**
comp=Z,1.7nm,0.4s,mb4.2,baz=288,slow=4.6,SNR=8.4
ESLA Sonseca Array 79.05 52 *e*P **P 11 39 56.1 -1.8**
ESLA LR LR
comp=Z,5μm,20.0s
KBS Kingsbay 79.05 11 *e*P **P 11 39 58.4 +1.1**
KBS *e*S S 11 50 03.1 +13
KBS *e*SS SS 11 55 15.1 +18
KBS AMS AMS 12 18 45.5
comp=Z,1μm,20.7s
KBS Kingsbay 79.05 11 *c e*P **P 11 39 57.6 +0.3**
KBS Kingsbay 79.05 11 PFAKE 11 40 10.0 +13
KBS LR LR
comp=Z,1μm,20.0s
GRR Gorron 79.90 43 *e*P **P 11 40 00.4 -2.0**
GRR Gorron 79.90 43 *e*P **P 11 40 00.4 -2.0**
GRR Gorron 79.90 43 *e*P **P 11 40 00.4 -2.0**
SPITS Spitsbergen Ar 80.12 12 LR LR 12 17 46.3
comp=Z,2μm,20.2s,baz=270,slow=37
FOO Floro 80.84 29 *e*P **P 11 40 05.2 -1.9**
FOO *e*S S 11 50 12.7 +3.0
BER Bergen 81.23 30 *e*P **P 11 40 09.7 +0.5**
BER *e*S S 11 50 19.0 +5.2
BER AMS AMS 12 13 12.3
comp=Z,497nm,25.9s
BILL Bilibino 82.08 338 *c i*P **P 11 40 12.9 -0.7**
BILL *e* 11 40 24.3
BILL *i* 11 43 20.3
BILL pmax pmax
comp=Z,33nm,1.2s,mb5.0
BILL Bilibino 82.08 338 *e*P **P 11 40 13.1 -0.4**
comp=Z,18nm,0.5s,mb5.2
BILL LR LR
comp=Z,999nm,21.0s
SSF Saint Saulge 83.04 43 *e*P **P 11 40 14.5 -4.5**
comp=Z,12nm,1.0s,mb4.4
SSF Saint Saulge 83.04 43 *e*P **P 11 40 14.5 -4.5**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
SSF Saint Saulge 83.04 43 *e*P **P 11 40 14.5 -4.5**
comp=Z,5.9nm,1.0s,mb4.4
KONO Kongsberg 83.49 30 *e*P **P 11 40 18.2 -2.9**
KONO *e*SKS 11 50 41.4
KONO AMS AMS 12 20 22.3
comp=Z,508nm,19.2s
KONO Kongsberg 83.49 30 PFAKE 11 40 30.0 +9.0
KONO LR LR
comp=Z,656nm,21.0s
NAO01 NORSAR Array S 83.77 29 PFAKE 11 40 30.0 +7.6
NAO01 LR LR
comp=Z,653nm,19.0s
NB2 NORSAR Subarra 83.86 29 P **P 11 40 22.1 -0.8**
comp=Z,10nm,1.2s,mb4.5,baz=290,slow=4.8
NB2 NORSAR Subarra 83.86 29 P **P 11 40 22.1 -0.8**

baz=290,slow=4.8
NOA NORSAR Array B 83.86 29 P P 11 40 21.8 -1.1
comp=Z,3.4nm,0.8s,mb4.2,baz=290,slow=4.9,SNR=8.1
NOA LR LR 12 18 03.7
comp=Z,558nm,21.9s,baz=280,slow=36
NOA NORSAR Array B 83.86 29 P P 11 40 21.8 -1.2
NOA LR LR 12 18 03.7
TRO Tromso 83.93 19 *e*P **P 11 40 22.6 -0.5**
TRO *e*SKS 11 50 44.7
TRO *e*SS SS 11 56 22.6 +13
TRO AMS AMS 12 15 36.8
comp=Z,844nm,18.7s
SSB Saint Sauveur 84.15 45 PFAKE 11 40 40.0 +15
SSB LR LR
comp=Z,705nm,21.0s
WLF Walferdange 84.16 40 PFAKE 11 40 40.0 +15
WLF LR LR
comp=Z,1μm,20.0s
TIC Toumodi 84.48 85 *e*PKP1 **P 11 40 26.6 -0.4**
comp=Z,15nm,0.2s,mb5.5
LIC Lamto 84.57 85 *e*P **P 11 40 25.6 -1.9**
comp=Z,44nm,0.8s,mb5.2,baz=283
LIC Lamto 84.57 85 *e*PKP1 **P 11 40 26.9 -0.6**
comp=Z,68nm,0.8s,mb5.6
LIC Lamto 84.57 85 *e*P **P 11 40 25.6 -1.9**
comp=Z,22nm,0.8s,mb5.1
DBIC Dimbokro 84.63 84 P **P 11 40 26.6 -1.2**
comp=Z,14nm,0.7s,mb5.0,baz=262,slow=4.6,SNR=18
DBIC LR LR 12 14 27.8
comp=Z,590nm,21.7s,baz=269,slow=33
DBIC Dimbokro 84.63 84 *e*P **P 11 40 26.5 -1.3**
DBIC pmax pmax
comp=Z,14nm,0.7s
DBIC MLR MLR
comp=Z,1μm,22.0s
DBIC Dimbokro 84.63 84 *e*P **P 11 40 26.5 -1.3**
comp=Z,14nm,0.7s,mb5.0
DBIC LR LR
comp=Z,1μm,22.0s
AFI Afiamalu 84.64 254 PFAKE 11 40 40.0 +12
AFI LR LR
comp=Z,977nm,20.0s
HAU Haudompre 84.69 42 *e*P **P 11 40 25.2 -2.2**
HAU Haudompre 84.69 42 *e*P **P 11 40 25.2 -2.2**
HAU Haudompre 84.69 42 *e*P **P 11 40 25.2 -2.2**
KIC Kosan Boka 84.81 85 *e*PKP1 **P 11 40 27.7 -1.0**
comp=Z,46nm,0.8s,mb5.5
HINF Hinteralfeld 85.07 42 *e*P **P 11 40 23.9 -5.4**
HINF Hinteralfeld 85.07 42 *e*P **P 11 40 23.9 -5.4**
HINF Hinteralfeld 85.07 42 *e*P **P 11 40 23.9 -5.4**
ECH Echery 85.17 42 PFAKE 11 40 40.0 +10
ECH LR LR
comp=Z,911nm,22.0s
CDF Champ du Feu 85.19 41 *e*P **P 11 40 23.9 -6.0**
CDF Champ du Feu 85.19 41 *e*P **P 11 40 23.9 -6.0**
CDF Champ du Feu 85.19 41 *e*P **P 11 40 23.9 -6.0**
HFS Hagfors 85.31 29 LR LR 12 16 56.6
comp=Z,661nm,20.4s,baz=301,slow=34
BNI Bardonecchia 85.67 45 PFAKE 11 40 40.0 +7.6
BNI LR LR
comp=Z,1μm,19.0s
ARCES ARCESS Array B 86.04 18 P **P 11 40 32.3 -1.4**
comp=Z,5.2nm,0.7s,mb4.6,baz=289,slow=3.7,SNR=11
KEV Kevo 86.39 18 PFAKE 11 40 50.0 +15
KEV LR LR
comp=Z,693nm,20.0s
DAVA Damuels 87.19 42⇑ *i*P **P 11 40 40.1 +0.3**
comp=Z,12nm,1.0s,mb4.8
RETA Reutte 87.70 42⇑ *i*P **P 11 40 42.0 -0.2**
comp=Z,10nm,0.9s,mb4.8
FETA Feichten 87.82 42⇓ *i*P **P 11 40 43.3 +0.6**
comp=Z,7.3nm,0.9s,mb4.7
CLL Collm 87.87 38 *i*P **P 11 40 43.5 +0.6**
CLL *e*S S 11 51 29.0 +8.8
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CLL MLR MLR
comp=Z,800nm,20.6s
CLL Collm 87.87 38 *i*P **P 11 40 43.5 +0.6**
comp=Z,5.0nm,0.9s,mb4.5
CLL *i* 11 41 17.5
CLL *e*S S 11 51 29.0 +8.8
CLL LR LR
comp=Z,800nm,20.6s
CLL Collm 87.87 38 *i*P **P 11 40 43.5 +0.6**
comp=Z,5.0nm,0.9s,mb4.5
CLL *i* 11 41 17.5
CLL *e*PP PP 11 44 07.0 -2.4
CLL *e*S S 11 51 29.0 +8.8
CLL *e*PS 11 52 34.0
CLL *e*SS SS 11 57 12.0 +3.9
CLL *e*SSS 12 01 12.0
NKC Novy Kostel 87.89 39 *e*P **P 11 40 43.0 -0.1**
NKC MLR MLR
comp=Z,900nm,20.3s
NKC Novy Kostel 87.89 39 *e*P **P 11 40 43.0 -0.1**
NKC AMS AMS 12 23 50.0
comp=Z,900nm,20.3s
VLC Villacollemand 88.46 45 PFAKE 11 41 00.0 +14
VLC LR LR
comp=Z,439nm,20.0s
KHC Kasperske Hory 88.95 39 *e*P **P 11 40 45.9 -2.2**
KHC *e*S S 11 51 46.5 +16
KHC AMS AMS 12 17 30.0
comp=Z,1μm,22.0s
PVCC Panska Ves 89.07 38 *e*P **P 11 40 48.3 -0.3**
PVCC MLR MLR
comp=Z,1μm,21.3s
PVCC Panska Ves 89.07 38 *e*P **P 11 40 48.3 -0.3**
PVCC AMS AMS 12 20 30.0
comp=Z,1μm,21.3s
GERES GERESS Array B 89.12 40 P **P 11 40 48.7 -0.2**
comp=Z,1.7nm,0.7s,mb4.2,baz=276,slow=2.4,SNR=9.7
GERES LR LR 12 22 42.1
comp=Z,852nm,19.5s,baz=285,slow=37
VSL Villasalto 89.13 50 PFAKE 11 41 00.0 +11
VSL LR LR
comp=Z,1μm,19.0s
PRU Pruhonice 89.25 38 *e*P **P 11 40 45.1 -4.3**
PRU *e*S S 11 51 35.2 +2.0
PRU AMS AMS 12 20 20.0
comp=Z,900nm,19.1s
SEY Seymchan 89.41 336⇓ *e*P **P 11 40 50.3 +0.4**
TORD Torodi Ar. Bea 89.41 77 P **P 11 40 48.1 -2.8**
comp=Z,1.4nm,0.5s,mb4.2,baz=292,slow=4.9,SNR=25
TORD LR LR 12 19 00.7
comp=Z,1μm,19.9s,baz=295,slow=34
APA Apatity 89.55 18⇓ *e*P **P 11 40 51.0 +0.5**
APA pmax pmax
comp=Z,53nm,1.6s,mb5.4
APA pmax pmax
comp=Z,300nm,12.0s
APA MLR MLR
comp=Z,700nm,17.0s
TREC Trest 90.07 39 *e*P **P 11 40 47.9 -5.4**
TREC MLR MLR
comp=Z,1μm,19.9s
TREC Trest 90.07 39 *e*P **P 11 40 47.9 -5.4**
TREC AMS AMS 12 18 10.0
comp=Z,1μm,19.9s
DPC Dobruska-Polom 90.18 38 *e*P **P 11 40 54.2 +0.4**
DPC *e* 11 51 37.5
DPC MLR MLR
comp=Z,1μm,19.9s
DPC Dobruska-Polom 90.18 38 *e*P **P 11 40 54.2 +0.4**
DPC *e*SKKS SKKSac 11 51 37.5 +5.0
DPC AMS AMS 12 21 20.0
comp=Z,1μm,19.9s
TRI Trieste 90.23 43 PFAKE 11 41 10.0 +16
TRI LR LR
comp=Z,585nm,22.0s
FINES FINESS Array B 90.28 25 P **P 11 40 52.7 -1.3**
comp=Z,3.3nm,0.9s,mb4.5,baz=155,slow=23,SNR=5.7
FINES LR LR 12 24 04.9
comp=Z,720nm,18.8s,baz=358,slow=37
FINES FINESS Array B 90.28 25 P **P 11 40 52.7 -1.3**
FINES LR LR 12 24 04.9
TAM Tamanrasset 90.55 67 PFAKE 11 41 10.0 +14
TAM LR LR
comp=Z,787nm,22.0s
TIXI Tiksi 90.72 348 *e*P **P 11 40 55.0 -0.9**
TIXI *e* 11 44 31.2
TIXI pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
TIXI Tiksi 90.72 348 *e*P **P 11 40 54.3 -1.6**
comp=Z,10nm,0.9s,mb5.0
TIXI LR LR
comp=Z,1μm,22.0s
VRAC Vranov 90.73 39 LR LR 12 19 03.8
comp=Z,926nm,21.4s,baz=332,slow=34
PET Petropavlovsk 90.96 326 *c i*P **P 11 40 56.2 -1.1**
PET *e* 11 44 32.8
PET *e*S S 11 51 46.8 -2.0
PET pmax pmax
comp=Z,500nm,5.3s
PET pmax pmax
comp=Z,22nm,1.9s,mb5.0
PET pmax pmax
comp=Z,300nm,11.2s
PET MLR MLR
comp=Z,400nm,22.0s
PET MLR MLR
comp=Z,300nm,21.0s
PET Petropavlovsk 90.96 326 PFAKE 11 41 10.0 +13
PET LR LR
comp=Z,478nm,20.0s
AQU L'Aquila 91.12 46 PFAKE 11 41 10.0 +12
AQU LR LR
comp=Z,596nm,20.0s
PEA0B Petropavlovsk- 91.44 326 *e*P **P 11 41 01.2 +1.7**
PETK Petropavlovsk- 91.44 326 P **P 11 41 00.1 +0.5**
comp=Z,12nm,1.0s,mb5.0,baz=64,slow=11,SNR=12
PETK LR LR 12 24 02.1
comp=Z,165nm,20.3s,baz=70,slow=37
OKC Ostrava-Krasne 91.46 38 *e*P **P 11 41 01.2 +1.4**
OKC *e* 11 51 46.8
OKC MLR MLR
comp=Z,1μm,18.4s
OKC Ostrava-Krasne 91.46 38 *e*P **P 11 41 01.2 +1.4**
OKC *e*SKKS SKKSac 11 51 46.8 +4.7
OKC AMS AMS 12 22 00.0
comp=Z,1μm,18.4s
FUNA Funafuti 91.88 262 PFAKE 11 41 10.0 +7.6
FUNA LR LR
comp=Z,7μm,19.0s
PSZ Piszkesteto 93.30 39 PFAKE 11 41 20.0 +12
PSZ LR LR
comp=Z,633nm,21.0s
VAE Valguarnera 93.51 50 LR LR 12 19 42.0
comp=Z,916nm,20.4s,baz=305,slow=33
WDD Wield Dalam 94.15 52 PFAKE 11 41 20.0 +7.5
WDD LR LR
comp=Z,512nm,19.0s
KWP Kalwaria Pacla 94.23 37 PFAKE 11 41 20.0 +7.5
KWP LR LR
comp=Z,616nm,20.0s
CEL Celeste 94.34 49 PFAKE 11 41 30.0 +17
CEL LR LR
comp=Z,508nm,20.0s
TIP Timpagrande 94.63 48 PFAKE 11 41 30.0 +15
TIP LR LR
comp=Z,668nm,19.0s
TARA Tarawa 95.66 273 PFAKE 11 41 30.0 +10
TARA LR LR
comp=Z,1μm,20.0s
TIR Tirane 95.98 45 PFAKE 11 41 30.0 +9.3
TIR LR LR
comp=Z,417nm,21.0s
WAKE Wake Island 96.89 292 PFAKE 11 41 40.0 +15
WAKE LR LR
comp=Z,646nm,20.0s
KIEV Kiev 97.35 34 PFAKE 11 41 40.0 +13
KIEV LR LR
comp=Z,824nm,21.0s
AKASG Malin Array Be 97.36 34 LR LR 12 25 52.1
comp=Z,813nm,20.0s,baz=295,slow=36
YAK Yakutsk 98.02 342 *e*P **P 11 41 23.6 -5.9**
YAK *e*S SKSac 11 51 58.0 -2.8
YAK *e*PS PS 11 54 16.2 -6.4
YAK pmax pmax
comp=Z,92nm,15.7s
YAK pmax pmax
comp=Z,103nm,12.2s
YAK smax
comp=N,45nm,3.0s
YAK Yakutsk 98.02 342 PFAKE 11 41 40.0 +11
YAK LR LR
comp=Z,648nm,19.0s
OBN Obninsk 98.42 27 PFAKE 11 41 40.0 +8.6
OBN LR LR
comp=Z,662nm,21.0s
SNZO South Karori 102.19 230 PFAKE 11 42 00.0 +12
SNZO LR LR
comp=Z,1μm,20.0s
ISP Isparta 104.88 44 PFAKE 11 46 30.0 +15
ISP LR LR
comp=Z,408nm,19.0s
ARU Arti 105.58 17 PFAKE 11 46 30.0 +14
ARU LR LR
comp=Z,976nm,22.0s
SBA Scott Base 105.95 192 PFAKE 11 46 30.0 +14
SBA LR LR
comp=Z,925nm,20.0s
BR131 Keskin Array S 105.95 41 PFAKE 11 46 30.0 +13
BR131 LR LR
comp=Z,490nm,21.0s
DZM Mont Dzumac 106.58 251 *e*Pdif Pdif 11 42 10.7 +3.0
comp=Z,68nm,23.1s
DZM Mont Dzumac 106.58 251 *e*PS PS 11 55 46.3 -8.8
comp=Z,335nm,27.1s
DZM *e*SS SS 12 01 41.6 +7.6
comp=Z,1μm,29.4s
DZM *e*LQ 12 12 36.5
comp=Z,503nm,34.6s
DZM *e*LR LR 12 17 25.7
comp=Z,936nm,25.4s
KIV Kislovodsk 108.70 34 *e*P Pdif 11 42 12.2 -5.0
KIV *e*PS PS 11 56 09.9 -5.5
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV MLR MLR
comp=Z,424nm,21.0s
KIV Kislovodsk 108.70 34 PFAKE 11 46 30.0 +7.6
KIV LR LR
comp=Z,462nm,21.0s
AKTK Aktyubinsk 110.53 21 PKPdf PKiKP 11 46 26.7 +1.1
AKTO Aktyubinsk 110.53 21 PKiKP PKiKP 11 46 26.7 +1.1
comp=Z,1.4nm,0.8s,baz=291,slow=4.4,SNR=4.6
BVAR Borovoye Array 111.58 12 PKiKP PKiKP 11 46 27.8 +0.3
comp=Z,1.7nm,0.8s,baz=202,slow=3.1,SNR=7.9
TSUM Tsumeb 111.63 105 *e*PKPdf PKiKP 11 46 28.6 +0.1
TSUM LR LR
comp=Z,802nm,20.0s
MAJO Matsushiro 111.84 319 PFAKE 11 46 40.0 +11
MAJO LR LR
comp=Z,482nm,21.0s
MAT Matsushiro 111.84 319 PP PP 11 47 08.0 -3.5
ABKAR Akbulak array 112.19 20 *e*PKPdf PKiKP 11 46 29.5 +0.7
GNI Garni 112.40 35 PFAKE 11 46 40.0 +11
GNI LR LR
comp=Z,297nm,21.0s
ZALV Zalesovo Beam 112.48 3 PKiKP PKiKP 11 46 28.6 -0.5
comp=Z,0.9nm,0.4s,baz=336,slow=3.2,SNR=6.1
TLY Talaya 113.63 350 PFAKE 11 46 40.0 +8.6
TLY LR LR
comp=Z,502nm,21.0s
CN2 Changchun 113.81 332 Pdif Pdif 11 42 32.0 -7.8
CN2 *e*PP PP 11 47 21.8 -3.2
CN2 SKS SKSdf 11 53 24.5 -14
CN2 AMB AMB
comp=Z,140nm,3.0s
ZAK Zakamensk 114.94 350 *e*PKIKP PKiKP 11 46 35.3 +1.3
ZAK pmax pmax
comp=Z,2.0nm,1.1s
KURK Kurchatov 115.16 7 PKP PKiKP 11 46 34.2 -0.2
comp=Z,6.5nm,0.8s,baz=348,slow=1.7,SNR=27
ULN Ulaanbaatar 116.60 347 PFAKE 11 46 50.0 +13
ULN LR LR
comp=Z,695nm,21.0s
SONM Songino Array 116.78 347 PKP PKPdf 11 46 37.8 +0.2
comp=Z,2.3nm,0.6s,baz=338,slow=0.7,SNR=11
SONM PKKPbc PKKPbc 11 57 04.7 -1.1
comp=Z,1.1nm,0.8s,baz=183,slow=1.5,SNR=4.5
KSRS Korea Array 117.34 326 PKP PKPdf 11 46 39.0 -0.1
comp=Z,5.1nm,0.7s,baz=20,slow=1.3,SNR=17
DRV Dumont d'Urvil 117.43 200 SP SP 11 57 42.0 +16
DRV SS SS 12 04 25.0 +30
DRV R 12 24 00.0
INCN Inchon 118.02 327 PFAKE 11 46 50.0 +10
INCN LR LR
comp=Z,419nm,20.0s
GUMO Guam 118.43 294 PFAKE 11 46 50.0 +8.3
GUMO LR LR
comp=Z,424nm,20.0s
BOSA Boshof 119.30 115 PKP PKPdf 11 46 43.1 +0.2
comp=Z,7.6nm,0.8s,baz=235,slow=3.1,SNR=20
BOSA Boshof 119.30 115 *e*PKPdf PKPdf 11 46 44.7 +1.8
BOSA LR LR
comp=Z,1μm,20.0s
MK31 Makanchi Array 119.43 5 *e*PKIKP PKPdf 11 46 42.5 -0.3
MKAR Makanchi Array 119.43 5 PKP PKPdf 11 46 42.4 -0.4
comp=Z,5.3nm,0.8s,baz=318,slow=2.4,SNR=34
LBTB Lobatse 119.53 111 *e*PKIKP PKPdf 11 46 44.9 +1.4
LBTB MLR MLR
comp=Z,1μm,22.0s
BJI Beijing 120.85 336 PKP PKPdf 11 46 45.5 -0.2
BJI SS SS 12 04 39.5 +0.4
BJI LR LR
comp=N,300nm,25.8s
BJI LR LR
comp=E,370nm,22.7s
BJI LR LR
comp=Z,450nm,26.4s
LSZ Lusaka 121.20 100 *e*PKIKP PKPdf 11 46 49.4 +2.5
LSZ MLR MLR
comp=Z,682nm,19.0s
USP Ospenovka 121.71 12 P PKPdf 11 46 48.3 +1.1
SNR=11
HHC Hu-ho-hao-te 121.82 340 *e*PKP PKPdf 11 46 48.0 +0.5
HHC PKS 11 50 24.0
HHC SKS SKSdf 11 53 48.5 -5.0
HHC AMB AMB
comp=Z,86nm,9.6s
HHC LR LR
comp=N,220nm,22.4s
HHC LR LR
comp=E,380nm,20.4s
HHC LR LR
comp=Z,490nm,22.5s
EKS2 Erkin-Say 122.13 13 P PKPdf 11 46 48.8 +0.7
SNR=6.4
EKS2 Erkin-Say 122.13 13 *e*PKPdf PKPdf 11 46 49.4 +1.3
EKS2 LR LR
comp=Z,326nm,21.0s
TKM2 Tokmak 2 122.27 12 P PKPdf 11 46 49.4 +1.1
SNR=11
TKM2 Tokmak 2 122.27 12 *e*PKIKP PKPdf 11 46 49.2 +0.9
TKM2 MLR MLR
comp=Z,521nm,21.0s
TKM2 Tokmak 2 122.27 12 *e*PKPdf PKPdf 11 46 49.2 +0.9
TKM2 LR LR
comp=Z,521nm,21.0s
AAK Ala-Archa 122.32 13 PKP PKPdf 11 46 48.7 +0.2
comp=Z,1.5nm,0.3s,baz=161,slow=3.7,SNR=11
AAK Ala-Archa 122.32 13⇓ *i*PKIKP PKPdf 11 46 49.7 +1.2
AAK pmax pmax
comp=Z,5.0nm,1.2s
WMQ Urumqi 122.70 1 *e*Pdif Pdif 11 43 20.3 +0.9
WMQ PKP PKPdf 11 46 49.8 +0.7
WMQ PP PP 11 48 32.0 +6.0
WMQ PKS 11 50 25.0
WMQ SKS SKSdf 11 53 53.5 -1.5
WMQ SKKS SKKSac 11 55 19.0 -1.0
WMQ S Sdif 11 56 22.8 +6.2
WMQ SS SS 12 05 03.5 +1.5
WMQ AMB AMB
comp=Z,220nm,7.0s
WMQ LR LR
comp=N,430nm,35.0s
WMQ LR LR
comp=E,1μm,35.0s
WMQ LR LR
comp=Z,910nm,21.0s
UCH Uchtor 122.71 13 P PKPdf 11 46 51.3 +2.1
SNR=16
UCH Uchtor 122.71 13 *e*PKPdf PKPdf 11 46 51.1 +1.9
KZA Kyzart 123.01 12 P PKPdf 11 46 51.4 +1.6
SNR=6.8
ULHL Ulahol 123.04 11 P PKPdf 11 46 50.6 +0.7
SNR=11
MAW Mawson 123.52 168 *e*P Pdif 11 43 22.6 -0.4
MAW MLR MLR
comp=Z,992nm,20.0s
CTAO Charters Tower 125.15 255 PFAKE 11 47 10.0 +16
CTAO LR LR
comp=Z,731nm,22.0s
CMSA Cobar Meteorol 125.42 241 *e*P PKPdf 11 46 53.7 -0.9
CASY Casey 125.58 190 PFAKE 11 47 10.0 +16
CASY LR LR
comp=Z,1μm,20.0s
KSH Kashi 125.62 12 *e*PKP PKPdf 11 46 56.5 +1.6
KSH *e*PKS 11 50 31.5
KSH *e*SKS SKSdf 11 53 56.5 -4.2
KSH *e*SKKS SKKSac 11 55 43.0 +4.1
KSH AMB AMB
comp=Z,90nm,4.1s
KSH LR LR
comp=N,130nm,6.1s
KSH LR LR
comp=E,200nm,10.3s
KSH LR LR
comp=Z,160nm,3.6s
GTA Gaotai 126.18 350 PKP PKPdf 11 46 56.0 0.0
GTA PP PP 11 48 53.8 +4.4
GTA SKS SKSdf 11 53 58.0 -3.8
GTA SS SS 12 05 51.3 +5.4
GTA AMB AMB
comp=Z,130nm,4.8s
GTA LR LR
comp=N,430nm,20.1s
GTA LR LR
comp=E,290nm,18.6s
GTA LR LR
comp=Z,580nm,20.1s
NJ2 Nanjing 126.27 328 *e*PKP PKPdf 11 46 57.0 +0.7
NJ2 PKS 11 50 32.0
NJ2 SKS SKSdf 11 53 56.0 -6.2
NJ2 SKKS SKKSac 11 55 38.0 -5.3
NJ2 AMB AMB
comp=Z,80nm,10.0s
NJ2 LR LR
comp=N,310nm,26.5s
NJ2 LR LR
comp=E,400nm,19.7s
NJ2 LR LR
comp=Z,340nm,26.2s
KMBO Kilima Mbogo 127.23 81 *e*PKIKP PKPdf 11 47 01.7 +3.1
KMBO MLR MLR
comp=Z,526nm,21.0s
LZH Lanzhou 128.51 345 PKP PKPdf 11 47 02.8 +2.3
LZH PKS 11 50 36.5
LZH SKS SKSdf 11 54 01.5 -4.7
LZH SKKS SKKSac 11 55 54.5 -2.7
LZH AMB AMB
comp=Z,91nm,5.0s
LZH LR LR
comp=N,660nm,15.6s
LZH LR LR
comp=Z,870nm,19.0s
STKA Stephens Creek 128.85 240 *e*P PKPdf 11 47 00.6 -0.6
comp=Z,6.3nm,0.9s
STKA Stephens Creek 128.85 240 PKP PKPdf 11 47 00.3 -0.9
comp=Z,7.5nm,0.9s,baz=29,slow=1.8,SNR=14
XAN Xi'an 128.86 339 PKP PKPdf 11 47 01.0 -0.2
TATO Taipei 130.20 320 PFAKE 11 47 20.0 +16
TATO LR LR
comp=Z,334nm,22.0s
YHNB Yeheng 130.49 320 PFAKE 11 47 20.0 +15
YHNB LR LR
comp=Z,310nm,22.0s
SSLB Suanglung 131.39 320 *e*PKPdf PKPdf 11 47 08.4 +2.1
CD2 Chengdu 133.41 343 PKP PKPdf 11 47 09.5 -0.4
CD2 PP PP 11 49 40.3 +3.7
CD2 PKS 11 50 44.5
CD2 SKS SKSdf 11 54 09.5 -5.8
CD2 AMB AMB
comp=Z,200nm,5.9s
CD2 LR LR
comp=N,520nm,19.6s
CD2 LR LR
comp=Z,420nm,22.0s
GYA Guiyang 136.53 337 Pdif Pdif 11 44 20.8 -0.1
GYA PP PP 11 49 59.0 +2.5
GYA SKS SKSdf 11 54 18.0 -2.9
GYA SKKS SKKSac 11 56 44.5 -2.0
GYA AMB AMB

comp=Z,980nm,11.5s
GYA LR LR
comp=N,1μm,25.0s
GYA LR LR
comp=E,2μm,24.9s
GYA LR LR
comp=Z,2μm,24.8s
ASAR Alice Springs 136.57 250 PKhKP 11 47 07.7
comp=Z,0.8nm,0.8s,baz=120,slow=3.4,SNR=4.9
ASAR PKP PKPdf 11 47 15.0 -1.0
comp=Z,3.9nm,0.8s,baz=103,slow=1.9,SNR=24
ASAR PKKP 11 56 53.6
comp=Z,0.2nm,0.4s,baz=319,slow=1.4,SNR=6.2
ASAR Alice Springs 136.57 250 PKHKP 11 47 07.7
ASAR 11 47 15.0
LSA Lhasa 136.76 357 PKP PKPdf 11 47 11.0 -5.2
DAV Davao City (W) 138.28 297 PFAKE 11 47 30.0 +11
DAV LR LR
comp=Z,282nm,20.0s
KMI Kunming 139.13 341 PKP PKPdf 11 47 20.3 -0.4
KMI PP PP 11 50 15.0 +2.4
KMI SKKS SKKSac 11 56 59.0 -2.9
KMI SS SS 12 08 25.0 +1.5
KMI AMB AMB
comp=Z,160nm,9.9s
KMI LR LR
comp=N,370nm,23.6s
KMI LR LR
comp=E,200nm,22.5s
KMI LR LR
comp=Z,520nm,24.8s
SHL Shillong 140.83 356 *e*P PKPdf 11 47 23.0 -0.8
SHL *e*S 11 51 11.5
FITZ Fitzroy Crossi 144.62 258 *e*P PKPdf 11 47 28.6 -2.0
comp=Z,20nm,0.9s
FITZ Fitzroy Crossi 144.62 258 *e*PKPdf PKPdf 11 47 29.6 -0.9
KMBL Kambalda 145.19 234 *e*P PKPbc 11 47 29.3 -1.7
comp=Z,192nm,0.9s
CHG Chiang Mai 146.22 343 ⇑P PKPdf 11 47 33.5 +0.1
comp=Z,54nm,0.8s
CHTO Chiang Mai 146.22 343 PFAKE 11 47 50.0 +17
CHTO LR LR
comp=Z,407nm,21.0s
CM31 Chiang Mai Arr 146.55 343 *e*PKPbc PKPbc 11 47 35.6 +0.2
CM31 LR LR
comp=Z,429nm,20.0s
CMAR Chiang Mai Arr 146.55 343 PKPbc PKPbc 11 47 35.6 +0.2
comp=Z,51nm,0.7s,baz=346,slow=3.4,SNR=104
KKM Kota Kinabalu 146.65 304 *e*PKPdf PKPdf 11 47 33.3 -0.9
KKM *e*PKPbc PKPbc 11 47 36.2 +0.2
KKM *e*PKPab PKPab 11 47 37.2 +0.1
KKM LR LR
comp=Z,245nm,22.0s
KKTK Khon Kaen 147.17 335 ⇑P PKPdf 11 47 38.0 +3.0
comp=Z,926nm,0.8s
HYB Hyderabad 147.34 19 *i* PKP PKPdf 11 47 34.0 -1.3
NWAO Narrogin (SRO) 148.03 229 *e*P PKPdf 11 47 37.7 +1.7
comp=Z,129nm,0.9s
NWAO Narrogin (SRO) 148.03 229 *e*PKIKP PKPdf 11 47 35.5 -0.5
NWAO *e* 11 47 41.7
NWAO MLR MLR
comp=Z,574nm,19.0s
NWAO Narrogin (SRO) 148.03 229 *e*PKPdf PKPdf 11 47 35.5 -0.5
NWAO *e*PKPbc PKPbc 11 47 39.0 -0.2
NWAO *e*PKPab PKPab 11 47 41.7 -0.3
NWAO LR LR
comp=Z,574nm,19.0s
KAPI Kappang 148.56 283 PFAKE 11 47 50.0 +13
KAPI LR LR
comp=Z,302nm,21.0s
NST Nakhon Sawan 148.79 339 P PKPdf 11 47 40.0 +2.3
comp=Z,104nm,0.8s
MEEK Meekatharra 149.55 241 *e*P PKPdf 11 47 41.6 +3.0
MBWA Marble Bar 149.89 252 *e*P PKPdf 11 47 42.6 +3.3
MBWA Marble Bar 149.89 252 *e*PKPbc PKPbc 11 47 44.0 -0.2
MBWA LR LR
comp=Z,1μm,20.0s
KSM Kuching 154.09 304 *e*PKPdf PKPdf 11 47 46.6 +0.8
KSM *e*PKPbc PKPbc 11 47 54.9 +0.9
KSM LR LR
comp=Z,425nm,20.0s
KULM Kulim 157.87 328 *e*PKPdf PKPdf 11 47 51.9 +1.1
KULM LR LR
comp=Z,435nm,20.0s

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*JMA **27** 11:42:21.1±0.4, 24°.94N×122°.21E, h73km, M2.4*
*ISCJB **27** 11:42:22.2±0.5, 24°.77N±0°.03×122°.23E±0°.02, h77km±5km,*
Error ellipse: s-maj=5.2km s-min=3.1km az=164.3
*TAP **27** 11:42:22.0, 24°.79N×122°.21E, h79km, ML3.4, C*
ISC 27 11:42:22.7±0.5, 24°.77N±0°.03×122°.23E±0°.02, h75km±5km, n44, σ0°69/83, 5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=313	**0.32**	**317**	⇓*i*P	**Pn**	**11 42 34.4**	**-0.2**
TWB1	baz=313			*i* S	**Sn**	**11 42 43.2**	**-0.2**
TWC	**Suao** baz=241	**0.38**	**245**	⇓*i*P	**Pn**	**11 42 34.7**	**-0.3**
TWC	baz=241			S	**Sn**	**11 42 43.9**	**-0.2**
ILA	**Ilan** baz=261	**0.44**	**269**	*e*P	**Pn**	**11 42 35.3**	**-0.1**
ILA	baz=261			*e*S	**Sn**	**11 42 45.2**	**+0.3**
NWF	**Wu-fen Shan** baz=300	**0.51**	**306**	⇓*i*P	**Pn**	**11 42 36.0**	**0.0**
NWF	baz=300			*i* S	**Sn**	**11 42 46.0**	**+0.1**
TWE	**Neicheng** baz=267	**0.52**	**264**	⇓*i*P	**Pn**	**11 42 36.1**	**-0.1**
TWE	baz=267			*e*S	**Sn**	**11 42 46.1**	**0.0**
ENA	**Nanau** baz=230	**0.56**	**233**	*e*P	**Pn**	**11 42 36.5**	**0.0**
ENA	baz=230			*e*S	**Sn**	**11 42 47.1**	**+0.2**
ENTT	**Nioudou** baz=262	**0.62**	**258**	⇓*i*P	**Pn**	**11 42 37.2**	**+0.1**
TWA	**Mucha** baz=288	**0.62**	**290**	*i* P	**Pn**	**11 42 36.9**	**-0.2**
TWA	baz=288			*i* S	**Sn**	**11 42 47.2**	**-0.7**
TAP1	**Taipei** baz=291	**0.70**	**293**	*e*P	**Pn**	**11 42 37.4**	**-0.5**
TAP1	baz=291			*e*S	**Sn**	**11 42 48.9**	**-0.3**
TWY	**Chenhua** baz=310	**0.76**	**311**	*e*P	**Pn**	**11 42 38.3**	**-0.4**
TWY	baz=310			*e*S	**Sn**	**11 42 50.5**	**0.0**
YOJ	**Yonaguni jima**	**0.77**	**113**	P	**Pn**	**11 42 38.2**	**-0.6**
YOJ				*e*S	**Sn**	**11 42 51.2**	**+0.4**
NSK	**Sanguang** baz=268	**0.80**	**263**	*i* P	**Pn**	**11 42 38.9**	**-0.2**
NSK	baz=268			*e*S	**Sn**	**11 42 51.2**	**0.0**
TWS1	**Kuangyinshan** baz=293	**0.81**	**294**	*i* P	**Pn**	**11 42 39.1**	**-0.1**
TWS1	baz=293			S	**Sn**	**11 42 51.6**	**+0.2**
NNS	**Nan Shan** baz=237	**0.85**	**247**	*e*P	**Pn**	**11 42 39.9**	**+0.2**
NNS	baz=237			*e*S	**Sn**	**11 42 52.6**	**+0.4**
PCYT	**Pengchaiyu** baz=343	**0.86**	**350**	*i* P	**Pn**	**11 42 39.6**	**-0.3**
PCYT	baz=343			*e*S	**Sn**	**11 42 52.6**	**0.0**
TWD	**Chiawan** baz=212	**0.90**	**220**	*e*P	**Pn**	**11 42 39.4**	**-0.8**
TWD	baz=212			*e*S	**Sn**	**11 42 52.9**	**-0.5**
NCU	**National Centr** baz=288	**0.97**	**282**	*e*P	**Pn**	**11 42 40.8**	**-0.3**
NCU	baz=288			*e*S	**Sn**	**11 42 55.0**	**+0.2**
HWA	**Hwalien** baz=209	**0.98**	**216**	*e*P	**Pn**	**11 42 41.2**	**0.0**
HWA	baz=209			*e*S	**Sn**	**11 42 55.4**	**+0.4**
WHF	**Hehuan Shan** baz=227	**1.08**	**235**	*e*P	**Pn**	**11 42 42.5**	**+0.1**
WHF	baz=227			*e*S	**Sn**	**11 42 57.2**	**0.0**
TWT	**Tachien** baz=233	**1.09**	**242**	*e*P	**Pn**	**11 42 43.2**	**+0.6**
TWT	baz=233			*e*S	**Sn**	**11 42 58.3**	**+0.9**
NSTT	**Nanjuang** baz=261	**1.13**	**263**	P	**Pn**	**11 42 42.9**	**-0.2**
NSTT	baz=261			S	**Sn**	**11 42 58.4**	**+0.1**
ESL	**Shilin** baz=225	**1.20**	**218**	*e*P	**Pn**	**11 42 42.4**	**-1.6**
NSY	**Sanyi** baz=253	**1.39**	**255**	*e*P	**Pn**	**11 42 46.9**	**+0.6**
NSY	baz=253			*e*S	**Sn**	**11 43 04.7**	**+0.6**
TWQ1	**Liyutan** baz=250	**1.39**	**253**	*e*P	**Pn**	**11 42 46.4**	**0.0**
TWQ1	baz=250			*e*S	**Sn**	**11 43 03.6**	**-0.8**
IRIF	**Iriomote-Funau**	**1.43**	**107**	P	**Pn**	**11 42 46.0**	**-0.9**
IRIF				S	**Sn**	**11 43 05.3**	**+0.1**
SMLT	**Sun Moon Lake** baz=233	**1.50**	**234**	*e*P	**Pn**	**11 42 48.6**	**+0.7**
SMLT	baz=233			*e*S	**Sn**	**11 43 07.5**	**+0.6**
EHY	**Hungye** baz=213	**1.51**	**214**	*e*P	**Pn**	**11 42 48.0**	**0.0**
TYC	**Yuchr** baz=229	**1.52**	**236**	*e*P	**Pn**	**11 42 48.5**	**+0.4**
TYC	baz=229			*e*S	**Sn**	**11 43 07.7**	**+0.4**
HATJ	**Hateruma jima**	**1.60**	**116**	P	**Pn**	**11 42 49.5**	**+0.3**
HATJ				*e*S	**Sn**	**11 43 10.3**	**+1.1**
TWF1	**Yuli** baz=218	**1.65**	**211**	*e*P	**Pn**	**11 42 48.2**	**-1.6**
JKRS	**Kuro-shima**	**1.71**	**108**	P	**Pn**	**11 42 50.6**	**+0.1**
JKRS				*e*S	**Sn**	**11 43 11.8**	**+0.2**
YUS	**Yu-Shan** baz=215	**1.73**	**223**	*e*P	**Pn**	**11 42 51.1**	**+0.3**
YUS	baz=215			*e*S	**Sn**	**11 43 12.5**	**+0.2**
JIJ	**Ishigaki jima**	**1.79**	**103**	P	**Pn**	**11 42 51.4**	**-0.2**
JIJ				*e*S	**Sn**	**11 43 12.9**	**-0.7**
ALS	**Alishan** baz=219	**1.81**	**226**	*e*P	**Pn**	**11 42 53.1**	**+1.2**
ALS	baz=219			*e*S	**Sn**	**11 43 14.5**	**+0.4**
CHN5	**Tsauling** baz=238	**1.84**	**231**	*e*P	**Pn**	**11 42 52.5**	**+0.1**
CHN5	baz=238			*e*S	**Sn**	**11 43 15.4**	**+0.6**
CHKT	**Chengkung** baz=197	**1.84**	**206**	*e*P	**Pn**	**11 42 50.0**	**-2.4**
ELDTW	**Lidau** baz=216	**1.93**	**215**	*e*P	**Pn**	**11 42 52.3**	**-1.2**
ELDTW	baz=216			*e*S	**Sn**	**11 43 15.9**	**-1.1**
WTP	**Ta-pu** baz=233	**2.12**	**225**	*e*P	**Pn**	**11 42 56.8**	**+0.8**
WTP	baz=233			*e*S	**Sn**	**11 43 22.5**	**+0.9**
TWG	**Pinlang** baz=205	**2.21**	**209**	*e*P	**Pn**	**11 42 56.7**	**-0.7**
TWG	baz=205			*e*S	**Sn**	**11 43 21.2**	**-2.6**
CHN1	**Nanshi** baz=232	**2.22**	**225**	*e*P	**Pn**	**11 42 59.0**	**+1.6**
CHN1	baz=232			*e*S	**Sn**	**11 43 24.2**	**+0.3**
JTJ	**Tarama**	**2.25**	**93**	P	**Pn**	**11 42 58.6**	**+0.8**
JTJ				*e*S	**Sn**	**11 43 26.0**	**+1.3**
SGST	**Jiashian** baz=221	**2.26**	**222**	*e*P	**Pn**	**11 42 58.8**	**+0.8**
SGST	baz=221			*e*S	**Sn**	**11 43 25.2**	**+0.3**
SSD	**Sandimen** baz=224	**2.49**	**216**	*e*P	**Pn**	**11 43 02.0**	**+0.9**
SSD	baz=224			*e*S	**Sn**	**11 43 30.6**	**0.0**
TWK1	**Hengchun** baz=216	**3.11**	**205**	*e*P	**Pn**	**11 43 07.7**	**-1.7**
TWK1	baz=216			*e*S	**Sn**	**11 43 44.9**	**-0.5**

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*NEIC **27** 11:49:18.2, 15°.97N×99°.26W, h15km, MD3.7(MEX), After MEX.*
MEX 27 11:49:18.2±1.0, 15°.97N×99°.26W, h15km±25km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.10**	**325**	*i* P	Pb	11 49 35.4	-3.5
ACX				*i* S	Sb	11 49 48.3	-4.8
ACX	**Acapulco**	**1.10**	**325**	*i* P	Pb	11 49 35.4	-3.5
ACX				*i* S	Sb	11 49 48.3	-4.8
PNIG	**Pinotepa**	**1.16**	**68**	*i* P	Pn	11 49 36.7	-3.2
PNIG				*i* S	Sb	11 49 50.0	-4.9
PNIG	**Pinotepa**	**1.16**	**68**	*i* P	Pn	11 49 36.7	-3.2
PNIG				*i* S	Sb	11 49 50.0	-4.9
CAIG	**El Cayaco**	**1.45**	**318**	*i* P	Pn	11 49 38.9	-5.0
CAIG				*i* S	Sn	11 49 59.1	-3.5
CAIG	**El Cayaco**	**1.45**	**318**	*i* P	Pn	11 49 38.9	-5.0
CAIG				*i* S	Sn	11 49 59.1	-3.5
UTMO	**Huajuapan**	**2.32**	**37**	*i* P	Pn	11 49 53.1	-2.7
UTMO				*i* S	Sn	11 50 20.5	-3.5
PLIG	**Platanillo**	**2.42**	**354**	*e*P	Pn	11 49 54.5	-2.8
PLIG				*i* S	Sn	11 50 22.9	-3.8
PLIG	**Platanillo**	**2.42**	**354**	*e*P	Pn	11 49 54.5	-2.8
PLIG				*i* S	Sn	11 50 22.9	-3.8
VHO	**Vista Hermosa**	**2.66**	**65**	*e*P	Pn	11 49 57.4	-3.1
VHO				*i* S	Sn	11 50 29.3	-3.2
VHO	**Vista Hermosa**	**2.66**	**65**	*e*P	Pn	11 49 57.4	-3.1
VHO				*i* S	Sn	11 50 29.3	-3.2
ZIIG	**Zihuatanejo**	**2.67**	**308**	*e*P	Pn	11 49 58.1	-2.6
ZIIG				*i* S	Sn	11 50 28.8	-4.0
ZIIG	**Zihuatanejo**	**2.67**	**308**	*e*P	Pn	11 49 58.1	-2.6
ZIIG				*i* S	Sn	11 50 28.8	-4.0
TPIG	**Tehuac#an**	**3.04**	**36**	*e*P	Pn	11 50 06.0	+0.2
TPIG				*i* S	Sn	11 50 42.0	+0.2
MZVM		**3.21**	**0**	*e*P	Pn	11 50 09.4	+1.4
MZVM				*i* S	Sn	11 50 45.5	-0.5
IIO	**Organos**	**3.64**	**8**	*e*P	Pn	11 50 14.0	-0.1
IIO				*i* S	Sn	11 50 54.9	-1.8
IIO	**Organos**	**3.64**	**8**	*e*P	Pn	11 50 14.0	-0.1
IIO				*i* S	Sn	11 50 54.9	-1.8

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*NIED **27** 12:19:00, 24°.90N×122°.40E, h5km, Mw4.1 Best double couple: M0=1.72000×10^15 NP1:φs67.00000°, δ53.00000°, λ-96.00000°. NP2:φs256.00000°, δ37.00000°, λ-82.00000°.*
*NEIC **27** 12:19:24.5±0.5, 24°.92N×122°.38E, h10km, MG3.6(JMA), Error ellipse: s-maj=11.4km s-min=7.1km az=125.0*
*TAP **27** 12:19:25.0, 24°.90N×122°.41E, h7km±1km, ML3.9, D*
*JMA **27** 12:19:24.3±0.3, 24°.88N×122°.40E, h16km, M3.6*
*ISCJB **27** 12:19:25.3±0.4, 24°.95N±0°.03×122°.48E±0°.02, h22km±3km, mb3.8/11, Error ellipse: s-maj=4.3km s-min=3.2km az=177.3*
*BJI **27** 12:19:29.2, 24°.81N×121°.61E, h10km, mB4.5/2, mb3.9/4, ML3.7/2, Ms4.2/1, Ms7 4.2/1*
*IDC **27** 12:19:30.6±4.3, 24°.93N×122°.50E, h61km±39km, mb3.6/9, mb1 3.6/11, mb1mx3.5/25, mbtmp3.5/11, ML2.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/28, Error ellipse: s-maj=38.6km s-min=20.6km az=50.0*
ISC 27 12:19:25.2±0.4, 24°.92N±0°.03×122°.47E±0°.02, h13km±2km, n76, σ1°03/97, mb3.8/11, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=286	**0.44**	**282**	⇓*i*P	**Pg**	**12 19 33.8**	**-0.1**
TWB1	baz=286			S	**Sg**	**12 19 40.2**	**+0.4**
NWF	**Wu-fen Shan** baz=286	**0.64**	**284**	*i* P	**Pg**	**12 19 37.8**	**+0.1**
NWF	baz=286			*i* S	**Sg**	**12 19 46.8**	**+0.8**
TWC	**Suao** baz=240	**0.64**	**241**	P	**Pg**	**12 19 36.9**	**-0.7**
TWC	baz=240			S	**Sg**	**12 19 46.5**	**+0.4**
ILA	**Ilan** baz=257	**0.67**	**257**	P	**Pg**	**12 19 37.7**	**-0.5**
YOJ	**Yonaguni jima** baz=254	**0.68**	**132**	P	**Pg**	**12 19 37.5**	**-0.8**
YOJ				S	**Sg**	**12 19 46.7**	**-0.5**
TWE	**Neicheng** baz=254	**0.75**	**255**	P	**Pg**	**12 19 39.2**	**-0.5**
TWE	baz=254			S	**Sg**	**12 19 49.4**	**-0.2**
PCYT	**Pengchaiyu** baz=337	**0.79**	**333**	P	**Pg**	**12 19 40.1**	**-0.4**
TWA	**Mucha** baz=276	**0.80**	**274**	P	**Pg**	**12 19 40.5**	**-0.2**
TWA	baz=276			S	**Sg**	**12 19 51.8**	**+0.6**
ENA	**Nanau** baz=231	**0.82**	**233**	P	**Pg**	**12 19 40.2**	**-0.8**
TWY	**Chenhua** baz=297	**0.86**	**294**	*e*P	**Pg**	**12 19 41.4**	**-0.4**
TWY	baz=297			*e*S	**Sg**	**12 19 54.3**	**+1.2**
ENTT	**Nioudou** baz=251	**0.86**	**251**	P	**Pg**	**12 19 40.9**	**-1.0**
ENTT	baz=251			*e*S	**Sg**	**12 19 53.1**	**-0.1**
TAP1	**Taipei** baz=279	**0.86**	**278**	P	**Pg**	**12 19 41.6**	**-0.3**
TAP1	baz=279			S	**Sg**	**12 19 53.4**	**+0.3**
TATO	**Taipei**	**0.89**	**274**	*e*Pn	**Pn**	**12 19 41.6**	**-1.8**
TATO				*e*Sn	**Sn**	**12 19 53.1**	**-2.9**
TWS1	**Kuangyinshan** baz=282	**0.97**	**281**	P	**Pb**	**12 19 43.3**	**-0.5**
YHNB	**Yeheng**	**1.02**	**256**	*e*Pn	**Pn**	**12 19 43.3**	**-1.8**
YHNB				*e*Sn	**Sn**	**12 19 57.3**	**-2.1**
NSK	**Sanguang** baz=256	**1.03**	**257**	P	**Pb**	**12 19 44.3**	**-0.6**
NSK	baz=256			S	**Sb**	**12 19 58.2**	**-0.2**
NACB	**Ninganchiao**	**1.09**	**227**	*e*Pn	**Pn**	**12 19 43.7**	**-2.4**
NACB				*e*Sn	**Sn**	**12 19 59.0**	**-2.0**
NNS	**Nan Shan** baz=243	**1.10**	**245**	P	**Pb**	**12 19 45.3**	**-0.8**
NNS	baz=243			*e*S	**Sb**	**12 20 00.1**	**-0.2**
TWD	**Chiawan** baz=222	**1.15**	**224**	P	**Pb**	**12 19 46.3**	**-0.6**
NCU	**National Centr** baz=273	**1.16**	**273**	*e*P	**Pb**	**12 19 46.5**	**-0.5**
HWA	**Hwalien** baz=218	**1.22**	**220**	*e*P	**Pn**	**12 19 48.8**	**+0.9**
IRIF	**Iriomote-Funau**	**1.29**	**117**	P	**Pn**	**12 19 46.2**	**-2.7**
IRIF				*e*S	**Sb**	**12 20 05.9**	**+0.1**
WHF	**Hehuan Shan** baz=234	**1.34**	**235**	P	**Pn**	**12 19 49.1**	**-0.4**
WHF	baz=234			*e*S	**Sb**	**12 20 07.1**	**-0.1**
TWT	**Tachien** baz=240	**1.35**	**241**	P	**Pn**	**12 19 50.0**	**+0.4**
TWT	baz=240			*e*S	**Sn**	**12 20 08.4**	**+1.0**
NSTT	**Nanjuang** baz=258	**1.36**	**258**	*e*P	**Pn**	**12 19 49.1**	**-0.7**
ESL	**Shilin** baz=219	**1.45**	**221**	*e*P	**Pn**	**12 19 50.6**	**-0.5**
ESL	baz=219			*e*S	**Sn**	**12 20 11.0**	**+1.1**
HATJ	**Hateruma jima**	**1.49**	**125**	P	**Pn**	**12 19 51.3**	**-0.4**
HATJ				*e*S	**Sn**	**12 20 11.2**	**+0.2**
JKRS	**Kuro-shima**	**1.56**	**115**	P	**Pn**	**12 19 51.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.62**	**110**	P	**Pn**	**12 19 53.1**	**-0.4**
NSY	**Sanyi** baz=252	**1.63**	**252**	*e*P	**Pn**	**12 19 53.8**	**+0.3**
TWQ1	**Liyutan** baz=249	**1.64**	**250**	*e*P	**Pn**	**12 19 56.2**	**+2.5**
EHY	**Hungye** baz=215	**1.75**	**217**	*e*P	**Pn**	**12 19 55.6**	**+0.3**
SMLT	**Sun Moon Lake** baz=233	**1.76**	**234**	P	**Pn**	**12 19 56.5**	**+1.1**
SSLB	**Suanglung**	**1.78**	**231**	*e*Pn	**Pn**	**12 19 55.8**	**+0.2**
SSLB				*e*Sn	**Sn**	**12 20 16.6**	**-1.6**
TYC	**Yuchr** baz=234	**1.78**	**236**	*e*P	**Pn**	**12 19 56.5**	**+0.8**
TCU	**Taichung** baz=244	**1.80**	**245**	*e*P	**Pn**	**12 19 57.1**	**+1.2**
YULB	**Yu-li**	**1.86**	**215**	*e*Pn	**Pn**	**12 19 54.8**	**-1.8**
YULB				*e*Sn	**Sn**	**12 20 19.1**	**-0.9**
TWF1	**Yuli** baz=213	**1.89**	**215**	*e*P	**Pn**	**12 19 56.9**	**-0.3**
WNT	**Mingjian** baz=237	**1.93**	**238**	*e*P	**Pn**	**12 19 59.4**	**+1.8**
YUS	**Yu-Shan** baz=223	**1.98**	**224**	P	**Pn**	**12 19 59.1**	**+0.7**
JTJ	**Tarama**	**2.05**	**97**	P	**Pn**	**12 19 59.6**	**+0.2**
ALS	**Alishan** baz=226	**2.07**	**228**	P	**Pn**	**12 20 00.7**	**+1.1**
CHKT	**Chengkung** baz=207	**2.07**	**209**	*e*P	**Pn**	**12 20 00.1**	**+0.5**
CHN5	**Tsauling** baz=230	**2.10**	**231**	*e*P	**Pn**	**12 20 01.6**	**+1.6**
WGK	**Gukeng** baz=234	**2.13**	**235**	*e*P	**Pn**	**12 20 00.8**	**+0.4**
ELDTW	**Lidau** baz=216	**2.17**	**218**	*e*P	**Pn**	**12 20 01.2**	**+0.2**
TPUB	**Ta-pu**	**2.33**	**226**	*e*Pn	**Pn**	**12 20 04.3**	**+1.1**
TPUB				*e*Sn	**Sn**	**12 20 31.2**	**-0.4**
CHY	**Chiayi** baz=232	**2.34**	**233**	*e*P	**Pn**	**12 20 04.8**	**+1.5**
WTP	**Ta-pu** baz=224	**2.38**	**226**	*e*P	**Pn**	**12 20 05.0**	**+1.2**
TWK	**Hsinying** baz=226	**2.44**	**228**	*e*P	**Pn**	**12 20 06.1**	**+1.3**
TWG	**Pinlang**	**2.45**	**212**	*e*Pn	**Pn**	**12 20 04.0**	**-0.8**
TWG	**Pinlang** baz=210	**2.45**	**212**	*e*P	**Pn**	**12 20 04.9**	**+0.1**
CHN1	**Nanshi** baz=225	**2.47**	**226**	*e*P	**Pn**	**12 20 06.7**	**+1.6**
SGST	**Jiashian** baz=222	**2.51**	**224**	*e*P	**Pn**	**12 20 06.8**	**+1.1**
SSD	**Sandimen** baz=217	**2.74**	**218**	*e*P	**Pn**	**12 20 10.3**	**+1.5**
EAST	**Anshuo** baz=209	**2.93**	**211**	*e*P	**Pn**	**12 20 13.9**	**+2.4**
SCZT	**Fangliau** baz=213	**3.05**	**214**	*e*P	**Pn**	**12 20 14.3**	**+1.2**
QZH	**Quanzhou**	**3.52**	**271**	*e*Pg	**Pn**	**12 20 17.5**	**-2.0**
QZH				smax			
	comp=N,270nm,1.0s						
QZH				smax			
	comp=E,160nm,0.9s						
JOW	**Kunigami**	**5.57**	**69**	P	**Pn**	**12 20 49.7**	**+2.0**
	comp=E,0.7nm,0.3s,baz=256,slow=19,SNR=4.0						
JOW				LR	LR	12 22 39.9	
	comp=E,64nm,21.1s,baz=128,slow=34						
JOW	**Kunigami**	**5.57**	**69**	P	**Pn**	**12 20 49.7**	**+2.0**
JOW				LR	LR	12 22 39.9	
KSRS	**Korea Array**	**13.33**	**19**	P	**Pn**	**12 22 37.0**	**+2.9**
	comp=E,0.1nm,0.3s,baz=218,slow=16,SNR=3.0						
CMAR	**Chiang Mai Arr**	**22.77**	**258**	PcP	PcP	12 28 19.0	-0.1
	comp=E,1.1nm,0.7s,baz=29,slow=0.8,SNR=6.4						
GTA	**Gaotai**	**23.92**	**313**	*e*P	**P**	**12 24 39.5**	**+0.7**
GTA				pP		12 24 45.5	
GTA				sP	sP	12 24 49.3	+4.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.0						
SONM	**Songino Array**	**26.17**	**335**	P	**P**	**12 24 59.6**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.5,baz=147,slow=8.8,SNR=6.5						
MK31	**Makanchi Array**	**38.64**	**315**	*e*P	**P**	**12 26 48.4**	**+0.2**
MKAR	**Makanchi Array**	**38.64**	**315**	P	**P**	**12 26 48.3**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.0,baz=96,slow=11,SNR=22						
MKAR				PcP	PcP	12 28 58.2	-2.0
	comp=Z,0.2nm,0.6s,baz=106,slow=4.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**40.27**	**326**	P	**P**	**12 27 01.1**	**-0.6**
	comp=Z,1.5nm,0.6s,mb3.9,baz=111,slow=8.1,SNR=8.4						
KURK	**Kurchatov**	**42.29**	**319**	P	**P**	**12 27 18.2**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.6,baz=110,slow=7.4,SNR=11						
TIXI	**Tiksi**	**46.90**	**3**	*e*P	**P**	**12 27 54.3**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**47.85**	**320**	P	**P**	**12 28 02.5**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.3,baz=107,slow=8.3,SNR=10						
ASAR	**Alice Springs**	**49.55**	**166**	P	**P**	**12 28 15.6**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.5,baz=346,slow=7.2,SNR=5.6						
CSS	**Prodhromos**	**75.50**	**302**	*e*P	**P**	**12 31 02.9**	**-6.5**
	comp=Z,125nm,0.8s						
NOA	**NORSAR Array B**	**78.12**	**332**	P	**P**	**12 31 22.0**	**-1.6**
	comp=Z,1.1nm,0.8s,mb3.8,baz=63,slow=5.6,SNR=3.0						
YKA	**Yellowknife Ar**	**81.84**	**23**	P	**P**	**12 31 42.7**	**-1.1**
	comp=Z,0.3nm,0.8s,mb3.3,baz=318,slow=5.9,SNR=3.7						
NVAR	**Mina Array Bea**	**95.10**	**43**	P	**P**	**12 32 48.2**	**0.0**

comp=Z,0.2nm,0.5s,mb3.8,baz=281,slow=2.3,SNR=3.8
NVAR Mina Array Bea 95.10 43 P P 12 32 48.2 0.0

JMA 27 13:05:30.8±0.3, 29°.08N×129°.63E, h61km±4km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.67**	**182**	P	Pn	13 05 44.4	-0.3
JAM				eS	Sn	13 05 53.9	-1.0
JNN	**Nakanoshima**	**0.79**	**16**	P	Pn	13 05 46.1	-0.1
JNN				S	Sn	13 05 57.2	-0.3
JZK	**Kikaishima**	**0.82**	**158**	P	Pn	13 05 47.0	+0.4
JZK				S	Sn	13 05 59.3	+1.1
JTK	**Tokunoshima**	**1.42**	**205**	P	Pn	13 05 55.6	+1.1
JTK				eS	Sn	13 06 13.2	+1.0
JKC	**Kuchinoerabu**	**1.46**	**20**	P	Pn	13 05 55.3	+0.3
JKC				S	Sn	13 06 12.7	-0.5
JTN	**Tanegashima 3**	**1.96**	**36**	P	Pn	13 06 01.5	-0.2
JTN				eS	Sn	13 06 23.4	-1.8
JIH	**Iheya**	**2.51**	**216**	P	Pn	13 06 11.2	+2.0
JIH				eS	Sn	13 06 41.5	+2.8
JOW	**Kunigami**	**2.54**	**208**	P	Pn	13 06 11.6	+2.0
JOW				eS	Sn	13 06 42.0	+2.6
JAGN	**Aguni-jima**	**3.26**	**221**	P	Pn	13 06 22.2	+2.7
JAGN				eS	Sn	13 06 59.9	+2.8

CASC 27 13:08:37.1±3.2, 8°.42N×82°.98W, h4km, MD3.5, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.47**	**38**	⇑iP	Pg	13 08 48.3	+2.1
BRU2				eS	Sg	13 08 55.3	+3.0
TBS2		**0.49**	**41**	⇑eP	Pg	13 08 56.2	+10
TBS2				eS	Sg	13 09 04.7	+12
BAR1		**0.88**	**338**	eP	Pg	13 08 54.1	+0.1
BAR1				eS	Sg	13 09 05.7	+0.3
BUS	**Buena Vista**	**1.36**	**326**	eP	Pn	13 09 02.6	-0.3
BUS				eS	Sg	13 09 20.2	-0.7
URSC	**Urasca**	**1.61**	**331**	eP	Pn	13 09 06.7	+0.4
URSC				eS	Sn	13 09 27.5	0.0
PRS1	**Puriscal**	**2.03**	**320**	eP	Pn	13 09 13.4	+1.3

IDC 27 13:22:33.7±1.5, 17°.04S×178°.42W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/15, mbtmp3.8/6, Error ellipse: s-maj=99.5km s-min=24.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.04**	**240**	P	P	13 30 03.1	+0.7
	0.8nm,0.4s,baz=87,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**45.02**	**253**	P	P	13 30 50.7	-0.7
	2.7nm,0.5s,baz=88,slow=8.2,SNR=52						
NVAR	**Mina Array Bea**	**78.81**	**44**	P	P	13 34 39.9	+1.3
	0.1nm,0.6s,baz=216,slow=9.0,SNR=3.8						
TXAR	**Lajitas Array**	**85.54**	**58**	P	P	13 35 14.3	+0.2
	0.3nm,0.7s,baz=248,slow=6.6,SNR=5.0						
PDAR	**Pinedale Array**	**86.73**	**43**	P	P	13 35 18.6	-1.0
	0.3nm,0.5s,baz=234,slow=2.5,SNR=3.8						
SONM	**Songino Array**	**92.89**	**319**	P	P	13 35 49.1	+0.6
	0.1nm,0.3s,baz=90,slow=4.3,SNR=2.4						

MEX 27 13:27:24.7±1.3, 16°.08N×97°.56W, h16km±17km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.63**	**300**	iP	Pg	13 27 34.5	-2.6
PNIG				iS	Sg	13 27 43.0	-2.7
VHO	**Vista Hermosa**	**1.27**	**38**	iP	Pn	13 27 43.9	-3.9
VHO				iS	Sb	13 27 59.0	-5.3
HUIG	**Huatulco**	**1.43**	**102**	iP	Pn	13 27 47.4	-2.5
HUIG				iS	Sn	13 28 02.1	-6.2
UTMO	**Huajuapan**	**1.76**	**352**	iP	Pn	13 27 52.2	-2.4
UTMO				iS	Sn	13 28 13.2	-3.5

CASC 27 13:41:03.0±1.3, 8°.82N×82°.92W, h13km±11km, MD3.5, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.23**	**95**	⇑iP	Pg	13 41 08.7	+0.7
BRU2				eS	Sg	13 41 12.8	+1.5
TBS2		**0.26**	**95**	⇓iP	Pg	13 41 16.4	+7.9
TBS2				eS	Sg	13 41 21.0	+8.7
BAR1		**0.57**	**318**	⇓eP	Pg	13 41 14.1	-0.1
BAR1				eS	Sg	13 41 22.1	+0.3
CNI	**Changuinola**	**0.72**	**34**	⇓iP	Pg	13 41 16.6	-0.4
BUS	**Buena Vista**	**1.10**	**312**	eP	Pb	13 41 23.0	-1.0
URSC	**Urasca**	**1.32**	**320**	⇑eP	Pn	13 41 26.3	-0.8
URSC				eS	Sb	13 41 43.5	-0.9
LAJ	**Bijagual**	**1.58**	**311**	eP	Pn	13 41 35.1	+4.5
PRS1	**Puriscal**	**1.79**	**310**	eP	Pn	13 41 32.7	-1.0
CGA2	**Cerro Gallo 2**	**1.93**	**308**	eP	Pn	13 41 35.5	-0.1

*IDC **27** 13:42:52.1±2.5, 29°.59N×141°.95E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.5/24, mbtmp3.6/9, ML3.6/2, Error ellipse: s-maj=78.3km s-min=23.7km az=77.0*
*ISCJB **27** 13:42:55.7±1.0, 29°.84N±0°.06×142°.0E±0°.2, h33km, mb3.6/7, Error ellipse: s-maj=22.6km s-min=7.4km az=168.6*
*JMA **27** 13:42:55.2±0.1, 29°.82N×142°.15E, h40km, M3.9*
*NEIC **27** 13:42:57.1±1.9, 29°.70N×142°.00E, h35km, MG3.9(JMA), Error ellipse: s-maj=56.2km s-min=15.7km az=82.0*
ISC 27 13:42:57.5±0.9, 29°.79N±0°.06×142°.0E±0°.2, h35km, n23, σ1°.03/29, mb3.6/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.82**	**331**	P	**Pn**	**13 43 53.9**	**+0.1**
JHJ2				eS	**Sn**	**13 44 37.3**	**-0.2**
JHJ	**Hachijo jima 2**	**3.84**	**330**	Pn	**Pn**	**13 43 53.2**	**-0.9**
	6.7nm,0.3s,baz=178,slow=23,SNR=7.3						
JHJ				Sn	**Sn**	**13 44 37.3**	**-0.7**
	7.1nm,0.3s,baz=139,slow=19,SNR=2.8						
BSO1	**Boso 1**	**4.94**	**350**	P	**Pn**	**13 44 07.9**	**-1.3**
BSO1				eS	**Sn**	**13 45 05.0**	**0.0**
BSO3	**Boso 3**	**5.17**	**346**	P	**Pn**	**13 44 13.7**	**+1.4**
JOD2	**Odawara 2**	**6.00**	**336**	P	**Pn**	**13 44 26.0**	**+2.2**
JIE	**Ise**	**6.45**	**317**	P	**Pn**	**13 44 30.3**	**+0.4**
JHU	**Hanno**	**6.48**	**340**	P	**Pn**	**13 44 31.3**	**+1.0**
JHU				eS	**Sn**	**13 45 42.2**	**-0.8**
JRY	**Ryogami san**	**6.75**	**338**	P	**Pn**	**13 44 34.8**	**+0.7**
JRY				eS	**Sn**	**13 45 50.1**	**+0.4**
JAG	**Ashikaga**	**6.97**	**343**	P	**Pn**	**13 44 36.7**	**-0.3**
MJAR	**Matsushiro Arr**	**7.46**	**336**	Pn	**Pn**	**13 44 43.8**	**0.0**
	1.3nm,0.3s,baz=159,slow=11,SNR=11						
MAJO	**Matsushiro**	**7.46**	**336**	P	**Pn**	**13 44 43.4**	**-0.4**
MAT	**Matsushiro**	**7.46**	**336**	P	**Pn**	**13 44 44.4**	**+0.5**
MAT				eS	**Sn**	**13 46 06.4**	**-0.9**
MAT	**Matsushiro**	**7.46**	**336**	P	**Pn**	**13 44 45.9**	**+2.0**
JMK	**Ichinoseki**	**9.17**	**356**	P	**Pn**	**13 45 05.1**	**-2.1**
SONM	**Songino Array**	**32.73**	**313**	P	**P**	**13 49 27.1**	**+0.4**
	0.4nm,0.6s,mb3.5,baz=117,slow=8.3,SNR=2.7						
CMAR	**Chiang Mai Arr**	**40.70**	**264**	P	**P**	**13 50 34.0**	**-0.9**
	0.5nm,0.7s,mb3.2,baz=37,slow=9.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**47.40**	**318**	P	**P**	**13 51 30.2**	**+2.0**
	0.4nm,0.5s,mb3.6,baz=72,slow=6.2,SNR=2.4						
MKAR	**Makanchi Array**	**48.70**	**308**	P	**P**	**13 51 37.1**	**-1.1**
	0.3nm,0.5s,mb3.5,baz=104,slow=8.6,SNR=4.9						
ASAR	**Alice Springs**	**53.72**	**189**	P	**P**	**13 52 14.2**	**-1.9**
	0.2nm,0.4s,mb3.4,baz=360,slow=5.2,SNR=7.3						
BVAR	**Borovoye Array**	**56.00**	**316**	P	**P**	**13 52 32.6**	**+0.2**
	0.4nm,0.3s,mb3.9,baz=98,slow=9.1,SNR=5.3						
ABKAR	**Akbulak array**	**63.15**	**313**	eP	**P**	**13 53 22.4**	**+0.7**
BRTR	**Keskin Array B**	**84.09**	**313**	P	**P**	**13 55 25.7**	**+0.9**
	0.3nm,0.4s,mb3.8,baz=57,slow=5.3,SNR=3.8						
BRTR	**Keskin Array B**	**84.09**	**313**	P	**P**	**13 55 25.7**	**+0.9**

IDC 27 13:43:12.1±32.0, 14°.12S×178°.23W, h609km±442km, mb2.9/5, mb1 3.3/5, mb1mx3.0/15, mbtmp2.9/5, Error ellipse: s-maj=156.1km s-min=96.3km az=170.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.71**	**237**	P	P	13 50 01.6	-0.1
	0.8nm,0.5s,baz=80,slow=17,SNR=2.6						
ASAR	**Alice Springs**	**46.09**	**251**	P	P	13 50 43.4	0.0
	2.4nm,0.5s,baz=84,slow=8.3,SNR=90						
NVAR	**Mina Array Bea**	**76.60**	**44**	P	P	13 54 01.8	+0.4
	0.4nm,0.5s,baz=236,slow=7.5,SNR=4.8						
TXAR	**Lajitas Array**	**83.84**	**58**	P	P	13 54 39.4	+0.3
	0.6nm,0.6s,baz=217,slow=6.2,SNR=9.3						
PDAR	**Pinedale Array**	**84.50**	**44**	P	P	13 54 42.4	+0.3
	0.6nm,0.6s,baz=188,slow=1.8,SNR=5.7						

*ISCJB **27** 13:59:33.1±0.2, 32°.50N±0°.02×105°.18E±0°.03, h10km, mb4.6/64, MS4.0/30, Error ellipse: s-maj=3.5km s-min=2.8km az=146.3*
*BJI **27** 13:59:33.8, 32°.49N×105°.30E, h15km, mB4.7/23, mb4.7/31, ML4.8/23, Ms4.7/53, Ms7 4.4/43*
*NEIC **27** 13:59:35.0±0.3, 32°.51N×105°.10E, h10km, mb4.7/36, Error ellipse: s-maj=6.0km s-min=5.3km az=180.0*
*MOS **27** 13:59:34.9±1.0, 32°.50N×105°.35E, h25km, mb4.8/41, MS4.0/21, Error ellipse: s-maj=10.0km s-min=5.1km az=106.7*
*IDC **27** 13:59:36.6±4.1, 32°.51N×105°.19E, h20km±26km, mb4.3/22, mb1 4.4/25, mb1mx4.3/34, mbtmp4.3/25, ML4.0/3, MS3.9/20, Ms1 3.9/20, ms1mx3.7/38, Error ellipse: s-maj=19.2km s-min=10.7km az=52.0*
ISC 27 13:59:35.1±0.2, 32°.50N±0°.02×105°.17E±0°.02, h10km, n199, σ1°.22/217, mb4.6/64, MS4.0/30, 11C-13D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.99**	**218**	Pn	**Pn**	**14 00 08.8**	**+0.1**
CD2				Pg	**Pg**	**14 00 11.5**	**-1.7**
CD2				Sg	**Sg**	**14 00 38.0**	**-0.9**
CD2				smax			
	comp=N,46μm,0.8s						
XAN	**Xi'an**	**3.50**	**63**	Pn	**Pn**	**14 00 29.0**	**-0.6**
XAN				Pg	**Pg**	**14 00 36.8**	**-5.4**
XAN				Sn	**Sn**	**14 01 09.5**	**-1.5**
XAN				Sg	**Sg**	**14 01 18.8**	**-8.7**
XAN				smax			
	comp=N,4μm,1.0s						
XAN				smax			
	comp=E,2μm,1.0s						
XAN				LR	LR		
	comp=N,9μm,7.0s						
XAN				LR	LR		
	comp=E,2μm,7.0s						
XAN				LR	LR		
	comp=Z,2μm,6.5s						
LZH	**Lanzhou**	**3.75**	**343**	ePn	**Pn**	**14 00 34.5**	**+1.6**
LZH				Pg	**Pg**	**14 00 45.5**	**-1.4**
LZH				Sn	**Sn**	**14 01 23.5**	**+6.4**
LZH				Sg	**Sg**	**14 01 31.5**	**-3.9**
LZH				smax			
	comp=N,4μm,1.1s						
LZH				smax			
	comp=E,4μm,0.8s						
LZH				LR	LR		
	comp=N,8μm,6.3s						
LZH				LR	LR		
	comp=Z,9μm,7.8s						
GYA	**Guiyang**	**6.16**	**167**	Pn	**Pn**	**14 01 06.3**	**+0.2**
GYA				smax			
	comp=N,610nm,1.0s						
GYA				smax			
	comp=E,1μm,1.1s						
GYA				LR	LR		
	comp=N,4μm,4.3s						
GYA				LR	LR		
	comp=E,3μm,3.7s						
GYA				LR	LR		
	comp=Z,4μm,4.7s						
KMI	**Kunming**	**7.65**	**197**	Pn	**Pn**	**14 01 26.8**	**+0.2**
KMI				Sn	**Sn**	**14 02 51.3**	**-2.0**
KMI				smax			
	comp=N,170nm,1.1s						
KMI				smax			
	comp=E,230nm,1.1s						
KMI				LR	LR		
	comp=N,3μm,8.1s						
KMI				LR	LR		
	comp=E,3μm,8.7s						
KMI				LR	LR		
	comp=Z,2μm,8.5s						
TIY	**Taiyuan**	**7.91**	**47**	ePn	**Pn**	**14 01 29.3**	**-0.8**
TIY				Sn	**Sn**	**14 02 54.0**	**-5.6**
TIY				LR	LR		
	comp=N,2μm,4.8s						
TIY				LR	LR		
	comp=E,1μm,6.8s						
TIY				LR	LR		
	comp=Z,1μm,5.6s						
WHN	**Wuhan**	**8.08**	**102**	P	**Pn**	**14 01 31.5**	**-0.9**
WHN				S	**Sn**	**14 02 57.0**	**-6.8**
WHN				LR	LR		
	comp=Z,5μm,4.3s						
GTA	**Gaotai**	**8.15**	**329**	⇓P	**Pn**	**14 01 33.5**	**+0.1**
GTA				pP		14 01 39.3	
GTA				sP		14 01 42.8	
GTA				S	**Sn**	**14 03 04.5**	**-1.0**
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
GTA				pmax	pmax		
	comp=Z,81nm,6.3s						
GTA				LR	LR		
	comp=N,3μm,10.1s						
GTA				LR	LR		
	comp=E,3μm,9.6s						
GTA				LR	LR		
	comp=Z,3μm,10.8s						
BTO	**Baotou**	**8.98**	**24**	eP	**Pn**	**14 01 43.5**	**-1.3**
BTO				LR	LR		
	comp=N,2μm,8.8s						
BTO				LR	LR		
	comp=E,880nm,8.0s						
HHC	**Hu-ho-hao-te**	**9.79**	**30**	eP	**Pn**	**14 01 55.3**	**-0.6**
HHC				pP		14 02 02.5	
HHC				sP		14 02 07.3	
HHC				S	**Sn**	**14 03 46.0**	**+0.2**
HHC				sS		14 03 56.8	
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.7s						
HHC				LR	LR		
	comp=N,3μm,5.1s						
HHC				LR	LR		
	comp=E,1μm,5.2s						
HHC				LR	LR		
	comp=Z,2μm,5.5s						
TIA	**Tai'an**	**10.55**	**66**	eP	**Pn**	**14 02 08.8**	**+2.4**
TIA				LR	LR		
	comp=N,460nm,8.0s						
TIA				LR	LR		
	comp=E,430nm,9.0s						
NJ2	**Nanjing**	**11.60**	**89**	eP	**Pn**	**14 02 20.3**	**-0.3**
NJ2				pP		14 02 27.8	
NJ2				PP		14 02 30.3	
NJ2				sP		14 02 32.5	
NJ2				S	**Sn**	**14 04 30.3**	**+0.1**
NJ2				sS		14 04 41.5	
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,60nm,3.5s						
NJ2				LR	LR		
	comp=N,700nm,10.1s						
NJ2				LR	LR		
	comp=E,2μm,11.3s						
BJI	**Beijing**	**11.64**	**47**	P	**Pn**	**14 02 20.3**	**-0.9**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				pmax	pmax		
	comp=Z,56nm,3.5s						
BJI				LR	LR		
	comp=N,3μm,19.1s						
BJI				LR	LR		
	comp=E,3μm,10.6s						
BJI				LR	LR		
	comp=Z,440nm,16.3s						
GZH	**Guangzhou**	**11.84**	**140**	P	**Pn**	**14 02 19.5**	**-4.5**
GZH				LR	LR		
	comp=N,4μm,10.2s						
GZH				LR	LR		
	comp=E,4μm,11.0s						
LSA	**Lhasa**	**12.33**	**261**	P	**Pn**	**14 02 32.3**	**+1.6**
LSA				LR	LR		
	comp=N,390nm,10.1s						
LSA				LR	LR		
	comp=E,760nm,10.1s						
LSA				LR	LR		
	comp=Z,1μm,11.4s						
SHL	**Shillong**	**13.51**	**243**	eP	**Pn**	**14 02 46.5**	**-0.4**
SHL				eS	Sx	14 06 51.0	
SSE	**Sheshan**	**13.70**	**92**	P	**Pn**	**14 02 47.3**	**-2.1**
SSE				S	**Sn**	**14 05 17.5**	**-4.1**
SSE				pmax	pmax		
	comp=Z,30nm,0.8s						
SSE				LR	LR		
	comp=N,900nm,8.8s						
SSE				LR	LR		
	comp=E,790nm,8.9s						
SSE				LR	LR		
	comp=Z,990nm,9.3s						
QZH	**Quanzhou**	**13.97**	**119**	eP	**Pn**	**14 02 53.5**	**+0.4**
QZH				S	**Sn**	**14 05 24.3**	**-4.0**
QZH				LR	LR		
	comp=N,9μm,8.0s						
QZH				LR	LR		
	comp=E,6μm,8.8s						
QZH				LR	LR		
	comp=Z,3μm,13.6s						
QIZ	**Qiongzhong**	**14.05**	**161**	P	**Pn**	**14 02 57.0**	**+2.7**
QIZ				S	**Sn**	**14 05 34.0**	**+3.7**
QIZ				pmax	pmax		
	comp=Z,11nm,1.1s						
QIZ				LR	LR		
	comp=N,2μm,9.4s						
QIZ				LR	LR		
	comp=Z,2μm,12.7s						
CHG	**Chiang Mai**	**14.73**	**204**	⇑P	**Pn**	**14 03 05.1**	**+1.6**
	comp=Z,16nm,0.8s						
DL2	**Dalian**	**14.82**	**60**	P	**Pn**	**14 03 06.5**	**+1.9**
DL2				S	**Sn**	**14 05 51.5**	**+2.7**
DL2				pmax	pmax		
	comp=Z,20nm,1.4s						
DL2				pmax	pmax		
	comp=Z,130nm,4.9s						
DL2				LR	LR		
	comp=N,410nm,14.0s						
DL2				LR	LR		
	comp=E,510nm,14.3s						
DL2				LR	LR		
	comp=Z,810nm,14.4s						
CM31	**Chiang Mai Arr**	**15.06**	**203**	eP	**Pn**	**14 03 08.2**	**+0.1**
	comp=Z,8.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.06**	**203**	Pn	**Pn**	**14 03 07.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=13,slow=11,SNR=24						
CMAR				Lg		14 07 40.7	
	comp=Z,0.2nm,0.3s,baz=16,slow=30,SNR=3.5						
CMAR				LR	LR	14 09 14.3	
	comp=Z,229nm,19.7s,baz=198,slow=38						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**14 03 10.1**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=185,slow=13,SNR=64						
SONM				Lg		14 07 38.6	
	comp=Z,0.2nm,0.3s,baz=190,slow=30,SNR=2.9						
SONM				LR	LR	14 09 44.1	
	comp=Z,749nm,20.5s,baz=182,slow=40						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**14 03 10.1**	**-1.5**
SONM				Lg		14 07 38.6	
SONM				LR	LR	14 09 44.1	
ULN	**Ulaanbaatar**	**15.42**	**5**	eP	**Pn**	**14 03 10.7**	**-1.9**
ULN				pmax	pmax		
	comp=Z,23nm,0.9s						
ULN	**Ulaanbaatar**	**15.42**	**5**	eP	**Pn**	**14 03 10.7**	**-1.9**
	comp=Z,24nm,0.9s						
TAPN	**Taplejung**	**15.98**	**256**	eP	**Pn**	**14 03 19.1**	**-0.8**
	comp=Z,111nm,1.1s						
SSLB	**Suanglung**	**16.39**	**118**	eP	**Pn**	**14 03 27.3**	**+2.0**
	comp=Z,20nm,0.8s						
ODAN	**Odare**	**16.43**	**255**	eP	**Pn**	**14 03 23.9**	**-1.9**
	comp=Z,53nm,0.7s						
YULB	**Yu-li**	**16.88**	**118**	eP	**Pn**	**14 03 33.9**	**+2.4**
	comp=Z,20nm,0.9s						
RAMN	**Ramite**	**17.04**	**256**	eP	**Pn**	**14 03 31.6**	**-1.9**
	comp=Z,168nm,1.1s						
TWG	**Pinlang**	**17.05**	**120**	eP	**Pn**	**14 03 34.7**	**+1.0**
	comp=Z,27nm,0.8s						
JIRN	**Jiri**	**17.11**	**259**	eP	**Pn**	**14 03 33.3**	**-1.1**
	comp=Z,58nm,1.0s						
GUN	**Gumba**	**17.28**	**260**	eP	**Pn**	**14 03 34.7**	**-1.8**
	comp=Z,190nm,1.1s						
SNY	**Shenyang**	**17.35**	**52**	⇓P	**Pn**	**14 03 38.5**	**+1.2**
SNY				S	**Sn**	**14 06 49.8**	**-0.6**
SNY				pmax	pmax		
	comp=Z,14nm,1.3s						
SNY				pmax	pmax		
	comp=Z,140nm,3.9s						
SNY				LR	LR		
	comp=N,560nm,13.3s						
SNY				LR	LR		
	comp=E,780nm,18.6s						
SNY				LR	LR		
	comp=Z,770nm,16.5s						
WMQ	**Urumqi**	**17.76**	**315**	eP	**Pn**	**14 03 43.0**	**+0.7**
WMQ				PP		14 03 56.8	
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ				LR	LR		
	comp=N,1μm,20.0s						
WMQ				LR	LR		
	comp=E,650nm,20.0s						
WMQ				LR	LR		
	comp=Z,520nm,19.0s						
PKI	**Pulchoki**	**17.79**	**259**	eP	**Pn**	**14 03 40.9**	**-2.0**
	comp=Z,86nm,0.8s						
PKI	**Pulchoki**	**17.79**	**259**	eP	**Pn**	**14 03 40.9**	**-2.0**
PKI				pmax	pmax		
	comp=Z,87nm,0.8s						
KKN	**Kakani**	**17.82**	**260**	eP	**Pn**	**14 03 40.8**	**-2.4**
	comp=Z,114nm,1.1s						
KKN	**Kakani**	**17.82**	**260**	eP	**Pn**	**14 03 40.8**	**-2.4**
KKN				pmax	pmax		
	comp=Z,114nm,1.1s						
ZAK	**Zakamensk**	**17.93**	**356**	eP	**Pn**	**14 03 44.4**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
DMN	**Daman**	**18.03**	**260**	eP	**Pn**	**14 03 44.0**	**-1.8**
	comp=Z,99nm,0.9s						
INCN	**Inchon**	**18.27**	**68**	eP	**Pn**	**14 03 49.5**	**+0.8**
	comp=Z,33nm,1.1s						
TLY	**Talaya**	**19.20**	**357**	eP	**Pn**	**14 04 00.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,14nm,1.1s						
TLY				MLR	MLR		
	comp=Z,652nm,11.0s						
KSRS	**Korea Array**	**19.28**	**69**	P	**Pn**	**14 03 59.5**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=254,slow=10,SNR=43						
KSRS				LR	LR	14 11 51.5	
	comp=Z,436nm,18.0s,baz=297,slow=38						
KSRS	**Korea Array**	**19.28**	**69**	P	**Pn**	**14 03 59.6**	**-1.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,437nm,18.0s						
MOY	**Mondy**	**19.40**	**352**	eP	**Pn**	**14 04 02.9**	**+0.7**
MOY				pmax	pmax		
	comp=Z,71nm,2.8s						
CN2	**Changchun**	**19.49**	**49**	eP	**Pn**	**14 04 03.5**	**+0.2**
CN2				esP	sP	14 04 14.0	+7.8
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,500nm,4.0s						
CN2				LR	LR		
	comp=N,2μm,14.0s						
CN2				LR	LR		
	comp=E,1μm,14.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
IRK	**Irkutsk**	**19.75**	**358**	eP	**Pn**	**14 04 05.3**	**-1.0**
IRK				pmax	pmax		
	comp=Z,65nm,1.0s						
CIT	**Chita**	**20.45**	**15**	eP	**P**	**14 04 12.3**	**-0.2**
JOW	**Kunigami**	**20.84**	**100**	P	**P**	**14 04 17.5**	**+0.5**
	comp=Z,52nm,0.9s,baz=302,slow=5.7,SNR=11						
JOW				LR	LR	14 14 22.5	
	comp=Z,539nm,18.4s,MS4.0,baz=300,slow=42						

MDJ	**Mudanjiang**	**22.52**	**50**	P	**P**	**14 04 33.8 -1.0**
MDJ				pP		14 04 39.5
MDJ				sP	sP	14 04 42.0 +3.0
MDJ				S	**S**	**14 08 39.0 -3.0**
MDJ				sS	sS	14 08 48.8 +2.2
MDJ				pmax	pmax	
	comp=Z,17nm,1.3s,mb4.3					
MDJ				LR	LR	
	comp=N,540nm,11.3s					
MDJ				LR	LR	
	comp=E,500nm,9.9s					
MDJ				LR	LR	
	comp=Z,520nm,11.7s,MS4.2					
MK31	**Makanchi Array**	**22.57 316**		*e*P	**P**	**14 04 35.5 +0.2**
MKAR	**Makanchi Array**	**22.57 316**		P	**P**	**14 04 35.5 +0.2**
	comp=Z,17nm,0.8s,mb4.5,baz=113,slow=11,SNR=54					
MKAR				ScP	ScP	14 12 04.3 -2.0
	comp=Z,0.9nm,0.9s,baz=116,slow=3.4,SNR=4.4					
MKAR				LR	LR	14 13 04.7
	comp=Z,357nm,20.0s,MS3.8,baz=120,slow=36					
MKAR	**Makanchi Array**	**22.57 316**		*i* P	**P**	**14 04 35.7 +0.4**
MKAR				pmax	pmax	
	comp=Z,17nm,0.8s					
KSH	**Kashi**	**24.57 295**		*e*P	**P**	**14 04 59.5 +4.5**
KSH				*e*pP		14 05 06.5
KSH				*e*sP	sP	14 05 09.5 +10
KSH				*e*PP		14 05 36.3
KSH				*e*PcP	PcP	14 08 36.3 +3.3
KSH				*e*S	**S**	**14 09 18.0 +2.1**
KSH				*e*sS	sS	14 09 28.5 +7.6
KSH				*e*SS		14 10 15.0
KSH				pmax	pmax	
	comp=Z,11nm,0.9s,mb4.4					
KSH				LR	LR	
	comp=N,400nm,9.8s					
KSH				LR	LR	
	comp=E,480nm,12.8s					
KSH				LR	LR	
	comp=Z,670nm,13.0s,MS4.3					
ULHL	**Ulahol**	**24.86 301**		P	**P**	**14 05 01.3 +3.6**
	SNR=18					
TKM2	**Tokmak 2**	**25.49 303**		P	**P**	**14 05 06.2 +2.8**
	SNR=11					
TKM2	**Tokmak 2**	**25.49 303**		*e*P	**P**	**14 05 04.6 +1.2**
TKM2				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.3					
TKM2	**Tokmak 2**	**25.49 303**		*e*P	**P**	**14 05 04.6 +1.3**
	comp=Z,9.7nm,0.9s,mb4.3					
KZA	**Kyzart**	**25.54 301**		P	**P**	**14 05 07.0 +3.0**
	SNR=20					
KBK	**Karagaybulak**	**25.89 302**		P	**P**	**14 05 10.0 +3.0**
	SNR=9.6					
ZAA0	**Zalesovo Array**	**25.89 332**		P	**P**	**14 05 05.9 -1.0**
ZALV	**Zalesovo Beam**	**25.89 332**		P	**P**	**14 05 06.9 -0.1**
	comp=Z,6.2nm,0.7s,mb4.3,baz=132,slow=10.0,SNR=24					
ZALV				LR	LR	14 16 00.9
	comp=Z,138nm,21.1s,MS3.5,baz=239,slow=38					
ZALV	**Zalesovo Beam**	**25.89 332**		P	**P**	**14 05 06.9 0.0**
ZALV				pmax	pmax	
	comp=Z,6.0nm,0.7s,mb4.2					
ZALV				MLR	MLR	
	comp=Z,139nm,21.1s,MS3.5					
KLR	**Kul'dur**	**25.95**	**42**	*e*P	**P**	**14 05 03.8 -3.7**
KLR				pmax	pmax	
	comp=E,100nm,1.8s					
KLR				pmax	pmax	
	comp=Z,70nm,1.8s,mb4.9					
KLR				MLR	MLR	
	comp=N,900nm,11.0s					
KLR				MLR	MLR	
	comp=Z,2μm,11.0s,MS5.0					
BOD	**Bodaibo**	**26.03**	**11**	*e*P	**P**	**14 05 08.9 +0.7**
BOD				pmax	pmax	
	comp=Z,20nm,1.3s,mb4.5					
UCH	**Uchtor**	**26.11 301**		P	**P**	**14 05 11.5 +2.4**
	SNR=37					
UCH	**Uchtor**	**26.11 301**		*e*P	**P**	**14 05 11.2 +2.2**
	comp=Z,31nm,1.1s,mb4.8					
AAK	**Ala-Archa**	**26.21 302**		P	**P**	**14 05 11.8 +1.9**
	comp=Z,1.0nm,0.3s,mb3.8,baz=128,slow=11,SNR=3.3					
AAK				LR	LR	14 16 00.8
	comp=Z,638nm,20.6s,MS4.1,baz=80,slow=38					
AAK	**Ala-Archa**	**26.21 302**		P	**P**	**14 05 11.8 +1.9**
AAK				pmax	pmax	
	comp=Z,1.0nm,0.3s,mb3.8					
AAK				MLR	MLR	
	comp=Z,638nm,20.6s,MS4.2					
AAK	**Ala-Archa**	**26.21 302**		P	**P**	**14 05 11.8 +1.9**
AAK				LR	LR	14 16 00.8
KURK	**Kurchatov**	**26.71 321**		P	**P**	**14 05 14.7 +0.3**
	comp=Z,9.6nm,0.9s,mb4.3,baz=134,slow=8.6,SNR=36					
KURK				LR	LR	14 17 33.3
	comp=Z,38nm,20.4s,MS2.9,baz=145,slow=40					
KURK	**Kurchatov**	**26.71 321**		*c i*P	**P**	**14 05 14.8 +0.4**
KURK				pmax	pmax	
	comp=Z,31nm,1.2s,mb4.7					
KURK				MLR	MLR	
	comp=Z,192nm,14.0s,MS3.8					
EKS2	**Erkin-Say**	**26.73 301**		*e*P	**P**	**14 05 15.8 +1.2**
	comp=Z,4.4nm,0.7s,mb4.1					
NVS	**Novosibirsk**	**27.18 332**		*e*P	**P**	**14 05 20.3 +1.8**
NVS				pmax	pmax	
	comp=Z,10.0nm,1.6s,mb4.1					
NVS				pmax	pmax	
	comp=N,7.0nm,1.2s					
NVS				pmax	pmax	
	comp=E,9.0nm,1.2s					
MJAR	**Matsushiro Arr**	**27.45**	**72**	LR	LR	14 16 25.1
	comp=E,120nm,18.6s,MS3.5,baz=270,slow=37					
NRGR	**Nerungri**	**27.69**	**23**	*e*P	**P**	**14 05 14.0 -9.1**
NRGR				S	**S**	**14 10 06.8 +1.8**
NRGR				smax		
	comp=N,79nm,0.9s					
JHJ	**Hachijo jima 2**	**29.03**	**79**	LR	LR	14 17 04.0
	comp=N,180nm,20.9s,MS3.7,baz=88,slow=36					
KBL	**Kabul**	**30.09 284**		*e*P	**P**	**14 05 46.9 +2.2**
KBL				pmax	pmax	
	comp=Z,9.0nm,1.0s,mb4.5					
KBL	**Kabul**	**30.09 284**		*e*P	**P**	**14 05 46.9 +2.2**
	comp=Z,9.0nm,1.0s,mb4.5					
PSI	**Prapat**	**30.11 193**		P	**P**	**14 05 45.2 +0.2**
	comp=Z,2.9nm,0.4s,mb4.3,baz=349,slow=17,SNR=4.7					
PSI				LR	LR	14 18 45.3
	comp=Z,356nm,18.4s,MS4.0,baz=176,slow=38					
PSI	**Prapat**	**30.11 193**		P	**P**	**14 05 45.3 +0.3**
PSI				pmax	pmax	
	comp=Z,3.0nm,0.4s,mb4.4					
PSI				MLR	MLR	
	comp=Z,356nm,18.5s,MS4.0					
BVAR	**Borovoye Array**	**32.29 320**		P	**P**	**14 06 03.3 -0.6**
	comp=Z,1.4nm,0.5s,mb4.0,baz=116,slow=9.7,SNR=9.7					
BVAR				PcP	PcP	14 08 51.5 -0.3
	comp=Z,1.2nm,0.6s,baz=93,slow=3.3,SNR=3.7					
BVAR				LR	LR	14 20 14.6
	comp=Z,274nm,18.2s,MS4.0,baz=120,slow=38					
BVAR	**Borovoye Array**	**32.29 320**		P	**P**	**14 06 03.3 -0.5**
BVAR						14 08 51.5
BVAR				pmax	pmax	
	comp=Z,1.0nm,0.5s					
BVAR				pmax	pmax	
	comp=Z,1.0nm,0.6s					
BVAR				MLR	MLR	
	comp=Z,274nm,18.2s					
BRVK	**Borovoye**	**32.36 320**		⇓*e*P	**P**	**14 06 06.7 +2.2**
BRVK				pmax	pmax	
	comp=Z,8.0nm,1.2s,mb4.4					
BRVK				MLR	MLR	
	comp=Z,265nm,20.0s,MS3.9					
YAK	**Yakutsk**	**33.49**	**21**	*e*P	**P**	**14 06 12.6 -1.6**
YAK				pmax	pmax	
	comp=N,6.0nm,1.3s					
YAK				pmax	pmax	
	comp=E,8.0nm,1.4s					
YAK				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.8					
YAK	**Yakutsk**	**33.49**	**21**	*e*P	**P**	**14 06 13.8 -0.4**
	comp=Z,16nm,0.8s,mb5.0					
ABKAR	**Akbulak array**	**37.45 310**		*e*P	**P**	**14 06 49.3 +0.9**
	comp=Z,2.7nm,0.5s,mb4.3					
AKTK	**Aktyubinsk**	**38.87 312**		P	**P**	**14 07 00.5 +0.1**
AKTO	**Aktyubinsk**	**38.87 312**		P	**P**	**14 07 00.5 +0.1**
	comp=Z,3.2nm,0.5s,mb4.3,baz=96,slow=12,SNR=12					
AKTO	**Aktyubinsk**	**38.87 312**		P	**P**	**14 07 00.5 +0.1**
AKTO				pmax	pmax	
	comp=Z,3.0nm,0.5s,mb4.3					
SVE	**Sverdlovsk**	**38.94 322**		⇑*e*P	**P**	**14 07 01.9 +1.0**
SVE				pmax	pmax	
	comp=Z,20nm,1.1s,mb4.8					
KAPI	**Kappang**	**39.80 157**		P	**P**	**14 07 07.2 -1.3**
	comp=Z,17nm,0.7s,mb4.9,baz=18,slow=6.4,SNR=4.7					
ARU	**Arti**	**39.91 321**		*c i*P	**P**	**14 07 09.1 +0.1**
ARU				*e*		14 08 40.7
ARU				S	**S**	**14 13 15.2 +1.5**
ARU				SS	SS	14 16 03.4 -6.5
ARU				pmax	pmax	
	comp=Z,24nm,1.2s,mb4.8					
GUMO	**Guam**	**40.80 108**		LR	LR	14 24 22.8
	comp=Z,113nm,19.4s,MS3.7,baz=5.0,slow=36					
TIXI	**Tiksi**	**41.22**	**11**	*e*P	**P**	**14 07 17.9 -1.7**
TIXI				pmax	pmax	
	comp=Z,14nm,1.5s,mb4.4					
TIXI				MLR	MLR	
	comp=Z,475nm,17.0s,MS4.4					
TIXI	**Tiksi**	**41.22**	**11**	*e*P	**P**	**14 07 18.3 -1.3**
	comp=Z,4.9nm,0.7s,mb4.2					
SOKR	**Solikamsk**	**41.76 325**		*e*P	**P**	**14 07 24.3 +0.1**
SOKR				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.5					
SOKR				MLR	MLR	
	comp=Z,230nm,18.0s,MS4.1					
SEY	**Seymchan**	**42.44**	**30**	⇓*e*P	**P**	**14 07 29.6 -0.1**
PETK	**Petropavlovsk-**	**42.57**	**45**	P	**P**	**14 07 31.4 +0.6**
	comp=Z,3.9nm,0.8s,mb4.2,baz=191,slow=6.9,SNR=4.8					
PETK				LR	LR	14 26 57.5
	comp=Z,225nm,18.7s,MS4.1,baz=130,slow=39					
PETK	**Petropavlovsk-**	**42.57**	**45**	P	**P**	**14 07 31.5 +0.6**
PETK				pmax	pmax	
	comp=Z,4.0nm,0.9s,mb4.2					
PETK				MLR	MLR	
	comp=Z,225nm,18.7s,MS4.1					
GNI	**Garni**	**48.47 297**		LR	LR	14 33 52.8
	comp=Z,79nm,18.2s,MS3.7,baz=268,slow=42					
KIV	**Kislovodsk**	**49.32 302**		*e*P	**P**	**14 08 27.8 +3.5**
KIV				pmax	pmax	
	comp=Z,8.0nm,1.1s,mb4.7					
KIV				MLR	MLR	
	comp=Z,103nm,16.0s,MS3.9					
BILL	**Bilibino**	**49.53**	**26**	*e*P	**P**	**14 08 24.9 -0.7**
BILL				*i*		14 09 45.3
BILL				*e*		14 10 22.3
BILL				pmax	pmax	
	comp=Z,12nm,1.2s,mb4.8					
BILL				MLR	MLR	
	comp=Z,400nm,15.0s,MS4.5					
BILL	**Bilibino**	**49.53**	**26**	*e*P	**P**	**14 08 24.4 -1.2**
	comp=Z,9.7nm,1.0s,mb4.8					
VORD	**Divnogorie**	**50.76 312**		*e*P	**P**	**14 08 34.7 -0.4**
VORD				pmax	pmax	
	comp=Z,3.0nm,0.6s,mb4.4					
VORD				pmax	pmax	
	comp=N,8.0nm,1.1s					
VORD				pmax	pmax	
	comp=E,10.0nm,0.9s					
VSR	**Storozhevoye**	**50.81 312**		*e*P	**P**	**14 08 35.6 +0.1**
VSR				pmax	pmax	
	comp=Z,10.0nm,1.4s,mb4.5					
VSR				pmax	pmax	
	comp=N,10.0nm,1.2s					
VSR				pmax	pmax	
	comp=E,7.0nm,1.0s					
MOS	**Moscow**	**51.43 318**		*e*P	**P**	**14 08 38.5 -1.5**
MOS				pmax	pmax	
	comp=Z,30nm,0.8s,mb5.3					
OBN	**Obninsk**	**52.06 317**		*e*P	**P**	**14 08 44.7 -0.1**
OBN				*e*		14 09 56.9
OBN				*e*		14 10 44.0
OBN				pmax	pmax	
	comp=Z,31nm,1.2s,mb5.1					
OBN				MLR	MLR	
	comp=Z,200nm,16.0s,MS4.2					
ANN	**Anapa**	**52.88 304**		*e*P	**P**	**14 08 48.6 -2.5**
ANN				*e**PP	pP	14 08 58.7 +4.4
ANN				*e*		14 09 59.7
ANN				*e*		14 10 48.8
ANN				*e*S	**S**	**14 16 15.3 -4.6**
ANN				pmax	pmax	
	comp=Z,32nm,1.3s,mb5.1					
ANN				MLR	MLR	
	comp=N,180nm,17.0s,MS4.4					
ANN				MLR	MLR	
	comp=E,210nm,17.0s,MS4.4					
ANN				MLR	MLR	
	comp=Z,168nm,17.0s,MS4.2					
APA	**Apatity**	**53.47 333**		⇓*i*P	**P**	**14 08 55.2 +0.2**
APA				pmax	pmax	
	comp=Z,10.0nm,0.6s,mb4.9					
APA				MLR	MLR	
	comp=Z,400nm,11.0s,MS4.7					
FITZ	**Fitzroy Crossi**	**53.99 156**		P	**P**	**14 09 00.6 +1.2**
	baz=356,slow=19					
FITZ	**Fitzroy Crossi**	**53.99 156**		*e*P	**P**	**14 09 00.5 +1.1**
JOF	**Joensuu**	**54.34 327**		*e*P	**P**	**14 09 01.5 0.0**
JOF				pmax	pmax	
	comp=Z,9.0nm,0.9s,mb4.7					
JOF	**Joensuu**	**54.34 327**		*e*p	**P**	**14 09 01.5 0.0**
	comp=Z,8.7nm,0.9s,mb4.7					
KEV	**Kevo**	**55.84 336**		*e*P	**P**	**14 09 11.5 -0.7**
KEV				pmax	pmax	
	comp=Z,18nm,1.0s,mb5.1					
KEV	**Kevo**	**55.84 336**		*e*p	**P**	**14 09 11.5 -0.7**
	comp=Z,18nm,1.0s,mb5.1					
ARCES	**ARCESS Array B**	**56.37 335**		P	**P**	**14 09 15.9 -0.1**
	comp=Z,7.0nm,0.6s,mb4.8,baz=87,slow=8.5,SNR=25					
ARCES	**ARCESS Array B**	**56.37 335**		P	**P**	**14 09 15.9 -0.1**
ARCES				pmax	pmax	
	comp=Z,7.0nm,0.6s					
ASF	**Jabal al Asfar**	**56.73 290**		P	**P**	**14 09 21.0 +1.9**
	comp=Z,2.0nm,0.6s,mb4.3,baz=113,slow=3.9,SNR=3.4					
ASF	**Jabal al Asfar**	**56.73 290**		P	**P**	**14 09 21.0 +1.9**
ASF				pmax	pmax	
	comp=Z,2.0nm,0.6s					
KAF	**Kangasniemi**	**56.73 327**		*e*P	**P**	**14 09 17.5 -1.1**
KAF				pmax	pmax	
	comp=Z,6.0nm,1.0s,mb4.6					
KAF	**Kangasniemi**	**56.73 327**		*e*p	**P**	**14 09 17.5 -1.1**
	comp=Z,6.4nm,1.0s,mb4.6					
BR131	**Keskin Array S**	**56.85 299**		P	**P**	**14 09 19.7 -0.2**
	comp=Z,1.9nm,0.6s,mb4.3					
BRTR	**Keskin Array B**	**56.85 299**		P	**P**	**14 09 20.1 +0.3**
	comp=Z,1.9nm,0.6s,mb4.3,baz=108,slow=4.9,SNR=10.0					
BRTR	**Keskin Array B**	**56.85 299**		P	**P**	**14 09 20.2 +0.3**
BRTR				pmax	pmax	
	comp=Z,2.0nm,0.6s					
FINES	**FINESS Array B**	**56.92 326**		P	**P**	**14 09 19.9 -0.1**
	comp=Z,2.1nm,0.4s,mb4.5,baz=95,slow=8.6,SNR=16					
FINES				LR	LR	14 35 56.5
	comp=Z,132nm,19.6s,MS4.0,baz=180,slow=38					
FINES	**FINESS Array B**	**56.92 326**		P	**P**	**14 09 19.9 -0.1**
FINES				pmax	pmax	
	comp=Z,2.0nm,0.4s					
FINES				MLR	MLR	
	comp=Z,132nm,19.6s					
FINES	**FINESS Array B**	**56.92 326**		P	**P**	**14 09 19.9 -0.1**
FINES				LR	LR	14 35 56.5
AKASG	**Malin Array Be**	**57.10 313**		P	**P**	**14 09 21.0 -0.5**
	comp=Z,3.0nm,0.5s,mb4.6,baz=68,slow=6.7,SNR=9.0					
AKASG				LR	LR	14 35 16.2
	comp=Z,161nm,21.7s,MS4.1,baz=50,slow=38					
AKASG	**Malin Array Be**	**57.10 313**		P	**P**	**14 09 21.0 -0.5**
AKASG				pmax	pmax	
	comp=Z,3.0nm,0.5s					
AKASG				MLR	MLR	
	comp=Z,161nm,21.7s					
VRI	**Vrincioaia**	**59.95 308**		⇑P	**P**	**14 09 42.9 +1.5**
VRI	**Vrincioaia**	**59.95 308**		⇑*i*P	**P**	**14 09 42.9 +1.5**
PLOR	**Plostina**	**60.00 308**		⇓P	**P**	**14 09 44.8 +3.0**
PLOR	**Plostina**	**60.00 308**		⇓*i*P	**P**	**14 09 44.8 +3.0**
BUR08	**Bucovina Ar. S**	**60.43 310**		*e*P	**P**	**14 09 45.2 +0.5**
KWP	**Kalwaria Pacla**	**61.43 313**		*e*P	**P**	**14 09 52.0 +0.6**
KWP	**Kalwaria Pacla**	**61.43 313**		*e*P	**P**	**14 09 51.8 +0.4**
KWP				pmax	pmax	
	comp=Z,28nm,0.8s,mb5.4					
KWP	**Kalwaria Pacla**	**61.43 313**		*e*P	**P**	**14 09 51.8 +0.4**
	comp=Z,28nm,0.8s,mb5.5					
KWP	**Kalwaria Pacla**	**61.43 313**		⇓*i*P	**P**	**14 09 52.2 +0.8**
ASAR	**Alice Springs**	**62.23 150**		P	**P**	**14 09 56.5 -0.5**
	comp=Z,3.1nm,0.6s,mb4.6,baz=335,slow=6.0,SNR=40					
ASAR	**Alice Springs**	**62.23 150**		P	**P**	**14 09 56.5 -0.5**
ASAR				pmax	pmax	
	comp=Z,3.0nm,0.6s					
DRGR		**62.31 310**		⇓P	**P**	**14 09 59.7 +2.3**
DRGR		**62.31 310**		⇓*i*P	**P**	**14 09 59.7 +2.3**
OJC	**Ojcow**	**63.03 314**		*e*P	**P**	**14 10 04.9 +2.8**
NB2	**NORSAR Subarra**	**63.98 327**		P	**P**	**14 10 07.0 -1.2**
	comp=Z,22nm,1.7s,mb4.9,baz=72,slow=6.5					
NOA	**NORSAR Array B**	**63.98 327**		P	**P**	**14 10 07.2 -1.1**
	comp=Z,2.5nm,0.6s,mb4.4,baz=72,slow=6.7,SNR=9.9					
NOA				LR	LR	14 39 47.2
	comp=Z,130nm,18.9s,MS4.1,baz=90,slow=38					
NOA	**NORSAR Array B**	**63.98 327**		P	**P**	**14 10 07.2 -1.0**
NOA				pmax	pmax	
	comp=Z,3.0nm,0.6s					
NOA				MLR	MLR	
	comp=Z,130nm,18.9s					
MORC	**Moravsky Berou**	**64.55 314**		P	**P**	**14 10 11.9 -0.3**
MORC				pmax	pmax	
	comp=Z,5.0nm,0.8s,mb4.6					
MORC	**Moravsky Berou**	**64.55 314**		P	**P**	**14 10 11.9 -0.3**
	comp=Z,4.9nm,0.8s,mb4.6					
MORC	**Moravsky Berou**	**64.55 314**		⇓*i*P	**P**	**14 10 09.9 -2.3**
DPC	**Dobruska-Polom**	**65.08 315**		*e*P	**P**	**14 10 16.1 +0.5**
DPC				MLR	MLR	
	comp=Z,200nm,19.7s,MS4.3					
DPC	**Dobruska-Polom**	**65.08 315**		*e*P	**P**	**14 10 16.1 +0.5**
DPC				AMS	AMS	14 39 20.0
	comp=Z,200nm,19.7s					
PKSM	**Moragy**	**65.15 310**		⇑P	**P**	**14 10 16.7 +0.6**
PKSM	**Moragy**	**65.15 310**		⇑*i*P	**P**	**14 10 16.7 +0.6**
TTA	**Tatalina**	**65.41**	**30**	*e*P	**P**	**14 10 18.1 +0.6**
TTA				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.3					
TTA	**Tatalina**	**65.41**	**30**	*e*P	**P**	**14 10 18.1 +0.6**
	comp=Z,2.1nm,0.6s,mb4.3					
PRU	**Pruhonice**	**66.27 315**		AMS	AMS	14 40 00.0
	comp=Z,200nm,13.1s					
CHUM	**Lake Minchumin**	**66.52**	**28**	*e*P	**P**	**14 10 26.0 +1.3**
	comp=Z,3.7nm,0.8s,mb4.5					
CLL	**Collm**	**66.66 317**		⇓*i*P	**P**	**14 10 25.7 -0.1**
CLL				*i*	pP	14 10 28.4 -0.6
CLL				MLR	MLR	
	comp=Z,100nm,24.0s,MS4.0					
CLL	**Collm**	**66.66 317**		⇓*i*P	**P**	**14 10 25.7 -0.1**
CLL				*i* pP	pP	14 10 28.4 -0.6
	comp=Z,7.0nm,1.2s					
CLL				*e*PP	PP	14 12 50.0 -2.2
BPAW	**Bear Paw Mtn.**	**66.95**	**28**	P	**P**	**14 10 26.1 -1.3**
	comp=Z,12nm,1.2s,mb4.8					
PPLA	**Purkeypile**	**67.01**	**29**	*e*P	**P**	**14 10 27.4 -0.4**
	comp=Z,8.1nm,0.7s,mb4.9					
GEC2	**GERESS Array S**	**67.23 314**		P	**P**	**14 10 30.7 +1.2**
	comp=Z,1μm,1.0s,mb6.9					
GERES	**GERESS Array B**	**67.23 314**		P	**P**	**14 10 29.4 -0.1**
	comp=Z,2.8nm,0.8s,mb4.3,baz=74,slow=4.7,SNR=9.7					
GERES				LR	LR	14 41 39.8
	comp=Z,133nm,18.8s,MS4.2,baz=275,slow=38					
GERES	**GERESS Array B**	**67.23 314**		P	**P**	**14 10 29.4 0.0**
GERES				pmax	pmax	
	comp=Z,3.0nm,0.8s					
GERES				MLR	MLR	
	comp=Z,133nm,18.8s					
SOKA	**Soboth**	**67.27 312**		⇑*i*P	**P**	**14 10 30.0 +0.2**
	comp=Z,5.0nm,0.7s,mb4.6					
COLA	**College**	**67.78**	**26**	*e*P	**P**	**14 10 32.1 -0.6**
COLA				pmax	pmax	
	comp=Z,7.0nm,0.6s,mb4.9					
COLA	**College**	**67.78**	**26**	*e*P	**P**	**14 10 32.1 -0.6**
	comp=Z,6.6nm,0.6s,mb4.8					
KBA	**Koelnbreinsper**	**68.17 313**		⇑*i*P	**P**	**14 10 36.8 +1.4**
	comp=Z,4.2nm,0.7s,mb4.6					
PMR	**Palmer**	**68.89**	**30**	*e*P	**P**	**14 10 37.4 -2.2**
PMR				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.5					
PMR	**Palmer**	**68.89**	**30**	*e*P	**P**	**14 10 37.4 -2.3**
	comp=Z,3.7nm,0.6s,mb4.5					
FETA	**Feichten**	**69.81 313**		⇑*i*P	**P**	**14 10 45.3 -0.3**
INK	**Inuvik**	**70.55**	**20**	*e*P	**P**	**14 10 48.6 -1.2**
INK				pmax	pmax	
	comp=Z,6.0nm,1.0s					
INK	**Inuvik**	**70.55**	**20**	*e*P	**P**	**14 10 48.6 -1.2**
	comp=Z,5.8nm,1.0s,mb4.5					
CDF	**Champ du Feu**	**71.25 316**		*e*P	**P**	**14 10 54.3 -0.1**
RES	**Resolute Bay**	**72.27**	**5**	*e*P	**P**	**14 10 59.2 -0.9**
RES				pmax	pmax	
	comp=Z,7.0nm,1.1s,mb4.5					
RES	**Resolute Bay**	**72.27**	**5**	*e*P	**P**	**14 10 59.2 -0.9**
	comp=Z,6.9nm,1.1s,mb4.5					
STKA	**Stephens Creek**	**72.69 148**		P	**P**	**14 11 04.0 +0.9**
	comp=Z,2.4nm,0.5s,mb4.4,baz=354,slow=6.0,SNR=6.9					
LPG	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.4 +0.7**
	comp=Z,29nm,0.7s,mb5.0					
LPG	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.4 +0.7**
LPG				pmax	pmax	
	comp=Z,15nm,0.7s,mb5.0					
LPG	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.4 +0.7**
	comp=Z,15nm,0.7s,mb5.0					
LPL	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.3 +0.6**
	comp=Z,20nm,0.7s,mb4.9					
LPL	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.3 +0.6**
LPL				pmax	pmax	
	comp=Z,10.0nm,0.7s,mb4.8					
LPL	**La Plagne**	**72.96 313**		*e*P	**P**	**14 11 05.3 +0.6**
	comp=Z,10nm,0.7s,mb4.9					
SMF	**Signal de Mont**	**74.15 315**		*e*P	**P**	**14 11 11.1 -0.5**
AVF	**Avril sur Loir**	**74.36 316**		*e*P	**P**	**14 11 12.6 -0.3**
	comp=Z,17nm,0.9s,mb4.7					
AVF	**Avril sur Loir**	**74.36 316**		*e*P	**P**	**14 11 12.6 -0.3**
AVF				pmax	pmax	
	comp=Z,9.0nm,0.9s,mb4.7					
AVF	**Avril sur Loir**	**74.36 316**		*e*P	**P**	**14 11 12.6 -0.3**
	comp=Z,8.6nm,0.9s,mb4.7					
YKA	**Yellowknife Ar**	**80.10**	**18**	P	**P**	**14 11 43.9 -0.8**
	comp=Z,2.0nm,0.8s,mb4.1,baz=322,slow=5.0,SNR=15					
YKA				LR	LR	14 51 49.9
	comp=Z,9.2nm,18.4s,MS3.2,baz=35,slow=39					
YKA	**Yellowknife Ar**	**80.10**	**18**	P	**P**	**14 11 43.9 -0.9**
YKA				pmax	pmax	
	comp=Z,2.0nm,0.8s					
YKA				MLR	MLR	
	comp=Z,9.0nm,18.4s					
YKA	**Yellowknife Ar**	**80.10**	**18**	P	**P**	**14 11 43.9 -0.8**
YKA				LR	LR	14 51 49.9
FCC	**Fort Churchill**	**87.68**	**10**	*e*P	**P**	**14 12 22.4 -1.2**
	comp=Z,0.5nm,1.3s,mb3.6					
SCHQ	**Schefferville**	**92.76 355**		P	**P**	**14 12 48.0 +0.6**
	comp=Z,4.6nm,1.1s,mb4.8,baz=11,slow=5.2,SNR=3.7					
SCHQ	**Schefferville**	**92.76 355**		P	**P**	**14 12 48.0 +0.6**
TORD	**Torodi Ar. Bea**	**94.07 288**		P	**P**	**14 12 53.9 -0.3**
	comp=Z,0.4nm,0.7s,mb4.0,baz=50,slow=4.8,SNR=2.9					
OTAV	**Otavalo**	**147.26**	**7**	*e*PKPdf	PKPdf	14 19 18.2 +1.0

ISCJB ***27*** *14:10:48.3±0

243nm,0.7s,2μm
COEN Coen 11.89 153 *e*P **Pn 14 13 36.3 -0.3**
COEN *e*S **Sn 14 15 43.7 -3.8**
COEN Coen 11.89 153 *e*P **Pn 14 13 36.3 -0.3**
125nm,0.6s
COEN *e*S **Sn 14 15 41.3 -6.2**
COEN Coen 11.89 153 P **Pn 14 13 36.5 -0.1**
91nm,0.6s
KNA Kununurra 15.08 215 *e*P **Pn 14 14 18.6 -0.4**
43nm,0.5s
KNA *e*S **S 14 16 56.1 -22**
MRSI Marisa 16.11 283 P **Pn 14 14 30.6 -1.5**
33nm,0.8s,561nm
APSI Ampana 16.13 278 P **Pn 14 14 32.7 +0.4**
94nm,0.8s,889nm
CTA Charters Tower 18.65 154 P **Pn 14 15 04.0 +0.8**
0.7nm,0.3s,baz=332,slow=12,SNR=5.0
CTA S **S 14 18 29.7 -1.0**
0.4nm,0.3s,baz=336,slow=20,SNR=3.5
CTA LR LR 14 22 58.5
comp=Z,120nm,19.6s,baz=346,slow=39
CTA Charters Tower 18.65 154 P **Pn 14 15 04.0 +0.8**
CTA S **S 14 18 29.7 -1.0**
CTA LR LR 14 22 58.5
CTAO Charters Tower 18.65 154 *e*P **Pn 14 15 03.7 +0.6**
8.5nm,0.6s
FITZ Fitzroy Crossi 18.77 218 *e*P **Pn 14 15 04.6 +0.1**
21nm,0.5s
FITZ *e*S **S 14 18 20.1 -13**
FITZ Fitzroy Crossi 18.77 218 P **Pn 14 15 03.6 -0.9**
0.8nm,0.3s,baz=15,slow=7.8,SNR=28
FITZ S **S 14 18 20.5 -13**
1.8nm,0.3s,baz=68,slow=2.7,SNR=7.9
FITZ LR LR 14 23 06.3
comp=Z,114nm,21.0s,baz=7.1,slow=40
FITZ Fitzroy Crossi 18.77 218 P **Pn 14 15 04.6 +0.1**
32nm,0.6s
ASAR Alice Springs 20.51 190 P **P 14 15 23.6 +1.4**
47nm,0.7s,baz=15,slow=8.2,SNR=233
ASAR S **S 14 19 06.1 -1.5**
12nm,0.9s,baz=13,slow=21,SNR=11
MYLDM Lahad Datu 20.88 294 P **P 14 15 27.8 +1.5**
STKA Stephens Creek 28.62 173 *e*P **P 14 16 38.9 -0.5**
2.6nm,0.7s,mb4.0
STKA Stephens Creek 28.62 173 P **P 14 16 39.0 -0.5**
3.0nm,0.6s,mb4.1,baz=324,slow=4.9,SNR=11
STKA LR LR 14 28 24.9
comp=Z,114nm,18.2s,baz=24,slow=37
STKA Stephens Creek 28.62 173 *e*P **P 14 16 39.1 -0.3**
STKA LR LR 14 28 24.9
FORT Forrest 28.73 197 *e*P **P 14 16 40.6 +0.2**
12nm,0.7s,mb4.6
MJAR Matsushiro Arr 39.69 1 P **P 14 18 14.4 -0.5**
1.7nm,0.6s,mb4.0,baz=175,slow=9.0,SNR=6.6
MJAR LR LR 14 32 22.5
comp=Z,74nm,19.8s,baz=285,slow=32
KSRS Korea Array 41.58 348 P **P 14 18 30.6 +0.1**
2.2nm,1.1s,mb3.8,baz=169,slow=8.7,SNR=4.2
KSRS LR LR 14 34 36.5
comp=Z,22nm,18.6s,baz=170,slow=34
CMAR Chiang Mai Arr 43.81 301 P **P 14 18 49.2 +0.4**
2.2nm,0.8s,mb3.9,baz=122,slow=6.3,SNR=9.2
TAPN Taplejung 56.94 306 *e*P **P 14 20 27.7 -0.2**
ODAN Odare 57.00 305 *e*P **P 14 20 28.1 -0.2**
ULN Ulaanbaatar 57.59 336 *e*P **P 14 20 32.7 +0.6**
RAMN Ramite 57.69 305 *e*P **P 14 20 32.8 -0.3**
SONM Songino Array 57.84 336 P **P 14 20 33.9 +0.1**
0.7nm,0.7s,mb3.8,baz=152,slow=6.5,SNR=3.9
GUN Gumba 58.65 306 *e*P **P 14 20 40.0 +0.1**
PETK Petropavlovsk- 58.74 14 P **P 14 20 40.8 +0.8**
4.4nm,0.6s,mb4.7,baz=180,slow=5.8,SNR=17
KKN Kakani 59.09 305 *e*P **P 14 20 42.1 -0.8**
17nm,0.8s,mb5.1
MK31 Makanchi Array 69.63 323 *e*P **P 14 21 51.5 +0.1**
MKAR Makanchi Array 69.63 323 P **P 14 21 51.6 +0.2**
3.6nm,0.8s,mb4.3,baz=107,slow=8.4,SNR=15
ZALV Zalesovo Beam 71.94 330 P **P 14 22 04.3 -0.9**
1.4nm,0.5s,mb4.0,baz=116,slow=6.8,SNR=6.1
ZALV LR LR 14 52 20.8
comp=Z,22nm,18.1s,baz=87,slow=35
ZALV Zalesovo Beam 71.94 330 P **P 14 22 04.3 -0.9**
ZALV LR LR 14 52 20.8
AAK Ala-Archa 72.90 316 LR LR 14 54 20.2
comp=Z,42nm,19.5s,baz=294,slow=36
KURK Kurchatov 73.61 325 P **P 14 22 14.4 -0.8**
0.8nm,0.7s,mb3.5,baz=120,slow=4.8,SNR=6.1
SBA Scott Base 76.03 174 P **P 14 22 29.9 +1.1**
3.5nm,0.9s,mb4.1
BVAR Borovoye Array 79.21 325 P **P 14 22 46.6 -0.3**
2.2nm,0.6s,mb4.2,baz=131,slow=6.8,SNR=8.7
CHUM Lake Minchumin 84.35 25 *e*P **P 14 23 14.5 +0.8**
14nm,1.0s,mb4.7
ABKAR Abkulak array 84.50 320 *e*P **P 14 23 14.7 -0.1**
0.8nm,0.6s,mb3.7
MCK McKinley 85.73 25 *e*P **P 14 23 20.2 -0.4**
9.4nm,1.1s,mb4.6
DAWY Dawson 89.93 26 *e*P **P 14 23 41.5 +0.8**
NVAR Mina Array Bea 103.11 51 Pdiff Pdif 14 24 43.5 +2.8
0.2nm,0.6s,baz=260,slow=5.4,SNR=4.4
TXAR Lajitas Array 116.57 59 PKP PKPdf 14 29 27.2 +1.1
0.6nm,0.9s,baz=297,slow=0.6,SNR=5.3
JCT Junction City 119.58 57 *e*PKPdf PKPdf 14 29 32.6 +0.7
TORD Torodi Ar. Bea 135.37 285 PKP PKPdf 14 30 02.2 -0.1
1.5nm,0.8s,baz=68,slow=2.0,SNR=8.6
DBIC Dimbokro 142.47 277 PKhKP 14 30 11.8
1.7nm,0.6s,baz=121,slow=3.3,SNR=4.6
CPUP Villa Florida 147.14 155 PKP PKPdf 14 30 24.4 +1.3
4.3nm,0.8s,baz=212,slow=2.9,SNR=12
CPUP PKPbc PKPbc 14 30 26.7 +1.3
4.3nm,0.8s,baz=200,slow=2.1,SNR=12
CPUP Villa Florida 147.14 155 PKP PKPdf 14 30 24.4 +1.3
CPUP PKPbc PKPbc 14 30 26.7 +1.3
LPAZ La Paz 147.94 128 PKP PKPdf 14 30 27.4 +2.8
4.4nm,0.8s,baz=235,slow=1.2,SNR=15
LPAZ PKPbc PKPbc 14 30 30.2 +2.4
4.4nm,0.8s,baz=236,slow=2.3,SNR=17
LPAZ La Paz 147.94 128 PKP PKPdf 14 30 27.4 +2.8
LPAZ PKPbc PKPbc 14 30 30.2 +2.4
SDV Santo Domingo 151.40 78 *e*PKPdf PKPdf 14 30 31.4 +1.1
SDV *e*PKPbc PKPbc 14 30 37.2 +0.8

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*ISCJB **27** 14:14:00.8±0.4, 31°.13N±0°.04×103°.38E±0°.04, h10km, mb3.8/9, MS3.1/5, Error ellipse: s-maj=6.3km s-min=4.8km az=155.5*
*IDC **27** 14:14:01.1±1.2, 31°.18N×103°.58E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML3.8/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/40, Error ellipse: s-maj=33.4km s-min=21.9km az=52.0*
*NEIC **27** 14:14:02.0±0.9, 31°.16N×103°.43E, h10km, mb4.4/3, Error ellipse: s-maj=15.8km s-min=10.2km az=125.0*
*BJI **27** 14:14:04.4, 31°.21N×103°.48E, h23km, mb4.3/1, ML3.9/17, Ms3.8/3, Ms7 3.7/2*
ISC 27 14:14:02.6±0.4, 31°.11N±0°.04×103°.39E±0°.04, h10km, n28, σ1§22/35, mb3.8/9, MS3.1/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.37**	**123**	Pg	**Pg**	**14 14 09.5**	**-0.5**
CD2				Sg	**Sg**	**14 14 17.3**	**+2.3**
CD2				smax			
comp=N,9μm,0.8s							
LZH	**Lanzhou**	**4.97**	**4**	Pg	**Pb**	**14 15 31.0**	**+1.2**
LZH				Sn	**Sn**	**14 16 16.3**	**+1.4**
LZH				Sg	**Sb**	**14 16 32.0**	**+2.4**
LZH				smax			
comp=N,190nm,0.8s							
LZH				smax			
comp=E,180nm,1.0s							
LZH				LR	LR		
comp=N,710nm,7.3s							
LZH				LR	LR		
comp=Z,860nm,7.7s							
LZH	**Lanzhou**	**4.97**	**4**	*e*Pn	**Pn**	**14 15 22.0**	**+4.7**
LZH				Pg	**Pb**	**14 15 31.0**	**+1.2**
LZH				Sn	**Sn**	**14 16 16.3**	**+1.4**
LZH				Sg	**Sb**	**14 16 32.0**	**+2.4**
LZH				smax			
comp=N,190nm,0.8s							
LZH				smax			
comp=E,180nm,1.0s							
LZH				LR	LR		
comp=N,710nm,7.3s							
LZH				LR	LR		
comp=Z,860nm,7.7s							
GYA	**Guiyang**	**5.46**	**147**	Pn	**Pn**	**14 15 25.0**	**+1.1**
GYA				smax			
comp=N,200nm,0.9s							
GYA				smax			
comp=E,160nm,0.9s							
XAN	**Xi'an**	**5.50**	**57**	Pn	**Pn**	**14 15 23.8**	**-0.8**
XAN				Pg	**Pb**	**14 15 36.5**	**-2.3**
XAN				Sn	**Sn**	**14 16 27.0**	**-0.9**
XAN				Sg	**Sb**	**14 16 45.8**	**+1.0**
XAN				smax			
comp=E,100nm,0.9s							
XAN				smax			
comp=E,51nm,0.9s							
CMAR	**Chiang Mai Arr**	**13.23**	**199**	Pn	**Pn**	**14 17 11.9**	**+1.3**
comp=E,0.2nm,0.3s,baz=6.0,slow=12,SNR=4.0							
TAPN	**Taplejung**	**14.20**	**259**	*e*P	**Pn**	**14 17 24.7**	**+1.0**
ODAN	**Odare**	**14.63**	**257**	*e*P	**Pn**	**14 17 30.0**	**+0.4**
comp=E,15nm,0.8s							
RAMN	**Ramite**	**15.26**	**258**	*e*P	**Pn**	**14 17 38.5**	**+0.4**
GUN	**Gumba**	**15.58**	**263**	*e*P	**Pn**	**14 17 41.3**	**-1.0**
comp=E,35nm,0.8s							
PKI	**Pulchoki**	**16.07**	**262**	*e*P	**Pn**	**14 17 47.7**	**-1.0**
KKN	**Kakani**	**16.12**	**263**	*e*P	**Pn**	**14 17 48.1**	**-1.2**
comp=E,25nm,0.9s							
SONM	**Songino Array**	**16.86**	**7**	Pn	**Pn**	**14 17 56.9**	**-1.7**
comp=E,0.2nm,0.3s,baz=182,slow=11,SNR=5.7							
SONM				LR	LR	14 23 29.3	
comp=E,52nm,18.4s,baz=18,slow=34							
KSRS	**Korea Array**	**21.20**	**66**	P	**P**	**14 18 46.6**	**-1.8**
comp=E,3.2nm,0.8s,mb3.7,baz=259,slow=10,SNR=10							
CN2	**Changchun**	**21.53**	**48**	*e*P	**P**	**14 18 51.3**	**-0.5**
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**22.57**	**320**	*e*P	**P**	**14 19 03.4**	**+0.5**
MKAR	**Makanchi Array**	**22.57**	**320**	P	**P**	**14 19 03.5**	**+0.5**
comp=Z,2.9nm,0.9s,mb3.7,baz=121,slow=12,SNR=14							
MKAR				LR	LR	14 27 42.5	
comp=Z,34nm,18.5s,MS2.8,baz=170,slow=36							
UCH	**Uchtor**	**25.56**	**304**	*e*P	**P**	**14 19 36.1**	**+4.5**
comp=Z,4.1nm,1.1s,mb3.9							
AAK	**Ala-Archa**	**25.69**	**305**	LR	LR	14 31 12.1	
comp=Z,70nm,19.3s,MS3.2,baz=235,slow=40							
ZAA0	**Zalesovo Array**	**26.45**	**335**	*e*P	**P**	**14 19 38.2**	**-1.3**
ZALV	**Zalesovo Beam**	**26.45**	**335**	P	**P**	**14 19 39.0**	**-0.5**
comp=Z,1.9nm,0.7s,mb3.8,baz=134,slow=8.5,SNR=11							
ZALV				LR	LR	14 30 43.4	
comp=Z,38nm,19.2s,MS3.0,baz=166,slow=38							
KURK	**Kurchatov**	**26.88**	**324**	P	**P**	**14 19 43.4**	**0.0**
comp=Z,2.4nm,0.8s,mb3.8,baz=128,slow=9.5,SNR=18							
BVAR	**Borovoye Array**	**32.41**	**322**	P	**P**	**14 20 34.5**	**+2.1**
comp=Z,0.4nm,0.3s,mb3.7,baz=134,slow=6.2,SNR=3.3							
BVAR				LR	LR	14 34 24.8	
comp=Z,64nm,21.1s,MS3.3,baz=74,slow=38							
TIXI	**Tiksi**	**42.86**	**12**	P	**P**	**14 21 56.9**	**-3.7**
PETK	**Petropavlovsk-**	**44.61**	**44**	LR	LR	14 40 55.3	
comp=Z,26nm,20.1s,MS3.1,baz=65,slow=36							
ASAR	**Alice Springs**	**61.82**	**148**	P	**P**	**14 24 21.6**	**-0.2**
comp=Z,0.7nm,0.9s,mb3.8,baz=338,slow=7.2,SNR=2.2							
ASAR	**Alice Springs**	**61.82**	**148**	P	**P**	**14 24 21.6**	**-0.2**
YKA	**Yellowknife Ar**	**81.86**	**17**	P	**P**	**14 26 21.1**	**-0.6**
comp=Z,0.2nm,0.6s,mb3.3,baz=326,slow=5.5,SNR=2.8							

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*NEIC **27** 14:32:12.4±3.4, 8°.96N×126°.59E, h98km±28km, Error ellipse: s-maj=54.4km s-min=15.7km az=62.0*
*IDC **27** 14:32:12.6±5.2, 8°.92N×126°.48E, h98km±44km, mb3.6/7, mb1 3.7/8, mb1mx3.4/23, mbtmp3.7/8, Error ellipse: s-maj=60.4km s-min=22.0km az=63.0*
*ISCJB **27** 14:32:14.7±0.7, 8°.82N±0°.04×126°.03E±0°.08, h121km±5km, mb3.8/7, Error ellipse: s-maj=13.2km s-min=6.6km az=165.8*
*MAN **27** 14:32:16, 8°.82N×126°.00E, h87km, mb4.8, ML3.7, MS3.7*
ISC 27 14:32:15.6±0.7, 8°.82N±0°.04×126°.04E±0°.08, h113km±5km, n31, σ0§95/37, mb3.8/7, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.44**	**289**	*e*P	**Pn**	**14 32 32.2**	**-0.2**
BUTP				*e*S	**Sn**	**14 32 43.3**	**-1.7**
BUKP	**Musuan**	**1.35**	**226**	*e*P	**Pn**	**14 32 40.9**	**0.0**
BUKP				*e*S	**Sn**	**14 32 51.0**	**-9.1**
CGP	**Cagayan de Oro**	**1.38**	**255**	⇑*e*P	**Pn**	**14 32 40.6**	**-0.7**
CGP				*i* S	**Sn**	**14 32 59.4**	**-1.3**
MSLP	**Maasin**	**1.75**	**318**	*e*P	**Pn**	**14 32 46.3**	**+0.6**
MSLP				*e*S	**Sn**	**14 33 08.9**	**+0.3**
DAV	**Davao City (W)**	**1.80**	**195**	P	**Pn**	**14 32 46.5**	**+0.1**
111nm,0.3s,baz=1.7,slow=3.4,SNR=5.5							
DAV				S	**Sn**	**14 33 11.3**	**+1.6**
69nm,0.3s,baz=37,slow=20,SNR=18							
DMPH	**Davao City--Mi**	**1.81**	**197**	*e*P	**Pn**	**14 32 46.7**	**+0.3**
MATI	**Mati**	**1.88**	**174**	*e*P	**Pn**	**14 32 47.9**	**+0.6**
TBP	**Tagbilaran**	**2.32**	**292**	*e*P	**Pn**	**14 32 52.4**	**-0.4**
CTBH	**Cotabato--PC H**	**2.39**	**228**	⇑*i*P	**Pn**	**14 32 53.2**	**-0.6**
LLP	**Lapu-Lapu**	**2.53**	**306**	⇓*e*P	**Pn**	**14 32 56.2**	**+0.6**
LLP				*e*S	**Sn**	**14 33 30.5**	**+4.2**
PLP	**Palo**	**2.55**	**336**	⇓*e*P	**Pn**	**14 32 56.5**	**+0.6**
OCLP	**Ormoc**	**2.63**	**328**	*e*P	**Pn**	**14 32 58.1**	**+1.2**
DCPH	**Dipolog City**	**2.67**	**265**	⇑*e*P	**Pn**	**14 32 57.1**	**-0.4**
PAGZ	**Pagadian**	**2.81**	**250**	*e*P	**Pn**	**14 32 59.3**	**+0.1**
SNPH	**Sibulan**	**2.82**	**281**	⇑*e*P	**Pn**	**14 32 59.8**	**+0.4**
SNPH				*i* S	**Sn**	**14 33 32.8**	**-0.2**
GUIM	**Jordan**	**3.85**	**298**	*e*P	**Pn**	**14 33 13.0**	**0.0**
CNP	**Catarman**	**3.91**	**340**	*e*P	**Pn**	**14 33 13.4**	**-0.4**
PVCP	**Virac**	**5.09**	**339**	*e*P	**Pn**	**14 33 29.8**	**0.0**
SJMP	**San Jose**	**6.04**	**307**	*e*P	**Pn**	**14 33 45.5**	**+2.9**
LUBP	**Lubang**	**7.49**	**311**	*e*P	**Pn**	**14 34 05.6**	**+3.3**
BALP	**Baler**	**8.14**	**328**	*e*P	**Pn**	**14 34 09.7**	**-1.5**
CMAR	**Chiang Mai Arr**	**27.99**	**293**	P	**P**	**14 37 58.4**	**+2.4**
1.8nm,0.9s,mb3.6,baz=105,slow=6.3,SNR=9.2							
ASAR	**Alice Springs**	**33.19**	**167**	P	**P**	**14 38 40.7**	**-1.0**
0.1nm,0.3s,mb3.1,baz=348,slow=7.3,SNR=7.7							
MK31	**Makanchi Array**	**53.05**	**324**	*e*P	**P**	**14 41 21.4**	**+0.3**
MKAR	**Makanchi Array**	**53.05**	**324**	P	**P**	**14 41 20.9**	**-0.2**
0.4nm,0.4s,mb3.8,baz=116,slow=8.0,SNR=8.4							
MKAR				PcP	PcP	14 42 27.2	-0.9
0.3nm,0.4s,baz=113,slow=1.9,SNR=5.3							
KURK	**Kurchatov**	**57.13**	**326**	P	**P**	**14 41 49.7**	**-0.7**
0.5nm,0.4s,mb3.9,baz=124,slow=7.2,SNR=5.2							
KURK	**Kurchatov**	**57.13**	**326**	P	**P**	**14 41 49.7**	**-0.7**
BVAR	**Borovoye Array**	**62.73**	**326**	P	**P**	**14 42 28.6**	**0.0**
0.7nm,0.4s,mb3.9,baz=123,slow=5.3,SNR=4.9							
ARCES	**ARCESS Array B**	**85.47**	**340**	P	**P**	**14 44 39.1**	**-1.3**
2.7nm,0.8s,mb4.2,baz=75,slow=6.9,SNR=6.1							
FINES	**FINESS Array B**	**87.05**	**332**	P	**P**	**14 44 47.6**	**-0.7**
1.1nm,0.4s,mb4.2,baz=69,slow=4.8,SNR=7.8							
TORD	**Torodi Ar. Bea**	**120.58**	**291**	PKP	PKPdf	14 50 53.8	-1.3
0.2nm,0.5s,baz=102,slow=0.9,SNR=3.7							

CASC 27 14:38:56.1±2.9, 8°.43N×82°.95W, h0km±7km, MD3.5, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.44**	**35**	⇓*i*P	Pg	14 39 06.8	+2.1
BRU2				*e*S	Sg	14 39 14.3	+3.9
TBS2		**0.46**	**39**	*e*P	Pg	14 39 14.3	+9.2
TBS2				*e*S	Sg	14 39 24.1	+13
BAR1		**0.88**	**336**	⇓*e*P	Pg	14 39 13.0	0.0
BUS	**Buena Vista**	**1.37**	**325**	*e*P	Pg	14 39 21.5	-1.0
BUS				*e*S	Sg	14 39 41.8	+1.5
URSC	**Urasca**	**1.62**	**330**	*e*P	Pn	14 39 24.8	-1.1
PRS1	**Puriscal**	**2.05**	**319**	⇑*e*P	Pn	14 39 31.4	-0.4
PRS1				*e*S	Sn	14 40 01.4	+3.4

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*ISCJB **27** 14:41:18.7±0.6, 32°.41N±0°.06×105°.19E±0°.06, h10km, mb3.7/8, Error ellipse: s-maj=9.6km s-min=5.8km az=140.1*
*IDC **27** 14:41:18.9±1.2, 32°.45N×105°.39E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML3.6/1, Error ellipse: s-maj=85.1km s-min=21.5km az=58.0*
*NEIC **27** 14:41:20.4±0.9, 32°.37N×105°.23E, h10km, Error ellipse: s-maj=27.6km s-min=15.6km az=62.0*
*BJI **27** 14:41:22.0, 32°.45N×104°.92E, h10km, ML3.3/9, Ms3.4/1, Ms7 3.3/2*
ISC 27 14:41:20.7±0.6, 32°.42N±0°.05×105°.10E±0°.06, h10km, n15, σ1§07/20, mb3.7/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.89**	**218**	Pg	**Pn**	**14 41 52.3**	**-0.7**
CD2				Sg	**Sn**	**14 42 16.0**	**-0.8**
CD2				smax			
comp=N,900nm,0.6s							
XAN	**Xi'an**	**3.59**	**62**	Pg	**Pg**	**14 42 29.8**	**+0.2**
XAN				Sg	**Sg**	**14 43 15.8**	**-0.3**
XAN				smax			
comp=N,79nm,0.6s							
XAN				smax			
comp=E,37nm,0.7s							
LZH	**Lanzhou**	**3.80**	**345**	*e*Pg	**Pb**	**14 42 25.8**	**-2.2**
LZH				Pg	**Pg**	**14 42 32.8**	**-0.8**
LZH				Sn	**Sn**	**14 43 11.3**	**+7.1**
LZH				Sg	**Sg**	**14 43 20.0**	**-2.9**
LZH				smax			
comp=N,110nm,0.5s							
LZH				smax			
comp=E,210nm,0.6s							
LZH				LR	LR		
comp=E,380nm,5.4s							
LZH				LR	LR		
comp=Z,560nm,6.6s							
GYA	**Guiyang**	**6.09**	**167**	Pn	**Pn**	**14 42 56.8**	**+5.9**
GYA				smax			
comp=N,30nm,0.7s							
GYA				smax			
comp=E,30nm,0.8s							
SONM	**Songino Array**	**15.43**	**3**	Pn	**Pn**	**14 44 59.2**	**+0.8**
comp=E,0.2nm,0.3s,baz=182,slow=10,SNR=2.7							
MK31	**Makanchi Array**	**22.58**	**316**	P	**P**	**14 46 21.2**	**+0.1**
MKAR	**Makanchi Array**	**22.58**	**316**	P	**P**	**14 46 23.6**	**+2.5**
comp=E,0.4nm,0.4s,mb3.2,baz=106,slow=13,SNR=6.6							
ZALV	**Zalesovo Beam**	**25.93**	**332**	P	**P**	**14 46 52.7**	**-0.3**
comp=E,0.5nm,0.4s,mb3.4,baz=123,slow=10,SNR=3.0							
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**14 47 01.2**	**+1.0**
comp=E,0.6nm,0.6s,mb3.3,baz=129,slow=7.9,SNR=6.2							
BVAR	**Borovoye Array**	**32.31**	**320**	P	**P**	**14 47 51.0**	**+1.4**
comp=E,0.3nm,0.4s,mb3.5,baz=92,slow=10,SNR=3.1							
ABKAR	**Abkulak array**	**37.45**	**310**	*e*P	**P**	**14 48 34.9**	**+0.8**
ARCES	**ARCESS Array B**	**56.41**	**335**	P	**P**	**14 51 02.7**	**+0.7**
comp=E,4.6nm,0.9s,mb4.5,baz=62,slow=9.4,SNR=5.0							
FINES	**FINESS Array B**	**56.95**	**326**	P	**P**	**14 51 05.7**	**-0.2**
comp=E,0.9nm,0.5s,mb4.1,baz=90,slow=8.6,SNR=5.7							
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**14 51 41.8**	**-0.6**
comp=E,0.6nm,0.8s,mb3.8,baz=330,slow=6.5,SNR=8.3							
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**14 51 53.7**	**-0.4**
comp=E,0.5nm,0.6s,mb3.8,baz=65,slow=6.1,SNR=3.3							

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*ISCJB **27** 14:49:09.9±0.7, 7°.3N±0°.1×35°.0W±0°.1, h10km, mb4.0/6, MS3.6/15, Error ellipse: s-maj=19.8km s-min=14.2km az=144.3*
*IDC **27** 14:49:09.8±0.9, 7°.38N×34°.95W, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/26, mbtmp4.0/6, MS3.6/16, Ms1 3.6/16, ms1mx3.4/33, Error ellipse: s-maj=35.7km s-min=20.4km az=164.0*
*NEIC **27** 14:49:11.7±0.5, 7°.38N×35°.00W, h10km, mb4.2/2, Error ellipse: s-maj=14.6km s-min=10.5km az=144.0*
ISC 27 14:49:11.8±0.7, 7°.4N±0°.1×35°.0W±0°.1, h10km, n23, σ0§50/10, mb4.0/6, MS3.6/15, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.14**	**184**	*e*P	**Pn**	**14 52 18.6**	**-0.1**
17nm,0.6s							
BBTS	**Babate**	**19.48**	**67**	LR	LR	14 59 49.0	
comp=Z,116nm,18.6s,baz=246,slow=33							
DBIC	**Dimbokro**	**29.89**	**89**	P	**P**	**14 55 18.4**	**-1.6**
4.5nm,0.6s,mb4.3,baz=250,slow=9.7,SNR=7.9							
DBIC	**Dimbokro**	**29.89**	**89**	*e*P	**P**	**14 55 20.4**	**+0.4**
5.2nm,0.7s,mb4.4							
SJG	**San Juan**	**32.18**	**292**	LR	LR	15 05 57.8	
comp=Z,399nm,20.9s,MS4.1,baz=90,slow=31							
SIV	**San Ignacio**	**34.74**	**228**	P	**P**	**14 56 02.2**	**-0.2**
2.1nm,0.8s,mb4.1,baz=59,slow=11,SNR=9.7							
TOA0	**Torodi Ar. Sit**	**36.50**	**78**	*e*P	**P**	**14 56 18.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**36.50**	**78**	P	**P**	**14 56 17.8**	**+0.2**
4.1nm,0.6s,mb4.6,baz=270,slow=8.9,SNR=47							
TORD				LR	LR	15 09 04.1	
comp=Z,131nm,18.9s,MS3.7,baz=185,slow=33							
CPUP	**Villa Florida**	**39.92**	**212**	LR	LR	15 13 28.6	
comp=Z,128nm,20.4s,MS3.8,baz=265,slow=36							
LPAZ	**La Paz**	**40.37**	**234**	P	**P**	**14 56 50.6**	**+0.4**
2.1nm,0.9s,mb3.8,baz=52,slow=5.9,SNR=5.5							
LPAZ				LR	LR	15 12 42.7	
comp=Z,73nm,19.8s,MS3.5,baz=150,slow=35							
LPAZ	**La Paz**	**40.37**	**234**	*e*P	**P**	**14 56 50.9**	**+0.7**
3.3nm,1.0s,mb4.0							
LPAZ				LR	LR	15 12 42.7	
KEST	**Kesra**	**49.34**	**49**	LR	LR	15 17 56.7	
comp=Z,37nm,19.9s,MS3.4,baz=208,slow=35							
DAVOX	**Davos/Dischmat**	**54.84**	**36**	LR	LR	15 18 36.4	
comp=Z,57nm,18.0s,MS3.7,baz=264,slow=32							
PLCA	**Paso Flores**	**57.99**	**211**	LR	LR	15 22 29.3	
comp=Z,163nm,20.8s,MS4.1,baz=308,slow=34							
GERES	**GERESS Array B**	**58.10**	**36**	LR	LR	15 20 32.7	
comp=Z,46nm,19.2s,MS3.6,baz=284,slow=32							
VRAC	**Vranov**	**60.00**	**36**	LR	LR	15 21 29.2	
comp=Z,34nm,19.2s,MS3.5,baz=104,slow=32							
FRB	**Frobisher Bay**	**61.21**	**344**	LR	LR	15 19 08.1	
comp=Z,46nm,21.8s,MS3.6,baz=267,slow=29							
NOA	**NORSAR Array B**	**63.54**	**23**	LR	LR	15 23 05.3	
comp=Z,26nm,19.6s,MS3.4,baz=230,slow=32							
BOSA	**Boshof**	**68.14**	**125**	LR	LR	15 22 43.6	
comp=Z,76nm,18.0s,MS4.0,baz=167,slow=30							
BRTR	**Keskin Array B**	**68.89**	**50**	LR	LR	15 30 15.3	
comp=Z,27nm,21.0s,MS3.5,baz=37,slow=36							
MMAI	**Mount Meron Ar**	**69.57**	**58**	LR	LR	15 30 54.6	
comp=Z,41nm,18.7s,MS3.7,baz=240,slow=36							
PDAR	**Pinedale Array**	**73.72**	**312**	P	**P**	**15 00 46.0**	**-0.1**
0.4nm,0.6s,mb3.5,baz=82,slow=6.5,SNR=4.8							
YKA	**Yellowknife Ar**	**78.71**	**332**	P	**P**	**15 01 13.9**	**-0.2**
0.3nm,0.7s,mb3.3,baz=83,slow=5.0,SNR=3.5							
YKA				LR	LR	15 32 31.5	
comp=Z,4.4nm,18.5s,MS2.8,baz=245,slow=33							

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*ISCJB **27** 14:51:26.9±1.2, 44°.9N±0°.1×82°.7E±0°.2, h10km, Error ellipse: s-maj=19.0km s-min=16.0km az=137.6*
*BJI **27** 14:51:27.0, 44°.49N×82

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**24.55**	**89**	LR	LR	15 29 42.6	
	comp=Z,59nm,20.1s,MS3.1,baz=343,slow=32						
SCHQ	**Schefferville**	**29.34**	**320**	LR	LR	15 33 23.2	
	comp=Z,64nm,20.4s,MS3.2,baz=62,slow=34						
DAVOX	**Davos/Dischmat**	**34.39**	**58**	LR	LR	15 36 29.6	
	comp=Z,28nm,21.1s,MS3.0,baz=267,slow=35						
GERES	**GERESS Array B**	**37.05**	**54**	LR	LR	15 38 27.6	
	comp=Z,30nm,18.3s,MS3.1,baz=312,slow=35						
NOA	**NORSAR Array B**	**38.03**	**34**	LR	LR	15 35 54.1	
	comp=Z,23nm,21.9s,MS2.9,baz=190,slow=30						
VRAC	**Vranov**	**38.96**	**54**	LR	LR	15 39 09.7	
	comp=Z,18nm,19.0s,MS2.9,baz=84,slow=35						
TORD	**Torodi Ar. Bea**	**39.39**	**116**	P	**P**	**15 24 11.3**	**-0.2**
	0.3nm,0.6s,mb3.2,baz=293,slow=8.4,SNR=3.2						
TORD				LR	LR	15 39 41.1	
	comp=Z,52nm,20.7s,MS3.4,baz=200,slow=35						
DBIC	**Dimbokro**	**39.61**	**130**	LR	LR	15 40 11.0	
	comp=Z,53nm,18.1s,MS3.4,baz=129,slow=36						
FINES	**FINESS Array B**	**45.11**	**36**	LR	LR	15 41 55.9	
	comp=Z,41nm,21.6s,MS3.3,baz=178,slow=34						
ULM	**Lac du Bonnet**	**45.99**	**308**	LR	LR	15 44 16.8	
	comp=Z,67nm,18.0s,MS3.6,baz=56,slow=36						
YKA	**Yellowknife Ar**	**54.56**	**326**	P	**P**	**15 26 09.2**	**-0.1**
	1.1nm,0.8s,mb3.9,baz=79,slow=7.3,SNR=11						
YKA	**Yellowknife Ar**	**54.56**	**326**	P	**P**	**15 26 09.2**	**-0.1**
YKA	**Yellowknife Ar**	**54.56**	**326**	P	**P**	**15 26 09.2**	**-0.1**
PDAR	**Pinedale Array**	**56.91**	**302**	LR	LR	15 50 21.0	
	comp=Z,42nm,18.1s,MS3.6,baz=329,slow=36						
TXAR	**Lajitas Array**	**57.80**	**285**	P	**P**	**15 26 32.9**	**-0.1**
	0.1nm,0.4s,mb3.2,baz=82,slow=8.6,SNR=3.1						
TXAR				LR	LR	15 48 01.2	
	comp=Z,32nm,18.2s,MS3.5,baz=0.0,slow=33						
TXAR	**Lajitas Array**	**57.80**	**285**	P	**P**	**15 26 32.9**	**-0.1**
LPAZ	**La Paz**	**61.07**	**218**	P	**P**	**15 26 55.8**	**+0.2**
	2.9nm,1.1s,mb4.3,baz=4.7,slow=9.2,SNR=5.5						
LPAZ	**La Paz**	**61.07**	**218**	P	**P**	**15 26 55.8**	**+0.2**
BVAR	**Borovoye Array**	**69.99**	**38**	P	**P**	**15 27 53.6**	**+0.7**
	0.3nm,0.4s,mb3.6,baz=277,slow=2.5,SNR=2.9						
BVAR	**Borovoye Array**	**69.99**	**38**	P	**P**	**15 27 53.6**	**+0.7**
MKAR	**Makanchi Array**	**79.87**	**39**	P	**P**	**15 28 49.8**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=336,slow=6.3,SNR=4.1						
MKAR				LR	LR	16 04 25.1	
	comp=Z,24nm,19.9s,MS3.5,baz=163,slow=36						

*ISCJB **27** 15:28:44.4±0.5,31°.90N±0°.05×104°.54E±0°.07,h10km, mb3.3/6, Error ellipse: s-maj=10.3km s-min=5.2km az=40.3*
*IDC **27** 15:28:44.7±1.1,31°.82N×104°.40E,h0km,mb3.5/7, mb1 3.6/7,mb1mx3.5/26,mbtmp3.5/7, Error ellipse: s-maj=42.7km s-min=20.2km az=49.0*
*NEIC **27** 15:28:46.5±0.8,32°.00N×104°.69E,h10km, Error ellipse: s-maj=26.5km s-min=12.2km az=81.0*
*BJI **27** 15:28:46.9,31°.88N×104°.53E,h10km,ML3.3/10,Ms2.7/1, Ms7 2.5/1*
ISC 27 15:28:46.4±0.5,31°.90N±0°.05×104°.45E±0°.07,h10km,n14, σ1°04/19,mb3.3/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.15**	**211**	Pg	**Pg**	**15 29 07.8**	**-0.7**
CD2				Sg	**Sg**	**15 29 22.5**	**-1.0**
CD2				smax			
	comp=N,3μm,0.8s						
LZH	**Lanzhou**	**4.20**	**353**	*e*Pg	**Pg**	**15 30 05.3**	**-1.6**
LZH				Sg	**Sg**	**15 30 55.5**	**-5.9**
LZH				smax			
	comp=N,57nm,0.6s						
LZH				smax			
	comp=E,49nm,0.6s						
XAN	**Xi'an**	**4.32**	**59**	Pn	**Pn**	**15 29 51.8**	**-0.4**
XAN				Pg	**Pg**	**15 30 05.5**	**-3.7**
XAN				Sn	**Sn**	**15 30 49.3**	**+6.7**
XAN				Sg	**Sg**	**15 31 05.0**	**-0.2**
XAN				smax			
	comp=N,85nm,0.6s						
XAN				smax			
	comp=E,45nm,1.0s						
XAN				LR	LR		
	comp=N,79nm,7.5s						
XAN				LR	LR		
	comp=E,45nm,10.3s						
XAN				LR	LR		
	comp=Z,56nm,8.8s						
GYA	**Guiyang**	**5.76**	**160**	Pn	**Pn**	**15 30 12.0**	**0.0**
GYA				smax			
	comp=N,30nm,0.8s						
GYA				smax			
	comp=E,40nm,0.9s						
WHN	**Wuhan**	**8.59**	**96**	P	Px	15 31 01.8	
WHN				S	**Sn**	**15 32 22.0**	**-5.7**
WHN				LR	LR		
	comp=N,200nm,2.9s						
WHN				LR	LR		
	comp=E,280nm,4.8s						
CMAR	**Chiang Mai Arr**	**14.28**	**202**	Pn	**Pn**	**15 32 11.3**	**+2.7**
	comp=E,0.1nm,0.3s,baz=10,slow=13,SNR=4.6						
SONM	**Songino Array**	**15.98**	**5**	Pn	**Pn**	**15 32 35.3**	**+4.1**
	comp=E,0.1nm,0.3s,baz=185,slow=7.4,SNR=4.1						
KSRS	**Korea Array**	**20.07**	**68**	P	**P**	**15 33 20.8**	**+1.0**
	comp=E,2.3nm,0.8s,baz=253,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**22.58**	**318**	P	**P**	**15 33 48.1**	**+1.4**
	comp=E,0.3nm,0.7s,mb2.9,baz=112,slow=10,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.14**	**333**	P	**P**	**15 34 19.7**	**-0.7**
	comp=E,0.5nm,0.5s,mb3.3,baz=140,slow=7.5,SNR=2.4						
KURK	**Kurchatov**	**26.79**	**322**	P	**P**	**15 34 27.3**	**+0.9**
	comp=E,0.2nm,0.4s,mb3.0,baz=125,slow=8.0,SNR=2.3						
FINES	**FINESS Array B**	**57.07**	**326**	P	**P**	**15 38 32.4**	**+0.1**
	comp=E,0.5nm,0.5s,mb3.8,baz=96,slow=28,SNR=2.7						
ASAR	**Alice Springs**	**62.02**	**149**	P	**P**	**15 39 06.6**	**-0.4**
	comp=E,0.5nm,0.5s,mb3.9,baz=333,slow=6.6,SNR=24						
YKA	**Yellowknife Ar**	**80.84**	**17**	P	**P**	**15 41 00.3**	**+0.2**
	comp=E,0.2nm,0.6s,mb3.2,baz=330,slow=5.1,SNR=2.7						

*ISK **27** 15:36:36.5,37°.88N×29°.24E,h19km,MD2.7*
*ISCJB **27** 15:36:37.6±0.5,37°.89N±0°.03×29°.21E±0°.06,h5km±10km, Error ellipse: s-maj=7.8km s-min=4.4km az=10.2*
*CSEM **27** 15:36:37.5±0.1,37°.88N×29°.20E,h10km,MD2.7, Error ellipse: s-maj=3.2km s-min=1.8km az=91.0*
*DDA **27** 15:36:37.7,37°.88N×29°.24E,h7km±4km,Md2.7*
ISC 27 15:36:37.9±0.6,37°.88N±0°.03×29°.20E±0°.06,h12km±8km, n18,σ0°85/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**226**	*e*PG	**Pg**	**15 36 42.4**	**+0.4**
DENT	**Denizli**	**0.19**	**226**	*e*Pg	**Pg**	**15 36 42.4**	**+0.5**
DNZL	**Cakiroluk**	**0.23**	**212**	*e*P	**Pg**	**15 36 42.8**	**+0.1**
DNZL				*e*S	**Sg**	**15 36 46.4**	**+0.5**
DNZL	**Cakiroluk**	**0.23**	**212**	*e*P	**Pg**	**15 36 42.8**	**+0.1**
DNZL				*e*S	**Sg**	**15 36 46.4**	**+0.5**
KHL	**Karahalli**	**0.51**	**30**	*e*PG	**Pg**	**15 36 46.9**	**-0.9**
KHL				*e*SG	**Sg**	**15 36 54.9**	**+0.3**
KHL	**Karahalli**	**0.51**	**30**	*e*Pg	**Pg**	**15 36 46.9**	**-0.9**
KHL				*e*Sg	**Sg**	**15 36 54.9**	**+0.3**
KHAL	**Karahalli**	**0.54**	**25**	*e*P	**Pg**	**15 36 48.1**	**-0.2**
KHAL				*e*S	**Sg**	**15 36 55.6**	**+0.1**
KHAL	**Karahalli**	**0.54**	**25**	*e*P	**Pg**	**15 36 48.1**	**-0.3**
KHAL				*e*S	**Sg**	**15 36 55.6**	**+0.1**
GOLH	**Golhisar**	**0.71**	**156**	*e*P	**Pg**	**15 36 51.4**	**-0.2**
GOLH				*e*S	**Sg**	**15 37 02.5**	**+1.7**
GOLH	**Golhisar**	**0.71**	**156**	*e*P	**Pg**	**15 36 51.4**	**-0.1**
GOLH				*e*S	**Sg**	**15 37 02.5**	**+1.7**
KULA	**Kula-Manisa**	**0.76**	**326**	*e*PG	**Pg**	**15 36 52.3**	**-0.3**
KULA				*e*SG	**Sg**	**15 37 03.2**	**+0.6**
KULA	**Kula-Manisa**	**0.76**	**326**	*e*Pg	**Pg**	**15 36 52.3**	**-0.3**
KULA				*e*Sg	**Sg**	**15 37 03.2**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.76**	**162**	*e*PG	**Pg**	**15 36 50.6**	**-2.0**
GLHS	**Glhisar (BURDU**	**0.76**	**162**	*e*Pg	**Pg**	**15 36 50.6**	**-2.0**
YER	**Yerkesik**	**1.04**	**225**	*e*PG	**Pg**	**15 36 56.8**	**-1.2**
YER	**Yerkesik**	**1.04**	**225**	*e*Pg	**Pg**	**15 36 56.8**	**-1.2**
GDZ	**Gediz**	**1.22**	**10**	*e*P	**Pn**	**15 37 02.0**	**+1.1**
GDZ				*e*S	**Sb**	**15 37 16.5**	**-0.2**
GDZ	**Gediz**	**1.22**	**10**	*e*P	**Pn**	**15 37 02.0**	**+1.2**
GDZ				*e*S	**Sb**	**15 37 16.5**	**-0.2**

BJI 27 15:47:40.6,34°.22N×100°.97E,h15km,ML3.4/7,Ms3.5/1, Ms7 3.7/1,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.00**	**51**	*e*Pn	Pn	15 48 29.0	+1.4
LZH				Pg	Pg	15 48 33.5	-4.6
LZH				Sn	Sn	15 49 06.8	+3.5
LZH				Sg	Sg	15 49 13.3	-3.8
LZH				smax			
	comp=N,240nm,0.8s						
LZH				smax			
	comp=E,230nm,0.7s						
LZH				LR	LR		
	comp=N,730nm,6.2s						
LZH				LR	LR		
	comp=Z,980nm,7.5s						
GTA	**Gaotai**	**5.26**	**350**	Pn	Pn	15 49 03.8	+5.1
GTA				Pg	Pg	15 49 18.5	-2.9
GTA				Sn	Sn	15 50 03.8	+4.8
GTA				Sg	Sg	15 50 25.8	-3.7
GTA				smax			
	comp=N,8.0nm,0.6s						
GTA				smax			
	comp=E,11nm,0.7s						

*NSSP **27** 16:06:19.2,39°.72N×43°.62E,h15km,Ms3.6*
*ISK **27** 16:06:21.0,39°.74N×43°.63E,h5km,MD3.6*
*CSEM **27** 16:06:22.4±0.2,39°.73N×43°.69E,h2km,MD3.4, Error ellipse: s-maj=5.0km s-min=3.6km az=129.0*
*ISCJB **27** 16:06:22.7±0.2,39°.73N±0°.01×43°.68E±0°.02,h10km, Error ellipse: s-maj=2.6km s-min=1.9km az=30.9*
*DDA **27** 16:06:23.4,39°.72N×43°.78E,h15km,Md3.4*
*TEH **27** 16:06:25.0,39°.64N×42°.94E,h18km*
ISC 27 16:06:23.3±0.2,39°.74N±0°.01×43°.68E±0°.02,h10km,n78, σ1°32/125,15C-19D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.20**	**179**	*i* P	**Pg**	**16 06 27.0**	**-0.5**
DYDN				*i* S	**Sg**	**16 06 30.5**	**+0.2**
DYDN	**Diyadin**	**0.20**	**179**	*i* P	**Pg**	**16 06 27.0**	**-0.5**
DYDN				*i* S	**Sg**	**16 06 30.5**	**+0.2**
AKSZ	**Araks**	**0.47**	**19**	⇑*i*P	**Pg**	**16 06 31.6**	**-1.0**
AKSZ				⇓*i*S	**Sg**	**16 06 39.9**	**+1.0**
VRNZ	**Vardanashen**	**0.50**	**52**	⇑*i*P	**Pg**	**16 06 32.4**	**-0.6**
VRNZ				⇑*i*S	**Sg**	**16 06 41.1**	**+1.6**
VRNZ	**Vardanashen**	**0.50**	**52**	⇑P	**Pg**	**16 06 32.4**	**-0.6**
VRNZ				S	**Sg**	**16 06 41.1**	**+1.5**
AGRB	**Hanur-Agry**	**0.56**	**253**	PG	**Pg**	**16 06 31.6**	**-2.6**
AGRB				*e*SG	**Sg**	**16 06 39.6**	**-1.9**
AGRB	**Hanur-Agry**	**0.56**	**253**	*i* Pg	**Pg**	**16 06 31.6**	**-2.6**
AGRB				*e*Sg	**Sg**	**16 06 39.6**	**-1.9**
CLDR	**Caldiran**	**0.62**	**163**	PG	**Pg**	**16 06 34.4**	**-1.0**
CLDR				*e*SG	**Sg**	**16 06 44.4**	**+0.8**
CLDR	**Caldiran**	**0.62**	**163**	*i* Pg	**Pg**	**16 06 34.4**	**-1.0**
CLDR				*e*Sg	**Sg**	**16 06 44.4**	**+0.8**
ARUZ	**Aruch**	**0.62**	**30**	⇓*i*P	**Pg**	**16 06 34.3**	**-1.1**
ARUZ				⇓*i*S	**Sg**	**16 06 43.6**	**0.0**
ARUZ	**Aruch**	**0.62**	**30**	⇓P	**Pg**	**16 06 34.3**	**-1.1**
ARUZ				S	**Sg**	**16 06 43.6**	**0.0**
PAAR	**P'arak'ar**	**0.67**	**52**	⇓*i*P	**Pg**	**16 06 35.9**	**-0.5**
PAAR				⇓*i*S	**Sg**	**16 06 47.3**	**+2.1**
PAAR	**P'arak'ar**	**0.67**	**52**	⇓P	**Pg**	**16 06 35.8**	**-0.6**
PAAR				S	**Sg**	**16 06 47.3**	**+2.1**
DIGO	**Kars**	**0.71**	**341**	*i* P	**Pg**	**16 06 35.7**	**-1.4**
DIGO				*i* S	**Sg**	**16 06 49.2**	**+2.8**
DIGO	**Kars**	**0.71**	**341**	*i* P	**Pg**	**16 06 35.7**	**-1.4**
ERE	**Yerevan**	**0.74**	**54**	⇑P	**Pg**	**16 06 34.4**	**-3.2**
ERE				S	**Sg**	**16 06 45.8**	**-1.5**
AMBZ	**Amberd**	**0.78**	**34**	⇓*i*P	**Pg**	**16 06 37.2**	**-1.2**
AMBZ				⇓*i*S	**Sg**	**16 06 49.4**	**+0.8**
AMBZ	**Amberd**	**0.78**	**34**	⇓P	**Pg**	**16 06 37.2**	**-1.2**
AMBZ				S	**Sg**	**16 06 49.4**	**+0.8**
ARRZ	**Ararat**	**0.79**	**81**	*e*P	**Pg**	**16 06 40.0**	**+1.5**
LERZ	**Lernakert**	**0.85**	**14**	⇑*i*P	**Pg**	**16 06 39.7**	**0.0**
LERZ				⇑S	**Sg**	**16 06 55.0**	**+4.3**
GNI	**Garni**	**0.91**	**63**	PG	**Pg**	**16 06 39.9**	**-1.0**
GNI	**Garni**	**0.91**	**63**	*i* Pg	**Pg**	**16 06 39.9**	**-0.9**
HNAZ	**Hnaberd**	**0.96**	**21**	⇑*i*P	**Pg**	**16 06 41.5**	**-0.2**
HNAZ				⇓*i*S	**Sg**	**16 06 57.4**	**+3.2**
HNAZ	**Hnaberd**	**0.96**	**21**	⇑P	**Pg**	**16 06 41.5**	**-0.3**
HNAZ				S	**Sg**	**16 06 57.4**	**+3.2**
KAPZ	**Kaputan**	**0.97**	**53**	⇓*i*P	**Pg**	**16 06 40.6**	**-1.4**
KAPZ				⇑*i*S	**Sg**	**16 06 57.7**	**+3.0**
KAPZ	**Kaputan**	**0.97**	**53**	⇓P	**Pg**	**16 06 40.7**	**-1.3**
KAPZ				S	**Sg**	**16 06 57.7**	**+3.0**
KARS	**Kars**	**1.00**	**333**	*e*PG	**Pg**	**16 06 41.0**	**-1.6**
KAMZ	**Kamo**	**1.10**	**11**	⇓*i*P	**Pg**	**16 06 44.3**	**-0.2**
KAMZ				⇑*i*S	**Sg**	**16 06 59.7**	**+0.8**
KAMZ	**Kamo**	**1.10**	**11**	⇓P	**Pg**	**16 06 44.3**	**-0.2**
KAMZ				S	**Sg**	**16 06 59.7**	**+0.9**
TCHZ	**Tchakhmakh**	**1.16**	**1**	⇑*i*P	**Pb**	**16 06 46.1**	**+0.7**
TCHZ				⇓*i*S	**Sg**	**16 07 04.5**	**+3.9**
TCHZ	**Tchakhmakh**	**1.16**	**1**	⇑P	**Pb**	**16 06 46.1**	**+0.7**
TCHZ				S	**Sg**	**16 07 04.5**	**+3.9**
VANB	**Van**	**1.17**	**191**	*e*PN	**Pg**	**16 06 44.3**	**-1.5**
VANB	**Van**	**1.17**	**191**	*e*Pn	**Pg**	**16 06 44.3**	**-1.5**
VANT	**Van**	**1.36**	**194**	*e*PN	**Pn**	**16 06 48.3**	**0.0**
STE	**Stepanavan**	**1.36**	**22**	⇓P	**Pn**	**16 06 48.0**	**-0.4**
STE				S	**Sb**	**16 07 05.3**	**-1.1**
STEZ	**Stepenevan**	**1.37**	**23**	⇓*i*P	**Pn**	**16 06 47.3**	**-1.2**
STEZ				⇑*i*S	**Sb**	**16 07 05.3**	**-1.3**
HOMI	**Horasan**	**1.40**	**283**	*i* P	**Pn**	**16 06 48.1**	**-0.8**
HOMI				*i* S	**Sn**	**16 07 09.7**	**+2.3**
CKLZ	**Chkalov**	**1.40**	**32**	⇓*i*P	Px	16 06 39.6	
CKLZ				⇑*i*S	**Sn**	**16 07 09.2**	**+1.7**
VADZ	**Vardenis**	**1.64**	**74**	*e*P	**Pg**	**16 06 53.0**	**-1.8**
VADZ				*e*S	**Sg**	**16 07 17.0**	**+0.9**
TATV	**Tatvan**	**1.65**	**222**	*i* P	**Pn**	**16 06 51.7**	**-0.7**
TATV				*i* S	**Sn**	**16 07 14.5**	**+0.9**
TATV	**Tatvan**	**1.65**	**222**	*i* P	**Pn**	**16 06 51.7**	**-0.7**
TATV				*i* S	**Sn**	**16 07 14.5**	**+0.9**
ERZM	**Erzurum**	**1.79**	**276**	*i* P	**Pn**	**16 06 54.4**	**+0.1**
ERZM				*i* S	**Sg**	**16 07 20.5**	**-0.5**
ERZM	**Erzurum**	**1.79**	**276**	*i* P	**Pn**	**16 06 54.4**	**+0.1**
ERZM				*i* S	**Sg**	**16 07 20.5**	**-0.5**
EZM	**Erzurum**	**1.79**	**276**	*e*PN	**Pn**	**16 06 54.4**	**+0.1**
DDEM	**Demirkent**	**1.87**	**308**	*i* P	**Pn**	**16 06 56.3**	**+0.9**
DDEM	**Demirkent**	**1.87**	**308**	*i* P	**Pn**	**16 06 56.3**	**+0.9**
IMRD	**Marand**	**1.88**	**123**	*e*Pn	**Pg**	**16 06 58.1**	**-1.2**
IMRD				*e*		16 07 03.8	
	comp=Z,7μm,0.2s						
IMRD				*e*Sn	**Sg**	**16 07 30.5**	**+6.9**
IMRD	**Marand**	**1.88**	**123**	*e*Pn	**Pg**	**16 06 58.1**	**-1.2**
ARTV	**Artvin**	**1.97**	**318**	*i* P	**Pn**	**16 06 57.6**	**+0.9**
ARTV				*i* S	**Sg**	**16 07 25.0**	**-1.5**
ARTV	**Artvin**	**1.97**	**318**	*i* P	**Pn**	**16 06 57.6**	**+0.9**
ARTV				*i* S	**Sg**	**16 07 25.0**	**-1.6**
ISHB	**Shabestar**	**2.10**	**133**	*e*Pn	**Pn**	**16 07 00.9**	**+2.4**
ISHB				*e*		16 07 08.3	
	comp=Z,3μm,0.2s						
MTA	**Mtatsminda**	**2.12**	**23**	P	**Pn**	**16 07 00.1**	**+1.3**
MTA				S	**Sg**	**16 07 29.5**	**-2.1**
DGRG	**David-gareji**	**2.14**	**36**	P	**Pn**	**16 07 01.6**	**+2.6**
DGRG				S	**Sg**	**16 07 36.8**	**+4.7**
TBLG	**Delisi**	**2.14**	**22**	P	**Pn**	**16 07 00.5**	**+1.4**
TBLG				S	**Sg**	**16 07 31.9**	**-0.3**
DBOC	**Borcka**	**2.22**	**317**	*i* P	**Pn**	**16 07 02.7**	**+2.5**
DBOC				*i* S	**Sn**	**16 07 31.4**	**+3.8**
DBOC	**Borcka**	**2.22**	**317**	*i* P	**Pn**	**16 07 02.7**	**+2.5**
DBOC				*i* S	**Sn**	**16 07 31.4**	**+3.7**
GOR	**Gori**	**2.27**	**8**	P	**Pn**	**16 07 04.4**	**+3.6**
GOR				S	**Sg**	**16 07 34.8**	**-1.3**
BTMT	**Batman**	**2.31**	**229**	*e*PN	**Pn**	**16 07 03.4**	**+2.1**
BCA	**Borcka**	**2.31**	**318**	*e*PN	**Pn**	**16 07 01.6**	**+0.2**
BCA	**Borcka**	**2.31**	**318**	*e*Pn	**Pn**	**16 07 01.7**	**+0.2**
ITBZ	**Tabriz**	**2.44**	**127**	*e*	**Pg**	**16 07 10.7**	**+0.6**
	comp=Z,1μm,0.3s						
ITBZ				*e*Pn	**Pn**	**16 07 07.1**	**+3.9**
ITBZ				*e*Sn	**Sg**	**16 07 43.1**	**+1.4**
CUKT	**Cukurca**	**2.49**	**181**	*e*PN	**Pn**	**16 07 04.2**	**+0.3**
CUKT	**Cukurca**	**2.49**	**181**	*e*Pn	**Pn**	**16 07 04.2**	**+0.3**
KEH	**Kehvi**	**2.57**	**4**	P	**Pn**	**16 07 09.8**	**+4.8**
KEH				S	**Sg**	**16 07 45.5**	**-0.4**
BINT	**Bingol**	**2.62**	**252**	*e*PN	**Pn**	**16 07 06.0**	**+0.2**
BINT	**Bingol**	**2.62**	**252**	*e*Pn	**Pn**	**16 07 06.0**	**+0.3**
IAZR	**Azarshahr**	**2.73**	**138**	*e*Pn	**Pg**	**16 07 12.7**	**-3.0**
IAZR				*e*		16 07 17.3	
	comp=Z,2μm,0.2s						
ONI	**Oni**	**2.85**	**357**	P	**Pg**	**16 07 15.0**	**-3.0**
ONI				S	**Sg**	**16 07 55.0**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHRS	**Heris**	**2.98**	**117**	*e*Pn	**Pg**	**16 07 17.7**	**-2.7**
IHRS				*e*		16 07 25.5	
	comp=Z,998nm,0.2s						
IBST	**Bostanabad**	**3.23**	**128**	*e*Pn	**Pb**	**16 07 20.3**	**-0.5**
GUMT	**Gumushane**	**3.30**	**284**	*e*PN	**Pn**	**16 07 16.0**	**+0.9**
GUMT	**Gumushane**	**3.30**	**284**	*e*Pn	**Pn**	**16 07 16.0**	**+0.9**
EZC	**Erzincan**	**3.34**	**272**	*e*PN	**Pn**	**16 07 16.6**	**+1.0**
PTK	**Pertek**	**3.44**	**257**	*e*PN	**Pn**	**16 07 17.9**	**+1.0**
PTK	**Pertek**	**3.44**	**257**	*e*Pn	**Pn**	**16 07 17.9**	**+1.0**
ISRB	**Sarab**	**3.65**	**120**	*e*Pn	**Pb**	**16 07 27.2**	**-0.8**
ISRB				*e*		16 07 40.2	
	comp=Z,805nm,0.3s						
SVRC	**Sivrice-ELAZID**	**3.67**	**250**	*e*PN	**Pn**	**16 07 20.7**	**+0.6**
SVRC	**Sivrice-ELAZID**	**3.67**	**250**	*e*Pn	**Pn**	**16 07 20.7**	**+0.6**

BJI 27 16:08:30.4,32°.74N×105°.59E,h19km,ML3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.40**	**221**	Pn	Pn	16 09 11.0	+2.3
CD2				Pg	Pg	16 09 16.0	-0.5
CD2				Sg	Sg	16 09 42.8	-4.8
CD2				smax			
	comp=N,200nm,0.8s						
XAN	**Xi'an**	**3.07**	**64**	Sn	Sn	16 09 54.8	+0.7
XAN				Sg	Sg	16 10 03.0	-6.2
XAN				smax			
	comp=N,82nm,0.7s						
XAN				smax			
	comp=E,35nm,0.7s						
LZH	**Lanzhou**	**3.64**	**337**	*e*Pg	Pg	16 09 36.8	-3.3
LZH				Sg	Sg	16 10 22.5	-4.7
LZH				smax			
	comp=N,100nm,0.5s						
LZH				smax			
	comp=E,110nm,0.8s						

*ISCJB **27** 16:35:46.1±0.6,37°.55N±0°.03×72°.07E±0°.06,h98km±9km, mb3.8/9, Error ellipse: s-maj=8.8km s-min=4.9km az=161.8*
*IDC **27** 16:35:48.5±4.7,37°.68N×72°.27E,h102km±35km,mb3.5/8, mb1 3.5/14,mb1mx3.4/30,mbtmp3.4/14,MS3.0/1, Ms1 3.2/1,ms1mx2.1/30, Error ellipse: s-maj=44.4km s-min=25.2km az=148.0*
*NEIC **27** 16:35:50.7±1.1,37°.84N×72°.03E,h111km±10km,mb4.0/3, Error ellipse: s-maj=19.4km s-min=9.8km az=132.0*
*NNC **27** 16:35:56.8±8.0,38°.27N×72°.18E,h96km±94km,mb3.4, mpv3.9, Error ellipse: s-maj=68.4km s-min=43.2km az=12.0*
*TEH **27** 16:36:38.4,37°.66N×67°.13E,h18km*
ISC 27 16:35:47.8±0.5,37°.59N±0°.03×72°.09E±0°.07,h97km±8km, n53,σ1°29/63,mb3.8/9,7C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.60**	**56**	Pn	**Pn**	**16 36 39.8**	**-1.7**
KSH				Sn	**Sn**	**16 37 13.5**	**-10**
KSH				smax			
	comp=N,620nm,0.6s						
KSH				smax			
	comp=E,470nm,0.6s						
KBL	**Kabul**	**3.92**	**220**	*e*Pn	**Pn**	**16 36 51.2**	**+5.4**
KBL				*e*S	**Sn**	**16 37 39.0**	**+8.3**
UCH	**Uchtor**	**4.99**	**21**	P	**Pn**	**16 37 01.5**	**+1.2**
	SNR=17						
UCH	**Uchtor**	**4.99**	**21**	*e*Pn	**Pn**	**16 37 01.2**	**+0.9**
UCH				*e*S	**Sn**	**16 37 50.5**	**-6.2**
KZA	**Kyzart**	**5.10**	**27**	P	**Pn**	**16 37 02.7**	**+1.0**
	SNR=15						
EKS2	**Erkin-Say**	**5.23**	**14**	P	**Pn**	**16 37 04.7**	**+1.2**
	SNR=32						
EKS2	**Erkin-Say**	**5.23**	**14**	*e*Pn	**Pn**	**16 37 04.3**	**+0.8**
AAK	**Ala-Archa**	**5.37**	**19**	P	**Pn**	**16 37 06.8**	**+1.5**
	SNR=9.3						
AAK	**Ala-Archa**	**5.37**	**19**	P	**Pn**	**16 37 06.5**	**+1.2**
	comp=E,0.0nm,0.3s,baz=162,slow=6.8,SNR=13						
AAK				S	**Sn**	**16 38 03.3**	**-2.5**
	comp=E,0.1nm,0.3s,baz=314,slow=21,SNR=20						
KK31	**Karatay Array**	**5.64**	**348**	⇓P	**Pn**	**16 37 09.3**	**+0.2**
	comp=E,22nm,0.3s,baz=169,slow=12,SNR=331						
KK31				⇑S	**Sn**	**16 38 07.7**	**-4.8**
	comp=E,44nm,0.6s,baz=170,slow=23,SNR=17						
CHMS	**Chumysh**

comp=Z,0.4nm,0.4s,mb3.6,baz=326,slow=18,SNR=4.1
FINES FINESS Array B 37.08 325 P P 16 42 48.4 +0.2
comp=Z,1.4nm,0.3s,mb4.3,baz=116,slow=9.1,SNR=14
ARCES ARCESS Array B 40.48 337 P P 16 43 16.7 +0.2
comp=Z,3.1nm,0.9s,mb4.1,baz=112,slow=8.8,SNR=6.6
GERES GERESS Array B 43.02 304 P P 16 43 40.2 +2.7
comp=Z,0.4nm,0.6s,mb3.4,baz=163,slow=36,SNR=2.4
CLL Collm 43.20 308 *e*P **P 16 43 39.0 +0.1**
NB2 NORSAR Subarra 44.05 322 P P 16 43 45.1 -0.4
comp=Z,1.2nm,0.6s,mb3.8,baz=94,slow=8.6
NOA NORSAR Array B 44.05 322 P P 16 43 45.4 -0.2
comp=Z,2.1nm,0.8s,mb3.9,baz=93,slow=7.8,SNR=7.4
TIXI Tiksi 44.44 22 P P 16 43 47.9 -0.6
comp=Z,3.5nm,0.4s,mb4.4
TORD Torodi Ar. Bea 66.61 269 P P 16 46 27.9 -0.3
comp=Z,0.5nm,0.4s,mb3.7,baz=44,slow=5.1,SNR=9.4
YKA Yellowknife Ar 80.12 3 P P 16 47 46.4 -0.2
comp=Z,0.7nm,0.6s,mb3.7,baz=350,slow=5.5,SNR=6.8
YKA Yellowknife Ar 80.12 3 P P 16 47 46.4 -0.2

IDC 27 16:44:25.6±4.2, 11°.40S×168°.07E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/15, mbtmp4.1/4, Error ellipse: s-maj=131.2km s-min=29.9km az=116.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.79**	**226**	P	P	16 50 51.2	-0.7
	1.4nm,0.3s,baz=51,slow=8.4,SNR=14						
ASAR	**Alice Springs**	**34.69**	**245**	P	P	16 51 19.0	+1.8
	3.9nm,0.5s,baz=74,slow=9.9,SNR=163						
PETK	**Petropavlovsk-**	**64.86**	**353**	P	P	16 55 07.1	+0.9
	1.3nm,0.6s,baz=141,slow=7.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**74.34**	**293**	P	P	16 56 03.7	-1.8
	0.1nm,0.3s,baz=109,slow=4.0,SNR=4.9						

NNC 27 16:45:20.1±5.1, 37°.20N×70°.85E, h131km±69km, mb2.9, mpv3.6, 4C-3D, Error ellipse: s-maj=46.5km s-min=28.0km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.91**	**358**	⇓P	Pn	16 46 45.8	+0.5
	7.4nm,0.5s,baz=178,slow=13,SNR=103						
KK31				⇓S	Sn	16 47 53.0	+1.3
	1.9nm,0.3s,baz=176,slow=26,SNR=7.0						
TKM2	**Tokmak 2**	**6.77**	**31**	⇑P	Pn	16 46 55.7	-1.3
	1.0nm,0.5s						
TKM2				⇑S	Sn	16 48 14.3	+1.6
	3.4nm,0.7s						
AB31	**Akbulak array**	**14.42**	**330**	⇑P	Pn	16 48 38.2	+0.3
	0.4nm,0.3s,baz=142,slow=13,SNR=31						
AB31				⇑S	Sn	16 51 13.6	-3.6
	0.4nm,0.3s,baz=158,slow=22,SNR=5.7						
AKTO	**Aktyubinsk**	**16.12**	**329**	⇓P	Pn	16 49 00.2	+1.2
	0.4nm,0.8s						

*IDC **27** 16:46:06.0±0.7, 32°.07N×104°.61E, h0km, mb4.2/17, mb1 4.2/20, mb1mx4.1/30, mbtmp4.1/20, ML3.3/2, MS3.3/8, Ms1 3.3/8, ms1mx2.9/40, Error ellipse: s-maj=21.6km s-min=14.9km az=49.0*
*ISCJB **27** 16:46:06.2±1.1, 32°.12N±0°.03×104°.61E±0°.04, h14km±7km, mb4.3/26, MS3.3/7, Error ellipse: s-maj=5.7km s-min=5.0km az=135.5*
*NEIC **27** 16:46:07.7±0.4, 32°.08N×104°.53E, h10km, mb4.5/8, Error ellipse: s-maj=9.0km s-min=6.6km az=118.0*
*BJI **27** 16:46:07.5, 32°.20N×104°.74E, h16km, mB4.6/8, mb4.4/15, ML4.2/21, Ms4.1/13, Ms7 4.0/11*
*MOS **27** 16:46:08.8±0.9, 32°.08N×104°.59E, h32km, mb4.4/20, Error ellipse: s-maj=11.6km s-min=7.5km az=108.5*
ISC 27 16:46:06.7±1.0, 32°.14N±0°.03×104°.58E±0°.04, h2km±7km, n92, σ1§01/101, mb4.3/26, MS3.3/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.41**	**210**	Pg	**Pg**	**16 46 34.0**	**+0.3**
CD2				Sg	**Sg**	**16 46 54.3**	**+2.3**
CD2				smax			
	comp=N,19μm,0.7s						
LZH	**Lanzhou**	**3.98**	**351**	*e*Pn	**Pn**	**16 47 11.8**	**+3.0**
LZH				Sn	**Sn**	**16 47 58.3**	**+2.2**
LZH				Sg	**Sg**	**16 48 13.0**	**-1.7**
LZH				smax			
	comp=N,930nm,0.7s						
LZH				smax			
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=N,2μm,6.3s						
LZH				LR	LR		
	comp=Z,2μm,7.2s						
XAN	**Xi'an**	**4.11**	**61**	Pn	**Pn**	**16 47 09.0**	**-1.6**
XAN				Pg	**Pg**	**16 47 21.5**	**-4.0**
XAN				Sn	**Sn**	**16 47 58.3**	**-0.9**
XAN				Sg	**Sg**	**16 48 13.8**	**-5.0**
XAN				smax			
	comp=N,750nm,0.9s						
XAN				smax			
	comp=E,460nm,0.8s						
GYA	**Guiyang**	**5.95**	**162**	Pn	**Pn**	**16 47 35.8**	**0.0**
GYA				smax			
	comp=N,260nm,0.8s						
GYA				smax			
	comp=E,370nm,0.9s						
KMI	**Kunming**	**7.17**	**193**	Pn	**Pn**	**16 47 48.5**	**-4.2**
KMI				Sn	**Sn**	**16 49 15.0**	**+0.2**
KMI				smax			
	comp=N,50nm,1.3s						
KMI				smax			
	comp=E,36nm,1.6s						
KMI				LR	LR		
	comp=N,460nm,7.7s						
KMI				LR	LR		
	comp=E,710nm,7.7s						
KMI				LR	LR		
	comp=Z,440nm,7.9s						
GTA	**Gaotai**	**8.22**	**333**	*e*P	**Pn**	**16 48 07.0**	**0.0**
GTA				pP		16 48 10.5	
GTA				S	**Sn**	**16 49 40.5**	**0.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,64nm,5.1s						
GTA				LR	LR		
	comp=N,420nm,10.5s						
GTA				LR	LR		
	comp=E,530nm,10.2s						
GTA				LR	LR		
	comp=Z,200nm,9.6s						
WHN	**Wuhan**	**8.51**	**98**	P	**Pn**	**16 48 10.8**	**-0.2**
WHN				S	**Sn**	**16 49 39.8**	**-7.8**
WHN				LR	LR		
	comp=Z,1μm,6.6s						
BTO	**Baotou**	**9.52**	**26**	*e*P	**Pn**	**16 48 25.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**10.35**	**31**	*e*P	**Pn**	**16 48 36.8**	**+0.6**
HHC				pP		16 48 41.0	
HHC				PP		16 48 45.3	
HHC				S	**Sn**	**16 50 33.5**	**+0.8**
HHC				sS		16 50 40.0	
HHC				SS		16 50 46.3	
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
HHC				LR	LR		
	comp=N,510nm,4.6s						
HHC				LR	LR		
	comp=E,300nm,4.7s						
HHC				LR	LR		
	comp=Z,420nm,5.7s						
NJ2	**Nanjing**	**12.11**	**87**	*e*P	**Pn**	**16 49 01.5**	**+1.2**
NJ2				pP		16 49 06.0	
NJ2				sP		16 49 09.5	
NJ2				PP		16 49 11.3	
NJ2				S	**Sn**	**16 51 17.5**	**+1.5**
NJ2				sS		16 51 22.8	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.5s						
NJ2				LR	LR		
	comp=N,250nm,9.4s						
NJ2				LR	LR		
	comp=E,330nm,8.2s						
NJ2				LR	LR		
	comp=Z,720nm,10.2s						
CM31	**Chiang Mai Arr**	**14.54**	**202**	*e*Pn	**Pn**	**16 49 39.5**	**+6.0**
	comp=Z,3.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.54**	**202**	Pn	**Pn**	**16 49 34.2**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=11,slow=16,SNR=4.0						
SONM	**Songino Array**	**15.74**	**5**	Pn	**Pn**	**16 49 50.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=187,slow=10,SNR=6.4						
SONM				Lg		16 54 29.1	
	comp=Z,0.2nm,0.3s,baz=183,slow=29,SNR=3.7						
SONM	**Songino Array**	**15.74**	**5**	Pn	**Pn**	**16 49 50.5**	**+1.2**
SONM				Lg		16 54 29.1	
ULN	**Ulaanbaatar**	**15.82**	**6**	*e*P	**Pn**	**16 49 50.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**15.82**	**6**	*e*P	**Pn**	**16 49 50.5**	**0.0**
	comp=Z,3.2nm,0.8s						
GUN	**Gumba**	**16.73**	**260**	*e*P	**Pn**	**16 50 01.1**	**-1.1**
PKI	**Pulchoki**	**17.23**	**260**	*e*P	**Pn**	**16 50 07.1**	**-1.5**
	comp=Z,25nm,0.7s						
PKI	**Pulchoki**	**17.23**	**260**	*e*P	**Pn**	**16 50 07.1**	**-1.5**
PKI				pmax	pmax		
	comp=Z,25nm,0.7s						
KKN	**Kakani**	**17.27**	**260**	*e*P	**Pn**	**16 50 07.5**	**-1.5**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**17.27**	**260**	*e*P	**Pn**	**16 50 07.5**	**-1.5**
KKN				pmax	pmax		
	comp=Z,16nm,0.7s						
DMN	**Daman**	**17.48**	**260**	*e*P	**Pn**	**16 50 10.2**	**-1.4**
ZAK	**Zakamensk**	**18.25**	**357**	*e*P	**Pn**	**16 50 21.8**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MOY	**Mondy**	**19.69**	**353**	*e*P	**Pn**	**16 50 42.2**	**+3.8**
KSRS	**Korea Array**	**19.88**	**68**	P	**Pn**	**16 50 38.9**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=255,slow=10,SNR=12						
KSRS				LR	LR	16 59 35.6	
	comp=Z,51nm,18.4s,baz=260,slow=41						
CN2	**Changchun**	**20.10**	**49**	*e*P	**P**	**16 50 42.3**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**22.48**	**317**	*e*P	**P**	**16 51 07.7**	**+0.5**
MKAR	**Makanchi Array**	**22.48**	**317**	P	**P**	**16 51 08.3**	**+1.1**
	comp=Z,2.7nm,0.6s,mb3.9,baz=107,slow=12,SNR=38						
MKAR				LR	LR	17 00 43.7	
	comp=Z,110nm,19.1s,MS3.3,baz=241,slow=39						
MKAR	**Makanchi Array**	**22.48**	**317**	P	**P**	**16 51 08.3**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,110nm,19.1s						
MKAR	**Makanchi Array**	**22.48**	**317**	P	**P**	**16 51 08.3**	**+1.1**
MKAR				LR	LR	17 00 43.7	
AAK	**Ala-Archa**	**25.97**	**302**	P	**P**	**16 51 41.7**	**+1.1**
	comp=Z,1.6nm,0.6s,mb3.7,baz=110,slow=5.9,SNR=4.0						
AAK				LR	LR	17 03 58.1	
	comp=Z,78nm,18.9s,MS3.3,baz=224,slow=41						
AAK	**Ala-Archa**	**25.97**	**302**	P	**P**	**16 51 41.7**	**+1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
AAK				MLR	MLR		
	comp=Z,78nm,18.9s,MS3.3						
AAK	**Ala-Archa**	**25.97**	**302**	P	**P**	**16 51 41.7**	**+1.1**
AAK				LR	LR	17 03 58.1	
ZAA0	**Zalesovo Array**	**25.98**	**333**	*e*P	**P**	**16 51 40.6**	**+0.1**
ZALV	**Zalesovo Beam**	**25.98**	**333**	P	**P**	**16 51 40.9**	**+0.3**
	comp=Z,9.7nm,0.6s,mb4.5,baz=131,slow=9.8,SNR=44						
ZALV	**Zalesovo Beam**	**25.98**	**333**	P	**P**	**16 51 40.9**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
KLR	**Kul'dur**	**26.55**	**42**	*e*P	**P**	**16 51 44.2**	**-1.6**
KURK	**Kurchatov**	**26.67**	**322**	P	**P**	**16 51 47.5**	**+0.6**
	comp=Z,3.0nm,0.7s,mb3.9,baz=121,slow=11,SNR=35						
KURK				PcP	PcP	16 55 09.2	-1.3
	comp=Z,0.9nm,0.7s,baz=110,slow=2.2,SNR=4.0						
KURK				LR	LR	17 02 56.2	
	comp=Z,43nm,18.4s,MS3.0,baz=170,slow=38						
KURK	**Kurchatov**	**26.67**	**322**	P	**P**	**16 51 47.5**	**+0.6**
KURK						16 55 09.2	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KURK				MLR	MLR		
	comp=Z,43nm,18.4s,MS3.0						
MJAR	**Matsushiro Arr**	**28.03**	**72**	LR	LR	17 02 39.5	
	comp=Z,75nm,18.5s,MS3.3,baz=45,slow=35						
BVAR	**Borovoye Array**	**32.24**	**320**	P	**P**	**16 52 37.2**	**+0.9**
	comp=Z,1.7nm,0.8s,mb4.0,baz=116,slow=3.4,SNR=4.8						
BVAR				LR	LR	17 06 13.7	
	comp=Z,48nm,18.7s,MS3.2,baz=271,slow=37						
BVAR	**Borovoye Array**	**32.24**	**320**	P	**P**	**16 52 37.2**	**+0.9**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,48nm,18.7s						
AKTK	**Aktyubinsk**	**38.73**	**312**	P	**P**	**16 53 32.8**	**+0.7**
AKTO	**Aktyubinsk**	**38.73**	**312**	P	**P**	**16 53 32.8**	**+0.7**
	comp=Z,2.8nm,0.5s,mb4.2,baz=100,slow=10,SNR=12						
AKTO	**Aktyubinsk**	**38.73**	**312**	P	**P**	**16 53 32.8**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ARU	**Arti**	**39.87**	**321**	P	**P**	**16 53 42.0**	**+0.5**
ARU	**Arti**	**39.87**	**321**	*e*P	**P**	**16 53 41.9**	**+0.3**
	comp=Z,20nm,1.1s,mb4.8						
TIXI	**Tiksi**	**41.66**	**11**	*e*P	**P**	**16 53 57.1**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TIXI	**Tiksi**	**41.66**	**11**	*e*P	**P**	**16 53 55.1**	**-1.0**
	comp=Z,2.7nm,0.8s,mb3.9						
PETK	**Petropavlovsk-**	**43.17**	**45**	P	**P**	**16 54 09.8**	**+1.1**
	comp=Z,3.5nm,0.9s,mb4.1,baz=297,slow=4.8,SNR=5.6						
PETK				LR	LR	17 13 39.6	
	comp=Z,36nm,18.0s,MS3.3,baz=0.9,slow=38						
PETK	**Petropavlovsk-**	**43.17**	**45**	P	**P**	**16 54 09.8**	**+1.1**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
PETK				MLR	MLR		
	comp=Z,36nm,18.0s,MS3.3						
PETK	**Petropavlovsk-**	**43.17**	**45**	P	**P**	**16 54 09.8**	**+1.1**
PETK				LR	LR	17 13 39.6	
VORD	**Divnogorie**	**50.62**	**312**	*e*P	**P**	**16 55 07.1**	**+0.1**
VORD				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
VORD				pmax	pmax		
	comp=N,8.0nm,1.0s						
VORD				pmax	pmax		
	comp=E,6.0nm,0.6s						
VSR	**Storozhevoye**	**50.68**	**312**	*e*P	**P**	**16 55 07.2**	**-0.2**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
VSR				pmax	pmax		
	comp=N,5.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.6s						
JOF	**Joensuu**	**54.37**	**327**	*e*P	**P**	**16 55 33.6**	**-1.0**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
JOF	**Joensuu**	**54.37**	**327**	*e*p	**P**	**16 55 33.6**	**-1.0**
	comp=Z,5.3nm,0.7s,mb4.6						
KEV	**Kevo**	**55.95**	**336**	*e*P	**P**	**16 55 44.5**	**-1.4**
KEV	**Kevo**	**55.95**	**336**	*e*p	**P**	**16 55 44.5**	**-1.4**
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**16 55 49.5**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.4,baz=82,slow=8.1,SNR=9.7						
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**16 55 49.5**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**56.59**	**299**	P	**P**	**16 55 51.2**	**+0.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=111,slow=6.7,SNR=5.8						
BRTR	**Keskin Array B**	**56.59**	**299**	P	**P**	**16 55 51.2**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KAF	**Kangasniemi**	**56.75**	**327**	*e*P	**P**	**16 55 50.5**	**-1.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**56.75**	**327**	*e*p	**P**	**16 55 50.5**	**-1.2**
	comp=Z,3.2nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**16 55 52.9**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.5,baz=92,slow=9.4,SNR=11						
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**16 55 52.9**	**-0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**56.98**	**313**	P	**P**	**16 55 53.0**	**-0.5**
	comp=Z,3.0nm,0.6s,mb4.5,baz=68,slow=6.6,SNR=8.5						
AKASG	**Malin Array Be**	**56.98**	**313**	P	**P**	**16 55 53.0**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**56.98**	**313**	P	**P**	**16 55 53.0**	**-0.5**
MLR	**Muntele Rosu**	**60.40**	**308**	LR	LR	17 24 39.3	
	comp=Z,46nm,19.5s,MS3.6,baz=129,slow=38						
ASAR	**Alice Springs**	**62.17**	**149**	P	**P**	**16 56 28.9**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.2,baz=336,slow=6.4,SNR=15						
ASAR	**Alice Springs**	**62.17**	**149**	P	**P**	**16 56 29.0**	**-0.6**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**64.01**	**327**	P	**P**	**16 56 40.1**	**-1.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=72,slow=6.5						
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**16 56 40.3**	**-1.1**
	comp=Z,1.7nm,0.7s,mb4.2,baz=72,slow=6.7,SNR=6.5						
NOA	**NORSAR Array B**	**64.01**	**327**	P	**P**	**16 56 40.3**	**-1.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**67.11**	**314**	P	**P**	**16 57 01.9**	**+0.2**
	comp=Z,1.5nm,0.9s,mb4.0,baz=72,slow=4.3,SNR=6.9						
GERES	**GERESS Array B**	**67.11**	**314**	P	**P**	**16 57 01.9**	**+0.2**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO	**Kilima Mbogo**	**71.54**	**257**	P	**P**	**16 57 29.5**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.1,baz=0.0,slow=20,SNR=3.3						
KMBO	**Kilima Mbogo**	**71.54**	**257**	P	**P**	**16 57 29.5**	**-0.1**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**72.66**	**148**	P	**P**	**16 57 34.8**	**-1.0**
	comp=Z,2.0nm,0.9s,mb4.0,baz=247,slow=9.6,SNR=3.1						
LPG	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.6**	**+0.7**
	comp=Z,20nm,0.7s,mb4.8						
LPG	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.6**	**+0.7**
LPG				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
LPG	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.6**	**+0.7**
	comp=Z,10.0nm,0.7s,mb4.8						
LPL	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.5**	**+0.6**
	comp=Z,15nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.5**	**+0.6**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LPL	**La Plagne**	**72.84**	**313**	*e*P	**P**	**16 57 37.5**	**+0.6**
	comp=Z,7.3nm,0.6s,mb4.8						
SMF	**Signal de Mont**	**74.05**	**315**	*e*P	**P**	**16 57 43.6**	**-0.4**
	comp=Z,15nm,0.9s,mb4.6						
SMF	**Signal de Mont**	**74.05**	**315**	*e*P	**P**	**16 57 43.6**	**-0.4**
SMF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
SMF	**Signal de Mont**	**74.05**	**315**	*e*P	**P**	**16 57 43.6**	**-0.4**
	comp=Z,7.4nm,0.9s,mb4.6						
YKA	**Yellowknife Ar**	**80.59**	**17**	P	**P**	**16 58 19.2**	**-1.2**
	comp=Z,1.7nm,0.6s,mb4.1,baz=328,slow=5.3,SNR=11						
YKA	**Yellowknife Ar**	**80.59**	**17**	P	**P**	**16 58 19.2**	**-1.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**80.59**	**17**	P	**P**	**16 58 19.2**	**-1.2**

IDC 27 16:58:23.7±1.4, 32°.25N×105°.03E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=76.9km s-min=26.5km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.66**	**316**	P	P	17 03 26.9	+0.5
	0.1nm,0.4s,baz=112,slow=12,SNR=4.2						
ZALV	**Zalesovo Beam**	**26.05**	**332**	P	P	17 03 58.0	-0.6
	0.8nm,0.6s,baz=127,slow=9.8,SNR=4.5						
ASAR	**Alice Springs**	**62.08**	**150**	P	P	17 08 46.2	0.0
	0.2nm,0.5s,baz=332,slow=6.1,SNR=5.7						
YKA	**Yellowknife Ar**	**80.36**	**17**	P	P	17 10 36.8	+0.3
	0.3nm,0.6s,baz=322,slow=4.8,SNR=3.4						

*IDC **27** 17:07:17.5±0.9, 30°.53N×57°.15E, h0km, mb4.0/17, mb1 4.2/20, mb1mx4.1/31, mbtmp4.1/20, ML3.4/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/36, Error ellipse: s-maj=20.9km s-min=14.0km az=171.0*
*BJI **27** 17:07:18.7, 30°.60N×57°.20E, h16km, mB4.8/2, mb4.2/2*
*MOS **27** 17:07:19.4±1.0, 30°.55N×57°.11E, h25km, mb4.3/15, Error ellipse: s-maj=11.2km s-min=9.2km az=83.1*
*CSEM **27** 17:07:19.7±0.2, 30°.62N×57°.17E, h10km, mb4.0/12, Error ellipse: s-maj=7.1km s-min=4.9km az=141.0*
*NEIC **27** 17:07:20.8±1.6, 30°.62N×57°.16E, h17km±11km, mb3.9/9, ML4.0(THR), MN4.3(TEH), Error ellipse: s-maj=7.8km s-min=5.8km az=166.0*
*THR **27** 17:07:21.5±0.4, 30°.49N×57°.08E, h14km±5km, ML4.0*
*TEH **27** 17:07:23.3, 30°.69N×57°.21E, h27km*
ISC 27 17:07:20.7±1.3, 30°.59N±0°.04×57°.18E±0°.04, h18km±9km, n144, σ1§11/148, mb4.0/21, MS3.1/5, 1C, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.71**	**211**	Pg	**Pg**	**17 07 32.0**	**-2.6**
KRBR	**Kerman**	**0.71**	**211**	*e*Pg	**Pg**	**17 07 32.9**	**-1.7**
KRBR				AML	AML	17 07 44.6	
	comp=E,10μm,0.5s						
KRBR				AML	AML	17 07 50.6	
	comp=N,8μm,0.3s						
KRBR	**Kerman**	**0.71**	**211**	*e*Pg	**Pg**	**17 07 32.9**	**-1.7**
IBAF	**Bafgh**	**1.71**	**306**	Pn	**Pn**	**17 07 49.4**	**-0.1**
IBAF				Sn	**Sn**	**17 08 11.8**	**+0.9**
IBAF	**Bafgh**	**1.71**	**306**	*e*Pn	**Pn**	**17 07 49.4**	**-0.1**
IBAF				*e*		17 07 56.1	
	comp=Z,57μm,0.1s						
IBAF				*e*Sn	**Sn**	**17 08 11.8**	**+0.9**
IBAF	**Bafgh**	**1.71**	**306**	Pn	**Pn**	**17 07 49.4**	**-0.1**
IBAF				Sn	**Sn**	**17 08 11.8**	**+0.9**
IMEH	**Mehriz**	**2.35**	**291**	Pn	**Pn**	**17 07 58.5**	**+0.2**
IMEH	**Mehriz**	**2.35**	**291**	*e*Pn	**Pn**	**17 07 58.6**	**+0.3**
IMEH				*e*		17 08 32.4	
	comp=Z,18μm,0.4s						
IMEH	**Mehriz**	**2.35**	**291**	Pn	**Pn**	**17 07 58.5**	**+0.2**
IKOO	**Kooshah**	**2.40**	**40**	*e*Pn	**Pn**	**17 07 59.4**	**+0.3**
IKOO				*e*		17 08 38.2	
	comp=Z,48μm,0.3s						
IKOO	**Kooshah**	**2.40**	**40**	*e*Pn	**Pn**	**17 07 59.4**	**+0.3**
ITEG	**Tejag**	**2.66**	**30**	*e*Pn	**Pn**	**17 08 02.7**	**+0.1**
ITEG				*e*Lg		17 08 43.7	
ITEG				*e*		17 08 50.9	
	comp=Z,21μm,0.2s						
ITEG	**Tejag**	**2.66**	**30**	*e*Pn	**Pn**	**17 08 02.7**	**+0.1**
ITEG				*e*Lg		17 08 43.7	
ICHK	**Chekchek**	**2.89**	**306**	Pn	**Pn**	**17 08 06.6**	**+0.8**
ICHK				Sn	**Sn**	**17 08 39.5**	**-0.6**
ICHK	**Chekchek**	**2.89**	**306**	*e*Sn	**Sn**	**17 08 39.5**	**-0.

ISRV e 17 09 31.2
comp=Z,5μm,0.4s
ISRV Sarvestan 3.73 252 Pn **Pn 17 08 19.8 +2.4**
IMOK Mouk 4.18 250 Pn **Pn 17 08 26.1 +2.6**
IMOK Mouk 4.18 250 ePn **Pn 17 08 26.2 +2.7**
IMOK e 17 09 46.2
comp=Z,2μm,0.6s
IMOK Mouk 4.18 250 Pn **Pn 17 08 26.1 +2.6**
GHIR Ghir-Karzin 4.32 239 Pn **Pn 17 08 26.0 +0.5**
GHIR Ghir-Karzin 4.32 239 ePn **Pn 17 08 27.2 +1.7**
GHIR Ghir-Karzin 4.32 239 Pn **Pn 17 08 26.0 +0.5**
IZEF Zefreh 4.73 300 Pn **Pn 17 08 31.8 +0.7**
IZEF Zefreh 4.73 300 ePn **Pn 17 08 31.9 +0.8**
IZEF e 17 10 01.7
comp=Z,2μm,0.5s
IZEF Zefreh 4.73 300 Pn **Pn 17 08 31.8 +0.7**
IGAR Gharneh 4.75 294 ePn **Pn 17 08 35.3 +3.9**
IGAR e 17 09 00.6
comp=Z,614nm,0.2s
IANJ Anjilo 5.58 331 Pn **Pn 17 08 42.1 -0.7**
IANJ Anjilo 5.58 331 ePn **Pn 17 08 42.2 -0.6**
IANJ e 17 10 33.7
comp=Z,2μm,0.4s
IANJ Anjilo 5.58 331 ePn **Pn 17 08 42.2 -0.6**
IPIR Pirpir 5.76 293 Pn **Pn 17 08 46.1 +0.9**
IPIR Pirpir 5.76 293 ePn **Pn 17 08 46.2 +1.0**
IPIR e 17 10 32.3
comp=Z,552nm,0.3s
IPIR Pirpir 5.76 293 Pn **Pn 17 08 46.1 +0.9**
SLWS 8.18 227 P **Pn 17 09 16.8 -1.7**
SLWS 8.18 227 P **Pn 17 09 16.8 -1.7**
BTHS 8.61 222 P **Pn 17 09 22.6 -1.9**
BTHS 8.61 222 P **Pn 17 09 22.6 -1.9**
ASF Jabal al Asfar 17.40 280 P **Pn 17 11 21.6 -0.8**
comp=Z,0.2nm,0.3s,baz=316,slow=6.3,SNR=4.0
ASF LR LR 17 19 02.5
comp=Z,55nm,18.4s,baz=142,slow=41
KSH Kashi 17.75 55 P **Pn 17 11 21.5 -5.3**
KSH pmax pmax
comp=Z,130nm,4.8s
EKS2 Erkin-Say 17.92 43 ePn **Pn 17 11 29.0 +0.1**
comp=Z,6.7nm,0.9s
EKS2 Erkin-Say 17.92 43 ePn **Pn 17 11 29.0 +0.1**
comp=Z,6.7nm,0.9s
UCH Uchtor 18.11 45 ePn **Pn 17 11 32.3 +1.1**
comp=Z,3.2nm,0.8s
UCH Uchtor 18.11 45 ePn **Pn 17 11 32.3 +1.1**
comp=Z,3.2nm,0.8s
AAK Ala-Archa 18.33 44 P **Pn 17 11 34.3 +0.4**
comp=Z,0.0nm,0.3s,baz=212,slow=8.7,SNR=15
AAK LR LR 17 19 59.5
comp=Z,71nm,19.5s,baz=33,slow=41
AAK Ala-Archa 18.33 44 P **Pn 17 11 34.3 +0.4**
comp=Z,71nm,19.5s
ABKAR Akbulak array 18.76 6 eP **Pn 17 11 38.5 -0.6**
comp=Z,1.7nm,0.7s
ABKAR Akbulak array 18.76 6 eP **Pn 17 11 38.5 -0.6**
comp=Z,1.7nm,0.7s
TKM2 Tokmak 2 19.16 45 eP **Pn 17 11 45.8 +1.8**
TKM2 pmax pmax
comp=Z,10.0nm,1.1s
TKM2 Tokmak 2 19.16 45 eP **Pn 17 11 45.8 +1.8**
comp=Z,10nm,1.1s
TKM2 Tokmak 2 19.16 45 eP **Pn 17 11 45.8 +1.8**
comp=Z,10.0nm,1.1s
EIL Elat 19.25 273 LR LR 17 20 32.1
comp=Z,62nm,18.6s,baz=95,slow=41
AKTK Aktyubinsk 19.84 2 P **Pn 17 11 50.3 -1.6**
AKTK LR LR 17 21 27.2
AKTK Aktyubinsk 19.84 2 P **Pn 17 11 50.3 -1.6**
comp=Z,39nm,20.2s
AKTO Aktyubinsk 19.84 2 P **Pn 17 11 50.3 -1.6**
comp=Z,0.4nm,0.3s,baz=178,slow=10,SNR=14
AKTO LR LR 17 21 27.2
comp=Z,39nm,20.1s,baz=94,slow=43
BR131 Keskin Array S 21.25 302 eP **P 17 12 05.5 -0.3**
comp=Z,3.3nm,0.8s,mb3.7
BR131 Keskin Array S 21.25 302 eP **P 17 12 05.5 -0.3**
comp=Z,3.3nm,0.8s,mb3.7
BRTR Keskin Array B 21.25 302 P **P 17 12 06.0 +0.2**
comp=Z,3.5nm,0.8s,mb3.8,baz=119,slow=10.0,SNR=18
BRTR Keskin Array B 21.25 302 P **P 17 12 06.0 +0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 21.25 302 P **P 17 12 05.9 +0.1**
ATD Arta Tunnel 23.16 218 P **P 17 12 27.0 +0.7**
comp=Z,2.7nm,0.4s,mb4.0,baz=249,slow=21,SNR=2.6
ATD Arta Tunnel 23.16 218 P **P 17 12 27.0 +0.7**
BVAR Borovoye Array 24.41 20 P **P 17 12 38.2 +0.4**
comp=Z,5.1nm,0.7s,mb4.1,baz=201,slow=7.9,SNR=22
BVAR LR LR 17 23 22.1
comp=Z,94nm,20.2s,MS3.3,baz=215,slow=39
BVAR Borovoye Array 24.41 20 P **P 17 12 38.2 +0.4**
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BVAR MLR MLR
comp=Z,94nm,20.2s
BVAR Borovoye Array 24.41 20 P **P 17 12 38.2 +0.4**
comp=Z,94nm,20.2s
MK31 Makanchi Array 25.26 43 eP **P 17 12 45.8 +0.2**
MK31 Makanchi Array 25.26 43 eP **P 17 12 45.8 +0.2**
MKAR Makanchi Array 25.26 43 P **P 17 12 46.0 +0.4**
comp=Z,3.0nm,0.7s,mb3.9,baz=227,slow=8.0,SNR=35
MKAR LR LR 17 23 50.4
comp=Z,34nm,20.6s,MS2.9,baz=73,slow=39
MKAR Makanchi Array 25.26 43 P **P 17 12 46.1 +0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR MLR MLR
comp=Z,34nm,20.6s
MKAR Makanchi Array 25.26 43 P **P 17 12 46.0 +0.4**
MKAR LR LR 17 23 50.4
MKAR Makanchi Array 25.26 43 P **P 17 12 46.0 +0.4**
KURK Kurchatov 25.69 32 P **P 17 12 49.2 -0.4**
comp=Z,4.9nm,0.8s,mb4.1,baz=231,slow=9.1,SNR=29
KURK LR LR 17 24 21.5
comp=Z,68nm,18.7s,MS3.2,baz=220,slow=40
KURK Kurchatov 25.69 32 P **P 17 12 49.2 -0.3**
KURK pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
KURK MLR MLR
comp=Z,68nm,18.7s,MS3.2
KURK Kurchatov 25.69 32 P **P 17 12 49.2 -0.4**
KURK LR LR 17 24 21.5
KURK Kurchatov 25.69 32 P **P 17 12 49.2 -0.3**
comp=Z,68nm,18.7s
MLR Muntele Rosu 28.53 310 P **P 17 13 16.8 +1.6**
comp=Z,2.9nm,0.9s,mb4.0,baz=166,slow=4.2,SNR=4.6
MLR Muntele Rosu 28.53 310 P **P 17 13 16.8 +1.7**
MLR pmax pmax
comp=Z,3.0nm,1.0s
MLR Muntele Rosu 28.53 310 P **P 17 13 16.8 +1.7**
comp=Z,3.0nm,1.0s,mb4.0
AKASG Malin Array Be 28.94 322 P **P 17 13 18.4 -0.3**
comp=Z,1.9nm,0.6s,mb4.0,baz=125,slow=8.6,SNR=8.5
AKASG Malin Array Be 28.94 322 P **P 17 13 18.4 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 28.94 322 P **P 17 13 18.4 -0.3**
comp=Z,2.0nm,0.6s,mb4.0
AKBB Malin Array Si 28.94 322 eP **P 17 13 17.9 -0.8**
AKBB Malin Array Si 28.94 322 eP **P 17 13 17.9 -0.8**
KIEV Kiev 28.94 322 eP **P 17 13 18.0 -0.7**
KIEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KIEV Kiev 28.94 322 eP **P 17 13 18.0 -0.7**
comp=Z,3.8nm,0.6s,mb4.3
KIEV Kiev 28.94 322 eP **P 17 13 18.0 -0.7**
comp=Z,4.0nm,0.6s,mb4.3
NVS Novosibirsk 30.55 30 eP **P 17 13 32.8 -0.1**
NVS Novosibirsk 30.55 30 eP **P 17 13 32.8 -0.1**
ZAA0 Zalesovo Array 30.68 32 eP **P 17 13 33.5 -0.6**
ZAA0 Zalesovo Array 30.68 32 eP **P 17 13 33.5 -0.6**
ZALV Zalesovo Beam 30.68 32 P **P 17 13 33.9 -0.2**
comp=Z,5.9nm,0.7s,mb4.5,baz=238,slow=9.0,SNR=29
ZALV LR LR 17 27 43.7
comp=Z,31nm,20.5s,MS3.0,baz=282,slow=40
ZALV Zalesovo Beam 30.68 32 P **P 17 13 33.9 -0.2**
ZALV pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
ZALV MLR MLR
comp=Z,31nm,20.5s,MS3.0
ZALV Zalesovo Beam 30.68 32 P **P 17 13 33.9 -0.2**
ZALV LR LR 17 27 43.7
MORC Moravsky Berou 35.31 314 P **P 17 14 13.6 -0.9**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MORC Moravsky Berou 35.31 314 P **P 17 14 13.6 -0.9**
comp=Z,1.6nm,0.7s,mb4.1
MORC Moravsky Berou 35.31 314 P **P 17 14 13.6 -0.9**
comp=Z,2.0nm,0.7s,mb4.2
FINES FINESS Array B 36.98 336 P **P 17 14 28.2 -0.4**
comp=Z,2.4nm,0.8s,mb4.1,baz=134,slow=8.2,SNR=5.8
FINES FINESS Array B 36.98 336 P **P 17 14 28.2 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 36.98 336 P **P 17 14 28.2 -0.5**
comp=Z,2.0nm,0.8s,mb4.0
GERES GERESS Array B 37.49 312 P **P 17 14 33.1 -0.1**
comp=Z,2.0nm,0.9s,mb4.0,baz=114,slow=6.4,SNR=12
GERES GERESS Array B 37.49 312 P **P 17 14 33.1 0.0**
GERES pmax pmax
comp=Z,2.0nm,0.9s
GERES GERESS Array B 37.49 312 P **P 17 14 33.1 0.0**
comp=Z,2.0nm,0.9s,mb4.0
CLL Collm 38.52 315 eP **P 17 14 42.0 +0.2**
CLL *i* pP 17 14 45.9 -1.6
CLL pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
CLL Collm 38.52 315 eP **P 17 14 42.0 +0.2**
comp=Z,3.0nm,0.9s,mb4.0
CLL *i* pP 17 14 45.9 -1.6
CLL Collm 38.52 315 eP **P 17 14 42.0 +0.2**
comp=Z,3.0nm,0.9s,mb4.0
CLL ⇑*i*pP pP 17 14 45.9 -1.6
comp=Z,7.0nm,1.1s
CLL Collm 38.52 315 eP **P 17 14 42.0 +0.2**
comp=Z,3.0nm,0.9s,mb4.0
CMAR Chiang Mai Arr 39.65 98 P **P 17 14 51.9 +0.2**
comp=Z,0.4nm,0.4s,mb3.5,baz=291,slow=7.8,SNR=5.4
CMAR LR LR 17 32 43.6
comp=Z,47nm,18.8s,MS3.4,baz=345,slow=38
CMAR Chiang Mai Arr 39.65 98 P **P 17 14 51.9 +0.2**
SONM Songino Array 41.09 51 P **P 17 15 04.1 +0.9**
comp=Z,4.0nm,1.2s,mb3.9,baz=278,slow=10,SNR=6.4
SONM Songino Array 41.09 51 P **P 17 15 04.1 +0.9**
SONM pmax pmax
comp=Z,4.0nm,1.2s
SONM Songino Array 41.09 51 P **P 17 15 04.1 +0.9**
ULN Ulaanbaatar 41.53 51 eP **P 17 15 07.0 +0.1**
ULN Ulaanbaatar 41.53 51 eP **P 17 15 07.0 +0.1**
NOA NORSAR Array B 42.77 329 P **P 17 15 15.7 -1.1**
comp=Z,0.7nm,0.5s,mb3.6,baz=116,slow=8.1,SNR=3.5
NOA NORSAR Array B 42.77 329 P **P 17 15 15.7 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 42.77 329 P **P 17 15 15.7 -1.1**
TOA0 Torodi Ar. Sit 53.82 264 eP **P 17 16 40.4 -2.3**
TORD Torodi Ar. Bea 53.82 264 P **P 17 16 40.8 -1.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=58,slow=7.1,SNR=17
KSRS Korea Array 57.79 63 P **P 17 17 09.9 -1.0**
comp=Z,1.6nm,0.6s,mb4.2,baz=275,slow=7.0,SNR=5.4
KSRS Korea Array 57.79 63 P **P 17 17 09.9 -1.0**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TSUM Tsumeb 62.46 223 eP **P 17 17 44.0 +1.0**
comp=Z,3.8nm,1.0s,mb4.5
TSUM Tsumeb 62.46 223 eP **P 17 17 44.0 +1.0**
comp=Z,3.8nm,1.0s,mb4.5
DBIC Dimbokro 62.61 261 P **P 17 17 43.4 -0.8**
DBIC Dimbokro 62.61 261 P **P 17 17 43.3 -0.9**
YKA Yellowknife Ar 87.01 356 P **P 17 20 04.5 0.0**
comp=Z,0.3nm,0.6s,mb3.7,baz=358,slow=4.8,SNR=4.0
YKA Yellowknife Ar 87.01 356 P **P 17 20 04.6 0.0**
ASAR Alice Springs 91.17 117 P **P 17 20 23.5 -1.3**
comp=Z,0.9nm,1.1s,mb4.0,baz=310,slow=4.5,SNR=3.0
ASAR Alice Springs 91.17 117 P **P 17 20 23.5 -1.3**
ASAR pmax pmax
comp=Z,1.0nm,1.1s
ASAR Alice Springs 91.17 117 P **P 17 20 23.5 -1.3**

NOU ***27*** *17:34:12.0±1.2, 19°.79S×168°.74E, h30km, MD3.1, MS2.6*
IDC ***27*** *17:34:12.9±0.5, 19°.97S×168°.72E, h0km, mb4.8/16, mb1 4.9/18, mb1mx4.9/20, mbtmp4.8/18, ML3.6/2, MS4.8/16, Ms1 4.7/16, ms1mx4.6/21, Error ellipse: s-maj=17.7km s-min=16.0km az=125.0*
ISCJB ***27*** *17:34:13.3±1.6, 20°.19S±0°.04×168°.73E±0°.03, h15km±9km, mb5.2/70, MS4.9/37, Error ellipse: s-maj=7.5km s-min=3.3km az=143.2*
SZGRF ***27*** *17:34:13.2, 21°.24S×169°.93E, h33km, mb5.1, Southeast of Loyalty Islands*
LDG ***27*** *17:34:13.8±0.1, 20°.02S×168°.60E, h10km, Mb5.7/2, Ms5.0/8, Error ellipse: s-maj=14.7km s-min=3.1km az=125.0*
MOS ***27*** *17:34:17.3±3.0, 19°.85S×168°.64E, h23km, mb5.5/24, MS5.0/15, Error ellipse: s-maj=10.4km s-min=10.0km az=111.1*
BJI ***27*** *17:34:17.9, 19°.67S×168°.85E, h35km, mB5.5/19, mb5.1/24, Ms5.2/24, Ms7 4.9/23*
GCMT ***27*** *17:34:18.0±0.1, 20°.11S×168°.61E, h12km, MW5.3/101, Moment Tensor Solution. s77,c134; s101,c183; Duration: 1s1 Moment tensor: Scale 10^17^Nm; M_{rr}-0.84±.02; $M_{\theta\theta}$1.02±.02; $M_{\phi\phi}$-0.18±.02; $M_{r\theta}$-0.36±.04; $M_{\theta\phi}$-0.95±.02; $M_{\phi r}$0.19±.05; Best double couple: $M_0$1.25900×10^17^ NP1:ϕ_s301.00000°, δ36.00000°, λ-87.00000°. NP2:ϕ_s118.00000°, δ54.00000°, λ-92.00000°. Principal axes: T 1.6110, Plg9.0000°, Azm209.0000°; N -0.7040, Plg2.0000°, Azm119.0000°; P -0.9080, Plg81.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***27*** *17:34:18.0±0.2, 20°.01S×168°.76E, h35km, mb5.3/44, MS5.2/5 Error ellipse: s-maj=7.4km s-min=5.8km az=157.0*
BGS ***27*** *17:34:19.7±2.2, 20°.01S×168°.76E, h33km, mb5.3(NEIC)*
ISC 27 17:34:14.4±1.8, 20°.23S±0°.04×168°.78E±0°.03, h14km±11km, h35km±1.2km:pP-P, n629, σ0s72/344, mb5.2/70, MS4.9/37, 120C-97D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.61**	**222**	*e*P	**Pn**	**17 34 55.5**	**-0.6**
BAYA				*e*S	**Sn**	**17 35 26.6**	**-1.0**
BAYA				AMP		17 35 47.1	
	comp=Z,84nm,7.0s						
DZM	**Mont Dzumac**	**2.85**	**230**	*e*Pn	**Pn**	**17 34 58.2**	**-1.2**
	comp=Z,181nm,0.3s						
DZM				*e*Sn	**Sn**	**17 35 30.1**	**-3.4**
	comp=Z,929nm,0.3s						
DZM				*e*LR	LR	17 35 35.7	
	comp=Z,50μm,24.9s						
DZM	**Mont Dzumac**	**2.85**	**230**	*e*P	**Pn**	**17 34 57.8**	**-1.6**
PLUM	**Mont Dore**	**2.85**	**224**	*e*P	**Pn**	**17 34 58.4**	**-1.0**
NORM	**Noumea**	**2.92**	**227**	*e*P	**Pn**	**17 34 59.2**	**-1.3**
NORM				*e*S	**Sn**	**17 35 33.8**	**-1.6**
NOUC	**Port Laguerre**	**2.97**	**231**	*e*P	**Pn**	**17 35 00.6**	**-0.5**
NOUC				*e*S	**Sn**	**17 35 35.7**	**-0.8**
NOUC				AMP		17 35 50.7	
	comp=Z,462nm,16.1s						
MVNO	**Noumea**	**2.98**	**227**	*e*P	**Pn**	**17 35 00.2**	**-1.0**
MVNO				*e*S	**Sn**	**17 35 36.2**	**-0.5**
ONTRN	**Noumea**	**3.00**	**226**	*e*P	**Pn**	**17 35 00.1**	**-1.3**
ONTRN				*e*S	**Sn**	**17 35 37.1**	**-0.1**
MSVF	**Nonsavu**	**9.12**	**76**	Pn	**Pn**	**17 36 33.0**	**+7.4**
	comp=Z,2μm,1.4s,SNR=23						
RAO	**Raoul Island**	**15.05**	**129**	LR	LR	17 42 31.5	
	comp=Z,2μm,19.9s,baz=298,slow=33						
OUZ	**Omahuta**	**15.53**	**165**	*e*P	**Pn**	**17 37 57.7**	**+4.8**
	comp=Z,7.1nm,1.0s						
EIDS	**Eidsvold**	**17.10**	**249**	*e*P	**Pn**	**17 38 15.6**	**+2.6**
EIDS	**Eidsvold**	**17.10**	**249**	P	**Pn**	**17 38 16.5**	**+3.4**
	comp=Z,15nm,1.0s						
ARMA	**Armidale**	**18.50**	**233**	*e*P	**Pn**	**17 38 34.1**	**+3.7**
ARMA				*e*S	**Sn**	**17 42 06.2**	**+9.1**
ARMA	**Armidale**	**18.50**	**233**	*e*P	**Pn**	**17 38 34.0**	**+3.5**
	comp=Z,159nm,1.6s						
URZ	**Urewera**	**19.36**	**160**	P	**Pn**	**17 38 44.0**	**+3.3**
	comp=Z,1.1nm,0.3s,baz=346,slow=7.8,SNR=13						
URZ				LR	LR	17 45 25.0	
	comp=Z,3μm,18.2s,baz=345,slow=34						
URZ	**Urewera**	**19.36**	**160**	*e*P	**Pn**	**17 38 43.2**	**+2.5**
	comp=Z,137nm,1.0s						
AFI	**Afiamalu**	**19.61**	**74**	P	**Pn**	**17 38 44.4**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=293,slow=16,SNR=3.6						
AFI				LR	LR	17 44 45.0	
	comp=Z,2μm,19.6s,baz=250,slow=32						
AFI	**Afiamalu**	**19.61**	**74**	*e*P	**Pn**	**17 38 43.6**	**-0.3**
AFI				pmax	pmax		
	comp=Z,93nm,1.0s						
AFI	**Afiamalu**	**19.61**	**74**	*e*P	**Pn**	**17 38 43.5**	**-0.3**
	comp=Z,93nm,1.0s						
CTA	**Charters Tower**	**21.15**	**266**	*e*P	**P**	**17 39 01.8**	**+2.7**
	comp=Z,25nm,0.6s,mb4.7						
CTA				*e*S	**S**	**17 43 00.7**	**+6.6**
CTA	**Charters Tower**	**21.15**	**266**	P	**P**	**17 39 01.1**	**+2.0**
	comp=Z,24nm,0.5s,mb4.8,baz=90,slow=11,SNR=36						
CTA				LR	LR	17 46 29.2	
	comp=Z,2μm,18.2s,MS4.6,baz=88,slow=35						
CTAO	**Charters Tower**	**21.15**	**266**	*e*P	**P**	**17 39 01.9**	**+2.8**
CTAO				pmax	pmax		
	comp=Z,85nm,1.0s,mb5.0						
CTAO	**Charters Tower**	**21.15**	**266**	*e*P	**P**	**17 39 01.9**	**+2.8**
	comp=Z,85nm,1.0s,mb5.0						
SNZO	**South Karori**	**21.61**	**168**	*e*P	**P**	**17 39 09.1**	**+5.2**
	comp=Z,163nm,1.5s,mb5.2						
CNB	**Canberra Magne**	**22.76**	**225**	*e*P	**P**	**17 39 19.2**	**+2.9**
CNB				*e*S	**S**	**17 43 28.5**	**+3.5**
CAN	**Canberra**	**23.01**	**225**	*e*P	**P**	**17 39 22.4**	**+3.5**
CAN				pmax	pmax		
	comp=Z,161nm,1.6s,mb5.2						
CAN	**Canberra**	**23.01**	**225**	*e*P	**P**	**17 39 22.4**	**+3.5**
	comp=Z,161nm,1.6s,mb5.2						
RPZ	**Rata Peaks**	**23.50**	**176**	P	**P**	**17 39 27.8**	**+3.9**
	comp=Z,6.5nm,0.6s,mb4.2,baz=222,slow=1.5,SNR=6.5						
RPZ				LR	LR	17 47 44.5	
	comp=Z,8μm,20.2s,MS5.2,baz=352,slow=34						
RPZ	**Rata Peaks**	**23.50**	**176**	*e*P	**P**	**17 39 26.6**	**+2.6**
	comp=Z,64nm,1.4s,mb4.9						
COEN	**Coen**	**25.24**	**280**	*e*P	**P**	**17 39 41.2**	**+1.1**
	comp=Z,504nm,1.1s,mb6.0						
TOO	**Toolangi**	**26.61**	**225**	*e*P	**P**	**17 39 53.7**	**+1.3**
TOO				*e*S	**S**	**17 44 34.8**	**+8.0**
STKA	**Stephens Creek**	**26.96**	**239**	*e*P	**P**	**17 39 56.2**	**+0.6**
	comp=Z,14nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**26.96**	**239**	P	**P**	**17 39 57.0**	**+1.5**
	comp=Z,17nm,0.7s,mb4.7,baz=67,slow=8.5,SNR=56						
STKA				LR	LR	17 49 28.5	
	comp=Z,3μm,20.8s,MS4.8,baz=70,slow=34						
STKA	**Stephens Creek**	**26.96**	**239**	*e*P	**P**	**17 39 56.3**	**+0.7**
	comp=Z,3.8nm,0.7s,mb4.0						
WRAB	**Tennant Creek**	**32.30**	**264**	P	**P**	**17 40 42.0**	**-1.1**
	comp=Z,203nm,0.7s,mb6.1,SNR=13						
ASAR	**Alice Springs**	**32.48**	**257**	P	**P**	**17 40 43.6**	**-1.0**
	comp=Z,61nm,0.8s,mb5.5,baz=85,slow=8.9,SNR=830						
KAKA	**Kakadu**	**35.58**	**276**	*e*P	**P**	**17 41 13.8**	**+2.1**
	comp=Z,25nm,1.0s,mb5.1						
FORT	**Forrest**	**38.04**	**246**	*e*P	**P**	**17 41 33.1**	**+0.6**
	comp=Z,22nm,0.8s,mb4.9						
PPT	**Papeete**	**39.42**	**93**	*e*P	**P**	**17 41 44.7**	**+0.6**
	comp=Z,26nm,1.3s,mb4.8						
PPT				*e*S	**S**	**17 47 45.2**	**-0.4**
	comp=Z,118nm,25.0s						
PPT				*e*LQ		17 50 50.7	
	comp=Z,4μm,27.0s						
PPT				*e*LR	LR	17 52 38.2	
	comp=Z,2μm,27.0s,baz=252						
PPT	**Papeete**	**39.42**	**93**	LR	LR	17 56 09.7	
	comp=Z,529nm,18.3s,MS4.4,baz=257,slow=33						
PPT	**Papeete**	**39.42**	**93**	*e*P	**P**	**17 41 44.7**	**+0.6**
PPT				*e*S	**S**	**17 47 45.2**	**-0.4**
PPT				pmax	pmax		
	comp=Z,26nm,1.3s						
PPT	**Papeete**	**39.42**	**93**	*e*P	**P**	**17 41 44.7**	**+0.6**
	comp=Z,26nm,1.3s,mb4.8						
PPT				*e*S	**S**	**17 47 45.2**	**-0.4**
PPT				*e*LQ		17 50 50.7	
TIAR	**Tiarei**	**39.63**	**93**	*e*P	**P**	**17 41 46.6**	**+0.6**
	comp=Z,40nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**40.72**	**265**	*e*P	**P**	**17 41 54.4**	**-0.6**
	comp=Z,110nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**40.72**	**265**	*e*P	**P**	**17 41 54.5**	**-0.5**
	comp=Z,86nm,0.9s,mb5.4						
MEH	**Mehetia**	**40.78**	**94**	*e*P	**P**	**17 41 55.8**	**+0.4**
	comp=Z,33nm,1.0s,mb4.9						
PMOR	**Pomariorio Ree**	**41.53**	**90**	*e*P	**P**	**17 42 02.1**	**+0.4**
	comp=Z,50nm,1.2s,mb5.0						
KMBL	**Kambalda**	**43.37**	**245**	*e*P	**P**	**17 42 17.0**	**+0.5**
	comp=Z,86nm,0.9s,mb5.5						
MBWA	**Marble Bar**	**45.75**	**260**	*e*P	**P**	**17 42 35.0**	**-0.6**
MBWA	**Marble Bar**	**45.75**	**260**	*e*P	**P**	**17 42 35.1**	**-0.5**
	comp=Z,141nm,1.3s,mb5.7						
MEEK	**Meekatharra**	**46.24**	**252**	*e*P	**P**	**17 42 38.7**	**-0.7**
NWAO	**Narrogin (SRO)**	**47.38**	**244**	*e*P	**P**	**17 42 47.9**	**-0.4**
	comp=Z,312nm,0.7s,mb6.3						
NWAO	**Narrogin (SRO)**	**47.38**	**244**	*e*P	**P**	**17 42 47.5**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,35nm,0.8s						
NWAO	**Narrogin (SRO)**	**47.38**	**244**	*e*P	**P**	**17 42 47.5**	**-0.8**
	comp=Z,35nm,0.8s,mb5.3						
MORW	**Morawa**	**48.40**	**249**	*e*P	**P**	**17 42 56.4**	**+0.1**
DRV	**Dumont d'Urvil**	**49.97**	**195**	P	**P**	**17 43 08.0**	**+0.4**
DRV				S	**S**	**17 50 31.0**	**+14**
DRV				SS	SS	17 53 58.0	+7.8
SBA	**Scott Base**	**57.67**	**181**	*e*P	**P**	**17 44 05.7**	**+1.8**
SBA				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.4						
SBA	**Scott Base**	**57.67**	**181**	*e*P	**P**	**17 44 05.7**	**+1.8**
	comp=Z,54nm,1.4s,mb5.4						
KDM	**Kudat**	**57.75**	**292**	P	**P**	**17 44 06.2**	**+0.8**
KKM	**Kota Kinabalu**	**57.88**	**291**	P	**P**	**17 44 07.2**	**+1.0**
KKM	**Kota Kinabalu**	**57.88**	**291**	*e*P	**P**	**17 44 05.9**	**-0.3**
	comp=Z,53nm,1.3s,mb5.4						
CASY	**Casey**	**59.05**	**204**	*e*P	**P**	**17 44 14.0**	**+0.4**
CASY	**Casey**	**59.05**	**204**	*e*P	**P**	**17 44 13.7**	**+0.1**
	comp=Z,36nm,1.4s,mb5.2						
BTM	**Bintulu**	**59.38**	**287**	P	**P**	**17 44 17.8**	**+1.0**
SBUM	**Sibu**	**59.84**	**285**	P	**P**	**17 44 20.9**	**+1.0**
JHJ	**Hachijo jima 2**	**59.84**	**332**	LR	LR	18 06 54.8	
	comp=Z,591nm,19.8s,MS4.7,baz=97,slow=33						
JOW	**Kunigami**	**61.07**	**318**	P	**P**	**17 44 26.3**	**-1.7**
	comp=Z,39nm,1.1s,mb5.5,baz=106,slow=10,SNR=8.4						
KSM	**Kuching**	**61.18**	**283**	*e*P	**P**	**17 44 28.9**	**-0.1**
	comp=Z,18nm,0.9s,mb5.2						
MJAR	**Matsushiro Arr**	**63.42**	**333**	P	**P**	**17 44 42.8**	**-0.8**
	comp=Z,2.3nm,0.6s,mb4.5,baz=164,slow=7.1,SNR=9.7						
MAJO	**Matsushiro**	**63.43**	**333**	P	**P**	**17 44 44.2**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
MAJO	**Matsushiro**	**63.43**	**333**	P	**P**	**17 44 44.1**	**+0.6**
	comp=Z,18nm,1.0s,mb5.2						
MAT	**Matsushiro**	**63.43**	**333**	P	**P**	**17 44 42.0**	**-1.6**
MAT				S	**S**	**17 53 17.0**	**+1.0**
YHNB	**Yeheng**	**64.18**	**312**	*e*P	**P**	**17 44 47.6**	**-1.2**
	comp=Z,18nm,2.7s,mb4.6						
MYKOM	**Kota Tinggi**	**67.23**	**281**	P	**P**	**17 45 08.8**	**0.0**
KGM	**Kluang**	**67.81**	**281**	P	**P**	**17 45 13.8**	**+1.3**
KSRS	**Korea Array**	**69.08**	**326**	P	**P**	**17 45 20.3**	**+0.4**
	comp=Z,4.4nm,1.0s,mb4.3,baz=146,slow=6.9,SNR=11						
KSRS				LR	LR	18 12 11.0	
	comp=Z,376nm,18.8s,MS4.7,baz=238,slow=33						
KTGM	**Kuala Trenggan**	**69.27**	**284**	P	**P**	**17 45 22.6**	**+0.9**
INCN	**Inchon**	**69.78**	**325**	*e*P	**P**	**17 45 24.4**	**+0.2**
	comp=Z,41nm,1.3s,mb5.2						
FRIM	**Kepong**	**69.83**	**281**	P	**P**	**17 45 25.6**	**+0.5**
NJ2	**Nanjing**	**70.62**	**316**	*e*P	**P**	**17 45 30.0**	**+0.5**
NJ2				pP	pP	17 45 40.5	+6.4
NJ2				sP	sP	17 45 44.8	+9.0
NJ2				PP	PP	17 48 08.3	+2.1
NJ2				S	S	17 54 39.0	-4.1
NJ2				p

HABR e 17 46 05.2
HABR e 17 48 36.3
HABR S S 17 55 25.0 -4.4
HABR e 17 55 58.4
HABR SSS 18 03 31.2
HABR pmax pmax
comp=Z,74nm,2.2s,mb5.2
HABR pmax pmax
comp=E,58nm,2.3s
HABR pmax pmax
comp=N,64nm,2.5s
HABR MLR MLR
comp=Z,195nm,16.0s,MS4.5
CN2 Changchun 75.08 329 *e*P **P 17 45 52.3 -3.4**
CN2 pmax pmax
comp=Z,100nm,1.0s,mb5.7
CN2 LR LR
comp=N,3µm,13.0s,MS5.9
CN2 LR LR
comp=E,3µm,13.0s,MS5.9
CN2 LR LR
comp=Z,3µm,15.0s,MS5.8
GYA Guiyang 76.03 305 P **P 17 46 03.0 +1.5**
GYA pP pP 17 46 14.8 +8.6
GYA sP sP 17 46 19.5 +12
GYA PP PP 17 48 56.0 +3.5
GYA S S 17 55 43.5 -1.2
GYA sS sS 17 56 01.0 +8.6
GYA SKS 17 56 08.3
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,150nm,4.9s
GYA LR LR
comp=N,530nm,18.9s,MS5.0
GYA LR LR
comp=E,510nm,19.0s,MS5.0
GYA LR LR
comp=Z,640nm,18.5s,MS5.0
KLR Kul'dur 76.59 336 *e*P **P 17 45 59.2 -5.0**
KLR pmax pmax
comp=Z,260nm,3.0s
MAW Mawson 77.36 202 P **P 17 46 11.1 +2.8**
comp=Z,5.7nm,0.9s,mb4.5,baz=113,slow=12,SNR=3.7
MAW LR LR 18 15 13.0
comp=Z,1µm,20.4s,MS5.3,baz=92,slow=32
MAW Mawson 77.36 202 *e*P **P 17 46 10.5 +2.1**
MAW pmax pmax
comp=Z,6.0nm,1.1s
MAW Mawson 77.36 202 *e*P **P 17 46 10.5 +2.1**
comp=Z,5.7nm,1.1s,mb4.4
KMI Kunming 78.43 302 P **P 17 46 16.5 +1.5**
KMI pP pP 17 46 27.5 +7.8
KMI sP sP 17 46 31.8 +10
KMI PP PP 17 49 16.0 +3.3
KMI S S 17 56 07.5 -3.3
KMI sS sS 17 56 27.5 +8.9
KMI pmax pmax
comp=Z,12nm,1.9s,mb4.5
KMI LR LR
comp=N,230nm,20.2s
KMI LR LR
comp=E,210nm,25.4s
KMI LR LR
comp=Z,400nm,19.3s,MS4.8
CM31 Chiang Mai Arr 78.52 295 *e*P **P 17 46 17.2 +1.5**
CMAR Chiang Mai Arr 78.52 295 P **P 17 46 16.9 +1.3**
comp=Z,8.3nm,0.9s,mb4.6,baz=128,slow=4.3,SNR=28
CMAR PKKPbc PKKPbc 18 05 12.1 0.0
comp=Z,0.5nm,0.6s,baz=286,slow=4.0,SNR=4.3
CMAR LR LR 18 18 35.5
comp=Z,216nm,18.6s,MS4.5,baz=139,slow=34
CD2 Chengdu 80.50 308 P **P 17 46 28.3 +2.1**
CD2 pP pP 17 46 38.5 +7.6
CD2 sP sP 17 46 42.5 +10
CD2 PP PP 17 49 33.5 +3.7
CD2 S S 17 56 31.0 -1.5
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CD2 pmax pmax
comp=Z,290nm,4.0s
CD2 LR LR
comp=N,410nm,17.8s
CD2 LR LR
comp=Z,650nm,22.0s,MS4.9
HHC Hu-ho-hao-te 80.69 320 ⇑P **P 17 46 28.5 +1.5**
HHC pP pP 17 46 39.0 +7.3
HHC sP sP 17 46 43.0 +10
HHC PP PP 17 49 34.8 +3.6
HHC S S 17 56 32.5 -1.6
HHC SKS 17 56 39.8
HHC sS sS 17 56 50.5 +8.6
HHC pmax pmax
comp=Z,42nm,1.2s,mb5.2
HHC pmax pmax
comp=Z,680nm,5.7s
HHC LR LR
comp=N,300nm,17.1s,MS4.9
HHC LR LR
comp=E,400nm,17.8s,MS4.9
HHC LR LR
comp=Z,490nm,17.9s,MS4.9
LZH Lanzhou 83.07 312 *e*P **P 17 46 41.8 +2.2**
LZH pP pP 17 46 51.0 +6.6
LZH sP sP 17 46 56.0 +10
LZH PP PP 17 49 53.3 +2.3
LZH *e*S S 17 56 58.3 -0.6
LZH pmax pmax
comp=Z,65nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,200nm,4.1s
LZH LR LR
comp=E,980nm,16.5s
LZH LR LR
comp=Z,1µm,18.4s,MS5.3
SEY Seymchan 83.89 353 ⇑*e*P **P 17 46 42.5 -0.7**
NRGR Nerungri 85.06 337 *i*P **P 17 46 49.9 +0.6**
SVW2 Sparrevohn 85.97 16 *e*P **P 17 46 53.7 0.0**
HOPS Hopland 86.73 46 *e*P **P 17 46 57.7 -0.3**
comp=Z,24nm,1.3s,mb5.3
PKM Peak Mountain 87.11 51 ⇑P **P 17 47 00.1 +0.2**
baz=87
SMMC Simmler 87.17 51 ⇑P **P 17 47 00.2 0.0**
baz=87
SCI San Clemente I 87.20 53 ⇓P **P 17 47 00.3 -0.1**
baz=87
TNA Tin City 87.35 9 *e*P **P 17 46 58.3 -2.0**
comp=Z,38nm,1.6s,mb5.4
ULN Ulaanbaatar 87.40 324 *e*P **P 17 47 01.4 +0.4**
GTA Gaotai 87.49 314 *e*P **P 17 47 03.0 +1.3**
GTA pP pP 17 47 13.0 +6.6
GTA sP sP 17 47 16.5 +8.4
GTA PP PP 17 50 30.3 +3.5
GTA SKS 17 57 25.8
GTA S S 17 57 40.3 -2.1
GTA sS sS 17 57 57.5 +7.2
GTA pmax pmax
comp=Z,13nm,1.0s,mb5.1
GTA pmax pmax
comp=Z,140nm,4.5s
GTA LR LR
comp=N,210nm,21.6s,MS4.7
GTA LR LR
comp=E,170nm,18.3s,MS4.7
GTA LR LR
comp=Z,230nm,18.6s,MS4.6
CIS Catalina Islan 87.50 53 ⇑P **P 17 47 01.8 0.0**
baz=88
YAK Yakutsk 87.68 343 *d i*P **P 17 47 00.8 -1.2**
YAK *e* pP 17 47 04.2 -2.6
YAK *e**PP pP 17 47 10.5 +3.7
YAK *e* 17 50 23.8
YAK *e*S SKSac 17 57 25.3 -3.9
YAK *e**SS sS 17 57 42.9 -8.2
YAK *e*SS SS 18 03 29.3 -0.9
YAK *e*SSS 18 06 53.1
YAK pmax pmax
comp=Z,47nm,1.6s,mb5.5
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,16nm,1.4s,mb5.1
YAK smax
comp=E,132nm,4.9s
YAK smax
comp=N,222nm,6.0s
YAK MLR MLR
comp=Z,792nm,19.0s,MS5.2
YAK MLR MLR
comp=N,693nm,18.0s,MS5.2
YAK MLR MLR
comp=E,291nm,18.0s,MS5.2
YAK Yakutsk 87.68 343 *e*P **P 17 47 01.1 -0.9**
comp=E,105nm,1.4s,mb5.9
FMP Fort Macarthur 87.71 53 ⇓P **P 17 47 02.9 0.0**
baz=88
SONM Songino Array 87.75 323 P **P 17 47 04.0 +1.3**
comp=E,21nm,1.0s,mb5.3,baz=134,slow=5.0,SNR=16
SONM LR LR 18 28 34.1
comp=E,646nm,18.1s,MS5.1,baz=109,slow=37
NVL N'lazarevskaya 87.83 187 *e*P **P 17 47 03.2 +0.4**
MAIT Maitri 87.83 187 *e*P **P 17 47 04.0 +1.2**
MAIT *e*E 17 47 13.5
WDC Whiskeytown Da 87.86 45 *e*P **P 17 47 02.8 -0.6**
WDC pmax pmax
comp=Z,57nm,1.6s,mb5.5
WDC Whiskeytown Da 87.86 45 *e*P **P 17 47 02.8 -0.6**
comp=Z,57nm,1.6s,mb5.5
BILL Bilibino 88.03 359 *d i*P **P 17 47 02.1 -1.5**
BILL pmax pmax
comp=Z,28nm,1.6s,mb5.2
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.6
BILL Bilibino 88.03 359 *e*P **P 17 47 02.5 -1.0**
VES Vestal, Richgr 88.07 51 ⇑P **P 17 47 04.3 -0.2**
baz=88
CMB Columbia Colle 88.14 48 *e*P **P 17 47 04.8 0.0**
CMB pmax pmax
comp=Z,28nm,1.3s,mb5.3
CMB Columbia Colle 88.14 48 *e*P **P 17 47 04.8 0.0**
comp=Z,28nm,1.3s,mb5.3
RCTC Rector, Farmer 88.17 50 ⇓P **P 17 47 04.1 -0.8**
baz=88
109C Camp Elliot, M 88.25 54 ⇓P **P 17 47 04.9 -0.5**
baz=88
YBH Yreka Blue Hor 88.31 44 P **P 17 47 05.4 -0.1**
comp=Z,8.0nm,1.1s,mb4.9,baz=172,slow=4.5,SNR=25
YBH Yreka Blue Hor 88.31 44 *e*P **P 17 47 05.7 +0.2**
YBH pmax pmax
comp=Z,50nm,1.6s
YBH Yreka Blue Hor 88.31 44 *e*P **P 17 47 05.7 +0.2**
comp=Z,50nm,1.6s,mb5.5
BFSC Mount Baldy St 88.42 53 ⇑P **P 17 47 05.8 -0.4**
baz=88,SNR=5.3
ISA Isabella 88.44 51 ⇑P **P 17 47 06.2 -0.1**
baz=88,SNR=11
ISA Isabella 88.44 51 *e*P **P 17 47 06.2 -0.1**
ISA pmax pmax
comp=Z,53nm,1.6s,mb5.5
ISA Isabella 88.44 51 *e*P **P 17 47 06.2 -0.1**
comp=Z,53nm,1.6s,mb5.5
EDW2 Edwards Air Fo 88.45 52 ⇑P **P 17 47 05.6 -0.7**
baz=88,SNR=8.0
MURC Murrieta 88.48 53 ⇓P **P 17 47 06.4 -0.1**
baz=88
HUMO Hull Mountain 88.57 43 *e*P **P 17 47 06.5 -0.2**
comp=Z,39nm,1.4s,mb5.5
MONP Monument Peak 88.78 54 ⇑P **P 17 47 07.8 -0.2**
baz=89,SNR=6.6
DVTC Desert V Tower 88.92 55 ⇑P **P 17 47 08.7 +0.1**
baz=89
LRMC Laurel Mountai 88.93 52 ⇓P **P 17 47 08.5 -0.1**
baz=89,SNR=8.0
BEKR Beckwourth 89.00 47 ⇑P **P 17 47 08.2 -0.6**
baz=89,SNR=16
MLAC Mammoth Lakes 89.05 49 ⇓P **P 17 47 09.7 +0.6**
baz=89
PFO Pinyon Flat Ob 89.05 54 ⇑P **P 17 47 08.9 -0.3**
baz=89,SNR=5.8
VNA2 Neumayer--Watz 89.05 181 *e*P **P 17 47 07.7 -0.9**
WCN Washoe City 89.15 47 ⇑P **P 17 47 09.3 -0.3**
baz=89
RRX Edison Barstow 89.18 52 ⇓P **P 17 47 10.0 +0.2**
baz=89
TIN Tinemaha 89.23 50 ⇓P **P 17 47 10.0 0.0**
baz=89
SWSC Sam W. Stewart 89.27 54 ⇑P **P 17 47 10.2 -0.1**
baz=89
MPMC Manual Prospec 89.33 51 ⇑P **P 17 47 10.6 +0.1**
baz=89,SNR=14
VNA1 Neumayer--Stat 89.34 181 *e*P **P 17 47 10.0 0.0**
BELC Belle Mtn. 89.56 53 ⇑P **P 17 47 11.8 +0.2**
baz=90,SNR=14
HEC Hector,Ludlow 89.66 53 ⇑P **P 17 47 11.8 -0.3**
baz=90
NVAR Mina Array Bea 89.78 49 P **P 17 47 12.2 -0.3**
comp=Z,6.8nm,1.1s,mb4.9,baz=227,slow=3.9,SNR=22
GRAC Grapevine Rang 89.82 50 ⇑P **P 17 47 12.7 -0.1**
baz=90
BC3 Big Chuckw Mtn 89.83 54 ⇑P **P 17 47 13.1 +0.2**
baz=90,SNR=11
F03A Seaside 89.83 40 ⇑P **P 17 47 12.7 +0.2**
baz=90
FURC Furnace Creek, 89.96 51 ⇑P **P 17 47 13.2 -0.2**
baz=90,SNR=5.9
K05A Summer Lake 89.97 44 ⇑P **P 17 47 13.2 0.0**
baz=90
MOD Modoc 89.97 45 *e*P **P 17 47 12.9 -0.4**
comp=Z,39nm,1.5s,mb5.5
BOD Bodaibo 90.03 334 *e*P **P 17 47 11.3 -1.9**
112A Yuma 90.04 55 ⇓P **P 17 47 13.9 0.0**
baz=90
GLA Glamis 90.06 55 ⇑P **P 17 47 13.9 -0.1**
baz=90,SNR=5.0
GLA Glamis 90.06 55 *e*P **P 17 47 14.5 +0.5**
GLA *e* 17 47 23.7
GLA pmax pmax
comp=Z,33nm,1.3s,mb5.5
GLA Glamis 90.06 55 *e*P **P 17 47 14.5 +0.5**
comp=Z,33nm,1.3s,mb5.5
GLA *e* 17 47 23.7
H04A Detroit Lake 90.07 42 ⇑P **P 17 47 13.0 -0.7**
baz=90,SNR=11
E03A Lebam 90.13 40 ⇑P **P 17 47 13.9 -0.1**
baz=90
G04A Mulino 90.14 41 ⇑P **P 17 47 13.7 -0.4**
baz=90
GMRC Granite Mounta 90.14 53 ⇓P **P 17 47 14.0 -0.3**
baz=90,SNR=6.9
SHOC Shoshone 90.15 52 ⇑P **P 17 47 13.9 -0.4**
baz=90
TUQ Turquoise Moun 90.22 52 ⇑P **P 17 47 14.7 +0.1**
baz=90
IRM Iron Mountain 90.27 54 ⇓P **P 17 47 14.7 -0.2**
baz=90,SNR=15
U10A Ash Meadows, A 90.33 51 ⇓P **P 17 47 15.1 0.0**
baz=90
NLWA Neilton Lookou 90.37 39 ⇓P **P 17 47 14.5 -0.6**
baz=90,SNR=6.2
NLWA Neilton Lookou 90.37 39 *e*P **P 17 47 15.4 +0.4**
comp=Z,47nm,1.5s,mb5.6
F04A Amboy 90.53 41 ⇓P **P 17 47 15.3 -0.5**
baz=91
Y12C Blythe 90.58 54 ⇓P **P 17 47 16.2 -0.2**
baz=91
V11A Goodsprings 90.75 52 ⇑P **P 17 47 17.0 -0.1**
baz=91
113A Mohawk Valley, 90.76 55 ⇑P **P 17 47 16.8 -0.5**
baz=91,SNR=6.5
S10A Tonopah Range, 90.77 50 ⇑P **P 17 47 16.8 -0.3**
baz=91,SNR=19
ZAK Zakamensk 90.84 324 *e*P **P 17 47 15.1 -2.1**
ZAK pmax pmax
comp=Z,27nm,1.4s,mb5.4
NEE2 Needles Airpor 90.92 53 ⇑P **P 17 47 17.7 -0.2**
baz=91
W12A Cal Nev Ari 90.94 53 ⇑P **P 17 47 18.1 +0.1**
baz=91
Z13A Yuma Proving G 91.02 55 ⇓P **P 17 47 18.2 -0.2**
baz=91,SNR=11
GNW Green Mountain 91.07 39 *e*P **P 17 47 19.0 +0.7**
comp=Z,11nm,1.1s,mb5.1
PDMCI Parker Dam,Lak 91.09 54 ⇑P **P 17 47 18.8 +0.1**
baz=91
Y13A Salome 91.13 54 ⇑P **P 17 47 19.5 +0.5**
baz=91
V12A Nelson 91.13 52 ⇓P **P 17 47 19.1 +0.2**
baz=91
R10A Warm Springs 91.14 49 ⇑P **P 17 47 19.1 +0.3**
baz=91
214A Organ Pipe Nat 91.18 56 ⇑P **P 17 47 19.5 +0.2**
baz=91,SNR=7.1
S11A Rachel 91.27 50 ⇑P **P 17 47 19.5 0.0**
baz=91
LON Longmire 91.29 40 *e*P **P 17 47 18.3 -1.0**
LON pmax pmax
comp=Z,13nm,1.3s,mb5.1
LON Longmire 91.29 40 *e*P **P 17 47 18.3 -1.1**
comp=Z,13nm,1.3s,mb5.1
Q10A Clear Creek Ra 91.29 49 ⇑P **P 17 47 19.4 -0.2**
baz=91
G06A Carlson Farm, 91.30 42 ⇓P **P 17 47 18.8 -0.6**
baz=91
WVOR Wild Horse Val 91.32 45 *e*P **P 17 47 19.6 0.0**
WVOR pmax pmax
comp=Z,48nm,1.6s,mb5.6
WVOR Wild Horse Val 91.32 45 *e*P **P 17 47 19.6 0.0**
comp=Z,48nm,1.6s,mb5.6
TLY Talaya 91.33 326 *e*P **P 17 47 19.7 +0.3**
TLY *e*S S 17 58 04.3 -13
TLY *e*SS SS 18 04 31.8 +8.2
TLY pmax pmax
comp=Z,36nm,1.5s,mb5.5
D05A Enumclaw 91.39 40 ⇓P **P 17 47 20.1 +0.3**
baz=91
114A Black Gap (USA 91.44 56 ⇑P **P 17 47 20.5 +0.1**
baz=92
X13A Yucca 91.44 54 ⇑P **P 17 47 20.7 +0.3**
baz=92,SNR=9.2
I07A Izee 91.49 43 ⇑P **P 17 47 19.8 -0.5**
baz=92,SNR=13
P10A Eureka 91.58 48 ⇓P **P 17 47 20.6 -0.3**
baz=92
W13A Hualapai Mount 91.60 53 ⇓P **P 17 47 20.8 -0.3**
baz=92,SNR=8.6
Z14A Wintersburg 91.63 55 ⇑P **P 17 47 21.0 -0.2**
baz=92
T12A Moapa 91.64 51 ⇓P **P 17 47 21.3 +0.1**
baz=92
U12A Valley of Fire 91.65 52 ⇑P **P 17 47 21.0 -0.3**
baz=92
R11A Troy Canyon, C 91.67 50 ⇑P **P 17 47 21.1 -0.2**
baz=92,SNR=7.2
Y14A Wickenburg 91.81 55 ⇑P **P 17 47 22.0 -0.1**
baz=92
Q11A Duckwater 91.83 49 ⇓P **P 17 47 21.7 -0.3**
baz=92,SNR=13
J08A Circle Bar Ran 91.83 44 ⇓P **P 17 47 21.5 -0.5**
baz=92,SNR=6.6
O10A Cortez Mining, 91.84 48 ⇑P **P 17 47 21.9 -0.2**
baz=92
S12A Delamar Landin 91.90 51 ⇑P **P 17 47 22.8 +0.4**
baz=92,SNR=12
JCW Jim Creek 91.91 39 *e*P **P 17 47 22.4 +0.2**
115A Sonoran Desert 91.93 56 ⇑P **P 17 47 22.8 +0.1**
baz=92
F07A Phinny Hill Vi 92.04 41 ⇑P **P 17 47 22.8 0.0**
baz=92
P11A Circle Ranch, 92.05 48 ⇓P **P 17 47 23.2 +0.2**
baz=92
U13A Pakoon Wash 92.07 52 ⇑P **P 17 47 23.3 +0.1**
baz=92,SNR=6.5
X14A Yava 92.10 54 ⇓P **P 17 47 23.8 +0.4**
baz=92,SNR=7.5
H08A Prairie City 92.22 43 ⇓P **P 17 47 22.6 -1.1**
baz=92,SNR=5.3
W14A Seligman 92.25 53 ⇓P **P 17 47 24.0 -0.1**
baz=92,SNR=9.2
216A Three Points, 92.26 57 ⇑P **P 17 47 24.4 +0.2**
baz=92
RPW Rockport 92.27 39 *e*P **P 17 47 23.3 -0.5**
116A Eloy 92.28 56 ⇓P **P 17 47 23.9 -0.4**
baz=92
J09A Fry Pan Ranch, 92.30 44 ⇓P **P 17 47 23.4 -0.7**
baz=92,SNR=12
B06A Marblemount 92.32 39 ⇓P **P 17 47 23.2 -0.8**
baz=92
Y15A Casa Rosa Ranc 92.33 55 ⇓P **P 17 47 24.1 -0.4**
baz=92,SNR=7.5
M10A I.L. Ranch, Tu 92.33 46 ⇑P **P 17 47 23.9 -0.4**
baz=92,SNR=8.2
T13A Saint George 92.35 51 ⇓P **P 17 47 24.9 +0.3**
baz=92
O11A Cowboy Ranch, 92.36 48 ⇑P **P 17 47 24.4 -0.1**
baz=92,SNR=5.4
R12A Pony Springs, 92.37 50 ⇓P **P 17 47 24.3 -0.2**
baz=92
G08A Pilot Rock 92.38 42 ⇑P **P 17 47 24.1 -0.3**
baz=92,SNR=5.7
E07A Sunnyside 92.39 41 ⇓P **P 17 47 24.3 -0.1**
baz=92
V14A Boquillas Ranc 92.40 53 ⇑P **P 17 47 24.8 +0.1**
baz=92,SNR=7.9
RSW Rattlesnake Hi 92.48 41 *e*P **P 17 47 26.5 +1.7**
comp=Z,2.5nm,0.4s,mb4.9
Q12A Willow Creek R 92.50 49 ⇓P **P 17 47 25.1 0.0**
baz=92
HAWA Hanford 92.51 41 *e*P **P 17 47 24.9 -0.1**
comp=Z,46nm,1.6s,mb5.7
S13A Holt Ranch, En 92.61 51 ⇑P **P 17 47 25.4 -0.3**
baz=93,SNR=12
X15A Humboldt 92.61 54 ⇑P **P 17 47 26.0 +0.3**
baz=93,SNR=5.3
L10A Juniper Basin 92.61 46 ⇓P **P 17 47 25.2 -0.4**
baz=93,SNR=9.0
P12A McGill 92.62 49 ⇓P **P 17 47 25.5 -0.2**
baz=93
K10A MacKenzie Ranc 92.64 45 ⇓P **P 17 47 25.1 -0.6**
baz=93,SNR=9.2
U14A Mt Trumbull 92.65 52 ⇑P **P 17 47 26.1 +0.2**
baz=93,SNR=10
217A Green Valley 92.68 57 ⇑P **P 17 47 26.2 +0.1**
baz=93
R13A O'Grain Ranch, 92.77 50 ⇑P **P 17 47 26.3 -0.1**
baz=93,SNR=5.3
Z16A Peralta Trail, 92.79 56 ⇑P **P 17 47 26.8 +0.1**
baz=93
M11A Holland Ranch, 92.81 47 ⇑P **P 17 47 27.1 +0.6**
baz=93
E08A Dider Farm, El 92.85 41 ⇑P **P 17 47 26.5 0.0**
baz=93
W15A Williams 92.85 54 ⇓P **P 17 47 27.4 +0.5**
baz=93
TUC Tucson 92.91 57 *e*P **P 17 47 27.7 +0.5**
TUC pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
TUC Tucson 92.91 57 *e*P **P 17 47 27.7 +0.5**
comp=Z,7.4nm,1.0s,mb5.1
CCUT Cedar City 92.96 51 *e*P **P 17 47 27.9 +0.6**
comp=Z,17nm,1.5s,mb5.2
Y16A Circle Bar Ran 92.96 55 ⇓P **P 17 47 27.3 -0.1**
baz=93,SNR=8.1
T14A Hurricane 92.97 52 ⇑P **P 17 47 27.5 +0.1**
baz=93
J10A Berg Farm, Mel 92.98 45 ⇑P **P 17 47 27.0 -0.2**
baz=93
Q13A Wheeler Ranch, 93.04 50 ⇑P **P 17 47 27.5 -0.1**
baz=93
117A Oracle 93.04 57 ⇓P **P 17 47 28.0 +0.2**
baz=93
O12A Currie 93.05 48 ⇑P **P 17 47 27.2 -0.5**
baz=93
L11A Cat Creek Ranc 93.14 46 ⇑P **P 17 47 27.5 -0.5**
baz=93,SNR=9.3
V15A Kaibab Nationa 93.17 53 ⇓P **P 17 47 28.7 +0.4**
baz=93,SNR=6.1
D08A Wollman Farm, 93.19 41 ⇑P **P 17 47 27.8 -0.3**
baz=93
X16A Lo Mia Camp, P 93.19 55 ⇓P **P 17 47 28.7 +0.3**
baz=93
K11A Parker Ranch, 93.20 45 ⇓P **P 17 47 28.0 -0.3**
baz=93
318A Bisbee 93.21 58 ⇑P **P 17 47 28.7 +0.1**
baz=93
A07A Ashnola River, 93.21 38 ⇑P **P 17 47 27.8 -0.3**
baz=93
I10A Payette 93.24 44 ⇓P **P 17 47 27.9 -0.5**
baz=93
P13A Bates Ranch, G 93.24 49 ⇓P **P 17 47 28.4 -0.1**
baz=93
U15A North Rim 93.31 52 ⇓P **P 17 47 29.1 +0.2**
baz=93,SNR=11
218A Dragoon 93.36 57 ⇑P **P 17 47 29.6 +0.3**
baz=93
W16A Flagstaff 93.38 54 ⇓P **P 17 47 29.7 +0.4**
baz=93
Y17A Roosevelt 93.38 55 ⇓P **P 17 47 29.4 +0.1**
baz=93
M12A Wells 93.40 47 ⇑P **P 17 47 29.2 -0.1**

baz=93
T15A **Red Dirt Ranch** 93.47 52 ⇑P P 17 47 29.7 +0.1
baz=94
H10A **Noah's Angus R** 93.49 44 ⇓P P 17 47 28.8 -0.7
baz=94
G10A **Bishop Farm, J** 93.55 43 ⇑P P 17 47 29.4 -0.5
baz=94
D09A **Jones Farm, Ri** 93.57 41 ⇑P P 17 47 29.3 -0.5
baz=94
Q14A **Sevier Lake (B** 93.58 50 ⇓P P 17 47 30.3 +0.1
baz=94
MFID **Camas Ranch** 93.60 45 ⇓P P 17 47 29.7 -0.4
baz=94
X17A **Forest Lakes** 93.65 55 ⇑P P 17 47 30.5 0.0
baz=94
WUAZ **Wupatki** 93.66 54 ⇓P P 17 47 30.7 +0.1
baz=94
WUAZ **Wupatki** 93.66 54 eP P 17 47 31.3 +0.7
comp=Z,8.8nm,1.0s,mb5.1
N13A **Wendover, West** 93.67 48 ⇓P P 17 47 30.1 -0.3
baz=94
N13A **Wendover, West** 93.67 48 eP P 17 47 30.7 +0.3
118A **Homack Ranch,** 93.67 57 ⇑P P 17 47 30.4 -0.3
baz=94
319A **Douglas** 93.75 58 ⇓P P 17 47 31.2 0.0
baz=94
F10A **Beach Ranch, E** 93.77 42 ⇑P P 17 47 29.9 -0.9
baz=94
M13A **Montello** 93.89 47 ⇑P P 17 47 31.2 -0.3
baz=94,SNR=5.5
M13A **Montello** 93.89 47 eP P 17 47 31.1 -0.4
comp=Z,8.6nm,1.1s,mb5.1
K12A **Draper Farm, C** 93.90 46 ⇑P P 17 47 31.3 -0.2
baz=94
P14A **Drum Mountains** 93.97 49 ⇓P P 17 47 31.9 0.0
baz=94
219A **White Tail Can** 94.00 57 ⇓P P 17 47 32.1 -0.1
baz=94
R15A **Junction** 94.01 51 ⇑P P 17 47 32.1 0.0
baz=94
H11A **Donnelly** 94.01 44 ⇓P P 17 47 31.4 -0.6
baz=94
J12A **Stokes Ranch,** 94.02 45 ⇑P P 17 47 31.5 -0.5
baz=94,SNR=5.4
T16A **Glen Canyon Da** 94.11 52 ⇑P P 17 47 32.4 -0.2
baz=94
V17A **Tonalea, Kykot** 94.13 54 ⇓P P 17 47 32.5 -0.2
baz=94
G11A **Walters Elk Ra** 94.14 43 ⇓P P 17 47 31.2 -1.4
baz=94
320A **Kipp Ranch, An** 94.34 58 ⇑P P 17 47 33.8 0.0
baz=94
N14A **Grayback Hills** 94.37 48 ⇓P P 17 47 33.7 0.0
baz=94
X18A **Snowflake** 94.37 55 ⇑P P 17 47 34.0 +0.1
baz=94
M14A **Sheep Mountain** 94.52 47 ⇓P P 17 47 34.1 -0.2
baz=94
220A **Playas Peak, P** 94.54 58 ⇑P P 17 47 35.0 +0.3
baz=95
HLID **Hailey** 94.60 45 ⇑P P 17 47 34.8 +0.1
baz=95
120A **U Bar Ranch, L** 94.69 57 ⇓P P 17 47 35.5 +0.2
baz=95
J13A **Cove Ranch, Pi** 94.70 45 ⇓P P 17 47 35.0 -0.2
baz=95
H12A **Diamond D Ranc** 94.70 44 ⇑P P 17 47 35.7 +0.6
baz=95
Y19A **Nutrioso** 94.70 56 ⇓P P 17 47 36.1 +0.7
baz=95
N15A **Stansbury Isla** 94.86 48 ⇓P P 17 47 35.7 -0.3
baz=95
S17A **Black Ridge (B** 94.87 52 ⇓P P 17 47 35.6 -0.5
baz=95
Z20A **Nine Sixteen R** 94.92 57 ⇑P P 17 47 36.8 +0.4
baz=95
F12A **Elk City** 94.93 43 ⇓P P 17 47 36.7 +0.5
baz=95
I13A **Wildhorse Cree** 94.94 45 ⇑P P 17 47 36.6 +0.3
baz=95
W19A **Sanders** 95.02 55 ⇑P P 17 47 36.8 0.0
baz=95
H13A **Challis** 95.11 44 ⇑P P 17 47 36.7 -0.3
baz=95
U18A **Rough Rock, Ch** 95.12 53 ⇓P P 17 47 37.1 -0.1
baz=95
M15A **Larsen Ranch,** 95.12 48 ⇑P P 17 47 36.9 -0.3
baz=95
R17A **Hanksville Air** 95.23 51 ⇑P P 17 47 37.2 -0.5
baz=95
Y20A **Horse Springs,** 95.37 56 ⇑P P 17 47 39.0 +0.5
baz=95
I14A **Mackay** 95.39 45 ⇓P P 17 47 39.0 +0.7
baz=95
S18A **Hurst Farm, Bl** 95.49 52 ⇑P P 17 47 38.9 0.0
baz=96
X20A **Quemado** 95.50 55 ⇑P P 17 47 39.2 +0.2
baz=96
A11A **Hall Mountain,** 95.56 40 ⇓P P 17 47 38.7 -0.2
baz=96
TIXI **Tiksi** 95.62 348 P P 17 47 37.1 -1.6
TIXI pmax pmax
comp=Z,7.0nm,1.7s,mb4.8
H14A **Leadore** 95.71 45 ⇓P P 17 47 40.2 +0.4
baz=96
Z21A **St. Cloud Mine** 95.71 57 ⇓P P 17 47 40.8 +0.8
baz=96
O17A **Robinson Place** 95.86 49 ⇑P P 17 47 41.2 +0.7
baz=96
H15A **Lima** 96.19 45 ⇑P P 17 47 42.6 +0.6
baz=96
J16A **Bone** 96.38 46 ⇑P P 17 47 43.5 +0.7
baz=96
YBMT **Yellow Bay** 96.55 41 P P 17 47 44.2 +0.7
324A **Moseley Ranch,** 96.82 59 ⇓P P 17 47 45.2 0.0
baz=97
224A **Corundas Mount** 97.00 59 ⇑P P 17 47 46.1 +0.2
baz=97
425A **Indio Mountain** 97.01 60 ⇑P P 17 47 46.3 +0.3
baz=97
WMQ **Urumqi** 97.58 314 eP P 17 47 48.3 +0.1
WMQ sP sP 17 48 04.5 +10
WMQ PP PP 17 51 48.0 +1.9
WMQ SKS 17 58 21.8
WMQ S S 17 59 06.5 -6.4
WMQ sS sS 17 59 24.5 +3.7
WMQ SS SS 18 05 49.5 -3.5
WMQ LR LR
comp=N,160nm,19.0s,MS4.7
WMQ LR LR
comp=E,220nm,21.0s,MS4.7
WMQ LR LR
comp=Z,300nm,24.0s,MS4.7
BW06 **Boulder Array** 97.60 47 P P 17 47 49.0 +0.6
PDAR **Pinedale Array** 97.60 47 P P 17 47 48.5 +0.1
comp=Z,0.3nm,0.6s,mb4.0,baz=205,slow=6.0,SNR=4.3
PDAR LR LR 18 30 25.6
comp=Z,239nm,18.2s,MS4.7,baz=272,slow=35
TXAR **Lajitas Array** 97.62 62 P P 17 47 50.1 +1.3
comp=Z,0.4nm,0.7s,mb4.1,baz=231,slow=7.6,SNR=4.6
TXAR PKKPbc PKKPbc 18 04 27.6 +2.1
comp=Z,0.4nm,0.7s,baz=110,slow=4.0,SNR=5.7
TXAR LR LR 18 27 18.4
comp=Z,413nm,18.4s,MS5.0,baz=145,slow=33
PLCA **Paso Flores** 98.08 139 LR LR 18 22 25.1
comp=Z,199nm,20.6s,MS4.6,baz=221,slow=29
MKAR **Makanchi Array** 102.14 315 P Pdif 17 48 09.5 +1.0
comp=Z,1.1nm,0.8s,baz=84,slow=12,SNR=3.8
MKAR PP PP 17 52 18.4 -2.3
comp=Z,2.0nm,1.1s,baz=81,slow=8.7,SNR=5.6
MKAR PKKPbc PKKPbc 18 04 11.8 -1.3
comp=Z,0.3nm,0.6s,baz=292,slow=3.5,SNR=4.6
MKAR **Makanchi Array** 102.14 315 P Pdif 17 48 09.5 +1.0
MKAR 17 52 18.4
ZALV **Zalesovo Beam** 102.64 323 P Pdif 17 48 10.6 -0.2
comp=Z,0.9nm,0.8s,baz=97,slow=6.1,SNR=3.9
ZALV **Zalesovo Beam** 102.64 323 P Pdif 17 48 10.6 -0.2
KURK **Kurchatov** 105.48 319 PP PP 17 52 43.6 -2.0
comp=Z,0.3nm,0.6s,baz=77,slow=1.6,SNR=3.6
BVAR **Borovoye Array** 110.90 320 PKIKP PKiKP 17 52 47.0 +0.2
comp=Z,0.3nm,0.4s,baz=219,slow=3.7,SNR=3.4
ARU **Arti** 117.78 324 PKIKP PKPdf 17 52 55.8 -4.1
AKTK **Aktyubinsk** 118.50 317 PKP PKPdf 17 53 02.0 +0.6
AKTO **Aktyubinsk** 118.50 317 PKP PKPdf 17 53 02.0 +0.6
comp=Z,0.7nm,0.5s,baz=47,slow=1.5,SNR=4.4
SPB4 **Spitsbergen Ar** 120.53 354 ePKPdf PKPdf 17 53 04.7 0.0
ARCES **ARCESS Array B** 125.91 345 PKP PKPdf 17 53 15.0 -0.2
comp=Z,4.6nm,0.8s,baz=23,slow=1.7,SNR=11

SCHQ **Schefferville** 125.96 36 PKP PKPdf 17 53 14.5 -1.1
comp=Z,2.5nm,0.6s,baz=98,slow=9.6,SNR=3.7
SCHQ **Schefferville** 125.96 36 PKP PKPdf 17 53 14.5 -1.1
MAK **Makhachkala** 126.25 309 ePKIKP PKPdf 17 53 15.5 -1.1
MAK i 17 55 13.3
MAK e 18 00 24.0
LSZ **Lusaka** 127.61 231 PKP PKPdf 17 53 22.2 +2.2
comp=Z,2.7nm,0.8s,baz=80,slow=3.0,SNR=5.3
KMBO **Kilima Mbogo** 128.01 252 PKP PKPdf 17 53 22.6 +1.7
comp=Z,0.4nm,0.3s,baz=166,slow=19,SNR=3.9
MOS **Moscow** 129.27 327 ePKIKP PKPdf 17 53 18.0 -4.0
KIV **Kislovodsk** 129.59 311 i PKIKP PKPdf 17 53 23.4 +0.5
KIV e 17 55 30.3
KIV ePS PS 18 05 31.7 -12
KIV eSS SS 18 12 48.6 -7.3
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,205nm,20.0s,MS4.8
OBN **Obninsk** 130.08 326c i PKIKP PKPdf 17 53 24.1 +0.6
OBN i SS SS 18 13 03.9 +3.0
OBN pmax pmax
comp=Z,24nm,2.5s
FINES **FINESS Array B** 131.33 337 PKP PKPdf 17 53 25.4 -0.2
comp=Z,2.6nm,0.8s,baz=146,slow=12,SNR=4.7
FINES SKPbc SKPbc 17 56 50.1 -0.2
comp=Z,5.7nm,0.9s,baz=40,slow=6.2,SNR=8.8
SOC **Sochi** 131.77 311 i PKIKP PKPdf 17 53 28.4 +1.3
SOC e 17 55 46.2
ANN **Anapa** 133.08 313 i PKIKP PKPdf 17 53 23.1 -6.4
ANN e 17 53 34.0
ANN pmax pmax
comp=Z,12nm,0.8s
AKASG **Malin Array Be** 136.03 324 PKP PKPdf 17 53 34.1 -0.8
comp=Z,0.5nm,0.5s,baz=71,slow=1.2,SNR=5.7
NB2 **NORSAR Subarra** 136.28 344 PKPdf 17 53 25.9
comp=Z,2.4nm,1.1s,baz=39,slow=1.9
NOA **NORSAR Array B** 136.28 344 PKP PKPdf 17 53 35.4 +0.4
comp=Z,0.9nm,0.6s,baz=50,slow=2.3,SNR=4.7
BRTR **Keskin Array B** 137.07 307 PKP PKPdf 17 53 37.9 +0.7
comp=Z,1.2nm,0.9s,baz=147,slow=2.9,SNR=5.0
TIRR **Tirgusor** 139.27 316 ⇓PKIKP PKPdf 17 53 42.0 +1.0
TIRR **Tirgusor** 139.27 316 ⇓i/P PKPdf 17 53 42.0 +1.0
BURAR **Bucovina Array** 139.84 321 ⇑PKIKP PKPdf 17 53 45.3 +3.3
BURAR **Bucovina Array** 139.84 321 ⇑i/P PKPdf 17 53 45.3 +3.3
PRD **Provadia** 140.44 314 P 17 53 34.3
KOLS **Kolonicke sedl** 140.79 325 ePKIKP PKPdf 17 53 43.9 +0.2
KOLS **Kolonicke sedl** 140.79 325 ePKP PKPdf 17 53 43.9 +0.2
JMB **Yambol** 141.28 314 P 17 53 38.6
DRGR 141.73 322 ⇓PKHKP 17 53 40.7
DRGR 141.73 322 ⇓i/P 17 53 40.7
OKC **Ostrava-Krasne** 142.36 329 AMS AMS 18 53 40.0
comp=Z,400nm,24.8s
KDZ **Kurdzhali** 142.40 313 P PKPdf 17 53 42.0 -4.8
GZR **Gura Zlata** 142.42 320 ⇓PKHKP PKPdf 17 53 45.0 -1.7
GZR **Gura Zlata** 142.42 320 ⇓i/P PKPdf 17 53 45.0 -1.7
RDO **Rodhopi** 142.51 312 P PKPdf 17 53 42.0 -5.0
BSEG **Bad Segeberg** 142.53 339 ePKIKP PKPdf 17 53 47.4 +0.8
PSZ **Piszkesteto** 142.67 325⇑ePKP PKPdf 17 53 44.0 -3.1
PSZ **Piszkesteto** 142.67 325 i/P PKPdf 17 53 44.9 -2.2
PRK **Paraskevi** 142.67 309 eP PKPdf 17 53 42.5 -4.8
MORC **Moravsky Berou** 142.69 329 ePKHKP 17 53 43.7
RZN **Rozhen** 142.87 313 P PKPdf 17 53 44.0 -3.6
VYHS **Vyhne** 142.88 326 ePKP PKPdf 17 53 44.2 -3.2
VYHS e 17 55 05.7
VYHS **Vyhne** 142.88 326 ePKP PKPdf 17 53 44.2 -3.2
VYHS e 17 55 05.7
DPC **Dobruska-Polom** 142.88 331 ePKHKP 17 53 44.4
DPC MLR MLR
comp=Z,600nm,24.4s,MS5.3
DPC **Dobruska-Polom** 142.88 331 ePKP 17 53 44.4
DPC AMS AMS 18 50 40.0
comp=Z,600nm,24.4s
BZS **Buzias** 143.00 321 ⇓PKHKP 17 53 43.8
BZS **Buzias** 143.00 321 ⇓i/P 17 53 43.8
CHOS **Chios island** 143.11 308 P PKPdf 17 53 43.6 -4.6
LIA **Limnos Island** 143.23 310 eP PKPdf 17 53 43.9 -4.4
LIA **Limnos Island** 143.23 310 P PKPdf 17 53 44.4 -3.9
KAVA **Kavala** 143.28 312 P PKPdf 17 53 43.9 -4.5
BUD **Budapest** 143.40 325⇑ePKP PKPdf 17 53 45.7 -2.7
VRAC **Vranov** 143.47 329 ⇓PKIKP PKPdf 17 53 47.8 -0.6
VRAC **Vranov** 143.47 329 ⇓i/P PKPdf 17 53 47.8 -0.6
VTS **Vitosha** 143.49 315 P PKPdf 17 53 46.0 -2.7
VTS **Vitosha** 143.49 315 P PKPdf 17 53 45.9 -2.8
PVCC **Panska Ves** 143.54 332 ePKIKP PKPdf 17 53 46.3 -2.2
PVCC MLR MLR
comp=Z,400nm,19.9s,MS5.2
PVCC **Panska Ves** 143.54 332 ePKP PKPdf 17 53 46.3 -2.2
PVCC AMS AMS 18 59 20.0
comp=Z,400nm,19.9s
NVR **Nevrokopi** 143.59 313 eP PKPdf 17 53 45.4 -3.5
CLL **Collm** 143.62 334 ePKPbc PKPdf 17 53 45.4 -3.2
CLL **Collm** 143.62 334⇑i/PKHKP 17 53 45.7
CLL e 17 53 50.0
CLL MLR MLR
comp=Z,400nm,18.5s,MS5.2
CLL **Collm** 143.62 334⇑i/PKP PKPdf 17 53 45.7 -2.9
CLL e 17 53 50.0
CLL LR LR
comp=Z,400nm,18.5s,MS5.2
CLL **Collm** 143.62 334⇑i/PKPdf PKPdf 17 53 45.7 -2.9
comp=Z,45nm,1.7s
CLL e(PKiKP) 17 53 50.0
CLL epPKiKP 17 54 04.0
CLL ePP PP 17 57 00.0 -0.5
CLL e(PSKS) 18 07 12.0
CLL e(SS) 18 16 00.0
CLL e 18 25 42.0
CLL LmV 19 06 00.0
comp=Z,400nm,18.5s
SRS **Serrai** 143.87 313 P PKPdf 17 53 46.5 -2.9
KKB **Krupnik** 143.90 314 P PKPdf 17 53 47.0 -2.4
OUR **Ouranopolis** 143.92 312 P PKPdf 17 53 46.1 -3.4
PRU **Pruhonice** 143.94 332 ePKHKP 17 53 46.9
PRU MLR MLR
comp=Z,500nm,26.8s,MS5.2
PRU **Pruhonice** 143.94 332 ePKP PKPdf 17 53 46.9 -2.3
PRU epPKP pPKPdf 17 54 06.2 +12
PRU AMS AMS 18 54 10.0
comp=Z,500nm,26.8s
TREC **Trest** 144.00 330 AMS AMS 18 54 00.0
comp=Z,500nm,24.3s
SOH **Sokhos** 144.16 313 eP PKPdf 17 53 46.7 -3.2
SOH **Sokhos** 144.16 313 P PKPdf 17 53 47.2 -2.7
CLZ **Clausthal** 144.22 337 ePKPbc PKPdf 17 53 47.4 -2.3
PLG **Polygyros** 144.28 312 eP PKPdf 17 53 49.0 -1.1
PLG **Polygyros** 144.28 312 P PKPdf 17 53 49.6 -0.5
PAIG **Paliouri** 144.29 311 P PKPdf 17 53 47.2 -3.0
KNT **Kendrikon** 144.33 313 P PKPdf 17 53 47.5 -2.7
PKSM **Moragy** 144.38 324 ⇓PKIKP PKPdf 17 53 49.2 -0.9
PKSM **Moragy** 144.38 324 ⇓i/P PKPdf 17 53 49.2 -0.9
HORT **Hortiatis** 144.43 312 P PKPdf 17 53 47.9 -2.5
VAY **Valandovo** 144.48 314 ePKP PKPdf 17 53 48.0 -2.5
VAY **Valandovo** 144.48 314 P PKPdf 17 53 47.9 -2.6
LAST **Lasithi** 144.49 303 P PKPdf 17 53 49.4 -1.3
THE **Thessaloniki** 144.51 313 P PKPdf 17 53 48.4 -2.1
TANN **Tannenbergstha** 144.53 334 ePKPbc PKPdf 17 53 48.4 -1.8
NKC **Novy Kostel** 144.67 334 ePKIKP PKPdf 17 53 49.7 -0.8
NKC e 17 54 01.8
NKC MLR MLR
comp=Z,400nm,21.7s,MS5.2
NKC **Novy Kostel** 144.67 334 ePKP PKPdf 17 53 49.7 -0.8
NKC epPKP pPKPdf 17 54 01.8 +6.4
NKC ex x 17 54 07.6
NKC AMS AMS 18 59 20.0
comp=Z,400nm,21.7s
MOX **Moxa** 144.69 335 ePKP PKPdf 17 53 49.3 -1.2
comp=Z,108nm,1.6s
MOX
comp=Z,400nm,20.0s
MOX **Moxa** 144.69 335 ePKPbc PKPdf 17 53 48.8 -1.7
IBBN **Ibbenburen** 144.74 340 ePKPbc PKPdf 17 53 48.7 -1.8
CONA **Conrad Observa** 144.76 328 ⇓i/PKPbc PKPdf 17 53 49.9 -0.8
comp=Z,95nm,1.5s,SNR=47
DIVS **Divibare** 144.79 320 P PKPdf 17 53 49.9 -1.0
PTL **Penteli** 144.85 308 eP PKPdf 17 53 49.6 -1.6
XOR **Xorichti** 144.86 310 P PKPdf 17 53 49.1 -2.1
ATHU **Athens Univers** 144.94 308 P PKPdf 17 53 49.4 -2.0
SKO **Skopje** 144.94 316 ePKP PKPdf 17 53 51.5 +0.3
SKO **Skopje** 144.94 316 P PKPdf 17 53 51.3 +0.1
ATH **Athens Observa** 144.99 308 eP PKPdf 17 53 49.7 -1.7
KHC **Kasperske Hory** 145.00 331 ePKIKP PKPdf 17 53 50.1 -1.0

KHC e 17 53 56.5
KHC MLR MLR
comp=Z,500nm,22.1s,MS5.2
KHC **Kasperske Hory** 145.00 331 ePKPpre PKPdf 17 53 50.0 -1.1
KHC **Kasperske Hory** 145.00 331 ePKP PKPdf 17 53 50.1 -1.0
KHC epPKP pPKPdf 17 53 56.5 +0.5
KHC ex x 17 54 08.4
KHC AMS AMS 18 53 10.0
comp=Z,500nm,22.1s
SIVA **Sivas** 145.05 303 P PKPbc 17 53 51.1 0.0
LIT **Litokhoron** 145.06 312 eP PKPbc 17 53 49.6 -1.3
LIT **Litokhoron** 145.06 312 P PKPbc 17 53 49.6 -1.3
GAL1 **Galloway** 145.07 353 eP PKPbc 17 53 50.8 +0.3
GAL1 eP 17 53 51.1
GAL1 AMb AMB 17 53 52.8
comp=Z,70nm,3.3s
GAL1 **Galloway** 145.07 353 P PKPbc 17 53 51.1 +0.7
GAL1 AMb AMB 17 53 52.8
comp=Z,70nm,3.3s
ROTZ **Rotzenmuhle** 145.12 333 ePKPbc PKPbc 17 53 50.7 -0.1
GEC2 **GERESS Array S** 145.15 331 ePKPbc PKPbc 17 53 50.5 -0.4
GEC2 **GERESS Array S** 145.15 331 ePKP PKPdf 17 53 50.5 -0.8
GERES **GERESS Array B** 145.15 331 PKP PKPdf 17 53 50.9 -0.5
comp=Z,9.3nm,0.9s,baz=41,slow=2.6,SNR=55
UBBA **Unterbreizbach** 145.19 336 ePKPbc PKPbc 17 53 50.5 -0.5
ATAL **Atalanti** 145.24 309 P PKPbc 17 53 49.9 -1.6
LKR **Lokris** 145.27 309 eP PKPbc 17 53 49.9 -1.7
LKR **Lokris** 145.27 309 P PKPbc 17 53 50.3 -1.3
WET **Wettzell** 145.30 332 ePKPbc PKPbc 17 53 51.2 -0.2
WTSB **Winterswijk** 145.34 340 ePKP PKPdf 17 53 50.3 -1.3
comp=Z,142nm,2.3s
KRUS **Krusevo** 145.35 315 ePKP PKPdf 17 53 50.7 -1.2
ARSA **Arzberg** 145.38 327 ⇓i/PKPbc PKPbc 17 53 50.4 -1.3
comp=Z,72nm,1.4s,SNR=31
VAM **Vamos** 145.43 303 eP PKPbc 17 53 52.4 +0.1
BIA **Bitola** 145.46 314 ePKP PKPdf 17 53 51.1 -1.0
KZN **Kozani** 145.47 313 eP PKPdf 17 53 51.1 -1.1
KZN **Kozani** 145.47 313 P PKPdf 17 53 51.1 -1.1
LTK **Loutraki** 145.52 308 eP PKPdf 17 53 50.3 -2.1
LTK **Loutraki** 145.52 308 P PKPdf 17 53 50.8 -1.6
FNA **Florina** 145.53 314 P PKPdf 17 53 51.1 -1.2
HPK **Haverah Park** 145.54 350 eP PKPdf 17 53 52.3 +0.4
HPK AMb AMB 17 53 52.9
comp=Z,143nm,1.3s
MOA **Molln** 145.59 329 i PKPbc PKPbc 17 53 52.3 0.0
comp=Z,134nm,1.5s,SNR=45
GRA1 **Grafenberg Arr** 145.59 334 ePKPbc PKPbc 17 53 52.3 0.0
GRF **Grafenberg Arr** 145.59 334 ePKPbc PKPbc 17 53 52.3 0.0
GRF eL 19 02 08.2
comp=Z,344nm,20.8s
AGG **Agios Georgios** 145.61 310 eP PKPdf 17 53 49.4 -3.1
AGG **Agios Georgios** 145.61 310 P PKPdf 17 53 51.4 -1.1
THL **Klokotos Trika** 145.61 311 P PKPdf 17 53 51.6 -0.9
BUG **Bochum--Univer** 145.64 339 ePKPbc PKPbc 17 53 52.0 -0.4
BCI **Bajram Curri** 145.64 317 eP PKPdf 17 53 54.1 +1.7
KARN **Karanos** 145.65 304 P PKPdf 17 53 52.8 +0.1
GVD **Gavdhos** 145.67 303 ePKP PKPdf 17 53 53.5 +0.7
GVD **Gavdhos** 145.67 303 P PKPdf 17 53 52.2 -0.5
DSF **Desfina** 145.70 309 P PKPdf 17 53 51.4 -1.3
PHP **Peshkopia** 145.74 316 eP PKPdf 17 53 52.6 0.0
OHR **Ohrid** 145.77 315 ePKP PKPdf 17 53 52.7 0.0
PUK **Puka** 145.91 317 eP PKPdf 17 53 53.8 +0.9
LHO **Holmfirth** 145.97 350 ePKP PKPbc 17 53 53.6 +0.3
KALE **Kalithea** 145.99 309 P PKPdf 17 53 52.8 -0.3
VLI **Veliai** 146.00 306 eP PKPdf 17 53 53.1 -0.1
KBN **Korca** 146.00 314 eP PKPdf 17 53 53.8 +0.7
GUR **Goura** 146.01 309 eP PKPdf 17 53 53.2 0.0
GUR **Goura** 146.01 309 P PKPdf 17 53 53.6 +0.4
SOKA **Soboth** 146.01 327⇑i/PKPdf PKPdf 17 53 52.8 -0.1
comp=Z,55nm,1.2s
ABA1 **Baconsthorpe** 146.02 347 eP PKPab 17 53 54.2 +0.2
TRIZ **Trizonia** 146.05 309 P PKPdf 17 53 53.4 +0.1
KYTH **Kithira** 146.06 305 eP PKPbc 17 53 54.1 -0.1
EFP **Efpalio** 146.15 310 ePKP PKPbc 17 53 54.1 -0.3
EFP **Efpalio** 146.15 310 P PKPab 17 53 54.8 -0.2
LAKA **Lakka** 146.16 309 P PKPab 17 53 54.5 -0.6
VLX **Vlachokerasia** 146.19 308 eP PKPbc 17 53 54.0 -0.6
VLX **Vlachokerasia** 146.19 308 P PKPab 17 53 54.5 -0.7
DMUB **Kingscourt** 146.23 355 eP PKPdf 17 53 53.0 0.0
TNS **Taunus Mts** 146.25 337 ePKPbc PKPbc 17 53 53.8 -0.5
AEU **East Anglia Un** 146.25 346 eP PKPbc 17 53 54.0 -0.2
TIR **Tirane** 146.28 316 ePKPdf PKPbc 17 53 54.6 -0.1
TIR **Tirane** 146.28 316 P PKPab 17 53 55.1 -0.3
UPR **University Cam** 146.29 309 P PKPab 17 53 55.7 +0.1
RJOB **Jochberg** 146.37 330 ePKPbc PKPbc 17 53 54.1 -0.6
OBKA **Obir** 146.37 327⇓i/PKPdf PKPbc 17 53 54.3 -0.4
comp=Z,25nm,1.1s,SNR=8.1
JAN **Janina** 146.39 312 eP PKPab 17 53 55.3 -0.6
STNC **Stoke** 146.47 350 eP PKPdf 17 53 54.6 +1.2
KBA **Koelnbreinsper** 146.58 329⇑i/PKPdf PKPdf 17 53 54.7 +0.9
comp=Z,28nm,1.4s,SNR=10.0
WLF1 **Llynfaes** 146.58 353 eP PKPbc 17 53 55.0 -0.2
WLF1 AMb AMB 17 53 56.0
comp=Z,528nm,1.3s
ITM **Ithomi** 146.60 308 eP PKPdf 17 53 53.0 -1.2
ITM **Ithomi** 146.60 308 P PKPdf 17 53 55.1 +0.9
RLS **Riolos of Patr** 146.61 309 eP PKPdf 17 53 54.8 +0.6
TOD **Tromm** 146.62 336 PKP PKPbc 17 53 55.9 +0.5
CWF **Charnwood Fore** 146.65 349 eP PKPdf 17 53 54.9 +1.1
CWF AMb AMB 17 53 56.3
comp=Z,146nm,1.6s
HGN **Heimansgroeve** 146.65 340 ePKP PKPdf 17 53 54.0 +0.1
comp=Z,149nm,2.5s
BEBN **Eben Emael** 146.71 340 PKP PKPbc 17 53 55.4 -0.2
FUR **Furstenfeldbru** 146.74 332 ePKPbc PKPbc 17 53 55.7 -0.1
MYKA **Terra Mystica** 146.75 328⇑i/PKPdf PKPdf 17 53 54.0 -0.2
comp=Z,19nm,1.2s
MEM **Membach** 146.76 340 PKP PKPbc 17 53 56.0 +0.2
IGT **Igoumenitsa** 146.80 312 P PKPbc 17 53 55.9 -0.4
DCN **Croghan** 146.81 356 eP PKPbc 17 53 55.0 -0.8
PYL **PYLOS** 146.84 307 eP PKPdf 17 53 53.2 -1.4
PYL **PYLOS** 146.84 307 P PKPbc 17 53 55.6 -0.9
ABH **Alteburg** 146.86 338 PKP PKPbc 17 53 55.7 -0.4
SRN **Sarande** 146.88 313 eP PKPbc 17 53 56.6 +0.1
PTCC **Patocco-Chiusa** 147.05 328 PKP PKPdf 17 53 53.5 -1.2
KEK **Kerkira** 147.09 313 eP PKPdf 17 53 54.9 -0.1
KEK **Kerkira** 147.09 313 P PKPdf 17 53 55.9 +0.9
UCC **Uccle** 147.11 342 PKP PKPbc 17 53 56.4 -0.3
KTD **Kalmit** 147.13 337 PKP PKPbc 17 53 57.6 +0.8
HLM1 **Long Mynd** 147.13 351 eP PKPbc 17 53 56.1 -0.6
STU **Stuttgart** 147.14 335 ePKPbc PKPbc 17 53 56.7 -0.2
STU **Stuttgart** 147.14 335 ePKPbc PKPbc 17 53 57.8 +0.9
BCLA **Clavier** 147.15 340 PKP PKPbc 17 53 57.0 +0.1
RUP **Ruppelstein** 147.18 338 PKP PKPbc 17 53 57.6 +0.6
VLS **Valsamata** 147.19 310 eP PKPdf 17 53 55.0 -0.2
VLS **Valsamata** 147.19 310 P PKPbc 17 53 57.1 -0.3
ABTA **Abfaltersbach** 147.22 329⇑i/PKPdf PKPdf 17 53 54.2 -0.7
comp=Z,37nm,1.8s,SNR=7.1
WATA **Walderalm** 147.22 331⇑i/PKPdf PKPdf 17 53 55.8 +0.9
comp=Z,39nm,1.3s
WTTA **Wattenberg** 147.25 331⇑i/PKPdf PKPdf 17 53 53.7 -1.2
comp=Z,82nm,1.3s,SNR=15
TRI **Trieste** 147.32 327 ePKIKP PKPbc 17 53 57.4 -0.1
SNF **Seneffe** 147.39 342 PKP PKPbc 17 53 57.0 -0.5
MOTA **Moosalm** 147.43 331⇓i/PKPdf PKPdf 17 53 54.6 -0.6
comp=Z,69nm,1.4s,SNR=12
LANF **Langenberg** 147.51 336 PKP PKPbc 17 53 58.6 +0.7
WLF **Walferdange** 147.53 339 PKP PKPbc 17 53 58.3 +0.3
WLF **Walferdange** 147.53 339 ePKPbc PKPbc 17 53 57.8 -0.1
WLF **Walferdange** 147.53 339 ePKPbc PKPbc 17 53 58.1 +0.1
GIVF **Givet** 147.58 341 ePKP1 PKPbc 17 53 57.6 -0.5
comp=Z,328nm,1.4s
HTR **Trewern Hill** 147.61 351 eP PKPbc 17 53 57.4 -0.7
BAIF **Baives** 147.81 341 ePKP1 PKPbc 17 53 58.3 -0.4
comp=Z,322nm,1.5s
BFO **Black Forest** 147.84 335 ePKPbc PKPbc 17 53 58.3 -0.5
SPAK **Spaichingen-Ko** 147.84 334 PKP PKPbc 17 53 59.0 +0.2
FETA **Feichten** 147.84 331⇓i/PKPdf PKPbc 17 53 58.7 -0.2
comp=Z,39nm,1.5s,SNR=10
SWN1 **Swindon** 147.92 349 eP PKPbc 17 53 58.8 -0.2
SWN1 AMb AMB 17 54 00.2
comp=Z,272nm,0.9s
MENF **Mencas** 147.94 344 PKP PKPbc 17 53 59.3 +0.3
HGH **Gray Hill** 147.97 350 eP PKPbc 17 53 58.3 -0.8
WOL **Wolverton** 148.00 348 eP PKPbc 17 53 57.9 -1.2
WOL AMb AMB 17 54 00.1
comp=Z,154nm,1.3s
APPI **Appiano** 148.02 330 PKP PKPbc 17 53 58.8 -0.6
DAVA **Damuels** 148.02 332⇑i/PKPdf PKPbc 17 53 58.4 -1.0
comp=Z,63nm,1.6s,SNR=10
CDF **Champ du Feu** 148.18 336 ePKP1 PKPbc 17 53 59.2 -0.5
comp=Z,319nm,1.6s

FELD	**Feldberg im Sc**	**148.33 335**	PKP	PKPbc	17 54 00.4	+0.2
ECH	**Echery**	**148.38 336**	PKP	PKPbc	17 54 00.4	+0.1
BRMO	**Bormio**	**148.42 331**	PKP	PKPbc	17 54 00.5	+0.1
MOF	**Molkenrain**	**148.69 336**	PKP	PKPbc	17 54 01.2	+0.1
THEF	**They Montfort**	**148.81 338**	PKP	PKPbc	17 54 01.9	+0.5
HINF	**Hinteralfeld**	**148.83 336**	*e*PKP1	PKPbc	17 54 00.7	-0.7
	comp=Z,353nm,1.9s					
HAU	**Haudompre**	**148.86 337**	*e*PKP1	PKPbc	17 54 01.0	-0.5
	comp=Z,239nm,1.6s					
HAU			*e*MLR	MLR		
	comp=Z,400nm,22.2s,MS4.9					
HAU	**Haudompre**	**148.86 337**	*e*PKP	PKPbc	17 54 01.0	-0.5
HAU			LR	LR		
	comp=Z,400nm,22.3s,MS5.2					
BBS	**Basel-Blauen**	**148.86 335**	PKP	PKPbc	17 54 01.2	-0.3
MEZF	**Maizieres J'vi**	**148.90 339**	*e*PKP1	PKPbc	17 54 01.5	-0.1
	comp=Z,750nm,1.8s					
CING	**Cingoli**	**149.18 324**	PKP	PKPdf	17 53 58.8	+0.5
LOMF	**Lomont**	**149.22 336**	PKP	PKPbc	17 54 02.9	+0.4
DYA	**Yadsworthy**	**149.31 351**	*e*P	PKPbc	17 54 00.5	-2.0
DYA			AMb	AMB	17 54 02.2	
	comp=Z,108nm,2.1s					
TIP	**Timpagrande**	**149.41 314**	*e*PKPbc	PKPbc	17 54 03.3	+0.1
MURB	**Monte Urbino**	**149.62 324**	PKP	PKPbc	17 54 03.4	-0.2
CSSN	**Cassano Irpino**	**149.64 318**	PKP	PKPbc	17 54 02.7	-1.0
MIDA	**Miranda**	**149.65 320**	PKP	PKPbc	17 54 04.0	+0.3
VMG	**Vicchio**	**149.66 326**	PKP	PKPbc	17 54 04.7	+1.0
ASS	**Assisi**	**149.68 324**	PKIKP	PKPbc	17 54 03.4	-0.3
AQU	**L'Aquila**	**149.71 322**	*e*PKPbc	PKPbc	17 54 04.8	+0.9
AQU	**L'Aquila**	**149.71 322**	⇓*i*P	PKPbc	17 54 05.2	+1.4
FNVD	**Fontana Vidola**	**149.74 327**	PKP	PKPbc	17 54 04.3	+0.5
OG01	**Vacheresse**	**150.12 335**	PKP	PKPbc	17 54 05.1	+0.4
CABF	**La Chapelle**	**150.12 336**	*e*PKP1	PKPbc	17 54 04.7	0.0
	comp=Z,496nm,1.9s					
ORO	**Oropa**	**150.13 332**	PKIKP	PKPdf	17 53 59.7	0.0
FLN	**La Foliniere**	**150.25 346**	*e*PKP1	PKPbc	17 54 03.9	-1.0
	comp=Z,526nm,1.7s					
FLN			*e*MLR	MLR		
	comp=Z,440nm,20.5s,MS4.9					
FLN	**La Foliniere**	**150.25 346**	*e*PKP	PKPbc	17 54 03.9	-1.0
FLN			LR	LR		
	comp=Z,440nm,20.5s,MS5.2					
LDF	**La Druitiere**	**150.32 345**	*e*PKP1	PKPbc	17 54 04.2	-0.9
	comp=Z,280nm,1.6s					
LOR	**Lormes**	**150.37 339**	*e*PKP1	PKPbc	17 54 04.6	-0.7
	comp=Z,102nm,1.1s					
LOR			*e*MLR	MLR		
	comp=Z,494nm,22.8s,MS5.0					
LOR	**Lormes**	**150.37 339**	*e*PKP	PKPbc	17 54 04.6	-0.7
LOR			LR	LR		
	comp=Z,490nm,22.8s,MS5.2					
SOI	**Samo**	**150.44 313**	PKIKP	PKPbc	17 54 05.8	+0.1
RDP	**Rocca di Papa**	**150.49 322**	PKIKP	PKPbc	17 54 06.1	+0.4
SSF	**Saint Saulge**	**150.67 339**	*e*PKP1	PKPbc	17 54 05.4	-0.6
	comp=Z,113nm,1.2s					
GRR	**Gorron**	**150.69 346**	*e*PKP1	PKPbc	17 54 05.2	-0.8
	comp=Z,115nm,1.2s					
LPL	**La Plagne**	**150.75 334**	*e*PKP1	PKPbc	17 54 06.2	0.0
	comp=Z,30nm,0.7s					
LPG	**La Plagne**	**150.76 334**	*e*PKP1	PKPbc	17 54 06.3	0.0
	comp=Z,95nm,1.1s					
HYF	**Humbligny**	**150.76 340**	*e*PKP1	PKPbc	17 54 06.0	-0.2
SMF	**Signal de Mont**	**150.91 338**	*e*PKP1	PKPbc	17 54 05.7	-0.9
	comp=Z,181nm,1.3s					
AVF	**Avril sur Loir**	**150.95 339**	*e*PKP1	PKPbc	17 54 05.7	-1.0
	comp=Z,189nm,1.5s					
BNI	**Bardonecchia**	**151.15 333**	*e*PKIKP	PKPbc	17 54 07.1	-0.1
SGMF	**Saint Gilles**	**151.18 348**	*e*PKP1	PKPbc	17 54 06.1	-1.0
	comp=Z,177nm,1.3s					
ROSF	**Rostrenen**	**151.24 349**	*e*PKP1	PKPbc	17 54 06.0	-1.3
	comp=Z,54nm,1.0s					
BGF	**Bois d'Agland**	**151.33 340**	*e*PKP1	PKPbc	17 54 06.8	-0.7
	comp=Z,58nm,1.0s					
MBDF	**Montbardon**	**151.37 333**	*e*PKP1	PKPbc	17 54 07.2	-0.5
	comp=Z,27nm,0.8s					
PLDF	**La Plantade**	**151.57 338**	PKP	PKPbc	17 54 09.0	+0.9
ORIF	**Oris-en-Rattie**	**151.59 334**	*e*PKP1	PKPbc	17 54 07.6	-0.6
	comp=Z,54nm,0.8s					
ORIF			*e*MLR	MLR		
	comp=Z,363nm,22.5s,MS4.8					
QUIF	**Quistinic**	**151.62 349**	*e*PKP1	PKPbc	17 54 07.1	-1.1
	comp=Z,88nm,1.5s					
AGO	**Saint Agoulin**	**151.67 339**	PKP	PKPbc	17 54 08.6	+0.2
SBF	**Sospel**	**151.75 331**	*e*PKP1	PKPbc	17 54 07.8	-0.8
	comp=Z,146nm,1.2s					
TCF	**Toulx Ste Croi**	**151.77 340**	*e*PKP1	PKPbc	17 54 07.8	-0.8
	comp=Z,80nm,1.1s					
SSB	**Saint Sauveur**	**151.82 336**	PKP	PKPbc	17 54 08.4	-0.3
SSB	**Saint Sauveur**	**151.82 336**	*e*PKPbc	PKPbc	17 54 08.2	-0.5
PGF	**Pioggiola**	**151.98 327**	*e*PKP1	PKPbc	17 54 08.5	-0.7
	comp=Z,74nm,0.8s					
PYM	**Petit Puy Mans**	**151.98 339**	PKP	PKPbc	17 54 09.7	+0.6
VIVF	**Saint-Julien-l**	**152.13 335**	*e*PKP1	PKPbc	17 54 09.0	-0.4
	comp=Z,68nm,1.2s					
MFF	**Saint Martin d**	**152.18 344**	*e*PKP1	PKPbc	17 54 08.6	-0.9
	comp=Z,100nm,1.3s					
LBL	**Lubilhac**	**152.34 338**	PKP	PKPbc	17 54 10.8	+0.9
FRF	**La Foret Royal**	**152.35 331**	*e*PKP1	PKPbc	17 54 09.1	-0.9
	comp=Z,422nm,1.9s					
SMRF	**Simiane la Rot**	**152.49 333**	*e*PKP1	PKPbc	17 54 10.2	-0.1
LMR	**La Mourre**	**152.59 331**	*e*PKP1	PKPbc	17 54 09.6	-0.9
RJF	**Les Rejaudoux**	**152.87 340**	*e*PKP1	PKPbc	17 54 10.4	-0.7
	comp=Z,49nm,1.1s					
RJF			*e*MLR	MLR		
	comp=Z,502nm,20.2s,MS5.0					
RJF	**Les Rejaudoux**	**152.87 340**	*e*PKP	PKPbc	17 54 10.4	-0.7
RJF			LR	LR		
	comp=Z,500nm,20.3s,MS5.3					
CAF	**Calviac**	**153.02 339**	*e*PKP1	PKPbc	17 54 10.8	-0.6
	comp=Z,100nm,1.3s					
LASF	**Ste Croix**	**153.10 336**	*e*PKP1	PKPbc	17 54 11.1	-0.5
	comp=Z,90nm,1.2s					
LFF	**La Frestale**	**153.44 341**	*e*PKP1	PKPbc	17 54 11.5	-0.8
	comp=Z,54nm,1.1s					
EPF	**Esparros**	**155.28 339**	*e*PKP1	PKPdf	17 54 16.0	+8.6
ETSF	**Etsaut**	**155.68 341**	*e*PKP1	PKPdf	17 54 16.0	+8.1
ESDC	**Sonseca Array**	**159.64 344**	PKPab	PKPab	17 54 50.6	-0.6
	comp=Z,2.2nm,0.7s,baz=18,slow=3.8,SNR=9.4					
DBIC	**Dimbokro**	**165.17 205**	PKPab	PKPab	17 55 17.1	+1.0
	comp=Z,4.4nm,0.9s,baz=183,slow=1.4,SNR=4.8					
DBIC	**Dimbokro**	**165.17 205**	PKPab	PKPab	17 55 17.1	+1.0
TORD	**Torodi Ar. Bea**	**165.77 242**	PKP	PKPdf	17 54 17.8	-1.9
	comp=Z,0.9nm,1.1s,baz=84,slow=4.6,SNR=4.1					
TORD			PKPab	PKPab	17 55 18.2	-0.7
	comp=Z,2.9nm,1.0s,baz=95,slow=3.7,SNR=6.2					
TORD	**Torodi Ar. Bea**	**165.77 242**	PKP	PKPdf	17 54 17.8	-1.9
TORD			PKPab	PKPab	17 55 18.2	-0.7

ISCJB ***27*** *17:35:07.9±0.1, 32°.66N±0°.02×105°.45E±0°.02, h10km, mb4.9/112, MS4.2/23, Error ellipse: s-maj=2.9km s-min=2.5km az=158.5*

IDC ***27*** *17:35:08.3±0.5, 32°.69N×105°.41E, h0km, mb4.8/27, mb1 4.8/30, mb1mx4.8/35, mbtmp4.8/30, ML4.3/3, MS4.0/10, Ms1 4.0/10, ms1mx3.7/34, Error ellipse: s-maj=15.4km s-min=10.4km az=48.0*

NEIC ***27*** *17:35:09.8±0.2, 32°.67N×105°.38E, h10km, mb5.0/57, MS4.5/1, Error ellipse: s-maj=4.7km s-min=3.8km az=211.0*

MOS ***27*** *17:35:10.5±0.8, 32°.69N×105°.48E, h28km, mb5.2/56, MS4.1/22, Error ellipse: s-maj=8.1km s-min=4.4km az=115.3*

DJA ***27*** *17:35:10, 32°.61N×105°.23E, h5km, mb5.3/18*

BJI ***27*** *17:35:10.4, 32°.66N×105°.44E, h16km, mB4.8/20, mb4.8/31, ML4.8/26, Ms4.7/51, Ms7 4.4/41*

SZGRF ***27*** *17:35:16.4, 32°.16N×104°.38E, h33km, mb5.1, Sichuan, China*

ISC 27 17:35:10.0±0.1, 32°.66N±0°.02×105°.44E±0°.02, h10km, (h12km±1.8km:pP-P), n329, α0°97/353, mb4.9/112, MS4.2/23, 20C-29D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.26**	**220**	Pn	**Pn**	**17 35 47.3**	**-0.1**
CD2				Pg	**Pg**	**17 35 50.3**	**-3.0**
CD2				Sg	**Sg**	**17 36 21.5**	**-1.1**
CD2				smax			
	comp=N,33μm,0.7s						
XAN	**Xi'an**	**3.22**	**64**	Pn	**Pn**	**17 36 01.0**	**+0.4**
XAN				Pg	**Pg**	**17 36 11.3**	**-0.4**
XAN				Sn	**Sn**	**17 36 37.0**	**-2.1**
XAN				Sg	**Sg**	**17 36 50.0**	**-3.5**
XAN				smax			
	comp=N,4μm,0.8s						
XAN				smax			
	comp=E,3μm,0.9s						
XAN				LR	LR		
	comp=N,4μm,5.6s						
XAN				LR	LR		
	comp=E,3μm,6.9s						
XAN				LR	LR		
	comp=Z,2μm,6.4s						
LZH	**Lanzhou**	**3.66**	**339**	*e*Pn	**Pn**	**17 36 08.5**	**+1.9**
LZH				Pg	**Pg**	**17 36 18.3**	**-1.8**
LZH				Sn	**Sn**	**17 36 53.3**	**+3.5**
LZH				Sg	**Sg**	**17 37 03.5**	**-4.0**
LZH				smax			
	comp=N,9μm,0.6s						
LZH				LR	LR		
	comp=N,15μm,6.2s						
LZH				LR	LR		
	comp=Z,18μm,7.8s						
GYA	**Guiyang**	**6.28**	**170**	Pn	**Pn**	**17 36 42.5**	**-0.1**
GYA				smax			
	comp=N,760nm,0.8s						
GYA				smax			
	comp=E,1μm,0.9s						
GYA				LR	LR		
	comp=N,3μm,6.3s						
GYA				LR	LR		
	comp=E,3μm,4.1s						
GYA				LR	LR		
	comp=Z,4μm,4.8s						
TIY	**Taiyuan**	**7.63**	**47**	*e*Pn	**Pn**	**17 36 59.8**	**-1.3**
TIY				Sn	**Sn**	**17 38 23.5**	**-4.1**
TIY				LR	LR		
	comp=N,2μm,7.2s						
TIY				LR	LR		
	comp=E,2μm,8.3s						
TIY				LR	LR		
	comp=Z,510nm,8.2s						
KMI	**Kunming**	**7.88**	**198**	Pn	**Pn**	**17 37 04.0**	**-0.6**
KMI				Sn	**Sn**	**17 38 35.8**	**+2.0**
KMI				smax			
	comp=N,150nm,1.4s						
KMI				smax			
	comp=E,190nm,1.5s						
KMI				LR	LR		
	comp=N,2μm,10.2s						
KMI				LR	LR		
	comp=E,4μm,9.6s						
KMI				LR	LR		
	comp=Z,3μm,13.1s						
WHN	**Wuhan**	**7.89**	**103**	⇑P	**Pn**	**17 37 06.0**	**+1.2**
WHN				S	**Sn**	**17 38 30.0**	**-4.1**
WHN				LR	LR		
	comp=N,6μm,5.4s						
WHN				LR	LR		
	comp=E,7μm,5.6s						
WHN				LR	LR		
	comp=Z,5μm,6.0s						
GTA	**Gaotai**	**8.13**	**328**	⇑P	**Pn**	**17 37 07.8**	**-0.1**
GTA				pP		17 37 11.5	
GTA				S	**Sn**	**17 38 40.0**	**+0.2**
GTA				pmax	pmax		
	comp=Z,52nm,0.8s						
GTA				pmax	pmax		
	comp=Z,81nm,4.0s						
GTA				LR	LR		
	comp=N,5μm,8.6s						
GTA				LR	LR		
	comp=E,3μm,8.7s						
GTA				LR	LR		
	comp=Z,5μm,9.6s						
HHC	**Hu-ho-hao-te**	**9.53**	**29**	*e*P	**Pn**	**17 37 28.8**	**+1.6**
HHC				pP		17 37 35.8	
HHC				sP		17 37 40.5	
HHC				S	**Sn**	**17 39 15.5**	**+1.1**
HHC				sS		17 39 26.3	
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
HHC				LR	LR		
	comp=N,2μm,5.1s						
HHC				LR	LR		
	comp=E,2μm,5.3s						
HHC				LR	LR		
	comp=Z,1μm,5.1s						
TIA	**Tai'an**	**10.28**	**67**	*e*P	**Pn**	**17 37 40.3**	**+2.8**
TIA				LR	LR		
	comp=N,580nm,8.0s						
TIA				LR	LR		
	comp=E,750nm,8.0s						
BJI	**Beijing**	**11.36**	**47**	P	**Pn**	**17 37 51.5**	**-0.7**
BJI				pmax	pmax		
	comp=Z,36nm,0.5s						
BJI				pmax	pmax		
	comp=Z,90nm,4.3s						
BJI				LR	LR		
	comp=N,2μm,12.9s						
BJI				LR	LR		
	comp=E,2μm,19.7s						
BJI				LR	LR		
	comp=Z,620nm,14.9s						
NJ2	**Nanjing**	**11.36**	**89**	*e*P	**Pn**	**17 37 51.8**	**-0.6**
NJ2				pP		17 37 57.8	
NJ2				PP		17 38 00.5	
NJ2				sP		17 38 03.3	
NJ2				S	**Sn**	**17 39 59.5**	**+0.1**
NJ2				sS		17 40 11.8	
NJ2				pmax	pmax		
	comp=Z,40nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,70nm,3.6s						
NJ2				LR	LR		
	comp=N,910nm,10.0s						
NJ2				LR	LR		
	comp=E,2μm,9.2s						
NJ2				LR	LR		
	comp=Z,11μm,9.5s						
GZH	**Guangzhou**	**11.82**	**142**	P	**Pn**	**17 37 53.0**	**-5.7**
GZH				S	**Sn**	**17 39 57.0**	**-14**
GZH				LR	LR		
	comp=N,2μm,8.7s						
GZH				LR	LR		
	comp=E,2μm,10.4s						
GZH				LR	LR		
	comp=Z,4μm,9.8s						
LSA	**Lhasa**	**12.59**	**260**	P	**Pn**	**17 38 10.3**	**+1.2**
LSA				LR	LR		
	comp=N,630nm,7.5s						
LSA				LR	LR		
	comp=Z,870nm,8.3s						
SSE	**Sheshan**	**13.48**	**92**	P	**Pn**	**17 38 17.5**	**-3.8**
SSE				S	**Sn**	**17 40 47.8**	**-3.3**
SSE				pmax	pmax		
	comp=Z,28nm,0.7s						
SSE				pmax	pmax		
	comp=Z,49nm,5.8s						
SSE				LR	LR		
	comp=N,620nm,8.6s						
SSE				LR	LR		
	comp=E,860nm,8.6s						
SSE				LR	LR		
	comp=Z,1μm,8.6s						
SHL	**Shillong**	**13.79**	**243**	*e*P	**Pn**	**17 38 25.0**	**-0.5**
SHL				*ex*	x	17 42 38.5	
QZH	**Quanzhou**	**13.86**	**120**	*e*P	**Pn**	**17 38 28.0**	**+1.6**
QZH				S	**Sn**	**17 41 01.8**	**+1.4**
QZH				LR	LR		
	comp=N,3μm,9.6s						
QZH				LR	LR		
	comp=E,2μm,10.2s						
QZH				LR	LR		
	comp=Z,1μm,9.6s						
QIZ	**Qiongzhong**	**14.14**	**163**	P	**Pn**	**17 38 30.3**	**-0.1**
QIZ				S	**Sn**	**17 41 04.5**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,13nm,0.9s						
QIZ				LR	LR		
	comp=N,3μm,11.4s						
QIZ				LR	LR		
	comp=E,530nm,9.5s						
QIZ				LR	LR		
	comp=Z,4μm,11.7s						
DL2	**Dalian**	**14.54**	**60**	P	**Pn**	**17 38 38.0**	**+2.4**
DL2				*e*S	**Sn**	**17 41 20.8**	**+4.0**
DL2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DL2				pmax	pmax		
	comp=Z,50nm,5.5s						
DL2				LR	LR		
	comp=N,420nm,12.9s						
DL2				LR	LR		
	comp=E,390nm,14.4s						
DL2				LR	LR		
	comp=Z,650nm,13.3s						
SONM	**Songino Array**	**15.17**	**2**	Pn	**Pn**	**17 38 42.6**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=187,slow=13,SNR=44						
SONM				Lg		17 43 10.8	
	comp=Z,0.8nm,0.3s,baz=172,slow=33,SNR=3.5						
SONM				LR	LR	17 44 57.1	
	comp=Z,1μm,19.0s,baz=191,slow=39						
ULN	**Ulaanbaatar**	**15.23**	**4**	*e*P	**Pn**	**17 38 43.1**	**-1.9**
ULN				pmax	pmax		
	comp=Z,57nm,1.1s						
ULN	**Ulaanbaatar**	**15.23**	**4**	*e*P	**Pn**	**17 38 43.1**	**-1.9**
	comp=Z,57nm,1.1s						
CM31	**Chiang Mai Arr**	**15.30**	**204**	*e*P	**Pn**	**17 38 44.3**	**-1.8**
	comp=Z,18nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.30**	**204**	Pn	**Pn**	**17 38 45.4**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=15,slow=11,SNR=71						
CMAR				LR	LR	17 45 26.6	
	comp=Z,533nm,20.9s,baz=196,slow=40						
TATO	**Taipei**	**16.01**	**114**	P	**Pn**	**17 38 55.7**	**+0.5**
YHNB	**Yeheng**	**16.09**	**116**	*e*P	**Pn**	**17 39 00.6**	**+4.4**
	comp=Z,73nm,0.8s						
SSLB	**Suanglung**	**16.27**	**119**	*e*P	**Pn**	**17 38 59.7**	**+1.1**
	comp=Z,56nm,1.1s						
TPUB	**Ta-pu**	**16.33**	**121**	P	**Pn**	**17 39 01.0**	**+1.6**
	comp=Z,17nm,0.7s						
KKTK	**Khon Kaen**	**16.43**	**189**	P	**Pn**	**17 39 00.0**	**-0.7**
	comp=Z,617nm,0.6s						
YULB	**Yu-li**	**16.76**	**119**	*e*P	**Pn**	**17 39 06.3**	**+1.4**
	comp=Z,18nm,0.7s						
SNY	**Shenyang**	**17.07**	**52**	⇓P	**Pn**	**17 39 08.8**	**+0.2**
SNY				S	**Sn**	**17 42 23.0**	**+4.6**
SNY				pmax	pmax		
	comp=Z,15nm,1.6s						
SNY				pmax	pmax		
	comp=Z,230nm,6.1s						
SNY				LR	LR		
	comp=E,820nm,13.1s						
SNY				LR	LR		
	comp=Z,680nm,12.2s						
GUN	**Gumba**	**17.54**	**259**	*e*P	**Pn**	**17 39 12.7**	**-1.9**
	comp=Z,212nm,0.9s						
NST	**Nakhon Sawan**	**17.59**	**197**	P	**Pn**	**17 39 14.7**	**-0.5**
ZAK	**Zakamensk**	**17.77**	**355**	*e*P	**Pn**	**17 39 15.5**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
WMQ	**Urumqi**	**17.80**	**314**	P	**Pn**	**17 39 20.0**	**+2.3**
WMQ				sP	sP	17 39 25.5	+2.9
WMQ				PP		17 39 35.5	
WMQ				S	**Sn**	**17 42 36.0**	**-0.1**
WMQ				sS	sS	17 42 40.5	-7.0
WMQ				SS		17 42 58.8	
WMQ				PcP	PcP	17 43 58.0	+3.3
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.5s						
WMQ				LR	LR		
	comp=N,1μm,14.0s						
WMQ				LR	LR		
	comp=E,860nm,12.0s						
WMQ				LR	LR		
	comp=Z,270nm,13.0s						
PKI	**Pulchoki**	**18.05**	**259**	*e*P	**Pn**	**17 39 17.8**	**-3.1**
	comp=Z,87nm,0.6s						
PKI	**Pulchoki**	**18.05**	**259**	*e*P	**Pn**	**17 39 17.8**	**-3.1**
PKI				pmax	pmax		
	comp=Z,87nm,0.6s						
KKN	**Kakani**	**18.08**	**260**	*e*P	**Pn**	**17 39 18.7**	**-2.5**
	comp=Z,204nm,0.8s						
KKN	**Kakani**	**18.08**	**260**	*e*P	**Pn**	**17 39 18.7**	**-2.5**
KKN				pmax	pmax		
	comp=Z,205nm,0.8s						
DMN	**Daman**	**18.29**	**259**	*e*P	**Pn**	**17 39 20.9**	**-2.9**
	comp=Z,123nm,0.8s						
KSRS	**Korea Array**	**19.00**	**69**	P	**Pn**	**17 39 32.1**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=251,slow=10,SNR=32						
KSRS				LR	LR	17 47 50.4	
	comp=Z,173nm,18.2s,baz=108,slow=40						
KSRS	**Korea Array**	**19.00**	**69**	P	**Pn**	**17 39 32.2**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,173nm,18.2s						
TLY	**Talaya**	**19.05**	**357**	*e*P	**Pn**	**17 39 33.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,18nm,1.2s						
TLY				MLR	MLR		
	comp=Z,951nm,15.0s						
CN2	**Changchun**	**19.20**	**49**	*e*P	**Pn**	**17 39 35.3**	**+0.5**
CN2				*es*P	sP	17 39 42.0	+4.0
CN2				*e*PP		17 39 51.5	
CN2				*e*S	**Sn**	**17 43 04.8**	**-5.2**
CN2				pmax	pmax		
	comp=Z,70nm,1.0s						
CN2				pmax	pmax		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=N,890nm,14.0s						
CN2				LR	LR		
	comp=E,520nm,14.0s						
CN2				LR	LR		
	comp=Z,630nm,14.0s						
MOY	**Mondy**	**19.27**	**352**	*e*P	**Pn**	**17 39 36.0**	**+0.5**
MOY				pmax	pmax		
	comp=Z,40nm,2.3s						
IRK	**Irkutsk**	**19.59**	**358**	*e*P	**Pn**	**17 39 39.4**	**+0.1**
IRK				pmax	pmax		
	comp=Z,102nm,1.3s						
CIT	**Chita**	**20.23**	**15**	*e*P	**P**	**17 39 42.5**	**-2.5**
CIT				*e*		17 40 17.6	
CIT				*e*		17 43 21.9	
CIT				pmax	pmax		
	comp=Z,103nm,1.8s						
JOW	**Kunigami**	**20.65**	**100**	P	**P**	**17 39 51.5**	**+1.8**
	comp=Z,36nm,0.9s,baz=248,slow=2.5,SNR=9.1						
NNT	**Nongplab**	**20.65**	**196**	P	**P**	**17 39 51.0**	**+1.1**
PTH	**Pithoragarh**	**21.80**	**269**	*e*P	**P**	**17 40 03.0**	**+0.8**
JOSI	**Joshimath**	**22.13**	**271**	*e*P	**P**	**17 40 05.8**	**+0.2**
MDJ	**Mudanjiang**	**22.23**	**51**	P	**P**	**17 40 06.3**	**-0.4**
MDJ				S	**S**	**17 44 11.5**	**+0.1**
MDJ				ScP	ScP	17 47 39.8	-0.5
MDJ				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,170nm,4.4s						
MDJ				LR	LR		
	comp=N,460nm,18.5s,MS4.1						
MDJ				LR	LR		
	comp=E,390nm,16.8s,MS4.1						
MDJ				LR	LR		
	comp=Z,500nm,18.5s,MS4.0						
MDJ	**Mudanjiang**	**22.23**	**51**	P	**P**	**17 40 08.3**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,170nm,3.9s						
MK31	**Makanchi Array**	**22.61**	**315**	*e*P	**P**	**17 40 10.6**	**0.0**
MKAR	**Makanchi Array**	**22.61**	**315**	P	**P**	**17 40 10.7**	**0.0**
	comp=Z,27nm,0.6s,mb4.8,baz=115,slow=13,SNR=193						
MKAR	**Makanchi Array**	**22.61**	**315**	P	**P**	**17 40 10.7**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,27nm,0.6s						
KLP	**Kalpa**	**23.04**	**275**	*e*P	**P**	**17 40 15.2**	**-0.2**
KLP				AMb	AMB	17 40 22.7	
	comp=Z,38nm,1.0s,mb4.8						
TGY	**Tagaytay City**	**23.27**	**139**	P	**P**	**17 40 20.0**	**+2.2**
	comp=Z,56nm,0.4s,mb5.3,baz=137,slow=16,SNR=3.2						
TGY	**Tagaytay City**	**23.27**	**139**	P	**P**	**17 40 20.0**	**+2.2**
TGY				pmax	pmax		
	comp=Z,56nm,0.4s						
DDI	**Dehra Dun**	**23.44**	**272**	*ex*	**P**	**17 40 19.5**	**-0.1**
SMLA	**Simla**	**24.02**	**274**	*i* P	**P**	**17 40 23.7**	**-1.4**
AGRA	**Agra**	**24.39**	**264**	*e*P	**P**	**17 40 26.1**	**-2.4**
BISR	**Bishrakh**

comp=Z,22nm,0.6s,mb4.9
KSH Kashi 24.70 294 *e*P **P 17 40 35.5 +4.3**
KSH *e*pP 17 40 39.0
KSH *e*sP sP 17 40 42.0 +6.5
KSH *e*PP 17 41 12.0
KSH *e*PcP PcP 17 44 10.0 +1.9
KSH *e*S **S 17 44 56.0 +3.1**
KSH *e*sS sS 17 45 02.0 +4.1
KSH *e*SS 17 45 54.3
KSH pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
KSH LR LR
comp=N,160nm,7.4s
KSH LR LR
comp=E,160nm,7.2s
KSH LR LR
comp=Z,450nm,11.3s,MS4.2
SONA Sohna 24.80 267 *e*P **P 17 40 31.2 -1.0**
ULHL Ulahol 24.97 301 P **P 17 40 35.0 +1.5**
SNR=27
TKM2 Tokmak 2 25.59 302 P **P 17 40 40.6 +1.4**
SNR=18
TKM2 Tokmak 2 25.59 302 *e*P **P 17 40 40.4 +1.2**
TKM2 pmax pmax
comp=Z,20nm,0.9s,mb4.7
TKM2 Tokmak 2 25.59 302 *e*P **P 17 40 40.4 +1.2**
comp=Z,20nm,0.9s,mb4.7
KZA Kyzart 25.66 300 P **P 17 40 42.0 +2.2**
SNR=22
KLR Kul'dur 25.67 42 *e*P **P 17 40 36.0 -3.9**
KLR pmax pmax
comp=E,140nm,0.8s
KLR pmax pmax
comp=Z,120nm,0.8s,mb5.5
BOD Bodaibo 25.83 11 *e*P **P 17 40 41.8 +0.6**
BOD pmax pmax
comp=Z,29nm,1.6s,mb4.6
ZAA0 Zalesovo Array 25.85 331 *e*P **P 17 40 41.2 -0.2**
ZALV Zalesovo Beam 25.85 331 P **P 17 40 41.2 -0.2**
comp=Z,25nm,0.4s,mb5.1,baz=133,slow=10.0,SNR=79
ZALV LR LR 17 51 13.9
comp=Z,249nm,18.0s,MS3.8,baz=167,slow=37
ZALV Zalesovo Beam 25.85 331 P **P 17 40 41.2 -0.3**
ZALV pmax pmax
comp=Z,25nm,0.4s,mb5.1
ZALV MLR MLR
comp=Z,249nm,18.0s,MS3.8
ZALV Zalesovo Beam 25.85 331 P **P 17 40 41.2 -0.2**
ZALV LR LR 17 51 13.9
KHET Khetri 25.93 268 *e*P **P 17 40 42.3 -0.1**
KBK Karagaybulak 25.99 301 P **P 17 40 44.6 +1.7**
SNR=32
UCH Uchtor 26.22 300 P **P 17 40 46.8 +1.8**
SNR=21
UCH Uchtor 26.22 300 *e*P **P 17 40 46.7 +1.7**
comp=Z,19nm,1.0s,mb4.6
AAK Ala-Archa 26.32 301 P **P 17 40 46.9 +1.1**
comp=Z,3.3nm,0.5s,mb4.2,baz=117,slow=7.9,SNR=14
AAK LR LR 17 53 32.9
comp=Z,237nm,18.5s,MS3.8,baz=293,slow=42
AAK Ala-Archa 26.32 301 P **P 17 40 46.9 +1.1**
AAK pmax pmax
comp=Z,3.0nm,0.5s,mb4.1
AAK MLR MLR
comp=Z,237nm,18.5s,MS3.8
BHPL Bhopal 26.40 256 *e*P **P 17 40 45.9 -0.8**
BHPL AMb AMB 17 40 54.4
comp=Z,52nm,1.6s,mb4.8
USP Ospenovka 26.45 303 P **P 17 40 48.2 +1.2**
SNR=31
KURK Kurchatov 26.72 320 P **P 17 40 49.9 +0.5**
comp=Z,293nm,0.6s,mb6.0,SNR=32
KURK Kurchatov 26.72 320 P **P 17 40 49.6 +0.3**
comp=Z,13nm,0.7s,mb4.6,baz=118,slow=10,SNR=96
KURK PcP PcP 17 44 11.4 -1.1
comp=Z,1.9nm,0.5s,baz=118,slow=2.3,SNR=4.6
KURK ScP ScP 17 47 49.6 -3.0
comp=Z,0.9nm,1.0s,baz=107,slow=2.8,SNR=3.9
KURK LR LR 17 52 02.3
comp=Z,220nm,21.3s,MS3.7,baz=125,slow=38
KURK Kurchatov 26.72 320 P **P 17 40 49.7 +0.3**
KURK 17 44 11.4
KURK pmax pmax
comp=Z,13nm,0.7s,mb4.6
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
KURK pmax pmax
comp=N,1.0nm,1.0s
KURK MLR MLR
comp=Z,220nm,21.3s,MS3.7
EKS2 Erkin-Say 26.84 301 P **P 17 40 51.6 +1.1**
SNR=9.1
EKS2 Erkin-Say 26.84 301 *e*P **P 17 40 51.3 +0.8**
comp=Z,5.0nm,0.6s,mb4.2
NVS Novosibirsk 27.14 331 *e*P **P 17 40 52.5 -0.6**
NVS pmax pmax
comp=N,25nm,1.3s
NVS pmax pmax
comp=Z,26nm,1.3s,mb4.6
NVS pmax pmax
comp=E,26nm,1.4s
MAT Matsushiro 27.18 73 P **P 17 40 52.6 -1.0**
MJAR Matsushiro Arr 27.18 73 P **P 17 40 54.4 +0.8**
comp=E,2.1nm,0.5s,mb3.9,baz=273,slow=9.1,SNR=8.5
MJAR Matsushiro Arr 27.18 73 P **P 17 40 54.4 +0.8**
MJAR pmax pmax
comp=Z,2.0nm,0.5s
HABR Khabarovsk 27.26 46 *e*P **P 17 40 55.9 +1.7**
HABR *e*PPP 17 41 43.3
HABR *e*S **S 17 45 31.3 -2.0**
HABR *e*SS 17 46 40.0
HABR *e* 17 51 43.2
HABR MLR MLR
comp=Z,649nm,9.0s
KKM Kota Kinabalu 28.33 157 *e*P **P 17 41 03.4 -0.6**
comp=Z,23nm,0.8s,mb4.8
HYB Hyderabad 28.59 244 *i*P **P 17 41 06.0 -0.4**
KBL Kabul 30.27 284 *e*P **P 17 41 22.1 +0.9**
KBL pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
KBL Kabul 30.27 284 *e*P **P 17 41 22.1 +1.0**
comp=Z,8.2nm,0.6s,mb4.6
PSI Prapat 30.33 193 P **P 17 41 21.9 +0.1**
comp=Z,24nm,0.7s,mb5.0,baz=333,slow=9.1
PSI LR LR 17 54 35.0
comp=Z,296nm,21.0s,MS3.9,baz=217,slow=38
PSI Prapat 30.33 193 P **P 17 41 21.9 +0.1**
PSI pmax pmax
comp=Z,24nm,0.7s,mb5.0
PSI MLR MLR
comp=Z,296nm,21.0s,MS3.9
JASL Jaisalmer 30.42 268 *e*P **P 17 41 22.5 -0.1**
KSM Kuching 31.36 171 *e*P **P 17 41 30.6 -0.3**
comp=Z,28nm,1.4s,mb4.9
YSS Yuzh-Sakhalins 31.70 52 *e*P **P 17 41 33.0 -0.6**
BVAR Borovoye Array 32.31 320 P **P 17 41 39.2 +0.3**
comp=Z,5.0nm,0.7s,mb4.5,baz=114,slow=10,SNR=36
BVAR PcP PcP 17 44 26.0 -0.7
comp=Z,2.4nm,0.7s,baz=119,slow=5.8,SNR=4.5
BVAR ScP ScP 17 48 08.6 -1.9
comp=Z,1.1nm,0.7s,baz=123,slow=5.3,SNR=4.0
BVAR Borovoye Array 32.31 320 P **P 17 41 39.2 +0.3**
BVAR 17 44 26.0
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=N,1.0nm,0.7s
BRVK Borovoye 32.38 320 P **P 17 41 40.8 +1.3**
comp=N,85nm,1.0s,mb5.5,SNR=7.8
BRVK Borovoye 32.38 320*c i*P **P 17 41 39.6 +0.1**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.7
BRVK MLR MLR
comp=Z,227nm,20.0s,MS3.9
YAK Yakutsk 33.25 21*c i*P **P 17 41 46.7 -0.3**
YAK *e**PP pP 17 41 55.0 +4.9
YAK *e*PPP 17 43 05.2
YAK *e* 17 44 28.7
YAK *e*S **S 17 47 00.0 -6.8**
YAK *e**SS sS 17 47 15.8 +3.9
YAK *e*SSS 17 49 11.0
YAK *e* 17 52 10.8
YAK pmax pmax
comp=E,30nm,1.1s
YAK pmax pmax
comp=N,22nm,1.0s
YAK pmax pmax
comp=Z,68nm,0.9s,mb5.6
YAK pmax pmax
comp=N,50nm,3.7s
YAK pmax pmax
comp=Z,118nm,4.3s
YAK pmax pmax
comp=E,71nm,4.8s
YAK smax
comp=E,80nm,2.1s
YAK smax
comp=N,102nm,1.8s
YAK MLR MLR
comp=Z,441nm,10.0s,MS4.5
YAK MLR MLR
comp=E,226nm,9.0s
YAK MLR MLR
comp=N,341nm,10.0s
YAK Yakutsk 33.25 21 *e*P **P 17 41 46.7 -0.3**
comp=N,101nm,0.8s,mb5.8
PALK Pallekele 34.15 228 LR LR 17 57 50.4
comp=N,83nm,21.1s,MS3.4,baz=9.2,slow=40
ABKAR Abkulak array 37.52 310 *e*P **P 17 42 24.3 +0.5**
comp=N,11nm,0.5s,mb4.8
ABKT Ailbek 38.65 291 P **P 17 42 35.3 +1.7**
comp=N,118nm,0.5s,mb5.9,SNR=6.9
AKTK Aktyubinsk 38.93 311 P **P 17 42 36.3 +0.5**
AKTK LR LR 17 59 46.3
AKTO Aktyubinsk 38.93 311 P **P 17 42 36.3 +0.5**
comp=N,10nm,0.7s,mb4.7,baz=95,slow=9.8,SNR=32
AKTO LR LR 17 59 46.3
comp=N,293nm,18.3s,MS4.1,baz=102,slow=38
AKTO Aktyubinsk 38.93 311 P **P 17 42 36.3 +0.5**
AKTO pmax pmax
comp=Z,11nm,0.7s,mb4.7
AKTO MLR MLR
comp=Z,293nm,18.3s,MS4.1
SVE Sverdlovsk 38.95 322⇓*e*P **P 17 42 36.7 +0.9**
SVE pmax pmax
comp=Z,46nm,1.0s,mb5.2
KAPI Kappang 39.86 157 P **P 17 42 44.8 +0.9**
comp=Z,527nm,0.7s,SNR=5.2
KAPI Kappang 39.86 157 P **P 17 42 44.9 +1.0**
comp=Z,53nm,0.7s,mb5.4,baz=328,slow=11
ARU Arti 39.92 321 P **P 17 42 44.7 +0.8**
comp=Z,228nm,0.8s,mb6.0,SNR=17
ARU Arti 39.92 321*c i*P **P 17 42 44.0 +0.1**
ARU *e* 17 44 14.3
ARU *e*PPP 17 44 41.2
ARU S **S 17 48 51.5 +2.8**
ARU SS SS 17 51 45.2 +0.2
ARU pmax pmax
comp=Z,44nm,1.0s,mb5.1
ARU Arti 39.92 321 *e*P **P 17 42 44.0 +0.1**
comp=Z,43nm,1.0s,mb5.1
TIXI Tiksi 41.01 11⇑*i*P **P 17 42 52.1 -0.7**
TIXI *e*S **S 17 49 02.2 -2.4**
TIXI pmax pmax
comp=Z,54nm,0.7s,mb5.3
TIXI MLR MLR
comp=Z,718nm,14.0s,MS4.7
TIXI Tiksi 41.01 11 *e*P **P 17 42 51.9 -0.8**
comp=Z,53nm,0.6s,mb5.3
SOKR Solikamsk 41.75 325*c i*P **P 17 42 59.4 +0.4**
SOKR pmax pmax
comp=Z,50nm,0.9s,mb5.1
SOKR MLR MLR
comp=Z,140nm,15.0s,MS4.0
SEY Seymchan 42.18 30⇓*e*P **P 17 43 02.8 +0.4**
PETK Petropavlovsk- 42.29 45 P **P 17 43 03.0 -0.4**
comp=Z,6.7nm,0.7s,mb4.4,baz=321,slow=3.6,SNR=13
PETK Petropavlovsk- 42.29 45 P **P 17 43 03.1 -0.4**
PETK pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
PET Petropavlovsk 42.85 45 *e*P **P 17 43 07.1 -0.9**
PET pmax pmax
comp=Z,27nm,1.1s,mb4.9
MAK Makhachkala 46.09 300 *e*P **P 17 43 29.9 -4.2**
MAK MLR MLR
comp=Z,68nm,6.0s
GNI Garni 48.59 297 P **P 17 43 54.9 +1.3**
GNI pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 48.59 297 P **P 17 43 54.9 +1.2**
comp=Z,10nm,0.8s,mb4.9
ZEI Tsey 48.74 301 *e*P **P 17 43 53.4 -1.4**
ZEI pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
UMR Umm Al-Rimmam 49.00 283 *e*P **P 17 43 56.2 -0.7**
UMR AMb AMB 17 43 57.4
comp=Z,29nm,0.7s,mb5.4
MIB Mutribah 49.23 283 *e*P **P 17 43 58.1 -0.6**
MIB AMb AMB 17 43 59.2
comp=Z,60nm,0.7s,mb5.8
BILL Biiibino 49.28 26*c i*P **P 17 43 57.8 -0.7**
BILL pmax pmax
comp=Z,32nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,500nm,15.0s,MS4.6
BILL Biiibino 49.28 26 *e*P **P 17 43 58.0 -0.6**
comp=Z,15nm,0.7s,mb5.1
VRHR Novokhopersk 49.34 312 *e*P **P 17 43 59.2 0.0**
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.7s
KIV Kislovodsk 49.42 302 *e*P **P 17 44 02.2 +2.2**
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,109nm,16.0s,MS4.0
KIV Kislovodsk 49.42 302 *e*P **P 17 44 00.6 +0.6**
comp=Z,16nm,1.0s,mb5.0
NAY Al-Naaiem 49.49 282 *e*P **P 17 43 59.9 -0.8**
NAY AMb AMB 17 44 01.4
comp=Z,68nm,0.7s,mb5.8
VORD Divnogorie 50.81 312 *e*P **P 17 44 09.6 -0.8**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,7.0nm,0.4s
VORD pmax pmax
comp=E,30nm,0.6s
VSR Storozhevoye 50.87 312 *e*P **P 17 44 10.3 -0.5**
VSR pmax pmax
comp=Z,30nm,1.2s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.5s
VSR pmax pmax
comp=E,20nm,0.8s
OBN Obninsk 52.10 317 *e*P **P 17 44 19.9 0.0**
OBN *i* 17 46 19.4
OBN pmax pmax
comp=Z,40nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.9
LVZ Lovozero 52.97 333⇓*e*P **P 17 44 25.9 -0.3**
LVZ pmax pmax
comp=Z,18nm,0.8s,mb5.0
LVZ MLR MLR
comp=Z,503nm,19.0s,MS4.6
ANN Anapa 52.98 304 *e*P **P 17 44 20.5 -6.1**
ANN *e* 17 45 32.7
ANN *e*S **S 17 51 46.9 -9.2**
ANN pmax pmax
comp=Z,21nm,1.4s,mb4.9
ANN MLR MLR
comp=Z,181nm,17.0s,MS4.2
APA Apatity 53.43 333⇑*i*P **P 17 44 27.6 -2.0**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
APA MLR MLR
comp=Z,400nm,12.0s,MS4.7
JOF Joensuu 54.33 327 *e*P **P 17 44 35.5 -0.7**
JOF pmax pmax
comp=Z,32nm,0.5s,mb5.5
JOF Joensuu 54.33 327 *e*p **P 17 44 35.5 -0.7**
comp=Z,32nm,0.5s,mb5.5
SIM Simferopol' 55.25 305 *e*P **P 17 44 44.5 +1.3**
SIM *e*S **S 17 52 22.4 -4.4**
SIM pmax pmax
comp=Z,20nm,0.7s,mb5.3
KEV Kevo 55.78 336 *e*P **P 17 44 45.7 -0.9**
KEV pmax pmax
comp=Z,27nm,1.2s,mb5.2
KEV Kevo 55.78 336 *e*p **P 17 44 45.7 -0.9**
comp=Z,27nm,1.2s,mb5.2
ARCES ARCESS Array B 56.31 335 P **P 17 44 50.3 -0.2**
comp=Z,10nm,0.5s,mb5.1,baz=78,slow=7.9,SNR=79
ARCES ARCESS Array B 56.31 335 P **P 17 44 50.3 -0.1**
ARCES pmax pmax
comp=Z,10.0nm,0.5s
KAF Kangasniemi 56.71 326 *e*P **P 17 44 52.6 -0.8**
KAF pmax pmax
comp=Z,23nm,0.5s,mb5.5
KAF Kangasniemi 56.71 326 *e*p **P 17 44 52.6 -0.8**
comp=Z,23nm,0.5s,mb5.5,baz=82,slow=6.8
FINES FINESS Array B 56.91 326 P **P 17 44 54.5 -0.3**
comp=Z,22nm,0.5s,mb5.5,baz=90,slow=7.4,SNR=247
FINES FINESS Array B 56.91 326 P **P 17 44 54.6 -0.2**
FINES pmax pmax
comp=Z,22nm,0.5s
BR131 Keskin Array S 56.97 299 *e*P **P 17 44 55.2 -0.4**
comp=Z,6.3nm,0.9s,mb4.7
BRTR Keskin Array B 56.97 299 P **P 17 44 55.5 0.0**
comp=Z,4.7nm,0.9s,mb4.5,baz=99,slow=6.5,SNR=16
BRTR Keskin Array B 56.97 299 P **P 17 44 55.6 0.0**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
VSU Vasula 57.06 322*c i*P **P 17 44 55.7 -0.2**
VSU pmax pmax
comp=Z,58nm,1.2s,mb5.5
VSU MLR MLR
comp=Z,123nm,18.0s,MS4.0
AKASG Malin Array Be 57.16 313 P **P 17 44 56.2 -0.5**
comp=Z,16nm,0.4s,mb5.4,baz=68,slow=6.6,SNR=31
AKASG Malin Array Be 57.16 313 P **P 17 44 56.2 -0.5**
AKASG pmax pmax
comp=Z,16nm,0.4s
AKASG Malin Array Be 57.16 313 P **P 17 44 56.2 -0.5**
AKBB Malin Array Si 57.16 313 *e*P **P 17 44 56.3 -0.4**
KIEV Kiev 57.17 313 *e*P **P 17 44 56.3 -0.5**
KIEV pmax pmax
comp=Z,13nm,0.4s,mb5.3
KIEV Kiev 57.17 313 *e*P **P 17 44 56.2 -0.6**
comp=Z,13nm,0.4s,mb5.3
IDID Didziasalis 57.64 318 *e*P **P 17 45 00.6 +0.5**
IZAR Zarasai 57.83 319 *e*P **P 17 45 01.9 +0.5**
IIGN Ignalina 57.92 319 *e*P **P 17 45 02.5 +0.5**
ISAL Salakas 57.93 319 *e*P **P 17 45 02.0 -0.1**
SPB4 Spitsbergen Ar 58.10 346 *e*P **P 17 45 02.6 -0.4**
TLCR 58.82 306⇓P **P 17 45 08.4 -0.1**
TLCR 58.82 306⇓*i*P **P 17 45 08.4 -0.1**
TIRR Tirgusor 59.30 306⇓P **P 17 45 12.0 +0.2**
TIRR Tirgusor 59.30 306⇓*i*P **P 17 45 12.0 +0.2**
HARR Harsova 59.56 306⇑P **P 17 45 14.3 +0.7**
HARR Harsova 59.56 306⇑*i*P **P 17 45 14.3 +0.7**
SUW Suwalki 59.95 317 *e*P **P 17 45 16.0 -0.2**
VRI Vrincioaia 60.02 308⇓P **P 17 45 17.6 +0.8**
VRI Vrincioaia 60.02 308⇓*i*P **P 17 45 17.6 +0.8**
PLOR Plostina 60.08 308⇓P **P 17 45 18.0 +0.8**
PLOR Plostina 60.08 308⇓*i*P **P 17 45 18.0 +0.8**
BURAR Bucovina Array 60.50 310⇑P **P 17 45 20.0 0.0**
BURAR Bucovina Array 60.50 310⇑*i*P **P 17 45 20.0 0.0**
BUR08 Bucovina Ar. S 60.50 310 *e*P **P 17 45 20.2 +0.2**
LVV L'vov 60.60 313 *e*P **P 17 45 20.2 -0.5**
MLR Muntele Rosu 60.66 307⇓P **P 17 45 21.8 +0.6**
MLR Muntele Rosu 60.66 307⇓*i*P **P 17 45 21.8 +0.6**
KWP Kalwaria Pacla 61.48 313 *e*P **P 17 45 27.6 +0.9**
KWP Kalwaria Pacla 61.48 313 *e*P **P 17 45 27.1 +0.5**
KWP pmax pmax
comp=Z,42nm,0.6s,mb5.8
KWP Kalwaria Pacla 61.48 313 *e*P **P 17 45 27.1 +0.5**
comp=Z,42nm,0.6s,mb5.8
KWP Kalwaria Pacla 61.48 313⇓*i*P **P 17 45 27.5 +0.9**
KOLS Kolonicke sedl 61.97 312 *e*P **P 17 45 29.9 0.0**
KOLS pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 61.97 312 *e*P **P 17 45 29.9 0.0**
comp=Z,5.8nm,1.0s,mb4.7
KOLS *e*SP 17 45 33.3
KOLS Kolonicke sedl 61.97 312 *e*P **P 17 45 29.9 0.0**
KOLS *e*pP pP 17 45 33.2 0.0
ASAR Alice Springs 62.26 150 P **P 17 45 31.4 -0.7**
comp=Z,9.1nm,0.6s,mb5.1,baz=328,slow=6.3,SNR=32
ASAR Alice Springs 62.26 150 P **P 17 45 31.4 -0.7**
ASAR pmax pmax
comp=Z,9.0nm,0.6s
DRGR 62.38 310⇑P **P 17 45 33.5 +0.8**
DRGR 62.38 310⇑*i*P **P 17 45 33.5 +0.8**
STHS Stebnicka Huta 62.45 313 *e*P **P 17 45 33.3 +0.1**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
STHS Stebnicka Huta 62.45 313 *e*P **P 17 45 33.3 +0.1**
comp=Z,6.5nm,0.9s,mb4.8
STHS Stebnicka Huta 62.45 313 *e*P **P 17 45 33.3 +0.1**
GZR Gura Zlata 62.80 308⇓P **P 17 45 36.4 +0.8**
GZR Gura Zlata 62.80 308⇓*i*P **P 17 45 36.4 +0.8**
OJC Ojcow 63.07 314 *e*P **P 17 45 36.9 -0.4**
KECS Kecovo 63.23 312 *e*P **P 17 45 38.7 +0.3**
KECS pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
KECS Kecovo 63.23 312 *e*P **P 17 45 38.7 +0.3**
comp=Z,3.6nm,0.6s,mb4.7
KECS Kecovo 63.23 312 *e*P **P 17 45 38.7 +0.3**
BZS Buzias 63.49 309⇓P **P 17 45 40.3 +0.1**
BZS Buzias 63.49 309⇓*i*P **P 17 45 40.3 +0.1**
PSZ Piszkesteto 63.80 312 *e*P **P 17 45 36.4 -5.8**
LIKS Likavka 63.90 313 *e*P **P 17 45 38.0 -4.8**
LIKS Likavka 63.90 313 *e*P **P 17 45 38.0 -4.8**
NB2 NORSAR Subarra 63.96 327 P **P 17 45 42.0 -1.0**
comp=Z,17nm,0.5s,mb5.3,baz=70,slow=6.9
NOA NORSAR Array B 63.96 327 P **P 17 45 41.9 -1.1**
comp=Z,19nm,0.6s,mb5.3,baz=71,slow=6.6,SNR=85
NOA NORSAR Array B 63.96 327 P **P 17 45 41.9 -1.1**
NOA pmax pmax
comp=Z,19nm,0.6s
NAO01 NORSAR Array S 64.18 327 *e*P **P 17 45 43.3 -1.2**
comp=Z,6.7nm,0.4s,mb5.0
VYHS Vyhne 64.26 313 *e*P **P 17 45 45.8 +0.6**
VYHS pmax pmax
comp=Z,9.0nm,1.4s,mb4.6
VYHS Vyhne 64.26 313 *e*P **P 17 45 45.8 +0.6**
comp=Z,9.1nm,1.4s,mb4.6
VYHS Vyhne 64.26 313 *e*P **P 17 45 45.8 +0.6**
KOLL Kolacno 64.50 313 *e*P **P 17 45 47.5 +0.8**
KOLL Kolacno 64.50 313 *e*P **P 17 45 47.5 +0.8**
MORC Moravsky Berou 64.59 314 *e*P **P 17 45 47.4 +0.1**
MORC pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
MORC Moravsky Berou 64.59 314 *e*P **P 17 45 47.4 +0.1**
comp=Z,6.1nm,0.7s,mb4.7
MORC Moravsky Berou 64.59 314⇓*i*P **P 17 45 47.5 +0.2**
DPC Dobruska-Polom 65.12 315 *e*P **P 17 45 51.2 +0.5**
DPC *e* pP 17 45 54.9 +0.9
DPC Dobruska-Polom 65.12 315 *e*P **P 17 45 51.2 +0.5**
DPC *e*pP pP 17 45 54.9 +0.9
TTA Tatalina 65.15 30 *e*P **P 17 45 50.6 -0.1**
PKSM Moragy 65.21 310⇓P **P 17 45 51.7 +0.3**
PKSM Moragy 65.21 310⇓*i*P **P 17 45 51.7 +0.3**
KONO Kongsberg 65.22 326 *e*P **P 17 45 50.4 -0.8**
KONO pmax pmax
comp=Z,14nm,0.9s,mb5.0
KONO Kongsberg 65.22 326 *e*P **P 17 45 50.4 -0.8**
comp=Z,14nm,0.9s,mb5.0
UPC Upice 65.24 315 *e*P **P 17 45 51.8 +0.2**
UPC *e*pP pP 17 45 54.9 +0.1
VRAC Vranov 65.34 314⇓P **P 17 45 52.9 +0.7**
VRAC Vranov 65.34 314⇓*i*P **P 17 45 52.9 +0.7**
COLD Coldfoot 65.59 24 *e*P **P 17 45 52.9 -0.6**
comp=Z,9.0nm,0.9s,mb4.8
TREC Trest 66.02 314 *e*P **P 17 45 57.0 +0.4**
TREC MLR MLR
comp=Z,200nm,14.6s,MS4.5
TREC Trest 66.02 314 *e*P **P 17 45 57.0 +0.4**
TREC AMS AMS 18 16 00.0
comp=Z,200nm,14.6s
SVW2 Sparrevohn 66.08 32 *e*P **P 17 45 57.2 +0.4**
CHUM Lake Minchumin 66.27 28 *e*P **P 17 45 57.1 -0.8**
comp=Z,15nm,0.7s,mb5.1
PRU Pruhonice 66.31 315 *e*P **P 17 45 59.3 +0.8**
PRU *e* pP 17 46 03.0 +1.3
PRU MLR MLR
comp=Z,200nm,12.8s,MS4.5
PRU Pruhonice 66.31 315 *e*P **P 17 45 59.3 +0.8**
PRU *e*pP pP 17 46 03.0 +1.3

PRU ex x 17 54 04.3
PRU AMS AMS 18 16 00.0
comp=Z,200nm,12.8s
CSNA Conrad Observa 66.32 313 ⇓*i*P **P 17 45 59.0 +0.5**
comp=Z,13nm,1.2s,mb4.8
CLL Collm 66.69 317 *e*P **P 17 46 00.5 -0.4**
comp=Z,13nm,1.3s,mb4.8
CLL Collm 66.69 317 ⇓*i*P **P 17 46 00.8 -0.1**
CLL pmax pmax
comp=Z,13nm,1.3s,mb4.8
CLL Collm 66.69 317 ⇓*i*P **P 17 46 00.8 -0.1**
comp=Z,13nm,1.3s,mb4.8
CLL *i* pP 17 46 04.1 0.0
CLL Collm 66.69 317 ⇓*i*P **P 17 46 00.8 -0.1**
comp=Z,13nm,1.3s,mb4.8
CLL *i* pP pP 17 46 04.1 0.0
CLL *i* (sP) sP 17 46 05.7 +0.4
BPAW Bear Paw Mtn. 66.70 28 *e*P **P 17 46 00.1 -0.6**
comp=Z,11nm,0.8s,mb4.9
PPLA Purkeypile 66.75 29 *e*P **P 17 46 00.9 -0.2**
comp=Z,23nm,0.6s,mb5.4
KTH Kantishna Hill 66.97 28 *e*P **P 17 46 02.0 -0.4**
comp=Z,7.3nm,0.8s,mb4.8
BSEG Bad Segeberg 67.13 320 *e*P **P 17 46 04.1 +0.5**
comp=Z,18nm,0.9s,mb5.1
KHC Kasperske Hory 67.23 315 *e*P **P 17 46 04.6 +0.3**
KHC *e*pP pP 17 46 07.7 +0.1
KHC *e*x x 17 53 44.6
GEC2 GERESS Array S 67.27 314 *e*P **P 17 46 04.7 +0.1**
GERES GERESS Array B 67.27 314 P **P 17 46 05.0 +0.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=64,slow=6.1,SNR=19
GERES GERESS Array B 67.27 314 P **P 17 46 05.0 +0.4**
GERES pmax pmax
comp=Z,3.0nm,0.8s
TRF Thorofare Moun 67.27 28 *e*P **P 17 46 03.9 -0.4**
comp=Z,6.5nm,0.8s,mb4.7
PERS Pernice 67.29 312 *i*P **P 17 46 04.6 -0.2**
SOKA Soboth 67.33 312 ⇓*i*P **P 17 46 05.0 -0.1**
comp=Z,13nm,1.1s,mb4.8
MOA Molln 67.33 313 ⇑*i*P **P 17 46 05.3 +0.3**
comp=Z,9.0nm,0.9s,mb4.8
TANN Tannenbergstha 67.37 316 *e*P **P 17 46 05.6 +0.4**
comp=Z,7.0nm,1.0s,mb4.7
NKC Novy Kostel 67.45 316 *e*P **P 17 46 05.7 0.0**
NKC *e*x x 17 53 48.6
COLA College 67.53 26 *e*P **P 17 46 05.1 -0.9**
COLA pmax pmax
comp=Z,14nm,0.8s,mb5.0
COLA College 67.53 26 *e*P **P 17 46 05.1 -0.8**
comp=Z,14nm,0.8s,mb5.0
RSO Redoubt South 67.60 32 *e*P **P 17 46 06.6 +0.1**
BOJS Bojanci 67.67 311 *i*P **P 17 46 07.4 +0.2**
MCK McKinley 67.67 28 *e*P **P 17 46 06.2 -0.7**
MCK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MCK McKinley 67.67 28 *e*P **P 17 46 06.2 -0.6**
comp=Z,6.4nm,0.9s,mb4.7
MOX Moxa 67.77 317 *e*(P) **P 17 46 07.5 -0.2**
ROTZ Rotzenmuhle 67.78 316 *e*P **P 17 46 08.3 +0.5**
comp=Z,14nm,1.2s,mb4.9
NRDL Niedersach Rie 67.84 319 *e*P **P 17 46 08.5 +0.3**
comp=Z,17nm,1.1s,mb5.0
CLZ Clausthal 67.97 318 *e*P **P 17 46 09.5 +0.5**
comp=Z,17nm,1.1s,mb5.0
CLZ Clausthal 67.97 318 *e*P **P 17 46 09.5 +0.5**
CLZ pmax pmax
comp=Z,17nm,1.1s,mb5.0
KNDS Knezji Dol 68.22 311 *e*P **P 17 46 10.4 -0.2**
KBA Koelnbreinsper 68.22 313 ⇑*i*P **P 17 46 11.3 +0.7**
comp=Z,10nm,1.0s,mb4.8
GRA1 Grafenberg Arr 68.40 316 *e*P **P 17 46 12.2 +0.5**
comp=Z,15nm,0.8s,mb5.1
GRA1 LR LR
comp=Z,300nm,20.8s,MS4.5
GRF Grafenberg Arr 68.40 316 *e*P **P 17 46 12.2 +0.5**
comp=Z,15nm,0.8s,mb5.1
GRF Grafenberg Arr 68.40 316 *e*P **P 17 46 12.2 +0.5**
GRF pmax pmax
comp=Z,15nm,0.8s,mb5.1
GRF MLR MLR
comp=Z,300nm,20.8s,MS4.5
GRF Grafenberg Arr 68.40 316 *e*P **P 17 46 12.2 +0.5**
GRF pmax pmax
comp=Z,15nm,0.8s,mb5.1
RC01 Rabbit Creek A 68.62 30 *e*P **P 17 46 12.1 -0.8**
comp=Z,7.7nm,0.5s,mb4.9
PMR Palmer 68.63 30 *e*P **P 17 46 12.2 -0.7**
PMR pmax pmax
comp=Z,17nm,0.5s,mb5.2
PMR Palmer 68.63 30 *e*P **P 17 46 12.2 -0.7**
comp=Z,17nm,0.5s,mb5.2
OHAK Old Harbor 68.84 35 *e*P **P 17 46 13.9 -0.4**
comp=Z,10nm,0.6s,mb4.9
OHAK *e*PcP PcP 17 46 40.4 +1.6
KDAK Kodiak Island 68.91 34 P **P 17 46 14.3 -0.5**
comp=Z,14nm,0.7s,mb5.0
KDAK Kodiak Island 68.91 34 P **P 17 46 14.3 -0.5**
KDAK pmax pmax
comp=Z,14nm,0.7s,mb5.0
KDAK Kodiak Island 68.91 34 P **P 17 46 14.3 -0.5**
WTTA Wattenberg 69.19 313 ⇑*i*P **P 17 46 16.3 -0.4**
comp=Z,11nm,0.9s,mb4.8
FETA Feichten 69.86 313 ⇑*i*P **P 17 46 20.3 -0.5**
comp=Z,15nm,1.0s,mb4.9
INK Inuvik 70.31 20 *e*P **P 17 46 21.8 -1.4**
INK pmax pmax
comp=Z,12nm,0.7s
INK Inuvik 70.31 20 *e*P **P 17 46 21.8 -1.4**
comp=Z,12nm,0.7s,mb4.9
BMRM Bremner River 70.83 29 *e*P **P 17 46 26.1 -0.4**
comp=Z,16nm,0.8s,mb5.0
DAWY Dawson 71.06 25 *e*P **P 17 46 27.1 -0.7**
CDF Champ du Feu 71.29 316 *e*P **P 17 46 29.3 -0.2**
WLF Walferdange 71.35 317 P **P 17 46 30.3 +0.5**
comp=Z,19nm,1.8s,mb4.7
WLF Walferdange 71.35 317 *e*P **P 17 46 30.7 +0.9**
DOU Dourbes 72.02 318 P **P 17 46 34.5 +0.6**
comp=Z,13nm,2.5s,mb4.4
SUMG Summit 72.13 349 *e*P **P 17 46 34.4 +0.2**
comp=Z,14nm,0.9s,mb4.9
KMBO Kilima Mbogo 72.37 257 P **P 17 46 37.1 +0.6**
comp=Z,4.5nm,0.8s,mb4.4,baz=182,slow=24,SNR=10
KMBO Kilima Mbogo 72.37 257 *e*P **P 17 46 36.6 +0.1**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 72.37 257 *e*P **P 17 46 36.6 +0.1**
comp=Z,5.4nm,0.9s,mb4.5
STKA Stephens Creek 72.72 148 P **P 17 46 38.8 +0.7**
comp=Z,5.9nm,0.7s,mb4.6,baz=325,slow=6.2,SNR=9.7
LPG La Plagne 73.01 313 *e*P **P 17 46 40.5 +0.6**
comp=Z,36nm,0.7s,mb5.1
LPG La Plagne 73.01 313 *e*P **P 17 46 40.5 +0.6**
LPG pmax pmax
comp=Z,18nm,0.7s,mb5.1
LPG La Plagne 73.01 313 *e*P **P 17 46 40.5 +0.6**
comp=Z,18nm,0.7s,mb5.1
LPL La Plagne 73.01 313 *e*P **P 17 46 40.4 +0.5**
comp=Z,18nm,0.5s,mb5.0
LPL La Plagne 73.01 313 *e*P **P 17 46 40.4 +0.5**
LPL pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
LPL La Plagne 73.01 313 *e*P **P 17 46 40.4 +0.5**
comp=Z,9.1nm,0.5s,mb5.0
SMF Signal de Mont 74.19 315 *e*P **P 17 46 46.3 -0.5**
comp=Z,23nm,1.0s,mb4.8
SMF Signal de Mont 74.19 315 *e*P **P 17 46 46.3 -0.5**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.7
SMF Signal de Mont 74.19 315 *e*P **P 17 46 46.3 -0.5**
comp=Z,11nm,1.0s,mb4.8
AVF Avril sur Loir 74.40 316 *e*P **P 17 46 47.6 -0.4**
SKAG Skagway 75.44 27 *e*P **P 17 46 54.4 +0.7**
comp=Z,28nm,1.1s,mb5.1
KEST Kesra 76.14 304 P **P 17 46 56.9 -1.4**
comp=Z,1.9nm,0.8s,mb4.1,baz=233,slow=10,SNR=3.4
YKA Yellowknife Ar 79.87 18 P **P 17 47 17.7 -0.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=328,slow=4.9,SNR=36
YKA PP PP 17 50 14.1 -5.0
comp=Z,1.0nm,0.7s,baz=335,slow=7.7,SNR=3.8
YKA Yellowknife Ar 79.87 18 P **P 17 47 17.7 -0.7**
YKA 17 50 14.1
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 79.87 18 P **P 17 47 17.7 -0.7**
YKA PP PP 17 50 14.1 -5.0
ESDC Sonseca Array 82.80 313 P **P 17 47 34.3 -0.1**
comp=Z,0.5nm,0.5s,mb3.8,baz=37,slow=5.8,SNR=4.8
TAM Tamanrasset 85.82 294 *e*P **P 17 47 50.4 +0.3**
TAM pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
TAM Tamanrasset 85.82 294 *e*P **P 17 47 50.4 +0.3**
comp=Z,3.5nm,0.9s,mb4.6
FCC Fort Churchill 87.47 10 *e*P **P 17 47 56.5 -1.0**
comp=Z,0.4nm,1.1s,mb3.6
SCHQ Schefferville 92.61 356 P **P 17 48 20.5 -1.0**
comp=Z,4.4nm,0.9s,mb4.9,baz=36,slow=5.9,SNR=2.9
SCHQ Schefferville 92.61 356 P **P 17 48 20.5 -1.0**
TORD Torodi Ar. Bea 94.23 288 P **P 17 48 29.4 -0.4**
comp=Z,0.8nm,0.5s,mb4.5,baz=56,slow=4.3,SNR=15
TORD PP PP 17 52 18.7 +2.4
comp=Z,0.6nm,0.9s,baz=40,slow=7.7,SNR=3.8
ULM Lac du Bonnet 95.32 14 LR LR 18 36 17.2
comp=Z,321nm,18.4s,MS4.8,baz=257,slow=38
OTAV Otavalo 147.07 7 *e*PKPbc PKPbc 17 54 54.5 +0.7
LPAZ La Paz 162.69 339 PKP PKPdf 17 55 12.6 -0.2
comp=Z,1.5nm,0.8s,baz=23,slow=6.8,SNR=6.3
LPAZ La Paz 162.69 339 PKIKP PKPdf 17 55 12.6 -0.2
LPAZ pmax pmax
comp=Z,2.0nm,0.8s

IDC ***27*** *17:41:04.5±1.0, 32°.40N×105°.61E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.0/27, mbtmp4.1/13, ML4.0/1, Error ellipse: s-maj=42.8km s-min=18.9km az=57.0*
NEIC ***27*** *17:41:06.5±0.7, 32°.49N×105°.54E, h10km, mb4.1/1, Error ellipse: s-maj=19.3km s-min=8.7km az=83.0*
BJI ***27*** *17:41:06.8, 32°.20N×104°.95E, h16km, mb4.1/1, ML3.8/8, Ms3.9/3, Ms7 3.9/3*
ISC 27 17:41:07.9±1.4, 32°.54N±0°.05×105°.2E±0°.1, h9km±10km, n29, σ0s89/36, mb4.1/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.04**	**218**	Pg	**Pn**	**17 41 35.8**	**-6.7**
CD2				Sg	**Sn**	**17 42 00.0**	**-8.1**
CD2				smax			
comp=N,8μm,0.5s							
XAN	**Xi'an**	**3.44**	**63**	Pg	**Pg**	**17 42 15.0**	**+1.1**
XAN				Sg	**Sg**	**17 43 08.5**	**+10**
XAN				smax			
comp=N,290nm,0.7s							
XAN				smax			
comp=E,190nm,0.7s							
LZH	**Lanzhou**	**3.72**	**343**	Pg	**Pg**	**17 42 19.0**	**-0.2**
LZH				Sn	**Sb**	**17 42 57.0**	**-2.0**
LZH				Sg	**Sg**	**17 43 07.5**	**0.0**
LZH				smax			
comp=N,540nm,0.9s							
LZH				smax			
comp=E,490nm,0.7s							
LZH				LR	LR		
comp=E,970nm,5.6s							
LZH				LR	LR		
comp=Z,2μm,8.6s							
LZH	**Lanzhou**	**3.72**	**343**	*e*Pn	**Pb**	**17 42 13.3**	**-0.5**
LZH				Pg	**Pg**	**17 42 19.0**	**-0.2**
LZH				Sn	**Sb**	**17 42 57.0**	**-2.0**
LZH				Sg	**Sg**	**17 43 07.5**	**0.0**
LZH				smax			
comp=N,540nm,0.9s							
LZH				smax			
comp=E,490nm,0.7s							
LZH				LR	LR		
comp=E,970nm,5.6s							
LZH				LR	LR		
comp=Z,2μm,8.6s							
GYA	**Guiyang**	**6.18**	**168**	Pn	**Pn**	**17 42 37.8**	**-1.7**
GYA				smax			
comp=N,110nm,0.7s							
GYA				smax			
comp=E,150nm,0.8s							
CM31	**Chiang Mai Arr**	**15.11**	**203**	P	**Pn**	**17 44 41.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**15.11**	**203**	Pn	**Pn**	**17 44 41.3**	**-0.4**
comp=E,0.2nm,0.3s,baz=8.8,slow=8.5,SNR=10							
MK31	**Makanchi Array**	**22.57**	**316**	*e*P	**P**	**17 46 08.3**	**-0.1**
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**17 46 08.4**	**0.0**
comp=E,2.8nm,0.8s,mb3.8,baz=115,slow=11,SNR=7.3							
KSH	**Kashi**	**24.59**	**295**	*e*P	**P**	**17 46 32.0**	**+3.7**
KSH				*e*pP		17 46 41.0	
KSH				*e*sP	sP	17 46 44.0	+12
KSH				*e*SKS		17 56 42.0	
KSH				pmax	pmax		
comp=Z,5.0nm,0.7s,mb4.2							
KSH				LR	LR		
comp=N,81nm,5.1s							
KSH				LR	LR		
comp=E,110nm,6.8s							
KSH				LR	LR		
comp=Z,210nm,11.4s							
TKM2	**Tokmak 2**	**25.50**	**303**	*e*P	**P**	**17 46 37.2**	**+0.6**
comp=Z,3.8nm,0.8s,mb4.0							
ZAA0	**Zalesovo Array**	**25.88**	**332**	*e*P	**P**	**17 46 39.5**	**-0.3**
ZALV	**Zalesovo Beam**	**25.88**	**332**	P	**P**	**17 46 40.2**	**+0.4**
comp=Z,2.4nm,0.7s,mb3.8,baz=139,slow=12,SNR=4.9							
UCH	**Uchtor**	**26.13**	**301**	*e*P	**P**	**17 46 41.6**	**-0.7**
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**17 46 48.1**	**+0.8**
comp=Z,2.7nm,0.7s,mb3.9,baz=133,slow=8.2,SNR=7.8							
BVAR	**Borovoye Array**	**32.29**	**320**	P	**P**	**17 47 38.1**	**+1.3**
comp=Z,1.3nm,0.6s,mb4.0,baz=112,slow=9.6,SNR=5.5							
AKTK	**Aktyubinsk**	**38.88**	**312**	P	**P**	**17 48 34.6**	**+1.1**
AKTO	**Aktyubinsk**	**38.88**	**312**	P	**P**	**17 48 34.6**	**+1.1**
comp=Z,2.1nm,0.6s,mb4.1,baz=87,slow=8.4,SNR=7.2							
ARCES	**ARCESS Array B**	**56.35**	**335**	P	**P**	**17 50 49.1**	**+0.2**
comp=Z,3.6nm,0.9s,mb4.4,baz=72,slow=7.8,SNR=8.2							
BRTR	**Keskin Array B**	**56.87**	**299**	P	**P**	**17 50 53.2**	**+0.2**
comp=Z,1.3nm,0.8s,mb4.0,baz=105,slow=7.2,SNR=5.2							
FINES	**FINESS Array B**	**56.92**	**326**	P	**P**	**17 50 53.7**	**+0.7**
comp=Z,5.3nm,0.7s,mb4.7,baz=85,slow=7.0,SNR=16							
FINES	**FINESS Array B**	**56.92**	**326**	P	**P**	**17 50 53.7**	**+0.6**
AKASG	**Malin Array Be**	**57.11**	**313**	P	**P**	**17 50 54.2**	**-0.4**
comp=Z,1.7nm,0.5s,mb4.4,baz=68,slow=7.8,SNR=4.5							
AKASG	**Malin Array Be**	**57.11**	**313**	P	**P**	**17 50 54.2**	**-0.4**
ASAR	**Alice Springs**	**62.24**	**150**	P	**P**	**17 51 26.1**	**-4.1**
comp=Z,1.7nm,0.7s,mb4.3,baz=329,slow=6.5,SNR=18							
NB2	**NORSAR Subarra**	**63.97**	**327**	P	**P**	**17 51 40.8**	**-0.4**
comp=Z,2.2nm,0.5s,mb4.4,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**63.97**	**327**	P	**P**	**17 51 41.2**	**0.0**
comp=Z,2.9nm,0.7s,mb4.4,baz=72,slow=6.7,SNR=12							
YKA	**Yellowknife Ar**	**80.05**	**18**	P	**P**	**17 53 15.7**	**-1.8**
comp=Z,0.6nm,0.6s,mb3.7,baz=329,slow=5.1,SNR=6.1							
YKA	**Yellowknife Ar**	**80.05**	**18**	P	**P**	**17 53 15.7**	**-1.8**

ISCJB ***27*** *17:46:48.5±0.3, 24°.12N±0°.02×122°.36E±0°.02, h33km, Error ellipse: s-maj=3.0km s-min=2.3km az=153.3*
TAP ***27*** *17:46:48.3, 24°.17N×122°.34E, h52km, ML3.0, C*
JMA ***27*** *17:46:48.3±0.2, 24°.31N×122°.36E, h64km, M2.4*
ISC 27 17:46:48.9±0.3, 24°.13N±0°.02×122°.36E±0°.02, h35km, n45, σ0s73/85, 6C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.63**	**298**	⇑*i*P	**Pn**	**17 47 01.1**	**-0.3**
ENA				*e*S	**Sn**	**17 47 10.3**	**+0.1**
baz=304							
TWC	**Suao**	**0.66**	**316**	⇑*i*P	**Pn**	**17 47 01.2**	**-0.7**
TWC				*i* S	**Sn**	**17 47 10.4**	**-0.6**
baz=315							
YOJ	**Yonaguni jima**	**0.68**	**61**	P	**Pn**	**17 47 01.9**	**-0.2**
YOJ				S	**Sn**	**17 47 11.8**	**+0.3**
TWD	**Chiawan**	**0.70**	**266**	⇑*i*P	**Pn**	**17 47 01.8**	**-0.5**
baz=255							
TWD				S	**Sn**	**17 47 11.5**	**-0.3**
baz=255							
HWA	**Hwalien**	**0.70**	**257**	*e*P	**Pn**	**17 47 02.2**	**-0.2**
baz=254							
HWA				*e*S	**Sn**	**17 47 13.0**	**+1.0**
baz=254							
TWE	**Neicheng**	**0.86**	**313**	*i* P	**Pn**	**17 47 04.2**	**-0.3**
baz=306							
TWE				*i* S	**Sn**	**17 47 15.7**	**-0.2**
baz=306							
ENTT	**Nioudou**	**0.88**	**305**	⇑*i*P	**Pn**	**17 47 04.6**	**-0.2**
baz=304							
ENTT				*e*S	**Sn**	**17 47 16.5**	**+0.1**
baz=304							
ESL	**Shilin**	**0.90**	**250**	P	**Pn**	**17 47 04.2**	**-0.9**
baz=240							
ESL				*e*S	**Sn**	**17 47 16.2**	**-0.7**
baz=240							
TWB1	**Santiao Chiao**	**0.93**	**339**	*e*P	**Pn**	**17 47 05.7**	**+0.2**
baz=328							
TWB1				*e*S	**Sn**	**17 47 16.0**	**-1.7**
baz=328							
NNS	**Nan Shan**	**0.95**	**289**	*e*P	**Pn**	**17 47 05.3**	**-0.4**
baz=287							
NNS				*e*S	**Sn**	**17 47 17.8**	**-0.2**
baz=287							
WHF	**Hehuan Shan**	**1.00**	**271**	⇑*i*P	**Pn**	**17 47 06.2**	**-0.2**
baz=259							
WHF				*e*S	**Sn**	**17 47 19.4**	**+0.1**
baz=259							
NSK	**Sanguang**	**1.06**	**301**	⇑*i*P	**Pn**	**17 47 07.1**	**-0.1**
baz=300							
NSK				*e*S	**Sn**	**17 47 20.1**	**-0.7**
baz=300							
NWF	**Wu-fen Shan**	**1.07**	**331**	*e*P	**Pn**	**17 47 08.4**	**+0.9**
baz=331							
NWF				*e*S	**Sn**	**17 47 20.3**	**-0.8**
baz=331							
TWT	**Tachien**	**1.08**	**277**	P	**Pn**	**17 47 08.0**	**+0.3**
baz=265							
TWT				*e*S	**Sn**	**17 47 21.7**	**+0.3**
baz=265							
TWA	**Mucha**	**1.10**	**320**	*e*P	**Pn**	**17 47 07.9**	**+0.1**
baz=332							
TWA				*e*S	**Sn**	**17 47 22.2**	**+0.4**
baz=332							
EHY	**Hungye**	**1.13**	**237**	*e*P	**Pn**	**17 47 08.0**	**-0.3**
baz=234							
EHY				*e*S	**Sn**	**17 47 21.9**	**-0.8**
baz=234							
TAP1	**Taipei**	**1.18**	**320**	*e*P	**Pn**	**17 47 09.6**	**+0.7**
baz=332							
TAP1				*e*S	**Sn**	**17 47 24.6**	**+0.8**
baz=332							
TWF1	**Yuli**	**1.24**	**232**	P	**Pn**	**17 47 09.4**	**-0.4**
baz=241							
TWF1				*e*S	**Sn**	**17 47 24.6**	**-0.7**
baz=241							
IRIF	**Iriomote-Funau**	**1.27**	**81**	P	**Pn**	**17 47 09.8**	**-0.4**
IRIF				S	**Sn**	**17 47 26.1**	**+0.1**
TWS1	**Kuangyinshan**	**1.29**	**319**	P	**Pn**	**17 47 10.2**	**-0.2**
baz=329							
TWS1				*e*S	**Sn**	**17 47 25.7**	**-0.7**
baz=329							
HATJ	**Hateruma jima**	**1.33**	**93**	P	**Pn**	**17 47 11.4**	**+0.5**
NSTT	**Nanjuang**	**1.33**	**292**	*i* P	**Pn**	**17 47 11.5**	**+0.5**
baz=291							
NSTT				*i* S	**Sn**	**17 47 28.1**	**+0.6**
baz=291							
SMLT	**Sun Moon Lake**	**1.35**	**260**	*i* P	**Pn**	**17 47 11.5**	**+0.1**
baz=257							
SMLT				S	**Sn**	**17 47 27.4**	**-0.7**
baz=257							
CHKT	**Chengkung**	**1.37**	**222**	*e*P	**Pn**	**17 47 10.4**	**-1.2**
baz=213							
CHKT				*e*S	**Sn**	**17 47 26.6**	**-1.9**
baz=213							
TYC	**Yuchr**	**1.39**	**261**	*i* P	**Pn**	**17 47 11.8**	**0.0**
baz=252							
TYC				*e*S	**Sn**	**17 47 29.1**	**+0.1**
baz=252							
YUS	**Yu-Shan**	**1.44**	**244**	*e*P	**Pn**	**17 47 12.7**	**+0.3**
baz=232							
YUS				*e*S	**Sn**	**17 47 30.4**	**+0.2**
baz=232							
TWQ1	**Liyutan**	**1.46**	**279**	*e*P	**Pn**	**17 47 13.3**	**+0.5**
baz=277							
TWQ1				*e*S	**Sn**	**17 47 30.0**	**-0.7**
baz=277							
JKRS	**Kuro-shima**	**1.51**	**86**	P	**Pn**	**17 47 13.7**	**+0.2**
JKRS				*e*S	**Sn**	**17 47 33.2**	**+1.2**
TCU	**Taichung**	**1.54**	**271**	*e*P	**Pn**	**17 47 14.7**	**+0.9**
baz=269							
ELDTW	**Lidau**	**1.55**	**233**	*e*P	**Pn**	**17 47 13.5**	**-0.4**
baz=223							
ELDTW				*e*S	**Sn**	**17 47 31.7**	**-1.1**
baz=223							
ALS	**Alishan**	**1.55**	**247**	*e*P	**Pn**	**17 47 14.7**	**+0.7**
baz=244							
ALS				*e*S	**Sn**	**17 47 32.9**	**0.0**
baz=244							
WNT	**Mingjian**	**1.55**	**261**	*e*P	**Pn**	**17 47 14.6**	**+0.5**
baz=259							
CHN5	**Tsauling**	**1.63**	**251**	*e*P	**Pn**	**17 47 15.8**	**+0.7**
baz=249							
CHN5				*e*S	**Sn**	**17 47 35.7**	**+0.9**
baz=249							
JIJ	**Ishigaki jima**	**1.65**	**82**	P	**Pn**	**17 47 14.9**	**-0.5**
JIJ				*e*S	**Sn**	**17 47 34.3**	**-1.0**
WGK	**Gukeng**	**1.70**	**255**	*e*P	**Pn**	**17 47 16.6**	**+0.5**
baz=252							
WGK				*e*S	**Sn**	**17 47 38.0**	**+1.3**
baz=252							
TWG	**Pinlang**	**1.76**	**222**	*e*P	**Pn**	**17 47 16.2**	**-0.7**
baz=228							
TWG				*e*S	**Sn**	**17 47 36.3**	**-1.8**
baz=228							
WTP	**Ta-pu**	**1.82**	**241**	*e*P	**Pn**	**17 47 18.5**	**+0.7**
baz=239							
WTP				*e*S	**Sn**	**17 47 40.0**	**+0.3**
baz=239							
TWK	**Hsinying**	**1.92**	**244**	*e*P	**Pn**	**17 47 19.7**	**+0.6**
baz=241							
TWK				*e*S	**Sn**	**17 47 42.4**	**+0.4**
baz=241							
CHN1	**Nanshi**	**1.92**	**241**	*e*P	**Pn**	**17 47 20.1**	**+0.9**
baz=238							
CHN1				*e*S	**Sn**	**17 47 42.8**	**+0.6**
baz=238							
SGST	**Jiashian**	**1.93**	**238**	*e*P	**Pn**	**17 47 20.3**	**+1.0**
baz=235							
SGST				*e*S	**Sn**	**17 47 44.6**	**+2.3**
baz=235							
ECL	**Taimali**	**2.00**	**220**	*e*P	**Pn**	**17 47 19.2**	**-1.0**
baz=225							
ECL				*e*S	**Sn**	**17 47 42.1**	**-1.9**
baz=225							
SSD	**Sandimen**	**2.10**	**229**	*e*P	**Pn**	**17 47 22.5**	**+0.9**
baz=227							
SSD				*e*S	**Sn**	**17 47 47.2**	**+0.7**
baz=227							
JTJ	**Tarama**	**2.20**	**76**	P	**Pn**	**17 47 23.0**	**+0.1**
EAST	**Anshuo**	**2.23**	**219**	*e*P	**Pn**	**17 47 24.1**	**+0.8**
baz=217							
SCZT	**Fangliau**	**2.37**	**223**	*e*P	**Pn**	**17 47 25.6**	**+0.3**
baz=218							
SCZT				*e*S	**Sn**	**17 47 53.2**	**0.0**
baz=218							

NOU ***27*** *17:47:25.3±1.2, 19°.84S×168°.67E, h30km, MD3.1, ML4.4*
LDG ***27*** *17:47:28.2±0.5, 19°.83S×168°.25E, h10km, Mb4.6/1, Error ellipse: s-maj=45.3km s-min=7.1km az=117.0*
ISCJB ***27*** *17:47:29.3±0.6, 20°.21S±0°.07×168°.59E±0°.09, h33km, mb4.6/16, Error ellipse: s-maj=15.1km s-min=5.5km az=37.0*
NEIC ***27*** *17:47:31.1±0.6, 20°.13S×168°.70E, h35km, mb4.8/7, Error ellipse: s-maj=16.9km s-min=16.5km az=143.0*
IDC ***27*** *17:47:34.8±10.0, 20°.19S×168°.65E, h66km±99km, mb4.0/7, mb1 4.2/8, mb1mx4.0/15, mbtmp4.0/8, ML3.9/1, Error ellipse: s-maj=46.3km s-min=27.2km az=10.0*
ISC 27 17:47:27.7±2.6, 20°.19S±0°.07×168°.5E±0°.1, h9km±17km, n54, σ1s00/40, mb4.6/16, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.48**	**218**	*e*P	**Pn**	**17 48 07.1**	**-1.1**
BAYA				*e*S	**Sn**	**17 48 38.6**	**-0.1**
DZM	**Mont Dzumac**	**2.70**	**226**	*e*P	**Pn**	**17 48 09.5**	**-1.7**
DZM				*e*S	**Sn**	**17 48 43.2**	**-0.9**
DZM				AMP		17 48 49.9	
comp=Z,3μm,2.6s							
NORM	**Noumea**	**2.78**	**223**	*e*P	**Pn**	**17 48 11.8**	**-0.7**
NORM				*e*S	**Sn**	**17 48 45.5**	**-0.6**
NOUC	**Port Laguerre**	**2.81**	**227**	*e*P	**Pn**	**17 48 12.3**	**-0.5**
NOUC				*e*S	**Sn**	**17 48 47.8**	**+0.9**
NOUC				AMP		17 49 03.1	
comp=Z,119nm,5.8s							
MVNO	**Noumea**	**2.84**	**223**	*e*P	**Pn**	**17 48 13.0**	**-0.1**
MVNO				*e*S	**Sn**	**17 48 47.6**	**+0.1**
ONTRN	**Noumea**	**2.86**	**222**	*e*P	**Pn**	**17 48 12.9**	**-0.5**

ONTRN eS Sn 17 48 47.4 -0.6
ARMA Armdale 18.34 233 eP Pn 17 51 45.6 +3.3
URZ Urewera 19.48 159 P Pn 17 51 56.7 +0.6
comp=Z,0.3nm,0.3s,baz=324,slow=17,SNR=4.2
CTA Charters Tower 20.91 266 eP P 17 52 14.5 +3.9
comp=Z,10.0nm,1.1s
CTA Charters Tower 20.91 266 P P 17 52 14.8 +4.1
comp=Z,7.5nm,0.6s,baz=90,slow=12,SNR=10
CTA Charters Tower 20.91 266 P P 17 52 14.8 +4.1
CTAO Charters Tower 20.91 266 eP P 17 52 14.8 +4.1
comp=Z,17nm,1.0s
CNB Canberra Magne 22.62 224 eP P 17 52 31.7 +2.9
YNG Young 22.70 228 eP P 17 52 31.6 +2.0
comp=Z,9.2nm,0.8s,mb4.3
CMSA Cobar Meteorol 23.40 237 eP P 17 52 38.2 +1.1
MILA Mila 23.83 221 eP P 17 52 42.5 +1.4
comp=Z,28nm,0.8s,mb4.7
TOO Toolangi 26.47 224 eP P 17 53 06.5 +1.3
STKA Stephens Creek 26.78 239 eP P 17 53 08.8 +0.8
comp=Z,5.7nm,0.6s,mb4.3
STKA Stephens Creek 26.78 239 P P 17 53 09.4 +1.4
comp=Z,6.3nm,0.7s,mb4.3,baz=64,slow=7.5,SNR=16
ASAR Alice Springs 32.26 257 P P 17 53 56.5 -0.3
comp=Z,12nm,0.6s,mb4.9,baz=85,slow=9.0,SNR=85
FORT Forrest 37.84 246 eP P 17 54 45.0 +0.2
comp=Z,6.6nm,0.7s,mb4.5
FITZ Fitzroy Crossi 40.49 265 eP P 17 55 07.3 +0.2
comp=Z,27nm,0.6s,mb5.2
MBWA Marble Bar 45.52 260 eP P 17 55 47.9 0.0
comp=Z,20nm,1.0s,mb5.0
MEEK Meekatharra 46.02 252 eP P 17 55 51.6 -0.2
NWAO Narrogin (SRO) 47.19 243 eP P 17 56 00.7 -0.1
comp=Z,124nm,0.8s,mb5.9
NWAO Narrogin (SRO) 47.19 243 eP P 17 55 60.0 -0.9
comp=Z,22nm,0.8s,mb5.1
RKT Rikitea 52.32 104 eLQ 17 56 15.3
RKT comp=Z,557nm,27.2s
RKT eLR LR 17 58 27.7
comp=Z,967nm,28.8s
SBA Scott Base 57.71 180 eP P 17 57 18.5 +0.3
comp=Z,8.8nm,1.0s,mb4.7
CASY Casey 58.99 204 eP P 17 57 25.8 -1.5
comp=Z,4.3nm,0.9s,mb4.5
KSM Kuching 60.94 284 eP P 17 57 40.6 -1.0
comp=Z,9.4nm,1.2s,mb4.8
PETK Petropavlovsk- 73.59 353 P P 17 59 00.3 -0.6
comp=Z,2.9nm,0.8s,mb4.3,baz=193,slow=5.9,SNR=6.6
CMAR Chiang Mai Arr 78.29 295 P P 17 59 29.4 +0.9
comp=Z,1.0nm,0.9s,mb3.7,baz=138,slow=4.6,SNR=6.9
ULN Ulaanbaatar 87.23 324 eP P 18 00 13.8 -0.5
comp=Z,5.7nm,1.1s,mb4.7
SONM Songino Array 87.58 323 P P 18 00 16.4 +0.3
comp=Z,2.0nm,0.9s,mb4.3,baz=141,slow=6.1,SNR=8.1
NVAR Mina Array Bea 89.93 49 P P 18 00 25.7 -1.6
comp=Z,0.8nm,0.8s,mb4.1,baz=235,slow=9.0,SNR=4.4
MOX Moxa 144.56 334 eP PKPdf 18 07 02.4 -2.0
MOX e 18 07 10.9
GERES GERESS Array B 145.00 331 PKPbc PKPbc 18 07 04.3 -0.2
comp=Z,0.9nm,0.7s,baz=35,slow=4.9,SNR=8.0
GRA1 Grafenberg Arr 145.46 334 ePKP PKPdf 18 07 05.5 -0.5
GRF Grafenberg Arr 145.46 334 ePKP PKPdf 18 07 05.5 -0.5
WLF Walferdange 147.41 339 ePKPbc PKPbc 18 07 11.4 -0.4
GIVF Givet 147.47 340 ePKP1 PKPbc 18 07 11.2 -0.7
BAIF Baives 147.70 341 ePKP1 PKPbc 18 07 12.0 -0.5
CDF Champ du Feu 148.05 336 ePKP1 PKPbc 18 07 12.9 -0.6
comp=Z,23nm,1.1s
CABF La Chapelle 149.99 335 ePKP1 PKPbc 18 07 18.3 -0.2
LOR Lormes 150.25 339 ePKP1 PKPbc 18 07 18.2 -0.9
comp=Z,24nm,1.1s
SSF Saint Saulge 150.55 339 ePKP1 PKPbc 18 07 19.1 -0.7
comp=Z,37nm,1.3s
LPL La Plagne 150.62 333 ePKP1 PKPbc 18 07 19.7 -0.4
LPG La Plagne 150.62 333 ePKP1 PKPbc 18 07 19.9 -0.2
SMF Signal de Mont 150.79 338 ePKP1 PKPbc 18 07 19.6 -0.8
AVF Avril sur Loir 150.84 339 ePKP1 PKPbc 18 07 19.3 -1.2
SGMF Saint Gilles 151.09 348 ePKP1 PKPbc 18 07 19.7 -1.4
ROSF Rostrenen 151.15 349 ePKP1 PKPbc 18 07 19.6 -1.6
TCF Toulx Ste Croi 151.66 340 ePKP1 PKPbc 18 07 21.6 -0.9
MFF Saint Martin d 152.07 343 ePKP1 PKPbc 18 07 22.1 -1.3

*KRSC **27** 18:21:01.8±0.4, 53°.64N×160°.66E, h36km±35km, ML4.3*
*ISCJB **27** 18:21:02.3±0.5, 53°.61N±0°.03×160°.68E±0°.08, h67km±4km, mb3.8/17, Error ellipse: s-maj=8.8km s-min=2.9km az=26.4*
*MOS **27** 18:21:02.1±1.7, 53°.71N×160°.53E, h66km, mb4.0/12, Error ellipse: s-maj=15.7km s-min=7.7km az=77.3*
*NEIC **27** 18:21:03.9±1.4, 53°.91N×160°.33E, h57km±15km, mb4.2/2, Error ellipse: s-maj=19.3km s-min=12.1km az=158.0*
*IDC **27** 18:21:06.6±1.9, 53°.92N×160°.24E, h79km±21km, mb3.5/14, mb1 3.7/14, mb1mx3.5/27, mbtmp3.5/14, Error ellipse: s-maj=25.7km s-min=15.6km az=173.0*
ISC 27 18:21:03.3±0.5, 53°.60N±0°.03×160°.67E±0°.08, h61km±4km, n66, σ1°.04/91, mb3.9/17, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.64**	**218**	*eP*		**Pn**	**18 21 15.8**	**-1.0**
SPN				*eS*		**Sn**	**18 21 25.3**	**-1.4**
KII	**Karymskiy**	**0.84**	**302**	*eP*		**Pn**	**18 21 17.9**	**-1.5**
NLC	**Nalytchevo**	**0.90**	**242**	*eP*		**Pn**	**18 21 19.4**	**-0.7**
NLC				*eS*		**Sn**	**18 21 31.9**	**-0.6**
MKZ	**Mys Kozlova**	**1.14**	**33**	*eP*		**Pn**	**18 21 21.4**	**-1.8**
MKZ				*i* S		**Sn**	**18 21 35.7**	**-2.4**
AVH	**Avacha**	**1.20**	**254**	*eP*		**Pn**	**18 21 24.1**	**+0.1**
AVH				*i* S		**Sn**	**18 21 39.7**	**+0.2**
PET	**Petropavlovsk**	**1.34**	**245**	⇑*i* PN		**Pn**	**18 21 26.0**	**+0.2**
PET				*i* S		**Sn**	**18 21 43.4**	**+0.7**
PET	comp=Z,212nm,0.5s			pmax	pmax			
PET	comp=E,1μm,0.6s			smax				
PET	comp=N,1μm,0.6s			smax				
PET	**Petropavlovsk**	**1.34**	**245**	*eP*		**Pn**	**18 21 25.6**	**-0.2**
PET				*i* S		**Sn**	**18 21 42.9**	**+0.2**
PET	**Petropavlovsk**	**1.34**	**245**	*e*Pn		**Pn**	**18 21 25.1**	**-0.8**
PET				*e*Sn		**Sn**	**18 21 41.5**	**-1.2**
GNL	**Ganaly**	**1.62**	**274**	*eP*		**Pn**	**18 21 29.8**	**+0.1**
TUMR	**Tumrok**	**1.71**	**350**	*eP*		**Pn**	**18 21 30.6**	**-0.2**
TUMR				*i* S		**Sn**	**18 21 51.1**	**-0.6**
RUS	**Russkaya**	**1.75**	**229**	*eP*		**Pn**	**18 21 31.0**	**-0.4**
RUS				*i* S		**Sn**	**18 21 52.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**1.85**	**256**	*e*Pn		**Pn**	**18 21 32.9**	**+0.2**
PETK	**Petropavlovsk-**	**1.85**	**256**	P		**Pn**	**18 21 33.0**	**+0.3**
PETK	comp=N,38nm,0.3s,baz=73,slow=19,SNR=723			S		**Sn**	**18 21 56.5**	**+1.6**
PETK	**Petropavlovsk-**	**1.85**	**256**	PN		**Pn**	**18 21 33.0**	**+0.3**
PETK				S		**Sn**	**18 21 56.5**	**+1.6**
PETK	comp=Z,38nm,0.3s			pmax	pmax			
PETK	comp=N,39nm,0.3s			smax				
GRL	**Gorelyy**	**1.89**	**237**	*eP*		**Pn**	**18 21 33.4**	**+0.2**
GRL				*e*S		**Sn**	**18 21 57.2**	**+1.3**
KMNR	**Kamenistaya**	**2.17**	**354**	*eP*		**Pn**	**18 21 37.2**	**+0.1**
KMNR				*i* S		**Sn**	**18 22 03.5**	**+0.6**
BZMR	**Bezymyannaya**	**2.34**	**358**	*eP*		**Pn**	**18 21 39.7**	**+0.3**
BZMR				*i* S		**Sn**	**18 22 08.1**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**2.34**	**0**	*eP*		**Pn**	**18 21 40.0**	**+0.6**
BZGR				*i* S		**Sn**	**18 22 07.4**	**+0.4**
KIRR	**Kirishev**	**2.36**	**356**	*eP*		**Pn**	**18 21 39.9**	**+0.2**
KIRR				*i* S		**Sn**	**18 22 07.4**	**-0.1**
BZWR	**Bezymyannyi-We**	**2.37**	**358**	*eP*		**Pn**	**18 21 40.4**	**+0.6**
BZWR				*i* S		**Sn**	**18 22 08.5**	**+0.9**
KPT	**Kopyto**	**2.38**	**354**	*eP*		**Pn**	**18 21 40.0**	**+0.1**
KPT				*i* S		**Sn**	**18 22 07.9**	**-0.1**
ZLN	**Zelenaya**	**2.42**	**2**	P		**Pn**	**18 21 41.1**	**+0.6**
ZLN				*i* S		**Sn**	**18 22 09.7**	**+0.8**
KOZ	**Kozyrevsk**	**2.50**	**350**	*eP*		**Pn**	**18 21 41.8**	**+0.2**
KOZ				*e*S		**Sn**	**18 22 11.0**	**+0.1**
KOZR	**Kozyr**	**2.51**	**350**	PN		**Pn**	**18 21 41.8**	**+0.1**
KOZR				S		**Sn**	**18 22 11.0**	**-0.1**
CIRR	**Tsirk**	**2.52**	**1**	P		**Pn**	**18 21 42.4**	**+0.6**
CIRR				*i* S		**Sn**	**18 22 12.0**	**+0.7**
KRSR	**Krestovskiy**	**2.62**	**359**	*eP*		**Pn**	**18 21 43.0**	**-0.2**
MIPR	**Malaya Ipel'ka**	**2.71**	**242**	*eP*		**Pn**	**18 21 44.7**	**+0.3**
KLY	**Klyuchi**	**2.72**	**360**	*eP*		**Pn**	**18 21 44.2**	**-0.3**
KLY				*i* S		**Sn**	**18 22 16.0**	**-0.1**
SRDR	**Sredinnyy**	**2.78**	**349**	*eP*		**Pn**	**18 21 44.2**	**-1.1**
KBTR	**Krutoberegovo**	**2.89**	**25**	*eP*		**Pn**	**18 21 47.0**	**+0.1**
KBTR				*e*S		**Sn**	**18 22 20.4**	**0.0**
SRKR	**Sorokina**	**3.07**	**5**	*eP*		**Pn**	**18 21 50.0**	**+0.7**
SRKR				*e*S		**Sn**	**18 22 25.2**	**+0.4**
SKR	**Severo-Kuril's**	**4.05**	**226**	*e*PN		**Pn**	**18 22 04.0**	**+1.3**
ALID	**Alaid**	**4.17**	**231**	P		**Pn**	**18 22 07.2**	**+2.9**
YAK	**Yakutsk**	**18.37**	**310**	*eP*		**Pn**	**18 25 11.2**	**-2.1**
YAK	comp=Z,10.0nm,0.8s			pmax	pmax			
TIXI	**Tiksi**	**22.77**	**334**	*eP*		**P**	**18 26 00.6**	**+0.6**
TIXI	comp=Z,4.0nm,2.3s,mb3.4			pmax	pmax			
MAJO	**Matsushiro**	**23.13**	**232**	P		**P**	**18 26 04.5**	**+0.4**
MAJO	comp=Z,5.0nm,0.7s,mb4.0			pmax	pmax			
MAJO	**Matsushiro**	**23.13**	**232**	P		**P**	**18 26 04.5**	**+0.4**
MJAR	**Matsushiro Arr**	**23.13**	**232**	P		**P**	**18 26 05.3**	**+1.2**
MJAR	**Matsushiro Arr**	**23.13**	**232**	P		**P**	**18 26 05.3**	**+1.2**
MJAR	comp=Z,1.0nm,0.7s			pmax	pmax			
INK	**Inuvik**	**33.26**	**38**	P		**P**	**18 27 31.3**	**-2.9**
INK	comp=Z,8.0nm,1.6s			pmax	pmax			
INK	**Inuvik**	**33.26**	**38**	P		**P**	**18 27 31.3**	**-2.8**
YKA	**Yellowknife Ar**	**42.56**	**43**	P		**P**	**18 28 53.2**	**+0.8**
YKA	**Yellowknife Ar**	**42.56**	**43**	P		**P**	**18 28 53.2**	**+0.8**
YKA	comp=Z,1.0nm,0.5s			pmax	pmax			
YKA	**Yellowknife Ar**	**42.56**	**43**	P		**P**	**18 28 53.2**	**+0.8**
ZALV	**Zalesovo Beam**	**42.79**	**302**	P		**P**	**18 28 52.2**	**-2.2**
ZALV	**Zalesovo Beam**	**42.79**	**302**	P		**P**	**18 28 52.2**	**-2.3**
SPITS	**Spitsbergen Ar**	**46.69**	**350**	P		**P**	**18 29 23.9**	**-1.3**
KURK	**Kurchatov**	**47.76**	**302**	P		**P**	**18 29 31.7**	**-2.1**
KURK	**Kurchatov**	**47.76**	**302**	P		**P**	**18 29 31.7**	**-2.1**
KURK	comp=Z,1.0nm,0.4s,mb4.2			pmax	pmax			
MKAR	**Makanchi Array**	**48.24**	**296**	P		**P**	**18 29 35.0**	**-2.6**
MKAR	**Makanchi Array**	**48.24**	**296**	*eP*		**P**	**18 29 35.0**	**-2.6**
BVAR	**Borovoye Array**	**50.34**	**308**	P		**P**	**18 29 52.0**	**-1.5**
BVAR	**Borovoye Array**	**50.34**	**308**	P		**P**	**18 29 52.0**	**-1.5**
BVAR	comp=Z,1.0nm,0.4s			pmax	pmax			
ARCES	**ARCESS Array B**	**52.91**	**342**	P		**P**	**18 30 11.7**	**-0.8**
ARCES	**ARCESS Array B**	**52.91**	**342**	P		**P**	**18 30 11.7**	**-0.7**
ARCES	comp=Z,3.0nm,0.8s,mb4.3,baz=23,slow=9.5,SNR=5.6			pmax	pmax			
NVAR	**Mina Array Bea**	**55.25**	**71**	P		**P**	**18 30 32.8**	**+2.9**
PDAR	**Pinedale Array**	**56.98**	**61**	P		**P**	**18 30 44.2**	**+2.0**
CMAR	**Chiang Mai Arr**	**58.62**	**258**	P		**P**	**18 30 55.3**	**+1.3**
CMAR	**Chiang Mai Arr**	**58.62**	**258**	P		**P**	**18 30 55.3**	**+1.3**
CMAR	comp=Z,1.0nm,0.4s			pmax	pmax			
FINES	**FINESS Array B**	**59.79**	**337**	P		**P**	**18 31 00.9**	**-0.5**
FINES	**FINESS Array B**	**59.79**	**337**	P		**P**	**18 31 00.9**	**-0.5**
FINES	comp=Z,1.0nm,0.3s			pmax	pmax			
NB2	**NORSAR Subarra**	**63.15**	**344**	P		**P**	**18 31 23.3**	**-0.8**
NOA	**NORSAR Array B**	**63.15**	**344**	P		**P**	**18 31 23.3**	**-0.8**
NOA	comp=Z,1.0nm,0.4s			pmax	pmax			
NOA	**NORSAR Array B**	**63.15**	**344**	P		**P**	**18 31 23.3**	**-0.8**
TXAR	**Lajitas Array**	**70.12**	**68**	P		**P**	**18 32 11.0**	**+2.0**
TXAR	**Lajitas Array**	**70.12**	**68**	P		**P**	**18 32 11.0**	**+2.0**
TXAR	comp=Z,1.0nm,0.6s			pmax	pmax			

CASC 27 18:39:55.6±3.7, 8°.44N×82°.99W, h4km, MD3.5, 1C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**320**	⇓*eP*		Pg	18 40 02.4	+1.4
ACR				*e*S		Sg	18 40 07.8	+3.2
BRU2	**Volcan**	**0.46**	**40**	⇓*i* P		Pg	18 40 06.2	+1.8
BRU2				*e*S		Sg	18 40 14.2	+3.8
TBS2		**0.48**	**43**	*eP*		Pg	18 40 00.9	-4.0
TBS2				*e*S		Sg	18 40 12.3	+1.2
CTCR	**Cotoan**	**0.51**	**26**	⇓*i* P		Pg	18 40 07.1	+1.7
CTCR				*e*S		Sg	18 40 15.2	+3.2
BAR1		**0.86**	**338**	⇓*eP*		Pg	18 40 12.7	+0.6
BAR1				*e*S		Sg	18 40 23.4	+0.1
BUS	**Buena Vista**	**1.34**	**326**	⇓*eP*		Pn	18 40 21.1	0.0
BUS				*e*S		Sg	18 40 38.2	-0.7
URSC	**Urasca**	**1.59**	**331**	⇓*eP*		Pn	18 40 25.1	+0.5
PRS1	**Puriscal**	**2.02**	**320**	*eP*		Pn	18 40 31.7	+1.3

*ISCJB **27** 18:50:42.7±0.7, 12°.54N±0°.03×120°.67E±0°.03, h5km±5km, mb3.5/4, Error ellipse: s-maj=5.1km s-min=4.5km az=26.0*
*MAN **27** 18:50:44, 12°.53N×120°.69E, h15km, mb5.2, ML4.2, MS4.4*
*IDC **27** 18:50:44.3±1.4, 12°.46N×120°.66E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/22, mbtmp3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=35.1km s-min=14.5km az=97.0*
ISC 27 18:50:43.6±0.6, 12°.57N±0°.03×120°.68E±0°.03, h6km±5km, n27, σ0°.98/34, mb3.5/4, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.45**	**104**	*eP*		**Pg**	**18 50 53.2**	**+1.0**
SJMP				*e*S		**Sg**	**18 51 00.2**	**+2.1**
BUSP	**Coron**	**0.73**	**220**	*eP*		**Pg**	**18 50 57.7**	**+0.1**
BUSP				*e*S		**Sg**	**18 51 06.4**	**-0.8**
PGP	**Puerto Galera**	**0.96**	**16**	*eP*		**Pg**	**18 51 02.3**	**+0.2**
LUBP	**Lubang**	**1.23**	**340**	*eP*		**Pg**	**18 51 07.7**	**+0.5**
LUBP				*e*S		**Sg**	**18 51 23.4**	**+0.2**
OTRP	**Odiongan**	**1.33**	**99**	*eP*		**Pn**	**18 51 08.3**	**-0.3**
OTRP				*e*S		**Sb**	**18 51 24.9**	**-1.3**
BOAC	**Boac**	**1.44**	**52**	*eP*		**Pn**	**18 51 11.2**	**+0.9**
BOAC				*e*S		**Sn**	**18 51 29.6**	**+0.2**
TGY	**Tagaytay City**	**1.54**	**9**	Pg		**Pg**	**18 51 13.2**	**0.0**
TGY	391nm,0.3s,baz=192,slow=3.3,SNR=31			Lg			18 51 37.4	
CUYO	**Cuyo Island**	**1.74**	**169**	*eP*		**Pn**	**18 51 12.2**	**-2.2**
ENPP	**El Nido**	**1.83**	**222**	*eP*		**Pn**	**18 51 14.8**	**-0.7**
KALP	**Kalibo**	**1.85**	**118**	*eP*		**Pg**	**18 51 18.4**	**-0.7**
KALP				*e*S		**Sg**	**18 51 51.4**	**+8.2**
AUQP	**San Andres**	**2.09**	**69**	*eP*		**Pg**	**18 51 23.2**	**-0.4**
GQP	**Guinayangan**	**2.18**	**52**	⇓*eP*		**Pn**	**18 51 19.4**	**-1.0**
GQP				*i* S		**Sn**	**18 51 52.7**	**+5.1**
RCP	**Roxas**	**2.26**	**116**	⇓*eP*		**Pg**	**18 51 33.8**	**+6.8**
POLP	**Polilio Island**	**2.47**	**30**	*eP*		**Pg**	**18 51 30.3**	**-0.7**
GUIM	**Jordan**	**2.69**	**136**	*eP*		**Pn**	**18 51 28.0**	**+0.6**
BALP	**Baler**	**3.27**	**15**	*eP*		**Pb**	**18 51 40.5**	**-1.5**
PVCP	**Virac**	**3.54**	**73**	*eP*		**Pb**	**18 51 45.5**	**-1.1**
SNPH	**Sibulan**	**4.08**	**142**	⇓*eP*		**Pn**	**18 51 47.8**	**+1.3**
SNPH				*i* S		**Sn**	**18 52 34.0**	**-0.5**
CAUP	**Cauayan**	**4.49**	**14**	*eP*		**Pb**	**18 51 59.0**	**-3.8**
BATP	**Bataraza**	**4.69**	**217**	*eP*		**Pn**	**18 51 55.2**	**+0.2**
IPIL	**Ipil**	**5.11**	**158**	*eP*		**Pn**	**18 52 00.4**	**-0.2**
PAGZ	**Pagadian**	**5.39**	**150**	*eP*		**Pn**	**18 52 05.7**	**+1.1**
DAV	**Davao City (W)**	**7.29**	**138**	LR		LR	18 55 49.0	
CMAR	comp=Z,111nm,20.0s,baz=219,slow=42 **Chiang Mai Arr**	**21.73**	**288**	P		**P**	**18 55 36.5**	**+0.7**
ASAR	1.6nm,1.0s,mb3.4,baz=86,slow=9.0,SNR=4.8 **Alice Springs**	**38.27**	**160**	P		**P**	**18 58 05.7**	**+0.9**
MKAR	0.3nm,0.5s,mb3.3,baz=341,slow=7.0,SNR=6.4 **Makanchi Array**	**46.93**	**324**	P		**P**	**18 59 19.1**	**+4.1**
ZALV	0.4nm,0.8s,mb3.4,baz=133,slow=8.5,SNR=3.6 **Zalesovo Beam**	**50.05**	**333**	P		**P**	**18 59 40.7**	**+1.9**
	0.6nm,0.5s,mb3.9,baz=114,slow=6.6,SNR=3.3							

*IDC **27** 19:11:49.9±0.9, 31°.72N×104°.16E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.6/26, mbtmp3.7/10, Error ellipse: s-maj=41.9km s-min=17.5km az=52.0*
*NEIC **27** 19:11:51.8±0.5, 31°.92N×104°.46E, h10km, Error ellipse: s-maj=16.8km s-min=9.8km az=78.0*
*BJI **27** 19:11:51.9, 31°.90N×104°.27E, h16km, ML3.5/11*
ISC 27 19:11:51.2±0.8, 31°.90N±0°.04×104°.29E±0°.06, h2km±6km, n21, σ1°.09/27, mb3.7/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.09**	**205**	Pg		**Pg**	**19 12 11.8**	**-0.3**
CD2				Sg		**Sg**	**19 12 26.3**	**+0.1**
CD2	comp=N,1μm,0.5s			smax				
LZH	**Lanzhou**	**4.19**	**355**	*e*Pn		**Pn**	**19 13 00.0**	**+3.9**
LZH	comp=N,53nm,0.8s			smax				
LZH	comp=E,52nm,0.7s			smax				
LZH	**Lanzhou**	**4.19**	**355**	*e*Pn		**Pg**	**19 13 13.0**	**+1.5**
LZH				Pg		Px	19 13 20.3	
LZH				Sn		**Sn**	**19 13 52.5**	**+6.9**
LZH				Sg		**Sg**	**19 14 04.3**	**-1.5**
LZH	comp=N,88nm,0.8s			smax				
LZH	comp=E,100nm,1.0s			smax				
LZH	comp=N,210nm,6.6s			LR		LR		
LZH	comp=Z,460nm,8.1s			LR		LR		
XAN	**Xi'an**	**4.44**	**60**	Pn		**Pn**	**19 13 00.5**	**+1.0**
XAN				Pg		**Pg**	**19 13 13.8**	**-2.4**
XAN				Sn		**Sn**	**19 13 56.3**	**+4.6**
XAN				Sg		**Sg**	**19 14 14.3**	**+0.6**
XAN	comp=N,95nm,0.7s			smax				
XAN	comp=E,59nm,0.9s			smax				
GYA	**Guiyang**	**5.81**	**158**	Pn		**Pn**	**19 13 18.0**	**-0.3**
GYA	comp=N,40nm,0.8s			smax				
GYA	comp=E,50nm,0.9s			smax				
WHN	**Wuhan**	**8.72**	**96**	*eP*		Px	19 14 12.8	
WHN				S		**Sn**	**19 15 32.0**	**-5.2**
WHN	comp=N,350nm,4.6s			LR		LR		
WHN	comp=E,170nm,3.1s			LR		LR		
CM31	**Chiang Mai Arr**	**14.23**	**201**	*e*Pn		**Pn**	**19 15 21.0**	**+7.2**
CMAR	**Chiang Mai Arr**	**14.23**	**201**	Pn		**Pn**	**19 15 15.3**	**+1.6**
KSRS	comp=E,0.0nm,0.3s,baz=8.8,slow=9.1,SNR=3.3 **Korea Array**	**20.19**	**68**	P		**P**	**19 16 28.4**	**+1.3**
CN2	comp=E,0.8nm,0.7s,baz=251,slow=11,SNR=3.1 **Changchun**	**20.43**	**48**	*eP*		**P**	**19 16 30.8**	**+1.1**
HIA	**Hailar**	**20.87**	**29**	*eP*		**P**	**19 16 34.0**	**-0.3**
MK31	**Makanchi Array**	**22.49**	**318**	*eP*		**P**	**19 16 52.3**	**+0.6**
MKAR	**Makanchi Array**	**22.49**	**318**	P		**P**	**19 16 52.6**	**+0.9**
ZALV	comp=E,0.3nm,0.4s,mb3.0,baz=106,slow=13,SNR=6.4 **Zalesovo Beam**	**26.08**	**333**	P		**P**	**19 17 26.4**	**+0.5**
KURK	comp=E,0.7nm,0.5s,mb3.5,baz=113,slow=9.6,SNR=3.4 **Kurchatov**	**26.71**	**322**	P		**P**	**19 17 31.9**	**+0.2**
ARCES	comp=E,0.2nm,0.3s,mb3.1,baz=131,slow=8.9,SNR=7.5 **ARCESS Array B**	**56.60**	**336**	P		**P**	**19 21 34.5**	**-0.5**
FINES	comp=E,3.6nm,0.8s,mb4.4,baz=78,slow=11,SNR=4.4 **FINESS Array B**	**57.00**	**326**	P		**P**	**19 21 37.3**	**-0.6**
ASAR	comp=E,1.0nm,0.5s,mb4.1,baz=95,slow=8.0,SNR=8.1 **Alice Springs**	**62.09**	**149**	P		**P**	**19 22 12.6**	**-0.9**
NOA	comp=E,0.4nm,0.5s,mb3.8,baz=333,slow=6.7,SNR=15 **NORSAR Array B**	**64.07**	**327**	P		**P**	**19 22 24.9**	**-1.4**
STKA	comp=E,0.4nm,0.4s,mb3.8,baz=65,slow=6.2,SNR=3.4 **Stephens Creek**	**72.59**	**147**	P		**P**	**19 23 17.6**	**-2.2**
YKA	comp=E,0.7nm,0.5s,mb3.8,baz=315,slow=13,SNR=3.5 **Yellowknife Ar**	**80.88**	**17**	P		**P**	**19 24 06.0**	**-0.4**
	comp=E,0.4nm,0.7s,mb3.5,baz=328,slow=5.5,SNR=3.8							

*ISCJB **27** 19:13:30.9±0.3, 45°.81N±0°.02×20°.57E±0°.03, h10km, Error ellipse: s-maj=3.2km s-min=2.6km az=147.7*
*CSEM **27** 19:13:30.5±0.2, 45°.84N×20°.58E, h2km, ML2.5, Error ellipse: s-maj=5.4km s-min=4.4km az=62.0*
*BEO **27** 19:13:32.7±0.5, 45°.78N×20°.60E, h0km*
ISC 27 19:13:31.1±0.6, 45°.83N±0°.02×20°.60E±0°.03, h3km±4km, n38, σ1°.21/59, 9C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIM	**Timisoara**	**0.44**	**103**	⇑*i* P		**Pg**	**19 13 39.1**	**-0.5**
TIM				S		**Sg**	**19 13 45.8**	**+0.5**
TIM	**Timisoara**	**0.44**	**103**	*i* Pg		**Pg**	**19 13 39.1**	**-0.5**
TIM				S		**Sg**	**19 13 45.8**	**+0.5**
FRGS	**Fruska Gora**	**0.88**	**220**	*eP*g		**Pg**	**19 13 47.4**	**-0.5**
FRGS				*e*Sg		**Sg**	**19 13 59.9**	**+0.7**
FGSL	**Fruska Gora**	**0.88**	**220**	*eP*g		**Pg**	**19 13 47.4**	**-0.5**
FGSL				*e*Sg		**Sg**	**19 13 59.9**	**+0.6**
PKS6	**Bocsa**	**1.05**	**317**	*e*Sn		**Sg**	**19 14 06.1**	**+1.2**
PKS2	**Kecel**	**1.17**	**305**	*e*Pn		**Pn**	**19 13 53.2**	**-1.1**
PKS2				*e*Sn		**Sn**	**19 14 09.5**	**-1.2**
PKSN	**Nyarlorinc**	**1.18**	**335**	⇓*e*Pn		**Pn**	**19 13 53.7**	**-0.7**
PKSN				⇓*e*Sn		**Sn**	**19 14 12.1**	**+1.1**
PKSM	**Moragy**	**1.42**	**286**	*eP*g		**Pg**	**19 13 58.5**	**+0.2**
PKSM				*e*Sg		**Sg**	**19 14 18.2**	**+1.5**
PKSM	**Moragy**	**1.42**	**286**	⇑*i* P		**Pn**	**19 13 59.1**	**+1.4**
PKSM	**Moragy**	**1.42**	**286**	S		**Sb**	**19 14 18.1**	**+1.5**
PKSM	**Moragy**	**1.42**	**286**	⇑*e*Pn		**Pn**	**19 13 56.2**	**-1.5**
PKSM	**Moragy**	**1.42**	**286**	*eP*g		**Pg**	**19 13 58.5**	**+0.2**
PKSM				⇑*e*Sn		**Sn**	**19 14 13.9**	**-3.0**
PKSM				*e*Sg		**Sg**	**19 14 18.2**	**+1.5**
PKS7	**Kunszentmiklos**	**1.57**	**321**	*e*Sn		**Sn**	**19 14 23.6**	**+3.0**
GZR	**Gura Zlata**	**1.59**	**105**	⇓*i* P		**Pn**	**19 13 58.4**	**-1.6**
GZR	**Gura Zlata**	**1.59**	**105**	⇓*i* P		**Pn**	**19 13 58.4**

BVAR Borovoye Array 26.43 339 P P 19 38 22.6 +0.3
0.2nm,0.5s,baz=146,slow=10,SNR=2.5

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*IDC **27** 19:36:22.5±0.9,28°.94N×85°.52E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.8/29, mbtmp3.8/17, ML3.2/3, Error ellipse: s-maj=26.8km s-min=17.2km az=43.0*
*BJI **27** 19:36:23.9,28°.64N×85°.39E, h28km, mb4.0/4, ML2.9/1, Ms3.6/1, Ms7 3.3/1*
*MOS **27** 19:36:24.4±1.0,28°.89N×85°.43E, h29km, mb4.0/13, Error ellipse: s-maj=16.8km s-min=8.0km az=109.9*
*ISCJB **27** 19:36:26.9±1.0,28°.99N×85°.06×85°.43E±0°.05, h43km±10km, mb3.8/18, Error ellipse: s-maj=9.4km s-min=7.6km az=8.0*
*NEIC **27** 19:36:28.6±0.6,29°.09N×85°.37E, h35km, mb3.6/7, Error ellipse: s-maj=13.9km s-min=8.4km az=225.0*
*NDI **27** 19:36:37.8±2.8,28°.98N×85°.02E, h35km, ML3.6, mb3.6(NEIC)*

ISC 27 19:36:28.9±0.8, 29°.02N±0°.06×85°.41E±0°.05, h42km±9km, n65, σ1§32/72, mb3.8/18, 2D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**4.57**	**278**	*e*P	**Pn**	**19 37 41.0**	**+5.5**
LSA	**Lhasa**	**5.05**	**81**	Pn	**Pn**	**19 37 41.8**	**-0.4**
LSA				smax			
	comp=N,10.0nm,0.9s						
LSA				smax			
	comp=E,20nm,0.8s						
JOSI	**Joshimath**	**5.32**	**288**	*e*P	**Pn**	**19 37 50.3**	**+4.6**
JOSI				*e*x	x	19 38 50.9	
DDI	**Dehra Dun**	**6.53**	**283**	*e*P	**Pn**	**19 38 06.4**	**+3.9**
DDI				*e*x	x	19 39 23.5	
KLP	**Kalpa**	**6.68**	**294**	*e*P	**Pn**	**19 38 09.4**	**+4.9**
KLP				*e*S	**Sn**	**19 39 16.4**	**-2.9**
KLP				AML	AML	19 39 35.1	
	comp=N,51nm,1.1s						
KLP				AML	AML	19 39 38.0	
	comp=E,106nm,0.8s						
AGRA	**Agra**	**6.83**	**257**	*e*P	**Pn**	**19 38 09.4**	**+2.9**
AGRA				*e*S	**Sn**	**19 39 20.1**	**-3.0**
AGRA				AML	AML	19 40 21.1	
	comp=N,114nm,0.7s						
AGRA				AML	AML	19 40 21.6	
	comp=E,150nm,0.5s						
NDI	**New Delhi**	**7.20**	**269**	*e*P	**Pn**	**19 38 16.0**	**+4.4**
AYAN	**Aya Nagar**	**7.29**	**268**	*e*P	**Pn**	**19 38 16.9**	**+4.0**
AYAN				*e*S	**Sn**	**19 39 28.2**	**-6.3**
SONA	**Sohna**	**7.36**	**266**	*e*x	**Pn**	**19 38 14.6**	**+0.7**
SONA				*e*S	**Sn**	**19 39 30.8**	**-5.3**
SONA				AML	AML	19 40 28.9	
	comp=N,31nm,0.8s						
SMLA	**Simla**	**7.45**	**288**	*i* x	**Pn**	**19 38 16.3**	**+1.2**
SMLA				*i* x	**Sn**	**19 39 40.2**	**+2.0**
KHET	**Khetri**	**8.50**	**266**	*e*P	**Pn**	**19 38 32.5**	**+3.1**
KHET				*e*S	**Sn**	**19 39 55.8**	**-8.3**
KHET				AML	AML	19 40 07.2	
	comp=N,22nm,0.6s						
KHET				AML	AML	19 40 07.8	
	comp=E,19nm,1.0s						
CHCP	**Chirah Chowk**	**11.37**	**297**	P	**Pn**	**19 39 10.2**	**+1.5**
CEP	**Cherat**	**12.49**	**296**	P	**Pn**	**19 39 24.0**	**0.0**
CEP				S	**Sn**	**19 41 38.0**	**-3.7**
HYB	**Hyderabad**	**13.15**	**210**	*i* P	**Pn**	**19 39 32.0**	**-1.1**
HYB				*e*S	**Sn**	**19 41 51.0**	**-7.1**
LATR	**Latur**	**13.30**	**219**	*e*x	**Pn**	**19 39 33.5**	**-1.7**
KBL	**Kabul**	**14.97**	**296**	*e*P	**Pn**	**19 39 57.1**	**-0.5**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	**Kabul**	**14.97**	**296**	*e*Pn	**Pn**	**19 39 57.1**	**-0.5**
	comp=Z,5.7nm,0.6s						
GTA	**Gaotai**	**15.77**	**45**	*e*P	**Pn**	**19 40 11.3**	**+3.3**
GTA				pP	pP	19 40 16.5	-5.0
GTA				sP	sP	19 40 19.8	-7.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
UCH	**Uchtor**	**15.86**	**329**	*e*Pn	**Pn**	**19 40 06.8**	**-2.3**
	comp=Z,2.0nm,0.6s						
TKM2	**Tokmak 2**	**15.97**	**333**	*e*P	**Pn**	**19 40 08.7**	**-1.8**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TKM2	**Tokmak 2**	**15.97**	**333**	*e*Pn	**Pn**	**19 40 08.7**	**-1.8**
	comp=Z,2.9nm,0.8s						
AAK	**Ala-Archa**	**16.20**	**330**	Pn	**Pn**	**19 40 13.8**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=130,slow=8.4,SNR=2.9						
CM31	**Chiang Mai Arr**	**16.23**	**127**	*e*Pn	**Pn**	**19 40 16.1**	**+2.1**
	comp=Z,6.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**16.23**	**127**	Pn	**Pn**	**19 40 10.2**	**-3.8**
	comp=Z,0.0nm,0.3s,baz=312,slow=12,SNR=2.7						
EKS2	**Erkin-Say**	**16.54**	**328**	*e*Pn	**Pn**	**19 40 18.1**	**+0.3**
	comp=Z,2.2nm,0.8s						
MK31	**Makanchi Array**	**17.91**	**353**	*e*P	**Pn**	**19 40 34.4**	**-0.4**
MKAR	**Makanchi Array**	**17.91**	**353**	P	**Pn**	**19 40 33.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=17						
MKAR	**Makanchi Array**	**17.91**	**353**	P	**Pn**	**19 40 33.9**	**-0.8**
KURK	**Kurchatov**	**22.27**	**349**	P	**P**	**19 41 21.3**	**-0.9**
	comp=Z,1.4nm,0.7s,mb3.5,baz=168,slow=9.8,SNR=10						
KURK	**Kurchatov**	**22.27**	**349**	P	**P**	**19 41 21.3**	**-0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
SONM	**Songino Array**	**24.83**	**35**	P	**P**	**19 41 47.1**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.6,baz=234,slow=8.7,SNR=2.9						
SONM	**Songino Array**	**24.83**	**35**	P	**P**	**19 41 47.1**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAA0	**Zalesovo Array**	**24.91**	**359**	P	**P**	**19 41 45.7**	**-2.1**
ZALV	**Zalesovo Beam**	**24.91**	**359**	P	**P**	**19 41 48.3**	**+0.5**
	comp=Z,1.1nm,0.4s,mb3.8,baz=181,slow=10,SNR=8.5						
ZALV	**Zalesovo Beam**	**24.91**	**359**	P	**P**	**19 41 48.3**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
ULN	**Ulaanbaatar**	**25.18**	**36**	*e*P	**P**	**19 41 50.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**25.18**	**36**	*e*P	**P**	**19 41 50.6**	**+0.4**
	comp=Z,2.0nm,0.6s,mb3.8						
ZAK	**Zakamensk**	**25.26**	**27**	*e*P	**P**	**19 41 50.5**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.4						
BVAR	**Borovoye Array**	**26.42**	**339**	P	**P**	**19 42 02.5**	**+1.1**
	comp=Z,1.1nm,0.7s,mb3.5,baz=142,slow=12,SNR=10						
BVAR	**Borovoye Array**	**26.42**	**339**	P	**P**	**19 42 02.5**	**+1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**28.04**	**323**	P	**P**	**19 42 15.9**	**-0.1**
	comp=Z,0.5nm,0.4s,mb3.5						
AKTK	**Aktyubinsk**	**29.74**	**324**	P	**P**	**19 42 31.0**	**-0.1**
AKTO	**Aktyubinsk**	**29.74**	**324**	P	**P**	**19 42 31.0**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.5,baz=108,slow=13,SNR=2.1						
ARU	**Arti**	**33.35**	**333**	P	**P**	**19 43 04.1**	**+1.4**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ARU	**Arti**	**33.35**	**333**	P	**P**	**19 43 04.1**	**+1.4**
	comp=Z,2.1nm,0.6s,mb4.2						
KSRS	**Korea Array**	**36.29**	**65**	P	**P**	**19 43 26.0**	**-2.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=276,slow=11,SNR=2.9						
KSRS	**Korea Array**	**36.29**	**65**	P	**P**	**19 43 26.0**	**-2.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AKASG	**Malin Array Be**	**46.97**	**314**	P	**P**	**19 44 55.5**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.6,baz=82,slow=7.4,SNR=4.1						
MLR	**Muntele Rosu**	**49.01**	**307**	‖ *i* P	**P**	**19 45 14.1**	**+2.7**
BURAR	**Bucovina Array**	**49.47**	**309**	‖ *i* P	**P**	**19 45 16.6**	**+1.7**
BUR08	**Bucovina Ar. S**	**49.48**	**309**	*e*P	**P**	**19 45 15.0**	**+0.1**
FINES	**FINESS Array B**	**50.37**	**328**	P	**P**	**19 45 21.6**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=98,slow=7.9,SNR=6.0						
FINES	**FINESS Array B**	**50.37**	**328**	P	**P**	**19 45 21.6**	**+0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KWP	**Kalwaria Pacla**	**51.11**	**312**	P	**P**	**19 45 25.5**	**-1.8**
ARCES	**ARCESS Array B**	**52.69**	**338**	P	**P**	**19 45 39.6**	**+0.9**
	comp=Z,1.7nm,0.6s,mb4.1,baz=90,slow=7.3,SNR=5.4						
ARCES	**ARCESS Array B**	**52.69**	**338**	P	**P**	**19 45 39.6**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	**GERESS Array B**	**57.05**	**312**	P	**P**	**19 46 11.2**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=134,slow=4.2,SNR=3.4						
NOA	**NORSAR Array B**	**57.48**	**326**	P	**P**	**19 46 13.0**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=87,slow=7.1,SNR=3.7						
NOA	**NORSAR Array B**	**57.48**	**326**	P	**P**	**19 46 13.0**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**70.15**	**133**	P	**P**	**19 47 36.9**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=316,slow=6.1,SNR=9.8						

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*ISCJB **27** 19:36:31.8±1.7,6°.42S±0°.08×103°.5E±0°.1, h54km±13km, mb4.0/13, Error ellipse: s-maj=21.1km s-min=9.7km az=148.9*
*DJA **27** 19:36:32,6°.39S×103°.60E, h18km, MLv3.8/6*
*NEIC **27** 19:36:34.1±0.9,6°.29S×103°.58E, mb4.1/4, Error ellipse: s-maj=46.4km s-min=9.5km az=54.0*
*IDC **27** 19:36:34.0±1.5,6°.37S×103°.49E, h49km±8km, mb3.7/9, mb1 3.7/9, mb1mx3.6/22, mbtmp3.7/9, Error ellipse: s-maj=66.3km s-min=15.7km az=56.0*

ISC 27 19:36:33.2±1.6, 6°.40S±0°.08×103°.6E±0°.1, h45km±13km, h52km±.5km: pP-P, n28, σ0§70/29, mb4.0/13, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.28**	**47**	P	**Pn**	**19 36 53.2**	**-1.5**
KASI				S	**Sn**	**19 37 09.3**	**-1.4**
LWLI	**Liwa**	**1.47**	**20**	P	**Pn**	**19 36 57.0**	**-0.2**
LWLI				S	**Sn**	**19 37 15.9**	**+0.7**
MDSI	**Maura Dua**	**2.00**	**18**	P	**Pn**	**19 37 04.7**	**+0.1**
MDSI				S	**Sn**	**19 37 30.0**	**+1.6**
KLI	**Kotabumi**	**2.01**	**40**	P	**Pn**	**19 37 05.5**	**+0.9**
CGJI	**Cibinong**	**2.14**	**96**	P	**Pn**	**19 37 06.2**	**-0.2**
RBSI	**Rajabasa**	**2.25**	**76**	P	**Pn**	**19 37 07.6**	**-0.3**
KSI	**Kapahiang**	**2.90**	**341**	P	**Pn**	**19 37 16.8**	**0.0**
DBJI	**Dramaga**	**3.18**	**93**	P	**Pn**	**19 37 21.2**	**+0.5**
CM31	**Chiang Mai Arr**	**25.12**	**350**	*e*P	**P**	**19 41 53.0**	**-1.0**
	1.3nm,0.5s,mb3.7						
CMAR	**Chiang Mai Arr**	**25.12**	**350**	P	**P**	**19 41 53.0**	**-1.0**
	2.5nm,0.7s,mb3.9,baz=180,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**33.84**	**124**	P	**P**	**19 43 12.1**	**+0.6**
	0.5nm,0.6s,mb3.6,baz=303,slow=7.6,SNR=7.1						
STKA	**Stephens Creek**	**43.60**	**131**	P	**P**	**19 44 34.1**	**+0.9**
	1.6nm,0.8s,mb3.8,baz=288,slow=9.4,SNR=6.1						
STKA				pP	pP	19 44 47.1	+1.6
	1.6nm,0.8s,baz=292,slow=13,SNR=2.3						
KSRS	**Korea Array**	**49.21**	**26**	P	**P**	**19 45 17.1**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=225,slow=9.7,SNR=4.1						
SONM	**Songino Array**	**54.06**	**2**	P	**P**	**19 45 53.8**	**+0.7**
	2.3nm,0.8s,mb4.1,baz=170,slow=8.8,SNR=4.2						
SONM	**Songino Array**	**54.06**	**2**	P	**P**	**19 45 53.8**	**+0.7**
TKM2	**Tokmak 2**	**55.27**	**335**	*e*P	**P**	**19 46 02.3**	**+0.3**
	1.6nm,0.5s,mb4.3						
EKS2	**Erkin-Say**	**55.84**	**334**	*e*P	**P**	**19 46 06.5**	**+0.4**
	1.4nm,0.7s,mb4.1						
MK31	**Makanchi Array**	**56.23**	**343**	*e*P	**P**	**19 46 07.8**	**-0.9**
MKAR	**Makanchi Array**	**56.23**	**343**	P	**P**	**19 46 08.8**	**+0.1**
	1.0nm,0.5s,mb4.1,baz=147,slow=8.2,SNR=15						
MKAR				pP	pP	19 46 22.6	+1.2
	0.9nm,0.8s,baz=136,slow=7.8,SNR=4.5						
MKAR	**Makanchi Array**	**56.23**	**343**	P	**P**	**19 46 08.8**	**+0.1**
MKAR				pP	pP	19 46 22.6	+1.2
KURK	**Kurchatov**	**60.83**	**342**	P	**P**	**19 46 40.7**	**0.0**
	0.8nm,0.6s,mb4.0,baz=160,slow=6.0,SNR=6.0						
KURK	**Kurchatov**	**60.83**	**342**	P	**P**	**19 46 40.7**	**0.0**
ZAA0	**Zalesovo Array**	**62.16**	**348**	P	**P**	**19 46 49.0**	**-0.6**
ZALV	**Zalesovo Beam**	**62.16**	**348**	P	**P**	**19 46 49.5**	**-0.1**
	1.5nm,0.7s,mb4.3,baz=152,slow=5.6,SNR=9.3						
ZALV				pP	pP	19 47 03.5	+1.1
	1.3nm,0.6s,baz=159,slow=4.5,SNR=3.6						
BVAR	**Borovoye Array**	**65.53**	**339**	P	**P**	**19 47 11.7**	**-0.1**
	1.3nm,0.6s,mb4.2,baz=146,slow=8.7,SNR=9.3						
ABKAR	**Akbulak array**	**67.18**	**331**	*e*P	**P**	**19 47 22.6**	**+0.2**
	1.1nm,0.6s,mb4.1						
TXAR	**Lajitas Array**	**145.66**	**45**	PKPbc	PKPbc	19 56 08.9	+1.2
	1.0nm,0.7s,baz=270,slow=2.4,SNR=12						
BLA	**Blacksburg**	**149.12**	**6**	*e*PKPbc	PKPbc	19 56 16.6	-0.5

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*ISCJB **27** 20:03:22.1±0.5,73°.11N±0°.04×5°.8E±0°.2, h10km, mb3.6/9, MS2.8/5, Error ellipse: s-maj=9.4km s-min=6.3km az=177.2*
*CSEM **27** 20:03:22.7±0.3,73°.12N×5°.76E, h2km, mb3.4/1, Error ellipse: s-maj=10.2km s-min=7.9km az=84.0*
*IDC **27** 20:03:23.1±0.8,73°.05N×5°.62E, h0km, mb3.6/7, mb1 3.7/12, mb1mx3.5/29, mbtmp3.6/12, ML3.0/5, MS2.9/7, Ms1 2.9/7, ms1mx2.6/39, Error ellipse: s-maj=20.6km s-min=14.3km az=39.0*
*NEIC **27** 20:03:24.1±0.5,73°.12N×5°.72E, h10km, mb3.4/1, Error ellipse: s-maj=10.0km s-min=8.4km az=75.0*
*BER **27** 20:03:28.0±2.5,73°.16N×6°.64E, h10km, ML2.5*

ISC 27 20:03:24.5±0.6, 73°.10N±0°.04×5°.9E±0°.2, h10km, n49, σ1§22/45, mb3.6/9, MS2.8/5, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.94**	**63**	*i* P	**Pn**	**20 04 23.8**	**-1.0**
BJO1	**Bjornoya**	**3.94**	**63**	*i* P	**Pn**	**20 04 23.8**	**-1.0**
BJO	**Bjornoya**	**3.99**	**63**	*e*P	**Pn**	**20 04 23.0**	**-2.5**
BJO	**Bjornoya**	**3.99**	**63**	*e*P	**Pn**	**20 04 23.0**	**-2.5**
	SNR=50						
JMIC	**Jan Mayen**	**4.93**	**252**	Pn	**Pn**	**20 04 36.4**	**-2.0**
	4.3nm,0.3s,baz=114,slow=3.8,SNR=3.8						
JMIC	**Jan Mayen**	**4.93**	**252**	Pn	**Pn**	**20 04 36.3**	**-2.1**
TRO	**Tromso**	**5.43**	**123**	*e*P	**Pn**	**20 04 44.4**	**-0.9**
TRO				*e*S	**Sn**	**20 05 42.4**	**-5.4**
TRO	**Tromso**	**5.43**	**123**	*i* P	**Pn**	**20 04 46.0**	**+0.7**
TRO	**Tromso**	**5.43**	**123**	*i* P	**Pn**	**20 04 46.0**	**+0.7**
LOF	**Lofoten**	**5.60**	**149**	*e*S	**Sn**	**20 05 46.1**	**-5.8**
LOF				AML	AML	20 05 47.1	
	comp=Z,12nm,0.6s						
LOF	**Lofoten**	**5.60**	**149**	*e*S	**Sn**	**20 05 46.1**	**-5.8**
	comp=Z,12nm,0.6s,SNR=49						
SPB4	**Spitsbergen Ar**	**5.72**	**22**	*e*Pn	**Pn**	**20 04 47.6**	**-1.6**
SPB4	**Spitsbergen Ar**	**5.72**	**22**	*e*Pn	**Pn**	**20 04 47.6**	**-1.7**
SPITS	**Spitsbergen Ar**	**5.72**	**22**	Pn	**Pn**	**20 04 47.9**	**-1.4**
	baz=199,slow=16,SNR=55						
SPITS	**Spitsbergen Ar**	**5.72**	**22**	Pn	**Pn**	**20 04 47.9**	**-1.4**
KBS	**Kingsbay**	**6.04**	**11**	*e*Pn	**Pn**	**20 04 53.9**	**+0.2**
KBS				*e*Sn	**Sn**	**20 06 04.2**	**+1.6**
KBS	**Kingsbay**	**6.04**	**11**	*e*Pn	**Pn**	**20 04 53.8**	**+0.2**
KBS				*e*Sn	**Sn**	**20 06 04.2**	**+1.6**
ARCES	**ARCESS Array B**	**7.22**	**110**	Pn	**Pn**	**20 05 10.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=316,slow=10,SNR=12						
ARCES				Sn	**Sn**	**20 06 25.9**	**-5.9**
	comp=Z,0.2nm,0.3s,baz=310,slow=22,SNR=2.3						
ARCES	**ARCESS Array B**	**7.22**	**110**	Pn	**Pn**	**20 05 10.1**	**+0.2**
MOR8	**Moi Rana**	**7.56**	**153**	*e*P	**Pn**	**20 05 14.8**	**+0.2**
MOR8				AML	AML	20 06 35.4	
	comp=Z,6.8nm,0.4s						
MOR8	**Moi Rana**	**7.56**	**153**	*e*P	**Pn**	**20 05 14.8**	**+0.3**
	SNR=47						
NOA	**NORSAR Array B**	**12.28**	**168**	LR	LR	20 10 44.7	
	comp=Z,32nm,19.5s,baz=355,slow=36						
HFS	**Hagfors**	**13.37**	**163**	Pn	**Pn**	**20 06 33.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=39,slow=12,SNR=5.1						
HFS				LR	LR	20 11 19.5	
	comp=Z,71nm,18.8s,baz=345,slow=36						
HFS	**Hagfors**	**13.37**	**163**	Pn	**Pn**	**20 06 33.1**	**-0.8**
FINES	**FINESS Array B**	**13.94**	**136**	Pn	**Pn**	**20 06 40.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=339,slow=10,SNR=4.3						
FINES	**FINESS Array B**	**13.94**	**136**	Pn	**Pn**	**20 06 40.5**	**-1.2**
GERES	**GERESS Array B**	**24.59**	**168**	LR	LR	20 18 30.9	
	comp=Z,34nm,19.6s,MS2.8,baz=10,slow=37						
AKASG	**Malin Array Be**	**24.66**	**143**	P	**P**	**20 08 45.0**	**+0.1**
	comp=Z,0.4nm,0.3s,mb3.4,baz=346,slow=9.9,SNR=3.1						
AKASG	**Malin Array Be**	**24.66**	**143**	P	**P**	**20 08 45.0**	**+0.2**
RES	**Resolute Bay**	**24.86**	**322**	LR	LR	20 18 29.3	
	comp=Z,34nm,19.6s,MS2.9,baz=169,slow=36						
AKTO	**Aktyubinsk**	**31.79**	**107**	LR	LR	20 22 44.3	
	comp=Z,39nm,21.5s,MS3.0,baz=27,slow=36						
ABKAR	**Akbulak array**	**33.40**	**105**	P	**P**	**20 10 03.5**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.3						
ABKAR	**Akbulak array**	**33.40**	**105**	P	**P**	**20 10 03.5**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.3						
BRTR	**Keskin Array B**	**36.06**	**142**	P	**P**	**20 10 27.4**	**+1.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=354,slow=5.8,SNR=2.9						
BRTR	**Keskin Array B**	**36.06**	**142**	P	**P**	**20 10 27.4**	**+1.7**
ZALV	**Zalesovo Beam**	**36.44**	**78**	P	**P**	**20 10 32.9**	**+4.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=322,slow=9.1,SNR=2.3						
KURK	**Kurchatov**	**37.51**	**86**	P	**P**	**20 10 39.1**	**+1.3**
	comp=Z,0.5nm,0.7s,mb3.3,baz=332,slow=7.6,SNR=2.9						
KURK	**Kurchatov**	**37.51**	**86**	P	**P**	**20 10 39.1**	**+1.3**
GNI	**Garni**	**37.93**	**129**	LR	LR	20 25 47.0	
	comp=Z,29nm,20.6s,MS3.1,baz=130,slow=35						
YKA	**Yellowknife Ar**	**38.92**	**320**	LR	LR	20 27 10.7	
	comp=Z,4.2nm,18.9s,MS2.3,baz=90,slow=37						
MKAR	**Makanchi Array**	**42.10**	**85**	P	**P**	**20 11 17.8**	**+1.7**
	comp=Z,1.4nm,1.3s,mb3.4,baz=321,slow=3.7,SNR=4.2						
PDAR	**Pinedale Array**	**56.33**	**307**	P	**P**	**20 13 06.2**	**+1.3**
	comp=Z,0.8nm,0.9s,mb3.8,baz=32,slow=5.3,SNR=2.8						
PDAR	**Pinedale Array**	**56.33**	**307**	P	**P**	**20 13 06.2**	**+1.3**
NVAR	**Mina Array Bea**	**62.43**	**313**	P	**P**	**20 13 47.0**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.8,baz=3.7,slow=5.6,SNR=3.1						
NVAR	**Mina Array Bea**	**62.43**	**313**	P	**P**	**20 13 47.0**	**-0.1**
DBIC	**Dimbokro**	**66.68**	**192**	P	**P**	**20 14 15.2**	**+0.1**
	comp=Z,3.7nm,1.0s,mb4.4,baz=32,slow=5.9,SNR=3.1						
DBIC	**Dimbokro**	**66.68**	**192**	P	**P**	**20 14 15.2**	**+0.1**
ASAR	**Alice Springs**	**123.16**	**60**	PKP	PKPdf	20 22 19.4	-1.2
	comp=Z,0.5nm,1.0s,baz=11,slow=1.7,SNR=4.2						
ASAR	**Alice Springs**	**123.16**	**60**	PKIKP	PKPdf	20 22 19.4	-1.1

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*NOU **27** 20:08:42.2±1.5, 19°.82S×168°.69E, h30km, MD2.8, ML3.5*
*ISCJB **27** 20:08:44.3±4.7,20°.2S±0°.1×168°.7E±0°.2, h15km±30km, mb4.0/7, Error ellipse: s-maj=37.9km s-min=11.5km az=36.0*
*NEIC **27** 20:08:45.3±2.1,20°.71S×169°.30E, h35km, mb3.9/2, Error ellipse: s-maj=67.9km s-min=17.1km az=137.0*
*IDC **27** 20:08:48.1±3.3,20°.10S×168°.72E, h30km±6km, mb4.0/5, mb1 4.1/5, mb1mx3.9/13, mbtmp4.0/5, MS3.2/1, Ms1 3.2/1, ms1mx2.9/15, Error ellipse: s-maj=113.9km s-min=25.1km az=132.0*

ISC 27 20:08:45.2±5.8, 20°.2S±0°.1×168°.6E±0°.2, h7km±37km, n15, σ0§84/14, mb4.1/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.48**	**219**	*e*S	**Sn**	**20 09 56.0**	**-0.5**
DZM	**Mont Dzumac**	**2.70**	**226**	*e*P	**Pn**	**20 09 27.7**	**-1.3**
DZM				*e*S	**Sn**	**20 10 02.4**	**+0.4**
DZM				AMP		20 10 06.8	
	comp=Z,2μm,4.8s						
DZM	**Mont Dzumac**	**2.70**	**226**	*e*Pn	**Pn**	**20 09 28.7**	**-0.3**
DZM				*e*Sn	**Sn**	**20 10 02.5**	**+0.5**
NOUC	**Port Laguerre**	**2.82**	**228**	*e*S	**Sn**	**20 10 04.4**	**-0.5**
NOUC				AMP		20 10 27.3	
	comp=Z,78nm,2.0s						
AFI	**Afiamalu**	**19.81**	**75**	LR	LR	20 18 35.7	
	comp=Z,63nm,19.8s,baz=75,slow=30						
CTA	**Charters Tower**	**20.94**	**266**	P	**P**	**20 13 33.6**	**+5.0**
	comp=Z,4.7nm,0.8s,baz=112,slow=14,SNR=4.2						
STKA	**Stephens Creek**	**26.79**	**239**	P	**P**	**20 14 27.4**	**+1.5**
	comp=Z,2.2nm,0.9s,mb3.7,baz=58,slow=9.5,SNR=4.7						
STKA				pP	pP	20 14 36.4	+8.3
	comp=Z,2.0nm,0.7s,baz=74,slow=10,SNR=3.9						
STKA	**Stephens Creek**	**26.79**	**239**	*e*P	**P**	**20 14 26.8**	**+1.0**
	comp=Z,0.7nm,0.8s,mb3.2						
STKA				P	pP	20 14 27.4	-0.7
STKA				pP	pP	20 14 36.4	+8.3
ASAR	**Alice Springs**	**32.28**	**257**	P	**P**	**20 15 15.2**	**+0.5**
	comp=Z,7.0nm,0.7s,mb4.6,baz=85,slow=9.0,SNR=73						
ASAR				pP	pP	20 15 24.4	+7.4
	comp=Z,4.2nm,0.6s,baz=82,slow=9.2,SNR=11						
SBA	**Scott Base**	**57.69**	**180**	*e*P	**P**	**20 18 36.3**	**+0.5**
	comp=Z,6.6nm,1.2s,mb4.5						
PETK	**Petropavlovsk-**	**73.62**	**353**	P	**P**	**20 20 17.2**	**-1.6**
	comp=Z,2.2nm,0.7s,mb4.2,baz=189,slow=6.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	**78.32**	**295**	P	**P**	**20 20 47.4**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.5,baz=118,slow=5.2,SNR=5.7						
SONM	**Songino Array**	**87.61**	**323**	P	**P**	**20 21 33.7**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.2,baz=116,slow=5.3,SNR=4.8						
MOX	**Moxa**	**144.59**	**335**	*e*P	PKPdf	20 28 19.1	-3.2
	comp=Z,9.0nm,1.3s						
GERES	**G

VAM	Vamos	1.98	115	*e*Pb	Pn	20 11 42.5	+0.6
KFL	Anninata	2.08	333	P	Pn	20 11 43.8	+0.4
TRIZ	Trizonia	2.10	1	P	Pn	20 11 43.8	+0.2
TRIZ				S	Sb	20 12 11.9	-0.8
TRIZ	Trizonia	2.10	1	P	Pn	20 11 43.8	+0.2
TRIZ				S	Sb	20 12 11.9	-0.8
KALE	Kalithea	2.13	3	P	Pn	20 11 44.5	+0.5
KALE				S	Sn	20 12 11.4	+0.4
KALE	Kalithea	2.13	3	P	Pn	20 11 44.5	+0.5
KALE				S	Sn	20 12 11.4	+0.4
VLY	Voula,Athens	2.13	42	*e*PN	Pn	20 11 41.9	-2.2
VLY	Voula,Athens	2.13	42	*e*Pb	Pn	20 11 41.5	-2.6
EFP	Efpalio	2.16	358	P	Pn	20 11 45.5	+1.0
EFP				S	Sn	20 12 13.0	+1.1
EFP	Efpalio	2.16	358	P	Pn	20 11 45.5	+1.0
EFP	Efpalio	2.16	358	*e*Pn	Pn	20 11 46.0	+1.5
EFP				S	Sn	20 12 13.0	+1.1
DSF	Desfina	2.18	11	P	Pn	20 11 45.6	+0.8
DSF				S	Sn	20 12 14.2	+1.8
DSF	Desfina	2.18	11	P	Pn	20 11 45.6	+0.8
DSF				S	Sn	20 12 14.2	+1.8
ATH	Athens Observa	2.19	38	*e*PN	Pn	20 11 41.6	-3.2
GVD	Gavdhos	2.21	129	*e*PB	Pn	20 11 47.0	+1.8
GVD	Gavdhos	2.21	129	*e*Pb	Pb	20 11 49.5	+1.3
GVD	Gavdhos	2.21	129	P	Pn	20 11 46.8	+1.6
GVD	Gavdhos	2.21	129	P	Pn	20 11 46.8	+1.6
GVD	Gavdhos	2.21	129	*e*Pb	Pb	20 11 49.5	+1.3
ATHU	Athens Univers	2.21	39	P	Pn	20 11 45.5	+0.3
ATHU	Athens Univers	2.21	39	P	Pn	20 11 45.5	+0.3
VLS	Valsamata	2.22	330	*e*PB	Pn	20 11 45.6	+0.3
VLS	Valsamata	2.22	330	P	Pn	20 11 44.9	-0.4
VLS	Valsamata	2.22	330	P	Pn	20 11 44.9	-0.4
PTL	Penteli	2.32	39	*e*PN	Pn	20 11 45.2	-1.4
PTL	Penteli	2.32	39	*e*Pn	Pn	20 11 45.2	-1.4
IDI	Anoyia	2.54	112	*e*PN	Pn	20 11 48.6	-1.1
SIVA	Sivas	2.60	118	*e*PB	Pn	20 11 52.7	+2.2
SIVA	Sivas	2.60	118	P	Pn	20 11 51.6	+1.1
SIVA	Sivas	2.60	118	P	Pn	20 11 51.6	+1.1
SIVA	Sivas	2.60	118	*e*Pb	Pb	20 11 55.8	+1.0
EVR	Evrytania	2.65	357	*e*Pb	Pn	20 11 53.6	+2.4
AGG	Agios Georgios	2.77	5	*e*PB	Pn	20 11 52.8	0.0
AGG	Agios Georgios	2.77	5	P	Pn	20 11 53.7	+0.9
AGG	Agios Georgios	2.77	5	*e*Pn	Pn	20 11 52.8	0.0
AGG	Agios Georgios	2.77	5	P	Pn	20 11 53.7	+0.9
APE	Apeiranthos	2.94	73	P	Pn	20 11 54.0	-1.3
APE	Apeiranthos	2.94	73	P	Pn	20 11 54.0	-1.3
LAST	Lasithi	3.03	110	*e*PN	Pn	20 11 56.5	+0.1
LAST	Lasithi	3.03	110	P	Pn	20 11 56.5	+0.1
LAST	Lasithi	3.03	110	P	Pn	20 11 56.5	+0.1
NEO	Neokhori	3.19	17	*e*PN	Pn	20 11 57.7	-0.9
NEO	Neokhori	3.19	17	*e*Pn	Pn	20 11 57.7	-0.9
XOR	Xorichti	3.24	17	P	Pn	20 11 58.9	-0.4
XOR	Xorichti	3.24	17	P	Pn	20 11 58.9	-0.4
AOS	Alonnisos	3.26	27	P	Pn	20 11 57.4	-2.2
AOS	Alonnisos	3.26	27	P	Pn	20 11 57.4	-2.2
THL	Klokotos Trika	3.29	0	*e*PN	Pn	20 12 00.4	+0.3
THL	Klokotos Trika	3.29	0	P	Pn	20 11 59.7	-0.4
THL	Klokotos Trika	3.29	0	P	Pn	20 11 59.7	-0.4
THL	Klokotos Trika	3.29	0	*e*Pn	Pn	20 12 00.4	+0.3
IGT	Igoumenitsa	3.52	338	P	Pn	20 12 01.6	-1.6
IGT	Igoumenitsa	3.52	338	P	Pn	20 12 01.6	-1.6
ZKR	Zakros	3.61	107	P	Pn	20 12 05.5	+1.1
ZKR	Zakros	3.61	107	P	Pn	20 12 05.5	+1.1
CHOS	Chios island	3.86	56	P	Pn	20 12 05.9	-1.9
CHOS	Chios island	3.86	56	P	Pn	20 12 05.9	-1.9
PAIG	Paliouri	3.89	19	P	Pn	20 12 06.2	-2.0
PAIG	Paliouri	3.89	19	P	Pn	20 12 06.2	-2.0
KARP	Karpathos	4.25	98	P	Pn	20 12 13.1	0.0
KARP	Karpathos	4.25	98	P	Pn	20 12 13.1	0.0
HORT	Hortiatis	4.41	11	P	Pn	20 12 13.8	-1.6
HORT	Hortiatis	4.41	11	P	Pn	20 12 13.8	-1.6
KNT	Kendrikon	4.94	8	P	Pn	20 12 23.1	+0.4
KNT	Kendrikon	4.94	8	P	Pn	20 12 23.1	+0.4
TIP	Timpagrande	5.08	307	P	Pn	20 12 24.4	-0.1
TIP	Timpagrande	5.08	307	P	Pn	20 12 24.4	-0.1
STON	Ston	7.39	335	*e*Pn	Pn	20 12 51.5	-4.8
STON				Sn	Sn	20 14 08.6	-12
NVLJ	Novalja	9.91	329	*e*Pn	Pn	20 13 28.4	-2.5
NVLJ				Sn	Sn	20 15 10.5	-12
NVLJ	Novalja	9.91	329	*e*Pn	Pn	20 13 28.4	-2.5

IDC 27 20:12:01.2±1.2, 41°82N×29°40W, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/29, mbtmp3.4/5, MS3.0/4, Ms1 3.0/4, ms1mx2.6/26, Error ellipse: s-maj=43.5km s-min=25.4km az=16.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVOX	Davos/Dischmat	28.33	66	LR	LR	20 27 57.8	
	comp=Z,22nm,19.1s,baz=93,slow=34						
GERES	GERESS Array B	30.77	62	LR	LR	20 29 00.2	
	comp=Z,32nm,18.1s,baz=282,slow=33						
JMIC	Jan Mayen	31.07	13	LR	LR	20 28 11.8	
	comp=Z,24nm,21.1s,baz=266,slow=31						
VRAC	Vranov	32.63	61	LR	LR	20 30 26.7	
	comp=Z,29nm,19.7s,baz=136,slow=34						
TORD	Torodi Ar. Bea	39.32	127	P	P	20 19 31.8	-0.2
	0.3nm,0.7s,baz=324,slow=7.8,SNR=2.5						
PDAR	Pinedale Array	57.08	300	P	P	20 21 48.6	-0.4
	0.2nm,0.5s,baz=53,slow=3.9,SNR=3.4						
TXAR	Lajitas Array	59.95	284	P	P	20 22 10.1	+0.8
	0.4nm,0.8s,baz=60,slow=5.3,SNR=4.5						
TXAR	Lajitas Array	59.95	284	P	P	20 22 10.1	+0.8
KURK	Kurchatov	68.54	41	P	P	20 23 05.5	+0.2
	0.5nm,0.8s,baz=310,slow=6.7,SNR=3.4						
MKAR	Makanchi Array	72.97	42	P	P	20 23 32.5	+0.2
	0.3nm,0.7s,baz=327,slow=7.2,SNR=4.6						

NNC 27 20:49:00.7±6.4, 37°08N×71°19E, h0km, mb3.6, mpv3.5, 1C-3D, Error ellipse: s-maj=55.1km s-min=45.3km az=159.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.04	355	⇑Pn	Pn	20 50 33.1	+1.8
	3.1nm,0.4s,baz=174,slow=12,SNR=104						
KK31				Sn	Sn	20 51 42.3	+1.2
	1.9nm,0.4s,baz=174,slow=22,SNR=14						
TKM2	Tokmak 2	6.74	29	⇓Pn	Pn	20 50 40.8	-0.2
	1.2nm,0.5s						
TKM2				⇓Sn	Sn	20 51 59.7	+1.2
	2.2nm,0.8s						
AB31	Akbulak array	14.65	330	⇓P	Pn	20 52 25.9	-3.2
	0.1nm,0.3s,baz=149,slow=13,SNR=6.1						

IDC 27 21:20:11.8±1.1, 8°52N×82°88W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.8/21, mbtmp3.8/7, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/24, Error ellipse: s-maj=45.1km s-min=16.0km az=44.0

ISCJB 27 21:20:12.8±1.0, 8°47N±0°08×82°91W±0°04, h23km±5km, mb3.9/9, Error ellipse: s-maj=13.5km s-min=5.6km az=17.8

CASC 27 21:20:12.3±3.0, 8°37N×82°97W, h21km±11km, MD4.1, mb4.3(NEIC)

NEIC 27 21:20:13.3±3.1, 8°54N×82°86W, h11km±19km, mb4.3/5, Error ellipse: s-maj=12.1km s-min=6.7km az=209.0

NEIC Felt at Laurel, Costa Rica.

ISC 27 21:20:13.4±1.2, 8°43N±0°07×82°95W±0°04, h17km±5km, n45, σ1§40/52, mb3.9/9, 5C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.31	316	⇑*i*P	Pg	21 20 18.4	-1.8
ACR				*e*S	Sg	21 20 25.8	+1.2
BRU2	Volcan	0.45	35	⇑*i*P	Pg	21 20 22.2	-0.3
BRU2				*e*S	Sg	21 20 31.7	+3.2
TBS2		0.47	38	*i*P	Pg	21 20 31.2	+8.3
TBS2				*e*S	Sg	21 20 38.8	+10
CTCR	Cotoan	0.50	22	⇑*i*P	Pg	21 20 30.9	+7.4
BAR1		0.89	336	⇓*i*P	Pb	21 20 28.6	-1.8
BUS	Buena Vista	1.38	325	⇑*i*P	Pn	21 20 36.6	-1.4
QCR	Quepos	1.56	310	*e*P	Pn	21 20 37.9	-2.5
QCR				*e*S	Sn	21 20 58.7	-1.5
LIO	Limon	1.57	357	*e*P	Pn	21 20 37.9	-2.7
URSC	Urasca	1.62	330	⇑*e*P	Pn	21 20 40.2	-1.1
LAJ	Bijagual	1.84	321	*e*P	Pn	21 20 47.3	+3.0
SJS	Escuela Geolog	1.86	324	*e*P	Pn	21 20 42.3	-2.2
PRS1	Puriscal	2.05	319	*e*P	Pn	21 20 46.1	-1.1
CGA2	Cerro Gallo 2	2.18	317	*e*P	Pn	21 20 48.3	-0.6
JCR	Jicaral	2.56	304	*e*P	Pn	21 20 53.7	-0.6
FORC	Fortuna	2.65	320	*e*P	Pn	21 20 53.7	-1.7
JTS	JuntasAbangare	2.71	313	Pn	Pn	21 20 57.3	+1.0
	18nm,0.3s,baz=101,slow=22,SNR=39						
JTS				Sn	Sn	21 21 31.3	+2.5
	27nm,0.3s,baz=329,slow=20,SNR=9.3						
JTS				Lg		21 21 36.6	
	29nm,0.3s,baz=308,slow=19,SNR=11						
JTS	JuntasAbangare	2.71	313	Pn	Pn	21 20 57.3	+1.0
JTS				Sn	Sn	21 21 31.2	+2.5
JTS				Lg		21 21 36.6	
CHPA	Chiripa	2.79	316	*i*P	Pn	21 21 01.1	+3.8
CHPA				*i*S	Sn	21 21 41.1	+11
VCR	Vista de Mar	3.14	303	*e*P	Pn	21 21 00.1	-2.1
BCIP	Isla Barro Col	3.16	76	*e*Pn	Pn	21 21 02.3	-0.2
BCIP				*e*Sn	Sn	21 21 39.2	-0.6
LIM1	Limonal	3.20	315	*i*P	Pn	21 21 05.8	+2.8
LIM1				*i*S	Sn	21 21 48.8	+7.9
ROSC	El Rosal	9.27	112	LR	LR	21 25 27.8	
	comp=Z,52nm,19.0s,baz=359,slow=34						
APG	El Apazote	9.84	312	Pn	Pn	21 22 38.0	+3.7
	0.7nm,0.3s,baz=121,slow=18,SNR=5.3						
APG				Sn	Sn	21 24 28.1	+3.6
	0.8nm,0.3s,baz=290,slow=7.7,SNR=7.1						
SDV	Santo Domingo	12.19	87	Pn	Pn	21 23 09.5	+3.1
	0.4nm,0.3s,baz=284,slow=8.3,SNR=2.3						
SDV	Santo Domingo	12.19	87	Pn	Pn	21 23 05.7	-0.7
CMIG	Matias Romero	14.47	308	Pn	Pn	21 23 38.2	+0.6
	0.2nm,0.3s,baz=128,slow=12,SNR=3.0						
SDDR	Presa de Saban	15.43	46	*e*Pn	Pn	21 23 48.6	-1.8
	6.5nm,0.6s						
WMOK	Wichita Mounta	29.95	333	*e*P	P	21 26 20.8	-0.1
	1.5nm,0.7s,mb3.8						
CPRX	Cap Rock	31.21	325	*e*P	P	21 26 31.8	-0.2
	7.8nm,0.5s,mb4.8						
LCO	Las Campanas	39.05	163	P	P	21 27 40.4	+0.9
PDAR	Pinedale Array	41.42	330	P	P	21 28 00.6	+1.5
	0.2nm,0.5s,mb3.0,baz=124,slow=11,SNR=2.4						
HWUT	Hardware Ranch	41.62	327	P	P	21 28 01.6	+0.8
ULM	Lac du Bonnet	43.06	348	P	P	21 28 11.8	-0.5
	1.7nm,0.4s,mb4.1,baz=159,slow=6.6,SNR=4.3						
ULM	Lac du Bonnet	43.06	348	*e*P	P	21 28 11.2	-1.1
	2.5nm,0.6s,mb4.1						
HLID	Hailey	44.49	327	*e*P	P	21 28 23.9	0.0
PLCA	Paso Flores	50.23	168	P	P	21 29 09.8	+1.2
	2.5nm,0.9s,mb4.2,baz=345,slow=8.3,SNR=3.8						
PLCA	Paso Flores	50.23	168	P	P	21 29 09.8	+1.2
FCC	Fort Churchill	50.94	353	*e*P	P	21 29 14.2	+0.4
	0.1nm,0.9s,mb2.8						
YKA	Yellowknife Ar	58.67	343	P	P	21 30 10.2	+0.5
	0.7nm,0.7s,mb3.8,baz=140,slow=6.8,SNR=8.3						
YKA	Yellowknife Ar	58.67	343	P	P	21 30 10.2	+0.5
INK	Inuvik	68.36	342	P	P	21 31 13.9	+0.2
SUMG	Summit	69.42	13	P	P	21 31 19.9	-0.4
	3.7nm,0.3s,mb4.8						
TORD	Torodi Ar. Bea	82.94	78	P	P	21 32 39.0	+0.8
	0.5nm,1.2s,mb3.4,baz=300,slow=2.9,SNR=3.7						
ASAR	Alice Springs	141.63	242	PKP	PKPdf	21 39 46.9	+2.2
	0.3nm,0.8s,baz=126,slow=1.3,SNR=4.2						
CMAR	Chiang Mai Arr	153.22	356	PKPbc	PKPbc	21 40 13.0	+1.5
	0.6nm,0.7s,baz=343,slow=2.8,SNR=4.6						
CMAR				PKPab	PKPab	21 40 23.3	+0.4
	0.6nm,0.7s,baz=338,slow=4.4,SNR=4.8						

CASC 27 21:44:36.7±1.5, 8°38N×82°95W, h3km, MD3.7, 4C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.34	321	⇑*e*P	Pg	21 44 43.6	+0.3
ACR				*e*S	Sg	21 44 50.6	+2.8
BRU2	Volcan	0.48	32	⇑*i*P	Pg	21 44 48.1	+2.1
BRU2				*e*S	Sg	21 44 55.9	+3.7
TBS2		0.50	35	⇑*e*P	Pg	21 44 56.1	+10
TBS2				*e*S	Sg	21 45 04.1	+11
CTCR	Cotoan	0.54	20	⇑*i*P	Pg	21 44 48.0	+0.9
CTCR				*e*S	Sg	21 44 57.5	+3.3
BAR1		0.93	337	⇓*e*P	Pg	21 44 53.9	-0.6
CNI	Changuinola	1.11	23	*e*P	Pg	21 44 58.0	-0.1
CNI				*e*S	Sg	21 45 13.5	+1.0
BUS	Buena Vista	1.41	326	⇓*e*P	Pn	21 45 02.4	-0.9
URSC	Urasca	1.66	330	*e*P	Pn	21 45 06.1	-0.6
PRS1	Puriscal	2.08	320	*e*P	Pn	21 45 12.1	-0.5
PRS1				*e*S	Sn	21 45 39.6	+0.6
CGA2	Cerro Gallo 2	2.21	317	*e*P	Pn	21 45 14.8	+0.5

CASC 27 21:47:32.1±1.6, 8°39N×82°96W, h3km, MD3.6, 3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.34	323	⇑*e*P	Pg	21 47 39.4	+0.9
ACR				*e*S	Sg	21 47 44.8	+1.9
BRU2	Volcan	0.49	33	⇑*i*P	Pg	21 47 43.1	+1.6
BRU2				*e*S	Sg	21 47 51.0	+3.1
CTCR	Cotoan	0.55	22	⇑*i*P	Pg	21 47 44.4	+1.8
CTCR				*e*S	Sg	21 47 53.4	+3.7
BAR1		0.92	338	⇓*e*P	Pg	21 47 49.7	-0.1
BUS	Buena Vista	1.40	326	*e*P	Pn	21 47 58.2	-0.4
BUS				*e*S	Sg	21 48 17.9	+0.6
URSC	Urasca	1.65	331	⇓*e*P	Pn	21 48 01.6	-0.4
PRS1	Puriscal	2.07	320	⇓*e*P	Pn	21 48 09.3	+1.5

CSEM 27 21:54:40.8±0.2, 38°19N×38°59E, h2km, MD2.9, Error ellipse: s-maj=5.5km s-min=3.8km az=151.0

DDA 27 21:54:40.3, 38°20N×38°56E, h7km±3km, Md2.9

ISK 27 21:54:40.5, 38°45N×38°55E, h16km, MD2.9

ISCJB 27 21:54:41.0±0.6, 38°27N±0°05×38°58E±0°04, h15km±7km, Error ellipse: s-maj=8.5km s-min=5.4km az=173.5

ISC 27 21:54:41.1±0.6, 38°21N±0°05×38°57E±0°04, h9km±10km, n17, σ1§02/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.17	315	*e*PG	Pg	21 54 45.1	+0.5
MYA				*e*SG	Sg	21 54 48.1	+1.1
MYA	Malataya	0.17	315	*e*Pg	Pg	21 54 45.1	+0.5
MYA				*e*Sg	Sg	21 54 48.1	+1.1
ELZG	Elazig	0.43	48	*i*P	Pg	21 54 49.7	+0.2
ELZG				*i*S	Sg	21 54 56.1	+0.8
ELZG	Elazig	0.43	48	*i*P	Pg	21 54 49.7	+0.2
ELZG				*i*S	Sg	21 54 56.1	+0.8
AKCD	Akcadag	0.52	280	*i*P	Pg	21 54 51.2	0.0
AKCD				*i*S	Sg	21 54 58.0	0.0
AKCD	Akcadag	0.52	280	*i*P	Pg	21 54 51.2	0.0
AKCD				*i*S	Sg	21 54 58.0	0.0
SVRC	Sivrice-ELAZID	0.60	73	*e*PG	Pg	21 54 52.8	+0.1
SVRC				*e*SG	Sg	21 55 01.4	+0.9
SVRC	Sivrice-ELAZID	0.60	73	*e*Pg	Pg	21 54 52.8	+0.1
SVRC				*e*Sg	Sg	21 55 01.4	+0.8
ATAB	Bozova	0.77	197	*i*P	Pg	21 54 54.6	-1.3
ATAB	Bozova	0.77	197	*i*P	Pg	21 54 54.6	-1.3
PTK	Pertek	0.94	43	*e*PG	Pg	21 54 56.7	-2.4
DARE	Darende-Malaty	0.95	321	*e*PG	Pg	21 54 56.8	-2.6
KEMA	Kemaliye	1.06	357	*i*P	Pg	21 55 00.2	-1.3
KEMA				*i*S	Sg	21 55 15.7	+0.5
KEMA	Kemaliye	1.06	357	*i*P	Pg	21 55 00.2	-1.2
KEMA				*i*S	Sg	21 55 15.7	+0.5
GZT	Gaziantep	1.17	223	*i*P	Pb	21 55 03.9	+0.5
GZT				*i*S	Sb	21 55 19.1	+0.5
KMRS	Kahramanmaras	1.50	243	*e*PN	Pn	21 55 08.9	+0.8
KMRS	Kahramanmaras	1.50	243	*e*Pn	Pn	21 55 08.9	+0.8

ISK 27 21:56:22.9, 36°94N×29°24E, h5km, MD3.0

DDA 27 21:56:23.4, 36°94N×29°20E, h7km±4km, Md3.2

ISCJB 27 21:56:24.2±0.5, 36°96N±0°03×29°22E±0°04, h3km±7km, Error ellipse: s-maj=5.9km s-min=4.3km az=22.1

CSEM 27 21:56:24.1±0.1, 36°94N×29°25E, h5km, MD3.0, Error ellipse: s-maj=2.2km s-min=2.0km az=124.0

ISC 27 21:56:24.6±0.5, 36°95N±0°03×29°23E±0°04, h8km±6km, n30, σ0§86/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.30	47	*i*Pg	Pg	21 56 29.8	-0.7
GLHS				*e*Sg	Sg	21 56 35.2	+0.7
FETY	Fethiye	0.34	200	*e*PG	Pg	21 56 30.3	-0.9
FETY				*e*SG	Sg	21 56 36.0	+0.3
FETY	Fethiye	0.34	200	*e*Pg	Pg	21 56 30.3	-0.9
FETY				*e*Sg	Sg	21 56 36.0	+0.3
GOLH	Golhisar	0.39	43	*i*P	Pg	21 56 31.6	-0.7
GOLH				*i*S	Sg	21 56 37.6	+0.3
GOLH	Golhisar	0.39	43	*i*P	Pg	21 56 31.6	-0.6
GOLH				*i*S	Sg	21 56 37.7	+0.3
TURN	Turunc	0.51	261	*i*P	Pg	21 56 38.6	+4.2
TURN				*i*S	Sg	21 56 50.1	+9.1
TURN	Turunc	0.51	261	*i*P	Pg	21 56 38.6	+4.2
ELL	Elmali	0.58	110	*e*PG	Pg	21 56 35.1	-0.8
ELL	Elmali	0.58	110	*e*Pg	Pg	21 56 35.1	-0.8
DNZL	Cakiroluk	0.75	349	*i*P	Pg	21 56 38.7	-0.3
DNZL				*i*S	Sg	21 56 49.4	+0.7
DNZL	Cakiroluk	0.75	349	*i*P	Pg	21 56 38.7	-0.3
DNZL				*i*S	Sg	21 56 49.4	+0.6
YER	Yerkesik	0.78	284	*e*PG	Pg	21 56 39.5	0.0
YER	Yerkesik	0.78	284	*e*Pg	Pg	21 56 39.5	0.0
AKAS	Kas	0.78	157	*i*P	Pg	21 56 39.0	-0.7
AKAS				*i*S	Sg	21 56 52.2	+2.4
AKAS	Kas	0.78	157	*i*P	Pg	21 56 39.0	-0.6
AKAS				*i*S	Sg	21 56 52.2	+2.4
AYDN	Tasoluk	1.28	304	*i*P	Pn	21 56 48.0	-0.8
AYDN				*i*S	Sb	21 57 06.7	+1.0
AYDN	Tasoluk	1.28	304	*i*P	Pn	21 56 48.0	-0.8
AYDN				*i*S	Sb	21 57 06.7	+1.1
DAT	Datca	1.34	261	*e*PN	Pn	21 56 50.1	+0.5
DAT	Datca	1.34	261	*e*Pn	Pn	21 56 50.1	+0.5
ISP	Isparta	1.35	49	*e*PN	Pn	21 56 50.1	+0.3
ISP	Isparta	1.35	49	*e*Pn	Pn	21 56 50.1	+0.4
KHL	Karahalli	1.39	10	*e*PN	Pn	21 56 50.1	-0.1
KHL	Karahalli	1.39	10	*e*Pn	Pn	21 56 50.1	-0.1
BDRM	Kayabasi	1.43	275	*i*P	Pn	21 56 51.0	+0.2
BDRM				*i*S	Sn	21 57 09.8	0.0
BDRM	Kayabasi	1.43	275	*i*P	Pn	21 56 51.0	+0.2
SUTC	Sutluce-Ispart	1.51	69	*e*PN	Pn	21 56 52.1	+0.2
SUTC	Sutluce-Ispart	1.51	69	*e*Pn	Pn	21 56 52.1	+0.2
GCAM	G?zelcaml?	1.75	296	*i*P	Pn	21 56 52.3	-3.0
GCAM	G?zelcaml?	1.75	296	*i*P	Pn	21 56 52.3	-2.9

NEIC 27 22:14:52.4, 40°79N×36°64E, h5km, MD3.6(ISK), After ISK.

DDA 27 22:14:53.0, 40°79N×36°68E, h12km±2km, Md3.4

ISK 27 22:14:53.2, 40°78N×36°64E, h5km, MD3.5

ISCJB 27 22:14:54.2±0.3, 40°74N±0°02×36°62E±0°02, h10km, Error ellipse: s-maj=3.5km s-min=2.6km az=17.8

CSEM 27 22:14:54.1±0.1, 40°77N×36°64E, h2km, MD3.5, Error ellipse: s-maj=4.0km s-min=3.0km az=12.0

IDC 27 22:14:55.2±4.9, 40°88N×36°48E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.1/24, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=67.5km s-min=16.5km az=125.0

ISC 27 22:14:54.7±0.3, 40°76N±0°02×36°64E±0°02, h10km, n100, σ1§13/130, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKT	Tokat	0.45	189	PG	Pg	22 15 02.9	-0.6
TOKT				*e*SG	Sg	22 15 09.6	+0.2
TOKT	Tokat	0.45	189	Pg	Pg	22 15 03.1	-0.4
TOKT	Tokat	0.45	189	Pg	Pg	22 15 03.1	-0.4
TOKT				*e*Sg	Sg	22 15 09.6	+0.2
TOKA	Tokat	0.46	196	*i*P	Pg	22 15 02.9	-0.7
TOKA				*i*S	Sg	22 15 10.0	+0.4
TOKA	Tokat	0.46	196	*i*P	Pg	22 15 02.9	-0.7
TOKA				*i*S	Sg	22 15 10.0	+0.3
KVT	Kavak	0.55	305	*e*PG	Pg	22 15 04.1	-1.3
KVT				*e*SG	Sg	22 15 12.0	-0.7
KVT	Kavak	0.55	305	Pg	Pg	22 15 04.2	-1.3
KVT				Sg	Sg	22 15 12.2	-0.5
KVT	Kavak	0.55	305	Pg	Pg	22 15 04.2	-1.2
KVT				*e*Sg	Sg	22 15 12.0	-0.6
SVSK	Karacayir	0.89	162	*e*PG	Pg	22 15 10.7	-1.2
SVSK	Karacayir	0.89	162	*e*Pg	Pg	22 15 10.7	-1.2
GRSN	GIRESUNGRSN	1.25	82	*i*P	Pn	22 15 16.7	-1.5
GRSN				*i*S	Sb	22 15 32.7	-1.7
GRSN	GIRESUNGRSN	1.25	82	*i*P	Pn	22 15 16.7	-1.5
GRSN				*i*S	Sb	22 15 32.7	-1.8
DIKM	Dikmen	1.37	311	*e*PN	Pn	22 15 19.3	-0.6
DIKM	Dikmen	1.37	311	*e*Pn	Pn	22 15 19.3	-0.6
YOZ	Yozgat	1.51	222	*e*PN	Pn	22 15 21.3	-0.5
YOZ	Yozgat	1.51	222	*e*Pn	Pn	22 15 21.3	-0.5
BYBT	Boyabat	1.58	297	*e*PN	Pn	22 15

SVRC	Sivrice-ELAZID	3.15	138	ePn	Pn	22 15 44.7 +0.3
KMRS	Kahramanmaras	3.26	176	ePN	Pn	22 15 46.9 +1.0
KMRS	Kahramanmaras	3.26	176	ePn	Pn	22 15 46.9 +1.0
KOZT	Kozan	3.34	191	ePN	Pn	22 15 48.1 +1.1
GZT	Gaziantep	3.48	168	eP	Pn	22 15 50.3 +1.4
GZT				eS	Sg	22 16 44.9 -1.6
BINT	Bingol	3.51	121	ePN	Pn	22 15 50.4 +1.0
BINT	Bingol	3.51	121	Pn	Pn	22 15 51.0 +1.6
BINT	Bingol	3.51	121	ePn	Pn	22 15 50.4 +1.0
SULT	Sultanhani-AKS	3.52	224	ePN	Pn	22 15 50.4 +0.9
SULT	Sultanhani-AKS	3.52	224	Pn	Pn	22 15 50.8 +1.3
SULT	Sultanhani-AKS	3.52	224	ePn	Pn	22 15 50.4 +0.9
KARA	Karaisali	3.71	200	ePN	Pn	22 15 53.1 +1.1
KARA	Karaisali	3.71	200	ePn	Pn	22 15 53.2 +1.1
EZM	Erzurum	3.71	102	ePN	Pn	22 15 53.4 +1.4
ERZM	Erzurum	3.71	102	eP	Pg	22 16 02.1 -3.8
ERZM				eS	Sg	22 16 48.0 -6.0
BCA	Borcka	3.83	78	Pn	Pn	22 15 53.2 -0.5
BCA	Borcka	3.83	78	Pn	Pn	22 15 53.2 -0.5
DDEM	Demirkent	3.88	86	i P	Pn	22 15 56.7 +2.3
DDEM				i S	Sn	22 16 44.6 +4.6
DDEM	Demirkent	3.88	86	i P	Pn	22 15 56.7 +2.3
DDEM				i S	Sn	22 16 44.6 +4.6
ARTV	Artvin	4.03	82	i P	Pn	22 15 57.1 +0.7
ARTV				i S	Sn	22 16 40.6 -3.0
ARTV	Artvin	4.03	82	i P	Pn	22 15 57.1 +0.7
ARTV				i S	Sn	22 16 40.6 -3.0
LADK	Ladik-KONYA	4.18	234	ePN	Pn	22 15 59.8 +1.2
LADK	Ladik-KONYA	4.18	234	ePn	Pn	22 15 59.8 +1.3
KONT	Konya--Tatoy	4.35	231	ePN	Pn	22 16 02.3 +1.5
KONT	Konya--Tatoy	4.35	231	Pn	Pn	22 16 02.6 +1.8
KONT	Konya--Tatoy	4.35	231	ePn	Pn	22 16 02.3 +1.5
AKASG	Malin Array Be	11.20	335	Pn	Pn	22 17 32.0 -2.8
	1.4nm,0.3s,baz=137,slow=14,SNR=4.7					
FINES	FINESS Array B	21.69	346	P	P	22 19 47.8 +2.4
	2.4nm,1.0s,baz=157,slow=10,SNR=5.0					
FINES	FINESS Array B	21.69	346	P	P	22 19 47.8 +2.4
FINES	FINESS Array B	21.69	346	P	P	22 19 47.8 +2.4

*IDC **27** 22:39:04.1±2.5, 43°.86N×129°.66W, h0km, mb3.8/4, mb1 3.9/7, mb1mx3.6/28, mbtmp3.7/7, ML3.2/3, MS3.6/6, Ms1 3.5/6, ms1mx3.0/40, Error ellipse: s-maj=51.3km s-min=22.0km az=40.0*
*ISCJB **27** 22:39:06.2±2.0, 44°.35N±0°.06×129°.0W±0°.1, h3km±11km, mb3.5/5, MS3.6/4, Error ellipse: s-maj=16.6km s-min=9.2km az=164.9*
*NEIC **27** 22:39:08.6±1.4, 44°.30N×129°.05W, h10km, mb4.2/3, Error ellipse: s-maj=18.3km s-min=9.8km az=71.0*
ISC 27 22:39:06.7±2.3, 44°.32N±0°.06×129°.2W±0°.1, h5km±12km, n38, σ1°.16/36, mb3.5/5, MS3.6/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	Roman Nose	3.98	94	P	Pn	22 40 07.4	-0.9
HEBO	Mount Hebo	4.00	75	Pn	Pn	22 40 13.0	+4.4
COR	Corvallis	4.25	84	eP	Pn	22 40 11.2	-0.9
COR				S	Pg	22 40 29.4	+1.2
HSO	Harness Mounta	4.51	98	P	Pn	22 40 11.7	-3.9
NLWA	Neilton Lookou	4.85	49	ePn	Pn	22 40 19.9	-0.3
HUMO	Hull Mountain	4.88	108	ePn	Pn	22 40 19.6	-1.1
BBOR	Butler Butte	4.97	104	P	Pn	22 40 19.6	-2.4
YBH	Yreka Blue Hor	5.43	116	Pn	Pn	22 40 28.5	+0.2
	0.1nm,0.3s,baz=289,slow=10.0,SNR=14						
YBH				Sn	Sn	22 41 32.4	+1.2
	baz=222,slow=18,SNR=2.1						
YBH	Yreka Blue Hor	5.43	116	Pn	Pn	22 40 29.0	+0.7
	6.9nm,1.0s						
GNW	Green Mountain	5.53	52	ePn	Pn	22 40 29.2	-0.4
	2.4nm,0.5s						
LON	Longmire	5.75	62	ePn	Pn	22 40 31.7	-1.0
	10nm,0.9s						
PGC	Sidney	5.89	41	ePn	Pn	22 40 34.3	-0.3
PGC				eSn	Sn	22 41 42.0	-0.4
JCW	Jim Creek	6.38	50	ePn	Pn	22 40 40.4	-0.9
BBB	Bella Bella	7.91	5	LR	LR	22 43 51.7	
	comp=Z,85nm,21.6s,baz=138,slow=34						
ELK	Elko	10.93	104	Pn	Pn	22 41 47.4	+3.7
	0.1nm,0.3s,baz=304,slow=5.7,SNR=3.7						
BOZ	Bozeman (W)	12.54	78	Pn	Pn	22 42 05.1	-0.5
	3.7nm,1.4s						
IMW	Indian Meadow	13.16	85	ePn	Pn	22 42 15.1	+1.0
	6.4nm,1.3s						
TPAW	Teton Pass	13.21	87	Pn	Pn	22 42 14.6	-0.3
	7.9nm,1.2s						
CCUT	Cedar City	13.76	114	ePn	Pn	22 42 21.8	-0.6
	12nm,1.4s						
GCMT	Greycliff	13.91	77	Pn	Pn	22 42 26.5	+2.1
	6.2nm,0.9s						
MSU	Marysvale	14.04	108	ePn	Pn	22 42 27.7	+1.5
	14nm,1.4s						
DLBC	Dease Lake	14.15	358	LR	LR	22 47 37.9	
	comp=Z,192nm,18.7s,baz=178,slow=35						
PDAR	Pinedale Array	14.36	89	Pn	Pn	22 42 37.8	+7.3
	0.0nm,0.3s,baz=282,slow=7.4,SNR=5.8						
SRU	San Rafael	14.90	104	ePn	Pn	22 42 38.0	+0.1
	20nm,1.0s						
PV01	Paradox Valley	16.71	105	eP	Pn	22 43 01.1	-0.4
	666nm,1.1s						
MVCO	Mesa Verde	17.21	107	ePn	Pn	22 43 08.1	+0.3
	45nm,1.8s						
ISCO	Idaho Springs	18.09	96	Pn	Pn	22 43 18.8	+0.2
	5.4nm,1.2s						
ANMO	Albuquerque	19.82	110	P	Pn	22 43 37.1	-2.5
YKA	Yellowknife Ar	20.10	20	P	P	22 43 45.3	+4.4
	2.0nm,0.9s,baz=209,slow=10,SNR=10						
YKA	Yellowknife Ar	20.10	20	P	P	22 43 45.3	+4.4
ULM	Lac du Bonnet	23.26	63	P	P	22 44 17.1	+2.2
	2.0nm,0.7s,mb3.7,baz=264,slow=9.2,SNR=2.3						
ULM				LR	LR	22 53 26.9	
	comp=Z,109nm,18.3s,MS3.3,baz=312,slow=36						
TXAR	Lajitas Array	25.21	118	P	P	22 44 32.1	-1.1
	0.7nm,0.9s,mb3.2,baz=298,slow=5.5,SNR=6.4						
WMOK	Wichita Mounta	25.24	102	eP	P	22 44 33.8	+0.3
	6.8nm,1.0s,mb4.1						
FCC	Fort Churchill	25.83	44	eP	P	22 44 41.2	+2.6
	0.2nm,1.2s,mb2.5						
SADO	Sadowa	35.25	71	LR	LR	23 00 48.6	
	comp=Z,157nm,19.9s,MS3.8,baz=342,slow=37						
TKL	Tuckaleechee C	35.50	88	LR	LR	23 01 16.2	
	comp=Z,158nm,19.9s,MS3.8,baz=94,slow=37						
SCHQ	Schefferville	40.51	52	LR	LR	23 03 51.3	
	comp=Z,95nm,19.1s,MS3.7,baz=133,slow=36						
KURK	Kurchatov	82.31	343	P	P	22 51 29.6	+0.7
	0.4nm,0.2s,mb4.0,baz=15,slow=4.8,SNR=2.4						

*ISCJB **27** 22:46:24.8±1.2, 23°.48N±0°.03×122°.01E±0°.02, h14km±8km, Error ellipse: s-maj=4.6km s-min=3.0km az=149.5*
*JMA **27** 22:46:25.9±0.3, 23°.41N×122°.12E, h16km*
*TAP **27** 22:46:26.0, 23°.50N×121°.95E, h18km±1km, ML2.8, C*
ISC 27 22:46:24.6±0.6, 23°.49N±0°.02×121°.99E±0°.02, h11km±3km, n30, σ0°.66/54, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	Shilin	0.61	302	i P	Pg	22 46 36.8	+0.3
	baz=303						
ESL				S	Sg	22 46 44.5	+0.1
	baz=303						
EHY	Hungye	0.61	272	i P	Pg	22 46 37.2	+0.6
	baz=258						
EHY				S	Sg	22 46 45.3	+0.6
	baz=258						
TWF1	Yuli	0.65	258	⇑ iP	Pg	22 46 37.8	+0.6
	baz=256						
TWF1				S	Sg	22 46 46.5	+0.6
	baz=256						
TWD	Chiawan	0.69	328	i P	Pg	22 46 38.0	0.0
	baz=331						
TWD				S	Sg	22 46 47.6	+0.4
	baz=331						
CHKT	Chengkung	0.69	236	P	Pg	22 46 38.0	-0.1
	baz=220						
CHKT				eS	Sg	22 46 46.6	-0.6
	baz=220						
WHF	Hehuan Shan	0.93	315	P	Pg	22 46 42.4	-0.2
	baz=315						
WHF				eS	Sg	22 46 54.0	-0.8
	baz=315						
ELDTW	Lidau	0.94	252	eP	Pg	22 46 41.9	-1.0
	baz=250						
YUS	Yu-Shan	0.95	270	i P	Pg	22 46 43.3	+0.3
	baz=269						
YUS				S	Sg	22 46 55.7	+0.2
	baz=269						
ENA	Nanau	0.96	346	P	Pg	22 46 43.0	-0.2
	baz=348						
ENA				eS	Sg	22 46 55.8	0.0
	baz=348						
TWT	Tachien	1.07	316	eP	Pb	22 46 44.8	-0.3
	baz=316						
SMLT	Sun Moon Lake	1.07	292	eP	Pb	22 46 44.8	-0.5
	baz=300						
SMLT				eS	Sb	22 46 59.1	-0.2
	baz=300						
TWG	Pinlang	1.08	232	eP	Pb	22 46 43.6	-1.6
	baz=220						
TWG				eS	Sb	22 46 57.4	-1.9
	baz=220						
ALS	Alishan	1.09	271	⇑ i P	Pb	22 46 45.7	+0.2
	baz=270						
ALS				S	Sb	22 46 59.6	-0.1
	baz=270						
TYC	Yuchr	1.12	292	eP	Pb	22 46 45.9	-0.1
	baz=300						
TYC				eS	Sb	22 47 00.3	-0.3
	baz=300						
TWC	Suao	1.12	353	P	Pb	22 46 46.0	-0.1
	baz=355						
TWC				S	Sb	22 47 00.9	+0.2
	baz=355						
CHN5	Tsauling	1.21	275	P	Pn	22 46 47.9	+0.4
	baz=274						
CHN5				S	Sb	22 47 03.1	0.0
	baz=274						
ENTT	Nioudou	1.21	341	eP	Pn	22 46 47.3	-0.2
	baz=342						
ENTT				eS	Sb	22 47 02.5	-0.7
	baz=342						
TWE	Neicheng	1.26	346	eP	Pn	22 46 48.1	-0.1
	baz=348						
WTP	Ta-pu	1.29	260	P	Pn	22 46 48.8	+0.2
	baz=257						
WTP				eS	Sb	22 47 06.3	+0.9
	baz=257						
NSK	Sanguang	1.32	334	eP	Pn	22 46 48.7	-0.2
	baz=335						
NSK				eS	Sb	22 47 04.4	-1.9
	baz=335						
YOJ	Yonaguni jima	1.34	44	P	Pn	22 46 50.0	+0.7
YOJ				S	Sb	22 47 06.9	-0.1
CHN1	Nanshi	1.38	258	P	Pn	22 46 50.5	+0.7
	baz=256						
CHN1				eS	Sn	22 47 08.8	+0.9
	baz=256						
TWK	Hsinying	1.40	261	eP	Pn	22 46 50.6	+0.6
	baz=259						
TWK				eS	Sn	22 47 09.1	+0.6
	baz=259						
SSD	Sandimen	1.45	240	eP	Pn	22 46 51.4	+0.6
	baz=228						
NSTT	Nanjuang	1.45	322	eP	Pn	22 46 51.5	+0.7
	baz=322						
NSTT				eS	Sn	22 47 09.3	-0.6
	baz=322						
EAST	Anshuo	1.52	224	eP	Pn	22 46 50.4	-1.3
	baz=222						
NWF	Wu-fen Shan	1.59	353	eP	Pn	22 46 53.8	+1.2
	baz=354						
NWF				eS	Sn	22 47 14.0	+0.9
	baz=354						
HATJ	Hateruma jima	1.75	71	P	Pn	22 46 55.1	+0.2
HATJ				eS	Sn	22 47 16.6	-0.7
IRIF	Iriomote-Funau	1.80	62	S	Sn	22 47 18.8	+0.4
JIJ	Ishigaki jima	2.15	66	P	Pn	22 47 01.0	+0.6
JIJ				eS	Sn	22 47 26.8	-0.3

*NEIC **27** 23:03:29.2±2.5, 23°.44N×122°.09E, h10km, Error ellipse: s-maj=27.9km s-min=9.4km az=114.0*
*ISCJB **27** 23:03:31.7±0.5, 23°.49N±0°.02×122°.00E±0°.02, h16km±5km, Error ellipse: s-maj=4.1km s-min=2.3km az=36.6*
*TAP **27** 23:03:32.4, 23°.51N×121°.97E, h18km, ML3.5, C*
*JMA **27** 23:03:33.4±0.3, 23°.37N×122°.07E, h43km, M2.7*
ISC 27 23:03:31.6±0.5, 23°.51N±0°.02×121°.98E±0°.02, h13km±2km, n56, σ0°.80/98, 2C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.58	324	eP	Pg	23 03 43.5	+0.6
	baz=325						
ESL	Shilin	0.58	302	i P	Pg	23 03 43.2	+0.2
	baz=302						
ESL				S	Sg	23 03 50.8	+0.1
	baz=302						
EHY	Hungye	0.60	270	i P	Pg	23 03 43.8	+0.5
	baz=258						
EHY				eS	Sg	23 03 51.8	+0.5
	baz=258						
YULB	Yu-li	0.63	260	eP	Pg	23 03 43.9	-0.1
YULB				eS	Sg	23 03 53.2	+0.9
TWF1	Yuli	0.64	256	⇑ iP	Pg	23 03 44.4	+0.3
	baz=244						
TWF1				i S	Sg	23 03 53.9	+1.3
	baz=244						
TWD	Chiawan	0.67	329	i P	Pg	23 03 44.8	+0.2
	baz=329						
TWD				eS	Sg	23 03 53.5	+0.2
	baz=329						
CHKT	Chengkung	0.69	234	⇑ i P	Pg	23 03 44.6	-0.4
	baz=221						
CHKT				eS	Sg	23 03 53.1	-1.1
	baz=221						
NACB	Ninganchiao	0.75	332	eP	Pg	23 03 45.6	-0.5
NACB				eS	Sg	23 03 55.6	-0.3
WHF	Hehuan Shan	0.91	314	⇓ i P	Pg	23 03 48.9	-0.3
	baz=314						
WHF				eS	Sg	23 04 00.4	-0.6
	baz=314						
ELDTW	Lidau	0.94	250	eP	Pb	23 03 48.6	-1.1
	baz=250						
YUS	Yu-Shan	0.94	269	eP	Pb	23 03 49.9	+0.1
	baz=268						
YUS				eS	Sg	23 04 01.8	-0.2
	baz=268						
ENA	Nanau	0.94	347	P	Pb	23 03 49.6	-0.2
	baz=347						
ENA				eS	Sg	23 04 02.0	0.0
	baz=347						
SSLB	Suanglung	0.98	287	eP	Pb	23 03 49.8	-0.5
SSLB				eS	Sb	23 04 02.0	-1.2
TWT	Tachien	1.04	316	eP	Pb	23 03 51.4	0.0
	baz=315						
SMLT	Sun Moon Lake	1.05	291	eP	Pb	23 03 51.1	-0.5
	baz=291						
SMLT				eS	Sb	23 04 06.3	+1.0
	baz=291						
TTN	Taitung	1.07	226	eP	Pb	23 03 51.2	-0.7
	baz=215						
ALS	Alishan	1.07	270	P	Pb	23 03 52.1	+0.1
	baz=269						
ALS				eS	Sb	23 04 06.1	+0.1
	baz=269						
TWG	Pinlang	1.08	231	eP	Pb	23 03 50.1	-1.9
TWG				eS	Sb	23 04 04.3	-1.8
TWG	Pinlang	1.08	231	eP	Pb	23 03 50.6	-1.5
	baz=221						
TWG				eS	Sb	23 04 02.8	-3.3
	baz=221						
NNS	Nan Shan	1.08	329	P	Pb	23 03 51.7	-0.4
	baz=329						
NNS				eS	Sb	23 04 05.5	-0.6
	baz=329						
TYC	Yuchr	1.10	291	eP	Pb	23 03 52.4	0.0
	baz=299						
TYC				eS	Sb	23 04 05.8	-0.8
	baz=299						
TWC	Suao	1.10	354	i P	Pb	23 03 52.6	+0.1
	baz=354						
TWC				S	Sb	23 04 07.1	+0.4
	baz=354						
ENTT	Nioudou	1.19	342	i P	Pn	23 03 53.4	-0.4
	baz=341						
ENTT				eS	Sb	23 04 09.0	-0.2
	baz=341						
CHN5	Tsauling	1.19	274	⇓ i P	Pn	23 03 54.7	+0.7
	baz=274						
CHN5				eS	Sb	23 04 08.2	-1.2
	baz=274						
TWE	Neicheng	1.24	347	P	Pn	23 03 54.2	-0.4
	baz=347						
TWE				S	Sb	23 04 10.4	-0.3
	baz=347						
TPUB	Ta-pu	1.25	261	ePn	Pn	23 03 54.8	0.0
TPUB				eS	Sb	23 04 13.1	+2.0
WTP	Ta-pu	1.28	258	P	Pn	23 03 55.4	+0.3
	baz=257						
WTP				eS	Sb	23 04 12.3	+0.5
	baz=257						
YHNB	Yeheng	1.28	335	ePn	Pn	23 03 54.9	-0.3
YHNB				S	Sb	23 04 10.5	-1.4
NSK	Sanguang	1.29	334	i P	Pn	23 03 55.2	-0.1
	baz=334						
NSK				eS	Sb	23 04 11.0	-1.2
	baz=334						
ECL	Taimali	1.31	226	eP	Pn	23 03 53.2	-2.4
	baz=238						
YOJ	Yonaguni jima	1.34	45	P	Pn	23 03 57.1	+1.1
YOJ				S	Sb	23 04 13.8	+0.2
SGST	Jiashian	1.35	252	P	Pn	23 03 56.1	+0.1
	baz=240						
SGST				eS	Sn	23 04 14.0	+0.2
	baz=240						
TCU	Taichung	1.35	298	eP	Pn	23 03 57.2	+1.1
	baz=298						
CHN1	Nanshi	1.37	257	i P	Pn	23 03 56.9	+0.6
	baz=256						
CHN1				eS	Sn	23 04 15.4	+1.1
	baz=256						
TWQ1	Liyutan	1.38	307	eP	Pn	23 03 57.4	+0.9
	baz=307						
TWQ1				eS	Sn	23 04 15.1	+0.5
	baz=307						
TWK	Hsinying	1.39	260	eP	Pn	23 03 57.2	+0.6
	baz=259						
TWK				eS	Sn	23 04 14.9	+0.1
	baz=259						
NSTT	Nanjuang	1.43	322	eP	Pn	23 03 58.0	+0.8
	baz=321						
NSTT				eS	Sn	23 04 15.8	-0.1
	baz=321						
NSY	Sanyi	1.43	309	eP	Pn	23 03 56.1	-1.1
	baz=308						
SSD	Sandimen	1.45	239	eP	Pn	23 03 57.6	+0.1
	baz=228						
TWB1	Santiao Chiao	1.49	0	P	Pn	23 03 58.7	+0.6
TWB1				eS	Sn	23 04 17.8	+0.4
TWA	Mucha	1.51	346	eP	Pn	23 03 58.5	+0.2
	baz=332						
TWA				eS	Sn	23 04 17.1	-0.7
	baz=332						
TATO	Taipei	1.53	343	ePn	Pn	23 03 58.0	-0.6
TATO				eSn	Sn	23 04 18.5	+0.2
EAST	Anshuo	1.53	223	eP	Pn	23 03 56.8	-1.7
	baz=222						
NWF	Wu-fen Shan	1.56	354	eP	Pn	23 04 00.5	+1.4
	baz=353						
NWF				eS	Sn	23 04 19.6	+0.4
	baz=353						
TWM1	Shoushan	1.58	245	eP	Pn	23 04 00.8	+1.5
	baz=244						
TWS1	Kuangyinshan	1.66	342	eP	Pn	23 04 00.7	+0.3
	baz=341						
SCZT	Fangliau	1.69	228	eP	Pn	23 04 01.4	+0.7
	baz=218						
SCZT				eS	Sn	23 04 21.4	-0.8
	baz=218						
HATJ	Hateruma jima	1.76	72	P	Pn	23 04 01.6	-0.2
HATJ				S	Sn	23 04 23.2	-0.9
TWY	Chenhua	1.79	349	eP	Pn	23 04 05.8	+3.7
	baz=330						
IRIF	Iriomote-Funau	1.80	63	P	Pn	23 04 02.9	+0.5
IRIF				eS	Sn	23 04 25.4	+0.3
HEN	Hengchun	1.88	218	eP	Pn	23 04 02.2	-1.2
	baz=217						
TWP	Hsiaoliuchiu	1.88	232	eP	Pn	23 04 04.7	+1.2
	baz=231						
TWP				eS	Sn	23 04 29.7	+2.6
	baz=231						
TWK1	Hengchun	1.90	215	eP	Pn	23 04 03.2	-0.4
	baz=223						
TWK1				eS	Sn	23 04 26.8	-0.6
	baz=223						
JKRS	Kuro-shima	2.00	68	P	Pn	23 04 05.6	+0.6
JKRS				eS	Sn	23 04 29.9	0.0
JIJ	Ishigaki jima	2.16	66	P	Pn	23 04 07.8	+0.6
JIJ				eS	Sn	23 04 32.9	-0.9
JTJ	Tarama	2.73	65	P	Pn	23 04 15.8	+0.6

*CSEM **27** 23:03:34.6, 37°.29N×24°.75W, h5km, ML2.9, After PDA*
PDA 27 23:03:34.6±1.8, 37°.29N×24°.75W, h5km±182km, MD3.7, ML2.9, Error ellipse: s-maj=105.5km s-min=8.9km az=129.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.38	221	i P	Pg	23 03 41.5	-0.5
PSMN				eS	Sg	23 03 47.0	0.0
PSMA	Santa Maria	0.42	225	i P	Pg	23 03 41.8	-1.0
PSMA				eS	Sg	23 03 47.7	-0.6
PSMA				A		23 03 48.7	
	193nm,0.2s						
CMLA	Cha da Macela	0.77	308	i P	Pg	23 03 47.0	-2.4
CMLA				eS	Sg	23 03 56.8	-2.7
CMLA				A		23 03 58.5	
	206nm,0.2s						
GRON	Grota Negra	0.78	308	eP	Pg	23 03 45.7	-3.9
GRON				eS	Sg	23 03 54.3	-5.4
GRON				A		23 03 55.8	
	107nm,0.2s						
PDA	Ponta Delgada	0.85	302	eP	Pg	23 03 48.5	-2.5
PDA				eS	Sg	23 03 59.0	-3.1
PDA	Ponta Delgada	0.85	302	eP	Pg	23 03 48.5	-2.5
PDA				eS	Sg	23 03 59.0	-3.1
PSET	Sete Cidades	0.93	305	eP	Pg	23 03 49.5	-3.0
PSET				eS	Sg	23 04 00.9	-3.8
PSET				A		23 04 03.4	
	35nm,0.2s						
PSET	Sete Cidades	0.93	305	eP	Pg	23 03 49.5	-3.0
PSET				eS	Sg	23 04 00.9	-3.8
ADH	Angra Heroismo	2.39	305	eP	Pn	23 04 09.6	-4.8
ADH				eS	Sn	23 04 36.2	-7.9
ADH				A		23 04 39.6	
	57nm,0.3s						
ADH	Angra Heroismo	2.39	305	eP	Pn	23 04 09.6	-4.8
ADH				eS	Sn	23 04 36.2	-7.9
PID	Ribeirinha	2.90	294	eP	Pn	23 04 17.7	-3.8
PID				eS	Sn	23 04 48.8	-7.9
PID	Ribeirinha	2.90	294	eP	Pn	23 04 17.7	-3.8
PID				eS	Sn	23 04 48.8	-7.9
PMAN	Manadas	2.96	298	eP	Pn	23 04 18.9	-3.3
PMAN				eS	Sn	23 04 50.6	-7.5
PMAN				A		23 04 52.6	
	21nm,0.2s						
PMAN	Manadas	2.96	298	eP	Pn	23 04 18.9	-3.3
PMAN				eS	Sn	23 04 50.6	-7.5
ROSA	Rosais	3.10	298	eP	Pn	23 04 21.0	-3.2
ROSA				eS	Sn	23 04 54.0	-7.7
ROSA	Rosais	3.10	298	eP	Pn	23 04 21.0	-3.2
ROSA				eS	Sn	23 04 54.0	-7.7
PICO	Pico	3.15	294	eP	Pn	23 04 22.2	-2.6
PICO				eS	Sn	23 04 55.6	-7.2
PICO	Pico	3.15	294	eP	Pn	23 04 22.2	-2.6
PICO				eS	Sn	23 04 55.6	-7.2
PCAN	Candelaria	3.18	293	eP	Pn	23 04 22.2	-3.1
PCAN				eS	Sn	23 04 56.2	-7.3
PCAN				A		23 05 02.0	
	25nm,0.2s						
PCAN	Candelaria	3.18	293	eP	Pn	23 04 22.2	-3.1
PCAN				eS	Sn	23 04 56.2	-7.3
CALA	Caldeira	3.38	294	eS	Sn	23 05 01.1	-7.4
CALA	Caldeira	3.38	294	eS	Sn	23 05 01.1	-7.4
PCED	Cedros	3.40	294	eP	Pn	23 04 24.1	-4.1
PCED	Cedros	3.40	294	eP	Pn	23 04 24.1	-4.1

*ROM **27** 23:25:59.2±0.1, 35°.17N×22°.65E, h10km, Md3.6/2, Error ellipse: s-maj=5.1km s-min=0.0km az=37.0*
*IDC **27** 23:26:02.7±0.5, 35°.55N×22°.40E, h0km, mb4.7/23, mb1 4.7/34, mb1mx4.6/40, mbtmp4.6/34, ML4.6/9, MS3.6/17, Ms1 3.5/17, ms1mx3.3/39, Error ellipse: s-maj=11.5km s-min=11.2km az=131.0*

ISCJB ***27*** *23:26:05.4±0.2,35°.42N±0°.01×22°.27E±0°.01,h40km±2km, mb4.8/80,MS3.6/33,Error ellipse: s-maj=2.1km s-min=1.5km az=27.9*

SZGRF ***27*** *23:26:05.2,35°.39N×22°.09E,h10km,Central Mediterranean Sea*

HLW ***27*** *23:26:08.9,35°.54N×22°.91E,h33km±99km*

CSEM ***27*** *23:26:08.2±0.1,35°.45N×22°.25E,h52km±1km,mb4.7/35, Ms3.0,Error ellipse: s-maj=2.9km s-min=1.9km az=33.0*

NEIC ***27*** *23:26:08.8,35°.53N×22°.38E,h91km,mb4.4/42,After ATH.*

MOS ***27*** *23:26:08.8±1.1,35°.64N×22°.31E,h60km,mb5.0/45,Error ellipse: s-maj=4.4km s-min=2.1km az=96.8*

PRU ***27*** *23:26:08.7,35°.86N×21°.40E,h0km,M4.4*

BJI ***27*** *23:26:09.3,35°.83N×22°.57E,h51km,mB4.9/12,mb4.9/25, Ms4.9/11,Ms7 4.5/12*

THE ***27*** *23:26:10.8,35°.63N×22°.43E,h94km±6km,ML5.4/10,Error ellipse: s-maj=6.7km s-min=1.1km az=148.0*

ATH ***27*** *23:26:10.1,35°.58N×22°.51E,h84km±2km,ML4.5*

PDG ***27*** *23:26:12.1±0.1,35°.83N×20°.89E,h12km±11km,MD5.6/10, ML5.5/9,Error ellipse: s-maj=121.6km s-min=27.0km az=90.0*

ISC 27 23:26:07.8±0.1,35°.42N±0°.01×22°.29E±0°.01,h40km±2km, h47km±1.6km:pP-P,n1298,σ1930/1453,mb4.8/80,MS3.6/33, 58C-64D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.05**	**35**	*eP*	**Pn**	**23 26 28.7**	**+2.7**
KYTH	**Kithira**	**1.05**	**35**	*eP*	**Pn**	**23 26 28.7**	**+2.7**
KARN	**Karanos**	**1.33**	**90**	*eP*	**Pn**	**23 26 32.6**	**+2.8**
KARN				*eS*	**Sn**	**23 26 47.9**	**+1.6**
KARN	**Karanos**	**1.33**	**90**	P	**Pn**	**23 26 32.7**	**+2.9**
KARN				S	**Sn**	**23 26 51.0**	**+4.7**
KARN	**Karanos**	**1.33**	**90**	*eP*	**Pn**	**23 26 32.6**	**+2.8**
KARN				S	**Sn**	**23 26 51.0**	**+4.7**
VLI	**Veliai**	**1.40**	**22**	*eP*	**Pn**	**23 26 33.6**	**+2.8**
VLI	**Veliai**	**1.40**	**22**	*eP*	**Pn**	**23 26 33.6**	**+2.8**
PYL	**PYLOS**	**1.54**	**343**	P	**Pn**	**23 26 33.8**	**+1.1**
PYL	**PYLOS**	**1.54**	**343**	*eP*	**Pn**	**23 26 33.6**	**+0.9**
VAM	**Vamos**	**1.56**	**90**	*eP*	**Pn**	**23 26 35.6**	**+2.6**
VAM				*eS*	**Sn**	**23 26 53.4**	**+1.4**
VAM	**Vamos**	**1.56**	**90**	*eP*	**Pn**	**23 26 35.6**	**+2.6**
GVD	**Gavdhos**	**1.58**	**111**	*eP*	**Pn**	**23 26 35.7**	**+2.4**
GVD				*eS*	**Sn**	**23 26 55.0**	**+2.5**
GVD	**Gavdhos**	**1.58**	**111**	P	**Pn**	**23 26 35.8**	**+2.5**
GVD				S	**Sn**	**23 26 58.0**	**+5.5**
GVD	**Gavdhos**	**1.58**	**111**	*eP*	**Pn**	**23 26 35.7**	**+2.4**
GVD				S	**Sn**	**23 26 58.0**	**+5.5**
ITM	**Ithomi**	**1.78**	**351**	*eP*	**Pn**	**23 26 37.4**	**+1.3**
ITM	**Ithomi**	**1.78**	**351**	*eP*	**Pn**	**23 26 37.6**	**+1.5**
ITM	**Ithomi**	**1.78**	**351**	P	**Pn**	**23 26 37.5**	**+1.4**
ITM	**Ithomi**	**1.78**	**351**	*eP*	**Pn**	**23 26 37.6**	**+1.5**
VLX	**Vlachokerasia**	**1.95**	**2**	*eP*	**Pn**	**23 26 40.5**	**+2.1**
VLX	**Vlachokerasia**	**1.95**	**2**	P	**Pn**	**23 26 41.2**	**+2.8**
VLX	**Vlachokerasia**	**1.95**	**2**	*eP*	**Pn**	**23 26 40.5**	**+2.1**
SIVA	**Sivas**	**2.10**	**100**	*eP*	**Pn**	**23 26 43.2**	**+2.8**
SIVA	**Sivas**	**2.10**	**100**	P	**Pn**	**23 26 43.5**	**+3.1**
SIVA	**Sivas**	**2.10**	**100**	*eP*	**Pn**	**23 26 43.2**	**+2.8**
IDI	**Anoyia**	**2.13**	**93**	Pn	**Pn**	**23 26 43.5**	**+2.7**
	166nm,0.3s,baz=274,slow=14,SNR=1027						
IDI				Sn	**Sn**	**23 27 06.1**	**0.0**
	252nm,0.3s,baz=268,slow=14,SNR=8.3						
IDI	**Anoyia**	**2.13**	**93**	*eP*	**Pn**	**23 26 43.5**	**+2.7**
IDI	**Anoyia**	**2.13**	**93**	*eP*	**Pn**	**23 26 43.5**	**+2.7**
GUR	**Goura**	**2.51**	**1**	*eP*	**Pn**	**23 26 48.7**	**+2.6**
GUR	**Goura**	**2.51**	**1**	P	**Pn**	**23 26 49.2**	**+3.1**
GUR	**Goura**	**2.51**	**1**	*eP*	**Pn**	**23 26 48.7**	**+2.6**
NAIG	**Nisos Aigina**	**2.53**	**22**	*eP*	**Pn**	**23 26 47.7**	**+1.4**
NAIG	**Nisos Aigina**	**2.53**	**22**	*eP*	**Pn**	**23 26 47.7**	**+1.4**
LAST	**Lasithi**	**2.62**	**95**	*eP*	**Pn**	**23 26 50.6**	**+3.0**
LAST	**Lasithi**	**2.62**	**95**	P	**Pn**	**23 26 50.7**	**+3.1**
LAST				S	**Sn**	**23 27 22.2**	**+4.1**
LAST	**Lasithi**	**2.62**	**95**	*eP*	**Pn**	**23 26 50.6**	**+3.0**
LAST				S	**Sn**	**23 27 22.2**	**+4.1**
LTK	**Loutraki**	**2.66**	**12**	*eP*	**Pn**	**23 26 49.5**	**+1.4**
LTK	**Loutraki**	**2.66**	**12**	P	**Pn**	**23 26 49.9**	**+1.8**
LTK	**Loutraki**	**2.66**	**12**	*eP*	**Pn**	**23 26 49.5**	**+1.4**
THR5	**Thira Island,**	**2.67**	**67**	P	**Pn**	**23 26 49.7**	**+1.4**
THR5	**Thira Island,**	**2.67**	**67**	P	**Pn**	**23 26 49.7**	**+1.4**
THR5	**Thira Island,**	**2.67**	**67**	P	**Pn**	**23 26 49.7**	**+1.4**
THR3	**Thira Island,**	**2.71**	**68**	P	**Pn**	**23 26 50.4**	**+1.6**
THR3	**Thira Island,**	**2.71**	**68**	P	**Pn**	**23 26 50.4**	**+1.6**
THR3	**Thira Island,**	**2.71**	**68**	P	**Pn**	**23 26 50.4**	**+1.6**
VLY	**Voula,Athens**	**2.71**	**26**	*eP*	**Pn**	**23 26 49.8**	**+1.0**
VLY	**Voula,Athens**	**2.71**	**26**	*eP*	**Pn**	**23 26 49.8**	**+1.0**
RLS	**Riolos of Patr**	**2.72**	**346**	*eP*	**Pn**	**23 26 51.3**	**+2.4**
RLS	**Riolos of Patr**	**2.72**	**346**	*eP*	**Pn**	**23 26 51.3**	**+2.4**
NPS	**Neapolis**	**2.72**	**92**	*eP*	**Pn**	**23 26 51.3**	**+2.4**
NPS	**Neapolis**	**2.72**	**92**	*eP*	**Pn**	**23 26 51.3**	**+2.4**
THR4	**Thira Island,**	**2.73**	**67**	P	**Pn**	**23 26 50.8**	**+1.8**
THR4	**Thira Island,**	**2.73**	**67**	P	**Pn**	**23 26 50.8**	**+1.8**
THR4	**Thira Island,**	**2.73**	**67**	P	**Pn**	**23 26 50.8**	**+1.8**
THR1	**Thera Island**	**2.74**	**69**	P	**Pn**	**23 26 50.8**	**+1.6**
THR1	**Thera Island**	**2.74**	**69**	P	**Pn**	**23 26 50.8**	**+1.6**
ATH	**Athens Observa**	**2.79**	**24**	*eP*	**Pn**	**23 26 51.2**	**+1.2**
ATH	**Athens Observa**	**2.79**	**24**	*eP*	**Pn**	**23 26 51.2**	**+1.2**
ATHU	**Athens Univers**	**2.81**	**25**	P	**Pn**	**23 26 51.3**	**+1.1**
ATHU				S	**Sn**	**23 27 21.3**	**-1.5**
ATHU	**Athens Univers**	**2.81**	**25**	P	**Pn**	**23 26 51.3**	**+1.1**
ATHU				S	**Sn**	**23 27 21.3**	**-1.5**
LAKA	**Lakka**	**2.83**	**355**	P	**Pn**	**23 26 53.9**	**+3.5**
LAKA	**Lakka**	**2.83**	**355**	P	**Pn**	**23 26 53.9**	**+3.5**
UPR	**University Cam**	**2.89**	**352**	*eP*	**Pn**	**23 26 54.7**	**+3.5**
UPR	**University Cam**	**2.89**	**352**	P	**Pn**	**23 26 55.9**	**+4.7**
UPR	**University Cam**	**2.89**	**352**	*eP*	**Pn**	**23 26 54.7**	**+3.5**
PTL	**Penteli**	**2.91**	**25**	*eP*	**Pn**	**23 26 52.9**	**+1.3**
PTL	**Penteli**	**2.91**	**25**	*eP*	**Pn**	**23 26 52.9**	**+1.3**
KFL	**Anninata**	**2.94**	**336**	P	**Pn**	**23 26 53.4**	**+1.4**
TRIZ	**Trizonia**	**2.95**	**357**	P	**Pn**	**23 26 54.6**	**+2.5**
TRIZ	**Trizonia**	**2.95**	**357**	P	**Pn**	**23 26 54.6**	**+2.5**
KALE	**Kalithea**	**2.97**	**358**	P	**Pn**	**23 26 54.6**	**+2.2**
KALE	**Kalithea**	**2.97**	**358**	P	**Pn**	**23 26 54.6**	**+2.2**
DSF	**Desfina**	**2.99**	**4**	P	**Pn**	**23 26 54.3**	**+1.6**
DSF	**Desfina**	**2.99**	**4**	P	**Pn**	**23 26 54.3**	**+1.6**
EFP	**Efpalio**	**3.02**	**354**	*eP*	**Pn**	**23 26 56.2**	**+3.2**
EFP	**Efpalio**	**3.02**	**354**	P	**Pn**	**23 26 57.0**	**+4.0**
EFP				S	**Sn**	**23 27 29.0**	**+1.1**
EFP	**Efpalio**	**3.02**	**354**	*eP*	**Pn**	**23 26 56.2**	**+3.2**
EFP				S	**Sn**	**23 27 29.0**	**+1.1**
VLS	**Valsamata**	**3.07**	**334**	*eP*	**Pn**	**23 26 54.9**	**+1.1**
VLS	**Valsamata**	**3.07**	**334**	P	**Pn**	**23 26 54.8**	**+1.0**
VLS				S	**Sn**	**23 27 29.5**	**+0.2**
VLS	**Valsamata**	**3.07**	**334**	*eP*	**Pn**	**23 26 54.9**	**+1.1**
VLS				S	**Sn**	**23 27 29.5**	**+0.2**
APE	**Apeiranthos**	**3.09**	**57**	*eP*	**Pn**	**23 26 55.3**	**+1.2**
APE	**Apeiranthos**	**3.09**	**57**	P	**Pn**	**23 26 55.3**	**+1.2**
APE				S	**Sn**	**23 27 28.9**	**-0.9**
APE	**Apeiranthos**	**3.09**	**57**	*eP*	**Pn**	**23 26 55.3**	**+1.2**
APE				S	**Sn**	**23 27 28.9**	**-0.9**
ZKR	**Zakros**	**3.23**	**94**	*eP*	**Pn**	**23 26 58.8**	**+2.9**
ZKR	**Zakros**	**3.23**	**94**	P	**Pn**	**23 26 58.9**	**+3.0**
ZKR				S	**Sn**	**23 27 36.5**	**+3.4**
ZKR	**Zakros**	**3.23**	**94**	*eP*	**Pn**	**23 26 58.8**	**+2.9**
ZKR				S	**Sn**	**23 27 36.5**	**+3.4**
LKR	**Lokris**	**3.27**	**10**	*eP*	**Pn**	**23 26 57.5**	**+0.9**
LKR	**Lokris**	**3.27**	**10**	P	**Pn**	**23 26 57.7**	**+1.1**
LKR	**Lokris**	**3.27**	**10**	*eP*	**Pn**	**23 26 57.5**	**+0.9**
ATAL	**Atalanti**	**3.32**	**10**	P	**Pn**	**23 26 58.2**	**+1.0**
ATAL				S	**Sn**	**23 27 33.1**	**-2.3**
ATAL	**Atalanti**	**3.32**	**10**	P	**Pn**	**23 26 58.2**	**+1.0**
ATAL				S	**Sn**	**23 27 33.1**	**-2.3**
EVR	**Evrytania**	**3.51**	**354**	*eP*	**Pn**	**23 27 03.5**	**+3.7**
EVR	**Evrytania**	**3.51**	**354**	*eP*	**Pn**	**23 27 03.5**	**+3.7**
AGG	**Agios Georgios**	**3.60**	**0**	*eP*	**Pn**	**23 27 03.1**	**+2.1**
AGG	**Agios Georgios**	**3.60**	**0**	P	**Pn**	**23 27 03.2**	**+2.2**
AGG				S	**Sn**	**23 27 41.9**	**-0.3**
AGG	**Agios Georgios**	**3.60**	**0**	*eP*	**Pn**	**23 27 03.1**	**+2.1**
AGG				S	**Sn**	**23 27 41.9**	**-0.3**
LTBQ	**Tobruq**	**3.62**	**157**	*i P*	**Pn**	**23 27 04.3**	**+3.0**
	SNR=76						
LTBQ				*eS*	**Sn**	**23 27 43.8**	**+1.0**
	SNR=76						
NEO	**Neokhori**	**3.95**	**11**	*eP*	**Pn**	**23 27 06.8**	**+0.9**
NEO	**Neokhori**	**3.95**	**11**	*eP*	**Pn**	**23 27 06.8**	**+0.9**
AOS	**Alonnisos**	**3.95**	**18**	P	**Pn**	**23 27 06.8**	**+0.9**
AOS				S	**Sn**	**23 27 48.6**	**-2.4**
AOS	**Alonnisos**	**3.95**	**18**	P	**Pn**	**23 27 06.8**	**+0.9**
AOS				S	**Sn**	**23 27 48.6**	**-2.4**
AOS	**Alonnisos**	**3.95**	**18**	P	**Pn**	**23 27 06.8**	**+0.9**
AOS				S	**Sn**	**23 27 48.6**	**-2.4**
KARP	**Karpathos**	**3.98**	**87**	*eP*	**Pn**	**23 27 06.8**	**+0.6**
KARP	**Karpathos**	**3.98**	**87**	*eP*	**Pn**	**23 27 06.8**	**+0.6**
XOR	**Xorichti**	**4.00**	**10**	P	**Pn**	**23 27 07.7**	**+1.1**
XOR	**Xorichti**	**4.00**	**10**	P	**Pn**	**23 27 07.7**	**+1.1**
XOR	**Xorichti**	**4.00**	**10**	P	**Pn**	**23 27 07.7**	**+1.1**
NIS1	**Nisyros Isl.**	**4.13**	**72**	P	**Pn**	**23 27 10.7**	**+2.3**
NIS1	**Nisyros Isl.**	**4.13**	**72**	P	**Pn**	**23 27 10.7**	**+2.3**
THL	**Klokotos Trika**	**4.14**	**357**	*eP*	**Pn**	**23 27 10.4**	**+1.9**
THL	**Klokotos Trika**	**4.14**	**357**	P	**Pn**	**23 27 10.3**	**+1.8**
THL				S	**Sn**	**23 27 55.8**	**+0.1**
THL	**Klokotos Trika**	**4.14**	**357**	*eP*	**Pn**	**23 27 10.4**	**+1.9**
THL				S	**Sn**	**23 27 55.8**	**+0.1**
CHOS	**Chios island**	**4.23**	**44**	*eP*	**Pn**	**23 27 10.8**	**+1.2**
CHOS	**Chios island**	**4.23**	**44**	P	**Pn**	**23 27 10.9**	**+1.3**
CHOS	**Chios island**	**4.23**	**44**	*eP*	**Pn**	**23 27 10.8**	**+1.2**
SMG	**Samos**	**4.31**	**57**	*eP*	**Pn**	**23 27 12.0**	**+1.2**
SMG	**Samos**	**4.31**	**57**	*eP*	**Pn**	**23 27 12.0**	**+1.2**
JAN	**Janina**	**4.38**	**345**	*eP*	**Pn**	**23 27 13.5**	**+1.7**
JAN	**Janina**	**4.38**	**345**	*eP*	**Pn**	**23 27 13.5**	**+1.7**
IGT	**Igoumenitsa**	**4.39**	**340**	P	**Pn**	**23 27 12.5**	**+0.6**
IGT				S	**Sn**	**23 28 01.4**	**-0.4**
IGT	**Igoumenitsa**	**4.39**	**340**	P	**Pn**	**23 27 12.5**	**+0.6**
IGT				S	**Sn**	**23 28 01.4**	**-0.4**
BDRM	**Kayabasi**	**4.48**	**67**	*i P*	**Pn**	**23 27 14.2**	**+1.1**
BDRM	**Kayabasi**	**4.48**	**67**	*i P*	**Pn**	**23 27 14.2**	**+1.1**
DAT	**Datca**	**4.48**	**71**	*ePN*	**Pn**	**23 27 13.2**	**+0.1**
URLA	**Izmir**	**4.53**	**48**	*i P*	**Pn**	**23 27 13.5**	**-0.3**
URLA	**Izmir**	**4.53**	**48**	*i P*	**Pn**	**23 27 13.5**	**-0.3**
GCAM	**G?zelcaml?**	**4.58**	**59**	*i P*	**Pn**	**23 27 15.1**	**+0.5**
GCAM	**G?zelcaml?**	**4.58**	**59**	*i P*	**Pn**	**23 27 15.1**	**+0.6**
SLUM		**4.62**	**147**	P	**Pn**	**23 27 16.1**	**+1.1**
	baz=153						
SLUM				S	**Sn**	**23 28 01.2**	**-6.1**
	baz=153						
SLUM		**4.62**	**147**	P	**Pn**	**23 27 16.1**	**+1.1**
SLUM				S	**Sn**	**23 28 10.1**	**+2.8**
PAIG	**Paliouri**	**4.63**	**13**	P	**Pn**	**23 27 16.1**	**+0.9**
PAIG	**Paliouri**	**4.63**	**13**	P	**Pn**	**23 27 16.1**	**+0.9**
LIT	**Litokhoron**	**4.68**	**2**	*eP*	**Pn**	**23 27 16.6**	**+0.8**
LIT	**Litokhoron**	**4.68**	**2**	P	**Pn**	**23 27 16.9**	**+1.1**
LIT				S	**Sn**	**23 28 09.5**	**+0.7**
LIT	**Litokhoron**	**4.68**	**2**	*eP*	**Pn**	**23 27 16.6**	**+0.8**
LIT				S	**Sn**	**23 28 09.5**	**+0.7**
KEK	**Kerkira**	**4.72**	**336**	*eP*	**Pn**	**23 27 16.4**	**0.0**
KEK	**Kerkira**	**4.72**	**336**	P	**Pn**	**23 27 16.8**	**+0.4**
KEK	**Kerkira**	**4.72**	**336**	*eP*	**Pn**	**23 27 16.4**	**0.0**
SIGR	**SIGRI**	**4.73**	**36**	P	**Pn**	**23 27 17.3**	**+0.7**
SIGR	**SIGRI**	**4.73**	**36**	P	**Pn**	**23 27 17.3**	**+0.7**
MLSB	**Milas**	**4.81**	**65**	*ePN*	**Pn**	**23 27 18.3**	**+0.7**
ARG	**Arkhangelos**	**4.81**	**79**	*eP*	**Pn**	**23 27 18.9**	**+1.3**
ARG	**Arkhangelos**	**4.81**	**79**	P	**Pn**	**23 27 19.1**	**+1.5**
ARG				S	**Sn**	**23 28 12.4**	**+0.3**
ARG	**Arkhangelos**	**4.81**	**79**	*eP*	**Pn**	**23 27 18.9**	**+1.3**
ARG				S	**Sn**	**23 28 12.4**	**+0.3**
BLCB	**Balcova**	**4.82**	**51**	*ePN*	**Pn**	**23 27 17.4**	**-0.5**
BLCB	**Balcova**	**4.82**	**51**	P	**Pn**	**23 27 19.3**	**+1.5**
BLCB	**Balcova**	**4.82**	**51**	P	**Pn**	**23 27 19.3**	**+1.5**
BLCB	**Balcova**	**4.82**	**51**	P	**Pn**	**23 27 19.3**	**+1.5**
LJBD	**Adjabya**	**4.82**	**202**	*i P*	**Pn**	**23 27 20.1**	**+2.2**
	SNR=76						
LJBD				*eS*	**Sn**	**23 28 12.7**	**+0.2**
	535nm,0.7s,SNR=76						
KZN	**Kozani**	**4.90**	**355**	*eP*	**Pn**	**23 27 20.2**	**+1.4**
KZN	**Kozani**	**4.90**	**355**	P	**Pn**	**23 27 20.6**	**+1.8**
KZN				S	**Sn**	**23 28 13.8**	**-0.4**
KZN	**Kozani**	**4.90**	**355**	*eP*	**Pn**	**23 27 20.2**	**+1.4**
KZN				S	**Sn**	**23 28 13.8**	**-0.4**
PRK	**Paraskevi**	**4.96**	**39**	*eP*	**Pn**	**23 27 20.5**	**+0.7**
PRK	**Paraskevi**	**4.96**	**39**	P	**Pn**	**23 27 20.6**	**+0.8**
PRK	**Paraskevi**	**4.96**	**39**	*eP*	**Pn**	**23 27 20.5**	**+0.7**
IZM	**Izmir**	**4.97**	**52**	*ePN*	**Pn**	**23 27 20.9**	**+1.1**
LOS	**Limnos**	**5.02**	**25**	P	**Pn**	**23 27 21.4**	**+0.9**
LOS	**Limnos**	**5.02**	**25**	P	**Pn**	**23 27 21.4**	**+0.9**
LOS	**Limnos**	**5.02**	**25**	P	**Pn**	**23 27 21.4**	**+0.9**
AYDN	**Tasoluk**	**5.03**	**62**	*i P*	**Pn**	**23 27 22.2**	**+1.6**
AYDN	**Tasoluk**	**5.03**	**62**	*i P*	**Pn**	**23 27 22.2**	**+1.6**
LIA	**Limnos Island**	**5.03**	**26**	*eP*	**Pn**	**23 27 21.0**	**+0.4**
LIA	**Limnos Island**	**5.03**	**26**	P	**Pn**	**23 27 21.0**	**+0.4**
LIA	**Limnos Island**	**5.03**	**26**	*eP*	**Pn**	**23 27 21.0**	**+0.4**
PLG	**Polygyros**	**5.03**	**10**	*eP*	**Pn**	**23 27 23.3**	**+2.6**
PLG	**Polygyros**	**5.03**	**10**	P	**Pn**	**23 27 23.8**	**+3.1**
PLG	**Polygyros**	**5.03**	**10**	*eP*	**Pn**	**23 27 23.3**	**+2.6**
OUR	**Ouranopolis**	**5.09**	**15**	P	**Pn**	**23 27 22.4**	**+1.0**
OUR	**Ouranopolis**	**5.09**	**15**	P	**Pn**	**23 27 22.4**	**+1.0**
YER	**Yerkesik**	**5.13**	**69**	*ePN*	**Pn**	**23 27 23.3**	**+1.2**
HORT	**Hortiatis**	**5.21**	**7**	P	**Pn**	**23 27 23.9**	**+0.8**
HORT				S	**Sn**	**23 28 20.4**	**-1.5**
HORT	**Hortiatis**	**5.21**	**7**	P	**Pn**	**23 27 23.9**	**+0.8**
HORT				S	**Sn**	**23 28 20.4**	**-1.5**
HORT	**Hortiatis**	**5.21**	**7**	P	**Pn**	**23 27 23.9**	**+0.8**
HORT				S	**Sn**	**23 28 20.4**	**-1.5**
AYVA	**Ayvalik**	**5.23**	**41**	*i P*	**Pn**	**23 27 24.5**	**+1.1**
AYVA	**Ayvalik**	**5.23**	**41**	*i P*	**Pn**	**23 27 24.5**	**+1.1**
THE	**Thessaloniki**	**5.23**	**6**	P	**Pn**	**23 27 23.9**	**+0.5**
THE				S	**Sn**	**23 28 21.9**	**-0.6**
THE	**Thessaloniki**	**5.23**	**6**	P	**Pn**	**23 27 23.9**	**+0.5**
THE				S	**Sn**	**23 28 21.9**	**-0.6**
TURN	**Turunc**	**5.31**	**72**	*i P*	**Pn**	**23 27 21.6**	**-2.9**
TURN	**Turunc**	**5.31**	**72**	*i P*	**Pn**	**23 27 21.6**	**-2.9**
BOZC	**Bozcaada**	**5.33**	**33**	*i P*	**Pn**	**23 27 25.0**	**+0.2**
FNA	**Florina**	**5.41**	**353**	P	**Pn**	**23 27 27.0**	**+1.2**
FNA	**Florina**	**5.41**	**353**	P	**Pn**	**23 27 27.0**	**+1.2**
EZN	**Ezine**	**5.44**	**35**	*ePN*	**Pn**	**23 27 24.8**	**-1.5**
SOH	**Sokhos**	**5.46**	**9**	*eP*	**Pn**	**23 27 27.6**	**+1.1**
SOH	**Sokhos**	**5.46**	**9**	P	**Pn**	**23 27 27.9**	**+1.4**
SOH				S	**Sn**	**23 28 27.9**	**-0.1**
SOH	**Sokhos**	**5.46**	**9**	*eP*	**Pn**	**23 27 27.6**	**+1.1**
SOH				S	**Sn**	**23 28 27.9**	**-0.1**
SCTE	**Santa Cesarea**	**5.55**	**328**	Pn	**Pn**	**23 27 27.2**	**-0.5**
	3μm,0.7s						
SCTE	**Santa Cesarea**	**5.55**	**328**	Pn	**Pn**	**23 27 27.2**	**-0.5**
	3μm,0.7s						
GADA	**Gvkgeada**	**5.55**	**30**	*ePN*	**Pn**	**23 27 25.9**	**-1.9**
PLAC	**Placanica**	**5.58**	**305**	*i Pn*	**Pn**	**23 27 27.9**	**-0.3**
	128nm,0.5s						
PLAC	**Placanica**	**5.58**	**305**	*i Pn*	**Pn**	**23 27 27.9**	**-0.3**
	128nm,0.5s						
AKHS	**Akhisar**	**5.60**	**50**	*i P*	**Pn**	**23 27 30.2**	**+1.7**
AKS	**Akhisar**	**5.60**	**50**	*ePN*	**Pn**	**23 27 29.4**	**+0.9**
FETY	**Fethiye**	**5.64**	**76**	*ePN*	**Pn**	**23 27 29.7**	**+0.7**
BIA	**Bitola**	**5.64**	**353**	*i Pn*	**Pn**	**23 27 29.6**	**+0.5**
BIA				*eSg*	**Sn**	**23 28 28.4**	**-4.1**
BIA	**Bitola**	**5.64**	**353**	P	**Pn**	**23 27 29.6**	**+0.5**
BIA	**Bitola**	**5.64**	**353**	P	**Pn**	**23 27 29.6**	**+0.5**
MPAZ	**Palizzi**	**5.65**	**298**	*i Pn*	**Pn**	**23 27 28.9**	**-0.2**
	391nm,0.4s						
MPAZ	**Palizzi**	**5.65**	**298**	*i Pn*	**Pn**	**23 27 28.9**	**-0.2**
	391nm,0.4s						
SOI	**Samo**	**5.66**	**300**	*i P*	**Pn**	**23 27 29.2**	**-0.2**
SOI				pmax	pmax		
	comp=Z,215nm,0.4s						
SOI	**Samo**	**5.66**	**300**	*i Pn*	**Pn**	**23 27 29.2**	**-0.2**
	comp=Z,215nm,0.4s						
SOI	**Samo**	**5.66**	**300**	*i Pn*	**Pn**	**23 27 29.2**	**-0.2**
	comp=Z,215nm,0.4s						
SOI	**Samo**	**5.66**	**300**	*i Pn*	**Pn**	**23 27 29.2**	**-0.2**
	comp=Z,215nm,0.4s						
SERS	**Sersale**	**5.75**	**311**	*i Pn*	**Pn**	**23 27 30.1**	**-0.4**
	comp=Z,531nm,0.5s						
SERS	**Sersale**	**5.75**	**311**	*i Pn*	**Pn**	**23 27 30.1**	**-0.4**
	comp=Z,531nm,0.5s						
KNT	**Kendrikon**	**5.75**	**5**	P	**Pn**	**23 27 31.5**	**+0.9**
KNT	**Kendrikon**	**5.75**	**5**	P	**Pn**	**23 27 31.5**	**+0.9**
SRS	**Serrai**	**5.78**	**10**	P	**Pn**	**23 27 31.7**	**+0.7**
SRS				S	**Sn**	**23 28 35.7**	**-0.3**
SRS	**Serrai**	**5.78**	**10**	P	**Pn**	**23 27 31.7**	**+0.7**
SRS				S	**Sn**	**23 28 35.7**	**-0.3**
TIP	**Timpagrande**	**5.79**	**312**	*ePn*	**Pn**	**23 27 30.8**	**-0.3**
TIP				*eSn*	**Sn**	**23 28 25.6**	**-11**
TIP	**Timpagrande**	**5.79**	**312**	*i Pn*	**Pn**	**23 27 30.8**	**-0.3**
	comp=Z,539nm,0.7s						
TIP	**Timpagrande**	**5.79**	**312**	*i Pn*	**Pn**	**23 27 30.8**	**-0.3**
	comp=Z,539nm,0.7s						
GRI	**Girifalco**	**5.79**	**308**	P	**Pn**	**23 27 31.1**	**0.0**
GRI				pmax	pmax		
	comp=Z,220nm,0.4s						
GRI	**Girifalco**	**5.79**	**308**	Pn	**Pn**	**23 27 31.1**	**0.0**
	comp=Z,220nm,0.4s						
GRI	**Girifalco**	**5.79**	**308**	Pn	**Pn**	**23 27 31.1**	**0.0**
	comp=Z,220nm,0.4s						
GRI	**Girifalco**	**5.79**	**308**	Pn	**Pn**	**23 27 31.1**	**0.0**
	comp=Z,220nm,0.4s						
OHR	**Ohrid**	**5.80**	**349**	*i* Pn	**Pn**	**23 27 32.0**	**+0.7**
OHR				*eSg*	**Sn**	**23 28 31.8**	**-4.7**
OHR	**Ohrid**	**5.80**	**349**	P	**Pn**	**23 27 31.0**	**-0.3**
KAVA	**Kavala**	**5.84**	**17**	P	**Pn**	**23 27 32.4**	**+0.7**
KAVA	**Kavala**	**5.84**	**17**	P	**Pn**	**23 27 32.4**	**+0.7**
CEL	**Celeste**	**5.86**	**301**	*ePn*	**Pn**	**23 27 31.9**	**-0.1**
	comp=Z,150nm,0.7s						
CEL				*eSn*	**Sn**	**23 28 31.3**	**-6.7**
CEL	**Celeste**	**5.86**	**301**	⇓*i Pn*	**Pn**	**23 27 32.0**	**-0.1**
	comp=Z,564nm,0.8s						
CEL	**Celeste**	**5.86**	**301**	⇓*i Pn*	**Pn**	**23 27 32.0**	**-0.1**
	comp=Z,564nm,0.8s						
DNZL	**Cakiroluk**	**5.89**	**65**	*i P*	**Pn**	**23 27 35.4**	**+2.9**
MTTG	**Motta San Giov**	**5.89**	**298**	Pn	**Pn**	**23 27 32.5**	**0.0**
	comp=Z,882nm,0.8s						
MTTG	**Motta San Giov**	**5.89**	**298**	Pn	**Pn**	**23 27 32.5**	**0.0**
	comp=Z,882nm,0.8s						
MTTG	**Motta San Giov**	**5.89**	**298**	Pn	**Pn**	**23 27 32.5**	**0.0**
	comp=Z,882nm,0.8s						
VAY	**Valandovo**	**5.90**	**2**	*i Pn*	**Pn**	**23 27 32.6**	**+0.1**
VAY				*i* Sg	**Sn**	**23 28 35.8**	**-3.0**
VAY	**Valandovo**	**5.90**	**2**	P	**Pn**	**23 27 32.6**	**0.0**
VAY				S	**Sn**	**23 28 36.2**	**-2.6**
VAY	**Valandovo**	**5.90**	**2**	P	**Pn**	**23 27 32.6**	**0.0**
VAY				S	**Sn**	**23 28 36.2**	**-2.6**
HMAT	**Matruh**	**5.90**	**136**	P	**Pn**	**23 27 34.0**	**+1.4**
	baz=140						
HMAT				S	**Sn**	**23 28 28.6**	**-10**

VAE Sn Sn 23 28 53.7 -4.3
comp=Z,33nm,0.3s,baz=97,slow=9.4,SNR=9.1
VAE Valguarnera 6.67 290 Pn Pn 23 27 44.0 +0.8
KORT Korkueli 6.70 74 *i* P Pn 23 27 45.4 +1.7
SWA2 6.71 156 P Pn 23 27 45.0 +1.1
baz=160
SWA2 6.71 156 P Pn 23 27 45.0 +1.2
LTRZ Laterza 6.74 322 Pn Pn 23 27 43.4 -0.7
comp=Z,113nm,0.3s
LTRZ Laterza 6.74 322 Pn Pn 23 27 43.4 -0.7
comp=Z,113nm,0.3s
LTRZ Laterza 6.74 322 Pn Pn 23 27 43.4 -0.7
comp=Z,113nm,0.3s
NOCI Noci 6.76 324 Pn Pn 23 27 43.5 -0.9
comp=Z,224nm,0.3s
NOCI Noci 6.76 324 Pn Pn 23 27 43.5 -0.9
comp=Z,224nm,0.3s
CRAC Craco 6.77 319 Pn Pn 23 27 45.1 +0.6
comp=Z,280nm,0.3s
CRAC Craco 6.77 319 Pn Pn 23 27 45.1 +0.6
comp=Z,280nm,0.3s
LMSR Misrath 6.80 245 *i* P Pn 23 27 44.3 -0.7
comp=Z,254nm,1.4s,SNR=70
GDZ Gediz 6.80 55 *i* P Pn 23 27 47.3 +2.2
KCT Karacabey 6.81 43 *e*PN Pn 23 27 44.9 -0.3
MATE Matera 6.83 321 Pn Pn 23 27 44.9 -0.5
MATE Matera 6.83 321 Pn Pn 23 27 44.9 -0.5
SCHR S. Chirico Rap 6.85 316 Pn Pn 23 27 46.6 +0.9
comp=Z,217nm,0.8s
SCHR S. Chirico Rap 6.85 316 Pn Pn 23 27 46.6 +0.9
comp=Z,217nm,0.8s
ANTB Antalya 6.92 75 *e*PN Pn 23 27 47.3 +0.6
IFIL Filicudi I Eol 6.93 299 Pn Pn 23 27 46.3 -0.5
comp=Z,223nm,0.3s
IFIL Filicudi I Eol 6.93 299 Pn Pn 23 27 46.3 -0.5
comp=Z,223nm,0.3s
MIGL Miglionico 6.94 320 Pn Pn 23 27 46.4 -0.4
comp=Z,370nm,0.5s
MIGL Miglionico 6.94 320 Pn Pn 23 27 46.4 -0.4
comp=Z,370nm,0.5s
PLD Plovdiv 6.94 15 P Pn 23 27 49.2 +2.4
PLD Plovdiv 6.94 15 P Pn 23 27 49.2 +2.4
ULC Ulcinj 6.95 341⇑ *i*Pn Pn 23 27 46.0 -1.1
ULC *e*Sn Sn 23 28 56.2 -8.6
ULC Ulcinj 6.95 341⇑ *i*Pn Pn 23 27 46.0 -1.1
SIRI Monte Sirino - 6.96 315 Pn Pn 23 27 48.3 +1.1
SIRI Monte Sirino - 6.96 315 Pn Pn 23 27 48.3 +1.1
BCK Bucak 6.99 71 *e*PN Pn 23 27 48.5 +0.9
RESU Resuttano 6.99 291 Pn Pn 23 27 48.8 +1.2
RESU Resuttano 6.99 291 Pn Pn 23 27 48.8 +1.2
ISP Isparta 7.04 67 *e*PN Pn 23 27 46.2 -2.0
ISP Isparta 7.04 67 P Pn 23 27 50.1 +1.9
ISP Sn Sn 23 29 05.4 -1.5
ISP Isparta 7.04 67⇓ *i*P Pn 23 27 50.3 +2.1
ISP Isparta 7.04 67 P Pn 23 27 50.1 +1.9
ISP Isparta 7.04 67 P Pn 23 27 50.1 +1.9
ISP S Sn 23 29 05.4 -1.5
IACL Alicudi 7.07 298 Pn Pn 23 27 48.5 -0.2
comp=Z,131nm,0.3s
IACL Alicudi 7.07 298 Pn Pn 23 27 48.5 -0.2
comp=Z,131nm,0.3s
AMUR Altamura 7.08 322 Pn Pn 23 27 47.9 -0.8
comp=Z,101nm,0.3s
AMUR Altamura 7.08 322 Pn Pn 23 27 47.9 -0.8
comp=Z,101nm,0.3s
PTRP Pietrapertosa 7.08 318 Pn Pn 23 27 49.8 +1.0
comp=Z,696nm,0.9s
PTRP Pietrapertosa 7.08 318 Pn Pn 23 27 49.8 +1.0
comp=Z,696nm,0.9s
PTRP Pietrapertosa 7.08 318 Pn Pn 23 27 49.8 +1.0
comp=Z,696nm,0.9s
MCEL Monticello 7.09 316 Pn Pn 23 27 49.7 +0.7
comp=Z,263nm,0.6s
MCEL Monticello 7.09 316 Pn Pn 23 27 49.7 +0.7
comp=Z,263nm,0.6s
MGR Morigerati 7.12 313 Pn Pn 23 27 49.1 -0.2
comp=Z,132nm,0.7s
MGR Morigerati 7.12 313 Pn Pn 23 27 49.1 -0.2
comp=Z,132nm,0.7s
MGR Morigerati 7.12 313 Pn Pn 23 27 49.1 -0.2
comp=Z,132nm,0.7s
CRLT Corlu 7.13 35 *e*PN Pn 23 27 48.1 -1.4
BULG Bulgheria - Ca 7.18 312 Pn Pn 23 27 50.3 +0.1
comp=Z,325nm,0.6s
BULG Bulgheria - Ca 7.18 312 Pn Pn 23 27 50.3 +0.1
comp=Z,325nm,0.6s
VTS Vitosha 7.20 5 P Pn 23 27 51.4 +1.0
VTS Vitosha 7.20 5 P Pn 23 27 51.4 +1.0
ALT Altintas 7.22 58 *e*PN Pn 23 27 50.6 0.0
PZUN Potenza 7.31 317 Pn Pn 23 27 52.6 +0.7
PZUN Potenza 7.31 317 Pn Pn 23 27 52.6 +0.7
SHUT Suhut-Afyon 7.31 62 *e*PN Pn 23 27 52.8 +0.8
SUTC Sutluce-Ispart 7.31 71 *e*PN Pn 23 27 52.7 +0.7
BUM Brajici-Budva 7.36 340⇑ *i*Pn Pn 23 27 51.5 -1.2
BUM *e*Sn Sn 23 29 05.4 -9.5
BUM Brajici-Budva 7.36 340⇑ *i*Pn Pn 23 27 51.5 -1.2
CMPR Campora 7.38 314 Pn Pn 23 27 52.8 -0.1
CMPR Campora 7.38 314 Pn Pn 23 27 52.8 -0.1
PDG Podgorica 7.39 342⇑ *i*Pn Pn 23 27 52.2 -0.8
TTG Podgorica 7.39 342⇑ *i*Pn Pn 23 27 52.2 -0.8
TTG *e*Sn Sn 23 29 07.4 -8.1
TTG Podgorica 7.39 342 *i* P Pn 23 27 52.2 -0.8
PVY Plav 7.39 347⇓ *i*Pn Pn 23 27 53.3 +0.3
PVY *e*Sn Sn 23 29 09.5 -6.0
PVY Plav 7.39 347⇓ *i*Pn Pn 23 27 53.3 +0.3
MRVN Minervino Murg 7.40 321 Pn Pn 23 27 52.4 -0.7
comp=Z,479nm,0.6s
MRVN Minervino Murg 7.40 321 Pn Pn 23 27 52.4 -0.7
comp=Z,479nm,0.6s
BARS Barje 7.40 357 P Pn 23 27 53.3 +0.2
BARS Barje 7.40 357⇑ *i*Pn Pn 23 27 52.9 -0.2
BARS Barje 7.40 357 P Pn 23 27 53.3 +0.2
GEMT Gemlik 7.40 45 *e*PN Pn 23 27 53.2 0.0
PALZ Palazzo San Ge 7.43 320 Pn Pn 23 27 52.9 -0.7
comp=Z,392nm,0.7s
PALZ Palazzo San Ge 7.43 320 Pn Pn 23 27 52.9 -0.7
comp=Z,392nm,0.7s
ELBA Catalca 7.48 38 *i* P Pn 23 27 55.6 +1.3
CDRU Civita di Ruta 7.49 315 Pn Pn 23 27 54.3 -0.1
comp=Z,83nm,0.3s
CDRU Civita di Ruta 7.49 315 Pn Pn 23 27 54.3 -0.1
comp=Z,83nm,0.3s
SGO Sicignano 7.53 315 P Pn 23 27 55.6 +0.6
SGO pmax pmax
comp=Z,186nm,0.5s
SGO Sicignano 7.53 315 Pn Pn 23 27 55.6 +0.6
comp=Z,186nm,0.5s
SGO Sicignano 7.53 315 Pn Pn 23 27 55.6 +0.6
comp=Z,186nm,0.5s
SGO Sicignano 7.53 315 Pn Pn 23 27 55.6 +0.6
comp=Z,186nm,0.5s
YLV Yalova 7.59 45 *e*PN Pn 23 27 55.5 -0.3
HCY Herceg Novi 7.61 338⇓ *i*Pn Pn 23 27 54.0 -2.1
HCY *e*Sn Sn 23 29 10.8 -10
HCY Herceg Novi 7.61 338⇓ *i*Pn Pn 23 27 54.0 -2.1
VULT Monte Vulture 7.62 318 Pn Pn 23 27 56.3 0.0
comp=Z,311nm,0.7s
VULT Monte Vulture 7.62 318 Pn Pn 23 27 56.3 0.0
comp=Z,311nm,0.7s
CTYL Yal??k??y-??at 7.66 36 *e*PN Pn 23 27 55.5 -1.2
BOLV Bolvadin 7.67 62 *i* P Pn 23 27 59.8 +2.9
BEY Berane 7.67 347⇓ *i*Pn Pn 23 27 57.0 +0.1
IVA Berane 7.67 347⇓ *i*Pn Pn 23 27 57.0 +0.1
IVA *e*Sn Sn 23 29 16.0 -6.4
IVA Berane 7.67 347⇓ *i*Pn Pn 23 27 57.0 +0.1
BGKT Bogazkoy 7.68 40 *e*PN Pn 23 27 56.2 -0.8
ADVT Abdulvahap 7.72 47 *e*PN Pn 23 27 57.5 -0.1
ISK Istanbul-Kandi 7.75 41 *e*PN Pn 23 27 57.4 -0.6
MCRV Calabrutti - M 7.76 316 Pn Pn 23 27 58.4 +0.3
comp=Z,376nm,0.6s
MCRV Calabrutti - M 7.76 316 Pn Pn 23 27 58.4 +0.3
comp=Z,376nm,0.6s
JMB Yambol 7.79 24 P Pn 23 27 59.5 +1.0
JMB Yambol 7.79 24 P Pn 23 27 59.5 +1.0
NKY Niksic 7.81 342⇑ *i*Pn Pn 23 27 58.0 -0.8
NKY *e*Sn Sn 23 29 17.4 -8.6
NKY Niksic 7.81 342⇑ *i*Pn Pn 23 27 58.0 -0.8
SNAL S. Angelo Dei 7.83 317 Pn Pn 23 27 59.6 +0.5
comp=Z,847nm,1.1s
SNAL S. Angelo Dei 7.83 317 Pn Pn 23 27 59.6 +0.5
comp=Z,847nm,1.1s
BORA Eskisehir 7.86 53 *i* P Pn 23 28 01.9 +2.5
KLYT Kilyos 7.88 40 *e*PN Pn 23 27 58.8 -1.0
SGTA Sant Agata di 7.89 318 Pn Pn 23 28 00.1 +0.2
comp=Z,278nm,0.7s
SGTA Sant Agata di 7.89 318 Pn Pn 23 28 00.1 +0.2
comp=Z,278nm,0.7s
CSSN Cassano Irpino 7.89 316 Pn Pn 23 28 00.3 +0.4
comp=Z,140nm,0.8s
CSSN Cassano Irpino 7.89 316 Pn Pn 23 28 00.3 +0.4
comp=Z,140nm,0.8s
CSSN Cassano Irpino 7.89 316 Pn Pn 23 28 00.3 +0.4
comp=Z,140nm,0.8s
TREB Trebinje 7.91 338 P Pn 23 27 58.0 -2.1
TREB Trebinje 7.91 338 P Pn 23 27 58.0 -2.1
LZLA Zalla 7.94 212 *i* P Pn 23 28 00.4 -0.2
comp=Z,89nm,1.2s,SNR=70
ESKT Eskisehir 7.94 56 *e*PN Pn 23 28 00.6 0.0
NISS 7.98 358⇓ *i*Pn Pn 23 28 01.0 -0.1
GPA Golpazari 7.99 50 *e*PN Pn 23 28 01.2 -0.1
BRY Bratogost 8.02 340⇑ *i*Pn Pn 23 27 59.9 -1.7
BRY *e*Sn Sn 23 29 20.9 -10
BRY Bratogost 8.02 340⇑ *i*Pn Pn 23 27 59.9 -1.7
MSAG Monte S. Angel 8.03 323 Pn Pn 23 28 00.7 -1.1
comp=Z,206nm,0.3s
MSAG Monte S. Angel 8.03 323 Pn Pn 23 28 00.7 -1.1
comp=Z,206nm,0.3s
SJES Sjenica 8.04 348⇓ *i*Pn Pn 23 28 00.9 -1.0
FG5 Orsara di Pugl 8.04 319 P Pn 23 28 02.3 +0.3
FG5 pmax pmax
comp=Z,118nm,0.4s
FG5 Orsara di Pugl 8.04 319 Pn Pn 23 28 02.3 +0.3
comp=Z,118nm,0.4s
FG5 Orsara di Pugl 8.04 319 Pn Pn 23 28 02.3 +0.3
comp=Z,118nm,0.4s
FG5 Orsara di Pugl 8.04 319 Pn Pn 23 28 02.3 +0.3
comp=Z,118nm,0.4s
MRB1 Monte Rocchett 8.10 317 Pn Pn 23 28 03.3 +0.6
comp=Z,442nm,0.5s
MRB1 Monte Rocchett 8.10 317 Pn Pn 23 28 03.3 +0.6
comp=Z,442nm,0.5s
MRB1 Monte Rocchett 8.10 317 Pn Pn 23 28 03.3 +0.6
comp=Z,442nm,0.5s
SGRT San Giovanni R 8.14 323 Pn Pn 23 28 02.2 -1.1
comp=Z,271nm,0.5s
SGRT San Giovanni R 8.14 323 Pn Pn 23 28 02.2 -1.1
comp=Z,271nm,0.5s
RGNG Rignano Grg 8.16 322 Pn Pn 23 28 03.0 -0.6
RGNG Rignano Grg 8.16 322 Pn Pn 23 28 03.0 -0.6
RGNG Rignano Grg 8.16 322 Pn Pn 23 28 03.0 -0.6
MOCO Biccari - m.te 8.16 319 Pn Pn 23 28 03.9 +0.3
comp=Z,126nm,0.6s
GULT Gulveren 8.20 50 *e*PN Pn 23 28 03.8 -0.4
UPM Unac-Piva 8.20 342⇑ *i*Pn Pn 23 28 03.4 -0.8
UPM *e*Sn Sn 23 29 26.9 -8.6
UPM Unac-Piva 8.20 342⇑ *i*Pn Pn 23 28 03.4 -0.8
PLE Pljevlja 8.21 345⇑ *i*Pn Pn 23 28 04.2 -0.1
PLE *e*Sn Sn 23 29 28.3 -7.4
PLE Pljevlja 8.21 345⇑ *i*Pn Pn 23 28 04.2 -0.1
STON Ston 8.25 336⇑ *i*Pn Pn 23 28 03.0 -1.8
STON Sn Sn 23 29 25.1 -12
STON Ston 8.25 336⇑ *i*Pn Pn 23 28 03.0 -1.8
PSB1 Pescosannita 8.25 317 Pn Pn 23 28 05.3 +0.4
comp=Z,108nm,0.8s
PSB1 Pescosannita 8.25 317 Pn Pn 23 28 05.3 +0.4
comp=Z,108nm,0.8s
PSB1 Pescosannita 8.25 317 Pn Pn 23 28 05.3 +0.4
comp=Z,108nm,0.8s
GHAR Gharyan 8.34 249 *i* P Pn 23 28 05.8 -0.3
comp=Z,89nm,1.2s,SNR=70
LJFR Jufra 8.35 223 *i* P Pn 23 28 05.7 -0.6
comp=Z,56nm,0.9s,SNR=70
SVRH Sivrihisar-ESK 8.37 59 *e*PN Pn 23 28 06.3 -0.2
HDMB Hadim 8.39 76 *e*PN Pn 23 28 07.0 +0.3
KIZT Kizilcal 8.40 63 *e*PN Pn 23 28 07.4 +0.6
SACR S. Croce Del S 8.43 317 Pn Pn 23 28 07.8 +0.5
comp=Z,184nm,0.9s
SACR S. Croce Del S 8.43 317 Pn Pn 23 28 07.8 +0.5
comp=Z,184nm,0.9s
FG2 Serracapriola 8.47 321 Pn Pn 23 28 07.6 -0.3
comp=Z,307nm,0.4s
FG2 Serracapriola 8.47 321 Pn Pn 23 28 07.6 -0.3
comp=Z,307nm,0.4s
KONT Konya--Tatoy 8.47 70 *e*PN Pn 23 28 08.1 +0.1
CIGN Sant'Elia a Pi 8.50 319 Pn Pn 23 28 08.9 +0.7
comp=Z,182nm,0.8s
CIGN Sant'Elia a Pi 8.50 319 Pn Pn 23 28 08.9 +0.7
comp=Z,182nm,0.8s
CIGN Sant'Elia a Pi 8.50 319 Pn Pn 23 28 08.9 +0.7
comp=Z,182nm,0.8s
LADK Ladik-KONYA 8.54 68 *e*PN Pn 23 28 08.9 0.0
GRUS Gruza 8.55 352 P Pn 23 28 07.5 -1.4
GRUS Gruza 8.55 352 P Pn 23 28 07.5 -1.4
BSSO Busso 8.59 318 Pn Pn 23 28 10.0 +0.5
comp=Z,223nm,0.7s
BSSO Busso 8.59 318 Pn Pn 23 28 10.0 +0.5
comp=Z,223nm,0.7s
SGG Gregorio Mates 8.60 316 Pn Pn 23 28 09.9 +0.2
comp=Z,90nm,0.5s
SGG Gregorio Mates 8.60 316 Pn Pn 23 28 09.9 +0.2
comp=Z,90nm,0.5s
SGG Gregorio Mates 8.60 316 Pn Pn 23 28 09.9 +0.2
comp=Z,90nm,0.5s
LSHF Shwairf 8.67 234 *i* P Pn 23 28 10.4 -0.3
comp=Z,185nm,0.5s,SNR=70
VAGA Valle Agricola 8.71 316 Pn Pn 23 28 11.1 0.0
comp=Z,156nm,0.9s
VAGA Valle Agricola 8.71 316 Pn Pn 23 28 11.1 0.0
comp=Z,156nm,0.9s
BBLS Lazići 8.72 346 P Pn 23 28 10.1 -1.2
BBLS Lazići 8.72 346 P Pn 23 28 10.1 -1.2
RFI Roccamonfina 8.77 314 Pn Pn 23 28 12.8 +0.8
comp=Z,11nm,1.0s
RFI Roccamonfina 8.77 314 Pn Pn 23 28 12.8 +0.8
comp=Z,11nm,1.0s
RFI Roccamonfina 8.77 314 Pn Pn 23 28 12.8 +0.8
comp=Z,11nm,1.0s
MIDA Miranda 8.84 317 Pn Pn 23 28 13.8 +0.8
comp=Z,147nm,0.6s
MIDA Miranda 8.84 317 Pn Pn 23 28 13.8 +0.8
comp=Z,147nm,0.6s
MIDA Miranda 8.84 317 Pn Pn 23 28 13.8 +0.8
comp=Z,147nm,0.6s
DIVS Divibare 8.85 349⇓ *i*Pn Pn 23 28 11.5 -1.5
FRES Fresagrandinar 8.85 320 Pn Pn 23 28 13.3 +0.3
comp=Z,362nm,1.2s
FRES Fresagrandinar 8.85 320 Pn Pn 23 28 13.3 +0.3
comp=Z,362nm,1.2s
SVIS Svilajnac 8.87 355 P Pn 23 28 12.1 -1.3
MANS Anshas 8.92 117 P Pn 23 28 16.7 +2.6
RNI2 Rionero Sannit 8.94 317 Pn Pn 23 28 15.0 +0.7
comp=Z,218nm,0.9s
RNI2 Rionero Sannit 8.94 317 Pn Pn 23 28 15.0 +0.7
comp=Z,218nm,0.9s
RNI2 Rionero Sannit 8.94 317 Pn Pn 23 28 15.0 +0.7
comp=Z,218nm,0.9s
CERA Filignano 8.95 316 Pn Pn 23 28 14.3 -0.1
comp=Z,224nm,0.9s
CERA Filignano 8.95 316 Pn Pn 23 28 14.3 -0.1
comp=Z,224nm,0.9s
AWBH 9.04 140 P Pn 23 28 15.6 -0.1
baz=143
AWBH 9.04 140 P Pn 23 28 15.6 -0.1
CSS Prodhromos 9.05 90 Pn Pn 23 28 12.8 -3.0
HNAT Natroun 9.09 127 P Pn 23 28 16.6 +0.1
baz=130
HNAT Natroun 9.09 127 P Pn 23 28 16.6 +0.2
HMYD Mayadein 9.11 126 P Pn 23 28 15.9 -0.7
baz=128
HMYD Mayadein 9.11 126 P Pn 23 28 15.9 -0.7
SDI San Donato 9.14 316 P Pn 23 28 16.5 -0.5
SDI pmax pmax
comp=Z,15nm,0.4s
SDI San Donato 9.14 316 Pn Pn 23 28 16.5 -0.5
comp=Z,15nm,0.4s
SDI San Donato 9.14 316 Pn Pn 23 28 16.5 -0.5
comp=Z,15nm,0.4s
SDI San Donato 9.14 316 Pn Pn 23 28 16.5 -0.5
comp=Z,15nm,0.4s
CAFR Castel Frentan 9.20 320 Pn Pn 23 28 18.6 +0.8
comp=Z,430nm,0.8s
CAFR Castel Frentan 9.20 320 Pn Pn 23 28 18.6 +0.8
comp=Z,430nm,0.8s
POFI Posta Fibreno 9.20 316 Pn Pn 23 28 17.4 -0.4
comp=Z,17nm,0.7s
POFI Posta Fibreno 9.20 316 Pn Pn 23 28 17.4 -0.4
comp=Z,17nm,0.7s
AANS 9.21 121 P Pn 23 28 16.7 -1.3
baz=123
ALAS Alassa 9.22 257 *i* P Pn 23 28 16.8 -1.3
comp=Z,47nm,1.5s,SNR=70
DJES Djerdap 9.24 1 P Pn 23 28 19.6 +1.2
INTR Introdacqua 9.29 318 Pn Pn 23 28 19.7 +0.7
comp=Z,161nm,0.8s
INTR Introdacqua 9.29 318 Pn Pn 23 28 19.7 +0.7
comp=Z,161nm,0.8s
INTR Introdacqua 9.29 318 Pn Pn 23 28 19.7 +0.7
comp=Z,161nm,0.8s
SQR 9.32 124 P Pn 23 28 18.7 -0.8
baz=126
SQR 9.32 124 P Pn 23 28 18.7 -0.8
FYM Al Fayyum 9.33 125 P Pn 23 28 19.4 -0.4
baz=128
FYM Al Fayyum 9.33 125 P Pn 23 28 19.4 -0.3
VVLD Villa Vallelon 9.35 316 Pn Pn 23 28 19.8 -0.1
comp=Z,152nm,1.0s
VVLD Villa Vallelon 9.35 316 Pn Pn 23 28 19.8 -0.1
comp=Z,152nm,1.0s
VVLD Villa Vallelon 9.35 316 Pn Pn 23 28 19.8 -0.1
comp=Z,152nm,1.0s
GIUL Giuliano Di Ro 9.36 314 Pn Pn 23 28 19.8 -0.3
comp=Z,35nm,0.7s
GIUL Giuliano Di Ro 9.36 314 Pn Pn 23 28 19.8 -0.3
comp=Z,35nm,0.7s
AYT Al 'Ayyat 9.40 125 P Pn 23 28 20.3 -0.4
baz=127
AYT Al 'Ayyat 9.40 125 P Pn 23 28 20.3 -0.3
GUAR Guarcino 9.48 315 Pn Pn 23 28 21.2 -0.5
comp=Z,46nm,0.7s
GUAR Guarcino 9.48 315 Pn Pn 23 28 21.2 -0.5
comp=Z,46nm,0.7s
GUAR Guarcino 9.48 315 Pn Pn 23 28 21.2 -0.5
comp=Z,46nm,0.7s
BEO Beograd 9.48 352⇓ *i*Pn Pn 23 28 19.6 -2.1
BBAL Bala 9.54 61 *i* P Pn 23 28 24.8 +2.3
VCEL Villa Celiera 9.58 319 Pn Pn 23 28 24.8 +1.7
comp=Z,114nm,0.7s
VCEL Villa Celiera 9.58 319 Pn Pn 23 28 24.8 +1.7
comp=Z,114nm,0.7s
FAGN Fagnano 9.63 318 Pn Pn 23 28 25.3 +1.5
comp=Z,125nm,0.6s
FAGN Fagnano 9.63 318 Pn Pn 23 28 25.3 +1.5
comp=Z,125nm,0.6s
HSAF As Saff 9.72 124 P Pn 23 28 24.4 -0.7
baz=126
HSAF As Saff 9.72 124 P Pn 23 28 24.4 -0.7
KOT Kottamia 9.72 122 P Pn 23 28 23.8 -1.3
baz=124
KOT Kottamia 9.72 122 P Pn 23 28 23.8 -1.3
CERT Cerreto 9.77 315 Pn Pn 23 28 25.9 +0.3
comp=Z,33nm,0.6s
CERT Cerreto 9.77 315 Pn Pn 23 28 25.9 +0.3
comp=Z,33nm,0.6s
CERT Cerreto 9.77 315 Pn Pn 23 28 25.9 +0.3
comp=Z,33nm,0.6s
AQU L'Aquila 9.79 318 P Pn 23 28 27.0 +1.1
AQU *e* 23 30 13.5
AQU pmax pmax
comp=Z,64nm,0.7s
AQU L'Aquila 9.79 318 Pn Pn 23 28 27.0 +1.1
comp=Z,64nm,0.7s
AQU *e*Sn Sn 23 30 13.4 -1.1
AQU L'Aquila 9.79 318⇓ *i*P Pn 23 28 26.0 +0.1
AQU L'Aquila 9.79 318 Pn Pn 23 28 27.0 +1.1
comp=Z,64nm,0.7s
AQU L'Aquila 9.79 318 Pn Pn 23 28 27.0 +1.1
comp=Z,64nm,0.7s
AQU *e*S Sn 23 30 13.5 -1.0
GLL Jalalah 9.85 124 P Pn 23 28 26.0 -0.8
baz=126
GLL Jalalah 9.85 124 P Pn 23 28 26.0 -0.9
TERO Teramo 9.87 319 Pn Pn 23 28 28.1 +1.1
comp=Z,66nm,0.8s
TERO Teramo 9.87 319 Pn Pn 23 28 28.1 +1.1
comp=Z,66nm,0.8s
TERO Teramo 9.87 319 Pn Pn 23 28 28.1 +1.1
comp=Z,66nm,0.8s
FIAM Fiamignano 9.89 316 Pn Pn 23 28 27.8 +0.5
comp=Z,63nm,0.7s
FIAM Fiamignano 9.89 316 Pn Pn 23 28 27.8 +0.5
comp=Z,63nm,0.7s
FIAM Fiamignano 9.89 316 Pn Pn 23 28 27.8 +0.5
comp=Z,63nm,0.7s
HHAG Hagoal 9.90 121 P Pn 23 28 26.2 -1.3
baz=123
HHAG S Sn 23 30 02.6 -15
baz=123
HHAG Hagoal 9.90 121 P Pn 23 28 26.2 -1.3
HHAG S Sn 23 30 02.6 -15
CAMP Campotosto 9.91 318 Pn Pn 23 28 28.8 +1.2
comp=Z,10.0nm,0.7s
CAMP Campotosto 9.91 318 Pn Pn 23 28 28.8 +1.2
comp=Z,10.0nm,0.7s
CVD Cernavoda 9.92 25 ⇓P Pn 23 28 28.6 +1.0
CVD Cernavoda 9.92 25⇓ *i*P Pn 23 28 28.6 +1.0
CVD Cernavoda 9.92 25 P Pn 23 28 28.6 +1.0
HBNS Bani Suwayf 9.93 128 P Pn 23 28 27.9 -0.1
baz=130
HBNS Bani Suwayf 9.93 128 P Pn 23 28 27.9 0.0
GZR Gura Zlata 9.97 2 P Pn 23 28 28.0 -0.4
GZR Gura Zlata 9.97 2⇓ *i*P Pn 23 28 27.9 -0.5
GZR Gura Zlata 9.97 2 P Pn 23 28 28.0 -0.4
BR131 Keskin Array S 9.98 61 *e*Pn Pn 23 28 30.9 +2.4
BR131 Keskin Array S 9.98 61 *e*Pn Pn 23 28 30.9 +2.4
BRTR Keskin Array B 9.98 61 Pn Pn 23 28 31.1 +2.6
comp=Z,4.5nm,0.3s,baz=238,slow=14,SNR=132
BRTR Sn Sn 23 30 18.3 -0.8
comp=Z,0.3nm,0.3s,baz=220,slow=11,SNR=2.7
BRTR Keskin Array B 9.98 61 P Pn 23 28 31.1 +2.6
BRTR 23 30 18.3
BRTR pmax pmax
comp=Z,5.0nm,0.3s
BRTR Keskin Array B 9.98 61 S Sn 23 30 18.3 -0.8
OFFI Offida 10.04 321 Pn Pn 23 28 30.8 +1.4
comp=Z,359nm,0.7s
OFFI Offida 10.04 321 Pn Pn 23 28 30.8 +1.4
comp=Z,359nm,0.7s
BLY Banja Luka 10.10 339 P Pn 23 28 28.3 -1.9
BLY Banja Luka 10.10 339 P Pn 23 28 28.3 -1.9
ELDT Eldivan 10.14 57 *i* P Pn 23 28 33.1 +2.3
LNSS Leonessa 10.16 318 Pn Pn 23 28 32.7 +1.8
comp=Z,133nm,0.7s
LNSS Leonessa 10.16 318 Pn Pn 23 28 32.7 +1.8
comp=Z,133nm,0.7s
TIRR Tirgusor 10.17 26 *e*P Pn 23 28 31.0 -0.2
TIRR pmax pmax
comp=Z,34nm,0.8s
TIRR Tirgusor 10.17 26 *e*Pn Pn 23 28 31.0 -0.2
comp=Z,34nm,0.8s
TIRR Tirgusor 10.17 26⇓ *i*P Pn 23 28 31.0 -0.2
TIRR Tirgusor 10.17 26 *e*P Pn 23 28 31.0 -0.2
comp=Z,34nm,0.8s
BZS Buzias 10.20 357 P Pn 23 28 29.7 -1.8
BZS Buzias 10.20 357⇑ *i*P Pn 23 28 29.9 -1.6
BZS Buzias 10.20 357 P Pn 23 28 29.9 -1.6
HARR Harsova 10.22 23 ⇓P Pn 23 28 32.1 +0.4
HARR Harsova 10.22 23⇓ *i*P Pn 23 28 32.1 +0.4
HARR Harsova 10.22 23 P Pn 23 28 32.1 +0.4
ISR Istrita 10.22 17 ⇑P Pn 23 28 32.3 +0.5
ISR Istrita 10.22 17⇑ *i*P Pn 23 28 32.3 +0.5
ISR Istrita 10.22 17 P Pn 23 28 32.3 +0.5
GULE Gulek 10.24 76 *i* P Pn 23 28 33.3 +1.2
AMAG Maghara 10.32 114 P Pn 23 28 30.0 -3.3
baz=116
AMAG Maghara 10.32 114 P Pn 23 28 30.0 -3.3
FDMO Fiordimonte 10.43 320 Pn Pn 23 28 36.2 +1.6
comp=Z,46nm,0.6s
FDMO Fiordimonte 10.43 320 Pn Pn 23 28 36.2 +1.6
comp=Z,46nm,0.6s
MLR Muntele Rosu 10.44 14 Pn Pn 23 28 34.2 -0.5
comp=Z,0.9nm,0.3s,baz=169,slow=13,SNR=12
MLR Muntele Rosu 10.44 14⇓ *i*P Pn 23 28 35.0 +0.2
MLR Muntele Rosu 10.44 14 Pn Pn 23 28 34.2 -0.6
MLR Muntele Rosu 10.44 14 P Pn 23 28 35.0 +0.2
CDAG Cicekdag 10.47 63 *i* P Pn 23 28 37.2 +1.9
SUZ 10.48 119 P Pn 23 28 33.9 -1.5
baz=121
SUZ 10.48 119 P Pn 23 28 33.9 -1.6
AOI Ancona 10.53 323 Pn Pn 23 28 35.0 -1.1
comp=Z,121nm,0.9s
AOI Ancona 10.53 323 Pn Pn 23 28 35.0 -1.1
comp=Z,121nm,0.9s
AOI Ancona 10.53 323 Pn Pn 23 28 35.0 -1.1
comp=Z,121nm,0.9s
KEST Kesra 10.55 275 Pn Pn 23 28 38.2 +1.8
comp=Z,0.2nm,0.3s,baz=59,slow=8.3,SNR=12

KEST Sn Sn 23 30 27.3 -5.9
comp=Z,0.8nm,0.3s,baz=39,slow=22,SNR=12
RSH 10.56 112 P Pn 23 28 33.9 -2.6
CING Cingoli 10.61 321 Pn Pn 23 28 36.5 -0.6
comp=Z,44nm,0.6s
CING Cingoli 10.61 321 Pn Pn 23 28 36.5 -0.6
comp=Z,44nm,0.6s
CING Cingoli 10.61 321 Pn Pn 23 28 36.5 -0.6
comp=Z,44nm,0.6s
ZAF 10.61 122 P Pn 23 28 35.7 -1.5
baz=124
ZAF 10.61 122 P Pn 23 28 35.7 -1.6
BALT Daday 10.62 52 *i* P Pn 23 28 39.3 +2.0
CFR Carcaliu 10.72 23 ⇑P Pn 23 28 38.6 0.0
CFR Carcaliu 10.72 23 ⇑*i*P Pn 23 28 38.6 0.0
CFR Carcaliu 10.72 23 P Pn 23 28 38.6 0.0
NVLJ Novalja 10.76 330 *e*Pn Pn 23 28 38.4 -0.7
NVLJ Sn Sn 23 30 27.8 -10
NVLJ Novalja 10.76 330 *e*Pn Pn 23 28 38.4 -0.7
ZNM 10.78 121 P Pn 23 28 38.6 -1.0
baz=123
ZNM 10.78 121 P Pn 23 28 38.6 -1.0
ARVD Arcevia 10.82 321 Pn Pn 23 28 39.5 -0.6
comp=Z,30nm,0.4s
ARVD Arcevia 10.82 321 Pn Pn 23 28 39.5 -0.6
comp=Z,30nm,0.4s
MURB Monte Urbino 10.88 319 Pn Pn 23 28 43.0 +2.1
comp=Z,78nm,0.3s
MURB Monte Urbino 10.88 319 Pn Pn 23 28 43.0 +2.1
comp=Z,78nm,0.3s
MURB Monte Urbino 10.88 319 Pn Pn 23 28 43.0 +2.1
comp=Z,78nm,0.3s
YURE YUREGIR 10.88 79 *i* P Pn 23 28 40.0 -0.9
RHK3 Tenkes 10.90 345⇑*e*Pn Pn 23 28 38.6 -2.4
OFRI 'Ofer 10.90 101 Pn Pn 23 28 38.7 -2.4
HNTI Hanita 10.91 99 Pn Pn 23 28 39.1 -2.3
HNTI S Sn 23 30 30.1 -12
PLOR Plostina 10.93 16 P Pn 23 28 46.7 +5.2
PLOR Plostina 10.93 16⇑*i*P Pn 23 28 45.8 +4.3
TLCR 10.95 25 ⇑P Pn 23 28 41.9 +0.1
TLCR 10.95 25⇑*i*P Pn 23 28 41.9 +0.1
TLCR 10.95 25 P Pn 23 28 41.9 +0.1
VRI Vrincioaia 10.96 17 P Pn 23 28 46.5 +4.5
VRI Vrincioaia 10.96 17⇓*i*P Pn 23 28 43.0 +1.0
VRI Vrincioaia 10.96 17 P Pn 23 28 43.2 +1.2
SISC Sisak 11.00 338 *e*Pn Pn 23 28 39.7 -2.8
SISC Sn Sn 23 30 33.0 -11
VSL Villasalto 11.04 295 *e*Pn Pn 23 28 42.8 -0.3
VSL *e*Sn Sn 23 30 39.3 -5.8
VSL Villasalto 11.04 295 *e*Pn Pn 23 28 42.8 -0.2
FSSB Fossombrone 11.05 321 Pn Pn 23 28 42.6 -0.5
comp=Z,147nm,0.3s
FSSB Fossombrone 11.05 321 Pn Pn 23 28 42.6 -0.5
comp=Z,147nm,0.3s
FSSB Fossombrone 11.05 321 Pn Pn 23 28 42.6 -0.5
comp=Z,147nm,0.3s
PIEI Pieia 11.06 320 Pn Pn 23 28 43.5 +0.2
comp=Z,49nm,1.0s
PIEI Pieia 11.06 320 Pn Pn 23 28 43.5 +0.2
comp=Z,49nm,1.0s
PIEI Pieia 11.06 320 Pn Pn 23 28 43.5 +0.2
comp=Z,49nm,1.0s
SLTI Sal'it 11.07 103 Pn Pn 23 28 41.1 -2.4
SLTI S Sn 23 30 32.9 -13
KZIT Kziot 11.10 111 Pn Pn 23 28 41.1 -2.8
MMAI Mount Meron Ar 11.12 99 Pn Pn 23 28 41.0 -3.1
comp=Z,4.1nm,0.3s,baz=300,slow=10,SNR=28
MMAI Sn Sn 23 30 39.4 -7.8
comp=Z,66nm,0.3s,baz=266,slow=22,SNR=10
PKSM Moragy 11.13 347 P Pn 23 28 41.7 -2.5
PKSM Moragy 11.13 347⇑*i*P Pn 23 28 41.7 -2.5
PKSM Moragy 11.13 347 P Pn 23 28 41.7 -2.5
CTKT Corum 11.14 58 *i* P Pn 23 28 49.5 +5.0
PESA Pesaro 11.19 322 Pn Pn 23 28 45.8 +0.7
comp=Z,155nm,0.3s
PESA Pesaro 11.19 322 Pn Pn 23 28 45.8 +0.7
comp=Z,155nm,0.3s
PESA Pesaro 11.19 322 Pn Pn 23 28 45.8 +0.7
comp=Z,155nm,0.3s
BADI Badiali 11.20 319 Pn Pn 23 28 46.8 +1.6
comp=Z,51nm,0.6s
BADI Badiali 11.20 319 Pn Pn 23 28 46.8 +1.6
comp=Z,51nm,0.6s
BADI Badiali 11.20 319 Pn Pn 23 28 46.8 +1.6
comp=Z,51nm,0.6s
CAFI Castiglion Fio 11.23 318 Pn Pn 23 28 47.1 +1.5
comp=Z,55nm,1.4s
CAFI Castiglion Fio 11.23 318 Pn Pn 23 28 47.1 +1.5
comp=Z,55nm,1.4s
YAYL Yayladag 11.25 83 *i* P Pn 23 28 41.5 -4.4
ASUT 11.25 133 P Pn 23 28 46.4 +0.4
baz=135
ASUT 11.25 133 P Pn 23 28 46.4 +0.4
RTMI Retamim 11.26 109 Pn Pn 23 28 44.1 -2.0
RTMI Retamim 11.26 109 Pn Pn 23 28 44.1 -2.0
HNKL Nakhl 11.27 116 P Pn 23 28 43.2 -3.0
baz=117
HNKL Nakhl 11.27 116 P Pn 23 28 43.2 -3.0
KSDI Kefar Szold 11.28 98 Pn Pn 23 28 43.2 -3.1
HWQ Hawqa 11.28 92 *e*Pn Pn 23 28 42.9 -3.5
LUMB Murzuk 11.29 217 *i* P Pn 23 28 45.6 -0.9
comp=Z,24nm,0.9s,SNR=70
MMLI Mount Malkishu 11.31 102 Pn Pn 23 28 43.9 -2.8
HRI Mount Hermon 11.32 97 P Pn 23 28 44.1 -2.8
RCY Rachaya 11.34 96 *e*Pn Pn 23 28 44.0 -3.1
DRGR 11.37 1 P Pn 23 28 47.2 -0.3
DRGR 11.37 1⇓*i*P Pn 23 28 47.1 -0.4
DRGR 11.37 1 P Pn 23 28 47.2 -0.3
COBT Iskenderun 11.37 80 *i* P Pn 23 28 46.4 -1.2
RSM Repubblica di 11.38 321 P Pn 23 28 47.7 0.0
RSM pmax pmax
comp=Z,25nm,0.4s
RSM Repubblica di 11.38 321 Pn Pn 23 28 47.7 0.0
comp=Z,25nm,0.4s
RSM Repubblica di 11.38 321 Pn Pn 23 28 47.7 0.0
comp=Z,25nm,0.4s
RSM Repubblica di 11.38 321 Pn Pn 23 28 47.7 0.0
comp=Z,25nm,0.4s
BOJS Bojanci 11.40 334 *i* Pn Pn 23 28 46.4 -1.6
BOJS Bojanci 11.40 334 *i* Pn Pn 23 28 46.4 -1.6
GRB Gharib 11.41 126 P Pn 23 28 46.8 -1.4
baz=128
GRB Gharib 11.41 126 P Pn 23 28 46.8 -1.4
CRE Caprese Michel 11.43 319 Pn Pn 23 28 50.5 +2.1
CRE Caprese Michel 11.43 319 Pn Pn 23 28 50.5 +2.1
HMDT Nahal Hemdat 11.45 102 Pn Pn 23 28 46.2 -2.5
HMDT S Sn 23 30 42.1 -13
YTIR Yattir 11.46 107 Pn Pn 23 28 46.0 -2.8
KSHT Keshet 11.46 98 Pn Pn 23 28 46.4 -2.4
HRDS Abu Rudays 11.48 123 P Pn 23 28 47.8 -1.3
baz=124
ANDN Andirin 11.52 75 *i* P Pn 23 28 49.2 -0.4
RMNI Mount Ramon 11.52 111 Pn Pn 23 28 47.5 -2.1
PKS9 Tamasi 11.56 346⇓*e*Pn Pn 23 28 47.8 -2.3
DSI Dead Sea 11.58 106 Pn Pn 23 28 48.0 -2.5
DSI S Sn 23 30 46.3 -12
HDK1 Dakhla 11.59 146 P Pn 23 28 50.0 -0.7
baz=149
HDK1 Dakhla 11.59 146 P Pn 23 28 50.0 -0.7
PKSN Nyarlorinc 11.61 352⇓*e*Pn Pn 23 28 50.4 -0.4
CRES Cresnjev 11.61 336 *i* Pn Pn 23 28 48.8 -2.1
CRES Cresnjev 11.61 336 *i* Pn Pn 23 28 48.8 -2.1
ASQU Asqua 11.64 319 Pn Pn 23 28 52.9 +1.7
ASQU Asqua 11.64 319 Pn Pn 23 28 52.9 +1.7
MZDA Masada 11.67 107 Pn Pn 23 28 49.6 -2.1
MZDA S Sn 23 30 48.0 -13
MZDA Masada 11.67 107 Pn Pn 23 28 49.6 -2.1
SFI Santa Sofia 11.68 320 P Pn 23 28 54.2 +2.5
SFI pmax pmax
comp=Z,141nm,2.0s
SFI Santa Sofia 11.68 320 Pn Pn 23 28 54.2 +2.5
comp=Z,141nm,2.0s
SFI Santa Sofia 11.68 320 Pn Pn 23 28 54.2 +2.5
comp=Z,141nm,2.0s
KRMI Paran Flat 11.72 113 Pn Pn 23 28 50.4 -2.0
KRMI S Sn 23 30 49.1 -13
KRMI Paran Flat 11.72 113 Pn Pn 23 28 50.4 -2.0
CESS Cesta pri Krsk 11.74 336 *i* Pn Pn 23 28 50.5 -2.1
CESS Cesta pri Krsk 11.74 336 *i* Pn Pn 23 28 50.5 -2.1
BEHE Becsehely 11.80 341⇑*e*Pn Pn 23 28 52.7 -0.6
PRNI Paran 11.82 112 Pn Pn 23 28 51.7 -2.0
PRNI S Sn 23 30 51.0 -13
PRNI Paran 11.82 112 P Pn 23 28 51.7 -2.0
PKS7 Kunszentmiklos 11.85 350⇓*e*Pn Pn 23 28 53.1 -1.0

ZFRI Zfri 11.86 111 Pn Pn 23 28 51.8 -2.4
ZFRI S Sn 23 30 52.0 -13
CEY Cerknica 11.91 332 P Pn 23 28 53.9 -1.0
CEY Cerknica 11.91 332 P Pn 23 28 53.9 -1.0
SKDS Skadanscina 11.91 331 *i* Pn Pn 23 28 52.9 -2.0
KOGS Kog 11.92 339 P Pn 23 28 52.8 -2.3
KOGS Kog 11.92 339 P Pn 23 28 52.8 -2.3
TR2 11.97 123 P Pn 23 28 53.6 -2.2
baz=125
TR2 11.97 123 P Pn 23 28 53.6 -2.3
PDKS Podkum 11.98 335 *i* Pn Pn 23 28 53.8 -2.0
HRFI Mount Harif 12.00 113 Pn Pn 23 28 54.4 -1.8
HRFI Mount Harif 12.00 113 Pn Pn 23 28 54.4 -1.8
KUZU Kuzuini 12.04 79 *i* P Pn 23 28 55.0 -1.7
HKAT Jabal Katrina 12.08 121 P Pn 23 28 54.9 -2.4
baz=123
HKAT Jabal Katrina 12.08 121 P Pn 23 28 54.9 -2.4
LGHD Ghdames 12.08 247 *i* P Pn 23 28 58.2 +0.8
comp=Z,31nm,1.2s,SNR=70
EIL Élat 12.12 115 Pn Pn 23 28 56.3 -1.6
comp=Z,6.7nm,0.3s,baz=295,slow=6.7,SNR=68
EIL Sn Sn 23 31 01.9 -10
comp=Z,23nm,0.3s,baz=86,slow=21,SNR=10
EIL Elat 12.12 115 Pn Pn 23 28 55.9 -1.9
EIL Elat 12.12 115 Pn Pn 23 28 55.9 -1.9
LJU Ljubljana 12.13 333 P Pn 23 28 57.2 -0.7
TRI Trieste 12.14 330 *e*P Pn 23 28 57.0 -1.1
TRI pmax pmax
comp=Z,21nm,0.5s
TRI Trieste 12.14 330 *e*Pn Pn 23 28 57.0 -1.1
comp=Z,22nm,0.5s
TRI Sn Sn 23 30 55.7 -16
TRI Trieste 12.14 330 Pn Pn 23 28 57.0 -1.1
comp=Z,27nm,0.9s
TRI Trieste 12.14 330 Pn Pn 23 28 57.0 -1.1
comp=Z,27nm,0.9s
AKRG Al Kharijah 12.15 142 P Pn 23 28 57.4 -0.9
baz=144
GTR Jabal at Tayr 12.18 142 P Pn 23 28 58.2 -0.5
baz=144
GTR Jabal at Tayr 12.18 142 P Pn 23 28 58.2 -0.4
HBST Basata 12.20 117 P Pn 23 28 57.1 -1.9
baz=119
HBST Basata 12.20 117 P Pn 23 28 57.1 -1.9
CRNS Crni Vrh 12.26 333 *i* Pn Pn 23 28 58.5 -1.1
BMR Baia Mare 12.28 4 P Pn 23 29 00.7 +0.8
BMR Baia Mare 12.28 4⇓*i*P Pn 23 29 00.0 +0.1
BMR Baia Mare 12.28 4 P Pn 23 29 00.7 +0.8
BUD Budapest 12.30 350⇓*e*P Pn 23 28 59.3 -0.9
BUD *e*S Sn 23 31 07.9 -7.9
BUD Budapest 12.30 350⇓*e*Pn Pn 23 28 59.3 -0.9
PKSG 12.31 347⇓*e*Pn Pn 23 28 58.8 -1.6
VOY Vojsko 12.36 332⇓*e*Pn Pn 23 29 00.2 -0.8
VOY *e*Sn Sn 23 31 04.2 -13
VOY *e* 23 31 07.7
VOY Vojsko 12.36 332⇓*e*Pn Pn 23 29 00.2 -0.8
TR1 12.37 123 P Pn 23 28 59.4 -1.9
baz=125
TR1 12.37 123 P Pn 23 28 59.4 -1.9
BURAR Bucovina Array 12.38 9 ⇑P Pn 23 29 01.2 -0.1
BURAR Bucovina Array 12.38 9 ⇑*i*P Pn 23 29 01.2 -0.1
HDHB Dhahab 12.40 119 P Pn 23 28 59.4 -2.3
baz=121
HDHB Dhahab 12.40 119 P Pn 23 28 59.4 -2.3
BUR08 Bucovina Ar. S 12.41 9 *e*Pn Pn 23 29 00.6 -1.1
BUR08 Bucovina Ar. S 12.41 9 *e*Pn Pn 23 29 00.6 -1.1
HAQS Haql 12.43 117 P Pn 23 28 59.7 -2.4
HAQS Haql 12.43 117 P Pn 23 28 59.7 -2.4
SOKA Soboth 12.50 336⇑*i*Pn Pn 23 29 00.6 -2.4
SOKA ⇑*i*Sn Sn 23 31 06.7 -14
SOKA Soboth 12.50 336 Pn Pn 23 29 00.6 -2.4
OBKA Obir 12.52 335⇑*i*Pn Pn 23 29 01.1 -2.1
SNR=56
OBKA ⇑*i*Sn Sn 23 31 11.1 -10
OBKA Obir 12.52 335 Pn Pn 23 29 01.1 -2.1
SNR=56
PGF Pioggiola 12.55 309 *e*P Pn 23 29 03.9 +0.3
PGF Pioggiola 12.55 309 *e*P Pn 23 29 03.9 +0.3
KIS Kishinev 12.56 21 *e*P Pn 23 29 03.0 -0.8
KIS Kishinev 12.56 21 P Pn 23 29 10.7 +6.9
KIS Kishinev 12.56 21 *e*P Pn 23 29 03.0 -0.8
SHRM 12.56 123 P Pn 23 29 02.1 -1.8
baz=125
SHRM 12.56 123 P Pn 23 29 02.1 -1.8
ASF Jabal al Asfar 12.57 101 Pn Pn 23 29 01.6 -2.5
comp=Z,1.8nm,0.3s,baz=160,slow=7.0,SNR=18
ASF Sn Sn 23 31 12.1 -11
comp=Z,4.5nm,0.3s,baz=141,slow=6.7,SNR=4.2
PSZ Piszkesteto 12.62 353 *e*Pn Pn 23 29 02.6 -1.9
PSZ Piszkesteto 12.62 353⇓*e*P Pn 23 29 04.1 -0.4
PSZ *e*S Sn 23 31 11.9 -12
PSZ Piszkesteto 12.62 353⇓*i*P Pn 23 29 04.2 -0.3
PSZ Piszkesteto 12.62 353 *e*Pn Pn 23 29 02.6 -1.9
PSZ Piszkesteto 12.62 353 P Pn 23 29 04.2 -0.3
HHRG Al Ghardaqah 12.63 127 P Pn 23 29 03.1 -1.8
baz=129
HHRG Al Ghardaqah 12.63 127 P Pn 23 29 03.1 -1.8
VLC Villacollemand 12.64 317 *e*Pn Pn 23 29 06.0 +1.1
VLC *e*Sn Sn 23 31 22.4 -1.7
VLC Villacollemand 12.64 317 *e*Pn Pn 23 29 06.0 +1.1
VLC *e*Sn Sn 23 31 22.4 -1.8
GSCL Gusciola 12.65 318 Pn Pn 23 29 07.6 +2.6
comp=Z,12nm,0.4s
GSCL Gusciola 12.65 318 Pn Pn 23 29 07.6 +2.6
comp=Z,12nm,0.4s
TRPA Tarpa 12.70 1⇑*e*Pn Pn 23 29 04.7 -1.0
GMNA Gemona 12.82 331 Pn Pn 23 29 06.9 -0.4
comp=Z,220nm,0.9s
GMNA Gemona 12.82 331 Pn Pn 23 29 06.9 -0.4
comp=Z,220nm,0.9s
GMNA Gemona 12.82 331 Pn Pn 23 29 06.9 -0.4
comp=Z,220nm,0.9s
ARSA Arzberg 12.86 339⇑*i*Pn Pn 23 29 05.0 -2.8
SNR=20
ARSA ⇓*i*Sn Sn 23 31 16.3 -13
BDAS Al Bad' 12.91 119 P Pn 23 29 06.5 -2.2
BDAS Al Bad' 12.91 119 P Pn 23 29 06.5 -2.2
MYKA Terra Mystica 12.95 332⇓*i*Pn Pn 23 29 07.5 -1.6
MYKA ⇑*i*Sn Sn 23 31 19.7 -12
MYKA Terra Mystica 12.95 332 Pn Pn 23 29 07.5 -1.6
JLOS 13.02 117 P Pn 23 29 07.5 -2.6
JLOS 13.02 117 P Pn 23 29 07.6 -2.6
SIM Simferopol' 13.11 40*d i*P Pn 23 29 14.6 +3.3
SIM pmax pmax
comp=Z,71nm,0.8s
SIM MLR MLR
comp=Z,180nm,19.9s
KECS Kecovo 13.12 355 *e*Pn Pn 23 29 11.5 +0.1
KECS *e*Sn Sn 23 31 26.6 -9.3
KECS Kecovo 13.12 355 *e*PN Pn 23 29 11.5 +0.1
KECS Kecovo 13.12 355 *e*P Pn 23 29 11.5 +0.1
UZH Uzhgorod 13.20 0 ⇑*i*P Pn 23 29 11.5 -1.0
UZH *e* 23 31 36.1
UZH Uzhgorod 13.20 0 *i* P Pn 23 29 11.5 -1.0
FVI Forni Avoltri 13.26 330 P Pn 23 29 13.0 -0.4
FVI pmax pmax
comp=Z,31nm,0.7s
FVI Forni Avoltri 13.26 330 Pn Pn 23 29 13.0 -0.4
comp=Z,31nm,0.7s
FVI Forni Avoltri 13.26 330 Pn Pn 23 29 13.0 -0.4
comp=Z,31nm,0.7s
FVI Forni Avoltri 13.26 330 Pn Pn 23 29 13.0 -0.4
comp=Z,31nm,0.7s
HSFG 13.31 128 P Pn 23 29 12.3 -1.9
baz=130
HSFG 13.31 128 P Pn 23 29 12.3 -1.9
VYHS Vyhne 13.31 350 *e*Pn Pn 23 29 11.9 -2.1
VYHS *e*Sn Sn 23 31 28.0 -13
VYHS Vyhne 13.31 350 *e*PN Pn 23 29 11.9 -2.1
VYHS Vyhne 13.31 350 *e*P Pn 23 29 11.9 -2.1
ZST Bratislava 13.34 345 *e*Pn Pn 23 29 12.8 -1.5
ZST *e*Sn Sn 23 31 26.2 -15
ZST Bratislava 13.34 345 *e*PN Pn 23 29 12.8 -1.5
ZST Bratislava 13.34 345 *e*P Pn 23 29 12.8 -1.5
CONA Conrad Observa 13.38 341⇑*i*Pn Pn 23 29 13.1 -1.9
CONA ⇑*i*Sn Sn 23 31 31.7 -11
CONA Conrad Observa 13.38 341 Pn Pn 23 29 13.1 -1.9
KBA Koelnbreinsper 13.44 333⇑*i*Pn Pn 23 29 15.1 -0.7
SNR=11
KBA ⇑*i*Sn Sn 23 31 34.0 -10
KBA Koelnbreinsper 13.44 333 Pn Pn 23 29 15.1 -0.7
SNR=11
KEMA Kemaliye 13.45 69 *i* P Pn 23 29 17.3 +1.3

KOLL Kolacno 13.46 349 *e*Pn Pn 23 29 13.7 -2.4
KOLL *e*Sn Sn 23 31 32.6 -12
KOLL Kolacno 13.46 349 *e*PN Pn 23 29 13.7 -2.4
KOLL Kolacno 13.46 349 *e*P Pn 23 29 13.7 -2.4
ABTA Abfaltersbach 13.49 330⇑*i*Pn Pn 23 29 14.8 -1.7
SNR=11
ABTA ⇓*i*Sn Sn 23 31 33.0 -12
ABTA Abfaltersbach 13.49 330 Pn Pn 23 29 14.8 -1.7
SNR=11
KOLS Kolonicke sedl 13.51 360 *e*P Pn 23 29 16.6 -0.1
KOLS Kolonicke sedl 13.51 360 *e*PN Pn 23 29 16.6 -0.1
KOLS Kolonicke sedl 13.51 360 *e*P Pn 23 29 16.6 -0.1
SALO Salr 13.54 322 Pn Pn 23 29 16.4 -0.8
comp=Z,132nm,0.8s
SALO Salr 13.54 322 Pn Pn 23 29 16.4 -0.8
comp=Z,132nm,0.8s
SMOL Smolenice 13.57 346 *e*Pn Pn 23 29 15.5 -2.1
SMOL *e*Sn Sn 23 31 34.4 -12
SMOL Smolenice 13.57 346 *e*PN Pn 23 29 15.5 -2.1
SMOL Smolenice 13.57 346 *e*P Pn 23 29 15.5 -2.1
MOA Molln 13.78 337⇑*i*Pn Pn 23 29 17.8 -2.6
SNR=19
MOA ⇓*i*Sn Sn 23 31 41.0 -11
MABI Malga Bissina 13.86 324 Pn Pn 23 29 21.0 -0.5
comp=Z,28nm,0.8s
MABI Malga Bissina 13.86 324 Pn Pn 23 29 21.0 -0.5
comp=Z,28nm,0.8s
MABI Malga Bissina 13.86 324 Pn Pn 23 29 21.0 -0.5
comp=Z,28nm,0.8s
HEDF Idfu 13.93 135 P Pn 23 29 22.5 -0.2
baz=137
HEDF Idfu 13.93 135 P Pn 23 29 22.5 -0.1
STHS Stebnicka Huta 14.01 357 *e*Pn Pn 23 29 26.7 +3.2
STHS *e*Sn Sn 23 31 54.4 -3.2
STHS Stebnicka Huta 14.01 357 *e*PN Pn 23 29 26.7 +3.2
NIE Niedzica 14.07 355 *e*P Pn 23 29 26.4 +2.1
HQSR 14.18 129 P Pn 23 29 24.4 -1.6
baz=131
HQSR 14.18 129 P Pn 23 29 33.3 +7.4
RJOB Jochberg 14.20 333 *e*Pn Pn 23 29 25.8 -0.3
RJOB *e*Sn Sn 23 31 52.2 -10
KWP Kalwaria Pacla 14.21 1 *e*P Pn 23 29 26.7 +0.5
KWP Kalwaria Pacla 14.21 1 *e*Pn Pn 23 29 26.1 -0.2
comp=Z,33nm,0.9s
KWP Kalwaria Pacla 14.21 1⇑*i*P Pn 23 29 26.2 0.0
KWP Kalwaria Pacla 14.21 1 *e*Pn Pn 23 29 26.1 -0.1
comp=Z,33nm,0.9s
BRMO Bormio 14.23 325 Pn Pn 23 29 27.8 +1.2
comp=Z,22nm,0.9s
BRMO Bormio 14.23 325 Pn Pn 23 29 27.8 +1.2
comp=Z,22nm,0.9s
BRMO Bormio 14.23 325 Pn Pn 23 29 27.8 +1.2
comp=Z,22nm,0.9s
DBAS Duba 14.26 121 P Pn 23 29 25.3 -1.8
DBAS Duba 14.26 121 P Pn 23 29 25.3 -1.8
WTTA Wattenberg 14.27 329⇑*i*Pn Pn 23 29 25.3 -1.8
SNR=10
WTTA ⇑*i*Sn Sn 23 31 53.5 -10
WTTA Wattenberg 14.27 329 Pn Pn 23 29 25.3 -1.8
SNR=10
WATA Walderalm 14.35 329⇓*i*Pn Pn 23 29 26.3 -1.8
SNR=9.3
WATA ⇓*i*Sn Sn 23 31 55.7 -10
WATA Walderalm 14.35 329 Pn Pn 23 29 26.3 -1.9
SNR=9.3
LVV L'vov 14.45 5 *e*P Pn 23 29 32.2 +2.7
FETA Feichten 14.47 327⇓*i*Pn Pn 23 29 28.3 -1.6
FETA ⇓*i*Sn Sn 23 31 58.4 -10
FETA Feichten 14.47 327 Pn Pn 23 29 28.3 -1.6
VRAC Vranov 14.50 345 Pn Pn 23 29 27.4 -2.8
comp=Z,0.3nm,0.3s,baz=170,slow=13,SNR=7.8
VRAC Vranov 14.50 345⇓*i*P Pn 23 29 37.5 +7.3
VRAC Vranov 14.50 345 *e*Pn Pn 23 29 27.9 -2.3
VRAC Vranov 14.50 345⇓*i*P Pn 23 29 37.5 +7.3
MOTA Moosalm 14.56 328⇑*i*Pn Pn 23 29 28.9 -2.0
SNR=13
MOTA ⇓*i*Sn Sn 23 32 01.9 -9.0
MOTA Moosalm 14.56 328 Pn Pn 23 29 29.0 -2.0
SNR=13
HADB 14.61 130 P Pn 23 29 30.4 -1.4
baz=132
HADB 14.61 130 P Pn 23 29 39.4 +7.5
DAVOX Davos/Dischmat 14.69 324 Pn Pn 23 29 32.3 -0.4
comp=Z,2.3nm,0.3s,baz=145,slow=19,SNR=14
DAVOX Sn Sn 23 32 05.5 -8.5
comp=Z,3.3nm,0.3s,baz=316,slow=18,SNR=12
DAVOX Davos/Dischmat 14.69 324 Pn Pn 23 29 32.3 -0.4
OKC Ostrava-Krasne 14.72 349 *e*P Pn 23 29 39.7 +6.5
OKC *e*S Sn 23 32 03.8 -11
OKC MLR MLR
comp=Z,200nm,18.7s
OKC Ostrava-Krasne 14.72 349 *e*P Pn 23 29 39.7 +6.5
OKC *e*S Sn 23 32 03.8 -11
OKC AMS AMS 23 36 10.0
comp=Z,200nm,18.7s
OKC Ostrava-Krasne 14.72 349 *e*P Pn 23 29 39.7 +6.5
comp=Z,200nm,18.7s
TREC Trest 14.74 342 *e*P Pn 23 29 39.8 +6.4
TREC MLR MLR
comp=Z,400nm,24.7s
TREC Trest 14.74 342 *e*P Pn 23 29 39.8 +6.4
TREC AMS AMS 23 36 00.0
comp=Z,400nm,24.7s
TREC Trest 14.74 342 *e*P Pn 23 29 39.8 +6.4
comp=Z,400nm,24.7s
MORC Moravsky Berou 14.76 348 *e*P Pn 23 29 32.6 -1.1
MORC *e* 23 32 03.6
MORC pmax pmax
comp=Z,12nm,0.6s
MORC Moravsky Berou 14.76 348 *e*Pn Pn 23 29 32.6 -1.1
comp=Z,12nm,0.6s
MORC *e*Sn Sn 23 32 03.6 -12
MORC Moravsky Berou 14.76 348⇓*i*P Pn 23 29 33.4 -0.3
MORC Moravsky Berou 14.76 348 *e*Pn Pn 23 29 32.6 -1.1
comp=Z,12nm,0.6s
GEC2 GERESS Array S 14.84 337 *e*Pn Pn 23 29 33.3 -1.4
GEC2 GERESS Array S 14.84 337 *e*Pn Pn 23 29 33.3 -1.4
GERES GERESS Array B 14.84 337 Pn Pn 23 29 32.2 -2.4
comp=Z,2.6nm,0.3s,baz=156,slow=13,SNR=40
GERES Sn Sn 23 32 04.8 -13
comp=Z,3.6nm,0.3s,baz=155,slow=24,SNR=12
GERES GERESS Array B 14.84 337 Pn Pn 23 29 32.2 -2.5
WJHS 14.85 122 P Pn 23 29 34.0 -1.1
WJHS 14.85 122 P Pn 23 29 34.0 -1.0
ANN Anapa 14.88 46 *e*P Pn 23 29 36.0 +0.7
ANN *e*S Sn 23 32 22.7 +3.9
ANN pmax pmax
comp=Z,20nm,0.6s
OJC Ojcow 14.90 354 *e*P Pn 23 29 34.9 -0.6
EMRS Mersa Alam 14.99 130 P Pn 23 29 35.7 -1.1
baz=132
EMRS Mersa Alam 14.99 130 P Pn 23 29 35.7 -1.2
DAVA Damuels 15.06 326⇑*i*Pn Pn 23 29 36.5 -1.0
DAVA ⇑*i*Sn Sn 23 32 15.3 -7.7
DAVA Damuels 15.06 326 Pn Pn 23 29 36.5 -1.1
MBDF Montbardon 15.06 313 *e*P Pn 23 29 38.7 +1.0
comp=Z,73nm,1.1s
MBDF Montbardon 15.06 313 *e*P Pn 23 29 38.7 +1.0
MBDF pmax pmax
comp=Z,37nm,1.1s
MBDF Montbardon 15.06 313 *e*P Pn 23 29 38.7 +1.0
comp=Z,36nm,1.1s
KOPT Kop Dagi 15.12 67 *i* P Pn 23 29 40.5 +2.1
KHC Kasperske Hory 15.13 338 *e*Pn Pn 23 29 35.9 -2.6
comp=Z,16nm,1.0s
KHC *e*Sn Sn 23 32 10.5 -14
KHC Kasperske Hory 15.13 338 *e*P Pn 23 29 36.2 -2.3
KHC *ex* x 23 29 40.4
KHC *e*pP pP 23 29 44.0 -8.4
KHC *ex* x 23 30 04.5
KHC *e*S S 23 32 11.9 -29
KHC AMS AMS 23 36 20.0
comp=Z,600nm,24.5s
FUR Furstenfeldbru 15.13 331 *e*Pn Pn 23 29 36.4 -2.2
FUR *e*Sn Sn 23 32 12.8 -12
FUR Furstenfeldbru 15.13 331 *e*Pn Pn 23 29 36.4 -2.2
BNI Bardonecchia 15.30 314 P Pn 23 29 40.2 -0.5
BNI Bardonecchia 15.30 314 Pn Pn 23 29 40.2 -0.5
WET Wettzell 15.36 336 *e*Pn Pn 23 29 40.8 -0.8
WET *e*Sn Sn 23 32 18.8 -12
WET Wettzell 15.36 336 *e*Pn Pn 23 29 40.8 -0.8
LPG La Plagne 15.51 315 *e*P Pn 23 29 45.4 +2.0
comp=Z,27nm,0.8s
LPG La Plagne 15.51 315 *e*P Pn 23 29 45.4 +2.0

LPG pmax pmax
comp=Z,13nm,0.8s
LPG La Plagne 15.51 315 *e*P **Pn 23 29 45.4 +2.0**
comp=Z,13nm,0.8s
LPG La Plagne 15.51 315 *e*P **Pn 23 29 45.4 +2.0**
comp=Z,13nm,0.8s
DPC Dobruska-Polom 15.54 346 *e*P **Pn 23 29 43.9 0.0**
DPC *ex* x 23 29 48.6
DPC *e*S S 23 32 22.8 -26
DPC AMS AMS 23 36 50.0
comp=Z,200nm,12.9s
DPC Dobruska-Polom 15.54 346 P **Pn 23 29 48.6 +4.7**
HAGS Hagol 15.55 132 P **Pn 23 29 43.0 -1.1**
baz=133
HAGS Hagol 15.55 132 P **Pn 23 29 43.0 -1.1**
PRU Pruhonice 15.62 341 *e*P **Pn 23 29 44.6 -0.3**
PRU *e*S **S 23 32 32.8 -18**
PRU MLR MLR
comp=Z,300nm,24.2s
PRU Pruhonice 15.62 341 *e*P **Pn 23 29 44.6 -0.3**
PRU *e*pP pP 23 29 50.4 -8.0
PRU *e*S **S 23 32 32.8 -18**
PRU AMS AMS 23 36 40.0
comp=Z,300nm,24.2s
ORIF Oris-en-Rattie 15.70 312 *e*P **Pn 23 29 47.1 +1.1**
comp=Z,14nm,0.7s
ORIF *e*MLR MLR
comp=Z,211nm,22.2s
ORIF Oris-en-Rattie 15.70 312 *e*P **Pn 23 29 47.1 +1.1**
ORIF pmax pmax
comp=Z,7.0nm,0.7s
ORIF Oris-en-Rattie 15.70 312 *e*P **Pn 23 29 47.1 +1.1**
comp=Z,6.8nm,0.7s
ORIF Oris-en-Rattie 15.70 312 *e*P **Pn 23 29 47.1 +1.1**
comp=Z,6.8nm,0.7s
PRA Prague 15.72 341 P **Pn 23 29 46.0 -0.2**
ERZM Erzurum 15.75 68 *i* P **Pn 23 29 49.0 +2.3**
UPC Upice 15.76 345 *e*P **Pn 23 29 51.4 +4.8**
KSP Ksiaz 16.02 346 *e*P **Pn 23 29 54.2 +4.2**
KSP Ksiaz 16.02 346 *e*P **Pn 23 29 53.4 +3.5**
KSP Ksiaz 16.02 346 *e*P **Pn 23 29 53.4 +3.5**
KIEV Kiev 16.07 16 *e*P **Pn 23 29 47.5 -3.1**
KIEV *e* 23 32 48.6
KIEV pmax pmax
comp=Z,33nm,0.6s
KIEV Kiev 16.07 16 *e*Pn **Pn 23 29 47.5 -3.2**
comp=Z,33nm,0.6s
KIEV *e*Sn **Sn 23 32 48.6 +1.0**
AKASG Malin Array Be 16.08 16 Pn **Pn 23 29 45.7 -5.0**
comp=Z,3.2nm,0.3s,baz=204,slow=11,SNR=19
AKASG Sn **Sn 23 32 48.2 +0.3**
baz=202,slow=23,SNR=4.3
AKASG Malin Array Be 16.08 16 P **Pn 23 29 45.7 -5.1**
AKASG 23 32 48.2
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG Malin Array Be 16.08 16 Pn **Pn 23 29 45.7 -5.0**
AKASG Sn **Sn 23 32 48.2 +0.3**
AKASG Malin Array Be 16.08 16 Sn **Sn 23 32 48.2 +0.3**
AKBB Malin Array Si 16.08 16 *e*Pn **Pn 23 29 47.5 -3.3**
AKBB *e*Sn **Sn 23 32 50.0 +2.2**
PVCC Panska Ves 16.11 342 P **Pn 23 29 52.1 +1.0**
PVCC Panska Ves 16.11 342 *e*P **Pn 23 29 50.8 -0.3**
PVCC AMS AMS 23 36 50.0
comp=Z,200nm,22.8s
PVCC Panska Ves 16.11 342 P **Pn 23 29 52.1 +1.0**
SPAK Spaichingen-Ko 16.16 326 *e*P **Pn 23 29 52.5 +0.7**
SPAK Spaichingen-Ko 16.16 326 *e*P **Pn 23 29 52.5 +0.7**
BBS Basel-Blauen 16.33 322 *e*P **Pn 23 29 53.2 -0.7**
FELD Feldberg im Sc 16.36 324 *e*P **Pn 23 29 54.3 -0.1**
GRA1 Grafenberg Arr 16.40 334 *e*Pn **Pn 23 29 57.4 +2.5**
GRA1 Grafenberg Arr 16.40 334 *e*P **Pn 23 29 57.4 +2.5**
GRF Grafenberg Arr 16.40 334 *e*Pn **Pn 23 29 57.4 +2.5**
GRF Grafenberg Arr 16.40 334 *e*P **Pn 23 29 57.4 +2.5**
NKC Novy Kostel 16.45 337 *e*P **Pn 23 29 58.4 +3.0**
NKC *e*S **S 23 32 48.0 -20**
NKC MLR MLR
comp=Z,400nm,21.7s
NKC Novy Kostel 16.45 337 *e*P **Pn 23 29 58.4 +3.0**
NKC *e*S **S 23 32 48.0 -20**
NKC AMS AMS 23 37 10.0
comp=Z,400nm,21.7s
NKC Novy Kostel 16.45 337 *e*P **Pn 23 29 58.4 +3.0**
comp=Z,400nm,21.7s
STU Stuttgart 16.47 328 *e*P **Pn 23 29 55.7 -0.1**
STU *e* 23 32 45.3
STU pmax pmax
comp=Z,18nm,0.6s
STU Stuttgart 16.47 328 *e*Pn **Pn 23 29 55.7 -0.1**
comp=Z,18nm,0.6s
STU *e*Sn **Sn 23 32 45.2 -12**
STU Stuttgart 16.47 328 *e*P **Pn 23 29 55.7 -0.1**
comp=Z,18nm,0.6s
BFO Black Forest 16.53 326 *e*Pn **Pn 23 29 55.5 -1.0**
BFO *e*Sn **Sn 23 32 42.5 -16**
BFO Black Forest 16.53 326 *e*Pn **Pn 23 29 55.5 -1.0**
CABF La Chapelle 16.53 317 *e*P **Pn 23 29 54.8 -1.7**
comp=Z,14nm,0.7s
CABF La Chapelle 16.53 317 *e*P **Pn 23 29 54.8 -1.7**
CABF pmax pmax
comp=Z,7.0nm,0.7s
CABF La Chapelle 16.53 317 *e*P **Pn 23 29 54.8 -1.7**
comp=Z,6.9nm,0.7s
LOMF Lomont 16.60 321 *e*P **Pn 23 29 57.5 +0.1**
LOMF Lomont 16.60 321 *e*P **Pn 23 29 57.5 +0.1**
TANN Tannenbergstha 16.60 338 *e*Pn **Pn 23 29 59.2 +1.8**
MOF Molkenrain 16.77 322 *e*P **Pn 23 30 00.1 +0.5**
MOF Molkenrain 16.77 322 *e*P **Pn 23 30 00.1 +0.5**
HINF Hinteralfeld 16.89 322 *e*P **Pn 23 30 00.6 -0.4**
comp=Z,11nm,0.4s
HINF Hinteralfeld 16.89 322 *e*P **Pn 23 30 00.6 -0.4**
HINF pmax pmax
comp=Z,5.0nm,0.4s
HINF Hinteralfeld 16.89 322 *e*P **Pn 23 30 00.6 -0.4**
comp=Z,5.3nm,0.4s
HINF Hinteralfeld 16.89 322 *e*P **Pn 23 30 00.6 -0.4**
comp=Z,5.3nm,0.4s
ECH Echery 17.01 323 *e*P **Pn 23 30 03.1 +0.6**
ECH Echery 17.01 323 *e*P **Pn 23 30 01.6 -0.9**
ECH *e* 23 32 56.0
ECH pmax pmax
comp=Z,4.0nm,0.5s
ECH Echery 17.01 323 *e*Pn **Pn 23 30 01.6 -0.9**
comp=Z,4.3nm,0.5s
ECH *e*Sn **Sn 23 32 56.0 -14**
ECH Echery 17.01 323 *e*Pn **Pn 23 30 01.6 -0.9**
comp=Z,4.3nm,0.5s
ECH Echery 17.01 323 *e*P **Pn 23 30 03.1 +0.6**
MOX Moxa 17.07 336 *e*P **Pn 23 30 04.1 +0.8**
comp=Z,17nm,0.8s
MOX *e* 23 32 57.7
MOX
comp=Z,300nm,23.0s
MOX Moxa 17.07 336 *e*Pn **Pn 23 30 04.2 +0.9**
MOX Moxa 17.07 336 *e*P **Pn 23 30 04.1 +0.8**
comp=Z,17nm,0.8s
MOX *e* 23 32 57.7
MOX Moxa 17.07 336 *e*P **Pn 23 30 04.1 +0.8**
comp=Z,17nm,0.8s
CDF Champ du Feu 17.09 324 *e*P **Pn 23 30 03.6 +0.1**
comp=Z,11nm,0.3s
CDF Champ du Feu 17.09 324 *e*P **Pn 23 30 03.6 +0.1**
CDF pmax pmax
comp=Z,6.0nm,0.3s
CDF Champ du Feu 17.09 324 *e*P **Pn 23 30 03.6 +0.1**
comp=Z,5.7nm,0.3s
CDF Champ du Feu 17.09 324 *e*P **Pn 23 30 03.6 +0.1**
comp=Z,5.7nm,0.3s
CLL Collm 17.23 340 *e*Pn **Pn 23 30 07.4 +2.2**
CLL Collm 17.23 340 *i* P **Pn 23 30 07.5 +2.3**
CLL pmax pmax
comp=Z,24nm,1.4s
CLL Collm 17.23 340 *i* P **Pn 23 30 07.5 +2.3**
comp=Z,24nm,1.4s
CLL *i* 23 30 17.0
CLL Collm 17.23 340 *i* P **Pn 23 30 07.5 +2.3**
comp=Z,24nm,1.4s
CLL *i* PP 23 30 17.0
CLL *i* 23 30 29.8
CLL Lm 23 37 00.0
comp=Z,300nm,21.2s
CLL Collm 17.23 340 *i* P **Pn 23 30 07.5 +2.3**
comp=Z,24nm,1.4s
LANF Langenberg 17.25 326 *e*P **Pn 23 30 05.9 +0.5**

LANF Langenberg 17.25 326 *e*P **Pn 23 30 05.9 +0.5**
HAU Haudompre 17.27 322 *e*P **Pn 23 30 05.6 -0.1**
comp=Z,23nm,0.5s
HAU *e*MLR MLR
comp=Z,154nm,19.8s
HAU Haudompre 17.27 322 *e*P **Pn 23 30 05.6 -0.1**
HAU pmax pmax
comp=Z,12nm,0.5s
HAU Haudompre 17.27 322 *e*P **Pn 23 30 05.6 -0.1**
comp=Z,12nm,0.5s
HAU Haudompre 17.27 322 *e*P **Pn 23 30 05.6 -0.1**
comp=Z,12nm,0.5s
THEF They Montfort 17.60 322 *e*P **Pn 23 30 09.9 +0.1**
THEF They Montfort 17.60 322 *e*P **Pn 23 30 09.9 +0.1**
KIV Kislovodsk 17.83 55 *e*P **Pn 23 30 12.9 +0.2**
KIV *e*S **S 23 33 32.5 -3.2**
KIV pmax pmax
comp=Z,51nm,1.2s
KIV MLR MLR
comp=Z,62nm,15.0s
KIV Kislovodsk 17.83 55 *e*Pn **Pn 23 30 12.5 -0.2**
comp=Z,27nm,0.7s
KIV *e*S **S 23 33 40.8 +5.1**
KIV Kislovodsk 17.83 55 *e*Pn **Pn 23 30 12.5 -0.2**
comp=Z,27nm,0.7s
KIV Kislovodsk 17.83 55 *e*P **Pn 23 30 12.9 +0.2**
comp=Z,51nm,1.2s
TNS Taunus Mts 17.90 330 *e*Pn **Pn 23 30 14.9 +1.4**
TNS *e*Sn **Sn 23 33 17.9 -14**
TNS Taunus Mts 17.90 330 *e*P **Pn 23 30 14.9 +1.4**
RUE Ruedersdorf 18.10 343 *e*Pn **Pn 23 30 15.2 -0.7**
RUE Ruedersdorf 18.10 343 *e*Pn **Pn 23 30 15.2 -0.7**
AVF Avril sur Loir 18.19 314 *e*P **Pn 23 30 15.8 -1.2**
AVF Avril sur Loir 18.19 314 *e*P **Pn 23 30 15.8 -1.2**
GKP Gorka Klasztor 18.20 350 *e*P **Pn 23 30 18.3 +1.2**
GKP *e*S **S 23 33 41.9 -1.2**
GKP Gorka Klasztor 18.20 350 P **Pn 23 30 19.0 +1.9**
GKP Gorka Klasztor 18.20 350 *e*P **Pn 23 30 18.3 +1.2**
GKP *e*S **S 23 33 41.9 -1.2**
SSF Saint Saulge 18.25 315 *e*P **Pn 23 30 17.6 -0.1**
SSF Saint Saulge 18.25 315 *e*P **Pn 23 30 17.6 -0.1**
ZEI Tsey 18.28 60 *e*P **Pn 23 30 17.8 -0.4**
ZEI pmax pmax
comp=Z,29nm,0.9s
ZEI Tsey 18.28 60 *e*P **Pn 23 30 17.8 -0.4**
comp=Z,29nm,0.9s
GNI Garni 18.35 68 P **Pn 23 30 16.4 -2.6**
comp=Z,2.7nm,0.3s,baz=307,slow=4.0,SNR=24
GNI LR LR 23 38 28.1
comp=Z,173nm,21.8s,baz=85,slow=41
GNI Garni 18.35 68 *e*P **Pn 23 30 19.0 0.0**
GNI pmax pmax
comp=Z,25nm,0.8s
GNI Garni 18.35 68 *e*Pn **Pn 23 30 19.0 -0.1**
comp=Z,25nm,0.8s
GNI Sn **Sn 23 33 48.1 +5.2**
GNI Garni 18.35 68 *e*P **Pn 23 30 19.0 0.0**
comp=Z,25nm,0.8s
GOF Gofitskoye 18.49 52 *e*P **Pn 23 30 19.0 -1.7**
GOF pmax pmax
comp=Z,40nm,1.0s
GOF Gofitskoye 18.49 52 *e*P **Pn 23 30 19.0 -1.7**
comp=Z,40nm,1.0s
WLF Walferdange 18.49 325 *e*Pn **Pn 23 30 21.5 +0.8**
WLF Walferdange 18.49 325 *e*P **Pn 23 30 20.2 -0.5**
WLF pmax pmax
comp=Z,17nm,1.0s
WLF Walferdange 18.49 325 *e*P **Pn 23 30 20.1 -0.5**
comp=Z,17nm,1.0s
WLF Walferdange 18.49 325 *e*P **Pn 23 30 20.2 -0.5**
comp=Z,17nm,1.0s
CLZ Clausthal 18.50 336 *e*Pn **Pn 23 30 21.2 +0.4**
CLZ Clausthal 18.50 336 *e*P **Pn 23 30 21.2 +0.4**
SUW Suwalki 18.60 2 *e*P **Pn 23 30 20.5 -1.5**
SUW *e*S **S 23 33 45.1 -6.1**
SUW Suwalki 18.60 2 *e*P **Pn 23 30 20.8 -1.2**
comp=Z,121nm,0.7s
SUW Suwalki 18.60 2 *e*P **Pn 23 30 20.8 -1.2**
comp=Z,121nm,0.7s
TCF Toulx Ste Croi 18.62 312 *e*P **Pn 23 30 22.5 +0.2**
TCF Toulx Ste Croi 18.62 312 *e*P **Pn 23 30 22.5 +0.2**
CART Cartagena 18.84 283 Pn **Pn 23 30 22.9 -2.1**
CART Cartagena 18.84 283 Pn **Pn 23 30 22.9 -2.1**
ETSF Etsaut 19.19 300 *e*P **Pn 23 30 32.2 +3.0**
comp=Z,6.6nm,0.5s
ETSF Etsaut 19.19 300 *e*P **Pn 23 30 32.2 +3.0**
ETSF pmax pmax
comp=Z,3.0nm,0.5s
ETSF Etsaut 19.19 300 *e*P **Pn 23 30 32.2 +3.0**
comp=Z,3.3nm,0.5s
MEM Membach 19.23 327 P **Pn 23 30 28.1 -1.4**
comp=Z,7.7nm,1.0s
BCLA Clavier 19.41 326 P **Pn 23 30 29.9 -1.9**
comp=Z,14nm,2.0s
GIVF Givet 19.42 324 *e*P **Pn 23 30 32.3 +0.5**
GIVF Givet 19.42 324 *e*P **Pn 23 30 32.3 +0.5**
MNK Minsk 19.47 10 *e*P **Pn 23 30 27.0 -5.4**
MICGM Minsk 19.47 10 *e*P **Pn 23 30 27.0 -5.4**
DOU Dourbes 19.52 324 P **Pn 23 30 33.0 -0.1**
BAIF Baives 19.68 324 *e*P **Pn 23 30 33.9 -1.1**
BAIF Baives 19.68 324 *e*P **Pn 23 30 33.9 -1.1**
SJPF Ste Jean 19.72 300 *e*P **Pn 23 30 38.0 +2.5**
comp=Z,40nm,0.8s
SJPF Ste Jean 19.72 300 *e*P **Pn 23 30 38.0 +2.5**
SJPF pmax pmax
comp=Z,20nm,0.8s
SJPF Ste Jean 19.72 300 *e*P **Pn 23 30 38.0 +2.5**
comp=Z,20nm,0.8s
NACGM Naroch 19.73 8 *e*P **Pn 23 30 30.0 -5.4**
VORD Divnogorie 19.80 33 *e*P **Pn 23 30 33.2 -3.2**
VORD pmax pmax
comp=Z,40nm,0.5s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,50nm,0.6s
VORD Divnogorie 19.80 33 *e*P **Pn 23 30 33.2 -3.2**
comp=E,40nm,0.5s
VSR Storozhevoye 19.93 32 *e*P **Pn 23 30 34.1 -3.7**
VSR pmax pmax
comp=Z,60nm,0.4s
VSR pmax pmax
comp=N,60nm,0.6s
VSR pmax pmax
comp=E,50nm,0.6s
VSR Storozhevoye 19.93 32 *e*P **Pn 23 30 34.1 -3.7**
comp=E,60nm,0.4s
UCC Uccle 20.11 325 P **P 23 30 39.5 +1.6**
IIGN Ignalina 20.12 7 *e*P **P 23 30 36.5 -1.4**
IIGN Ignalina 20.12 7 *e*P **P 23 30 36.5 -1.4**
SNR=33
RGN Rugen 20.12 345 *e*P **P 23 30 37.5 -0.5**
comp=E,52nm,0.7s
RGN Rugen 20.12 345 *e*P **P 23 30 37.5 -0.5**
comp=E,52nm,0.7s
IDID Didziasalis 20.13 7 *e*P **P 23 30 36.3 -1.8**
IDID Didziasalis 20.13 7 *e*P **P 23 30 36.3 -1.8**
SNR=33
MFF Saint Martin d 20.21 310 *e*P **P 23 30 43.5 +4.4**
comp=E,21nm,0.6s
MFF Saint Martin d 20.21 310 *e*P **P 23 30 43.5 +4.4**
MFF pmax pmax
comp=Z,11nm,0.6s
MFF Saint Martin d 20.21 310 *e*P **P 23 30 43.5 +4.4**
comp=Z,11nm,0.6s
ISAL Salakas 20.33 6 *e*P **P 23 30 38.5 -1.7**
ISAL Salakas 20.33 6 *e*P **P 23 30 38.5 -1.7**
SNR=33
BSD Bornholm Skovb 20.35 348 *i* P **P 23 30 38.4 -2.0**
BSD pmax pmax
comp=Z,64nm,0.8s
BSD MLR MLR
comp=Z,83nm,21.0s,MS3.1
BSD Bornholm Skovb 20.35 348 *i* P **P 23 30 38.4 -2.0**
comp=Z,64nm,0.8s
BSD
comp=Z,80nm,21.0s
BSD Bornholm Skovb 20.35 348 *i* P **P 23 30 38.4 -2.0**
comp=Z,83nm,21.0s
IZAR Zarasai 20.51 6 *e*P **P 23 30 40.6 -1.6**
IZAR Zarasai 20.51 6 *e*P **P 23 30 40.6 -1.7**
SNR=29
MAK Makhachkala 20.89 61 *c i*P **P 23 30 46.5 0.0**
MAK *e*S **S 23 34 38.0 +0.9**
MAK *e*SS 23 34 58.1

MAK pmax pmax
comp=Z,242nm,1.0s
MAK MLR MLR
comp=Z,140nm,21.0s,MS3.3
MAK Makhachkala 20.89 61 *i* P **P 23 30 46.5 0.0**
comp=Z,242nm,1.0s
MAK *e*S **S 23 34 38.0 +0.9**
VRHR Novokhopersk 20.97 36 *e*P **P 23 30 46.0 -1.2**
VRHR *e*S **S 23 34 33.0 -5.4**
VRHR pmax pmax
comp=Z,110nm,0.8s
VRHR pmax pmax
comp=N,20nm,1.0s
VRHR pmax pmax
comp=E,40nm,1.0s
VRHR smax
comp=N,40nm,1.2s
VRHR smax
comp=Z,20nm,1.1s
VRHR smax
comp=E,70nm,0.9s
VRHR Novokhopersk 20.97 36 *e*P **P 23 30 46.0 -1.2**
comp=E,110nm,0.8s
LDF La Druitiere 21.13 315 *e*P **P 23 30 49.6 +0.6**
comp=E,19nm,0.8s,mb4.2
LDF La Druitiere 21.13 315 *e*P **P 23 30 49.6 +0.6**
LDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
LDF La Druitiere 21.13 315 *e*P **P 23 30 49.6 +0.6**
comp=Z,9.4nm,0.8s,mb4.2
LDF La Druitiere 21.13 315 *e*P **P 23 30 49.6 +0.6**
comp=Z,9.4nm,0.8s,mb4.2
ESDC Sonseca Array 21.22 289 P **P 23 30 53.1 +3.1**
comp=Z,2.6nm,0.5s,mb3.8,baz=82,slow=9.7,SNR=14
ESLA Sonseca Array 21.22 289 *e*P **P 23 30 50.5 +0.5**
ESLA Sonseca Array 21.22 289 *e*P **P 23 30 50.5 +0.5**
COP Copenhagen 21.37 345 *i* P **P 23 30 54.6 +3.1**
COP pmax pmax
comp=Z,17nm,0.8s,mb4.4
COP MLR MLR
comp=Z,38nm,19.0s,MS2.8
COP Copenhagen 21.37 345 *i* P **P 23 30 54.6 +3.1**
comp=Z,17nm,0.8s,mb4.4
COP
comp=Z,30nm,19.0s
FLN La Foliniere 21.42 315 *e*P **P 23 30 52.2 +0.1**
comp=Z,33nm,0.7s,mb4.5
FLN *e*MLR MLR
comp=Z,70nm,21.0s,MS2.7
FLN La Foliniere 21.42 315 *e*P **P 23 30 52.2 +0.1**
FLN pmax pmax
comp=Z,17nm,0.7s,mb4.5
FLN MLR MLR
comp=Z,70nm,21.0s,MS3.0
FLN La Foliniere 21.42 315 *e*P **P 23 30 52.2 +0.1**
comp=Z,16nm,0.7s,mb4.5
FLN LR LR
comp=Z,70nm,21.0s,MS3.0
FLN La Foliniere 21.42 315 *e*P **P 23 30 52.2 +0.1**
comp=Z,16nm,0.7s,mb4.5
GRR Gorron 21.46 314 *e*P **P 23 30 55.2 +2.7**
comp=Z,14nm,0.6s,mb4.1
GRR Gorron 21.46 314 *e*P **P 23 30 55.2 +2.7**
GRR pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
GRR Gorron 21.46 314 *e*P **P 23 30 55.2 +2.7**
comp=Z,6.8nm,0.6s,mb4.2
PAB San Pablo 21.51 289 *e*P **P 23 30 54.7 +1.6**
PAB pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
PAB San Pablo 21.51 289 *e*P **P 23 30 54.7 +1.6**
comp=Z,7.6nm,0.8s,mb4.2
PAB San Pablo 21.51 289 *e*P **P 23 30 54.7 +1.6**
comp=Z,7.6nm,0.8s,mb4.2
MIB Mutribah 21.80 98 *e*P **P 23 30 56.6 +0.2**
MIB AMb AMB 23 31 16.1
comp=Z,84nm,0.6s,mb5.4
MIB Mutribah 21.80 98 *e*P **P 23 30 56.6 +0.2**
comp=Z,84nm,0.6s,mb5.3
NAY Al-Naaiem 21.93 99 *e*P **P 23 30 58.2 +0.4**
NAY AMb AMB 23 31 00.5
comp=Z,35nm,0.6s,mb5.0
NAY Al-Naaiem 21.93 99 *e*P **P 23 30 58.2 +0.4**
comp=Z,35nm,0.6s,mb5.0
OBN Obninsk 22.03 22 *c i*P **P 23 30 56.2 -2.3**
OBN *i* 23 31 18.2
OBN *i* S **S 23 34 55.6 -3.5**
OBN pmax pmax
comp=Z,112nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,200nm,17.0s,MS3.6
OBN Obninsk 22.03 22 *e*P **P 23 30 56.6 -1.9**
comp=Z,59nm,0.3s,mb5.5
OBN *e*PcP PcP 23 34 52.8 -2.5
OBN Obninsk 22.03 22 *e*P **P 23 30 56.7 -1.8**
comp=Z,59nm,0.3s,mb5.5
UMR Umm Al-Rimmam 22.20 98 *e*P **P 23 31 00.8 +0.2**
UMR AMb AMB 23 31 08.5
comp=Z,66nm,0.6s,mb5.2
UMR Umm Al-Rimmam 22.20 98 *e*P **P 23 31 00.8 +0.2**
comp=Z,66nm,0.6s,mb5.2
MDT Midelt 22.40 271 P **P 23 31 05.0 +2.3**
comp=Z,2.6nm,0.8s,mb3.7,baz=125,slow=4.4,SNR=3.8
MDT Midelt 22.40 271 P **P 23 31 05.0 +2.3**
SGMF Saint Gilles 22.40 313 *e*P **P 23 31 05.5 +2.9**
QUIF Quistinic 22.63 311 *e*P **P 23 31 07.1 +2.1**
comp=Z,49nm,0.8s,mb4.7
QUIF Quistinic 22.63 311 *e*P **P 23 31 07.1 +2.1**
QUIF pmax pmax
comp=Z,25nm,0.8s,mb4.7
QUIF Quistinic 22.63 311 *e*P **P 23 31 07.1 +2.1**
comp=Z,24nm,0.8s,mb4.7
MUD Monsted U'grnd 22.85 341 *i* P **P 23 31 09.4 +2.1**
MUD pmax pmax
comp=Z,16nm,0.8s,mb4.5
MUD MLR MLR
comp=Z,89nm,19.0s,MS3.2
MUD Monsted U'grnd 22.85 341 *i* P **P 23 31 09.4 +2.1**
comp=Z,16nm,0.8s,mb4.5
MUD
comp=Z,80nm,19.0s
MUD Monsted U'grnd 22.85 341 *i* P **P 23 31 09.4 +2.1**
comp=Z,89nm,19.0s
ROSF Rostrenen 22.87 312 *e*P **P 23 31 09.8 +2.3**
MOS Moscow 22.88 23 *e*P **P 23 31 03.5 -4.1**
MOS *e* 23 31 30.1
MOS *e* 23 34 57.3
MOS *e*S **S 23 35 08.7 -5.6**
MOS pmax pmax
comp=Z,200nm,0.8s,mb5.6
MOS Moscow 22.88 23 *e*PcP PcP 23 34 57.3 +0.3
SARR Saratov 22.96 39 *i* P **P 23 31 06.8 -1.7**
comp=Z,373nm,0.9s,mb5.8
SARR *i* S **S 23 35 15.4 -0.3**
VSU Vasula 23.24 6⇓ *e*P **P 23 31 08.8 -2.5**
VSU pmax pmax
comp=Z,55nm,0.9s,mb5.0
VSU MLR MLR
comp=Z,344nm,19.0s,MS3.8
MVO Moncorvo 23.65 293 *e*P **P 23 31 18.2 +2.8**
comp=Z,24nm,1.7s,mb4.3
MVO *i* P 23 31 24.4
EVO Evora 24.36 286 *e*P **P 23 31 24.1 +2.2**
comp=Z,2.8nm,0.6s,mb3.9
EVO Evora 24.36 286 *e*P **P 23 31 24.1 +2.2**
comp=Z,2.8nm,0.6s,mb3.9
PUL Pulkovo 24.92 10⇑ *e*P **P 23 31 27.5 +0.8**
PUL pmax pmax
comp=Z,118nm,0.7s,mb5.5
PUL MLR MLR
comp=Z,335nm,24.0s,MS3.8
HFS Hagfors 25.35 350 P **P 23 31 29.7 -1.0**
comp=Z,16nm,0.6s,mb4.8,baz=155,slow=11,SNR=71
HFS Hagfors 25.35 350 P **P 23 31 29.7 -1.0**
HFS pmax pmax
comp=Z,16nm,0.6s
KONO Kongsberg 25.62 345 *e*P **P 23 31 32.4 -0.7**
KONO pmax pmax
comp=Z,23nm,1.2s,mb4.6
KONO Kongsberg 25.62 345 *e*P **P 23 31 32.4 -0.8**
comp=Z,23nm,1.2s,mb4.6
FINES FINESS Array B 26.16 4 P **P 23 31 37.1 -0.9**
comp=Z,20nm,0.7s,mb4.8,baz=163,slow=10,SNR=66
FINES LR LR 23 43 15.6
comp=Z,364nm,20.3s,MS3.9,baz=158,slow=40
FINES FINESS Array B 26.16 4 P **P 23 31 37.1 -0.8**

FINES pmax pmax
comp=Z,20nm,0.7s
FINES MLR MLR
comp=Z,364nm,20.3s
NAO01 NORSAR Array S 26.48 347 *e*P **P 23 31 40.2 -0.6**
comp=Z,4.7nm,0.5s,mb4.3
EKA Eskdalemuir Ar 26.50 327 P **P 23 31 41.7 +0.6**
comp=Z,14nm,0.7s,mb4.6,baz=127,slow=8.1,SNR=17
EKA Eskdalemuir Ar 26.50 327 P **P 23 31 41.7 +0.6**
EKA pmax pmax
comp=Z,14nm,0.7s
NB2 NORSAR Subarra 26.60 348 P **P 23 31 41.0 -1.0**
comp=Z,0.5nm,0.5s,baz=155,slow=11
NB2 NORSAR Subarra 26.60 348 P **P 23 31 41.0 -1.0**
comp=Z,0.5nm,0.5s,baz=155,slow=11,SNR=3.9
NOA NORSAR Array B 26.60 348 P **P 23 31 40.6 -1.3**
comp=Z,2.6nm,0.5s,mb4.0,baz=143,slow=10,SNR=20
NOA NORSAR Array B 26.60 348 P **P 23 31 40.7 -1.3**
NOA pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 26.84 4 *e*P **P 23 31 42.8 -1.3**
KAF pmax pmax
comp=Z,13nm,0.6s,mb4.6
KAF Kangasniemi 26.84 4 *e*p **P 23 31 42.8 -1.3**
comp=Z,13nm,0.6s,mb4.6,baz=183,slow=9.1
JOF Joensuu 28.09 9 *e*P **P 23 31 53.3 -2.0**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
JOF Joensuu 28.09 9 *e*p **P 23 31 53.3 -2.0**
comp=Z,9.1nm,0.6s,mb4.6
TOA0 Torodi Ar. Sit 28.93 225 *e*P **P 23 32 04.1 +0.9**
TOA0 *e*PcP PcP 23 35 12.3 +0.7
TOA0 Torodi Ar. Sit 28.93 225 *e*P **P 23 32 04.1 +0.9**
TORD Torodi Ar. Bea 28.93 225 P **P 23 32 04.2 +1.0**
comp=Z,3.3nm,0.6s,mb4.3,baz=36,slow=9.4,SNR=54
TORD LR LR 23 44 27.9
comp=Z,171nm,20.7s,MS3.6,baz=105,slow=38
AKTK Aktyubinsk 29.82 49 P **P 23 32 09.6 -1.1**
AKTK LR LR 23 49 01.9
AKTK Aktyubinsk 29.82 49 P **P 23 32 09.6 -1.2**
comp=Z,43nm,18.1s
AKTO Aktyubinsk 29.82 49 P **P 23 32 09.6 -1.1**
comp=Z,8.9nm,0.7s,mb4.6,baz=268,slow=8.0,SNR=44
AKTO LR LR 23 49 01.9
comp=Z,43nm,18.1s,MS3.1,baz=87,slow=46
AKTO Aktyubinsk 29.82 49 P **P 23 32 09.6 -1.2**
AKTO pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
AKTO MLR MLR
comp=Z,43nm,18.1s,MS3.1
ARU Arti 32.27 38 *d i*P **P 23 32 30.7 -1.6**
ARU *e* 23 33 36.8
ARU S **S 23 37 42.3 -0.5**
ARU SS SS 23 39 30.1 -32
ARU pmax pmax
comp=Z,39nm,1.7s,mb5.0
ARU Arti 32.27 38 *e*P **P 23 32 30.9 -1.4**
comp=Z,18nm,0.8s,mb5.0
ARU Arti 32.27 38 *e*P **P 23 32 30.9 -1.4**
comp=Z,18nm,0.8s,mb5.0
APA Apatity 32.82 8⇑ *e*P **P 23 32 46.2 +9.2**
APA pmax pmax
comp=Z,11nm,0.9s,mb4.8
APA MLR MLR
comp=Z,300nm,19.0s,MS4.0
SOKR Solikamsk 32.94 32 *c i*P **P 23 32 37.6 -0.5**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb5.2
SOKR Solikamsk 32.94 32 *i*P **P 23 32 37.6 -0.5**
comp=Z,30nm,1.0s,mb5.2
SVE Sverdlovsk 33.48 38⇑ *e*P **P 23 32 42.0 -0.8**
SVE pmax pmax
comp=Z,42nm,0.6s,mb5.5
SVE Sverdlovsk 33.48 38 *e*P **P 23 32 42.0 -0.8**
comp=Z,42nm,0.6s,mb5.5
ARCES ARCESS Array B 34.22 2 P **P 23 32 48.3 -0.8**
comp=Z,22nm,0.5s,mb5.3,baz=188,slow=9.4,SNR=118
ARCES ARCESS Array B 34.22 2 P **P 23 32 48.3 -0.8**
ARCES pmax pmax
comp=Z,22nm,0.5s
ARCES ARCESS Array B 34.22 2 P **P 23 32 48.3 -0.8**
comp=Z,22nm,0.5s,mb5.3
KEV Kevo 34.49 3 *e*P **P 23 32 50.2 -1.3**
KEV pmax pmax
comp=Z,19nm,0.6s,mb5.2
KEV Kevo 34.49 3 *e*p **P 23 32 50.2 -1.3**
comp=Z,19nm,0.6s,mb5.2
KEV Kevo 34.49 3 *e*P **P 23 32 50.2 -1.3**
comp=Z,19nm,0.6s,mb5.2
BRVK Borovoye 37.82 47⇓ *e*P **P 23 33 19.7 -0.4**
BRVK pmax pmax
comp=Z,13nm,0.7s,mb4.8
BRVK MLR MLR
comp=Z,67nm,24.0s,MS3.4
BRVK Borovoye 37.82 47 *e*P **P 23 33 19.7 -0.4**
comp=Z,67nm,24.0s
BVAR Borovoye Array 37.88 47 P **P 23 33 20.7 +0.1**
comp=Z,7.8nm,0.6s,mb4.6,baz=263,slow=6.0,SNR=67
BVAR PP PP 23 34 46.5 -0.9
comp=Z,2.9nm,0.7s,baz=268,slow=9.9,SNR=3.8
BVAR LR LR 23 51 41.5
comp=Z,78nm,20.2s,MS3.5,baz=270,slow=41
BVAR Borovoye Array 37.88 47 P **P 23 33 20.7 +0.1**
BVAR 23 34 46.5
BVAR pmax pmax
comp=Z,8.0nm,0.6s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR MLR MLR
comp=Z,78nm,20.2s
BVAR Borovoye Array 37.88 47 P **P 23 33 20.7 +0.1**
comp=Z,8.0nm,0.6s,mb4.6
BVAR Borovoye Array 37.88 47 PP PP 23 34 46.5 -1.0
DBIC Dimbokro 37.95 227 P **P 23 33 22.5 +0.9**
comp=Z,6.6nm,0.5s,mb4.6,baz=17,slow=9.6,SNR=19
DBIC LR LR 23 49 51.3
comp=Z,73nm,20.8s,MS3.5,baz=23,slow=38
DBIC Dimbokro 37.95 227 *e*P **P 23 33 22.8 +1.2**
DBIC pmax pmax
comp=Z,8.0nm,0.7s
DBIC Dimbokro 37.95 227 *e*P **P 23 33 22.8 +1.2**
comp=Z,7.7nm,0.7s,mb4.5
DBIC Dimbokro 37.95 227 *e*P **P 23 33 22.8 +1.2**
comp=Z,7.7nm,0.7s,mb4.5
KBL Kabul 38.04 77 *e*P **P 23 33 22.3 +0.1**
KBL pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
KBL Kabul 38.04 77 *e*P **P 23 33 22.3 +0.1**
comp=Z,2.8nm,0.6s,mb4.2
KBL Kabul 38.04 77 *e*P **P 23 33 22.3 +0.1**
comp=Z,2.8nm,0.6s,mb4.2
TIC Toumodi 38.07 228 *e*P **P 23 33 23.9 +1.3**
comp=Z,12nm,0.7s,mb4.8
KIC Kosan Boka 38.13 227 *e*P **P 23 33 24.6 +1.5**
comp=Z,26nm,0.8s,mb5.0
LIC Lamto 38.41 227 *e*P **P 23 33 26.2 +0.7**
comp=Z,29nm,0.7s,mb4.8
LIC *e*MLR MLR
comp=Z,125nm,18.5s,MS3.5
LIC Lamto 38.41 227 *e*P **P 23 33 27.0 +1.5**
comp=Z,47nm,0.7s,mb5.3
LIC Lamto 38.41 227 *e*P **P 23 33 26.2 +0.7**
comp=Z,15nm,0.7s,mb4.8
LIC LR LR
comp=Z,60nm,18.5s,MS3.4
LIC Lamto 38.41 227 *e*P **P 23 33 26.2 +0.7**
comp=Z,15nm,0.7s,mb4.8
KMBO Kilima Mbogo 38.95 156 P **P 23 33 32.9 +2.9**
comp=Z,4.1nm,0.9s,mb4.2,baz=181,slow=24,SNR=9.3
KMBO Kilima Mbogo 38.95 156 *e*P **P 23 33 33.9 +3.9**
KMBO pmax pmax
comp=Z,9.0nm,1.2s
KMBO Kilima Mbogo 38.95 156 *e*P **P 23 33 33.9 +3.9**
comp=Z,8.5nm,1.2s,mb4.3
EKS2 Erkin-Say 40.12 64 P **P 23 33 40.2 +0.7**
SNR=25
USP Ospenovka 40.57 63 P **P 23 33 42.8 -0.4**
SNR=9.8
AAK Ala-Archa 40.65 64 P **P 23 33 44.6 +0.7**
SNR=10
AAK Ala-Archa 40.65 64 P **P 23 33 43.9 +0.1**
comp=Z,6.1nm,0.6s,mb4.4,baz=239,slow=3.2,SNR=9.3
AAK LR LR 23 53 15.4
comp=Z,64nm,18.2s,MS3.5,baz=286,slow=40
AAK Ala-Archa 40.65 64 *c i*P **P 23 33 44.2 +0.4**
AAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
AAK MLR MLR
comp=Z,32nm,24.0s,MS3.1
AAK Ala-Archa 40.65 64 P **P 23 33 43.9 +0.1**
AAK LR LR 23 53 15.4
AAK Ala-Archa 40.65 64 *i*P **P 23 33 44.2 +0.4**
comp=Z,32nm,24.0s
UCH Uchtor 40.72 64 P **P 23 33 45.4 +1.0**
SNR=9.4
CHMS Chumysh 40.78 63 P **P 23 33 45.1 +0.1**
SNR=10
KZA Kyzart 41.28 64 P **P 23 33 50.6 +1.5**
SNR=22
TKM2 Tokmak 2 41.41 63 P **P 23 33 50.3 +0.2**
SNR=9.6
ULHL Ulahol 41.98 64 P **P 23 33 55.7 +0.9**
SNR=29
SCO Scoresbysund 42.26 340 *i*P **P 23 33 59.1 +2.4**
SCO pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
SCO MLR MLR
comp=Z,38nm,18.0s,MS3.3
SCO Scoresbysund 42.26 340 *i*P **P 23 33 59.1 +2.4**
comp=Z,9.3nm,1.0s,mb4.4
SCO
comp=Z,30nm,18.0s
KSH Kashi 42.28 68 *e*P **P 23 33 56.3 -1.0**
KSH *e*pP pP 23 34 08.3 -0.4
KSH *e*sP sP 23 34 13.3 -0.1
KSH *e*PP PP 23 35 36.3 +0.7
KSH *e*PcP PcP 23 35 52.0 +1.5
KSH *e*ScP ScP 23 39 37.0 -0.9
KSH *e*PcS PcS 23 39 42.0 -0.3
KSH *e*S **S 23 40 10.0 -5.2**
KSH *e*sS sS 23 40 30.5 -3.6
KSH *e*ScS ScS 23 43 52.0 -3.9
KSH pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
KSH LR LR
comp=N,90nm,5.7s
KSH LR LR
comp=E,81nm,5.0s
KSH LR LR
comp=Z,95nm,6.4s
KURK Kurchatov 42.84 51 P **P 23 34 00.2 -1.5**
comp=Z,30nm,0.7s,mb5.1,baz=279,slow=8.4,SNR=84
KURK LR LR 23 54 08.8
comp=Z,24nm,20.4s,MS3.1,baz=200,slow=40
KURK Kurchatov 42.84 51 *c i*P **P 23 34 00.7 -1.0**
KURK pmax pmax
comp=Z,22nm,0.7s,mb5.0
KURK Kurchatov 42.84 51 P **P 23 34 00.2 -1.5**
KURK LR LR 23 54 08.8
KURK Kurchatov 42.84 51 *i*P **P 23 34 00.7 -1.0**
comp=Z,22nm,0.7s,mb5.0
SPB4 Spitsbergen Ar 42.94 358 *e*P **P 23 34 02.5 +0.3**
SPB4 Spitsbergen Ar 42.94 358 *e*P **P 23 34 02.5 +0.3**
KBS Kingsbay 43.83 357 *d i*P **P 23 34 10.0 +0.7**
KBS pmax pmax
comp=Z,30nm,2.5s,mb4.6
KBS Kingsbay 43.83 357 *i*P **P 23 34 10.0 +0.7**
comp=Z,30nm,2.5s,mb4.6
SDNR Sundarnagar 45.30 79 *e*P **P 23 34 22.1 +0.4**
NVS Novosibirsk 45.57 45 *i*P **P 23 34 23.4 0.0**
NVS *e* 23 36 04.8
NVS *i*S **S 23 40 59.1 -3.5**
NVS pmax pmax
comp=N,6.0nm,1.0s
NVS pmax pmax
comp=E,12nm,1.0s
NVS pmax pmax
comp=Z,29nm,1.0s,mb5.2
NVS pmax pmax
comp=Z,11nm,1.4s,mb4.6
NVS pmax pmax
comp=N,2.0nm,1.1s
NVS pmax pmax
comp=E,2.0nm,1.1s
NVS smax
comp=N,14nm,1.6s
NVS smax
comp=E,3.0nm,0.8s
NVS Novosibirsk 45.57 45 *i*P **P 23 34 23.4 0.0**
MK31 Makanchi Array 45.59 56 *e*P **P 23 34 23.2 -0.5**
MK31 *e* 23 36 03.8
MK31 Makanchi Array 45.59 56 *e*P **P 23 34 23.2 -0.5**
MKAR Makanchi Array 45.59 56 P **P 23 34 23.2 -0.5**
comp=E,30nm,0.6s,mb5.4,baz=286,slow=6.3,SNR=412
MKAR LR LR 23 56 45.4
comp=E,68nm,21.8s,MS3.5,baz=105,slow=41
MKAR Makanchi Array 45.59 56 P **P 23 34 23.3 -0.4**
MKAR pmax pmax
comp=Z,30nm,0.6s
MKAR MLR MLR
comp=Z,68nm,21.8s
ZAA0 Zalesovo Array 46.52 46 *e*P **P 23 34 29.9 -1.1**
ZAA0 *e*PcP PcP 23 36 08.7 +4.0
ZAA0 Zalesovo Array 46.52 46 *e*P **P 23 34 29.9 -1.0**
ZALV Zalesovo Beam 46.52 46 P **P 23 34 30.0 -1.0**
comp=Z,16nm,0.5s,mb5.2,baz=269,slow=9.1,SNR=70
ZALV LR LR 23 56 46.2
comp=Z,36nm,20.3s,MS3.3,baz=225,slow=40
ZALV Zalesovo Beam 46.52 46 P **P 23 34 30.0 -0.9**
ZALV pmax pmax
comp=Z,16nm,0.5s,mb5.2
ZALV MLR MLR
comp=Z,36nm,20.3s,MS3.3
ZALV Zalesovo Beam 46.52 46 P **P 23 34 30.0 -0.9**
comp=Z,36nm,20.3s
SUMG Summit 47.90 339 P **P 23 34 42.0 +0.6**
SUMG Summit 47.90 339 P **P 23 34 42.0 +0.5**
WMQ Urumqi 49.90 59 P **P 23 34 57.5 +0.3**
WMQ pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
WMQ LR LR
comp=Z,64nm,21.0s,MS3.6
LSZ Lusaka 50.73 173 *e*P **P 23 35 05.9 +2.3**
LSZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LSZ Lusaka 50.73 173 *e*P **P 23 35 05.9 +2.3**
comp=Z,9.5nm,0.9s,mb4.7
DMN Daman 53.34 80 *e*P **P 23 35 23.1 0.0**
comp=Z,20nm,0.3s,mb5.5
KKN Kakani 53.40 79 *e*P **P 23 35 23.0 -0.6**
comp=Z,23nm,0.5s,mb5.3
KKN Kakani 53.40 79 *e*P **P 23 35 23.0 -0.6**
KKN pmax pmax
comp=Z,23nm,0.5s,mb5.4
KKN Kakani 53.40 79 *e*P **P 23 35 23.0 -0.6**
comp=Z,23nm,0.5s,mb5.4
PKI Pulchoki 53.60 80 *e*P **P 23 35 24.5 -0.5**
comp=Z,13nm,0.3s,mb5.4
GUN Gumba 53.83 79 *e*P **P 23 35 26.5 -0.2**
comp=Z,22nm,0.3s,mb5.5
TSUM Tsumeb 54.50 185 *e*P **P 23 35 33.0 +1.5**
TSUM Tsumeb 54.50 185 *e*P **P 23 35 33.0 +1.5**
MOY Mondy 56.56 47 *e*P **P 23 35 46.6 +0.6**
MOY Mondy 56.56 47 *e*P **P 23 35 46.6 +0.6**
LSA Lhasa 57.27 75 P **P 23 35 52.3 +0.9**
TLY Talaya 58.13 46 *e*P **P 23 35 57.2 +0.1**
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,64nm,17.0s,MS3.8
TLY Talaya 58.13 46 *e*P **P 23 35 57.4 +0.3**
comp=Z,5.2nm,0.8s,mb4.6
TLY Talaya 58.13 46 *e*P **P 23 35 57.4 +0.3**
comp=Z,5.2nm,0.8s,mb4.6
ZAK Zakamensk 58.33 48 *e*P **P 23 35 58.9 +0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ZAK Zakamensk 58.33 48 *e*P **P 23 35 58.9 +0.4**
comp=Z,9.0nm,1.0s,mb4.8
GTA Gaotai 59.90 61 *e*P **P 23 36 10.0 +0.5**
GTA pP pP 23 36 23.5 +2.1
GTA sP sP 23 36 29.8 +3.8
GTA S **S 23 44 13.0 -5.6**
GTA sS sS 23 44 33.8 -4.4
GTA SS SS 23 48 10.8 -4.1
GTA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LBTB Lobatse 60.19 177 *e*P **P 23 36 12.7 +1.2**
LBTB pmax pmax
comp=Z,11nm,1.4s,mb4.7
LBTB Lobatse 60.19 177 *e*P **P 23 36 12.7 +1.2**
comp=Z,11nm,1.4s,mb4.7
LBTB Lobatse 60.19 177 *e*P **P 23 36 12.6 +1.1**
comp=Z,11nm,1.4s,mb4.7
SONM Songino Array 61.13 50 P **P 23 36 18.2 +0.4**
comp=Z,8.8nm,0.9s,mb4.9,baz=284,slow=8.8,SNR=12
SONM LR LR 00 02 42.0
comp=Z,68nm,22.0s,MS3.8,baz=96,slow=36
SONM Songino Array 61.13 50 P **P 23 36 18.2 +0.4**
SONM pmax pmax
comp=Z,9.0nm,0.9s
SONM MLR MLR
comp=Z,68nm,22.0s
SONM Songino Array 61.13 50 P **P 23 36 18.2 +0.4**
comp=Z,68nm,22.0s
SCHQ Schefferville 61.46 319 P **P 23 36 20.8 +0.9**
comp=Z,4.2nm,0.5s,mb4.9,baz=45,slow=7.8,SNR=14
SCHQ LR LR 00 04 01.2
comp=Z,34nm,19.4s,MS3.5,baz=125,slow=37
SCHQ Schefferville 61.46 319 *e*P **P 23 36 20.5 +0.6**
ULN Ulaanbaatar 61.53 50 *e*P **P 23 36 19.5 -1.0**
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
ULN Ulaanbaatar 61.53 50 *e*P **P 23 36 19.5 -1.0**
comp=Z,9.7nm,0.8s,mb5.0
ULN Ulaanbaatar 61.53 50 *e*P **P 23 36 19.5 -1.0**
comp=Z,9.7nm,0.8s,mb5.0
BOD Bodaibo 61.69 37 *e*P **P 23 36 19.9 -1.5**
BOD pmax pmax
comp=Z,23nm,0.9s,mb5.3
BOD Bodaibo 61.69 37 *e*P **P 23 36 19.9 -1.5**
comp=Z,23nm,0.9s,mb5.3
TIXI Tiksi 61.74 20 *e*P **P 23 36 20.9 -0.6**
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
TIXI MLR MLR
comp=Z,116nm,19.0s,MS4.1
TIXI Tiksi 61.74 20 *e*P **P 23 36 21.2 -0.4**
comp=Z,3.1nm,0.5s,mb4.7
TIXI Tiksi 61.74 20 *e*P **P 23 36 21.2 -0.3**
comp=Z,3.1nm,0.5s,mb4.7
BOSA Boshof 63.75 177 P **P 23 36 37.1 +1.8**
comp=Z,4.0nm,0.5s,mb4.7,baz=345,slow=6.9,SNR=14
BOSA LR LR 00 03 39.7
comp=Z,157nm,20.7s,MS4.2,baz=100,slow=35
BOSA Boshof 63.75 177 *e*P **P 23 36 37.0 +1.7**
comp=Z,3.3nm,0.4s,mb4.7
BOSA Boshof 63.75 177 *e*P **P 23 36 37.0 +1.7**
comp=Z,3.3nm,0.4s,mb4.7
LZH Lanzhou 64.18 63 *e*P **P 23 36 41.0 +2.7**
LZH pP pP 23 36 54.3 +4.1
LZH sP sP 23 37 00.8 +5.9
LZH pmax pmax
comp=Z,78nm,1.2s,mb5.6
LZH pmax pmax
comp=Z,510nm,6.4s
CD2 Chengdu 66.48 68 P **P 23 36 54.8 +1.5**
CD2 pP pP 23 37 07.8 +2.5
CD2 sP sP 23 37 13.0 +3.1
CD2 PP PP 23 39 23.3 +3.5
CD2 S S 23 45 39.5 -1.5
CD2 sS sS 23 46 01.3 +0.4
CD2 SS SS 23 49 57.8 -0.2
CD2 pmax pmax
comp=Z,30nm,0.6s,mb5.5
CD2 pmax pmax
comp=Z,130nm,5.4s
CD2 LR LR
comp=N,140nm,5.4s
CD2 LR LR
comp=Z,230nm,6.5s
YAK Yakutsk 66.81 29 *e*P **P 23 36 52.4 -2.5**
YAK pmax pmax
comp=Z,20nm,0.8s,mb5.2
HHC Hu-ho-hao-te 67.43 55 *e*P **P 23 37 00.0 +0.8**
HHC pP pP 23 37 13.0 +1.8
HHC sP sP 23 37 18.3 +2.5
HHC PP PP 23 39 31.0 +3.2
HHC ScP 23 41 26.0
HHC S S 23 45 50.0 -2.2
HHC sS sS 23 46 11.8 -0.3
HHC ScS ScS 23 46 50.5 -3.6
HHC SS SS 23 50 12.0 -0.3
HHC pmax pmax
comp=Z,23nm,1.1s,mb5.1
HHC pmax pmax
comp=Z,65nm,5.6s
HHC LR LR
comp=N,110nm,15.5s,MS4.3
HHC LR LR
comp=E,110nm,15.3s,MS4.3
HHC LR LR
comp=Z,100nm,16.3s,MS4.1
RCBR Riachuelo 68.28 246 P **P 23 37 07.0 +2.1**
KMI Kunming 68.50 74 P **P 23 37 05.5 -0.7**
KMI pP pP 23 37 19.8 +1.6
KMI sP sP 23 37 25.0 +2.2
KMI PP PP 23 39 40.5 +3.0
KMI S S 23 46 03.3 -2.2
KMI sS sS 23 46 24.5 -0.9
KMI SS SS 23 50 29.0 -0.6
KMI pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KMI pmax pmax
comp=Z,55nm,4.6s
KMI LR LR
comp=N,69nm,14.9s,MS4.3
KMI LR LR
comp=E,120nm,15.6s,MS4.3
KMI LR LR
comp=Z,82nm,18.8s,MS4.0
CM31 Chiang Mai Arr 68.87 82 P **P 23 37 09.4 +0.9**
CMAR Chiang Mai Arr 68.87 82 P **P 23 37 08.8 +0.3**
comp=Z,1.6nm,0.4s,mb4.3,baz=298,slow=7.7,SNR=13
CMAR Chiang Mai Arr 68.87 82 P **P 23 37 08.8 +0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 68.87 82 P **P 23 37 08.8 +0.3**
comp=Z,2.0nm,0.4s,mb4.4
GYA Guiyang 70.89 71 P **P 23 37 21.0 +0.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BJI Beijing 70.90 54 P **P 23 37 20.3 -0.4**
BJI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
FCC Fort Churchill 72.34 331 *e*P **P 23 37 29.2 +0.2**
FCC Fort Churchill 72.34 331 *e*P **P 23 37 29.2 +0.2**
BILL Bilibino 73.38 13 *e*P **P 23 37 34.8 -0.2**
BILL *i* pP 23 37 46.1 -1.0
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.3
BILL MLR MLR
comp=Z,100nm,18.0s,MS4.1
BILL Bilibino 73.38 13 *e*P **P 23 37 33.4 -1.6**
comp=Z,3.8nm,0.8s,mb4.4
BILL Bilibino 73.38 13 *e*P **P 23 37 34.8 -0.2**
comp=Z,7.0nm,1.6s,mb4.3
CN2 Changchun 74.73 47 *e*P **P 23 37 44.5 +1.2**
INK Inuvik 75.01 351 *e*P **P 23 37 45.2 +0.7**
YKA Yellowknife Ar 76.46 341 P **P 23 37 53.3 +0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=37,slow=5.7,SNR=21
YKA PP PP 23 40 35.0 -9.3
comp=Z,0.9nm,0.8s,baz=25,slow=7.2,SNR=4.7
YKA LR LR 00 13 34.6
comp=Z,4.8nm,19.4s,MS2.8,baz=325,slow=37
YKA Yellowknife Ar 76.46 341 P **P 23 37 53.3 +0.4**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA MLR MLR
comp=Z,5.0nm,19.4s
YKA Yellowknife Ar 76.46 341 P **P 23 37 53.4 +0.5**
YKA PP PP 23 40 35.0 -9.3
YKA LR LR 00 13 34.5
NJ2 Nanjing 76.97 60 *e*P **P 23 37 59.0 +2.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
ACSO Alum Creek Sta 78.08 311 P **P 23 38 03.6 +1.2**
DAWY Dawson 79.79 352 *e*P **P 23 38 12.6 +1.3**
KSRS Korea Array 79.97 51 P **P 23 38 12.9 +0.1**
comp=Z,2.9nm,0.5s,mb4.5,baz=309,slow=4.4,SNR=13
KSRS LR LR 00 16 56.1
comp=Z,32nm,18.2s,MS3.7,baz=325,slow=38
KSRS Korea Array 79.97 51 P **P 23 38 12.9 +0.1**
KSRS pmax pmax
comp=Z,3.0nm,0.5s,mb4.5

KSRS MLR MLR
comp=Z,32nm,18.2s,MS3.7
PMR Palmer 83.08 356 P **P 23 38 29.3 +0.5**
WVT Waverly 83.61 310 P **P 23 38 32.8 +0.8**
PETK Petropavlovsk- 83.71 25 P **P 23 38 31.3 -0.9**
comp=Z,1.0nm,0.8s,mb4.0,baz=286,slow=5.4,SNR=3.1
PETK LR LR 00 17 49.7
comp=Z,51nm,19.0s,MS3.9,baz=129,slow=37
PETK Petropavlovsk- 83.71 25 P **P 23 38 31.3 -0.8**
PETK pmax pmax
comp=Z,1.0nm,0.9s,mb4.0
PETK MLR MLR
comp=Z,51nm,19.0s,MS3.9
PETK Petropavlovsk- 83.71 25 P **P 23 38 31.3 -0.8**
comp=Z,51nm,19.0s
SDV Santo Domingo 87.28 279 *e*P **P 23 38 51.4 +0.8**
WALA Waterton Lakes 87.32 333 P **P 23 38 51.4 +1.2**
ASAR Alice Springs 120.41 99 PKP PKPdf 23 44 55.5 +0.5
comp=Z,0.9nm,0.6s,baz=292,slow=1.4,SNR=7.4
ASAR Alice Springs 120.41 99 PKIKP PKPdf 23 44 55.6 +0.6
ASAR pmax pmax
comp=Z,1.0nm,0.6s
STKA Stephens Creek 130.04 104 PKP PKPdf 23 45 13.9 +0.7
comp=Z,1.2nm,0.7s,baz=346,slow=4.2,SNR=4.7

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*ISCJB **27** 23:33:03.0±0.4, 32°.68N±0°.04×105°.44E±0°.05, h10km, mb4.0/15, Error ellipse: s-maj=6.3km s-min=5.1km az=27.2*
*MOS **27** 23:33:03.9±1.0, 32°.50N×105°.32E, h23km, mb4.4/12, Error ellipse: s-maj=16.2km s-min=10.7km az=111.3*
*IDC **27** 23:33:03.0±1.0, 32°.50N×105°.24E, h0km, mb3.9/8, mb1 4.0/11, mb1mx3.8/29, mbtmp3.9/11, ML4.0/3, Error ellipse: s-maj=35.1km s-min=20.8km az=52.0*
*NEIC **27** 23:33:04.0±0.5, 32°.50N×105°.40E, h10km, mb4.2/3, Error ellipse: s-maj=11.0km s-min=9.8km az=74.0*
*BJI **27** 23:33:06.2, 32°.74N×105°.58E, h13km, mB4.6/2, mb4.2/2, ML3.8/15, Ms3.6/3, Ms7 3.4/4*
ISC 27 23:33:04.7±0.4, 32°.68N±0°.04×105°.55E±0°.04, h10km, n42, σ1°29/51, mb4.0/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.34**	**221**	Pn	**Pn**	**23 33 45.5**	**+2.3**
CD2				Pg	**Pg**	**23 33 48.5**	**-1.0**
CD2				Sg	**Sg**	**23 34 19.0**	**-0.8**
CD2				smax			
	comp=N,2μm,0.8s						
XAN	**Xi'an**	**3.13**	**63**	Pn	**Pn**	**23 33 54.5**	**+0.5**
XAN				Pg	**Pg**	**23 34 02.3**	**-2.3**
XAN				Sn	**Sn**	**23 34 33.0**	**+1.6**
XAN				Sg	**Sg**	**23 34 43.3**	**-1.9**
XAN				smax			
	comp=N,460nm,0.7s						
XAN				smax			
	comp=E,310nm,0.7s						
LZH	**Lanzhou**	**3.68**	**338**	*e*Pn	**Pn**	**23 34 03.8**	**+2.2**
LZH				Pg	**Pg**	**23 34 13.0**	**-2.2**
LZH				Sn	**Sn**	**23 34 45.8**	**+0.8**
LZH				Sg	**Sg**	**23 34 58.8**	**-4.0**
LZH				smax			
	comp=N,810nm,0.6s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,2μm,5.0s						
LZH				LR	LR		
	comp=Z,2μm,7.1s						
GYA	**Guiyang**	**6.28**	**171**	Pn	**Pn**	**23 34 39.5**	**+2.1**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,90nm,0.8s						
WHN	**Wuhan**	**7.80**	**104**	P	Px	23 35 09.0	
WHN				S	**Sn**	**23 36 23.5**	**-3.1**
WHN				LR	LR		
	comp=N,250nm,3.3s						
WHN				LR	LR		
	comp=E,400nm,2.9s						
WHN				LR	LR		
	comp=Z,460nm,3.6s						
GTA	**Gaotai**	**8.16**	**327**	*e*P	**Pn**	**23 35 04.0**	**+0.8**
GTA				pP		23 35 07.8	
GTA				sP		23 35 10.3	
GTA				S	**Sn**	**23 36 35.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,280nm,9.3s						
GTA				LR	LR		
	comp=E,170nm,7.2s						
GTA				LR	LR		
	comp=Z,270nm,9.0s						
SONM	**Songino Array 15.15 2**			Pn	**Pn**	**23 36 39.9**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=169,slow=16,SNR=4.1						
CMAR	**Chiang Mai Arr 15.36 204**			Pn	**Pn**	**23 36 37.0**	**-4.6**
	comp=Z,0.3nm,0.3s,baz=38,slow=14,SNR=2.7						
KSRS	**Korea Array 18.91 69**			P	**Pn**	**23 37 29.6**	**+3.5**
	comp=Z,0.3nm,0.3s,baz=257,slow=11,SNR=4.2						
MK31	**Makanchi Array 22.66 315**			*e*P	**P**	**23 38 05.2**	**-0.8**
MKAR	**Makanchi Array 22.66 315**			P	**P**	**23 38 07.0**	**+1.0**
	comp=Z,1.7nm,0.7s,mb3.6,baz=117,slow=13,SNR=5.0						
MKAR	**Makanchi Array 22.66 315**			P	**P**	**23 38 07.0**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov 26.77 320**			P	**P**	**23 38 45.3**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.5,baz=139,slow=8.6,SNR=4.7						
KURK	**Kurchatov 26.77 320**			P	**P**	**23 38 45.3**	**+0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
MJAR	**Matsushiro Arr 27.08 73**			P	**P**	**23 38 48.2**	**+0.7**
	comp=Z,3.4nm,0.9s,mb3.9,baz=316,slow=5.2,SNR=8.8						
MJAR				LR	LR	00 19 42.6	
	comp=Z,53nm,21.1s,baz=65,slow=37						
MJAR	**Matsushiro Arr 27.08 73**			P	**P**	**23 38 48.2**	**+0.7**
MJAR				LR	LR	00 19 42.6	
MJAR	**Matsushiro Arr 27.08 73**			P	**P**	**23 38 48.2**	**+0.7**
	comp=Z,53nm,21.1s						
KBL	**Kabul 30.36 284**			*e*P	**P**	**23 39 15.6**	**-1.1**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
KBL	**Kabul 30.36 284**			*e*P	**P**	**23 39 15.6**	**-1.2**
	comp=Z,1.6nm,0.4s,mb4.1						
YSS	**Yuzh-Sakhalins 31.61 52**			P	**P**	**23 39 28.7**	**+1.1**
ARU	**Arti 39.97 321**			*e*P	**P**	**23 40 38.5**	**-0.6**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ARU	**Arti 39.97 321**			*e*P	**P**	**23 40 38.5**	**-0.6**
	comp=Z,2.1nm,0.6s,mb4.0						
TIXI	**Tiksi 40.97 11**			*e*P	**P**	**23 40 44.5**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
JOF	**Joensuu 54.36 327**			*e*P	**P**	**23 42 30.3**	**-0.9**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
JOF	**Joensuu 54.36 327**			*e*p	**P**	**23 42 30.3**	**-0.9**
	comp=Z,4.1nm,0.8s,mb4.4						
KAF	**Kangasniemi 56.75 326**			*e*P	**P**	**23 42 47.4**	**-1.0**
KAF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KAF	**Kangasniemi 56.75 326**			*e*p	**P**	**23 42 47.4**	**-1.0**
	comp=Z,4.3nm,1.0s,mb4.4						
FINES	**FINESS Array B 56.95 326**			P	**P**	**23 42 49.9**	**0.0**
	comp=Z,2.5nm,0.5s,mb4.5,baz=91,slow=7.4,SNR=22						
FINES	**FINESS Array B 56.95 326**			P	**P**	**23 42 49.9**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	**Malin Array Be 57.21 313**			P	**P**	**23 42 51.6**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=65,slow=7.9,SNR=4.0						
AKASG	**Malin Array Be 57.21 313**			P	**P**	**23 42 51.6**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KWP	**Kalwaria Pacla 61.54 313**			*e*P	**P**	**23 43 22.4**	**+0.6**
KWP				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
KWP	**Kalwaria Pacla 61.54 313**			*e*P	**P**	**23 43 22.4**	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.5						
ASAR	**Alice Springs 62.23 151**			P	**P**	**23 43 26.6**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.1,baz=334,slow=7.1,SNR=7.6						
ASAR	**Alice Springs 62.23 151**			P	**P**	**23 43 26.7**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors 63.16 326**			P	**P**	**23 43 31.4**	**-1.1**
	comp=Z,1.0nm,0.5s,mb4.2,baz=118,slow=5.7,SNR=7.5						
HFS	**Hagfors 63.16 326**			P	**P**	**23 43 31.4**	**-1.0**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra 64.00 327**			P	**P**	**23 43 37.0**	**-1.0**
	comp=Z,0.1nm,0.6s,mb3.0,baz=74,slow=7.4						
NOA	**NORSAR Array B 64.00 327**			P	**P**	**23 43 37.3**	**-0.7**
	comp=Z,1.4nm,0.8s,mb4.0,baz=71,slow=6.7,SNR=6.2						
NOA	**NORSAR Array B 64.00 327**			P	**P**	**23 43 37.3**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AQU	**L'Aquila 70.29 308**			P	**P**	**23 44 17.7**	**-0.6**
YKA	**Yellowknife Ar 79.82 18**			P	**P**	**23 45 13.8**	**+0.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=332,slow=4.9,SNR=3.6						

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*IDC **27** 23:40:00.1±3.1, 3°.46N×84°.52W, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.8/20, mbtmp4.0/6, ML3.6/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/26, Error ellipse: s-maj=60.1km s-min=32.9km az=25.0*
*ISCJB **27** 23:40:02.5±2.1, 3°.5N±0°.1×83°.9W±0°.2, h37km±20km, mb4.2/5, MS3.3/3, Error ellipse: s-maj=30.7km s-min=10.1km az=147.8*
*NEIC **27** 23:40:03.9±0.9, 3°.41N×83°.99W, h35km, mb4.4/2, Error ellipse: s-maj=19.4km s-min=9.4km az=222.0*
ISC 27 23:40:04.9±1.8, 3°.5N±0°.1×83°.9W±0°.2, h43km±18km, n20, σ0°98/18, mb4.2/5, MS3.3/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**6.34**	**120**	*e*Pn	**Pn**	**23 41 34.7**	**-1.2**
	8.4nm,0.6s						
OTAV				*e*Sn	**Sn**	**23 42 43.5**	**-3.6**
JTS	**JuntasAbangare**	**6.84**	**351**	Pn	**Pn**	**23 41 42.8**	**0.0**
	15nm,0.3s,baz=180,slow=6.1,SNR=5.2						
JTS				Sn	**Sn**	**23 42 59.2**	**-0.3**
	baz=311,slow=19,SNR=3.5						
JTS				LR	LR	23 43 58.9	
	comp=Z,279nm,21.1s,baz=354,slow=35						
ROSC	**El Rosal**	**9.65**	**82**	Pn	**Pn**	**23 42 28.0**	**+6.6**
	0.4nm,0.3s,baz=72,slow=13,SNR=3.4						
ROSC				LR	LR	23 46 18.6	
	comp=Z,91nm,19.1s,baz=204,slow=37						
ROSC	**El Rosal**	**9.65**	**82**	*e*Pn	**Pn**	**23 42 21.6**	**+0.2**
ROSC				LR	LR	23 46 18.6	
TGUH	**Tegucigalpa,Un**	**11.02**	**343**	Pn	**Pn**	**23 42 41.6**	**+1.5**
	70nm,0.6s						
ATAH	**Atahualpa**	**11.78**	**152**	LR	LR	23 45 58.1	
	comp=Z,48nm,21.6s,baz=350,slow=29						
APG	**El Apazote**	**13.14**	**331**	Pn	**Pn**	**23 43 03.8**	**-5.3**
	baz=214,slow=9.5,SNR=1.4						
APG				LR	LR	23 47 27.0	
	comp=Z,207nm,19.3s,baz=274,slow=35						
SDV	**Santo Domingo**	**14.25**	**67**	Pn	**Pn**	**23 43 32.8**	**+8.6**
	0.3nm,0.3s,baz=258,slow=7.8,SNR=12						
SDV				LR	LR	23 48 27.0	
	comp=Z,143nm,20.1s,baz=339,slow=34						
SDV	**Santo Domingo**	**14.25**	**67**	*e*Pn	**Pn**	**23 43 25.9**	**+1.7**
SDV				LR	LR	23 48 27.0	
CMIG	**Matias Romero**	**17.29**	**322**	Pn	**Pn**	**23 44 02.5**	**-0.8**
	0.2nm,0.3s,baz=174,slow=12,SNR=2.3						
CMIG				LR	LR	23 49 22.7	
	comp=Z,141nm,19.2s,baz=12,slow=33						
PCRV	**Puerto La Cruz**	**20.25**	**70**	LR	LR	23 51 49.4	
	comp=Z,96nm,18.4s,MS3.2,baz=318,slow=34						
TXAR	**Lajitas Array**	**31.82**	**326**	LR	LR	23 58 40.9	
	comp=Z,36nm,19.6s,MS3.1,baz=5.0,slow=36						
LCO	**Las Campanas**	**34.71**	**159**	P	**P**	**23 46 52.3**	**+1.4**
CPUP	**Villa Florida**	**39.24**	**141**	LR	LR	00 03 23.4	
	comp=Z,82nm,19.4s,MS3.6,baz=118,slow=35						
PV04	**Paradox Valley**	**41.56**	**330**	P	**P**	**23 47 54.7**	**+6.2**
PDAR	**Pinedale Array**	**45.29**	**333**	P	**P**	**23 48 17.7**	**-0.8**
	0.6nm,0.9s,mb3.4,baz=129,slow=12,SNR=5.1						
HWUT	**Hardware Ranch**	**45.33**	**331**	*e*P	**P**	**23 48 18.3**	**-0.5**
	4.0nm,0.8s,mb4.3						
AGMN	**Agassiz Refuge**	**45.81**	**349**	*e*P	**P**	**23 48 22.0**	**-0.5**
	4.9nm,0.9s,mb4.4						
ULM	**Lac du Bonnet**	**47.69**	**350**	P	**P**	**23 48 36.8**	**-0.3**
	3.8nm,0.6s,mb4.6,baz=173,slow=11,SNR=4.7						
YKA	**Yellowknife Ar**	**63.13**	**345**	P	**P**	**23 50 29.0**	**+1.1**
	1.1nm,0.8s,mb4.0,baz=139,slow=5.9,SNR=9.7						

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*IDC **27** 23:59:14.9±3.5, 3°.73S×100°.87E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/22, mbtmp3.8/4, Error ellipse: s-maj=160.9km s-min=25.0km az=57.0*
*ISCJB **27** 23:59:15.1±0.6, 3°.94S±0°.08×101°.21E±0°.05, h33km, mb3.8/8, Error ellipse: s-maj=11.4km s-min=6.2km az=16.8*
*NEIC **27** 23:59:18.6±3.3, 3°.74S×100°.84E, h29km±24km, mb4.0/4, Error ellipse: s-maj=16.0km s-min=8.7km az=83.0*
*DJA **27** 23:59:21, 3°.71S×102°.13E, h131km, MLv3.7/3*
ISC 27 23:59:17.4±0.6, 3°.95S±0°.08×101°.28E±0°.05, h35km, n25, σ1°19/28, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.35**	**78**	P	**Pn**	**23 59 41.5**	**+1.8**
KSI				S	**Sn**	**23 59 57.3**	**+1.0**
MNAI	**Manna**	**1.73**	**104**	P	**Pn**	**23 59 45.8**	**+0.9**
MNAI				S	**Sn**	**00 00 03.5**	**-2.2**
PPSI	**Pulau Pagai**	**1.73**	**313**	P	**Sn**	**00 00 00.4**	**-5.3**
MDSI	**Maura Dua**	**2.94**	**101**	P	**Pn**	**00 00 01.4**	**-0.3**
MDSI				S	**Sn**	**00 00 26.8**	**-9.0**
LWLI	**Liwa**	**2.97**	**111**	P	**Pn**	**00 00 00.7**	**-1.3**
LWLI				S	**Sn**	**00 00 30.0**	**-6.5**
SDSI	**Sungai Dareh**	**3.00**	**3**	P	**Pn**	**00 00 07.0**	**+4.6**
PDSI	**Padang**	**3.12**	**345**	P	Px	00 00 13.0	
PDSI				S	**Sn**	**00 00 50.6**	**+10**
PPI	**Padang Panjang**	**3.58**	**346**	P	**Pn**	**00 00 14.0**	**+3.6**
CGJI	**Cibinong**	**5.13**	**121**	P	Px	00 00 27.7	
CGJI				S	**Sn**	**00 01 21.6**	**-8.3**
KULM	**Kulim**	**9.20**	**356**	*e*Pn	**Pn**	**00 01 25.7**	**-1.9**
COCO	**West Island**	**9.29**	**208**	Pn	**Pn**	**00 01 30.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**22.38**	**354**	P	**P**	**00 04 13.2**	**+0.6**
	1.5nm,0.5s,mb3.7,baz=181,slow=8.6,SNR=10						
PALK	**Palleke**	**23.36**	**298**	P	**P**	**00 04 20.5**	**-2.7**
ASAR	**Alice Springs**	**37.09**	**125**	P	**P**	**00 06 32.0**	**+7.4**
	0.3nm,0.3s,mb3.6,baz=295,slow=7.0,SNR=3.8						
STKA	**Stephens Creek**	**46.92**	**131**	*e*P	**P**	**00 07 50.0**	**+5.3**
	0.1nm,0.5s,mb3.0						
ULN	**Ulaanbaatar**	**51.84**	**5**	P	**P**	**00 08 22.5**	**+0.6**
TKM2	**Tokmak 2**	**52.11**	**336**	*e*P	**P**	**00 08 24.2**	**+0.1**
	1.3nm,0.5s,mb4.1						
MK31	**Makanchi Array**	**53.24**	**344**	*e*P	**P**	**00 08 32.2**	**-0.1**
MKAR	**Makanchi Array**	**53.24**	**344**	P	**P**	**00 08 33.1**	**+0.8**
	1.5nm,0.7s,mb4.0,baz=144,slow=8.4,SNR=16						
KURK	**Kurchatov**	**57.82**	**343**	*e*P	**P**	**00 09 04.3**	**-0.9**
	1.2nm,0.7s,mb4.0						
ZALV	**Zalesovo Beam**	**59.31**	**349**	P	**P**	**00 09 16.2**	**+0.7**
	0.8nm,0.5s,mb4.0,baz=177,slow=4.3,SNR=7.5						
CASY	**Casey**	**62.56**	**176**	P	**P**	**00 09 41.9**	**+4.5**
ABKAR	**Akbulak array**	**63.95**	**331**	*e*P	**P**	**00 09 46.3**	**-0.5**
	1.0nm,0.7s,mb4.0						
LSZ	**Lusaka**	**72.66**	**255**	P	**P**	**00 10 42.1**	**-0.1**
TXAR	**Lajitas Array**	**145.41**	**40**	PKPbc	PKPbc	00 18 53.2	+0.9
	0.9nm,0.7s,baz=329,slow=1.5,SNR=7.6						

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*ISCJB **28** 00:00:36.5±0.8, 31°.61N±0°.04×104°.24E±0°.06, h5km±6km, mb3.9/8, Error ellipse: s-maj=9.5km s-min=5.2km az=36.6*
*IDC **28** 00:00:36.2±3.7, 31°.69N×104°.62E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/26, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=107.6km s-min=41.6km az=89.0*
*NEIC **28** 00:00:38.3±1.1, 31°.71N×104°.50E, h10km, mb3.5/2, Error ellipse: s-maj=26.4km s-min=9.5km az=91.0*
*BJI **28** 00:00:40.3, 31°.53N×104°.14E, h10km, ML3.2/10, Ms3.1/1, Ms7 3.1/1*
ISC 28 00:00:39.3±0.8, 31°.53N±0°.05×104°.21E±0°.06, h13km±5km, n20, σ0°98/25, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.73**	**212**	Pg	**Pg**	**00 00 53.0**	**-0.4**
CD2				Sg	**Sg**	**00 01 03.0**	**0.0**
CD2				smax			
	comp=N,880nm,0.6s						
LZH	**Lanzhou**	**4.56**	**356**	*e*Pg	**Pg**	**00 02 08.5**	**+1.9**
LZH				Sg	**Sg**	**00 03 05.8**	**+0.2**
LZH				smax			
	comp=N,38nm,0.5s						
LZH				smax			
	comp=E,62nm,0.7s						
XAN	**Xi'an 4.69 56**			Pn	**Pn**	**00 01 51.0**	**+1.2**
XAN				Pg	**Pg**	**00 02 08.0**	**-1.2**
XAN				Sn	**Sn**	**00 02 45.5**	**+1.4**
XAN				Sg	**Sg**	**00 03 09.3**	**-0.7**
XAN				smax			
	comp=N,88nm,0.6s						
XAN				smax			
	comp=E,36nm,0.8s						
CMAR	**Chiang Mai Arr 13.86 201**			Pn	**Pn**	**00 03 58.5**	**+3.0**
	comp=E,0.2nm,0.3s,baz=12,slow=9.6,SNR=3.2						
MK31	**Makanchi Array 22.72 318**			*e*P	**P**	**00 05 40.3**	**-0.5**
MKAR	**Makanchi Array 22.72 318**			P	**P**	**00 05 40.8**	**0.0**
	comp=E,1.0nm,0.7s,mb3.3,baz=117,slow=13,SNR=10.0						
UCH	**Uchtor 25.92 303**			*e*P	**P**	**00 06 11.9**	**+0.7**
	comp=E,1.0nm,0.6s,mb3.5						
AAK	**Ala-Archa 26.04 304**			P	**P**	**00 06 12.9**	**+0.7**
ZALV	**Zalesovo Beam 26.38 334**			P	**P**	**00 06 15.0**	**-0.1**
	comp=E,1.1nm,0.6s,mb3.6,baz=137,slow=9.7,SNR=6.9						
ZALV	**Zalesovo Beam 26.38 334**			P	**P**	**00 06 15.0**	**-0.1**
KURK	**Kurchatov 26.96 323**			P	**P**	**00 06 20.1**	**-0.3**
	comp=E,1.1nm,0.7s,mb3.4,baz=132,slow=8.9,SNR=3.9						
KURK	**Kurchatov 26.96 323**			*e*P	**P**	**00 06 20.0**	**-0.4**
	comp=E,0.6nm,0.7s,mb3.2						
KBL	**Kabul 29.55 285**			P	**P**	**00 06 45.3**	**+1.7**
	comp=E,6.2nm,0.5s,mb4.6						
BRVK	**Borovoye 32.59 321**			*e*P	**P**	**00 07 09.4**	**-0.8**
ARU	**Arti 40.15 322**			*e*P	**P**	**00 08 14.4**	**-0.4**
KEV	**Kevo 56.38 336**			*e*P	**P**	**00 10 18.8**	**-1.0**
ARCES	**ARCESS Array B 56.91 336**			P	**P**	**00 10 23.0**	**-0.6**
	comp=E,2.6nm,0.8s,mb4.3,baz=83,slow=7.5,SNR=3.0						
FINES	**FINESS Array B 57.27 326**			P	**P**	**00 10 24.9**	**-1.3**
	comp=E,3.2nm,1.0s,mb4.3,baz=156,slow=9.6,SNR=2.6						
HFS	**Hagfors 63.47 326**			P	**P**	**00 11 07.7**	**-0.9**
	comp=E,0.6nm,0.6s,mb3.9,baz=98,slow=8.9,SNR=3.5						
WLF	**Walferdange 71.47 317**			P	**P**	**00 11 59.0**	**-0.5**

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*ISCJB **28** 00:03:45.9±0.6, 51°.46N±0°.03×16°.13E±0°.03, h0km, Error ellipse: s-maj=4.9km s-min=2.9km az=14.1*
*IPEC **28** 00:03:47.6±0.3, 51°.49N×16°.27E, h2km±1km, ML1.7/3, Error ellipse: s-maj=2.2km s-min=0.7km az=31.0*
*CSEM **28** 00:03:47.3±0.4, 51°.47N×16°.14E, h2km, ML2.9/8, Error ellipse: s-maj=6.5km s-min=4.7km az=28.0*
*WAR **28** 00:03:48.7, 51°.47N×16°.15E, ML2.4, Mining Induced*
*PRU **28** 00:03:49.0, 51°.42N×16°.13E, h0km*
ISC 28 00:03:47.4±0.6, 51°.47N±0°.03×16°.14E±0°.03, h0km, n33, σ0°91/63, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**171**	*e*Pg	**Pg**	**00 04 00.4**	**+0.8**
KSP				*e*Sg	**Sg**	**00 04 08.3**	**+0.5**
KSP	**Ksiaz**	**0.64**	**171**	*e*Pg	**Pg**	**00 04 00.2**	**+0.6**
KSP				*e*Sg	**Sg**	**00 04 07.1**	**-0.7**
UPC	**Upice**	**0.97**	**185**	*e*PG	**Pg**	**00 04 06.4**	**+0.5**
UPC	**Upice**	**0.97**	**185**	Pg	**Pg**	**00 04 06.4**	**+0.5**
DPC	**Dobruska-Polom**	**1.13**	**174**	*e*PG	**Pg**	**00 04 09.2**	**+0.2**
DPC				*e*SG	**Sg**	**00 04 23.9**	**+0.3**
	comp=Z,11nm,0.3s						
DPC	**Dobruska-Polom**	**1.13**	**174**	Pg	**Pg**	**00 04 09.2**	**+0.2**
DPC				Sg	**Sg**	**00 04 23.9**	**+0.3**
	comp=Z,11nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**227**	*e*PG	**Pg**	**00 04 13.9**	**+0.3**
PVCC				*e*SG	**Sg**	**00 04 33.0**	**+1.7**
	comp=Z,44nm,0.2s						
PVCC	**Panska Ves**	**1.37**	**227**	Pg	**Pg**	**00 04 13.9**	**+0.3**
PVCC				Sg	**Sg**	**00 04 33.0**	**+1.7**
	comp=Z,44nm,0.2s						
PRU	**Pruhonice**	**1.80**	**215**	*e*PN	**Pn**	**00 04 19.8**	**+0.2**
PRU				*e*PG	**Pg**	**00 04 21.5**	**-0.3**
PRU				*e*SG	**Sg**	**00 04 45.5**	**+0.4**
	comp=Z,12nm,0.6s						
PRU	**Pruhonice**	**1.80**	**215**	Pn	**Pn**	**00 04 19.8**	**+0.2**
PRU	**Pruhonice**	**1.80**	**215**	Pg	**Pg**	**00 04 21.5**	**-0.3**
PRU				Sg	**Sg**	**00 04 45.5**	**+0.4**
	comp=Z,12nm,0.6s						
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**00 04 21.1**	**-0.1**
MORC				*e*Sg	**Sg**	**00 04 47.4**	**-1.5**
	comp=Z,4.8nm,0.3s						
CLL	**Collm**	**1.97**	**266**	*e*(Pn)	**Pn**	**00 04 22.0**	**0.0**
CLL				*i* Pg	**Pg**	**00 04 24.4**	**-0.7**
CLL				*e*		00 04 28.0	
CLL				*e*Sg	**Sg**	**00 04 51.0**	**+0.3**
	comp=Z,11nm,0.7s						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**00 04 23.8**	**+1.8**
CLL				*e*Sg	**Sg**	**00 04 51.0**	**+0.3**
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*PN	**Pn**	**00 04 22.8**	**-0.6**
OKC				*e*PG	**Pg**	**00 04 26.5**	**-0.7**
OKC	**Ostrava-Krasne**	**2.08**	**141**	Pn	**Pn**	**00 04 22.8**	**-0.6**
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**00 04 25.4**	**+0.5**
VRAC				*e*Sg	**Sg**	**00 04 56.1**	**-1.4**
	comp=Z,5.1nm,0.3s						
TREC	**Trest**	**2.22**	**191**	*e*PG	**Pg**	**00 04 29.1**	**-0.8**
TREC	**Trest**	**2.22**	**191**	Pg	**Pg**	**00 04 29.1**	**-0.8**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**00 04 28.7**	**+0.6**
KRUC				*e*Sg	**Sg**	**00 05 04.1**	**-0.9**
	comp=Z,3.2nm,0.3s						
OJC	**Ojcow**	**2.64**	**117**	*e*Pg	**Pg**	**00 04 37.6**	**-0.3**
OJC				*e*Sg	**Sg**	**00 05 12.6**	**+0.5**
NKC	**Novy Kostel**	**2.65**	**244**	*e*PN	**Pn**	**00 04 30.9**	**-0.4**
NKC				*e*PG	**Pg**	**00 04 37.1**	**-1.0**
NKC				*e*SG	**Sg**	**00 05 12.8**	**+0.5**
	comp=Z,10nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**244**	Pn	**

FG6		**1.40**	**319**	*e*P	Pn	00 14 04.3 +0.4
FG6				*e*S	Sn	00 14 23.6 +2.2
MRL	**Marmol**	**1.59**	**9**	⇓*e*P	Pn	00 14 07.4 +1.1
VSM	**San Miguel**	**1.62**	**92**	*e*P	Pn	00 14 07.0 +0.2
BLLM	**Bellamira**	**1.66**	**91**	*e*P	Pn	00 14 07.0 -0.3
BLLM				*e*S	Sn	00 14 29.5 +1.9
TP2	**Tecpan 2**	**1.66**	**321**	*e*P	Pn	00 14 08.7 +1.4
TP2				*e*S	Sn	00 14 32.7 +5.1
CAHU	**Cacacuatique**	**1.71**	**80**	*e*P	Pn	00 14 07.7 -0.2
JAT	**Jato**	**1.84**	**297**	*e*P	Pn	00 14 10.8 +1.0
CNCH	**Conchagua**	**2.06**	**96**	*e*P	Pn	00 14 12.7 -0.1
CNCH				*e*S	Sn	00 14 39.5 +2.1

*ISK **28** 00:19:20.8, 40°.54N×32°.99E, h5km, MD3.2*
*ISCJB **28** 00:19:21.1±0.7, 40°.55N±0°.03×32°.98E±0°.04, h3km±6km, Error ellipse: s-maj=5.4km s-min=4.2km az=34.2*
*DDA **28** 00:19:21.6, 40°.53N×33°.01E, h7km±2km, Md2.9*
*CSEM **28** 00:19:21.2±0.1, 40°.54N×32°.99E, h2km, MD3.2, Error ellipse: s-maj=1.7km s-min=1.3km az=125.0*

ISC 28 00:19:21.8±0.6, 40°.55N±0°.03×32°.99E±0°.04, h7km±5km, n36, σ0s62/50, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.34**	**99**	⇑*i*P*g*	**Pg**	**00 19 28.2**	**-0.1**
ELDT				*i* S*g*	**Sg**	**00 19 33.6**	**+0.7**
CANT	**Cankiri**	**0.48**	**82**	*e*PG	**Pg**	**00 19 30.8**	**-0.3**
CANT				*e*SG	**Sg**	**00 19 37.5**	**+0.1**
LOD	**Lodumlu**	**0.68**	**195**	*e*PG	**Pg**	**00 19 34.3**	**-0.6**
LOD				*e*SG	**Sg**	**00 19 43.6**	**0.0**
LOD	**Lodumlu**	**0.68**	**195**	*e*P*g*	**Pg**	**00 19 34.3**	**-0.6**
LOD				*e*S*g*	**Sg**	**00 19 43.6**	**-0.1**
SAFT	**Safranbolu**	**0.73**	**342**	*e*PG	**Pg**	**00 19 35.0**	**-0.9**
SAFT	**Safranbolu**	**0.73**	**342**	*e*P*g*	**Pg**	**00 19 35.0**	**-0.9**
ILGA	**Ilgaz**	**0.75**	**47**	*e*P	**Pg**	**00 19 35.9**	**-0.3**
ILGA				*e*S	**Sg**	**00 19 47.2**	**+1.2**
ILGA	**Ilgaz**	**0.75**	**47**	*e*P	**Pg**	**00 19 35.9**	**-0.3**
ILGA				*e*S	**Sg**	**00 19 47.2**	**+1.3**
TOS	**Tosya**	**0.92**	**58**	*e*PG	**Pg**	**00 19 38.5**	**-1.0**
TOS	**Tosya**	**0.92**	**58**	*e*P*g*	**Pg**	**00 19 38.5**	**-1.1**
BBAL	**Bala**	**1.01**	**174**	*e*P	**Pg**	**00 19 40.5**	**-0.6**
BBAL				*e*S	**Sg**	**00 19 55.3**	**+1.1**
BBAL	**Bala**	**1.01**	**174**	*e*P	**Pg**	**00 19 40.5**	**-0.6**
BBAL				*e*S	**Sg**	**00 19 55.3**	**+1.1**
BALT	**Daday**	**1.03**	**17**	*e*P	**Pg**	**00 19 41.7**	**0.0**
BALT				*e*S	**Sg**	**00 19 55.4**	**+0.3**
BALT	**Daday**	**1.03**	**17**	*e*P	**Pg**	**00 19 41.7**	**+0.1**
BALT				*e*S	**Sg**	**00 19 55.4**	**+0.3**
CORM	**Corum**	**1.30**	**106**	*e*PN	**Pn**	**00 19 46.6**	**+0.2**
CORM	**Corum**	**1.30**	**106**	*e*Pn	**Pn**	**00 19 46.6**	**+0.2**
MDU	**Mudurnu**	**1.36**	**267**	*e*PN	**Pn**	**00 19 47.2**	**+0.1**
MDU	**Mudurnu**	**1.36**	**267**	*e*Pn	**Pn**	**00 19 47.2**	**+0.1**
CTKT	**Corum**	**1.37**	**86**	*e*P	**Pn**	**00 19 47.2**	**-0.1**
CTKT				*e*S	**Sb**	**00 20 04.5**	**-1.0**
CTKT	**Corum**	**1.37**	**86**	*e*P	**Pn**	**00 19 47.2**	**-0.1**
CTKT				*e*S	**Sb**	**00 20 04.5**	**-1.0**
CDAG	**Cicekdag**	**1.40**	**131**	*e*P	**Pn**	**00 19 47.4**	**-0.4**
CDAG				*e*S	**Sb**	**00 20 05.3**	**-1.1**
CDAG	**Cicekdag**	**1.40**	**131**	*e*P	**Pn**	**00 19 47.4**	**-0.4**
CDAG				*e*S	**Sb**	**00 20 05.3**	**-1.1**
BYBT	**Boyabat**	**1.63**	**55**	*e*PN	**Pn**	**00 19 51.2**	**+0.3**
BYBT	**Boyabat**	**1.63**	**55**	*e*Pn	**Pn**	**00 19 51.2**	**+0.3**
GULT	**Gulveren**	**1.89**	**267**	*e*PN	**Pn**	**00 19 54.5**	**0.0**
GULT	**Gulveren**	**1.89**	**267**	*e*Pn	**Pn**	**00 19 54.5**	**0.0**
ESKT	**Eskisehir**	**1.94**	**239**	*e*PN	**Pn**	**00 19 55.7**	**+0.6**
ESKT	**Eskisehir**	**1.94**	**239**	*e*Pn	**Pn**	**00 19 55.7**	**+0.6**
YOZ	**Yozgat**	**2.00**	**116**	*e*PN	**Pn**	**00 19 56.9**	**+0.9**
YOZ	**Yozgat**	**2.00**	**116**	*e*Pn	**Pn**	**00 19 56.9**	**+0.9**
DIKM	**Dikmen**	**2.04**	**56**	*e*PN	**Pn**	**00 19 56.5**	**0.0**
DIKM	**Dikmen**	**2.04**	**56**	*e*Pn	**Pn**	**00 19 56.5**	**0.0**
SULT	**Sultanhani-AKS**	**2.38**	**170**	*e*PN	**Pn**	**00 20 01.3**	**+0.2**
SULT	**Sultanhani-AKS**	**2.38**	**170**	*e*Pn	**Pn**	**00 20 01.3**	**+0.1**
SVSK	**Karacayir**	**3.13**	**100**	*e*PN	**Pn**	**00 20 12.2**	**+0.7**
SVSK	**Karacayir**	**3.13**	**100**	*e*Pn	**Pn**	**00 20 12.2**	**+0.7**

*ISCJB **28** 01:07:22.2±0.4, 41°.55N±0°.04×142°.08E±0°.05, h70km±4km, mb3.9/12, Error ellipse: s-maj=8.2km s-min=5.0km az=44.6*
*JMA **28** 01:07:22.6±0.1, 41°.55N×142°.07E, h66km±3km, M3.4 Broadband fault plane solution: P waves. NP1: φs160.00000°, δ16.00000°, λ42.00000°. NP2:φs29.00000°, δ79.00000°, λ102.00000°. Principal axes: T Plg54.0000°, Azm314.0000°; N Plg12.0000°, Azm207.0000°; P Plg33.0000°, Azm109.0000°;*
JMA Felt I J1.
*NEIC **28** 01:07:24.1±0.9, 41°.89N×142°.03E, h54km±16km, mb4.2/5 Error ellipse: s-maj=23.2km s-min=9.8km az=149.0*
*IDC **28** 01:07:26.9±2.3, 41°.77N×141°.99E, h84km±15km, mb3.7/10, mb1 3.6/13, mb1mx3.5/28, mbtmp3.6/13, Error ellipse: s-maj=30.7km s-min=14.3km az=127.0*

ISC 28 01:07:23.1±0.5, 41°.54N±0°.04×142°.09E±0°.05, h62km±4km, n33, σ0s47/41, mb4.0/12, 2C-2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.80**	**259**	⇓P	**Pn**	**01 07 38.4**	**-0.2**
JOT				S	**Sn**	**01 07 50.5**	**+0.5**
JKB	**Kayabe**	**0.86**	**294**	⇓P	**Pn**	**01 07 38.8**	**-0.6**
JKB				S	**Sn**	**01 07 51.3**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.89**	**34**	P	**Pn**	**01 07 39.1**	**-0.6**
JNBK				*e*S	**Sn**	**01 07 52.5**	**+0.5**
ERM	**Erimo**	**0.93**	**59**	*e*Pn	**Pn**	**01 07 39.7**	**-0.6**
ERM				*e*Sn	**Sn**	**01 07 47.6**	**-5.3**
JEM	**Erimo**	**0.93**	**59**	⇑P	**Pn**	**01 07 40.0**	**-0.2**
JEM				*e*S	**Sn**	**01 07 52.7**	**-0.2**
JANG	**Nango**	**1.24**	**201**	⇑P	**Pn**	**01 07 44.3**	**-0.1**
JANG				*e*S	**Sn**	**01 08 00.0**	**-0.2**
JEW	**Eniwo**	**1.38**	**340**	P	**Pn**	**01 07 46.3**	**+0.1**
JEW				*e*S	**Sn**	**01 08 03.6**	**0.0**
JCH	**Churui**	**1.43**	**41**	P	**Pn**	**01 07 47.4**	**+0.5**
JFR	**Furan**	**1.67**	**13**	P	**Pn**	**01 07 50.0**	**0.0**
JOSM	**Okushiri--Mats**	**2.03**	**286**	P	**Pn**	**01 07 54.4**	**-0.5**
JAR	**Ashorobuto**	**2.15**	**35**	P	**Pn**	**01 07 56.8**	**+0.2**
JAR				*e*S	**Sn**	**01 08 22.2**	**+0.1**
JOM	**Ohasama**	**2.15**	**197**	P	**Pn**	**01 07 57.4**	**+0.8**
ASAJ	**Asahikawa**	**2.60**	**8**	P	**Pn**	**01 08 03.5**	**+0.8**
	7.8nm,0.3s,baz=233,slow=7.1,SNR=14						
ASAJ				S	**Sn**	**01 08 33.0**	**-0.1**
	5.5nm,0.3s,baz=342,slow=25,SNR=5.9						
MJAR	**Matsushiro Arr**	**5.83**	**212**	P	**Pn**	**01 08 52.1**	**+5.1**
	0.5nm,0.3s,baz=14,slow=16,SNR=4.5						
KSRS	**Korea Array**	**11.68**	**254**	P	**Pn**	**01 10 12.6**	**+5.8**
	0.3nm,0.3s,baz=65,slow=14,SNR=4.7						
SONM	**Songino Array**	**25.98**	**296**	P	**P**	**01 12 50.6**	**+0.9**
	1.1nm,0.4s,mb3.7,baz=72,slow=9.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**39.40**	**308**	P	**P**	**01 14 45.7**	**-0.7**
	0.6nm,0.3s,mb3.8,baz=79,slow=5.2,SNR=5.2						
ZALV				PcP	PcP	01 16 54.2	+0.7
	0.4nm,0.4s,baz=44,slow=4.8,SNR=2.7						
ZALV	**Zalesovo Beam**	**39.40**	**308**	P	**P**	**01 14 45.7**	**-0.7**
ZALV				PcP	PcP	01 16 54.2	+0.7
MK31	**Makanchi Array**	**42.31**	**298**	*e*P	**P**	**01 15 10.9**	**+0.3**
MKAR	**Makanchi Array**	**42.31**	**298**	P	**P**	**01 15 10.0**	**-0.6**
	1.1nm,0.8s,mb3.5,baz=84,slow=6.5,SNR=3.2						
KURK	**Kurchatov**	**43.69**	**305**	P	**P**	**01 15 22.0**	**+0.4**
	1.7nm,0.5s,mb4.0,baz=78,slow=8.6,SNR=8.9						
KURK	**Kurchatov**	**43.69**	**305**	*e*P	**P**	**01 15 21.2**	**-0.4**
	2.4nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**48.02**	**310**	P	**P**	**01 15 56.3**	**+0.7**
	1.0nm,0.4s,mb4.2,baz=73,slow=9.4,SNR=9.0						
TKM2	**Tokmak 2**	**48.07**	**295**	*e*P	**P**	**01 15 57.0**	**+0.7**
	2.6nm,0.5s,mb4.5						
INK	**Inuvik**	**50.17**	**29**	P	**P**	**01 16 12.4**	**+0.6**
	0.8nm,0.5s,mb4.0,baz=256,slow=9.5,SNR=7.3						
INK	**Inuvik**	**50.17**	**29**	*e*P	**P**	**01 16 12.1**	**+0.2**
	1.0nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**55.51**	**308**	*e*P	**P**	**01 16 51.4**	**-0.1**
	1.5nm,0.7s,mb4.1						
RES	**Resolute Bay**	**58.12**	**15**	P	**P**	**01 17 09.6**	**0.0**
	1.9nm,0.7s,mb4.2,baz=310,slow=5.7,SNR=13						
RES	**Resolute Bay**	**58.12**	**15**	*e*P	**P**	**01 17 09.2**	**-0.4**
	1.8nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**65.09**	**332**	P	**P**	**01 17 56.4**	**-0.3**
	1.5nm,0.7s,mb4.2,baz=46,slow=8.8,SNR=8.7						
NOA	**NORSAR Array B**	**70.24**	**337**	P	**P**	**01 18 28.7**	**-0.4**
	0.5nm,0.6s,mb3.6,baz=37,slow=6.3,SNR=3.2						
AKASG	**Malin Array Be**	**71.07**	**322**	P	**P**	**01 18 33.7**	**-0.6**
	0.7nm,0.5s,mb3.9,baz=46,slow=6.8,SNR=4.4						

TOA0	**Torodi Ar. Sit**	**114.46**	**317**	*e*PKP	PKiKP	01 25 57.7 +1.3

*NEIC **28** 01:10:10.5, 18°.42N×100°.39W, h17km, MD3.7(MEX), After MEX.*

MEX 28 01:10:10.5±0.6, 18°.42N×100°.39W, h17km±52km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.84**	**92**	*i* P	Pb	01 10 24.4	-2.3
PLIG				*i* S	Sb	01 10 33.8	-3.9
PLIG	**Platanillo**	**0.84**	**92**	*i* P	Pb	01 10 24.4	-2.3
PLIG				*i* S	Sb	01 10 33.8	-3.9
ZIIG	**Zihuatanejo**	**1.30**	**232**	*i* P	Pn	01 10 30.2	-3.7
ZIIG				*i* S	Sn	01 10 45.8	-5.1
ZIIG	**Zihuatanejo**	**1.30**	**232**	*i* P	Pn	01 10 30.2	-3.7
ZIIG				*i* S	Sn	01 10 45.8	-5.1
MZVM		**1.34**	**55**	*e*P	Pn	01 10 30.7	-3.7
MZVM				*i* S	Sn	01 10 46.0	-5.7
CAIG	**El Cayaco**	**1.37**	**175**	*i* P	Pn	01 10 31.8	-3.1
CAIG				*i* S	Sn	01 10 47.5	-5.1
CAIG	**El Cayaco**	**1.37**	**175**	*i* P	Pn	01 10 31.8	-3.1
CAIG				*i* S	Sn	01 10 47.5	-5.1
PBVM	**Pinon**	**1.60**	**50**	*e*P	Pn	01 10 35.0	-2.9
PBVM				*i* S	Sn	01 10 54.0	-4.1
PBVM	**Pinon**	**1.60**	**50**	*e*P	Pn	01 10 35.0	-2.9
PBVM				*i* S	Sn	01 10 54.0	-4.1
ACX	**Acapulco**	**1.61**	**164**	*i* P	Pn	01 10 35.1	-3.0
ACX				*i* S	Sn	01 10 54.5	-4.1
ACX	**Acapulco**	**1.61**	**164**	*i* P	Pn	01 10 35.1	-3.0
ACX				*i* S	Sn	01 10 54.5	-4.1
IIO	**Organos**	**1.96**	**53**	*e*P	Pn	01 10 40.1	-2.9
IIO				*i* S	Sn	01 11 04.2	-2.9
IIO	**Organos**	**1.96**	**53**	*e*P	Pn	01 10 40.1	-2.9
IIO				*i* S	Sn	01 11 04.2	-2.9
PNIG	**Pinotepa**	**2.96**	**133**	*e*P	Pn	01 10 54.0	-2.6
PNIG				*i* S	Sn	01 11 28.1	-3.6
PNIG	**Pinotepa**	**2.96**	**133**	*e*P	Pn	01 10 54.0	-2.6
PNIG				*i* S	Sn	01 11 28.1	-3.6

CASC 28 01:40:18.3±2.0, 8°.72N×83°.14W, h3km, MD3.6, 4C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.07**	**203**	⇑*i*P	Pg	01 40 21.7	+1.9
BRU2	**Volcan**	**0.45**	**81**	⇓*i*P	Pg	01 40 28.7	+1.8
BRU2				*e*S	Sg	01 40 36.8	+4.1
TBS2		**0.48**	**81**	⇑*i*P	Pg	01 40 38.0	+10
TBS2				*e*S	Sg	01 40 46.5	+13
BAR1		**0.55**	**342**	⇑*e*P	Pg	01 40 29.7	+0.9
BAR1				*e*S	Sg	01 40 37.5	+1.6
CNI	**Changuinola**	**0.93**	**42**	⇑*i*P	Pg	01 40 37.0	+0.9
BUS	**Buena Vista**	**1.03**	**324**	*e*P	Pg	01 40 37.4	-0.7
QCR	**Quepos**	**1.23**	**305**	*e*P	Pg	01 40 40.8	-1.1
URSC	**Urasca**	**1.27**	**330**	*e*P	Pg	01 40 41.1	-1.6
LAJ	**Bijagual**	**1.49**	**320**	*e*P	Pn	01 40 50.4	+4.4
PRS1	**Puriscal**	**1.71**	**317**	*e*P	Pn	01 40 47.9	-1.0
PRS1				*e*S	Sn	01 41 11.6	+0.3
CGA2	**Cerro Gallo 2**	**1.84**	**315**	*e*P	Pn	01 40 50.9	+0.2

*NEIC **28** 02:23:33.6±2.2, 23°.45N×122°.03E, h10km, Error ellipse: s-maj=24.0km s-min=10.5km az=114.0*
*ISCJB **28** 02:23:34.3±0.6, 23°.47N±0°.02×122°.03E±0°.02, h9km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=38.5*
*JMA **28** 02:23:35.7±0.3, 23°.41N×122°.07E, h21km, M3.1*
*TAP **28** 02:23:36.1, 23°.50N×121°.97E, h18km, ML3.7, C*

ISC 28 02:23:34.7±0.5, 23°.48N±0°.02×122°.01E±0°.02, h10km±2km, n60, σ0s75/110, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.48**	**298**	*e*P	**Pg**	**02 23 45.9**	**+1.8**
	baz=298						
TEGC				*e*S	**Sg**	**02 23 52.8**	**+2.3**
	baz=298						
HWA	**Hwalien**	**0.62**	**323**	*e*P	**Pg**	**02 23 47.2**	**+0.6**
	baz=325						
HWA				S	**Sg**	**02 23 56.1**	**+1.4**
	baz=325						
EHY	**Hungye**	**0.63**	**272**	*i* P	**Pg**	**02 23 47.5**	**+0.7**
	baz=259						
EHY				S	**Sg**	**02 23 56.2**	**+1.1**
	baz=259						
YULB	**Yu-li**	**0.66**	**262**	*e*P*g*	**Pg**	**02 23 47.5**	**+0.1**
YULB				*e*S*g*	**Sg**	**02 23 56.4**	**+0.4**
TWF1	**Yuli**	**0.67**	**259**	*i* P	**Pg**	**02 23 48.1**	**+0.6**
	baz=245						
TWF1				*e*S	**Sg**	**02 23 57.8**	**+1.6**
	baz=245						
CHKT	**Chenkung**	**0.70**	**237**	*e*P	**Pg**	**02 23 48.1**	**-0.1**
	baz=222						
CHKT				*e*S	**Sg**	**02 23 57.3**	**-0.1**
	baz=222						
TWD	**Chiawan**	**0.70**	**328**	P	**Pg**	**02 23 48.4**	**+0.1**
	baz=330						
TWD				*e*S	**Sg**	**02 23 57.8**	**+0.3**
	baz=330						
NACB	**Ninganchiao**	**0.79**	**331**	*e*P*g*	**Pg**	**02 23 49.2**	**-0.6**
NACB				*e*S*g*	**Sg**	**02 24 00.0**	**-0.1**
WHF	**Hehuan Shan**	**0.95**	**314**	*i* P	**Pg**	**02 23 52.5**	**-0.4**
	baz=315						
WHF				S	**Sg**	**02 24 04.4**	**-0.9**
	baz=315						
ELDTW	**Lidau**	**0.95**	**252**	*e*P	**Pg**	**02 23 52.2**	**-0.9**
	baz=238						
ELDTW				*e*S	**Sg**	**02 24 04.0**	**-1.5**
	baz=238						
YUS	**Yu-Shan**	**0.97**	**271**	*i* P	**Pg**	**02 23 53.5**	**+0.2**
	baz=269						
YUS				*e*S	**Sg**	**02 24 06.3**	**+0.4**
	baz=269						
ENA	**Nanau**	**0.97**	**346**	*e*P	**Pg**	**02 23 53.2**	**-0.2**
	baz=347						
SSLB	**Suanglung**	**1.01**	**288**	*e*P*g*	**Pg**	**02 23 53.3**	**-0.8**
SSLB				*e*S*g*	**Sg**	**02 24 05.8**	**-1.5**
TTN	**Taitung**	**1.07**	**228**	*e*P	**Pg**	**02 23 55.4**	**+0.1**
	baz=225						
TTN				*e*S	**Sg**	**02 24 08.6**	**-0.6**
	baz=225						
TWT	**Tachien**	**1.08**	**315**	P	**Pg**	**02 23 55.3**	**-0.2**
	baz=315						
TWT				*e*S	**Sg**	**02 24 09.1**	**-0.4**
	baz=315						
TWG	**Pinlang**	**1.08**	**233**	*e*Pn	**Pn**	**02 23 54.1**	**-1.8**
TWG				*e*S*g*	**Sg**	**02 24 06.6**	**-2.9**
TWG	**Pinlang**	**1.08**	**233**	*e*P	**Pg**	**02 23 54.0**	**-1.5**
	baz=242						
TWG				*e*S	**Sg**	**02 24 07.6**	**-2.0**
	baz=242						
SMLT	**Sun Moon Lake**	**1.09**	**292**	*e*P	**Pg**	**02 23 55.2**	**-0.4**
	baz=299						
SMLT				*e*S	**Sg**	**02 24 09.9**	**+0.1**
	baz=299						
ALS	**Alishan**	**1.10**	**272**	⇑*i*P	**Pb**	**02 23 56.0**	**+0.1**
	baz=270						
ALS				*e*S	**Sg**	**02 24 10.0**	**-0.3**
	baz=270						
NNS	**Nan Shan**	**1.12**	**329**	*e*P	**Pb**	**02 23 55.4**	**-0.7**
	baz=329						
NNS				*e*S	**Sg**	**02 24 09.5**	**-1.2**
	baz=329						
TWC	**Suao**	**1.13**	**353**	*i* P	**Pb**	**02 23 56.2**	**-0.2**
	baz=354						
TWC				S	**Sg**	**02 24 11.4**	**+0.3**
	baz=354						
TYC	**Yuchr**	**1.14**	**292**	P	**Pb**	**02 23 56.1**	**-0.3**
	baz=300						
TYC				*e*S	**Sb**	**02 24 11.3**	**0.0**
	baz=300						
ENTT	**Nioudou**	**1.22**	**341**	*e*P	**Pn**	**02 23 56.9**	**-1.0**
	baz=341						
ENTT				*e*S	**Sb**	**02 24 12.5**	**-1.2**
	baz=341						
CHN5	**Tsauling**	**1.23**	**276**	*i* P	**Pn**	**02 23 58.1**	**+0.2**
	baz=274						
CHN5				S	**Sb**	**02 24 13.9**	**+0.1**
	baz=274						
TWE	**Neicheng**	**1.27**	**346**	P	**Pn**	**02 23 58.1**	**-0.4**
	baz=347						
TWE				*e*S	**Sb**	**02 24 14.6**	**-0.6**
	baz=347						
WNT	**Mingjian**	**1.28**	**288**	*e*P	**Pn**	**02 23 58.8**	**+0.2**
	baz=287						
WNT				*e*S	**Sb**	**02 24 15.5**	**+0.2**
	baz=287						
TPUB	**Ta-pu**	**1.28**	**262**	*e*Pn	**Pn**	**02 23 58.4**	**-0.2**
ILA	**Ilan**	**1.30**	**350**	*e*P	**Pn**	**02 23 58.8**	**-0.1**
	baz=350						
ILA				*e*S	**Sb**	**02 24 16.3**	**+0.3**
	baz=350						
WTP	**Ta-pu**	**1.30**	**260**	P	**Pn**	**02 23 59.0**	**+0.1**
	baz=258						
WTP				*e*S	**Sb**	**02 24 16.2**	**+0.2**
	baz=258						
YHNB	**Yeheng**	**1.32**	**334**	*e*Pn	**Pn**	**02 23 58.4**	**-0.7**
YHNB				*e*S*g*	**Sg**	**02 24 12.8**	**-4.3**
NSK	**Sanguang**	**1.33**	**334**	*e*P	**Pn**	**02 23 58.9**	**-0.4**
	baz=334						
NSK				*e*S	**Sb**	**02 24 14.8**	**-2.0**
	baz=334						
YOJ	**Yonaguni jima**	**1.34**	**43**	*e*S	**Sb**	**02 24 17.1**	**0.0**
WGK	**Gukeng**	**1.34**	**279**	*e*P	**Pn**	**02 23 59.8**	**+0.3**
	baz=277						
WGK				*e*S	**Sb**	**02 24 17.1**	**0.0**
	baz=277						
SGST	**Jiashian**	**1.37**	**253**	*e*P	**Pn**	**02 23 59.8**	**0.0**
	baz=241						
SGST				*e*S	**Sb**	**02 24 18.1**	**+0.2**
	baz=241						
TCU	**Taichung**	**1.39**	**299**	*e*P	**Pn**	**02 24 00.3**	**+0.2**
	baz=298						
TCU				*e*S	**Sb**	**02 24 18.9**	**+0.4**
	baz=298						
CHN1	**Nanshi**	**1.39**	**258**	*i* P	**Pn**	**02 24 00.8**	**+0.6**
	baz=256						
CHN1				*e*S	**Sb**	**02 24 18.8**	**+0.2**
	baz=256						
TWK	**Hsinying**	**1.41**	**262**	*e*P	**Pn**	**02 24 00.8**	**+0.3**
	baz=259						
TWK				*e*S	**Sn**	**02 24 19.0**	**-0.1**
	baz=259						
TWQ1	**Liyutan**	**1.42**	**308**	*e*P	**Pn**	**02 24 01.3**	**+0.7**
	baz=307						
TWQ1				*e*S	**Sn**	**02 24 19.3**	**0.0**
	baz=307						
CHY	**Chiayi**	**1.45**	**271**	*e*P	**Pn**	**02 24 02.0**	**+1.0**
	baz=269						
CHY				*e*S	**Sn**	**02 24 19.9**	**-0.2**
	baz=269						
SSD	**Sandimen**	**1.46**	**240**	*e*P	**Pn**	**02 24 02.0**	**+0.9**
	baz=229						
NSTT	**Nanjuang**	**1.47**	**321**	*e*P	**Pn**	**02 24 01.2**	**0.0**
	baz=321						
NSTT				*e*S	**Sn**	**02 24 19.8**	**-0.7**
	baz=321						
NSY	**Sanyi**	**1.47**	**309**	*e*P	**Pn**	**02 24 01.0**	**-0.2**
	baz=309						
NSY				*e*S	**Sn**	**02 24 20.2**	**-0.4**
	baz=309						
TAW	**Tawu**	**1.52**	**223**	*e*P	**Pn**	**02 24 02.1**	**+0.2**
	baz=221						
TWB1	**Santiao Chiao**	**1.52**	**359**	*e*P	**Pn**	**02 24 02.1**	**+0.2**
TWB1				*e*S	**Sn**	**02 24 22.6**	**+0.8**
EAST	**Anshuo**	**1.53**	**225**	*e*P	**Pn**	**02 24 00.6**	**-1.5**
	baz=223						
TWA	**Mucha**	**1.54**	**346**	*e*P	**Pn**	**02 24 02.8**	**+0.6**
	baz=332						
TWA				*e*S	**Sn**	**02 24 21.8**	**-0.6**
	baz=332						
TATO	**Taipei**	**1.56**	**342**	*e*Pn	**Pn**	**02 24 03.0**	**+0.5**
CHN3	**Shinhua**	**1.56**	**255**	*e*P	**Pn**	**02 24 03.7**	**+1.2**
	baz=253						
NWF	**Wu-fen Shan**	**1.60**	**353**	P	**Pn**	**02 24 04.3**	**+1.3**
	baz=353						
NWF				*e*S	**Sn**	**02 24 24.5**	**+0.8**
	baz=353						
TWM1	**Shoushan**	**1.60**	**246**	*e*P	**Pn**	**02 24 03.2**	**+0.2**
	baz=244						
SCZT	**Fangliau**	**1.69**	**229**	*e*P	**Pn**	**02 24 04.3**	**0.0**
	baz=219						
SCZT				*e*S	**Sn**	**02 24 26.2**	**+0.2**
	baz=219						
TWS1	**Kuangyinshan**	**1.70**	**342**	*e*P	**Pn**	**02 24 04.9**	**+0.5**
	baz=342						
TWS1				*e*S	**Sn**	**02 24 26.5**	**+0.2**
	baz=342						
HATJ	**Hateruma jima**	**1.74**	**70**	P	**Pn**	**02 24 05.0**	**0.0**
HATJ				S	**Sn**	**02 24 26.4**	**-0.9**
TSEB	**Hengchuen, Pin**	**1.88**	**213**	*e*P	**Pn**	**02 24 07.0**	**+0.2**
	baz=222						
TSEB				*e*S	**Sn**	**02 24 31.0**	**+0.4**
	baz=222						
HEN	**Hengchun**	**1.88**	**219**	*e*P	**Pn**	**02 24 07.4**	**+0.5**
	baz=217						
HEN				*e*S	**Sn**	**02 24 30.9**	**+0.3**
	baz=217						
TWK1	**Hengchun**	**1.89**	**216**	*e*P	**Pn**	**02 24 07.1**	**+0.1**
	baz=223						
TWK1				*e*S	**Sn**	**02 24 29.2**	**-1.7**
	baz=223						
TWP	**Hsiaoliuchiu**	**1.89**	**234**	*e*P	**Pn**	**02 24 08.3**	**+1.3**
	baz=232						

KSH smax
comp=N,2μm,0.2s
KSH smax
comp=E,1μm,0.2s
KZA Kyzart 2.81 359 P **Pn 02 48 34.9 0.0**
SNR=6.0
UCH Uchtor 3.02 348 P **Pn 02 48 38.4 +0.5**
SNR=13
AML Almayashu 3.12 337 P **Pn 02 48 40.9 +1.7**
SNR=13
AAK Ala-Archa 3.42 350 P **Pn 02 48 46.7 +3.3**
SNR=9.1
EKS2 Erkin-Say 3.59 341 P **Pn 02 48 50.8 +5.1**
SNR=6.9
TKM2 Tokmak 2 3.65 3 ⇓Pn **Pn 02 48 46.9 +0.3**
comp=E,5.0nm,0.4s
TKM2 ⇓Sn **Sn 02 49 29.0 -0.7**
comp=E,8.8nm,0.6s
TKM2 Tokmak 2 3.65 3 P **Pn 02 48 47.2 +0.6**
SNR=14
KK31 Karatay Array 5.28 318 ⇑Pn **Pn 02 49 06.5 -2.5**
comp=E,0.3nm,0.4s,baz=114,slow=13,SNR=4.3
KK31 Pg **Pg 02 49 18.1 -13**
comp=E,2.7nm,0.8s,baz=140,slow=16,SNR=16
KK31 ⇓Sn **Sn 02 50 02.1 -7.7**
comp=E,0.9nm,0.3s,baz=123,slow=22,SNR=4.9
KK31 ⇑Lg 02 50 15.5
comp=E,2.0nm,0.5s,baz=130,slow=29,SNR=5.1

*IDC **28** 02:53:06.8±2.8, 16°.41S×167°.26E, h0km, mb4.5/3, mb1 4.7/3, mb1mx4.1/15, mbtmp4.6/3, MS3.5/7, Ms1 3.5/7, ms1mx3.2/23, Error ellipse: s-maj=117.3km s-min=53.9km az=153.0*
*NEIC **28** 02:53:07.5±1.8, 16°.47S×167°.45E, h10km, mb4.1/3, Error ellipse: s-maj=31.0km s-min=22.3km az=54.0*
*NOU **28** 02:53:07.3±0.8, 16°.27S×167°.68E, h30km, MD3.7, ML3.1*
*ISCJB **28** 02:53:10.3±3.9, 16°.69S±0°.08×167°.2E±0°.3, h26km±30km, mb4.7/5, MS3.4/7, Error ellipse: s-maj=41.1km s-min=12.0km az=171.7*

ISC 28 02:53:11.5±4.0, 16°.64S±0°.08×167°.3E±0°.2, h23km±30km, n32, σ0°52/15, mb4.7/5, MS3.4/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.45**	**188**	*e*P	**Pn**	**02 54 30.9**	**-0.5**
DZM				*e*S	**Sn**	**02 55 33.8**	**+0.3**
DZM				AMP		02 55 48.2	
comp=Z,163nm,1.0s							
DZM	**Mont Dzumac**	**5.45**	**188**	*e*Pn	**Pn**	**02 54 30.8**	**-0.6**
comp=Z,16nm,0.6s							
NOUC	**Port Laguerre**	**5.50**	**189**	*e*P	**Pn**	**02 54 32.1**	**0.0**
NOUC				*e*S	**Sn**	**02 55 34.5**	**-0.3**
NOUC				AMP		02 55 38.3	
comp=Z,9.6nm,1.7s							
NORM	**Noumea**	**5.60**	**187**	*e*P	**Pn**	**02 54 33.7**	**+0.2**
ARMA	**Armidale**	**19.80**	**223**	*e*P	**Pn**	**02 57 43.0**	**+1.0**
comp=Z,5.0nm,0.8s							
CTA	**Charters Tower**	**20.23**	**257**	P	**P**	**02 57 45.3**	**+1.0**
comp=Z,4.9nm,0.7s,baz=77,slow=14,SNR=4.3							
CTAO	**Charters Tower**	**20.23**	**257**	*e*P	**P**	**02 57 45.2**	**0.0**
comp=Z,4.7nm,0.7s							
AFI	**Afiamalu**	**20.40**	**85**	LR	LR	03 03 50.4	
comp=Z,101nm,20.3s,MS3.2,baz=68,slow=32							
URZ	**Urewera**	**23.21**	**160**	LR	LR	03 05 24.9	
comp=Z,115nm,18.4s,MS3.4,baz=315,slow=32							
RPZ	**Rata Peaks**	**27.18**	**174**	LR	LR	03 08 38.0	
comp=Z,152nm,19.2s,MS3.6,baz=338,slow=34							
STKA	**Stephens Creek**	**27.79**	**232**	P	**P**	**02 58 59.0**	**+0.1**
comp=Z,6.9nm,0.9s,mb4.3,baz=60,slow=7.2,SNR=13							
STKA				LR	LR	03 08 48.9	
comp=Z,92nm,20.9s,MS3.3,baz=158,slow=34							
STKA	**Stephens Creek**	**27.79**	**232**	P	**P**	**02 58 59.0**	**+0.1**
STKA				LR	LR	03 08 48.9	
ASAR	**Alice Springs**	**32.03**	**252**	P	**P**	**02 59 35.4**	**-1.2**
comp=Z,18nm,0.8s,mb5.0,baz=78,slow=9.0,SNR=122							
GUMO	**Guam**	**37.31**	**322**	LR	LR	03 13 05.4	
comp=Z,83nm,20.5s,MS3.5,baz=179,slow=32							
DAV	**Davao City (W)**	**47.49**	**296**	LR	LR	03 18 52.2	
comp=Z,38nm,18.8s,MS3.4,baz=150,slow=33							
CASY	**Casey**	**61.77**	**203**	*e*P	**P**	**03 03 28.0**	**0.0**
comp=Z,3.3nm,0.7s,mb4.6							
PETK	**Petropavlovsk-**	**69.95**	**354**	LR	LR	03 32 13.2	
comp=Z,27nm,18.4s,MS3.5,baz=98,slow=34							
LZH	**Lanzhou**	**79.60**	**313**	*e*P	**P**	**03 05 22.5**	**+5.5**
LZH				pP	pP	03 05 27.0	+2.6
LZH				sP	sP	03 05 29.8	+2.7
LZH				pmax	pmax		
comp=Z,18nm,1.4s,mb4.8							
GTA	**Gaotai**	**83.98**	**314**	*e*P	**P**	**03 05 40.5**	**+0.4**
GTA				pP	pP	03 05 45.8	-1.7
GTA				sP	sP	03 05 49.0	-1.1
GTA				pmax	pmax		
comp=Z,6.0nm,0.7s,mb4.8							
FLN	**La Foliniere**	**146.44**	**345**	*e*PKP1	PKPbc	03 12 50.3	-0.4
LDF	**La Druitiere**	**146.51**	**345**	*e*PKP1	PKPbc	03 12 50.6	-0.3
LOR	**Lormes**	**146.52**	**339**	*e*PKP1	PKPbc	03 12 49.9	-1.1
comp=Z,9.2nm,0.8s							
SSF	**Saint Saulge**	**146.82**	**340**	*e*PKP1	PKPbc	03 12 50.8	-1.1
comp=Z,15nm,0.9s							
GRR	**Gorron**	**146.88**	**345**	*e*PKP1	PKPbc	03 12 51.9	-0.1
SGMF	**Saint Gilles**	**147.39**	**347**	*e*PKP1	PKPbc	03 12 52.9	-0.5
ROSF	**Rostrenen**	**147.46**	**348**	*e*PKP1	PKPbc	03 12 52.0	-1.6
BGF	**Bois d'Agland**	**147.48**	**340**	*e*PKP1	PKPbc	03 12 53.3	-0.4
comp=Z,9.1nm,0.7s							
ORIF	**Oris-en-Rattie**	**147.75**	**335**	*e*PKP1	PKPbc	03 12 55.2	+0.7
TCF	**Toulx Ste Croi**	**147.93**	**340**	*e*PKP1	PKPbc	03 12 53.9	-1.0
comp=Z,11nm,1.0s							
MFF	**Saint Martin d**	**148.35**	**343**	*e*PKP1	PKPbc	03 12 55.5	-0.5
comp=Z,9.8nm,0.8s							
MTLF	**Montolieu**	**150.50**	**338**	*e*PKP1	PKPbc	03 13 00.7	-0.8
TORD	**Torodi Ar. Bea**	**165.63**	**258**	PKP	PKPdf	03 13 14.2	-1.1
comp=Z,0.3nm,0.8s,baz=356,slow=2.4,SNR=2.5							
TORD				PKPab	PKPab	03 14 13.0	-1.2
comp=Z,0.8nm,0.8s,baz=106,slow=4.2,SNR=5.6							

*NEIC **28** 02:57:31.0±2.2, 5°.04S×11°.91W, h10km, mb3.9/1, Error ellipse: s-maj=115.0km s-min=35.0km az=128.0*
*IDC **28** 02:57:30.0±4.6, 4°.90S×11°.96W, h0km, mb4.1/6, mb1 4.3/7, mb1mx3.8/27, mbtmp4.2/7, ML2.7/1, MS3.5/12, Ms1 3.6/12, ms1mx3.4/33, Error ellipse: s-maj=159.7km s-min=80.7km az=137.0*

ISC 28 02:57:30.4±1.9, 5°.1S±0°.5×12°.0W±0°.7, h10km, n23, σ0°82/13, mb4.2/7, MS3.6/11, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**13.23**	**32**	*e*PKIKP	**Pn**	**03 00 43.6**	**+5.1**
39nm,1.1s							
KIC	**Kosan Boka**	**13.50**	**32**	*e*PKIKP	**Pn**	**03 00 43.1**	**+1.0**
39nm,1.4s							
TIC	**Toumodi**	**13.59**	**31**	*e*PKIKP	**Pn**	**03 00 43.4**	**0.0**
68nm,1.4s							
DBIC	**Dimbokro**	**13.70**	**31**	Pn	**Pn**	**03 00 44.6**	**-0.3**
0.0nm,0.3s,baz=188,slow=16,SNR=3.8							
DBIC				LR	LR	03 04 48.3	
comp=Z,200nm,21.8s,baz=137,slow=32							
BBTS	**Babate**	**20.16**	**347**	LR	LR	03 08 27.3	
comp=Z,78nm,18.7s,MS3.1,baz=19,slow=33							
TOA0	**Torodi Ar. Sit**	**22.66**	**37**	*e*P	**P**	**03 02 31.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**22.66**	**37**	P	**P**	**03 02 30.1**	**-2.0**
12nm,1.1s,mb4.2,baz=217,slow=9.4,SNR=27							
TORD				LR	LR	03 10 10.1	
comp=Z,161nm,19.2s,MS3.5,baz=195,slow=34							
TAM	**Tamanrasset**	**32.59**	**31**	*e*P	**P**	**03 04 02.7**	**+0.5**
1.6nm,1.0s,mb3.9							
BOSA	**Boshof**	**42.31**	**128**	LR	LR	03 19 29.3	
comp=Z,72nm,18.6s,MS3.6,baz=335,slow=31							
KEST	**Kesra**	**45.30**	**25**	LR	LR	03 25 11.2	
comp=Z,47nm,19.7s,MS3.4,baz=311,slow=37							
CPUP	**Villa Florida**	**48.14**	**239**	LR	LR	03 22 48.5	
comp=Z,76nm,21.3s,MS3.6,baz=243,slow=32							
IDI	**Anoyia**	**53.06**	**38**	P	**P**	**03 06 49.3**	**+1.3**
4.1nm,0.8s,mb4.4,baz=211,slow=5.9,SNR=3.8							
LPAZ	**La Paz**	**56.12**	**254**	LR	LR	03 29 17.8	
comp=Z,75nm,18.8s,MS3.8,baz=127,slow=34							
GERES	**GERESS Array B**	**58.23**	**20**	P	**P**	**03 07 25.2**	**+0.3**
1.5nm,0.9s,mb4.0,baz=201,slow=10,SNR=9.9							
MMAI	**Mount Meron Ar**	**58.76**	**46**	LR	LR	03 31 14.9	
comp=Z,32nm,18.1s,MS3.5,baz=330,slow=35							
MLR	**Muntele Rosu**	**60.68**	**30**	P	**P**	**03 07 42.0**	**+0.2**
1.4nm,0.6s,mb4.3,baz=130,slow=5.5,SNR=3.9							
BRTR	**Keskin Array B**	**61.25**	**39**	P	**P**	**03 07 46.2**	**+0.4**
1.1nm,0.7s,mb4.1,baz=215,slow=7.0,SNR=9.1							
ROSC	**El Rosal**	**63.06**	**278**	LR	LR	03 35 04.6	
comp=Z,59nm,18.6s,MS3.8,baz=126,slow=36							
AKASG	**Malin Array Be**	**65.91**	**27**	P	**P**	**03 08 15.4**	**-1.0**
2.1nm,0.8s,mb4.2,baz=226,slow=6.5,SNR=11							
AKBB	**Malin Array Si**	**65.91**	**27**	*e*P	**P**	**03 08 15.9**	**-0.5**
NOA	**NORSAR Array B**	**68.39**	**12**	LR	LR	03 35 46.0	
comp=Z,15nm,21.2s,MS3.2,baz=215,slow=34							
AKTO	**Aktyubinsk**	**81.38**	**37**	LR	LR	03 48 02.4	
comp=Z,29nm,19.4s,MS3.6,baz=26,slow=37							
AAK	**Ala-Archa**	**90.83**	**47**	LR	LR	03 50 36.3	
comp=Z,58nm,19.9s,MS4.0,baz=108,slow=35							

*MOS **28** 03:07:15.9±0.9, 27°.66N×139°.89E, h489km, mb3.9/14, Error ellipse: s-maj=19.9km s-min=10.5km az=106.5*
*ISCJB **28** 03:07:16.7±0.4, 27°.70N±0°.04×139°.90E±0°.08, h490km±4km, mb3.8/27, Error ellipse: s-maj=11.4km s-min=6.2km az=172.4*
*NEIC **28** 03:07:17.6±0.9, 27°.70N×139°.88E, h485km±9km, mb3.9/16, Error ellipse: s-maj=9.6km s-min=8.6km az=120.0*
*IDC **28** 03:07:17.0±0.6, 27°.69N×139°.89E, h479km±6km, mb3.3/10, mb1 3.4/15, mb1mx3.2/28, mbtmp3.4/15, Error ellipse: s-maj=16.5km s-min=10.3km az=71.0*
*JMA **28** 03:07:18.8±0.3, 27°.92N×140°.41E, h493km±4km, M4.2*

ISC 28 03:07:17.8±0.4, 27°.73N±0°.04×139°.94E±0°.08, h485km±4km, n79, σ1°06/89, mb3.8/27, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.09**	**107**	P	**P**	**03 08 22.8**	**+0.8**
CBIJ				*e*S	**S**	**03 09 12.1**	**-2.0**
CBIJ	**Chichi jima**	**2.09**	**107**	P	**P**	**03 08 22.9**	**+0.9**
126nm,0.3s,baz=323,slow=1.1,SNR=75							
CBIJ				S	**S**	**03 09 12.5**	**-1.6**
288nm,0.3s,baz=295,slow=21,SNR=26							
JHHJ	**Haha-jima-NKT**	**2.27**	**118**	P	**P**	**03 08 23.9**	**+0.9**
JHHJ				*e*S	**S**	**03 09 15.0**	**-0.9**
JHJ2	**Mitsune**	**5.37**	**359**	P	**P**	**03 08 48.1**	**+0.9**
JHJ2				*e*S	**S**	**03 09 59.3**	**-1.1**
JHJ	**Hachijo jima 2**	**5.38**	**359**	P	**P**	**03 08 48.4**	**+1.1**
8.2nm,0.3s,baz=235,slow=22,SNR=5.1							
JHJ				S	**S**	**03 09 59.3**	**-1.2**
12nm,0.3s,baz=73,slow=19,SNR=3.9							
JWZ	**Kozaga**	**6.83**	**329**	P	**P**	**03 09 05.4**	**+3.7**
BSO1	**Boso 1**	**6.96**	**7**	P	**P**	**03 09 04.2**	**+1.2**
BSO1				*e*S	**S**	**03 10 28.3**	**-0.9**
BSO3	**Boso 3**	**7.07**	**4**	P	**P**	**03 09 05.0**	**+0.9**
BSO3				*e*S	**S**	**03 10 29.1**	**-2.1**
JIE	**Ise**	**7.20**	**338**	P	**P**	**03 09 08.1**	**+2.7**
BSO4	**Boso 4**	**7.25**	**3**	P	**P**	**03 09 06.9**	**+1.0**
BSO4				*e*S	**S**	**03 10 33.7**	**-0.9**
HMMJ	**Hamamatsu 2**	**7.36**	**346**	P	**P**	**03 09 08.4**	**+1.4**
JOD2	**Odawara 2**	**7.55**	**355**	P	**P**	**03 09 09.6**	**+0.6**
JOD2				S	**S**	**03 10 39.1**	**-1.1**
JEG	**Eigenji**	**7.98**	**339**	P	**P**	**03 09 17.2**	**+3.7**
JHU	**Hanno**	**8.12**	**356**	P	**P**	**03 09 14.7**	**-0.2**
JHU				*e*S	**S**	**03 10 45.7**	**-5.5**
JRY	**Ryogami san**	**8.31**	**354**	P	**P**	**03 09 17.4**	**+0.5**
JRY				*e*S	**S**	**03 10 50.5**	**-4.4**
JYT	**Yasato**	**8.48**	**1**	P	**P**	**03 09 18.8**	**+0.1**
JAG	**Ashikaga**	**8.68**	**357**	P	**P**	**03 09 20.3**	**-0.6**
JAG				S	**S**	**03 10 56.8**	**-5.2**
JHO	**Hitachi**	**8.88**	**3**	P	**P**	**03 09 23.7**	**+0.8**
JHO				*e*S	**S**	**03 11 02.8**	**-2.9**
MJAR	**Matsushiro Arr**	**8.91**	**351**	P	**P**	**03 09 23.5**	**+0.2**
2.8nm,0.3s,baz=169,slow=9.7,SNR=16							
MJAR	**Matsushiro Arr**	**8.91**	**351**	P	**P**	**03 09 23.5**	**+0.2**
MJAR				pmax	pmax		
comp=Z,3.0nm,0.3s							
MAJO	**Matsushiro**	**8.91**	**351**	*e*P	**P**	**03 09 22.7**	**-0.6**
MAJO				pmax	pmax		
comp=Z,31nm,0.8s							
MAJO	**Matsushiro**	**8.91**	**351**	*e*Pn	**P**	**03 09 22.7**	**-0.6**
comp=Z,32nm,0.8s							
MAT	**Matsushiro**	**8.91**	**351**	P	**P**	**03 09 24.0**	**+0.7**
MAT				*e*S	**S**	**03 11 11.4**	**+4.9**
JHS	**Saijyo**	**9.30**	**323**	P	**P**	**03 09 29.9**	**+2.5**
JFK	**Kawauchi**	**9.65**	**4**	P	**P**	**03 09 32.4**	**+1.3**
JOW	**Kunigami**	**10.42**	**268**	P	**P**	**03 09 39.6**	**+0.1**
comp=Z,2.7nm,0.3s,baz=95,slow=15,SNR=5.6							
JMK	**Ichinoseki**	**11.25**	**5**	P	**P**	**03 09 48.8**	**+0.7**
ASAJ	**Asahikawa**	**16.50**	**7**	P	**P**	**03 10 44.5**	**+0.9**
comp=Z,0.7nm,0.3s,baz=215,slow=33,SNR=5.0							
ASAJ	**Asahikawa**	**16.50**	**7**	P	**P**	**03 10 44.6**	**+1.0**
ASAJ				pmax	pmax		
comp=Z,1.0nm,0.3s							
ENH	**Enshi**	**26.72**	**283**	*e*P	**P**	**03 12 16.7**	**-0.6**
comp=Z,7.3nm,0.6s,mb4.3							
BILL	**Bilibino**	**43.31**	**14**	*e*P	**P**	**03 14 36.1**	**+0.7**
BILL				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.2							
BILL	**Bilibino**	**43.31**	**14**	*e*P	**P**	**03 14 36.1**	**+0.7**
comp=Z,8.9nm,0.8s,mb4.2							
TIXI	**Tiksi**	**44.40**	**355**	*e*P	**P**	**03 14 42.7**	**-1.1**
TIXI				pmax	pmax		
comp=Z,2.0nm,0.9s,mb3.5							
GUN	**Gumba**	**47.47**	**284**	*e*P	**P**	**03 15 07.9**	**-0.1**
comp=Z,18nm,0.3s,mb5.0							
WRAB	**Tennant Creek**	**47.68**	**187**	*e*P	**P**	**03 15 08.7**	**-0.9**
WRAB				pmax	pmax		
comp=Z,3.0nm,0.4s,mb4.0							
WRAB	**Tennant Creek**	**47.68**	**187**	*e*P	**P**	**03 15 08.7**	**-0.9**
comp=Z,3.2nm,0.4s,mb4.0							
ZALV	**Zalesovo Beam**	**47.71**	**319**	P	**P**	**03 15 07.9**	**-1.4**
comp=Z,0.7nm,0.4s,mb3.4,baz=86,slow=8.2,SNR=2.8							
ZALV				PcP	PcP	03 16 28.2	-1.2
comp=Z,1.0nm,0.4s,baz=80,slow=1.6,SNR=3.4							
ZALV	**Zalesovo Beam**	**47.71**	**319**	P	**P**	**03 15 07.9**	**-1.4**
ZALV						03 16 28.2	
ZALV				pmax	pmax		
comp=Z,1.0nm,0.4s,mb3.5							
PKI	**Pulchoki**	**47.96**	**283**	*e*P	**P**	**03 15 10.7**	**-1.0**
KKN	**Kakani**	**48.02**	**284**	*e*P	**P**	**03 15 11.3**	**-0.8**
DMN	**Daman**	**48.21**	**283**	*e*P	**P**	**03 15 13.0**	**-0.5**
comp=Z,9.1nm,0.3s,mb4.5							
MK31	**Makanchi Array**	**48.53**	**309**	*e*P	**P**	**03 15 15.3**	**-0.4**
MKAR	**Makanchi Array**	**48.53**	**309**	P	**P**	**03 15 15.7**	**0.0**
comp=Z,0.8nm,0.3s,mb3.5,baz=85,slow=11,SNR=20							
MKAR				PcP	PcP	03 16 31.9	-0.7
comp=Z,0.4nm,0.6s,baz=74,slow=9.1,SNR=4.7							
MKAR	**Makanchi Array**	**48.53**	**309**	P	**P**	**03 15 15.7**	**0.0**
MKAR						03 16 31.9	
MKAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**51.12**	**314**	*e*P	**P**	**03 15 34.1**	**-0.5**
KURK				pmax	pmax		
comp=Z,3.0nm,0.6s,mb3.8							
KURK	**Kurchatov**	**51.12**	**314**	*e*P	**P**	**03 15 34.1**	**-0.6**
comp=Z,3.1nm,0.6s,mb3.8							
ASAR	**Alice Springs**	**51.42**	**187**	P	**P**	**03 15 36.4**	**-0.8**
comp=Z,1.3nm,0.4s,mb3.6,baz=5.5,slow=6.3,SNR=32							
ASAR	**Alice Springs**	**51.42**	**187**	P	**P**	**03 15 36.4**	**-0.7**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
TKM2	**Tokmak 2**	**53.42**	**304**	*e*P	**P**	**03 15 52.1**	**+0.7**
TKM2				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.5							
TKM2	**Tokmak 2**	**53.42**	**304**	*e*P	**P**	**03 15 52.1**	**+0.8**
comp=Z,2.3nm,0.8s,mb3.6							
AAK	**Ala-Archa**	**54.26**	**304**	*e*P	**P**	**03 15 57.5**	**+0.2**
AAK				pmax	pmax		
comp=Z,2.0nm,0.5s,mb3.7							
AAK	**Ala-Archa**	**54.26**	**304**	*e*P	**P**	**03 15 57.5**	**+0.2**
comp=Z,1.7nm,0.5s,mb3.6							
UCH	**Uchtor**	**54.29**	**304**	*e*P	**P**	**03 15 59.1**	**+1.6**
comp=Z,3.0nm,0.7s,mb3.7							
AML	**Almayashu**	**54.91**	**304**	*e*P	**P**	**03 16 02.9**	**+1.0**
comp=Z,2.5nm,0.4s,mb3.9							
BVAR	**Borovoye Array**	**56.23**	**317**	P	**P**	**03 16 10.9**	**0.0**
comp=Z,4.8nm,0.4s,mb4.2,baz=87,slow=6.9,SNR=36							
BVAR	**Borovoye Array**	**56.23**	**317**	P	**P**	**03 16 10.9**	**0.0**
BVAR				pmax	pmax		
comp=Z,5.0nm,0.4s							
BRVK	**Borovoye**	**56.29**	**317**	*e*P	**P**	**03 16 10.9**	**-0.4**
BRVK				pmax	pmax		
comp=Z,3.0nm,0.5s,mb3.9							
BRVK	**Borovoye**	**56.29**	**317**	*e*P	**P**	**03 16 10.8**	**-0.5**
comp=Z,2.7nm,0.5s,mb3.8							
MCK	**McKinley**	**57.18**	**30**	*e*P	**P**	**03 16 15.5**	**-1.8**
MCK				pmax	pmax		
comp=Z,4.0nm,0.7s,mb3.9							
MCK	**McKinley**	**57.18**	**30**	*e*P	**P**	**03 16 15.5**	**-1.8**
comp=Z,3.8nm,0.7s,mb3.8							
FORT	**Forrest**	**59.27**	**192**	*e*P	**P**	**03 16 31.2**	**-0.7**
comp=Z,13nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**59.29**	**178**	P	**P**	**03 16 31.4**	**-0.5**
comp=Z,2.3nm,0.5s,mb3.7,baz=355,slow=6.9,SNR=7.9							
ABKAR	**Akbulak array**	**63.22**	**314**	*e*P	**P**	**03 16 57.0**	**-0.8**
comp=Z,2.1nm,0.6s,mb3.8							
INK	**Inuvik**	**63.29**	**25**	P	**P**	**03 16 57.0**	**-0.8**
comp=Z,0.6nm,0.4s,mb3.5,baz=168,slow=3.3,SNR=6.7							
INK	**Inuvik**	**63.29**	**25**	P	**P**	**03 16 57.0**	**-0.8**
INK				pmax	pmax		
comp=Z,1.0nm,0.4s							
INK	**Inuvik**	**63.29**	**25**	P	**P**	**03 16 57.0**	**-0.8**
YKA	**Yellowknife Ar**	**72.53**	**28**	P	**P**	**03 17 54.3**	**-0.1**
comp=Z,0.9nm,0.5s,mb3.6,baz=297,slow=6.0,SNR=8.5							
YKA	**Yellowknife Ar**	**72.53**	**28**	P	**P**	**03 17 54.3**	**-0.1**
YKA				pmax	pmax		
comp=Z,1.0nm,0.5s							
YKA	**Yellowknife Ar**	**72.53**	**28**	P	**P**	**03 17 54.3**	**-0.1**
FINES	**FINESS Array B**	**76.50**	**333**	P	**P**	**03 18 16.4**	**-0.4**
comp=Z,0.8nm,0.3s,mb3.7,baz=60,slow=4.5,SNR=8.8							
FINES	**FINESS Array B**	**76.50**	**333**	P	**P**	**03 18 16.4**	**-0.4**
FINES				pmax	pmax		
comp=Z,1.0nm,0.3s							
NVAR	**Mina Array Bea**	**81.69**	**51**	P	**P**	**03 18 46.4**	**+1.5**
comp=Z,0.3nm,0.4s,mb3.1,baz=298,slow=5.8,SNR=5.6							
HLID	**Hailey**	**81.72**	**45**	*e*P	**P**	**03 18 46.3**	**+1.3**
comp=Z,0.7nm,0.6s,mb3.4							
TPAW	**Teton Pass**	**83.91**	**44**	*e*P	**P**	**03 18 58.0**	**+2.0**
comp=Z,0.9nm,0.7s,mb3.4							
BRTR	**Keskin Array B**	**84.11**	**312**	P	**P**	**03 18 55.9**	**-1.2**
comp=Z,0.4nm,0.6s,mb3.1,baz=109,slow=3.5,SNR=2.8							
TORD	**Torodi Ar. Bea**	**122.66**	**310**	PKP	PKPdf	03 25 17.5	-1.0
comp=Z,0.1nm,0.4s,baz=8.2,slow=1.6,SNR=6.7							
TORD	**Torodi Ar. Bea**	**122.66**	**310**	PKP	PKPdf	03 25 17.5	-1.0
LPAZ	**La Paz**	**151.67**	**72**	PKPbc	PKPbc	03 26 18.8	+1.4
comp=Z,1.1nm,0.7s,baz=172,slow=7.1,SNR=3.0							
PLCA	**Paso Flores**	**151.80**	**125**	PKPbc	PKPbc	03 26 17.4	+0.3
comp=Z,2.3nm,0.9s,baz=352,slow=2.5,SNR=4.2							

*IDC **28** 03:12:04.0±1.0, 4°.53N×73°.52W, h0km, mb3.6/6, mb1 4.0/7, mb1mx3.7/22, mbtmp3.7/7, ML3.5/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/23, Error ellipse: s-maj=26.5km s-min=10.0km az=27.0*
*ISCJB **28** 03:12:06.2±0.8, 4°.39N±0°.05×73°.73W±0°.04, h22km±6km, mb3.6/6, MS3.2/2, Error ellipse: s-maj=8.0km s-min=6.7km az=154.4*
*NEIC **28** 03:12:07.0, 4°.38N×73°.83W, h4km, ML4.0(RSNC), After RSNC.*
NEIC Felt at Caqueza.

ISC 28 03:12:06.9±0.9, 4°.39N±0°.05×73°.78W±0°.04, h13km±5km, n20, σ1°31/23, mb3.6/6, MS3.2/2, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIC	**Chingaza**	**0.25**	**12**	*i* P	**Pg**	**03 12 11.8**	**-0.4**
CHIC				*e*S	**Sg**	**03 12 16.3**	**+0.5**
ROSC	**El Rosal**	**0.72**	**311**	Pg	**Pg**	**03 12 20.4**	**-0.5**
238nm,0.3s,baz=116,slow=6.3,SNR=846							
ROSC				Lg		03 12 32.8	
246nm,0.3s,baz=97,slow=20,SNR=18							
TOLC	**Tolima**	**1.56**	**277**	*e*P	**Pn**	**03 12 33.1**	**-1.4**
TOLC				*e*S	**Sn**	**03 12 53.4**	**-1.2**
GUVC	**San Jose del G**	**2.16**	**148**	*e*P	**Pn**	**03 12 42.8**	**0.0**
HELC	**Santa Helena**	**2.54**	**316**	*e*P	**Pn**	**03 12 48.8**	**+0.9**
HELC				*e*S	**Sn**	**03 13 20.6**	**+1.8**
SDV	**Santo Domingo**	**5.46**	**35**	Pn	**Pn**	**03 13 28.9**	**+0.8**
14nm,0.3s,baz=247,slow=9.6,SNR=41							
SDV				Sn	**Sn**	**03 14 30.9**	**+0.1**
9.2nm,0.3s,baz=284,slow=7.2,SNR=3.6							
SDV				Lg		03 14 59.1	
14nm,0.3s,baz=280,slow=21,SNR=5.0							
SDV				LR	LR	03 15 42.3	
comp=Z,199nm,18.0s,baz=11,slow=42							
SDV	**Santo Domingo**	**5.46**	**35**	Pn	**Pn**	**03 13 28.9**	**+0.8**
SDV				Sn	**Sn**	**03 14 30.9**	**+0.1**
SDV				Lg		03 14 59.1	
SDV				LR	LR	03 15 42.3	
OTAV	**Otavalo**	**6.22**	**229**	*e*Pn	**Pn**	**03 13 41.5**	**+2.9**
27nm,1.0s							
PCRV	**Puerto La Cruz**	**10.74**	**57**	Pn	**Pn**	**03 14 38.5**	**-2.2**
1.2nm,0.3s,baz=259,slow=3.8,SNR=4.4							
PCRV				Sn	**Sn**	**03 16 42.1**	**+1.2**

TAPN	**Taplejung**	**7.37 309**	*e*Pn	**Pn**	**03 40 11.5**	**+3.0**
TAPN			*e*Sn	**Sn**	**03 41 31.2**	**+0.3**
	comp=E,98nm,0.4s					
RAMN	**Ramite**	**7.99 303**	*e*Pn	**Pn**	**03 40 19.5**	**+2.6**
RAMN			*e*Sn	**Sn**	**03 41 44.8**	**-1.2**
	comp=E,90nm,0.4s					
JIRN	**Jiri**	**8.66 305**	*e*Pn	**Pn**	**03 40 28.5**	**+2.3**
JIRN			*e*Sn	**Sn**	**03 42 01.1**	**-1.5**
	comp=E,129nm,0.3s					
GUN	**Gumba**	**9.03 306**	*e*Pn	**Pn**	**03 40 33.4**	**+2.2**
GUN			*e*Sn	**Sn**	**03 42 09.8**	**-1.8**
PKI	**Pulchoki**	**9.21 303**	*e*Pn	**Pn**	**03 40 35.4**	**+1.7**
PKI			*e*Sn	**Sn**	**03 42 14.2**	**-2.0**
	comp=E,30nm,0.3s					
PKI	**Pulchoki**	**9.21 303**	*e*Pn	**Pn**	**03 40 36.4**	**+2.7**
PKI			*e*Sn	**Sn**	**03 42 15.4**	**-0.8**
PKIN	**Phulchoki**	**9.23 303**	*e*Pn	**Pn**	**03 40 36.4**	**+2.5**
PKIN			*e*Sn	**Sn**	**03 42 15.4**	**-1.1**
	comp=E,41nm,0.3s					
KKN	**Kakani**	**9.42 304**	*e*Pn	**Pn**	**03 40 38.4**	**+1.8**
KKN			*e*Sn	**Sn**	**03 42 19.7**	**-1.6**
	comp=E,39nm,0.2s					
DMN	**Daman**	**9.47 302**	*e*Pn	**Pn**	**03 40 39.3**	**+2.1**
DMN			*e*Sn	**Sn**	**03 42 20.9**	**-1.5**
	comp=E,30nm,0.3s					
MK31	**Makanchi Array**	**25.77 341**	*e*P	**P**	**03 43 48.9**	**-1.7**
MKAR	**Makanchi Array**	**25.77 341**	P	**P**	**03 43 49.1**	**-1.6**
	comp=E,1.3nm,0.7s,mb3.6,baz=141,slow=10,SNR=10.0					
KURK	**Kurchatov**	**30.37 340**	P	**P**	**03 44 29.6**	**-2.1**
	comp=E,0.2nm,0.3s,mb3.3,baz=148,slow=8.8,SNR=3.0					
KURK	**Kurchatov**	**30.37 340**	*e*P	**P**	**03 44 29.6**	**-2.1**
	comp=E,0.6nm,0.7s,mb3.4					
ASAR	**Alice Springs**	**60.23 137**	P	**P**	**03 48 26.0**	**-2.2**
	comp=E,0.8nm,0.5s,mb4.0,baz=319,slow=7.3,SNR=10					
TORD	**Torodi Ar. Bea**	**87.20 283**	P	**P**	**03 51 05.9**	**-0.7**
	comp=E,0.2nm,0.9s,mb3.4,baz=59,slow=5.6,SNR=4.0					

*IDC **28** 03:38:57.6±2.0, 36°.51N×54°.95E, h0km, mb3.2/3, mb1 3.6/8, mb1mx3.4/29, mbtmp3.6/8, ML3.1/3, Error ellipse: s-maj=39.6km s-min=19.2km az=158.0*
*CSEM **28** 03:38:59.8±0.2, 36°.77N×54°.85E, h2km, ML4.0, Error ellipse: s-maj=6.8km s-min=4.1km az=156.0*
*ISCJB **28** 03:38:59.7±0.3, 36°.77N±0°.03×54°.86E±0°.03, h10km, mb3.8/5, Error ellipse: s-maj=5.2km s-min=2.8km az=160.0*
*TEH **28** 03:39:01.4, 36°.78N×54°.86E, h9km*
*NEIC **28** 03:39:01.0, 36°.80N×54°.90E, h9km, mb3.8/3, ML3.7(THR), MN4.0(TEH), After TEH.*
*THR **28** 03:39:03.4±0.8, 36°.61N×54°.85E, h15km±10km, ML3.8*

ISC 28 03:39:00.7±0.3, 36°.80N±0°.03×54°.82E±0°.03, h10km, n118, σ1°37/150, mb3.8/5, 5C-5D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.85**	**250**	Pg	**Pg**	**03 39 16.4**	**-0.6**
IGLO	**Ghaloghah**	**0.85**	**250**	*e*Pg	**Pg**	**03 39 16.5**	**-0.5**
IGLO				*e*		03 39 40.7	
	comp=Z,53μm,0.3s						
IGLO	**Ghaloghah**	**0.85**	**250**	*e*Pg	**Pg**	**03 39 16.5**	**-0.5**
IKIA	**Kiasar**	**1.09**	**238**	Pg	**Pg**	**03 39 20.4**	**-1.2**
IKIA				Sg	**Sg**	**03 39 36.3**	**+0.6**
IKIA	**Kiasar**	**1.09**	**238⇓**	*e*Pg	**Pg**	**03 39 20.4**	**-1.2**
IKIA				*e*Sg	**Sg**	**03 39 36.4**	**+0.7**
IKIA				*e*		03 39 52.0	
	comp=Z,10μm,0.2s						
IKIA	**Kiasar**	**1.09**	**238⇓**	*e*Pg	**Pg**	**03 39 20.4**	**-1.2**
IKIA				Sg	**Sg**	**03 39 36.3**	**+0.6**
IANJ	**Anjilo**	**1.52**	**209**	Pg	**Pn**	**03 39 26.8**	**-1.0**
IANJ	**Anjilo**	**1.52**	**209⇑**	*e*Pg	**Pn**	**03 39 26.9**	**-0.9**
IANJ				*e*		03 39 49.4	
	comp=Z,11μm,0.1s						
IANJ	**Anjilo**	**1.52**	**209⇑**	*e*Pg	**Pn**	**03 39 26.9**	**-0.9**
ISHM	**Shahmirzad**	**1.58**	**232**	Pn	**Pn**	**03 39 28.6**	**-0.1**
ISHM	**Shahmirzad**	**1.58**	**232⇑**	*e*Pn	**Pn**	**03 39 28.6**	**-0.1**
ISHM				*e*		03 39 58.0	
	comp=Z,22μm,0.2s						
ISHM	**Shahmirzad**	**1.58**	**232⇑**	*e*Pn	**Pn**	**03 39 28.6**	**-0.1**
IALA	**Alasht**	**1.77**	**247**	Pg	**Pn**	**03 39 32.5**	**+1.2**
IALA				Sg	**Sg**	**03 39 57.7**	**+0.1**
IALA	**Alasht**	**1.77**	**247**	*e*Pg	**Pn**	**03 39 32.5**	**+1.2**
IALA				*e*Sg	**Sg**	**03 39 57.7**	**+0.1**
IALA				*e*		03 40 02.7	
	comp=Z,26μm,0.1s						
IALA	**Alasht**	**1.77**	**247**	*e*Pg	**Pn**	**03 39 32.5**	**+1.2**
IALA				*e*Sg	**Sg**	**03 39 57.7**	**+0.1**
IFIR	**Firoozkooh**	**2.03**	**236**	Pn	**Pn**	**03 39 36.7**	**+1.8**
IFIR				Sg	**Sg**	**03 40 05.9**	**0.0**
IFIR	**Firoozkooh**	**2.03**	**236**	*e*Pn	**Pn**	**03 39 36.8**	**+1.9**
IFIR				*e*Sg	**Sg**	**03 40 06.0**	**+0.1**
IFIR				*e*		03 40 10.5	
	comp=Z,13μm,0.1s						
IFIR	**Firoozkooh**	**2.03**	**236**	Pn	**Pn**	**03 39 36.7**	**+1.8**
IFIR				Sg	**Sg**	**03 40 05.9**	**0.0**
ILAS	**Lasjerd**	**2.07**	**227**	Pg	**Pb**	**03 39 38.4**	**+0.2**
ILAS				Sg	**Sg**	**03 40 06.6**	**-0.4**
ILAS	**Lasjerd**	**2.07**	**227**	*e*Pg	**Pb**	**03 39 38.5**	**+0.3**
ILAS				*e*Sg	**Sg**	**03 40 06.6**	**-0.4**
ILAS				*e*		03 40 11.1	
	comp=Z,11μm,0.2s						
ILAS	**Lasjerd**	**2.07**	**227**	*e*Pg	**Pb**	**03 39 38.5**	**+0.3**
ILAS				*e*Sg	**Sg**	**03 40 06.6**	**-0.4**
IPRN	**Peran**	**2.08**	**255**	Pn	**Pn**	**03 39 37.7**	**+2.2**
IPRN	**Peran**	**2.08**	**255**	*e*Pn	**Pn**	**03 39 37.8**	**+2.3**
IPRN				*e*		03 40 14.8	
	comp=Z,45μm,0.3s						
IPRN	**Peran**	**2.08**	**255**	Pn	**Pn**	**03 39 37.7**	**+2.2**
BJRD	**Bojnurd**	**2.25**	**66**	*e*Pn	**Pg**	**03 39 43.1**	**-0.8**
BJRD	**Bojnurd**	**2.25**	**66**	*e*Pn	**Pg**	**03 39 42.8**	**-1.1**
ISHV	**Shirvan**	**2.42**	**71**	Pn	**Pn**	**03 39 40.8**	**+0.6**
ISHV	**Shirvan**	**2.42**	**71**	*e*Pn	**Pn**	**03 39 40.9**	**+0.7**
ISHV				*e*		03 40 22.2	
	comp=Z,20μm,0.5s						
ISHV	**Shirvan**	**2.42**	**71**	Pn	**Pn**	**03 39 40.8**	**+0.6**
ISFR	**Sfrayin**	**2.56**	**83**	Pn	**Pn**	**03 39 42.5**	**+0.3**
ISFR	**Sfrayin**	**2.56**	**83**	*e*Pn	**Pn**	**03 39 42.6**	**+0.4**
ISFR				*e*		03 40 37.5	
	comp=Z,5μm,0.3s						
ISFR	**Sfrayin**	**2.56**	**83**	Pn	**Pn**	**03 39 42.5**	**+0.3**
IDMV	**Damavand**	**2.56**	**242**	Pn	**Pb**	**03 39 45.4**	**-1.3**
IDMV				Sg	**Sg**	**03 40 21.8**	**-1.2**
IDMV	**Damavand**	**2.56**	**242**	*e*Pn	**Pb**	**03 39 45.5**	**-1.2**
IDMV				*e*Sg	**Sg**	**03 40 21.9**	**-1.1**
IDMV				*e*		03 40 23.5	
	comp=Z,5μm,0.3s						
IDMV	**Damavand**	**2.56**	**242**	Pn	**Pb**	**03 39 45.4**	**-1.3**
IDMV				*e*Sg	**Sg**	**03 40 21.9**	**-1.1**
DAMV	**Damavand**	**2.58**	**244**	Pn	**Pn**	**03 39 45.0**	**+2.5**
DAMV				Sg	**Sg**	**03 40 22.0**	**-1.6**
DAMV	**Damavand**	**2.58**	**244**	*e*Pn	**Pb**	**03 39 45.8**	**-1.2**
DAMV				*e*Sg	**Sg**	**03 40 22.8**	**-0.9**
DAMV				AML	AML	03 40 26.9	
	comp=E,416nm,0.4s						
DAMV				AML	AML	03 40 28.3	
	comp=N,364nm,0.6s						
DAMV	**Damavand**	**2.58**	**244**	Pn	**Pn**	**03 39 45.0**	**+2.5**
DAMV				*e*Sg	**Sg**	**03 40 22.8**	**-0.8**
IAFJ	**Afjeh**	**2.68**	**250**	*e*Sg	**Sg**	**03 40 25.2**	**-1.5**
IAFJ	**Afjeh**	**2.68**	**250**	*e*Sg	**Sg**	**03 40 25.2**	**-1.5**
IKRD	**Kardeh**	**2.97**	**89**	Pn	**Pg**	**03 39 59.0**	**+1.5**
IKRD	**Kardeh**	**2.97**	**89**	*e*Pn	**Pg**	**03 39 59.1**	**+1.6**
IKRD				*e*		03 41 16.2	
	comp=Z,1μm,0.4s						
IVRN	**Varamin**	**3.09**	**235**	Pn	**Pn**	**03 39 51.5**	**+2.0**
IVRN	**Varamin**	**3.09**	**235**	*e*Pn	**Pn**	**03 39 51.6**	**+2.1**
IVRN				*e*		03 40 47.1	
	comp=Z,2μm,0.2s						
IVRN	**Varamin**	**3.09**	**235**	Pn	**Pn**	**03 39 51.5**	**+2.0**
CHTH	**Charan**	**3.11**	**255**	Pn	**Pb**	**03 39 54.0**	**-2.1**
CHTH	**Charan**	**3.11**	**255**	*e*Pn	**Pb**	**03 39 54.1**	**-1.9**
CHTH	**Charan**	**3.11**	**255**	Pn	**Pb**	**03 39 54.0**	**-2.1**
IEMG	**Emamgholi**	**3.12**	**77**	Pn	**Pn**	**03 39 50.1**	**+0.1**
IEMG	**Emamgholi**	**3.12**	**77**	*e*Pn	**Pn**	**03 39 50.1**	**+0.1**
IEMG				*e*		03 40 48.6	
	comp=Z,2μm,0.2s						
IEMG	**Emamgholi**	**3.12**	**77**	*e*Pn	**Pn**	**03 39 50.1**	**+0.1**
ISFB	**Sefidab**	**3.22**	**222**	Pn	**Pn**	**03 39 51.9**	**+0.6**
ISFB				Sg	**Sg**	**03 40 41.7**	**-2.4**
ISFB	**Sefidab**	**3.22**	**222**	*e*Pn	**Pn**	**03 39 52.0**	**+0.7**
ISFB				*e*Sg	**Sg**	**03 40 41.7**	**-2.4**
ISFB				*e*		03 40 53.0	
	comp=Z,1μm,0.2s						
ISFB	**Sefidab**	**3.22**	**222**	Pn	**Pn**	**03 39 51.9**	**+0.6**
ISFB				*e*Sg	**Sg**	**03 40 41.7**	**-2.4**
THKV	**Tehran--Karaj**	**3.30**	**256**	Pn	**Pn**	**03 39 56.0**	**+3.6**
THKV				Sg	**Sg**	**03 40 45.0**	**-1.7**
THKV	**Tehran--Karaj**	**3.30**	**256**	*e*Pn	**Pn**	**03 39 57.0**	**+4.6**
THKV				*e*Sg	**Sg**	**03 40 45.7**	**-1.0**
THKV				AML	AML	03 40 48.7	
	comp=E,246nm,0.5s						
THKV				AML	AML	03 40 48.9	
	comp=N,239nm,0.6s						
THKV	**Tehran--Karaj**	**3.30**	**256**	Pn	**Pn**	**03 39 56.0**	**+3.6**
THKV				*e*Sg	**Sg**	**03 40 45.7**	**-1.0**
IR3	**Iran Long-Peri**	**3.34**	**248**	*e*Pn	**Pn**	**03 39 54.5**	**+1.5**
IR3				*e*		03 41 04.3	
	comp=Z,99nm,0.7s						
IPAY	**Payeh**	**3.38**	**95**	Pn	**Pn**	**03 39 53.4**	**0.0**
IPAY	**Payeh**	**3.38**	**95**	*e*Pn	**Pn**	**03 39 53.4**	**0.0**
IPAY				*e*		03 40 55.0	
	comp=Z,1μm,0.4s						
IPAY	**Payeh**	**3.38**	**95**	*e*Pn	**Pn**	**03 39 53.4**	**0.0**
ASAO	**Ashtian**	**4.50**	**242**	Pn	**Pn**	**03 40 12.0**	**+3.1**
ASAO	**Ashtian**	**4.50**	**242**	*e*Pn	**Pn**	**03 40 12.4**	**+3.5**
ASAO	**Ashtian**	**4.50**	**242**	Pn	**Pn**	**03 40 12.0**	**+3.1**
ICHK	**Chekchek**	**4.55**	**184**	Pn	**Pn**	**03 40 10.1**	**+0.5**
ICHK	**Chekchek**	**4.55**	**184**	*e*Pn	**Pn**	**03 40 10.2**	**+0.6**
ICHK				*e*		03 41 36.9	
	comp=Z,854nm,0.2s						
ICHK	**Chekchek**	**4.55**	**184**	Pn	**Pn**	**03 40 10.1**	**+0.5**
ZNJK	**Zanjan**	**4.93**	**270**	*e*Pn	**Pn**	**03 40 19.2**	**+4.4**
ZNJK	**Zanjan**	**4.93**	**270**	*e*Pn	**Pn**	**03 40 19.2**	**+4.4**
ISAD	**Sadrabad**	**4.96**	**191**	Pn	**Pn**	**03 40 15.7**	**+0.5**
ISAD	**Sadrabad**	**4.96**	**191**	*e*Pn	**Pn**	**03 40 15.8**	**+0.6**
ISAD				*e*		03 41 48.9	
	comp=Z,1μm,0.4s						
ISAD	**Sadrabad**	**4.96**	**191**	Pn	**Pn**	**03 40 15.7**	**+0.5**
ITEG	**Tejag**	**5.06**	**139**	*e*Pn	**Pn**	**03 40 16.6**	**+0.1**
ITEG				*e*		03 40 17.7	
	comp=Z,4μm,0.2s						
ITEG	**Tejag**	**5.06**	**139**	*e*Pn	**Pn**	**03 40 16.6**	**+0.1**
IMEH	**Mehriz**	**5.40**	**182**	Pn	**Pn**	**03 40 21.3**	**+0.1**
IMEH	**Mehriz**	**5.40**	**182**	*e*Pn	**Pn**	**03 40 21.3**	**+0.1**
IMEH				*e*		03 41 54.0	
	comp=Z,912nm,0.6s						
IMEH	**Mehriz**	**5.40**	**182**	*e*Pn	**Pn**	**03 40 21.3**	**+0.1**
IKOO	**Kooshah**	**5.56**	**140**	*e*Pn	**Pn**	**03 40 23.5**	**0.0**
IKOO				*e*		03 40 24.5	
	comp=Z,968nm,0.2s						
IKOO	**Kooshah**	**5.56**	**140**	*e*Pn	**Pn**	**03 40 23.5**	**0.0**
ISRB	**Sarab**	**5.79**	**282**	Pn	**Pn**	**03 40 27.7**	**+1.1**
ISRB	**Sarab**	**5.79**	**282**	*e*Pn	**Pn**	**03 40 27.8**	**+1.2**
ISRB				*e*		03 40 29.4	
	comp=Z,550nm,0.1s						
ISRB	**Sarab**	**5.79**	**282**	Pn	**Pn**	**03 40 27.7**	**+1.1**
IDAH	**Dahanechah**	**5.80**	**133**	*e*Pn	**Pn**	**03 40 26.4**	**-0.3**
IDAH				*e*		03 40 29.9	
	comp=Z,251nm,0.2s						
IDAH	**Dahanechah**	**5.80**	**133**	*e*Pn	**Pn**	**03 40 26.4**	**-0.3**
IHRS	**Heris**	**6.36**	**286**	Pn	**Pn**	**03 40 35.3**	**+0.9**
IHRS	**Heris**	**6.36**	**286**	*e*Pn	**Pn**	**03 40 35.3**	**+0.9**
IHRS				*e*		03 40 42.5	
	comp=Z,359nm,0.1s						
GNI	**Garni**	**8.58**	**296**	Pn	**Pn**	**03 41 08.1**	**+3.2**
	comp=Z,0.4nm,0.3s,baz=70,slow=15,SNR=1.4						
GNI				Sn	**Sn**	**03 42 44.9**	**+3.1**
	comp=Z,0.7nm,0.3s,baz=360,slow=19,SNR=2.4						
GNI	**Garni**	**8.58**	**296**	Pn	**Pn**	**03 41 08.1**	**+3.2**
GNI				Sn	**Sn**	**03 42 44.9**	**+3.1**
GNI	**Garni**	**8.58**	**296**	Sn	**Sn**	**03 42 44.9**	**+3.1**
BHD	**Baghdad**	**9.26**	**251**	*e*P	**Pn**	**03 41 14.0**	**-0.2**
BHD				*e*S	**Sn**	**03 43 03.0**	**+4.7**
BHD	**Baghdad**	**9.26**	**251**	*e*P	**Pn**	**03 41 14.0**	**-0.2**
MSL	**Mosul**	**9.43**	**271**	*e*P	**Pn**	**03 41 20.0**	**+3.5**
MSL				*e*S	**Sn**	**03 43 08.0**	**+5.5**
AB31	**Akbulak array**	**13.00**	**15**	⇑Pn	**Pn**	**03 42 02.7**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=202,slow=14,SNR=7.6						
AB31				⇓Sn	**Sn**	**03 44 18.7**	**-11**
	comp=Z,1.4nm,0.5s,baz=194,slow=24,SNR=13						
ABKAR	**Akbulak array**	**13.00**	**15**	*e*Pn	**Pn**	**03 42 02.9**	**-2.4**
	comp=Z,1.0nm,0.4s						
AKTK	**Aktyubinsk**	**13.82**	**9**	Pn	**Pn**	**03 42 14.6**	**-2.0**
AKTK				Sn	**Sn**	**03 44 41.4**	**-8.7**
AKTK	**Aktyubinsk**	**13.82**	**9**	Pn	**Pn**	**03 42 14.6**	**-2.0**
AKTO	**Aktyubinsk**	**13.82**	**9**	⇓Pn	**Pn**	**03 42 11.4**	**-5.1**
	comp=Z,1.0nm,1.4s						
AKTO				⇓Sn	**Sn**	**03 44 31.7**	**-18**
	comp=Z,0.8nm,1.2s						
AKTO	**Aktyubinsk**	**13.82**	**9**	Pn	**Pn**	**03 42 14.6**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=181,slow=14,SNR=7.1						
AKTO				Sn	**Sn**	**03 44 41.4**	**-8.7**
	comp=Z,0.1nm,0.3s,baz=72,slow=20,SNR=4.4						
AAK	**Ala-Archa**	**16.21**	**63**	Pn	**Pn**	**03 42 46.5**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=153,slow=3.3,SNR=3.8						
AAK	**Ala-Archa**	**16.21**	**63**	Pn	**Pn**	**03 42 46.5**	**-1.9**
BRTR	**Keskin Array B**	**16.89**	**286**	Pn	**Pn**	**03 42 59.8**	**+2.8**
	comp=Z,0.0nm,0.3s,baz=100,slow=8.5,SNR=2.8						
BRTR	**Keskin Array B**	**16.89**	**286**	Pn	**Pn**	**03 42 59.8**	**+2.8**
BRVK	**Borovoye**	**19.53**	**29**	*e*P	**Pn**	**03 43 28.5**	**-0.8**
	comp=Z,4.2nm,0.8s						
BRVK	**Borovoye**	**19.53**	**29**	*e*P	**Pn**	**03 43 28.5**	**-0.8**
	comp=Z,4.2nm,0.8s						
BVAR	**Borovoye Array**	**19.55**	**29**	P	**Pn**	**03 43 28.1**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=207,slow=9.5,SNR=21						
BVAR	**Borovoye Array**	**19.55**	**29**	P	**Pn**	**03 43 28.1**	**-1.4**
KURK	**Kurchatov**	**21.99**	**43**	P	**P**	**03 43 53.6**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.3,baz=244,slow=10,SNR=6.9						
KURK	**Kurchatov**	**21.99**	**43**	*e*P	**P**	**03 43 57.2**	**+2.5**
	comp=Z,3.2nm,1.0s,mb3.7						
KURK	**Kurchatov**	**21.99**	**43**	*e*P	**P**	**03 43 57.2**	**+2.5**
	comp=Z,3.2nm,1.0s,mb3.7						
AKASG	**Malin Array Be**	**22.98**	**315**	P	**P**	**03 44 07.0**	**+1.7**
	comp=Z,0.7nm,0.4s,mb3.4,baz=121,slow=9.1,SNR=5.7						
AKASG	**Malin Array Be**	**22.98**	**315**	P	**P**	**03 44 06.9**	**+1.7**
AKBB	**Malin Array Si**	**22.98**	**315**	*e*P	**P**	**03 44 07.0**	**+1.7**
AKBB	**Malin Array Si**	**22.98**	**315**	*e*P	**P**	**03 44 07.0**	**+1.8**
KIEV	**Kiev**	**22.99**	**315**	*e*P	**P**	**03 44 05.0**	**-0.3**
	comp=Z,2.2nm,0.5s,mb3.8						
KIEV	**Kiev**	**22.99**	**315**	*e*P	**P**	**03 44 05.0**	**-0.3**
	comp=Z,2.2nm,0.5s,mb3.8						
GVD	**Gavdhos**	**24.95**	**275**	*e*P	**P**	**03 44 25.2**	**+1.0**
	comp=Z,28nm,1.0s,mb4.8						
GVD	**Gavdhos**	**24.95**	**275**	*e*P	**P**	**03 44 25.2**	**+1.1**
	comp=Z,28nm,1.0s,mb4.8						
TORD	**Torodi Ar. Bea**	**52.84**	**258**	P	**P**	**03 48 15.0**	**-1.7**
	comp=Z,0.4nm,1.1s,mb3.3,baz=61,slow=6.9,SNR=2.8						

*IDC **28** 03:48:17.8±1.5, 3°.75S×100°.18E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.9/7, Error ellipse: s-maj=60.8km s-min=24.1km az=54.0*
*DJA **28** 03:48:18, 3°.86S×100°.44E, h19km, MLv4.1/5*
*ISCJB **28** 03:48:19.2±0.8, 3°.90S±0°.06×100°.43E±0°.06, h33km, mb3.9/9, Error ellipse: s-maj=10.6km s-min=7.4km az=42.1*
*NEIC **28** 03:48:23.4±0.9, 3°.70S×100°.31E, h35km, mb4.1/2, Error ellipse: s-maj=35.7km s-min=14.0km az=55.0*

ISC 28 03:48:21.7±0.8, 3°.86S±0°.07×100°.50E±0°.07, h35km, n18, σ0°96/20, mb3.9/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**2.00**	**29**	P	**Pn**	**03 48 51.8**	**-1.2**
KRJI				S	**Sn**	**03 49 17.7**	**+0.9**
MNAI	**Manna**	**2.50**	**102**	P	**Pn**	**03 48 59.0**	**-0.9**
MNAI				S	**Sn**	**03 49 30.7**	**+1.5**
PDSI	**Padang**	**2.93**	**359**	P	**Pn**	**03 49 04.0**	**-1.7**
PDSI				S	**Sn**	**03 49 40.8**	**+1.1**
SDSI	**Sungai Dareh**	**3.05**	**18**	P	**Pn**	**03 49 06.1**	**-1.3**
PPI	**Padang Panjang**	**3.38**	**358**	P	**Pn**	**03 49 10.9**	**-1.1**
MDSI	**Maura Dua**	**3.72**	**100**	P	**Pn**	**03 49 15.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**22.23**	**356**	P	**P**	**03 53 15.6**	**+0.2**
	0.8nm,0.4s,mb3.5,baz=196,slow=7.2,SNR=4.8						
ASAR	**Alice Springs**	**37.78**	**125**	P	**P**	**03 55 38.9**	**+4.2**
	0.3nm,0.3s,mb3.5,baz=298,slow=7.1,SNR=2.9						
TKM2	**Tokmak 2**	**51.73**	**337**	*e*P	**P**	**03 57 26.8**	**+1.3**
	1.0nm,0.4s,mb4.1						
SONM	**Songino Array**	**51.73**	**5**	P	**P**	**03 57 25.6**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=177,slow=5.8,SNR=2.5						
MK31	**Makanchi Array**	**52.94**	**344**	*e*P	**P**	**03 57 34.8**	**+0.4**
MKAR	**Makanchi Array**	**52.94**	**344**	P	**P**	**03 57 35.2**	**+0.8**
	0.8nm,0.7s,mb3.8,baz=136,slow=8.1,SNR=11						
MKAR	**Makanchi Array**	**52.94**	**344**	P	**P**	**03 57 35.2**	**+0.7**
ZALV	**Zalesovo Beam**	**59.07**	**349**	P	**P**	**03 58 18.6**	**+0.4**
	1.4nm,0.3s,mb4.4,baz=147,slow=7.1,SNR=4.3						
BVAR	**Borovoye Array**	**62.09**	**340**	P	**P**	**03 58 38.7**	**0.0**
	1.2nm,0.5s,mb4.2,baz=144,slow=10,SNR=7.6						
ABKAR	**Akbulak array**	**63.50**	**332**	*e*P	**P**	**03 58 48.6**	**+0.3**
	0.7nm,0.6s,mb4.0						
ABKAR				*e*pP	pP	03 58 56.5	-2.5
BRTR	**Keskin Array B**	**74.94**	**313**	P	**P**	**03 59 59.3**	**0.0**
	0.3nm,0.4s,mb3.5,baz=126,slow=7.3,SNR=3.1						
TXAR	**Lajitas Array**	**145.84**	**40**	PKPbc	PKPbc	04 07 59.4	+1.5
	1.7nm,0.6s,baz=279,slow=1.1,SNR=32						

*ISCJB **28** 04:00:36.9±0.9, 23°.48N±0°.02×122°.01E±0°.02, h13km±6km, Error ellipse: s-maj=3.9km s-min=2.7km az=153.4*
*TAP **28** 04:00:38.2, 23°.50N×121°.95E, h20km, ML3.1, C*
*JMA **28** 04:00:38.1±0.3, 23°.44N×122°.10E, h13km*

ISC 28 04:00:37.2±0.6, 23°.49N±0°.02×121°.98E±0°.02, h14km±3km, n39, σ0°68/68, 3C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.46**	**298**	*e*P	**Pg**	**04 00 47.2**	**+0.9**
	baz=299						
HWA	**Hwalien**	**0.59**	**325**	*e*P	**Pg**	**04 00 49.0**	**+0.1**
	baz=327						
HWA				*e*S	**Sg**	**04 00 57.2**	**+0.4**
	baz=327						
EHY	**Hungye**	**0.60**	**272**	*i* P	**Pg**	**04 00 49.4**	**+0.3**
	baz=261						
EHY				S	**Sg**	**04 00 57.7**	**+0.6**
	baz=261						
TWF1	**Yuli**	**0.64**	**258⇑**	*i* P	**Pg**	**04 00 50.0**	**+0.2**
	baz=247						
TWF1				*e*S	**Sg**	**04 00 58.7**	**+0.4**
	baz=247						
TWD	**Chiawan**	**0.69**	**329**	P	**Pg**	**04 00 50.5**	**-0.1**
	baz=331						
TWD				S	**Sg**	**04 00 60.0**	**+0.4**
	baz=331						
CHKT	**Chengkung**	**0.69**	**236⇑**	*i* P	**Pg**	**04 00 50.1**	**-0.5**
	baz=222						
CHKT				*e*S	**Sg**	**04 00 58.9**	**-0.8**
	baz=222						
WHF	**Hehuan Shan**	**0.92**	**315**	*i* P	**Pb**	**04 00 54.4**	**-0.6**
	baz=315						
WHF				*e*S	**Sb**	**04 01 06.3**	**-0.9**
	baz=315						
ELDTW	**Lidau**	**0.94**	**251**	*e*P	**Pb**	**04 00 53.9**	**-1.3**
	baz=237						
ELDTW				*e*S	**Sb**	**04 01 06.4**	**-1.1**
	baz=237						
YUS	**Yu-Shan**	**0.94**	**270**	*i* P	**Pb**	**04 00 55.5**	**+0.1**
	baz=269						
YUS				*e*S	**Sb**	**04 01 07.7**	**-0.1**
	baz=269						
ENA	**Nanau**	**0.96**	**347**	*e*P	**Pb**	**04 00 55.1**	**-0.5**
	baz=348						
ENA				S	**Sb**	**04 01 08.0**	**-0.2**
	baz=348						
TWT	**Tachien**	**1.06**	**316**	*e*P	**Pb**	**04 00 57.0**	**-0.3**
	baz=315						
TWT				*e*S	**Sb**	**04 01 11.2**	**+0.2**
	baz=315						
SMLT	**Sun Moon Lake**	**1.06**	**292**	*e*P	**Pb**	**04 00 57.0**	**-0.4**
	baz=300						
SMLT				*e*S	**Sb**	**04 01 11.6**	**+0.3**
	baz=300						
TWG	**Pinlang**	**1.07**	**232**	*e*P	**Pb**	**04 00 56.0**	**-1.5

CORM	**Corum**	**0.43 200**	*i* Pg	**Pg**	**04 13 33.3**	**-0.1**
CORM			*e*Sg	**Sg**	**04 13 40.0**	**+1.0**
TOS	**Tosya**	**0.76 307**	PG	**Pg**	**04 13 39.1**	**-0.6**
TOS	**Tosya**	**0.76 307**	*i* Pg	**Pg**	**04 13 39.1**	**-0.6**
BYBT	**Boyabat**	**0.89 358**	*e*PG	**Pg**	**04 13 42.1**	**-0.1**
BYBT	**Boyabat**	**0.89 358**	*e*Pg	**Pg**	**04 13 42.1**	**-0.2**
CANT	**Cankiri**	**0.91 272**	*e*PG	**Pg**	**04 13 42.1**	**-0.7**
ILGA	**Ilgaz**	**0.96 300**	*i* P	**Pg**	**04 13 43.0**	**-0.6**
ILGA			*i* S	**Sg**	**04 13 45.4**	**-11**
ILGA	**Ilgaz**	**0.96 300**	*i* P	**Pg**	**04 13 43.0**	**-0.6**
CDAG	**Cicekdag**	**1.02 200**	*i* P	**Pg**	**04 13 43.6**	**-1.1**
CDAG			*i* S	**Sg**	**04 13 57.7**	**-0.2**
CDAG	**Cicekdag**	**1.02 200**	*i* P	**Pg**	**04 13 43.6**	**-1.1**
CDAG			*i* S	**Sg**	**04 13 57.7**	**-0.2**
YOZ	**Yozgat**	**1.02 158**	*e*PG	**Pg**	**04 13 44.2**	**-0.5**
YOZ	**Yozgat**	**1.02 158**	*e*Pg	**Pg**	**04 13 44.3**	**-0.4**
KVT	**Kavak**	**1.06 61**	*e*PG	**Pg**	**04 13 44.4**	**-1.1**
KVT	**Kavak**	**1.06 61**	*e*Pg	**Pg**	**04 13 44.4**	**-1.1**
ELDT	**Eldivan**	**1.06 266**	*i* P	**Pg**	**04 13 44.4**	**-1.2**
ELDT			*i* S	**Sg**	**04 13 58.9**	**-0.5**
ELDT	**Eldivan**	**1.06 266**	*i* P	**Pg**	**04 13 44.4**	**-1.2**
ELDT			*i* S	**Sg**	**04 13 58.9**	**-0.5**
DIKM	**Dikmen**	**1.12 17**	*e*PN	**Pn**	**04 13 46.4**	**-1.1**
DIKM	**Dikmen**	**1.12 17**	*e*Pn	**Pn**	**04 13 46.4**	**-1.2**
TOKA	**Tokat**	**1.29 101**	*i* P	**Pn**	**04 13 50.6**	**+0.6**
TOKA	**Tokat**	**1.29 101**	*i* P	**Pn**	**04 13 50.6**	**+0.6**
TOKT	**Tokat**	**1.34 101**	*e*PN	**Pn**	**04 13 50.6**	**-0.1**
TOKT	**Tokat**	**1.34 101**	*e*Pn	**Pn**	**04 13 50.6**	**-0.1**
BALT	**Daday**	**1.44 312**	*i* P	**Pn**	**04 13 51.8**	**-0.2**
BALT			*i* S	**Sb**	**04 14 12.0**	**+0.7**
BALT	**Daday**	**1.44 312**	*i* P	**Pn**	**04 13 51.8**	**-0.2**
BALT			*i* S	**Sb**	**04 14 12.0**	**+0.8**
BZK	**Bozkurt**	**1.51 336**	*e*PN	**Pn**	**04 13 53.4**	**+0.4**
BZK	**Bozkurt**	**1.51 336**	*e*Pn	**Pn**	**04 13 53.4**	**+0.5**
BBAL	**Bala**	**1.66 232**	*i* P	**Pn**	**04 13 55.1**	**0.0**
BBAL			*i* S	**Sn**	**04 14 16.9**	**+0.1**
BBAL	**Bala**	**1.66 232**	*i* P	**Pn**	**04 13 55.1**	**0.0**
BBAL			*i* S	**Sn**	**04 14 16.9**	**+0.1**
LOD	**Lodumlu**	**1.72 247**	*e*PN	**Pn**	**04 13 55.9**	**+0.1**
LOD	**Lodumlu**	**1.72 247**	*e*Pn	**Pn**	**04 13 55.9**	**+0.1**
SAFT	**Safranbolu**	**1.74 293**	*e*PN	**Pn**	**04 13 55.8**	**-0.3**
SAFT	**Safranbolu**	**1.74 293**	*e*Pn	**Pn**	**04 13 55.8**	**-0.4**
SVSK	**Karacayir**	**1.80 111**	*e*PN	**Pn**	**04 13 57.4**	**+0.5**
SVSK	**Karacayir**	**1.80 111**	*e*Pn	**Pn**	**04 13 57.4**	**+0.5**
SGKT	**Sivrigoynuk**	**2.10 271**	*i* P	**Pn**	**04 14 01.3**	**+0.2**
SGKT	**Sivrigoynuk**	**2.10 271**	*i* P	**Pn**	**04 14 01.3**	**+0.2**
SULT	**Sultanhani-AKS**	**2.58 203**	*e*PN	**Pn**	**04 14 08.5**	**+0.8**
SULT	**Sultanhani-AKS**	**2.58 203**	*e*Pn	**Pn**	**04 14 08.5**	**+0.8**
SVRH	**Sivrihisar-ESK**	**2.77 247**	*e*PN	**Pn**	**04 14 10.9**	**+0.6**
SVRH	**Sivrihisar-ESK**	**2.77 247**	*e*Pn	**Pn**	**04 14 10.9**	**+0.6**
KONT	**Konya--Tatoy**	**3.25 217**	*e*PN	**Pn**	**04 14 17.8**	**+0.9**
KONT	**Konya--Tatoy**	**3.25 217**	*e*Pn	**Pn**	**04 14 17.8**	**+0.9**

*IDC **28** 04:20:47.9±1.7, 37.°00S×178.°03E, h0km, mb3.7/1, mb1 3.8/1, mb1mx3.6/12, mbtmp3.7/1, Error ellipse: s-maj=76.8km s-min=51.2km az=28.0*

NEIC 28 04:21:00.0, 37.°49S×177.°57E, h90km, MG4.3(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.85**	**205**	*e*Pn	Pn	04 21 19.7	+1.7
URZ				*e*Sn	Sn	04 21 32.1	+0.6
SNZO	**South Karori**	**4.41**	**209**	*e*Pn	Pn	04 22 02.7	-1.9
ASAR	**Alice Springs**	**39.69**	**278**	P	P	04 28 24.9	+1.4
	0.5nm,0.4s,baz=124,slow=8.3,SNR=7.7						
ASAR				PcP	PcP	04 30 27.9	-0.6
	0.6nm,0.5s,baz=116,slow=4.0,SNR=5.7						
ARCES	**ARCESS Array B**	**144.54**	**344**	PKP	PKPdf	04 40 24.4	-0.4
	2.4nm,0.7s,baz=64,slow=3.6,SNR=10.0						
FINES	**FINESS Array B**	**150.15**	**333**	PKPbc	PKPbc	04 40 39.3	0.0
	0.6nm,0.5s,baz=5.2,slow=4.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**155.48**	**190**	PKPbc	PKPdf	04 40 54.5	+11
	0.1nm,0.3s,baz=156,slow=2.7,SNR=8.7						
TORD				PKPab	PKPab	04 41 11.6	+2.2
	0.4nm,0.4s,baz=157,slow=4.2,SNR=16						

*IDC **28** 04:26:14.8±6.4, 30.°57N×103.°69E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/24, mbtmp3.9/6, MS3.1/4, Ms1 3.1/4, ms1mx2.6/33, Error ellipse: s-maj=158.4km s-min=30.1km az=12.0*

*NEIC **28** 04:26:21.5±1.9, 31.°40N×103.°86E, h10km, mb4.0/2, Error ellipse: s-maj=60.5km s-min=11.4km az=205.0*

*BJI **28** 04:26:22.1, 31.°25N×104.°15E, h14km, mb3.7/1, ML3.9/17, Ms3.7/4, Ms7 3.5/5*

ISC 28 04:26:19.1±0.9, 31.°35N±0.°03×104.°06E±0.°05, h1km±6km, n23, σ0°99/30, mb3.8/8, MS2.9/4, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.51**	**211**	Sg	**Sg**	**04 26 36.3**	**+0.9**
CD2				smax			
	comp=N,7μm,0.7s						
LZH	**Lanzhou**	**4.73**	**358**	*e*Pg	**Pg**	**04 27 49.8**	**0.0**
LZH				Sg	**Sg**	**04 28 50.3**	**-0.9**
LZH				smax			
	comp=N,130nm,1.0s						
LZH				smax			
	comp=E,100nm,0.8s						
LZH				LR	LR		
	comp=E,780nm,7.1s						
LZH				LR	LR		
	comp=Z,890nm,8.2s						
ENH	**Enshi**	**4.79**	**102**	*e*Pn	**Pn**	**04 27 36.8**	**+4.4**
ENH				*e*Sg	**Sg**	**04 28 53.0**	**0.0**
XAN	**Xi'an**	**4.90**	**55**	Pn	**Pn**	**04 27 35.5**	**+1.6**
XAN				Pg	**Pg**	**04 27 52.3**	**-0.7**
XAN				Sn	**Sn**	**04 28 36.5**	**+5.2**
XAN				Sg	**Sg**	**04 28 56.8**	**+0.3**
XAN				smax			
	comp=N,290nm,0.9s						
XAN				smax			
	comp=E,150nm,0.9s						
XAN				LR	LR		
	comp=Z,100nm,6.9s						
GYA	**Guiyang**	**5.38**	**154**	Pg	**Pb**	**04 27 49.5**	**-4.4**
GYA				Sg	**Sb**	**04 28 53.5**	**-5.4**
GYA				smax			
	comp=N,180nm,1.0s						
GYA				smax			
	comp=E,160nm,1.0s						
KMI	**Kunming**	**6.31**	**191**	Pn	**Pn**	**04 27 50.3**	**-3.0**
KMI				Sn	**Sn**	**04 29 05.5**	**-0.5**
KMI				smax			
	comp=N,21nm,1.3s						
KMI				smax			
	comp=E,19nm,1.4s						
KMI				LR	LR		
	comp=N,330nm,9.9s						
KMI				LR	LR		
	comp=E,490nm,7.2s						
KMI				LR	LR		
	comp=Z,360nm,9.5s						
GTA	**Gaotai**	**8.76**	**338**	*e*P	**Pn**	**04 28 33.8**	**+6.9**
GTA				pP		04 28 37.5	
GTA				sP		04 28 40.0	
GTA				S	**Sn**	**04 30 06.5**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				LR	LR		
	comp=N,270nm,10.5s						
GTA				LR	LR		
	comp=E,310nm,11.1s						
GTA				LR	LR		
	comp=Z,320nm,13.2s						
WHN	**Wuhan**	**8.87**	**93**	P	**Pn**	**04 28 23.0**	**-5.5**
WHN				S	**Sn**	**04 30 05.5**	**-3.6**
WHN				LR	LR		
	comp=N,620nm,2.6s						
WHN				LR	LR		
	comp=E,730nm,2.8s						
WHN				LR	LR		
	comp=Z,680nm,6.6s						
KSRS	**Korea Array**	**20.59**	**66**	P	**P**	**04 31 01.6**	**+2.2**
	comp=Z,3.5nm,0.9s,baz=254,slow=10,SNR=9.6						
KSRS				LR	LR	04 38 43.0	
	comp=Z,25nm,20.4s,MS2.6,baz=190,slow=35						
CN2	**Changchun**	**20.95**	**48**	*e*P	**P**	**04 31 07.0**	**+3.6**
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**	**04 31 22.5**	**-0.3**
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**04 31 23.2**	**+0.3**
	comp=Z,1.4nm,0.8s,mb3.6,baz=120,slow=9.6,SNR=15						
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**	**04 31 23.2**	**+0.3**
TKM2	**Tokmak 2**	**25.34**	**305**	*e*P	**P**	**04 31 47.0**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.6						
AAK	**Ala-Archa**	**26.04**	**304**	LR	LR	04 43 05.1	
	comp=Z,65nm,18.6s,MS3.2,baz=227,slow=38						
ZALV	**Zalesovo Beam**	**26.49**	**334**	P	**P**	**04 31 58.2**	**+0.5**
	comp=Z,1.4nm,0.6s,mb3.8,baz=130,slow=7.4,SNR=6.0						
ZALV				LR	LR	04 43 03.9	
	comp=Z,28nm,20.5s,MS2.8,baz=233,slow=37						
KURK	**Kurchatov**	**27.03**	**323**	P	**P**	**04 32 02.5**	**-0.1**
	comp=Z,1.2nm,0.2s,mb4.3,baz=126,slow=11,SNR=4.5						
KK31	**Karatay Array**	**28.99**	**303**	⇑Pn	**P**	**04 32 14.4**	**-5.9**
	comp=Z,0.2nm,0.2s,mb3.5,baz=222,slow=16,SNR=5.1						
KK31				⇓Lg		04 33 03.6	
	comp=Z,0.4nm,0.3s,baz=215,slow=28,SNR=6.0						
POO	**Poona**	**30.11**	**252**	*ex*	**P**	**04 32 31.0**	**+0.5**
BVAR	**Borovoye Array**	**32.58**	**322**	LR	LR	04 47 07.6	
	comp=Z,41nm,18.1s,MS3.2,baz=254,slow=38						
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**04 36 55.5**	**-1.3**
	comp=Z,0.7nm,0.9s,mb3.9,baz=78,slow=6.4,SNR=2.9						
COLA	**College**	**69.23**	**26**	*e*P	**P**	**04 37 27.6**	**+0.4**
	comp=Z,1.2nm,0.4s,mb4.5						
YKA	**Yellowknife Ar**	**81.47**	**17**	P	**P**	**04 38 38.1**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=329,slow=5.6,SNR=3.4						

*ISCJB **28** 04:30:49.3±0.7, 18.°88S±0.°06×122.°52E±0.°05, h10km, mb3.7/3, Error ellipse: s-maj=9.3km s-min=5.7km az=159.5*

*IDC **28** 04:30:49.8±1.3, 18.°74S×122.°29E, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.9/18, mbtmp4.1/6, ML3.6/3, Error ellipse: s-maj=29.9km s-min=16.9km az=13.0*

*AUST **28** 04:30:52.1, 18.°60S×122.°32E, h0km, ML4.7*

ISC 28 04:30:51.4±0.7, 18.°83S±0.°06×122.°45E±0.°05, h10km, n18, σ1°12/34, mb3.7/3, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**3.12**	**77**	*e*P	**Pn**	**04 31 41.2**	**+0.6**
FITZ				*e*S	**Sn**	**04 32 23.0**	**+5.1**
	185nm,0.3s						
FITZ	**Fitzroy Crossi**	**3.12**	**77**	Pn	**Pn**	**04 31 41.6**	**+1.0**
	5.4nm,0.3s,baz=262,slow=10,SNR=139						
FITZ				P*g*	**Pg**	**04 31 49.5**	**-1.6**
	16nm,0.3s,baz=250,slow=11,SNR=34						
FITZ				Sn	**Sn**	**04 32 20.1**	**+2.3**
	38nm,0.3s,baz=210,slow=20,SNR=7.4						
FITZ				Lg		04 32 32.3	
	40nm,0.3s,baz=5.6,slow=21,SNR=3.6						
MBWA	**Marble Bar**	**3.45**	**227**	*e*P	**Pn**	**04 31 46.0**	**+0.9**
MBWA				*e*S	**Sn**	**04 32 26.5**	**+0.4**
KNA	**Kununurra**	**6.77**	**64**	*e*P	**Pn**	**04 32 30.5**	**-0.3**
KNA				*e*S	**Sn**	**04 33 42.8**	**-5.2**
	39nm,0.3s						
MEEK	**Meekatharra**	**8.54**	**204**	*e*P	**Pn**	**04 32 57.1**	**+2.0**
MEEK				*e*S	**Sn**	**04 34 28.6**	**-2.9**
GIRL	**Giralia**	**8.57**	**242**	*e*P	**Pn**	**04 32 55.6**	**+0.1**
KAKA	**Kakadu**	**11.38**	**59**	*e*P	**Pn**	**04 33 23.5**	**-11**
KAKA				*e*S	**Sn**	**04 35 31.7**	**-10**
	22nm,0.3s						
ASAR	**Alice Springs**	**11.72**	**116**	Pn	**Pn**	**04 33 40.5**	**+1.8**
	1.4nm,0.3s,baz=292,slow=12,SNR=47						
ASAR				Sn	**Sn**	**04 35 49.2**	**-0.4**
	3.6nm,0.3s,baz=303,slow=24,SNR=9.3						
ASAR				Lg		04 37 09.4	
	1.5nm,0.3s,baz=285,slow=27,SNR=4.7						
MORW	**Morawa**	**11.75**	**209**	*e*P	**Pn**	**04 33 39.0**	**-0.1**
MORW				*e*S	**Sn**	**04 35 40.0**	**-10**
KMBL	**Kambalda**	**12.50**	**182**	*e*P	**Pn**	**04 33 49.3**	**0.0**
KMBL				*e*S	**Sn**	**04 36 01.7**	**-6.9**
	102nm,0.3s						
KLBR	**Kellerberrin**	**13.40**	**198**	*e*P	**Pn**	**04 34 01.9**	**+0.3**
KLBR				*e*S	**Sn**	**04 36 19.7**	**-11**
	24nm,0.2s						
NWAO	**Narrogin (SRO)**	**14.80**	**197**	*e*P	**Pn**	**04 34 19.8**	**-0.9**
NWAO				*e*S	**Sn**	**04 36 52.6**	**-12**
	294nm,0.6s						
NWAO	**Narrogin (SRO)**	**14.80**	**197**	Pn	**Pn**	**04 34 20.0**	**-0.7**
	2.3nm,0.3s,baz=18,slow=12,SNR=12						
NWAO				Sn	**Sn**	**04 36 56.3**	**-8.5**
	12nm,0.3s,baz=120,slow=14,SNR=9.2						
NWAO				Lg		04 38 31.0	
	3.9nm,0.3s,baz=104,slow=18,SNR=3.1						
BBOO	**Buckleboo**	**18.52**	**141**	*e*P	**Pn**	**04 35 08.1**	**0.0**
BBOO				*e*S	**Sn**	**04 38 27.1**	**-8.1**
	2.4nm,0.3s						
STKA	**Stephens Creek**	**21.60**	**131**	*e*P	**P**	**04 35 46.5**	**+5.0**
STKA				*e*S	**S**	**04 39 33.6**	**-7.1**
	2.3nm,0.7s						
STKA	**Stephens Creek**	**21.60**	**131**	P	**P**	**04 35 43.4**	**+2.0**
	2.0nm,0.3s,mb4.0,baz=299,slow=9.7,SNR=10.0						
STKA				S	**S**	**04 39 38.3**	**-2.4**
	5.2nm,0.8s,baz=241,slow=21,SNR=3.6						
MKAR	**Makanchi Array**	**74.67**	**333**	P	**P**	**04 42 30.6**	**-0.4**
	0.5nm,0.5s,mb3.7,baz=142,slow=7.6,SNR=8.9						
KURK	**Kurchatov**	**79.23**	**333**	P	**P**	**04 42 55.4**	**-1.1**
	0.3nm,0.5s,mb3.5,baz=150,slow=4.8,SNR=2.6						

CASC 28 04:48:16.5±3.1, 8.°39N×82.°97W, h5km, MD4.0, 3C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.33**	**323**	⇓*i*P	Pg	04 48 22.4	-0.5
ACR				*e*S	Sg	04 48 28.8	+1.7
BRU2	**Volcan**	**0.49**	**35**	⇓*i*P	Pg	04 48 26.9	+1.0
BRU2				*e*S	Sg	04 48 35.3	+3.0
TBS2		**0.51**	**38**	⇑*i*P	Pg	04 48 33.1	+6.8
TBS2				*e*S	Sg	04 48 41.7	+8.9
BAR1		**0.91**	**338**	⇑*e*P	Pg	04 48 32.7	-1.3
CNI	**Changuinola**	**1.11**	**24**	⇓*i*P	Pg	04 48 37.2	-0.6
BUS	**Buena Vista**	**1.39**	**326**	⇑*i*P	Pn	04 48 41.1	-1.5
BUS				*e*P		04 48 41.1	
QCR	**Quepos**	**1.56**	**311**	*e*P	Pn	04 48 43.4	-1.5
QCR				*e*S	Sn	04 49 06.2	+0.6
URSC	**Urasca**	**1.64**	**331**	*e*P	Pn	04 48 44.5	-1.6
URSC				*e*S	Sn	04 49 06.4	-1.1
LAJ	**Bijagual**	**1.85**	**322**	*e*P	Pn	04 48 50.7	+1.8
PRS1	**Puriscal**	**2.06**	**320**	*e*P	Pn	04 48 50.5	-1.3
CGA2	**Cerro Gallo 2**	**2.19**	**318**	⇓*e*P	Pn	04 48 54.3	+0.8
JCR	**Jicaral**	**2.56**	**305**	*e*P	Pn	04 48 58.9	+0.2
CHPA	**Chiripa**	**2.79**	**317**	*i* P	Pn	04 49 04.3	+2.4
CHPA				*i* S	Sn	04 49 42.9	+6.9
VCR	**Vista de Mar**	**3.14**	**303**	*e*P	Pn	04 49 06.9	+0.2
LIM1	**Limonal**	**3.21**	**316**	*i* P	Pn	04 49 09.5	+1.9
LIM1				*i* S	Sn	04 49 50.7	+4.4
NY14	**Universidad de**	**3.38**	**312**	*i* P	Pn	04 49 11.9	+2.0
LAPC	**Finca la Perla**	**3.39**	**314**	*i* P	Pn	04 49 11.5	+1.5
BUEV	**Buena Vista**	**3.39**	**315**	*i* P	Pn	04 49 11.5	+1.4

DJA 28 04:53:36, 1.°68S×99.°97E, h14km, MLv3.7/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.91**	**33**	P	Pb	04 53 53.3	-0.2
PDSI				S	Sb	04 54 06.0	+0.5
SISI	**Saibi**	**0.95**	**292**	P	Pb	04 53 54.3	+0.1
PPSI	**Pulau Pagai**	**1.08**	**178**	P	Pb	04 53 55.3	-1.1
PPI	**Padang Panjang**	**1.29**	**19**	P	Pn	04 53 59.0	-0.6
PPI				S	Sb	04 54 15.8	-0.7
SDSI	**Sungai Dareh**	**1.64**	**63**	P	Pn	04 54 04.9	+0.5
SDSI				S	Sn	04 54 26.4	+1.2
MNSI	**Mandailing Nat**	**2.49**	**351**	P	Pn	04 54 17.1	+1.0

CASC 28 05:09:26.8±1.5, 8.°39N×82.°94W, h4km, MD3.9, 3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.35**	**319**	⇑*e*P	Pg	05 09 33.6	+0.1
ACR				*e*S	Sg	05 09 39.8	+1.7
BRU2	**Volcan**	**0.47**	**31**	⇑*i*P	Pg	05 09 37.2	+1.3
BRU2				*e*S	Sg	05 09 44.8	+2.7
TBS2		**0.49**	**35**	⇓*i*P	Pg	05 09 43.3	+7.1
TBS2				*e*S	Sg	05 09 52.1	+9.5
CTCR	**Cotoan**	**0.54**	**19**	⇓*i*P	Pg	05 09 38.3	+1.2
BAR1		**0.93**	**337**	⇓*e*P	Pg	05 09 43.9	-0.7
CNI	**Changuinola**	**1.10**	**22**	⇑*i*P	Pg	05 09 47.8	-0.2
BUS	**Buena Vista**	**1.42**	**325**	*e*P	Pn	05 09 54.4	+1.1
QCR	**Quepos**	**1.59**	**310**	*e*P	Pn	05 09 55.6	-0.2
QCR				*e*S	Sn	05 10 16.9	+0.1
URSC	**Urasca**	**1.66**	**330**	*e*P	Pn	05 09 56.3	-0.5
LAJ	**Bijagual**	**1.88**	**322**	*e*P	Pn	05 10 02.4	+2.7
PRS1	**Puriscal**	**2.09**	**320**	*e*P	Pn	05 10 01.8	-0.8
PRS1				*e*S	Sn	05 10 28.2	-0.8
CGA2	**Cerro Gallo 2**	**2.21**	**317**	*e*P	Pn	05 10 05.8	+1.5
CGA2				*e*S	Sn	05 10 33.7	+1.6

*NEIC **28** 05:40:15.1, 15.°20N×92.°88W, h103km, MD3.7(MEX), After MEX.*

MEX 28 05:40:15.1±0.8, 15.°20N×92.°88W, h103km±8km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.60**	**327**	*i* P	Pn	05 40 30.9	-1.0
PCIG				*i* S	Sn	05 40 43.0	-1.5
THIG		**0.66**	**116**	*i* P	Pn	05 40 30.6	-1.8
THIG				*i* S	Sn	05 40 43.6	-1.9
CCIG	**Comitan**	**1.29**	**34**	*i* P	Pn	05 40 38.9	-0.1
CCIG				*i* S	Sn	05 40 56.0	-1.2
CCIG	**Comitan**	**1.29**	**34**	*i* P	Pn	05 40 38.9	-0.1
CCIG				*i* S	Sn	05 40 56.0	-1.2
SCX	**San Cristobal**	**1.54**	**9**	*e*P	Pn	05 40 41.0	-1.1
SCX				*i* S	Sn	05 41 02.1	-0.4
SCX	**San Cristobal**	**1.54**	**9**	*e*P	Pn	05 40 41.0	-1.1
SCX				*i* S	Sn	05 41 02.1	-0.4
TGIG		**1.58**	**352**	*i* P	Pn	05 40 41.3	-1.2
TGIG				*i* S	Sn	05 41 01.1	-2.3
HUIG	**Huatulco**	**3.16**	**281**	*e*P	Pn	05 41 02.8	-0.3
HUIG				*i* S	Sn	05 41 37.9	-2.2
HUIG	**Huatulco**	**3.16**	**281**	*e*P	Pn	05 41 02.8	-0.3
HUIG				*i* S	Sn	05 41 37.9	-2.2
VHO	**Vista Hermosa**	**4.14**	**297**	*e*P	Pn	05 41 14.5	-1.7
VHO				*i* S	Sn	05 42 03.2	-0.4
VHO	**Vista Hermosa**	**4.14**	**297**	*e*P	Pn	05 41 14.5	-1.7
VHO				*i* S	Sn	05 42 03.2	-0.4

*IDC **28** 05:59:54.9±30.0, 0.°38S×123.°78E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.6/20, mbtmp3.8/4, Error ellipse: s-maj=679.1km s-min=489.2km az=155.0*

*ISCJB **28** 06:00:25.3±0.8, 0.°4N±0.°2×121.°8E±0.°3, h185km±14km, mb3.6/4, Error ellipse: s-maj=60.4km s-min=30.0km az=152.6*

*DJA **28** 06:00:28, 0.°38N×121.°60E, h154km, MLv3.4/3*

ISC 28 06:00:26.6±0.8, 0.°4N±0.°2×121.°7E±0.°3, h176km±14km, n7, σ0°59/8, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.25**	**69**	P	**Pn**	**06 00 50.1**	**0.0**
APSI	**Ampana**	**1.29**	**183**	P	**Pn**	**06 00 56.2**	**-0.1**
LUWI	**Luwuk**	**1.77**	**143**	P	**Pn**	**06 01 01.4**	**+0.4**
LUWI				S	**Sn**	**06 01 27.4**	**-0.2**
MKAR	**Makanchi Array**	**57.61**	**329**	P	**P**	**06 09 58.9**	**+0.7**
	0.9nm,0.8s,mb3.7,baz=123,slow=8.1,SNR=6.1						
ZALV	**Zalesovo Beam**	**61.43**	**336**	P	**P**	**06 10 23.4**	**-0.8**
	0.4nm,0.4s,mb3.6,baz=133,slow=6.1,SNR=4.7						
KURK	**Kurchatov**	**62.00**	**331**	P	**P**	**06 10 28.0**	**0.0**
	0.7nm,0.8s,mb3.5,baz=134,slow=5.9,SNR=7.3						
BVAR	**Borovoye Array**	**67.49**	**329**	P	**P**	**06 11 03.5**	**0.0**
	0.3nm,0.4s,mb3.5,baz=137,slow=5.0,SNR=3.0						

MAN 28 06:17:33, 12.°45N×120.°67E, h10km, mb4.8, ML3.7, MS3.7, 2C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.44**	**88**	*e*P	Pg	06 17 42.3	+0.8
BUSP	**Coron**	**0.64**	**227**	*e*P	Pg	06 17 46.7	+1.3
BUSP				*e*S	Sg	06 17 53.6	-0.1
OTRP	**Odiongan**	**1.32**	**93**	*e*P	Pn	06 17 57.3	-0.2
OTRP				*e*S	Sb	06 18 16.3	+1.5
LUBP	**Lubang**	**1.35**	**342**	*e*P	Pn	06 17 56.3	-1.6
LUBP				*e*S	Sb	06 18 11.9	-3.8
BOAC	**Boac**	**1.52**	**48**	*e*P	Pn	06 18 00.3	0.0
CUYO	**Cuyo Island**	**1.62**	**168**	*e*P	Pn	06 18 01.3	-0.3
TGY	**Tagaytay City**	**1.67**	**9**	⇑*i*P	Pn	06 18 02.9	+0.6
ENPP	**El Nido**	**1.73**	**225**	*e*P	Pn	06 18 03.5	+0.3
AUQP	**San Andres**	**2.14**	**66**	*e*P	Pn	06 18 12.1	+3.3
RCP	**Roxas**	**2.21**	**113**	⇓*e*P	Pn	06 18 12.5	+2.8
GQP	**Quinayangan**	**2.26**	**50**	⇓*e*P	Pn	06 18 11.6	+1.2
SNPH	**Sibulan**	**3.98**	**141**	⇑*e*P	Pn	06 18 25.6	-8.5
SNPH				*e*S	Sn	06 19 22.1	+1.2

*NEIC **28** 06:19:14.3, 17.°50N×94.°81W, h155km, MD3.9(MEX), After MEX.*

MEX 28 06:19:13.9±0.9, 17.°50N×94.°81W, h160km±16km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.76**	**114**	*i* P	Pn	06 19 46.4	-0.7
TGIG			

4.3nm,0.5s,mb4.1,baz=343,slow=11,SNR=3.9
RPZ Rata Peaks 31.30 202 P **P 06 27 19.2 0.0**
6.0nm,1.0s,mb4.4,baz=308,slow=14,SNR=2.6
STKA Stephens Creek 44.02 240 P **P 06 29 06.6 -0.2**
2.2nm,0.6s,mb4.1,baz=69,slow=6.2,SNR=6.2
STKA LR LR 06 46 00.1
comp=Z,74nm,21.7s,MS3.6,baz=26,slow=34
WRAB Tennant Creek 49.75 257 P **P 06 29 51.3 -0.5**
6.8nm,1.2s,mb4.5
ASAR Alice Springs 50.04 252 P **P 06 29 53.4 -0.6**
7.5nm,0.8s,mb4.8,baz=84,slow=8.5,SNR=43
ASAR pP pP 06 30 08.5 +4.0
3.4nm,0.7s,baz=83,slow=8.4,SNR=7.2
PETK Petropavlovsk- 72.42 342 P **P 06 32 26.0 +1.1**
2.6nm,0.8s,mb4.2,baz=141,slow=7.3,SNR=3.7
NVAR Mina Array Bea 74.28 42 P **P 06 32 37.0 +0.8**
0.4nm,0.6s,mb3.5,baz=238,slow=10.0,SNR=4.6
KSRS Korea Array 75.94 316 LR LR 06 59 49.3
comp=Z,13nm,20.9s,MS3.2,baz=216,slow=31
TXAR Lajitas Array 80.62 56 P **P 06 33 11.4 -0.5**
1.0nm,1.0s,mb3.7,baz=205,slow=5.5,SNR=7.2
MCMT McKenzie Canyo 81.19 39 *e*P **P 06 33 15.4 +0.8**
0.3nm,0.5s,mb3.5
PDAR Pinedale Array 82.22 42 P **P 06 33 20.2 +0.1**
0.8nm,0.8s,mb3.7,baz=227,slow=3.5,SNR=8.4
YKA Yellowknife Ar 89.98 23 P **P 06 33 57.3 -0.5**
0.4nm,0.9s,mb3.8,baz=241,slow=4.8,SNR=4.5
YKA LR LR 07 05 47.8
comp=Z,3.5nm,19.7s,MS2.8,baz=200,slow=30
BVAR Borovoye Array 117.66 322 PKP PKPdf 06 39 44.7 0.0
0.2nm,0.3s,baz=180,slow=2.0,SNR=2.8
KOLS Kolonicke sedl 143.96 342 *e*P PKPdf 06 40 42.2 +8.0
KOLS Kolonicke sedl 143.96 342 *e*PKP PKPdf 06 40 42.1 +7.9
BURAR Bucovina Array 144.15 338 ⇓*i*P PKPdf 06 40 44.3 +10
KECS Kecovo 144.88 344 *e*P PKPdf 06 40 36.2 +0.4
KECS Kecovo 144.88 344 *e*PKP PKPdf 06 40 36.2 +0.4
VYHS Vyhne 145.29 346 *e*P PKPbc 06 40 37.2 +0.9
VYHS Vyhne 145.29 346 *e*PKP PKPdf 06 40 37.2 +0.6
GRA1 Grafenberg Arr 145.40 355 *e*PKP PKPdf 06 40 37.4 +0.7
GRF Grafenberg Arr 145.40 355 *e*PKP PKPdf 06 40 37.4 +0.7
HARR Harsova 145.45 333 ⇑*i*P PKPdf 06 40 38.2 +1.2
MLR Muntele Rosu 145.65 335 PKPbc PKPbc 06 40 38.6 +1.1
6.9nm,0.8s,baz=194,slow=1.6,SNR=11
MLR Muntele Rosu 145.65 335 ⇓*i*P PKPbc 06 40 39.5 +1.9
DRGR 145.72 340 ⇑*i*P PKPdf 06 40 37.9 +0.5
BR131 Keskin Array S 145.93 321 *e*PKPdf PKPdf 06 40 39.1 +1.1
BRTR Keskin Array B 145.93 321 PKPbc PKPbc 06 40 38.8 +0.1
3.2nm,1.0s,baz=90,slow=1.2,SNR=11
GERES GERESS Array B 145.94 351 PKPbc PKPbc 06 40 37.6 -0.8
0.9nm,0.5s,baz=29,slow=3.0,SNR=10.0
BZS Buzias 147.12 340 ⇓*i*P PKPab 06 40 42.5 -1.0
PKSM Moragy 147.46 344 ⇓*i*P PKPdf 06 40 36.7 -3.6

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*NNC **28** 06:47:46.6±5.0, 40°.13N×77°.93E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=46.6km s-min=30.9km az=15.0
*ISCJB **28** 06:47:54.0±1.4, 40°.64N±0°.07×77°.9E±0°.1, h10km, Error*
ellipse: s-maj=12.4km s-min=8.9km az=22.9
ISC 28 06:47:54.4±1.4, 40°.57N±0°.07×77°.9E±0°.1, h10km, n13,
σ1§06/15, 5C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.79**	**235**	Pn	**Pn**	**06 48 21.5**	**-3.9**
KSH				Sn	**Sn**	**06 48 48.8**	**+0.6**
KSH				smax			
	comp=N,600nm,0.6s						
KSH				smax			
	comp=E,610nm,0.5s						
ULHL	**Ulahol**	**2.08**	**324**	P	**Pn**	**06 48 30.4**	**+1.1**
	SNR=26						
KZA	**Kyzart**	**2.48**	**308**	P	**Pn**	**06 48 35.0**	**+0.1**
	SNR=78						
KNDC	**Almaty**	**2.73**	**346**	⇑Pg	**Pg**	**06 48 44.9**	**-1.9**
	comp=E,36nm,0.5s						
KNDC				⇑Lg		06 49 27.7	
	comp=E,130nm,0.8s						
TKM2	**Tokmak 2**	**2.90**	**325**	⇑Pn	**Pn**	**06 48 41.1**	**+0.5**
	comp=E,2.5nm,0.5s						
TKM2				⇑Pg	**Pg**	**06 48 45.7**	**-4.3**
	comp=E,10nm,0.5s						
TKM2				⇓Lg		06 49 29.4	
	comp=E,66nm,0.8s						
TKM2	**Tokmak 2**	**2.90**	**325**	P	**Pn**	**06 48 42.0**	**+1.4**
	SNR=16						
UCH	**Uchtor**	**3.02**	**304**	P	**Pn**	**06 48 41.1**	**-1.1**
	SNR=15						
KBK	**Karagaybulak**	**3.02**	**315**	P	**Pn**	**06 48 46.1**	**+3.8**
	SNR=8.4						
CHMS	**Chumysh**	**3.37**	**317**	P	**Sg**	**06 49 43.4**	**+0.9**
	SNR=7.9						
AML	**Almayashu**	**3.51**	**298**	P	**Pn**	**06 48 48.0**	**-1.0**
	SNR=20						
USP	**Ospenovka**	**3.69**	**318**	P	**Pb**	**06 48 59.5**	**0.0**
	SNR=14						
KK31	**Karatay Array**	**6.05**	**297**	⇑Pg	**Pb**	**06 49 39.2**	**-0.7**
	comp=E,0.7nm,0.5s,baz=132,slow=16,SNR=6.7						
KK31				⇓Lg		06 51 01.4	
	comp=E,1.8nm,0.5s,baz=124,slow=28,SNR=3.5						
MK31	**Makanchi Array**	**7.00**	**26**	Pn	**Pn**	**06 49 37.8**	**+0.9**
	comp=E,0.3nm,0.5s,baz=195,slow=14,SNR=9.4						
MK31				⇓Lg		06 51 37.1	
	comp=E,0.7nm,0.5s						

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*ISCJB **28** 07:31:41.1±0.8, 38°.73N±0°.04×43°.28E±0°.07, h10km±6km,*
Error ellipse: s-maj=9.9km s-min=6.5km az=165.0
*CSEM **28** 07:31:41.4±0.1, 38°.72N×43°.25E, h2km, MD2.7, Error*
ellipse: s-maj=3.1km s-min=2.5km az=77.0
*DDA **28** 07:31:41.4, 38°.66N×43°.27E, h7km±4km, Md2.8*
*ISK **28** 07:31:41.3, 38°.72N×43°.28E, h7km, MD2.7*
ISC 28 07:31:41.4±0.8, 38°.72N±0°.04×43°.28E±0°.06, h11km±6km,
n16, σ0§83/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**146**	PG	**Pg**	**07 31 44.9**	**+0.1**
VANB				*e*SG	**Sg**	**07 31 47.5**	**+0.3**
VANB	**Van**	**0.15**	**146**	*i* Pg	**Pg**	**07 31 44.9**	**+0.1**
VANB				*e*Sg	**Sg**	**07 31 47.6**	**+0.4**
TVAN	**Van**	**0.21**	**153**	*i* P	**Pg**	**07 31 45.2**	**-0.8**
TVAN				*i* S	**Sg**	**07 31 48.0**	**-0.9**
TVAN	**Van**	**0.21**	**153**	*i* P	**Pg**	**07 31 45.2**	**-0.7**
TVAN				*i* S	**Sg**	**07 31 48.0**	**-1.0**
VANT	**Van**	**0.30**	**183**	*e*PG	**Pg**	**07 31 47.7**	**+0.3**
VANT				*e*SG	**Sg**	**07 31 52.4**	**+0.9**
VANT	**Van**	**0.30**	**183**	*e*Pg	**Pg**	**07 31 47.7**	**+0.3**
VANT				*e*Sg	**Sg**	**07 31 52.4**	**+1.0**
CLDR	**Caldiran**	**0.65**	**49**	*e*PG	**Pg**	**07 31 54.5**	**+0.4**
CLDR	**Caldiran**	**0.65**	**49**	*e*Pg	**Pg**	**07 31 54.5**	**+0.4**
TATV	**Tatvan**	**0.82**	**256**	*i* P	**Pg**	**07 31 56.8**	**-0.5**
TATV				*i* S	**Sg**	**07 32 08.0**	**0.0**
TATV	**Tatvan**	**0.82**	**256**	*i* P	**Pg**	**07 31 56.8**	**-0.5**
TATV				*i* S	**Sg**	**07 32 08.0**	**0.0**
AGRB	**Hanur-Agry**	**0.89**	**345**	*e*PG	**Pg**	**07 31 58.7**	**+0.2**
AGRB	**Hanur-Agry**	**0.89**	**345**	*e*Pg	**Pg**	**07 31 58.7**	**+0.2**
HAKT	**HAKKARI**	**1.21**	**164**	*i* P	**Pn**	**07 32 01.7**	**-2.4**
HAKT				*i* S	**Sb**	**07 32 20.1**	**+0.4**
HAKT	**HAKKARI**	**1.21**	**164**	*i* P	**Pn**	**07 32 01.7**	**-2.4**
HAKT				*i* S	**Sb**	**07 32 20.1**	**+0.4**
CUKT	**Cukurca**	**1.49**	**170**	*e*PN	**Pn**	**07 32 09.3**	**+1.2**
CUKT	**Cukurca**	**1.49**	**170**	*e*Pn	**Pn**	**07 32 09.3**	**+1.3**

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*NIED **28** 07:44:00.24°.30N×125°.20E, h26km, Mw4.2 Best double*
couple: M0=2.07000×10^15 NP1:φs=183.00000°, δ90.00000°,
λ-61.00000°. NP2:φs=273.00000°, δ29.00000°,
λ-180.00000°.
*ISCJB **28** 07:44:28.3±0.7, 24°.23N±0°.05×125°.33E±0°.04, h35km±6km,*
mb3.9/15, MS3.3/6, Error ellipse: s-maj=9.2km
s-min=4.4km az=152.2
*IDC **28** 07:44:28.8±0.8, 24°.34N×125°.40E, h26km±4km, mb3.7/12,*
mb1 3.9/13, mb1mx3.8/24, mbtmp3.8/13, ML3.3/1, MS3.3/8,
Ms1 3.4/8, ms1mx3.0/28, Error ellipse: s-maj=25.7km
s-min=18.0km az=62.0
*NEIC **28** 07:44:28.5±3.6, 24°.24N×125°.21E, h20km±23km, mb4.5/3,*
MW4.1(NIED), Error ellipse: s-maj=12.0km s-min=8.7km
az=152.0
NEIC Recorded [1 JMA] on Miyako-jima.
*JMA **28** 07:44:29.6±0.1, 24°.28N×125°.25E, h30km±4km, M4.3*
JMA Felt I J1.

ISC 28 07:44:28.3±1.1, 24°.21N±0°.05×125°.29E±0°.04, h21km±7km,
h28km±2.0km: pP-P, n48, σ0§93/53, mb3.9/15, MS3.3/6,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.56**	**11**	P	**Pb**	**07 44 39.9**	**+0.5**
JOGS				S	**Sb**	**07 44 47.7**	**+0.8**
JMJ	**Miyako jima 2**	**0.60**	**0**	P	**Pb**	**07 44 40.3**	**+0.2**
JMJ				*e*S	**Sb**	**07 44 48.0**	**-0.2**
JTJ	**Tarama**	**0.69**	**309**	P	**Pb**	**07 44 41.5**	**-0.1**
JTJ				S	**Sb**	**07 44 50.0**	**-0.7**
JIJ	**Ishigaki jima**	**1.06**	**278**	P	**Pn**	**07 44 47.7**	**-0.2**
JIJ				*e*S	**Sb**	**07 45 01.3**	**-0.1**
JKRS	**Kuro-shima**	**1.17**	**272**	P	**Pn**	**07 44 50.3**	**+0.8**
JKRS				*e*S	**Sb**	**07 45 04.8**	**+0.2**
HATJ	**Hateruma jima**	**1.37**	**264**	P	**Pn**	**07 44 52.7**	**+0.5**
HATJ				*e*S	**Sn**	**07 45 09.7**	**0.0**
IRIF	**Iriomote-Funau**	**1.43**	**275**	P	**Pn**	**07 44 53.7**	**+0.6**
IRIF				*e*S	**Sn**	**07 45 11.3**	**0.0**
YOJ	**Yonaguni jima**	**2.10**	**277**	P	**Pn**	**07 45 03.3**	**+1.1**
JAGN	**Aguni-jima**	**2.95**	**36**	P	**Pn**	**07 45 15.2**	**+1.2**
NACB	**Ningnanchiao**	**3.38**	**270**	*e*Pn	**Pn**	**07 45 19.6**	**-0.3**
JIH	**Iheya**	**3.71**	**40**	P	**Pn**	**07 45 24.1**	**-0.2**
JOW	**Kunigami**	**3.75**	**45**	P	**Pn**	**07 45 24.6**	**-0.4**
JOW	**Kunigami**	**3.75**	**45**	Pn	**Pn**	**07 45 24.7**	**-0.3**
	5.2nm,0.3s,baz=180,slow=16,SNR=6.3						
JOW				Sn	**Sn**	**07 46 09.6**	**+1.1**
	9.5nm,0.3s,baz=296,slow=11,SNR=4.4						
JOW	**Kunigami**	**3.75**	**45**	Pn	**Pn**	**07 45 24.7**	**-0.3**
JOW				Sn	**Sn**	**07 46 09.6**	**+1.1**
SSLB	**Suanglung**	**3.99**	**265**	*e*Pn	**Pn**	**07 45 27.8**	**-0.5**
TWG	**Pinlang**	**4.11**	**251**	*e*Pn	**Pn**	**07 45 28.5**	**-1.5**
TPUB	**Ta-pu**	**4.37**	**259**	*e*Pn	**Pn**	**07 45 33.6**	**+0.1**
JTK	**Tokunoshima**	**4.85**	**42**	P	**Pn**	**07 45 38.5**	**-1.5**
JMZ	**Minamidaito**	**5.61**	**72**	P	**Pn**	**07 45 48.3**	**-2.2**
JAM	**Amami Oshima**	**5.70**	**42**	P	**Pn**	**07 45 49.8**	**-1.9**
KSRS	**Korea Array**	**13.39**	**9**	**Pn**	**Pn**	**07 47 37.4**	**+0.3**
	0.2nm,0.3s,baz=252,slow=9.8,SNR=5.3						
KSRS				LR	LR	07 52 55.2	
	comp=Z,93nm,19.5s,baz=190,slow=38						
CBIJ	**Chichi jima**	**15.50**	**76**	LR	LR	07 52 44.6	
	comp=Z,104nm,22.0s,baz=262,slow=32						
MJAR	**Matsushiro Arr**	**16.57**	**39**	Pn	**Pn**	**07 48 21.2**	**+1.9**
	0.3nm,0.3s,baz=234,slow=11,SNR=5.2						
GUMO	**Guam**	**21.29**	**116**	LR	LR	07 55 51.4	
	comp=Z,66nm,18.5s,MS3.0,baz=313,slow=32						
CMAR	**Chiang Mai Arr**	**25.18**	**262**	P	**P**	**07 49 52.9**	**+0.4**
	1.2nm,0.5s,mb3.7,baz=13,slow=9.5,SNR=6.1						
CMAR				LR	LR	07 59 21.2	
	comp=Z,96nm,18.6s,MS3.3,baz=233,slow=35						
CMAR	**Chiang Mai Arr**	**25.18**	**262**	P	**P**	**07 49 52.9**	**+0.4**
CMAR				LR	LR	07 59 21.2	
SONM	**Songino Array**	**27.95**	**332**	LR	LR	08 03 00.6	
	comp=Z,195nm,18.3s,MS3.7,baz=72,slow=40						
PETK	**Petropavlovsk-**	**37.80**	**32**	LR	LR	08 08 27.6	
	comp=Z,26nm,18.2s,MS3.1,baz=315,slow=38						
MK31	**Makanchi Array**	**40.97**	**314**	P	**P**	**07 52 08.5**	**-1.0**
MKAR	**Makanchi Array**	**40.97**	**314**	P	**P**	**07 52 08.4**	**-1.1**
	0.9nm,0.4s,mb3.8,baz=96,slow=9.9,SNR=17						
MKAR				pP	pP	07 52 18.4	+2.5
	2.1nm,0.7s,baz=96,slow=10,SNR=9.7						
ZALV	**Zalesovo Beam**	**42.31**	**325**	P	**P**	**07 52 18.8**	**-1.6**
	1.2nm,0.4s,mb3.9,baz=113,slow=9.4,SNR=4.0						
ZALV				pP	pP	07 52 27.4	+0.5
	1.0nm,0.3s,baz=120,slow=7.4,SNR=2.8						
ZALV				LR	LR	08 11 53.5	
	comp=Z,32nm,19.2s,MS3.2,baz=43,slow=39						
ZALV	**Zalesovo Beam**	**42.31**	**325**	P	**P**	**07 52 18.8**	**-1.6**
ZALV				pP	pP	07 52 27.4	+0.5
ZALV				LR	LR	08 11 53.5	
KURK	**Kurchatov**	**44.51**	**319**	P	**P**	**07 52 37.2**	**-1.0**
	0.7nm,0.5s,mb3.7,baz=110,slow=8.5,SNR=3.8						
TKM2	**Tokmak 2**	**44.72**	**307**	*e*P	**P**	**07 52 40.6**	**+0.6**
	5.1nm,0.7s,mb4.5						
WRAB	**Tennant Creek**	**44.76**	**168**	*e*P	**P**	**07 52 41.2**	**+0.8**
UCH	**Uchtor**	**45.42**	**306**	*e*P	**P**	**07 52 47.3**	**+1.7**
	7.0nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**48.32**	**169**	P	**P**	**07 53 09.4**	**+1.0**
	1.4nm,0.8s,mb4.1,baz=354,slow=14,SNR=12						
BVAR	**Borovoye Array**	**50.05**	**320**	P	**P**	**07 53 21.4**	**+0.1**
	0.3nm,0.3s,mb3.8,baz=105,slow=7.1,SNR=2.2						
ABKAR	**Akbulak array**	**56.11**	**314**	*e*P	**P**	**07 54 05.6**	**-0.4**
	2.6nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**57.91**	**164**	P	**P**	**07 54 18.6**	**-0.3**
	2.1nm,0.9s,mb4.2,baz=39,slow=4.5,SNR=4.7						
BPAW	**Bear Paw Mtn.**	**65.78**	**29**	*e*P	**P**	**07 55 14.9**	**+3.4**
FINES	**FINESS Array B**	**73.30**	**330**	P	**P**	**07 55 57.1**	**-0.8**
	1.0nm,0.6s,mb3.9,baz=57,slow=7.0,SNR=4.6						
FINES				pP	pP	07 56 05.0	+0.3
	2.1nm,0.7s,baz=126,slow=9.7,SNR=3.4						
BRTR	**Keskin Array B**	**76.16**	**307**	P	**P**	**07 56 15.6**	**+0.7**
	0.4nm,0.5s,mb3.6,baz=97,slow=4.2,SNR=2.7						
BRTR				pP	pP	07 56 24.7	+2.9
	3.2nm,0.9s,baz=96,slow=5.0,SNR=12						
NB2	**NORSAR Subarra**	**79.92**	**333**	P	**P**	**07 56 35.6**	**+0.2**
	comp=Z,5.0nm,1.0s,mb4.4,baz=54,slow=5.9						
NOA	**NORSAR Array B**	**79.92**	**333**	P	**P**	**07 56 35.2**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=57,slow=5.5,SNR=2.5						
NOA				pP	pP	07 56 41.4	-0.8
	comp=Z,2.9nm,1.0s,baz=56,slow=5.5,SNR=6.0						
NOA				LR	LR	08 36 02.6	
	comp=Z,20nm,18.1s,MS3.5,baz=345,slow=39						
YKA	**Yellowknife Ar**	**81.46**	**24**	P	**P**	**07 56 42.5**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=312,slow=4.6,SNR=3.0						
YKA				pP	pP	07 56 50.2	-0.2
	comp=Z,0.6nm,0.8s,baz=312,slow=4.7,SNR=4.6						
YKA	**Yellowknife Ar**	**81.46**	**24**	P	**P**	**07 56 42.5**	**-1.1**
YKA				pP	pP	07 56 50.2	-0.2
GERES	**GERESS Array B**	**85.17**	**322**	P	**P**	**07 57 04.2**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.8,baz=96,slow=9.0,SNR=4.5						

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*NEIC **28** 07:47:13.9, 43°.96N×19°.38E, h6km, ML2.6(PDG), After*
PDG.
*PDG **28** 07:47:13.9±0.4, 43°.96N×19°.38E, h6km±1km, MD2.7/1,*
ML2.6/10, Error ellipse: s-maj=0.7km s-min=1.8km az=0.0
*ISCJB **28** 07:47:14.1±0.4, 43°.95N±0°.02×19°.37E±0°.03, h9km±3km,*
Error ellipse: s-maj=3.7km s-min=2.4km az=26.0
*CSEM **28** 07:47:14.3±0.2, 43°.94N×19°.37E, h2km, ML3.0, Error*
ellipse: s-maj=4.3km s-min=2.9km az=115.0
*BEO **28** 07:47:15.1±0.3, 43°.89N×19°.36E, h7km±2km, ML3.0/11*
ISC 28 07:47:15.0±0.3, 43°.95N±0°.02×19°.37E±0°.03, h11km±3km,
n56, σ1§19/102, 13C-29D, Northwestern Balkan
Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBLS	**Lazići**	**0.09**	**163**	⇓*i*Pg	**Pg**	**07 47 16.3**	**-1.2**
BBLS				*i* Sg	**Sg**	**07 47 17.7**	**-1.6**
BBLS	**Lazići**	**0.09**	**163**	⇓*i*Pg	**Pg**	**07 47 16.3**	**-1.2**
BBLS				*i* Sg	**Sg**	**07 47 17.7**	**-1.6**
DIVS	**Divibare**	**0.47**	**71**	⇓*i*Pg	**Pg**	**07 47 24.5**	**+0.2**
DIVS				*i* Sg	**Sg**	**07 47 31.6**	**+1.1**
DIVS	**Divibare**	**0.47**	**71**	⇓*i*Pg	**Pg**	**07 47 24.5**	**+0.2**
PLE	**Pljevlja**	**0.62**	**178**	⇓*i*Pg	**Pg**	**07 47 26.0**	**-1.0**
PLE				*e*Sg	**Sg**	**07 47 34.9**	**-0.2**
PLE	**Pljevlja**	**0.62**	**178**	⇓*i*Pg	**Pg**	**07 47 26.0**	**-1.0**
PLE				*e*Sg	**Sg**	**07 47 34.9**	**-0.2**
TRUS	**Trudelj**	**0.80**	**69**	⇓*e*Pg	**Pg**	**07 47 29.6**	**-0.8**
TRUS				*i* Sg	**Sg**	**07 47 42.3**	**+1.6**
TRUS	**Trudelj**	**0.80**	**69**	⇓*e*Pg	**Pg**	**07 47 29.6**	**-0.8**
TRUS				*i* Sg	**Sg**	**07 47 42.3**	**+1.6**
SJES	**Sjenica**	**0.81**	**147**	⇓*i*Pg	**Pg**	**07 47 29.3**	**-1.4**
SJES				*i* Sg	**Sg**	**07 47 41.4**	**0.0**
UPM	**Unac-Piva**	**0.82**	**204**	⇑*i*Pg	**Pg**	**07 47 29.4**	**-1.4**
UPM				*e*Sg	**Sg**	**07 47 41.9**	**+0.5**
UPM	**Unac-Piva**	**0.82**	**204**	⇑*i*Pg	**Pg**	**07 47 29.4**	**-1.4**
UPM				*e*Sg	**Sg**	**07 47 41.9**	**+0.5**
GRUS	**Gruza**	**0.97**	**93**	*e*Pg	**Pg**	**07 47 32.3**	**-1.4**
GRUS				*i* Sg	**Sg**	**07 47 46.2**	**-0.2**
GRUS	**Gruza**	**0.97**	**93**	*e*Pg	**Pg**	**07 47 32.3**	**-1.4**
GRUS				*i* Sg	**Sg**	**07 47 46.2**	**-0.2**
BEY	**Berane**	**1.14**	**160**	⇑*i*Pg	**Pg**	**07 47 35.2**	**-1.8**
BEY				*e*Sg	**Sg**	**07 47 52.6**	**+0.8**
IVA	**Berane**	**1.14**	**160**	⇑*i*Pg	**Pg**	**07 47 35.2**	**-1.8**
IVA				*e*Sg	**Sg**	**07 47 52.6**	**+0.8**
IVA	**Berane**	**1.14**	**160**	⇑*i*Pg	**Pg**	**07 47 35.2**	**-1.8**
IVA				*e*Sg	**Sg**	**07 47 52.6**	**+0.8**
NKY	**Niksic**	**1.17**	**194**	⇓*i*Pg	**Pn**	**07 47 35.6**	**-1.7**
NKY				*e*Sg	**Sg**	**07 47 54.1**	**+1.5**
NKY	**Niksic**	**1.17**	**194**	⇓*i*Pg	**Pn**	**07 47 35.6**	**-1.7**
NKY				*e*Sg	**Sg**	**07 47 54.1**	**+1.5**
BRY	**Bratogost**	**1.21**	**210**	⇓*i*Pg	**Pn**	**07 47 36.0**	**-1.9**
BRY				*e*Sg	**Sg**	**07 47 55.4**	**+1.5**
BRY	**Bratogost**	**1.21**	**210**	⇓*i*Pg	**Pn**	**07 47 36.0**	**-1.9**
BRY				*e*Sg	**Sg**	**07 47 55.4**	**+1.5**
FGSL	**Fruska Gora**	**1.25**	**14**	⇓*i*Pg	**Pg**	**07 47 38.5**	**-0.5**
FGSL				*i* Sg	**Sg**	**07 47 57.0**	**+1.8**
FRGS	**Fruska Gora**	**1.25**	**14**	⇓*i*Pg	**Pg**	**07 47 38.5**	**-0.5**
FRGS				*i* Sg	**Sg**	**07 47 57.0**	**+1.8**
PVY	**Plav**	**1.42**	**162**	⇓*i*Pg	**Pn**	**07 47 40.3**	**-0.5**
PVY				*e*Sg	**Sg**	**07 48 02.4**	**+1.6**
PVY	**Plav**	**1.42**	**162**	⇓*i*Pg	**Pn**	**07 47 40.3**	**-0.5**
PVY				*e*Sg	**Sg**	**07 48 02.4**	**+1.6**
TREB	**Trebinje**	**1.44**	**212**	*i* Pg	**Pn**	**07 47 39.5**	**-1.5**
TREB				*i* Sg	**Sg**	**07 47 58.9**	**-2.4**
PDG	**Podgorica**	**1.52**	**183**	⇓*i*Pg	**Pn**	**07 47 42.4**	**+0.3**
PDG				*e*Sg	**Sg**	**07 48 05.3**	**+1.4**
TTG	**Podgorica**	**1.52**	**183**	⇓*i*Pg	**Pn**	**07 47 42.4**	**+0.3**
TTG				*e*Sg	**Sg**	**07 48 05.3**	**+1.4**
TTG	**Podgorica**	**1.52**	**183**	⇓*i*Pg	**Pn**	**07 47 42.4**	**+0.3**
TTG				*e*Sg	**Sg**	**07 48 05.3**	**+1.4**
STON	**Ston**	**1.63**	**229**	*e*Pn	**Pn**	**07 47 43.9**	**+0.3**
STON				Sn	**Sn**	**07 48 05.4**	**+0.9**
STON	**Ston**	**1.63**	**229**	*e*Pn	**Pn**	**07 47 43.9**	**+0.3**
STON				Sn	**Sn**	**07 48 05.4**	**+0.9**
HCY	**Herceg Novi**	**1.63**	**203**	⇓*i*Pn	**Pn**	**07 47 45.6**	**+1.9**
HCY				*e*Sn	**Sg**	**07 48 08.6**	**+1.2**
HCY	**Herceg Novi**	**1.63**	**203**	⇓*i*Pn	**Pn**	**07 47 45.6**	**+1.9**
HCY				*e*Sn	**Sg**	**07 48 08.6**	**+1.2**
BUM	**Brajici-Budva**	**1.68**	**192**	⇓*i*Pn	**Pn**	**07 47 44.8**	**+0.4**
BUM				*e*Sn	**Sg**	**07 48 10.3**	**+1.2**
BUM	**Brajici-Budva**	**1.68**	**192**	⇓*i*Pn	**Pn**	**07 47 44.8**	**+0.4**
BUM				*e*Sn	**Sg**	**07 48 10.3**	**+1.2**
BLY	**Banja Luka**	**1.76**	**298**	⇑*i*Pn	**Pn**	**07 47 46.5**	**+1.1**
BLY				*i* Sg	**Sg**	**07 48 12.2**	**+0.6**
BLY	**Banja Luka**	**1.76**	**298**	⇑*i*Pn	**Pn**	**07 47 46.5**	**+1.1**
BLY				*i* Sg	**Sg**	**07 48 12.2**	**+0.6**
NISS		**1.95**	**105**	⇑*i*Pn	**Pn**	**07 47 48.4**	**+0.4**
NISS				*i* Sn	**Sn**	**07 48 12.8**	**+0.4**
NISS		**1.95**	**105**	⇑*i*Pn	**Pn**	**07 47 48.4**	**+0.4**
NISS				*i* Sn	**Sn**	**07 48 12.8**	**+0.4**
ULC	**Ulcinj**	**1.99**	**183**	⇑*i*Pn	**Pn**	**07 47 49.8**	**+1.3**
ULC				*e*Sn	**Sg**	**07 48 17.5**	**-1.3**
ULC	**Ulcinj**	**1.99**	**183**	⇑*i*Pn	**Pn**	**07 47 49.8**	**+1.3**
ULC				*e*Sn	**Sg**	**07 48 17.5**	**-1.3**
BARS	**Barje**	**2.11**	**122**	*i* Pn	**Pn**	**07 47 50.8**	**+0.5**
BARS				*i* Sg	**Sg**	**07 48 21.3**	**-1.5**
BARS	**Barje**	**2.11**	**122**	*i* Pn	**Pn**	**07 47 50.8**	**+0.5**
BARS				*i* Sg	**Sg**	**07 48 21.3**	**-1.5**
BZS	**Buzias**	**2.31**	**43**	⇓*i*P	**Pn**	**07 47 53.3**	**+0.3**
BZS	**Buzias**	**2.31**	**43**	⇓*i*P	**Pn**	**07 47 53.3**	**+0.3**
BZS				S	**Sn**	**07 48 20.1**	**-1.3**
PKSM	**Moragy**	**2.32**	**347**	⇓*i*P	**Pn**	**07 47 53.3**	**+0.1**
PKSM	**Moragy**	**2.32**	**347**	S	**Sn**	**07 48 18.8**	**-2.9**
PKSM	**Moragy**	**2.32**	**347**	S	**Sn**	**07 48 18.8**	**-2.9**
ZAPS	**Zavoj**	**2.46**	**105**	⇑*i*Pn	**Pn**	**07 47 55.3**	**+0.2**
ZAPS				*e*Sn	**Sn**	**07 48 25.7**	**+0.5**
GZR	**Gura Zlata**	**2.83**	**58**	⇑*i*P	**Pn**	**07 48 00.8**	**+0.7**
GZR	**Gura Zlata**	**2.83**	**58**	S	**Sn**	**07 48 34.8**	**+0.7**
GZR	**Gura Zlata**	**2.83**	**58**	S	**Sn**	**07 48 34.8**	**+0.7**
DRGR		**3.69**	**38**	⇓*i*P	**Pn**	**07 48 12.1**	**+0.1**
DRGR		**3.69**	**38**	⇓*i*P

s-maj=15.0km s-min=10.5km az=43.0
*BJI **28** 08:26:18.7,31.'14N×103.'50E,h10km,ML3.5/11*
ISC 28 08:26:17.3±1.0,31.'18N±0.'04×103.'52E±0.'08,h10km±8km, n15,σ0.94/18,mb3.4/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**142**	Pg	**Pg**	**08 26 22.5**	**-1.5**
CD2				Sg	**Sg**	**08 26 28.8**	**+0.3**
CD2				smax			
	comp=N,6μm,0.7s						
LZH	**Lanzhou**	**4.90**	**3**	Pg	**Pg**	**08 27 52.0**	**+0.8**
LZH				Sg	**Sg**	**08 28 54.8**	**+0.1**
LZH				smax			
	comp=N,30nm,0.8s						
LZH				smax			
	comp=E,69nm,1.1s						
LZH				LR	LR		
	comp=N,110nm,4.0s						
LZH				LR	LR		
	comp=Z,360nm,5.9s						
ENH	**Enshi**	**5.22**	**98**	*e*Pn	**Pn**	**08 27 35.8**	**+0.4**
	comp=Z,14nm,0.7s						
XAN	**Xi'an**	**5.38**	**57**	Pg	**Pb**	**08 27 51.0**	**-0.3**
XAN				smax			
	comp=N,33nm,0.7s						
XAN				smax			
	comp=E,22nm,0.6s						
GYA	**Guiyang**	**5.45**	**149**	Pn	**Pn**	**08 27 43.8**	**+5.2**
GYA				Sg	**Sb**	**08 28 59.8**	**+1.7**
GYA				smax			
	comp=N,60nm,0.8s						
GYA				smax			
	comp=E,50nm,0.8s						
LSA	**Lhasa**	**10.78**	**265**	*e*Pn	**Pn**	**08 28 51.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**13.33**	**199**	Pn	**Pn**	**08 29 27.5**	**+1.0**
	comp=E,0.7nm,0.3s,baz=21,slow=16,SNR=4.6						
KSRS	**Korea Array**	**21.08**	**66**	P	**P**	**08 30 57.2**	**-4.4**
	comp=E,1.5nm,0.7s,mb3.5,baz=264,slow=10,SNR=5.5						
MK31	**Makanchi Array**	**22.59**	**320**	*e*P	**P**	**08 31 18.2**	**+0.4**
MKAR	**Makanchi Array**	**22.59**	**320**	P	**P**	**08 31 19.0**	**+1.2**
	comp=E,1.0nm,0.8s,mb3.3,baz=122,slow=12,SNR=5.4						
MKAR	**Makanchi Array**	**22.59**	**320**	P	**P**	**08 31 19.0**	**+1.2**
ZALV	**Zalesovo Beam**	**26.44**	**335**	P	**P**	**08 31 53.8**	**-0.3**
	comp=E,0.4nm,0.3s,mb3.4,baz=105,slow=11,SNR=3.7						
KURK	**Kurchatov**	**26.89**	**324**	P	**P**	**08 31 57.7**	**-0.4**
	comp=E,1.2nm,1.0s,mb3.4,baz=128,slow=9.3,SNR=4.6						
WRAB	**Tennant Creek**	**58.81**	**146**	*e*P	**P**	**08 36 14.5**	**-1.5**
ASAR	**Alice Springs**	**61.82**	**148**	P	**P**	**08 36 35.0**	**-1.4**
	comp=E,0.2nm,0.6s,mb3.4,baz=342,slow=6.8,SNR=4.8						

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*ISK **28** 09:01:44.4,37.'27N×28.'23E,h5km,MD3.1*
*ISCJB **28** 09:01:45.1±0.4,37.'23N±0.'03×28.'20E±0.'03,h10km,Error ellipse: s-maj=4.4km s-min=3.5km az=17.8*
*CSEM **28** 09:01:45.1±0.1,37.'25N×28.'22E,h2km,MD3.1,Error ellipse: s-maj=3.0km s-min=2.5km az=8.0*
*DDA **28** 09:01:45.3,37.'23N×28.'22E,h7km±6km,Md3.0*
ISC 28 09:01:45.3±0.5,37.'26N±0.'03×28.'23E±0.'03,h2km±8km, n28,σ0.71/44,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**160**	PG	**Pg**	**09 01 47.8**	**-0.1**
YER				*e*SG	**Sg**	**09 01 50.1**	**+0.5**
YER	**Yerkesik**	**0.13**	**160**	*i* Pg	**Pg**	**09 01 47.8**	**-0.1**
YER				*e*Sg	**Sg**	**09 01 50.1**	**+0.5**
MLSB	**Milas**	**0.36**	**276**	*e*PG	**Pg**	**09 01 52.0**	**-0.3**
MLSB				*e*SG	**Sg**	**09 01 57.5**	**+0.6**
MLSB	**Milas**	**0.36**	**276**	*e*Pg	**Pg**	**09 01 52.0**	**-0.3**
MLSB				*e*Sg	**Sg**	**09 01 57.5**	**+0.5**
AYDN	**Tasoluk**	**0.49**	**326**	*i* P	**Pg**	**09 01 54.4**	**-0.4**
AYDN				*i* S	**Sg**	**09 02 02.0**	**+1.0**
AYDN	**Tasoluk**	**0.49**	**326**	*i* P	**Pg**	**09 01 54.4**	**-0.3**
AYDN				*i* S	**Sg**	**09 02 02.0**	**+0.9**
TURN	**Turunc**	**0.49**	**142**	*i* P	**Pg**	**09 01 54.0**	**-0.7**
TURN				*i* S	**Sg**	**09 02 01.4**	**+0.4**
TURN	**Turunc**	**0.49**	**142**	*i* P	**Pg**	**09 01 54.0**	**-0.7**
TURN				*i* S	**Sg**	**09 02 01.4**	**+0.4**
BDRM	**Kayabasi**	**0.65**	**253**	*i* P	**Pg**	**09 01 57.0**	**-0.9**
BDRM				*i* S	**Sg**	**09 02 06.3**	**0.0**
BDRM	**Kayabasi**	**0.65**	**253**	*i* P	**Pg**	**09 01 57.0**	**-0.9**
BDRM				*i* S	**Sg**	**09 02 06.3**	**-0.1**
DAT	**Datca**	**0.74**	**225**	*e*PG	**Pg**	**09 01 59.7**	**+0.1**
DAT	**Datca**	**0.74**	**225**	*e*Pg	**Pg**	**09 01 59.7**	**+0.2**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pg**	**09 02 01.0**	**+0.6**
DNZL				*i* S	**Sg**	**09 02 09.7**	**-0.7**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pg**	**09 02 01.0**	**+0.7**
DNZL				*i* S	**Sg**	**09 02 09.7**	**-0.8**
FETY	**Fethiye**	**0.93**	**132**	*e*PG	**Pg**	**09 02 02.4**	**-0.7**
FETY	**Fethiye**	**0.93**	**132**	*e*Pg	**Pg**	**09 02 02.4**	**-0.7**
GOLH	**Golhisar**	**1.06**	**91**	*i* P	**Pg**	**09 02 06.2**	**+0.5**
GOLH				*i* S	**Sg**	**09 02 26.5**	**+7.0**
GOLH	**Golhisar**	**1.06**	**91**	*i* P	**Pg**	**09 02 06.2**	**+0.5**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*PN	**Pn**	**09 02 09.4**	**-1.1**
KULA	**Kula-Manisa**	**1.30**	**15**	*e*Pn	**Pn**	**09 02 09.5**	**-1.0**
ELL	**Elmali**	**1.44**	**110**	*e*PN	**Pn**	**09 02 11.7**	**-0.7**
ELL	**Elmali**	**1.44**	**110**	*e*Pn	**Pn**	**09 02 11.7**	**-0.7**
KHL	**Karahalli**	**1.48**	**44**	*e*PN	**Pn**	**09 02 12.3**	**-0.6**
KHL	**Karahalli**	**1.48**	**44**	*e*Pn	**Pn**	**09 02 12.3**	**-0.7**
KHAL	**Karahalli**	**1.50**	**42**	*i* P	**Pn**	**09 02 13.2**	**0.0**
KHAL				*i* S	**Sb**	**09 02 34.1**	**+0.9**
KHAL	**Karahalli**	**1.50**	**42**	*i* P	**Pn**	**09 02 13.2**	**0.0**
KHAL				*i* S	**Sb**	**09 02 34.2**	**+0.9**
AKAS	**Kas**	**1.51**	**132**	*i* P	**Pn**	**09 02 15.1**	**+1.7**
AKAS				*i* S	**Sn**	**09 02 40.9**	**+7.3**
AKAS	**Kas**	**1.51**	**132**	*i* P	**Pn**	**09 02 15.1**	**+1.8**

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*ISCJB **28** 09:13:31.1±0.5,28.'63N±0.'05×139.'5E±0.'1,h451km±6km, mb3.4/13,Error ellipse: s-maj=18.7km s-min=7.1km az=164.3*
*JMA **28** 09:13:31.0±0.1,28.'73N×140.'08E,h479km,M3.7*
*IDC **28** 09:13:31.8±0.7,28.'66N×139.'56E,h444km±8km,mb3.1/12, mb1 3.3/16,mb1mx3.2/26,mbtmp3.2/16,Error ellipse: s-maj=20.9km s-min=11.1km az=67.0*
*NEIC **28** 09:13:32.5±1.3,28.'67N×139.'50E,h452km±11km,mb3.8/1, Error ellipse: s-maj=16.6km s-min=14.3km az=212.0*
ISC 28 09:13:32.2±0.5,28.'66N±0.'05×139.'6E±0.'1,h448km±6km, n33,σ0.78/41,mb3.4/13,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.76**	**124**	P	**P**	**09 14 37.3**	**-0.1**
CBIJ				*e*S	**S**	**09 15 29.6**	**-0.7**
CBIJ	**Chichi jima**	**2.76**	**124**	P	**P**	**09 14 37.4**	**0.0**
	87nm,0.3s,baz=273,slow=20,SNR=67						
CBIJ				S	**S**	**09 15 29.8**	**-0.5**
	66nm,0.3s,baz=293,slow=22,SNR=22						
JHHJ	**Haha-jima-NKT**	**3.05**	**131**	P	**P**	**09 14 39.4**	**-0.1**
JHHJ				*e*S	**S**	**09 15 33.6**	**-0.5**
JHJ2	**Mitsune**	**4.44**	**2**	P	**P**	**09 14 52.0**	**+0.9**
JHJ	**Hachijo jima 2**	**4.44**	**2**	P	**P**	**09 14 51.8**	**+0.6**
	34nm,0.3s,baz=259,slow=21,SNR=19						
JHJ				S	**S**	**09 15 54.7**	**-0.8**
	8.3nm,0.3s,baz=261,slow=20,SNR=2.7						
BSO1	**Boso 1**	**6.08**	**11**	P	**P**	**09 15 07.7**	**+0.5**
BSO1				*e*S	**S**	**09 16 25.1**	**+0.2**
BSO3	**Boso 3**	**6.17**	**7**	P	**P**	**09 15 08.0**	**0.0**
BSO3				*e*S	**S**	**09 16 24.7**	**-1.7**
JIE	**Ise**	**6.22**	**337**	P	**P**	**09 15 11.0**	**+2.3**
BSO4	**Boso 4**	**6.34**	**5**	P	**P**	**09 15 10.5**	**+0.7**
BSO4				*e*S	**S**	**09 16 29.6**	**-0.1**
JOD2	**Odawara 2**	**6.59**	**356**	P	**P**	**09 15 12.5**	**0.0**
JNY	**Yasuok**	**6.84**	**348**	P	**P**	**09 15 15.9**	**+0.9**
JRY	**Ryogami san**	**7.36**	**355**	P	**P**	**09 15 20.4**	**-0.1**
JRY				*e*S	**S**	**09 16 46.7**	**-2.6**
MJAR	**Matsushiro Arr**	**7.94**	**352**	P	**P**	**09 15 26.5**	**-0.3**
	0.8nm,0.3s,baz=168,slow=10,SNR=7.8						
MAJO	**Matsushiro**	**7.95**	**352**	*e*Pn	**P**	**09 15 27.4**	**+0.6**
MAT	**Matsushiro**	**7.95**	**352**	P	**P**	**09 15 27.1**	**+0.2**
MAT	**Matsushiro**	**7.95**	**352**	P	**P**	**09 15 27.3**	**+0.4**
JFK	**Kawauchi**	**8.74**	**7**	P	**P**	**09 15 36.1**	**+0.6**
JMK	**Ichinoseki**	**10.35**	**7**	P	**P**	**09 15 53.7**	**+0.8**
KSRS	**Korea Array**	**13.14**	**315**	P	**P**	**09 16 23.9**	**+0.6**
	0.2nm,0.3s,baz=124,slow=11,SNR=4.9						
SONM	**Songino Array**	**32.01**	**316**	P	**P**	**09 19 18.8**	**-1.1**
	1.2nm,0.4s,mb3.7,baz=125,slow=9.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**46.81**	**319**	P	**P**	**09 21 18.8**	**-0.9**
	0.8nm,0.5s,mb3.4,baz=73,slow=5.4,SNR=3.5						
MK31	**Makanchi Array**	**47.72**	**309**	*e*P	**P**	**09 21 26.6**	**-0.1**
MKAR	**Makanchi Array**	**47.72**	**309**	P	**P**	**09 21 26.6**	**-0.2**
	1.7nm,0.7s,mb3.5,baz=89,slow=10,SNR=17						
KURK	**Kurchatov**	**50.26**	**314**	*e*P	**P**	**09 21 45.3**	**-0.3**
	3.9nm,0.8s,mb3.8						
ASAR	**Alice Springs**	**52.32**	**187**	P	**P**	**09 22 00.8**	**-0.1**
	0.4nm,0.3s,mb3.3,baz=2.7,slow=5.7,SNR=21						
BVAR	**Borovoye Array**	**55.35**	**317**	P	**P**	**09 22 21.9**	**-0.3**
	1.8nm,0.5s,mb3.6,baz=98,slow=6.1,SNR=8.7						
ARCES	**ARCESS Array B**	**71.31**	**340**	P	**P**	**09 24 05.2**	**+0.4**
	1.2nm,0.6s,mb3.6,baz=70,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**71.84**	**28**	P	**P**	**09 24 08.1**	**+0.1**
	0.3nm,0.3s,mb3.2,baz=298,slow=6.1,SNR=4.6						
FINES	**FINESS Array B**	**75.53**	**333**	P	**P**	**09 24 28.7**	**-0.5**
	1.0nm,0.3s,mb3.8,baz=93,slow=5.0,SNR=5.9						
NOA	**NORSAR Array B**	**81.31**	**337**	P	**P**	**09 24 59.0**	**-1.3**
	1.1nm,0.8s,mb3.4,baz=48,slow=4.9,SNR=3.5						
NVAR	**Mina Array Bea**	**81.32**	**51**	P	**P**	**09 25 01.2**	**+0.4**
	0.4nm,0.6s,mb3.2,baz=290,slow=6.2,SNR=5.4						
BRTR	**Keskin Array B**	**83.27**	**312**	P	**P**	**09 25 10.7**	**0.0**
	0.3nm,0.5s,mb3.1,baz=118,slow=5.2,SNR=2.6						
PDAR	**Pinedale Array**	**84.68**	**44**	P	**P**	**09 25 18.8**	**+1.1**
	0.3nm,0.6s,mb3.1,baz=297,slow=5.0,SNR=3.5						

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*ISCJB **28** 09:21:26.4±2.9,33.'27S±0.'05×179.'02W±0.'07,h5km±17km, mb5.0/40,MS4.2/17,Error ellipse: s-maj=10.9km s-min=6.9km az=39.9*
*MOS **28** 09:21:30.9±1.3,33.'08S×179.'21W,h34km,mb5.0/21, Error ellipse: s-maj=17.0km s-min=13.7km az=80.8*
*BJI **28** 09:21:30.3,33.'54S×178.'66W,h49km,mB5.5/14, mb5.4/19,Ms5.3/10,Ms7 5.0/10*
*NEIC **28** 09:21:31.7±0.4,33.'22S×179.'02W,h35km,mb5.0/18, Error ellipse: s-maj=12.5km s-min=9.5km az=139.0*
*IDC **28** 09:21:31.7±2.5,33.'08S×179.'17W,h38km±20km,mb4.5/13, mb1 4.7/15,mb1mx4.6/19,mbtmp4.6/15,ML5.3/2,MS4.1/14, Ms1 4.1/14,ms1mx4.0/20,Error ellipse: s-maj=16.2km s-min=14.5km az=124.0*
ISC 28 09:21:35.2±1.3,33.'26S±0.'05×179.'10W±0.'08, h58km±11km,h44km±2.8km:pP-P,n183,σ1.18/98,mb5.0/40, MS4.2/17,1C-3D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.12**	**15**	Pn	**Pn**	**09 22 28.4**	**-7.2**
	202nm,0.3s,baz=83,slow=21,SNR=10						
RAO				Sn	**Sn**	**09 23 14.6**	**-7.9**
	178nm,0.3s,baz=60,slow=22,SNR=3.9						
RAO	**Raoul Island**	**4.12**	**15**	*e*Pn	**Pn**	**09 22 29.1**	**-6.4**
RAO				*e*Sn	**Sn**	**09 23 14.7**	**-7.8**
URZ	**Urewera**	**5.86**	**211**	Pn	**Pn**	**09 22 55.7**	**-3.7**
	62nm,0.3s,baz=347,slow=1.7,SNR=277						
URZ				Sn	**Sn**	**09 24 04.9**	**-0.3**
	78nm,0.3s,baz=255,slow=16,SNR=8.3						
URZ	**Urewera**	**5.86**	**211**	*e*Pn	**Pn**	**09 22 57.5**	**-1.9**
	289nm,0.5s						
URZ				*e*Sn	**Sn**	**09 24 05.6**	**+0.3**
OUZ	**Omahuta**	**6.36**	**250**	*e*Pn	**Pn**	**09 23 05.2**	**-1.0**
	432nm,0.5s						
OUZ				*e*Sn	**Sn**	**09 24 19.8**	**+2.4**
KHZ	**Kahutara**	**10.83**	**210**	*e*Pn	**Pn**	**09 23 59.8**	**-7.5**
	27nm,0.4s						
RPZ	**Rata Peaks**	**12.97**	**214**	Pn	**Pn**	**09 24 27.7**	**-8.8**
	3.3nm,0.3s,baz=52,slow=1.6,SNR=29						
RPZ				Sn	**Sn**	**09 26 48.6**	**-11**
	6.0nm,0.3s,baz=313,slow=18,SNR=9.0						
RPZ	**Rata Peaks**	**12.97**	**214**	*e*Pn	**Pn**	**09 24 27.8**	**-8.7**
	20nm,0.4s						
ODZ	**Otahua Downs**	**14.19**	**211**	*e*Pn	**Pn**	**09 24 43.7**	**-9.2**
	10nm,0.5s						
MSVF	**Nonsavu**	**15.67**	**350**	*e*P	**Pn**	**09 25 11.2**	**-1.2**
	27nm,0.9s						
DZM	**Mont Dzumac**	**16.95**	**307**	*e*P	**Pn**	**09 25 29.5**	**+1.1**
	128nm,1.6s						
DZM				*e*LR	LR	09 29 20.1	
	1μm,23.4s						
DZM	**Mont Dzumac**	**16.95**	**307**	*e*P	**Pn**	**09 25 28.8**	**+0.3**
DZM	**Mont Dzumac**	**16.95**	**307**	Pn	**Pn**	**09 25 29.6**	**+1.1**
	41nm,0.9s						
NOUC	**Port Laguerre**	**17.03**	**307**	*e*P	**Pn**	**09 25 32.1**	**+2.8**
ARMA	**Armidale**	**24.99**	**269**	*e*P	**P**	**09 26 56.5**	**+3.0**
CNB	**Canberra Magne**	**26.08**	**257**	*e*P	**P**	**09 27 05.0**	**+1.7**
EIDS	**Eidsvold**	**27.09**	**279**	*e*P	**P**	**09 27 14.1**	**+1.5**
	13nm,0.6s,mb4.7						
MOO	**Moorlands**	**28.00**	**241**	*e*P	**P**	**09 27 20.9**	**+0.5**
TOO	**Toolangi**	**29.07**	**251**	*e*P	**P**	**09 27 31.0**	**+1.0**
PAE	**Paea**	**30.71**	**67**	*e*T		09 59 41.2	
	19nm,0.3s						
PPT	**Papeete**	**30.77**	**67**	*e*S	**S**	**09 32 50.2**	**+5.8**
	115nm,25.8s						
PPT				*e*LR	LR	09 35 42.9	
	621nm,26.0s,baz=235						
PPT				*e*T		09 59 45.6	
	47nm,0.3s						
PPT	**Papeete**	**30.77**	**67**	LR	LR	09 37 07.4	
	comp=Z,243nm,21.0s,MS3.8,baz=229,slow=30						
PPT				T		10 00 15.8	
	76nm,0.3s,baz=129,slow=12,SNR=3.7						
TIAR	**Tiarei**	**30.95**	**67**	*e*T		09 59 59.6	
	26nm,0.4s						
MEH	**Mehetia**	**31.76**	**69**	*e*T		10 01 00.7	
	169nm,0.3s						
STKA	**Stephens Creek**	**33.02**	**261**	*e*P	**P**	**09 28 05.2**	**+0.3**
	3.1nm,0.7s,mb4.3						
STKA				*e*		09 30 45.1	
STKA	**Stephens Creek**	**33.02**	**261**	P	**P**	**09 28 03.4**	**-1.5**
	2.6nm,0.5s,mb4.4,baz=106,slow=8.5,SNR=11						
STKA				PcP	PcP	09 30 45.5	-2.0
	2.7nm,0.6s,baz=43,slow=6.4,SNR=4.9						
STKA				LR	LR	09 40 50.0	
	comp=Z,485nm,18.9s,MS4.2,baz=285,slow=35						
STKA	**Stephens Creek**	**33.02**	**261**	P	**P**	**09 28 03.4**	**-1.5**
STKA				PcP	PcP	09 30 45.5	-2.0
STKA				LR	LR	09 40 50.0	
CTA	**Charters Tower**	**33.46**	**284**	*e*P	**P**	**09 28 09.4**	**+0.6**
	21nm,0.5s,mb5.3						
CTA	**Charters Tower**	**33.46**	**284**	P	**P**	**09 28 09.9**	**+1.2**
	27nm,0.5s,mb5.4,baz=114,slow=10,SNR=52						
CTA				LR	LR	09 39 27.5	
	comp=Z,266nm,21.0s,MS3.9,baz=56,slow=32						
CTAO	**Charters Tower**	**33.46**	**284**	*e*P	**P**	**09 28 08.5**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
CTAO	**Charters Tower**	**33.46**	**284**	*e*P	**P**	**09 28 08.5**	**-0.3**
	comp=Z,21nm,0.6s,mb5.2						
PMOR	**Pomariorio Ree**	**33.60**	**65**	*e*T		10 03 17.5	
	comp=Z,8.5nm,0.3s						
COEN	**Coen**	**39.26**	**290**	*e*P	**P**	**09 28 59.1**	**+0.8**
	comp=Z,139nm,0.6s,mb5.9						
RKT	**Rikitea**	**39.93**	**87**	*e*LR	LR	09 40 02.4	
	comp=Z,540nm,26.0s,baz=245						
RKT				*e*T		10 11 18.8	
	comp=Z,5.1nm,0.3s						
ASAR	**Alice Springs**	**42.11**	**271**	P	**P**	**09 29 21.2**	**-0.5**
	comp=Z,21nm,0.7s,mb4.9,baz=109,slow=7.2,SNR=208						
ASAR				S	**S**	**09 35 36.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=115,slow=14,SNR=5.5						
ASAR				PKiKP	PKiKP	09 38 19.9	-1.3
	comp=Z,0.2nm,0.5s,baz=103,slow=1.2,SNR=6.7						
ASAR	**Alice Springs**	**42.11**	**271**	P	**P**	**09 29 21.2**	**-0.5**
ASAR				S	**S**	**09 35 36.8**	**-0.5**
ASAR				pmax	pmax		
	comp=Z,21nm,0.7s						
ASAR				smax			
	comp=N,1.0nm,0.7s						
TAOE	**Nuku Hiva Isla**	**43.33**	**65**	*e*S	**S**	**09 36 01.5**	**+6.2**
	comp=N,155nm,25.9s						
TAOE				*e*LR	LR	09 41 29.6	
	comp=N,293nm,26.3s						
WRAB	**Tennant Creek**	**43.35**	**276**	P	**P**	**09 29 31.0**	**-0.8**
	comp=N,363nm,0.7s,mb6.2,SNR=40						
WRAB	**Tennant Creek**	**43.35**	**276**	*e*P	**P**	**09 29 31.2**	**-0.6**
WRAB				*e*PP	pP	09 29 40.3	-6.5
WRAB				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**43.35**	**276**	*e*P	**P**	**09 29 31.2**	**-0.6**
	comp=Z,48nm,0.8s,mb5.3						
WRAB				*e*pP	pP	09 29 40.3	-6.5
FORT	**Forrest**	**44.48**	**258**	*e*P	**P**	**09 29 37.7**	**-3.0**
	comp=Z,46nm,0.6s,mb5.4						
FORT	**Forrest**	**44.48**	**258**	*e*P	**P**	**09 29 39.3**	**-1.4**
	comp=Z,40nm,0.6s,mb5.3						
SBA	**Scott Base**	**45.12**	**184**	*e*P	**P**	**09 29 48.4**	**+3.1**
SBA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
SBA	**Scott Base**	**45.12**	**184**	*e*P	**P**	**09 29 48.4**	**+3.1**
	comp=Z,9.4nm,0.9s,mb4.6						
KAKA	**Kakadu**	**48.58**	**283**	*e*P	**P**	**09 30 10.7**	**-2.3**
	comp=Z,24nm,0.7s,mb5.3						
KAKA	**Kakadu**	**48.58**	**283**	*e*P	**P**	**09 30 11.6**	**-1.4**
	comp=Z,45nm,0.6s,mb5.7						
FITZ	**Fitzroy Crossi**	**51.49**	**273**	*e*P	**P**	**09 30 33.6**	**-1.4**
	comp=Z,36nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**51.49**	**273**	P	**P**	**09 30 34.2**	**-0.8**
	comp=Z,21nm,0.7s,mb5.2,baz=156,slow=6.9,SNR=31						
FITZ				LR	LR	09 51 51.2	
	comp=Z,293nm,19.2s,MS4.3,baz=129,slow=35						
FITZ	**Fitzroy Crossi**	**51.49**	**273**	*e*P	**P**	**09 30 33.9**	**-1.2**
	comp=Z,21nm,0.8s,mb5.1						
CASY	**Casey**	**52.19**	**209**	*e*P	**P**	**09 30 38.1**	**-1.4**
CASY	**Casey**	**52.19**	**209**	*e*P	**P**	**09 30 38.7**	**-0.8**
	comp=Z,37nm,0.7s,mb5.4						
NWAO	**Narrogin (SRO)**	**52.56**	**252**	P	**P**	**09 30 40.2**	**-2.7**
	comp=Z,9.8nm,0.5s,mb5.0,baz=156,slow=6.7,SNR=8.4						
NWAO	**Narrogin (SRO)**	**52.56**	**252**	P	**P**	**09 30 40.2**	**-2.7**
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLBR	**Kellerberrin**	**52.59**	**253**	*e*P	**P**	**09 30 40.4**	**-2.7**
	comp=Z,14nm,0.5s,mb5.2						
QSPA	**South Pole Qui**	**56.86**	**180**	P	**P**	**09 31 14.3**	**+1.1**
	comp=Z,28nm,0.6s,mb5.5,baz=33,slow=1.5,SNR=248						
QSPA	**South Pole Qui**	**56.86**	**180**	*e*P	**P**	**09 31 15.1**	**+1.9**
	comp=Z,30nm,0.7s,mb5.4						
MIR	**Mirnyy**	**59.16**	**208**	‖ *i*P	**P**	**09 31 29.2**	**-0.3**
MIR				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.6						
KAPI	**Kappang**	**63.24**	**282**	P	**P**	**09 31 56.2**	**-1.8**
	comp=Z,5.9nm,0.5s,mb5.0,baz=181,slow=8.1,SNR=4.3						
KAPI	**Kappang**	**63.24**	**282**	P	**P**	**09 31 56.1**	**-1.8**
MAW	**Mawson**	**69.31**	**201**	*e*P	**P**	**09 32 36.5**	**+0.6**
	comp=Z,7.1nm,0.4s,mb5.0						
MAW	**Mawson**	**69.31**	**201**	P	**P**	**09 32 35.9**	**0.0**
	comp=Z,12nm,0.6s,mb5.0,baz=139,slow=7.4,SNR=22						
MAW				LR	LR	10 00 20.4	
	comp=Z,109nm,19.9s,MS4.1,baz=327,slow=34						
MAW	**Mawson**	**69.31**	**201**	*e*P	**P**	**09 32 36.1**	**+0.2**
	comp=Z,2.6nm,0.7s,mb4.3						
SYO	**Syowa Base**	**74.13**	**194**	‖ *e*P	**P**	**09 33 05.6**	**+0.8**
VNA2	**Neumayer--Watz**	**75.94**	**177**	*e*P	**P**	**09 33 14.5**	**-0.7**
VNA2				*e*		09 33 20.4	
MAIT	**Maitri**	**75.97**	**184**	*e*P	**P**	**09 33 15.4**	**0.0**
MAIT				*e*E		09 33 20.0	
VNA1	**Neumayer--Stat**	**76.18**	**177**	*e*P	**P**	**09 33 16.2**	**-0.4**
VNA1				*e*		09 33 22.2	
MJAR	**Matsushiro Arr**	**80.07**	**326**	P	**P**	**09 33 37.9**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.2,baz=163,slow=5.0,SNR=4.8						
MJAR	**Matsushiro Arr**	**80.07**	**326**	P	**P**	**09 33 37.9**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PLCA	**Paso Flores**	**81.24**	**133**	P	**P**	**09 33 45.1**	**+0.2**
	comp=Z,1.8nm,0.8s,mb4.0,baz=166,slow=21,SNR=3.6						
PLCA				LR	LR	10 00 20.8	
	comp=Z,113nm,21.3s,MS4.2,baz=237,slow=29						
QIZ	**Qiongzhong**	**85.39**	**296**	P	**P**	**09 34 06.3**	**-0.1**
QIZ				pP	pP	09 34 19.3	-3.5
QIZ				S	S	09 44 35.0	+1.9
QIZ				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
KSRS	**Korea Array**	**85.93**	**320**	P	**P**	**09 34 08.0**	**-0.7**
	comp=Z,2.8nm,0.7s,mb4.6,baz=145,slow=6.1,SNR=9.9						
KSRS				LR	LR	10 09 52.7	
	comp=Z,46nm,18.7s,MS3.9,baz=167,slow=34						
YSS	**Yuzh-Sakhalins**	**86.92**	**335**	*e*P	**P**	**09 34 12.8**	**-0.5**
NJ2	**Nanjing**	**87.41**	**311**	*e*P	**P**	**09 34 15.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.7						
PETK	**Petropavlovsk-**	**88.35**	**346**	P	**P**	**09 34 18.6**	**-1.4**
	comp=Z,6.1nm,0.7s,mb4.9,baz=108,slow=8.6,SNR=12						
PETK				LR	LR	10 07 08.5	
	comp=Z,80nm,20.8s,MS4.1,baz=70,slow=31						
**ISA

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CD2				pmax	pmax		
	comp=Z,100nm,6.5s						
CD2				LR	LR		
	comp=N,140nm,5.9s						
CD2				LR	LR		
	comp=Z,190nm,7.7s						
HHC	Hu-ho-hao-te	97.55	314	eP	P	09 35 04.8	+2.1
HHC				pP	pP	09 35 18.3	-1.0
HHC				sP	sP	09 35 23.5	-2.1
HHC				SKS		09 45 37.0	
HHC				S	S	09 46 24.0	+1.2
HHC				sS	sS	09 46 47.5	-3.5
HHC				SS	SS	09 53 11.5	+7.3
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.2						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
HHC				LR	LR		
	comp=N,260nm,19.6s,MS5.1						
HHC				LR	LR		
	comp=E,570nm,19.1s,MS5.1						
HHC				LR	LR		
	comp=Z,140nm,18.6s,MS4.5						
LPAZ	La Paz	97.81	115	LR	LR	10 11 10.3	
	comp=Z,67nm,18.1s,MS4.2,baz=123,slow=30						
PDAR	Pinedale Array	98.84	44	P	P	09 35 09.3	+0.8
	comp=Z,0.2nm,0.5s,mb3.9,baz=168,slow=4.6,SNR=3.1						
PDAR				LR	LR	10 09 51.1	
	comp=Z,74nm,20.7s,MS4.2,baz=252,slow=29						
CPUP	Villa Florida	98.92	129	LR	LR	10 10 53.3	
	comp=Z,157nm,19.0s,MS4.5,baz=193,slow=30						
LZH	Lanzhou	99.67	307	eP	Pdif	09 35 14.3	+1.8
LZH				pP	pP	09 35 27.8	-1.2
LZH				sP	sP	09 35 33.0	-2.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.3						
YKA	Yellowknife Ar	108.42	26	PKiKP	PKiKP	09 39 54.5	-1.6
	comp=Z,0.4nm,0.5s,baz=250,slow=1.6,SNR=4.0						
YKA				PKKPbc	PKKPbc	09 51 04.7	-3.6
	comp=Z,1.0nm,0.6s,baz=40,slow=3.3,SNR=9.8						
YKA	Yellowknife Ar	108.42	26	PKPdf	PKiKP	09 39 54.5	-1.6
YKA				PKKPbc	PKKPbc	09 51 04.7	-3.6
WMQ	Urumqi	114.24	308	ePKP	PKiKP	09 40 07.5	-0.3
BOSA	Boshof	114.27	203	PKP	PKiKP	09 40 08.4	-0.1
	comp=Z,2.3nm,0.7s,baz=77,slow=5.6,SNR=5.1						
BOSA	Boshof	114.27	203	PKIKP	PKiKP	09 40 08.4	-0.1
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	118.87	309	ePKIKP	PKPdf	09 40 14.4	-2.2
MKAR	Makanchi Array	118.87	309	PKP	PKPdf	09 40 14.3	-2.3
	comp=Z,1.8nm,0.8s,baz=77,slow=1.2,SNR=14						
MKAR				PKKPbc	PKKPbc	09 50 31.2	-1.0
	comp=Z,0.5nm,0.4s,baz=302,slow=1.4,SNR=4.7						
MKAR	Makanchi Array	118.87	309	PKIKP	PKPdf	09 40 14.3	-2.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	118.87	309	PKP	PKPdf	09 40 14.3	-2.3
MKAR				PKKPbc	PKKPbc	09 50 31.2	-1.0
ZALV	Zalesovo Beam	119.52	318	PKP	PKPdf	09 40 14.8	-2.8
	comp=Z,1.8nm,0.4s,baz=158,slow=1.4,SNR=10						
ZALV	Zalesovo Beam	119.52	318	PKIKP	PKPdf	09 40 14.8	-2.8
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RES	Resolute Bay	120.25	18	ePKIKP	PKPdf	09 40 16.9	-1.6
TKM2	Tokmak 2	122.19	303	ePKIKP	PKPdf	09 40 22.4	-0.7
KURK	Kurchatov	122.32	313	PKP	PKPdf	09 40 20.4	-2.7
	comp=Z,4.1nm,0.8s,baz=117,slow=1.8,SNR=26						
KURK	Kurchatov	122.32	313	PKIKP	PKPdf	09 40 20.4	-2.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	122.32	313	ePKPdf	PKPdf	09 40 21.1	-2.0
UCH	Uchtor	122.75	302	ePKPdf	PKPdf	09 40 23.5	-0.7
AAK	Ala-Archa	122.89	303	PKP	PKPdf	09 40 22.5	-2.0
	comp=Z,0.8nm,0.3s,baz=205,slow=10,SNR=3.5						
AAK	Ala-Archa	122.89	303	PKIKP	PKPdf	09 40 22.5	-2.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	122.89	303	PKP	PKPdf	09 40 22.4	-2.0
AML	Almayashu	123.31	302	ePKPdf	PKPdf	09 40 24.3	-1.0
BVAR	Borovoye Array	127.76	314	PKP	PKPdf	09 40 31.4	-2.0
	comp=Z,2.8nm,0.7s,baz=95,slow=3.3,SNR=9.2						
BVAR	Borovoye Array	127.76	314	PKIKP	PKPdf	09 40 31.4	-2.0
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMBO	Kilima Mbogo	131.61	232	PKP	PKPdf	09 40 42.1	0.0
	comp=Z,1.6nm,0.7s,baz=179,slow=23,SNR=4.6						
KMBO	Kilima Mbogo	131.61	232	PKIKP	PKPdf	09 40 42.1	0.0
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KEV	Kevo	140.68	346	epkp	PKPdf	09 40 56.8	-0.3
APA	Apatity	140.82	341	⇓iPKIKP	PKPdf	09 40 58.4	+1.0
APA				pmax	pmax		
	comp=Z,14nm,0.8s						
ARCES	ARCESS Array B	141.16	346	PKhKP		09 40 51.9	
	comp=Z,2.1nm,0.5s,baz=0.0,slow=2.4,SNR=18						
ARCES				SKPbc	SKPbc	09 44 30.6	+0.7
	comp=Z,1.9nm,0.7s,baz=35,slow=4.4,SNR=4.0						
ARCES	ARCESS Array B	141.16	346	i PKHKP		09 40 51.9	
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES				pmax	pmax		
	comp=N,2.0nm,0.7s						
JOF	Joensuu	144.69	336	ePKIKP	PKPdf	09 41 01.1	-3.3
JOF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
JOF	Joensuu	144.69	336	epkp	PKPdf	09 41 01.1	-3.3
	comp=Z,5.9nm,0.4s						
MOR8	Moi Rana	146.07	350	ePKPdf	PKPdf	09 41 04.9	-1.8
MOS	Moscow	146.10	323	ePKIKP	PKPdf	09 41 05.4	-1.6
MOS				e		09 41 17.5	
MOS				pmax	pmax		
	comp=Z,57nm,0.7s						
STOK	Stokkvaagen	146.11	351	ePKPdf	PKPdf	09 41 06.3	-0.4
STOK				AMB	AMB	09 41 08.6	
	comp=Z,62nm,1.8s						
KAF	Kangasniemi	146.89	338	ePKIKP	PKPdf	09 41 07.1	-1.1
KAF				pmax	pmax		
	comp=Z,30nm,0.6s						
KAF	Kangasniemi	146.89	338	epkp	PKPdf	09 41 07.1	-1.1
	comp=Z,30nm,0.6s,baz=42,slow=2.7						
FINES	FINESS Array B	147.46	338	PKPbc	PKPdf	09 41 09.8	+0.7
	comp=Z,52nm,0.6s,baz=54,slow=3.3,SNR=154						
FINES	FINESS Array B	147.46	338	PKP2	PKPdf	09 41 09.9	+0.8
FINES				pmax	pmax		
	comp=Z,52nm,0.6s						
NSS	Namsos	147.97	351	ePKPdf	PKPdf	09 41 10.2	+0.4
NSS				AMB	AMB	09 41 10.9	
	comp=Z,36nm,1.8s						
ASF	Jabal al Asfar	149.78	278	PKPbc	PKPbc	09 41 17.4	-1.3
EIL	Elat	150.81	272	PKPbc	PKPbc	09 41 19.5	-1.7
	comp=Z,12nm,0.6s,baz=137,slow=0.1,SNR=10						
MMAI	Mount Meron Ar	151.18	279	PKPbc	PKPbc	09 41 20.6	-1.3
	comp=Z,14nm,0.6s,baz=78,slow=5.5,SNR=22						
NB2	NORSAR Subarra	151.41	350	PKP	PKPbc	09 41 20.0	-1.6
	baz=16,slow=2.6						
NOA	NORSAR Array B	151.41	350	PKPbc	PKPbc	09 41 19.7	-1.9
	comp=Z,13nm,0.7s,baz=15,slow=4.1,SNR=66						
NOA	NORSAR Array B	151.41	350	PKIKP	PKPbc	09 41 19.7	-1.9
NOA				pmax	pmax		
	comp=Z,13nm,0.7s						
IZAR	Zarasai	151.44	330	eP	PKPbc	09 41 20.9	-1.0
IDID	Didziasalis	151.52	329	eP	PKPbc	09 41 20.8	-1.2
FOO	Floro	151.52	356	ePKPdf	PKPbc	09 41 19.8	-2.1
FOO				AMB	AMB	09 41 20.6	
	comp=Z,30nm,1.0s						
ISAL	Salakas	151.61	329	eP	PKPbc	09 41 21.3	-0.9
NAO01	NORSAR Array S	151.64	350	ePKPdf	PKPdf	09 41 15.2	-0.6
NAO01				ePKPbc	PKPbc	09 41 21.0	-1.1
NAO01				ePKPab	PKPab	09 41 29.7	-1.3
IIGN	Ignalina	151.72	329	eP	PKPbc	09 41 21.6	-0.9
SUE	Sulen	152.07	356	ePKPdf	PKPbc	09 41 22.8	-0.3
LIC	Lamto	152.54	167	ePKP1	PKPbc	09 41 25.1	-0.5
	comp=Z,94nm,0.8s						
LIC	Lamto	152.54	167	ePKIKP	PKPbc	09 41 25.1	-0.5
	comp=Z,33nm,0.5s						
KIC	Kosan Boka	152.73	168	ePKP1	PKPbc	09 41 26.0	0.0
	comp=Z,44nm,0.6s						
AKASG	Malin Array Be	152.91	319	PKPbc	PKPbc	09 41 23.3	-2.0
	comp=Z,5.1nm,0.7s,baz=67,slow=2.1,SNR=10						
AKASG				PKPab	PKPab	09 41 33.6	-3.0
	comp=Z,0.8nm,0.3s,baz=49,slow=3.6,SNR=4.0						
AKASG	Malin Array Be	152.91	319	PKIKP	PKPbc	09 41 23.3	-2.0
AKASG						09 41 33.6	
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TIC	Toumodi	152.95	167	ePKP1	PKPbc	09 41 25.9	-0.6
	comp=Z,38nm,0.8s						
KONO	Kongsberg	152.98	350	ePKIKP	PKPdf	09 41 17.8	0.0
KONO				e		09 41 23.9	
KONO	Kongsberg	152.98	350	ePKPdf	PKPdf	09 41 17.8	0.0
KONO				ePKPbc	PKPbc	09 41 23.9	-1.2
KONO				ePKPab	PKPab	09 41 36.7	+0.1
BR131	Keskin Array S	153.00	293	ePKPbc	PKPbc	09 41 23.6	-2.2
BRTR	Keskin Array B	153.00	293	PKPbc	PKPbc	09 41 23.6	-2.3
	comp=Z,5.0nm,0.6s,baz=148,slow=4.2,SNR=29						
BRTR				PKPab	PKPab	09 41 34.1	-3.3
	comp=Z,2.5nm,0.8s,baz=169,slow=7.3,SNR=5.4						
BRTR	Keskin Array B	153.00	293	PKIKP	PKPbc	09 41 23.6	-2.3
BRTR						09 41 34.1	
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DBIC	Dimbokro	153.01	167	PKPbc	PKPbc	09 41 26.4	-0.3
	comp=Z,6.8nm,0.5s,baz=133,slow=2.1,SNR=3.6						
DBIC				PKPab	PKPab	09 41 37.0	-1.0
	comp=Z,4.8nm,0.4s,baz=288,slow=1.4,SNR=4.1						
DBIC	Dimbokro	153.01	167	PKIKP	PKPbc	09 41 26.4	-0.3
DBIC						09 41 37.0	
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MLR	Muntele Rosu	157.21	310	PKPbc	PKPdf	09 41 32.4	+8.4
	comp=Z,1.3nm,0.6s,baz=300,slow=19,SNR=3.0						
MLR				PKPab	PKPab	09 41 51.8	-3.4
	comp=Z,2.0nm,0.6s,baz=151,slow=8.3,SNR=3.3						
MLR	Muntele Rosu	157.21	310	PKIKP	PKPdf	09 41 32.4	+8.3
MLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TORD	Torodi Ar. Bea	159.97	182	PKP	PKPdf	09 41 28.8	+0.5
	comp=Z,2.9nm,1.0s,baz=178,slow=1.2,SNR=9.9						
TORD				PKPab	PKPab	09 42 07.1	-0.6
	comp=Z,4.5nm,0.7s,baz=166,slow=3.3,SNR=4.9						
KHC	Kasperske Hory	161.54	333	ePKPAB	PKPab	09 42 12.2	-1.6
GERES	GERESS Array B	161.72	332	PKPab	PKPab	09 42 13.0	-1.6
	comp=Z,1.1nm,0.7s,baz=49,slow=4.1,SNR=5.2						
GERES	GERESS Array B	161.72	332	PKP2	PKPab	09 42 13.0	-1.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GRFO	Grafenberg	161.88	338	ePKP	PKPab	09 42 16.2	+0.9
CDF	Champ du Feu	164.12	344	ePKP2	PKPab	09 42 23.2	-1.9
FETA	Feichten	164.35	334	⇑iPKPab	PKPab	09 42 27.2	+0.9
	comp=Z,5.4nm,1.2s						
SGMF	Saint Gilles	164.80	9	ePKP2	PKPab	09 42 25.7	-2.4
	comp=Z,32nm,0.8s						
QUIF	Quistinic	165.04	11	ePKP2	PKPab	09 42 27.4	-1.8
	comp=Z,22nm,0.9s						
LOR	Lormes	165.83	352	ePKP2	PKPab	09 42 30.8	-1.9
SSF	Saint Saulge	166.07	353	ePKP2	PKPab	09 42 31.8	-1.9
	comp=Z,15nm,0.7s						
CABF	La Chapelle	166.09	345	ePKP2	PKPab	09 42 32.1	-1.7
AVF	Avril sur Loir	166.35	353	ePKP2	PKPab	09 42 33.0	-2.0
	comp=Z,6.7nm,0.7s						
SMF	Signal de Mont	166.44	351	ePKP2	PKPab	09 42 33.5	-1.9
	comp=Z,26nm,1.0s						
BGF	Bois d'Agland	166.63	354	ePKP2	PKPab	09 42 34.3	-1.9

*ISK **28** 09:23:13.4, 37°.28N×28°.23E, h13^{km}, MD2.9*
*ISCJB **28** 09:23:14.7±0.5, 37°.21N±0°.04×28°.19E±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=3.8km az=21.8*
*CSEM **28** 09:23:14.4±0.2, 37°.22N×28°.22E, h10^{km}, MD2.9, Error ellipse: s-maj=5.0km s-min=3.5km az=19.0*
*DDA **28** 09:23:14.6, 37°.25N×28°.19E, h8^{km}±3^{km}, Md3.1*
ISC 28 09:23:15.1±0.4**, 37°.21N**±0°.04×**28°.19E**±0°.03**, h9**^{km}±6^{km}**, n28, σ1^{s}10**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
YER	Yerkesik	0.11	137	PG	Pg	09 23 17.4	-0.2
YER	Yerkesik	0.11	137	i Pg	Pg	09 23 17.4	-0.2
MLSB	Milas	0.34	284	ePG	Pg	09 23 21.2	-0.5
MLSB				eSG	Sg	09 23 26.8	+0.4
MLSB	Milas	0.34	284	ePg	Pg	09 23 21.2	-0.6
MLSB				eSg	Sg	09 23 26.8	+0.5
TURN	Turunc	0.47	136	i P	Pg	09 23 23.4	-0.8
TURN				i S	Sg	09 23 30.6	+0.1
TURN	Turunc	0.47	136	i P	Pg	09 23 23.4	-0.8
TURN				i S	Sg	09 23 30.5	+0.1
AYDN	Tasoluk	0.51	331	i P	Pg	09 23 24.4	-0.6
AYDN				i S	Sg	09 23 31.7	-0.1
AYDN	Tasoluk	0.51	331	i P	Pg	09 23 24.4	-0.6
AYDN				i S	Sg	09 23 31.7	-0.1
BDRM	Kayabasi	0.61	256	i P	Pg	09 23 26.4	-0.6
BDRM				i S	Sg	09 23 36.7	+1.7
BDRM	Kayabasi	0.61	256	i P	Pg	09 23 26.4	-0.5
BDRM				i S	Sg	09 23 36.7	+1.7
DAT	Datca	0.69	226	ePG	Pg	09 23 28.6	+0.2
DAT	Datca	0.69	226	ePg	Pg	09 23 28.6	+0.3
DNZL	Cakiroluk	0.83	55	i P	Pg	09 23 30.2	-0.8
DNZL				i S	Sg	09 23 44.6	+2.7
DNZL	Cakiroluk	0.83	55	i P	Pg	09 23 30.2	-0.9
DNZL				i S	Sg	09 23 44.6	+2.7
GCAM	G?zelcaml?	0.91	303	i P	Pg	09 23 32.3	-0.1
GCAM				i S	Sg	09 23 44.4	+0.2
GCAM	G?zelcaml?	0.91	303	i P	Pg	09 23 32.3	-0.2
GCAM				i S	Sg	09 23 44.4	+0.2
FETY	Fethiye	0.92	129	ePG	Pg	09 23 31.8	-0.9
FETY	Fethiye	0.92	129	ePg	Pg	09 23 31.8	-0.9
GOLH	Golhisar	1.09	88	i P	Pg	09 23 35.3	-0.7
GOLH				i S	Sg	09 23 52.0	+1.7
GOLH	Golhisar	1.09	88	i P	Pg	09 23 35.3	-0.8
GOLH				i S	Sg	09 23 52.0	+1.7
KULA	Kula-Manisa	1.35	16	ePN	Pn	09 23 37.7	-2.4
KULA	Kula-Manisa	1.35	16	ePn	Pn	09 23 37.7	-2.4
ELL	Elmali	1.45	108	ePN	Pn	09 23 39.8	-1.7
ELL	Elmali	1.45	108	ePn	Pn	09 23 39.8	-1.6
AKAS	Kas	1.50	130	i P	Pn	09 23 44.3	+2.2
AKAS				i S	Sn	09 24 08.7	+7.0
AKAS	Kas	1.50	130	i P	Pn	09 23 44.3	+2.2
KHAL	Karahalli	1.55	41	i P	Pn	09 23 43.5	+0.8
KHAL				i S	Sn	09 24 03.5	+0.6
KHAL	Karahalli	1.55	41	i P	Pn	09 23 43.5	+0.7
KHAL				i S	Sn	09 24 03.5	+0.5

CASC 28 09:28:29.4±1.9**, 8°.36N**×**82°.98W, h4**^{km}**, MD4.0, MW4.2, 2C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
ACR	Cerro Adams	0.35	327	⇑eP	Pg	09 28 36.8	+0.6
ACR				eS	Sg	09 28 42.0	+1.3
BRU2	Volcan	0.52	33	⇑iP	Pg	09 28 40.3	+1.0
BRU2				eS	Sg	09 28 48.5	+2.4
TBS2		0.54	36	eP	Pg	09 28 47.1	+7.3
TBS2				eS	Sg	09 28 56.2	+9.5
BAR1		0.94	339	⇓eP	Pg	09 28 47.1	-0.4
CNI	Changuinola	1.15	23	⇓iP	Pg	09 28 51.0	-0.4
BUS	Buena Vista	1.42	327	eP	Pn	09 28 55.6	-0.4
URSC	Urasca	1.67	332	eP	Pn	09 28 58.7	-0.7
URSC				eS	Sn	09 29 23.5	+2.2
PRS1	Puriscal	2.09	321	eP	Pn	09 29 04.9	-0.3
PRS1				eS	Sn	09 29 31.1	-0.5
CGA2	Cerro Gallo 2	2.21	318	eP	Pn	09 29 08.9	+2.1
CGA2				eS	Sn	09 29 34.3	-0.4

AUST 28 09:35:24.0, 18°.43S×**118°.92E, h5**^{km}**, ML3.6, 1C, Northwest of Australia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
MBWA	Marble Bar	2.82	164	⇑iP	Pn	09 36 10.6	+0.9
MBWA				eS	Sn	09 36 42.7	-1.4
GIRL	Giralia	6.07	226	eP	Pn	09 36 54.1	-0.3
GIRL				eS	Sn	09 37 58.0	-6.3
	33nm,0.2s						
FITZ	Fitzroy Crossi	6.39	88	eP	Pn	09 36 58.5	-0.4
FITZ				eS	Sn	09 38 05.8	-6.5
	11nm,0.4s						
MEEK	Meekatharra	8.17	182	eP	Pn	09 37 22.4	-0.9
MEEK				eS	Sn	09 38 49.2	-6.9
MORW	Morawa	10.91	193	eP	Pn	09 37 58.4	-2.5
MORW				eS	Sn	09 39 50.6	-13
NWAO	Narrogin (SRO)	14.52	186	eP	Pn	09 38 46.6	-3.5
NWAO				eS	Sn	09 41 15.9	-16
	54nm,0.6s						

GUC 28 09:36:14.4±0.5**, 42°.03S**×**72°.52W, h8**^{km}±1^{km}**, ML3.6, 2C, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
HOCH	HornopirØn	0.15	36	⇑iP	Pg	09 36 16.5	-1.0
HOCH				i S	Sg	09 36 18.1	-1.6
HOCH				AML	AML	09 36 21.2	
	comp=N,6µm,0.5s						
PMCH	Puerto Montt	0.60	332	⇑iP	Pg	09 36 26.3	+0.2
PMCH				i S	Sg	09 36 35.9	+1.9
PMCH				AML	AML	09 36 37.5	
	comp=N,34µm,0.0s						
OSCH	Osorno	1.52	342	eP	Pn	09 36 40.9	-0.9
OSCH				i S	Sn	09 37 01.0	-0.7
PLCA	Paso Flores	1.97	50	eP	Pn	09 36 48.5	+0.5
PLCA				i S	Sn	09 37 14.2	+1.4

CASC 28 10:08:16.8±1.9**, 9°.37N**×**82°.74W, h13**^{km}±12^{km}**, MD3.4, MW3.5, 4C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
CNI	Changuinola	0.23	78	⇑iP	Pg	10 08 22.3	+0.6
CNI				eS	Sg	10 08 26.3	+1.2
CTCR	Cotoan	0.47	182	⇓iP	Pg	10 08 26.4	+0.2
CTCR				eS	Sg	10 08 33.2	+0.7
BRU2	Volcan	0.57	175	eP	Pg	10 08 27.0	-1.1
BRU2				eS	Sg	10 08 36.8	+1.1
BAR1		0.58	257	⇑iP	Pg	10 08 27.7	-0.4
BAR1				⇑eP		10 08 27.8	
BAR1				eS	Sg	10 08 35.8	0.0
BAR1				eS	Sg	10 08 35.8	0.0
ACR	Cerro Adams	0.83	211	⇑eP	Pg	10 08 33.0	+0.1
ACR				eS	Sg	10 08 44.7	+1.0
BUS	Buena Vista	1.02	280	⇓eP	Pb	10 08 36.0	-0.3
BUS				eS	Sb	10 08 50.1	+0.4
URSC	Urasca	1.12	294	⇓eP	Pb	10 08 37.0	-1.1
URSC				eS	Sb	10 08 51.5	-1.1
PRS1	Puriscal	1.66	292	eP	Pn	10 08 46.7	+1.0
PRS1				eS	Sn	10 09 08.6	+1.7

*ISCJB **28** 10:17:20.2±0.2, 53°.33N±0°.02×108°.58E±0°.03, h10^{km}, mb3.7/5, Error ellipse: s-maj=3.5km s-min=1.9km az=136.8*
*MOS **28** 10:17:20.8±0.8, 53°.26N×108°.61E, h10^{km}, mb3.9/5, Error ellipse: s-maj=10.8km s-min=7.4km az=49.8*
MOS Felt (II) at Elantcy.
*IDC **28** 10:17:21.2±1.7, 53°.28N×108°.55E, h0^{km}, mb3.7/3, mb1 3.8/7, mb1mx3.5/29, mbtmp3.7/7, ML3.7/4, MS3.2/2, Ms1 3.3/2, ms1mx2.7/29, Error ellipse: s-maj=29.6km s-min=19.5km az=59.0*
*NEIC **28** 10:17:22.6±0.7, 53°.32N×108°.52E, h10^{km}, mb3.9/3, Error ellipse: s-maj=11.9km s-min=10.3km az=126.0*
*BYKL **28** 10:17:22.4±0.2, 53°.31N×108°.50E, h12^{km}±3^{km}*
ISC 28 10:17:21.8±0.2**, 53°.30N**±0°.02×**108°.58E**±0°.03**, h10**^{km}**, n70, σ1^{s}36**/134**, mb3.7**/5**, 18C-21D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res (ISC)
MXMB	Maximikha	0.11	113	⇑iPg	Pg	10 17 25.2	+0.8
MXMB				eSg	Sg	10 17 27.4	+1.1
KELR	Kotokel	0.62	209	⇑iPg	Pg	10 17 33.6	-0.2
KELR				i Sg	Sg	10 17 41.9	-0.1
OGRR	Ongureny	0.68	300	ePG	Pg	10 17 35.0	+0.1
OGRR				e		10 17 44.2	
OGRR				pmax	pmax		
	comp=Z,2µm,0.3s						
OGRR				smax			
	comp=N,5µm,0.2s						
OGRR	Ongureny	0.68	300	⇑iPg	Pg	10 17 35.0	+0.1
OGRR				Pmax		10 17 35.3	
	comp=N,2µm,0.2s						
OGRR				eSg	Sg	10 17 44.1	+0.3
OGRR				Smax		10 17 44.8	
	comp=N,5µm,0.4s						
SYVR	Suvo	0.92	67	ePG	Pg	10 17 39.3	-0.1
SYVR				e		10 17 52.0	
SYVR				pmax	pmax		
	comp=Z,341nm,0.4s						
SYVR				smax			
	comp=E,1µm,0.2s						
SYVR	Suvo	0.92	67	⇑iPg	Pg	10 17 39.3	-0.1
SYVR				Pmax		10 17 39.9	
	comp=E,323nm,0.5s						
SYVR				i Sg	Sg	10 17 51.9	+0.5
SYVR				eSb	Sb	10 17 56.2	+4.2
SYVR				max		10 17 57.0	
	comp=E,1µm,0.4s						
ZRHB	Zarechye	1.15	230	ePg	Pg	10 17 42.9	-0.8
ZRHB				Pmax		10 17 44.4	
	comp=E,3µm,0.6s						
ZRHB				e		10 17 47.5	
ZRHB				eSg	Sg	10 17 58.6	0.0
ZRHB				eSb	Sb	10 18 01.1	+2.6
ZRHB				max		10 18 09.3	
	comp=E,9µm,1.0s						
TRTB	Turuntaevo	1.22	209	⇑iPg	Pg	10 17 44.1	-1.1
	comp=E,390nm,0.8s						
TRTB				⇑iPg	Pg	10 17 44.1	-1.1
	comp=E,223nm,0.8s						
TRTB				⇓iPg	Pg	10 17 44.1	-1.1
	comp=E,353nm,0.8s						
TRTB				Pmax		10 17 45.9	
	comp=E,3µm,0.5s						
TRTB				i Sg	Sg	10 18 00.4	-0.6
TRTB				Smax		10 18 03.4	
	comp=E,6µm,0.6s						
TRG	Tyrgan	1.46	249	ePG	Pg	10 17 47.8	-1.8
TRG				e		10 18 06.8	
TRG				pmax	pmax		
	comp=Z,1µm,0.4s						
TRG				smax			
	comp=N,7µm,0.3s						
TRG	Tyrgan	1.46	249	⇑iPg	Pg	10 17 47.7	-1.9
TRG				⇓iPb	Pb	10 17 48.9	0.0
TRG				max		10 17 49.2	
	comp=N,1µm,0.4s						
TRG				eSg	Sg	10 18 07.3	-1.2
TRG				Smax		10 18 10.8	
	comp=N,9µm,0.3s						
UUDB	Ulan-Yde	1.54	202	⇑iPg	Pg	10 17 49.8	-1.6
	comp=N,487nm,0.8s						
UUDB				⇑iPg	Pg	10 17 49.8	-1.6
	comp=N,146nm,0.8s						
UUDB				⇓iPg	Pg	10 17 49.8	-1.6
	comp=N,503nm,0.8s						
UUDB				⇑iPb	Pb	10 17 50.8	+0.4
UUDB				max		10 17 51.3	
	comp=N,2µm,0.9s						
UUDB				eSg	Sg	10 18 10.8	-0.6
UUDB				Smax		10 18 12.6	
	comp=N,4µm,0.5s						
UUDB				e		10 18 13.6	
FFNB	Fofonovo	1.68	222	ePn	Pn	10 17 51.6	+0.5
FFNB				⇓iPg	Pg	10 17 52.6	-1.3
FFNB				Pmax		10 17 53.4	
	comp=N,1µm,0.3s						
FFNB				eSg	Sg	10 18 14.1	-1.5
FFNB				eSb	Sb	10 18 15.1	+1.3
FFNB				max		10 18 17.0	
	comp=N,13µm,0.4s						
FFNB				e		10 18 19.3	
HRMR	Khuramsha	1.95	211	ePn	Pn	10 17 55.7	+0.8
HRMR				⇓iPg	Pg	10 17 56.9	-2.2
HRMR				Pmax		10 17 57.6	
	comp=N,3µm,0.7s						
HRMR				i Sg	Sg	10 18 23.0	-1.4
HRMR				Smax		10 18 24.0	
	comp=N,17µm,0.4s						
YLYR	Ulyunkhan	2.19	43	ePN	Pn	10 17 59.5	+1.4
YLYR				e		10 18 01.8	

YLYR				*e*		10 18 31.4	
YLYR				pmax	pmax		
	comp=Z,263nm,0.6s						
YLYR				smax			
	comp=N,1μm,0.5s						
YLYR	**Ulyunkhan**	**2.19**	**43**	⇓*i*Pn	**Pn**	**10 17 59.5**	**+1.4**
	comp=N,62nm,0.5s						
YLYR				⇓*i*Pn	**Pn**	**10 17 59.5**	**+1.4**
	comp=N,46nm,0.5s						
YLYR				⇓*i*Pn	**Pn**	**10 17 59.5**	**+1.4**
	comp=N,77nm,0.5s						
YLYR				⇓*i*Pg	**Pg**	**10 18 01.5**	**-2.2**
YLYR				Pmax		10 18 05.3	
	comp=N,299nm,1.3s						
YLYR				*i* Sg	**Sg**	**10 18 31.8**	**-0.2**
YLYR				Smax		10 18 32.6	
	comp=N,1μm,1.9s						
NIZ	**Nizh Angarsk**	**2.54**	**12**	*e*PN	**Pn**	**10 18 05.1**	**+2.1**
NIZ				*e*		10 18 08.3	
NIZ	**Nizh Angarsk**	**2.54**	**12**	⇓*i*Pn	**Pn**	**10 18 04.6**	**+1.6**
NIZ				*e*Pg	**Pg**	**10 18 08.5**	**-1.9**
NIZ				*e*PgPg		10 18 11.6	
NIZ				max		10 18 14.6	
	comp=N,117nm,0.4s						
NIZ				*e*Sg	**Sg**	**10 18 41.7**	**-1.6**
NIZ				Smax		10 18 52.0	
	comp=N,861nm,1.3s						
LSTR	**Listvyanka**	**2.70**	**239**	⇑*i*Pn	**Pn**	**10 18 05.3**	**+0.1**
	comp=N,63nm,0.8s						
LSTR				⇑*i*Pn	**Pn**	**10 18 05.3**	**+0.1**
	comp=N,136nm,0.8s						
LSTR				⇓*i*Pn	**Pn**	**10 18 05.3**	**+0.1**
	comp=N,108nm,0.8s						
LSTR				⇓*i*Pg	**Pg**	**10 18 09.4**	**-4.1**
LSTR				⇓*i*		10 18 10.9	
LSTR				max		10 18 17.8	
	comp=N,176nm,0.9s						
LSTR				*i* Sn	**Sn**	**10 18 37.7**	**-0.2**
LSTR				*i* Sg	**Sg**	**10 18 44.1**	**-4.4**
LSTR				Smax		10 18 47.0	
	comp=N,2μm,1.6s						
IRK	**Irkutsk**	**2.83**	**250**	*e*PN	**Pn**	**10 18 07.1**	**+0.2**
IRK				*e*		10 18 12.4	
IRK				*e*		10 18 47.1	
IRK				pmax	pmax		
	comp=Z,335nm,0.5s						
IRK				smax			
	comp=N,6μm,0.4s						
IRK	**Irkutsk**	**2.83**	**250**	*e*Pn	**Pn**	**10 18 04.6**	**-2.3**
IRK				Pg	**Pg**	**10 18 12.1**	**-3.8**
IRK				Pmax		10 18 15.1	
	comp=N,212nm,0.4s						
IRK				*e*		10 18 44.5	
IRK				*i* Sg	**Sg**	**10 18 47.9**	**-4.5**
IRK				Smax		10 18 56.2	
	comp=N,6μm,0.4s						
IRK				*e*		10 18 58.9	
KMO	**Kumora**	**3.00**	**29**	*e*PN	**Pn**	**10 18 11.0**	**+1.7**
KMO				*e*		10 18 16.4	
KMO				*e*S	**Sn**	**10 18 45.8**	**+0.5**
KMO	**Kumora**	**3.00**	**29**	⇓*i*Pn	**Pn**	**10 18 11.1**	**+1.8**
KMO				*e*		10 18 14.3	
KMO				⇓*i*Pg	**Pg**	**10 18 16.3**	**-3.0**
KMO				Pmax		10 18 28.0	
	comp=N,185nm,0.8s						
KMO				*e*		10 18 42.8	
KMO				*e*Sg	**Sg**	**10 18 56.2**	**-2.0**
KMO				Smax		10 19 08.2	
	comp=N,1μm,1.1s						
CIT	**Chita**	**3.29**	**111**	*e*PN	**Pn**	**10 18 13.9**	**+0.7**
CIT				*e*		10 18 21.7	
CIT				*e*S	**Sn**	**10 18 53.0**	**+0.6**
CIT				*e*		10 19 04.8	
CIT				pmax	pmax		
	comp=Z,345nm,0.8s						
CIT				smax			
	comp=E,2μm,2.1s						
CIT	**Chita**	**3.29**	**111**	*e*Pn	**Pn**	**10 18 14.2**	**+0.9**
CIT				Pg	**Pg**	**10 18 22.2**	**-2.5**
CIT				Pmax		10 18 24.1	
	comp=E,347nm,0.8s						
CIT				*e*		10 18 40.1	
CIT				*i* Sg	**Sg**	**10 19 04.9**	**-2.4**
CIT				*e*		10 19 06.7	
CIT				max		10 19 07.5	
	comp=E,1μm,0.2s						
YOA	**Uoyan**	**3.37**	**31**	⇑*i*PN	**Pn**	**10 18 22.9**	**+8.5**
YOA				*i*		10 19 07.9	
YOA				pmax	pmax		
	comp=Z,361nm,1.4s						
YOA				smax			
	comp=N,5μm,1.8s						
YOA	**Uoyan**	**3.37**	**31**	Pg	**Pg**	**10 18 23.1**	**-3.2**
YOA				Pmax		10 18 37.5	
	comp=N,357nm,1.5s						
YOA				*e*Sg	**Sg**	**10 19 09.4**	**-0.5**
YOA				Smax		10 19 28.5	
	comp=N,5μm,1.4s						
TLY	**Talaya**	**3.43**	**244**	*e*PN	**Pn**	**10 18 15.3**	**+0.1**
TLY				*e*		10 18 22.8	
TLY				*e*		10 19 06.7	
TLY				pmax	pmax		
	comp=Z,116nm,0.6s						
TLY				smax			
	comp=E,1μm,0.9s						
TLY	**Talaya**	**3.43**	**244**	⇓*i*Pn	**Pn**	**10 18 15.2**	**0.0**
TLY				⇓*i*Pg	**Pg**	**10 18 23.2**	**-4.2**
TLY				Pmax		10 18 28.6	
	comp=E,115nm,0.7s						
TLY				*e*		10 18 50.2	
TLY				*e*		10 19 00.7	
TLY				*e*Sg	**Sg**	**10 19 07.1**	**-4.7**
TLY				Smax		10 19 11.6	
	comp=E,1μm,1.0s						
TLY	**Talaya**	**3.43**	**244**	*e*Pn	**Pn**	**10 18 15.2**	**0.0**
TLY				*e*Sg	**Sg**	**10 19 07.7**	**-4.1**
UKT	**Uakit**	**3.67**	**51**	*e*Pn	**Pn**	**10 18 20.3**	**+1.8**
UKT				*e*Pg	**Pg**	**10 18 28.2**	**-3.9**
UKT				Pmax		10 18 38.9	
	comp=E,84nm,1.3s						
UKT				*e*		10 19 16.2	
UKT				*e*Sg	**Sg**	**10 19 17.1**	**-2.5**
UKT				Smax		10 19 28.9	
	comp=E,383nm,1.3s						
ARS	**Arshan**	**4.00**	**252**	*e*PN	**Pn**	**10 18 23.3**	**+0.3**
ARS				*e*		10 18 34.2	
ARS	**Arshan**	**4.00**	**252**	⇓*i*Pn	**Pn**	**10 18 23.2**	**+0.2**
ARS				*e*Pg	**Pg**	**10 18 32.1**	**-6.2**
ARS				Pmax		10 18 36.4	
	comp=E,289nm,0.7s						
ARS				*e*		10 18 42.6	
ARS				*e*Sg	**Sg**	**10 19 23.0**	**-7.1**
ARS				Smax		10 19 28.9	
	comp=E,7μm,0.9s						
SVKR	**Severomuysk**	**4.03**	**44**	*e*	**Pn**	**10 18 27.9**	**+4.4**
SVKR				*e*Pg	**Pg**	**10 18 37.1**	**-1.9**
SVKR				Pmax		10 18 38.9	
	comp=E,2μm,0.1s						
SVKR				*e*		10 19 14.3	
SVKR				*e*Sg	**Sg**	**10 19 30.7**	**-0.5**
SVKR				Smax		10 19 58.3	
	comp=E,1μm,1.3s						
ZAK	**Zakamensk**	**4.40**	**230**	*e*PN	**Pn**	**10 18 29.5**	**+1.0**
ZAK				*e*		10 18 40.2	
ZAK				*e*		10 19 38.0	
ZAK				pmax	pmax		
	comp=Z,149nm,0.9s						
ZAK				smax			
	comp=N,429nm,1.1s						
ZAK	**Zakamensk**	**4.40**	**230**	⇑*i*Pn	**Pn**	**10 18 29.5**	**+1.0**
	comp=N,12nm,0.8s						
ZAK				⇑*i*Pn	**Pn**	**10 18 29.5**	**+1.0**
	comp=N,10.0nm,0.8s						
ZAK				⇓*i*Pn	**Pn**	**10 18 29.5**	**+1.0**
	comp=N,16nm,0.8s						
ZAK				*e*Pg	**Pg**	**10 18 40.4**	**-5.6**
ZAK				⇓*i*		10 18 41.2	
	comp=N,51nm,1.2s						
ZAK				⇓*i*		10 18 41.2	
	comp=N,38nm,1.2s						
ZAK				⇑*i*		10 18 41.2	
	comp=N,67nm,1.2s						
ZAK				max		10 18 44.4	
	comp=N,149nm,0.9s						
ZAK				*e*		10 18 47.6	
ZAK				*e*		10 19 19.9	
ZAK				*e*Sg	**Sg**	**10 19 37.8**	**-5.1**
ZAK				Smax		10 19 51.9	
	comp=N,429nm,1.4s						
MOY	**Mondy**	**4.92**	**254**	*e*PN	**Pn**	**10 18 38.0**	**+2.4**
MOY				*e*		10 18 50.9	
MOY				*e*S	**Sn**	**10 19 35.1**	**+2.6**
MOY				*e*		10 19 51.6	
MOY				pmax	pmax		
	comp=Z,82nm,0.5s						
MOY				smax			
	comp=N,2μm,1.2s						
MOY	**Mondy**	**4.92**	**254**	*e*Pn	**Pn**	**10 18 38.1**	**+2.5**
MOY				*e*		10 18 51.2	
MOY				max		10 18 59.1	
	comp=N,142nm,1.0s						
MOY				*e*		10 19 16.4	
MOY				*e*		10 19 35.4	
MOY				*e*Sg	**Sg**	**10 19 52.4**	**-7.2**
MOY				*e*		10 20 00.6	
MOY				max		10 20 09.4	
	comp=N,2μm,1.3s						
ORL	**Orlik**	**5.36**	**265**	*e*PN	**Pn**	**10 18 42.3**	**+0.6**
ORL				*e*		10 18 57.6	
ORL				*e*S	**Sn**	**10 19 41.8**	**-1.7**
ORL				*e*		10 20 05.0	
ORL				pmax	pmax		
	comp=Z,116nm,0.6s						
ORL				smax			
	comp=N,998nm,0.4s						
BOD	**Bodaibo**	**5.47**	**32**	*e*PN	**Pn**	**10 18 44.0**	**+0.8**
BOD				*e*		10 19 00.5	
BOD				*e*		10 20 12.5	
BOD				pmax	pmax		
	comp=Z,19nm,0.5s						
BOD				smax			
	comp=E,222nm,1.3s						
BOD	**Bodaibo**	**5.47**	**32**	*e*Pn	**Pn**	**10 18 45.8**	**+2.6**
BOD				*e*		10 18 58.2	
BOD				*e*Pg	**Pg**	**10 19 00.9**	**-5.5**
BOD				Pmax		10 19 11.1	
	comp=E,15nm,0.4s						
BOD				*i* Sg	**Sg**	**10 20 11.9**	**-5.3**
BOD				Smax		10 20 23.0	
	comp=E,221nm,1.6s						
ULN	**Ulaanbaatar**	**5.53**	**191**	*e*	**Pg**	**10 19 06.0**	**-1.6**
ULN				*e*		10 19 51.0	
ULN				*e*		10 20 09.9	
ULN				*e*Sg	**Sg**	**10 20 14.8**	**-4.4**
SONM	**Songino Array**	**5.65**	**195**	Pn	**Pn**	**10 18 47.1**	**+1.4**
	comp=E,2.3nm,0.3s,baz=6.4,slow=13,SNR=24						
SONM				Pg	**Pg**	**10 19 03.7**	**-6.2**
	comp=E,4.0nm,0.3s,baz=6.1,slow=18,SNR=4.8						
SONM				Sn	**Sn**	**10 19 53.1**	**+2.5**
	comp=E,7.5nm,0.3s,baz=6.0,slow=24,SNR=5.5						
SONM				Lg		10 20 20.3	
	comp=E,31nm,0.3s,baz=13,slow=28,SNR=19						
SONM				LR	LR	10 21 29.0	
	comp=E,105nm,19.4s,baz=271,slow=44						
SONM	**Songino Array**	**5.65**	**195**	PN	**Pn**	**10 18 47.1**	**+1.4**
SONM						10 19 03.7	
SONM						10 19 53.1	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SONM				smax			
	comp=N,8.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,105nm,19.4s						
CRS	**Chara**	**6.62**	**53**	*e*PG	**Pg**	**10 19 23.7**	**-4.8**
CRS				*e*		10 20 48.6	
CRS				pmax	pmax		
	comp=Z,33nm,1.2s						
CRS				smax			
	comp=E,418nm,1.4s						
CRS	**Chara**	**6.62**	**53**	*e*Pn	**Pn**	**10 19 00.8**	**+1.8**
CRS				*e*		10 19 11.7	
CRS				*e*Pg	**Pg**	**10 19 23.7**	**-4.8**
CRS				*e*		10 19 32.7	
CRS				max		10 19 37.3	
	comp=E,37nm,1.4s						
CRS				*e*		10 20 14.9	
CRS				*e*Sg	**Sg**	**10 20 49.6**	**-4.5**
CRS				Smax		10 20 56.4	
	comp=E,609nm,2.2s						
TUP	**Tupik**	**6.82**	**76**	*e*PN	**Pn**	**10 19 02.7**	**+1.0**
TUP				*e*		10 19 24.9	
TUP				*e*S	**Sn**	**10 20 19.6**	**+0.2**
TUP				*e*		10 20 53.9	
TUP				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TUP				smax			
	comp=N,997nm,1.5s						
TUP	**Tupik**	**6.82**	**76**	⇑*i*Pn	**Pn**	**10 19 02.5**	**+0.8**
TUP				⇑*i*		10 19 05.8	
TUP				*e*Pg	**Pg**	**10 19 26.0**	**-6.3**
TUP				Pmax		10 19 35.1	
	comp=N,26nm,2.2s						
TUP				*i* Sg	**Sg**	**10 20 54.4**	**-6.1**
TUP				Smax		10 21 01.4	
	comp=N,990nm,1.7s						
HIA	**Hailar**	**8.08**	**116**	*e*PN	**Pn**	**10 19 19.6**	**+0.6**
HIA	**Hailar**	**8.08**	**116**	*e*	Px	10 20 00.8	
HIA				*e*Sg	Sx	10 21 33.1	
IENR	**Ienga**	**9.85**	**66**	*e*	Sx	10 22 14.3	
IENR				*e*Sg	Sx	10 22 27.0	
IENR				*e*		10 22 32.1	
NRGR	**Nerungri**	**9.87**	**64**	*e*P	**Pn**	**10 19 44.7**	**+1.3**
ZALV	**Zalesovo Beam**	**14.10**	**282**	Pn	**Pn**	**10 20 41.7**	**+0.4**
	comp=N,0.6nm,0.3s,baz=69,slow=8.1,SNR=5.3						
ZALV				Lg		10 24 47.6	
	baz=84,slow=26,SNR=10						
ZALV	**Zalesovo Beam**	**14.10**	**282**	P	**Pn**	**10 20 41.7**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**18.03**	**259**	*e*P	**Pn**	**10 21 32.7**	**+0.5**
MKAR	**Makanchi Array**	**18.03**	**259**	P	**Pn**	**10 21 32.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=8.7						
MKAR				Lg		10 26 55.9	
	comp=Z,0.1nm,0.3s,baz=66,slow=24,SNR=7.3						
MKAR	**Makanchi Array**	**18.03**	**259**	*i* P	**Pn**	**10 21 33.2**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**18.56**	**274**	P	**Pn**	**10 21 38.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=67,slow=11,SNR=6.8						
KURK				Lg		10 27 14.3	
	comp=Z,0.0nm,0.3s,baz=239,slow=33,SNR=6.6						
KURK	**Kurchatov**	**18.56**	**274**	*e*P	**Pn**	**10 21 41.0**	**+2.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	**Tiksi**	**20.45**	**18**	*e*P	**P**	**10 22 01.0**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,68nm,8.0s						
TIXI	**Tiksi**	**20.45**	**18**	*e*Pn	**P**	**10 22 01.5**	**+2.6**
	comp=Z,5.5nm,0.9s						
BVAR	**Borovoye Array**	**22.72**	**285**	P	**P**	**10 22 24.2**	**+0.7**
	comp=Z,1.3nm,0.6s,mb3.5,baz=82,slow=11,SNR=6.4						
BVAR	**Borovoye Array**	**22.72**	**285**	P	**P**	**10 22 24.2**	**+0.8**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TKM2	**Tokmak 2**	**24.14**	**258**	*e*P	**P**	**10 22 38.3**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
TKM2	**Tokmak 2**	**24.14**	**258**	*e*P	**P**	**10 22 38.3**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.5						
AML	**Almayashu**	**25.74**	**258**	*e*P	**P**	**10 22 48.0**	**-4.1**
	comp=Z,1.7nm,0.3s,mb4.0						
BRTR	**Keskin Array B**	**50.99**	**287**	P	**P**	**10 26 25.6**	**+2.2**
	comp=Z,0.5nm,0.7s,mb3.6,baz=96,slow=4.5,SNR=2.8						
BRTR	**Keskin Array B**	**50.99**	**287**	P	**P**	**10 26 25.6**	**+2.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**70.67**	**311**	LR	LR	11 03 40.1	
	comp=Z,38nm,19.5s,baz=100,slow=39						
ASAR	**Alice Springs**	**79.74**	**157**	P	**P**	**10 29 30.4**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=354,slow=6.0,SNR=13						
ASAR	**Alice Springs**	**79.74**	**157**	P	**P**	**10 29 30.4**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **28** 10:31:15.7±0.5, 23°.47N±0°.02×122°.03E±0°.02, h6km±3km,*
Error ellipse: s-maj=3.9km s-min=2.7km az=154.6
*TAP **28** 10:31:16.9, 23°.46N×122°.01E, h14km±1km, ML3.1, D*
*JMA **28** 10:31:17.4±0.2, 23°.44N×122°.09E, h13km, M2.6*
*NEIC **28** 10:31:18.6±2.8, 23°.59N×121°.81E, h10km, MG3.1(JMA),*
Error ellipse: s-maj=29.6km s-min=8.3km az=108.0

ISC 28 10:31:16.3±0.5, 23°.48N±0°.02×122°.01E±0°.02, h9km±3km, n38, σ0°.83/69, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.48**	**298**	*e*P	**Pg**	**10 31 30.1**	**+4.3**
	baz=299						
HWA	**Hwalien**	**0.61**	**323**	*e*P	**Pg**	**10 31 28.5**	**+0.2**
	baz=324						
HWA				*e*S	**Sg**	**10 31 38.2**	**+2.0**
	baz=324						
EHY	**Hungye**	**0.63**	**272**	P	**Pg**	**10 31 29.3**	**+0.8**
	baz=273						
EHY				*e*S	**Sg**	**10 31 37.9**	**+1.2**
	baz=273						
YULB	**Yu-li**	**0.66**	**262**	*e*Pg	**Pg**	**10 31 29.3**	**+0.3**
YULB				*e*Sg	**Sg**	**10 31 38.1**	**+0.5**
TWF1	**Yuli**	**0.67**	**259**	⇑*i*P	**Pg**	**10 31 29.8**	**+0.5**
	baz=260						
TWF1				*e*S	**Sg**	**10 31 39.5**	**+1.6**
	baz=260						
CHKT	**Chengkung**	**0.70**	**237**	*e*P	**Pg**	**10 31 29.7**	**-0.2**
	baz=226						
CHKT				*e*S	**Sg**	**10 31 38.4**	**-0.7**
	baz=226						
TWD	**Chiawan**	**0.70**	**328**	P	**Pg**	**10 31 30.1**	**+0.2**
	baz=328						
TWD				S	**Sg**	**10 31 40.5**	**+1.4**
	baz=328						
NACB	**Ninganchiao**	**0.78**	**331**	*e*Pg	**Pg**	**10 31 31.0**	**-0.4**
NACB				*e*Sg	**Sg**	**10 31 37.7**	**-4.0**
WHF	**Hehuan Shan**	**0.95**	**314**	P	**Pg**	**10 31 34.2**	**-0.4**
	baz=314						
WHF				*e*S	**Sg**	**10 31 46.5**	**-0.4**
	baz=314						
ELDTW	**Lidau**	**0.96**	**252**	*e*P	**Pg**	**10 31 33.8**	**-0.9**
	baz=240						
ELDTW				*e*S	**Sg**	**10 31 44.8**	**-2.4**
	baz=240						
YUS	**Yu-Shan**	**0.97**	**271**	*e*P	**Pg**	**10 31 35.4**	**+0.4**
	baz=271						
YUS				*e*S	**Sg**	**10 31 47.6**	**0.0**
	baz=271						
ENA	**Nanau**	**0.97**	**346**	*e*P	**Pg**	**10 31 34.8**	**-0.3**
	baz=345						
ENA				*e*S	**Sg**	**10 31 48.0**	**+0.3**
	baz=345						
SSLB	**Suanglung**	**1.01**	**288**	*e*Pg	**Pg**	**10 31 34.7**	**-1.1**
TWG	**Pinlang**	**1.08**	**233**	*e*Pg	**Pg**	**10 31 38.3**	**+1.1**
TWG	**Pinlang**	**1.08**	**233**	*e*P	**Pg**	**10 31 35.8**	**-1.4**
	baz=223						
TWG				*e*S	**Sg**	**10 31 50.5**	**-0.7**
	baz=223						
SMLT	**Sun Moon Lake**	**1.09**	**292**	*e*P	**Pg**	**10 31 36.6**	**-0.7**
	baz=302						
SMLT				*e*S	**Sg**	**10 31 52.3**	**+0.8**
	baz=302						
ALS	**Alishan**	**1.10**	**272**	*e*P	**Pb**	**10 31 37.5**	**-0.1**
	baz=272						
TWC	**Suao**	**1.13**	**353**	*i* P	**Pb**	**10 31 37.9**	**-0.1**
	baz=351						
TWC				*i* S	**Sg**	**10 31 53.0**	**+0.2**
	baz=351						
TYC	**Yuchr**	**1.13**	**292**	P	**Pb**	**10 31 37.5**	**-0.6**
	baz=292						
TYC				S	**Sb**	**10 31 53.9**	**+1.0**
	baz=292						
ENTT	**Nioudou**	**1.22**	**341**	P	**Pn**	**10 31 39.1**	**-0.5**
	baz=340						
ENTT				*e*S	**Sb**	**10 31 54.6**	**-0.9**
	baz=340						
CHN5	**Tsauling**	**1.23**	**276**	*e*P	**Pn**	**10 31 39.9**	**+0.3**
	baz=276						
CHN5				*e*S	**Sb**	**10 31 55.8**	**+0.2**
	baz=276						
TWE	**Neicheng**	**1.27**	**346**	P	**Pn**	**10 31 40.0**	**-0.2**
	baz=345						
TWE				*e*S	**Sb**	**10 31 56.0**	**-0.9**
	baz=345						
TPUB	**Ta-pu**	**1.28**	**262**	*e*Pg	**Pg**	**10 31 39.0**	**-2.0**
WTP	**Ta-pu**	**1.30**	**260**	P	**Pn**	**10 31 40.8**	**+0.2**
	baz=248						
WTP				S	**Sb**	**10 31 58.9**	**+1.1**
	baz=248						
YHNB	**Yeheng**	**1.31**	**334**	*e*Pg	**Pg**	**10 31 40.1**	**-1.5**
YHNB				*e*Sg	**Sg**	**10 31 51.3**	**-7.4**
NSK	**Sanguang**	**1.33**	**334**	*e*P	**Pn**	**10 31 40.5**	**-0.5**
	baz=332						
NSK				*e*S	**Sb**	**10 31 56.4**	**-2.1**
	baz=332						
YOJ	**Yonaguni jima**	**1.34**	**43**	P	**Pn**	**10 31 41.5**	**+0.3**
YOJ				*e*S	**Sb**	**10 31 58.7**	**-0.1**
CHN1	**Nanshi**	**1.39**	**258**	P	**Pn**	**10 31 42.3**	**+0.4**
	baz=259						
CHN1				S	**Sb**	**10 32 00.9**	**+0.6**
	baz=259						
TWK	**Hsinying**	**1.41**	**262**	*e*P	**Pn**	**10 31 42.4**	**+0.2**
	baz=262						
TWK				*e*S	**Sn**	**10 32 01.5**	**+0.6**
	baz=262						
TWQ1	**Liyutan**	**1.42**	**308**	*e*P	**Pn**	**10 31 42.7**	**+0.4**
	baz=307						
TWQ1				*e*S	**Sn**	**10 32 00.6**	**-0.5**
	baz=307						
NSTT	**Nanjuang**	**1.47**	**321**	*e*P	**Pn**	**10 31 42.7**	**-0.3**
	baz=320						
NSTT				*e*S	**Sn**	**10 32 01.7**	**-0.6**
	baz=320						
EAST	**Anshuo**	**1.53**	**225**	*e*P	**Pn**	**10 31 42.4**	**-1.5**
	baz=225						
NWF	**Wu-fen Shan**	**1.59**	**353**	*e*P	**Pn**	**10 31 45.9**	**+1.2**
	baz=352						
HATJ	**Hateruma jima**	**1.74**	**71**	P	**Pn**	**10 31 46.9**	**+0.1**
HATJ				*e*S	**Sn**	**10 32 08.6**	**-0.5**
IRIF	**Iriomote-Funau**	**1.79**	**61**	P	**Pn**	**10 31 48.1**	**+0.7**
IRIF				*e*S	**Sn**	**10 32 10.3**	**0.0**
JKRS	**Kuro-shima**	**1.98**	**67**	P	**Pn**	**10 31 50.8**	**+0.8**
JKRS				*e*S	**Sn**	**10 32 15.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.14**	**65**	P	**Pn**	**10 31 52.9**	**+0.7**
JIJ				*e*S	**Sn**	**10 32 18.5**	**-0.4**
JTJ	**Tarama**	**2.72**	**64**	P	**Pn**	**10 32 01.0**	**+0.8**
JTJ				*e*S	**Sn**	**10 32 33.8**	**+0.6**

*NEIC **28** 10:33:42.9, 19°.50N×100°.33W, h6km, MD3.7(MEX), After MEX.*

MEX 28 10:33:42.9±0.5, 19°.50N×100°.33W, h6km±5km, MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**0.83**	**283**	*e*P	Pg	10 33 57.0	-1.8
MOIG				*i* S	Sg	10 34 08.8	-0.9
MOIG	**Morelia**	**0.83**	**283**	*e*P	Pg	10 33 57.0	-1.8
MOIG				*i* S	Sg	10 34 08.8	-0.9
MZVM		**1.08**	**106**	*i* P	Pg	10 34 00.8	-2.9
MZVM				*i* S	Sg	10 34 14.4	-3.3
PLIG	**Platanillo**	**1.35**	**144**	*i* P	Pn	10 34 04.5	-3.8
PLIG				*i* S	Sb	10 34 21.4	-4.7
PLIG	**Platanillo**	**1.35**	**144**	*i* P	Pn	10 34 04.5	-3.8
PLIG				*i* S	Sb	10 34 21.4	-4.7
IIO	**Organos**	**1.52**	**86**	*i* P	Pn	10 34 07.8	-2.8
IIO				*i* S	Sn	10 34 26.4	-4.4
IIO	**Organos**	**1.52**	**86**	*i* P	Pn	10 34 07.8	-2.8
IIO				*i* S	Sn	10 34 26.4	-4.4
ZIIG	**Zihuatanejo**	**2.17**	**210**	*e*P	Pn	10 34 16.7	-2.9
ZIIG				*i* S	Sn	10 34 41.9	-4.9
ZIIG	**Zihuatanejo**	**2.17**	**210**	*e*P	Pn	10 34 16.7	-2.9
ZIIG				*i* S	Sn	10 34 41.9	-4.9
CAIG	**El Cayaco**	**2.44**	**179**	*e*P	Pn	10 34 20.7	-2.6
CAIG				*i* S	Sn	10 34 49.5	-3.9
CAIG	**El Cayaco**	**2.44**	**

PNIG			*i* S	Sn	10 35 22.4	-3.0
PNIG	**Pinotepa**	**3.73 145**	*i* P	Pn	10 34 39.4	-1.7
PNIG			*i* S	Sn	10 35 22.4	-3.0

CASC 28 10:50:03.8±1.5, 8°.46N×83°.01W, h4km, MD3.7, MW4.1, 2C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**321**	⇓*e*P	Pg	10 50 09.3	+0.8
ACR				*e*S	Sg	10 50 13.0	+1.2
BRU2	**Volcan**	**0.46**	**44**	⇑*i*P	Pg	10 50 14.1	+1.5
BRU2				*e*S	Sg	10 50 21.8	+3.2
CTCR	**Cotoan**	**0.50**	**30**	⇓*i*P	Pg	10 50 14.5	+1.1
BAR1		**0.83**	**339**	⇑*e*P	Pg	10 50 19.8	0.0
BAR1				*e*S	Sg	10 50 31.7	+1.2
CNI	**Changuinola**	**1.07**	**27**	*e*P	Pg	10 50 24.1	-0.2
BUS	**Buena Vista**	**1.31**	**326**	*e*P	Pn	10 50 27.9	-1.0
URSC	**Urasca**	**1.56**	**331**	*e*P	Pn	10 50 31.6	-0.7
URSC				*e*S	Sn	10 50 53.1	+0.1
PRS1	**Puriscal**	**1.98**	**320**	*e*P	Pn	10 50 38.0	-0.2
PRS1				*e*S	Sn	10 51 03.0	-0.4
CGA2	**Cerro Gallo 2**	**2.11**	**317**	*e*P	Pn	10 50 41.4	+1.5
CGA2				*e*S	Sn	10 51 08.1	+1.5

DJA 28 10:53:53, 7°.07S×106°.45E, h46km, MLv3.5/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	**Dramaga**	**0.59**	**30**	P	Pn	10 54 06.8	+1.6
CBJI	**Citeko**	**0.76**	**32**	P	Pn	10 54 06.9	-0.5
CGJI	**Cibinong**	**0.88**	**301**	P	Pn	10 54 09.6	+0.6
CGJI				S	Sn	10 54 22.6	+1.9
LEM	**Lembang**	**1.18**	**78**	P	Pn	10 54 14.0	+0.9
KASI	**Kota Agung**	**2.48**	**308**	P	Pn	10 54 31.3	+0.4
MDSI	**Maura Dua**	**3.42**	**319**	P	Pn	10 54 44.4	+0.6

*ISCJB **28** 11:23:41.1±0.8, 31°.24N±0°.03×103°.96E±0°.05, h4km±6km, mb3.6/5, MS3.1/4, Error ellipse: s-maj=7.0km s-min=5.1km az=5.5*
*IDC **28** 11:23:42.3±1.0, 31°.10N×103°.64E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, ML4.1/1, MS3.2/4, Ms1 3.2/4, ms1mx2.6/32, Error ellipse: s-maj=37.1km s-min=19.4km az=57.0*
*BJI **28** 11:23:44.8, 31°.06N×103°.85E, h10km, ML3.7/17, Ms3.6/3, Ms7 3.5/3*
*NEIC **28** 11:23:44.0±0.6, 31°.10N×103°.61E, h10km, Error ellipse: s-maj=16.1km s-min=9.9km az=54.0*

ISC 28 11:23:44.5±0.7, 31°.15N±0°.03×103°.81E±0°.05, h16km±5km, n17, σ1§21/24, mb3.6/5, MS3.1/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.25**	**191**	Pg	**Pg**	**11 23 49.3**	**-0.7**
CD2				Sg	**Sg**	**11 23 54.8**	**+1.1**
CD2				smax			
	comp=N,13μm,0.7s						
LZH	**Lanzhou**	**4.92**	**0**	Pg	**Pg**	**11 25 18.0**	**-0.8**
LZH				Sg	**Sg**	**11 26 22.0**	**-0.5**
LZH				smax			
	comp=N,72nm,0.5s						
LZH				smax			
	comp=E,140nm,0.6s						
LZH				LR	LR		
	comp=E,290nm,4.7s						
LZH				LR	LR		
	comp=Z,470nm,5.4s						
ENH	**Enshi**	**4.97**	**99**	*e*Pn	**Pn**	**11 25 01.3**	**+2.9**
	comp=Z,40nm,0.7s						
ENH				*e*Sg	**Sg**	**11 26 23.1**	**-0.9**
XAN	**Xi'an**	**5.18**	**55**	Pn	**Pn**	**11 25 03.8**	**+2.4**
XAN				Pg	**Pg**	**11 25 19.3**	**-4.5**
XAN				Sn	**Sn**	**11 26 00.0**	**-0.9**
XAN				Sg	**Sg**	**11 26 24.5**	**-6.5**
XAN				smax			
	comp=N,100nm,0.7s						
XAN				smax			
	comp=E,46nm,0.8s						
GYA	**Guiyang**	**5.30**	**151**	Pg	**Pb**	**11 25 12.0**	**-4.9**
GYA				Sg	**Sb**	**11 26 19.5**	**-0.8**
GYA				smax			
	comp=N,100nm,0.6s						
GYA				smax			
	comp=E,110nm,0.7s						
KMI	**Kunming**	**6.08**	**189**	Pn	**Pn**	**11 25 15.5**	**+1.8**
KMI				Sn	**Sn**	**11 26 21.0**	**-2.0**
KMI				smax			
	comp=N,25nm,1.0s						
KMI				smax			
	comp=E,25nm,1.0s						
KMI				LR	LR		
	comp=N,210nm,8.2s						
KMI				LR	LR		
	comp=E,370nm,6.6s						
KMI				LR	LR		
	comp=Z,190nm,5.2s						
CMAR	**Chiang Mai Arr**	**13.39**	**200**	Pn	**Pn**	**11 26 53.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=214,slow=28,SNR=4.1						
KSRS	**Korea Array**	**20.86**	**66**	P	**P**	**11 28 27.4**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=267,slow=11,SNR=8.3						
MK31	**Makanchi Array**	**22.78**	**319**	P	**P**	**11 28 45.9**	**-0.3**
MKAR	**Makanchi Array**	**22.78**	**319**	P	**P**	**11 28 46.8**	**+0.6**
	comp=Z,1.5nm,0.9s,mb3.4,baz=119,slow=13,SNR=6.8						
MKAR				LR	LR	11 38 20.0	
	comp=Z,55nm,18.4s,MS3.0,baz=173,slow=39						
ZALV	**Zalesovo Beam**	**26.57**	**335**	P	**P**	**11 29 21.9**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.4,baz=134,slow=6.4,SNR=4.5						
ZALV				LR	LR	11 40 38.7	
	comp=Z,16nm,22.0s,MS2.5,baz=112,slow=38						
ZALV	**Zalesovo Beam**	**26.57**	**335**	P	**P**	**11 29 21.9**	**+0.3**
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**11 29 24.8**	**-1.2**
	comp=Z,0.6nm,0.4s,mb3.4,baz=128,slow=9.4,SNR=7.4						
KURK	**Kurchatov**	**27.06**	**323**	P	**P**	**11 29 24.8**	**-1.3**
BVAR	**Borovoye Array**	**32.60**	**322**	LR	LR	11 44 23.6	
	comp=Z,30nm,21.2s,MS3.0,baz=228,slow=38						
ASAR	**Alice Springs**	**61.66**	**149**	P	**P**	**11 34 02.8**	**+1.1**
	comp=Z,0.8nm,0.8s,mb3.9,baz=338,slow=6.7,SNR=8.3						
STKA	**Stephens Creek**	**72.19**	**147**	P	**P**	**11 35 08.4**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=303,slow=5.3,SNR=4.2						
STKA				LR	LR	12 04 50.7	
	comp=Z,81nm,20.1s,MS4.0,baz=24,slow=34						

*NEIC **28** 11:31:31.6±4.4, 23°.43N×122°.13E, h4km±16km, MG3.1(JMA), Error ellipse: s-maj=40.9km s-min=10.5km az=109.0*
*ISCJB **28** 11:31:33.6±0.6, 23°.46N±0°.02×122°.03E±0°.02, h8km±3km, mb3.6/4, Error ellipse: s-maj=3.5km s-min=2.6km az=147.7*
*TAP **28** 11:31:34.8, 23°.49N×121°.99E, h10km, ML3.6, C*
*JMA **28** 11:31:35.4±0.2, 23°.42N×122°.08E, h19km, M3.1*
*IDC **28** 11:31:42.7±5.0, 23°.83N×121°.76E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/25, mbtmp3.8/5, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx1.9/30, Error ellipse: s-maj=109.8km s-min=50.2km az=179.0*

ISC 28 11:31:34.2±0.5, 23°.48N±0°.02×122°.01E±0°.02, h10km±3km, n55, σ0§80/89, mb3.6/4, 7C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.62**	**323**	*e*P	**Pg**	**11 31 46.8**	**+0.6**
	baz=324						
HWA				*e*S	**Sg**	**11 31 56.2**	**+1.8**
	baz=324						
EHY	**Hungye**	**0.63**	**273**	⇑*i*P	**Pg**	**11 31 47.0**	**+0.6**
	baz=271						
EHY				*e*S	**Sg**	**11 31 56.2**	**+1.6**
	baz=271						
YULB	**Yu-li**	**0.66**	**263**	*e*Pg	**Pg**	**11 31 47.1**	**+0.2**
TWF1	**Yuli**	**0.67**	**259**	⇑*i*P	**Pg**	**11 31 47.7**	**+0.7**
	baz=257						
TWF1				S	**Sg**	**11 31 57.4**	**+1.6**
	baz=257						
CHKT	**Chengkung**	**0.70**	**238**	⇑*i*P	**Pg**	**11 31 47.9**	**+0.1**
	baz=219						
CHKT				*e*S	**Sg**	**11 31 56.7**	**-0.2**
	baz=219						
TWD	**Chiawan**	**0.71**	**328**	P	**Pg**	**11 31 48.0**	**+0.1**
	baz=328						
TWD				*e*S	**Sg**	**11 31 57.8**	**+0.6**
	baz=328						
NACB	**Ninganchiao**	**0.79**	**331**	*e*Pg	**Pg**	**11 31 48.9**	**-0.5**
WHF	**Hehuan Shan**	**0.95**	**314**	*e*P	**Pg**	**11 31 52.1**	**-0.4**
	baz=314						
WHF				*e*S	**Sg**	**11 32 04.6**	**-0.3**
	baz=314						
ELDTW	**Lidau**	**0.96**	**253**	*i* P	**Pg**	**11 31 51.9**	**-0.7**
	baz=251						
YUS	**Yu-Shan**	**0.97**	**271**	⇑*i*P	**Pg**	**11 31 53.2**	**+0.4**
	baz=269						
YUS				*e*S	**Sg**	**11 32 05.8**	**+0.3**
	baz=269						
ENA	**Nanau**	**0.98**	**346**	P	**Pg**	**11 31 52.8**	**-0.2**
	baz=346						
ENA				*e*S	**Sg**	**11 32 06.7**	**+0.9**
	baz=346						
SSLB	**Suanglung**	**1.01**	**288**	*e*Pg	**Pg**	**11 31 52.9**	**-0.8**
SSLB				*e*Sg	**Sg**	**11 32 05.0**	**-1.9**
TTN	**Taitung**	**1.07**	**228**	*e*P	**Pg**	**11 31 54.1**	**-0.7**
	baz=213						
TWG	**Pinlang**	**1.08**	**233**	*e*Pg	**Pg**	**11 31 53.4**	**-1.6**
TWG				*e*Sg	**Sg**	**11 32 07.1**	**-1.9**
TWG	**Pinlang**	**1.08**	**233**	*e*P	**Pg**	**11 31 53.7**	**-1.3**
	baz=220						
TWG				*e*S	**Sg**	**11 32 07.2**	**-1.8**
	baz=220						
TWT	**Tachien**	**1.09**	**316**	*e*P	**Pg**	**11 31 55.0**	**-0.1**
	baz=314						
TWT				*e*S	**Sg**	**11 32 08.6**	**-0.6**
	baz=314						
SMLT	**Sun Moon Lake**	**1.09**	**292**	*e*P	**Pb**	**11 31 54.8**	**-0.4**
	baz=291						
ALS	**Alishan**	**1.11**	**272**	⇑*i*P	**Pb**	**11 31 55.6**	**+0.2**
	baz=270						
ALS				*e*S	**Sg**	**11 32 09.9**	**+0.1**
	baz=270						
NNS	**Nan Shan**	**1.12**	**329**	*e*P	**Pb**	**11 31 55.1**	**-0.6**
	baz=328						
NNS				*e*S	**Sg**	**11 32 09.2**	**-1.2**
	baz=328						
TWC	**Suao**	**1.14**	**353**	*i* P	**Pb**	**11 31 55.8**	**-0.1**
	baz=353						
TWC				*i* S	**Sb**	**11 32 10.9**	**+0.1**
	baz=353						
TYC	**Yuchr**	**1.14**	**292**	*e*P	**Pb**	**11 31 55.4**	**-0.5**
	baz=302						
TYC				*e*S	**Sb**	**11 32 10.2**	**-0.6**
	baz=302						
ENTT	**Nioudou**	**1.23**	**341**	*i* P	**Pn**	**11 31 56.8**	**-0.6**
	baz=340						
ENTT				*e*S	**Sb**	**11 32 12.9**	**-0.5**
	baz=340						
CHN5	**Tsauling**	**1.23**	**276**	*i* P	**Pn**	**11 31 57.7**	**+0.3**
	baz=274						
CHN5				*e*S	**Sb**	**11 32 12.7**	**-0.7**
	baz=274						
TWE	**Neicheng**	**1.28**	**346**	P	**Pn**	**11 31 57.8**	**-0.3**
	baz=346						
TWE				*e*S	**Sb**	**11 32 14.9**	**+0.1**
	baz=346						
TPUB	**Ta-pu**	**1.28**	**262**	*e*Pn	**Pn**	**11 31 57.9**	**-0.2**
TPUB				*e*Sn	**Sn**	**11 32 14.8**	**-0.5**
WTP	**Ta-pu**	**1.30**	**260**	⇑*i*P	**Pn**	**11 31 58.7**	**+0.3**
	baz=258						
WTP				S	**Sb**	**11 32 16.3**	**+0.8**
	baz=258						
ECL	**Taimali**	**1.31**	**228**	*e*P	**Pn**	**11 31 56.5**	**-2.0**
	baz=240						
YHNB	**Yeheng**	**1.32**	**334**	*e*Pn	**Pn**	**11 31 57.8**	**-0.9**
YHNB				*e*Sn	**Sn**	**11 32 15.4**	**-0.9**
NSK	**Sanguang**	**1.33**	**334**	*e*P	**Pn**	**11 31 58.4**	**-0.4**
	baz=333						
NSK				*e*S	**Sb**	**11 32 14.6**	**-1.8**
	baz=333						
YOJ	**Yonaguni jima**	**1.34**	**43**	P	**Pn**	**11 31 59.3**	**+0.3**
YOJ				S	**Sb**	**11 32 16.7**	**0.0**
WGK	**Gukeng**	**1.34**	**279**	*e*P	**Pn**	**11 31 59.0**	**0.0**
	baz=278						
SGST	**Jiashian**	**1.37**	**254**	*e*P	**Pn**	**11 31 59.5**	**+0.2**
	baz=239						
CHN1	**Nanshi**	**1.39**	**258**	⇑P	**Pn**	**11 32 00.3**	**+0.7**
	baz=243						
CHN1				*e*S	**Sb**	**11 32 19.7**	**+1.6**
	baz=243						
TWK	**Hsinying**	**1.41**	**262**	*e*P	**Pn**	**11 32 00.6**	**+0.7**
	baz=260						
TWK				*e*S	**Sn**	**11 32 18.7**	**+0.1**
	baz=260						
TWQ1	**Liyutan**	**1.43**	**308**	*e*P	**Pn**	**11 32 00.8**	**+0.7**
	baz=307						
SSD	**Sandimen**	**1.46**	**240**	*e*P	**Pn**	**11 32 01.4**	**+0.8**
	baz=227						
NSTT	**Nanjuang**	**1.47**	**321**	*e*P	**Pn**	**11 32 01.5**	**+0.8**
	baz=300						
TWB1	**Santiao Chiao**	**1.52**	**359**	*e*P	**Pn**	**11 32 01.6**	**+0.1**
	baz=359						
TWB1				*e*S	**Sn**	**11 32 21.9**	**+0.6**
	baz=359						
EAST	**Anshuo**	**1.53**	**225**	*e*P	**Pn**	**11 31 59.8**	**-1.7**
	baz=223						
TWA	**Mucha**	**1.55**	**346**	*e*P	**Pn**	**11 32 02.0**	**+0.2**
	baz=345						
TATO	**Taipei**	**1.56**	**342**	*e*Pn	**Pn**	**11 32 01.8**	**-0.2**
TATO				*e*Sn	**Sn**	**11 32 22.2**	**-0.2**
TWM1	**Shoushan**	**1.60**	**246**	*e*P	**Pn**	**11 32 03.5**	**+1.0**
	baz=245						
NWF	**Wu-fen Shan**	**1.60**	**353**	*e*P	**Pn**	**11 32 03.8**	**+1.2**
	baz=351						
NWF				*e*S	**Sn**	**11 32 24.2**	**+1.0**
	baz=351						
SCZT	**Fangliau**	**1.69**	**230**	*e*P	**Pn**	**11 32 04.9**	**+1.2**
	baz=216						
HATJ	**Hateruma jima**	**1.74**	**70**	P	**Pn**	**11 32 04.7**	**+0.2**
HATJ				S	**Sn**	**11 32 25.9**	**-0.9**
IRIF	**Iriomote-Funau**	**1.79**	**61**	P	**Pn**	**11 32 05.8**	**+0.7**
IRIF				S	**Sn**	**11 32 28.3**	**+0.3**
JKRS	**Kuro-shima**	**1.98**	**67**	P	**Pn**	**11 32 08.5**	**+0.7**
JKRS				S	**Sn**	**11 32 32.7**	**0.0**
JIJ	**Ishigaki jima**	**2.14**	**65**	P	**Pn**	**11 32 10.4**	**+0.4**
JIJ				S	**Sn**	**11 32 35.3**	**-1.3**
JTJ	**Tarama**	**2.72**	**64**	P	**Pn**	**11 32 18.6**	**+0.7**
JTJ				S	**Sn**	**11 32 50.9**	**0.0**
JOGS	**Gusukube**	**3.36**	**67**	*e*S	**Sn**	**11 33 06.5**	**-0.1**
KSRS	**Korea Array**	**14.83**	**19**	Pn	**Pn**	**11 35 10.2**	**+6.4**
	0.2nm,0.3s,baz=198,slow=11,SNR=6.7						
KSRS				LR	LR	11 41 52.6	
	comp=Z,31nm,18.2s,baz=154,slow=42						
MKAR	**Makanchi Array**	**39.37**	**316**	P	**P**	**11 39 11.3**	**+7.5**
	0.7nm,0.6s,mb3.6,baz=102,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**41.25**	**327**	P	**P**	**11 39 25.4**	**+6.1**
	1.0nm,0.4s,mb3.8,baz=108,slow=9.3,SNR=3.6						
KURK	**Kurchatov**	**43.12**	**320**	P	**P**	**11 39 40.6**	**+6.1**
	0.5nm,0.5s,mb3.5,baz=113,slow=9.4,SNR=4.7						
YKA	**Yellowknife Ar**	**83.33**	**23**	P	**P**	**11 44 10.1**	**+9.1**
	0.6nm,0.8s,mb3.7,baz=308,slow=5.0,SNR=4.5						

CASC 28 11:57:52.5±1.8, 8°.37N×82°.83W, h9km±10km, MD3.8, MW4.1, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.44**	**310**	⇑*i*P	Pg	11 58 01.1	0.0
ACR				*e*S	Sg	11 58 08.1	+1.3
BRU2	**Volcan**	**0.44**	**18**	⇓*i*P	Pg	11 58 02.3	+1.1
BRU2				*e*S	Sg	11 58 10.1	+3.1
TBS2		**0.45**	**22**	⇑*i*P	Pg	11 58 08.9	+7.6
TBS2				*e*S	Sg	11 58 16.4	+9.0
CTCR	**Cotoan**	**0.53**	**8**	⇓*i*P	Pg	11 58 03.6	+0.9
CTCR				*e*S	Sg	11 58 10.6	+0.9
BAR1		**0.99**	**331**	*e*P	Pg	11 58 10.5	-1.0
BAR1				*e*S	Sg	11 58 24.6	+0.1
CNI	**Changuinola**	**1.08**	**17**	⇓*i*P	Pg	11 58 12.3	-1.0
CNI				*e*S	Sg	11 58 27.3	-0.1
BUS	**Buena Vista**	**1.49**	**322**	*e*P	Pn	11 58 18.7	-0.8
QCR	**Quepos**	**1.68**	**309**	*e*P	Pn	11 58 21.9	-0.2
QCR				*e*S	Sn	11 58 43.2	-0.6
URSC	**Urasca**	**1.73**	**327**	*e*P	Pn	11 58 22.2	-0.5
URSC				*e*S	Sn	11 58 45.0	+0.1
LAJ	**Bijagual**	**1.96**	**319**	*e*P	Pn	11 58 28.3	+2.5
PRS1	**Puriscal**	**2.17**	**318**	*e*P	Pn	11 58 28.2	-0.6
PRS1				*e*S	Sn	11 58 56.5	+0.8
CGA2	**Cerro Gallo 2**	**2.30**	**315**	*e*P	Pn	11 58 31.9	+1.3
CGA2				*e*S	Sn	11 59 01.3	+2.4

*JMA **28** 12:20:20.6±0.1, 36°.75N×141°.27E, h47km±2km, M2.5*

ISC 28 12:20:19.6±2.2, 36°.78N±0°.06×141°.4E±0°.1, h18km±7km, n7, σ0§58/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.58**	**304**	P	**Pg**	**12 20 31.7**	**+0.6**
ONAJ				S	**Sg**	**12 20 39.5**	**+0.7**
JHO	**Hitachi**	**0.68**	**256**	S	**Sg**	**12 20 40.9**	**-1.2**
JFK	**Kawauchi**	**0.72**	**325**	P	**Pb**	**12 20 34.0**	**+0.3**
JFK				*e*S	**Sb**	**12 20 43.3**	**+0.1**
JFT	**Otama**	**1.12**	**312**	P	**Pn**	**12 20 40.5**	**0.0**
JFT				*e*S	**Sb**	**12 20 54.9**	**+0.1**
JMM	**Marumori**	**1.19**	**336**	P	**Pn**	**12 20 40.9**	**-0.5**
JMM				*e*S	**Sb**	**12 20 55.7**	**-1.0**
JFY	**Yanaizu**	**1.49**	**296**	P	**Pn**	**12 20 45.9**	**+0.4**
JFY				*e*S	**Sn**	**12 21 04.3**	**-0.2**
MAT	**Matsushiro**	**2.57**	**266**	P	**Pn**	**12 21 00.5**	**+0.1**
MAT				S	**Sn**	**12 21 32.0**	**+0.7**

DJA 28 12:24:00, 9°.12S×111°.32E, h20km, MLv3.9/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.93**	**351**	P	Pb	12 24 17.0	-0.5
PWJI	**Pagerwojo**	**1.19**	**24**	P	Pn	12 24 20.8	-0.7
PWJI				S	Sb	12 24 36.1	-0.8
UGM	**Wanagama**	**1.44**	**327**	P	Pn	12 24 24.6	-0.3
UGM				S	Sn	12 24 43.0	-0.2
SJI	**Sawahan**	**1.45**	**18**	P	Pn	12 24 25.0	0.0
SJI				S	Sn	12 24 44.4	+1.0
KRKI	**Karangkates**	**1.47**	**50**	P	Pn	12 24 25.7	+0.3
NGJI	**Ngawi**	**1.75**	**5**	P	Pn	12 24 32.2	+3.0
SMRI	**Semarang**	**2.23**	**337**	P	Pn	12 24 36.9	+1.0
GMJI	**Gumukmas**	**2.26**	**68**	P	Pn	12 24 35.9	-0.4
GRJI	**Gresik**	**2.47**	**28**	P	Pn	12 24 40.2	+1.0
SRBI	**Singaraja**	**3.98**	**75**	P	Pn	12 25 00.6	+0.6
KHKI	**Kahang-Kahang**	**4.30**	**80**	P	Pn	12 25 04.6	+0.2

*CSEM **28** 12:32:13.6±0.2, 50°.08N×18°.40E, h1km, ML3.2/8, Error ellipse: s-maj=4.4km s-min=2.5km az=6.0*
*IPEC **28** 12:32:14.1±0.1, 50°.12N×18°.39E, h6km±1km, ML2.2/4, Error ellipse: s-maj=1.3km s-min=0.7km az=160.0*
*PRU **28** 12:32:15.4, 50°.07N×18°.33E, h0km*
*VIE **28** 12:32:16.6±0.4, 49°.72N×18°.35E, h0km, mb1.9/4, ML2.4/4, Error ellipse: s-maj=2.7km s-min=1.4km az=91.0 15 km SSE of Ostrava Suspected Mining induced.*

WAR 28 12:32:14.1, 50°.06N×18°.43E, 1C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**278**	*e*Pg	Pg	12 32 17.9	+0.9
RAC				*e*Sg	Sg	12 32 21.0	+2.0
OKC	**Ostrava-Krasne**	**0.29**	**219**	*e*PG	Pg	12 32 20.2	+0.6
OKC				*e*SG	Sg	12 32 23.8	+0.5
	comp=Z,165nm,0.6s						
OKC	**Ostrava-Krasne**	**0.29**	**219**	*e*Pg	Pg	12 32 20.0	+0.4
	baz=29						
OKC				*e*Sg	Sg	12 32 24.5	+1.2
	baz=29						
MORC	**Moravsky Berou**	**0.64**	**244**	*e*Pg	Pg	12 32 26.2	-0.1
	baz=58						
MORC				*e*Sg	Sg	12 32 34.7	+0.1
	comp=Z,59nm,0.3s,baz=58						
OJC	**Ojcow**	**0.90**	**79**	*e*Pg	Pg	12 32 30.4	-0.9
OJC				*e*Sg	Sg	12 32 43.3	+0.4
OJC	**Ojcow**	**0.90**	**79**	*e*Pg	Pg	12 32 30.2	-1.1
	baz=264						
OJC				*e*Sg	Sg	12 32 43.8	+0.9
	baz=264						
JAVC	**Velka Javorina**	**1.30**	**203**	*e*Pn	Pn	12 32 39.4	-0.1
	baz=20						
DPC	**Dobruska-Polom**	**1.38**	**283**	*e*PG	Pn	12 32 39.8	-0.8
DPC				*e*SG	Sn	12 32 57.6	-2.0
	comp=Z,61nm,0.5s						
DPC	**Dobruska-Polom**	**1.38**	**283**	Pg	Pn	12 32 39.8	-0.8
DPC				Sg	Sn	12 32 57.6	-2.0
	comp=Z,61nm,0.5s						
NIE	**Niedzica**	**1.38**	**117**	*e*Pg	Pg	12 32 40.9	+0.3
NIE				*e*Sg	Sg	12 33 00.3	+1.8
NIE	**Niedzica**	**1.38**	**117**	*e*Pg	Pg	12 32 40.9	+0.3
NIE				*e*Sg	Sg	12 33 00.3	+1.8
VRAC	**Vranov**	**1.41**	**238**	*e*Pn	Pn	12 32 40.0	-1.0
	baz=54						
VRAC				*e*Sg	Sg	12 32 58.2	-1.2
	comp=Z,31nm,0.3s,baz=54						
KOLL	**Kolacno**	**1.48**	**181**	*e*	Pn	12 32 42.1	+0.1
KOLL	**Kolacno**	**1.48**	**181**	*e*SN	Sn	12 33 01.5	-0.6
KOLL	**Kolacno**	**1.48**	**181**	*e*Sn	Sn	12 33 01.5	-0.6
KSP	**Ksiaz**	**1.57**	**301**	*e*Pn	Pn	12 32 42.7	-0.5
KSP				*e*Pg	Pg	12 32 44.9	+0.7
KSP				*e*Sn	Sn	12 33 04.8	+0.6
KSP				*e*Sg	Sg	12 33 06.3	+1.7
KSP	**Ksiaz**	**1.57**	**301**	*e*Pg	Pg	12 32 42.7	-1.5
VYHS	**Vyhne**	**1.59**	**170**	*e*PN	Pn	12 32 43.8	+0.3
VYHS				*e*SN	Sn	12 33 04.0	-0.7
VYHS	**Vyhne**	**1.59**	**170**	*e*Pn	Pn	12 32 43.6	+0.1
	baz=350						
VYHS				*e*Sn	Sn	12 33 04.0	-0.7
UPC	**Upice**	**1.61**	**287**	*e*PG	Pg	12 32 44.5	-0.5
UPC				*e*SG	Sg	12 33 04.4	-1.5
UPC	**Upice**	**1.61**	**287**	Pg	Pg	12 32 44.5	-0.5
UPC				Sg	Sg	12 33 04.4	-1.5
KRUC	**Moravsky**	**1.66**	**234**	*e*Pn	Pn	12 32 43.8	-0.6
	baz=50						
KRUC				*e*Sg	Sg	12 33 06.1	-1.3
	comp=Z,22nm,0.3s,baz=50						
STHS	**Stebnicka Huta**	**1.94**	**108**	*e*PN	Pg	12 32 51.8	+0.6
STHS				*e*SN	Sg	12 33 18.4	+2.1
STHS	**Stebnicka Huta**	**1.94**	**108**	*e*Pn	Pg	12 32 51.8	+0.6
KECS	**Kecovo**	**2.08**	**139**	*e*	Pg	12 32 56.0	+2.1
KECS	**Kecovo**	**2.08**	**139**	*e*SN	Sn	12 33 18.3	+1.6
PRU	**Pruhonice**	**2.51**	**270**	*e*SG	Sg	12 33 32.4	-2.2
	comp=Z,12nm,0.4s						
PRU	**Pruhonice**	**2.51**	**270**	Sg	Sg	12 33 32.4	-2.2
	comp=Z,12nm,0.4s						
PVCC	**Panska Ves**	**2.52**	**282**	*e*SG	Sg	12 33 33.4	-1.5
	comp=Z,21nm,0.3s						
PVCC	**Panska Ves**	**2.52**	**282

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.14**	**211**	Pg	**Pg**	**12 51 19.0**	**-1.0**
CD2				Sg	**Sg**	**12 51 34.3**	**-0.5**
CD2				smax			
	comp=N,1μm,0.8s						
LZH	**Lanzhou**	**4.21**	**353**	Pg	**Pg**	**12 52 20.8**	**+2.1**
LZH				Sg	**Sg**	**12 53 12.0**	**-1.3**
LZH				smax			
	comp=N,77nm,0.6s						
LZH				smax			
	comp=E,96nm,0.5s						
LZH				LR	LR		
	comp=E,220nm,5.4s						
LZH				LR	LR		
	comp=Z,320nm,6.7s						
XAN	**Xi'an**	**4.33**	**59**	Pn	**Pn**	**12 52 06.0**	**+2.1**
XAN				Pg	**Pg**	**12 52 18.5**	**-2.4**
XAN				Sn	**Sn**	**12 52 55.0**	**+0.6**
XAN				Sg	**Sg**	**12 53 13.5**	**-3.5**
XAN				smax			
	comp=N,68nm,0.9s						
XAN				smax			
	comp=E,42nm,0.9s						
ENH	**Enshi**	**4.62**	**109**	*e*Pn	**Pn**	**12 52 08.4**	**+0.6**
ENH				*e*Sg	**Sg**	**12 53 27.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**14.27**	**202**	Pn	**Pn**	**12 54 25.8**	**+5.6**
	comp=E,0.1nm,0.3s,baz=19,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**22.59**	**318**	P	**P**	**12 55 59.5**	**+1.1**
	comp=E,0.2nm,0.3s,mb3.0,baz=127,slow=9.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.14**	**333**	P	**P**	**12 56 32.4**	**+0.3**
	comp=E,0.7nm,0.4s,mb3.5,baz=133,slow=9.3,SNR=2.9						
KURK	**Kurchatov**	**26.80**	**322**	P	**P**	**12 56 38.1**	**+0.1**
	comp=E,0.2nm,0.3s,mb3.1,baz=126,slow=8.3,SNR=5.0						
FINES	**FINESS Array B**	**57.08**	**326**	P	**P**	**13 00 43.9**	**-0.2**
	comp=E,0.7nm,0.5s,mb4.0,baz=93,slow=10,SNR=2.1						
ASAR	**Alice Springs**	**62.02**	**149**	P	**P**	**13 01 18.3**	**-0.2**
	comp=E,0.3nm,0.8s,mb3.5,baz=332,slow=6.4,SNR=4.0						

DJA 28 12:53:30,0.18S×120.03E,h15km,MLv3.6/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.75**	**195**	P	Pg	12 53 42.0	-2.6
APSI	**Ampana**	**1.77**	**114**	P	Pn	12 54 00.1	-0.1
APSI				S	Sn	12 54 23.6	+1.1
MRSI	**Marisa**	**2.02**	**71**	P	Pn	12 54 03.0	-0.5
TTSI	**Tana Toraja**	**2.85**	**184**	P	Pn	12 54 15.7	+0.7
TTSI				S	Sn	12 54 51.1	+2.0
LUWI	**Luwuk**	**2.87**	**107**	P	Pn	12 54 17.3	+2.0
LUWI				S	Sn	12 54 51.5	+1.9
MYLDM	**Lahad Datu**	**5.54**	**344**	P	Pn	12 54 52.9	+0.9

MAN 28 13:07:56,10.46N×126.03E,h51km,mb4.6,ML3.5,MS3.4, 1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.25**	**304**	↓*e*P	Pn	13 08 17.3	+0.1
PLP				*e*S	Sn	13 08 34.1	+1.1
BESP	**Borongan**	**1.28**	**333**	*e*P	Pn	13 08 18.9	+1.3
OCLP	**Ormoc**	**1.52**	**293**	*e*P	Pn	13 08 22.9	+2.1
BUTP	**Butuan**	**1.53**	**195**	*e*P	Pn	13 08 21.8	+0.9
LLP	**Lapu-Lapu**	**2.04**	**266**	*e*P	Pn	13 08 28.5	+0.6
LLP				*e*S	Sn	13 08 54.2	+2.0
TBP	**Tagbilaran**	**2.27**	**251**	*e*P	Pn	13 08 32.0	+1.0
CNP	**Cataraman**	**2.44**	**327**	*e*P	Pn	13 08 34.1	+0.6
BUKP	**Musuan**	**2.73**	**201**	*e*P	Pn	13 08 39.1	+1.7
GUIM	**Jordan**	**3.39**	**273**	*e*P	Pn	13 08 47.6	+1.2
RCP	**Roxas**	**3.41**	**289**	⇑*e*P	Pn	13 08 50.0	+3.3
PVCP	**Virac**	**3.62**	**330**	*e*P	Pn	13 08 52.9	+3.3
PAGZ	**Pagadian**	**3.68**	**226**	*e*P	Pn	13 08 51.7	+1.2

BJI ***28*** *13:19:49.8,84.94N×12.45E,h13km,mB5.2/26,mb4.9/37, Ms5.0/30,Ms7 4.6/31*
IDC ***28*** *13:19:50.9±0.4,84.98N×13.11E,h0km,mb4.4/34, mb1 4.5/37,mb1mx4.5/40,mbtmp4.4/37,ML4.5/3,MS4.5/41, Ms1 4.5/41,ms1mx4.4/47,Error ellipse: s-maj=11.7km s-min=9.1km az=51.0*
MOS ***28*** *13:19:50.6±1.1,84.93N×12.98E,h10km,mb4.9/80, MS4.5/47,Error ellipse: s-maj=60.3km s-min=3.8km az=90.9*
ISCJB ***28*** *13:19:51.0±0.4,84.94N±0.02×13.0E±0.2,h10km, mb4.8/183,MS4.5/78,Error ellipse: s-maj=3.4km s-min=1.7km az=141.3*
NEIC ***28*** *13:19:52.7±0.1,84.91N×12.90E,h10km,mb4.9/109, MS4.5/5,Error ellipse: s-maj=4.5km s-min=2.7km az=58.0*
GCMT ***28*** *13:19:52.7±0.2,84.90N×14.20E,h12km,MW5.2/98, Moment Tensor Solution. s56,c73; s98,c187; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr0.78±.01; Mθθ-0.53±.01; Mφφ-0.25±.01; Mrθ-0.08±.04; Mφθ-0.36±.01; Mφr0.22±.04; Best double couple: M0=0.81200×10^17 NP1:φs250.00000°,δ45.00000°,λ112.00000°. NP2: φs40.00000°,δ49.00000°,λ70.00000°. Principal axes: T 0.8460, Plg75.0000°, Azm243.0000°; N -0.0690, Plg15.0000°, Azm54.0000°; P -0.7780, Plg2.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
CSEM ***28*** *13:19:53.1±0.1,84.96N×13.12E,h16km,mb4.9/99,Ms4.5, Mw5.2 Error ellipse: s-maj=4.2km s-min=2.6km az=61.0*
SZGRF ***28*** *13:20:31.3,80.88N×2.44E,h33km,mb5.1,MS4.4,North of Svalbard*

ISC 28 13:19:53.0±0.1,84.93N±0.02×13.1E±0.2,h10km, (h17km±1.1km:pP-P),n936,s0s76/986,mb4.8/183, MS4.5/78,215C-158D,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**6.04**	**182**	Pn	**Pn**	**13 21 17.8**	**-4.4**
KBS				Sn	**Sn**	**13 22 24.4**	**-6.9**
KBS	**Kingsbay**	**6.04**	**182**	*c i*P	**Pn**	**13 21 18.3**	**-4.0**
KBS				pmax	pmax		
	comp=Z,285nm,1.2s						
KBS	**Kingsbay**	**6.04**	**182**	*e*Pn	**Pn**	**13 21 18.1**	**-4.1**
	comp=Z,126nm,0.6s						
SPB4	**Spitsbergen Ar**	**6.81**	**174**	*e*Pn	**Pn**	**13 21 28.6**	**-4.1**
SPA0	**Spitsbergen Ar**	**6.81**	**174**	Pn	**Pn**	**13 21 28.3**	**-4.5**
	baz=10.0,slow=14						
SPA0				Sn	**Sn**	**13 22 38.9**	**-11**
SPITS	**Spitsbergen Ar**	**6.81**	**174**	Pn	**Pn**	**13 21 28.8**	**-3.9**
	baz=20,slow=10.0,SNR=555						
SPITS				Sn	**Sn**	**13 22 42.2**	**-7.9**
	baz=54,slow=8.4,SNR=0.9						
SPITS				LR	LR	13 23 52.7	
	comp=Z,9μm,20.4s,baz=335,slow=35						
HSP	**Hornsund**	**7.98**	**176**	*e*Pn	**Pn**	**13 21 46.6**	**-2.2**
HSP				*e*Sn	**Sn**	**13 23 11.5**	**-7.4**
DAG	**Danmarks Havn**	**9.36**	**228**	⇑*e*P	**Pn**	**13 22 05.8**	**-1.9**
DAG				pmax	pmax		
	comp=Z,16nm,0.8s						
DAG	**Danmarks Havn**	**9.36**	**228**	⇑*i*P	**Pn**	**13 22 05.8**	**-1.9**
	comp=Z,16nm,0.8s						
DAG	**Danmarks Havn**	**9.36**	**228**	*e*P	**Pn**	**13 22 05.8**	**-1.9**
	comp=Z,16nm,0.8s						
SUMG	**Summit**	**14.89**	**247**	*e*Pn	**Pn**	**13 23 18.9**	**-4.2**
	comp=Z,181nm,1.2s						
TRO	**Tromso**	**15.42**	**172**	*e*	**Pn**	**13 23 24.7**	**-5.5**
KEV	**Kevo**	**15.46**	**162**	*e*P	**Pn**	**13 23 26.0**	**-4.7**
KEV				pmax	pmax		
	comp=Z,34nm,0.8s						
KEV	**Kevo**	**15.46**	**162**	*e*Pn	**Pn**	**13 23 25.6**	**-5.1**
	comp=Z,89nm,1.1s						
KEV	**Kevo**	**15.46**	**162**	*e*p	**Pn**	**13 23 26.0**	**-4.7**
	comp=Z,34nm,0.8s						
ARA0	**ARCESS Array S**	**15.64**	**164**	P	**Pn**	**13 23 27.4**	**-5.6**
	baz=348,slow=11						
ARCES	**ARCESS Array B**	**15.64**	**164**	Pn	**Pn**	**13 23 27.8**	**-5.3**
	comp=Z,1.6nm,0.3s,baz=351,slow=9.7,SNR=39						
ARCES				Sn	**Sn**	**13 26 11.9**	**-14**
	comp=Z,1.3nm,0.3s,baz=0.4,slow=18,SNR=3.7						
SCO	**Scoresbysund**	**15.72**	**225**	*i* P	**Pn**	**13 23 34.7**	**+0.6**
SCO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SCO				MLR	MLR		
	comp=Z,300nm,20.0s						
SCO	**Scoresbysund**	**15.72**	**225**	*i* P	**Pn**	**13 23 34.7**	**+0.6**
	comp=Z,7.4nm,1.1s						
SCO				MLR	MLR		
	comp=Z,290nm,20.0s						
LVZ	**Lovozero**	**17.58**	**153**	⇑*e*P	**Pn**	**13 23 55.7**	**-2.0**
LVZ				pmax	pmax		
	comp=Z,173nm,2.5s						
RES	**Resolute Bay**	**17.65**	**304**	Pn	**Pn**	**13 23 55.3**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=17,slow=12,SNR=11						
RES				LR	LR	13 30 54.2	
	comp=Z,4μm,19.3s,baz=30,slow=38						
RES	**Resolute Bay**	**17.65**	**304**	P	**Pn**	**13 23 55.3**	**-3.2**
RES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RES				MLR	MLR		
	comp=Z,4μm,19.3s						
RES	**Resolute Bay**	**17.65**	**304**	*e*P	**Pn**	**13 23 54.4**	**-4.1**
	comp=Z,46nm,1.4s						
APA0	**Apatity Array**	**17.81**	**155**	P	**Pn**	**13 23 54.7**	**-5.7**
	baz=0.7,slow=11						
APA	**Apatity**	**17.86**	**154**	↓*i*P	**Pn**	**13 23 53.0**	**-8.1**
APA				pmax	pmax		
	comp=Z,120nm,1.4s						
APA				pmax	pmax		
	comp=Z,900nm,13.0s						
APA				MLR	MLR		
	comp=Z,5μm,14.0s						
TIXI	**Tiksi**	**21.17**	**52**	*c i*P	**P**	**13 24 38.1**	**+0.3**
TIXI				*e*S	**S**	**13 28 36.4**	**+3.6**
TIXI				*e*SS		13 29 02.2	
TIXI				*e*SSS		13 29 13.8	
TIXI				pmax	pmax		
	comp=Z,47nm,1.7s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,92nm,8.0s						
TIXI	**Tiksi**	**21.17**	**52**	*e*P	**P**	**13 24 38.0**	**+0.1**
	comp=Z,27nm,1.2s,mb4.5						
TIXI	**Tiksi**	**21.17**	**52**	*e*P	**P**	**13 24 38.0**	**+0.2**
	comp=Z,27nm,1.2s,mb4.5						
SFJD	**Kangerlussuaq**	**21.35**	**255**	P	**P**	**13 24 40.2**	**+0.4**
	comp=Z,102nm,1.1s,mb5.1,baz=355,slow=12,SNR=17						
SFJD	**Kangerlussuaq**	**21.35**	**255**	*i* P	**P**	**13 24 37.7**	**-2.1**
SFJD				*i* S	**S**	**13 28 45.1**	**+8.7**
SFJD				pmax	pmax		
	comp=Z,57nm,1.0s,mb4.9						
SFJD				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.0						
SFJD	**Kangerlussuaq**	**21.35**	**255**	*e*P	**P**	**13 24 40.3**	**+0.5**
	comp=Z,121nm,1.3s,mb5.1						
SFJD	**Kangerlussuaq**	**21.35**	**255**	*i* P	**P**	**13 24 37.7**	**-2.1**
	comp=Z,57nm,1.0s,mb4.9						
SFJD				*i* S	**S**	**13 28 45.1**	**+8.7**
SFJD				pmax	pmax		
	comp=Z,590nm,19.0s						
SFJD	**Kangerlussuaq**	**21.35**	**255**	*i* P	**P**	**13 24 37.7**	**-2.1**
	comp=Z,57nm,1.0s,mb4.9						
SFJD	**Kangerlussuaq**	**21.35**	**255**	*i* PcP	PcP	13 28 45.1	+2.1
	comp=Z,600nm,19.0s						
JOF	**Joensuu**	**22.44**	**158**	*e*P	**P**	**13 24 48.9**	**-2.6**
JOF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
JOF	**Joensuu**	**22.44**	**158**	*e*p	**P**	**13 24 48.9**	**-2.6**
	comp=Z,16nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**23.10**	**164**	*e*P	**P**	**13 24 58.3**	**-0.2**
KAF				pmax	pmax		
	comp=Z,59nm,1.6s,mb4.8						
KAF	**Kangasniemi**	**23.10**	**164**	*e*p	**P**	**13 24 58.3**	**-0.2**
	comp=Z,59nm,1.6s,mb4.8,baz=359,slow=7.5						
KAF	**Kangasniemi**	**23.10**	**164**	*e*P	**P**	**13 24 58.3**	**-0.2**
	comp=Z,59nm,1.6s,mb4.8						
FIA0	**FINESS Array S**	**23.77**	**164**	P	**P**	**13 25 03.4**	**-1.8**
	baz=355,slow=11						
FINES	**FINESS Array B**	**23.77**	**164**	P	**P**	**13 25 03.4**	**-1.8**
	comp=Z,12nm,0.7s,mb4.4,baz=1.0,slow=11,SNR=27						
FINES				PcP	PcP	13 28 47.3	-0.7
	comp=Z,3.0nm,0.7s,baz=15,slow=1.6,SNR=3.4						
FINES				LR	LR	13 34 23.3	
	comp=Z,1μm,19.1s,MS4.4,baz=353,slow=37						
FINES	**FINESS Array B**	**23.77**	**164**	P	**P**	**13 25 03.4**	**-1.8**
FINES						13 28 47.3	
FINES				pmax	pmax		
	comp=Z,12nm,0.7s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,1μm,19.2s						
FINES	**FINESS Array B**	**23.77**	**164**	P	**P**	**13 25 03.4**	**-1.8**
	comp=Z,12nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**23.77**	**164**	PcP	PcP	13 28 47.3	-0.7
	comp=Z,1μm,19.2s						
NB2	**NORSAR Subarra**	**24.02**	**182**	P	**P**	**13 25 07.2**	**-0.3**
	comp=Z,116nm,1.7s,mb5.0,baz=1.2,slow=9.3						
NB2	**NORSAR Subarra**	**24.02**	**182**	P	**P**	**13 25 07.0**	**-0.4**
	baz=1.1,slow=9.3						
NB2	**NORSAR Subarra**	**24.02**	**182**	P	**P**	**13 25 07.2**	**-0.3**
	comp=Z,116nm,1.7s,mb5.0,baz=1.2,slow=9.2,SNR=4.3						
NOA	**NORSAR Array B**	**24.02**	**182**	P	**P**	**13 25 07.0**	**-0.4**
	comp=Z,2.0nm,0.7s,mb3.7,baz=0.2,slow=9.2,SNR=12						
NOA				LR	LR	13 35 23.1	
	comp=Z,1μm,18.2s,MS4.3,baz=5.0,slow=39						
NOA	**NORSAR Array B**	**24.02**	**182**	P	**P**	**13 25 07.0**	**-0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,1μm,18.2s						
NOA	**NORSAR Array B**	**24.02**	**182**	P	**P**	**13 25 07.0**	**-0.5**
	comp=Z,1μm,18.2s						
NAO01	**NORSAR Array S**	**24.22**	**183**	*e*P	**P**	**13 25 09.9**	**+0.7**
	comp=Z,9.1nm,0.9s,mb4.2						
NAO01	**NORSAR Array S**	**24.22**	**183**	*e*P	**P**	**13 25 09.9**	**+0.6**
	comp=Z,9.1nm,0.9s,mb4.2						
HFS	**Hagfors**	**24.93**	**179**	P	**P**	**13 25 15.6**	**-0.1**
	baz=10,slow=10						
HFS	**Hagfors**	**24.93**	**179**	P	**P**	**13 25 15.3**	**-0.4**
	comp=Z,9.9nm,0.9s,mb4.4,baz=1.4,slow=5.9,SNR=15						
HFS				PcP	PcP	13 28 49.1	-1.5
	comp=Z,1.3nm,0.6s,baz=77,slow=6.2,SNR=2.4						
HFS	**Hagfors**	**24.93**	**179**	P	**P**	**13 25 15.3**	**-0.4**
HFS						13 28 49.1	
HFS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**24.93**	**179**	P	**P**	**13 25 15.3**	**-0.4**
	comp=Z,10.0nm,0.9s,mb4.3						
HFS	**Hagfors**	**24.93**	**179**	PcP	PcP	13 28 49.1	-1.4
	comp=Z,1.0nm,0.6s						
KONO	**Kongsberg**	**25.43**	**184**	P	**P**	**13 25 20.1**	**-0.1**
KONO				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.7						
KONO	**Kongsberg**	**25.43**	**184**	P	**P**	**13 25 20.1**	**-0.1**
	comp=Z,28nm,1.2s,mb4.7						
KONO	**Kongsberg**	**25.43**	**184**	P	**P**	**13 25 20.1**	**-0.1**
	comp=Z,28nm,1.2s,mb4.7						
FRB	**Frobisher Bay**	**26.12**	**272**	P	**P**	**13 25 25.8**	**-0.7**
	comp=Z,8.7nm,1.1s,mb4.2,baz=358,slow=10.0,SNR=5.7						
FRB				LR	LR	13 35 27.6	
	comp=Z,1μm,19.6s,MS4.4,baz=150,slow=36						
FRB	**Frobisher Bay**	**26.12**	**272**	P	**P**	**13 25 25.8**	**-0.7**
FRB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FRB				MLR	MLR		
	comp=Z,1μm,19.6s						
FRB	**Frobisher Bay**	**26.12**	**272**	P	**P**	**13 25 25.8**	**-0.7**
	comp=Z,1μm,19.6s						
INK	**Inuvik**	**26.23**	**332**	P	**P**	**13 25 27.0**	**-0.5**
	comp=Z,12nm,1.2s,mb4.3,baz=9.6,slow=12,SNR=13						
INK	**Inuvik**	**26.23**	**332**	P	**P**	**13 25 27.0**	**-0.5**
INK				pmax	pmax		
	comp=Z,12nm,1.2s						
INK	**Inuvik**	**26.23**	**332**	*e*P	**P**	**13 25 26.7**	**-0.7**
	comp=Z,77nm,1.6s,mb5.0						
INK	**Inuvik**	**26.23**	**332**	*e*P	**P**	**13 25 26.7**	**-0.8**
	comp=Z,77nm,1.6s,mb5.0						
BILL	**Bilibino**	**26.75**	**22**	⇑*i*P	**P**	**13 25 31.8**	**-0.3**
BILL				*i* S	**S**	**13 30 11.2**	**+4.0**
BILL				pmax	pmax		
	comp=Z,43nm,1.2s,mb4.8						
BILL				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.4						
BILL	**Bilibino**	**26.75**	**22**	*e*P	**P**	**13 25 31.8**	**-0.3**
	comp=Z,37nm,1.2s,mb4.8						
BILL	**Bilibino**	**26.75**	**22**	*i* P	**P**	**13 25 31.8**	**-0.3**
	comp=Z,43nm,1.2s,mb4.8						
VSU	**Vasula**	**26.77**	**164**	*e*P	**P**	**13 25 31.0**	**-1.4**
VSU				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
VSU	**Vasula**	**26.77**	**164**	*e*P	**P**	**13 25 31.0**	**-1.4**
	comp=Z,12nm,0.9s,mb4.4						
SOKR	**Solikamsk**	**27.12**	**130**	*d i*P	**P**	**13 25 34.6**	**-0.9**
SOKR				S	**S**	**13 30 14.6**	**+1.4**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,2μm,18.0s,MS4.7						
SOKR	**Solikamsk**	**27.12**	**130**	*i* P	**P**	**13 25 34.6**	**-0.9**
	comp=Z,20nm,0.9s,mb4.7						
SOKR				S	**S**	**13 30 14.6**	**+1.4**
	comp=Z,2μm,18.0s						
COLD	**Coldfoot**	**27.84**	**346**	*e*P	**P**	**13 25 42.0**	**+0.2**
	comp=Z,37nm,1.4s,mb4.8						
COLD	**Coldfoot**	**27.84**	**346**	*e*P	**P**	**13 25 42.0**	**+0.1**
	comp=Z,37nm,1.4s,mb4.8						
IZAR	**Zarasai**	**29.48**	**165**	*e*P	**P**	**13 25 56.1**	**-0.5**
IZAR	**Zarasai**	**29.48**	**165**	*e*P	**P**	**13 25 56.1**	**-0.5**
ISAL	**Salakas**	**29.66**	**165**	*e*P	**P**	**13 25 58.9**	**+0.8**
ISAL	**Salakas**	**29.66**	**165**	*e*P	**P**	**13 25 58.9**	**+0.8**
MOS	**Moscow**	**29.86**	**152**	*e*P	Px	13 26 12.1	
MOS				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.6						
IIGN	**Ignalina**	**29.88**	**165**	*e*P	**P**	**13 26 00.9**	**+0.8**
IIGN	**Ignalina**	**29.88**	**165**	*e*P	**P**	**13 26 00.9**	**+0.8**
IDID	**Didziasalis**	**29.93**	**164**	*e*P	**P**	**13 26 01.1**	**+0.6**
IDID	**Didziasalis**	**29.93**	**164**	*e*P	**P**	**13 26 01.1**	**+0.6**
BSD	**Bornholm Skovb**	**29.96**	**178**	*e*S	**S**	**13 30 58.2**	**+0.2**
	SNR=28						
EGAK	**Eagle**	**30.05**	**338**	*e*P	**P**	**13 26 01.9**	**+0.4**
	comp=Z,42nm,1.7s,mb4.9						
EGAK	**Eagle**	**30.05**	**338**	*e*P	**P**	**13 26 01.9**	**+0.4**
	comp=Z,42nm,1.7s,mb4.9						
SVE	**Sverdlovsk**	**30.11**	**126**	*e*P	**P**	**13 26 01.3**	**-0.9**
SVE				*e*S	**S**	**13 31 04.6**	**+4.3**
SVE				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.7						
SVE				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.8						
SVE	**Sverdlovsk**	**30.11**	**126**	*e*P	**P**	**13 26 01.3**	**-0.9**
	comp=Z,24nm,1.6s,mb4.7						
COLA	**College**	**30.14**	**344**	*e*P	**P**	**13 26 01.5**	**-0.9**
COLA				pmax	pmax		
	comp=Z,59nm,1.8s,mb5.0						
COLA	**College**	**30.14**	**344**	*e*P	**P**	**13 26 01.5**	**-0.9**
	comp=Z,59nm,1.8s,mb5.0						
COLA	**College**	**30.14**	**344**	*e*P	**P**	**13 26 01.5**	**-0.9**
	comp=Z,59nm,1.8s,mb5.0						
ARU	**Arti**	**30.36**	**128**	*c i*P	**P**	**13 26 03.8**	**-0.5**
ARU				*e*		13 27 02.3	
ARU				S	**S**	**13 31 05.1**	**+0.9**
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
ARU				MLR	MLR		
	comp=Z,3μm,16.0s,MS5.0						
ARU	**Arti**	**30.36**	**128**	P	**P**	**13 26 01.3**	**-3.1**
	comp=Z,8.6nm,1.0s,mb4.4						
ARU	**Arti**	**30.36**	**128**	*i* P	**P**	**13 26 03.8**	**-0.5**
	comp=Z,12nm,1.7s,mb4.3						
ARU				S	**S**	**13 31 05.1**	**+0.9**
	comp=Z,3μm,16.0s						
OBN	**Obninsk**	**30.44**	**153**	⇑*i*P	**P**	**13 26 04.2**	**-0.9**
OBN				*i* S	**S**	**13 31 07.6**	**+2.1**
OBN				pmax	pmax		
	comp=Z,72nm,2.5s,mb5.0						
OBN				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.5						
OBN	**Obninsk**	**30.44**	**153**	*i* P	**P**	**13 26 04.2**	**-0.9**
	comp=Z,72nm,2.5s,mb5.0						
OBN				*i* S	**S**	**13 31 07.6**	**+2.1**
	comp=Z,1μm,18.0s						
DAWY	**Dawson**	**30.70**	**337**	*e*P	**P**	**13 26 07.3**	**0.0**
DAWY	**Dawson**	**30.70**	**337**	*e*P	**P**	**13 26 07.3**	**0.0**
YAK	**Yakutsk**	**30.73**	**56**	*c i*P	**P**	**13 26 06.7**	**-0.8**
YAK				*e**PP	pP	13 26 15.5	+4.9
YAK				*e*PPP		13 27 15.8	
YAK				*e*S	**S**	**13 31 09.8**	**0.0**
YAK				*e*SS	SS	13 32 50.2	-30
YAK				*e*SSS		13 33 11.5	
YAK				*e*		13 36 38.0	
YAK				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,24nm,1.3s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax			
	comp=E,56nm,9.4s						
YAK				smax			
	comp=N,60nm,11.3s						
YAK				MLR	MLR		
	comp=Z,507nm,26.0s,MS4.1						
YAK				MLR	MLR		
	comp=E,198nm,19.0s						
YAK				MLR	MLR		
	comp=N,303nm,18.0s						
YAK	**Yakutsk**	**30.73**	**56**	*e*P	**P**	**13 26 06.8**	**-0.8**
	comp=N,17nm,0.5s,mb5.1						
YAK	**Yakutsk**	**30.73**	**56**	*i* P	**P**	**13 26 06.7**	**-0.8**
	comp=N,24nm,1.3s,mb4.9						
YAK				*e*S	**S**	**13 31 09.8**	**0.0**
	comp=N,60nm,11.3s						
MNK	**Minsk**	**30.77**	**163**	⇑*e*P	**P**	**13 26 07.0**	**-1.0**
MNK				*e*PPP		13 27 32.0	
MNK				*e*S	**S**	**13 31 08.0**	**-2.6**
MNK				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.4						
MNK				MLR	MLR		
	comp=Z,4μm,10.0s,MS5.3						
MNK	**Minsk**	**30.77**	**163**	*e*P	**P**	**13 26 07.0**	**-1.0**
	comp=Z,60nm,1.0s,mb5.4						
MICGM	**Minsk**	**30.77**	**163**	⇑*e*P	**P**	**13 26 07.0**	**-1.0**
BPAW	**Bear Paw Mtn.**	**30.99**	**346**	*e*P	**P**	**13 26 10.5**	**+0.6**
	comp=Z,48nm,1.5s,mb5.1						
YKA	**Yellowknife Ar**	**31.03**	**315**	P	**P**	**13 26 09.5**	**-0.7**
	comp=Z,3.5nm,1.0s,mb4.1,baz=2.7,slow=9.0,SNR=18						
YKA				PP	PP	13 27 02.9	-17
	comp=Z,0.5nm,0.6s,baz=355,slow=12,SNR=1.8						
YKA				LR	LR	13 39 15.5	
	comp=Z,125nm,18.2s,MS3.6,baz=30,slow=38						
YKA	**Yellowknife Ar**	**31.03**	**315**

BOD Bodaibo 33.66 71 *e*P **P 13 26 30.7 -2.5**
comp=Z,14nm,1.7s,mb4.6
CLL Collm 33.78 180 *e*P **P 13 26 34.6 +0.3**
comp=Z,48nm,1.6s,mb5.2
CLL Collm 33.78 180 *e*P **P 13 26 34.0 -0.3**
CLL *i* 13 26 39.4
CLL *e* 13 29 13.0
CLL *e*S **S 13 32 06.0 +8.5**
CLL pmax pmax
comp=Z,16nm,1.4s,mb4.8
CLL MLR MLR
comp=Z,1μm,20.2s,MS4.7
CLL Collm 33.78 180 *e*P **P 13 26 34.0 -0.3**
comp=Z,16nm,1.4s,mb4.8
CLL *i* 13 26 39.4
CLL *e*PcP PcP 13 29 13.0 -0.1
CLL *e*S **S 13 32 06.0 +8.5**
CLL LR LR
comp=Z,1μm,20.2s,MS4.7
CLL Collm 33.78 180 *e*P **P 13 26 34.0 -0.3**
comp=Z,16nm,1.4s,mb4.8
CLL *i* pP pP 13 26 39.4 +2.0
comp=Z,47nm,1.6s
CLL *e*PP PP 13 27 46.0 -4.5
CLL *e*PcP PcP 13 29 13.0 -0.1
CLL *e*S **S 13 32 06.0 +8.5**
CLL *e*PKPKPdf 13 59 57.0
CLL Collm 33.78 180 *e*P **P 13 26 34.0 -0.3**
comp=Z,16nm,1.4s,mb4.8
NVS Novosibirsk 33.90 103 *i* P **P 13 26 35.1 -0.3**
NVS pmax pmax
comp=N,62nm,1.7s
NVS pmax pmax
comp=E,8.0nm,1.7s
NVS pmax pmax
comp=Z,63nm,1.7s,mb5.3
NVS Novosibirsk 33.90 103 *i* P **P 13 26 35.1 -0.3**
RC01 Rabbit Creek A 33.98 345 *e*P **P 13 26 37.2 +1.1**
comp=Z,62nm,1.7s,mb5.3
RC01 Rabbit Creek A 33.98 345 *e*P **P 13 26 37.2 +1.1**
comp=Z,62nm,1.7s,mb5.3
SVW2 Sparrevohn 34.09 350 *e*P **P 13 26 38.4 +1.5**
SVW2 Sparrevohn 34.09 350 *e*P **P 13 26 38.4 +1.5**
BRG Berggiesshubel 34.21 179 *e*P **P 13 26 38.3 +0.2**
comp=Z,50nm,1.6s,mb5.2
BRG Berggiesshubel 34.21 179 *e*P **P 13 26 38.4 +0.2**
comp=Z,7.3nm,0.9s,mb4.6
BRG *e* 13 26 44.0
comp=Z,50nm,1.6s
BRG S **S 13 32 02.0 -2.2**
BRG
comp=N,962nm,26.5s
BRG
comp=E,534nm,23.1s
BRG
comp=Z,1μm,22.6s
KSP Ksiaz 34.25 176 *e*P **P 13 26 40.7 +2.3**
KSP Ksiaz 34.25 176 *e*P **P 13 26 39.7 +1.2**
KSP *e**PP pP 13 26 44.6 +3.1
KSP *e*S **S 13 32 00.0 -4.8**
KSP Ksiaz 34.25 176 *e*P **P 13 26 39.7 +1.2**
KSP *e*pP pP 13 26 44.6 +3.1
UBBA Unterbreizbach 34.27 184 *e*P **P 13 26 38.2 -0.5**
comp=Z,53nm,2.0s,mb5.1
MOX Moxa 34.44 182 *e*P **P 13 26 41.4 +1.3**
comp=Z,85nm,1.8s,mb5.4
MOX *e*S **S 13 32 12.0 +4.2**
MOX
comp=Z,600nm,20.0s
MOX Moxa 34.44 182 *e*P **P 13 26 40.5 +0.4**
comp=Z,50nm,1.4s,mb5.2
MOX Moxa 34.44 182 *e*P **P 13 26 41.4 +1.3**
MOX *e*S **S 13 32 12.0 +4.2**
MOX pmax pmax
comp=Z,85nm,1.8s,mb5.4
MOX MLR MLR
comp=Z,600nm,20.0s,MS4.3
MOX Moxa 34.44 182 *e*P **P 13 26 41.4 +1.3**
comp=Z,85nm,1.8s,mb5.4
MOX *e*S **S 13 32 12.0 +4.2**
MOX LR LR
comp=Z,600nm,20.0s,MS4.3
MOX Moxa 34.44 182 *e*P **P 13 26 41.4 +1.3**
comp=Z,85nm,1.8s,mb5.4
VSR Storozhevoye 34.45 151 *e*P **P 13 26 41.1 +0.9**
VSR *e*S **S 13 32 07.0 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR smax
comp=N,120nm,5.7s
VSR smax
comp=Z,40nm,9.6s
VSR smax
comp=E,40nm,4.5s
VSR MLR MLR
comp=Z,1μm,16.0s,MS4.7
VSR MLR MLR
comp=N,1μm,19.0s,MS4.8
VSR MLR MLR
comp=E,220nm,14.0s,MS4.8
VSR Storozhevoye 34.45 151 *e*P **P 13 26 41.1 +0.9**
comp=E,20nm,1.2s,mb4.9
VSR *e*S **S 13 32 07.0 -0.9**
comp=E,1μm,19.0s
PVCC Panska Ves 34.56 178 *e*P **P 13 26 46.6 +5.5**
PVCC MLR MLR
comp=Z,1μm,30.1s,MS4.5
PVCC Panska Ves 34.56 178 *e*P **P 13 26 46.6 +5.5**
PVCC AMS AMS 13 38 00.0
comp=Z,1μm,30.1s
UPC Upice 34.59 177 *e*P **P 13 26 43.7 +2.3**
BRVK Borovoye 34.59 117 *c i*P **P 13 26 41.7 +0.3**
BRVK pmax pmax
comp=Z,24nm,1.7s,mb4.8
BRVK Borovoye 34.59 117 *e*P **P 13 26 41.5 +0.1**
comp=Z,55nm,1.8s,mb5.2
BRVK Borovoye 34.59 117 *e*P **P 13 26 41.5 +0.1**
comp=Z,55nm,1.8s,mb5.2
AKASG Malin Array Be 34.61 162 P **P 13 26 40.2 -1.4**
comp=Z,0.9nm,0.3s,mb4.2,baz=354,slow=8.9,SNR=19
AKASG PP PP 13 27 44.2 -15
comp=Z,1.3nm,0.5s,baz=359,slow=13,SNR=4.0
AKASG PcP PcP 13 29 14.1 -1.5
comp=Z,1.9nm,0.6s,baz=348,slow=2.8,SNR=6.8
AKASG LR LR 13 41 03.7
comp=Z,2μm,18.2s,MS4.8,baz=0.0,slow=37
AKASG Malin Array Be 34.61 162 P **P 13 26 40.2 -1.4**
AKASG 13 29 14.1
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG MLR MLR
comp=Z,2μm,18.2s
AKASG Malin Array Be 34.61 162 P **P 13 26 40.2 -1.4**
AKASG PP PP 13 27 44.2 -15
AKASG PcP PcP 13 29 14.1 -1.5
AKASG LR LR 13 41 03.7
AKASG Malin Array Be 34.61 162 P **P 13 26 40.2 -1.4**
comp=Z,1.0nm,0.5s,mb4.0
AKASG Malin Array Be 34.61 162 PcP PcP 13 29 14.1 -1.4
comp=Z,2μm,18.2s
AKBB Malin Array Si 34.61 162 *e*P **P 13 26 40.2 -1.4**
AKBB Malin Array Si 34.61 162 *e*P **P 13 26 40.2 -1.4**
KIEV Kiev 34.61 162 *e*P **P 13 26 40.3 -1.3**
KIEV pmax pmax
comp=Z,36nm,1.4s,mb5.1
KIEV Kiev 34.61 162 *e*P **P 13 26 40.3 -1.3**
comp=Z,36nm,1.4s,mb5.1
KIEV Kiev 34.61 162 *e*P **P 13 26 40.3 -1.3**
comp=Z,36nm,1.4s,mb5.1
BVAR Borovoye Array 34.63 117 P **P 13 26 41.9 +0.2**
comp=Z,4.1nm,0.7s,mb4.5,baz=347,slow=6.1,SNR=39
BVAR LR LR 13 43 55.4
comp=Z,1μm,18.2s,MS4.7,baz=344,slow=42
BVAR Borovoye Array 34.63 117 P **P 13 26 41.9 +0.2**
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR MLR MLR
comp=Z,1μm,18.2s
BVAR Borovoye Array 34.63 117 P **P 13 26 41.9 +0.2**
comp=Z,1μm,18.2s
WERD Werda 34.64 181 *e*P **P 13 26 42.6 +0.8**
comp=Z,64nm,1.7s,mb5.3
TANN Tannenbergstha 34.67 181 *e*P **P 13 26 43.2 +1.1**
comp=Z,66nm,1.7s,mb5.3
VORD Divnogorie 34.70 151 *e*P **P 13 26 40.4 -2.0**
VORD *e*S **S 13 32 07.5 -4.3**
VORD pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD smax
comp=N,50nm,4.2s
VORD smax
comp=Z,40nm,5.8s
VORD smax
comp=E,30nm,7.3s
VORD MLR MLR
comp=Z,1μm,19.0s,MS4.6
VORD MLR MLR
comp=N,1μm,23.0s
VORD MLR MLR
comp=E,320nm,15.0s
VORD Divnogorie 34.70 151 *e*P **P 13 26 40.4 -2.0**
comp=E,30nm,0.8s,mb5.3
GUNZ Gunzen 34.72 181 *e*P **P 13 26 43.5 +1.0**
comp=Z,79nm,1.7s,mb5.4
DPC Dobruska-Polom 34.74 176 *e*P **P 13 26 42.8 +0.1**
DPC *e*pP pP 13 26 47.9 +2.1
DPC *e*S **S 13 32 12.4 0.0**
DPC AMS AMS 13 40 10.0
comp=Z,800nm,18.3s
DPC Dobruska-Polom 34.74 176 *e*P **P 13 26 42.8 +0.1**
DPC *e*S **S 13 32 12.4 0.0**
comp=Z,800nm,18.3s
SCHQ Schefferville 34.78 267 P **P 13 26 42.8 -0.1**
comp=Z,3.0nm,0.8s,mb4.3,baz=31,slow=18,SNR=2.2
SCHQ LR LR 13 40 52.5
comp=Z,385nm,20.1s,MS4.1,baz=330,slow=36
SCHQ Schefferville 34.78 267 P **P 13 26 42.8 -0.2**
WERN Wernitzgruen 34.80 181 *e*P **P 13 26 44.1 +0.9**
comp=Z,56nm,1.4s,mb5.3
NKC Novy Kostel 34.85 181 *e*P **P 13 26 44.5 +0.8**
NKC *e*pP pP 13 26 48.6 +1.9
NKC *e*S **S 13 32 17.4 +3.3**
NKC AMS AMS 13 39 40.0
comp=Z,900nm,20.4s
NKC Novy Kostel 34.85 181 *e*P **P 13 26 44.5 +0.8**
OJC Ojcow 34.90 172 *e*P **P 13 26 44.4 +0.3**
OJC *e*sP sP 13 26 49.9 +1.5
OJC *e*S **S 13 32 15.8 +0.9**
OJC L 13 47 50.7
comp=Z,0.7nm,16.5s
OJC Ojcow 34.90 172 *e*P **P 13 26 44.4 +0.3**
OJC *e**SP sP 13 26 49.9 +1.5
OJC *e*S **S 13 32 15.8 +0.9**
OJC Ojcow 34.90 172 *e*P **P 13 26 44.4 +0.3**
OJC *e*S **S 13 32 15.8 +0.9**
ZAA0 Zalesovo Array 34.92 101 *e*P **P 13 26 44.1 -0.2**
ZAA0 Zalesovo Array 34.92 101 *e*P **P 13 26 44.1 -0.2**
ZALV Zalesovo Beam 34.92 101 P **P 13 26 43.9 -0.3**
comp=Z,6.0nm,0.8s,mb4.6,baz=350,slow=7.5,SNR=31
ZALV PP PP 13 27 58.2 -5.0
comp=Z,1.5nm,0.7s,baz=2.1,slow=12,SNR=1.7
ZALV LR LR 13 44 55.0
comp=Z,767nm,18.1s,MS4.5,baz=349,slow=43
ZALV Zalesovo Beam 34.92 101 P **P 13 26 43.9 -0.4**
ZALV 13 27 58.2
ZALV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
ZALV pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ZALV MLR MLR
comp=Z,767nm,18.1s,MS4.5
PRU Pruhonice 35.10 178 *e*P **P 13 26 46.8 +1.0**
PRU *e*pP pP 13 26 51.0 +2.1
PRU *e*S **S 13 32 20.2 +2.3**
PRU AMS AMS 13 38 40.0
comp=Z,1μm,25.8s
PRU Pruhonice 35.10 178 *e*P **P 13 26 46.8 +1.0**
PRU *e*S **S 13 32 20.2 +2.3**
comp=Z,1μm,25.8s
OKC Ostrava-Krasne 35.27 174 *e*P **P 13 26 48.4 +1.1**
OKC *e*pP pP 13 26 53.4 +3.1
OKC *e*S **S 13 32 20.9 +0.4**
OKC AMS AMS 13 41 00.0
comp=Z,2μm,19.3s
OKC Ostrava-Krasne 35.27 174 *e*P **P 13 26 48.4 +1.1**
OKC *e*S **S 13 32 20.9 +0.4**
comp=Z,2μm,19.3s
ROTZ Rotzenmuhle 35.32 181 *e*P **P 13 26 48.7 +1.0**
comp=Z,30nm,1.4s,mb5.0
MORC Moravsky Berou 35.33 175 *e*P **P 13 26 48.0 +0.2**
MORC pmax pmax
comp=Z,39nm,1.4s,mb5.1
MORC Moravsky Berou 35.33 175 *e*P **P 13 26 48.0 +0.3**
comp=Z,39nm,1.4s,mb5.2
MORC Moravsky Berou 35.33 175 ‖ *i*P **P 13 26 49.3 +1.5**
MORC Moravsky Berou 35.33 175 *e*P **P 13 26 48.0 +0.2**
comp=Z,39nm,1.4s,mb5.1
LVV L'vov 35.37 168 *e*P **P 13 26 53.8 +5.7**
LVV MLR MLR
comp=N,600nm,14.0s,MS4.5
LVV MLR MLR
comp=E,300nm,14.0s,MS4.5
LVV MLR MLR
comp=Z,100nm,14.0s,MS3.7
GRA1 Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
GRA1 LR LR
comp=Z,700nm,19.2s,MS4.4
GRA1 Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
comp=Z,700nm,19.2s
GRF Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
GRF *e*L 13 41 13.4
comp=Z,717nm,19.2s
GRF Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
GRF pmax pmax
comp=Z,30nm,1.0s,mb5.2
GRF MLR MLR
comp=Z,700nm,19.2s,MS4.4
GRF Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
GRF pmax pmax
comp=Z,30nm,1.0s,mb5.2
GRF MLR MLR
comp=Z,700nm,19.2s,MS4.4
GRF Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
GRF LR LR
comp=Z,700nm,19.2s,MS4.4
GRF Grafenberg Arr 35.40 182 *e*P **P 13 26 48.7 +0.3**
comp=Z,700nm,19.2s
CLNS Chul'man 35.52 61 *e*P **P 13 26 46.7 -2.6**
CLNS *e* 13 28 09.5
CLNS *e* 13 29 12.1
CLNS *e*S **S 13 32 16.0 -8.2**
CLNS pmax pmax
comp=Z,26nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,19nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,1.2s
CLNS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS smax
comp=N,125nm,14.4s
CLNS smax
comp=E,131nm,13.4s
CLNS Chul'man 35.52 61 *e*P **P 13 26 46.7 -2.6**
comp=E,10.0nm,0.8s,mb4.8
KWP Kalwaria Pacla 35.53 169 *e*P **P 13 26 51.2 +1.6**
KWP Kalwaria Pacla 35.53 169 *e*P **P 13 26 49.7 +0.1**
KWP pmax pmax
comp=Z,71nm,1.4s,mb5.4
KWP Kalwaria Pacla 35.53 169 *e*P **P 13 26 49.7 +0.1**
comp=Z,71nm,1.4s,mb5.4
KWP Kalwaria Pacla 35.53 169 ⇑ *i*P **P 13 26 50.1 +0.6**
KWP Kalwaria Pacla 35.53 169 *e*P **P 13 26 49.7 +0.1**
comp=Z,71nm,1.4s,mb5.4
STHS Stebnicka Huta 35.73 171 *e*P **P 13 26 53.0 +1.8**
STHS pmax pmax
comp=Z,19nm,1.1s,mb4.9
STHS Stebnicka Huta 35.73 171 *e*P **P 13 26 53.0 +1.8**
comp=Z,18nm,1.1s,mb4.9
STHS Stebnicka Huta 35.73 171 *e*P **P 13 26 53.0 +1.8**
STHS Stebnicka Huta 35.73 171 *e*P **P 13 26 53.0 +1.8**
comp=Z,19nm,1.1s,mb4.9
VRAC Vranov 35.79 176 P **P 13 26 52.8 +1.0**
comp=Z,8.9nm,1.0s,mb4.6,baz=346,slow=10,SNR=7.2
VRAC LR LR 13 41 30.8
comp=Z,1μm,20.3s,MS4.6,baz=354,slow=36
VRAC Vranov 35.79 176 P **P 13 26 52.8 +1.1**
VRAC pmax pmax
comp=Z,9.0nm,1.0s
VRAC MLR MLR
comp=Z,1μm,20.3s
VRAC Vranov 35.79 176 P **P 13 26 52.8 +1.0**
VRAC LR LR 13 41 30.8
VRAC Vranov 35.79 176 ⇑ *i*P **P 13 26 53.8 +2.1**
VRAC Vranov 35.79 176 *e*P **P 13 26 52.7 +1.0**
TREC Trest 35.80 177 *e*P **P 13 26 53.0 +1.2**
TREC *e*pP pP 13 26 58.4 +3.5
TREC *e*S **S 13 32 31.3 +2.7**
TREC AMS AMS 13 39 00.0
comp=Z,1μm,24.0s
TREC Trest 35.80 177 *e*P **P 13 26 53.0 +1.2**
TREC *e*S **S 13 32 31.3 +2.7**
comp=Z,1μm,24.0s
DLBC Dease Lake 35.94 327 *e*P **P 13 26 53.5 +0.6**
DLBC Dease Lake 35.94 327 *e*P **P 13 26 53.5 +0.6**
WET Wettzell 35.94 180 *e*P **P 13 26 54.2 +1.1**
comp=Z,67nm,1.8s,mb5.3
WET Wettzell 35.94 180 *e*P **P 13 26 54.2 +1.1**
WET pmax pmax
comp=Z,67nm,1.8s,mb5.3
WET Wettzell 35.94 180 *e*P **P 13 26 54.2 +1.1**
comp=Z,67nm,1.8s,mb5.3
WET Wettzell 35.94 180 *e*P **P 13 26 54.2 +1.1**
comp=Z,67nm,1.8s,mb5.3
KHC Kasperske Hory 35.95 179 P **P 13 26 53.4 +0.2**
comp=Z,26nm,1.4s,mb5.0
KHC Kasperske Hory 35.95 179 *e*P **P 13 26 54.2 +1.0**
KHC *e*pP pP 13 26 58.3 +2.1
KHC *e*S **S 13 32 35.9 +4.8**
KHC AMS AMS 13 40 20.0
comp=Z,1μm,19.0s
KHC Kasperske Hory 35.95 179 P **P 13 26 53.4 +0.2**
comp=Z,26nm,1.4s,mb5.0
KOLS Kolonicke sedl 36.23 170 *e*P **P 13 26 56.5 +1.0**
KOLS *e* 13 27 01.7
KOLS *e*S **S 13 32 38.7 +3.5**
KOLS pmax pmax
comp=Z,31nm,1.9s,mb4.9
KOLS MLR MLR
comp=Z,1μm,20.8s,MS4.7
KOLS Kolonicke sedl 36.23 170 *e*P **P 13 26 56.5 +1.0**
comp=Z,31nm,1.9s,mb4.9
KOLS *e* 13 27 01.7
KOLS *e*S **S 13 32 38.7 +3.5**
KOLS LR LR
comp=Z,1μm,20.8s,MS4.7
KOLS Kolonicke sedl 36.23 170 *e*P **P 13 26 56.5 +1.0**
KOLS *e*pP pP 13 27 01.7 +3.1
KOLS *e*S **S 13 32 38.7 +3.5**
KOLS Kolonicke sedl 36.23 170 *e*P **P 13 26 56.5 +1.0**
comp=Z,31nm,1.9s,mb4.9
GEC2 GERESS Array S 36.24 179 *e*P **P 13 26 56.7 +1.1**
comp=Z,55nm,1.6s,mb5.2
GEC2 GERESS Array S 36.24 179 *e*P **P 13 26 56.7 +1.1**
GEC2 pmax pmax
comp=Z,55nm,1.6s,mb5.2
GEC2 GERESS Array S 36.24 179 *e*P **P 13 26 56.7 +1.1**
comp=Z,55nm,1.6s,mb5.2
GEC2 GERESS Array S 36.24 179 *e*P **P 13 26 56.7 +1.1**
comp=Z,55nm,1.6s,mb5.2
GERES GERESS Array B 36.24 179 P **P 13 26 56.8 +1.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=13,slow=8.2,SNR=12
GERES LR LR 13 41 10.1
comp=Z,1μm,20.0s,MS4.6,baz=357,slow=35
GERES GERESS Array B 36.24 179 P **P 13 26 56.8 +1.2**
GERES pmax pmax
comp=Z,2.0nm,0.6s
GERES MLR MLR
comp=Z,1μm,20.0s
GERES GERESS Array B 36.24 179 P **P 13 26 56.8 +1.2**
comp=Z,1μm,20.0s
AKTK Aktyubinsk 36.29 130 P **P 13 26 55.9 -0.1**
AKTK PP PP 13 28 07.9 -10
AKTK LR LR 13 44 07.5
AKTK Aktyubinsk 36.29 130 P **P 13 26 55.9 -0.1**
comp=Z,1μm,20.0s
AKTO Aktyubinsk 36.29 130 P **P 13 26 55.9 -0.1**
comp=Z,2.0nm,0.5s,mb4.3,baz=8.9,slow=8.9,SNR=6.2
AKTO PP PP 13 28 07.9 -10
comp=Z,3.0nm,0.7s,baz=358,slow=14,SNR=4.3
AKTO LR LR 13 44 07.5
comp=Z,1μm,20.0s,MS4.7,baz=4.7,slow=40
AKTO Aktyubinsk 36.29 130 P **P 13 26 55.9 -0.1**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
AKTO MLR MLR
comp=Z,1μm,20.0s,MS4.7
UZH Uzhgorod 36.53 170 *e*P **P 13 27 00.0 +1.9**
UZH *e*S **S 13 32 44.0 +4.2**
UZH *e* 13 35 11.0
UZH MLR MLR
comp=N,800nm,18.0s,MS4.7
UZH MLR MLR
comp=E,700nm,18.0s,MS4.7
UZH MLR MLR
comp=Z,650nm,18.0s,MS4.5
UZH Uzhgorod 36.53 170 *e*P **P 13 27 00.0 +1.9**
VYHS Vyhne 36.62 174 *e*P **P 13 26 58.7 -0.2**
comp=Z,20nm,1.5s,mb4.7
VYHS *e* 13 27 05.3
VYHS *e*S **S 13 32 35.2 -6.0**
VYHS LR LR
comp=Z,800nm,25.3s,MS4.4
VYHS Vyhne 36.62 174 *e*P **P 13 26 58.7 -0.2**
VYHS *e*pP pP 13 27 05.3 +3.4
VYHS *e*S **S 13 32 35.2 -6.0**
VYHS Vyhne 36.62 174 *e*P **P 13 26 58.7 -0.2**
comp=Z,20nm,1.5s,mb4.7
KECS Kecovo 36.65 172 *e*P **P 13 26 59.9 +0.8**
KECS pmax pmax
comp=Z,9.0nm,1.8s,mb4.3
KECS Kecovo 36.65 172 *e*P **P 13 26 59.9 +0.8**
comp=Z,9.1nm,1.8s,mb4.3
KECS Kecovo 36.65 172 *e*P **P 13 26 59.9 +0.8**
KECS Kecovo 36.65 172 *e*P **P 13 26 59.9 +0.8**
comp=Z,9.0nm,1.8s,mb4.3
CDF Champ du Feu 36.70 187 *e*P **P 13 26 58.6 -1.0**
CDF Champ du Feu 36.70 187 *e*P **P 13 26 58.6 -1.0**
BFO Black Forest 36.78 185 *e*P **P 13 26 59.5 -0.7**
comp=Z,23nm,1.4s,mb4.8
BFO Black Forest 36.78 185 *e*P **P 13 26 59.5 -0.7**
BFO pmax pmax
comp=Z,23nm,1.4s,mb4.8
BFO Black Forest 36.78 185 *e*P **P 13 26 59.5 -0.7**
comp=Z,23nm,1.4s,mb4.8
BFO Black Forest 36.78 185 *e*P **P 13 26 59.5 -0.7**
comp=Z,23nm,1.4s,mb4.8
ECH Echery 36.90 187 P **P 13 27 00.2 -1.0**
ECH pmax pmax
comp=Z,28nm,1.6s,mb4.8
ECH Echery 36.90 187 P **P 13 27 00.2 -1.0**
comp=Z,28nm,1.6s,mb4.8
ECH Echery 36.90 187 P **P 13 27 00.2 -1.0**
comp=Z,28nm,1.6s,mb4.8
ZST Bratislava 36.91 176 *e*P **P 13 27 08.9 +7.6**
ZST *e*S **S 13 32 46.3 +0.7**
ZST MLR MLR
comp=Z,1μm,17.4s,MS4.7
ZST Bratislava 36.91 176 *e*pP pP 13 27 08.9 +4.5
ZST *e*S **S 13 32 46.3 +0.7**
TRPA Tarpa 37.03 170 ‖ *e*P **P 13 27 02.8 +0.4**
CSNA Conrad Observa 37.16 177 ‖ *i*P **P 13 27 04.1 +0.6**
comp=Z,31nm,1.5s,mb4.9
CSNA Conrad Observa 37.16 177 P **P 13 27 04.1 +0.6**
comp=Z,31nm,1.5s,mb4.9
PSZ Piszkesteto 37.21 172 *e*P **P 13 27 04.9 +1.0**

PSZ pmax pmax
comp=Z,39nm,1.5s,mb5.0
PSZ Piszkesteto 37.21 172 *eP* **P 13 27 04.9 +1.1**
comp=Z,39nm,1.5s,mb5.0
PSZ Piszkesteto 37.21 172⇑ *eP* **P 13 27 06.5 +2.6**
PSZ Piszkesteto 37.21 172⇑ *iP* **P 13 27 05.6 +1.7**
PSZ Piszkesteto 37.21 172 *eP* **P 13 27 04.9 +1.0**
comp=Z,39nm,1.5s,mb5.0
MOA Molln 37.24 179⇓ *iP* **P 13 27 04.8 +0.7**
comp=Z,17nm,1.3s,mb4.7
MOA Molln 37.24 179 P **P 13 27 04.8 +0.7**
comp=Z,17nm,1.3s,mb4.7
RJOB Jochberg 37.35 180 *eP* **P 13 27 06.9 +1.8**
comp=Z,12nm,1.0s,mb4.7
KDAK Kodiak Island 37.36 347 *eP* **P 13 27 04.4 -0.6**
KDAK pmax pmax
comp=Z,86nm,1.6s,mb5.3
KDAK Kodiak Island 37.36 347 *eP* **P 13 27 04.4 -0.6**
comp=Z,86nm,1.6s,mb5.3
KDAK Kodiak Island 37.36 347 *eP* **P 13 27 04.4 -0.6**
comp=Z,86nm,1.6s,mb5.3
SOP Sopron 37.41 176⇓ *eP* **P 13 27 06.5 +0.9**
ABKAR Akbulak array 37.60 128 *eP* **P 13 27 05.6 -1.5**
comp=Z,4.4nm,1.0s,mb4.1
ABKAR Akbulak array 37.60 128 *eP* **P 13 27 05.6 -1.5**
comp=Z,4.4nm,1.0s,mb4.1
BURAR Bucovina Array 37.60 167⇑ *iP* **P 13 27 08.0 +0.8**
BURAR Bucovina Array 37.60 167⇑ *iP* **P 13 27 08.0 +0.8**
KURK Kurchatov 37.60 109 P **P 13 27 07.6 +0.5**
comp=Z,15nm,1.1s,mb4.7,baz=358,slow=7.7,SNR=44
KURK LR LR 13 44 42.9
comp=Z,452nm,21.6s,MS4.2,baz=330,slow=40
KURK Kurchatov 37.60 109 P **P 13 27 07.6 +0.5**
KURK pmax pmax
comp=Z,15nm,1.1s,mb4.6
KURK MLR MLR
comp=Z,452nm,21.6s,MS4.2
KURK Kurchatov 37.60 109 *eP* **P 13 27 05.6 -1.5**
comp=Z,50nm,1.5s,mb5.0
KURK Kurchatov 37.60 109 *eP* **P 13 27 05.6 -1.5**
comp=Z,50nm,1.5s,mb5.0
LOR Lormes 37.89 190 *eP* **P 13 27 07.9 -1.8**
LOR Lormes 37.89 190 *eP* **P 13 27 07.9 -1.8**
OHAK Old Harbor 37.93 348 *eP* **P 13 27 10.0 +0.2**
comp=Z,52nm,1.2s,mb5.1
OHAK Old Harbor 37.93 348 *eP* **P 13 27 10.0 +0.1**
comp=Z,52nm,1.2s,mb5.1
KIS Kishinev 38.30 163 *ePP* PP 13 28 37.0 -3.4
KIS *eS* **S 13 33 00.0 -6.8**
KIS Kishinev 38.30 163 *ePcS* PcS 13 33 20.0 +4.4
KIS *eSS* 13 35 08.0
KIS *eSSS* SS 13 35 53.0 -1.7
KIS *eLQ* 13 40 00.0
KIS *eLR* LR 13 41 08.0
comp=Z,2μm,18.0s
KIS Kishinev 38.30 163 *eP* **P 13 27 09.0 -4.1**
KIS *e* pP 13 27 12.0 -4.2
KIS *eS* **S 13 33 00.0 -6.8**
KIS *eSSS* 13 35 53.0
KIS MLR MLR
comp=N,2μm,16.0s
KIS MLR MLR
comp=Z,2μm,16.0s,MS5.1
KIS MLR MLR
comp=Z,2μm,18.0s
DAVOX Davos/Dischmat 38.32 184 P **P 13 27 13.1 -0.2**
comp=Z,1.3nm,0.3s,mb4.1,baz=0.0,slow=17,SNR=1.5
DAVOX LR LR 13 45 12.9
comp=Z,682nm,18.5s,MS4.5,baz=88,slow=40
DAVOX Davos/Dischmat 38.32 184 P **P 13 27 13.1 -0.1**
IRK Irkutsk 38.34 82 *eP* **P 13 27 11.6 -1.7**
IRK pmax pmax
comp=Z,56nm,1.2s,mb5.2
IRK Irkutsk 38.34 82 *eP* **P 13 27 11.6 -1.7**
comp=Z,56nm,1.2s,mb5.2
DRGR 38.38 169⇓ *iP* **P 13 27 14.9 +1.2**
DRGR 38.38 169⇓ *iP* **P 13 27 14.9 +1.2**
AVF Avril sur Loir 38.38 191 *eP* **P 13 27 12.2 -1.6**
AVF Avril sur Loir 38.38 191 *eP* **P 13 27 12.2 -1.6**
SOKA Soboth 38.41 178⇓ *iP* **P 13 27 15.8 +1.8**
comp=Z,24nm,1.6s,mb4.7
SOKA Soboth 38.41 178 P **P 13 27 15.8 +1.8**
comp=Z,24nm,1.6s,mb4.7
MYKA Terra Mystica 38.46 179⇓ *iP* **P 13 27 15.5 +1.0**
comp=Z,34nm,1.4s,mb4.9
MYKA Terra Mystica 38.46 179 P **P 13 27 15.5 +1.1**
comp=Z,34nm,1.4s,mb4.9
OBKA Obir 38.58 178⇑ *iP* **P 13 27 16.2 +0.8**
comp=Z,38nm,1.5s,mb4.9
OBKA Obir 38.58 178 P **P 13 27 16.2 +0.8**
comp=Z,38nm,1.5s,mb4.9
MOY Mondy 38.62 86 *eP* **P 13 27 16.2 +0.5**
MOY pmax pmax
comp=Z,65nm,3.7s
MOY Mondy 38.62 86 *eP* **P 13 27 16.2 +0.5**
comp=Z,65nm,3.7s
BGF Bois d'Agland 38.62 191 *eP* **P 13 27 14.7 -1.1**
BGF Bois d'Agland 38.62 191 *eP* **P 13 27 14.7 -1.1**
MFF Saint Martin d 38.64 195 *eP* **P 13 27 14.3 -1.6**
comp=Z,112nm,1.8s,mb5.0
MFF Saint Martin d 38.64 195 *eP* **P 13 27 14.3 -1.6**
MFF pmax pmax
comp=Z,56nm,1.8s,mb5.0
MFF Saint Martin d 38.64 195 *eP* **P 13 27 14.3 -1.6**
comp=Z,56nm,1.8s,mb5.0
MFF Saint Martin d 38.64 195 *eP* **P 13 27 14.3 -1.6**
comp=Z,56nm,1.8s,mb5.0
TLY Talaya 38.84 83 *eP* **P 13 27 16.7 -0.9**
TLY *e* 13 29 20.0
TLY *eS* **S 13 33 13.8 -1.0**
TLY pmax pmax
comp=Z,14nm,1.3s,mb4.5
TLY MLR MLR
comp=Z,938nm,21.0s,MS4.6
TLY Talaya 38.84 83 *eP* **P 13 27 16.4 -1.2**
comp=Z,22nm,1.6s,mb4.6
TLY Talaya 38.84 83 *eP* **P 13 27 16.4 -1.2**
comp=Z,22nm,1.6s,mb4.6
TLY *eS* **S 13 33 13.8 -1.0**
comp=Z,938nm,21.0s
PKSM Moragy 38.90 174⇓ *eP* **P 13 27 18.7 +0.6**
TCF Toulx Ste Croi 38.90 192 *eP* **P 13 27 16.2 -1.9**
comp=Z,55nm,1.5s,mb4.8
TCF Toulx Ste Croi 38.90 192 *eP* **P 13 27 16.2 -1.9**
TCF pmax pmax
comp=Z,28nm,1.5s,mb4.8
TCF Toulx Ste Croi 38.90 192 *eP* **P 13 27 16.2 -1.9**
comp=Z,28nm,1.5s,mb4.8
TCF Toulx Ste Croi 38.90 192 *eP* **P 13 27 16.2 -1.9**
comp=Z,28nm,1.5s,mb4.8
CIT Chita 39.36 73 *eP* **P 13 27 22.7 +0.8**
CIT Chita 39.36 73 *eP* **P 13 27 22.7 +0.8**
LPG La Plagne 39.62 187 *eP* **P 13 27 22.9 -1.3**
LPG La Plagne 39.62 187 *eP* **P 13 27 22.9 -1.3**
MLR Muntele Rosu 39.74 166 P **P 13 27 26.6 +1.5**
comp=Z,2.3nm,0.6s,mb4.1,baz=5.9,slow=11,SNR=2.3
MLR LR LR 13 45 09.8
comp=Z,1μm,19.9s,MS4.7,baz=358,slow=38
MLR Muntele Rosu 39.74 166 P **P 13 27 26.6 +1.5**
MLR pmax pmax
comp=Z,2.0nm,0.6s
MLR MLR MLR
comp=Z,1μm,19.9s
MLR Muntele Rosu 39.74 166 P **P 13 27 26.6 +1.5**
MLR LR LR 13 45 09.8
MLR Muntele Rosu 39.74 166 P **P 13 27 26.6 +1.5**
comp=Z,1μm,19.9s
RJF Les Rejaudoux 39.90 193 *eP* **P 13 27 24.9 -1.6**
RJF Les Rejaudoux 39.90 193 *eP* **P 13 27 24.9 -1.6**
SIM Simferopol' 40.51 157 *eP* **P 13 27 32.1 +0.6**
SIM *eS* **S 13 33 42.0 +2.0**
SIM pmax pmax
comp=Z,48nm,2.7s,mb4.7
SIM MLR MLR
comp=Z,2μm,16.6s,MS5.0
SIM Simferopol' 40.51 157 *eP* **P 13 27 32.1 +0.6**
comp=Z,48nm,2.7s,mb4.7
SIM *eS* **S 13 33 42.0 +2.0**
comp=Z,2μm,16.6s
ANN Anapa 40.78 153 *c iP* **P 13 27 32.9 -0.9**
ANN *e* 13 29 03.7
ANN *eS* **S 13 33 43.6 -0.4**
ANN pmax pmax
comp=Z,62nm,1.3s,mb5.1
ANN MLR MLR
comp=Z,695nm,14.0s,MS4.7

ANN Anapa 40.78 153 *i P* **P 13 27 32.9 -0.9**
comp=Z,62nm,1.3s,mb5.1
ANN *eS* **S 13 33 43.6 -0.4**
comp=Z,695nm,14.0s
PETK Petropavlovsk- 41.33 32 P **P 13 27 37.8 -0.4**
comp=Z,5.3nm,0.9s,mb4.2,baz=29,slow=6.8,SNR=6.4
PETK LR LR 13 43 55.2
comp=Z,211nm,21.6s,MS4.0,baz=0.9,slow=35
PETK Petropavlovsk- 41.33 32 P **P 13 27 37.8 -0.4**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
PETK MLR MLR
comp=Z,211nm,21.7s,MS4.0
PETK Petropavlovsk- 41.33 32 P **P 13 27 37.8 -0.4**
comp=Z,211nm,21.7s
PET Petropavlovsk 41.46 31 *eP* **P 13 27 41.7 +2.5**
PET *ePPP* 13 29 38.8
PET *eS* **S 13 33 54.9 +1.0**
PET *eSS* SS 13 37 00.2 +2.7
PET pmax pmax
comp=Z,100nm,6.6s
PET pmax pmax
comp=Z,100nm,5.5s
PET MLR MLR
comp=Z,300nm,20.0s,MS4.2
PET MLR MLR
comp=Z,400nm,20.0s
PET Petropavlovsk 41.46 31 *ePcP* PcP 13 29 38.8 +2.1
PET *eS* **S 13 33 54.9 +1.0**
MK31 Makanchi Array 41.80 106 *eP* **P 13 27 40.8 -1.3**
MK31 Makanchi Array 41.80 106 *eP* **P 13 27 40.8 -1.3**
MKAR Makanchi Array 41.80 106 P **P 13 27 41.5 -0.6**
comp=Z,1.7nm,0.6s,mb3.8,baz=353,slow=7.3,SNR=21
MKAR PP PP 13 29 22.6 +4.1
comp=Z,1.8nm,1.0s,baz=4.6,slow=7.2,SNR=2.4
MKAR LR LR 13 48 41.1
comp=Z,890nm,18.9s,MS4.7,baz=350,slow=41
MKAR Makanchi Array 41.80 106 P **P 13 27 41.5 -0.6**
MKAR 13 29 22.6
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR MLR MLR
comp=Z,890nm,18.9s
ULM Lac du Bonnet 41.83 294 P **P 13 27 41.6 -0.7**
comp=Z,5.0nm,0.9s,mb4.2,baz=10,slow=10,SNR=5.3
ULM LR LR 13 45 28.3
comp=Z,973nm,18.4s,MS4.7,baz=11,slow=37
ULM Lac du Bonnet 41.83 294 P **P 13 27 41.7 -0.7**
KIV Kislovodsk 41.86 148 *eP* **P 13 27 41.5 -1.1**
KIV *e* 13 29 17.5
KIV *eS* **S 13 34 00.0 0.0**
KIV pmax pmax
comp=Z,26nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,1μm,17.0s,MS4.8
KIV Kislovodsk 41.86 148 *eP* **P 13 27 42.5 -0.1**
comp=Z,46nm,1.4s,mb4.9
KIV Kislovodsk 41.86 148 *eP* **P 13 27 41.5 -1.1**
comp=Z,26nm,1.2s,mb4.7
KIV *eS* **S 13 34 00.0 0.0**
SOC Sochi 42.09 151 *eP* **P 13 27 44.1 -0.4**
SOC *e*PP* pP 13 27 48.7 +1.0
SOC *eS* **S 13 33 57.8 -5.7**
SOC *eSSS* 13 37 42.6
SOC pmax pmax
comp=Z,728nm,0.9s
SOC Sochi 42.09 151 *eP* **P 13 27 44.1 -0.4**
comp=Z,728nm,0.9s
HIA Hailar 42.62 68 *eP* **P 13 27 49.2 +0.5**
HIA pmax pmax
comp=Z,15nm,1.1s
HIA Hailar 42.62 68 *eP* **P 13 27 49.2 +0.5**
comp=Z,15nm,1.1s,mb4.6
HIA Hailar 42.62 68 *eP* **P 13 27 49.2 +0.5**
comp=Z,15nm,1.1s,mb4.6
SONM Songino Array 42.90 81 P **P 13 27 51.6 +0.6**
comp=Z,12nm,1.1s,mb4.5,baz=342,slow=8.5,SNR=38
SONM PP PP 13 29 31.8 +1.6
comp=Z,1.3nm,0.9s,baz=0.9,slow=8.8,SNR=2.0
SONM LR LR 13 47 15.7
comp=Z,326nm,19.0s,MS4.2,baz=168,slow=38
SONM Songino Array 42.90 81 P **P 13 27 51.6 +0.6**
SONM 13 29 31.8
SONM pmax pmax
comp=Z,12nm,1.1s
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM MLR MLR
comp=Z,326nm,19.0s
SONM Songino Array 42.90 81 P **P 13 27 51.6 +0.6**
comp=Z,12nm,1.1s,mb4.5
SONM Songino Array 42.90 81 PP PP 13 29 31.8 +1.6
MAK Makhachkala 43.09 143 *eP* **P 13 27 53.8 +1.1**
MAK *e* 13 29 32.7
MAK *eS* **S 13 34 17.9 -0.3**
MAK pmax pmax
comp=Z,41nm,0.4s,mb5.5
MAK MLR MLR
comp=Z,3μm,16.0s,MS5.3
MAK Makhachkala 43.09 143 *eP* **P 13 27 53.8 +1.1**
comp=Z,41nm,0.4s,mb5.5
MAK *eS* **S 13 34 17.9 -0.3**
comp=Z,3μm,16.0s
ZEI Tsey 43.10 147 *eP* **P 13 27 52.7 0.0**
ZEI pmax pmax
comp=Z,35nm,1.4s,mb4.9
ZEI Tsey 43.10 147 *eP* **P 13 27 52.7 0.0**
comp=Z,35nm,1.4s,mb4.9
KLR Kul'dur 43.60 57 *eP* **P 13 27 52.8 -3.9**
EYMN Ely 43.76 290 *eP* **P 13 27 57.2 -0.7**
comp=Z,17nm,1.4s,mb4.6
EYMN Ely 43.76 290 *eP* **P 13 27 57.2 -0.8**
comp=Z,17nm,1.4s,mb4.6
AGMN Agassiz Refuge 43.77 294 *eP* **P 13 27 56.6 -1.4**
comp=Z,21nm,1.3s,mb4.7
AGMN Agassiz Refuge 43.77 294 *eP* **P 13 27 56.7 -1.4**
comp=Z,21nm,1.3s,mb4.7
A18A Metzger Ranch, 44.22 307 ⇑P **P 13 28 01.1 -0.6**
baz=44
A17A Triple J Farms 44.25 308 ⇑P **P 13 28 00.7 -1.2**
baz=44
DGMT Dagmar 44.25 302 ⇑P **P 13 28 01.7 -0.3**
baz=44
WALA Waterton Lakes 44.36 311 *eP* **P 13 28 02.8 0.0**
comp=Z,0.7nm,1.2s
WALA Waterton Lakes 44.36 311 *eP* **P 13 28 02.8 0.0**
comp=Z,0.7nm,1.2s
A15A Johnson Ranch, 44.36 310 ⇓P **P 13 28 02.3 -0.5**
baz=44,SNR=6.5
A14A Double T Ranch 44.41 311 ⇓P **P 13 28 03.1 -0.1**
baz=44,SNR=8.9
HABR Khabarovsk 44.59 54 *cePP* **P 13 28 03.1 -1.5**
HABR *e*SP* sP 13 28 07.6 -1.4
HABR *e* 13 29 45.2
HABR PPP 13 30 24.2
HABR *eS* **S 13 34 40.3 +0.4**
HABR *e*SS* sS 13 34 45.7 +0.6
HABR *e* 13 38 01.1
HABR pmax pmax
comp=Z,42nm,1.6s,mb5.0
HABR pmax pmax
comp=N,25nm,1.9s
HABR pmax pmax
comp=E,29nm,1.5s
HABR MLR MLR
comp=Z,131nm,18.0s,MS3.9
HABR Khabarovsk 44.59 54 *eP* **P 13 28 03.1 -1.5**
comp=Z,25nm,1.9s,mb4.7
HABR Khabarovsk 44.59 54 *ePcP* PcP 13 29 45.2 -2.1
HABR *eS* **S 13 34 40.3 +0.4**
HABR *eScS* ScS 13 38 01.1 -0.6
comp=Z,131nm,18.0s
A12A Yaak River Ran 44.60 313 ⇑P **P 13 28 02.9 -1.8**
baz=44
A11A Hall Mountain, 44.62 314 ⇓P **P 13 28 03.6 -1.3**
baz=44
A10A Northport 44.67 315 ⇓P **P 13 28 04.8 -0.5**
baz=44
B18A Beardsley Farm 44.74 307 ⇑P **P 13 28 05.3 -0.5**
baz=45
A07A Ashnola River, 44.78 317 ⇑P **P 13 28 05.8 -0.4**
baz=45
B16A M & M Farms, S 44.85 309 ⇓P **P 13 28 06.0 -0.7**
baz=45

B17A L&G Farms, Che 44.91 308 ⇓P **P 13 28 06.6 -0.6**
baz=45,SNR=15
A05A Maple Falls 44.93 319 ⇑P **P 13 28 06.9 -0.4**
baz=45
B14A Marquette Ranc 45.01 311 ⇓P **P 13 28 07.5 -0.5**
baz=45,SNR=5.2
B15A Bradely Ranch, 45.01 310 ⇓P **P 13 28 07.2 -0.8**
baz=45,SNR=9.3
B12A Libby 45.06 313 ⇓P **P 13 28 09.0 +0.6**
baz=45
B13A Whitefish 45.08 312 ⇑P **P 13 28 08.9 +0.4**
baz=45,SNR=6.2
TKM2 Tokmak 2 45.09 113 *eP* **P 13 28 09.6 +0.9**
TKM2 pmax pmax
comp=Z,11nm,1.1s,mb4.6
TKM2 Tokmak 2 45.09 113 *eP* **P 13 28 09.6 +1.0**
comp=Z,11nm,1.1s,mb4.6
TKM2 Tokmak 2 45.09 113 *eP* **P 13 28 09.6 +0.9**
comp=Z,11nm,1.1s,mb4.6
FRU Bishkek 45.09 114 *i P* **P 13 28 10.0 +1.3**
FRU *e* 13 29 52.0
FRU *e* 13 34 51.0
FRU pmax pmax
comp=Z,100nm,2.2s,mb5.3
FRU Bishkek 45.09 114 *i P* **P 13 28 10.0 +1.3**
comp=Z,100nm,2.2s,mb5.3
EGMT Eagleton 45.10 307 ⇑P **P 13 28 08.2 -0.5**
baz=45
B11A Sandpoint 45.14 314 ⇓P **P 13 28 09.1 0.0**
baz=45
WMQ Urumqi 45.22 101 *eP* **P 13 28 10.5 +0.8**
WMQ sP sP 13 28 16.8 +2.7
WMQ PP PP 13 29 55.8 +0.7
WMQ ScP ScP 13 33 42.0 +0.4
WMQ PcS PcS 13 33 44.3 +1.1
WMQ S **S 13 34 50.0 +0.8**
WMQ sS sS 13 34 56.0 +1.7
WMQ ScS ScS 13 38 05.0 -0.9
WMQ pmax pmax
comp=Z,11nm,1.3s,mb4.5
WMQ pmax pmax
comp=Z,290nm,4.0s
WMQ LR LR
comp=N,770nm,24.0s,MS4.7
WMQ LR LR
comp=E,520nm,20.0s,MS4.7
WMQ LR LR
comp=Z,820nm,22.0s,MS4.6
B09A Rice 45.27 315 ⇑P **P 13 28 10.2 +0.2**
baz=45
AAK Ala-Archa 45.28 114 LR LR 13 50 28.5
comp=Z,740nm,18.0s,MS4.7,baz=345,slow=41
AAK Ala-Archa 45.28 114 *c iP* **P 13 28 10.7 +0.5**
AAK pmax pmax
comp=Z,11nm,1.2s,mb4.6
AAK Ala-Archa 45.28 114 *eP* **P 13 28 10.6 +0.4**
comp=Z,16nm,1.1s,mb4.8
AAK Ala-Archa 45.28 114 *eP* **P 13 28 10.6 +0.4**
comp=Z,16nm,1.1s,mb4.8
B10A Chitwood Farm, 45.33 314 ⇓P **P 13 28 11.0 +0.4**
baz=45
NEW Newport 45.36 314 *eP* **P 13 28 11.6 +0.8**
NEW pmax pmax
comp=Z,9.0nm,1.3s
NEW Newport 45.36 314 *eP* **P 13 28 11.6 +0.8**
comp=Z,8.5nm,1.3s,mb4.4
NEW Newport 45.36 314 *eP* **P 13 28 11.6 +0.8**
comp=Z,9.0nm,1.3s,mb4.4
B06A Marblemount 45.38 318 ⇑P **P 13 28 10.2 -0.7**
baz=45
COWI Conover 45.39 287 *eP* **P 13 28 09.6 -1.4**
comp=Z,11nm,1.1s,mb4.6
COWI Conover 45.39 287 *eP* **P 13 28 09.6 -1.5**
comp=Z,11nm,1.1s,mb4.6
B08A Colville Reser 45.41 316 ⇑P **P 13 28 11.5 +0.4**
baz=45,SNR=5.4
C15A Salmond Ranch, 45.55 310 ⇓P **P 13 28 11.4 -0.9**
baz=45
C17A Wharram Farm, 45.56 308 ⇑P **P 13 28 11.5 -0.8**
baz=45
BSMT Bassoo Peak 45.62 312 *eP* **P 13 28 13.2 +0.4**
comp=Z,6.5nm,1.1s,mb4.5
BSMT Bassoo Peak 45.62 312 *eP* **P 13 28 13.2 +0.4**
comp=Z,6.5nm,1.1s,mb4.5
ESDC Sonseca Array 45.65 198 P **P 13 28 13.3 +0.2**
comp=Z,0.5nm,0.4s,mb3.8,baz=357,slow=7.7,SNR=6.3
ESDC LR LR 13 46 28.0
comp=Z,153nm,18.0s,MS4.0,baz=50,slow=35
ESDC Sonseca Array 45.65 198 P **P 13 28 13.4 +0.2**
UCH Uchtor 45.69 114 *eP* **P 13 28 15.3 +1.9**
comp=Z,15nm,1.1s,mb4.8
UCH Uchtor 45.69 114 *eP* **P 13 28 15.3 +1.9**
comp=Z,15nm,1.1s,mb4.8
JTMT Jette 45.69 311 *eP* **P 13 28 13.3 -0.1**
comp=Z,10nm,1.0s,mb4.7
JTMT Jette 45.69 311 *eP* **P 13 28 13.3 -0.1**
comp=Z,10nm,1.0s,mb4.7
BR131 Keskin Array S 45.71 158 *eP* **P 13 28 13.9 +0.3**
comp=Z,13nm,1.0s,mb4.8
BR131 Keskin Array S 45.71 158 *eP* **P 13 28 13.9 +0.3**
comp=Z,13nm,1.0s,mb4.8
BRTR Keskin Array B 45.71 158 P **P 13 28 14.6 +1.0**
comp=Z,8.8nm,1.0s,mb4.7,baz=348,slow=5.5,SNR=36
BRTR LR LR 13 50 06.3
comp=Z,533nm,18.4s,MS4.5,baz=342,slow=40
BRTR Keskin Array B 45.71 158 P **P 13 28 14.6 +1.0**
BRTR pmax pmax
comp=Z,9.0nm,1.0s
BRTR MLR MLR
comp=Z,533nm,18.4s
BRTR Keskin Array B 45.71 158 P **P 13 28 14.6 +1.0**
comp=Z,533nm,18.4s
AML Almayashu 45.72 115 P **P 13 28 14.1 +0.5**
comp=Z,13nm,1.1s,mb4.8
AML Almayashu 45.72 115 P **P 13 28 14.1 +0.4**
comp=Z,13nm,1.1s,mb4.8
GNI Garni 45.75 146 P **P 13 28 15.2 +1.2**
comp=Z,3.5nm,0.3s,mb4.7,baz=344,slow=18,SNR=1.8
GNI LR LR 13 49 00.8
comp=Z,947nm,20.6s,MS4.7,baz=359,slow=38
GNI Garni 45.75 146 P **P 13 28 15.2 +1.2**
GNI pmax pmax
comp=Z,4.0nm,0.4s
GNI MLR MLR
comp=Z,947nm,20.6s
GNI Garni 45.75 146 P **P 13 28 15.2 +1.2**
comp=Z,947nm,20.6s
C13A Hot Springs 45.78 312 ⇓P **P 13 28 14.4 +0.3**
baz=46,SNR=7.4
C12B Naegeli Ranch, 45.81 313 ⇑P **P 13 28 14.8 +0.5**
baz=46
C10A Spilker Farm, 45.82 314 ⇑P **P 13 28 14.2 -0.2**
baz=46
C09A Chrisman Ranch 45.90 315 ⇓P **P 13 28 15.2 +0.2**
baz=46
SWMT Swartz Lake 45.91 311 *eP* **P 13 28 15.1 0.0**
comp=Z,16nm,1.5s,mb4.7
SWMT Swartz Lake 45.91 311 *eP* **P 13 28 15.1 0.0**
comp=Z,16nm,1.5s,mb4.7
D18A Linhart Farms, 45.93 307 ⇑P **P 13 28 14.8 -0.5**
baz=46
D17A Six Diamond Ra 46.04 308 ⇑P **P 13 28 15.8 -0.3**
baz=46
SLMT Seeley Lake 46.14 311 *eP* **P 13 28 16.8 -0.1**
comp=Z,16nm,1.2s,mb4.8
SLMT Seeley Lake 46.14 311 *eP* **P 13 28 16.8 -0.1**
comp=Z,16nm,1.2s,mb4.8
LAO LASA Array 46.18 304 *eP* **P 13 28 17.2 0.0**
LAO LASA Array 46.18 304 *eP* **P 13 28 17.2 0.0**
D16A Dana Ranch, Ca 46.22 309 ⇑P **P 13 28 16.6 -0.9**
baz=46
D15A Lincoln 46.27 310 ⇑P **P 13 28 16.9 -1.1**
baz=46
D14A Greenough 46.30 311 ⇑P **P 13 28 18.2 0.0**
baz=46,SNR=7.7
D13A Huson 46.35 312 ⇑P **P 13 28 18.7 +0.1**
baz=46,SNR=6.2
GNW Green Mountain 46.41 319 *eP* **P 13 28 18.9 -0.1**
comp=Z,19nm,1.5s,mb4.8
GNW Green Mountain 46.41 319 *eP* **P 13 28 19.0 0.0**
comp=Z,19nm,1.5s,mb4.8
CHMT Chamberlain Mo 46.45 310 *eP* **P 13 28 19.1 -0.3**
comp=Z,4.3nm,0.9s,mb4.4
CHMT Chamberlain Mo 46.45 310 *eP* **P 13 28 19.1 -0.3**
comp=Z,4.3nm,0.9s,mb4.4
D11A Klaveano Farm, 46.52 313 ⇑P **P 13 28 19.6 -0.3**
baz=46

E18A	Harlowton	46.57	307	⇑P	P	13 28 20.2 -0.1
	baz=46					
D10A	Wagner Farm, O	46.58	314	⇓P	P	13 28 19.8 -0.6
	baz=46					
MSO	Missoula	46.58	311	eP	P	13 28 19.7 -0.7
	comp=Z,15nm,1.4s,mb4.7					
MSO	Missoula	46.58	311	eP	P	13 28 19.7 -0.7
	comp=Z,15nm,1.4s,mb4.7					
YSS	Yuzh-Sakhalins	46.63	47	⇑eP	P	13 28 19.8 -1.0
YSS				pmax	pmax	
	comp=Z,60nm,1.4s,mb5.3					
YSS	Yuzh-Sakhalins	46.63	47	eP	P	13 28 19.8 -1.0
	comp=Z,60nm,1.4s,mb5.3					
D09A	Jones Farm, Ri	46.63	315	⇓P	P	13 28 20.6 -0.2
	baz=46					
NLWA	Neilton Lookou	46.64	320	⇓P	P	13 28 21.5 +0.7
	baz=46					
D08A	Wollman Farm,	46.68	316	⇓P	P	13 28 20.7 -0.4
	baz=46					
E16A	East Helena	46.72	309	⇓P	P	13 28 21.2 -0.3
	baz=47,SNR=9.8					
D05A	Enumclaw	46.73	319	⇑P	P	13 28 22.0 +0.4
	baz=47					
E17A	Martinsdale	46.74	308	⇓P	P	13 28 21.4 -0.2
	baz=47,SNR=9.3					
E15A	Deer Lodge	46.90	310	⇓P	P	13 28 22.6 -0.3
	baz=47					
E14A	Clinton	46.96	311	⇓P	P	13 28 23.1 -0.3
	baz=47					
E10A	Myers Farm, Un	47.13	314	⇓P	P	13 28 24.1 -0.6
	baz=47					
LON	Longmire	47.16	318	eP	P	13 28 24.7 -0.2
LON				pmax	pmax	
	comp=Z,25nm,1.5s,mb4.9					
LON	Longmire	47.16	318	eP	P	13 28 24.7 -0.2
	comp=Z,25nm,1.5s,mb4.9					
LON	Longmire	47.16	318	eP	P	13 28 24.7 -0.2
	comp=Z,25nm,1.5s,mb4.9					
E09A	Wood Farm, Sta	47.17	315	⇑P	P	13 28 24.3 -0.7
	baz=47					
E11A	Bogner Ranch,	47.20	313	⇓P	P	13 28 24.7 -0.6
	baz=47					
F18A	Big Timber	47.21	307	⇓P	P	13 28 25.2 -0.1
	baz=47					
E07A	Sunnyside	47.23	317	⇑P	P	13 28 25.2 -0.3
	baz=47					
E08A	Dider Farm, El	47.25	316	⇓P	P	13 28 25.6 0.0
	baz=47					
F17A	Fitzpatrick Pl	47.28	308	⇑P	P	13 28 25.9 +0.1
	baz=47,SNR=5.4					
GCMT	Greycliff	47.32	307	P	P	13 28 26.0 -0.2
	comp=Z,1.8nm,1.1s,mb3.9					
GCMT	Greycliff	47.32	307	P	P	13 28 26.0 -0.2
	comp=Z,1.8nm,1.1s,mb3.9					
E03A	Lebam	47.46	320	⇓P	P	13 28 27.1 -0.2
	baz=47					
F16A	Kennard Place,	47.46	309	⇑P	P	13 28 26.8 -0.5
	baz=47					
F15A	Butte	47.47	310	⇑P	P	13 28 27.1 -0.2
	baz=47					
LRM	Limekiln Ridge	47.48	309	eP	P	13 28 26.5 -0.9
	comp=Z,75nm,1.7s,mb5.3					
LRM	Limekiln Ridge	47.48	309	eP	P	13 28 26.5 -1.0
	comp=Z,75nm,1.7s,mb5.3					
F14A	Wisdom	47.56	310	⇑P	P	13 28 28.0 0.0
	baz=47					
BOZ	Bozeman (W)	47.60	309	⇓P	P	13 28 28.9 +0.6
	baz=48,SNR=16					
BOZ	Bozeman (W)	47.60	309	eP	P	13 28 28.5 +0.1
BOZ				pmax	pmax	
	comp=Z,20nm,1.4s,mb5.0					
BOZ	Bozeman (W)	47.60	309	eP	P	13 28 28.5 +0.2
	comp=Z,20nm,1.4s,mb5.0					
BOZ	Bozeman (W)	47.60	309	eP	P	13 28 28.5 +0.1
	comp=Z,20nm,1.4s,mb5.0					
VAE	Valguarnera	47.60	179	LR	LR	13 49 10.9
	comp=Z,849nm,18.4s,MS4.8,baz=83,slow=37					
F13A	Darby	47.64	311	⇑P	P	13 28 28.9 +0.2
	baz=48					
F10A	Beach Ranch, E	47.65	314	⇓P	P	13 28 28.3 -0.4
	baz=48					
F11A	Grangeville	47.67	313	⇑P	P	13 28 28.5 -0.3
	baz=48					
F12A	Elk City	47.74	312	⇓P	P	13 28 29.4 0.0
	baz=48					
G18A	Lazy EL Ranch,	47.78	307	⇑P	P	13 28 29.0 -0.8
	baz=48					
G17A	Pierce Place,	47.86	308	⇑P	P	13 28 30.2 -0.2
	baz=48					
F08A	Pendleton	47.92	315	⇑P	P	13 28 30.8 0.0
	baz=48					
F04A	Amboy	48.01	319	⇑P	P	13 28 32.1 +0.5
	baz=48					
MDJ	Mudanjiang	48.02	59	eP	P	13 28 31.0 -0.6
	comp=Z,15nm,1.0s,mb5.0					
MDJ	Mudanjiang	48.02	59	eP	P	13 28 31.0 -0.6
	comp=Z,15nm,1.0s,mb5.0					
G16A	Moss Hill, Enn	48.03	309	⇑P	P	13 28 32.0 +0.3
	baz=48,SNR=6.2					
G14A	Jackson	48.13	310	⇓P	P	13 28 32.8 +0.3
	baz=48					
G15A	Dillon	48.14	309	⇓P	P	13 28 32.4 -0.2
	baz=48					
G11A	Walters Elk Ra	48.16	313	⇑P	P	13 28 32.2 -0.5
	baz=48					
G10A	Bishop Farm, J	48.32	314	⇑P	P	13 28 34.4 +0.4
	baz=48,SNR=12					
G13A	Cobalt	48.33	311	⇑P	P	13 28 34.1 +0.1
	baz=48,SNR=6.5					
ECSD	EROS Data Cent	48.37	294	eP	P	13 28 33.2 -1.1
	comp=Z,23nm,1.3s,mb5.0					
ECSD	EROS Data Cent	48.37	294	eP	P	13 28 33.2 -1.1
	comp=Z,23nm,1.3s,mb5.0					
G08A	Pilot Rock	48.44	316	⇑P	P	13 28 35.8 +1.0
	baz=48					
KSH	Kashi	48.50	113	eP	P	13 28 39.0 +3.6
KSH				epP	pP	13 28 43.0 +4.5
KSH				esP	sP	13 28 46.0 +6.2
KSH				ePcP	PcP	13 30 03.0 +1.8
KSH				ePP	PP	13 30 32.0 +4.2
KSH				eScP	ScP	13 33 56.0 +0.6
KSH				ePcS	PcS	13 33 58.3 +1.2
KSH				eS	S	13 35 40.3 +4.3
KSH				esS	sS	13 35 49.0 +7.8
KSH				eScS	ScS	13 38 27.3 -0.2
KSH				eSS	SS	13 39 08.0 +2.7
KSH				pmax	pmax	
	comp=Z,3.0nm,0.8s,mb4.4					
KSH				pmax	pmax	
	comp=Z,250nm,4.6s					
KSH				LR	LR	
	comp=N,740nm,15.8s,MS5.0					
KSH				LR	LR	
	comp=E,780nm,11.6s,MS5.0					
KSH				LR	LR	
	comp=Z,840nm,16.4s,MS4.8					
MCMT	McKenzie Canyo	48.50	310	eP	P	13 28 35.8 +0.5
	comp=Z,2.2nm,0.8s,mb4.2					
MCMT	McKenzie Canyo	48.50	310	eP	P	13 28 35.8 +0.5
	comp=Z,2.2nm,0.8s,mb4.2					
H16A	Russell Place,	48.51	308	⇑P	P	13 28 35.8 +0.4
	baz=48,SNR=11					
RSSD	Black Hills	48.57	301	eP	P	13 28 34.4 -1.4
RSSD				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.6					
RSSD	Black Hills	48.57	301	eP	P	13 28 34.4 -1.4
	comp=Z,6.3nm,0.9s,mb4.7					
RSSD	Black Hills	48.57	301	eP	P	13 28 34.4 -1.4
	comp=Z,6.0nm,0.9s,mb4.6					
G06A	Carlson Farm,	48.60	317	⇑P	P	13 28 36.6 +0.5
	baz=48					
H15A	Lima	48.70	310	⇑P	P	13 28 37.3 +0.4
	baz=48,SNR=8.3					
G04A	Mulino	48.74	319	⇑P	P	13 28 37.4 +0.3
	baz=49					
H14A	Leadore	48.75	310	⇓P	P	13 28 37.7 +0.5
	baz=49,SNR=5.1					
H17A	Grant Village	48.77	308	⇓P	P	13 28 37.8 +0.4
	baz=49					
H11A	Donnelly	48.84	313	⇑P	P	13 28 37.3 -0.6
	baz=49					
H13A	Challis	48.86	311	⇓P	P	13 28 38.2 +0.1
	baz=49,SNR=10					
H12A	Diamond D Ranc	48.91	312	⇑P	P	13 28 38.3 -0.2
	baz=49,SNR=7.5					
H09A	Durkee	48.98	314	⇑P	P	13 28 39.8 +0.8
	baz=49					
H10A	Noah's Angus R	49.00	313	⇓P	P	13 28 39.2 0.0
	baz=49,SNR=7.2					
H08A	Prairie City	49.19	315	⇑P	P	13 28 41.7 +1.1
	baz=49,SNR=9.7					
H04A	Detroit Lake	49.24	319	⇑P	P	13 28 41.0 0.0
	baz=49					
I17A	Pilgrim Ck.	49.25	307	⇑P	P	13 28 41.8 +0.8
	baz=49					
IMW	Indian Meadow	49.29	308	eP	P	13 28 42.4 +1.0
	comp=Z,24nm,1.5s,mb5.0					
IMW	Indian Meadow	49.29	308	eP	P	13 28 42.4 +1.0
	comp=Z,24nm,1.5s,mb5.0					
I15A	Monteview	49.30	309	⇓P	P	13 28 42.2 +0.7
	baz=49					
I16A	Newdale	49.35	308	⇑P	P	13 28 42.8 +0.9
	baz=49					
KEST	Kesra	49.36	184	P	P	13 28 42.6 +0.6
	comp=Z,3.4nm,1.0s,mb4.3,baz=356,slow=13,SNR=2.3					
KEST				LR	LR	13 50 00.4
	comp=Z,179nm,20.9s,MS4.0,baz=350,slow=37					
I18A	Diamond G Ranc	49.41	307	⇓P	P	13 28 42.2 -0.1
	baz=49					
I14A	Mackay	49.44	310	⇑P	P	13 28 42.9 +0.3
	baz=49					
I13A	Wildhorse Cree	49.50	311	⇓P	P	13 28 43.2 +0.2
	baz=49,SNR=14					
I10A	Payette	49.50	313	⇓P	P	13 28 43.2 +0.2
	baz=49					
LOHW	Long Hollow	49.55	307	eP	P	13 28 43.8 +0.4
	comp=Z,12nm,1.4s,mb4.8					
LOHW	Long Hollow	49.55	307	eP	P	13 28 43.8 +0.4
	comp=Z,12nm,1.4s,mb4.8					
DCID1	Drake Creek	49.61	308	eP	P	13 28 44.8 +0.9
DCID1	Drake Creek	49.61	308	eP	P	13 28 44.8 +0.9
I09A	Lost Marbles R	49.67	314	⇑P	P	13 28 44.3 -0.1
	baz=50					
I07A	Izee	49.68	316	⇓P	P	13 28 45.3 +1.0
	baz=50					
I12A	Atlanta	49.68	312	⇑P	P	13 28 44.0 -0.4
	baz=50					
TPAW	Teton Pass	49.70	308	eP	P	13 28 44.8 +0.3
	comp=Z,15nm,1.5s,mb4.8					
TPAW	Teton Pass	49.70	308	eP	P	13 28 44.8 +0.3
	comp=Z,15nm,1.5s,mb4.8					
J17A	Brown Place, J	49.81	308	⇑P	P	13 28 45.4 0.0
	baz=50					
HLID	Hailey	49.87	311	⇓P	P	13 28 45.5 -0.3
	baz=50					
HLID	Hailey	49.87	311	eP	P	13 28 44.7 -1.1
	comp=Z,5.2nm,1.2s,mb4.4					
HLID	Hailey	49.87	311	eP	P	13 28 44.7 -1.1
	comp=Z,5.2nm,1.2s,mb4.4					
RRI2	Red Ridge	49.87	308	eP	P	13 28 44.9 -1.0
	comp=Z,14nm,1.3s,mb4.8					
J15A	Blackfoot	49.89	309	⇓P	P	13 28 46.6 +0.6
	baz=50,SNR=5.1					
IDI	Anoyia	49.90	167	P	P	13 28 45.3 -0.8
	comp=Z,1.9nm,0.4s,mb4.4,baz=39,slow=14,SNR=1.8					
IDI				LR	LR	13 51 53.4
	comp=Z,386nm,18.3s,MS4.4,baz=282,slow=38					
IDI	Anoyia	49.90	167	P	P	13 28 45.3 -0.9
J18A	Kendall Valley	49.91	307	⇑P	P	13 28 46.3 +0.1
	baz=50,SNR=10					
J16A	Bone	49.96	308	⇓P	P	13 28 46.8 +0.3
	baz=50					
J13A	Cove Ranch, Pi	50.01	311	⇑P	P	13 28 46.9 0.0
	baz=50,SNR=9.1					
MFID	Camas Ranch	50.11	312	⇑P	P	13 28 47.3 -0.3
	baz=50					
J10A	Berg Farm, Mel	50.16	313	⇑P	P	13 28 47.7 -0.3
	baz=50					
K19A	Absolon Red Bu	50.21	306	⇑P	P	13 28 47.9 -0.5
	baz=50					
J12A	Stokes Ranch,	50.22	312	⇑P	P	13 28 47.9 -0.6
	baz=50					
HHC	Hu-ho-hao-te	50.28	77	⇑P	P	13 28 49.5 +0.5
HHC				pP	pP	13 28 54.0 +1.9
HHC				sP	sP	13 28 56.5 +3.2
HHC				PcP	PcP	13 30 08.8 +1.2
HHC				PP	PP	13 30 45.8 +1.8
HHC				ScP	ScP	13 34 03.0 +0.1
HHC				S	S	13 36 01.3 +0.3
HHC				sS	sS	13 36 07.0 +0.9
HHC				ScS	ScS	13 38 37.3 -2.2
HHC				SS	SS	13 39 29.8 -4.0
HHC				pmax	pmax	
	comp=Z,87nm,6.5s					
HHC				LR	LR	
	comp=N,460nm,17.1s,MS5.0					
HHC				LR	LR	
	comp=E,1μm,17.6s,MS5.0					
HHC				LR	LR	
	comp=Z,450nm,16.1s,MS4.6					
J09A	Fry Pan Ranch,	50.30	314	⇓P	P	13 28 47.7 -1.4
	baz=50					
BW06	Boulder Array	50.32	306	⇓P	P	13 28 48.9 -0.3
	baz=50,SNR=11					
PDAR	Pinedale Array	50.32	306	P	P	13 28 48.7 -0.6
	comp=Z,4.0nm,1.0s,mb4.4,baz=7.6,slow=4.5,SNR=24					
PDAR				LR	LR	13 50 27.1
	comp=Z,1μm,18.3s,MS5.0,baz=9.6,slow=36					
PDAR	Pinedale Array	50.32	306	P	P	13 28 48.7 -0.5
J08A	Circle Bar Ran	50.33	315	⇑P	P	13 28 49.4 +0.1
	baz=50					
K16A	Soda Springs	50.40	308	⇑P	P	13 28 50.1 +0.3
	baz=50					
K17A	Gardner Place,	50.43	308	⇓P	P	13 28 50.1 0.0
	baz=50					
K18A	Toltan Ranch,	50.48	307	⇓P	P	13 28 50.8 +0.3
	baz=50,SNR=6.3					
K15A	Arbon	50.61	309	⇓P	P	13 28 51.9 +0.4
	baz=50					
GTA	Gaotai	50.67	89	⇑P	P	13 28 52.3 +0.4
GTA				pP	pP	13 28 55.5 +0.4
GTA				sP	sP	13 28 58.5 +2.2
GTA				PP	PP	13 30 47.3 -0.2
GTA				S	S	13 36 07.0 +0.6
GTA				sS	sS	13 36 14.8 +3.2
GTA				SS	SS	13 39 38.0 -2.1
GTA				pmax	pmax	
	comp=Z,19nm,1.5s,mb4.8					
GTA				pmax	pmax	
	comp=Z,190nm,4.2s					
GTA				LR	LR	
	comp=N,600nm,16.5s,MS4.8					
GTA				LR	LR	
	comp=E,530nm,16.9s,MS4.8					
GTA				LR	LR	
	comp=Z,780nm,18.1s,MS4.8					
K13A	Stover Farm, H	50.75	311	⇓P	P	13 28 52.4 -0.1
	baz=51					
K11A	Parker Ranch,	50.76	312	⇑P	P	13 28 53.1 +0.6
	baz=51,SNR=10.0					
K10A	MacKenzie Ranc	50.81	313	⇑P	P	13 28 53.5 +0.6
	baz=51,SNR=13					
K12A	Draper Farm, C	50.82	311	⇓P	P	13 28 53.0 0.0
	baz=51					
L22A	Ellis Ranch, M	50.82	303	⇓P	P	13 28 52.7 -0.3
	baz=51					
L21A	Rawlins	50.96	304	⇓P	P	13 28 53.4 -0.7
	baz=51					
L19A	Farson	50.97	306	⇑P	P	13 28 53.5 -0.6
	baz=51					
L20A	Wamsutter	50.99	305	⇑P	P	13 28 53.8 -0.5
	baz=51					
L17A	Cokeville	51.08	308	⇑P	P	13 28 54.9 -0.1
	baz=51					
K05A	Summer Lake	51.11	317	⇓P	P	13 28 57.1 +1.9
	baz=51,SNR=12					
L18A	Fontenelle, Gr	51.19	307	⇑P	P	13 28 55.5 -0.4
	baz=51					
L16A	Fish Haven	51.20	308	⇑P	P	13 28 55.8 -0.1
	baz=51					
RWWY	Rawlins	51.22	304	eP	P	13 28 55.4 -0.6
	comp=Z,6.1nm,0.6s,mb4.7					
RWWY	Rawlins	51.22	304	eP	P	13 28 55.4 -0.6
	comp=Z,6.1nm,0.6s,mb4.7					
WVOR	Wild Horse Val	51.26	315	eP	P	13 28 56.4 0.0
WVOR				pmax	pmax	
	comp=Z,16nm,1.5s,mb4.7					
WVOR	Wild Horse Val	51.26	315	eP	P	13 28 56.4 +0.1
	comp=Z,16nm,1.5s,mb4.7					
WVOR	Wild Horse Val	51.26	315	eP	P	13 28 56.4 0.0
	comp=Z,16nm,1.5s,mb4.7					
L15A	Malad City	51.28	309	⇓P	P	13 28 56.2 -0.3
	baz=51					
L14A	Malta	51.31	310	⇓P	P	13 28 56.7 0.0
	baz=51					
M21A	Separation Pea	51.31	304	⇓P	P	13 28 56.1 -0.6
	baz=51,SNR=10					
L12A	House Creek Ra	51.32	311	⇓P	P	13 28 56.9 +0.1
	baz=51					
L11A	Cat Creek Ranc	51.34	312	⇓P	P	13 28 57.6 +0.6
	baz=51,SNR=7.1					
HUMO	Hull Mountain	51.35	319	eP	P	13 28 57.1 +0.1
	comp=Z,6.7nm,0.9s,mb4.6					
HUMO	Hull Mountain	51.35	319	eP	P	13 28 57.1 +0.1
	comp=Z,6.7nm,0.9s,mb4.6					
BJI	Beijing	51.48	73	P	P	13 28 58.8 +0.8
BJI				PP	PP	13 30 57.0 +2.2
BJI				S	S	13 36 20.8 +3.2
BJI				SS	SS	13 39 54.3 +1.5
BJI				pmax	pmax	
	comp=Z,28nm,1.6s,mb4.9					
BJI				pmax	pmax	
	comp=Z,300nm,4.1s					
BJI				LR	LR	
	comp=N,350nm,18.0s,MS4.6					
BJI				LR	LR	
	comp=E,280nm,16.3s,MS4.6					
BJI				LR	LR	
	comp=Z,150nm,27.4s					
L10A	Juniper Basin	51.48	313	⇑P	P	13 28 58.1 +0.2
	baz=51					
M20A	Sweetwater, Wa	51.49	305	⇓P	P	13 28 57.8 -0.3
	baz=51					
BJT	Baijiatuau	51.50	73	eP	P	13 28 57.7 -0.5
BJT	Baijiatuau	51.50	73	eP	P	13 28 57.7 -0.5
M19A	Rock Springs	51.55	306	⇑P	P	13 28 57.7 -0.7
	baz=51					
HWUT	Hardware Ranch	51.62	308	eP	P	13 28 58.5 -0.5
	comp=Z,11nm,1.1s,mb4.7					
HWUT	Hardware Ranch	51.62	308	eP	P	13 28 58.5 -0.5
	comp=Z,11nm,1.1s,mb4.7					
M17A	Scullys Gap (B	51.69	307	⇓P	P	13 28 59.1 -0.5
	baz=52					
M18A	Lyman	51.69	307	⇑P	P	13 28 59.5 -0.1
	baz=52					
M15A	Larsen Ranch,	51.82	309	⇑P	P	13 29 00.2 -0.3
	baz=52					
M14A	Sheep Mountain	51.84	310	⇓P	P	13 29 01.0 +0.3
	baz=52,SNR=8.6					
MOD	Modoc	51.90	316	eP	P	13 29 01.9 +0.8
	comp=Z,6.3nm,1.0s,mb4.5					
MOD	Modoc	51.90	316	eP	P	13 29 01.9 +0.8
	comp=Z,6.3nm,1.0s,mb4.5					
M16A	Huntsville	51.91	308	⇑P	P	13 29 01.0 -0.2
	baz=52					
M12A	Wells	52.04	311	⇑P	P	13 29 03.0 +0.9
	baz=52,SNR=11					
M10A	I.L. Ranch, Tu	52.04	313	⇑P	P	13 29 03.0 +0.9
	baz=52,SNR=5.5					
M13A	Montello	52.04	311	⇑P	P	13 29 02.7 +0.5
	baz=52					
N22A	Wattenberg Ran	52.05	303	⇑P	P	13 29 02.2 -0.1
	baz=52					
M11A	Holland Ranch,	52.08	312	⇓P	P	13 29 03.4 +1.0
	baz=52,SNR=7.3					
N20A	Spence Gulch,	52.15	305	⇓P	P	13 29 03.1 +0.1
	baz=52					
N19A	John Jarvie Ra	52.16	306	⇑P	P	13 29 02.7 -0.4
	baz=52					
N21A	Black Mountain	52.17	304	⇑P	P	13 29 02.8 -0.3
	baz=52					
YBH	Yreka Blue Hor	52.21	319	LR	LR	13 51 57.2
	comp=Z,1μm,20.0s,MS4.9,baz=50,slow=37					
N17A	Moffit Pass	52.23	307	⇑P	P	13 29 03.4 -0.2
	baz=52					
N16A	Rees Ranch, Co	52.32	308	⇓P	P	13 29 04.5 +0.2
	baz=52					
BGU	Big Grassy Mou	52.40	309	eP	P	13 29 04.5 -0.3
	comp=Z,16nm,1.5s,mb4.7					
BGU	Big Grassy Mou	52.40	309	eP	P	13 29 04.5 -0.3
	comp=Z,16nm,1.5s,mb4.7					
N15A	Stansbury Isla	52.40	309	⇑P	P	13 29 04.6 -0.3
	baz=52					
MMAI	Mount Meron Ar	52.46	156	P	P	13 29 06.2 +0.8
	comp=Z,8.4nm,0.6s,mb4.9,baz=13,slow=7.7,SNR=16					
MMAI				LR	LR	13 53 48.1
	comp=Z,324nm,18.0s,MS4.4,baz=115,slow=39					
N14A	Grayback Hills	52.48	310	⇓P	P	13 29 05.2 -0.3
	baz=52					
MDT	Midelt	52.51	199	LR	LR	13 50 48.1
	comp=Z,100nm,19.6s,MS3.9,baz=339,slow=35					
N13A	Wendover, West	52.55	311	⇓P	P	13 29 06.4 +0.5
	baz=52					
N12A	Clover Valley,	52.60	311	⇑P	P	13 29 06.8 +0.4
	baz=52					
N12A	Clover Valley,	52.60	311	eP	P	13 29 06.7 +0.3
	comp=Z,29nm,1.6s,mb5.0					
N12A	Clover Valley,	52.60	311	eP	P	13 29 06.7 +0.3
	comp=Z,29nm,1.6s,mb5.0					
N11A	Elko Archery C	52.69	312	⇑P	P	13 29 07.5 +0.5
	baz=52					
O21A	Pagoda	52.71	304	⇑P	P	13 29 07.6 +0.5
	baz=52					
O19A	Miners Draw (B	52.74	306	⇑P	P	13 29 07.4 0.0
	baz=53					
N10A	Dunphy	52.84	313	⇓P	P	13 29 08.6 +0.6
	baz=53					
O20A	White River Ci	52.84	305	⇑P	P	13 29 08.5 +0.4
	baz=53					
O17A	Robinson Place	52.96	307	⇓P	P	13 29 09.4 +0.4
	baz=53,SNR=5.3					
DL2	Dalian	53.06	68	P	P	13 29 08.5 -1.3
DL2				S	S	13 36 37.8 -1.5
DL2				pmax	pmax	
	comp=Z,20nm,0.8s,mb5.1					
DL2				LR	LR	
	comp=N,130nm,14.0s,MS4.3					
DL2				LR	LR	
	comp=E,170nm,15.6s,MS4.3					
DL2				LR	LR	
	comp=Z,190nm,14.4s,MS4.3					
DUG	Dugway	53.11	309	⇓P	P	13 29 10.2 +0.1
	baz=53					
O12A	Currie	53.17	311	⇑P	P	13 29 10.8 +0.3
	baz=53					
MPU	Maple Canyon	53.20	308	P	P	13 29 11.6 +0.8
MPU	Maple Canyon	53.20	308	P	P	13 29 11.6 +0.8
O13A	Hicks Ranch, I	53.25	310	⇑P	P	13 29 11.4 +0.2
	baz=53					
O10A	Cortez Mining,	53.26	313	⇑P	P	13 29 11.8 +0.6
	baz=53					
NLU	North Lily Min	53.30	308	eP	P	13 29 09.2 -2.3
	comp=Z,6.3nm,1.1s,mb4.5					
NLU	North Lily Min	53.30	308	eP	P	13 29 09.2 -2.3
	comp=Z,6.3nm,1.1s,mb4.5					
WDC	Whiskeytown Da	53.35	318	eP	P	13 29 11.3 -0.6
WDC				pmax	pmax	
	comp=Z,12nm,1.1s,mb4.7					
WDC	Whiskeytown Da	53.35	318	eP	P	13 29 11.3 -0.6
	comp=Z,12nm,1.1s,mb4.7					
WDC	Whiskeytown Da	53.35	318	eP	P	13 29 11.3 -0.6
	comp=Z,12nm,1.1s,mb4.7					
O11A	Cowboy Ranch,	53.36	312	⇑P	P	13 29 12.5 +0.5
	baz=53					
P19A	Cripple Cowboy	53.40	305	⇓P	P	13 29 12.0 -0.2
	baz=53					
P20A	De Beque	53.48	305	⇓P	P	13 29 12.9 0.0
	baz=53					
P18A	Preston Nutter	53.49	307	⇑P	P	13 29 12.7 -0.2
	baz=53					
CCM	Cathedral Cave	53.56	288	eP	P	13 29 11.5 -1.9
CCM				pmax	pmax	
	comp=Z,11nm,1.2s,mb4.7					
CCM	Cathedral Cave	53.56	288	eP	P	13 29 11.5 -1.9
	comp=Z,11nm,1.2s,mb4.7					
CCM	Cathedral Cave	53.56	288	eP	P	13 29 11.5 -1.9
	comp=Z,11nm,1.2s,mb4.7					
P16A	Fountain Green	53.61	308	⇓P	P	13 29 14.5 +0.7
	baz=54					
P17A	Butcher Ranch,	53.68	307	⇓P	P	13 29 14.2 -0.1
	baz=54					
P15A	Leamington	53.69	309	⇑P	P	13 29 14.5 +0.1
	baz=54					
SMCO	Snowmass	53.70	303	eP	P	13 29 14.8

P11A	Circle Ranch,	53.95	312	⇓P	P	13 29 16.7 +0.4
	baz=54					
P12A	McGill	53.97	311	⇑P	P	13 29 17.0 +0.6
	baz=54,SNR=7.4					
Q18A	Rafter H Ranch	54.01	306	⇓P	P	13 29 16.2 -0.4
	baz=54,SNR=5.8					
Q22A	Crested Butte,	54.01	303	⇓P	P	13 29 16.8 +0.1
	baz=54					
Q20A	Ridgley Place,	54.02	305	⇓P	P	13 29 16.4 -0.4
	baz=54					
SRU	San Rafael	54.03	307	⇑P	P	13 29 16.8 -0.1
	baz=54					
SRU	San Rafael	54.03	307	eP	P	13 29 16.4 -0.4
SRU				pmax	pmax	
	comp=Z,5.0nm,1.0s,mb4.4					
SRU	San Rafael	54.03	307	eP	P	13 29 16.4 -0.4
	comp=Z,4.9nm,1.0s,mb4.4					
SRU	San Rafael	54.03	307	eP	P	13 29 16.4 -0.4
	comp=Z,5.0nm,1.0s,mb4.4					
Q21A	Lamborn Mesa,	54.09	304	⇑P	P	13 29 17.9 +0.6
	baz=54					
Q16A	Castle Valley	54.26	307	⇑P	P	13 29 19.2 +0.6
	baz=54,SNR=9.2					
Q15A	Fillmore	54.27	309	⇑P	P	13 29 18.8 +0.2
	baz=54					
LZH	Lanzhou	54.33	86	P	P	13 29 19.8 +0.7
LZH				pP	pP	13 29 27.3 +5.1
LZH				sP	sP	13 29 30.5 +7.0
LZH				PP	PP	13 31 23.0 +2.4
LZH				eS	S	13 36 57.0 +0.5
LZH				sS	sS	13 37 02.3 +0.6
LZH				SS	SS	13 40 36.0 -1.9
LZH				pmax	pmax	
	comp=Z,49nm,1.2s,mb5.3					
LZH				pmax	pmax	
	comp=Z,210nm,4.0s					
LZH				LR	LR	
	comp=N,970nm,16.8s					
LZH				LR	LR	
	comp=Z,1µm,17.7s,MS5.0					
Q14A	Sevier Lake (B	54.34	309	⇓P	P	13 29 19.7 +0.5
	baz=54,SNR=10					
Q12A	Willow Creek R	54.39	311	⇓P	P	13 29 19.9 +0.4
	baz=54					
Q13A	Wheeler Ranch,	54.42	310	⇑P	P	13 29 19.7 0.0
	baz=54					
WCN	Washoe City	54.45	316	⇑P	P	13 29 20.7 +0.8
	baz=54					
R21A	Cimarron	54.55	304	⇓P	P	13 29 21.1 +0.5
	baz=54					
R22A	Saguache, Gunn	54.63	303	⇓P	P	13 29 21.7 +0.5
	baz=54					
Q11A	Duckwater	54.64	312	⇑P	P	13 29 21.6 +0.3
	baz=54,SNR=10					
R18A	Canyonlands Na	54.70	306	⇑P	P	13 29 21.4 -0.3
	baz=54,SNR=5.7					
Q10A	Clear Creek Ra	54.71	312	⇓P	P	13 29 22.5 +0.7
	baz=55,SNR=11					
R17A	Hanksville Air	54.73	307	⇓P	P	13 29 21.6 -0.3
	baz=55,SNR=7.2					
MSU	Marysvale	54.74	308	eP	P	13 29 22.9 +0.9
MSU				pmax	pmax	
	comp=Z,6.0nm,1.3s,mb4.5					
MSU	Marysvale	54.74	308	eP	P	13 29 22.9 +0.9
	comp=Z,6.2nm,1.3s,mb4.5					
MSU	Marysvale	54.74	308	eP	P	13 29 22.9 +0.9
	comp=Z,6.0nm,1.3s,mb4.5					
R19A	Curley Farm, L	54.75	306	⇑P	P	13 29 22.1 0.0
	baz=55					
R20A	Redvale	54.79	305	⇓P	P	13 29 22.8 +0.4
	baz=55					
R16A	Teasdale	54.92	308	⇑P	P	13 29 23.8 +0.5
	baz=55					
HOPS	Hopland	54.96	319	eP	P	13 29 23.9 +0.3
	comp=Z,31nm,1.4s,mb5.1					
HOPS	Hopland	54.96	319	eP	P	13 29 23.9 +0.3
	comp=Z,31nm,1.4s,mb5.1					
KSRS	Korea Array	55.01	62	P	P	13 29 22.9 -1.1
	comp=Z,3.8nm,1.0s,mb4.4,baz=356,slow=6.8,SNR=9.6					
KSRS				LR	LR	13 55 11.5
	comp=Z,166nm,19.2s,MS4.1,baz=357,slow=39					
KSRS	Korea Array	55.01	62	P	P	13 29 22.9 -1.1
KSRS				pmax	pmax	
	comp=Z,4.0nm,1.0s,mb4.4					
KSRS				MLR	MLR	
	comp=Z,166nm,19.2s,MS4.1					
KSRS	Korea Array	55.01	62	P	P	13 29 22.9 -1.1
	comp=Z,166nm,19.2s					
SDCO	Great Sand Dun	55.01	302	eP	P	13 29 21.5 -2.6
	comp=Z,16nm,2.0s,mb4.7					
R15A	Junction	55.04	308	⇑P	P	13 29 25.3 +1.1
	baz=55					
R12A	Pony Springs,	55.09	311	⇓P	P	13 29 25.0 +0.4
	baz=55					
R11A	Troy Canyon, C	55.13	312	⇓P	P	13 29 25.1 +0.3
	baz=55,SNR=9.2					
WVT	Waverly	55.18	284	eP	P	13 29 22.0 -3.2
WVT				pmax	pmax	
	comp=Z,7.0nm,1.0s,mb4.7					
WVT	Waverly	55.18	284	eP	P	13 29 22.0 -3.2
	comp=Z,6.8nm,1.0s,mb4.6					
R13A	O'Grain Ranch,	55.19	310	⇑P	P	13 29 25.9 +0.6
	baz=55,SNR=5.3					
NVAR	Mina Array Bea	55.23	314	P	P	13 29 25.8 +0.2
	comp=Z,2.1nm,0.9s,mb4.2,baz=14,slow=5.5,SNR=11					
NVAR	Mina Array Bea	55.23	314	P	P	13 29 25.8 +0.2
R10A	Warm Springs	55.24	312	⇑P	P	13 29 26.3 +0.6
	baz=55,SNR=11					
S21A	Coal Bank Pass	55.27	304	⇑P	P	13 29 26.4 +0.5
	baz=55					
S19A	Harvey Farm, M	55.28	305	⇑P	P	13 29 26.0 0.0
	baz=55					
TKL	Tuckaleechee C	55.29	280	LR	LR	13 52 27.2
	comp=Z,910nm,21.4s,MS4.8,baz=68,slow=35					
S18A	Hurst Farm, Bl	55.40	306	⇓P	P	13 29 27.0 +0.2
	baz=55,SNR=24					
S17A	Black Ridge (B	55.51	307	⇑P	P	13 29 27.7 +0.1
	baz=55,SNR=7.8					
S14A	Cedar City	55.55	309	⇑P	P	13 29 28.1 +0.1
	baz=55					
S10A	Tonopah Range,	55.62	313	⇓P	P	13 29 28.6 +0.2
	baz=56,SNR=9.5					
MVCO	Mesa Verde	55.77	305	⇑P	P	13 29 30.0 +0.6
	baz=56,SNR=6.8					
MVCO	Mesa Verde	55.77	305	eP	P	13 29 29.8 +0.4
	comp=Z,27nm,1.3s,mb5.1					
MVCO	Mesa Verde	55.77	305	eP	P	13 29 29.8 +0.3
	comp=Z,27nm,1.3s,mb5.1					
S13A	Holt Ranch, En	55.78	310	⇑P	P	13 29 29.7 +0.2
	baz=56					
S12A	Delamar Landin	55.82	311	⇑P	P	13 29 30.4 +0.5
	baz=56					
S11A	Rachel	55.84	312	⇓P	P	13 29 30.7 +0.7
	baz=56					
T22A	Edith	55.85	303	⇓P	P	13 29 30.3 +0.2
	baz=56					
T18A	Mexican Hat	55.94	306	⇓P	P	13 29 30.6 -0.1
	baz=56,SNR=7.1					
T17A	Navajo Res., N	56.15	307	⇑P	P	13 29 32.1 0.0
	baz=56					
T19A	Beclabito	56.19	305	⇓P	P	13 29 32.4 0.0
	baz=56,SNR=7.5					
MIB	Mutribah	56.19	144	eP	P	13 29 32.2 -0.3
MIB				AMb	AMB	13 29 33.6
	comp=Z,26nm,0.7s,mb5.4					
MIB	Mutribah	56.19	144	eP	P	13 29 32.2 -0.3
	comp=Z,27nm,0.7s,mb5.4					
T11A	Corn Creek, Al	56.21	311	⇑P	P	13 29 33.1 +0.4
	baz=56					
T16A	Glen Canyon Da	56.21	308	⇓P	P	13 29 32.1 -0.5
	baz=56					
U26A	Atchley Ranch,	56.22	300	⇑P	P	13 29 32.5 -0.2
	baz=56					
T15A	Red Dirt Ranch	56.24	308	⇑P	P	13 29 32.6 -0.2
	baz=56					
T14A	Hurricane	56.24	309	⇑P	P	13 29 33.1 +0.3
	baz=56					
U25A	Circle Dot Ran	56.27	301	⇑P	P	13 29 33.0 -0.1
	baz=56					
U24A	Moreno Valley	56.33	301	⇓P	P	13 29 33.4 0.0
	baz=56					
PLAL	Pickwick Lake	56.34	285	eP	P	13 29 31.6 -2.0
	comp=Z,8.8nm,1.1s,mb4.7					
PLAL	Pickwick Lake	56.34	285	eP	P	13 29 31.6 -2.0
	comp=Z,8.8nm,1.1s,mb4.7					
T13A	Saint George	56.34	310	⇑P	P	13 29 33.7 +0.2
	baz=56					
UMR	Umm Al-Rimmam	56.46	144	eP	P	13 29 33.7 -0.8
UMR				AMb	AMB	13 29 35.9
	comp=Z,52nm,0.9s,mb5.5					
UMR	Umm Al-Rimmam	56.46	144	eP	P	13 29 33.7 -0.8
	comp=Z,52nm,0.9s,mb5.6					
U17A	Shonto	56.53	307	⇓P	P	13 29 34.9 0.0
	baz=56					
GRAC	Grapevine Rang	56.59	313	⇓P	P	13 29 36.0 +0.6
	baz=56					
U20A	Newcomb	56.60	305	⇑P	P	13 29 34.8 -0.6
	baz=56					
U18A	Rough Rock, Ch	56.65	306	⇑P	P	13 29 36.2 +0.5
	baz=56					
MAT	Matsushiro	56.68	52	P	P	13 29 34.5 -1.5
MAT				S	S	13 37 42.0 +14
MJAR	Matsushiro Arr	56.68	52	P	P	13 29 34.9 -1.1
	comp=Z,6.3nm,1.1s,mb4.5,baz=352,slow=8.4,SNR=11					
MJAR				LR	LR	13 53 49.4
	comp=Z,79nm,18.2s,MS3.9,baz=5.0,slow=36					
MJAR	Matsushiro Arr	56.68	52	P	P	13 29 34.9 -1.1
MJAR				pmax	pmax	
	comp=Z,6.0nm,1.1s					
MJAR				MLR	MLR	
	comp=Z,79nm,18.2s					
MJAR	Matsushiro Arr	56.68	52	P	P	13 29 34.9 -1.1
	comp=Z,79nm,18.2s					
NAY	Al-Naaiem	56.73	144	eP	P	13 29 35.6 -0.8
NAY				AMb	AMB	13 29 39.4
	comp=Z,10nm,1.3s,mb4.7					
NAY	Al-Naaiem	56.73	144	eP	P	13 29 35.6 -0.8
	comp=Z,10.0nm,1.3s,mb4.7					
U19A	Dine' College,	56.73	305	⇑P	P	13 29 36.4 +0.1
	baz=57					
U15A	North Rim	56.82	308	⇓P	P	13 29 37.0 0.0
	baz=57					
V25A	Rancho No Teng	56.84	301	⇑P	P	13 29 36.9 -0.3
	baz=57					
U14A	Mt Trumbull	56.89	309	⇑P	P	13 29 37.9 +0.4
	baz=57					
V22A	San Miguel Ran	56.94	303	⇓P	P	13 29 37.8 0.0
	baz=57					
U13A	Pakoon Wash	56.95	310	⇑P	P	13 29 38.5 +0.6
	baz=57,SNR=5.2					
U12A	Valley of Fire	56.97	310	⇓P	P	13 29 38.1 +0.1
	baz=57					
V23A	Ortiz Mt. (NFS	57.05	302	⇑P	P	13 29 39.1 +0.5
	baz=57					
SAO	San Andreas Ge	57.08	317	P	P	13 29 38.4 -0.4
SAO				pmax	pmax	
	comp=Z,5.0nm,0.9s,mb4.5					
SAO	San Andreas Ge	57.08	317	P	P	13 29 38.4 -0.4
	comp=Z,4.8nm,0.9s,mb4.5					
SAO	San Andreas Ge	57.08	317	P	P	13 29 38.4 -0.4
	comp=Z,5.0nm,0.9s,mb4.5					
V21A	Milan	57.10	304	⇓P	P	13 29 39.3 +0.3
	baz=57					
V20A	Brimhall	57.17	304	⇑P	P	13 29 39.4 -0.1
	baz=57					
MIAR	Mount Ida	57.24	290	eP	P	13 29 39.0 -1.0
MIAR				pmax	pmax	
	comp=Z,61nm,2.0s,mb5.3					
MIAR	Mount Ida	57.24	290	eP	P	13 29 39.0 -1.0
	comp=Z,61nm,2.0s,mb5.3					
MIAR	Mount Ida	57.24	290	eP	P	13 29 39.0 -1.0
	comp=Z,61nm,2.0s,mb5.3					
V19A	Window Rock	57.30	305	⇑P	P	13 29 40.3 -0.1
	baz=57					
V18A	Ganado	57.36	306	⇑P	P	13 29 40.8 0.0
	baz=57					
V15A	Kaibab Nationa	57.41	308	⇑P	P	13 29 42.0 +0.8
	baz=57					
WMOK	Wichita Mounta	57.48	295	eP	P	13 29 40.8 -0.8
WMOK				pmax	pmax	
	comp=Z,7.0nm,1.3s,mb4.5					
WMOK	Wichita Mounta	57.48	295	eP	P	13 29 40.8 -0.8
	comp=Z,7.4nm,1.3s,mb4.6					
WMOK	Wichita Mounta	57.48	295	eP	P	13 29 40.8 -0.8
	comp=Z,7.0nm,1.3s,mb4.5					
V17A	Tonalea, Kykot	57.51	307	⇓P	P	13 29 42.1 +0.3
	baz=57,SNR=11					
W26A	Owens Ranch, T	57.52	300	⇓P	P	13 29 42.0 +0.1
	baz=57					
W24A	Lazy 6 Ranch,	57.53	301	⇑P	P	13 29 41.6 -0.4
	baz=57					
MPMC	Manual Prospec	57.53	313	⇑P	P	13 29 43.0 +0.9
	baz=57,SNR=7.7					
SHOC	Shoshone	57.62	312	⇑P	P	13 29 43.2 +0.6
	baz=58					
V11A	Goodsprings	57.62	311	⇑P	P	13 29 43.0 +0.3
	baz=58					
W23A	Werner Place,	57.63	302	⇓P	P	13 29 42.5 -0.2
	baz=58					
WUAZ	Wupatki	57.66	307	⇑P	P	13 29 43.4 +0.5
	baz=58					
WUAZ	Wupatki	57.66	307	eP	P	13 29 43.2 +0.3
	comp=Z,10nm,1.2s,mb4.7					
WUAZ	Wupatki	57.66	307	eP	P	13 29 43.2 +0.3
	comp=Z,10nm,1.2s,mb4.7					
V14A	Boquillas Ranc	57.66	309	⇓P	P	13 29 43.7 +0.7
	baz=58,SNR=7.8					
V12A	Nelson	57.69	311	⇓P	P	13 29 43.6 +0.5
	baz=58					
W22A	Albuquerque	57.77	303	⇓P	P	13 29 43.9 +0.2
	baz=58					
X27A	F and S Farms,	57.91	299	⇑P	P	13 29 44.1 -0.5
	baz=58					
W19A	Sanders	57.92	305	⇑P	P	13 29 44.8 +0.1
	baz=58					
W18A	Petrified Fore	57.94	306	⇓P	P	13 29 44.9 0.0
	baz=58					
ISA	Isabella	57.99	314	⇑P	P	13 29 45.9 +0.7
	baz=58					
ISA	Isabella	57.99	314	eP	P	13 29 44.3 -1.0
ISA				pmax	pmax	
	comp=Z,28nm,1.7s,mb5.0					
ISA	Isabella	57.99	314	eP	P	13 29 44.3 -0.9
	comp=Z,28nm,1.7s,mb5.0					
ISA	Isabella	57.99	314	eP	P	13 29 44.3 -1.0
	comp=Z,28nm,1.7s,mb5.0					
W17A	Winslow	58.05	307	⇑P	P	13 29 46.0 +0.4
	baz=58					
TUQ	Turquoise Moun	58.05	312	⇑P	P	13 29 46.4 +0.7
	baz=58					
W15A	Williams	58.06	308	⇓P	P	13 29 46.5 +0.8
	baz=58					
X26A	CR and CF Fran	58.06	300	⇑P	P	13 29 45.2 -0.5
	baz=58					
W14A	Seligman	58.08	309	⇑P	P	13 29 46.6 +0.7
	baz=58,SNR=6.2					
W16A	Flagstaff	58.09	307	⇓P	P	13 29 46.8 +0.9
	baz=58					
W12A	Cal Nev Ari	58.12	311	⇑P	P	13 29 46.7 +0.6
	baz=58					
X25A	Clemmons Ranch	58.15	301	⇑P	P	13 29 46.1 -0.3
	baz=58					
GSC	Goldstone	58.24	312	⇓P	P	13 29 47.8 +0.7
	baz=58,SNR=5.4					
GSC	Goldstone	58.24	312	eP	P	13 29 47.3 +0.3
GSC				pmax	pmax	
	comp=Z,10.0nm,1.2s,mb4.7					
GSC	Goldstone	58.24	312	eP	P	13 29 47.3 +0.3
	comp=Z,10nm,1.2s,mb4.7					
GSC	Goldstone	58.24	312	eP	P	13 29 47.3 +0.3
	comp=Z,10.0nm,1.2s,mb4.7					
W13A	Hualapai Mount	58.25	310	⇑P	P	13 29 48.2 +1.2
	baz=58					
LDFC	Landfair	58.35	311	eP	P	13 29 47.8 0.0
	comp=Z,12nm,1.1s,mb4.8					
LDFC	Landfair	58.35	311	eP	P	13 29 47.8 0.0
	comp=Z,12nm,1.1s,mb4.8					
X20A	Quemado	58.42	304	⇓P	P	13 29 47.7 -0.5
	baz=58					
SMMC	Simmler	58.44	316	⇑P	P	13 29 49.2 +0.8
	baz=58					
X21A	Alamocita Cree	58.46	304	⇑P	P	13 29 48.5 -0.1
	baz=58					
X18A	Snowflake	58.54	306	⇑P	P	13 29 49.3 +0.2
	baz=58					
MSTX	Muleshoe	58.56	299	⇑P	P	13 29 48.5 -0.7
	baz=58					
X19A	St. Johns	58.59	305	⇓P	P	13 29 48.9 -0.5
	baz=58					
Y27A	Causey	58.67	299	⇓P	P	13 29 50.0 0.0
	baz=58					
HEC	Hector,Ludlow	58.68	312	⇑P	P	13 29 50.8 +0.8
	baz=59					
Y26A	Elida	58.68	300	⇓P	P	13 29 50.1 0.0
	baz=58					
GMRC	Granite Mounta	58.69	311	⇓P	P	13 29 50.9 +0.8
	baz=59					
EDW2	Edwards Air Fo	58.74	314	⇓P	P	13 29 51.1 +0.7
	baz=59					
X15A	Humboldt	58.74	308	⇑P	P	13 29 50.2 -0.3
	baz=59					
X13A	Yucca	58.75	310	⇑P	P	13 29 50.9 +0.3
	baz=59,SNR=5.7					
Y25A	Mesa, Roswell	58.75	301	⇑P	P	13 29 50.2 -0.4
	baz=59					
X16A	Lo Mia Camp, P	58.76	307	⇑P	P	13 29 51.1 +0.5
	baz=59					
Y24A	Capitan	58.80	301	⇓P	P	13 29 50.6 -0.3
	baz=59					
X14A	Yava	58.81	309	⇓P	P	13 29 51.0 +0.1
	baz=59					
PKM	Peak Mountain	58.84	315	⇓P	P	13 29 50.2 -1.0
	baz=59					
Y23A	Lovelace Mesa,	58.84	302	⇑P	P	13 29 50.3 -1.0
	baz=59					
Y21A	Point of Rocks	58.89	304	⇑P	P	13 29 51.4 -0.2
	baz=59					
Y20A	Horse Springs,	59.04	304	⇑P	P	13 29 52.3 -0.3
	baz=59					
OSI	Osito Adit	59.05	314	⇓P	P	13 29 53.1 +0.4
	baz=59					
Y19A	Nutrioso	59.06	305	⇑P	P	13 29 52.8 +0.1
	baz=59					
PDMCI	Parker Dam,Lak	59.06	310	⇑P	P	13 29 52.7 -0.1
	baz=59					
Z27A	Tatum	59.24	299	⇑P	P	13 29 53.2 -0.8
	baz=59					
IRM	Iron Mountain	59.27	311	⇓P	P	13 29 54.7 +0.5
	baz=59					
Y15A	Casa Rosa Ranc	59.28	308	⇓P	P	13 29 54.2 -0.1
	baz=59					
Y16A	Circle Bar Ran	59.29	307	⇑P	P	13 29 54.5 +0.2
	baz=59					
Z26A	Caprock	59.34	300	⇓P	P	13 29 54.3 -0.4
	baz=59					
BFSC	Mount Baldy St	59.36	313	⇓P	P	13 29 55.4 +0.6
	baz=59,SNR=5.1					
Z25A	Roswell	59.39	301	⇑P	P	13 29 54.9 -0.1
	baz=59					
MWC	Mount Wilson	59.40	314	eP	P	13 29 56.2 +1.2
MWC				pmax	pmax	
	comp=Z,25nm,1.3s,mb5.1					
MWC	Mount Wilson	59.40	314	eP	P	13 29 56.1 +1.1
	comp=Z,25nm,1.3s,mb5.1					
MWC	Mount Wilson	59.40	314	eP	P	13 29 56.2 +1.2
	comp=Z,25nm,1.3s,mb5.1					
Y17A	Roosevelt	59.43	307	⇑P	P	13 29 55.4 +0.2
	baz=59					
BELC	Belle Mtn.	59.48	312	⇓P	P	13 29 56.3 +0.6
	baz=59,SNR=7.1					
Y13A	Salome	59.52	309	⇑P	P	13 29 56.8 +0.8
	baz=59					
Z23A	Rita Site, Whi	59.52	302	⇑P	P	13 29 55.6 -0.3
	baz=59					
NJ2	Nanjing	59.63	71	eP	P	13 29 57.0 +0.3
NJ2				pP	pP	13 30 00.3 +0.4
NJ2				sP	sP	13 30 03.0 +1.9
NJ2				PP	PP	13 32 11.5 +3.6
NJ2				S	S	13 38 06.5 -0.1
NJ2				sS	sS	13 38 16.0 +4.2
NJ2				pmax	pmax	
	comp=Z,30nm,0.8s,mb5.4					
NJ2				pmax	pmax	
	comp=Z,110nm,5.0s					
NJ2				LR	LR	
	comp=N,190nm,16.5s					
NJ2				LR	LR	
	comp=E,300nm,21.7s					
NJ2				LR	LR	
	comp=Z,260nm,19.5s,MS4.4					
Y12C	Blythe	59.63	310	⇓P	P	13 29 57.3 +0.6
	baz=60					
Z19A	T-Link Ranch,	59.72	305	⇑P	P	13 29 57.4 +0.1
	baz=60					
BC3	Big Chuckw Mtn	59.79	311	⇑P	P	13 29 57.8 0.0
	baz=60					
Z17A	San Carlos Hig	59.80	306	⇑P	P	13 29 58.1 +0.3
	baz=60					
Z14A	Wintersburg	59.91	309	⇓P	P	13 29 58.9 +0.3
	baz=60					
125A	Gardner Draw,	60.00	300	⇓P	P	13 29 58.9 -0.3
	baz=60					
124A	Stringfield Ra	60.02	301	⇓P	P	13 29 59.2 -0.2
	baz=60,SNR=5.9					
Z13A	Yuma Proving G	60.12	309	⇓P	P	13 30 00.5 +0.5
	baz=60					
120A	U Bar Ranch, L	60.41	304	⇓P	P	13 30 02.3 +0.3
	baz=60					
118A	Homack Ranch,	60.42	306	⇑P	P	13 30 01.7 -0.3
	baz=60					
115A	Sonoran Desert	60.52	308	⇑P	P	13 30 03.2 +0.5
	baz=60					
117A	Oracle	60.54	306	⇑P	P	13 30 03.3 +0.4
	baz=60,SNR=6.7					
113A	Mohawk Valley,	60.56	309	⇑P	P	13 30 03.1 +0.1
	baz=60					
ENH	Enshi	60.59	81	eP	P	13 30 03.2 -0.1
	comp=Z,70nm,1.4s,mb5.6					
ENH	Enshi	60.59	81	eP	P	13 30 03.2 -0.1
	comp=Z,69nm,1.4s,mb5.6					
MONP	Monument Peak	60.62	312	⇓P	P	13 30 03.1 -0.3
	baz=60					
116A	Eloy	60.62	307	⇑P	P	13 30 03.9 +0.4
	baz=60					
TUC	Tucson	60.80	306	eP	P	13 30 04.7 0.0
TUC				pmax	pmax	
	comp=Z,14nm,1.4s,mb4.9					
TUC	Tucson	60.80	306	eP	P	13 30 04.7 0.0
	comp=Z,14nm,1.4s,mb4.9					
TUC	Tucson	60.80	306	eP	P	13 30 04.7 0.0
	comp=Z,14nm,1.4s,mb4.9					
GUN	Gumba	60.85	105	eP	P	13 30 04.3 -0.8
	comp=Z,72nm,1.1s,mb5.7					
GUN	Gumba	60.85	105	eP	P	13 30 04.3 -0.8
	comp=Z,72nm,1.1s,mb5.7					
221A	Mesquite Ranch	60.88	303	⇑P	P	13 30 05.5 +0.2
	baz=61					
KKN	Kakani	60.92	105	eP	P	13 30 04.9 -0.6
	comp=Z,34nm,0.6s,mb5.7					
KKN	Kakani	60.92	105	eP	P	13 30 04.9 -0.6
KKN				pmax	pmax	
	comp=Z,34nm,0.6s,mb5.7					
KKN	Kakani	60.92	105	eP	P	13 30 04.9 -0.6
	comp=Z,34nm,0.6s,mb5.7					
219A	White Tail Can	61.00	305	⇑P	P	13 30 06.1 0.0
	baz=61					
220A	Playas Peak, P	61.04	304	⇑P	P	13 30 06.5 +0.1
	baz=61,SNR=6.9					
218A	Dragoon	61.09	306	⇓P	P	13 30 06.9 +0.3
	baz=61					
328A	Wristen Ranch,	61.13	299	⇑P	P	13 30 06.3 -0.6
	baz=61					
PKIN	Phulchoki	61.14	105	eP	P	13 30 06.1 -0.9
	comp=Z,9.4nm,0.4s,mb5.2					
PKI	Pulchoki	61.15	105	eP	P	13 30 05.9 -1.2
PKI	Pulchoki	61.15	105	eP	P	13 30 06.1 -1.0
PKI				pmax	pmax	
	comp=Z,9.0nm,0.4s,mb5.2					
PKI	Pulchoki	61.15	105	eP	P	13 30 06.1 -1.0
	comp=Z,9.4nm,0.4s,mb5.3					
PKI	Pulchoki	61.15	105	eP	P	13 30 06.1 -1.0
	comp=Z,9.0nm,0.4s,mb5.2					
216A	Three Points,	61.16	307	⇑P	P	13 30 07.1 0.0
	baz=61					
327A	Balmorhea Ranc	61.19	299	⇓P	P	13 30 07.3 -0.1
	baz=61					
326A	Caldwell Ranch	61.28	300	⇑P	P	13 30 07.8 -0.2
	baz=61					
217A	Green Valley	61.34	306	⇓P	P	13 30 08.7 +0.3
	baz=61,SNR=5.1					
320A	Kipp Ranch, An	61.61	304	⇑P	P	13 30 10.1 -0.1
	baz=62					
318A	Bisbee	61.61	306	⇑P	P	13 30 10.1 -0.1
	baz=62					
319A	Douglas	61.62	305	⇓

comp=Z,15nm,1.2s,mb5.0
JCT Junction City 61.78 296 *e*P **P 13 30 11.2 -0.2**
comp=Z,15nm,1.2s,mb5.0
425A Indio Mountain 61.89 301 ⇓P **P 13 30 11.7 -0.3**
baz=62,SNR=15
426A McDonald Obser 61.93 300 ⇓P **P 13 30 11.8 -0.6**
baz=62
528A Cox Ranch, San 62.34 298 ⇑P **P 13 30 14.5 -0.5**
baz=62,SNR=5.7
527A Woodward Ranch 62.42 299 ⇓P **P 13 30 15.3 -0.3**
baz=62
526A Mary Lane Ranc 62.54 300 ⇓P **P 13 30 15.1 -1.3**
baz=62
628A Black Gap, Mar 63.02 298 ⇓P **P 13 30 18.7 -0.9**
baz=63
626A Big Bend Ranch 63.05 300 ⇓P **P 13 30 19.5 -0.3**
baz=63
627A Terlingua Ranc 63.09 299 ⇑P **P 13 30 19.6 -0.5**
baz=63
TXAR Lajitas Array 63.23 299 P **P 13 30 20.0 -1.0**
comp=Z,1.3nm,0.7s,mb4.1,baz=0.2,slow=3.1,SNR=14
TXAR LR LR 13 59 51.9
comp=Z,507nm,18.3s,MS4.7,baz=5.0,slow=38
TXAR Lajitas Array 63.23 299 P **P 13 30 20.0 -1.0**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR MLR MLR
comp=Z,507nm,18.3s
TXAR Lajitas Array 63.23 299 P **P 13 30 20.0 -1.0**
comp=Z,507nm,18.3s
SHL Shillong 63.70 99 *e*P **P 13 30 25.0 +0.9**
GYA Guiyang 64.12 84 P **P 13 30 28.0 +1.0**
GYA PcP PcP 13 31 03.3 +1.3
GYA PP PP 13 32 51.8 +4.2
GYA ScP 13 35 04.8
GYA S **S 13 39 02.5 -0.9**
GYA SKS 13 40 18.0
GYA SS SS 13 43 12.5 +0.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,540nm,18.0s,MS4.9
GYA LR LR
comp=E,480nm,18.7s,MS4.9
GYA LR LR
comp=Z,510nm,19.0s,MS4.7
KMI Kunming 65.10 88 P **P 13 30 32.5 -0.8**
KMI pP pP 13 30 37.0 +0.4
KMI sP sP 13 30 38.8 +1.0
KMI PP PP 13 32 58.0 +1.9
KMI S S 13 39 13.8 -1.7
KMI sS sS 13 39 21.3 +0.5
KMI SS SS 13 43 28.0 +1.0
KMI pmax pmax
comp=Z,13nm,1.6s,mb4.7
KMI LR LR
comp=N,110nm,25.7s
KMI LR LR
comp=E,440nm,19.1s
KMI LR LR
comp=Z,200nm,23.7s,MS4.2
CMAR Chiang Mai Arr 71.36 92 P **P 13 31 10.9 -1.7**
comp=Z,7.2nm,1.0s,mb4.6,baz=346,slow=7.3,SNR=34
CMAR LR LR 14 04 51.6
comp=Z,401nm,20.4s,MS4.7,baz=352,slow=38
CMAR Chiang Mai Arr 71.36 92 P **P 13 31 11.0 -1.7**
CMAR pmax pmax
comp=Z,7.0nm,1.0s
CMAR MLR MLR
comp=Z,401nm,20.4s
CMAR Chiang Mai Arr 71.36 92 P **P 13 31 10.9 -1.8**
QIZ Qiongzhong 71.76 82 P **P 13 31 14.3 -0.8**
QIZ pP pP 13 31 18.5 +0.2
QIZ sP sP 13 31 22.0 +2.5
QIZ S S 13 40 34.0 -0.9
QIZ sS sS 13 40 40.5 +0.2
QIZ pmax pmax
comp=Z,14nm,1.7s,mb4.6
QIZ LR LR
comp=Z,280nm,15.5s,MS4.6
TORD Torodi Ar. Bea 71.94 192 P **P 13 31 15.0 -1.2**
comp=Z,2.5nm,0.8s,mb4.2,baz=348,slow=7.0,SNR=11
TORD LR LR 14 03 46.9
comp=Z,263nm,18.5s,MS4.5,baz=15,slow=37
DBIC Dimbokro 78.52 198 LR LR 14 04 21.9
comp=Z,125nm,21.0s,MS4.2,baz=359,slow=34
JTS JuntasAbangare 80.53 279 LR LR 14 07 13.7
comp=Z,321nm,21.2s,MS4.6,baz=174,slow=35
ROSC El Rosal 84.97 268 LR LR 14 09 35.5
comp=Z,136nm,21.6s,MS4.3,baz=20,slow=35
ATAH Atahualpa 97.19 271 LR LR 14 18 16.8
comp=Z,195nm,21.9s,MS4.5,baz=9.3,slow=36
TAOE Nuku Hiva Isla 103.35 333 *e*LR LR 14 07 51.3
comp=Z,375nm,27.7s
PPT Papeete 112.32 342 *e*SS SS 13 54 55.3 +2.6
comp=Z,479nm,26.5s
PPT *e*LR LR 14 12 00.6
comp=Z,345nm,26.5s
ASAR Alice Springs 116.06 61 PKP PKPdf 13 38 33.9 -1.4
comp=Z,0.5nm,0.9s,baz=321,slow=1.2,SNR=3.1
ASAR Alice Springs 116.06 61 PKIKP PKPdf 13 38 33.9 -1.4
ASAR pmax pmax
comp=Z,1.0nm,0.9s
DZM Mont Dzumac 116.48 28 *e*LR LR 14 13 57.6
comp=Z,250nm,27.1s
RKT Rikitea 117.28 327 *e*LR LR 14 14 17.9
comp=Z,409nm,34.2s
USHA Ushuaia 143.59 255 PKP PKPdf 13 39 23.9 -2.1
comp=Z,7.5nm,0.6s,baz=64,slow=0.7,SNR=5.6
MAW Mawson 153.89 138 PKPbc PKPbc 13 39 49.4 -0.9
comp=Z,2.8nm,0.7s,baz=33,slow=6.3,SNR=3.8
VNA2 Neumayer--Watz 155.96 196 *e*PKPdf PKPab 13 40 12.6 +0.2

*SOF **28** 13:27:16.9,41°.83N×22°.77E,h13km,MD3.0*
*CSEM **28** 13:27:17.9±0.2,41°.79N×22°.79E,h2km,ML2.3,Error ellipse: s-maj=3.0km s-min=2.6km az=151.0*
*ISCJB **28** 13:27:18.0±0.6,41°.76N±0°.03×22°.77E±0°.04,h5km±6km, Error ellipse: s-maj=4.8km s-min=4.4km az=14.6*
*THE **28** 13:27:18.9,41°.74N×22°.83E,h0km±2km,ML3.1/2,Error ellipse: s-maj=2.3km s-min=0.7km az=284.0*
*SKO **28** 13:27:18.5,41°.78N×22°.78E,h2km,M1.8,ML2.3*
ISC 28 13:27:18.5±0.5,41°.77N±0°.03×22°.77E±0°.04,h6km±5km, n50,σ0°78/72,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.25**	**66**	P	**Pg**	**13 27 22.9**	**-0.5**
KKB	**Krupnik**	**0.25**	**66**	P	**Pg**	**13 27 22.9**	**-0.5**
KKB	**Krupnik**	**0.25**	**66**	P	**Pg**	**13 27 22.9**	**-0.5**
KKB	**Krupnik**	**0.25**	**66**	Pg	**Pg**	**13 27 22.9**	**-0.5**
KKB	**Krupnik**	**0.25**	**66**	Pg	**Pg**	**13 27 22.9**	**-0.5**
STIP	**Stip**	**0.45**	**261**	*i* Pg	**Pg**	**13 27 26.9**	**-0.1**
STIP				*i* Sg	**Sg**	**13 27 33.5**	**+0.6**
STIP				*e*Lg		13 27 33.7	
STIP	comp=N,0.5nm,0.2s			*e*Lg		13 27 33.9	
	comp=E,89nm,0.3s						
STIP	**Stip**	**0.45**	**261**	P	**Pg**	**13 27 27.5**	**+0.4**
STIP	**Stip**	**0.45**	**261**	*i* Pg	**Pg**	**13 27 26.9**	**-0.2**
STIP	**Stip**	**0.45**	**261**	P	**Pg**	**13 27 27.5**	**+0.4**
STIP				*i* Sg	**Sg**	**13 27 33.4**	**+0.5**
VAY	**Valandovo**	**0.47**	**199**	*e*Pg	**Pg**	**13 27 27.4**	**-0.1**
VAY				*e*Sg	**Sg**	**13 27 34.2**	**+0.5**
VAY				*e*Lg		13 27 34.7	
	comp=E,172nm,0.6s						
VAY				*e*Lg		13 27 34.8	
	comp=N,114nm,0.3s						
VAY	**Valandovo**	**0.47**	**199**	P	**Pg**	**13 27 27.9**	**+0.4**
VAY				S	**Sg**	**13 27 34.5**	**+0.9**
VAY	**Valandovo**	**0.47**	**199**	*e*Pg	**Pg**	**13 27 27.4**	**-0.1**
VAY	**Valandovo**	**0.47**	**199**	P	**Pg**	**13 27 27.9**	**+0.4**
VAY				*e*Sg	**Sg**	**13 27 34.1**	**+0.5**
VAY				S	**Sg**	**13 27 34.5**	**+0.9**
KNT	**Kendrikon**	**0.61**	**171**	P	**Pg**	**13 27 30.3**	**+0.1**
KNT				S	**Sg**	**13 27 38.3**	**+0.2**
KNT	**Kendrikon**	**0.61**	**171**	P	**Pg**	**13 27 30.3**	**+0.1**
KNT				S	**Sg**	**13 27 38.3**	**+0.2**
MMB	**Musomiste**	**0.74**	**104**	P	**Pg**	**13 27 32.5**	**-0.1**
MMB	**Musomiste**	**0.74**	**104**	P	**Pg**	**13 27 32.5**	**-0.1**
MMB	**Musomiste**	**0.74**	**104**	P	**Pg**	**13 27 32.5**	**-0.1**
MMB	**Musomiste**	**0.74**	**104**	Pg	**Pg**	**13 27 32.3**	**-0.3**
MMB	**Musomiste**	**0.74**	**104**	Pg	**Pg**	**13 27 32.3**	**-0.3**
VTS	**Vitosha**	**0.89**	**21**	P	**Pg**	**13 27 35.6**	**+0.1**
VTS				S	**Sg**	**13 27 49.4**	**+2.4**
VTS	**Vitosha**	**0.89**	**21**	P	**Pg**	**13 27 34.2**	**-1.3**
VTS	**Vitosha**	**0.89**	**21**	P	**Pg**	**13 27 34.2**	**-1.3**
VTS	**Vitosha**	**0.89**	**21**	P	**Pg**	**13 27 34.2**	**-1.3**
VTS	**Vitosha**	**0.89**	**21**	Pg	**Pg**	**13 27 34.2**	**-1.3**
VTS	**Vitosha**	**0.89**	**21**	Pg	**Pg**	**13 27 34.2**	**-1.3**
VTS	**Vitosha**	**0.89**	**21**	P	**Pg**	**13 27 35.6**	**+0.1**
VTS				S	**Sg**	**13 27 49.4**	**+2.4**
SRS	**Serrai**	**0.89**	**136**	P	**Pg**	**13 27 35.0**	**-0.6**
SRS				S	**Sg**	**13 27 46.9**	**-0.3**
SRS	**Serrai**	**0.89**	**136**	P	**Pg**	**13 27 35.0**	**-0.6**
SRS				S	**Sg**	**13 27 46.9**	**-0.3**
SOH	**Sokhos**	**1.04**	**155**	P	**Pg**	**13 27 38.0**	**-0.4**
SOH				S	**Sg**	**13 27 51.5**	**-0.4**
SOH	**Sokhos**	**1.04**	**155**	P	**Pg**	**13 27 38.0**	**-0.4**
SOH				S	**Sg**	**13 27 51.5**	**-0.4**
HORT	**Hortiatis**	**1.19**	**168**	P	**Pg**	**13 27 40.8**	**-0.5**
HORT				S	**Sg**	**13 27 58.1**	**+1.3**
HORT	**Hortiatis**	**1.19**	**168**	P	**Pg**	**13 27 40.8**	**-0.5**
HORT				S	**Sg**	**13 27 58.1**	**+1.3**
KRUS	**Krusevo**	**1.21**	**251**	*e*Pg	**Pn**	**13 27 40.4**	**-1.5**
KRUS				*e*Sg	**Sg**	**13 27 57.0**	**-0.3**
KRUS				*e*Lg		13 27 57.4	
	comp=N,6.6nm,0.2s						
KRUS				*e*Lg		13 27 57.5	
	comp=E,4.5nm,0.2s						
KRUS	**Krusevo**	**1.21**	**251**	*e*Pg	**Pn**	**13 27 40.3**	**-1.6**
KRUS				*e*Sg	**Sg**	**13 27 57.0**	**-0.4**
RZN	**Rozhen**	**1.46**	**92**	P	**Pn**	**13 27 44.9**	**-0.4**
RZN	**Rozhen**	**1.46**	**92**	P	**Pn**	**13 27 44.9**	**-0.4**
RZN	**Rozhen**	**1.46**	**92**	P	**Pn**	**13 27 44.9**	**-0.4**
RZN	**Rozhen**	**1.46**	**92**	Pg	**Pn**	**13 27 44.8**	**-0.5**
RZN	**Rozhen**	**1.46**	**92**	Pg	**Pn**	**13 27 44.8**	**-0.5**
KAVA	**Kavala**	**1.52**	**120**	P	**Pn**	**13 27 45.7**	**-0.4**
KAVA				S	**Sn**	**13 28 06.3**	**+0.1**
KAVA	**Kavala**	**1.52**	**120**	P	**Pn**	**13 27 45.7**	**-0.4**
KAVA				S	**Sn**	**13 28 06.3**	**+0.1**
OUR	**Ouranopolis**	**1.70**	**147**	P	**Pn**	**13 27 47.9**	**-0.7**
OUR				S	**Sn**	**13 28 11.8**	**+1.2**
OUR	**Ouranopolis**	**1.70**	**147**	P	**Pn**	**13 27 47.9**	**-0.7**
OUR				S	**Sn**	**13 28 11.8**	**+1.2**
MPEP	**Malo Peshtene**	**1.74**	**24**	P	**Pn**	**13 27 49.7**	**+0.5**
MPEP	**Malo Peshtene**	**1.74**	**24**	P	**Pn**	**13 27 49.7**	**+0.5**
MPEP	**Malo Peshtene**	**1.74**	**24**	P	**Pn**	**13 27 49.7**	**+0.5**
KDZ	**Kurdzhali**	**1.98**	**92**	P	**Pn**	**13 27 53.2**	**+0.7**
KDZ	**Kurdzhali**	**1.98**	**92**	P	**Pn**	**13 27 53.2**	**+0.7**
KDZ	**Kurdzhali**	**1.98**	**92**	P	**Pn**	**13 27 53.2**	**+0.7**

*IDC **28** 13:32:54.6±0.8,84°.88N×12°.98E,h0km,mb3.7/16, mb1 3.9/18,mb1mx3.8/31,mbtmp3.7/18,ML3.9/2,MS3.8/3, Ms1 3.8/3,ms1mx3.1/39,Error ellipse: s-maj=22.2km s-min=15.2km az=66.0*
*NEIC **28** 13:32:56.0±0.7,84°.73N×12°.42E,h10km,mb3.7/1,Error ellipse: s-maj=17.8km s-min=10.9km az=77.0*
*ISCJB **28** 13:32:57.7±2.9,84°.52N±0°.05×12°.0E±1°.0,h33km±22km, mb3.7/16,MS3.9/2,Error ellipse: s-maj=15.7km s-min=8.6km az=173.7*
*CSEM **28** 13:32:58.5±0.4,84°.68N×12°.46E,h30km,mb3.7/1,Error ellipse: s-maj=17.1km s-min=11.4km az=83.0*
ISC 28 13:32:58.8±2.9,84°.58N±0°.05×12°.7E±1°.0,h24km±22km, n45,σ1°42/51,mb3.7/16,MS3.9/2,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**5.69**	**182**	*e*P	**Pn**	**13 34 21.8**	**+0.2**
KBS				*e*Sg	Sn	13 35 27.1	+1.1
KBS				AML	AML	13 35 32.9	
	comp=Z,52nm,0.7s						
KBS	**Kingsbay**	**5.69**	**182**	*e*Pn	**Pn**	**13 34 21.6**	**0.0**
KBS				*e*S	**Sn**	**13 35 24.4**	**-1.6**
KBS	**Kingsbay**	**5.69**	**182**	*e*Pn	**Pn**	**13 34 21.6**	**0.0**
KBS				*e*S	**Sn**	**13 35 24.5**	**-1.5**
SPB4	**Spitsbergen Ar**	**6.46**	**173**	*e*P	**Pn**	**13 34 32.6**	**+0.4**
SPB4				*e*S	**Sn**	**13 35 44.0**	**-1.0**
SPB4	**Spitsbergen Ar**	**6.46**	**173**	*e*P	**Pn**	**13 34 32.6**	**+0.4**
SPB4				*e*S	**Sn**	**13 35 44.0**	**-1.0**
SPITS	**Spitsbergen Ar**	**6.47**	**173**	Pn	**Pn**	**13 34 32.5**	**+0.3**
	baz=12,slow=13,SNR=214						
SPITS				Sn	**Sn**	**13 35 44.0**	**-1.0**
	baz=15,slow=13,SNR=1.9						
SPITS	**Spitsbergen Ar**	**6.47**	**173**	Pn	**Pn**	**13 34 32.5**	**+0.3**
SPITS				Sn	**Sn**	**13 35 44.0**	**-1.0**
SPITS	**Spitsbergen Ar**	**6.47**	**173**	Pn	**Pn**	**13 34 32.5**	**+0.3**
SPITS				Sn	**Sn**	**13 35 44.0**	**-1.0**
HOPEN	**Hopen**	**8.33**	**160**	*e*P	**Pn**	**13 34 55.7**	**-1.9**
HOPEN				*e*S	**Sn**	**13 36 26.1**	**-4.6**
HOPEN				AML	AML	13 36 31.6	
	comp=Z,10nm,0.6s						
DAG	**Danmarks Havn**	**9.11**	**229**	*i* P	**Pn**	**13 35 10.0**	**+1.7**
KEV	**Kevo**	**15.14**	**161**	P	**Pn**	**13 36 28.8**	**-1.7**
ARCES	**ARCESS Array B**	**15.32**	**163**	Pn	**Pn**	**13 36 32.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=5.7,slow=10.0,SNR=4.3						
ARCES				Sn	**Sn**	**13 39 14.9**	**-6.5**
	comp=Z,0.3nm,0.3s,baz=0.8,slow=19,SNR=1.6						
ARCES	**ARCESS Array B**	**15.32**	**163**	Pn	**Pn**	**13 36 32.6**	**-0.3**
RES	**Resolute Bay**	**17.82**	**304**	LR	LR	13 43 02.0	
	comp=Z,150nm,18.5s,baz=347,slow=34						
FINES	**FINESS Array B**	**23.44**	**164**	P	**P**	**13 38 06.7**	**+0.9**
	comp=Z,4.9nm,0.9s,mb3.9,baz=350,slow=8.5,SNR=7.8						
FINES	**FINESS Array B**	**23.44**	**164**	P	**P**	**13 38 06.7**	**+0.9**
NOA	**NORSAR Array B**	**23.67**	**182**	P	**P**	**13 38 10.3**	**+2.3**
	comp=Z,1.2nm,0.9s,mb3.3,baz=19,slow=11,SNR=3.3						
NOA	**NORSAR Array B**	**23.67**	**182**	P	**P**	**13 38 10.3**	**+2.4**
HFS	**Hagfors**	**24.58**	**179**	P	**P**	**13 38 18.6**	**+2.4**
	comp=Z,2.7nm,0.8s,mb3.8,baz=45,slow=15,SNR=4.1						
HFS	**Hagfors**	**24.58**	**179**	P	**P**	**13 38 18.6**	**+2.4**
INK	**Inuvik**	**26.53**	**332**	P	**P**	**13 38 31.9**	**-1.9**
	comp=Z,1.1nm,0.7s,mb3.5,baz=349,slow=12,SNR=5.2						
INK	**Inuvik**	**26.53**	**332**	*e*P	**P**	**13 38 31.4**	**-2.4**
	comp=Z,1.5nm,0.9s,mb3.5						
INK	**Inuvik**	**26.53**	**332**	*e*P	**P**	**13 38 31.4**	**-2.4**
	comp=Z,1.5nm,0.9s,mb3.5						
AKASG	**Malin Array Be**	**34.29**	**161**	P	**P**	**13 39 43.4**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=357,slow=9.1,SNR=4.6						
AKASG	**Malin Array Be**	**34.29**	**161**	P	**P**	**13 39 43.4**	**+1.0**
BVAR	**Borovoye Array**	**34.51**	**116**	P	**P**	**13 39 45.3**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.6,baz=350,slow=5.0,SNR=2.5						
BVAR	**Borovoye Array**	**34.51**	**116**	P	**P**	**13 39 45.3**	**+1.0**
GERES	**GERESS Array B**	**35.89**	**179**	P	**P**	**13 39 59.9**	**+3.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=4.6,slow=6.7,SNR=8.0						
KURK	**Kurchatov**	**37.52**	**108**	P	**P**	**13 40 10.8**	**+0.7**
	comp=Z,1.4nm,0.7s,mb3.8,baz=354,slow=7.7,SNR=10						
KURK	**Kurchatov**	**37.52**	**108**	P	**P**	**13 40 10.9**	**+0.8**
MKAR	**Makanchi Array**	**41.74**	**105**	P	**P**	**13 40 44.8**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.1,baz=3.5,slow=4.8,SNR=1.7						
SONM	**Songino Array**	**42.99**	**80**	P	**P**	**13 40 55.2**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.3,baz=335,slow=6.4,SNR=2.5						
SONM	**Songino Array**	**42.99**	**80**	P	**P**	**13 40 55.2**	**-0.1**
BRTR	**Keskin Array B**	**45.40**	**157**	P	**P**	**13 41 17.4**	**+2.7**
	comp=Z,3.8nm,1.1s,mb4.2,baz=355,slow=4.3,SNR=11						
BRTR	**Keskin Array B**	**45.40**	**157**	P	**P**	**13 41 17.5**	**+2.7**
PDAR	**Pinedale Array**	**50.50**	**306**	P	**P**	**13 41 51.6**	**-2.5**
	comp=Z,0.3nm,0.3s,mb3.8,baz=106,slow=3.8,SNR=4.8						
PDAR	**Pinedale Array**	**50.50**	**306**	P	**P**	**13 41 51.6**	**-2.6**
MMAI	**Mount Meron Ar**	**52.16**	**156**	P	**P**	**13 42 09.3**	**+2.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=5.7,slow=9.2,SNR=3.7						
TKL	**Tuckaleechee C**	**55.32**	**280**	LR	LR	14 04 44.0	
	comp=Z,118nm,20.3s,MS4.0,baz=88,slow=34						
NVAR	**Mina Array Bea**	**55.45**	**314**	P	**P**	**13 42 30.0**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.5,baz=51,slow=1.7,SNR=2.8						
NVAR	**Mina Array Bea**	**55.45**	**314**	P	**P**	**13 42 30.0**	**-0.7**
ANMO	**Albuquerque**	**58.02**	**302**	LR	LR	14 08 49.6	
	comp=Z,88nm,18.4s,MS3.9,baz=291,slow=37						
CMAR	**Chiang Mai Arr**	**71.38**	**92**	P	**P**	**13 44 14.7**	**-1.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=342,slow=6.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**71.38**	**92**	P	**P**	**13 44 14.7**	**-1.6**
TORD	**Torodi Ar. Bea**	**71.59**	**191**	P	**P**	**13 44 17.6**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=2.7,slow=5.1,SNR=3.8						

*NEIC **28** 13:47:01.9,16°.72N×99°.93W,h11km,MD3.8(MEX),After MEX.*
MEX 28 13:47:01.9±0.4,16°.72N×99°.93W,h11km±1km,MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.14**	**4**	*i* P	Pg	13 47 04.7	-0.6
ACX				*i* S	Sg	13 47 07.2	-0.5
ACX	**Acapulco**	**0.14**	**4**	*i* P	Pg	13 47 04.7	-0.6
ACX				*i* S	Sg	13 47 07.2	-0.5
CAIG	**El Cayaco**	**0.46**	**315**	*i* P	Pg	13 47 10.1	-0.9
CAIG				*i* S	Sg	13 47 16.8	-0.2
CAIG	**El Cayaco**	**0.46**	**315**	*i* P	Pg	13 47 10.1	-0.9
CAIG				*i* S	Sg	13 47 16.8	-0.2
PLIG	**Platanillo**	**1.71**	**14**	*i* P	Pn	13 47 28.4	-3.2
PLIG				*i* S	Sn	13 47 48.7	-4.7
PLIG	**Platanillo**	**1.71**	**14**	*i* P	Pn	13 47 28.4	-3.2
PLIG				*i* S	Sn	13 47 48.7	-4.7
ZIIG	**Zihuatanejo**	**1.71**	**301**	*i* P	Pn	13 47 28.5	-3.2
ZIIG				*i* S	Sn	13 47 49.4	-4.2
ZIIG	**Zihuatanejo**	**1.71**	**301**	*i* P	Pn	13 47 28.5	-3.2
ZIIG				*i* S	Sn	13 47 49.4	-4.2
PNIG	**Pinotepa**	**1.76**	**101**	*i* P	Pn	13 47 29.1	-3.1
PNIG				*i* S	Sn	13 47 49.6	-5.0
PNIG	**Pinotepa**	**1.76**	**101**	*i* P	Pn	13 47 29.1	-3.1
PNIG				*i* S	Sn	13 47 49.6	-5.0
MZVM		**2.54**	**15**	*i* P	Pn	13 47 39.6	-3.5
MZVM				*i* S	Sn	13 48 09.2	-4.8
IIO	**Organos**	**3.07**	**22**	*i* P	Pn	13 47 48.6	-1.8
IIO				*i* S	Sn	13 48 23.9	-3.2
IIO	**Organos**	**3.07**	**22**	*i* P	Pn	13 47 48.6	-1.8
IIO				*i* S	Sn	13 48 23.9	-3.2
VHO	**Vista Hermosa**	**3.08**	**83**	*e*P	Pn	13 47 49.4	-1.0
VHO				*i* S	Sn	13 48 25.0	-2.2
VHO	**Vista Hermosa**	**3.08**	**83**	*e*P	Pn	13 47 49.4	-1.0
VHO				*i* S	Sn	13 48 25.0	-2.2
HUIG	**Huatulco**	**3.79**	**104**	*e*P	Pn	13 48 01.1	+0.9
HUIG				*i* S	Sn	13 48 43.9	-0.9
HUIG	**Huatulco**	**3.79**	**104**	*e*P	Pn	13 48 01.1	+0.9
HUIG				*i* S	Sn	13 48 43.9	-0.9

*ISCJB **28** 13:49:18.5±1.1,24°.53S±0°.07×179°.9E±0°.1,h498km±14km, mb3.9/12,Error ellipse: s-maj=15.1km s-min=10.4km az=22.2*
*NEIC **28** 13:49:18.6±1.1,24°.59S×179°.98W,h495km±13km,mb4.3/3, Error ellipse: s-maj=19.2km s-min=12.9km az=121.0*
*IDC **28** 13:49:18.7±2.4,24°.63S×179°.99E,h493km±27km,mb3.3/8, mb1 3.5/10,mb1mx3.4/16,mbtmp3.3/10,Error ellipse: s-maj=24.6km s-min=14.4km az=145.0*
ISC 28 13:49:18.7±0.9,24°.60S±0°.07×180°.0E±0°.1,h489km±12km, n30,σ1°13/30,mb3.9/12,1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.06**	**345**	*e*P	**P**	**13 51 06.5**	**+1.3**
DZM	**Mont Dzumac**	**12.68**	**279**	P	**P**	**13 52 06.6**	**+2.1**
AFI	**Afiamalu**	**13.18**	**38**	P	**P**	**13 52 09.3**	**-0.6**
	1.3nm,0.3s,baz=18,slow=20,SNR=1.7						
AFI				S	**S**	**13 54 22.7**	**-8.4**
	1.0nm,0.3s,baz=232,slow=23,SNR=1.1						
AFI	**Afiamalu**	**13.18**	**38**	P	**P**	**13 52 09.3**	**-0.6**
AFI				S	**S**	**13 54 22.7**	**-8.4**
URZ	**Urewera**	**13.84**	**189**	P	**P**	**13 52 16.8**	**+0.2**
	0.4nm,0.3s,baz=338,slow=4.1,SNR=1.6						
URZ				S	**S**	**13 54 43.6**	**+0.2**
	0.4nm,0.3s,baz=163,slow=24,SNR=8.2						
URZ	**Urewera**	**13.84**	**189**	*e*P	**P**	**13 52 15.3**	**-1.3**
URZ				S	**S**	**13 54 43.6**	**+0.2**
FUNA	**Funafuti**	**16.00**	**357**	*e*P	**P**	**13 52 37.2**	**-2.4**
RPZ	**Rata Peaks**	**20.43**	**199**	P	**P**	**13 53 19.5**	**-2.0**
	2.8nm,0.5s,baz=287,slow=1.1,SNR=2.0						
CTA	**Charters Tower**	**31.45**	**271**	‖P	**P**	**13 54 59.8**	**+0.5**
	12nm,0.4s,mb4.7						
CTAO	**Charters Tower**	**31.45**	**271**	*e*P	**P**	**13 54 59.9**	**+0.6**
	14nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.44**	**249**	*e*P	**P**	**13 55 24.5**	**-0.1**
	2.9nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**34.44**	**249**	P	**P**	**13 55 24.9**	**+0.3**
	4.0nm,0.4s,mb4.2,baz=91,slow=9.3,SNR=23						
STKA				S	**S**	**14 00 17.2**	**-0.3**
	0.8nm,0.5s,baz=168,slow=21,SNR=3.7						
STKA	**Stephens Creek**	**34.44**	**249**	*e*P	**P**	**13 55 24.6**	**0.0**
STKA				S	**S**	**14 00 17.2**	**-0.3**
ASAR	**Alice Springs**	**41.90**	**261**	P	**P**	**13 56 25.1**	**-0.5**
	1.9nm,0.5s,mb3.8,baz=89,slow=6.5,SNR=40						
WRAB	**Tennant Creek**	**42.33**	**267**	*e*P	**P**	**13 56 28.0**	**-1.0**
	6.6nm,0.5s,mb4.3						
KAKA	**Kakadu**	**46.34**	**276**	*e*P	**P**	**13 56 58.7**	**-1.5**
	3.2nm,0.2s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.75**	**266**	*e*P	**P**	**13 57 32.7**	**-0.3**
	11nm,0.7s,mb4.3						
SBA	**Scott Base**	**53.69**	**183**	*e*P	**P**	**13 57 55.5**	**+2.2**
	3.1nm,1.0s,mb3.6						
MAW	**Mawson**	**77.09**	**200**	P	**P**	**14 00 20.7**	**+0.3**
	1.5nm,0.5s,mb3.8,baz=105,slow=8.3,SNR=6.3						
NVAR	**Mina Array Bea**	**85.27**	**44**	P	**P**	**14 01 03.6**	**+0.5**
	0.1nm,0.4s,mb2.8,baz=203,slow=6.7,SNR=2.2						
CMAR	**Chiang Mai Arr**	**89.74**	**290**	P	**P**	**14 01 25.8**	**+1.2**
	1.0nm,0.7s,mb3.8,baz=149,slow=4.1,SNR=5.8						
TXAR	**Lajitas Array**	**90.82**	**58**	P	**P**	**14 01 29.8**	**+0.4**
	0.3nm,0.7s,mb3.3,baz=218,slow=7.8,SNR=3.7						
PDAR	**Pinedale Array**	**93.21**	**44**	P	**P**	**14 01 40.2**	**+0.2**
	0.4nm,0.8s,mb3.5,baz=256,slow=3.6,SNR=3.0						
PDAR	**Pinedale Array**	**93.21**	**44**	P	**P**	**14 01 40.2**	**+0.2**
BVAR	**Borovoye Array**	**120.94**	**318**	PKP	PKPdf	14 07 12.5	-2.0
	0.4nm,0.3s,baz=198,slow=1.0,SNR=3.0						
ARCES	**ARCESS Array B**	**132.56**	**348**	PKP	PKPdf	14 07 34.9	-1.4
	1.3nm,0.7s,baz=58,slow=3.0,SNR=4.2						
AKASG	**Malin Array Be**	**145.53**	**327**

*ISCJB **28** 14:44:08.5±0.7, 32.5°N±0.1°×40.0°W±0.1°, h10km, mb3.9/15, MS3.8/6, Error ellipse: s-maj=21.7km s-min=12.0km az=172.4*
*IDC **28** 14:44:08.8±0.8, 32.49°N×39.96°W, h0km, mb3.8/13, mb1 4.0/13, mb1mx3.9/29, mbtmp3.8/13, MS3.8/6, Ms1 3.8/6, ms1mx3.6/12, Error ellipse: s-maj=26.8km s-min=17.1km az=172.0*
*CSEM **28** 14:44:10.0, 32.43N×39.97W, h10km, mb4.3/2, After NEIC*
*NEIC **28** 14:44:10.0±0.4, 32.43N×39.97W, h10km, mb4.3/2, Error ellipse: s-maj=14.9km s-min=8.8km az=172.0*

ISC 28 14:44:10.5±0.7, 32.5N±0.2×40.0W±0.1, h10km, n44, σ0.62/36, mb3.9/15, MS3.8/6, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	27.77	124	LR	LR	14 58 05.1	
	comp=Z,388nm,21.4s,MS4.0,baz=52,slow=30						
ESDC	**Sonseca Array**	29.82	66	LR	LR	14 59 19.3	
	comp=Z,81nm,18.8s,MS3.4,baz=345,slow=30						
SADO	**Sadowa**	32.65	303	LR	LR	15 02 44.5	
	comp=Z,132nm,18.5s,MS3.7,baz=84,slow=34						
FRB	**Frobisher Bay**	35.99	339	LR	LR	15 04 48.9	
	comp=Z,70nm,18.7s,MS3.5,baz=56,slow=34						
TORD	**Torodi Ar. Bea**	42.63	107	P	P	14 52 07.1	-0.2
	5.6nm,1.0s,mb4.3,baz=303,slow=6.1,SNR=20						
GERES	**GERESS Array B**	42.93	51	LR	LR	15 06 27.4	
	comp=Z,97nm,21.6s,MS3.7,baz=262,slow=31						
NOA	**NORSAR Array B**	43.53	33	P	P	14 52 13.8	-0.2
	1.8nm,1.0s,mb3.8,baz=253,slow=8.5,SNR=3.0						
NOA	**NORSAR Array B**	43.53	33	P	P	14 52 13.8	-0.2
WMOK	**Wichita Mounta**	48.41	290	P	P	14 52 51.2	-1.7
	5.2nm,1.1s,mb4.5						
WMOK	**Wichita Mounta**	48.41	290	P	P	14 52 51.2	-1.7
	5.2nm,1.1s,mb4.5						
JCT	**Junction City**	50.47	285	*eP*	P	14 53 08.8	+0.2
JCT	**Junction City**	50.47	285	*eP*	P	14 53 08.8	+0.2
FINES	**FINESS Array B**	50.66	35	P	P	14 53 09.7	+0.1
	0.7nm,0.4s,mb4.0,baz=258,slow=7.0,SNR=3.8						
FINES	**FINESS Array B**	50.66	35	P	P	14 53 09.7	+0.1
AKASG	**Malin Array Be**	52.87	48	P	P	14 53 25.2	-1.0
	0.3nm,0.2s,mb3.8,baz=275,slow=6.9,SNR=6.3						
AKASG	**Malin Array Be**	52.87	48	P	P	14 53 25.2	-1.1
IDI	**Anoyia**	53.04	68	P	P	14 53 28.3	+0.5
	3.2nm,0.8s,mb4.3,baz=306,slow=8.7,SNR=3.0						
IDI	**Anoyia**	53.04	68	P	P	14 53 28.3	+0.5
TXAR	**Lajitas Array**	54.01	285	P	P	14 53 34.8	-0.1
	0.8nm,1.0s,mb3.6,baz=96,slow=6.3,SNR=4.2						
TXAR	**Lajitas Array**	54.01	285	P	P	14 53 34.8	-0.2
PDAR	**Pinedale Array**	54.62	302	P	P	14 53 39.5	+0.3
	0.8nm,0.9s,mb3.7,baz=61,slow=4.2,SNR=7.8						
PDAR	**Pinedale Array**	54.62	302	P	P	14 53 39.5	+0.2
YKA	**Yellowknife Ar**	54.71	327	P	P	14 53 39.3	-0.2
	0.4nm,0.7s,mb3.6,baz=88,slow=7.5,SNR=2.8						
YKA	**Yellowknife Ar**	54.71	327	P	P	14 53 39.3	-0.2
LPAZ	**La Paz**	55.51	213	P	P	14 53 46.0	+0.2
	0.7nm,0.7s,mb3.8,baz=31,slow=5.9,SNR=2.6						
LPAZ	**La Paz**	55.51	213	P	P	14 53 46.0	+0.2
LPAZ	**La Paz**	55.51	213	P	P	14 53 46.0	+0.2
BRTR	**Keskin Array B**	58.38	60	P	P	14 54 06.1	+0.1
	1.1nm,0.9s,mb3.9,baz=282,slow=7.4,SNR=6.6						
BRTR	**Keskin Array B**	58.38	60	P	P	14 54 06.1	+0.1
NVAR	**Mina Array Bea**	62.27	300	P	P	14 54 33.7	+1.0
	0.2nm,0.5s,mb3.5,baz=60,slow=7.7,SNR=3.4						
NVAR	**Mina Array Bea**	62.27	300	P	P	14 54 33.7	+1.0
ABKAR	**Akbulak array**	72.02	43	*eP*	P	14 55 34.9	+0.5
	1.4nm,0.9s,mb3.9						
ABKAR	**Akbulak array**	72.02	43	*eP*	P	14 55 34.9	+0.5
	1.4nm,0.9s,mb3.9						
BILL	**Bilibino**	77.84	350	P	P	14 56 08.6	+0.9
BILL	**Bilibino**	77.84	350	P	P	14 56 08.6	+0.9
ZALV	**Zalesovo Beam**	81.58	29	P	P	14 56 28.8	+0.5
	0.7nm,0.6s,mb3.8,baz=288,slow=7.0,SNR=5.0						
ZALV	**Zalesovo Beam**	81.58	29	P	P	14 56 28.8	+0.5
MK31	**Makanchi Array**	85.48	36	*eP*	P	14 56 48.1	-0.3
MK31	**Makanchi Array**	85.48	36	*eP*	P	14 56 48.1	-0.4
MKAR	**Makanchi Array**	85.48	36	P	P	14 56 48.0	-0.5
	1.6nm,0.9s,mb4.1,baz=329,slow=4.2,SNR=12						
MKAR	**Makanchi Array**	85.48	36	P	P	14 56 48.0	-0.5
BOSA	**Boshof**	86.77	127	LR	LR	15 29 53.0	
	comp=Z,136nm,19.0s,MS4.4,baz=194,slow=32						
MAW	**Mawson**	124.47	153	*e*PKPdf	PKPdf	15 03 07.4	-1.5
MAW	**Mawson**	124.47	153	*e*PKIKP	PKPdf	15 03 07.4	-1.5

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*ISCJB **28** 14:45:11.7±0.6, 32.6N±0.1°×40.0W±0.1°, h10km, mb3.8/14, MS3.3/2, Error ellipse: s-maj=19.0km s-min=13.7km az=153.2*
*IDC **28** 14:45:11.8±0.7, 32.57°N×39.98W, h0km, mb3.8/13, mb1 4.0/13, mb1mx3.8/29, mbtmp3.8/13, MS3.4/2, Ms1 3.4/2, ms1mx3.1/14, Error ellipse: s-maj=23.3km s-min=17.2km az=157.0*
*NEIC **28** 14:45:13.4±0.4, 32.55N×39.98W, h10km, mb4.2/1, Error ellipse: s-maj=14.1km s-min=10.1km az=153.0*
*CSEM **28** 14:45:13.4, 32.55N×39.98W, h10km, mb4.2/1, After NEIC*

ISC 28 14:45:13.7±0.6, 32.6N±0.1°×40.0W±0.1°, h10km, n31, σ0.54/29, mb3.8/14, MS3.3/2, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	31.85	231	LR	LR	15 02 08.3	
	comp=Z,74nm,19.8s,MS3.4,baz=51,slow=32						
KEST	**Kesra**	40.60	71	LR	LR	15 07 47.1	
	comp=Z,37nm,18.3s,MS3.3,baz=197,slow=33						
TORD	**Torodi Ar. Bea**	42.65	107	P	P	14 53 10.4	-0.2
	4.4nm,0.9s,mb4.2,baz=302,slow=7.3,SNR=7.6						
NB2	**NORSAR Subarra**	43.48	33	P	P	14 53 17.3	+0.5
	comp=Z,1.4nm,0.8s,mb3.7,baz=254,slow=8.6						
NOA	**NORSAR Array B**	43.48	33	P	P	14 53 17.1	+0.4
	comp=Z,1.1nm,0.7s,mb3.7,baz=254,slow=8.0,SNR=5.4						
NOA	**NORSAR Array B**	43.48	33	P	P	14 53 17.1	+0.3
FINES	**FINESS Array B**	50.61	35	P	P	14 54 12.6	+0.1
	comp=Z,1.3nm,0.5s,mb4.1,baz=251,slow=5.8,SNR=5.0						
FINES	**FINESS Array B**	50.61	35	P	P	14 54 12.6	+0.2
SIV	**San Ignacio**	52.34	206	P	P	14 54 25.8	0.0
	comp=Z,0.4nm,0.5s,mb3.6,baz=338,slow=11,SNR=4.3						
SIV	**San Ignacio**	52.34	206	P	P	14 54 25.8	0.0
AKASG	**Malin Array Be**	52.83	48	P	P	14 54 29.3	+0.1
	comp=Z,0.4nm,0.4s,mb3.7,baz=294,slow=5.6,SNR=3.2						
AKASG	**Malin Array Be**	52.83	48	P	P	14 54 29.3	+0.1
TXAR	**Lajitas Array**	53.99	285	P	P	14 54 37.9	-0.1
	comp=Z,0.3nm,0.7s,mb3.3,baz=70,slow=7.4,SNR=3.2						
TXAR	**Lajitas Array**	53.99	285	P	P	14 54 37.9	-0.1
PDAR	**Pinedale Array**	54.59	302	P	P	14 54 42.4	+0.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=64,slow=3.4,SNR=5.2						
PDAR	**Pinedale Array**	54.59	302	P	P	14 54 42.3	+0.1
YKA	**Yellowknife Ar**	54.66	327	P	P	14 54 42.4	0.0
	comp=Z,0.2nm,0.6s,mb3.3,baz=103,slow=5.1,SNR=2.5						
YKA	**Yellowknife Ar**	54.66	327	P	P	14 54 42.4	0.0
LPAZ	**La Paz**	55.56	213	P	P	14 54 49.6	+0.2
	comp=Z,0.7nm,0.6s,mb3.9,baz=31,slow=5.8,SNR=3.1						
LPAZ	**La Paz**	55.56	213	P	P	14 54 49.6	+0.2
BRTR	**Keskin Array B**	58.35	60	P	P	14 55 09.1	0.0
	comp=Z,1.0nm,0.8s,mb3.9,baz=272,slow=6.0,SNR=4.5						
BRTR	**Keskin Array B**	58.35	60	P	P	14 55 09.1	+0.1
NVAR	**Mina Array Bea**	62.24	300	P	P	14 55 35.8	+0.1
	comp=Z,0.5nm,0.8s,mb3.7,baz=64,slow=6.1,SNR=2.7						
NVAR	**Mina Array Bea**	62.24	300	P	P	14 55 35.8	+0.1
NVAR	**Mina Array Bea**	62.24	300	P	P	14 55 35.8	+0.1
ABKAR	**Akbulak array**	71.97	43	*eP*	P	14 56 38.0	+0.7
	comp=Z,2.8nm,1.2s,mb4.1						
ABKAR	**Akbulak array**	71.97	43	*eP*	P	14 56 38.0	+0.7
	comp=Z,2.8nm,1.2s,mb4.1						
ZALV	**Zalesovo Beam**	81.53	29	P	P	14 57 29.1	-2.0
	comp=Z,0.5nm,0.3s,mb3.9,baz=317,slow=8.0,SNR=3.2						
MK31	**Makanchi Array**	85.43	36	*eP*	P	14 57 51.6	+0.2
MK31	**Makanchi Array**	85.43	36	*eP*	P	14 57 51.6	+0.2
MKAR	**Makanchi Array**	85.43	36	P	P	14 57 51.4	-0.1
	comp=Z,1.5nm,0.8s,mb4.2,baz=335,slow=5.4,SNR=9.8						

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*IDC **28** 14:51:22.9±0.7, 25.23S×176.50W, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.3/17, mbtmp4.1/12, ML4.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.4/19, Error ellipse: s-maj=23.9km s-min=18.6km az=120.0*
*ISCJB **28** 14:51:26.7±0.5, 25.31S±0.06×176.5W±0.1°, h33km, mb4.4/14, MS3.8/3, Error ellipse: s-maj=16.0km s-min=6.7km az=16.8*
*NEIC **28** 14:51:28.2±0.6, 25.20S×176.53W, h35km, mb5.0/1, Error ellipse: s-maj=20.2km s-min=14.4km az=138.0*

ISC 28 14:51:28.5±0.5, 25.29S±0.07×176.5W±0.1, h35km, n47, σ1.16/38, mb4.3/15, MS3.8/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	4.15	198	Pn	Pn	14 52 29.5	+0.1
	252nm,0.3s,baz=282,slow=23,SNR=9.8						
RAO				LR	LR	14 53 15.0	
	comp=Z,253nm,20.2s,baz=96,slow=27						
RAO				Sn	Sn	14 53 17.6	+0.9
	273nm,0.3s,baz=74,slow=21,SNR=6.1						
RAO	**Raoul Island**	4.15	198	*e*P	Pn	14 52 28.8	-0.6
RAO				LR	LR	14 53 15.0	
RAO				*e*S	Sn	14 53 15.5	-1.2
MSVF	**Nonsavu**	9.08	325	*e*P	Pn	14 53 42.5	+5.4
	37nm,0.8s						
AFI	**Afiamalu**	12.15	22	Pn	Pn	14 54 11.1	-8.1
	60nm,0.3s,baz=149,slow=2.5,SNR=111						
AFI				Sn	Sn	14 56 14.9	-19
	6.1nm,0.3s,baz=36,slow=19,SNR=5.0						
AFI				LR	LR	14 57 54.7	
	comp=Z,200nm,19.3s,baz=296,slow=32						
AFI	**Afiamalu**	12.15	22	*e*P	Pn	14 54 12.1	-7.2
AFI				Sn	Sn	14 56 14.9	-19
AFI				LR	LR	14 57 54.7	
OUZ	**Omahuta**	13.09	219	*e*P	Pn	14 54 42.2	+10
URZ	**Urewera**	14.03	201	Pn	Pn	14 54 44.1	-0.6
	1.1nm,0.3s,baz=332,slow=13,SNR=5.7						
URZ				Sn	Sn	14 57 07.4	-12
	3.0nm,0.3s,baz=343,slow=23,SNR=8.6						
URZ	**Urewera**	14.03	201	P	Pn	14 54 49.9	+5.2
URZ				Sn	Sn	14 57 07.4	-12
DZM	**Mont Dzumac**	15.97	278	*e*LR	LR	14 58 50.6	
	198nm,25.5s						
DZM	**Mont Dzumac**	15.97	278	*e*P	Pn	14 55 21.1	+10
RPZ	**Rata Peaks**	21.02	206	P	P	14 56 04.3	-4.7
	2.0nm,0.3s,mb3.9,baz=332,slow=17,SNR=4.2						
RPZ				S	S	14 59 41.4	-20
	6.0nm,1.0s,baz=195,slow=18,SNR=3.7						
RPZ				LR	LR	15 03 57.8	
	comp=Z,395nm,18.7s,MS3.8,baz=93,slow=36						
RPZ	**Rata Peaks**	21.02	206	*e*P	P	14 56 04.7	-4.3
RPZ				S	S	14 59 41.4	-20
RPZ				LR	LR	15 03 57.8	
PAE	**Paea**	26.12	78	*e*T		15 23 32.0	
	15nm,0.3s						
PPT	**Papeete**	26.16	78	*e*LQ		15 02 02.1	
	437nm,25.5s						
PPT				*e*LR	LR	15 03 19.8	
	143nm,22.5s						
PPT				*e*T		15 23 34.6	
	13nm,0.3s						
TIAR	**Tiarei**	26.37	78	*e*T		15 23 50.5	
	12nm,0.3s						
MEH	**Mehetia**	27.39	80	*e*T		15 25 10.0	
	254nm,0.3s						
EIDS	**Eidsvold**	29.29	263	*e*P	P	14 57 29.0	+1.4
CTA	**Charters Tower**	34.70	271	*e*P	P	14 58 12.9	-2.3
	8.9nm,1.4s,mb4.5						
CTA	**Charters Tower**	34.70	271	P	P	14 58 12.9	-2.3
	2.7nm,0.4s,mb4.5,baz=70,slow=7.4,SNR=3.5						
CTAO	**Charters Tower**	34.70	271	*e*P	P	14 58 12.8	-2.4
STKA	**Stephens Creek**	37.23	250	P	P	14 58 37.1	+0.4
	1.2nm,0.4s,mb4.1,baz=97,slow=19,SNR=8.0						
STKA	**Stephens Creek**	37.23	250	*e*P	P	14 58 37.4	+0.6
RKT	**Rikitea**	37.81	96	*e*T		15 38 36.3	
	5.3nm,0.4s						
TAOE	**Nuku Hiva Isla**	38.21	71	*e*LR	LR	15 08 52.6	
	130nm,25.9s						
ASAR	**Alice Springs**	44.98	261	P	P	14 59 39.8	-0.9
	1.7nm,0.6s,mb4.0,baz=97,slow=8.2,SNR=9.9						
SBA	**Scott Base**	53.22	184	*e*P	P	15 00 45.2	+2.4
	30nm,1.6s,mb5.0						
FITZ	**Fitzroy Crossi**	53.92	265	P	P	15 00 48.2	-0.7
	3.5nm,0.8s,mb4.3,baz=116,slow=8.7,SNR=4.2						
QSPA	**South Pole Qui**	64.81	180	P	P	15 02 03.9	+0.7
	6.1nm,0.6s,mb4.8,baz=31,slow=1.1,SNR=72						
MJAR	**Matsushiro Arr**	74.88	324	LR	LR	15 28 33.3	
	comp=Z,74nm,20.6s,MS4.0,baz=120,slow=30						
PETK	**Petropavlovsk-**	81.23	345	P	P	15 03 41.3	+0.8
	1.0nm,0.6s,mb3.9,baz=146,slow=6.2,SNR=3.8						
KSRS	**Korea Array**	81.39	318	P	P	15 03 42.1	+0.5
	1.3nm,0.8s,mb3.9,baz=154,slow=6.9,SNR=4.0						
KSRS				LR	LR	15 34 44.8	
	comp=Z,29nm,18.9s,MS3.7,baz=116,slow=32						
NVAR	**Mina Array Bea**	83.57	42	P	P	15 03 53.9	+0.9
	0.5nm,0.7s,mb3.8,baz=226,slow=8.0,SNR=4.8						
NVAR	**Mina Array Bea**	83.57	42	P	P	15 03 53.9	+0.9
N13A	**Wendover, West**	87.55	42	*e*P	P	15 04 10.6	-2.2
	19nm,0.6s,mb5.5						
TXAR	**Lajitas Array**	88.48	57	P	P	15 04 16.6	-0.8
	0.4nm,0.8s,mb3.7,baz=224,slow=5.2,SNR=4.4						
PDAR	**Pinedale Array**	91.49	43	P	P	15 04 31.2	0.0
	0.5nm,0.7s,mb4.0,baz=150,slow=3.3,SNR=3.9						
JCT	**Junction City**	91.96	57	*e*P	P	15 04 33.4	-0.3
	15nm,0.5s,mb5.6						
CMAR	**Chiang Mai Arr**	93.01	289	P	P	15 04 40.3	+1.5
	0.7nm,0.7s,mb4.2,baz=131,slow=3.9,SNR=2.8						
MKAR	**Makanchi Array**	115.46	312	PKP	PKPdf	15 10 05.2	-1.3
	0.2nm,0.4s,baz=153,slow=0.6,SNR=3.1						
ARCES	**ARCESS Array B**	133.86	349	PKP	PKPdf	15 10 41.9	+1.0
	8.8nm,1.3s,baz=77,slow=4.7,SNR=3.0						
NOA	**NORSAR Array B**	143.88	354	PKhKP		15 10 55.0	
	0.5nm,0.6s,baz=2.4,slow=2.3,SNR=3.2						
AKASG	**Malin Array Be**	147.84	329	PKPbc	PKPbc	15 11 07.2	-2.3
	0.7nm,0.4s,baz=42,slow=3.7,SNR=3.3						
AKASG	**Malin Array Be**	147.84	329	PKPbc	PKPbc	15 11 07.2	-2.3
BRTR	**Keskin Array B**	150.97	307	PKPbc	PKPbc	15 11 17.1	-0.6
	0.7nm,0.6s,baz=144,slow=5.1,SNR=3.6						
BRTR				PKPab	PKPab	15 11 24.4	-0.8
	1.1nm,0.6s,baz=138,slow=4.3,SNR=7.7						
BRTR	**Keskin Array B**	150.97	307	PKPbc	PKPbc	15 11 17.1	-0.6
BRTR				PKPab	PKPab	15 11 24.4	-0.8
MMAI	**Mount Meron Ar**	151.19	293	PKPab	PKPab	15 11 25.7	-0.6
	3.5nm,0.5s,baz=64,slow=6.6,SNR=6.3						
TORD	**Torodi Ar. Bea**	167.80	172	PKPab	PKPab	15 12 38.0	-0.3
	1.9nm,0.8s,baz=198,slow=4.3,SNR=8.3						

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*MOS **28** 14:53:54.9±1.0, 0.05S×124.87E, h40km, mb5.2/25, Error ellipse: s-maj=15.8km s-min=7.4km az=115.0*
*BJI **28** 14:53:55.5, 0.33S×125.06E, h59km, mB5.0/23, mb5.0/34, Ms4.6/18, Ms7 4.4/23*
*NEIC **28** 14:53:56.6±1.1, 0.09S×124.91E, h41km±10km, mb5.0/33, Error ellipse: s-maj=9.6km s-min=5.2km az=65.0*
*IDC **28** 14:53:56.5±3.5, 0.07S×124.83E, h33km±26km, mb4.5/20, mb1 4.5/21, mb1mx4.5/24, mbtmp4.4/21, ML4.1/1, MS3.8/7, Ms1 3.8/7, ms1mx3.4/25, Error ellipse: s-maj=22.5km s-min=11.0km az=73.0*
*ISCJB **28** 14:53:58.3±0.5, 0.13S±0.03×125.02E±0.03, h72km±4km, mb4.8/78, Error ellipse: s-maj=5.7km s-min=5.0km az=33.6*
*DJA **28** 14:53:59, 0.16S×125.08E, h49km, MLv4.9/10*

ISC 28 14:53:59.7±0.4, 0.16S±0.03×125.05E±0.03, h70km±4km, h46km±.4km: pP-P, n178, σ1.20/173, mb4.8/78, 4C-2D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	2.44	249	P	Pn	14 54 38.2	+0.9
TNTI	**Ternate**	2.50	68	P	Pn	14 54 37.9	-0.2
TNTI				S	Sn	14 55 08.4	+0.8
LBMI	**Labuha**	2.50	101	P	Pn	14 54 37.6	-0.6
LBMI				S	Sn	14 55 07.0	-0.7
MRSI	**Marisa**	3.17	281	P	Pn	14 54 43.9	-3.3
APSI	**Ampana**	3.48	258	P	Pn	14 54 51.6	+0.1
NLAI	**Namlea**	3.69	146	P	Pn	14 54 53.2	-1.1
SGSI	**Sangihe**	3.85	7	P	Pn	14 54 56.4	-0.1
KDI	**Kendari**	4.49	213	P	Pn	14 55 05.8	+0.5
AAI	**Ambon**	4.71	138	P	Pn	14 55 08.1	-0.2
TTSI	**Tana Toraja**	5.96	241	P	Pn	14 55 25.2	-0.2
	324nm,0.7s,3μm1.8nm						
DAV	**Davao City (W)**	7.20	4	Pn	Pn	14 55 47.3	+4.9
	67nm,0.3s,baz=151,slow=3.9,SNR=7.5						
DAV				LR	LR	14 58 40.2	
	comp=Z,1μm,19.5s,baz=195,slow=40						
DAV	**Davao City (W)**	7.20	4	Pn	Pn	14 55 39.2	-3.2
DAV				LR	LR	14 58 40.2	
ZMPH	**Zamboanga City**	7.66	337	⇑*iP*	Pn	14 55 48.5	-0.3
PAGZ	**Pagadian**	8.12	348	*e*P	Pn	14 55 55.3	+0.3
IPIL	**Ipil**	8.27	343	*e*P	Pn	14 55 56.9	-0.1
MYLDM	**Lahad Datu**	8.42	309	P	Pn	14 56 00.3	+1.3
	248nm,1.1s,2μm						
KBKI	**Kotabaru**	9.41	251	P	Px	14 56 23.4	
BATP	**Bataraza**	11.45	321	*e*P	Pn	14 56 41.7	+1.2
CUYO	**Cuyo Island**	11.64	340	*e*P	Pn	14 56 45.5	+2.3
SBUM	**Sibu**	13.08	281	P	Pn	14 57 03.9	+1.2
	24nm,1.2s						
KAKA	**Kakadu**	14.47	150	*e*P	Pn	14 57 18.4	-2.6
	35nm,0.7s						
KAKA	**Kakadu**	14.47	150	*e*P	Pn	14 57 18.3	-2.7
	111nm,0.7s						
TGY	**Tagaytay City**	14.74	344	Pn	Pn	14 57 31.0	+6.5
	7.0nm,0.3s,baz=216,slow=14,SNR=3.3						
KSM	**Kuching**	14.82	276	P	Pn	14 57 28.1	+2.5
	34nm,1.0s						
NGJI	**Ngawi**	15.32	242	P	Pn	14 57 39.5	+7.4
FITZ	**Fitzroy Crossi**	17.84	178	*e*P	Pn	14 58 03.3	-0.1
	16nm,0.9s						
FITZ	**Fitzroy Crossi**	17.84	178	P	Pn	14 58 03.2	-0.2
	0.5nm,0.3s,baz=35,slow=6.3,SNR=13						
FITZ				LR	LR	15 04 14.4	
	comp=Z,127nm,20.9s,baz=1.3,slow=34						
FITZ	**Fitzroy Crossi**	17.84	178	*e*P	Pn	14 58 03.2	-0.1
	13nm,0.9s						
CGJI	**Cibinong**	20.35	251	P	P	14 58 34.0	+3.4
	147nm,0.6s						
WRAB	**Tennant Creek**	21.66	156	*e*P	P	14 58 44.1	-0.6
WRAB				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	21.66	156	*e*P	P	14 58 44.1	-0.6
	comp=Z,22nm,0.9s,mb4.5						
COEN	**Coen**	22.59	128	*e*P	P	14 58 54.8	+0.3
	comp=Z,154nm,0.7s,mb5.4						
TPUB	**Ta-pu**	23.71	350	*e*P	P	14 59 02.8	-2.6
	comp=Z,22nm,0.4s,mb4.8						
QIZ	**Qiongzhong**	24.21	323	P	P	14 59 09.8	-0.2
QIZ				pP		14 59 20.8	
QIZ				sP	sP	14 59 26.0	-8.7
QIZ				S	S	15 03 25.8	+2.1
QIZ				LR	LR		
	comp=Z,140nm,20.5s						
IPM	**Ipoh**	24.43	281	P	P	14 59 11.6	-0.6
GIRL	**Giralia**	24.70	204	*e*P	P	14 59 15.2	+0.7
	comp=Z,189nm,0.9s,mb5.5						
ASAR	**Alice Springs**	24.90	160	P	P	14 59 17.1	+0.8
	comp=Z,10nm,0.8s,mb4.3,baz=339,slow=8.6,SNR=75						
ASAR				PcP	PcP	15 02 52.4	+1.7
	comp=Z,2.3nm,0.7s,baz=347,slow=2.2,SNR=9.3						
ASAR				S	S	15 03 37.3	+2.6
	comp=Z,2.7nm,1.0s,baz=348,slow=22,SNR=6.1						
ASAR				ScP	ScP	15 06 27.6	+4.0
	comp=Z,1.3nm,0.9s,baz=348,slow=2.9,SNR=5.0						
ASAR	**Alice Springs**	24.90	160	P	P	14 59 17.1	+0.8
ASAR						15 02 52.4	
ASAR				S	S	15 03 37.3	+2.6
PSI	**Prapat**	26.28	277	P	P	14 59 27.9	-1.1
	comp=Z,6.6nm,0.6s,mb4.2,baz=124,slow=14,SNR=4.1						
JOW	**Kunigami**	27.01	6	P	P	14 59 36.5	+1.2
	comp=Z,42nm,0.7s,mb5.1,baz=181,slow=9.0,SNR=7.7						
JOW				LR	LR	15 09 39.3	
	comp=Z,162nm,18.0s,baz=227,slow=35						
SSE	**Sheshan**	31.30	354	P	P	15 00 11.5	-1.8
SSE				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0						
SSE				LR	LR		
	comp=Z,88nm,23.9s						
CM31	**Chiang Mai Arr**	31.62	307	*e*P	P	15 00 16.6	+0.2
	comp=Z,2.5nm,0.7s,mb4.0						
CMAR	**Chiang Mai Arr**	31.62	307	P	P	15 00 16.6	+0.2
	comp=Z,3.5nm,0.8s,mb4.1,baz=135,slow=7.0,SNR=19						
CMAR				PcP	PcP	15 03 09.2	+2.0
	comp=Z,5.1nm,0.8s,baz=167,slow=2.0,SNR=28						
CMAR				LR	LR	15 12 60.0	
	comp=Z,121nm,19.7s,baz=169,slow=36						
CMAR	**Chiang Mai Arr**	31.62	307	P	P	15 00 16.6	+0.3
CMAR						15 03 09.3	
GYA	**Guiyang**	31.84	328	P	P	15 00 19.8	+1.6
GYA				pP	pP	15 00 31.8	-3.1
GYA				sP	sP	15 00 38.5	-4.6
GYA				PP	PP	15 01 27.0	-4.3
GYA				PcP	PcP	15 03 09.8	+2.1
GYA

HHC				pP	pP	15 02 03.3	-3.1
HHC				sP	sP	15 02 08.8	-5.6
HHC				PP	PP	15 03 33.0	+3.8
HHC				PcP	PcP	15 03 42.5	+2.3
HHC				ScP	ScP	15 07 27.0	+1.9
HHC				PcS	PcS	15 07 33.0	+0.8
HHC				S	**S**	**15 08 11.0**	**+4.0**
HHC				sS	sS	15 08 32.5	-3.9
HHC				SS	SS	15 11 17.5	-2.1
HHC				ScS	ScS	15 11 45.3	+1.5
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
HHC				pmax	pmax		
	comp=Z,87nm,5.2s						
HHC				LR	LR		
	comp=N,460nm,15.5s						
HHC				LR	LR		
	comp=E,2μm,16.7s						
HHC				LR	LR		
	comp=Z,220nm,16.3s						
CN2	**Changchun**	**43.77**	**0**	*eP*	**P**	**15 02 01.8**	**+3.5**
CN2				*e*pP	pP	15 02 14.0	-1.7
CN2				PcP	PcP	15 03 46.0	+2.0
CN2				*e*S	**S**	**15 08 29.0**	**+5.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
LSA	**Lhasa**	**43.88**	**316**	P	**P**	**15 02 01.0**	**+1.5**
LSA	**Lhasa**	**43.88**	**316**	*e*P	**P**	**15 02 00.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
LSA	**Lhasa**	**43.88**	**316**	*e*P	**P**	**15 02 00.3**	**+0.9**
	comp=Z,14nm,0.8s,mb4.8						
MDJ	**Mudanjiang**	**44.76**	**5**	P	**P**	**15 02 07.0**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,270nm,4.2s						
MDJ	**Mudanjiang**	**44.76**	**5**	*e*P	**P**	**15 02 06.8**	**+0.5**
	comp=Z,13nm,0.7s,mb4.8						
ODAN	**Odare**	**45.09**	**310**	*e*P	**P**	**15 02 08.4**	**-0.8**
	comp=Z,25nm,0.8s,mb5.0						
TAPN	**Taplejung**	**45.09**	**310**	*e*P	**P**	**15 02 07.6**	**-1.6**
	comp=Z,18nm,0.5s,mb5.1						
GTA	**Gaotai**	**45.65**	**332**	*e*P	**P**	**15 02 13.3**	**-0.1**
GTA				pP	pP	15 02 25.5	-5.3
GTA				sP	sP	15 02 31.0	-7.8
GTA				PcP	PcP	15 03 52.0	+1.4
GTA				PP	PP	15 04 00.5	-1.1
GTA				S	**S**	**15 08 51.5**	**+0.4**
GTA				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.6						
GTA				pmax	pmax		
	comp=Z,94nm,4.2s						
GTA				LR	LR		
	comp=N,78nm,17.8s						
GTA				LR	LR		
	comp=E,130nm,15.8s						
GTA				LR	LR		
	comp=Z,97nm,17.2s						
RAMN	**Ramite**	**45.74**	**309**	*e*P	**P**	**15 02 13.2**	**-1.2**
	comp=Z,59nm,0.7s,mb5.4						
JIRN	**Jiri**	**46.41**	**310**	*e*P	**P**	**15 02 18.7**	**-0.9**
GUN	**Gumba**	**46.77**	**310**	*e*P	**P**	**15 02 20.9**	**-1.6**
	comp=Z,57nm,0.8s,mb5.4						
PKI	**Pulchoki**	**46.97**	**309**	*e*P	**P**	**15 02 21.8**	**-2.2**
	comp=Z,11nm,0.5s,mb4.9						
PKI	**Pulchoki**	**46.97**	**309**	*e*P	**P**	**15 02 22.1**	**-1.9**
PKI				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.9						
PKI	**Pulchoki**	**46.97**	**309**	*e*P	**P**	**15 02 22.1**	**-1.9**
	comp=Z,16nm,0.6s,mb4.9						
PKIN	**Phulchoki**	**46.98**	**309**	*e*P	**P**	**15 02 22.1**	**-2.0**
	comp=Z,16nm,0.6s,mb4.9						
KKN	**Kakani**	**47.18**	**309**	*e*P	**P**	**15 02 23.5**	**-2.1**
HYB	**Hyderabad**	**48.97**	**293**	*i*P	**P**	**15 02 38.0**	**-1.6**
HABR	**Khabarovsk**	**49.21**	**9**	*e*P	**P**	**15 02 40.8**	**-0.1**
HABR				*e**SP	pP	15 02 52.6	-5.9
HABR						15 04 35.0	
HABR				S	**S**	**15 09 44.4**	**+3.0**
HABR				*e**SS	sS	15 09 59.1	-12
HABR				*e*		15 12 28.1	
HABR				pmax	pmax		
	comp=E,13nm,0.8s						
HABR				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
HABR				pmax	pmax		
	comp=N,37nm,2.2s						
HABR				MLR	MLR		
	comp=Z,82nm,19.0s						
YSS	**Yuzh-Sakhalins**	**49.41**	**16**	*e*P	**P**	**15 02 52.0**	**+10**
HIA	**Hailar**	**49.44**	**355**	*e*P	**P**	**15 02 42.7**	**+0.1**
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HIA	**Hailar**	**49.44**	**355**	*e*P	**P**	**15 02 42.7**	**0.0**
	comp=Z,16nm,0.8s,mb5.0						
KLR	**Kul'dur**	**49.53**	**6**	*e*P	**P**	**15 02 39.8**	**-3.5**
SONM	**Songino Array**	**50.48**	**344**	P	**P**	**15 02 50.3**	**-0.2**
	comp=Z,5.8nm,0.7s,mb4.6,baz=160,slow=8.8,SNR=26						
SONM				PcP	PcP	15 04 08.6	+0.8
	comp=Z,2.2nm,0.7s,baz=154,slow=4.2,SNR=5.7						
SONM				LR	LR	15 23 12.8	
	comp=Z,59nm,21.8s,baz=288,slow=35						
SONM	**Songino Array**	**50.48**	**344**	P	**P**	**15 02 50.3**	**-0.2**
SONM						15 04 08.6	
SONM	**Songino Array**	**50.48**	**344**	P	**P**	**15 02 50.3**	**-0.2**
SONM				PcP	PcP	15 04 08.6	+0.8
SONM				LR	LR	15 23 12.8	
TLY	**Talaya**	**54.72**	**344**	*e*P	**P**	**15 03 24.4**	**+2.6**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
WMQ	**Urumqi**	**55.00**	**328**	P	**P**	**15 03 25.3**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,34nm,33.0s						
WMQ				LR	LR		
	comp=E,58nm,35.0s						
WMQ				LR	LR		
	comp=Z,69nm,25.0s						
MOY	**Mondy**	**55.49**	**342**	*e*P	**P**	**15 03 29.9**	**+2.6**
BOD	**Bodaibo**	**58.47**	**353**	*e*P	**P**	**15 03 48.1**	**-0.2**
BOD				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
RPZ	**Rata Peaks**	**59.64**	**143**	P	**P**	**15 03 59.2**	**+2.5**
	comp=Z,6.1nm,0.7s,mb4.7,baz=32,slow=19,SNR=5.6						
PETK	**Petropavlovsk-**	**59.64**	**22**	P	**P**	**15 03 57.9**	**+1.4**
	comp=Z,7.1nm,0.7s,mb4.8,baz=189,slow=5.4,SNR=9.0						
MK31	**Makanchi Array**	**59.83**	**327**	*e*P	**P**	**15 03 57.1**	**-0.8**
MKAR	**Makanchi Array**	**59.83**	**327**	P	**P**	**15 03 56.8**	**-1.1**
	comp=Z,16nm,0.5s,mb5.3,baz=112,slow=9.0,SNR=129						
MKAR				PcP	PcP	15 04 44.3	+0.5
	comp=Z,6.3nm,0.6s,baz=117,slow=4.8,SNR=9.3						
KZA	**Kyzart**	**61.40**	**320**	P	**P**	**15 04 09.0**	**+0.3**
	SNR=18						
TKM2	**Tokmak 2**	**61.59**	**321**	P	**P**	**15 04 09.6**	**-0.4**
	SNR=21						
TKM2	**Tokmak 2**	**61.59**	**321**	*e*P	**P**	**15 04 09.0**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
TKM2	**Tokmak 2**	**61.59**	**321**	*e*P	**P**	**15 04 09.0**	**-0.9**
	comp=Z,20nm,0.8s,mb5.2						
KBK	**Karagaybulak**	**61.88**	**320**	P	**P**	**15 04 13.1**	**+1.2**
	SNR=6.7						
UCH	**Uchtor**	**61.95**	**319**	P	**P**	**15 04 12.9**	**+0.5**
	SNR=20						
UCH	**Uchtor**	**61.95**	**319**	*e*P	**P**	**15 04 12.6**	**+0.3**
	comp=Z,16nm,1.0s,mb5.0						
YAK	**Yakutsk**	**62.13**	**2**	*e*P	**P**	**15 04 13.1**	**-0.1**
YAK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK	**Yakutsk**	**62.13**	**2**	*e*P	**P**	**15 04 13.5**	**+0.3**
	comp=N,43nm,0.7s,mb5.6						
AAK	**Ala-Archa**	**62.16**	**320**	P	**P**	**15 04 15.4**	**+1.6**
	SNR=5.3						
AAK	**Ala-Archa**	**62.16**	**320**	*e*P	**P**	**15 04 13.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
AAK	**Ala-Archa**	**62.16**	**320**	*e*P	**P**	**15 04 13.5**	**-0.3**
	comp=Z,12nm,1.0s,mb4.9						
AML	**Almayashu**	**62.44**	**319**	P	**P**	**15 04 15.9**	**+0.3**
	SNR=21						
AML	**Almayashu**	**62.44**	**319**	*e*P	**P**	**15 04 15.4**	**-0.2**
	comp=Z,37nm,1.3s,mb5.3						
USP	**Ospenovka**	**62.46**	**320**	P	**P**	**15 04 15.3**	**-0.5**
	SNR=14						
KBL	**Kabul**	**62.61**	**310**	*e*P	**P**	**15 04 15.3**	**-1.7**
KBL				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
KBL	**Kabul**	**62.61**	**310**	*e*P	**P**	**15 04 15.3**	**-1.7**
	comp=Z,19nm,0.8s,mb5.1						
EKS2	**Erkin-Say**	**62.63**	**320**	P	**P**	**15 04 16.8**	**-0.2**
	SNR=12						
EKS2	**Erkin-Say**	**62.63**	**320**	*e*P	**P**	**15 04 16.4**	**-0.5**
	comp=Z,29nm,1.2s,mb5.1						
ZAA0	**Zalesovo Array**	**63.31**	**335**	*e*P	**P**	**15 04 20.6**	**-0.6**
ZALV	**Zalesovo Beam**	**63.31**	**335**	P	**P**	**15 04 19.3**	**-1.9**
	comp=Z,4.4nm,0.6s,mb4.6,baz=124,slow=5.0,SNR=22						
ZALV	**Zalesovo Beam**	**63.31**	**335**	P	**P**	**15 04 19.3**	**-1.9**
KURK	**Kurchatov**	**64.14**	**329**	*e*P	**P**	**15 04 25.4**	**-1.4**
KURK				pmax	pmax		
	comp=Z,38nm,0.5s,mb5.5						
KURK	**Kurchatov**	**64.14**	**329**	*e*P	**P**	**15 04 25.4**	**-1.4**
	comp=Z,38nm,0.5s,mb5.5						
NVS	**Novosibirsk**	**64.60**	**335**	*e*P	**P**	**15 04 27.8**	**-1.8**
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
NVS				pmax	pmax		
	comp=Z,30nm,1.7s,mb4.8						
NVS				pmax	pmax		
	comp=N,13nm,1.8s						
NVS				pmax	pmax		
	comp=E,21nm,1.8s						
SEY	**Seymchan**	**66.17**	**13**⇑	*e*P	**P**	**15 04 40.4**	**+0.8**
BVAR	**Borovoye Array**	**69.68**	**328**	P	**P**	**15 05 00.8**	**-1.1**
	comp=E,6.3nm,0.6s,mb4.6,baz=137,slow=9.9,SNR=33						
BRVK	**Borovoye**	**69.75**	**328**	P	**P**	**15 05 01.0**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
BRVK	**Borovoye**	**69.75**	**328**	P	**P**	**15 05 01.0**	**-1.3**
	comp=Z,7.2nm,0.6s,mb4.7						
TIXI	**Tiksi**	**71.73**	**1**	*e*P	**P**	**15 05 14.0**	**0.0**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
TIXI	**Tiksi**	**71.73**	**1**	*e*P	**P**	**15 05 13.3**	**-0.7**
	comp=Z,7.8nm,0.7s,mb4.7						
BILL	**Bilibino**	**73.72**	**15**⇓	*e*P	**P**	**15 05 26.5**	**+0.7**
BILL				*e*		15 08 09.7	
BILL				*e*S	S	15 14 53.3	+2.3
BILL				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb4.0						
ABKAR	**Akbulak array**	**74.11**	**322**	*e*P	**P**	**15 05 27.0**	**-1.5**
	comp=Z,6.9nm,0.6s,mb4.6						
SVE	**Sverdlovsk**	**76.40**	**329**⇓	*e*P	**P**	**15 05 40.6**	**-0.8**
SVE				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
ARU	**Arti**	**77.33**	**329***c*	*i*P	**P**	**15 05 45.9**	**-0.8**
ARU				S	S	15 15 33.9	+2.7
ARU				SS	SS	15 20 28.9	-2.0
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
ARU	**Arti**	**77.33**	**329**	*e*P	**P**	**15 05 45.2**	**-1.5**
	comp=Z,16nm,0.8s,mb4.8						
MAW	**Mawson**	**79.55**	**200**	P	**P**	**15 06 00.0**	**+1.3**
	comp=Z,2.7nm,0.8s,mb4.1,baz=69,slow=4.3,SNR=4.1						
SDPT	**Sand Point**	**81.34**	**34**	*e*P	**P**	**15 06 09.9**	**+1.3**
	comp=Z,29nm,0.8s,mb5.2						
GNI	**Garni**	**82.68**	**310**	*e*P	**P**	**15 06 15.1**	**-0.9**
GNI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZEI	**Tsey**	**83.60**	**313**	*e*P	**P**	**15 06 21.0**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.9						
KIV	**Kislovodsk**	**84.60**	**314**	*e*P	**P**	**15 06 25.7**	**0.0**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,24nm,19.0s						
TTA	**Tatalina**	**85.11**	**27**	*e*P	**P**	**15 06 27.6**	**-0.2**
TTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TTA	**Tatalina**	**85.11**	**27**	*e*P	**P**	**15 06 27.6**	**-0.2**
	comp=Z,5.4nm,0.8s,mb4.5						
VRHR	**Novokhopersk**	**85.98**	**321**	*e*P	**P**	**15 06 32.2**	**-0.2**
VRHR				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
VRHR				pmax	pmax		
	comp=N,50nm,1.0s						
VRHR				pmax	pmax		
	comp=E,20nm,1.0s						
BPAW	**Bear Paw Mtn.**	**87.50**	**26**	*e*P	**P**	**15 06 39.7**	**+0.2**
VSR	**Storozhevoye**	**87.53**	**321**	*e*P	**P**	**15 06 39.4**	**-0.6**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
VSR				pmax	pmax		
	comp=N,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=E,8.0nm,1.0s						
COLD	**Coldfoot**	**88.10**	**23**	*e*P	**P**	**15 06 43.7**	**+1.4**
	comp=E,3.5nm,0.4s,mb4.7						
ANN	**Anapa**	**88.41**	**315**	*e*P	**P**	**15 06 41.4**	**-2.9**
ANN				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5						
OBN	**Obninsk**	**89.25**	**325**⇑	*e*P	**P**	**15 06 47.2**	**-0.8**
OBN				*e*		15 10 14.4	
OBN				*e*S	SKSac	15 17 14.8	+3.0
OBN				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.1						
QSPA	**South Pole Qui**	**89.78**	**180**	P	**P**	**15 06 51.9**	**+1.9**
	comp=Z,5.3nm,1.0s,mb4.6,baz=304,slow=2.4,SNR=12						
MMAI	**Mount Meron Ar**	**89.78**	**303**	P	**P**	**15 06 51.6**	**+0.6**
	comp=Z,2.6nm,0.6s,mb4.5,baz=101,slow=7.5,SNR=3.5						
MENT	**Mentasta**	**90.70**	**27**	P	**P**	**15 06 54.0**	**-0.6**
BRTR	**Keskin Array B**	**91.18**	**310**	P	**P**	**15 06 56.9**	**-0.5**
	comp=Z,0.8nm,0.7s,mb4.0,baz=120,slow=7.2,SNR=4.6						
JOF	**Joensuu**	**91.85**	**333**	*e*P	**P**	**15 06 58.5**	**-1.4**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
JOF	**Joensuu**	**91.85**	**333**	*e*p	**P**	**15 06 58.5**	**-1.4**
	comp=Z,9.1nm,0.9s,mb5.0						
ARCES	**ARCESS Array B**	**93.49**	**340**	P	**P**	**15 07 06.3**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.6,baz=80,slow=6.7,SNR=10						
ARCES	**ARCESS Array B**	**93.49**	**340**	P	**P**	**15 07 06.3**	**-1.0**
AKASG	**Malin Array Be**	**93.82**	**321**	P	**P**	**15 07 09.0**	**-0.3**
	comp=Z,1.0nm,0.4s,mb4.5,baz=75,slow=4.4,SNR=6.6						
KAF	**Kangasniemi**	**94.23**	**332**	*e*P	**P**	**15 07 06.3**	**-4.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.7						
KAF	**Kangasniemi**	**94.23**	**332**	*e*p	**P**	**15 07 06.3**	**-4.6**
	comp=Z,2.0nm,0.5s,mb4.7						
INK	**Inuvik**	**94.37**	**21**	*e*P	**P**	**15 07 11.9**	**+0.5**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**94.37**	**21**	*e*P	**P**	**15 07 11.9**	**+0.5**
	comp=Z,6.2nm,1.2s,mb4.8						
FINES	**FINESS Array B**	**94.43**	**332**	P	**P**	**15 07 10.8**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.4,baz=57,slow=7.0,SNR=5.5						
FINES	**FINESS Array B**	**94.43**	**332**	P	**P**	**15 07 10.8**	**-1.1**
BUR08	**Bucovina Ar. S**	**96.75**	**318**	*e*P	**P**	**15 07 23.3**	**+0.5**
BOSA	**Boshof**	**98.52**	**241**	LR	LR	15 48 26.4	
	comp=Z,122nm,18.4s,baz=175,slow=33						
NB2	**NORSAR Subarra**	**101.48**	**333**	P	Pdif	15 07 42.1	-1.6
	comp=Z,2.8nm,1.1s,baz=78,slow=4.6						
NOA	**NORSAR Array B**	**101.48**	**333**	P	Pdif	15 07 42.7	-1.0
	comp=Z,1.3nm,0.9s,baz=70,slow=4.7,SNR=3.5						
NOA	**NORSAR Array B**	**101.48**	**333**	P	Pdif	15 07 42.7	-1.0
DPC	**Dobruska-Polom**	**101.99**	**322**	AMS	AMS	15 07 50.0	
	comp=Z,200nm,20.2s						
PVCC	**Panska Ves**	**103.03**	**322**	AMS	AMS	15 08 30.0	
	comp=Z,200nm,14.3s						
PRU	**Pruhonice**	**103.19**	**322**	AMS	AMS	15 08 20.0	
	comp=Z,100nm,16.7s						
NKC	**Novy Kostel**	**104.41**	**322**	AMS	AMS	15 08 10.0	
	comp=Z,200nm,17.2s						
TORD	**Torodi Ar. Bea**	**122.42**	**285**	PKP	PKPdf	15 12 48.9	+0.8
	comp=Z,2.8nm,0.7s,baz=138,slow=1.8,SNR=12						
TXAR	**Lajitas Array**	**125.27**	**53**	PKP	PKPdf	15 12 54.9	+1.7
	comp=Z,0.5nm,0.6s,baz=182,slow=1.4,SNR=7.7						
TXAR	**Lajitas Array**	**125.27**	**53**	PKP	PKPdf	15 12 54.9	+1.7
WVT	**Waverly**	**132.96**	**37**	*e*PKIKP	PKPdf	15 13 06.1	-1.6
GOGA	**Godfrey**	**137.43**	**36**	*e*PKIKP	PKPdf	15 13 15.9	-0.2
CPUP	**Villa Florida**	**153.57**	**175**	PKPbc	PKPbc	15 13 52.8	+1.5
	comp=Z,2.2nm,0.7s,baz=166,slow=4.2,SNR=5.0						
CPUP				PKPab	PKPab	15 14 05.8	+2.1
	comp=Z,1.4nm,0.6s,baz=148,slow=4.5,SNR=3.4						
CPUP	**Villa Florida**	**153.57**	**175**	PKPbc	PKPbc	15 13 52.8	+1.5
CPUP				PKPab	PKPab	15 14 05.8	+2.1
LPAZ	**La Paz**	**159.12**	**142**	PKPab	PKPab	15 14 31.7	+3.9
	comp=Z,0.8nm,0.5s,baz=174,slow=4.6,SNR=2.9						

DJA 28 15:12:44, 1°.59N×99°.19E, h10km, MLv3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.30**	**262**	P	Pg	15 12 51.4	+1.3
TRSI	**Tarutung**	**0.49**	**332**	P	Pg	15 12 53.4	-0.2
MNSI	**Mandailing Nat**	**0.88**	**154**	P	Pg	15 13 01.7	+0.7
GSI	**Gunungsitoli**	**1.64**	**260**	P	Pn	15 13 12.8	-0.1
BKNI	**Bangkinang**	**2.23**	**124**	P	Pn	15 13 20.5	-0.6
PPI	**Padang Panjang**	**2.36**	**149**	P	Pn	15 13 19.9	-3.0
PDSI	**Padang**	**2.79**	**153**	P	Pn	15 13 32.0	+3.2
IPM	**Ipoh**	**3.41**	**33**	P	Pn	15 13 38.7	+1.5
KULM	**Kulim**	**3.95**	**22**	P	Pn	15 13 45.1	+0.3

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*IDC **28** 15:30:35.4±11.0, 13°.96N×91°.89W, h0km, mb3.6/2, mb1 4.1/3, mb1mx3.7/20, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=231.0km s-min=118.4km az=11.0*
*ISCJB **28** 15:30:53.2±0.9, 14°.97N±0°.06×92°.86W±0°.05, h74km±8km, mb3.5/2, Error ellipse: s-maj=10.7km s-min=7.4km az=178.7*
*MEX **28** 15:30:55.6±0.9, 14°.97N×92°.85W, h68km±10km, MD4.2*
*NEIC **28** 15:30:55.6, 14°.97N×92°.85W, h68km, MD4.2(MEX), After MEX.*

ISC 28 15:30:54.4±0.8, 15°.00N±0°.06×92°.83W±0°.04, h67km±8km, n18, σ0°92/31, mb3.5/2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.55**	**99**	*i*P	**Pn**	**15 31 07.0**	**-0.4**
THIG				*i*S	**Sn**	**15 31 17.3**	**+0.3**
PCIG		**0.80**	**332**	*i*P	**Pn**	**15 31 10.6**	**+0.4**
PCIG				*i*S	**Sn**	**15 31 21.8**	**-0.2**
CCIG	**Comitan**	**1.44**	**28**	*i*P	**Pn**	**15 31 20.0**	**+1.4**
CCIG				*i*S	**Sn**	**15 31 36.2**	**-0.4**
CCIG	**Comitan**	**1.44**	**28**	*i*P	**Pn**	**15 31 20.0**	**+1.4**
CCIG				*i*S	**Sn**	**15 31 36.2**	**-0.4**
SCX	**San Cristobal**	**1.74**	**6**	*i*P	**Pn**	**15 31 23.1**	**+0.6**
SCX				*i*S	**Sn**	**15 31 43.8**	**0.0**
SCX	**San Cristobal**	**1.74**	**6**	*i*P	**Pn**	**15 31 23.1**	**+0.6**
SCX				*i*S	**Sn**	**15 31 43.8**	**0.0**
TGIG		**1.79**	**351**	*i*P	**Pn**	**15 31 23.2**	**-0.1**
TGIG				*i*S	**Sn**	**15 31 44.9**	**-0.2**
HUIG	**Huatulco**	**3.25**	**284**	*i*P	**Pn**	**15 31 42.9**	**-0.2**
HUIG				*i*S	**Sn**	**15 32 20.3**	**-0.3**
HUIG	**Huatulco**	**3.25**	**284**	*i*P	**Pn**	**15 31 42.9**	**-0.2**
HUIG				*i*S	**Sn**	**15 32 20.3**	**-0.3**
VHO	**Vista Hermosa**	**4.28**	**299**	*i*P	**Pn**	**15 31 57.5**	**+0.4**
VHO				*i*S	**Sn**	**15 32 46.4**	**+0.5**
VHO	**Vista Hermosa**	**4.28**	**299**	*i*P	**Pn**	**15 31 57.5**	**+0.4**
VHO				*i*S	**Sn**	**15 32 46.4**	**+0.5**
PNIG	**Pinotepa**	**5.29**	**286**	*i*P	**Pn**	**15 32 11.2**	**+0.4**
PNIG				*i*S	**Sn**	**15 33 09.2**	**-1.3**
PNIG	**Pinotepa**	**5.29**	**286**	*i*P	**Pn**	**15 32 11.2**	**+0.4**
PNIG				*i*S	**Sn**	**15 33 09.2**	**-1.3**
TEIG	**Tepich**	**6.77**	**39**	*e*Pn	**Pn**	**15 32 29.4**	**-1.8**
	38nm,0.4s						
TXAR	**Lajitas Array**	**17.43**	**327**	P	**Pn**	**15 34 56.5**	**+3.5**
	0.1nm,0.3s,baz=152,slow=14,SNR=15						
NVAR	**Mina Array Bea**	**32.40**	**321**	P	**P**	**15 37 19.5**	**+1.7**
	0.9nm,0.7s,mb3.6,baz=121,slow=8.5,SNR=8.0						
NVAR	**Mina Array Bea**	**32.40**	**321**	P	**P**	**15 37 19.5**	**+1.7**
YKA	**Yellowknife Ar**	**49.88**	**347**	P	**P**	**15 39 38.9**	**-1.8**
	0.3nm,0.6s,mb3.4,baz=160,slow=7.6,SNR=2.7						

ISC 28 15:38:40.6±2.3, 39°.3N±0°.2×75°.36E±0°.08, h10km, n9, σ0°91/13, 2C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.54**	**62**⇓	*i*Pg	**Pg**	**15 38 50.5**	**-0.5**
KSH				Sg	**Sg**	**15 38 58.5**	**+0.4**
KSH				smax			
	comp=N,2μm,0.3s						
KSH				smax			
	comp=E,770nm,0.2s						
KZA	**Kyzart**	**2.81**	**358**	P	**Pn**	**15 39 24.7**	**-0.8**
	SNR=10						
UCH	**Uchtor**	**3.03**	**348**	P	**Pn**	**15 39 28.4**	**-0.1**
	SNR=5.5						
AML	**Almayashu**	**3.13**	**337**	P	**Pn**	**15 39 31.2**	**+1.3**
	SNR=15						
AAK	**Ala-Archa**	**3.43**	**349**	P	**Pn**	**15 39 37.2**	**+3.2**
	SNR=8.9						
EKS2	**Erkin-Say**	**3.59**	**341**	P	**Pn**	**15 39 41.0**	**+4.7**
	SNR=8.7						
TKM2	**Tokmak 2**	**3.66**	**3**	⇓Pn	**Pn**	**15 39 37.2**	**+0.1**
	comp=E,5.1nm,0.5s						
TKM2				⇓Sn	**Sn**	**15 40 19.9**	**-0.4**
	comp=E,22nm,0.6s						
TKM2	**Tokmak 2**	**3.66**	**3**	P	**Pn**	**15 39 37.6**	**+0.4**
	SNR=12						
KK31	**Karatay Array**	**5.29**	**318**	⇑Pn	**Pn**	**15 39 58.8**	**-0.8**

FIA1 SG **Sg** **15 50 21.3 +0.2**
VJF Virojoki 2.37 71 PN **Pn** **15 49 51.2 +0.5**
VJF SG **Sg** **15 50 24.7 -2.0**
VJF MSG 15 50 24.7
comp=Z,1.9nm,0.1s
KEF Keuruu 2.49 21 PN **Pn** **15 49 56.0 +3.7**
KEF SG **Sg** **15 50 28.2 -2.3**
KEF MSG 15 50 28.2
comp=Z,3.1nm,0.4s
KAF Kangasniemi 2.77 34 PN **Pn** **15 50 00.0 +3.8**
KAF SG **Sg** **15 50 36.6 -3.1**
KAF MSG 15 50 36.6
comp=Z,2.3nm,0.2s
SUF Sumiainen 3.25 26 PN **Pn** **15 50 04.9 +2.2**
NOA NORSAR Array B 5.96 287 Pn **Pn** **15 50 39.2 -0.7**
comp=Z,0.3nm,0.3s,baz=99,slow=12,SNR=13
ARCES ARCESS Array B 9.77 5 Pn **Pn** **15 51 31.8 -0.4**
comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=10

GUC 28 16:09:44.9±0.7, 34.°06S×70.°14W, h19km±3km, MD3.6, ML2.6, 4C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.39**	**261**	*i*P	Pg	16 09 52.7	-0.4
CACH				*i* S	Sg	16 09 58.5	-0.1
CHCH	**Chadas Angostu**	**0.45**	**286**	⇓*i*P	Pg	16 09 53.9	-0.2
CHCH				*i* S	Sg	16 09 60.0	-0.3
SJCH	**San Jose de Ma**	**0.46**	**337**	⇑*i*P	Pg	16 09 53.7	-0.5
SJCH				*i* S	Sg	16 10 00.6	+0.1
SJCH				AML	AML	16 10 00.9	
	comp=E,1μm,0.1s						
ANTU	**Antumapu**	**0.64**	**320**	⇑*i*P	Pb	16 09 57.0	-0.4
ANTU				*i* S	Sb	16 10 06.3	+0.4
ANTU				AML	AML	16 10 07.2	
	comp=N,516nm,0.2s						
CLCH	**Cerro Calan**	**0.74**	**333**	*e*P	Pb	16 09 59.5	+0.4
CLCH				*i* S	Sb	16 10 10.5	+1.7
CLCH				AML	AML	16 10 11.9	
	comp=N,752nm,0.9s						
FCH	**Farellones**	**0.74**	**350**	*i* P	Pb	16 09 48.3	-11
FCH				*i* S	Sb	16 09 58.7	-10
FCH				AML	AML	16 10 00.3	
	comp=N,511nm,0.2s						
PEL	**Peldehue**	**1.02**	**333**	⇓*i*P	Pb	16 10 03.6	-0.4
PEL				*i* S	Sb	16 10 18.0	+1.1
PEL				AML	AML	16 10 19.3	
	comp=E,383nm,0.2s						
LNV	**Longovilo**	**1.06**	**275**	⇑*i*P	Pb	16 10 04.5	-0.2
LNV				*i* S	Sb	16 10 19.0	+0.8

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*BJI **28** 16:14:12.0, 12.°71N×145.°48E, h54km, mB5.1/32, mb4.9/39, Ms4.7/37, Ms7 4.6/37*
*DJA **28** 16:14:17, 13.°64N×145.°35E, h57km, mb5.3/14*
*IDC **28** 16:14:19.7±0.8, 13.°34N×144.°93E, h52km±4km, mb4.4/19, mb1 4.5/19, mb1mx4.4/24, mbtmp4.4/19, MS4.5/27, Ms1 4.5/27, ms1mx4.4/33, Error ellipse: s-maj=17.9km s-min=13.2km az=81.0*
*MOS **28** 16:14:19.2±1.0, 13.°41N×144.°76E, h56km, mb5.4/39, MS4.5/14, Error ellipse: s-maj=9.5km s-min=6.5km az=90.2*
*ISCJB **28** 16:14:19.3±0.5, 13.°31N±0.°03×144.°80E±0.°02, h54km±4km, mb5.2/184, MS4.5/60, Error ellipse: s-maj=4.9km s-min=3.6km az=3.7*
*NEIC **28** 16:14:20.4±0.6, 13.°39N×144.°82E, h54km±5km, mb5.4/126, MS4.6/10, MW5.4, Error ellipse: s-maj=4.6km s-min=4.0km az=145.0*
NEIC Felt [IV] at Barrigada and Santa Rita; [III] at Hagatna and Yigo. Also felt at Mangilao, Merizo and Tamuning.
*GCMT **28** 16:14:20.4±0.1, 13.°18N×145.°01E, h55km, MW5.2/93, Moment Tensor Solution. s84,c146; s93,c168; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.86±.02; $M_{r\theta}$0.53±.01; $M_{\phi\phi}$0.33±.02; $M_{r\phi}$-0.12±.01; $M_{\theta\phi}$0.19±.01; M_{θ}r0.59±.01; Best double couple: $M_0$0.90900×10^{17} NP1:ϕ_s67.00000°, δ37.00000°, λ-56.00000°. NP2:ϕ_s207.00000°, δ60.00000°, λ-113.00000°. Principal axes: T 0.6910, Plg13.0000°, Azm313.0000°; N 0.4350, Plg20.0000°, Azm219.0000°; P -1.1260, Plg66.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 16:14:21.0±0.5, 13.°36N±0.°03×144.°85E±0.°02, h56km±4km, h53km±2.3km: pP-P, n734, σ0.°74/708, mb5.2/184, MS4.5/60, 190C-196D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.23**	**5**	P	**Pn**	**16 14 30.0**	**-0.3**
	6μm,0.3s,baz=172,slow=5.5,SNR=3742						
GUMO				S	**Sn**	**16 14 37.5**	**+0.8**
	12μm,0.3s,baz=38,slow=19,SNR=76						
GUMO	**Guam**	**0.23**	**5**	*e*Pn	**Pn**	**16 14 29.8**	**-0.4**
GUMO				*e*Sn	**Sn**	**16 14 36.2**	**-0.6**
CBIJ	**Chichi jima**	**13.89**	**350**	P	**Pn**	**16 17 41.4**	**+6.2**
CBIJ	**Chichi jima**	**13.89**	**350**	P	**Pn**	**16 17 39.2**	**+4.0**
	3.2nm,0.3s,baz=211,slow=5.7,SNR=4.5						
MSLP	**Maasin**	**19.83**	**263**	*e*P	**Pn**	**16 18 49.6**	**+0.3**
DAV	**Davao City (W)**	**19.96**	**254**	P	**Pn**	**16 18 53.3**	**+2.4**
	81nm,0.4s,baz=78,slow=0.3,SNR=4.1						
DAV				LR	LR	16 25 24.6	
	comp=Z,1μm,19.0s,baz=269,slow=33						
DAV	**Davao City (W)**	**19.96**	**254**	P	**Pn**	**16 18 53.3**	**+2.4**
DAV				LR	LR	16 25 24.6	
PVCP	**Virac**	**20.13**	**273**	*e*P	**P**	**16 18 53.9**	**+3.2**
BUKP	**Musuan**	**20.19**	**256**	*e*P	**P**	**16 18 52.8**	**+1.5**
JHJ	**Hachijo jima 2**	**20.21**	**348**	LR	LR	16 26 10.0	
	comp=Z,1μm,18.7s,MS4.4,baz=178,slow=35						
JOW	**Kunigami**	**20.51**	**313**	P	**P**	**16 18 57.6**	**+2.9**
	79nm,0.6s,baz=144,slow=11,SNR=20						
JOW				LR	LR	16 25 25.6	
	comp=Z,2μm,20.6s,MS4.4,baz=129,slow=32						
JAM	**Amami Oshima**	**20.63**	**319**	P	**P**	**16 18 58.8**	**+2.8**
WAKE	**Wake Island**	**21.73**	**71**	*e*P	**P**	**16 19 07.5**	**-0.4**
	377nm,1.1s,mb5.7						
JOD2	**Odawara 2**	**22.42**	**348**	P	**P**	**16 19 14.9**	**-0.2**
JMN	**Monobe**	**22.60**	**336**	P	**P**	**16 19 21.1**	**+4.1**
JRY	**Ryogami san**	**23.19**	**348**	P	**P**	**16 19 22.2**	**-0.9**
TGY	**Tagaytay City**	**23.24**	**275**	P	**P**	**16 19 26.2**	**+2.4**
	117nm,0.3s,mb5.8,baz=113,slow=12,SNR=5.5						
TGY				LR	LR	16 26 32.4	
	comp=Z,7.5nm,19.9s,baz=143,slow=31						
JWT	**Wachi**	**23.44**	**340**	P	**P**	**16 19 27.8**	**+2.4**
JNU	**Nakatsue**	**23.44**	**329**	P	**P**	**16 19 26.3**	**+0.8**
JAD	**Aida**	**23.56**	**338**	P	**P**	**16 19 29.7**	**+3.1**
MJAR	**Matsushiro Arr**	**23.84**	**347**	P	**P**	**16 19 27.4**	**-1.8**
	8.7nm,0.9s,mb4.2,baz=165,slow=9.8,SNR=13						
MJAR				LR	LR	16 28 22.6	
	comp=Z,555nm,18.6s,MS4.1,baz=170,slow=35						
MAJO	**Matsushiro**	**23.84**	**347**	*e*P	**P**	**16 19 28.7**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**23.84**	**347**	*e*P	**P**	**16 19 28.7**	**-0.5**
	comp=Z,31nm,0.8s,mb4.8						
MAT	**Matsushiro**	**23.84**	**347**	P	**P**	**16 19 27.6**	**-1.5**
MAT				S	**S**	**16 23 39.0**	**-2.2**
MAT	**Matsushiro**	**23.84**	**347**	P	**P**	**16 19 28.8**	**-0.3**
JHS	**Saijyo**	**24.02**	**336**	P	**P**	**16 19 33.0**	**+2.3**
YULB	**Yu-li**	**24.44**	**297**	*e*P	**P**	**16 19 34.8**	**0.0**
	comp=Z,35nm,0.6s,mb5.0						
TWG	**Pinlang**	**24.45**	**296**	*e*P	**P**	**16 19 35.5**	**+0.6**
	comp=Z,22nm,0.6s,mb4.8						
SSLB	**Suanglung**	**24.87**	**298**	*e*P	**P**	**16 19 38.3**	**-0.4**
	comp=Z,52nm,0.6s,mb5.2						
TPUB	**Ta-pu**	**24.99**	**297**	P	**P**	**16 19 40.2**	**+0.4**
	comp=Z,29nm,0.9s,mb4.8						
JSD	**Sado**	**25.27**	**348**	P	**P**	**16 19 42.7**	**+0.6**
JOM	**Ohasama**	**26.20**	**354**	P	pP	16 20 05.2	+0.8
COEN	**Coen**	**27.19**	**184**	*e*P	**P**	**16 19 59.4**	**-0.2**
	comp=Z,67nm,0.7s,mb5.3						
MYLDM	**Lahad Datu**	**27.22**	**255**	P	**P**	**16 20 01.5**	**+1.5**
SSE	**Sheshan**	**28.03**	**313**	P	**P**	**16 19 59.5**	**-7.5**
SSE				sP	pP	16 20 06.5	-14
SSE				S	**S**	**16 24 47.8**	**+0.1**
SSE				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.9						
SSE				pmax	pmax		
	comp=Z,38nm,2.9s,mb4.5						
SSE				LR	LR		
	comp=N,590nm,29.2s,MS4.2						
SSE				LR	LR		
	comp=E,740nm,29.2s,MS4.2						
SSE				LR	LR		
	comp=Z,1μm,23.8s						
TSM	**Tawau**	**28.11**	**254**	P	**P**	**16 20 09.6**	**+1.7**
JOT	**Ohata**	**28.12**	**354**	P	**P**	**16 20 12.9**	**+5.2**
KSRS	**Korea Array**	**28.36**	**331**	P	**P**	**16 20 09.3**	**-0.5**
	comp=Z,16nm,0.8s,mb4.7,baz=152,slow=9.3,SNR=38						
KSRS				PcP	PcP	16 23 20.6	-0.9
	comp=Z,3.2nm,1.0s,baz=196,slow=2.3,SNR=4.9						
KSRS				ScP	ScP	16 26 59.5	+1.5
	comp=Z,4.7nm,1.0s,baz=154,slow=2.5,SNR=11						
KAKA	**Kakadu**	**28.67**	**206**	⇓*i*P	**P**	**16 20 11.4**	**-1.5**
	comp=Z,21nm,0.6s,mb5.0						
KAKA	**Kakadu**	**28.67**	**206**	*e*P	**P**	**16 20 11.4**	**-1.4**
	comp=Z,40nm,0.6s,mb5.3						
NJ2	**Nanjing**	**30.22**	**312**	*e*P	**P**	**16 20 27.3**	**+0.8**
NJ2				pP	pP	16 20 41.5	+1.0
NJ2				sP	sP	16 20 49.0	+2.0
NJ2				PP	PP	16 21 27.3	-8.2
NJ2				S	**S**	**16 25 22.0**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,40nm,4.8s						
NJ2				LR	LR		
	comp=N,940nm,26.9s,MS4.4						
NJ2				LR	LR		
	comp=E,880nm,31.6s,MS4.4						
NJ2				LR	LR		
	comp=Z,1μm,25.6s						
ASAJ	**Asahikawa**	**30.71**	**357**	LR	LR	16 33 57.8	
	comp=Z,449nm,19.1s,MS4.1,baz=180,slow=38						
VLA	**Vladivostok**	**31.70**	**342**	P	**P**	**16 20 42.0**	**+2.7**
VLA				MLR	MLR		
	comp=Z,800nm,19.7s,MS4.4						
DL2	**Dalian**	**32.70**	**325**	P	**P**	**16 20 51.3**	**+3.1**
DL2				pP	pP	16 21 03.0	+0.7
DL2				S	**S**	**16 26 06.8**	**+6.0**
DL2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
DL2				LR	LR		
	comp=N,260nm,18.8s,MS4.2						
DL2				LR	LR		
	comp=E,360nm,18.1s,MS4.2						
DL2				LR	LR		
	comp=Z,450nm,16.0s,MS4.3						
BTM	**Bintulu**	**32.97**	**255**	P	**P**	**16 20 51.2**	**+0.3**
CTA	**Charters Tower**	**33.26**	**178**	⇓*i*P	**P**	**16 20 52.5**	**-0.7**
	comp=Z,7.5nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**33.54**	**357**	*e*P	**P**	**16 21 05.0**	**+10**
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.2						
MDJ	**Mudanjiang**	**33.77**	**340**	P	**P**	**16 20 56.0**	**-1.4**
MDJ				pP	pP	16 21 08.8	-2.7
MDJ				sP	sP	16 21 15.5	-2.6
MDJ				PP	PP	16 22 15.5	+0.8
MDJ				S	**S**	**16 26 18.5**	**+1.4**
MDJ				ScP	ScP	16 27 09.0	-6.9
MDJ				PcS	PcS	16 27 16.0	-5.5
MDJ				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
MDJ				pmax	pmax		
	comp=Z,250nm,4.2s						
MDJ				LR	LR		
	comp=N,450nm,26.1s,MS4.1						
MDJ				LR	LR		
	comp=E,240nm,26.1s,MS4.1						
MDJ				LR	LR		
	comp=Z,740nm,22.0s,MS4.4						
SNY	**Shenyang**	**33.86**	**331**	⇑P	**P**	**16 21 00.3**	**+2.0**
SNY				pmax	pmax		
	comp=Z,13nm,0.4s,mb5.2						
SNY				LR	LR		
	comp=N,610nm,16.8s,MS4.5						
SNY				LR	LR		
	comp=E,430nm,19.8s,MS4.5						
SNY				LR	LR		
	comp=Z,750nm,19.8s,MS4.4						
SBUM	**Sibu**	**34.03**	**254**	P	**P**	**16 21 00.4**	**+0.3**
QIZ	**Qiongzhong**	**34.05**	**284**	P	**P**	**16 20 58.8**	**-1.4**
QIZ				pP	pP	16 21 12.5	-1.8
QIZ				S	**S**	**16 26 20.8**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,100nm,5.0s						
QIZ				LR	LR		
	comp=N,440nm,19.9s,MS4.3						
QIZ				LR	LR		
	comp=E,460nm,19.6s,MS4.3						
QIZ				LR	LR		
	comp=Z,1μm,20.5s,MS4.7						
WRAB	**Tennant Creek**	**34.66**	**198**	P	**P**	**16 21 04.0**	**-1.3**
	comp=Z,224nm,0.7s,mb6.2,SNR=11						
WRAB	**Tennant Creek**	**34.66**	**198**	*e*P	**P**	**16 21 04.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**34.66**	**198**	*e*P	**P**	**16 21 04.5**	**-0.8**
	comp=Z,27nm,0.8s,mb5.2						
HABR	**Khabarovsk**	**35.94**	**349**	P	pP	16 21 27.4	-2.9
HABR				*e*		16 22 33.8	
HABR				*e*S	**S**	**16 26 49.8**	**-0.7**
HABR				*e*SS	SS	16 29 15.7	-13
HABR				*e*		16 31 28.8	
HABR				MLR	MLR		
	comp=Z,660nm,18.0s,MS4.5						
KSM	**Kuching**	**36.16**	**254**	P	**P**	**16 21 18.3**	**-0.2**
KSM	**Kuching**	**36.16**	**254**	*e*P	**P**	**16 21 17.6**	**-0.9**
	comp=Z,18nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**36.55**	**212**	*e*P	**P**	**16 21 21.2**	**-0.4**
	comp=Z,45nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**36.55**	**212**	*e*P	**P**	**16 21 21.1**	**-0.6**
	comp=Z,37nm,1.0s,mb5.2						
BJI	**Beijing**	**36.61**	**322**	P	**P**	**16 21 24.5**	**+2.5**
BJI				S	**S**	**16 26 59.8**	**-1.2**
BJI				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.2						
BJI				pmax	pmax		
	comp=Z,210nm,6.6s						
BJI				LR	LR		
	comp=N,600nm,26.2s,MS4.3						
BJI				LR	LR		
	comp=E,290nm,23.6s,MS4.3						
BJI				LR	LR		
	comp=Z,1μm,32.0s						
ENH	**Enshi**	**36.70**	**303**	*e*P	**P**	**16 21 21.2**	**-1.6**
	comp=Z,26nm,0.8s,mb5.1						
KLR	**Kul'dur**	**37.37**	**346**	*e*P	**P**	**16 21 24.8**	**-3.4**
TIY	**Taiyuan**	**37.68**	**316**	*e*P	pP	16 21 46.0	+0.7
TIY				pP	sP	16 21 55.8	+4.0
TIY				PP	PP	16 23 02.5	+4.6
TIY				S	**S**	**16 27 17.8**	**+0.6**
TIY				sS	sS	16 27 41.3	0.0
TIY				LR	LR		
	comp=N,290nm,12.2s,MS4.6						
TIY				LR	LR		
	comp=E,620nm,17.2s,MS4.6						
TIY				LR	LR		
	comp=Z,560nm,17.8s,MS4.4						
GYA	**Guiyang**	**38.04**	**296**	⇑*i*P	**P**	**16 21 33.8**	**-0.5**
GYA				pP	pP	16 21 49.0	+0.5
GYA				sP	sP	16 21 56.3	+1.2
GYA				PP	PP	16 23 06.0	+3.9
GYA				S	**S**	**16 27 22.5**	**-0.6**
GYA				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
GYA				pmax	pmax		
	comp=Z,320nm,4.8s						
GYA				LR	LR		
	comp=N,3μm,17.0s,MS5.2						
GYA				LR	LR		
	comp=E,2μm,16.7s,MS5.2						
GYA				LR	LR		
	comp=Z,4μm,17.0s,MS5.2						
ASAR	**Alice Springs**	**38.32**	**196**	P	**P**	**16 21 35.6**	**-0.9**
	comp=Z,13nm,0.6s,mb4.8,baz=22,slow=11,SNR=193						
XAN	**Xi'an**	**38.52**	**309**	P	**P**	**16 21 40.0**	**+1.8**
XAN				pP	pP	16 21 55.0	+2.5
XAN				sP	sP	16 22 02.3	+3.3
XAN				PP	PP	16 23 11.5	+4.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
XAN				pmax	pmax		
	comp=Z,43nm,10.1s						
XAN				LR	LR		
	comp=N,410nm,25.1s,MS4.1						
XAN				LR	LR		
	comp=E,140nm,29.9s,MS4.1						
XAN				LR	LR		
	comp=Z,260nm,19.5s						
HHC	**Hu-ho-hao-te**	**39.93**	**320**	*e*P	**P**	**16 21 50.8**	**+0.9**
HHC				pP	pP	16 22 06.0	+1.8
HHC				sP	sP	16 22 13.3	+2.6
HHC				PP	PP	16 23 28.0	+5.5
HHC				PcP	PcP	16 23 55.0	+0.5
HHC				ScP	ScP	16 27 37.8	-1.1
HHC				PcS	PcS	16 27 43.8	-0.8
HHC				S	**S**	**16 27 52.0**	**+0.9**
HHC				sS	sS	16 28 17.8	+2.5
HHC				ScS	ScS	16 31 50.3	-1.7
HHC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
HHC				pmax	pmax		
	comp=Z,220nm,5.0s						
HHC				LR	LR		
	comp=N,770nm,16.0s,MS4.8						
HHC				LR	LR		
	comp=E,850nm,16.9s,MS4.8						
HHC				LR	LR		
	comp=Z,990nm,15.7s,MS4.8						
BTO	**Baotou**	**40.79**	**318**	*e*P	**P**	**16 21 57.8**	**+0.9**
PETK	**Petropavlovsk-**	**40.95**	**12**	P	**P**	**16 21 58.5**	**+0.4**
	comp=Z,3.2nm,0.9s,mb4.0,baz=151,slow=5.3,SNR=4.3						
PETK				PcP	PcP	16 23 56.4	-1.1
	comp=Z,2.6nm,0.7s,baz=153,slow=3.4,SNR=3.7						
NOUC	**Port Laguerre**	**41.04**	**149**	*e*P	**P**	**16 21 58.4**	**-0.8**
PET	**Petropavlovsk**	**41.07**	**13**	*e*P	**P**	**16 21 59.4**	**+0.3**
PET				*e*S	**S**	**16 28 10.2**	**+2.5**
PET				*e*SS	SS	16 31 08.5	-3.3
PET				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
PET				pmax	pmax		
	comp=Z,100nm,16.3s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.2						
PET				MLR	MLR		
	comp=Z,400nm,18.0s						
DZM	**Mont Dzumac**	**41.09**	**149**	*e*P	**P**	**16 21 59.6**	**0.0**
	comp=Z,158nm,1.1s,mb5.5						
DZM				*e*S	**S**	**16 28 12.7**	**+4.1**
	comp=Z,404nm,30.2s						
DZM				*e*SS	SS	16 31 15.8	+2.7
	comp=Z,589nm,26.4s						
DZM				*e*LR	LR	16 33 18.6	
	comp=Z,2μm,26.1s						
DZM	**Mont Dzumac**	**41.09**	**149**	*e*P	**P**	**16 21 59.3**	**-0.3**
DZM	**Mont Dzumac**	**41.09**	**149**	*e*P	**P**	**16 21 59.5**	**-0.1**
	comp=Z,86nm,1.1s,mb5.3						
KMI	**Kunming**	**41.28**	**293**	P	**P**	**16 22 02.0**	**+0.8**
KMI				pP	pP	16 22 13.3	-2.3
KMI				sP	sP	16 22 20.3	-1.8
KMI				PP	PP	16 23 39.0	+1.6
KMI				S	**S**	**16 28 11.3**	**-0.3**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
KMI				pmax	pmax		
	comp=Z,110nm,4.2s						
KMI				LR	LR		
	comp=N,240nm,22.2s,MS4.3						
KMI				LR	LR		
	comp=E,470nm,23.7s,MS4.3						
KMI				LR	LR		
	comp=Z,780nm,25.6s,MS4.5						
HIA	**Hailar**	**41.34**	**335**	*e*P	**P**	**16 22 00.3**	**-1.0**
HIA				pmax	pmax		
	comp=Z,15nm,0.6s						
HIA				MLR	MLR		
	comp=Z,1μm,21.0s						
HIA	**Hailar**	**41.34**	**335**	*e*P	**P**	**16 22 00.3**	**-1.1**
	comp=Z,15nm,0.6s,mb4.8						
HIA				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
CD2	**Chengdu**	**41.60**	**302**	P	**P**	**16 22 04.3**	**+0.5**
CD2				pP	pP	16 22 16.5	-1.7
CD2				sP	sP	16 22 22.0	-2.6
CD2				PP	PP	16 23 44.3	+3.5
CD2				S	**S**	**16 28 16.5**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,330nm,7.7s						
CD2				LR	LR		
	comp=N,650nm,16.6s						
CD2				LR	LR		
	comp=Z,700nm,20.8s,MS4.5						
MYKOM	**Kota Tinggi**	**42.16**	**258**	P	**P**	**16 22 08.1**	**-0.4**
MBWA	**Marble Bar**	**42.25**	**216**	*e*P	**P**	**16 22 08.5**	**-0.6**
	comp=Z,25nm,0.8s,mb4.9						
MBWA				LR	LR		
	comp=Z,667nm,19.0s,MS4.5						
KGM	**Kluang**	**42.59**	**258**	P	**P**	**16 22 11.4**	**-0.7**
LZH	**Lanzhou**	**43.15**	**309**	*e*P	**P**	**16 22 15.8**	**-0.5**
LZH				PP	PP	16 23 58.0	+0.6
LZH				S	**S**	**16 28 40.0**	**+1.1**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,100nm,4.1s						
LZH				LR	LR		
	comp=E,710nm,14.2s						
LZH				LR	LR		
	comp=Z,730nm,16.7s,MS4.7						
FRIM	**Kepong**	**43.86**	**261**	P	**P**	**16 22 21.6**	**-0.8**
ARMA	**Armidale**	**44.01**	**172**	⇓*i*P	**P**	**16 22 22.5**	**-0.6**
ARMA	**Armidale**	**44.01**	**172**	*e*P	**P**	**16 22 22.7**	**-0.5**
	comp=Z,8.9nm,0.6s,mb4.7						
IPM	**Ipoh**	**44.12**	**263**	P	**P**	**16 22 23.4**	**-1.0**
KULM	**Kulim**	**44.28**	**264**	P	**P**	**16 22 24.2**	**-1.5**
CM31	**Chiang Mai Arr**	**44.35**	**283**	*e*P	**P**	**16 22 26.7**	**+0.5**
	comp=Z,7.0nm,0.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**44.35**	**283**	P	**P**	**16 22 26.7**	**+0.5**
	comp=Z,8.6nm,0.6s,mb4.6,baz=84,slow=6.3,SNR=35						
CMAR				PcP	PcP	16 24 09.9	+0.4
	comp=Z,1.6nm,0.6s,baz=94,slow=2.1,SNR=5.6						
CMAR				LR	LR	16 41 17.1	
	comp=Z,682nm,20.4s,MS4.6,baz=83,slow=36						
CMAR	**Chiang Mai Arr**	**44.35**	**283**	P	**P**	**16 22 26.7**	**+0.5**
CMAR						16 24 09.9	
STKA	**Stephens Creek**	**45.08**	**184**	⇓*i*P	**P**	**16 22 30.2**	**-1.5**
	comp=Z,7.2nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**45.08**	**184**	P	**P**	**16 22 30.0**	**-1.7**
	comp=Z,8.6nm,0.7s,mb4.7,baz=355,slow=7.4,SNR=36						
STKA				LR	LR	16 42 48.3	
	comp=Z,829nm,18.9s,MS4.7,baz=134,slow=38						
STKA	**Stephens Creek**	**45.08**	**184**	*e*P	**P**	**16 22 30.1**	**-1.6**
	comp=Z,2.8nm,1.0s,mb4.0						
CIT	**Chita**	**46.02**	**334**	*e*P	**P**	**16 22 39.4**	**+0.5**
CIT				*e*	pP	16 22 49.9	-3.6
CIT				*e*		16 23 01.0	
PSI	**Prapat**	**46.58**	**261**	LR	LR	16 41 51.4	
	comp=Z,551nm,19.2s,MS4.5,baz=240,slow=35						
GIRL	**Giralia**	**46.69**	**220**	*e*P	**P**	**16 22 45.4**	**+0.9**
	comp=Z,232nm,1.0s,mb6.1						
FORT	**Forrest**	**46.76**	**200**	*e*P	**P**	**16 22 44.3**	**-0.6**
	comp=Z,17nm,0.8s,mb5.0						
SONM	**Songino Array**	**46.91**	**325**	P	**P**	**16 22 46.5**	**+0.5**
	comp=Z,2.5nm,0.7s,mb4.2,baz=141,slow=8.0,SNR=16						
SONM				ScP	ScP	16 28 06.2	-0.9
	comp=Z,2.2nm,0.8s,baz=141,slow=4.3,SNR=5.7						
SONM				LR	LR	16 42 16.3	
	comp=Z,878nm,19.3s,MS4.7,baz=136,slow=36				

comp=Z,5.0nm,0.6s,mb4.7
CAN Canberra 48.57 175 eP P 16 22 58.7 -0.2
comp=Z,5.0nm,0.6s,mb4.7
CNB Canberra Magne 48.59 175⇓iP P 16 22 58.8 -0.2
SEY Seymchan 49.80 5c iP P 16 23 07.9 0.0
YAK Yakutsk 49.81 351 eP P 16 23 07.8 -0.2
YAK e*PP pP 16 23 32.6 +10
YAK e 16 24 28.2
YAK e 16 25 01.9
YAK ePPP 16 26 04.2
YAK eS S 16 30 08.6 -4.7
YAK e 16 32 48.0
YAK pmax pmax
comp=Z,14nm,0.8s,mb5.0
YAK pmax pmax
comp=Z,11nm,1.0s,mb4.8
YAK smax
comp=E,53nm,2.5s
YAK smax
comp=N,28nm,2.2s
YAK Yakutsk 49.81 351 eP P 16 23 07.0 -1.0
comp=N,17nm,0.6s,mb5.2
YAK LR LR
comp=Z,473nm,21.0s,MS4.5
BOD Bodaibo 50.12 339 eP P 16 23 09.3 -1.2
BOD pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
TLY Talaya 50.54 328 eP P 16 23 14.3 +0.6
TLY ePPP 16 26 02.4
TLY eS S 16 30 26.6 +2.8
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TLY MLR MLR
comp=Z,381nm,20.0s,MS4.4
TOO Toolangi 50.66 179⇓iP P 16 23 15.2 +0.5
SHL Shillong 51.10 292 eP P 16 23 20.0 +1.6
KLBR Kellerberrin 51.70 210 eP P 16 23 21.1 -1.6
comp=Z,17nm,0.6s,mb5.1
MOY Mondy 51.92 327 eP P 16 23 24.5 +0.4
LSA Lhasa 52.09 297 P P 16 23 26.5 +0.8
LSA LR LR
comp=N,200nm,27.9s
LSA LR LR
comp=E,440nm,33.5s
LSA LR LR
comp=Z,580nm,39.0s
LSA Lhasa 52.09 297 eP P 16 23 26.4 +0.7
LSA pmax pmax
comp=Z,13nm,0.8s,mb4.9
LSA Lhasa 52.09 297 eP P 16 23 26.4 +0.7
comp=Z,13nm,0.8s,mb4.9
KIP Kipapa 54.87 73 eP P 16 23 46.7 +0.5
KIP pmax pmax
comp=Z,21nm,0.6s,mb5.3
KIP Kipapa 54.87 73 eP P 16 23 46.7 +0.4
comp=Z,21nm,0.6s,mb5.3
UNV Unalaska Valle 55.53 33 eP P 16 23 48.9 -1.5
comp=Z,36nm,0.6s,mb5.6
BILL Bilibino 56.39 9⇓eP P 16 23 55.5 -0.8
BILL e 16 26 01.8
BILL eS S 16 31 36.1 -6.6
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,300nm,20.0s,MS4.4
BILL Bilibino 56.39 9 eP P 16 23 54.0 -2.3
comp=Z,10nm,0.8s,mb4.9
GUN Gumba 56.57 295 eP P 16 23 57.6 -0.7
comp=Z,32nm,0.8s,mb5.4
PKI Pulchoki 56.98 294 eP P 16 24 00.8 -0.4
comp=Z,9.9nm,0.5s,mb5.1
PKI Pulchoki 56.98 294 eP P 16 24 01.5 +0.3
PKIN Phulchoki 56.99 294 eP P 16 24 01.5 +0.2
KKN Kakani 57.10 295 eP P 16 24 01.2 -0.9
comp=Z,15nm,0.8s,mb5.1
KKN Kakani 57.10 295 eP P 16 24 01.2 -0.9
KKN pmax pmax
comp=Z,15nm,0.8s,mb5.1
DMN Daman 57.25 294 eP P 16 24 02.4 -0.7
comp=Z,15nm,0.5s,mb5.2
WMQ Urumqi 57.28 314 eP P 16 24 03.8 +0.7
WMQ pP pP 16 24 18.8 +0.7
WMQ PcP PcP 16 24 58.0 +1.2
WMQ PP PP 16 26 09.8 -0.9
WMQ S S 16 31 54.8 -0.4
WMQ ScS ScS 16 33 45.5 -2.2
WMQ pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
WMQ pmax pmax
comp=Z,17nm,5.0s
WMQ LR LR
comp=N,410nm,25.0s,MS4.5
WMQ LR LR
comp=E,350nm,27.0s,MS4.5
WMQ LR LR
comp=Z,510nm,26.0s,MS4.5
TIXI Tiksi 59.06 354 eP P 16 24 14.6 -0.4
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
TIXI MLR MLR
comp=Z,175nm,16.0s,MS4.3
TIXI Tiksi 59.06 354 eP P 16 24 13.5 -1.5
comp=Z,5.0nm,0.8s,mb4.6
TIXI LR LR
comp=Z,261nm,19.0s,MS4.4
SDPT Sand Point 59.35 33 eP P 16 24 15.8 -1.5
comp=Z,122nm,0.6s,mb6.1
URZ Urewera 59.58 151 eP P 16 24 18.1 -0.9
CHGN Chignik 60.78 32 eP P 16 24 25.2 -1.8
TNA Tin City 61.07 20 eP P 16 24 27.1 -1.8
comp=Z,7.1nm,0.9s,mb4.8
RPZ Rata Peaks 61.63 159 eP P 16 24 31.5 -1.5
comp=Z,18nm,0.8s,mb5.3
MK31 Makanchi Array 61.64 316 eP P 16 24 32.4 -0.7
MKAR Makanchi Array 61.64 316 P P 16 24 32.5 -0.6
comp=Z,5.2nm,0.5s,mb4.9,baz=88,slow=9.8,SNR=33
MKAR LR LR 16 52 15.9
comp=Z,300nm,19.0s,MS4.5,baz=101,slow=37
MKAR PKP2bc 16 53 51.5
comp=Z,0.9nm,1.0s,baz=300,slow=2.0,SNR=4.9
MKAR Makanchi Array 61.64 316ceP P 16 24 32.7 -0.4
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 61.64 316 P P 16 24 32.5 -0.5
MKAR LR LR 16 52 15.9
MKAR ⇑e 16 53 51.5
ZAA0 Zalesovo Array 61.80 324 eP P 16 24 32.9 -1.1
ZALV Zalesovo Beam 61.80 324 P P 16 24 32.9 -1.1
comp=Z,1.6nm,0.5s,mb4.4,baz=98,slow=6.3,SNR=6.8
ZALV LR LR 16 50 59.9
comp=Z,352nm,20.8s,MS4.5,baz=318,slow=36
ZALV PKPPKP 16 53 43.9
comp=Z,0.5nm,0.5s,baz=282,slow=2.8,SNR=3.5
ZALV Zalesovo Beam 61.80 324 P P 16 24 32.9 -1.1
ZALV LR LR 16 50 59.9
ZALV P'P' 16 53 43.9
PALK Pallekele 63.26 271 LR LR 16 49 57.7
comp=Z,280nm,21.6s,MS4.4,baz=73,slow=34
OHAK Old Harbor 63.75 32 eP P 16 24 46.1 -0.8
comp=Z,21nm,0.8s,mb5.2
HYB Hyderabad 63.78 283 iP P 16 24 48.0 +0.2
SVW2 Sparrevohn 63.89 28 eP P 16 24 47.3 -0.4
KDAK Kodiak Island 64.28 32 P P 16 24 49.0 -1.4
comp=Z,12nm,0.6s,mb5.1
KDAK Kodiak Island 64.28 32 P P 16 24 49.0 -1.4
KDAK ⇑e 16 53 44.0
TTA Tatalina 64.37 26 eP P 16 24 50.0 -0.9
KURK Kurchatov 64.75 320 P P 16 24 52.6 -1.0
comp=Z,96nm,0.5s,mb6.1,SNR=19
KURK Kurchatov 64.75 320 LR LR 16 52 43.2
comp=Z,509nm,21.9s,MS4.7,baz=75,slow=36
KURK PKP2bc 16 53 44.0
comp=Z,0.8nm,0.7s,baz=287,slow=3.4,SNR=4.9
KURK Kurchatov 64.75 320c iP P 16 24 52.8 -0.8
KURK pmax pmax
comp=Z,14nm,1.0s,mb5.0
KURK Kurchatov 64.75 320 eP P 16 24 52.3 -1.3
comp=Z,18nm,0.9s,mb5.1
RSO Redoubt South 64.99 29 eP P 16 24 53.5 -1.5
KSH Kashi 65.37 307 P P 16 24 59.8 +2.0
KSH epP pP 16 25 15.8 +2.7
KSH esP sP 16 25 23.0 +3.6
KSH ePcP PcP 16 25 31.8 +2.2
KSH ePP PP 16 27 26.8 +4.7
KSH eScP 16 29 26.8
KSH ePcS 16 29 33.8
KSH eS S 16 33 37.3 -0.7
KSH esS sS 16 34 07.0 +3.3
KSH eScS ScS 16 34 45.3 -3.4
KSH pmax pmax
comp=Z,98nm,4.5s
KSH LR LR
comp=N,140nm,8.0s
KSH LR LR
comp=E,130nm,8.2s
KSH LR LR
comp=Z,150nm,7.9s
TKM2 Tokmak 2 65.86 311 eP P 16 25 00.4 -0.5
TKM2 pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
TKM2 Tokmak 2 65.86 311 eP P 16 25 00.4 -0.5
comp=Z,1.5nm,0.5s,mb4.3
PPLA Purkeypile 66.00 27 eP P 16 25 00.6 -0.8
comp=Z,27nm,0.9s,mb5.3
CHUM Lake Minchumin 66.27 25 eP P 16 25 02.9 -0.3
comp=Z,17nm,0.8s,mb5.1
SEW Seward 66.47 30 eP P 16 25 03.3 -1.2
comp=Z,27nm,0.9s,mb5.3
RC01 Rabbit Creek A 66.58 29 eP P 16 25 03.8 -1.4
comp=Z,46nm,0.9s,mb5.5
UCH Uchtor 66.61 310 eP P 16 25 05.6 -0.2
comp=Z,11nm,1.1s,mb4.8
AAK Ala-Archa 66.65 311 eP P 16 25 05.9 -0.1
AAK pmax pmax
comp=Z,3.0nm,2.6s,mb3.9
KTH Kantishna Hill 66.75 26 eP P 16 25 04.2 -2.0
comp=Z,29nm,1.0s,mb5.3
TRF Thorofare Moun 66.99 26 eP P 16 25 05.7 -2.1
comp=Z,22nm,0.9s,mb5.2
PMR Palmer 67.00 28 eP P 16 25 06.1 -1.7
PMR pmax pmax
comp=Z,26nm,1.0s,mb5.2
PMR Palmer 67.00 28 eP P 16 25 06.1 -1.7
comp=Z,26nm,1.0s,mb5.2
AML Almayashu 67.22 310 P P 16 25 10.3 +0.7
comp=Z,1.6nm,0.5s,mb4.3
MCK McKinley 67.65 26 eP P 16 25 10.3 -1.6
MCK pmax pmax
comp=Z,12nm,1.0s,mb4.9
MCK McKinley 67.65 26 eP P 16 25 10.3 -1.7
comp=Z,12nm,1.0s,mb4.9
POO Poona 68.09 285 eP P 16 25 12.0 -3.5
COLD Coldfoot 68.17 22 eP P 16 25 14.1 -1.0
comp=Z,15nm,1.0s,mb5.0
DIV Divide 68.47 29 eP P 16 25 16.5 -0.6
comp=Z,30nm,1.0s,mb5.3
PAX Paxson 68.99 27 eP P 16 25 19.2 -1.1
PAX pmax pmax
comp=Z,15nm,0.8s,mb5.0
PAX Paxson 68.99 27 eP P 16 25 19.2 -1.0
comp=Z,15nm,0.8s,mb5.0
MENT Mentasta 69.76 28 eP P 16 25 24.5 -0.6
BVAR Borovoye Array 70.10 322 P P 16 25 26.5 -0.8
comp=Z,5.0nm,0.5s,mb4.7,baz=103,slow=7.4,SNR=24
BRVK Borovoye 70.16 322⇓iP P 16 25 27.5 -0.2
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BRVK Borovoye 70.16 322 eP P 16 25 27.3 -0.5
comp=Z,7.3nm,0.8s,mb4.7
BRVK LR LR
comp=Z,987nm,21.0s,MS5.0
EGAK Eagle 71.19 26 eP P 16 25 32.7 -1.1
comp=Z,21nm,1.1s,mb5.0
PNL Peninsula 71.38 31 eP P 16 25 34.3 -0.7
comp=Z,29nm,1.2s,mb5.1
PPT Papeete 71.64 114 ePP PP 16 28 18.0 +1.0
comp=Z,76nm,26.2s
PPT eS S 16 34 52.2 -0.8
comp=Z,421nm,25.5s
PPT eLR LR 16 47 19.1
comp=Z,2μm,25.8s,baz=292
PPT Papeete 71.64 114 LR LR 16 49 39.3
comp=Z,511nm,20.8s,MS4.8,baz=280,slow=30
DAWY Dawson 71.85 27 eP P 16 25 36.7 -1.1
PMOR Pomariorio Ree 72.27 111 eT 17 44 14.9
comp=Z,3.6nm,0.2s
SKAG Skagway 73.43 32 eP P 16 25 47.6 +0.4
INK Inuvik 74.59 22 LR LR 16 58 48.5
comp=Z,172nm,21.7s,MS4.3,baz=59,slow=36
INK Inuvik 74.59 22 eP P 16 25 52.4 -1.4
INK pmax pmax
comp=Z,16nm,1.0s
INK Inuvik 74.59 22 eP P 16 25 52.4 -1.4
comp=Z,16nm,1.0s,mb4.9
SVE Sverdlovsk 75.78 326 eP P 16 25 59.2 -1.7
SVE eS S 16 35 37.7 -0.7
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.8
SVE MLR MLR
comp=Z,567nm,19.0s,MS4.9
DLBC Dease Lake 76.19 33 LR LR 17 01 09.9
comp=Z,196nm,18.8s,MS4.4,baz=77,slow=37
DLBC Dease Lake 76.19 33 eP P 16 26 03.1 -0.1
ABKAR Akbulak array 76.70 318 eP P 16 26 05.2 -1.0
comp=Z,3.3nm,0.6s,mb4.4
ARU Arti 76.94 325 P P 16 26 08.6 +1.1
ARU 16 28 59.9
ARU S S 16 35 55.1 +3.8
ARU SS SS 16 40 48.8 +0.3
TAOE Nuku Hiva Isla 77.66 102 eLR LR 16 50 12.5
comp=Z,891nm,25.5s,baz=296
BBB Bella Bella 77.77 39 P P 16 26 11.6 -0.6
comp=Z,23nm,1.0s,mb5.1,baz=289,slow=6.7,SNR=11
BBB Bella Bella 77.77 39 P P 16 26 11.6 -0.6
AKTO Aktyubinsk 77.83 319 LR LR 17 00 52.3
comp=Z,413nm,21.9s,MS4.7,baz=94,slow=36
IKRD Kardeh 79.23 305 eP P 16 26 20.8 +0.2
OBC Olympics--Boni 80.91 43 P P 16 26 30.4 +1.0
NLWA Neilton Lookou 81.16 43 ⇑P P 16 26 31.3 +0.6
baz=81
NLWA Neilton Lookou 81.16 43 eP P 16 26 31.5 +0.8
comp=Z,84nm,1.1s,mb5.6
PGC Sidney 81.22 42 eP P 16 26 28.9 -2.1
comp=Z,3.6nm,1.1s,mb4.2
E03A Lebam 81.52 44 ⇑P P 16 26 33.1 +0.4
baz=81
MCW Mount Constitu 81.62 42 P P 16 26 33.7 +0.6
F03A Seaside 81.63 45 ⇓P P 16 26 33.8 +0.5
baz=82
GNW Green Mountain 81.83 43 eP P 16 26 34.8 +0.5
comp=Z,59nm,1.4s,mb5.3
RNO Roman Nose 81.88 47 P P 16 26 35.3 +0.7
A05A Maple Falls 82.04 42 ⇑P P 16 26 34.9 -0.4
baz=82
COR Corvallis 82.06 46 eP P 16 26 36.5 +1.0
COR pmax pmax
comp=Z,32nm,0.9s,mb5.2
COR Corvallis 82.06 46 eP P 16 26 36.5 +0.9
comp=Z,32nm,0.9s,mb5.2
MBW Mount Baker 82.20 42 P P 16 26 36.0 -0.2
JCW Jim Creek 82.30 42 eP P 16 26 36.7 0.0
F04A Amboy 82.41 45 ⇓P P 16 26 37.2 -0.1
baz=82
D05A Enumclaw 82.46 43 ⇑P P 16 26 38.0 +0.4
baz=82
G04A Mulino 82.52 45 ⇓P P 16 26 38.1 +0.2
baz=82
RPW Rockport 82.52 42 eP P 16 26 37.5 -0.4
comp=Z,6.3nm,1.1s,mb4.6
B06A Marblemount 82.53 42 ⇓P P 16 26 37.3 -0.6
baz=82
MTMW Mount Mitchell 82.54 45 P P 16 26 38.7 +0.7
LON Longmire 82.67 44 eP P 16 26 38.2 -0.5
LON pmax pmax
comp=Z,23nm,1.3s,mb5.0
LON Longmire 82.67 44 eP P 16 26 38.2 -0.4
comp=Z,23nm,1.3s,mb5.0
HUMO Hull Mountain 82.69 48 eP P 16 26 39.2 +0.4
comp=Z,64nm,1.2s,mb5.5
H04A Detroit Lake 82.82 46 ⇓P P 16 26 39.4 -0.1
baz=83
YBH Yreka Blue Hor 83.04 49 LR LR 16 55 42.9
comp=Z,516nm,21.8s,MS4.9,baz=239,slow=30
YBH Yreka Blue Hor 83.04 49 eP P 16 26 40.8 +0.1
YBH pmax pmax
comp=Z,72nm,1.2s
YBH Yreka Blue Hor 83.04 49 eP P 16 26 40.8 +0.1
comp=Z,72nm,1.2s,mb5.6
HOOD Mount Hood Mea 83.06 45 eP P 16 26 40.8 0.0
comp=Z,162nm,1.4s,mb5.9
YKA Yellowknife Ar 83.07 27 P P 16 26 38.6 -1.8
comp=Z,6.1nm,0.6s,mb4.8,baz=285,slow=5.0,SNR=32
YKA LR LR 17 05 22.4
comp=Z,28nm,19.7s,MS3.6,baz=340,slow=37
A07A Ashnola River, 83.13 41 ⇓P P 16 26 40.7 -0.3
baz=83
HOPS Hopland 83.32 52 eP P 16 26 42.2 0.0
comp=Z,61nm,1.4s,mb5.4
CASY Casey 83.38 193⇓iP P 16 26 41.5 -0.2
WDC Whiskeytown Da 83.40 50 eP P 16 26 42.4 -0.2
WDC pmax pmax
comp=Z,72nm,1.4s,mb5.5
WDC Whiskeytown Da 83.40 50 eP P 16 26 42.4 -0.2
comp=Z,72nm,1.4s,mb5.5
ALE Alert 83.46 3 P P 16 26 41.8 -0.4
comp=Z,81nm,1.1s,mb5.7,SNR=7.9
ETW Entiat 83.47 43 eP P 16 26 42.5 -0.3
comp=Z,50nm,1.2s,mb5.4
MCCM Marconi Confer 83.64 52 eP P 16 26 43.6 -0.2
comp=Z,45nm,1.4s,mb5.4
G06A Carlson Farm, 83.78 45 ⇓P P 16 26 44.2 -0.3
baz=84
B08A Colville Reser 83.96 42 ⇑P P 16 26 44.9 -0.4
baz=84
E07A Sunnyside 84.02 44 ⇓P P 16 26 45.3 -0.3
baz=84
F07A Phinny Hill Vi 84.12 44 ⇑P P 16 26 46.1 0.0
baz=84
K05A Summer Lake 84.15 48 ⇑P P 16 26 46.7 +0.4
baz=84
HAWA Hanford 84.28 44 eP P 16 26 46.6 -0.3
comp=Z,16nm,1.1s,mb5.1
HAWA LR LR
comp=Z,409nm,21.0s,MS4.8
D08A Wollman Farm, 84.53 43 ⇑P P 16 26 47.8 -0.4
baz=84
E08A Dider Farm, El 84.57 44 ⇓P P 16 26 47.8 -0.6
baz=84
OD2 Odessa Site #2 84.59 43 eP P 16 26 47.9 -0.7
comp=Z,56nm,1.6s,mb5.4
B09A Rice 84.71 42 ⇑P P 16 26 48.8 -0.3
baz=85,SNR=14
MOD Modoc 84.76 48 eP P 16 26 49.8 +0.3
comp=Z,70nm,1.3s,mb5.6
RES Resolute Bay 84.78 13 LR LR 17 04 44.6
comp=Z,96nm,20.0s,MS4.2,baz=344,slow=36
RES Resolute Bay 84.78 13 eP P 16 26 48.0 -0.9
RES pmax pmax
comp=Z,11nm,1.0s,mb4.9
RES Resolute Bay 84.78 13 eP P 16 26 48.0 -1.0
comp=Z,10nm,1.0s,mb4.9
C09A Chrisman Ranch 84.78 42 ⇓P P 16 26 48.7 -0.7
baz=85
I07A Izee 84.83 46 ⇑P P 16 26 49.7 0.0
baz=85
G08A Pilot Rock 84.92 45 ⇓P P 16 26 49.9 -0.3
baz=85
F08A Pendleton 84.93 44 ⇓P P 16 26 50.4 +0.1
baz=85
D09A Jones Farm, Ri 84.94 43 ⇓P P 16 26 49.8 -0.4
baz=85
A10A Northport 84.95 41 ⇑P P 16 26 50.0 -0.3
baz=85
SAO San Andreas Ge 85.05 54 eP P 16 26 51.0 0.0
SAO pmax pmax
comp=Z,23nm,1.4s,mb5.1
SAO San Andreas Ge 85.05 54 eP P 16 26 51.0 0.0
comp=Z,23nm,1.4s,mb5.1
E09A Wood Farm, Sta 85.18 43 ⇑P P 16 26 51.2 -0.3
baz=85
BEKR Beckwourth 85.18 50 ⇑P P 16 26 51.6 0.0
baz=85
LNOR Lincton Mounta 85.24 44 eP P 16 26 51.8 0.0
LNOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
LNOR Lincton Mounta 85.24 44 eP P 16 26 51.8 0.0
comp=Z,3.7nm,0.8s,mb4.6
H08A Prairie City 85.31 45 ⇑P P 16 26 52.2 +0.1
baz=85
B10A Chitwood Farm, 85.34 42 ⇓P P 16 26 51.9 -0.3
baz=85
C10A Spilker Farm, 85.41 42 ⇓P P 16 26 52.1 -0.5
baz=85
NEW Newport 85.42 42 eP P 16 26 52.0 -0.6
NEW pmax pmax
comp=Z,94nm,1.3s
NEW Newport 85.42 42 eP P 16 26 52.0 -0.7
comp=Z,94nm,1.3s,mb5.8
F09A S2 Ranch, Elgi 85.54 44 ⇓P P 16 26 52.9 -0.4
baz=85
CMB Columbia Colle 85.58 52 eP P 16 26 53.4 -0.3
CMB pmax pmax
comp=Z,52nm,1.4s,mb5.6
CMB MLR MLR
comp=Z,169nm,21.0s,MS4.4
CMB Columbia Colle 85.58 52 eP P 16 26 53.4 -0.3
comp=Z,52nm,1.4s,mb5.6
CMB LR LR
comp=Z,169nm,21.0s,MS4.4
D10A Wagner Farm, O 85.62 43 ⇓P P 16 26 53.1 -0.6
baz=86,SNR=8.0
APA Apatity 85.67 339⇑eP P 16 26 54.0 +0.5
APA eS S 16 37 24.0 +2.7
APA pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
APA MLR MLR
comp=Z,300nm,17.0s,MS4.8
A11A Hall Mountain, 85.72 41 ⇓P P 16 26 54.6 +0.5
baz=86,SNR=24
J08A Circle Bar Ran 85.73 47 ⇑P P 16 26 54.2 -0.1
baz=86
WCN Washoe City 85.77 51 ⇓P P 16 26 55.0 +0.5
baz=86
WVOR Wild Horse Val 85.84 48 eP P 16 26 54.7 -0.1
WVOR pmax pmax
comp=Z,141nm,1.8s,mb5.9
WVOR Wild Horse Val 85.84 48 eP P 16 26 54.7 -0.2
comp=Z,141nm,1.8s,mb5.9
B11A Sandpoint 85.86 41 ⇓P P 16 26 54.6 -0.2
baz=86,SNR=15
E10A Myers Farm, Un 85.88 43 ⇑P P 16 26 54.5 -0.4
baz=86,SNR=6.0
F10A Beach Ranch, E 85.93 44 ⇓P P 16 26 54.9 -0.3
baz=86,SNR=13
H09A Durkee 85.97 45 ⇓P P 16 26 55.2 -0.2
baz=86
I09A Lost Marbles R 86.09 46 ⇑P P 16 26 55.7 -0.3
baz=86,SNR=15
A12A Yaak River Ran 86.18 41 ⇓P P 16 26 56.5 +0.1
baz=86,SNR=5.6
G10A Bishop Farm, J 86.18 44 ⇓P P 16 26 56.1 -0.3
baz=86,SNR=60
J09A Fry Pan Ranch, 86.24 46 ⇓P P 16 26 56.7 -0.1
baz=86
D11A Klaveano Farm, 86.25 43 ⇓P P 16 26 56.1 -0.6
baz=86,SNR=10
MAK Makhachkala 86.30 313 eP P 16 27 06.7 +10
MAK pmax pmax
comp=Z,24nm,0.3s,mb5.9
B12A Libby 86.35 41 ⇑P P 16 26 57.1 -0.1
baz=86,SNR=9.1
EDM Edmonton 86.35 36 eP P 16 26 56.6 -0.5
RKT Rikitea 86.37 115 eLR LR 16 54 12.5
comp=Z,1μm,27.0s,baz=289
E11A Bogner Ranch, 86.52 43 ⇓P P 16 26 57.4 -0.7
baz=86,SNR=22
SMMC Simmler 86.53 55 ⇓P P 16 26 58.7 +0.3
baz=86
H10A Noah's Angus R 86.62 45 ⇓P P 16 26 58.0 -0.6
baz=86,SNR=50
C12B Naegeli Ranch, 86.63 42 ⇓P P 16 26 58.4 -0.3
baz=86,SNR=7.5
F11A Grangeville 86.68 44 ⇓P P 16 26 57.8 -1.1
baz=87,SNR=22
I10A Payette 86.72 46 ⇓P P 16 26 59.2 +0.1
baz=87,SNR=5.9
G11A Walters Elk Ra 86.73 44 ⇓P P 16 26 58.2 -1.0
baz=87,SNR=51
KEV Kevo 86.73 342 eP P 16 26 58.3 -0.4
KEV Kevo 86.73 342 ep P 16 26 58.3 -0.4
PKM Peak Mountain 86.77 55 ⇓P P 16 27 00.1 +0.6
baz=87
MLAC Mammoth Lakes 86.87 52 ⇓P P 16 27 00.6 +0.6
baz=87
RCTC Rector, Farmer 86.88 54 ⇓P P 16 26 59.8 -0.4
baz=87
D12A Red Ives Fores 86.89 42 ⇓P P 16 26 59.5 -0.4
baz=87,SNR=22
J10A Berg Farm, Mel 86.91 46 ⇑P P 16 26 59.7 -0.5
baz=87

E12A **Beaver Dam Sad** 86.92 43 ⇑P P 16 26 59.9 -0.2
baz=87,SNR=39
SBC **Santa Barbara** 86.96 55 ⇓P P 16 27 00.6 0.0
baz=87
K10A **MacKenzie Ranc** 87.01 47 ⇓P P 16 27 00.6 0.0
baz=87,SNR=50
BSMT **Bassoo Peak** 87.03 42 *e*P P 16 27 00.0 -0.6
comp=Z,127nm,1.2s,mb6.0
NVAR **Mina Array Bea** 87.08 51 P P 16 27 01.3 +0.3
comp=Z,11nm,0.7s,mb5.2,baz=267,slow=5.4,SNR=84
B13A **Whitefish** 87.09 41 ⇓P P 16 27 00.8 0.0
baz=87,SNR=28
H11A **Donnelly** 87.09 45 ⇓P P 16 27 00.4 -0.5
baz=87,SNR=47
VES **Vestal, Richgr** 87.12 54 ⇓P P 16 27 00.5 -0.8
baz=87
BSC **Santa Cruz Isl** 87.14 56 ⇓P P 16 27 00.8 -0.6
baz=87
C13A **Hot Springs** 87.22 42 ⇓P P 16 27 01.1 -0.4
baz=87,SNR=16
WALA **Waterton Lakes** 87.24 40 *e*P P 16 27 01.6 0.0
comp=Z,3.0nm,1.4s,mb4.3
ARCES **ARCESS Array B** 87.30 342 P P 16 27 00.5 -1.0
comp=Z,1.9nm,0.7s,mb4.4,baz=51,slow=4.5,SNR=11
ARCES PKiKP PKiKP 16 32 04.7 -0.8
comp=Z,1.4nm,0.7s,baz=67,slow=4.1,SNR=4.8
F12A **Elk City** 87.32 44 ⇓P P 16 27 01.3 -0.7
baz=87,SNR=26
I11A **Placerville** 87.35 46 ⇓P P 16 27 01.8 -0.4
baz=87,SNR=43
BMN **Battle Mountai** 87.38 49 *e*P P 16 27 03.0 +0.6
BMN pmax pmax
comp=Z,29nm,1.3s,mb5.3
BMN **Battle Mountai** 87.38 49 *e*P P 16 27 03.0 +0.6
comp=Z,29nm,1.3s,mb5.3
JTMT **Jette** 87.39 42 *e*P P 16 27 02.3 0.0
comp=Z,32nm,1.3s,mb5.4
SNCC **San Nicolas Is** 87.41 57 ⇓P P 16 27 02.8 +0.1
baz=87
D13A **Huson** 87.47 42 ⇓P P 16 27 01.8 -0.9
baz=87,SNR=12
L10A **Juniper Basin** 87.48 47 ⇑P P 16 27 03.0 +0.1
baz=87,SNR=37
TIN **Tinemaha** 87.49 53 ⇑P P 16 27 03.2 +0.2
baz=87
ARVC **Arvin** 87.50 55 ⇑P P 16 27 02.9 -0.2
baz=87
YBMT **Yellow Bay** 87.53 41 *e*P P 16 27 02.7 -0.3
comp=Z,45nm,1.3s,mb5.5
BLG **Laguna Peak** 87.56 56 ⇓P P 16 27 02.9 -0.5
baz=88
MFID **Camas Ranch** 87.58 46 ⇑P P 16 27 03.4 +0.1
baz=88,SNR=63
A14A **Double T Ranch** 87.58 40 ⇓P P 16 27 03.5 +0.3
baz=87,SNR=29
M10A **I.L. Ranch, Tu** 87.58 48 ⇑P P 16 27 03.6 +0.2
baz=88,SNR=11
K11A **Parker Ranch,** 87.61 47 ⇓P P 16 27 03.7 +0.2
baz=88,SNR=46
SWMT **Swartz Lake** 87.64 42 *e*P P 16 27 02.8 -0.7
comp=Z,33nm,1.5s,mb5.3
ISA **Isabella** 87.65 54 ⇑P P 16 27 03.4 -0.5
baz=88,SNR=8.2
ISA **Isabella** 87.65 54 *e*P P 16 27 02.0 -1.8
ISA pmax pmax
comp=Z,37nm,1.5s,mb5.4
ISA **Isabella** 87.65 54 *e*P P 16 27 02.0 -1.8
comp=Z,37nm,1.5s,mb5.4
OSI **Osito Adit** 87.71 55 ⇓P P 16 27 04.1 0.0
baz=88
N10A **Dunphy** 87.82 49 ⇑P P 16 27 04.9 +0.3
baz=88
B14A **Marquette Ranc** 87.86 41 ⇑P P 16 27 04.4 -0.2
baz=88,SNR=18
MSO **Missoula** 87.88 42 *e*P P 16 27 04.1 -0.6
comp=Z,16nm,1.3s,mb5.1
F13A **Darby** 87.93 43 ⇓P P 16 27 04.1 -0.9
baz=88,SNR=18
H12A **Diamond D Ranc** 87.93 45 ⇓P P 16 27 04.7 -0.3
baz=88,SNR=29
O10A **Cortez Mining,** 87.94 49 ⇓P P 16 27 05.6 +0.5
baz=88,SNR=11
I12A **Atlanta** 87.95 46 ⇑P P 16 27 05.0 -0.1
baz=88,SNR=15
L11A **Cat Creek Ranc** 87.97 47 ⇓P P 16 27 05.5 +0.3
baz=88,SNR=19
A15A **Johnson Ranch,** 88.01 40 ⇓P P 16 27 04.9 -0.3
baz=88,SNR=36
SLMT **Seeley Lake** 88.05 42 *e*P P 16 27 04.7 -0.8
comp=Z,62nm,1.4s,mb5.7
D14A **Greenough** 88.09 42 ⇓P P 16 27 04.8 -0.9
baz=88,SNR=8.8
DECC **Green Verdugo** 88.12 55 ⇓P P 16 27 05.6 -0.5
baz=88
J12A **Stokes Ranch,** 88.13 46 ⇑P P 16 27 06.2 +0.3
baz=88,SNR=46
M11A **Holland Ranch,** 88.15 48 ⇑P P 16 27 06.6 +0.5
baz=88,SNR=18
P10A **Eureka** 88.15 50 ⇓P P 16 27 06.6 +0.5
baz=88
GRAC **Grapevine Rang** 88.16 53 ⇓P P 16 27 06.5 +0.2
baz=88
G13A **Cobalt** 88.20 44 ⇑P P 16 27 06.0 -0.2
baz=88,SNR=52
EDW2 **Edwards Air Fo** 88.23 55 ⇓P P 16 27 06.7 +0.1
baz=88,SNR=9.8
CIS **Catalina Islan** 88.27 56 ⇓P P 16 27 06.5 -0.4
baz=88
FMP **Fort Macarthur** 88.28 56 ⇑P P 16 27 06.6 -0.3
baz=88
E14A **Clinton** 88.30 43 ⇓P P 16 27 05.9 -0.7
baz=88,SNR=6.0
CHMT **Chamberlain Mo** 88.31 42 *e*P P 16 27 05.7 -1.1
comp=Z,27nm,1.5s,mb5.3
LRMC **Laurel Mountai** 88.31 54 ⇑P P 16 27 07.2 +0.2
baz=88
MPMC **Manual Prospec** 88.32 53 ⇓P P 16 27 07.3 +0.3
baz=88,SNR=26
B15A **Bradely Ranch,** 88.32 41 ⇑P P 16 27 06.0 -0.7
baz=88,SNR=9.5
H13A **Challis** 88.34 45 ⇓P P 16 27 07.0 +0.1
baz=88,SNR=46
MWC **Mount Wilson** 88.34 55 *e*P P 16 27 07.2 0.0
MWC pmax pmax
comp=Z,20nm,1.1s,mb5.3
MWC **Mount Wilson** 88.34 55 *e*P P 16 27 07.2 +0.1
comp=Z,20nm,1.1s,mb5.3
N11A **Elko Archery C** 88.36 49 ⇑P P 16 27 07.3 +0.2
baz=88
Q10A **Clear Creek Ra** 88.42 51 ⇓P P 16 27 07.4 0.0
baz=88,SNR=10
K12A **Draper Farm, C** 88.45 47 ⇓P P 16 27 07.6 +0.1
baz=88,SNR=9.3
C15A **Salmond Ranch,** 88.46 41 ⇓P P 16 27 07.1 -0.3
baz=88,SNR=16
JOF **Joensuu** 88.50 335 *e*P P 16 27 06.1 -1.2
JOF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
JOF **Joensuu** 88.50 335 *e*p P 16 27 06.1 -1.2
comp=Z,5.4nm,1.0s,mb4.7
L12A **House Creek Ra** 88.50 47 ⇓P P 16 27 08.2 +0.5
baz=88,SNR=32
S10A **Tonopah Range,** 88.51 51 ⇑P P 16 27 08.2 +0.3
baz=88,SNR=25
HLID **Hailey** 88.52 46 ⇑P P 16 27 08.1 +0.3
baz=88,SNR=56
HLID **Hailey** 88.52 46 *e*P P 16 27 07.8 0.0
HLID LR LR
comp=Z,58nm,1.2s,mb5.8
comp=Z,452nm,21.0s,MS4.9
F14A **Wisdom** 88.56 43 ⇓P P 16 27 07.2 -0.7
baz=88,SNR=5.0
O11A **Cowboy Ranch,** 88.61 49 ⇓P P 16 27 08.6 +0.4
baz=88,SNR=14
I13A **Wildhorse Cree** 88.62 45 ⇓P P 16 27 08.7 +0.4
baz=88,SNR=53
R10A **Warm Springs** 88.64 51 ⇓P P 16 27 08.6 +0.2
baz=88
BFSC **Mount Baldy St** 88.66 55 ⇓P P 16 27 08.2 -0.4
baz=89
G14A **Jackson** 88.67 44 ⇓P P 16 27 07.7 -0.7
baz=88
P11A **Circle Ranch,** 88.70 50 ⇓P P 16 27 08.8 +0.1
baz=89
FURC **Furnace Creek,** 88.70 53 ⇑P P 16 27 09.0 +0.2
baz=89,SNR=7.3
J13A **Cove Ranch, Pi** 88.74 46 ⇑P P 16 27 09.0 +0.2
baz=89,SNR=39
ELK **Elko** 88.74 48 *e*P P 16 27 09.4 +0.5
ELK pmax pmax
comp=Z,79nm,1.1s
ELK **Elko** 88.74 48 *e*P P 16 27 09.3 +0.5
comp=Z,79nm,1.1s,mb6.0
D15A **Lincoln** 88.75 42 ⇑P P 16 27 08.1 -0.6
baz=89,SNR=9.3
M12A **Wells** 88.79 48 ⇓P P 16 27 09.5 +0.5
baz=89,SNR=29
B16A **M & M Farms, S** 88.83 40 ⇑P P 16 27 08.4 -0.7
baz=89,SNR=8.1
E15A **Deer Lodge** 88.86 42 ⇑P P 16 27 09.1 -0.2
baz=89,SNR=35
N12A **Clover Valley,** 88.86 48 ⇓P P 16 27 09.7 +0.3
baz=89,SNR=27
N12A **Clover Valley,** 88.86 48 *e*P P 16 27 09.8 +0.4
comp=Z,132nm,1.5s,mb6.0
H14A **Leadore** 88.93 44 ⇑P P 16 27 09.9 +0.2
baz=89,SNR=36
Q11A **Duckwater** 88.97 50 ⇓P P 16 27 10.3 +0.3
baz=89,SNR=31
RRX **Edison Barstow** 89.01 54 ⇓P P 16 27 10.3 0.0
baz=89
K13A **Stover Farm, H** 89.02 46 ⇓P P 16 27 10.5 +0.3
baz=89,SNR=12
GSC **Goldstone** 89.05 54 ⇓P P 16 27 10.6 +0.1
baz=89,SNR=14
GSC **Goldstone** 89.05 54 *e*P P 16 27 09.6 -0.9
GSC pmax pmax
comp=Z,66nm,1.4s,mb5.8
GSC **Goldstone** 89.05 54 *e*P P 16 27 09.6 -0.9
comp=Z,66nm,1.4s,mb5.8
GNI **Garni** 89.06 311 LR LR 17 11 07.0
comp=Z,161nm,19.7s,MS4.5,baz=63,slow=38
I14A **Mackay** 89.08 45 ⇓P P 16 27 10.9 +0.5
baz=89,SNR=28
U10A **Ash Meadows, A** 89.12 53 ⇓P P 16 27 11.4 +0.6
baz=89,SNR=5.5
F15A **Butte** 89.14 43 ⇑P P 16 27 10.5 -0.1
baz=89,SNR=30
R11A **Troy Canyon, C** 89.16 51 ⇓P P 16 27 11.4 +0.5
baz=89,SNR=52
LRM **Limekiln Ridge** 89.17 43 *e*P P 16 27 10.4 -0.4
comp=Z,297nm,1.3s,mb6.5
MURC **Murrieta** 89.19 56 ⇓P P 16 27 11.0 -0.1
baz=89
MCMT **McKenzie Canyo** 89.22 44 *e*P P 16 27 11.2 +0.2
comp=Z,22nm,1.4s,mb5.3
DLMT **Dillon** 89.22 43 *e*P P 16 27 10.6 -0.4
comp=Z,52nm,1.5s,mb5.6
S11A **Rachel** 89.23 52 ⇓P P 16 27 11.6 +0.3
baz=89,SNR=15
O12A **Currie** 89.24 49 ⇑P P 16 27 11.6 +0.3
baz=89,SNR=6.0
BBRC **Big Bear Sol-O** 89.24 55 ⇑P P 16 27 11.4 0.0
baz=89
L13A **Double Diamond** 89.28 47 ⇑P P 16 27 11.9 +0.5
baz=89,SNR=21
OBN **Obninsk** 89.28 327 ⇑*e*P P 16 27 11.2 +0.1
OBN *e* 16 30 38.7
OBN *i* S SKSac 16 37 27.3 -9.1
OBN *i* PS PS 16 38 57.7 -10
OBN *e*SS SS 16 43 54.1 +3.1
OBN pmax pmax
comp=Z,18nm,1.7s,mb5.1
OBN MLR MLR
comp=Z,300nm,19.0s,MS4.7
A17A **Triple J Farms** 89.29 40 ⇑P P 16 27 10.8 -0.5
baz=89,SNR=5.9
HRY **Holter Researc** 89.30 42 *e*P P 16 27 11.6 +0.2
comp=Z,8.5nm,0.5s,mb5.3
SHOC **Shoshone** 89.30 53 ⇑P P 16 27 11.6 -0.1
baz=89
M13A **Montello** 89.34 48 ⇑P P 16 27 11.9 +0.2
baz=89,SNR=35
M13A **Montello** 89.34 48 *e*P P 16 27 11.7 0.0
comp=Z,86nm,1.3s,mb5.9
P12A **McGill** 89.35 50 ⇓P P 16 27 12.1 +0.3
baz=89,SNR=17
G15A **Dillon** 89.35 44 ⇓P P 16 27 11.4 -0.2
baz=89,SNR=9.0
D16A **Dana Ranch, Ca** 89.38 42 ⇑P P 16 27 11.3 -0.4
baz=89,SNR=12
KIV **Kislovodsk** 89.39 315 *e*P P 16 27 09.3 -2.6
KIV *e* 16 37 35.4
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
H15A **Lima** 89.42 44 ⇑P P 16 27 12.1 +0.1
baz=89,SNR=15
B17A **L&G Farms, Che** 89.44 40 ⇑P P 16 27 11.3 -0.7
baz=89,SNR=12
E16A **East Helena** 89.46 42 ⇑P P 16 27 12.0 -0.1
baz=89,SNR=22
109C **Camp Elliot, M** 89.46 56 ⇓P P 16 27 12.4 -0.1
baz=89
N13A **Wendover, West** 89.46 48 ⇑P P 16 27 12.3 0.0
baz=89,SNR=5.8
N13A **Wendover, West** 89.46 48 *e*P P 16 27 12.4 +0.2
comp=Z,102nm,2.1s,mb5.8
DAG **Danmarks Havn** 89.52 356 *e*P P 16 27 10.0 -1.8
DAG **Danmarks Havn** 89.52 356 *i* P P 16 27 10.0 -1.8
Q12A **Willow Creek R** 89.53 50 ⇑P P 16 27 13.2 +0.5
baz=89,SNR=7.6
HEC **Hector,Ludlow** 89.56 54 ⇓P P 16 27 12.8 -0.1
baz=90,SNR=6.9
C17A **Wharram Farm,** 89.69 41 ⇑P P 16 27 12.0 -1.1
baz=90
TUQ **Turquoise Moun** 89.71 54 ⇓P P 16 27 13.6 +0.1
baz=90,SNR=11
I15A **Monteview** 89.72 45 ⇓P P 16 27 13.8 +0.4
baz=90,SNR=7.2
F16A **Kennard Place,** 89.73 43 ⇓P P 16 27 13.2 -0.2
baz=90,SNR=7.5
BOZ **Bozeman (W)** 89.77 43 ⇑P P 16 27 13.6 0.0
baz=90,SNR=23
BOZ **Bozeman (W)** 89.77 43 *e*P P 16 27 13.3 -0.3
BOZ pmax pmax
comp=Z,35nm,1.4s,mb5.5
BOZ MLR MLR
comp=Z,191nm,20.0s,MS4.5
BOZ **Bozeman (W)** 89.77 43 *e*P P 16 27 13.3 -0.3
comp=Z,35nm,1.4s,mb5.5
BOZ LR LR
comp=Z,191nm,20.0s,MS4.5
G16A **Moss Hill, Enn** 89.79 43 ⇓P P 16 27 13.7 0.0
baz=90,SNR=27
PFO **Pinyon Flat Ob** 89.79 56 ⇑P P 16 27 13.9 -0.1
baz=90,SNR=5.8
PFO **Pinyon Flat Ob** 89.79 56 *e*P P 16 27 14.2 +0.2
PFO pmax pmax
comp=Z,70nm,1.8s,mb5.7
PFO **Pinyon Flat Ob** 89.79 56 *e*P P 16 27 14.2 +0.2
comp=Z,70nm,1.8s,mb5.7
L14A **Malta** 89.80 47 ⇓P P 16 27 14.2 +0.4
baz=90,SNR=37
A18A **Metzger Ranch,** 89.83 40 ⇓P P 16 27 13.1 -0.6
baz=90
O13A **Hicks Ranch, I** 89.84 49 ⇑P P 16 27 14.3 +0.2
baz=90
U11A **Corn Creek** 89.86 53 ⇑P P 16 27 14.7 +0.5
baz=90
BAR **Barrett** 89.87 57 *e*P P 16 27 13.7 -0.7
comp=Z,15nm,1.0s,mb5.3
M14A **Shep Mountain** 89.89 47 ⇓P P 16 27 14.7 +0.4
baz=90,SNR=39
D17A **Six Diamond Ra** 89.89 41 ⇑P P 16 27 13.7 -0.4
baz=90,SNR=19
R12A **Pony Springs,** 89.90 51 ⇑P P 16 27 14.8 +0.5
baz=90,SNR=10
S12A **Delamar Landin** 89.93 51 ⇑P P 16 27 15.2 +0.6
baz=90,SNR=11
J15A **Blackfoot** 89.94 45 ⇓P P 16 27 15.3 +0.8
baz=90,SNR=37
V11A **Goodsprings** 89.98 53 ⇓P P 16 27 15.1 +0.3
baz=90
E17A **Martinsdale** 90.01 42 ⇑P P 16 27 14.7 0.0
baz=90,SNR=16
MONP **Monument Peak** 90.01 56 ⇓P P 16 27 15.3 +0.2
baz=90,SNR=9.1
P13A **Bates Ranch, G** 90.01 49 ⇓P P 16 27 15.0 +0.2
baz=90,SNR=60
B18A **Beardsley Farm** 90.05 40 ⇓P P 16 27 14.2 -0.7
baz=90
BELC **Belle Mtn.** 90.05 55 ⇑P P 16 27 15.1 0.0
baz=90,SNR=7.3
K15A **Arbon** 90.10 46 ⇑P P 16 27 15.7 +0.5
baz=90,SNR=16
GMRC **Granite Mounta** 90.10 54 ⇓P P 16 27 15.8 +0.4
baz=90,SNR=20
Q13A **Wheeler Ranch,** 90.16 50 ⇓P P 16 27 15.7 +0.2
baz=90,SNR=13
QLMT **Earthquake Lak** 90.17 44 *e*P P 16 27 16.3 +0.8
comp=Z,46nm,1.3s,mb5.7
EGMT **Eagleton** 90.19 40 ⇑P P 16 27 14.8 -0.7
baz=90
EGMT **Eagleton** 90.19 40 *e*P P 16 27 14.6 -0.9
comp=Z,40nm,1.6s,mb5.5
N14A **Grayback Hills** 90.20 48 ⇑P P 16 27 15.6 -0.2
baz=90,SNR=6.9
HVU **Hansel Valley** 90.21 47 *e*P P 16 27 16.1 +0.4
HVU pmax pmax
comp=Z,110nm,1.5s,mb6.0
HVU **Hansel Valley** 90.21 47 *e*P P 16 27 16.1 +0.4
comp=Z,110nm,1.5s,mb6.0
T12A **Moapa** 90.29 52 ⇑P P 16 27 16.5 +0.3
baz=90
BGU **Big Grassy Mou** 90.29 48 *e*P P 16 27 14.8 -1.3
comp=Z,56nm,1.8s,mb5.6
F17A **Fitzpatrick Pl** 90.33 43 ⇑P P 16 27 16.2 0.0
baz=90,SNR=7.8
DVTC **Desert V Tower** 90.34 56 ⇑P P 16 27 16.5 0.0
baz=90
H16A **Russell Place,** 90.34 44 ⇑P P 16 27 17.0 +0.8
baz=90,SNR=33
L15A **Malad City** 90.42 47 ⇑P P 16 27 16.7 0.0
baz=90,SNR=6.6
R13A **O'Grain Ranch,** 90.43 51 ⇑P P 16 27 17.3 +0.5
baz=90,SNR=25
I16A **Newdale** 90.44 45 ⇑P P 16 27 17.5 +0.7
baz=90,SNR=11
D18A **Linhart Farms,** 90.45 41 ⇓P P 16 27 16.7 0.0
baz=90
V12A **Nelson** 90.47 53 ⇑P P 16 27 17.4 +0.3
baz=90,SNR=16
G17A **Pierce Place,** 90.47 43 ⇓P P 16 27 17.2 +0.3
baz=90
SWSC **Sam W. Stewart** 90.50 56 ⇑P P 16 27 17.1 -0.3
baz=90
U12A **Valley of Fire** 90.51 52 ⇓P P 16 27 17.7 +0.4
baz=90,SNR=5.2
YMR **Madison River** 90.54 44 *e*P P 16 27 18.1 +0.9
comp=Z,14nm,0.4s,mb5.6
M15A **Larsen Ranch,** 90.54 47 ⇑P P 16 27 17.2 -0.1
baz=90,SNR=13
J16A **Bone** 90.55 45 ⇑P P 16 27 17.8 +0.5
baz=90,SNR=36
W12A **Cal Nev Ari** 90.58 54 ⇓P P 16 27 18.0 +0.4
baz=90
BC3 **Big Chuckw Mtn** 90.58 55 ⇑P P 16 27 17.8 +0.2
baz=90,SNR=16
SPUT **South Promonto** 90.59 47 *e*P P 16 27 17.9 +0.4
comp=Z,103nm,1.7s,mb5.9
E18A **Harlowton** 90.59 42 ⇑P P 16 27 17.2 -0.2
baz=90,SNR=16
N15A **Stansbury Isla** 90.67 48 ⇓P P 16 27 17.8 -0.1
baz=90
P14A **Drum Mountains** 90.67 49 ⇑P P 16 27 17.9 0.0
baz=90,SNR=15
DUG **Dugway** 90.67 48 ⇑P P 16 27 18.0 0.0
baz=90,SNR=16
DUG **Dugway** 90.67 48 *e*P P 16 27 18.0 +0.1
DUG pmax pmax
comp=Z,58nm,1.3s,mb5.8
DUG **Dugway** 90.67 48 *e*P P 16 27 18.0 +0.1
comp=Z,58nm,1.3s,mb5.8
IRM **Iron Mountain** 90.68 55 ⇑P P 16 27 18.2 0.0
baz=91,SNR=20
S13A **Holt Ranch, En** 90.69 51 ⇑P P 16 27 18.7 +0.7
baz=91,SNR=11
YFT **Old Faithful** 90.70 44 *e*P P 16 27 20.1 +2.1
comp=Z,36nm,1.1s,mb5.6
Q14A **Sevier Lake (B** 90.70 50 ⇑P P 16 27 18.3 +0.2
baz=91,SNR=35
K16A **Soda Springs** 90.71 46 ⇑P P 16 27 18.8 +0.7
baz=91,SNR=20
YNR **Norris Junctio** 90.71 44 *e*P P 16 27 19.7 +1.6
comp=Z,116nm,1.4s,mb6.0
RRI2 **Red Ridge** 90.73 45 *e*P P 16 27 18.6 +0.5
comp=Z,60nm,1.3s,mb5.8
IMW **Indian Meadow** 90.81 44 *e*P P 16 27 18.4 0.0
comp=Z,71nm,1.5s,mb5.8
T13A **Saint George** 90.82 52 ⇑P P 16 27 19.4 +0.7
baz=91,SNR=15
H17A **Grant Village** 90.89 44 ⇓P P 16 27 20.7 +1.8
baz=91,SNR=30
O15A **The Old Anders** 90.90 48 ⇓P P 16 27 19.2 +0.2
baz=91
KAF **Kangasniemi** 90.92 336 *e*P P 16 27 16.5 -2.1
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
KAF **Kangasniemi** 90.92 336 *e*p P 16 27 16.5 -2.1
comp=Z,1.6nm,0.4s,mb4.7
NEE2 **Needles Airpor** 90.93 54 ⇓P P 16 27 19.4 +0.2
baz=91
TPAW **Teton Pass** 90.94 45 *e*P P 16 27 19.5 +0.4
comp=Z,50nm,1.4s,mb5.7
F18A **Big Timber** 90.95 42 ⇓P P 16 27 19.2 +0.1
baz=91,SNR=15
LKWY **Lake** 90.95 44 *e*P P 16 27 21.5 +2.4
LKWY pmax pmax
comp=Z,44nm,1.4s,mb5.6
LKWY **Lake** 90.95 44 *e*P P 16 27 21.5 +2.3
comp=Z,44nm,1.4s,mb5.6
U13A **Pakoon Wash** 90.95 52 ⇑P P 16 27 20.0 +0.7
baz=91,SNR=27
GCMT **Greycliff** 91.02 42 *e*P P 16 27 19.7 +0.3
comp=Z,37nm,1.7s,mb5.4
REDW **Red Top Meadow** 91.05 45 *e*P P 16 27 19.9 +0.3
comp=Z,55nm,1.6s,mb5.6
I17A **Pilgrim Ck.** 91.05 44 ⇑P P 16 27 20.6 +1.0
baz=91,SNR=6.4
AHID **Auburn Hatcher** 91.07 46 *e*P P 16 27 20.4 +0.7
comp=Z,14nm,0.8s,mb5.3
CCUT **Cedar City** 91.07 51 *e*P P 16 27 20.4 +0.5
comp=Z,42nm,1.5s,mb5.5
L16A **Fish Haven** 91.09 46 ⇑P P 16 27 20.1 +0.3
baz=91,SNR=22
R14A **James Farms, M** 91.10 50 ⇑P P 16 27 20.0 +0.1
baz=91
V13A **Grand Canyon W** 91.11 53 ⇑P P 16 27 20.6 +0.6
baz=91,SNR=18
HWUT **Hardware Ranch** 91.12 47 *e*P P 16 27 20.2 +0.2
comp=Z,64nm,1.4s,mb5.8
J17A **Brown Place, J** 91.14 45 ⇓P P 16 27 20.3 +0.3
baz=91
S14A **Cedar City** 91.16 51 ⇑P P 16 27 20.6 +0.3
baz=91
M16A **Huntsville** 91.17 47 ⇑P P 16 27 19.6 -0.6
baz=91
K17A **Gardner Place,** 91.20 46 ⇑P P 16 27 20.3 -0.1
baz=91
G18A **Lazy EL Ranch,** 91.25 43 ⇑P P 16 27 20.5 0.0
baz=91,SNR=9.2
GLA **Glamis** 91.25 56 ⇑P P 16 27 21.0 +0.3
baz=91
GLA **Glamis** 91.25 56 *e*P P 16 27 21.2 +0.4
GLA pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
GLA **Glamis** 91.25 56 *e*P P 16 27 21.1 +0.4
comp=Z,4.9nm,0.6s,mb5.0
P15A **Leamington** 91.26 49 ⇑P P 16 27 20.8 +0.2
baz=91,SNR=12
NLU **North Lily Min** 91.29 48 *e*P P 16 27 21.4 +0.6
comp=Z,45nm,1.4s,mb5.6
Y12C **Blythe** 91.30 55 ⇓P P 16 27 21.2 +0.2
baz=91
FINES **FINESS Array B** 91.36 335 P P 16 27 18.3 -2.4
comp=Z,0.6nm,0.5s,mb4.2,baz=67,slow=4.4,SNR=15
Q15A **Fillmore** 91.36 49 ⇑P P 16 27 21.1 0.0
baz=91
W13A **Hualapai Mount** 91.41 54 ⇓P P 16 27 21.9 +0.4
baz=91,SNR=16
T14A **Hurricane** 91.43 51 ⇑P P 16 27 22.1 +0.6
baz=91,SNR=6.7
PDMCI **Parker Dam,Lak** 91.44 54 ⇑P P 16 27 21.9 +0.2
baz=91,SNR=7.9
N16A **Rees Ranch, Co** 91.45 47 ⇑P P 16 27 21.6 +0.1
baz=91
L17A **Cokeville** 91.45 46 ⇓P P 16 27 21.4 -0.1
baz=91,SNR=10
JLU **Jordanelle** 91.53 48 *e*P P 16 27 22.1 +0.1
comp=Z,97nm,1.8s,mb5.8
U14A **Mt Trumbull** 91.56 52 ⇓P P 16 27 22.8 +0.7
baz=91,SNR=17
MPU **Maple Canyon** 91.59 48 *e*P P 16 27 22.6 +0.4
comp=Z,61nm,1.7s,mb5.7

X13A **Yucca** 91.60 54 ⇓P P 16 27 22.9 +0.6
baz=92,SNR=25
112A **Yuma** 91.60 56 ⇑P P 16 27 22.6 +0.2
baz=92
O16A **Springville** 91.62 48 ⇑P P 16 27 22.4 +0.1
baz=92
I18A **Diamond G Ranc** 91.64 44 ⇑P P 16 27 22.8 +0.4
baz=92,SNR=8.0
MSU **Marysvale** 91.67 50 *e*P P 16 27 23.6 +1.0
MSU pmax pmax
comp=Z,15nm,1.2s,mb5.2
MSU **Marysvale** 91.67 50 *e*P P 16 27 23.6 +1.0
comp=Z,15nm,1.2s,mb5.2
J18A **Kendall Valley** 91.67 45 ⇓P P 16 27 22.6 +0.1
baz=92,SNR=19
R15A **Junction** 91.69 50 ⇓P P 16 27 23.4 +0.7
baz=92
P16A **Fountain Green** 91.70 49 ⇓P P 16 27 22.9 +0.2
baz=92
DAU **Daniels Canyon** 91.73 48 *e*P P 16 27 23.0 +0.1
DAU pmax pmax
comp=Z,38nm,1.5s,mb5.5
DAU **Daniels Canyon** 91.73 48 *e*P P 16 27 23.0 +0.1
comp=Z,38nm,1.5s,mb5.5
S15A **Panguitch** 91.79 51 ⇑P P 16 27 24.0 +0.8
baz=92
M17A **Scullys Gap (B** 91.81 47 ⇑P P 16 27 22.7 -0.4
baz=92,SNR=6.0
Y13A **Salome** 91.83 55 ⇓P P 16 27 23.9 +0.4
baz=92,SNR=8.6
K18A **Toltan Ranch,** 91.85 45 ⇓P P 16 27 23.8 +0.5
baz=92,SNR=12
V14A **Boquillas Ranc** 91.85 53 ⇓P P 16 27 24.4 +0.9
baz=92,SNR=35
N17A **Moffit Pass** 91.86 47 ⇑P P 16 27 23.3 -0.1
baz=92
SBA **Scott Base** 91.89 175 *e*P P 16 27 24.0 +1.3
SBA pmax pmax
comp=Z,40nm,1.7s,mb5.5
SBA **Scott Base** 91.89 175 *e*P P 16 27 24.0 +1.4
comp=Z,40nm,1.7s,mb5.5
T15A **Red Dirt Ranch** 91.98 51 ⇑P P 16 27 24.4 +0.3
baz=92
W14A **Seligman** 92.00 53 ⇑P P 16 27 24.9 +0.7
baz=92,SNR=7.1
FFC **Flin Flon** 92.02 32 *i*P P 16 27 23.1 -0.7
L18A **Fontenelle, Gr** 92.10 46 ⇑P P 16 27 24.6 +0.1
baz=92,SNR=9.9
TMUT **Trail Mountain** 92.13 49 *e*P P 16 27 25.4 +0.7
comp=Z,7.2nm,1.1s,mb4.9
BW06 **Boulder Array** 92.14 45 ⇓P P 16 27 24.1 -0.5
baz=92,SNR=9.0
PDAR **Pinedale Array** 92.14 45 P P 16 27 24.1 -0.6
comp=Z,2.3nm,0.7s,mb4.6,baz=264,slow=3.0,SNR=20
PDAR LR LR 17 01 35.5
comp=Z,301nm,21.9s,MS4.7,baz=282,slow=31
Z13A **Yuma Proving G** 92.15 55 ⇑P P 16 27 25.2 +0.3
baz=92,SNR=18
O17A **Robinson Place** 92.18 48 ⇑P P 16 27 25.0 +0.1
baz=92,SNR=7.8
113A **Mohawk Valley,** 92.19 56 ⇑P P 16 27 25.2 0.0
baz=92,SNR=8.7
U15A **North Rim** 92.23 52 ⇓P P 16 27 26.0 +0.7
baz=92,SNR=14
M18A **Lyman** 92.25 47 ⇓P P 16 27 24.9 -0.2
baz=92
R16A **Teasdale** 92.26 50 ⇑P P 16 27 25.8 +0.5
baz=92,SNR=6.5
Q16A **Castle Valley** 92.28 49 ⇓P P 16 27 25.7 +0.3
baz=92,SNR=9.6
X14A **Yava** 92.38 54 ⇑P P 16 27 26.8 +0.9
baz=92,SNR=17
P17A **Butcher Ranch,** 92.42 49 ⇑P P 16 27 26.0 0.0
baz=92
Y14A **Wickenburg** 92.45 54 ⇓P P 16 27 26.6 +0.3
baz=92,SNR=6.2
L19A **Farson** 92.51 46 ⇓P P 16 27 26.2 -0.2
baz=92,SNR=14
V15A **Kaibab Nationa** 92.52 52 ⇑P P 16 27 27.3 +0.7
baz=92,SNR=14
K19A **Absolon Red Bu** 92.61 45 ⇑P P 16 27 26.4 -0.5
baz=92
W15A **Williams** 92.64 53 ⇓P P 16 27 28.2 +1.0
baz=92,SNR=9.5
ANN **Anapa** 92.65 317 *e*P P 16 27 31.4 +4.4
ANN pmax pmax
comp=Z,13nm,1.0s,mb5.3
T16A **Glen Canyon Da** 92.66 51 ⇑P P 16 27 27.0 -0.2
baz=92
Z14A **Wintersburg** 92.67 55 ⇑P P 16 27 27.7 +0.4
baz=93
O18A **Roosevelt** 92.68 48 ⇓P P 16 27 27.2 0.0
baz=92
SRU **San Rafael** 92.69 49 ⇓P P 16 27 27.1 -0.2
baz=93,SNR=7.2
SRU **San Rafael** 92.69 49 *e*P P 16 27 27.4 +0.1
SRU pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
SRU **San Rafael** 92.69 49 *e*P P 16 27 27.4 +0.1
comp=Z,6.5nm,0.8s,mb5.1
P18A **Preston Nutter** 92.72 48 ⇓P P 16 27 27.5 0.0
baz=93
R17A **Hanksville Air** 92.79 50 ⇓P P 16 27 27.5 -0.2
baz=93,SNR=14
M19A **Rock Springs** 92.86 46 ⇓P P 16 27 27.8 -0.2
baz=93
X15A **Humboldt** 92.88 54 ⇑P P 16 27 29.0 +0.7
baz=93,SNR=13
LAO **LASA Array** 92.92 41 *e*P P 16 27 28.2 0.0
comp=Z,68nm,1.2s,mb6.0
Y15A **Casa Rosa Ranc** 92.97 54 ⇓P P 16 27 29.2 +0.4
baz=93,SNR=13
S17A **Black Ridge (B** 92.98 50 ⇑P P 16 27 28.1 -0.5
baz=93,SNR=5.1
Q18A **Rafter H Ranch** 92.98 49 ⇑P P 16 27 28.0 -0.6
baz=93
K20A **Yellowstone Ra** 93.02 45 ⇓P P 16 27 28.2 -0.5
baz=93
N19A **John Jarvie Ra** 93.06 47 ⇑P P 16 27 28.1 -0.8
baz=93
T17A **Navajo Res., N** 93.19 51 ⇓P P 16 27 29.7 0.0
baz=93,SNR=6.3
214A **Organ Pipe Nat** 93.20 56 ⇑P P 16 27 30.2 +0.4
baz=93,SNR=9.8
WUAZ **Wupatki** 93.23 53 ⇑P P 16 27 30.5 +0.6
baz=93,SNR=8.5
WUAZ **Wupatki** 93.23 53 *e*P P 16 27 30.6 +0.7
comp=Z,8.9nm,0.9s,mb5.2
W16A **Flagstaff** 93.24 53 ⇑P P 16 27 30.4 +0.5
baz=93
L20A **Wamsutter** 93.25 46 ⇑P P 16 27 29.9 0.0
baz=93
O19A **Miners Draw (B** 93.31 47 ⇑P P 16 27 29.6 -0.5
baz=93
Z15A **Gila River Ind** 93.32 55 ⇑P P 16 27 30.5 +0.1
baz=93
R18A **Canyonlands Na** 93.40 49 ⇑P P 16 27 30.0 -0.6
baz=93,SNR=8.8
U17A **Shonto** 93.42 51 ⇓P P 16 27 30.9 +0.2
baz=93
115A **Sonoran Desert** 93.45 55 ⇑P P 16 27 31.3 +0.4
baz=93
DGMT **Dagmar** 93.46 39 ⇑P P 16 27 29.7 -0.9
baz=93
X16A **Lo Mia Camp, P** 93.53 54 ⇑P P 16 27 32.0 +0.7
baz=93
M20A **Sweetwater, Wa** 93.55 46 ⇑P P 16 27 31.2 0.0
baz=93
S18A **Hurst Farm, Bl** 93.56 50 ⇓P P 16 27 31.0 -0.4
baz=93,SNR=7.9
P19A **Cripple Cowboy** 93.64 48 ⇑P P 16 27 31.8 +0.2
baz=94
V17A **Tonalea, Kykot** 93.64 52 ⇑P P 16 27 32.4 +0.6
baz=94,SNR=11
Q19A **Hogan Spring (** 93.67 49 ⇑P P 16 27 31.3 -0.5
baz=94
Y16A **Circle Bar Ran** 93.67 54 ⇑P P 16 27 32.5 +0.6
baz=94,SNR=16
N20A **Spence Gulch,** 93.73 47 ⇑P P 16 27 32.1 0.0
baz=94
T18A **Mexican Hat** 93.84 51 ⇓P P 16 27 32.2 -0.4
baz=94
W17A **Winslow** 93.88 53 ⇓P P 16 27 33.4 +0.5
baz=94
Z16A **Peralta Trail,** 93.88 55 ⇓P P 16 27 33.5 +0.6
baz=94
R19A **Curley Farm, L** 93.90 49 ⇑P P 16 27 32.5 -0.4
baz=94

116A **Eloy** 93.91 55 ⇑P P 16 27 33.4 +0.3
baz=94
L21A **Rawlins** 93.94 45 ⇓P P 16 27 32.7 -0.3
baz=94
O20A **White River Ci** 94.00 47 ⇓P P 16 27 34.1 +0.8
baz=94
X17A **Forest Lakes** 94.05 53 ⇑P P 16 27 34.9 +1.2
baz=94
M21A **Separation Pea** 94.08 46 ⇓P P 16 27 33.3 -0.4
baz=94
U18A **Rough Rock, Ch** 94.08 51 ⇑P P 16 27 34.1 +0.3
baz=94,SNR=7.4
P20A **De Beque** 94.11 48 ⇑P P 16 27 33.5 -0.3
baz=94
RWWY **Rawlins** 94.16 46 *e*P P 16 27 33.8 -0.2
comp=Z,51nm,1.6s,mb5.7
S19A **Harvey Farm, M** 94.18 50 ⇑P P 16 27 34.1 -0.1
baz=94
Y17A **Roosevelt** 94.23 54 ⇓P P 16 27 34.9 +0.4
baz=94,SNR=7.4
V18A **Ganado** 94.28 52 ⇑P P 16 27 35.0 +0.3
baz=94
N21A **Black Mountain** 94.28 47 ⇑P P 16 27 34.5 -0.1
baz=94
216A **Three Points,** 94.28 56 ⇓P P 16 27 35.3 +0.5
baz=94,SNR=6.5
Q20A **Ridgley Place,** 94.38 48 ⇑P P 16 27 34.9 -0.1
baz=94
PV01 **Paradox Valley** 94.47 49 P P 16 27 34.9 -0.6
comp=Z,630nm,0.7s
O21A **Pagoda** 94.52 47 ⇓P P 16 27 35.2 -0.5
baz=94
L22A **Ellis Ranch, M** 94.56 45 ⇓P P 16 27 36.3 +0.4
baz=94
T19A **Beclabito** 94.58 51 ⇑P P 16 27 36.3 +0.2
baz=94
R20A **Redvale** 94.59 49 ⇑P P 16 27 35.7 -0.4
baz=94
W18A **Petrified Fore** 94.62 52 ⇓P P 16 27 36.6 +0.3
baz=94
U19A **Dine' College,** 94.63 51 ⇓P P 16 27 36.9 +0.7
baz=94
Z17A **San Carlos Hig** 94.65 54 ⇓P P 16 27 37.4 +0.9
baz=94
X18A **Snowflake** 94.66 53 ⇓P P 16 27 36.8 +0.3
baz=94
117A **Oracle** 94.68 55 ⇑P P 16 27 37.2 +0.6
baz=95
TUC **Tucson** 94.73 55 *e*P P 16 27 37.3 +0.5
TUC pmax pmax
comp=Z,22nm,1.8s,mb5.3
TUC **Tucson** 94.73 55 *e*P P 16 27 37.3 +0.5
comp=Z,22nm,1.8s,mb5.3
MVCO **Mesa Verde** 94.84 50 ⇓P P 16 27 37.3 0.0
baz=95
217A **Green Valley** 94.87 56 ⇑P P 16 27 38.2 +0.7
baz=95
W19A **Sanders** 94.90 52 ⇓P P 16 27 38.1 +0.6
baz=95
Q21A **Lamborn Mesa,** 94.95 48 ⇑P P 16 27 37.9 +0.2
baz=95
V19A **Window Rock** 94.95 52 ⇑P P 16 27 38.2 +0.4
baz=95
N22A **Wattenberg Ran** 95.02 46 ⇓P P 16 27 37.3 -0.6
baz=95
U20A **Newcomb** 95.12 51 ⇑P P 16 27 38.9 +0.4
baz=95
R21A **Cimarron** 95.13 49 ⇓P P 16 27 38.7 +0.2
baz=95
X19A **St. Johns** 95.20 53 ⇓P P 16 27 39.5 +0.6
baz=95
S21A **Coal Bank Pass** 95.21 50 ⇑P P 16 27 39.0 +0.1
baz=95
118A **Homack Ranch,** 95.27 55 ⇑P P 16 27 40.1 +0.8
baz=95
RSSD **Black Hills** 95.35 42 *e*P P 16 27 38.8 -0.6
RSSD pmax pmax
comp=Z,22nm,1.3s,mb5.4
RSSD **Black Hills** 95.35 42 *e*P P 16 27 38.8 -0.6
comp=Z,22nm,1.3s,mb5.4
V20A **Brimhall** 95.36 51 ⇑P P 16 27 39.9 +0.2
baz=95
Y19A **Nutrioso** 95.39 53 ⇑P P 16 27 40.9 +1.1
baz=95
Q22A **Crested Butte,** 95.42 48 ⇓P P 16 27 40.1 +0.3
baz=95
218A **Dragoon** 95.43 56 ⇓P P 16 27 40.8 +0.8
baz=95
PHWY **Pilot Hill** 95.52 45 *e*P P 16 27 40.3 +0.1
comp=Z,30nm,1.7s,mb5.5
Z19A **T-Link Ranch,** 95.61 54 ⇑P P 16 27 41.4 +0.5
baz=96
318A **Bisbee** 95.65 56 ⇑P P 16 27 41.8 +0.7
baz=96
119A **Ashpeak Ranch,** 95.76 55 ⇓P P 16 27 42.1 +0.6
baz=96
R22A **Saguache, Gunn** 95.77 49 ⇓P P 16 27 41.8 +0.4
baz=96
X20A **Quemado** 95.78 53 ⇓P P 16 27 42.6 +1.0
baz=96
V21A **Milan** 95.99 51 ⇓P P 16 27 42.6 +0.1
baz=96
219A **White Tail Can** 96.05 55 ⇓P P 16 27 43.5 +0.6
baz=96
Y20A **Horse Springs,** 96.09 53 ⇑P P 16 27 43.9 +0.9
baz=96
T22A **Edith** 96.11 50 ⇑P P 16 27 43.1 +0.1
baz=96
Z20A **Nine Sixteen R** 96.20 54 ⇑P P 16 27 44.3 +0.8
baz=96
W21A **San Fidel** 96.23 52 ⇓P P 16 27 44.1 +0.5
baz=96
319A **Douglas** 96.24 56 ⇑P P 16 27 44.3 +0.6
baz=96
120A **U Bar Ranch, L** 96.36 55 ⇓P P 16 27 45.1 +0.8
baz=96
X21A **Alamocita Cree** 96.36 53 ⇑P P 16 27 44.8 +0.6
baz=96
Y21A **Point of Rocks** 96.61 53 ⇑P P 16 27 46.2 +0.9
baz=96
220A **Playas Peak, P** 96.67 55 ⇓P P 16 27 46.2 +0.5
baz=97
Z21A **St. Cloud Mine** 96.86 54 ⇓P P 16 27 47.6 +1.1
baz=97
320A **Kipp Ranch, An** 96.86 56 ⇓P P 16 27 47.4 +0.8
baz=97
SDCO **Great Sand Dun** 96.86 49 *e*P P 16 27 46.4 -0.1
comp=Z,9.4nm,1.7s,mb4.9
121A **Cones Peak, D** 97.04 54 ⇓P P 16 27 48.2 +0.8
baz=97
Y22A **Socorro** 97.18 53 ⇑P P 16 27 48.9 +0.9
baz=97
BRTR **Keskin Array B** 97.21 314 P P 16 27 47.4 -0.6
comp=Z,0.3nm,0.5s,mb4.0,baz=32,slow=3.6,SNR=2.8
NOA **NORSAR Array B** 97.26 339 P P 16 27 46.0 -1.7
comp=Z,0.4nm,0.6s,mb4.0,baz=50,slow=4.2,SNR=2.5
Z22A **Elephant Butte** 97.43 53 ⇑P P 16 27 49.8 +0.7
baz=97
ULM **Lac du Bonnet** 97.44 34 LR LR 17 14 58.1
comp=Z,209nm,18.2s,MS4.7,baz=311,slow=37
ASF **Jabal al Asfar** 97.63 306 LR LR 17 15 08.0
comp=Z,100nm,19.9s,MS4.3,baz=357,slow=37
Y23A **Lovelace Mesa,** 97.89 52 ⇓P P 16 27 51.7 +0.6
baz=98
W24A **Lazy 6 Ranch,** 97.90 51 ⇑P P 16 27 51.6 +0.4
baz=98
Z23A **Rita Site, Whi** 98.00 53 ⇑P P 16 27 52.2 +0.6
baz=98
U25A **Circle Dot Ran** 98.19 50 ⇓P P 16 27 52.7 +0.2
baz=98
V25A **Rancho No Teng** 98.26 50 ⇓P P 16 27 53.1 +0.4
baz=98
MMAI **Mount Meron Ar** 98.50 307 LR LR 17 18 01.3
comp=Z,132nm,20.5s,MS4.4,baz=90,slow=39
W25A **X Bar L Ranch,** 98.61 51 ⇓P P 16 27 54.8 +0.4
baz=98
Z24A **Sheeppen Canyo** 98.64 53 ⇑P P 16 27 55.0 +0.5
baz=98
U26A **Atchley Ranch,** 98.69 49 ⇓P P 16 27 54.8 +0.2
baz=98
124A **Stringfield Ra** 98.81 53 ⇓P P 16 27 56.0 +0.7
baz=99
Y25A **Mesa, Roswell** 98.94 52 ⇑P P 16 27 56.3 +0.4
baz=99
224A **Corundas Mount** 98.99 54 ⇑P P 16 27 56.5 +0.4
baz=99
MAW **Mawson** 99.20 203 LR LR 17 11 39.6
comp=Z,371nm,19.2s,MS4.9,baz=83,slow=35

324A **Moseley Ranch,** 99.26 55 ⇑P P 16 27 57.5 +0.1
baz=99
X26A **CR and CF Fran** 99.37 51 ⇓P P 16 27 57.8 +0.1
baz=99
125A **Gardner Draw,** 99.45 53 ⇑P P 16 27 58.7 +0.5
baz=99
325A **Bean Ranch, Si** 99.69 55 ⇓P Pdif 16 27 59.2 +0.5
baz=100
425A **Indio Mountain** 99.89 55 ⇑P Pdif 16 28 00.9 +1.3
baz=100
TXAR **Lajitas Array** 101.50 56 P Pdif 16 28 07.3 +0.6
comp=Z,0.2nm,0.5s,baz=289,slow=3.8,SNR=6.1
TXAR PP PP 16 32 15.4 -2.1
comp=Z,0.7nm,1.0s,baz=269,slow=5.0,SNR=3.6
TXAR **Lajitas Array** 101.50 56 P Pdif 16 28 07.3 +0.6
TXAR PP PP 16 32 15.4 -2.1
627A **Terlingua Ranc** 101.68 56 ⇓P Pdif 16 28 08.6 +1.0
baz=102
QSPA **South Pole Qui** 103.20 180 Pdiff Pdif 16 28 15.4 +1.1
comp=Z,0.8nm,0.8s,baz=259,slow=3.0,SNR=7.6
CLL **Collm** 103.23 331 *e*P Pdif 16 28 12.0 -2.4
CLL *e* 16 32 25.0
CLL MLR MLR
comp=Z,400nm,21.0s,MS4.9
CLL **Collm** 103.23 331 *e*Pdif Pdif 16 28 12.0 -2.4
CLL *e*PP PP 16 32 25.0 -4.5
CLL *e*SKSac SKSac 16 38 48.0 -1.7
CLL *e*SP SP 16 41 27.0 -5.2
CLL *e*PPS 16 42 35.0
CLL *e* 16 52 42.0
MCWV **Mont Chateau** 112.84 36 *e*PKiKP PKiKP 16 32 52.2 +0.2
LSZ **Lusaka** 118.79 260 *e*PKIKP PKPdf 16 33 04.2 +0.2
EANR **'Ain N'Sour** 120.18 326 P Pdif 16 29 30.0 +0.2
BOSA **Boshof** 122.14 245 PKP PKPdf 16 33 09.6 -0.6
comp=Z,4.4nm,0.9s,baz=133,slow=0.8,SNR=4.9
BOSA **Boshof** 122.14 245 PKP PKPdf 16 33 09.6 -0.6
TSUM **Tsumeb** 129.20 256 PKP PKPdf 16 33 23.9 +0.1
comp=Z,3.2nm,0.8s,baz=103,slow=7.1,SNR=6.3
TORD **Torodi Ar. Bea** 134.98 304 PKhKP 16 33 28.2
comp=Z,0.4nm,0.7s,baz=58,slow=3.4,SNR=2.4
TORD PKP PKPdf 16 33 33.9 -1.0
comp=Z,2.8nm,0.8s,baz=27,slow=2.1,SNR=12
TORD SKPbc SKPbc 16 36 59.5 -1.5
comp=Z,8.4nm,1.0s,baz=51,slow=2.5,SNR=18
TORD **Torodi Ar. Bea** 134.98 304 PKP 16 33 28.2
TORD PKP PKPdf 16 33 33.9 -1.0
TORD SKPbc SKPbc 16 36 59.5 -1.5
PLCA **Paso Flores** 138.77 138 PKP PKPdf 16 33 39.2 -2.0
comp=Z,6.9nm,1.1s,baz=77,slow=2.3,SNR=5.5
PLCA SKPbc SKPbc 16 37 14.4 +3.0
comp=Z,2.5nm,0.8s,baz=252,slow=3.2,SNR=4.2
DBIC **Dimbokro** 143.93 302 PKP PKPdf 16 33 48.2 -3.1
comp=Z,4.7nm,0.4s,baz=55,slow=3.5,SNR=26
KIC **Kosan Boka** 144.00 301 *e*PKP1 PKPdf 16 33 48.3 -3.1
comp=Z,28nm,0.8s
TIC **Toumodi** 144.08 302 *e*PKP1 PKPdf 16 33 48.5 -3.1
comp=Z,14nm,0.2s
LIC **Lamto** 144.31 301 *e*PKP1 PKPdf 16 33 49.4 -2.6
comp=Z,58nm,0.7s
BBTS **Babate** 146.61 326 PKPbc PKPbc 16 33 56.3 -1.1
comp=Z,11nm,0.3s,baz=57,slow=1.1,SNR=3.4
LPAZ **La Paz** 148.00 99 PKPbc PKPbc 16 33 59.1 -2.1
comp=Z,16nm,0.8s,baz=287,slow=2.8,SNR=29
LPAZ **La Paz** 148.00 99 *e*PKPdf PKPdf 16 33 58.4 +0.4
CPUP **Villa Florida** 155.52 125 PKPbc PKPdf 16 34 18.0 +8.9
comp=Z,0.9nm,0.5s,baz=359,slow=5.2,SNR=3.0
CPUP PKPab PKPab 16 34 34.0 -1.1
comp=Z,2.8nm,0.6s,baz=216,slow=4.7,SNR=6.1
CPUP **Villa Florida** 155.52 125 PKPbc PKPdf 16 34 18.0 +8.9
CPUP PKPab PKPab 16 34 34.0 -1.1

IDC ***28*** *16:24:55.0±0.9, 31°.01N×142°.79E, h0km, mb3.9/11, mb1 4.0/15, mb1mx3.9/25, mbtmp4.0/15, ML3.8/4, MS4.5/2, Ms1 4.5/2, ms1mx3.4/40, Error ellipse: s-maj=27.1km s-min=19.7km az=53.0*
JMA ***28*** *16:24:55.2±0.2, 30°.85N×142°.85E, h46km, M4.5*
MOS ***28*** *16:24:56.7±1.2, 31°.15N×142°.95E, h25km, mb4.2/11, Error ellipse: s-maj=25.1km s-min=8.9km az=113.1*
NEIC ***28*** *16:24:56.6±0.7, 31°.05N×142°.88E, h10km, mb4.3/1, Error ellipse: s-maj=17.9km s-min=12.5km az=67.0*
ISCJB ***28*** *16:24:58.8±1.5, 31°.14N±0°.05×142°.75E±0°.08, h33km±11km, mb3.9/13, MS4.6/2, Error ellipse: s-maj=13.3km s-min=6.3km az=148.6*
BJI ***28*** *16:24:59.3, 31°.12N×141°.96E, h10km, mB4.8/4, mb4.3/7, Ms4.4/2, Ms7 4.2/2*
ISC 28 16:25:00.0±1.5, 31°.10N±0°.05×142°.78E±0°.08, h30km±12km, n58, σ1°12/77, mb3.9/13, MS4.6/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.22**	**309**		P		**Pn**	**16 25 47.5**	**-1.0**
JHJ2					*e*S		**Sn**	**16 26 24.4**	**-1.5**
JHJ	**Hachijo jima 2**	**3.25**	**309**		Pn		**Pn**	**16 25 47.5**	**-1.4**
	24nm,0.3s,baz=84,slow=14,SNR=22								
JHJ					Sn		**Sn**	**16 26 24.5**	**-2.0**
	78nm,0.3s,baz=67,slow=21,SNR=9.3								
BSO1	**Boso 1**	**3.86**	**337**		P		**Pn**	**16 25 56.9**	**-0.4**
BSO1					S		**Sn**	**16 26 43.8**	**+2.2**
CBIJ	**Chichi jima**	**4.02**	**188**		P		**Pn**	**16 25 52.1**	**-7.4**
CBIJ					S		**Sn**	**16 26 31.9**	**-14**
CBIJ	**Chichi jima**	**4.02**	**188**		Pn		**Pn**	**16 25 52.9**	**-6.6**
	5.3nm,0.3s,baz=284,slow=21,SNR=8.7								
CBIJ					Sn		**Sn**	**16 26 31.9**	**-14**
	24nm,0.3s,baz=272,slow=22,SNR=9.2								
BSO2	**Boso 2**	**4.02**	**335**		S		**Sn**	**16 26 47.9**	**+2.2**
BSO3	**Boso 3**	**4.16**	**333**		P		**Pn**	**16 26 02.8**	**+1.3**
BSO3					*e*S		**Sn**	**16 26 51.3**	**+2.2**
BSO4	**Boso 4**	**4.39**	**333**		P		**Pn**	**16 26 04.5**	**-0.2**
BSO4					S		**Sn**	**16 26 55.8**	**+1.0**
JOD2	**Odawara 2**	**5.18**	**324**		P		**Pn**	**16 26 16.2**	**+0.7**
JOD2					*e*S		**Sn**	**16 27 12.3**	**-2.0**
JYT	**Yasato**	**5.55**	**338**		P		**Pn**	**16 26 21.0**	**+0.4**
JYT					S		**Sn**	**16 27 24.2**	**+0.8**
JHU	**Hanno**	**5.57**	**329**		P		**Pn**	**16 26 21.0**	**+0.1**
JHU					S		**Sn**	**16 27 23.1**	**-0.8**
HMMJ	**Hamamatsu 2**	**5.67**	**313**		P		**Pn**	**16 26 23.7**	**+1.5**
JHO	**Hitachi**	**5.80**	**342**		P		**Pn**	**16 26 23.7**	**-0.3**
JHO					S		**Sn**	**16 27 28.5**	**-1.0**
JRY	**Ryogami san**	**5.88**	**328**		P		**Pn**	**16 26 25.8**	**+0.7**
JRY					S		**Sn**	**16 27 32.1**	**+0.7**
JNY	**Yasuok**	**5.92**	**317**		P		**Pn**	**16 26 27.6**	**+1.9**
JAG	**Ashikaga**	**5.99**	**333**		P		**Pn**	**16 26 26.6**	**-0.1**
JAG					*e*S		**Sn**	**16 27 33.3**	**-1.0**
JIE	**Ise**	**6.08**	**304**		P		**Pn**	**16 26 28.5**	**+0.6**
JFK	**Kawauchi**	**6.45**	**346**		P		**Pn**	**16 26 31.9**	**-1.0**
JFK					*e*S		**Sn**	**16 27 42.0**	**-3.5**
MJAR	**Matsushiro Arr**	**6.63**	**326**		Pn		**Pn**	**16 26 35.7**	**+0.3**
	5.4nm,0.3s,baz=164,slow=11,SNR=43								
MJAR					Sn		**Sn**	**16 27 49.5**	**-0.5**
	1.5nm,0.3s,baz=146,slow=19,SNR=6.9								
MJAR	**Matsushiro Arr**	**6.63**	**326**		P		**Pn**	**16 26 35.7**	**+0.3**
MJAR								16 27 49.5	
MJAR					pmax		pmax		
	comp=Z,5.0nm,0.3s								
MJAR					smax				
	comp=N,2.0nm,0.3s								
MJAR	**Matsushiro Arr**	**6.63**	**326**		Pn		**Pn**	**16 26 35.7**	**+0.3**
MJAR					Sn		**Sn**	**16 27 49.5**	**-0.5**
MAJO	**Matsushiro**	**6.63**	**326**		*e*P		**Pn**	**16 26 35.9**	**+0.5**
MAJO					pmax		pmax		
	comp=Z,24nm,0.5s								
MAJO	**Matsushiro**	**6.63**	**326**		*e*Pn		**Pn**	**16 26 35.9**	**+0.5**
	comp=Z,24nm,0.5s								
MAT	**Matsushiro**	**6.63**	**326**		P		**Pn**	**16 26 35.9**	**+0.5**
MAT					S		**Sn**	**16 27 49.7**	**-0.3**
MAT	**Matsushiro**	**6.63**	**326**		P		**Pn**	**16 26 36.3**	**+0.9**
MAT					S		**Sn**	**16 27 50.7**	**+0.7**
JMK	**Ichinoseki**	**7.94**	**351**		P		**Pn**	**16 26 52.8**	**-0.6**
JMK					*e*S		**Sn**	**16 28 18.9**	**-3.3**
ERM	**Erimo**	**10.90**	**1**		*e*P		**Pn**	**16 27 31.5**	**-2.4**
ASAJ	**Asahikawa**	**13.00**	**359**		Pn		**Pn**	**16 28 00.7**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=195,slow=10,SNR=7.3								
ASAJ					Sn		**Sn**	**16 30 21.1**	**-5.0**
	comp=Z,0.5nm,0.3s,baz=252,slow=20,SNR=5.2								
ASAJ	**Asahikawa**	**13.00**	**359**		P		**Pn**	**16 28 00.7**	**-1.9**
ASAJ								16 30 21.1	
ASAJ					pmax		pmax		
	comp=Z,1.0nm,0.3s								
ASAJ					smax				
	comp=N,1.0nm,0.3s								
KSRS	**Korea Array**	**13.82**	**301**		Pn		**Pn**	**16 28 14.2**	**+0.4**
	comp=N,0.2nm,0.3s,baz=50,slow=38,SNR=4.5								

KLR	Kul'dur	19.94	338	*e*P	Pn	16 29 29.7	-1.5
HIA	Hailar	25.12	323	*e*P	P	16 30 22.9	+0.8
HIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HIA	Hailar	25.12	323	*e*P	P	16 30 22.9	+0.7
	comp=Z,3.2nm,0.4s,mb4.2						
SONM	Songino Array	32.32	312	P	P	16 31 27.9	+1.6
	comp=Z,2.6nm,0.8s,mb4.1,baz=120,slow=8.1,SNR=13						
SONM	Songino Array	32.32	312	P	P	16 31 27.9	+1.6
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	41.31	353	*e*P	P	16 32 42.9	+0.5
ZALV	Zalesovo Beam	46.88	317	P	P	16 33 26.8	-0.5
	comp=Z,0.5nm,0.4s,mb3.8,baz=98,slow=9.1,SNR=3.9						
ZALV				PcP	PcP	16 34 59.1	-0.6
	comp=Z,1.3nm,0.6s,baz=110,slow=3.6,SNR=5.3						
ZALV	Zalesovo Beam	46.88	317	P	P	16 33 26.8	-0.5
ZALV						16 34 59.1	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
MKAR	Makanchi Array	48.41	307	P	P	16 33 39.5	+0.1
	comp=Z,1.7nm,0.5s,mb4.3,baz=86,slow=11,SNR=15						
MKAR	Makanchi Array	48.41	307	P	P	16 33 39.5	+0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	48.41	307	P	P	16 33 39.5	+0.1
ASAR	Alice Springs	55.11	190	P	P	16 34 28.2	-1.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=7.2,slow=6.8,SNR=17						
BVAR	Borovoye Array	55.51	316	P	P	16 34 32.1	+0.1
	comp=Z,0.9nm,0.5s,mb4.1,baz=96,slow=9.6,SNR=5.2						
BVAR	Borovoye Array	55.51	316	P	P	16 34 32.1	+0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	68.40	29	P	P	16 35 58.5	0.0
	comp=Z,0.5nm,0.5s,mb3.8,baz=293,slow=6.2,SNR=2.9						
YKA	Yellowknife Ar	68.40	29	P	P	16 35 58.5	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	74.61	334	P	P	16 36 35.7	-0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=63,slow=5.3,SNR=3.4						
FINES	FINESS Array B	74.61	334	P	P	16 36 35.7	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	Mina Array Bea	77.66	53	P	P	16 36 55.0	+1.2
	comp=Z,0.3nm,0.5s,mb3.5,baz=275,slow=5.3,SNR=3.0						
AKASG	Malin Array Be	79.71	324	P	P	16 37 04.1	-0.7
	comp=Z,0.7nm,0.4s,mb3.9,baz=53,slow=5.4,SNR=4.0						
AKASG	Malin Array Be	79.71	324	P	P	16 37 04.1	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	NORSAR Array B	80.10	338	P	P	16 37 06.8	+0.1
	comp=Z,0.8nm,0.8s,mb3.7,baz=40,slow=5.3,SNR=3.1						
NOA				LR	LR	17 18 58.9	
	comp=Z,159nm,18.7s,MS4.4,baz=20,slow=40						
NOA	NORSAR Array B	80.10	338	P	P	16 37 06.8	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,159nm,18.7s						
BRTR	Keskin Array B	83.67	313	P	P	16 37 26.1	+0.1
	comp=Z,1.9nm,0.9s,mb4.2,baz=98,slow=4.5,SNR=7.8						
BRTR	Keskin Array B	83.67	313	P	P	16 37 26.1	+0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	88.36	329	LR	LR	17 22 02.2	
	comp=Z,339nm,18.4s,MS4.8,baz=58,slow=39						
TXAR	Lajitas Array	92.80	53	P	P	16 38 14.1	+4.1
	comp=Z,0.5nm,0.9s,mb4.0,baz=321,slow=1.3,SNR=3.4						
TXAR	Lajitas Array	92.80	53	P	P	16 38 14.1	+4.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

ISC 28 16:31:57.7±2.3, 39°.2N±0°.2×75°.29E±0°.08, h10km, n10, σ0°45/14, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.60	62		Pg	Pg	16 32 09.0	-0.3
KSH					Sg	Sg	16 32 17.0	-0.1
KSH					smax			
	comp=N,3μm,0.4s							
KSH					smax			
	comp=E,1μm,0.2s							
KZA	Kyzart	2.83	359	P		Pn	16 32 43.5	+0.4
	SNR=11							
UCH	Uchtor	3.04	349	P		Pn	16 32 46.1	+0.2
	SNR=18							
AML	Almayashu	3.13	338	P		Pn	16 32 46.9	-0.3
	SNR=7.5							
KBK	Karagaybulak	3.42	356	P		Pn	16 32 56.7	+5.7
	SNR=5.9							
AAK	Ala-Archa	3.44	350	P		Pn	16 32 51.8	+0.4
	SNR=13							
EKS2	Erkin-Say	3.60	342	P		Pn	16 32 59.0	+5.4
	SNR=5.3							
TKM2	Tokmak 2	3.68	3	⇓Pn		Pn	16 32 54.9	+0.3
	comp=E,7.7nm,0.5s							
TKM2				⇑Sn		Sn	16 33 37.8	-0.4
	comp=E,20nm,0.6s							
TKM2	Tokmak 2	3.68	3	P		Pn	16 32 55.6	+0.9
	SNR=19							
KK31	Karatay Array	5.28	318	⇑Pn		Pn	16 33 15.8	-0.8
	comp=E,0.3nm,0.3s,baz=128,slow=13,SNR=18							
KK31				⇓Pg		Pg	16 33 26.7	-12
	comp=E,4.1nm,0.7s,baz=136,slow=15,SNR=21							
KK31				⇑Sn		Sn	16 34 07.4	-10
	comp=E,2.8nm,0.5s,baz=126,slow=24,SNR=4.6							
KK31				⇑Lg			16 34 21.0	
	comp=E,4.3nm,0.5s,baz=128,slow=29,SNR=6.1							

*IDC **28** 16:37:33.4±2.4, 10°.11N×126°.26E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.7/4, Error ellipse: s-maj=155.3km s-min=24.8km az=68.0*
*ISCJB **28** 16:37:41.0±1.4, 10°.02N±0°.06×126°.3E±0°.1, h75km±13km, mb3.7/3, Error ellipse: s-maj=20.1km s-min=9.1km az=161.2*
*MAN **28** 16:37:41, 10°.06N×126°.20E, h27km, mb5.1, ML4.1, MS4.2*

ISC 28 16:37:42.3±1.4, 10°.01N±0°.06×126°.3E±0°.1, h66km±14km, n17, σ0°87/20, mb3.7/3, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.21	211	*e*P		Pn	16 38 01.7	-1.6
BUTP				*e*S		Sn	16 38 18.7	-0.3
MSLP	Maasin	1.38	275	*e*P		Pn	16 38 04.3	-1.2
LLP	Lapu-Lapu	2.28	278	⇓*i*P		Pn	16 38 17.6	0.0
LLP				*i*S		Sn	16 38 43.6	-0.9
TBP	Tagbilaran	2.38	263	*e*P		Pn	16 38 19.1	+0.1
BUKP	Musuan	2.42	209	*e*P		Pn	16 38 20.8	+1.2
CNP	Catarman	2.94	328	*e*P		Pn	16 38 25.7	-0.9
SNPH	Sibulan	3.05	258	⇓*e*P		Pn	16 38 29.0	+0.8
SNPH				*i*S		Sn	16 39 12.9	+9.4
PAGZ	Pagadian	3.56	233	*e*P		Pn	16 38 35.7	+0.6
GUIM	Jordan	3.66	280	*e*P		Pn	16 38 36.6	+0.1
RCP	Roxas	3.78	294	⇑*e*P		Pn	16 38 40.7	+2.6
PVCP	Virac	4.12	330	*e*P		Pn	16 38 43.4	+0.6
CUYO	Cuyo Island	5.22	280	*e*P		Pn	16 38 58.1	+0.3
ENPP	El Nido	6.82	281	*e*P		Pn	16 39 20.2	+0.4
FITZ	Fitzroy Crossi	27.94	181	P		P	16 43 26.4	-0.1
	1.4nm,0.6s,mb3.6,baz=0.0,slow=1.0,SNR=3.8							
ASAR	Alice Springs	34.29	167	P		P	16 44 22.1	-0.3
	0.2nm,0.4s,baz=353,slow=6.9,SNR=16							
STKA	Stephens Creek	44.16	161	P		P	16 45 45.0	+0.4
	0.7nm,0.4s,mb3.7,baz=0.0,slow=13,SNR=4.0							
MKAR	Makanchi Array	52.23	323	P		P	16 46 45.6	-1.0
	0.7nm,0.7s,mb3.8,baz=117,slow=7.9,SNR=8.6							

*ISCJB **28** 16:41:37.8±0.7, 36°.68N±0°.04×22°.59E±0°.04, h6km±5km, Error ellipse: s-maj=7.3km s-min=4.5km az=41.2*
*ATH **28** 16:41:37.2, 36°.62N×22°.64E, h16km±2km, MD3.5/7*
*CSEM **28** 16:41:38.0±0.3, 36°.69N×22°.61E, h2km, MD3.5, Error ellipse: s-maj=6.4km s-min=4.6km az=33.0*
*THE **28** 16:41:40.6, 36°.70N×22°.46E, h25km±1km, ML3.3/3, Error ellipse: s-maj=2.3km s-min=0.7km az=259.0*

ISC 28 16:41:38.4±0.7, 36°.69N±0°.04×22°.61E±0°.04, h8km±5km, n29, σ0°94/45, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VLI	Veliai	0.26	84	*e*PB		Pg	16 41 43.1	-0.5
VLI				*e*SB		Sg	16 41 47.1	0.0
VLI	Veliai	0.26	84	*e*Pb		Pg	16 41 43.1	-0.5
VLI				*e*Sb		Sg	16 41 47.1	0.0
KYTH	Kithira	0.53	140	*e*PB		Pg	16 41 46.4	-2.3
VLX	Vlachokerasia	0.70	345	*e*PN		Pg	16 41 52.2	+0.3
VLX	Vlachokerasia	0.70	345	P		Pg	16 41 53.4	+1.5
VLX				S		Sg	16 42 03.2	+2.1
VLX	Vlachokerasia	0.70	345	*e*Pn		Pg	16 41 52.2	+0.3
VLX	Vlachokerasia	0.70	345	P		Pg	16 41 53.4	+1.5
VLX				S		Sg	16 42 03.2	+2.1
PYL	PYLOS	0.73	287	*e*PN		Pg	16 41 52.0	-0.3
PYL	PYLOS	0.73	287	P		Pg	16 41 52.5	+0.2
PYL				S		Sg	16 42 01.6	-0.2
PYL	PYLOS	0.73	287	*e*Pn		Pg	16 41 52.0	-0.3
PYL	PYLOS	0.73	287	P		Pg	16 41 52.5	+0.2
PYL				S		Sg	16 42 01.6	-0.2
ITM	Ithomi	0.73	312	*e*PN		Pg	16 41 52.9	+0.4
ITM	Ithomi	0.73	312	P		Pg	16 41 52.7	+0.2
ITM				S		Sg	16 42 01.8	-0.2
ITM	Ithomi	0.73	312	P		Pg	16 41 52.7	+0.2
ITM	Ithomi	0.73	312	*e*Pn		Pg	16 41 52.9	+0.4
ITM				S		Sg	16 42 01.8	-0.2
GUR	Goura	1.26	350	*e*PN		Pn	16 42 02.4	+0.1
GUR	Goura	1.26	350	P		Pn	16 42 01.8	-0.5
GUR				S		Sb	16 42 17.5	-1.3
GUR	Goura	1.26	350	P		Pn	16 42 01.8	-0.5
GUR	Goura	1.26	350	*e*Pn		Pn	16 42 02.4	+0.1
GUR				S		Sb	16 42 17.5	-1.3
LTK	Loutraki	1.36	12	*e*PN		Pn	16 42 03.6	0.0
LTK	Loutraki	1.36	12	P		Pn	16 42 04.0	+0.4
LTK				S		Sb	16 42 22.1	+0.5
LTK	Loutraki	1.36	12	*e*Pn		Pn	16 42 03.6	0.0
LTK	Loutraki	1.36	12	P		Pn	16 42 04.0	+0.4
LTK				S		Sb	16 42 22.1	+0.5
KARN	Karanos	1.67	140	P		Pn	16 42 08.8	+1.0
KARN				S		Sn	16 42 30.7	+1.3
KARN	Karanos	1.67	140	P		Pn	16 42 08.8	+1.0
KARN				S		Sn	16 42 30.7	+1.3
DSF	Desfina	1.72	358	P		Pn	16 42 08.6	0.0
DSF				S		Sn	16 42 29.6	-1.1
DSF	Desfina	1.72	358	P		Pn	16 42 08.6	0.0
DSF				S		Sn	16 42 29.6	-1.1
KALE	Kalithea	1.74	348	P		Pn	16 42 08.4	-0.4
KALE	Kalithea	1.74	348	P		Pn	16 42 08.4	-0.4

*ISCJB **28** 16:41:58.1±0.5, 39°.02N±0°.02×140°.59E±0°.03, h9km±3km, mb4.5/94, MS4.1/14, Error ellipse: s-maj=3.9km s-min=2.9km az=41.9*
*IDC **28** 16:41:58.3±0.5, 39°.09N×140°.53E, h0km, mb4.4/28, mb1 4.5/31, mb1mx4.4/36, mbtmp4.4/31, ML3.8/3, MS3.8/8, Ms1 3.8/8, ms1mx3.5/37, Error ellipse: s-maj=15.0km s-min=11.4km az=115.0*
*BJI **28** 16:41:58.1, 39°.02N×140°.78E, h21km, mB5.0/20, mb4.6/30, Ms4.4/24, Ms7 4.1/25*
*JMA **28** 16:41:58.5±0.1, 38°.99N×140°.58E, h1km±1km, M4.8 Broadband fault plane solution: P waves. NP1: φs157.00000°, δ83.00000°, λ0.00000°. NP2:φs67.00000°, δ90.00000°, λ173.00000°. Principal axes: T Plg5.0000°, Azm22.0000°; N Plg83.0000°, Azm247.0000°; P Plg5.0000°, Azm112.0000°;*
JMA Felt III J1.
*NEIC **28** 16:41:59.3±2.3, 39°.09N×140°.51E, h4km±14km, mb4.7/46, MW4.5(NIED) Error ellipse: s-maj=6.8km s-min=4.4km az=145.0*
NEIC Recorded [3 JMA] in Akita; [2 JMA] in Miyagi and Yamagata; [1 JMA] in Iwate.
*MOS **28** 16:41:59.4±1.2, 39°.11N×140°.52E, h16km, mb4.8/49, Error ellipse: s-maj=9.2km s-min=5.0km az=99.6*
*NIED **28** 16:42:00, 39°.00N×140°.60E, h5km, Mw4.5 Best double couple: M0:6.02000×10^15 NP1:φs168.00000°, δ74.00000°, λ18.00000°. NP2:φs73.00000°, δ73.00000°, λ163.00000°.*
*SZGRF **28** 16:42:10.3, 39°.90N×139°.89E, h33km, mb4.6, MS4.8, Near west coast of eastern Honshu, Japan*

ISC 28 16:41:58.8±0.4, 39°.01N±0°.02×140°.60E±0°.03, h3km±3km, n218, σ1°.02/234, mb4.5/94, MS4.1/14, 18C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYK	Kaneyama	0.21	246	⇓P		Pg	16 42 02.4	-0.4
JYK				S		Sg	16 42 05.2	-0.4
JRG	Rokugo	0.39	3	⇑P		Pg	16 42 06.7	+0.4
JRG				S		Sg	16 42 12.9	+1.5
JMK	Ichinoseki	0.48	96	⇓P		Pg	16 42 08.0	-0.1
JMK				S		Sg	16 42 14.7	+0.4
JOU	Okura	0.64	176	⇑P		Pg	16 42 10.8	-0.3
JOU				*e*S		Sg	16 42 19.3	-0.1
JOM	Ohasama	0.71	49	⇑P		Pg	16 42 12.4	0.0
JOM				*e*S		Sg	16 42 22.2	+0.6
JIO	Ouri	0.80	133	⇓P		Pg	16 42 13.5	-0.7
JIO				*e*S		Sg	16 42 24.8	+0.3
JYA	Atsumi	0.81	240	⇑P		Pg	16 42 13.5	-0.8
JYA				S		Sg	16 42 24.3	-0.5
JYS	Shiratake	0.89	208	⇑P		Pg	16 42 15.1	-0.7
JYS				*e*S		Sg	16 42 26.9	-0.5
MAJO	Matsushiro	3.11	218	⇑*e*P		Pn	16 42 48.8	+0.1
MAT	Matsushiro	3.11	218	P		Pn	16 42 48.8	+0.1
MAT				S		Sn	16 43 22.7	-3.7
MJAR	Matsushiro Arr	3.11	218	Pn		Pn	16 42 48.9	+0.2
	13nm,0.3s,baz=27,slow=14,SNR=150							
MJAR				Lg			16 43 37.5	
	2.5nm,0.3s,baz=16,slow=23,SNR=2.9							
MJAR				LR		LR	16 44 03.2	
	comp=Z,2μm,21.0s,baz=50,slow=40							
ERM	Erimo	3.58	32	*e*P		Pn	16 42 56.3	+1.1
ASAJ	Asahikawa	5.32	16	Pn		Pn	16 43 20.8	+1.6
	3.1nm,0.3s,baz=218,slow=16,SNR=32							
ASAJ	Asahikawa	5.32	16	P		Pn	16 43 20.8	+1.7
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
JHJ	Hachijo jima 2	5.91	187	Pn		Pn	16 43 27.7	+0.4
	comp=Z,21nm,0.3s,baz=30,slow=16,SNR=5.1							
JHJ				Sn		Sn	16 44 37.9	+2.4
	comp=Z,4.8nm,0.3s,baz=217,slow=20,SNR=2.0							
YUK	Yuzh-Kuril'sk	6.39	36	*e*P		Pn	16 43 32.1	-1.7
YUK				*e*S		Sn	16 44 44.3	-2.9
YUK				pmax	pmax			
	comp=Z,230nm,0.6s							
YUK				pmax	pmax			
	comp=N,130nm,0.5s							
YUK				smax				
	comp=E,480nm,0.9s							
YUK				smax				
	comp=N,200nm,0.6s							
YUK				MLR	MLR			
	comp=Z,3μm,16.0s							
YUK				MLR	MLR			
	comp=E,5μm,17.0s							
YSS	Yuzh-Sakhalins	8.10	11	*e*P		Pn	16 43 58.3	+1.0
YSS				*e*S		Sn	16 45 30.0	+0.7
YSS				pmax	pmax			
	comp=Z,30nm,0.9s							
YSS				MLR	MLR			
	comp=N,900nm,12.0s							
YSS				MLR	MLR			
	comp=Z,700nm,12.0s							
YSS				MLR	MLR			
	comp=E,800nm,14.0s							
YSS	Yuzh-Sakhalins	8.10	11	P		Pn	16 43 57.4	+0.1
	comp=E,18nm,0.7s							
KSRS	Korea Array	10.10	265	Pn		Pn	16 44 26.9	+2.2
	comp=E,1.4nm,0.3s,baz=76,slow=14,SNR=37							
KSRS				Sn		Sn	16 46 21.2	+2.7
	comp=E,1.5nm,0.3s,baz=76,slow=24,SNR=11							
KSRS				LR		LR	16 47 55.4	
	comp=E,342nm,18.7s,baz=257,slow=35							
KSRS	Korea Array	10.10	265	P		Pn	16 44 27.0	+2.3
KSRS							16 46 21.2	
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KSRS				smax				
	comp=N,2.0nm,0.3s							
KSRS				MLR	MLR			
	comp=Z,343nm,18.7s							
HABR	Khabarovsk	10.28	339	*e*P		Pn	16 44 29.2	+2.1
HABR				*e*			16 46 23.4	
HABR				MLR	MLR			
	comp=Z,314nm,13.0s							
CBIJ	Chichi jima	11.95	173	LR		LR	16 49 24.9	
	comp=Z,497nm,19.9s,baz=35,slow=37							
KLR	Kul'dur	12.03	331	*e*P		Pn	16 44 50.2	-0.9
KLR				MLR	MLR			
	comp=E,1μm,12.0s							
KLR				MLR	MLR			
	comp=Z,2μm,12.0s							
CN2	Changchun	12.34	298	*e*P		Pn	16 44 57.8	+2.4
CN2				*e*PP			16 45 08.0	
CN2				*e*S		Sn	16 47 15.0	+1.5
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,300nm,4.0s							
CN2				LR	LR			
	comp=N,400nm,10.0s							
CN2				LR	LR			
	comp=E,500nm,10.0s							
CN2				LR	LR			
	comp=Z,500nm,10.0s							
DL2	Dalian	14.77	276	P		Pn	16 45 34.5	+6.0
DL2				pmax	pmax			
	comp=Z,20nm,1.2s							
DL2				LR	LR			
	comp=N,440nm,12.8s							
DL2				LR	LR			
	comp=E,380nm,14.7s							
DL2				LR	LR			
	comp=Z,330nm,17.0s							
JOW	Kunigami	15.93	224	LR		LR	16 52 16.8	
	comp=Z,321nm,19.2s,baz=349,slow=39							
SSE	Sheshan	17.73	249	P		Pn	16 46 03.5	-3.2
SSE				S		Sn	16 49 27.5	+2.8
SSE				pmax	pmax			
	comp=Z,21nm,0.7s							
SSE				pmax	pmax			
	comp=Z,74nm,5.0s							
SSE				LR	LR			
	comp=N,530nm,14.8s							
SSE				LR	LR			
	comp=E,310nm,14.8s							
SSE				LR	LR			
	comp=Z,500nm,12.7s							
PETK	Petropavlovsk-	18.36	34	P		Pn	16 46 13.5	-0.8
	comp=Z,0.1nm,0.3s,baz=207,slow=7.8,SNR=5.0							
PETK				LR		LR	16 53 09.9	
	comp=Z,193nm,18.8s,baz=219,slow=37							
BJI	Beijing	18.86	281	P		Pn	16 46 22.8	+2.2
BJI				S		Sn	16 49 56.5	+4.5
BJI				pmax	pmax			
	comp=Z,36nm,1.3s							
BJI				LR	LR			
	comp=N,810nm,14.0s							
BJI				LR	LR			
	comp=E,220nm,13.2s							
BJI				LR	LR			
	comp=Z,200nm,20.6s							
NJ2	Nanjing	18.99	255	*e*P		Pn	16 46 21.0	-1.1
NJ2				PP			16 46 38.3	
NJ2				S		Sn	16 49 49.0	-6.2
NJ2				sS		sS	16 49 58.0	-0.9
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.9s							
NJ2				pmax	pmax			
	comp=Z,230nm,4.0s							
NJ2				LR	LR			
	comp=N,290nm,13.9s							
NJ2				LR	LR			
	comp=E,750nm,13.2s							
NJ2				LR	LR			
	comp=Z,590nm,12.6s							
CLNS	Chul'man	20.63	335	*e*P		P	16 46 38.3	-0.8
CLNS				pmax	pmax			
	comp=Z,20nm,1.3s							
CLNS				pmax	pmax			
	comp=E,21nm,1.5s							
CLNS				pmax	pmax			
	comp=N,21nm,1.3s							
HHC	Hu-ho-hao-te	22.30	284	*e*P		P	16 46 57.3	0.0
HHC				pP			16 47 01.5	
HHC				sP		sP	16 47 04.3	+5.9
HHC				PP			16 47 23.5	
HHC				PcP		PcP	16 50 55.3	+2.3
HHC				S		S	16 50 58.0	-5.3
HHC				SS			16 51 35.8	
HHC				pmax	pmax			
	comp=Z,21nm,1.1s,mb4.5							
HHC				pmax	pmax			
	comp=Z,150nm,5.0s							
HHC				LR	LR			
	comp=N,490nm,12.4s,MS4.6							
HHC				LR	LR			
	comp=E,1μm,13.1s,MS4.6							
HHC				LR	LR			
	comp=Z,500nm,13.5s,MS4.1							
YAK	Yakutsk	24.01	347	*e*P		P	16 47 10.9	-3.6
YAK				*e*PP			16 47 21.5	
YAK				*e*PPP			16 47 41.4	
YAK				*e*			16 51 00.2	
YAK				*e*S		S	16 51 19.3	-13
YAK				pmax	pmax			
	comp=E,3.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,20nm,1.0s,mb4.5							
YAK				pmax	pmax			
	comp=N,11nm,1.1s							
YAK				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.1							
YAK				pmax	pmax			
	comp=E,7.0nm,1.0s							
YAK				smax				
	comp=E,95nm,10.8s							
YAK				smax				
	comp=N,66nm,9.9s							
YAK				MLR	MLR			
	comp=Z,196nm,13.0s,MS3.8							
YAK				MLR	MLR			
	comp=E,181nm,10.0s,MS3.9							
YAK				MLR	MLR			
	comp=N,180nm,13.0s,MS3.9							
YAK	Yakutsk	24.01	347	*e*P		P	16 47 11.6	-2.9
	comp=N,26nm,0.9s,mb4.7							
SEY	Seymchan	25.00	13d	*i*P		P	16 47 24.3	+0.8
BOD	Bodaibo	25.53	326	*e*P		P	16 47 24.9	-3.5
BOD				pmax	pmax			
	comp=Z,6.0nm,1.4s,mb3.9							
SONM	Songino Array	26.19	301	P		P	16 47 34.3	-0.2
	comp=Z,1.2nm,0.7s,mb3.6,baz=82,slow=11,SNR=6.9							
SONM				LR		LR	16 57 55.8	
	comp=Z,287nm,19.6s,MS3.8,baz=100,slow=37							
SONM	Songino Array	26.19	301	P		P	16 47 34.3	-0.2
SONM				pmax	pmax			
	comp=Z,1.0nm,0.7s							
SONM				MLR	MLR			
	comp=Z,287nm,19.6s							
ENH	Enshi	26.94	261	P		P	16 47 42.1	+0.7
	comp=Z,6.1nm,0.9s,mb4.1							
LZH	Lanzhou	29.17	276	*e*P		P	16 48 02.0	+0.7
LZH				pP		pP	16 48 06.0	+3.9
LZH				sP		sP	16 48 09.0	+6.6
LZH				PP		PP	16 48 56.0	-11
LZH				*e*S		S	16 52 52.0	-2.2
LZH				sS		sS	16 53 01.0	+5.5
LZH				*e*SS		SS	16 54 22.0	-35
LZH				pmax	pmax			
	comp=Z,24nm,1.2s,mb4.8							
LZH				pmax	pmax			
	comp=Z,110nm,4.5s							
LZH				LR	LR			
	comp=N,610nm,14.1s							
LZH				LR	LR			
	comp=Z,990nm,15.4s,MS4.5							
GYA	Guiyang	30.99	256	P		P	16 48 19.0	+1.5
GYA				PP		PP	16 49 20.5	-6.8
GYA				S		S	16 53 23.5	+0.5
GYA				SS		SS	16 55 06.5	-28
GYA				pmax

CD2 Chengdu 31.09 266 P **P** **16 48 13.0 -5.4**
CD2 pP pP 16 48 27.8 +8.6
CD2 sP sP 16 48 35.0 +15
CD2 PP PP 16 49 16.8 -12
CD2 S **S** **16 53 12.3 -12**
CD2 sS sS 16 53 38.0 +12
CD2 SS SS 16 54 59.8 -37
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,170nm,7.4s
CD2 LR LR
comp=N,400nm,13.1s
CD2 LR LR
comp=Z,320nm,13.1s,MS4.2
GTA Gaotai 31.42 284 *e*P **P** **16 48 21.0 -0.2**
GTA pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
BILL Bilibino 32.33 18⇑ *e*P **P** **16 48 28.5 -0.4**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
BILL MLR MLR
comp=Z,200nm,17.0s,MS3.9
BILL Bilibino 32.33 18 *e*P **P** **16 48 28.4 -0.5**
comp=Z,6.7nm,1.2s,mb4.3
QIZ Qiongzhong 33.22 242 P **P** **16 48 38.0 +0.9**
QIZ S **S** **16 53 58.8 +1.0**
QIZ pmax pmax
comp=Z,14nm,1.6s,mb4.6
QIZ LR LR
comp=N,370nm,14.7s,MS4.2
QIZ LR LR
comp=E,160nm,15.3s,MS4.2
QIZ LR LR
comp=Z,330nm,14.9s,MS4.2
TIXI Tiksi 33.26 353 *e*P **P** **16 48 34.6 -2.3**
TIXI pmax pmax
comp=Z,7.0nm,1.5s,mb4.4
TIXI MLR MLR
comp=Z,284nm,16.0s,MS4.1
TIXI Tiksi 33.26 353 *e*P **P** **16 48 35.2 -1.7**
comp=Z,4.6nm,0.9s,mb4.4
KMI Kunming 34.69 258 P **P** **16 48 50.0 +0.1**
KMI pP pP 16 48 53.5 +2.9
KMI PP PP 16 50 07.8 -0.5
KMI S **S** **16 54 20.0 -0.5**
KMI SS SS 16 56 30.8 -20
KMI pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KMI LR LR
comp=N,340nm,18.6s,MS4.2
KMI LR LR
comp=E,190nm,17.5s,MS4.2
KMI LR LR
comp=Z,200nm,14.1s,MS4.0
WMQ Urumqi 39.41 295 *e*P **P** **16 49 32.0 +2.2**
WMQ LR LR
comp=N,60nm,18.0s,MS3.8
WMQ LR LR
comp=E,120nm,21.0s,MS3.8
WMQ LR LR
comp=Z,130nm,23.0s,MS3.7
TNA Tin City 39.47 31 *e*P **P** **16 49 30.2 +0.1**
comp=Z,7.4nm,0.9s,mb4.4
ZAA0 Zalesovo Array 40.13 311 *e*P **P** **16 49 34.6 -1.1**
ZALV Zalesovo Beam 40.13 311 P **P** **16 49 34.8 -0.8**
comp=Z,17nm,1.0s,mb4.7,baz=90,slow=7.4,SNR=34
ZALV PcP PcP 16 51 39.8 -0.2
comp=Z,2.3nm,0.5s,baz=84,slow=3.2,SNR=7.6
ZALV LR LR 17 06 52.1
comp=Z,196nm,18.0s,MS4.0,baz=78,slow=37
ZALV Zalesovo Beam 40.13 311 P **P** **16 49 34.8 -0.9**
ZALV 16 51 39.8
ZALV pmax pmax
comp=Z,17nm,1.0s,mb4.7
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
ZALV MLR MLR
comp=Z,196nm,18.0s,MS4.0
NVS Novosibirsk 41.03 312 *i*P **P** **16 49 42.2 -0.9**
NVS *e* 16 51 42.8
NVS pmax pmax
comp=Z,15nm,1.2s,mb4.5
NVS pmax pmax
comp=N,11nm,1.5s
NVS pmax pmax
comp=E,16nm,1.2s
CMAR Chiang Mai Arr 41.43 252 P **P** **16 49 48.0 +1.2**
comp=E,0.5nm,0.6s,mb3.3,baz=47,slow=7.5,SNR=4.7
CMAR LR LR 17 07 22.3
comp=E,98nm,18.1s,MS3.7,baz=237,slow=37
CMAR Chiang Mai Arr 41.43 252 P **P** **16 49 48.0 +1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR MLR MLR
comp=Z,98nm,18.1s
MK31 Makanchi Array 42.55 300 *e*P **P** **16 49 55.1 -0.6**
MKAR Makanchi Array 42.55 300 P **P** **16 49 54.9 -0.8**
comp=Z,3.0nm,0.7s,mb4.1,baz=82,slow=10,SNR=23
MKAR Makanchi Array 42.55 300 *ce*P **P** **16 49 55.2 -0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
TTA Tatalina 44.19 36 P **P** **16 50 09.0 +0.4**
TTA pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
TTA Tatalina 44.19 36 P **P** **16 50 09.0 +0.4**
comp=Z,6.0nm,1.1s,mb4.2
KURK Kurchatov 44.23 306 P **P** **16 50 08.9 -0.2**
comp=Z,31nm,1.1s,mb5.0,baz=81,slow=8.6,SNR=7.3
KURK PcP PcP 16 51 53.3 -0.4
comp=Z,3.0nm,1.1s,baz=82,slow=3.6,SNR=4.0
KURK Kurchatov 44.23 306 P **P** **16 50 08.9 -0.3**
KURK 16 51 53.3
KURK pmax pmax
comp=Z,31nm,1.1s,mb5.0
KURK pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
KURK Kurchatov 44.23 306 *e*P **P** **16 50 08.2 -1.0**
comp=Z,37nm,1.0s,mb5.1
PPLA Purkeypile 45.94 36 *e*P **P** **16 50 23.5 +1.0**
comp=Z,9.8nm,0.9s,mb4.7
KTH Kantishna Hill 46.49 35 *e*P **P** **16 50 27.7 +0.8**
comp=Z,12nm,0.9s,mb4.8
COLD Coldfoot 46.76 30 *e*P **P** **16 50 29.6 +0.7**
comp=Z,5.7nm,1.1s,mb4.4
TKM2 Tokmak 2 48.15 297 P **P** **16 50 40.8 +0.6**
SNR=32
TKM2 Tokmak 2 48.15 297 *e*P **P** **16 50 40.4 +0.3**
TKM2 pmax pmax
comp=Z,27nm,1.1s,mb5.2
TKM2 Tokmak 2 48.15 297 *e*P **P** **16 50 40.4 +0.2**
comp=Z,27nm,1.1s,mb5.2
KZA Kyzart 48.67 296 P **P** **16 50 46.1 +2.0**
SNR=7.6
KBK Karagaybulak 48.69 297 P **P** **16 50 44.7 +0.4**
SNR=18
BVAR Borovoye Array 48.79 311 P **P** **16 50 44.5 -0.3**
comp=Z,2.2nm,0.8s,mb4.2,baz=90,slow=7.4,SNR=8.7
BVAR PcP PcP 16 52 09.1 -0.6
comp=Z,2.2nm,0.6s,baz=90,slow=3.0,SNR=7.7
BVAR Borovoye Array 48.79 311 P **P** **16 50 44.5 -0.4**
BVAR 16 52 09.1
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR pmax pmax
comp=Z,2.0nm,0.6s
USP Ospenovka 48.80 297 P **P** **16 50 45.2 +0.1**
SNR=10.0
BRVK Borovoye 48.84 311⇑ *e*P **P** **16 50 45.0 -0.3**
BRVK pmax pmax
comp=Z,11nm,1.7s,mb4.6
AAK Ala-Archa 49.01 297 *e*P **P** **16 50 46.9 +0.1**
AAK pmax pmax
comp=Z,13nm,1.3s,mb4.8
AAK Ala-Archa 49.01 297 *e*P **P** **16 50 46.9 +0.1**
comp=Z,13nm,1.3s,mb4.8
UCH Uchtor 49.14 296 *e*P **P** **16 50 48.6 +0.9**
comp=Z,5.0nm,1.1s,mb4.5
EKS2 Erkin-Say 49.50 297 P **P** **16 50 50.2 -0.3**
SNR=8.7
EKS2 Erkin-Say 49.50 297 *e*P **P** **16 50 50.1 -0.4**
comp=Z,7.8nm,1.2s,mb4.6
AML Almayashu 49.74 296 P **P** **16 50 53.4 +1.1**
SNR=16
AML Almayashu 49.74 296 *e*P **P** **16 50 53.2 +0.9**
comp=Z,20nm,1.1s,mb5.0

MENT Mentasta 49.79 35 *e*P **P** **16 50 53.4 +1.0**
EGAK Eagle 50.62 33 *e*P **P** **16 50 58.7 0.0**
comp=Z,4.7nm,1.0s,mb4.4
INK Inuvik 52.94 28 P **P** **16 51 15.8 -0.1**
comp=Z,3.8nm,0.7s,mb4.4,baz=327,slow=9.5,SNR=6.6
INK Inuvik 52.94 28 P **P** **16 51 15.8 -0.1**
INK pmax pmax
comp=Z,4.0nm,0.7s
SVE Sverdlovsk 53.26 318⇑ *e*P **P** **16 51 18.2 -0.2**
SVE pmax pmax
comp=Z,17nm,1.2s,mb4.8
ARU Arti 54.47 317 *c i*P **P** **16 51 26.5 -0.8**
ARU *e* 16 53 24.2
ARU S **S** **16 59 05.8 -0.8**
ARU SS SS 17 02 44.4 -3.9
ARU pmax pmax
comp=Z,19nm,1.2s,mb4.9
ARU Arti 54.47 317 *e*P **P** **16 51 26.0 -1.3**
comp=Z,14nm,1.0s,mb4.8
ABKAR Akbulak array 56.19 309 *e*P **P** **16 51 39.1 -0.8**
comp=Z,4.4nm,0.6s,mb4.7
FITZ Fitzroy Crossi 58.51 197 P **P** **16 51 57.6 +1.2**
comp=Z,3.6nm,0.9s,mb4.4,baz=50,slow=9.4,SNR=3.3
KBS Kingsbay 58.61 350⇑ *e*P **P** **16 51 55.0 -1.5**
KBS pmax pmax
comp=Z,13nm,1.2s,mb4.8
RES Resolute Bay 60.86 15 P **P** **16 52 11.1 -0.9**
comp=Z,6.7nm,0.8s,mb4.8,baz=307,slow=7.7,SNR=28
RES Resolute Bay 60.86 15 P **P** **16 52 11.1 -0.9**
RES pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
RES Resolute Bay 60.86 15 P **P** **16 52 11.1 -0.9**
ARCES ARCESS Array B 61.93 339 P **P** **16 52 17.9 -1.4**
comp=Z,1.4nm,0.7s,mb4.2,baz=60,slow=7.2,SNR=12
ARCES ARCESS Array B 61.93 339 P **P** **16 52 17.9 -1.4**
ARCES pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 62.43 30 P **P** **16 52 22.5 -0.3**
comp=Z,2.1nm,0.9s,mb4.3,baz=301,slow=6.8,SNR=7.6
YKA Yellowknife Ar 62.43 30 P **P** **16 52 22.5 -0.3**
YKA pmax pmax
comp=Z,2.0nm,0.9s
ASAR Alice Springs 62.66 187 P **P** **16 52 23.9 -0.7**
comp=Z,3.3nm,0.8s,mb4.5,baz=13,slow=5.7,SNR=31
ASAR Alice Springs 62.66 187 P **P** **16 52 24.0 -0.6**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
JOF Joensuu 63.93 331 *e*P **P** **16 52 31.6 -1.1**
JOF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
JOF Joensuu 63.93 331 *e*p **P** **16 52 31.6 -1.1**
comp=Z,5.7nm,1.0s,mb4.6
DZM Mont Dzumac 65.40 154 *e*LR LR 17 12 18.5
comp=Z,126nm,22.0s
OBN Obninsk 66.14 322⇑ *e*P **P** **16 52 47.0 -0.2**
OBN *e*S S 17 01 36.4 +0.1
OBN pmax pmax
comp=Z,40nm,2.5s,mb5.0
KAF Kangasniemi 66.27 332 *e*P **P** **16 52 45.3 -2.6**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KAF Kangasniemi 66.27 332 *e*p **P** **16 52 45.3 -2.6**
comp=Z,3.5nm,0.7s,mb4.5
FINES FINESS Array B 66.78 332 P **P** **16 52 49.5 -1.7**
comp=Z,3.9nm,0.7s,mb4.6,baz=41,slow=8.2,SNR=11
FINES FINESS Array B 66.78 332 P **P** **16 52 49.5 -1.7**
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES FINESS Array B 66.78 332 P **P** **16 52 49.5 -1.7**
VSR Storozhevoye 67.04 318 *e*P **P** **16 52 52.7 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD Divnogorie 67.11 318 *e*P **P** **16 52 53.2 -0.3**
VORD pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,5.0nm,0.5s
SUMG Summit 68.72 360 *e*P **P** **16 53 03.5 +0.2**
comp=E,12nm,1.1s,mb4.7
ZEI Tsey 69.08 308 *e*P **P** **16 53 03.3 -2.7**
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
KIV Kislovodsk 69.14 310 *d i*P **P** **16 53 06.7 +0.3**
KIV pmax pmax
comp=Z,59nm,1.1s,mb5.4
KIV Kislovodsk 69.14 310 *e*P **P** **16 53 06.7 +0.3**
comp=Z,64nm,1.1s,mb5.5
YBH Yreka Blue Hor 69.65 52 P **P** **16 53 10.8 +1.2**
comp=Z,3.5nm,1.1s,mb4.2,baz=315,slow=5.0,SNR=4.4
YBH Yreka Blue Hor 69.65 52 P **P** **16 53 10.8 +1.2**
YBH pmax pmax
comp=Z,4.0nm,1.1s
GNI Garni 70.03 306⇑ *i*P **P** **16 53 12.2 +0.3**
GNI pmax pmax
comp=Z,13nm,1.2s
GNI Garni 70.03 306 P **P** **16 53 13.1 +1.2**
comp=Z,17nm,1.3s,mb4.8
STKA Stephens Creek 70.53 179 P **P** **16 53 15.1 +0.3**
comp=Z,1.9nm,0.9s,mb4.0,baz=303,slow=12,SNR=3.2
SWMT Swartz Lake 71.31 44 P **P** **16 53 19.8 +0.2**
comp=Z,3.6nm,1.0s,mb4.3
ANN Anapa 71.71 313 *e*P **P** **16 53 19.6 -2.5**
ANN *e*S S 17 02 38.3 -4.4
ANN pmax pmax
comp=Z,31nm,1.3s,mb5.1
WVOR Wild Horse Val 71.72 50 *e*P **P** **16 53 22.3 +0.2**
WVOR pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
WVOR Wild Horse Val 71.72 50 *e*P **P** **16 53 22.3 +0.2**
comp=Z,4.3nm,1.1s,mb4.3
SLMT Seeley Lake 71.74 44 *e*P **P** **16 53 22.7 +0.5**
comp=Z,6.4nm,1.0s,mb4.5
HFS Hagfors 72.03 335 P **P** **16 53 22.8 -0.9**
comp=Z,1.7nm,0.5s,mb4.2,baz=60,slow=8.8,SNR=12
HFS Hagfors 72.03 335 P **P** **16 53 22.8 -0.9**
HFS pmax pmax
comp=Z,2.0nm,0.5s
NB2 NORSAR Subarra 72.13 337 P **P** **16 53 23.2 -1.1**
comp=Z,1.0nm,0.6s,mb3.9,baz=40,slow=6.2
NOA NORSAR Array B 72.13 337 P **P** **16 53 23.0 -1.2**
comp=Z,2.4nm,0.8s,mb4.2,baz=39,slow=6.2,SNR=9.0
NOA NORSAR Array B 72.13 337 P **P** **16 53 23.0 -1.3**
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA NORSAR Array B 72.13 337 P **P** **16 53 23.0 -1.2**
AKASG Malin Array Be 72.35 322 P **P** **16 53 24.9 -1.0**
comp=Z,1.6nm,0.5s,mb4.2,baz=46,slow=6.2,SNR=16
AKASG Malin Array Be 72.35 322 *ce*P **P** **16 53 24.6 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
FFC Flin Flon 72.39 33 *e*P **P** **16 53 25.5 -0.5**
FFC pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
FFC Flin Flon 72.39 33 *e*P **P** **16 53 25.5 -0.5**
comp=Z,5.5nm,1.0s,mb4.4
LRM Limekiln Ridge 73.19 44 *e*P **P** **16 53 31.4 +0.5**
comp=Z,40nm,1.0s,mb5.3
DLMT Dillon 73.39 45 *e*P **P** **16 53 32.7 +0.6**
comp=Z,8.0nm,1.0s,mb4.6
HLID Hailey 73.50 47 *e*P **P** **16 53 33.8 +1.0**
comp=Z,5.9nm,1.3s,mb4.4
BOZ Bozeman (W) 73.74 44 *e*P **P** **16 53 34.1 0.0**
BOZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BOZ Bozeman (W) 73.74 44 *e*P **P** **16 53 34.1 -0.1**
comp=Z,5.3nm,1.0s,mb4.4
NVAR Mina Array Bea 74.32 53 P **P** **16 53 38.8 +1.2**
comp=Z,5.1nm,1.1s,mb4.4,baz=288,slow=6.2,SNR=18
GCMT Greycliff 74.70 43 P **P** **16 53 40.5 +0.8**
comp=Z,76nm,1.7s,mb5.3
IMW Indian Meadow 75.24 45 *e*P **P** **16 53 44.3 +1.4**
comp=Z,4.8nm,0.9s,mb4.4
LVV L'vov 75.42 323 *e*P **P** **16 53 44.6 +0.8**
KWP Kalwaria Pacla 76.16 324 *e*P **P** **16 53 48.4 +0.3**
KWP Kalwaria Pacla 76.16 324 *e*P **P** **16 53 47.7 -0.3**
KWP pmax pmax
comp=Z,24nm,1.1s,mb5.0
KWP Kalwaria Pacla 76.16 324 *e*P **P** **16 53 47.7 -0.3**
comp=Z,24nm,1.1s,mb5.0
BUR08 Bucovina Ar. S 76.36 321 *e*P **P** **16 53 49.4 +0.2**

PDAR Pinedale Array 76.74 45 P **P** **16 53 51.3 -0.1**
comp=Z,1.7nm,0.7s,mb4.1,baz=311,slow=2.1,SNR=10.0
KOLS Kolonicke sedl 76.86 323 *e*P **P** **16 53 52.5 +0.5**
KOLS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 76.86 323 *e*P **P** **16 53 52.5 +0.5**
comp=Z,4.2nm,1.1s,mb4.3
KOLS Kolonicke sedl 76.86 323 *e*P **P** **16 53 52.5 +0.5**
STHS Stebnicka Huta 76.99 324 *e*P **P** **16 53 53.9 +1.2**
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
STHS Stebnicka Huta 76.99 324 *e*P **P** **16 53 53.9 +1.2**
comp=Z,6.5nm,1.1s,mb4.5
STHS Stebnicka Huta 76.99 324 *e*P **P** **16 53 53.9 +1.2**
OJC Ojcow 77.05 326 *e*P **P** **16 53 52.3 -0.8**
BR131 Keskin Array S 77.08 311 *e*P **P** **16 53 53.5 +0.1**
comp=Z,4.6nm,1.0s,mb4.4
BRTR Keskin Array B 77.08 311 P **P** **16 53 53.6 +0.2**
comp=Z,8.2nm,1.1s,mb4.6,baz=99,slow=4.1,SNR=25
BRTR Keskin Array B 77.08 311 P **P** **16 53 53.6 +0.2**
BRTR pmax pmax
comp=Z,8.0nm,1.1s
MLR Muntele Rosu 77.47 319 P **P** **16 53 55.5 0.0**
comp=Z,5.4nm,1.0s,mb4.4,baz=321,slow=3.1,SNR=5.9
MLR Muntele Rosu 77.47 319 P **P** **16 53 55.5 0.0**
MLR pmax pmax
comp=Z,5.0nm,1.0s
KECS Kecovo 78.01 324 *e*P **P** **16 53 59.9 +1.5**
KECS pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
KECS Kecovo 78.01 324 *e*P **P** **16 53 59.9 +1.5**
comp=Z,1.8nm,1.2s,mb3.9
KECS Kecovo 78.01 324 *e*P **P** **16 53 59.9 +1.5**
ULM Lac du Bonnet 78.21 33 P **P** **16 53 58.5 -1.1**
comp=Z,2.2nm,0.4s,mb4.4,baz=309,slow=9.4,SNR=3.0
MORC Moravsky Berou 78.36 326 *e*P **P** **16 53 59.3 -1.1**
MORC pmax pmax
comp=Z,12nm,1.3s,mb4.7
MORC Moravsky Berou 78.36 326 *e*P **P** **16 53 59.3 -1.1**
comp=Z,12nm,1.3s,mb4.7
PSZ Piszkesteto 78.69 324 *e*P **P** **16 54 02.9 +0.7**
PSZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
PSZ Piszkesteto 78.69 324 *e*P **P** **16 54 02.9 +0.7**
comp=Z,9.6nm,1.2s,mb4.6
VYHS Vyhne 78.75 325 *e*P **P** **16 54 02.0 -0.5**
VYHS pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
VYHS Vyhne 78.75 325 *e*P **P** **16 54 02.0 -0.5**
comp=Z,7.9nm,1.7s,mb4.4
VYHS Vyhne 78.75 325 *e*P **P** **16 54 02.0 -0.5**
CLL Collm 79.08 330 *e*P **P** **16 54 02.0 -2.3**
CLL *e* 16 54 12.0
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CLL Collm 79.08 330 *e*P **P** **16 54 02.0 -2.3**
comp=Z,5.0nm,1.0s,mb4.4
CLL *e* 16 54 12.0
CLL Collm 79.08 330 *e*(P) **P** **16 54 02.0 -2.3**
comp=Z,5.0nm,1.0s,mb4.4
CLL *e*PcP PcP 16 54 12.0 -0.8
VRAC Vranov 79.12 326 P **P** **16 54 04.0 -0.6**
comp=Z,5.3nm,0.8s,mb4.5,baz=11,slow=3.4,SNR=6.6
VRAC Vranov 79.12 326 P **P** **16 54 04.0 -0.6**
VRAC pmax pmax
comp=Z,5.0nm,0.8s
MMAI Mount Meron Ar 80.31 305 P **P** **16 54 10.4 -0.9**
comp=Z,7.1nm,1.0s,mb4.6,baz=53,slow=7.4,SNR=5.3
CONA Conrad Observa 80.49 326⇑ *i*P **P** **16 54 11.0 -1.0**
comp=Z,8.5nm,0.9s,mb4.7
KHC Kasperske Hory 80.53 328 *e*P **P** **16 54 12.5 +0.3**
KHC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KHC Kasperske Hory 80.53 328 *e*P **P** **16 54 12.4 +0.2**
comp=Z,3.9nm,0.9s,mb4.3
GERES GERESS Array B 80.71 328 P **P** **16 54 12.4 -0.7**
comp=Z,1.1nm,0.8s,mb3.8,baz=42,slow=4.2,SNR=10.0
GERES GERESS Array B 80.71 328 P **P** **16 54 12.4 -0.8**
GERES pmax pmax
comp=Z,1.0nm,0.8s
GRA1 Grafenberg Arr 81.05 329 *e*P **P** **16 54 15.1 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
GRA1 LR LR
comp=Z,500nm,20.0s,MS4.9
GRF Grafenberg Arr 81.05 329 *e*P **P** **16 54 15.1 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
GRF *e*L 17 20 38.3
comp=Z,455nm,20.0s
GRF Grafenberg Arr 81.05 329 *e*P **P** **16 54 15.1 +0.1**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GRF MLR MLR
comp=Z,500nm,20.0s,MS4.9
GRF Grafenberg Arr 81.05 329 *e*P **P** **16 54 15.1 +0.1**
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GRF MLR MLR
comp=Z,500nm,20.0s,MS4.9
SOKA Soboth 81.81 326⇑ *i*P **P** **16 54 18.8 -0.2**
comp=Z,12nm,1.1s,mb4.7
DAVA Damuels 83.51 329⇑ *i*P **P** **16 54 28.5 +0.6**
comp=Z,10nm,1.1s,mb4.9
CDF Champ du Feu 83.61 331 *e*P **P** **16 54 27.9 -0.5**
DAVOX Davos/Dischmat 83.92 328 P **P** **16 54 29.8 -0.1**
comp=Z,1.4nm,0.2s,mb4.7,baz=291,slow=8.6,SNR=5.1
IDI Anoyia 85.19 312 P **P** **16 54 35.7 -0.9**
comp=Z,14nm,1.1s,mb5.0,baz=4.9,slow=4.3,SNR=7.0
PMOR Pomariorio Ree 85.55 113 *e*T 18 28 13.8
comp=Z,2.4nm,0.2s
CABF La Chapelle 85.56 330 *e*P **P** **16 54 39.1 +0.8**
LOR Lormes 85.84 332 *e*P **P** **16 54 38.8 -0.9**
PPT Papeete 86.08 116 *e*LR LR 17 21 49.1
comp=Z,182nm,25.0s
SSF Saint Saulge 86.14 332 *e*P **P** **16 54 40.5 -0.7**
LPG La Plagne 86.22 329 *e*P **P** **16 54 41.3 -0.3**
comp=Z,6.3nm,0.8s,mb4.6
LPG La Plagne 86.22 329 *e*P **P** **16 54 41.3 -0.3**
LPG pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
LPG La Plagne 86.22 329 *e*P **P** **16 54 41.3 -0.3**
comp=Z,3.2nm,0.8s,mb4.6
SMF Signal de Mont 86.37 332 *e*P **P** **16 54 41.7 -0.6**
AVF Avril sur Loir 86.43 332 *e*P **P** **16 54 41.8 -0.8**
comp=Z,25nm,1.1s,mb5.1
AVF Avril sur Loir 86.43 332 *e*P **P** **16 54 41.8 -0.8**
AVF pmax pmax
comp=Z,13nm,1.1s,mb5.1
AVF Avril sur Loir 86.43 332 *e*P **P** **16 54 41.8 -0.8**
comp=Z,13nm,1.1s,mb5.1
GRR Gorron 86.50 335 *e*P **P** **16 54 43.7 +0.8**
comp=Z,14nm,0.8s,mb4.9
GRR Gorron 86.50 335 *e*P **P** **16 54 43.7 +0.8**
GRR pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
GRR Gorron 86.50 335 *e*P **P** **16 54 43.7 +0.8**
comp=Z,6.9nm,0.8s,mb4.9
SGMF Saint Gilles 87.16 336 *e*P **P** **16 54 47.9 +1.8**
comp=Z,34nm,1.2s,mb5.2
SGMF Saint Gilles 87.16 336 *e*P **P** **16 54 47.9 +1.8**
SGMF pmax pmax
comp=Z,17nm,1.2s,mb5.2
SGMF Saint Gilles 87.16 336 *e*P **P** **16 54 47.9 +1.8**
comp=Z,17nm,1.2s,mb5.2
RJF Les Rejaudoux 88.36 332 *e*P **P** **16 54 51.5 -0.5**
VNA1 Neumayer--Stat 144.42 197 *e*PKPdf PKPdf 17 01 34.6 -0.7
LPAZ La Paz 146.19 56 PKPbc PKPbc 17 01 41.4 +0.5
comp=Z,8.4nm,0.9s,baz=352,slow=4.8,SNR=15
LPAZ La Paz 146.19 56 PKP2 PKPbc 17 01 41.4 +0.5
LPAZ pmax pmax
comp=Z,8.0nm,0.9s
LPAZ La Paz 146.19 56 *e*PKP PKPbc 17 01 41.5 +0.5

KRSC ***28*** *16:47:17.6±1.2, 49°.19N×156°.94E, h14km±16km, ML4.6*
ISCJB ***28*** *16:47:19.4±1.0, 49°.20N±0°.07×156°.5E±0°.1, h56km±8km, mb3.8/19, Error ellipse: s-maj=15.7km s-min=7.0km az=42.8*
MOS ***28*** *16:47:19.7±1.3, 49°.34N×156°.24E, h50km, mb4.1/13, Error ellipse: s-maj=16.3km s-min=6.7km az=75.8*
NEIC ***28*** *16:47:21.7±0.8, 49°.36N×156°.12E, mb4.1/3, Error ellipse: s-maj=19.1km s-min=9.3km az=135.0*
IDC ***28*** *16:47:23.8±3.0, 49°.42N×156°.02E, h63km±26km, mb3.5/17, mb1 3.6/19, mb1mx3.5/31, mbtmp3.5/19, ML3.8/2, Error ellipse: s-maj=25.1km s-min=16.5km az=143.0*

ISC 28 16:47:21.5±0.8, 49°23N±0°.06×156°.4E±0°.1, h56km±7km, n59, σ1ˢ22/69, mb3.8/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.47**	**352**	*i* PN	**Pn**	**16 47 44.1**	**-1.5**
SKR				*e*S	**Sn**	**16 48 03.5**	**-0.3**
SKR				pmax	pmax		
	comp=N,230nm,0.5s						
SKR				pmax	pmax		
	comp=Z,290nm,0.5s						
SKR				pmax	pmax		
	comp=E,160nm,0.4s						
SKR				smax			
	comp=N,2μm,0.3s						
SKR				smax			
	comp=E,880nm,0.3s						
ALID	**Alaid**	**1.74**	**341**	*e*P	**Pn**	**16 47 49.3**	**+0.1**
ALID				*i* S	**Sn**	**16 48 12.4**	**+2.1**
MIPR	**Malaya Ipel'ka**	**3.06**	**4**	*e*P	**Pn**	**16 48 07.5**	**+0.2**
RUS	**Russkaya**	**3.47**	**22**	*e*P	**Pn**	**16 48 11.3**	**-1.6**
RUS				*i* S	**Sn**	**16 48 51.2**	**-1.4**
GRL	**Gorelyy**	**3.49**	**17**	*e*P	**Pn**	**16 48 13.2**	**+0.1**
PEA0B	**Petropavlovsk-**	**3.97**	**11**	*e*Pn	**Pn**	**16 48 20.2**	**+0.6**
PETK	**Petropavlovsk-**	**3.97**	**11**	P	**Pn**	**16 48 20.2**	**+0.6**
	comp=E,2.4nm,0.3s,baz=167,slow=15,SNR=78						
PETK				S	**Sn**	**16 49 07.8**	**+2.9**
	comp=E,1.9nm,0.3s,baz=187,slow=20,SNR=3.9						
PETK	**Petropavlovsk-**	**3.97**	**11**	PN	**Pn**	**16 48 20.2**	**+0.5**
PETK				S	**Sn**	**16 49 07.8**	**+3.0**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax			
	comp=N,2.0nm,0.3s						
PET	**Petropavlovsk**	**4.05**	**19**	*e*PN	**Pn**	**16 48 20.3**	**-0.5**
PET				*e*S	**Sn**	**16 49 07.5**	**+0.6**
PET				pmax	pmax		
	comp=Z,28nm,0.5s						
PET				smax			
	comp=N,177nm,0.5s						
PET				smax			
	comp=E,234nm,0.6s						
PET	**Petropavlovsk**	**4.05**	**19**	*e*P	**Pn**	**16 48 20.4**	**-0.4**
PET				*i* S	**Sn**	**16 49 07.1**	**+0.2**
PET	**Petropavlovsk**	**4.05**	**19**	*e*P	**Pn**	**16 48 20.0**	**-0.8**
AVH	**Avacha**	**4.29**	**19**	*e*P	**Pn**	**16 48 24.9**	**+0.8**
NLC	**Nalytchevo**	**4.35**	**24**	*e*P	**Pn**	**16 48 23.4**	**-1.5**
NLC				*i* S	**Sn**	**16 49 10.6**	**-3.7**
SPN	**Mys Shipunski**	**4.49**	**29**	*e*P	**Pn**	**16 48 26.1**	**-0.7**
SPN				*i* S	**Sn**	**16 49 16.3**	**-1.3**
GNL	**Ganaly**	**4.57**	**11**	*e*P	**Pn**	**16 48 28.9**	**+1.0**
KII	**Karymskiy**	**5.17**	**20**	*e*P	**Pn**	**16 48 37.4**	**+1.3**
MKZ	**Mys Kozlova**	**6.26**	**30**	*e*P	**Pn**	**16 48 49.0**	**-2.1**
MKZ				*i* S	**Sn**	**16 49 56.3**	**-4.9**
ZLN	**Zelenaya**	**7.30**	**20**	P	**Pn**	**16 49 06.7**	**+1.4**
SRDR	**Sredinnyy**	**7.37**	**14**	P	**Pn**	**16 49 08.7**	**+2.4**
SMKR	**Semkarok**	**7.97**	**21**	*e*P	**Pn**	**16 49 16.2**	**+1.8**
KBTR	**Krutoberegovo**	**7.99**	**27**	*e*P	**Pn**	**16 49 13.6**	**-1.1**
YSS	**Yuzh-Sakhalins**	**9.43**	**261**	*e*PN	**Pn**	**16 49 35.9**	**+1.4**
ASAJ	**Asahikawa**	**10.79**	**247**	P	**Pn**	**16 49 52.6**	**-0.5**
	comp=E,1.6nm,0.3s,baz=62,slow=17,SNR=15						
ASAJ	**Asahikawa**	**10.79**	**247**	PN	**Pn**	**16 49 52.6**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**11.75**	**237**	*e*PN	**Pn**	**16 50 04.7**	**-1.5**
KSRS	**Korea Array**	**23.69**	**251**	P	**P**	**16 52 28.6**	**+0.7**
	comp=Z,1.5nm,0.8s,mb3.5,baz=56,slow=9.0,SNR=4.9						
KSRS	**Korea Array**	**23.69**	**251**	P	**P**	**16 52 28.6**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
TIXI	**Tiksi**	**25.80**	**340**	*e*P	**P**	**16 52 45.4**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
TIXI	**Tiksi**	**25.80**	**340**	*e*P	**P**	**16 52 45.4**	**-1.3**
	comp=Z,2.6nm,0.6s,mb3.9						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**16 54 38.4**	**+2.0**
	comp=Z,0.7nm,0.5s,mb3.6,baz=281,slow=1.6,SNR=3.1						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**16 54 38.4**	**+2.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**38.36**	**34**	P	**P**	**16 54 38.4**	**+2.0**
MKAR	**Makanchi Array**	**47.80**	**297**	P	**P**	**16 55 51.7**	**-1.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=64,slow=6.6,SNR=3.8						
KURK	**Kurchatov**	**47.86**	**303**	P	**P**	**16 55 53.1**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=66,slow=8.2,SNR=14						
KURK	**Kurchatov**	**47.86**	**303**	*e*P	**P**	**16 55 52.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**47.86**	**303**	*e*P	**P**	**16 55 52.6**	**-0.8**
	comp=Z,2.7nm,0.9s,mb4.3						
SPITS	**Spitsbergen Ar**	**50.56**	**350**	P	**P**	**16 56 13.4**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.1,baz=90,slow=1.9,SNR=2.7						
SPITS	**Spitsbergen Ar**	**50.56**	**350**	P	**P**	**16 56 13.4**	**-0.2**
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**51.02**	**309**	P	**P**	**16 56 16.3**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.9,baz=46,slow=7.3,SNR=6.0						
BVAR	**Borovoye Array**	**51.02**	**309**	P	**P**	**16 56 16.3**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**55.10**	**257**	P	**P**	**16 56 49.3**	**+1.5**
	comp=Z,0.6nm,0.5s,mb3.9,baz=32,slow=7.5,SNR=6.5						
CMAR	**Chiang Mai Arr**	**55.10**	**257**	P	**P**	**16 56 49.3**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**58.54**	**310**	*e*P	**P**	**16 57 10.7**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.1						
NVAR	**Mina Array Bea**	**59.34**	**65**	P	**P**	**16 57 20.9**	**+3.4**
	comp=Z,0.1nm,0.3s,mb3.3,baz=322,slow=7.1,SNR=3.0						
FINES	**FINESS Array B**	**62.73**	**336**	P	**P**	**16 57 39.4**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.9,baz=34,slow=10,SNR=4.3						
HFS	**Hagfors**	**66.88**	**341**	P	**P**	**16 58 06.9**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=34,slow=8.7,SNR=3.5						
HFS	**Hagfors**	**66.88**	**341**	P	**P**	**16 58 06.9**	**-0.2**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**70.69**	**328**	P	**P**	**16 58 29.9**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=32,slow=6.5,SNR=3.6						
AKASG	**Malin Array Be**	**70.69**	**328**	P	**P**	**16 58 29.9**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**74.36**	**63**	P	**P**	**16 58 56.1**	**+3.0**
	comp=Z,1.2nm,1.2s,mb3.7,baz=289,slow=5.4,SNR=3.8						
TXAR				pP	pP	16 59 08.4	-0.3
	comp=Z,0.4nm,0.5s,baz=292,slow=4.8,SNR=5.1						
TXAR	**Lajitas Array**	**74.36**	**63**	P	**P**	**16 58 56.1**	**+3.0**
TXAR				*PP	pP	16 59 08.4	-0.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
EKA	**Eskdalemuir Ar**	**74.42**	**348**	P	**P**	**16 58 53.5**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.0,baz=21,slow=5.0,SNR=5.9						
EKA	**Eskdalemuir Ar**	**74.42**	**348**	P	**P**	**16 58 53.5**	**+0.5**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**75.30**	**201**	P	**P**	**16 58 58.8**	**+0.5**
	comp=Z,0.2nm,0.7s,mb3.1,baz=19,slow=6.9,SNR=3.5						
ASAR				pP	pP	16 59 13.2	-0.8
	comp=Z,0.2nm,0.5s,baz=17,slow=6.3,SNR=2.0						
GERES	**GERESS Array B**	**77.16**	**336**	P	**P**	**16 59 08.0**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.7,baz=46,slow=4.2,SNR=6.0						
GERES	**GERESS Array B**	**77.16**	**336**	P	**P**	**16 59 08.0**	**-0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**78.06**	**318**	P	**P**	**16 59 13.6**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=85,slow=3.0,SNR=4.6						
BRTR	**Keskin Array B**	**78.06**	**318**	P	**P**	**16 59 13.6**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MMAI	**Mount Meron Ar**	**82.79**	**313**	P	**P**	**16 59 40.5**	**+1.1**
	comp=Z,1.3nm,0.4s,mb4.3,baz=55,slow=7.2,SNR=6.5						

*ISCJB **28** 16:54:45.4±0.8, 51°.51N±0°.04×16°.03E±0°.04, h0km, Error ellipse: s-maj=5.5km s-min=2.9km az=18.7*
*IPEC **28** 16:54:46.6±3.4, 51°.57N×16°.07E, h3km±19km, ML1.8/3, Error ellipse: s-maj=21.1km s-min=8.4km az=22.0*
*CSEM **28** 16:54:46.7±0.2, 51°.53N×16°.04E, h2km, ML2.9/8, Error ellipse: s-maj=4.3km s-min=2.4km az=15.0*
*PRU **28** 16:54:47.9, 51°.50N×16°.04E, h0km*
*WAR **28** 16:54:48.2, 51°.54N×16°.01E, ML2.5, Mining Induced*

ISC 28 16:54:46.5±0.8, 51°.55N±0°.04×16°.05E±0°.04, h0km, n29, σ0ˢ73/59, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**167**	*e*Pg	**Pg**	**16 55 01.2**	**+1.0**
KSP				*e*		16 55 04.3	
KSP				*e*Sg	**Sg**	**16 55 10.7**	**+1.1**
KSP				*e*		16 55 15.1	
KSP	**Ksiaz**	**0.72**	**167**	*e*Pg	**Pg**	**16 55 01.1**	**+0.8**
KSP	baz=349			*e*Sg	**Sg**	**16 55 10.5**	**+0.9**
	baz=349						
UPC	**Upice**	**1.04**	**181**	*e*PG	**Pg**	**16 55 07.6**	**+1.2**
UPC	**Upice**	**1.04**	**181**	*e*Pg	**Pg**	**16 55 07.2**	**+0.8**
UPC	baz=2.1			*e*Sg	**Sg**	**16 55 20.8**	**+1.0**
	baz=2.1						
DPC	**Dobruska-Polom**	**1.21**	**172**	*e*PG	**Pg**	**16 55 10.1**	**+0.5**
DPC				*e*SG	**Sg**	**16 55 25.3**	**0.0**
	comp=Z,11nm,0.2s						
DPC	**Dobruska-Polom**	**1.21**	**172**	Pg	**Pg**	**16 55 10.1**	**+0.5**
DPC				Sg	**Sg**	**16 55 25.3**	**0.0**
	comp=Z,11nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**223**	*e*PG	**Pg**	**16 55 13.4**	**+0.5**
PVCC	**Panska Ves**	**1.38**	**223**	Pg	**Pg**	**16 55 13.4**	**+0.5**
PVCC				*e*Sg	**Sg**	**16 55 31.2**	**+0.4**
	baz=42						
BRG	**Berggiesshubel**	**1.48**	**244**	PG	**Pg**	**16 55 15.1**	**+0.2**
BRG				SG	**Sg**	**16 55 35.0**	**+0.9**
	comp=Z,24nm,0.6s						
BRG	**Berggiesshubel**	**1.48**	**244**	*e*Pn	**Pn**	**16 55 14.9**	**+0.5**
	baz=62						
BRG				*e*Sg	**Sg**	**16 55 34.5**	**+0.4**
	baz=62						
PRU	**Pruhonice**	**1.83**	**212**	*e*PN	**Pn**	**16 55 18.0**	**-1.1**
PRU				*e*PG	**Pg**	**16 55 21.2**	**-0.3**
PRU				*e*SG	**Sg**	**16 55 45.1**	**-0.1**
	comp=Z,14nm,0.4s						
PRU	**Pruhonice**	**1.83**	**212**	*e*Pn	**Pn**	**16 55 19.2**	**+0.1**
	baz=31						
PRU	**Pruhonice**	**1.83**	**212**	Pg	**Pg**	**16 55 21.2**	**-0.3**
PRU				Sg	**Sg**	**16 55 45.1**	**-0.1**
	comp=Z,14nm,0.4s						
CLL	**Collm**	**1.92**	**264**	*e*Pn	**Pn**	**16 55 20.0**	**-0.4**
CLL				*e*Pg	**Pg**	**16 55 22.0**	**-1.2**
CLL				*i*		16 55 26.9	
CLL				*i* Sg	**Sg**	**16 55 47.4**	**-0.7**
	comp=Z,11nm,0.6s						
CLL	**Collm**	**1.92**	**264**	*e*Pn	**Pn**	**16 55 19.5**	**-0.9**
	baz=81						
CLL				*e*Sg	**Sg**	**16 55 47.4**	**-0.7**
	baz=81						
MORC	**Moravsky Berou**	**2.01**	**151**	*e*Pn	**Pn**	**16 55 21.8**	**+0.2**
	baz=333						
MORC				*e*Sg	**Sg**	**16 55 49.7**	**-1.3**
	comp=Z,6.7nm,0.3s,baz=333						
OKC	**Ostrava-Krasne**	**2.17**	**141**	*e*PG	**Pg**	**16 55 27.2**	**-0.9**
OKC				*e*SG	**Sg**	**16 55 56.6**	**+0.4**
	comp=Z,11nm,0.5s						
OKC	**Ostrava-Krasne**	**2.17**	**141**	Pg	**Pg**	**16 55 27.2**	**-0.9**
OKC				Sg	**Sg**	**16 55 56.6**	**+0.4**
	comp=Z,11nm,0.5s						
VRAC	**Vranov**	**2.27**	**171**	*e*Pn	**Pn**	**16 55 25.7**	**+0.6**
	baz=352						
VRAC				*e*Sg	**Sg**	**16 55 57.9**	**-1.4**
	comp=Z,3.7nm,0.2s,baz=352						
KRUC	**Moravsky**	**2.50**	**175**	*e*Pg	**Pg**	**16 55 33.3**	**-1.0**
	baz=355						
KRUC				*e*Sg	**Sg**	**16 56 05.7**	**-0.9**
	comp=Z,5.3nm,0.3s,baz=355						
NKC	**Novy Kostel**	**2.63**	**241**	*e*PN	**Pn**	**16 55 30.7**	**+0.6**
NKC				*e*PG	**Pg**	**16 55 37.0**	**+0.2**
NKC				*e*SG	**Sg**	**16 56 11.1**	**+0.2**
	comp=Z,16nm,0.5s						
NKC	**Novy Kostel**	**2.63**	**241**	*e*Pn	**Pn**	**16 55 30.4**	**+0.3**
	baz=58						
NKC	**Novy Kostel**	**2.63**	**241**	Pg	**Pg**	**16 55 37.0**	**+0.2**
NKC				Sg	**Sg**	**16 56 11.1**	**+0.2**
	comp=Z,16nm,0.5s						
OJC	**Ojcow**	**2.72**	**118**	*e*Pg	**Pg**	**16 55 38.8**	**+0.2**
OJC				*e*Sg	**Sg**	**16 56 14.6**	**+0.7**
OJC	**Ojcow**	**2.72**	**118**	*e*Pg	**Pg**	**16 55 38.8**	**+0.2**
OJC				*e*Sg	**Sg**	**16 56 14.6**	**+0.7**
KHC	**Kasperske Hory**	**2.89**	**214**	*e*PN	**Pn**	**16 55 34.1**	**+0.4**
KHC				*e*PG	**Pg**	**16 55 40.5**	**-1.3**
KHC				*e*SN	**Sn**	**16 56 09.2**	**+0.1**
KHC				*e*SG	**Sg**	**16 56 18.7**	**-0.5**
	comp=Z,6.2nm,0.6s						
KHC	**Kasperske Hory**	**2.89**	**214**	Pn	**Pn**	**16 55 34.1**	**+0.4**
KHC	**Kasperske Hory**	**2.89**	**214**	Pg	**Pg**	**16 55 40.5**	**-1.3**
KHC				Sn	**Sn**	**16 56 09.2**	**+0.1**
KHC				Sg	**Sg**	**16 56 18.7**	**-0.5**
	comp=Z,6.2nm,0.6s						
MOX	**Moxa**	**2.93**	**254**	*e*PG	**Pg**	**16 55 42.2**	**-0.5**
MOX				*e*SG	**Sg**	**16 56 21.8**	**+1.1**

*ISCJB **28** 17:14:07.9±1.2, 24°.02N±0°.02×122°.30E±0°.02, h10km±9km, Error ellipse: s-maj=3.9km s-min=2.6km az=173.3*
*TAP **28** 17:14:08.4, 24°.06N×122°.30E, h24km, ML3.0, C*
*JMA **28** 17:14:08.5±0.2, 24°.12N×122°.24E, h24km, M2.5*

ISC 28 17:14:08.3±0.6, 24°.03N±0°.03×122°.29E±0°.02, h14km±4km, n31, σ0ˢ53/57, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.62**	**265**	*e*P	**Pg**	**17 14 20.8**	**+0.3**
	baz=247						
TWD	**Chiawan**	**0.63**	**275**	*e*P	**Pg**	**17 14 21.0**	**+0.3**
	baz=272						
TWD				*e*S	**Sg**	**17 14 30.1**	**+1.1**
	baz=272						
ENA	**Nanau**	**0.64**	**309⇑**	*i P*	**Pg**	**17 14 20.5**	**-0.2**
	baz=315						
ENA				*e*S	**Sg**	**17 14 30.0**	**+0.8**
	baz=315						
TWC	**Suao**	**0.70**	**325⇑**	*i P*	**Pg**	**17 14 21.2**	**-0.8**
	baz=323						
TWC				*e*S	**Sg**	**17 14 31.2**	**0.0**
	baz=323						
YOJ	**Yonaguni jima**	**0.79**	**57**	P	**Pg**	**17 14 23.1**	**-0.5**
YOJ				*e*S	**Sg**	**17 14 33.4**	**-0.6**
TWE	**Neicheng**	**0.89**	**321**	*e*P	**Pb**	**17 14 25.0**	**-0.5**
	baz=327						
TWE				*e*S	**Sg**	**17 14 37.3**	**+0.1**
	baz=327						
ENTT	**Nioudou**	**0.89**	**313**	P	**Pb**	**17 14 25.3**	**-0.3**
	baz=321						
ENTT				*e*S	**Sg**	**17 14 37.4**	**+0.1**
	baz=321						
NNS	**Nan Shan**	**0.93**	**296**	*e*P	**Pb**	**17 14 25.9**	**-0.2**
	baz=293						
NNS				*e*S	**Sb**	**17 14 38.4**	**+0.1**
	baz=293						
WHF	**Hehuan Shan**	**0.94**	**277**	P	**Pb**	**17 14 26.1**	**-0.3**
	baz=263						
WHF				S	**Sb**	**17 14 38.7**	**0.0**
	baz=263						
TWB1	**Santiao Chiao**	**1.01**	**345**	*e*P	**Pb**	**17 14 28.9**	**+1.3**
	baz=329						
TWB1				*e*S	**Sb**	**17 14 40.3**	**-0.4**
	baz=329						
EHY	**Hungye**	**1.03**	**240**	*e*P	**Pb**	**17 14 27.4**	**-0.4**
	baz=239						
EHY				*e*S	**Sb**	**17 14 41.3**	**+0.2**
	baz=239						
NSK	**Sanguang**	**1.06**	**307**	*e*P	**Pb**	**17 14 28.1**	**-0.3**
	baz=304						
NSK				*e*S	**Sb**	**17 14 42.2**	**0.0**
	baz=304						
TWF1	**Yuli**	**1.13**	**234**	*e*P	**Pb**	**17 14 28.8**	**-0.7**
	baz=222						
TWF1				*e*S	**Sb**	**17 14 44.0**	**-0.2**
	baz=222						
NWF	**Wu-fen Shan**	**1.13**	**336**	*e*P	**Pb**	**17 14 29.6**	**0.0**
	baz=333						
NWF				*e*S	**Sb**	**17 14 44.0**	**-0.3**
	baz=333						
TWA	**Mucha**	**1.14**	**326**	*e*P	**Pb**	**17 14 29.1**	**-0.7**
	baz=323						
TWA				*e*S	**Sb**	**17 14 44.4**	**-0.1**
	baz=323						
SMLT	**Sun Moon Lake**	**1.28**	**264**	*e*P	**Pn**	**17 14 31.2**	**-0.4**
	baz=252						
SMLT				*e*S	**Sb**	**17 14 47.8**	**-0.5**
	baz=252						
TYC	**Yuchr**	**1.31**	**265**	*e*P	**Pn**	**17 14 31.9**	**-0.3**
	baz=263						
TYC				*e*S	**Sb**	**17 14 49.5**	**+0.1**
	baz=263						
NSTT	**Nanjuang**	**1.32**	**297**	*e*P	**Pn**	**17 14 32.0**	**-0.2**
	baz=295						
NSTT				*e*S	**Sb**	**17 14 49.0**	**-0.5**
	baz=295						
TWS1	**Kuangyinshan**	**1.33**	**324**	*e*P	**Pn**	**17 14 33.0**	**+0.7**
	baz=332						
TWS1				*e*S	**Sb**	**17 14 50.2**	**+0.4**
	baz=332						
YUS	**Yu-Shan**	**1.33**	**246**	*e*P	**Pn**	**17 14 32.6**	**+0.1**
	baz=233						
IRIF	**Iriomote-Funau**	**1.35**	**77**	P	**Pn**	**17 14 32.5**	**-0.2**
IRIF				*e*S	**Sn**	**17 14 50.3**	**-0.2**
HATJ	**Hateruma jima**	**1.39**	**89**	P	**Pn**	**17 14 33.1**	**-0.1**
HATJ				*e*S	**Sn**	**17 14 51.8**	**+0.4**
TWQ1	**Liyutan**	**1.42**	**283**	*e*P	**Pn**	**17 14 34.4**	**+0.8**
	baz=281						
ELDTW	**Lidau**	**1.43**	**235**	*e*P	**Pn**	**17 14 32.8**	**-1.0**
	baz=223						
ELDTW				*e*S	**Sn**	**17 14 52.1**	**-0.4**
	baz=223						
ALS	**Alishan**	**1.45**	**249**	*e*P	**Pn**	**17 14 33.6**	**-0.5**
	baz=249						
ALS				*e*S	**Sn**	**17 14 52.4**	**-0.6**
	baz=249						
CHN5	**Tsauling**	**1.53**	**254**	*e*P	**Pn**	**17 14 35.6**	**+0.4**
	baz=243						
CHN5				*e*S	**Sn**	**17 14 55.8**	**+0.9**
	baz=243						
JKRS	**Kuro-shima**	**1.59**	**82**	P	**Pn**	**17 14 36.6**	**+0.6**
JKRS				*e*S	**Sn**	**17 14 57.3**	**+1.0**
JIJ	**Ishigaki jima**	**1.73**	**79**	P	**Pn**	**17 14 37.6**	**-0.3**
JIJ				*e*S	**Sn**	**17 14 59.0**	**-0.7**
CHN1	**Nanshi**	**1.82**	**243**	*e*P	**Pn**	**17 14 40.0**	**+0.8**
	baz=242						
SGST	**Jiashian**	**1.82**	**239**	*e*P	**Pn**	**17 14 40.0**	**+0.8**
	baz=228						
JTJ	**Tarama**	**2.29**	**74**	P	**Pn**	**17 14 46.1**	**+0.5**
JTJ				*e*S	**Sn**	**17 15 14.1**	**+0.6**

IDC 28 17:26:51.7±1.5, 32°.09N×104°.75E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.3/26, mbtmp3.3/4, ML3.2/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/19, Error ellipse: s-maj=44.7km s-min=27.5km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.54**	**202**	Pn	Pn	17 30 24.7	+5.9
	0.0nm,0.3s,baz=9.7,slow=8.7,SNR=2.5						
SONM	**Songino Array**	**15.78**	**4**	Pn	Pn	17 30 34.6	-0.6
	0.1nm,0.3s,baz=183,slow=11,SNR=2.6						
KSRS	**Korea Array**	**19.76**	**68**	P	Pn	17 31 23.3	-1.4
	0.1nm,0.3s,baz=255,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**22.62**	**317**	P	P	17 31 54.2	+0.2
	0.5nm,0.7s,baz=114,slow=11,SNR=5.5						
MMAI	**Mount Meron Ar**	**57.44**	**291**	LR	LR	18 04 43.0	
	comp=Z,90nm,19.9s,baz=160,slow=40						
ASAR	**Alice Springs**	**62.05**	**150**	P	P	17 37 14.1	0.0
	0.3nm,0.4s,baz=333,slow=6.5,SNR=15						

*NEIC **28** 17:30:15.9±4.1, 21°.30S×175°.02W, h35km, mb4.6/2, Error ellipse: s-maj=127.0km s-min=33.0km az=139.0*

IDC 28 17:30:10.9±2.7, 21°.26S×174°.99W, h0km, mb4.5/3, mb1 4.6/3, mb1mx3.9/17, mbtmp4.5/3, Error ellipse: s-maj=95.5km s-min=42.7km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.22**	**265**	P	P	17 37 16.3	+0.5
	6.3nm,0.5s,baz=96,slow=9.8,SNR=14						
CTAO	**Charters Tower**	**36.22**	**265**	*e*P	P	17 37 16.2	+0.4
	6.5nm,0.5s						
ASAR	**Alice Springs**	**47.09**	**257**	P	P	17 38 44.5	-0.3
	4.7nm,0.9s,baz=94,slow=8.1,SNR=41						
ASAR				PcP	PcP	17 40 15.9	-1.0
	0.3nm,0.5s,baz=101,slow=4.1,SNR=5.4						
WRAB	**Tennant Creek**	**47.28**	**262**	*e*P	P	17 38 44.2	-2.1
	2.6nm,0.6s						
MJAR	**Matsushiro Arr**	**72.51**	**322**	P	P	17 41 38.9	-0.7
	1.5nm,0.5s,baz=154,slow=6.2,SNR=4.1						
AKASG	**Malin Array Be**	**145.00**	**333**	PKPbc	PKPbc	17 49 49.1	-0.1
	0.7nm,0.4s,baz=43,slow=4.8,SNR=5.3						
MMAI	**Mount Meron Ar**	**150.63**	**300**	PKPbc	PKPbc	17 50 05.4	+0.2
	0.6nm,0.4s,baz=45,slow=6.3,SNR=2.9						

*ISCJB **28** 17:30:29.8±1.9, 41°.20N±0°.10×21°.99E±0°.06, h24km±37km, Error ellipse: s-maj=17.0km s-min=5.9km az=160.7*
*CSEM **28** 17:30:29.7±0.1, 41°.21N×21°.97E, h20km, ML2.5/1, Error ellipse: s-maj=4.3km s-min=1.8km az=163.0*
*THE **28** 17:30:30.2, 41°.17N×21°.99E, h3km±27km, ML2.5/1, Error ellipse: s-maj=27.5km s-min=0.6km az=339.0*
*SKO **28** 17:30:30.9, 41°.21N×21°.99E, h6km, M1.4, ML1.8*

ISC 28 17:30:29.8±1.9, 41°.20N±0°.10×21°.99E±0°.06, h24km±51km, n13, σ0ˢ35/21, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.46**	**74**	*i* Pg	**Pb**	**17 30 39.0**	**-0.2**
VAY				*e*Sg	**Sb**	**17 30 46.0**	**+0.4**
VAY				*e*Lg		17 30 46.2	
	comp=E,63nm,0.3s						
VAY				*e*Lg		17 30 46.2	
	comp=N,45nm,0.4s						
VAY	**Valandovo**	**0.46**	**74**	P	**Pb**	**17 30 39.0**	**-0.2**
VAY				S

h126km,.5km:pP-P,n832,σ0°74/771,mb5.2/205,
206C-216D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.25**	**296**	⇑	*i*	P	**Pn**	**17 35 50.7**	**-4.3**
PB01					*i*	S	**Sn**	**17 36 08.1**	**-5.9**
PB01						AML	AML	17 36 09.8	
	comp=E,88μm,0.4s								
PB04	**Plate Boundary**	**1.30**	**239**	⇑	*i*	P	**Pn**	**17 35 55.5**	**0.0**
PB04					*i*	S	**Sn**	**17 36 16.2**	**+1.2**
PB04						AML	AML	17 36 21.5	
	comp=E,42μm,0.6s								
MACH	**Maria Elena**	**1.49**	**246**	⇑	*i*	P	**Pn**	**17 35 51.5**	**-6.2**
MACH					*i*	S	**Sn**	**17 36 09.5**	**-9.3**
PECH	**Pedro de Valdi**	**1.63**	**232**	⇓	*i*	P	**Pn**	**17 35 52.9**	**-6.4**
PECH					*i*	S	**Sn**	**17 36 12.2**	**-9.4**
PECH						AML	AML	17 36 14.3	
	comp=E,110μm,0.6s								
HMBC	**Humberston**	**1.99**	**311**	⇑	*i*	P	**Pn**	**17 35 59.5**	**-4.0**
HMBC					*i*	S	**Sn**	**17 36 24.2**	**-5.2**
HMBC						AML	AML	17 36 27.7	
	comp=N,78μm,0.7s								
PSGC	**Pisagua**	**2.63**	**319**	⇑	*i*	P	**Pn**	**17 36 07.3**	**-4.3**
PSGC					*i*	S	**Sn**	**17 36 38.0**	**-5.8**
PSGC						AML	AML	17 36 40.4	
	comp=E,22μm,0.4s								
MNMC	**Miæe Miæ**	**2.74**	**333**	⇑	*i*	P	**Pn**	**17 36 11.5**	**-1.6**
MNMC					*i*	S	**Sn**	**17 36 45.2**	**-1.1**
ANCH	**Antofagasta**	**2.86**	**223**	⇓	*i*	P	**Pn**	**17 36 07.4**	**-7.2**
ANCH					*i*	S	**Sn**	**17 36 35.7**	**-13**
LPAZ	**La Paz**	**5.28**	**2**	P			**Pn**	**17 36 48.6**	**+1.8**
	comp=E,95nm,0.3s,baz=190,slow=4.8,SNR=1017								
LPAZ						LR	LR	17 38 47.8	
	comp=E,1μm,19.4s,baz=189,slow=37								
LPAZ	**La Paz**	**5.28**	**2**	*eP*			**Pn**	**17 36 48.7**	**+2.0**
	comp=E,382nm,0.5s								
LCO	**Las Campanas**	**7.70**	**196**	*eP*			**Pn**	**17 37 09.8**	**-10**
	comp=E,447nm,0.4s								
SIV	**San Ignacio**	**8.81**	**52**	P			**Pn**	**17 37 33.1**	**-1.3**
	comp=E,90nm,0.3s,baz=242,slow=12,SNR=1291								
SIV						S	**Sn**	**17 39 09.3**	**-2.8**
	comp=E,9.6nm,0.3s,baz=142,slow=23,SNR=4.3								
CFAA	**Coronel Fontan**	**9.97**	**180**	P			**Pn**	**17 37 41.7**	**-8.1**
	comp=E,4.2nm,0.3s,baz=353,slow=13,SNR=47								
CFAA						S	**Sn**	**17 39 26.6**	**-13**
	comp=E,2.3nm,0.3s,baz=215,slow=16,SNR=5.4								
CFAA						LR	LR	17 41 54.3	
	comp=E,61nm,19.7s,baz=358,slow=39								
CFAA	**Coronel Fontan**	**9.97**	**180**	P			**Pn**	**17 37 41.7**	**-8.1**
CFAA						S	**Sn**	**17 39 26.6**	**-13**
CFAA						LR	LR	17 41 54.3	
CPUP	**Villa Florida**	**11.07**	**117**	P			**Pn**	**17 38 02.1**	**-2.4**
	comp=E,3.5nm,0.3s,baz=275,slow=11,SNR=42								
CPUP						LR	LR	17 42 10.4	
	comp=E,1μm,19.0s,baz=316,slow=36								
NNA	**Nana**	**12.58**	**318**	Pn			**Pn**	**17 38 23.0**	**-1.5**
	comp=E,2μm,0.9s,SNR=8.1								
NNA	**Nana**	**12.58**	**318**	P			**Pn**	**17 38 23.7**	**-0.9**
	comp=E,2.0nm,0.3s,baz=171,slow=11,SNR=12								
NNA						S	**Sn**	**17 40 36.7**	**-6.5**
	comp=E,8.4nm,0.3s,baz=228,slow=21,SNR=6.0								
NNA						LR	LR	17 44 01.4	
	comp=E,581nm,18.6s,baz=132,slow=41								
NNA	**Nana**	**12.58**	**318**	*eP*			**Pn**	**17 38 23.0**	**-1.5**
	comp=E,324nm,0.9s								
TRQA	**Tornquist**	**17.29**	**163**	*eP*			**Pn**	**17 39 18.5**	**-4.9**
	comp=E,462nm,1.7s								
ATAH	**Atahualpa**	**17.49**	**325**	P			**Pn**	**17 39 24.9**	**-1.1**
	comp=E,1.5nm,0.3s,baz=177,slow=8.4,SNR=29								
PLCA	**Paso Flores**	**19.18**	**185**	P			**P**	**17 39 40.0**	**-3.6**
	comp=E,1.0nm,0.3s,baz=2.0,slow=11,SNR=24								
PLCA						LR	LR	17 47 59.6	
	comp=E,604nm,20.5s,baz=192,slow=39								
PLCA	**Paso Flores**	**19.18**	**185**	*eP*			**P**	**17 39 40.0**	**-3.6**
PLCA						pmax	pmax		
	comp=Z,44nm,1.0s								
PLCA	**Paso Flores**	**19.18**	**185**	*eP*			**P**	**17 39 40.0**	**-3.5**
	comp=Z,44nm,1.0s								
CAM4	**Nova Friburgo**	**23.86**	**97**	⇓⇓	*i*	P	**P**	**17 40 31.3**	**-0.5**
CAM4					*i*			17 40 38.9	
CAM4					*i*			17 40 40.9	
CAM4					*i*			17 40 44.9	
CAM4					*i*			17 40 47.5	
CAM4					*i*			17 40 48.3	
CAM4					*i*			17 40 51.9	
CAM4					*i*			17 40 58.9	
CAM4					*i*			17 41 02.1	
CAM4					*i*			17 41 06.5	
CAM4					*i*			17 41 08.5	
CAM4					*i*			17 41 11.6	
OTAV	**Otavalo**	**23.86**	**334**	*eP*			**P**	**17 40 32.7**	**+0.9**
	comp=Z,94nm,1.0s,mb5.1								
ROSC	**El Rosal**	**26.95**	**347**	P			**P**	**17 40 60.0**	**+0.3**
	comp=Z,24nm,0.9s,mb4.7,baz=94,slow=15,SNR=11								
ROSC						LR	LR	17 53 03.3	
	comp=Z,657nm,19.3s,baz=197,slow=39								
ROSC	**El Rosal**	**26.95**	**347**	*eP*			**P**	**17 41 00.5**	**+0.8**
SDV	**Santo Domingo**	**30.38**	**355**	*eP*			**P**	**17 41 28.8**	**-1.3**
	comp=Z,44nm,0.8s,mb5.1								
USHA	**Ushuaia**	**33.19**	**180**	P			**P**	**17 41 51.8**	**-2.5**
	comp=Z,11nm,0.8s,mb4.8,baz=315,slow=6.3,SNR=4.1								
RCBR	**Riachuelo**	**35.03**	**68**	*eP*			**P**	**17 42 10.8**	**+0.1**
	comp=Z,157nm,0.8s,mb5.9								
JTS	**JuntasAbangare**	**35.66**	**331**	*eP*			**P**	**17 42 16.5**	**+0.4**
JTS						pmax	pmax		
	comp=Z,72nm,1.3s								
JTS	**JuntasAbangare**	**35.66**	**331**	*eP*			**P**	**17 42 16.5**	**+0.5**
	comp=Z,72nm,1.3s,mb5.4								
ICM	**Isla Caja Muer**	**39.28**	**3**	P			**P**	**17 42 45.5**	**-1.0**
ICM						*epP*	pP	17 43 14.6	-0.1
CRPR	**Cabo Rojo, PR**	**39.37**	**2**	*eP*			**P**	**17 42 46.0**	**-1.3**
	comp=Z,49nm,1.1s,mb5.2								
CRPR						*epP*	pP	17 43 15.4	0.0
SJG	**San Juan**	**39.52**	**3**	*eP*			**P**	**17 42 46.1**	**-2.3**
SJG						*e*PP*	pP	17 43 15.6	-1.0
SJG						pmax	pmax		
	comp=Z,224nm,0.8s								
SJG	**San Juan**	**39.52**	**3**	*eP*			**P**	**17 42 46.1**	**-2.4**
	comp=Z,224nm,0.8s,mb6.0								
SJG						*epP*	pP	17 43 15.6	-1.1
MTP	**Monte Pirata**	**39.54**	**4**	*eP*			**P**	**17 42 45.6**	**-2.9**
	comp=Z,11nm,0.5s,mb4.9								
MTP						*epP*	pP	17 43 15.3	-1.5
CBYP	**Canovanas**	**39.69**	**4**	P			**P**	**17 42 47.3**	**-2.6**
	comp=Z,110nm,1.3s,mb5.5								
CBYP						*epP*	pP	17 43 17.2	-0.9
TGUH	**Tegucigalpa,Un**	**40.03**	**331**	*eP*			**P**	**17 42 52.5**	**-0.2**
	comp=Z,221nm,1.3s,mb5.8								
GRTK	**Grand Turk**	**42.93**	**356**	*eP*			**P**	**17 43 15.2**	**-1.1**
PMSA	**Palmer Station**	**43.25**	**177**	P			**P**	**17 43 16.7**	**-1.7**
	comp=Z,47nm,0.8s,mb5.2,baz=9.5,slow=6.1,SNR=4.8								
TEIG	**Tepich**	**45.93**	**333**	*eP*			**P**	**17 43 38.8**	**-1.3**
	comp=Z,86nm,1.1s,mb5.4								
TEIG						*epP*	pP	17 44 08.3	-0.7
DWPF	**Disney**	**51.02**	**345**	*eP*			**P**	**17 44 18.6**	**-0.5**
	comp=Z,241nm,0.8s,mb6.3								
BRAL	**Brewton**	**55.32**	**340**	*eP*			**P**	**17 44 51.0**	**+0.5**
	comp=Z,72nm,0.4s,mb6.1								
NHSC	**New Hope**	**55.57**	**348**	*eP*			**P**	**17 44 52.2**	**0.0**
	comp=Z,696nm,1.2s,mb6.6								
NHSC						*epP*	pP	17 45 22.6	+0.5
COW	**Cow Castle Cre**	**55.94**	**347**	*eP*			**P**	**17 44 54.8**	**-0.1**
COW						*epP*	pP	17 45 24.9	+0.2
GOGA	**Godfrey**	**56.58**	**345**	*eP*			**P**	**17 44 57.9**	**-1.5**
GOGA						*e*PP*	pP	17 45 28.6	-0.8
GOGA						pmax	pmax		
	comp=Z,51nm,1.3s,mb5.4								
GOGA	**Godfrey**	**56.58**	**345**	*eP*			**P**	**17 44 57.9**	**-1.5**
	comp=Z,51nm,1.3s,mb5.4								
GOGA						*epP*	pP	17 45 28.6	-0.8
JSC	**Jenkinsville**	**56.92**	**347**	*eP*			**P**	**17 45 01.4**	**-0.4**
JSC						*e*PP*	pP	17 45 32.1	+0.3
LHS	**Liberty Hill**	**57.02**	**348**	*eP*			**P**	**17 45 02.4**	**-0.1**
LRAL	**Lakeview Retre**	**57.19**	**341**	*eP*			**P**	**17 45 02.0**	**-1.7**
	comp=Z,26nm,0.5s,mb5.5								
LRAL						*epP*	pP	17 45 32.1	-1.7
HKT	**Hockley**	**57.70**	**332**	*eP*			**P**	**17 45 06.4**	**-0.9**
HKT						pmax	pmax		
	comp=Z,101nm,1.6s,mb5.6								
HKT	**Hockley**	**57.70**	**332**	*eP*			**P**	**17 45 06.4**	**-0.9**
	comp=Z,101nm,1.6s,mb5.6								
NATX	**Nacogdoches**	**58.76**	**334**	*eP*			**P**	**17 45 14.5**	**-0.2**
	comp=Z,216nm,1.4s,mb6.0								
CPCT	**Cooper Cave**	**58.78**	**345**	*eP*			**P**	**17 45 13.5**	**-1.3**
CPCT						*epP*	pP	17 45 44.3	-0.6
TKL	**Tuckaleechee C**	**58.80**	**345**	*eP*			**P**	**17 45 13.4**	**-1.5**
TKL						*e*PP*	pP	17 45 44.4	-0.7
TKL						*e*SP*	sP	17 45 57.1	-1.8
SWET	**Sewanee**	**58.93**	**343**	*eP*			**P**	**17 45 14.5**	**-1.3**
SWET						*epP*	pP	17 45 45.1	-0.9
SWET						*esP*	sP	17 45 58.0	-1.8
SHEL	**Horse Pasture**	**59.15**	**96**	P			**P**	**17 45 19.1**	**+1.3**
	comp=Z,3μm,0.7s,SNR=8.2								
SHEL	**Horse Pasture**	**59.15**	**96**	*eP*			**P**	**17 45 19.1**	**+1.3**
SHEL						pmax	pmax		
	comp=Z,312nm,0.8s,mb6.4								
SHEL	**Horse Pasture**	**59.15**	**96**	*eP*			**P**	**17 45 19.1**	**+1.3**
	comp=Z,312nm,0.8s,mb6.4								
PLAL	**Pickwick Lake**	**59.32**	**341**	*eP*			**P**	**17 45 16.2**	**-2.3**
	comp=Z,48nm,0.9s,mb5.5								
PLAL						*epP*	pP	17 45 46.7	-2.0
TZTN	**Tazewell**	**59.59**	**346**	*eP*			**P**	**17 45 19.3**	**-1.1**
	comp=Z,25nm,0.9s,mb5.2								
BLA	**Blacksburg**	**59.60**	**349**	*eP*			**P**	**17 45 20.4**	**0.0**
BLA						pmax	pmax		
	comp=Z,70nm,0.6s,mb5.9								
BLA	**Blacksburg**	**59.60**	**349**	*eP*			**P**	**17 45 20.4**	**0.0**
	comp=Z,70nm,0.6s,mb5.9								
ELN	**Prospectdale**	**59.67**	**348**	*eP*			**P**	**17 45 21.1**	**+0.2**
ELN						*epP*	pP	17 45 52.1	+1.0
JCT	**Junction City**	**59.98**	**329**	*eP*			**P**	**17 45 22.1**	**-1.0**
JCT						*e*PP*	pP	17 45 52.1	-1.3
JCT						pmax	pmax		
	comp=Z,53nm,0.8s,mb5.6								
JCT	**Junction City**	**59.98**	**329**	*eP*			**P**	**17 45 22.1**	**-1.1**
	comp=Z,53nm,0.8s,mb5.6								
JCT						*epP*	pP	17 45 52.1	-1.3
VNA1	**Neumayer--Stat**	**60.00**	**161**	*eP*			**P**	**17 45 21.1**	**-1.6**
WVT	**Waverly**	**60.31**	**342**	*eP*			**P**	**17 45 23.4**	**-1.9**
WVT						*e*PP*	pP	17 45 53.7	-1.9
WVT						*e*SP*	sP	17 46 07.2	-2.2
WVT						pmax	pmax		
	comp=Z,78nm,0.8s,mb5.8								
WVT	**Waverly**	**60.31**	**342**	*eP*			**P**	**17 45 23.4**	**-1.9**
	comp=Z,78nm,0.8s,mb5.8								
WVT						*epP*	pP	17 45 53.7	-1.9
WVT						*esP*	sP	17 46 07.2	-2.2
VNA2	**Neumayer--Watz**	**60.37**	**161**	*eP*			**P**	**17 45 23.2**	**-2.0**
UALR	**University of**	**60.54**	**337**	*eP*			**P**	**17 45 25.4**	**-1.4**
	comp=Z,61nm,1.0s,mb5.6								
628A	**Black Gap, Mar**	**60.74**	**325**	⇑P			**P**	**17 45 28.0**	**-0.3**
	baz=61,SNR=58								
MIAR	**Mount Ida**	**60.79**	**336**	*eP*			**P**	**17 45 26.8**	**-1.7**
MIAR						*e*PP*	pP	17 45 57.0	-1.9
MIAR						pmax	pmax		
	comp=Z,65nm,0.9s,mb5.7								
MIAR	**Mount Ida**	**60.79**	**336**	*eP*			**P**	**17 45 26.8**	**-1.7**
	comp=Z,65nm,0.9s,mb5.7								
MIAR						*epP*	pP	17 45 57.0	-1.9
UTMT	**University of**	**60.82**	**341**	*eP*			**P**	**17 45 27.6**	**-1.1**
627A	**Terlingua Ranc**	**60.98**	**325**	⇑P			**P**	**17 45 29.1**	**-0.9**
	baz=61,SNR=26								
TXAR	**Lajas Array**	**61.04**	**325**	P			**P**	**17 45 29.1**	**-1.2**
	comp=Z,5.1nm,0.7s,mb4.7,baz=149,slow=9.2,SNR=64								
TXAR						pP	pP	17 45 58.7	-2.0
	comp=Z,5.2nm,0.7s,baz=160,slow=7.9,SNR=6.7								
528A	**Cox Ranch, San**	**61.23**	**326**	⇓P			**P**	**17 45 30.6**	**-1.0**
	baz=62,SNR=33								
PARMO	**Parma**	**61.39**	**340**	*eP*			**P**	**17 45 31.6**	**-0.9**
PARMO						*epP*	pP	17 46 03.0	0.0
626A	**Big Bend Ranch**	**61.46**	**324**	⇓P			**P**	**17 45 32.8**	**-0.3**
	baz=62,SNR=70								
428A	**Kincaid Ranch,**	**61.62**	**326**	⇑P			**P**	**17 45 33.6**	**-0.7**
	baz=62,SNR=16								
527A	**Woodward Ranch**	**61.65**	**325**	⇑P			**P**	**17 45 33.6**	**-0.8**
	baz=62,SNR=41								
526A	**Mary Lane Ranc**	**61.84**	**325**	⇓P			**P**	**17 45 35.1**	**-0.6**
	baz=62,SNR=46								
WCI	**Wyandotte Cave**	**61.86**	**344**	*eP*			**P**	**17 45 34.1**	**-1.6**
WCI						*e*PP*	pP	17 46 04.9	-1.2
WCI						pmax	pmax		
	comp=Z,49nm,0.7s,mb5.7								
WCI	**Wyandotte Cave**	**61.86**	**344**	*eP*			**P**	**17 45 34.1**	**-1.6**
	comp=Z,48nm,0.7s,mb5.6								
WCI						*epP*	pP	17 46 04.9	-1.2
MCWV	**Mont Chateau**	**61.88**	**350**	*eP*			**P**	**17 45 35.9**	**+0.1**
	comp=Z,125nm,0.7s,mb6.0								
MCWV						*epP*	pP	17 46 06.9	+0.7
USIN	**University of**	**61.98**	**343**	*eP*			**P**	**17 45 34.5**	**-1.9**
	comp=Z,50nm,0.8s,mb5.6								
427A	**Hayter Ranch,**	**62.09**	**326**	⇑P			**P**	**17 45 36.5**	**-0.9**
	baz=62,SNR=13								
SIUC	**Southern Illin**	**62.20**	**341**	*eP*			**P**	**17 45 36.7**	**-1.2**
	comp=Z,72nm,0.8s,mb5.8								
328A	**Wristen Ranch,**	**62.21**	**327**	⇑P			**P**	**17 45 37.2**	**-1.0**
	baz=62,SNR=16								
426A	**McDonald Obser**	**62.28**	**325**	⇑P			**P**	**17 45 38.1**	**-0.6**
	baz=62,SNR=32								
SSPA	**Standing Stone**	**62.55**	**352**	*eP*			**P**	**17 45 39.8**	**-0.4**
	comp=Z,52nm,1.3s,mb5.3								
SSPA						*epP*	pP	17 46 10.7	0.0
327A	**Balmorhea Ranc**	**62.55**	**326**	⇓P			**P**	**17 45 39.5**	**-0.9**
	baz=63								
326A	**Caldwell Ranch**	**62.77**	**326**	⇑P			**P**	**17 45 41.1**	**-0.8**
	baz=63,SNR=17								
FVM	**French Village**	**62.81**	**340**	*eP*			**P**	**17 45 40.7**	**-1.3**
FVM						pmax	pmax		
	comp=Z,102nm,0.8s,mb5.8								
FVM	**French Village**	**62.81**	**340**	*eP*			**P**	**17 45 40.7**	**-1.3**
	comp=Z,102nm,0.8s,mb5.8								
OLIL	**Olney**	**62.82**	**343**	*eP*			**P**	**17 45 40.1**	**-2.0**
	comp=Z,27nm,0.6s,mb5.3								
425A	**Indio Mountain**	**62.88**	**325**	⇑P			**P**	**17 45 41.9**	**-0.8**
	baz=63,SNR=58								
227A	**Bennet, Jal**	**62.96**	**327**	⇓P			**P**	**17 45 42.6**	**-0.6**
	baz=63								
ACSO	**Alum Creek Sta**	**63.01**	**347**	*eP*			**P**	**17 45 42.0**	**-1.2**
	comp=Z,58nm,0.8s,mb5.6								
ACSO						*epP*	pP	17 46 13.3	-0.5
ACSO						*esP*	sP	17 46 26.9	-0.7
WMOK	**Wichita Mounta**	**63.07**	**332**	*eP*			**P**	**17 45 41.9**	**-1.9**
WMOK						*e*PP*	pP	17 46 12.4	-2.0
WMOK						pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7								
WMOK	**Wichita Mounta**	**63.07**	**332**	*eP*			**P**	**17 45 41.9**	**-1.9**
	comp=Z,11nm,1.0s,mb4.8								
WMOK						*epP*	pP	17 46 12.4	-1.9
CCM	**Cathedral Cave**	**63.14**	**340**	*eP*			**P**	**17 45 42.7**	**-1.4**
CCM						*e*PP*	pP	17 46 13.6	-1.1
CCM						pmax	pmax		
	comp=Z,59nm,0.8s,mb5.6								
CCM	**Cathedral Cave**	**63.14**	**340**	*eP*			**P**	**17 45 42.7**	**-1.5**
	comp=Z,59nm,0.8s,mb5.6								
CCM						*epP*	pP	17 46 13.6	-1.1
325A	**Bean Ranch, Si**	**63.33**	**325**	⇓P			**P**	**17 45 44.8**	**-0.7**
	baz=64,SNR=80								
226A	**Malaga, Loving**	**63.42**	**326**	⇓P			**P**	**17 45 45.9**	**-0.3**
	baz=64,SNR=17								
CLNB	**Carlsbad**	**63.46**	**327**	*eP*			**P**	**17 45 46.1**	**-0.3**
	comp=Z,14nm,1.2s,mb4.8								
CLNB						*epP*	pP	17 46 15.7	-1.4
127A	**Arkansas Junct**	**63.53**	**327**	⇑P			**P**	**17 45 45.7**	**-1.2**
	baz=64								
324A	**Moseley Ranch,**	**63.66**	**325**	⇓P			**P**	**17 45 46.2**	**-1.5**
	baz=64,SNR=48								
GDL2	**Guadalupe Moun**	**63.66**	**326**	*eP*			**P**	**17 45 47.2**	**-0.6**
	comp=Z,19nm,0.9s,mb4.9								
GDL2						*epP*	pP	17 46 17.4	-1.0
MNTX	**Cornudas Mount**	**63.81**	**325**	*eP*			**P**	**17 45 46.6**	**-2.1**
	comp=Z,28nm,1.1s,mb5.0								
MNTX						*epP*	pP	17 46 16.4	-2.9
225A	**Deer Hill, Car**	**63.83**	**326**	⇑P			**P**	**17 45 48.0**	**-0.9**
	baz=64,SNR=22								
126A	**Clayton Basin,**	**63.84**	**327**	⇓P			**P**	**17 45 47.9**	**-1.0**
	baz=64,SNR=12								
BINY	**Binghamton**	**63.87**	**354**	*eP*			**P**	**17 45 48.8**	**-0.1**
	comp=Z,95nm,1.0s,mb5.6								
BINY						*epP*	pP	17 46 19.4	-0.1
BINY						*esP*	sP	17 46 33.5	+0.3
Z27A	**Tatum**	**63.97**	**328**	⇓P			**P**	**17 45 48.3**	**-1.4**
	baz=64,SNR=28								
224A	**Corundas Mount**	**64.17**	**325**	⇓P			**P**	**17 45 49.9**	**-1.2**
	baz=64,SNR=39								
125A	**Gardner Draw,**	**64.18**	**326**	⇑P			**P**	**17 45 49.7**	**-1.4**
	baz=64,SNR=11								
MSTX	**Muleshoe**	**64.28**	**329**	⇑P			**P**	**17 45 50.4**	**-1.4**
	baz=64,SNR=30								
ERPA	**Erie**	**64.31**	**350**	*eP*			**P**	**17 45 50.9**	**-0.8**
	comp=Z,120nm,0.8s,mb5.8								
ERPA						*epP*	pP	17 46 22.1	-0.3
ERPA						*esP*	sP	17 46 35.8	-0.3
Z26A	**Caprock**	**64.32**	**327**	⇑P			**P**	**17 45 51.0**	**-1.0**
	baz=65,SNR=12								
Y27A	**Causey**	**64.40**	**328**	⇑P			**P**	**17 45 51.2**	**-1.3**
	baz=65,SNR=11								
AMTX	**Amarillo**	**64.50**	**330**	*eP*			**P**	**17 45 51.4**	**-1.8**
	comp=Z,28nm,1.0s,mb5.0								
223A	**Chaparral, Ant**	**64.61**	**324**	⇓P			**P**	**17 45 53.1**	**-0.8**
	baz=65								
124A	**Stringfield Ra**	**64.62**	**326**	⇑P			**P**	**17 45 53.2**	**-0.8**
	baz=65,SNR=36								
Z25A	**Roswell**	**64.70**	**327**	⇑P			**P**	**17 45 53.3**	**-1.2**
	baz=65,SNR=18								
Y26A	**Elida**	**64.76**	**328**	⇓P			**P**	**17 45 53.5**	**-1.4**
	baz=65								
X27A	**F and S Farms,**	**64.98**	**329**	⇑P			**P**	**17 45 55.0**	**-1.3**
	baz=65								
123A	**Bell Site, Whi**	**65.00**	**325**	⇑P			**P**	**17 45 55.7**	**-0.8**
	baz=65								
222A	**Williams Famil**	**65.05**	**324**	⇓P			**P**	**17 45 56.7**	**-0.1**
	baz=65								
Z24A	**Sheeppen Canyo**	**65.07**	**326**	⇓P			**P**	**17 45 56.1**	**-0.8**
	baz=65,SNR=39								
Y25A	**Mesa, Roswell**	**65.19**	**327**	⇓P			**P**	**17 45 56.4**	**-1.3**
	baz=65,SNR=24								
X26A	**CR and CF Fran**	**65.25**	**328**	⇑P			**P**	**17 45 57.1**	**-1.0**
	baz=66,SNR=13								
320A	**Kipp Ranch, An**	**65.26**	**323**	⇓P			**P**	**17 45 58.1**	**-0.1**
	baz=66,SNR=8.8								
W27A	**Bowe Ranch, En**	**65.30**	**329**	⇓P			**P**	**17 45 57.2**	**-1.2**
	baz=66,SNR=14								
221A	**Mesquite Ranch**	**65.35**	**324**	⇓P			**P**	**17 45 58.8**	**+0.1**
	baz=66,SNR=5.6								
NCB	**Newcomb**	**65.47**	**355**	*eP*			**P**	**17 45 59.0**	**-0.3**
	comp=Z,38nm,1.2s,mb5.1								
NCB						*epP*	pP	17 46 30.3	+0.3
Z23A	**Rita Site, Whi**	**65.47**	**326**	⇓P			**P**	**17 45 59.2**	**-0.3**
	baz=66,SNR=26								
Y24A	**Capitan**	**65.57**	**327**	⇓P			**P**	**17 45 58.9**	**-1.2**
	baz=66								
X25A	**Clemmons Ranch**	**65.66**	**327**	⇑P			**P**	**17 45 59.5**	**-1.1**
	baz=66,SNR=6.6								
W26A	**Owens Ranch, T**	**65.66**	**329**	⇓P			**P**	**17 45 60.0**	**-0.7**
	baz=66,SNR=12								
220A	**Playas Peak, P**	**65.68**	**323**	⇓P			**P**	**17 46 00.8**	**-0.1**
	baz=66,SNR=49								
319A	**Douglas**	**65.72**	**322**	⇓P			**P**	**17 46 01.2**	**+0.1**
	baz=66,SNR=29								
121A	**Cookes Peak, D**	**65.75**	**324**	⇓P			**P**	**17 46 01.6**	**+0.3**
	baz=66,SNR=28								
Z22A	**Elephant Butte**	**65.85**	**325**	⇑P			**P**	**17 46 02.2**	**+0.3**
	baz=66,SNR=110								
Y23A	**Lovelace Mesa,**	**65.90**	**326**	⇓P			**P**	**17 46 01.6**	**-0.6**
	baz=66,SNR=18								
X24A	**Lazy VL Ranch,**	**66.08**	**327**	⇑P			**P**	**17 46 02.5**	**-0.9**
	baz=66								
W25A	**X Bar L Ranch,**	**66.11**	**328**	⇑P			**P**	**17 46 02.7**	**-0.9**
	baz=66,SNR=34								
LONY	**Lake Ozonia**	**66.14**	**355**	*eP*			**P**	**17 46 03.2**	**-0.3**
	comp=Z,149nm,1.7s,mb5.5								
LONY						*epP*	pP	17 46 34.0	-0.3
219A	**White Tail Can**

LIC Lamto 67.86 73⇑*i*P P 17 46 14.8 -0.3
comp=Z,99nm,0.7s,mb5.5,baz=256
LIC *e*MLR MLR
comp=Z,254nm,20.8s
LIC Lamto 67.86 73⇑*i*P P 17 46 14.8 -0.3
comp=Z,49nm,0.7s,mb5.5
LIC LR LR
comp=Z,130nm,20.8s
V22A San Miguel Ran 67.88 327 ⇑P P 17 46 15.4 +0.7
baz=68,SNR=29
116A Eloy 67.98 321 ⇑P P 17 46 15.7 +0.2
baz=68,SNR=7.7
X19A St. Johns 68.00 324 ⇑P P 17 46 15.9 +0.4
baz=68,SNR=8.7
TIC Toumodi 68.05 73 *e*P P 17 46 16.0 -0.3
comp=Z,83nm,0.5s,mb5.8
V21A Milan 68.17 326 ⇑P P 17 46 17.2 +0.6
baz=68,SNR=6.3
KIC Kosan Boka 68.17 73 *e*P P 17 46 16.7 -0.4
comp=Z,290nm,0.7s,mb6.2
214A Organ Pipe Nat 68.20 320 ⇑P P 17 46 17.3 +0.5
baz=68,SNR=44
DBIC Dimbokro 68.20 73 P P 17 46 17.0 -0.2
comp=Z,143nm,0.8s,mb5.9,baz=218,slow=6.5,SNR=130
DBIC LR LR 18 13 19.9
comp=Z,149nm,19.1s,baz=160,slow=33
DBIC Dimbokro 68.20 73 *e*P P 17 46 17.1 -0.2
DBIC *e**PP pP 17 46 47.9 -0.3
DBIC pmax pmax
comp=Z,141nm,0.8s
DBIC Dimbokro 68.20 73 *e*P P 17 46 17.1 -0.1
comp=Z,141nm,0.8s,mb5.8
DBIC *e*pP pP 17 46 47.9 -0.3
Y17A Roosevelt 68.32 323 ⇑P P 17 46 18.0 +0.5
baz=68,SNR=65
Z16A Peralta Trail, 68.39 322 ⇓P P 17 46 18.2 +0.2
baz=69,SNR=8.1
115A Sonoran Desert 68.39 321 ⇑P P 17 46 18.5 +0.5
baz=69,SNR=14
X18A Snowflake 68.44 324 ⇑P P 17 46 18.7 +0.5
baz=69,SNR=8.2
W19A Sanders 68.57 325 ⇓P P 17 46 19.4 +0.3
baz=69,SNR=35
V20A Brimhall 68.60 326 ⇓P P 17 46 19.6 +0.4
baz=69,SNR=28
SDCO Great Sand Dun 68.62 329 *e*P P 17 46 19.3 0.0
comp=Z,76nm,1.3s,mb5.4
SDCO *e*pP pP 17 46 49.8 -0.6
SDCO *e*sP sP 17 47 03.7 -0.3
T22A Edith 68.73 328 ⇓P P 17 46 20.6 +0.6
baz=69,SNR=6.2
W18A Petrified Fore 68.76 324 ⇑P P 17 46 20.5 +0.3
baz=69,SNR=6.2
X17A Forest Lakes 68.77 323 ⇑P P 17 46 21.2 +0.9
baz=69,SNR=14
Z15A Gila River Ind 68.77 321 ⇓P P 17 46 20.7 +0.3
baz=69
Y16A Circle Bar Ran 68.81 322 ⇓P P 17 46 21.3 +0.7
baz=69,SNR=26
V19A Window Rock 68.84 325 ⇓P P 17 46 21.0 +0.3
baz=69,SNR=22
U20A Newcomb 69.06 326 ⇑P P 17 46 22.2 +0.1
baz=69,SNR=20
X16A Lo Mia Camp, P 69.18 323 ⇑P P 17 46 23.5 +0.6
baz=69,SNR=44
W17A Winslow 69.26 324 ⇑P P 17 46 23.6 +0.3
baz=70,SNR=11
Z14A Wintersburg 69.28 321 ⇓P P 17 46 23.6 +0.1
baz=70,SNR=5.5
V18A Ganado 69.31 325 ⇓P P 17 46 23.5 -0.1
baz=70,SNR=6.6
113A Mohawk Valley, 69.35 320 ⇓P P 17 46 23.9 0.0
baz=70,SNR=8.5
Y15A Casa Rosa Ranc 69.35 322 ⇑P P 17 46 24.2 +0.2
baz=70,SNR=51
U19A Dine' College, 69.36 326 ⇓P P 17 46 23.4 -0.5
baz=70,SNR=8.8
Z13A Yuma Proving G 69.59 320 ⇓P P 17 46 25.6 +0.2
baz=70,SNR=25
R22A Saguache, Gunn 69.61 328 ⇓P P 17 46 25.8 +0.4
baz=70
T19A Beclabito 69.67 326 ⇓P P 17 46 25.9 +0.1
baz=70,SNR=32
OGNE Ogallala 69.68 333 *e*P P 17 46 25.4 -0.4
comp=Z,25nm,0.9s,mb5.0
OGNE *e*pP pP 17 46 55.9 -0.9
112A Yuma 69.68 319 ⇑P P 17 46 26.1 +0.2
baz=70
S21A Coal Bank Pass 69.68 327 ⇓P P 17 46 26.2 +0.4
baz=70,SNR=20
X15A Humboldt 69.68 322 ⇑P P 17 46 26.4 +0.5
baz=70,SNR=38
MVCO Mesa Verde 69.69 327 ⇓P P 17 46 26.3 +0.4
baz=70,SNR=20
MVCO Mesa Verde 69.69 327 *e*P P 17 46 26.1 +0.2
comp=Z,111nm,1.3s,mb5.5
MVCO *e*pP pP 17 46 55.8 -1.2
W16A Flagstaff 69.73 323 ⇑P P 17 46 27.1 +0.9
baz=70,SNR=50
Y14A Wickenburg 69.73 321 ⇓P P 17 46 26.4 +0.1
baz=70,SNR=19
U18A Rough Rock, Ch 69.81 325 ⇑P P 17 46 27.2 +0.6
baz=70,SNR=42
WUAZ Wupatki 69.95 324 ⇓P P 17 46 28.2 +0.7
baz=70,SNR=36
WUAZ Wupatki 69.95 324 *e*P P 17 46 28.2 +0.7
comp=Z,120nm,1.0s,mb5.7
WUAZ *e*pP pP 17 46 59.1 +0.5
WUAZ *e*sP sP 17 47 11.8 -0.4
COWI Conover 69.98 345 *e*P P 17 46 26.3 -1.2
comp=Z,35nm,1.3s,mb5.0
COWI *e*pP pP 17 46 57.2 -1.4
ECSD EROS Data Cent 70.02 339 *e*P P 17 46 26.3 -1.5
comp=Z,16nm,0.9s,mb4.8
ECSD PcP PcP 17 46 48.1 -1.0
ECSD *e*pP pP 17 46 57.2 -1.7
X14A Yava 70.04 322 ⇑P P 17 46 28.7 +0.5
baz=70,SNR=43
R21A Cimarron 70.11 328 ⇓P P 17 46 28.8 +0.4
baz=70,SNR=6.7
Y13A Salome 70.12 321 ⇑P P 17 46 28.9 +0.2
baz=70,SNR=11
GLA Glamis 70.18 320 ⇑P P 17 46 29.2 +0.2
baz=70,SNR=8.5
GLA Glamis 70.18 320 *e*P P 17 46 29.3 +0.3
GLA *e**PP pP 17 46 59.5 -0.7
GLA pmax pmax
comp=Z,19nm,0.8s,mb5.0
GLA Glamis 70.18 320 *e*P P 17 46 29.3 +0.2
comp=Z,19nm,0.8s,mb5.0
GLA *e*pP pP 17 46 59.5 -0.6
Q22A Crested Butte, 70.19 329 ⇑P P 17 46 29.3 +0.4
baz=70,SNR=7.6
W15A Williams 70.20 323 ⇑P P 17 46 29.9 +0.9
baz=70,SNR=21
ISCO Idaho Springs 70.31 330 *e*P P 17 46 29.9 +0.2
ISCO *e**PP pP 17 47 00.1 -0.7
ISCO pmax pmax
comp=Z,48nm,1.3s,mb5.2
ISCO Idaho Springs 70.31 330 *e*P P 17 46 29.9 +0.2
comp=Z,48nm,1.3s,mb5.2
ISCO *e*pP pP 17 47 00.1 -0.8
T18A Mexican Hat 70.35 326 ⇑P P 17 46 30.0 +0.1
baz=71,SNR=99
U17A Shonto 70.36 325 ⇓P P 17 46 30.6 +0.5
baz=71,SNR=39
R20A Redvale 70.38 327 ⇑P P 17 46 30.8 +0.7
baz=71,SNR=25
S19A Harvey Farm, M 70.43 327 ⇓P P 17 46 30.7 +0.3
baz=71,SNR=30
SMCO Snowmass 70.46 329 *e*P P 17 46 31.3 +0.7
comp=Z,29nm,0.9s,mb5.1
Q21A Lamborn Mesa, 70.48 328 ⇓P P 17 46 31.1 +0.4
baz=71,SNR=5.0
Y12C Blythe 70.49 320 ⇑P P 17 46 31.2 +0.3
baz=71,SNR=11
V15A Kaibab Nationa 70.61 323 ⇑P P 17 46 32.5 +0.9
baz=71,SNR=60
PDMCI Parker Dam,Lak 70.65 321 ⇓P P 17 46 32.0 +0.2
baz=71,SNR=7.5
X13A Yucca 70.67 321 ⇑P P 17 46 32.4 +0.4
baz=71,SNR=61
W14A Seligman 70.69 322 ⇑P P 17 46 32.7 +0.7
baz=71,SNR=20
DVTC Desert V Tower 70.69 319 ⇑P P 17 46 32.5 +0.3
baz=71
SWSC Sam W. Stewart 70.70 319 ⇓P P 17 46 32.2 +0.1
baz=71,SNR=7.5
T17A Navajo Res., N 70.73 325 ⇑P P 17 46 33.3 +1.0
baz=71,SNR=48
S18A Hurst Farm, Bl 70.83 326 ⇑P P 17 46 33.4 +0.6
baz=71,SNR=53
R19A Curley Farm, L 70.91 327 ⇑P P 17 46 33.4 +0.1
baz=71,SNR=9.9
Q20A Ridgley Place, 70.93 328 ⇓P P 17 46 33.4 -0.1
baz=71
BC3 Big Chuckw Mtn 70.98 320 ⇓P P 17 46 34.0 +0.2
baz=71,SNR=59
V14A Boquillas Ranc 71.00 323 ⇑P P 17 46 34.9 +1.0
baz=71,SNR=80
MONP Monument Peak 71.05 319 ⇑P P 17 46 34.6 +0.4
baz=71,SNR=16
BAR Barrett 71.06 318 *e*P P 17 46 34.4 0.0
comp=Z,51nm,1.0s,mb5.3
BAR *e*pP pP 17 47 04.8 -0.8
W13A Hualapai Mount 71.07 322 ⇑P P 17 46 35.1 +0.7
baz=71,SNR=27
T16A Glen Canyon Da 71.10 325 ⇓P P 17 46 35.2 +0.7
baz=71,SNR=11
U15A North Rim 71.12 324 ⇑P P 17 46 35.7 +1.0
baz=71,SNR=84
IRM Iron Mountain 71.15 320 ⇓P P 17 46 35.1 +0.2
baz=71,SNR=58
S17A Black Ridge (B 71.21 325 ⇑P P 17 46 35.7 +0.6
baz=72,SNR=19
NEE2 Needles Airpor 71.26 321 ⇑P P 17 46 35.5 0.0
baz=72
R18A Canyonlands Na 71.30 327 ⇓P P 17 46 35.7 0.0
baz=72,SNR=21
P20A De Beque 71.40 328 ⇓P P 17 46 36.4 +0.2
baz=72,SNR=8.4
Q19A Hogan Spring (71.41 327 ⇓P P 17 46 36.6 +0.2
baz=72,SNR=13
PHWY Pilot Hill 71.45 331 *e*P P 17 46 36.5 0.0
comp=Z,89nm,1.8s,mb5.3
PHWY *e*pP pP 17 47 07.0 -0.7
109C Camp Elliot, M 71.47 318 ⇑P P 17 46 36.7 -0.1
baz=72
N22A Wattenberg Ran 71.50 330 ⇓P P 17 46 37.2 +0.4
baz=72,SNR=15
O21A Pagoda 71.51 329 ⇑P P 17 46 37.5 +0.5
baz=72,SNR=5.3
BELC Belle Mtn, 71.55 320 ⇑P P 17 46 37.6 +0.4
baz=72,SNR=24
PFO Pinyon Flat Ob 71.56 319 P P 17 46 37.5 +0.2
comp=Z,191nm,1.0s,mb5.9,SNR=11
PFO Pinyon Flat Ob 71.56 319 ⇑P P 17 46 37.7 +0.4
baz=72,SNR=14
PFO Pinyon Flat Ob 71.56 319 *e*P P 17 46 37.3 0.0
PFO *e* 17 46 55.8
PFO *e**PP pP 17 47 08.0 -0.6
PFO pmax pmax
comp=Z,61nm,1.2s,mb5.3
PFO Pinyon Flat Ob 71.56 319 *e*P P 17 46 37.3 0.0
comp=Z,61nm,1.2s,mb5.3
PFO *e*PcP PcP 17 46 55.8 -0.1
PFO *e*pP pP 17 47 08.0 -0.6
T15A Red Dirt Ranch 71.60 324 ⇓P P 17 46 38.4 +0.8
baz=72,SNR=43
U14A Mt Trumbull 71.61 323 ⇓P P 17 46 38.5 +1.0
baz=72,SNR=57
V13A Grand Canyon W 71.66 322 ⇓P P 17 46 38.4 +0.5
baz=72,SNR=40
R17A Hanksville Air 71.75 326 ⇓P P 17 46 38.6 +0.3
baz=72,SNR=96
LDFC Landfair 71.76 321 *e*P P 17 46 39.6 +1.0
comp=Z,15nm,0.6s,mb5.0
W12A Cal Nev Ari 71.78 321 ⇓P P 17 46 38.7 +0.1
baz=72,SNR=7.1
P19A Cripple Cowboy 71.79 328 ⇓P P 17 46 39.1 +0.5
baz=72,SNR=36
O20A White River Ci 71.82 329 ⇑P P 17 46 39.2 +0.4
baz=72,SNR=8.1
GMRC Granite Mounta 71.88 320 ⇑P P 17 46 39.7 +0.5
baz=72,SNR=81
N21A Black Mountain 71.96 330 ⇓P P 17 46 40.2 +0.6
baz=72
Q18A Rafter H Ranch 71.97 327 ⇓P P 17 46 39.9 +0.2
baz=72,SNR=13
MURC Murrieta 72.00 319 ⇑P P 17 46 40.1 +0.1
baz=72,SNR=5.8
T14A Hurricane 72.02 324 ⇑P P 17 46 40.8 +0.7
baz=72,SNR=27
U13A Pakoon Wash 72.05 323 ⇑P P 17 46 40.7 +0.5
baz=72,SNR=24
R16A Teasdale 72.05 326 ⇑P P 17 46 40.5 +0.3
baz=72,SNR=22
V12A Nelson 72.07 322 ⇑P P 17 46 40.5 +0.2
baz=72,SNR=36
S15A Panguitch 72.07 325 ⇓P P 17 46 40.8 +0.5
baz=72
SRU San Rafael 72.17 327 ⇓P P 17 46 41.0 +0.1
baz=72
SRU San Rafael 72.17 327 *e*P P 17 46 41.0 +0.1
SRU *e**PP pP 17 47 11.6 -0.6
SRU pmax pmax
comp=Z,82nm,0.9s,mb5.6
SRU San Rafael 72.17 327 *e*P P 17 46 41.0 +0.2
comp=Z,82nm,0.9s,mb5.6
SRU *e*pP pP 17 47 11.6 -0.6
BBRC Big Bear Sol-O 72.28 319 ⇓P P 17 46 42.3 +0.7
baz=72
EYMN Ely 72.29 344 *e*P P 17 46 40.0 -1.3
comp=Z,41nm,1.1s,mb5.2
EYMN *e*pP pP 17 47 10.8 -1.9
EYMN *e*sP sP 17 47 24.7 -1.5
HEC Hector,Ludlow 72.31 320 ⇓P P 17 46 42.4 +0.5
baz=72,SNR=32
Q16A Castle Valley 72.36 326 ⇓P P 17 46 42.4 +0.4
baz=73,SNR=20
N20A Spence Gulch, 72.37 329 ⇓P P 17 46 42.2 +0.2
baz=73,SNR=14
O19A Miners Draw (B 72.38 328 ⇓P P 17 46 42.2 +0.2
baz=73,SNR=35
U12A Valley of Fire 72.38 322 ⇑P P 17 46 42.8 +0.6
baz=73
R15A Junction 72.42 325 ⇓P P 17 46 42.9 +0.5
baz=73,SNR=26
P18A Preston Nutter 72.42 327 ⇑P P 17 46 43.1 +0.7
baz=73,SNR=56
SCI San Clemente I 72.43 317 ⇑P P 17 46 42.3 -0.2
baz=73
T13A Saint George 72.45 323 ⇑P P 17 46 43.3 +0.7
baz=73,SNR=23
L22A Ellis Ranch, M 72.47 331 ⇑P P 17 46 43.1 +0.5
baz=73,SNR=8.0
V11A Goodsprings 72.48 321 ⇑P P 17 46 43.1 +0.4
baz=73,SNR=6.9
TUQ Turquoise Moun 72.49 321 ⇑P P 17 46 43.2 +0.4
baz=73,SNR=6.0
CCUT Cedar City 72.53 324 *e*P P 17 46 44.2 +1.2
comp=Z,126nm,1.0s,mb5.7
CCUT *e*pP pP 17 47 14.5 +0.1
CCUT *e*sP sP 17 47 28.3 +0.4
P17A Butcher Ranch, 72.55 327 ⇑P P 17 46 43.5 +0.4
baz=73,SNR=33
M21A Separation Pea 72.56 330 ⇑P P 17 46 43.4 +0.3
baz=73,SNR=9.8
S14A Cedar City 72.57 324 ⇓P P 17 46 44.0 +0.8
baz=73,SNR=7.5
MSU Marysvale 72.59 325 *e*P P 17 46 44.1 +0.8
MSU *e**PP pP 17 47 14.5 -0.2
MSU *SP sP 17 47 28.2 0.0
MSU pmax pmax
comp=Z,90nm,0.9s,mb5.6
MSU Marysvale 72.59 325 *e*P P 17 46 44.1 +0.8
comp=Z,90nm,0.9s,mb5.6
MSU *e*pP pP 17 47 14.5 -0.2
MSU sP sP 17 47 28.1 -0.1
CIS Catalina Islan 72.62 318 ⇓P P 17 46 43.6 -0.1
baz=73,SNR=5.1
TMUT Trail Mountain 72.66 326 *e*P P 17 46 44.3 +0.5
comp=Z,32nm,1.0s,mb5.1
T12A Moapa 72.69 322 ⇓P P 17 46 44.1 +0.1
baz=73
BFSC Mount Baldy St 72.72 319 ⇑P P 17 46 44.3 +0.1
baz=73,SNR=16
RRX Edison Barstow 72.75 320 ⇓P P 17 46 44.7 +0.3
baz=73
FMP Fort Macarthur 72.76 318 ⇓P P 17 46 44.6 +0.2
baz=73
O18A Roosevelt 72.78 328 ⇑P P 17 46 44.8 +0.4
baz=73,SNR=14
S13A Holt Ranch, En 72.82 324 ⇑P P 17 46 45.8 +1.0
baz=73,SNR=45
L21A Rawlins 72.84 331 ⇓P P 17 46 44.8 0.0
baz=73,SNR=22
M20A Sweetwater, Wa 72.85 330 ⇓P P 17 46 45.0 +0.1
baz=73,SNR=12
N19A John Jarvie Ra 72.86 329 ⇑P P 17 46 44.9 0.0
baz=73,SNR=23
U11A Corn Creek 72.86 322 ⇓P P 17 46 45.9 +0.9
baz=73
R14A James Farms, M 72.88 325 ⇑P P 17 46 46.1 +1.0
baz=73
GSC Goldstone 72.92 320 ⇑P P 17 46 45.8 +0.5
baz=73,SNR=19
GSC Goldstone 72.92 320 *e*P P 17 46 45.8 +0.4
GSC *e**PP pP 17 47 16.4 -0.3
GSC pmax pmax
comp=Z,46nm,1.1s,mb5.2
GSC Goldstone 72.92 320 *e*P P 17 46 45.8 +0.4
comp=Z,46nm,1.1s,mb5.2
GSC *e*pP pP 17 47 16.4 -0.3
MWC Mount Wilson 72.95 319 *e*P P 17 46 45.9 +0.3
MWC *e**PP pP 17 47 16.0 -0.9
MWC pmax pmax
comp=Z,90nm,1.4s,mb5.4
MWC Mount Wilson 72.95 319 *e*P P 17 46 45.9 +0.3
comp=Z,90nm,1.4s,mb5.4
MWC *e*pP pP 17 47 16.0 -1.0
PASC Pasadena Art C 73.00 318 *e*P P 17 46 45.4 -0.4
comp=Z,113nm,0.8s,mb5.8
SHOC Shoshone 73.02 321 ⇓P P 17 46 46.3 +0.3
baz=73
Q15A Fillmore 73.05 325 ⇓P P 17 46 46.6 +0.5
baz=73,SNR=13
O17A Robinson Place 73.10 327 ⇓P P 17 46 47.1 +0.8
baz=73,SNR=95
P16A Fountain Green 73.13 326 ⇑P P 17 46 47.4 +0.9
baz=73
RSSD Black Hills 73.14 334 *e*P P 17 46 46.3 -0.1
RSSD *e**PP pP 17 47 17.3 -0.5
RSSD *e**SP sP 17 47 30.9 -0.4
RSSD pmax pmax
comp=Z,22nm,0.9s,mb5.0
RSSD Black Hills 73.14 334 *e*P P 17 46 46.3 -0.1
comp=Z,22nm,0.9s,mb5.0
RSSD *e*pP pP 17 47 17.2 -0.6
RSSD *e*sP sP 17 47 30.9 -0.5
DECC Green Verdugo 73.14 318 ⇓P P 17 46 46.9 +0.2
baz=73
SNCC San Nicolas Is 73.23 317 ⇓P P 17 46 47.1 -0.1
baz=73
R13A O'Grain Ranch, 73.31 324 ⇑P P 17 46 48.7 +1.0
baz=74,SNR=42
M19A Rock Springs 73.32 329 ⇑P P 17 46 47.4 -0.2
baz=74,SNR=5.3
L20A Wamsutter 73.32 330 ⇑P P 17 46 47.9 +0.3
baz=74,SNR=11
EDW2 Edwards Air Fo 73.35 319 ⇑P P 17 46 47.7 -0.2
baz=74,SNR=23
S12A Delamar Landin 73.39 323 ⇓P P 17 46 48.9 +0.8
baz=74,SNR=9.3
U10A Ash Meadows, A 73.41 321 ⇑P P 17 46 48.9 +0.7
baz=74,SNR=10
MPU Maple Canyon 73.42 327 *e*P P 17 46 48.5 +0.3
comp=Z,78nm,1.1s,mb5.5
MPU *e*pP pP 17 47 19.2 -0.3
P15A Leamington 73.42 326 ⇓P P 17 46 48.7 +0.4
baz=74,SNR=12
O16A Springville 73.49 327 ⇓P P 17 46 49.2 +0.5
baz=74,SNR=23
BLG Laguna Peak 73.50 318 ⇑P P 17 46 48.6 -0.2
baz=74,SNR=5.2
DAU Daniels Canyon 73.52 327 *e*P P 17 46 49.4 +0.6
DAU *e**PP pP 17 47 20.1 -0.1
DAU pmax pmax
comp=Z,31nm,0.8s,mb5.1
DAU Daniels Canyon 73.52 327 *e*P P 17 46 49.4 +0.6
comp=Z,31nm,0.8s,mb5.1
DAU *e*pP pP 17 47 20.1 -0.1
Q14A Sevier Lake (B 73.52 325 ⇓P P 17 46 49.8 +0.9
baz=74,SNR=114
LRMC Laurel Mountai 73.57 320 ⇓P P 17 46 49.4 +0.1
baz=74,SNR=7.8
NLU North Lily Min 73.60 326 *e*P P 17 46 49.8 +0.5
comp=Z,60nm,1.3s,mb5.2
OSI Osito Adit 73.62 318 ⇑P P 17 46 49.4 -0.1
baz=74
M18A Lyman 73.70 329 ⇑P P 17 46 49.5 -0.3
baz=74,SNR=7.6
N17A Moffit Pass 73.71 328 ⇑P P 17 46 50.6 +0.7
baz=74,SNR=45
FURC Furnace Creek, 73.75 321 ⇑P P 17 46 50.7 +0.5
baz=74,SNR=21
JLU Jordanelle 73.76 327 *e*P P 17 46 50.8 +0.6
comp=Z,106nm,1.3s,mb5.4
JLU *e*pP pP 17 47 21.1 -0.5
JLU *e*sP sP 17 47 33.7 -1.4
R12A Pony Springs, 73.77 324 ⇑P P 17 46 51.4 +1.1
baz=74,SNR=57
BSC Santa Cruz Isl 73.78 317 ⇓P P 17 46 50.6 +0.1
baz=74
AGMN Agassiz Refuge 73.83 341 *e*P P 17 46 49.3 -1.1
comp=Z,29nm,0.9s,mb5.0
AGMN *e*pP pP 17 47 20.4 -1.5
K20A Yellowstone Ra 73.83 330 ⇓P P 17 46 50.3 -0.3
baz=74,SNR=29
MPMC Manual Prospec 73.84 320 ⇑P P 17 46 51.0 +0.2
baz=74,SNR=34
P14A Drum Mountains 73.85 325 ⇑P P 17 46 51.7 +1.0
baz=74,SNR=55
L19A Farson 73.88 329 ⇑P P 17 46 51.1 +0.3
baz=74,SNR=31
Q13A Wheeler Ranch, 73.90 324 ⇓P P 17 46 51.6 +0.6
baz=74,SNR=42
S11A Rachel 73.92 323 ⇓P P 17 46 52.3 +1.1
baz=74,SNR=5.8
N16A Rees Ranch, Co 73.97 327 ⇑P P 17 46 51.9 +0.5
baz=74,SNR=13
ARVC Arvin 74.03 319 ⇓P P 17 46 51.9 0.0
baz=74
M17A Scullys Gap (B 74.03 328 ⇓P P 17 46 51.4 -0.3
baz=74,SNR=9.6
O15A The Old Anders 74.04 326 ⇑P P 17 46 52.4 +0.5
baz=74
L18A Fontenelle, Gr 74.06 329 ⇓P P 17 46 52.0 +0.1
baz=74,SNR=42
NOQ North Oquirrh 74.14 327 *e*P P 17 46 52.5 +0.1
comp=Z,25nm,0.9s,mb4.9
DUG Dugway 74.16 326 ⇓P P 17 46 52.9 +0.4
baz=74,SNR=26
DUG Dugway 74.16 326 *e*P P 17 46 52.8 +0.3
DUG *e**PP pP 17 47 24.2 +0.2
DUG pmax pmax
comp=Z,70nm,1.2s,mb5.3
DUG Dugway 74.16 326 *e*P P 17 46 52.8 +0.3
comp=Z,70nm,1.2s,mb5.3
DUG *e*pP pP 17 47 24.2 +0.2
ISA Isabella 74.17 319 ⇑P P 17 46 53.1 +0.4
baz=74,SNR=33
ISA Isabella 74.17 319 *e*P P 17 46 53.1 +0.4
ISA *e**PP pP 17 47 23.6 -0.5
ISA *e**SP sP 17 47 37.9 +0.3
ISA pmax pmax
comp=Z,54nm,0.9s,mb5.3
ISA Isabella 74.17 319 *e*P P 17 46 53.1 +0.4
comp=Z,54nm,0.9s,mb5.3
ISA *e*pP pP 17 47 23.6 -0.5
ISA *e*sP sP 17 47 37.9 +0.2
K19A Absolon Red Bu 74.20 330 ⇓P P 17 46 52.2 -0.5
baz=74,SNR=22
P13A Bates Ranch, G 74.25 325 ⇓P P 17 46 53.8 +0.7
baz=74,SNR=57
R11A Troy Canyon, C 74.33 323 ⇓P P 17 46 54.2 +0.7
baz=75,SNR=73
M16A Huntsville 74.38 328 ⇓P P 17 46 53.8 0.0
baz=75,SNR=10
Q12A Willow Creek R 74.40 324 ⇑P P 17 46 54.3 +0.4
baz=75,SNR=18
GRAC Grapevine Rang 74.41 321 ⇑P P 17 46 54.5 +0.4
baz=75
BW06 Boulder Array 74.48 330 ⇓P P 17 46 54.0 -0.4
baz=75,SNR=9.0
PDAR Pinedale Array 74.48 330 P P 17 46 53.9 -0.4
comp=Z,7.7nm,0.8s,mb4.5,baz=149,slow=6.9,SNR=45
PKM Peak Mountain 74.48 318 ⇓P P 17 46 54.8 +0.2
baz=75,SNR=44
N15A Stansbury Isla 74.52 327 ⇓P P 17 46 54.6 0.0
baz=75,SNR=6.3

HWUT Hardware Ranch 74.57 328 *eP* **P 17 46 54.3 -0.5**
comp=Z,40nm,0.8s,mb5.2
HWUT *epP* pP 17 47 25.2 -1.2
HWUT *esP* sP 17 47 39.2 -0.7
S10A Tonopah Range, 74.60 322 ⇑P **P 17 46 55.6 +0.4**
baz=75,SNR=64
L17A Cokeville 74.60 329 ⇓P **P 17 46 54.7 -0.3**
baz=75,SNR=20
K18A Toltan Ranch, 74.61 329 ⇑P **P 17 46 55.6 +0.5**
baz=75,SNR=36
VES Vestal, Richgr 74.66 319 ⇑P **P 17 46 55.6 +0.1**
baz=75,SNR=11
R10A Warm Springs 74.69 323 ⇓P **P 17 46 56.7 +1.1**
baz=75,SNR=26
Q11A Duckwater 74.71 323 ⇓P **P 17 46 56.2 +0.4**
baz=75,SNR=88
O13A Hicks Ranch, I 74.72 325 ⇓P **P 17 46 56.2 +0.4**
baz=75,SNR=5.2
P12A McGill 74.75 324 ⇓P **P 17 46 56.5 +0.5**
baz=75,SNR=23
SPUT South Promonto 74.79 327 *eP* **P 17 46 56.4 +0.2**
comp=Z,68nm,0.9s,mb5.4
BGU Big Grassy Mou 74.81 326 *eP* **P 17 46 56.2 -0.1**
comp=Z,45nm,1.1s,mb5.1
BGU *epP* pP 17 47 26.8 -1.0
L16A Fish Haven 74.81 328 ⇓P **P 17 46 56.0 -0.2**
baz=75,SNR=23
N14A Grayback Hills 74.83 326 ⇓P **P 17 46 56.6 +0.2**
baz=75,SNR=14
SMMC Simmler 74.87 318 ⇓P **P 17 46 57.2 +0.4**
baz=75,SNR=11
M15A Larsen Ranch, 74.91 327 ⇓P **P 17 46 56.6 -0.2**
baz=75,SNR=36
TIN Tinemaha 74.95 321 ⇓P **P 17 46 57.4 +0.2**
baz=75,SNR=5.7
J18A Kendall Valley 75.04 330 ⇓P **P 17 46 57.5 0.0**
baz=75,SNR=78
RCTC Rector, Farmer 75.06 320 ⇓P **P 17 46 57.3 -0.6**
baz=75
Q10A Clear Creek Ra 75.11 323 ⇓P **P 17 46 58.8 +0.8**
baz=75,SNR=39
K17A Gardner Place, 75.12 329 ⇑P **P 17 46 58.0 0.0**
baz=75,SNR=6.4
AHID Auburn Hatcher 75.22 329 *eP* **P 17 46 58.6 +0.1**
comp=Z,82nm,0.9s,mb5.5
AHID *epP* pP 17 47 29.1 -1.0
AHID *esP* sP 17 47 42.0 -1.5
O12A Currie 75.23 325 ⇓P **P 17 46 59.2 +0.5**
baz=76,SNR=58
P11A Circle Ranch, 75.27 324 ⇑P **P 17 46 59.4 +0.5**
baz=76
L15A Malad City 75.28 328 ⇓P **P 17 46 58.8 -0.1**
baz=76,SNR=12
HVU Hansel Valley 75.30 327 *eP* **P 17 46 58.9 -0.2**
HVU *e*PP* pP 17 47 28.6 -2.0
HVU pmax pmax
comp=Z,55nm,1.0s,mb5.2
HVU Hansel Valley 75.30 327 *eP* **P 17 46 58.9 -0.1**
comp=Z,55nm,1.0s,mb5.2
HVU *epP* pP 17 47 28.6 -2.0
I18A Diamond G Ranc 75.32 330 ⇓P **P 17 46 59.5 +0.4**
baz=76,SNR=9.1
N13A Wendover, West 75.36 326 ⇓P **P 17 46 59.5 +0.1**
baz=76,SNR=9.4
N13A Wendover, West 75.36 326 *eP* **P 17 46 59.4 0.0**
comp=Z,60nm,1.2s,mb5.2
M14A Sheep Mountain 75.39 327 ⇓P **P 17 46 59.6 0.0**
baz=76,SNR=19
J17A Brown Place, J 75.48 329 ⇓P **P 17 47 00.5 +0.4**
baz=76,SNR=12
K16A Soda Springs 75.50 329 ⇑P **P 17 47 00.9 +0.7**
baz=76,SNR=61
REDW Red Top Meadow 75.55 329 *eP* **P 17 47 00.6 +0.2**
comp=Z,47nm,0.9s,mb5.2
REDW *epP* pP 17 47 31.2 -0.7
SNOW Snow King Moun 75.58 329 *eP* **P 17 47 01.1 +0.5**
comp=Z,48nm,0.9s,mb5.2
ULM Lac du Bonnet 75.58 342 P **P 17 46 59.1 -1.3**
comp=Z,11nm,0.5s,mb4.9,baz=149,slow=5.8,SNR=18
ULM pP pP 17 47 30.4 -1.6
comp=Z,21nm,0.8s,baz=152,slow=7.5,SNR=6.0
ULM LR LR 18 24 33.7
comp=Z,75nm,19.4s,baz=160,slow=39
ULM Lac du Bonnet 75.58 342 *eP* **P 17 46 59.2 -1.3**
comp=Z,20nm,0.8s,mb4.9
ULM *epP* pP 17 47 30.4 -1.6
O11A Cowboy Ranch, 75.62 324 ⇑P **P 17 47 01.4 +0.4**
baz=76,SNR=19
LOHW Long Hollow 75.62 330 *eP* **P 17 47 01.1 +0.2**
comp=Z,50nm,1.0s,mb5.2
TPAW Teton Pass 75.69 329 *eP* **P 17 47 01.5 +0.2**
comp=Z,49nm,0.9s,mb5.2
TPAW *epP* pP 17 47 32.2 -0.6
MLAC Mammoth Lakes 75.70 321 ⇓P **P 17 47 02.1 +0.6**
baz=76
P10A Eureka 75.70 324 ⇑P **P 17 47 02.2 +0.7**
baz=76,SNR=25
M13A Montello 75.71 326 ⇓P **P 17 47 01.2 -0.2**
baz=76,SNR=21
M13A Montello 75.71 326 *eP* **P 17 47 00.8 -0.6**
comp=Z,24nm,0.9s,mb4.9
L14A Malta 75.73 327 ⇓P **P 17 47 01.3 -0.2**
baz=76,SNR=49
RRI2 Red Ridge 75.76 329 *eP* **P 17 47 02.0 +0.4**
comp=Z,90nm,1.0s,mb5.5
N12A Clover Valley, 75.80 325 ⇓P **P 17 47 01.9 0.0**
baz=76,SNR=12
N12A Clover Valley, 75.80 325 *eP* **P 17 47 01.9 -0.1**
comp=Z,35nm,1.3s,mb4.9
ELK Elko 75.83 325 *eP* **P 17 47 02.3 +0.2**
ELK pmax pmax
comp=Z,43nm,1.0s
ELK Elko 75.83 325 *eP* **P 17 47 02.3 +0.1**
comp=Z,43nm,1.0s,mb5.1
I17A Pilgrim Ck. 75.84 330 ⇑P **P 17 47 03.1 +0.9**
baz=76,SNR=25
J16A Bone 75.84 329 ⇑P **P 17 47 02.4 +0.3**
baz=76,SNR=22
K15A Arbon 75.85 328 ⇓P **P 17 47 02.3 +0.1**
baz=76,SNR=21
PPT Papeete 75.87 257 *eP* **P 17 47 04.5 +1.6**
comp=Z,124nm,25.8s
PPT Papeete 75.87 257 *e*PP PP 17 49 57.4 +2.7
comp=Z,64nm,29.2s
PPT *e*S S 17 56 41.0 +5.5
comp=Z,197nm,29.2s
PPT *e*LR LR 18 10 24.5
comp=Z,603nm,37.8s
PPT Papeete 75.87 257 LR LR 18 13 39.7
comp=Z,133nm,21.6s,baz=272,slow=30
PPT Papeete 75.87 257 *eP* **P 17 47 04.5 +1.6**
PPT *e*PP PP 17 49 57.4 +2.7
PPT *e*S S 17 56 41.0 +5.5
DCID1 Drake Creek 75.88 329 *eP* **P 17 47 03.0 +0.7**
comp=Z,49nm,0.9s,mb5.2
NVAR Mina Array Bea 75.93 322 P **P 17 47 03.0 +0.2**
comp=Z,23nm,0.9s,mb4.9,baz=152,slow=6.7,SNR=130
NVAR pP pP 17 47 33.9 -0.4
comp=Z,20nm,1.1s,baz=152,slow=7.2,SNR=4.0
NVAR PP PP 17 49 59.2 +4.2
comp=Z,1.0nm,0.8s,baz=155,slow=7.9,SNR=3.7
IMW Indian Meadow 76.00 330 *eP* **P 17 47 03.3 +0.4**
comp=Z,56nm,0.9s,mb5.3
LAO LASA Array 76.12 334 *eP* **P 17 47 03.6 0.0**
comp=Z,57nm,1.2s,mb5.2
SCHQ Schefferville 76.12 1 P **P 17 47 03.1 -0.3**
comp=Z,13nm,0.7s,mb4.7,baz=166,slow=3.9,SNR=13
SCHQ pP pP 17 47 35.0 -0.1
comp=Z,28nm,0.8s,baz=172,slow=4.7,SNR=7.1
SCHQ Schefferville 76.12 1 *eP* **P 17 47 03.0 -0.4**
comp=Z,10nm,0.7s,mb4.7
L13A Double Diamond 76.12 327 ⇑P **P 17 47 04.3 +0.6**
baz=76,SNR=46
M12A Wells 76.14 326 ⇑P **P 17 47 03.9 0.0**
baz=76,SNR=28
N11A Elko Archery C 76.15 325 ⇓P **P 17 47 04.2 +0.3**
baz=76
O10A Cortez Mining, 76.19 324 ⇓P **P 17 47 04.5 +0.3**
baz=76,SNR=12
H17A Grant Village 76.21 330 ⇑P **P 17 47 05.3 +1.2**
baz=76,SNR=12
SYO Syowa Base 76.21 159 ⇓/P **P 17 47 01.6 -2.3**
I16A Newdale 76.24 329 ⇓P **P 17 47 04.7 +0.4**
baz=76,SNR=14
J15A Blackfoot 76.34 329 ⇑P **P 17 47 05.3 +0.4**
baz=77,SNR=38
YFT Old Faithful 76.37 330 *eP* **P 17 47 06.7 +1.6**
comp=Z,46nm,1.0s,mb5.2

G18A Lazy EL Ranch, 76.46 331 ⇓P **P 17 47 05.7 +0.1**
baz=77,SNR=58
N10A Dunphy 76.50 324 ⇓P **P 17 47 06.0 +0.1**
baz=77
YNR Norris Junctio 76.50 330 *eP* **P 17 47 07.2 +1.4**
comp=Z,26nm,1.0s,mb4.9
YMR Madison River 76.59 330 *eP* **P 17 47 07.7 +1.3**
comp=Z,140nm,1.2s,mb5.6
K13A Stover Farm, H 76.60 327 ⇑P **P 17 47 06.6 +0.1**
baz=77,SNR=11
M11A Holland Ranch, 76.61 325 ⇑P **P 17 47 07.0 +0.5**
baz=77,SNR=53
BMN Battle Mountai 76.69 324 *eP* **P 17 47 06.4 -0.6**
BMN pmax pmax
comp=Z,27nm,1.2s,mb4.8
BMN Battle Mountai 76.69 324 *eP* **P 17 47 06.4 -0.6**
comp=Z,26nm,1.2s,mb4.8
SAO San Andreas Ge 76.70 319 *eP* **P 17 47 06.7 -0.4**
SAO pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
SAO San Andreas Ge 76.70 319 *eP* **P 17 47 06.7 -0.4**
comp=Z,10nm,0.8s,mb4.6
L12A House Creek Ra 76.72 326 ⇑P **P 17 47 07.6 +0.5**
baz=77,SNR=54
H16A Russell Place, 76.75 330 ⇓P **P 17 47 08.1 +0.8**
baz=77,SNR=42
DGMT Dagmar 76.79 336 ⇑P **P 17 47 07.5 +0.2**
baz=77,SNR=8.1
DGMT Dagmar 76.79 336 *eP* **P 17 47 07.4 +0.1**
comp=Z,39nm,0.8s,mb5.2
DGMT *epP* pP 17 47 38.6 -0.4
I15A Monteview 76.81 329 ⇓P **P 17 47 08.4 +0.9**
baz=77,SNR=10.0
TOA0 Torodi Ar. Sit 76.84 70 *eP* **P 17 47 07.7 -0.7**
TOA0 *epP* pP 17 47 40.0 0.0
TORD Torodi Ar. Bea 76.84 70 P **P 17 47 07.7 -0.7**
comp=Z,68nm,0.9s,mb5.4,baz=253,slow=5.2,SNR=317
TORD pP pP 17 47 39.7 -0.3
comp=Z,19nm,0.7s,baz=255,slow=5.5,SNR=1.9
TORD Torodi Ar. Bea 76.84 70 P **P 17 47 07.7 -0.7**
TORD pP pP 17 47 39.7 -0.3
GCMT Greycliff 76.87 332 *eP* **P 17 47 07.9 +0.1**
comp=Z,40nm,0.9s,mb5.1
GCMT *epP* pP 17 47 38.9 -0.6
CMB Columbia Colle 76.88 320 *eP* **P 17 47 07.2 -0.9**
CMB *e*PP* pP 17 47 38.0 -1.8
CMB pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
CMB Columbia Colle 76.88 320 *eP* **P 17 47 07.2 -0.9**
comp=Z,9.2nm,0.9s,mb4.5
CMB *epP* pP 17 47 38.0 -1.8
F18A Big Timber 76.98 332 ⇓P **P 17 47 08.6 +0.1**
baz=77,SNR=69
G17A Pierce Place, 76.99 331 ⇓P **P 17 47 09.3 +0.7**
baz=77
K12A Draper Farm, C 77.01 327 ⇓P **P 17 47 09.5 +0.8**
baz=77,SNR=33
M10A I.L. Ranch, Tu 77.08 325 ⇑P **P 17 47 09.5 +0.3**
baz=77,SNR=17
L11A Cat Creek Ranc 77.11 326 ⇑P **P 17 47 09.7 +0.4**
baz=77,SNR=44
J13A Cove Ranch, Pi 77.19 328 ⇓P **P 17 47 10.2 +0.5**
baz=77,SNR=34
I14A Mackay 77.22 328 ⇑P **P 17 47 10.8 +0.9**
baz=78,SNR=58
H15A Lima 77.34 329 ⇑P **P 17 47 11.2 +0.7**
baz=78
WCN Washoe City 77.35 322 ⇑P **P 17 47 11.2 +0.5**
baz=78,SNR=6.2
F17A Fitzpatrick Pl 77.40 331 ⇑P **P 17 47 11.4 +0.6**
baz=78,SNR=37
G16A Moss Hill, Enn 77.41 330 ⇓P **P 17 47 11.1 +0.2**
baz=78
L10A Juniper Basin 77.43 325 ⇓P **P 17 47 11.6 +0.5**
baz=78,SNR=103
HLID Hailey 77.43 328 ⇓P **P 17 47 11.8 +0.7**
baz=78,SNR=116
HLID Hailey 77.43 328 *eP* **P 17 47 11.7 +0.6**
comp=Z,90nm,1.0s,mb5.5
HLID *epP* pP 17 47 42.7 0.0
HLID *esP* sP 17 47 57.0 +0.8
I13A Wildhorse Cree 77.54 328 ⇑P **P 17 47 12.5 +0.8**
baz=78,SNR=52
J12A Stokes Ranch, 77.55 327 ⇑P **P 17 47 12.2 +0.5**
baz=78,SNR=90
E18A Harlowton 77.58 332 ⇑P **P 17 47 11.9 +0.1**
baz=78,SNR=28
MCMT McKenzie Canyo 77.60 329 *eP* **P 17 47 12.8 +0.8**
comp=Z,24nm,0.9s,mb4.9
MCMT *epP* pP 17 47 43.6 0.0
BOZ Bozeman (W) 77.64 330 ⇑P **P 17 47 12.1 -0.1**
baz=78,SNR=26
BOZ Bozeman (W) 77.64 330 *eP* **P 17 47 11.8 -0.4**
BOZ *e*PP* pP 17 47 42.6 -1.3
BOZ pmax pmax
comp=Z,23nm,1.2s,mb4.8
BOZ Bozeman (W) 77.64 330 *eP* **P 17 47 11.8 -0.4**
comp=Z,23nm,1.2s,mb4.8
BOZ *epP* pP 17 47 42.6 -1.2
G15A Dillon 77.68 330 ⇓P **P 17 47 12.8 +0.4**
baz=78,SNR=22
K11A Parker Ranch, 77.69 326 ⇑P **P 17 47 12.9 +0.4**
baz=78,SNR=44
H14A Leadore 77.69 329 ⇓P **P 17 47 13.0 +0.6**
baz=78,SNR=31
F16A Kennard Place, 77.75 331 ⇑P **P 17 47 12.8 0.0**
baz=78,SNR=8.9
DLMT Dillon 77.88 330 *eP* **P 17 47 13.4 -0.1**
comp=Z,42nm,1.1s,mb5.1
E17A Martinsdale 77.92 331 ⇑P **P 17 47 13.9 +0.2**
baz=78,SNR=37
I12A Atlanta 77.96 327 ⇑P **P 17 47 14.6 +0.6**
baz=78,SNR=31
D18A Linhart Farms, 78.02 332 ⇓P **P 17 47 14.2 0.0**
baz=78,SNR=8.1
SUR Sutherland 78.03 120 P **P 17 47 15.5 +0.7**
comp=Z,381nm,0.8s,mb6.2,SNR=13
MFID Camas Ranch 78.04 327 ⇑P **P 17 47 14.8 +0.4**
baz=78,SNR=29
BEKR Beckwourth 78.07 322 ⇑P **P 17 47 14.8 +0.1**
baz=78,SNR=45
H13A Challis 78.08 328 ⇑P **P 17 47 15.2 +0.6**
baz=78,SNR=91
K10A MacKenzie Ranc 78.13 326 ⇑P **P 17 47 15.0 +0.1**
baz=78,SNR=57
LRM Limekiln Ridge 78.15 330 *eP* **P 17 47 15.3 +0.3**
comp=Z,131nm,1.0s,mb5.6
LRM *epP* pP 17 47 46.4 -0.4
LRM *esP* sP 17 48 00.4 +0.2
F15A Butte 78.19 330 ⇓P **P 17 47 15.5 +0.3**
baz=78,SNR=32
G14A Jackson 78.20 329 ⇓P **P 17 47 15.8 +0.5**
baz=78
E16A East Helena 78.34 331 ⇓P **P 17 47 16.1 +0.2**
baz=79,SNR=5.6
H12A Diamond D Ranc 78.37 328 ⇑P **P 17 47 16.6 +0.4**
baz=79,SNR=45
D17A Six Diamond Ra 78.37 332 ⇓P **P 17 47 16.2 0.0**
baz=79,SNR=25
G13A Cobalt 78.46 329 ⇑P **P 17 47 17.5 +0.8**
baz=79,SNR=96
MCCM Marconi Confer 78.46 319 *eP* **P 17 47 16.6 -0.2**
comp=Z,68nm,1.0s,mb5.3
I11A Placerville 78.46 327 ⇓P **P 17 47 16.7 0.0**
baz=79,SNR=20
J10A Berg Farm, Mel 78.53 326 ⇓P **P 17 47 16.9 -0.2**
baz=79
HRY Holter Researc 78.54 331 *eP* **P 17 47 17.4 +0.3**
comp=Z,11nm,0.7s,mb4.8
F14A Wisdom 78.58 330 ⇓P **P 17 47 18.0 +0.7**
baz=79,SNR=23
EGMT Eagleton 78.64 333 ⇑P **P 17 47 17.2 -0.4**
baz=79,SNR=11
EGMT Eagleton 78.64 333 *eP* **P 17 47 16.9 -0.7**
comp=Z,41nm,1.1s,mb5.2
EGMT *epP* pP 17 47 48.4 -1.0
D16A Dana Ranch, Ca 78.66 331 ⇑P **P 17 47 18.3 +0.6**
baz=79,SNR=67
E15A Deer Lodge 78.69 330 ⇑P **P 17 47 18.2 +0.2**
baz=79,SNR=25
C17A Wharram Farm, 78.77 332 ⇓P **P 17 47 17.9 -0.5**
baz=79,SNR=6.3
WVOR Wild Horse Val 78.83 324 *eP* **P 17 47 18.4 -0.4**
WVOR pmax pmax
comp=Z,17nm,1.0s,mb4.8
WVOR Wild Horse Val 78.83 324 *eP* **P 17 47 18.4 -0.5**
comp=Z,17nm,1.0s,mb4.8

B18A Beardsley Farm 78.94 333 ⇑P **P 17 47 19.1 -0.2**
baz=79,SNR=34
J09A Fry Pan Ranch, 78.99 326 ⇓P **P 17 47 19.5 -0.1**
baz=79,SNR=24
F13A Darby 79.01 329 ⇑P **P 17 47 20.1 +0.4**
baz=79,SNR=62
I10A Payette 79.02 327 ⇑P **P 17 47 19.8 0.0**
baz=79
H11A Donnelly 79.05 327 ⇓P **P 17 47 20.0 0.0**
baz=79,SNR=14
E14A Clinton 79.08 330 ⇓P **P 17 47 20.6 +0.6**
baz=79,SNR=16
D15A Lincoln 79.10 331 ⇑P **P 17 47 20.6 +0.5**
baz=79,SNR=23
HOPS Hopland 79.11 320 *eP* **P 17 47 20.4 -0.1**
comp=Z,33nm,1.2s,mb5.0
B17A L&G Farms, Che 79.29 333 ⇑P **P 17 47 20.6 -0.5**
baz=80
CHMT Chamberlain Mo 79.34 330 *eP* **P 17 47 21.7 +0.2**
comp=Z,7.2nm,1.0s,mb4.5
CHMT pP pP 17 47 54.5 +1.2
CHMT *esP* sP 17 48 06.5 -0.2
H10A Noah's Angus R 79.34 327 ⇓P **P 17 47 21.2 -0.3**
baz=80,SNR=31
A18A Metzger Ranch, 79.38 334 ⇓P **P 17 47 21.0 -0.6**
baz=80,SNR=25
J08A Circle Bar Ran 79.38 325 ⇓P **P 17 47 22.1 +0.3**
baz=80,SNR=12
MOD Modoc 79.39 323 *eP* **P 17 47 21.8 -0.1**
comp=Z,72nm,0.9s,mb5.5
I09A Lost Marbles R 79.42 326 ⇑P **P 17 47 21.9 -0.1**
baz=80,SNR=37
F12A Elk City 79.43 329 ⇓P **P 17 47 21.9 -0.1**
baz=80,SNR=23
TSUM Tsumeb 79.46 107 *eP* **P 17 47 23.1 +0.2**
comp=Z,96nm,0.8s,mb5.7
D14A Greenough 79.58 330 ⇓P **P 17 47 22.8 +0.1**
baz=80,SNR=11
MSO Missoula 79.59 330 *eP* **P 17 47 23.3 +0.5**
comp=Z,21nm,1.2s,mb4.8
G11A Walters Elk Ra 79.67 328 ⇑P **P 17 47 23.5 +0.2**
baz=80,SNR=49
C15A Salmond Ranch, 79.69 331 ⇓P **P 17 47 23.7 +0.4**
baz=80
SLMT Seeley Lake 79.69 331 *eP* **P 17 47 23.4 0.0**
comp=Z,34nm,1.1s,mb5.1
SLMT *epP* pP 17 47 54.7 -0.5
A17A Triple J Farms 79.75 333 ⇑P **P 17 47 23.2 -0.5**
baz=80,SNR=22
B16A M & M Farms, S 79.78 332 ⇑P **P 17 47 23.1 -0.7**
baz=80
WDC Whiskeytown Da 79.81 321 *eP* **P 17 47 22.3 -1.8**
WDC pmax pmax
comp=Z,38nm,0.8s,mb5.3
WDC Whiskeytown Da 79.81 321 *eP* **P 17 47 22.3 -1.8**
comp=Z,38nm,0.8s,mb5.3
H09A Durkee 79.86 327 ⇓P **P 17 47 24.3 0.0**
baz=80,SNR=7.4
F11A Grangeville 79.97 328 ⇓P **P 17 47 24.4 -0.5**
baz=80,SNR=30
G10A Bishop Farm, J 80.02 327 ⇓P **P 17 47 25.9 +0.7**
baz=80,SNR=73
D13A Huson 80.03 330 ⇑P **P 17 47 25.4 +0.2**
baz=80,SNR=33
B15A Bradely Ranch, 80.07 332 ⇓P **P 17 47 24.7 -0.7**
baz=80,SNR=39
SWMT Swartz Lake 80.12 330 *eP* **P 17 47 25.6 -0.1**
comp=Z,27nm,1.2s,mb5.0
SWMT *epP* pP 17 47 57.1 -0.4
A16A West Butte Ran 80.14 333 ⇓P **P 17 47 25.4 -0.3**
baz=80,SNR=66
K05A Summer Lake 80.27 324 ⇑P **P 17 47 27.0 +0.5**
baz=80,SNR=77
H08A Prairie City 80.28 326 ⇓P **P 17 47 26.7 +0.1**
baz=80,SNR=40
E11A Bogner Ranch, 80.33 329 ⇑P **P 17 47 26.3 -0.5**
baz=81,SNR=17
YBMT Yellow Bay 80.39 331 *eP* **P 17 47 27.3 +0.2**
comp=Z,47nm,1.5s,mb5.1
YBMT *epP* pP 17 47 58.5 -0.4
I07A Izee 80.42 325 ⇑P **P 17 47 27.7 +0.4**
baz=81,SNR=54
B14A Marquette Ranc 80.42 331 ⇑P **P 17 47 26.8 -0.4**
baz=81,SNR=10
JTMT Jette 80.43 331 *eP* **P 17 47 27.4 +0.1**
comp=Z,17nm,1.0s,mb4.8
C13A Hot Springs 80.51 330 ⇓P **P 17 47 27.9 +0.2**
baz=81,SNR=25
F10A Beach Ranch, E 80.56 328 ⇑P **P 17 47 28.1 0.0**
baz=81,SNR=11
YBH Yreka Blue Hor 80.64 322 *eP* **P 17 47 27.2 -1.4**
YBH pmax pmax
comp=Z,19nm,0.8s
YBH Yreka Blue Hor 80.64 322 *eP* **P 17 47 27.2 -1.4**
comp=Z,19nm,0.8s,mb5.0
A15A Johnson Ranch, 80.65 332 ⇓P **P 17 47 27.4 -1.1**
baz=81,SNR=14
F09A S2 Ranch, Elgi 80.71 327 ⇓P **P 17 47 28.8 0.0**
baz=81
BSMT Bassoo Peak 80.73 330 *eP* **P 17 47 29.1 +0.1**
comp=Z,33nm,1.0s,mb5.1
BSMT *epP* pP 17 48 00.6 -0.2
E10A Myers Farm, Un 80.86 328 ⇓P **P 17 47 29.5 -0.1**
baz=81,SNR=27
D11A Klavearno Farm, 80.88 329 ⇓P **P 17 47 29.2 -0.6**
baz=81,SNR=7.7
A14A Double T Ranch 80.95 332 ⇑P **P 17 47 29.4 -0.6**
baz=81,SNR=17
C12B Naegeli Ranch, 80.95 330 ⇓P **P 17 47 30.4 +0.3**
baz=81
G08A Pilot Rock 80.96 326 ⇓P **P 17 47 30.1 0.0**
baz=81,SNR=15
B13A Whitefish 80.97 331 ⇓P **P 17 47 30.1 -0.1**
baz=81,SNR=20
LNOR Lincton Mounta 81.01 327 *eP* **P 17 47 29.7 -0.8**
LNOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
LNOR Lincton Mounta 81.01 327 *eP* **P 17 47 29.7 -0.8**
comp=Z,7.5nm,1.1s,mb4.4
MORF Marmelete 81.12 44 *eP* **P 17 47 31.6 +0.3**
comp=Z,36nm,1.1s,mb5.1
F08A Pendleton 81.21 327 ⇑P **P 17 47 30.8 -0.7**
baz=82
PTEO Sao Teotonio 81.22 44 *eP* **P 17 47 34.1 +2.4**
comp=Z,62nm,1.6s,mb5.2
WALA Waterton Lakes 81.23 332 *eP* **P 17 47 31.2 -0.4**
comp=Z,1.1nm,1.0s
VIPM Ingram Point 81.30 325 P **P 17 47 32.6 +0.6**
FFC Flin Flon 81.31 341 P **P 17 47 31.2 -0.6**
comp=Z,107nm,1.3s,mb5.5,SNR=6.9
FFC Flin Flon 81.31 341 *eP* **P 17 47 30.9 -0.9**
FFC *e*PP* pP 17 48 02.7 -1.0
FFC pmax pmax
comp=Z,29nm,1.3s,mb5.0
FFC Flin Flon 81.31 341 *eP* **P 17 47 30.9 -0.9**
comp=Z,29nm,1.3s,mb5.0
FFC *epP* pP 17 48 02.7 -1.0
D10A Wagner Farm, O 81.34 329 ⇑P **P 17 47 31.5 -0.7**
baz=82,SNR=20
HUMO Hull Mountain 81.34 322 *eP* **P 17 47 30.8 -1.5**
comp=Z,22nm,1.0s,mb5.0
E09A Wood Farm, Sta 81.39 328 ⇑P **P 17 47 31.9 -0.6**
baz=82
GMO Grizzlie Mount 81.43 325 P **P 17 47 33.2 +0.5**
B12A Libby 81.55 330 ⇑P **P 17 47 33.3 +0.1**
baz=82,SNR=8.4
PBDV Barranco-do-Ve 81.55 45 *eP* **P 17 47 35.2 +1.7**
comp=Z,52nm,1.9s,mb5.0
PCVE Castro Verde 81.71 44 *eP* **P 17 47 36.4 +2.1**
comp=Z,19nm,0.9s,mb4.9
PVAQ Vaqueiros 81.79 44 *eP* **P 17 47 36.1 +1.3**
comp=Z,32nm,1.9s,mb4.8
G06A Carlson Farm, 81.79 326 ⇓P **P 17 47 34.9 +0.3**
baz=82,SNR=11
E08A Dider Farm, El 81.83 327 ⇑P **P 17 47 34.4 -0.3**
baz=82
D09A Jones Farm, Ri 81.85 328 ⇓P **P 17 47 34.6 -0.2**
baz=82,SNR=18
F07A Phinny Hill Vi 81.87 326 ⇓P **P 17 47 35.2 +0.2**
baz=82
B11A Sandpoint 81.89 330 ⇓P **P 17 47 34.4 -0.6**
baz=82,SNR=7.3
C10A Spilker Farm, 81.89 329 ⇓P **P 17 47 34.8 -0.3**
baz=82,SNR=6.4
A12A Yaak River Ran 81.92 331 ⇓P **P 17 47 35.1 0.0**
baz=82,SNR=9.8
HAWA Hanford 82.00 327 *eP* **P 17 47 35.5 -0.1**
comp=Z,25nm,0.8s,mb5.1

HAWA *e*pP pP 17 48 05.7 -2.0
EGRO El Granado 82.01 44 P **P 17 47 36.8 +0.8**
comp=Z,32nm,0.8s,mb5.2
RSW Rattlesnake Hi 82.03 327 *e*P **P 17 47 36.1 +0.2**
comp=Z,32nm,1.1s,mb5.1
PBEJ Beja 82.05 44 *e*P **P 17 47 37.5 +1.4**
comp=Z,24nm,1.1s,mb4.9
D08A Wollman Farm, 82.15 328 ⇑P **P 17 47 36.2 -0.2**
baz=82,SNR=11
B10A Chitwood Farm, 82.19 329 ⇑P **P 17 47 36.0 -0.6**
baz=82
EVO Evora 82.24 43 *e*P **P 17 47 37.4 +0.3**
comp=Z,44nm,1.1s,mb4.9
EVO *e*MLR MLR
comp=Z,92nm,20.2s
EVO Evora 82.24 43 *e*P **P 17 47 38.2 +1.1**
comp=Z,17nm,2.1s,mb4.5
H04A Detroit Lake 82.26 324 ⇑P **P 17 47 36.2 -0.8**
baz=82,SNR=15
A11A Hall Mountain, 82.26 330 ⇑P **P 17 47 36.8 -0.1**
baz=82,SNR=33
OD2 Odessa Site #2 82.28 328 P **P 17 47 37.0 -0.1**
E07A Sunnyside 82.28 327 ⇓P **P 17 47 37.2 +0.1**
baz=82
VFP Flag Point 82.29 325 P **P 17 47 37.5 +0.4**
C09A Chrisman Ranch 82.35 329 ⇓P **P 17 47 37.2 -0.2**
baz=83,SNR=20
RNO Roman Nose 82.62 323 P **P 17 47 39.1 +0.1**
PTOM Tomar 82.62 42 *e*P **P 17 47 40.1 +1.0**
comp=Z,43nm,1.1s,mb5.2
PBAR Barrancos 82.67 44 *e*P **P 17 47 40.2 +0.9**
comp=Z,26nm,2.7s,mb4.6
EMIN Mina Concepcio 82.67 45 P **P 17 47 40.2 +0.9**
comp=Z,40nm,0.9s,mb5.2
PESTR Estremoz 82.71 43 *e*P **P 17 47 41.1 +1.6**
comp=Z,35nm,2.5s,mb4.8
ESPR Espera 82.71 46 P **P 17 47 40.5 +0.9**
comp=Z,25nm,0.7s,mb5.2
B09A Rice 82.72 329 ⇓P **P 17 47 38.8 -0.6**
baz=83,SNR=13
EJIF Jimena Fronter 82.74 46 P **P 17 47 41.2 +1.4**
EJIF pmax pmax
comp=Z,15nm,0.7s,mb4.9
EJIF Jimena Fronter 82.74 46 P **P 17 47 41.2 +1.5**
comp=Z,14nm,0.7s,mb4.9
G04A Mulino 82.75 325 ⇑P **P 17 47 39.2 -0.4**
baz=83
COR Corvallis 82.80 324 *e*P **P 17 47 40.2 +0.3**
COR pmax pmax
comp=Z,103nm,1.2s,mb5.5
COR Corvallis 82.80 324 *e*P **P 17 47 40.2 +0.3**
comp=Z,103nm,1.2s,mb5.5
A10A Northport 82.83 330 ⇑P **P 17 47 39.1 -0.8**
baz=83
MPOR Mary's Peak 82.89 324 P **P 17 47 40.7 +0.4**
BOSA Boshof 82.89 118 P **P 17 47 40.5 -0.4**
comp=Z,59nm,0.8s,mb5.5,baz=250,slow=4.3,SNR=64
BOSA Boshof 82.89 118 *e*P **P 17 47 40.0 -0.9**
BOSA *e**PP pP 17 48 14.6 +1.7
BOSA pmax pmax
comp=Z,56nm,0.8s,mb5.5
BOSA Boshof 82.89 118 *e*P **P 17 47 40.0 -0.8**
comp=Z,56nm,0.8s,mb5.4
BOSA *e*pP pP 17 48 14.6 +1.7
EBAD Badajoz 83.01 44 P **P 17 47 41.8 +0.7**
comp=Z,27nm,0.8s,mb5.1
TBM Table Mountain 83.07 327 P **P 17 47 41.2 0.0**
PMRV Marv??o 83.16 43 *e*P **P 17 47 42.3 +0.5**
comp=Z,23nm,1.5s,mb4.8
F04A Amboy 83.19 325 ⇓P **P 17 47 41.1 -0.8**
baz=83,SNR=7.5
ETW Entiat 83.23 327 *e*P **P 17 47 41.9 -0.1**
comp=Z,44nm,0.9s,mb5.3
ETW *e*pP pP 17 48 12.2 -1.8
B08A Colville Reser 83.25 329 ⇑P **P 17 47 41.2 -0.9**
baz=84,SNR=11
LVP Lakeview Peak 83.28 325 P **P 17 47 42.3 0.0**
PCBR Castelo Branco 83.34 43 *e*P **P 17 47 43.5 +0.8**
comp=Z,16nm,1.3s,mb4.7
LON Longmire 83.41 326 *e*P **P 17 47 42.0 -0.9**
LON *e**PP pP 17 48 13.4 -1.6
LON pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
LON Longmire 83.41 326 *e*P **P 17 47 42.0 -1.0**
comp=Z,5.8nm,0.7s,mb4.5
LON *e*pP pP 17 48 13.4 -1.6
MTE Manteigas 83.62 42 *e*P **P 17 47 45.2 +1.0**
comp=Z,39nm,1.4s,mb5.0
MTE Manteigas 83.62 42 *e*P **P 17 47 44.0 -0.1**
comp=Z,22nm,0.9s,mb5.0
D05A Enumclaw 83.79 326 ⇑P **P 17 47 44.1 -0.7**
baz=84,SNR=7.9
F03A Seaside 83.80 325 ⇓P **P 17 47 44.8 -0.2**
baz=84
ELOJ Sierra Loja 84.01 46 P **P 17 47 47.7 +1.5**
ELOJ pmax pmax
comp=Z,15nm,0.7s,mb4.9
ELOJ Sierra Loja 84.01 46 P **P 17 47 47.7 +1.5**
comp=Z,15nm,0.7s,mb4.9
PVRL Vila Real 84.02 41 *e*P **P 17 47 47.2 +1.0**
comp=Z,52nm,1.7s,mb5.1
MAW Mawson 84.07 163 ⇑*i*P **P 17 47 45.1 -1.0**
comp=Z,22nm,0.6s,mb5.2
MAW Mawson 84.07 163 P **P 17 47 45.2 -0.9**
comp=Z,26nm,0.7s,mb5.2,baz=216,slow=6.5,SNR=63
MAW LR LR 18 23 03.3
comp=Z,141nm,19.7s,baz=110,slow=34
MAW Mawson 84.07 163 *e*P **P 17 47 45.1 -1.0**
MAW *e**PP pP 17 48 19.1 +0.9
MAW pmax pmax
comp=Z,5.0nm,0.8s
MAW Mawson 84.07 163 *e*P **P 17 47 45.0 -1.1**
comp=Z,4.7nm,0.8s,mb4.4
MAW *e*pP pP 17 48 19.1 +0.9
PCAB Cabril 84.08 41 *e*P **P 17 47 47.4 +0.9**
comp=Z,36nm,1.0s,mb5.2
EDM Edmonton 84.09 335 *e*P **P 17 47 44.7 -1.6**
EDM *e**PP pP 17 48 16.5 -1.9
ELOB Lobios 84.15 41 P **P 17 47 47.2 +0.4**
comp=Z,37nm,1.2s,mb5.1
ELUQ Luque 84.15 46 P **P 17 47 47.7 +0.8**
ELUQ pmax pmax
comp=Z,36nm,0.8s,mb5.2
ELUQ Luque 84.15 46 P **P 17 47 47.7 +0.8**
comp=Z,36nm,0.8s,mb5.2
E03A Lebam 84.20 325 ⇓P **P 17 47 46.6 -0.4**
baz=84
A07A Ashnola River, 84.23 329 ⇓P **P 17 47 46.9 -0.2**
baz=84,SNR=33
EADA Adamuz 84.27 45 P **P 17 47 47.6 0.0**
comp=Z,21nm,0.9s,mb5.0
TAM Tamanrasset 84.34 63 *e*P **P 17 47 48.7 +0.4**
TAM pmax pmax
comp=Z,16nm,1.0s,mb4.8
TAM Tamanrasset 84.34 63 *e*P **P 17 47 48.7 +0.4**
comp=Z,16nm,1.0s,mb4.8
MVO Moncorvo 84.38 42 *e*P **P 17 47 49.0 +1.0**
comp=Z,45nm,2.2s,mb4.9
RPW Rockport 84.38 328 *e*P **P 17 47 46.6 -1.2**
comp=Z,19nm,1.3s,mb4.8
RPW *e*pP pP 17 48 17.2 -2.8
B06A Marblemount 84.41 328 ⇑P **P 17 47 46.9 -1.1**
baz=85,SNR=5.5
JCW Jim Creek 84.42 327 *e*P **P 17 47 46.8 -1.2**
JCW *e*pP pP 17 48 18.5 -1.7
LBTB Lobatse 84.45 115 *e*P **P 17 47 48.4 -0.5**
LBTB pmax pmax
comp=Z,49nm,0.8s,mb5.4
LBTB Lobatse 84.45 115 *e*P **P 17 47 48.4 -0.5**
comp=Z,49nm,0.8s,mb5.4
GNW Green Mountain 84.47 326 *e*P **P 17 47 47.4 -0.9**
comp=Z,5.1nm,0.7s,mb4.5
GNW *e*pP pP 17 48 18.6 -1.8
EBAN Banos Encina 84.80 46 P **P 17 47 51.3 +1.1**
EBAN pmax pmax
comp=Z,47nm,0.9s,mb5.4
EBAN Banos Encina 84.80 46 P **P 17 47 51.3 +1.1**
comp=Z,47nm,0.9s,mb5.4
NLWA Neilton Lookou 84.90 326 ⇓P **P 17 47 50.2 -0.3**
baz=85
NLWA Neilton Lookou 84.90 326 *e*P **P 17 47 49.9 -0.5**
comp=Z,31nm,1.1s,mb5.1
PBRG Braganca 84.92 41 *e*P **P 17 47 51.5 +0.8**
comp=Z,28nm,2.0s,mb4.8
ECAL Calabor 85.00 41 P **P 17 47 51.5 +0.4**
comp=Z,24nm,0.9s,mb5.1
A05A Maple Falls 85.03 328 ⇓P **P 17 47 50.1 -1.0**
baz=85
EQES Quesada 85.08 46 P **P 17 47 51.9 +0.2**
comp=Z,36nm,1.0s,mb5.3
PAB San Pablo 85.17 44 *e*P **P 17 47 52.7 +0.7**
PAB pmax pmax
comp=Z,30nm,0.9s,mb5.2
PAB San Pablo 85.17 44 *e*P **P 17 47 52.7 +0.7**
comp=Z,30nm,0.9s,mb5.2
EHUE Huescar 85.41 46 P **P 17 47 53.5 +0.3**
EHUE pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
EHUE Huescar 85.41 46 P **P 17 47 53.5 +0.2**
comp=Z,3.4nm,0.5s,mb4.5
PGC Sidney 85.49 327 *e*P **P 17 47 53.0 -0.4**
comp=Z,4.6nm,1.3s,mb4.2
ESDC Sonseca Array 85.49 44 P **P 17 47 53.9 +0.3**
comp=Z,9.9nm,1.0s,mb4.7,baz=238,slow=5.1,SNR=23
ESDC LR LR 18 21 37.5
comp=Z,60nm,20.4s,baz=205,slow=32
ESDC Sonseca Array 85.49 44 P **P 17 47 54.4 +0.8**
comp=Z,14nm,1.1s,mb4.8
ESLA Sonseca Array 85.49 44 *e*P **P 17 47 54.1 +0.5**
comp=Z,3.5nm,1.0s,mb4.2
ETOB Tobarra 86.55 46 P **P 17 47 58.4 -0.5**
comp=Z,36nm,0.9s,mb5.3
ETOR Torete 87.34 44 P **P 17 48 03.4 +0.8**
ETOR pmax pmax
comp=Z,12nm,0.7s,mb4.9
ETOR Torete 87.34 44 P **P 17 48 03.4 +0.8**
comp=Z,12nm,0.7s,mb4.9
ERTA Horta de San J 88.97 45 P **P 17 48 10.8 +0.5**
comp=Z,7.3nm,0.7s,mb4.8
SJPF Ste Jean 89.06 42 *e*P **P 17 48 11.3 +0.6**
comp=Z,16nm,1.2s,mb4.6
SJPF Ste Jean 89.06 42 *e*P **P 17 48 11.3 +0.6**
SJPF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
SJPF Ste Jean 89.06 42 *e*P **P 17 48 11.3 +0.6**
comp=Z,8.1nm,1.2s,mb4.6
ETSF Etsaut 89.37 43 *e*P **P 17 48 13.2 +1.1**
LSZ Lusaka 90.31 106 *e*P **P 17 48 18.6 +1.4**
LSZ pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
LSZ Lusaka 90.31 106 *e*P **P 17 48 18.6 +1.3**
comp=Z,10.0nm,0.8s,mb5.0
QUIF Quistinic 90.42 38 *e*P **P 17 48 16.5 -0.4**
LFF La Frestale 91.20 42 *e*P **P 17 48 20.6 0.0**
comp=Z,25nm,0.9s,mb5.1
LFF *e*pP pP 17 48 55.6 +2.5
LFF La Frestale 91.20 42 *e*P **P 17 48 20.6 0.0**
LFF *e**PP pP 17 48 55.6 +2.5
LFF pmax pmax
comp=Z,13nm,0.9s,mb5.1
LFF La Frestale 91.20 42 *e*P **P 17 48 20.6 0.0**
comp=Z,13nm,0.9s,mb5.0
LFF *e*pP pP 17 48 55.6 +2.5
MTLF Montolieu 91.35 43 *e*P **P 17 48 21.1 -0.2**
comp=Z,19nm,1.3s,mb4.8
MTLF Montolieu 91.35 43 *e*P **P 17 48 21.1 -0.2**
MTLF pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
MTLF Montolieu 91.35 43 *e*P **P 17 48 21.1 -0.2**
comp=Z,9.6nm,1.3s,mb4.8
YKA Yellowknife Ar 91.47 340 P **P 17 48 20.7 -0.7**
comp=Z,24nm,0.7s,mb5.5,baz=134,slow=4.5,SNR=158
YKA pP pP 17 48 52.9 -1.0
comp=Z,35nm,1.0s,baz=136,slow=4.6,SNR=10.0
YKA LR LR 18 32 30.0
comp=Z,6.6nm,18.2s,baz=80,slow=37
YKA Yellowknife Ar 91.47 340 P **P 17 48 20.7 -0.7**
YKA *PP pP 17 48 52.9 -1.0
YKA Yellowknife Ar 91.47 340 P **P 17 48 20.7 -0.7**
YKA pP pP 17 48 52.9 -1.0
YKA LR LR 18 32 30.0
MFF Saint Martin d 91.49 40 *e*P **P 17 48 21.8 -0.1**
comp=Z,32nm,1.1s,mb5.1
MFF Saint Martin d 91.49 40 *e*P **P 17 48 21.8 -0.1**
MFF pmax pmax
comp=Z,16nm,1.1s,mb5.1
MFF Saint Martin d 91.49 40 *e*P **P 17 48 21.8 -0.1**
comp=Z,16nm,1.1s,mb5.1
RJF Les Rejaudoux 91.86 42 *e*P **P 17 48 23.5 -0.1**
RJF *e*MLR MLR
comp=Z,89nm,20.2s
RJF Les Rejaudoux 91.86 42 *e*P **P 17 48 23.5 -0.1**
RJF LR LR
comp=Z,90nm,20.3s
GRR Gorron 91.98 38 *e*P **P 17 48 23.7 -0.4**
comp=Z,53nm,1.3s,mb5.3
GRR Gorron 91.98 38 *e*P **P 17 48 23.7 -0.4**
GRR pmax pmax
comp=Z,27nm,1.3s,mb5.3
GRR Gorron 91.98 38 *e*P **P 17 48 23.7 -0.4**
comp=Z,26nm,1.3s,mb5.3
CAF Calviac 92.02 42 *e*P **P 17 48 24.4 0.0**
CASY Casey 92.40 180 *e*P **P 17 48 25.0 -0.9**
CASY Casey 92.40 180 *e*P **P 17 48 24.8 -1.1**
comp=Z,16nm,1.0s,mb5.2
BGF Bois d'Agland 93.28 41 *e*P **P 17 48 29.9 -0.2**
comp=Z,32nm,1.1s,mb5.3
BGF Bois d'Agland 93.28 41 *e*P **P 17 48 29.9 -0.2**
BGF pmax pmax
comp=Z,16nm,1.1s,mb5.3
BGF Bois d'Agland 93.28 41 *e*P **P 17 48 29.9 -0.2**
comp=Z,16nm,1.1s,mb5.3
AVF Avril sur Loir 93.69 41 *e*P **P 17 48 31.7 -0.4**
SSF Saint Saulge 93.91 41 *e*P **P 17 48 32.3 -0.8**
SMF Signal de Mont 93.92 41 *e*P **P 17 48 33.0 -0.1**
comp=Z,25nm,1.2s,mb5.1
SMF Signal de Mont 93.92 41 *e*P **P 17 48 33.0 -0.1**
SMF pmax pmax
comp=Z,13nm,1.2s,mb5.1
SMF Signal de Mont 93.92 41 *e*P **P 17 48 33.0 -0.1**
comp=Z,13nm,1.2s,mb5.1
SUMG Summit 96.06 9 *e*P **P 17 48 44.7 +2.3**
comp=Z,7.3nm,0.8s,mb5.2
CDF Champ du Feu 96.79 41 *e*P **P 17 48 45.8 -0.4**
GERES GERESS Array B 100.89 42 P Pdif 17 49 04.3 -0.3
comp=Z,0.2nm,0.3s,baz=239,slow=3.9,SNR=3.5
INK Inuvik 101.23 340 *e*P Pdif 17 49 04.6 -1.5
INK pmax pmax
comp=Z,10.0nm,1.3s
INK Inuvik 101.23 340 *e*Pdif Pdif 17 49 04.6 -1.5
comp=Z,9.8nm,1.3s
CLL Collm 101.32 39 *e*PS PS 18 02 23.0 -0.3
CLL *e*PPS 18 03 12.0
CLL *e*SS SS 18 07 54.0 +15
AKASG Malin Array Be 111.08 43 PKiKP PKiKP 17 53 46.8 -1.4
comp=Z,0.8nm,0.6s,baz=291,slow=2.2,SNR=4.6
AKASG PP PP 17 54 26.0 -3.3
comp=Z,0.2nm,0.2s,baz=257,slow=7.4,SNR=4.5
DZM Mont Dzumac 111.21 234 *e*PP PP 17 54 35.4 +5.2
comp=Z,75nm,25.6s
DZM *e*LR LR 18 27 17.2
comp=Z,134nm,30.8s
BRTR Keskin Array B 112.41 55 PKiKP PKiKP 17 53 50.4 -0.7
comp=Z,1.3nm,0.8s,baz=196,slow=3.2,SNR=8.3
BRTR PP PP 17 54 36.2 -2.9
comp=Z,2.3nm,0.9s,baz=230,slow=9.0,SNR=6.5
OBN Obninsk 115.88 38 ⇑*i*PKIKP PKPdf 17 53 49.8 -7.5
OBN *e* 17 54 35.6
OBN *e* 17 55 02.0
OBN *e*PS PS 18 04 33.6 -12
OBN pmax pmax
comp=Z,4.0nm,0.6s
BILL Bilibino 122.82 339 ⇓*i*PKIKP PKPdf 17 54 07.4 -2.8
BILL *i* 17 55 47.4
BILL *e*PS SP 18 05 24.3 -7.3
BILL *e*SS SS 18 12 40.1 +17
BILL pmax pmax
comp=Z,3.0nm,1.2s
ARU Arti 127.90 34 *i* PKIKP PKPdf 17 54 20.0 -0.3
ARU 17 56 22.9
ARU 18 01 15.1
ARU SS SS 18 13 19.5 -7.6
ARU Arti 127.90 34 *e*PKPdf PKPdf 17 54 20.8 +0.5
ARU *e*pPKPdf pPKPdf 17 54 54.4 +0.2
TIXI Tiksi 128.96 353 *e*PKIKP PKPdf 17 54 20.3 -1.6
TIXI pmax pmax
comp=Z,3.0nm,0.9s
TIXI Tiksi 128.96 353 *e*PKPdf PKPdf 17 54 20.8 -1.1
ASAR Alice Springs 130.10 207 PKP PKPdf 17 54 24.1 -1.5
comp=Z,1.7nm,0.7s,baz=134,slow=1.9,SNR=28
ASAR pPKP pPKPdf 17 54 57.9 -1.6
comp=Z,8.5nm,0.8s,baz=144,slow=2.2,SNR=19
ABKAR Akbulak array 130.82 43 *e*PKPdf PKPdf 17 54 25.9 -0.2
ABKAR *e*SKPbc SKPbc 17 57 40.9 +2.2
PETK Petropavlovsk- 132.98 324 PKP PKPdf 17 54 29.9 -0.1
comp=Z,3.1nm,0.8s,baz=158,slow=4.7,SNR=3.6
PETK pPKP pPKPdf 17 55 02.6 -1.3
comp=Z,7.7nm,0.8s,baz=100,slow=3.6,SNR=7.0
PETK Petropavlovsk- 132.98 324 PKP PKPdf 17 54 29.9 -0.1
PETK pPKP pPKPdf 17 55 02.6 -1.3
WRAB Tennant Creek 133.17 210 *e*PKIKP PKPdf 17 54 30.2 -1.3
WRAB *e* 17 55 04.3
BVAR Borovoye Array 135.54 35 PKP PKPdf 17 54 34.5 -0.3
comp=Z,4.3nm,0.8s,baz=270,slow=3.0,SNR=19
BVAR pPKP pPKPdf 17 55 09.5 +0.8
comp=Z,5.0nm,0.8s,baz=270,slow=3.0,SNR=6.9
YAK Yakutsk 137.74 348 *e*PKHKP 17 54 28.0
NVS Novosibirsk 140.50 26 *e*PKIKP PKPdf 17 54 43.7 -0.2
NVS *i* 17 55 17.2
NVS *e* 17 57 41.8
NVS pmax pmax
comp=Z,9.0nm,1.4s
NVS pmax pmax
comp=N,7.0nm,2.2s
NVS pmax pmax
comp=E,13nm,2.5s
KURK Kurchatov 141.09 34 PKhKP 17 54 39.7
comp=E,1.5nm,0.8s,baz=292,slow=3.0,SNR=6.9
KURK PKP PKPdf 17 54 44.8 -0.3
comp=E,3.8nm,0.8s,baz=299,slow=2.6,SNR=12
KURK pPKP pPKPdf 17 55 19.8 +0.8
comp=E,5.8nm,0.8s,baz=297,slow=2.7,SNR=7.1
KURK PP PP 17 57 56.2 +8.6
comp=E,2.0nm,0.9s,baz=287,slow=6.5,SNR=4.5
KURK Kurchatov 141.09 34 *e*PKPpre 17 54 41.9
ZAA0 Zalesovo Array 141.79 26 *e*PKPdf PKPdf 17 54 46.0 -0.2
ZAA0 *ep*PKPdf pPKPdf 17 55 19.0 -1.2
ZALV Zalesovo Beam 141.79 26 PKhKP 17 54 40.9
comp=E,3.8nm,0.6s,baz=316,slow=4.1,SNR=12
ZALV PKP PKPdf 17 54 46.2 0.0
comp=E,5.7nm,0.6s,baz=304,slow=3.3,SNR=15
ZALV pPKP pPKPdf 17 55 19.1 -1.1
comp=E,18nm,0.9s,baz=299,slow=3.1,SNR=7.9
ZALV Zalesovo Beam 141.79 26 *e*PKIKP PKPdf 17 54 43.6 -2.6
ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZALV Zalesovo Beam 141.79 26 PKP 17 54 40.9
ZALV PKP PKPdf 17 54 46.2 0.0
ZALV pPKP pPKPdf 17 55 19.1 -1.1
EKS2 Erkin-Say 142.04 48 *e*PKPpre 17 54 43.1
AML Almayashu 142.18 48 *e*PKPpre 17 54 44.2
AAK Ala-Archa 142.54 47 PKP PKPdf 17 54 46.8 -1.1
comp=Z,2.7nm,0.7s,baz=230,slow=7.9,SNR=6.9
AAK Ala-Archa 142.54 47 *e*PKPpre 17 54 44.9
UCH Uchtor 142.71 48 *e*PKPpre 17 54 45.4
UCH *ep*PKPdf pPKPdf 17 55 21.9 -0.3
TKM2 Tokmak 2 143.18 46 *e*PKIKP PKPdf 17 54 47.2 -1.9
BOD Bodaibo 143.78 359 ⇓*i*PKIKP PKPdf 17 54 46.1 -3.5
BOD pmax pmax
comp=Z,14nm,1.0s
YSS Yuzh-Sakhalins 144.37 323 *e*PKIKP PKPdf 17 54 49.0 -2.0
KSH Kashi 144.71 51 *e*PKP PKPdf 17 54 51.3 -0.5
KSH *e*PKS 17 58 24.0
KSH *e*SKS SKSdf 18 01 44.3 -5.2
KSH AMB AMB
comp=Z,100nm,5.2s
KSH LR LR
comp=N,120nm,5.2s
KSH LR LR
comp=E,72nm,5.8s
KSH LR LR
comp=Z,130nm,5.9s
MK31 Makanchi Array 145.37 36 *e*PKP PKPdf 17 54 53.1 +0.4
MK31 *ep*PKP pPKPdf 17 55 27.2 +0.5
MKAR Makanchi Array 145.37 36 PKPbc PKPbc 17 54 52.9 0.0
comp=Z,12nm,0.7s,baz=330,slow=4.1,SNR=57
MKAR pPKPbc pPKPbc 17 55 26.1 -0.2
comp=Z,30nm,0.9s,baz=338,slow=2.9,SNR=8.7
ERM Erimo 146.69 315 *e*PKPbc PKPbc 17 54 57.2 +0.2
ERM *ep*PKPdf pPKPdf 17 55 28.2 -0.9
PALK Pallekele 146.86 111 PKPbc PKPbc 17 54 57.7 -0.6
comp=Z,13nm,0.8s,baz=341,slow=4.2,SNR=4.3
HABR Khabarovsk 147.33 331 *e*PKP2 PKPdf 17 54 57.9 +1.9
HABR *e* 17 58 28.5
HABR *e* 18 01 50.4
HABR *e* 18 10 52.1
HABR *e*SSS 18 22 50.8
HABR pmax pmax
comp=Z,99nm,1.6s
HABR pmax pmax
comp=N,21nm,1.5s
HABR pmax pmax
comp=E,26nm,1.1s
HABR MLR MLR
comp=Z,180nm,23.0s
GUMO Guam 147.46 261 PKPbc PKPbc 17 54 58.0 -1.9
comp=Z,85nm,0.8s,baz=185,slow=5.2,SNR=7.9
KLR Kul'dur 148.16 335 *e*PKHKP 17 54 53.8
HYB Hyderabad 148.50 92 *i* PKP PKPdf 17 54 59.5 +0.6
HYB *e* 17 55 06.5
HYB *e* 17 55 17.0
HYB *e* 17 55 35.0
HYB *e* 17 55 45.0
MOY Mondy 148.84 13 *e*PKP2 PKPbc 17 55 03.3 +0.9
MOY pmax pmax
comp=Z,19nm,1.6s
TLY Talaya 149.32 10 *i* PKP2 PKPab 17 55 09.8 +1.2
TLY pmax pmax
comp=Z,28nm,1.6s
WMQ Urumqi 150.20 36 PKPbc PKPbc 17 55 06.5 +0.5
WMQ PKPab PKPab 17 55 21.0 +8.5
WMQ sPKP 17 55 53.0
WMQ PKS 17 58 40.0
WMQ PP PP 17 58 50.8 +9.1
WMQ SS SS 18 17 55.3 +6.3
WMQ LR LR
comp=N,46nm,29.0s
WMQ LR LR
comp=E,56nm,34.0s
WMQ LR LR
comp=Z,30nm,23.0s
HIA Hailar 151.66 349 *e*PKIKP PKPbc 17 55 08.5 -0.7
MJAR Matsushiro Arr 152.59 309 PKPbc PKPbc 17 55 10.6 -1.2
comp=Z,11nm,0.9s,baz=86,slow=1.2,SNR=28
MJAR PKPab PKPab 17 55 21.3 -1.4
comp=Z,9.2nm,1.0s,baz=106,slow=1.3,SNR=9.4
MJAR pPKPbc pPKPbc 17 55 44.1 -1.5
comp=Z,12nm,0.9s,baz=95,slow=1.2,SNR=7.6
MAJO Matsushiro 152.59 309 *e*PKIKP PKPbc 17 55 10.5 -1.3
MAJO *e* 17 55 21.3
SONM Songino Array 153.47 8 PKP PKPdf 17 55 06.0 +0.5
comp=Z,2.4nm,0.7s,baz=320,slow=2.4,SNR=4.8
SONM PKPbc PKPbc 17 55 13.3 0.0
comp=Z,1.9nm,0.8s,baz=277,slow=0.5,SNR=5.7
CN2 Changchun 155.09 336 *e*PKP PKPdf 17 55 10.0 +2.0
CN2 *e*PP PP 17 59 13.8 +4.9
DMN Daman 155.10 71 *e*P PKPab 17 55 33.6 -0.1
comp=Z,52nm,0.9s
KKN Kakani 155.23 70 *e*P PKPab 17 55 33.7 -0.6
comp=Z,45nm,0.5s
PKIN Phulchoki 155.36 71 *e*P PKPab 17 55 33.9 -0.9
comp=Z,20nm,0.6s
PKI Pulchoki 155.38 71 *e*P PKPab 17 55 34.0 -0.9
comp=Z,36nm,0.9s
GUN Gumba 155.74 70 *e*P PKPab 17 55 35.3 -1.1
comp=Z,38nm,0.5s
PSI Prapat 157.56 145 PKPab PKPab 17 55 43.8 -0.7
comp=Z,13nm,0.8s,baz=236,slow=5.4,SNR=8.6
KSRS Korea Array 158.87 322 PKP PKPdf 17 55 11.8 -1.1
comp=Z,2.1nm,0.9s,baz=23,slow=1.5,SNR=8.4
KSRS PKPab PKPab 17 55 46.6 -2.9
comp=Z,4.7nm,0.8s,baz=38,slow=0.9,SNR=10
KSRS pPKPab pPKPab 17 56 21.0 -1.3
comp=Z,6.6nm,0.9s,baz=43,slow=3.9,SNR=5.7
GTA Gaotai 159.53 27 PKP PKPdf 17 55 14.5 +0.8
GTA pPKP pPKPdf 17 55 49.0 +1.2
GTA sPKP 17 55 57.8
GTA PKS 17 58 47.0
GTA PP PP 17 59 32.5 -0.9
GTA SKS SKSdf 18 02 04.5 -3.0
GTA SS SS 18 19 29.0 -0.4
GTA AMB AMB
comp=Z,81nm,4.8s
GTA LR LR
comp=N,71nm,14.3s
GTA LR LR
comp=E,47nm,16.0s
GTA LR LR

comp=Z,94nm,15.5s
LSA Lhasa 159.80 62 P PKPab 17 55 44.3 -10
LSA Lhasa 159.80 62 *e*PKIKP PKPdf 17 55 15.2 +0.9
HHC Hu-ho-hao-te 160.80 0 *e*PKP PKPdf 17 55 13.3 -1.8
HHC PKS 17 58 44.5
HHC AMB AMB
comp=Z,96nm,7.4s
HHC LR LR
comp=N,120nm,20.7s
HHC LR LR
comp=E,280nm,21.8s
HHC LR LR
comp=Z,130nm,20.2s
BJI Beijing 161.22 349 PKP PKPdf 17 55 14.5 -1.0
BJI LR LR
comp=Z,46nm,38.6s
LZH Lanzhou 164.01 24 *e*PKP PKPdf 17 55 16.5 -1.9
LZH LR LR
comp=N,160nm,17.6s
LZH LR LR
comp=Z,230nm,18.9s
CMAR Chiang Mai Arr 167.60 102 PKP PKPdf 17 55 20.8 -1.0
comp=Z,1.2nm,0.9s,baz=292,slow=2.2,SNR=7.4
CMAR pPKP pPKPdf 17 55 55.3 -0.7
comp=Z,2.3nm,0.9s,baz=265,slow=2.0,SNR=6.6
CMAR PKPab PKPab 17 56 27.9 -0.6
comp=Z,3.0nm,0.8s,baz=247,slow=6.6,SNR=14
CMAR pPKPab pPKPab 17 57 00.6 -0.6
comp=Z,1.5nm,1.0s,baz=256,slow=6.1,SNR=1.7
CMAR PP PP 18 00 21.0 +3.4
comp=Z,0.6nm,0.7s,baz=301,slow=5.3,SNR=4.8
CMAR Chiang Mai Arr 167.60 102 PKIKP PKPdf 17 55 20.8 -1.0
CMAR 17 55 55.3
CMAR 17 56 28.0
CMAR 18 00 21.0
CD2 Chengdu 168.30 36 PKP PKPdf 17 55 21.0 -0.9
CD2 pPKP pPKPdf 17 55 53.0 -3.1
CD2 sPKP 17 56 05.5
CD2 PKPab PKPab 17 56 32.5 +1.4
CD2 PKS 17 58 52.3
CD2 PP PP 18 00 22.3 +2.6
CD2 SKS SKSdf 18 02 13.5 -0.7
CD2 SKKS SKKSac 18 06 57.3 +1.7
CD2 SS SS 18 21 01.5 +1.5
CD2 AMB AMB
comp=Z,180nm,6.0s
CD2 LR LR
comp=N,120nm,6.5s
CD2 LR LR
comp=Z,190nm,7.7s
KMI Kunming 171.04 65 PKP PKPdf 17 55 21.5 -2.2
KMI pPKP pPKPdf 17 55 56.8 -1.1
KMI sPKP 17 56 11.0
KMI PKPab PKPab 17 56 43.5 -0.1
KMI PP PP 18 00 34.5 -0.1
KMI SKKS SKKSac 18 07 06.8 -2.8
KMI SS SS 18 21 28.3 -0.9
KMI AMB AMB
comp=Z,110nm,5.9s
KMI LR LR
comp=N,73nm,19.1s
KMI LR LR
comp=E,89nm,18.4s
KMI LR LR
comp=Z,170nm,52.7s
GYA Guiyang 173.31 43 PKP PKPdf 17 55 22.8 -1.9
GYA pPKP pPKPdf 17 55 56.5 -2.4
GYA sPKP 17 56 10.3
GYA PKPab PKPab 17 56 54.8 +1.3
GYA PKS 17 58 52.8
GYA PP PP 18 00 46.8 +1.9
GYA SKKS SKKSac 18 07 19.0 -1.1
GYA SS SS 18 21 49.3 -0.5
GYA AMB AMB
comp=Z,160nm,8.7s
GYA LR LR
comp=N,280nm,24.3s
GYA LR LR
comp=E,210nm,25.0s
GYA LR LR
comp=Z,180nm,25.8s
QIZ Qiongzhong 176.90 145 PKP PKPdf 17 55 24.0 -1.9
QIZ PP PP 18 01 01.5 -0.3
QIZ SS SS 18 22 18.5 -5.0

*CSEM **28** 17:45:34.7, 43°.28N×46°.49E, h9km, mb3.8, After OBN*
*MOS **28** 17:45:34.7±2.2, 43°.28N×46°.49E, h9km, mb3.8/1, Error ellipse: s-maj=10.8km s-min=8.1km az=12.2*
ISC 28 17:45:35.3±0.8, **43°.33N**±0°.04×**46°.51E**±0°.05, **h4**km±4km, **n37**, σ1§**11**/67, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.27**	**161**	*e*PG	**Pg**	**17 45 40.5**	**0.0**
DLMR				*e*S	**Sg**	**17 45 45.0**	**+1.0**
DLMR				pmax	pmax		
	comp=Z,115nm,0.2s						
DLMR	**Dylym**	**0.27**	**161**	*e*Pg	**Pg**	**17 45 40.5**	**0.0**
	comp=Z,115nm,0.2s						
DLMR				*e*Sg	**Sg**	**17 45 45.0**	**+1.0**
XNZR	**Khunzakh**	**0.80**	**169**	*e*PG	**Pg**	**17 45 48.5**	**-2.1**
XNZR				*i* S	**Sg**	**17 45 59.5**	**-1.4**
XNZR				pmax	pmax		
	comp=Z,88nm,0.1s						
XNZR	**Khunzakh**	**0.80**	**169**	*e*Pg	**Pg**	**17 45 48.5**	**-2.1**
	comp=Z,88nm,0.1s						
XNZR				*i* Sg	**Sg**	**17 45 59.5**	**-1.4**
MAK	**Makhachkala**	**0.82**	**116**	PG	**Pg**	**17 45 50.1**	**-0.8**
MAK				*e*		17 46 06.4	
MAK				pmax	pmax		
	comp=Z,79nm,0.2s						
MAK				smax			
	comp=N,218nm,0.4s						
MAK				smax			
	comp=E,592nm,0.6s						
MAK	**Makhachkala**	**0.82**	**116**	Pg	**Pg**	**17 45 50.1**	**-0.8**
	comp=E,79nm,0.2s						
MAK				*e*Sg	**Sg**	**17 46 06.4**	**+4.9**
	comp=E,218nm,0.4s						
SNJR	**Sundja**	**1.27**	**259**	*e*PG	**Pn**	**17 45 58.8**	**-0.9**
SNJR				*e*S	**Sg**	**17 46 15.8**	**-0.2**
SNJR	**Sundja**	**1.27**	**259**	*e*Pg	**Pn**	**17 45 58.8**	**-0.9**
SNJR				*e*Sg	**Sg**	**17 46 15.8**	**-0.2**
KMKR	**Kumukh**	**1.27**	**160**	*i* PG	**Pg**	**17 46 00.0**	**+0.4**
KMKR				*i* S	**Sg**	**17 46 17.0**	**+0.9**
KMKR				pmax	pmax		
	comp=Z,32nm,0.3s						
KMKR	**Kumukh**	**1.27**	**160**	*i* Pg	**Pg**	**17 46 00.0**	**+0.4**
	comp=Z,32nm,0.3s						
KMKR				*i* Sg	**Sg**	**17 46 17.0**	**+0.9**
TRKR	**Terskaya**	**1.35**	**288**	*e*PG	**Pg**	**17 46 00.9**	**-0.3**
TRKR				*e*S	**Sg**	**17 46 20.2**	**+1.5**
TRKR	**Terskaya**	**1.35**	**288**	*e*Pg	**Pg**	**17 46 00.9**	**-0.3**
TRKR				*e*Sg	**Sg**	**17 46 20.2**	**+1.5**
VLKR	**Vladikavkaz**	**1.37**	**259**	*e*PG	**Pn**	**17 46 00.7**	**-0.4**
VLKR				*i* S	**Sg**	**17 46 19.7**	**+0.5**
VLKR	**Vladikavkaz**	**1.37**	**259**	*e*Pg	**Pn**	**17 46 00.7**	**-0.4**
VLKR				*i* Sg	**Sg**	**17 46 19.7**	**+0.5**
BTKR	**Batakoyurt**	**1.43**	**273**	*e*PG	**Pg**	**17 46 02.4**	**-0.4**
BTKR				*i* S	**Sg**	**17 46 22.0**	**+0.7**
BTKR	**Batakoyurt**	**1.43**	**273**	*e*Pg	**Pg**	**17 46 02.4**	**-0.4**
BTKR				*i* Sg	**Sg**	**17 46 22.0**	**+0.7**
KMSR	**Komsomolskaya**	**1.62**	**272**	*e*PG	**Pn**	**17 46 01.0**	**-3.5**
KMSR				*e*S	**Sn**	**17 46 23.4**	**-2.4**
KMSR	**Komsomolskaya**	**1.62**	**272**	*e*Pg	**Pn**	**17 46 01.0**	**-3.5**
KMSR				*e*Sg	**Sn**	**17 46 23.4**	**-2.4**
ARNR	**Ardon**	**1.63**	**266**	*e*PN	**Pn**	**17 46 04.7**	**-0.1**
ARNR				*e*S	**Sn**	**17 46 26.1**	**-0.1**
ARNR	**Ardon**	**1.63**	**266**	*e*Pn	**Pn**	**17 46 04.7**	**-0.1**
ARNR				*e*Sg	**Sn**	**17 46 26.1**	**-0.1**
PRTR	**Priterechnaya**	**1.67**	**285**	*e*PN	**Pn**	**17 46 06.0**	**+0.7**
PRTR				*e*S	**Sg**	**17 46 28.4**	**-0.6**
PRTR	**Priterechnaya**	**1.67**	**285**	*e*Pn	**Pn**	**17 46 06.0**	**+0.7**
PRTR				*e*Sg	**Sg**	**17 46 28.4**	**-0.6**
LACR	**Lac**	**1.70**	**254**	*e*PN	**Pn**	**17 46 04.7**	**-0.9**
LACR				*e*S	**Sn**	**17 46 26.1**	**-1.6**
LACR	**Lac**	**1.70**	**254**	*e*Pn	**Pn**	**17 46 04.7**	**-0.9**
LACR				*e*Sg	**Sn**	**17 46 26.1**	**-1.6**
KORR	**Kora**	**1.80**	**263**	*e*PN	**Pn**	**17 46 00.6**	**-6.4**
KORR	**Kora**	**1.80**	**263**	*e*Pn	**Pn**	**17 46 00.6**	**-6.4**
LSNR	**Lesken**	**1.97**	**269**	*e*PN	**Pn**	**17 46 09.9**	**+0.6**
LSNR	**Lesken**	**1.97**	**269**	*e*Pn	**Pn**	**17 46 09.9**	**+0.6**
ZEI	**Tsey**	**1.99**	**255**	*e*PN	**Pn**	**17 46 09.5**	**-0.2**
ZEI	**Tsey**	**1.99**	**255**	*e*Pn	**Pn**	**17 46 09.5**	**-0.2**
DGRG	**David-gareji**	**2.05**	**205**	P	**Pn**	**17 46 12.0**	**+1.5**
DGRG				S	**Sn**	**17 46 41.5**	**+5.0**
TBLG	**Delisi**	**2.06**	**220**	*e*PN	**Pn**	**17 46 11.8**	**+1.2**
TBLG				*e*S	**Sg**	**17 46 40.7**	**-0.8**
TBLG	**Delisi**	**2.06**	**220**	P	**Pn**	**17 46 11.9**	**+1.2**
TBLG				S	**Sn**	**17 46 40.8**	**+4.0**
TBLG	**Delisi**	**2.06**	**220**	*e*Pn	**Pn**	**17 46 11.8**	**+1.2**
TBLG				*e*Sg	**Sg**	**17 46 40.7**	**-0.8**
MTA	**Mtatsminda**	**2.07**	**218**	P	**Pn**	**17 46 11.4**	**+0.7**
MTA				S	**Sn**	**17 46 38.0**	**+1.1**
GOR	**Gori**	**2.22**	**234**	P	**Pn**	**17 46 17.7**	**+4.9**
GOR				S	**Sn**	**17 46 39.4**	**-1.2**
ONI	**Oni**	**2.36**	**253**	P	**Pn**	**17 46 16.7**	**+1.9**
ONI				S	**Sn**	**17 46 47.2**	**+3.1**

*IDC **28** 17:47:09.7±0.7, 32°.47N×105°.22E, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/33, Error ellipse: s-maj=31.7km s-min=14.1km az=53.0*
*BJI **28** 17:47:10.1, 32°.48N×105°.26E, h15km, mB4.5/5, mb4.2/7, ML4.2/20, Ms3.9/8, Ms7 3.7/7*
*NEIC **28** 17:47:11.4±0.4, 32°.53N×105°.28E, h10km, mb4.3/5, Error ellipse: s-maj=8.5km s-min=7.2km az=224.0*
*MOS **28** 17:47:12.3±1.1, 32°.48N×105°.30E, h33km, mb4.3/10, Error ellipse: s-maj=12.9km s-min=9.9km az=108.1*
ISC 28 17:47:11.3±1.2, **32°.49N**±0°.03×**105°.32E**±0°.03, **h11**km±8km, **n55**, σ1§**08**/65, **mb4.0**/16, **1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.06**	**221**	Pn	**Pn**	**17 47 46.3**	**+0.5**
CD2				Pg	**Pg**	**17 47 48.8**	**-2.0**
CD2				Sg	**Sg**	**17 48 17.3**	**-0.3**
CD2				smax			
	comp=N,8μm,1.1s						
XAN	**Xi'an**	**3.39**	**62**	Pn	**Pn**	**17 48 04.5**	**+0.4**
XAN				Pg	**Pb**	**17 48 11.0**	**-0.3**
XAN				Sg	**Sb**	**17 48 52.3**	**-0.2**
XAN				smax			
	comp=N,920nm,0.7s						
XAN				smax			
	comp=E,410nm,0.8s						
LZH	**Lanzhou**	**3.79**	**342**	*e*Pn	**Pn**	**17 48 11.8**	**+2.2**
LZH				Sn	**Sn**	**17 48 51.8**	**-2.4**
LZH				Sg	**Sg**	**17 49 07.5**	**-5.6**
LZH				smax			
	comp=N,700nm,0.8s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=N,2μm,4.8s						
LZH				LR	LR		
	comp=Z,3μm,5.5s						
ENH	**Enshi**	**4.19**	**121**	*e*P	**Pn**	**17 48 18.1**	**+3.0**
GYA	**Guiyang**	**6.12**	**169**	⇑*i*Pn	**Pn**	**17 48 42.5**	**+0.9**
GYA				smax			
	comp=N,220nm,0.9s						
GYA				smax			
	comp=E,130nm,0.7s						
KMI	**Kunming**	**7.68**	**198**	Pn	**Pn**	**17 49 02.0**	**-1.0**
KMI				Sn	**Sn**	**17 50 28.3**	**-1.7**
KMI				smax			
	comp=N,16nm,0.6s						
KMI				smax			
	comp=E,24nm,0.8s						
KMI				LR	LR		
	comp=N,180nm,10.7s						
KMI				LR	LR		
	comp=E,350nm,8.3s						
KMI				LR	LR		
	comp=Z,190nm,11.3s						
WHN	**Wuhan**	**7.95**	**102**	P	**Pn**	**17 49 08.3**	**+1.6**
WHN				S	**Sn**	**17 50 36.8**	**+0.2**
GTA	**Gaotai**	**8.22**	**329**	P	**Pn**	**17 49 10.3**	**-0.1**
GTA				pP		17 49 13.5	
GTA				S	**Sn**	**17 50 42.5**	**-0.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,5.4s						
GTA				LR	LR		
	comp=N,550nm,11.0s						
GTA				LR	LR		
	comp=E,650nm,10.4s						
GTA				LR	LR		
	comp=Z,450nm,10.7s						
BTO	**Baotou**	**8.94**	**24**	*e*P	**Pn**	**17 49 26.8**	**+6.6**
NJ2	**Nanjing**	**11.46**	**89**	*e*P	**Pn**	**17 49 52.5**	**-2.4**
NJ2				pP		17 49 59.0	
NJ2				sP		17 50 02.5	
NJ2				S	**Sn**	**17 52 01.0**	**-1.9**
NJ2				sS		17 52 16.5	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.6s						
NJ2				LR	LR		
	comp=N,330nm,11.3s						
NJ2				LR	LR		
	comp=E,130nm,7.6s						
NJ2				LR	LR		
	comp=Z,290nm,5.2s						
LSA	**Lhasa**	**12.46**	**261**	*e*P	**Pn**	**17 50 11.1**	**+2.6**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	**Lhasa**	**12.46**	**261**	*e*P	**Pn**	**17 50 11.1**	**+2.6**
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.11**	**204**	Pn	**Pn**	**17 50 44.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=17,slow=11,SNR=9.0						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**17 50 47.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=7.0						
SONM				LR	LR	17 57 07.6	
	comp=Z,92nm,18.7s,baz=0.4,slow=39						
GUN	**Gumba**	**17.41**	**260**	*e*P	**Pn**	**17 51 14.6**	**+0.5**
	comp=Z,17nm,0.7s						
PKI	**Pulchoki**	**17.92**	**259**	*e*P	**Pn**	**17 51 21.3**	**+0.8**
PKI	**Pulchoki**	**17.92**	**259**	*e*P	**Pn**	**17 51 21.5**	**+1.1**
PKI				pmax	pmax		
	comp=Z,16nm,0.7s						
PKI	**Pulchoki**	**17.92**	**259**	*e*P	**Pn**	**17 51 21.5**	**+1.1**
	comp=Z,16nm,0.7s						
PKIN	**Phulchoki**	**17.93**	**259**	*e*P	**Pn**	**17 51 21.5**	**+0.9**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**17.95**	**260**	*e*P	**Pn**	**17 51 20.0**	**-0.8**
	comp=Z,16nm,1.0s						
KKN	**Kakani**	**17.95**	**260**	*e*P	**Pn**	**17 51 20.0**	**-0.8**
KKN				pmax	pmax		
	comp=Z,16nm,1.0s						
DMN	**Daman**	**18.16**	**260**	*e*P	**Pn**	**17 51 23.7**	**+0.3**
	comp=Z,16nm,0.8s						
KSRS	**Korea Array**	**19.16**	**69**	P	**Pn**	**17 51 35.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=250,slow=10,SNR=11						
KSRS	**Korea Array**	**19.16**	**69**	P	**Pn**	**17 51 35.3**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**22.66**	**316**	*e*P	**P**	**17 52 12.3**	**-0.1**
MKAR	**Makanchi Array**	**22.66**	**316**	P	**P**	**17 52 12.7**	**+0.3**
	comp=Z,1.3nm,0.6s,mb3.5,baz=113,slow=9.5,SNR=17						
MKAR	**Makanchi Array**	**22.66**	**316**	P	**P**	**17 52 12.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**17 52 43.1**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.8,baz=137,slow=9.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**17 52 43.1**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
BOD	**Bodaibo**	**26.02**	**11**	*e*P	**P**	**17 52 46.1**	**+2.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.8						
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**17 52 51.3**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.5,baz=136,slow=8.9,SNR=9.7						
KURK	**Kurchatov**	**26.80**	**321**	P	**P**	**17 52 51.3**	**+0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
BVAR	**Borovoye Array**	**32.38**	**320**	P	**P**	**17 53 40.2**	**-0.5**
	comp=Z,0.5nm,0.6s,mb3.5,baz=138,slow=18,SNR=3.8						
BVAR	**Borovoye Array**	**32.38**	**320**	P	**P**	**17 53 40.2**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**41.20**	**11**	*i* P	**P**	**17 54 54.5**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**17 56 53.0**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.2,baz=86,slow=3.7,SNR=5.4						
ARCES	**ARCESS Array B**	**56.43**	**335**	P	**P**	**17 56 53.1**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**17 56 55.9**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.2,baz=104,slow=8.0,SNR=4.3						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**17 56 55.9**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**17 56 55.9**	**-0.7**
AKASG	**Malin Array Be**	**57.20**	**313**	P	**P**	**17 56 57.5**	**-0.6**
	comp=Z,2.5nm,0.6s,mb4.4,baz=68,slow=7.4,SNR=4.6						
AKASG	**Malin Array Be**	**57.20**	**313**	P	**P**	**17 56 57.5**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRAB	**Tennant Creek**	**59.06**	**148**	*e*P	**P**	**17 57 11.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**59.06**	**148**	*e*P	**P**	**17 57 11.2**	**-0.3**
	comp=Z,5.8nm,0.9s,mb4.6						
ASAR	**Alice Springs**	**62.15**	**150**	P	**P**	**17 57 32.6**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=330,slow=6.6,SNR=14						
ASAR	**Alice Springs**	**62.15**	**150**	P	**P**	**17 57 32.7**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.06**	**327**	P	**P**	**17 57 45.9**	**+1.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**17 57 43.7**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.8,baz=87,slow=6.8,SNR=3.8						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**17 57 43.7**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**64.06**	**327**	P	**P**	**17 57 43.7**	**-1.0**
CTA	**Charters Tower**	**65.32**	**137**	P	**P**	**17 57 54.0**	**+0.6**
	comp=Z,6.1nm,0.9s,mb4.6,baz=301,slow=5.9,SNR=3.3						
CTA	**Charters Tower**	**65.32**	**137**	P	**P**	**17 57 54.0**	**+0.6**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	**GERESS Array B**	**67.32**	**314**	P	**P**	**17 58 06.6**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=115,slow=6.9,SNR=2.8						
STKA	**Stephens Creek**	**72.62**	**148**	P	**P**	**17 58 39.6**	**+1.0**
	comp=Z,2.2nm,0.9s,mb4.1,baz=311,slow=7.7,SNR=3.3						
YKA	**Yellowknife Ar**	**80.07**	**18**	P	**P**	**17 59 21.5**	**+0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=331,slow=5.3,SNR=2.8						

IDC 28 17:59:47.4±1.5, **31°.02N**×**103°.31E**, **h0**km, **mb3.4**/5, **mb1 3.5**/5, **mb1mx3.3**/24, **mbtmp3.5**/5, **Error ellipse: s-maj=49.7km s-min=23.6km az=48.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.31**	**66**	P	P	18 04 35.5	-0.3
	0.4nm,0.7s,baz=261,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**22.60**	**320**	P	P	18 04 49.4	-0.1
	1.0nm,0.9s,baz=125,slow=10,SNR=6.1						
ZALV	**Zalesovo Beam**	**26.51**	**335**	P	P	18 05 26.2	-0.1
	0.6nm,0.7s,baz=128,slow=11,SNR=2.9						
KURK	**Kurchatov**	**26.91**	**324**	P	P	18 05 30.4	+0.3
	0.3nm,0.3s,baz=135,slow=9.1,SNR=3.6						
ASAR	**Alice Springs**	**61.78**	**148**	P	P	18 10 08.0	+0.1
	0.3nm,0.8s,baz=332,slow=6.3,SNR=5.1						

*IDC **28** 18:12:48.9±1.2, 31°.47N×104°.31E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/28, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=51.4km s-min=21.9km az=66.0*
*ISCJB **28** 18:12:50.3±1.5, 31°.37N±0°.08×104°.03E±0°.09, h21km±13km, mb3.5/6, Error ellipse: s-maj=14.4km s-min=11.8km az=36.5*
*NEIC **28** 18:12:51.0±0.7, 31°.45N×104°.04E, h10km, mb4.6/1, Error ellipse: s-maj=19.0km s-min=12.5km az=68.0*
*BJI **28** 18:12:52.1, 31°.26N×104°.06E, h16km, ML3.4/9, Ms3.5/1, Ms7 3.3/1*
ISC 28 18:12:50.4±0.8, **31°.39N**±0°.03×**104°.03E**±0°.07, **h7**km±6km, **n13**, σ1§**18**/19, **mb3.5**/6, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.54**	**206**	Pg	**Pg**	**18 12 59.8**	**-0.9**
CD2				Sg	**Sg**	**18 13 07.3**	**-0.4**
CD2				smax			
	comp=N,5μm,0.7s						
LZH	**Lanzhou**	**4.68**	**358**	*e*Pg	**Pg**	**18 14 20.0**	**-0.1**
LZH				Sg	**Sg**	**18 15 22.0**	**+1.2**
LZH				smax			
	comp=N,19nm,0.5s						
LZH				smax			
	comp=E,25nm,0.5s						
ENH	**Enshi**	**4.82**	**102**	*e*P	**Pn**	**18 14 05.8**	**+2.4**
XAN	**Xi'an**	**4.89**	**56**	Pn	**Pn**	**18 14 05.5**	**+1.1**
XAN				Pg	**Pg**	**18 14 22.0**	**-2.1**
XAN				Sn	**Sn**	**18 15 00.8**	**-0.4**
XAN				Sg	**Sg**	**18 15 20.5**	**-7.0**
XAN				smax			
	comp=N,62nm,0.9s						
XAN				smax			
	comp=E,26nm,0.9s						
GYA	**Guiyang**	**5.43**	**154**	*e*Pg	**Pg**	**18 14 35.0**	**+0.6**
GYA				Sg	**Sg**	**18 15 48.3**	**+3.5**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,50nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.68**	**201**	Pn	**Pn**	**18 16 07.0**	**+2.2**
	comp=E,0.0nm,0.3s,baz=11,slow=15,SNR=4.0						
SONM	**Songino Array**	**16.52**	**6**	Pn	**Pn**	**18 16 42.0**	**-0.5**
	baz=179,slow=16,SNR=2.4						
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**	**18 17 53.0**	**+0.3**
	comp=E,0.6nm,0.8s,mb3.0,baz=116,slow=11,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**	**18 18 27.6**	**0.0**
	comp=E,0.6nm,0.7s,mb3.2,baz=115,slow=10.0,SNR=4.6						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**18 18 33.0**	**+0.4**
	comp=E,0.4nm,0.5s,mb3.2,baz=120,slow=9.3,SNR=4.0						
WRAB	**Tennant Creek**	**58.74**	**146**	*e*P	**P**	**18 22 47.7**	**-1.4**
	comp=E,3.8nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**18 23 09.0**	**-0.8**
	comp=E,0.2nm,0.5s,mb3.5,baz=335,slow=6.9,SNR=7.9						
YKA	**Yellowknife Ar**	**81.43**	**17**	P	**P**	**18 25 06.5**	**-1.3**
	comp=E,0.5nm,0.7s,mb3.5,baz=334,slow=5.5,SNR=2.7						

*ISCJB **28** 18:16:12.3±1.5, 42°.12S±0°.07×72°.45W±0°.09, h5km±6km, mb3.9/7, MS3.7/5, Error ellipse: s-maj=13.4km s-min=8.5km az=137.7*
*IDC **28** 18:16:13.3±1.1, 42°.02S×72°.45W, h0km, mb4.0/5, mb1 4.0/7, mb1mx4.0/13, mbtmp3.9/7, ML4.6/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/28, Error ellipse: s-maj=32.5km s-min=18.4km az=134.0*
*GUC **28** 18:16:13.3±1.1, 42°.05S×72°.51W, h22km±3km, ML5.4*
*NEIC **28** 18:16:16.7±0.8, 41°.86S×72°.30W, h10km, mb4.5/1, Error ellipse: s-maj=21.6km s-min=15.6km az=137.0*
NEIC Felt [V] at Hualaihue and [III] at El Bolson, Argentina.
ISC 28 18:16:14.5±1.5, **42°.05S**±0°.08×**72°.4W**±0°.1, **h7**km±6km, **n43**, σ1§**16**/42, **mb3.9**/7, **MS3.7**/4, **2C-2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.14**	**359**	⇑*i*P	**Pg**	**18 16 17.3**	**-0.1**
HOCH				*i* S	**Sg**	**18 16 19.5**	**+0.1**
HOCH				AML	AML	18 16 21.4	
	comp=E,467μm,0.7s						
HOCH	**HornopirØn**	**0.14**	**359**	⇑*i*P	**Pg**	**18 16 17.3**	**-0.1**
HOCH				*i* S	**Sg**	**18 16 19.5**	**+0.1**
HOCH				AML	AML	18 16 21.4	
	comp=E,467μm,0.7s						
PMCH	**Puerto Montt**	**0.67**	**326**	⇓*

comp=N,251nm,0.3s,baz=321,slow=20,SNR=3.2
PLCA LR LR 18 17 15.3
comp=N,341nm,19.1s,baz=239,slow=32
PLCA Paso Flores 1.92 47 *eP* **Pn 18 16 48.3 +0.8**
PLCA *eS* **Sn 18 17 15.4 +3.6**
PLCA Paso Flores 1.92 47 *eP* **Pn 18 16 48.3 +0.8**
PLCA *eS* **Sn 18 17 14.9 +3.1**
PLCA Paso Flores 1.92 47 *eP* **Pn 18 16 48.3 +0.8**
PLCA *eS* **Sn 18 17 14.9 +3.1**
VLCH Valdivia 2.33 344 *eP* **Pn 18 16 53.1 0.0**
VLCH *eS* **Sn 18 17 24.0 +2.0**
VLCH Valdivia 2.33 344 *eP* **Pn 18 16 53.1 0.0**
VLCH *eS* **Sn 18 17 24.0 +2.0**
VLCH AML AML 18 17 35.0
comp=E,4μm,0.9s
TRQA Tornquist 8.93 67 *eP* **Pn 18 18 23.9 0.0**
comp=E,22nm,0.8s
CFAA Coronel Fontan 10.94 19 Pn **Pn 18 18 50.3 -1.1**
comp=E,0.1nm,0.3s,baz=194,slow=10,SNR=10
CFAA LR LR 18 22 56.4
comp=E,70nm,20.5s,baz=187,slow=37
CFAA Coronel Fontan 10.94 19 Pn **Pn 18 18 50.3 -1.1**
CFAA LR LR 18 22 56.4
USHA Ushuaia 13.06 170 LR LR 18 24 46.3
comp=E,527nm,19.6s,baz=185,slow=39
CPUP Villa Florida 19.98 43 P **Pn 18 20 48.1 -1.0**
comp=E,0.4nm,0.3s,baz=215,slow=12,SNR=3.2
CPUP LR LR 18 28 49.6
comp=E,148nm,18.7s,baz=198,slow=38
CPUP Villa Florida 19.98 43 P **Pn 18 20 48.1 -1.0**
CPUP LR LR 18 28 49.6
LPAZ La Paz 25.93 9 P **P 18 21 48.1 +0.8**
comp=E,3.9nm,0.8s,mb4.0,baz=159,slow=6.5,SNR=14
LPAZ La Paz 25.93 9 *eP* **P 18 21 47.3 -0.1**
comp=E,13nm,1.3s,mb4.3
SIV San Ignacio 27.74 24 P **P 18 22 02.2 -1.5**
comp=E,1.9nm,0.9s,mb3.7,baz=210,slow=12,SNR=5.6
SIV San Ignacio 27.74 24 P **P 18 22 02.2 -1.5**
NNA Nana 30.20 351 LR LR 18 32 39.9
comp=E,114nm,18.3s,MS3.5,baz=148,slow=33
CMIG Matias Romero 62.40 336 LR LR 18 46 55.4
comp=E,59nm,20.1s,MS3.8,baz=222,slow=30
TXAR Lajitas Array 76.66 332 P **P 18 28 06.2 +0.4**
comp=E,0.7nm,0.8s,mb3.7,baz=134,slow=6.4,SNR=5.7
TXAR LR LR 18 56 52.9
comp=E,41nm,18.2s,MS3.8,baz=0.0,slow=32
TXAR Lajitas Array 76.66 332 P **P 18 28 06.2 +0.4**
TXAR LR LR 18 56 52.9
BOSA Boshof 76.67 116 P **P 18 28 07.3 +1.1**
comp=E,2.1nm,0.7s,mb4.2,baz=248,slow=3.6,SNR=3.5
BOSA LR LR 18 57 26.5
comp=E,56nm,19.9s,MS3.9,baz=55,slow=32
BOSA Boshof 76.67 116 P **P 18 28 07.3 +1.1**
BOSA LR LR 18 57 26.5
TORD Torodi Ar. Bea 87.25 70 P **P 18 29 01.1 -0.7**
comp=E,0.6nm,0.7s,mb3.9,baz=236,slow=3.7,SNR=3.4
TORD Torodi Ar. Bea 87.25 70 P **P 18 29 01.1 -0.7**
NVAR Mina Array Bea 90.34 326 P **P 18 29 22.2 +6.4**
comp=E,0.4nm,0.7s,mb3.9,baz=165,slow=7.2,SNR=3.3
NVAR Mina Array Bea 90.34 326 P **P 18 29 22.2 +6.3**
PDAR Pinedale Array 90.82 334 P **P 18 29 21.0 +3.0**
comp=E,0.3nm,0.7s,mb3.7,baz=146,slow=2.9,SNR=4.0
PDAR Pinedale Array 90.82 334 P **P 18 29 21.0 +3.0**
ARU Arti 145.70 48 *eP* PKPdf 18 35 55.2 +2.5
TIXI Tiksi 148.51 347 *e*PKPdf PKPdf 18 35 59.5 +2.5
BVAR Borovoye Array 152.89 53 PKP PKPdf 18 36 07.0 +2.7
comp=E,0.3nm,0.6s,baz=280,slow=38,SNR=2.3
BVAR PKPbc PKPbc 18 36 14.6 +3.1
comp=E,0.6nm,0.7s,baz=222,slow=1.9,SNR=4.1
BVAR Borovoye Array 152.89 53 PKP PKPdf 18 36 07.0 +2.7
BVAR PKPbc PKPbc 18 36 14.6 +3.1
KURK Kurchatov 158.33 56 PKP PKPdf 18 36 13.5 +1.8
comp=E,0.2nm,0.6s,baz=266,slow=1.8,SNR=3.9
KURK PKPab PKPab 18 36 44.5 -1.6
comp=E,0.2nm,0.2s,baz=220,slow=2.4,SNR=3.0
KURK Kurchatov 158.33 56 PKP PKPdf 18 36 13.5 +1.8
KURK PKPab PKPab 18 36 44.5 -1.6
ZALV Zalesovo Beam 160.76 44 PKP PKPdf 18 36 15.2 +0.9
comp=E,0.3nm,0.3s,baz=300,slow=3.2,SNR=3.4
ZALV Zalesovo Beam 160.76 44 PKP PKPdf 18 36 15.2 +0.9
MKAR Makanchi Array 161.35 67 PKPab PKPab 18 36 57.7 -1.7
comp=E,0.2nm,0.5s,baz=225,slow=3.9,SNR=5.0

IDC 28 18:19:37.0±3.1, 1°.36N×126°.89E, h0km, mb3.9/5, mb1 3.9/5, mb1mx3.6/19, mbtmp3.9/5, MS3.5/2, Ms1 3.5/2, ms1mx2.8/31, Error ellipse: s-maj=412.5km s-min=20.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.79**	**165**	P	P	18 25 09.9	0.0
	0.9nm,0.3s,baz=346,slow=11,SNR=31						
STKA	**Stephens Creek**	**35.88**	**158**	P	P	18 26 38.8	0.0
	1.7nm,0.8s,baz=330,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**59.59**	**326**	P	P	18 29 42.5	-0.2
	0.7nm,0.5s,baz=114,slow=7.8,SNR=12						
MKAR				LR	LR	18 55 05.9	
	comp=Z,26nm,18.1s,baz=341,slow=36						
KURK	**Kurchatov**	**63.82**	**328**	P	P	18 30 10.8	-0.3
	1.0nm,0.5s,baz=127,slow=6.3,SNR=8.0						
BVAR	**Borovoye Array**	**69.39**	**327**	P	P	18 30 47.5	+0.9
	0.5nm,0.6s,baz=110,slow=8.3,SNR=3.5						
KDAK	**Kodiak Island**	**83.80**	**32**	LR	LR	19 07 56.1	
	comp=Z,32nm,19.4s,slow=35						

*IDC **28** 18:38:36.5±3.2, 1°.14N×145°.67E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=98.5km s-min=30.7km az=81.0*
*ISCJB **28** 18:38:39.4±1.2, 1°.2N±0°.2×145°.7E±0°.2, h33km, mb3.7/6, Error ellipse: s-maj=33.7km s-min=13.3km az=37.1*
*NEIC **28** 18:38:41.8±1.4, 1°.13N×145°.57E, h35km, mb4.1/2, Error ellipse: s-maj=40.5km s-min=18.0km az=68.0*
ISC 28 18:38:42.3±1.3, 1°.1N±0°.2×145°.5E±0°.2, h35km, n7, σ0°.34/8, mb3.7/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.78**	**307**	*eP*	**Pn**	**18 38 56.9**	**+0.1**
GUMO				*eS*	**Sn**	**18 39 07.1**	**-0.1**
ASAR	**Alice Springs**	**38.28**	**197**	P	**P**	**18 45 59.3**	**-0.2**
	0.2nm,0.4s,mb3.2,baz=31,slow=9.2,SNR=3.7						
CMAR	**Chiang Mai Arr**	**45.03**	**283**	P	**P**	**18 46 55.4**	**+0.5**
	0.4nm,0.5s,mb3.5,baz=85,slow=6.7,SNR=6.4						
MKAR	**Makanchi Array**	**62.26**	**316**	P	**P**	**18 49 00.8**	**+0.1**
	0.2nm,0.4s,mb3.6,baz=87,slow=8.6,SNR=7.0						
KURK	**Kurchatov**	**65.34**	**320**	*eP*	**P**	**18 49 20.9**	**0.0**
	1.5nm,0.8s,mb4.1						
UCH	**Uchtor**	**67.25**	**310**	*eP*	**P**	**18 49 32.6**	**-0.7**
	1.0nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**70.68**	**322**	P	**P**	**18 49 54.8**	**+0.4**
	1.1nm,0.5s,mb4.0,baz=94,slow=7.9,SNR=6.9						

*IDC **28** 18:54:26.5±1.6, 32°.94N×82°.96E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=49.6km s-min=21.1km az=66.0*
*NEIC **28** 18:54:31.7±1.3, 33°.08N×83°.03E, h35km, mb3.2/1, Error ellipse: s-maj=35.9km s-min=13.0km az=67.0*
ISC 28 18:54:31.6±1.4, 33°.1N±0°.1×83°.0E±0°.3, h35km, n9, σ1°.03/9, mb3.6/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**13.71**	**358**	*eP*	**Pn**	**18 57 41.7**	**-1.7**
MKAR	**Makanchi Array**	**13.71**	**358**	Pn	**Pn**	**18 57 43.1**	**-0.4**
	0.1nm,0.3s,baz=179,slow=12,SNR=7.7						
KURK	**Kurchatov**	**17.92**	**351**	P	**Pn**	**18 58 37.5**	**-0.4**
	0.1nm,0.3s,baz=174,slow=10,SNR=5.0						
KURK	**Kurchatov**	**17.92**	**351**	*eP*	**Pn**	**18 58 38.8**	**+0.9**
	2.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**20.40**	**132**	P	**P**	**18 59 05.0**	**-0.6**
	0.7nm,0.6s,baz=301,slow=10,SNR=9.9						
ZALV	**Zalesovo Beam**	**20.90**	**3**	P	**P**	**18 59 10.6**	**-0.2**
	0.7nm,0.7s,baz=191,slow=12,SNR=4.2						
SONM	**Songino Array**	**22.98**	**43**	P	**P**	**18 59 34.8**	**+1.8**
	0.8nm,0.8s,mb3.2,baz=236,slow=10,SNR=5.7						
FINES	**FINESS Array B**	**45.86**	**326**	P	**P**	**19 02 51.3**	**+1.3**
	2.7nm,1.0s,mb4.2,baz=90,slow=8.3,SNR=4.3						
ASAR	**Alice Springs**	**74.41**	**132**	P	**P**	**19 06 05.8**	**-0.3**
	0.6nm,0.8s,mb3.6,baz=315,slow=5.8,SNR=9.8						

IDC 28 18:56:56.1±3.0, 14°.33S×167°.46E, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.6/15, mbtmp3.9/2, Error ellipse: s-maj=169.7km s-min=45.6km az=137.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.39**	**229**	P	P	19 03 01.5	+0.3
	0.8nm,0.3s,baz=54,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**32.98**	**249**	P	P	19 03 32.8	-0.2
	0.7nm,0.8s,baz=80,slow=8.8,SNR=9.1						
ARCES	**ARCESS Array B**	**119.92**	**346**	PKP	PKPdf	19 15 47.9	-0.1
	1.6nm,0.7s,baz=54,slow=1.4,SNR=8.4						

IDC 28 18:58:13.7±14.0, 28°.11S×69°.98W, h0km, mb3.9/1, mb1 3.9/1, mb1mx3.6/14, mbtmp3.9/1, Error ellipse: s-maj=903.2km s-min=108.9km az=4.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**80.53**	**70**	P	P	19 10 28.3	+0.1
	0.6nm,0.6s,baz=255,slow=4.2,SNR=12						
TORD				pP		19 10 49.9	
	0.2nm,0.6s,baz=263,slow=5.2,SNR=1.8						
ZALV	**Zalesovo Beam**	**148.27**	**29**	PKPbc	PKPbc	19 18 00.8	-0.6
	0.5nm,0.4s,baz=259,slow=1.2,SNR=3.5						
MKAR	**Makanchi Array**	**151.38**	**42**	PKPbc	PKPbc	19 18 09.1	-0.2
	0.4nm,0.6s,baz=313,slow=2.8,SNR=3.9						
MKAR				pPKPbc		19 18 30.6	
	0.4nm,0.6s,baz=317,slow=2.0,SNR=3.2						

IDC 28 19:12:13.2±2.8, 4°.00S×151°.16E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.8/3, MS3.3/5, Ms1 3.3/5, ms1mx3.1/25, Error ellipse: s-maj=88.5km s-min=31.4km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.69**	**196**	LR	LR	19 20 28.3	
	comp=Z,32nm,20.7s,baz=248,slow=30						
ASAR	**Alice Springs**	**25.68**	**219**	P	P	19 17 45.1	0.0
	1.3nm,1.0s,baz=50,slow=8.5,SNR=12						
FITZ	**Fitzroy Crossi**	**28.64**	**239**	LR	LR	19 30 12.6	
	comp=Z,83nm,19.1s,baz=57,slow=38						
MJAR	**Matsushiro Arr**	**42.11**	**344**	LR	LR	19 34 38.1	
	comp=Z,69nm,19.4s,baz=215,slow=32						
KSRS	**Korea Array**	**46.57**	**334**	LR	LR	19 39 12.9	
	comp=Z,27nm,19.8s,baz=24,slow=35						
CMAR	**Chiang Mai Arr**	**56.06**	**295**	P	P	19 21 54.7	+0.2
	0.5nm,0.8s,baz=101,slow=4.7,SNR=4.0						
PETK	**Petropavlovsk-**	**57.17**	**5**	P	P	19 22 01.6	-0.1
	21nm,1.3s,baz=155,slow=6.8,SNR=4.7						
PETK				LR	LR	19 47 14.2	
	comp=Z,37nm,18.4s,baz=54,slow=37						

CASC 28 19:13:22.1±1.5, 8°.41N×83°.02W, h3km, MD3.6, MW4.0, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**328⇑**	*eP*	Pg	19 13 28.6	+1.0
ACR				*eS*	Sg	19 13 33.1	+1.8
BRU2	**Volcan**	**0.50**	**40⇓**	*iP*	Pg	19 13 32.9	+1.1
BRU2				*eS*	Sg	19 13 41.6	+3.4
CTCR	**Cotoan**	**0.55**	**28⇓**	*iP*	Pg	19 13 33.6	+1.0
BAR1		**0.88**	**341**	*eP*	Pg	19 13 39.2	+0.3
BAR1				*eS*	Sg	19 13 52.7	+2.4
CNI	**Changuinola**	**1.11**	**26**	*eP*	Pg	19 13 42.9	-0.6
BUS	**Buena Vista**	**1.35**	**327**	*eP*	Pn	19 13 47.4	-0.5
BUS				*eS*	Sg	19 14 05.6	0.0
URSC	**Urasca**	**1.60**	**332**	*eP*	Pn	19 13 51.2	-0.1
PRS1	**Puriscal**	**2.02**	**321**	*eP*	Pn	19 13 57.5	+0.4

*IDC **28** 19:14:21.0±2.3, 50°.20N×18°.96E, h0km, mb1 3.4/3, mb1mx3.1/23, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=42.3km s-min=10.5km az=135.0*
*CSEM **28** 19:14:21.4±0.2, 50°.38N×18°.85E, h2km, ML2.8/8, Error ellipse: s-maj=6.0km s-min=2.5km az=9.0*
*IPEC **28** 19:14:21.9±0.2, 50°.30N×18°.90E, h3km±1km, ML2.0/3, Error ellipse: s-maj=1.6km s-min=0.8km az=173.0*
*PRU **28** 19:14:22.3, 50°.35N×18°.83E, h0km*
WAR 28 19:14:20.8, 50°.36N×18°.93E, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.58**	**104**	*e*Pg	Pg	19 14 32.4	+0.6
OJC				*e*Sg	Sg	19 14 40.8	+1.5
OJC	**Ojcow**	**0.58**	**104**	*e*Pg	Pg	19 14 32.3	+0.5
	baz=278						
OJC				*e*Sg	Sg	19 14 41.1	+1.8
	baz=278						
OKC	**Ostrava-Krasne**	**0.73**	**224**	*e*PG	Pg	19 14 35.8	+1.1
OKC				*e*SG	Sg	19 14 45.6	+1.5
	comp=Z,20nm,0.3s						
OKC	**Ostrava-Krasne**	**0.73**	**224**	*e*Pg	Pg	19 14 35.6	+0.9
	baz=46						
OKC				Sg	Sg	19 14 45.6	+1.5
	comp=Z,20nm,0.3s						
MORC	**Moravsky Berou**	**1.07**	**237**	*e*Pg	Pg	19 14 41.3	+0.1
	baz=59						
MORC				*e*Sg	Sg	19 14 55.6	+0.5
	comp=Z,30nm,0.4s,baz=59						
NIE	**Niedzica**	**1.30**	**136**	*e*Pg	Pg	19 14 46.5	+0.8
NIE				*e*Sg	Sg	19 15 04.1	+1.6
NIE	**Niedzica**	**1.30**	**136**	*e*Pg	Pg	19 14 46.5	+0.8
NIE				*e*Sg	Sg	19 15 04.1	+1.6
DPC	**Dobruska-Polom**	**1.67**	**271**	*e*PG	Pg	19 14 51.1	-1.7
DPC				*e*SG	Sg	19 15 13.7	-0.7
	comp=Z,14nm,0.4s						
DPC	**Dobruska-Polom**	**1.67**	**271**	*e*Pn	Pn	19 14 51.0	-0.3
	baz=91						
DPC				Sg	Sg	19 15 13.7	-0.7
	comp=Z,14nm,0.4s						
JAVC	**Velka Javorina**	**1.71**	**209**	*e*Pn	Pn	19 14 52.6	+0.8
	baz=29						
KSP	**Ksiaz**	**1.75**	**287**	*e*Pn	Pn	19 14 53.0	+0.7
KSP				*e*Sn	Sn	19 15 17.3	+2.0
KSP	**Ksiaz**	**1.75**	**287**	*e*Pg	Pg	19 14 53.6	-0.7
KSP				*e*Sg	Sg	19 15 17.6	+0.7
STHS	**Stebnicka Huta**	**1.77**	**121**	*e*PN	Pg	19 14 55.7	+1.0
STHS				*e*SN	Sg	19 15 19.0	+1.4
STHS	**Stebnicka Huta**	**1.77**	**121**	*e*Pn	Pg	19 14 55.7	+1.0
STHS				*e*Sn	Sg	19 15 19.0	+1.4
VRAC	**Vranov**	**1.84**	**236**	Pg	Pn	19 14 53.6	-0.1
	comp=Z,3.8nm,0.3s,baz=56,slow=14,SNR=13						
VRAC				Lg		19 15 18.9	
	comp=Z,3.8nm,0.3s,baz=142,slow=21,SNR=12						
VRAC	**Vranov**	**1.84**	**236**	*e*Pn	Pn	19 14 53.2	-0.4
	baz=56						
VRAC				*e*Sg	Sg	19 15 18.2	-1.8
	comp=Z,10nm,0.4s,baz=56						
VYHS	**Vyhne**	**1.87**	**182**	*e*PN	Pn	19 14 54.5	+0.5
VYHS				*e*SN	Sn	19 15 17.4	-0.9
VYHS	**Vyhne**	**1.87**	**182**	*e*Pn	Pn	19 14 54.1	+0.1
	baz=1.3						
VYHS				*e*Sn	Sn	19 15 17.4	-0.9
KRUC	**Moravsky**	**2.10**	**233**	*e*Pn	Pn	19 14 58.2	+1.1
	baz=52						
KECS	**Kecovo**	**2.14**	**151**	*e*PN	Pb	19 15 01.8	+1.5
KECS				*e*SN	Sn	19 15 26.3	+1.4
KOLS	**Kolonicke sedl**	**2.60**	**122**	*e*PG	Pg	19 15 12.1	+1.5
KOLS				*e*SG	Sg	19 15 48.2	+3.9
KOLS	**Kolonicke sedl**	**2.60**	**122**	*e*Pg	Pg	19 15 12.1	+1.5
KOLS				*e*Sg	Sg	19 15 48.2	+3.9
PRU	**Pruhonice**	**2.84**	**264**	*e*PG	Pb	19 15 12.0	-0.4
PRU				*e*SG	Sg	19 15 50.7	-1.4
	comp=Z,4.5nm,0.4s						
PRU	**Pruhonice**	**2.84**	**264**	Pg	Pb	19 15 12.0	-0.4
PRU				Sg	Sg	19 15 50.7	-1.4
	comp=Z,4.5nm,0.4s						
BRG	**Berggiesshubel**	**3.22**	**281**	PG	Pg	19 15 21.9	-0.5
BRG				SG	Sg	19 16 01.7	-2.4
	comp=Z,3.7nm,0.4s						
KHC	**Kasperske Hory**	**3.68**	**253**	*e*PN	Pn	19 15 18.7	-0.2
KHC				*e*PG	Pg	19 15 27.3	-4.0
KHC				*e*SG	Sg	19 16 17.9	-1.1
	comp=Z,5.7nm,0.4s						
KHC	**Kasperske Hory**	**3.68**	**253**	Pn	Pn	19 15 18.7	-0.2
KHC	**Kasperske Hory**	**3.68**	**253**	Pg	Pb	19 15 27.3	+0.6
KHC				Sg	Sg	19 16 17.9	-1.1
	comp=Z,5.7nm,0.4s						
GERES	**GERESS Array B**	**3.72**	**248**	Pn	Pn	19 15 18.0	-1.5
	comp=Z,0.2nm,0.3s,baz=63,slow=14,SNR=5.0						
GERES				Pg	Pg	19 15 28.8	-3.3
	comp=Z,1.0nm,0.3s,baz=63,slow=17,SNR=20						
GERES				Lg		19 16 18.0	
	comp=Z,1.6nm,0.3s,baz=64,slow=30,SNR=8.8						
MOA	**Molln**	**3.96**	**232**	*i*Pg	Sg	19 16 26.9	-1.1
	comp=Z,3.0nm,0.4s						
MOA	**Molln**	**3.96**	**232**	Sg	Sg	19 16 26.9	-1.1
	comp=Z,3.0nm,0.4s						
NKC	**Novy Kostel**	**4.16**	**271**	*e*SG	Sg	19 16 32.0	-2.3
	comp=Z,4.7nm,0.5s						
NKC	**Novy Kostel**	**4.16**	**271**	Sg	Sg	19 16 32.0	-2.3
	comp=Z,4.7nm,0.5s						
MOX	**Moxa**	**4.68**	**276**	*e*SG	Sg	19 16 53.0	+2.1
FINES	**FINESS Array B**	**11.80**	**17**	Pn	Pn	19 17 06.9	-3.2
	comp=Z,0.2nm,0.3s,baz=198,slow=8.7,SNR=4.8						
ARCES	**ARCESS Array B**	**19.49**	**7**	Pn	Pn	19 18 47.7	-2.5
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=3.5						

IDC 28 19:19:05.1±1.9, 31°.87N×104°.68E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/25, mbtmp3.2/3, ML3.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/18, Error ellipse: s-maj=81.4km s-min=30.1km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.32**	**203**	Pn	Pn	19 22 28.6	-0.5
	0.1nm,0.3s,baz=10,slow=8.8,SNR=4.8						
MKAR	**Makanchi Array**	**22.74**	**317**	P	P	19 24 08.7	+0.1
	0.3nm,0.5s,baz=113,slow=10,SNR=6.2						
KURK	**Kurchatov**	**26.94**	**322**	LR	LR	19 34 40.7	
	comp=Z,14nm,18.8s,baz=150,slow=35						
ASAR	**Alice Springs**	**61.89**	**150**	P	P	19 29 26.6	+0.2
	0.3nm,0.8s,baz=334,slow=6.7,SNR=6.4						

CASC 28 19:27:30.4±1.6, 8°.43N×83°.04W, h3km, MD3.8, MW4.2, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.26**	**329**	*eP*	Pg	19 27 36.5	+1.2
ACR				*eS*	Sg	19 27 40.2	+1.5
BRU2	**Volcan**	**0.49**	**43⇓**	*iP*	Pg	19 27 40.7	+0.7
BRU2				*eS*	Sg	19 27 49.4	+3.0
CTCR	**Cotoan**	**0.54**	**31**	*i* P	Pg	19 27 41.5	+0.8
BAR1		**0.85**	**341**	*eP*	Pg	19 27 47.2	+0.5
BAR1				*eS*	Sg	19 27 59.2	+1.5
CNI	**Changuinola**	**1.10**	**28**	*eP*	Pg	19 27 51.2	-0.3
BUS	**Buena Vista**	**1.32**	**327**	*eP*	Pn	19 27 55.2	-0.6
URSC	**Urasca**	**1.57**	**332**	*eP*	Pn	19 27 59.0	-0.2
URSC				*eS*	Sn	19 28 19.5	-0.7
PRS1	**Puriscal**	**1.99**	**321**	*eP*	Pn	19 28 05.3	+0.3

*CSEM **28** 19:29:29.1, 43°.19N×46°.41E, h13km, mb3.8, After OBN*
MOS 28 19:29:29.1±1.0, 43°.19N×46°.41E, h13km, mb3.8/1, 2C-1D, Error ellipse: s-maj=14.7km s-min=8.5km az=17.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.20**	**125**	*e*PG	Pg	19 29 34.3	+0.7
DLMR				*i* S	Sg	19 29 38.4	+1.8
DLMR				pmax	pmax		
	comp=Z,127nm,0.2s						
DLMR	**Dylym**	**0.20**	**125**	*e*Pg	Pg	19 29 34.3	+0.7
	comp=Z,127nm,0.2s						
DLMR				*i* Sg	Sg	19 29 38.4	+1.8
XNZR	**Khunzakh**	**0.68**	**161**	*i* PG	Pg	19 29 42.0	-0.3
XNZR				*i* S	Sg	19 29 54.0	+2.7
XNZR	**Khunzakh**	**0.68**	**161**	*i* Pg	Pg	19 29 42.0	-0.3
XNZR				*i* Sg	Sg	19 29 54.0	+2.7
SNJR	**Sundja**	**1.17**	**265**	*e*PG	Pg	19 29 51.7	0.0
SNJR				*e*S	Sb	19 30 09.9	+3.6
SNJR	**Sundja**	**1.17**	**265**	*e*Pg	Pg	19 29 51.7	0.0
SNJR				*e*Sg	Sg	19 30 09.9	+3.0
KMKR	**Kumukh**	**1.17**	**154**	*e*PG	Pg	19 29 53.0	+1.3
KMKR				*i* S	Sb	19 30 10.5	+4.2
KMKR				pmax	pmax		
	comp=Z,32nm,0.3s						
KMKR	**Kumukh**	**1.17**	**154**	*e*Pg	Pg	19 29 53.0	+1.3
	comp=Z,32nm,0.3s						
KMKR				*i* Sg	Sg	19 30 10.5	+3.6
VLKR	**Vladikavkaz**	**1.27**	**264**	*e*PG	Pg	19 29 53.2	-0.4
VLKR				*e*S	Sb	19 30 12.8	+3.6
VLKR	**Vladikavkaz**	**1.27**	**264**	*e*Pg	Pg	19 29 53.2	-0.4
VLKR				*e*Sg	Sg	19 30 12.8	+2.7
TRKR	**Terskaya**	**1.33**	**294**	*e*PG	Pg	19 29 53.8	-0.9
TRKR				*i* S	Sb	19 30 12.9	+2.1
TRKR	**Terskaya**	**1.33**	**294**	*e*Pg	Pg	19 29 53.8	-0.9
TRKR				*i* Sg	Sg	19 30 12.9	+0.9
BTKR	**Batakoyurt**	**1.37**	**278**	*e*PG	Pg	19 29 54.7	-0.8
BTKR				*i* S	Sn	19 30 15.1	+3.2
BTKR	**Batakoyurt**	**1.37**	**278**	*e*Pg	Pg	19 29 54.7	-0.8
BTKR				*i* Sg	Sg	19 30 15.1	+1.8
KMSR	**Komsomolskaya**	**1.55**	**278**	*i* PG	Pg	19 29 56.9	-2.0
KMSR				*e*S	Sn	19 30 19.7	+3.3
KMSR	**Komsomolskaya**	**1.55**	**278**	*i* Pg	Pg	19 29 56.9	-2.0
KMSR				*e*Sg	Sg	19 30 19.7	+0.6
ARNR	**Ardon**	**1.56**	**271**	*e*PG	Pg	19 29 57.0	-1.9
ARNR				*e*S	Sn	19 30 19.9	+3.5
ARNR	**Ardon**	**1.56**	**271**	*e*Pg	Pg	19 29 57.0	-1.9
ARNR				*e*Sg	Sg	19 30 19.9	+0.8
LACR	**Lac**	**1.59**	**258**	*i* PG	Pg	19 29 57.0	-2.6
LACR				*e*S	Sn	19 30 20.0	+2.7
LACR	**Lac**	**1.59**	**258**	*i* Pg	Pg	19 29 57.0	-2.6
LACR				*e*Sg	Sg	19 30 20.0	-0.2
PRTR	**Priterechnaya**	**1.65**	**291**	*e*PN	Pn	19 29 58.1	+0.4
PRTR				*e*S	Sn	19 30 21.7	+3.0
PRTR	**Priterechnaya**	**1.65**	**291**	*e*Pn	Pn	19 29 58.1	+0.4
PRTR				*e*Sg	Sg	19 30 21.7	-0.3
KORR	**Kora**	**1.71**	**267

0.4nm,0.4s,baz=6.5,slow=11,SNR=3.6
TKL Tuckaleechee C 30.53 342 LR LR 19 54 53.1
comp=Z,31nm,20.5s,baz=98,slow=38
TXAR Lajitas Array 36.74 312 P **P** **19 42 08.4 -0.2**
0.3nm,0.6s,mb3.1,baz=131,slow=9.7,SNR=3.9
PDAR Pinedale Array 48.34 324 P **P** **19 43 42.8 +0.9**
0.2nm,0.4s,mb3.1,baz=135,slow=12,SNR=4.1
YKA Yellowknife Ar 63.48 340 P **P** **19 45 28.7 -0.5**
0.5nm,0.5s,mb3.6,baz=134,slow=6.4,SNR=4.0
TORD Torodi Ar. Bea 73.52 78 P **P** **19 46 32.6 +0.2**
0.3nm,0.7s,mb3.1,baz=300,slow=6.4,SNR=2.9

*ISCJB **28** 19:39:46.9±0.9,24°.51S×0°.07×179°.6E±0°.1,h524km±14km, mb4.0/12, Error ellipse: s-maj=15.2km s-min=8.9km az=27.9*
*IDC **28** 19:39:47.0±2.7,24°.48S×179°.47E,h503km±30km, mb3.4/9, mb1 3.7/11,mb1mx3.6/16,mbtmp3.5/11, Error ellipse: s-maj=21.0km s-min=16.7km az=108.0*
*NEIC **28** 19:39:47.6±0.8,24°.50S×179°.67E,h532km±11km, mb4.3/2, Error ellipse: s-maj=15.1km s-min=11.7km az=98.0*
ISC 28 19:39:48.1±0.9,24°.56S±0°.09×179°.5E±0°.1,h516km±13km, n34,σ1§07/31,mb4.0/12,3C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.20**	**155**	*eP*	**P**	**19 41 18.6**	**+1.1**
OUZ	**Omahuta**	**11.80**	**204**	*eP*	**P**	**19 42 28.0**	**+3.7**
76nm,1.1s							
DZM	**Mont Dzumac**	**12.27**	**279**	*eP*	**P**	**19 42 30.6**	**+1.1**
DZM	**Mont Dzumac**	**12.27**	**279**	*eP*	**P**	**19 42 31.3**	**+1.8**
52nm,1.0s							
AFI	**Afiamalu**	**13.40**	**39**	P	**P**	**19 42 39.1**	**-2.3**
2.0nm,0.3s,baz=46,slow=22,SNR=3.6							
AFI				S	**S**	**19 44 57.0**	**-7.3**
1.0nm,0.3s,baz=236,slow=21,SNR=2.9							
URZ	**Urewera**	**13.81**	**188**	P	**P**	**19 42 44.6**	**-0.7**
2.5nm,0.3s,baz=313,slow=2.1,SNR=21							
URZ				S	**S**	**19 45 07.6**	**-4.0**
0.8nm,0.3s,baz=236,slow=19,SNR=6.2							
SNZO	**South Karori**	**17.18**	**192**	*eP*	**P**	**19 43 19.6**	**-0.3**
90nm,1.1s							
KHZ	**Kahutara**	**18.49**	**194**	*eP*	**P**	**19 43 30.6**	**-1.2**
35nm,0.8s							
RPZ	**Rata Peaks**	**20.33**	**198**	P	**P**	**19 43 48.6**	**0.0**
8.0nm,0.5s,baz=28,slow=2.4,SNR=9.1							
CNB	**Canberra Magne**	**28.15**	**241**	*eP*	**P**	**19 44 59.3**	**+1.0**
YNG	**Young**	**28.70**	**243**	*eP*	**P**	**19 45 03.9**	**+0.8**
5.0nm,0.7s,mb4.2							
CMSA	**Cobar Meteorol**	**30.57**	**249**	⇑*iP*	**P**	**19 45 19.3**	**-0.1**
CTA	**Charters Tower**	**31.05**	**272**	⇑*iP*	**P**	**19 45 23.6**	**-0.1**
9.6nm,0.4s,mb4.7							
CTAO	**Charters Tower**	**31.05**	**272**	*eP*	**P**	**19 45 23.4**	**-0.3**
13nm,0.6s,mb4.6							
TOO	**Toolangi**	**31.73**	**238**	*eP*	**P**	**19 45 29.7**	**+0.5**
STKA	**Stephens Creek**	**34.08**	**249**	⇑*iP*	**P**	**19 45 49.2**	**0.0**
5.8nm,0.5s,mb4.4							
STKA	**Stephens Creek**	**34.08**	**249**	P	**P**	**19 45 49.3**	**+0.1**
6.9nm,0.5s,mb4.4,baz=97,slow=10.0,SNR=38							
STKA	**Stephens Creek**	**34.08**	**249**	*eP*	**P**	**19 45 49.1**	**-0.1**
ASAR	**Alice Springs**	**41.50**	**261**	P	**P**	**19 46 49.2**	**-0.8**
6.6nm,1.1s,mb4.1,baz=93,slow=7.0,SNR=34							
ASAR				S	**S**	**19 52 23.8**	**-4.5**
0.7nm,0.9s,baz=96,slow=17,SNR=4.3							
WRAB	**Tennant Creek**	**41.93**	**267**	*eP*	**P**	**19 46 51.9**	**-1.5**
2.4nm,0.5s,mb4.0							
FORT	**Forrest**	**45.68**	**250**	*eP*	**P**	**19 47 20.8**	**-1.6**
31nm,0.6s,mb5.0							
CASY	**Casey**	**59.33**	**206**	*eP*	**P**	**19 48 59.1**	**-0.5**
MJAR	**Matsushiro Arr**	**72.20**	**326**	P	**P**	**19 50 19.6**	**-0.8**
4.7nm,0.8s,mb3.9,baz=166,slow=5.6,SNR=10.0							
MAW	**Mawson**	**76.98**	**201**	P	**P**	**19 50 47.4**	**+0.4**
3.7nm,0.6s,mb4.0,baz=123,slow=11,SNR=11							
KSRS	**Korea Array**	**78.47**	**320**	P	**P**	**19 50 55.4**	**0.0**
1.4nm,0.7s,mb3.4,baz=129,slow=6.6,SNR=6.4							
NVAR	**Mina Array Bea**	**85.53**	**44**	P	**P**	**19 51 32.5**	**+1.2**
0.9nm,0.9s,mb3.4,baz=221,slow=7.2,SNR=4.7							
CMAR	**Chiang Mai Arr**	**89.35**	**291**	P	**P**	**19 51 51.2**	**+1.5**
0.2nm,0.5s,mb3.2,baz=135,slow=2.6,SNR=4.6							
TXAR	**Lajitas Array**	**91.15**	**58**	P	**P**	**19 51 59.4**	**+1.6**
0.4nm,0.7s,mb3.5,baz=217,slow=6.1,SNR=5.2							
NOA	**NORSAR Array B**	**142.66**	**351**	PKhKP		19 58 17.9	
2.3nm,0.8s,baz=17,slow=4.9,SNR=6.9							
AKASG	**Malin Array Be**	**145.28**	**326**	PKPbc	PKPbc	19 58 24.8	-2.8
0.4nm,0.4s,baz=80,slow=2.6,SNR=3.2							
BR131	**Keskin Array S**	**147.62**	**306**	*e*PKPbc	PKPab	19 58 38.4	0.0
BRTR	**Keskin Array B**	**147.62**	**306**	PKPbc	PKPbc	19 58 33.1	-1.2
0.3nm,0.5s,baz=104,slow=5.2,SNR=3.4							
BRTR				PKPab	PKPab	19 58 38.3	-0.1
1.8nm,0.8s,baz=108,slow=3.8,SNR=11							
CLL	**Collm**	**151.35**	**342**	*e*PKPdf	PKPdf	19 58 36.0	-0.3
CLL				*i* PKPbc	PKPbc	19 58 42.6	-0.3
comp=Z,4.0nm,0.7s							
CLL				*i* PKPab	PKPab	19 58 52.8	-0.6
TORD	**Torodi Ar. Bea**	**168.46**	**191**	PKPab	PKPab	20 00 08.6	-0.2
comp=Z,1.1nm,0.7s,baz=166,slow=3.4,SNR=5.6							

*NEIC **28** 19:40:39.6±0.7,21°.78N×94°.15E,h10km, Error ellipse: s-maj=33.9km s-min=7.2km az=219.0*
*ISCJB **28** 19:40:41.1±1.0,22°.0N±0°.1×94°.3E±0°.1,h91km±18km, mb3.2/2, Error ellipse: s-maj=26.3km s-min=7.9km az=137.8*
*IDC **28** 19:40:44.2±4.7,21°.97N×94°.55E,h97km±44km, mb3.1/2, mb1 3.2/3,mb1mx2.9/25,mbtmp3.0/3, Error ellipse: s-maj=80.5km s-min=27.4km az=62.0*
ISC 28 19:40:42.6±0.8,22°.0N±0°.1×94°.3E±0°.1,h84km±15km,n14, σ1§15/17,mb3.2/2,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.21**	**329**	*i* PN	**Pn**	**19 41 47.5**	**+3.1**
SHL				*i* SN	**Sn**	**19 42 32.0**	**-0.3**
CM31	**Chiang Mai Arr**	**5.59**	**128**	*eP*	**Pn**	**19 42 03.0**	**-0.2**
4.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**5.59**	**128**	P	**Pn**	**19 42 02.5**	**-0.8**
0.5nm,0.3s,baz=306,slow=13,SNR=27							
LSA	**Lhasa**	**8.20**	**340**	Pg	**Pn**	**19 42 40.5**	**+1.7**
LSA				Sg	**Sn**	**19 44 08.0**	**-1.8**
LSA				smax			
comp=N,10.0nm,1.0s							
LSA				smax			
comp=E,20nm,0.8s							
LSA	**Lhasa**	**8.20**	**340**	*eP*	**Pn**	**19 42 41.0**	**+2.2**
comp=E,5.0nm,0.3s							
LSA				S	**Sn**	**19 44 08.3**	**-1.5**
GUN	**Gumba**	**9.66**	**309**	*e*Pn	**Pn**	**19 42 59.0**	**+0.3**
GUN				*e*Sn	**Sn**	**19 44 43.3**	**-2.2**
comp=E,62nm,0.4s							
PKI	**Pulchoki**	**9.81**	**306**	*e*Pn	**Pn**	**19 43 00.8**	**0.0**
PKI	**Pulchoki**	**9.81**	**306**	*e*Pn	**Pn**	**19 43 01.3**	**+0.5**
PKIN	**Phulchoki**	**9.82**	**306**	*e*Pn	**Pn**	**19 43 01.3**	**+0.3**
KKN	**Kakani**	**10.03**	**307**	*e*Pn	**Pn**	**19 43 03.4**	**-0.4**
DMN	**Daman**	**10.06**	**306**	*e*Pn	**Pn**	**19 43 05.2**	**+1.0**
MKAR	**Makanchi Array**	**26.61**	**341**	P	**P**	**19 46 14.1**	**+1.2**
comp=E,0.3nm,0.8s,mb2.9,baz=152,slow=9.5,SNR=4.2							
AKTO	**Aktyubinsk**	**40.14**	**324**	pP	pP	19 48 31.6	+1.5
comp=E,1.1nm,0.4s,baz=125,slow=12,SNR=3.9							
ASAR	**Alice Springs**	**59.52**	**137**	P	**P**	**19 50 36.5**	**-0.8**
comp=E,0.6nm,0.9s,mb3.6,baz=319,slow=7.1,SNR=4.3							

*CSEM **28** 20:13:55.6,38°.27N×26°.84W,h0km, ML3.1, After PDA*
PDA 28 20:13:55.6±1.0,38°.27N×26°.84W,h0km±4km,MD3.6, ML3.1,Error ellipse: s-maj=5.5km s-min=1.3km az=34.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	**Angra Heroismo**	**0.50**	**321**	*eP*	Pg	20 14 04.3	-0.9
ADH				*e*S	Sg	20 14 11.2	-0.5
ADH				A		20 14 11.6	
1um,0.2s							
ADH	**Angra Heroismo**	**0.50**	**321**	*eP*	Pg	20 14 04.3	-0.9
ADH				*e*S	Sg	20 14 11.2	-0.5
PSET	**Sete Cidades**	**0.98**	**116**	*eP*	Pg	20 14 11.8	-2.7
PSET				*e*S	Sg	20 14 23.9	-3.3
PSET				A		20 14 27.4	
46nm,0.3s							
PSET				A		20 14 27.4	
46nm,0.3s							
PSET	**Sete Cidades**	**0.98**	**116**	*eP*	Pg	20 14 11.8	-2.7
PSET				*e*S	Sg	20 14 23.9	-3.3
PID	**Ribeirinha**	**1.02**	**280**	*eP*	Pg	20 14 12.3	-2.9
PID				*e*S	Sg	20 14 24.8	-3.7
PID	**Ribeirinha**	**1.02**	**280**	*eP*	Pg	20 14 12.3	-2.9
PID				*e*S	Sg	20 14 24.8	-3.7
PMAN	**Manadas**	**1.05**	**291**	*eP*	Pg	20 14 12.4	-3.3
PMAN				*e*S	Sg	20 14 25.3	-4.0
PMAN				A		20 14 27.5	
159nm,0.2s							
PMAN	**Manadas**	**1.05**	**291**	*eP*	Pg	20 14 12.4	-3.3
PMAN				*e*S	Sg	20 14 25.3	-4.0
PDA	**Ponta Delgada**	**1.06**	**119**	*eP*	Pg	20 14 12.4	-3.5
PDA	**Ponta Delgada**	**1.06**	**119**	*eP*	Pg	20 14 12.4	-3.5
GRON	**Grota Negra**	**1.14**	**115**	*eP*	Pg	20 14 26.1	+8.6
CMLA	**Cha da Macela**	**1.15**	**115**	*eP*	Pg	20 14 14.3	-3.3
CMLA				*e*S	Sg	20 14 27.9	-4.7
CMLA				A		20 14 29.8	
152nm,0.4s							
CMLA				A		20 14 31.4	
717nm,0.4s							
CMLA	**Cha da Macela**	**1.15**	**115**	*eP*	Pg	20 14 14.3	-3.3
CMLA				*e*S	Sg	20 14 27.9	-4.7
ROSA	**Rosais**	**1.19**	**293**	*eP*	Pg	20 14 14.8	-3.7
ROSA				*e*S	Sg	20 14 29.2	-4.7
ROSA	**Rosais**	**1.19**	**293**	*eP*	Pg	20 14 14.8	-3.7
ROSA				*e*S	Sg	20 14 29.2	-4.7
PICO	**Pico**	**1.27**	**281**	*eP*	Pg	20 14 15.8	-4.2
PICO				*e*S	Sg	20 14 30.6	-5.8
PICO	**Pico**	**1.27**	**281**	*eP*	Pg	20 14 15.8	-4.2
PICO				*e*S	Sg	20 14 30.6	-5.8
PCAN	**Candelaria**	**1.31**	**279**	*eP*	Pg	20 14 16.0	-4.7
PCAN				*e*S	Sg	20 14 31.9	-5.8
PCAN				A		20 14 34.6	
99nm,0.4s							
PCAN	**Candelaria**	**1.31**	**279**	*eP*	Pg	20 14 16.0	-4.7
PCAN				*e*S	Sg	20 14 31.9	-5.8
CALA	**Caldeira**	**1.50**	**283**	*eP*	Pn	20 14 18.8	-4.9
CALA				*e*S	Sg	20 14 36.4	-7.4
CALA	**Caldeira**	**1.50**	**283**	*eP*	Pn	20 14 18.8	-4.9
CALA				*e*S	Sg	20 14 36.4	-7.4
PCED	**Cedros**	**1.51**	**284**	*eP*	Pn	20 14 19.0	-4.8
PCED				*e*S	Sb	20 14 36.1	-8.0
PCED				A		20 14 39.3	
66nm,0.4s							
PCED	**Cedros**	**1.51**	**284**	*eP*	Pn	20 14 19.0	-4.8
PCED				*e*S	Sb	20 14 36.1	-8.0
PSMA	**Santa Maria**	**1.86**	**133**	*eP*	Pn	20 14 23.7	-4.9
PSMA				*e*S	Sn	20 14 45.1	-7.6
PSMA				A		20 14 46.9	
51nm,0.2s							
PSMN	**Pico do Norte,**	**1.89**	**131**	*eP*	Pn	20 14 24.4	-4.6
PSMN				*e*S	Sn	20 14 45.0	-8.5
PSMN	**Pico do Norte,**	**1.89**	**131**	*eP*	Pn	20 14 24.4	-4.6
PSMN				*e*S	Sn	20 14 45.0	-8.5

*NEIC **28** 20:24:51.0,58°.32N×133°.48W,h5km, ML2.9(AEIC), ML3.3(PGC), After PGC.*
PGC 28 20:24:51.0±7.3,58°.32N×133°.48W,h5km,ML3.3/5,5D, 55km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.77**	**290**	P	Pg	20 25 02.7	-3.1
SKAG	**Skagway**	**1.49**	**321**	P	Pn	20 25 15.3	-3.1
SKAG				S	Sn	20 25 36.7	-1.6
SIT	**Sitka**	**1.61**	**219**	P	Pn	20 25 17.3	-2.7
SIT				S	Sn	20 25 40.4	-0.8
DLBC	**Dease Lake**	**1.82**	**85**	Pn	Pn	20 25 22.1	-0.9
DLBC				Sg	Sg	20 25 47.0	-2.5
DLBC	**Dease Lake**	**1.82**	**85**	⇑Pn	Pn	20 25 22.1	-0.9
DLBC				⇓Sg	Sg	20 25 47.0	-2.5
PLBC	**Pleasant Camp**	**1.88**	**308**	Pn	Pn	20 25 22.4	-1.4
PLBC				Sg	Sg	20 25 47.7	-3.8
PLBC	**Pleasant Camp**	**1.88**	**308**	⇑Pn	Pn	20 25 22.4	-1.4
PLBC				⇑Sg	Sg	20 25 47.7	-3.8
WHY	**Whitehorse**	**2.45**	**344**	Pn	Pn	20 25 28.9	-2.7
WHY				Sg	Sg	20 26 03.1	-6.7
WHY	**Whitehorse**	**2.45**	**344**	⇓Pn	Pn	20 25 28.9	-2.7
WHY				⇓Sg	Sg	20 26 03.1	-6.7
CRAG	**Craig**	**2.87**	**176**	P	Pn	20 25 35.1	-2.2
HYT	**Haines Junctio**	**3.24**	**323**	Pn	Pn	20 25 43.2	+0.7
HYT				Sg	Sg	20 26 28.6	-6.4
HYT	**Haines Junctio**	**3.24**	**323**	⇑Pn	Pn	20 25 43.2	+0.7
HYT				⇑Pg	Pg	20 25 49.4	-3.7
HYT				⇑Sg	Sg	20 26 28.6	-6.4
PNL	**Peninsula**	**3.35**	**296**	*e*Pn	Pn	20 25 42.8	-1.1
RUBB	**Prince Rupert**	**4.39**	**154**	⇓Sg	Sg	20 27 06.4	-5.5
FNBB	**Fort Nelson**	**5.50**	**80**	⇓Sg	Sg	20 27 42.7	-4.9
EGAK	**Eagle**	**7.44**	**334**	*e*Pn	Pn	20 26 39.8	-0.3
7.1nm,0.7s							
EGAK				*e*Pg	Pg	20 27 03.6	-10
INK	**Inuvik**	**10.03**	**360**	*e*Pn	Pn	20 27 13.4	-2.0
5.6nm,1.0s							
RSO	**Redoubt South**	**10.06**	**290**	*e*Pn	Pn	20 27 17.1	+1.2

*IDC **28** 20:28:48.6±0.8,3°.10N×84°.35W,h0km, mb4.0/10, mb1 4.3/12,mb1mx4.1/22,mbtmp4.1/12,ML5.1/2,MS3.5/6, Ms1 3.5/6,ms1mx3.1/29, Error ellipse: s-maj=32.2km s-min=14.4km az=58.0*
*ISCJB **28** 20:28:51.5±0.6,3°.15N±0°.06×84°.36W±0°.09,h33km, mb3.9/11,MS3.5/3, Error ellipse: s-maj=13.3km s-min=6.7km az=153.6*
*NEIC **28** 20:28:53.5±1.8,3°.07N×84°.39W,h36km±16km, mb4.6/1, Error ellipse: s-maj=19.8km s-min=8.5km az=58.0*
*CASC **28** 20:28:58.9±1.9,3°.66N×84°.29W,h20km±999km, MD4.5, mb4.6(NEIC)*
ISC 28 20:28:53.8±0.6,3°.13N±0°.06×84°.34W±0°.09,h35km,n32, σ1§04/31,mb3.9/11,MS3.5/3,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**6.16**	**10**	*eP*	**Pn**	**20 30 21.4**	**-0.9**
BAR1				*e*S	**Sn**	**20 31 26.8**	**-4.9**
QCR	**Quepos**	**6.26**	**2**	*eP*	**Pn**	**20 30 22.6**	**-1.1**
BUS	**Buena Vista**	**6.41**	**5**	*eP*	**Pn**	**20 30 26.4**	**+0.6**
OTAV	**Otavalo**	**6.55**	**116**	*eP*	**Pn**	**20 30 25.9**	**-1.8**
24nm,0.6s							
URSC	**Urasca**	**6.69**	**5**	*eP*	**Pn**	**20 30 29.5**	**-0.1**
JCR	**Jicaral**	**6.72**	**354**	*eP*	**Pn**	**20 30 28.8**	**-1.2**
PRS1	**Puriscal**	**6.81**	**0**	*eP*	**Pn**	**20 30 29.1**	**-2.2**
CGA2	**Cerro Gallo 2**	**6.85**	**359**	*eP*	**Pn**	**20 30 32.5**	**+0.8**
JTS	**JuntasAbangare**	**7.14**	**355**	**Pn**	**Pn**	**20 30 36.0**	**+0.2**
40nm,0.3s,baz=175,slow=5.8,SNR=103							
FORC	**Fortuna**	**7.30**	**357**	*eP*	**Pn**	**20 30 40.0**	**+2.0**
ROSC	**El Rosal**	**10.13**	**80**	Pn	**Pn**	**20 31 20.0**	**+3.1**
1.7nm,0.3s,baz=92,slow=17,SNR=14							
ROSC				LR	LR	20 35 01.5	
comp=Z,266nm,21.7s,baz=267,slow=37							
ROSC	**El Rosal**	**10.13**	**80**	*eP*	**Pn**	**20 31 19.6**	**+2.7**
ROSC				LR	LR	20 35 01.5	
APG	**El Apazote**	**13.26**	**333**	Pn	**Pn**	**20 32 00.6**	**+1.0**
0.2nm,0.3s,baz=137,slow=17,SNR=2.3							
SDV	**Santo Domingo**	**14.78**	**67**	**Pn**	**Pn**	**20 32 21.3**	**+0.8**
5.9nm,0.3s,baz=360,slow=16,SNR=2.6							
SDV				LR	LR	20 37 45.9	
comp=Z,243nm,21.8s,baz=87,slow=36							
SDV	**Santo Domingo**	**14.78**	**67**	Pn	**Pn**	**20 32 21.3**	**+0.8**
SDV				LR	LR	20 37 45.9	
CMIG	**Matias Romero**	**17.31**	**324**	P	**Pn**	**20 33 00.5**	**+7.6**
1.0nm,0.3s,baz=123,slow=10,SNR=12							
CMIG				LR	LR	20 38 28.4	
comp=Z,118nm,18.0s,baz=20,slow=34							
PCRV	**Puerto La Cruz**	**20.78**	**69**	P	**P**	**20 33 32.7**	**+0.7**
24nm,0.9s,baz=238,slow=2.7,SNR=6.1							
PCRV				LR	LR	20 41 41.8	
comp=Z,82nm,18.9s,MS3.1,baz=296,slow=37							
LPAZ	**La Paz**	**25.08**	**141**	P	**P**	**20 34 16.3**	**+1.0**
3.7nm,1.1s,mb3.8,baz=340,slow=9.6,SNR=6.4							
LPAZ	**La Paz**	**25.08**	**141**	P	**P**	**20 34 16.3**	**+1.0**
SIV	**San Ignacio**	**29.84**	**130**	P	**P**	**20 34 58.0**	**0.0**
0.2nm,0.3s,mb3.3,baz=321,slow=17,SNR=4.1							
TXAR	**Lajitas Array**	**31.88**	**327**	P	**P**	**20 35 16.3**	**+0.5**
0.4nm,0.8s,mb3.3,baz=178,slow=6.1,SNR=3.7							
CFAA	**Coronel Fontan**	**37.78**	**157**	P	**P**	**20 36 07.0**	**+0.3**
0.1nm,0.3s,mb3.0,baz=306,slow=8.7,SNR=3.3							
CPUP	**Villa Florida**	**39.24**	**140**	LR	LR	20 53 53.1	
comp=Z,94nm,19.9s,MS3.6,baz=85,slow=38							
PDAR	**Pinedale Array**	**45.42**	**334**	P	**P**	**20 37 09.4**	**+0.3**
1.2nm,0.8s,mb3.8,baz=120,slow=8.8,SNR=7.9							
PDAR				LR	LR	20 57 17.4	
comp=Z,76nm,19.3s,MS3.6,baz=63,slow=38							
PLCA	**Paso Flores**	**45.43**	**165**	P	**P**	**20 37 08.6**	**-0.7**
4.4nm,1.1s,mb4.2,baz=9.5,slow=6.1,SNR=3.0							
AGMN	**Agassiz Refuge**	**46.08**	**349**	*eP*	**P**	**20 37 14.2**	**0.0**
6.2nm,0.8s,mb4.6							
NVAR	**Mina Array Bea**	**46.84**	**323**	P	**P**	**20 37 21.6**	**+1.2**
2.3nm,0.7s,mb4.2,baz=135,slow=7.3,SNR=18							
NVAR				PcP	PcP	20 38 54.0	+1.0
0.4nm,0.6s,baz=123,slow=3.3,SNR=2.8							
ULM	**Lac du Bonnet**	**47.96**	**350**	P	**P**	**20 37 27.6**	**-1.3**
4.2nm,0.8s,mb4.5,baz=160,slow=7.6,SNR=5.1							
FCC	**Fort Churchill**	**56.01**	**354**	*eP*	**P**	**20 38 28.3**	**-0.4**
YKA	**Yellowknife Ar**	**63.36**	**345**	P	**P**	**20 39 19.0**	**-0.2**
0.6nm,0.6s,mb3.9,baz=140,slow=6.6,SNR=7.0							
TORD	**Torodi Ar. Bea**	**85.44**	**77**	P	**P**	**20 41 27.5**	**-1.1**
1.6nm,1.2s,mb4.0,baz=265,slow=4.8,SNR=3.5							
ASAR	**Alice Springs**	**137.79**	**238**	PKP	PKPdf	20 48 14.2	-1.2
0.6nm,0.9s,baz=117,slow=3.2,SNR=4.0							

*BJI **28** 20:33:47.7,35°.18N×81°.57E,h19km, mb4.0/2, ML3.8/6*
*IDC **28** 20:33:49.2±1.0,35°.38N×81°.39E,h0km, mb3.6/6, mb1 3.6/11,mb1mx3.4/29,mbtmp3.5/11, ML3.5/3, Error ellipse: s-maj=33.2km s-min=16.5km az=64.0*
*ISCJB **28** 20:33:51.9±2.0,35°.61N±0°.04×81°.76E±0°.09,h29km±18km, mb3.4/7, Error ellipse: s-maj=13.3km s-min=5.5km az=155.6*
*NEIC **28** 20:33:52.1±0.5,35°.53N×81°.54E,h10km, mb3.3/1, Error ellipse: s-maj=15.1km s-min=6.2km az=62.0*
ISC 28 20:33:55.8±0.6,35°.55N±0°.04×81°.65E±0°.09,h51km±9km, n29,σ1§01/33,mb3.4/6,2C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.00**	**313**	Pn	**Pn**	**20 35 22.0**	**+0.1**
KSH				Sn	**Sn**	**20 36 31.5**	**+2.2**
KSH				smax			
comp=N,34nm,0.8s							
KSH				smax			
comp=E,75nm,1.1s							
KKN	**Kakani**	**8.33**	**157**	*eP*	**Pn**	**20 35 53.9**	**0.0**
comp=E,24nm,0.5s							
GUN	**Gumba**	**8.43**	**154**	*eP*	**Pn**	**20 35 56.2**	**+1.0**
comp=E,17nm,0.4s							
DMN	**Daman**	**8.45**	**159**	*eP*	**Pn**	**20 35 55.9**	**+0.4**
comp=E,8.3nm,0.4s							
PKIN	**Phulchoki**	**8.57**	**157**	*eP*	**Pn**	**20 35 57.2**	**0.0**
comp=E,20nm,0.4s							
PKI	**Pulchoki**	**8.58**	**157**	*eP*	**Pn**	**20 35 57.3**	**0.0**
comp=E,19nm,0.5s							
UCH	**Uchtor**	**8.68**	**322**	*eP*	**Pn**	**20 35 58.3**	**-0.3**
comp=E,4.9nm,0.7s							
TKM2	**Tokmak 2**	**8.73**	**329**	⇑Pn	**Pn**	**20 35 59.4**	**+0.2**
comp=E,1.5nm,0.7s							
TKM2				⇑Lg		20 38 18.5	
comp=E,4.8nm,0.7s							
AAK	**Ala-Archa**	**8.99**	**324**	Pn	**Pn**	**20 36 02.6**	**-0.4**
comp=E,0.0nm,0.3s,baz=192,slow=18,SNR=2.6							
AAK				Pg	Px	20 36 31.0	
comp=E,0.0nm,0.3s,baz=103,slow=5.9,SNR=5.2							
AAK				Lg		20 38 31.7	
comp=E,0.0nm,0.3s,baz=181,slow=22,SNR=2.5							
AML	**Almayashu**	**9.04**	**319**	*eP*	**Pn**	**20 36 04.3**	**+0.9**
comp=E,3.0nm,0.5s							
EKS2	**Erkin-Say**	**9.37**	**322**	*eP*	**Pn**	**20 36 07.7**	**-0.4**
comp=E,1.5nm,0.8s							
KBL	**Kabul**	**10.39**	**268**	*eP*	**Pn**	**20 36 19.3**	**-2.8**
MK31	**Makanchi Array**	**11.24**	**2**	Pn	**Pn**	**20 36 33.6**	**0.0**
comp=E,2.2nm,1.0s,baz=176,slow=12,SNR=18							
MK31				⇓Sn	**Sn**	**20 38 37.6**	**0.0**
comp=E,1.7nm,0.8s,baz=178,slow=22,SNR=3.6							
MK31	**Makanchi Array**	**11.24**	**2**	*eP*	**Pn**	**20 36 32.8**	**-0.8**
MKAR	**Makanchi Array**	**11.24**	**2**	Pn	**Pn**	**20 36 33.4**	**-0.2**
comp=E,0.3nm,0.3s,baz=173,slow=12,SNR=19							
MKAR				Sn	**Sn**	**20 38 37.8**	**+0.1**
comp=E,0.2nm,0.3s,baz=188,slow=20,SNR=4.2							
MKAR	**Makanchi Array**	**11.24**	**2**	Pn	**Pn**	**20 36 33.4**	**-0.2**
MKAR				Sn	**Sn**	**20 38 37.8**	**+0.1**
KURK	**Kurchatov**	**15.31**	**353**	Pn	**Pn**	**20 37 24.7**	**-3.8**
baz=175,slow=12,SNR=5.4							
KURK				Lg		20 41 58.8	
comp=E,0.0nm,0.3s,baz=113,slow=34,SNR=2.9							
ZALV	**Zalesovo Beam**	**18.53**	**6**	P	**Pn**	**20 38 08.3**	**-0.1**
comp=E,0.1nm,0.3s,baz=197,slow=9.3,SNR=4.5							
BVAR	**Borov

MAJO Matsushiro 4.46 244 *eP* **Pn 20 44 38.0 +1.1**
MAT Matsushiro 4.46 244 P **Pn 20 44 38.0 +1.1**
MAT S **Sn 20 45 31.5 +2.9**
ASAJ Asahikawa 5.51 356 Pn **Pn 20 44 51.1 -0.1**
comp=Z,0.9nm,0.3s,baz=226,slow=6.5,SNR=7.2
ASAJ Sn **Sn 20 45 48.1 -6.3**
comp=Z,1.2nm,0.3s,baz=245,slow=9.4,SNR=3.9
ASAJ LR LR 20 47 57.3
comp=Z,105nm,18.2s,baz=152,slow=49
ASAJ Asahikawa 5.51 356 P **Pn 20 44 51.1 -0.1**
ASAJ 20 45 48.1
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,105nm,18.3s
JHJ Hachijo jima 2 6.14 208 Pn **Pn 20 45 00.6 +0.6**
comp=Z,6.8nm,0.3s,baz=80,slow=19,SNR=2.9
JHJ Sn **Sn 20 45 58.6 -12**
comp=Z,10nm,0.3s,baz=55,slow=22,SNR=2.2
CBIJ Chichi jima 11.53 184 Pn **Pn 20 46 11.6 -2.3**
comp=Z,1.4nm,0.3s,baz=267,slow=20,SNR=3.2
CBIJ Sn **Sn 20 48 08.3 -14**
comp=Z,2.9nm,0.3s,baz=317,slow=21,SNR=3.9
KSRS Korea Array 12.09 269 LR LR 20 50 52.3
comp=Z,71nm,18.6s,baz=70,slow=36
BOD Bodaibo 26.98 325 *eP* **P 20 49 07.8 -3.0**
SONM Songino Array 28.11 301 P **P 20 49 21.3 +0.4**
comp=Z,0.5nm,0.5s,mb3.4,baz=99,slow=9.2,SNR=4.7
SONM Songino Array 28.11 301 P **P 20 49 21.3 +0.3**
SONM pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 41.90 311 P **P 20 51 19.5 +0.1**
comp=Z,0.9nm,0.4s,mb3.7,baz=91,slow=8.8,SNR=4.7
ZALV LR LR 21 09 27.2
comp=Z,25nm,19.3s,MS3.1,baz=42,slow=37
ZALV Zalesovo Beam 41.90 311 P **P 20 51 19.5 +0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV MLR MLR
comp=Z,25nm,19.3s,MS3.1
ZALV Zalesovo Beam 41.90 311 P **P 20 51 19.5 +0.1**
ZALV LR LR 21 09 27.2
MK31 Makanchi Array 44.48 301 *eP* **P 20 51 40.0 -0.4**
MKAR Makanchi Array 44.48 301 P **P 20 51 40.3 -0.1**
comp=Z,0.3nm,0.4s,mb3.4,baz=84,slow=12,SNR=9.8
KURK Kurchatov 46.07 307 P **P 20 51 53.5 +0.5**
comp=Z,2.2nm,0.6s,mb4.2,baz=81,slow=8.3,SNR=13
KURK Kurchatov 46.07 307 P **P 20 51 53.5 +0.6**
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KURK Kurchatov 46.07 307 P **P 20 51 53.5 +0.5**
TKM2 Tokmak 2 50.12 298 *eP* **P 20 52 24.3 0.0**
TKM2 pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
TKM2 Tokmak 2 50.12 298 *eP* **P 20 52 24.3 0.0**
comp=Z,1.1nm,0.5s,mb4.1
BVAR Borovoye Array 50.55 312 P **P 20 52 28.0 +0.6**
comp=Z,0.6nm,0.6s,mb3.7,baz=85,slow=7.3,SNR=4.2
BVAR Borovoye Array 50.55 312 P **P 20 52 28.0 +0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
ABKAR Abkulak array 57.99 310 *eP* **P 20 53 21.0 -0.7**
comp=Z,1.0nm,0.6s,mb4.0
AKTK Aktyubinsk 58.66 312 P **P 20 53 28.1 +1.7**
AKTO Aktyubinsk 58.66 312 P **P 20 53 28.1 +1.7**
comp=Z,0.5nm,0.4s,mb3.9,baz=45,slow=14,SNR=2.4
AKTO Aktyubinsk 58.66 312 P **P 20 53 28.1 +1.8**
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ASAR Alice Springs 62.57 190 P **P 20 53 52.6 -0.6**
comp=Z,0.6nm,0.9s,mb3.7,baz=209,slow=31,SNR=3.5
ASAR Alice Springs 62.57 190 P **P 20 53 52.6 -0.6**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
HFS Hagfors 73.21 336 LR LR 21 30 07.1
comp=Z,28nm,18.9s,MS3.6,baz=60,slow=38
NOA NORSAR Array B 73.25 338 P **P 20 55 00.2 +0.1**
comp=Z,0.7nm,0.8s,mb3.6,baz=38,slow=6.0,SNR=3.3
NOA NORSAR Array B 73.25 338 P **P 20 55 00.2 +0.1**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 73.25 338 P **P 20 55 00.2 +0.1**
EIL Elat 84.67 304 LR LR 21 38 44.3
comp=Z,42nm,18.9s,MS3.8,baz=295,slow=39

ISCJB ***28*** *21:20:59.1±0.6, 43°.33N±0°.04×46°.00E±0°.03, h5km±4km, Error ellipse: s-maj=7.8km s-min=2.7km az=21.5*
MOS ***28*** *21:21:00.7±0.9, 43°.18N×45°.91E, h12km, mb4.1/1, Error ellipse: s-maj=12.5km s-min=7.2km az=18.9*
CSEM ***28*** *21:21:00.1, 43°.18N×45°.91E, h12km, mb4.1, After OBN*
ISC 28 21:20:60.0±0.6, 43°.32N±0°.04×46°.02E±0°.03, h10km±3km, n44, σ1900/86, 4C-4D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRNR	**Karanay**	**0.82**	**127**	⇑*i*PG	**Pg**	**21 21 14.8**	**-0.9**
KRNR				*e*S	**Sg**	**21 21 27.2**	**+0.8**
KRNR				pmax	pmax		
comp=Z,57nm,0.2s							
KRNR	**Karanay**	**0.82**	**127**	*i* Pg	**Pg**	**21 21 14.8**	**-0.9**
comp=Z,57nm,0.2s							
KRNR				*e*Sg	**Sg**	**21 21 27.2**	**+0.8**
SNJR	**Sundja**	**0.92**	**254**	⇓*i*PG	**Pg**	**21 21 17.2**	**-0.5**
SNJR				*e*S	**Sg**	**21 21 30.1**	**+0.5**
SNJR	**Sundja**	**0.92**	**254**	*i* Pg	**Pg**	**21 21 17.2**	**-0.5**
SNJR				*e*Sg	**Sg**	**21 21 30.1**	**+0.5**
XNZR	**Khunzakh**	**0.93**	**147**	*i* PG	**Pg**	**21 21 16.0**	**-1.8**
XNZR				*i* S	**Sg**	**21 21 28.5**	**-1.4**
XNZR				pmax	pmax		
comp=Z,88nm,0.1s							
XNZR	**Khunzakh**	**0.93**	**147**	*i* Pg	**Pg**	**21 21 16.0**	**-1.8**
comp=Z,88nm,0.1s							
XNZR				*i* Sg	**Sg**	**21 21 28.5**	**-1.4**
BUJR	**Buynaksk**	**0.94**	**121**	*e*PG	**Pg**	**21 21 17.5**	**-0.6**
BUJR				*i* S	**Sg**	**21 21 32.0**	**+1.7**
BUJR	**Buynaksk**	**0.94**	**121**	*e*Pg	**Pg**	**21 21 17.5**	**-0.6**
BUJR				*i* Sg	**Sg**	**21 21 32.0**	**+1.7**
TRKR	**Terskaya**	**1.02**	**294**	⇑*i*PG	**Pg**	**21 21 19.8**	**+0.2**
TRKR				*i* S	**Sg**	**21 21 34.7**	**+1.9**
TRKR	**Terskaya**	**1.02**	**294**	*i* Pg	**Pg**	**21 21 19.8**	**+0.2**
TRKR				*i* Sg	**Sg**	**21 21 34.7**	**+1.9**
VLKR	**Vladikavkaz**	**1.02**	**255**	*e*PG	**Pg**	**21 21 18.9**	**-0.7**
VLKR				*e*S	**Sg**	**21 21 33.1**	**+0.3**
VLKR	**Vladikavkaz**	**1.02**	**255**	*e*Pg	**Pg**	**21 21 18.9**	**-0.7**
VLKR				*e*Sg	**Sg**	**21 21 33.1**	**+0.3**
BTKR	**Batakoyurt**	**1.08**	**273**	*e*PG	**Pg**	**21 21 20.1**	**-0.6**
BTKR				*e*S	**Sg**	**21 21 35.6**	**+0.8**
BTKR	**Batakoyurt**	**1.08**	**273**	*e*Pg	**Pg**	**21 21 20.1**	**-0.6**
BTKR				*e*Sg	**Sg**	**21 21 35.6**	**+0.8**
MAK	**Makhachkala**	**1.15**	**108**	*e*PG	**Pg**	**21 21 25.8**	**+3.8**
MAK				pmax	pmax		
comp=N,615nm,0.6s							
MAK				pmax	pmax		
comp=E,678nm,0.5s							
MAK	**Makhachkala**	**1.15**	**108**	*e*Pg	**Pg**	**21 21 25.8**	**+3.8**
comp=E,615nm,0.6s							
KMSR	**Komsomolskaya**	**1.26**	**273**	*e*PG	**Pn**	**21 21 23.0**	**-0.6**
KMSR				*e*S	**Sg**	**21 21 40.4**	**-0.2**
KMSR	**Komsomolskaya**	**1.26**	**273**	*e*Pg	**Pn**	**21 21 23.0**	**-0.6**
KMSR				*e*Sg	**Sg**	**21 21 40.4**	**-0.2**
ARNR	**Ardon**	**1.28**	**265**	⇓*i*PG	**Pn**	**21 21 23.1**	**-0.7**
ARNR				*e*S	**Sb**	**21 21 40.7**	**+0.2**
ARNR	**Ardon**	**1.28**	**265**	*i* Pg	**Pn**	**21 21 23.1**	**-0.7**
ARNR				*e*Sg	**Sb**	**21 21 40.7**	**+0.2**
PRTR	**Priterechnaya**	**1.33**	**289**	⇑*i*PG	**Pn**	**21 21 24.4**	**-0.2**
PRTR				*e*S	**Sg**	**21 21 43.3**	**+0.4**
PRTR	**Priterechnaya**	**1.33**	**289**	*i* Pg	**Pn**	**21 21 24.4**	**-0.2**
PRTR				*e*Sg	**Sg**	**21 21 43.3**	**+0.4**
LACR	**Lac**	**1.36**	**249**	*e*PG	**Pn**	**21 21 23.8**	**-1.1**
LACR				*i* S	**Sb**	**21 21 42.0**	**-0.8**
LACR	**Lac**	**1.36**	**249**	*e*Pg	**Pn**	**21 21 23.8**	**-1.1**
LACR				*i* Sg	**Sb**	**21 21 42.0**	**-0.8**
KMKR	**Kumukh**	**1.43**	**146**	*i* PG	**Pn**	**21 21 25.5**	**-0.4**
KMKR				*i* S	**Sn**	**21 21 45.0**	**+0.3**
KMKR				pmax	pmax		
comp=Z,97nm,0.3s							
KMKR	**Kumukh**	**1.43**	**146**	*i* Pg	**Pn**	**21 21 25.5**	**-0.4**
comp=Z,97nm,0.3s							
KMKR				*i* Sg	**Sn**	**21 21 45.0**	**+0.3**
KORR	**Kora**	**1.45**	**261**	⇓*i*PG	**Pn**	**21 21 25.5**	**-0.6**
KORR				*e*S	**Sn**	**21 21 44.5**	**-0.6**
KORR	**Kora**	**1.45**	**261**	*i* Pg	**Pn**	**21 21 25.5**	**-0.6**
KORR				*e*Sg	**Sn**	**21 21 44.5**	**-0.6**
LSNR	**Lesken**	**1.61**	**269**	⇓*i*PG	**Pn**	**21 21 27.9**	**-0.5**
LSNR				*e*S	**Sn**	**21 21 49.2**	**0.0**
LSNR	**Lesken**	**1.61**	**269**	*i* Pg	**Pn**	**21 21 27.9**	**-0.5**
LSNR				*e*Sg	**Sn**	**21 21 49.2**	**0.0**
ZEI	**Tsey**	**1.65**	**251**	⇑*i*PG	**Pn**	**21 21 28.0**	**-0.9**
ZEI				*i* S	**Sn**	**21 21 49.0**	**-1.1**
ZEI	**Tsey**	**1.65**	**251**	*i* Pg	**Pn**	**21 21 28.0**	**-0.9**
ZEI				*i* Sg	**Sn**	**21 21 49.0**	**-1.1**
KEH	**Kehvi**	**1.84**	**237**	P	**Pn**	**21 21 29.9**	**-1.7**
KEH				S	**Sn**	**21 21 54.2**	**-0.6**
TBLG	**Delisi**	**1.85**	**211**	*e*PN	**Pn**	**21 21 31.1**	**-0.6**
TBLG				*e*S	**Sn**	**21 21 56.0**	**+0.9**
TBLG	**Delisi**	**1.85**	**211**	P	**Pn**	**21 21 31.1**	**-0.6**
TBLG				S	**Sn**	**21 21 56.1**	**+1.0**
TBLG	**Delisi**	**1.85**	**211**	*e*Pn	**Pn**	**21 21 31.1**	**-0.6**
TBLG				*e*Sg	**Sn**	**21 21 56.0**	**+0.9**
MTA	**Mtatsminda**	**1.86**	**210**	P	**Pn**	**21 21 31.7**	**-0.2**
MTA				S	**Sn**	**21 21 56.4**	**+1.1**
DGRG	**David-gareji**	**1.93**	**195**	P	**Pn**	**21 21 33.8**	**+1.1**
DGRG				S	**Sn**	**21 22 01.0**	**+3.9**
GOR	**Gori**	**1.94**	**227**	P	**Pn**	**21 21 33.0**	**0.0**
GOR				S	**Sn**	**21 21 59.2**	**+1.9**
ONI	**Oni**	**2.02**	**250**	P	**Pn**	**21 21 34.0**	**0.0**
ONI				S	**Sn**	**21 22 01.1**	**+1.8**
KSMR	**Kasumkent**	**2.32**	**137**	*e*PN	**Pn**	**21 21 42.0**	**+3.9**
KSMR				*e*S	**Sb**	**21 22 13.0**	**+2.5**
KSMR	**Kasumkent**	**2.32**	**137**	*e*Pn	**Pn**	**21 21 42.0**	**+3.9**
KSMR				*e*Sb	**Sb**	**21 22 13.0**	**+2.5**
GOF	**Gofitskoye**	**2.76**	**310**	*e*PN	**Pg**	**21 21 57.8**	**+4.9**
GOF				*e*S	**Sg**	**21 22 30.0**	**+1.3**
GOF				pmax	pmax		
comp=Z,20nm,0.7s							
GOF				smax			
comp=N,80nm,0.9s							
GOF				smax			
comp=E,70nm,0.7s							
GOF	**Gofitskoye**	**2.76**	**310**	*e*Pn	**Pg**	**21 21 57.8**	**+4.9**
comp=E,20nm,0.7s							
GOF				*e*Sb	**Sg**	**21 22 30.0**	**+1.3**
comp=E,80nm,0.9s							

ISCJB ***28*** *21:39:01.3±0.8, 13°.07S±0°.04×74°.52W±0°.03, h63km±7km, mb5.4/280, Error ellipse: s-maj=6.6km s-min=3.3km az=31.5*
MOS ***28*** *21:39:01.3±0.9, 12°.97S×74°.53W, h60km, mb5.6/94, MS4.2/5, Error ellipse: s-maj=7.5km s-min=5.1km az=92.7*
BJI ***28*** *21:39:04.0, 13°.10S×74°.50W, h84km, mB5.3/19, Ms5.4/15, Ms7 5.2/19*
GCMT ***28*** *21:39:05.1±0.2, 13°.24S×74°.55W, h108km±1km, MW5.2/78, Moment Tensor Solution. s68,c89; s78,c115; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.64±.15; $M_{\theta\theta}$2.80±.17; $M_{\phi\phi}$3.84±.21; $M_{r\theta}$-0.20±.14; $M_{r\phi}$4.73±.16; $M_{\theta\phi}$1.40±.17; Best double couple: $M_0$7.52200×10^{16} NP1:ϕ_s211.00000°, δ50.00000°, λ-105.00000°. Principal axes: T 8.1350, Plg4.0000°, Azm311.0000°; N -1.2260, Plg11.0000°, Azm221.0000°; P -6.9090, Plg78.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***28*** *21:39:05.3±0.5, 13°.11S×74°.51W, h86km±4km, mb4.9/26, mb1 5.1/29, mb1mx5.1/30, mbtmp5.0/29, MS4.1/13, Ms1 4.1/13, ms1mx3.9/21 Error ellipse: s-maj=10.6km s-min=6.0km az=51.0*
NEIC ***28*** *21:39:05.1±0.6, 13°.10S×74°.46W, h84km±5km, mb5.4/222, MW5.2, Error ellipse: s-maj=4.5km s-min=2.9km az=221.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{16}Nm; M_{rr}-7.92; $M_{\theta\theta}$0.82; $M_{\phi\phi}$7.10; $M_{r\theta}$-0.96; $M_{\theta\phi}$2.69; $M_{r\phi}$1.87; Best double couple: $M_0$8.30000×10^{16} NP1: ϕ_s190.00000°, δ51.00000°, λ-104.00000°. NP2: ϕ_s31.00000°, δ41.00000°, λ-74.00000°. Principal axes: T 8.2200, Plg5.0000°, Azm289.0000°; N 0.1100, Plg10.0000°, Azm198.0000°; P -8.3400, Plg78.0000°, Azm44.0000°;*
NEIC Felt [IV] at Ayacucho and [II] at Ica and Lima.
ISC 28 21:39:03.8±0.7, 13°.10S±0°.03×74°.42W±0°.03, h70km±5km, h82km±2.4km: pP-P, n1066, σ0s72/958, mb5.3/279, 221C-207D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.61**	**295**	Pn	**Pn**	**21 39 44.8**	**+1.0**
87μm,0.4s							
NNA	**Nana**	**2.61**	**295**	P	**Pn**	**21 39 43.7**	**-0.1**
2μm,0.3s,baz=125,slow=11,SNR=608							
NNA				S	**Sn**	**21 40 14.9**	**+0.4**
5μm,0.3s,baz=208,slow=19,SNR=15							
NNA				LR	LR	21 40 54.1	
comp=Z,6μm,19.4s,baz=292,slow=43							
NNA	**Nana**	**2.61**	**295**	⇑*i*Pn	**Pn**	**21 39 43.9**	**+0.1**
NNA				*e*Sn	**Sn**	**21 40 15.8**	**+1.3**
LPAZ	**La Paz**	**6.86**	**118**	P	**Pn**	**21 40 45.3**	**+3.5**
50nm,0.3s,baz=304,slow=9.9,SNR=819							
LPAZ				S	**Sn**	**21 42 02.6**	**+4.2**
baz=216,slow=24,SNR=2.7							
LPAZ				LR	LR	21 43 36.6	
comp=Z,2μm,18.4s,baz=241,slow=39							
LPAZ	**La Paz**	**6.86**	**118**	⇑*i*Pn	**Pn**	**21 40 45.4**	**+3.6**
LPAZ				Sn	**Sn**	**21 42 09.5**	**+11**
ATAH	**Atahualpa**	**7.22**	**327**	P	**Pn**	**21 40 44.6**	**-2.1**
158nm,0.3s,baz=171,slow=4.4,SNR=93							
ATAH				S	**Sn**	**21 42 06.1**	**-1.1**
21nm,0.3s,baz=346,slow=21,SNR=1.5							
CEN1	**Los Morros**	**10.99**	**159**	*e*P	**Pn**	**21 41 38.9**	**+0.7**
SIV	**San Ignacio**	**13.23**	**104**	P	**Pn**	**21 42 06.8**	**-2.0**
4.6nm,0.3s,baz=284,slow=12,SNR=30							
OTAV	**Otavalo**	**13.84**	**343**	⇑*e*Pn	**Pn**	**21 42 18.7**	**+1.9**
OTAV				*e*Sn	**Sn**	**21 44 42.3**	**-6.8**
LCO	**Las Campanas**	**16.20**	**168**	*e*Pn	**Pn**	**21 42 47.7**	**+0.6**
71nm,0.8s							
LCO				*e*Sn	**Sn**	**21 45 37.9**	**-8.3**
ROSC	**El Rosal**	**17.84**	**0**	P	**Pn**	**21 43 12.3**	**+4.9**
5.3nm,0.3s,baz=118,slow=8.7,SNR=15							
ROSC				S	**S**	**21 46 32.5**	**+3.8**
0.5nm,0.3s,baz=242,slow=22,SNR=2.3							
ROSC				LR	LR	21 50 55.5	
comp=Z,519nm,18.7s,baz=206,slow=40							
ROSC	**El Rosal**	**17.84**	**0**	*e*Pn	**Pn**	**21 43 06.2**	**-1.3**
ROSC				Sn	**Sn**	**21 46 27.8**	**+1.9**
CFAA	**Coronel Fontan**	**19.27**	**164**	P	**Pn**	**21 43 23.3**	**-1.2**
0.3nm,0.3s,baz=339,slow=12,SNR=16							
CFAA				S	**S**	**21 46 58.7**	**+1.3**
0.0nm,0.3s,baz=348,slow=13,SNR=2.1							
CFAA	**Coronel Fontan**	**19.27**	**164**	P	**Pn**	**21 43 23.3**	**-1.2**
CFAA				S	**S**	**21 46 58.7**	**+1.3**
FCH	**Farellones**	**20.48**	**170**	*e*P	**P**	**21 43 31.6**	**-4.4**
CPUP	**Villa Florida**	**20.75**	**132**	P	**P**	**21 43 39.3**	**+0.4**
38nm,0.9s,baz=297,slow=11,SNR=27							
CPUP				S	**S**	**21 47 27.6**	**+0.7**
2.4nm,0.7s,baz=278,slow=15,SNR=1.7							
CPUP	**Villa Florida**	**20.75**	**132**	*e*P	**P**	**21 43 39.2**	**+0.3**
CPUP				pmax	pmax		
comp=Z,145nm,0.6s							
CPUP	**Villa Florida**	**20.75**	**132**	*e*Pn	**P**	**21 43 39.2**	**+0.3**
comp=Z,144nm,0.6s							
SDV	**Santo Domingo**	**22.16**	**10**	P	**P**	**21 43 54.2**	**+0.1**
comp=Z,171nm,1.0s,mb5.3,baz=233,slow=8.8,SNR=64							
SDV				S	**S**	**21 47 53.9**	**-0.5**
comp=Z,5.2nm,0.5s,baz=26,slow=21,SNR=3.8							
SDV				LR	LR	21 54 04.9	
comp=Z,376nm,20.0s,baz=188,slow=40							
SDV	**Santo Domingo**	**22.16**	**10**	⇓*e*P	**P**	**21 43 54.1**	**0.0**
comp=Z,220nm,1.1s,mb5.4							
SDV				*e*S	**S**	**21 47 53.9**	**-0.5**
BCIP	**Isla Barro Col**	**22.77**	**346**	P	**P**	**21 44 01.0**	**+0.6**
comp=Z,74nm,0.8s,mb5.1							
PCRV	**Puerto La Cruz**	**25.08**	**23**	P	**P**	**21 44 22.4**	**+0.4**
comp=Z,60nm,1.0s,mb5.0,baz=176,slow=6.8,SNR=12							
PCRV				S	**S**	**21 48 43.7**	**+2.1**
comp=Z,4.3nm,0.6s,baz=350,slow=9.9,SNR=1.9							
PCRV				LR	LR	21 54 47.2	
comp=Z,329nm,20.3s,baz=225,slow=38							
PCRV	**Puerto La Cruz**	**25.08**	**23**	P	**P**	**21 44 22.4**	**+0.4**
PCRV				S	**S**	**21 48 43.7**	**+2.1**
PCRV				LR	LR	21 54 47.2	
JTS	**JuntasAbangare**	**25.48**	**335**	P	**P**	**21 44 27.2**	**+1.5**
comp=Z,21nm,0.9s,mb4.6,baz=299,slow=18,SNR=3.7							
TRQA	**Tornquist**	**27.21**	**158**	P	**P**	**21 44 40.3**	**-0.7**
PLCA	**Paso Flores**	**27.73**	**174**	P	**P**	**21 44 45.0**	**-0.6**
comp=Z,5.3nm,0.5s,mb4.3,baz=351,slow=11,SNR=3.5							
PLCA				PcP	PcP	21 48 00.8	-0.1
comp=Z,9.9nm,0.9s,baz=330,slow=2.4,SNR=4.5							
PLCA	**Paso Flores**	**27.73**	**174**	*e*P	**P**	**21 44 45.2**	**-0.4**
MTDJ	**Mount Denham**	**31.28**	**354**	*e*P	**P**	**21 45 19.1**	**+1.9**
comp=Z,61nm,0.8s,mb5.4							
CAM4	**Nova Friburgo**	**31.65**	**111**	⇓*i*P	**P**	**21 45 19.7**	**-0.9**
CAM4				*i*		21 45 20.7	
CAM4				*i*		21 45 23.0	
CAM4				*i*		21 45 30.3	
CAM4				*i*	pP	21 45 35.5	-1.8
CAM4				*i*	pP	21 45 40.6	+3.2
CRPR	**Cabo Rojo, PR**	**31.74**	**13**	⇓*e*P	**P**	**21 45 21.9**	**+0.6**
comp=Z,66nm,0.8s,mb5.4							
ICM	**Isla Caja Muer**	**31.77**	**14**	*e*P	**P**	**21 45 21.4**	**-0.1**
OBIP	**Obispado Ponce**	**31.89**	**14**	*e*P	**P**	**21 45 22.9**	**+0.3**
comp=Z,338nm,0.7s,mb6.2							
LSP	**Las Mesas**	**31.91**	**13**	*e*P	**P**	**21 45 23.4**	**+0.6**
CELP	**Cerrillos**	**31.93**	**14**	*e*P	**P**	**21 45 23.1**	**+0.2**
MPR	**Mayaguez**	**31.93**	**13**	*e*P	**P**	**21 45 23.0**	**+0.1**
SJG	**San Juan**	**32.07**	**15**	⇓*e*P	**P**	**21 45 23.7**	**-0.5**
SJG				pmax	pmax		
comp=Z,538nm,0.8s							
SJG	**San Juan**	**32.07**	**15**	⇓*e*P	**P**	**21 45 23.7**	**-0.5**
comp=Z,538nm,0.8s,mb6.3							
LRS	**Lares**	**32.07**	**14**	*e*P	**P**	**21 45 24.2**	**-0.1**
CDVI	**St. Croix**	**32.10**	**17**	*e*P	**P**	**21 45 24.2**	**-0.3**
comp=Z,143nm,0.7s,mb5.8							
AGP	**Aguadilla**	**32.12**	**13**	*e*P	**P**	**21 45 26.6**	**+2.0**
AOPR	**Arecibo Observ**	**32.15**	**14**	*e*P	**P**	**21 45 25.0**	**+0.1**
comp=Z,383nm,1.6s,mb5.9							
HUMP	**Col San Antoni**	**32.17**	**15**	*e*P	**P**	**21 45 24.5**	**-0.6**
comp=Z,79nm,0.6s,mb5.6							
MTP	**Monte Pirata**	**32.21**	**16**	⇓*e*P	**P**	**21 45 24.7**	**-0.8**
comp=Z,122nm,0.9s,mb5.6							
CBYP	**Canovanas**	**32.30**	**15**	⇓*e*P	**P**	**21 45 26.0**	**-0.2**
comp=Z,307nm,0.8s,mb6.1							
STVI	**Saint Thomas**	**32.62**	**17**	*e*P	**P**	**21 45 28.5**	**-0.5**
comp=Z,40nm,0.9s,mb5.2							
TEIG	**Tepich**	**35.81**	**337**	*e*P	**P**	**21 45 57.0**	**+0.3**
comp=Z,69nm,1.0s,mb5.5							
RCBR	**Riachuelo**	**38.63**	**83**	*e*P	**P**	**21 46 21.1**	**+0.3**
comp=Z,40nm,1.0s,mb5.2							
USHA	**Ushuaia**	**41.90**	**175**	P	**P**	**21 46 47.0**	**-0.1**
comp=Z,52nm,0.9s,mb5.3,baz=342,slow=6.1,SNR=14							
BBSR	**BB Station**	**46.16**	**11**	*e*P	**P**	**21 47 21.0**	**-0.5**
comp=Z,44nm,0.9s,mb5.2							
GOGA	**Godfrey**	**47.05**	**350**	*e*P	**P**	**21 47 27.6**	**-0.8**
GOGA				pmax	pmax		
comp=Z,19nm,0.9s,mb4.8							
GOGA	**Godfrey**	**47.05**	**350**	*e*P	**P**	**21 47 27.6**	**-0.8**
comp=Z,19nm,0.9s,mb4.8							
LRAL	**Lakeview Retre**	**47.42**	**346**	*e*P	**P**	**21 47 30.1**	**-1.3**
comp=Z,17nm,1.1s,mb4.7							
LRAL				*e*PcP	PcP	21 48 59.7	-1.2
HKT	**Hockley**	**47.52**	**335**	*e*P	**P**	**21 47 30.8**	**-1.3**
HKT				*e*		21 47 53.3	
HKT				*e*		21 49 01.5	
HKT				pmax	pmax		
comp=Z,57nm,1.6s,mb5.2							
HKT	**Hockley**	**47.52**	**335**	*e*P	**P**	**21 47 30.8**	**-1.3**
comp=Z,57nm,1.6s,mb5.2							
HKT				*e*		21 47 53.3	
HKT				*e*PcP	PcP	21 49 01.5	+0.2
NATX	**Nacogdoches**	**48.65**	**337**	*e*P	**P**	**21 47 40.8**	**0.0**
CPCT	**Cooper Cave**	**49.22**	**349**	*e*P	**P**	**21 47 44.3**	**-0.8**
SWET	**Sewanee**	**49.27**	**348**	*e*P	**P**	**21 47 44.1**	**-1.5**
SWET				*e*PcP	PcP	21 49 06.4	-1.1
PLAL	**Pickwick Lake**	**49.54**	**345**	*e*P	**P**	**21 47 45.3**	**-2.3**
comp=Z,22nm,0.8s,mb5.1							
PLAL				*e*PcP	PcP	21 49 07.2	-1.3
JCT	**Junction City**	**49.74**	**331**	*e*P	**P**	**21 47 49.2**	**0.0**
JCT				*e*		21 49 09.8	
JCT				pmax	pmax		
comp=Z,13nm,0.9s,mb4.9							
JCT	**Junction City**	**49.74**	**331**	*e*P	**P**	**21 47 49.2**	**-0.1**
comp=Z,13nm,0.9s,mb4.9							
JCT				*e*PcP	PcP	21 49 09.8	+0.5
TZTN	**Tazewell**	**50.12**	**350**	*e*P	**P**	**21 47 50.8**	**-1.1**
comp=Z,58nm,1.6s,mb5.3							
VWCC	**Virginia Weste**	**50.35**	**354**	*e*P	**P**	**21 47 53.5**	**-0.1**
BLA	**Blacksburg**	**50.36**	**354**	*e*P	**P**	**21 47 53.1**	**-0.7**
BLA						21 49 11.4	
BLA				pmax	pmax		
comp=Z,15nm,0.6s,mb5.1							
BLA	**Blacksburg**	**50.36**	**354**	*e*P	**P**	**21 47 53.1**	**-0.7**
comp=Z,14nm,0.6s,mb5.1							
BLA				PcP	PcP	21 49 11.4	-0.1
ELN	**Prospectdale**	**50.41**	**353**	*e*P	**P**	**21 47 53.3**	**-0.8**
628A	**Black Gap, Mar**	**50.47**	**327**	⇑P	**P**	**21 47 55.0**	**+0.3**
baz=51,SNR=37							
UALR	**University of**	**50.56**	**341**	*e*P	**P**	**21 47 54.8**	**-0.6**
comp=Z,50nm,1.0s,mb5.5							
UALR				PcP	PcP	21 49 11.8	-0.4
WVT	**Waverly**	**50.58**	**346**	*e*P	**P**	**21 47 53.0**	**-2.4**
WVT				*e*		21 49 10.9	
WVT				pmax	pmax		
comp=Z,30nm,1.2s,mb5.2							
WVT	**Waverly**	**50.58**	**346**	*e*P	**P**	**

FVM *e* 21 49 20.8
FVM pmax pmax
comp=Z,56nm,1.1s,mb5.5
FVM French Village 52.99 344 *e*P **P 21 48 11.8 -1.5**
comp=Z,56nm,1.1s,mb5.5
FVM *e*PcP PcP 21 49 20.8 -0.5
325A Bean Ranch, Si 53.06 327 ⇓P **P 21 48 13.5 -0.5**
baz=53,SNR=33
OLIL Olney 53.13 347 *e*P **P 21 48 12.7 -1.6**
comp=Z,70nm,0.8s,mb5.7
OLIL *e*PcP PcP 21 49 21.1 -0.6
BLO Bloomington 53.21 348 *e*P **P 21 48 12.7 -2.3**
BLO *e* 21 49 21.3
BLO pmax pmax
comp=Z,47nm,0.7s,mb5.6
BLO Bloomington 53.21 348 *e*P **P 21 48 12.7 -2.3**
comp=Z,47nm,0.7s,mb5.6
BLO *e*PcP PcP 21 49 21.3 -0.8
127A Arkansas Junct 53.27 329 ⇑P **P 21 48 14.9 -0.6**
baz=54,SNR=5.7
CCM Cathedral Cave 53.28 343 *e*P **P 21 48 13.4 -2.1**
CCM *e* 21 49 21.8
CCM pmax pmax
comp=Z,49nm,0.7s,mb5.7
CCM Cathedral Cave 53.28 343 *e*P **P 21 48 13.4 -2.0**
comp=Z,49nm,0.7s,mb5.7
CCM *e*PcP PcP 21 49 21.8 -0.5
324A Moseley Ranch, 53.39 327 ⇓P **P 21 48 15.4 -1.0**
baz=54,SNR=17
GDL2 Guadalupe Moun 53.40 328 *e*P **P 21 48 17.0 +0.5**
MNTX Cornudas Mount 53.53 327 *e*P **P 21 48 16.5 -0.9**
comp=Z,38nm,1.5s,mb5.2
MNTX *e*PcP PcP 21 49 22.5 -1.0
SLM Saint Louis 53.55 345 *e*P **P 21 48 16.4 -1.1**
SLM *e* pP 21 48 37.4 +2.0
SLM *e* 21 49 22.9
SSPA Standing Stone 53.56 357 *e*P **P 21 48 17.6 +0.1**
comp=Z,49nm,1.4s,mb5.3
225A Deer Hill, Car 53.56 328 ⇑P **P 21 48 17.5 -0.1**
baz=54,SNR=16
126A Clayton Basin, 53.58 329 ⇑P **P 21 48 17.5 -0.3**
baz=54,SNR=13
ACSO Alum Creek Sta 53.65 352 *e*P **P 21 48 16.8 -1.3**
comp=Z,44nm,0.9s,mb5.5
ACSO *e*PcP PcP 21 49 23.1 -0.7
Z27A Tatum 53.71 330 ⇓P **P 21 48 17.9 -0.8**
baz=54,SNR=35
CPRX Cap Rock 53.81 329 *e*P **P 21 48 19.6 +0.2**
comp=Z,80nm,1.2s,mb5.6
CPRX *e* pP 21 48 42.1 +4.7
125A Gardner Draw, 53.91 328 ⇓P **P 21 48 19.4 -0.8**
baz=54,SNR=19
MSTX Muleshoe 54.03 331 ⇑P **P 21 48 20.1 -0.9**
baz=54,SNR=18
Z26A Caprock 54.05 329 ⇑P **P 21 48 20.7 -0.6**
baz=54,SNR=15
Y27A Causey 54.15 330 ⇓P **P 21 48 21.0 -1.0**
baz=54,SNR=32
AMTX Amarillo 54.28 332 *e*P **P 21 48 21.9 -1.0**
comp=Z,44nm,1.3s,mb5.3
223A Chaparral, Ant 54.33 326 ⇑P **P 21 48 22.8 -0.5**
baz=54
124A Stringfield Ra 54.35 328 ⇑P **P 21 48 23.1 -0.3**
baz=54,SNR=36
Z25A Roswell 54.43 329 ⇑P **P 21 48 23.3 -0.7**
baz=55,SNR=27
X27A F and S Farms, 54.74 331 ⇑P **P 21 48 25.3 -0.9**
baz=55
222A Williams Famil 54.77 326 ⇑P **P 21 48 26.4 -0.1**
baz=55
Z24A Sheeppen Canyo 54.80 328 ⇑P **P 21 48 26.2 -0.5**
baz=55,SNR=14
Y25A Mesa, Roswell 54.93 329 ⇑P **P 21 48 26.7 -0.9**
baz=55,SNR=11
320A Kipp Ranch, An 54.99 324 ⇑P **P 21 48 28.2 +0.1**
baz=55,SNR=20
X26A CR and CF Fran 55.00 330 ⇓P **P 21 48 27.4 -0.8**
baz=55,SNR=18
BINY Binghamton 55.04 359 *e*P **P 21 48 28.8 +0.5**
comp=Z,166nm,1.4s,mb5.9
W27A Bowe Ranch, En 55.07 331 ⇓P **P 21 48 27.6 -0.9**
baz=55,SNR=15
221A Mesquite Ranch 55.07 325 ⇑P **P 21 48 29.1 +0.4**
baz=55
HDIL Hopedale 55.14 346 *e*P **P 21 48 27.2 -1.7**
comp=Z,42nm,0.7s,mb5.6
HDIL PcP PcP 21 49 28.9 -0.5
122A Conniff Cattle 55.17 326 ⇑P **P 21 48 29.8 +0.4**
baz=55
ERPA Erie 55.18 355 *e*P **P 21 48 28.4 -0.8**
comp=Z,59nm,1.0s,mb5.6
ERPA pP pP 21 48 49.5 +2.2
Z23A Rita Site, Whi 55.20 327 ⇓P **P 21 48 29.1 -0.4**
baz=55,SNR=8.7
Y24A Capitan 55.31 329 ⇑P **P 21 48 29.5 -0.8**
baz=56,SNR=8.0
X25A Clemmons Ranch 55.40 330 ⇑P **P 21 48 30.0 -1.0**
baz=56,SNR=9.9
220A Playas Peak, P 55.41 325 ⇑P **P 21 48 31.2 +0.1**
baz=56,SNR=50
W26A Owens Ranch, T 55.42 331 ⇑P **P 21 48 30.4 -0.7**
baz=56,SNR=6.9
319A Douglas 55.45 324 ⇑P **P 21 48 31.6 +0.2**
baz=56,SNR=36
121A Cookes Peak, D 55.47 326 ⇑P **P 21 48 31.9 +0.3**
baz=56,SNR=31
TRY Troy 55.56 1 *e*P **P 21 48 32.7 +0.8**
Z22A Elephant Butte 55.58 327 ⇓P **P 21 48 32.4 +0.1**
baz=56,SNR=12
Y23A Lovelace Mesa, 55.63 328 ⇑P **P 21 48 32.3 -0.4**
baz=56,SNR=19
X24A Lazy VL Ranch, 55.81 329 ⇓P **P 21 48 33.2 -0.7**
baz=56
W25A X Bar L Ranch, 55.86 330 ⇓P **P 21 48 33.4 -0.8**
baz=56,SNR=31
219A White Tail Can 55.90 324 ⇓P **P 21 48 34.7 +0.1**
baz=56,SNR=17
318A Bisbee 55.91 323 ⇑P **P 21 48 34.8 +0.1**
baz=56,SNR=59
120A U Bar Ranch, L 55.95 325 ⇑P **P 21 48 35.2 +0.2**
baz=56,SNR=16
Z21A St. Cloud Mine 56.00 326 ⇓P **P 21 48 35.7 +0.4**
baz=56,SNR=7.3
V26A Tequesquite Ra 56.00 331 ⇓P **P 21 48 34.6 -0.7**
baz=56,SNR=21
BNM Barren Site 56.10 328 *e*P **P 21 48 35.4 -0.5**
comp=Z,30nm,1.4s,mb5.1
BNM *e*PcP PcP 21 49 33.5 +0.2
Y22A Socorro 56.11 327 ⇓P **P 21 48 36.0 -0.1**
baz=56,SNR=10
ACCN Adirondack Com 56.21 1 *e*P **P 21 48 37.0 +0.4**
comp=Z,82nm,1.5s,mb5.5
LPM Los Pinos Moun 56.22 328 *e*P **P 21 48 37.2 +0.4**
W24A Lazy 6 Ranch, 56.31 330 ⇑P **P 21 48 36.9 -0.6**
baz=56,SNR=14
218A Dragoon 56.33 323 ⇓P **P 21 48 37.8 +0.1**
baz=56,SNR=8.1
Z20A Nine Sixteen R 56.35 326 ⇓P **P 21 48 38.1 +0.3**
baz=56,SNR=39
V25A Rancho No Teng 56.43 331 ⇑P **P 21 48 38.0 -0.3**
baz=57
U26A Atchley Ranch, 56.47 332 ⇑P **P 21 48 38.1 -0.5**
baz=57,SNR=13
119A Ashpeak Ranch, 56.49 325 ⇓P **P 21 48 38.9 +0.1**
baz=57,SNR=8.4
Y21A Point of Rocks 56.54 327 ⇓P **P 21 48 39.7 +0.7**
baz=57,SNR=46
LAZ Ladron 56.56 328 *e*P **P 21 48 39.5 +0.2**
comp=Z,17nm,0.9s,mb5.1
LAZ *e* pP 21 49 00.1 +2.8
X22A Bernardo 56.57 328 ⇓P **P 21 48 39.8 +0.5**
baz=57,SNR=6.8
ANMO Albuquerque 56.63 329 *e*P **P 21 48 39.5 -0.3**
ANMO *e* pP 21 49 01.5 +3.6
ANMO *e* 21 49 35.7
ANMO pmax pmax
comp=Z,21nm,0.9s
ANMO Albuquerque 56.63 329 *e*P **P 21 48 39.5 -0.3**
comp=Z,21nm,0.9s,mb5.2
ANMO *e* pP 21 49 01.5 +3.6
ANMO *e*PcP PcP 21 49 35.7 +0.3
217A Green Valley 56.64 323 ⇑P **P 21 48 39.8 -0.1**
baz=57,SNR=10
W23A Werner Place, 56.64 329 ⇑P **P 21 48 39.5 -0.4**
baz=57,SNR=6.2
118A Homack Ranch, 56.78 324 ⇓P **P 21 48 40.8 -0.1**
baz=57,SNR=18

U25A Circle Dot Ran 56.79 331 ⇑P **P 21 48 40.5 -0.3**
baz=57
NCB Newcomb 56.79 0 *e*P **P 21 48 40.9 +0.2**
comp=Z,94nm,1.5s,mb5.6
NCB *e* pP 21 49 01.6 +2.8
CBKS Cedar Bluff 56.81 336 *e*P **P 21 48 40.4 -0.5**
CBKS *e* 21 49 34.9
CBKS pmax pmax
comp=Z,68nm,0.8s,mb5.7
CBKS Cedar Bluff 56.81 336 *e*P **P 21 48 40.4 -0.5**
comp=Z,68nm,0.8s,mb5.7
CBKS *e*PcP PcP 21 49 34.9 -1.1
Y20A Horse Springs, 56.84 326 ⇓P **P 21 48 41.6 +0.4**
baz=57,SNR=13
Z19A T-Link Ranch, 56.86 325 ⇑P **P 21 48 41.6 +0.2**
baz=57,SNR=7.1
X21A Alamocita Cree 56.93 327 ⇑P **P 21 48 42.4 +0.5**
baz=57,SNR=34
W22A Albuquerque 56.94 328 ⇑P **P 21 48 42.2 +0.3**
baz=57
TUC Tucson 57.01 323 *e*P **P 21 48 41.8 -0.7**
TUC pmax pmax
comp=Z,18nm,0.9s,mb5.1
TUC Tucson 57.01 323 *e*P **P 21 48 41.8 -0.6**
comp=Z,18nm,0.9s,mb5.1
LBNH Lisbon 57.11 2 *e*P **P 21 48 43.1 +0.2**
LBNH pmax pmax
comp=Z,66nm,1.4s,mb5.5
LBNH Lisbon 57.11 2 *e*P **P 21 48 43.0 +0.1**
comp=Z,66nm,1.4s,mb5.5
V23A Ortiz Mt. (NFS 57.12 329 ⇑P **P 21 48 43.3 +0.1**
baz=57
117A Oracle 57.17 323 ⇑P **P 21 48 43.6 0.0**
baz=57,SNR=20
216A Three Points, 57.18 322 ⇓P **P 21 48 43.7 0.0**
baz=57,SNR=18
U24A Moreno Valley 57.21 331 ⇑P **P 21 48 44.0 +0.2**
baz=57
Y19A Nuevoso 57.35 326 ⇑P **P 21 48 45.4 +0.5**
baz=58,SNR=14
W21A San Fidel 57.37 328 ⇑P **P 21 48 45.1 +0.1**
baz=58,SNR=5.3
SCIA State Center 57.41 343 *e*P **P 21 48 43.8 -1.3**
comp=Z,28nm,0.7s,mb5.4
SCIA *e*PcP PcP 21 49 37.2 -1.0
LONY Lake Ozonia 57.44 360 *e*P **P 21 48 45.2 -0.1**
comp=Z,38nm,1.2s,mb5.3
LONY *e* pP 21 49 04.3 +0.9
LONY *e*PcP PcP 21 49 38.5 +0.2
LONY *e*PP PP 21 50 53.4 -0.3
Z17A San Carlos Hig 57.54 324 ⇑P **P 21 48 45.9 -0.3**
baz=58
JFWS Jewell Farm 57.60 346 *e*P **P 21 48 44.9 -1.5**
JFWS *e* 21 49 38.7
JFWS pmax pmax
comp=Z,59nm,1.4s,mb5.4
JFWS Jewell Farm 57.60 346 *e*P **P 21 48 44.9 -1.5**
comp=Z,59nm,1.4s,mb5.4
JFWS *e*PcP PcP 21 49 38.7 -0.2
V22A San Miguel Ran 57.62 329 ⇑P **P 21 48 46.9 +0.2**
baz=58,SNR=13
FRNY Flat Rock 57.66 1 *e*P **P 21 48 47.1 +0.3**
comp=Z,64nm,1.2s,mb5.5
X19A St. Johns 57.72 326 ⇓P **P 21 48 47.6 +0.1**
baz=58,SNR=7.3
116A Eloy 57.73 323 ⇓P **P 21 48 47.5 0.0**
baz=58,SNR=8.1
V21A Milan 57.90 328 ⇓P **P 21 48 49.0 +0.3**
baz=58,SNR=8.3
214A Organ Pipe Nat 57.96 321 ⇑P **P 21 48 49.2 0.0**
baz=58,SNR=35
Y17A Roosevelt 58.05 324 ⇑P **P 21 48 49.8 0.0**
baz=58,SNR=9.5
RKT Rikitea 58.07 251 *e*LR LR 22 05 34.6
comp=Z,249nm,24.8s
Z16A Peralta Trail, 58.12 324 ⇑P **P 21 48 50.2 -0.1**
baz=58
115A Sonoran Desert 58.13 323 ⇓P **P 21 48 50.3 -0.1**
baz=58,SNR=7.9
X18A Snowflake 58.16 326 ⇑P **P 21 48 50.8 +0.2**
baz=58,SNR=8.4
PKME Peaks-Kenny Pk 58.27 4 *e*P **P 21 48 51.1 0.0**
comp=Z,59nm,0.9s,mb5.6
W19A Sanders 58.29 326 ⇓P **P 21 48 51.7 +0.2**
baz=58,SNR=15
V20A Brimhall 58.33 328 ⇓P **P 21 48 51.6 0.0**
baz=58
SDCO Great Sand Dun 58.39 331 *e*P **P 21 48 51.8 -0.2**
comp=Z,65nm,0.9s,mb5.7
T22A Edith 58.48 330 ⇑P **P 21 48 52.8 +0.1**
baz=59
W18A Petrified Fore 58.48 326 ⇑P **P 21 48 53.1 +0.3**
baz=59,SNR=18
X17A Forest Lakes 58.49 325 ⇓P **P 21 48 53.8 +0.9**
baz=59
Y16A Circle Bar Ran 58.54 324 ⇑P **P 21 48 53.6 +0.4**
baz=59,SNR=32
114A Black Gap (USA 58.56 322 ⇑P **P 21 48 53.4 0.0**
baz=59,SNR=14
V19A Window Rock 58.56 327 ⇑P **P 21 48 53.3 0.0**
baz=59,SNR=6.6
U20A Newcomb 58.80 328 ⇑P **P 21 48 54.8 -0.1**
baz=59,SNR=13
X16A Lo Mia Camp, P 58.91 324 ⇑P **P 21 48 56.2 +0.4**
baz=59,SNR=17
W17A Winslow 58.99 325 ⇑P **P 21 48 56.3 0.0**
baz=59
Z14A Wintersburg 59.03 323 ⇑P **P 21 48 56.4 -0.2**
baz=59
V18A Ganado 59.03 327 ⇑P **P 21 48 56.3 -0.3**
baz=59,SNR=5.3
U19A Dine' College, 59.09 328 ⇑P **P 21 48 56.2 -0.7**
baz=59
Y15A Casa Rosa Ranc 59.09 323 ⇓P **P 21 48 57.2 +0.2**
baz=59,SNR=18
113A Mohawk Valley, 59.11 321 ⇓P **P 21 48 56.9 -0.2**
baz=59
Z13A Yuma Proving G 59.34 322 ⇓P **P 21 48 58.7 0.0**
baz=60,SNR=16
R22A Saguache, Gunn 59.37 331 ⇓P **P 21 48 58.9 +0.1**
baz=60,SNR=9.6
T19A Beclabito 59.40 328 ⇓P **P 21 48 58.5 -0.6**
baz=60,SNR=15
X15A Humboldt 59.41 324 ⇑P **P 21 48 59.4 +0.2**
baz=60,SNR=13
S21A Coal Bank Pass 59.42 330 ⇑P **P 21 48 59.1 -0.1**
baz=60,SNR=17
MVCO Mesa Verde 59.43 329 ⇑P **P 21 48 59.2 0.0**
baz=60,SNR=13
MVCO Mesa Verde 59.43 329 *e*P **P 21 48 59.2 -0.1**
comp=Z,34nm,0.9s,mb5.4
MVCO *e*PcP PcP 21 49 45.9 -0.5
V17A Tonalea, Kykot 59.43 326 ⇑P **P 21 48 59.7 +0.4**
baz=60,SNR=62
W16A Flagstaff 59.46 325 ⇓P **P 21 49 00.3 +0.7**
baz=60,SNR=11
Y14A Wickenburg 59.47 323 ⇑P **P 21 48 59.7 +0.1**
baz=60,SNR=19
U18A Rough Rock, Ch 59.53 327 ⇑P **P 21 48 59.9 -0.1**
baz=60,SNR=6.8
OGNE Ogallala 59.54 336 *e*P **P 21 48 59.5 -0.4**
comp=Z,68nm,0.8s,mb5.7
OGNE *e*PcP PcP 21 49 46.1 -0.6
WUAZ Wupatki 59.68 325 ⇓P **P 21 49 01.5 +0.5**
baz=60,SNR=19
WUAZ Wupatki 59.68 325 *e*P **P 21 49 01.3 +0.3**
comp=Z,66nm,0.9s,mb5.7
WUAZ *e*PcP PcP 21 49 46.1 -1.3
X14A Yava 59.78 323 ⇑P **P 21 49 02.1 +0.3**
baz=60,SNR=22
R21A Cimarron 59.86 330 ⇓P **P 21 49 02.3 +0.1**
baz=60
Y13A Salome 59.87 322 ⇓P **P 21 49 02.6 +0.2**
baz=60,SNR=7.3
W15A Williams 59.93 324 ⇓P **P 21 49 03.3 +0.6**
baz=60,SNR=9.6
Q22A Crested Butte, 59.94 331 ⇑P **P 21 49 02.9 +0.1**
baz=60,SNR=7.0
GLA Glamis 59.95 321 ⇓P **P 21 49 03.0 0.0**
baz=60
GLA Glamis 59.95 321 *e*P **P 21 49 03.0 +0.1**
GLA *e* 21 49 47.7
GLA *e* 21 51 16.3
GLA pmax pmax
comp=Z,22nm,0.8s,mb5.2
GLA Glamis 59.95 321 *e*P **P 21 49 03.0 +0.1**
comp=Z,22nm,0.8s,mb5.2

GLA *e*PcP PcP 21 49 47.7 -0.8
GLA *e*PP PP 21 51 16.3 +0.2
T18A Mexican Hat 60.08 328 ⇓P **P 21 49 03.3 -0.4**
baz=60,SNR=46
ECSD EROS Data Cent 60.08 342 *e*P **P 21 49 02.2 -1.4**
comp=Z,39nm,0.9s,mb5.4
ECSD *e*PcP PcP 21 49 47.8 -1.0
U17A Shonto 60.09 327 ⇓P **P 21 49 04.0 +0.2**
baz=60,SNR=24
ISCO Idaho Springs 60.10 333 *e*P **P 21 49 03.8 0.0**
ISCO *e* 21 49 49.2
ISCO pmax pmax
comp=Z,24nm,0.8s,mb5.3
ISCO Idaho Springs 60.10 333 *e*P **P 21 49 03.8 -0.1**
comp=Z,24nm,0.8s,mb5.3
ISCO *e*PcP PcP 21 49 49.2 +0.2
R20A Redvale 60.12 329 ⇑P **P 21 49 04.4 +0.4**
baz=60,SNR=21
S19A Harvey Farm, M 60.16 329 ⇓P **P 21 49 04.1 -0.2**
baz=60,SNR=11
PV01 Paradox Valley 60.18 329 *e*P **P 21 49 05.2 +0.8**
SMCO Snowmass 60.23 331 *e*P **P 21 49 05.5 +0.8**
comp=Z,32nm,0.8s,mb5.4
Q21A Lamborn Mesa, 60.24 331 ⇑P **P 21 49 04.7 -0.1**
baz=60
Y12C Blythe 60.24 322 ⇓P **P 21 49 05.1 +0.2**
baz=60,SNR=13
V15A Kaibab Nationa 60.34 325 ⇓P **P 21 49 06.2 +0.6**
baz=60,SNR=16
PDMCI Parker Dam,Lak 60.39 323 ⇓P **P 21 49 05.9 0.0**
baz=61
COWI Conover 60.40 348 *e*P **P 21 49 04.1 -1.6**
comp=Z,14nm,0.7s,mb5.1
COWI *e*PcP PcP 21 49 49.3 -0.7
X13A Yucca 60.41 323 ⇓P **P 21 49 06.2 +0.1**
baz=61,SNR=15
W14A Seligman 60.42 324 ⇑P **P 21 49 06.6 +0.5**
baz=61,SNR=12
T17A Navajo Res., N 60.46 327 ⇑P **P 21 49 06.8 +0.5**
baz=61,SNR=10
SWSC Sam W. Stewart 60.47 320 ⇑P **P 21 49 06.6 +0.1**
baz=61
DVTC Desert V Tower 60.47 320 ⇓P **P 21 49 06.9 +0.4**
baz=61
S18A Hurst Farm, Bl 60.56 328 ⇓P **P 21 49 07.1 +0.1**
baz=61,SNR=28
R19A Curley Farm, L 60.64 329 ⇑P **P 21 49 07.3 -0.2**
baz=61,SNR=7.3
Q20A Ridgley Place, 60.68 330 ⇑P **P 21 49 07.4 -0.4**
baz=61
V14A Boquillas Ranc 60.73 324 ⇓P **P 21 49 08.9 +0.7**
baz=61,SNR=28
BC3 Big Chuckw Mtn 60.74 321 ⇓P **P 21 49 08.7 +0.3**
baz=61,SNR=27
W13A Hualapai Mount 60.80 323 ⇑P **P 21 49 09.3 +0.6**
baz=61,SNR=25
MONP Monument Peak 60.83 320 ⇑P **P 21 49 09.2 +0.2**
baz=61,SNR=5.3
T16A Glen Canyon Da 60.83 326 ⇑P **P 21 49 09.2 +0.4**
baz=61
BAR Barrett 60.85 320 *e*P **P 21 49 08.9 -0.2**
comp=Z,30nm,0.9s,mb5.3
BAR *e*PcP PcP 21 49 51.5 -0.7
U15A North Rim 60.85 325 ⇓P **P 21 49 09.7 +0.7**
baz=61,SNR=27
IRM Iron Mountain 60.90 322 ⇑P **P 21 49 09.7 +0.3**
baz=61,SNR=36
S17A Black Ridge (B 60.94 327 ⇓P **P 21 49 09.7 +0.1**
baz=61,SNR=5.9
NEE2 Needles Airpor 61.00 323 ⇑P **P 21 49 10.1 +0.1**
baz=61
R18A Canyonlands Na 61.04 329 ⇑P **P 21 49 09.9 -0.3**
baz=61,SNR=8.8
P20A De Beque 61.15 330 ⇓P **P 21 49 10.9 -0.1**
baz=61,SNR=6.0
Q19A Hogan Spring (61.16 329 ⇑P **P 21 49 11.0 -0.1**
baz=61,SNR=22
PHWY Pilot Hill 61.26 334 *e*P **P 21 49 11.5 -0.2**
comp=Z,64nm,1.7s,mb5.4
PHWY *e*PcP PcP 21 49 53.0 -0.6
109C Camp Elliot, M 61.26 319 ⇓P **P 21 49 11.7 -0.2**
baz=61
O21A Pagoda 61.28 332 ⇓P **P 21 49 12.2 +0.4**
baz=62
N22A Wattenberg Ran 61.29 333 ⇑P **P 21 49 12.0 +0.1**
baz=62,SNR=9.0
BELC Belle Mtn, 61.31 321 ⇓P **P 21 49 12.5 +0.4**
baz=62,SNR=9.7
PFO Pinyon Flat Ob 61.33 320 P **P 21 49 13.2 +0.9**
comp=Z,183nm,0.7s,mb6.2,SNR=8.0
PFO Pinyon Flat Ob 61.33 320 ⇑P **P 21 49 12.7 +0.4**
baz=62,SNR=8.9
PFO Pinyon Flat Ob 61.33 320 *e*P **P 21 49 12.9 +0.6**
PFO *e* 21 49 54.4
PFO pmax pmax
comp=Z,42nm,0.9s,mb5.5
PFO Pinyon Flat Ob 61.33 320 *e*P **P 21 49 12.8 +0.5**
comp=Z,42nm,0.9s,mb5.5
PFO *e*PcP PcP 21 49 54.4 +0.3
T15A Red Dirt Ranch 61.33 326 ⇑P **P 21 49 12.8 +0.6**
baz=62,SNR=8.1
U14A Mt Trumbull 61.34 325 ⇓P **P 21 49 13.0 +0.7**
baz=62,SNR=20
V13A Grand Canyon W 61.39 324 ⇓P **P 21 49 12.9 +0.2**
baz=62,SNR=5.3
R17A Hanksville Air 61.48 328 ⇓P **P 21 49 13.2 0.0**
baz=62,SNR=96
LDFC Landfair 61.51 323 *e*P **P 21 49 14.1 +0.6**
LDFC *e*PcP PcP 21 49 55.2 +0.4
W12A Cal Nev Ari 61.52 323 ⇓P **P 21 49 13.7 +0.1**
baz=62
P19A Cripple Cowboy 61.54 330 ⇑P **P 21 49 13.7 +0.1**
baz=62,SNR=35
O20A White River Ci 61.58 331 ⇑P **P 21 49 13.9 +0.1**
baz=62,SNR=12
GMRC Granite Mounta 61.63 322 ⇑P **P 21 49 14.6 +0.3**
baz=62,SNR=16
Q18A Rafter H Ranch 61.70 329 ⇑P **P 21 49 14.7 0.0**
baz=62,SNR=25
N21A Black Mountain 61.74 332 ⇑P **P 21 49 15.3 +0.4**
baz=62,SNR=17
T14A Hurricane 61.75 325 ⇑P **P 21 49 15.7 +0.6**
baz=62
U13A Pakoon Wash 61.78 324 ⇓P **P 21 49 15.5 +0.3**
baz=62,SNR=9.8
R16A Teasdale 61.78 327 ⇓P **P 21 49 15.5 +0.2**
baz=62,SNR=12
MURC Murrieta 61.79 320 ⇓P **P 21 49 15.5 +0.1**
baz=62,SNR=5.0
S15A Panguitch 61.80 326 ⇓P **P 21 49 15.6 +0.2**
baz=62,SNR=7.4
V12A Nelson 61.80 323 ⇑P **P 21 49 15.7 +0.2**
baz=62,SNR=12
SRU San Rafael 61.91 329 ⇓P **P 21 49 16.0 -0.1**
baz=62,SNR=33
SRU San Rafael 61.91 329 *e*P **P 21 49 16.1 0.0**
SRU 21 49 55.7
SRU pmax pmax
comp=Z,52nm,0.8s,mb5.6
SRU San Rafael 61.91 329 *e*P **P 21 49 16.1 0.0**
comp=Z,52nm,0.8s,mb5.6
SRU PcP PcP 21 49 55.7 -0.6
HEC Hector,Ludlow 62.07 322 ⇓P **P 21 49 17.8 +0.5**
baz=62,SNR=16
Q16A Castle Valley 62.09 328 ⇓P **P 21 49 17.5 +0.2**
baz=62,SNR=23
U12A Valley of Fire 62.12 324 ⇑P **P 21 49 17.8 +0.2**
baz=62,SNR=15
O19A Miners Draw (B 62.13 330 ⇑P **P 21 49 17.4 -0.2**
baz=62,SNR=59
N20A Spence Gulch, 62.14 331 ⇑P **P 21 49 17.6 0.0**
baz=62,SNR=49
R15A Junction 62.15 327 ⇑P **P 21 49 17.9 +0.2**
baz=62,SNR=18
P18A Preston Nutter 62.16 329 ⇓P **P 21 49 18.0 +0.2**
baz=62,SNR=20
T13A Saint George 62.17 325 ⇓P **P 21 49 18.5 +0.6**
baz=62,SNR=13
V11A Goodsprings 62.22 323 ⇑P **P 21 49 18.5 +0.2**
baz=62,SNR=11
TUQ Turquoise Moun 62.24 322 ⇓P **P 21 49 18.8 +0.5**
baz=62
CCUT Cedar City 62.25 326 *e*P **P 21 49 19.7 +1.2**
comp=Z,35nm,0.9s,mb5.4
CCUT *e*PcP PcP 21 49 58.4 +0.7
L22A Ellis Ranch, M 62.27 333 ⇑P **P 21 49 18.8 +0.3**
baz=62,SNR=14

P17A **Butcher Ranch,** 62.29 329 ⇑P P 21 49 18.7 0.0
baz=62,SNR=28
S14A **Cedar City** 62.30 326 ⇑P P 21 49 19.4 +0.6
baz=62
MSU **Marysvale** 62.31 327 eP P 21 49 19.5 +0.7
MSU e 21 49 58.3
MSU pmax pmax
comp=Z,49nm,1.0s,mb5.5
MSU **Marysvale** 62.31 327 eP P 21 49 19.4 +0.6
comp=Z,49nm,1.0s,mb5.5
MSU ePcP PcP 21 49 58.3 +0.4
M21A **Separation Pea** 62.34 333 ⇑P P 21 49 19.0 0.0
baz=63,SNR=22
TMUT **Trail Mountain** 62.39 328 eP P 21 49 19.9 +0.6
comp=Z,31nm,0.7s,mb5.4
CIS **Catalina Islan** 62.42 319 ⇓P P 21 49 19.9 +0.3
baz=63
T12A **Moapa** 62.42 324 ⇑P P 21 49 19.9 +0.3
baz=63
BFSC **Mount Baldy St** 62.49 320 ⇓P P 21 49 20.3 +0.1
baz=63,SNR=5.8
RRX **Edison Barstow** 62.51 321 ⇓P P 21 49 20.7 +0.5
baz=63
SHPR **Sheep Range** 62.52 324 eP P 21 49 20.7 +0.4
O18A **Roosevelt** 62.53 330 ⇓P P 21 49 20.5 +0.2
baz=63,SNR=8.3
FMP **Fort Macarthur** 62.55 319 ⇓P P 21 49 21.1 +0.6
baz=63
S13A **Holt Ranch, En** 62.55 325 ⇑P P 21 49 21.2 +0.8
baz=63,SNR=56
U11A **Corn Creek** 62.60 323 ⇓P P 21 49 21.4 +0.6
baz=63
R14A **James Farms, M** 62.61 326 ⇑P P 21 49 21.2 +0.4
baz=63
N19A **John Jarvie Ra** 62.62 331 ⇓P P 21 49 20.6 -0.2
baz=63,SNR=54
M20A **Sweetwater, Wa** 62.62 332 ⇓P P 21 49 20.8 0.0
baz=63,SNR=31
L21A **Rawlins** 62.63 333 ⇓P P 21 49 20.6 -0.3
baz=63,SNR=13
EYMN **Ely** 62.65 347 eP P 21 49 19.3 -1.6
comp=Z,28nm,1.0s,mb5.1
EYMN ePcP PcP 21 49 58.5 -0.6
GSC **Goldstone** 62.67 322 ⇓P P 21 49 21.7 +0.4
baz=63,SNR=22
GSC **Goldstone** 62.67 322 eP P 21 49 21.8 +0.5
GSC e 21 49 59.3
GSC pmax pmax
comp=Z,26nm,0.9s,mb5.2
GSC **Goldstone** 62.67 322 eP P 21 49 21.8 +0.5
comp=Z,26nm,0.9s,mb5.2
GSC ePcP PcP 21 49 59.3 -0.2
MWC **Mount Wilson** 62.73 320 eP P 21 49 22.6 +0.9
MWC pmax pmax
comp=Z,71nm,1.4s,mb5.4
MWC **Mount Wilson** 62.73 320 eP P 21 49 22.6 +0.9
comp=Z,71nm,1.4s,mb5.4
SHOC **Shoshone** 62.76 322 ⇓P P 21 49 22.2 +0.3
baz=63
PASC **Pasadena Art C** 62.78 320 eP P 21 49 21.5 -0.5
comp=Z,146nm,1.0s,mb5.9
Q15A **Fillmore** 62.78 327 ⇓P P 21 49 22.2 +0.3
baz=63,SNR=15
O17A **Robinson Place** 62.84 329 ⇓P P 21 49 22.7 +0.5
baz=63,SNR=67
P16A **Fountain Green** 62.86 328 ⇑P P 21 49 23.2 +0.7
baz=63
DECC **Green Verdugo** 62.92 320 ⇑P P 21 49 23.7 +0.7
baz=63
RSSD **Black Hills** 63.01 336 eP P 21 49 23.3 -0.1
RSSD pmax pmax
comp=Z,62nm,1.4s,mb5.3
RSSD **Black Hills** 63.01 336 eP P 21 49 23.3 0.0
comp=Z,62nm,1.4s,mb5.3
R13A **O'Grain Ranch,** 63.04 326 ⇓P P 21 49 24.7 +1.0
baz=63,SNR=17
SNCC **San Nicolas Is** 63.04 318 ⇑P P 21 49 24.1 +0.3
baz=63
T11A **Corn Creek, Al** 63.07 324 ⇓P P 21 49 24.4 +0.5
baz=63,SNR=38
M19A **Rock Springs** 63.08 331 ⇑P P 21 49 23.3 -0.6
baz=63
L20A **Wamsutter** 63.10 332 ⇑P P 21 49 23.8 -0.2
baz=63,SNR=15
EDW2 **Edwards Air Fo** 63.12 321 ⇑P P 21 49 24.3 0.0
baz=63,SNR=25
S12A **Delamar Landin** 63.12 325 ⇓P P 21 49 24.9 +0.7
baz=63
U10A **Ash Meadows, A** 63.15 323 ⇑P P 21 49 24.9 +0.5
baz=63,SNR=6.1
P15A **Leamington** 63.15 328 ⇓P P 21 49 24.7 +0.3
baz=63
MPU **Maple Canyon** 63.15 329 eP P 21 49 24.9 +0.6
comp=Z,35nm,0.9s,mb5.3
MPU e pP 21 49 45.2 +2.4
O16A **Springville** 63.23 329 ⇑P P 21 49 25.3 +0.5
baz=63
Q14A **Sevier Lake (B** 63.25 327 ⇓P P 21 49 25.8 +0.8
baz=63,SNR=64
DAU **Daniels Canyon** 63.26 329 eP P 21 49 25.7 +0.6
DAU e 21 50 02.3
BLG **Laguna Peak** 63.29 319 ⇑P P 21 49 25.7 +0.2
baz=64
LRMC **Laurel Mountai** 63.33 321 ⇓P P 21 49 26.0 +0.4
baz=64
NLU **North Lily Min** 63.33 328 eP P 21 49 25.4 -0.2
comp=Z,14nm,0.8s,mb4.9
NLU PP PP 21 51 42.5 -3.3
N17A **Moffit Pass** 63.45 330 ⇓P P 21 49 26.5 +0.2
baz=64,SNR=37
M18A **Lyman** 63.45 331 ⇑P P 21 49 25.7 -0.6
baz=64,SNR=12
FURC **Furnace Creek,** 63.49 323 ⇓P P 21 49 26.9 +0.2
baz=64,SNR=10
R12A **Pony Springs,** 63.49 325 ⇑P P 21 49 27.5 +0.8
baz=64,SNR=33
JLU **Jordanelle** 63.50 329 eP P 21 49 27.2 +0.5
P14A **Drum Mountains** 63.58 327 ⇑P P 21 49 28.0 +0.8
baz=64,SNR=56
BSC **Santa Cruz Isl** 63.58 319 ⇑P P 21 49 27.6 +0.3
baz=64
MPMC **Manual Prospec** 63.60 322 ⇑P P 21 49 27.5 +0.1
baz=64,SNR=24
K20A **Yellowstone Ra** 63.62 333 ⇓P P 21 49 26.8 -0.6
baz=64,SNR=38
Q13A **Wheeler Ranch,** 63.62 326 ⇓P P 21 49 27.9 +0.4
baz=64,SNR=41
L19A **Farson** 63.64 332 ⇓P P 21 49 27.4 -0.1
baz=64,SNR=41
S11A **Rachel** 63.65 324 ⇑P P 21 49 28.6 +0.9
baz=64,SNR=5.1
N16A **Rees Ranch, Co** 63.71 329 ⇓P P 21 49 28.5 +0.5
baz=64,SNR=23
O15A **The Old Anders** 63.77 328 ⇓P P 21 49 28.9 +0.5
baz=64,SNR=13
M17A **Scullys Gap (B** 63.78 330 ⇓P P 21 49 27.9 -0.5
baz=64,SNR=48
ARVC **Arvin** 63.80 320 ⇑P P 21 49 29.1 +0.3
baz=64
L18A **Fontenelle, Gr** 63.82 331 ⇑P P 21 49 28.6 -0.2
baz=64,SNR=11
NOQ **North Oquirrh** 63.87 329 eP P 21 49 29.5 +0.4
comp=Z,39nm,0.7s,mb5.3
DUG **Dugway** 63.89 328 ⇑P P 21 49 29.6 +0.4
baz=64,SNR=68
DUG **Dugway** 63.89 328 eP P 21 49 29.8 +0.6
DUG e 21 50 06.5
DUG pmax pmax
comp=Z,87nm,0.8s,mb5.6
DUG **Dugway** 63.89 328 eP P 21 49 29.8 +0.6
comp=Z,87nm,0.8s,mb5.6
DUG ePcP PcP 21 50 06.5 +2.2
ISA **Isabella** 63.93 321 ⇑P P 21 49 30.0 +0.4
baz=64,SNR=26
ISA **Isabella** 63.93 321 eP P 21 49 30.0 +0.4
ISA pmax pmax
comp=Z,37nm,0.9s,mb5.2
ISA **Isabella** 63.93 321 eP P 21 49 30.0 +0.4
comp=Z,37nm,0.9s,mb5.2
K19A **Absolon Red Bu** 63.98 332 ⇑P P 21 49 29.0 -0.8
baz=64,SNR=34
P13A **Bates Ranch, G** 63.98 327 ⇑P P 21 49 30.7 +0.9
baz=64
AGMN **Agassiz Refuge** 64.03 344 eP P 21 49 28.7 -1.3
comp=Z,69nm,0.9s,mb5.5
R11A **Troy Canyon, C** 64.05 325 ⇑P P 21 49 31.0 +0.7
baz=64,SNR=44

Q12A **Willow Creek R** 64.12 326 ⇑P P 21 49 31.2 +0.4
baz=64,SNR=30
M16A **Huntsville** 64.13 330 ⇓P P 21 49 30.5 -0.2
baz=64,SNR=20
GRAC **Grapevine Rang** 64.16 323 ⇓P P 21 49 31.8 +0.7
baz=64
CWC **Cottonwood Cre** 64.20 322 ⇑P P 21 49 31.9 +0.5
baz=64
N15A **Stansbury Isla** 64.25 329 ⇓P P 21 49 31.3 -0.3
baz=64,SNR=16
BW06 **Boulder Array** 64.26 332 ⇓P P 21 49 30.8 -0.7
baz=64,SNR=20
BW06 **Boulder Array** 64.26 332 eP P 21 49 30.6 -1.0
comp=Z,14nm,0.8s,mb4.8
PDAR **Pinedale Array** 64.26 332 P P 21 49 30.9 -0.7
comp=Z,11nm,0.7s,mb4.8,baz=140,slow=7.8,SNR=66
PDAR S S 21 58 02.9 -1.0
comp=Z,0.2nm,0.4s,baz=70,slow=13,SNR=2.3
PDAR PKPPKP 22 18 20.9
comp=Z,0.2nm,0.3s,baz=46,slow=6.4,SNR=4.2
PDAR LR LR 22 19 00.0
comp=Z,102nm,21.1s,baz=137,slow=37
PKM **Peak Mountain** 64.28 319 ⇑P P 21 49 32.2 +0.3
baz=64,SNR=26
HWUT **Hardware Ranch** 64.32 330 eP P 21 49 31.2 -0.8
comp=Z,55nm,0.8s,mb5.4
S10A **Tonopah Range,** 64.33 324 ⇑P P 21 49 32.8 +0.7
baz=64,SNR=58
L17A **Cokeville** 64.36 331 ⇑P P 21 49 31.6 -0.7
baz=65,SNR=7.5
K18A **Toltan Ranch,** 64.38 332 ⇑P P 21 49 32.6 +0.2
baz=65,SNR=22
R10A **Warm Springs** 64.42 324 ⇑P P 21 49 33.9 +1.2
baz=65,SNR=5.2
VES **Vestal, Richgr** 64.42 321 ⇓P P 21 49 33.0 +0.2
baz=65,SNR=11
Q11A **Duckwater** 64.44 325 ⇑P P 21 49 33.4 +0.6
baz=65,SNR=66
O13A **Hicks Ranch, I** 64.45 327 ⇓P P 21 49 33.5 +0.6
baz=65,SNR=6.1
P12A **McGill** 64.47 326 ⇑P P 21 49 33.8 +0.7
baz=65,SNR=47
TAOE **Nuku Hiva Isla** 64.52 266 eLR LR 22 08 33.2
comp=Z,571nm,26.3s
SPUT **South Promonto** 64.53 329 eP P 21 49 33.4 0.0
comp=Z,77nm,1.4s,mb5.3
BGU **Big Grassy Mou** 64.54 328 eP P 21 49 33.2 -0.3
comp=Z,31nm,1.0s,mb5.1
L16A **Fish Haven** 64.56 330 ⇓P P 21 49 33.1 -0.5
baz=65,SNR=18
N14A **Grayback Hills** 64.56 328 ⇑P P 21 49 33.7 +0.1
baz=65,SNR=8.0
M15A **Larsen Ranch,** 64.64 329 ⇓P P 21 49 33.7 -0.4
baz=65,SNR=21
SMMC **Simmler** 64.65 320 ⇓P P 21 49 35.1 +0.7
baz=65
TIN **Tinemaha** 64.70 322 ⇑P P 21 49 35.4 +0.8
baz=65
J18A **Kendall Valley** 64.81 332 ⇑P P 21 49 34.8 -0.4
baz=65,SNR=75
RCTC **Rector, Farmer** 64.82 321 ⇓P P 21 49 34.9 -0.5
baz=65
Q10A **Clear Creek Ra** 64.84 325 ⇑P P 21 49 36.4 +0.9
baz=65,SNR=29
K17A **Gardner Place,** 64.88 331 ⇑P P 21 49 35.2 -0.4
baz=65,SNR=12
O12A **Currie** 64.95 327 ⇓P P 21 49 36.6 +0.4
baz=65
AHID **Auburn Hatcher** 64.97 331 eP P 21 49 33.8 -2.5
comp=Z,50nm,0.7s,mb5.5
P11A **Circle Ranch,** 64.99 326 ⇓P P 21 49 37.1 +0.7
baz=65
L15A **Malad City** 65.02 330 ⇑P P 21 49 36.1 -0.4
baz=65,SNR=41
HVU **Hansel Valley** 65.04 329 eP P 21 49 36.5 -0.2
HVU pmax pmax
comp=Z,48nm,0.8s,mb5.4
HVU **Hansel Valley** 65.04 329 eP P 21 49 36.5 -0.3
comp=Z,48nm,0.8s,mb5.4
N13A **Wendover, West** 65.09 328 ⇑P P 21 49 37.1 +0.1
baz=65
N13A **Wendover, West** 65.09 328 eP P 21 49 36.8 -0.3
comp=Z,36nm,1.0s,mb5.2
MTUM **Tungsten Hills** 65.10 322 eP P 21 49 37.7 +0.5
I18A **Diamond G Ranc** 65.11 332 ⇑P P 21 49 37.1 0.0
baz=65,SNR=47
M14A **Sheep Mountain** 65.13 329 ⇑P P 21 49 37.1 -0.1
baz=65,SNR=86
J17A **Brown Place, J** 65.25 332 ⇑P P 21 49 38.0 0.0
baz=66,SNR=6.2
K16A **Soda Springs** 65.26 331 ⇓P P 21 49 38.3 +0.2
baz=66,SNR=13
REDW **Red Top Meadow** 65.32 332 eP P 21 49 38.3 -0.2
comp=Z,74nm,1.5s,mb5.3
O11A **Cowboy Ranch,** 65.35 326 ⇓P P 21 49 39.2 +0.5
baz=66,SNR=40
SNOW **Snow King Moun** 65.35 332 eP P 21 49 39.1 +0.4
comp=Z,27nm,0.6s,mb5.2
LOHW **Long Hollow** 65.39 332 eP P 21 49 39.0 0.0
comp=Z,27nm,0.7s,mb5.2
P10A **Eureka** 65.43 325 ⇑P P 21 49 39.9 +0.6
baz=66,SNR=12
M13A **Montello** 65.44 328 ⇓P P 21 49 38.8 -0.5
baz=66,SNR=7.4
M13A **Montello** 65.44 328 eP P 21 49 39.0 -0.3
comp=Z,15nm,0.9s,mb4.8
TPAW **Teton Pass** 65.46 332 eP P 21 49 39.4 0.0
comp=Z,21nm,0.6s,mb5.1
L14A **Malta** 65.47 329 ⇑P P 21 49 39.1 -0.4
baz=66,SNR=55
RRI2 **Red Ridge** 65.52 331 eP P 21 49 39.9 +0.1
comp=Z,105nm,0.8s,mb5.7
N12A **Clover Valley,** 65.53 327 ⇓P P 21 49 39.7 -0.2
baz=66,SNR=7.0
N12A **Clover Valley,** 65.53 327 eP P 21 49 40.1 +0.3
comp=Z,14nm,0.9s,mb4.8
ELK **Elko** 65.56 327 eP P 21 49 40.6 +0.5
K15A **Arbon** 65.60 330 ⇓P P 21 49 40.0 -0.3
baz=66,SNR=19
I17A **Pilgrim Ck.** 65.62 332 ⇑P P 21 49 41.1 +0.6
baz=66
DCID1 **Drake Creek** 65.65 331 eP P 21 49 41.0 +0.4
comp=Z,60nm,0.8s,mb5.5
NVAR **Mina Array Bea** 65.66 323 P P 21 49 41.0 +0.2
comp=Z,14nm,0.8s,mb4.8,baz=148,slow=7.2,SNR=25
NVAR PcP PcP 21 50 11.7 -0.1
comp=Z,6.8nm,0.7s,baz=126,slow=5.1,SNR=5.7
NVAR **Mina Array Bea** 65.66 323 P P 21 49 41.0 +0.2
NVAR PcP PcP 21 50 11.7 -0.1
IMW **Indian Meadow** 65.77 332 eP P 21 49 41.5 +0.2
comp=Z,43nm,1.0s,mb5.2
K14A **Jones Ranch, D** 65.81 330 ⇑P P 21 49 41.3 -0.4
baz=66,SNR=19
ULM **Lac du Bonnet** 65.83 345 P P 21 49 40.3 -1.3
comp=Z,56nm,0.8s,mb5.5,baz=158,slow=6.0,SNR=59
ULM LR LR 22 16 56.2
comp=Z,107nm,20.5s,baz=182,slow=34
ULM **Lac du Bonnet** 65.83 345 eP P 21 49 40.3 -1.3
comp=Z,62nm,0.9s,mb5.4
L13A **Double Diamond** 65.86 329 ⇓P P 21 49 42.1 +0.1
baz=66,SNR=26
M12A **Wells** 65.87 328 ⇓P P 21 49 41.7 -0.4
baz=66,SNR=14
N11A **Elko Archery C** 65.87 327 ⇑P P 21 49 42.1 0.0
baz=66
O10A **Cortez Mining,** 65.92 326 ⇓P P 21 49 43.0 +0.6
baz=66,SNR=8.3
LAO **LASA Array** 66.00 337 eP P 21 49 42.2 -0.6
comp=Z,17nm,0.8s,mb4.9
I16A **Newdale** 66.01 332 ⇑P P 21 49 43.1 +0.2
baz=66
LKWY **Lake** 66.04 333 eP P 21 49 44.7 +1.6
LKWY pmax pmax
comp=Z,41nm,0.9s,mb5.3
LKWY **Lake** 66.04 333 eP P 21 49 44.7 +1.6
comp=Z,41nm,0.9s,mb5.3
J15A **Blackfoot** 66.09 331 ⇑P P 21 49 43.5 +0.1
baz=66,SNR=30
YFT **Old Faithful** 66.15 332 eP P 21 49 42.3 -1.5
comp=Z,34nm,1.1s,mb5.1
N10A **Dunphy** 66.22 326 ⇓P P 21 49 44.4 +0.1
baz=66
G18A **Lazy EL Ranch,** 66.26 334 ⇑P P 21 49 44.4 -0.1
baz=66,SNR=30
YNR **Norris Junctio** 66.28 333 eP P 21 49 45.8 +1.1
comp=Z,27nm,0.7s,mb5.2
K13A **Stover Farm, H** 66.34 329 ⇓P P 21 49 44.9 -0.1
baz=66,SNR=10.0

M11A **Holland Ranch,** 66.34 327 ⇑P P 21 49 45.2 +0.2
baz=66,SNR=33
WAKR **Walker** 66.38 323 eP P 21 49 46.2 +0.8
YMR **Madison River** 66.38 332 eP P 21 49 45.3 0.0
comp=Z,52nm,0.7s,mb5.5
BMN **Battle Mountai** 66.41 326 eP P 21 49 46.1 +0.5
BMN pmax pmax
comp=Z,13nm,0.8s,mb4.8
BMN **Battle Mountai** 66.41 326 eP P 21 49 46.1 +0.6
comp=Z,13nm,0.8s,mb4.8
L12A **House Creek Ra** 66.45 328 ⇑P P 21 49 45.8 0.0
baz=67,SNR=20
SAO **San Andreas Ge** 66.48 320 eP P 21 49 46.5 +0.4
SAO pmax pmax
comp=Z,17nm,1.1s,mb4.8
SAO **San Andreas Ge** 66.48 320 eP P 21 49 46.5 +0.4
comp=Z,17nm,1.1s,mb4.8
H16A **Russell Place,** 66.53 332 ⇑P P 21 49 46.9 +0.6
baz=67,SNR=62
I15A **Monteview** 66.57 331 ⇑P P 21 49 46.9 +0.5
baz=67,SNR=6.5
CMB **Columbia Colle** 66.64 322 eP P 21 49 47.0 -0.1
CMB pmax pmax
comp=Z,17nm,1.0s,mb4.8
CMB **Columbia Colle** 66.64 322 eP P 21 49 47.0 -0.1
comp=Z,17nm,1.0s,mb4.8
GCMT **Greycliff** 66.68 334 eP P 21 49 47.5 +0.3
comp=Z,36nm,0.8s,mb5.3
QLMT **Earthquake Lak** 66.71 332 eP P 21 49 48.3 +0.9
K12A **Draper Farm, C** 66.74 329 ⇓P P 21 49 48.1 +0.5
baz=67,SNR=34
DGMT **Dagmar** 66.75 339 ⇑P P 21 49 47.6 +0.1
baz=67,SNR=10
DGMT **Dagmar** 66.75 339 eP P 21 49 47.9 +0.3
comp=Z,91nm,1.0s,mb5.6
F18A **Big Timber** 66.79 334 ⇑P P 21 49 47.9 0.0
baz=67,SNR=78
M10A **I.L. Ranch, Tu** 66.80 327 ⇓P P 21 49 47.9 -0.1
baz=67,SNR=9.5
L11A **Cat Creek Ranc** 66.84 328 ⇓P P 21 49 48.5 +0.2
baz=67,SNR=28
J13A **Cove Ranch, Pi** 66.94 330 ⇓P P 21 49 49.1 +0.2
baz=67,SNR=16
I14A **Mackay** 66.98 330 ⇑P P 21 49 49.7 +0.6
baz=67,SNR=58
WCN **Washoe City** 67.09 323 ⇓P P 21 49 50.7 +0.8
baz=67,SNR=7.5
H15A **Lima** 67.11 331 ⇓P P 21 49 50.6 +0.7
baz=67
PAHR **Pah Rah Range** 67.14 324 eP P 21 49 51.1 +0.9
comp=Z,84nm,0.9s,mb5.6
L10A **Juniper Basin** 67.16 327 ⇓P P 21 49 50.7 +0.4
baz=67,SNR=38
HLID **Hailey** 67.17 330 ⇑P P 21 49 50.7 +0.4
baz=67,SNR=44
HLID **Hailey** 67.17 330 eP P 21 49 50.7 +0.4
comp=Z,22nm,0.7s,mb5.1
G16A **Moss Hill, Enn** 67.19 332 ⇓P P 21 49 50.5 +0.1
baz=67,SNR=8.7
F17A **Fitzpatrick Pl** 67.20 333 ⇑P P 21 49 50.7 +0.2
baz=67,SNR=28
I13A **Wildhorse Cree** 67.29 330 ⇑P P 21 49 51.6 +0.6
baz=68,SNR=93
J12A **Stokes Ranch,** 67.29 329 ⇓P P 21 49 51.1 +0.1
baz=68,SNR=31
MCMT **McKenzie Canyo** 67.36 331 eP P 21 49 51.8 +0.3
comp=Z,14nm,0.7s,mb4.9
E18A **Harlowton** 67.40 334 ⇓P P 21 49 51.7 0.0
baz=68,SNR=41
K11A **Parker Ranch,** 67.42 328 ⇓P P 21 49 52.0 +0.1
baz=68,SNR=18
BOZ **Bozeman (W)** 67.43 333 ⇑P P 21 49 51.6 -0.3
baz=68,SNR=57
BOZ **Bozeman (W)** 67.43 333 eP P 21 49 51.6 -0.3
H14A **Leadore** 67.45 331 ⇑P P 21 49 52.4 +0.3
baz=68,SNR=49
G15A **Dillon** 67.45 332 ⇓P P 21 49 52.1 +0.1
baz=68,SNR=12
F16A **Kennard Place,** 67.53 333 ⇓P P 21 49 52.4 -0.2
baz=68,SNR=11
DLMT **Dillon** 67.65 332 eP P 21 49 53.5 +0.2
comp=Z,35nm,1.1s,mb5.1
I12A **Atlanta** 67.70 329 ⇑P P 21 49 54.1 +0.4
baz=68,SNR=15
E17A **Martinsdale** 67.72 334 ⇑P P 21 49 53.7 0.0
baz=68,SNR=32
MFID **Camas Ranch** 67.78 329 ⇑P P 21 49 54.6 +0.5
baz=68,SNR=76
BEKR **Beckwourth** 67.81 323 ⇑P P 21 49 55.0 +0.5
baz=68,SNR=29
H13A **Challis** 67.83 330 ⇓P P 21 49 54.7 +0.2
baz=68,SNR=54
D18A **Linhart Farms,** 67.85 335 ⇑P P 21 49 54.5 -0.1
baz=68,SNR=16
K10A **MacKenzie Ranc** 67.86 328 ⇑P P 21 49 55.0 +0.3
baz=68,SNR=62
LRM **Limekiln Ridge** 67.94 332 eP P 21 49 55.0 -0.1
G14A **Jackson** 67.96 331 ⇓P P 21 49 55.2 -0.1
baz=68
F15A **Butte** 67.97 332 ⇓P P 21 49 55.3 0.0
baz=68,SNR=17
SCHQ **Schefferville** 67.97 5 P P 21 49 54.7 -0.4
comp=Z,42nm,0.9s,mb5.2,baz=190,slow=4.7,SNR=30
SCHQ LR LR 22 22 16.0
comp=Z,58nm,19.4s,baz=254,slow=38
SCHQ **Schefferville** 67.97 5 eP P 21 49 54.8 -0.3
comp=Z,52nm,1.0s,mb5.3
H12A **Diamond D Ranc** 68.11 330 ⇑P P 21 49 56.5 +0.2
baz=68,SNR=26
OHCM **Honcut** 68.13 322 eP P 21 49 55.7 -0.8
E16A **East Helena** 68.14 333 ⇓P P 21 49 56.3 -0.1
baz=68,SNR=8.2
D17A **Six Diamond Ra** 68.19 334 ⇓P P 21 49 56.7 0.0
baz=68,SNR=27
I11A **Placerville** 68.20 329 ⇓P P 21 49 56.6 -0.2
baz=68,SNR=8.0
G13A **Cobalt** 68.22 331 ⇓P P 21 49 57.0 +0.1
baz=68,SNR=35
J10A **Berg Farm, Mel** 68.26 328 ⇑P P 21 49 57.0 -0.2
baz=68,SNR=6.1
HRY **Holter Researc** 68.34 333 eP P 21 49 58.1 +0.5
F14A **Wisdom** 68.35 332 ⇓P P 21 49 57.8 +0.1
baz=69,SNR=9.3
D16A **Dana Ranch, Ca** 68.47 334 ⇓P P 21 49 58.5 +0.1
baz=69
E15A **Deer Lodge** 68.48 333 ⇓P P 21 49 58.3 -0.1
baz=69,SNR=9.5
EGMT **Eagleton** 68.49 335 ⇓P P 21 49 58.1 -0.4
baz=69,SNR=13
EGMT **Eagleton** 68.49 335 eP P 21 49 58.2 -0.3
comp=Z,42nm,0.9s,mb5.3
WVOR **Wild Horse Val** 68.56 326 eP P 21 49 58.4 -0.7
WVOR pmax pmax
comp=Z,14nm,1.0s,mb4.8
WVOR **Wild Horse Val** 68.56 326 eP P 21 49 58.4 -0.7
comp=Z,14nm,1.0s,mb4.8
C17A **Wharram Farm,** 68.60 334 ⇓P P 21 49 59.0 -0.2
baz=69,SNR=14
J09A **Fry Pan Ranch,** 68.72 328 ⇓P P 21 49 60.0 -0.1
baz=69,SNR=12
I10A **Payette** 68.75 329 ⇑P P 21 50 00.3 0.0
baz=69
F13A **Darby** 68.78 331 ⇑P P 21 50 00.3 0.0
baz=69,SNR=24
H11A **Donnelly** 68.79 329 ⇓P P 21 49 59.9 -0.6
baz=69,SNR=15
B18A **Beardsley Farm** 68.80 336 ⇑P P 21 50 00.3 -0.1
baz=69,SNR=34
E14A **Clinton** 68.86 332 ⇑P P 21 50 01.2 +0.4
baz=69,SNR=30
HOPS **Hopland** 68.87 321 eP P 21 50 01.9 +0.8
comp=Z,254nm,2.8s,mb5.6
D15A **Lincoln** 68.90 333 ⇓P P 21 50 01.3 +0.2
baz=69,SNR=10
LBCM **Butte Creek Ri** 69.02 324 P P 21 50 01.8 -0.1
H10A **Noah's Angus R** 69.08 329 ⇑P P 21 50 01.3 -0.9
baz=69,SNR=11
J08A **Circle Bar Ran** 69.11 327 ⇑P P 21 50 02.2 -0.3
baz=69,SNR=13
MOD **Modoc** 69.12 325 eP P 21 50 02.8 +0.3
CHMT **Chamberlain Mo** 69.13 333 eP P 21 50 02.6 +0.1
B17A **L&G Farms, Che** 69.13 335 ⇓P P 21 50 01.9 -0.6
baz=69,SNR=7.6
I09A **Lost Marbles R** 69.15 328 ⇓P P 21 50 02.4 -0.3
baz=69,SNR=14
F12A **Elk City** 69.19 331 ⇓P P 21 50 02.8 -0.1
baz=69,SNR=26
A18A **Metzger Ranch,** 69.24 336 ⇓P P 21 50 02.7 -0.4

baz=70,SNR=42
D14A **Greenough** 69.37 333 ⇑P P 21 50 04.0 0.0
baz=70,SNR=14
MSO **Missoula** 69.37 332 eP P 21 50 04.4 +0.4
comp=Z,33nm,1.1s,mb5.1
G11A **Walters Elk Ra** 69.42 330 ⇑P P 21 50 04.2 -0.1
baz=70,SNR=33
SLMT **Seeley Lake** 69.48 333 eP P 21 50 04.9 +0.2
C15A **Salmond Ranch,** 69.50 334 ⇑P P 21 50 05.3 +0.5
baz=70,SNR=47
WDC **Whiskeytown Da** 69.55 323 eP P 21 50 03.7 -1.5
WDC pmax pmax
comp=Z,14nm,0.6s,mb5.0
WDC **Whiskeytown Da** 69.55 323 eP P 21 50 03.7 -1.6
comp=Z,14nm,0.6s,mb5.0
H09A **Durkee** 69.59 329 ⇓P P 21 50 05.0 -0.4
baz=70,SNR=5.6
B16A **M & M Farms, S** 69.61 334 ⇓P P 21 50 04.9 -0.5
baz=70
A17A **Triple J Farms** 69.61 335 ⇓P P 21 50 05.2 -0.2
baz=70,SNR=42
KCPM **Cahto Peak** 69.61 321 eP P 21 50 07.0 +1.3
comp=Z,36nm,1.0s,mb5.2
F11A **Grangeville** 69.72 330 ⇓P P 21 50 05.8 -0.3
baz=70,SNR=42
G10A **Bishop Farm, J** 69.77 329 ⇓P P 21 50 06.8 +0.3
baz=70,SNR=50
D13A **Huson** 69.81 332 ⇑P P 21 50 06.8 +0.1
baz=70,SNR=6.3
B15A **Bradely Ranch,** 69.89 334 ⇑P P 21 50 06.8 -0.3
baz=70,SNR=25
VNA1 **Neumayer--Stat** 69.90 161 eP P 21 50 06.3 -0.7
VNA1 e 21 52 42.5
SWMT **Swartz Lake** 69.91 333 eP P 21 50 07.9 +0.6
A16A **West Butte Ran** 69.98 335 ⇑P P 21 50 07.6 -0.1
baz=70,SNR=20
K05A **Summer Lake** 69.99 325 ⇑P P 21 50 08.6 +0.6
baz=70,SNR=9.4
H08A **Prairie City** 70.01 328 ⇑P P 21 50 08.5 +0.5
baz=70,SNR=81
E11A **Bogner Ranch,** 70.08 331 ⇑P P 21 50 07.9 -0.5
baz=70,SNR=19
HOG **Hogback Mounta** 70.13 325 P P 21 50 09.4 +0.7
I07A **Izee** 70.15 327 ⇓P P 21 50 09.4 +0.6
baz=70,SNR=52
YBMT **Yellow Bay** 70.18 333 eP P 21 50 09.4 +0.4
JTMT **Jette** 70.21 333 eP P 21 50 09.7 +0.5
B14A **Marquette Ranc** 70.23 334 ⇑P P 21 50 09.3 0.0
baz=70,SNR=27
C13A **Hot Springs** 70.29 332 ⇓P P 21 50 09.9 +0.3
baz=70,SNR=32
F10A **Beach Ranch, E** 70.30 330 ⇓P P 21 50 09.9 +0.2
baz=70,SNR=23
YBH **Yreka Blue Hor** 70.38 324 eP P 21 50 08.9 -1.4
YBH pmax pmax
comp=Z,28nm,1.1s
YBH **Yreka Blue Hor** 70.38 324 eP P 21 50 08.9 -1.4
comp=Z,28nm,1.1s,mb5.0
KHMM **Horse Mountain** 70.44 322 eP P 21 50 10.2 -0.5
comp=Z,36nm,1.1s,mb5.1
F09A **S2 Ranch, Elgi** 70.45 329 ⇓P P 21 50 10.9 +0.3
baz=71,SNR=11
A15A **Johnson Ranch,** 70.47 334 ⇓P P 21 50 10.1 -0.6
baz=71,SNR=15
BSMT **Bassoo Peak** 70.52 332 eP P 21 50 11.5 +0.4
E10A **Myers Farm, Un** 70.61 330 ⇑P P 21 50 11.6 0.0
baz=71
D11A **Klaveano Farm,** 70.64 331 ⇓P P 21 50 11.4 -0.4
baz=71
G08A **Pilot Rock** 70.69 328 ⇓P P 21 50 12.3 +0.1
baz=71,SNR=15
C12B **Naegeli Ranch,** 70.73 332 ⇑P P 21 50 12.9 +0.6
baz=71
LNOR **Lincton Mounta** 70.75 329 eP P 21 50 12.4 -0.1
A14A **Double T Ranch** 70.76 334 ⇓P P 21 50 12.1 -0.4
baz=71,SNR=21
B13A **Whitefish** 70.77 333 ⇓P P 21 50 12.6 +0.1
baz=71,SNR=6.6
VIPM **Ingram Point** 71.03 327 P P 21 50 14.9 +0.7
WALA **Waterton Lakes** 71.04 334 eP P 21 50 14.2 +0.1
comp=Z,1.2nm,1.0s
D10A **Wagner Farm, O** 71.09 331 ⇓P P 21 50 14.1 -0.5
baz=71,SNR=6.1
E09A **Wood Farm, Sta** 71.13 330 ⇑P P 21 50 14.4 -0.4
baz=71,SNR=6.7
JBO **Jordan Butte** 71.26 328 P P 21 50 16.5 +0.9
B12A **Libby** 71.34 332 ⇑P P 21 50 16.5 +0.6
baz=72
FFC **Flin Flon** 71.48 344 P P 21 50 15.5 -1.2
comp=Z,129nm,0.9s,mb5.8,SNR=12
FFC **Flin Flon** 71.48 344 eP P 21 50 15.7 -1.0
FFC pmax pmax
comp=Z,22nm,1.0s,mb4.9
FFC **Flin Flon** 71.48 344 eP P 21 50 15.7 -1.0
comp=Z,22nm,1.0s,mb5.0
G06A **Carlson Farm,** 71.52 327 ⇑P P 21 50 17.9 +0.7
baz=72,SNR=6.5
LIC **Lamto** 71.53 79 eP P 21 50 16.1 -1.8
comp=Z,109nm,1.1s,mb5.6
LIC **Lamto** 71.53 79 ⇑iP P 21 50 16.3 -1.6
comp=Z,93nm,1.1s,mb5.2,baz=252
LIC eMLR MLR
comp=Z,280nm,21.5s
LIC **Lamto** 71.53 79 ⇑iP P 21 50 16.3 -1.6
comp=Z,46nm,1.1s,mb5.2
LIC LR LR
comp=Z,140nm,21.5s
E08A **Dider Farm, El** 71.57 329 ⇑P P 21 50 17.1 -0.3
baz=72
D09A **Jones Farm, Ri** 71.60 330 ⇑P P 21 50 17.6 0.0
baz=72,SNR=9.1
F07A **Phinny Hill Vi** 71.60 328 ⇑P P 21 50 18.3 +0.7
baz=72
C10A **Spilker Farm,** 71.66 331 ⇑P P 21 50 18.1 +0.2
baz=72
TIC **Toumodi** 71.66 78 eP P 21 50 17.0 -1.7
comp=Z,117nm,1.2s,mb5.6
B11A **Sandpoint** 71.67 332 ⇑P P 21 50 18.0 0.0
baz=72,SNR=5.5
A12A **Yaak River Ran** 71.71 333 ⇓P P 21 50 18.8 +0.6
baz=72,SNR=8.4
HAWA **Hanford** 71.74 329 eP P 21 50 19.1 +0.6
comp=Z,30nm,0.9s,mb5.1
RSW **Rattlesnake Hi** 71.77 329 eP P 21 50 19.6 +0.9
DBIC **Dimbokro** 71.82 78 P P 21 50 18.9 -0.8
comp=Z,43nm,1.1s,mb5.2,baz=237,slow=5.7,SNR=22
DBIC **Dimbokro** 71.82 78 eP P 21 50 19.0 -0.7
DBIC pmax pmax
comp=Z,51nm,1.0s
DBIC **Dimbokro** 71.82 78 eP P 21 50 19.0 -0.7
comp=Z,51nm,1.0s,mb5.3
KIC **Kosan Boka** 71.85 79 eP P 21 50 18.3 -1.5
comp=Z,146nm,1.0s,mb5.8
NEW **Newport** 71.89 332 eP P 21 50 19.3 0.0
NEW e pP 21 50 37.8 -0.2
NEW pmax pmax
comp=Z,22nm,1.1s
NEW **Newport** 71.89 332 eP P 21 50 19.3 0.0
comp=Z,22nm,1.1s,mb4.9
NEW ePcP PcP 21 50 37.8 +0.1
D08A **Wollman Farm,** 71.89 330 ⇑P P 21 50 19.4 +0.1
baz=72
B10A **Chitwood Farm,** 71.96 331 ⇑P P 21 50 19.4 -0.3
baz=72
H04A **Detroit Lake** 71.98 326 ⇑P P 21 50 19.6 -0.4
baz=72,SNR=10.0
E07A **Sunnyside** 72.02 329 ⇑P P 21 50 20.7 +0.7
baz=72
OD2 **Odessa Site #2** 72.03 330 P P 21 50 20.4 +0.3
KEBM **Edson Butte** 72.03 324 eP P 21 50 20.4 +0.1
comp=Z,52nm,1.0s,mb5.3
A11A **Hall Mountain,** 72.05 332 ⇓P P 21 50 20.4 +0.2
baz=72,SNR=9.6
C09A **Chrisman Ranch** 72.10 331 ⇑P P 21 50 20.6 0.0
baz=72
HOOD **Mount Hood Mea** 72.11 327 eP P 21 50 22.2 +1.5
comp=Z,99nm,0.9s,mb5.6
PPT **Papeete** 72.20 256 eS S 21 59 37.0 -2.6
comp=Z,112nm,26.0s
PPT eLR LR 22 12 08.8
comp=Z,156nm,29.2s
PPT **Papeete** 72.20 256 LR LR 22 13 43.5
comp=Z,168nm,18.8s,baz=239,slow=29
G04A **Mulino** 72.48 327 ⇑P P 21 50 22.7 -0.2
baz=73
B09A **Rice** 72.48 331 ⇓P P 21 50 22.7 -0.1
baz=73,SNR=10

COR **Corvallis** 72.53 326 eP P 21 50 24.3 +1.1
MPOR **Mary's Peak** 72.61 325 P P 21 50 24.4 +0.7
WTV **Waterville** 72.85 330 P P 21 50 25.6 +0.6
F04A **Amboy** 72.92 327 ⇓P P 21 50 25.5 0.0
baz=73,SNR=9.9
ETW **Entiat** 72.97 329 eP P 21 50 26.4 +0.6
B08A **Colville Reser** 73.00 330 ⇓P P 21 50 25.8 -0.1
baz=73,SNR=13
LON **Longmire** 73.14 328 eP P 21 50 26.6 -0.2
LON pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
LON **Longmire** 73.14 328 eP P 21 50 26.6 -0.2
comp=Z,8.6nm,0.9s,mb4.6
HEBO **Mount Hebo** 73.17 326 P P 21 50 27.4 +0.4
FCC **Fort Churchill** 73.39 349 eP P 21 50 27.3 -0.6
comp=Z,1.7nm,1.0s,mb3.8
D05A **Enumclaw** 73.52 328 ⇓P P 21 50 29.1 +0.1
baz=74,SNR=6.9
E03A **Lebam** 73.92 327 ⇓P P 21 50 31.8 +0.4
baz=74
A07A **Ashnola River,** 73.98 331 ⇑P P 21 50 32.3 +0.6
baz=74,SNR=17
EDM **Edmonton** 73.99 337 eP P 21 50 30.5 -1.1
RPW **Rockport** 74.12 330 eP P 21 50 32.4 -0.1
B06A **Marblemount** 74.16 330 ⇑P P 21 50 32.2 -0.5
baz=74
JCW **Jim Creek** 74.16 329 eP P 21 50 32.2 -0.5
GNW **Green Mountain** 74.20 328 eP P 21 50 32.2 -0.8
comp=Z,26nm,1.4s,mb4.8
GNW ePcP PcP 21 50 45.7 -1.9
CMW **Cultus Mountai** 74.41 329 P P 21 50 34.0 -0.2
NLWA **Neilton Lookou** 74.63 328 ⇑P P 21 50 36.2 +0.7
baz=75,SNR=13
NLWA **Neilton Lookou** 74.63 328 eP P 21 50 36.3 +0.9
A05A **Maple Falls** 74.77 330 ⇑P P 21 50 36.0 -0.2
baz=75
PGC **Sidney** 75.22 329 eP P 21 50 39.8 +1.0
comp=Z,4.3nm,1.4s,mb4.0
MAIT **Maitri** 76.46 160 eP P 21 50 45.7 +0.1
MAIT eE 21 50 57.9
NVL **N'lazarevskaya** 76.49 160 eP P 21 50 43.2 -2.6
NVL pmax pmax
comp=Z,57nm,1.4s,mb5.1
QSPA **South Pole Qui** 77.04 180 P P 21 50 49.1 +0.4
comp=Z,24nm,0.9s,mb4.9,baz=153,slow=2.7,SNR=8.9
QSPA **South Pole Qui** 77.04 180 P P 21 50 49.1 +0.4
PFVI **Vila Bisbo** 79.26 48 eP P 21 51 03.4 +1.7
comp=Z,129nm,1.4s,mb5.6
MORF **Marmelete** 79.46 48 eP P 21 51 04.7 +1.9
comp=Z,134nm,1.8s,mb5.5
PTEO **Sao Teotonio** 79.51 47 eP P 21 51 05.0 +1.9
comp=Z,129nm,1.3s,mb5.6
TOA0 **Torodi Ar. Sit** 79.81 74 eP P 21 51 04.5 -0.7
TORD **Torodi Ar. Bea** 79.81 74 P P 21 51 04.6 -0.6
comp=Z,86nm,0.9s,mb5.6,baz=270,slow=6.3,SNR=348
PBDV **Barranco-do-Ve** 79.95 48 eP P 21 51 06.6 +1.1
comp=Z,86nm,1.4s,mb5.4
PCVE **Castro Verde** 80.04 48 eP P 21 51 08.5 +2.6
comp=Z,108nm,1.0s,mb5.6
PVAQ **Vaqueiros** 80.17 48 eP P 21 51 08.3 +1.6
comp=Z,30nm,2.1s,mb4.8
PBEJ **Beja** 80.33 47 eP P 21 51 09.0 +1.5
comp=Z,48nm,1.5s,mb5.1
EGRO **El Granado** 80.40 48 P P 21 51 09.2 +1.4
comp=Z,39nm,1.0s,mb5.2
EVO **Evora** 80.44 47 eP P 21 51 08.4 +0.3
comp=Z,95nm,1.0s,mb5.3
EVO eMLR MLR
comp=Z,97nm,22.5s
EVO **Evora** 80.44 47 eP P 21 51 09.2 +1.1
comp=Z,38nm,1.4s,mb5.0
PTOM **Tomar** 80.62 46 eP P 21 51 10.2 +1.2
comp=Z,103nm,1.1s,mb5.6
MDT **Midelt** 80.69 53 P P 21 51 10.7 +1.1
comp=Z,23nm,0.9s,mb5.0,baz=256,slow=5.0,SNR=42
PESTR **Estremoz** 80.88 47 eP P 21 51 11.6 +1.2
comp=Z,49nm,1.8s,mb5.0
PBAR **Barrancos** 80.98 47 eP P 21 51 12.3 +1.3
comp=Z,42nm,1.8s,mb5.0
EMIN **Mina Concepcio** 81.08 48 P P 21 51 12.5 +1.0
comp=Z,256nm,2.5s,mb5.6
EBAD **Badajoz** 81.24 47 P P 21 51 13.2 +0.9
comp=Z,145nm,2.5s,mb5.4
PMRV **Marv??o** 81.25 46 eP P 21 51 12.8 +0.4
comp=Z,28nm,1.6s,mb4.8
ESPR **Espera** 81.31 49 P P 21 51 14.1 +1.3
comp=Z,118nm,1.9s,mb5.4
PCBR **Castelo Branco** 81.36 46 eP P 21 51 13.8 +0.8
comp=Z,42nm,1.3s,mb5.1
EJIF **Jimena Fronter** 81.43 50 P P 21 51 14.8 +1.4
EJIF pmax pmax
comp=Z,85nm,1.7s,mb5.3
EJIF **Jimena Fronter** 81.43 50 P P 21 51 14.8 +1.4
comp=Z,85nm,1.7s,mb5.3
PVIS **Viseu** 81.45 45 eP P 21 51 14.3 +0.9
comp=Z,99nm,1.3s,mb5.5
EZAM **Zamans** 81.53 43 P P 21 51 14.5 +0.7
EZAM pmax pmax
comp=Z,40nm,0.7s,mb5.4
EZAM **Zamans** 81.53 43 P P 21 51 14.5 +0.8
comp=Z,40nm,0.7s,mb5.4
MTE **Manteigas** 81.56 45 eP P 21 51 15.1 +1.1
comp=Z,74nm,1.6s,mb5.3
MTE **Manteigas** 81.56 45 eP P 21 51 15.1 +1.1
YKA **Yellowknife Ar** 81.60 342 P P 21 51 12.7 -0.9
comp=Z,43nm,0.8s,mb5.3,baz=137,slow=5.6,SNR=279
YKA PKKPbc PKKPbc 22 09 45.7 -3.8
comp=Z,0.2nm,0.6s,baz=311,slow=2.8,SNR=5.1
YKA LR LR 22 32 13.5
comp=Z,7.7nm,19.3s,baz=150,slow=39
YKA **Yellowknife Ar** 81.60 342 P P 21 51 12.7 -0.9
YKA PKKPbc PKKPbc 22 09 45.7 -3.8
YKA LR LR 22 32 13.5
SFJD **Kangerlussuaq** 81.76 9 iP P 21 51 13.1 -1.3
SFJD pmax pmax
comp=Z,15nm,0.9s,mb4.8
SFJD **Kangerlussuaq** 81.76 9 iP P 21 51 13.1 -1.3
comp=Z,15nm,0.9s,mb4.8
PCAB **Cabril** 81.78 44 eP P 21 51 16.1 +1.0
comp=Z,94nm,1.4s,mb5.4
PVRL **Vila Real** 81.81 44 eP P 21 51 16.4 +1.1
comp=Z,69nm,1.5s,mb5.3
ELOB **Lobios** 81.83 44 P P 21 51 16.0 +0.6
comp=Z,27nm,0.9s,mb5.1
STS **Santiago** 81.95 43 P P 21 51 17.7 +1.7
STS pmax pmax
comp=Z,19nm,0.8s,mb5.0
STS **Santiago** 81.95 43 P P 21 51 17.7 +1.8
comp=Z,19nm,0.8s,mb5.0
EMIJ **Mijas** 81.99 50 P P 21 51 17.4 +1.0
comp=Z,24nm,0.7s,mb5.1
MVO **Moncorvo** 82.23 45 eP P 21 51 18.6 +1.1
comp=Z,99nm,1.2s,mb5.5
ERUA **La Rua** 82.67 44 P P 21 51 21.1 +1.3
ERUA pmax pmax
comp=Z,29nm,1.0s,mb5.1
ERUA **La Rua** 82.67 44 P P 21 51 21.1 +1.3
comp=Z,29nm,1.0s,mb5.1
ELOJ **Sierra Loja** 82.68 49 P P 21 51 21.8 +1.9
ELOJ pmax pmax
comp=Z,80nm,1.2s,mb5.4
ELOJ **Sierra Loja** 82.68 49 P P 21 51 21.8 +1.9
comp=Z,80nm,1.2s,mb5.4
PBRG **Braganca** 82.70 44 eP P 21 51 21.0 +1.1
comp=Z,115nm,1.4s,mb5.5
EADA **Adamuz** 82.76 48 P P 21 51 21.3 +1.0
comp=Z,35nm,0.8s,mb5.2
ECAL **Calabor** 82.76 44 P P 21 51 21.2 +1.0
comp=Z,77nm,1.0s,mb5.5
ERON **Agron** 82.88 50 P P 21 51 22.2 +1.2
comp=Z,25nm,0.8s,mb5.1
EPON **Pontenova** 83.06 43 P P 21 51 22.8 +1.1
comp=Z,52nm,1.1s,mb5.3
SBA **Scott Base** 83.07 191 eP P 21 51 21.7 +0.4
ECOG **Cogollos-Vega** 83.16 49 P P 21 51 23.8 +1.4
ECOG pmax pmax
comp=Z,33nm,0.8s,mb5.2
ECOG **Cogollos-Vega** 83.16 49 P P 21 51 23.8 +1.4
comp=Z,33nm,0.8s,mb5.2
EBAN **Banos Encina** 83.33 48 P P 21 51 24.5 +1.2
EBAN pmax pmax
comp=Z,34nm,0.8s,mb5.2
EBAN **Banos Encina** 83.33 48 P P 21 51 24.5 +1.2
comp=Z,34nm,0.8s,mb5.2
PAB **San Pablo** 83.45 47 eP P 21 51 24.8 +0.9
PAB e pP 21 51 45.3 +2.3
PAB pmax pmax
comp=Z,102nm,1.3s,mb5.5
PAB **San Pablo** 83.45 47 eP P 21 51 24.8 +0.9
comp=Z,102nm,1.3s,mb5.5
PAB e pP 21 51 45.3 +2.3
EBER **Berja** 83.52 50 P P 21 51 25.5 +1.2
comp=Z,518nm,3.0s
EQES **Quesada** 83.72 49 P P 21 51 25.9 +0.7
comp=Z,45nm,0.8s,mb5.3
ESDC **Sonseca Array** 83.78 47 P P 21 51 26.5 +0.9
comp=Z,33nm,0.9s,mb5.2,baz=254,slow=5.2,SNR=79
ESDC **Sonseca Array** 83.78 47 ⇓P P 21 51 26.4 +0.8
comp=Z,27nm,1.1s,mb5.0
ESLA **Sonseca Array** 83.78 47 eP P 21 51 25.9 +0.4
GUD **Guadarrama** 84.02 46 P P 21 51 27.9 +1.2
GUD pmax pmax
comp=Z,12nm,0.8s,mb4.8
GUD **Guadarrama** 84.02 46 P P 21 51 27.9 +1.2
comp=Z,12nm,0.8s,mb4.8
ENIJ **Nijar** 84.06 50 P P 21 51 27.0 0.0
ENIJ pmax pmax
comp=Z,32nm,0.5s,mb5.4
ENIJ **Nijar** 84.06 50 P P 21 51 27.0 0.0
comp=Z,32nm,0.5s,mb5.4
EHUE **Huescar** 84.08 49 P P 21 51 27.3 +0.2
EHUE pmax pmax
comp=Z,19nm,0.7s,mb5.0
EHUE **Huescar** 84.08 49 P P 21 51 27.3 +0.2
comp=Z,19nm,0.7s,mb5.0
EARI **Arriondas** 84.34 43 P P 21 51 29.2 +0.9
comp=Z,22nm,1.3s,mb4.8
DLBC **Dease Lake** 84.38 334 eP P 21 51 27.3 -0.9
EVIA **Vianos** 84.44 48 P P 21 51 30.0 +1.1
EVIA pmax pmax
comp=Z,42nm,0.8s,mb5.3
EVIA **Vianos** 84.44 48 P P 21 51 30.0 +1.1
comp=Z,42nm,0.8s,mb5.3
EMUR **La Murta** 85.08 50 P P 21 51 32.4 +0.2
comp=Z,21nm,1.0s,mb5.0
ETOB **Tobarra** 85.14 49 P P 21 51 33.2 +0.7
comp=Z,24nm,0.8s,mb5.2
ELAN **Lanestosa** 85.51 44 P P 21 51 34.6 +0.5
comp=Z,14nm,0.9s,mb4.9
ETOR **Torete** 85.56 47 P P 21 51 35.7 +1.2
ETOR pmax pmax
comp=Z,13nm,1.0s,mb4.8
ETOR **Torete** 85.56 47 P P 21 51 35.7 +1.2
comp=Z,13nm,1.0s,mb4.8
ECRI **Cripan** 85.90 45 P P 21 51 36.6 +0.5
ECRI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ECRI **Cripan** 85.90 45 P P 21 51 36.6 +0.4
comp=Z,9.8nm,0.8s,mb4.8
TAM **Tamanrasset** 85.97 66 eP P 21 51 37.8 +0.9
TAM e pP 21 51 59.1 +3.0
TAM pmax pmax
comp=Z,49nm,1.1s,mb5.3
TAM **Tamanrasset** 85.97 66 eP P 21 51 37.8 +0.9
comp=Z,49nm,1.1s,mb5.3
TAM e pP 21 51 59.1 +3.0
SIT **Sitka** 85.97 331 P P 21 51 35.5 -0.6
EBEN **Beniarda** 86.13 49 P P 21 51 38.0 +0.7
comp=Z,14nm,0.9s,mb4.9
SYO **Syowa Base** 86.14 161 ⇓eP P 21 51 35.0 -1.9
EMOS **Mosqueruela** 86.53 47 P P 21 51 39.8 +0.6
comp=Z,22nm,0.9s,mb5.1
SJPF **Ste Jean** 86.97 45 eP P 21 51 41.2 -0.1
comp=Z,51nm,1.2s,mb5.0
SJPF **Ste Jean** 86.97 45 eP P 21 51 41.2 -0.1
SJPF pmax pmax
comp=Z,25nm,1.2s,mb5.0
SJPF **Ste Jean** 86.97 45 eP P 21 51 41.2 -0.1
comp=Z,25nm,1.2s,mb5.0
ESAC **San Caprasio** 87.00 46 P P 21 51 42.1 +0.6
comp=Z,25nm,1.1s,mb5.1
BST **Brest** 87.07 39 eP P 21 51 41.7 0.0
SKAG **Skagway** 87.23 333 eP P 21 51 42.7 +0.5
comp=Z,70nm,1.7s,mb5.3
BORG **Borgarnes** 87.27 20 P P 21 51 43.6 +1.3
comp=Z,29nm,0.9s,mb5.2,baz=201,slow=2.6,SNR=8.6
BORG **Borgarnes** 87.27 20 eP P 21 51 42.4 +0.1
ERTA **Horta de San J** 87.30 47 P P 21 51 43.6 +0.6
comp=Z,21nm,0.9s,mb5.1
ETSF **Etsaut** 87.35 45 eP P 21 51 43.1 -0.1
comp=Z,65nm,1.5s,mb5.0
ETSF **Etsaut** 87.35 45 eP P 21 51 43.1 -0.1
ETSF pmax pmax
comp=Z,33nm,1.5s,mb5.0
ETSF **Etsaut** 87.35 45 eP P 21 51 43.1 -0.1
comp=Z,33nm,1.5s,mb5.0
QUIF **Quistinic** 87.48 40 eP P 21 51 42.9 -0.8
comp=Z,46nm,1.0s,mb5.1
QUIF **Quistinic** 87.48 40 eP P 21 51 42.9 -0.8
QUIF pmax pmax
comp=Z,23nm,1.0s,mb5.1
QUIF **Quistinic** 87.48 40 eP P 21 51 42.9 -0.8
comp=Z,23nm,1.0s,mb5.1
ROSF **Rostrenen** 87.57 39 eP P 21 51 43.3 -0.8
comp=Z,80nm,1.3s,mb5.3
ROSF **Rostrenen** 87.57 39 eP P 21 51 43.3 -0.8
ROSF pmax pmax
comp=Z,40nm,1.3s,mb5.3
ROSF **Rostrenen** 87.57 39 eP P 21 51 43.3 -0.8
comp=Z,40nm,1.3s,mb5.3
TSUM **Tsumeb** 87.62 109 eP P 21 51 44.8 -0.3
comp=Z,24nm,0.8s,mb5.3
EBIE **Bielsa** 87.76 45 P P 21 51 45.4 +0.2
comp=Z,16nm,0.7s,mb5.2
EPOB **Poblet** 87.97 47 P P 21 51 46.1 -0.1
comp=Z,8.4nm,1.0s,mb4.7
SGMF **Saint Gilles** 87.98 39 eP P 21 51 45.0 -1.1
EPF **Esparros** 88.01 45 eP P 21 51 46.0 -0.3
comp=Z,36nm,1.1s,mb5.0
EPF **Esparros** 88.01 45 eP P 21 51 46.0 -0.3
EPF pmax pmax
comp=Z,18nm,1.1s,mb5.0
EPF **Esparros** 88.01 45 eP P 21 51 46.0 -0.3
comp=Z,18nm,1.1s,mb5.0
MLS **Moulis** 88.51 45 eP P 21 51 45.7 -3.0
RES **Resolute Bay** 88.54 355 eP P 21 51 47.9 -0.3
SUMG **Summit** 88.69 10 eP P 21 51 49.1 +0.2
HYT **Haines Junctio** 88.87 334 eP P 21 51 52.7 +2.8
MFF **Saint Martin d** 88.91 42 eP P 21 51 49.6 -0.9
comp=Z,24nm,0.9s,mb4.9
MFF **Saint Martin d** 88.91 42 eP P 21 51 49.6 -0.9
MFF pmax pmax
comp=Z,12nm,0.9s,mb4.9
MFF **Saint Martin d** 88.91 42 eP P 21 51 49.6 -0.9
comp=Z,12nm,0.9s,mb4.9
LFF **La Frestale** 88.93 43 eP P 21 51 49.8 -0.8
comp=Z,43nm,1.0s,mb5.1
LFF **La Frestale** 88.93 43 eP P 21 51 49.8 -0.8
LFF pmax pmax
comp=Z,21nm,1.0s,mb5.1
LFF **La Frestale** 88.93 43 eP P 21 51 49.8 -0.8
comp=Z,21nm,1.0s,mb5.1
GRR **Gorron** 89.09 40 eP P 21 51 50.3 -1.0
comp=Z,50nm,0.9s,mb5.3
GRR **Gorron** 89.09 40 eP P 21 51 50.3 -1.0
GRR pmax pmax
comp=Z,25nm,0.9s,mb5.2
GRR **Gorron** 89.09 40 eP P 21 51 50.3 -1.0
comp=Z,25nm,0.9s,mb5.2
PNL **Peninsula** 89.14 333 eP P 21 51 50.7 -0.5
comp=Z,71nm,1.2s,mb5.6
FILF **Fillols** 89.40 46 eP P 21 51 52.6 -0.3
MTLF **Montolieu** 89.41 45 eP P 21 51 51.9 -1.0
comp=Z,28nm,1.0s,mb5.0
MTLF **Montolieu** 89.41 45 eP P 21 51 51.9 -1.0
MTLF pmax pmax
comp=Z,14nm,1.0s,mb5.0
MTLF **Montolieu** 89.41 45 eP P 21 51 51.9 -1.0
comp=Z,14nm,1.0s,mb5.0
FLN **La Foliniere** 89.45 39 eP P 21 51 52.2 -0.8
comp=Z,62nm,0.9s,mb5.3
FLN eMLR MLR
comp=Z,53nm,22.5s
FLN **La Foliniere** 89.45 39 eP P 21 51 52.2 -0.8
FLN pmax pmax
comp=Z,31nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,50nm,22.5s
FLN **La Foliniere** 89.45 39 eP P 21 51 52.2 -0.8
comp=Z,31nm,0.9s,mb5.3
FLN LR LR
comp=Z,50nm,22.5s
RJF **Les Rejaudoux** 89.57 43 eP P 21 51 52.6 -1.0
comp=Z,43nm,1.0s,mb5.2

RJF *e*MLR MLR
comp=Z,88nm,20.5s
RJF Les Rejaudoux 89.57 43 *e*P **P 21 51 52.6 -1.0**
RJF pmax pmax
comp=Z,21nm,1.0s,mb5.2
RJF MLR MLR
comp=Z,90nm,20.5s
RJF Les Rejaudoux 89.57 43 *e*P **P 21 51 52.6 -1.0**
comp=Z,21nm,1.0s,mb5.2
RJF LR LR
comp=Z,90nm,20.5s
LDF La Druitiere 89.62 40 *e*P **P 21 51 52.8 -1.0**
comp=Z,69nm,0.9s,mb5.5
LDF La Druitiere 89.62 40 *e*P **P 21 51 52.8 -1.0**
LDF pmax pmax
comp=Z,35nm,0.9s,mb5.5
LDF La Druitiere 89.62 40 *e*P **P 21 51 52.8 -1.0**
comp=Z,35nm,0.9s,mb5.5
CAF Calviac 89.81 44 *e*P **P 21 51 54.0 -0.8**
comp=Z,26nm,0.8s,mb5.1
CAF Calviac 89.81 44 *e*P **P 21 51 54.0 -0.8**
CAF pmax pmax
comp=Z,13nm,0.8s,mb5.1
CAF Calviac 89.81 44 *e*P **P 21 51 54.0 -0.8**
comp=Z,13nm,0.8s,mb5.1
EKA Eskdalemuir Ar 90.34 33 P **P 21 51 56.4 -0.6**
comp=Z,6.2nm,1.0s,mb4.7,baz=226,slow=5.7,SNR=5.8
TCF Toulx Ste Croi 90.34 42⇑ *i*P **P 21 51 56.1 -1.1**
comp=Z,13nm,0.8s,mb4.8
TCF Toulx Ste Croi 90.34 42⇑ *i*P **P 21 51 56.1 -1.1**
TCF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 90.34 42⇑ *i*P **P 21 51 56.1 -1.1**
comp=Z,6.7nm,0.8s,mb4.8
PYM Petit Puy Mans 90.70 43 *e*P **P 21 51 58.6 -0.3**
LBL Lubilhac 90.70 44 *e*P **P 21 51 59.0 +0.1**
SCO Scoresbysund 90.72 15⇓ *i*P **P 21 51 58.5 +0.1**
SCO pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
SCO Scoresbysund 90.72 15⇓ *i*P **P 21 51 58.5 +0.1**
comp=Z,7.6nm,1.0s,mb4.8
LASF Ste Croix 90.77 45 *e*P **P 21 51 58.8 -0.4**
comp=Z,25nm,0.9s,mb5.0
BGF Bois d'Agland 90.85 42 *e*P **P 21 51 58.6 -0.9**
comp=Z,34nm,0.8s,mb5.2
BGF Bois d'Agland 90.85 42 *e*P **P 21 51 58.6 -0.9**
BGF pmax pmax
comp=Z,17nm,0.8s,mb5.2
BGF Bois d'Agland 90.85 42 *e*P **P 21 51 58.6 -0.9**
comp=Z,17nm,0.8s,mb5.2
HYF Humbligny 90.93 42 *e*P **P 21 51 59.2 -0.7**
DAWY Dawson 91.20 337 *e*P **P 21 52 00.1 -0.7**
AVF Avril sur Loir 91.25 42 *e*P **P 21 52 00.2 -1.2**
comp=Z,30nm,1.2s,mb5.0
AVF Avril sur Loir 91.25 42 *e*P **P 21 52 00.2 -1.2**
AVF pmax pmax
comp=Z,15nm,1.2s,mb5.0
AVF Avril sur Loir 91.25 42 *e*P **P 21 52 00.2 -1.2**
comp=Z,15nm,1.2s,mb5.0
INK Inuvik 91.32 341 *e*P **P 21 52 00.4 -0.9**
SSF Saint Saulge 91.43 42 *e*P **P 21 52 00.8 -1.4**
comp=Z,20nm,1.2s,mb4.8
SSF Saint Saulge 91.43 42 *e*P **P 21 52 00.8 -1.4**
SSF pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
SSF Saint Saulge 91.43 42 *e*P **P 21 52 00.8 -1.4**
comp=Z,10.0nm,1.2s,mb4.8
SMF Signal de Mont 91.53 42 *e*P **P 21 52 01.7 -1.0**
comp=Z,34nm,1.0s,mb5.2
SMF Signal de Mont 91.53 42 *e*P **P 21 52 01.7 -1.0**
SMF pmax pmax
comp=Z,17nm,1.0s,mb5.2
SMF Signal de Mont 91.53 42 *e*P **P 21 52 01.7 -1.0**
comp=Z,17nm,1.0s,mb5.2
VIVF Saint-Julien-l 91.56 44 *e*P **P 21 52 02.5 -0.4**
comp=Z,33nm,1.0s,mb5.2
VIVF Saint-Julien-l 91.56 44 *e*P **P 21 52 02.5 -0.4**
VIVF pmax pmax
comp=Z,16nm,1.0s,mb5.2
VIVF Saint-Julien-l 91.56 44 *e*P **P 21 52 02.5 -0.4**
comp=Z,16nm,1.0s,mb5.2
SSB Saint Sauveur 91.59 44 *e*P **P 21 52 02.1 -0.9**
SSB pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
SSB Saint Sauveur 91.59 44 *e*P **P 21 52 02.1 -0.9**
comp=Z,7.1nm,0.9s,mb4.9
LOR Lormes 91.72 42 *e*P **P 21 52 02.3 -1.3**
comp=Z,15nm,1.0s,mb4.9
LOR *e*MLR MLR
comp=Z,88nm,20.5s
LOR Lormes 91.72 42 *e*P **P 21 52 02.3 -1.3**
LOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
LOR MLR MLR
comp=Z,90nm,20.5s
LOR Lormes 91.72 42 *e*P **P 21 52 02.3 -1.3**
comp=Z,7.7nm,1.0s,mb4.9
LOR LR LR
comp=Z,90nm,20.5s
SMRF Simiane la Rot 91.92 45 *e*P **P 21 52 02.5 -2.1**
BMRM Bremner River 92.03 333 *e*P **P 21 52 02.7 -2.0**
comp=Z,820nm,1.2s,mb6.8
BOSA Boshof 92.10 120 P **P 21 52 04.8 -1.1**
comp=Z,3.7nm,0.6s,mb4.8,baz=266,slow=4.6,SNR=8.9
BOSA LR LR 22 28 55.3
comp=Z,164nm,19.0s,baz=81,slow=32
BOSA Boshof 92.10 120 *e*P **P 21 52 05.0 -0.9**
EGAK Eagle 92.21 337 *e*P **P 21 52 04.5 -1.0**
ORIF Oris-en-Rattie 92.40 45 *e*P **P 21 52 06.8 0.0**
comp=Z,37nm,0.7s,mb5.4
ORIF *e*MLR MLR
comp=Z,94nm,20.0s
ORIF Oris-en-Rattie 92.40 45 *e*P **P 21 52 06.8 0.0**
ORIF pmax pmax
comp=Z,18nm,0.7s,mb5.4
ORIF Oris-en-Rattie 92.40 45 *e*P **P 21 52 06.8 0.0**
comp=Z,18nm,0.7s,mb5.4
FRF La Foret Royal 92.56 46 *e*P **P 21 52 06.7 -0.8**
comp=Z,38nm,1.1s,mb5.3
FRF La Foret Royal 92.56 46 *e*P **P 21 52 06.7 -0.8**
FRF pmax pmax
comp=Z,19nm,1.1s,mb5.3
FRF La Foret Royal 92.56 46 *e*P **P 21 52 06.7 -0.8**
comp=Z,19nm,1.1s,mb5.3
KEST Kesra 92.57 54 P **P 21 52 07.7 -0.1**
comp=Z,2.5nm,0.7s,mb4.7,baz=283,slow=6.3,SNR=8.6
DIV Divide 92.62 333 *e*P **P 21 52 06.3 -1.1**
comp=Z,30nm,0.9s,mb5.6
BAIF Baives 92.77 39 *e*P **P 21 52 07.3 -1.1**
comp=Z,19nm,1.1s,mb5.0
BAIF Baives 92.77 39 *e*P **P 21 52 07.3 -1.1**
BAIF pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
BAIF Baives 92.77 39 *e*P **P 21 52 07.3 -1.1**
comp=Z,9.5nm,1.1s,mb5.0
MEZF Maizieres J'vi 92.85 41 *e*P **P 21 52 07.9 -0.9**
SNF Seneffe 92.95 39 P **P 21 52 09.0 -0.2**
comp=Z,16nm,2.6s,mb4.9
CABF La Chapelle 93.00 43 *e*P **P 21 52 08.7 -0.8**
comp=Z,22nm,1.0s,mb5.2
CABF La Chapelle 93.00 43 *e*P **P 21 52 08.7 -0.8**
CABF pmax pmax
comp=Z,11nm,1.0s,mb5.1
CABF La Chapelle 93.00 43 *e*P **P 21 52 08.7 -0.8**
comp=Z,11nm,1.0s,mb5.2
DOU Dourbes 93.02 39 P **P 21 52 08.6 -0.9**
comp=Z,4.2nm,1.1s,mb4.7
LPL La Plagne 93.14 44 *e*P **P 21 52 10.3 +0.1**
comp=Z,50nm,1.2s,mb5.4
LPL La Plagne 93.14 44 *e*P **P 21 52 10.3 +0.1**
LPL pmax pmax
comp=Z,25nm,1.2s,mb5.4
LPL La Plagne 93.14 44 *e*P **P 21 52 10.3 +0.1**
comp=Z,25nm,1.2s,mb5.4
LPG La Plagne 93.15 44 *e*P **P 21 52 10.6 +0.4**
comp=Z,30nm,0.9s,mb5.3
LPG La Plagne 93.15 44 *e*P **P 21 52 10.6 +0.4**
LPG pmax pmax
comp=Z,15nm,0.9s,mb5.3
LPG La Plagne 93.15 44 *e*P **P 21 52 10.6 +0.4**
comp=Z,15nm,0.9s,mb5.3
GIVF Givet 93.16 39 *e*P **P 21 52 09.4 -0.8**
comp=Z,26nm,0.8s,mb5.3
GIVF Givet 93.16 39 *e*P **P 21 52 09.4 -0.8**
GIVF pmax pmax
comp=Z,13nm,0.8s,mb5.3
GIVF Givet 93.16 39 *e*P **P 21 52 09.4 -0.8**
comp=Z,13nm,0.8s,mb5.3
SBF Sospel 93.19 46 *e*P **P 21 52 09.6 -0.9**
THEF They Montfort 93.37 41 *e*P **P 21 52 11.1 -0.1**
LBTB Lobatse 93.38 116 *e*P **P 21 52 12.1 +0.2**
BCLA Clavier 93.55 39 P **P 21 52 11.2 -0.7**
comp=Z,18nm,2.1s,mb5.0
HAU Haudompre 93.55 42 *e*P **P 21 52 10.9 -1.1**
comp=Z,22nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,126nm,22.8s
HAU Haudompre 93.55 42 *e*P **P 21 52 10.9 -1.1**
HAU pmax pmax
comp=Z,11nm,1.1s,mb5.1
HAU MLR MLR
comp=Z,130nm,22.8s
HAU Haudompre 93.55 42 *e*P **P 21 52 10.9 -1.1**
comp=Z,11nm,1.1s,mb5.1
HAU LR LR
comp=Z,130nm,22.8s
LOMF Lomont 93.69 42 *e*P **P 21 52 13.5 +0.8**
MAW Mawson 93.80 165 P **P 21 52 12.4 -0.5**
comp=Z,22nm,0.9s,mb5.5,baz=222,slow=6.6,SNR=25
MAW LR LR 22 37 09.4
comp=Z,180nm,18.4s,baz=4.1,slow=37
MAW Mawson 93.80 165 *e*P **P 21 52 12.4 -0.5**
HINF Hinteralfeld 93.83 42 *e*P **P 21 52 12.1 -1.2**
WLF Walferdange 93.87 40 P **P 21 52 13.7 +0.3**
comp=Z,18nm,1.8s,mb5.1
WLF Walferdange 93.87 40 P **P 21 52 12.7 -0.7**
SEW Seward 93.95 331 *e*P **P 21 52 12.3 -1.3**
comp=Z,30nm,1.2s,mb5.5
MEM Membach 94.03 39 P **P 21 52 15.6 +1.5**
ECH Echery 94.13 42 *e*P **P 21 52 14.5 -0.2**
ECH Echery 94.13 42 *e*P **P 21 52 14.4 -0.3**
ECH pmax pmax
comp=Z,38nm,1.5s,mb5.5
ECH Echery 94.13 42 *e*P **P 21 52 14.4 -0.3**
comp=Z,38nm,1.5s,mb5.5
CDF Champ du Feu 94.25 41 *e*P **P 21 52 14.3 -0.9**
comp=Z,26nm,1.0s,mb5.2
CDF Champ du Feu 94.25 41 *e*P **P 21 52 14.3 -0.9**
CDF pmax pmax
comp=Z,13nm,1.0s,mb5.2
CDF Champ du Feu 94.25 41 *e*P **P 21 52 14.3 -0.9**
comp=Z,13nm,1.0s,mb5.2
PMR Palmer 94.30 332 *e*P **P 21 52 13.9 -1.2**
RC01 Rabbit Creek A 94.41 332 *e*P **P 21 52 14.5 -1.2**
comp=Z,26nm,1.0s,mb5.5
RUP Ruppelstein 94.45 40 *e*P **P 21 52 16.3 +0.2**
FELD Feldberg im Sc 94.59 42 *e*P **P 21 52 16.5 -0.3**
JMIC Jan Mayen 94.73 17 P **P 21 52 16.6 -0.3**
comp=Z,37nm,0.8s,mb5.8,baz=262,slow=7.1,SNR=2.5
LANF Langenberg 94.73 41 *e*P **P 21 52 17.0 -0.4**
COLA College 94.88 336 *e*P **P 21 52 16.9 -0.8**
COLA pmax pmax
comp=Z,25nm,1.2s,mb5.5
COLA College 94.88 336 *e*P **P 21 52 16.9 -0.9**
comp=Z,25nm,1.2s,mb5.5
MCK McKinley 94.93 335 *e*P **P 21 52 16.5 -1.5**
MCK pmax pmax
comp=Z,19nm,1.3s,mb5.4
MCK McKinley 94.93 335 *e*P **P 21 52 16.5 -1.5**
comp=Z,19nm,1.3s,mb5.4
OHAK Old Harbor 94.97 328 *e*P **P 21 52 17.7 -0.6**
DAG Danmarks Havn 95.33 11 *e*P **P 21 52 18.3 -1.3**
DAG Danmarks Havn 95.33 11 *i*P **P 21 52 18.3 -1.3**
TRF Thorofare Moun 95.41 334 *e*P **P 21 52 19.2 -1.0**
comp=Z,6.2nm,0.6s,mb5.2
DAVOX Davos/Dischmat 95.57 43 P **P 21 52 21.3 0.0**
comp=Z,9.4nm,0.8s,mb5.3,baz=226,slow=4.4,SNR=10
RSO Redoubt South 95.63 331 P **P 21 52 20.3 -0.9**
DAVA Damuels 95.68 43⇑ *i*P **P 21 52 22.4 +0.6**
comp=Z,17nm,0.9s,mb5.5
KTH Kantishna Hill 95.71 334 *e*P **P 21 52 20.3 -1.2**
comp=Z,15nm,1.0s,mb5.4
BPAW Bear Paw Mtn. 95.91 335 *e*P **P 21 52 20.4 -2.0**
comp=Z,30nm,1.1s,mb5.6
PPLA Purkeypile 96.07 333 *e*P **P 21 52 22.1 -1.1**
comp=Z,16nm,1.0s,mb5.4
FETA Feichten 96.19 43⇑ *i*P **P 21 52 24.3 +0.2**
comp=Z,20nm,1.7s,mb5.3
RETA Reutte 96.31 43⇓ *i*P **P 21 52 24.4 -0.3**
comp=Z,18nm,1.2s,mb5.4
MOTA Moosalm 96.51 43⇓ *i*P **P 21 52 25.4 -0.2**
comp=Z,20nm,1.0s,mb5.5
COLD Coldfoot 96.56 338 *e*P **P 21 52 24.9 -0.5**
comp=Z,12nm,1.3s,mb5.2
WATA Walderalm 96.82 43⇓ *i*P **P 21 52 27.0 +0.1**
comp=Z,10nm,0.8s,mb5.3
WTTA Wattenberg 96.85 43⇓ *i*P **P 21 52 27.2 +0.1**
comp=Z,36nm,1.1s,mb5.7
GRA1 Grafenberg Arr 97.07 41 *e*P **P 21 52 28.2 +0.2**
comp=Z,18nm,1.0s,mb5.5
GRF Grafenberg Arr 97.07 41 *e*P **P 21 52 28.2 +0.2**
comp=Z,18nm,1.0s,mb5.5
GRF Grafenberg Arr 97.07 41 *e*P **P 21 52 28.2 +0.2**
GRF pmax pmax
comp=Z,18nm,1.0s,mb5.5
GRF Grafenberg Arr 97.07 41 *e*P **P 21 52 28.2 +0.2**
GRF pmax pmax
comp=Z,18nm,1.0s,mb5.5
AQU L'Aquila 97.10 48 P **P 21 52 27.3 -1.1**
AQU pmax pmax
comp=Z,17nm,1.1s,mb5.4
AQU L'Aquila 97.10 48 P **P 21 52 27.3 -1.1**
comp=Z,17nm,1.1s,mb5.4
SVW2 Sparrevohn 97.13 331 *e*P **P 21 52 24.8 -3.2**
ABTA Abfaltersbach 97.33 44⇑ *i*P **P 21 52 29.1 -0.2**
comp=Z,20nm,1.1s,mb5.5
TTA Tatalina 97.77 333 *e*P **P 21 52 29.3 -1.5**
TTA pmax pmax
comp=Z,8.0nm,1.5s,mb5.0
TTA Tatalina 97.77 333 *e*P **P 21 52 29.3 -1.5**
comp=Z,8.1nm,1.5s,mb5.0
KBA Koelnbreinsper 97.95 44⇓ *i*PcP PcP 21 52 32.0 -0.1
comp=Z,11nm,1.1s
JAVS Javornik 98.23 45 *i*P **P 21 52 33.1 -0.2**
CRNS Crni Vrh 98.40 45 *e*P **P 21 52 33.5 -0.7**
KHC Kasperske Hory 98.48 42 *e*P **P 21 52 34.6 +0.2**
KHC pmax pmax
comp=Z,11nm,1.3s,mb5.2
KHC Kasperske Hory 98.48 42 *e*P **P 21 52 34.6 +0.2**
comp=Z,11nm,1.3s,mb5.2
CLL Collm 98.50 39 *e*P **P 21 52 35.0 +0.6**
CLL pmax pmax
comp=Z,5.0nm,1.0s,mb5.0
CLL Collm 98.50 39 *e*Pdif **P 21 52 35.0 +0.6**
comp=Z,5.0nm,1.0s,mb5.0
CLL Collm 98.50 39 *e*Pdif **P 21 52 35.0 +0.6**
comp=Z,5.0nm,1.0s,mb5.0
CLL *e*pPP 21 56 58.0
GEC2 GERESS Array S 98.51 42 *e*P **P 21 52 34.2 -0.3**
GEC2 pmax pmax
comp=Z,2µm,0.9s
GEC2 GERESS Array S 98.51 42 *e*P **P 21 52 34.1 -0.4**
comp=Z,2µm,0.9s
GERES GERESS Array B 98.51 42 P **P 21 52 34.0 -0.5**
comp=Z,6.5nm,0.8s,mb5.2,baz=245,slow=2.8,SNR=52
GERES LR LR 22 33 52.2
comp=Z,49nm,19.8s,baz=70,slow=33
MOA Molln 98.71 43⇓ *i*Pdiff **P 21 52 35.3 -0.2**
comp=Z,17nm,1.2s,mb5.5
VISS Visnje 98.75 45 *i*P **P 21 52 35.8 +0.2**
BOJS Bojanci 98.98 45 *i*P **P 21 52 37.0 +0.2**
BRG Berggiesshubel 99.01 40 *e*P **P 21 52 37.0 +0.3**
comp=Z,16nm,1.6s,mb5.3
NAO01 NORSAR Array S 99.05 30 *e*P **P 21 52 35.2 -1.4**
PRU Pruhonice 99.24 41 *e*PDIFF **P 21 52 38.7 +0.9**
PRU AMS AMS 22 32 00.0
NOA NORSAR Array B 99.24 29 P **P 21 52 37.5 0.0**
comp=Z,2.6nm,1.1s,mb4.7,baz=251,slow=4.2,SNR=2.8
NOA LR LR 22 33 43.8
comp=Z,56nm,22.0s,baz=250,slow=33
PVCC Panska Ves 99.34 40 *e*PDIFF **P 21 52 38.8 +0.6**
PVCC AMS AMS 22 27 20.0
TREC Trest 99.74 42 AMS AMS 22 28 40.0
CONA Conrad Observa 99.78 43⇑ *i*Pdiff Pdif 21 52 39.9 -0.3
comp=Z,9.6nm,1.2s
DPC Dobruska-Polom 100.43 41 *e*PDIFF Pdif 21 52 43.7 +0.6
DPC AMS AMS 22 32 30.0
VRAC Vranov 100.46 42 P Pdif 21 52 43.2 0.0
comp=Z,3.2nm,0.3s,baz=227,slow=7.9,SNR=5.9
MORC Moravsky Berou 101.13 41 *e*P Pdif 21 52 47.4 +1.2
OKC Ostrava-Krasne 101.53 41 *e*PDIFF Pdif 21 52 49.4 +1.4
OKC AMS AMS 22 30 20.0
VYHS Vyhne 101.83 43 *e*P Pdif 21 52 50.0 +0.7
VYHS pmax pmax
comp=Z,5.0nm,1.4s
VYHS Vyhne 101.83 43 *e*P Pdif 21 52 50.0 +0.7
comp=Z,5.3nm,1.4s
VYHS *e* 21 53 01.7
VYHS Vyhne 101.83 43 PDIF Pdif 21 52 50.0 +0.7
VYHS *e* 21 53 01.7
KOLS Kolonicke sedl 104.13 42 *e*P Pdif 21 52 57.1 -2.4
KOLS Kolonicke sedl 104.13 42 PDIF Pdif 21 52 57.1 -2.4
FINES FINESS Array B 106.43 30 PP PP 21 57 32.1 -2.7
comp=Z,1.5nm,0.9s,baz=246,slow=8.1,SNR=4.2
FINES PKKPbc PKKPbc 22 08 39.6 -3.4
comp=Z,1.6nm,0.7s,baz=90,slow=4.4,SNR=6.7
AKASG Malin Array Be 108.66 41 PKiKP PKiKP 21 57 23.2 -1.5
comp=Z,0.2nm,0.3s,baz=302,slow=2.2,SNR=4.2
AKASG PP PP 21 57 48.3 -3.2
comp=Z,0.2nm,0.3s,baz=266,slow=7.5,SNR=5.0
AKASG PKKPab PKKPab 22 08 44.8 -1.6
comp=Z,0.8nm,0.6s,baz=97,slow=3.2,SNR=4.9
DZM Mont Dzumac 110.85 240 eLR LR 22 30 05.7
comp=Z,103nm,23.2s
BRTR Keskin Array B 112.10 52 PKiKP PKiKP 21 57 30.8 -0.7
comp=Z,0.3nm,0.5s,baz=180,slow=3.7,SNR=5.3
BRTR PKKPab PKKPab 22 08 31.2 -0.2
comp=Z,2.1nm,1.0s,baz=121,slow=4.8,SNR=8.3
OBN Obninsk 112.63 36⇑ *i*PKIKP PKiKP 21 57 30.8 -1.2
OBN *i* 21 58 17.8
OBN *e* 22 04 11.3
OBN *e*SS SS 22 13 56.7 +0.7
OBN *e*SSS 22 18 09.7
OBN pmax pmax
comp=Z,12nm,1.7s
OBN Obninsk 112.63 36 PKiKP PKiKP 21 57 31.0 -1.1
BILL Bilibino 112.84 339⇑ *i*PKIKP PKiKP 21 57 31.2 -0.9
BILL *e* 21 57 56.9
BILL *i* 21 58 19.4
BILL *e*PS PS 22 07 47.3 -9.3
BILL pmax pmax
comp=Z,7.0nm,2.5s
VSR Storozhevoye 114.85 39 *e*PKIKP PKiKP 21 57 35.3 -1.1
VSR pmax pmax
comp=Z,6.0nm,0.8s
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.7s
TIXI Tiksi 119.81 352 *i*PKIKP PKPdf 21 57 42.7 -2.7
TIXI pmax pmax
comp=Z,5.0nm,1.4s
TIXI MLR MLR
comp=Z,105nm,19.0s
SEY Seymchan 120.36 337⇓ *i*PKIKP PKPdf 21 57 44.9 -1.8
PETK Petropavlovsk- 122.71 326 PKP PKPdf 21 57 50.8 -0.7
comp=Z,4.7nm,0.9s,baz=46,slow=4.3,SNR=3.9
STKA Stephens Creek 123.52 217 *e*PKP PKPdf 21 57 52.3 -1.5
comp=Z,5.1nm,0.6s
STKA Stephens Creek 123.52 217 PKP PKPdf 21 57 52.9 -0.9
comp=Z,6.2nm,0.6s,baz=142,slow=2.8,SNR=22
STKA pPKP pPKPdf 21 58 16.8 +2.9
comp=Z,4.9nm,0.9s,baz=47,slow=3.9,SNR=4.7
STKA Stephens Creek 123.52 217 *e*PKPdf PKPdf 21 57 52.9 -0.9
ARU Arti 123.80 29 *i*PKIKP PKPdf 21 57 52.9 -0.6
ARU 22 04 45.9
ARU Arti 123.80 29 PKPdf PKPdf 21 57 52.9 -0.5
SVE Sverdlovsk 124.56 28 *e*PKIKP PKPdf 21 57 54.5 -0.4
SVE pmax pmax
comp=Z,5.0nm,0.8s
AKTK Aktyubinsk 126.41 36 PKP PKPdf 21 57 59.0 +0.4
AKTO Aktyubinsk 126.41 36 PKP PKPdf 21 57 59.0 +0.4
comp=Z,12nm,0.8s,baz=314,slow=2.6,SNR=42
ABKAR Akbulak array 128.06 37 *e*PKPdf PKPdf 21 58 02.1 +0.3
CTAO Charters Tower 128.15 231 *e*PKIKP PKPdf 21 58 02.4 -0.5
YAK Yakutsk 128.16 346 *e*PKIKP PKPdf 21 57 59.6 -2.0
YAK pmax pmax
comp=Z,26nm,1.0s
MTSU Mount Surprise 130.77 232 *e*PKP PKPdf 21 58 07.4 -0.6
comp=Z,43nm,1.1s
BRVK Borovoye 131.26 28*d* *i*PKIKP PKPdf 21 58 07.7 -0.1
BRVK pmax pmax
comp=Z,9.0nm,1.0s
BRVK Borovoye 131.26 28 *e*PKPdf PKPdf 21 58 07.1 -0.7
BVAR Borovoye Array 131.33 28 PKPdf PKPdf 21 58 08.3 +0.4
comp=Z,7.7nm,0.8s,baz=277,slow=2.4,SNR=36
ASAR Alice Springs 134.15 217 PKP PKPdf 21 58 12.6 -1.6
comp=Z,6.4nm,0.7s,baz=130,slow=2.1,SNR=40
ASAR pPKP pPKPdf 21 58 37.6 +3.3
comp=Z,4.3nm,0.8s,baz=125,slow=2.1,SNR=5.4
NVS Novosibirsk 134.83 18 *i*PKIKP PKPdf 21 58 13.5 -1.0
NVS *i* 21 58 37.8
NVS *i* 22 00 44.7
NVS pmax pmax
comp=N,5.0nm,1.5s
NVS pmax pmax
comp=E,12nm,1.5s
NVS pmax pmax
comp=Z,23nm,1.5s
BOD Bodaibo 134.91 354 *e*PKHKP 21 58 02.1
BOD pmax pmax
comp=Z,4.0nm,1.2s
JMP Maruseppu 135.37 321 P PKPdf 21 58 15.2 -0.6
ASAJ Asahikawa 135.77 322 P PKPdf 21 58 16.9 +0.3
ZAA0 Zalesovo Array 136.07 18 *e*PKPdf PKPdf 21 58 16.3 -0.5
ZALV Zalesovo Beam 136.07 18 PKhKP 21 58 11.6
comp=Z,11nm,0.8s,baz=300,slow=1.8,SNR=15
ZALV PKP PKPdf 21 58 16.5 -0.3
comp=Z,32nm,0.7s,baz=287,slow=0.7,SNR=23
KURK Kurchatov 136.54 25 PKP PKPdf 21 58 17.8 0.0
comp=Z,13nm,0.8s,baz=310,slow=2.6,SNR=44
KURK PP PP 22 00 58.1 -1.3
comp=Z,1.6nm,1.0s,baz=322,slow=6.7,SNR=4.0
KURK Kurchatov 136.54 25⇓ *i*PKIKP PKPdf 21 58 18.0 +0.2
KURK pmax pmax
comp=Z,18nm,1.0s
KURK Kurchatov 136.54 25 *e*PKPdf PKPdf 21 58 17.7 -0.1
WRAB Tennant Creek 136.65 221 *e*PKIKP PKPdf 21 58 17.9 -1.1
EKS2 Erkin-Say 139.72 37 PKPdf PKPdf 21 58 24.2 +0.3
USP Ospenovka 139.76 36 P PKPdf 21 58 24.8 +0.9
SNR=5.2
AML Almayashu 139.99 38 P PKPdf 21 58 25.8 +1.4
SNR=7.6
AML Almayashu 139.99 38 *e*PKPdf PKPdf 21 58 25.3 +1.0
AAK Ala-Archa 140.15 36 PKhKP 21 58 17.8
comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=5.1
AAK PKP PKPdf 21 58 24.0 -0.7
comp=Z,2.8nm,0.6s,baz=178,slow=5.3,SNR=12
AAK Ala-Archa 140.15 36 PKP 21 58 17.8
AAK *e*PKPdf PKPdf 21 58 23.4 -1.3
UCH Uchtor 140.41 37 P PKPdf 21 58 26.9 +1.8
SNR=14
UCH Uchtor 140.41 37 *e*PKPdf PKPdf 21 58 25.4 +0.2
TKM2 Tokmak 2 140.60 35 P PKPdf 21 58 26.6 +1.1
SNR=6.9
TKM2 Tokmak 2 140.60 35 *e*PKPdf PKPdf 21 58 25.4 0.0
KBL Kabul 140.65 51 *e*PKIKP PKPdf 21 58 25.1 -0.7
MK31 Makanchi Array 141.12 26 *e*PKIKP PKPdf 21 58 25.1 -1.2
MKAR Makanchi Array 141.12 26 PKhKP 21 58 19.0
comp=Z,1.7nm,0.7s,baz=328,slow=3.3,SNR=18
MKAR PKP PKPdf 21 58 25.9 -0.4
comp=Z,5.1nm,0.7s,baz=345,slow=2.5,SNR=32
MOY Mondy 141.36 5 *e*PKIKP PKPdf 21 58 22.5 -4.1
ULHL Ulahol 141.40 36 P PKPdf 21 58 28.4 +1.5
SNR=8.8
JRY Ryogami san 142.37 313 P 21 58 22.4
MDJ Mudanjiang 142.49 331 PKP PKPdf 21 58 27.3 -1.5
JOD2 Odawara 2 142.59 312 P 21 58 21.7
MJAR Matsushiro Arr 142.59 314 PKhKP 21 58 23.4
comp=Z,32nm,0.9s,baz=108,slow=2.0,SNR=58
MJAR Matsushiro Arr 142.59 314 PKP 21 58 23.4
MAJO Matsushiro 142.59 314 *e*PKHKP 21 58 23.5
MAT Matsushiro 142.59 314 PKP 21 58 22.8
MAT Matsushiro 142.59 314 P 21 58 23.5
KSH Kashi 142.94 39 PKP PKPdf 21 58 27.0 -2.8
KSH *e*pPKP pPKPdf 21 58 53.0 +3.1
KSH *e*sPKP 21 59 04.3
KSH *e*PKS 22 02 01.0
KSH *e*SKS SKSdf 22 05 25.0 -8.5
KSH *e*SKKS SKKSac 22 08 19.0 -7.4
KSH *e*SS SS 22 20 07.3 -4.8
KSH AMB AMB
comp=Z,62nm,4.5s
KSH LR LR
comp=N,98nm,5.0s
KSH LR LR
comp=E,84nm,5.4s
KSH LR LR

comp=Z,100nm,5.2s
CBIJ Chichi jima 143.07 298 P 21 58 24.8
FITZ Fitzroy Crossi 143.22 213 *e*PKP 21 58 25.9
comp=Z,26nm,0.8s
FITZ Fitzroy Crossi 143.22 213 *e*PKPdf 21 58 26.2
MBWA Marble Bar 143.23 202 *e*P 21 58 25.6
MBWA Marble Bar 143.23 202 *e*PKPdf 21 58 25.5
BHJ Bhuj 144.49 68 *ex* 21 58 25.9
CN2 Changchun 144.97 335 *e*PKP PKPdf 21 58 28.5 -4.7
CN2 *e*PKPab PKPdf 21 58 29.5 -3.7
CN2 *e*pPKP pPKPdf 21 58 53.0 -0.3
CN2 *e*PP PP 22 01 49.5 -1.4
JWT Wachi 145.19 315 P PKPbc 21 58 32.6 -1.0
SONM Songino Array 145.37 359 PKPbc PKPbc 21 58 33.9 +0.2
comp=Z,80nm,0.8s,baz=328,slow=2.7,SNR=341
SONM pPKPbc pPKPbc 21 58 57.9 +4.4
comp=Z,33nm,0.8s,baz=322,slow=2.1,SNR=7.8
SONM PP PP 22 01 49.7 -3.1
comp=Z,2.9nm,0.8s,baz=329,slow=5.5,SNR=6.0
WMQ Urumqi 145.75 23 PKPbc PKPbc 21 58 34.5 -0.5
WMQ pPKP pPKPdf 21 58 58.5 +3.8
WMQ PP PP 22 02 00.0 +4.5
WMQ SKS SKSdf 22 05 31.8 -5.7
WMQ SKKS SKKSac 22 08 39.8 -2.3
WMQ SS SS 22 20 42.5 -0.7
WMQ LR LR
comp=N,47nm,30.0s
WMQ LR LR
comp=E,68nm,30.0s
WMQ LR LR
comp=Z,61nm,28.0s
JAD Aida 146.23 315 P PKPdf 21 58 35.2 -0.4
JHS Saijyo 146.92 316 P PKPdf 21 58 37.7 +0.9
JMN Monobe 147.08 313 P PKPdf 21 58 37.8 +0.7
SNY Shenyang 147.37 335 ⇓PKPbc PKPbc 21 58 38.8 -1.0
KSRS Korea Array 148.60 325 PKP PKPdf 21 58 39.5 0.0
comp=Z,36nm,0.9s,baz=20,slow=1.1,SNR=26
KSRS PKPbc PKPbc 21 58 42.8 -0.4
comp=Z,36nm,0.9s,baz=8.3,slow=1.5,SNR=56
KSRS pPKPbc pPKPbc 21 59 06.0 +2.8
comp=Z,13nm,1.0s,baz=24,slow=1.2,SNR=2.4
POO Poona 149.02 76 *e*P PKPdf 21 58 38.6 -2.1
DDI Dehra Dun 149.34 52 *e*P PKPdf 21 58 41.0 +0.1
NDI New Delhi 149.41 55 *ex* PKPdf 21 58 32.0 -9.1
KAD Karad 149.43 78 *e*P PKPdf 21 58 41.0 -0.4
JNU Nakatsue 149.51 315 P PKPbc 21 58 43.7 -1.9
DL2 Dalian 150.63 334 PKPbc PKPbc 21 58 46.5 -1.7
JFU Fukue jima 2 151.23 316 P PKPbc 21 58 48.7 -1.1
BHPL Bhopal 151.46 65 *e*P PKPdf 21 58 42.2 -2.2
BHPL AMb AMB 21 59 02.4
comp=Z,44nm,1.9s
BJI Beijing 151.59 343 PKPbc PKPdf 21 58 43.5 -0.6
BJI PP PP 22 02 29.0 -0.3
BJI AMB AMB
comp=Z,75nm,8.3s
BJI LR LR
comp=Z,69nm,30.0s
BJI Beijing 151.59 343 P PKPbc 21 58 49.5 -0.9
BJI Beijing 151.59 343 P PKPbc 21 58 49.5 -0.9
BJI pmax pmax
comp=Z,130nm,0.7s
BJI pmax pmax
comp=Z,130nm,0.7s
BJT Baijiatuau 151.61 343 *e*PKIKP PKPbc 21 58 49.3 -1.1
HHC Hu-ho-hao-te 151.87 350 ⇓PKPbc PKPbc 21 58 51.5 +0.5
HHC pPKP pPKPdf 21 59 18.3 +14
HHC sPKP 21 59 29.0
HHC PKS 22 02 23.8
HHC PP PP 22 03 12.8 +42
HHC SKS SKSdf 22 05 45.8 -0.1
HHC SKKS SKKSac 22 09 49.8 +34
HHC SS 22 23 08.0
HHC AMB AMB
comp=Z,100nm,7.1s
HHC LR LR
comp=N,120nm,22.6s
HHC LR LR
comp=E,440nm,21.4s
HHC LR LR
comp=Z,130nm,20.6s
GTA Gaotai 153.30 10 PKPbc PKPdf 21 58 47.0 +0.3
GTA pPKP pPKPdf 21 59 06.0 -0.8
GTA sPKP 21 59 15.3
GTA PKS 22 02 19.0
GTA SKS SKSdf 22 05 45.3 -2.4
GTA AMB AMB
comp=Z,120nm,5.1s
GTA LR LR
comp=N,56nm,17.8s
GTA LR LR
comp=E,67nm,17.0s
GTA LR LR
comp=Z,98nm,19.9s
HYB Hyderabad 153.58 77 *i* PKP PKPdf 21 58 47.0 -0.7
HYB *e* 21 58 55.0
HYB *e*PKPAB PKPab 21 59 08.0 -0.2
MDRS Chennai 155.32 87 *e*P PKPdf 21 58 49.0 -1.2
DMN Daman 156.03 50 *e*P PKPab 21 59 18.0 -0.3
comp=Z,90nm,0.8s
KKN Kakani 156.06 49 *e*P PKPab 21 59 18.0 -0.4
comp=Z,100nm,0.7s
PKIN Phulchoki 156.27 50 *e*P PKPab 21 59 18.3 -1.0
comp=Z,35nm,0.9s
PKI Pulchoki 156.28 50 *e*P PKPab 21 59 18.8 -0.6
comp=Z,86nm,1.1s
GUN Gumba 156.44 48 *e*P PKPab 21 59 19.7 -0.3
comp=Z,152nm,0.9s
LZH Lanzhou 157.06 4 *e*PKP PKPdf 21 58 50.0 -1.9
LZH pPKP pPKPdf 21 59 17.3 +5.2
LZH sPKP 21 59 26.0
LZH AMB AMB
comp=Z,200nm,5.2s
LZH LR LR
comp=E,220nm,15.4s
LZH LR LR
comp=Z,450nm,17.5s
LSA Lhasa 158.74 37 *e*PKIKP PKPdf 21 58 54.5 +0.4
WHN Wuhan 160.84 336 PKP PKPdf 21 58 55.3 -1.2
SSLB Suanglung 161.97 308 *e*PKPdf PKPdf 21 58 57.4 -0.5
SHL Shillong 162.11 44 *ex* PKPdf 21 59 00.0 +2.1
CD2 Chengdu 162.20 5 PKP PKPdf 21 58 54.5 -3.4
CD2 pPKP pPKPdf 21 59 21.3 +3.2
CD2 sPKP 21 59 32.0
CD2 PKPab PKPab 21 59 43.5 -1.3
CD2 PKS 22 02 26.5
CD2 PP PP 22 03 28.0 +0.4
CD2 SKS SKSdf 22 05 48.0 -8.8
CD2 SKKS SKKSac 22 10 05.0 -6.0
CD2 SS SS 22 23 37.0 -4.6
CD2 AMB AMB
comp=Z,140nm,5.9s
CD2 LR LR
comp=N,250nm,5.4s
CD2 LR LR
comp=Z,180nm,7.1s
ENH Enshi 162.53 349 *e*PKPdf PKPdf 21 58 57.2 -1.0
GYA Guiyang 166.67 356 PKP PKPdf 21 59 01.3 -0.7
GYA pPKP pPKPdf 21 59 23.5 +1.3
GYA sPKP 21 59 33.8
GYA PKPab PKPab 22 00 04.5 0.0
GYA PKS 22 02 32.0
GYA PP PP 22 03 54.3 +3.3
GYA SKKS SKKSac 22 10 31.3 -2.4
GYA SS SS 22 24 25.8 -1.7
GYA AMB AMB
comp=Z,150nm,8.5s
GYA LR LR
comp=N,180nm,23.8s
GYA LR LR
comp=E,210nm,25.0s
GYA LR LR
comp=Z,270nm,24.1s
KSM Kuching 167.54 202 *e*PKPdf PKPdf 21 59 01.9 -1.1
KMI Kunming 167.74 12 PKP PKPdf 21 59 02.5 -0.3
KMI pPKP pPKPdf 21 59 26.5 +3.5
KMI sPKP 21 59 33.8
KMI PKPab PKPab 22 00 08.0 -1.3
KMI PP PP 22 03 59.0 +2.4
KMI SS SS 22 24 37.0 -1.5
KMI AMB AMB
comp=Z,140nm,5.2s
KMI LR LR
comp=N,110nm,17.3s
KMI LR LR
comp=E,97nm,14.1s
KMI LR LR
comp=Z,92nm,22.6s
CM31 Chiang Mai Arr 171.68 49 *e*PKPdf PKPdf 21 59 03.9 -1.3
CMAR Chiang Mai Arr 171.68 49 PKP PKPdf 21 59 04.5 -0.8
comp=Z,3.3nm,0.8s,baz=277,slow=1.8,SNR=28
CMAR pPKP pPKPdf 21 59 27.3 +1.8
comp=Z,0.8nm,0.8s,baz=254,slow=1.8,SNR=3.4
CMAR PKPab PKPab 22 00 26.8 -0.4
comp=Z,3.6nm,0.9s,baz=299,slow=4.7,SNR=10
CMAR PP PP 22 04 20.9 +3.1
comp=Z,3.6nm,1.2s,baz=300,slow=7.2,SNR=5.6
CMAR Chiang Mai Arr 171.68 49 PKIKP PKPdf 21 59 04.5 -0.8
CMAR 21 59 27.3

NEIC ***28*** *21:40:39.9, 16°.79N×99°.91W, h12km, MD3.7(MEX), After MEX.*
MEX 28 21:40:39.9±0.8, 16°.79N×99°.91W, h12km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.08**	**354**	*i* P	Pg	21 40 41.7	-0.8
ACX				*i* S	Sg	21 40 43.6	-0.8
ACX	**Acapulco**	**0.08**	**354**	*i* P	Pg	21 40 41.7	-0.8
ACX				*i* S	Sg	21 40 43.6	-0.8
CAIG	**El Cayaco**	**0.43**	**307**	*i* P	Pg	21 40 47.3	-1.2
CAIG				*i* S	Sg	21 40 54.2	-0.1
CAIG	**El Cayaco**	**0.43**	**307**	*i* P	Pg	21 40 47.3	-1.2
CAIG				*i* S	Sg	21 40 54.2	-0.1
PLIG	**Platanillo**	**1.64**	**14**	*i* P	Pn	21 41 06.2	-2.4
PLIG				*i* S	Sn	21 41 24.3	-5.4
PLIG	**Platanillo**	**1.64**	**14**	*i* P	Pn	21 41 06.2	-2.4
PLIG				*i* S	Sn	21 41 24.3	-5.4
ZIIG	**Zihuatanejo**	**1.70**	**299**	*e*P	Pn	21 41 06.2	-3.2
ZIIG				*i* S	Sn	21 41 26.8	-4.2
ZIIG	**Zihuatanejo**	**1.70**	**299**	*e*P	Pn	21 41 06.2	-3.2
ZIIG				*i* S	Sn	21 41 26.8	-4.2
PNIG	**Pinotepa**	**1.75**	**103**	*i* P	Pn	21 41 06.8	-3.3
PNIG				*i* S	Sn	21 41 27.8	-4.5
PNIG	**Pinotepa**	**1.75**	**103**	*i* P	Pn	21 41 06.8	-3.3
PNIG				*i* S	Sn	21 41 27.8	-4.5
MZVM		**2.48**	**15**	*i* P	Pn	21 41 17.6	-2.5
MZVM				*i* S	Sn	21 41 45.2	-5.0
PTVM	**Pico Tres Padr**	**2.89**	**15**	*i* P	Pn	21 41 23.1	-2.7
PTVM				*i* S	Sn	21 41 57.0	-3.5
PTVM	**Pico Tres Padr**	**2.89**	**15**	*i* P	Pn	21 41 23.1	-2.7
PTVM				*i* S	Sn	21 41 57.0	-3.5
TPIG	**Tehuac#an**	**2.92**	**56**	*e*P	Pn	21 41 23.4	-2.8
TPIG				*i* S	Sn	21 41 58.0	-3.3
IIO	**Organos**	**3.01**	**22**	*i* P	Pn	21 41 25.6	-1.8
IIO				*i* S	Sn	21 41 59.6	-3.8
IIO	**Organos**	**3.01**	**22**	*i* P	Pn	21 41 25.6	-1.8
IIO				*i* S	Sn	21 41 59.6	-3.8
VHO	**Vista Hermosa**	**3.05**	**84**	*e*P	Pn	21 41 27.2	-0.8
VHO				*i* S	Sn	21 41 59.5	-5.0
VHO	**Vista Hermosa**	**3.05**	**84**	*e*P	Pn	21 41 27.2	-0.8
VHO				*i* S	Sn	21 41 59.5	-5.0
HUIG	**Huatulco**	**3.79**	**105**	*e*P	Pn	21 41 37.2	-0.9
HUIG				*i* S	Sn	21 42 21.5	-1.1
HUIG	**Huatulco**	**3.79**	**105**	*e*P	Pn	21 41 37.2	-0.9
HUIG				*i* S	Sn	21 42 21.5	-1.1

DDA ***28*** *21:46:44.8, 39°.05N×44°.29E, h5km±2km, Md3.4, Ml3.6*
NSSP ***28*** *21:46:45.8, 39°.13N×43°.95E, h10km, Ms3.3*
TEH ***28*** *21:46:46.2, 39°.15N×43°.92E, h4km*
ISCJB ***28*** *21:46:47.6±0.4, 39°.05N±0°.02×44°.07E±0°.02, h3km±4km, Error ellipse: s-maj=3.2km s-min=2.7km az=9.6*
ISK ***28*** *21:46:47.3, 39°.14N×44°.03E, h10km, MD3.6*
CSEM ***28*** *21:46:48.5±0.2, 39°.09N×43°.97E, h8km, MD3.6, Error ellipse: s-maj=7.2km s-min=3.1km az=111.0*
ISC 28 21:46:48.4±0.4, 39°.07N±0°.02×44°.05E±0°.02, h6km±3km, n71, σ1°.12/108, 5C-14D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.13**	**306**	PG	**Pg**	**21 46 49.9**	**-1.2**
CLDR				*e*SG	**Sg**	**21 46 52.8**	**-0.1**
CLDR	**Caldiran**	**0.13**	**306**	*i* Pg	**Pg**	**21 46 49.9**	**-1.2**
CLDR				*e*Sg	**Sg**	**21 46 52.8**	**-0.1**
DYDN	**Diyadin**	**0.55**	**330**	*i* P	**Pg**	**21 46 57.6**	**-1.5**
DYDN				*i* S	**Sg**	**21 47 06.0**	**-0.2**
DYDN	**Diyadin**	**0.55**	**330**	*i* P	**Pg**	**21 46 57.6**	**-1.4**
DYDN				*i* S	**Sg**	**21 47 06.0**	**-0.2**
VANB	**Van**	**0.70**	**228**	*e*PG	**Pg**	**21 47 01.4**	**-0.4**
VANB				*e*SG	**Sg**	**21 47 13.0**	**+2.1**
VANB	**Van**	**0.70**	**228**	*e*Pg	**Pg**	**21 47 01.4**	**-0.4**
VANB				*e*Sg	**Sg**	**21 47 13.0**	**+2.1**
TVAN	**Van**	**0.74**	**223**	*i* P	**Pg**	**21 47 02.4**	**-0.2**
TVAN				*i* S	**Sg**	**21 47 15.2**	**+3.1**
TVAN	**Van**	**0.74**	**223**	*i* P	**Pg**	**21 47 02.4**	**-0.1**
VANT	**Van**	**0.89**	**224**	*e*PG	**Pg**	**21 47 06.2**	**+0.7**
AGRB	**Hanur-Agry**	**0.96**	**302**	*e*PG	**Pg**	**21 47 04.8**	**-2.1**
AGRB	**Hanur-Agry**	**0.96**	**302**	*e*Pg	**Pg**	**21 47 04.8**	**-2.1**
VRNZ	**Vardanashen**	**0.99**	**6**	⇓*i*P	**Pg**	**21 47 10.3**	**+3.0**
VRNZ				⇓*i*S	**Sg**	**21 47 20.7**	**+0.5**
VRNZ	**Vardanashen**	**0.99**	**6**	⇓P	**Pg**	**21 47 10.3**	**+3.0**
VRNZ				S	**Sg**	**21 47 20.7**	**+0.6**
VNNZ	**Vanand**	**1.05**	**350**	⇓*i*P	**Pg**	**21 47 10.1**	**+1.6**
VNNZ				⇑*i*S	**Sg**	**21 47 22.1**	**0.0**
VNNZ	**Vanand**	**1.05**	**350**	⇓P	**Pg**	**21 47 10.1**	**+1.6**
VNNZ				S	**Sg**	**21 47 22.1**	**0.0**
PAAR	**P'arak'ar**	**1.11**	**13**	⇓*i*P	**Pg**	**21 47 09.8**	**+0.1**
PAAR				⇓*i*S	**Sg**	**21 47 26.1**	**+1.9**
PAAR	**P'arak'ar**	**1.11**	**13**	⇓P	**Pg**	**21 47 09.8**	**+0.1**
PAAR				S	**Sg**	**21 47 26.1**	**+2.0**
ERE	**Yerevan**	**1.15**	**16**	*e*P	**Pg**	**21 47 10.8**	**+0.4**
ERE	**Yerevan**	**1.15**	**16**	P	**Pg**	**21 47 10.8**	**+0.4**
GNI	**Garni**	**1.21**	**26**	*e*PN	**Pn**	**21 47 09.7**	**-2.1**
GNI	**Garni**	**1.21**	**26**	*e*Pn	**Pn**	**21 47 09.7**	**-2.1**
ARUZ	**Aruch**	**1.22**	**1**	⇓*i*P	**Pg**	**21 47 10.8**	**-0.9**
ARUZ				⇑*i*S	**Sg**	**21 47 28.1**	**+0.6**
ARUZ	**Aruch**	**1.22**	**1**	⇓P	**Pg**	**21 47 10.8**	**-0.9**
ARUZ				S	**Sg**	**21 47 28.1**	**+0.6**
AMBZ	**Amberd**	**1.33**	**7**	⇓*i*P	**Pn**	**21 47 14.0**	**+0.6**
AMBZ				⇑*i*S	**Sb**	**21 47 31.9**	**+0.9**
AMBZ	**Amberd**	**1.33**	**7**	⇓P	**Pn**	**21 47 14.0**	**+0.6**
AMBZ				S	**Sb**	**21 47 31.9**	**+0.9**
IMRD	**Marand**	**1.34**	**105**	*e*Pg	**Pn**	**21 47 12.1**	**-1.5**
IMRD				*e*Sg	**Sg**	**21 47 31.8**	**+0.4**
IMRD				*e*		21 47 36.6	
comp=Z,23μm,0.2s
KAPZ **Kaputan** **1.35** **22** ⇓*i*P **Pn** **21 47 13.7** **-0.1**
KAPZ ⇑*i*S **Sb** **21 47 33.2** **+1.6**
KAPZ **Kaputan** **1.35** **22** ⇓P **Pn** **21 47 13.7** **0.0**
KAPZ S **Sb** **21 47 33.2** **+1.6**
DIGO **Kars** **1.44** **339** *e*P **Pn** **21 47 14.4** **-0.6**
DIGO *i* S **Sg** **21 47 38.4** **+3.6**
DIGO **Kars** **1.44** **339** *e*P **Pn** **21 47 14.4** **-0.6**
ISHB **Shabestar** **1.46** **122** *e*Pn **Pn** **21 47 14.0** **-1.2**
ISHB *e* 21 47 17.5
comp=Z,6μm,0.2s
TATV **Tatvan** **1.50** **249** *i* P **Pn** **21 47 15.0** **-0.8**
TATV *i* S **Sn** **21 47 34.8** **-0.9**
TATV **Tatvan** **1.50** **249** *i* P **Pn** **21 47 15.0** **-0.8**
TATV *i* S **Sn** **21 47 34.8** **-0.9**
HAKT **HAKKARI** **1.53** **190** *i* P **Pn** **21 47 15.3** **-0.9**
HAKT *i* S **Sn** **21 47 37.3** **+1.0**
HAKT **HAKKARI** **1.53** **190** *i* P **Pn** **21 47 15.3** **-0.9**
HAKT *i* S **Sn** **21 47 37.3** **+0.9**
VADZ **Vardenis** **1.71** **49** *e*P **Pn** **21 47 20.0** **+1.3**
VADZ ⇑S **Sg** **21 47 48.0** **+4.6**
KARS **Kars** **1.73** **335** *e*PN **Pn** **21 47 17.7** **-1.2**
ITBZ **Tabriz** **1.84** **116** *e*Pn **Pn** **21 47 20.2** **-0.3**
ITBZ *e* 21 47 29.4
comp=Z,2μm,0.2s
ITBZ *e*Sg **Sg** **21 47 47.1** **-0.4**
CUKT **Cukurca** **1.85** **191** *e*PN **Pn** **21 47 21.2** **+0.7**
CUKT **Cukurca** **1.85** **191** *e*Pn **Pn** **21 47 21.3** **+0.7**
HOMI **Horasan** **1.92** **301** *i* P **Pn** **21 47 22.9** **+1.3**
HOMI *i* S **Sg** **21 47 53.5** **+3.3**
STE **Stepanavan** **1.95** **7** P **Pn** **21 47 23.0** **+1.1**
IAZR **Azarshahr** **2.06** **132** *e*Pn **Pn** **21 47 23.7** **+0.3**
IAZR *e* 21 47 26.9
comp=Z,6μm,0.2s
BTMT **Batman** **2.19** **247** *e*PN **Pn** **21 47 27.1** **+1.8**
ERZM **Erzurum** **2.24** **293** *i* P **Pb** **21 47 29.8** **+0.6**
ERZM **Erzurum** **2.24** **293** *i* P **Pb** **21 47 29.8** **+0.6**
EZM **Erzurum** **2.24** **293** *e*PN **Pn** **21 47 24.8** **-1.2**
IHRS **Heris** **2.46** **107** *e*Pn **Pn** **21 47 29.9** **+0.9**
IHRS *e*Sn **Sn** **21 47 59.9** **+0.6**
BEST **Besiri** **2.48** **243** *i* P **Pb** **21 47 32.7** **-0.6**
BEST *i* S **Sg** **21 48 04.3** **-3.6**
IBST **Bostanabad** **2.62** **121** *e*Pn **Pn** **21 47 30.4** **-0.8**
IBST *e* 21 48 18.8
comp=Z,642nm,0.4s
MTA **Mtatsminda** **2.69** **12** P **Pb** **21 47 36.0** **-0.8**
MTA S **Sg** **21 48 13.2** **-1.4**
TBLG **Delisi** **2.71** **11** P **Pb** **21 47 36.5** **-0.8**
TBLG S **Sg** **21 48 14.8** **-0.7**
MSL **Mosul** **2.77** **196** *e*Pn **Pn** **21 47 33.0** **-0.2**
MSL *e*Sn **Sn** **21 48 09.0** **+2.1**
BINT **Bingol** **2.78** **267** *e*PN **Pn** **21 47 32.7** **-0.7**
BINT **Bingol** **2.78** **267** *e*Pn **Pn** **21 47 32.7** **-0.7**
GOR **Gori** **2.92** **1** P **Pb** **21 47 39.8** **-1.0**
GOR S **Sg** **21 48 22.1** **0.0**
BCA **Borcka** **3.02** **323** *e*PN **Pn** **21 47 35.6** **-1.1**
BCA **Borcka** **3.02** **323** *e*Pn **Pn** **21 47 35.6** **-1.0**
ISRB **Sarab** **3.10** **112** *e*Pn **Pn** **21 47 37.6** **-0.2**
ISRB *e* 21 47 47.5
comp=Z,742nm,0.3s
ISRB *e*Sg **Sg** **21 48 27.0** **-0.9**
DIY **Diyarbakir** **3.22** **250** *e*PN **Pn** **21 47 39.3** **-0.2**
DIY **Diyarbakir** **3.22** **250** *e*Pn **Pn** **21 47 39.3** **-0.1**
KEH **Kehvi** **3.24** **358** P **Pn** **21 47 36.1** **-3.6**
KEH S **Sn** **21 48 13.6** **-5.0**
ONI **Oni** **3.55** **353** P **Pn** **21 47 45.2** **+1.2**
ONI S **Sn** **21 48 31.4** **+5.2**
ONI **Oni** **3.55** **353** P **Pg** **21 47 59.4** **+3.1**
PTK **Pertek** **3.63** **269** *e*PN **Pn** **21 47 44.8** **-0.3**
PTK **Pertek** **3.63** **269** *e*Pn **Pn** **21 47 44.8** **-0.3**
EZC **Erzincan** **3.70** **282** *e*PN **Pb** **21 47 46.6** **-7.5**
SVRC **Sivrice-ELAZID** **3.77** **261** *e*PN **Pn** **21 47 46.6** **-0.4**
SVRC **Sivrice-ELAZID** **3.77** **261** *e*Pn **Pn** **21 47 46.6** **-0.4**
GUMT **Gumushane** **3.79** **293** *e*PN **Pn** **21 47 47.1** **-0.1**
GUMT **Gumushane** **3.79** **293** *e*Pn **Pn** **21 47 47.1** **-0.1**

ISCJB ***28*** *21:47:14.3±0.5, 32°.71N±0°.05×105°.99E±0°.07, h10km, mb3.5/5, Error ellipse: s-maj=9.5km s-min=5.5km az=143.6*
BJI ***28*** *21:47:14.1, 32°.45N×105°.74E, h10km, mB4.4/1, mb3.9/1, ML3.7/6, Ms3.5/4, Ms7 2.9/4*
IDC ***28*** *21:47:15.3±1.5, 32°.69N×105°.96E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/28, mbtmp3.3/5, ML3.5/1, Error ellipse: s-maj=63.6km s-min=23.7km az=61.0*
NEIC ***28*** *21:47:16.2±0.5, 32°.69N×105°.97E, h10km, mb3.7/3, Error ellipse: s-maj=12.7km s-min=8.0km az=60.0*
ISC 28 21:47:16.3±0.5, 32°.72N±0°.05×105°.96E±0°.07, h10km, n21, σ0°.97/31, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.60**	**227**	Pg	**Pn**	**21 47 51.8**	**-6.6**
CD2				Sg	**Sn**	**21 48 18.3**	**-12**
CD2				smax			
comp=N,2μm,0.7s
XAN **Xi'an** **2.81** **61** Pg **Pg** **21 48 11.3** **+1.2**
XAN smax
comp=N,210nm,0.9s
XAN smax
comp=E,110nm,0.8s
XAN LR LR
comp=N,240nm,9.0s
XAN LR LR
comp=E,56nm,10.4s
XAN LR LR
comp=Z,31nm,6.2s
LZH **Lanzhou** **3.79** **333** *e*Pn **Pn** **21 48 19.5** **+4.7**
LZH Pg **Pg** **21 48 26.8** **-2.1**
LZH Sn **Sn** **21 48 59.5** **+0.1**
LZH Sg **Sg** **21 49 14.0** **-4.1**
LZH smax
comp=N,380nm,0.6s
LZH smax
comp=E,930nm,0.6s
LZH LR LR
comp=E,2μm,5.8s
ENH **Enshi** **3.87** **128** *e*Pn **Pn** **21 48 15.6** **-0.3**
ENH *e*Pg **Pg** **21 48 30.3** **-0.2**
ENH S **Sn** **21 49 10.5** **+9.0**
GYA **Guiyang** **6.26** **174** Pg **Pn** **21 48 48.3** **-0.5**
GYA Sg **Sn** **21 49 53.8** **-6.6**
GYA smax
comp=N,60nm,0.9s
GYA smax
comp=E,50nm,0.7s
WHN **Wuhan** **7.47** **105** Pn **Pn** **21 49 04.0** **-1.4**
WHN Sn **Sn** **21 50 36.5** **+6.3**
KMI **Kunming** **8.07** **201** Pn **Pn** **21 49 17.0** **+3.4**
KMI Sn **Sn** **21 50 29.5** **-15**
KMI smax
comp=N,8.0nm,0.8s
KMI smax
comp=E,12nm,0.8s
KMI LR LR
comp=N,130nm,8.8s
KMI LR LR
comp=E,120nm,9.9s
KMI LR LR
comp=Z,74nm,6.8s
GTA **Gaotai** **8.33** **325** *e*P **Pn** **21 49 17.5** **+0.4**
GTA pP 21 49 21.0
GTA sP 21 49 23.0
GTA S **Sn** **21 50 50.0** **-1.2**
GTA pmax pmax
comp=Z,3.0nm,0.5s
GTA pmax pmax
comp=Z,95nm,5.4s
GTA LR LR
comp=N,66nm,8.0s
GTA LR LR
comp=E,87nm,8.6s
GTA LR LR
comp=Z,77nm,11.6s
SONM **Songino Array** **15.11** **1** Pn **Pn** **21 50 48.6** **-1.1**
comp=Z,0.2nm,0.3s,baz=174,slow=16,SNR=3.2
CMAR **Chiang Mai Arr** **15.54** **206** Pn **Pn** **21 50 53.9** **-1.6**
comp=Z,0.1nm,0.3s,baz=15,slow=10,SNR=3.9
MK31 **Makanchi Array** **22.88** **315** *e*P **P** **21 52 20.5** **+0.6**
MKAR **Makanchi Array** **22.88** **315** P **P** **21 52 20.4** **+0.5**
comp=Z,1.1nm,0.9s,mb3.3,baz=107,slow=12,SNR=8.4
TKM2 **Tokmak 2** **25.94** **302** P **P** **21 52 49.0** **+0.4**
UCH **Uchtor** **26.58** **300** *e*P **P** **21 52 55.8** **+1.3**
comp=Z,0.9nm,0.5s,mb3.6
KURK **Kurchatov** **26.97** **320** P **P** **21 52 59.3** **+1.4**
comp=Z,0.5nm,0.8s,mb3.1,baz=132,slow=8.9,SNR=4.3
KURK **Kurchatov** **26.97** **320** *e*P **P** **21 52 58.2** **+0.3**
comp=Z,1.5nm,0.8s,mb3.6
AML **Almayashu** **27.16** **300** *e*P **P** **21 53 00.2** **+0.4**
comp=Z,0.9nm,0.5s,mb3.6
YAK **Yakutsk** **33.05** **20** *e*P **P** **21 53 51.7** **+0.2**
comp=Z,16nm,0.4s
ARU **Arti** **40.16** **321** P **P** **21 54 52.4** **+0.1**
KWP **Kalwaria Pacla** **61.77** **313** P **P** **21 57 35.4** **+0.5**
ASAR **Alice Springs** **62.09** **151** P **P** **21 57 38.0** **+0.7**
comp=Z,0.4nm,0.8s,mb3.6,baz=336,slow=6.6,SNR=3.3

IDC 28 22:00:09.8±48.0, 4°.25N×32°.58W, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.5/25, mbtmp3.9/3, MS3.8/10, Ms1 3.8/10, ms1mx3.5/33, Error ellipse: s-maj=1167.0km s-min=89.6km az=28.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**34.97**	**73**	P	P	22 07 04.0	0.0
3.1nm,1.1s,baz=261,slow=9.2,SNR=7.8
TORD LR LR 22 19 27.1
comp=Z,194nm,18.5s,baz=265,slow=33
CPUP **Villa Florida** **38.71** **217** LR LR 22 23 13.9
comp=Z,142nm,18.7s,baz=2.0,slow=36
LPAZ **La Paz** **40.65** **239** LR LR 22 25 15.0
comp=Z,94nm,18.3s,baz=89,slow=37
ROSC **El Rosal** **41.62** **273** LR LR 22 26 04.5
comp=Z,84nm,18.7s,baz=32,slow=37
MLR **Muntele Rosu** **65.25** **41** LR LR 22 37 39.4
comp=Z,68nm,22.0s,baz=130,slow=34
EIL **Elat** **68.41** **60** LR LR 22 41 58.3

comp=Z,138nm,18.7s,baz=281,slow=37
BRTR Keskin Array B 69.08 49 P P 22 11 18.1 +0.2
1.7nm,1.0s,baz=254,slow=4.6,SNR=6.4
AKASG Malin Array Be 69.12 37 P P 22 11 17.9 +0.1
0.1nm,0.3s,baz=247,slow=7.2,SNR=4.7
KMBO Kilima Mbogo 69.98 93 LR LR 22 40 36.2
comp=Z,98nm,18.2s,baz=267,slow=35
TXAR Lajitas Array 71.45 299 LR LR 22 44 33.2
comp=Z,30nm,20.5s,baz=5.0,slow=37
PDAR Pinedale Array 77.57 313 LR LR 22 42 42.4
comp=Z,56nm,18.8s,baz=332,slow=33
SPITS Spitsbergen Ar 78.05 9 LR LR 22 40 01.8
comp=Z,40nm,19.1s,baz=200,slow=31

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*PDA **28** 22:21:27.0±0.9, 37°.46N×24°.30W, h5km, MD3.9, ML3.5,*
Error ellipse: s-maj=5.8km s-min=3.0km az=77.0
*CSEM **28** 22:21:27.0, 37°.46N×24°.30W, h5km, ML3.5, After PDA*
ISC 28 22:21:17.3±0.7, 37°.70N±0°.07×24°.03W±0°.04, h10km, n33,
σ1§74/53, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**1.08**	**230**	*eP*	**Pg**	**22 21 39.0**	**+1.1**
PSMN				*eS*	**Sg**	**22 21 49.0**	**-2.9**
PSMN	**Pico do Norte,**	**1.08**	**230**	*eP*	**Pg**	**22 21 39.0**	**+1.1**
PSMN				*eS*	**Sg**	**22 21 49.0**	**-2.9**
PSMA	**Santa Maria**	**1.12**	**232**	*eP*	**Pb**	**22 21 40.3**	**+1.6**
PSMA				*eS*	**Sg**	**22 21 49.9**	**-3.4**
PSMA				A		22 21 51.4	
	294nm,0.2s						
CMLA	**Cha da Macela**	**1.19**	**274**	*eP*	**Pb**	**22 21 43.2**	**+3.4**
CMLA				*eS*	**Sb**	**22 21 54.9**	**-0.3**
CMLA				A		22 21 57.0	
	489nm,0.5s						
CMLA				A		22 21 58.5	
	4μm,0.5s						
CMLA	**Cha da Macela**	**1.19**	**274**	*eP*	**Pb**	**22 21 43.2**	**+3.4**
CMLA				*eS*	**Sb**	**22 21 54.9**	**-0.3**
GRON	**Grota Negra**	**1.19**	**274**	*eP*	**Pb**	**22 21 41.7**	**+1.7**
GRON				*eS*	**Sb**	**22 21 52.8**	**-2.6**
GRON				A		22 21 55.2	
	160nm,0.2s						
PDA	**Ponta Delgada**	**1.30**	**273**	*eP*	**Pn**	**22 21 43.7**	**+2.3**
PDA				*eS*	**Sb**	**22 21 57.2**	**-1.2**
PDA	**Ponta Delgada**	**1.30**	**273**	*eP*	**Pn**	**22 21 43.7**	**+2.3**
PDA				*eS*	**Sb**	**22 21 57.2**	**-1.2**
PSET	**Sete Cidades**	**1.35**	**276**	*eP*	**Pn**	**22 21 45.6**	**+3.5**
PSET				*eS*	**Sb**	**22 21 59.2**	**-0.6**
PSET				A		22 22 01.4	
	94nm,0.3s						
PSET	**Sete Cidades**	**1.35**	**276**	*eP*	**Pn**	**22 21 45.6**	**+3.5**
PSET				*eS*	**Sb**	**22 21 59.2**	**-0.6**
ADH	**Angra Heroismo**	**2.70**	**292**	*eP*	**Pn**	**22 22 05.0**	**+4.3**
ADH				*eS*	**Sn**	**22 22 33.4**	**0.0**
ADH				A		22 22 35.6	
	90nm,0.3s						
ADH	**Angra Heroismo**	**2.70**	**292**	*eP*	**Pn**	**22 22 05.0**	**+4.3**
ADH				*eS*	**Sn**	**22 22 33.4**	**0.0**
PID	**Ribeirinha**	**3.31**	**284**	*eP*	**Pn**	**22 22 12.8**	**+3.7**
PID	**Ribeirinha**	**3.31**	**284**	*eP*	**Pn**	**22 22 12.8**	**+3.7**
PMAN	**Manadas**	**3.33**	**288**	*eS*	**Sn**	**22 22 48.2**	**-0.8**
PMAN				A		22 22 49.6	
	31nm,0.2s						
PMAN	**Manadas**	**3.33**	**288**	*eS*	**Sn**	**22 22 48.2**	**-0.8**
ROSA	**Rosais**	**3.47**	**288**	*eP*	**Pn**	**22 22 15.7**	**+4.4**
ROSA	**Rosais**	**3.47**	**288**	*eP*	**Pn**	**22 22 15.7**	**+4.4**
PICO	**Pico**	**3.56**	**284**	*eP*	**Pn**	**22 22 16.5**	**+4.0**
PICO				*eS*	**Sn**	**22 22 53.7**	**-0.9**
PICO	**Pico**	**3.56**	**284**	*eP*	**Pn**	**22 22 16.5**	**+4.0**
PICO				*eS*	**Sn**	**22 22 53.7**	**-0.9**
PCAN	**Candelaria**	**3.60**	**284**	*eP*	**Pn**	**22 22 17.0**	**+4.0**
PCAN				*eS*	**Sn**	**22 22 53.9**	**-1.7**
PCAN				A		22 23 00.7	
	56nm,0.3s						
PCAN	**Candelaria**	**3.60**	**284**	*eP*	**Pn**	**22 22 17.0**	**+4.0**
PCAN				*eS*	**Sn**	**22 22 53.9**	**-1.7**
CALA	**Caldeira**	**3.79**	**285**	*eP*	**Pn**	**22 22 19.6**	**+3.9**
CALA				*eS*	**Sn**	**22 22 59.3**	**-1.0**
CALA	**Caldeira**	**3.79**	**285**	*eP*	**Pn**	**22 22 19.6**	**+3.9**
CALA				*eS*	**Sn**	**22 22 59.3**	**-1.0**
PMAR	**Madeira**	**7.65**	**128**	*eP*	**Pn**	**22 23 15.3**	**+6.6**
PMAR				*eS*	**Sn**	**22 24 34.1**	**-1.3**
PMAR				A		22 24 42.4	
	17nm,0.3s						
FUL	**Funchal**	**7.72**	**129**	*eP*	**Pn**	**22 23 16.0**	**+6.3**
PMPS	**Porto Santo**	**7.80**	**124**	*eP*	**Pn**	**22 23 16.9**	**+6.1**
PMPS				*eS*	**Sn**	**22 24 39.2**	**-0.1**
PTEO	**Sao Teotonio**	**12.14**	**86**	*eS*	**Sn**	**22 26 21.5**	**-4.1**
PCVE	**Castro Verde**	**12.68**	**85**	*eS*	**Sn**	**22 26 36.2**	**-2.5**
PBDV	**Barranco-do-Ve**	**12.80**	**87**	*eS*	**Sn**	**22 26 39.7**	**-2.1**
PVAQ	**Vaqueiros**	**12.95**	**86**	*eS*	**Sn**	**22 26 42.0**	**-3.5**
PESTR	**Estremoz**	**12.97**	**80**	*eS*	**Sn**	**22 26 43.6**	**-2.4**
PBAR	**Barrancos**	**13.43**	**83**	*eS*	**Sn**	**22 26 53.4**	**-3.6**

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*ISK **28** 22:35:48.7, 36°.96N×29°.19E, h5km, MD3.7, ML3.8*
*NEIC **28** 22:35:48.8, 36°.97N×29°.19E, h5km, mb4.0/9, ML3.6(ATH),*
ML3.8(ISK), After ISK.
*IDC **28** 22:35:49.0±0.8, 36°.94N×29°.23E, h0km, mb3.8/9,*
mb1 4.0/16, mb1mx3.8/32, mbtmp3.8/16, ML4.0/7, MS3.3/3,
Ms1 3.4/3, ms1mx2.6/40, Error ellipse: s-maj=15.9km
s-min=14.0km az=15.0
*ATH **28** 22:35:49.9, 36°.99N×29°.13E, h7km±1km, MD3.9/7, ML3.6*
*DDA **28** 22:35:49.6, 36°.96N×29°.25E, h23km, Md3.5*
*CSEM **28** 22:35:50.0±0.1, 36°.93N×29°.23E, h2km, mb4.0/5, Error*
ellipse: s-maj=2.3km s-min=1.9km az=43.0
*HLW **28** 22:35:52.1, 36°.92N×29°.32E, h33km±41km, Ml3.7*
*THE **28** 22:35:53.6, 37°.03N×29°.26E, h11km±3km, ML4.1/1, Error*
ellipse: s-maj=3.4km s-min=1.1km az=110.0
*GII **28** 22:35:54.5±1.2, 36°.77N×29°.19E, h31km±1km, Mb4.1/5,*
Md3.8/7
ISC 28 22:35:50.8±0.4, 36°.92N±0°.01×29°.27E±0°.02, h9km±2km,
n352, σ1§09/428, mb3.7/14, MS3.3/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**38**	PG	**Pg**	**22 35 55.8**	**-0.9**
GLHS				*e*SG	**Sg**	**22 36 00.8**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**38**	Pg	**Pg**	**22 35 55.9**	**-0.8**
GLHS				Sg	**Sg**	**22 36 01.9**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.30**	**38**	Pg	**Pg**	**22 35 55.9**	**-0.8**
GLHS				*e*Sg	**Sg**	**22 36 00.9**	**+0.2**
FETY	**Fethiye**	**0.32**	**207**	PG	**Pg**	**22 35 56.4**	**-0.8**
FETY				*e*SG	**Sg**	**22 36 01.9**	**+0.4**
FETY	**Fethiye**	**0.32**	**207**	Pg	**Pg**	**22 35 56.6**	**-0.6**
FETY	**Fethiye**	**0.32**	**207**	*i* Pg	**Pg**	**22 35 56.4**	**-0.8**
FETY				*e*Sg	**Sg**	**22 36 01.9**	**+0.4**
GOLH	**Golhisar**	**0.39**	**37**	*i* P	**Pg**	**22 35 57.7**	**-0.8**
GOLH				*i* S	**Sg**	**22 36 04.6**	**+0.9**
GOLH	**Golhisar**	**0.39**	**37**	*i* P	**Pg**	**22 35 57.7**	**-0.8**
GOLH				*i* S	**Sg**	**22 36 04.6**	**+0.9**
TURN	**Turunc**	**0.54**	**265**	*i* P	**Pg**	**22 36 05.1**	**+3.9**
TURN				*i* S	**Sg**	**22 36 17.7**	**+9.5**
ELL	**Elmali**	**0.54**	**109**	*e*PG	**Pg**	**22 36 01.4**	**+0.1**
ELL				*e*SG	**Sg**	**22 36 11.6**	**+3.1**
ELL	**Elmali**	**0.54**	**109**	*e*Pg	**Pg**	**22 36 01.4**	**+0.1**
ELL				*e*Sg	**Sg**	**22 36 11.6**	**+3.1**
AKAS	**Kas**	**0.74**	**158**	*i* P	**Pg**	**22 36 05.5**	**+0.5**
AKAS				*i* S	**Sg**	**22 36 19.7**	**+5.0**
AKAS	**Kas**	**0.74**	**158**	*i* P	**Pg**	**22 36 05.5**	**+0.4**
DNZL	**Cakiroluk**	**0.79**	**347**	*i* P	**Pg**	**22 36 03.7**	**-2.2**
DNZL				*i* S	**Sg**	**22 36 15.4**	**-0.7**
DNZL	**Cakiroluk**	**0.79**	**347**	*i* P	**Pg**	**22 36 03.7**	**-2.2**
DNZL				*i* S	**Sg**	**22 36 15.4**	**-0.8**
KSL	**Kastellorizon**	**0.81**	**162**	*e*PB	**Pb**	**22 36 07.2**	**+0.1**
YER	**Yerkesik**	**0.81**	**285**	*e*PG	**Pg**	**22 36 04.9**	**-1.6**
YER	**Yerkesik**	**0.81**	**285**	Pg	**Pg**	**22 36 04.7**	**-1.8**
YER	**Yerkesik**	**0.81**	**285**	Pg	**Pg**	**22 36 04.7**	**-1.8**
DENT	**Denizli**	**0.85**	**347**	*e*PG	**Pg**	**22 36 04.4**	**-2.7**
DENT	**Denizli**	**0.85**	**347**	*e*Pg	**Pg**	**22 36 04.4**	**-2.8**
KORT	**Korkueli**	**0.87**	**85**	*i* P	**Pg**	**22 36 06.4**	**-1.1**
KORT				*i* S	**Sg**	**22 36 23.9**	**+5.0**
KORT	**Korkueli**	**0.87**	**85**	*i* P	**Pg**	**22 36 06.4**	**-1.2**
KORT				*i* S	**Sg**	**22 36 23.9**	**+5.0**
ANTB	**Antalya**	**1.11**	**91**	*e*PN	**Pn**	**22 36 12.0**	**-0.5**
ANTB	**Antalya**	**1.11**	**91**	*e*Pn	**Pn**	**22 36 12.0**	**-0.5**
ARG	**Arkhangelos**	**1.16**	**233**	*e*PB	**Pb**	**22 36 11.2**	**-1.8**
ARG				*e*SB	**Sb**	**22 36 26.3**	**-1.8**
ARG	**Arkhangelos**	**1.16**	**233**	P	**Pb**	**22 36 11.4**	**-1.6**
ARG				S	**Sb**	**22 36 30.9**	**+2.8**
ARG	**Arkhangelos**	**1.16**	**233**	P	**Pb**	**22 36 11.4**	**-1.6**
ARG				*e*Sb	**Sb**	**22 36 26.3**	**-1.8**
BCK	**Bucak**	**1.18**	**63**	*e*PN	**Pn**	**22 36 12.2**	**-1.3**
BCK	**Bucak**	**1.18**	**63**	Pn	**Pn**	**22 36 13.2**	**-0.3**
BCK	**Bucak**	**1.18**	**63**	Pn	**Pn**	**22 36 13.2**	**-0.3**
MLSB	**Milas**	**1.25**	**288**	*e*PN	**Pn**	**22 36 12.3**	**-2.1**
MLSB	**Milas**	**1.25**	**288**	Pn	**Pn**	**22 36 12.7**	**-1.7**
MLSB	**Milas**	**1.25**	**288**	Pn	**Pn**	**22 36 12.7**	**-1.7**
AYDN	**Tasoluk**	**1.33**	**304**	*i* P	**Pn**	**22 36 14.2**	**-1.3**
AYDN				*i* S	**Sb**	**22 36 33.2**	**+0.2**
AYDN	**Tasoluk**	**1.33**	**304**	*i* P	**Pn**	**22 36 14.2**	**-1.3**
AYDN				*i* S	**Sb**	**22 36 33.2**	**+0.2**
ISP	**Isparta**	**1.35**	**47**	*e*PN	**Pn**	**22 36 15.8**	**0.0**
ISP	**Isparta**	**1.35**	**47**	P	**Pn**	**22 36 16.0**	**+0.2**
ISP	**Isparta**	**1.35**	**47**	P	**Pn**	**22 36 15.9**	**+0.1**
ISP				S	**Sb**	**22 36 33.0**	**-0.6**
ISP	**Isparta**	**1.35**	**47**	P	**Pn**	**22 36 16.0**	**+0.2**
ISP				S	**Sb**	**22 36 33.0**	**-0.6**
DAT	**Datca**	**1.37**	**262**	*e*PN	**Pn**	**22 36 15.0**	**-1.1**
DAT	**Datca**	**1.37**	**262**	*e*Pn	**Pn**	**22 36 15.0**	**-1.1**
KHL	**Karahalli**	**1.41**	**8**	*e*PN	**Pn**	**22 36 16.2**	**-0.4**
KHL	**Karahalli**	**1.41**	**8**	*e*Pn	**Pn**	**22 36 16.2**	**-0.5**
KHAL	**Karahalli**	**1.46**	**7**	*i* P	**Pn**	**22 36 16.1**	**-1.2**
KHAL				*i* S	**Sn**	**22 36 36.5**	**+0.1**
KHAL	**Karahalli**	**1.46**	**7**	*i* P	**Pn**	**22 36 16.1**	**-1.1**
KHAL				*i* S	**Sn**	**22 36 36.5**	**+0.1**
BDRM	**Kayabasi**	**1.47**	**276**	*i* P	**Pn**	**22 36 17.3**	**-0.1**
BDRM				*i* S	**Sn**	**22 36 36.7**	**0.0**
BDRM	**Kayabasi**	**1.47**	**276**	*i* P	**Pn**	**22 36 17.3**	**-0.1**
BDRM				*i* S	**Sn**	**22 36 36.7**	**0.0**
SUTC	**Sutluce-Ispart**	**1.49**	**68**	*e*PN	**Pn**	**22 36 18.7**	**+1.0**
SUTC	**Sutluce-Ispart**	**1.49**	**68**	*e*Pn	**Pn**	**22 36 18.7**	**+1.0**
KULA	**Kula-Manisa**	**1.66**	**343**	*e*PN	**Pn**	**22 36 19.2**	**-0.9**
KULA	**Kula-Manisa**	**1.66**	**343**	*e*Pn	**Pn**	**22 36 19.2**	**-0.9**
MANT	**Manisa**	**1.66**	**340**	*e*P	**Pn**	**22 36 19.4**	**-0.7**
MANT				*i* S	**Sn**	**22 36 41.0**	**-0.5**
MANT	**Manisa**	**1.66**	**340**	*e*P	**Pn**	**22 36 19.4**	**-0.7**
MANT				*i* S	**Sn**	**22 36 41.0**	**-0.5**
GCAM	**G?zelcaml?**	**1.80**	**296**	*i* P	**Pn**	**22 36 22.0**	**+0.1**
GCAM				*i* S	**Sn**	**22 36 50.0**	**+5.2**
GCAM	**G?zelcaml?**	**1.80**	**296**	*i* P	**Pn**	**22 36 22.0**	**+0.1**
SHUT	**Suhut-Afyon**	**1.92**	**32**	*e*PN	**Pn**	**22 36 23.8**	**+0.2**
SHUT	**Suhut-Afyon**	**1.92**	**32**	*e*Pn	**Pn**	**22 36 23.8**	**+0.2**
SMG	**Samos**	**2.09**	**293**	*e*PN	**Pn**	**22 36 25.3**	**-0.7**
SMG	**Samos**	**2.09**	**293**	*e*Pn	**Pn**	**22 36 25.3**	**-0.7**
DEMI	**Demirci**	**2.16**	**349**	*i* P	**Pn**	**22 36 26.6**	**-0.3**
DEMI				*i* S	**Sn**	**22 36 54.6**	**+0.8**
DEMI	**Demirci**	**2.16**	**349**	*i* P	**Pn**	**22 36 26.6**	**-0.3**
DEMI				*i* S	**Sn**	**22 36 54.6**	**+0.8**
IZM	**Izmir**	**2.17**	**313**	*e*PN	**Pn**	**22 36 26.6**	**-0.5**
GDZ	**Gediz**	**2.17**	**4**	*i* P	**Pn**	**22 36 26.8**	**-0.2**
GDZ				*i* S	**Sn**	**22 36 54.8**	**+0.8**
GDZ	**Gediz**	**2.17**	**4**	*i* P	**Pn**	**22 36 26.8**	**-0.2**
GDZ				*i* S	**Sn**	**22 36 54.8**	**+0.8**
KARP	**Karpathos**	**2.19**	**232**	*e*PN	**Pn**	**22 36 28.4**	**+1.1**
KARP				*e*SN	**Sn**	**22 36 56.0**	**+1.5**
KARP	**Karpathos**	**2.19**	**232**	*e*Pn	**Pn**	**22 36 28.4**	**+1.1**
KARP				*e*Sn	**Sn**	**22 36 56.0**	**+1.5**
ALT	**Altintas**	**2.23**	**17**	*e*PN	**Pn**	**22 36 27.5**	**-0.4**
ALT	**Altintas**	**2.23**	**17**	Pn	**Pn**	**22 36 28.0**	**+0.1**
ALT	**Altintas**	**2.23**	**17**	Pn	**Pn**	**22 36 28.0**	**+0.1**
BOLV	**Bolvadin**	**2.23**	**36**	*i* P	**Pn**	**22 36 28.9**	**+1.0**
BOLV				*i* S	**Sn**	**22 36 54.2**	**-1.4**
BOLV	**Bolvadin**	**2.23**	**36**	*i* P	**Pn**	**22 36 29.0**	**+1.1**
BOLV				*i* S	**Sn**	**22 36 54.2**	**-1.4**
AKHS	**Akhisar**	**2.27**	**330**	*i* P	**Pn**	**22 36 27.6**	**-0.8**
AKHS				*i* S	**Sn**	**22 36 56.3**	**-0.1**
AKHS	**Akhisar**	**2.27**	**330**	*i* P	**Pn**	**22 36 27.6**	**-0.8**
AKHS				*i* S	**Sn**	**22 36 56.3**	**-0.1**
AKS	**Akhisar**	**2.27**	**330**	*e*PN	**Pn**	**22 36 27.6**	**-0.8**
AKS	**Akhisar**	**2.27**	**330**	Pn	**Pn**	**22 36 27.7**	**-0.7**
AKS	**Akhisar**	**2.27**	**330**	Pn	**Pn**	**22 36 27.7**	**-0.7**
BLCB	**Balcova**	**2.29**	**310**	*e*PN	**Pn**	**22 36 27.8**	**-0.9**
BLCB	**Balcova**	**2.29**	**310**	P	**Pn**	**22 36 28.2**	**-0.5**
BLCB				S	**Sn**	**22 36 57.0**	**0.0**
BLCB	**Balcova**	**2.29**	**310**	*e*Pn	**Pn**	**22 36 27.8**	**-0.9**
BLCB	**Balcova**	**2.29**	**310**	P	**Pn**	**22 36 28.2**	**-0.5**
BLCB				S	**Sn**	**22 36 57.0**	**0.0**
GAZI	**Gazipasa**	**2.55**	**105**	*e*P	**Pn**	**22 36 34.7**	**+2.5**
GAZI				*i* S	**Sn**	**22 37 09.4**	**+6.1**
GAZI	**Gazipasa**	**2.55**	**105**	*e*P	**Pn**	**22 36 34.7**	**+2.4**
GAZI				*i* S	**Sn**	**22 37 09.4**	**+6.0**
URLA	**Izmir**	**2.56**	**305**	*i* P	**Pn**	**22 36 31.9**	**-0.5**
URLA				*i* S	**Sn**	**22 37 04.6**	**+0.9**
URLA	**Izmir**	**2.56**	**305**	*i* P	**Pn**	**22 36 32.0**	**-0.4**
URLA				*i* S	**Sn**	**22 37 04.6**	**+0.9**
HDMB	**Hadim**	**2.58**	**88**	*e*PN	**Pn**	**22 36 34.1**	**+1.4**
HDMB	**Hadim**	**2.58**	**88**	*e*Pn	**Pn**	**22 36 34.1**	**+1.4**
KONT	**Konya--Tatoy**	**2.67**	**67**	*e*PN	**Pn**	**22 36 35.0**	**+1.2**
KONT	**Konya--Tatoy**	**2.67**	**67**	Pn	**Pn**	**22 36 35.2**	**+1.3**
KONT	**Konya--Tatoy**	**2.67**	**67**	*e*Pn	**Pn**	**22 36 35.0**	**+1.1**
DST	**Dursunbey**	**2.73**	**350**	*e*PN	**Pn**	**22 36 35.3**	**+0.6**
DST	**Dursunbey**	**2.73**	**350**	Pn	**Pn**	**22 36 34.7**	**0.0**
DST	**Dursunbey**	**2.73**	**350**	Pn	**Pn**	**22 36 34.7**	**0.0**
LADK	**Ladik-KONYA**	**2.77**	**62**	*e*PN	**Pn**	**22 36 36.5**	**+1.2**
LADK	**Ladik-KONYA**	**2.77**	**62**	*e*Pn	**Pn**	**22 36 36.5**	**+1.2**
KIZT	**Kizilcal**	**2.84**	**46**	*e*PN	**Pn**	**22 36 37.2**	**+0.9**
KIZT	**Kizilcal**	**2.84**	**46**	Pn	**Pn**	**22 36 37.5**	**+1.1**
KIZT	**Kizilcal**	**2.84**	**46**	*e*Pn	**Pn**	**22 36 37.3**	**+1.0**
ESKT	**Eskisehir**	**2.88**	**25**	*e*PN	**Pn**	**22 36 37.3**	**+0.5**
ESKT	**Eskisehir**	**2.88**	**25**	*e*Pn	**Pn**	**22 36 37.3**	**+0.5**
BALB	**Balikesir**	**2.92**	**339**	*e*PN	**Pn**	**22 36 37.3**	**-0.1**
BALB	**Balikesir**	**2.92**	**339**	Pn	**Pn**	**22 36 37.5**	**0.5**
BALB	**Balikesir**	**2.92**	**339**	*e*Pn	**Pn**	**22 36 37.3**	**-0.1**
ERMK	**Ermenek**	**2.94**	**94**	*i* P	**Pg**	**22 36 43.4**	**-3.8**
ERMK				*i* S	**Sg**	**22 37 24.0**	**-1.3**
ERMK	**Ermenek**	**2.94**	**94**	*i* P	**Pn**	**22 36 43.4**	**+5.7**
APE	**Apeiranthos**	**3.00**	**274**	*e*PN	**Pn**	**22 36 38.8**	**+0.4**
APE				*e*SN	**Sn**	**22 37 14.4**	**0.0**
APE	**Apeiranthos**	**3.00**	**274**	P	**Pn**	**22 36 39.0**	**+0.6**
APE				S	**Sn**	**22 37 15.7**	**+1.3**
APE	**Apeiranthos**	**3.00**	**274**	*e*Pn	**Pn**	**22 36 38.8**	**+0.4**
APE				*e*Sn	**Sn**	**22 37 14.4**	**0.0**
APE				S	**Sn**	**22 37 15.7**	**+1.3**
ZKR	**Zakros**	**3.06**	**235**	P	**Pn**	**22 36 41.2**	**+1.9**
ZKR				S	**Sn**	**22 37 18.9**	**+2.9**
ZKR	**Zakros**	**3.06**	**235**	P	**Pn**	**22 36 41.2**	**+1.9**
ZKR				S	**Sn**	**22 37 18.9**	**+2.9**
SVRH	**Sivrihisar-ESK**	**3.08**	**35**	*e*PN	**Pn**	**22 36 40.5**	**+0.9**
SVRH	**Sivrihisar-ESK**	**3.08**	**35**	Pn	**Pn**	**22 36 40.5**	**+1.0**
SVRH	**Sivrihisar-ESK**	**3.08**	**35**	*e*Pn	**Pn**	**22 36 40.5**	**+0.9**
THR1	**Thera Island**	**3.11**	**261**	P	**Pn**	**22 36 41.9**	**+1.9**
THR1	**Thera Island**	**3.11**	**261**	P	**Pn**	**22 36 41.9**	**+1.9**
PRK	**Paraskevi**	**3.31**	**315**	*e*PN	**Pn**	**22 36 42.6**	**-0.1**
PRK	**Paraskevi**	**3.31**	**315**	P	**Pn**	**22 36 42.6**	**-0.1**
PRK	**Paraskevi**	**3.31**	**315**	P	**Pn**	**22 36 42.6**	**-0.1**
NPS	**Neapolis**	**3.39**	**242**	*e*PN	**Pn**	**22 36 44.7**	**+0.8**
NPS	**Neapolis**	**3.39**	**242**	*e*Pn	**Pn**	**22 36 44.7**	**+0.8**
LEF	**Lefka**	**3.44**	**120**	*e*PN	**Pn**	**22 36 46.4**	**+1.8**
LEF	**Lefka**	**3.44**	**120**	Pn	**Pn**	**22 36 46.6**	**+2.0**
LEF	**Lefka**	**3.44**	**120**	*e*Pn	**Pn**	**22 36 46.4**	**+1.8**
GPA	**Golpazari**	**3.46**	**13**	*e*PN	**Pn**	**22 36 45.3**	**+0.5**
GPA	**Golpazari**	**3.46**	**13**	Pn	**Pn**	**22 36 45.5**	**+0.8**
GPA	**Golpazari**	**3.46**	**13**	*e*Pn	**Pn**	**22 36 45.3**	**+0.5**
ADVT	**Abdulvahap**	**3.52**	**6**	*e*PN	**Pn**	**22 36 46.3**	**+0.6**
ADVT	**Abdulvahap**	**3.52**	**6**	*e*Pn	**Pn**	**22 36 46.3**	**+0.6**
LAST	**Lasithi**	**3.54**	**241**	P	**Pn**	**22 36 46.9**	**+1.0**
LAST				S	**Sn**	**22 37 30.0**	**+2.2**
LAST	**Lasithi**	**3.54**	**241**	P	**Pn**	**22 36 46.9**	**+1.0**
LAST				S	**Sn**	**22 37 30.0**	**+2.2**
BNT	**Bandirma**	**3.59**	**343**	*e*PN	**Pn**	**22 36 46.6**	**0.0**
BNT	**Bandirma**	**3.59**	**343**	*e*Pn	**Pn**	**22 36 46.6**	**+0.1**
EDC	**Edincik**	**3.59**	**343**	*e*PN	**Pn**	**22 36 46.7**	**+0.1**
EDC	**Edincik**	**3.59**	**343**	*e*Pn	**Pn**	**22 36 46.7**	**+0.1**
SULT	**Sultanhani-AKS**	**3.61**	**68**	*e*PN	**Pn**	**22 36 48.5**	**+1.7**
SULT	**Sultanhani-AKS**	**3.61**	**68**	Pn	**Pn**	**22 36 48.8**	**+1.9**
SULT	**Sultanhani-AKS**	**3.61**	**68**	*e*Pn	**Pn**	**22 36 48.5**	**+1.7**
IKL	**Isikli**	**3.62**	**100**	*e*PN	**Pn**	**22 36 49.1**	**+2.1**
IKL	**Isikli**	**3.62**	**100**	Pn	**Pn**	**22 36 49.4**	**+2.4**
IKL	**Isikli**	**3.62**	**100**	*e*Pn	**Pn**	**22 36 49.1**	**+2.1**
GULT	**Gulveren**	**3.64**	**15**	*e*PN	**Pn**	**22 36 48.0**	**+0.8**
GULT	**Gulveren**	**3.64**	**15**	*e*Pn	**Pn**	**22 36 48.0**	**+0.8**
YLV	**Yalova**	**3.64**	**1**	*e*PN	**Pn**	**22 36 47.8**	**+0.5**
YLV	**Yalova**	**3.64**	**1**	*e*Pn	**Pn**	**22 36 47.8**	**+0.5**
EZN	**Ezine**	**3.71**	**322**	*e*PN	**Pn**	**22 36 48.1**	**-0.1**
EZN	**Ezine**	**3.71**	**322**	*e*Pn	**Pn**	**22 36 48.1**	**-0.1**
LFK	**Lefkose**	**3.82**	**114**	*e*PN	**Pn**	**22 36 52.1**	**+2.3**
LFK	**Lefkose**	**3.82**	**114**	Pn	**Pn**	**22 36 52.6**	**+2.8**
LFK	**Lefkose**	**3.82**	**114**	*e*Pn	**Pn**	**22 36 52.1**	**+2.3**
CSS	**Prodhromos**	**3.83**	**119**	Pn	**Pn**	**22 36 48.3**	**-1.6**
CSS	**Prodhromos**	**3.83**	**119**	Pn	**Pn**	**22 36 48.3**	**-1.6**
MDU	**Mudurnu**	**3.85**	**23**	*e*PN	**Pn**	**22 36 51.0**	**+0.8**
MDU	**Mudurnu**	**3.85**	**23**	*e*Pn	**Pn**	**22 36 51.0**	**+0.8**
IDI	**Anoyia**	**3.90**	**247**	Pn	**Pn**	**22 36 51.3**	**+0.5**
	7.9nm,0.3s,baz=61,slow=15,SNR=64						
IDI				Sn	**Sn**	**22 37 36.9**	**+0.1**
	14nm,0.3s,baz=85,slow=17,SNR=19						
IDI	**Anoyia**	**3.90**	**247**	*e*PN	**Pn**	**22 36 52.3**	**+1.4**
IDI	**Anoyia**	**3.90**	**247**	*e*Pn	**Pn**	**22 36 52.3**	**+1.4**
LPK	**Lapseki**	**3.96**	**331**	*e*PN	**Pn**	**22 36 51.5**	**-0.2**
LPK	**Lapseki**	**3.96**	**331**	*e*Pn	**Pn**	**22 36 51.5**	**-0.2**
LOD	**Lodumlu**	**4.04**	**42**	*e*PN	**Pn**	**22 36 53.7**	**+1.0**
LOD	**Lodumlu**	**4.04**	**42**	Pn	**Pn**	**22 36 53.4**	**+0.6**
LOD	**Lodumlu**	**4.04**	**42**	Pn	**Pn**	**22 36 53.4**	**+0.7**
SIVA	**Sivas**	**4.08**	**244**	P	**Pn**	**22 36 58.0**	**+4.6**
SIVA	**Sivas**	**4.08**	**244**	P	**Pn**	**22 36 55.9**	**+2.5**
SIVA				S	**Sn**	**22 37 42.5**	**+1.2**
SIVA	**Sivas**	**4.08**	**244**	P	**Pn**	**22 36 55.9**	**+2.5**
SIVA				S	**Sn**	**22 37 42.5**	**+1.2**
RKY	**Sarkoy-Tekirda**	**4.10**	**337**	*e*PN	**Pn**	**22 36 54.0**	**+0.5**
RKY	**Sarkoy-Tekirda**	**4.10**	**337**	Pn	**Pn**	**22 36 54.0**	**+0.5**
RKY	**Sarkoy-Tekirda**	**4.10**	**337**	*e*Pn	**Pn**	**22 36 54.0**	**+0.4**
ISK	**Istanbul-Kandi**	**4.14**	**358**	*e*PN	**Pn**	**22 36 54.9**	**+0.7**
ISK	**Istanbul-Kandi**	**4.14**	**358**	Pn	**Pn**	**22 36 55.0**	**+0.8**
ISK	**Istanbul-Kandi**	**4.14**	**358**	*e*Pn	**Pn**	**22 36 54.9**	**+0.8**

AWBH		8.58 182	P	Pn	22 37 54.4	-0.8
	baz=183					
AWBH		8.58 182	P	Pn	22 37 54.4	-0.8
EIL	Elat	8.66 145	Pn	Pn	22 37 56.0	-0.2
	comp=E,3.0nm,0.3s,baz=324,slow=4.4,SNR=21					
EIL			Sn	Sn	22 39 30.0	-3.9
	comp=E,0.5nm,0.3s,baz=339,slow=14,SNR=3.2					
EIL	Elat	8.66 145	Pn	Pn	22 37 55.7	-0.5
EIL	Elat	8.66 145	Pn	Pn	22 37 55.7	-0.5
MLR	Muntele Rosu	8.92 345	Pn	Pn	22 38 00.1	+0.4
	comp=E,0.8nm,0.3s,baz=227,slow=4.8,SNR=6.3					
MLR	Muntele Rosu	8.92 345	Pn	Pn	22 38 00.1	+0.4
HKAT	Jabal Katrina	9.27 153	P	Pn	22 38 04.2	-0.4
	baz=153					
HKAT	Jabal Katrina	9.27 153	P	Pn	22 38 04.2	-0.4
TR2		9.30 155	P	Pn	22 38 04.8	-0.2
	baz=155					
TR2		9.30 155	P	Pn	22 38 04.9	-0.2
TIP	Timpagrande	10.12 287	*e*Pn	Pn	22 38 17.4	+1.2
	comp=E,28nm,1.1s					
TIP	Timpagrande	10.12 287	*e*Pn	Pn	22 38 17.4	+1.2
	comp=E,28nm,1.1s					
GNI	Garni	12.54 70	LR	LR	22 44 48.5	
	comp=E,100nm,21.4s,baz=269,slow=43					
GERES	GERESS Array B	16.46 321	Pn	Pn	22 39 42.9	+1.2
	comp=E,0.1nm,0.3s,baz=125,slow=12,SNR=8.3					
GERES	GERESS Array B	16.46 321	Pn	Pn	22 39 42.9	+1.1
PGF	Pioggiola	16.56 296	*e*P	Pn	22 39 40.1	-3.0
LMR	La Mourre	18.52 297	*e*P	Pn	22 40 06.3	-1.1
LMR	La Mourre	18.52 297	*e*P	Pn	22 40 06.3	-1.1
MBDF	Montbardon	18.69 302	*e*P	Pn	22 40 11.3	+1.8
MBDF	Montbardon	18.69 302	*e*P	Pn	22 40 11.3	+1.8
LPG	La Plagne	18.94 304	*e*P	Pn	22 40 12.3	-0.2
	comp=E,8.8nm,0.7s					
LPG	La Plagne	18.94 304	*e*P	Pn	22 40 12.3	-0.2
	comp=E,4.4nm,0.7s					
LPG	La Plagne	18.94 304	*e*P	Pn	22 40 12.3	-0.2
	comp=E,4.4nm,0.7s					
SMRF	Simiane la Rot	19.32 299	*e*P	Pn	22 40 16.5	-0.6
SMRF	Simiane la Rot	19.32 299	*e*P	Pn	22 40 16.5	-0.6
ORIF	Oris-en-Rattie	19.35 302	*e*P	Pn	22 40 16.7	-0.8
	comp=E,9.8nm,0.8s					
ORIF	Oris-en-Rattie	19.35 302	*e*P	Pn	22 40 16.7	-0.8
	comp=E,4.9nm,0.8s					
ORIF	Oris-en-Rattie	19.35 302	*e*P	Pn	22 40 16.7	-0.8
	comp=E,4.9nm,0.8s					
CABF	La Chapelle	19.75 307	*e*P	Pn	22 40 21.1	-1.2
	comp=E,23nm,0.9s					
CABF	La Chapelle	19.75 307	*e*P	Pn	22 40 21.1	-1.2
	comp=E,12nm,0.9s					
CABF	La Chapelle	19.75 307	*e*P	Pn	22 40 21.1	-1.2
	comp=E,12nm,0.9s					
CDF	Champ du Feu	19.76 312	*e*P	Pn	22 40 20.7	-1.6
CDF	Champ du Feu	19.76 312	*e*P	Pn	22 40 20.7	-1.6
HAU	Haudompre	20.13 311	*e*P	P	22 40 25.7	+0.7
HAU	Haudompre	20.13 311	*e*P	P	22 40 25.7	+0.7
VIVF	Saint-Julien-l	20.16 301	*e*P	P	22 40 25.2	-0.1
	comp=E,16nm,0.8s					
VIVF	Saint-Julien-l	20.16 301	*e*P	P	22 40 25.2	-0.1
	comp=E,8.2nm,0.8s					
VIVF	Saint-Julien-l	20.16 301	*e*P	P	22 40 25.2	-0.1
	comp=E,8.2nm,0.8s					
LASF	Ste Croix	20.55 298	*e*P	P	22 40 29.4	-0.1
	comp=E,17nm,1.1s					
LASF	Ste Croix	20.55 298	*e*P	P	22 40 29.4	-0.1
	comp=E,8.6nm,1.1s					
SMF	Signal de Mont	21.22 305	*e*P	P	22 40 36.4	-0.4
	comp=E,11nm,0.8s,mb3.9					
SMF	Signal de Mont	21.22 305	*e*P	P	22 40 36.4	-0.4
	comp=E,5.7nm,0.8s,mb4.0					
SMF	Signal de Mont	21.22 305	*e*P	P	22 40 36.4	-0.4
	comp=E,5.7nm,0.8s,mb3.9					
LOR	Lormes	21.41 307	*e*P	P	22 40 38.4	-0.4
LOR	Lormes	21.41 307	*e*P	P	22 40 38.4	-0.4
SSF	Saint Saulge	21.57 306	*e*P	P	22 40 40.3	-0.2
SSF	Saint Saulge	21.57 306	*e*P	P	22 40 40.3	-0.2
AVF	Avril sur Loir	21.59 305	*e*P	P	22 40 40.3	-0.4
AVF	Avril sur Loir	21.59 305	*e*P	P	22 40 40.3	-0.4
CAF	Calviac	21.98 300	*e*P	P	22 40 44.6	-0.3
CAF	Calviac	21.98 300	*e*P	P	22 40 44.6	-0.3
TCF	Toulx Ste Croi	22.20 303	*e*P	P	22 40 46.6	-0.6
	comp=E,14nm,1.1s,mb4.0					
TCF	Toulx Ste Croi	22.20 303	*e*P	P	22 40 46.6	-0.6
	comp=E,6.8nm,1.1s,mb4.0					
TCF	Toulx Ste Croi	22.20 303	*e*P	P	22 40 46.6	-0.6
	comp=E,6.8nm,1.1s,mb4.0					
BAIF	Baives	22.30 314	*e*P	P	22 40 47.3	-0.9
BAIF	Baives	22.30 314	*e*P	P	22 40 47.3	-0.9
RJF	Les Rejaudoux	22.44 301	*e*P	P	22 40 49.7	-0.1
RJF	Les Rejaudoux	22.44 301	*e*P	P	22 40 49.7	-0.1
ETSF	Etsaut	23.57 294	*e*P	P	22 40 59.3	-2.4
MFF	Saint Martin d	23.86 303	*e*P	P	22 41 03.5	-0.8
	comp=E,9.7nm,0.9s,mb4.0					
MFF	Saint Martin d	23.86 303	*e*P	P	22 41 03.5	-0.8
	comp=E,4.8nm,0.9s,mb3.9					
MFF	Saint Martin d	23.86 303	*e*P	P	22 41 03.5	-0.8
	comp=E,4.8nm,0.9s,mb3.9					
AKTK	Aktyubinsk	24.61 48	P	P	22 41 10.3	-0.8
AKTK	Aktyubinsk	24.61 48	P	P	22 41 10.3	-0.8
AKTO	Aktyubinsk	24.61 48	P	P	22 41 10.3	-0.8
	comp=E,0.8nm,0.5s,mb3.5,baz=244,slow=12,SNR=3.9					
FINES	FINESS Array B	24.62 356	P	P	22 41 11.0	-0.1
	comp=E,2.1nm,0.8s,mb3.7,baz=159,slow=12,SNR=7.9					
FINES	FINESS Array B	24.62 356	P	P	22 41 11.0	-0.1
FINES	FINESS Array B	24.62 356	P	P	22 41 11.0	-0.2
GRR	Gorron	24.78 307	*e*P	P	22 41 11.8	-0.9
	comp=E,5.5nm,0.7s,mb3.9					
GRR	Gorron	24.78 307	*e*P	P	22 41 11.8	-0.9
	comp=E,2.8nm,0.7s,mb3.9					
GRR	Gorron	24.78 307	*e*P	P	22 41 11.8	-0.9
	comp=E,2.8nm,0.7s,mb3.9					
TAM	Tamanrasset	24.86 242	*e*P	P	22 41 14.0	+0.3
	comp=E,3.6nm,1.3s,mb3.7					
TAM	Tamanrasset	24.86 242	*e*P	P	22 41 14.0	+0.3
	comp=E,3.6nm,1.3s,mb3.7					
HFS	Hagfors	25.28 342	P	P	22 41 16.7	-0.4
	comp=E,2.6nm,0.8s,mb3.8,baz=149,slow=12,SNR=5.4					
HFS	Hagfors	25.28 342	P	P	22 41 16.7	-0.4
ESDC	Sonseca Array	26.14 286	P	P	22 41 23.6	-1.6
	comp=E,2.5nm,0.7s,mb3.9,baz=77,slow=10,SNR=9.0					
ESDC	Sonseca Array	26.14 286	P	P	22 41 23.6	-1.6
NOA	NORSAR Array B	26.70 340	P	P	22 41 29.5	-0.5
	comp=E,0.5nm,0.7s,mb3.1,baz=143,slow=8.9,SNR=3.0					
NOA			LR	LR	22 53 03.2	
	comp=E,20nm,19.3s,MS2.7,baz=120,slow=39					
NOA	NORSAR Array B	26.70 340	P	P	22 41 29.5	-0.5
TORD	Torodi Ar. Bea	34.19 233	P	P	22 42 36.1	-0.5
	comp=E,3.3nm,0.7s,mb4.2,baz=33,slow=8.5,SNR=28					
KURK	Kurchatov	37.48 52	P	P	22 43 03.9	-0.6
	comp=E,0.6nm,0.7s,mb3.5,baz=277,slow=8.9,SNR=5.4					
KURK	Kurchatov	37.48 52	P	P	22 43 03.9	-0.6
MKAR	Makanchi Array	40.02 59	P	P	22 43 24.8	-1.1
	comp=E,0.4nm,0.6s,mb3.3,baz=270,slow=9.7,SNR=5.0					
MKAR	Makanchi Array	40.02 59	P	P	22 43 24.8	-1.1
CMAR	Chiang Mai Arr	63.10 86	LR	LR	23 18 16.3	
	comp=E,70nm,18.2s,MS3.9,baz=4.8,slow=40					
YKA	Yellowknife Ar	76.75 344	P	P	22 47 41.4	-0.7
	comp=E,0.6nm,0.8s,mb3.6,baz=40,slow=5.7,SNR=4.7					
YKA	Yellowknife Ar	76.75 344	P	P	22 47 41.4	-0.7

IDC 28 22:39:54.1±5.1, 39°37N×110°20E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/32, Error ellipse: s-maj=108.0km s-min=23.6km az=85.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	8.90	343	Pn	Pn	22 42 02.5	-1.4
	0.2nm,0.3s,baz=161,slow=11,SNR=5.9						
SONM				Lg		22 44 37.2	
	0.2nm,0.3s,baz=164,slow=32,SNR=2.8						
MKAR	Makanchi Array	21.62 299		P	P	22 44 45.4	-0.2
	1.5nm,0.9s,baz=97,slow=12,SNR=9.7						
ZALV	Zalesovo Beam	22.55 319		P	P	22 44 56.8	+1.3
	0.4nm,0.6s,baz=101,slow=7.5,SNR=5.5						
CMAR	Chiang Mai Arr	23.01 208		P	P	22 45 00.6	0.0
	0.9nm,0.3s,baz=13,slow=9.7,SNR=8.3						
KURK	Kurchatov	24.84 308		P	P	22 45 18.1	+0.2
	1.1nm,0.9s,baz=107,slow=10,SNR=6.3						
CBIJ	Chichi jima	29.27 105		LR	LR	22 58 08.5	
	comp=Z,61nm,21.2s,baz=181,slow=37						

*ISK **28** 22:44:07.9, 36°95N×29°21E, h3km, MD3.0*

*ISCJB **28** 22:44:09.0±0.5, 36°94N±0°03×29°23E±0°04, h10km, Error ellipse: s-maj=5.0km s-min=3.8km az=28.0*
*CSEM **28** 22:44:08.8±0.2, 36°96N×29°21E, h5km, MD3.0, Error ellipse: s-maj=3.4km s-min=3.1km az=106.0*
*DDA **28** 22:44:09.1, 36°96N×29°22E, h7km±3km, Ml2.9*
ISC 28 22:44:09.2±0.5, 36°95N±0°03×29°20E±0°04, h6km±6km, n31, σ0°70/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	49	*e*PG	Pg	22 44 14.0	-1.3
GLHS				*e*SG	Sg	22 44 19.7	+0.3
GLHS	Glhisar (BURDU	0.31	49	*e*Pg	Pg	22 44 14.0	-1.3
GLHS				*e*Sg	Sg	22 44 19.7	+0.3
FETY	Fethiye	0.33	197	*e*PG	Pg	22 44 14.9	-0.6
FETY				*e*SG	Sg	22 44 20.6	+0.7
FETY	Fethiye	0.33	197	*e*Pg	Pg	22 44 14.9	-0.7
FETY				*e*Sg	Sg	22 44 20.6	+0.7
GOLH	Golhisar	0.41	45	*i* P	Pg	22 44 16.4	-0.6
GOLH				*i* S	Sg	22 44 23.5	+1.1
GOLH	Golhisar	0.41	45	*i* P	Pg	22 44 16.4	-0.6
GOLH				*i* S	Sg	22 44 23.5	+1.2
TURN	Turunc	0.49	261	*e*P	Pg	22 44 24.1	+5.5
TURN				*i* S	Sg	22 44 36.3	+11
ELL	Elmali	0.60	109	*e*PG	Pg	22 44 20.5	-0.2
ELL	Elmali	0.60	109	*e*Pg	Pg	22 44 20.5	-0.2
DNZL	Cakiroluk	0.75	350	*i* P	Pg	22 44 22.2	-1.4
DNZL				*i* S	Sg	22 44 34.0	+0.7
DNZL	Cakiroluk	0.75	350	*i* P	Pg	22 44 22.2	-1.4
DNZL				*i* S	Sg	22 44 34.0	+0.7
YER	Yerkesik	0.76	284	*e*PG	Pg	22 44 23.5	-0.3
YER	Yerkesik	0.76	284	*e*Pg	Pg	22 44 23.5	-0.2
AKAS	Kas	0.79	156	*i* P	Pg	22 44 24.6	+0.4
AKAS				*i* S	Sg	22 44 38.4	+3.9
AKAS	Kas	0.79	156	*i* P	Pg	22 44 24.6	+0.4
AKAS				*i* S	Sg	22 44 38.4	+4.0
DENT	Denizli	0.81	350	*e*PG	Pg	22 44 24.5	-0.3
DENT	Denizli	0.81	350	*e*Pg	Pg	22 44 24.5	-0.3
MLSB	Milas	1.19	287	*e*PN	Pn	22 44 31.7	-0.6
MLSB	Milas	1.19	287	*e*Pn	Pn	22 44 31.7	-0.6
AYDN	Tasoluk	1.27	304	*i* P	Pg	22 44 33.3	-0.3
AYDN				*i* S	Sg	22 44 51.2	+1.2
AYDN	Tasoluk	1.27	304	*i* P	Pg	22 44 33.3	-0.3
AYDN				*i* S	Sg	22 44 51.2	+1.1
DAT	Datca	1.32	261	*e*PN	Pn	22 44 34.4	+0.3
DAT	Datca	1.32	261	*e*Pn	Pn	22 44 34.4	+0.3
KHL	Karahalli	1.39	10	*e*PN	Pn	22 44 34.9	-0.2
KHL	Karahalli	1.39	10	*e*Pn	Pn	22 44 34.9	-0.2
KHAL	Karahalli	1.44	9	*i* P	Pn	22 44 35.7	0.0
KHAL				*i* S	Sb	22 44 55.3	+0.5
KHAL	Karahalli	1.44	9	*i* P	Pn	22 44 35.7	0.0
KHAL				*i* S	Sb	22 44 55.3	+0.5
SUTC	Sutluce-Ispart	1.53	69	*e*PN	Pn	22 44 37.4	+0.5
SUTC	Sutluce-Ispart	1.53	69	*e*Pn	Pn	22 44 37.4	+0.5
KULA	Kula-Manisa	1.62	345	*e*PN	Pn	22 44 38.0	-0.2
KULA	Kula-Manisa	1.62	345	*e*Pn	Pn	22 44 38.0	-0.2

*ISCJB **28** 22:49:39.5±0.6, 8°12S±0°05×119°84E±0°05, h179km±5km, mb4.0/14, Error ellipse: s-maj=10.7km s-min=5.6km az=136.9*
*NEIC **28** 22:49:40.6±1.2, 8°14S×119°81E, h173km±13km, mb3.9/6, Error ellipse: s-maj=11.5km s-min=6.5km az=65.0*
*IDC **28** 22:49:40.6±3.9, 8°06S×119°90E, h170km±37km, mb3.7/9, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, Error ellipse: s-maj=65.8km s-min=13.9km az=61.0*
*DJA **28** 22:49:43, 8°34S×119°65E, h149km, MLv4.8/4*
ISC 28 22:49:41.4±0.5, 8°25S±0°05×119°79E±0°05, h183km±5km, n51, σ1°09/60, mb4.0/14, 1C, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.49	161	P	Pn	22 50 14.1	+0.6
WSI				S	Sn	22 50 36.8	-1.7
MMRI	Maumere	2.45	99	P	Pn	22 50 25.9	+2.2
KHKI	Kahang-Kahang	4.14	268	P	Pn	22 50 44.3	-0.1
SRBI	Singaraja	4.54	272	P	Pn	22 50 50.0	+0.5
IGBI	Denpasar	4.63	263	P	Pn	22 50 51.1	+0.4
IGBI				S	Sn	22 51 43.2	-1.8
TTSI	Tana Toraja	5.17	0	P	Pn	22 51 00.0	+2.3
FITZ	Fitzroy Crossi	11.32	150	*e*P	Pn	22 52 18.2	+0.1
	28nm,0.7s						
FITZ				*e*S	Sn	22 54 16.4	-7.6
FITZ	Fitzroy Crossi	11.32	150	P	Pn	22 52 18.5	+0.4
	2.7nm,0.3s,baz=348,slow=8.5,SNR=90						
FITZ				S	Sn	22 54 15.9	-8.1
	5.0nm,0.3s,baz=215,slow=12,SNR=9.7						
FITZ	Fitzroy Crossi	11.32	150	*e*Pn	Pn	22 52 18.1	0.0
FITZ				*e*Sn	Sn	22 54 21.6	-2.3
KNA	Kununurra	11.51	131	*e*P	Pn	22 52 18.9	-1.6
	38nm,0.2s						
KNA				*e*S	Sn	22 54 21.0	-7.5
MBWA	Marble Bar	12.83	180	*e*P	Pn	22 52 40.7	+3.3
MBWA				*e*S	Sn	22 54 51.5	-8.6
MBWA	Marble Bar	12.83	180	*e*Pn	Pn	22 52 37.7	+0.3
MBWA				*e*Sn	Sn	22 54 50.6	-9.5
KAKA	Kakadu	13.20	111	*e*P	Pn	22 52 41.8	-0.3
	22nm,0.2s						
KAKA				*e*S	Sn	22 54 57.7	-11
KAKA	Kakadu	13.20	111	*e*Pn	Pn	22 52 41.9	-0.2
	59nm,0.3s						
KAKA				*e*Sn	Sn	22 54 59.8	-9.2
WRAB	Tennant Creek	18.26	131	*e*P	P	22 53 42.0	+0.7
	13nm,0.6s						
WRAB				*e*S	S	22 56 59.4	-1.4
MEEK	Meekatharra	18.32	183	*e*P	P	22 53 43.5	+1.6
MEEK				*e*S	S	22 57 00.4	-1.4
ASAR	Alice Springs	20.44	140	P	P	22 54 05.7	+0.9
	6.3nm,0.5s,baz=315,slow=9.8,SNR=99						
ASAR				S	S	22 57 41.5	-2.0
	2.6nm,0.8s,baz=315,slow=20,SNR=8.1						
COCO	West Island	22.93	258	P	P	22 54 30.9	+1.1
KULM	Kulim	23.36	305	*e*P	P	22 54 33.8	+0.1
FORT	Forrest	23.71	162	*e*P	P	22 54 37.7	+1.0
	29nm,0.7s,mb4.9						
BBOO	Buckleboo	28.71	151⇑	*i*P	P	22 55 22.5	+0.9
	11nm,0.5s,mb4.8						
STKA	Stephens Creek	31.04	142	*e*P	P	22 55 43.6	+1.4
	7.6nm,0.6s,mb4.6						
STKA	Stephens Creek	31.04	142	P	P	22 55 43.2	+1.1
	9.2nm,0.6s,mb4.7,baz=315,slow=9.8,SNR=32						
STKA	Stephens Creek	31.04	142	*e*P	P	22 55 43.4	+1.2
	1.5nm,0.5s,mb4.0						
SSLB	Suanglung	31.86	2	*e*P	P	22 55 49.1	-0.3
CMAR	Chiang Mai Arr	33.58	322	P	P	22 56 06.0	+1.6
	0.4nm,0.4s,mb3.5,baz=138,slow=7.7,SNR=2.9						
KMI	Kunming	37.10	334	P	P	22 56 37.8	+3.4
KMI				pP	pP	22 56 45.8	-27
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2						
ENH	Enshi	39.56	346	P	P	22 56 53.8	-1.0
TAU	Tasmania Unive	42.13	150	*e*P	P	22 57 16.4	+0.7
SONM	Songino Array	57.09	349	P	P	22 59 08.0	-0.5
	comp=Z,1.7nm,0.7s,mb4.0,baz=148,slow=8.7,SNR=6.6						
CASY	Casey	58.29	184	P	P	22 59 18.2	+1.6
TLY	Talaya	61.29	349	*e*P	P	22 59 37.0	-0.2
MK31	Makanchi Array	64.16	332	*e*P	P	22 59 56.3	0.0
MKAR	Makanchi Array	64.16	332	P	P	22 59 56.6	+0.3
	comp=Z,1.2nm,0.5s,mb4.0,baz=136,slow=7.5,SNR=28						
TKM2	Tokmak 2	64.88	326	*e*P	P	23 00 00.5	-0.6
	comp=Z,1.0nm,1.0s,mb3.6						
AML	Almayashu	65.47	324	*e*P	P	23 00 05.2	+0.3
	comp=Z,1.9nm,0.8s,mb4.0						
EKS2	Erkin-Say	65.75	324	*e*P	P	23 00 06.2	-0.5
ZAA0	Zalesovo Array	68.63	339	*e*P	P	23 00 23.6	-1.0
ZALV	Zalesovo Beam	68.63	339	P	P	23 00 23.7	-0.9
	comp=Z,4.2nm,0.3s,mb4.6,baz=144,slow=5.3,SNR=30						
KURK	Kurchatov	68.68	333	P	P	23 00 24.9	-0.1
	comp=Z,0.7nm,0.5s,mb3.7,baz=144,slow=5.2,SNR=6.4						
KURK	Kurchatov	68.68	333	*e*P	P	23 00 24.1	-0.8
	comp=Z,3.2nm,1.2s,mb3.9						
MAW	Mawson	70.20	200	*e*P	P	23 00 34.7	+0.6
BVAR	Borovoye Array	74.01	332	P	P	23 00 56.4	-0.4
	comp=Z,0.4nm,0.4s,mb3.5,baz=137,slow=8.0,SNR=4.2						
ABKAR	Abkulak array	77.41	325	*e*P	P	23 01 15.1	-1.1
	comp=Z,0.6nm,0.5s,mb3.5						
AKTK	Aktyubinsk	79.06	325	P	P	23 01 24.1	-1.2
AKTO	Aktyubinsk	79.06	325	P	P	23 01 24.1	-1.2
	comp=Z,0.4nm,0.4s,mb3.4,baz=124,slow=9.5,SNR=3.8						
BOSA	Boshof	90.05	241	*e*P	P	23 02 21.9	+1.0
TORD	Torodi Ar. Bea	119.10	280	PKP	PKPdf	23 08 08.8	-0.8
	comp=Z,0.4nm,0.7s,baz=50,slow=2.5,SNR=7.8						
NVAR	Mina Array Bea	119.94	50	PKP	PKPdf	23 08 11.9	+1.4
	comp=Z,0.4nm,0.7s,baz=217,slow=2.3,SNR=3.2						
CPUP	Villa Florida	145.51	185	PKPbc	PKPbc	23 08 59.7	+0.8
	comp=Z,1.1nm,0.5s,baz=188,slow=5.7,SNR=5.0						
LPAZ	La Paz	154.39	162	PKPab	PKPab	23 09 38.6	+2.8
	comp=Z,1.1nm,0.8s,baz=207,slow=4.8,SNR=5.4						

*IDC **28** 22:54:03.8±1.6, 16°68N×122°22E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/24, mbtmp4.0/11, ML4.5/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/38, Error ellipse: s-maj=41.8km s-min=16.3km az=112.0*
*MAN **28** 22:54:05, 16°45N×122°33E, h7km, mb5.2, ML4.2, MS4.4*
*ISCJB **28** 22:54:07.0±0.6, 16°58N±0°04×122°28E±0°07, h42km±5km, mb4.0/14, Error ellipse: s-maj=11.8km s-min=6.7km az=13.5*
*NEIC **28** 22:54:09.5±2.0, 16°70N×122°22E, h42km±25km, mb4.4/5, Error ellipse: s-maj=21.6km s-min=15.8km az=164.0*
ISC 28 22:54:07.1±0.9, 16°55N±0°05×122°27E±0°07, h28km±6km, n35, σ0°98/36, mb4.0/14, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.53	16	*e*P	Pb	22 54 18.2	+0.3
PALP				*e*S	Sb	22 54 26.0	+0.8
CAUP	Cauayan	0.58	312	*e*P	Pb	22 54 18.3	-0.5
CAUP				*e*S	Sb	22 54 25.3	-1.4
BALP	Baler	1.05	220	*e*P	Pn	22 54 24.8	-1.2
PCPH	Palayan	1.50	229⇑	*e*P	Pn	22 54 31.9	-0.2
APYP	Conner	1.63	323	*e*P	Pn	22 54 35.9	+1.9
BCPH	Baguio City Da	1.63	264⇓	*e*P	Pn	22 54 35.1	+1.1
BCPH				*e*S	Sn	22 54 49.3	-4.7
POLP	Polilio Island	1.84	190	*e*P	Pn	22 54 36.2	-0.6
BOLP	Bolinao	2.27	266	*e*P	Pn	22 54 46.1	+3.4
GQP	Guinayangan	2.64	176⇑	*e*P	Pn	22 54 46.9	-0.9
TGY	Tagaytay City	2.76	208	Pn	Pn	22 54 52.7	+3.3
	68nm,0.3s,baz=90,slow=4.0,SNR=4.2						
TGY				Lg		22 55 33.5	
	74nm,0.3s,baz=30,slow=16,SNR=4.6						
LUBP	Lubang	3.42	215	*e*P	Pn	22 55 00.1	+1.6
DAV	Davao City (W)	9.96	161	LR	LR	23 01 24.6	
	comp=Z,120nm,18.7s,baz=248,slow=44						
JOW	Kunigami	11.65	28	LR	LR	23 01 02.5	
	comp=Z,555nm,20.8s,baz=141,slow=36						
KSRS	Korea Array	21.41	12	P	P	22 58 52.0	-0.6
	1.3nm,0.5s,mb3.5,baz=197,slow=11,SNR=4.2						
CMAR	Chiang Mai Arr	22.33	278	P	P	22 59 03.0	+0.3
	0.3nm,0.4s,mb3.1,baz=78,slow=8.5,SNR=4.0						
BJT	Baijiatuau	23.98	348	P	P	22 59 18.2	-0.8
MDJ	Mudanjiang	28.65	11	*e*P	P	23 00 00.1	-1.1
SONM	Songino Array	33.82	341	P	P	23 00 47.5	+0.8
	0.9nm,0.5s,mb4.0,baz=155,slow=10,SNR=4.1						
TLY	Talaya	38.05	341	P	P	23 01 21.6	-1.3
MKAR	Makanchi Array	44.71	321	P	P	23 02 18.1	+0.4
	0.6nm,0.5s,mb3.7,baz=114,slow=9.7,SNR=7.6						
PETK	Petropavlovsk-	45.81	29	P	P	23 02 27.4	+1.2
	4.4nm,1.0s,mb4.3,baz=210,slow=7.0,SNR=3.4						
ZALV	Zalesovo Beam	47.28	331	P	P	23 02 37.1	-0.6
	0.6nm,0.6s,mb3.7,baz=136,slow=7.0,SNR=2.8						
AML	Almayashu	48.61	312	*e*P	P	23 02 49.8	+1.6
	0.7nm,0.4s,mb4.0						
EKS2	Erkin-Say	48.70	313	*e*P	P	23 02 48.5	-0.5
KURK	Kurchatov	48.72	324	P	P	23 02 49.4	+0.4
	3.6nm,0.5s,mb4.6,baz=121,slow=8.1,SNR=12						
KURK	Kurchatov	48.72	324	*e*P	P	23 02 48.4	-0.6
	3.0nm,0.7s,mb4.4						
BVAR	Borovoye Array	54.32	324	P	P	23 03 31.2	+0.4
	0.7nm,0.4s,mb4.0,baz=101,slow=7.5,SNR=5.8						
BRVK	Borovoye	54.39	324	*e*P	P	23 03 31.5	+0.1
	2.4nm,0.6s,mb4.3						
ARU	Arti	61.87	326	*e*P	P	23 04 23.4	-0.2
	2.6nm,0.5s,mb4.6						
FINES	FINESS Array B	78.55	331	P	P	23 06 05.0	-0.6
	0.9nm,0.5s,mb4.0,baz=55,slow=5.3,SNR=9.6						
FINES	FINESS Array B	78.55	331	P	P	23 06 05.0	-0.7
INK	Inuvik	79.90	21	P	P

AKHS	**Akhisar**	**0.54**	**243**	*i* P	**Pg**	**23 13 07.7**	**+0.3**
AKHS				*i* S	**Sg**	**23 13 15.0**	**+0.7**
AKS	**Akhisar**	**0.54**	**243**	*e*PG	**Pg**	**23 13 07.3**	**-0.1**
AKS				*e*SG	**Sg**	**23 13 14.9**	**+0.6**
AKS	**Akhisar**	**0.54**	**243**	*e*Pg	**Pg**	**23 13 07.3**	**-0.1**
AKS				*e*Sg	**Sg**	**23 13 14.9**	**+0.6**
KULA	**Kula-Manisa**	**0.64**	**163**	*e*PG	**Pg**	**23 13 09.2**	**0.0**
KULA				*e*SG	**Sg**	**23 13 17.3**	**-0.2**
KULA	**Kula-Manisa**	**0.64**	**163**	*e*Pg	**Pg**	**23 13 09.2**	**0.0**
KULA				*e*Sg	**Sg**	**23 13 17.3**	**-0.2**
MANT	**Manisa**	**0.64**	**171**	*i* P	**Pg**	**23 13 09.2**	**-0.1**
MANT				*i* S	**Sg**	**23 13 17.6**	**0.0**
MANT	**Manisa**	**0.64**	**171**	*i* P	**Pg**	**23 13 09.2**	**-0.1**
BALB	**Balikesir**	**0.67**	**321**	*e*PG	**Pg**	**23 13 10.4**	**+0.5**
BALB	**Balikesir**	**0.67**	**321**	*e*Pg	**Pg**	**23 13 10.4**	**+0.5**
GDZ	**Gediz**	**0.82**	**92**	*i* P	**Pg**	**23 13 12.3**	**-0.6**
GDZ				*i* S	**Sg**	**23 13 23.1**	**-0.3**
GDZ	**Gediz**	**0.82**	**92**	*i* P	**Pg**	**23 13 12.3**	**-0.5**
GDZ				*i* S	**Sg**	**23 13 23.1**	**-0.4**
KHAL	**Karahalli**	**1.12**	**132**	*i* P	**Pg**	**23 13 19.0**	**+0.4**
KHAL				*i* S	**Sg**	**23 13 33.3**	**+0.2**
KHAL	**Karahalli**	**1.12**	**132**	*i* P	**Pg**	**23 13 19.0**	**+0.4**
KHAL				*i* S	**Sg**	**23 13 33.3**	**+0.2**
IZM	**Izmir**	**1.16**	**232**	*e*PN	**Pn**	**23 13 19.9**	**-0.6**
KHL	**Karahalli**	**1.17**	**133**	*e*PN	**Pn**	**23 13 20.0**	**-0.6**
KHL	**Karahalli**	**1.17**	**133**	*e*Pn	**Pn**	**23 13 20.0**	**-0.6**
BNT	**Bandirma**	**1.29**	**343**	*e*PN	**Pn**	**23 13 20.9**	**-1.3**
BNT	**Bandirma**	**1.29**	**343**	*e*Pn	**Pn**	**23 13 20.9**	**-1.3**
BLCB	**Balcova**	**1.31**	**236**	*e*PN	**Pn**	**23 13 21.2**	**-1.3**
BLCB	**Balcova**	**1.31**	**236**	*e*Pn	**Pn**	**23 13 21.2**	**-1.3**
ALT	**Altintas**	**1.31**	**92**	*e*PN	**Pn**	**23 13 22.0**	**-0.5**
ALT	**Altintas**	**1.31**	**92**	*e*Pn	**Pn**	**23 13 22.0**	**-0.5**
AYDN	**Tasoluk**	**1.52**	**197**	*i* P	**Pn**	**23 13 25.9**	**+0.5**
AYDN				*i* S	**Sn**	**23 13 45.8**	**0.0**
ADVT	**Abdulvahap**	**1.65**	**37**	*e*PN	**Pn**	**23 13 26.8**	**-0.4**
ADVT	**Abdulvahap**	**1.65**	**37**	*e*Pn	**Pn**	**23 13 26.8**	**-0.4**
BORA	**Eskisehir**	**1.74**	**64**	*i* P	**Pn**	**23 13 29.2**	**+0.8**
BORA				*i* S	**Sn**	**23 13 53.4**	**+2.1**
GPA	**Golpazari**	**1.86**	**51**	*e*PN	**Pn**	**23 13 30.1**	**+0.1**
GPA	**Golpazari**	**1.86**	**51**	*e*Pn	**Pn**	**23 13 30.2**	**+0.1**
ESKT	**Eskisehir**	**1.92**	**77**	*e*PN	**Pn**	**23 13 31.1**	**+0.2**
ESKT	**Eskisehir**	**1.92**	**77**	*e*Pn	**Pn**	**23 13 31.1**	**+0.2**
GULT	**Gulveren**	**2.07**	**50**	*e*PN	**Pn**	**23 13 33.5**	**+0.5**
GULT	**Gulveren**	**2.07**	**50**	*e*Pn	**Pn**	**23 13 33.5**	**+0.5**

GUC 28 23:14:18.6±0.5, 42°.01S×72°.30W, h13km±21km, ML3.6, 2C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.13**	**322**	⇑*i*P	Pg	23 14 21.5	-0.5
HOCH				*i* S	Sg	23 14 23.8	-0.6
HOCH				AML	AML	23 14 24.8	
	comp=N,21μm,0.2s						
PMCH	**Puerto Montt**	**0.69**	**319**	⇑*i*P	Pg	23 14 31.4	-0.5
PMCH				*i* S	Sg	23 14 41.1	+0.1
OSCH	**Osorno**	**1.56**	**336**	*e*P	Pn	23 14 46.9	+0.9
OSCH				*i* S	Sn	23 15 08.1	+2.0
VLCH	**Valdivia**	**2.32**	**342**	*i* S	Sn	23 15 30.2	+5.5

*FUNV **28** 23:26:06.9, 6°.73N×73°.20W, h167km, MW3.7*
*ISCJB **28** 23:26:07.6±0.5, 6°.88N±0°.05×72°.95W±0°.05, h174km±5km, mb3.6/6, Error ellipse: s-maj=10.6km s-min=5.4km az=39.7*
*NEIC **28** 23:26:08.4±0.6, 6°.77N×72°.95W, h168km±7km, mb4.1/2, Error ellipse: s-maj=12.0km s-min=8.0km az=124.0*
*IDC **28** 23:26:08.5±0.7, 6°.78N×72°.89W, h168km±10km, mb3.3/4, mb1 3.6/7, mb1mx3.3/22, mbtmp3.5/7, Error ellipse: s-maj=30.7km s-min=7.6km az=135.0*

ISC 28 23:26:08.6±0.5, 6°.87N±0°.05×72°.94W±0°.05, h168km±5km, n27, σ0°85/40, mb3.6/6, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**32**	⇓*i*P	**Pn**	**23 26 37.1**	**+0.5**
CAPV				*e*S	**Sn**	**23 26 58.4**	**+0.4**
ROSC	**El Rosal**	**2.43**	**215**	P	**Pn**	**23 26 48.7**	**-1.2**
	65nm,0.3s,baz=340,slow=2.8,SNR=167						
ROSC				S	**Sn**	**23 27 22.3**	**+0.5**
	136nm,0.3s,baz=103,slow=20,SNR=13						
ROSC	**El Rosal**	**2.43**	**215**	*e*Pn	**Pn**	**23 26 48.8**	**-1.1**
ROSC				Sn	**Sn**	**23 27 21.5**	**-0.3**
SOCV	**Socops**	**2.50**	**56**	*e*P	**Pn**	**23 26 51.7**	**+1.1**
SOCV				*e*S	**Sn**	**23 27 23.6**	**+0.5**
VIGV	**El Vigia**	**2.50**	**38**	⇓*i*P	**Pn**	**23 26 51.5**	**+0.8**
VIGV				*e*S	**Sn**	**23 27 23.9**	**+0.6**
SDV	**Santo Domingo**	**3.04**	**48**	P	**Pn**	**23 26 58.7**	**+1.5**
	43nm,0.3s,baz=262,slow=3.5,SNR=24						
SDV				S	**Sn**	**23 27 35.7**	**+0.8**
	32nm,0.3s,baz=57,slow=23,SNR=23						
SDV	**Santo Domingo**	**3.04**	**48**	*e*Pn	**Pn**	**23 26 57.6**	**+0.4**
SDV				*e*Sn	**Sn**	**23 27 34.9**	**-0.1**
ELOV	**Elorza**	**3.43**	**88**	*e*P	**Pn**	**23 27 03.2**	**+1.1**
VIRV	**Villa del Rosa**	**3.65**	**8**	*e*P	**Pn**	**23 27 03.9**	**-1.0**
VIRV				*e*S	**Sn**	**23 27 46.0**	**-2.8**
QARV	**Quebrada Arrib**	**4.09**	**36**	*e*P	**Pn**	**23 27 11.4**	**+0.9**
QARV				*e*S	**Sn**	**23 27 58.3**	**-0.5**
SANV	**Sanarito**	**4.26**	**52**	*e*P	**Pn**	**23 27 13.2**	**+0.4**
SANV				*e*S	**Sn**	**23 28 02.6**	**-0.2**
CURV	**Curarigua**	**4.29**	**43**	*e*P	**Pn**	**23 27 13.7**	**+0.5**
CURV				*e*S	**Sn**	**23 28 02.8**	**-0.7**
DABV	**Dabajuro**	**4.63**	**29**	*e*P	**Pn**	**23 27 17.5**	**0.0**
DABV				*e*S	**Sn**	**23 28 10.2**	**-1.2**
TEPV	**Terepaima**	**4.81**	**50**	*e*P	**Pn**	**23 27 20.6**	**+0.7**
TEPV				*e*S	**Sn**	**23 28 15.0**	**-0.8**
BAUV	**El Baul**	**5.27**	**67**	*e*S	**Sn**	**23 28 25.3**	**-1.1**
CAOV	**Caicara del Or**	**6.58**	**86**	*e*P	**Pn**	**23 27 42.1**	**-1.1**
BIRV	**Birongo**	**7.50**	**61**	*e*P	**Pn**	**23 27 54.3**	**-1.1**
OTAV	**Otavalo**	**8.58**	**220**	Pn	**Pn**	**23 28 09.1**	**-0.6**
PCRV	**Puerto La Cruz**	**8.84**	**68**	P	**Pn**	**23 28 14.4**	**+1.3**
	1.1nm,0.3s,baz=207,slow=1.5,SNR=7.8						
LPAZ	**La Paz**	**23.49**	**168**	P	**P**	**23 31 03.2**	**-0.1**
WVT	**Waverly**	**32.16**	**337**	*e*P	**P**	**23 32 20.8**	**+0.3**
	1.7nm,0.3s,mb4.2						
LCO	**Las Campanas**	**35.73**	**177**	*e*P	**P**	**23 32 50.5**	**-0.8**
TXAR	**Lajitas Array**	**36.57**	**312**	P	**P**	**23 32 59.0**	**+0.5**
	0.3nm,0.6s,mb3.1,baz=128,slow=8.2,SNR=3.8						
MVCO	**Mesa Verde**	**44.24**	**318**	*e*P	**P**	**23 34 01.3**	**-0.1**
	2.6nm,0.6s,mb4.0						
SCHQ	**Schefferville**	**48.08**	**5**	P	**P**	**23 34 32.6**	**+1.6**
	2.1nm,0.8s,mb3.8,baz=185,slow=11,SNR=3.9						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**23 36 19.4**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=134,slow=6.6,SNR=10						
TORD	**Torodi Ar. Bea**	**73.55**	**78**	P	**P**	**23 37 23.1**	**-0.7**
	0.2nm,0.9s,mb2.8,baz=278,slow=6.7,SNR=3.3						

*ISCJB **28** 23:26:26.7±0.4, 37°.85N±0°.02×27°.56E±0°.02, h2km±3km, Error ellipse: s-maj=3.5km s-min=2.6km az=153.4*
*NEIC **28** 23:26:26.2, 37°.83N×27°.58E, h5km, MD3.4(ISK), MD3.6(ATH), After ISK.*
*ATH **28** 23:26:26.5, 37°.84N×27°.54E, h27km±3km, MD3.6/4*
*ISK **28** 23:26:26.0, 37°.84N×27°.58E, h5km, MD3.4*
*DDA **28** 23:26:26.6, 37°.86N×27°.54E, h7km±3km, Ml3.3*
*THE **28** 23:26:27.1, 37°.94N×27°.63E, h3km±4km, ML3.8/1, Error ellipse: s-maj=6.4km s-min=1.4km az=246.0*
*CSEM **28** 23:26:27.2±0.1, 37°.81N×27°.55E, h2km, MD3.6, Error ellipse: s-maj=3.4km s-min=2.6km az=70.0*

ISC 28 23:26:27.4±0.4, 37°.85N±0°.02×27°.56E±0°.03, h1km±3km, n128, σ1°07/167, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.30**	**241**	*i* P	**Pg**	**23 26 33.0**	**-0.1**
GCAM				*i* S	**Sg**	**23 26 36.6**	**-0.3**
GCAM	**G?zelcaml?**	**0.30**	**241**	*i* P	**Pg**	**23 26 33.0**	**-0.1**
GCAM				*i* S	**Sg**	**23 26 36.7**	**-0.3**
AYDN	**Tasoluk**	**0.31**	**126**	P	**Pg**	**23 26 33.8**	**+0.5**
AYDN				S	**Sg**	**23 26 38.2**	**+0.9**
AYDN	**Tasoluk**	**0.31**	**126**	*i* P	**Pg**	**23 26 33.8**	**+0.5**
AYDN				*i* S	**Sg**	**23 26 38.2**	**+0.9**
AYDN	**Tasoluk**	**0.31**	**126**	P	**Pg**	**23 26 33.8**	**+0.5**
AYDN				S	**Sg**	**23 26 38.2**	**+0.9**
MLSB	**Milas**	**0.57**	**163**	*e*PG	**Pg**	**23 26 38.0**	**-0.3**
MLSB				*e*SG	**Sg**	**23 26 47.4**	**+1.6**
MLSB	**Milas**	**0.57**	**163**	Pg	**Pg**	**23 26 38.0**	**-0.3**
MLSB				Sg	**Sg**	**23 26 47.0**	**+1.2**
MLSB	**Milas**	**0.57**	**163**	*e*Pg	**Pg**	**23 26 38.1**	**-0.3**
MLSB				Sg	**Sg**	**23 26 47.0**	**+1.2**
SMG	**Samos**	**0.59**	**257**	*e*PN	**Pg**	**23 26 38.4**	**-0.3**
SMG				*e*SN	**Sg**	**23 26 46.7**	**+0.3**
SMG	**Samos**	**0.59**	**257**	*e*Pn	**Pg**	**23 26 38.4**	**-0.3**
IZM	**Izmir**	**0.60**	**337**	*e*PG	**Pg**	**23 26 39.5**	**+0.6**
IZM				*e*SG	**Sg**	**23 26 47.6**	**+0.9**
IZM	**Izmir**	**0.60**	**337**	Pg	**Pg**	**23 26 39.8**	**+0.9**
IZM	**Izmir**	**0.60**	**337**	Pg	**Pg**	**23 26 39.8**	**+0.9**
IZM				*e*Sg	**Sg**	**23 26 47.6**	**+0.9**
BLCB	**Balcova**	**0.68**	**323**	Pg	**Pg**	**23 26 40.1**	**-0.3**
BLCB	**Balcova**	**0.68**	**323**	P	**Pg**	**23 26 40.1**	**-0.3**
BLCB				S	**Sg**	**23 26 48.5**	**-0.7**
BLCB	**Balcova**	**0.68**	**323**	P	**Pg**	**23 26 40.1**	**-0.3**
BLCB				S	**Sg**	**23 26 48.5**	**-0.7**
BDRM	**Kayabasi**	**0.78**	**187**	*i* P	**Pg**	**23 26 41.8**	**-0.6**
BDRM				*i* S	**Sg**	**23 26 55.6**	**+3.0**
BDRM	**Kayabasi**	**0.78**	**187**	P	**Pg**	**23 26 41.8**	**-0.6**
BDRM				*i* S	**Sg**	**23 26 55.6**	**+3.1**
YER	**Yerkesik**	**0.91**	**141**	*e*PG	**Pg**	**23 26 44.5**	**-0.4**
YER				*e*SG	**Sg**	**23 26 57.3**	**+0.6**
YER	**Yerkesik**	**0.91**	**141**	Pg	**Pg**	**23 26 44.5**	**-0.3**
YER	**Yerkesik**	**0.91**	**141**	*e*Pg	**Pg**	**23 26 44.5**	**-0.3**
YER				*e*Sg	**Sg**	**23 26 57.3**	**+0.7**
URLA	**Izmir**	**0.92**	**304**	*i* P	**Pg**	**23 26 44.5**	**-0.5**
URLA				*i* S	**Sg**	**23 26 56.8**	**-0.1**
URLA	**Izmir**	**0.92**	**304**	*i* P	**Pg**	**23 26 44.5**	**-0.5**
URLA				*i* S	**Sg**	**23 26 56.8**	**-0.2**
AKHS	**Akhisar**	**1.05**	**11**	P	**Pg**	**23 26 46.8**	**-0.8**
AKHS				S	**Sg**	**23 27 00.3**	**-0.8**
AKHS	**Akhisar**	**1.05**	**11**	*i* P	**Pg**	**23 26 46.8**	**-0.8**
AKHS				*i* S	**Sg**	**23 27 00.3**	**-0.8**
AKHS	**Akhisar**	**1.05**	**11**	P	**Pg**	**23 26 46.8**	**-0.7**
AKHS				S	**Sg**	**23 27 00.3**	**-0.9**
AKS	**Akhisar**	**1.05**	**11**	*e*PG	**Pg**	**23 26 46.5**	**-1.0**
AKS	**Akhisar**	**1.05**	**11**	Pg	**Pg**	**23 26 46.9**	**-0.7**
AKS	**Akhisar**	**1.05**	**11**	Pg	**Pg**	**23 26 46.9**	**-0.6**
KULA	**Kula-Manisa**	**1.09**	**52**	*e*PN	**Pg**	**23 26 47.3**	**-1.0**
KULA	**Kula-Manisa**	**1.09**	**52**	*e*Pn	**Pg**	**23 26 47.3**	**-1.0**
DAT	**Datca**	**1.11**	**179**	*e*PN	**Pg**	**23 26 47.7**	**-1.0**
DAT	**Datca**	**1.11**	**179**	*e*Pn	**Pg**	**23 26 47.7**	**-1.0**
DENT	**Denizli**	**1.17**	**94**	*e*PN	**Pn**	**23 26 49.1**	**-1.7**
DENT	**Denizli**	**1.17**	**94**	Pn	**Pn**	**23 26 49.6**	**-1.2**
DENT	**Denizli**	**1.17**	**94**	Pn	**Pn**	**23 26 49.6**	**-1.2**
DNZL	**Cakiroluk**	**1.19**	**97**	P	**Pn**	**23 26 49.3**	**-1.7**
DNZL				S	**Sn**	**23 27 07.4**	**-0.3**
DNZL	**Cakiroluk**	**1.19**	**97**	*i* P	**Pn**	**23 26 49.3**	**-1.7**
DNZL				*i* S	**Sn**	**23 27 07.4**	**-0.3**
DNZL	**Cakiroluk**	**1.19**	**97**	P	**Pn**	**23 26 49.3**	**-1.7**
DNZL				S	**Sn**	**23 27 07.4**	**-0.4**
TURN	**Turunc**	**1.28**	**139**	*i* P	**Pn**	**23 26 48.9**	**-3.4**
TURN				*i* S	**Sn**	**23 27 06.5**	**-3.5**
TURN	**Turunc**	**1.28**	**139**	*i* P	**Pn**	**23 26 48.8**	**-3.5**
TURN				*i* S	**Sn**	**23 27 06.5**	**-3.5**
DEMI	**Demirci**	**1.50**	**37**	*e*P	**Pn**	**23 26 54.6**	**-0.8**
DEMI				*i* S	**Sn**	**23 27 14.7**	**-0.9**
DEMI	**Demirci**	**1.50**	**37**	*e*P	**Pn**	**23 26 54.6**	**-0.8**
DEMI				*i* S	**Sn**	**23 27 14.7**	**-0.9**
KHAL	**Karahalli**	**1.61**	**70**	*i* P	**Pn**	**23 26 55.2**	**-1.7**
KHAL				*i* S	**Sn**	**23 27 15.1**	**-3.1**
KHAL	**Karahalli**	**1.61**	**70**	*i* P	**Pn**	**23 26 55.2**	**-1.7**
KHAL				*i* S	**Sn**	**23 27 15.1**	**-3.1**
KHL	**Karahalli**	**1.62**	**72**	Pn	**Pn**	**23 26 56.8**	**-0.2**
KHL	**Karahalli**	**1.62**	**72**	Pn	**Pn**	**23 26 56.8**	**-0.2**
ARG	**Arkhangelos**	**1.69**	**164**	*e*PN	**Pn**	**23 26 56.7**	**-1.2**
ARG	**Arkhangelos**	**1.69**	**164**	P	**Pn**	**23 26 56.7**	**-1.2**
ARG				S	**Sn**	**23 27 20.2**	**0.0**
ARG	**Arkhangelos**	**1.69**	**164**	P	**Pn**	**23 26 56.7**	**-1.2**
ARG				S	**Sn**	**23 27 20.2**	**0.0**
FETY	**Fethiye**	**1.71**	**134**	*e*PN	**Pn**	**23 26 58.0**	**-0.3**
FETY	**Fethiye**	**1.71**	**134**	Pn	**Pn**	**23 26 58.5**	**+0.2**
FETY	**Fethiye**	**1.71**	**134**	Pn	**Pn**	**23 26 58.5**	**+0.2**
PRK	**Paraskevi**	**1.73**	**324**	*e*PB	**Pb**	**23 26 56.4**	**-3.5**
PRK				*e*SN	**Sn**	**23 27 19.2**	**-2.0**
PRK	**Paraskevi**	**1.73**	**324**	P	**Pn**	**23 26 56.3**	**-2.2**
PRK				S	**Sn**	**23 27 18.9**	**-2.3**
PRK	**Paraskevi**	**1.73**	**324**	P	**Pn**	**23 26 56.3**	**-2.2**
PRK				S	**Sn**	**23 27 18.9**	**-2.3**
PRK				*e*Sn	**Sn**	**23 27 19.2**	**-2.0**
APE	**Apeiranthos**	**1.79**	**245**	*e*PN	**Pn**	**23 26 57.6**	**-1.8**
APE	**Apeiranthos**	**1.79**	**245**	P	**Pn**	**23 26 58.1**	**-1.3**
APE				S	**Sn**	**23 27 24.9**	**+2.1**
APE	**Apeiranthos**	**1.79**	**245**	*e*Pn	**Pn**	**23 26 57.6**	**-1.8**
APE	**Apeiranthos**	**1.79**	**245**	P	**Pn**	**23 26 58.1**	**-1.3**
APE				S	**Sn**	**23 27 24.9**	**+2.1**
BALB	**Balikesir**	**1.81**	**8**	*e*PN	**Pn**	**23 26 59.5**	**-0.1**
BALB	**Balikesir**	**1.81**	**8**	Pn	**Pn**	**23 27 00.0**	**+0.4**
BALB	**Balikesir**	**1.81**	**8**	Pn	**Pn**	**23 27 00.0**	**+0.4**
DST	**Dursunbey**	**1.94**	**25**	*e*PN	**Pn**	**23 27 01.9**	**+0.4**
DST	**Dursunbey**	**1.94**	**25**	Pn	**Pn**	**23 27 01.7**	**+0.3**
DST	**Dursunbey**	**1.94**	**25**	*e*Pn	**Pn**	**23 27 01.9**	**+0.5**
ELL	**Elmali**	**2.17**	**120**	*e*PN	**Pn**	**23 27 04.7**	**+0.1**
ELL	**Elmali**	**2.17**	**120**	Pn	**Pn**	**23 27 04.9**	**+0.4**
ELL	**Elmali**	**2.17**	**120**	Pn	**Pn**	**23 27 04.9**	**+0.4**
EZN	**Ezine**	**2.20**	**334**	*e*PN	**Pn**	**23 27 05.4**	**+0.3**
EZN	**Ezine**	**2.20**	**334**	Pn	**Pn**	**23 27 05.8**	**+0.8**
EZN	**Ezine**	**2.20**	**334**	Pn	**Pn**	**23 27 05.8**	**+0.8**
THR1	**Thera Island**	**2.23**	**229**	P	**Pn**	**23 27 06.2**	**+0.7**
THR1	**Thera Island**	**2.23**	**229**	P	**Pn**	**23 27 06.2**	**+0.7**
KARP	**Karpathos**	**2.32**	**188**	*e*PN	**Pn**	**23 27 04.7**	**-1.9**
KARP	**Karpathos**	**2.32**	**188**	*e*Pn	**Pn**	**23 27 04.7**	**-1.9**
ALT	**Altintas**	**2.34**	**58**	*e*PN	**Pn**	**23 27 07.0**	**+0.1**
ALT	**Altintas**	**2.34**	**58**	Pn	**Pn**	**23 27 07.4**	**+0.5**
ALT	**Altintas**	**2.34**	**58**	Pn	**Pn**	**23 27 07.4**	**+0.5**
SHUT	**Suhut-Afyon**	**2.46**	**72**	*e*PN	**Pn**	**23 27 08.5**	**0.0**
SHUT	**Suhut-Afyon**	**2.46**	**72**	*e*Pn	**Pn**	**23 27 08.6**	**+0.1**
BNT	**Bandirma**	**2.52**	**6**	*e*PN	**Pn**	**23 27 09.8**	**+0.3**
BNT	**Bandirma**	**2.52**	**6**	Pn	**Pn**	**23 27 10.2**	**+0.8**
BNT	**Bandirma**	**2.52**	**6**	Pn	**Pn**	**23 27 10.2**	**+0.8**
LPK	**Lapseki**	**2.60**	**346**	*e*PN	**Pn**	**23 27 11.0**	**+0.5**
LPK	**Lapseki**	**2.60**	**346**	Pn	**Pn**	**23 27 11.3**	**+0.8**
LPK	**Lapseki**	**2.60**	**346**	Pn	**Pn**	**23 27 11.3**	**+0.8**
GADA	**Gvkgeada**	**2.68**	**332**	*e*PN	**Pn**	**23 27 11.7**	**+0.1**
GADA	**Gvkgeada**	**2.68**	**332**	Pn	**Pn**	**23 27 12.3**	**+0.7**
GADA	**Gvkgeada**	**2.68**	**332**	Pn	**Pn**	**23 27 12.3**	**+0.7**
SUTC	**Sutluce-Ispart**	**2.75**	**97**	*e*PN	**Pn**	**23 27 13.2**	**+0.6**
SUTC	**Sutluce-Ispart**	**2.75**	**97**	*e*Pn	**Pn**	**23 27 13.2**	**+0.6**
LIA	**Limnos Island**	**2.77**	**319**	*e*PN	**Pn**	**23 27 10.5**	**-2.3**
LIA	**Limnos Island**	**2.77**	**319**	*e*Pn	**Pn**	**23 27 10.5**	**-2.3**
RKY	**Sarkoy-Tekirda**	**2.85**	**354**	*e*PN	**Pn**	**23 27 14.8**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.85**	**354**	Pn	**Pn**	**23 27 14.9**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.85**	**354**	*e*Pn	**Pn**	**23 27 14.8**	**+0.8**
MFT	**Murefte**	**2.95**	**356**	*e*PN	**Pn**	**23 27 16.6**	**+1.3**
MFT	**Murefte**	**2.95**	**356**	*e*Pn	**Pn**	**23 27 16.6**	**+1.3**
YLV	**Yalova**	**3.06**	**27**	*e*PN	**Pn**	**23 27 17.9**	**+1.0**
YLV	**Yalova**	**3.06**	**27**	*e*Pn	**Pn**	**23 27 17.9**	**+1.1**
ESKT	**Eskisehir**	**3.07**	**56**	*e*PN	**Pn**	**23 27 17.5**	**+0.6**
ESKT	**Eskisehir**	**3.07**	**56**	Pn	**Pn**	**23 27 17.6**	**+0.7**
ESKT	**Eskisehir**	**3.07**	**56**	Pn	**Pn**	**23 27 17.6**	**+0.7**
ENEZ	**Enez**	**3.09**	**340**	*e*PN	**Pn**	**23 27 18.3**	**+1.1**
ENEZ	**Enez**	**3.09**	**340**	*e*Pn	**Pn**	**23 27 18.3**	**+1.1**
ADVT	**Abdulvahap**	**3.09**	**33**	*e*PN	**Pn**	**23 27 17.9**	**+0.7**
ADVT	**Abdulvahap**	**3.09**	**33**	*e*Pn	**Pn**	**23 27 17.9**	**+0.7**
GPA	**Golpazari**	**3.24**	**40**	*e*PN	**Pn**	**23 27 20.2**	**+0.8**
GPA	**Golpazari**	**3.24**	**40**	Pn	**Pn**	**23 27 20.6**	**+1.2**
GPA	**Golpazari**	**3.24**	**40**	*e*Pn	**Pn**	**23 27 20.2**	**+0.8**
CRLT	**Corlu**	**3.28**	**2**	*e*PN	**Pn**	**23 27 20.8**	**+0.9**
CRLT	**Corlu**	**3.28**	**2**	*e*Pn	**Pn**	**23 27 20.8**	**+0.9**
SLVT	**Silivri**	**3.42**	**8**	*e*PN	**Pn**	**23 27 22.8**	**+1.1**
SLVT	**Silivri**	**3.42**	**8**	Pn	**Pn**	**23 27 23.1**	**+1.3**
SLVT	**Silivri**	**3.42**	**8**	*e*Pn	**Pn**	**23 27 22.8**	**+1.1**
ISK	**Istanbul-Kandi**	**3.42**	**19**	*e*PN	**Pn**	**23 27 22.6**	**+0.9**
ISK	**Istanbul-Kandi**	**3.42**	**19**	Pn	**Pn**	**23 27 22.9**	**+1.1**
ISK	**Istanbul-Kandi**	**3.42**	**19**	*e*Pn	**Pn**	**23 27 22.6**	**+0.9**
GULT	**Gulveren**	**3.46**	**41**	*e*PN	**Pn**	**23 27 23.3**	**+1.0**
GULT	**Gulveren**	**3.46**	**41**	*e*Pn	**Pn**	**23 27 23.3**	**+1.0**
SVRH	**Sivrihisar-ESK**	**3.49**	**61**	*e*PN	**Pn**	**23 27 23.5**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.49**	**61**	*e*Pn	**Pn**	**23 27 23.5**	**+0.8**
KLYT	**Kilyos**	**3.59**	**18**	*e*PN	**Pn**	**23 27 25.3**	**+1.2**
KLYT	**Kilyos**	**3.59**	**18**	*e*Pn	**Pn**	**23 27 25.3**	**+1.2**
EDRB	**Edirne**	**4.05**	**351**	*e*PN	**Pn**	**23 27 31.4**	**+1.0**
EDRB	**Edirne**	**4.05**	**351**	Pn	**Pn**	**23 27 31.8**	**+1.4**
EDRB	**Edirne**	**4.05**	**351**	*e*Pn	**Pn**	**23 27 31.4**	**+1.0**

*NEIC **28** 23:27:47.1±1.5, 36°.75N×71°.31E, h84km±15km, mb4.1/3, Error ellipse: s-maj=16.0km s-min=8.9km az=54.0*
*BJI **28** 23:27:47.7, 36°.85N×71°.17E, h98km, mB4.9/4, mb4.7/8*
*IDC **28** 23:27:48.8±4.3, 36°.77N×71°.46E, h91km±37km, mb3.6/7, mb1 3.8/10, mb1mx3.5/27, mbtmp3.7/10, MS3.1/1, Ms1 3.1/1, ms1mx2.2/26, Error ellipse: s-maj=30.0km s-min=22.3km az=6.0*
*ISCJB **28** 23:27:48.5±0.4, 37°.00N±0°.02×71°.40E±0°.05, h98km±6km, mb4.1/12, Error ellipse: s-maj=6.9km s-min=3.6km az=173.2*
*NNC **28** 23:27:49.7±7.3, 37°.09N×70°.54E, h96km±88km, mb3.8, mpv4.5, Error ellipse: s-maj=54.1km s-min=34.6km az=15.0*
*MOS **28** 23:27:49.0±1.3, 36°.93N×71°.44E, h106km, mb4.0/7, Error ellipse: s-maj=15.3km s-min=7.6km az=84.0*

ISC 28 23:27:49.6±0.4, 37°.00N±0°.02×71°.33E±0°.05, h93km±5km, h107km±5.1km±pP-P, n92, σ1°64/120, mb4.1/11, 10C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.08**	**218**	*e*Pn	**Pn**	**23 28 38.0**	**+1.7**
KBL				*e*Sn	**Sn**	**23 29 15.2**	**+3.0**
CEP	**Cherat**	**3.21**	**171**	P	**Pn**	**23 28 39.3**	**+1.4**
CEP				S	**Sn**	**23 29 17.0**	**+1.8**
CHCP	**Chirah Chowk**	**3.69**	**154**	P	**Pn**	**23 28 46.2**	**+1.8**
KSH	**Kashi**	**4.43**	**54**	P	**Pn**	**23 28 51.8**	**-2.6**
KSH				sP		23 29 18.0	
KSH				S	**Sn**	**23 29 37.5**	**-7.3**
KSH				LR	LR		
	comp=N,270nm,0.5s						
KSH				LR	LR		
	comp=E,250nm,1.2s						
KSH				LR	LR		
	comp=Z,150nm,4.9s						
SARP	**Sargodha**	**5.19**	**167**	P	**Pn**	**23 29 03.6**	**-1.2**
AML	**Almayashu**	**5.44**	**19**	P	**Pn**	**23 29 09.8**	**+1.7**
	SNR=158						
AML	**Almayashu**	**5.44**	**19**	*e*Pn	**Pn**	**23 29 09.8**	**+1.7**
	comp=Z,95nm,0.5s				

BRVK				*e*			23 34 23.1
BRVK				pmax	pmax		
comp=Z,7.0nm,0.5s							
BRVK	**Borovoye**	**16.07**	**358**	*e*Pn	**Pn**	**23 31 28.8**	**-1.1**
comp=Z,7.1nm,0.5s							
BRVK				*e*Sn	**Sn**	**23 34 23.1**	**-4.4**
AKTK	**Aktyubinsk**	**16.48**	**329**	P	**Pn**	**23 31 34.3**	**-0.6**
AKTK				S	**S**	**23 34 28.9**	**-15**
AKTO	**Aktyubinsk**	**16.48**	**329**	⇑P	**Pn**	**23 31 34.3**	**-0.6**
comp=Z,4.6nm,0.9s							
AKTO				⇑S	**S**	**23 34 28.3**	**-15**
comp=Z,0.8nm,0.9s							
AKTO	**Aktyubinsk**	**16.48**	**329**	P	**Pn**	**23 31 34.3**	**-0.6**
comp=Z,3.3nm,0.3s,baz=133,slow=14,SNR=33							
AKTO				S	**S**	**23 34 28.9**	**-15**
baz=225,slow=19,SNR=2.4							
AKTO	**Aktyubinsk**	**16.48**	**329**	P	**Pn**	**23 31 34.3**	**-0.7**
AKTO				S	**S**	**23 34 28.9**	**-15**
AKTO				pmax	pmax		
comp=Z,3.0nm,0.3s							
ZAA0	**Zalesovo Array**	**19.35**	**25**	*e*P	**Pn**	**23 32 07.2**	**-2.2**
ZALV	**Zalesovo Beam**	**19.35**	**25**	P	**Pn**	**23 32 07.8**	**-1.6**
comp=Z,1.4nm,0.3s,baz=222,slow=11,SNR=29							
ZALV	**Zalesovo Beam**	**19.35**	**25**	P	**Pn**	**23 32 07.9**	**-1.5**
ZALV				pmax	pmax		
comp=Z,1.0nm,0.3s							
NVS	**Novosibirsk**	**19.62**	**21**	*e*P	**Pn**	**23 32 10.9**	**-1.7**
GNI	**Garni**	**21.00**	**287**	P	**P**	**23 32 27.5**	**+2.1**
comp=Z,3.8nm,0.8s,baz=359,slow=16,SNR=4.7							
GNI	**Garni**	**21.00**	**287**	*e*P	**P**	**23 32 27.6**	**+2.2**
GNI				pmax	pmax		
comp=Z,9.0nm,1.4s							
GNI	**Garni**	**21.00**	**287**	*e*P	**P**	**23 32 23.8**	**-1.6**
comp=Z,16nm,1.4s							
ARU	**Arti**	**21.25**	**340**	*d*iP	**P**	**23 32 29.0**	**+1.1**
ARU				S	**S**	**23 36 22.9**	**+4.4**
ARU				pmax	pmax		
comp=Z,4.0nm,1.2s,mb3.6							
ARU	**Arti**	**21.25**	**340**	*e*P	**P**	**23 32 27.8**	**0.0**
comp=Z,3.5nm,0.7s,mb3.8							
KIV	**Kislovodsk**	**22.80**	**297**	P	**P**	**23 32 43.3**	**-1.1**
KIV	**Kislovodsk**	**22.80**	**297**	P	**P**	**23 32 43.2**	**-1.1**
LZH	**Lanzhou**	**26.07**	**82**	*e*P	**P**	**23 33 17.0**	**+2.7**
LZH				pP	pP	23 33 40.8	+5.7
LZH				sP	sP	23 33 54.3	+8.3
LZH				PP		23 34 02.0	
LZH				pmax	pmax		
comp=Z,18nm,1.3s,mb4.3							
CD2	**Chengdu**	**27.49**	**93**	P	**P**	**23 33 30.0**	**+2.9**
CD2				pP	pP	23 33 54.0	+6.0
CD2				sP	sP	23 34 07.3	+8.4
CD2				PP	PP	23 34 22.0	-8.7
CD2				S	**S**	**23 38 01.8**	**+0.7**
CD2				sS	sS	23 38 44.0	+6.5
CD2				SS		23 39 29.0	
CD2				pmax	pmax		
comp=Z,140nm,3.9s							
CD2				LR	LR		
comp=N,160nm,5.9s							
CD2				LR	LR		
comp=Z,330nm,5.2s							
KMI	**Kunming**	**29.26**	**105**	P	**P**	**23 33 43.3**	**+0.4**
KMI				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.6							
MMAI	**Mount Meron Ar**	**29.59**	**273**	LR	LR	23 49 06.9	
comp=Z,34nm,18.6s,baz=105,slow=43							
HHC	**Hu-ho-hao-te**	**31.34**	**70**	*e*P	**P**	**23 34 03.8**	**+2.7**
HHC				pP	pP	23 34 28.0	+5.8
HHC				sP	sP	23 34 41.5	+8.5
HHC				PP	PP	23 35 11.5	-1.9
HHC				S	**S**	**23 39 03.0**	**+1.7**
HHC				sS	sS	23 39 45.0	+7.1
HHC				ScP	ScP	23 40 25.8	-1.5
HHC				PcS	PcS	23 40 38.0	+0.9
HHC				SS	SS	23 40 57.5	-21
HHC				pmax	pmax		
comp=Z,13nm,1.1s,mb4.6							
HHC				pmax	pmax		
comp=Z,78nm,5.5s							
HHC				LR	LR		
comp=N,140nm,12.4s							
HHC				LR	LR		
comp=E,230nm,10.7s							
HHC				LR	LR		
comp=Z,110nm,11.2s							
GYA	**Guiyang**	**31.67**	**99**	P	**P**	**23 34 06.5**	**+2.4**
GYA				sP	sP	23 34 44.5	+8.4
GYA				PcP	PcP	23 36 52.0	-1.9
GYA				S	**S**	**23 39 08.0**	**+1.2**
GYA				sS	sS	23 39 50.5	+7.1
GYA				ScP	ScP	23 40 27.0	-1.7
GYA				ScS	ScS	23 44 23.5	-3.6
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.6							
FINES	**FINESS Array B**	**37.22**	**326**	P	**P**	**23 34 53.0**	**+1.4**
comp=Z,2.3nm,0.6s,mb4.3,baz=114,slow=8.7,SNR=13							
FINES	**FINESS Array B**	**37.22**	**326**	P	**P**	**23 34 53.0**	**+1.5**
FINES				pmax	pmax		
comp=Z,2.0nm,0.6s							
APA	**Apatity**	**37.28**	**337**	⇑*e*P	**P**	**23 34 57.0**	**+5.0**
APA				MLR	MLR		
comp=Z,100nm,20.0s							
ARCES	**ARCESS Array B**	**40.78**	**337**	P	**P**	**23 35 22.9**	**+1.7**
comp=Z,1.6nm,0.5s,mb4.1,baz=111,slow=7.9,SNR=14							
ARCES	**ARCESS Array B**	**40.78**	**337**	P	**P**	**23 35 22.9**	**+1.8**
ARCES				pmax	pmax		
comp=Z,2.0nm,0.5s							
NB2	**NORSAR Subarra**	**44.14**	**323**	P	**P**	**23 35 49.4**	**+1.0**
comp=Z,0.5nm,0.4s,mb3.6,baz=94,slow=8.6							
NOA	**NORSAR Array B**	**44.14**	**323**	P	**P**	**23 35 49.5**	**+1.1**
comp=Z,0.5nm,0.4s,mb3.6,baz=97,slow=7.8,SNR=4.6							
NOA				pP	pP	23 36 11.7	+1.2
comp=Z,1.4nm,0.7s,baz=96,slow=8.1,SNR=4.6							
NOA	**NORSAR Array B**	**44.14**	**323**	P	**P**	**23 35 49.6**	**+1.2**
NOA				*PP	pP	23 36 11.7	+1.2
NOA				pmax	pmax		
comp=Z,1.0nm,0.4s							
NOA				pmax	pmax		
comp=Z,1.0nm,0.7s							
DCPH	**Dipolog City**	**54.83**	**108**	⇓*i*P	**P**	**23 37 03.9**	**-6.3**
TORD	**Torodi Ar. Bea**	**66.00**	**269**	P	**P**	**23 38 25.9**	**-0.5**
comp=Z,0.4nm,0.4s,mb3.6,baz=50,slow=5.8,SNR=20							
YKA	**Yellowknife Ar**	**80.73**	**3**	P	**P**	**23 39 52.9**	**+0.8**
comp=Z,0.5nm,0.7s,mb3.5,baz=353,slow=5.2,SNR=4.0							
YKA	**Yellowknife Ar**	**80.73**	**3**	P	**P**	**23 39 52.9**	**+0.8**
YKA				pmax	pmax		
comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**84.32**	**125**	P	**P**	**23 40 10.0**	**-1.2**
comp=Z,0.7nm,0.6s,mb3.7,baz=310,slow=4.9,SNR=9.3							
ASAR	**Alice Springs**	**84.32**	**125**	P	**P**	**23 40 10.0**	**-1.3**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.6s							

KRSC 28 23:39:30.0±0.8, 56°.30N×161°.75E, h71km±70km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDR	**Baidarnaya**	**0.40**	**312**	*e*P	Pn	23 39 43.0	+1.0
BDR				*i*S	Sn	23 39 52.0	+1.2
SRKR	**Sorokina**	**0.48**	**318**	*e*P	Pn	23 39 43.5	+0.8
SRKR				*i*S	Sn	23 39 52.8	+0.8
CIRR	**Tsirk**	**0.59**	**252**	*e*P	Pn	23 39 44.9	+1.2
CIRR				*i*S	Sn	23 39 55.3	+1.4
KBTR	**Krutoberegovo**	**0.60**	**98**	*e*P	Pn	23 39 45.4	+1.5
KBTR				*i*S	Sn	23 39 56.8	+2.7
KLY	**Klyuchi**	**0.61**	**272**	*e*P	Pn	23 39 43.5	-0.5
KLY				*i*S	Sn	23 39 53.1	-1.2
KRSR	**Krestovskiy**	**0.67**	**263**	*e*P	Pn	23 39 45.4	+0.9
KRSR				*i*S	Sn	23 39 56.5	+1.2
BZMR	**Bezymyannaya**	**0.80**	**243**	*e*P	Pn	23 39 47.6	+1.6
BZMR				*i*S	Sn	23 40 00.7	+2.9
KIRR	**Kirishev**	**0.86**	**247**	*e*P	Pn	23 39 48.3	+1.5
KIRR				*i*S	Sn	23 40 01.5	+2.3
KPT	**Kopyto**	**0.92**	**249**	*e*P	Pn	23 39 49.0	+1.5
KPT				*i*S	Sn	23 40 03.6	+3.1
KMNR	**Kamenistaya**	**1.01**	**238**	*e*P	Pn	23 39 50.6	+2.0
KMNR				*i*S	Sn	23 40 05.8	+3.4
KOZ	**Kozyrevsk**	**1.08**	**258**	*e*P	Pn	23 39 51.5	+2.1
KOZ				*i*S	Sn	23 40 07.4	+3.4
MKZ	**Mys Kozlova**	**1.75**	**180**	*e*P	Pn	23 39 59.9	+1.7
MKZ				*i*S	Sn	23 40 22.0	+2.4
KII	**Karymskiy**	**2.62**	**211**	*e*P	Pn	23 40 13.2	+3.2
SPN	**Mys Shipunski**	**3.36**	**198**	*e*P	Pn	23 40 21.6	+1.5
SPN				*i*S	Sn	23 40 59.4	+0.7
GNL	**Ganaly**	**3.41**	**222**	*e*P	Pn	23 40 23.4	+2.7
NLC	**Nalytchevo**	**3.43**	**205**	*e*P	Pn	23 40 23.4	+2.4
NLC				*i*S	Sn	23 41 03.3	+2.9
AVH	**Avacha**	**3.51**	**211**	*e*P	Pn	23 40 25.9	+3.9
RUS	**Russkaya**	**4.31**	**207**	*e*P	Pn	23 40 36.6	+3.6

*NEIC **28** 23:39:47.3, 55°.78N×153°.20W, h10km, ML3.2(AEIC), After AEIC.*
*IDC **28** 23:39:53.0±1.6, 56°.28N×153°.34W, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.6/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/38, Error ellipse: s-maj=37.7km s-min=26.1km az=23.0*

ISC 28 23:39:56.4±0.9, 56°.32N±0°.08×153°.6W±0°.1, h35km, n20, σ1§81/26, mb3.8/7, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.92**	**12**	P	**Pn**	**23 40 11.5**	**-1.3**
OHAK				S	**Sn**	**23 40 30.6**	**+5.8**
KDAK	**Kodiak Island**	**1.57**	**21**	Pn	**Pn**	**23 40 20.0**	**-1.7**
KDAK				LR	LR	23 40 45.8	
comp=Z,955nm,20.2s,slow=34							
KDAK	**Kodiak Island**	**1.57**	**21**	P	**Pn**	**23 40 20.1**	**-1.6**
KDAK				S	**Sn**	**23 40 44.6**	**+3.8**
CHGN	**Chignik**	**2.67**	**272**	*e*Pn	**Pn**	**23 40 32.7**	**-4.0**
CHGN				*e*Sn	**Sn**	**23 41 07.4**	**-0.4**
SDPT	**Sand Point**	**3.98**	**259**	*e*Pn	**Pn**	**23 40 49.9**	**-4.9**
SDPT				*e*Sn	**Sn**	**23 41 37.3**	**-2.9**
SEW	**Seward**	**4.39**	**28**	*e*Pn	**Pn**	**23 40 58.4**	**-2.0**
SEW				*e*Sn	**Sn**	**23 41 49.9**	**-0.3**
SVW2	**Sparrevohn**	**4.90**	**349**	Pn	**Pn**	**23 41 07.5**	**+0.2**
RC01	**Rabbit Creek A**	**5.19**	**21**	*e*Pn	**Pn**	**23 41 11.1**	**-0.3**
RC01				Sn	**Sn**	**23 42 12.1**	**+2.1**
BMRM	**Bremner River**	**6.62**	**42**	*e*Pn	**Pn**	**23 41 27.1**	**-3.9**
BMRM				*e*Sn	**Sn**	**23 42 42.9**	**-2.2**
PNL	**Peninsula**	**8.27**	**60**	Pn	**Pn**	**23 41 47.8**	**-5.8**
DIB	**Dawson Inlet,**	**12.60**	**95**	T		23 55 29.9	
YKA	**Yellowknife Ar**	**20.54**	**56**	P	**P**	**23 44 30.4**	**-0.8**
0.5nm,0.7s,baz=268,slow=9.3,SNR=4.0							
YKA	**Yellowknife Ar**	**20.54**	**56**	P	**P**	**23 44 30.4**	**-0.8**
NVAR	**Mina Array Bea**	**29.42**	**112**	P	**P**	**23 45 56.8**	**+0.5**
0.4nm,0.4s,mb3.5,baz=304,slow=9.7,SNR=4.3							
ARCES	**ARCESS Array B**	**54.45**	**0**	P	**P**	**23 49 22.1**	**+2.7**
1.9nm,1.0s,mb4.0,baz=13,slow=8.7,SNR=3.7							
SONM	**Songino Array**	**56.73**	**307**	P	**P**	**23 49 38.8**	**+2.7**
1.1nm,0.7s,mb4.0,baz=57,slow=5.5,SNR=3.6							
ZALV	**Zalesovo Beam**	**60.17**	**325**	P	**P**	**23 50 03.1**	**+3.1**
0.4nm,0.4s,mb3.8,baz=44,slow=6.6,SNR=4.0							
ZALV				LR	LR	00 21 05.4	
comp=Z,19nm,18.4s,baz=55,slow=41							
NOA	**NORSAR Array B**	**62.37**	**8**	P	**P**	**23 50 17.5**	**+2.8**
0.7nm,0.6s,mb3.9,baz=349,slow=6.3,SNR=3.1							
BVAR	**Borovoye Array**	**65.18**	**332**	P	**P**	**23 50 36.1**	**+2.8**
1.1nm,0.7s,mb4.0,baz=35,slow=5.3,SNR=2.6							
MKAR	**Makanchi Array**	**67.12**	**322**	P	**P**	**23 50 48.3**	**+2.4**
0.2nm,0.5s,mb3.4,baz=34,slow=6.6,SNR=3.1							

IDC 29 00:02:18.9±22.0, 2°.34N×95°.07E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.4/25, mbtmp3.4/5, ML4.4/1, Error ellipse: s-maj=510.7km s-min=112.6km az=134.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.46**	**13**	Pn	Pn	00 06 11.1	-0.3
0.5nm,0.3s,baz=198,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**45.65**	**348**	P	P	00 10 41.1	-0.1
0.2nm,0.5s,baz=158,slow=8.1,SNR=3.7							
KURK	**Kurchatov**	**50.17**	**346**	P	P	00 11 15.7	-0.5
0.2nm,0.5s,baz=167,slow=7.1,SNR=2.8							
ZALV	**Zalesovo Beam**	**52.12**	**352**	P	P	00 11 31.4	+0.6
0.3nm,0.3s,baz=176,slow=8.0,SNR=3.1							
BVAR	**Borovoye Array**	**54.50**	**342**	P	P	00 11 47.8	-0.4
0.2nm,0.6s,baz=157,slow=7.8,SNR=2.4							

*NIED **29** 00:19:00, 38°.30N×140°.20E, h8km, Mw3.6 Best double couple: M0=2.71000×10^14 NP1:φs=331.00000°, δ61.00000°, λ93.00000°. NP2:φs=145.00000°, δ29.00000°, λ84.00000°.*
*IDC **29** 00:19:36.5±1.8, 38°.39N×140°.47E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.4/26, mbtmp3.6/6, ML3.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.1/21, Error ellipse: s-maj=36.2km s-min=24.7km az=83.0*
*ISCJB **29** 00:19:38.7±0.5, 38°.30N±0°.03×140°.25E±0°.03, h13km±3km, mb3.4/4, Error ellipse: s-maj=4.4km s-min=3.5km az=155.6*
*JMA **29** 00:19:39.1, 38°.29N×140°.23E, h9km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=159.00000°, δ39.00000°, λ103.00000°. NP2: φs=323.00000°, δ53.00000°, λ80.00000°. Principal axes: T Plg79.0000°, Azm191.0000°; N Plg8.0000°, Azm329.0000°; P Plg7.0000°, Azm60.0000°;*
JMA Felt III J1.
*NEIC **29** 00:19:40.8±4.3, 38°.19N×140°.46E, h35km, MG4.0(JMA) Error ellipse: s-maj=94.5km s-min=12.1km az=110.0*

ISC 29 00:19:39.0±0.4, 38°.30N±0°.02×140°.25E±0°.03, h8km±3km, n22, σ0§70/36, mb3.4/4, 1C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYS	**Shirataka**	**0.17**	**243**	⇓P	**Pg**	**00 19 42.5**	**0.0**
JYS				S	**Sg**	**00 19 45.1**	**+0.2**
JOU	**Okura**	**0.33**	**78**	⇓P	**Pg**	**00 19 46.0**	**+0.5**
JOU				S	**Sg**	**00 19 50.8**	**+0.9**
JYA	**Atsumi**	**0.52**	**305**	⇑P	**Pg**	**00 19 48.8**	**-0.2**
JYA				S	**Sg**	**00 19 56.0**	**+0.2**
JMM	**Marumori**	**0.60**	**135**	P	**Pg**	**00 19 50.7**	**0.0**
JMM				*e*S	**Sg**	**00 19 58.8**	**+0.3**
JYK	**Kaneyama**	**0.63**	**7**	⇓P	**Pg**	**00 19 51.3**	**+0.2**
JYK				S	**Sg**	**00 19 59.7**	**+0.4**
JFT	**Otama**	**0.78**	**175**	⇓P	**Pg**	**00 19 54.0**	**0.0**
JFT				*e*S	**Sg**	**00 20 04.0**	**-0.1**
JAW	**Awa shima**	**0.81**	**282**	⇓P	**Pg**	**00 19 54.4**	**-0.1**
JAW				*e*S	**Sg**	**00 20 05.3**	**+0.3**
JIO	**Ouri**	**0.88**	**79**	P	**Pg**	**00 19 55.4**	**-0.4**
JIO				*e*S	**Sg**	**00 20 07.2**	**0.0**
JNS	**Sasagawa**	**0.88**	**237**	⇓P	**Pg**	**00 19 55.4**	**-0.5**
JNS				*e*S	**Sg**	**00 20 06.7**	**-0.7**
JFY	**Yanaizu**	**0.99**	**206**	⇓P	**Pg**	**00 19 57.6**	**-0.4**
JFY				S	**Sg**	**00 20 10.6**	**-0.2**
JMK	**Ichinoseki**	**1.00**	**49**	⇓P	**Pg**	**00 19 57.3**	**-0.9**
JMK				S	**Sg**	**00 20 11.2**	**0.0**
MJAR	**Matsushiro Arr**	**2.39**	**224**	Pn	**Pn**	**00 20 19.1**	**+0.8**
7.6nm,0.3s,baz=22,slow=13,SNR=25							
MJAR				Sn	**Sn**	**00 20 52.1**	**+4.3**
17nm,0.3s,baz=22,slow=27,SNR=18							
MAJO	**Matsushiro**	**2.39**	**224**	*e*Pn	**Pn**	**00 20 17.3**	**-1.1**
MAJO				*e*Sn	**Sn**	**00 20 48.7**	**+0.9**
MAT	**Matsushiro**	**2.39**	**224**	P	**Pn**	**00 20 18.8**	**+0.4**
MAT				S	**Sn**	**00 20 51.1**	**+3.3**
KSRS	**Korea Array**	**9.79**	**269**	Pn	**Pn**	**00 22 02.0**	**+2.1**
2.3nm,0.3s,baz=76,slow=14,SNR=16							
KSRS				Sn	**Sn**	**00 23 54.0**	**+4.0**
0.9nm,0.3s,baz=76,slow=24,SNR=5.6							
JOW	**Kunigami**	**15.24**	**225**	LR	LR	00 28 18.2	
comp=Z,155nm,21.7s,baz=100,slow=34							
SSLB	**Suanglung**	**21.91**	**234**	P	**P**	**00 24 31.3**	**-1.2**
YAK	**Yakutsk**	**24.64**	**348**	P	**P**	**00 24 59.0**	**-0.6**
MKAR	**Makanchi Array**	**42.68**	**301**	P	**P**	**00 27 35.4**	**-0.6**
0.1nm,0.3s,mb3.0,baz=80,slow=10,SNR=2.9							
KURK	**Kurchatov**	**44.44**	**307**	P	**P**	**00 27 49.6**	**-0.5**
0.8nm,0.7s,mb3.6,baz=82,slow=8.3,SNR=5.8							
BVAR	**Borovoye Array**	**49.05**	**311**	P	**P**	**00 28 25.9**	**-0.3**
0.1nm,0.3s,mb3.3,baz=85,slow=8.8,SNR=2.4							
ASAR	**Alice Springs**	**61.92**	**187**	P	**P**	**00 29 58.5**	**-0.4**
0.3nm,0.3s,mb3.9,baz=10,slow=5.7,SNR=3.1							

*IDC **29** 00:27:41.0±1.5, 32°.93N×105°.95E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, Error ellipse: s-maj=181.8km s-min=23.2km az=54.0*
*NEIC **29** 00:27:42.7±0.5, 33°.02N×105°.98E, h10km, mb3.9/2, Error ellipse: s-maj=13.8km s-min=7.9km az=210.0*
*BJI **29** 00:27:44.3, 32°.91N×105°.48E, h10km, mb3.8/2, ML3.5/10, Ms3.2/2, Ms7 2.9/3*

ISC 29 00:27:41.8±1.0, 32°.59N±0°.05×105°.55E±0°.04, h4km±8km, n21, σ1§13/29, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.26**	**223**	Pg	**Pg**	**00 28 24.8**	**-0.3**
CD2				Sg	**Sg**	**00 28 56.0**	**+1.6**
CD2				smax			
comp=N,820nm,0.7s							
XAN	**Xi'an**	**3.18**	**62**	Pn	**Pn**	**00 28 33.5**	**+1.0**
XAN				Pg	**Pg**	**00 28 44.3**	**+1.6**
XAN				Sn	**Sn**	**00 29 12.8**	**+2.0**
XAN				Sg	**Sg**	**00 29 23.8**	**-0.1**
XAN				smax			
comp=N,150nm,0.8s							
XAN				smax			
comp=E,98nm,0.7s							
LZH	**Lanzhou**	**3.77**	**339**	Pn	**Pn**	**00 28 41.3**	**+0.7**
LZH				Sn	**Sn**	**00 29 24.0**	**-1.3**
LZH				Sg	**Sg**	**00 29 36.3**	**-6.5**
LZH				smax			
comp=N,170nm,0.6s							
LZH				smax			
comp=E,190nm,0.7s							
LZH				LR	LR		
comp=N,370nm,5.6s							
LZH				LR	LR		
comp=Z,460nm,6.7s							
ENH	**Enshi**	**4.08**	**123**	*e*Pn	**Pn**	**00 28 45.2**	**+0.2**
ENH				*e*Pg	**Pg**	**00 28 58.7**	**-1.4**
ENH				Sg	**Sg**	**00 29 51.2**	**-1.8**
WHN	**Wuhan**	**7.78**	**103**	P	**Pb**	**00 29 53.0**	**-4.3**
GTA	**Gaotai**	**8.24**	**327**	*e*P	**Pn**	**00 29 42.0**	**-0.1**
GTA				pP		00 29 46.0	
GTA				sP		00 29 48.3	
GTA				pmax	pmax		
comp=Z,2.0nm,0.4s							
BJT	**Baijiatuau**	**11.33**	**46**	*e*Pn	**Pn**	**00 30 17.0**	**-7.3**
MK31	**Makanchi Array**	**22.73**	**315**	*e*P	**P**	**00 32 43.2**	**-1.4**
MKAR	**Makanchi Array**	**22.73**	**315**	P	**P**	**00 32 44.8**	**+0.2**
comp=Z,0.4nm,0.5s,mb3.1,baz=112,slow=11,SNR=5.2							
TKM2	**Tokmak 2**	**25.71**	**302**	P	**P**	**00 33 15.6**	**+2.6**
KURK	**Kurchatov**	**26.84**	**320**	P	**P**	**00 33 22.9**	**-0.3**
comp=Z,0.5nm,0.6s,mb3.2,baz=139,slow=8.6,SNR=4.5							
KURK	**Kurchatov**	**26.84**	**320**	*e*P	**P**	**00 33 22.0**	**-1.1**
comp=Z,1.6nm,0.7s,mb3.7							
YSS	**Yuzh-Sakhalins**	**31.67**	**52**	P	**P**	**00 34 01.1**	**-5.0**
BRVK	**Borovoye**	**32.50**	**320**	*e*P	**P**	**00 34 12.3**	**-1.0**
comp=Z,0.7nm,0.4s,mb3.8							
GNI	**Garni**	**48.71**	**297**	P	**P**	**00 36 28.4**	**+1.1**
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**00 37 27.8**	**-0.6**
comp=Z,1.1nm,0.5s,mb4.2,baz=94,slow=7.0,SNR=6.8							
AKASG	**Malin Array Be**	**57.27**	**313**	P	**P**	**00 37 29.9**	**-0.4**
comp=Z,0.5nm,0.4s,mb3.9,baz=68,slow=6.8,SNR=3.5							
ASAR	**Alice Springs**	**62.15**	**150**	P	**P**	**00 38 05.0**	**+0.9**
comp=Z,0.2nm,0.3s,mb3.7,baz=341,slow=7.9,SNR=3.0							
PSZ	**Piszkesteto**	**63.92**	**312**	P	**P**	**00 38 15.4**	**-0.3**
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**00 38 15.3**	**-1.2**
comp=Z,0.5nm,0.6s,mb3.7,baz=71,slow=6.8,SNR=3.7							
NOA	**NORSAR Array B**	**64.08**	**327**	P	**P**	**00 38 15.3**	**-1.2**

*MOS **29** 00:36:36.2±0.6, 53°.32N×108°.52E, h5km, mb4.3/1, Error ellipse: s-maj=23.3km s-min=16.1km az=51.6*

BYKL 29 00:36:37.7±0.2, 53°.31N×108°.52E, h8km±3km, 8C-13D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.14**	**109**	⇑*i*Pg	Pg	00 36 40.3	-0.4
MXMB				*e*Sg	Sg	00 36 42.5	-0.3
MXMB				Pmax			
992nm,0.4s							
MXMB				Smax			
35μm,0.7s							
KELR	**Kotokel**	**0.61**	**206**	⇑*i*Pg	Pg	00 36 48.7	-0.8
KELR				*e*Sg	Sg	00 36 57.2	-0.2
KELR				*e*Sb	Sb	00 37 04.0	+4.7
KELR				Pmax			
146nm,0.4s							
KELR				max			
3μm,0.4s							
OGRR	**Ongureny**	**0.65**	**302**	*e*PG	Pg	00 36 50.1	0.0
OGRR				*e*		00 36 59.3	
OGRR				pmax	pmax		
comp=Z,210nm,2.3s							
OGRR				smax			
comp=E,523nm,0.3s							
OGRR	**Ongureny**	**0.65**	**302**	⇑*i*Pg	Pg	00 36 50.1	0.0
comp=E,192nm,0.4s							
OGRR				⇓*i*Pg	Pg	00 36 50.1	0.0
comp=E,205nm,0.4s							
OGRR				⇑*i*Pg	Pg	00 36 50.1	0.0
comp=E,271nm,0.4s							
OGRR				*e*Sg	Sg	00 36 59.3	+0.7
OGRR				*e*Sb	Sb	00 37 04.3	+4.0
OGRR				Pmax			
comp=E,219nm,0.3s							
OGRR				max			
comp=E,648nm,0.3s							
SYVR	**Suvo**	**0.95**	**68**	⇓*i*Pg	Pg	00 36 54.4	-1.5
SYVR				*e*		00 36 58.0	
SYVR				*e*		00 37 00.0	
SYVR				*e*Sg	Sg	00 37 07.2	-1.1
SYVR				max			
comp=E,80nm,0.2s							
SYVR				Smax			
comp=E,314nm,0.3s							
ZRHB	**Zarechye**	**1.12**	**228**	⇑*i*Pg	Pg	00 36 58.6	-0.6
ZRHB				*e*		00 37 02.7	
ZRHB				*e*Sg	Sg	00 37 12.9	-0.9
ZRHB				Pmax			
comp=E,268nm,0.6s							
ZRH

YLYR				Smax			
	comp=E,199nm,0.8s						
NIZ	**Nizh Angarsk**	**2.54**	**13**	*e*PN	Pn	00 37 19.9	+0.7
NIZ				*e*		00 37 23.2	
NIZ	**Nizh Angarsk**	**2.54**	**13**	*e*Pn	Pn	00 37 19.9	+0.7
NIZ				*e*Pg	Pg	00 37 23.0	-3.4
NIZ				*e*Sg	Sg	00 37 56.3	-3.0
NIZ				Pmax			
	comp=E,18nm,0.3s						
NIZ				Smax			
	comp=E,140nm,0.4s						
LSTR	**Listvyanka**	**2.67**	**239**	⇓*i*Pn	Pn	00 37 20.5	-0.5
LSTR				⇓*i*Pg	Pg	00 37 25.9	-3.0
LSTR				*e*Sn	Sn	00 37 52.8	-0.7
LSTR				*e*Sg	Sg	00 37 59.1	-4.4
LSTR				Pmax			
	comp=E,17nm,0.7s						
LSTR				Smax			
	comp=E,130nm,1.5s						
KMO	**Kumora**	**3.02**	**30**	*e*PN	Pn	00 37 25.8	+0.1
KMO				*e*		00 37 31.3	
KMO				*e*S	Sn	00 38 00.9	-1.1
KMO				*e*		00 38 08.9	
KMO				pmax	pmax		
	comp=Z,30nm,0.3s						
KMO				smax			
	comp=E,177nm,0.7s						
KMO	**Kumora**	**3.02**	**30**	*e*Pn	Pn	00 37 26.7	+1.0
KMO				*e*Pg	Pg	00 37 31.4	-4.0
KMO				*e*Sg	Sg	00 38 11.6	-2.9
KMO				Pmax			
	comp=E,41nm,0.5s						
KMO				Smax			
	comp=E,176nm,0.8s						
CIT	**Chita**	**3.33**	**111**	*e*Sg	Sg	00 38 20.7	-3.7
CIT				Smax			
	comp=E,226nm,0.2s						
TLY	**Talaya**	**3.40**	**243**	*e*PN	Pn	00 37 30.4	-0.5
TLY				*e*		00 37 37.6	
TLY				*e*		00 38 21.5	
TLY				pmax	pmax		
	comp=Z,15nm,0.4s						
TLY				smax			
	comp=E,96nm,0.9s						
TLY	**Talaya**	**3.40**	**243**	*e*Pn	Pn	00 37 30.5	-0.4
TLY				*e*Pg	Pg	00 37 38.5	-4.2
TLY				*e*Sg	Sg	00 38 22.3	-4.4
TLY				Pmax			
	comp=E,14nm,0.5s						
TLY				Smax			
	comp=E,95nm,0.8s						
UKT	**Uakit**	**3.70**	**52**	*e*Pn	Pn	00 37 35.8	+0.8
UKT				*e*Pg	Pg	00 37 43.4	-5.1
UKT				*e*Sg	Sg	00 38 31.9	-4.4
UKT				Pmax			
	comp=E,9.0nm,0.9s						
UKT				Smax			
	comp=E,78nm,1.3s						
ARS	**Arshan**	**3.97**	**252**	*e*PN	Pg	00 37 48.6	-5.1
ARS				*e*		00 38 36.6	
ARS				pmax	pmax		
	comp=Z,21nm,0.3s						
ARS				smax			
	comp=E,527nm,0.6s						
ARS	**Arshan**	**3.97**	**252**	*e*Pg	Pg	00 37 49.2	-4.5
ARS				*e*Sg	Sg	00 38 39.5	-5.5
ARS				Pmax			
	comp=E,24nm,0.7s						
ARS				Smax			
	comp=E,606nm,0.9s						
SVKR	**Severomuysk**	**4.06**	**44**	*e*	Pg	00 37 54.0	-1.3
SVKR				*e*Sg	Sg	00 38 44.8	-3.0
SVKR				Smax			
	comp=E,186nm,0.8s						
ZAK	**Zakamensk**	**4.38**	**230**	*e*Pg	Pg	00 37 57.7	-3.8
ZAK				*e*Sg	Sg	00 38 54.4	-3.7
ZAK				Pmax			
	comp=E,13nm,0.9s						
ZAK				Smax			
	comp=E,40nm,1.5s						
MOY	**Mondy**	**4.88**	**253**	*e*PN	Pn	00 37 51.6	+0.2
MOY				*e*S	Sg	00 39 05.2	-9.2
MOY				smax			
	comp=N,140nm,1.3s						
MOY	**Mondy**	**4.88**	**253**	*e*Pg	Pg	00 38 04.2	-7.0
MOY				*e*		00 38 50.2	
MOY				*e*Sg	Sg	00 39 07.5	-6.9
MOY				Pmax			
	comp=N,7.0nm,0.7s						
MOY				Smax			
	comp=N,141nm,1.3s						
NLYR	**Nelyaty**	**5.23**	**50**	*e*Sg	Sg	00 39 19.9	-5.5
NLYR				Smax			
	comp=N,83nm,1.2s						
ORL	**Orlik**	**5.33**	**265**	*e*PN	Pn	00 37 59.1	+1.7
ORL				*e*		00 38 14.3	
ORL				*e*		00 39 21.7	
ORL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ORL				smax			
	comp=N,71nm,0.9s						
ORL	**Orlik**	**5.33**	**265**	⇓*i*Pn	Pn	00 37 59.3	+1.9
ORL				*e*Sg	Sg	00 39 22.0	-6.6
ORL				max			
	comp=N,9.0nm,0.8s						
ORL				Smax			
	comp=N,119nm,1.0s						
BOD	**Bodaibo**	**5.49**	**32**	*e*Pg	Pg	00 38 18.0	-4.7
BOD				*e*Sg	Sg	00 39 27.1	-6.5
BOD				Pmax			
	comp=N,2.0nm,0.3s						
BOD				Smax			
	comp=N,27nm,1.0s						
CRS	**Chara**	**6.65**	**53**	*e*Pg	Pg	00 38 38.3	-6.6
CRS				*e*Sg	Sg	00 40 03.0	-7.9
CRS				Smax			
	comp=N,74nm,1.7s						
TUP	**Tupik**	**6.86**	**76**	*e*PN	Pn	00 38 19.9	+1.5
TUP				*e*		00 38 41.4	
TUP				*e*		00 40 07.9	
TUP				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TUP				smax			
	comp=N,116nm,1.2s						
TUP	**Tupik**	**6.86**	**76**	*e*Pn	Pn	00 38 20.1	+1.7
TUP				*e*Pg	Pg	00 38 41.3	-7.6
TUP				*e*Sg	Sg	00 40 08.2	-9.4
TUP				Pmax			
	comp=N,2.0nm,0.6s						
TUP				Smax			
	comp=N,117nm,1.5s						

*SGS **29** 00:49:40.6, 16°.81N×43°.29E, h0km*
CSEM 29 00:49:41.1±1.0, 16°.98N×43°.36E, h2km, ML3.0, Error ellipse: s-maj=26.1km s-min=22.0km az=141.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAZS	**Jizan**	**0.43**	**282**	P	Pg	00 49 50.3	+0.9
JAZS	**Jizan**	**0.43**	**282**	P	Pg	00 49 50.3	+0.9
JAZS				S	Sg	00 49 57.5	+2.5
DJNS	**Zahran al Janu**	**0.74**	**14**	P	Pg	00 49 54.0	-1.4
DJNS	**Zahran al Janu**	**0.74**	**14**	P	Pg	00 49 54.0	-1.3
FRSS	**Farasan al Kab**	**1.22**	**259**	P	Pg	00 50 02.0	-2.4
FRSS	**Farasan al Kab**	**1.22**	**259**	P	Pg	00 50 02.0	-2.4
WBHS	**Wadi 'Ibn Hash**	**1.73**	**340**	P	Pn	00 50 12.2	+0.1
WBHS	**Wadi 'Ibn Hash**	**1.73**	**340**	P	Pn	00 50 12.2	0.0
SANA	**San'a**	**1.78**	**153**	*i* P	Pn	00 50 10.9	-2.0
SANA				*i* S	Sn	00 50 33.2	-2.9
TATS	**Tathlith**	**2.55**	**2**	P	Pb	00 50 25.5	-2.1
TATS	**Tathlith**	**2.55**	**2**	P	Pb	00 50 25.5	-2.1
BLJS	**Baljurashi**	**3.40**	**331**	P	Sn	00 51 09.7	-6.4
BLJS	**Baljurashi**	**3.40**	**331**	P	Sn	00 51 09.7	-6.4
BDHA	**Al Bayda'**	**3.67**	**144**	*i* P	Pb	00 50 43.9	-2.8
BDHA				*e*		00 50 43.9	
	baz=359,slow=5.9						
BDHA				*i* S	Sb	00 51 28.6	-3.0
BDHA				AML	AML	00 51 34.1	
	comp=E,73nm,0.5s						

*CSEM **29** 00:49:51.8±0.2, 43°.70N×13°.45E, h20km, ML2.6/8, Error ellipse: s-maj=4.4km s-min=3.3km az=150.0*
*ROM **29** 00:49:51.8±0.3, 43°.72N×13°.46E, h10km±1km, Md2.3/9, Ml1.9/8, Error ellipse: s-maj=4.4km s-min=2.0km az=41.0*
*ISCJB **29** 00:49:52.0±0.6, 43°.72N±0°.03×13°.45E±0°.04, h10km, Error ellipse: s-maj=5.0km s-min=3.7km az=153.6*
ISC 29 00:49:52.3±0.8, 43.71N±0°.04×13.45E±0°.04, h18km±8km, n24, σ0s74/42, 2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENI	**Senigallia**	**0.15**	**269**	Pg	**Pg**	**00 49 56.0**	**-0.5**
SENI				Sg	**Sg**	**00 49 59.1**	**-0.3**
	280nm,0.3s						
SENI	**Senigallia**	**0.15**	**269**	Pg	**Pg**	**00 49 56.0**	**-0.5**
SENI				Sg	**Sg**	**00 49 59.1**	**-0.3**
	280nm,0.3s						
AOI	**Ancona**	**0.20**	**144**	Pg	**Pg**	**00 49 56.6**	**-0.5**
AOI				Sg	**Sg**	**00 50 00.4**	**0.0**
	325nm,0.2s						
AOI	**Ancona**	**0.20**	**144**	Pg	**Pg**	**00 49 56.6**	**-0.5**
AOI				Sg	**Sg**	**00 50 00.4**	**0.0**
	325nm,0.2s						
CING	**Cingoli**	**0.38**	**209**	⇓*i*Pg	**Pg**	**00 49 59.5**	**-0.7**
CING				Sg	**Sg**	**00 50 05.7**	**+0.3**
	118nm,0.2s						
CING	**Cingoli**	**0.38**	**209**	⇓*i*Pg	**Pg**	**00 49 59.5**	**-0.7**
CING				Sg	**Sg**	**00 50 05.7**	**+0.3**
	118nm,0.2s						
ARVD	**Arcevia**	**0.42**	**240**	Pg	**Pg**	**00 50 00.3**	**-0.6**
ARVD				Sg	**Sg**	**00 50 07.3**	**+0.6**
	59nm,0.1s						
ARVD	**Arcevia**	**0.42**	**240**	Pg	**Pg**	**00 50 00.3**	**-0.6**
ARVD				Sg	**Sg**	**00 50 07.3**	**+0.6**
	59nm,0.1s						
FSSB	**Fossombrone**	**0.48**	**268**	Pg	**Pg**	**00 50 01.6**	**-0.5**
FSSB				Sg	**Sg**	**00 50 09.6**	**+1.0**
	106nm,0.2s						
FSSB	**Fossombrone**	**0.48**	**268**	Pg	**Pg**	**00 50 01.6**	**-0.5**
FSSB				Sg	**Sg**	**00 50 09.6**	**+1.0**
	106nm,0.2s						
PESA	**Pesaro**	**0.50**	**298**	Pg	**Pg**	**00 50 02.5**	**+0.2**
	95nm,0.8s						
PESA	**Pesaro**	**0.50**	**298**	Pg	**Pg**	**00 50 02.5**	**+0.2**
	95nm,0.8s						
SNTG	**Esanatoglia**	**0.58**	**219**	Pg	**Pg**	**00 50 03.2**	**-0.7**
SNTG				Sg	**Sg**	**00 50 12.3**	**+0.6**
	33nm,0.4s						
SNTG	**Esanatoglia**	**0.58**	**219**	Pg	**Pg**	**00 50 03.2**	**-0.7**
SNTG				Sg	**Sg**	**00 50 12.3**	**+0.6**
	33nm,0.4s						
PIEI	**Pieia**	**0.68**	**256**	Pg	**Pg**	**00 50 04.7**	**-1.0**
PIEI				Sg	**Sg**	**00 50 15.6**	**+0.8**
	23nm,0.2s						
PIEI	**Pieia**	**0.68**	**256**	Pg	**Pg**	**00 50 04.7**	**-1.0**
PIEI				Sg	**Sg**	**00 50 15.6**	**+0.8**
	23nm,0.2s						
FDMO	**Fiordimonte**	**0.72**	**201**	Pg	**Pg**	**00 50 05.5**	**-0.9**
FDMO				Sg	**Sg**	**00 50 17.4**	**+1.4**
	43nm,0.1s						
FDMO	**Fiordimonte**	**0.72**	**201**	Pg	**Pg**	**00 50 05.5**	**-0.9**
FDMO				Sg	**Sg**	**00 50 17.4**	**+1.4**
	43nm,0.1s						
MURB	**Monte Urbino**	**0.80**	**237**	Pg	**Pg**	**00 50 08.5**	**+0.5**
MURB	**Monte Urbino**	**0.80**	**237**	Pg	**Pg**	**00 50 08.5**	**+0.5**
BADI	**Badiali**	**0.89**	**258**	Pg	**Pg**	**00 50 08.9**	**-0.8**
BADI	**Badiali**	**0.89**	**258**	Pg	**Pg**	**00 50 08.9**	**-0.8**
NVLJ	**Novalja**	**1.34**	**50**	*i* Pg	**Pg**	**00 50 17.9**	**-0.2**
NVLJ				Sg	**Sg**	**00 50 37.0**	**+1.4**
NVLJ	**Novalja**	**1.34**	**50**	*i* Pg	**Pg**	**00 50 17.9**	**-0.2**
NVLJ				Sg	**Sg**	**00 50 37.0**	**+1.4**

*NEIC **29** 01:01:33.5, 16°.31N×61°.70W, h154km, mb3.9/1, MD3.5(TRN), After TRN.*
*TRN **29** 01:01:33.9, 16°.30N×61°.71W, h149km, MD3.5, M3.5(FDF) TRN Felt II Guadeloupe.*
*ISCJB **29** 01:01:34.7±0.3, 16°.26N±0°.03×61°.79W±0°.04, h147km±2km, mb3.8/10, Error ellipse: s-maj=8.1km s-min=3.4km az=142.1*
*IDC **29** 01:01:34.8±0.5, 16°.21N×61°.78W, h132km±3km, mb3.6/8, mb1 3.8/9, mb1mx3.6/23, mbtmp3.6/9, Error ellipse: s-maj=12.5km s-min=8.3km az=52.0*
ISC 29 01:01:35.8±0.3, 16°.25N±0°.03×61°.80W±0°.04, h142km±2km, n72, σ0s72/105, mb3.8/10, 6C-11D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZG	**Guadaloupe-1**	**0.11**	**167**	⇓*i*P	**Pn**	**01 01 54.9**	**-0.1**
BCG	**Bois Riant Cap**	**0.24**	**133**	*e*P	**Pn**	**01 01 55.2**	**0.0**
SCG	**Saint Claude**	**0.25**	**152**	⇓*i*P	**Pn**	**01 01 55.4**	**+0.2**
SCG				⇓*e*S	**Sn**	**01 02 10.3**	**+0.3**
PHG	**Guadaloupe-2**	**0.28**	**147**	⇑*i*P	**Pn**	**01 01 55.5**	**+0.1**
HMG	**Houelmont**	**0.28**	**160**	⇓*i*P	**Pn**	**01 01 55.4**	**0.0**
HMG				⇓*e*S	**Sn**	**01 02 10.2**	**0.0**
TBG	**Guadaloupe-3**	**0.42**	**159**	⇑*e*P	**Pn**	**01 01 55.6**	**-0.3**
MGG	**Marie-Galante**	**0.57**	**125**	⇑*i*P	**Pn**	**01 01 56.3**	**-0.3**
SFG	**Saint Francois**	**0.58**	**89**	*e*P	**Pn**	**01 01 56.2**	**-0.5**
DEG	**La Desirade**	**0.71**	**85**	⇑*i*P	**Pn**	**01 01 56.7**	**-0.8**
PSDMZ	**Portsmouth**	**0.74**	**153**	⇓*i*P	**Pn**	**01 01 57.3**	**-0.5**
BPA	**Boggy Peak**	**0.80**	**356**	*i* P	**Pn**	**01 01 58.3**	**+0.1**
BPA				*i* S	**Sn**	**01 02 14.4**	**-0.9**
BPA	**Boggy Peak**	**0.80**	**356**	*i* P	**Pn**	**01 01 58.3**	**+0.1**
BPA				*i* S	**Sn**	**01 02 14.4**	**-0.9**
DWS	**Wesley**	**0.82**	**145**	⇓*e*P	**Pn**	**01 01 58.5**	**+0.1**
DWS				*i* S	**Sn**	**01 02 15.1**	**-0.4**
DWS	**Wesley**	**0.82**	**145**	⇓*e*P	**Pn**	**01 01 58.5**	**+0.1**
DWS				*i* S	**Sn**	**01 02 15.1**	**-0.4**
MDN	**Morne-Daniel**	**1.00**	**157**	*e*P	**Pn**	**01 02 00.5**	**+0.6**
MDN				*e*S	**Sn**	**01 02 18.6**	**+0.4**
MDN	**Morne-Daniel**	**1.00**	**157**	*e*P	**Pn**	**01 02 00.5**	**+0.6**
MDN				*e*S	**Sn**	**01 02 18.6**	**+0.4**
DLPL	**La Plaine**	**1.05**	**150**	*e*P	**Pn**	**01 01 59.8**	**-0.5**
DLPL				*e*S	**Sn**	**01 02 18.2**	**-0.8**
DPMT	**Pointe Michel**	**1.06**	**157**	*e*P	**Pn**	**01 02 01.0**	**+0.6**
DPMT				*e*S	**Sn**	**01 02 20.4**	**+1.2**
DPMT	**Pointe Michel**	**1.06**	**157**	*e*P	**Pn**	**01 02 01.0**	**+0.6**
DPMT				*e*S	**Sn**	**01 02 20.4**	**+1.2**
DBCT	**Belle View Cho**	**1.06**	**156**	*e*P	**Pn**	**01 02 01.2**	**+0.8**
DBCT				*e*S	**Sn**	**01 02 21.1**	**+2.0**
DBCT	**Belle View Cho**	**1.06**	**156**	*e*P	**Pn**	**01 02 01.2**	**+0.8**
DFBT	**Forest Bistro**	**1.09**	**157**	*e*P	**Pn**	**01 02 00.9**	**+0.2**
DFBT				*e*S	**Sn**	**01 02 20.7**	**+1.1**
DFBT	**Forest Bistro**	**1.09**	**157**	*e*P	**Pn**	**01 02 00.9**	**+0.2**
DFBT				*e*S	**Sn**	**01 02 20.7**	**+1.1**
DSTT	**Stowe**	**1.10**	**154**	*e*P	**Pn**	**01 02 01.4**	**+0.7**
DSTT				*e*S	**Sn**	**01 02 21.0**	**+1.2**
DSTT	**Stowe**	**1.10**	**154**	*e*P	**Pn**	**01 02 01.4**	**+0.7**
DSTT				*e*S	**Sn**	**01 02 21.0**	**+1.2**
DSHT	**Scott's Head**	**1.11**	**158**	*e*P	**Pn**	**01 02 01.3**	**+0.5**
DSHT				*e*S	**Sn**	**01 02 21.1**	**+1.2**
DSHT	**Scott's Head**	**1.11**	**158**	*e*P	**Pn**	**01 02 01.3**	**+0.5**
DSHT				*e*S	**Sn**	**01 02 21.1**	**+1.2**
SKI	**Saint Kitts**	**1.41**	**320**	*e*P	**Pn**	**01 02 04.3**	**+0.6**
SKI				*e*S	**Sn**	**01 02 25.8**	**+0.6**
SKI	**Saint Kitts**	**1.41**	**320**	*e*P	**Pn**	**01 02 04.3**	**+0.6**
SKI				*e*S	**Sn**	**01 02 25.8**	**+0.6**
ANWB	**Willy Bob**	**1.41**	**1**	*e*Pn	**Pn**	**01 02 03.7**	**-0.2**
ANWB				*e*Sn	**Sn**	**01 02 24.2**	**-1.2**
FDF	**Fort de France**	**1.63**	**157**	*e*Pn	**Pn**	**01 02 05.0**	**-1.2**
FDF	**Fort de France**	**1.63**	**157**	⇓*e*P	**Pn**	**01 02 05.1**	**-1.1**
BIM	**Bigot**	**1.86**	**158**	⇓*e*P	**Pn**	**01 02 07.9**	**-0.9**
MVM	**Montagne Vauci**	**1.90**	**152**	⇓*e*P	**Pn**	**01 02 08.2**	**-1.1**
SLB	**Belfond**	**2.52**	**163**	⇓*i*P	**Pn**	**01 02 16.4**	**-0.4**
SLB				*e*S	**Sn**	**01 02 48.1**	**-0.2**
SLB	**Belfond**	**2.52**	**163**	⇓*i*P	**Pn**	**01 02 16.4**	**-0.4**
SLB				*e*S	**Sn**	**01 02 48.1**	**-0.2**
MCLT	**Moule a Chique**	**2.66**	**162**	*e*P	**Pn**	**01 02 17.2**	**-1.3**
MCLT				*e*S	**Sn**	**01 02 50.9**	**-0.5**
MCLT	**Moule a Chique**	**2.66**	**162**	*e*P	**Pn**	**01 02 17.2**	**-1.3**
MCLT				*e*S	**Sn**	**01 02 50.9**	**-0.5**
BHS	**Barnard House**	**3.00**	**167**	*e*P	**Pn**	**01 02 22.1**	**-0.8**
BHS	**Barnard House**	**3.00**	**167**	*e*P	**Pn**	**01 02 22.1**	**-0.8**
SVB	**Belmont**	**3.00**	**170**	*e*P	**Pn**	**01 02 21.9**	**-1.1**
SVB	**Belmont**	**3.00**	**170**	*e*P	**Pn**	**01 02 21.9**	**-1.1**
FCV	**Fort Charlotte**	**3.12**	**170**	*e*P	**Pn**	**01 02 24.0**	**-0.4**
FCV				*e*S	**Sn**	**01 03 01.2**	**-0.7**
FCV	**Fort Charlotte**	**3.12**	**170**	*e*P	**Pn**	**01 02 24.0**	**-0.4**
FCV				*e*S	**Sn**	**01 03 01.2**	**-0.7**
STVI	**Saint Thomas**	**3.67**	**305**	*e*Pn	**Pn**	**01 02 31.6**	**+0.1**
STVI				*e*Sn	**Sn**	**01 03 14.4**	**-0.2**
MTP	**Monte Pirata**	**4.03**	**298**	*e*Pn	**Pn**	**01 02 36.5**	**+0.3**
GRGR	**Grenville**	**4.09**	**178**	*e*Pn	**Pn**	**01 02 36.4**	**-0.8**
HUMP	**Col San Antoni**	**4.30**	**297**	*e*Pn	**Pn**	**01 02 40.2**	**+0.3**
HUMP				*e*Sn	**Sn**	**01 03 28.6**	**-1.1**
CBYP	**Canovanas**	**4.37**	**298**	*e*Pn	**Pn**	**01 02 41.7**	**+1.0**
SJG	**San Juan**	**4.55**	**295**	P	**Pn**	**01 02 43.7**	**+0.5**
	37nm,0.3s,baz=2.6,slow=22,SNR=4.7						
SJG				S	**Sn**	**01 03 35.9**	**+0.4**
	15nm,0.3s,baz=35,slow=23,SNR=6.1						
SJG	**San Juan**	**4.55**	**295**	*e*Pn	**Pn**	**01 02 43.2**	**+0.1**
CELP	**Cerrillos**	**4.92**	**292**	*e*Pn	**Pn**	**01 02 48.4**	**+0.4**
CELP				*e*Sn	**Sn**	**01 03 42.4**	**-1.8**
OBIP	**Obispado Ponce**	**4.93**	**292**	*e*Pn	**Pn**	**01 02 49.5**	**+1.4**
TOSP	**Speyside**	**5.07**	**166**	*e*P	**Pn**	**01 02 50.3**	**+0.3**
AOPR	**Arecibo Observ**	**5.17**	**295**	*e*Pn	**Pn**	**01 02 51.9**	**+0.5**
AOPR				*e*Sn	**Sn**	**01 03 41.1**	**-9.2**
LRS	**Lares**	**5.23**	**294**	*e*Pn	**Pn**	**01 02 52.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**5.37**	**290**	*e*Pn	**Pn**	**01 02 53.9**	**-0.1**
MPR	**Mayaguez**	**5.46**	**292**	*e*Pn	**Pn**	**01 02 53.8**	**-1.5**
MPR				*e*Sn	**Sn**	**01 03 37.7**	**-20**
AGPR	**Aguadilla, PR**	**5.53**	**294**	*e*Pn	**Pn**	**01 02 56.0**	**-0.1**
SCHQ	**Schefferville**	**38.70**	**355**	P	**P**	**01 08 46.5**	**+0.9**
	2.2nm,0.6s,mb4.0,baz=199,slow=12,SNR=6.1						
TXAR	**Lajitas Array**	**40.52**	**296**	P	**P**	**01 09 00.8**	**-0.2**
	0.4nm,0.6s,mb3.3,baz=117,slow=8.2,SNR=5.6						
TXAR	**Lajitas Array**	**40.52**	**296**	P	**P**	**01 09 00.8**	**-0.3**
BNM	**Barren Site**	**43.92**	**303**	P	**P**	**01 09 29.7**	**+1.2**
	2.9nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**48.42**	**313**	P	**P**	**01 10 03.7**	**+0.1**
	3.6nm,0.6s,mb4.2,baz=116,slow=8.4,SNR=13						
NVAR	**Mina Array Bea**	**53.95**	**306**	P	**P**	**01 10 45.7**	**+0.8**
	1.4nm,0.8s,mb3.8,baz=98,slow=6.8,SNR=9.4						
ESDC	**Sonseca Array**	**55.15**	**53**	P	**P**	**01 10 53.7**	**+0.2**
	0.9nm,0.8s,mb3.6,baz=263,slow=9.4,SNR=3.3						
ESDC	**Sonseca Array**	**55.15**	**53**	P	**P**	**01 10 53.7**	**+0.1**
DBIC	**Dimbokro**	**56.46**	**93**	P	**P**	**01 11 03.2**	**0.0**
	5.2nm,0.9s,mb4.3,baz=297,slow=2.3,SNR=3.2						
YKA	**Yellowknife Ar**	**58.94**	**334**	P	**P**	**01 11 19.6**	**-0.1**
	1.2nm,0.6s,mb3.9,baz=107,slow=7.4,SNR=8.2						
TORD	**Torodi Ar. Bea**	**61.29**	**84**	P	**P**	**01 11 36.7**	**+0.1**
	1.8nm,0.9s,mb3.9,baz=258,slow=6.4,SNR=13						
TORD	**Torodi Ar. Bea**	**61.29**	**84**	P	**P**	**01 11 36.7**	**+0.1**
BRTR	**Keskin Array B**	**83.87**	**51**	P	**P**	**01 13 49.8**	**+0.1**
	0.8nm,0.8s,mb3.5,baz=316,slow=6.0,SNR=4.1						

*TUN **29** 01:17:08.9, 33°.95N×9°.08E, h12km, MD3.7*
*IDC **29** 01:17:13.2±1.1, 34°.12N×9°.01E, h0km, mb3.6/13, mb1 3.7/17, mb1mx3.6/33, mbtmp3.6/17, ML3.5/4, MS2.9/4, Ms1 2.9/4, ms1mx2.4/36, Error ellipse: s-maj=22.6km s-min=17.0km az=126.0*
*CSEM **29** 01:17:14.3±0.2, 34°.09N×9°.17E, h5km, MD3.7, Error ellipse: s-maj=7.7km s-min=4.6km az=39.0*
*NEIC **29** 01:17:14.8±0.6, 34°.07N×9°.17E, h10km, MG4.2(MDD), Error ellipse: s-maj=10.1km s-min=8.0km az=161.0*
*CRAAG **29** 01:17:15.0, 34°.12N×9°.22E, Mb3.7*
*NAO **29** 01:18:28.9±4.5, 78°.06N×8°.08E, ML2.4*
*BER **29** 01:18:31.9±1.5, 78°.00N×8°.39E, h15km±22km, MD2.5, ML2.4, ML2.4(NAO)*
ISC 29 01:17:14.5±0.7, 34°.10N±0°.04×9°.16E±0°.04, h5km±4km, n82, σ1s15/89, mb3.6/12, MS2.6/3, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BERT	**Berda**	**0.19**	**319**	*i* P	**Pg**	**01 17 17.4**	**-0.8**
MEDT	**Meda**	**0.63**	**89**	*i* P	**Pg**	**01 17 27.0**	**+0.3**
SYA	**Sidi Yaiche**	**0.70**	**336**	*i* P	**Pg**	**01 17 29.1**	**+1.1**
SGNT	**Sidi Gnaou**	**0.74**	**126**	*i* P	**Pg**	**01 17 27.5**	**-1.2**
OAR	**Oum El Arais**	**0.76**	**304**	*i* P	**Pg**	**01 17 29.4**	**+0.2**
MART	**Mareth**	**1.05**	**120**	*i* P	**Pg**	**01 17 33.5**	**-1.1**
TROT	**Trozza**	**1.50**	**14**	*i* P	**Pn**	**01 17 42.6**	**+0.5**
KEST	**Kesra**	**1.63**	**5**	Pg	**Pg**	**01 17 44.7**	**-1.2**
	7.3nm,0.3s,baz=144,slow=2.7,SNR=125						
KEST				Lg		01 18 10.7	
	12nm,0.3s,baz=114,slow=23,SNR=8.0						
ZGN	**Zaghouan**	**2.39**	**19**	*i* P	**Pn**	**01 17 55.1**	**+0.7**
ALAS	**Alassa**	**2.41**	**121**	*i* Pn	**Pn**	**01 17 54.5**	**-0.1**
	SNR=23						
ALAS				*e*S	**Sn**	**01 18 26.4**	**+2.0**
	288nm,0.5s,SNR=24						
GHAT	**Ghardimaou**	**2.49**	**344**	*i* P	**Pn**	**01 17 54.7**	**-1.0**
ABSA	**Djebel Ababsia**	**2.57**	**328**	P	**Pg**	**01 18 06.0**	**+2.2**
BLIT	**Baltah**	**2.61**	**356**	*i* P	**Pn**	**01 17 57.4**	**0.0**
CMAH	**Djebel Manchou**	**2.89**	**331**	P	**Pn**	**01 18 01.0**	**-0.2**
CMAH	**Djebel Manchou**	**2.89**	**331**	P	**Pn**	**01 18 01.0**	**-0.2**
CKFL	**Kef-Lekhel**	**3.04**	**320**	P	**Pn**	**01 18 03.7**	**+0.4**
CKFL	**Kef-Lekhel**	**3.04**	**320**	P	**Pn**	**01 18 03.7**	**+0.4**
CASM	**Ain Smara**	**3.07**	**315**	P	**Pn**	**01 18 04.0**	**+0.3**
CASM	**Ain Smara**	**3.07**	**315**	P	**Pn**	**01 18 04.0**	**+0.3**
DFRA	**Djebel Bou Aff**	**3.63**	**313**	P	**Pn**	**01 18 12.0**	**+0.7**
DFRA	**Djebel Bou Aff**	**3.63**	**313**	P	**Pn**	**01 18 12.0**	**+0.7**
SET	**Setif**	**3.72**	**305**	P	**Pn**	**01 18 14.0**	**+1.3**
SET	**Setif**	**3.72**	**305**	P	**Pn**	**01 18 14.0**	**+1.3**
GHAR	**

AKASG	Malin Array Be	22.13	35	P	P	01 22 10.5	-0.3
	0.3nm,0.3s,mb3.3,baz=234,slow=8.9,SNR=3.8						
AKASG	Malin Array Be	22.13	35	P	P	01 22 10.5	-0.3
AKASG	Malin Array Be	22.13	35	P	P	01 22 10.5	-0.3
EKA	Eskdalemuir Ar	22.90	342	P	P	01 22 16.9	-2.0
	1.3nm,0.8s,mb3.4,baz=46,slow=15,SNR=3.8						
EKA	Eskdalemuir Ar	22.90	342	P	P	01 22 16.9	-2.0
HFS	Hagfors	26.21	5	P	P	01 22 48.7	-1.3
	0.7nm,0.4s,mb3.5,baz=183,slow=10,SNR=5.7						
HFS				LR	LR	01 33 31.0	
	comp=Z,24nm,19.5s,MS2.7,baz=28,slow=37						
HFS	Hagfors	26.21	5	P	P	01 22 48.7	-1.3
NOA	NORSAR Array B	26.99	2	P	P	01 22 55.3	-1.6
	0.6nm,0.8s,mb3.2,baz=174,slow=9.2,SNR=2.6						
NOA				LR	LR	01 33 02.2	
	comp=Z,10nm,20.7s,MS2.4,baz=230,slow=35						
NOA	NORSAR Array B	26.99	2	P	P	01 22 55.3	-1.7
FINES	FINESS Array B	29.44	17	P	P	01 23 17.3	-1.5
	1.4nm,0.7s,mb3.8,baz=197,slow=6.0,SNR=5.5						
FINES	FINESS Array B	29.44	17	P	P	01 23 17.3	-1.5
FINES	FINESS Array B	29.44	17	P	P	01 23 17.3	-1.5
ARCES	ARCESS Array B	36.63	10	P	P	01 24 19.7	-1.8
	2.1nm,0.9s,mb4.0,baz=210,slow=7.0,SNR=6.9						
ARCES	ARCESS Array B	36.63	10	P	P	01 24 19.7	-1.8
KURK	Kurchatov	51.99	49	P	P	01 26 25.1	+0.5
	0.5nm,0.6s,mb3.6,baz=281,slow=8.2,SNR=5.0						
KURK	Kurchatov	51.99	49	P	P	01 26 25.0	+0.5
ZALV	Zalesovo Beam	55.14	44	P	P	01 26 47.8	+0.1
	0.4nm,0.4s,mb3.8,baz=277,slow=12,SNR=2.0						
ZALV	Zalesovo Beam	55.14	44	P	P	01 26 47.8	+0.2
MKAR	Makanchi Array	55.19	53	P	P	01 26 49.0	+0.9
	0.4nm,0.4s,mb3.8,baz=286,slow=7.4,SNR=3.5						
YKA	Yellowknife Ar	73.73	336	P	P	01 28 48.5	-0.7
	0.3nm,0.6s,mb3.4,baz=45,slow=5.3,SNR=4.5						
YKA	Yellowknife Ar	73.73	336	P	P	01 28 48.5	-0.7
YKA	Yellowknife Ar	73.73	336	P	P	01 28 48.5	-0.7
PDAR	Pinedale Array	85.19	320	P	P	01 29 52.5	+0.6
	1.0nm,0.8s,mb4.0,baz=64,slow=6.8,SNR=8.9						
PDAR	Pinedale Array	85.19	320	P	P	01 29 52.5	+0.6

NEIC ***29*** *01:21:00.7, 38.°37N×25.°95E, h33km, MD3.4(ATH), After ATH.*
ATH ***29*** *01:21:00.7, 38.°37N×25.°95E, h33km±11km, MD3.4/4*
CSEM ***29*** *01:21:00.8±0.3, 38.°35N×25.°89E, h15km, MD3.4, Error ellipse: s-maj=6.1km s-min=4.1km az=87.0*
ISCJB ***29*** *01:21:00.4±0.7, 38.°36N±0.°02×25.°98E±0.°04, h11km±5km, Error ellipse: s-maj=5.6km s-min=3.5km az=163.1*
DDA ***29*** *01:21:02.1, 38.°36N×26.°03E, h8km±3km, Md3.0*
THE ***29*** *01:21:03.0, 38.°37N×25.°99E, h43km±9km, ML3.2/2, Error ellipse: s-maj=9.7km s-min=0.7km az=67.0*

ISC 29 01:21:01.1±0.7, 38.°36N±0.°02×25.°94E±0.°04, h15km±4km, n39, σ0.°62/70, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.51	89	*i* P	Pg	01 21 11.6	+0.4
URLA				*i* S	Sg	01 21 18.2	+0.2
URLA	Izmir	0.51	89	*i* P	Pg	01 21 11.6	+0.4
URLA				*i* S	Sg	01 21 18.2	+0.2
SIGR	SIGRI	0.86	355	P	Pg	01 21 17.7	0.0
SIGR				S	Sg	01 21 29.6	+0.6
SIGR	SIGRI	0.86	355	P	Pg	01 21 17.7	0.0
SIGR				S	Sg	01 21 29.6	+0.6
BLCB	Balcova	0.86	88	P	Pg	01 21 17.7	-0.1
BLCB				S	Sg	01 21 29.6	+0.5
BLCB	Balcova	0.86	88	P	Pg	01 21 17.7	-0.1
BLCB				S	Sg	01 21 29.6	+0.5
PRK	Paraskevi	0.93	16	*e*PN	Pg	01 21 18.5	-0.5
PRK				*e*SN	Sg	01 21 31.0	-0.1
PRK	Paraskevi	0.93	16	P	Pg	01 21 18.5	-0.5
PRK				S	Sg	01 21 31.4	+0.3
PRK	Paraskevi	0.93	16	*e*Pn	Pg	01 21 18.5	-0.5
PRK				*e*Sn	Sg	01 21 31.0	-0.1
PRK				S	Sg	01 21 31.4	+0.3
SMG	Samos	0.96	132	*e*PN	Pg	01 21 19.3	-0.2
SMG				*e*SN	Sg	01 21 32.5	+0.5
SMG	Samos	0.96	132	*e*Pn	Pg	01 21 19.3	-0.2
SMG				*e*Sn	Sg	01 21 32.5	+0.5
AYVA	Ayvalik	1.12	31	*i* P	Pg	01 21 21.6	-0.9
AYVA				*i* S	Sg	01 21 37.4	+0.3
AYVA	Ayvalik	1.12	31	*i* P	Pg	01 21 21.6	-1.0
AYVA				*i* S	Sg	01 21 37.4	+0.2
GCAM	G?zelcaml?	1.21	122	*i* P	Pn	01 21 23.4	0.0
GCAM				*i* S	Sb	01 21 40.5	+1.4
GCAM	G?zelcaml?	1.21	122	*i* P	Pn	01 21 23.5	+0.1
GCAM				*i* S	Sb	01 21 40.5	+1.4
APE	Apeiranthos	1.32	194	*e*PN	Pn	01 21 24.8	-0.2
APE	Apeiranthos	1.32	194	P	Pn	01 21 24.8	-0.2
APE				S	Sb	01 21 42.4	0.0
APE	Apeiranthos	1.32	194	*e*Pn	Pn	01 21 24.8	-0.2
APE				S	Sb	01 21 42.4	0.0
BOZC	Bozcaada	1.49	3	*i* P	Pn	01 21 26.9	-0.4
BOZC				*i* S	Sn	01 21 46.9	+0.5
AKHS	Akhisar	1.56	70	*i* P	Pg	01 21 30.9	0.0
AKHS				*i* S	Sg	01 21 51.0	-0.2
AKHS	Akhisar	1.56	70	*i* P	Pg	01 21 30.9	0.0
AKHS				*i* S	Sg	01 21 51.0	-0.2
LIA	Limnos Island	1.65	339	P	Pn	01 21 29.6	+0.1
LIA	Limnos Island	1.65	339	P	Pn	01 21 29.6	+0.1
AYDN	Tasoluk	1.68	114	*e*P	Pn	01 21 30.3	+0.4
AYDN				*i* S	Sn	01 21 48.7	-2.4
AYDN	Tasoluk	1.68	114	*e*P	Pn	01 21 30.3	+0.4
AYDN				*i* S	Sn	01 21 48.7	-2.4
BDRM	Kayabasi	1.75	137	*i* P	Pn	01 21 31.1	+0.2
BDRM				*i* S	Sg	01 21 57.7	+0.2
BDRM	Kayabasi	1.75	137	*i* P	Pn	01 21 31.1	+0.2
BDRM				*i* S	Sg	01 21 57.7	+0.2
BALY	Balya	1.90	43	*i* P	Pn	01 21 33.0	+0.1
BALY				*i* S	Sn	01 21 57.0	+0.4
BALY	Balya	1.90	43	*i* P	Pn	01 21 33.0	+0.1
BALY				*i* S	Sn	01 21 57.0	+0.4
MANT	Manisa	2.06	85	*i* P	Pg	01 21 40.8	+0.3
MANT				*i* S	Sg	01 22 06.5	-0.7
MANT	Manisa	2.06	85	*i* P	Pg	01 21 40.8	+0.3
MANT				*i* S	Sg	01 22 06.5	-0.7
DURS	Dursunbey	2.33	57	*i* P	Pg	01 21 45.4	-0.4
DURS	Dursunbey	2.33	57	*i* P	Pg	01 21 45.4	-0.4
ARG	Arkhangelos	2.75	140	*e*PN	Pn	01 21 45.8	+1.1
ARG	Arkhangelos	2.75	140	*e*Pn	Pn	01 21 45.8	+1.1
KHAL	Karahalli	2.79	89	*i* P	Pg	01 21 54.6	+0.1
KHAL				*i* S	Sg	01 22 29.9	-0.8
KHAL	Karahalli	2.79	89	*i* P	Pg	01 21 54.6	+0.1
KHAL				*i* S	Sg	01 22 29.9	-0.7
IDI	Anoyia	3.18	196	*e*Pn	Pn	01 21 49.4	-1.1
IDI	Anoyia	3.18	196	*e*Pn	Pn	01 21 49.4	-1.1

ISCJB ***29*** *01:30:33.4±0.3, 5.°84S±0.°05×107.°50E±0.°05, h314km±3km, mb4.0/23, Error ellipse: s-maj=9.5km s-min=6.2km az=137.0*
DJA ***29*** *01:30:33, 5.°98S×107.°47E, h311km, MLv4.3/14*
IDC ***29*** *01:30:36.4±2.3, 5.°75S×107.°56E, h328km±22km, mb3.8/12, mb1 3.8/12, mb1mx3.6/23, mbtmp3.8/12, Error ellipse: s-maj=21.5km s-min=9.4km az=60.0*
NEIC ***29*** *01:30:43.2±1.8, 5.°72S×107.°73E, h407km±20km, mb4.0/16, Error ellipse: s-maj=21.9km s-min=7.8km az=64.0*

ISC 29 01:30:34.2±0.3, 5.°82S±0.°05×107.°52E±0.°05, h307km±3km, n54, σ0.°92/53, mb4.0/23, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBJI	Citeko	0.90	228	P	Pn	01 31 14.8	-0.1
JCJI	Jatiwangi	1.00	132	P	Pn	01 31 16.3	+1.0
LEM	Lembang	1.01	175	P	Pn	01 31 14.2	-1.2
DBJI	Dramaga	1.06	226	P	Pn	01 31 14.9	-0.7
RBSI	Rajabasa	1.77	269	P	Pn	01 31 19.2	-0.7
CGJI	Cibinong	1.98	246	P	Pn	01 31 20.1	-1.3
KLI	Kotabumi	2.82	290	P	Pn	01 31 28.4	-0.3
KASI	Kota Agung	3.02	275	P	Pn	01 31 30.6	-0.1
TPI	Tanjungpandan	3.04	2	P	Pn	01 31 32.0	+1.1
SMRI	Semarang	3.15	113	P	Pn	01 31 33.5	+1.6
LWLI	Liwa	3.54	283	P	Pn	01 31 36.9	+1.0
MDSI	Maura Dua	3.58	291	P	Pn	01 31 36.9	+0.5
UGM	Wanagama	3.64	125	P	Pn	01 31 35.4	-1.5
PPBI	Pangkal Pinang	3.88	339	P	Pn	01 31 40.9	+1.3
NGJI	Ngawi	4.21	112	P	Pn	01 31 44.1	+1.0
PCJI	Pacitan	4.33	123	P	Pn	01 31 43.1	-1.3
SJI	Sawahan	4.63	115	P	Pn	01 31 46.7	-1.1
MNAI	Manna	4.77	287	P	Pn	01 31 49.4	0.0
KSI	Kapahiang	5.36	293	P	Pn	01 31 56.4	+0.2
KSM	Kuching	7.76	21	*e*Pn	Px	01 32 35.0	
	21nm,0.8s						
KSM				*e*S	S	01 33 54.0	-0.8
MYKOM	Kota Tinggi	8.40	334	P	Pn	01 32 34.2	+1.4
MBWA	Marble Bar	19.30	143	*e*P	P	01 34 38.0	+0.5
	8.1nm,0.7s						
FITZ	Fitzroy Crossi	21.49	126	*e*P	P	01 34 59.2	0.0
CMAR	Chiang Mai Arr	25.56	341	P	P	01 35 36.6	+0.6
	2.1nm,0.4s,mb3.9,baz=179,slow=9.9,SNR=8.2						
NWAO	Narrogin (SRO)	28.45	163	P	P	01 36 02.1	+0.6
	7.1nm,0.7s,mb4.2,baz=313,slow=6.4,SNR=3.3						
WRAB	Tennant Creek	29.61	121	*e*P	P	01 36 12.0	+0.1
	3.3nm,0.4s,mb4.2						
WRAB				*e*		01 38 01.1	
WRAB				*e*PcP	PcP	01 39 08.2	-0.2
ASAR	Alice Springs	30.97	128	P	P	01 36 24.2	+0.4
	3.4nm,0.4s,mb4.2,baz=300,slow=7.8,SNR=69						
ASAR				PcP	PcP	01 39 11.7	-0.2
	1.1nm,0.5s,baz=310,slow=2.1,SNR=8.3						
ASAR				S	S	01 41 04.2	-1.3
	2.4nm,0.6s,baz=300,slow=15,SNR=12						
ASAR				ScP	ScP	01 42 24.4	-0.8
	1.4nm,0.7s,baz=302,slow=2.8,SNR=7.4						
STKA	Stephens Creek	41.06	133	P	P	01 37 49.4	+0.7
	11nm,0.7s,mb4.2,baz=305,slow=7.5,SNR=21						
STKA				PcP	PcP	01 39 41.7	-0.3
	2.0nm,0.5s,baz=294,slow=5.3,SNR=4.3						
STKA	Stephens Creek	41.06	133	*e*P	P	01 37 49.3	+0.7
	1.8nm,0.6s,mb3.5						
STKA				PcP	PcP	01 39 41.7	-0.3
GTA	Gaotai	45.56	352	*e*P	P	01 38 26.5	+2.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.8						
SONM	Songino Array	53.43	359	P	P	01 39 24.3	+1.2
	comp=Z,1.6nm,0.5s,mb3.6,baz=174,slow=9.5,SNR=5.3						
TKM2	Tokmak 2	56.49	332	*e*P	P	01 39 43.9	-1.1
	comp=Z,5.2nm,0.4s,mb4.3						
MK31	Makanchi Array	56.96	340	*e*P	P	01 39 47.7	-0.4
MKAR	Makanchi Array	56.96	340	P	P	01 39 47.7	-0.4
	comp=Z,6.9nm,0.4s,mb4.4,baz=142,slow=8.0,SNR=75						
MKAR	Makanchi Array	56.96	340	P	P	01 39 47.7	-0.4
EKS2	Erkin-Say	57.16	331	*e*P	P	01 39 48.2	-1.4
	comp=Z,2.1nm,0.7s,mb3.7						
KURK	Kurchatov	61.57	340	*e*P	P	01 40 18.7	-0.8
	comp=Z,3.2nm,0.6s,mb4.1						
ZALV	Zalesovo Beam	62.53	345	P	P	01 40 24.8	-0.9
	comp=Z,2.6nm,0.3s,mb4.3,baz=154,slow=6.6,SNR=10						
BVAR	Borovoye Array	66.49	337	P	P	01 40 50.7	-0.5
	comp=Z,2.8nm,0.6s,mb4.1,baz=142,slow=8.8,SNR=23						
BRVK	Borovoye	66.56	337	*e*P	P	01 40 50.8	-0.8
	comp=Z,1.5nm,0.4s,mb4.1						
MAW	Mawson	68.64	197	P	P	01 41 05.4	+1.0
	comp=Z,1.9nm,0.5s,mb4.0,baz=37,slow=5.1,SNR=5.1						
MAW	Mawson	68.64	197	*e*P	P	01 41 05.0	+0.6
	comp=Z,0.5nm,0.7s,mb3.4						
ABKAR	Akbulak array	68.67	329	*e*P	P	01 41 03.6	-1.2
	comp=Z,4.2nm,0.6s,mb4.3						
SBA	Scott Base	78.10	169	*e*P	P	01 42 00.4	+1.3
	comp=Z,2.2nm,0.7s,mb4.0						
LSZ	Lusaka	78.22	256	*e*P	P	01 42 01.0	0.0
	comp=Z,1.6nm,0.4s,mb4.1						
LBTB	Lobatse	80.26	246	*e*P	P	01 42 11.8	0.0
	comp=Z,2.0nm,0.6s,mb4.0						
BOSA	Boshof	80.46	242	P	P	01 42 12.9	+0.1
	comp=Z,1.5nm,1.0s,mb3.7,baz=76,slow=8.9,SNR=4.9						
BOSA	Boshof	80.46	242	*e*P	P	01 42 12.8	0.0
	comp=Z,1.2nm,0.6s,mb3.8						
BRTR	Keskin Array B	81.44	311	P	P	01 42 16.6	-1.0
	comp=Z,0.6nm,0.7s,mb3.5,baz=139,slow=7.2,SNR=3.9						
QSPA	South Pole Qui	84.17	180	P	P	01 42 31.3	+0.5
	comp=Z,2.0nm,0.5s,mb4.2,baz=292,slow=2.0,SNR=22						
QSPA	South Pole Qui	84.17	180	*e*P	P	01 42 31.1	+0.3
	comp=Z,2.0nm,0.5s,mb4.2						
TSUM	Tsumeb	88.06	251	*e*P	P	01 42 51.5	+0.6
	comp=Z,0.7nm,0.4s,mb3.8						
SIV	San Ignacio	155.57	207	PKPab	PKPab	01 50 19.8	0.0
	comp=Z,1.7nm,0.8s,baz=141,slow=7.3,SNR=8.6						
LPAZ	La Paz	157.62	191	PKPab	PKPab	01 50 30.4	+1.8
	comp=Z,0.8nm,0.8s,baz=178,slow=7.3,SNR=3.6						

DJA 29 01:31:17, 0.°76N×99.°80E, h15km, MLv4.0/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.22	279	P	Pg	01 31 21.1	-0.9
BKNI	Bangkinang	1.31	109	P	Pn	01 31 39.0	-1.8
PPI	Padang Panjang	1.35	154	P	Pn	01 31 40.3	-1.0
TRSI	Tarutung	1.51	326	P	Pn	01 31 45.5	+1.9
PDSI	Padang	1.79	158	P	Pn	01 31 47.9	+0.5
SISI	Saibi	2.19	199	P	Pn	01 31 54.0	+1.1
GSI	Gunungsitoli	2.29	284	P	Pn	01 31 56.3	+2.1
SDSI	Sungai Dareh	2.34	136	P	Pn	01 31 55.9	+0.9
RGRI	Rengat	2.76	113	P	Pn	01 32 01.4	+0.6
IPM	Ipoh	3.89	18	P	Pn	01 32 18.3	+2.0

CSEM ***29*** *02:04:02.0, 38.°75N×48.°78E, h6km, ML3.5, After TEH*

TEH 29 02:04:02.0, 38.°75N×48.°78E, h6km, 1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	Sarab	1.27	224	*e*Pn	Pn	02 04 25.9	-0.3
ISRB				*e*		02 04 26.7	
	comp=Z,8μm,0.1s						
ISRB				*e*Sg	Sg	02 04 43.5	+0.7
ISRB	Sarab	1.27	224	*e*Pn	Pn	02 04 25.9	-0.3
ISRB				*e*Sg	Sg	02 04 43.5	+0.7
IHRS	Heris	1.43	253	*e*Pg	Pg	02 04 27.5	-1.9
IHRS				*e*		02 04 29.6	
	comp=Z,18μm,0.1s						
IHRS				*e*Sg	Sg	02 04 47.0	-0.9
IBST	Bostanabad	1.82	235	*e*Pn	Pn	02 04 33.8	+0.1
IBST				*e*		02 04 36.5	
	comp=Z,3μm,0.1s						
IBST				*e*Sg	Sg	02 04 59.9	-0.5
ITBZ	Tabriz	2.13	257	*e*Pn	Pn	02 04 38.0	0.0
ITBZ				*e*		02 04 41.4	
	comp=Z,2μm,0.1s						
IMRD	Marand	2.41	270	*e*Pn	Pn	02 04 42.0	+0.2
IMRD				*e*		02 05 19.1	
	comp=Z,5μm,0.1s						
IMRD	Marand	2.41	270	*e*Pn	Pn	02 04 42.0	+0.2
IAZR	Azarshahr	2.45	245	*e*Pn	Pn	02 04 43.1	+0.7
IAZR				*e*		02 04 52.0	
	comp=Z,2μm,0.2s						
IAZR	Azarshahr	2.45	245	*e*Pn	Pn	02 04 43.1	+0.7
ISHB	Shabestar	2.52	260	*e*Pn	Pn	02 04 43.0	-0.4
ISHB				*e*		02 04 59.3	
	comp=Z,991nm,0.3s						
IMHD	Mahdasht	3.41	153	*e*Pn	Pn	02 04 56.0	+0.4
IMHD				*e*		02 06 59.2	
	comp=Z,474nm,0.0s						
IMHD	Mahdasht	3.41	153	*e*Pn	Pn	02 04 56.0	+0.4
IRAZ	Razeghan	3.46	164	*e*Pn	Pn	02 04 55.0	-1.3
IRAZ				*e*		02 06 00.1	
	comp=Z,309nm,0.2s						
IRAZ	Razeghan	3.46	164	*e*Pn	Pn	02 04 55.0	-1.3
IPRN	Peran	3.78	130	*e*Pn	Pn	02 05 00.0	-0.7
IPRN				*e*		02 05 45.5	
	comp=Z,2μm,0.1s						
IPRN	Peran	3.78	130	*e*Pn	Pn	02 05 00.0	-0.7
IDMV	Damavand	4.09	140	*e*Pn	Pn	02 05 04.6	-0.4
IDMV				*e*		02 05 58.5	
	comp=Z,146nm,0.2s						
IDMV	Damavand	4.09	140	*e*Pn	Pn	02 05 04.6	-0.4
IFIR	Firoozkooh	4.43	133	*e*	Pn	02 05 19.0	+9.3
IFIR				*e*Pn	Pn	02 05 09.8	+0.1
	comp=Z,197nm,0.1s						
ISHM	Shahmirzad	4.64	128	*e*Pn	Pn	02 05 12.7	+0.1
ISHM				*e*		02 06 09.5	
	comp=Z,514nm,0.2s						
ISHM	Shahmirzad	4.64	128	*e*Pn	Pn	02 05 12.7	+0.1
IKIA	Kiasar	4.65	122	*e*Pn	Pn	02 05 12.5	-0.2
IKIA				*e*		02 05 18.4	
	comp=Z,170nm,0.0s						
IKIA	Kiasar	4.65	122	*e*Pn	Pn	02 05 12.5	-0.2

CASC 29 02:23:13.9±1.9, 8.°39N×82.°95W, h4km, MD3.7, MW4.0, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.34	321	↑*i*P	Pg	02 23 20.9	+0.4
ACR				*e*S	Sg	02 23 26.7	+1.8
BRU2	Volcan	0.48	33	↓*i*P	Pg	02 23 23.9	+0.8
BRU2				*e*S	Sg	02 23 32.7	+3.2
BAR1		0.92	337	↓*e*P	Pg	02 23 31.1	-0.4
BAR1				*e*S	Sg	02 23 43.5	0.0
BUS	Buena Vista	1.41	326	↑*i*P	Pn	02 23 39.8	-0.6
URSC	Urasca	1.65	331	*e*P	Pn	02 23 43.6	-0.1
PRS1	Puriscal	2.08	320	*e*P	Pn	02 23 49.6	+0.1
CGA2	Cerro Gallo 2	2.20	317	*e*P	Pn	02 23 53.7	+2.4

DJA 29 02:41:36, 9.°49S×116.°11E, h24km, MLv3.5/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	Denpasar	1.16	305	P	Pn	02 41 57.0	+0.2
IGBI				S	Sn	02 42 12.2	+0.3
DNP	Denpasar	1.20	312	P	Sn	02 42 14.8	+2.0
KHKI	Kahang-Kahang	1.22	336	P	Pn	02 41 57.5	-0.1
KHKI				S	Sn	02 42 14.1	+0.7
SRBI	Singaraja	1.65	328	P	Pn	02 42 04.0	+0.5
SRBI				S	Sn	02 42 25.2	+1.2
GMJI	Gumukmas	2.90	294	P	Pn	02 42 21.6	+0.9

NEIC ***29*** *02:42:37.0, 39.°43N×21.°40E, h5km, MD3.6(ATH), After ATH.*
ATH ***29*** *02:42:37.0, 39.°43N×21.°40E, h5km, MD3.6/7*
ISCJB ***29*** *02:42:38.3±0.4, 39.°42N±0.°02×21.°32E±0.°03, h10km, Error ellipse: s-maj=3.6km s-min=2.9km az=142.8*
CSEM ***29*** *02:42:38.1±0.2, 39.°40N×21.°32E, h2km, ML3.0/6, Error ellipse: s-maj=5.2km s-min=4.2km az=73.0*
THE ***29*** *02:42:38.7, 39.°40N×21.°33E, h5km±1km, ML3.0/6, Error ellipse: s-maj=1.4km s-min=0.5km az=137.0*

ISC 29 02:42:38.3±0.5, 39.°38N±0.°02×21.°31E±0.°03, h0km±6km, n50, σ1.°02/72, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEV	Metsovon	0.41	351	P	Pg	02 42 46.1	0.0
MEV	Metsovon	0.41	351	P	Pg	02 42 46.1	0.0
JAN	Janina	0.45	308	*e*PB	Pg	02 42 46.5	-0.4
JAN				*e*SB	Sg	02 42 53.5	+0.8
JAN	Janina	0.45	308	*e*Pb	Pg	02 42 46.5	-0.4
JAN				*e*Sb	Sg	02 42 53.5	+0.8
THL	Klokotos Trika	0.57	71	P	Pg	02 42 48.9	-0.4
THL				S	Sg	02 42 57.1	+0.3
THL	Klokotos Trika	0.57	71	P	Pg	02 42 48.9	-0.4
THL				S	Sg	02 42 57.1	+0.3
EVR	Evrytania	0.61	140	*e*PG	Pg	02 42 48.5	-1.4
EVR	Evrytania	0.61	140	*e*Pg	Pg	02 42 48.5	-1.4
IGT	Igoumenitsa	0.77	282	P	Pg	02 42 53.2	+0.1
IGT				S	Sg	02 43 05.2	+2.1
IGT	Igoumenitsa	0.77	282	P	Pg	02 42 53.2	+0.1
IGT				S	Sg	02 43 05.2	+2.1
AGG	Agios Georgios	0.87	114	P	Pg	02 42 55.5	+0.5
AGG				S	Sg	02 43 08.3	+2.0
AGG	Agios Georgios	0.87	114	P	Pg	02 42 55.5	+0.5
AGG				S	Sg	02 43 08.3	+2.0
KZN	Kozani	0.99	21	*e*PG	Pg	02 42 54.3	-3.0
KZN				*e*SB	Sg	02 43 08.4	-1.7
KZN	Kozani	0.99	21	P	Pg	02 42 56.4	-0.9
KZN				S	Sg	02 43 11.0	+0.9
KZN	Kozani	0.99	21	*e*Pg	Pg	02 42 54.3	-3.0
KZN	Kozani	0.99	21	P	Pg	02 42 56.4	-0.9
KZN				*e*Sb	Sg	02 43 08.4	-1.7
KZN				S	Sg	02 43 11.0	+0.9
EFP	Efpalio	1.06	154	*e*PG	Pg	02 42 57.0	-1.7
EFP	Efpalio	1.06	154	*e*Pg	Pg	02 42 57.0	-1.7
LIT	Litokhoron	1.16	51	P	Pg	02 42 59.6	-0.9
LIT				S	Sg	02 43 16.9	+1.3
LIT	Litokhoron	1.16	51	P	Pg	02 42 59.6	-0.9
LIT				S	Sg	02 43 16.9	+1.3
KALE	Kalithea	1.18	147	P	Pg	02 43 01.0	0.0
KALE	Kalithea	1.18	147	P	Pg	02 43 01.0	0.0
KEK	Kerkira	1.21	286	*e*PB	Pg	02 43 01.2	-0.4
KEK	Kerkira	1.21	286	P	Pg	02 43 01.8	+0.2
KEK	Kerkira	1.21	286	*e*Pb	Pg	02 43 01.2	-0.4
KEK	Kerkira	1.21	286	P	Pg	02 43 01.8	+0.2
RLS	Riolos of Patr	1.33	175	*e*PB	Pn	02 43 03.8	-0.3
RLS	Riolos of Patr	1.33	175	*e*Pb	Pn	02 43 03.8	-0.3
VLS	Valsamata	1.33	205	*e*PB	Pn	02 43 03.5	-0.6
VLS	Valsamata	1.33	205	P	Pg	02 43 03.2	-0.6
VLS	Valsamata	1.33	205	P	Pg	02 43 03.2	-0.6
VLS	Valsamata	1.33	205	*e*Pb	Pn

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
	111nm,0.8s						
PTEO	Sao Teotonio	0.68	94	ePg	Pg	03 15 31.0	+1.3
PTEO				eSg	Sg	03 15 40.0	+1.3
	222nm,0.8s						
PFVI	Vila Bisbo	0.76	127	ePg	Pg	03 15 30.8	-0.3
PFVI				eSg	Sg	03 15 39.7	-1.4
PFVI				A		03 15 41.2	
	146nm,0.2s						
PFVI	Vila Bisbo	0.76	127	Pg	Pg	03 15 30.7	-0.4
PFVI				Lg		03 15 39.6	
PFVI	Vila Bisbo	0.76	127	Pg	Pg	03 15 30.7	-0.4
	118nm,0.1s,SNR=7.9						
PFVI				Lg		03 15 39.6	
	588nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	0.76	127	Pg	Pg	03 15 30.7	-0.4
	118nm,0.1s,SNR=7.9						
PFVI				Lg		03 15 39.6	
	588nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	0.76	127	ePg	Pg	03 15 30.8	-0.3
PFVI				Lg		03 15 39.6	
	588nm,0.2s,SNR=7.9						
PFVI				eSg	Sg	03 15 39.7	-1.4
	146nm,0.2s						
MORF	Marmelete	0.80	111	ePg	Pg	03 15 32.3	+0.5
MORF				eSg	Sg	03 15 41.9	-0.3
MORF				A		03 15 43.7	
	285nm,0.1s						
MORF	Marmelete	0.80	111	Pg	Pg	03 15 32.3	+0.5
MORF				Lg		03 15 41.9	
	285nm,0.1s						
MORF	Marmelete	0.80	111	Pg	Pg	03 15 32.3	+0.5
MORF				Lg		03 15 41.9	
	285nm,0.1s						
MORF	Marmelete	0.80	111	ePg	Pg	03 15 32.3	+0.5
MORF				eSg	Sg	03 15 41.9	-0.3
	285nm,0.1s						
PCVE	Castro Verde	1.23	88	eP	Pg	03 15 41.4	+1.4
PCVE				eS	Sb	03 15 57.2	+1.6
PCVE				A		03 15 59.6	
	68nm,0.4s						
PCVE	Castro Verde	1.23	88	Pg	Pg	03 15 41.4	+1.4
PCVE				Lg		03 15 57.2	
	68nm,0.4s						
PCVE	Castro Verde	1.23	88	Pg	Pg	03 15 41.4	+1.4
PCVE				Lg		03 15 57.2	
	68nm,0.4s						
MOE	Montemor	1.34	46	eP	Pn	03 15 44.5	+3.2
MOE				eS	Sb	03 15 59.4	+0.5
PBDV	Barranco-do-Ve	1.36	105	eP	Pn	03 15 41.1	-0.4
PBDV				eS	Sb	03 15 59.1	-0.4
PBDV				A		03 16 02.4	
	56nm,0.3s						
PBDV	Barranco-do-Ve	1.36	105	Pg	Pn	03 15 41.1	-0.4
PBDV				Lg		03 15 59.1	
	56nm,0.3s						
PBDV	Barranco-do-Ve	1.36	105	Pg	Pn	03 15 41.1	-0.4
PBDV				Lg		03 15 59.1	
	56nm,0.3s						
PBDV	Barranco-do-Ve	1.36	105	eP	Pn	03 15 41.1	-0.4
PBEJ	Beja	1.43	72	eP	Pg	03 15 44.2	+0.4
PBEJ				eS	Sn	03 16 02.9	+1.7
PBEJ				A		03 16 08.4	
	23nm,0.2s						
PBEJ	Beja	1.43	72	Pg	Pg	03 15 44.2	+0.4
PBEJ				Lg		03 16 02.9	
	12nm,0.2s						
PBEJ	Beja	1.43	72	Pg	Pg	03 15 44.2	+0.4
PBEJ				Lg		03 16 02.9	
	12nm,0.2s						
PBEJ	Beja	1.43	72	eP	Pg	03 15 44.2	+0.4
EVOP	Sao Brissos	1.48	51	ePn	Pn	03 15 43.2	0.0
EVOP	Sao Brissos	1.48	51	ePg	Pg	03 15 46.3	+1.4
EVOP				eSg	Sg	03 16 06.6	+2.5
	14nm,0.2s						
PVAQ	Vaqueiros	1.50	97	ePn	Pn	03 15 43.0	-0.4
PVAQ	Vaqueiros	1.50	97	ePg	Pg	03 15 44.7	-0.5
PVAQ				eSg	Sg	03 16 04.8	+0.2
PVAQ				A		03 16 07.7	
	75nm,0.3s						
PVAQ	Vaqueiros	1.50	97	Pn	Pn	03 15 43.0	-0.4
PVAQ				Pg	Pg	03 15 44.7	-0.5
PVAQ				Lg		03 16 04.8	
	75nm,0.3s						
PVAQ	Vaqueiros	1.50	97	Pn	Pn	03 15 43.0	-0.4
PVAQ				Pg	Pg	03 15 44.7	-0.5
PVAQ				Lg		03 16 04.8	
	75nm,0.3s						
PVAQ	Vaqueiros	1.50	97	ePn	Pn	03 15 43.0	-0.4
PVAQ	Vaqueiros	1.50	97	ePg	Pg	03 15 44.7	-0.5
PVAQ				eSg	Sg	03 16 04.8	+0.2
	75nm,0.3s						
EVO	Evora	1.55	53	ePn	Pn	03 15 43.2	-0.9
EVO	Evora	1.55	53	ePg	Pg	03 15 46.3	+0.1
EVO				eSg	Sg	03 16 06.6	+0.2
	28nm,0.2s						
EVO	Evora	1.55	53	ePn	Pn	03 15 45.4	+1.3
EVO	Evora	1.55	53	ePg	Pg	03 15 47.6	+1.4
EVO				eSn	Sn	03 16 04.7	+0.4
EVO				A		03 16 14.8	
	31nm,0.1s						
EVO	Evora	1.55	53	Pn	Pn	03 15 45.4	+1.3
EVO				Pg	Pg	03 15 47.6	+1.4
EVO				Sn	Sn	03 16 04.7	+0.4
	31nm,0.1s						
EVO	Evora	1.55	53	Pn	Pn	03 15 45.4	+1.3
EVO				Pg	Pg	03 15 47.6	+1.4
EVO				Sn	Sn	03 16 04.7	+0.4
	31nm,0.1s						
EVO	Evora	1.55	53	ePn	Pn	03 15 45.4	+1.3
EGRO	El Granado	1.67	92	Pn	Pn	03 15 45.0	-0.8
EGRO				Pg	Pg	03 15 47.8	-0.7
EGRO				Sn	Sn	03 16 09.0	+1.8
EGRO				Lg		03 16 11.1	
EGRO	El Granado	1.67	92	Pn	Pn	03 15 45.0	-0.8
	0.1nm,0.1s,SNR=25						
EGRO				Pg	Pg	03 15 47.8	-0.7
	2.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	03 16 09.0	+1.8
	9.3nm,0.1s,SNR=11						
EGRO				Lg		03 16 11.1	
	58nm,0.2s,SNR=6.4						
EGRO	El Granado	1.67	92	Pn	Pn	03 15 45.0	-0.8
	0.1nm,0.1s,SNR=25						
EGRO				Pg	Pg	03 15 47.8	-0.7
	2.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	03 16 09.0	+1.8
	9.3nm,0.1s,SNR=11						
EGRO				Lg		03 16 11.1	
	58nm,0.2s,SNR=6.4						
EGRO	El Granado	1.67	92	Pn	Pn	03 15 45.0	-0.8
	0.1nm,0.1s,SNR=25						
EGRO	El Granado	1.67	92	Pg	Pg	03 15 47.8	-0.7
	2.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	03 16 09.0	+1.8
	9.3nm,0.1s,SNR=11						
EGRO				Lg		03 16 11.1	
	58nm,0.2s,SNR=6.4						
PESTR	Estremoz	2.02	50	ePn	Pn	03 15 51.9	+1.4
PESTR	Estremoz	2.02	50	ePg	Pg	03 15 57.5	+2.3
PESTR				eSg	Sg	03 16 23.8	+2.5
PESTR				A		03 16 28.6	
	8.9nm,0.3s						
PESTR	Estremoz	2.02	50	Pn	Pn	03 15 51.9	+1.4
PESTR				Pg	Pg	03 15 57.5	+2.3
PESTR				Lg		03 16 23.8	
	8.9nm,0.3s						
PESTR	Estremoz	2.02	50	Pn	Pn	03 15 51.9	+1.4
PESTR				Pg	Pg	03 15 57.5	+2.3
PESTR				Lg		03 16 23.8	
	8.9nm,0.3s						
PESTR	Estremoz	2.02	50	ePn	Pn	03 15 51.9	+1.4
PESTR	Estremoz	2.02	50	ePg	Pg	03 15 57.5	+2.3
PESTR				eSg	Sg	03 16 23.8	+2.5
	8.9nm,0.3s						
PBAR	Barrancos	2.09	73	ePn	Pn	03 15 51.5	-0.1
PBAR	Barrancos	2.09	73	ePg	Pg	03 15 56.4	-0.2
PBAR				eSg	Sg	03 16 24.0	+0.2
PBAR				A		03 16 28.1	
	21nm,0.5s						
PBAR	Barrancos	2.09	73	Pn	Pn	03 15 51.5	-0.1
PBAR				Pg	Pg	03 15 56.4	-0.2
PBAR				Lg		03 16 24.0	
	21nm,0.5s						
PBAR	Barrancos	2.09	73	Pn	Pn	03 15 51.5	-0.1
PBAR				Pg	Pg	03 15 56.4	-0.2
PBAR				Lg		03 16 24.0	
	21nm,0.5s						
PBAR	Barrancos	2.09	73	ePn	Pn	03 15 51.5	-0.1
PBAR	Barrancos	2.09	73	ePg	Pg	03 15 56.4	-0.2
PBAR				eSg	Sg	03 16 24.0	+0.2
	21nm,0.5s						
PTOM	Tomar	2.22	24	ePn	Pn	03 15 54.5	+1.2
PTOM				eSn	Sn	03 16 19.7	-1.0
PTOM				A		03 16 35.3	
	18nm,0.3s						
PTOM	Tomar	2.22	24	Pn	Pn	03 15 54.5	+1.2
PTOM				Sn	Sn	03 16 19.7	-1.0
	8.8nm,0.3s						
PTOM	Tomar	2.22	24	Pn	Pn	03 15 54.5	+1.2
PTOM				Sn	Sn	03 16 19.7	-1.0
	8.8nm,0.3s						
PTOM	Tomar	2.22	24	ePn	Pn	03 15 54.5	+1.2
PTOM				eSn	Sn	03 16 19.7	-1.0
	18nm,0.3s						
EMIN	Mina Concepcio	2.31	85	Pn	Pn	03 15 53.7	-0.9
EMIN				Sn	Sn	03 16 21.3	-1.8
EMIN				Lg		03 16 30.7	
EMIN	Mina Concepcio	2.31	85	Pn	Pn	03 15 53.7	-0.9
	1.0nm,0.1s,SNR=11						
EMIN				Sn	Sn	03 16 21.3	-1.8
	1.8nm,0.1s,SNR=6.4						
EMIN				Lg		03 16 30.7	
	7.3nm,0.1s,SNR=9.9						
EMIN	Mina Concepcio	2.31	85	Pn	Pn	03 15 53.7	-0.9
	1.0nm,0.1s,SNR=11						
EMIN				Sn	Sn	03 16 21.3	-1.8
	1.8nm,0.1s,SNR=6.4						
EMIN				Lg		03 16 30.7	
	7.3nm,0.1s,SNR=9.9						
EMIN	Mina Concepcio	2.31	85	Pn	Pn	03 15 53.7	-0.9
	1.0nm,0.1s,SNR=11						
EMIN				Sn	Sn	03 16 21.3	-1.9
	1.8nm,0.1s,SNR=6.4						
EMIN				Lg		03 16 30.7	
	7.3nm,0.1s,SNR=9.9						
EBAD	Badajoz	2.33	59	Pn	Pn	03 15 54.4	-0.5
EBAD				Pg	Pg	03 16 01.3	+0.1
EBAD				Sn	Sn	03 16 23.0	-0.6
EBAD				Lg		03 16 32.7	
EBAD	Badajoz	2.33	59	Pn	Pn	03 15 54.4	-0.5
	0.3nm,0.1s,SNR=13						
EBAD				Pg	Pg	03 16 01.3	+0.1
	2.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	03 16 23.0	-0.6
	14nm,0.2s,SNR=16						
EBAD				Lg		03 16 32.7	
	9.9nm,0.1s,SNR=7.0						
EBAD	Badajoz	2.33	59	Pn	Pn	03 15 54.4	-0.5
	0.3nm,0.1s,SNR=13						
EBAD				Pg	Pg	03 16 01.3	+0.1
	2.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	03 16 23.0	-0.6
	14nm,0.2s,SNR=16						
EBAD				Lg		03 16 32.7	
	9.9nm,0.1s,SNR=7.0						
EBAD	Badajoz	2.33	59	Pn	Pn	03 15 54.4	-0.5
	0.3nm,0.1s,SNR=13						
EBAD	Badajoz	2.33	59	Pg	Pg	03 16 01.3	+0.1
	SNR=7.9						
EBAD				Sn	Sn	03 16 23.0	-0.6
	14nm,0.2s,SNR=16						
EBAD				Lg		03 16 32.7	
	9.9nm,0.1s,SNR=7.0						
PMRV	Marv??o	2.51	43	ePn	Pn	03 15 58.0	+0.7
PMRV				eSn	Sn	03 16 26.6	-1.3
PMRV				A		03 16 44.7	
	5.7nm,0.3s						
PMRV	Marv??o	2.51	43	Pn	Pn	03 15 58.0	+0.7
PMRV				Sn	Sn	03 16 26.6	-1.3
	2.8nm,0.3s						
PMRV	Marv??o	2.51	43	Pn	Pn	03 15 58.0	+0.7
PMRV				Sn	Sn	03 16 26.6	-1.3
	2.8nm,0.3s						
PMRV	Marv??o	2.51	43	ePn	Pn	03 15 58.0	+0.7
PMRV				eSn	Sn	03 16 26.6	-1.3
	5.7nm,0.3s						
PCBR	Castelo Branco	2.78	36	ePn	Pn	03 16 02.2	+1.2
PCBR				eSn	Sn	03 16 34.0	-0.6
PCBR				A		03 16 51.8	
	3.9nm,0.5s						
PCBR	Castelo Branco	2.78	36	Pn	Pn	03 16 02.2	+1.2
PCBR				Sn	Sn	03 16 34.0	-0.6
	1.9nm,0.5s						
PCBR	Castelo Branco	2.78	36	Pn	Pn	03 16 02.2	+1.2
PCBR				Sn	Sn	03 16 34.0	-0.6
	1.9nm,0.5s						
PCBR	Castelo Branco	2.78	36	ePn	Pn	03 16 02.2	+1.2
PCBR				eSn	Sn	03 16 34.0	-0.6
	3.9nm,0.5s						
ESPR	Espera	3.06	103	Pn	Pn	03 16 04.3	-0.6
ESPR				Sn	Sn	03 16 39.9	-1.7
ESPR				Lg		03 16 54.9	
ESPR	Espera	3.06	103	Pn	Pn	03 16 04.3	-0.6
	0.5nm,0.1s,SNR=5.2						
ESPR				Sn	Sn	03 16 39.9	-1.7
	6.5nm,0.3s						
ESPR				Lg		03 16 54.9	
	8.8nm,0.2s,SNR=7.9						
ESPR	Espera	3.06	103	Pn	Pn	03 16 04.3	-0.6
	0.5nm,0.1s,SNR=5.2						
ESPR				Sn	Sn	03 16 39.9	-1.7
	6.5nm,0.3s						
ESPR				Lg		03 16 54.9	
	8.8nm,0.2s,SNR=7.9						
ESPR	Espera	3.06	103	Pn	Pn	03 16 04.3	-0.6
	0.5nm,0.1s,SNR=5.2						
ESPR				Sn	Sn	03 16 39.9	-1.7
	6.5nm,0.3s						
ESPR				Lg		03 16 54.9	
	8.8nm,0.2s,SNR=7.9						
MTE	Manteigas	3.22	29	ePn	Pn	03 16 08.4	+1.4
MTE				eSn	Sn	03 16 44.5	-0.9
MTE				A		03 17 12.2	
	8.4nm,0.6s						
MTE	Manteigas	3.22	29	ePn	Pn	03 16 08.3	+1.3
MTE				eSg	Sg	03 17 04.9	+5.1
MTE	Manteigas	3.22	29	ePn	Pn	03 16 08.3	+1.3
MTE				eSn	Sn	03 16 44.5	-0.9
	8.4nm,0.6s						
MTE				eSg	Sg	03 17 04.9	+5.1
PVIS	Viseu	3.38	22	ePn	Pn	03 16 10.2	+0.9
PVIS				eSn	Sn	03 16 47.7	-1.7
PVIS				A		03 16 49.6	
	4.6nm,0.1s						
PVIS	Viseu	3.38	22	Pn	Pn	03 16 10.2	+0.9
PVIS				Sn	Sn	03 16 47.7	-1.7
	2.3nm,0.1s						
PVIS	Viseu	3.38	22	Pn	Pn	03 16 10.2	+0.9
PVIS				Sn	Sn	03 16 47.7	-1.7
	2.3nm,0.1s						
PVIS	Viseu	3.38	22	ePn	Pn	03 16 10.2	+0.9
PVIS				eSn	Sn	03 16 47.7	-1.7
	4.6nm,0.1s						
PVRL	Vila Real	3.95	21	eSn	Sn	03 17 02.2	-1.2
PVRL				A		03 17 03.1	
	7.7nm,0.3s						
PVRL	Vila Real	3.95	21	Sn	Sn	03 17 02.2	-1.2
	3.8nm,0.3s						
PVRL	Vila Real	3.95	21	Sn	Sn	03 17 02.2	-1.2
	3.8nm,0.3s						
PVRL	Vila Real	3.95	21	eSn	Sn	03 17 02.2	-1.2
	7.7nm,0.3s						
EADA	Adamuz	4.00	80	Pn	Pn	03 16 17.0	-0.8
EADA				Sn	Sn	03 17 01.3	-3.5
EADA				Lg		03 17 24.4	
EADA	Adamuz	4.00	80	Pn	Pn	03 16 17.0	-0.8
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	03 17 01.3	-3.5
	1.8nm,0.3s,SNR=7.9						
EADA				Lg		03 17 24.4	
	6.0nm,0.4s,SNR=7.9						
EADA	Adamuz	4.00	80	Pn	Pn	03 16 17.0	-0.8
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	03 17 01.3	-3.5
	1.8nm,0.3s,SNR=7.9						
EADA				Lg		03 17 24.4	
	6.0nm,0.4s,SNR=7.9						
EADA	Adamuz	4.00	80	Pn	Pn	03 16 17.0	-0.8
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	03 17 01.3	-3.4
	1.8nm,0.3s,SNR=7.9						
EADA				Lg		03 17 24.4	
	6.0nm,0.4s,SNR=7.9						
MVO	Moncorvo	4.08	28	ePn	Pn	03 16 19.6	+0.8
MVO				eSn	Sn	03 17 04.3	-2.3
MVO				A		03 17 05.8	
	3.0nm,0.4s						
MVO	Moncorvo	4.08	28	Pn	Pn	03 16 19.2	+0.4
MVO				Sn	Sn	03 17 03.9	-2.7
MVO	Moncorvo	4.08	28	Pn	Pn	03 16 19.2	+0.4
	0.5nm,0.1s,SNR=7.9						
MVO				Sn	Sn	03 17 03.8	-2.7
	2.6nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.08	28	Pn	Pn	03 16 19.2	+0.4
	0.5nm,0.1s,SNR=7.9						
MVO				Sn	Sn	03 17 03.8	-2.7
	2.6nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.08	28	ePn	Pn	03 16 19.6	+0.8
MVO				Sn	Sn	03 17 03.8	-2.8
	2.6nm,0.2s,SNR=7.9						
PCAB	Cabril	4.28	16	ePn	Pn	03 16 22.8	+1.2
PCAB				eSn	Sn	03 17 08.6	-3.0
PCAB				A		03 17 10.1	
	5.3nm,0.7s						
PCAB	Cabril	4.28	16	Pn	Pn	03 16 22.8	+1.2
PCAB				Sn	Sn	03 17 08.6	-3.0
	2.7nm,0.7s						
PCAB	Cabril	4.28	16	Pn	Pn	03 16 22.8	+1.2
PCAB				Sn	Sn	03 17 08.6	-3.0
	2.7nm,0.7s						
PCAB	Cabril	4.28	16	ePn	Pn	03 16 22.8	+1.2
ELOB	Lobios	4.42	15	Pn	Pn	03 16 25.1	+1.5
ELOB				Sn	Sn	03 17 11.7	-3.4
ELOB	Lobios	4.42	15	Pn	Pn	03 16 25.1	+1.5
	0.1nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	03 17 11.7	-3.4
	0.9nm,0.1s,SNR=5.8						
ELOB	Lobios	4.42	15	Pn	Pn	03 16 25.1	+1.5
	0.1nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	03 17 11.7	-3.4
	0.9nm,0.1s,SNR=5.8						
ELOB	Lobios	4.42	15	Pn	Pn	03 16 25.1	+1.5
	0.1nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	03 17 11.7	-3.4
	0.9nm,0.1s,SNR=5.8						
PAB	San Pablo	4.54	63	Pn	Pn	03 16 26.8	+1.6
PAB				eSg	Sg	03 17 45.9	+3.7
PAB	San Pablo	4.54	63	Pn	Pn	03 16 26.8	+1.6
PAB				eSg	Sg	03 17 45.9	+3.7
EBAN	Banos Encina	4.62	81	Pn	Pn	03 16 25.5	-0.8
EBAN	Banos Encina	4.62	81	Pn	Pn	03 16 25.5	-0.8
PBRG	Braganca	4.74	27	eSn	Sn	03 17 21.1	-1.8
PBRG	Braganca	4.74	27	Sn	Sn	03 17 21.1	-1.8
PBRG	Braganca	4.74	27	Sn	Sn	03 17 21.1	-1.8
PBRG	Braganca	4.74	27	eSn	Sn	03 17 21.1	-1.8
ECAL	Calabor	4.86	26	Pn	Pn	03 16 30.4	+0.7
ECAL				Sn	Sn	03 17 23.5	-2.4
ECAL	Calabor	4.86	26	Pn	Pn	03 16 30.4	+0.7
	0.5nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	03 17 23.5	-2.4
	2.0nm,0.2s,SNR=7.9						
ECAL	Calabor	4.86	26	Pn	Pn	03 16 30.4	+0.7
	0.5nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	03 17 23.5	-2.4
	2.0nm,0.2s,SNR=7.9						
ECAL	Calabor	4.86	26	Pn	Pn	03 16 30.4	+0.8
	0.5nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	03 17 23.5	-2.4
	2.0nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	4.86	63	Pn	Pn	03 16 29.1	-0.6
ESDC				Sn	Sn	03 17 22.9	-3.1
ESDC				Lg		03 17 52.5	
ESDC	Sonseca Array	4.86	63	Sn	Sn	03 17 23.0	-3.1
	0.9nm,0.2s,baz=246,slow=23,SNR=4.8						
ESDC				Lg		03 17 52.5	
	2.4nm,0.5s,baz=247,slow=29,SNR=4.5						
ESDC	Sonseca Array	4.86	63	Sn	Sn	03 17 23.0	-3.1
	0.9nm,0.2s,baz=246,slow=23,SNR=4.8						
ESDC				Lg		03 17 52.5	
	2.4nm,0.5s,baz=247,slow=29,SNR=4.5						
ESDC	Sonseca Array	4.86	63	Pn	Pn	03 16 29.1	-0.6
ESDC				Sn	Sn	03 17 23.0	-3.0
	0.9nm,0.2s,baz=246,slow=23,SNR=4.8						
ESDC				Lg		03 17 52.5	
	2.4nm,0.5s,baz=247,SNR=4.5						
EQES	Quesada	5.17	86	Pn	Pn	03 16 32.9	-1.0
EQES				Sn	Sn	03 17 30.7	-2.8
EQES				Lg		03 18 02.5	
EQES	Quesada	5.17	86	Pn	Pn	03 16 32.9	-1.0
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	03 17 30.7	-2.8
	0.8nm,0.3s,SNR=7.9						
EQES				Lg		03 18 02.5	
	0.9nm,0.3s,SNR=7.9						
EQES	Quesada	5.17	86	Pn	Pn	03 16 32.9	-1.0
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	03 17 30.7	-2.8
	0.8nm,0.3s,SNR=7.9						
EQES				Lg		03 18 02.5	
	0.9nm,0.3s,SNR=7.9						
EQES	Quesada	5.17	86	Pn	Pn	03 16 32.9	-1.0
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	Sn	03 17 30.7	-2.8
	0.8nm,0.3s,SNR=7.9						
EQES				Lg		03 18 02.5	
	0.9nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.20	53	Sn	Sn	03 17 32.0	-2.4
	1.3nm,0.4s,SNR=7.9						
GUD				Lg		03 18 05.4	
	1.0nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.20	53	Sn	Sn	03 17 32.0	-2.4
	1.3nm,0.4s,SNR=7.9						
GUD				Lg		03 18 05.4	
	1.0nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.20	53	Sn	Sn	03 17 32.0	-2.4
	1.3nm,0.4s,SNR=7.9						
GUD				Lg		03 18 05.4	
	1.0nm,0.3s,SNR=7.9						
ETOB	Tobarra	6.42	78	Lg		03 18 42.0	
	1.1nm,0.5s,SNR=4.0						
ETOB	Tobarra	6.42	78	Lg		03 18 42.0	
	1.1nm,0.5s,SNR=4.0						
ETOR	Torete	6.67	59	Pn	Pn	03 16 54.6	+0.1
ETOR				Sn	Sn	03 18 05.9	-4.7
ETOR	Torete	6.67	59	Pn	Pn	03 16 54.6	+0.1
	1.6nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	03 18 05.9	-4.7
	1.2nm,0.2s,SNR=7.9						
ETOR	Torete	6.67	59	Pn	Pn	03 16 54.6	+0.1
	1.6nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	03 18 05.9	-4.7
	1.2nm,0.2s,SNR=7.9						
ETOR	Torete	6.67	59	Pn	Pn	03 16 54.6	+0.1
	1.6nm,0.2s,SNR=7.9						

DDA ***29*** *03:21:41.0, 38°.41N×35°.03E, h6km±3km, Md3.2*
ISK ***29*** *03:21:41.2, 38°.41N×35°.07E, h2km, MD3.6*
ISCJB ***29*** *03:21:42.8±0.3, 38°.45N±0°.02×35°.07E±0°.02, h10km, Error ellipse: s-maj=2.7km s-min=2.5km az=172.7*
CSEM ***29*** *03:21:42.6±0.1, 38°.41N×35°.07E, h2km, MD3.2, Error ellipse: s-maj=4.0km s-min=3.9km az=10.0*
ISC 29 03:21:43.5±0.2, 38°.42N±0°.02×35°.06E±0°.02, h10km, n90, σ1§12/119, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIG	Nigde	0.47	229	ePG	Pg	03 21 51.3	-1.3
NIG				eSG	Sg	03 21 58.2	-0.6
NIG	Nigde	0.47	229	ePg	Pg	03 21 51.3	-1.4
NIG				eSg	Sg	03 21 58.3	-0.6
BSTP	Nigde	0.88	238	iP	Pg	03 22 01.0	+0.5
BSTP				iS	Sg	03 22 14.8	+2.8
PINB	Pinarbasi	1.08	76	iP	Pg	03 22 01.4	-2.8
PINB				iS	Sg	03 22 19.0	+0.7
PINB	Pinarbasi	1.08	76	iP	Pg	03 22 01.4	-2.9
PINB				iS	Sg	03 22 19.0	+0.6
KOZT	Kozan	1.12	147	ePN	Pn	03 22 02.6	-2.4
GULE	Gulek	1.16	191	iP	Pb	03 22 03.0	-2.6
GULE				iS	Sb	03 22 21.7	+1.1
GULE	Gulek	1.16	191	iP	Pb	03 22 03.0	-2.6
GULE				iS	Sb	03 22 21.7	+1.1
KARA	Karaisali	1.16	180	ePN	Pn	03 22 03.0	-2.7
KARA				eSN	Sn	03 22 20.6	-1.1
KARA	Karaisali	1.16	180	ePn	Pn	03 22 03.0	-2.7
KARA				eSn	Sn	03 22 20.6	-1.0

YOZ	Yozgat	1.23	9	ePN	Pn	03 22 05.0	-1.7
YOZ	Yozgat	1.23	9	ePn	Pn	03 22 05.0	-1.7
SULT	Sultanhani-AKS	1.23	260	ePN	Pn	03 22 05.7	-1.1
SULT	Sultanhani-AKS	1.23	260	ePn	Pn	03 22 05.7	-1.0
SARI	SarD1z-Kayseri	1.31	78	ePG	Pn	03 22 02.0	-5.8
SARI				eSG	Sn	03 22 17.8	-7.5
CDAG	Cicekdag	1.31	336	i P	Pn	03 22 06.5	-1.3
CDAG				i S	Sb	03 22 24.2	-0.9
CDAG	Cicekdag	1.31	336	i P	Pn	03 22 06.5	-1.3
CDAG				i S	Sb	03 22 24.2	-0.9
ANDN	Andirin	1.32	129	i P	Pn	03 22 06.1	-1.8
ANDN				i S	Sb	03 22 24.6	-0.7
ANDN	Andirin	1.32	129	i P	Pn	03 22 06.1	-1.8
ANDN				i S	Sb	03 22 24.6	-0.7
CEYT	Ceyhan	1.51	159	ePN	Pn	03 22 10.1	-0.5
CEYT	Ceyhan	1.51	159	ePn	Pn	03 22 10.1	-0.5
MERS	Mersin	1.61	196	ePN	Pn	03 22 11.2	-0.7
MERS	Mersin	1.61	196	ePn	Pn	03 22 11.2	-0.7
YURE	YUREGIR	1.66	164	i P	Pn	03 22 12.8	+0.2
YURE				i S	Sg	03 22 41.5	+4.8
YURE	YUREGIR	1.66	164	i P	Pn	03 22 12.8	+0.2
YURE				i S	Sg	03 22 41.5	+4.7
KMRS	Kahramanmaras	1.72	122	ePN	Pn	03 22 13.1	-0.4
KMRS	Kahramanmaras	1.72	122	ePn	Pn	03 22 13.1	-0.3
CORM	Corum	1.78	349	ePN	Pn	03 22 14.4	+0.1
CORM	Corum	1.78	349	ePn	Pn	03 22 14.4	+0.1
KRTS	Karatas	1.86	172	ePN	Pn	03 22 15.2	-0.2
KRTS	Karatas	1.86	172	ePn	Pn	03 22 15.2	-0.2
BBAL	Bala	1.88	307	i P	Pn	03 22 15.7	+0.1
BBAL				i S	Sg	03 22 42.8	-1.1
BBAL	Bala	1.88	307	i P	Pn	03 22 15.7	+0.1
BBAL				i S	Sg	03 22 42.8	-1.0
SVSK	Karacayir	2.12	45	ePN	Pn	03 22 18.9	0.0
SVSK	Karacayir	2.12	45	ePn	Pn	03 22 18.9	0.0
COBT	Iskenderun	2.13	153	i P	Pn	03 22 19.8	+0.8
COBT				i S	Sg	03 22 50.1	-1.7
COBT	Iskenderun	2.13	153	i P	Pn	03 22 19.8	+0.8
COBT				i S	Sg	03 22 50.1	-1.7
LADK	Ladik-KONYA	2.13	265	ePN	Pn	03 22 19.2	+0.1
LADK	Ladik-KONYA	2.13	265	ePn	Pn	03 22 19.2	+0.1
KONT	Konya--Tatoy	2.18	258	ePN	Pn	03 22 19.9	+0.2
KONT	Konya--Tatoy	2.18	258	ePn	Pn	03 22 19.9	+0.2
TOKA	Tokat	2.19	30	i P	Pn	03 22 21.1	+1.2
TOKA				i S	Sg	03 22 53.2	-0.7
TOKA	Tokat	2.19	30	i P	Pn	03 22 21.1	+1.2
CTKT	Corum	2.21	355	i P	Pn	03 22 22.8	+2.7
CTKT				i S	Sg	03 22 52.8	-1.5
CTKT	Corum	2.21	355	i P	Pn	03 22 22.8	+2.7
DARE	Darende-Malaty	2.21	75	ePN	Pn	03 22 15.9	-4.3
DARE	Darende-Malaty	2.21	75	ePn	Pn	03 22 15.9	-4.3
TOKT	Tokat	2.22	31	ePN	Pn	03 22 20.3	+0.1
TOKT	Tokat	2.22	31	ePn	Pn	03 22 20.3	0.0
GZT	Gaziantep	2.25	118	eP	Pn	03 22 22.1	+1.4
GZT				i S	Sg	03 23 00.0	+4.2
AKCD	Akcadag	2.25	92	i P	Pn	03 22 22.9	+2.1
AKCD				i S	Sn	03 22 52.9	+4.3
AKCD	Akcadag	2.25	92	i P	Pn	03 22 22.9	+2.1
KUZU	Kuzuini	2.30	135	i P	Pn	03 22 21.5	+0.2
KUZU				i S	Sg	03 22 57.6	+0.4
KUZU	Kuzuini	2.30	135	i P	Pn	03 22 21.5	+0.1
LOD	Lodumlu	2.31	310	ePN	Pn	03 22 21.8	+0.3
LOD	Lodumlu	2.31	310	ePn	Pn	03 22 21.8	+0.3
IKL	Isikli	2.44	207	ePN	Pn	03 22 23.5	+0.2
IKL	Isikli	2.44	207	ePn	Pn	03 22 23.5	+0.2
CANT	Cankiri	2.45	333	ePN	Pn	03 22 23.8	+0.4
HTY	Hatay	2.45	159	ePN	Pn	03 22 23.6	+0.1
HTY	Hatay	2.45	159	ePn	Pn	03 22 23.7	+0.2
HDMB	Hadim	2.51	235	ePN	Pn	03 22 24.6	+0.3
HDMB	Hadim	2.51	235	ePn	Pn	03 22 24.6	+0.3
YAYL	Yayladag	2.53	160	i P	Pn	03 22 24.7	+0.2
YAYL				i S	Sn	03 22 58.6	+3.3
YAYL	Yayladag	2.53	160	i P	Pn	03 22 24.7	+0.2
KIZT	Kizilcal	2.53	281	ePN	Pn	03 22 25.0	+0.4
KIZT	Kizilcal	2.53	281	ePn	Pn	03 22 25.0	+0.4
ERBA	Erbaa	2.61	30	eP	Pn	03 22 27.7	+2.0
ERBA				i S	Sg	03 23 07.2	0.0
ERBA	Erbaa	2.61	30	eP	Pn	03 22 27.7	+2.1
MYA	Malataya	2.65	91	ePN	Pn	03 22 26.3	+0.1
MYA	Malataya	2.65	91	ePn	Pn	03 22 26.3	+0.1
TOS	Tosya	2.73	343	ePN	Pn	03 22 27.7	+0.4
TOS	Tosya	2.73	343	ePn	Pn	03 22 27.7	+0.4
ATAB	Bozova	2.73	109	i P	Pn	03 22 32.4	+5.1
ATAB				i S	Sg	03 23 10.9	-0.2
KEMA	Kemaliye	2.81	71	i P	Pn	03 22 33.0	+4.5
SVRH	Sivrihisar-ESK	2.94	291	ePN	Pn	03 22 30.8	+0.6
SVRH	Sivrihisar-ESK	2.94	291	ePn	Pn	03 22 30.8	+0.6
GAZI	Gazipasa	3.09	226	i P	Pn	03 22 34.9	+2.6
GAZI				i S	Sn	03 23 17.8	+8.5
GAZI	Gazipasa	3.09	226	i P	Pn	03 22 34.9	+2.6
URFA	Urfa	3.13	107	ePN	Pn	03 22 33.2	+0.4
URFA	Urfa	3.13	107	ePn	Pn	03 22 33.2	+0.4
SVRC	Sivrice-ELAZID	3.34	89	ePN	Pn	03 22 36.1	+0.5
SVRC	Sivrice-ELAZID	3.34	89	ePn	Pn	03 22 36.2	+0.5
SUTC	Sutluce-Ispart	3.34	255	ePN	Pn	03 22 36.6	+0.8
SUTC	Sutluce-Ispart	3.34	255	ePn	Pn	03 22 36.6	+0.8
LFK	Lefkose	3.37	202	ePN	Pn	03 22 36.7	+0.6
LFK	Lefkose	3.37	202	ePn	Pn	03 22 36.7	+0.6
PTK	Pertek	3.42	81	ePN	Pn	03 22 37.4	+0.5
PTK	Pertek	3.42	81	ePn	Pn	03 22 37.4	+0.5
EZC	Erzincan	3.59	67	ePN	Pn	03 22 39.9	+0.7

*ISCJB **29** 03:23:30.0±0.4, 37°.87N±0°.02×27°.57E±0°.03, h6km±4km, Error ellipse: s-maj=4.3km s-min=3.1km az=153.6*
*ISK **29** 03:23:29.8, 37°.86N×27°.51E, h20km, MD3.0*
*DDA **29** 03:23:30.3, 37°.86N×27°.54E, h7km±3km, Md2.8*
*CSEM **29** 03:23:30.3±0.1, 37°.85N×27°.56E, h12km, MD2.8, Error ellipse: s-maj=3.9km s-min=2.8km az=75.0*

ISC 29 03:23:30.5±0.4, 37°.86N±0°.02×27°.56E±0°.03, h10km±4km, n38, σ0s.86/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.30	239	i P	Pg	03 23 36.5	0.0
GCAM				i S	Sg	03 23 40.4	-0.2
GCAM	G?zelcaml?	0.30	239	i P	Pg	03 23 36.5	-0.1
GCAM				i S	Sg	03 23 40.4	-0.3
AYDN	Tasoluk	0.32	128	i P	Pg	03 23 37.4	+0.5
AYDN				i S	Sg	03 23 41.9	+0.7
AYDN	Tasoluk	0.32	128	i P	Pg	03 23 37.4	+0.6
AYDN				i S	Sg	03 23 41.9	+0.8
IZM	Izmir	0.59	336	ePG	Pg	03 23 41.9	0.0
IZM				eSG	Sg	03 23 50.5	+1.0
MLSB	Milas	0.59	163	ePG	Pg	03 23 42.0	+0.1
MLSB				eSG	Sg	03 23 51.1	+1.5
MLSB	Milas	0.59	163	ePg	Pg	03 23 42.0	+0.1
MLSB				eSg	Sg	03 23 51.1	+1.5
BLCB	Balcova	0.67	322	ePG	Pg	03 23 43.1	-0.3
BLCB				eSG	Sg	03 23 51.7	-0.4
BDRM	Kayabasi	0.80	187	i P	Pg	03 23 45.2	-0.6
BDRM	Kayabasi	0.80	187	i P	Pg	03 23 45.2	-0.7
URLA	Izmir	0.91	304	i P	Pg	03 23 48.1	+0.1
URLA				i S	Sg	03 24 00.3	+0.4
URLA	Izmir	0.91	304	i P	Pg	03 23 48.1	+0.1
URLA				i S	Sg	03 24 00.3	+0.4
YER	Yerkesik	0.92	141	ePG	Pg	03 23 48.4	+0.2
YER	Yerkesik	0.92	141	ePg	Pg	03 23 48.4	+0.2
MANT	Manisa	1.01	51	i P	Pg	03 23 49.6	-0.3
MANT				i S	Sg	03 24 02.1	-0.9
MANT	Manisa	1.01	51	i P	Pg	03 23 49.6	-0.2
MANT				i S	Sg	03 24 02.1	-0.8
AKHS	Akhisar	1.04	11	i P	Pg	03 23 50.2	-0.2
AKHS				i S	Sg	03 24 04.0	+0.1
AKHS	Akhisar	1.04	11	i P	Pg	03 23 50.2	-0.2
AKHS				i S	Sg	03 24 04.0	+0.1
AKS	Akhisar	1.04	11	ePG	Pg	03 23 50.2	-0.2
AKS	Akhisar	1.04	11	ePg	Pg	03 23 50.2	-0.2
KULA	Kula-Manisa	1.08	53	ePN	Pg	03 23 50.9	-0.4
KULA	Kula-Manisa	1.08	53	ePn	Pg	03 23 50.9	-0.4
DAT	Datca	1.13	179	ePN	Pg	03 23 51.1	-1.1
DAT	Datca	1.13	179	ePn	Pg	03 23 51.1	-1.0
DENT	Denizli	1.17	95	ePN	Pn	03 23 52.1	-0.8
DENT	Denizli	1.17	95	ePn	Pn	03 23 52.1	-0.7
DNZL	Cakiroluk	1.19	98	i P	Pb	03 23 53.1	+0.1
DNZL				i S	Sb	03 24 11.9	+3.5
DNZL	Cakiroluk	1.19	98	i P	Pb	03 23 53.2	+0.2
TURN	Turunc	1.29	140	i P	Pn	03 23 52.9	-1.5
TURN				i S	Sb	03 24 11.0	-0.3
TURN	Turunc	1.29	140	i P	Pn	03 23 52.9	-1.6
TURN				i S	Sb	03 24 11.0	-0.3
DEMI	Demirci	1.49	37	i P	Pn	03 23 58.9	+1.7
DEMI				i S	Sn	03 24 16.2	-0.5
DEMI	Demirci	1.49	37	i P	Pn	03 23 58.9	+1.7
DEMI				i S	Sn	03 24 16.2	-0.5
AYVA	Ayvalik	1.60	335	i P	Pn	03 23 59.4	+0.6
AYVA				i S	Sn	03 24 21.2	+1.8
AYVA	Ayvalik	1.60	335	i P	Pn	03 23 59.3	+0.5
KHAL	Karahalli	1.60	71	i P	Pn	03 23 58.5	-0.3
KHAL				i S	Sn	03 24 22.3	+2.8
KHL	Karahalli	1.61	73	ePN	Pn	03 23 58.2	-0.7
KHL	Karahalli	1.61	73	ePn	Pn	03 23 58.2	-0.8
BALY	Balya	1.88	1	eP	Pn	03 24 02.0	-0.6
BALY				i S	Sn	03 24 25.2	-1.1

*NEIC **29** 03:25:09.5, 17°.00N×100°.34W, h8km, MD3.5(MEX), After MEX.*

MEX 29 03:25:09.5±0.8, 17°.00N×100°.34W, h8km±9km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.09	55	i P	Pg	03 25 11.4	-0.2
CAIG				i S	Sg	03 25 12.4	-0.8
CAIG	El Cayaco	0.09	55	i P	Pg	03 25 11.4	-0.2
CAIG				i S	Sg	03 25 12.4	-0.8
ACX	Acapulco	0.43	108	eP	Pg	03 25 16.6	-1.2
ACX				i S	Sg	03 25 23.9	+0.5
ACX	Acapulco	0.43	108	eP	Pg	03 25 16.6	-1.2
ACX				i S	Sg	03 25 23.9	+0.5
ZIIG	Zihuatanejo	1.23	300	eP	Pn	03 25 29.1	-3.9
ZIIG				i S	Sb	03 25 44.6	-4.6
ZIIG	Zihuatanejo	1.23	300	eP	Pn	03 25 29.1	-3.9
ZIIG				i S	Sb	03 25 44.6	-4.6
PNIG	Pinotepa	2.21	106	eP	Pn	03 25 44.5	-1.9
PNIG				i S	Sn	03 26 08.0	-5.8
PNIG	Pinotepa	2.21	106	eP	Pn	03 25 44.5	-1.9
PNIG				i S	Sn	03 26 08.0	-5.8
IIO	Organos	3.00	31	eP	Pn	03 25 54.7	-2.7
IIO				i S	Sn	03 26 30.8	-2.7
IIO	Organos	3.00	31	eP	Pn	03 25 54.7	-2.7
IIO				i S	Sn	03 26 30.8	-2.7
HUIG	Huatulco	4.24	106	eP	Pn	03 26 17.5	+3.0
HUIG				i S	Sn	03 27 08.6	+4.4
HUIG	Huatulco	4.24	106	eP	Pn	03 26 17.5	+3.0
HUIG				i S	Sn	03 27 08.6	+4.4

MEX 29 03:59:10.0±0.6, 13°.66N×92°.65W, h27km±26km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.29	17	i P	Pn	03 59 29.7	-2.6
THIG				i S	Sn	03 59 45.5	-3.3
PCIG		2.10	345	i P	Pn	03 59 41.3	-2.2
PCIG				i S	Sn	04 00 06.1	-2.6
CCIG	Comitan	2.65	11	i P	Pn	03 59 50.3	-0.7
CCIG				i S	Sn	04 00 19.3	-3.0
TGIG		3.13	352	i P	Pn	03 59 55.5	-2.1
TGIG				i S	Sn	04 00 30.9	-3.2
VHO	Vista Hermosa	5.20	311	eP	Pn	04 00 29.6	+3.7
VHO				i S	Sn	04 01 29.4	+4.3

*ISCJB **29** 04:02:19.6±0.3, 24°.57N±0°.02×122°.76E±0°.02, h99km±3km, mb3.7/4, Error ellipse: s-maj=3.7km s-min=2.4km az=163.8*
*IDC **29** 04:02:19.3±6.8, 24°.33N×123°.06E, h124km±40km, mb3.4/4, mb1 3.7/6, mb1mx3.3/25, mbtmp3.6/6, Error ellipse: s-maj=93.9km s-min=30.6km az=176.0*
*NEIC **29** 04:02:20.0±0.8, 24°.50N×122°.93E, h35km, MG3.6(JMA), Error ellipse: s-maj=20.0km s-min=8.9km az=152.0*
*JMA **29** 04:02:20.6±0.1, 24°.75N×122°.79E, h91km±2km, M3.6*
*TAP **29** 04:02:20.3, 24°.61N×122°.71E, h103km, ML4.5, C*

ISC 29 04:02:20.2±0.3, 24°.58N±0°.02×122°.76E±0°.02, h98km±3km, n84, σ0s.85/155, mb3.7/4, 1C-17D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.26	117	P	Pn	04 02 34.5	+0.2
YOJ				S	Sn	04 02 44.9	0.0
TWB1	Santiao Chiao	0.82	302	i P	Pn	04 02 38.7	+0.2
TWB1				S	Sn	04 02 51.5	-0.8
TWC	Suao	0.83	272	i P	Pn	04 02 38.6	0.0
TWC				S	Sn	04 02 51.6	-0.9
IRIF	Iriomote-Funau	0.92	105	P	Pn	04 02 39.9	+0.4
IRIF				S	Sn	04 02 54.9	+0.8
ILA	Ilan	0.94	282	P	Pn	04 02 40.0	+0.3
ILA				eS	Sn	04 02 54.0	-0.5
ENA	Nanau	0.94	261	eP	Pn	04 02 39.7	0.0
ENA				eS	Sn	04 02 54.0	-0.5
TWE	Neicheng	1.00	278	i P	Pn	04 02 40.7	+0.3
TWE				eS	Sn	04 02 54.8	-1.0
NWF	Wu-fen Shan	1.01	299	i P	Pn	04 02 41.2	+0.6
NWF				S	Sn	04 02 55.9	0.0
ENTT	Nioudou	1.09	273	P	Pn	04 02 41.8	+0.4
ENTT				eS	Sn	04 02 56.9	-0.5
HATJ	Hateruma jima	1.09	118	P	Pn	04 02 42.5	+1.1
HATJ				S	Sn	04 02 58.2	+0.8
NACB	Ninganchiao	1.14	249	ePg	Pn	04 02 41.3	-0.7
NACB				eS	Sn	04 02 53.3	-5.0
TWA	Mucha	1.14	291	i P	Pn	04 02 42.3	+0.3
TWA				i S	Sn	04 02 57.7	-0.8
TWD	Chiawan	1.17	245	i P	Pn	04 02 42.1	-0.2
TWD				eS	Sn	04 02 58.4	-0.7
JKRS	Kuro-shima	1.19	106	P	Pn	04 02 43.5	+0.9
JKRS				S	Sn	04 03 00.1	+0.6
HWA	Hwalien	1.21	241	i P	Pn	04 02 42.9	0.0
HWA				S	Sn	04 02 59.4	-0.5
TAP1	Taipei	1.21	292	eP	Pn	04 02 43.5	+0.7
TAP1				eS	Sn	04 02 59.3	-0.6
PCYT	Pengchaiyu	1.22	329	i P	Pn	04 02 43.4	+0.5
PCYT				eS	Sn	04 03 00.3	+0.3
TATO	Taipei	1.22	289	ePg	Pn	04 02 42.8	-0.1
TATO				eS	Sn	04 02 58.8	-1.3
TWY	Chenhua	1.26	304	i P	Pn	04 02 43.9	+0.5
TWY				S	Sn	04 03 00.9	-0.1
NNS	Nan Shan	1.27	264	i P	Pn	04 02 43.7	+0.2
NNS				S	Sn	04 03 00.8	-0.3
NSK	Sanguang	1.28	275	i P	Pn	04 02 44.2	+0.6
NSK				eS	Sn	04 03 00.9	-0.4
JIJ	Ishigaki jima	1.28	99	P	Pn	04 02 43.8	+0.2
JIJ				S	Sn	04 03 00.8	-0.6
TWS1	Kuangyinshan	1.32	293	P	Pn	04 02 44.3	+0.1
TWS1				S	Sn	04 03 02.1	-0.2
TEGC	Jichi Village	1.41	232	P	Pn	04 02 45.3	+0.1
TEGC				eS	Sn	04 03 03.6	-0.6
WHF	Hehuan Shan	1.43	253	i P	Pn	04 02 46.0	+0.5
WHF				i S	Sn	04 03 04.3	-0.2
ESL	Shilin	1.43	238	i P	Pn	04 02 45.0	-0.4
ESL				S	Sn	04 03 03.6	-1.0
TWT	Tachien	1.48	258	i P	Pn	04 02 47.1	+1.0
TWT				S	Sn	04 03 05.4	-0.2
NCU	National Centr	1.48	286	eP	Pn	04 02 46.7	+0.6
NCU				eS	Sn	04 03 05.9	+0.2
NSTT	Nanjuang	1.60	272	i P	Pn	04 02 47.9	+0.4
NSTT				S	Sn	04 03 07.9	-0.4
HSN	Hsinchu	1.64	278	eP	Pn	04 02 47.9	-0.2
HSN				eS	Sn	04 03 08.8	-0.5
EHY	Hungye	1.69	231	i P	Pn	04 02 48.2	-0.5
EHY				eS	Sn	04 03 09.3	-1.1
JTJ	Tarama	1.77	88	P	Pn	04 02 50.2	+0.5
JTJ				eS	Sn	04 03 11.4	-0.8
YULB	Yu-li	1.78	229	ePn	Pn	04 02 49.3	-0.5
TWF1	Yuli	1.81	228	i P	Pn	04 02 50.0	-0.2
TWF1				eS	Sn	04 03 11.9	-1.2
TWQ1	Liyutan	1.82	263	i P	Pn	04 02 50.9	+0.6
TWQ1				S	Sn	04 03 13.1	-0.3
SSLB	Suanglung	1.83	245	ePn	Pn	04 02 50.5	+0.1
SSLB				eS	Sn	04 03 13.9	+0.4
NSY	Sanyi	1.83	265	i P	Pn	04 02 51.3	+0.9
NSY				eS	Sn	04 03 13.6	+0.2
SMLT	Sun Moon Lake	1.83	248	i P	Pn	04 02 51.3	+0.8
SMLT				i S	Sn	04 03 13.8	+0.2
TYC	Yuchr	1.86	249	eP	Pn	04 02 51.6	+0.7
TYC				S	Sn	04 03 14.2	0.0
TCU	Taichung	1.95	258	eP	Pn	04 02 52.6	+0.7
TCU				eS	Sn	04 03 17.5	+1.3
CHKT	Chengkung	1.95	221	i P	Pn	04 02 51.3	-0.7
CHKT				i S	Sn	04 03 14.5	-1.8
YUS	Yu-Shan	1.98	237	eP	Pn	04 02 53.3	+1.0
YUS				S	Sn	04 03 16.8	-0.1
WNT	Mingjian	2.02	250	eP	Pn	04 02 54.0	+1.1
WNT				eS	Sn	04 03 18.6	+0.7
ALS	Alishan	2.08	240	eP	Pn	04 02 54.8	+1.1
ALS				eS	Sn	04 03 20.1	+0.8
ELDTW	Lidau	2.11	229	i P	Pn	04 02 54.0	-0.1
ELDTW				eS	Sn	04 03 18.4	-1.6
CHN5	Tsauling	2.14	243	eP	Pn	04 02 55.4	+1.0
CHN5				eS	Sn	04 03 21.4	+0.7
WGK	Gukeng	2.19	247	eP	Pn	04 02 56.2	+1.0
WGK				eS	Sn	04 03 23.3	+1.3
JMJ	Miyako jima 2	2.32	84	eS	Sn	04 03 24.7	-0.2
TPUB	Ta-pu	2.33	237	ePn	Pn	04 02 57.8	+0.8
TWG	Pinlang	2.33	222	ePn	Pn	04 02 56.3	-0.8
TWG				eS	Sn	04 03 24.5	-0.8
TWG	Pinlang	2.33	222	eP	Pn	04 02 56.5	-0.6
TWG				eS	Sn	04 03 23.9	-1.4
TTN	Taitung	2.34	219	eP	Pn	04 02 57.1	0.0
TTN				eS	Sn	04 03 24.9	-0.5
WTP	Ta-pu	2.37	236	eP	Pn	04 02 58.4	+0.9
WTP				eS	Sn	04 03 26.4	+0.3
WTCT	Ta-ch'eng	2.37	253	eP	Pn	04 02 58.0	+0.5
WTCT				eS	Sn	04 03 25.8	-0.3
CHY	Chiayi	2.39	244	eP	Pn	04 02 59.1	+1.3
CHY				eS	Sn	04 03 27.2	+0.6
JOGS	Gusukube	2.42	85	P	Pn	04 02 58.7	+0.6
JOGS				eS	Sn	04 03 26.9	-0.3
TWK	Hsinying	2.45	238	eP	Pn	04 02 59.7	+1.1
TWK				eS	Sn	04 03 28.1	0.0
CHN1	Nanshi	2.47	236	eP	Pn	04 02 59.7	+0.9
CHN1				eS	Sn	04 03 28.8	+0.4
SGST	Jiashian	2.49	234	eP	Pn	04 03 00.2	+1.1
SGST				eS	Sn	04 03 29.2	+0.3
WSF	Szhu	2.50	249	eP	Pn	04 02 59.3	+0.1
WSF				eS	Sn	04 03 29.3	+0.1
ECL	Taimali	2.58	220	eP	Pn	04 02 59.3	-0.9
ECL				eS	Sn	04 03 28.9	-2.1
CHN8	Yiju	2.63	243	eP	Pn	04 03 01.4	+0.4
CHN8				eS	Sn	04 03 32.5	+0.1
SSD	Sandimen	2.67	227	eP	Pn	04 03 02.2	+0.7
SSD				eS	Sn	04 03 32.6	-0.7
SCLT	Jiali	2.73	240	eP	Pn	04 03 03.2	+0.9
SCLT				eS	Sn	04 03 35.3	+0.6
LAY	Lan-yu	2.76	204	eP	Pn	04 03 01.6	-1.1
LAY				eS	Sn	04 03 32.3	-3.1
TWM1	Shoushan	2.76	231	eP	Pn	04 03 04.4	+1.7
TWM1				eS	Sn	04 03 39.2	+3.8
EAST	Anshuo	2.80	219	eP	Pn	04 03 03.4	+0.2
EAST				eS	Sn	04 03 35.4	-1.0
SCZT	Fangliau	2.95	222	eP	Pn	04 03 06.1	+0.9
SCZT				eS	Sn	04 03 41.8	+2.0
PNG	Penghu	3.10	252	eP	Pn	04 03 07.1	-0.1
PNG				eS	Sn	04 03 41.3	-2.1
TSEB	Hengchuen, Pin	3.17	213	eP	Pn	04 03 08.9	+0.8
TSEB				eS	Sn	04 03 45.0	-0.1
TWK1	Hengchun	3.18	215	eP	Pn	04 03 06.9	-1.4

baz=211
TWK1 *e*S **Sn** **04 03 45.0 -0.4**
baz=211
QZH Quanzhou 3.81 276 ⇑*i*Pn **Pn** **04 03 16.5 -0.2**
QZH Sn **Sn** **04 03 56.5 -4.0**
QZH smax
comp=N,100nm,0.6s
QZH smax
comp=E,90nm,0.6s
KNM Kinmen 3.94 269 *e*P **Pn** **04 03 19.2 +0.6**
baz=267
JKE Kume jima 2 4.04 64 P **Pn** **04 03 19.6 -0.2**
JAGN Aguni-jima 4.52 63 P **Pn** **04 03 26.0 -0.3**
JOW Kunigami 5.46 65 P **Pn** **04 03 37.2 -1.9**
JOW *e*S **Sn** **04 04 36.6 -4.0**
JOW Kunigami 5.46 65 P **Pn** **04 03 37.4 -1.7**
comp=E,18nm,0.3s,baz=114,slow=20,SNR=37
JOW S **Sn** **04 04 36.5 -4.1**
comp=E,9.6nm,0.3s,baz=116,slow=25,SNR=6.3
JTK Tokunoshima 6.41 59 P **Pn** **04 03 49.9 -2.2**
JAM Amami Oshima 7.22 57 P **Pn** **04 04 00.2 -2.9**
KSRS Korea Array 13.57 18 P **Pn** **04 05 30.3 +1.7**
comp=E,0.7nm,0.3s,baz=197,slow=12,SNR=22
PETK Petropavlovsk- 38.74 33 P **P** **04 09 31.5 -3.2**
comp=E,2.1nm,0.8s,mb4.0,baz=243,slow=6.3,SNR=5.1
MKAR Makanchi Array 39.06 315 P **P** **04 09 37.1 -0.4**
comp=E,0.3nm,0.4s,mb3.5,baz=100,slow=11,SNR=2.9
FINES FINESS Array B 71.83 330 P **P** **04 13 29.4 -2.6**
comp=E,0.7nm,0.4s,mb3.8,baz=75,slow=6.0,SNR=6.3
YKA Yellowknife Ar 82.05 23 P **P** **04 14 27.1 -2.1**
comp=E,0.4nm,0.6s,mb3.5,baz=311,slow=5.4,SNR=4.2

BJI 29 04:13:55.4, 28°.91N×102°.63E, h14km, ML3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.22**	**26**	Pg	Pg	04 14 34.0	-4.0
CD2				Sg	Sg	04 15 05.3	-1.5
CD2				smax			
	comp=N,570nm,0.7s						

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*IDC **29** 04:16:43.7±1.2, 6°.30N×127°.01E, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.7/21, mbtmp4.0/5, Error ellipse: s-maj=53.9km s-min=18.5km az=53.0*
ISC 29 04:16:44.4±2.7, 6°.3N±0°.2×126°.9E±0°.2, h3km±16km, n9, σ0°58/13, mb3.9/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.94**	**318**	*e*P	**Pg**	**04 17 07.8**	**+5.4**
MATI				*e*S	**Sg**	**04 17 14.5**	**-0.1**
DAV	**Davao City (W)**	**1.54**	**302**	Pn	**Pn**	**04 17 12.3**	**-0.4**
	82nm,0.3s,baz=196,slow=5.4,SNR=12						
DAV				Sn	**Sn**	**04 17 37.6**	**+4.4**
	127nm,0.3s,baz=286,slow=21,SNR=20						
DMPH	**Davao City--Mi**	**1.60**	**301**	⇓*i*P	**Pn**	**04 17 13.7**	**+0.1**
DMPH				*i*S	**Sn**	**04 17 34.7**	**-0.1**
BUKP	**Musuan**	**2.43**	**312**	*e*P	**Pn**	**04 17 28.7**	**+3.6**
BUKP				*e*S	**Sn**	**04 17 41.3**	**-14**
ASAR	**Alice Springs**	**30.51**	**167**	P	**P**	**04 22 59.3**	**+0.4**
	0.4nm,0.4s,mb3.6,baz=348,slow=7.0,SNR=4.3						
STKA	**Stephens Creek**	**40.42**	**161**	P	**P**	**04 24 23.6**	**-0.4**
	2.5nm,0.7s,mb4.1,baz=342,slow=4.9,SNR=5.2						
MKAR	**Makanchi Array**	**55.61**	**324**	P	**P**	**04 26 21.9**	**+0.5**
	0.7nm,0.5s,mb4.0,baz=115,slow=9.3,SNR=7.4						
KURK	**Kurchatov**	**59.73**	**327**	P	**P**	**04 26 50.5**	**+0.2**
	1.0nm,0.6s,mb4.0,baz=125,slow=7.1,SNR=4.2						
ARCES	**ARCESS Array B**	**88.16**	**340**	P	**P**	**04 29 35.6**	**-0.7**
	0.4nm,0.5s,mb3.9,baz=76,slow=6.5,SNR=4.9						

IDC 29 04:23:48.7±1.1, 31°.69N×104°.36E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/27, mbtmp3.9/9, Error ellipse: s-maj=35.1km s-min=20.9km az=52.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.05**	**202**	Pn	Pn	04 27 10.1	+1.0
	baz=270,slow=7.2,SNR=2.8						
KSRS	**Korea Array**	**20.22**	**67**	P	P	04 28 25.4	+0.2
	5.1nm,0.8s,baz=255,slow=10,SNR=14						
MKAR	**Makanchi Array**	**22.69**	**318**	P	P	04 28 52.9	+1.2
	1.0nm,0.4s,baz=111,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**26.30**	**334**	P	P	04 29 24.4	-1.3
	0.5nm,0.4s,baz=128,slow=9.6,SNR=3.8						
KURK	**Kurchatov**	**26.91**	**322**	P	P	04 29 30.5	-0.8
	0.8nm,0.6s,baz=131,slow=8.6,SNR=5.7						
ARCES	**ARCESS Array B**	**56.82**	**336**	P	P	04 33 35.2	+0.8
	1.4nm,0.8s,baz=74,slow=8.9,SNR=3.9						
FINES	**FINESS Array B**	**57.21**	**326**	P	P	04 33 37.4	+0.1
	1.0nm,0.5s,baz=91,slow=7.0,SNR=3.5						
ASAR	**Alice Springs**	**61.88**	**149**	P	P	04 34 09.7	-0.3
	1.3nm,0.8s,baz=323,slow=6.3,SNR=6.4						
YKA	**Yellowknife Ar**	**81.08**	**17**	P	P	04 36 05.3	0.0
	0.4nm,0.6s,baz=330,slow=5.6,SNR=2.7						

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*MOS **29** 04:35:32.2±1.4, 36°.66N×71°.77E, h137km, mb3.8/2, Error ellipse: s-maj=28.3km s-min=9.9km az=74.3*
*NEIC **29** 04:35:33.0±1.1, 36°.64N×71°.78E, h129km±12km, mb3.7/1, Error ellipse: s-maj=23.7km s-min=10.3km az=133.0*
*IDC **29** 04:35:32.1±5.2, 36°.59N×71°.79E, h121km±41km, mb3.3/4, mb1 3.4/10, mb1mx3.2/29, mbtmp3.4/10, Error ellipse: s-maj=43.9km s-min=26.3km az=156.0*
*ISCJB **29** 04:35:33.1±0.4, 36°.77N±0°.03×71°.60E±0°.07, h142km±8km, mb3.5/4, Error ellipse: s-maj=8.8km s-min=5.0km az=8.6*
*BJI **29** 04:35:37.1, 37°.08N×71°.51E, h148km, mB4.5/1, mb3.8/1*
*NNC **29** 04:35:40.5±11.0, 37°.33N×71°.24E, h190km±125km, mb2.6, mpv3.8, Error ellipse: s-maj=107.0km s-min=67.4km az=25.0*
ISC 29 04:35:33.9±0.4, 36°.72N±0°.03×71°.66E±0°.06, h135km±7km, n44, σ1°24/57, mb3.5/4, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.90**	**176**	P	**Pn**	**04 36 20.9**	**+1.5**
CEP				S	**Sn**	**04 36 57.0**	**+2.6**
KBL	**Kabul**	**3.05**	**225**	*e*PN	**Pn**	**04 36 20.7**	**-0.6**
KBL				*e*S	**Sn**	**04 36 56.7**	**-1.1**
KSH	**Kashi**	**4.40**	**49**	P	**Pn**	**04 36 36.5**	**-2.5**
KSH				S	**Sn**	**04 37 20.5**	**-9.1**
KSH				smax			
	comp=N,220nm,0.3s						
KSH				smax			
	comp=E,210nm,0.3s						
SARP	**Sargodha**	**4.86**	**170**	P	**Pn**	**04 36 48.2**	**+3.0**
THN	**Thein Dam**	**5.43**	**141**	*e*P	**Pn**	**04 36 55.5**	**+2.7**
THN				*e*x	**Sn**	**04 37 55.0**	**+0.8**
AML	**Almayashu**	**5.63**	**16**	P	**Pn**	**04 36 56.0**	**+0.6**
	SNR=69						
UCH	**Uchtor**	**5.93**	**21**	P	**Pn**	**04 37 00.3**	**+0.9**
	SNR=18						
KZA	**Kyzart**	**6.03**	**26**	P	**Pn**	**04 37 01.8**	**+1.0**
	SNR=17						
EKS2	**Erkin-Say**	**6.15**	**15**	P	**Pn**	**04 37 02.9**	**+0.5**
	SNR=12						
AAK	**Ala-Archa**	**6.30**	**19**	P	**Pn**	**04 37 05.5**	**+1.1**
	SNR=14						
AAK	**Ala-Archa**	**6.30**	**19**	P	**Pn**	**04 37 05.4**	**+1.1**
	comp=E,0.1nm,0.3s,baz=167,slow=4.5,SNR=24						
AAK				S	**Sn**	**04 38 14.4**	**-0.6**
	comp=E,0.1nm,0.3s,baz=322,slow=21,SNR=15						
AAK	**Ala-Archa**	**6.30**	**19**	*e*Pn	**Pn**	**04 37 05.3**	**+1.0**
AAK				S	**Sn**	**04 38 14.4**	**-0.6**
KK31	**Karatay Array**	**6.44**	**352**	P	**Pn**	**04 37 04.7**	**-1.6**
	comp=E,1.3nm,0.2s,baz=196,slow=16,SNR=64						
KK31				⇑S	**Sn**	**04 38 13.3**	**-5.1**
	comp=E,13nm,0.5s,baz=187,slow=25,SNR=12						
ULHL	**Ulahol**	**6.56**	**31**	P	**Pn**	**04 37 09.0**	**+1.2**
	SNR=8.0						
CHMS	**Chumysh**	**6.71**	**20**	P	**Pn**	**04 37 10.7**	**+0.8**
	SNR=7.2						
USP	**Ospenovka**	**6.89**	**18**	P	**Pn**	**04 37 13.2**	**+0.9**
	SNR=19						
TKM2	**Tokmak 2**	**6.89**	**25**	⇓P	**Pn**	**04 37 13.1**	**+0.8**
	comp=E,7.6nm,0.5s						
TKM2				⇑S	**Sn**	**04 38 28.4**	**-1.0**
	comp=E,13nm,0.8s						
TKM2	**Tokmak 2**	**6.89**	**25**	P	**Pn**	**04 37 13.3**	**+0.9**
	SNR=24						
SMLA	**Simla**	**7.21**	**139**	*i*x	**Pn**	**04 37 16.5**	**-0.3**
SMLA				*i*S	**Sn**	**04 38 33.5**	**-3.7**
SMLA				*i*S	**Sn**	**04 38 33.6**	**-3.7**
KLP	**Kalpa**	**7.52**	**132**	*e*P	**Pn**	**04 37 22.7**	**+1.8**
KLP				*e*S	**Sn**	**04 38 40.5**	**-4.2**
KLP				AML	AML	04 38 45.4	
	comp=E,94nm,0.5s						
KLP				AML	AML	04 38 46.5	
	comp=N,69nm,0.4s						
JOSI	**Joshimath**	**9.00**	**131**	*e*S	**Sn**	**04 39 13.7**	**-6.9**
KHET	**Khetri**	**9.30**	**157**	*e*S	**Sn**	**04 39 20.7**	**-7.1**
KHET				AML	AML	04 39 23.8	
	comp=E,25nm,0.3s						
KHET				AML	AML	04 39 24.0	
	comp=N,17nm,0.4s						
SONA	**Sohna**	**9.60**	**150**	*e*S	**Sn**	**04 39 29.0**	**-6.1**
MK31	**Makanchi Array**	**12.80**	**35**	*e*P	**Pn**	**04 38 28.1**	**-2.8**
MKAR	**Makanchi Array**	**12.80**	**35**	P	**Pn**	**04 38 30.9**	**0.0**
	comp=N,0.1nm,0.3s,baz=216,slow=12,SNR=11						
KURK	**Kurchatov**	**14.86**	**17**	P	**Pn**	**04 38 55.9**	**-1.1**
	comp=N,0.2nm,0.3s,baz=207,slow=11,SNR=13						
KURK	**Kurchatov**	**14.86**	**17**	P	**Pn**	**04 38 56.4**	**-0.6**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**14.86**	**17**	Pn	**Pn**	**04 38 56.4**	**-0.6**
	comp=Z,4.4nm,0.9s						
AB31	**Akbulak array**	**15.16**	**329**	P	**Pn**	**04 38 57.8**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=172,slow=10,SNR=19						
AB31				⇑⇑S	**Sn**	**04 41 30.9**	**-18**
	comp=Z,1.0nm,0.5s,baz=150,slow=23,SNR=5.4						
BVAR	**Borovoye Array**	**16.33**	**357**	P	**Pn**	**04 39 14.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=175,slow=9.6,SNR=3.3						
AKTK	**Aktyubinsk**	**16.86**	**329**	P	**Pn**	**04 39 21.4**	**-0.3**
AKTO	**Aktyubinsk**	**16.86**	**329**	⇑P	**Pn**	**04 39 20.8**	**-0.9**
	comp=Z,0.4nm,0.7s						
AKTO				⇓S	**Sn**	**04 42 16.3**	**-13**
	comp=Z,0.5nm,1.1s						
AKTO	**Aktyubinsk**	**16.86**	**329**	P	**Pn**	**04 39 21.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=118,slow=5.5,SNR=3.1						
ZAA0	**Zalesovo Array**	**19.50**	**24**	*e*P	**P**	**04 39 51.0**	**+0.8**
ZALV	**Zalesovo Beam**	**19.50**	**24**	P	**P**	**04 39 51.0**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=222,slow=11,SNR=18						
ZALV	**Zalesovo Beam**	**19.50**	**24**	P	**P**	**04 39 51.0**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	**Novosibirsk**	**19.79**	**20**	*e*P	**P**	**04 39 52.8**	**-0.6**
SONM	**Songino Array**	**27.77**	**55**	P	**P**	**04 41 08.9**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.6,baz=253,slow=10,SNR=2.0						
SONM	**Songino Array**	**27.77**	**55**	P	**P**	**04 41 08.9**	**-1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**41.15**	**337**	P	**P**	**04 43 06.0**	**+1.6**
	comp=Z,0.6nm,0.4s,mb3.6,baz=107,slow=8.1,SNR=14						
ARCES	**ARCESS Array B**	**41.15**	**337**	P	**P**	**04 43 06.0**	**+1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**41.15**	**337**	P	**P**	**04 43 06.0**	**+1.6**
TORD	**Torodi Ar. Bea**	**66.26**	**269**	P	**P**	**04 46 07.8**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.6,baz=47,slow=6.1,SNR=18						
YKA	**Yellowknife Ar**	**81.00**	**3**	P	**P**	**04 47 33.5**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.1,baz=348,slow=5.2,SNR=3.5						

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*ISCJB **29** 04:48:43.7±0.2, 32°.63N±0°.02×105°.47E±0°.02, h10km, mb4.7/81, MS3.8/16, Error ellipse: s-maj=3.3km s-min=2.7km az=139.1*
*BJI **29** 04:48:44.5, 32°.62N×105°.54E, h16km, mB4.9/14, mb4.7/30, ML4.8/22, Ms4.5/47, Ms7 4.3/38*
*IDC **29** 04:48:44.1±0.5, 32°.65N×105°.38E, h0km, mb4.5/24, mb1 4.6/27, mb1mx4.6/31, mbtmp4.5/27, ML4.4/3, MS3.5/11, Ms1 3.6/11, ms1mx3.4/31, Error ellipse: s-maj=17.7km s-min=11.8km az=44.0*
*NEIC **29** 04:48:45.6±0.2, 32°.64N×105°.37E, h10km, mb4.9/39, Error ellipse: s-maj=5.2km s-min=4.3km az=151.0*
*MOS **29** 04:48:46.3±0.8, 32°.65N×105°.42E, h27km, mb5.0/43, Error ellipse: s-maj=8.8km s-min=5.3km az=110.2*
ISC 29 04:48:45.8±0.2, 32°.64N±0°.02×105°.45E±0°.02, h10km, n236, σ1°00/253, mb4.7/81, MS3.8/16, 21C-5D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.25**	**220**	Pn	**Pn**	**04 49 23.0**	**0.0**
CD2				Pg	**Pg**	**04 49 26.5**	**-2.4**
CD2				Sg	**Sg**	**04 49 57.5**	**-0.5**
CD2				smax			
	comp=N,17μm,0.6s						
CD2				smax			
	comp=E,25μm,0.7s						
XAN	**Xi'an**	**3.22**	**63**	Pn	**Pn**	**04 49 36.8**	**+0.4**
XAN				Sn	**Sn**	**04 50 11.5**	**-3.4**
XAN				Sg	**Sb**	**04 50 22.8**	**+0.4**
XAN				smax			
	comp=N,4μm,0.9s						
XAN				smax			
	comp=E,2μm,1.0s						
LZH	**Lanzhou**	**3.68**	**339**	⇑Pn	**Pn**	**04 49 44.5**	**+1.8**
LZH				Pg	**Pg**	**04 49 54.3**	**-2.0**
LZH				Sn	**Sn**	**04 50 27.8**	**+1.6**
LZH				Sg	**Sg**	**04 50 40.0**	**-4.0**
LZH				smax			
	comp=N,9μm,0.8s						
LZH				smax			
	comp=E,8μm,0.6s						
LZH				LR	LR		
	comp=N,10μm,5.6s						
LZH				LR	LR		
	comp=Z,15μm,7.8s						
GYA	**Guiyang**	**6.25**	**170**	⇑*i*Pn	**Pn**	**04 50 18.5**	**+0.4**
GYA				smax			
	comp=N,680nm,0.9s						
GYA				smax			
	comp=E,520nm,0.7s						
GYA				LR	LR		
	comp=N,2μm,5.3s						
GYA				LR	LR		
	comp=E,3μm,4.0s						
GYA				LR	LR		
	comp=Z,3μm,4.6s						
KMI	**Kunming**	**7.86**	**198**	Pn	**Pn**	**04 50 40.3**	**+0.2**
KMI				Sn	**Sn**	**04 52 10.5**	**+1.3**
KMI				Sg	Sx	04 52 57.8	
KMI				smax			
	comp=N,130nm,1.0s						
KMI				smax			
	comp=E,120nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,7.2s						
KMI				LR	LR		
	comp=E,2μm,9.2s						
KMI				LR	LR		
	comp=Z,2μm,13.1s						
WHN	**Wuhan**	**7.88**	**103**	Pn	**Pn**	**04 50 39.5**	**-0.9**
WHN				Sn	**Sn**	**04 52 06.0**	**-3.6**
WHN				LR	LR		
	comp=N,5μm,5.3s						
WHN				LR	LR		
	comp=E,4μm,5.4s						
WHN				LR	LR		
	comp=Z,3μm,4.9s						
GTA	**Gaotai**	**8.15**	**328**	⇑P	**Pn**	**04 50 43.8**	**-0.2**
GTA				pP		04 50 48.0	
GTA				sP		04 50 50.3	
GTA				S	**Sn**	**04 52 16.8**	**+0.6**
GTA				pmax	pmax		
	comp=Z,29nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,5.3s						
GTA				LR	LR		
	comp=N,3μm,8.3s						
GTA				LR	LR		
	comp=E,2μm,9.5s						
GTA				LR	LR		
	comp=Z,3μm,9.2s						
BTO	**Baotou**	**8.75**	**24**	*e*P	**Pn**	**04 50 54.3**	**+1.9**
BTO				LR	LR		
	comp=N,1μm,9.4s						
BTO				LR	LR		
	comp=E,300nm,6.7s						
HHC	**Hu-ho-hao-te**	**9.54**	**29**	*e*P	**Pn**	**04 51 02.3**	**-0.9**
HHC				pP		04 51 09.3	
HHC				sP		04 51 14.0	
HHC				S	**Sn**	**04 52 50.0**	**-0.5**
HHC				sS		04 53 00.5	
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
HHC				LR	LR		
	comp=N,1μm,4.7s						
HHC				LR	LR		
	comp=E,2μm,5.0s						
HHC				LR	LR		
	comp=Z,1μm,5.6s						
TIA	**Tai'an**	**10.28**	**67**	*e*P	**Pn**	**04 51 20.0**	**+6.7**
NJ2	**Nanjing**	**11.36**	**89**	*e*P	**Pn**	**04 51 28.8**	**+0.7**
NJ2				pP		04 51 32.0	
NJ2				sP		04 51 35.0	
NJ2				PP		04 51 37.5	
NJ2				S	**Sn**	**04 53 35.0**	**0.0**
NJ2				sS		04 53 40.0	
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,1μm,4.6s						
NJ2				LR	LR		
	comp=N,430nm,12.4s						
NJ2				LR	LR		
	comp=E,1μm,10.0s						
NJ2				LR	LR		
	comp=Z,1μm,11.1s						
BJI	**Beijing**	**11.37**	**46**	P	**Pn**	**04 51 27.3**	**-0.8**
BJI				pmax	pmax		
	comp=Z,27nm,0.6s						
BJI				pmax	pmax		
	comp=Z,170nm,4.0s						
BJI				LR	LR		
	comp=N,1μm,13.0s						
BJI				LR	LR		
	comp=E,1μm,9.4s						
BJI				LR	LR		
	comp=Z,400nm,19.1s						
GZH	**Guangzhou**	**11.80**	**142**	P	**Pn**	**04 51 30.3**	**-3.9**
GZH				S	**Sn**	**04 53 44.0**	**-2.0**
GZH				LR	LR		
	comp=N,1μm,8.3s						
GZH				LR	LR		
	comp=E,1μm,9.5s						
GZH				LR	LR		
	comp=Z,2μm,10.3s						
LSA	**Lhasa**	**12.59**	**260**	P	**Pn**	**04 51 46.8**	**+1.9**
LSA				S	**Sn**	**04 54 08.0**	**+2.8**
LSA				LR	LR		
	comp=E,400nm,11.2s						
LSA				LR	LR		
	comp=Z,520nm,9.7s						
SHL	**Shillong**	**13.79**	**243**	*e*P	**Pn**	**04 52 01.0**	**-0.3**
SHL				*e*x	x	04 56 11.0	
QZH	**Quanzhou**	**13.84**	**120**	*e*P	**Pn**	**04 51 58.3**	**-3.7**
QZH				S	**Sn**	**04 54 30.8**	**-4.9**
QZH				LR	LR		
	comp=N,2μm,6.0s						
QZH				LR	LR		
	comp=E,1μm,10.0s						
QZH				LR	LR		
	comp=Z,940nm,17.6s						
QIZ	**Qiongzhong**	**14.12**	**163**	P	**Pn**	**04 52 07.0**	**+1.1**
QIZ				S	**Sn**	**04 54 44.5**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,15nm,0.8s						
QIZ				LR	LR		
	comp=N,1μm,9.9s						
QIZ				LR	LR		
	comp=E,300nm,10.7s						
QIZ				LR	LR		
	comp=Z,2μm,10.7s						
DL2	**Dalian**	**14.54**	**60**	P	**Pn**	**04 52 17.0**	**+5.5**
DL2				S	**Sn**	**04 55 06.5**	**+14**
DL2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DL2				LR	LR		
	comp=N,310nm,12.6s						
DL2				LR	LR		
	comp=E,240nm,14.0s						
DL2				LR	LR		
	comp=Z,440nm,13.5s						
CHG	**Chiang Mai**	**14.96**	**205**	PG	**Pn**	**04 52 18.6**	**+1.3**
CHG				SG	Px	04 52 26.8	
SONM	**Songino Array**	**15.19**	**2**	Pn	**Pn**	**04 52 18.9**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=184,slow=12,SNR=9.3						
SONM				Lg		04 56 44.2	
	baz=198,slow=27,SNR=3.8						
SONM				LR	LR	04 58 32.6	
	comp=Z,672nm,19.1s,baz=359,slow=39						
SONM	**Songino Array**	**15.19**	**2**	P	**Pn**	**04 52 18.9**	**-1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				MLR	MLR		
	comp=Z,672nm,19.1s						
CM31	**Chiang Mai Arr**	**15.29**	**204**	*e*Pn	**Pn**	**04 52 21.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**15.29**	**204**	Pn	**Pn**	**04 52 21.5**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=14,slow=12,SNR=19						
CMAR				LR	LR	04 58 54.7	
	comp=Z,641nm,18.5s,baz=5.0,slow=40						
CMAR	**Chiang Mai Arr**	**15.29**	**204**	P	**Pn**	**04 52 21.5**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,641nm,18.5s						
TAPN	**Taplejung**	**16.24**	**256**	*e*P	**Pn**	**04 52 33.3**	**-0.7**
	comp=Z,246nm,1.3s						
TAPN	**Taplejung**	**16.24**	**256**	*e*P	**Pn**	**04 52 33.3**	**-0.7**
	comp=Z,246nm,1.3s						
BDT	**Bhumibol Dam**	**16.40**	**202**	P	**Pn**	**04 52 39.0**	**+2.9**
ODAN	**Odare**	**16.70**	**254**	*e*P	**Pn**	**04 52 38.0**	**-1.9**
	comp=Z,47nm,0.5s						
ODAN	**Odare**	**16.70**	**254**	*e*P	**Pn**	**04 52 38.0**	**-1.9**
	comp=Z,47nm,0.5s						
SNY	**Shenyang**	**17.08**	**52**	⇑P	**Pn**	**04 52 45.0**	**+0.5**
SNY				S	**Sn**	**04 55 59.0**	**+4.7**
SNY				pmax	pmax		
	comp=Z,13nm,2.3s						
SNY				pmax	pmax		
	comp=Z,200nm,3.5s						
SNY				LR	LR		
	comp=E,410nm,18.0s						
SNY				LR	LR		
	comp=Z,470nm,17.6s						
RAMN	**Ramite**	**17.31**	**256**	*e*P	**Pn**	**04 52 45.4**	**-2.1**
	comp=Z,152nm,1.0s						
GUN	**Gumba**	**17.54**	**260**	*e*P	**Pn**	**04 52 49.5**	**-0.9**
	comp=Z,178nm,1.1s						
ZAK	**Zakamensk**	**17.80**	**355**	*e*P	**Pn**	**04 52 53.2**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WMQ	**Urumqi**	**17.82**	**314**	*e*P	**Pn**	**04 52 54.3**	**+0.5**
WMQ				sP	sP	04 53 00.8	+2.2
WMQ				S	**Sn**	**04 56 10.8**	**-1.6**
WMQ				sS	sS	04 56 22.8	-0.9
WMQ				SS		04 56 32.8	
WMQ				PcP	PcP	04 57 31.8	+1.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				LR	LR		
	comp=N,180nm,14.0s						
WMQ				LR	LR		
	comp=Z,110nm,15.0s						
PKI	**Pulchoki**	**18.05**	**259**	*e*P	**Pn**	**04 52 54.9**	**-1.8**
	comp=Z,71nm,0.8s						
PKI	**Pulchoki**	**18.05**	**259**	*e*P	**Pn**	**04 52 55.5**	**-1.2**
PKI				pmax	pmax		
	comp=Z,86nm,0.7s						
PKI	**Pulchoki**	**18.05**	**259**	*e*P	**Pn**	**04 52 55.5**	**-1.2**
	comp=Z,86nm,0.7s						
PKIN	**Phulchoki**	**18.06**	**259**	*e*P	**Pn**	**04 52 55.5**	**-1.3**
	comp=Z,86nm,0.7s						
KKN	**Kakani**	**18.08**	**260**	*e*P	**Pn**	**04 52 55.6**	**-1.5**
	comp=Z,112nm,0.8s						
KKN	**Kakani**	**18.08**	**260**	*e*P	**Pn**	**04 52 55.6**	**-1.5**
KKN				pmax	pmax		
	comp=Z,112nm,0.8s						
DMN	**Daman**	**18.29**	**259**	*e*P	**Pn**	**04 52 58.2**	**-1.5**
	comp=Z,114nm,1.0s						
KSRS	**Korea Array**	**19.00**	**69**	P	**Pn**	**04 53 08.0**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=252,slow=10.0,SNR=23						
KSRS				LR	LR	05 01 50.7	
	comp=Z,54nm,19.1s,baz=314,slow=41						
KSRS	**Korea Array**	**19.00**	**69**	P	**Pn**	**04 53 08.0**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,

TLY *e*S **Sn** **04 56 31.4 -11**
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY MLR MLR
comp=Z,522nm,15.0s
CN2 Changchun 19.21 49 *e*P **Pn** **04 53 11.3 +0.6**
CN2 *es*P sP 04 53 17.0 +3.1
CN2 *e*S **Sn** **04 56 40.8 -5.2**
CN2 pmax pmax
comp=Z,60nm,1.1s
CN2 LR LR
comp=N,670nm,12.0s
CN2 LR LR
comp=E,440nm,12.0s
CN2 LR LR
comp=Z,350nm,12.0s
MOY Mondy 19.29 352 *e*P **Pn** **04 53 12.3 +0.8**
IRK Irkutsk 19.61 358 *e*P **Pn** **04 53 15.5 +0.1**
IRK pmax pmax
comp=Z,67nm,1.3s
JOW Kunigami 20.63 100 P **P** **04 53 25.6 +0.1**
comp=Z,31nm,0.8s,baz=330,slow=8.1,SNR=2.7
JOSI Joshimath 22.13 272 *e*P **P** **04 53 40.9 -0.7**
JOSI AMb AMB 04 53 47.3
comp=Z,336nm,0.8s,mb5.8
MDJ Mudanjiang 22.24 51 P **P** **04 53 43.5 +0.9**
MDJ sP sP 04 53 47.8 +1.1
MDJ pmax pmax
comp=Z,33nm,1.2s,mb4.6
MDJ pmax pmax
comp=Z,120nm,4.1s
MDJ LR LR
comp=N,77nm,18.5s,MS3.3
MDJ LR LR
comp=E,82nm,16.5s,MS3.3
MDJ LR LR
comp=Z,120nm,17.5s,MS3.4
MK31 Makanchi Array 22.63 315 *e*P **P** **04 53 46.8 +0.2**
MKAR Makanchi Array 22.63 315 P **P** **04 53 46.7 +0.1**
comp=Z,15nm,0.7s,mb4.6,baz=114,slow=13,SNR=96
MKAR Makanchi Array 22.63 315 P **P** **04 53 46.7 +0.1**
MKAR pmax pmax
comp=Z,15nm,0.7s
MKAR Makanchi Array 22.63 315 P **P** **04 53 46.7 +0.1**
KLP Kalpa 23.05 275 *e*P **P** **04 53 50.7 -0.6**
KLP AMb AMB 04 54 01.6
comp=Z,36nm,1.2s,mb4.7
TGY Tagaytay City 23.25 139 LR LR 05 03 13.9
comp=Z,7.1nm,20.6s,baz=155,slow=37
SMLA Simla 24.04 274 *e*P **P** **04 53 59.3 -1.7**
SMLA AMb AMB 04 54 08.7
comp=Z,30nm,2.3s,mb4.3
BISR Bishrakh 24.41 268 *e*P **P** **04 54 04.1 -0.4**
BISR AMb AMB 04 54 19.2
comp=Z,91nm,0.8s,mb5.3
KKR Kurukshetra 24.57 271 *e*P **P** **04 54 07.1 +1.2**
AYAN Aya Nagar 24.70 268 *e*P **P** **04 54 06.8 -0.3**
AYAN AMb AMB 04 54 19.1
comp=Z,14nm,1.2s,mb4.4
KSH Kashi 24.72 294 P **P** **04 54 11.3 +4.2**
KSH *e*pP 04 54 15.5
KSH *es*P sP 04 54 18.5 +7.1
KSH *e*PP 04 54 48.5
KSH *e*PcP PcP 04 57 46.3 +2.3
KSH *e*S **S** **04 58 32.0 +3.0**
KSH *es*S sS 04 58 38.3 +4.3
KSH *e*SS 04 59 30.5
KSH pmax pmax
comp=Z,14nm,1.0s,mb4.5
KSH LR LR
comp=N,140nm,5.6s
KSH LR LR
comp=E,130nm,6.1s
KSH LR LR
comp=Z,200nm,6.6s
SONA Sohna 24.81 267 *e*P **P** **04 54 08.1 0.0**
ULHL Ulahol 24.99 301 P **P** **04 54 11.4 +1.8**
SNR=20
TKM2 Tokmak 2 25.61 302 P **P** **04 54 16.8 +1.7**
SNR=14
KZA Kyzart 25.67 300 P **P** **04 54 17.9 +2.2**
SNR=13
KLR Kul'dur 25.68 42 *e*P **P** **04 54 11.9 -3.9**
KLR pmax pmax
comp=Z,50nm,1.4s,mb4.8
BOD Bodaibo 25.84 11 *e*P **P** **04 54 17.6 +0.5**
BOD pmax pmax
comp=Z,19nm,1.0s,mb4.6
ZAA0 Zalesovo Array 25.88 331 *e*P **P** **04 54 17.4 -0.1**
ZALV Zalesovo Beam 25.88 331 P **P** **04 54 17.4 -0.1**
comp=Z,15nm,0.4s,mb4.9,baz=133,slow=9.9,SNR=28
ZALV LR LR 05 04 49.7
comp=Z,128nm,18.2s,MS3.5,baz=181,slow=37
ZALV Zalesovo Beam 25.88 331 P **P** **04 54 17.4 -0.1**
ZALV pmax pmax
comp=Z,15nm,0.4s,mb4.9
ZALV MLR MLR
comp=Z,128nm,18.2s,MS3.5
KHET Khetri 25.94 268 *e*P **P** **04 54 18.1 -0.2**
KHET AMb AMB 04 54 27.0
comp=Z,13nm,0.9s,mb4.5
KBK Karagaybulak 26.01 301 P **P** **04 54 20.9 +2.1**
SNR=18
UCH Uchtor 26.24 300 P **P** **04 54 23.0 +2.1**
SNR=14
AAK Ala-Archa 26.33 301 P **P** **04 54 22.3 +0.6**
comp=Z,2.1nm,0.5s,mb3.9,baz=86,slow=9.2,SNR=9.1
AAK LR LR 05 05 32.2
comp=Z,137nm,18.4s,MS3.5,baz=206,slow=38
AAK Ala-Archa 26.33 301 P **P** **04 54 22.3 +0.6**
AAK pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
AAK MLR MLR
comp=Z,137nm,18.4s,MS3.5
AAK Ala-Archa 26.33 301 *e*P **P** **04 54 23.0 +1.3**
comp=Z,5.8nm,0.9s,mb4.1
BHPL Bhopal 26.40 256 *e*P **P** **04 54 22.6 +0.1**
BHPL AMb AMB 04 54 29.7
comp=Z,28nm,1.2s,mb4.7
USP Ospenovka 26.47 303 P **P** **04 54 24.2 +1.2**
SNR=20
KURK Kurchatov 26.75 320 P **P** **04 54 25.2 -0.2**
comp=Z,183nm,0.7s,mb5.7,SNR=14
KURK Kurchatov 26.75 320 P **P** **04 54 25.4 +0.1**
comp=Z,6.8nm,0.5s,mb4.5,baz=118,slow=10,SNR=35
KURK ScP ScP 05 01 26.5 -2.0
comp=Z,0.8nm,1.0s,baz=131,slow=3.6,SNR=5.1
KURK LR LR 05 05 12.7
comp=Z,82nm,20.7s,MS3.3,baz=140,slow=37
KURK Kurchatov 26.75 320 P **P** **04 54 25.4 0.0**
KURK pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
KURK pmax pmax
comp=N,1.0nm,1.0s
KURK MLR MLR
comp=Z,82nm,20.7s,MS3.3
KURK Kurchatov 26.75 320 *e*P **P** **04 54 25.6 +0.2**
comp=Z,20nm,0.6s,mb4.8
AML Almayashu 26.82 300 P **P** **04 54 28.1 +2.0**
SNR=8.3
NVS Novosibirsk 27.16 331 *e*P **P** **04 54 28.0 -1.1**
NVS pmax pmax
comp=N,9.0nm,1.5s
NVS pmax pmax
comp=E,13nm,1.5s
NVS pmax pmax
comp=Z,17nm,1.5s,mb4.3
MJAR Matsushiro Arr 27.18 73 P **P** **04 54 31.2 +1.8**
comp=Z,1.1nm,0.3s,mb3.8,baz=273,slow=9.9,SNR=5.3
MJAR LR LR 05 04 14.7
comp=Z,74nm,21.8s,MS3.2,baz=270,slow=34
MJAR Matsushiro Arr 27.18 73 P **P** **04 54 31.2 +1.8**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,74nm,21.8s
HABR Khabarovsk 27.27 46 *e*P sP 04 54 42.0 +7.6
HABR *e*SS 05 00 15.7
HABR *e* 05 05 15.9
HABR MLR MLR
comp=Z,509nm,11.0s,MS4.3
CLNS Chul'man 27.66 23 *e*P **P** **04 54 30.8 -2.7**
CLNS pmax pmax
comp=Z,13nm,0.8s,mb4.6
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS MLR MLR
comp=Z,396nm,10.0s,MS4.3
CLNS MLR MLR
comp=E,309nm,10.0s,MS4.3
CLNS MLR MLR
comp=N,274nm,11.0s,MS4.3
KBL Kabul 30.28 284 *e*P **P** **04 54 58.7 +1.6**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
KBL Kabul 30.28 284 *e*P **P** **04 54 58.7 +1.6**
comp=Z,6.9nm,0.7s,mb4.5
YSS Yuzh-Sakhalins 31.70 52 *e*P **P** **04 55 08.9 -0.6**
BVAR Borovoye Array 32.33 320 P **P** **04 55 15.1 +0.2**
comp=Z,2.3nm,0.5s,mb4.3,baz=108,slow=9.5,SNR=18
BVAR PcP PcP 04 58 02.4 -0.2
comp=Z,1.8nm,0.7s,baz=75,slow=6.8,SNR=4.0
BVAR LR LR 05 09 16.5
comp=Z,106nm,18.6s,MS3.6,baz=10,slow=38
BVAR Borovoye Array 32.33 320 P **P** **04 55 15.1 +0.2**
BVAR 04 58 02.4
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR MLR MLR
comp=Z,106nm,18.6s
BVAR Borovoye Array 32.33 320 P **P** **04 55 15.1 +0.2**
BVAR PcP PcP 04 58 02.4 -0.2
BVAR LR LR 05 09 16.5
BRVK Borovoye 32.40 320 *e*P **P** **04 55 16.0 +0.5**
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
BRVK Borovoye 32.40 320 *e*P **P** **04 55 16.0 +0.5**
comp=Z,6.9nm,0.9s,mb4.5
YAK Yakutsk 33.27 21 *e*P **P** **04 55 22.1 -0.9**
YAK pmax pmax
comp=Z,53nm,0.9s,mb5.5
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,15nm,1.3s
YAK MLR MLR
comp=Z,349nm,16.0s,MS4.2
YAK MLR MLR
comp=N,299nm,15.0s,MS4.2
YAK MLR MLR
comp=E,42nm,10.0s,MS4.2
YAK Yakutsk 33.27 21 *e*P **P** **04 55 22.8 -0.2**
comp=E,73nm,0.6s,mb5.8
SVE Sverdlovsk 38.97 322⇓ *e*P **P** **04 56 11.3 -0.5**
SVE *e*S **S** **05 02 02.5 -7.8**
SVE pmax pmax
comp=Z,30nm,1.0s,mb5.0
ARU Arti 39.94 321 *d i*P **P** **04 56 20.5 +0.6**
ARU 04 57 48.9
ARU PPP 04 58 14.2
ARU S **S** **05 02 25.9 +1.1**
ARU SS SS 05 05 16.2 -5.1
ARU pmax pmax
comp=Z,38nm,1.2s,mb5.0
ARU Arti 39.94 321 *e*P **P** **04 56 20.3 +0.4**
comp=Z,31nm,0.9s,mb5.0
TIXI Tiksi 41.03 11 *i* P **P** **04 56 27.9 -0.8**
TIXI pmax pmax
comp=Z,40nm,0.7s,mb5.2
TIXI MLR MLR
comp=Z,379nm,13.0s,MS4.4
TIXI Tiksi 41.03 11 *e*P **P** **04 56 28.0 -0.7**
comp=Z,43nm,0.6s,mb5.2
SEY Seymchan 42.19 30⇑ *i*P **P** **04 56 38.5 +0.1**
PETK Petropavlovsk- 42.30 45 P **P** **04 56 39.6 +0.3**
comp=Z,11nm,0.9s,mb4.5,baz=269,slow=2.7,SNR=7.4
PETK LR LR 05 16 08.6
comp=Z,87nm,18.8s,MS3.7,baz=250,slow=39
PETK Petropavlovsk- 42.30 45 P **P** **04 56 39.7 +0.4**
PETK pmax pmax
comp=Z,11nm,1.0s,mb4.4
PETK MLR MLR
comp=Z,87nm,18.8s,MS3.7
MIB Mutribah 49.24 283 *e*P **P** **04 57 34.2 -0.4**
MIB AMb AMB 04 57 38.3
comp=Z,39nm,0.7s,mb5.5
BILL Bilibino 49.30 26 *c i*P **P** **04 57 33.9 -0.5**
BILL pmax pmax
comp=Z,20nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.4
BILL Bilibino 49.30 26 *e*P **P** **04 57 33.8 -0.6**
comp=Z,7.6nm,0.6s,mb4.9
RDF Al-Radifah 49.35 282 *e*P **P** **04 57 35.3 -0.2**
RDF AMb AMB 04 57 36.7
comp=Z,49nm,0.8s,mb5.6
NAY Al-Naaiem 49.50 282 *e*P **P** **04 57 36.0 -0.6**
NAY AMb AMB 04 57 37.4
comp=Z,41nm,0.7s,mb5.6
VSR Storozhevoye 50.89 312 *e*P **P** **04 57 46.3 -0.5**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
OBN Obninsk 52.12 317⇓ *i*P **P** **04 57 55.6 -0.3**
OBN pmax pmax
comp=Z,16nm,1.0s,mb4.9
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.0
APA Apatity 53.45 333⇑ *e*P **P** **04 58 06.6 +1.1**
APA pmax pmax
comp=Z,11nm,0.9s,mb4.8
APA MLR MLR
comp=Z,200nm,16.0s,MS4.3
FITZ Fitzroy Crossi 54.03 156 P **P** **04 58 10.3 -0.1**
comp=Z,6.4nm,0.9s,mb4.5,baz=343,slow=8.2,SNR=3.6
JOF Joensuu 54.35 327 *e*P **P** **04 58 11.4 -0.8**
JOF pmax pmax
comp=Z,24nm,0.6s,mb5.3
JOF Joensuu 54.35 327 *e*p **P** **04 58 11.4 -0.8**
comp=Z,24nm,0.6s,mb5.3
KEV Kevo 55.80 336 *e*P **P** **04 58 22.2 -0.4**
KEV pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KEV Kevo 55.80 336 *e*P **P** **04 58 22.2 -0.4**
comp=Z,10nm,0.6s,mb5.0
KEV Kevo 55.80 336 *e*p **P** **04 58 21.8 -0.8**
comp=Z,13nm,0.6s,mb5.2
ARCES ARCESS Array B 56.33 335 P **P** **04 58 26.2 -0.2**
comp=Z,8.1nm,0.5s,mb5.0,baz=77,slow=8.1,SNR=87
ARCES ARCESS Array B 56.33 335 P **P** **04 58 26.2 -0.2**
ARCES pmax pmax
comp=Z,8.0nm,0.5s
KAF Kangasniemi 56.73 326 *e*P **P** **04 58 28.4 -1.0**
KAF pmax pmax
comp=Z,17nm,0.6s,mb5.2
KAF Kangasniemi 56.73 326 *e*p **P** **04 58 28.4 -1.0**
comp=Z,16nm,0.6s,mb5.2,baz=82,slow=6.8
FINES FINESS Array B 56.94 326 P **P** **04 58 30.4 -0.4**
comp=Z,15nm,0.5s,mb5.3,baz=89,slow=7.4,SNR=88
FINES FINESS Array B 56.94 326 P **P** **04 58 30.4 -0.4**
FINES pmax pmax
comp=Z,15nm,0.5s
BR131 Keskin Array S 56.98 299 P **P** **04 58 31.5 0.0**
comp=Z,0.8nm,0.5s,mb4.0
BRTR Keskin Array B 56.98 299 P **P** **04 58 31.0 -0.5**
comp=Z,3.5nm,0.9s,mb4.4,baz=92,slow=6.3,SNR=8.9
BRTR Keskin Array B 56.98 299 P **P** **04 58 31.0 -0.5**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
VSU Vasula 57.08 322⇑ *i*P **P** **04 58 31.8 -0.1**
VSU pmax pmax
comp=Z,26nm,0.9s,mb5.3
AKASG Malin Array Be 57.17 313 P **P** **04 58 32.0 -0.6**
comp=Z,8.7nm,0.4s,mb5.1,baz=67,slow=7.5,SNR=37
AKASG Malin Array Be 57.17 313 P **P** **04 58 32.1 -0.6**
AKASG pmax pmax
comp=Z,9.0nm,0.4s
AKBB Malin Array Si 57.17 313 *e*P **P** **04 58 32.0 -0.7**
KIEV Kiev 57.19 313 *e*P **P** **04 58 32.0 -0.7**
KIEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KIEV Kiev 57.19 313 *e*P **P** **04 58 32.0 -0.7**
comp=Z,6.8nm,0.4s,mb5.0
IDID Didziasalis 57.66 318 *e*P **P** **04 58 36.3 +0.3**
NACGM Naroch 57.73 318 *e* **P** **04 58 35.0 -1.5**
IZAR Zarasai 57.85 319 *e*P **P** **04 58 38.0 +0.6**
IIGN Ignalina 57.94 319 *e*P **P** **04 58 38.4 +0.4**
ISAL Salakas 57.95 319 *e*P **P** **04 58 37.6 -0.4**
WRAB Tennant Creek 59.14 148 P **P** **04 58 48.0 +1.3**
comp=Z,177nm,0.7s,SNR=10
WRAB Tennant Creek 59.14 148 *e*P **P** **04 58 48.6 +1.9**
WRAB pmax pmax
comp=Z,20nm,0.8s,mb5.2
WRAB Tennant Creek 59.14 148 *e*P **P** **04 58 48.6 +1.9**
comp=Z,20nm,0.8s,mb5.2
BURAR Bucovina Array 60.52 310⇑ *i*P **P** **04 58 56.0 +0.1**
BUR08 Bucovina Ar. S 60.52 310 *e*P **P** **04 58 56.3 +0.3**
KWP Kalwaria Pacla 61.50 313 *e*P **P** **04 59 03.3 +0.7**
KOLS Kolonicke sedl 61.99 312 *e*P **P** **04 59 06.1 +0.2**
KOLS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
KOLS Kolonicke sedl 61.99 312 *e*P **P** **04 59 06.1 +0.2**
comp=Z,3.2nm,0.7s,mb4.6
KOLS Kolonicke sedl 61.99 312 *e*P **P** **04 59 06.1 +0.2**
ASAR Alice Springs 62.24 150 P **P** **04 59 07.8 +0.1**
comp=Z,6.8nm,0.7s,mb4.9,baz=333,slow=6.0,SNR=42
ASAR Alice Springs 62.24 150 P **P** **04 59 07.8 +0.1**
ASAR pmax pmax
comp=Z,7.0nm,0.7s
DRGR 62.40 310⇑ *i*P **P** **04 59 09.4 +0.7**
STHS Stebnicka Huta 62.47 313 *e*P **P** **04 59 09.5 +0.4**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
STHS Stebnicka Huta 62.47 313 *e*P **P** **04 59 09.5 +0.4**
comp=Z,3.4nm,0.7s,mb4.6
STHS Stebnicka Huta 62.47 313 *e*P **P** **04 59 09.5 +0.4**
NIE Niedzica 63.05 313 *e*P **P** **04 59 14.1 +1.1**
OJC Ojcow 63.09 314 *e*P **P** **04 59 12.5 -0.8**
KECS Kecovo 63.25 312 *e*P **P** **04 59 14.6 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.25 312 *e*P **P** **04 59 14.6 +0.3**
comp=Z,2.0nm,0.7s,mb4.4
KECS Kecovo 63.25 312 *e*P **P** **04 59 14.6 +0.3**
NB2 NORSAR Subarra 63.98 327 P **P** **04 59 18.0 -0.9**
comp=Z,10nm,0.5s,mb5.1,baz=70,slow=6.5
NOA NORSAR Array B 63.98 327 P **P** **04 59 18.1 -0.9**
comp=Z,10nm,0.5s,mb5.1,baz=71,slow=6.7,SNR=53
NOA LR LR 05 28 50.6
comp=Z,41nm,21.5s,MS3.6,baz=70,slow=38
NOA NORSAR Array B 63.98 327 P **P** **04 59 18.1 -0.8**
NOA pmax pmax
comp=Z,10.0nm,0.5s
NOA MLR MLR
comp=Z,41nm,21.5s
NAO01 NORSAR Array S 64.20 327 *e*P **P** **04 59 19.3 -1.1**
comp=Z,4.0nm,0.4s,mb4.8
VYHS Vyhne 64.28 313 *e*P **P** **04 59 21.7 +0.6**
VYHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
VYHS Vyhne 64.28 313 *e*P **P** **04 59 21.7 +0.6**
comp=Z,6.6nm,1.4s,mb4.5
VYHS Vyhne 64.28 313 *e*P **P** **04 59 21.7 +0.6**
MORC Moravsky Berou 64.61 314 *e*P **P** **04 59 24.0 +0.7**
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MORC Moravsky Berou 64.61 314 *e*P **P** **04 59 23.9 +0.7**
comp=Z,6.6nm,0.9s,mb4.7
MORC Moravsky Berou 64.61 314⇑ *i*P **P** **04 59 23.7 +0.4**
TTA Tatalina 65.16 30 *e*P **P** **04 59 26.6 0.0**
TTA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TTA Tatalina 65.16 30 *e*P **P** **04 59 26.6 0.0**
comp=Z,5.8nm,0.8s,mb4.7
PKSM Moragy 65.23 310⇓ *i*P **P** **04 59 25.8 -1.6**
SVW2 Sparrevohn 66.09 32 *e*P **P** **04 59 33.3 +0.6**
CONA Conrad Observa 66.33 313⇓ *i*P **P** **04 59 34.7 +0.3**
comp=Z,7.1nm,1.1s,mb4.6
BRG Berggiesshubel 66.34 316 *e*P **P** **04 59 34.4 -0.1**
comp=Z,3.7nm,0.8s,mb4.5
CLL Collm 66.72 317 *i* P **P** **04 59 36.3 -0.5**
CLL *i* pP 04 59 39.9 -0.2
CLL pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
CLL Collm 66.72 317 *i* P **P** **04 59 36.3 -0.5**
comp=Z,6.0nm,1.3s,mb4.5
CLL *i* pP 04 59 39.9 -0.2
CLL Collm 66.72 317 *i* P **P** **04 59 36.3 -0.5**
comp=Z,6.0nm,1.3s,mb4.5
CLL *i* pP pP 04 59 39.9 -0.2
comp=Z,15nm,1.6s
GROS Grobnik 67.14 311 *e*P **P** **04 59 39.1 -0.5**
GEC2 GERESS Array S 67.29 314 *e*P **P** **04 59 40.8 +0.3**
GEC2 pmax pmax
comp=Z,2μm,1.1s
GEC2 GERESS Array S 67.29 314 *e*P **P** **04 59 40.8 +0.2**
comp=Z,2μm,1.1s
GERES GERESS Array B 67.29 314 P **P** **04 59 41.0 +0.4**
comp=Z,1.6nm,0.7s,mb4.2,baz=60,slow=5.3,SNR=14
GERES GERESS Array B 67.29 314 P **P** **04 59 41.0 +0.5**
GERES pmax pmax
comp=Z,2.0nm,0.7s
SOKA Soboth 67.35 312⇑ *i*P **P** **04 59 40.9 0.0**
comp=Z,9.6nm,1.2s,mb4.7
MOA Molln 67.35 313⇑ *i*P **P** **04 59 41.9 +1.0**
comp=Z,7.5nm,1.0s,mb4.7
COLA College 67.55 26 *e*P **P** **04 59 41.2 -0.7**
COLA pmax pmax
comp=Z,19nm,1.0s,mb5.1
COLA College 67.55 26 *e*P **P** **04 59 41.2 -0.6**
comp=Z,19nm,1.0s,mb5.1
PDKS Podkum 67.62 311 *e*P **P** **04 59 42.5 -0.2**
KBA Koelnbreinsper 68.24 313⇑ *i*P **P** **04 59 46.5 -0.1**
comp=Z,6.4nm,0.8s,mb4.7
PMR Palmer 68.64 30 *e*P **P** **04 59 47.9 -0.9**
PMR pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
PMR Palmer 68.64 30 *e*P **P** **04 59 47.9 -0.9**
comp=Z,8.7nm,0.5s,mb4.9
OHAK Old Harbor 68.85 35 *e*P **P** **04 59 49.8 -0.3**
comp=Z,10nm,0.7s,mb4.9
KDAK Kodiak Island 68.93 34 *i* P **P** **04 59 50.0 -0.6**
FETA Feichten 69.88 313⇑ *i*P **P** **04 59 56.5 -0.2**
comp=Z,11nm,1.0s,mb4.7
INK Inuvik 70.33 20 *e*P **P** **04 59 58.2 -0.9**
INK pmax pmax
comp=Z,11nm,0.8s
INK Inuvik 70.33 20 *e*P **P** **04 59 58.2 -0.9**
comp=Z,11nm,0.8s,mb4.8
DAWY Dawson 71.07 25 *e*P **P** **05 00 03.4 -0.3**
CDF Champ du Feu 71.31 316 *e*P **P** **05 00 05.2 -0.2**
WLF Walferdange 71.37 317 P **P** **05 00 06.6 +0.9**
WLF XP sP 05 00 10.4 +0.2
comp=Z,11nm,1.4s
RES Resolute Bay 72.10 6 *e*P **P** **05 00 09.3 -0.5**
RES pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
RES Resolute Bay 72.10 6 *e*P **P** **05 00 09.3 -0.5**
comp=Z,10nm,0.9s,mb4.8
SUMG Summit 72.15 349 *e*P **P** **05 00 10.6 +0.5**
comp=Z,11nm,0.9s,mb4.8
KMBO Kilima Mbogo 72.37 257 P **P** **05 00 12.6 +0.3**
comp=Z,3.7nm,0.9s,mb4.3,baz=1.8,slow=23,SNR=6.9
KMBO Kilima Mbogo 72.37 257 P **P** **05 00 12.6 +0.3**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 72.69 148 P **P** **05 00 14.3 +0.5**
comp=Z,4.2nm,0.7s,mb4.5,baz=332,slow=7.6,SNR=8.3
LPG La Plagne 73.03 313⇑ *i*P **P** **05 00 16.4 +0.6**
comp=Z,27nm,0.8s,mb4.9
LPG La Plagne 73.03 313⇑ *i*P **P** **05 00 16.4 +0.6**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPG La Plagne 73.03 313⇑ *i*P **P** **05 00 16.4 +0.6**
comp=Z,13nm,0.8s,mb4.9
LPL La Plagne 73.03 313⇑ *i*P **P** **05 00 16.2 +0.4**
comp=Z,24nm,0.6s,mb5.0
LPL La Plagne 73.03 313⇑ *i*P **P** **05 00 16.2 +0.4**
LPL pmax pmax
comp=Z,12nm,0.6s,mb5.0
LPL La Plagne 73.03 313⇑ *i*P **P** **05 00 16.2 +0.4**
comp=Z,12nm,0.6s,mb5.0
SMF Signal de Mont 74.21 315 *e*P **P** **05 00 22.2 -0.5**
comp=Z,10nm,0.8s,mb4.5
SMF Signal de Mont 74.21 315 *e*P **P** **05 00 22.2 -0.5**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMF Signal de Mont 74.21 315 *e*P **P** **05 00 22.2 -0.5**
comp=Z,5.2nm,0.8s,mb4.5
AVF Avril sur Loir 74.42 316 *e*P **P** **05 00 23.5 -0.4**
TCF Toulx Ste Croi 75.36 316 *e*P **P** **05 00 29.1 -0.2**
SKAG Skagway 75.45 27 *e*P **P** **05 00 30.2 +0.6**
comp=Z,12nm,0.7s,mb4.9

YKA Yellowknife Ar 79.89 18 P P 05 00 53.5 -0.8
comp=Z,2.2nm,0.6s,mb4.3,baz=327,slow=4.8,SNR=16
YKA LR LR 05 37 27.7
comp=Z,4.0nm,18.1s,MS2.8,baz=0.0,slow=37
YKA Yellowknife Ar 79.89 18 P P 05 00 53.5 -0.8
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA MLR MLR
comp=Z,4.0nm,18.1s
YKA Yellowknife Ar 79.89 18 P P 05 00 53.5 -0.8
YKA LR LR 05 37 27.7
ESDC Sonseca Array 82.82 313 P P 05 01 10.6 +0.2
comp=Z,0.3nm,0.4s,mb3.7,baz=43,slow=5.7,SNR=3.2
FCC Fort Churchill 87.49 10 *eP* **P 05 01 32.4 -1.0**
comp=Z,0.3nm,1.0s
FFC Flin Flon 89.84 15 *eP* **P 05 01 44.1 -0.4**
FFC pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
FFC Flin Flon 89.84 15 *eP* **P 05 01 44.1 -0.4**
comp=Z,2.7nm,0.6s,mb4.8
SCHQ Schefferville 92.63 356 P P 05 01 55.5 -1.9
comp=Z,3.0nm,0.8s,mb4.8,baz=30,slow=4.4,SNR=4.2
SLMT Seeley Lake 93.11 25 *eP* **P 05 02 00.4 +0.6**
comp=Z,8.1nm,1.2s,mb5.0
TORD Torodi Ar. Bea 94.25 288 P P 05 02 03.7 -2.0
comp=Z,0.7nm,0.7s,mb4.2,baz=64,slow=4.1,SNR=14
TORD Torodi Ar. Bea 94.25 288 P P 05 02 03.7 -2.0
PDAR Pinedale Array 98.38 25 P P 05 02 25.0 +1.1
comp=Z,0.3nm,0.6s,mb4.0,baz=2.6,slow=6.0,SNR=2.5
NVAR Mina Array Bea 98.42 33 P P 05 02 26.2 +2.0
comp=Z,0.3nm,0.8s,mb3.9,baz=258,slow=6.4,SNR=2.8
QSPA South Pole Qui 122.41 180 PKP PKPdf 05 07 40.7 +0.7
comp=Z,1.0nm,0.6s,baz=254,slow=3.0,SNR=9.2
SIV San Ignacio 159.40 320 PKP PKPdf 05 08 44.5 -0.6
comp=Z,0.6nm,0.8s,baz=252,slow=10,SNR=2.5
SIV PKPab PKPab 05 09 21.9 -0.7
comp=Z,1.9nm,1.1s,baz=58,slow=7.8,SNR=4.8
LPAZ La Paz 162.71 339 PKP PKPdf 05 08 49.2 +0.6
comp=Z,0.9nm,0.9s,baz=137,slow=1.8,SNR=5.0
LPAZ La Paz 162.71 339 PKIKP PKPdf 05 08 49.2 +0.6
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
LPAZ La Paz 162.71 339 PKP PKPdf 05 08 49.2 +0.6

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*ISCJB **29** 05:05:05.0±1.1, 17°.5S±0°.3×178°.4W±0°.2, h566km±13km, mb4.2/10, Error ellipse: s-maj=53.5km s-min=14.5km az=151.4*
*IDC **29** 05:05:04.1±2.2, 17°.37S×178°.41W, h538km±28km, mb3.5/6, mb1 3.8/7, mb1mx3.5/17, mbtmp3.5/7, Error ellipse: s-maj=97.3km s-min=13.6km az=153.0*
*NEIC **29** 05:05:05.0±0.9, 17°.46S×178°.32W, h554km±10km, mb4.4/4, Error ellipse: s-maj=60.5km s-min=11.4km az=156.0*
ISC 29 05:05:05.1±1.0, 17°.65S±0°.3×178°.3W±0°.2, h555km±11km, n19, σ0°83/19, mb4.2/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.48**	**266**	*eP*	**P**	**05 06 25.3**	**+1.6**
AFI	**Afiamalu**	**7.25**	**61**	P	**P**	**05 06 53.8**	**-2.0**
3.4nm,0.3s,baz=96,slow=13,SNR=4.1							
DZM	**Mont Dzumac**	**15.04**	**250**	P	**P**	**05 08 15.0**	**0.0**
19nm,1.0s							
ARMA	**Armidale**	**30.21**	**239**	*eP*	**P**	**05 10 31.6**	**+0.5**
3.3nm,0.5s,mb4.1							
CTAO	**Charters Tower**	**33.60**	**260**	*eP*	**P**	**05 10 59.4**	**-0.7**
2.9nm,0.4s,mb4.2							
CNB	**Canberra Magne**	**33.73**	**232**	*eP*	**P**	**05 11 01.2**	**+0.3**
CMSA	**Cobar Meteorol**	**35.41**	**240**	*eP*	**P**	**05 11 14.8**	**-0.3**
COEN	**Coen**	**37.20**	**270**	*eP*	**P**	**05 11 30.2**	**+0.2**
COEN	**Coen**	**37.20**	**270**	*eP*	**P**	**05 11 29.9**	**-0.1**
42nm,0.5s,mb5.2							
STKA	**Stephens Creek**	**38.89**	**241**	*eP*	**P**	**05 11 43.6**	**+0.1**
5.2nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**38.89**	**241**	P	**P**	**05 11 43.8**	**+0.3**
5.9nm,0.5s,mb4.4,baz=87,slow=9.8,SNR=20							
BBOO	**Buckleboo**	**43.67**	**241**	*eP*	**P**	**05 12 20.5**	**-0.8**
4.7nm,0.3s,mb4.5							
ASAR	**Alice Springs**	**44.98**	**254**	P	**P**	**05 12 31.2**	**-0.4**
38nm,0.6s,mb5.1,baz=88,slow=8.1,SNR=437							
ASAR				PcP	PcP	05 13 60.0	-0.9
0.5nm,0.4s,baz=108,slow=3.4,SNR=2.8							
KAKA	**Kakadu**	**47.69**	**269**	*eP*	**P**	**05 12 51.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.19**	**260**	P	**P**	**05 13 32.2**	**0.0**
1.5nm,0.3s,mb3.8,baz=82,slow=6.4,SNR=14							
NVAR	**Mina Array Bea**	**79.09**	**44**	P	**P**	**05 16 12.8**	**+0.4**
1.1nm,0.6s,mb3.4,baz=227,slow=7.9,SNR=12							
NVAR	**Mina Array Bea**	**79.09**	**44**	P	**P**	**05 16 12.8**	**+0.4**
TXAR	**Lajitas Array**	**85.72**	**58**	P	**P**	**05 16 47.6**	**+1.5**
0.8nm,0.7s,mb3.5,baz=214,slow=5.9,SNR=12							
PDAR	**Pinedale Array**	**87.02**	**43**	P	**P**	**05 16 52.3**	**+0.4**
0.5nm,0.5s,mb3.4,baz=225,slow=2.4,SNR=6.0							

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*ISCJB **29** 05:08:06.5±1.0, 42°.15S±0°.07×72°.3W±0°.1, h10km, mb3.9/4, MS3.6/2, Error ellipse: s-maj=13.8km s-min=7.3km az=147.7*
*IDC **29** 05:08:06.5±1.3, 42°.12S×72°.51W, h0km, mb3.9/5, mb1 4.2/6, mb1mx4.0/17, mbtmp4.0/6, ML5.1/1, MS3.3/4, Ms1 3.4/4, ms1mx3.3/18, Error ellipse: s-maj=30.3km s-min=15.3km az=131.0*
*GUC **29** 05:08:07.7±0.7, 41°.95S×72°.19W, h10km±32km, ML5.0*
*NEIC **29** 05:08:07.7, 41°.95S×72°.19W, h10km, mb4.5/1, ML5.0(GUC), After GUC.*
NEIC Felt [II] at Hualaihue. Also felt at Puerto Montt and Puerto Varas.
ISC 29 05:08:08.4±1.0, 42°.10S±0°.06×72°.4W±0°.1, h10km, n14, σ1°06/17, mb3.9/4, MS3.6/2, 1C-1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.19**	**359**	⇓*i*P	**Pg**	**05 08 11.9**	**-0.5**
HOCH				*i* S	**Sg**	**05 08 14.9**	**-0.1**
HOCH				AML	AML	05 08 17.4	
comp=N,416μm,0.6s							
OSCH	**Osorno**	**1.61**	**340**	*eP*	**Pn**	**05 08 35.5**	**-1.4**
OSCH				*e*S	**Sn**	**05 08 57.0**	**-0.8**
PLCA	**Paso Flores**	**1.95**	**46**	Pn	**Pn**	**05 08 42.4**	**+0.9**
comp=N,160nm,0.3s,baz=226,slow=15,SNR=989							
PLCA				Pg	**Pg**	**05 08 44.2**	**-1.5**
comp=N,169nm,0.3s,baz=230,slow=17,SNR=968							
PLCA				Lg		05 09 10.4	
comp=N,550nm,0.3s,baz=98,slow=15,SNR=21							
PLCA				LR	LR	05 09 49.0	
comp=N,811nm,20.2s,baz=234,slow=51							
PLCA	**Paso Flores**	**1.95**	**46**	Pn	**Pn**	**05 08 42.4**	**+0.9**
PLCA				Pg	**Pg**	**05 08 44.2**	**-1.5**
PLCA				Lg		05 09 10.4	
PLCA				LR	LR	05 09 49.0	
VLCH	**Valdivia**	**2.38**	**344**	⇑*e*P	**Pn**	**05 08 47.9**	**+0.4**
VLCH				*e*S	**Sn**	**05 09 18.8**	**+2.2**
TRQA	**Tornquist**	**8.95**	**67**	*e*Pn	**Pn**	**05 10 18.6**	**+0.9**
CFAA	**Coronel Fontan**	**10.99**	**19**	LR	LR	05 14 41.0	
comp=N,32nm,20.2s,baz=202,slow=36							
CPUP	**Villa Florida**	**20.02**	**43**	P	**P**	**05 12 42.0**	**+0.7**
comp=N,1.2nm,0.5s,baz=214,slow=12,SNR=6.4							
CPUP				LR	LR	05 21 36.3	
comp=N,144nm,19.8s,MS3.3,baz=200,slow=40							
LPAZ	**La Paz**	**25.98**	**9**	P	**P**	**05 13 42.4**	**+1.1**
comp=N,9.4nm,1.0s,mb4.3,baz=176,slow=8.0,SNR=17							
LPAZ	**La Paz**	**25.98**	**9**	*eP*	**P**	**05 13 42.4**	**+1.1**
comp=N,10nm,1.0s,mb4.3							
SIV	**San Ignacio**	**27.78**	**24**	P	**P**	**05 13 55.8**	**-1.7**
comp=N,1.6nm,0.8s,mb3.7,baz=226,slow=8.5,SNR=6.8							
QSPA	**South Pole Qui**	**48.15**	**180**	P	**P**	**05 16 47.8**	**-0.3**
comp=N,2.1nm,0.7s,mb4.3,baz=105,slow=8.8,SNR=7.7							
TXAR	**Lajitas Array**	**76.70**	**332**	P	**P**	**05 19 60.0**	**+0.4**
comp=N,0.4nm,0.8s,mb3.4,baz=148,slow=7.4,SNR=4.5							
DBIC	**Dimbokro**	**78.15**	**70**	LR	LR	05 51 46.4	
comp=N,56nm,19.0s,MS3.9,baz=179,slow=34							

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*MOS **29** 05:54:34.6±1.2, 51°.65N×178°.11W, h49km, mb4.7/41, Error ellipse: s-maj=9.0km s-min=7.7km az=136.9*
*ISCJB **29** 05:54:35.7±0.7, 51°.49N±0°.05×178°.11W±0°.03, h63km±5km, mb4.6/115, Error ellipse: s-maj=8.9km s-min=3.0km az=3.7*
*BJI **29** 05:54:35.4, 52°.28N×178°.55W, h35km, mB5.1/12, mb4.7/20, Ms4.9/8, Ms7 4.6/8*
*NEIC **29** 05:54:36.8±0.2, 51°.50N×178°.16W, mb4.7/83, ML4.6(AEIC), Error ellipse: s-maj=7.3km s-min=3.3km az=179.0*

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*IDC **29** 05:54:36.2±0.9, 51°.62N×178°.14W, h53km±7km, mb4.0/22, mb1 4.1/23, mb1mx4.0/31, mbtmp3.9/23, MS3.5/14, Ms1 3.5/14, ms1mx3.4/30, Error ellipse: s-maj=18.1km s-min=11.0km az=175.0*
ISC 29 05:54:38.5±0.7, 51°.59N±0°.06×178°.08W±0°.03, h69km±5km, h57km±2.1km: pP-P, n554, σ0°68/554, mb4.6/115, 164C-146D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**1.35**	**67**	*e*Pn	**Pn**	**05 54 59.5**	**-1.9**
GSTR				*e*Sn	**Sn**	**05 55 18.6**	**-0.1**
AMKA	**Amchitka**	**1.65**	**264**	P	**Pn**	**05 55 00.8**	**-4.6**
SMY	**Shemya**	**4.95**	**286**	P	**Pn**	**05 55 49.1**	**-1.0**
SMY				S	**Sn**	**05 56 47.9**	**+1.9**
FX1	**Attu Island--F**	**5.53**	**287**	P	**Pn**	**05 55 57.5**	**-0.6**
NIKO	**Nikolski**	**5.83**	**73**	*e*Pn	**Pn**	**05 55 58.9**	**-3.3**
OKFG	**Magazine Ridge**	**6.47**	**70**	P	**Pn**	**05 56 10.9**	**0.0**
OKFG				S	**Sn**	**05 57 24.6**	**+1.3**
UNV	**Unalaska Valle**	**7.39**	**68**	*e*Pn	**Pn**	**05 56 23.9**	**+0.4**
AKUT	**Akutan**	**7.88**	**66**	*e*Pn	**Pn**	**05 56 30.3**	**+0.2**
FALS	**False Pass**	**9.39**	**64**	*e*Pn	**Pn**	**05 56 51.2**	**+0.5**
FALS				*e*Sn	**Sn**	**05 58 32.1**	**-2.4**
SDPT	**Sand Point**	**11.14**	**63**	*e*Pn	**Pn**	**05 57 12.8**	**-1.9**
CHGN	**Chignik**	**12.50**	**60**	*e*Pn	**Pn**	**05 57 27.1**	**-6.0**
GAMB	**Gambell**	**12.68**	**13**	*e*Pn	**Pn**	**05 57 37.3**	**+1.7**
PETK	**Petropavlovsk-**	**14.86**	**285**	P	**Pn**	**05 58 00.8**	**-3.6**
0.1nm,0.3s,baz=272,slow=17,SNR=3.3							
PETK				LR	LR	06 03 33.4	
comp=Z,182nm,21.8s,baz=273,slow=36							
TNA	**Tin City**	**14.95**	**17**	*e*Pn	**Pn**	**05 58 05.1**	**-0.4**
61nm,2.4s							
OHAK	**Old Harbor**	**15.45**	**59**	*e*P	**Pn**	**05 58 12.3**	**+0.3**
16nm,0.3s							
SVW2	**Sparrevohn**	**15.61**	**44**	*e*P	**Pn**	**05 58 14.5**	**+0.5**
KDAK	**Kodiak Island**	**15.93**	**57**	P	**Pn**	**05 58 14.1**	**-4.1**
KDAK	**Kodiak Island**	**15.93**	**57**	*e*P	**Pn**	**05 58 14.2**	**-3.9**
KDAK				*e*		06 01 08.9	
KDAK				pmax	pmax		
comp=Z,22nm,0.5s							
KDAK	**Kodiak Island**	**15.93**	**57**	*e*Pn	**Pn**	**05 58 14.2**	**-3.9**
comp=Z,22nm,0.5s							
KDAK				*e*Sn	**Sn**	**06 01 08.9**	**-4.8**
TTA	**Tatalina**	**16.37**	**38**	*e*P	**Pn**	**05 58 25.6**	**+2.0**
RSO	**Redoubt South**	**16.61**	**48**	*e*P	**Pn**	**05 58 29.0**	**+2.4**
SLKM	**Skilak Lake**	**17.81**	**49**	*e*P	**Pn**	**05 58 41.3**	**0.0**
SEW	**Seward**	**18.07**	**51**	*e*P	**Pn**	**05 58 42.4**	**-2.0**
BILL	**Biilibino**	**18.18**	**341**	*e*P	**Pn**	**05 58 48.1**	**+2.4**
BILL				pmax	pmax		
comp=Z,29nm,1.2s							
BILL	**Biilibino**	**18.18**	**341**	*e*Pn	**Pn**	**05 58 48.1**	**+2.4**
comp=Z,29nm,1.2s							
CHUM	**Lake Minchumin**	**18.29**	**38**	*e*P	**Pn**	**05 58 47.9**	**+0.8**
comp=Z,10nm,0.6s							
PMR	**Palmer**	**18.66**	**46**	*e*P	**Pn**	**05 58 51.3**	**-0.2**
TRF	**Thorofare Moun**	**18.89**	**40**	*e*P	**Pn**	**05 58 52.9**	**-1.3**
comp=Z,34nm,0.8s							
SEY	**Seymchan**	**19.39**	**317**	*ce*P	**Pn**	**05 58 59.3**	**-0.9**
COLA	**College**	**20.47**	**38**	*e*P	**P**	**05 59 10.3**	**+0.2**
COLA				pmax	pmax		
comp=Z,18nm,0.9s							
COLA	**College**	**20.47**	**38**	*e*P	**P**	**05 59 10.2**	**+0.1**
comp=Z,18nm,0.9s							
BMRM	**Bremner River**	**20.60**	**50**	P	**P**	**05 59 13.6**	**+2.0**
comp=Z,466nm,0.7s							
MENT	**Mentasta**	**21.48**	**45**	*e*P	**P**	**05 59 20.9**	**-0.1**
EGAK	**Eagle**	**23.10**	**41**	*e*P	**P**	**05 59 36.8**	**-1.2**
comp=Z,14nm,0.6s,mb4.5							
DAWY	**Dawson**	**23.65**	**43**	*e*P	**P**	**05 59 42.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**25.75**	**275**	*e*P	**P**	**06 00 02.1**	**-0.2**
YSS				pmax	pmax		
comp=Z,30nm,1.0s,mb4.7							
INK	**Inuvik**	**27.03**	**35**	P	**P**	**06 00 11.9**	**-1.7**
comp=Z,2.1nm,0.6s,mb3.8,baz=250,slow=12,SNR=8.5							
INK				PcP	PcP	06 03 33.1	+0.1
comp=Z,3.2nm,0.6s,baz=293,slow=4.7,SNR=7.4							
INK	**Inuvik**	**27.03**	**35**	*e*P	**P**	**06 00 13.3**	**-0.3**
INK				*e*		06 03 33.2	
INK				pmax	pmax		
comp=Z,4.0nm,0.8s							
INK	**Inuvik**	**27.03**	**35**	*e*P	**P**	**06 00 13.3**	**-0.3**
comp=Z,4.1nm,0.8s,mb4.0							
INK				*e*PcP	PcP	06 03 33.2	+0.2
ASAJ	**Asahikawa**	**27.16**	**270**	P	**P**	**06 00 13.0**	**-2.0**
comp=Z,4.3nm,0.5s,mb4.3,baz=290,slow=8.3,SNR=4.2							
ASAJ	**Asahikawa**	**27.16**	**270**	P	**P**	**06 00 13.0**	**-2.0**
ASAJ				pmax	pmax		
comp=Z,4.0nm,0.5s							
DLBC	**Dease Lake**	**27.87**	**57**	LR	LR	06 12 37.9	
comp=Z,83nm,18.5s,baz=348,slow=39							
KLR	**Kul'dur**	**31.56**	**286**	*e*P	**P**	**06 00 49.0**	**-4.9**
MJAR	**Matsushiro Arr**	**34.26**	**261**	P	**P**	**06 01 16.5**	**-1.1**
comp=Z,0.8nm,0.3s,mb4.0,baz=46,slow=7.1,SNR=6.5							
MJAR	**Matsushiro Arr**	**34.26**	**261**	P	**P**	**06 01 16.5**	**-1.1**
MJAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
YKA	**Yellowknife Ar**	**34.76**	**47**	P	**P**	**06 01 20.7**	**-1.0**
comp=Z,3.4nm,0.8s,mb4.2,baz=282,slow=8.3,SNR=23							
YKA				PcP	PcP	06 03 54.0	+0.5
comp=Z,1.4nm,0.6s,baz=286,slow=2.8,SNR=14							
YKA				LR	LR	06 17 05.6	
comp=Z,8.1nm,18.5s,baz=200,slow=39							
YKA	**Yellowknife Ar**	**34.76**	**47**	P	**P**	**06 01 20.7**	**-1.0**
YKA				*e*		06 03 54.0	
YKA				pmax	pmax		
comp=Z,3.0nm,0.8s							
YKA				pmax	pmax		
comp=Z,1.0nm,0.6s							
YKA				MLR	MLR		
comp=Z,8.0nm,18.5s							
YKA	**Yellowknife Ar**	**34.76**	**47**	P	**P**	**06 01 20.7**	**-1.0**
YKA				PcP	PcP	06 03 54.0	+0.4
YKA				LR	LR	06 17 05.6	
NLWA	**Neilton Lookou**	**34.78**	**75**	⇓P	**P**	**06 01 22.9**	**+0.9**
comp=Z,35							
MDJ	**Mudanjiang**	**34.98**	**280**	P	**P**	**06 01 21.3**	**-2.5**
MDJ				pP	pP	06 01 33.5	-6.9
MDJ				sP	sP	06 01 40.0	-8.5
MDJ				S	**S**	**06 06 51.0**	**+0.6**
MDJ				pmax	pmax		
comp=Z,120nm,3.6s							
A05A	**Maple Falls**	**35.13**	**72**	⇑P	**P**	**06 01 25.4**	**+0.5**
baz=35							
B06A	**Marblemount**	**35.70**	**72**	⇓P	**P**	**06 01 30.4**	**+0.6**
baz=36							
A07A	**Ashnola River,**	**36.11**	**71**	⇓P	**P**	**06 01 33.9**	**+0.5**
baz=36,SNR=15							
LON	**Longmire**	**36.33**	**75**	*e*P	**P**	**06 01 37.0**	**+1.7**
LON				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.5							
LON	**Longmire**	**36.33**	**75**	*e*P	**P**	**06 01 37.0**	**+1.7**
comp=Z,4.1nm,0.6s,mb4.5							
F04A	**Amboy**	**36.36**	**76**	⇓P	**P**	**06 01 36.0**	**+0.5**
baz=36							
ETW	**Entiat**	**36.81**	**73**	*e*P	**P**	**06 01 40.6**	**+1.2**
B08A	**Colville Reser**	**37.05**	**71**	⇑P	**P**	**06 01 41.8**	**+0.5**
baz=37,SNR=13							
H04A	**Detroit Lake**	**37.13**	**78**	⇑P	**P**	**06 01 42.9**	**+0.8**
baz=37,SNR=7.5							
B09A	**Rice**	**37.71**	**70**	⇑P	**P**	**06 01 47.2**	**+0.3**
baz=38,SNR=7.6							
SNIWA	**Snively Ranch**	**37.76**	**74**	P	**P**	**06 01 48.6**	**+1.2**
RSW	**Rattlesnake Hi**	**37.84**	**74**	*e*P	**P**	**06 01 49.1**	**+1.1**
HAWA	**Hanford**	**37.87**	**74**	*e*P	**P**	**06 01 49.2**	**+0.9**
comp=Z,12nm,0.6s,mb4.9							
OD2	**Odessa Site #2**	**37.87**	**72**	*e*P	**P**	**06 01 46.7**	**-1.6**
D08A	**Wollman Farm,**	**37.91**	**73**	⇑P	**P**	**06 01 48.8**	**+0.2**
baz=38							
C09A	**Chrisman Ranch**	**37.93**	**71**	⇑P	**P**	**06 01 48.8**	**0.0**
baz=38,SNR=5.8							
CN2	**Changchun**	**37.95**	**281**	*e*P	**P**	**06 01 49.3**	**+0.3**
CN2				*e*S	**S**	**06 07 35.3**	**-0.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.8							
VIPM	**Ingram Point**	**38.18**	**77**	P	**P**	**06 01 51.9**	**+0.9**
D09A	**Jones Farm, Ri**	**38.27**	**72**	⇑P	**P**	**06 01 51.5**	**-0.2**
baz=38							
B10A	**Chitwood Farm,**	**38.31**	**70**	⇓P	**P**	**06 01 52.1**	**+0.1**
baz=38,SNR=5.3							
EDM	**Edmonton**	**38.32**	**61**	*e*P	**P**	**06 01 51.7**	**-0.3**
NEW	**Newport**	**38.39**	**70**	*e*P	**P**	**06 01 52.8**	**+0.1**
NEW				pmax	pmax		
comp=Z,26nm,0.6s							
NEW	**Newport**	**38.39**	**70**	*e*P	**P**	**06 01 52.8**	**+0.2**
comp=Z,26nm,0.6s,mb5.2							
YBH	**Yreka Blue Hor**	**38.41**	**82**	*e*P	**P**	**06 01 54.4**	**+1.5**
YBH				pmax	pmax		
comp=Z,8.0nm,1.3s							
YBH	**Yreka Blue Hor**	**38.41**	**82**	*e*P	**P**	**06 01 54.4**	**+1.5**
comp=Z,7.7nm,1.3s,mb4.4							
C10A	**Spilker Farm,**	**38.50**	**71**	⇑P	**P**	**06 01 53.7**	**+0.2**
baz=38							
A11A	**Hall Mountain,**	**38.51**	**69**	⇑P	**P**	**06 01 54.3**	**+0.7**
baz=38,SNR=12							
B11A	**Sandpoint**	**38.75**	**70**	⇑P	**P**	**06 01 55.9**	**+0.2**
baz=39,SNR=7.1							
G08A	**Pilot Rock**	**38.78**	**75**	⇓P	**P**	**06 01 55.6**	**-0.4**
baz=39							
D10A	**Wagner Farm, O**	**38.89**	**72**	⇓P	**P**	**06 01 56.5**	**-0.4**
baz=39,SNR=9.6							
K05A	**Summer Lake**	**38.97**	**80**	⇑P	**P**	**06 01 58.7**	**+1.1**
baz=39,SNR=6.2							
I07A	**Izee**	**39.09**	**77**	⇑P	**P**	**06 01 59.0**	**+0.5**
baz=39,SNR=12							
B12A	**Libby**	**39.19**	**69**	⇓P	**P**	**06 02 00.1**	**+0.7**
baz=39							
E10A	**Myers Farm, Un**	**39.27**	**73**	⇑P	**P**	**06 02 00.3**	**+0.2**
baz=39,SNR=9.4							
H08A	**Prairie City**	**39.36**	**76**	⇑P	**P**	**06 02 01.1**	**+0.3**
baz=39							
RES	**Resolute Bay**	**39.37**	**25**	P	**P**	**06 01 59.6**	**-0.9**
comp=Z,0.5nm,0.5s,mb3.6,baz=321,slow=5.6,SNR=7.9							
RES				PcP	PcP	06 04 06.8	-0.6
comp=Z,2.9nm,0.7s,baz=240,slow=3.8,SNR=13							
RES	**Resolute Bay**	**39.37**	**25**	*e*P	**P**	**06 02 00.5**	**0.0**
RES				*e*		06 04 07.4	
RES				pmax	pmax		
comp=Z,58nm,3.0s							
RES	**Resolute Bay**	**39.37**	**25**	*e*P	**P**	**06 02 00.5**	**-0.1**
comp=Z,58nm,3.0s							
RES				*e*PcP	PcP	06 04 07.3	0.0
D11A	**Klaveano Farm,**	**39.45**	**71**	⇑P	**P**	**06 02 01.1**	**-0.4**
baz=39,SNR=13							
F10A	**Beach Ranch, E**	**39.47**	**73**	⇓P	**P**	**06 02 02.0**	**+0.3**
baz=39							
C12B	**Naegeli Ranch,**	**39.63**	**70**	⇓P	**P**	**06 02 02.9**	**-0.1**
baz=40,SNR=20							
A13A	**Flathead Natio**	**39.65**	**68**	⇓P	**P**	**06 02 03.1**	**0.0**
baz=40							
LBCM	**Butte Creek Ri**	**39.76**	**83**	P	**P**	**06 02 05.0**	**+0.8**
MOD	**Modoc**	**39.80**	**81**	*e*P	**P**	**06 02 05.5**	**+1.1**
WALA	**Waterton Lakes**	**39.88**	**67**	*e*P	**P**	**06 02 05.3**	**+0.3**
comp=Z,0.2nm,0.8s							
E11A	**Bogner Ranch,**	**39.88**	**72**	⇑P	**P**	**06 02 04.4**	**-0.7**
baz=40,SNR=5.4							
G10A	**Bishop Farm, J**	**39.88**	**74**	⇓P	**P**	**06 02 05.4**	**+0.3**
baz=40,SNR=11							
B13A	**Whitefish**	**39.89**	**69**	⇓P	**P**	**06 02 05.0**	**-0.1**
baz=40,SNR=8.2							
BSMT	**Bassoo Peak**	**39.96**	**70**	*e*P	**P**	**06 02 06.1**	**+0.3**
D12A	**Red Ives Fores**	**40.03**	**71**	⇑P	**P**	**06 02 05.9**	**-0.5**
baz=40							
KSRS	**Korea Array**	**40.08**	**271**	P	**P**	**06 02 06.9**	**0.0**
comp=Z,2.6nm,0.8s,mb4.1,baz=57,slow=7.7,SNR=6.3							
KSRS				LR	LR	06 15 52.4	
comp=Z,49nm,21.9s,baz=65,slow=32							
J08A	**Circle Bar Ran**	**40.11**	**78**	⇑P	**P**	**06 02 07.2**	**+0.2**
baz=40							
F11A	**Grangeville**	**40.15**	**73**	⇓P	**P**	**06 02 07.4**	**+0.1**
baz=40							
C13A	**Hot Springs**	**40.17**	**70**	⇑P	**P**	**06 02 07.4**	**-0.1**
baz=40,SNR=12							
A14A	**Double T Ranch**	**40.20**	**67**	⇑P	**P**	**06 02 07.6**	**-0.1**
baz=40,SNR=22							
I09A	**Lost Marbles R**	**40.22**	**76**	⇓P	**P**	**06 02 08.0**	**0.0**
baz=40							
E12A	**Beaver Dam Sad**	**40.23**	**72**	⇓P	**P**	**06 02 08.0**	**0.0**
baz=40							
JTMT	**Jette**	**40.31**	**69**	*e*P	**P**	**06 02 09.1**	**+0.5**
G11A	**Walters Elk Ra**	**40.34**	**74**	⇓P	**P**	**06 02 09.1**	**+0.2**
baz=40							
YBMT	**Yellow Bay**	**40.41**	**69**	*e*P	**P**	**06 02 09.8**	**+0.3**
H10A	**Noah's Angus R**	**40.48**	**75**	⇓P	**P**	**06 02 10.0**	**-0.2**
baz=40,SNR=6.5							
WVOR	**Wild Horse Val**	**40.52**	**79**	*e*P	**P**	**06 02 11.0**	**+0.5**
WVOR				pmax	pmax		
comp=Z,9.0nm,0.9s,mb4.6							
WVOR	**Wild Horse Val**	**40.52**	**79**	*e*P	**P**	**06 02 11.0**	**+0.6**
comp=Z,8.9nm,0.9s,mb4.6							
D13A	**Huson**	**40.53**	**70**	⇓P	**P**	**06 02 09.5**	**-1.0**
baz=40,SNR=7.4							
J09A	**Fry Pan Ranch,**	**40.55**	**77**	⇑P	**P**	**06 02 10.6**	**0.0**
baz=40,SNR=7.0							
B14A	**Marquette Ranc**	**40.59**	**68**	⇓P	**P**	**06 02 11.1**	**+0.1**
baz=40							
SWMT	**Swartz Lake**	**40.59**	**70**	*e*P	**P**	**06 02 11.1**	**+0.1**
A15A	**Johnson Ranch,**	**40.59**	**67**	⇑P	**P**	**06 02 10.0**	**-1.0**
baz=40,SNR=7.4							
C14A

baz=42,SNR=12
I13A **Wildhorse Cree** 42.44 74 ⇓P P 06 02 26.3 +0.2
baz=42,SNR=17
HLID **Hailey** 42.45 75 ⇓P P 06 02 26.5 +0.2
baz=42,SNR=8.3
HLID **Hailey** 42.45 75 eP P 06 02 26.9 +0.7
comp=Z,3.7nm,0.8s,mb4.2
E16A **East Helena** 42.46 70 ⇓P P 06 02 26.1 -0.1
baz=42
H14A **Leadore** 42.49 73 ⇑P P 06 02 26.2 -0.4
baz=42,SNR=16
DLMT **Dillon** 42.55 72 eP P 06 02 27.2 +0.2
comp=Z,2.7nm,0.8s,mb4.0
B18A **Beardsley Farm** 42.58 66 ⇓P P 06 02 26.6 -0.6
baz=42,SNR=5.9
K12A **Draper Farm, C** 42.68 76 ⇑P P 06 02 28.2 +0.1
baz=43,SNR=7.6
MCMT **McKenzie Canyo** 42.69 72 eP P 06 02 28.1 -0.1
comp=Z,4.4nm,0.6s,mb4.4
J13A **Cove Ranch, Pi** 42.69 75 ⇑P P 06 02 28.2 +0.1
baz=43,SNR=18
D17A **Six Diamond Ra** 42.70 68 ⇑P P 06 02 27.9 -0.3
baz=43
G15A **Dillon** 42.72 72 ⇑P P 06 02 28.0 -0.4
baz=43,SNR=11
EGMT **Eagleton** 42.78 67 ⇑P P 06 02 28.0 -0.8
baz=43,SNR=11
EGMT **Eagleton** 42.78 67 eP P 06 02 28.6 -0.2
comp=Z,15nm,0.9s,mb4.7
N10A **Dunphy** 42.81 80 ⇑P P 06 02 29.4 +0.2
baz=43
I14A **Mackay** 42.83 74 ⇓P P 06 02 29.4 +0.1
baz=43,SNR=21
M11A **Holland Ranch,** 42.83 78 ⇑P P 06 02 29.8 +0.4
baz=43,SNR=9.4
L12A **House Creek Ra** 42.89 77 ⇓P P 06 02 30.1 +0.3
baz=43,SNR=16
H15A **Lima** 42.92 73 ⇓P P 06 02 30.2 +0.2
baz=43
BOZ **Bozeman (W)** 42.96 71 ⇑P P 06 02 30.4 0.0
baz=43,SNR=39
BOZ **Bozeman (W)** 42.96 71 eP P 06 02 30.4 +0.1
BOZ pmax pmax
comp=Z,13nm,0.6s,mb4.8
BOZ **Bozeman (W)** 42.96 71 eP P 06 02 30.4 +0.1
comp=Z,13nm,0.6s,mb4.8
E17A **Martinsdale** 42.97 69 ⇓P P 06 02 30.5 0.0
baz=43,SNR=16
NVAR **Mina Array Bea** 43.08 84 P P 06 02 31.9 +0.5
comp=Z,2.0nm,0.7s,mb3.9,baz=290,slow=7.8,SNR=19
NVAR pP pP 06 02 44.2 -4.3
comp=Z,1.7nm,0.7s,baz=280,slow=8.9,SNR=6.9
NVAR PcP PcP 06 04 20.7 +0.5
comp=Z,0.7nm,0.7s,baz=286,slow=4.5,SNR=3.8
G16A **Moss Hill, Enn** 43.09 71 ⇑P P 06 02 31.2 -0.2
baz=43,SNR=23
J14A **Carey** 43.13 75 ⇑P P 06 02 32.0 +0.3
baz=43,SNR=6.6
K13A **Stover Farm, H** 43.17 76 ⇑P P 06 02 32.7 +0.7
baz=43
D18A **Linhart Farms,** 43.19 68 ⇑P P 06 02 32.1 -0.1
baz=43,SNR=16
N11A **Elko Archery C** 43.23 79 ⇑P P 06 02 32.7 +0.1
baz=43
I15A **Monteview** 43.36 73 ⇓P P 06 02 34.1 +0.5
baz=43
M12A **Wells** 43.38 78 ⇑P P 06 02 34.2 +0.5
baz=43,SNR=6.3
F17A **Fitzpatrick Pl** 43.39 70 ⇑P P 06 02 33.6 -0.2
baz=43,SNR=15
E18A **Harlowton** 43.47 69 ⇓P P 06 02 34.8 +0.4
baz=43,SNR=23
P10A **Eureka** 43.49 81 ⇑P P 06 02 35.0 +0.3
baz=43
QLMT **Earthquake Lak** 43.53 72 eP P 06 02 35.4 +0.4
comp=Z,2.8nm,0.4s,mb4.3
L13A **Double Diamond** 43.58 76 ⇑P P 06 02 35.8 +0.5
baz=44,SNR=6.2
N12A **Clover Valley,** 43.63 78 ⇓P P 06 02 36.4 +0.5
baz=44,SNR=6.5
N12A **Clover Valley,** 43.63 78 eP P 06 02 36.6 +0.8
comp=Z,10nm,1.0s,mb4.5
G17A **Pierce Place,** 43.66 71 ⇓P P 06 02 35.9 -0.1
baz=44,SNR=8.6
O11A **Cowboy Ranch,** 43.68 80 ⇓P P 06 02 36.7 +0.5
baz=44,SNR=5.4
H16A **Russell Place,** 43.71 72 ⇓P P 06 02 36.4 0.0
baz=44,SNR=20
J15A **Blackfoot** 43.73 74 ⇑P P 06 02 37.8 +1.2
baz=44,SNR=7.7
K14A **Jones Ranch, D** 43.78 75 ⇑P P 06 02 38.1 +1.2
baz=44
M13A **Montello** 43.87 77 ⇓P P 06 02 37.9 +0.2
baz=44,SNR=7.0
M13A **Montello** 43.87 77 eP P 06 02 38.2 +0.5
comp=Z,5.8nm,1.0s,mb4.3
F18A **Big Timber** 43.94 69 ⇑P P 06 02 37.9 -0.3
baz=44,SNR=7.5
Q10A **Clear Creek Ra** 44.02 82 ⇑P P 06 02 39.4 +0.5
baz=44
I16A **Newdale** 44.03 73 ⇓P P 06 02 39.7 +0.8
baz=44
L14A **Malta** 44.03 76 ⇑P P 06 02 39.6 +0.6
baz=44,SNR=13
K15A **Arbon** 44.09 75 ⇓P P 06 02 40.1 +0.7
baz=44,SNR=7.5
YFT **Old Faithful** 44.09 72 eP P 06 02 41.7 +2.3
comp=Z,12nm,0.9s,mb4.6
N13A **Wendover, West** 44.14 78 ⇓P P 06 02 40.3 +0.4
baz=44
O12A **Currie** 44.16 79 ⇑P P 06 02 40.3 +0.3
baz=44,SNR=14
VES **Vestal, Richgr** 44.22 87 ⇑P P 06 02 40.0 -0.6
baz=44
H17A **Grant Village** 44.28 72 ⇑P P 06 02 42.2 +1.2
baz=44,SNR=19
M14A **Sheep Mountain** 44.28 77 ⇓P P 06 02 41.4 +0.4
baz=44
LKWY **Lake** 44.28 71 eP P 06 02 42.8 +1.8
LKWY pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
LKWY **Lake** 44.28 71 eP P 06 02 42.8 +1.8
comp=Z,10.0nm,0.8s,mb4.6
J16A **Bone** 44.30 74 ⇓P P 06 02 42.1 +1.0
baz=44
IMW **Indian Meadow** 44.34 72 eP P 06 02 42.4 +1.0
comp=Z,5.6nm,1.0s,mb4.2
G18A **Lazy EL Ranch,** 44.36 70 ⇑P P 06 02 41.1 -0.4
baz=44
R10A **Warm Springs** 44.41 82 ⇑P P 06 02 41.8 -0.2
baz=44,SNR=5.2
RRI2 **Red Ridge** 44.43 73 eP P 06 02 43.8 +1.7
comp=Z,6.0nm,0.7s,mb4.4
S10A **Tonopah Range,** 44.45 83 ⇑P P 06 02 42.4 0.0
baz=44,SNR=9.9
HVU **Hansel Valley** 44.47 76 eP P 06 02 43.5 +1.1
HVU pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
HVU **Hansel Valley** 44.47 76 eP P 06 02 43.5 +1.1
comp=Z,7.3nm,0.7s,mb4.5
Q11A **Duckwater** 44.47 81 ⇓P P 06 02 42.4 -0.1
baz=44,SNR=7.2
P12A **McGill** 44.54 80 ⇓P P 06 02 43.1 +0.1
baz=44,SNR=8.5
K16A **Soda Springs** 44.57 74 ⇓P P 06 02 43.9 +0.7
baz=44,SNR=10.0
L15A **Malad City** 44.57 75 ⇑P P 06 02 43.1 -0.1
baz=44
TPAW **Teton Pass** 44.57 73 eP P 06 02 44.2 +1.0
comp=Z,32nm,2.2s,mb4.7
REDW **Red Top Meadow** 44.70 73 eP P 06 02 45.7 +1.4
comp=Z,24nm,1.9s,mb4.6
LOHW **Long Hollow** 44.70 73 eP P 06 02 45.1 +0.7
comp=Z,2.7nm,0.7s,mb4.1
ISA **Isabella** 44.71 87 ⇑P P 06 02 43.9 -0.6
baz=45
N14A **Grayback Hills** 44.76 77 ⇓P P 06 02 45.2 +0.4
baz=45
R11A **Troy Canyon, C** 44.81 82 ⇓P P 06 02 45.2 0.0
baz=45,SNR=8.6
Q12A **Willow Creek R** 44.85 80 ⇑P P 06 02 46.2 +0.6
baz=45
K17A **Gardner Place,** 45.01 74 ⇑P P 06 02 47.3 +0.5
baz=45
MPMC **Manual Prospec** 45.07 86 ⇑P P 06 02 47.4 +0.1
baz=45
P13A **Bates Ranch, G** 45.10 79 ⇓P P 06 02 47.6 0.0
baz=45,SNR=6.9

L16A **Fish Haven** 45.14 75 ⇑P P 06 02 48.1 +0.3
baz=45,SNR=7.1
S11A **Rachel** 45.15 83 ⇑P P 06 02 48.3 +0.4
baz=45
FURC **Furnace Creek,** 45.20 85 ⇓P P 06 02 48.6 +0.2
baz=45
J18A **Kendall Valley** 45.28 73 ⇓P P 06 02 49.1 +0.1
baz=45,SNR=9.7
HWUT **Hardware Ranch** 45.30 75 eP P 06 02 49.7 +0.6
comp=Z,49nm,2.5s,mb4.8
DUG **Dugway** 45.39 78 ⇑P P 06 02 50.1 +0.3
baz=45,SNR=9.4
DUG **Dugway** 45.39 78 eP P 06 02 50.3 +0.5
DUG pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
DUG **Dugway** 45.39 78 eP P 06 02 50.3 +0.5
comp=Z,6.9nm,0.6s,mb4.6
Q13A **Wheeler Ranch,** 45.40 80 ⇓P P 06 02 50.2 +0.3
baz=45,SNR=10.0
L17A **Cokeville** 45.42 74 ⇑P P 06 02 50.2 +0.2
baz=45
R12A **Pony Springs,** 45.43 81 ⇓P P 06 02 50.1 0.0
baz=45,SNR=6.6
M16A **Huntsville** 45.43 76 ⇑P P 06 02 50.2 +0.1
baz=45,SNR=9.4
FCC **Fort Churchill** 45.49 47 eP P 06 02 49.3 -1.1
comp=Z,0.3nm,1.3s
LAO **LASA Array** 45.53 66 eP P 06 02 51.0 +0.2
comp=Z,16nm,0.8s,mb4.8
P14A **Drum Mountains** 45.60 79 ⇑P P 06 02 51.5 0.0
baz=46,SNR=12
K18A **Toltan Ranch,** 45.61 73 ⇑P P 06 02 52.0 +0.5
baz=46,SNR=16
S12A **Delamar Landin** 45.73 82 ⇑P P 06 02 52.8 +0.3
baz=46,SNR=8.3
T11A **Corn Creek, Al** 45.73 83 ⇓P P 06 02 52.4 -0.1
baz=46,SNR=15
BW06 **Boulder Array** 45.82 73 ⇓P P 06 02 53.0 -0.2
baz=46,SNR=23
BW06 **Boulder Array** 45.82 73 eP P 06 02 53.6 +0.4
comp=Z,16nm,1.0s,mb4.7
PDAR **Pinedale Array** 45.82 73 P P 06 02 53.1 -0.1
comp=Z,10nm,0.5s,mb4.8,baz=308,slow=3.6,SNR=95
PDAR LR LR 06 19 26.0
comp=Z,44nm,21.0s,baz=136,slow=32
Q14A **Sevier Lake (B** 45.84 79 ⇓P P 06 02 53.8 +0.4
baz=46,SNR=11
R13A **O'Grain Ranch,** 45.91 81 ⇑P P 06 02 54.0 0.0
baz=46
M17A **Scullys Gap (B** 45.92 75 ⇓P P 06 02 54.0 +0.1
baz=46,SNR=5.5
SHOC **Shoshone** 45.93 85 ⇓P P 06 02 54.0 -0.1
baz=46
JLU **Jordanelle** 45.97 76 eP P 06 02 55.3 +0.9
comp=Z,8.9nm,1.1s,mb4.4
NLU **North Lily Min** 45.98 78 eP P 06 02 54.8 +0.3
comp=Z,6.1nm,0.9s,mb4.3
GSC **Goldstone** 45.98 86 ⇑P P 06 02 54.5 0.0
baz=46
GSC **Goldstone** 45.98 86 eP P 06 02 54.4 -0.2
GSC pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
GSC **Goldstone** 45.98 86 eP P 06 02 54.4 -0.1
comp=Z,5.6nm,0.9s,mb4.3
L18A **Fontenelle, Gr** 46.03 74 ⇑P P 06 02 54.8 0.0
baz=46,SNR=5.8
P15A **Leamington** 46.09 78 ⇑P P 06 02 55.3 0.0
baz=46
BFSC **Mount Baldy St** 46.15 88 ⇑P P 06 02 55.9 +0.1
baz=46
O16A **Springville** 46.18 77 ⇑P P 06 02 56.3 +0.3
baz=46,SNR=5.7
DAU **Daniels Canyon** 46.20 77 eP P 06 02 57.4 +1.2
K19A **Absolon Red Bu** 46.21 72 ⇓P P 06 02 55.7 -0.6
baz=46,SNR=24
MPU **Maple Canyon** 46.21 77 eP P 06 02 56.9 +0.6
comp=Z,4.9nm,0.7s,mb4.3
M18A **Lyman** 46.31 75 ⇓P P 06 02 56.9 -0.1
baz=46
L19A **Farson** 46.33 73 ⇓P P 06 02 57.4 +0.2
baz=46,SNR=8.8
S13A **Holt Ranch, En** 46.36 81 ⇑P P 06 02 57.6 +0.1
baz=46,SNR=8.0
Q15A **Filmore** 46.38 79 ⇑P P 06 02 57.7 0.0
baz=46
K20A **Yellowstone Ra** 46.61 72 ⇓P P 06 02 58.8 -0.6
baz=46,SNR=7.4
CCUT **Cedar City** 46.68 81 eP P 06 03 00.2 +0.2
comp=Z,2.4nm,0.8s,mb4.0
T13A **Saint George** 46.68 82 ⇑P P 06 02 59.5 -0.5
baz=47,SNR=5.4
MSU **Marysvale** 46.81 79 eP P 06 03 01.7 +0.7
N18A **Larsen Ranch,** 46.82 75 ⇑P P 06 03 00.6 -0.4
baz=47,SNR=7.7
R15A **Junction** 46.94 80 ⇑P P 06 03 02.2 +0.3
baz=47
SONM **Songino Array** 46.95 297 P P 06 03 01.9 -0.1
comp=Z,0.6nm,0.5s,mb3.5,baz=329,slow=44,SNR=3.3
SONM LR LR 06 24 01.0
comp=Z,141nm,20.7s,baz=344,slow=38
SONM **Songino Array** 46.95 297 P P 06 03 01.9 -0.1
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,141nm,20.7s
L20A **Wamsutter** 47.00 73 ⇑P P 06 03 02.5 +0.1
baz=47
U13A **Pakoon Wash** 47.03 83 ⇑P P 06 03 03.1 +0.3
baz=47,SNR=8.0
GMRC **Granite Mounta** 47.04 86 ⇑P P 06 03 02.7 -0.1
baz=47
P17A **Butcher Ranch,** 47.09 77 ⇑P P 06 03 03.5 +0.3
baz=47
T14A **Hurricane** 47.16 81 ⇑P P 06 03 03.7 0.0
baz=47,SNR=7.7
N19A **John Jarvie Ra** 47.17 75 ⇑P P 06 03 03.7 0.0
baz=47,SNR=5.8
Q16A **Castle Valley** 47.17 78 ⇑P P 06 03 04.2 +0.4
baz=47,SNR=11
S15A **Panguitch** 47.22 80 ⇑P P 06 03 04.3 +0.1
baz=47
ZAK **Zakamensk** 47.23 301 eP P 06 03 01.8 -2.3
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
P18A **Preston Nutter** 47.30 77 ⇑P P 06 03 05.3 +0.5
baz=47,SNR=9.3
R16A **Teasdale** 47.38 79 ⇑P P 06 03 06.1 +0.7
baz=47,SNR=14
V13A **Grand Canyon W** 47.38 83 ⇑P P 06 03 05.4 -0.1
baz=47
M20A **Sweetwater, Wa** 47.40 73 ⇓P P 06 03 05.8 +0.3
baz=47,SNR=5.3
SRU **San Rafael** 47.45 77 ⇑P P 06 03 06.0 +0.1
baz=47,SNR=14
SRU **San Rafael** 47.45 77 eP P 06 03 06.5 +0.6
SRU pmax pmax
comp=Z,11nm,0.9s,mb4.6
SRU **San Rafael** 47.45 77 eP P 06 03 06.5 +0.5
comp=Z,11nm,0.9s,mb4.6
U14A **Mt Trumbull** 47.52 82 ⇑P P 06 03 06.6 +0.1
baz=47
O19A **Miners Draw (B** 47.56 75 ⇓P P 06 03 06.7 -0.1
baz=48,SNR=30
L21A **Rawlins** 47.60 72 ⇑P P 06 03 06.8 -0.3
baz=48,SNR=17
T15A **Red Dirt Ranch** 47.62 81 ⇓P P 06 03 07.4 0.0
baz=48,SNR=5.8
Q18A **Rafter H Ranch** 47.69 77 ⇑P P 06 03 07.6 -0.2
baz=48,SNR=9.5
N20A **Spence Gulch,** 47.75 74 ⇑P P 06 03 08.4 +0.1
baz=48,SNR=7.3
IRM **Iron Mountain** 47.76 86 ⇓P P 06 03 08.0 -0.4
baz=48
R17A **Hanksville Air** 47.76 78 ⇑P P 06 03 08.2 -0.2
baz=48,SNR=11
M21A **Separation Pea** 47.82 73 ⇓P P 06 03 08.3 -0.5
baz=48,SNR=6.5
RWWY **Rawlins** 47.86 73 eP P 06 03 09.0 -0.1
comp=Z,7.4nm,0.8s,mb4.6
W13A **Hualapai Mount** 47.93 84 ⇓P P 06 03 09.3 -0.4
baz=48,SNR=5.2
P19A **Cripple Cowboy** 48.06 76 ⇓P P 06 03 10.5 -0.2
baz=48,SNR=21
U15A **North Rim** 48.06 81 ⇓P P 06 03 10.9 +0.3
baz=48,SNR=12
HHC **Hu-ho-hao-te** 48.06 286 eP P 06 03 10.8 +0.1
HHC pP pP 06 03 26.3 -1.7
HHC PcP PcP 06 04 38.3 +0.9

HHC PP PP 06 05 03.3 +0.2
HHC ScP ScP 06 08 25.8 +0.2
HHC PcS PcS 06 08 34.5 +1.3
HHC S **S** **06 10 03.5 -0.2**
HHC ScS ScS 06 12 55.0 -1.9
HHC SS SS 06 13 26.8 -6.2
HHC pmax pmax
comp=Z,20nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,120nm,5.9s
HHC LR LR
comp=N,330nm,14.3s
HHC LR LR
comp=E,950nm,15.3s
HHC LR LR
comp=Z,230nm,15.3s
V14A **Boquillas Ranc** 48.07 83 ⇑P P 06 03 10.5 -0.3
baz=48
L22A **Ellis Ranch, M** 48.12 72 ⇑P P 06 03 11.3 +0.3
baz=48,SNR=6.8
O20A **White River Ci** 48.19 75 ⇑P P 06 03 11.0 -0.6
baz=48,SNR=17
S17A **Black Ridge (B** 48.20 79 ⇓P P 06 03 11.7 -0.1
baz=48
N21A **Black Mountain** 48.24 74 ⇓P P 06 03 11.5 -0.6
baz=48,SNR=6.5
RSSD **Black Hills** 48.27 68 eP P 06 03 12.2 0.0
RSSD pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
RSSD **Black Hills** 48.27 68 eP P 06 03 12.2 0.0
comp=Z,7.0nm,0.6s,mb4.7
R18A **Canyonlands Na** 48.28 78 ⇑P P 06 03 11.5 -0.8
baz=48,SNR=7.3
X13A **Yucca** 48.30 84 ⇑P P 06 03 11.9 -0.6
baz=48
Q19A **Hogan Spring (** 48.31 77 ⇑P P 06 03 11.9 -0.7
baz=48,SNR=11
W14A **Seligman** 48.35 83 ⇑P P 06 03 12.6 -0.4
baz=48
V15A **Kaibab Nationa** 48.52 82 ⇑P P 06 03 14.2 -0.1
baz=48,SNR=6.8
O21A **Pagoda** 48.61 74 ⇑P P 06 03 14.9 0.0
baz=48
T17A **Navajo Res., N** 48.61 80 ⇑P P 06 03 14.6 -0.3
baz=48
S18A **Hurst Farm, Bl** 48.66 79 ⇑P P 06 03 14.9 -0.4
baz=49,SNR=19
R19A **Curley Farm, L** 48.73 77 ⇓P P 06 03 15.2 -0.6
baz=49,SNR=11
N22A **Wattenberg Ran** 48.85 73 ⇓P P 06 03 16.7 0.0
baz=49,SNR=7.2
PV04 **Paradox Valley** 48.88 77 eP P 06 03 17.0 0.0
Q20A **Ridgley Place,** 48.90 76 ⇓P P 06 03 16.3 -0.8
baz=49,SNR=5.3
U17A **Shonto** 48.95 80 ⇓P P 06 03 17.3 -0.2
baz=49
X14A **Yava** 48.96 84 ⇓P P 06 03 17.3 -0.3
baz=49
T18A **Mexican Hat** 49.09 79 ⇓P P 06 03 17.8 -0.8
baz=49,SNR=14
S19A **Harvey Farm, M** 49.15 78 ⇑P P 06 03 18.6 -0.4
baz=49,SNR=17
WUAZ **Wupatki** 49.21 82 ⇓P P 06 03 19.6 0.0
baz=49
WUAZ **Wupatki** 49.21 82 eP P 06 03 20.2 +0.7
comp=Z,4.4nm,0.8s,mb4.4
Y14A **Wickenburg** 49.24 84 ⇑P P 06 03 19.3 -0.5
baz=49
PV01 **Paradox Valley** 49.25 77 eP P 06 03 19.5 -0.3
comp=Z,1μm,0.7s
PV01 ePP pP 06 03 34.9 -2.3
NJ2 **Nanjing** 49.25 272 eP P 06 03 21.5 +1.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
Z13A **Yuma Proving G** 49.33 86 ⇑P P 06 03 19.9 -0.5
baz=49
R20A **Redvale** 49.33 77 ⇓P P 06 03 20.1 -0.4
baz=49,SNR=10
X15A **Humboldt** 49.36 83 ⇑P P 06 03 20.8 +0.1
baz=49
V17A **Tonalea, Kykot** 49.50 81 ⇑P P 06 03 22.0 +0.3
baz=49,SNR=8.5
U18A **Rough Rock, Ch** 49.55 80 ⇓P P 06 03 22.3 +0.2
baz=50
Y15A **Casa Rosa Ranc** 49.65 84 ⇓P P 06 03 22.7 -0.2
baz=50
Q22A **Crested Butte,** 49.79 75 ⇓P P 06 03 23.8 -0.1
baz=50,SNR=6.1
T19A **Beclabito** 49.81 79 ⇓P P 06 03 23.8 -0.3
baz=50,SNR=20
MVCO **Mesa Verde** 49.88 78 ⇑P P 06 03 24.5 -0.1
baz=50
MVCO **Mesa Verde** 49.88 78 eP P 06 03 24.8 +0.1
comp=Z,3.9nm,0.6s,mb4.5
X16A **Lo Mia Camp, P** 49.89 83 ⇓P P 06 03 25.0 +0.2
baz=50
V18A **Ganado** 49.98 81 ⇓P P 06 03 25.4 +0.1
baz=50
ISCO **Idaho Springs** 49.98 74 eP P 06 03 25.6 +0.3
ISCO pmax pmax
comp=Z,18nm,1.9s,mb4.7
ISCO **Idaho Springs** 49.98 74 eP P 06 03 25.6 +0.3
comp=Z,18nm,1.9s,mb4.7
S21A **Coal Bank Pass** 50.02 77 ⇓P P 06 03 26.1 +0.4
baz=50
U19A **Dine' College,** 50.04 79 ⇓P P 06 03 25.5 -0.4
baz=50,SNR=6.9
114A **Black Gap (USA** 50.11 86 ⇓P P 06 03 26.3 -0.1
baz=50
SPB4 **Spitsbergen Ar** 50.20 356 eP P 06 03 26.2 -0.3
SPB4 ePP pP 06 03 40.7 -3.3
SPITS **Spitsbergen Ar** 50.20 356 P P 06 03 26.0 -0.5
comp=Z,4.7nm,0.7s,mb4.5,baz=55,slow=7.2,SNR=16
SPITS pP pP 06 03 40.7 -3.3
comp=Z,5.9nm,0.8s,baz=57,slow=8.0,SNR=4.7
SPITS **Spitsbergen Ar** 50.20 356 P P 06 03 26.0 -0.5
SPITS *PP pP 06 03 40.7 -3.3
SPITS pmax pmax
comp=Z,5.0nm,0.7s
SPITS pmax pmax
comp=Z,6.0nm,0.8s
SPITS **Spitsbergen Ar** 50.20 356 P P 06 03 26.0 -0.5
SPITS pP pP 06 03 40.7 -3.3
Y16A **Circle Bar Ran** 50.23 83 ⇓P P 06 03 27.2 -0.1
baz=50
R22A **Saguache, Gunn** 50.29 76 ⇓P P 06 03 28.3 +0.6
baz=50,SNR=5.7
AGMN **Agassiz Refuge** 50.35 59 eP P 06 03 26.9 -1.1
comp=Z,54nm,2.3s,mb5.1
W18A **Petrified Fore** 50.49 81 ⇑P P 06 03 29.5 +0.3
baz=50
115A **Sonoran Desert** 50.55 85 ⇓P P 06 03 29.9 +0.2
baz=50
Z16A **Peralta Trail,** 50.62 84 ⇑P P 06 03 30.0 -0.3
baz=50
214A **Organ Pipe Nat** 50.69 86 ⇓P P 06 03 30.5 -0.3
baz=51
X18A **Snowflake** 50.74 82 ⇑P P 06 03 31.2 +0.1
baz=51,SNR=5.9
Y17A **Roosevelt** 50.74 83 ⇓P P 06 03 31.2 0.0
baz=51
V20A **Brimhall** 50.82 79 ⇓P P 06 03 31.6 -0.1
baz=51
T22A **Edith** 50.98 77 ⇓P P 06 03 33.3 +0.4
baz=51,SNR=8.0
X19A **St. Johns** 51.22 81 ⇑P P 06 03 34.8 +0.1
baz=51
V21A **Milan** 51.32 79 ⇑P P 06 03 35.3 -0.1
baz=51,SNR=5.2
SDCO **Great Sand Dun** 51.36 76 eP P 06 03 36.5 +0.8
comp=Z,4.0nm,0.8s,mb4.5
OGNE **Ogallala** 51.38 70 eP P 06 03 36.1 +0.2
comp=Z,20nm,0.9s,mb5.1
117A **Oracle** 51.56 84 ⇑P P 06 03 37.4 0.0
baz=52
X20A **Quemado** 51.63 81 ⇑P P 06 03 38.0 +0.2
baz=52,SNR=10
V22A **San Miguel Ran** 51.70 78 ⇓P P 06 03 38.1 -0.1
baz=52
TUC **Tucson** 51.71 84 eP P 06 03 38.0 -0.4
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TUC **Tucson** 51.71 84 eP P 06 03 38.0 -0.5
comp=Z,2.7nm,0.8s,mb4.3
118A **Homack Ranch,** 51.99 84 ⇓P P 06 03 40.4 -0.1
baz=52,SNR=5.5
Y20A **Horse Springs,** 52.13 81 ⇑P P 06 03 41.7 +0.2

baz=52,SNR=6.2
X21A Alamocita Cree 52.13 80 ⇓P **P 06 03 42.0 +0.5**
baz=52,SNR=8.6
V23A Ortiz Mt. (NFS 52.25 78 ⇓P **P 06 03 42.8 +0.4**
baz=52
218A Dragoon 52.40 84 ⇑P **P 06 03 43.6 +0.1**
baz=52
Y21A Point of Rocks 52.49 81 ⇑P **P 06 03 44.7 +0.5**
baz=52,SNR=6.1
Z20A Nine Sixteen R 52.53 82 ⇓P **P 06 03 44.6 +0.1**
baz=52
LAZ Ladron 52.56 80 *e*P **P 06 03 45.1 +0.4**
comp=Z,2.9nm,0.8s,mb4.4
X22A Bernardo 52.57 80 ⇓P **P 06 03 45.7 +1.0**
baz=52
ANMO Albuquerque 52.61 79 *e*P **P 06 03 45.3 +0.2**
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 52.61 79 *e*P **P 06 03 45.3 +0.2**
comp=Z,2.1nm,0.8s,mb4.2
W23A Werner Place, 52.66 78 ⇓P **P 06 03 45.6 +0.1**
baz=53
ECSD EROS Data Cent 52.74 64 *e*P **P 06 03 44.2 -1.6**
comp=Z,68nm,2.8s,mb5.2
318A Bisbee 52.80 85 ⇓P **P 06 03 46.4 -0.1**
baz=53
219A White Tail Can 52.87 84 ⇑P **P 06 03 47.1 0.0**
baz=53
U25A Circle Dot Ran 52.90 76 ⇑P **P 06 03 47.4 +0.3**
baz=53
Y22A Socorro 52.98 80 ⇑P **P 06 03 48.1 +0.3**
baz=53,SNR=9.3
BNM Barren Site 53.04 80 *e*P **P 06 03 48.5 +0.2**
comp=Z,1.8nm,0.6s,mb4.3
W24A Lazy 6 Ranch, 53.08 78 ⇓P **P 06 03 48.7 +0.2**
baz=53,SNR=12
WHN Wuhan 53.09 274 P **P 06 03 48.5 -0.2**
V25A Rancho No Teng 53.14 77 ⇓P **P 06 03 49.0 +0.1**
baz=53
319A Douglas 53.28 84 ⇑P **P 06 03 49.6 -0.5**
baz=53
U26A Atchley Ranch, 53.30 76 ⇑P **P 06 03 50.0 -0.1**
baz=53,SNR=7.9
220A Playas Peak, P 53.39 83 ⇓P **P 06 03 50.5 -0.4**
baz=53,SNR=7.1
121A Cookes Peak, D 53.42 82 ⇑P **P 06 03 50.9 -0.2**
baz=53,SNR=6.3
Y23A Lovelace Mesa, 53.54 80 ⇑P **P 06 03 52.1 +0.2**
baz=54,SNR=12
W25A X Bar L Ranch, 53.65 77 ⇑P **P 06 03 52.6 -0.1**
baz=54,SNR=11
V26A Tequesquite Ra 53.67 76 ⇓P **P 06 03 52.6 -0.3**
baz=54,SNR=11
320A Kipp Ranch, An 53.78 84 ⇓P **P 06 03 53.7 0.0**
baz=54
Z23A Rita Site, Whi 53.88 80 ⇑P **P 06 03 54.4 0.0**
baz=54
Y24A Capitan 53.92 79 ⇑P **P 06 03 54.8 +0.1**
baz=54,SNR=28
X25A Clemmons Ranch 53.99 78 ⇑P **P 06 03 55.2 0.0**
baz=54,SNR=5.6
222A Williams Famil 54.13 82 ⇓P **P 06 03 56.1 -0.2**
baz=54
W26A Owens Ranch, T 54.16 77 ⇑P **P 06 03 56.5 +0.1**
baz=54
ZALV Zalesovo Beam 54.21 314 P **P 06 03 56.5 0.0**
comp=Z,0.4nm,0.4s,mb3.8,baz=101,slow=1.5,SNR=2.3
ZALV PcP PcP 06 05 00.3 +0.2
comp=Z,3.9nm,0.6s,baz=40,slow=3.8,SNR=13
ZALV LR LR 06 28 15.4
comp=Z,37nm,20.5s,baz=42,slow=37
ZALV Zalesovo Beam 54.21 314 P **P 06 03 56.5 0.0**
ZALV 06 05 00.3
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ZALV MLR MLR
comp=Z,37nm,20.5s
Z24A Sheeppen Canyo 54.37 80 ⇑P **P 06 03 57.6 -0.3**
baz=54
Y25A Mesa, Roswell 54.38 79 ⇑P **P 06 03 57.6 -0.5**
baz=54,SNR=5.6
X26A CR and CF Fran 54.49 77 ⇓P **P 06 03 58.7 -0.2**
baz=54
W27A Bowe Ranch, En 54.60 76 ⇓P **P 06 03 59.4 -0.3**
baz=54
124A Stringfield Ra 54.74 80 ⇓P **P 06 04 00.5 -0.2**
baz=55
Z25A Roswell 54.80 79 ⇓P **P 06 04 00.8 -0.3**
baz=55
Y26A Elida 54.91 78 ⇓P **P 06 04 01.5 -0.3**
baz=55
Z26A Caprock 55.26 79 ⇓P **P 06 04 03.9 -0.5**
baz=55,SNR=7.5
125A Gardner Draw, 55.26 80 ⇓P **P 06 04 04.0 -0.4**
baz=55,SNR=6.9
COWI Conover 55.30 58 *e*P **P 06 04 03.2 -1.3**
comp=Z,3.4nm,0.5s,mb4.6
Y27A Causey 55.34 78 ⇑P **P 06 04 04.4 -0.6**
baz=55,SNR=11
MNTX Cornudas Mount 55.47 81 *e*P **P 06 04 05.7 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
MSTX Muleshoe 55.52 77 ⇓P **P 06 04 05.9 -0.4**
baz=55
225A Deer Hill, Car 55.53 80 ⇓P **P 06 04 06.3 -0.1**
baz=55
AMTX Amarillo 55.56 76 *e*P **P 06 04 06.1 -0.4**
comp=Z,5.5nm,0.7s,mb4.7
324A Moseley Ranch, 55.59 81 ⇑P **P 06 04 06.5 -0.2**
baz=56
126A Clayton Basin, 55.66 79 ⇓P **P 06 04 06.8 -0.4**
baz=56
Z27A Tatum 55.70 78 ⇓P **P 06 04 06.9 -0.6**
baz=56
GDL2 Guadalupe Moun 55.76 80 *e*P **P 06 04 07.5 -0.4**
comp=Z,1.0nm,0.4s,mb4.2
LZH Lanzhou 55.76 287 P **P 06 04 08.8 +0.9**
LZH pP pP 06 04 21.8 -3.9
LZH sP sP 06 04 28.0 -5.4
LZH pmax pmax
comp=Z,29nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,130nm,4.2s
GTA Gaotai 55.91 292 P **P 06 04 09.8 +0.9**
GTA pP pP 06 04 24.3 -2.4
GTA pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
325A Bean Ranch, Si 55.95 81 ⇑P **P 06 04 09.0 -0.4**
baz=56,SNR=9.2
226A Malaga, Loving 56.01 80 ⇓P **P 06 04 09.3 -0.5**
baz=56
127A Arkansas Junct 56.05 79 ⇑P **P 06 04 09.4 -0.6**
baz=56
425A Indio Mountain 56.35 82 ⇑P **P 06 04 12.0 -0.2**
baz=56,SNR=6.7
326A Caldwell Ranch 56.60 80 ⇓P **P 06 04 13.5 -0.5**
baz=56,SNR=7.9
JFWS Jewell Farm 56.80 61 *e*P **P 06 04 10.1 -5.2**
JFWS pmax pmax
comp=Z,13nm,1.0s,mb4.9
JFWS Jewell Farm 56.80 61 *e*P **P 06 04 10.1 -5.2**
comp=Z,13nm,1.0s,mb4.9
426A McDonald Obser 57.02 81 ⇑P **P 06 04 16.2 -0.8**
baz=57,SNR=6.5
328A Wristen Ranch, 57.27 79 ⇓P **P 06 04 17.9 -0.9**
baz=57,SNR=7.2
427A Hayter Ranch, 57.28 80 ⇑P **P 06 04 18.0 -0.8**
baz=57
WMOK Wichita Mounta 57.41 74 *e*P **P 06 04 18.9 -0.7**
WMOK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
WMOK Wichita Mounta 57.41 74 *e*P **P 06 04 18.9 -0.8**
comp=Z,6.2nm,0.9s,mb4.6
526A Mary Lane Ranc 57.41 82 ⇓P **P 06 04 19.3 -0.4**
baz=57,SNR=6.7
527A Woodward Ranch 57.64 81 ⇓P **P 06 04 20.6 -0.8**
baz=58
626A Big Bend Ranch 57.74 82 ⇑P **P 06 04 21.4 -0.6**
baz=58
428A Kincaid Ranch, 57.81 80 ⇑P **P 06 04 22.1 -0.4**
baz=58,SNR=9.0
ARCES ARCESS Array B 57.96 350 P **P 06 04 21.2 -1.8**
comp=Z,1.8nm,0.5s,mb4.4,baz=31,slow=8.2,SNR=22
ARCES PcP PcP 06 05 13.8 -0.6
comp=Z,2.6nm,0.7s,baz=1.1,slow=4.8,SNR=5.0
ARCES ARCESS Array B 57.96 350 P **P 06 04 21.2 -1.8**
ARCES 06 05 13.8
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES pmax pmax
comp=Z,3.0nm,0.7s
TXAR Lajitas Array 58.18 82 P **P 06 04 24.7 -0.5**
comp=Z,2.3nm,0.7s,mb4.3,baz=299,slow=5.0,SNR=31
TXAR PcP PcP 06 05 16.0 +0.1
comp=Z,1.2nm,0.8s,baz=294,slow=2.4,SNR=4.0
TXAR LR LR 06 26 21.0
comp=Z,44nm,18.5s,baz=0.0,slow=33
TXAR Lajitas Array 58.18 82 P **P 06 04 24.7 -0.4**
TXAR 06 05 16.0
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 58.18 82 P **P 06 04 24.7 -0.5**
TXAR PcP PcP 06 05 16.0 +0.1
TXAR LR LR 06 26 21.0
627A Terlingua Ranc 58.27 82 ⇑P **P 06 04 25.1 -0.6**
baz=58
628A Black Gap, Mar 58.55 81 ⇓P **P 06 04 26.7 -1.0**
baz=58,SNR=7.2
HDIL Hopedale 58.92 63 *e*P **P 06 04 29.5 -0.7**
comp=Z,12nm,0.8s,mb5.0
KURK Kurchatov 59.20 314 *de*P **P 06 04 33.4 +1.5**
KURK pmax pmax
comp=Z,7.0nm,2.5s,mb4.2
CD2 Chengdu 59.37 282 P **P 06 04 33.3 -0.1**
CD2 pP pP 06 04 49.3 -2.0
CD2 PP PP 06 06 46.3 +1.5
CD2 S **S 06 12 34.5 -2.3**
CD2 SS SS 06 16 31.3 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,160nm,7.1s
CD2 LR LR
comp=N,180nm,5.3s
CD2 LR LR
comp=Z,170nm,7.7s
CCM Cathedral Cave 59.54 66 *e*P **P 06 04 32.6 -1.9**
CCM pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CCM Cathedral Cave 59.54 66 *e*P **P 06 04 32.5 -1.9**
comp=Z,6.5nm,0.8s,mb4.7
JCT Junction City 59.75 78 *e*P **P 06 04 37.5 +1.5**
JCT pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
JCT Junction City 59.75 78 *e*P **P 06 04 37.5 +1.5**
comp=Z,7.7nm,0.6s,mb4.9
FVM French Village 60.06 66 *e*P **P 06 04 36.6 -1.4**
FVM pmax pmax
comp=Z,12nm,0.6s,mb5.1
FVM French Village 60.06 66 *e*P **P 06 04 36.6 -1.4**
comp=Z,12nm,0.6s,mb5.1
MK31 Makanchi Array 60.26 309 *e*P **P 06 04 39.6 +0.4**
MKAR Makanchi Array 60.26 309 P **P 06 04 36.5 -2.7**
comp=Z,0.8nm,0.6s,mb3.9,baz=53,slow=6.9,SNR=8.4
MKAR pP pP 06 04 53.0 -4.2
comp=Z,0.3nm,0.5s,baz=60,slow=5.9,SNR=3.1
MKAR PcP PcP 06 05 22.8 -1.1
comp=Z,0.5nm,0.5s,baz=34,slow=5.8,SNR=5.2
MKAR LR LR 06 31 20.7
comp=Z,64nm,19.0s,baz=0.3,slow=37
MKAR Makanchi Array 60.26 309 P **P 06 04 36.5 -2.7**
MKAR *PP pP 06 04 53.0 -4.2
MKAR 06 05 22.8
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR MLR MLR
comp=Z,64nm,19.0s
MIAR Mount Ida 60.63 71 *e*P **P 06 04 41.5 -0.5**
MIAR pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MIAR Mount Ida 60.63 71 *e*P **P 06 04 41.5 -0.5**
comp=Z,6.7nm,0.8s,mb4.7
GYA Guiyang 60.75 276 P **P 06 04 43.3 +0.5**
GYA pP pP 06 04 59.0 -1.8
GYA PcP PcP 06 05 28.3 +2.1
GYA PP PP 06 07 01.3 +4.2
GYA ScP ScP 06 09 21.5 +0.3
GYA S **S 06 12 54.3 -0.2**
GYA SS SS 06 16 54.5 +0.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,450nm,18.2s
GYA LR LR
comp=E,320nm,19.0s
GYA LR LR
comp=Z,420nm,18.5s
OLIL Olney 60.85 64 *e*P **P 06 04 43.0 -0.4**
comp=Z,28nm,0.8s,mb5.3
SIUC Southern Illin 60.93 65 *e*P **P 06 04 43.2 -0.8**
comp=Z,11nm,0.7s,mb5.0
BVAR Borovoye Array 61.02 320 P **P 06 04 44.7 +0.4**
comp=Z,1.2nm,0.5s,mb4.2,baz=42,slow=6.3,SNR=9.7
BVAR PcP PcP 06 05 25.9 -0.9
comp=Z,2.3nm,0.5s,baz=52,slow=3.2,SNR=7.9
BVAR LR LR 06 33 46.5
comp=Z,80nm,18.5s,baz=163,slow=39
BVAR Borovoye Array 61.02 320 P **P 06 04 44.7 +0.4**
BVAR 06 05 25.9
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR MLR MLR
comp=Z,80nm,18.5s
BRVK Borovoye 61.04 320 *ce*P **P 06 04 46.6 +2.2**
BRVK pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
USIN University of 61.63 64 *e*P **P 06 04 47.9 -0.8**
comp=Z,37nm,0.6s,mb5.6
WCI Wyandotte Cave 62.21 63 *e*P **P 06 04 51.9 -0.6**
WCI pmax pmax
comp=Z,15nm,0.7s,mb5.1
WCI Wyandotte Cave 62.21 63 *e*P **P 06 04 51.9 -0.7**
comp=Z,15nm,0.7s,mb5.1
HKT Hockley 62.53 76 *e*P **P 06 04 54.0 -0.8**
HKT pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
HKT Hockley 62.53 76 *e*P **P 06 04 54.0 -0.8**
comp=Z,6.1nm,1.2s,mb4.4
ARU Arti 62.66 329 *c i*P **P 06 04 55.3 0.0**
ARU S **S 06 13 22.7 +4.8**
ARU SS SS 06 17 23.7 +1.3
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
WVT Waverly 62.84 65 *e*P **P 06 04 56.1 -0.6**
WVT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
WVT Waverly 62.84 65 *e*P **P 06 04 56.1 -0.6**
comp=Z,7.8nm,0.9s,mb4.6
PLAL Pickwick Lake 63.52 67 *e*P **P 06 05 00.4 -0.9**
KMI Kunming 64.14 278 P **P 06 05 05.5 0.0**
KMI pmax pmax
comp=Z,12nm,0.7s,mb4.8
SWET Sewanee 64.57 65 *e*P **P 06 05 07.1 -1.1**
TZTN Tazewell 64.94 62 *e*P **P 06 05 10.5 -0.1**
comp=Z,13nm,0.8s,mb4.8
CPCT Cooper Cave 65.19 64 *e*P **P 06 05 11.0 -1.2**
TKL Tuckaleechee C 65.46 63 *e*P **P 06 05 13.4 -0.5**
LRAL Lakeview Retre 65.54 67 *e*P **P 06 05 14.2 -0.3**
comp=Z,6.5nm,0.8s,mb4.5
FINES FINESS Array B 65.68 348 P **P 06 05 13.4 -1.5**
comp=Z,2.0nm,0.7s,mb4.1,baz=28,slow=8.6,SNR=5.9
FINES PcP PcP 06 05 44.5 -1.3
comp=Z,2.1nm,0.8s,baz=32,slow=5.4,SNR=4.3
FINES FINESS Array B 65.68 348 P **P 06 05 13.4 -1.5**
FINES 06 05 44.5
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES pmax pmax
comp=Z,2.0nm,0.8s
BRAL Brewton 66.98 69 *e*P **P 06 05 24.2 +0.5**
comp=Z,30nm,0.9s,mb5.1
GOGA Godfrey 67.28 65 *e*P **P 06 05 25.0 -0.6**
GOGA pmax pmax
comp=Z,22nm,1.0s,mb4.9
GOGA Godfrey 67.28 65 *e*P **P 06 05 25.0 -0.6**
comp=Z,22nm,1.0s,mb4.9
NB2 NORSAR Subarra 67.48 355 P **P 06 05 26.7 +0.3**
comp=Z,0.7nm,0.6s,mb3.7,baz=6.8,slow=6.5
NOA NORSAR Array B 67.48 355 P **P 06 05 26.3 -0.1**
comp=Z,1.2nm,0.8s,mb3.8,baz=5.6,slow=6.3,SNR=4.1
NOA LR LR 06 33 45.2
comp=Z,22nm,19.1s,baz=355,slow=35
AKTO Aktyubinsk 67.78 325 LR LR 06 36 43.1
comp=Z,76nm,20.4s,baz=228,slow=37
LSA Lhasa 67.79 290 P **P 06 05 30.0 +1.1**
LSA Lhasa 67.79 290 *e*P **P 06 05 31.2 +2.3**
LSA pmax pmax
comp=Z,26nm,0.7s,mb5.2
LSA Lhasa 67.79 290 *e*P **P 06 05 31.2 +2.3**
comp=Z,26nm,0.7s,mb5.2
JSC Jenkinsville 67.86 63 *e*P **P 06 05 29.3 0.0**
ABKAR Akbulak array 68.04 323 *e*P **P 06 05 29.6 -0.5**
comp=Z,0.7nm,0.5s,mb3.8
COW Cow Castle Cre 68.84 63 *e*P **P 06 05 35.9 +0.5**
OBN Obninsk 69.83 340 *e*P **P 06 05 41.2 +0.1**
OBN *e* pP 06 06 03.0 +3.5
OBN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
CMAR Chiang Mai Arr 71.44 276 P **P 06 05 51.4 -0.1**
comp=Z,2.0nm,0.6s,mb4.1,baz=29,slow=7.0,SNR=7.0
CMAR Chiang Mai Arr 71.44 276 P **P 06 05 51.4 0.0**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
TAPN Taplejung 71.55 291 *e*P **P 06 05 52.6 +0.6**
comp=Z,69nm,0.8s,mb5.5
ODAN Odare 72.11 291 *e*P **P 06 05 55.3 -0.1**
comp=Z,28nm,0.9s,mb5.1
GUN Gumba 72.19 292 *e*P **P 06 05 56.5 +0.6**
comp=Z,90nm,0.7s,mb5.7
JIRN Jiri 72.20 292 *e*P **P 06 05 56.8 +0.9**
RAMN Ramite 72.50 291 *e*P **P 06 05 58.2 +0.5**
comp=Z,92nm,0.6s,mb5.8
KKN Kakani 72.63 293 *e*P **P 06 05 59.2 +0.7**
PKI Pulchoki 72.72 293 *e*P **P 06 05 59.5 +0.5**
comp=Z,46nm,1.0s,mb5.3
PKI Pulchoki 72.72 293 *e*P **P 06 06 00.0 +1.0**
PKI pmax pmax
comp=Z,32nm,0.8s,mb5.2
PKI Pulchoki 72.72 293 *e*P **P 06 06 00.0 +1.0**
comp=Z,32nm,0.8s,mb5.2
PKIN Phulchoki 72.72 293 *e*P **P 06 06 00.0 +1.0**
comp=Z,32nm,0.8s,mb5.2
DMN Daman 72.87 293 *e*P **P 06 06 00.3 +0.4**
comp=Z,30nm,0.9s,mb5.1
PPT Papeete 73.23 152 LR LR 06 34 24.9
comp=Z,104nm,19.2s,baz=262,slow=33
AKASG Malin Array Be 75.49 342 P **P 06 06 13.6 -1.1**
comp=Z,2.4nm,0.5s,mb4.2,baz=18,slow=5.4,SNR=8.3
AKASG Malin Array Be 75.49 342 *i* P **P 06 06 14.6 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
KIV Kislovodsk 78.51 331 *e*P **P 06 06 24.9 -6.9**
KIV pmax pmax
comp=Z,16nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,57nm,20.0s
BUR08 Bucovina Ar. S 79.15 344 *e*P **P 06 06 35.9 +0.6**
BURAR Bucovina Array 79.18 344 ⇑*i*P **P 06 06 35.9 +0.5**
GERES GERESS Array B 79.44 352 P **P 06 06 36.1 -0.7**
comp=Z,0.7nm,0.6s,mb3.7,baz=21,slow=4.9,SNR=4.8
GERES LR LR 06 44 48.0
comp=Z,38nm,19.2s,baz=59,slow=38
GERES GERESS Array B 79.44 352 P **P 06 06 36.1 -0.7**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,38nm,19.2s
DRGR 80.39 346 ⇓*i*P **P 06 06 42.5 +0.6**
MLR Muntele Rosu 81.11 343 ⇓*i*P **P 06 06 47.4 +1.6**
KBA Koelnbreinsper 81.23 352 ⇑*i*P **P 06 06 45.1 -1.4**
comp=Z,6.2nm,0.8s,mb4.5
GZR Gura Zlata 81.74 345 ⇓*i*P **P 06 06 50.1 +0.9**
BR131 Keskin Array S 84.94 336 *e*P **P 06 07 05.6 -0.2**
BRTR Keskin Array B 84.94 336 P **P 06 07 06.0 +0.2**
comp=Z,3.4nm,0.9s,mb4.3,baz=73,slow=3.0,SNR=9.8
BRTR Keskin Array B 84.94 336 P **P 06 07 06.0 +0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
ASAR Alice Springs 85.94 223 P **P 06 07 09.5 -1.2**
comp=Z,1.8nm,0.8s,mb4.1,baz=33,slow=4.4,SNR=14
ASAR Alice Springs 85.94 223 P **P 06 07 09.5 -1.2**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
TORD Torodi Ar. Bea 115.54 0 PKP PKPdf 06 13 10.7 -2.0
comp=Z,0.7nm,0.6s,baz=356,slow=2.6,SNR=4.6
TSUM Tsumeb 145.41 333 *e*PKPdf PKPdf 06 14 08.6 +0.2
MAW Mawson 146.92 218 PKPbc PKPbc 06 14 10.1 -1.4
comp=Z,7.3nm,0.9s,baz=88,slow=1.8,SNR=7.7
MAW Mawson 146.92 218 PKP2 PKPbc 06 14 10.1 -1.4
MAW pmax pmax
comp=Z,7.0nm,0.9s
MAW Mawson 146.92 218 *e*PKPdf PKPdf 06 14 11.2 +1.8
LBTB Lobatse 147.89 317 *e*PKP2 PKPbc 06 14 15.7 +0.3
BOSA Boshof 151.16 314 PKPbc PKPbc 06 14 22.8 -0.6
comp=Z,8.6nm,0.6s,baz=80,slow=1.1,SNR=24
BOSA Boshof 151.16 314 PKIKP PKPbc 06 14 22.8 -0.6
BOSA pmax pmax
comp=Z,9.0nm,0.6s

ISCJB ***29*** *06:05:07.1±0.7, 24°.47S±0°.04×67°.11W±0°.09, h158km±11km, mb3.4/4, Error ellipse: s-maj=14.3km s-min=6.5km az=15.2*
NEIC ***29*** *06:05:08.8±0.8, 24°.47S×67°.10W, h164km±9km, Error ellipse: s-maj=13.9km s-min=8.4km az=102.0*
IDC ***29*** *06:05:08.2±1.5, 24°.45S×67°.06W, h156km±15km, mb3.4/4, mb1 3.7/8, mb1mx3.5/18, mbtmp3.4/8, Error ellipse: s-maj=22.6km s-min=12.9km az=95.0*
ISC 29 06:05:07.8±0.7, 24°.46S±0°.04×67°.10W±0°.09, h149km±10km, n14, σ1$09/16, mb3.4/4, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas** 76nm,0.6s	**5.56**	**215**	*e*Pn	**Pn**	**06 06 29.0**	**+0.3**
LCO				*e*Sn	**Sn**	**06 07 30.7**	**-1.2**
CFAA	**Coronel Fontan** 0.1nm,0.3s,baz=356,slow=12,SNR=17	**7.19**	**188**	P	**Pn**	**06 06 52.3**	**+1.9**
CFAA				S	**Sn**	**06 08 10.1**	**-0.8**
LPAZ	**La Paz** 1.5nm,0.3s,baz=170,slow=9.2,SNR=71	**8.19**	**353**	P	**Pn**	**06 07 05.9**	**+2.1**
LPAZ				S	**Sn**	**06 08 34.8**	**-0.1**
CPUP	**Villa Florida** 0.2nm,0.3s,baz=262,slow=12,SNR=5.3	**9.03**	**104**	P	**Pn**	**06 07 16.6**	**+1.7**
SIV	**San Ignacio** 2.4nm,0.3s,baz=219,slow=14,SNR=60	**10.14**	**35**	P	**Pn**	**06 07 29.3**	**-0.4**
SIV				S	**Sn**	**06 09 19.9**	**-2.2**
TRQA	**Tornquist**	**14.24**	**163**	*e*Pn	**Pn**	**06 08 22.6**	**-0.1**
PLCA	**Paso Flores** 0.1nm,0.3s,baz=15,slow=7.0,SNR=4.0	**16.49**	**189**	P	**Pn**	**06 08 49.8**	**-0.6**
TORD	**Torodi Ar. Bea** 0.8nm,0.6s,mb3.5,baz=259,slow=5.8,SNR=13	**76.81**	**69**	P	**P**	**06 16 42.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**76.81**	**69**	P	**P**	**06 16 42.9**	**-0.6**
PDAR	**Pinedale Array** 0.3nm,0.5s,mb3.2,baz=138,slow=6.8,SNR=3.5	**77.49**	**329**	P	**P**	**06 16 47.3**	**+0.6**
NVAR	**Mina Array Bea** 0.4nm,0.6s,mb3.2,baz=160,slow=6.0,SNR=4.3	**78.84**	**321**	P	**P**	**06 16 53.7**	**-0.5**
YKA	**Yellowknife Ar** 0.4nm,0.6s,mb3.8,baz=130,slow=4.3,SNR=4.0	**94.52**	**340**	P	**P**	**06 18 10.8**	**+0.2**
ASAR	**Alice Springs** 0.5nm,0.9s,baz=209,slow=23,SNR=4.7	**128.01**	**205**	PKP	PKPdf	06 23 56.0	-0.7
MKAR	**Makanchi Array** 1.6nm,0.6s,baz=340,slow=2.8,SNR=16	**146.93**	**40**	PKPbc	PKPbc	06 24 30.9	-1.7

ISCJB ***29*** *06:09:08.7±0.5, 10°.72N±0°.03×62°.47W±0°.03, h85km±6km, Error ellipse: s-maj=5.9km s-min=3.8km az=147.4*
FUNV ***29*** *06:09:09.2, 10°.82N×62°.35W, h80km, MW3.4*
NEIC ***29*** *06:09:10.9, 10°.73N×62°.41W, h75km, MD3.6(TRN), After TRN.*
TRN ***29*** *06:09:11.1, 10°.76N×62°.36W, h81km, MD3.5*
ISC 29 06:09:09.8±0.5, 10°.72N±0°.03×62°.46W±0°.03, h78km±7km, n35, σ1$01/65, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.24**	**107**	⇑*i*P	**Pn**	**06 09 21.4**	**-0.1**

GUIV				eS	Sn	06 09 29.5	-0.7
TCE	**Chacachacare**	0.70	92	eP	Pn	06 09 25.7	+0.5
TCE				eS	Sn	06 09 37.0	+0.2
TCE	**Chacachacare**	0.70	92	eP	Pn	06 09 25.7	+0.5
TCE				eS	Sn	06 09 37.0	+0.2
GUNV	**Guanoco**	0.73	221	⇓iP	Pn	06 09 26.8	+1.2
GUNV				eS	Sn	06 09 39.7	+2.3
ITEV	**Isla Los Testi**	0.91	314	eP	Pn	06 09 27.0	-0.7
ITEV				eS	Sn	06 09 40.0	-1.1
TRN	**Trinidad (W)**	1.04	94	eP	Pn	06 09 29.6	+0.4
TRN				eS	Sn	06 09 43.1	-0.7
TRN	**Trinidad (W)**	1.04	94	eP	Pn	06 09 29.6	+0.4
TRN				eS	Sn	06 09 43.1	-0.7
TPP	**Pointe-a-Pierr**	1.07	112	eP	Pn	06 09 30.6	+1.0
TPP				eS	Sn	06 09 45.1	+0.7
TPP	**Pointe-a-Pierr**	1.07	112	eP	Pn	06 09 30.6	+1.0
TPP				eS	Sn	06 09 45.1	+0.7
TBH	**Brigand Hill**	1.39	100	eP	Pn	06 09 34.4	+0.8
TBH				eS	Sn	06 09 51.3	-0.3
TBH	**Brigand Hill**	1.39	100	eP	Pn	06 09 34.4	+0.8
TBH				eS	Sn	06 09 51.3	-0.3
GRW	**Mount Saint Ca**	1.63	29	eP	Pn	06 09 37.3	+0.5
GRW				eS	Sn	06 09 56.3	-0.9
GRW	**Mount Saint Ca**	1.63	29	eP	Pn	06 09 37.3	+0.5
GRW				eS	Sn	06 09 56.3	-0.9
TPR	**Prospect**	1.72	74	eP	Pn	06 09 37.9	0.0
TPR				eS	Sn	06 09 58.1	-1.1
TPR	**Prospect**	1.72	74	eP	Pn	06 09 37.9	0.0
TPR				eS	Sn	06 09 58.1	-1.1
BOT	**Bacolet**	1.77	75	eP	Pn	06 09 38.4	-0.1
BOT				eS	Sn	06 09 59.0	-1.3
BOT	**Bacolet**	1.77	75	eP	Pn	06 09 38.4	-0.1
BOT				eS	Sn	06 09 59.0	-1.3
ORIV	**Oritupano**	1.89	210	⇓iP	Pn	06 09 41.0	+0.9
TOSP	**Speyside**	1.98	73	eP	Pn	06 09 41.0	-0.3
TOSP				eS	Sn	06 10 02.4	-2.9
PCRV	**Puerto La Cruz**	2.21	256	eP	Pn	06 09 45.0	+0.6
FCV	**Fort Charlotte**	2.70	26	eP	Pn	06 09 53.3	+2.3
FCV				eS	Sn	06 10 21.9	-0.8
FCV	**Fort Charlotte**	2.70	26	eP	Pn	06 09 52.0	+1.0
FCV				eS	Sn	06 10 21.9	-0.8
RIOV	**Rio Grande**	2.71	166	eP	Pn	06 09 51.6	+0.4
SVB	**Belmont**	2.80	25	eP	Pn	06 09 52.4	0.0
SVB				eS	Sn	06 10 25.5	+0.4
SVB	**Belmont**	2.80	25	eP	Pn	06 09 52.4	0.0
SVB				eS	Sn	06 10 25.5	+0.4
SVV	**Soufriere Volc**	2.86	25	eP	Pn	06 09 54.6	+1.5
SVV				eS	Sn	06 10 27.5	+1.0
SVV	**Soufriere Volc**	2.86	25	eP	Pn	06 09 54.6	+1.5
SVV				eS	Sn	06 10 27.5	+1.0
MCLT	**Moule a Chique**	3.32	26	eP	Pn	06 10 02.7	+3.2
MCLT				eS	Sn	06 10 38.0	+0.1
MCLT	**Moule a Chique**	3.32	26	eP	Pn	06 10 02.7	+3.2
MCLT				eS	Sn	06 10 38.0	+0.1
CUPV	**Cœpira**	3.34	259	eP	Pn	06 10 00.6	+0.9
CUPV				eS	Sn	06 10 38.2	0.0
MERV	**Las Mercedes**	4.05	249	eP	Pn	06 10 09.7	+0.3
MERV				eS	Sn	06 10 54.2	-1.4
LUEV	**Luepa**	4.94	168	eP	Pn	06 10 20.2	-1.4
CAOV	**Caicara del Or**	5.09	229	eP	Pn	06 10 22.8	-0.7
CAOV				eS	Sn	06 11 18.2	-2.9
TURV	**Turiamo**	5.29	268	eP	Pn	06 10 25.5	-0.8
BAUV	**El Baul**	5.78	253	eP	Pn	06 10 32.6	-0.3
BAUV				eS	Sn	06 11 33.9	-3.9

*NEIC **29** 06:10:44.3, 27°.56N×33°.28E, h31km, MD3.9(GII), After GII.*
NEIC Felt at Sharm ash Shaykh.
*GII **29** 06:10:44.3±4.2, 27°.56N×33°.28E, h31km±12km, Mb4.1/5, Md3.9/5, Mm2.9/5*
*ISCJB **29** 06:10:48.7±1.7, 27°.83N±0°.05×34°.54E±0°.09, h15km±10km, Error ellipse: s-maj=15.0km s-min=5.9km az=151.4*
*SGS **29** 06:10:50.8, 27°.85N×34°.49E, h22km*
*CSEM **29** 06:10:55.3±0.9, 27°.88N×35°.06E, h2km, ML3.4, Error ellipse: s-maj=25.8km s-min=7.7km az=62.0*
ISC 29 06:10:50.1±1.9, **27°.90N**±0°.05×**34°.59E**±0°.09, **h18**km±11km, **n30**, σ1**°13**/38, **Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDAS	**Al Bad'**	0.69	40	P	**Pg**	06 11 04.3	+0.5
BDAS	**Al Bad'**	0.69	40	P	**Pg**	06 11 04.3	+0.5
JLOS		1.15	43	P	**Pn**	06 11 11.6	+0.2
JLOS		1.15	43	P	**Pn**	06 11 11.6	+0.2
JLOS				S	**Sb**	06 11 26.6	+0.5
HAQS	**Haql**	1.18	14	P	**Pn**	06 11 11.3	-0.5
HAQS	**Haql**	1.18	14	P	**Pn**	06 11 11.3	-0.5
HAQS				S	**Sb**	06 11 26.9	-0.2
DBAS	**Duba**	1.40	119	P	**Pn**	06 11 14.7	-0.1
DBAS	**Duba**	1.40	119	P	**Pn**	06 11 14.7	-0.1
DBAS				S	**Sn**	06 11 31.7	-1.1
TBKS	**Tabuk**	1.75	79	P	**Pn**	06 11 21.3	+1.7
TBKS	**Tabuk**	1.75	79	P	**Pn**	06 11 21.3	+1.7
EIL	**Elat**	1.79	10	Pn	**Pn**	06 11 21.1	+0.9
EIL	**Elat**	1.79	10	Pn	**Pn**	06 11 21.1	+0.9
WJHS		1.98	126	S	**Sn**	06 11 45.3	-1.8
WJHS		1.98	126	S	**Sn**	06 11 45.3	-1.8
HRFI	**Mount Harif**	2.17	10	Pn	**Pn**	06 11 26.0	+0.7
HRFI	**Mount Harif**	2.17	10	Pn	**Pn**	06 11 26.0	+0.7
KRMI	**Paran Flat**	2.21	3	Pn	**Pn**	06 11 26.7	+0.7
KRMI				S	**Sn**	06 11 57.4	+4.4
KRMI	**Paran Flat**	2.21	3	Pn	**Pn**	06 11 26.7	+0.7
KRMI				S	**Sn**	06 11 57.4	+4.4
BIDS	**Bi'r al Bayda'**	2.34	115	P	**Pn**	06 11 28.8	+1.0
BIDS	**Bi'r al Bayda'**	2.34	115	P	**Pn**	06 11 28.8	+1.1
BIDS				S	**Sn**	06 11 56.4	+0.4
PRNI	**Paran**	2.47	8	Pn	**Pn**	06 11 30.7	+1.1
PRNI				S	**Sg**	06 12 06.7	-3.0
PRNI	**Paran**	2.47	8	Pn	**Pn**	06 11 30.7	+1.1
RMNI	**Mount Ramon**	2.69	3	Pn	**Pn**	06 11 32.2	-0.4
RMNI	**Mount Ramon**	2.69	3	Pn	**Pn**	06 11 32.2	-0.4
ZFRI	**Zfri**	2.70	11	Pn	**Pn**	06 11 33.6	+1.0
ZFRI				S	**Sg**	06 12 12.1	-4.7
ZFRI	**Zfri**	2.70	11	Pn	**Pn**	06 11 33.6	+1.0
KZIT	**Kziot**	3.00	357	Pn	**Pn**	06 11 34.0	-2.9
KZIT	**Kziot**	3.00	357	Pn	**Pn**	06 11 34.0	-2.9
RTMI	**Retamim**	3.15	2	Pn	**Pn**	06 11 37.2	-1.6
RTMI	**Retamim**	3.15	2	Pn	**Pn**	06 11 37.2	-1.6

*ISK **29** 06:26:06.3, 36°.97N×29°.18E, h5km, MD3.2*
*DDA **29** 06:26:06.7, 36°.96N×29°.25E, h7km±4km, Md3.1*
*CSEM **29** 06:26:06.8±0.2, 36°.96N×29°.20E, h2km, MD3.2, Error ellipse: s-maj=4.6km s-min=4.1km az=156.0*
*ISCJB **29** 06:26:07.4±0.3, 36°.95N±0°.03×29°.23E±0°.03, h10km, Error ellipse: s-maj=4.0km s-min=3.3km az=149.9*
*NEIC **29** 06:26:13.9, 36°.42N×29°.03E, h17km, MD3.1(ISK), MD3.1(ATH), After ATH.*
*ATH **29** 06:26:13.9, 36°.42N×29°.03E, h17km±3km, MD3.1/3*
ISC 29 06:26:07.1±0.5, **36°.95N**±0°.03×**29°.22E**±0°.03, **h3**km±5km, **n62**, σ1**°05**/79, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	0.30	48	ePG	**Pg**	06 26 12.5	-0.5
GLHS				eSG	**Sg**	06 26 18.0	+1.0
GLHS	**Glhisar (BURDU**	0.30	48	ePg	**Pg**	06 26 12.5	-0.5
GLHS				eSg	**Sg**	06 26 18.0	+1.0
FETY	**Fethiye**	0.33	199	ePG	**Pg**	06 26 13.3	-0.2
FETY	**Fethiye**	0.33	199	ePg	**Pg**	06 26 13.3	-0.2
GOLH	**Golhisar**	0.40	44	iP	**Pg**	06 26 14.6	-0.2
GOLH				iS	**Sg**	06 26 21.4	+1.5
GOLH	**Golhisar**	0.40	44	iP	**Pg**	06 26 14.6	-0.2
GOLH				iS	**Sg**	06 26 21.4	+1.5
TURN	**Turunc**	0.50	261	iP	**Pg**	06 26 22.1	+5.4
TURN				iS	**Sg**	06 26 34.8	+12
ELL	**Elmali**	0.59	110	ePG	**Pg**	06 26 19.0	+0.6
ELL	**Elmali**	0.59	110	ePg	**Pg**	06 26 19.0	+0.5
DNZL	**Cakiroluk**	0.75	350	iP	**Pg**	06 26 20.4	-1.1
DNZL				iS	**Sg**	06 26 32.4	+1.1
DNZL	**Cakiroluk**	0.75	350	iP	**Pg**	06 26 20.4	-1.1
DNZL				iS	**Sg**	06 26 32.4	+1.2
YER	**Yerkesik**	0.77	284	ePG	**Pg**	06 26 21.1	-0.8
YER	**Yerkesik**	0.77	284	ePg	**Pg**	06 26 21.1	-0.8
AKAS	**Kas**	0.78	156	iP	**Pg**	06 26 21.9	-0.2
AKAS				iS	**Sg**	06 26 36.4	+4.2
AKAS	**Kas**	0.78	156	iP	**Pg**	06 26 21.9	-0.2
AKAS				iS	**Sg**	06 26 36.4	+4.1
DENT	**Denizli**	0.81	350	ePG	**Pg**	06 26 21.8	-1.0
DENT	**Denizli**	0.81	350	ePg	**Pg**	06 26 21.8	-1.0
KSL	**Kastellorizon**	0.85	160	ePN	**Pn**	06 26 24.2	-1.8
KORT	**Korkueli**	0.91	87	iP	**Pg**	06 26 23.7	-0.9
KORT				iS	**Sg**	06 26 41.3	+4.9
KORT	**Korkueli**	0.91	87	iP	**Pg**	06 26 23.7	-0.9
KORT				iS	**Sg**	06 26 41.3	+4.9
ARG	**Arkhangelos**	1.14	230	ePN	**Pn**	06 26 28.7	-1.4
ARG	**Arkhangelos**	1.14	230	ePn	**Pn**	06 26 28.7	-1.4
ANTB	**Antalya**	1.15	92	ePN	**Pn**	06 26 29.6	-0.6
ANTB	**Antalya**	1.15	92	ePn	**Pn**	06 26 29.6	-0.6
MLSB	**Milas**	1.20	287	ePN	**Pn**	06 26 29.1	-1.8
MLSB	**Milas**	1.20	287	ePn	**Pn**	06 26 29.1	-1.7
BCK	**Bucak**	1.21	65	ePN	**Pn**	06 26 30.1	-0.8
BCK	**Bucak**	1.21	65	ePn	**Pn**	06 26 30.1	-0.8
AYDN	**Tasoluk**	1.28	304	iP	**Pg**	06 26 30.7	-1.0
AYDN				iS	**Sg**	06 26 49.5	+1.3
AYDN	**Tasoluk**	1.28	304	iP	**Pg**	06 26 30.7	-1.0
AYDN				iS	**Sg**	06 26 49.5	+1.2
DAT	**Datca**	1.33	261	ePN	**Pn**	06 26 31.8	-0.8
DAT	**Datca**	1.33	261	ePn	**Pn**	06 26 31.8	-0.9
ISP	**Isparta**	1.36	49	ePN	**Pn**	06 26 32.8	-0.2
ISP	**Isparta**	1.36	49	ePn	**Pn**	06 26 32.8	-0.2
KHL	**Karahalli**	1.39	10	ePN	**Pn**	06 26 32.9	-0.6
KHL	**Karahalli**	1.39	10	ePn	**Pn**	06 26 32.9	-0.6
BDRM	**Kayabasi**	1.42	275	iP	**Pn**	06 26 34.5	+0.6
BDRM				iS	**Sb**	06 26 54.4	+1.6
BDRM	**Kayabasi**	1.42	275	iP	**Pn**	06 26 34.5	+0.6
BDRM				iS	**Sb**	06 26 54.4	+1.5
KHAL	**Karahalli**	1.43	9	iP	**Pn**	06 26 33.8	-0.2
KHAL				iS	**Sb**	06 26 52.8	-0.4
KHAL	**Karahalli**	1.43	9	iP	**Pn**	06 26 33.8	-0.2
KHAL				iS	**Sb**	06 26 52.8	-0.4
SUTC	**Sutluce-Ispart**	1.52	69	ePN	**Pn**	06 26 35.2	+0.1
SUTC	**Sutluce-Ispart**	1.52	69	ePn	**Pn**	06 26 35.3	+0.1
KULA	**Kula-Manisa**	1.62	344	ePN	**Pn**	06 26 35.8	-0.8
KULA	**Kula-Manisa**	1.62	344	ePn	**Pn**	06 26 35.8	-0.8
MANT	**Manisa**	1.62	341	iP	**Pn**	06 26 36.6	-0.1
MANT	**Manisa**	1.62	341	iP	**Pn**	06 26 36.6	-0.1
KARP	**Karpathos**	2.17	230	ePN	**Pn**	06 26 46.0	+1.8
KARP	**Karpathos**	2.17	230	ePn	**Pn**	06 26 46.0	+1.8
ALT	**Altintas**	2.21	18	ePN	**Pn**	06 26 44.5	-0.3
ALT	**Altintas**	2.21	18	ePn	**Pn**	06 26 44.5	-0.3
HDMB	**Hadim**	2.62	89	ePN	**Pn**	06 26 51.2	+0.9
HDMB	**Hadim**	2.62	89	ePn	**Pn**	06 26 51.2	+0.9
KONT	**Konya--Tatoy**	2.69	67	ePN	**Pn**	06 26 52.0	+0.7
KONT	**Konya--Tatoy**	2.69	67	ePn	**Pn**	06 26 52.0	+0.7
ZKR	**Zakros**	3.04	234	ePB	**Pb**	06 26 58.4	-3.6
ZKR	**Zakros**	3.04	234	ePb	**Pb**	06 26 58.4	-3.6
LAST	**Lasithi**	3.52	241	ePN	**Pn**	06 27 05.0	+2.3
LAST	**Lasithi**	3.52	241	ePn	**Pn**	06 27 05.0	+2.3
XRY	**Khrisi**	3.53	235	ePN	**Pn**	06 27 04.4	+1.5
XRY	**Khrisi**	3.53	235	ePn	**Pn**	06 27 04.4	+1.5
IKL	**Isikli**	3.67	100	ePN	**Pn**	06 27 06.2	+1.4
IKL	**Isikli**	3.67	100	ePn	**Pn**	06 27 06.2	+1.5

*ISK **29** 06:35:40.5, 36°.98N×29°.19E, h5km, MD3.3*
*ISCJB **29** 06:35:41.3±0.5, 36°.96N±0°.03×29°.23E±0°.04, h3km±5km, Error ellipse: s-maj=5.0km s-min=4.2km az=37.7*
*CSEM **29** 06:35:41.5±0.2, 36°.98N×29°.21E, h8km, MD3.3*
*DDA **29** 06:35:41.5, 36°.97N×29°.23E, h7km±6km, Md3.1*
ISC 29 06:35:41.8±0.5, **36°.96N**±0°.03×**29°.23E**±0°.03, **h6**km±5km, **n43**, σ0**°98**/62, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	0.29	48	PG	**Pg**	06 35 46.9	-0.6
GLHS				SG	**Sg**	06 35 51.7	+0.3
GLHS	**Glhisar (BURDU**	0.29	48	iPg	**Pg**	06 35 46.9	-0.6
GLHS				iSg	**Sg**	06 35 51.7	+0.3
FETY	**Fethiye**	0.34	200	PG	**Pg**	06 35 47.8	-0.6
FETY				SG	**Sg**	06 35 53.1	+0.3
FETY	**Fethiye**	0.34	200	iPg	**Pg**	06 35 47.8	-0.6
FETY				iSg	**Sg**	06 35 53.1	+0.3
GOLH	**Golhisar**	0.39	44	iP	**Pg**	06 35 48.9	-0.4
GOLH				iS	**Sg**	06 35 55.6	+1.3
GOLH	**Golhisar**	0.39	44	iP	**Pg**	06 35 48.9	-0.4
GOLH				iS	**Sg**	06 35 55.6	+1.3
TURN	**Turunc**	0.51	261	iP	**Pg**	06 35 56.3	+4.8
TURN				iS	**Sg**	06 36 08.6	+10
ELL	**Elmali**	0.59	111	ePG	**Pg**	06 35 53.4	+0.4
ELL	**Elmali**	0.59	111	ePg	**Pg**	06 35 53.4	+0.4
DNZL	**Cakiroluk**	0.74	349	iP	**Pg**	06 35 55.0	-1.1
DNZL				iS	**Sg**	06 36 07.8	+1.3
DNZL	**Cakiroluk**	0.74	349	iP	**Pg**	06 35 55.0	-1.1
DNZL				iS	**Sg**	06 36 07.0	+1.2
YER	**Yerkesik**	0.78	283	ePG	**Pg**	06 35 56.1	-0.5
YER	**Yerkesik**	0.78	283	ePg	**Pg**	06 35 56.1	-0.5
AKAS	**Kas**	0.78	157	iP	**Pg**	06 35 57.2	+0.4
AKAS				iS	**Sg**	06 36 11.0	+4.0
AKAS	**Kas**	0.78	157	iP	**Pg**	06 35 57.2	+0.4
AKAS				iS	**Sg**	06 36 11.0	+4.0
DENT	**Denizli**	0.81	349	ePG	**Pg**	06 35 55.8	-1.6
DENT	**Denizli**	0.81	349	ePg	**Pg**	06 35 55.8	-1.5
KORT	**Korkueli**	0.90	87	iP	**Pg**	06 35 58.3	-0.8
KORT				iS	**Sg**	06 36 15.2	+4.5
KORT	**Korkueli**	0.90	87	iP	**Pg**	06 35 58.3	-0.8
KORT				iS	**Sg**	06 36 15.2	+4.4
BCK	**Bucak**	1.20	65	ePN	**Pn**	06 36 04.3	-0.7
BCK	**Bucak**	1.20	65	ePn	**Pn**	06 36 04.3	-0.7
MLSB	**Milas**	1.21	287	ePN	**Pn**	06 36 03.4	-1.7
MLSB	**Milas**	1.21	287	ePn	**Pn**	06 36 03.4	-1.7
AYDN	**Tasoluk**	1.28	304	iP	**Pg**	06 36 05.9	-0.4
AYDN				iS	**Sg**	06 36 25.5	+2.5
AYDN	**Tasoluk**	1.28	304	iP	**Pg**	06 36 05.9	-0.5
AYDN				iS	**Sg**	06 36 25.5	+2.5
DAT	**Datca**	1.34	261	ePN	**Pn**	06 36 06.4	-0.6
DAT	**Datca**	1.34	261	ePn	**Pn**	06 36 06.4	-0.6
KHL	**Karahalli**	1.38	10	ePN	**Pn**	06 36 06.6	-0.9
KHL	**Karahalli**	1.38	10	ePn	**Pn**	06 36 06.6	-1.0
KHAL	**Karahalli**	1.43	8	iP	**Pn**	06 36 08.4	+0.3
KHAL				iS	**Sb**	06 36 28.1	+0.9
KHAL	**Karahalli**	1.43	8	iP	**Pn**	06 36 08.4	+0.3
KHAL				iS	**Sb**	06 36 28.1	+1.0
BDRM	**Kayabasi**	1.43	275	iP	**Pn**	06 36 09.6	+1.4
BDRM				iS	**Sb**	06 36 28.4	+1.2
BDRM	**Kayabasi**	1.43	275	iP	**Pn**	06 36 09.6	+1.4
BDRM				iS	**Sb**	06 36 28.4	+1.2
SUTC	**Sutluce-Ispart**	1.51	69	ePN	**Pn**	06 36 09.2	0.0
SUTC	**Sutluce-Ispart**	1.51	69	ePn	**Pn**	06 36 09.2	-0.1
KULA	**Kula-Manisa**	1.62	344	ePN	**Pn**	06 36 09.7	-1.1
KULA	**Kula-Manisa**	1.62	344	ePn	**Pn**	06 36 09.7	-1.1
ALT	**Altintas**	2.21	18	ePN	**Pn**	06 36 18.3	-0.6
ALT	**Altintas**	2.21	18	ePn	**Pn**	06 36 18.3	-0.6
HDMB	**Hadim**	2.61	89	ePN	**Pn**	06 36 25.1	+0.7
HDMB	**Hadim**	2.61	89	ePn	**Pn**	06 36 25.1	+0.7
IKL	**Isikli**	3.66	100	ePN	**Pn**	06 36 40.1	+1.2
IKL	**Isikli**	3.66	100	ePn	**Pn**	06 36 40.1	+1.2

*IDC **29** 07:01:45.9±0.6, 8°.41N×82°.91W, h0km, mb4.2/16, mb1 4.5/22, mb1mx4.4/28, mbtmp4.3/22, ML4.0/6, MS3.9/25, Ms1 3.9/25, ms1mx3.8/31, Error ellipse: s-maj=21.9km s-min=11.3km az=56.0*
*ISCJB **29** 07:01:46.9±0.8, 8°.49N±0°.04×82°.83W±0°.02, h12km±4km, mb4.5/83, MS4.1/21, Error ellipse: s-maj=6.6km s-min=3.7km az=18.0*
*CASC **29** 07:01:46.1, 8°.43N×82°.93W, h1km, MD4.6, ML3.7, mb4.7(NEIC)*
*MOS **29** 07:01:47.7±1.1, 8°.47N×82°.90W, h21km, mb4.9/37, Error ellipse: s-maj=14.4km s-min=5.8km az=113.1*
*BJI **29** 07:01:47.6, 7°.53N×83°.15W, h29km, mB5.1/6, Ms4.8/2, Ms7 4.5/5*
*NEIC **29** 07:01:50.8±1.7, 8°.44N×82°.94W, h29km±12km, mb4.7/79, MD5.1(HDC), Error ellipse: s-maj=7.1km s-min=4.6km az=215.0*
NEIC Felt in southern Costa Rica.
ISC 29 07:01:48.8±0.9, **8°.53N**±0°.04×**82°.81W**±0°.03, **h11**km±5km, **n420**, σ0**°89**/398, **mb4.5**/83, **MS4.1**/21, **116C-97D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	0.29	24	⇑iP	**Pg**	07 01 55.7	+1.0
BRU2				eS	**Sg**	07 02 04.2	+5.5
ACR	**Cerro Adams**	0.37	290	⇑iP	**Pg**	07 01 52.1	-4.1
ACR				eS	**Sg**	07 01 57.9	-3.3
BAR1		0.87	325	⇓iP	**Pg**	07 02 02.4	-3.0
CNI	**Changuinola**	0.93	18	⇓eP	**Pg**	07 02 06.1	-0.6
BUS	**Buena Vista**	1.39	318	⇑iP	**Pn**	07 02 10.4	-3.7
LIO	**Limon**	1.49	352	⇓iP	**Pn**	07 02 14.9	-0.6
QCR	**Quepos**	1.61	304	⇓eP	**Pn**	07 02 14.5	-2.6
URSC	**Urasca**	1.61	324	⇑iP	**Pn**	07 02 14.2	-3.1
LAJ	**Bijagual**	1.85	316	⇑iP	**Pn**	07 02 21.1	+0.6
SJS	**Escuela Geolog**	1.86	319	⇑iP	**Pn**	07 02 19.4	-1.3
PRS1	**Puriscal**	2.07	315	⇑iP	**Pn**	07 02 20.5	-3.0
CGA2	**Cerro Gallo 2**	2.20	312	⇓eP	**Pn**	07 02 23.4	-1.9
CGA2				eS	**Sn**	07 02 48.9	-3.7
JCR	**Jicaral**	2.62	300	⇑eP	**Pn**	07 02 27.8	-3.4
FORC	**Fortuna**	2.66	317	eP	**Pn**	07 02 29.4	-2.2
JTS	**JuntasAbangare**	2.74	310	Pn	**Pn**	07 02 31.2	-1.6
	60nm,0.3s,baz=160,slow=6.7,SNR=89						
JTS				Sn	**Sn**	07 03 08.0	+2.0
	55nm,0.3s,baz=311,slow=22,SNR=11						
JTS				LR	LR	07 03 34.3	
	comp=Z,434nm,20.0s,baz=137,slow=40						
JTS	**JuntasAbangare**	2.74	310	P	**Pn**	07 02 31.2	-1.6
JTS						07 03 08.0	
JTS				pmax	pmax		
	comp=Z,60nm,0.3s						
JTS				smax			
	comp=N,55nm,0.3s						
JTS				MLR	MLR		
	comp=Z,434nm,20.0s						
JTS	**JuntasAbangare**	2.74	310	ePn	**Pn**	07 02 31.1	-1.6
BCIP	**Isla Barro Col**	3.01	78	ePn	**Pn**	07 02 36.6	+0.1
BCIP	**Isla Barro Col**	3.01	78	ePn	**Pn**	07 02 36.5	+0.1
BCIP				AML	AML	07 03 38.9	
	comp=Z,2μm,0.4s						
VCR	**Vista de Mar**	3.20	300	⇑iP	**Pn**	07 02 36.9	-2.2
UPIG		3.27	82	⇓eP	**Pn**	07 02 39.4	-0.7
UPIG				eS	**Sn**	07 03 17.8	-1.3
SSN	**San Juan del S**	4.07	313	eP	**Pn**	07 02 51.3	+0.2
CONN	**Concepcion**	4.10	318	eP	**Pn**	07 02 52.8	+1.4
APON	**Apoyo**	4.65	317	eP	**Pn**	07 03 00.8	+1.8
TICN	**Ticuantepe**	4.84	316	eP	**Pn**	07 03 02.8	+1.1
WILN	**Americas 2**	4.91	318	eP	**Pn**	07 03 03.4	+0.8
MGAN	**Managua**	4.94	317	eP	**Pn**	07 03 03.2	+0.2
HUEN		5.03	319	eP	**Pn**	07 03 04.8	+0.6
APYN	**Apoyeque**	5.07	317	eP	**Pn**	07 03 05.5	+0.8
CSAN		5.08	316	eP	**Pn**	07 03 05.5	+0.6
CNGN	**Cerro Negro**	5.49	316	eP	**Pn**	07 03 11.2	+0.5
TGUH	**Tegucigalpa,Un**	7.02	322	ePn	**Pn**	07 03 33.6	+1.9
TGUH	**Tegucigalpa,Un**	7.02	322	eP	**Pn**	07 03 33.2	+1.6
ROSC	**El Rosal**	9.18	113	Pn	**Pn**	07 04 01.3	0.0
	comp=Z,0.3nm,0.3s,baz=285,slow=16,SNR=2.0						
ROSC				LR	LR	07 07 05.6	
	comp=Z,201nm,19.4s,baz=9.8,slow=35						
OTAV	**Otavalo**	9.31	152	ePn	**Pn**	07 04 03.7	+0.6
APG	**El Apazote**	9.88	311	Pn	**Pn**	07 04 10.4	-0.4
	comp=Z,1.1nm,0.3s,baz=143,slow=11,SNR=20						
APG				LR	LR	07 08 16.1	
	comp=Z,659nm,19.6s,baz=

TXAR MLR MLR
comp=Z,106nm,19.3s
TXAR Lajitas Array 28.49 319 P P 07 07 43.7 -0.5
TXAR PcP PcP 07 10 56.1 0.0
TXAR LR LR 07 19 58.3
LPAZ La Paz 28.62 149 P P 07 07 44.3 -1.1
comp=Z,3.0nm,0.9s,mb4.0,baz=341,slow=11,SNR=8.9
LPAZ La Paz 28.62 149 P P 07 07 44.3 -1.1
LPAZ pmax pmax
comp=Z,3.0nm,1.0s
LPAZ La Paz 28.62 149 eP P 07 07 46.4 +1.0
comp=Z,6.1nm,1.2s,mb4.2
428A Kincaid Ranch, 28.85 323 ⇑P P 07 07 47.2 -0.2
baz=29
626A Big Bend Ranch 28.94 319 ⇑P P 07 07 48.2 -0.1
baz=29
527A Woodward Ranch 29.01 321 ⇑P P 07 07 48.7 -0.1
baz=29,SNR=7.2
526A Mary Lane Ranc 29.25 320 ⇓P P 07 07 50.7 -0.3
baz=29
328A Wristen Ranch, 29.39 323 ⇑P P 07 07 53.2 +1.0
baz=29
426A McDonald Obser 29.63 321 ⇑P P 07 07 54.4 0.0
baz=30
SIUC Southern Illin 29.63 350 eP P 07 07 55.6 +1.3
comp=Z,67nm,1.8s,mb5.1
USIN University of 29.64 352 eP P 07 07 54.5 +0.3
comp=Z,23nm,0.7s,mb5.0
WCI Wyandotte Cave 29.74 354 eP P 07 07 55.1 -0.1
WCI pmax pmax
comp=Z,25nm,1.1s,mb4.9
WCI Wyandotte Cave 29.74 354 eP P 07 07 55.1 -0.1
comp=Z,25nm,1.1s,mb4.9
FVM French Village 30.12 348 eP P 07 07 58.4 -0.2
FVM pmax pmax
comp=Z,30nm,1.5s,mb4.8
FVM French Village 30.12 348 eP P 07 07 58.4 -0.2
comp=Z,30nm,1.5s,mb4.8
425A Indio Mountain 30.31 320 ⇓P P 07 08 00.5 +0.1
baz=30,SNR=6.9
CCM Cathedral Cave 30.37 347 eP P 07 07 59.6 -1.2
CCM pmax pmax
comp=Z,13nm,1.0s,mb4.6
CCM Cathedral Cave 30.37 347 eP P 07 07 59.6 -1.2
comp=Z,14nm,1.0s,mb4.6
OLIL Olney 30.45 352 eP P 07 08 01.7 +0.2
comp=Z,23nm,0.9s,mb4.9
BLO Bloomington 30.70 354 eP P 07 08 02.8 -0.8
BLO pmax pmax
comp=Z,20nm,0.8s,mb5.0
BLO Bloomington 30.70 354 eP P 07 08 02.8 -0.9
comp=Z,20nm,0.8s,mb5.0
325A Bean Ranch, Si 30.70 321 ⇓P P 07 08 03.7 -0.2
baz=31
324A Moseley Ranch, 31.07 320 ⇓P P 07 08 06.9 -0.2
baz=31,SNR=11
225A Deer Hill, Car 31.12 322 ⇓P P 07 08 08.2 +0.8
baz=31
125A Gardner Draw, 31.40 323 ⇓P P 07 08 10.6 +0.7
baz=31
ACSO Alum Creek Sta 31.57 360 eP P 07 08 11.4 0.0
comp=Z,25nm,1.1s,mb5.0
Z25A Roswell 31.88 324 ⇑P P 07 08 14.7 +0.5
baz=32
124A Stringfield Ra 31.91 322 ⇓P P 07 08 14.8 +0.3
baz=32
HDIL Hopedale 32.41 351 eP P 07 08 17.8 -1.0
comp=Z,23nm,0.8s,mb5.1
320A Kipp Ranch, An 32.99 317 ⇓P P 07 08 25.2 +1.2
baz=33,SNR=9.9
ALLY Alegheny Colle 33.07 4 eP P 07 08 19.4 -5.1
comp=Z,36nm,0.6s,mb5.5
121A Cookes Peak, D 33.26 319 ⇓P P 07 08 27.5 +1.2
baz=33
220A Playas Peak, P 33.34 318 ⇓P P 07 08 28.2 +1.2
baz=33,SNR=10
319A Douglas 33.53 316 ⇑P P 07 08 29.6 +1.0
baz=34,SNR=7.9
120A U Bar Ranch, L 33.81 319 ⇑P P 07 08 32.1 +1.0
baz=34,SNR=6.8
219A White Tail Can 33.89 317 ⇑P P 07 08 32.6 +0.8
baz=34,SNR=12
318A Bisbee 34.05 316 ⇑P P 07 08 34.1 +0.8
baz=34,SNR=5.5
Z20A Nine Sixteen R 34.15 319 ⇑P P 07 08 35.0 +1.0
baz=34,SNR=9.5
Y21A Point of Rocks 34.16 322 ⇑P P 07 08 35.4 +1.3
baz=34,SNR=8.1
119A Ashpeak Ranch, 34.39 318 ⇑P P 07 08 36.8 +0.7
baz=34
SCIA State Center 34.49 346 eP P 07 08 36.7 -0.2
comp=Z,32nm,1.3s,mb5.1
X21A Alamocita Cree 34.52 322 ⇑P P 07 08 38.2 +1.0
baz=34,SNR=5.7
Y20A Horse Springs, 34.53 321 ⇓P P 07 08 38.5 +1.2
baz=34,SNR=5.6
118A Homack Ranch, 34.76 318 ⇑P P 07 08 40.1 +0.8
baz=35,SNR=8.6
217A Green Valley 34.82 316 ⇑P P 07 08 40.5 +0.7
baz=35,SNR=9.0
JFWS Jewell Farm 34.87 350 eP P 07 08 38.9 -1.2
JFWS pmax pmax
comp=Z,12nm,0.8s,mb4.9
JFWS Jewell Farm 34.87 350 eP P 07 08 38.9 -1.2
comp=Z,12nm,0.8s,mb4.9
X20A Quenado 35.02 321 ⇓P P 07 08 42.4 +0.8
baz=35
TUC Tucson 35.11 316 eP P 07 08 43.3 +0.9
TUC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TUC Tucson 35.11 316 eP P 07 08 43.2 +0.9
comp=Z,5.1nm,1.0s,mb4.4
Y19A Nutrioso 35.11 320 ⇑P P 07 08 43.1 +0.7
baz=35
216A Three Points, 35.39 315 ⇓P P 07 08 45.1 +0.2
baz=35
Z17A San Carlos Hig 35.49 318 ⇓P P 07 08 46.4 +0.7
baz=36,SNR=8.9
116A Eloy 35.89 316 ⇑P P 07 08 49.6 +0.6
baz=36,SNR=12
X18A Snowflake 35.92 320 ⇓P P 07 08 49.9 +0.6
baz=36
Y17A Roosevelt 35.98 318 ⇑P P 07 08 50.3 +0.5
baz=36
Z16A Peralta Trail, 36.16 317 ⇓P P 07 08 52.1 +0.7
baz=36
W18A Petrified Fore 36.17 321 ⇓P P 07 08 52.3 +0.9
baz=36
214A Organ Pipe Nat 36.32 314 ⇑P P 07 08 53.4 +0.7
baz=36,SNR=12
115A Sonoran Desert 36.33 316 ⇑P P 07 08 53.4 +0.6
baz=36,SNR=6.4
X17A Forest Lakes 36.35 319 ⇑P P 07 08 54.2 +1.3
baz=36
Y16A Circle Bar Ran 36.51 318 ⇑P P 07 08 55.2 +0.8
baz=36,SNR=14
114A Black Gap (USA 36.81 315 ⇑P P 07 08 57.6 +0.7
baz=37
X16A Lo Mia Camp, P 36.81 319 ⇑P P 07 08 57.9 +1.0
baz=37,SNR=10
T19A Beclabito 36.88 324 ⇑P P 07 08 57.9 +0.4
baz=37
ECSD EROS Data Cent 37.09 343 eP P 07 08 57.7 -1.4
comp=Z,15nm,1.3s,mb4.7
Y15A Casa Rosa Ranc 37.13 317 ⇑P P 07 09 00.3 +0.7
baz=37,SNR=9.1
V17A Tonalea, Kykot 37.15 321 ⇑P P 07 09 00.6 +0.8
baz=37,SNR=7.8
Z14A Wintersburg 37.20 316 ⇓P P 07 09 00.9 +0.7
baz=37
X15A Humboldt 37.38 318 ⇓P P 07 09 02.6 +0.8
baz=37,SNR=10
113A Mohawk Valley, 37.44 315 ⇑P P 07 09 02.8 +0.5
baz=37,SNR=11
Y14A Wickenburg 37.57 317 ⇑P P 07 09 03.8 +0.4
baz=38
Z13A Yuma Proving G 37.60 315 ⇓P P 07 09 04.1 +0.5
baz=38,SNR=12
X14A Yava 37.80 318 ⇑P P 07 09 06.2 +0.9
baz=38,SNR=6.0
W15A Williams 37.81 319 ⇑P P 07 09 06.5 +1.1
baz=38
112A Yuma 37.89 314 ⇓P P 07 09 06.7 +0.6
baz=38
Y13A Salome 38.06 316 ⇓P P 07 09 08.4 +0.9
baz=38,SNR=5.2
V15A Kaibab Nationa 38.15 320 ⇓P P 07 09 09.4 +1.2
baz=38,SNR=15
GLA Glamis 38.34 314 ⇑P P 07 09 10.8 +0.9
baz=38,SNR=7.8
GLA Glamis 38.34 314 eP P 07 09 10.2 +0.3
GLA pmax pmax
comp=Z,26nm,1.0s,mb4.9
GLA Glamis 38.34 314 eP P 07 09 10.2 +0.3
comp=Z,26nm,1.0s,mb4.9
W14A Seligman 38.37 318 ⇑P P 07 09 11.1 +1.0
baz=38,SNR=5.9
Q19A Hogan Spring (38.49 326 ⇓P P 07 09 12.2 +1.1
baz=38
X13A Yucca 38.51 317 ⇓P P 07 09 11.9 +0.6
baz=38,SNR=6.2
Y12C Blythe 38.51 315 ⇓P P 07 09 11.7 +0.4
baz=38,SNR=6.6
PDMCI Parker Dam,Lak 38.55 316 ⇓P P 07 09 11.8 +0.1
baz=39,SNR=7.2
O20A White River Ci 38.79 328 ⇑P P 07 09 14.9 +1.3
baz=39
W13A Hualapai Mount 38.83 318 ⇓P P 07 09 14.3 +0.3
baz=39,SNR=9.3
R17A Hanksville Air 38.94 324 ⇓P P 07 09 14.4 -0.4
baz=39,SNR=11
SWSC Sam W. Stewart 38.98 313 ⇑P P 07 09 15.8 +0.5
baz=39
T15A Red Dirt Ranch 39.03 321 ⇑P P 07 09 16.0 +0.4
baz=39
BC3 Big Chuckw Mtn 39.11 315 ⇑P P 07 09 16.6 +0.3
baz=39
U14A Mt Trumbull 39.16 320 ⇑P P 07 09 17.5 +0.8
baz=39
IRM Iron Mountain 39.17 315 ⇓P P 07 09 17.2 +0.4
baz=39,SNR=5.6
R16A Teasdale 39.30 323 ⇓P P 07 09 19.0 +1.1
baz=39
SRU San Rafael 39.30 325 ⇓P P 07 09 18.3 +0.5
baz=39
SRU San Rafael 39.30 325 eP P 07 09 17.7 -0.2
SRU pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
SRU San Rafael 39.30 325 eP P 07 09 17.7 -0.2
comp=Z,4.2nm,1.0s,mb4.1
N20A Spence Gulch, 39.32 329 ⇓P P 07 09 18.6 +0.6
baz=39
V13A Grand Canyon W 39.34 318 ⇓P P 07 09 19.1 +0.9
baz=39
MONP Monument Peak 39.40 313 ⇑P P 07 09 19.3 +0.5
baz=39
U13A Pakoon Wash 39.66 319 ⇓P P 07 09 21.5 +0.6
baz=40
BELC Belle Mtn. 39.67 315 ⇑P P 07 09 21.6 +0.6
baz=40,SNR=7.7
PFO Pinyon Flat Ob 39.80 314 ⇓P P 07 09 22.5 +0.4
baz=40
PFO Pinyon Flat Ob 39.80 314 eP P 07 09 22.5 +0.4
PFO pmax pmax
comp=Z,15nm,1.0s,mb4.7
PFO Pinyon Flat Ob 39.80 314 eP P 07 09 22.5 +0.4
comp=Z,15nm,1.0s,mb4.7
V12A Nelson 39.84 318 ⇑P P 07 09 22.8 +0.4
baz=40,SNR=6.3
MSU Marysvale 39.86 323 eP P 07 09 23.0 +0.5
MSU pmax pmax
comp=Z,3.0nm,1.1s,mb3.9
MSU Marysvale 39.86 323 eP P 07 09 23.0 +0.4
comp=Z,3.2nm,1.1s,mb4.0
109C Camp Elliot, M 39.90 312 ⇓P P 07 09 23.6 +0.6
baz=40
V11A Goodsprings 40.29 317 ⇓P P 07 09 27.0 +0.8
baz=40
S13A Holt Ranch, En 40.30 321 ⇑P P 07 09 27.0 +0.8
baz=40,SNR=6.1
MURC Murrieta 40.33 313 ⇓P P 07 09 27.0 +0.5
baz=40
HEC Hector,Ludlow 40.35 315 ⇑P P 07 09 27.4 +0.7
baz=40,SNR=5.4
TUQ Turquoise Moun 40.40 317 ⇑P P 07 09 27.6 +0.5
baz=40
L19A Farson 40.81 329 ⇑P P 07 09 32.0 +1.6
baz=41
Q14A Sevier Lake (B 40.82 323 ⇓P P 07 09 31.3 +0.8
baz=41
SHOC Shoshone 40.90 317 ⇓P P 07 09 32.2 +1.1
baz=41
GSC Goldstone 40.93 316 ⇑P P 07 09 32.1 +0.6
baz=41,SNR=8.2
GSC Goldstone 40.93 316 eP P 07 09 31.7 +0.2
GSC pmax pmax
comp=Z,14nm,1.0s,mb4.5
GSC Goldstone 40.93 316 eP P 07 09 31.7 +0.3
comp=Z,14nm,1.0s,mb4.5
T11A Corn Creek, Al 40.96 319 ⇓P P 07 09 32.7 +1.1
baz=41
BFSC Mount Baldy St 40.98 314 ⇑P P 07 09 32.5 +0.7
baz=41
L18A Fontenelle, Gr 41.03 329 ⇓P P 07 09 32.4 +0.3
baz=41
M17A Scullys Gap (B 41.03 328 ⇓P P 07 09 32.7 +0.5
baz=41
P14A Drum Mountains 41.09 324 ⇓P P 07 09 33.8 +1.1
baz=41
CIS Catalina Islan 41.10 312 ⇑P P 07 09 33.4 +0.5
baz=41
AGMN Agassiz Refuge 41.15 347 eP P 07 09 32.5 -0.5
comp=Z,20nm,1.4s,mb4.5
U10A Ash Meadows, A 41.22 317 ⇓P P 07 09 34.9 +1.1
baz=41
R12A Pony Springs, 41.22 321 ⇓P P 07 09 34.6 +0.8
baz=41
Q13A Wheeler Ranch, 41.25 322 ⇑P P 07 09 34.7 +0.7
baz=41,SNR=11
BW06 Boulder Array 41.40 330 ⇓P P 07 09 35.4 +0.2
baz=42
PDAR Pinedale Array 41.40 330 P P 07 09 34.8 -0.4
comp=Z,2.0nm,1.1s,mb3.6,baz=131,slow=8.1,SNR=6.2
S11A Rachel 41.54 319 ⇑P P 07 09 37.3 +0.9
baz=42,SNR=7.8
EDW2 Edwards Air Fo 41.54 314 ⇑P P 07 09 37.0 +0.5
baz=42,SNR=6.7
K18A Toltan Ranch, 41.55 329 ⇑P P 07 09 36.2 -0.2
baz=42,SNR=7.0
P13A Bates Ranch, G 41.56 323 ⇑P P 07 09 36.5 -0.1
baz=42
L17A Cokeville 41.59 328 ⇓P P 07 09 37.1 +0.4
baz=42
FURC Furnace Creek, 41.60 317 ⇑P P 07 09 37.3 +0.4
baz=42,SNR=9.9
HWUT Hardware Ranch 41.61 327 eP P 07 09 35.6 -1.2
comp=Z,7.0nm,1.0s,mb4.2
HWUT ePcP PcP 07 11 34.4 +0.4
Q12A Willow Creek R 41.80 322 ⇑P P 07 09 38.9 +0.4
baz=42
MPMC Manual Prospec 41.81 316 ⇓P P 07 09 39.1 +0.4
baz=42,SNR=11
R11A Troy Canyon, C 41.85 320 ⇑P P 07 09 39.4 +0.5
baz=42
J18A Kendall Valley 41.96 330 ⇓P P 07 09 39.5 -0.2
baz=42
Q11A Duckwater 42.19 321 ⇓P P 07 09 42.4 +0.7
baz=42,SNR=7.5
S10A Tonopah Range, 42.24 319 ⇑P P 07 09 42.9 +0.7
baz=42,SNR=12
ARVC Arvin 42.26 314 ⇑P P 07 09 42.9 +0.6
baz=42,SNR=8.4
R10A Warm Springs 42.27 320 ⇑P P 07 09 43.7 +1.3
baz=42,SNR=7.2
CFAA Coronel Fontan 42.27 161 P P 07 09 41.5 -0.9
comp=Z,0.9nm,1.0s,mb3.4,baz=334,slow=7.8,SNR=10
CFAA Coronel Fontan 42.27 161 P P 07 09 41.5 -0.9
ISA Isabella 42.28 315 ⇓P P 07 09 42.9 +0.4
baz=42,SNR=8.0
ISA Isabella 42.28 315 eP P 07 09 42.6 +0.1
ISA pmax pmax
comp=Z,16nm,1.3s,mb4.5
ISA Isabella 42.28 315 eP P 07 09 42.6 +0.1
comp=Z,16nm,1.3s,mb4.5
L15A Malad City 42.32 327 ⇓P P 07 09 43.1 +0.3
baz=42
CWC Cottonwood Cre 42.41 316 ⇓P P 07 09 43.9 +0.3
baz=42
J17A Brown Place, J 42.41 330 ⇑P P 07 09 43.9 +0.5
baz=42
REDW Red Top Meadow 42.48 329 eP P 07 09 42.8 -1.2
comp=Z,11nm,1.3s,mb4.3
M14A Sheep Mountain 42.51 326 ⇓P P 07 09 44.5 +0.2
baz=42,SNR=7.2
O12A Currie 42.51 323 ⇑P P 07 09 44.5 +0.2
baz=42
LOHW Long Hollow 42.54 330 P P 07 09 44.9 +0.4
comp=Z,2.5nm,0.9s,mb3.9
N13A Wendover, West 42.57 324 ⇑P P 07 09 45.3 +0.5
baz=43
N13A Wendover, West 42.57 324 eP P 07 09 44.2 -0.6
comp=Z,20nm,1.1s,mb4.8
TPAW Teton Pass 42.63 330 eP P 07 09 44.0 -1.2
comp=Z,3.7nm,0.9s,mb4.1
Q10A Clear Creek Ra 42.64 320 ⇓P P 07 09 46.4 +0.9
baz=43
VES Vestal, Richgr 42.80 315 ⇓P P 07 09 46.9 +0.2
baz=43,SNR=15
J16A Bone 42.80 329 ⇑P P 07 09 46.5 -0.2
baz=43
L14A Malta 42.81 326 ⇓P P 07 09 46.6 -0.1
baz=43
PKM Peak Mountain 42.85 313 ⇑P P 07 09 46.8 -0.3
baz=43
M13A Montello 42.88 325 ⇑P P 07 09 47.4 +0.1
baz=43
M13A Montello 42.88 325 eP P 07 09 46.4 -0.9
comp=Z,5.8nm,1.1s,mb4.2
IMW Indian Meadow 42.91 330 eP P 07 09 46.5 -1.0
comp=Z,4.1nm,1.0s,mb4.1
O11A Cowboy Ranch, 42.97 322 ⇓P P 07 09 47.9 -0.1
baz=43
ULM Lac du Bonnet 42.99 348 P P 07 09 46.1 -1.9
comp=Z,9.5nm,0.9s,mb4.5,baz=162,slow=8.3,SNR=7.3
ULM LR LR 07 29 00.8
comp=Z,110nm,18.7s,MS3.8,baz=77,slow=38
ULM Lac du Bonnet 42.99 348 P P 07 09 46.2 -1.8
ULM pmax pmax
comp=Z,10.0nm,0.9s
ULM MLR MLR
comp=Z,110nm,18.7s
ULM Lac du Bonnet 42.99 348 eP P 07 09 45.4 -2.6
comp=Z,19nm,1.1s,mb4.7
N12A Clover Valley, 43.06 324 ⇑P P 07 09 48.6 -0.1
baz=43
N12A Clover Valley, 43.06 324 eP P 07 09 48.1 -0.6
comp=Z,6.9nm,1.0s,mb4.3
K14A Jones Ranch, D 43.12 327 ⇑P P 07 09 48.8 -0.4
baz=43,SNR=9.7
RCTC Rector, Farmer 43.14 315 ⇓P P 07 09 49.5 0.0
baz=43,SNR=5.7
SMMC Simmler 43.18 314 ⇑P P 07 09 49.9 +0.1
baz=43,SNR=5.8
G18A Lazy EL Ranch, 43.32 332 ⇓P P 07 09 50.0 -0.7
baz=43
J15A Blackfoot 43.32 328 ⇑P P 07 09 50.8 0.0
baz=43
NVAR Mina Array Bea 43.64 319 P P 07 09 53.9 +0.4
comp=Z,6.0nm,0.9s,mb4.3,baz=136,slow=7.4,SNR=40
H16A Russell Place, 43.66 331 ⇑P P 07 09 54.0 +0.5
baz=44
DGMT Dagmar 43.71 339 ⇓P P 07 09 53.4 -0.5
baz=44
DGMT Dagmar 43.71 339 eP P 07 09 53.5 -0.3
comp=Z,14nm,1.1s,mb4.6
GCMT Greycliff 43.73 333 eP P 07 09 53.1 -0.9
comp=Z,3.9nm,0.8s,mb4.2
F18A Big Timber 43.84 333 ⇓P P 07 09 54.2 -0.7
baz=44
J14A Carey 43.84 327 ⇑P P 07 09 54.7 -0.2
baz=44
G17A Pierce Place, 43.87 332 ⇑P P 07 09 55.4 +0.2
baz=44
L12A House Creek Ra 43.87 325 ⇓P P 07 09 55.1 -0.2
baz=44
BMN Battle Mountai 44.11 322 eP P 07 09 56.7 -0.5
BMN pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
BMN Battle Mountai 44.11 322 eP P 07 09 56.7 -0.5
comp=Z,9.6nm,1.1s,mb4.4
K12A Draper Farm, C 44.13 326 ⇑P P 07 09 57.0 -0.3
baz=44
I14A Mackay 44.22 328 ⇓P P 07 09 57.8 -0.2
baz=44
J13A Cove Ranch, Pi 44.24 327 ⇑P P 07 09 57.8 -0.4
baz=44
F17A Fitzpatrick Pl 44.27 332 ⇓P P 07 09 58.1 -0.3
baz=44
H15A Lima 44.28 329 ⇑P P 07 09 58.1 -0.4
baz=44
L11A Cat Creek Ranc 44.31 325 ⇑P P 07 09 58.4 -0.4
baz=44
G16A Moss Hill, Enn 44.31 331 ⇓P P 07 09 58.5 -0.3
baz=44
M10A I.L. Ranch, Tu 44.36 323 ⇓P P 07 09 58.8 -0.4
baz=44
WAKR Walker 44.43 318 eP P 07 10 00.9 +1.1
E18A Harlowton 44.43 333 ⇑P P 07 09 59.3 -0.4
baz=44
HLID Hailey 44.48 327 ⇓P P 07 09 59.7 -0.4
baz=44
HLID Hailey 44.48 327 eP P 07 09 59.6 -0.6
comp=Z,4.0nm,1.0s,mb4.1
BOZ Bozeman (W) 44.53 331 ⇑P P 07 09 59.6 -0.9
baz=45,SNR=6.0
BOZ Bozeman (W) 44.53 331 eP P 07 09 59.3 -1.2
BOZ pmax pmax
comp=Z,8.0nm,1.5s,mb4.3
BOZ Bozeman (W) 44.53 331 eP P 07 09 59.3 -1.2
comp=Z,7.7nm,1.5s,mb4.3
MCMT McKenzie Canyo 44.54 329 eP P 07 10 00.7 +0.1
comp=Z,2.1nm,1.0s,mb3.9
I13A Wildhorse Cree 44.56 328 ⇓P P 07 10 00.2 -0.5
baz=45
G15A Dillon 44.60 330 ⇑P P 07 10 00.6 -0.4
baz=45
H14A Leadore 44.65 329 ⇓P P 07 10 01.3 -0.2
baz=45
L10A Juniper Basin 44.66 324 ⇑P P 07 10 01.0 -0.7
baz=45
E17A Martinsdale 44.77 333 ⇓P P 07 10 02.1 -0.3
baz=45
DLMT Dillon 44.79 330 eP P 07 10 02.3 -0.3
comp=Z,11nm,1.6s,mb4.5
CMB Columbia Colle 44.81 317 eP P 07 10 02.7 -0.2
CMB pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
CMB Columbia Colle 44.81 317 eP P 07 10 02.7 -0.2
comp=Z,5.0nm,1.0s,mb4.3
K11A Parker Ranch, 44.85 325 ⇑P P 07 10 02.9 -0.2
baz=45
D18A Linhart Farms, 44.87 334 ⇓P P 07 10 03.0 -0.1
baz=45
SAO San Andreas Ge 44.91 315 eP P 07 10 03.1 -0.6
SAO pmax pmax
comp=Z,11nm,1.2s,mb4.6
SAO San Andreas Ge 44.91 315 eP P 07 10 03.1 -0.6
comp=Z,11nm,1.2s,mb4.6
I12A Atlanta 45.02 327 ⇑P P 07 10 04.0 -0.4
baz=45
LRM Limekiln Ridge 45.05 331 eP P 07 10 03.8 -0.9
WCN Washoe City 45.07 319 ⇓P P 07 10 05.3 +0.4
baz=45
H13A Challis 45.07 328 ⇓P P 07 10 04.6 -0.2
baz=45
F15A Butte 45.09 331 ⇑P P 07 10 04.1 -0.8
baz=45
D17A Six Diamond Ra 45.22 333 ⇑P P 07 10 05.7 -0.3
baz=45
K10A MacKenzie Ranc 45.33 325 ⇓P P 07 10 06.6 -0.4
baz=45
H12A Diamond D Ranc 45.38 328 ⇑P P 07 10 06.7 -0.5
baz=45
G13A Cobalt 45.42 329 ⇑P P 07 10 07.3 -0.3
baz=46
EGMT Eagleton 45.49 335 ⇑P P 07 10 07.5 -0.5
baz=46
EGMT Eagleton 45.49 335 eP P 07 10 07.6 -0.5
comp=Z,6.6nm,1.0s,mb4.4
D16A Dana Ranch, Ca 45.52 333 ⇑P P 07 10 08.0 -0.3
baz=46
I11A Placerville 45.55 326 ⇓P P 07 10 07.9 -0.7
baz=46
E15A Deer Lodge 45.58 331 ⇑P P 07 10 08.3 -0.5
baz=46
C17A Wharram Farm, 45.62 334 ⇑P P 07 10 09.0 -0.1
baz=46
BEKR Beckwourth 45.76 319 ⇓P P 07 10 10.1 -0.3
baz=46,SNR=8.6
B18A Beardsley Farm 45.78 335 ⇓P P 07 10 09.9 -0.5
baz=46
F13A Darby 45.96 329 ⇓P P 07 10 11.4 -0.5
baz=46
E14A Clinton 45.98 331 ⇓P P 07 10 11.2 -0.9

baz=46
H11A Donnelly 46.09 327 ⇑P P 07 10 12.1 -0.9
baz=46
WVOR Wild Horse Val 46.15 323 *e*P **P 07 10 12.7 -0.8**
WVOR pmax pmax
comp=Z,13nm,1.1s,mb4.8
WVOR Wild Horse Val 46.15 323 *e*P **P 07 10 12.7 -0.8**
comp=Z,13nm,1.1s,mb4.8
J09A Fry Pan Ranch, 46.19 325 ⇓P **P 07 10 12.6 -1.1**
baz=46
OHCM Honcut 46.22 318 *e*P **P 07 10 13.8 -0.3**
A18A Metzger Ranch, 46.22 335 ⇑P **P 07 10 12.5 -1.4**
baz=46,SNR=7.9
E13A Victor 46.34 330 ⇑P **P 07 10 13.5 -1.3**
baz=46
F12A Elk City 46.40 329 ⇑P **P 07 10 14.4 -0.9**
baz=46
H10A Noah's Angus R 46.42 327 ⇓P **P 07 10 14.2 -1.3**
baz=46
MSO Missoula 46.49 331 *e*P **P 07 10 15.0 -1.1**
comp=Z,41nm,2.8s,mb4.9
C15A Salmond Ranch, 46.55 333 ⇑P **P 07 10 15.7 -0.8**
baz=47
I09A Lost Marbles R 46.58 325 ⇑P **P 07 10 15.8 -0.9**
baz=47
A17A Triple J Farms 46.60 335 ⇓P **P 07 10 15.3 -1.6**
baz=47,SNR=8.0
J08A Circle Bar Ran 46.62 324 ⇓P **P 07 10 16.6 -0.4**
baz=47
B15A Bradely Ranch, 46.93 333 ⇑P **P 07 10 18.1 -1.4**
baz=47,SNR=7.4
A16A West Butte Ran 46.98 334 ⇑P **P 07 10 19.1 -0.7**
baz=47
B14A Marquette Ranc 47.28 333 ⇑P **P 07 10 21.3 -0.9**
baz=47,SNR=10
E11A Bogner Ranch, 47.30 329 ⇓P **P 07 10 21.3 -1.1**
baz=47
D12A Red Ives Fores 47.34 330 ⇑P **P 07 10 21.8 -0.9**
baz=47
A15A Johnson Ranch, 47.50 334 ⇓P **P 07 10 22.2 -1.6**
baz=48,SNR=7.9
F10A Beach Ranch, E 47.58 328 ⇑P **P 07 10 23.8 -0.7**
baz=48
I07A Izee 47.65 324 ⇓P **P 07 10 24.5 -0.6**
baz=48
A14A Double T Ranch 47.80 333 ⇑P **P 07 10 24.7 -1.5**
baz=48
KCPM Cahto Peak 47.80 317 *e*P **P 07 10 26.6 +0.2**
comp=Z,19nm,1.1s,mb5.0
D11A Klaveano Farm, 47.83 329 ⇑P **P 07 10 26.0 -0.5**
baz=48
B13A Whitefish 47.84 332 ⇑P **P 07 10 26.3 -0.3**
baz=48
SCHQ Schefferville 47.91 12 P **P 07 10 27.9 +0.9**
comp=Z,4.0nm,0.9s,mb4.4,baz=166,slow=9.6,SNR=3.6
SCHQ LR LR 07 32 09.8
comp=Z,264nm,18.7s,MS4.2,baz=344,slow=38
G08A Pilot Rock 48.08 326 ⇑P **P 07 10 27.8 -0.6**
baz=48
KHMM Horse Mountain 48.49 318 *e*P **P 07 10 31.8 +0.1**
comp=Z,16nm,1.0s,mb5.0
FFC Flin Flon 48.55 345 *e*P **P 07 10 30.2 -1.7**
FFC pmax pmax
comp=Z,39nm,2.0s,mb5.1
FFC Flin Flon 48.55 345 *e*P **P 07 10 30.2 -1.7**
comp=Z,39nm,2.0s,mb5.1
PLCA Paso Flores 50.30 168 P **P 07 10 42.8 -2.6**
comp=Z,10nm,0.8s,mb4.9,baz=345,slow=8.4,SNR=12
PLCA LR LR 07 30 58.5
comp=Z,149nm,20.2s,MS4.0,baz=288,slow=35
PLCA Paso Flores 50.30 168 *e*P **P 07 10 43.8 -1.6**
PLCA pmax pmax
comp=Z,13nm,0.9s
PLCA Paso Flores 50.30 168 *e*P **P 07 10 43.8 -1.7**
comp=Z,13nm,0.9s,mb5.0
FCC Fort Churchill 50.86 352 *e*P **P 07 10 47.9 -1.5**
comp=Z,0.3nm,0.8s
EDM Edmonton 50.95 337 *e*P **P 07 10 48.7 -1.5**
FRB Frobisher Bay 56.07 8 LR LR 07 36 16.6
comp=Z,250nm,18.2s,MS4.3,baz=33,slow=37
YKA Yellowknife Ar 58.62 343 P **P 07 11 44.6 -1.0**
comp=Z,3.7nm,0.8s,mb4.5,baz=138,slow=7.2,SNR=29
YKA LR LR 07 39 41.3
comp=Z,16nm,18.2s,MS3.2,baz=210,slow=39
YKA Yellowknife Ar 58.62 343 P **P 07 11 44.6 -1.0**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA MLR MLR
comp=Z,16nm,18.2s
RKT Rikitea 59.92 237 *e*LR LR 07 29 30.3
comp=Z,365nm,25.5s,baz=55
DLBC Dease Lake 61.40 334 *e*P **P 07 12 04.9 +0.1**
SFJD Kangerlussuaq 62.33 14 LR LR 07 40 41.3
comp=Z,272nm,18.4s,MS4.5,baz=4.6,slow=37
BBTS Babate 65.03 78 LR LR 07 39 28.6
comp=Z,88nm,19.0s,MS4.0,baz=108,slow=35
RES Resolute Bay 66.48 357 *e*P **P 07 12 36.1 -1.9**
RES pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
RES Resolute Bay 66.48 357 *e*P **P 07 12 36.1 -1.9**
comp=Z,8.9nm,1.2s,mb4.7
DAWY Dawson 68.17 337 *e*P **P 07 12 48.5 -0.4**
INK Inuvik 68.31 342 *e*P **P 07 12 49.8 +0.1**
INK pmax pmax
comp=Z,19nm,1.3s
INK Inuvik 68.31 342 *e*P **P 07 12 49.8 +0.1**
comp=Z,19nm,1.3s,mb5.0
BMRM Bremner River 69.11 333 *e*P **P 07 12 53.9 -0.8**
comp=Z,4.7nm,0.8s,mb4.5
EGAK Eagle 69.18 337 *e*P **P 07 12 55.0 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
SUMG Summit 69.30 13 *e*P **P 07 12 54.7 -1.1**
SUMG pmax pmax
comp=Z,13nm,0.9s
SUMG Summit 69.30 13 *e*P **P 07 12 54.7 -1.1**
comp=Z,13nm,0.9s,mb4.9
PPT Papeete 70.85 248 *e*LR LR 07 34 34.8
comp=Z,95nm,24.5s
COLA College 71.86 336 *e*P **P 07 13 10.6 -0.9**
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
COLA College 71.86 336 *e*P **P 07 13 10.6 -0.9**
comp=Z,3.2nm,0.8s,mb4.3
MCK McKinley 71.94 335 *e*P **P 07 13 12.2 +0.2**
MCK pmax pmax
comp=Z,11nm,1.0s,mb4.7
MCK McKinley 71.94 335 *e*P **P 07 13 12.2 +0.2**
comp=Z,11nm,1.0s,mb4.7
OHAK Old Harbor 72.34 327 *e*P **P 07 13 14.2 -0.3**
TRF Thorofare Moun 72.43 334 *e*P **P 07 13 14.3 -0.6**
comp=Z,17nm,1.3s,mb4.8
KTH Kantishna Hill 72.73 334 *e*P **P 07 13 15.9 -0.9**
comp=Z,6.3nm,1.0s,mb4.5
RSO Redoubt South 72.78 331 *e*P **P 07 13 17.1 0.0**
BPAW Bear Paw Mtn. 72.91 335 *e*P **P 07 13 16.6 -1.2**
comp=Z,9.9nm,1.1s,mb4.7
PPLA Purkeypile 73.11 333 *e*P **P 07 13 18.4 -0.6**
comp=Z,25nm,1.6s,mb4.9
COLD Coldfoot 73.52 338 *e*P **P 07 13 20.7 -0.6**
comp=Z,8.4nm,1.1s,mb4.6
SVW2 Sparrevohn 74.27 331 *e*P **P 07 13 24.5 -1.4**
TTA Tatalina 74.83 333 *e*P **P 07 13 26.9 -2.1**
CHGN Chignik 74.97 326 *e*P **P 07 13 29.3 -0.7**
MDT Midelt 75.54 58 LR LR 07 43 32.3
comp=Z,78nm,19.1s,MS4.0,baz=127,slow=33
ESDC Sonseca Array 76.04 51 P **P 07 13 36.8 +0.3**
comp=Z,0.3nm,0.3s,mb3.7,baz=272,slow=5.2,SNR=4.4
ESDC LR LR 07 43 42.8
comp=Z,106nm,18.5s,MS4.2,baz=190,slow=33
DBIC Dimbokro 77.17 85 P **P 07 13 43.0 -0.4**
comp=Z,9.9nm,1.0s,mb4.7,baz=233,slow=5.9,SNR=3.2
DBIC LR LR 07 49 37.9
comp=Z,47nm,18.4s,MS3.8,baz=185,slow=37
DBIC Dimbokro 77.17 85 P **P 07 13 43.0 -0.4**
DBIC pmax pmax
comp=Z,10.0nm,1.0s
DBIC MLR MLR
comp=Z,47nm,18.4s
TNA Tin City 80.27 335 *e*P **P 07 13 59.0 -0.4**
comp=Z,9.6nm,1.3s,mb4.6
TORD Torodi Ar. Bea 82.79 78 P **P 07 14 13.2 -0.6**
comp=Z,1.0nm,0.8s,mb3.9,baz=312,slow=3.8,SNR=5.3
TORD LR LR 07 50 58.5
comp=Z,56nm,18.0s,MS4.0,baz=195,slow=36
NOA NORSAR Array B 84.56 29 P **P 07 14 21.5 -0.4**
comp=Z,2.7nm,1.0s,mb4.3,baz=282,slow=5.3,SNR=3.6
NOA NORSAR Array B 84.56 29 P **P 07 14 21.5 -0.4**
NOA pmax pmax
comp=Z,3.0nm,1.0s
DAVOX Davos/Dischmat 85.70 44 LR LR 07 45 16.3
comp=Z,91nm,22.0s,MS4.1,baz=262,slow=30
KEST Kesra 86.83 55 LR LR 07 49 29.7
comp=Z,38nm,20.9s,MS3.8,baz=290,slow=33
GERES GERESS Array B 87.91 41 P **P 07 14 38.5 -0.2**
comp=Z,0.6nm,0.8s,mb3.9,baz=270,slow=1.3,SNR=4.7
GERES LR LR 07 47 11.0
comp=Z,143nm,20.2s,MS4.4,baz=92,slow=31
BILL Bilibino 89.79 339 *de*P **P 07 14 46.6 -0.6**
BILL pmax pmax
comp=Z,21nm,1.6s,mb5.2
BILL Bilibino 89.79 339 *e*P **P 07 14 47.0 -0.2**
comp=Z,24nm,1.3s,mb5.4
VAE Valguarnera 90.56 52 LR LR 07 48 08.6
comp=Z,116nm,19.7s,MS4.3,baz=123,slow=31
AKASG Malin Array Be 97.03 36 LR LR 07 56 41.2
comp=Z,104nm,18.4s,MS4.3,baz=110,slow=34
TIXI Tiksi 97.29 350 *e*P **P 07 15 22.4 +0.8**
TIXI pmax pmax
comp=Z,4.0nm,1.3s,mb4.7
DZM Mont Dzumac 112.33 250 *e*LR LR 07 53 48.1
comp=Z,66nm,21.8s
KMBO Kilima Mbogo 119.89 86 *i* PKIKP PKPdf 07 20 39.9 -0.6
KMBO pmax pmax
comp=Z,1.0nm,0.3s
CN2 Changchun 121.95 336 *e*PKP PKPdf 07 20 42.5 -1.1
KSRS Korea Array 125.97 330 PKP PKPdf 07 20 50.0 -1.5
comp=Z,1.5nm,0.8s,baz=329,slow=1.6,SNR=3.7
KSRS Korea Array 125.97 330 PKIKP PKPdf 07 20 50.0 -1.5
KSRS pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 127.19 9 *e*PKP PKPdf 07 20 52.3 -1.4
WMQ LR LR
comp=Z,50nm,25.0s,MS4.1
WMQ Urumqi 127.19 9 *e*Pdif Pdif 07 17 34.0 -0.9
WMQ LR LR
comp=Z,50nm,25.0s,MS4.1
HHC Hu-ho-hao-te 129.12 346 *e*PKP PKPdf 07 20 58.5 +1.1
HHC PKS 07 24 34.0
HHC SKS SKSdf 07 28 05.0 -4.3
HHC AMB AMB
comp=Z,65nm,7.5s
HHC LR LR
comp=Z,97nm,22.5s,MS4.4
NJ2 Nanjing 134.65 334 *e*PKP PKPdf 07 21 07.5 -0.6
LZH Lanzhou 135.19 352 *e*PKP PKPdf 07 21 08.3 -0.7
LZH sPKP 07 21 22.3
CD2 Chengdu 140.29 351 PKP PKPdf 07 21 16.0 -2.6
ASAR Alice Springs 141.79 242 PKP PKPdf 07 21 18.4 -3.1
comp=Z,1.5nm,0.8s,baz=90,slow=1.9,SNR=4.6
ASAR Alice Springs 141.79 242 PKIKP PKPdf 07 21 18.4 -3.0
ASAR pmax pmax
comp=Z,2.0nm,0.8s
GYA Guiyang 144.03 345 *e*PKP PKPdf 07 21 22.8 -2.6
GYA pPKP pPKPdf 07 21 33.8 +4.8
GYA sPKP 07 21 38.0
GYA PP PP 07 24 41.5 +4.0
GYA AMB AMB
comp=Z,80nm,8.0s
SHL Shillong 145.72 9 *e*P PKPdf 07 21 27.5 -0.8
KMI Kunming 146.12 351 PKPbc PKPbc 07 21 27.3 -2.5
KMI pPKP pPKPdf 07 21 38.3 +5.6
KMI sPKP 07 21 42.0
KMI PP PP 07 24 53.0 +3.1
KMI AMB AMB
comp=Z,77nm,5.4s
KMI LR LR
comp=N,100nm,16.4s,MS4.8
KMI LR LR
comp=E,77nm,16.4s,MS4.8
KMI LR LR
comp=Z,99nm,13.9s,MS4.8
CMAR Chiang Mai Arr 153.13 356 PKPbc PKPbc 07 21 44.6 -3.0
comp=Z,1.1nm,0.3s,baz=321,slow=3.0,SNR=7.9

CASC 29 07:05:37.0±1.2, 8°.43N×82°.98W, h3km, MD3.8, MW4.5, 2C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
ACR	**Cerro Adams**	**0.29**	**321**	⇑*i*P	Pg	07 05 43.3		+0.8
ACR				*e*S	Sg	07 05 49.3		+3.0
BRU2	**Volcan**	**0.46**	**39**	⇑*i*P	Pg	07 05 47.2		+1.3
BRU2				*e*S	Sg	07 05 55.7		+3.7
BAR1		**0.87**	**338**	‖*e*P	Pg	07 05 53.6		-0.1
CNI	**Changuinola**	**1.08**	**25**	*e*P	Pg	07 05 57.4		-0.4
BUS	**Buena Vista**	**1.36**	**326**	*e*P	Pn	07 06 01.9		-0.9
URSC	**Urasca**	**1.60**	**331**	*e*P	Pn	07 06 05.4		-0.9
URSC				*e*S	Sn	07 06 28.2		+0.7
PRS1	**Puriscal**	**2.03**	**320**	*e*P	Pn	07 06 11.9		-0.2
CGA2	**Cerro Gallo 2**	**2.15**	**317**	*e*P	Pn	07 06 14.2		+0.4

IDC ***29*** *07:10:18.0±0.7, 31°.26N×103°.79E, h0km, mb4.1/20, mb1 4.2/22, mb1mx4.1/32, mbtmp4.2/22, ML3.9/2, MS3.7/16, Ms1 3.7/16, ms1mx3.5/34, Error ellipse: s-maj=22.1km s-min=14.1km az=58.0*
ISCJB ***29*** *07:10:19.8±1.2, 31°.20N±0°.03×103°.57E±0°.03, h14km±8km, mb4.4/54, MS3.7/20, Error ellipse: s-maj=5.3km s-min=4.4km az=39.6*
NEIC ***29*** *07:10:21.0±0.3, 31°.09N×103°.51E, h10km, mb4.8/33, Error ellipse: s-maj=8.1km s-min=6.7km az=157.0*
BJI ***29*** *07:10:20.1, 31°.23N×103°.74E, h13km, mB5.0/15, mb4.6/27, ML4.6/22, Ms4.4/34, Ms7 4.1/31*
MOS ***29*** *07:10:20.5±1.4, 31°.14N×103°.64E, h30km, mb4.7/28, Error ellipse: s-maj=9.6km s-min=5.8km az=100.2*
ISC 29 07:10:21.2±0.9, 31°.19N±0°.02×103°.66E±0°.03, h13km±6km, n155, σ1°.43/166, mb4.4/53, MS3.7/20, 6C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
CD2	**Chengdu**	**0.29**	**162**	Pg	**Pg**	**07 10 29.3**		**+2.1**
CD2				Sg	**Sg**	**07 10 35.5**		**+4.2**
CD2				smax				
comp=N,62μm,0.9s								
LZH	**Lanzhou**	**4.89**	**2**	Pn	**Pn**	**07 11 35.0**		**+0.7**
LZH				Pg	**Pg**	**07 11 49.0**		**-5.8**
LZH				Sn	**Sn**	**07 12 32.3**		**+1.6**
LZH				Sg	**Sg**	**07 12 50.0**		**-8.1**
LZH				smax				
comp=N,1μm,1.3s								
LZH				smax				
comp=E,740nm,1.2s								
LZH				LR	LR			
comp=N,3μm,7.0s								
LZH				LR	LR			
comp=Z,4μm,9.4s								
ENH	**Enshi**	**5.10**	**99**	*e*Pn	**Pn**	**07 11 37.3**		**0.0**
comp=Z,431nm,0.9s								
ENH				*e*Sg	**Sg**	**07 13 03.2**		**-1.8**
XAN	**Xi'an**	**5.27**	**56**	Pn	**Pn**	**07 11 36.5**		**-3.1**
XAN				Pg	**Pb**	**07 11 52.0**		**-1.2**
XAN				Sn	**Sn**	**07 12 38.5**		**-1.8**
XAN				Sg	**Sb**	**07 12 57.0**		**+0.6**
XAN				smax				
comp=N,810nm,1.0s								
XAN				smax				
comp=E,560nm,0.8s								
XAN				LR	LR			
comp=N,2μm,10.1s								
XAN				LR	LR			
comp=E,470nm,13.4s								
XAN				LR	LR			
comp=Z,310nm,10.6s								
GYA	**Guiyang**	**5.40**	**150**	Pn	**Pn**	**07 11 43.0**		**+1.6**
GYA				smax				
comp=N,1μm,0.7s								
GYA				smax				
comp=E,1μm,0.8s								
GYA				LR	LR			
comp=N,3μm,5.1s								
GYA				LR	LR			
comp=E,2μm,4.3s								
GYA				LR	LR			
comp=Z,2μm,4.4s								
KMI	**Kunming**	**6.10**	**188**	Pn	**Pn**	**07 11 53.5**		**+2.5**
KMI				Sn	**Sn**	**07 13 02.0**		**+1.4**
KMI				Sg	**Sg**	**07 13 36.5**		**-0.4**
KMI				smax				
comp=N,180nm,1.5s								
KMI				smax				
comp=E,230nm,1.3s								
KMI				LR	LR			
comp=N,1μm,11.0s								
KMI				LR	LR			
comp=E,1μm,6.4s								
KMI				LR	LR			
comp=Z,2μm,12.6s								
GTA	**Gaotai**	**8.78**	**340**	*e*P	**Pn**	**07 12 29.5**		**+1.7**
GTA				pP		07 12 32.5		
GTA				sP		07 12 35.3		
GTA				S	**Sn**	**07 14 07.5**		**+0.9**
GTA				pmax	pmax			
comp=Z,3.0nm,1.0s								
GTA				pmax	pmax			
comp=Z,42nm,3.9s								
GTA				LR	LR			
comp=N,1μm,12.2s								
GTA				LR	LR			
comp=E,2μm,13.4s								
GTA				LR	LR			
comp=Z,2μm,12.8s								
WHN	**Wuhan**	**9.21**	**91**	P	**Pn**	**07 12 38.0**		**+4.2**
WHN				LR	LR			
comp=Z,2μm,8.6s								
LSA	**Lhasa**	**10.90**	**265**	P	**Pn**	**07 13 01.0**		**+4.2**
LSA	**Lhasa**	**10.90**	**265**	*e*Pn	**Pn**	**07 13 00.9**		**+4.1**
HHC	**Hu-ho-hao-te**	**11.57**	**31**	*e*P	**Pn**	**07 13 05.0**		**-0.9**
HHC				pP		07 13 09.5		
HHC				PP		07 13 14.5		
HHC				S	**Sn**	**07 15 13.8**		**-1.1**
HHC				SS		07 15 27.0		
HHC				pmax	pmax			
comp=Z,26nm,1.0s								
HHC				pmax	pmax			
comp=Z,100nm,5.5s								
HHC				LR	LR			
comp=N,800nm,5.4s								
HHC				LR	LR			
comp=E,580nm,4.8s								
HHC				LR	LR			
comp=Z,630nm,6.3s								
SHL	**Shillong**	**11.78**	**245**	*e*P	**Pn**	**07 13 12.5**		**+3.6**
SHL				*e*S	Sx	07 16 49.0		
NJ2	**Nanjing**	**12.98**	**82**	*e*P	**Pn**	**07 13 30.3**		**+5.0**
NJ2				pP		07 13 33.8		
NJ2				sP		07 13 37.0		
NJ2				PP		07 13 41.0		
NJ2				S	**Sn**	**07 15 58.3**		**+8.6**
NJ2				sS		07 16 03.3		
NJ2				pmax	pmax			
comp=Z,10.0nm,0.6s								
NJ2				pmax	pmax			
comp=Z,1μm,3.9s								
NJ2				LR	LR			
comp=N,990nm,11.1s								
NJ2				LR	LR			
comp=E,710nm,10.2s								
NJ2				LR	LR			
comp=Z,770nm,10.7s								
CHTO	**Chiang Mai**	**13.04**	**200**	P	**Pn**	**07 13 23.4**		**-2.7**
CHTO				pmax	pmax			
comp=Z,23nm,1.1s								
CHTO	**Chiang Mai**	**13.04**	**200**	Pn	**Pn**	**07 13 23.4**		**-2.8**
comp=Z,23nm,1.1s								
QIZ	**Qiongzhong**	**13.34**	**154**	P	**Pn**	**07 13 29.3**		**-0.9**
QIZ				S	**Sn**	**07 15 57.5**		**-0.9**
QIZ				pmax	pmax			
comp=Z,12nm,0.8s								
QIZ				LR	LR			
comp=N,1μm,11.7s								
QIZ				LR	LR			
comp=Z,1μm,12.2s								
QIZ	**Qiongzhong**	**13.34**	**154**	*e*Pn	**Pn**	**07 13 29.3**		**-0.9**
CM31	**Chiang Mai Arr**	**13.38**	**200**	*e*Pn	**Pn**	**07 13 32.9**		**+2.1**
CMAR	**Chiang Mai Arr**	**13.38**	**200**	Pn	**Pn**	**07 13 31.1**		**+0.3**
comp=Z,0.4nm,0.3s,baz=11,slow=11,SNR=31								
CMAR				LR	LR	07 19 31.6		
comp=Z,199nm,20.7s,baz=20,slow=41								
BJT	**Baijiatuau**	**13.45**	**46**	*e*P	**Pn**	**07 13 33.8**		**+2.1**
BJI	**Beijing**	**13.47**	**46**	P	**Pn**	**07 13 33.8**		**+1.9**
BJI				pmax	pmax			
comp=Z,14nm,0.7s								
BJI				LR	LR			
comp=N,710nm,4.0s								
BJI				LR	LR			
comp=E,540nm,6.1s								
BJI				LR	LR			
comp=Z,140nm,19.1s								
TAPN	**Taplejung**	**14.43**	**259**	*e*P	**Pn**	**07 13 46.1**		**+1.0**
ODAN	**Odare**	**14.87**	**257**	*e*P	**Pn**	**07 13 51.0**		**-0.1**
comp=Z,47nm,0.8s								
RAMN	**Ramite**	**15.50**	**258**	*e*P	**Pn**	**07 13 58.2**		**-1.2**
GUN	**Gumba**	**15.81**	**263**	*e*P	**Pn**	**07 14 02.8**		**-0.7**
comp=Z,109nm,0.9s								
PKI	**Pulchoki**	**16.31**	**262**	*e*P	**Pn**	**07 14 08.6**		**-1.3**
comp=Z,87nm,0.8s								
PKI	**Pulchoki**	**16.31**	**262**	*e*P	**Pn**	**07 14 09.2**		**-0.7**
PKI				pmax	pmax			
comp=Z,111nm,0.8s								
PKI	**Pulchoki**	**16.31**	**262**	*e*P	**Pn**	**07 14 09.2**		**-0.7**
comp=Z,111nm,0.8s								
PKIN	**Phulchoki**	**16.32**	**262**	*e*P	**Pn**	**07 14 09.2**		**-0.8**
comp=Z,111nm,0.8s								
KKN	**Kakani**	**16.36**	**263**	*e*P	**Pn**	**07 14 08.9**		**-1.6**
comp=Z,107nm,0.7s								
KKN	**Kakani**	**16.36**	**263**	*e*P	**Pn**	**07 14 08.9**		**-1.6**
KKN				pmax	pmax			
comp=Z,107nm,0.7s								
DMN	**Daman**	**16.55**	**262**	*e*P	**Pn**	**07 14 11.8**		**-1.2**
comp=Z,120nm,0.9s								
SONM	**Songino Array**	**16.76**	**6**	Pn	**Pn**	**07 14 13.6**		**-1.9**
comp=Z,0.1nm,0.3s,baz=171,slow=10,SNR=10								
SONM				LR	LR	07 21 01.4		
comp=Z,481nm,18.3s,baz=53,slow=39								
ZAK	**Zakamensk**	**19.18**	**359**	*e*P	**Pn**	**07 14 43.8**		**-1.4**
ZAK				pmax	pmax			
comp=Z,6.0nm,1.1s								
TLY	**Talaya**	**20.47**	**360**	*e*P	**P**	**07 14 59.1**		**+0.7**
TLY				*e*S	**S**	**07 18 43.9**		**-3.3**
TLY				pmax	pmax			
comp=Z,12nm,1.6s								
TLY				MLR	MLR			
comp=Z,444nm,15.0s,MS4.0								
TLY	**Talaya**	**20.47**	**360**	*e*P	**P**	**07 14 59.1**		**+0.7**
comp=Z,4.5nm,0.7s								
MOY	**Mondy**	**20.55**	**355**	*e*P	**P**	**07 14 59.9**		**+0.6**
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**07 15 02.2**		**-1.7**
comp=Z,6.8nm,0.7s,baz=256,slow=11,SNR=14								
KSRS				LR	LR	07 22 60.0		
comp=Z,110nm,19.1s,MS3.2,baz=265,slow=37								
KSRS	**Korea Array**	**20.97**	**66**	P	**P**	**07 15 02.2**		**-1.7**
KSRS				pmax	pmax			
comp=Z,7.0nm,0.7s								
KSRS				MLR	MLR			
comp=Z,110nm,19.1s,MS3.2								
IRK	**Irkutsk**	**21.04**	**1**	*e*P	**P**	**07 15 04.1**		**-0.5**
IRK				pmax	pmax			
comp=Z,43nm,1.0s,mb4.7								
CN2	**Changchun**	**21.31**	**48**	*e*P	**P**	**07 15 11.0**		**+3.4**
CN2				*es*P	sP	07 15 17.0		+3.9
CN2				*e*S	**S**	**07 19 03.3**		**-0.6**
CN2				pmax	pmax			
comp=Z,60nm,0.7s,mb5.0								
CN2				pmax	pmax			
comp=Z,150nm,4.0s								
CN2				LR	LR			
comp=N,220nm,11.0s,MS3.9								
CN2				LR	LR			
comp=E,180nm,11.0s,MS3.9								
CN2				LR	LR			
comp=Z,210nm,12.0s,MS3.8								
HIA	**Hailar**	**21.76**	**29**	*e*P	**P**	**07 15 15.2**		**+2.9**
HIA				pmax	pmax			
comp=Z,8.0nm,0.5s								
HIA	**Hailar**	**21.76**	**29**	*e*P	**P**	**07 15 15.2**		**+2.9**
comp=Z,8.3nm,0.5s,mb4.4								
DDI	**Dehra Dun**	**22.01**	**274**	*ex*	x	07 15 24.0		
MK31	**Makanchi Array**	**22.66**	**319**	*e*P	**P**	**07 15 21.9**		**-0.1**
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**07 15 21.9**		**-0.1**
comp=Z,5.0nm,0.5s,mb4.2,baz=119,slow=11,SNR=67								
MKAR				LR	LR	07 24 54.2		
comp=Z,355nm,18.3s,MS3.8,baz=15,slow=39								
MKAR	**Makanchi Array**	**22.66**	**319**	P	**P**	**07 15 22.0**		**0.0**
MKAR				pmax	pmax			
comp=Z,5.0nm,0.5s								
MKAR				MLR	MLR			

comp=Z,355nm,18.3s
KSH Kashi 23.99 298 *e*P **P 07 15 39.0 +3.6**
KSH *e*pP 07 15 43.0
KSH *e*sP sP 07 15 46.0 +4.9
KSH *e*PP 07 16 14.3
KSH *e*PcP PcP 07 19 19.0 +1.7
KSH *e*S **S 07 19 54.0 +2.1**
KSH *e*sS sS 07 20 02.0 +3.5
KSH *e*SS 07 20 49.0
KSH *e*ScP ScP 07 22 56.0 +0.6
KSH *e*PcS PcS 07 22 57.3 +0.5
KSH *e*ScS ScS 07 26 42.0 -0.4
KSH pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
KSH LR LR
comp=N,940nm,15.3s
KSH LR LR
comp=E,200nm,9.6s
KSH LR LR
comp=Z,290nm,7.6s
MDJ Mudanjiang 24.34 49 P **P 07 15 40.8 +2.2**
MDJ pP 07 15 44.0
MDJ sP sP 07 15 45.5 +1.3
MDJ PcP PcP 07 19 18.5 +0.6
MDJ S **S 07 20 02.0 +4.5**
MDJ sS sS 07 20 07.5 +3.4
MDJ pmax pmax
comp=Z,12nm,2.0s,mb4.0
MDJ pmax pmax
comp=Z,140nm,4.0s
MDJ LR LR
comp=N,110nm,25.9s,MS3.3
MDJ LR LR
comp=E,47nm,24.7s,MS3.3
MDJ LR LR
comp=Z,62nm,16.5s
MDJ Mudanjiang 24.34 49 P **P 07 15 42.2 +3.6**
comp=Z,19nm,1.0s,mb4.5
TKM2 Tokmak 2 25.15 306 *e*P **P 07 15 47.1 +1.1**
TKM2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
TKM2 Tokmak 2 25.15 306 *e*P **P 07 15 47.1 +1.2**
comp=Z,10nm,1.0s,mb4.3
UCH Uchtor 25.71 304 *e*P **P 07 15 52.9 +1.8**
comp=Z,17nm,1.1s,mb4.5
AAK Ala-Archa 25.84 304 P **P 07 15 53.0 +0.8**
comp=Z,1.0nm,0.4s,mb3.7,baz=135,slow=2.9,SNR=4.0
AAK LR LR 07 27 47.4
comp=Z,418nm,21.2s,MS3.9,baz=276,slow=40
AAK Ala-Archa 25.84 304 P **P 07 15 53.0 +0.8**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
AAK MLR MLR
comp=Z,418nm,21.2s,MS3.9
AAK Ala-Archa 25.84 304 *e*P **P 07 15 55.0 +2.8**
comp=Z,4.0nm,0.8s,mb4.0
AML Almayashu 26.27 303 *e*P **P 07 15 57.7 +1.6**
comp=Z,11nm,1.2s,mb4.2
EKS2 Erkin-Say 26.35 304 *e*P **P 07 15 57.8 +0.9**
comp=Z,13nm,1.4s,mb4.3
ZALV Zalesovo Beam 26.48 335 P **P 07 15 57.0 -0.9**
comp=Z,9.0nm,0.8s,mb4.3,baz=134,slow=8.5,SNR=26
ZALV LR LR 07 27 01.2
comp=Z,189nm,21.4s,MS3.6,baz=204,slow=38
ZALV Zalesovo Beam 26.48 335 P **P 07 15 57.0 -0.9**
ZALV pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
ZALV MLR MLR
comp=Z,189nm,21.4s,MS3.6
KURK Kurchatov 26.95 324 P **P 07 16 01.7 -0.4**
comp=Z,8.7nm,0.8s,mb4.3,baz=127,slow=9.3,SNR=66
KURK LR LR 07 27 26.1
comp=Z,151nm,19.8s,MS3.6,baz=140,slow=38
KURK Kurchatov 26.95 324 P **P 07 16 01.7 -0.4**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
KURK MLR MLR
comp=Z,151nm,19.8s,MS3.6
KURK Kurchatov 26.95 324 *e*P **P 07 16 01.8 -0.3**
comp=Z,14nm,1.0s,mb4.4
BOD Bodaibo 27.57 12 *e*P **P 07 16 06.0 -1.6**
NVS Novosibirsk 27.76 334 *e*P **P 07 16 11.0 +1.7**
NVS pmax pmax
comp=Z,16nm,1.9s,mb4.3
NVS pmax pmax
comp=N,14nm,2.0s
NVS pmax pmax
comp=E,10.0nm,2.0s
KLR Kul'dur 27.78 41 *e*P **P 07 16 11.0 +1.4**
KLR MLR MLR
comp=E,400nm,12.0s
KLR MLR MLR
comp=Z,700nm,12.0s,MS4.5
PSI Prapat 28.59 190 P **P 07 16 17.1 +0.1**
comp=Z,7.8nm,0.8s,mb4.5,baz=338,slow=6.3,SNR=6.7
PSI LR LR 07 28 54.8
comp=Z,214nm,21.0s,MS3.7,baz=179,slow=39
PSI Prapat 28.59 190 P **P 07 16 17.2 +0.1**
PSI pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
PSI MLR MLR
comp=Z,214nm,21.0s,MS3.7
MJAR Matsushiro Arr 29.08 70 LR LR 07 26 56.9
comp=Z,95nm,20.1s,MS3.4,baz=220,slow=34
KBL Kabul 29.18 286 P **P 07 16 23.1 +0.8**
KBL pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
KBL Kabul 29.18 286 P **P 07 16 23.1 +0.9**
comp=Z,2.6nm,0.4s,mb4.3
PALK Pallekele 32.04 227 LR LR 07 31 11.8
comp=Z,82nm,19.1s,MS3.4,baz=207,slow=39
BVAR Borovoye Array 32.49 322 P **P 07 16 50.4 -0.8**
comp=Z,1.4nm,0.7s,mb3.9,baz=116,slow=8.4,SNR=9.2
BVAR PcP PcP 07 19 39.0 +1.1
comp=Z,1.0nm,0.7s,baz=126,slow=4.2,SNR=3.9
BVAR LR LR 07 30 56.6
comp=Z,266nm,20.2s,MS3.9,baz=310,slow=38
BVAR Borovoye Array 32.49 322 P **P 07 16 50.4 -0.8**
BVAR 07 19 39.0
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR MLR MLR
comp=Z,266nm,20.2s
BRVK Borovoye 32.56 322 *ce*P **P 07 16 50.9 -0.9**
BRVK pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
BRVK Borovoye 32.56 322 *e*P **P 07 16 51.6 -0.2**
comp=Z,15nm,1.4s,mb4.7
ABKAR Akbulak array 37.33 312 *e*P **P 07 17 33.1 +0.1**
comp=Z,3.7nm,0.8s,mb4.3
AKTK Aktyubinsk 38.80 313 P **P 07 17 45.1 -0.3**
AKTK LR LR 07 36 30.9
AKTO Aktyubinsk 38.80 313 P **P 07 17 45.1 -0.3**
comp=Z,1.1nm,0.8s,mb3.6,baz=91,slow=9.0,SNR=2.9
AKTO LR LR 07 36 30.9
comp=Z,46nm,18.2s,MS3.3,baz=205,slow=40
AKTO Aktyubinsk 38.80 313 P **P 07 17 45.1 -0.3**
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.6
AKTO MLR MLR
comp=Z,46nm,18.2s,MS3.3
ARU Arti 40.13 322 *c i*P **P 07 17 56.3 -0.1**
ARU 07 19 27.3
ARU S **S 07 24 03.3 +1.0**
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.4
ARU Arti 40.13 322 *e*P **P 07 17 55.6 -0.8**
comp=Z,12nm,0.8s,mb4.7
GUMO Guam 41.65 105 LR LR 07 34 05.6
comp=Z,56nm,20.5s,MS3.4,baz=273,slow=34
TIXI Tiksi 42.74 11 *e*P **P 07 18 15.3 -2.4**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
SEY Seymchan 44.20 30 *c i*P **P 07 18 30.0 +0.4**
PETK Petropavlovsk- 44.40 44 LR LR 07 37 12.4
comp=Z,34nm,21.4s,MS3.2,baz=66,slow=36
BILL Bilibino 51.26 25 *e*P **P 07 19 24.4 +0.2**
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BILL Bilibino 51.26 25 *e*P **P 07 19 26.9 +2.6**
comp=Z,3.3nm,0.8s,mb4.3
FITZ Fitzroy Crossi 53.37 154 LR LR 07 40 40.6
comp=Z,62nm,20.4s,MS3.6,baz=336,slow=34
APA Apatity 54.06 334⇑ *e*P **P 07 19 46.0 +1.1**
APA MLR MLR
comp=Z,500nm,14.0s,MS4.7
JOF Joensuu 54.75 328 *e*P **P 07 19 48.2 -1.8**
JOF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
JOF Joensuu 54.75 328 *e*p **P 07 19 48.2 -1.8**
comp=Z,5.9nm,0.8s,mb4.7
KEV Kevo 56.50 336 *e*P **P 07 20 01.1 -1.4**
KEV pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KEV Kevo 56.50 336 *e*p **P 07 20 01.1 -1.4**
comp=Z,10.0nm,1.1s,mb4.8
ARCES ARCESS Array B 57.02 336 P **P 07 20 03.5 -2.7**
comp=Z,5.5nm,1.0s,mb4.5,baz=87,slow=7.6,SNR=4.9
ARCES ARCESS Array B 57.02 336 P **P 07 20 03.5 -2.7**
ARCES pmax pmax
comp=Z,6.0nm,1.0s
AKASG Malin Array Be 57.05 313 P **P 07 20 05.3 -1.4**
comp=Z,0.2nm,0.3s,mb3.6,baz=66,slow=9.2,SNR=4.7
KAF Kangasniemi 57.11 327 *e*P **P 07 20 04.0 -2.9**
KAF pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KAF Kangasniemi 57.11 327 *e*p **P 07 20 04.0 -2.9**
comp=Z,4.1nm,1.0s,mb4.4
FINES FINESS Array B 57.28 326 P **P 07 20 06.3 -1.8**
comp=Z,0.8nm,0.4s,mb4.1,baz=106,slow=8.0,SNR=5.4
FINES FINESS Array B 57.28 326 P **P 07 20 06.3 -1.9**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 57.28 326 P **P 07 20 06.3 -1.8**
VSU Vasula 57.30 323 *ce*P **P 07 20 04.6 -3.7**
VSU pmax pmax
comp=Z,13nm,1.2s,mb4.8
WRAB Tennant Creek 58.76 146 *e*P **P 07 20 18.2 -0.8**
WRAB pmax pmax
comp=Z,11nm,0.6s,mb5.1
WRAB Tennant Creek 58.76 146 *e*P **P 07 20 18.2 -0.8**
comp=Z,11nm,0.6s,mb5.0
SPITS Spitsbergen Ar 59.16 346 LR LR 07 47 51.0
comp=Z,69nm,19.0s,MS3.8,baz=165,slow=38
ASAR Alice Springs 61.76 148 P **P 07 20 38.9 -0.7**
comp=Z,1.7nm,0.5s,mb4.5,baz=337,slow=6.5,SNR=10
ASAR Alice Springs 61.76 148 P **P 07 20 38.9 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
HFS Hagfors 63.49 326 P **P 07 20 48.8 -1.8**
comp=Z,1.9nm,0.9s,mb4.2,baz=231,slow=0.9,SNR=3.2
HFS Hagfors 63.49 326 P **P 07 20 48.8 -1.8**
HFS pmax pmax
comp=Z,2.0nm,0.9s
IDI Anoyia 64.35 297 P **P 07 20 55.4 -1.3**
comp=Z,1.4nm,0.4s,mb4.4,baz=38,slow=17,SNR=3.4
NB2 NORSAR Subarra 64.38 327 P **P 07 20 55.7 -0.8**
comp=Z,4.6nm,0.8s,mb4.6,baz=73,slow=6.9
NOA NORSAR Array B 64.38 327 P **P 07 20 55.1 -1.3**
comp=Z,0.7nm,0.8s,mb3.7,baz=42,slow=21,SNR=4.0
NOA NORSAR Array B 64.38 327 P **P 07 20 55.1 -1.4**
NOA pmax pmax
comp=Z,1.0nm,0.8s
CLL Collm 66.73 317 *e*P **P 07 21 08.0 -3.9**
CLL MLR MLR
comp=Z,100nm,19.6s,MS4.0
CLL Collm 66.73 317 *e*pP pP 07 21 17.0 +0.9
CLL LmV 07 51 00.0
comp=Z,100nm,19.6s
TTA Tatalina 67.18 29 *e*P **P 07 21 17.2 +2.7**
GERES GERESS Array B 67.21 314 P **P 07 21 14.3 -0.7**
comp=Z,0.2nm,0.2s,mb3.7,baz=355,slow=4.9,SNR=2.6
COLD Coldfoot 67.55 24 *e*P **P 07 21 19.5 +2.7**
comp=Z,9.2nm,0.9s,mb4.8
CHUM Lake Minchumin 68.28 28 *e*P **P 07 21 22.0 +0.6**
comp=Z,4.1nm,0.6s,mb4.6
BPAW Bear Paw Mtn. 68.70 27 P **P 07 21 24.1 0.0**
comp=Z,4.7nm,0.7s,mb4.5
PPLA Purkeypile 68.77 28 *e*P **P 07 21 28.0 +3.5**
comp=Z,7.6nm,0.6s,mb4.8
CHGN Chignik 68.78 36 *e*P **P 07 21 29.6 +4.9**
KTH Kantishna Hill 68.98 28 *e*P **P 07 21 28.3 +2.5**
comp=Z,22nm,1.6s,mb4.8
COLA College 69.52 26 *e*P **P 07 21 27.2 -1.9**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 69.52 26 *e*P **P 07 21 27.2 -1.9**
comp=Z,9.9nm,0.8s,mb4.8
RSO Redoubt South 69.65 31 *e*P **P 07 21 34.3 +4.3**
PMR Palmer 70.65 29 *e*P **P 07 21 39.1 +3.0**
OHAK Old Harbor 70.91 34 *e*P **P 07 21 41.1 +3.4**
KDAK Kodiak Island 70.98 33 P **P 07 21 35.7 -2.4**
comp=Z,7.6nm,0.6s,mb4.8
KDAK Kodiak Island 70.98 33 P **P 07 21 35.7 -2.5**
KDAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KDAK Kodiak Island 70.98 33 *e*P **P 07 21 40.4 +2.2**
comp=Z,11nm,0.8s,mb4.8
CDF Champ du Feu 71.29 316 *e*P **P 07 21 39.7 -0.5**
EGAK Eagle 71.98 24 *e*P **P 07 21 46.3 +2.2**
comp=Z,18nm,1.8s,mb4.7
INK Inuvik 72.20 19 *e*P **P 07 21 45.3 -0.1**
INK pmax pmax
comp=Z,6.0nm,0.8s
INK Inuvik 72.20 19 *e*P **P 07 21 45.3 -0.1**
comp=Z,6.2nm,0.8s,mb4.6
STKA Stephens Creek 72.29 147 P **P 07 21 45.4 -0.9**
comp=Z,1.4nm,0.5s,mb4.1,baz=319,slow=17,SNR=3.3
STKA Stephens Creek 72.29 147 P **P 07 21 45.4 -0.9**
BMRM Bremner River 72.84 28 *e*P **P 07 21 52.1 +2.8**
comp=Z,14nm,0.9s,mb4.9
LPG La Plagne 72.91 313 *e*P **P 07 21 49.5 -0.5**
comp=Z,11nm,0.6s,mb4.7
LPG La Plagne 72.91 313 *e*P **P 07 21 49.5 -0.5**
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LPG La Plagne 72.91 313 *e*P **P 07 21 49.5 -0.5**
comp=Z,5.4nm,0.6s,mb4.7
LPL La Plagne 72.92 313 *e*P **P 07 21 49.4 -0.6**
comp=Z,8.9nm,0.6s,mb4.6
LPL La Plagne 72.92 313 *e*P **P 07 21 49.4 -0.6**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LPL La Plagne 72.92 313 *e*P **P 07 21 49.4 -0.6**
comp=Z,4.4nm,0.6s,mb4.6
DAWY Dawson 73.02 24 *e*P **P 07 21 53.0 +2.7**
SUMG Summit 73.29 349 *e*P **P 07 21 52.7 +0.9**
comp=Z,28nm,1.7s,mb4.9
SMF Signal de Mont 74.17 315 *e*P **P 07 21 56.5 -0.9**
TCF Toulx Ste Croi 75.33 315 *e*P **P 07 22 02.9 -1.2**
SKAG Skagway 77.44 27 *e*P **P 07 22 19.2 +3.5**
comp=Z,12nm,1.3s,mb4.7
YKA Yellowknife Ar 81.72 17 P **P 07 22 37.2 -1.9**
comp=Z,1.1nm,0.6s,mb3.9,baz=328,slow=5.4,SNR=5.8
YKA Yellowknife Ar 81.72 17 P **P 07 22 37.2 -1.9**
YKA pmax pmax
comp=Z,1.0nm,0.6s
EDM Edmonton 89.99 21 P **P 07 23 20.3 +0.1**
FFC Flin Flon 91.63 15 *ce*P **P 07 23 27.9 +0.1**
TORD Torodi Ar. Bea 93.24 287 P **P 07 23 36.2 +0.3**
comp=Z,0.4nm,0.8s,mb3.9,baz=51,slow=2.8,SNR=3.7

*IDC **29** 07:14:17.2±2.0, 5°.55S×146°.76E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.0/6, Error ellipse: s-maj=69.1km s-min=22.7km az=97.0*
*ISCJB **29** 07:14:28.1±4.4, 5°.7S±0°.2×146°.4E±0°.2, h91km±37km, mb3.9/7, Error ellipse: s-maj=35.0km s-min=22.9km az=142.6*
*NEIC **29** 07:14:29.2±2.4, 5°.64S×146°.37E, h83km±21km, mb4.7/3, Error ellipse: s-maj=19.9km s-min=16.1km az=59.0*
ISC 29 07:14:29.5±3.5,**5°.7S**±0°.2×**146°.4E**±0°.2,**h89**km±30km,**n19,**
σ0°61/18,mb3.9/7,1C-2D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.82**	**201**	⇓ *i*P	**Pn**	**07 16 34.1**	**-0.1**
COEN	**Coen**	**8.82**	**201**	*e*Pn	**Pn**	**07 16 34.0**	**-0.2**
	135nm,0.4s						
CTA	**Charters Tower**	**14.32**	**181**	Pn	**Pn**	**07 17 48.0**	**0.0**
	0.6nm,0.3s,baz=356,slow=16,SNR=3.1						
CTAO	**Charters Tower**	**14.32**	**181**	*e*Pn	**Pn**	**07 17 49.3**	**+1.3**
KAKA	**Kakadu**	**15.45**	**242**	⇓ *i*P	**Pn**	**07 18 02.7**	**+0.1**
	17nm,0.6s						
KAKA	**Kakadu**	**15.45**	**242**	*e*Pn	**Pn**	**07 18 02.6**	**0.0**
	52nm,0.6s						
WRAB	**Tennant Creek**	**18.39**	**219**	*e*P	**Pn**	**07 18 37.7**	**-1.0**
	4.9nm,0.8s						
ASAR	**Alice Springs**	**21.56**	**213**	P	**P**	**07 19 12.6**	**+0.7**
	5.2nm,0.6s,mb4.0,baz=52,slow=9.0,SNR=49						
FITZ	**Fitzroy Crossi**	**23.74**	**237**⇑ *i*P		**P**	**07 19 34.2**	**+0.4**
	38nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**23.74**	**237**	P	**P**	**07 19 33.8**	**0.0**
	24nm,0.6s,mb4.7,baz=52,slow=7.5,SNR=58						
ARMA	**Armidale**	**25.09**	**169**	*e*P	**P**	**07 19 45.6**	**-0.3**
STKA	**Stephens Creek**	**26.45**	**189**	*e*P	**P**	**07 19 57.8**	**-0.4**
	2.3nm,0.9s,mb3.6						
STKA	**Stephens Creek**	**26.45**	**189**	P	**P**	**07 19 57.8**	**-0.4**
	2.8nm,0.8s,mb3.8,baz=8.5,slow=12,SNR=6.9						
STKA	**Stephens Creek**	**26.45**	**189**	*e*P	**P**	**07 19 58.0**	**-0.2**
MBWA	**Marble Bar**	**30.09**	**237**	*e*P	**P**	**07 20 30.9**	**+0.1**
	65nm,2.4s,mb4.8						
MKAR	**Makanchi Array**	**76.88**	**321**	P	**P**	**07 26 12.4**	**+0.4**
	0.3nm,0.7s,mb3.1,baz=95,slow=7.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**78.44**	**328**	P	**P**	**07 26 19.4**	**-1.1**
	0.7nm,0.6s,mb3.6,baz=95,slow=4.8,SNR=3.2						
KURK	**Kurchatov**	**80.61**	**323**	P	**P**	**07 26 33.1**	**+0.7**
	0.3nm,0.6s,mb3.3,baz=103,slow=5.7,SNR=2.6						
TORD	**Torodi Ar. Bea**	**144.45**	**285**	PKP	PKPdf	07 33 57.7	+1.1
	0.3nm,0.9s,baz=72,slow=4.0,SNR=4.1						

*NEIC **29** 07:16:13.0, 27°.29N×34°.34E, h10km, MD4.1(GII), After GII.*
NEIC Felt at Sharm ash Shaykh, Egypt.
*GII **29** 07:16:13.0±24.0, 27°.29N×34°.34E, h10km±649km, Mb4.2/7, Md4.1/7, Mm3.1/6*
*ISCJB **29** 07:16:23.1±2.5, 28°.00N±0°.09×34°.7E±0°.2, h15km±11km, Error ellipse: s-maj=26.0km s-min=7.5km az=148.2*
*CSEM **29** 07:16:23.7±0.5, 27°.93N×34°.60E, h20km, ML3.7, Error ellipse: s-maj=14.5km s-min=5.0km az=60.0*
*SGS **29** 07:16:24.8, 27°.98N×34°.65E, h15km*
ISC 29 07:16:23.6±2.8,**27°.96N**±0°.10×**34°.7E**±0°.2,**h15**km±12km,
n30,σ0°79/34,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDAS	**Al Bad'**	**0.59**	**37**	P	**Pg**	**07 16 36.4**	**+1.1**
BDAS	**Al Bad'**	**0.59**	**37**	P	**Pg**	**07 16 36.3**	**+1.1**
JLOS		**1.05**	**42**	P	**Pg**	**07 16 43.6**	**-0.2**
JLOS		**1.05**	**42**	P	**Pg**	**07 16 43.6**	**-0.2**
HAQS	**Haql**	**1.11**	**10**	P	**Pg**	**07 16 43.4**	**-1.5**
HAQS	**Haql**	**1.11**	**10**	P	**Pg**	**07 16 43.4**	**-1.5**
TBKS	**Tabuk**	**1.66**	**80**	P	**Pn**	**07 16 53.5**	**+1.4**
TBKS	**Tabuk**	**1.66**	**80**	P	**Pn**	**07 16 53.5**	**+1.4**
EIL	**Elat**	**1.72**	**8**	Pn	**Pn**	**07 16 52.3**	**-0.7**
EIL	**Elat**	**1.72**	**8**	Pn	**Pn**	**07 16 52.3**	**-0.7**
HRFI	**Mount Harif**	**2.09**	**8**	Pn	**Pn**	**07 16 58.4**	**+0.3**
HRFI	**Mount Harif**	**2.09**	**8**	Pn	**Pn**	**07 16 58.4**	**+0.3**
KRMI	**Paran Flat**	**2.15**	**1**	Pn	**Pn**	**07 16 58.8**	**-0.1**
KRMI				S	**Sg**	**07 17 33.6**	**+0.8**
KRMI	**Paran Flat**	**2.15**	**1**	Pn	**Pn**	**07 16 58.8**	**-0.1**
BIDS	**Bi'r al Bayda'**	**2.29**	**118**	P	**Pn**	**07 17 00.7**	**-0.2**
BIDS	**Bi'r al Bayda'**	**2.29**	**118**	P	**Pn**	**07 17 00.7**	**-0.1**
BIDS				S	**Sn**	**07 17 27.6**	**-1.2**
PRNI	**Paran**	**2.40**	**6**	Pn	**Pn**	**07 17 02.6**	**+0.2**
PRNI	**Paran**	**2.40**	**6**	Pn	**Pn**	**07 17 02.6**	**+0.2**
ZFRI	**Zfri**	**2.62**	**9**	Pn	**Pn**	**07 17 06.0**	**+0.6**
ZFRI				S	**Sg**	**07 17 46.9**	**-0.9**
ZFRI	**Zfri**	**2.62**	**9**	Pn	**Pn**	**07 17 06.0**	**+0.6**
KZIT	**Kziot**	**2.95**	**355**	Pn	**Pn**	**07 17 08.8**	**-1.1**
KZIT	**Kziot**	**2.95**	**355**	Pn	**Pn**	**07 17 08.8**	**-1.1**
MZDA	**Masada**	**3.39**	**10**	Pn	**Pn**	**07 17 16.3**	**+0.3**
MZDA				S	**Sg**	**07 18 05.0**	**-7.5**
MZDA	**Masada**	**3.39**	**10**	Pn	**Pn**	**07 17 16.3**	**+0.3**
DSI	**Dead Sea**	**3.65**	**9**	Pn	**Pn**	**07 17 19.9**	**+0.4**
DSI	**Dead Sea**	**3.65**	**9**	Pn	**Pn**	**07 17 19.9**	**+0.4**
HMDT	**Nahal Hemdat**	**4.34**	**9**	Pn	**Pn**	**07 17 29.5**	**+0.5**
HMDT	**Nahal Hemdat**	**4.34**	**9**	Pn	**Pn**	**07 17 29.5**	**+0.5**
YOBS		**5.11**	**134**	P	**Pn**	**07 17 40.0**	**+0.4**
YOBS		**5.11**	**134**	P	**Pn**	**07 17 40.0**	**+0.4**

*ISCJB **29** 07:22:37.4±0.6, 41°.47N±0°.04×24°.84E±0°.04, h1km±8km, Error ellipse: s-maj=6.4km s-min=4.9km az=7.8*
*SOF **29** 07:22:37.7, 41°.50N×24°.85E, h20km, MD2.6*
*CSEM **29** 07:22:37.9±0.2, 41°.46N×24°.83E, h10km, MD2.6, Error ellipse: s-maj=4.4km s-min=4.2km az=15.0*
*THE **29** 07:22:38.4, 41°.44N×24°.86E, h8km±2km, ML2.6/1, Error ellipse: s-maj=2.3km s-min=0.9km az=28.0*
ISC 29 07:22:37.9±0.5,**41°.48N**±0°.04×**24°.84E**±0°.04,**h11**km±7km,
n26,σ0°70/36,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RZN	**Rozhen**	**0.23**	**336**	*i* Pg	**Pg**	**07 22 43.6**	**+0.9**
RZN	**Rozhen**	**0.23**	**336**	*i* Pg	**Pg**	**07 22 43.6**	**+0.9**
KDZ	**Kurdzhali**	**0.47**	**68**	*i* Pg	**Pg**	**07 22 46.3**	**-0.8**
KDZ	**Kurdzhali**	**0.47**	**68**	*i* Pg	**Pg**	**07 22 46.3**	**-0.8**
KAVA	**Kavala**	**0.54**	**207**	P	**Pg**	**07 22 48.4**	**0.0**
KAVA				S	**Sg**	**07 22 55.9**	**+0.3**
KAVA	**Kavala**	**0.54**	**207**	P	**Pg**	**07 22 48.4**	**0.0**
KAVA				S	**Sg**	**07 22 55.9**	**+0.3**
RDO	**Rodhopi**	**0.62**	**122**	P	**Pg**	**07 22 50.0**	**0.0**
RDO				S	**Sg**	**07 22 57.9**	**-0.2**
RDO	**Rodhopi**	**0.62**	**122**	P	**Pg**	**07 22 50.0**	**0.0**
RDO				S	**Sg**	**07 22 57.9**	**-0.2**
PLD	**Plovdiv**	**0.64**	**351**	P	**Pg**	**07 22 51.3**	**+1.0**
PLD	**Plovdiv**	**0.64**	**351**	*i* Pg	**Pg**	**07 22 50.9**	**+0.6**
PLD	**Plovdiv**	**0.64**	**351**	*i* Pg	**Pg**	**07 22 50.9**	**+0.6**
PLD	**Plovdiv**	**0.64**	**351**	P	**Pg**	**07 22 51.3**	**+1.0**
DIM	**Dimitrovgrad**	**0.77**	**42**	*i* Pg	**Pg**	**07 22 53.6**	**+0.7**
DIM	**Dimitrovgrad**	**0.77**	**42**	*i* Pg	**Pg**	**07 22 53.6**	**+0.7**
MMB	**Musomiste**	**0.84**	**278**	P	**Pg**	**07 22 54.0**	**-0.2**
MMB	**Musomiste**	**0.84**	**278**	P	**Pg**	**07 22 54.0**	**-0.2**
SRS	**Serrai**	**1.01**	**249**	P	**Pb**	**07 22 57.6**	**+0.2**
SRS				S	**Sb**	**07 23 11.1**	**+0.5**
SRS	**Serrai**	**1.01**	**249**	P	**Pb**	**07 22 57.6**	**+0.2**
SRS				S	**Sb**	**07 23 11.1**	**+0.5**
ALN	**Alexandroupoli**	**1.08**	**122**	P	**Pb**	**07 22 58.5**	**-0.1**
ALN				S	**Sb**	**07 23 12.9**	**+0.2**
ALN	**Alexandroupoli**	**1.08**	**122**	P	**Pb**	**07 22 58.5**	**-0.1**
ALN				S	**Sb**	**07 23 12.9**	**+0.2**
OUR	**Ouranopolis**	**1.31**	**210**	P	**Pn**	**07 23 01.0**	**-1.2**
OUR				S	**Sb**	**07 23 20.3**	**+0.8**
OUR	**Ouranopolis**	**1.31**	**210**	P	**Pn**	**07 23 01.0**	**-1.2**
OUR				S	**Sb**	**07 23 20.3**	**+0.8**
KKB	**Krupnik**	**1.37**	**287**	*i* Pg	**Pg**	**07 23 02.5**	**-1.8**
KKB	**Krupnik**	**1.37**	**287**	*i* Pg	**Pg**	**07 23 02.5**	**-1.8**
VTS	**Vitosha**	**1.65**	**313**	Pg	**Pg**	**07 23 09.2**	**-0.4**
VTS	**Vitosha**	**1.65**	**313**	Pg	**Pg**	**07 23 09.2**	**-0.4**

*ISCJB **29** 07:45:53.6±0.6, 11°.58N±0°.02×62°.02W±0°.03, h123km±6km, Error ellipse: s-maj=5.7km s-min=3.6km az=27.5*
*FUNV **29** 07:45:53.9, 11°.52N×61°.82W, h120km, MW3.2*
*TRN **29** 07:45:55.8, 11°.60N×61°.86W, h119km, MD3.9*
*NEIC **29** 07:45:56.0, 11°.61N×61°.84W, h119km, MD3.9(TRN), After TRN.*
ISC 29 07:45:54.3±0.7,**11°.58N**±0°.02×**62°.00W**±0°.03,**h122**km±7km,
n48,σ1°05/85,2C-2D,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.64**	**32**	⇓ *i*Pg	**Pn**	**07 46 13.7**	**+0.3**
GRGR				*e*Sn	**Sn**	**07 46 29.4**	**+1.5**
GRW	**Mount Saint Ca**	**0.66**	**30**	*e*P	**Pn**	**07 46 15.0**	**+1.5**
GRW				*e*S	**Sn**	**07 46 28.4**	**+0.3**
GRW	**Mount Saint Ca**	**0.66**	**30**	*e*P	**Pn**	**07 46 15.0**	**+1.5**
GRW				*e*S	**Sn**	**07 46 28.4**	**+0.3**
GRHS	**Sauteurs**	**0.73**	**29**	*e*P	**Pn**	**07 46 14.2**	**+0.1**
GRHS	**Sauteurs**	**0.73**	**29**	*e*P	**Pn**	**07 46 14.2**	**+0.1**
GRSS	**Sisters**	**0.81**	**28**	*e*P	**Pn**	**07 46 14.9**	**+0.2**
GRSS	**Sisters**	**0.81**	**28**	*e*P	**Pn**	**07 46 14.9**	**+0.2**
GRIC	**Isle de Caille**	**0.81**	**30**	*e*P	**Pn**	**07 46 15.2**	**+0.5**
TCE	**Chacachacare**	**0.92**	**164**	*e*P	**Pn**	**07 46 16.8**	**+1.1**
TCE				*e*S	**Sn**	**07 46 32.3**	**+0.4**
TCE	**Chacachacare**	**0.92**	**164**	*e*P	**Pn**	**07 46 16.8**	**+1.1**
TCE				*e*S	**Sn**	**07 46 32.3**	**+0.4**
GUIV	**Guiria**	**0.96**	**193**⇑ *e*P		**Pn**	**07 46 15.6**	**-0.4**
GUIV				*e*S	**Sn**	**07 46 31.3**	**-1.2**
TRN	**Trinidad (W)**	**1.10**	**148**	*e*P	**Pn**	**07 46 17.9**	**+0.4**
TRN				*e*S	**Sn**	**07 46 34.3**	**-0.7**
TRN	**Trinidad (W)**	**1.10**	**148**	*e*P	**Pn**	**07 46 17.9**	**+0.4**
TRN				*e*S	**Sn**	**07 46 34.3**	**-0.7**
ITEV	**Isla Los Testi**	**1.13**	**258**	*e*P	**Pn**	**07 46 18.2**	**+0.5**
ITEV				*e*S	**Sn**	**07 46 36.4**	**+0.9**
TPR	**Prospect**	**1.27**	**108**	*e*P	**Pn**	**07 46 19.4**	**+0.3**

TPR			*e*S	**Sn**	**07 46 36.6**	**-1.6**
TPR	**Prospect**	**1.27 108**	*e*P	**Pn**	**07 46 19.4**	**+0.3**
TPR			*e*S	**Sn**	**07 46 36.6**	**-1.6**
BOT	**Bacolet**	**1.33 108**	*e*P	**Pn**	**07 46 20.1**	**+0.2**
BOT			*e*S	**Sn**	**07 46 37.2**	**-2.1**
BOT	**Bacolet**	**1.33 108**	*e*P	**Pn**	**07 46 20.1**	**+0.2**
BOT			*e*S	**Sn**	**07 46 37.2**	**-2.1**
TPP	**Pointe-a-Pierr**	**1.37 157**	*e*P	**Pn**	**07 46 21.6**	**+1.2**
TPP			*e*S	**Sn**	**07 46 40.4**	**+0.1**
TPP	**Pointe-a-Pierr**	**1.37 157**	*e*P	**Pn**	**07 46 21.6**	**+1.2**
TPP			*e*S	**Sn**	**07 46 40.4**	**+0.1**
ALNG	**Atlantic LNG**	**1.43 167**	*e*S	**Sn**	**07 46 42.5**	**+1.2**
TBH	**Brigand Hill**	**1.43 140**	*e*P	**Pn**	**07 46 21.5**	**+0.5**
TBH			*e*S	**Sn**	**07 46 41.4**	**+0.1**
TBH	**Brigand Hill**	**1.43 140**	*e*P	**Pn**	**07 46 21.5**	**+0.5**
TBH			*e*S	**Sn**	**07 46 41.4**	**+0.1**
TOSP	**Speyside**	**1.47 101**	*e*P	**Pn**	**07 46 20.5**	**-1.0**
TOSP			*e*S	**Sn**	**07 46 40.2**	**-1.9**
BUAY	**Buenos Aires**	**1.50 168**	*e*P	**Pn**	**07 46 24.3**	**+2.4**
BUAY			*e*S	**Sn**	**07 46 44.8**	**+2.0**
BUAY	**Buenos Aires**	**1.50 168**	*e*P	**Pn**	**07 46 24.3**	**+2.4**
BUAY			*e*S	**Sn**	**07 46 42.0**	**-0.8**
CRUV	**Carupano**	**1.51 233**	*e*P	**Pn**	**07 46 21.8**	**-0.1**
CRUV			*e*S	**Sn**	**07 46 42.4**	**-0.6**
SIPA	**Siparia**	**1.51 161**	*e*P	**Pn**	**07 46 23.7**	**+1.7**
SIPA	**Siparia**	**1.51 161**	*e*P	**Pn**	**07 46 23.7**	**+1.7**
GUNV	**Guanoco**	**1.69 213⇓**	*e*P	**Pn**	**07 46 24.0**	**-0.1**
GUNV			*e*S	**Sn**	**07 46 45.4**	**-1.3**
FCV	**Fort Charlotte**	**1.73 25**	*e*P	**Pn**	**07 46 25.3**	**+0.8**
FCV			*e*S	**Sn**	**07 46 46.1**	**-1.6**
FCV	**Fort Charlotte**	**1.73 25**	*e*P	**Pn**	**07 46 25.3**	**+0.8**
FCV			*e*S	**Sn**	**07 46 46.1**	**-1.6**
SVB	**Belmont**	**1.83 24**	*e*P	**Pn**	**07 46 25.7**	**-0.1**
SVB			*e*S	**Sn**	**07 46 49.6**	**-0.3**
SVB	**Belmont**	**1.83 24**	*e*P	**Pn**	**07 46 25.7**	**-0.1**
SVB			*e*S	**Sn**	**07 46 49.6**	**-0.3**
SVV	**Soufriere Volc**	**1.89 24**	*e*P	**Pn**	**07 46 27.3**	**+0.9**
SVV			*e*S	**Sn**	**07 46 51.9**	**+0.9**
SVV	**Soufriere Volc**	**1.89 24**	*e*P	**Pn**	**07 46 27.3**	**+0.9**
SVV			*e*S	**Sn**	**07 46 50.0**	**-1.0**
BHS	**Barnard House**	**1.91 27**	*e*P	**Pn**	**07 46 26.4**	**-0.2**
BHS	**Barnard House**	**1.91 27**	*e*P	**Pn**	**07 46 26.4**	**-0.2**
SSV	**Crater Summit**	**1.91 24**	*e*P	**Pn**	**07 46 27.8**	**+1.1**
SSV			*e*S	**Sn**	**07 46 56.2**	**+4.8**
SSV	**Crater Summit**	**1.91 24**	*e*P	**Pn**	**07 46 27.8**	**+1.1**
SSV			*e*S	**Sn**	**07 46 50.8**	**-0.6**
MCLT	**Moule a Chique**	**2.35 26**	*e*P	**Pn**	**07 46 32.2**	**-0.1**
MCLT			*e*S	**Sn**	**07 47 00.1**	**-1.4**
MCLT	**Moule a Chique**	**2.35 26**	*e*P	**Pn**	**07 46 32.2**	**-0.1**
MCLT			*e*S	**Sn**	**07 47 00.1**	**-1.4**
SLB	**Belfond**	**2.42 23**	*e*P	**Pn**	**07 46 34.7**	**+1.6**
SLB			*e*S	**Sn**	**07 47 01.7**	**-1.3**
SLB	**Belfond**	**2.42 23**	*e*P	**Pn**	**07 46 34.7**	**+1.6**
SLB			*e*S	**Sn**	**07 47 01.7**	**-1.3**
CUPV	**Cœpira**	**4.01 248⇓**	*e*P	**Pn**	**07 46 54.6**	**+0.5**
CUPV			*e*S	**Sn**	**07 47 39.3**	**-1.1**
BIRV	**Birongo**	**4.33 256**	*e*P	**Pn**	**07 46 59.3**	**+1.0**
BIRV			*e*S	**Sn**	**07 47 47.1**	**-0.8**
CAOV	**Caicara del Or**	**6.00 226**	*e*P	**Pn**	**07 47 18.7**	**-2.1**
BAUV	**El Baul**	**6.50 247**	*e*P	**Pn**	**07 47 25.7**	**-1.8**
BAUV			*e*S	**Sn**	**07 48 35.3**	**-4.9**

DJA 29 08:01:09, 9.72S×114.15E, h28km, MLv3.7/9, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.33**	**48**	P	Pn	08 01 31.1	-0.6
IGBI				S	Sn	08 01 48.2	-0.3
NBBI	**Negara**	**1.42**	**19**	P	Pn	08 01 33.9	+0.9
NBBI				S	Sn	08 01 51.5	+0.8
DNP	**Denpasar**	**1.47**	**45**	P	Pn	08 01 33.8	+0.1
DNP				S	Sn	08 01 52.0	0.0
BYJI	**Banyuwangi**	**1.51**	**8**	P	Pn	08 01 34.6	+0.4
BYJI				S	Sn	08 01 54.7	+1.7
GMJI	**Gumukmas**	**1.60**	**334**	P	Pn	08 01 35.3	-0.1
GMJI				S	Sn	08 01 55.8	+0.7
SRBI	**Singaraja**	**1.94**	**33**	P	Pn	08 01 40.6	+0.6
KHKI	**Kahang-Kahang**	**1.97**	**47**	P	Pn	08 01 41.8	+1.2
KRKI	**Karangkates**	**2.29**	**313**	P	Pn	08 01 44.8	-0.1
KMMI	**Kalianget**	**2.66**	**356**	P	Pn	08 01 51.4	+1.4
PWJI	**Pagerwojo**	**2.87**	**306**	P	Pn	08 01 52.0	-0.9
PWJI				S	Sn	08 02 28.7	+2.2
SJI	**Sawahan**	**3.07**	**310**	P	Pn	08 01 55.9	+0.2
GRJI	**Gresik**	**3.24**	**329**	P	Pn	08 01 58.3	+0.3
PCJI	**Pacitan**	**3.31**	**297**	P	Pn	08 01 59.1	+0.2
NGJI	**Ngawi**	**3.54**	**311**	P	Pn	08 02 02.4	+0.3
UGM	**Wanagama**	**4.01**	**296**	P	Pn	08 02 09.2	+0.6

CASC 29 08:05:52.2±1.8, 11.28N×86.08W, h89km±8km, MD3.5, ML3.4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APON	**Apoyo**	**0.63**	**1**	*e*P	Pn	08 06 08.8	+0.7
MASN	**Masaya**	**0.71**	**354**	*e*P	Pn	08 06 07.6	-1.1
MASN				*e*S	Sn	08 06 21.9	+0.9
GBS2	**Las Lilas**	**0.75**	**126**	*i* P	Pn	08 06 09.3	+0.1
GBS2				*i* S	Sn	08 06 22.1	+0.3
TICN	**Ticuantepe**	**0.77**	**349**	*e*P	Pn	08 06 09.7	+0.4
GBS3	**Finca Las Im¨¡**	**0.79**	**129**	*i* P	Pn	08 06 09.7	+0.2
GBS3				*i* S	Sn	08 06 23.5	+1.1
GB1A	**Borinquen Arri**	**0.81**	**124**	*i* P	Pn	08 06 10.0	+0.2
LAPC	**Finca la Perla**	**0.81**	**129**	*i* P	Pn	08 06 09.9	+0.2
LAPC				*i* S	Sn	08 06 23.2	+0.3
BUEV	**Buena Vista**	**0.81**	**126**	*i* P	Pn	08 06 10.1	+0.3
BUEV				*i* S	Sn	08 06 23.5	+0.6
NY14	**Universidad de**	**0.82**	**140**	*i* P	Pn	08 06 11.0	+1.1
GPS3	**Bodega del ICE**	**0.87**	**127**	*i* P	Pn	08 06 10.8	+0.4
GPS3				*i* S	Sn	08 06 24.9	+0.8
GPS1	**Guardaparques**	**0.87**	**125**	*i* P	Pn	08 06 11.0	+0.6
GPS1				*i* S	Sn	08 06 24.9	+0.9
MGAN	**Managua**	**0.88**	**349**	*e*P	Pn	08 06 10.7	+0.2
GPS2	**Hotel Rinc¨‡n**	**0.88**	**126**	*i* P	Pn	08 06 10.9	+0.4
WILN	**Americas 2**	**0.88**	**353**	*e*P	Pn	08 06 10.5	-0.1
XAVN	**Gruta Xavier**	**0.90**	**344**	*e*P	Pn	08 06 10.9	+0.2
CSAN		**0.96**	**339**	*e*P	Pn	08 06 11.6	+0.2
APAN	**Apoyeque**	**0.99**	**344**	*e*P	Pn	08 06 11.8	+0.1
LIM1	**Limonal**	**0.99**	**125**	*i* P	Pn	08 06 11.8	0.0
LIM1				*i* S	Sn	08 06 27.6	+1.1
HUEN		**1.06**	**355**	*e*P	Pn	08 06 12.7	+0.2
CUI	**Cuipilapa**	**1.09**	**124**	*i* P	Pn	08 06 13.2	+0.3
CUI				*i* S	Sn	08 06 29.1	+0.7
VCR	**Vista de Mar**	**1.23**	**159**	*e*P	Pn	08 06 15.2	+0.7
AMAS	**Alto Masis**	**1.25**	**122**	*i* P	Pn	08 06 15.1	+0.3
AMAS				*i* S	Sn	08 06 32.4	+0.5
CNGN	**Cerro Negro**	**1.36**	**333**	*e*P	Pn	08 06 16.1	0.0
CNGN				*e*S	Sn	08 06 34.4	+0.2
CNGN				AML	AML	08 06 40.4	
	comp=E,470nm,0.3s						
JCR	**Jicaral**	**1.71**	**146**	*e*P	Pn	08 06 21.5	+0.9
JCR				*e*S	Sn	08 06 42.1	0.0
CGA2	**Cerro Gallo 2**	**2.02**	**128**	*e*P	Pn	08 06 24.9	+0.2
CGA2				*e*S	Sn	08 06 50.0	+0.6
PRS1	**Puriscal**	**2.16**	**126**	*e*P	Pn	08 06 28.2	+1.7
PRS1				*e*S	Sn	08 06 55.5	+2.7
CNCH	**Conchagua**	**2.62**	**319**	*e*P	Pn	08 06 33.2	+0.5
CNCH				*e*S	Sn	08 07 03.5	-0.3
URSC	**Urasca**	**2.68**	**122**	*e*P	Pn	08 06 34.2	+0.8
BUS	**Buena Vista**	**2.85**	**127**	*e*P	Pn	08 06 37.7	+2.0
TGUH	**Tegucigalpa,Un**	**3.00**	**337**	*e*P	Pn	08 06 38.4	+0.7
BAR1		**3.39**	**126**	*e*P	Pn	08 06 43.9	+0.9
LFRS	**El Faro**	**3.73**	**309**	*e*P	Pn	08 06 48.9	+1.3
LFRS				*e*S	Sn	08 07 31.2	+0.6
ACR	**Cerro Adams**	**3.88**	**132**	*e*P	Pn	08 06 49.9	+0.3
ACR				*e*S	Sn	08 07 32.1	-1.9

MAN 29 08:49:31, 13.47N×122.28E, h29km, mb3.8, ML2.5, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.43**	**269**	*e*P	Pb	08 49 42.0	+1.8
BOAC				*e*S	Sb	08 49 49.3	+2.7
GQP	**Guinayangan**	**0.46**	**20⇓**	*i*P	Pb	08 49 41.4	+0.5
GQP				*i* S	Sb	08 49 44.1	-3.4
POLP	**Polilio Island**	**1.30**	**345**	*e*P	Pn	08 49 53.8	+0.6
POLP				*e*S	Sn	08 50 04.3	-5.3

IDC ***29*** *09:01:32.8±1.4, 13.55S×77.09W, h0km, mb3.8/4, mb1 3.8/7, mb1mx3.7/18, mbtmp3.6/7, ML3.5/3, MS2.6/1, Ms1 2.8/1, ms1mx2.4/25, Error ellipse: s-maj=31.3km s-min=13.7km az=81.0*
ISCJB ***29*** *09:01:36.8±2.6, 13.5S±0.2×77.0W±0.2, h43km±22km, mb3.8/5, Error ellipse: s-maj=41.7km s-min=11.8km az=145.5*
NEIC ***29*** *09:01:38.8±1.8, 13.41S×76.94W, h42km±16km, MG4.1(LIM), Error ellipse: s-maj=28.8km s-min=7.9km az=57.0*
NEIC Felt [II] at San Vicente de Canete.
ISC 29 09:01:38.5±2.0, 13.5S±0.1×77.0W±0.2, h43km±18km, n14, σ1º05/14, mb3.8/5, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.52**	**6**	Pg	**Pn**	**09 02 02.2**	**-1.0**
	272nm,0.3s,baz=184,slow=15,SNR=287						
NNA				Lg		09 02 22.6	
	687nm,0.3s,baz=229,slow=18,SNR=22						
NNA				LR	LR	09 02 24.7	
	comp=Z,668nm,18.3s,baz=130,slow=33						
NNA	**Nana**	**1.52**	**6**	Pg	**Pn**	**09 02 02.2**	**-1.0**
NNA				Lg		09 02 22.6	
ATAH	**Atahualpa**	**6.61**	**348**	Pn	**Pn**	**09 03 15.6**	**+2.5**
	4.0nm,0.3s,baz=176,slow=2.2,SNR=13						
LPAZ	**La Paz**	**9.02**	**109**	Pn	**Pn**	**09 03 46.9**	**+0.7**
	0.3nm,0.3s,baz=292,slow=12,SNR=8.1						
LPAZ				LR	LR	09 06 54.7	
	comp=Z,36nm,18.1s,baz=298,slow=36						
OTAV	**Otavalo**	**13.73**	**354**	*e*Pn	**Pn**	**09 04 50.1**	**-0.5**
	3.3nm,0.8s						
SIV	**San Ignacio**	**15.61**	**101**	Pn	**Pn**	**09 05 15.8**	**+0.1**
	0.1nm,0.3s,baz=287,slow=14,SNR=4.9						
CFAA	**Coronel Fontan**	**19.73**	**157**	P	**Pn**	**09 06 05.2**	**-1.2**
	0.1nm,0.3s,baz=335,slow=9.8,SNR=6.4						
CPUP	**Villa Florida**	**22.44**	**128**	P	**P**	**09 06 34.2**	**+0.5**
	0.3nm,0.4s,mb3.1,baz=289,slow=8.8,SNR=3.0						
CPUP	**Villa Florida**	**22.44**	**128**	P	**P**	**09 06 34.2**	**+0.5**
BCIP	**Isla Barro Col**	**22.70**	**353**	*e*P	**P**	**09 06 35.1**	**-1.5**
	17nm,0.5s,mb4.7						
TXAR	**Lajitas Array**	**49.76**	**329**	P	**P**	**09 10 28.3**	**+1.4**
	0.2nm,0.7s,mb3.2,baz=134,slow=8.9,SNR=3.8						
TXAR	**Lajitas Array**	**49.76**	**329**	P	**P**	**09 10 28.3**	**+1.4**
YKA	**Yellowknife Ar**	**81.24**	**343**	P	**P**	**09 13 49.6**	**0.0**
	0.5nm,0.6s,mb3.6,baz=142,slow=6.5,SNR=5.5						
TORD	**Torodi Ar. Bea**	**82.35**	**75**	P	**P**	**09 13 56.4**	**-0.1**
	2.5nm,0.9s,mb4.2,baz=248,slow=5.5,SNR=9.9						

ISCJB ***29*** *09:08:20.3±0.5, 59.72N±0.03×23.04E±0.06, h0km, Error ellipse: s-maj=5.2km s-min=3.9km az=154.7*
CSEM ***29*** *09:08:21.5±0.3, 59.71N×23.08E, h2km, ML1.8, Error ellipse: s-maj=6.6km s-min=5.3km az=160.0, Mining explosion.*
HEL ***29*** *09:08:21.8±0.1, 59.72N×23.01E, h0km, ML1.8, ML1.7(UPP), Explosion*
IDC ***29*** *09:08:22.9±2.0, 59.85N×23.04E, h0km, mb1 2.9/4, mb1mx2.9/27, mbtmp2.9/4, ML2.6/3, Error ellipse: s-maj=27.8km s-min=6.8km az=156.0*
UPP ***29*** *09:08:25.0, 59.80N×22.56E, h0km, ML1.7, Mining explosion.*
ISC 29 09:08:21.1±0.5, 59.72N±0.03×23.04E±0.06, h0km, n31, σ1º01/44, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.84**	**53**	*e*P	**Pg**	**09 08 36.7**	**-0.5**
MEF				*e*S	**Sg**	**09 08 47.7**	**-0.4**
MEF	**Metsahovi**	**0.84**	**53**	P	**Pg**	**09 08 36.6**	**-0.6**
MEF				S	**Sg**	**09 08 47.7**	**-0.4**
MTSE	**Matsula**	**1.09**	**158**	*e*P	**Pg**	**09 08 41.8**	**-0.1**
MTSE				*e*S	**Sg**	**09 08 55.1**	**-0.8**
MTSE	**Matsula**	**1.09**	**158**	P	**Pg**	**09 08 41.7**	**-0.1**
MTSE				S	**Sg**	**09 08 55.0**	**-0.9**
RAF	**Rauma**	**1.45**	**335**	*e*P	**Pn**	**09 08 47.5**	**-1.0**
RAF				*e*S	**Sg**	**09 09 06.0**	**-1.6**
RAF				MSG		09 09 07.2	
	comp=Z,6.3nm,0.2s						
RAF	**Rauma**	**1.45**	**335**	P	**Pn**	**09 08 47.4**	**-1.1**
RAF				S	**Sg**	**09 09 06.0**	**-1.6**
	comp=Z,6.3nm,0.2s						
AAL	**Aland**	**1.60**	**288**	*e*P	**Pn**	**09 08 49.8**	**-0.7**
PVF	**Pernaja**	**1.64**	**58**	*e*P	**Pn**	**09 08 50.9**	**-0.2**
PVF				*e*S	**Sn**	**09 09 11.9**	**-0.9**
PVF				MSG		09 09 17.1	
	comp=Z,9.4nm,0.2s						
PVF	**Pernaja**	**1.64**	**58**	P	**Pn**	**09 08 50.8**	**-0.2**
PVF				S	**Sn**	**09 09 11.8**	**-1.0**
	comp=Z,9.4nm,0.2s						
NRTU	**Norrtaelje**	**2.23**	**271**	*e*P	**Pn**	**09 08 59.7**	**+0.4**
NRTU	**Norrtaelje**	**2.23**	**271**	P	**Pn**	**09 08 59.7**	**+0.4**
FIA0	**FINESS Array S**	**2.29**	**40**	*e*P	**Pn**	**09 09 01.7**	**+1.7**
FIA0				*e*S	**Sn**	**09 09 29.6**	**+0.7**
FIA0				MSG		09 09 33.2	
	comp=Z,5.3nm,0.2s						
FIA0	**FINESS Array S**	**2.29**	**40**	P	**Pn**	**09 09 01.6**	**+1.6**
FIA0				S	**Sn**	**09 09 29.5**	**+0.7**
	comp=Z,5.3nm,0.2s						
FINES	**FINESS Array B**	**2.29**	**40**	Pn	**Pn**	**09 09 01.8**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=226,slow=15,SNR=57						
FINES				Lg		09 09 31.0	
	comp=Z,1.7nm,0.3s,baz=226,slow=24,SNR=13						
GRAU	**Graesoe**	**2.34**	**287**	*e*P	**Pn**	**09 09 00.6**	**-0.1**
GRAU	**Graesoe**	**2.34**	**287**	P	**Pn**	**09 09 00.6**	**-0.1**
KEF	**Keuruu**	**2.61**	**19**	*e*S	**Sn**	**09 09 37.4**	**+0.6**
KEF				MSG		09 09 43.2	
	comp=Z,4.2nm,0.2s						
KEF	**Keuruu**	**2.61**	**19**	S	**Sn**	**09 09 37.3**	**+0.5**
	comp=Z,4.2nm,0.2s						
FLYU	**Flymyra**	**2.63**	**281**	*e*P	**Pn**	**09 09 06.9**	**+2.3**
FLYU	**Flymyra**	**2.63**	**281**	P	**Pn**	**09 09 06.9**	**+2.3**
KAF	**Kangasniemi**	**2.88**	**32**	*e*P	**Pn**	**09 09 09.5**	**+1.4**
KAF				*e*S	**Sn**	**09 09 44.1**	**+0.7**
KAF				MSG		09 09 51.0	
	comp=Z,2.5nm,0.2s						
KAF	**Kangasniemi**	**2.88**	**32**	P	**Pn**	**09 09 09.4**	**+1.3**
KAF				S	**Sn**	**09 09 44.1**	**+0.7**
	comp=Z,2.5nm,0.2s						
OSTU	**Oestervaala**	**3.01**	**282**	*e*P	**Pn**	**09 09 10.7**	**+0.8**
OSTU	**Oestervaala**	**3.01**	**282**	P	**Pn**	**09 09 10.7**	**+0.8**
IGGU	**Iggoen**	**3.07**	**295**	*e*P	**Pn**	**09 09 11.5**	**+0.7**
IGGU	**Iggoen**	**3.07**	**295**	P	**Pn**	**09 09 11.4**	**+0.6**
ARNU	**Arnoeviken**	**3.41**	**308**	*e*P	**Pn**	**09 09 15.9**	**+0.5**
ARNU	**Arnoeviken**	**3.41**	**308**	P	**Pn**	**09 09 15.9**	**+0.5**
HFS	**Hagfors**	**4.72**	**279**	Pn	**Pn**	**09 09 34.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=92,slow=11,SNR=6.5						
HFS				Sn	**Sn**	**09 10 27.9**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=97,slow=25,SNR=3.4						
HFS				Lg		09 10 48.4	
	comp=Z,0.5nm,0.3s,baz=91,slow=29,SNR=7.2						
NOA	**NORSAR Array B**	**6.01**	**288**	Pn	**Pn**	**09 09 49.6**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=77,slow=19,SNR=2.5						
NOA				Lg		09 11 23.8	
	comp=Z,0.2nm,0.3s,baz=96,slow=16,SNR=2.8						
ARCES	**ARCESS Array B**	**9.91**	**5**	Pn	**Pn**	**09 10 42.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=183,slow=13,SNR=15						

IDC 29 09:14:47.0±1.3, 33.85S×56.27E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/22, mbtmp3.9/4, ML3.8/1, MS3.6/4, Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=49.7km s-min=31.6km az=76.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.24**	**330**	P	Pn	09 18 50.6	+1.4
	0.3nm,0.3s,baz=166,slow=12,SNR=4.0						
BOSA	**Boshof**	**26.97**	**273**	LR	LR	09 28 39.6	
	comp=Z,90nm,19.5s,baz=334,slow=31						
LBTB	**Lobatse**	**28.05**	**280**	LR	LR	09 29 04.7	
	comp=Z,69nm,19.1s,baz=88,slow=31						
MAW	**Mawson**	**34.02**	**175**	P	P	09 21 32.2	+0.1
	1.7nm,0.8s,baz=342,slow=12,SNR=3.8						
MAW				LR	LR	09 33 04.1	
	comp=Z,121nm,19.9s,baz=329,slow=32						
CMAR	**Chiang Mai Arr**	**66.02**	**45**	P	P	09 25 35.4	-0.1
	0.6nm,0.3s,baz=229,slow=6.9,SNR=4.4						
ASAR	**Alice Springs**	**67.37**	**104**	P	P	09 25 44.8	+0.5
	0.3nm,0.7s,baz=234,slow=6.4,SNR=4.3						
GNI	**Garni**	**74.39**	**351**	LR	LR	09 56 06.9	
	comp=Z,47nm,19.7s,baz=269,slow=33						

YKA	**Yellowknife Ar**	**150.75**	**351**	PKP	PKPdf	09 34 33.2 -1.5
	0.2nm,0.6s,baz=14,slow=1.9,SNR=2.6					
YKA				PKPbc	PKPbc	09 34 39.8 -0.5
	0.6nm,0.6s,baz=11,slow=1.8,SNR=7.5					

JMA ***29*** *09:25:20.5±0.2, 33.25N×137.76E, h355km, M2.9*
ISCJB ***29*** *09:25:22.1±0.8, 33.4N±0.1×137.74E±0.10, h343km±8km, mb2.8/3, Error ellipse: s-maj=16.3km s-min=13.0km az=178.7*
IDC ***29*** *09:25:23.5±1.1, 33.48N×137.81E, h342km±22km, mb2.8/3, mb1 2.8/5, mb1mx2.7/26, mbtmp2.7/5, Error ellipse: s-maj=51.1km s-min=18.3km az=61.0*
ISC 29 09:25:23.2±0.8, 33.4N±0.1×137.75E±0.10, h336km±8km, n16, σ0º87/19, mb2.8/3, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**1.32**	**319**	P	**Pn**	**09 26 09.3**	**+0.5**
JWZ	**Kozaga**	**1.71**	**275**	P	**Pn**	**09 26 10.6**	**-0.6**
JHJ	**Hachijo jima 2**	**1.73**	**99**	P	**Pn**	**09 26 12.8**	**+1.5**
	12nm,0.3s,baz=285,slow=20,SNR=3.8						
JWY	**Kouya**	**1.97**	**295**	P	**Pn**	**09 26 13.1**	**+0.1**
JOD2	**Odawara 2**	**2.17**	**30**	P	**Pn**	**09 26 15.0**	**+0.6**
JGM	**Miyama**	**2.45**	**340**	P	**Pn**	**09 26 17.2**	**+0.6**
JWT	**Wachi**	**2.71**	**315**	P	**Pn**	**09 26 18.6**	**-0.2**
JAI	**Aioi**	**2.78**	**279**	P	**Pn**	**09 26 18.6**	**-0.9**
JRY	**Ryogami san**	**2.78**	**20**	P	**Pn**	**09 26 20.4**	**+1.0**
JRY				*e*S	**S**	**09 27 05.0**	**+0.4**
BSO1	**Boso 1**	**2.96**	**64**	P	**Pn**	**09 26 20.3**	**-0.8**
BSO1				*e*S	**S**	**09 27 06.0**	**-1.5**
JKG	**Kaga**	**3.10**	**338**	P	**Pn**	**09 26 22.4**	**0.0**
MJAR	**Matsushiro Arr**	**3.16**	**7**	P	**Pn**	**09 26 23.4**	**+0.5**
	0.5nm,0.3s,baz=181,slow=10.0,SNR=6.7						
MJAR				S	**S**	**09 27 10.1**	**-0.8**
	0.2nm,0.3s,baz=184,slow=17,SNR=2.9						
KSRS	**Korea Array**	**8.98**	**300**	P	**Pn**	**09 27 28.4**	**-0.4**
	0.4nm,0.3s,baz=124,slow=10,SNR=5.6						
SONM	**Songino Array**	**27.61**	**311**	P	**P**	**09 30 42.2**	**+1.6**
	0.3nm,0.4s,mb2.9,baz=111,slow=8.0,SNR=3.6						
MKAR	**Makanchi Array**	**43.62**	**305**	P	**P**	**09 32 53.7**	**-1.6**
	0.2nm,0.3s,mb2.8,baz=88,slow=9.0,SNR=2.8						
ASAR	**Alice Springs**	**56.86**	**184**	P	**P**	**09 34 33.7**	**-0.1**
	0.5nm,1.1s,mb2.8,baz=18,slow=13,SNR=5.2						

MOS ***29*** *09:36:34.7±1.1, 6.96S×129.52E, h115km, mb4.4/22, Error ellipse: s-maj=20.4km s-min=8.2km az=116.8*
NEIC ***29*** *09:36:35.9±1.3, 6.96S×129.51E, h109km±13km, mb4.5/12, Error ellipse: s-maj=12.7km s-min=7.8km az=54.0*
ISCJB ***29*** *09:36:37.8±0.7, 7.14S±0.04×129.66E±0.06, h156km±7km, mb4.2/26, Error ellipse: s-maj=10.8km s-min=5.8km az=162.6*
DJA ***29*** *09:36:39, 7.12S×129.74E, h120km, mb4.8/13*
IDC ***29*** *09:36:40.3±0.8, 6.85S×129.55E, h148km±6km, mb4.0/15, mb1 4.0/15, mb1mx3.9/21, mbtmp4.0/15, MS3.3/1, Ms1 3.2/1, ms1mx2.4/27, Error ellipse: s-maj=22.9km s-min=12.8km az=56.0*
ISC 29 09:36:38.8±0.6, 7.12S±0.05×129.65E±0.07, h146km±7km, h154km±6km: pP-P, n101, σ1º16/102, mb4.2/26, 3C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.40**	**65**	P	**Pn**	**09 37 31.0**	**-0.1**
KAKA	**Kakadu**	**6.20**	**154**	*e*P	**Pn**	**09 38 07.8**	**-0.3**
	152nm,0.3s						
KAKA				*e*S	**Sn**	**09 39 13.6**	**-4.4**
KAKA	**Kakadu**	**6.20**	**154**	*e*Pn	**Pn**	**09 38 07.8**	**-0.4**
	291nm,0.4s						
KAKA				*e*Sn	**Sn**	**09 39 17.8**	**-0.2**
KAKA	**Kakadu**	**6.20**	**154**	P	**Pn**	**09 38 08.3**	**+0.2**
	241nm,0.5s,19nm						
SWI	**Sorong**	**6.42**	**15**	P	**Pn**	**09 38 07.1**	**-4.0**
	111nm,0.7s,4μm0.9nm						
LBMI	**Labuha**	**6.79**	**341**	P	**Pn**	**09 38 15.8**	**-0.2**
TNTI	**Ternate**	**8.16**	**344**	P	**Pn**	**09 38 34.7**	**+0.3**
	68nm,0.7s						
APSI	**Ampana**	**10.09

comp=Z,3.0nm,0.4s,mb4.4
CMAR Chiang Mai Arr 39.54 310 P **P 09 43 55.0 -0.7**
comp=Z,4.3nm,0.6s,mb4.2,baz=140,slow=7.6,SNR=17
CMAR Chiang Mai Arr 39.54 310 P **P 09 43 55.0 -0.7**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
CMAR Chiang Mai Arr 39.54 310 P **P 09 43 55.0 -0.7**
CHTO Chiang Mai 39.76 311 *e*P **P 09 43 57.0 -0.5**
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
CHTO Chiang Mai 39.76 311 *e*P **P 09 43 57.0 -0.5**
comp=Z,8.7nm,0.8s,mb4.4
NJ2 Nanjing 40.29 346 *e*P **P 09 44 00.0 -1.7**
NJ2 pmax pmax
comp=Z,160nm,0.6s
MJAR Matsushiro Arr 44.16 10 P **P 09 44 30.9 -2.1**
comp=Z,1.4nm,0.6s,mb3.8,baz=184,slow=8.9,SNR=6.3
MJAR Matsushiro Arr 44.16 10 P **P 09 44 30.9 -2.1**
MJAR pmax pmax
comp=Z,1.0nm,0.6s
KSRS Korea Array 44.37 358 P **P 09 44 33.0 -1.6**
comp=Z,1.0nm,0.6s,mb3.7,baz=176,slow=8.5,SNR=4.9
KSRS Korea Array 44.37 358 P **P 09 44 33.0 -1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.6
PALK Pallekele 50.87 285 P **P 09 45 24.3 -0.9**
comp=Z,7.3nm,0.5s,mb4.5,baz=135,slow=14,SNR=4.8
PALK Pallekele 50.87 285 P **P 09 45 24.3 -0.9**
PALK pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
SONM Songino Array 58.44 342 P **P 09 46 19.2 0.0**
comp=Z,2.0nm,0.6s,mb4.1,baz=154,slow=6.1,SNR=9.1
SONM Songino Array 58.44 342 P **P 09 46 19.2 +0.1**
SONM pmax pmax
comp=Z,2.0nm,0.6s
PETK Petropavlovsk- 64.54 18 P **P 09 47 00.4 +0.4**
comp=Z,2.8nm,0.7s,mb4.2,baz=232,slow=8.9,SNR=4.5
PETK Petropavlovsk- 64.54 18 P **P 09 47 00.4 +0.4**
PETK pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
MK31 Makanchi Array 68.14 327 *e*P **P 09 47 23.2 +0.2**
MKAR Makanchi Array 68.14 327 P **P 09 47 23.0 +0.1**
comp=Z,8.6nm,0.6s,mb4.7,baz=116,slow=8.1,SNR=95
MKAR pP pP 09 47 59.8 +1.5
comp=Z,1.1nm,0.6s,baz=116,slow=8.9,SNR=1.5
MKAR Makanchi Array 68.14 327 P **P 09 47 23.0 0.0**
MKAR *PP pP 09 47 59.8 +1.5
MKAR pmax pmax
comp=Z,9.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 68.14 327 P **P 09 47 23.0 0.0**
MKAR pP pP 09 47 59.8 +1.5
YAK Yakutsk 68.94 0 *e*P **P 09 47 27.2 -0.4**
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.6
KZA Kyzart 69.64 320 P **P 09 47 34.6 +2.2**
SNR=6.0
TKM2 Tokmak 2 69.86 321 P **P 09 47 35.1 +1.4**
SNR=8.5
TKM2 Tokmak 2 69.86 321 *e*P **P 09 47 33.7 0.0**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
TKM2 Tokmak 2 69.86 321 *e*P **P 09 47 33.7 0.0**
comp=Z,4.4nm,0.6s,mb4.4
UCH Uchtor 70.19 320 P **P 09 47 37.2 +1.5**
SNR=5.5
UCH Uchtor 70.19 320 *e*P **P 09 47 38.1 +2.3**
UCH pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
UCH Uchtor 70.19 320 *e*P **P 09 47 38.1 +2.4**
comp=Z,1.8nm,0.7s,mb3.9
AAK Ala-Archa 70.41 320 P **P 09 47 37.8 +0.7**
comp=Z,2.1nm,0.4s,mb4.2,baz=106,slow=5.8,SNR=6.6
AAK Ala-Archa 70.41 320*ce*P **P 09 47 37.5 +0.4**
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb3.8
AML Almayashu 70.67 319 P **P 09 47 39.5 +0.8**
SNR=7.2
AML Almayashu 70.67 319 *e*P **P 09 47 40.2 +1.5**
AML pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
AML Almayashu 70.67 319 *e*P **P 09 47 40.2 +1.5**
comp=Z,6.2nm,0.8s,mb4.4
USP Ospenovka 70.72 321 P **P 09 47 39.5 +0.5**
SNR=5.1
EKS2 Erkin-Say 70.88 320 *e*P **P 09 47 41.5 +1.6**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
EKS2 Erkin-Say 70.88 320 *e*P **P 09 47 41.5 +1.6**
comp=Z,3.1nm,0.8s,mb4.1
ZAA0 Zalesovo Array 71.54 334 *e*P **P 09 47 42.8 -0.8**
ZALV Zalesovo Beam 71.54 334 P **P 09 47 42.5 -1.2**
comp=Z,2.3nm,0.5s,mb4.1,baz=120,slow=5.3,SNR=10
ZALV pP pP 09 48 19.7 +0.4
comp=Z,0.8nm,0.5s,baz=130,slow=6.0,SNR=2.2
ZALV Zalesovo Beam 71.54 334 P **P 09 47 42.5 -1.1**
ZALV *PP pP 09 48 19.7 +0.5
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ZALV Zalesovo Beam 71.54 334 P **P 09 47 42.5 -1.2**
ZALV pP pP 09 48 19.7 +0.4
SEY Seymchan 71.98 11*ce*P **P 09 47 46.4 +0.3**
KURK Kurchatov 72.44 329 P **P 09 47 48.8 -0.2**
comp=Z,4.7nm,0.8s,mb4.3,baz=128,slow=4.9,SNR=16
KURK pP pP 09 48 25.8 +1.0
comp=Z,1.9nm,0.7s,baz=129,slow=4.7,SNR=3.1
KURK Kurchatov 72.44 329 P **P 09 47 48.8 -0.3**
KURK *PP pP 09 48 25.8 +1.0
KURK pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
BVAR Borovoye Array 77.98 328 P **P 09 48 20.4 -0.3**
comp=Z,2.4nm,0.8s,mb3.9,baz=157,slow=4.5,SNR=8.8
BVAR Borovoye Array 77.98 328 P **P 09 48 20.4 -0.3**
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 78.05 328*ce*P **P 09 48 20.7 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
TIXI Tiksi 78.61 360 *e*P **P 09 48 23.0 -0.8**
TIXI pmax pmax
comp=Z,13nm,2.5s,mb4.1
TIXI Tiksi 78.61 360 *e*P **P 09 48 23.5 -0.3**
comp=Z,2.2nm,0.6s,mb4.0
BILL Biiibino 79.31 13 *e*P **P 09 48 29.8 +2.1**
BILL pmax pmax
comp=Z,8.0nm,2.5s,mb3.9
ABKAR Abkulak array 82.39 322 *e*P **P 09 48 44.1 -0.3**
comp=Z,3.3nm,0.6s,mb4.1
AKTO Aktyubinsk 83.95 322 P **P 09 48 52.3 -0.2**
comp=Z,1.9nm,0.4s,mb4.2,baz=106,slow=9.0,SNR=7.0
AKTO Aktyubinsk 83.95 322 P **P 09 48 52.3 -0.1**
AKTO pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ARU Arti 85.62 328*d i*P **P 09 48 59.3 -1.4**
ARU 09 52 15.6
ARU S S 09 59 15.9 -4.5
ARU SS SS 10 04 53.8 -6.2
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
PDAR Pinedale Array 117.22 45 PKP PKPdf 09 55 07.6 +0.6
comp=Z,0.5nm,0.7s,baz=301,slow=0.5,SNR=4.8
TXAR Lajitas Array 125.28 59 PKP PKPdf 09 55 25.0 +2.1
comp=Z,0.7nm,0.8s,baz=209,slow=1.3,SNR=7.2
TXAR Lajitas Array 125.28 59 PKIKP PKPdf 09 55 25.0 +2.1
TXAR pmax pmax
comp=Z,1.0nm,0.8s
JCT Junction City 128.25 57 *e*PKIKP PKPdf 09 55 30.2 +1.7
TORD Torodi Ar. Bea 128.49 281 PKP PKPdf 09 55 30.2 +0.9
comp=Z,0.9nm,0.6s,baz=78,slow=1.9,SNR=5.6
CPUP Villa Florida 146.07 169 PKPbc PKPab 09 56 04.5 +1.4
comp=Z,3.4nm,0.7s,baz=168,slow=3.0,SNR=8.9
CPUP Villa Florida 146.07 169 PKP2 PKPab 09 56 04.5 +1.4
CPUP pmax pmax
comp=Z,3.0nm,0.7s
LPAZ La Paz 150.84 143 PKP PKPbc 09 56 12.7 -2.3
comp=Z,0.7nm,0.8s,baz=247,slow=7.7,SNR=2.9
LPAZ PKPbc PKPab 09 56 18.4 -4.2
comp=Z,1.7nm,0.6s,baz=218,slow=10,SNR=10
LPAZ pPKPbc pPKPbc 09 56 55.5 +1.8
comp=Z,1.6nm,0.7s,baz=53,slow=2.0,SNR=2.7
LPAZ La Paz 150.84 143 PKIKP PKPbc 09 56 12.7 -2.3
LPAZ 09 56 55.5
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ pmax pmax
comp=Z,2.0nm,0.6s
LPAZ pmax pmax
comp=Z,2.0nm,0.7s

UPP ***29*** *09:44:50.8, 58°.83N×27°.35E, h0km, ML1.9, Suspected Mining explosion.*
ISCJB ***29*** *09:44:53.2±0.8, 59°.34N±0°.04×26°.98E±0°.09, h0km, Error ellipse: s-maj=7.0km s-min=4.5km az=28.1*
CSEM ***29*** *09:44:54.8±0.4, 59°.32N×27°.01E, h2km, ML2.0, Error ellipse: s-maj=9.8km s-min=5.8km az=112.0, Mining explosion.*
BER ***29*** *09:44:54.9±3.9, 59°.31N×27°.20E, h2km±19km, ML2.5(NAO)*
NAO ***29*** *09:44:54.5±1.1, 59°.29N×27°.09E, ML2.5*
IDC ***29*** *09:44:55.7±2.0, 59°.35N×27°.02E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=17.3km s-min=10.4km az=125.0*
ISC 29 09:44:54.9±0.7, 59°.35N±0°.03×26°.96E±0°.09, h0km, n37, σ1§19/47, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
VSU	**Vasula**	**0.89**	**188**	Pg		**Pg**	**09 45 10.8**	**-1.2**
VSU				Lg			09 45 22.6	
VSU	**Vasula**	**0.89**	**188**	Pg		**Pg**	**09 45 10.8**	**-1.2**
VSU				Lg			09 45 22.6	
	SNR=90							
VJF	**Virojoki**	**1.23**	**14**	Pg		**Pg**	**09 45 17.6**	**-1.0**
VJF				Sg		**Sg**	**09 45 34.8**	**+0.2**
PVF	**Pernaja**	**1.32**	**336**	Pg		**Pg**	**09 45 20.0**	**-0.3**
PVF				Sg		**Sg**	**09 45 38.2**	**+0.8**
MEF	**Metsahovi**	**1.56**	**305**	Pg		**Pg**	**09 45 23.6**	**-1.3**
MEF	**Metsahovi**	**1.56**	**305**	*e*P		**Pn**	**09 45 24.8**	**+0.9**
	SNR=50							
MEF				Sg		**Sg**	**09 45 45.3**	**+0.2**
MEF				*e*S		**Sn**	**09 45 45.6**	**+0.8**
	SNR=50							
MTSE	**Matsula**	**1.74**	**250**	Pn		**Pn**	**09 45 27.1**	**+0.7**
MTSE				Sg		**Sg**	**09 45 50.4**	**-0.5**
FIA0	**FINESS Array S**	**2.15**	**349**	Pn		**Pn**	**09 45 32.6**	**+0.6**
	baz=163,slow=18							
FIA0				Lg			09 46 04.2	
	baz=165,slow=28							
FIA0				Rg			09 46 15.8	
	baz=163,slow=37							
FIA0	**FINESS Array S**	**2.15**	**349**	Pn		**Pn**	**09 45 32.6**	**+0.6**
	baz=163,slow=16,SNR=50							
FIA0				Lg			09 46 04.2	
	baz=165,slow=27							
FINES	**FINESS Array B**	**2.15**	**349**	Pn		**Pn**	**09 45 32.5**	**+0.5**
	1.7nm,0.3s,baz=166,slow=16,SNR=29							
FINES				Pg		**Pg**	**09 45 33.9**	**-2.3**
	1.7nm,0.3s,baz=167,slow=17,SNR=30							
FINES				Lg			09 46 03.8	
	5.9nm,0.3s,baz=170,slow=29,SNR=26							
FIA1	**FINESS Array S**	**2.15**	**349**	Pn		**Pn**	**09 45 32.8**	**+0.8**
KAF	**Kangasniemi**	**2.80**	**354**	Pn		**Pn**	**09 45 41.0**	**+0.2**
KAF				Sg		**Sg**	**09 46 24.0**	**-0.7**
KEF	**Keuruu**	**3.01**	**341**	Sg		**Sg**	**09 46 29.4**	**-2.2**
RAF	**Rauma**	**3.09**	**305**	Pn		**Pn**	**09 45 47.3**	**+2.4**
RAF				Sg		**Sg**	**09 46 30.3**	**-3.9**
GRAU	**Graesoe**	**4.36**	**287**	P		**Pn**	**09 46 01.9**	**-0.4**
NACGM	**Naroch**	**4.46**	**181**	*e*		**Sg**	**09 47 11.0**	**-7.0**
MICGM	**Minsk**	**4.88**	**174**	*e*		**Sg**	**09 47 26.0**	**-5.7**
OSTU	**Oestervaala**	**5.04**	**284**	P		**Pn**	**09 46 11.7**	**0.0**
IGGU	**Iggoen**	**5.06**	**292**	P		**Pn**	**09 46 12.2**	**+0.3**
ARNU	**Arnoeviken**	**5.29**	**301**	P		**Pn**	**09 46 15.5**	**+0.5**
HEMU	**Hemsoen**	**5.47**	**311**	P		**Pn**	**09 46 19.4**	**+1.8**
BURU	**Burvik**	**5.88**	**336**	P		**Pn**	**09 46 23.8**	**+0.7**
BREU	**Bredtraesk**	**6.06**	**322**	P		**Pn**	**09 46 27.8**	**+2.2**
SVAU	**Svanoeeiden**	**6.23**	**329**	P		**Pn**	**09 46 28.9**	**+1.0**
SJUU	**Sjulsmark**	**6.66**	**340**	P		**Pn**	**09 46 35.4**	**+1.5**
HFS	**Hagfors**	**6.75**	**282**	Pn		**Pn**	**09 46 34.1**	**-1.0**
	baz=107,slow=16							
HFS				Sn		**Sn**	**09 47 50.1**	**-2.5**
	baz=100,slow=28							
HFS				Lg			09 48 26.2	
	baz=80,slow=28							
HFS	**Hagfors**	**6.75**	**282**	Pn		**Pn**	**09 46 35.3**	**+0.1**
	0.1nm,0.3s,baz=102,slow=13,SNR=2.5							
HFS				Sn		**Sn**	**09 47 49.7**	**-3.0**
	0.2nm,0.3s,baz=96,slow=25,SNR=3.4							
HFS				Lg			09 48 28.2	
	0.7nm,0.3s,baz=91,slow=27,SNR=6.9							
HFS	**Hagfors**	**6.75**	**282**	Pn		**Pn**	**09 46 34.1**	**-1.0**
	baz=107,slow=15,SNR=50							
LILU	**Lilltraesk**	**6.82**	**334**	P		**Pn**	**09 46 36.8**	**+0.8**
ERTU	**Ertsjaerv**	**7.55**	**345**	P		**Pn**	**09 46 46.5**	**+0.4**
PAJU	**Pajala**	**7.90**	**349**	P		**Pn**	**09 46 51.4**	**+0.5**
NB2	**NORSAR Subarra**	**8.03**	**289**	Pn		**Pn**	**09 46 51.0**	**-1.6**
NB2				Lg			09 49 07.5	
	baz=111,slow=37							
NB2	**NORSAR Subarra**	**8.03**	**289**	Pn		**Pn**	**09 46 51.0**	**-1.6**
	SNR=50							
NOA	**NORSAR Array B**	**8.03**	**289**	Pn		**Pn**	**09 46 50.0**	**-2.6**
	0.2nm,0.3s,baz=72,slow=18,SNR=2.3							
NOA				Lg			09 49 04.8	
	0.5nm,0.3s,baz=140,slow=21,SNR=4.9							
ARA0	**ARCESS Array S**	**10.25**	**357**	Pn		**Pn**	**09 47 21.3**	**-1.8**
	baz=172,slow=16							
ARA0	**ARCESS Array S**	**10.25**	**357**	Pn		**Pn**	**09 47 21.3**	**-1.7**
	baz=172,slow=15,SNR=50							
ARCES	**ARCESS Array B**	**10.25**	**357**	Pn		**Pn**	**09 47 21.0**	**-2.0**
	0.1nm,0.3s,baz=174,slow=13,SNR=6.9							

ISCJB ***29*** *09:46:34.6±1.3, 8°.1S±0°.1×117°.8E±0°.1, h230km±14km, mb3.8/7, Error ellipse: s-maj=32.1km s-min=8.7km az=43.9*
IDC ***29*** *09:46:37.1±2.3, 8°.07S×117°.89E, h241km±22km, mb3.5/7, mb1 3.5/8, mb1mx3.3/22, mbtmp3.5/8, Error ellipse: s-maj=35.0km s-min=11.4km az=56.0*
NEIC ***29*** *09:46:39.0±2.5, 8°.07S×117°.88E, h264km±27km, mb4.0/1, Error ellipse: s-maj=27.3km s-min=12.6km az=53.0*
DJA ***29*** *09:46:44, 9°.97S×116°.67E, h11km, MLv3.6/3*
ISC 29 09:46:36.0±1.2, 8°.1S±0°.1×117°.7E±0°.1, h231km±13km, n19, σ0§97/21, mb3.8/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
KHKI	**Kahang-Kahang**	**2.10**	**263**	P		**Pn**	**09 47 16.8**	**-1.1**
SRBI	**Singaraja**	**2.48**	**271**	P		**Pn**	**09 47 23.3**	**+1.6**
GMJI	**Gumukmas**	**4.23**	**268**	P		**Pn**	**09 47 40.2**	**-1.6**
PWJI	**Pagerwojo**	**5.85**	**271**	P		**Pn**	**09 48 02.5**	**+0.5**
	37nm,0.5s							
PCJI	**Pacitan**	**6.47**	**269**	P		**Pn**	**09 48 09.5**	**-0.3**
UGM	**Wanagama**	**7.12**	**271**	P		**Pn**	**09 48 18.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**12.57**	**143**	P		**Pn**	**09 49 28.9**	**+1.7**
	1.1nm,0.3s,baz=329,slow=10.0,SNR=8.0							
FITZ				S		**S**	**09 51 41.6**	**-5.7**
	0.8nm,0.3s,baz=0.0,slow=20,SNR=6.4							
WRAB	**Tennant Creek**	**19.94**	**128**	*e*P		**P**	**09 50 49.8**	**-0.9**
	5.0nm,0.8s							
PSI	**Prapat**	**21.66**	**299**	P		**P**	**09 51 09.1**	**+0.5**
	2.7nm,0.5s,mb4.1,baz=104,slow=7.3,SNR=4.4							
PSI	**Prapat**	**21.66**	**299**	P		**P**	**09 51 09.1**	**+0.5**
ASAR	**Alice Springs**	**21.90**	**137**	P		**P**	**09 51 10.1**	**-0.7**
	1.7nm,0.5s,mb3.8,baz=313,slow=9.1,SNR=16							
ASAR				S		**S**	**09 54 54.7**	**-1.4**
	0.4nm,0.8s,baz=313,slow=16,SNR=2.9							
ASAR				ScP		ScP	09 58 15.4	-0.9
	0.4nm,0.5s,baz=314,slow=2.5,SNR=5.1							
ASAR	**Alice Springs**	**21.90**	**137**	P		**P**	**09 51 10.1**	**-0.7**
ASAR				S		**S**	**09 54 54.6**	**-1.4**
ASAR				ScP		ScP	09 58 15.4	-0.9
NWAO	**Narrogin (SRO)**	**24.69**	**181**	P		**P**	**09 51 37.3**	**+1.3**
	9.1nm,0.8s,mb4.5,baz=0.0,slow=12,SNR=4.6							
STKA	**Stephens Creek**	**32.44**	**140**	P		**P**	**09 52 44.5**	**-0.2**
	1.7nm,0.8s,mb3.7,baz=321,slow=14,SNR=4.3							
STKA	**Stephens Creek**	**32.44**	**140**	P		**P**	**09 52 44.5**	**-0.2**
SONM	**Songino Array**	**56.60**	**351**	P		**P**	**09 55 55.7**	**+0.9**
	1.2nm,0.5s,mb3.8,baz=177,slow=8.3,SNR=5.7							
MKAR	**Makanchi Array**	**63.10**	**333**	P		**P**	**09 56 38.9**	**0.0**
	0.3nm,0.3s,mb3.4,baz=145,slow=6.3,SNR=3.1							
ZALV	**Zalesovo Beam**	**67.77**	**340**	P		**P**	**09 57 08.0**	**-0.7**
	0.5nm,0.4s,mb3.5,baz=130,slow=4.5,SNR=2.7							
TORD	**Torodi Ar. Bea**	**117.05**	**281**	PKP		PKPdf	10 04 54.0	-0.4
	0.3nm,0.7s,baz=58,slow=2.2,SNR=2.5							

IDC ***29*** *09:59:07.0±1.1, 2°.96N×125°.83E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, MS3.3/2, Ms1 3.3/2, ms1mx2.5/36, Error ellipse: s-maj=64.6km s-min=20.3km az=68.0*
ISCJB ***29*** *09:59:12.9±1.4, 3°.54N±0°.09×126°.81E±0°.09, h56km±14km, mb3.9/10, MS3.2/2, Error ellipse: s-maj=18.0km s-min=10.2km az=43.6*
NEIC ***29*** *09:59:12.6±0.6, 2°.92N×125°.80E, h35km, mb4.2/3, Error ellipse: s-maj=39.0km s-min=10.3km az=69.0*
DJA ***29*** *09:59:13, 3°.55N×126°.77E, h30km, MLv4.5/3*
ISC 29 09:59:15.6±1.3, 3°.4N±0°.1×126°.7E±0°.1, h67km±14km, n20, σ1§22/19, mb3.8/10, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
SGSI	**Sangihe**	**1.25**	**284**	P		**Pn**	**09 59 35.6**	**-1.5**
SGSI				S		**Sn**	**09 59 50.0**	**-3.2**
TNTI	**Ternate**	**2.67**	**166**	P		**Pn**	**09 59 55.5**	**-0.8**
MNI	**Manado**	**2.71**	**225**	P		**Pn**	**09 59 56.7**	**0.0**
MNI				S		**Sn**	**10 00 32.3**	**+3.9**
MRSI	**Marisa**	**5.60**	**239**	P		**Pn**	**10 00 37.3**	**+1.0**
	124nm,0.8s,2μm							
SWI	**Sorong**	**6.18**	**133**	P		**Pn**	**10 00 45.8**	**+1.5**
APSI	**Ampana**	**6.64**	**230**	P		**Pn**	**10 00 53.9**	**+3.3**
GUMO	**Guam**	**20.58**	**59**	LR		LR	10 10 20.3	
	comp=Z,59nm,21.9s,baz=70,slow=31							
FITZ	**Fitzroy Crossi**	**21.38**	**183**	P		**P**	**10 03 52.2**	**-5.5**
	2.4nm,0.8s,mb3.6,baz=14,slow=11,SNR=1.9							
WRAB	**Tennant Creek**	**24.35**	**162**	*e*P		**P**	**10 04 26.5**	**-0.9**
	4.4nm,0.8s,mb3.8							
ASAR	**Alice Springs**	**27.78**	**166**	P		**P**	**10 04 56.0**	**-2.3**
	0.2nm,0.6s,mb2.9,baz=342,slow=7.2,SNR=6.2							
PSI	**Prapat**	**27.78**	**270**	LR		LR	10 17 35.6	
	comp=Z,97nm,18.0s,baz=328,slow=41							
CMAR	**Chiang Mai Arr**	**31.05**	**301**	P		**P**	**10 05 21.6**	**-5.8**
	0.4nm,0.4s,mb3.5,baz=104,slow=7.5,SNR=2.5							
SONM	**Songino Array**	**47.63**	**342**	P		**P**	**10 07 45.5**	**+0.6**
	0.6nm,0.5s,mb3.7,baz=156,slow=11,SNR=4.8							
MKAR	**Makanchi Array**	**57.84**	**325**	P		**P**	**10 08 59.7**	**-0.6**
	0.6nm,0.3s,mb4.0,baz=122,slow=8.9,SNR=7.1							
MKAR	**Makanchi Array**	**57.84**	**325**	P		**P**	**10 08 59.7**	**-0.6**
ZALV	**Zalesovo Beam**	**60.90**	**333**	P		**P**	**10 09 21.6**	**+0.4**
	0.8nm,0.5s,mb4.0,baz=124,slow=7.2,SNR=3.2							
KURK	**Kurchatov**	**62.03**	**328**	*e*P		**P**	**10 09 30.0**	**+1.1**
	7.3nm,0.7s,mb4.8							
BVAR	**Borovoye Array**	**67.61**	**327**	P		**P**	**10 10 04.8**	**-0.3**
	1.1nm,0.7s,mb3.8,baz=98,slow=5.1,SNR=5.6							
ABKAR	**Abkulak array**	**72.42**	**321**	*e*P		**P**	**10 10 35.1**	**+0.4**
	1.4nm,0.6s,mb4.0							
TXAR	**Lajitas Array**	**121.80**	**52**	PKP		PKPdf	10 18 05.5	+2.7
	0.1nm,0.6s,baz=307,slow=3.3,SNR=2.5							

ISCJB ***29*** *09:59:57.2±1.0, 36°.71N±0°.08×70°.8E±0°.2, h179km±36km, Error ellipse: s-maj=29.8km s-min=11.7km az=12.3*
NNC ***29*** *10:00:00.2±5.3, 37°.27N×70°.46E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=45.6km s-min=40.5km az=97.0*
ISC 29 09:59:58.2±1.0, 36°.72N±0°.06×70°.8E±0°.2, h169km±28km, n5, σ0§68/9, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
CEP	**Cherat**	**3.04**	**162**	⇑P		**Pn**	**10 00 47.2**	**+0.4**
CEP				S		**Sn**	**10 01 24.0**	**-0.5**
KK31	**Karatay Array**	**6.38**	**358**	⇓Pn		**Pn**	**10 01 31.7**	**+1.8**
	1.5nm,0.5s,baz=183,slow=12,SNR=24							
KK31				⇑Sn		**Sn**	**10 02 41.8**	**-0.3**
	7.2nm,0.5s,baz=190,slow=24,SNR=19							
TKM2	**Tokmak 2**	**7.23**	**30**	⇑Pn		**Pn**	**10 01 41.5**	**+0.3**
	2.1nm,0.8s							
TKM2				⇓Sn		**Sn**	**10 03 01.8**	**-0.5**
	1.9nm,0.9s							
AB31	**Akbulak array**	**14.80**	**331**	⇑Pn		**Pn**	**10 03 18.5**	**-0.5**
	0.4nm,0.5s,baz=144,slow=12,SNR=12							
AB31				⇑Sn		**Sn**	**10 06 03.4**	**-0.2**
	0.2nm,0.5s							
AKTO	**Aktyubinsk**	**16.49**	**330**	⇓Pn		**Pn**	**10 03 39.5**	**-0.2**
	0.4nm,0.8s							

NOU ***29*** *10:14:00.0±0.8, 19°.93S×168°.65E, h30km, MD3.1, ML3.9*
ISCJB ***29*** *10:14:01.0±2.2, 20°.3S±0°.1×168°.8E±0°.2, h37km±19km, mb4.2/9, Error ellipse: s-maj=31.1km s-min=15.1km az=136.3*
IDC ***29*** *10:14:01.5±1.2, 20°.35S×168°.85E, h30km±6km, mb4.1/8, mb1 4.3/8, mb1mx4.0/16, mbtmp4.2/8, MS3.4/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=30.2km s-min=20.7km az=140.0*
NEIC ***29*** *10:14:02.4±0.6, 20°.34S×168°.79E, h35km, mb4.4/1, Error ellipse: s-maj=19.9km s-min=10.3km az=143.0*
ISC 29 10:14:01.5±3.7, 20°.3S±0°.1×168°.8E±0°.1, h28km±27km, h33km±1.6km: pP-P, n22, σ0§55/20, mb4.2/9, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
BAYA	**Yate Dam**	**2.54**	**224**	*e*S		**Sn**	**10 15 11.1**	**+0.2**
DZM	**Mont Dzumac**	**2.79**	**231**	*e*P		**Pn**	**10 14 43.5**	**-0.8**
DZM				*e*S		**Sn**	**10 15 16.2**	**-0.9**
DZM				AMP			10 15 34.0	
	comp=Z,936nm,3.3s							
DZM	**Mont Dzumac**	**2.79**	**231**	*e*Pn		**Pn**	**10 14 43.6**	**-0.7**
DZM				*e*Sn		**Sn**	**10 15 17.8**	**+0.7**
LASL	**Noumea**	**2.83**	**228**	*e*P		**Pn**	**10 14 44.8**	**0.0**
LASL				*e*S		**Sn**	**10 15 18.1**	**+0.2**
NORM	**Noumea**	**2.86**	**228**	*e*S		**Sn**	**10 15 18.3**	**-0.5**
NOUC	**Port Laguerre**	**2.91**	**232**	*e*P		**Pn**	**10 14 46.3**	**+0.2**
NOUC				*e*S		**Sn**	**10 15 20.3**	**+0.2**
NOUC				AMP			10 15 35.9	
	comp=Z,49nm,5.9s							
URZ	**Urewera**	**19.27**	**160**	pP		pP	10 18 30.1	-1.3
	comp=Z,0.3nm,0.3s,baz=332,slow=5.5,SNR=2.7							
URZ				LR		LR	10 24 44.1	
	comp=Z,143nm,19.8s,baz=264,slow=33							
CTA	**Charters Tower**	**21.15**	**267**	P		**P**	**10 18 45.9**	**+1.4**
	comp=Z,5.0nm,0.7s,mb4.0,baz=86,slow=13,SNR=6.0							
CTA				LR		LR	10 25 32.7	
	comp=Z,87nm,18.9s,baz=61,slow=33							
STKA	**Stephens Creek**	**26.92**	**239**	P		**P**	**10 19 40.8**	**+0.4**
	comp=Z,2.1nm,0.7s,mb3.8,baz=64,slow=6.7,SNR=6.3							
WRAB	**Tennant Creek**	**32.31**	**265**	*e*P		**P**	**10 20 28.0**	**-0.3**
	comp=Z,5.6nm,1.0s,mb4.3							
ASAR	**Alice Springs**	**32.47**	**258**	P		**P**	**10 20 29.7**	**0.0**
	comp=Z,4.7nm,0.6s,mb4.5,baz=87,slow=8.9,SNR=67							
ASAR				pP		pP	10 20 38.9	+0.9
	comp=Z,5.6nm,0.5s,baz=85,slow=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOYT	**Boyabat**	**0.23**	**274**	*i* P	**Pg**	**10 17 55.8**	**-0.7**
BOYT				*i* S	**Sg**	**10 18 00.1**	**+0.7**
BOYT	**Boyabat**	**0.23**	**274**	*i* P	**Pg**	**10 17 55.8**	**-0.7**
BOYT				*i* S	**Sg**	**10 18 00.1**	**+0.7**
DIKM	**Dikmen**	**0.25**	**9**	*e*PG	**Pg**	**10 17 57.0**	**+0.1**
DIKM				*e*SG	**Sg**	**10 18 00.3**	**+0.2**
DIKM	**Dikmen**	**0.25**	**9**	*e*Pg	**Pg**	**10 17 57.0**	**+0.2**
DIKM				*e*Sg	**Sg**	**10 18 00.3**	**+0.2**
BYBT	**Boyabat**	**0.34**	**281**	*e*PG	**Pg**	**10 17 58.1**	**-0.5**
BYBT				*e*SG	**Sg**	**10 18 03.5**	**+0.6**
BYBT	**Boyabat**	**0.34**	**281**	*e*Pg	**Pg**	**10 17 58.1**	**-0.4**
BYBT				*e*Sg	**Sg**	**10 18 03.5**	**+0.6**
KVT	**Kavak**	**0.71**	**117**	*e*PG	**Pg**	**10 18 06.2**	**+0.4**
KVT	**Kavak**	**0.71**	**117**	*e*Pg	**Pg**	**10 18 06.2**	**+0.5**
CTKT	**Corum**	**0.84**	**202**	*i* P	**Pg**	**10 18 06.0**	**-2.3**
CTKT				*i* S	**Sg**	**10 18 18.1**	**-1.0**
CTKT	**Corum**	**0.84**	**202**	*i* P	**Pg**	**10 18 06.0**	**-2.2**
CTKT				*i* S	**Sg**	**10 18 18.1**	**-1.1**
TOS	**Tosya**	**0.96**	**248**	*e*PG	**Pg**	**10 18 10.0**	**-0.6**
TOS	**Tosya**	**0.96**	**248**	*e*Pg	**Pg**	**10 18 10.0**	**-0.6**
BZK	**Bozkurt**	**1.06**	**302**	*e*PG	**Pg**	**10 18 11.8**	**-0.6**
BZK	**Bozkurt**	**1.06**	**302**	*e*Pg	**Pg**	**10 18 11.8**	**-0.5**
ILGA	**Ilgaz**	**1.18**	**253**	*i* P	**Pg**	**10 18 13.1**	**-1.6**
ILGA				*i* S	**Sg**	**10 18 32.1**	**+2.2**
ILGA	**Ilgaz**	**1.18**	**253**	*i* P	**Pg**	**10 18 13.1**	**-1.5**
CORM	**Corum**	**1.30**	**200**	*e*PN	**Pn**	**10 18 16.5**	**-0.6**
CORM	**Corum**	**1.30**	**200**	*e*Pn	**Pn**	**10 18 16.5**	**-0.7**
BALT	**Daday**	**1.37**	**276**	*i* P	**Pn**	**10 18 15.9**	**-2.3**
BALT				*i* S	**Sg**	**10 18 38.5**	**+2.3**
BALT	**Daday**	**1.37**	**276**	*i* P	**Pn**	**10 18 15.9**	**-2.3**
ERBA	**Erbaa**	**1.38**	**121**	*i* P	**Pn**	**10 18 17.1**	**-1.1**
ERBA				*i* S	**Sg**	**10 18 38.2**	**+1.9**
ERBA	**Erbaa**	**1.38**	**121**	*i* P	**Pn**	**10 18 17.1**	**-1.1**
ERBA				*i* S	**Sg**	**10 18 38.2**	**+1.9**
CANT	**Cankiri**	**1.44**	**237**	*e*PN	**Pn**	**10 18 18.8**	**-0.3**
TOKT	**Tokat**	**1.49**	**136**	*e*PN	**Pn**	**10 18 19.9**	**+0.2**
TOKT	**Tokat**	**1.49**	**136**	*e*Pn	**Pn**	**10 18 20.0**	**+0.3**
CDAG	**Cicekdag**	**1.89**	**200**	*i* P	**Pn**	**10 18 26.3**	**+1.0**
CDAG				*i* S	**Sn**	**10 18 52.2**	**+2.6**
CDAG	**Cicekdag**	**1.89**	**200**	*i* P	**Pn**	**10 18 26.3**	**+1.0**
SAFT	**Safranbolu**	**1.90**	**266**	*e*PN	**Pn**	**10 18 25.4**	**-0.1**
SAFT	**Safranbolu**	**1.90**	**266**	*e*Pn	**Pn**	**10 18 25.4**	**-0.1**
SVSK	**Karacayir**	**2.02**	**137**	*e*PN	**Pn**	**10 18 27.2**	**+0.2**
SVSK	**Karacayir**	**2.02**	**137**	*e*Pn	**Pn**	**10 18 27.2**	**+0.2**

MOS ***29*** *10:34:44.8±0.9, 26°.25N×91°.77E, h49km, mb4.4/18, Error ellipse: s-maj=15.0km s-min=7.9km az=110.7*
DMN ***29*** *10:34:45.4±0.5, 26°.35N×91°.91E, h10km, Ml4.8/8, Error ellipse: s-maj=45.3km s-min=9.8km az=13.0*
BJI ***29*** *10:34:45.3, 26°.14N×92°.14E, h45km, mB4.9/3, mb4.3/7, ML4.2/2, Ms3.7/2, Ms7 3.5/2*
NEIC ***29*** *10:34:46.7±0.4, 26°.31N×91°.79E, mb4.5/7, Error ellipse: s-maj=9.1km s-min=5.9km az=194.0*
NEIC Felt at Guwahati and Shillong.
IDC ***29*** *10:34:46.4±0.8, 26°.32N×91°.77E, h44km±6km, mb3.9/12, mb1 4.0/13, mb1mx3.8/27, mbtmp3.9/13, ML3.8/1, MS3.2/4, Ms1 3.3/4, ms1mx2.7/36, Error ellipse: s-maj=30.0km s-min=13.7km az=61.0*
ISCJB ***29*** *10:34:47.1±0.5, 26°.22N±0°.06×91°.62E±0°.03, h73km±6km, mb4.2/23, Error ellipse: s-maj=9.8km s-min=4.4km az=16.2*

ISC 29 10:34:48.1±0.5, 26°.25N±0°.06×91°.68E±0°.04, h63km±6km, h45km±1.9km:pP-P, n76, σ0°.95/85, mb4.3/23, 2C, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.70**	**165**	*e*P	**Pn**	**10 35 04.0**	**+1.4**
SHL				*e*S	**Sn**	**10 35 13.6**	**+0.4**
IMP	**Imphal**	**2.50**	**125**	*e*P	**Pn**	**10 35 25.0**	**-1.5**
IMP				*ex*	x	10 36 06.0	
GTK	**Gangtok**	**2.94**	**292**	*ex*	x	10 35 47.5	
SLGI	**Shiliguri**	**2.96**	**280**	*ex*	**Sn**	**10 36 04.3**	**-2.7**
LSA	**Lhasa**	**3.47**	**352**	P	**Pn**	**10 35 39.5**	**-0.2**
LSA				LR	LR		
	comp=N,190nm,6.7s						
LSA				LR	LR		
	comp=E,960nm,7.5s						
LSA				LR	LR		
	comp=Z,310nm,6.7s						
LSA	**Lhasa**	**3.47**	**352**	*e*Pn	**Pn**	**10 35 39.9**	**+0.3**
TAPN	**Taplejung**	**3.71**	**288**	*e*Pn	**Pn**	**10 35 43.9**	**+0.9**
ODAN	**Odare**	**3.89**	**280**	*e*Pn	**Pn**	**10 35 45.9**	**+0.5**
ODAN				*e*Sn	**Sn**	**10 36 30.2**	**+0.4**
	comp=Z,684nm,0.3s						
RAMN	**Ramite**	**4.60**	**280**	*e*Pn	**Pn**	**10 35 56.3**	**+1.2**
RAMN				*e*Sn	**Sn**	**10 36 47.3**	**0.0**
	comp=Z,324nm,0.5s						
JIRN	**Jiri**	**5.10**	**287**	*e*Pn	**Pn**	**10 36 02.1**	**+0.2**
JIRN				*e*Sn	**Sn**	**10 36 59.0**	**-0.4**
	comp=Z,556nm,0.4s						
GUN	**Gumba**	**5.43**	**289**	*e*Pn	**Pn**	**10 36 06.5**	**+0.1**
GUN				*e*Sn	**Sn**	**10 37 07.7**	**+0.1**
	comp=Z,235nm,0.3s						
PKI	**Pulchoki**	**5.75**	**285**	*e*Pn	**Pn**	**10 36 11.2**	**+0.3**
PKI				*e*Sn	**Sn**	**10 37 16.0**	**+0.5**
	comp=Z,180nm,0.4s						
PKI	**Pulchoki**	**5.75**	**285**	*e*Pn	**Pn**	**10 36 12.0**	**+1.1**
PKI				*e*Sn	**Sn**	**10 37 15.9**	**+0.4**
PKIN	**Phulchoki**	**5.76**	**285**	*e*Pn	**Pn**	**10 36 12.0**	**+1.0**
PKIN				*e*Sn	**Sn**	**10 37 15.9**	**+0.1**
	comp=Z,204nm,0.4s						
BOK	**Bokaro**	**5.79**	**246**	*e*P	**Pn**	**10 36 12.2**	**+0.7**
BOK				*e*S	**Sn**	**10 37 14.5**	**-2.0**
KKN	**Kakani**	**5.91**	**287**	*e*Pn	**Pn**	**10 36 12.7**	**-0.3**
KKN				*e*Sn	**Sn**	**10 37 19.7**	**+0.3**
	comp=Z,118nm,0.2s						
DMN	**Daman**	**6.02**	**284**	*e*Pn	**Pn**	**10 36 14.5**	**-0.1**
DMN				*e*Sn	**Sn**	**10 37 20.8**	**-1.3**
	comp=Z,205nm,0.5s						
CMAR	**Chiang Mai Arr**	**10.26**	**138**	P	**Pn**	**10 37 10.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=318,slow=13,SNR=4.0						
JOSI	**Joshimath**	**11.50**	**295**	*e*P	**Pn**	**10 37 28.3**	**-1.2**
JOSI				*e*S	**Sn**	**10 39 27.9**	**-8.4**
JOSI				AML	AML	10 39 55.4	
	comp=E,98nm,0.9s						
JOSI				AML	AML	10 39 55.9	
	comp=N,101nm,0.5s						
KLP	**Kalpa**	**12.89**	**297**	*e*P	**Pn**	**10 37 47.4**	**-0.9**
KLP				*e*S	**Sn**	**10 39 59.9**	**-10**
KLP				AML	AML	10 40 07.6	
	comp=E,51nm,0.8s						
KLP				AML	AML	10 40 11.7	
	comp=N,25nm,0.6s						
NDI	**New Delhi**	**13.07**	**284**	*e*S	**Sn**	**10 40 05.0**	**-10**
AYAN	**Aya Nagar**	**13.12**	**283**	*e*P	**Pn**	**10 37 51.8**	**+0.2**
AYAN				*e*S	**Sn**	**10 40 06.8**	**-9.1**
SONA	**Sohna**	**13.14**	**282**	*e*P	**Pn**	**10 37 52.0**	**+0.2**
SONA				*e*S	**Sn**	**10 40 07.5**	**-8.7**
BHPL	**Bhopal**	**13.29**	**260**	*e*P	**Pn**	**10 37 52.6**	**-1.4**
BHPL				*e*S	**Sn**	**10 40 10.5**	**-10**
KHET	**Khetri**	**14.25**	**281**	*e*P	**Pn**	**10 38 08.2**	**+1.6**
KHET				*ex*	x	10 40 32.6	
KHET				AML	AML	10 40 35.2	
	comp=E,13nm,0.4s						
KHET				AML	AML	10 40 35.5	
	comp=N,11nm,0.2s						
LZH	**Lanzhou**	**14.29**	**44**	⇑P	**Pn**	**10 38 02.8**	**-4.3**
LZH				pP		10 38 16.8	
LZH				sP		10 38 23.3	
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA	**Gaotai**	**14.79**	**25**	*e*P	**Pn**	**10 38 16.8**	**+3.2**
GTA				pP	pP	10 38 23.0	-8.3
GTA				sP	sP	10 38 25.5	-14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ENH	**Enshi**	**16.19**	**72**	*e*P	**Pn**	**10 38 32.4**	**+0.8**
	comp=Z,22nm,0.7s						
TKM2	**Tokmak 2**	**21.20**	**326**	*e*P	**P**	**10 39 29.7**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**21.20**	**326**	*e*P	**P**	**10 39 29.7**	**+1.4**
	comp=Z,13nm,0.5s,mb4.5						
UCH	**Uchtor**	**21.28**	**323**	*e*P	**P**	**10 39 28.4**	**-0.8**
	comp=Z,18nm,0.9s,mb4.4						
MK31	**Makanchi Array**	**21.82**	**342**	*e*P	**P**	**10 39 34.4**	**-0.5**
MKAR	**Makanchi Array**	**21.82**	**342**	P	**P**	**10 39 34.4**	**-0.6**
	comp=Z,11nm,0.6s,mb4.4,baz=147,slow=11,SNR=44						
MKAR				pP		10 39 46.6	
	comp=Z,7.1nm,0.8s,baz=151,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**21.82**	**342**	P	**P**	**10 39 34.4**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,11nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NJ2	**Nanjing**	**24.39**	**70**	*e*P	**P**	**10 39 58.3**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
SONM	**Songino Array**	**24.46**	**24**	P	**P**	**10 39 59.6**	**-1.2**
	comp=Z,3.4nm,0.5s,mb4.0,baz=208,slow=9.3,SNR=15						
SONM				pP		10 40 12.9	
	comp=Z,2.9nm,0.5s,baz=211,slow=9.5,SNR=3.3						
SONM	**Songino Array**	**24.46**	**24**	P	**P**	**10 39 59.6**	**-1.3**
SONM				*PP		10 40 12.9	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SONM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZAK	**Zakamensk**	**25.70**	**17**	*e*P	**P**	**10 40 12.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
KURK	**Kurchatov**	**26.40**	**341**	P	**P**	**10 40 17.6**	**-0.9**
	comp=Z,0.7nm,0.3s,mb3.7,baz=158,slow=9.8,SNR=8.0						
KURK				pP	pP	10 40 29.2	-4.6
	comp=Z,1.2nm,0.5s,baz=155,slow=9.0,SNR=3.2						
KURK	**Kurchatov**	**26.40**	**341**	P	**P**	**10 40 17.6**	**-0.9**
KURK				*PP	pP	10 40 29.2	-4.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
KURK	**Kurchatov**	**26.40**	**341**	P	**P**	**10 40 17.6**	**-0.9**
KURK				pP	pP	10 40 29.2	-4.6
ZALV	**Zalesovo Beam**	**28.14**	**351**	P	**P**	**10 40 33.6**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.1,baz=168,slow=8.5,SNR=10						
ZALV				LR	LR	10 54 21.3	
	comp=Z,22nm,18.1s,baz=13,slow=42						
ZALV	**Zalesovo Beam**	**28.14**	**351**	P	**P**	**10 40 33.6**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,23nm,18.1s						
BVAR	**Borovoye Array**	**31.13**	**335**	P	**P**	**10 41 00.6**	**+0.2**
	comp=Z,1.2nm,0.3s,mb4.2,baz=134,slow=9.1,SNR=7.7						
BVAR	**Borovoye Array**	**31.13**	**335**	P	**P**	**10 41 00.6**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ABKAR	**Akbulak array**	**33.62**	**322**	*e*P	**P**	**10 41 23.4**	**+1.1**
	comp=Z,4.3nm,0.6s,mb4.6						
ABKAR				*e*pP	pP	10 41 35.7	-2.2
ARU	**Arti**	**38.41**	**331**	*e*P	**P**	**10 42 03.7**	**+0.6**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
YAK	**Yakutsk**	**43.82**	**25**	*e*P	**P**	**10 42 46.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
OBN	**Obninsk**	**49.07**	**321**	*e*P	**P**	**10 43 28.7**	**0.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
TIXI	**Tiksi**	**49.92**	**14**	*e*P	**P**	**10 43 33.4**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
TIXI	**Tiksi**	**49.92**	**14**	*e*P	**P**	**10 43 34.5**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.3						
TIXI				*e*pP	pP	10 43 46.9	-4.4
MLR	**Muntele Rosu**	**55.09**	**309**	LR	LR	11 12 01.7	
	comp=Z,45nm,18.4s,baz=297,slow=41						
PETK	**Petropavlovsk-**	**55.18**	**42**	LR	LR	11 07 39.1	
	comp=Z,20nm,19.8s,baz=109,slow=36						
FINES	**FINESS Array B**	**55.67**	**328**	P	**P**	**10 44 17.4**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=110,slow=8.9,SNR=4.1						
FINES	**FINESS Array B**	**55.67**	**328**	P	**P**	**10 44 17.4**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**57.36**	**338**	P	**P**	**10 44 29.9**	**+0.6**
	comp=Z,1.5nm,0.8s,mb4.1,baz=94,slow=6.6,SNR=5.5						
ARCES	**ARCESS Array B**	**57.36**	**338**	P	**P**	**10 44 29.9**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	**Bilibino**	**60.18**	**25**	⇑*e*P	**P**	**10 44 48.9**	**0.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BILL	**Bilibino**	**60.18**	**25**	*e*P	**P**	**10 44 48.8**	**-0.1**
	comp=Z,6.8nm,0.9s,mb4.7						
BILL				*e*pP	pP	10 45 02.0	-3.7
WRAB	**Tennant Creek**	**61.82**	**134**	*e*P	**P**	**10 45 01.5**	**+0.8**
WRAB				*e*PP	pP	10 45 12.2	-5.4
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
WRAB	**Tennant Creek**	**61.82**	**134**	*e*P	**P**	**10 45 01.5**	**+0.9**
	comp=Z,7.0nm,1.3s,mb4.6						
WRAB				*e*pP	pP	10 45 12.2	-5.3
NB2	**NORSAR Subarra**	**62.83**	**327**	P	**P**	**10 45 06.3**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.3,baz=85,slow=6.5						
NOA	**NORSAR Array B**	**62.83**	**327**	P	**P**	**10 45 06.4**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.2,baz=85,slow=6.4,SNR=5.3						
NOA				pP	pP	10 45 19.2	-4.6
	comp=Z,0.7nm,0.6s,baz=85,slow=6.8,SNR=3.0						
NOA	**NORSAR Array B**	**62.83**	**327**	P	**P**	**10 45 06.4**	**-0.5**
NOA				*PP	pP	10 45 19.2	-4.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**63.01**	**314**	P	**P**	**10 45 09.4**	**+1.1**
	comp=Z,2.0nm,0.6s,mb4.4,baz=76,slow=5.6,SNR=15						
GERES	**GERESS Array B**	**63.01**	**314**	P	**P**	**10 45 09.4**	**+1.1**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**64.27**	**137**	P	**P**	**10 45 17.7**	**+0.9**
	comp=Z,1.0nm,0.5s,mb4.1,baz=319,slow=6.5,SNR=30						
ASAR				pP	pP	10 45 29.9	-3.8
	comp=Z,1.0nm,0.5s,baz=319,slow=6.4,SNR=7.9						
ASAR	**Alice Springs**	**64.27**	**137**	P	**P**	**10 45 17.7**	**+0.9**
ASAR				*PP	pP	10 45 29.9	-3.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ESDC	**Sonseca Array**	**77.79**	**308**	LR	LR	11 21 38.7	
	comp=Z,19nm,21.3s,baz=280,slow=36						
KDAK	**Kodiak Island**	**80.65**	**29**	*i* P	**P**	**10 46 53.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**84.28**	**282**	P	**P**	**10 47 14.9**	**+1.4**
	comp=Z,0.3nm,0.5s,mb3.7,baz=66,slow=5.1,SNR=4.5						
YKA	**Yellowknife Ar**	**89.10**	**12**	P	**P**	**10 47 36.1**	**0.0**
	comp=Z,0.8nm,0.7s,mb4.1,baz=327,slow=4.4,SNR=7.3						
YKA	**Yellowknife Ar**	**89.10**	**12**	P	**P**	**10 47 36.1**	**0.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**122.81**	**16**	PKP	PKPdf	10 53 37.8	+0.4
	comp=Z,0.2nm,0.4s,baz=280,slow=0.4,SNR=4.6						
TXAR				pPKP	pPKPdf	10 53 50.5	-5.3
	comp=Z,0.2nm,0.5s,baz=166,slow=0.7,SNR=3.2						
ROSC	**El Rosal**	**146.24**	**334**	PKPbc	PKPbc	10 54 21.8	-0.4
	comp=Z,10.0nm,0.6s,baz=96,slow=16,SNR=4.6						
CPUP	**Villa Florida**	**152.24**	**263**	PKPbc	PKPbc	10 54 37.3	+0.2
	comp=Z,0.9nm,0.4s,baz=56,slow=4.6,SNR=4.9						

KRSC 29 10:35:45.8±0.6, 56°.31N×163°.07E, h13km±17km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.17**	**234**	*i* P	Pg	10 35 49.9	+0.1
SMKR	**Semkarok**	**0.93**	**288**	*e*P	Pg	10 36 03.9	+0.2
SMKR				*e*S	Sg	10 36 18.2	+2.3
BDR	**Baidarnaya**	**1.07**	**285**	*e*P	Pb	10 36 06.2	+0.1
BDR				*e*S	Sb	10 36 21.3	+1.4
SRKR	**Sorokina**	**1.11**	**289**	*e*P	Pb	10 36 07.0	+0.2
SRKR				*e*S	Sb	10 36 22.7	+1.6
ZLN	**Zelenaya**	**1.30**	**258**	*e*P	Pn	10 36 10.1	+0.5
ZLN				*e*S	Sb	10 36 27.8	+1.2
CIRR	**Tsirk**	**1.31**	**262**	*e*P	Pn	10 36 10.1	+0.3
KLY	**Klyuchi**	**1.35**	**271**	*e*P	Pn	10 36 08.4	-1.9
KLY				*e*S	Sb	10 36 25.1	-2.9
KRSR	**Krestovskiy**	**1.40**	**267**	*e*P	Pn	10 36 11.0	0.0
KRSR				*e*S	Sn	10 36 29.9	+0.6
BZMR	**Bezymyannaya**	**1.49**	**256**	*e*P	Pn	10 36 12.9	+0.7
BZMR				*e*S	Sn	10 36 32.9	+1.3
KIRR	**Kirishev**	**1.57**	**258**	*e*P	Pn	10 36 14.5	+1.2
KIRR				*e*S	Sn	10 36 35.8	+2.4
KPT	**Kopyto**	**1.63**	**259**	*e*P	Pn	10 36 16.1	+2.0
KPT				*e*S	Sn	10 36 38.2	+3.2
KMNR	**Kamenistaya**	**1.68**	**252**	*e*P	Pn	10 36 16.6	+1.7
KMNR				*e*S	Sn	10 36 39.0	+2.7
KOZ	**Kozyrevsk**	**1.81**	**263**	*e*P	Pn	10 36 17.8	+1.3
KOZ				*e*S	Sn	10 36 41.4	+2.1
SRDR	**Sredinnyy**	**1.87**	**272**	*e*P	Pn	10 36 19.0	+1.6
SRDR				*e*S	Sn	10 36 43.1	+2.3
MKZ	**Mys Kozlova**	**1.92**	**204**	*e*P	Pn	10 36 19.0	+0.9
MKZ				*e*S	Sn	10 36 42.6	+0.6
TUMR	**Tumrok**	**1.95**	**239**	*e*P	Pn	10 36 19.9	+1.4
TUMR				*e*S	Sn	10 36 45.4	+2.7
BKI	**Bering**	**1.98**	**123**	*e*S	Sn	10 36 46.2	+2.6
SPN	**Mys Shipunski**	**3.67**	**210**	*e*P	Pn	10 36 43.4	+1.2
SPN				*e*S	Sn	10 37 24.9	-0.4
NLC	**Nalytchevo**	**3.81**	**216**	*e*S	Sn	10 37 30.8	+2.0
GNL	**Ganaly**	**3.95**	**231**	*e*P	Pn	10 36 48.8	+2.8
AVH	**Avacha**	**3.95**	**221**	*e*P	Pn	10 36 49.2	+3.2

ISC 29 10:36:17.8±2.3, 40°.2N±0°.1×72°.9E±0°.2, h10km, n13, σ0°.90/15, 2C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.04**	**18**	P	**Pn**	**10 36 51.6**	**-0.5**
	SNR=293						
UCH	**Uchtor**	**2.38**	**31**	P	**Pn**	**10 36 56.5**	**-0.4**
	SNR=40						
KSH	**Kashi**	**2.49**	**105**	Pn	**Pn**	**10 36 58.0**	**-0.4**
KSH				Sn	**Sn**	**10 37 29.3**	**+0.5**
KSH				smax			
	comp=N,160nm,0.5s						
KSH				smax			
	comp=E,140nm,0.3s						
EKS2	**Erkin-Say**	**2.56**	**15**	P	**Pn**	**10 36 59.9**	**+0.5**
	SNR=23						
KZA	**Kyzart**	**2.61**	**43**	P	**Pn**	**10 36 59.3**	**-0.7**
	SNR=19						
AAK	**Ala-Archa**	**2.73**	**26**	P	**Pn**	**10 37 03.6**	**+2.0**
	SNR=50						
KBK	**Karagaybulak**	**2.92**	**32**	P	**Pn**	**10 37 08.0**	**+3.7**
	SNR=6.4						
CHMS	**Chumysh**	**3.14**	**26**	P	**Pn**	**10 37 11.0**	**+3.7**
	SNR=7.1						
ULHL	**Ulahol**	**3.27**	**50**	P	**Pn**	**10 37 08.3**	**-0.8**
	SNR=14						
USP	**Ospenovka**	**3.31**	**21**	P	**Pn**	**10 37 09.2**	**-0.4**
	SNR=6.1						
KK31	**Karatay Array**	**3.40**	**330**	⇑Pn	**Pn**	**10 37 11.0**	**+0.1**
	comp=E,0.9nm,0.5s,baz=132,slow=12,SNR=55						
KK31				⇑Pg	**Pg**	**10 37 18.4**	**-4.5**
	comp=E,4.1nm,0.5s,baz=148,slow=18,SNR=35						
KK31				Lg		10 38 00.6	
	comp=E,16nm,0.4s,baz=144,slow=30,SNR=6.6						
TKM2	**Tokmak 2**	**3.41**	**36**	⇓Pn	**Pn**	**10 37 10.6**	**-0.5**
	comp=E,5.7nm,0.4s						
TKM2				⇓Lg		10 37 56.9	
	comp=E,15nm,0.5s						
TKM2	**Tokmak 2**	**3.41**	**36**	P	**Pn**	**10 37 10.6**	**-0.5**
	SNR=10						

ISCJB ***29*** *11:03:21.3±0.3, 54°.80N±0°.04×52°.23E±0°.04, h0km, mb3.8/7, Error ellipse: s-maj=5.5km s-min=3.6km az=6.1*
MOS ***29*** *11:03:22.8±1.8, 54°.90N×52°.16E, h10km, mb3.7/4, Error ellipse: s-maj=9.3km s-min=8.7km az=84.8*
MOS Felt (IV) at Almet'evsk.
CSEM ***29*** *11:03:23.6±0.2, 54°.95N×52°.14E, h1km, mb3.9/4, Mining explosion.*
NEIC ***29*** *11:03:24.5±0.4, 54°.95N×52°.03E, h10km, mb3.7/4, Error ellipse: s-maj=11.7km s-min=5.9km az=191.0*
IDC ***29*** *11:03:24.7±0.7, 54°.69N×51°.90E, h0km, mb3.7/6, mb1 3.9/14, mb1mx3.8/30, mbtmp3.8/14, ML3.6/7, Error ellipse: s-maj=18.9km s-min=8.5km az=30.0*
NNC ***29*** *11:03:33.4±3.9, 54°.64N×53°.64E, h0km, mb3.8, mpv3.0, Error ellipse: s-maj=33.5km s-min=25.3km az=84.0*

ISC 29 11:03:23.7±0.3, 54°.91N±0°.04×52°.16E±0°.04, h0km, n107, σ1°.28/127, mb3.8/7, 16C-9D, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARU	**Arti**	**3.93**	**65**	*d* P	**Pn**	**11 04 23.1**	**-2.2**
ARU				S	**Sn**	**11 05 09.1**	**-2.9**
ARU	**Arti**	**3.93**	**65**	*e*Pn	**Pn**	**11 04 24.0**	**-1.3**
ARU				*e*Sn	**Sn**	**11 05 15.5**	**+3.4**
ARU	**Arti**	**3.93**	**65**	*i* P	**Pn**	**11 04 23.1**	**-2.2**
ARU	**Arti**	**3.93**	**65**	*e*Pn	**Pn**	**11 04 24.0**	**-1.3**

comp=E,10.0nm,0.3s
VSR smax
comp=Z,10.0nm,0.4s
VSR smax
comp=N,4.0nm,0.3s
VSR MLR MLR
comp=Z,210nm,4.0s
VSR MLR MLR
comp=N,240nm,5.0s
VSR MLR MLR
comp=E,170nm,2.0s
VSR Storozhevoye 8.65 250 *e*P **Pn 11 05 29.7 -0.3**
comp=E,7.0nm,0.7s
VORD Divnogorie 8.71 248 *e*P **Pn 11 05 30.5 -0.4**
VORD *e* 11 07 03.3
VORD pmax pmax
comp=Z,6.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD smax
comp=Z,10.0nm,0.6s
VORD smax
comp=N,10.0nm,0.8s
VORD smax
comp=E,40nm,0.9s
VORD MLR MLR
comp=Z,170nm,4.0s
VORD MLR MLR
comp=N,390nm,7.0s
VORD MLR MLR
comp=E,340nm,5.0s
VORD Divnogorie 8.71 248 *e*P **Pn 11 05 30.5 -0.4**
comp=E,10.0nm,0.7s
OBN Obninsk 8.97 278 *ce*P **Pn 11 05 35.6 +1.3**
OBN *e* 11 07 16.2
OBN pmax pmax
comp=Z,9.0nm,0.5s
OBN pmax pmax
comp=Z,11nm,0.8s
OBN Obninsk 8.97 278 *e*P **Pn 11 05 35.6 +1.3**
comp=Z,11nm,0.8s
OBN *e*S **Sn 11 07 16.2 +0.3**
ZRNK Zerenda 10.12 94 ⇓Pn **Pn 11 05 50.3 +0.1**
comp=Z,4.7nm,0.6s
ZRNK ⇑Sn **Sn 11 07 35.2 -9.1**
comp=Z,4.9nm,0.4s
ZRNK ⇑Lg 11 08 28.0
comp=Z,22nm,1.0s
BRVK Borovoye 10.83 92 *e*P **Pn 11 06 00.0 +0.2**
BRVK *e* 11 07 54.1
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 10.83 92 *e*Pn **Pn 11 05 60.0 +0.2**
comp=Z,7.7nm,0.8s
BRVK *e*Sn **Sn 11 07 54.1 -7.5**
BRVK Borovoye 10.83 92 *e*P **Pn 11 06 00.0 +0.2**
comp=Z,8.0nm,0.8s
BVA0 Borovoye Array 10.90 92 Pn **Pn 11 06 01.0 +0.2**
comp=Z,0.5nm,0.5s,baz=278,slow=14,SNR=21
BVA0 ⇑Sn **Sn 11 07 54.2 -9.1**
comp=Z,1.1nm,0.7s,baz=278,slow=25,SNR=3.8
BVA0 ⇑Lg 11 08 55.6
comp=Z,4.8nm,1.5s,baz=285,slow=29,SNR=3.8
BVAR Borovoye Array 10.90 92 Pn **Pn 11 06 00.4 -0.4**
comp=Z,2.0nm,0.3s,baz=284,slow=14,SNR=21
BVAR Sn **Sn 11 07 56.2 -7.1**
comp=Z,2.1nm,0.3s,baz=279,slow=25,SNR=7.2
BVAR Borovoye Array 10.90 92 P **Pn 11 06 00.4 -0.4**
BVAR 11 07 56.2
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR smax
comp=N,2.0nm,0.3s
BVAR Borovoye Array 10.90 92 P **Pn 11 06 00.4 -0.4**
comp=N,2.0nm,0.3s
BVAR Borovoye Array 10.90 92 Pn **Pn 11 06 01.0 +0.2**
comp=N,0.5nm,0.5s,SNR=21
VOSK Vostochnaya 11.34 93 ⇓Pn **Pn 11 06 06.7 0.0**
comp=N,2.3nm,0.5s
VOSK ⇑Sn **Sn 11 08 05.5 -8.5**
comp=N,4.9nm,0.5s
VOSK ⇓Lg 11 09 06.0
comp=N,40nm,1.8s
VOSK Vostochnaya 11.34 93 Pn **Pn 11 06 06.7 0.0**
comp=N,2.3nm,0.5s
JOF Joensuu 13.38 315 *e*P **Pn 11 06 33.5 -1.1**
JOF pmax pmax
comp=Z,2.0nm,0.3s
JOF Joensuu 13.38 315 *e*p **Pn 11 06 33.5 -1.1**
comp=Z,1.7nm,0.3s
JOF Joensuu 13.38 315 P **Pn 11 06 33.8 -0.8**
AKASG Malin Array Be 14.47 263 Pn **Pn 11 06 46.0 -3.6**
comp=Z,2.1nm,0.3s,baz=58,slow=13,SNR=3.8
AKASG Lg 11 10 51.3
comp=Z,0.8nm,0.3s,baz=71,slow=25,SNR=4.2
AKASG Malin Array Be 14.47 263 *i*P **Pn 11 06 52.0 +2.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 14.47 263 Pn **Pn 11 06 46.0 -3.6**
AKASG Lg 11 10 51.3
FINES FINESS Array B 15.16 306 Pn **Pn 11 06 55.3 -3.6**
comp=Z,0.5nm,0.3s,baz=105,slow=12,SNR=7.5
FINES Sn **Sn 11 09 35.6 -12**
comp=Z,0.9nm,0.3s,baz=95,slow=23,SNR=5.9
KAF Kangasniemi 15.23 309 *e*P **Pn 11 07 02.6 +2.8**
KAF pmax pmax
comp=Z,2.0nm,0.3s
KAF Kangasniemi 15.23 309 *e*p **Pn 11 07 02.6 +2.8**
comp=Z,2.0nm,0.3s
KAF Kangasniemi 15.23 309 *e*P **Pn 11 07 02.6 +2.8**
comp=Z,2.0nm,0.3s
KURK Kurchatov 16.49 94 ⇓P **Pn 11 07 13.2 -3.0**
comp=Z,2.0nm,0.6s
KURK Kurchatov 16.49 94 Pn **Pn 11 07 13.2 -3.0**
comp=Z,0.3nm,0.3s,baz=295,slow=14,SNR=6.1
KK31 Karatay Array 16.80 127 ⇑Pn **Pn 11 07 18.8 -1.4**
comp=Z,0.9nm,0.5s,baz=325,slow=13,SNR=11
KK31 ⇓Sn **Sn 11 10 20.4 -6.9**
comp=Z,0.4nm,0.4s,baz=332,slow=40,SNR=4.6
KK31 Karatay Array 16.80 127 Pn **Pn 11 07 18.8 -1.4**
comp=Z,0.9nm,0.5s,SNR=11
BUR08 Bucovina Ar. S 18.29 258 *e*Pn **Pn 11 07 36.4 -2.2**
BUR08 Bucovina Ar. S 18.29 258 *e*Pn **Pn 11 07 36.4 -2.2**
BURAR Bucovina Array 18.29 258 ⇑*i*P **Pn 11 07 39.9 +1.2**
BURAR Bucovina Array 18.29 258 ⇑*i*P **Pn 11 07 39.9 +1.2**
KEV Kevo 18.68 332 *e*P **Pn 11 07 42.1 -1.2**
KEV Kevo 18.68 332 *e*p **Pn 11 07 42.1 -1.2**
KEV Kevo 18.68 332 *e*P **Pn 11 07 42.1 -1.2**
EKS2 Erkin-Say 18.69 122 *e*P **Pn 11 07 44.5 +0.9**
comp=Z,2.3nm,0.4s
EKS2 Erkin-Say 18.69 122 *e*P **Pn 11 07 44.5 +0.9**
comp=Z,2.2nm,0.4s
ZALV Zalesovo Beam 18.93 79 P **Pn 11 07 46.0 -0.5**
comp=Z,0.5nm,0.3s,baz=289,slow=13,SNR=7.5
ZALV Zalesovo Beam 18.93 79 P **Pn 11 07 46.0 -0.4**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 18.93 79 P **Pn 11 07 46.0 -0.5**
ZALV Zalesovo Beam 18.93 79 P **Pn 11 07 46.0 -0.4**
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 18.96 331 P **Pn 11 07 46.9 +0.3**
comp=Z,0.4nm,0.3s,baz=130,slow=10,SNR=13
ARCES ARCESS Array B 18.96 331 P **Pn 11 07 46.9 +0.3**
AML Almayashu 19.05 123 *e*P **Pn 11 07 49.9 +1.9**
comp=Z,1.6nm,0.4s
AML Almayashu 19.05 123 *e*P **Pn 11 07 49.9 +2.0**
comp=Z,1.6nm,0.4s
AAK Ala-Archa 19.07 121 P **Pn 11 07 49.3 +1.2**
comp=Z,0.0nm,0.3s,baz=330,slow=15,SNR=2.1
AAK Ala-Archa 19.07 121 *de*P **Pn 11 07 49.6 +1.5**
AAK pmax pmax
comp=Z,1.0nm,0.7s
AAK MLR MLR
comp=Z,13nm,17.0s
AAK Ala-Archa 19.07 121 P **Pn 11 07 49.3 +1.2**
MLR Muntele Rosu 19.14 251 P **Pn 11 07 47.5 -1.6**
comp=Z,0.6nm,0.3s,baz=84,slow=10,SNR=3.2
MLR Muntele Rosu 19.14 251 P **Pn 11 07 47.5 -1.5**
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 19.14 251 ⇑*i*P **Pn 11 07 50.6 +1.6**
MLR Muntele Rosu 19.14 251 P **Pn 11 07 47.5 -1.5**
comp=Z,1.0nm,0.3s
UCH Uchtor 19.38 122 *e*P **Pn 11 07 55.5 +3.6**
comp=Z,2.0nm,0.5s

BRTR Keskin Array B 19.61 227 P **Pn 11 07 52.1 -2.6**
comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=2.5
BRTR Keskin Array B 19.61 227 P **Pn 11 07 52.1 -2.6**
DRGR 20.17 258 ⇓*i*P **P 11 08 01.5 +2.1**
DRGR 20.17 258 ⇓*i*P **P 11 08 01.5 +2.1**
MK31 Makanchi Array 20.55 101 ⇑P **P 11 08 04.2 +0.6**
comp=Z,5.6nm,1.1s,baz=306,slow=8.9,SNR=18
MK31 Makanchi Array 20.55 101 *e*P **P 11 08 04.7 +1.1**
MK31 Makanchi Array 20.55 101 P **P 11 08 04.2 +0.6**
comp=Z,5.6nm,1.1s,SNR=18
MKAR Makanchi Array 20.55 101 P **P 11 08 03.9 +0.3**
comp=Z,1.1nm,0.5s,baz=302,slow=8.4,SNR=14
MKAR Makanchi Array 20.55 101 P **P 11 08 03.9 +0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 20.55 101 P **P 11 08 03.9 +0.3**
HFS Hagfors 21.08 300 P **P 11 08 08.0 -1.2**
comp=Z,5.7nm,0.4s,mb4.2,baz=88,slow=11,SNR=40
HFS Hagfors 21.08 300 P **P 11 08 08.0 -1.2**
HFS pmax pmax
comp=Z,6.0nm,0.4s
HFS Hagfors 21.08 300 P **P 11 08 08.0 -1.2**
comp=Z,6.0nm,0.4s,mb4.3
DPC Dobruska-Polom 22.06 273 *e*P **P 11 08 21.1 +1.3**
NOA NORSAR Array B 22.26 303 P **P 11 08 21.6 -0.2**
comp=Z,0.8nm,0.3s,mb3.6,baz=88,slow=9.5,SNR=11
NOA NORSAR Array B 22.26 303 P **P 11 08 21.7 -0.2**
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA NORSAR Array B 22.26 303 P **P 11 08 21.6 -0.3**
NAO01 NORSAR Array S 22.43 302 *e*P **P 11 08 23.5 -0.2**
comp=Z,2.1nm,0.5s,mb3.8
NAO01 NORSAR Array S 22.43 302 *e*P **P 11 08 23.5 -0.2**
comp=Z,2.1nm,0.5s,mb3.8
GERES GERESS Array B 24.27 272 P **P 11 08 41.9 -0.3**
comp=Z,0.8nm,0.6s,mb3.4,baz=64,slow=7.7,SNR=4.7
GERES GERESS Array B 24.27 272 P **P 11 08 41.9 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 24.27 272 P **P 11 08 41.9 -0.3**
comp=Z,1.0nm,0.6s,mb3.5
TIXI Tiksi 35.27 32 *e*P **P 11 10 18.9 -0.6**
TIXI pmax pmax
comp=Z,3.0nm,1.7s,mb4.0
TIXI MLR MLR
comp=Z,23nm,15.2s
TIXI Tiksi 35.27 32 *e*P **P 11 10 18.9 -0.6**
comp=Z,23nm,15.2s
SEY Seymchan 47.23 38 *ce*P **P 11 11 59.8 +2.0**
SEY Seymchan 47.23 38 *e*P **P 11 11 59.8 +2.0**
TORD Torodi Ar. Bea 57.14 243 P **P 11 13 11.3 -0.8**
comp=Z,0.3nm,0.3s,mb3.8,baz=26,slow=6.9,SNR=7.6
YKA Yellowknife Ar 62.48 353 P **P 11 13 51.0 +2.8**
comp=Z,0.3nm,0.4s,mb3.8,baz=4.2,slow=7.2,SNR=4.2
YKA Yellowknife Ar 62.48 353 P **P 11 13 51.0 +2.8**

DDA ***29*** *11:12:18.2,38°.08N×35°.13E,h25km, Md2.8*
ISCJB ***29*** *11:12:23.5±1.0,37°.79N±0°.06×34°.61E±0°.07,h13km±9km, Error ellipse: s-maj=10.6km s-min=8.2km az=44.2*
CSEM ***29*** *11:12:24.7±0.2,37°.71N×34°.53E,h10km,MD3.1, Error ellipse: s-maj=6.7km s-min=3.4km az=37.0*
ISK ***29*** *11:12:24.2,37°.70N×34°.52E,h10km,MD3.1*
ISC 29 11:12:24.3±1.0,37°.77N±0°.06×34°.59E±0°.07,h15km±8km, n20,σ0§98/27,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.50**	**163**	*i*P		**Pg**	**11 12 33.8**	**-0.5**
GULE				*i*S		**Sg**	**11 12 41.6**	**+0.7**
GULE	**Gulek**	**0.50**	**163**	*i*P		**Pg**	**11 12 33.8**	**-0.5**
GULE				*i*S		**Sg**	**11 12 41.7**	**+0.7**
KARA	**Karaisali**	**0.62**	**144**	*e*PG		**Pg**	**11 12 36.8**	**+0.3**
KARA				*e*SG		**Sg**	**11 12 45.9**	**+1.1**
KARA	**Karaisali**	**0.62**	**144**	*e*Pg		**Pg**	**11 12 36.8**	**+0.3**
KARA				*e*Sg		**Sg**	**11 12 45.9**	**+1.1**
MERS	**Mersin**	**0.90**	**184**	*e*PG		**Pg**	**11 12 40.2**	**-1.5**
MERS				*e*SG		**Sg**	**11 12 52.2**	**-1.3**
MERS	**Mersin**	**0.90**	**184**	*e*Pg		**Pg**	**11 12 40.2**	**-1.5**
MERS				*e*Sg		**Sg**	**11 12 52.2**	**-1.3**
SULT	**Sultanhani-AKS**	**0.95**	**297**	*e*PG		**Pg**	**11 12 42.9**	**+0.1**
SULT	**Sultanhani-AKS**	**0.95**	**297**	*e*Pg		**Pg**	**11 12 42.9**	**+0.1**
KOZT	**Kozan**	**1.02**	**106**	*e*PG		**Pg**	**11 12 44.8**	**+0.8**
KOZT	**Kozan**	**1.02**	**106**	*e*Pg		**Pg**	**11 12 44.8**	**+0.8**
AVNT	**Avonos**	**1.03**	**11**	*i*P		**Pb**	**11 12 32.0**	**-12**
AVNT				*i*S		**Sb**	**11 12 46.9**	**-10**
KRTS	**Karatas**	**1.34**	**152**	*e*PN		**Pn**	**11 12 48.8**	**+0.3**
KRTS	**Karatas**	**1.34**	**152**	*e*Pn		**Pn**	**11 12 48.8**	**+0.3**
IKL	**Isikli**	**1.69**	**206**	*e*PN		**Pn**	**11 12 53.4**	**+0.2**
IKL	**Isikli**	**1.69**	**206**	*e*Pn		**Pn**	**11 12 53.4**	**+0.2**
LADK	**Ladik-KONYA**	**1.81**	**285**	*e*PN		**Pn**	**11 12 56.1**	**+1.1**
LADK	**Ladik-KONYA**	**1.81**	**285**	*e*Pn		**Pn**	**11 12 56.1**	**+1.2**
HDMB	**Hadim**	**1.86**	**245**	*e*PN		**Pn**	**11 12 56.0**	**+0.5**
HDMB	**Hadim**	**1.86**	**245**	*e*Pn		**Pn**	**11 12 56.1**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.89**	**61**	*e*PN		**Pn**	**11 12 53.4**	**-2.6**

NDI 29 11:20:17.1±4.3,17°.84N×82°.85E,h56km±61km,ML3.6, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**0.47**	**105**	*i*P		Pn	11 20 29.0	+0.5
VIS				*i*S		Sn	11 20 36.8	+0.1
VIS				*i*S		Sn	11 20 38.0	+1.3
VIS				*ex*		x	11 20 39.8	
	comp=N,783nm,0.4s							
VIS				*ex*		x	11 20 40.2	
	comp=E,466nm,0.2s							
BWNR	**Bhubaneshwar**	**3.71**	**48**	*ex*		x	11 21 00.0	
BWNR				*e*S		Sn	11 21 51.0	-3.4
HYB	**Hyderabad**	**4.12**	**265**	*i*Pg		Pn	11 21 17.5	0.0
HYB				*e*			11 21 54.5	
HYB				*e*Sg		Sn	11 22 05.0	+0.5
LATR	**Latur**	**6.01**	**276**	*ex*		x	11 21 57.0	
LATR				*ex*		x	11 23 11.2	
BOK	**Bokaro**	**6.57**	**25**	*e*P		Pn	11 21 58.6	+7.5
BOK				*e*S		Sn	11 23 08.8	+4.3
BHPL	**Bhopal**	**7.39**	**317**	*e*P		Pn	11 22 02.2	-0.2
BHPL				*e*S		Sn	11 23 17.6	-7.3
BHPL				AML		AML	11 24 01.8	
	comp=N,59nm,0.4s							
BHPL				AML		AML	11 24 02.6	
	comp=E,92nm,0.5s							
KAD	**Karad**	**8.28**	**268**	*e*S		Sn	11 23 38.9	-7.9
KAD				AML		AML	11 24 33.0	
	comp=E,35nm,0.4s							
KAD				AML		AML	11 24 34.5	
	comp=N,56nm,0.6s							
POO	**Poona**	**8.58**	**276**	*e*S		Sn	11 23 47.2	-6.9
POO				AML		AML	11 24 37.0	
	comp=N,70nm,0.4s							
POO				AML		AML	11 24 37.5	
	comp=E,27nm,0.5s							
BOM	**Bombay**	**9.59**	**278**	*ex*		x	11 23 42.2	
BOM				*ex*		x	11 24 34.7	

IDC ***29*** *11:30:11.0±1.0,56°.17S×144°.52W,h0km,mb4.0/4, mb1 4.2/4,mb1mx4.0/12,mbtmp4.0/4,MS4.0/8,Ms1 4.0/8, ms1mx3.8/13,Error ellipse: s-maj=40.9km s-min=31.1km az=167.0*
ISCJB ***29*** *11:30:11.9±0.9,56°.4S±0°.2×144°.4W±0°.4,h10km,mb4.0/4, MS4.0/8,Error ellipse: s-maj=30.2km s-min=21.9km az=5.2*
NEIC ***29*** *11:30:12.4±0.8,56°.18S×144°.59W,h10km,Error ellipse: s-maj=33.6km s-min=28.8km az=144.0*
GCMT ***29*** *11:30:16.0±0.4,56°.21S×143°.61W,h18km±2km,MW4.9/56, Moment Tensor Solution. s18,c23; s56,c76; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.64±.14; Mθθ2.20±.14; Mφφ-1.56±.10; Mrθ0.02±.27; Mφφ1.53±.09; Mφr0.01±.24; Best double couple: M0.42400×10¹⁶ NP1:φs115.00000°,δ90.00000°,λ0.00000°. NP2: φs25.00000°,δ90.00000°,λ180.00000°. Principal axes: T 2.7440, Plg0.0000°, Azm340.0000°; N -0.6360, Plg90.0000°, Azm173.0000°; P -2.1040, Plg0.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 29 11:30:13.8±0.9,56°.4S±0°.2×144°.4W±0°.4,h10km,n21, σ1§37/5,mb4.0/4,MS4.0/8,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**31.20**	**289**	LR		LR	11 46 03.2	
	comp=Z,221nm,19.9s,MS3.8,baz=321,slow=31							
QSPA	**South Pole Qui**	**33.79**	**180**	P		**P**	**11 36 55.9**	**+0.7**
	5.7nm,1.2s,mb4.4,baz=69,slow=4.8,SNR=6.2							
RKT	**Rikitea**	**33.92**	**16**	*e*LR		LR	11 45 39.7	
	426nm,32.2s,baz=190							
RKT				*e*T			12 11 51.9	
	23nm,0.3s							
MEH	**Mehetia**	**38.52**	**354**	*e*T			12 17 54.3	
	164nm,0.3s							
PAE	**Paea**	**38.83**	**352**	*e*T			12 18 12.5	
	7.8nm,0.3s							
TIAR	**Tiarei**	**38.91**	**353**	*e*T			12 18 09.5	
	25nm,0.3s							
PPT	**Papeete**	**38.92**	**352**	*e*S		**S**	**11 43 40.0**	**+2.3**
	90nm,24.8s							
PPT				*e*LR		LR	11 47 44.8	
	610nm,28.2s,baz=188							
PPT				*e*T			12 18 18.2	
	10nm,0.3s							
PPT	**Papeete**	**38.92**	**352**	LR		LR	11 48 44.9	
	comp=Z,304nm,19.9s,MS4.1,baz=169,slow=29							
PMOR	**Pomariorio Ree**	**41.36**	**355**	*e*T			12 21 20.9	
	13nm,0.2s							
TAOE	**Nuku Hiva Isla**	**47.51**	**6**	*e*LR		LR	11 51 57.1	
	366nm,28.1s							
PLCA	**Paso Flores**	**48.89**	**104**	LR		LR	11 54 22.1	
	comp=Z,167nm,19.9s,MS4.0,baz=110,slow=30							
DZM	**Mont Dzumac**	**49.60**	**293**	*e*LR		LR	11 52 13.9	
	168nm,24.5s							
MAW	**Mawson**	**54.70**	**192**	LR		LR	12 02 39.2	
	comp=Z,171nm,19.1s,MS4.1,baz=51,slow=36							
STKA	**Stephens Creek**	**55.44**	**263**	LR		LR	11 58 36.4	
	comp=Z,160nm,20.4s,MS4.1,baz=202,slow=31							
ASAR	**Alice Springs**	**66.08**	**263**	P		**P**	**11 41 00.3**	**-0.5**
	1.7nm,0.9s,mb4.0,baz=140,slow=6.1,SNR=10							
LPAZ	**La Paz**	**69.01**	**88**	P		**P**	**11 41 19.6**	**+0.2**
	1.6nm,0.8s,mb4.0,baz=229,slow=11,SNR=5.9							
LPAZ				LR		LR	12 02 36.8	
	comp=Z,52nm,19.0s,MS3.8,baz=25,slow=28							
ROSC	**El Rosal**	**83.17**	**71**	LR		LR	12 14 20.8	
	comp=Z,34nm,18.2s,MS3.8,baz=274,slow=32							
TXAR	**Lajitas Array**	**92.11**	**35**	P		**P**	**11 43 21.6**	**-1.2**
	0.1nm,0.5s,mb3.4,baz=189,slow=5.3,SNR=2.4							
BOSA	**Boshof**	**94.91**	**171**	LR		LR	12 21 28.0	
	comp=Z,143nm,18.2s,MS4.5,baz=166,slow=32							
MKAR	**Makanchi Array**	**149.98**	**271**	PKPbc		PKPbc	11 49 59.9	-3.4
	1.3nm,0.8s,baz=107,slow=4.1,SNR=3.7							
ZALV	**Zalesovo Beam**	**152.24**	**286**	PKPbc		PKPbc	11 50 06.4	-1.9
	0.5nm,0.4s,baz=114,slow=3.5,SNR=2.7							

GRAL 29 11:42:12.5±0.3,33°.73N×35°.86E,h36km±5km,MD2.9, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.24**	**315**	*e*P		Pn	11 42 19.4	-0.4
BHL				*e*S		Sn	11 42 24.5	-0.3
RCY	**Rachaya**	**0.25**	**188**	*e*P		Pn	11 42 19.4	-0.5
RCY				*e*S		Sn	11 42 24.5	-0.4
HWQ	**Hawqa**	**0.55**	**8**	*e*P		Pn	11 42 23.3	-0.5
HWQ				*e*S		Sn	11 42 31.2	-0.6

IDC ***29*** *12:14:42.0±1.2,1°.29N×124°.54E,h0km,mb3.8/5, mb1 4.0/6,mb1mx3.7/21,mbtmp3.8/6,ML3.7/1,Error ellipse: s-maj=80.5km s-min=18.3km az=65.0*
ISCJB ***29*** *12:15:08.6±0.6,0°.70N±0°.10×123°.85E±0°.05,h269km±6km, mb3.4/5,Error ellipse: s-maj=15.6km s-min=8.5km az=173.8*
DJA ***29*** *12:15:14,0°.79N×123°.92E,h200km,MLv4.1/5*
ISC 29 12:15:09.7±0.6,0°.70N±0°.10×123°.86E±0°.05,h260km±6km, n11,σ0§89/15,mb3.4/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.93**	**264**	P		**Pn**	**12 15 53.5**	**+1.1**
LUWI	**Luwuk**	**2.04**	**212**	P		**Pn**	**12 15 54.0**	**+0.7**
LUWI				S		**S**	**12 16 26.3**	**-1.6**
APSI	**Ampana**	**2.73**	**234**	P		**Pn**	**12 16 01.1**	**+1.2**
APSI				S		**S**	**12 16 39.1**	**-0.6**
TNTI	**Ternate**	**3.51**	**89**	P		**Pn**	**12 16 09.2**	**+0.9**
TNTI				S		**S**	**12 16 54.6**	**-0.3**
LBMI	**Labuha**	**3.88**	**110**	P		**Pn**	**12 16 13.4**	**+0.9**
LBMI				S		**S**	**12 17 01.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**18.76**	**175**	P		**P**	**12 19 09.7**	**-0.2**
	0.2nm,0.3s,baz=14,slow=7.8,SNR=15							
ASAR	**Alice Springs**	**26.11**	**159**	P		**P**	**12 20 20.4**	**+0.4**
	0.4nm,0.4s,mb3.2,baz=339,slow=8.7,SNR=12							
CMAR	**Chiang Mai Arr**	**30.16**	**307**	P		**P**	**12 20 56.2**	**+0.2**
	0.4nm,0.3s,mb3.4,baz=130,slow=7.8,SNR=5.0							
STKA	**Stephens Creek**	**36.49**	**154**	P		**P**	**12 21 51.0**	**+0.6**
	1.5nm,0.5s,mb3.8,baz=345,slow=10,SNR=7.7							
SONM	**Songino Array**	**49.34**	**345**	P		**P**	**12 23 31.6**	**-1.1**
	0.5nm,0.4s,mb3.2,baz=160,slow=6.5,SNR=4.2							
MKAR	**Makanchi Array**	**58.48**	**328**	P		**P**	**12 24 37.6**	**-1.1**
	0.8nm,0.3s,mb3.6,baz=117,slow=8.1,SNR=5.8							

IDC ***29*** *12:17:34.4±2.5,19°.54S×177°.68W,h527km±30km,mb3.2/7, mb1 3.4/8,mb1mx3.2/19,mbtmp3.2/8,Error ellipse: s-maj=33.2km s-min=15.9km az=153.0*
NEIC ***29*** *12:17:35.3±1.2,19°.58S×177°.66W,h543km±14km,Error ellipse: s-maj=41.5km s-min=12.8km az=157.0*
ISC 29 12:17:32.3±1.3,20°.3S±0°.2×177°.3W±0°.1,h520km±15km, n16,σ0§74/16,mb3.5/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.08**	**300**	*e*P		**P**	**12 19 02.6**	**+1.4**
AFI	**Afiamalu**	**8.29**	**41**	P		**P**	**12 19 31.2**	**-1.1**
	2.7nm,0.3s,baz=53,slow=22,SNR=5.0							
AFI	**Afiamalu**	**8.29**	**41**	P		**P**	**12 19 31.2**	**-1.1**
DZM	**Mont Dzumac**	**15.24**	**261**	P		**P**	**12 20 44.1**	**-0.6**
URZ	**Urewera**	**18.51**	**194**	S		**S**	**12 24 18.6**	**+0.1**
	0.9nm,0.3s,baz=348,slow=5.4,SNR=9.1							
CTA	**Charters Tower**	**34.14**	**264**	P		**P**	**12 23 33.7**	**-0.2**
	1.7nm,0.3s,mb4.0,baz=94,slow=12,SNR=4.2							
CTA	**Charters Tower**	**34.14**	**264**	P		**P**	**12 23 33.7**	**-0.2**
CTAO	**Charters Tower**	**34.14**	**264**	*e*P		**P**	**12 23 33.6**	**-0.3**
ASAR	**Alice Springs**	**45.18**	**256**	P		**P**	**12 25 03.1**	**+0.4**
	1.7nm,0.9s,mb3.6,baz=86,slow=7.7,SNR=17							
WRAB	**Tennant Creek**	**45.25**	**262**	*e*P		**P**	**12 25 02.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.68**	**262**	P		**P**	**12 26 05.2**	**-0.3**
	3.5nm,1.0s,mb3.6,baz=90,slow=20,SNR=2.8							
QSPA	**South Pole Qui**	**69.74**	**180**	P		**P**	**12 27 55.9**	**+6.6**
	1.6nm,0.9s,mb3.5,baz=45,slow=1.9,SNR=9.2							
QSPA	**South Pole Qui**	**69.74**	**180**	P		**P**	**12 27 55.9**	**+6.6**
NVAR	**Mina Array Bea**	**80.46**	**43**	P		**P**	**12 28 49.9**	**0.0**
	0.6nm,0.7s,mb3.0,baz=233,slow=9.2,SNR=4.3							
TXAR	**Lajitas Array**	**86.42**	**57**	P		**P**	**12 29 21.1**	**+1.3**
	0.8nm,0.8s,mb3.4,baz=217,slow=6.5,SNR=12							
PDAR	**Pinedale Array**	**88.40**	**43**	P		**P**	**12 29 28.6**	**-0.2**
	0.4nm,0.6s,mb3.4,baz=201,slow=3.9,SNR=5.0							

CASC 29 12:22:23.9±1.2,8°.42N×83°.03W,h19km±6km,MD3.4, MW4.1,2D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.27**	**329**	⇓*e*P		Pg	12 22 29.6	-0.4
ACR				*e*S		Sg	12 22 34.8	+0.6
BRU2	**Volcan**	**0.50**	**42**	⇓*i*P		Pg	12 22 34.1	+0.1
BRU2				*e*S		Sg	12 22 42.1	+1.3
BAR1		**0.86**	**341**	*e*P		Pb	12 22 40.0	-0.2
BUS	**Buena Vista**	**1.34**	**327**	*e*P		Pn	12 22 49.1	+1.6
URSC	**Urasca**	**1.59**	**332**	*e*P		Pn	12 22 50.4	-0.6

ISCJB ***29*** *12:22:51.6±5.6,57°.5S±0°.1×26°.7W±0°.2,h140km±52km, mb4.3/15,Error ellipse: s-maj=20.5km s-min=15.1km az=139.7*
IDC ***29*** *12:22:53.5±2.9,57°.52S×26°.77W,h142km±25km,mb4.3/12, mb1 4.3/13,mb1mx4.2/18,mbtmp4.3/13,MS3.7/2, Ms1 3.6/2,ms1mx3.2/17,Error ellipse: s-maj=15.5km s-

σ0°63′19, **mb4.3**/15, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.14**	**232**	P	**P**	**12 27 06.4**	**+0.5**
	5.6nm,0.3s,baz=267,slow=22,SNR=2.9						
USHA	**Ushuaia**	**23.08**	**259**	P	**P**	**12 27 46.4**	**-0.1**
	13nm,0.9s,mb4.3,baz=12,slow=18,SNR=4.3						
PLCA	**Paso Flores**	**32.50**	**282**	P	**P**	**12 29 10.8**	**+0.3**
	5.1nm,0.7s,mb4.3,baz=150,slow=7.0,SNR=14						
PLCA				PcP	PcP	12 31 53.7	+0.5
	2.7nm,0.9s,baz=346,slow=1.2,SNR=3.8						
PLCA				LR	LR	12 39 46.8	
	comp=Z,159nm,21.2s,baz=132,slow=31						
PLCA	**Paso Flores**	**32.50**	**282**	P	**P**	**12 29 10.8**	**+0.3**
PLCA				PcP	PcP	12 31 53.7	+0.5
PLCA				LR	LR	12 39 46.8	
QSPA	**South Pole Qui**	**32.73**	**180**	P	**P**	**12 29 12.6**	**+0.4**
	39nm,0.6s,mb5.3,baz=203,slow=2.5,SNR=455						
QSPA				PcP	PcP	12 31 54.3	+1.1
	5.4nm,0.6s,baz=270,slow=2.2,SNR=5.5						
QSPA				ScP	ScP	12 35 23.8	+2.5
	1.3nm,0.5s,baz=250,slow=2.6,SNR=9.0						
CPUP	**Villa Florida**	**37.96**	**312**	P	**P**	**12 29 56.7**	**-0.6**
	1.8nm,0.5s,mb4.0,baz=138,slow=8.7,SNR=8.4						
CPUP				PcP	PcP	12 32 09.8	+0.3
	0.8nm,0.4s,baz=253,slow=3.0,SNR=3.5						
CPUP	**Villa Florida**	**37.96**	**312**	P	**P**	**12 29 56.7**	**-0.6**
CPUP				PcP	PcP	12 32 09.8	+0.3
CFAA	**Coronel Fontan**	**38.36**	**294**	P	**P**	**12 29 59.0**	**-1.6**
	0.3nm,0.4s,mb3.2,baz=178,slow=3.5,SNR=4.8						
CFAA				PcP	PcP	12 32 11.1	+0.4
	0.7nm,0.5s,baz=140,slow=3.1,SNR=8.7						
MAW	**Mawson**	**38.84**	**142**	P	**P**	**12 30 03.7**	**-0.4**
	1.6nm,0.3s,mb4.1,baz=224,slow=6.8,SNR=9.7						
MAW				PcP	PcP	12 32 12.3	+0.8
	1.5nm,0.5s,baz=255,slow=19,SNR=4.2						
BOSA	**Boshof**	**46.14**	**74**	P	**P**	**12 31 03.1**	**-0.3**
	1.9nm,0.6s,mb3.9,baz=174,slow=8.9,SNR=4.2						
BOSA				pP	pP	12 31 35.4	-4.7
	2.8nm,0.6s,baz=219,slow=5.3,SNR=5.1						
BOSA				LR	LR	12 45 26.9	
	comp=Z,78nm,20.1s,baz=157,slow=29						
LPAZ	**La Paz**	**51.41**	**306**	P	**P**	**12 31 44.8**	**+1.0**
	6.0nm,0.7s,mb4.3,baz=158,slow=6.6,SNR=26						
LPAZ				PcP	PcP	12 32 57.5	+1.6
	3.8nm,0.5s,baz=80,slow=4.5,SNR=7.8						
LPAZ	**La Paz**	**51.41**	**306**	P	**P**	**12 31 44.8**	**+1.1**
LPAZ				PcP	PcP	12 32 57.5	+1.6
DBIC	**Dimbokro**	**66.42**	**24**	P	**P**	**12 33 27.1**	**0.0**
	4.6nm,0.6s,mb4.5,baz=174,slow=16,SNR=10						
OTAV	**Otavalo**	**70.66**	**304**	*e*P	**P**	**12 33 53.4**	**0.0**
	6.8nm,1.1s,mb4.3						
TORD	**Torodi Ar. Bea**	**74.23**	**29**	P	**P**	**12 34 15.4**	**+1.0**
	7.1nm,0.5s,mb4.6,baz=197,slow=6.5,SNR=116						
SDV	**Santo Domingo**	**75.21**	**315**	*e*P	**P**	**12 34 20.2**	**+0.2**
	7.9nm,0.8s,mb4.4						
URZ	**Urewera**	**82.49**	**199**	P	**P**	**12 34 59.5**	**0.0**
	5.2nm,0.8s,mb4.2,baz=318,slow=5.6,SNR=5.5						
STKA	**Stephens Creek**	**90.42**	**170**	P	**P**	**12 35 38.5**	**+0.2**
	4.9nm,0.8s,mb4.5,baz=148,slow=6.6,SNR=9.7						
ASAR	**Alice Springs**	**97.52**	**162**	P	**P**	**12 36 10.2**	**-0.8**
	2.7nm,0.8s,mb4.7,baz=182,slow=4.4,SNR=24						
PDAR	**Pinedale Array**	**121.31**	**301**	PKP	PKPdf	12 41 28.2	0.0
	0.3nm,0.4s,baz=114,slow=5.6,SNR=4.6						
NVAR	**Mina Array Bea**	**122.17**	**292**	PKP	PKPdf	12 41 31.2	+1.2
	0.6nm,0.7s,baz=132,slow=3.6,SNR=4.7						
CMAR	**Chiang Mai Arr**	**124.33**	**111**	PKP	PKPdf	12 41 34.8	0.0
	1.6nm,0.6s,baz=236,slow=3.4,SNR=8.0						
WVOR	**Wild Horse Val**	**125.37**	**295**	*e*PKPdf	PKPdf	12 41 36.5	+0.4
FINES	**FINESS Array B**	**125.58**	**28**	PKP	PKPdf	12 41 35.8	0.0
	1.9nm,0.5s,baz=252,slow=0.6,SNR=8.8						
ARCES	**ARCESS Array B**	**132.22**	**22**	PKP	PKPdf	12 41 48.6	+0.4
	2.1nm,0.7s,baz=209,slow=2.0,SNR=13						
BVAR	**Borovoye Array**	**135.37**	**59**	PKP	PKPdf	12 41 55.7	+1.1
	1.0nm,0.5s,baz=212,slow=1.6,SNR=4.8						
YKA	**Yellowknife Ar**	**137.40**	**317**	PKhKP		12 41 51.1	
	0.2nm,0.4s,baz=129,slow=2.3,SNR=4.6						
YKA				PKP	PKPdf	12 41 58.3	+0.2
	3.8nm,0.7s,baz=130,slow=2.0,SNR=8.1						
YKA	**Yellowknife Ar**	**137.40**	**317**	PKP		12 41 51.1	
YKA				PKP	PKPdf	12 41 58.3	+0.2
ZALV	**Zalesovo Beam**	**142.80**	**65**	PKhKP		12 42 04.0	
	1.0nm,0.3s,baz=232,slow=5.0,SNR=6.5						
ZALV	**Zalesovo Beam**	**142.80**	**65**	PKP		12 42 04.0	
SKAG	**Skagway**	**144.24**	**304**	*e*PKPdf	PKPdf	12 42 09.4	-1.1
INK	**Inuvik**	**147.07**	**319**	*e*PKPbc	PKPbc	12 42 17.1	-0.4
DAWY	**Dawson**	**147.93**	**310**	*e*PKPbc	PKPbc	12 42 19.6	-0.2
CBIJ	**Chichi jima**	**148.60**	**161**	PKPbc	PKPbc	12 42 22.1	-0.7
	27nm,0.5s,baz=269,slow=23,SNR=4.5						
EGAK	**Eagle**	**148.88**	**311**	*e*PKPbc	PKPbc	12 42 21.4	-0.8
BMRM	**Bremner River**	**149.07**	**303**	*e*PKPbc	PKPbc	12 42 23.4	+0.5
MENT	**Mentasta**	**149.37**	**307**	*e*PKPbc	PKPbc	12 42 23.5	0.0
SONM	**Songino Array**	**150.56**	**89**	PKPbc	PKPbc	12 42 27.2	+0.3
	5.6nm,0.5s,baz=221,slow=3.5,SNR=36						
KDAK	**Kodiak Island**	**151.64**	**294**	*e*PKPbc	PKPbc	12 42 29.2	+0.2
COLA	**College**	**151.67**	**310**	*e*PKPbc	PKPbc	12 42 28.4	-0.5
COLA				*e*PKPab	PKPab	12 42 38.1	-0.3
OHAK	**Old Harbor**	**151.77**	**292**	*e*PKPbc	PKPbc	12 42 29.4	+0.1
KTH	**Kantishna Hill**	**152.67**	**306**	*e*PKPbc	PKPbc	12 42 31.2	0.0
TTA	**Tatalina**	**154.79**	**304**	*e*PKPbc	PKPbc	12 42 36.6	+0.8

*VIE **29** 12:32:52.6±0.6, 46.°17N×12.°99E, h8km, ML1.5/2, Error ellipse: s-maj=3.8km s-min=1.8km az=66.0 9 km NE of Spilimbergo*
*CSEM **29** 12:32:52.0±0.3, 46.°15N×12.°95E, h15km, ML1.5/2, Error ellipse: s-maj=5.3km s-min=2.7km az=58.0*
ISC 29 12:32:52.4±1.4, 46.°14N±0.°04×12.°94E±0.°08, h11km±9km, n28, σ0°57/50, 7C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPRI	**Monte Prat**	**0.11**	**18**	⇓*i*Pg	**Pg**	**12 32 55.3**	**+0.1**
MPRI				*i* Sg	**Sg**	**12 32 57.1**	**-0.1**
MPRI	**Monte Prat**	**0.11**	**18**	*i* Pg	**Pg**	**12 32 55.3**	**+0.1**
MPRI				*i* Sg	**Sg**	**12 32 57.2**	**0.0**
BUA	**Buia**	**0.15**	**58**	⇓*i*Pg	**Pg**	**12 32 55.6**	**-0.2**
BUA	**Buia**	**0.15**	**58**	*i* Pg	**Pg**	**12 32 55.6**	**-0.2**
BAD	**Bernadia**	**0.23**	**65**	⇓*i*Pg	**Pg**	**12 32 56.9**	**-0.3**
BAD				*i* Sg	**Sg**	**12 32 59.9**	**-0.6**
BAD	**Bernadia**	**0.23**	**65**	*i* Pg	**Pg**	**12 32 56.9**	**-0.3**
BAD				*i* Sg	**Sg**	**12 32 59.8**	**-0.7**
VINO	**Villanova**	**0.27**	**64**	⇑*i*Pg	**Pg**	**12 32 57.5**	**-0.3**
VINO				*i* Sg	**Sg**	**12 33 00.7**	**-0.7**
VINO	**Villanova**	**0.27**	**64**	*i* Pg	**Pg**	**12 32 57.5**	**-0.3**
VINO				*i* Sg	**Sg**	**12 33 00.7**	**-0.7**
FUSE	**Fusea**	**0.28**	**9**	⇑*i*Pg	**Pg**	**12 32 58.1**	**+0.1**
FUSE				*i* Sg	**Sg**	**12 33 02.9**	**+1.0**
FUSE	**Fusea**	**0.28**	**9**	*i* Pg	**Pg**	**12 32 58.2**	**+0.2**
FUSE				*i* Sg	**Sg**	**12 33 02.9**	**+1.0**
COLI	**Coloredo**	**0.30**	**91**	⇓*i*Pg	**Pg**	**12 32 58.6**	**+0.1**
COLI	**Coloredo**	**0.30**	**91**	*i* Pg	**Pg**	**12 32 58.6**	**+0.1**
PLRO	**Paularo**	**0.44**	**19**	⇓*i*Pg	**Pg**	**12 33 01.1**	**+0.1**
PLRO				*i* Sg	**Sg**	**12 33 08.0**	**+1.2**
PLRO	**Paularo**	**0.44**	**19**	*i* Pg	**Pg**	**12 33 01.1**	**+0.2**
PLRO				*i* Sg	**Sg**	**12 33 08.0**	**+1.3**
SABO	**M.te Sabotino**	**0.49**	**109**	⇑*i*Pg	**Pg**	**12 33 02.2**	**+0.4**
SABO	**M.te Sabotino**	**0.49**	**109**	*i* Pg	**Pg**	**12 33 02.2**	**+0.3**
DRE	**Drenchia**	**0.49**	**86**	⇑*i*Pg	**Pg**	**12 33 01.5**	**-0.4**
DRE				*i* Sg	**Sg**	**12 33 09.3**	**+0.9**
DRE	**Drenchia**	**0.49**	**86**	*i* Pg	**Pg**	**12 33 01.5**	**-0.4**
DRE				*i* Sg	**Sg**	**12 33 09.3**	**+0.9**
LSR	**Lussari**	**0.53**	**50**	⇓*i*Pg	**Pg**	**12 33 02.0**	**-0.7**
LSR				*i* Sg	**Sg**	**12 33 09.5**	**-0.1**
LSR	**Lussari**	**0.53**	**50**	*i* Pg	**Pg**	**12 33 02.0**	**-0.7**
LSR				*i* Sg	**Sg**	**12 33 09.5**	**-0.2**
ACOM	**Acomizza, Ital**	**0.57**	**44**	⇑*i*Pg	**Pg**	**12 33 03.1**	**-0.4**
ACOM				*i* Sg	**Sg**	**12 33 10.8**	**-0.1**
ACOM	**Acomizza, Ital**	**0.57**	**44**	*i* Pg	**Pg**	**12 33 03.1**	**-0.4**
ACOM				*i* Sg	**Sg**	**12 33 10.8**	**-0.2**
VOY	**Vojsko**	**0.67**	**99**	*e*Pg	**Pg**	**12 33 04.9**	**-0.5**
VOY				*e*Sg	**Sg**	**12 33 15.7**	**+1.5**
VOY	**Vojsko**	**0.67**	**99**	*e*Pg	**Pg**	**12 33 04.9**	**-0.5**
VOY				*e*Sg	**Sg**	**12 33 15.7**	**+1.5**
MYKA	**Terra Mystica**	**0.69**	**44**	⇓*i*Pg	**Pg**	**12 33 05.4**	**-0.4**
MYKA				⇓*i*Sg	**Sg**	**12 33 14.6**	**-0.2**
	4.3nm,0.2s						
MYKA	**Terra Mystica**	**0.69**	**44**	Pg	**Pg**	**12 33 05.4**	**-0.3**
MYKA				Sg	**Sg**	**12 33 14.6**	**-0.2**
	4.3nm,0.2s						
KBA	**Koelnbreinsper**	**0.98**	**16**	⇑*i*Pg	**Pg**	**12 33 11.2**	**0.0**
KBA				⇑*i*Sg	**Sg**	**12 33 23.6**	**-0.4**
	2.4nm,0.2s						
KBA	**Koelnbreinsper**	**0.98**	**16**	Pg	**Pg**	**12 33 11.2**	**0.0**
KBA				Sg	**Sg**	**12 33 23.6**	**-0.4**
	2.4nm,0.2s						

*IDC **29** 12:45:45.8±0.9, 5.°24S×152.°14E, h0km, mb4.3/12, mb1 4.4/12, mb1mx4.3/16, mbtmp4.3/12, Error ellipse: s-maj=34.3km s-min=18.4km az=110.0*
*NEIC **29** 12:45:47.4±0.3, 5.°23S×152.°14E, h10km, mb4.7/10, Error ellipse: s-maj=9.5km s-min=7.0km az=131.0*
*ISCJB **29** 12:45:49.0±0.4, 5.°31S±0.°08×152.°19E±0.°08, h33km, mb4.4/23, Error ellipse: s-maj=13.5km s-min=9.0km az=42.0*
ISC 29 12:45:50.8±6.4, 5.°3S±0.°1×152.°18E±0.°09, h33km±47km, n35, σ0°62/33, mb4.4/23, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.73**	**119**	*e*Pn	**Pn**	**12 47 54.7**	**-0.2**
KAKA	**Kakadu**	**20.83**	**248**	*e*P	**P**	**12 50 30.2**	**+0.3**
	35nm,0.5s						
KAKA	**Kakadu**	**20.83**	**248**	*e*P	**P**	**12 50 29.2**	**-0.7**
	133nm,0.6s						
WRAB	**Tennant Creek**	**22.64**	**228**	*e*P	**P**	**12 50 49.6**	**+0.3**
	15nm,0.8s,mb4.5						
KNA	**Kununurra**	**25.22**	**244**	*e*P	**P**	**12 51 14.8**	**+0.9**
	26nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**25.37**	**222**	P	**P**	**12 51 15.6**	**+0.4**
	4.4nm,0.4s,mb4.3,baz=58,slow=9.4,SNR=72						
ASAR				PcP	PcP	12 54 47.8	+0.4
	0.6nm,0.6s,baz=54,slow=2.2,SNR=4.1						
STKA	**Stephens Creek**	**28.24**	**199**	P	**P**	**12 51 41.2**	**+0.3**
	1.1nm,0.6s,mb3.7,baz=44,slow=19,SNR=3.7						
STKA	**Stephens Creek**	**28.24**	**199**	P	**P**	**12 51 41.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**28.88**	**242**	*e*P	**P**	**12 51 46.7**	**-0.1**
	16nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**28.88**	**242**	P	**P**	**12 51 46.3**	**-0.5**
	11nm,0.7s,mb4.7,baz=79,slow=5.5,SNR=22						
MBWA	**Marble Bar**	**35.19**	**240**	*e*P	**P**	**12 52 41.3**	**-0.8**
MEEK	**Meekatharra**	**38.41**	**233**	*e*P	**P**	**12 53 09.4**	**-0.1**
MORW	**Morawa**	**41.55**	**231**	*e*P	**P**	**12 53 34.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**57.53**	**296**	P	**P**	**12 55 38.1**	**+0.6**
	1.3nm,0.6s,mb4.2,baz=125,slow=6.2,SNR=7.6						
PETK	**Petropavlovsk-**	**58.37**	**4**	P	**P**	**12 55 42.4**	**-0.3**
	3.2nm,0.9s,mb4.4,baz=190,slow=7.2,SNR=3.5						
GTA	**Gaotai**	**65.60**	**318**	*e*P	**P**	**12 56 32.3**	**+0.7**
GTA				pP	pP	12 56 35.8	-6.0
GTA				sP	sP	12 56 38.0	-7.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
SONM	**Songino Array**	**66.41**	**328**	P	**P**	**12 56 37.0**	**+0.4**
	comp=Z,1.6nm,0.5s,mb4.3,baz=137,slow=5.3,SNR=7.8						
TTA	**Tatalina**	**78.45**	**22**	*e*P	**P**	**12 57 48.7**	**+0.6**
	comp=Z,9.0nm,1.1s,mb4.6						
PPLA	**Purkeypile**	**79.86**	**23**	*e*P	**P**	**12 57 56.0**	**+0.2**
MKAR	**Makanchi Array**	**80.29**	**319**	P	**P**	**12 57 58.8**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=98,slow=7.5,SNR=10.0						
KTH	**Kantishna Hill**	**80.70**	**22**	*e*P	**P**	**12 57 59.8**	**-0.5**
	comp=Z,3.1nm,0.5s,mb4.5						
TRF	**Thorofare Moun**	**80.89**	**23**	*e*P	**P**	**12 58 00.9**	**-0.4**
	comp=Z,3.3nm,0.5s,mb4.5						
BPAW	**Bear Paw Mtn.**	**80.97**	**22**	*e*P	**P**	**12 58 01.4**	**-0.4**
	comp=Z,1.7nm,0.7s,mb4.1						
ZALV	**Zalesovo Beam**	**81.22**	**326**	P	**P**	**12 58 02.5**	**-0.8**
	comp=Z,1.9nm,0.4s,mb4.4,baz=109,slow=6.9,SNR=7.6						
MCK	**McKinley**	**81.55**	**23**	*e*P	**P**	**12 58 04.5**	**-0.4**
	comp=Z,13nm,0.9s,mb4.9						
UCH	**Uchtor**	**84.45**	**313**	*e*P	**P**	**12 58 19.9**	**-0.5**
	comp=Z,3.0nm,1.3s,mb4.3						
MAW	**Mawson**	**84.88**	**203**	P	**P**	**12 58 21.7**	**-0.3**
	comp=Z,1.5nm,0.5s,mb4.4,baz=90,slow=13,SNR=6.6						
AML	**Almayashu**	**85.03**	**313**	*e*P	**P**	**12 58 24.1**	**+0.8**
	comp=Z,12nm,1.1s,mb4.9						
EGAK	**Eagle**	**85.05**	**23**	*e*P	**P**	**12 58 23.0**	**+0.1**
	comp=Z,4.9nm,0.9s,mb4.6						
BVAR	**Borovoye Array**	**89.26**	**323**	P	**P**	**12 58 41.9**	**-1.6**
	comp=Z,0.7nm,0.5s,mb4.3,baz=89,slow=7.6,SNR=4.9						
NVAR	**Mina Array Bea**	**92.87**	**52**	P	**P**	**12 59 02.0**	**+1.3**
	comp=Z,0.2nm,0.5s,mb3.8,baz=249,slow=6.6,SNR=3.5						
YKA	**Yellowknife Ar**	**96.15**	**28**	P	**P**	**12 59 15.7**	**+0.6**
	comp=Z,0.6nm,0.7s,mb4.2,baz=273,slow=5.2,SNR=7.4						
YKA	**Yellowknife Ar**	**96.15**	**28**	P	**P**	**12 59 15.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**149.87**	**287**	PKPbc	PKPbc	13 05 37.9	-0.8
	comp=Z,4.5nm,0.7s,baz=95,slow=2.3,SNR=30						
TORD	**Torodi Ar. Bea**	**149.87**	**287**	PKPbc	PKPbc	13 05 37.9	-0.8

MAN 29 12:46:34, 18.°73N×121.°00E, h36km, mb5.2, ML4.2, MS4.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.90**	**165**	*e*P	Pn	12 46 51.4	+1.3
CVP	**Callao Caves**	**1.29**	**143**	⇓*i*P	Pn	12 46 56.6	+1.1
CAUP	**Cauayan**	**1.94**	**156**	*e*P	Pn	12 47 07.4	+2.9
PALP	**Palanan**	**2.14**	**141**	*e*P	Pn	12 47 08.5	+1.2
BOLP	**Bolinao**	**2.56**	**204**	*e*P	Pn	12 47 15.3	+2.2
BOLP				*e*S	Sn	12 47 45.0	+2.0

*BJI **29** 13:05:43.3, 23.°44N×94.°75E, h113km, mb4.4/10*
*NEIC **29** 13:05:44.9±1.0, 23.°41N×94.°76E, h122km±11km, mb4.1/4, Error ellipse: s-maj=16.7km s-min=8.1km az=66.0*
*ISCJB **29** 13:05:47.0±0.9, 23.°61N±0.°08×94.°59E±0.°05, h147km±7km, mb3.9/14, Error ellipse: s-maj=14.2km s-min=6.9km az=12.9*
*IDC **29** 13:05:47.1±0.9, 23.°45N×94.°77E, h142km±8km, mb3.7/12, mb1 3.7/13, mb1mx3.5/27, mbtmp3.6/13, MS2.9/1, Ms1 2.9/1, ms1mx2.2/31, Error ellipse: s-maj=29.9km s-min=11.9km az=67.0*
ISC 29 13:05:46.7±0.8, 23.°49N±0.°07×94.°60E±0.°05, h132km±6km, h146km±.8km: pP-P, n35, σ1°07/48, mb3.9/13, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.42**	**335**	*e*P	**Pn**	**13 06 15.0**	**+0.9**
IMP				*e*S	**Sn**	**13 06 34.0**	**-0.9**
SHL	**Shillong**	**3.22**	**310**	*i* PN	**Pn**	**13 06 39.0**	**+2.7**
SHL				*e*SN	**Sn**	**13 07 15.0**	**+0.4**
CHTO	**Chiang Mai**	**6.17**	**138**	*e*Pn	**Pn**	**13 07 09.3**	**-6.3**
	8.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.45**	**140**	P	**Pn**	**13 07 16.4**	**-3.0**
	1.5nm,0.3s,baz=317,slow=14,SNR=34						
LSA	**Lhasa**	**6.91**	**334**	P	**Pn**	**13 07 26.8**	**+1.3**
LSA				S	**Sn**	**13 08 36.8**	**-5.9**
LSA				smax			
	comp=N,110nm,0.8s						
LSA				smax			
	comp=E,120nm,0.7s						
LSA	**Lhasa**	**6.91**	**334**	*e*Pn	**Pn**	**13 07 26.5**	**+1.0**
	comp=E,47nm,0.6s						
TAPN	**Taplejung**	**7.32**	**303**	*e*Pn	**Pn**	**13 07 32.0**	**+1.0**
TAPN				*e*Sn	**Sn**	**13 08 50.8**	**-1.8**
	comp=E,177nm,0.5s						
ODAN	**Odare**	**7.34**	**299**	*e*Pn	**Pn**	**13 07 32.6**	**+1.3**
ODAN				*e*Sn	**Sn**	**13 08 52.3**	**-0.9**
	comp=E,688nm,0.9s						
RAMN	**Ramite**	**8.02**	**297**	*e*Pn	**Pn**	**13 07 42.0**	**+1.5**
RAMN				*e*Sn	**Sn**	**13 09 09.5**	**-0.1**
	comp=E,240nm,0.7s						
JIRN	**Jiri**	**8.65**	**300**	*e*Pn	**Pn**	**13 07 50.1**	**+1.1**
JIRN				*e*Sn	**Sn**	**13 09 23.0**	**-1.8**
	comp=E,78nm,0.3s						
GUN	**Gumba**	**9.01**	**301**	*e*Pn	**Pn**	**13 07 54.8**	**+1.0**
GUN				*e*Sn	**Sn**	**13 09 32.4**	**-1.1**
	comp=E,179nm,0.5s						
PKI	**Pulchoki**	**9.24**	**298**	*e*Pn	**Pn**	**13 07 57.7**	**+0.9**
PKI				*e*Sn	**Sn**	**13 09 37.7**	**-1.4**
	comp=E,47nm,0.4s						
PKI	**Pulchoki**	**9.24**	**298**	*e*Pn	**Pn**	**13 07 57.9**	**+1.1**
PKI				*e*Sn	**Sn**	**13 09 38.4**	**-0.7**
PKIN	**Phulchoki**	**9.25**	**298**	*e*Pn	**Pn**	**13 07 57.9**	**+0.9**
PKIN				*e*Sn	**Sn**	**13 09 38.4**	**-1.0**
	comp=E,56nm,0.4s						
KKN	**Kakani**	**9.44**	**299**	*e*Pn	**Pn**	**13 08 00.4**	**+0.9**
KKN				*e*Sn	**Sn**	**13 09 42.8**	**-1.0**
	comp=E,92nm,0.6s						
DMN	**Daman**	**9.50**	**298**	*e*Pn	**Pn**	**13 08 01.2**	**+0.9**
DMN				*e*Sn	**Sn**	**13 09 44.6**	**-0.8**
	comp=E,97nm,0.9s						
LZH	**Lanzhou**	**14.88**	**30**	*e*P	**Pn**	**13 09 05.3**	**-5.1**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
ENH	**Enshi**	**14.89**	**60**	*e*Pn	**Pn**	**13 09 08.9**	**-1.7**
	comp=Z,5.7nm,0.4s						
GTA	**Gaotai**	**16.48**	**14**	*e*P	**Pn**	**13 09 29.8**	**-0.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PSI	**Prapat**	**20.99**	**168**	P	**P**	**13 10 20.2**	**+0.5**
	comp=Z,3.5nm,0.7s,baz=324,slow=6.7,SNR=6.2						
TKM2	**Tokmak 2**	**24.96**	**325**	*e*P	**P**	**13 10 59.6**	**+1.8**
	comp=Z,3.2nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**25.27**	**340**	P	**P**	**13 11 01.5**	**+0.9**
	comp=Z,5.2nm,0.6s,mb4.3,baz=140,slow=11,SNR=42						
MKAR				pP	pP	13 11 31.0	+2.5
	comp=Z,2.9nm,0.7s,baz=145,slow=9.5,SNR=4.3						
MKAR				LR	LR	13 21 32.7	
	comp=Z,24nm,18.4s,baz=190,slow=37						
SONM	**Songino Array**	**26.05**	**18**	P	**P**	**13 11 07.1**	**-0.5**
	comp=Z,0.2nm,0.6s,mb2.9,baz=82,slow=40,SNR=2.3						
KURK	**Kurchatov**	**29.88**	**339**	P	**P**	**13 11 41.5**	**-0.1**
	comp=Z,1.3nm,0.7s,mb3.8,baz=147,slow=9.6,SNR=11						
KURK				pP	pP	13 12 12.3	+2.3
	comp=Z,1.1nm,0.6s,baz=143,slow=9.9,SNR=4.6						
KURK				ScP	ScP	13 18 09.7	-1.6
	comp=Z,0.5nm,0.6s,baz=151,slow=2.6,SNR=5.3						
KURK	**Kurchatov**	**29.88**	**339**	P	**P**	**13 11 41.5**	**-0.1**
KURK				pP	pP	13 12 12.3	+2.3
KURK				ScP	ScP	13 18 09.7	-1.6
ZALV	**Zalesovo Beam**	**31.29**	**349**	P	**P**	**13 11 53.8**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.6,baz=148,slow=8.5,SNR=2.8						
BVAR	**Borovoye Array**	**34.75**	**334**	P	**P**	**13 12 23.8**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=148,slow=14,SNR=4.6						
ABKAR	**Akbulak array**	**37.42**	**322**	*e*P	**P**	**13 12 47.9**	**+1.1**
	comp=Z,0.8nm,0.5s,mb3.6						
AKASG	**Malin Array Be**	**56.69**	**316**	P	**P**	**13 15 15.5**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.0,baz=82,slow=6.6,SNR=3.8						
FINES	**FINESS Array B**	**59.40**	**329**	P	**P**	**13 15 34.8**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.8,baz=166,slow=13,SNR=2.8						
FINES				pP	pP	13 16 08.8	+2.5
	comp=Z,1.2nm,0.7s,baz=102,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**60.45**	**138**	P	**P**	**13 15 41.2**	**-1.4**
	comp=Z,4.3nm,0.7s,mb4.4,baz=321,slow=6.9,SNR=57						
ARCES	**ARCESS Array B**	**60.91**	**338**	P	**P**	**13 15 45.0**	**-0.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=92,slow=7.3,SNR=5.1						
BOSA	**Boshof**	**84.50**	**236**	P	**P**	**13 18 05.1**	**0.0**
	comp=Z,6.4nm,0.6s,mb4.5,baz=47,slow=4.0,SNR=16						
BOSA	**Boshof**	**84.50**	**236**	P	**P**	**13 18 05.1**	**0.0**
TORD	**Torodi Ar. Bea**	**87.46**	**283**	P	**P**	**13 18 19.7**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.8,baz=66,slow=4.0,SNR=6.6						

*SKO **29** 13:39:21.7, 42.°30N×19.°68E, h52km*
*CSEM **29** 13:39:24.4±0.2, 42.°28N×19.°94E, h5km, ML2.5/9, Error ellipse: s-maj=3.4km s-min=2.8km az=28.0*
*ISCJB **29** 13:39:24.3±0.3, 42.°30N±0.°02×19.°94E±0.°

DDA ***29*** *14:10:30.0, 40.′22N×39.′68E, h7km, 3km, Md3.0*
ISK ***29*** *14:10:30.3, 40.′28N×39.′61E, h2km, MD2.7*
ISCJB ***29*** *14:10:31.7±0.5, 40.′29N±0.′03×39.′58E±0.′05, h10km, Error ellipse: s-maj=6.1km s-min=3.9km az=34.8*
CSEM ***29*** *14:10:31.3±0.1, 40.′27N×39.′61E, h2km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.0km az=109.0*
ISC 29 14:10:31.7±0.8, 40.′27N±0.′04×39.′61E±0.′08, h5km±10km, n23, σ0s56/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.22**	**333**	*e*PG	**Pg**	**14 10 35.8**	**-0.2**
GUMT				*e*SG	**Sg**	**14 10 39.4**	**+0.6**
GUMT	**Gumushane**	**0.22**	**333**	*e*Pg	**Pg**	**14 10 35.8**	**-0.1**
GUMT				*e*Sg	**Sg**	**14 10 39.4**	**+0.6**
KELT	**Kelkit**	**0.29**	**247**	*i* P	**Pg**	**14 10 37.4**	**0.0**
KELT				*i* S	**Sg**	**14 10 41.7**	**+0.4**
KELT	**Kelkit**	**0.29**	**247**	*i* P	**Pg**	**14 10 37.4**	**0.0**
KELT				*i* S	**Sg**	**14 10 41.7**	**+0.5**
EZC	**Erzincan**	**0.55**	**201**	*e*PG	**Pg**	**14 10 42.0**	**-0.2**
EZC	**Erzincan**	**0.55**	**201**	*e*Pg	**Pg**	**14 10 42.0**	**-0.2**
MACK	**Trabzon**	**0.69**	**10**	*i* P	**Pg**	**14 10 44.8**	**-0.1**
MACK				*i* S	**Sg**	**14 10 54.3**	**+0.5**
MACK	**Trabzon**	**0.69**	**10**	*i* P	**Pg**	**14 10 44.8**	**-0.1**
MACK				*i* S	**Sg**	**14 10 54.3**	**+0.5**
KTUT	**Trabzon**	**0.73**	**9**	*e*PG	**Pg**	**14 10 44.9**	**-0.8**
KTUT	**Trabzon**	**0.73**	**9**	*e*Pg	**Pg**	**14 10 44.9**	**-0.8**
ESPY	**Espiye-Giresun**	**0.93**	**314**	*e*PG	**Pg**	**14 10 48.8**	**-0.7**
ESPY	**Espiye-Giresun**	**0.93**	**314**	*e*Pg	**Pg**	**14 10 48.8**	**-0.8**
KEMA	**Kemaliye**	**1.31**	**221**	*i* P	**Pn**	**14 10 55.4**	**-1.2**
KEMA				*i* S	**Sg**	**14 11 14.5**	**+0.6**
KEMA	**Kemaliye**	**1.31**	**221**	*i* P	**Pn**	**14 10 55.4**	**-1.2**
KEMA				*i* S	**Sg**	**14 11 14.5**	**+0.6**
PTK	**Pertek**	**1.38**	**187**	*e*PN	**Pn**	**14 10 57.8**	**+0.2**
PTK	**Pertek**	**1.38**	**187**	*e*Pn	**Pn**	**14 10 57.8**	**+0.3**
EZM	**Erzurum**	**1.39**	**104**	*e*PN	**Pn**	**14 10 57.7**	**0.0**
DDEM	**Demirkent**	**1.75**	**68**	*i* P	**Pn**	**14 11 02.0**	**-0.6**
DDEM				*i* S	**Sn**	**14 11 26.2**	**+1.0**
DDEM	**Demirkent**	**1.75**	**68**	*i* P	**Pn**	**14 11 02.0**	**-0.6**
DDEM				*i* S	**Sn**	**14 11 26.2**	**+1.0**
BCA	**Borcka**	**1.93**	**52**	*e*PN	**Pn**	**14 11 05.1**	**0.0**
BCA	**Borcka**	**1.93**	**52**	*e*Pn	**Pn**	**14 11 05.1**	**0.0**
SVSK	**Karacayir**	**2.03**	**261**	*e*PN	**Pn**	**14 11 06.8**	**+0.4**
SVSK	**Karacayir**	**2.03**	**261**	*e*Pn	**Pn**	**14 11 06.8**	**+0.3**

BJI ***29*** *14:11:09.6, 3.′44S×143.′27E, h25km, mB5.2/9, mb5.0/18, Ms4.5/4, Ms7 4.3/4*
ISCJB ***29*** *14:11:10.7±2.5, 3.′24S±0.′04×142.′42E±0.′06, h1km±16km, mb4.8/59, MS3.9/15, Error ellipse: s-maj=9.4km s-min=6.1km az=179.1*
MOS ***29*** *14:11:15.0±1.0, 3.′24S×142.′50E, h33km, mb4.9/31, Error ellipse: s-maj=14.1km s-min=7.7km az=113.3*
NEIC ***29*** *14:11:17.2±0.3, 3.′32S×142.′38E, h35km, mb4.8/29, Error ellipse: s-maj=8.6km s-min=6.7km az=81.0*
GCMT ***29*** *14:11:17.2±0.3, 3.′15S×142.′51E, h16km±1km, MW5.0/60, Moment Tensor Solution. s27,c32; s60,c84; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.99±.15; Mθθ-0.94±.10; Mφφ-1.05±.10; Mrθ-0.39±.26; Mrφ1.98±.07; Mθφ3.23±.44; Best double couple: M0=4.18100×10^16 NP1:φs106.00000°, δ29.00000°, λ34.00000°. NP2: φs345.00000°, δ74.00000°, λ115.00000°. Principal axes: T 4.1560, Plg54.0000°, Azm286.0000°; N 0.0460, Plg24.0000°, Azm158.0000°; P -4.2060, Plg25.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***29*** *14:11:18.9±3.8, 3.′30S×142.′37E, h49km±35km, mb4.3/12, mb1 4.4/14, mb1mx4.3/18, mbtmp4.3/14, ML3.7/1, MS3.8/15, Ms1 3.8/15, ms1mx3.7/24 Error ellipse: s-maj=25.1km s-min=11.7km az=83.0*
DJA ***29*** *14:11:23, 3.′31S×142.′16E, h53km, Mw5.4/11*
ISC 29 14:11:14.5±3.5, 3.′27S±0.′04×142.′46E±0.′06, h14km±22km, n153, σ1s06/135, mb4.8/59, MS3.9/15, 3C-4D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**10.64**	**176**	*e*Pn	**Pn**	**14 13 50.9**	**+4.3**
COEN	233nm,1.0s			*e*Sn	**Sn**	**14 15 52.7**	**+7.1**
KAKA	**Kakadu**	**13.64**	**226**	*e*P	**Pn**	**14 14 27.0**	**-0.7**
KAKA	79nm,0.4s			*e*S	**Sn**	**14 16 45.6**	**-14**
KAKA	**Kakadu**	**13.64**	**226**	*e*Pn	**Pn**	**14 14 26.9**	**-0.7**
KAKA	218nm,0.5s			*e*Sn	**Sn**	**14 16 53.1**	**-6.0**
GUMO	**Guam**	**16.92**	**8**	LR	LR	14 20 54.1	
	comp=Z,222nm,19.2s,baz=197,slow=34						
CTA	**Charters Tower**	**17.12**	**168**	P	**Pn**	**14 15 15.1**	**+1.7**
	0.2nm,0.3s,baz=49,slow=18,SNR=2.3						
CTA				LR	LR	14 22 08.7	
	comp=Z,406nm,19.4s,baz=169,slow=38						
KNA	**Kununurra**	**18.31**	**226**	*e*P	**Pn**	**14 15 27.3**	**-0.9**
KNA	87nm,0.6s			*e*S	**Sn**	**14 18 45.0**	**-7.6**
WRAB	**Tennant Creek**	**18.35**	**205**	*e*P	**Pn**	**14 15 27.0**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,61nm,0.9s						
WRAB	**Tennant Creek**	**18.35**	**205**	*e*Pn	**Pn**	**14 15 27.0**	**-1.7**
	comp=Z,61nm,0.9s						
HNR	**Honiara**	**18.42**	**110**	*e*P	**Pn**	**14 15 28.8**	**-0.8**
HNR				pmax	pmax		
	comp=Z,104nm,0.7s						
HNR	**Honiara**	**18.42**	**110**	*e*Pn	**Pn**	**14 15 28.8**	**-0.8**
	comp=Z,104nm,0.7s						
DAV	**Davao City (W)**	**19.73**	**301**	P	**Pn**	**14 15 43.9**	**-1.5**
	comp=Z,25nm,0.3s,baz=184,slow=13,SNR=2.3						
DAV	**Davao City (W)**	**19.73**	**301**	P	**Pn**	**14 15 43.9**	**-1.5**
ASAR	**Alice Springs**	**21.89**	**201**	P	**P**	**14 16 07.4**	**+0.2**
	comp=Z,6.2nm,0.5s,mb4.3,baz=28,slow=10,SNR=125						
ASAR				S	**S**	**14 20 06.9**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=18,slow=24,SNR=3.2						
ASAR	**Alice Springs**	**21.89**	**201**	P	**P**	**14 16 07.4**	**+0.2**
ASAR				S	**S**	**14 20 06.9**	**-1.9**
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ASAR				smax			
	comp=N,2.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.11**	**227**	*e*P	**P**	**14 16 08.8**	**-0.7**
	comp=N,62nm,1.0s,mb5.0						
FITZ				*e*S	**S**	**14 20 07.0**	**-6.0**
FITZ	**Fitzroy Crossi**	**22.11**	**227**	P	**P**	**14 16 09.4**	**-0.1**
	comp=N,27nm,0.5s,mb4.9,baz=40,slow=10,SNR=44						
FITZ				LR	LR	14 25 02.7	
	comp=N,449nm,20.1s,MS3.9,baz=46,slow=37						
EIDS	**Eidsvold**	**23.48**	**160**	*e*Pn	**P**	**14 16 24.8**	**+0.7**
	comp=N,24nm,0.5s,mb4.9						
TGY	**Tagaytay City**	**27.45**	**309**	P	**P**	**14 16 59.9**	**-0.3**
	comp=N,59nm,0.3s,mb5.5,baz=280,slow=8.6,SNR=4.3						
TGY	**Tagaytay City**	**27.45**	**309**	P	**P**	**14 16 59.9**	**-0.3**
TGY				pmax	pmax		
	comp=Z,59nm,0.3s						
KKM	**Kota Kinabalu**	**27.79**	**289**	*e*P	**P**	**14 17 02.8**	**-0.6**
	comp=Z,31nm,1.1s,mb4.8						
ARMA	**Armidale**	**28.36**	**163**	*e*P	**P**	**14 17 09.7**	**+1.5**
MBWA	**Marble Bar**	**28.37**	**229**	*e*P	**P**	**14 17 08.6**	**+0.2**
MBWA	**Marble Bar**	**28.37**	**229**	*e*P	**P**	**14 17 07.2**	**-1.2**
	comp=Z,43nm,1.4s,mb4.9						
STKA	**Stephens Creek**	**28.46**	**182**	*e*P	**P**	**14 17 09.4**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**28.46**	**182**	P	**P**	**14 17 08.9**	**-0.2**
	comp=Z,6.0nm,0.7s,mb4.3,baz=2.1,slow=7.0,SNR=8.1						
STKA				LR	LR	14 30 04.8	
	comp=Z,567nm,20.2s,MS4.2,baz=0.9,slow=40						
STKA	**Stephens Creek**	**28.46**	**182**	P	**P**	**14 17 08.9**	**-0.2**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
STKA				MLR	MLR		
	comp=Z,567nm,20.2s						
STKA	**Stephens Creek**	**28.46**	**182**	*e*P	**P**	**14 17 08.5**	**-0.6**
	comp=Z,3.0nm,1.1s,mb3.8						
DZM	**Mont Dzumac**	**29.86**	**131**	*e*S	**S**	**14 22 28.7**	**+10**
	comp=Z,105nm,25.1s						
DZM				*e*LR	LR	14 25 16.1	
	comp=Z,592nm,24.5s						
BBOO	**Buckleboo**	**29.99**	**191**	*e*P	**P**	**14 17 22.5**	**-0.1**
	comp=Z,4.9nm,0.4s,mb4.6						
FORT	**Forrest**	**30.55**	**205**	*e*P	**P**	**14 17 28.3**	**+0.6**
	comp=Z,103nm,0.6s,mb5.8						
FORT	**Forrest**	**30.55**	**205**	*e*P	**P**	**14 17 28.1**	**+0.4**
	comp=Z,98nm,0.6s,mb5.8						
CAN	**Canberra**	**32.46**	**170**	*e*P	**P**	**14 17 44.7**	**+0.3**
CAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
CAN	**Canberra**	**32.46**	**170**	*e*P	**P**	**14 17 44.7**	**+0.3**
	comp=Z,7.6nm,0.8s,mb4.6						
KSM	**Kuching**	**32.48**	**278**	*e*P	**P**	**14 17 42.4**	**-2.4**
MEEK	**Meekatharra**	**32.58**	**222**	*e*P	**P**	**14 17 45.5**	**-0.1**
ARPS	**Mount Arapiles**	**33.34**	**181**	*e*P	**P**	**14 17 52.4**	**+0.3**
	comp=Z,50nm,1.0s,mb5.4						
GIRL	**Giralia**	**33.45**	**232**	*e*P	**P**	**14 17 54.4**	**+1.2**
	comp=Z,106nm,0.8s,mb5.8						
NACB	**Ninganchiao**	**34.00**	**324**	*e*P	**P**	**14 17 58.9**	**+0.8**
	comp=Z,15nm,0.8s,mb5.0						
KMBL	**Kambalda**	**34.01**	**213**	*e*P	**P**	**14 17 57.9**	**-0.1**
	comp=Z,45nm,0.6s,mb5.6						
KLBR	**Kellerberrin**	**36.52**	**217**	*e*P	**P**	**14 18 19.2**	**-0.4**
NWAO	**Narrogin (SRO)**	**37.79**	**216**	*e*P	**P**	**14 18 31.1**	**+0.7**
	comp=Z,48nm,0.6s,mb5.4						
NWAO	**Narrogin (SRO)**	**37.79**	**216**	*e*P	**P**	**14 18 26.8**	**-3.6**
NWAO				pmax	pmax		
	comp=Z,30nm,1.3s						
NWAO	**Narrogin (SRO)**	**37.79**	**216**	*e*P	**P**	**14 18 26.8**	**-3.5**
	comp=Z,30nm,1.3s,mb4.9						
MJAR	**Matsushiro Arr**	**39.80**	**355**	LR	LR	14 32 15.4	
	comp=Z,80nm,19.3s,MS3.6,baz=250,slow=32						
KULM	**Kulim**	**42.62**	**281**	*e*P	**P**	**14 19 09.3**	**-1.5**
	comp=Z,15nm,1.3s,mb4.6						
KSRS	**Korea Array**	**42.71**	**343**	P	**P**	**14 19 10.8**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.7,baz=160,slow=8.7,SNR=4.4						
KSRS				LR	LR	14 35 11.9	
	comp=Z,124nm,20.6s,MS3.8,baz=180,slow=34						
WHN	**Wuhan**	**43.02**	**323**	⇓P	**P**	**14 19 15.5**	**+1.8**
ENH	**Enshi**	**45.88**	**319**	*e*P	**P**	**14 19 36.6**	**+0.1**
	comp=Z,8.3nm,0.6s,mb4.8						
AFI	**Afiamalu**	**46.38**	**106**	LR	LR	14 37 14.2	
	comp=Z,212nm,20.4s,MS4.1,baz=288,slow=34						
URZ	**Urewera**	**47.04**	**142**	P	**P**	**14 19 46.7**	**+1.1**
	comp=Z,4.4nm,0.5s,mb4.6,baz=297,slow=6.8,SNR=4.2						
URZ				LR	LR	14 37 01.4	
	comp=Z,249nm,18.4s,MS4.2,baz=123,slow=33						
CMAR	**Chiang Mai Arr**	**47.98**	**298**	P	**P**	**14 19 52.4**	**-0.8**
	comp=Z,6.8nm,1.1s,mb4.6,baz=117,slow=5.8,SNR=21						
CMAR				PcP	PcP	14 21 21.9	+0.4
	comp=Z,1.4nm,0.7s,baz=139,slow=2.7,SNR=4.1						
CMAR				LR	LR	14 41 36.6	
	comp=Z,86nm,18.6s,MS3.8,baz=278,slow=38						
CMAR	**Chiang Mai Arr**	**47.98**	**298**	P	**P**	**14 19 52.4**	**-0.8**
CMAR						14 21 21.9	
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,86nm,18.6s						
XAN	**Xi'an**	**48.74**	**322**	P	**P**	**14 19 58.5**	**-0.3**
XAN				sP	sP	14 20 14.5	+9.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
YSS	**Yuzh-Sakhalins**	**50.01**	**0**	*e*P	**P**	**14 20 07.9**	**-0.4**
YSS				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
KLR	**Kul'dur**	**53.11**	**351**	*e*P	**P**	**14 20 23.0**	**-8.4**
LZH	**Lanzhou**	**53.23**	**321**	⇓P	**P**	**14 20 34.5**	**+1.9**
LZH				pP	pP	14 20 47.5	+10
LZH				sP	sP	14 20 50.5	+12
LZH				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
SHL	**Shillong**	**56.74**	**303**	*e*P	**P**	**14 21 01.5**	**+3.3**
PETK	**Petropavlovsk-**	**57.62**	**11**	LR	LR	14 41 30.7	
	comp=Z,70nm,20.9s,MS3.8,baz=202,slow=31						
GTA	**Gaotai**	**57.78**	**322**	⇑P	**P**	**14 21 06.3**	**+1.0**
GTA				pP	pP	14 21 12.3	+2.3
GTA				sP	sP	14 21 15.0	+3.3
GTA				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
GTA				pmax	pmax		
	comp=Z,120nm,6.5s						
GTA				LR	LR		
	comp=N,74nm,17.2s,MS4.1						
GTA				LR	LR		
	comp=E,100nm,14.6s,MS4.1						
GTA				LR	LR		
	comp=Z,130nm,14.6s,MS4.2						
LSA	**Lhasa**	**58.99**	**308**	P	**P**	**14 21 15.5**	**+1.5**
LSA	**Lhasa**	**58.99**	**308**	*e*P	**P**	**14 21 15.9**	**+1.9**
LSA				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
LSA	**Lhasa**	**58.99**	**308**	*e*P	**P**	**14 21 15.9**	**+1.9**
	comp=Z,26nm,1.1s,mb5.2						
SONM	**Songino Array**	**59.88**	**333**	P	**P**	**14 21 19.4**	**-0.2**
	comp=Z,2.5nm,0.9s,mb4.2,baz=148,slow=6.9,SNR=13						
SONM				LR	LR	14 48 22.0	
	comp=Z,169nm,18.4s,MS4.2,baz=122,slow=37						
SONM	**Songino Array**	**59.88**	**333**	P	**P**	**14 21 19.4**	**-0.3**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,169nm,18.4s						
SONM	**Songino Array**	**59.88**	**333**	P	**P**	**14 21 19.4**	**-0.2**
SONM				LR	LR	14 48 22.0	
TAPN	**Taplejung**	**60.88**	**304**	*e*P	**P**	**14 21 27.8**	**+0.8**
ODAN	**Odare**	**60.97**	**303**	*e*P	**P**	**14 21 28.6**	**+1.0**
	comp=Z,71nm,0.9s,mb5.8						
RAMN	**Ramite**	**61.66**	**303**	*e*P	**P**	**14 21 33.0**	**+0.7**
JIRN	**Jiri**	**62.25**	**304**	*e*P	**P**	**14 21 37.1**	**+0.9**
PALK	**Pallekele**	**62.51**	**280**	*e*P	**P**	**14 21 39.4**	**+1.2**
PALK				pmax	pmax		
	comp=Z,147nm,1.9s,mb5.8						
PALK	**Pallekele**	**62.51**	**280**	*e*P	**P**	**14 21 39.4**	**+1.2**
	comp=Z,147nm,1.9s,mb5.8						
GUN	**Gumba**	**62.59**	**304**	*e*P	**P**	**14 21 39.6**	**+1.1**
	comp=Z,123nm,1.1s,mb5.9						
PKI	**Pulchoki**	**62.87**	**303**	*e*P	**P**	**14 21 41.0**	**+0.6**
	comp=Z,43nm,0.9s,mb5.6						
PKI	**Pulchoki**	**62.87**	**303**	*e*P	**P**	**14 21 41.4**	**+1.0**
PKIN	**Phulchoki**	**62.88**	**303**	*e*P	**P**	**14 21 41.4**	**+0.9**
KKN	**Kakani**	**63.05**	**303**	*e*P	**P**	**14 21 42.1**	**+0.5**
	comp=Z,98nm,1.0s,mb5.9						
ZAK	**Zakamensk**	**63.13**	**333**	*e*P	**P**	**14 21 41.4**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
DMN	**Daman**	**63.14**	**303**	*e*P	**P**	**14 21 43.2**	**+1.0**
	comp=Z,135nm,1.1s						
TLY	**Talaya**	**63.90**	**334**	*e*P	**P**	**14 21 46.9**	**+0.2**
TLY				*e*SS	SS	14 34 22.8	-7.6
TLY				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
TLY				MLR	MLR		
	comp=Z,105nm,18.0s,MS4.1						
TLY	**Talaya**	**63.90**	**334**	*e*P	**P**	**14 21 46.2**	**-0.5**
	comp=Z,8.9nm,1.1s,mb4.7						
BOD	**Bodaibo**	**65.05**	**344**	*e*P	**P**	**14 21 53.1**	**-1.0**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
MOY	**Mondy**	**65.06**	**333**	*e*P	**P**	**14 21 55.3**	**+1.0**
MOY				pmax	pmax		
	comp=Z,34nm,2.1s,mb5.0						
YAK	**Yakutsk**	**65.86**	**353**	*e*P	**P**	**14 21 58.7**	**-0.5**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SEY	**Seymchan**	**66.45**	**5**	*ce*P	**P**	**14 22 01.8**	**-1.3**
PPT	**Papeete**	**68.02**	**108**	*e*LR	LR	14 43 12.0	
	comp=Z,89nm,23.0s						
MKAR	**Makanchi Array**	**72.54**	**321**	P	**P**	**14 22 41.2**	**+0.2**
	comp=Z,9.3nm,1.0s,mb4.7,baz=99,slow=7.6,SNR=36						
MKAR				LR	LR	14 52 55.6	
	comp=Z,41nm,21.2s,MS3.7,baz=249,slow=34						
MKAR	**Makanchi Array**	**72.54**	**321**	P	**P**	**14 22 41.2**	**+0.2**
MKAR				LR	LR	14 52 55.6	
BILL	**Bilibino**	**73.08**	**9**	⇓*e*P	**P**	**14 22 42.5**	**-1.3**
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.3						
ZAA0	**Zalesovo Array**	**74.33**	**329**	*e*P	**P**	**14 22 50.1**	**-1.3**
ZALV	**Zalesovo Beam**	**74.33**	**329**	P	**P**	**14 22 50.5**	**-0.9**
	comp=Z,3.7nm,0.6s,mb4.5,baz=111,slow=6.0,SNR=17						
ZALV				LR	LR	14 54 56.3	
	comp=Z,67nm,19.9s,MS3.9,baz=126,slow=35						
ZALV	**Zalesovo Beam**	**74.33**	**329**	P	**P**	**14 22 50.5**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,67nm,19.9s,MS3.9						
ULHL	**Ulahol**	**74.87**	**315**	P	**P**	**14 22 55.5**	**+0.7**
	SNR=5.2						
TIXI	**Tiksi**	**75.31**	**356**	*e*P	**P**	**14 22 54.0**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.1s,mb4.2						
TIXI	**Tiksi**	**75.31**	**356**	*e*P	**P**	**14 22 54.9**	**-1.9**
	comp=Z,2.6nm,0.8s,mb4.2						
KZA	**Kyzart**	**75.52**	**315**	P	**P**	**14 23 00.3**	**+1.8**
	SNR=28						
TKM2	**Tokmak 2**	**75.54**	**316**	P	**P**	**14 22 59.4**	**+0.7**
	SNR=7.6						
TKM2	**Tokmak 2**	**75.54**	**316**	*e*P	**P**	**14 22 58.7**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
TKM2	**Tokmak 2**	**75.54**	**316**	*e*P	**P**	**14 22 58.7**	**+0.1**
	comp=Z,6.5nm,1.0s,mb4.5						
NVS	**Novosibirsk**	**75.56**	**329**	*e*P	**P**	**14 22 55.8**	**-2.7**
NVS				pmax	pmax		
	comp=Z,31nm,1.8s,mb4.9						
NVS				pmax	pmax		
	comp=N,24nm,1.7s						
NVS				pmax	pmax		
	comp=E,28nm,1.4s						
UCH	**Uchtor**	**76.08**	**315**	P	**P**	**14 23 03.1**	**+1.3**
	SNR=12						
UCH	**Uchtor**	**76.08**	**315**	*e*P	**P**	**14 23 03.4**	**+1.6**
UCH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
UCH	**Uchtor**	**76.08**	**315**	*e*P	**P**	**14 23 03.4**	**+1.7**
	comp=Z,10nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**76.22**	**315**	*e*P	**P**	**14 23 02.8**	**+0.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**76.22**	**315**	*e*P	**P**	**14 23 02.8**	**+0.2**
	comp=Z,6.5nm,1.1s,mb4.5						
KURK	**Kurchatov**	**76.34**	**324**	LR	LR	14 57 22.3	
	comp=Z,51nm,18.2s,MS3.9,baz=200,slow=36						
KURK	**Kurchatov**	**76.34**	**324**	*e*P	**P**	**14 23 02.5**	**-0.6**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KURK	**Kurchatov**	**76.34**	**324**	*e*P	**P**	**14 23 02.5**	**-0.6**
	comp=Z,7.9nm,1.1s,mb4.6						
USP	**Ospenovka**	**76.41**	**316**	P	**P**	**14 23 04.0**	**+0.4**
	SNR=10						
AML	**Almayashu**	**76.64**	**315**	P	**P**	**14 23 06.3**	**+1.4**
	SNR=10						
AML	**Almayashu**	**76.64**	**315**	*e*P	**P**	**14 23 06.0**	**+1.1**
AML				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
AML	**Almayashu**	**76.64**	**315**	*e*P	**P**	**14 23 06.0**	**+1.0**
	comp=Z,21nm,1.2s,mb5.0						
EKS2	**Erkin-Say**	**76.73**	**315**	*e*P	**P**	**14 23 05.6**	**+0.1**
EKS2				*e*		14 23 20.8	
EKS2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
EKS2	**Erkin-Say**	**76.73**	**315**	*e*P	**P**	**14 23 05.6**	**+0.2**
	comp=Z,12nm,1.0s,mb4.8						
EKS2				*e*PcP	PcP	14 23 20.8	+4.0
OHAK	**Old Harbor**	**79.15**	**30**	*e*P	**P**	**14 23 19.2**	**+0.7**
	comp=Z,8.4nm,0.7s,mb4.8						
OHAK				*e*PcP	PcP	14 23 23.8	-3.1
KDAK	**Kodiak Island**	**79.72**	**30**	*e*P	**P**	**14 23 26.7**	**+5.0**
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KDAK	**Kodiak Island**	**79.72**	**30**	*e*P	**P**	**14 23 26.6**	**+5.0**
	comp=Z,9.3nm,0.9s,mb4.7						
SVW2	**Sparrevohn**	**79.72**	**26**	*e*P	**P**	**14 23 20.9**	**-0.7**
TTA	**Tatalina**	**80.37**	**24**	*e*P	**P**	**14 23 24.4**	**-0.7**
TTA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TTA	**Tatalina**	**80.37**	**24**	*e*P	**P**	**14 23 24.4**	**-0.7**
	comp=Z,2.5nm,0.7s,mb4.2						
RSO	**Redoubt South**	**80.71**	**27**	*e*P	**P**	**14 23 28.3**	**+1.4**
BVAR	**Borovoye Array**	**81.92**	**325**	P	**P**	**14 23 33.1**	**-0.4**
	comp=Z,5.9nm,0.7s,mb4.6,baz=111,slow=6.5,SNR=32						
BVAR	**Borovoye Array**	**81.92**	**325**	P	**P**	**14 23 33.1**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	**Borovoye**	**81.99**	**325**	*ce*P	**P**	**14 23 33.6**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BRVK	**Borovoye**	**81.99**	**325**	*e*P	**P**	**14 23 33.3**	**-0.7**
	comp=Z,6.3nm,0.8s,mb4.6						
BPAW	**Bear Paw Mtn.**	**82.91**	**24**	*e*P	**P**	**14 23 36.4**	**-2.0**
	comp=Z,13nm,1.7s,mb4.7						
MAW	**Mawson**	**83.02**	**202**	P	**P**	**14 23 38.1**	**-0.9**
	comp=Z,2.9nm,0.5s,mb4.5,baz=77,slow=6.8,SNR=13						
MAW	**Mawson**	**83.02**	**202**	P	**P**	**14 23 38.1**	**-0.9**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						
COLD	**Coldfoot**	**84.41**	**21**	*e*P	**P**	**14 23 46.2**	**+0.1**
	comp=Z,3.5nm,1.1s,mb4.4						
EGAK	**Eagle**	**

*CSEM **29** 14:26:10.9±0.2, 33°.34N×35°.39E, h2km, ML3.2, Error ellipse: s-maj=7.6km s-min=2.9km az=99.0*
GII 29 14:26:10.7±0.5, 33°.28N×35°.42E, h1km±1km, Md2.4/7, Jordan - Syria region
GRAL 29 14:26:11.5±0.3, 33°.32N×35°.42E, h7km±2km, MD3.2, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.18**	**336**	*e*P	Pg	14 26 15.0	-0.2
MATL	**Matirih**	**0.18**	**336**	*e*P	Pg	14 26 15.0	-0.2
RCY	**Rachaya**	**0.37**	**64**	*e*P	Pg	14 26 18.6	-0.1
RCY				*e*S	Sg	14 26 23.9	+0.3
RCY	**Rachaya**	**0.37**	**64**	*e*P	Pg	14 26 18.6	-0.1
RCY				*e*S	Sg	14 26 23.9	+0.3
BHL	**Bhannes**	**0.61**	**19**	*e*P	Pg	14 26 22.6	-0.7
BHL	**Bhannes**	**0.61**	**19**	*e*P	Pg	14 26 22.6	-0.7
HWQ	**Hawqa**	**1.05**	**25**	*e*P	Pg	14 26 30.2	-1.5
HWQ				*e*S	Sg	14 26 44.0	-1.3
HWQ	**Hawqa**	**1.05**	**25**	*e*P	Pg	14 26 30.2	-1.5
HWQ				*e*S	Sg	14 26 44.0	-1.3

*CSEM **29** 14:41:48.5, 63°.97N×21°.07W, h6km, ML3.5, After REY*
REY 29 14:41:48.5, 63°.97N×21°.07W, h6km, ML3.1, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISOL	**Solvholt**	**0.07**	**130**	P	Pg	14 41 50.3	+0.2
ISOL				S	Sg	14 41 51.6	+0.3
IBJA	**Bjarnastaoir**	**0.11**	**255**	P	Pg	14 41 51.1	+0.3
IBJA				S	Sg	14 41 53.0	+0.7
IKRO	**Krokur**	**0.13**	**349**	P	Pg	14 41 51.3	+0.2
IKRO				S	Sg	14 41 53.6	+0.7
ISAN	**Sandskeio**	**0.24**	**291**	P	Pg	14 41 53.2	+0.1
ISAN				S	Sg	14 41 56.8	+0.6
IHEI	**Heioarbar**	**0.24**	**342**	P	Pg	14 41 53.2	0.0
IHEI				S	Sg	14 41 56.9	+0.6
IASM	**Asmuli**	**0.24**	**125**	P	Pg	14 41 53.3	+0.1
IASM				S	Sg	14 41 56.9	+0.4
ISAU	**Saurbar**	**0.29**	**87**	P	Pg	14 41 54.0	-0.1
ISAU				S	Sg	14 41 58.3	+0.4
IVOS	**Vogsosar**	**0.31**	**247**	P	Pg	14 41 54.3	-0.1
IVOS				S	Sg	14 41 58.9	+0.5
IKAS	**Kald??rsel**	**0.35**	**278**	P	Pg	14 41 55.2	0.0
IKAS				S	Sg	14 42 00.5	+0.7
IKRI	**Krysuvik**	**0.46**	**258**	P	Pg	14 41 56.8	-0.5
IKRI				S	Sg	14 42 03.0	-0.2
IGYG	**Gygjarholskot**	**0.48**	**50**	P	Pg	14 41 57.3	-0.5
IGYG				S	Sg	14 42 04.2	+0.1
IHAU	**Haukadalur**	**0.49**	**90**	P	Pg	14 41 57.4	-0.4
IHAU				S	Sg	14 42 04.2	+0.1
IKUD	**Kuludalsa**	**0.50**	**315**	P	Pg	14 41 57.3	-0.8
IKUD				S	Sg	14 42 04.5	0.0
IVOG	**Vogar**	**0.58**	**270**	P	Pg	14 41 58.9	-0.8
IVOG				S	Sg	14 42 07.3	0.0
IMID	**Miomork**	**0.61**	**121**	P	Pg	14 41 59.5	-0.7
IMID				S	Sg	14 42 07.9	-0.3
IGRV	**Grindav??k**	**0.62**	**260**	P	Pg	14 41 59.6	-0.9
IGRV				S	Sg	14 42 08.3	-0.3
IVES	**Vestmannaeyjar**	**0.64**	**147**	P	Pg	14 42 00.1	-0.6
IVES				S	Sg	14 42 09.0	+0.1
INYL	**Nylenda**	**0.74**	**271**	P	Pg	14 42 01.1	-1.5
INYL				S	Sg	14 42 11.4	-0.8
IASB	**`sbjarnarst**	**0.79**	**352**	P	Pg	14 42 02.2	-1.4
IASB				S	Sg	14 42 12.9	-0.8
IESK	**Eystri-Skogar**	**0.85**	**121**	P	Pg	14 42 03.4	-1.3
IESK				S	Sg	14 42 14.9	-0.8
IVAT	**Vatnsfell**	**0.97**	**76**	P	Pg	14 42 05.4	-1.6
IVAT				S	Sg	14 42 18.6	-1.0
IHVO	**Lagu-Hvolar**	**1.08**	**114**	P	Pg	14 42 07.5	-1.7
IHVO				S	Sg	14 42 22.2	-1.1
ISNB	**Snabyli**	**1.10**	**101**	P	Pg	14 42 07.5	-2.1
ISNB				S	Sg	14 42 22.6	-1.4
IHVE	**Hveravellir**	**1.11**	**35**	P	Pg	14 42 07.3	-2.5
IHVE				S	Sg	14 42 22.9	-1.2
ISKR	**Skrokkalda**	**1.31**	**62**	P	Pn	14 42 11.2	-2.1
ISKR				S	Sb	14 42 29.0	-1.5
IKAL	**Kalfafell**	**1.49**	**89**	P	Pn	14 42 14.3	-1.5
IKAL				S	Sn	14 42 33.9	-1.7
IGRF	**Grimsfjall**	**1.72**	**74**	P	Pn	14 42 18.0	-0.9
IFAG	**Fagurholsmyri**	**1.95**	**91**	P	Pn	14 42 21.3	-0.8
IFAG				S	Sn	14 42 46.6	-0.3
ISVA	**Svartarkot**	**2.14**	**48**	P	Pn	14 42 24.0	-0.6
IHRN	**Hraun**	**2.18**	**10**	P	Pn	14 42 24.6	-0.7
IHRN				S	Sn	14 42 53.3	+0.7
IKRE	**Kreppuhraun**	**2.19**	**66**	P	Pn	14 42 24.9	-0.5
IHLA	**Hella**	**2.28**	**29**	P	Pn	14 42 25.9	-0.8
IBRU	**Bruarjokull**	**2.33**	**66**	P	Pn	14 42 26.8	-0.5
IHVA	**Hvannstoosfjol**	**2.46**	**64**	P	Pn	14 42 29.5	+0.4
IVSH	**V-Sauoahnukur**	**2.47**	**68**	P	Pn	14 42 29.4	+0.2

*ISCJB **29** 14:54:12.8±0.5, 39°.82N±0°.03×25°.59E±0°.03, h2km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=39.1*
*SOF **29** 14:54:12.1, 39°.86N×25°.64E, h4km, MD2.9*
*ISK **29** 14:54:12.6, 39°.77N×25°.66E, h5km, ML3.7*
*NEIC **29** 14:54:12.0, 39°.77N×25°.64E, h2km, ML3.2(ATH), ML3.6(ISK), After ISK.*
*CSEM **29** 14:54:13.9±0.1, 39°.81N×25°.60E, h5km, MD3.7, Error ellipse: s-maj=3.7km s-min=2.3km az=44.0*
*ATH **29** 14:54:13.2, 39°.80N×25°.58E, h26km±1km, MD3.7/4*
*DDA **29** 14:54:16.7, 40°.11N×26°.13E, h7km±16km, Md3.5*
ISC 29 14:54:14.2±0.4, 39°.82N±0°.02×25°.62E±0°.03, h5km±3km, n130, σ0°.84/141, 7C-4D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.34**	**86**	*i*P	**Pg**	**14 54 20.5**	**-0.1**
BOZC				*i*S	**Sg**	**14 54 29.2**	**+4.2**
LIA	**Limnos Island**	**0.34**	**284**	*e*PB	**Pg**	**14 54 21.1**	**+0.3**
LIA				*e*SB	**Sg**	**14 54 26.2**	**+0.8**
LIA	**Limnos Island**	**0.34**	**284**	P	**Pg**	**14 54 21.2**	**+0.4**
LIA	**Limnos Island**	**0.34**	**284**	P	**Pg**	**14 54 21.2**	**+0.4**
LIA				*e*Sb	**Sg**	**14 54 26.2**	**+0.8**
GADA	**Gvkgeada**	**0.43**	**30**	*e*PG	**Pg**	**14 54 22.3**	**-0.2**
GADA	**Gvkgeada**	**0.43**	**30**	*e*Pg	**Pg**	**14 54 22.3**	**-0.2**
EZN	**Ezine**	**0.54**	**89**	*e*PG	**Pg**	**14 54 23.6**	**-1.0**
EZN				*e*SG	**Sg**	**14 54 31.8**	**+0.1**
EZN	**Ezine**	**0.54**	**89**	*e*Pg	**Pg**	**14 54 23.7**	**-0.9**
EZN				*e*Sg	**Sg**	**14 54 31.8**	**+0.1**
PRK	**Paraskevi**	**0.76**	**138**	*e*PN	**Pg**	**14 54 28.4**	**-0.4**
PRK				*e*SN	**Sg**	**14 54 39.2**	**+0.5**
PRK	**Paraskevi**	**0.76**	**138**	P	**Pg**	**14 54 30.2**	**+1.4**
PRK	**Paraskevi**	**0.76**	**138**	P	**Pg**	**14 54 30.2**	**+1.4**
AYVA	**Ayvalik**	**0.97**	**121**	*i*P	**Pg**	**14 54 32.2**	**-0.6**
AYVA				*i*S	**Sg**	**14 54 46.6**	**+1.2**
AYVA	**Ayvalik**	**0.97**	**121**	*i*P	**Pg**	**14 54 32.2**	**-0.6**
AYVA				*i*S	**Sg**	**14 54 46.6**	**+1.2**
ENEZ	**Enez**	**1.00**	**24**	*e*PG	**Pg**	**14 54 33.2**	**-0.3**
ENEZ	**Enez**	**1.00**	**24**	*e*Pg	**Pg**	**14 54 33.2**	**-0.2**
LPK	**Lapseki**	**1.04**	**57**	*e*PG	**Pg**	**14 54 33.2**	**-0.8**
LPK	**Lapseki**	**1.04**	**57**	*e*Pg	**Pg**	**14 54 33.2**	**-0.8**
RDO	**Rodhopi**	**1.33**	**357**	*e*PN	**Pn**	**14 54 38.1**	**-1.2**
RDO	**Rodhopi**	**1.33**	**357**	P	**Pn**	**14 54 38.7**	**-0.6**
RDO	**Rodhopi**	**1.33**	**357**	*e*Pn	**Pn**	**14 54 38.1**	**-1.2**
RDO	**Rodhopi**	**1.33**	**357**	P	**Pn**	**14 54 38.7**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.48**	**53**	*e*PN	**Pn**	**14 54 41.4**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.48**	**53**	*e*Pn	**Pn**	**14 54 41.4**	**0.0**
BALY	**Balya**	**1.54**	**92**	*i*P	**Pn**	**14 54 41.8**	**-0.5**
BALY				*i*S	**Sn**	**14 55 01.3**	**-1.4**
BALY	**Balya**	**1.54**	**92**	*i*P	**Pn**	**14 54 41.8**	**-0.5**
BALY				*i*S	**Sn**	**14 55 01.3**	**-1.4**
MFT	**Murefte**	**1.60**	**52**	*e*PN	**Pn**	**14 54 42.7**	**-0.3**
MFT	**Murefte**	**1.60**	**52**	*e*Pn	**Pn**	**14 54 42.7**	**-0.3**
BALB	**Balikesir**	**1.75**	**95**	*e*PN	**Pn**	**14 54 44.9**	**-0.3**
BALB	**Balikesir**	**1.75**	**95**	*e*Pn	**Pn**	**14 54 44.9**	**-0.3**
PLG	**Polygyros**	**1.76**	**289**	P	**Pg**	**14 54 50.3**	**+2.5**
EDC	**Edincik**	**1.80**	**72**	*e*PN	**Pn**	**14 54 45.9**	**+0.1**
EDC	**Edincik**	**1.80**	**72**	*e*Pn	**Pn**	**14 54 45.9**	**+0.1**
BLCB	**Balcova**	**1.81**	**142**	*e*PN	**Pn**	**14 54 45.4**	**-0.5**
BLCB	**Balcova**	**1.81**	**142**	*e*Pn	**Pn**	**14 54 45.4**	**-0.5**
KDZ	**Kurdzhali**	**1.84**	**355**	P	**Pn**	**14 54 45.2**	**-1.1**
KDZ	**Kurdzhali**	**1.84**	**355**	P	**Pn**	**14 54 45.2**	**-1.1**
BNT	**Bandirma**	**1.84**	**72**	*e*PN	**Pn**	**14 54 46.1**	**-0.3**
TKR	**Tekirdag**	**1.88**	**51**	*e*PN	**Pn**	**14 54 47.2**	**+0.3**
TKR	**Tekirdag**	**1.88**	**51**	*e*Pn	**Pn**	**14 54 47.2**	**+0.4**
IZM	**Izmir**	**1.91**	**137**	*e*PN	**Pn**	**14 54 47.0**	**-0.3**
IZM	**Izmir**	**1.91**	**137**	*e*Pn	**Pn**	**14 54 47.0**	**-0.3**
AKS	**Akhisar**	**1.94**	**118**	*e*PN	**Pn**	**14 54 47.3**	**-0.5**
AKS	**Akhisar**	**1.94**	**118**	*e*Pn	**Pn**	**14 54 47.3**	**-0.5**
NVR	**Nevrokopi**	**2.03**	**319**	*e*PB	**Pn**	**14 54 48.2**	**-0.8**
NVR	**Nevrokopi**	**2.03**	**319**	P	**Pn**	**14 54 48.7**	**-0.3**
NVR	**Nevrokopi**	**2.03**	**319**	P	**Pn**	**14 54 48.7**	**-0.3**
CRLT	**Corlu**	**2.08**	**50**	*e*PN	**Pn**	**14 54 50.2**	**+0.5**
CRLT	**Corlu**	**2.08**	**50**	*e*Pn	**Pn**	**14 54 50.2**	**+0.5**
KCT	**Karacabey**	**2.15**	**77**	*e*PN	**Pn**	**14 54 50.9**	**+0.3**
KCT	**Karacabey**	**2.15**	**77**	*e*Pn	**Pn**	**14 54 50.9**	**+0.3**
EDRB	**Edirne**	**2.20**	**22**	*e*PN	**Pn**	**14 54 52.1**	**+0.8**
EDRB	**Edirne**	**2.20**	**22**	*e*Pn	**Pn**	**14 54 52.1**	**+0.8**
DIM	**Dimitrovgrad**	**2.23**	**358**	P	**Pn**	**14 54 50.8**	**-0.9**
DIM	**Dimitrovgrad**	**2.23**	**358**	P	**Pn**	**14 54 50.8**	**-0.9**
MMB	**Musomiste**	**2.28**	**322**	P	**Pn**	**14 54 51.6**	**-0.8**
MMB	**Musomiste**	**2.28**	**322**	P	**Pn**	**14 54 51.6**	**-0.8**
SMG	**Samos**	**2.31**	**155**	*e*PB	**Pn**	**14 54 52.2**	**-0.6**
SMG	**Samos**	**2.31**	**155**	P	**Pn**	**14 54 53.2**	**+0.4**
SMG	**Samos**	**2.31**	**155**	P	**Pn**	**14 54 53.2**	**+0.4**
DST	**Dursunbey**	**2.33**	**94**	*e*PN	**Pn**	**14 54 53.2**	**+0.1**
DST	**Dursunbey**	**2.33**	**94**	*e*Pn	**Pn**	**14 54 53.2**	**+0.1**
PLD	**Plovdiv**	**2.39**	**343**	Pg	**Pg**	**14 54 58.9**	**-1.0**
PLD	**Plovdiv**	**2.39**	**343**	Pg	**Pg**	**14 54 58.9**	**-1.0**
SLVT	**Silivri**	**2.43**	**54**	*e*PN	**Pn**	**14 54 55.1**	**+0.7**
SLVT	**Silivri**	**2.43**	**54**	*e*Pn	**Pn**	**14 54 55.1**	**+0.7**
CTKS	**Kestanelik-??a**	**2.62**	**56**	*e*PN	**Pn**	**14 54 57.8**	**+0.7**
CTKS	**Kestanelik-??a**	**2.62**	**56**	*e*Pn	**Pn**	**14 54 57.8**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.62**	**50**	*e*PN	**Pn**	**14 54 57.8**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.62**	**50**	*e*Pn	**Pn**	**14 54 57.8**	**+0.7**
KULA	**Kula-Manisa**	**2.70**	**118**	*e*PN	**Pn**	**14 54 57.7**	**-0.5**
KULA	**Kula-Manisa**	**2.70**	**118**	*e*Pn	**Pn**	**14 54 57.7**	**-0.5**
APE	**Apeiranthos**	**2.75**	**181**	*e*PN	**Pn**	**14 54 57.6**	**-1.2**
APE	**Apeiranthos**	**2.75**	**181**	*e*Pn	**Pn**	**14 54 57.6**	**-1.2**
BGKT	**Bogazkoy**	**2.76**	**59**	*e*PN	**Pn**	**14 54 59.7**	**+0.7**
BGKT	**Bogazkoy**	**2.76**	**59**	*e*Pn	**Pn**	**14 54 59.7**	**+0.6**
VAY	**Valandovo**	**2.77**	**304**	*e*Pn	**Pg**	**14 55 05.7**	**-1.4**
VAY				*e*Sg	**Sg**	**14 55 43.4**	**+0.4**
GEMT	**Gemlik**	**2.81**	**76**	*e*PN	**Pn**	**14 55 00.2**	**+0.6**
GEMT	**Gemlik**	**2.81**	**76**	*e*Pn	**Pn**	**14 55 00.2**	**+0.6**
KKB	**Krupnik**	**2.81**	**318**	Pg	**Pg**	**14 55 06.3**	**-1.7**
KKB	**Krupnik**	**2.81**	**318**	Pg	**Pg**	**14 55 06.3**	**-1.7**
ISK	**Istanbul-Kandi**	**2.91**	**63**	*e*PN	**Pn**	**14 55 01.7**	**+0.7**
ISK	**Istanbul-Kandi**	**2.91**	**63**	*e*Pn	**Pn**	**14 55 01.7**	**+0.7**
PGB	**Panagyurishte**	**2.94**	**339**	Pg	**Pg**	**14 55 10.0**	**-0.5**
PGB	**Panagyurishte**	**2.94**	**339**	Pg	**Pg**	**14 55 10.0**	**-0.5**
YLV	**Yalova**	**2.97**	**74**	*e*PN	**Pn**	**14 55 03.2**	**+1.3**
YLV	**Yalova**	**2.97**	**74**	*e*Pn	**Pn**	**14 55 03.2**	**+1.3**
KLYT	**Kilyos**	**2.98**	**60**	*e*PN	**Pn**	**14 55 02.0**	**0.0**
KLYT	**Kilyos**	**2.98**	**60**	*e*Pn	**Pn**	**14 55 02.0**	**0.0**
MLSB	**Milas**	**3.03**	**145**	*e*PN	**Pn**	**14 55 02.7**	**0.0**
MLSB	**Milas**	**3.03**	**145**	*e*Pn	**Pn**	**14 55 02.7**	**-0.1**
ADVT	**Abdulvahap**	**3.22**	**78**	*e*PN	**Pn**	**14 55 06.1**	**+0.8**
ADVT	**Abdulvahap**	**3.22**	**78**	*e*Pn	**Pn**	**14 55 06.1**	**+0.8**
VTS	**Vitosha**	**3.31**	**328**	Pg	**Pg**	**14 55 18.9**	**+1.2**
VTS	**Vitosha**	**3.31**	**328**	Pg	**Pg**	**14 55 18.9**	**+1.2**
SILT	**Sile**	**3.35**	**65**	*e*PN	**Pn**	**14 55 08.1**	**+1.1**
SILT	**Sile**	**3.35**	**65**	*e*Pn	**Pn**	**14 55 08.1**	**+1.0**
DENT	**Denizli**	**3.37**	**127**	*e*PN	**Pn**	**14 55 07.0**	**-0.4**
DENT	**Denizli**	**3.37**	**127**	*e*Pn	**Pn**	**14 55 07.0**	**-0.4**
KHL	**Karahalli**	**3.38**	**115**	*e*PN	**Pn**	**14 55 07.5**	**-0.1**
KHL	**Karahalli**	**3.38**	**115**	*e*Pn	**Pn**	**14 55 07.5**	**-0.1**
YER	**Yerkesik**	**3.40**	**141**	*e*PN	**Pn**	**14 55 07.2**	**-0.6**
YER	**Yerkesik**	**3.40**	**141**	*e*Pn	**Pn**	**14 55 07.2**	**-0.6**
DAT	**Datca**	**3.45**	**153**	*e*PN	**Pn**	**14 55 07.7**	**-0.8**
DAT	**Datca**	**3.45**	**153**	*e*Pn	**Pn**	**14 55 07.7**	**-0.8**
ALT	**Altintas**	**3.56**	**101**	*e*PN	**Pn**	**14 55 09.8**	**-0.2**
ALT	**Altintas**	**3.56**	**101**	*e*Pn	**Pn**	**14 55 09.8**	**-0.2**
GPA	**Golpazari**	**3.63**	**81**	*e*PN	**Pn**	**14 55 10.8**	**-0.2**
KRUS	**Krusevo**	**3.67**	**296**	*e*PN	**Pn**	**14 55 12.7**	**+1.1**
KRUS	**Krusevo**	**3.67**	**296**	*e*Pn	**Pn**	**14 55 12.6**	**+1.1**
GULT	**Gulveren**	**3.80**	**79**	*e*PN	**Pn**	**14 55 14.0**	**+0.7**
GULT	**Gulveren**	**3.80**	**79**	*e*Pn	**Pn**	**14 55 14.0**	**+0.7**
SHUT	**Suhut-Afyon**	**4.04**	**107**	*e*PN	**Pn**	**14 55 16.7**	**+0.2**
SHUT	**Suhut-Afyon**	**4.04**	**107**	*e*Pn	**Pn**	**14 55 16.7**	**+0.2**
ESKT	**Eskisehir**	**4.05**	**93**	*e*PN	**Pn**	**14 55 17.2**	**+0.5**
ESKT	**Eskisehir**	**4.05**	**93**	*e*Pn	**Pn**	**14 55 17.2**	**+0.5**
BARS	**Barje**	**4.14**	**318**	*i*Pn	**Pn**	**14 55 18.1**	**+0.1**
TIRR	**Tirgusor**	**5.08**	**23** ⇑	*i*P	**Pn**	**14 55 29.9**	**-1.0**
TIRR	**Tirgusor**	**5.08**	**23**	S	**Sg**	**14 56 55.9**	**-1.4**
TIRR	**Tirgusor**	**5.08**	**23** ⇑	*i*P	**Pn**	**14 55 29.9**	**-1.0**
HARR	**Harsova**	**5.16**	**19** ⇑	*i*P	**Pg**	**14 55 52.0**	**-1.0**
HARR	**Harsova**	**5.16**	**19**	S	**Sg**	**14 57 01.4**	**+1.5**
MLR	**Muntele Rosu**	**5.67**	**2** ⇓	*i*P	**Pn**	**14 55 40.3**	**+1.3**
MLR	**Muntele Rosu**	**5.67**	**2**	S	**Sg**	**14 57 21.4**	**+5.1**
MLR	**Muntele Rosu**	**5.67**	**2** ⇓	*i*P	**Pn**	**14 55 40.3**	**+1.3**
GZR	**Gura Zlata**	**5.95**	**340** ⇑	*i*P	**Pn**	**14 55 42.6**	**-0.3**
GZR	**Gura Zlata**	**5.95**	**340** ⇑	*i*P	**Pn**	**14 55 42.6**	**-0.3**
BZS	**Buzias**	**6.50**	**334** ⇓	*i*P	**Pn**	**14 55 43.0**	**-7.4**
DRGR		**7.29**	**344** ⇓	*i*P	**Pn**	**14 56 06.9**	**+5.7**
BURAR	**Bucovina Array**	**7.80**	**358** ⇑	*i*P	**Pn**	**14 56 10.8**	**+2.6**
BURAR	**Bucovina Array**	**7.80**	**358** ⇑	*i*P	**Pn**	**14 56 10.8**	**+2.6**

*IDC **29** 15:20:35.5±1.7, 0°.17N×133°.21E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/20, mbtmp3.8/6, ML4.0/1, MS3.8/2, Ms1 3.7/2, ms1mx2.9/30, Error ellipse: s-maj=68.5km s-min=16.0km az=75.0*
*NEIC **29** 15:20:36.6±1.3, 0°.22N×133°.36E, h10km, mb4.5/2, Error ellipse: s-maj=44.8km s-min=13.3km az=77.0*
*ISCJB **29** 15:20:37.9±1.3, 0°.2N±0°.1×133°.4E±0°.3, h33km, mb3.9/6, MS3.8/2, Error ellipse: s-maj=43.1km s-min=13.4km az=167.8*
ISC 29 15:20:40.3±1.2, 0°.1N±0°.1×133°.3E±0°.3, h35km, n10, σ1°.20/10, mb3.9/6, MS3.8/2, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.78**	**184**	*e*Pn	**Pn**	**15 23 38.4**	**-1.2**
	25nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.62**	**202**	P	**Pn**	**15 25 07.6**	**+0.2**
	0.4nm,0.3s,baz=50,slow=9.9,SNR=8.3						
WRAB	**Tennant Creek**	**19.96**	**177**	*e*P	**Pn**	**15 25 10.5**	**-0.9**
	22nm,0.9s						
ASAR	**Alice Springs**	**23.65**	**179**	P	**P**	**15 25 50.0**	**+1.3**
	19nm,0.8s,mb4.6,baz=356,slow=11,SNR=176						
ASAR				S	**S**	**15 30 06.6**	**+5.5**
	1.1nm,1.0s,baz=352,slow=25,SNR=4.8						
MBWA	**Marble Bar**	**24.97**	**211**	P	**P**	**15 26 02.7**	**+1.9**
	8.9nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**32.78**	**167**	P	**P**	**15 27 09.9**	**-0.3**
	1.1nm,0.8s,mb3.8,baz=354,slow=10,SNR=2.4						
STKA				LR	LR	15 41 47.8	
	comp=Z,54nm,19.2s,MS3.3,baz=200,slow=39						
CMAR	**Chiang Mai Arr**	**38.35**	**300**	P	**P**	**15 27 56.1**	**-2.2**
	0.4nm,0.6s,mb3.4,baz=106,slow=6.0,SNR=4.4						
SONM	**Songino Array**	**52.96**	**338**	P	**P**	**15 29 53.2**	**-0.1**
	0.2nm,0.4s,mb3.4,baz=139,slow=9.5,SNR=2.2						
MKAR	**Makanchi Array**	**64.29**	**324**	P	**P**	**15 31 13.2**	**+1.0**
	0.3nm,0.5s,mb3.6,baz=103,slow=9.3,SNR=4.8						
KURK	**Kurchatov**	**68.34**	**326**	LR	LR	16 00 18.2	
	comp=Z,195nm,21.8s,MS4.3,baz=340,slow=35						

*ISCJB **29** 15:27:28.9±2.2, 51°.99N±0°.09×170°.60W±0°.07, h31km±15km, mb4.2/41, Error ellipse: s-maj=15.1km s-min=6.7km az=164.5*
*MOS **29** 15:27:29.5±0.9, 51°.95N×170°.51W, h40km, mb4.4/26, Error ellipse: s-maj=15.1km s-min=8.5km az=102.7*
*BJI **29** 15:27:30.6, 52°.10N×170°.50W, h47km, mB5.0/6, mb4.4/9*
*NEIC **29** 15:27:32.6±0.5, 52°.06N×170°.51W, mb4.3/14, ML3.7(AEIC), Error ellipse: s-maj=11.3km s-min=4.6km az=170.0*
*IDC **29** 15:27:32.0±4.4, 51°.99N×170°.53W, h41km±39km, mb3.8/22, mb1 4.0/24, mb1mx3.9/32, mbtmp3.8/24, ML4.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/41, Error ellipse: s-maj=24.1km s-min=12.8km az=1.0*
ISC 29 15:27:29.6±2.1, 51°.97N±0°.09×170°.60W±0°.07, h23km±14km, n97, σ0°.92/100, mb4.2/41, 7C-1D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**1.47**	**46**	*e*Pn	**Pn**	**15 27 45.8**	**-8.8**
NIKO				*e*Sn	**Sn**	**15 28 09.8**	**-3.2**
OKFG	**Magazine Ridge**	**2.18**	**47**	P	**Pn**	**15 28 04.5**	**+0.1**
OKFG				S	**Sn**	**15 28 34.3**	**+3.6**
UNV	**Unalaska Valle**	**3.11**	**51**	*e*Pn	**Pn**	**15 28 16.6**	**-0.6**
UNV				S	**Sn**	**15 28 54.5**	**+0.9**
AKGG	**Akutan Green G**	**3.56**	**49**	P	**Pn**	**15 28 23.8**	**+0.4**
AKUT	**Akutan**	**3.63**	**51**	*e*Pn	**Pn**	**15 28 25.6**	**+1.2**
SDPT	**Sand Point**	**6.90**	**57**	P	**Pn**	**15 29 08.5**	**-0.8**
KDAK	**Kodiak Island**	**11.88**	**54**	P	**Pn**	**15 30 16.8**	**-0.6**
KDAK	**Kodiak Island**	**11.88**	**54**	*e*Pn	**Pn**	**15 30 14.0**	**-3.4**
SVW2	**Sparrevohn**	**12.31**	**36**	Pn	**Pn**	**15 30 28.0**	**+4.8**
TTA	**Tatalina**	**13.46**	**30**	*e*P	**Pn**	**15 30 40.3**	**+1.4**
TNA	**Tin City**	**13.70**	**5**	*e*Pn	**Pn**	**15 30 46.2**	**+4.0**
KTH	**Kantishna Hill**	**15.56**	**34**	*e*Pn	**Pn**	**15 31 08.3**	**+1.1**
KTH				*e*		15 31 17.5	
BMRM	**Bremner River**	**16.84**	**48**	*e*Pn	**Pn**	**15 31 17.8**	**-5.8**
	18nm,1.2s						
COLD	**Coldfoot**	**18.30**	**26**	*e*P	**Pn**	**15 31 36.5**	**-5.1**
PETK	**Petropavlovsk-**	**19.24**	**286**	P	**Pn**	**15 31 53.5**	**+0.4**
	0.9nm,0.3s,baz=88,slow=15,SNR=32						
PETK				LR	LR	15 39 00.9	
	comp=Z,30nm,21.4s,baz=274,slow=36						
PETK	**Petropavlovsk-**	**19.24**	**286**	P	**Pn**	**15 31 53.5**	**+0.4**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,30nm,21.4s						
PETK	**Petropavlovsk-**	**19.24**	**286**	P	**Pn**	**15 31 53.5**	**+0.4**
PETK				LR	LR	15 39 00.9	
BILL	**Bilibino**	**19.62**	**334** ⇑	*e*P	**Pn**	**15 31 57.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**19.62**	**334**	*e*P	**Pn**	**15 31 56.0**	**-1.5**
	comp=Z,4.4nm,0.6s						
EGAK	**Eagle**	**19.82**	**38**	*e*P	**Pn**	**15 31 57.4**	**-2.6**
	comp=Z,4.5nm,0.6s						
DAWY	**Dawson**	**20.23**	**41**	*e*P	**P**	**15 32 00.6**	**-2.1**
SKAG	**Skagway**	**21.02**	**55**	*e*P	**P**	**15 32 11.8**	**+0.5**
	comp=Z,15nm,0.6s,mb4.5						
CRAG	**Craig**	**22.27**	**66**	*e*P	**P**	**15 32 27.3**	**+2.6**
	comp=Z,11nm,0.9s,mb4.3						
SEY	**Seymchan**	**22.39**	**314**	*ce*P	**P**	**15 32 26.5**	**+0.6**
DLBC	**Dease Lake**	**23.74**	**58**	P	**P**	**15 32 40.2**	**+0.4**
	comp=Z,1.8nm,0.3s,mb4.0,baz=276,slow=9.5,SNR=6.5						
INK	**Inuvik**	**24.10**	**33**	P	**P**	**15 32 42.7**	**-0.3**
	com

BRVK Borovoye 63.60 324 *ce*P **P 15 37 58.4 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,2.5s,mb4.3
BRVK Borovoye 63.60 324 P **P 15 37 57.9 -0.1**
comp=Z,2.4nm,0.6s,mb4.4
ARU Arti 64.63 332 *d i*P **P 15 38 04.8 0.0**
ARU *e* 15 40 23.1
ARU S **S 15 46 43.8 +1.0**
ARU pmax pmax
comp=Z,12nm,2.5s,mb4.5
FINES FINESS Array B 66.16 351 P **P 15 38 14.3 -0.3**
comp=Z,2.0nm,0.7s,mb4.2,baz=19,slow=12,SNR=6.4
FINES FINESS Array B 66.16 351 P **P 15 38 14.3 -0.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 66.16 351 P **P 15 38 14.3 -0.3**
NB2 NORSAR Subarra 67.33 359 P **P 15 38 21.9 -0.2**
comp=Z,1.0nm,0.6s,mb4.0,baz=4.0,slow=6.9
NOA NORSAR Array B 67.33 359 P **P 15 38 21.9 -0.2**
comp=Z,0.9nm,0.7s,mb3.9,baz=1.4,slow=6.3,SNR=4.5
NOA NORSAR Array B 67.33 359 P **P 15 38 21.9 -0.2**
NOA pmax pmax
comp=Z,1.0nm,0.7s
AKTK Aktyubinsk 69.97 329 P **P 15 38 39.0 +0.3**
AKTO Aktyubinsk 69.97 329 P **P 15 38 39.0 +0.3**
comp=Z,5.0nm,0.6s,mb4.7,baz=52,slow=6.7,SNR=25
AKTO Aktyubinsk 69.97 329 P **P 15 38 39.0 +0.3**
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
AAK Ala-Archa 70.25 315 *ce*P **P 15 38 40.9 +0.3**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
AAK Ala-Archa 70.25 315 *e*P **P 15 38 40.8 +0.3**
comp=Z,1.6nm,0.6s,mb4.1
ABKAR Akbulak array 70.37 328 *e*P **P 15 38 41.0 -0.2**
comp=Z,2.4nm,0.6s,mb4.3
OBN Obninsk 70.92 344⇑ *e*P **P 15 38 44.0 -0.5**
OBN pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LSA Lhasa 71.94 295 *e*P **P 15 38 52.2 +1.2**
LSA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LSA Lhasa 71.94 295 *e*P **P 15 38 52.2 +1.2**
comp=Z,4.3nm,0.6s,mb4.6
CMAR Chiang Mai Arr 75.96 282 P **P 15 39 15.2 +0.6**
comp=Z,2.0nm,0.7s,mb4.2,baz=25,slow=6.4,SNR=18
CMAR Chiang Mai Arr 75.96 282 P **P 15 39 15.3 +0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 76.34 347 P **P 15 39 15.1 -1.2**
comp=Z,0.2nm,0.3s,mb3.5,baz=12,slow=5.8,SNR=4.3
AKASG Malin Array Be 76.34 347 *ce*P **P 15 39 17.0 +0.7**
GERES GERESS Array B 79.50 357 P **P 15 39 33.9 0.0**
comp=Z,0.7nm,0.7s,mb3.7,baz=21,slow=7.7,SNR=4.5
GERES GERESS Array B 79.50 357 P **P 15 39 33.9 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 89.56 229 P **P 15 40 24.1 -0.8**
comp=Z,0.6nm,0.8s,mb4.0,baz=26,slow=4.7,SNR=8.3
ASAR Alice Springs 89.56 229 P **P 15 40 24.1 -0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.8s

BJI ***29*** *15:37:31.7, 21°.31N×143°.80E, h329km, mB4.7/16, mb4.4/28*
MOS ***29*** *15:37:33.2±0.8, 21°.58N×143°.14E, h291km, mb4.6/50, Error ellipse: s-maj=10.1km s-min=5.6km az=106.0*
ISCJB ***29*** *15:37:36.7±0.6, 21°.59N±0°.03×143°.08E±0°.03, h321km±5km, mb4.5/112, Error ellipse: s-maj=4.6km s-min=4.2km az=146.4*
IDC ***29*** *15:37:37.1±1.1, 21°.57N×143°.10E, h318km±10km, mb4.2/29, mb1 4.3/34, mb1mx4.2/39, mbtmp4.2/34, Error ellipse: s-maj=10.8km s-min=7.1km az=85.0*
NEIC ***29*** *15:37:38.2±0.7, 21°.57N×143°.11E, h329km±7km, mb4.5/65, Error ellipse: s-maj=4.3km s-min=4.0km az=190.0*
ISC 29 15:37:38.0±0.6, 21°.60N±0°.03×143°.12E±0°.03, h322km±5km, h319km±3.4km; pP-P, n518, σ0s69/535, mb4.5/112, 126C-128D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.54**	**351**	P	**Pn**	**15 39 01.2**	**-1.3**
CBIJ				S	**S**	**15 40 09.3**	**-1.5**
CBIJ	**Chichi jima**	**5.54**	**351**	P	**Pn**	**15 39 01.1**	**-1.4**
	259nm,0.3s,baz=147,slow=3.2,SNR=155						
CBIJ				S	**S**	**15 40 09.8**	**-1.0**
	200nm,0.3s,baz=306,slow=23,SNR=11						
GUMO	**Guam**	**8.14**	**168**	P	**Pn**	**15 39 33.1**	**-0.4**
	45nm,0.3s,baz=166,slow=2.4,SNR=43						
GUMO	**Guam**	**8.14**	**168**	*e*P	**Pn**	**15 39 33.3**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,706nm,1.0s						
GUMO	**Guam**	**8.14**	**168**	*e*P	**Pn**	**15 39 33.3**	**-0.3**
	comp=Z,706nm,1.0s						
JHJ2	**Mitsune**	**11.84**	**346**	P	**Pn**	**15 40 17.7**	**-0.5**
JHJ2				S	**S**	**15 42 32.9**	**+3.0**
JHJ	**Hachijo jima 2**	**11.85**	**346**	P	**Pn**	**15 40 17.4**	**-1.0**
	comp=Z,54nm,0.3s,baz=93,slow=18,SNR=9.6						
JHJ				S	**S**	**15 42 27.8**	**-2.5**
	comp=Z,26nm,0.3s,baz=76,slow=15,SNR=3.1						
JWZ	**Kozaga**	**13.57**	**333**	P	**Pn**	**15 40 40.1**	**+1.2**
JIE	**Ise**	**13.94**	**337**	P	**Pn**	**15 40 42.4**	**-0.8**
JOD2	**Odawara 2**	**14.07**	**346**	P	**P**	**15 40 44.6**	**+1.0**
JOD2				S	**S**	**15 43 15.2**	**-2.4**
JOW	**Kunigami**	**14.51**	**294**	P	**P**	**15 40 49.5**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=76,slow=12,SNR=9.1						
JMN	**Monobe**	**14.59**	**328**	P	**P**	**15 40 52.0**	**+2.6**
JYT	**Yasato**	**14.80**	**351**	P	**P**	**15 40 51.7**	**0.0**
JYT				S	**S**	**15 43 31.3**	**-1.1**
JRY	**Ryogami san**	**14.83**	**347**	P	**P**	**15 40 52.2**	**+0.2**
JRY				S	**S**	**15 43 28.4**	**-4.6**
JWT	**Wachi**	**15.22**	**335**	P	**P**	**15 40 57.8**	**+1.5**
JWT				S	**S**	**15 43 38.8**	**-2.1**
JAD	**Aida**	**15.44**	**331**	P	**P**	**15 41 00.3**	**+1.5**
MJAR	**Matsushiro Arr**	**15.49**	**345**	P	**P**	**15 40 59.2**	**0.0**
	comp=Z,6.3nm,0.3s,baz=120,slow=14,SNR=36						
MJAR				S	**S**	**15 43 42.4**	**-3.9**
	comp=Z,1.5nm,0.3s,baz=286,slow=26,SNR=4.1						
MJAR	**Matsushiro Arr**	**15.49**	**345**	P	**P**	**15 40 59.2**	**-0.1**
MJAR				S	**S**	**15 43 42.4**	**-3.9**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR				smax			
	comp=N,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**15.49**	**345**	P	**P**	**15 40 59.2**	**-0.1**
MJAR				S	**S**	**15 43 42.4**	**-3.9**
MAJO	**Matsushiro**	**15.49**	**345**	*e*P	**P**	**15 40 59.3**	**0.0**
MAJO				pmax	pmax		
	comp=Z,27nm,0.3s						
MAJO	**Matsushiro**	**15.49**	**345**	*e*P	**P**	**15 40 59.3**	**+0.1**
	comp=Z,27nm,0.3s						
MAT	**Matsushiro**	**15.49**	**345**	P	**P**	**15 40 59.3**	**0.0**
MAT				S	**S**	**15 43 44.3**	**-2.0**
MAT	**Matsushiro**	**15.49**	**345**	P	**P**	**15 40 59.2**	**-0.1**
MAT				S	**S**	**15 43 44.0**	**-2.3**
JNU	**Nakatsue**	**15.80**	**319**	P	**P**	**15 41 02.1**	**-0.5**
JHS	**Saijyo**	**15.98**	**329**	P	**P**	**15 41 05.6**	**+1.0**
JMM	**Marumori**	**16.34**	**353**	P	**P**	**15 41 11.8**	**+3.4**
JMM				S	**S**	**15 44 05.6**	**+2.5**
JSD	**Sado**	**16.91**	**347**	P	**P**	**15 41 14.1**	**-0.6**
JSD				S	**S**	**15 44 10.3**	**-4.2**
JYA	**Atsumi**	**17.19**	**351**	P	**P**	**15 41 20.2**	**+2.5**
JYA				S	**S**	**15 44 22.7**	**+2.8**
JOM	**Ohasama**	**17.89**	**355**	P	**P**	**15 41 25.8**	**+0.7**
JOM				S	**S**	**15 44 43.0**	**+9.4**
JTM	**Tenmabayashi**	**19.21**	**355**	P	**P**	**15 41 39.9**	**+0.7**
PVCP	**Virac**	**19.74**	**249**	*e*P	**P**	**15 41 45.1**	**+0.1**
JOT	**Ohata**	**19.80**	**355**	P	**P**	**15 41 46.0**	**+0.6**
CNP	**Cataraman**	**19.81**	**246**	*e*P	**P**	**15 41 46.1**	**+0.3**
ERM	**Erimo**	**20.36**	**0**	*e*P	**P**	**15 41 49.6**	**-1.6**
ERM				pmax	pmax		
	comp=Z,29nm,0.8s						
ERM	**Erimo**	**20.36**	**0**	*e*P	**P**	**15 41 49.5**	**-1.6**
	comp=Z,30nm,0.8s						
JEM	**Erimo**	**20.36**	**0**	P	**P**	**15 41 52.1**	**+0.9**
KSRS	**Korea Array**	**20.56**	**324**	P	**P**	**15 41 52.0**	**-1.0**
	comp=Z,26nm,0.6s,baz=149,slow=8.6,SNR=140						
KSRS				ScP	ScP	15 48 55.8	+0.7
	comp=Z,2.4nm,0.9s,baz=138,slow=3.0,SNR=7.9						
KSRS	**Korea Array**	**20.56**	**324**	P	**P**	**15 41 52.1**	**-1.0**
KSRS				pmax	pmax		
	comp=Z,26nm,0.6s						
KSRS				pmax	pmax		
	comp=N,2.0nm,0.9s						
SSLB	**Suanglung**	**20.57**	**280**	*e*P	**P**	**15 41 52.5**	**-0.8**
	comp=N,19nm,0.4s						
JEW	**Eniwo**	**21.23**	**357**	P	**P**	**15 41 59.3**	**+0.2**
JMP	**Maruseppu**	**22.35**	**0**	P	**P**	**15 42 09.7**	**+0.3**
ASAJ	**Asahikawa**	**22.46**	**359**	P	**P**	**15 42 12.5**	**+2.1**
ASAJ	**Asahikawa**	**22.46**	**359**	P	**P**	**15 42 10.8**	**+0.4**
	comp=N,3.6nm,0.4s,mb4.0,baz=236,slow=16,SNR=12						
ASAJ	**Asahikawa**	**22.46**	**359**	P	**P**	**15 42 10.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GUIM	**Jordan**	**22.51**	**244**	*e*P	**P**	**15 42 10.6**	**-0.6**
SJMP	**San Jose**	**22.89**	**250**	*e*P	**P**	**15 42 16.5**	**+1.9**
NJ2	**Nanjing**	**23.98**	**301**	*e*P	**P**	**15 42 25.5**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s,mb4.6						
MDJ	**Mudanjiang**	**25.53**	**337**	P	**P**	**15 42 38.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.0						
MDJ				pmax	pmax		
	comp=Z,160nm,4.2s						
CN2	**Changchun**	**26.56**	**331**	*e*P	**P**	**15 42 49.8**	**+2.6**
WHN	**Wuhan**	**27.27**	**295**	*e*P	**P**	**15 42 56.0**	**+2.3**
HABR	**Khabarovsk**	**27.59**	**348**	P	**P**	**15 42 54.9**	**-1.3**
HABR				*e*S	**S**	**15 47 13.3**	**0.0**
HABR				*e*		15 53 04.3	
HABR				pmax	pmax		
	comp=E,53nm,2.6s						
HABR				pmax	pmax		
	comp=N,21nm,2.2s						
HABR				pmax	pmax		
	comp=Z,40nm,3.0s						
KLR	**Kul'dur**	**29.02**	**345**	*e*P	**P**	**15 43 05.2**	**-3.7**
HHC	**Hu-ho-hao-te**	**32.86**	**313**	*e*P	**P**	**15 43 44.5**	**+2.0**
HHC				pP	pP	15 44 46.8	+2.6
HHC				PP	PP	15 45 09.8	+5.2
HHC				sP	sP	15 45 23.0	+1.4
HHC				PcP	PcP	15 46 20.5	+1.8
HHC				S	**S**	**15 48 39.3**	**+3.7**
HHC				ScP	ScP	15 49 32.5	+0.8
HHC				PcS	PcS	15 50 05.0	+0.6
HHC				sS	sS	15 50 29.3	+1.5
HHC				SS	SS	15 51 07.8	-5.4
HHC				ScS	ScS	15 53 33.0	+0.5
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.1						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
HHC				LR	LR		
	comp=N,730nm,11.6s						
HHC				LR	LR		
	comp=E,220nm,10.6s						
HHC				LR	LR		
	comp=Z,200nm,12.2s						
HIA	**Hailar**	**33.27**	**332**	*e*P	**P**	**15 43 45.9**	**0.0**
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HIA	**Hailar**	**33.27**	**332**	*e*P	**P**	**15 43 45.9**	**0.0**
	comp=Z,16nm,0.8s,mb4.3						
PEA0B	**Petropavlovsk-**	**33.39**	**16**	*e*P	**P**	**15 43 47.1**	**+0.2**
PETK	**Petropavlovsk-**	**33.39**	**16**	P	**P**	**15 43 47.0**	**+0.2**
	comp=Z,2.1nm,0.6s,mb3.6,baz=300,slow=5.9,SNR=13						
PETK				PcP	PcP	15 46 18.6	-1.3
	comp=Z,2.5nm,0.6s,baz=235,slow=4.3,SNR=6.1						
PETK	**Petropavlovsk-**	**33.39**	**16**	P	**P**	**15 43 47.0**	**+0.2**
PETK						15 46 18.6	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.5						
PETK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.7						
GYA	**Guiyang**	**33.57**	**286**	P	**P**	**15 43 49.8**	**+1.0**
GYA				pP	pP	15 44 53.3	+2.5
GYA				PP	PP	15 45 16.8	+4.2
GYA				sP	sP	15 45 29.0	+1.0
GYA				PcP	PcP	15 46 22.0	+0.9
GYA				S	**S**	**15 48 48.5**	**+1.5**
GYA				ScS	ScS	15 53 35.5	-1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.0						
COEN	**Coen**	**35.33**	**180**	*e*P	**P**	**15 44 03.7**	**-0.1**
CD2	**Chengdu**	**36.34**	**293**	P	**P**	**15 44 12.5**	**+0.2**
CD2				pP	pP	15 45 15.5	+0.5
CD2				PP	PP	15 45 46.8	+3.9
CD2				sP	sP	15 45 51.5	-0.6
CD2				S	**S**	**15 49 29.5**	**+0.5**
CD2				SS	SS	15 52 18.5	-4.9
CD2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.3						
CD2				pmax	pmax		
	comp=Z,100nm,8.3s						
LZH	**Lanzhou**	**37.05**	**302**	*e*P	**P**	**15 44 18.8**	**+0.7**
LZH				pP	pP	15 45 21.3	+0.2
LZH				sP	sP	15 45 57.3	-0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.2						
KMI	**Kunming**	**37.14**	**283**	P	**P**	**15 44 18.8**	**-0.2**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.0						
ULN	**Ulaanbaatar**	**39.01**	**321**	*e*P	**P**	**15 44 34.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.7						
ULN	**Ulaanbaatar**	**39.01**	**321**	*e*P	**P**	**15 44 34.3**	**+0.2**
	comp=Z,3.3nm,0.6s,mb3.7						
SONM	**Songino Array**	**39.38**	**321**	P	**P**	**15 44 37.3**	**+0.1**
	comp=Z,4.1nm,0.4s,mb4.0,baz=128,slow=7.1,SNR=33						
SONM				PcP	PcP	15 46 38.0	-0.3
	comp=Z,1.2nm,0.8s,baz=108,slow=3.2,SNR=4.2						
SONM	**Songino Array**	**39.38**	**321**	P	**P**	**15 44 37.3**	**+0.1**
SONM						15 46 38.0	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**39.38**	**321**	P	**P**	**15 44 37.3**	**+0.1**
SONM				PcP	PcP	15 46 38.0	-0.3
GTA	**Gaotai**	**40.88**	**306**	⇑P	**P**	**15 44 49.8**	**+0.2**
GTA				pP	pP	15 45 56.8	+3.0
GTA				sP	sP	15 46 31.5	+1.0
GTA				PcP	PcP	15 46 44.0	+0.7
GTA				ScS	ScS	15 54 13.5	-4.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.1						
CHTO	**Chiang Mai**	**41.45**	**274**	*e*P	**P**	**15 44 54.2**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb3.9						
CHTO	**Chiang Mai**	**41.45**	**274**	*e*P	**P**	**15 44 54.2**	**-0.3**
	comp=Z,7.2nm,0.8s,mb4.0						
YAK	**Yakutsk**	**41.46**	**350**	*c i*P	**P**	**15 44 52.8**	**-1.0**
YAK				*e**PP	pP	15 45 53.7	-4.5
YAK				*e*		15 46 33.5	
YAK				*e*		15 46 43.5	
YAK				*e*S	**S**	**15 50 42.3**	**-1.8**
YAK				*e*SS	SS	15 53 59.6	-3.2
YAK				pmax	pmax		
	comp=Z,34nm,0.8s,mb4.6						
YAK				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,37nm,3.7s						
YAK				pmax	pmax		
	comp=N,16nm,2.7s						
YAK				pmax	pmax		
	comp=E,47nm,3.3s						
YAK				smax			
	comp=N,41nm,2.3s						
YAK				smax			
	comp=E,15nm,2.0s						
YAK	**Yakutsk**	**41.46**	**350**	*e*P	**P**	**15 44 52.5**	**-1.3**
	comp=E,49nm,0.7s,mb4.8						
CMAR	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**15 44 55.5**	**+0.5**
	comp=E,5.4nm,0.6s,mb3.9,baz=85,slow=6.1,SNR=61						
CMAR				PcP	PcP	15 46 46.5	+0.6
	comp=E,0.7nm,0.7s,baz=120,slow=2.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**15 44 55.5**	**+0.5**
CMAR						15 46 46.5	
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CTA	**Charters Tower**	**41.54**	**176**	*e*P	**P**	**15 44 54.5**	**-0.6**
	comp=Z,7.4nm,0.4s,mb4.2						
CTA	**Charters Tower**	**41.54**	**176**	P	**P**	**15 44 54.8**	**-0.3**
	comp=Z,13nm,0.5s,mb4.3,baz=1.4,slow=8.0,SNR=13						
CTA	**Charters Tower**	**41.54**	**176**	P	**P**	**15 44 54.8**	**-0.3**
CTA				pmax	pmax		
	comp=Z,13nm,0.5s						
SEY	**Seymchan**	**41.79**	**6**	*ce*P	**P**	**15 44 56.6**	**+0.1**
BOD	**Bodaibo**	**41.91**	**337**	*e*P	**P**	**15 44 56.5**	**-1.0**
WRAB	**Tennant Creek**	**42.16**	**192**	*e*P	**P**	**15 44 59.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**42.16**	**192**	*e*P	**P**	**15 44 59.2**	**-0.8**
	comp=Z,16nm,0.6s,mb4.3						
ZAK	**Zakamensk**	**42.39**	**323**	⇓ *i*P	**P**	**15 45 00.9**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb3.9						
TLY	**Talaya**	**42.81**	**324**	*e*P	**P**	**15 45 05.2**	**+0.3**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s,mb3.9						
TLY	**Talaya**	**42.81**	**324**	*e*P	**P**	**15 45 05.0**	**+0.2**
	comp=Z,5.0nm,0.5s,mb3.9						
FITZ	**Fitzroy Crossi**	**43.01**	**205**	*e*P	**P**	**15 45 05.6**	**-1.2**
	comp=Z,6.9nm,0.7s,mb3.9						
MOY	**Mondy**	**44.26**	**323**	*e*P	**P**	**15 45 16.3**	**0.0**
ASAR	**Alice Springs**	**45.88**	**192**	P	**P**	**15 45 27.9**	**-1.3**
	comp=Z,2.3nm,0.3s,mb3.8,baz=11,slow=7.3,SNR=126						
ASAR				ScP	ScP	15 50 24.1	+1.9
	comp=Z,0.7nm,0.6s,baz=11,slow=4.2,SNR=7.7						
ASAR				S	**S**	**15 51 46.6**	**-2.0**
	comp=Z,1.7nm,0.7s,baz=19,slow=20,SNR=16						
LSA	**Lhasa**	**47.22**	**291**	P	**P**	**15 45 41.0**	**+1.4**
LSA	**Lhasa**	**47.22**	**291**	*e*P	**P**	**15 45 40.8**	**+1.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.0						
LSA	**Lhasa**	**47.22**	**291**	*e*P	**P**	**15 45 40.8**	**+1.2**
	comp=Z,5.9nm,0.6s,mb4.0						
BILL	**Bilibino**	**48.63**	**11**	⇑ *i*P	**P**	**15 45 49.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,31nm,0.7s,mb4.7						
BILL	**Bilibino**	**48.63**	**11**	*e*P	**P**	**15 45 49.3**	**-0.4**
	comp=Z,27nm,0.6s,mb4.7						
BILL				*e*PcP	PcP	15 47 09.6	-0.1
UNV	**Unalaska Valle**	**49.73**	**37**	*e*P	**P**	**15 45 57.4**	**-0.8**
WMQ	**Urumqi**	**50.60**	**310**	P	**P**	**15 46 06.0**	**+1.1**
WMQ				pP	pP	15 47 12.5	+0.4
WMQ				PcP	PcP	15 47 17.5	+0.1
WMQ				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.3						
TIXI	**Tiksi**	**50.74**	**354**	*e*P	**P**	**15 46 04.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.0						
TIXI	**Tiksi**	**50.74**	**354**	*e*P	**P**	**15 46 04.4**	**-1.1**
	comp=Z,9.4nm,0.8s,mb4.1						
CMSA	**Cobar Meteorol**	**52.89**	**177**	*e*P	**P**	**15 46 21.1**	**-0.6**
STKA	**Stephens Creek**	**53.19**	**182**	*e*P	**P**	**15 46 23.0**	**-0.9**
	comp=Z,8.2nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**53.19**	**182**	P	**P**	**15 46 22.9**	**-1.0**
	comp=Z,12nm,0.6s,mb4.4,baz=354,slow=7.5,SNR=65						
STKA	**Stephens Creek**	**53.19**	**182**	P	**P**	**15 46 22.9**	**-1.0**
STKA				pmax	pmax		
	comp=Z,12nm,0.6s						
STKA	**Stephens Creek**	**53.19**	**182**	*e*P	**P**	**15 46 22.8**	**-1.1**
	comp=Z,2.1nm,0.6s,mb3.6						
FORT	**Forrest**	**54.05**	**196**	*e*P	**P**	**15 46 29.2**	**-0.9**
	comp=Z,8.8nm,0.7s,mb4.2						
TNA	**Tin City**	**54.06**	**23**	*e*P	**P**	**15 46 29.9**	**+0.1**
	comp=Z,7.0nm,1.0s,mb4.0						
ZAA0	**Zalesovo Array**	**54.25**	**322**	*e*P	**P**	**15 46 30.6**	**-0.7**
ZALV	**Zalesovo Beam**	**54.25**	**322**	P	**P**	**15 46 30.7**	**-0.6**
	comp=Z,18nm,0.6s,mb4.6,baz=103,slow=7.5,SNR=67						
ZALV				PcP	PcP	15 47 29.9	-1.1
	comp=Z,8.1nm,0.5s,baz=125,slow=3.7,SNR=13						
ZALV	**Zalesovo Beam**	**54.25**	**322**	P	**P**	**15 46 30.7**	**-0.6**
ZALV						15 47 29.9	
ZALV				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.6						
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.3						
ZALV	**Zalesovo Beam**	**54.25**	**322**	P	**P**	**15 46 30.7**	**-0.6**
ZALV				PcP	PcP	15 47 29.9	-1.1
MK31	**Makanchi Array**	**54.72**	**313**	*e*P	**P**	**15 46 34.7**	**-0.1**
MKAR	**Makanchi Array**	**54.72**	**313**	P	**P**	**15 46 34.9**	**+0.1**
	comp=Z,14nm,0.5s,mb4.6,baz=86,slow=9.8,SNR=103						
MKAR				PcP	PcP	15 47 32.6	-0.4
	comp=Z,3.6nm,0.6s,baz=75,slow=7.0,SNR=6.8						
MKAR	**Makanchi Array**	**54.72**	**313**	P	**P**	**15 46 34.9**	**+0.1**
MKAR						15 47 32.6	
MKAR				pmax	pmax		
	comp=Z,14nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHGN	**Chignik**	**54.89**	**36**	*e*P	**P**	**15 46 34.6**	**-1.2**
NVS	**Novosibirsk**	**55.35**	**323**	⇑ *i*P	**P**	**15 46 38.7**	**-0.4**
NVS				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.4						
NVS				pmax	pmax		
	comp=N,13nm,1.6s						
NVS				pmax	pmax		
	comp=E,20nm,1.2s						
YNG	**Young**	**55.81**	**175**	*e*P	**P**	**15 46 41.8**	**-0.7**
	comp=E,4.6nm,0.5s,mb4.1						
CNB	**Canberra Magne**	**56.91**	**174**	*e*P	**P**	**15 46 50.0**	**-0.2**
KURK	**Kurchatov**	**57.51**	**317**	*ce*P	**P**	**15 46 53.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,22nm,0.6s,mb4.7						
KURK	**Kurchatov**	**57.51**	**317**	*e*P	**P**	**15 46 53.9**	**-0.4**
	comp=Z,30nm,0.6s,mb4.8						
SVW2	**Sparrevohn**	**57.52**	**30**	*e*P	**P**	**15 46 54.2**	**0.0**
TTA	**Tatalina**	**57.81**	**28**	*e*P	**P**	**15 46 55.6**	**-0.6**
OHAK	**Old Harbor**	**57.85**	**35**	*e*P	**P**	**15 46 56.0**	**-0.5**
	comp=Z,5.6nm,0.6s,mb4.1						
KDAK	**Kodiak Island**	**58.32**	**35**	P	**P**	**15 46 59.1**	**-0.6**
	comp=Z,12nm,0.7s,mb4.3						
KDAK	**Kodiak Island**	**58.32**	**35**	P	**P**	**15 46 59.1**	**-0.6**
KDAK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.3						
KDAK	**Kodiak Island**	**58.32**	**35**	*e*P	**P**	**15 46 59.3**	**-0.4**
	comp=Z,7.0nm,0.6s,mb4.2						
RSO	**Redoubt South**	**58.73**	**31**	*e*P	**P**	**15 47 02.3**	**-0.2**
TOO	**Toolangi**	**58.89**	**178**	*e*P	**P**	**15 47 03.7**	**-0.2**
ULHL	**Ulahol**	**58.90**	**307**	P	**P**	**15 47 04.9**	**+0.8**
	SNR=12						
KSH	**Kashi**	**59.24**	**304**	*e*P	**P**	**15 47 09.5**	**+3.1**
KSH				*e*PcP	PcP	15 47 53.5	+2.6
KSH				*e*sP	sP	15 48 52.8	+1.6
KSH				*e*PP	PP	15 49 26

comp=Z,14nm,0.6s,mb4.6
UCH Uchtor 60.19 307 *e*P P 15 47 14.2 +1.4
comp=Z,14nm,0.6s,mb4.6
KTH Kantishna Hill 60.20 28 *e*P P 15 47 11.9 -0.5
comp=Z,2µm,0.7s
BPAW Bear Paw Mtn. 60.29 27 *e*P P 15 47 13.1 +0.1
comp=Z,27nm,0.6s,mb4.8
SEW Seward 60.29 32 *e*P P 15 47 12.5 -0.6
comp=Z,21nm,0.8s,mb4.6
RC01 Rabbit Creek A 60.30 31 *e*P P 15 47 12.5 -0.7
comp=Z,2µm,0.6s
TRF Thorofare Moun 60.46 28 *e*P P 15 47 13.6 -0.6
comp=Z,19nm,0.8s,mb4.6
PMR Palmer 60.67 31 *e*P P 15 47 14.2 -1.4
PMR pmax pmax
comp=Z,7.0nm,0.5s,mb4.3
PMR Palmer 60.67 31 *e*P P 15 47 14.2 -1.4
comp=Z,6.6nm,0.5s,mb4.3
EKS2 Erkin-Say 60.71 308 P P 15 47 16.8 +0.6
SNR=8.2
EKS2 Erkin-Say 60.71 308 *e*P P 15 47 16.5 +0.3
EKS2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
EKS2 Erkin-Say 60.71 308 *e*P P 15 47 16.5 +0.3
comp=Z,5.7nm,0.8s,mb4.0
AML Almayashu 60.80 307 P P 15 47 18.3 +1.4
SNR=18
AML Almayashu 60.80 307 *e*P P 15 47 17.8 +0.9
AML pmax pmax
comp=Z,13nm,0.7s,mb4.5
AML Almayashu 60.80 307 *e*P P 15 47 17.8 +1.0
comp=Z,13nm,0.7s,mb4.5
MCK McKinley 61.11 28 *e*P P 15 47 17.4 -1.1
MCK pmax pmax
comp=Z,19nm,0.9s,mb4.5
MCK McKinley 61.11 28 *e*P P 15 47 17.4 -1.1
comp=Z,19nm,0.9s,mb4.5
COLD Coldfoot 61.28 24 *e*P P 15 47 20.0 +0.4
comp=Z,14nm,0.9s,mb4.4
COLA College 61.76 27 *e*P P 15 47 22.5 -0.3
COLA pmax pmax
comp=Z,11nm,0.6s,mb4.6
COLA College 61.76 27 *e*P P 15 47 22.5 -0.3
comp=Z,11nm,0.6s,mb4.5
PAX Paxson 62.55 29 *e*P P 15 47 27.8 -0.2
PAX pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
PAX Paxson 62.55 29 *e*P P 15 47 27.8 -0.2
comp=Z,4.2nm,0.5s,mb4.2
BVAR Borovoye Array 62.71 320 P P 15 47 29.3 0.0
comp=Z,45nm,0.4s,mb5.4,baz=92,slow=7.4,SNR=180
BVAR PcP PcP 15 48 03.2 -1.6
comp=Z,4.0nm,0.5s,baz=92,slow=4.5,SNR=3.8
BVAR Borovoye Array 62.71 320 P P 15 47 29.3 0.0
BVAR 15 48 03.2
BVAR pmax pmax
comp=Z,45nm,0.4s
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BMRM Bremner River 62.77 32 *e*P P 15 47 29.3 -0.2
comp=Z,735nm,0.9s
BRVK Borovoye 62.77 320 *e*P P 15 47 29.7 0.0
BRVK pmax pmax
comp=Z,36nm,0.8s,mb5.0
BRVK Borovoye 62.77 320 *e*P P 15 47 29.6 0.0
comp=Z,36nm,0.8s,mb5.0
EGAK Eagle 64.60 27 *e*P P 15 47 40.6 -0.7
comp=Z,6.5nm,0.8s,mb4.3
KBL Kabul 65.33 299 *e*P P 15 47 46.4 -0.2
KBL pmax pmax
comp=Z,16nm,0.9s,mb4.7
KBL Kabul 65.33 299 *e*P P 15 47 46.4 -0.2
comp=Z,16nm,0.9s,mb4.7
DAWY Dawson 65.34 28 *e*P P 15 47 46.2 +0.1
URZ Urewera 67.56 152 P P 15 47 59.0 -1.3
comp=Z,1.7nm,0.4s,mb4.2,baz=354,slow=17,SNR=7.6
INK Inuvik 67.69 24 P P 15 48 00.1 -0.6
comp=Z,8.5nm,0.6s,mb4.7,baz=284,slow=6.6,SNR=30
INK Inuvik 67.69 24 *e*P P 15 48 00.0 -0.7
INK pmax pmax
comp=Z,12nm,0.9s
INK Inuvik 67.69 24 *e*P P 15 47 60.0 -0.8
comp=Z,12nm,0.9s,mb4.6
ARU Arti 69.31 324*c i*P P 15 48 10.2 -0.7
ARU *e* 15 48 30.8
ARU *PP pP 15 49 21.7 -1.3
ARU *e* 15 50 46.5
ARU S S 15 56 52.6 +2.0
ARU SS SS 16 01 26.6 +2.5
ARU pmax pmax
comp=Z,16nm,0.6s,mb4.9
ARU Arti 69.31 324 *e*P P 15 48 10.3 -0.6
comp=Z,24nm,0.4s,mb5.3
ABKAR Akbulak array 69.58 316 *e*P P 15 48 12.3 -0.4
comp=Z,18nm,0.5s,mb5.1
DLBC Dease Lake 70.24 34 P P 15 48 17.3 +0.8
comp=Z,8.0nm,0.8s,mb4.5,baz=291,slow=7.5,SNR=12
DLBC Dease Lake 70.24 34 *e*P P 15 48 17.1 +0.6
AKTK Aktyubinsk 70.60 318 P P 15 48 18.0 -0.9
AKTO Aktyubinsk 70.60 318 P P 15 48 18.0 -0.9
comp=Z,5.0nm,0.6s,mb4.5,baz=84,slow=5.5,SNR=15
AKTO Aktyubinsk 70.60 318 P P 15 48 18.0 -0.9
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
BBB Bella Bella 72.50 40 P P 15 48 29.7 -0.4
comp=Z,6.7nm,0.6s,mb4.5,baz=298,slow=8.4,SNR=11
SPITS Spitsbergen Ar 75.92 350 P P 15 48 48.9 -0.4
comp=Z,2.1nm,0.3s,mb4.3,baz=104,slow=7.0,SNR=54
SPITS Spitsbergen Ar 75.92 350 P P 15 48 48.9 -0.4
SPITS pmax pmax
comp=Z,2.0nm,0.3s
KBS Kingsbay 76.08 351*ce*P P 15 48 49.8 -0.3
KBS pmax pmax
comp=Z,15nm,0.8s,mb4.8
NLWA Neilton Lookou 76.39 44 ⇑P P 15 48 53.3 +0.9
baz=76
YKA Yellowknife Ar 76.57 28 P P 15 48 52.5 -0.6
comp=Z,22nm,0.6s,mb5.1,baz=291,slow=5.8,SNR=154
YKA Yellowknife Ar 76.57 28 P P 15 48 52.5 -0.6
YKA pmax pmax
comp=Z,22nm,0.6s
YKA Yellowknife Ar 76.57 28 P P 15 48 52.5 -0.6
E03A Lebam 76.84 45 ⇓P P 15 48 55.4 +0.5
baz=77
F03A Seaside 77.03 46 ⇓P P 15 48 56.5 +0.5
baz=77
RES Resolute Bay 77.19 13 P P 15 48 55.9 -0.4
comp=Z,12nm,0.7s,mb4.7,baz=348,slow=4.9,SNR=33
RES Resolute Bay 77.19 13 P P 15 48 55.9 -0.4
RES pmax pmax
comp=Z,12nm,0.7s,mb4.7
CMW Cultus Mountai 77.20 43 P P 15 48 57.8 +0.9
JCW Jim Creek 77.40 43 P P 15 48 58.5 +0.5
APA Apatity 77.44 338⇑*i*P P 15 48 57.6 -0.2
APA pmax pmax
comp=Z,52nm,1.0s,mb5.2
MPOR Mary's Peak 77.47 47 P P 15 48 59.5 +1.1
RNO Roman Nose 77.52 48 P P 15 48 59.8 +1.0
F04A Amboy 77.79 45 ⇓P P 15 49 00.3 +0.1
baz=78
A07A Ashnola River, 78.09 42 ⇓P P 15 49 01.9 +0.1
baz=78,SNR=5.6
H04A Detroit Lake 78.34 47 ⇓P P 15 49 03.2 0.0
baz=78
KEV Kevo 78.44 341 *e*P P 15 49 02.0 -1.2
KEV pmax pmax
comp=Z,27nm,0.6s,mb5.2
KEV Kevo 78.44 341 *ep* P 15 49 02.0 -1.2
comp=Z,27nm,0.6s,mb5.2
YBH Yreka Blue Hor 78.93 50 *e*P P 15 49 06.8 +0.3
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 78.93 50 *e*P P 15 49 06.8 +0.3
comp=Z,7.8nm,0.9s,mb4.4
B08A Colville Reser 78.98 42 ⇓P P 15 49 06.6 -0.1
baz=79,SNR=9.9
ARCES ARCESS Array B 79.00 341 P P 15 49 06.0 -0.3
comp=Z,29nm,0.6s,mb5.2,baz=71,slow=8.2,SNR=163
ARCES ARCESS Array B 79.00 341 P P 15 49 06.0 -0.3
ARCES pmax pmax
comp=Z,29nm,0.6s
ARCES ARCESS Array B 79.00 341 P P 15 49 06.0 -0.3
BUOR Burton Butte 79.08 49 P P 15 49 07.8 +0.6
G06A Carlson Farm, 79.20 46 ⇑P P 15 49 07.9 +0.1
baz=79
WDC Whiskeytown Da 79.43 51 *e*P P 15 49 09.2 0.0
WDC pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
WDC Whiskeytown Da 79.43 51 *e*P P 15 49 09.2 0.0
comp=Z,5.9nm,1.0s,mb4.3
F07A Phinny Hill Vi 79.44 45 ⇑P P 15 49 09.2 0.0
baz=79
VIPM Ingram Point 79.45 46 P P 15 49 09.6 +0.4
D08A Wollman Farm, 79.69 43 ⇓P P 15 49 10.2 -0.2
baz=80
B09A Rice 79.70 42 ⇑P P 15 49 10.5 0.0
baz=80
OD2 Odessa Site #2 79.71 43 *e*P P 15 49 10.1 -0.5
comp=Z,5.1nm,0.9s,mb4.2
C09A Chrisman Ranch 79.84 43 ⇑P P 15 49 11.2 0.0
baz=80
K05A Summer Lake 79.87 48 ⇑P P 15 49 11.9 +0.4
baz=80
D09A Jones Farm, Ri 80.08 43 ⇑P P 15 49 12.4 -0.1
baz=80,SNR=5.6
LBCM Butte Creek Ri 80.19 50 P P 15 49 13.3 +0.1
F08A Pendleton 80.23 45 ⇑P P 15 49 13.7 +0.3
baz=80
G08A Pilot Rock 80.29 45 ⇑P P 15 49 13.5 -0.2
baz=80
I07A Izee 80.35 46 ⇓P P 15 49 14.1 +0.1
baz=80
JOF Joensuu 80.38 334 *e*P P 15 49 11.4 -2.4
JOF pmax pmax
comp=Z,34nm,0.5s,mb5.3
JOF Joensuu 80.38 334 *ep* P 15 49 11.4 -2.4
comp=Z,34nm,0.5s,mb5.3
VRHR Novokhopersk 80.38 321 *e*P P 15 49 13.8 -0.2
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.1
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.7s
E09A Wood Farm, Sta 80.38 44 ⇓P P 15 49 14.0 -0.1
baz=80
A11A Hall Mountain, 80.61 41 ⇓P P 15 49 16.0 +0.7
baz=80
EDM Edmonton 80.71 36 *e*P P 15 49 15.0 -0.7
D10A Wagner Farm, O 80.74 43 ⇓P P 15 49 15.6 -0.4
baz=81
H08A Prairie City 80.76 46 ⇑P P 15 49 16.2 0.0
baz=81
B11A Sandpoint 80.80 42 ⇓P P 15 49 16.2 -0.1
baz=81
A12A Yaak River Ran 81.05 41 ⇑P P 15 49 18.1 +0.5
baz=81
E10A Myers Farm, Un 81.06 44 ⇑P P 15 49 17.8 +0.1
baz=81
G09A Cove 81.07 45 ⇑P P 15 49 17.8 0.0
baz=81
F10A Beach Ranch, E 81.17 44 ⇓P P 15 49 18.8 +0.5
baz=81
BEKR Beckwourth 81.24 51 ⇓P P 15 49 18.5 -0.3
baz=81
J08A Circle Bar Ran 81.31 47 ⇓P P 15 49 19.2 +0.1
baz=81
D11A Klaveano Farm, 81.34 43 ⇑P P 15 49 18.7 -0.5
baz=81
H09A Durkee 81.37 45 ⇑P P 15 49 19.3 0.0
baz=81
G10A Bishop Farm, J 81.50 45 ⇓P P 15 49 20.1 +0.1
baz=81,SNR=5.9
OBN Obninsk 81.54 326*c i*P P 15 49 19.2 -0.8
OBN pmax pmax
comp=Z,14nm,0.7s,mb4.9
I09A Lost Marbles R 81.58 46 ⇓P P 15 49 20.5 0.0
baz=81
C12B Naegeli Ranch, 81.63 42 ⇑P P 15 49 20.5 -0.1
baz=82
E11A Bogner Ranch, 81.69 43 ⇑P P 15 49 20.5 -0.5
baz=82,SNR=8.3
VSR Storozhevoye 81.76 322 *e*P P 15 49 20.7 -0.5
VSR pmax pmax
comp=Z,30nm,0.5s,mb5.4
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.5s
VORD Divnogorie 81.79 322 *e*P P 15 49 20.8 -0.6
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VORD pmax pmax
comp=N,40nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.6s
A13A Flathead Natio 81.80 41 ⇓P P 15 49 22.1 +0.5
baz=82
J09A Fry Pan Ranch, 81.80 47 ⇑P P 15 49 21.7 0.0
baz=82
CMB Columbia Colle 81.87 52 *e*P P 15 49 21.7 -0.4
CMB pmax pmax
comp=Z,14nm,0.7s,mb4.9
CMB Columbia Colle 81.87 52 *e*P P 15 49 21.7 -0.4
comp=Z,14nm,0.7s,mb4.9
WCN Washoe City 81.88 51 ⇓P P 15 49 22.2 +0.1
baz=82
F11A Grangeville 81.90 44 ⇓P P 15 49 22.2 +0.1
baz=82
D12A Red Ives Fores 81.96 43 ⇓P P 15 49 21.9 -0.5
baz=82
B13A Whitefish 81.99 41 ⇑P P 15 49 22.9 +0.4
baz=82,SNR=6.1
BSMT Bassoo Peak 82.00 42 *e*P P 15 49 22.9 +0.3
comp=Z,12nm,0.9s,mb4.7
H10A Noah's Angus R 82.01 45 ⇑P P 15 49 22.2 -0.5
baz=82,SNR=12
G11A Walters Elk Ra 82.02 44 ⇑P P 15 49 22.0 -0.7
baz=82,SNR=8.5
E12A Beaver Dam Sad 82.07 43 ⇓P P 15 49 22.9 -0.1
baz=82,SNR=7.7
ZEI Tsey 82.08 313 *e*P P 15 49 20.8 -2.3
ZEI pmax pmax
comp=Z,39nm,1.2s,mb5.1
I10A Payette 82.16 46 ⇑P P 15 49 23.6 +0.1
baz=82
C13A Hot Springs 82.20 42 ⇓P P 15 49 23.6 0.0
baz=82,SNR=9.4
A14A Double T Ranch 82.39 40 ⇑P P 15 49 25.0 +0.5
baz=82,SNR=9.9
H11A Donnelly 82.45 45 ⇑P P 15 49 24.3 -0.6
baz=82,SNR=14
KIV Kislovodsk 82.45 314 *e*P P 15 49 26.8 +1.8
KIV pmax pmax
comp=Z,19nm,1.0s,mb4.9
D13A Huson 82.51 42 ⇓P P 15 49 24.6 -0.6
baz=82
F12A Elk City 82.53 44 ⇓P P 15 49 25.5 +0.1
baz=82,SNR=8.0
K10A MacKenzie Ranc 82.62 47 ⇓P P 15 49 25.8 0.0
baz=82,SNR=9.9
C14A Swan Lake 82.68 41 ⇑P P 15 49 25.9 -0.2
baz=82,SNR=20
B14A Marquette Ranc 82.72 41 ⇑P P 15 49 26.5 +0.2
baz=82,SNR=6.8
G12A Big Creek, Yel 82.73 44 ⇓P P 15 49 25.6 -0.8
baz=83
KAF Kangasniemi 82.79 335 *e*P P 15 49 24.3 -2.0
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
KAF Kangasniemi 82.79 335 *ep* P 15 49 24.3 -2.0
comp=Z,6.2nm,0.5s,mb4.7,baz=55,slow=4.8
I11A Placerville 82.79 46 ⇑P P 15 49 26.4 -0.3
baz=83
A15A Johnson Ranch, 82.80 40 ⇑P P 15 49 26.6 0.0
baz=83,SNR=16
SLMT Seeley Lake 83.05 42 *e*P P 15 49 27.5 -0.4
comp=Z,5.4nm,0.7s,mb4.5
MFID Camas Ranch 83.07 46 ⇓P P 15 49 28.1 0.0
baz=83,SNR=9.6
D14A Greenough 83.11 42 ⇑P P 15 49 28.0 -0.3
baz=83
F13A Darby 83.11 43 ⇑P P 15 49 27.5 -0.8
baz=83,SNR=6.2
L10A Juniper Basin 83.16 48 ⇓P P 15 49 28.6 -0.1
baz=83,SNR=5.5
B15A Bradely Ranch, 83.18 41 ⇓P P 15 49 28.5 -0.1
baz=83,SNR=19
K11A Parker Ranch, 83.19 47 ⇓P P 15 49 28.7 0.0
baz=83,SNR=9.2
FINES FINESS Array B 83.25 334 P P 15 49 27.2 -1.5
comp=Z,16nm,0.4s,mb5.2,baz=66,slow=4.7,SNR=163
FINES FINESS Array B 83.25 334 P P 15 49 27.2 -1.4
FINES pmax pmax
comp=Z,16nm,0.4s
FINES FINESS Array B 83.25 334 P P 15 49 27.2 -1.5
NVAR Mina Array Bea 83.25 51 P P 15 49 29.4 +0.2
comp=Z,10nm,0.7s,mb4.8,baz=274,slow=5.5,SNR=81
H12A Diamond D Ranc 83.27 45 ⇑P P 15 49 28.9 -0.2
baz=83
M10A I.L. Ranch, Tu 83.33 48 ⇑P P 15 49 29.5 0.0
baz=83,SNR=5.2
C15A Salmond Ranch, 83.38 41 ⇓P P 15 49 29.4 -0.1
baz=83,SNR=15
I12A Atlanta 83.39 46 ⇓P P 15 49 29.4 -0.3
baz=83
E14A Clinton 83.39 43 ⇓P P 15 49 29.6 -0.1
baz=83
PKM Peak Mountain 83.43 55 ⇓P P 15 49 30.6 +0.4
baz=83
G13A Cobalt 83.46 44 ⇓P P 15 49 29.7 -0.4
baz=83,SNR=16
A16A West Butte Ran 83.49 40 ⇓P P 15 49 30.1 -0.1
baz=83,SNR=22
L11A Cat Creek Ranc 83.61 47 ⇑P P 15 49 31.2 +0.2
baz=83,SNR=11
J12A Stokes Ranch, 83.63 46 ⇑P P 15 49 30.5 -0.4
baz=84
VES Vestal, Richgr 83.64 54 ⇑P P 15 49 30.3 -0.9
baz=84
B16A M & M Farms, S 83.65 40 ⇑P P 15 49 30.7 -0.2
baz=84,SNR=25
H13A Challis 83.66 45 ⇑P P 15 49 31.2 +0.1
baz=84,SNR=14
O10A Cortez Mining, 83.83 49 ⇑P P 15 49 32.3 +0.3
baz=84
M11A Holland Ranch, 83.88 48 ⇓P P 15 49 32.6 +0.3
baz=84,SNR=5.8
C16A Fuhringer Ranc 83.89 41 ⇑P P 15 49 31.8 -0.4
baz=84,SNR=13
E15A Deer Lodge 83.92 42 ⇑P P 15 49 32.2 -0.2
baz=84,SNR=17
HLID Hailey 83.96 46 ⇑P P 15 49 32.6 0.0
baz=84,SNR=11
HLID Hailey 83.96 46 *e*P P 15 49 32.7 0.0
comp=Z,5.7nm,1.0s,mb4.4
K12A Draper Farm, C 84.01 47 ⇓P P 15 49 32.9 0.0
baz=84,SNR=8.4
I13A Wildhorse Cree 84.01 45 ⇑P P 15 49 33.1 +0.2
baz=84,SNR=13
A17A Triple J Farms 84.02 40 ⇓P P 15 49 32.7 -0.1
baz=84,SNR=19
P10A Eureka 84.12 50 ⇑P P 15 49 33.8 +0.3
baz=84
L12A House Creek Ra 84.13 47 ⇓P P 15 49 33.7 +0.2
baz=84
ISA Isabella 84.17 54 ⇑P P 15 49 33.2 -0.6
baz=84
J13A Cove Ranch, Pi 84.19 46 ⇓P P 15 49 33.8 +0.1
baz=84,SNR=9.3
H14A Leadore 84.21 44 ⇓P P 15 49 33.8 0.0
baz=84,SNR=11
B17A L&G Farms, Che 84.25 40 ⇓P P 15 49 34.0 0.0
baz=84,SNR=32
F15A Butte 84.26 43 ⇑P P 15 49 34.1 0.0
baz=84,SNR=20
LRM Limekiln Ridge 84.30 43 *e*P P 15 49 34.1 -0.2
comp=Z,80nm,0.9s,mb5.5
HRY Holter Researc 84.31 42 *e*P P 15 49 34.4 +0.1
comp=Z,30nm,0.5s,mb5.4
I14A Mackay 84.44 45 ⇓P P 15 49 35.5 +0.5
baz=84,SNR=5.9
MCMT McKenzie Canyo 84.46 44 *e*P P 15 49 34.9 -0.2
comp=Z,0.7nm,0.6s,mb3.7
Q10A Clear Creek Ra 84.48 51 ⇓P P 15 49 35.3 0.0
baz=84,SNR=8.3
E16A East Helena 84.48 42 ⇓P P 15 49 35.2 0.0
baz=84,SNR=27
GRAC Grapevine Rang 84.48 52 ⇑P P 15 49 35.3 -0.1
baz=84
O11A Cowboy Ranch, 84.49 49 ⇓P P 15 49 35.3 0.0
baz=84,SNR=9.4
M12A Wells 84.49 48 ⇓P P 15 49 35.8 +0.5
baz=84,SNR=12
A18A Metzger Ranch, 84.54 39 ⇓P P 15 49 35.3 -0.1
baz=84,SNR=27
G15A Dillon 84.55 44 ⇑P P 15 49 35.2 -0.3
baz=84,SNR=5.3
K13A Stover Farm, H 84.55 46 ⇓P P 15 49 36.0 +0.4
baz=84,SNR=5.0
C17A Wharram Farm, 84.56 41 ⇓P P 15 49 35.4 -0.2
baz=84
N12A Clover Valley, 84.63 48 ⇓P P 15 49 36.3 +0.3
baz=84
N12A Clover Valley, 84.63 48 *e*P P 15 49 36.0 -0.1
comp=Z,5.5nm,0.5s,mb4.6
J14A Carey 84.65 45 ⇓P P 15 49 36.7 +0.6
baz=84,SNR=19
H15A Lima 84.68 44 ⇑P P 15 49 36.3 +0.1
baz=84
S10A Tonopah Range, 84.69 51 ⇓P P 15 49 36.4 0.0
baz=84,SNR=15
MPMC Manual Prospec 84.76 53 ⇓P P 15 49 36.6 -0.1
baz=85,SNR=14
R10A Warm Springs 84.76 51 ⇓P P 15 49 37.0 +0.2
baz=85
B18A Beardsley Farm 84.81 40 ⇑P P 15 49 36.6 -0.1
baz=85,SNR=20
D17A Six Diamond Ra 84.82 41 ⇑P P 15 49 36.7 -0.1
baz=85,SNR=16
LRMC Laurel Mountai 84.83 54 ⇓P P 15 49 37.1 -0.1
baz=85
F16A Kennard Place, 84.83 43 ⇓P P 15 49 36.9 -0.1
baz=85,SNR=18
L13A Double Diamond 84.88 47 ⇑P P 15 49 37.8 +0.5
baz=85,SNR=11
BOZ Bozeman (W) 84.89 43 ⇑P P 15 49 37.3 +0.1
baz=85,SNR=12
BOZ Bozeman (W) 84.89 43 *e*P P 15 49 37.3 +0.1
BOZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
BOZ Bozeman (W) 84.89 43 *e*P P 15 49 37.3 0.0
comp=Z,6.1nm,0.6s,mb4.6
G16A Moss Hill, Enn 84.96 43 ⇓P P 15 49 37.6 0.0
baz=85,SNR=9.8
EGMT Eagleton 85.00 40 ⇓P P 15 49 37.3 -0.3
baz=85,SNR=5.6
EGMT Eagleton 85.00 40 *e*P P 15 49 37.0 -0.7
comp=Z,12nm,0.9s,mb4.7
Q11A Duckwater 85.00 50 ⇓P P 15 49 37.7 -0.2
baz=85,SNR=5.2
E17A Martinsdale 85.02 42 ⇓P P 15 49 37.9 +0.1
baz=85,SNR=12
M13A Montello 85.03 47 ⇑P P 15 49 38.1 +0.1
baz=85,SNR=8.4
M13A Montello 85.03 47 *e*P P 15 49 37.9 -0.1
comp=Z,17nm,1.0s,mb4.8
I15A Monteview 85.05 45 ⇑P P 15 49 38.4 +0.3
baz=85
FURC Furnace Creek, 85.06 53 ⇑P P 15 49 38.3 0.0
baz=85
O12A Currie 85.07 49 ⇑P P 15 49 38.3 +0.1
baz=85,SNR=8.2
K14A Jones Ranch, D 85.21 46 ⇑P P 15 49 39.3 +0.5
baz=85,SNR=5.2
N13A Wendover, West 85.21 48 ⇓P P 15 49 39.1 +0.2
baz=85
R11A Troy Canyon, C 85.25 51 ⇑P P 15 49 39.1 0.0
baz=85,SNR=16
P12A McGill 85.28 49 ⇑P P 15 49 39.4 +0.1
baz=85,SNR=11
J15A Blackfoot 85.34 45 ⇑P P 15 49 40.3 +0.8
baz=85,SNR=12
D18A Linhart Farms, 85.34 41 ⇓P P 15 49 39.2 -0.2
baz=85,SNR=5.5
QLMT Earthquake Lak 85.37 43 *e*P P 15 49 40.4 +0.8
comp=Z,1.9nm,0.3s,mb4.4
L14A Malta 85.38 47 ⇓P P 15 49 40.0 +0.3
baz=85,SNR=6.9
F17A Fitzpatrick Pl 85.39 42 ⇓P P 15 49 39.9 +0.2
baz=85,SNR=7.8
S11A Rachel 85.42 51 ⇑P P 15 49 40.2 +0.2
baz=85
Q12A Willow Creek R 85.51 50 ⇑P P 15 49 40.6 +0.2
baz=85
M14A Sheep Mountain 85.53 47 ⇓P P 15 49 40.7 +0.2
baz=85,SNR=23
H16A Russell Place, 85.54 44 ⇑P P 15 49 41.0 +0.6
baz=85,SNR=11
E18A Harlowton 85.56 41 ⇓P P 15 49 40.9 +0.4
baz=85,SNR=21
GSC Goldstone 85.56 54 ⇓P P 15 49 40.5 -0.2

	baz=85						
K15A	Arbon	85.58	46	⇓P	P	15 49 41.2	+0.6
	baz=85						
G17A	Pierce Place,	85.60	43	⇑P	P	15 49 41.1	+0.4
	baz=85						
SHOC	Shoshone	85.72	53	⇓P	P	15 49 41.8	+0.2
	baz=86						
YMR	Madison River	85.74	43	P	P	15 49 40.8	-0.7
	comp=Z,23nm,0.9s,mb5.0						
HVU	Hansel Valley	85.80	47	eP	P	15 49 42.0	+0.2
HVU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
HVU	Hansel Valley	85.80	47	eP	P	15 49 42.0	+0.2
	comp=Z,5.9nm,0.9s,mb4.4						
N14A	Grayback Hills	85.91	48	⇑P	P	15 49 42.4	+0.1
	baz=86						
P13A	Bates Ranch, G	85.92	49	⇑P	P	15 49 42.3	-0.1
	baz=86,SNR=12						
YFT	Old Faithful	85.92	44	eP	P	15 49 44.6	+2.4
	comp=Z,8.7nm,0.5s,mb4.8						
J16A	Bone	85.93	45	⇑P	P	15 49 42.9	+0.6
	baz=86,SNR=8.1						
FFC	Flin Flon	85.94	32	i P	P	15 49 42.0	-0.2
R12A	Pony Springs,	85.96	50	⇓P	P	15 49 42.9	+0.3
	baz=86						
T11A	Corn Creek, Al	85.96	52	⇑P	P	15 49 42.5	-0.1
	baz=86						
L15A	Malad City	85.97	46	⇓P	P	15 49 42.5	-0.1
	baz=86,SNR=5.4						
F18A	Big Timber	85.98	42	⇑P	P	15 49 42.5	0.0
	baz=86,SNR=7.4						
S12A	Delamar Landin	86.08	51	⇓P	P	15 49 43.9	+0.7
	baz=86						
IMW	Indian Meadow	86.10	44	eP	P	15 49 43.5	+0.3
	comp=Z,4.5nm,0.8s,mb4.3						
H17A	Grant Village	86.11	44	⇑P	P	15 49 44.8	+1.6
	baz=86						
Q13A	Wheeler Ranch,	86.12	50	⇑P	P	15 49 43.5	+0.1
	baz=86,SNR=6.7						
K16A	Soda Springs	86.14	45	⇓P	P	15 49 44.1	+0.7
	baz=86,SNR=5.5						
M15A	Larsen Ranch,	86.16	47	⇓P	P	15 49 43.9	+0.4
	baz=86						
TUQ	Turquoise Moun	86.17	53	⇓P	P	15 49 44.1	+0.3
	baz=86						
TPAW	Teton Pass	86.27	45	P	P	15 49 45.0	+1.0
	comp=Z,3.0nm,0.8s,mb4.2						
DUG	Dugway	86.45	48	⇓P	P	15 49 44.9	-0.1
	baz=86,SNR=5.2						
DUG	Dugway	86.45	48	P	P	15 49 44.6	-0.3
DUG				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
DUG	Dugway	86.45	48	P	P	15 49 44.6	-0.4
	comp=Z,12nm,1.0s,mb4.7						
PFO	Pinyon Flat Ob	86.50	55	⇓P	P	15 49 45.1	-0.3
	baz=86						
P14A	Drum Mountains	86.53	49	⇑P	P	15 49 45.3	-0.1
	baz=86,SNR=11						
L16A	Fish Haven	86.60	46	⇑P	P	15 49 46.1	+0.5
	baz=86						
GMRC	Granite Mounta	86.63	54	⇓P	P	15 49 45.8	-0.2
	baz=86,SNR=7.1						
Q14A	Sevier Lake (B	86.64	49	⇑P	P	15 49 45.8	0.0
	baz=86,SNR=14						
HWUT	Hardware Ranch	86.69	46	eP	P	15 49 45.8	-0.3
	comp=Z,7.2nm,1.0s,mb4.5						
BELC	Belle Mtn.	86.69	55	⇑P	P	15 49 45.7	-0.5
	baz=86,SNR=6.4						
U12A	Valley of Fire	86.79	52	⇑P	P	15 49 47.0	+0.3
	baz=87						
S13A	Holt Ranch, En	86.81	51	⇑P	P	15 49 47.1	+0.3
	baz=87						
MONP	Monument Peak	86.81	56	⇑P	P	15 49 46.7	-0.2
	baz=87,SNR=5.9						
V12A	Nelson	86.85	53	⇓P	P	15 49 46.9	-0.1
	baz=87,SNR=7.7						
LDFC	Landfair	86.93	54	eP	P	15 49 47.0	-0.3
	comp=Z,23nm,1.2s,mb4.9						
L17A	Cokeville	86.94	46	⇓P	P	15 49 47.1	-0.1
	baz=87						
J18A	Kendall Valley	87.00	44	⇑P	P	15 49 47.4	-0.1
	baz=87,SNR=7.5						
T13A	Saint George	87.01	51	⇑P	P	15 49 48.0	+0.3
	baz=87						
DVTC	Desert V Tower	87.15	56	⇓P	P	15 49 48.6	+0.2
	baz=87						
FCC	Fort Churchill	87.16	26	eP	P	15 49 46.8	-1.1
	comp=Z,0.3nm,0.6s						
U13A	Pakoon Wash	87.22	52	⇓P	P	15 49 48.9	+0.1
	baz=87,SNR=8.8						
BC3	Big Chuckw Mtn	87.25	55	⇑P	P	15 49 48.8	-0.1
	baz=87,SNR=8.5						
IRM	Iron Mountain	87.27	54	⇓P	P	15 49 49.0	0.0
	baz=87						
SWSC	Sam W. Stewart	87.27	56	⇓P	P	15 49 48.8	-0.2
	baz=87						
M17A	Scullys Gap (B	87.36	46	⇓P	P	15 49 49.0	-0.2
	baz=87						
V13A	Grand Canyon W	87.44	52	⇑P	P	15 49 50.0	+0.2
	baz=87						
BW06	Boulder Array	87.51	45	⇑P	P	15 49 49.7	-0.3
	baz=87						
PDAR	Pinedale Array	87.51	45	P	P	15 49 49.4	-0.6
	comp=Z,1.2nm,0.5s,mb4.0,baz=176,slow=1.0,SNR=15						
AKASG	Malin Array Be	87.55	324	P	P	15 49 48.1	-1.9
	comp=Z,1.5nm,0.4s,mb4.2,baz=47,slow=4.7,SNR=11						
AKASG	Malin Array Be	87.55	324	i P	P	15 49 48.0	-2.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
U14A	Mt Trumbull	87.79	52	⇑P	P	15 49 51.6	+0.2
	baz=88						
W13A	Hualapai Mount	87.83	53	⇓P	P	15 49 51.7	+0.1
	baz=88						
O17A	Robinson Place	87.88	47	⇑P	P	15 49 51.9	+0.2
	baz=88						
Y12C	Blythe	87.91	55	⇓P	P	15 49 52.4	+0.4
	baz=88						
L19A	Farson	87.94	45	⇓P	P	15 49 52.3	+0.3
	baz=88						
K19A	Absolon Red Bu	87.94	44	⇑P	P	15 49 51.7	-0.2
	baz=88						
GLA	Glamis	87.97	55	⇓P	P	15 49 52.4	+0.1
	baz=88						
GLA	Glamis	87.97	55	eP	P	15 49 52.5	+0.2
GLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
GLA	Glamis	87.97	55	eP	P	15 49 52.5	+0.1
	comp=Z,2.2nm,0.6s,mb4.2						
PDMCI	Parker Dam,Lak	87.97	54	⇑P	P	15 49 52.3	0.0
	baz=88						
X13A	Yucca	88.08	54	⇑P	P	15 49 52.9	+0.1
	baz=88						
T15A	Red Dirt Ranch	88.12	51	⇓P	P	15 49 53.4	+0.4
	baz=88						
Q16A	Castle Valley	88.14	49	⇓P	P	15 49 53.2	+0.2
	baz=88,SNR=5.7						
V14A	Boquillas Ranc	88.18	52	⇓P	P	15 49 53.7	+0.4
	baz=88,SNR=5.7						
P17A	Butcher Ranch,	88.20	48	⇓P	P	15 49 53.5	+0.2
	baz=88						
R16A	Teasdale	88.21	49	⇑P	P	15 49 53.8	+0.5
	baz=88						
N18A	Larsen Ranch,	88.25	46	⇓P	P	15 49 53.4	0.0
	baz=88						
O18A	Roosevelt	88.34	47	⇓P	P	15 49 54.0	+0.1
	baz=88						
K20A	Yellowstone Ra	88.35	44	⇓P	P	15 49 53.5	-0.4
	baz=88						
U15A	North Rim	88.44	51	⇑P	P	15 49 54.8	+0.4
	baz=88						
P18A	Preston Nutter	88.47	48	⇓P	P	15 49 54.6	+0.1
	baz=88						
SRU	San Rafael	88.51	48	⇑P	P	15 49 54.4	-0.3
	baz=88						
R17A	Hanksville Air	88.69	49	⇑P	P	15 49 55.4	-0.2
	baz=88						
Z13A	Yuma Proving G	88.80	55	⇓P	P	15 49 56.5	+0.3
	baz=89,SNR=8.5						
X14A	Yava	88.84	53	⇓P	P	15 49 56.6	+0.3
	baz=89						
113A	Mohawk Valley,	88.90	55	⇓P	P	15 49 56.7	0.0
	baz=89						
O19A	Miners Draw (B	88.93	47	⇑P	P	15 49 56.4	-0.3
	baz=89						
S17A	Black Ridge (B	88.98	50	⇓P	P	15 49 56.5	-0.4
	baz=89						
Y14A	Wickenburg	88.98	54	⇑P	P	15 49 57.0	0.0
	baz=89,SNR=6.8						
M20A	Sweetwater, Wa	89.00	45	⇑P	P	15 49 57.0	+0.1
	baz=89						
N20A	Spence Gulch,	89.26	46	⇓P	P	15 49 58.3	+0.1
	baz=89						
R18A	Canyonlands Na	89.28	49	⇑P	P	15 49 57.9	-0.4
	baz=89						
L21A	Rawlins	89.31	45	⇓P	P	15 49 58.5	+0.1
	baz=89						
X15A	Humboldt	89.32	53	⇑P	P	15 49 59.3	+0.7
	baz=89						
P19A	Cripple Cowboy	89.34	47	⇓P	P	15 49 58.7	+0.1
	baz=89						
Y15A	Casa Rosa Ranc	89.48	54	⇑P	P	15 49 59.6	+0.2
	baz=89,SNR=5.6						
M21A	Separation Pea	89.49	45	⇑P	P	15 49 59.1	-0.2
	baz=89						
WUAZ	Wupatki	89.50	52	⇑P	P	15 49 59.7	+0.3
	baz=89						
S18A	Hurst Farm, Bl	89.52	49	⇓P	P	15 49 59.3	-0.2
	baz=89						
114A	Black Gap (USA	89.58	55	⇓P	P	15 50 00.1	+0.2
	baz=89						
N21A	Black Mountain	89.79	46	⇓P	P	15 50 00.6	-0.1
	baz=90						
T18A	Mexican Hat	89.86	50	⇑P	P	15 50 00.5	-0.6
	baz=90						
V17A	Tonalea, Kykot	89.88	52	⇓P	P	15 50 01.4	+0.2
	baz=90						
L22A	Ellis Ranch, M	89.89	44	⇓P	P	15 50 01.2	+0.1
	baz=90						
214A	Organ Pipe Nat	89.98	56	⇑P	P	15 50 02.0	+0.3
	baz=90						
115A	Sonoran Desert	90.10	55	⇓P	P	15 50 02.6	+0.3
	baz=90						
S19A	Harvey Farm, M	90.10	49	⇑P	P	15 50 01.8	-0.3
	baz=90						
Q20A	Ridgley Place,	90.12	48	⇓P	P	15 50 02.3	+0.1
	baz=90						
Y16A	Circle Bar Ran	90.15	53	⇓P	P	15 50 02.8	+0.3
	baz=90						
U18A	Rough Rock, Ch	90.19	50	⇑P	P	15 50 03.0	+0.4
	baz=90						
RSSD	Black Hills	90.36	42	eP	P	15 50 02.6	-0.6
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
RSSD	Black Hills	90.36	42	eP	P	15 50 02.6	-0.6
	comp=Z,5.8nm,0.4s,mb4.9						
BR131	Keskin Array S	90.37	313	eP	P	15 50 01.7	-1.7
	comp=Z,2.9nm,0.8s,mb4.3						
BRTR	Keskin Array B	90.37	313	P	P	15 50 02.1	-1.2
	comp=Z,2.8nm,0.7s,mb4.3,baz=86,slow=3.1,SNR=11						
BRTR	Keskin Array B	90.37	313	P	P	15 50 02.2	-1.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
R20A	Redvale	90.42	48	⇑P	P	15 50 04.0	+0.3
	baz=90						
V18A	Ganado	90.47	51	⇓P	P	15 50 04.2	+0.3
	baz=90						
T19A	Beclabito	90.61	50	⇑P	P	15 50 04.8	+0.2
	baz=90						
Q21A	Lamborn Mesa,	90.68	47	⇑P	P	15 50 05.2	+0.4
	baz=90						
SMCO	Snowmass	90.92	47	eP	P	15 50 05.8	-0.2
	comp=Z,5.1nm,0.8s,mb4.5						
Q22A	Crested Butte,	91.12	47	⇓P	P	15 50 07.5	+0.6
	baz=91						
U20A	Newcomb	91.17	50	⇑P	P	15 50 07.4	+0.2
	baz=91						
117A	Oracle	91.28	54	⇓P	P	15 50 08.1	+0.4
	baz=91						
FRB	Frobisher Bay	91.41	14	P	P	15 50 06.4	-1.3
	comp=Z,3.5nm,0.4s,mb4.6,baz=26,slow=3.4,SNR=6.7						
BUR08	Bucovina Ar. S	91.44	323	eP	P	15 50 07.0	-1.1
V20A	Brimhall	91.48	50	⇑P	P	15 50 08.8	+0.2
	baz=91						
X19A	St. Johns	91.52	52	⇓P	P	15 50 09.4	+0.6
	baz=91						
ISCO	Idaho Springs	91.53	46	eP	P	15 50 09.0	+0.2
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ISCO	Idaho Springs	91.53	46	eP	P	15 50 09.0	+0.2
	comp=Z,3.9nm,0.8s,mb4.4						
217A	Green Valley	91.58	55	⇑P	P	15 50 09.8	+0.6
	baz=91						
118A	Homack Ranch,	91.83	54	⇓P	P	15 50 10.9	+0.6
	baz=92						
T22A	Edith	92.02	49	⇑P	P	15 50 11.3	+0.3
	baz=92						
X20A	Quemado	92.05	52	⇓P	P	15 50 12.0	+0.7
	baz=92						
V21A	Milan	92.07	50	⇑P	P	15 50 11.5	+0.1
	baz=92						
119A	Ashpeak Ranch,	92.28	53	⇓P	P	15 50 13.3	+1.0
	baz=92						
318A	Bisbee	92.36	55	⇑P	P	15 50 13.8	+1.0
	baz=92						
Y20A	Horse Springs,	92.43	52	⇓P	P	15 50 13.8	+0.8
	baz=92						
X21A	Alamocita Cree	92.61	51	⇓P	P	15 50 14.4	+0.5
	baz=92						
Z20A	Nine Sixteen R	92.64	53	⇑P	P	15 50 14.5	+0.5
	baz=92						
219A	White Tail Can	92.66	54	⇑P	P	15 50 14.5	+0.4
	baz=92						
120A	U Bar Ranch, L	92.88	53	⇓P	P	15 50 15.9	+0.8
	baz=93						
Z22A	Elephant Butte	93.78	52	⇓P	P	15 50 19.2	0.0
	baz=94						
W24A	Lazy 6 Ranch,	93.95	50	⇓P	P	15 50 19.9	0.0
	baz=94						
GERES	GERESS Array B	96.64	329	P	P	15 50 30.3	-1.5
	comp=Z,0.4nm,0.3s,mb4.0,baz=33,slow=5.4,SNR=5.6						
TXAR	Lajitas Array	98.16	54	P	P	15 50 39.5	+0.4
	comp=Z,0.6nm,0.7s,mb3.9,baz=278,slow=3.7,SNR=5.0						
TXAR	Lajitas Array	98.16	54	P	P	15 50 39.5	+0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
627A	Terlingua Ranc	98.31	54	⇑P	P	15 50 39.1	-0.7
	baz=98						
SDV	Santo Domingo	135.11	51	ePKPdf	PKPdf	15 56 19.9	-0.3
DBIC	Dimbokro	137.86	308	PKP	PKPdf	15 56 23.5	-1.9
	comp=Z,8.3nm,0.9s,baz=106,slow=17,SNR=4.0						
DBIC	Dimbokro	137.86	308	PKIKP	PKPdf	15 56 23.5	-1.8
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PLCA	Paso Flores	145.74	132	PKPbc	PKPbc	15 56 39.7	+0.1
	comp=Z,8.8nm,0.6s,baz=233,slow=3.0,SNR=38						
PLCA	Paso Flores	145.74	132	PKPbc	PKPbc	15 56 39.7	+0.1
LPAZ	La Paz	150.01	85	PKP	PKPdf	15 56 48.0	+1.8
	comp=Z,11nm,0.6s,baz=291,slow=2.8,SNR=23						
LPAZ				PKPbc	PKPbc	15 56 52.3	+0.9
	comp=Z,11nm,0.6s,baz=312,slow=2.2,SNR=42						
LPAZ	La Paz	150.01	85	ePKPdf	PKPdf	15 56 46.6	+0.5
LPAZ				ePKPbc	PKPbc	15 56 52.2	+0.7
LPAZ				ePKPab	PKPab	15 56 59.4	+0.9

ISCJB ***29*** *15:41:18.6±0.4, 34°.77S±0°.04×70°.68W±0°.08, h107km±4km, mb3.9/8, Error ellipse: s-maj=11.6km s-min=4.9km az=18.2*

GUC ***29*** *15:41:18.9±0.8, 34°.74S×70°.78W, h107km±6km, MD3.5, ML4.3*

NEIC ***29*** *15:41:18.0, 34°.74S×70°.78W, h107km, mb3.7/2, MD3.5(GUC), After GUC.*

NEIC Felt [II] at Curico, Rancagua, San Fernando and Santiago.

IDC ***29*** *15:41:20.9±2.0, 34°.75S×70°.53W, h114km±18km, mb3.7/9, mb1 3.8/11, mb1mx3.8/17, mbtmp3.6/11, Error ellipse: s-maj=27.5km s-min=12.0km az=94.0*

ISC 29 15:41:19.7±0.4, 34°.76S±0°.03×70°.71W±0°.08, h101km±4km, n32, σ0°65/42, mb3.9/8, 5C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	El Canelo	0.65	8	⇑iP	Pn	15 41 37.1	+0.3
CACH				i S	Sn	15 41 50.9	+1.3
CHCH	Chadas Angostu	0.83	3	⇓iP	Pn	15 41 38.3	-0.1
TALC	Talca	0.99	230	⇑iP	Pn	15 41 39.8	-0.2
TALC				i S	Sn	15 41 55.1	-0.2
TALC				AML	AML	15 41 56.5	
	comp=E,10μm,0.2s						
LNV	Longovilo	0.99	324	⇑iP	Pn	15 41 39.5	-0.6
TACH	Talagante	1.12	350	⇓iP	Pn	15 41 41.2	-0.4
PCH	Pirque	1.15	8	⇓iP	Pn	15 41 41.9	+0.1
ANTU	Antumapu	1.19	3	⇑iP	Pn	15 41 42.2	-0.1
ANTU				i S	Sn	15 42 00.1	+0.7
ANTU				AML	AML	15 42 00.5	
	comp=N,7μm,0.2s						
SAN	Santiago	1.31	2	⇓iP	Pn	15 41 43.5	-0.2
SAN				i S	Sn	15 42 01.7	-0.1
SAN				AML	AML	15 42 02.9	
	comp=N,5μm,0.4s						
CLCH	Cerro Calan	1.37	6	AML	AML	15 42 05.7	
	comp=N,10μm,0.6s						
LCCH	Las Cruces	1.47	331	⇓iP	Pn	15 41 45.0	-0.6
LCCH				eS	Sn	15 42 04.5	-0.7
FCH	Farellones	1.47	14	⇑iP	Pn	15 41 46.0	+0.3
FCH				i S	Sn	15 42 06.0	+0.6
FCH				AML	AML	15 42 16.5	
	comp=E,5μm,0.3s						
PEL	Peldehue	1.62	1	⇓iP	Pn	15 41 47.3	-0.1
PEL				i S	Sn	15 42 08.4	-0.1
PEL				AML	AML	15 42 10.0	
	comp=N,9μm,0.5s						
ROCH	El Roble	1.80	352	⇓iP	Pn	15 41 49.4	-0.4
JACH	Jahuel	2.08	3	eP	Pn	15 41 52.9	-0.4
JACH				i S	Sn	15 42 18.8	-0.2
CCHI	Chillan	2.15	211	⇓iP	Pn	15 41 54.3	+0.1
CCHI				i S	Sn	15 42 19.9	-0.6
CCHI				i S	Sn	15 42 21.3	+0.8
CCHI				AML	AML	15 42 50.2	
	comp=N,544nm,0.2s						
CFAA	Coronel Fontan	3.77	34	P	Pn	15 42 15.5	-0.3
	comp=N,0.8nm,0.3s,baz=209,slow=8.7,SNR=79						
CFAA				S	Sn	15 42 59.6	+0.4
	comp=N,1.2nm,0.3s,baz=230,slow=14,SNR=4.0						
PLCA	Paso Flores	5.96	179	P	Pn	15 42 45.7	+0.4
	comp=N,1.6nm,0.3s,baz=345,slow=11,SNR=38						
PLCA	Paso Flores	5.96	179	ePn	Pn	15 42 45.0	-0.3
TRQA	Tornquist	7.77	118	ePn	Pn	15 43 09.1	-0.8
LPAZ	La Paz	18.54	8	P	P	15 45 29.8	+1.3
	comp=N,0.3nm,0.3s,baz=169,slow=6.7,SNR=8.2						
LPAZ	La Paz	18.54	8	eP	P	15 45 29.5	+1.0
	comp=N,2.5nm,0.7s						
USHA	Ushuaia	20.13	176	P	P	15 45 47.2	+1.9
	comp=N,18nm,0.7s,baz=346,slow=8.7,SNR=13						
SIV	San Ignacio	20.60	27	P	P	15 45 49.5	-1.2
	comp=N,0.8nm,0.4s,baz=211,slow=15,SNR=6.5						
QSPA	South Pole Qui	55.48	180	P	P	15 50 43.8	+0.5
	comp=N,2.3nm,0.8s,mb4.2,baz=102,slow=3.0,SNR=17						
QSPA	South Pole Qui	55.48	180	P	P	15 50 43.8	+0.5
TXAR	Lajitas Array	70.94	330	P	P	15 52 26.1	+0.1
	comp=N,1.5nm,0.5s,mb4.1,baz=160,slow=9.0,SNR=24						
MAW	Mawson	72.14	163	P	P	15 52 32.0	-0.7
	comp=N,0.6nm,0.4s,mb3.8,baz=233,slow=14,SNR=3.1						
ANMO	Albuquerque	76.98	330	P	P	15 53 01.6	+0.6
	comp=N,1.3nm,0.7s,mb3.8						
BOSA	Boshof	78.75	117	P	P	15 53 10.4	-0.8
	comp=N,2.7nm,0.6s,mb4.3,baz=243,slow=4.5,SNR=5.4						
TORD	Torodi Ar. Bea	83.45	69	P	P	15 53 35.2	-1.0
	comp=N,0.7nm,0.9s,mb3.5,baz=225,slow=3.9,SNR=2.7						
PDAR	Pinedale Array	84.94	332	P	P	15 53 43.9	+0.7
	comp=N,0.6nm,0.7s,mb3.7,baz=205,slow=1.5,SNR=4.2						
NVAR	Mina Array Bea	85.14	324	P	P	15 53 44.8	+0.6
	comp=N,0.7nm,0.7s,mb3.7,baz=150,slow=7.1,SNR=4.8						

SZGRF ***29*** *15:45:56.8, 64°.47N×21°.81W, h33km, mb6.1, MS6.0, Iceland*

CSEM ***29*** *15:45:58.9±0.0, 64°.01N×21°.02W, h2km, mb5.9/99, Ms6.1, Mw6.3, Error ellipse: s-maj=2.3km s-min=1.2km az=25.0*

MOS ***29*** *15:45:58.8±0.9, 63°.90N×21°.18W, h10km, mb6.1/136, MS6.2/110, Error ellipse: s-maj=6.7km s-min=3.2km az=116.0*

ISCJB ***29*** *15:45:58.9±0.1, 63°.96N±0°.01×21°.07W±0°.02, h10km, mb5.8/480, MS6.2/288, Error ellipse: s-maj=1.8km s-min=0.9km az=23.0*

REY ***29*** *15:45:58.9, 63°.97N×21°.07W, h5km, ML5.3, ML5.7*

IDC ***29*** *15:45:59.4±0.3, 64°.01N×21°.11W, h0km, mb5.1/35, mb1 5.1/41, mb1mx5.1/42, mbtmp5.1/41, ML4.3/4, MS6.2/34, Ms1 6.2/34, ms1mx6.1/36, Error ellipse: s-maj=7.8km s-min=5.5km az=38.0*

GCMT ***29*** *15:46:00.5±0.1, 63°.92N×21°.17W, h12km, MW6.3/114, Moment Tensor Solution. s107,c234; s114,c471; Duration: 3s4 Moment tensor: Scale 10^18Nm; Mrr-0.70±.02; Mθθ0.07±.02; Mφφ0.63±.02; Mrθ0.23±.04; Mθφ3.29±.01; Mφr-0.61±.04; Best double couple: M0 3.38300×10^18 NP1:φs267.00000°, δ78.00000°, λ-7.00000°. NP2:φs358.00000°, δ83.00000°, λ-167.00000°. Principal axes: T 3.6740, Plg4.0000°, Azm132.0000°; N -0.5830, Plg76.0000°, Azm27.0000°; P -3.0920, Plg14.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

SFS ***29*** *15:46:00.0, 63°.99N×21°.00W, h10km, ML6.3*

BJI ***29*** *15:46:00.3±0.1, 64°.17N×21°.07W, h10km, mB6.0/50, mb5.5/42, Ms6.6/73, Ms7 6.4/64*

NEIC ***29*** *15:46:00.3±0.1, 64°.01N×21°.01W, h9km, mb5.9/291, ME6.7, MS6.2/206, MW6.2, MW6.2, ML6.1(REY), Error ellipse: s-maj=2.3km s-min=1.2km az=207.0, Moment Tensor Solution. s158 Moment tensor: Scale 10^18Nm; Mrr-0.07; Mθθ0.00; Mφφ0.06; Mrθ-0.18; Mθφ2.28; Mφr0.35; Best double couple: M0 2.30000×10^18 NP1:φs180.00000°, δ85.00000°, λ-171.00000°. NP2:φs89.00000°, δ81.00000°, λ-5.00000°. Principal axes: T 2.3200, Plg2.0000°, Azm314.0000°; N -0.0100, Plg80.0000°, Azm207.0000°; P -2.3100, Plg9.0000°, Azm44.0000°; Broadband fault plane solution: P waves. NP1:φs350.00000°, δ85.00000°, λ178.00000°. NP2:φs80.00000°, δ88.00000°, λ5.00000°. Principal axes: T Plg5.0000°, Azm305.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm215.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC About 30 people injured at Selfoss. Some sheep were killed, buildings damaged and utilities cut off in the Hveragerdhi-Selfoss area. The road between Reykjavik and Selfoss was damaged and rockslides occurred in Vestmannaeyjum. A steaming fissure opened in an existing area of geothermal springs. Felt [VIII] at Hveragerdhi and Selfoss; [V] at Keflavik; [IV] at Hafnarfjordhur, Kopavogur and Reykjavik. Felt at Akranes, Akureyri, Alftanes, Borgarnes, Eyrarbakki, Hvammstangi, Isafjordhur, Laugaras, Reykholar, Reykholt, Saudharkrokur and in Mosfellsbaer. Also felt on Selfjarnarnes and Vestmannaeyjar.

BGS ***29*** *15:46:04.7±2.4, 63°.63N×20°.34W, h10km, mb6.5, MS5.9*

ISC 29 15:46:00.8±0.1, 63°.96N±0°.01×20°.99W±0°.02, h10km, (h13km±1.0km:pP-P), n2539, σ1°02/2604, mb5.8/479, MS6.2/287, 389C-257D, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISOL	Solvholt	0.03	145	P	Pg	15 46 00.6	-2.1
ISOL				S	Sg	15 46 01.9	-2.1
IBJA	Bjarnastaoir	0.14	266	P	Pg	15 46 01.5	-2.5
IKRO	Krokur	0.15	338	P	Pg	15 46 01.8	-

IVOG	Vogar	0.62	272	P	Pg	15 46 09.4	-3.4
IVOG	Vogar	0.62	272	P	Pg	15 46 09.4	-3.4
IVOG				S	Sg	15 46 18.3	-2.6
IGRV	Grindav??k	0.66	262	P	Pg	15 46 10.0	-3.5
INYL	Nylenda	0.77	272	P	Pg	15 46 11.7	-4.0
INYL				S	Sg	15 46 22.3	-3.5
INYL	Nylenda	0.77	272	P	Pg	15 46 11.4	-4.3
INYL				S	Sg	15 46 22.3	-3.5
IGOD	Go??abunga	0.80	111	P	Pg	15 46 14.1	-2.0
IGOD	Go??abunga	0.80	111	P	Pg	15 46 14.1	-2.1
BORG	Borgarnes	0.81	350	Pg	Pg	15 46 12.6	-3.8
	25μm,0.3s,baz=174,slow=7.5						
BORG				Lg	Sg	15 46 23.6	-3.3
	109μm,0.3s,baz=256,slow=20,SNR=61						
BORG				LR	LR	15 46 25.4	
	comp=Z,980μm,20.0s,baz=0.0,slow=35						
BORG	Borgarnes	0.81	350⇑	*e*Pg	Pg	15 46 12.7	-3.7
BORG				*e*Sg	Sg	15 46 23.5	-3.4
BORG	Borgarnes	0.81	350	*e*P	Pg	15 46 12.7	-3.7
BORG				*e*S	Sg	15 46 23.5	-3.4
IESK	Eystri-Skogar	0.81	122	P	Pg	15 46 13.9	-2.5
IESK	Eystri-Skogar	0.81	122	P	Pg	15 46 13.9	-2.5
ISKR	Skrokkalda	1.29	61	P	Pn	15 46 21.8	-3.0
ISKR				S	Sb	15 46 40.2	-1.5
ISKR	Skrokkalda	1.29	61	P	Pn	15 46 21.8	-3.0
ISKR				S	Sb	15 46 40.2	-1.5
IKAL	Kalfafell	1.46	89	P	Pn	15 46 24.5	-2.6
IKAL	Kalfafell	1.46	89	P	Pn	15 46 25.0	-2.1
IKAL				S	Sn	15 46 45.2	-1.1
IGRF	Grimsfjall	1.69	73	P	Pn	15 46 28.1	-2.3
IGRF	Grimsfjall	1.69	73	P	Pn	15 46 28.1	-2.3
IFAG	Fagurholsmyri	1.92	90	P	Pn	15 46 31.6	-1.9
IFAG	Fagurholsmyri	1.92	90	P	Pn	15 46 31.6	-1.9
IFAG				S	Sn	15 46 56.7	-0.9
ISVA	Svartarkot	2.12	48	P	Pn	15 46 33.5	-2.8
ISVA	Svartarkot	2.12	48	P	Pn	15 46 33.5	-2.8
ISVA				S	Sn	15 47 01.8	-0.8
IKRE	Kreppuhraun	2.17	65	P	Pn	15 46 34.6	-2.3
IKRE	Kreppuhraun	2.17	65	P	Pn	15 46 35.6	-1.3
IHRN	Hraun	2.19	9	P	Pn	15 46 33.7	-3.6
IHRN	Hraun	2.19	9	P	Pn	15 46 34.6	-2.7
IHRN				S	Sn	15 47 02.8	-1.6
IHLA	Hella	2.28	28	P	Pn	15 46 36.0	-2.5
IHLA	Hella	2.28	28	P	Pn	15 46 36.3	-2.2
IBRU	Bruarjokull	2.30	65	P	Pn	15 46 36.3	-2.4
IBRU	Bruarjokull	2.30	65	P	Pn	15 46 36.3	-2.4
ISIG	Siglufjorour	2.35	21	P	Pn	15 46 36.8	-2.7
ISIG	Siglufjorour	2.35	21	P	Pn	15 46 36.8	-2.7
IHVA	Hvannstoosfjol	2.43	63	P	Pn	15 46 37.9	-2.7
IHVA	Hvannstoosfjol	2.43	63	P	Pn	15 46 37.9	-2.7
IREN	Reynihlio	2.44	44	P	Pn	15 46 38.5	-2.1
IREN	Reynihlio	2.44	44	P	Pn	15 46 38.5	-2.1
IVSH	V-Sauoahnukur	2.44	67	P	Pn	15 46 38.5	-2.1
IVSH	V-Sauoahnukur	2.44	67	P	Pn	15 46 38.5	-2.1
IGRA	Granastaoir	2.45	35	P	Pn	15 46 38.4	-2.3
IGRA	Granastaoir	2.45	35	P	Pn	15 46 38.4	-2.3
IKVO	Krokottuvotn	2.49	43	P	Pn	15 46 38.8	-2.5
IKVO	Krokottuvotn	2.49	43	P	Pn	15 46 38.8	-2.5
IADA	Aoalbol	2.57	63	P	Pn	15 46 41.9	-0.6
IADA	Aoalbol	2.57	63	P	Pn	15 46 41.9	-0.6
IGRS	Grimsstaoir	2.68	49	P	Pn	15 46 41.8	-2.1
IGRS	Grimsstaoir	2.68	49	P	Pn	15 46 41.8	-2.1
IGIL	Gilhagi	2.90	41	P	Pn	15 46 45.5	-1.4
IGIL	Gilhagi	2.90	41	P	Pn	15 46 45.5	-1.4
SCO	Scoresbysund	6.57	357	*i* P	Pn	15 47 35.1	-2.2
SCO				pmax	pmax		
	comp=Z,890nm,0.8s						
SCO				MLR	MLR		
	comp=Z,150μm,16.0s						
SCO	Scoresbysund	6.57	357	*i* P	Pn	15 47 35.1	-2.2
	comp=Z,890nm,0.8s						
SCO							
	comp=Z,147μm,16.0s						
SCO	Scoresbysund	6.57	357	*i* P	Pn	15 47 35.2	-2.1
	comp=Z,890nm,0.8s,SNR=46						
SOFL	Sornfelli, Far	6.66	100	*e*P	Pn	15 47 38.5	0.0
SOFL				AMb	AMB	15 47 50.7	
	comp=Z,3μm,1.3s						
SOFL				AMS	AMS	15 49 48.4	
	comp=Z,243μm,19.7s						
SOFL	Sornfelli, Far	6.66	100	P	Pn	15 47 39.6	+1.1
SOFL	Sornfelli, Far	6.66	100	*e*P	Pn	15 47 38.5	0.0
	comp=Z,3μm,1.3s						
JMIC	Jan Mayen	8.51	29	*e*Pn	Pn	15 48 07.5	+3.7
JMIC				*e*Sn	Sn	15 49 49.2	+9.4
JMIC	Jan Mayen	8.51	29	Pn	Pn	15 48 05.2	+1.4
	comp=Z,4.8nm,0.3s,baz=201,slow=8.8,SNR=5.6						
JMIC				Sn	Sn	15 49 44.9	+5.1
	baz=307,slow=20,SNR=1.2						
JMIC				LR	LR	15 50 39.4	
	comp=Z,159μm,19.2s,baz=225,slow=33						
JNW	Jan Mayen West	8.56	29	*e*	Px	15 48 17.5	
RRH	Rhenigidale	9.21	125	*e*P	Pn	15 48 10.6	-2.9
RRH	Rhenigidale	9.21	125	*e*P	Pn	15 48 10.6	-2.9
RSC	Scourie	9.47	119	*e*P	Pn	15 48 14.7	-2.4
RSC	Scourie	9.47	119	*e*P	Pn	15 48 14.7	-2.4
KSK	Scoval	9.54	126⇑	*e*P	Pn	15 48 14.6	-3.4
RRR	Rubha Reidh	9.58	123	*e*P	Pn	15 48 15.8	-2.7
RRR				*e*S	Sn	15 49 59.5	-6.5
RRR	Rubha Reidh	9.58	123	*e*P	Pn	15 48 15.8	-2.7
WAL1	Walls	9.79	103	*e*P	Pn	15 48 19.4	-2.0
WAL1	Walls	9.79	103	*e*P	Pn	15 48 19.4	-2.0
ORE	Reay	9.89	115	*e*P	Pn	15 48 22.3	-0.6
ORE	Reay	9.89	115	*e*P	Pn	15 48 22.3	-0.5
KPL	Plockton	10.01	124	*e*P	Pn	15 48 22.5	-2.0
KPL				AMb	AMB	15 48 32.2	
	comp=Z,809nm,1.8s						
KPL				AMS	AMS	15 51 24.2	
	comp=Z,147μm,20.8s						
KPL	Plockton	10.01	124	*e*P	Pn	15 48 22.5	-2.0
	comp=Z,809nm,1.8s						
KAC	Achnashellach	10.02	123	*e*P	Pn	15 48 22.5	-2.2
KAC	Achnashellach	10.02	123	*e*P	Pn	15 48 22.5	-2.2
LRW	Lerwick	10.04	103	*e*P	Pn	15 48 24.1	-0.8
LRW				AMb	AMB	15 48 30.3	
	comp=Z,813nm,2.5s						
LRW				AMS	AMS	15 51 51.5	
	comp=Z,163μm,18.6s						
LRW	Lerwick	10.04	103	P	Pn	15 48 27.8	+2.9
LRW	Lerwick	10.04	103	*e*P	Pn	15 48 24.1	-0.8
	comp=Z,813nm,2.5s						
MVH1	Achvaich	10.14	119	*e*P	Pn	15 48 24.4	-1.9
MVH1				*e*S	Sn	15 50 16.0	-3.9
MVH1	Achvaich	10.14	119	*e*P	Pn	15 48 24.4	-1.9
KSB	Sheil Bridge	10.19	124	*e*P	Pn	15 48 24.2	-2.8
KSB				*e*S	Sn	15 50 16.9	-4.2
KSB	Sheil Bridge	10.19	124	*e*P	Pn	15 48 24.2	-2.8
KAR1	Arisaig	10.27	126	*e*P	Pn	15 48 24.4	-3.5
KAR1	Arisaig	10.27	126	*e*P	Pn	15 48 24.4	-3.6
MDO	Dochfour	10.42	121	*e*P	Pn	15 48 28.8	-1.2
MDO	Dochfour	10.42	121	*e*P	Pn	15 48 28.8	-1.2
MCD	Coleburn Disti	10.74	118	*e*P	Pn	15 48 33.1	-1.3
MCD				*e*S	Sn	15 50 32.0	-2.6
MCD	Coleburn Disti	10.74	118	*e*P	Pn	15 48 33.1	-1.4
SUMG	Summit	10.75	331	*e*Pn	Pn	15 48 32.0	-2.5
	comp=Z,1μm,1.4s						
SUMG	Summit	10.75	331	*e*Pn	Pn	15 48 32.0	-2.5
	comp=Z,1μm,1.4s						
SUMG	Summit	10.75	331⇑	*e*P	Pn	15 48 33.2	-1.3
	comp=Z,264nm,0.9s,SNR=46						
MME1	Meikle Cairn	11.04	119	*e*P	Pn	15 48 36.7	-1.9
MME1	Meikle Cairn	11.04	119	*e*P	Pn	15 48 36.7	-1.9
EAB	Aberfoyle	11.36	126	*e*P	Pn	15 48 41.2	-1.6
EAB	Aberfoyle	11.36	126	*e*P	Pn	15 48 41.2	-1.7
ELO	Logie Almond	11.37	123	*e*P	Pn	15 48 43.6	+0.6
ELO	Logie Almond	11.37	123	*e*P	Pn	15 48 43.6	+0.5
EBH	Black Hill	11.61	124	*e*P	Pn	15 48 43.9	-2.5
EBH	Black Hill	11.61	124	*e*P	Pn	15 48 43.9	-2.5
EAU	Auchinoon	11.94	125	*e*P	Pn	15 48 51.0	+0.1
EAU	Auchinoon	11.94	125	*e*P	Pn	15 48 51.0	+0.1
EDI	Edinburgh	11.98	124	*e*P	Pn	15 48 50.5	-0.8
EDI				AMb	AMB	15 48 58.4	
	comp=Z,2μm,2.8s						
EDI				AMS	AMS	15 52 34.2	
	comp=Z,123μm,20.5s						
EDI	Edinburgh	11.98	124	*e*P	Pn	15 48 50.5	-0.9
	comp=Z,2μm,2.8s						
FOO	Floro	12.11	89	*e*Pn	Pn	15 48 52.4	-0.8
FOO				*e*Sn	Sn	15 51 10.7	+2.5
FOO	Floro	12.11	89	*e*Pn	Pn	15 48 52.4	-0.8
	SNR=50						
FOO				*e*Sn	Sn	15 51 10.6	+2.5
	SNR=50						
EBL	Broad Law	12.14	124	*e*P	Pn	15 48 51.0	-2.6
EBL	Broad Law	12.14	124	*e*P	Pn	15 48 51.0	-2.7
ESY	Stoneypath	12.19	123	*e*P	Pn	15 48 52.9	-1.4
ESY	Stoneypath	12.19	123	*e*P	Pn	15 48 52.9	-1.4
SUE	Sulen	12.21	92	*e*Pn	Pn	15 48 53.7	-0.8
SUE	Sulen	12.21	92	*e*Pn	Pn	15 48 53.7	-0.8
	SNR=50						
GAL1	Galloway	12.28	130	*e*P	Pn	15 48 54.2	-1.2
GAL1				AMb	AMB	15 49 04.0	
	comp=Z,1μm,1.7s						
GAL1				AMS	AMS	15 52 29.7	
	comp=Z,97μm,22.2s						
GAL1	Galloway	12.28	130	P	Pn	15 48 55.9	+0.5
GAL1	Galloway	12.28	130	P	Pn	15 48 55.9	+0.5
DMUB	Kingscourt	12.39	138	*e*P	Pn	15 48 55.2	-1.9
GMM	Mts of Mourne	12.39	135	*e*P	Pn	15 48 54.9	-2.2
GMM				*e*S	Sn	15 51 07.4	-7.6
GMM	Mts of Mourne	12.39	135	*e*P	Pn	15 48 54.9	-2.2
ESK	Eskdalemuir	12.44	126	Pn	Pn	15 48 57.2	-0.5
	comp=Z,2μm,1.1s,SNR=48						
ESK	Eskdalemuir	12.44	126⇑	*e*P	Pn	15 48 57.2	-0.5
ESK				AMb	AMB	15 49 04.0	
	comp=Z,1μm,2.1s						
ESK	Eskdalemuir	12.44	126	*e*P	Pn	15 48 57.1	-0.6
ESK				*e*		15 51 12.7	
ESK				pmax	pmax		
	comp=Z,4μm,2.0s						
ESK	Eskdalemuir	12.44	126	*e*Pn	Pn	15 48 57.1	-0.6
	comp=Z,4μm,2.0s						
ESK				*e*Sn	Sn	15 51 12.7	-3.4
ESK	Eskdalemuir	12.44	126	*e*Pn	Pn	15 48 57.1	-0.6
	comp=Z,4μm,2.0s						
EKA	Eskdalemuir Ar	12.44	126	Pn	Pn	15 48 56.6	-1.1
	baz=319,slow=12,SNR=95						
EKA				Sn	Sn	15 51 13.0	-3.2
	baz=316,slow=16,SNR=4.8						
EKA	Eskdalemuir Ar	12.44	126	Pn	Pn	15 48 56.6	-1.1
ECK	Cauldkaine Hil	12.57	126	*e*P	Pn	15 48 58.8	-0.7
ECK	Cauldkaine Hil	12.57	126	*e*P	Pn	15 48 58.8	-0.7
SFJD	Kangerlussuaq	12.61	297	Pn	Pn	15 48 56.4	-3.6
	comp=Z,3.1nm,0.3s,baz=76,slow=11,SNR=14						
SFJD				LR	LR	15 53 14.1	
	comp=Z,185μm,20.5s,baz=72,slow=35						
SFJD	Kangerlussuaq	12.61	297⇑	*i* P	Pn	15 48 56.8	-3.1
SFJD				pmax	pmax		
	comp=Z,120nm,0.9s						
SFJD				MLR	MLR		
	comp=Z,170μm,16.0s						
SFJD	Kangerlussuaq	12.61	297	*e*P	Pn	15 48 59.0	-0.9
	comp=Z,246nm,1.8s						
SFJD	Kangerlussuaq	12.61	297⇑	*i* P	Pn	15 48 56.8	-3.1
	comp=Z,121nm,0.9s						
SFJD							
	comp=Z,166μm,16.0s						
SFJD	Kangerlussuaq	12.61	297⇑	*i* P	Pn	15 48 56.8	-3.1
	comp=Z,122nm,0.9s,SNR=45						
ASK	Askoy	12.65	94	*e*Pn	Pn	15 48 59.3	-1.3
BER	Bergen	12.76	94	*e*Pn	Pn	15 49 00.0	-2.0
BER				*e*Pn	Pn	15 49 00.6	-1.4
BER				*e*Sn	Sn	15 51 21.0	-2.9
BER	Bergen	12.76	94	*e*P	Pn	15 49 00.6	-1.4
BER				*e*S	Sn	15 51 32.9	+9.1
BER	Bergen	12.76	94	*e*Pn	Pn	15 49 00.6	-1.4
	SNR=45						
HYA	Hoyanger	12.79	90	*e*Pn	Pn	15 49 01.8	-0.6
HYA	Hoyanger	12.79	90	*e*Pn	Pn	15 49 01.8	-0.6
	SNR=50						
MOL	Molde	12.87	83	*e*Pn	Pn	15 49 04.8	+1.2
MOL				*e*Sn	Sn	15 51 33.1	+6.5
MOL	Molde	12.87	83	*e*Pn	Pn	15 49 04.8	+1.3
	SNR=45						
DAG	Danmarks Havn	12.90	2⇑	*e*P	Pn	15 48 55.8	-8.1
DAG				pmax	pmax		
	comp=Z,180nm,1.5s						
DAG	Danmarks Havn	12.90	2⇑	*e*P	Pn	15 48 55.8	-8.1
	comp=Z,175nm,1.5s						
DAG	Danmarks Havn	12.90	2⇑	*i* P	Pn	15 48 55.8	-8.1
	comp=Z,175nm,1.5s						
DSB	Dublin	13.12	138	*e*P	Pn	15 49 04.2	-2.8
	comp=Z,377nm,1.0s						
DSB				*e*S	Sn	15 51 25.9	-6.9
XAL	Allendale	13.15	125⇑	*e*P	Pn	15 49 06.8	-0.6
XAL	Allendale	13.15	125⇑	*e*P	Pn	15 49 06.8	-0.6
VAL	Valentia	13.30	150	*e*P	Pn	15 49 07.5	-1.9
VAL	Valentia	13.30	150	P	Pn	15 49 08.4	-1.1
VAL	Valentia	13.30	150	*e*P	Pn	15 49 07.5	-2.0
KMY	Karmoy	13.31	99	*e*Pn	Pn	15 49 08.7	-0.7
KMY	Karmoy	13.31	99	*e*Pn	Pn	15 49 08.7	-0.8
	SNR=45						
STAV	Stavanger	13.65	99	*e*Pn	Pn	15 49 12.8	-1.4
STAV	Stavanger	13.65	99	*e*Pn	Pn	15 49 12.9	-1.3
	SNR=45						
WLF1	Llynfaes	13.69	134⇑	*e*P	Pn	15 49 14.0	-0.8
WLF1				AMb	AMB	15 49 19.7	
	comp=Z,7μm,2.4s						
WLF1				AMS	AMS	15 53 42.8	
	comp=Z,273μm,18.6s						
WLF1	Llynfaes	13.69	134⇑	*e*P	Pn	15 49 14.0	-0.8
	comp=Z,7μm,2.4s						
DOMB	Dombas	13.72	84	*e*Pn	Pn	15 49 16.2	+1.1
DOMB	Dombas	13.72	84	*e*Pn	Pn	15 49 16.2	+1.1
	SNR=45						
BLS5	Blasjo	13.72	97	*e*Pn	Pn	15 49 14.5	-0.6
BLS5	Blasjo	13.72	97	*e*Pn	Pn	15 49 14.5	-0.7
	SNR=45						
HPK	Haverah Park	14.08	126⇑	*e*P	Pn	15 49 19.0	-1.0
HPK				AMb	AMB	15 49 27.1	
	comp=Z,2μm,2.3s						
HPK	Haverah Park	14.08	126	P	Pn	15 49 20.1	+0.1
LDU	Leeds Universi	14.23	127⇑	*e*P	Pn	15 49 20.9	-1.2
NSS	Namsos	14.25	73	*e*Pn	Pn	15 49 21.1	-1.2
NSS				*e*Sn	Sx	15 52 10.4	
NSS	Namsos	14.25	73	*e*Pn	Pn	15 49 21.1	-1.2
	SNR=45						
LHO	Holmfirth	14.33	128⇑	*e*P	Pn	15 49 22.3	-1.1
STOK	Stokkvaagen	14.38	65	*e*Pn	Pn	15 49 25.3	+1.2
STOK				*e*Sn	Sx	15 52 13.4	
KONS	Konsvik	14.41	65	*e*Pn	Pn	15 49 27.1	+2.7
LOF	Lofoten	14.49	58	*e*Pn	Pn	15 49 30.6	+5.1
STNC	Stoke	14.58	130	*e*P	Pn	15 49 26.1	-0.7
SNART	Snartemo	14.64	100	*e*Pn	Pn	15 49 25.5	-2.1
HLM1	Long Mynd	14.84	132⇑	*e*P	Pn	15 49 29.3	-1.1
KONO	Kongsberg	14.99	93	*e*Pn	Pn	15 49 30.5	-2.0
KONO				*e*Sn	Sx	15 52 28.8	
KONO	Kongsberg	14.99	93	*e*P	Pn	15 49 32.4	0.0
KONO				pmax	pmax		
	comp=Z,297nm,1.2s						
KONO	Kongsberg	14.99	93	*e*P	Pn	15 49 32.4	0.0
	comp=Z,297nm,1.2s						
KONO	Kongsberg	14.99	93	*e*Pn	Pn	15 49 30.5	-1.9
	SNR=43						
NAO01	NORSAR Array S	15.00	87	*e*P	Pn	15 49 32.3	-0.3
	comp=Z,97nm,0.9s						
NB2	NORSAR Subarra	15.06	86	P	Pn	15 49 34.3	+0.9
	comp=Z,4μm,2.5s,baz=295,slow=11						
NOA	NORSAR Array B	15.06	86	Pn	Pn	15 49 34.1	+0.8
	comp=Z,1.3nm,0.3s,baz=87,slow=16,SNR=47						
NOA				LR	LR	15 55 25.5	
	comp=Z,52μm,18.4s,baz=290,slow=38						
NOA	NORSAR Array B	15.06	86	Pn	Pn	15 49 34.1	+0.7
HTR	Trewern Hill	15.09	134⇑	*e*P	Pn	15 49 32.8	-0.9
CWF	Charnwood Fore	15.18	129	*e*P	Pn	15 49 32.9	-2.1
CWF				AMb	AMB	15 49 40.3	
	comp=Z,1μm,1.9s						
OSL	Oslo	15.35	91	*e*Pn	Pn	15 49 35.7	-1.4
OSL	Oslo	15.35	91	*e*Pn	Pn	15 49 35.7	-1.4
	SNR=42						
HGH	Gray Hill	15.61	134⇑	*e*P	Pn	15 49 39.7	-0.9
ABA1	Baconsthorpe	15.93	124⇑	*e*P	Pn	15 49 42.8	-2.0
SWN1	Swindon	16.04	132⇑	*e*P	Pn	15 49 45.1	-1.1
SWN1				AMb	AMB	15 49 54.5	
	comp=Z,5μm,2.1s						
AWI1	Witton	16.09	123⇑	*e*P	Pn	15 49 45.8	-1.0
CCA1	Carnmenellis	16.17	141⇑	*e*P	Pn	15 49 46.3	-1.5
CCA1				AMb	AMB	15 49 55.7	
	comp=Z,732nm,1.6s						
CCA1				AMS	AMS	15 54 34.4	
	comp=Z,74μm,23.6s						
AEU	East Anglia Un	16.18	124	*e*P	Pn	15 49 46.5	-1.4
DYA	Yadsworthy	16.32	138	*e*P	Pn	15 49 48.4	-1.4
DYA				AMb	AMB	15 49 58.2	
	comp=Z,2μm,1.8s						
DYA	Yadsworthy	16.32	138	P	Pn	15 49 49.9	+0.1
WOL	Wolverton	16.41	131	*e*P	Pn	15 49 48.9	-2.0
WOL				AMb	AMB	15 49 58.6	
	comp=Z,4μm,2.1s						
TRO	Tromso	16.46	52	*e*Pn	Pn	15 49 51.6	+0.2
TRO				*e*Sn	Sx	15 53 06.5	
TRO	Tromso	16.46	52	*e*P	Pn	15 49 51.6	+0.2
TRO				*e*S	Sx	15 53 09.0	
TRO	Tromso	16.46	52	*e*Pn	Pn	15 49 51.6	+0.2
	SNR=41						
HFA0	Hagfors New Ar	16.56	87	P	Pn	15 49 55.0	+2.3
HFA0	Hagfors New Ar	16.56	87	P	Pn	15 49 55.0	+2.3
HFS	Hagfors	16.56	87	Pn	Pn	15 49 53.6	+0.8
	comp=Z,1.4nm,0.3s,baz=95,slow=3.8,SNR=41						
HFS				LR	LR	15 56 22.8	
	comp=Z,62μm,19.1s,baz=294,slow=38						
HFS	Hagfors	16.56	87	Pn	Pn	15 49 53.6	+0.8
MUD	Monsted U'grnd	16.62	103⇑	*i* P	Pn	15 49 51.2	-2.4
MUD				pmax	pmax		
	comp=Z,230nm,1.2s						
MUD				MLR	MLR		
	comp=Z,100μm,18.0s						
MUD	Monsted U'grnd	16.62	103	P	Pn	15 49 53.8	+0.2
MUD	Monsted U'grnd	16.62	103⇑	*i* P	Pn	15 49 51.2	-2.4
	comp=Z,228nm,1.2s						
MUD							
	comp=Z,102μm,18.0s						
MUD	Monsted U'grnd	16.62	103	P	Pn	15 49 53.8	+0.2
TFO1	Folkestone	17.38	127	*e*P	Pn	15 50 00.6	-2.5
TFO1				*e*P		15 50 01.8	
TFO1	Folkestone	17.38	127	P	Pn	15 50 01.8	-1.3
TFO1	Folkestone	17.38	127	*e*P	Pn	15 50 01.8	-1.3
HSP	Hornsund	17.39	27	*e*P	Pn	15 50 05.5	+2.3
HLG	Helgoland	17.61	110	*e*P	Pn	15 50 03.6	-2.3
	comp=Z,4μm,1.9s						
KBS	Kingsbay	17.83	20	*e*Pn	Pn	15 50 11.3	+2.8
KBS	Kingsbay	17.83	20	*e*P	Pn	15 50 11.2	+2.7
KBS				pmax	pmax		
	comp=Z,3μm,2.1s						
KBS	Kingsbay	17.83	20	*e*P	Pn	15 50 11.2	+2.7
	comp=Z,3μm,2.1s						
JLP	Les Platons	17.92	136⇑	*e*P	Pn	15 50 08.2	-1.7
JLP	Les Platons	17.92	136⇑	*e*P	Pn	15 50 08.2	-1.7
JSA	Saint Aubin	17.95	137⇑	*e*P	Pn	15 50 09.3	-0.9
JSA				*e*P		15 50 09.8	
JSA				AMb	AMB	15 50 17.6	
	comp=Z,3μm,2.0s						
JSA				AMS	AMS	15 56 43.0	
	comp=Z,88μm,17.9s						
JSA	Saint Aubin	17.95	137	P	Pn	15 50 09.8	-0.4
JSA				AMb	AMB	15 50 17.6	
	comp=Z,3μm,2.0s						
JSA				AMS	AMS	15 56 43.0	
	comp=Z,88μm,17.9s						
JSA	Saint Aubin	17.95	137	P	Pn	15 50 09.9	-0.3
JSA	Saint Aubin	17.95	137⇑	*e*P	Pn	15 50 09.3	-0.9
JRS	Jersey	17.97	136⇑	*e*P	Pn	15 50 09.5	-0.9
JRS	Jersey	17.97	136⇑	*e*P	Pn	15 50 09.5	-1.0
JQE	Queens East	17.98	136⇑	*e*P	Pn	15 50 09.3	-1.3
JQE	Queens East	17.98	136⇑	*e*P	Pn	15 50 09.3	-1.3
KTK1	Kautokeino	18.01	54	*e*Pn	Pn	15 50 12.2	+1.3
KTK1				*e*Sn	Sn	15 53 40.0	+8.7
KTK1	Kautokeino	18.01	54	*e*Pn	Pn	15 50 12.1	+1.3
	SNR=39						
WIT	Witteveen	18.12	115	*e*P	Pn	15 50 10.1	-2.1
WIT	Witteveen	18.12	115⇑	*e*P	Pn	15 50 10.8	-1.4
	comp=Z,10μm,2.3s						
WIT	Witteveen	18.12	115	*e*P	Pn	15 50 10.1	-2.1
SPB4	Spitsbergen Ar	18.13	24	*e*P	Pn	15 50 14.9	+2.7
SPITS	Spitsbergen Ar	18.13	24	P	Pn	15 50 13.4	+1.1
	baz=203,slow=8.2,SNR=39						
SPITS				LR	LR	15 55 23.4	
	comp=Z,124μm,21.5s,baz=245,slow=31						
SPITS	Spitsbergen Ar	18.13	24	P	Pn	15 50 13.4	+1.2
MENF	Mencas	18.20	127	*e*P	Pn	15 50 12.4	-0.8
MENF	Mencas	18.20	127	*e*P	Pn	15 50 12.4	-0.8
ROSF	Rostrenen	18.39	140	*e*P	Pn	15 50 15.0	-0.6
	comp=Z,2μm,1.3s						
ROSF	Rostrenen	18.39	140	*e*P	Pn	15 50 15.0	-0.6
ROSF				pmax	pmax		
	comp=Z,1μm,1.3s						
ROSF	Rostrenen	18.39	140	*e*P	Pn	15 50 15.0	-0.6
	comp=Z,1μm,1.3s						
ROSF	Rostr

KEV **Kevo** 19.27 52 *e*P Pn 15 50 24.7 -1.3
comp=Z,727nm,2.4s
BEBN **Eben Emael** 19.30 120 P Pn 15 50 24.4 -2.1
BAIF **Baives** 19.35 124 *e*P Pn 15 50 25.6 -1.6
comp=Z,2μm,1.4s
BAIF **Baives** 19.35 124 *e*P Pn 15 50 25.6 -1.6
BAIF pmax pmax
comp=Z,1μm,1.4s
BAIF **Baives** 19.35 124 *e*P Pn 15 50 25.6 -1.6
comp=Z,1μm,1.4s
BAIF **Baives** 19.35 124 *e*P Pn 15 50 25.6 -1.6
comp=Z,1μm,1.4s
BUG **Bochum--Univer** 19.41 117 *e*P Pn 15 50 24.5 -3.4
comp=Z,897nm,1.4s
HGN **Heimansgroeve** 19.42 120⇑*e*P Pn 15 50 26.0 -2.0
HGN **Heimansgroeve** 19.42 120⇑*e*P Pn 15 50 26.0 -2.1
comp=Z,2μm,2.9s
HGN **Heimansgroeve** 19.42 120 *e*S Sn 15 54 07.3 +1.6
HGN **Heimansgroeve** 19.42 120 *e*S Sn 15 54 12.1 +6.4
HGN **Heimansgroeve** 19.42 120 P Pn 15 50 26.3 -1.8
HGN **Heimansgroeve** 19.42 120⇑*e*P Pn 15 50 26.0 -2.1
BCLA **Clavier** 19.46 122 P Pn 15 50 26.2 -2.3
comp=Z,910nm,2.8s
DOU **Dourbes** 19.46 123 P Pn 15 50 26.6 -1.9
comp=Z,550nm,2.7s
GIVF **Givet** 19.54 123 *e*P Pn 15 50 27.4 -2.1
comp=Z,3μm,1.9s
GIVF **Givet** 19.54 123 *e*P Pn 15 50 27.4 -2.1
GIVF pmax pmax
comp=Z,1μm,1.9s
GIVF **Givet** 19.54 123 *e*P Pn 15 50 27.4 -2.1
comp=Z,1μm,1.9s
GIVF **Givet** 19.54 123 *e*P Pn 15 50 27.4 -2.1
comp=Z,1μm,1.9s
MEM **Membach** 19.58 120 P Pn 15 50 27.8 -2.0
comp=Z,605nm,2.7s
MEM **Membach** 19.58 120 P Pn 15 50 28.4 -1.5
MEM **Membach** 19.58 120 P Pn 15 50 28.4 -1.5
RGN **Rugen** 19.66 103 *e*P Pn 15 50 28.9 -1.9
comp=Z,24μm,3.1s
RGN **Rugen** 19.66 103 *e*P Pn 15 50 29.3 -1.6
comp=Z,30μm,2.8s
RGN **Rugen** 19.66 103 *e*P Pn 15 50 29.3 -1.5
comp=Z,10μm,2.8s
NRDL **Niedersach Rie** 19.75 111 *e*P Pn 15 50 29.8 -2.2
comp=Z,3μm,2.0s
NRDL *e*S Sn 15 54 16.4 +2.8
BSD **Bornholm Skovb** 19.97 99⇑*i*P Pn 15 50 31.9 -2.7
BSD pmax pmax
comp=Z,45nm,0.9s
BSD MLR MLR
comp=Z,68μm,20.0s
BSD **Bornholm Skovb** 19.97 99⇑*i*P Pn 15 50 31.9 -2.7
comp=Z,45nm,0.9s
BSD
comp=Z,68μm,20.0s
BSD **Bornholm Skovb** 19.97 99⇑*i*P Pn 15 50 31.9 -2.7
comp=Z,45nm,0.9s,SNR=35
CLZ **Clausthal** 20.35 112 *e*P P 15 50 37.3 +0.3
comp=Z,8μm,3.0s
CLZ **Clausthal** 20.35 112 *e*P P 15 50 37.3 +0.3
CLZ pmax pmax
comp=Z,8μm,3.0s
CLZ **Clausthal** 20.35 112 *e*P P 15 50 37.3 +0.3
comp=Z,8μm,3.0s
WLF **Walferdange** 20.40 122 P P 15 50 38.0 +0.5
comp=Z,785nm,2.1s
WLF **Walferdange** 20.40 122 *e*P P 15 50 37.1 -0.4
comp=Z,2μm,1.8s
WLF **Walferdange** 20.40 122 *e*P P 15 50 37.6 +0.1
WLF pmax pmax
comp=Z,3μm,2.0s
WLF MLR MLR
comp=Z,79μm,19.0s,MS6.1
WLF **Walferdange** 20.40 122 *e*P P 15 50 37.6 +0.1
comp=Z,3μm,2.0s
WLF LR LR
comp=Z,79μm,19.0s,MS6.1
WLF **Walferdange** 20.40 122 *e*P P 15 50 37.6 +0.1
comp=Z,3μm,2.0s
FRB **Frobisher Bay** 20.59 291 P P 15 50 38.5 -1.0
comp=Z,256nm,1.2s,baz=69,slow=11,SNR=29
FRB S S 15 54 30.4 +1.2
comp=Z,14nm,1.1s,baz=131,slow=11,SNR=2.2
FRB LR LR 15 57 38.3
comp=Z,90μm,19.9s,MS6.1,baz=73,slow=34
FRB **Frobisher Bay** 20.59 291 P P 15 50 38.5 -0.9
FRB S S 15 54 30.5 +1.3
FRB **Frobisher Bay** 20.59 291 P P 15 50 38.5 -0.9
FRB S S 15 54 30.5 +1.3
RUP **Ruppelstein** 20.71 120⇑*e*P P 15 50 41.7 +0.8
RUP **Ruppelstein** 20.71 120⇑*e*P P 15 50 41.7 +0.8
ABH **Alteburg** 20.75 119⇑*e*P P 15 50 42.1 +0.8
ABH **Alteburg** 20.75 119⇑*e*P P 15 50 42.1 +0.8
TNS **Taunus Mts** 20.83 117 *e*P P 15 50 42.0 -0.2
comp=Z,7μm,2.4s
TNS **Taunus Mts** 20.83 117 *e*P P 15 50 42.0 -0.2
TNS pmax pmax
comp=Z,7μm,2.4s
TNS **Taunus Mts** 20.83 117 *e*P P 15 50 42.0 -0.2
comp=Z,7μm,2.4s
MFF **Saint Martin d** 20.88 136 *e*P P 15 50 42.6 -0.1
comp=Z,6μm,1.9s
MFF **Saint Martin d** 20.88 136 *e*P P 15 50 42.6 -0.1
MFF pmax pmax
comp=Z,3μm,1.9s
MFF **Saint Martin d** 20.88 136 *e*P P 15 50 42.6 -0.1
comp=Z,3μm,1.9s
MFF **Saint Martin d** 20.88 136 *e*P P 15 50 42.6 -0.1
comp=Z,3μm,1.9s
MEZF **Maizieres J'vi** 20.96 125 *e*P P 15 50 43.9 +0.3
comp=Z,12μm,1.9s,baz=332
MEZF **Maizieres J'vi** 20.96 125 *e*P P 15 50 43.9 +0.3
comp=Z,12μm,1.9s
MEZF **Maizieres J'vi** 20.96 125 *e*P P 15 50 43.9 +0.3
comp=Z,6μm,1.9s
UBBA **Unterbreizbach** 20.98 114 *e*P P 15 50 44.0 +0.2
comp=Z,13μm,2.5s
RFYF **Reffroy** 21.00 124 *e*P P 15 50 44.6 +0.5
comp=Z,11μm,1.9s,mb6.5,baz=318
RFYF **Reffroy** 21.00 124 *e*P P 15 50 44.6 +0.5
comp=Z,11μm,1.9s,mb6.8
RFYF **Reffroy** 21.00 124 *e*P P 15 50 44.6 +0.5
comp=Z,5μm,1.9s,mb6.5
ALE **Alert** 21.09 346 Pn P 15 50 45.3 +0.5
comp=Z,1μm,1.5s,mb6.0,SNR=64
KAF **Kangasniemi** 21.14 73 *e*P P 15 50 47.6 +2.1
KAF pmax pmax
comp=Z,2μm,2.1s,mb6.1
HYF **Humbligny** 21.18 131 *e*P P 15 50 45.4 -0.5
HYF **Humbligny** 21.18 131 *e*P P 15 50 45.4 -0.5
SFTF **Sexfontaines** 21.20 126 *e*P P 15 50 46.4 +0.2
comp=Z,17μm,1.9s,mb6.8,baz=321
SFTF **Sexfontaines** 21.20 126 *e*P P 15 50 46.4 +0.2
comp=Z,17μm,1.9s,mb7.1
SFTF **Sexfontaines** 21.20 126 *e*P P 15 50 46.4 +0.2
comp=Z,9μm,1.9s,mb6.8
RUE **Ruedersdorf** 21.30 106 *e*P P 15 50 47.1 -0.2
comp=Z,19μm,2.9s,mb6.9
RUE **Ruedersdorf** 21.30 106 *e*P P 15 50 47.1 -0.1
comp=Z,12μm,2.5s,mb6.8
RUE **Ruedersdorf** 21.30 106 *e*P P 15 50 47.1 -0.2
comp=Z,10μm,2.5s,mb6.7
FINES **FINESS Array B** 21.35 75 P P 15 50 48.3 +0.6
comp=Z,115nm,0.9s,mb5.2,baz=308,slow=9.5,SNR=40
FINES LR LR 15 59 28.5
comp=Z,43μm,19.4s,MS5.9,baz=292,slow=38
FINES **FINESS Array B** 21.35 75 P P 15 50 48.3 +0.6
KTD **Kalmit** 21.41 119⇑*e*P P 15 50 49.3 +0.8
KTD **Kalmit** 21.41 119⇑*e*P P 15 50 49.3 +0.8
TOD **Tromm** 21.46 118⇑*e*P P 15 50 49.7 +0.7
TOD **Tromm** 21.46 118⇑*e*P P 15 50 49.7 +0.7
SWS **Schriesheim-Wi** 21.52 118 P P 15 50 50.9 +1.3
SWS **Schriesheim-Wi** 21.52 118 P P 15 50 50.9 +1.3
THEF **They Montfort** 21.53 124⇑*e*P P 15 50 50.3 +0.6
THEF **They Montfort** 21.53 124⇑*e*P P 15 50 50.3 +0.6
LANF **Langenberg** 21.58 120⇑*e*P P 15 50 51.0 +0.7
LANF **Langenberg** 21.58 120⇑*e*P P 15 50 51.0 +0.7
LOR **Lormes** 21.59 129⇑*i*P P 15 50 49.9 -0.5
comp=Z,10μm,1.9s,mb6.6,baz=334
LOR *e*MLR MLR
comp=Z,88μm,21.0s,MS5.8
LOR **Lormes** 21.59 129⇑*i*P P 15 50 49.9 -0.5
LOR pmax pmax
comp=Z,5μm,1.9s,mb6.6
LOR MLR MLR
comp=Z,88μm,21.0s,MS6.1
LOR **Lormes** 21.59 129⇑*i*P P 15 50 49.9 -0.5
comp=Z,5μm,1.9s,mb6.6
LOR LR LR
comp=Z,88μm,21.0s,MS6.1
LOR **Lormes** 21.59 129⇑*i*P P 15 50 49.9 -0.5
comp=Z,5μm,1.9s,mb6.6
SSF **Saint Saulge** 21.65 130 *e*P P 15 50 50.3 -0.7
comp=Z,8μm,1.9s,mb6.5
SSF **Saint Saulge** 21.65 130 *e*P P 15 50 50.3 -0.7
SSF pmax pmax
comp=Z,4μm,1.9s,mb6.5
SSF **Saint Saulge** 21.65 130 *e*P P 15 50 50.3 -0.7
comp=Z,4μm,1.9s,mb6.5
SSF **Saint Saulge** 21.65 130 *e*P P 15 50 50.3 -0.7
comp=Z,4μm,1.9s,mb6.5
MOX **Moxa** 21.77 112*ce*P P 15 50 52.4 +0.1
comp=Z,5μm,2.0s,mb6.6
MOX *e*S S 15 55 02.0 +9.3
MOX
comp=Z,43μm,23.0s
MOX **Moxa** 21.77 112 *e*P P 15 50 52.0 -0.3
comp=Z,5μm,2.1s,mb6.6
MOX *e*S S 15 54 56.4 +3.7
MOX **Moxa** 21.77 112⇑*e*P P 15 50 52.4 +0.1
MOX pmax pmax
comp=Z,5μm,2.0s,mb6.6
MOX MLR MLR
comp=Z,43μm,23.0s,MS5.8
MOX **Moxa** 21.77 112⇑*e*P P 15 50 52.4 +0.1
comp=Z,5μm,2.0s,mb6.6
AVF **Avril sur Loir** 21.83 130 *e*P P 15 50 52.3 -0.7
comp=Z,7μm,1.9s,mb6.5
AVF **Avril sur Loir** 21.83 130 *e*P P 15 50 52.3 -0.7
AVF pmax pmax
comp=Z,3μm,1.9s,mb6.5
AVF **Avril sur Loir** 21.83 130 *e*P P 15 50 52.3 -0.7
comp=Z,3μm,1.9s,mb6.5
AVF **Avril sur Loir** 21.83 130 *e*P P 15 50 52.3 -0.7
comp=Z,3μm,1.9s,mb6.5
CLL **Collm** 21.84 109 *e*P P 15 50 52.6 -0.4
comp=Z,4μm,1.9s,mb6.5
CLL *e*S S 15 54 55.7 +1.7
CLL **Collm** 21.84 109 *e*P P 15 50 53.0 0.0
CLL *e*S S 15 55 00.0 +6.0
CLL pmax pmax
comp=Z,4μm,1.9s,mb6.5
CLL MLR MLR
comp=Z,51μm,22.0s,MS5.9
CLL **Collm** 21.84 109 *e*P P 15 50 53.0 0.0
comp=Z,4μm,1.9s,mb6.5
CLL *e*S S 15 55 00.0 +6.0
CLL LR LR
comp=Z,51μm,22.0s,MS5.9
CLL **Collm** 21.84 109 *e*P P 15 50 53.0 0.0
comp=Z,4μm,1.9s,mb6.5
CLL *e*Plp 15 50 55.0
comp=Z,7μm,27.5s
CLL *e*Pmax 15 50 58.0
CLL *e*S S 15 55 00.0 +6.0
comp=N,22μm,25.0s
CLL *e*S S 15 55 00.0 +6.0
comp=E,27μm,29.2s
CLL *e* 15 55 10.0
CLL Lm 15 59 00.0
comp=N,60μm,22.0s
CLL Lm 15 59 00.0
comp=E,27μm,20.5s
CLL Lm 15 59 00.0
comp=Z,51μm,22.0s
CLL **Collm** 21.84 109 *e*P P 15 50 53.0 0.0
comp=Z,4μm,1.9s,mb6.5
HAU **Haudompre** 21.84 124 *e*P P 15 50 53.6 +0.5
comp=Z,8μm,1.9s,mb6.5
HAU *e*MLR MLR
comp=Z,71μm,19.0s,MS5.8
HAU **Haudompre** 21.84 124 *e*P P 15 50 53.6 +0.5
HAU pmax pmax
comp=Z,4μm,1.9s,mb6.5
HAU MLR MLR
comp=Z,71μm,19.0s,MS6.1
HAU **Haudompre** 21.84 124 *e*P P 15 50 53.6 +0.5
comp=Z,4μm,1.9s,mb6.5
HAU LR LR
comp=Z,71μm,19.0s,MS6.1
HAU **Haudompre** 21.84 124 *e*P P 15 50 53.6 +0.5
comp=Z,4μm,1.9s,mb6.5
CDF **Champ du Feu** 21.85 122 *e*P P 15 50 53.8 +0.6
comp=Z,7μm,1.8s,mb6.5
CDF **Champ du Feu** 21.85 122 *e*P P 15 50 53.8 +0.6
CDF pmax pmax
comp=Z,3μm,1.8s,mb6.5
CDF **Champ du Feu** 21.85 122 *e*P P 15 50 53.8 +0.6
comp=Z,3μm,1.8s,mb6.5
CDF **Champ du Feu** 21.85 122 *e*P P 15 50 53.8 +0.6
comp=Z,3μm,1.8s,mb6.5
BGF **Bois d'Agland** 21.87 132 *e*P P 15 50 52.8 -0.6
comp=Z,8μm,1.9s,mb6.5
BGF **Bois d'Agland** 21.87 132 *e*P P 15 50 52.8 -0.6
BGF pmax pmax
comp=Z,4μm,1.9s,mb6.5
BGF **Bois d'Agland** 21.87 132 *e*P P 15 50 52.8 -0.6
comp=Z,4μm,1.9s,mb6.5
BGF **Bois d'Agland** 21.87 132 *e*P P 15 50 52.8 -0.6
comp=Z,4μm,1.9s,mb6.5
TCF **Toulx Ste Croi** 21.89 133 *e*P P 15 50 53.3 -0.4
comp=Z,2μm,1.5s,mb6.1
TCF **Toulx Ste Croi** 21.89 133 *e*P P 15 50 53.3 -0.4
TCF pmax pmax
comp=Z,1μm,1.5s,mb6.1
TCF **Toulx Ste Croi** 21.89 133 *e*P P 15 50 53.3 -0.4
comp=Z,1μm,1.5s,mb6.1
TCF **Toulx Ste Croi** 21.89 133 *e*P P 15 50 53.3 -0.4
comp=Z,1μm,1.5s,mb6.1
ECH **Echery** 21.97 122⇑*e*P P 15 50 55.3 +0.9
ECH **Echery** 21.97 122 *e*P P 15 50 54.8 +0.4
ECH pmax pmax
comp=Z,2μm,1.8s,mb6.3
ECH MLR MLR
comp=Z,47μm,19.0s,MS5.9
ECH **Echery** 21.97 122 *e*P P 15 50 54.8 +0.4
comp=Z,2μm,1.8s,mb6.3
ECH LR LR
comp=Z,47μm,19.0s,MS5.9
ECH **Echery** 21.97 122⇑*e*P P 15 50 55.3 +0.9
SIND **Sindeldorf** 21.98 117 P P 15 50 55.7 +1.2
SIND **Sindeldorf** 21.98 117 P P 15 50 55.7 +1.2
APA **Apatity** 22.00 56⇓*i*P P 15 50 54.0 -0.6
APA *i* 15 50 58.0
APA *i* S S 15 54 54.0 -2.9
APA pmax pmax
comp=Z,8μm,10.0s
APA pmax pmax
comp=Z,750nm,1.6s,mb5.9
APA MLR MLR
comp=Z,110μm,16.0s,MS6.4
SMF **Signal de Mont** 22.12 130 *e*P P 15 50 55.6 -0.5
comp=Z,5μm,1.8s,mb6.3
SMF **Signal de Mont** 22.12 130 *e*P P 15 50 55.6 -0.5
SMF pmax pmax
comp=Z,2μm,1.8s,mb6.3
SMF **Signal de Mont** 22.12 130 *e*P P 15 50 55.6 -0.5
comp=Z,2μm,1.8s,mb6.3
SMF **Signal de Mont** 22.12 130 *e*P P 15 50 55.6 -0.5
comp=Z,2μm,1.8s,mb6.3
HINF **Hinteralfeld** 22.19 124 *e*P P 15 50 57.0 +0.2
comp=Z,5μm,1.9s,mb6.3
HINF **Hinteralfeld** 22.19 124 *e*P P 15 50 57.0 +0.2
HINF pmax pmax
comp=Z,3μm,1.9s,mb6.3
HINF **Hinteralfeld** 22.19 124 *e*P P 15 50 57.0 +0.2
comp=Z,3μm,1.9s,mb6.3
HINF **Hinteralfeld** 22.19 124 *e*P P 15 50 57.0 +0.2
comp=Z,3μm,1.9s,mb6.3
LIBD **Limburg** 22.19 122 *e*P P 15 50 57.5 +0.7
LIBD **Limburg** 22.19 122 *e*P P 15 50 57.5 +0.7
WERD **Werda** 22.20 112 *e*P P 15 50 56.3 -0.6
comp=Z,2μm,1.6s,mb6.2
LBG **Lerchenberg** 22.22 119 P P 15 50 58.1 +1.0
LBG **Lerchenberg** 22.22 119 P P 15 50 58.1 +1.0
GKP **Gorka Klasztor** 22.23 101 *e*P P 15 50 57.6 +0.5
GKP *e*pP 15 51 00.3
GKP *e*S S 15 55 14.2 +13
GKP *es*S sS 15 55 19.4 +13
GKP LMZ 15 59 05.1
comp=Z,91μm,20.6s
GKP **Gorka Klasztor** 22.23 101 *e*P P 15 50 57.6 +0.5
GKP *e*PP 15 51 00.3
GKP MLR MLR
comp=Z,91μm,20.6s,MS6.2
MOF **Molkenrain** 22.26 123⇑*e*P P 15 50 58.3 +0.7
MOF **Molkenrain** 22.26 123⇑*e*P P 15 50 58.3 +0.7
GUNZ **Gunzen** 22.28 112 *e*P P 15 50 57.2 -0.5
comp=Z,3μm,2.0s,mb6.3
STU **Stuttgart** 22.28 119 *e*P P 15 50 57.6 -0.2
comp=Z,1μm,1.3s,mb6.1
STU **Stuttgart** 22.28 119 *e*P P 15 50 57.9 +0.1
STU pmax pmax
comp=Z,2μm,1.8s,mb6.3
STU **Stuttgart** 22.28 119 *e*P P 15 50 57.9 +0.1
comp=Z,2μm,1.8s,mb6.3
STU **Stuttgart** 22.28 119 *e*P P 15 50 57.9 +0.1
comp=Z,2μm,1.8s,mb6.3
STS **Santiago** 22.29 155 P P 15 50 57.2 -0.7
STS pmax pmax
comp=Z,232nm,1.0s,mb5.6
STS **Santiago** 22.29 155 P P 15 50 57.2 -0.7
comp=Z,232nm,1.0s,mb5.6
STS **Santiago** 22.29 155 P P 15 50 57.2 -0.7
comp=Z,232nm,1.0s,mb5.6
TANN **Tannenbergstha** 22.29 112 *e*P P 15 50 57.2 -0.7
comp=Z,1μm,1.6s,mb6.2
TANN *e*S S 15 55 06.6 +3.8
BFO **Black Forest** 22.31 121 P P 15 50 58.8 +0.7
comp=Z,2μm,1.3s,mb6.4
BFO **Black Forest** 22.31 121 *e*P P 15 50 58.2 +0.1
comp=Z,984nm,1.4s,mb6.0
BFO **Black Forest** 22.31 121 *e*P P 15 50 58.2 +0.1
BFO pmax pmax
comp=Z,984nm,1.4s,mb6.0
BFO **Black Forest** 22.31 121 *e*P P 15 50 58.2 +0.1
comp=Z,984nm,1.4s,mb6.0
GRA1 **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
comp=Z,2μm,1.8s,mb6.3
GRA1 LR LR
comp=Z,51μm,19.4s,MS6.0
GRA1 **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
comp=Z,2μm,1.8s,mb6.3
GRF **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
comp=Z,2μm,1.8s,mb6.3
GRF *e*L 15 59 40.0
comp=Z,51μm,19.4s
GRF **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
GRF pmax pmax
comp=Z,2μm,1.8s,mb6.3
GRF MLR MLR
comp=Z,51μm,19.4s,MS6.0
GRF **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
GRF pmax pmax
comp=Z,2μm,1.8s,mb6.3
GRF MLR MLR
comp=Z,51μm,19.4s,MS6.0
GRF **Grafenberg Arr** 22.35 114 *e*P P 15 50 58.5 0.0
comp=Z,2μm,1.8s,mb6.3
WERN **Wernitzgruen** 22.35 112 *e*P P 15 50 57.6 -0.9
comp=Z,2μm,1.7s,mb6.3
LVZ **Lovozero** 22.36 55 P P 15 50 59.7 +1.3
comp=Z,994nm,1.1s,mb6.2,SNR=7.8
LVZ **Lovozero** 22.36 55*ce*P P 15 51 01.3 +2.9
LVZ pmax pmax
comp=Z,355nm,2.5s,mb5.3
LVZ MLR MLR
comp=Z,112μm,20.0s,MS6.3
LVZ **Lovozero** 22.36 55 PFAKE 15 51 10.0 +12
LVZ LR LR
comp=Z,92μm,19.0s,MS6.2
AGO **Saint Agoulin** 22.40 132 *e*P P 15 50 58.7 -0.4
AGO **Saint Agoulin** 22.40 132 *e*P P 15 50 58.7 -0.4
NKC **Novy Kostel** 22.43 112 *e*P P 15 50 59.5 +0.2
NKC *e*PP 15 51 02.4
NKC *e* 15 51 23.0
NKC MLR MLR
comp=Z,58μm,16.9s,MS6.1
NKC **Novy Kostel** 22.43 112 *e*P P 15 50 59.5 +0.2
NKC *e*pP 15 51 02.4
NKC *e*x x 15 51 23.0
NKC *e*S S 15 55 11.7 +6.3
NKC AMS AMS 16 00 10.0
comp=Z,58μm,16.9s
NKC **Novy Kostel** 22.43 112 P P 15 50 59.5 +0.2
RJF **Les Rejaudoux** 22.55 135 *e*P P 15 51 00.3 -0.4
comp=Z,6μm,1.9s,mb6.4
RJF *e*MLR MLR
comp=Z,134μm,21.5s,MS6.0
RJF **Les Rejaudoux** 22.55 135 *e*P P 15 51 00.3 -0.4
RJF pmax pmax
comp=Z,3μm,1.9s,mb6.4
RJF MLR MLR
comp=Z,134μm,21.5s,MS6.3
RJF **Les Rejaudoux** 22.55 135 *e*P P 15 51 00.3 -0.4
comp=Z,3μm,1.9s,mb6.4
RJF LR LR
comp=Z,134μm,21.5s,MS6.3
RJF **Les Rejaudoux** 22.55 135 *e*P P 15 51 00.3 -0.4
comp=Z,3μm,1.9s,mb6.4
BRG **Berggiesshubel** 22.55 109 *e*P P 15 50 59.9 -0.8
comp=Z,2μm,1.8s,mb6.1
BRG *e*S S 15 55 11.3 +3.3
BRG **Berggiesshubel** 22.55 109⇑*i*P P 15 51 00.0 -0.6
comp=Z,2μm,1.8s,mb6.1
BRG *e* 15 51 02.9
BRG *i* 15 51 07.8
BRG *e* 15 51 17.4
BRG S S 15 55 17.0 +9.0
BRG
comp=Z,66μm,15.3s
BRG
comp=N,30μm,17.2s
BRG
comp=E,97μm,17.2s
FELD **Feldberg im Sc** 22.57 122 *e*P P 15 51 01.4 +0.6
FELD **Feldberg im Sc** 22.57 122 *e*P P 15 51 01.4 +0.6
LOMF **Lomont** 22.57 124⇑*e*P P 15 51 01.4 +0.6
LOMF **Lomont** 22.57 124⇑*e*P P 15 51 01.4 +0.6
EARI **Arriondas** 22.58 149 P P 15 50 60.0 -1.1
comp=E,3μm,2.0s,mb6.4
EARI **Arriondas** 22.58 149 P P 15 51 00.0 -1.0
comp=E,3μm,2.0s,mb6.4
BUCH **Bad Urach** 22.61 119 P P 15 51 02.4 +1.2
BUCH **Bad Urach** 22.61 119 P P 15 51 02.4 +1.2
PYM **Petit Puy Mans** 22.63 132 *e*P P 15 51 01.4 -0.1
PYM **Petit Puy Mans** 22.63 132 *e*P P 15 51 01.4 -0.1
PLDF **La Plantade** 22.64 131 *e*P P 15 51 01.5 -0.1
PLDF **La Plantade** 22.64 131 *e*P P 15 51 01.5 -0.1
LFF **La Frestale** 22.64 137 *e*P P 15 51 01.7 +0.1
comp=E,6μm,1.8s,mb6.4
LFF **La Frestale** 22.64 137 *e*P P 15 51 01.7 +0.1
LFF pmax pmax
comp=Z,3μm,1.8s,mb6.4
LFF **La Frestale** 22.64 137 *e*P P 15 51 01.7 +0.1
comp=Z,3μm,1.8s,mb6.4
LFF **La Frestale** 22.64 137 *e*P P 15 51 01.7 +0.1
comp=Z,3μm,1.8s,mb6.4
SPAK **Spaichingen-Ko** 22.67 120 *e*P P 15 51 02.5 +0.6
SPAK **Spaichingen-Ko** 22.67 120 *e*P P 15 51 02.5 +0.6
BOURR **Bourrignon** 22.68 124⇑*e*P P 15 51 02.3 +0.3
comp=Z,6μm,2.4s,mb6.6
BOURR **Bourrignon** 22.68 124⇑*e*P P 15 51 02.3 +0.3
comp=Z,6μm,2.4s,mb6.6
ROTZ **Rotzenmuhle** 22.69 113 *e*P P 15 51 01.7 -0.4
comp=Z,2μm,2.0s,mb6.1
BBS **Basel-Blauen** 22.73 123 *e*P P 15 51 03.5 +1.0
BBS **Basel-Blauen** 22.73 123 *e*P P 15 51 03.5 +1.0
BRANT **Les Verrieres** 22.79 125⇑*e*P P 15 51 03.3 +0.1
comp=Z,4μm,2.2s,mb6.5
BRANT **Les Verrieres** 22.79 125⇑*e*P P 15 51 03.3 +0.1
comp=Z,4μm,2.2s,mb6.5
FRNF **Fournols** 22.81 133 *e*P P 15 51 03.0 -0.4
FRNF **Fournols** 22.81 133 *e*P P 15 51 03.0 -0.4
GUT **Gutenstein** 22.83 120 P P 15 51 04.5 +0.9
GUT **Gutenstein** 22.83 120 P P 15 51 04.5 +0.9
HDH **Heidenheim-Cha** 22.83 118 P P 15 51 04.9 +1.3
HDH **Heidenheim-Cha** 22.83 118 P P 15 51 04.9 +1.3
SLE **Schleitheim** 22.84 121⇑*e*P P 15 51 03.6 -0.1

comp=Z,3µm,2.4s,mb6.3
SLE Schleitheim 22.84 121⇑ *e*P **P 15 51 03.6 -0.1**
comp=Z,3µm,2.4s,mb6.3
JOF Joensuu 22.88 69 *e*P **P 15 51 03.7 -0.3**
JOF pmax pmax
comp=Z,2µm,2.2s,mb6.2
SULZ Cheisacher 22.90 122⇑ *e*P **P 15 51 03.9 -0.4**
comp=Z,5µm,2.3s,mb6.5
SULZ Cheisacher 22.90 122⇑ *e*P **P 15 51 03.9 -0.4**
comp=Z,5µm,2.3s,mb6.5
BALST Balsthal 22.90 123⇑ *e*P **P 15 51 04.2 -0.2**
comp=Z,5µm,2.2s,mb6.6
BALST Balsthal 22.90 123⇑ *e*P **P 15 51 04.2 -0.2**
comp=Z,5µm,2.2s,mb6.6
CABF La Chapelle 22.93 126 *e*P **P 15 51 04.6 -0.1**
comp=Z,8µm,1.9s,mb6.5
CABF La Chapelle 22.93 126 *e*P **P 15 51 04.6 -0.1**
CABF pmax pmax
comp=Z,4µm,1.9s,mb6.5
CABF La Chapelle 22.93 126 *e*P **P 15 51 04.6 -0.1**
comp=Z,4µm,1.9s,mb6.5
CABF La Chapelle 22.93 126 *e*P **P 15 51 04.6 -0.1**
comp=Z,4µm,1.9s,mb6.5
EZAM Zamans 22.98 156 P **P 15 51 05.5 +0.3**
EZAM pmax pmax
comp=Z,3µm,2.1s,mb6.3
EZAM Zamans 22.98 156 P **P 15 51 05.5 +0.3**
comp=Z,3µm,2.1s,mb6.3
EZAM Zamans 22.98 156 P **P 15 51 05.5 +0.3**
comp=Z,3µm,2.1s,mb6.3
TRULL Truellikon 23.01 121⇑ *i*P **P 15 51 05.4 -0.1**
TRULL Truellikon 23.01 121⇑ *i*P **P 15 51 05.4 -0.1**
FLACH Flaach 23.03 121⇑ *e*P **P 15 51 05.5 -0.2**
FLACH Flaach 23.03 121⇑ *e*P **P 15 51 05.5 -0.2**
ERUA La Rua 23.04 153 P **P 15 51 04.8 -1.0**
ERUA pmax pmax
comp=Z,352nm,1.2s,mb5.7
ERUA La Rua 23.04 153 P **P 15 51 04.8 -1.1**
comp=Z,352nm,1.2s,mb5.7
ERUA La Rua 23.04 153 P **P 15 51 04.8 -1.0**
comp=Z,352nm,1.2s,mb5.7
GIMEL St. Georges / 23.06 126⇑ *e*P **P 15 51 05.6 -0.5**
comp=Z,3µm,2.7s,mb6.3
GIMEL St. Georges / 23.06 126⇑ *e*P **P 15 51 05.6 -0.5**
comp=Z,3µm,2.7s,mb6.3
CAF Calviac 23.06 135 *e*P **P 15 51 05.4 -0.7**
comp=Z,5µm,1.9s,mb6.3
CAF Calviac 23.06 135 *e*P **P 15 51 05.4 -0.7**
CAF pmax pmax
comp=Z,2µm,1.9s,mb6.3
CAF Calviac 23.06 135 *e*P **P 15 51 05.4 -0.7**
comp=Z,2µm,1.9s,mb6.3
CAF Calviac 23.06 135 *e*P **P 15 51 05.4 -0.7**
comp=Z,2µm,1.9s,mb6.3
STEIN Stein am Rhein 23.06 121⇑ *e*P **P 15 51 06.1 0.0**
STEIN Stein am Rhein 23.06 121⇑ *e*P **P 15 51 06.1 0.0**
ELAN Lanestosa 23.07 146 P **P 15 51 05.6 -0.6**
comp=Z,2µm,3.2s
ELAN Lanestosa 23.07 146 P **P 15 51 05.6 -0.6**
comp=Z,2µm,3.2s
PVCC Panska Ves 23.08 109 *e*P **P 15 51 07.4 +1.2**
PVCC *e* 15 51 32.2
PVCC *e*S **S 15 55 22.1 +5.3**
PVCC MLR MLR
comp=Z,63µm,15.7s,MS6.2
PVCC Panska Ves 23.08 109 *e*P **P 15 51 07.4 +1.2**
PVCC *ex* x 15 51 32.2
PVCC *e*S **S 15 55 22.1 +5.3**
PVCC AMS AMS 16 01 50.0
comp=Z,63µm,15.7s
PVCC Panska Ves 23.08 109 P **P 15 51 07.4 +1.2**
SISB Singen-Schiene 23.09 121 P **P 15 51 07.4 +1.1**
SISB Singen-Schiene 23.09 121 P **P 15 51 07.4 +1.1**
TORNY Torny/Romont 23.11 125⇑ *e*P **P 15 51 06.5 0.0**
comp=Z,6µm,2.3s,mb6.6
TORNY Torny/Romont 23.11 125⇑ *e*P **P 15 51 06.5 0.0**
comp=Z,6µm,2.3s,mb6.6
VSU Vasula 23.16 81 *d i*P **P 15 51 07.1 +0.1**
VSU pmax pmax
comp=Z,763nm,1.2s,mb6.0
VSU MLR MLR
comp=Z,30µm,15.0s,MS5.9
LBL Lubilhac 23.17 133 *e*P **P 15 51 07.0 -0.2**
LBL Lubilhac 23.17 133 *e*P **P 15 51 07.0 -0.2**
ZUR Degenried 23.20 122⇑ *e*P **P 15 51 07.3 -0.2**
comp=Z,4µm,2.4s,mb6.5
ZUR Degenried 23.20 122⇑ *e*P **P 15 51 07.3 -0.2**
comp=Z,4µm,2.4s,mb6.5
WEIN Weingarten 23.22 121⇑ *e*P **P 15 51 07.7 -0.1**
WEIN Weingarten 23.22 121⇑ *e*P **P 15 51 07.7 -0.1**
WILA Wila 23.29 121⇑ *e*P **P 15 51 08.2 -0.2**
comp=Z,3µm,2.3s,mb6.3
WILA Wila 23.29 121⇑ *e*P **P 15 51 08.2 -0.2**
comp=Z,3µm,2.3s,mb6.3
ELOB Lobios 23.37 155 P **P 15 51 07.8 -1.5**
comp=Z,911nm,1.8s,mb5.9
ELOB Lobios 23.37 155 P **P 15 51 07.8 -1.5**
comp=Z,911nm,1.8s,mb5.9
PRA Prague 23.37 110 ⇑P **P 15 51 09.0 -0.3**
PRA S **S 15 55 30.0 +8.4**
PRA AMS AMS 16 00 55.0
WIMIS Wimmis 23.44 124⇑ *e*P **P 15 51 09.4 -0.6**
comp=Z,2µm,2.3s,mb6.2
WIMIS Wimmis 23.44 124⇑ *e*P **P 15 51 09.4 -0.6**
comp=Z,2µm,2.3s,mb6.2
WET Wettzell 23.45 113 *e*P **P 15 51 09.8 -0.3**
comp=Z,4µm,2.2s,mb6.4
WET Wettzell 23.45 113 *e*P **P 15 51 09.8 -0.3**
WET pmax pmax
comp=Z,4µm,2.2s,mb6.4
WET Wettzell 23.45 113 *e*P **P 15 51 09.8 -0.3**
comp=Z,4µm,2.2s,mb6.4
AIGLE Aigle 23.47 125⇑ *e*P **P 15 51 10.0 -0.4**
comp=Z,2µm,2.0s,mb6.2
AIGLE Aigle 23.47 125⇑ *e*P **P 15 51 10.0 -0.4**
comp=Z,2µm,2.0s,mb6.2
PRU Pruhonice 23.48 110 *e*P **P 15 51 11.2 +0.8**
PRU *e**PP 15 51 15.4
PRU *e* 15 51 38.4
PRU MLR MLR
comp=Z,62µm,17.6s,MS6.1
PRU Pruhonice 23.48 110 *e*P **P 15 51 11.2 +0.8**
PRU *ep*P 15 51 15.4
PRU *ex* x 15 51 38.4
PRU *e*S **S 15 55 31.1 +7.8**
PRU AMS AMS 16 00 40.0
comp=Z,62µm,17.6s
PRU Pruhonice 23.48 110 P **P 15 51 11.2 +0.8**
PCAB Cabril 23.52 155 *e*P **P 15 51 11.0 0.0**
comp=Z,748nm,1.4s,mb5.9
PCAB *e*S **S 15 55 34.5 +10**
PCAB Cabril 23.52 155 *e*P **P 15 51 11.0 0.0**
comp=Z,748nm,1.4s,mb5.9
UBR Ueberruh 23.53 119 P **P 15 51 11.8 +0.8**
UBR Ueberruh 23.53 119 P **P 15 51 11.8 +0.8**
ECAL Calabor 23.55 153 P **P 15 51 10.1 -1.1**
comp=Z,2µm,2.3s,mb6.1
ECAL Calabor 23.55 153 P **P 15 51 10.1 -1.1**
comp=Z,2µm,2.3s,mb6.1
SSB Saint Sauveur 23.55 130 *e*P **P 15 51 10.7 -0.5**
SSB Saint Sauveur 23.55 130 *e*P **P 15 51 10.1 -1.1**
SSB pmax pmax
comp=Z,4µm,2.1s,mb6.5
SSB MLR MLR
comp=Z,65µm,22.0s,MS6.0
SSB Saint Sauveur 23.55 130 *e*P **P 15 51 10.1 -1.1**
comp=Z,4µm,2.1s,mb6.5
SSB LR LR
comp=Z,65µm,22.0s,MS6.0
SSB Saint Sauveur 23.55 130 *e*P **P 15 51 10.7 -0.5**
HASLI Hasliberg/Brie 23.56 123⇑ *e*P **P 15 51 11.0 -0.2**
comp=Z,3µm,2.4s,mb6.3
HASLI Hasliberg/Brie 23.56 123⇑ *e*P **P 15 51 11.0 -0.2**
comp=Z,3µm,2.4s,mb6.3
MUO Muotathal 23.56 122⇑ *e*P **P 15 51 11.0 -0.3**
comp=Z,4µm,2.2s,mb6.5
MUO Muotathal 23.56 122⇑ *e*P **P 15 51 11.0 -0.3**
comp=Z,4µm,2.2s,mb6.5
BNALP Bannalp 23.56 123⇑ *e*P **P 15 51 11.0 -0.3**
comp=Z,3µm,2.3s,mb6.3
BNALP Bannalp 23.56 123⇑ *e*P **P 15 51 11.0 -0.3**
comp=Z,3µm,2.3s,mb6.3
KSP Ksiaz 23.57 106 *e*P **P 15 51 10.7 -0.6**
KSP *ep*P 15 51 13.9
KSP *e*S **S 15 55 29.4 +4.6**
KSP *es*S sS 15 55 39.1 +9.4
KSP LMZ 16 02 18.5
comp=Z,161µm,16.0s
KSP Ksiaz 23.57 106⇑ *e*P **P 15 51 10.4 -0.9**
KSP *i **PP 15 51 11.9
KSP *e*S **S 15 55 26.0 +1.2**
KSP MLR MLR
comp=Z,192µm,15.8s,MS6.7
KSP Ksiaz 23.57 106⇑ *e*P **P 15 51 10.4 -0.9**
SENIN Lac Senin/Sane 23.58 125⇑ *e*P **P 15 51 11.3 -0.1**
comp=Z,4µm,2.1s,mb6.5
SENIN Lac Senin/Sane 23.58 125⇑ *e*P **P 15 51 11.3 -0.1**
comp=Z,4µm,2.1s,mb6.5
EALK Alkurruntz 23.58 142 P **P 15 51 10.0 -1.5**
comp=Z,2µm,1.7s,mb6.3
EALK Alkurruntz 23.58 142 P **P 15 51 10.0 -1.5**
comp=Z,2µm,1.7s,mb6.3
FUR Furstenfeldbru 23.59 117 *e*P **P 15 51 11.1 -0.4**
comp=Z,7µm,2.3s,mb6.7
FUR Furstenfeldbru 23.59 117 *e*P **P 15 51 11.1 -0.4**
FUR pmax pmax
comp=Z,7µm,2.3s,mb6.7
FUR Furstenfeldbru 23.59 117 *e*P **P 15 51 11.1 -0.4**
comp=Z,7µm,2.3s,mb6.7
GRYON Gryon 23.61 125⇑ *e*P **P 15 51 11.4 -0.3**
GRYON Gryon 23.61 125⇑ *e*P **P 15 51 11.4 -0.3**
LIENZ Kamor/St.Gall 23.61 120⇑ *e*P **P 15 51 11.5 -0.2**
comp=Z,2µm,2.2s,mb6.2
LIENZ Kamor/St.Gall 23.61 120⇑ *e*P **P 15 51 11.5 -0.2**
comp=Z,2µm,2.2s,mb6.2
ELIZ Elizondo 23.63 143 P **P 15 51 11.0 -0.9**
ELIZ pmax pmax
comp=Z,360nm,1.2s,mb5.7
ELIZ Elizondo 23.63 143 P **P 15 51 11.0 -0.9**
comp=Z,360nm,1.2s,mb5.7
ELIZ Elizondo 23.63 143 P **P 15 51 11.0 -0.9**
comp=Z,360nm,1.2s,mb5.7
SALAN Lac Salanfe 23.65 126⇑ *e*P **P 15 51 11.9 -0.2**
SALAN Lac Salanfe 23.65 126⇑ *e*P **P 15 51 11.9 -0.2**
LKBD Leukerbad 23.68 124⇑ *e*P **P 15 51 12.3 0.0**
LKBD Leukerbad 23.68 124⇑ *e*P **P 15 51 12.3 0.0**
PBRG Braganca 23.68 153 *e*P **P 15 51 12.4 0.0**
comp=Z,582nm,1.7s,mb5.7
PBRG *e*S **S 15 55 34.4 +7.6**
PBRG Braganca 23.68 153 *e*P **P 15 51 12.4 0.0**
comp=Z,582nm,1.7s,mb5.7
EMV Vieux Emosson 23.69 126⇑ *e*P **P 15 51 12.4 -0.1**
comp=Z,2µm,2.5s,mb6.1
EMV Vieux Emosson 23.69 126⇑ *e*P **P 15 51 12.4 -0.1**
comp=Z,2µm,2.5s,mb6.1
UPC Upice 23.70 107 *e*P **P 15 51 12.4 -0.1**
UPC *e**PP 15 51 16.2
UPC *e* 15 51 41.0
UPC Upice 23.70 107 *e*P **P 15 51 12.4 -0.1**
UPC *ep*P 15 51 16.2
UPC *ex* x 15 51 41.0
UPC *e*S **S 15 55 38.0 +11**
UPC Upice 23.70 107 P **P 15 51 12.4 -0.1**
KHC Kasperske Hory 23.74 112 *e*P **P 15 51 13.1 +0.2**
KHC *e**PP 15 51 16.1
KHC *e* 15 51 43.1
KHC MLR MLR
comp=Z,76µm,18.1s,MS6.2
KHC Kasperske Hory 23.74 112 *e*P **P 15 51 13.0 0.0**
comp=Z,6µm,2.3s,mb6.6
KHC Kasperske Hory 23.74 112 *e*P **P 15 51 13.1 +0.2**
KHC *ep*P 15 51 16.1
KHC *ex* x 15 51 43.1
KHC *e*S **S 15 55 35.8 +8.1**
KHC AMS AMS 16 00 50.0
comp=Z,76µm,18.1s
KHC Kasperske Hory 23.74 112 *e*P **P 15 51 13.0 +0.1**
comp=Z,6µm,2.3s,mb6.6
SJPF Ste Jean 23.76 142 *e*P **P 15 51 12.0 -1.1**
comp=Z,422nm,1.0s,mb5.5
SJPF Ste Jean 23.76 142 *e*P **P 15 51 12.0 -1.1**
SJPF pmax pmax
comp=Z,211nm,1.0s,mb5.5
SJPF Ste Jean 23.76 142 *e*P **P 15 51 12.0 -1.1**
comp=Z,211nm,1.0s,mb5.5
SJPF Ste Jean 23.76 142 *e*P **P 15 51 12.0 -1.1**
comp=Z,211nm,1.0s,mb5.5
DAVA Damuels 23.77 120⇓ *e*P **P 15 51 12.5 -0.6**
comp=Z,702nm,1.8s,mb5.8,SNR=180
DAVA Damuels 23.77 120 P **P 15 51 12.5 -0.6**
comp=Z,702nm,1.8s,mb5.8,SNR=180
PLONS Plons/SG 23.77 121⇑ *e*P **P 15 51 12.7 -0.5**
comp=Z,4µm,5.0s
LLS Linth-Limmern 23.80 122⇑ *e*P **P 15 51 13.5 0.0**
comp=Z,1µm,2.0s,mb6.0
DIX Grande Dixence 23.86 125⇑ *e*P **P 15 51 14.2 +0.2**
comp=Z,1µm,2.3s,mb5.9
DIX Grande Dixence 23.86 125⇑ *e*P **P 15 51 14.2 +0.2**
comp=Z,1µm,2.3s,mb5.9
ECRI Cripan 23.89 145 P **P 15 51 14.1 -0.2**
ECRI pmax pmax
comp=Z,213nm,1.4s,mb5.4
ECRI Cripan 23.89 145 P **P 15 51 14.1 -0.2**
comp=Z,212nm,1.4s,mb5.4
ECRI Cripan 23.89 145 P **P 15 51 14.1 -0.2**
comp=Z,212nm,1.4s,mb5.4
RETA Reutte 23.94 118 *i* P **P 15 51 15.1 +0.3**
comp=Z,780nm,1.9s,mb5.8,SNR=238
RETA Reutte 23.94 118 P **P 15 51 15.1 +0.4**
comp=Z,780nm,1.9s,mb5.8,SNR=238
DPC Dobruska-Polom 23.95 107 *e*P **P 15 51 13.9 -0.9**
DPC *e**PP 15 51 18.1
DPC *e* 15 51 44.7
DPC MLR MLR
comp=Z,65µm,14.7s,MS6.2
DPC Dobruska-Polom 23.95 107 *e*P **P 15 51 13.9 -0.9**
DPC *ep*P 15 51 18.1
DPC *ex* x 15 51 44.7
DPC *e*S **S 15 55 39.3 +8.3**
DPC AMS AMS 16 02 50.0
comp=Z,65µm,14.7s
DPC Dobruska-Polom 23.95 107 P **P 15 51 13.9 -0.9**
VIVF Saint-Julien-I 23.97 131 *e*P **P 15 51 14.8 -0.2**
comp=Z,4µm,1.7s,mb6.3
VIVF Saint-Julien-I 23.97 131 *e*P **P 15 51 14.8 -0.2**
VIVF pmax pmax
comp=Z,2µm,1.7s,mb6.3
VIVF Saint-Julien-I 23.97 131 *e*P **P 15 51 14.8 -0.2**
comp=Z,2µm,1.7s,mb6.3
VIVF Saint-Julien-I 23.97 131 *e*P **P 15 51 14.8 -0.2**
comp=Z,2µm,1.7s,mb6.3
PUL Pulkovo 24.00 76 *ce*P **P 15 51 16.9 +1.8**
PUL pmax pmax
comp=Z,767nm,1.2s,mb6.0
PUL MLR MLR
comp=Z,43µm,16.0s,MS6.0
GRN Grenoble 24.00 129 *e*P **P 15 51 15.2 -0.1**
GRN Grenoble 24.00 129 *e*P **P 15 51 15.2 -0.1**
FUSIO Fusio 24.00 123⇑ *e*P **P 15 51 16.0 +0.7**
comp=Z,2µm,2.1s,mb6.2
FUSIO Fusio 24.00 123⇑ *e*P **P 15 51 16.0 +0.7**
comp=Z,2µm,2.1s,mb6.2
PVRL Vila Real 24.00 155 *e*P **P 15 51 16.0 +0.6**
comp=Z,690nm,2.2s,mb5.7
PVRL *e*S **S 15 55 47.3 +15**
PVRL Vila Real 24.00 155 *e*P **P 15 51 16.0 +0.6**
comp=Z,690nm,2.2s,mb5.7
GEC2 GERESS Array S 24.02 113 *e*P **P 15 51 15.6 +0.2**
comp=Z,3µm,2.3s,mb6.3
GEC2 *e*S **S 15 55 36.6 +4.5**
GEC2 GERESS Array S 24.02 113 *e*P **P 15 51 15.6 +0.2**
GEC2 *e*S **S 15 55 36.6 +4.5**
GEC2 pmax pmax
comp=Z,3µm,2.3s,mb6.3
GEC2 GERESS Array S 24.02 113 *e*P **P 15 51 15.6 +0.2**
comp=Z,3µm,2.3s,mb6.3
GERES GERESS Array B 24.02 113 P **P 15 51 15.6 +0.2**
comp=Z,21nm,0.9s,mb4.5,baz=313,slow=6.7,SNR=55
GERES S **S 15 55 37.5 +5.3**
comp=Z,3.7nm,1.1s,baz=299,slow=31,SNR=2.4
GERES LR LR 16 01 22.5
comp=Z,63µm,18.9s,MS6.1,baz=315,slow=38
GERES GERESS Array B 24.02 113 P **P 15 51 15.6 +0.2**
GERES S **S 15 55 37.5 +5.4**
GERES GERESS Array B 24.02 113 P **P 15 51 15.6 +0.2**
MMK Mattmark 24.09 124⇑ *e*P **P 15 51 16.9 +0.8**
comp=Z,2µm,2.3s,mb6.1
MMK Mattmark 24.09 124⇑ *e*P **P 15 51 16.9 +0.8**
comp=Z,2µm,2.3s,mb6.1
LPL La Plagne 24.10 127 *e*P **P 15 51 16.0 -0.2**
comp=Z,5µm,1.9s,mb6.3
LPL La Plagne 24.10 127 *e*P **P 15 51 16.0 -0.2**
LPL pmax pmax
comp=Z,2µm,1.9s,mb6.3
LPL La Plagne 24.10 127 *e*P **P 15 51 16.0 -0.2**
comp=Z,2µm,1.9s,mb6.3
LPL La Plagne 24.10 127 *e*P **P 15 51 16.0 -0.2**
comp=Z,2µm,1.9s,mb6.3
LPG La Plagne 24.13 127 *e*P **P 15 51 17.3 +0.9**
comp=Z,3µm,1.6s,mb6.1
LPG La Plagne 24.13 127 *e*P **P 15 51 17.3 +0.9**
LPG pmax pmax
comp=Z,1µm,1.6s,mb6.1
LPG La Plagne 24.13 127 *e*P **P 15 51 17.3 +0.9**
comp=Z,1µm,1.6s,mb6.1
LPG La Plagne 24.13 127 *e*P **P 15 51 17.3 +0.9**
comp=Z,1µm,1.6s,mb6.1
ETSF Etsaut 24.14 141 *e*P **P 15 51 17.0 +0.4**
comp=Z,2µm,1.9s,mb5.8
ETSF Etsaut 24.14 141 *e*P **P 15 51 17.0 +0.4**
ETSF pmax pmax
comp=Z,820nm,1.9s,mb5.8
ETSF Etsaut 24.14 141 *e*P **P 15 51 17.0 +0.4**
comp=Z,820nm,1.9s,mb5.8
ETSF Etsaut 24.14 141 *e*P **P 15 51 17.0 +0.4**
comp=Z,820nm,1.9s,mb5.8
GDM Grand'Maison 24.16 128 *e*P **P 15 51 16.8 +0.1**
GDM Grand'Maison 24.16 128 *e*P **P 15 51 16.8 +0.1**
DAVOX Davos/Dischmat 24.18 121⇑ *e*P **P 15 51 17.4 +0.4**
comp=Z,1µm,2.2s,mb6.0
DAVOX Davos/Dischmat 24.18 121 P **P 15 51 17.6 +0.6**
comp=Z,18nm,0.6s,mb4.6,baz=329,slow=11,SNR=40
DAVOX S **S 15 55 40.3 +5.5**
comp=Z,2.5nm,0.6s,baz=119,slow=13,SNR=1.6
DAVOX LR LR 16 01 05.4
comp=Z,64µm,19.3s,MS6.1,baz=252,slow=37
DAVOX Davos/Dischmat 24.18 121 P **P 15 51 17.6 +0.6**
DAVOX S **S 15 55 40.4 +5.6**
DAVOX Davos/Dischmat 24.18 121 P **P 15 51 17.6 +0.6**
DAVOX S **S 15 55 40.4 +5.5**
DAVOX LR LR 16 01 05.4
DAVOX Davos/Dischmat 24.18 121 P **P 15 51 17.6 +0.6**
MOTA Moosalm 24.19 118⇑ *e*P **P 15 51 17.1 0.0**
comp=Z,553nm,1.5s,mb5.8,SNR=48
MOTA Moosalm 24.19 118 P **P 15 51 17.1 +0.1**
comp=Z,553nm,1.5s,mb5.8,SNR=48
MVO Moncorvo 24.24 154 *e*P **P 15 51 17.5 0.0**
comp=Z,349nm,2.0s,mb5.4
MVO *e*S **S 15 55 50.1 +14**
MVO *e*LR LR 15 57 23.7
comp=Z,28µm,19.2s
MVO Moncorvo 24.24 154 P **P 15 51 18.3 +0.8**
MVO Moncorvo 24.24 154 *e*P **P 15 51 17.5 0.0**
comp=Z,349nm,2.0s,mb5.4
EPF Esparros 24.27 140 *e*P **P 15 51 16.9 -0.9**
comp=Z,641nm,1.4s,mb5.6
EPF Esparros 24.27 140 *e*P **P 15 51 16.9 -0.9**
EPF pmax pmax
comp=Z,321nm,1.4s,mb5.6
EPF Esparros 24.27 140 *e*P **P 15 51 16.9 -0.9**
comp=Z,320nm,1.4s,mb5.6
EPF Esparros 24.27 140 *e*P **P 15 51 16.9 -0.9**
comp=Z,320nm,1.4s,mb5.6
VDL Val di Lei 24.27 122⇑ *e*P **P 15 51 18.8 +1.0**
comp=Z,2µm,2.3s,mb6.2
VDL Val di Lei 24.27 122⇑ *e*P **P 15 51 18.8 +1.0**
comp=Z,2µm,2.3s,mb6.2
FETA Feichten 24.31 119⇑ *e*P **P 15 51 18.6 +0.5**
comp=Z,337nm,1.8s,mb5.5,SNR=70
FETA Feichten 24.31 119 P **P 15 51 18.6 +0.5**
comp=Z,337nm,1.8s,mb5.5,SNR=70
SUW Suwalki 24.32 93 *e*P **P 15 51 17.6 -0.6**
SUW *ep*P 15 51 20.1
SUW *e*S **S 15 55 44.2 +7.3**
SUW *es*S sS 15 55 52.8 +11
SUW LMZ 16 01 11.1
comp=Z,102µm,17.4s
SUW Suwalki 24.32 93 *e*P **P 15 51 17.6 -0.6**
SUW *e**PP 15 51 20.1
SUW *e*S **S 15 55 44.2 +7.2**
SUW *e**SS sS 15 55 52.8 +11
SUW MLR MLR
comp=Z,102µm,17.4s,MS6.4
SUW Suwalki 24.32 93 *e*P **P 15 51 17.6 -0.6**
ORIF Oris-en-Rattie 24.33 129 *e*P **P 15 51 18.4 +0.1**
comp=Z,4µm,1.9s,mb6.3
ORIF *e*MLR MLR
comp=Z,72µm,21.2s,MS5.8
ORIF Oris-en-Rattie 24.33 129 *e*P **P 15 51 18.4 +0.1**
ORIF pmax pmax
comp=Z,2µm,1.9s,mb6.3
ORIF Oris-en-Rattie 24.33 129 *e*P **P 15 51 18.4 +0.1**
comp=Z,2µm,1.9s,mb6.3
ORIF Oris-en-Rattie 24.33 129 *e*P **P 15 51 18.4 +0.1**
comp=Z,2µm,1.9s,mb6.3
SQTA Sankt Quirin 24.33 118⇑ *i*P **P 15 51 18.7 +0.4**
SQTA Sankt Quirin 24.33 118 P **P 15 51 18.7 +0.4**
WATA Walderalm 24.38 118⇑ *i*P **P 15 51 19.0 +0.3**
comp=Z,533nm,1.6s,mb5.7,SNR=45
WATA Walderalm 24.38 118 P **P 15 51 19.0 +0.2**
comp=Z,533nm,1.6s,mb5.7,SNR=45
LASF Ste Croix 24.39 133 *e*P **P 15 51 19.1 +0.2**
comp=Z,2µm,1.8s,mb6.0
LASF Ste Croix 24.39 133 *e*P **P 15 51 19.1 +0.2**
comp=Z,1µm,1.8s,mb6.0
TREC Trest 24.40 110 *e*P **P 15 51 19.6 +0.7**
TREC *e**PP 15 51 22.8
TREC *e* 15 51 49.5
TREC MLR MLR
comp=Z,56µm,18.9s,MS6.1
TREC Trest 24.40 110 *e*P **P 15 51 19.6 +0.7**
TREC *ep*P 15 51 22.8
TREC *ex* x 15 51 49.5
TREC *e*S **S 15 55 47.3 +9.0**
TREC AMS AMS 16 01 00.0
comp=Z,56µm,18.9s
TREC Trest 24.40 110 P **P 15 51 19.6 +0.7**
ORO Oropa 24.45 125 P **P 15 51 20.7 +1.3**
WTTA Wattenberg 24.46 118 *i* P **P 15 51 20.3 +0.7**
comp=Z,946nm,1.7s,mb6.0,SNR=203
WTTA Wattenberg 24.46 118 P **P 15 51 20.3 +0.8**
comp=Z,946nm,1.7s,mb6.0,SNR=203
FUORN Ofenpass-Fuorn 24.46 120⇑ *e*P **P 15 51 20.2 +0.7**
comp=Z,2µm,2.2s,mb6.2
FUORN Ofenpass-Fuorn 24.46 120⇑ *e*P **P 15 51 20.2 +0.7**
comp=Z,2µm,2.2s,mb6.2
BNI Bardonecchia 24.49 127 *e*P **P 15 51 20.2 +0.5**
BNI pmax pmax
comp=Z,2µm,2.0s,mb6.2
BNI MLR MLR
comp=Z,77µm,19.0s,MS6.2
BNI Bardonecchia 24.49 127 *e*P **P 15 51 20.2 +0.4**
comp=Z,2µm,2.0s,mb6.2
BNI LR LR
comp=Z,77µm,19.0s,MS6.2
BNI Bardonecchia 24.49 127 *e*P **P 15 51 20.2 +0.5**
comp=Z,2µm,2.0s,mb6.2
PVIS Viseu 24.51 155 *e*P **P 15 51 21.2 +1.2**
comp=Z,460nm,2.3s,mb5.6
PVIS *e*S **S 15 55 55.2 +15**
PVIS Viseu 24.51 155 *e*P **P 15 51 21.2 +1.2**
comp=Z,460nm,2.3s,mb5.6
SCHQ Schefferville 24.53 270 P **P 15 51 19.1 -0.9**
comp=Z,174nm,1.1s,mb5.5,baz=49,slow=8.5,SNR=34
SCHQ S **S 15 55 41.2 +1.0**
comp=Z,5.3nm,0.9s,baz=260,slow=18,SNR=1.7
SCHQ LR LR 15 59 23.0
comp=Z,40µm,18.9s,MS5.9,baz=49,slow=33
SCHQ Schefferville 24.53 270 P **P 15 51 19.1 -0.9**
SCHQ S **S 15 55 41.2 +1.0**
SCHQ LR LR 15 59 23.1
SCHQ Schefferville 24.53 270 P **P 15 51 19.1 -0.9**
SCHQ S **S 15 55 41.2 +1.0**
EBIE Bielsa 24.53 140 P **P 15 51 20.0 -0.1**
comp=Z,4µm,2.7s,mb6.4
EBIE Bielsa 24.53 140 P **P 15 51 20.0 -0.1**
comp=Z,4µm,2.7s,mb6.4
RJOB Jochberg 24.54 115 *e*P **P 15 51 20.6 +0.4**
comp=Z,2µm,2.0s,mb6.4
VAI Varese 24.54 123 P **P 15 51 20.8 +0.6**
MTLF Montolieu 24.54 136 *e*P **P 15 51 19.8 -0.4**
comp=Z,1µm,1.9s,mb5.9
MTLF Montolieu 24.54 136 *e*P **P 15 51 19.8 -0.4**
MTLF pmax pmax
comp=Z,713nm,1.9s,mb5.9
MTLF Montolieu 24.54 136 *e*P **P 15 51 19.8 -0.4**
comp=Z,713nm,1.9s,mb5.9
MTLF Montolieu 24.54 136 *e*P **P 15 51 19.8 -0.4**

comp=Z,713nm,1.9s,mb5.9
BERNI Berninapass 24.55 121⇑ eP P 15 51 21.1 +0.8
comp=Z,2μm,2.2s,mb6.3
BERNI Berninapass 24.55 121⇑ eP P 15 51 21.1 +0.8
comp=Z,2μm,2.2s,mb6.3
IZAR Zarasai 24.55 87 eP P 15 51 20.2 0.0
IZAR Zarasai 24.55 87 eP P 15 51 20.2 -0.1
MUGIO Muggio 24.59 123⇑ eP P 15 51 21.5 +0.8
comp=Z,2μm,2.3s,mb6.3
MUGIO Muggio 24.59 123⇑ eP P 15 51 21.5 +0.8
comp=Z,2μm,2.3s,mb6.3
WAR Warsaw 24.59 99 eP P 15 51 21.1 +0.5
WAR ep P 15 51 23.8
WAR eS S 15 55 57.0 +16
WAR eS sS 15 55 59.7 +13
WAR LMZ 15 59 30.1
comp=Z,40μm,28.3s
WAR Warsaw 24.59 99 eP P 15 51 21.1 +0.5
WAR e*PP 15 51 23.8
WAR MLR MLR
comp=Z,40μm,28.3s,MS5.8
WAR Warsaw 24.59 99 eP P 15 51 21.1 +0.5
RSP Reno Superiore 24.61 126 P P 15 51 22.0 +1.1
ISAL Salakas 24.61 88 eP P 15 51 20.9 +0.1
ISAL Salakas 24.61 88 eP P 15 51 20.9 +0.1
BRMO Bormio 24.63 120 P P 15 51 22.3 +1.3
BRMO Bormio 24.63 120 P P 15 51 22.3 +1.3
IIGN Ignalina 24.80 88 eP P 15 51 22.7 +0.2
IIGN Ignalina 24.80 88 eP P 15 51 22.7 +0.2
MBDF Montbardon 24.80 128 eP P 15 51 23.4 +0.8
comp=Z,5μm,1.9s,mb6.4
MBDF Montbardon 24.80 128 eP P 15 51 23.4 +0.8
MBDF pmax pmax
comp=Z,2μm,1.9s,mb6.4
MBDF Montbardon 24.80 128 eP P 15 51 23.4 +0.8
comp=Z,2μm,1.9s,mb6.4
MBDF Montbardon 24.80 128 eP P 15 51 23.4 +0.8
comp=Z,2μm,1.9s,mb6.4
VRAC Vranov 24.86 108 P P 15 51 23.2 +0.1
comp=Z,46nm,0.9s,mb5.0,baz=321,slow=9.2,SNR=48
VRAC S S 15 55 50.1 +4.5
comp=Z,6.2nm,1.0s,baz=0.0,slow=20,SNR=2.1
VRAC LR LR 16 01 05.1
comp=Z,30μm,21.3s,MS5.8,baz=329,slow=36
VRAC Vranov 24.86 108 P P 15 51 23.2 +0.1
VRAC S S 15 55 50.1 +4.5
VRAC Vranov 24.86 108⇑ iP P 15 51 23.1 0.0
VRAC Vranov 24.86 108⇑ iP P 15 51 23.0 -0.1
MTE Manteigas 24.88 155 eP P 15 51 25.0 +1.6
comp=Z,506nm,2.2s,mb5.7
MTE i S S 15 55 58.0 +12
MTE eLR LR 15 57 42.4
comp=Z,26μm,20.1s
MTE Manteigas 24.88 155 eP P 15 51 22.9 -0.5
comp=Z,385nm,1.5s,mb5.7
MTE LR LR
comp=Z,30μm,21.0s,MS5.8
MTE Manteigas 24.88 155 eP P 15 51 25.0 +1.6
comp=Z,506nm,2.2s,mb5.7
MORC Moravsky Berou 24.90 106 eP P 15 51 23.2 -0.2
MORC pmax pmax
comp=Z,1μm,1.6s,mb6.1
MORC Moravsky Berou 24.90 106 eP P 15 51 23.2 -0.3
comp=Z,1μm,1.6s,mb6.1
MORC Moravsky Berou 24.90 106⇑ iP P 15 51 23.5 +0.1
MORC Moravsky Berou 24.90 106⇑ iP P 15 51 23.5 +0.1
RAC Raciborz 24.94 105 eP P 15 51 24.0 +0.2
RAC eS S 15 55 47.1 +0.1
RAC MLR MLR
comp=E,102μm,20.0s,MS6.5
RAC MLR MLR
comp=Z,43μm,18.0s,MS6.0
RAC MLR MLR
comp=N,86μm,18.0s,MS6.5
RAC Raciborz 24.94 105 eP P 15 51 24.0 +0.2
APPI Appiano 24.95 119 P P 15 51 25.0 +1.0
APPI Appiano 24.95 119 P P 15 51 25.0 +1.0
SURF Saint Ours 25.03 128 eP P 15 51 25.6 +0.9
SURF Saint Ours 25.03 128 eP P 15 51 25.6 +0.9
MABI Malga Bissina 25.03 121 P P 15 51 25.7 +1.0
MABI Malga Bissina 25.03 121 P P 15 51 25.7 +1.0
MOA Molln 25.04 113⇑ eP P 15 51 24.6 -0.1
comp=N,335nm,1.6s,mb5.6,SNR=79
MOA Molln 25.04 113 P P 15 51 24.6 -0.1
comp=N,335nm,1.6s,mb5.6,SNR=79
IDID Didziasalis 25.05 88 eP P 15 51 24.8 0.0
IDID Didziasalis 25.05 88 eP P 15 51 24.8 +0.1
SMRF Simiane la Rot 25.05 130 eP P 15 51 25.4 +0.5
comp=N,1μm,1.6s,mb5.9
SMRF Simiane la Rot 25.05 130 eP P 15 51 25.4 +0.5
comp=N,1μm,1.6s,mb6.2
SMRF Simiane la Rot 25.05 130 eP P 15 51 25.4 +0.5
comp=N,623nm,1.6s,mb5.9
OKC Ostrava-Krasne 25.11 106 eP P 15 51 25.6 +0.2
OKC e*PP pP 15 51 29.9 +1.5
OKC e 15 52 02.5
OKC MLR MLR
comp=Z,57μm,14.4s,MS6.2
OKC Ostrava-Krasne 25.11 106 eP P 15 51 25.6 +0.2
OKC ep P pP 15 51 29.9 +1.5
OKC ex x 15 52 02.5
OKC eS S 15 56 04.6 +15
OKC AMS AMS 16 03 20.0
comp=Z,57μm,14.4s
OKC Ostrava-Krasne 25.11 106 P P 15 51 25.6 +0.2
DOI San Damiano 25.16 127 P P 15 51 26.4 +0.5
ABTA Abfaltersbach 25.23 117⇑ eP P 15 51 27.4 +0.9
comp=Z,203nm,1.1s,mb5.6,SNR=78
ABTA Abfaltersbach 25.23 117 P P 15 51 27.4 +0.9
comp=Z,203nm,1.1s,mb5.6,SNR=78
ESAC San Caprasio 25.25 142 P P 15 51 26.9 +0.2
comp=Z,841nm,1.7s,mb6.0
ESAC San Caprasio 25.25 142 P P 15 51 27.0 +0.3
comp=Z,841nm,1.7s,mb6.0
KBA Koelnbreinsper 25.29 116 i P P 15 51 28.0 +1.0
comp=Z,515nm,1.9s,mb5.7,SNR=83
KBA Koelnbreinsper 25.29 116 P P 15 51 28.0 +1.0
comp=Z,515nm,1.9s,mb5.7,SNR=83
NACGM Naroch 25.33 88 eP P 15 51 25.0 -2.3
GUD Guadarrama 25.35 149 P P 15 51 27.2 -0.4
GUD pmax pmax
comp=Z,142nm,1.2s,mb5.4
GUD Guadarrama 25.35 149 P P 15 51 27.2 -0.4
comp=Z,142nm,1.2s,mb5.4
GUD Guadarrama 25.35 149 P P 15 51 27.2 -0.4
comp=Z,142nm,1.2s,mb5.4
PCBR Castelo Branco 25.44 155 eP P 15 51 30.0 +1.6
comp=Z,315nm,1.7s,mb5.6
PCBR eS S 15 56 10.9 +16
PCBR Castelo Branco 25.44 155 eP P 15 51 30.0 +1.6
comp=Z,315nm,1.7s,mb5.6
FVI Forni Avoltri 25.46 117 P P 15 51 29.6 +1.0
PTOM Tomar 25.49 157 eP P 15 51 29.8 +0.9
comp=Z,591nm,0.9s,mb6.1
PTOM eS S 15 56 00.9 +5.1
PTOM Tomar 25.49 157 eP P 15 51 29.8 +0.9
comp=Z,591nm,0.9s,mb6.1
OJC Ojcow 25.53 103 eP P 15 51 28.0 -1.2
OJC ep P pP 15 51 30.8 -1.4
OJC eP cP cP 15 55 01.5 +1.4
OJC eS S 15 56 02.5 +6.2
OJC L 16 02 41.1
comp=Z,108nm,17.3s
OJC Ojcow 25.53 103 eP P 15 51 28.0 -1.2
EJON La Jonquera 25.56 136 P P 15 51 28.5 -1.0
comp=Z,756nm,2.0s,mb5.9
EJON La Jonquera 25.56 136 P P 15 51 28.5 -1.0
comp=Z,756nm,2.0s,mb5.9
TOUF Mont Tournerai 25.59 128 eP P 15 51 30.3 +0.5
TOUF Mont Tournerai 25.59 128 eP P 15 51 30.3 +0.5
CONA Conrad Observa 25.63 111⇑ iP P 15 51 30.1 0.0
comp=Z,355nm,1.4s,mb5.7,SNR=175
CONA Conrad Observa 25.63 111 P P 15 51 30.1 0.0
comp=Z,355nm,1.4s,mb5.7,SNR=175
MVIF Mont Vial 25.66 128 eP P 15 51 30.6 +0.2
MVIF Mont Vial 25.66 128 eP P 15 51 30.6 +0.2
AUTN L'Aution 25.67 128 eP P 15 51 32.1 +1.6
AUTN L'Aution 25.67 128 eP P 15 51 32.1 +1.6
ETOR Torete 25.69 145 P P 15 51 30.6 -0.1
ETOR pmax pmax
comp=Z,121nm,1.6s,mb5.2
ETOR Torete 25.69 145 P P 15 51 30.6 0.0
comp=Z,120nm,1.6s,mb5.2
ETOR Torete 25.69 145 P P 15 51 30.6 -0.1
comp=Z,120nm,1.6s,mb5.2

CALN Calern 25.70 129 eP P 15 51 30.8 +0.1
CALN Calern 25.70 129 eP P 15 51 30.8 +0.1
QLNO Quiliano 25.71 126 P P 15 51 31.1 +0.3
QLNO Quiliano 25.71 126 P P 15 51 31.1 +0.3
PMAN Manadas 25.71 193 eP P 15 51 38.1 +7.2
comp=Z,273nm,1.5s,mb5.6
PMAN eS S 15 56 10.7 +11
SAOF Saorge 25.72 127 eP P 15 51 31.6 +0.6
SAOF Saorge 25.72 127 eP P 15 51 31.6 +0.6
BOB Bobbio (Coli) 25.73 124 P P 15 51 32.2 +1.2
LUCF Luceram 25.73 128 eP P 15 51 31.1 0.0
LUCF Luceram 25.73 128 eP P 15 51 31.1 0.0
MYKA Terra Mystica 25.77 116⇑ iP P 15 51 32.3 +0.8
comp=Z,987nm,1.8s,mb6.0
MYKA Terra Mystica 25.77 116 P P 15 51 32.3 +0.9
comp=Z,987nm,1.8s,mb6.0
PCED Cedros 25.78 194 eP P 15 51 38.1 +6.6
comp=Z,91nm,0.7s,mb5.4
PCED eS S 15 56 12.4 +12
FRF La Foret Royal 25.78 129 eP P 15 51 31.0 -0.5
comp=Z,340nm,1.1s,mb5.5
FRF La Foret Royal 25.78 129 eP P 15 51 31.0 -0.5
FRF pmax pmax
comp=Z,170nm,1.1s,mb5.5
FRF La Foret Royal 25.78 129 eP P 15 51 31.0 -0.5
comp=Z,170nm,1.1s,mb5.5
FRF La Foret Royal 25.78 129 eP P 15 51 31.0 -0.5
comp=Z,170nm,1.1s,mb5.5
SBF Sospel 25.79 128 eP P 15 51 31.4 -0.2
comp=Z,2μm,1.5s,mb6.0
SBF Sospel 25.79 128 eP P 15 51 31.4 -0.2
SBF pmax pmax
comp=Z,789nm,1.5s,mb6.0
SBF Sospel 25.79 128 eP P 15 51 31.4 -0.2
comp=Z,788nm,1.5s,mb6.0
SBF Sospel 25.79 128 eP P 15 51 31.4 -0.2
comp=Z,788nm,1.5s,mb6.0
SMOL Smolenice 25.82 108 eP P 15 51 32.1 +0.3
SMOL Smolenice 25.82 108 eP P 15 51 32.1 +0.3
SMOL Smolenice 25.82 108 eP P 15 51 32.1 +0.3
PTCC Patocco-Chiusa 25.84 116 P P 15 51 32.5 +0.5
PTCC Patocco-Chiusa 25.84 116 P P 15 51 32.5 +0.5
PMRV Marv??o 25.85 155 eP P 15 51 32.7 +0.5
comp=Z,240nm,1.8s,mb5.4
PMRV eS S 15 56 12.3 +11
PMRV eLR LR 15 58 05.4
comp=Z,26μm,21.5s
PMRV Marv??o 25.85 155 eP P 15 51 32.7 +0.5
comp=Z,240nm,1.8s,mb5.4
REVF Revere 25.87 128 eP P 15 51 32.3 0.0
REVF Revere 25.87 128 eP P 15 51 32.3 0.0
IMI Imperia 25.91 127 P P 15 51 33.2 +0.5
IMI Imperia 25.91 127 P P 15 51 33.2 +0.5
PCAN Candelaria 25.92 194 eP P 15 51 42.1 +9.3
ZST Bratislava 25.93 109 eP P 15 51 37.7 +4.9
comp=Z,196nm,1.7s,mb5.4
ZST eS S 15 56 09.4 +6.7
ZST LR LR
comp=Z,106μm,15.2s,MS6.5
ZST Bratislava 25.93 109 eP P 15 51 37.7 +4.9
ZST eS S 15 56 09.4 +6.7
LMR La Mourre 25.93 130 eP P 15 51 32.6 -0.3
comp=Z,1μm,1.6s,mb5.8
LMR La Mourre 25.93 130 eP P 15 51 32.6 -0.3
LMR pmax pmax
comp=Z,539nm,1.6s,mb5.8
LMR La Mourre 25.93 130 eP P 15 51 32.6 -0.3
comp=Z,539nm,1.6s,mb5.8
LMR La Mourre 25.93 130 eP P 15 51 32.6 -0.3
comp=Z,539nm,1.6s,mb5.8
EPOB Poblet 26.03 140 P P 15 51 32.9 -0.9
comp=Z,717nm,1.7s,mb5.9
EPOB Poblet 26.03 140 P P 15 51 32.9 -0.9
comp=Z,717nm,1.7s,mb5.9
ARSA Arzberg 26.03 113⇑ eP P 15 51 34.0 +0.3
comp=Z,395nm,2.0s,mb5.6,SNR=119
ARSA Arzberg 26.03 113 P P 15 51 34.0 +0.3
comp=Z,395nm,2.0s,mb5.6,SNR=119
MNK Minsk 26.06 88⇓ iP P 15 51 34.0 +0.1
MNK eP PP 15 52 36.0
MNK eS S 15 56 04.0 -0.6
MNK eS S 15 57 30.0
MNK pmax pmax
comp=N,1μm,2.0s
MNK pmax pmax
comp=Z,2μm,2.0s,mb6.4
MNK pmax pmax
comp=Z,6μm,9.0s
MNK smax
comp=N,8μm,10.0s
MNK smax
comp=E,43μm,14.0s
MNK MLR MLR
comp=N,124μm,14.0s,MS6.8
MNK MLR MLR
comp=Z,134μm,14.0s,MS6.6
MNK MLR MLR
comp=E,166μm,14.0s,MS6.8
SC2M Scurtabo 26.07 124 P P 15 51 34.6 +0.5
SC2M Scurtabo 26.07 124 P P 15 51 34.6 +0.5
MICGM Minsk 26.08 88⇓ iP P 15 51 34.0 -0.1
LIKS Likavka 26.11 106 eP P 15 51 36.7 +2.2
LIKS pmax pmax
comp=Z,262nm,1.3s,mb5.6
LIKS Likavka 26.11 106 eP P 15 51 36.7 +2.2
comp=Z,262nm,1.3s,mb5.6
LIKS Likavka 26.11 106 eP P 15 51 36.7 +2.2
LIKS Likavka 26.11 106 eP P 15 51 36.7 +2.2
comp=Z,262nm,1.3s,mb5.6
CADS Cadrg 26.14 116 i P P 15 51 34.5 -0.3
CADS eS S 15 56 14.8 +8.8
CADS Cadrg 26.14 116 i P P 15 51 34.5 -0.2
RES Resolute Bay 26.16 325 P P 15 51 34.0 -0.7
comp=Z,53nm,1.1s,mb5.0,baz=63,slow=9.7,SNR=34
RES S S 15 56 08.2 +2.2
comp=Z,6.2nm,0.9s,baz=324,slow=19,SNR=1.9
RES LR LR 16 01 28.6
comp=Z,63μm,20.0s,MS6.2,baz=81,slow=36
RES Resolute Bay 26.16 325 eP P 15 51 33.0 -1.7
RES pmax pmax
comp=Z,860nm,2.2s,mb5.9
RES Resolute Bay 26.16 325 eP P 15 51 33.0 -1.7
comp=Z,860nm,2.2s,mb5.9
RES Resolute Bay 26.16 325 eP P 15 51 33.0 -1.7
comp=Z,860nm,2.2s,mb5.9
KOLL Kolacno 26.18 107 eP P 15 51 35.6 +0.5
KOLL Kolacno 26.18 107 eP P 15 51 35.6 +0.5
KOLL Kolacno 26.18 107 eP P 15 51 35.6 +0.5
OBKA Obir 26.23 115⇑ eP P 15 51 35.9 +0.3
comp=Z,321nm,2.1s,mb5.5,SNR=22
OBKA Obir 26.23 115 P P 15 51 35.9 +0.3
comp=Z,321nm,2.1s,mb5.5,SNR=22
LIS Lisbon 26.24 159 eP P 15 51 35.9 +0.1
LIS AMb AMB 15 51 52.2
comp=Z,569nm,1.9s,mb5.8
LIS eS S 15 56 09.6 +1.9
LIS eS S 15 56 09.8 +2.0
LIS Lisbon 26.24 159 eP P 15 51 35.9 +0.2
LIS eS S 15 56 09.6 +1.8
SOKA Soboth 26.29 114⇑ iP P 15 51 36.3 +0.2
comp=Z,393nm,1.9s,mb5.6
SOKA Soboth 26.29 114 P P 15 51 36.3 +0.2
comp=Z,393nm,1.9s,mb5.6
ESDC Sonseca Array 26.32 149 P P 15 51 35.8 -0.6
comp=Z,26nm,0.9s,mb4.8,baz=345,slow=8.0,SNR=34
ESDC LR LR 16 00 44.4
comp=Z,34μm,20.7s,MS5.9,baz=335,slow=34
ESDC Sonseca Array 26.32 149 P P 15 51 35.2 -1.2
comp=Z,157nm,1.6s,mb5.3
ESDC Sonseca Array 26.32 149 P P 15 51 35.2 -1.2
comp=Z,157nm,1.6s,mb5.3
ESLA Sonseca Array 26.32 149 eP P 15 51 35.9 -0.5
comp=Z,54nm,1.3s,mb4.9
ESLA LR LR
comp=Z,247μm,21.0s,MS6.7
ESLA Sonseca Array 26.32 149 eP P 15 51 35.9 -0.5
comp=Z,54nm,1.3s,mb4.9
NIE Niedzica 26.35 104⇑ eP P 15 51 36.7 +0.1
NIE e*PP pP 15 51 40.0 +0.4
NIE Niedzica 26.35 104⇑ eP P 15 51 36.7 +0.1
PAB San Pablo 26.36 150 eP P 15 51 36.6 -0.1
PAB pmax pmax
comp=Z,183nm,1.3s,mb5.5
PAB MLR MLR
comp=Z,39μm,20.0s,MS6.0

PAB San Pablo 26.36 150 eP P 15 51 36.6 -0.1
comp=Z,183nm,1.3s,mb5.5
PAB LR LR
comp=Z,39μm,20.0s,MS6.0
PAB San Pablo 26.36 150 eP P 15 51 36.6 -0.1
comp=Z,183nm,1.3s,mb5.5
PESTR Estremoz 26.36 156 eP P 15 51 36.5 -0.3
comp=Z,149nm,1.7s,mb5.2
PESTR eS S 15 56 19.5 +10
PESTR eLR LR 15 58 19.6
comp=Z,25μm,16.8s
PESTR Estremoz 26.36 156 eP P 15 51 36.5 -0.3
comp=Z,149nm,1.7s,mb5.2
VOY Vojsko 26.36 116 eP P 15 51 36.7 -0.1
VOY e pP 15 51 38.9 -0.9
VOY e 15 53 21.5
VOY e 15 53 42.1
VOY Vojsko 26.36 116 eP P 15 51 36.7 -0.1
CMLA Cha da Macela 26.37 188 eP P 15 51 43.0 +6.1
comp=Z,61nm,0.8s,mb5.2
CMLA eS S 15 56 17.9 +8.2
CMLA eLQ 15 56 53.1
CMLA eLR LR 15 58 05.5
CMLA Cha da Macela 26.37 188 PFAKE 15 51 50.0 +13
CMLA LR LR
comp=Z,28μm,22.0s,MS5.8
ERBM Eremo 26.38 123 P P 15 51 38.8 +1.9
ERBM Eremo 26.38 123 P P 15 51 38.8 +1.9
PDA Ponta Delgada 26.39 188 eLQ 15 56 14.0
PDA eLR LR 15 57 20.0
VYHS Vyhne 26.43 107 eP P 15 51 37.2 -0.1
comp=Z,2μm,2.4s,mb6.2
VYHS eS S 15 56 11.3 +0.8
VYHS LR LR
comp=Z,23μm,37.7s,MS5.5
VYHS Vyhne 26.43 107 eP P 15 51 37.2 -0.1
VYHS eS S 15 56 11.3 +0.8
VYHS Vyhne 26.43 107 eP P 15 51 37.2 -0.1
comp=Z,2μm,2.4s,mb6.2
VYHS eS S 15 56 11.3 +0.8
GSCL Gusciola 26.50 123 P P 15 51 39.6 +1.6
GSCL Gusciola 26.50 123 P P 15 51 39.6 +1.6
EMOS Mosqueruela 26.52 143 P P 15 51 37.5 -0.7
comp=Z,761nm,2.2s,mb5.8
EMOS Mosqueruela 26.52 143 P P 15 51 37.5 -0.7
comp=Z,761nm,2.2s,mb5.8
EBAD Badajoz 26.58 155 P P 15 51 37.2 -1.6
comp=Z,105nm,1.1s,mb5.3
EBAD Badajoz 26.58 155 P P 15 51 37.2 -1.5
comp=Z,105nm,1.1s,mb5.3
TRI Trieste 26.58 117 eP P 15 51 38.3 -0.4
TRI pmax pmax
comp=Z,1μm,1.9s,mb6.1
TRI MLR MLR
comp=Z,76μm,19.0s,MS6.3
TRI Trieste 26.58 117 eP P 15 51 38.3 -0.4
comp=Z,1μm,1.9s,mb6.1
TRI LR LR
comp=Z,76μm,19.0s,MS6.3
TRI Trieste 26.58 117 eP P 15 51 38.3 -0.4
comp=Z,1μm,1.9s,mb6.1
VLC Villacollemand 26.59 123 eP P 15 51 39.1 +0.2
comp=Z,3μm,2.1s,mb6.5
VLC LR LR
comp=Z,50μm,22.0s,MS6.0
VLC Villacollemand 26.59 123 eP P 15 51 39.1 +0.3
comp=Z,3μm,2.1s,mb6.5
FIU Minerbio Fiu 26.60 121 P P 15 51 40.5 +1.6
FIU Minerbio Fiu 26.60 121 P P 15 51 40.5 +1.6
EVOP Sao Brissos 26.60 157 eP P 15 51 39.1 +0.2
EVOP AMb AMB 15 51 49.0
comp=Z,113nm,1.2s,mb5.3
EVOP eS S 15 56 15.2 +1.9
EVOP eS S 15 56 15.3 +1.9
EVOP Sao Brissos 26.60 157 eP P 15 51 37.9 -1.0
comp=Z,148nm,1.4s,mb5.3
LJU Ljubljana 26.61 115 eP P 15 51 39.0 0.0
LJU eS S 15 56 21.9 +8.5
LJU Ljubljana 26.61 115 eP P 15 51 39.0 +0.1
EVO Evora 26.61 157 eP P 15 51 37.9 -1.2
comp=Z,297nm,1.4s,mb5.3
EVO eMLR MLR
comp=Z,53μm,21.5s,MS5.8
EVO Evora 26.61 157 eP P 15 51 39.5 +0.4
comp=Z,120nm,1.8s,mb5.1
EVO i S S 15 56 21.6 +8.0
EVO Evora 26.61 157 eP P 15 51 39.5 +0.4
comp=Z,120nm,1.8s,mb5.1
ZCCA Zocca 26.65 122 P P 15 51 41.5 +2.2
ZCCA Zocca 26.65 122 P P 15 51 41.5 +2.2
GROS Grobnik 26.66 114 eP P 15 51 39.1 -0.3
GROS eS S 15 56 23.1 +8.9
GROS Grobnik 26.66 114 eP P 15 51 39.1 -0.3
STHS Stebnicka Huta 26.75 103 eP P 15 51 38.3 -1.9
STHS pmax pmax
comp=Z,310nm,1.7s,mb5.6
STHS Stebnicka Huta 26.75 103 eP P 15 51 38.3 -1.9
comp=Z,310nm,1.7s,mb5.6
STHS Stebnicka Huta 26.75 103 eP P 15 51 38.3 -1.9
STHS Stebnicka Huta 26.75 103 eP P 15 51 38.3 -1.9
comp=Z,310nm,1.7s,mb5.6
BDI Bagni Di Lucca 26.75 123 P P 15 51 40.6 +0.3
FNVD Fontana Vidola 26.86 122 P P 15 51 42.1 +0.9
FNVD Fontana Vidola 26.86 122 P P 15 51 42.1 +0.9
KOGS Kog 26.97 113 i P P 15 51 41.9 -0.3
KOGS eS S 15 56 29.6 +10
KOGS Kog 26.97 113 i P P 15 51 41.9 -0.3
KNDS Knezji Dol 26.97 116 i P P 15 51 42.2 0.0
KNDS Knezji Dol 26.97 116 i P P 15 51 42.2 0.0
PII Pisa 27.02 123 P P 15 51 42.7 0.0
PSMA Santa Maria 27.11 187 eP P 15 51 49.8 +6.3
PBEJ Beja 27.13 157 eP P 15 51 42.6 -1.1
comp=Z,223nm,1.7s,mb5.4
PBEJ eS S 15 56 35.3 +14
PBEJ Beja 27.13 157 eP P 15 51 42.6 -1.1
comp=Z,223nm,1.7s,mb5.4
PBEJ eS S 15 56 35.3 +14
PBAR Barrancos 27.14 155 eP P 15 51 43.7 -0.1
comp=Z,187nm,1.7s,mb5.3
PBAR eS S 15 56 31.7 +10
PBAR eLR LR 15 58 45.8
comp=Z,27μm,20.6s
PBAR Barrancos 27.14 155 eP P 15 51 43.7 -0.1
comp=Z,187nm,1.7s,mb5.3
KECS Kecovo 27.14 105 eP P 15 51 43.4 -0.3
KECS pmax pmax
comp=Z,126nm,1.8s,mb5.2
KECS Kecovo 27.14 105 eP P 15 51 43.4 -0.3
comp=Z,126nm,1.8s,mb5.2
KECS Kecovo 27.14 105 eP P 15 51 43.4 -0.3
VMG Vicchio 27.19 122 P P 15 51 45.8 +1.6
VMG Vicchio 27.19 122 P P 15 51 45.8 +1.6
KWP Kalwaria Pacla 27.22 101 eP P 15 51 44.8 +0.4
KWP ep P pP 15 51 47.6 +0.1
KWP eS S 15 56 33.3 +10
KWP LMZ 16 02 38.3
comp=Z,80μm,20.1s
KWP Kalwaria Pacla 27.22 101 eP P 15 51 44.8 +0.3
KWP e*PP pP 15 51 47.6 +0.1
KWP MLR MLR
comp=Z,80μm,20.1s,MS6.3
KWP Kalwaria Pacla 27.22 101 eP P 15 51 44.8 +0.3
BUD Budapest 27.29 108⇑ eP P 15 51 45.8 +0.7
PSZ Piszkesteto 27.32 106 eP P 15 51 45.5 +0.1
PSZ pmax pmax
comp=Z,1μm,1.9s,mb6.1
PSZ MLR MLR
comp=Z,28μm,20.0s,MS5.8
PSZ Piszkesteto 27.32 106 eP P 15 51 45.5 +0.2
comp=Z,1μm,1.9s,mb6.1
PSZ LR LR
comp=Z,28μm,20.0s,MS5.8
PSZ Piszkesteto 27.32 106⇑ eP P 15 51 46.0 +0.6
PSZ Piszkesteto 27.32 106⇓ iP P 15 51 45.9 +0.5
PSZ Piszkesteto 27.32 106 eP P 15 51 45.5 +0.1
comp=Z,1μm,1.9s,mb6.1
BOJS Bojanci 27.34 115 eP P 15 51 44.9 -0.6
BOJS Bojanci 27.34 115 eP P 15 51 44.9 -0.6
PTEO Sao Teotonio 27.46 159 eP P 15 51 46.3 -0.4
comp=Z,233nm,1.7s,mb5.4
PTEO Sao Teotonio 27.46 159 eP P 15 51 46.3 -0.4
comp=Z,233nm,1.7s,mb5.4
PCVE Castro Verde 27.49 157 eP P 15 51 48.5 +1.6
comp=Z,219nm,1.6s,mb5.4
PCVE eS S 15 56 39.6 +12

PCVE eLR LR 15 59 13.9
comp=Z,21μm,16.7s
PCVE Castro Verde 27.49 157 eP **P 15 51 48.5 +1.6**
comp=Z,219nm,1.6s,mb5.4
PGF Pioggiola 27.49 127 eP **P 15 51 47.2 +0.3**
comp=Z,2μm,1.9s,mb6.1
PGF Pioggiola 27.49 127 eP **P 15 51 47.2 +0.3**
PGF pmax pmax
comp=Z,1μm,1.9s,mb6.1
PGF Pioggiola 27.49 127 eP **P 15 51 47.2 +0.3**
comp=Z,1μm,1.9s,mb6.1
PGF Pioggiola 27.49 127 eP **P 15 51 47.2 +0.3**
comp=Z,1μm,1.9s,mb6.1
CSNT Castellina Chi 27.52 123 P **P 15 51 46.7 -0.5**
CSNT Castellina Chi 27.52 123 P **P 15 51 46.7 -0.5**
ECAB El Cabril 27.54 153 P **P 15 51 46.2 -1.3**
comp=Z,398nm,1.2s,mb5.9
ECAB El Cabril 27.54 153 P **P 15 51 46.2 -1.2**
comp=Z,398nm,1.2s,mb5.9
KOLS Kolonicke sedl 27.56 102 eP **P 15 51 47.7 +0.2**
comp=Z,1μm,2.5s,mb6.1
KOLS eS **S 15 56 34.6 +6.2**
KOLS LR LR
comp=Z,89μm,15.6s,MS6.5
KOLS Kolonicke sedl 27.56 102 eP **P 15 51 47.7 +0.2**
KOLS eS **S 15 56 34.6 +6.2**
KOLS Kolonicke sedl 27.56 102 eP **P 15 51 47.7 +0.2**
comp=Z,1μm,2.5s,mb6.1
RSM Repubblica di 27.56 121 P **P 15 51 48.7 +1.1**
EMIN Mina Concepcio 27.60 155 P **P 15 51 47.0 -0.9**
comp=Z,663nm,2.3s,mb5.9
EMIN Mina Concepcio 27.60 155 P **P 15 51 47.0 -0.9**
comp=Z,663nm,2.3s,mb5.9
EADA Adamuz 27.63 151 P **P 15 51 46.8 -1.4**
comp=Z,521nm,2.0s,mb5.8
EADA Adamuz 27.63 151 P **P 15 51 46.8 -1.4**
comp=Z,521nm,2.0s,mb5.8
CRE Caprese Michel 27.64 122 P **P 15 51 48.3 +0.1**
EVIA Vianos 27.64 148 P **P 15 51 48.1 -0.2**
EVIA pmax pmax
comp=Z,400nm,1.6s,mb5.8
EVIA Vianos 27.64 148 P **P 15 51 48.1 -0.2**
comp=Z,400nm,1.6s,mb5.8
EVIA Vianos 27.64 148 P **P 15 51 48.1 -0.2**
comp=Z,400nm,1.6s,mb5.8
LVV L'vov 27.66 99 eP **P 15 51 48.1 -0.3**
LVV e 15 52 49.7
LVV eS **S 15 56 36.5 +6.6**
LVV e 15 57 55.1
LVV MLR MLR
comp=N,18μm,16.0s,MS6.5
LVV MLR MLR
comp=E,103μm,16.0s,MS6.5
LVV MLR MLR
comp=Z,78μm,16.0s,MS6.4
EGRO El Granado 27.68 156 P **P 15 51 48.2 -0.4**
comp=Z,264nm,1.9s,mb5.5
EGRO El Granado 27.68 156 P **P 15 51 48.2 -0.4**
comp=Z,264nm,1.9s,mb5.5
PESA Pesaro 27.70 120 P **P 15 51 49.7 +0.9**
PESA Pesaro 27.70 120 P **P 15 51 49.7 +0.9**
MORF Marmelete 27.70 159 eP **P 15 51 49.4 +0.5**
comp=Z,101nm,1.6s,mb5.2
MORF eS **S 15 56 44.6 +14**
MORF eLQ 15 58 00.0
MORF eLR LR 15 59 55.1
comp=Z,24μm,16.7s
MORF Marmelete 27.70 159 eP **P 15 51 49.1 +0.2**
MORF eS **S 15 56 32.7 +1.9**
MORF Marmelete 27.70 159 eP **P 15 51 49.4 +0.5**
comp=Z,101nm,1.6s,mb5.2
PVAQ Vaqueiros 27.76 157 eP **P 15 51 48.9 -0.5**
comp=Z,160nm,1.6s,mb5.4
PVAQ eS **S 15 56 33.8 +2.1**
PVAQ eLR LR 15 59 19.8
comp=Z,24μm,17.2s
PVAQ Vaqueiros 27.76 157 eP **P 15 51 48.9 -0.5**
comp=Z,160nm,1.6s,mb5.4
PVAQ eS **S 15 56 33.8 +2.1**
UZH Uzhgorod 27.80 103 ⇓iP **P 15 51 49.0 -0.6**
UZH e 15 52 41.4
UZH eS **S 15 56 29.0 -3.1**
UZH e 15 58 18.0
UZH MLR MLR
comp=N,40μm,14.0s,MS6.5
UZH MLR MLR
comp=E,72μm,14.0s,MS6.5
UZH MLR MLR
comp=Z,38μm,14.0s,MS6.1
EBAN Banos Encina 27.80 150 P **P 15 51 49.9 +0.1**
EBAN pmax pmax
comp=Z,66nm,1.0s,mb5.2
EBAN Banos Encina 27.80 150 P **P 15 51 49.9 +0.1**
comp=Z,66nm,1.0s,mb5.2
EBAN Banos Encina 27.80 150 P **P 15 51 49.9 +0.1**
comp=Z,66nm,1.0s,mb5.2
PFVI Vila Bisbo 27.84 159 eP **P 15 51 50.2 +0.1**
comp=Z,127nm,1.6s,mb5.3
PFVI eS **S 15 56 43.9 +11**
PFVI eLR LR 15 59 32.0
comp=Z,24μm,14.3s
PFVI Vila Bisbo 27.84 159 eP **P 15 51 50.2 +0.1**
comp=Z,127nm,1.6s,mb5.3
ETOB Tobarra 27.87 146 P **P 15 51 51.0 +0.7**
comp=Z,1μm,3.0s
ETOB Tobarra 27.87 146 P **P 15 51 51.0 +0.7**
comp=Z,1μm,3.0s
PBDV Barranco-do-Ve 27.88 157 eP **P 15 51 50.7 +0.2**
comp=Z,140nm,1.5s,mb5.4
PBDV eS **S 15 56 43.9 +10**
PBDV eLR LR 15 59 20.4
comp=Z,26μm,18.5s
PBDV Barranco-do-Ve 27.88 157 eP **P 15 51 50.7 +0.2**
comp=Z,140nm,1.5s,mb5.4
FSSB Fossombrone 27.89 120 P **P 15 51 51.0 +0.5**
FSSB Fossombrone 27.89 120 P **P 15 51 51.0 +0.5**
PIEI Pieia 27.93 121 P **P 15 51 51.5 +0.7**
PIEI Pieia 27.93 121 P **P 15 51 51.5 +0.7**
ETOS Mallorca 27.99 138 P **P 15 51 48.6 -2.8**
comp=Z,920nm,2.1s,mb6.0
PKSM Moragy 28.14 110 P **P 15 51 52.7 0.0**
PKSM Moragy 28.14 110 ⇑iP **P 15 51 52.2 -0.5**
PKSM Moragy 28.14 110 P **P 15 51 52.7 0.0**
EBEN Beniarda 28.15 144 P **P 15 51 53.2 +0.4**
comp=Z,370nm,2.0s,mb5.7
EBEN Beniarda 28.15 144 P **P 15 51 53.2 +0.4**
comp=Z,370nm,2.0s,mb5.7
MURB Monte Urbino 28.16 121 P **P 15 51 53.2 +0.3**
MURB Monte Urbino 28.16 121 P **P 15 51 53.2 +0.3**
EIBI Ibiza 28.26 141 P **P 15 51 54.4 +0.6**
comp=Z,952nm,3.0s
EIBI Ibiza 28.26 141 P **P 15 51 54.4 +0.5**
comp=Z,952nm,3.0s
TRPA Tarpa 28.29 103 ⇓iP **P 15 51 53.6 -0.4**
TRPA Tarpa 28.29 103 ⇑eP **P 15 51 53.8 -0.2**
MGAB Montegabbione 28.31 122 P **P 15 51 55.8 +1.6**
MGAB Montegabbione 28.31 122 P **P 15 51 55.8 +1.6**
EQES Quesada 28.31 149 P **P 15 51 54.2 -0.1**
comp=Z,369nm,1.5s,mb5.8
EQES Quesada 28.31 149 P **P 15 51 54.2 -0.1**
comp=Z,369nm,1.5s,mb5.8
MAHO Mahon 28.31 136 iP **P 15 51 55.4 +1.1**
CING Cingoli 28.32 120 P **P 15 51 54.8 +0.5**
CING Cingoli 28.32 120 P **P 15 51 54.8 +0.5**
SNTG Esanatoglia 28.32 121 P **P 15 51 54.8 +0.4**
SNTG Esanatoglia 28.32 121 P **P 15 51 54.8 +0.4**
AOI Ancona 28.33 120 P **P 15 51 54.9 +0.5**
AOI Ancona 28.33 120 P **P 15 51 54.9 +0.5**
OSPF L'Ospedale 28.34 127 eP **P 15 51 54.5 0.0**
OSPF L'Ospedale 28.34 127 eP **P 15 51 54.5 0.0**
MAON Monte Argentar 28.36 124 P **P 15 51 54.7 0.0**
MAON Monte Argentar 28.36 124 P **P 15 51 54.7 0.0**
ASS Assisi 28.38 121 P **P 15 51 55.3 +0.4**
EHUE Huescar 28.41 148 P **P 15 51 55.4 +0.3**
EHUE pmax pmax
comp=Z,231nm,1.4s,mb5.6
EHUE Huescar 28.41 148 P **P 15 51 55.4 +0.3**
comp=Z,231nm,1.4s,mb5.6
EHUE Huescar 28.41 148 P **P 15 51 55.4 +0.3**
comp=Z,231nm,1.4s,mb5.6
LATE Laterza 28.45 123 P **P 15 51 55.5 0.0**
LATE Laterza 28.45 123 P **P 15 51 55.5 0.0**
ESPR Espera 28.62 154 P **P 15 51 56.7 -0.4**
comp=Z,313nm,1.5s,mb5.8
ESPR Espera 28.62 154 P **P 15 51 56.7 -0.4**
comp=Z,313nm,1.5s,mb5.8
ELOJ Sierra Loja 28.70 151 P **P 15 51 58.9 +1.1**
ELOJ pmax pmax
comp=Z,15nm,1.0s,mb4.7
ELOJ Sierra Loja 28.70 151 P **P 15 51 58.9 +1.1**
comp=Z,15nm,1.0s,mb4.7
ELOJ Sierra Loja 28.70 151 P **P 15 51 58.9 +1.1**
comp=Z,15nm,1.0s,mb4.7
ECOG Cogollos-Vega 28.70 150 P **P 15 51 59.0 +1.2**
ECOG pmax pmax
comp=Z,161nm,1.6s,mb5.5
ECOG Cogollos-Vega 28.70 150 P **P 15 51 59.0 +1.2**
comp=Z,161nm,1.6s,mb5.5
ECOG Cogollos-Vega 28.70 150 P **P 15 51 59.0 +1.2**
comp=Z,161nm,1.6s,mb5.5
EMUR La Murta 28.70 146 P **P 15 51 58.7 +0.9**
comp=Z,404nm,2.1s,mb5.8
EMUR La Murta 28.70 146 P **P 15 51 58.7 +0.9**
comp=Z,404nm,2.1s,mb5.8
ERON Agron 28.90 151 P **P 15 52 02.6 +3.1**
comp=Z,33nm,0.7s,mb5.2
ERON Agron 28.90 151 P **P 15 52 02.6 +3.1**
comp=Z,33nm,0.7s,mb5.2
SFS San Fernando 28.95 155 PFAKE 15 52 10.0 +10
SFS LR LR
comp=Z,68μm,19.0s,MS6.3
SFS San Fernando 28.95 155 iP **P 15 52 02.7 +2.7**
TOLF Tolfa 29.00 123 P **P 15 52 00.5 +0.1**
TOLF Tolfa 29.00 123 P **P 15 52 00.5 +0.1**
CART Cartagena 29.01 146 iP **P 15 52 00.3 -0.2**
EMAL Malaga-Limoner 29.01 152 iP **P 15 52 01.1 +0.6**
BMR Baia Mare 29.05 103 P **P 15 52 01.7 +0.9**
BMR Baia Mare 29.05 103 ⇓iP **P 15 52 01.5 +0.7**
BMR Baia Mare 29.05 103 ⇓iP **P 15 52 01.5 +0.7**
EJIF Jimena Fronter 29.10 154 P **P 15 52 02.0 +0.7**
EJIF pmax pmax
comp=Z,568nm,1.6s,mb6.0
EJIF Jimena Fronter 29.10 154 P **P 15 52 02.0 +0.7**
comp=Z,568nm,1.6s,mb6.0
EJIF Jimena Fronter 29.10 154 P **P 15 52 02.0 +0.7**
comp=Z,568nm,1.6s,mb6.0
TERO Teramo 29.12 121 P **P 15 52 01.7 +0.3**
TERO Teramo 29.12 121 P **P 15 52 01.7 +0.3**
EGUA Guajares 29.13 150 P **P 15 52 02.4 +0.8**
EGUA pmax pmax
comp=Z,903nm,1.2s,mb6.4
EGUA Guajares 29.13 150 P **P 15 52 02.4 +0.9**
comp=Z,903nm,1.2s,mb6.4
EGUA Guajares 29.13 150 P **P 15 52 02.4 +0.8**
comp=Z,903nm,1.2s,mb6.4
EMIJ Mijas 29.13 152 P **P 15 52 02.5 +0.9**
comp=Z,372nm,1.8s,mb5.8
EMIJ Mijas 29.13 152 P **P 15 52 02.5 +0.9**
comp=Z,372nm,1.8s,mb5.8
EBER Berja 29.22 149 P **P 15 52 02.7 +0.4**
comp=Z,319nm,1.4s,mb5.9
EBER Berja 29.22 149 P **P 15 52 02.7 +0.4**
comp=Z,319nm,1.4s,mb5.9
FIAM Fiamignano 29.24 122 P **P 15 52 02.7 +0.2**
FIAM Fiamignano 29.24 122 P **P 15 52 02.7 +0.2**
AQU L'Aquila 29.27 121 eP **P 15 52 02.8 0.0**
AQU pmax pmax
comp=Z,144nm,1.2s,mb5.6
AQU MLR MLR
comp=Z,92μm,22.0s,MS6.4
AQU L'Aquila 29.27 121 eP **P 15 52 02.8 0.0**
comp=Z,144nm,1.2s,mb5.6
AQU LR LR
comp=Z,92μm,22.0s,MS6.4
AQU L'Aquila 29.27 121 eP **P 15 52 02.8 0.0**
comp=Z,144nm,1.2s,mb5.6
KIEV Kiev 29.29 93 eP **P 15 52 01.6 -1.3**
KIEV pmax pmax
comp=Z,481nm,1.9s,mb5.9
KIEV MLR MLR
comp=Z,50μm,19.0s,MS6.2
KIEV Kiev 29.29 93 eP **P 15 52 01.6 -1.3**
comp=Z,481nm,1.9s,mb5.9
KIEV LR LR
comp=Z,50μm,19.0s,MS6.2
KIEV Kiev 29.29 93 eP **P 15 52 01.6 -1.3**
comp=Z,481nm,1.9s,mb5.9
AKASG Malin Array Be 29.29 93 P **P 15 52 01.9 -1.0**
comp=Z,19nm,0.9s,mb4.8,baz=316,slow=8.8,SNR=24
AKASG PcP PcP 15 55 10.6 +1.5
comp=Z,0.6nm,0.3s,baz=271,slow=3.0,SNR=5.7
AKASG S **S 15 56 58.2 +2.7**
comp=Z,0.4nm,0.4s,baz=335,slow=24,SNR=2.7
AKASG LR LR 16 04 14.4
comp=Z,61μm,18.5s,MS6.2,baz=315,slow=37
AKASG Malin Array Be 29.29 93 P **P 15 52 01.9 -1.0**
AKASG 15 55 10.6
AKASG S **S 15 56 58.3 +2.7**
AKASG Malin Array Be 29.29 93 P **P 15 52 01.9 -1.0**
AKASG Malin Array Be 29.29 93 PcP PcP 15 55 10.6 +1.5
AKBB Malin Array Si 29.29 93 eP **P 15 52 01.7 -1.2**
AKBB Malin Array Si 29.29 93 eP **P 15 52 01.7 -1.2**
ENIJ Nijar 29.30 148 P **P 15 52 03.4 +0.3**
ENIJ pmax pmax
comp=Z,222nm,1.6s,mb5.6
ENIJ Nijar 29.30 148 P **P 15 52 03.4 +0.3**
comp=Z,222nm,1.6s,mb5.6
ENIJ Nijar 29.30 148 P **P 15 52 03.4 +0.3**
comp=Z,222nm,1.6s,mb5.6
MTCE Montecelio 29.31 122 P **P 15 52 03.2 +0.1**
MTCE Montecelio 29.31 122 P **P 15 52 03.2 +0.1**
DRGR 29.40 105 ⇓iP **P 15 52 04.5 +0.6**
DRGR 29.40 105 ⇓iP **P 15 52 04.5 +0.6**
CERT Cerreto 29.46 122 P **P 15 52 04.4 -0.1**
CERT Cerreto 29.46 122 P **P 15 52 04.4 -0.1**
OBN Obninsk 29.49 80 P **P 15 52 05.0 +0.4**
comp=Z,740nm,1.5s,mb6.2,SNR=20
OBN Obninsk 29.49 80 *d* iP **P 15 52 04.9 +0.3**
OBN *i* 15 52 56.5
OBN *i* S **S 15 57 02.9 +4.4**
OBN *i* SS SS 15 58 31.7 -32
OBN pmax pmax
comp=Z,268nm,1.6s,mb5.7
OBN MLR MLR
comp=Z,52μm,12.0s,MS6.4
OBN Obninsk 29.49 80 eP **P 15 52 04.2 -0.4**
comp=Z,596nm,1.7s,mb6.0
OBN LR LR
comp=Z,27μm,22.0s,MS5.8
OBN Obninsk 29.49 80 eP **P 15 52 04.2 -0.4**
comp=Z,596nm,1.7s,mb6.0
RDP Rocca di Papa 29.53 123 P **P 15 52 07.5 +2.4**
RDP Rocca di Papa 29.53 123 P **P 15 52 07.5 +2.4**
MOS Moscow 29.54 78 eP **P 15 52 04.8 -0.2**
MOS *e* 15 52 56.0
MOS *e* 15 53 12.8
MOS eS **S 15 57 02.5 +3.2**
MOS eSS SS 15 58 38.9 -25
MOS pmax pmax
comp=Z,237nm,1.5s,mb5.7
MOS pmax pmax
comp=Z,600nm,2.0s,mb6.0
MOS MLR MLR
comp=Z,23μm,13.0s,MS6.0
PTQR Pietraquaria 29.56 121 P **P 15 52 05.3 0.0**
PTQR Pietraquaria 29.56 121 P **P 15 52 05.3 0.0**
GUAR Guarcino 29.72 122 P **P 15 52 07.1 +0.3**
GUAR Guarcino 29.72 122 P **P 15 52 07.1 +0.3**
INTR Introdacqua 29.76 121 P **P 15 52 07.4 +0.3**
INTR Introdacqua 29.76 121 P **P 15 52 07.4 +0.3**
VVLD Villa Vallelon 29.77 121 P **P 15 52 08.1 +0.9**
VVLD Villa Vallelon 29.77 121 P **P 15 52 08.1 +0.9**
BUR08 Bucovina Ar. S 29.81 101 eP **P 15 52 07.8 +0.3**
BUR08 Bucovina Ar. S 29.81 101 eP **P 15 52 07.8 +0.3**
BURAR Bucovina Array 29.84 101 ⇓iP **P 15 52 08.9 +1.2**
BURAR Bucovina Array 29.84 101 ⇓iP **P 15 52 08.9 +1.2**
BZS Buzias 29.86 107 ⇓iP **P 15 52 08.8 +0.8**
BZS Buzias 29.86 107 ⇓iP **P 15 52 08.8 +0.8**
SDI San Donato 29.98 121 P **P 15 52 09.3 +0.2**
EALB Alboran 30.10 150 P **P 15 52 09.9 -0.3**
comp=Z,722nm,1.4s,mb6.2
EALB Alboran 30.10 150 P **P 15 52 09.9 -0.3**
comp=Z,722nm,1.4s,mb6.2
RNI2 Rionero Sannit 30.12 121 P **P 15 52 11.0 +0.7**
RNI2 Rionero Sannit 30.12 121 P **P 15 52 11.0 +0.7**
MIDA Miranda 30.21 121 P **P 15 52 11.3 +0.2**
MIDA Miranda 30.21 121 P **P 15 52 11.3 +0.2**
VSL Villasalto 30.33 129 eP **P 15 52 11.6 -0.6**
comp=Z,826nm,1.8s,mb6.2
VSL LR LR
comp=Z,43μm,19.0s,MS6.1
VSL Villasalto 30.33 129 eP **P 15 52 11.6 -0.6**
comp=Z,826nm,1.8s,mb6.2
BBLS Lazići 30.37 112 ⇑iP **P 15 52 12.6 +0.1**
RFI Roccamonfina 30.40 121 P **P 15 52 13.8 +1.0**
RFI Roccamonfina 30.40 121 P **P 15 52 13.8 +1.0**
FG2 Serracapriola 30.41 119 P **P 15 52 13.9 +1.0**
FG2 Serracapriola 30.41 119 P **P 15 52 13.9 +1.0**
DIVS Divibare 30.42 111 ⇑iP **P 15 52 12.8 -0.1**
CIGN Sant'Elia a Pi 30.45 120 P **P 15 52 13.9 +0.7**
CIGN Sant'Elia a Pi 30.45 120 P **P 15 52 13.9 +0.7**
TRUS Trudelj 30.49 110 ⇑iP **P 15 52 12.3 -1.2**
GZR Gura Zlata 30.53 106 P **P 15 52 14.9 +1.0**
GZR Gura Zlata 30.53 106 ⇑iP **P 15 52 15.3 +1.4**
GZR Gura Zlata 30.53 106 P **P 15 52 14.9 +1.0**
VENT Ventotene 30.63 123 P **P 15 52 15.0 +0.2**
VENT Ventotene 30.63 123 P **P 15 52 15.0 +0.2**
RGNG Rignano Grg 30.69 119 P **P 15 52 15.9 +0.6**
RGNG Rignano Grg 30.69 119 P **P 15 52 15.9 +0.6**
UPM Unac-Piva 30.71 113 ⇓iP **P 15 52 12.6 -2.9**
UPM Unac-Piva 30.71 113 ⇓iP **P 15 52 12.7 -2.9**
MELI Melilla 30.75 150 *i* P **P 15 52 17.1 +1.2**
MELI *e*S **S 15 57 22.1 +3.5**
PSB1 Pescosannita 30.78 120 P **P 15 52 16.7 +0.6**
PSB1 Pescosannita 30.78 120 P **P 15 52 16.7 +0.6**
MSAG Monte S. Angel 30.78 119 P **P 15 52 17.0 +0.9**
MSAG Monte S. Angel 30.78 119 P **P 15 52 17.0 +0.9**
PLE Pljevlja 30.81 113 ⇓iP **P 15 52 16.2 -0.1**
PLE Pljevlja 30.81 113 ⇓iP **P 15 52 16.3 -0.1**
PLE Pljevlja 30.81 113 ⇓iP **P 15 52 16.3 0.0**
BRY Bratogost 30.82 114 ⇓iP **P 15 52 13.7 -2.8**
BRY Bratogost 30.82 114 ⇓iP **P 15 52 13.8 -2.7**
EBNR Beni Rached 30.88 143 P **P 15 52 19.5 +2.4**
EBNR Beni Rached 30.88 143 P **P 15 52 19.5 +2.4**
GRUS Gruza 30.89 110 ⇑iP **P 15 52 16.7 -0.4**
OKGL Djebel Kef Gue 30.89 144 P **P 15 52 18.0 +0.9**
OKGL Djebel Kef Gue 30.89 144 P **P 15 52 18.0 +0.9**
FG5 Orsara di Pugl 30.90 120 P **P 15 52 17.7 +0.5**
FG5 Orsara di Pugl 30.90 120 P **P 15 52 17.7 +0.5**
MRB1 Monte Rocchett 30.93 120 P **P 15 52 18.1 +0.7**
MRB1 Monte Rocchett 30.93 120 P **P 15 52 18.1 +0.7**
ECHA Ech Chlef 30.97 143 P **P 15 52 20.0 +2.1**
ECHA Ech Chlef 30.97 143 P **P 15 52 20.0 +2.1**
NKY Niksic 31.08 114 ⇓iP **P 15 52 15.2 -3.5**
NKY Niksic 31.08 114 ⇓iP **P 15 52 15.3 -3.4**
EANR 'Ain N'Sour 31.09 144 P **P 15 52 20.6 +1.7**
EANR 'Ain N'Sour 31.09 144 P **P 15 52 20.6 +1.7**
ODZI Dzjouia 31.14 148 P **P 15 52 23.0 +3.7**
CSSN Cassano Irpino 31.17 121 P **P 15 52 20.0 +0.4**
CSSN Cassano Irpino 31.17 121 P **P 15 52 20.0 +0.4**
HCY Herceg Novi 31.18 115 ⇓iP **P 15 52 18.4 -1.3**
HCY Herceg Novi 31.18 115 ⇓iP **P 15 52 18.4 -1.2**
HCY Herceg Novi 31.18 115 ⇓iP **P 15 52 18.4 -1.3**
RTC Rabat Centre 31.24 157 PFAKE 15 52 30.0 +10
RTC LR LR
comp=Z,17μm,20.0s,MS5.7
EMHD Djebel Mahouad 31.35 141 P **P 15 52 22.5 +1.3**
EMHD Djebel Mahouad 31.35 141 P **P 15 52 22.5 +1.3**
PMAR Madeira 31.36 173 eP **P 15 52 23.7 +2.4**
comp=Z,285nm,1.7s,mb5.8
PMAR Madeira 31.36 173 eP **P 15 52 23.7 +2.4**
comp=Z,285nm,1.7s,mb5.8
ODJA Bouhanifia 31.36 146 P **P 15 52 23.0 +1.7**
BEY Berane 31.39 113 ⇓iP **P 15 52 22.0 +0.5**
IVA Berane 31.39 113 ⇓iP **P 15 52 22.0 +0.5**
IVA Berane 31.39 113 ⇓iP **P 15 52 22.0 +0.5**
AKF Akfadou 31.41 138 P **P 15 52 23.7 +2.0**
AKF Akfadou 31.41 138 P **P 15 52 23.7 +2.0**
OJGS Djebel Guires 31.42 145 P **P 15 52 24.0 +2.2**
OJGS Djebel Guires 31.42 145 P **P 15 52 24.0 +2.2**
BUM Brajici-Budva 31.46 114 ⇓iP **P 15 52 19.4 -2.8**
TTG Podgorica 31.50 114 ⇓iP **P 15 52 18.0 -4.5**
TTG Podgorica 31.50 114 ⇓iP **P 15 52 18.1 -4.4**
ADJB Djebel Djouab 31.53 140 P **P 15 52 24.2 +1.4**
ADJB Djebel Djouab 31.53 140 P **P 15 52 24.2 +1.4**
PVY Plav 31.65 113 ⇓iP **P 15 52 23.2 -0.6**
PVY Plav 31.65 113 ⇓iP **P 15 52 23.2 -0.6**
ETRT Tiaret 31.67 144 P **P 15 52 26.0 +2.0**
ETRT Tiaret 31.67 144 P **P 15 52 26.0 +2.0**
AKET Djebel Ketaf 31.76 140 P **P 15 52 23.9 -0.9**
AKET Djebel Ketaf 31.76 140 P **P 15 52 23.9 -0.9**
MLR Muntele Rosu 31.81 103 P **P 15 52 26.2 +1.1**
MLR Muntele Rosu 31.81 103 ⇓iP **P 15 52 25.6 +0.5**
MLR Muntele Rosu 31.81 103 ⇓iP **P 15 52 25.6 +0.5**
KIS Kishinev 31.88 98 eP **P 15 52 22.0 -3.8**
comp=Z,1μm,2.3s,mb6.3
KIS Kishinev 31.88 98 *i* PP PP 15 53 30.0 -7.5
KIS Kishinev 31.88 98 eP **P 15 52 22.0 -3.8**
KIS *i* 16 53 30.0
KIS *i* PPP 16 53 44.0
KIS pmax pmax
comp=Z,1μm,2.3s,mb6.3
KIS pmax pmax
comp=Z,2μm,8.0s
DFRA Djebel Bou Aff 31.89 136 P **P 15 52 26.7 +0.8**
DFRA Djebel Bou Aff 31.89 136 P **P 15 52 26.7 +0.8**
ULC Ulcinj 31.89 114 ⇓iP **P 15 52 22.8 -3.1**
ULC Ulcinj 31.89 114 ⇓iP **P 15 52 22.8 -3.1**
MGR Morigerati 32.00 121 P **P 15 52 26.3 -0.6**
MGR Morigerati 32.00 121 P **P 15 52 26.3 -0.6**
ATAF Djebel Tarf 32.03 139 P **P 15 52 17.5 -10**
SET Setif 32.06 137 P **P 15 52 29.0 +1.6**
SET Setif 32.06 137 P **P 15 52 29.0 +1.6**
LTRZ Laterza 32.09 119 P **P 15 52 28.0 +0.4**
LTRZ Laterza 32.09 119 P **P 15 52 28.0 +0.4**
SCHR S. Chirico Rap 32.15 120 P **P 15 52 28.3 +0.1**
BARS Barje 32.23 110 ⇑iP **P 15 52 28.4 -0.4**
CKHR Kef el Ahmar 32.27 137 P **P 15 52 27.0 -2.2**
CKHR Kef el Ahmar 32.27 137 P **P 15 52 27.0 -2.2**
CKFL Kef-Lekhel 32.28 135 P **P 15 52 29.6 +0.2**
CKFL Kef-Lekhel 32.28 135 P **P 15 52 29.6 +0.2**
CMAH Djebel Manchou 32.29 134 P **P 15 52 29.7 +0.2**
CMAH Djebel Manchou 32.29 134 P **P 15 52 29.7 +0.2**
CASM Ain Smara 32.34 136 P **P 15 52 29.2 -0.7**
CASM Ain Smara 32.34 136 P **P 15 52 29.2 -0.7**
CTEI Djebel Teioual 32.49 136 P **P 15 52 29.1 -2.1**
CTEI Djebel Teioual 32.49 136 P **P 15 52 29.1 -2.1**
PKME Peaks-Kenny Pk 32.58 258 eP **P 15 52 32.8 +0.9**
comp=Z,109nm,0.9s,mb5.8
PKME LR LR
comp=Z,57μm,19.0s,MS6.3
PKME Peaks-Kenny Pk 32.58 258 eP **P 15 52 32.8 +0.9**
comp=Z,109nm,0.9s,mb5.8
ABSA Djebel Ababsia 32.63 134 P **P 15 52 30.3 -2.2**
ABSA Djebel Ababsia 32.63 134 P **P 15 52 30.3 -2.2**
TIR Tirane 32.66 114 eP **P 15 52 32.3 -0.3**
TIR pmax pmax
comp=Z,2μm,2.1s,mb6.6
TIR MLR MLR
comp=Z,86μm,19.0s,MS6.5
TIR Tirane 32.66 114 eP **P 15 52 32.3 -0.3**
comp=Z,2μm,2.1s,mb6.6
TIR LR LR
comp=Z,86μm,19.0s,MS6.5
TIR Tirane 32.66 114 eP **P 15 52 32.3 -0.3**
comp=Z,2μm,2.1s,mb6.6
SKO Skopje 32.77 112 eP **P 15 52 33.7 +0.1**
VOR Voronezh 32.95 83 eP **P 15 52 35.0 -0.1**
VOR pmax pmax
comp=Z,540nm,2.4s,mb6.0
VTS Vitosha 32.99 109 P **P 15 52 35.2 -0.3**
KRUS Krusevo 33.20 112 eP **P 15 52 36.0 -1.4**
OHR Ohrid 33.23 113 eP **P 15 52 36.9 -0.8**
TIP Timpagrande 33.29 120 eP **P 15 52 36.7 -1.5**
comp=Z,518nm,2.0s,mb6.1
TIP LR LR
comp=Z,43μm,19.0s,MS6.2
TIP Timpagrande 33.29 120 eP **P 15 52 36.7 -1.5**
comp=Z,518nm,2.0s,mb6.1
VSR Storozhevoye 33.30 83 *c* iP **P 15 52 37.6 -0.6**
VSR *e**SP sP 15 52 41.9 -0.6
VSR eS S **15 58 00.7 +2.5**
VSR eSS SS 15 59 55.4 -26
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,20nm,1.0s
VSR smax
comp=E,1μm,3.4s
VSR smax

comp=Z,270nm,2.7s
VSR smax
comp=N,920nm,3.3s
VSR MLR MLR
comp=Z,48µm,14.0s,MS6.4
VSR MLR MLR
comp=N,24µm,12.0s,MS6.3
VSR MLR MLR
comp=E,31µm,13.0s,MS6.3
STIP Stip 33.31 111 *eP* **P 15 52 36.0 -2.4**
GIB Gibilmanna 33.32 124 P **P 15 52 39.7 +1.3**
PGB Panagyurishte 33.43 108 P **P 15 52 39.3 0.0**
KKB Krupnik 33.54 110 P Px 15 52 50.5
VORD Divnogorie 33.54 84 *eP* **P 15 52 39.8 -0.4**
VORD *e**SP sP 15 52 44.0 -0.5
VORD *e*SS SS 16 00 00.7 -25
VORD pmax pmax
comp=Z,30nm,1.2s,mb5.1
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,20nm,0.9s
VORD MLR MLR
comp=Z,35µm,13.0s,MS6.3
VORD MLR MLR
comp=N,39µm,14.0s,MS6.4
VORD MLR MLR
comp=E,25µm,12.0s,MS6.4
SZH Strazhica 33.59 105 P **P 15 52 39.7 -1.0**
FCC Fort Churchill 33.62 296 *eP* **P 15 52 40.3 -0.6**
comp=E,10nm,1.5s,mb4.5
FCC Fort Churchill 33.62 296 *eP* **P 15 52 40.3 -0.6**
comp=E,10nm,1.5s,mb4.5
TIRR Tirgusor 33.69 101 *eP* **P 15 52 40.1 -1.5**
TIRR pP 15 52 43.4 -1.3
TIRR pmax pmax
comp=Z,385nm,2.1s,mb6.0
TIRR Tirgusor 33.69 101 *eP* **P 15 52 40.1 -1.6**
comp=Z,385nm,2.1s,mb6.0
TIRR P pP 15 52 43.4 -1.3
TIRR Tirgusor 33.69 101⇑ *iP* **P 15 52 41.0 -0.6**
TIRR Tirgusor 33.69 101 P **P 15 52 43.4 +1.8**
SCLL Scilla 33.70 122 P **P 15 52 41.5 -0.3**
SCLL Scilla 33.70 122 P **P 15 52 41.5 -0.3**
KEST Kesra 33.73 132 P **P 15 52 42.6 +0.6**
comp=Z,83nm,1.1s,mb5.6,baz=9.2,slow=1.4,SNR=27
KEST LR LR 16 05 52.0
comp=Z,12µm,18.5s,MS5.7,baz=290,slow=35
CEL Celeste 33.77 122 *eP* **P 15 52 39.6 -2.8**
comp=Z,1µm,2.0s,mb6.4
CEL LR LR
comp=Z,50µm,19.0s,MS6.2
VAY Valandovo 33.78 111 *eP* **P 15 52 41.5 -0.9**
PLD Plovdiv 34.02 108 P **P 15 52 43.1 -1.4**
MMB Musomiste 34.04 109 P **P 15 52 44.6 -0.1**
PSN Preselentsi 34.22 103 P **P 15 52 46.0 -0.2**
PRD Provadia 34.27 104 P **P 15 52 48.0 +1.4**
HVZN Vizzini 34.29 124 P **P 15 52 47.7 +0.8**
HVZN Vizzini 34.29 124 P **P 15 52 47.7 +0.8**
RZN Rozhen 34.37 108 P **P 15 52 46.5 -1.0**
SSY Sortino 34.44 124 P **P 15 52 49.9 +1.7**
SSY Sortino 34.44 124 P **P 15 52 49.9 +1.7**
VRHR Novokhopersk 34.47 82 *eP* **P 15 52 48.6 +0.3**
VRHR *e**PP pP 15 52 51.0 -0.3
VRHR *eS* **S 15 58 20.2 +4.0**
VRHR pmax pmax
comp=N,30nm,0.4s
VRHR pmax pmax
comp=Z,20nm,0.4s,mb5.4
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR smax
comp=E,2µm,5.1s
VRHR smax
comp=Z,380nm,4.9s
VRHR smax
comp=N,1µm,3.4s
VRHR MLR MLR
comp=N,44µm,13.0s,MS6.5
VRHR MLR MLR
comp=E,36µm,13.0s,MS6.5
VRHR MLR MLR
comp=Z,13µm,13.0s,MS5.8
HMDC Modica 34.51 124 P **P 15 52 49.0 +0.2**
HMDC Modica 34.51 124 P **P 15 52 49.0 +0.2**
LBNH Lisbon 34.53 260 *eP* **P 15 52 50.2 +1.3**
LBNH pmax pmax
comp=Z,76nm,1.1s,mb5.5
LBNH MLR MLR
comp=Z,51µm,19.0s,MS6.3
LBNH Lisbon 34.53 260 *eP* **P 15 52 50.1 +1.2**
comp=Z,76nm,1.1s,mb5.5
LBNH LR LR
comp=Z,51µm,19.0s,MS6.3
LBNH Lisbon 34.53 260 *eP* **P 15 52 50.2 +1.3**
comp=Z,76nm,1.1s,mb5.5
KDZ Kurdzhali 34.69 108 P **P 15 52 49.7 -0.6**
SOKR Solikamsk 34.92 60*d iP* **P 15 52 53.7 +1.6**
SOKR S **S 15 58 28.5 +5.4**
SOKR pmax pmax
comp=Z,70nm,1.2s,mb5.5
SOKR MLR MLR
comp=Z,72µm,16.0s,MS6.5
WDD Wield Dalam 35.39 125 PFAKE 15 53 10.0 +14
WDD LR LR
comp=Z,39µm,19.0s,MS6.2
LONY Lake Ozonia 35.39 263 *eP* **P 15 52 55.6 -0.8**
comp=Z,85nm,1.1s,mb5.6
LONY LR LR
comp=Z,31µm,21.0s,MS6.0
LONY Lake Ozonia 35.39 263 *eP* **P 15 52 55.6 -0.7**
comp=Z,85nm,1.1s,mb5.6
EBAJ Bajamar 35.55 173 P **P 15 52 59.9 +2.1**
comp=Z,249nm,1.6s,mb5.9
EBAJ Bajamar 35.55 173 P **P 15 52 59.9 +2.1**
comp=Z,249nm,1.6s,mb5.9
NCB Newcomb 35.75 262 *eP* **P 15 53 00.5 +1.1**
comp=Z,43nm,1.2s,mb5.2
NCB LR LR
comp=Z,38µm,20.0s,MS6.2
NCB Newcomb 35.75 262 *eP* **P 15 53 00.5 +1.1**
comp=Z,43nm,1.2s,mb5.2
SIM Simferopol' 35.80 95 *eP* **P 15 53 01.0 +1.2**
SIM *eS* **S 15 58 44.0 +7.2**
SIM pmax pmax
comp=Z,530nm,11.3s
SIM MLR MLR
comp=Z,28µm,14.6s,MS6.2
CFTV Fuerteventura 35.83 170 P **P 15 53 02.5 +2.3**
comp=Z,29nm,1.2s,mb5.1
CFTV Fuerteventura 35.83 170 P **P 15 53 02.5 +2.3**
comp=Z,29nm,1.2s,mb5.1
EOSO Osorio 36.06 172 P **P 15 53 02.8 +0.5**
comp=Z,392nm,2.0s,mb6.0
EOSO Osorio 36.06 172 P **P 15 53 02.8 +0.6**
comp=Z,392nm,2.0s,mb6.0
BOZC Bozcaada 36.47 109 *iP* **P 15 53 05.5 -0.1**
ALAS Alassa 37.12 131 *eP* **P 15 53 12.9 +1.7**
SNR=26
BALY Balya 37.21 107 *iP* **P 15 53 10.3 -1.6**
ANN Anapa 37.37 92 *eP* **P 15 53 13.3 +0.1**
ANN *e**PP pP 15 53 15.8 -0.5
ANN *e* 15 54 37.8
ANN *e*PPP 15 54 54.8
ANN *e* 15 55 33.8
ANN *eS* **S 15 59 04.2 +3.4**
ANN *e* 16 03 24.4
ANN pmax pmax
comp=Z,243nm,2.7s,mb5.5
ANN MLR MLR
comp=N,95µm,15.0s,MS6.7
ANN MLR MLR
comp=E,29µm,15.0s,MS6.7
ANN MLR MLR
comp=Z,69µm,15.0s,MS6.6
DURS Dursunbey 37.69 106 *iP* **P 15 53 15.8 -0.2**
ARU Arti 37.76 63 P **P 15 53 17.5 +1.1**
comp=Z,218nm,1.0s,mb5.8,SNR=15
ARU Arti 37.76 63 *eP* **P 15 53 18.4 +2.0**
ARU *e*PPP 15 55 01.8
ARU S **S 15 59 12.9 +6.4**
ARU MLR MLR
comp=Z,42µm,15.0s,MS6.4
ARU Arti 37.76 63 *eP* **P 15 53 17.0 +0.6**
comp=Z,101nm,1.4s,mb5.4
ARU LR LR
comp=Z,43µm,22.0s,MS6.2
ARU Arti 37.76 63 *eP* **P 15 53 17.0 +0.6**
comp=Z,101nm,1.4s,mb5.4
BINY Binghamton 37.94 262 *eP* **P 15 53 19.5 +1.5**
comp=Z,68nm,1.3s,mb5.2
BINY LR LR
comp=Z,36µm,21.0s,MS6.2
BINY Binghamton 37.94 262 *eP* **P 15 53 19.5 +1.4**
comp=Z,68nm,1.3s,mb5.2
AKHS Akhisar 38.01 108 *iP* **P 15 53 19.0 +0.3**
DEMI Demirci 38.26 106 *iP* **P 15 53 20.8 0.0**
GHAR Gharyan 38.27 130 *eP* **P 15 53 23.6 +2.6**
SNR=154
SVE Sverdlovsk 38.29 61 *eP* **P 15 53 22.8 +2.0**
SVE *eS* **S 15 59 14.5 0.0**
SVE pmax pmax
comp=Z,64nm,1.1s,mb5.3
SVE MLR MLR
comp=Z,76µm,15.0s,MS6.6
BORA Eskisehir 38.30 104 *iP* **P 15 53 22.7 +1.6**
SGKT Sivrigoynuk 38.42 102 *iP* **P 15 53 24.0 +1.9**
GDZ Gediz 38.54 106 *iP* **P 15 53 23.2 +0.1**
YKA Yelloknife Ar 38.58 312 P **P 15 53 22.2 -0.9**
comp=Z,20nm,0.7s,mb5.0,baz=43,slow=8.2,SNR=232
YKA PcP PcP 15 55 35.5 +0.2
comp=Z,7.1nm,0.6s,baz=36,slow=3.1,SNR=18
YKA LR LR 16 09 09.2
comp=Z,14µm,18.2s,MS5.8,baz=115,slow=36
YKA Yelloknife Ar 38.58 312 P **P 15 53 22.3 -0.9**
YKA 15 55 35.5
YKA Yelloknife Ar 38.58 312 P **P 15 53 22.2 -0.9**
YKA PcP PcP 15 55 35.5 +0.2
YKA LR LR 16 09 09.2
YKA Yelloknife Ar 38.58 312 P **P 15 53 22.2 -1.0**
YKA Yelloknife Ar 38.58 312 PcP PcP 15 55 35.5 +0.2
APE Apeiranthos 38.60 112⇑ P **P 15 53 23.1 -0.6**
APE Apeiranthos 38.60 112 P **P 15 53 23.7 0.0**
APE Apeiranthos 38.60 112⇑ *iP* **P 15 53 23.0 -0.7**
APE Apeiranthos 38.60 112 P **P 15 53 23.7 0.0**
LMSR Mistrah 38.76 127 *eP* **P 15 53 26.2 +1.1**
SNR=26
GCAM G?zelcaml? 38.77 109 *iP* **P 15 53 24.4 -0.7**
LGHD Ghdames 39.04 136 *eP* **P 15 53 28.8 +1.4**
SNR=26
KHAL Karahalli 39.15 106 *iP* **P 15 53 28.1 -0.2**
SOC Sochi 39.34 91 *eP* **P 15 53 34.8 +5.0**
SOC *e**PP pP 15 53 39.8 +6.9
SOC *e* 15 55 00.6
SOC *e* 15 55 30.9
SOC *eS* **S 15 59 35.5 +4.9**
SOC *e**SS sS 15 59 44.0 +8.3
SOC *e*SS SS 16 02 18.5 -5.3
SOC *e* 16 03 34.3
SOC pmax pmax
comp=Z,2µm,1.1s,mb6.8
SOC MLR MLR
comp=Z,2492µm,15.0s
DNZL Cakiroluk 39.54 107 *iP* **P 15 53 32.1 +0.6**
FFC Flin Flon 39.56 296 P **P 15 53 31.9 +0.4**
comp=Z,1µm,1.8s,mb6.3,SNR=24
FFC Flin Flon 39.56 296 *eP* **P 15 53 31.2 -0.3**
FFC pmax pmax
comp=Z,678nm,1.6s,mb6.1
FFC MLR MLR
comp=Z,52µm,20.0s,MS6.4
FFC Flin Flon 39.56 296 *eP* **P 15 53 31.2 -0.2**
comp=Z,678nm,1.6s,mb6.1
FFC LR LR
comp=Z,52µm,20.0s,MS6.4
FFC Flin Flon 39.56 296 *eP* **P 15 53 31.2 -0.3**
comp=Z,678nm,1.6s,mb6.1
INK Inuvik 39.64 327 P **P 15 53 30.6 -1.4**
comp=Z,44nm,1.2s,mb5.1,baz=43,slow=11,SNR=56
INK Inuvik 39.64 327 *eP* **P 15 53 30.0 -2.0**
INK pmax pmax
comp=Z,111nm,1.2s
INK Inuvik 39.64 327 *eP* **P 15 53 30.0 -2.0**
comp=Z,111nm,1.2s,mb5.5
INK Inuvik 39.64 327 *eP* **P 15 53 30.0 -2.0**
comp=Z,111nm,1.2s,mb5.5
GLMI Grayling 39.65 272 *eP* **P 15 53 32.5 +0.1**
comp=Z,309nm,0.9s,mb6.0
GLMI LR LR
comp=Z,30µm,19.0s,MS6.1
GLMI Grayling 39.65 272 *eP* **P 15 53 32.5 +0.1**
comp=Z,309nm,0.9s,mb6.0
BBAL Bala 39.73 101 *iP* **P 15 53 33.7 +0.6**
ERPA Erie 39.76 266 *eP* **P 15 53 33.2 -0.2**
comp=Z,109nm,1.1s,mb5.5
ERPA LR LR
comp=Z,46µm,19.0s,MS6.3
ERPA Erie 39.76 266 *eP* **P 15 53 33.2 -0.1**
comp=Z,109nm,1.1s,mb5.5
BR131 Keskin Array S 39.80 101 *eP* **P 15 53 34.0 +0.4**
comp=Z,223nm,1.4s,mb5.7
BR131 LR LR
comp=Z,20µm,19.0s,MS6.0
BR131 Keskin Array S 39.80 101 *eP* **P 15 53 34.0 +0.3**
comp=Z,223nm,1.4s,mb5.7
BRTR Keskin Array B 39.80 101 P **P 15 53 34.5 +0.8**
comp=Z,37nm,0.8s,mb5.1,baz=325,slow=6.2,SNR=31
BRTR LR LR 16 12 30.0
comp=Z,22µm,19.8s,MS6.0,baz=125,slow=40
BRTR Keskin Array B 39.80 101 P **P 15 53 34.5 +0.8**
GVD Gavdhos 39.94 115 *eP* **P 15 53 34.1 -0.8**
comp=Z,339nm,0.9s,mb6.1
GVD Gavdhos 39.94 115 *eP* **P 15 53 34.1 -0.8**
comp=Z,339nm,0.9s,mb6.1
SSPA Standing Stone 40.04 262 *eP* **P 15 53 36.6 +0.9**
comp=Z,86nm,1.1s,mb5.4
SSPA LR LR
comp=Z,26µm,20.0s,MS6.1
SSPA Standing Stone 40.04 262 *eP* **P 15 53 36.6 +0.9**
comp=Z,86nm,1.1s,mb5.4
ISP Isparta 40.05 106 *eP* **P 15 53 35.1 -0.7**
ISP pmax pmax
comp=Z,149nm,1.5s,mb5.5
ISP MLR MLR
comp=Z,34µm,21.0s,MS6.2
ISP Isparta 40.05 106 *eP* **P 15 53 35.0 -0.7**
comp=Z,149nm,1.5s,mb5.5
ISP LR LR
comp=Z,34µm,21.0s,MS6.2
ISP Isparta 40.05 106⇑ *iP* **P 15 53 35.6 -0.2**
GOLH Golhisar 40.14 107 *iP* **P 15 53 37.3 +0.8**
CDAG Cicekdag 40.20 100 *iP* **P 15 53 36.4 -0.6**
EYMN Ely 40.25 281 *eP* **P 15 53 36.1 -1.2**
comp=Z,314nm,1.7s,mb5.8
EYMN LR LR
comp=Z,33µm,20.0s,MS6.2
EYMN Ely 40.25 281 *eP* **P 15 53 36.1 -1.2**
comp=Z,314nm,1.7s,mb5.8
KIV Kislovodsk 40.36 88 P **P 15 53 42.6 +4.4**
comp=Z,359nm,2.2s,mb5.7,SNR=8.7
KIV Kislovodsk 40.36 88 *eP* **P 15 53 39.3 +1.1**
KIV *e* 15 55 10.0
KIV *eS* **S 15 59 48.5 +2.7**
KIV *eSS* SS 16 02 47.7 +3.6
KIV pmax pmax
comp=Z,55nm,1.2s,mb5.2
KIV pmax pmax
comp=Z,347nm,5.8s
KIV MLR MLR
comp=Z,25µm,16.0s,MS6.2
KIV Kislovodsk 40.36 88 *eP* **P 15 53 38.7 +0.4**
comp=Z,365nm,1.9s,mb5.8
KIV LR LR
comp=Z,31µm,20.0s,MS6.2
KIV Kislovodsk 40.36 88 P **P 15 53 42.5 +4.2**
SNR=14
KIV P 15 53 42.5
SNR=14
KIV Kislovodsk 40.36 88 *eP* **P 15 53 38.7 +0.5**
comp=Z,365nm,1.9s,mb5.8
ULM Lac du Bonnet 40.37 287 P **P 15 53 36.9 -1.4**
comp=Z,92nm,1.2s,mb5.4,baz=40,slow=9.2,SNR=22
ULM S **S 15 59 48.5 +2.7**
comp=Z,6.1nm,1.0s,baz=300,slow=20,SNR=2.0
ULM LR LR 16 09 26.1
comp=Z,59µm,18.2s,MS6.5,baz=46,slow=35
ULM Lac du Bonnet 40.37 287 *eP* **P 15 53 36.9 -1.4**
comp=Z,227nm,1.5s,mb5.7
ULM LR LR
comp=Z,68µm,19.0s,MS6.5
ULM Lac du Bonnet 40.37 287 *eP* **P 15 53 36.9 -1.4**
comp=Z,227nm,1.5s,mb5.7
LSHF Shwairf 40.62 130 *eP* **P 15 53 42.0 +1.4**
SNR=25
COWI Conover 40.64 277 *eP* **P 15 53 39.5 -1.1**
comp=Z,42nm,0.8s,mb5.1
COWI LR LR
comp=Z,21µm,20.0s,MS6.0
COWI Conover 40.64 277 *eP* **P 15 53 39.5 -1.1**
comp=Z,42nm,0.8s,mb5.1
KORT Korkueli 40.67 106 *iP* **P 15 53 41.4 +0.5**
AAM Ann Arbor 41.23 269 PFAKE 15 54 00.0 +15
AAM LR LR
comp=Z,11µm,22.0s,MS5.7
BBSR BB Station 41.57 242 PFAKE 15 54 00.0 +12
BBSR LR LR
comp=Z,29µm,20.0s,MS6.1
MCWV Mont Chateau 41.70 263 P **P 15 53 48.3 -1.0**
comp=Z,166nm,0.9s,mb5.7
MCWV LR LR
comp=Z,39µm,21.0s,MS6.3
MCWV Mont Chateau 41.70 263 P **P 15 53 48.3 -1.1**
comp=Z,166nm,0.9s,mb5.7
CBN Corbin 41.83 260 P **P 15 53 49.5 -0.9**
comp=Z,109nm,0.8s,mb5.5
CBN LR LR
comp=Z,49µm,19.0s,MS6.4
CBN Corbin 41.83 260 P **P 15 53 49.5 -0.9**
comp=Z,109nm,0.8s,mb5.5
ZEI Tsey 41.84 88 *eP* **P 15 53 54.8 +4.4**
ZEI pmax pmax
comp=Z,222nm,2.1s,mb5.4
AGMN Agassiz Refuge 41.85 285 *eP* **P 15 53 49.7 -0.8**
comp=Z,163nm,1.3s,mb5.5
AGMN LR LR
comp=Z,24µm,21.0s,MS6.0
AGMN Agassiz Refuge 41.85 285 *eP* **P 15 53 49.7 -0.8**
comp=Z,163nm,1.3s,mb5.5
PINB Pinarbasi 41.87 99 *iP* **P 15 53 52.1 +1.3**
LJBD Adjabya 41.91 122 *eP* **P 15 53 53.2 +2.1**
SNR=25
KELT Kelkit 41.91 95 *iP* **P 15 53 52.7 +1.6**
LJFR Jufra 41.97 128 *eP* **P 15 53 52.1 +0.5**
SNR=25
GAZI Gazipasa 42.16 105 *iP* **P 15 53 50.9 -2.2**
KEH Kehvi 42.22 89 P **P 15 53 55.4 +1.9**
ARTV Artvin 42.24 92 *iP* **P 15 53 57.1 +3.3**
KEMA Kemaliye 42.30 96 *iP* **P 15 53 50.6 -3.6**
LTBQ Tobrug 42.32 117 *eP* **P 15 53 56.2 +1.7**
SNR=25
DAGI Agillar 42.32 92 *iP* **P 15 53 53.5 -0.9**
GULE Gulek 42.33 102 *iP* **P 15 53 54.7 +0.2**
DDEM Demirkent 42.40 92 *iP* **P 15 53 57.6 +2.6**
GOR Gori 42.56 89 P **P 15 53 59.0 +2.6**
KOPT Kop Dagi 42.56 94 *iP* **P 15 54 01.0 +4.7**
ACSO Alum Creek Sta 42.61 267 *eP* **P 15 53 55.3 -1.5**
comp=Z,148nm,1.1s,mb5.6
ACSO LR LR
comp=Z,51µm,19.0s,MS6.4
ACSO Alum Creek Sta 42.61 267 *eP* **P 15 53 55.3 -1.5**
comp=Z,148nm,1.1s,mb5.6
ANDN Andirin 42.76 100 *iP* **P 15 53 58.5 +0.5**
AKCD Akcadag 42.85 98 *iP* **P 15 54 01.2 +2.5**
TBLG Delisi 43.04 89 *eP* **P 15 54 04.8 +4.6**
TBLG Delisi 43.04 89 P **P 15 54 04.9 +4.7**
LZLA Zalla 43.08 127 *eP* **P 15 54 02.5 +1.8**
SNR=25
MTA Mtatsminda 43.10 89 P **P 15 54 04.2 +3.5**
TIXI Tiksi 43.10 13 *eP* **P 15 54 02.4 +2.0**
TIXI *e* 15 55 44.2
TIXI *eS* **S 16 00 33.7 +7.9**
TIXI *eSS* SS 16 03 54.2 +17
TIXI pmax pmax
comp=Z,264nm,1.8s,mb5.7
TIXI pmax pmax
comp=N,105nm,1.7s
TIXI pmax pmax
comp=E,30nm,2.2s
TIXI pmax pmax
comp=Z,716nm,7.6s
TIXI smax
comp=E,4µm,14.2s
TIXI smax
comp=N,3µm,15.7s
TIXI MLR MLR
comp=Z,8µm,17.0s,MS5.7
TIXI Tiksi 43.10 13 *eP* **P 15 54 03.1 +2.8**
comp=Z,513nm,1.9s,mb5.9
TIXI LR LR
comp=Z,10µm,22.0s,MS5.7
ELZG Elazig 43.15 97 *iP* **P 15 54 04.2 +3.1**
HOMI Horasan 43.16 93 *iP* **P 15 54 04.9 +3.7**
MAK Makhachkala 43.27 85 *eP* **P 15 54 04.2 +2.1**
MAK *e* 15 55 50.0
MAK *e*PPP 15 56 21.5
MAK *eS* **S 16 00 34.0 +5.1**
MAK *e*SS SS 16 03 44.2 +2.5
MAK *e* 16 04 06.9
MAK *e*SSS 16 04 24.4
MAK pmax pmax
comp=Z,444nm,1.8s,mb5.9
MAK pmax pmax
comp=N,375nm,1.6s
MAK pmax pmax
comp=E,434nm,1.9s
MAK pmax pmax
comp=Z,948nm,1.9s,mb6.2
MAK smax
comp=E,14µm,10.4s
MAK smax
comp=N,7µm,10.8s
MAK MLR MLR
comp=Z,37µm,12.0s,MS6.5
MAK MLR MLR
comp=N,64µm,12.0s
DGRG David-gareji 43.55 88 P **P 15 54 06.9 +2.6**
JFWS Jewell Farm 43.65 275 P **P 15 54 04.5 -0.6**
JFWS pmax pmax
comp=Z,61nm,0.8s,mb5.4
JFWS MLR MLR
comp=Z,33µm,19.0s,MS6.3
JFWS Jewell Farm 43.65 275 P **P 15 54 04.5 -0.6**
comp=Z,62nm,0.8s,mb5.4
JFWS LR LR
comp=Z,33µm,19.0s,MS6.3
JFWS Jewell Farm 43.65 275 P **P 15 54 04.5 -0.6**
comp=Z,62nm,0.8s,mb5.4
ABKAR Akbulak array 43.66 70 *eP* **P 15 54 04.9 -0.2**
comp=Z,14nm,2.1s,mb4.3
ABKAR Akbulak array 43.66 70 *eP* **P 15 54 04.9 -0.2**
comp=Z,14nm,2.1s,mb4.3
CSS Prodhromos 43.67 105 *eP* **P 15 54 03.4 -2.0**
comp=Z,1µm,2.3s,mb6.2
CSS LR LR
comp=Z,28µm,20.0s,MS6.2
CSS Prodhromos 43.67 105 *eP* **P 15 54 03.4 -2.0**
comp=Z,1µm,2.3s,mb6.2
KUZU Kuzuini 43.75 100 *iP* **P 15 54 07.3 +1.3**
LUJL Ujela 43.93 122 *eP* **P 15 54 09.2 +1.6**
SNR=24
BLA Blacksburg 43.98 262 *eP* **P 15 54 07.9 0.0**
BLA pmax pmax
comp=Z,99nm,1.3s,mb5.4
BLA MLR MLR
comp=Z,51µm,19.0s,MS6.5
BLA Blacksburg 43.98 262 *eP* **P 15 54 07.9 +0.1**
comp=Z,99nm,1.3s,mb5.4
BLA LR LR
comp=Z,51µm,19.0s,MS6.5
BLA Blacksburg 43.98 262 *eP* **P 15 54 07.9 0.0**
comp=Z,99nm,1.3s,mb5.4
ELN Prospectdale 44.11 262 *eP* **P 15 54 09.4 +0.5**
ELN Prospectdale 44.11 262 *eP* **P 15 54 09.4 +0.5**
COLD Coldfoot 44.12 334 *eP* **P 15 54 07.8 -0.8**
comp=Z,61nm,1.2s,mb5.2
COLD Coldfoot 44.12 334 *eP* **P 15 54 07.8 -0.8**
comp=Z,61nm,1.2s,mb5.2
EGAK Eagle 44.30 328 *eP* **P 15 54 08.1 -2.0**
comp=Z,382nm,1.8s,mb5.8
EGAK LR LR
comp=Z,40µm,19.0s,MS6.3
EGAK Eagle 44.30 328 *eP* **P 15 54 08.1 -2.0**
comp=Z,382nm,1.8s,mb5.8
GNI Garni 44.33 90 *eP* **P 15 54 12.1 +1.5**
GNI pmax pmax
comp=Z,806nm,1.9s
GNI MLR MLR
comp=Z,27µm,20.0s

GNI Garni 44.33 90 *e*P **P 15 54 12.1 +1.5**
comp=Z,806nm,1.9s,mb6.1
GNI LR LR
comp=Z,27µm,20.0s,MS6.2
GNI Garni 44.33 90 P **P 15 54 16.0 +5.4**
SNR=36
GNI P 15 54 16.0
SNR=36
GNI Garni 44.33 90 P **P 15 54 11.6 +1.0**
SNR=13
LUMB Murzuk 44.34 131 *e*P **P 15 54 11.2 +0.4**
SNR=24
DAWY Dawson 44.48 326 *e*P **P 15 54 10.8 -0.7**
DAWY *e*PP PP 15 55 54.0 -0.8
DAWY Dawson 44.48 326 *e*P **P 15 54 10.8 -0.7**
TAM Tamanrasset 44.75 144 *e*P **P 15 54 14.8 +0.7**
TAM pmax pmax
comp=Z,521nm,1.7s,mb6.1
TAM MLR MLR
comp=Z,22µm,19.0s,MS6.1
TAM Tamanrasset 44.75 144 *e*P **P 15 54 14.8 +0.7**
comp=Z,522nm,1.7s,mb6.1
TAM LR LR
comp=Z,22µm,19.0s,MS6.1
TAM Tamanrasset 44.75 144 *e*P **P 15 54 14.8 +0.7**
comp=Z,522nm,1.7s,mb6.1
BRVK Borovoye 44.81 59 P **P 15 54 15.0 +0.7**
comp=Z,215nm,2.1s,mb5.6,SNR=23
BRVK Borovoye 44.81 59*c*e**P P 15 54 15.0 +0.7**
BRVK pmax pmax
comp=Z,60nm,1.7s,mb5.2
BRVK MLR MLR
comp=Z,46µm,18.0s,MS6.5
BRVK Borovoye 44.81 59 *e*P **P 15 54 15.3 +1.0**
comp=Z,270nm,1.9s,mb5.8
BRVK LR LR
comp=Z,28µm,20.0s,MS6.2
BRVK Borovoye 44.81 59 P **P 15 54 15.8 +1.5**
SNR=46
BRVK P 15 54 15.8
SNR=46
BRVK Borovoye 44.81 59 *e*P **P 15 54 15.3 +1.0**
comp=Z,270nm,1.9s,mb5.8
BVAR Borovoye Array 44.87 59 P **P 15 54 14.7 -0.1**
comp=Z,20nm,0.9s,mb4.9,baz=298,slow=6.1,SNR=53
BVAR LR LR 16 12 44.3
comp=Z,32µm,19.7s,MS6.3,baz=196,slow=36
BVAR Borovoye Array 44.87 59 P **P 15 54 14.7 -0.1**
BLO Bloomington 45.04 269 *e*P **P 15 54 15.4 -0.9**
BLO pmax pmax
comp=Z,94nm,1.0s,mb5.6
BLO Bloomington 45.04 269 *e*P **P 15 54 15.4 -0.9**
comp=Z,94nm,1.0s,mb5.6
BLO Bloomington 45.04 269 *e*P **P 15 54 15.4 -0.9**
comp=Z,94nm,1.0s,mb5.6
EDM Edmonton 45.09 302 *e*P **P 15 54 15.9 -0.6**
EDM Edmonton 45.09 302 *e*P **P 15 54 15.9 -0.6**
HDIL Hopedale 45.13 273 *e*P **P 15 54 16.2 -0.8**
comp=Z,162nm,1.0s,mb5.8
HDIL LR LR
comp=Z,14µm,19.0s,MS5.9
HDIL Hopedale 45.13 273 *e*P **P 15 54 16.2 -0.8**
comp=Z,162nm,1.0s,mb5.8
DGMT Dagmar 45.21 291 ⇑P **P 15 54 18.2 +0.7**
baz=45,SNR=27
DGMT ⇓S **S 16 01 05.3 +8.2**
baz=45
DGMT Dagmar 45.21 291 *e*P **P 15 54 17.6 0.0**
comp=Z,781nm,1.7s,mb6.3
DGMT LR LR
comp=Z,26µm,20.0s,MS6.2
DGMT Dagmar 45.21 291 *e*P **P 15 54 17.6 0.0**
comp=Z,781nm,1.7s,mb6.3
HWQ Hawqa 45.37 103 *e*P **P 15 54 19.0 0.0**
BHL Bhannes 45.57 103 *e*P **P 15 54 19.4 -1.1**
COLA College 45.71 331 *e*P **P 15 54 20.5 -0.8**
COLA pmax pmax
comp=Z,117nm,1.2s,mb5.7
COLA MLR MLR
comp=Z,44µm,21.0s,MS6.4
COLA College 45.71 331 *e*P **P 15 54 20.5 -0.8**
comp=Z,117nm,1.2s,mb5.7
COLA LR LR
comp=Z,44µm,21.0s,MS6.4
COLA College 45.71 331 *e*P **P 15 54 20.5 -0.8**
comp=Z,117nm,1.2s,mb5.7
WCI Wyandotte Cave 45.72 268 *e*P **P 15 54 21.0 -0.7**
WCI pmax pmax
comp=Z,102nm,0.9s,mb5.8
WCI MLR MLR
comp=Z,9µm,21.0s,MS5.7
WCI Wyandotte Cave 45.72 268 *e*P **P 15 54 21.0 -0.6**
comp=Z,102nm,0.9s,mb5.8
WCI LR LR
comp=Z,9µm,21.0s,MS5.7
WCI Wyandotte Cave 45.72 268 *e*P **P 15 54 21.0 -0.7**
comp=Z,102nm,0.9s,mb5.8
SCIA State Center 45.76 277 *e*P **P 15 54 21.4 -0.6**
comp=Z,84nm,0.8s,mb5.7
SCIA LR LR
comp=Z,26µm,19.0s,MS6.2
SCIA State Center 45.76 277 *e*P **P 15 54 21.4 -0.6**
comp=Z,84nm,0.8s,mb5.7
ECSD EROS Data Cent 45.77 281 *e*P **P 15 54 21.4 -0.6**
comp=Z,199nm,1.5s,mb5.8
ECSD LR LR
comp=Z,24µm,19.0s,MS6.2
ECSD EROS Data Cent 45.77 281 *e*P **P 15 54 21.4 -0.6**
comp=Z,199nm,1.5s,mb5.8
TZTN Tazewell 45.91 264 *e*P **P 15 54 23.0 -0.2**
comp=Z,183nm,1.5s,mb5.8
TZTN Tazewell 45.91 264 *e*P **P 15 54 23.0 -0.2**
comp=Z,183nm,1.5s,mb5.8
RCY Rachaya 46.00 104 *e*P **P 15 54 24.6 +0.7**
HAKT HAKKARI 46.01 93 *i*P **P 15 54 25.6 +1.6**
OLIL Olney 46.10 270 *e*P **P 15 54 24.6 -0.1**
comp=Z,131nm,1.1s,mb5.8
OLIL Olney 46.10 270 *e*P **P 15 54 24.6 -0.1**
comp=Z,131nm,1.1s,mb5.8
MMAI Mount Meron Ar 46.22 104 P **P 15 54 25.1 -0.6**
comp=Z,18nm,0.9s,mb5.0,baz=1.6,slow=5.8,SNR=20
MENT Mentasta 46.47 328 P **P 15 54 27.1 -0.1**
MENT Mentasta 46.47 328 P **P 15 54 27.1 -0.2**
USIN University of 46.54 269 *e*P **P 15 54 27.6 -0.6**
comp=Z,253nm,1.0s,mb6.1
USIN University of 46.54 269 *e*P **P 15 54 27.6 -0.6**
comp=Z,253nm,1.0s,mb6.1
DLBC Dease Lake 46.58 317 *e*P **P 15 54 28.1 -0.1**
DLBC Dease Lake 46.58 317 *e*P **P 15 54 28.0 -0.2**
TKL Tuckaleechee C 46.75 264 *e*P **P 15 54 30.2 +0.3**
TKL Tuckaleechee C 46.75 264 *e*P **P 15 54 30.2 +0.3**
JSC Jenkinsville 46.82 260 *e*P **P 15 54 31.4 +1.0**
JSC Jenkinsville 46.82 260 *e*P **P 15 54 31.4 +1.0**
PAX Paxson 46.84 329 *e*P **P 15 54 29.8 -0.4**
PAX pmax pmax
comp=Z,242nm,1.6s,mb5.9
PAX Paxson 46.84 329 *e*P **P 15 54 29.8 -0.5**
comp=Z,242nm,1.6s,mb5.9
PAX Paxson 46.84 329 *e*P **P 15 54 29.8 -0.4**
comp=Z,242nm,1.6s,mb5.9
MCK McKinley 46.94 331 *e*P **P 15 54 30.0 -1.0**
MCK pmax pmax
comp=Z,295nm,1.7s,mb5.9
MCK McKinley 46.94 331 *e*P **P 15 54 30.0 -0.9**
comp=Z,293nm,1.7s,mb5.9
MCK McKinley 46.94 331 *e*P **P 15 54 30.0 -1.0**
comp=Z,293nm,1.7s,mb5.9
BPAW Bear Paw Mtn. 47.04 333 *e*P **P 15 54 30.8 -0.9**
comp=Z,116nm,1.4s,mb5.6
BPAW Bear Paw Mtn. 47.04 333 *e*P **P 15 54 30.8 -0.9**
comp=Z,116nm,1.4s,mb5.6
SLM Saint Louis 47.12 272 *e*P **P 15 54 32.1 -0.6**
SLM pmax pmax
comp=Z,225nm,1.0s,mb6.0
SLM Saint Louis 47.12 272 *e*P **P 15 54 32.1 -0.6**
comp=Z,225nm,1.0s,mb6.0
SLM Saint Louis 47.12 272 *e*P **P 15 54 32.1 -0.6**
comp=Z,225nm,1.0s,mb6.0
A18A Metzger Ranch, 47.14 296 ⇓P **P 15 54 32.8 +0.1**
baz=47,SNR=143
A18A ⇑S **S 16 01 32.5 +7.8**
baz=47
CPCT Cooper Cave 47.26 264 *e*P **P 15 54 34.6 +0.8**
CPCT Cooper Cave 47.26 264 *e*P **P 15 54 34.6 +0.8**
SKAG Skagway 47.27 321 *e*P **P 15 54 33.6 0.0**
comp=Z,287nm,1.6s,mb6.0
SKAG Skagway 47.27 321 *e*P **P 15 54 33.6 0.0**
comp=Z,287nm,1.6s,mb6.0
COW Cow Castle Cre 47.34 259 *e*P **P 15 54 35.4 +1.0**
COW Cow Castle Cre 47.34 259 *e*P **P 15 54 35.4 +1.0**
NHSC New Hope 47.35 259 *e*P **P 15 54 34.7 +0.2**
comp=Z,541nm,1.0s,mb6.4
NHSC LR LR
comp=Z,17µm,20.0s,MS6.0
NHSC New Hope 47.35 259 *e*P **P 15 54 34.7 +0.2**
comp=Z,541nm,1.0s,mb6.4
SIUC Sothern Illin 47.44 270 *e*P **P 15 54 35.0 -0.2**
comp=Z,160nm,1.2s,mb5.8
SIUC Southern Illin 47.44 270 *e*P **P 15 54 35.0 -0.2**
comp=Z,160nm,1.2s,mb5.8
A17A Triple J Farms 47.46 297 ⇓P **P 15 54 35.0 -0.2**
baz=47,SNR=106
A17A ⇑S **S 16 01 35.7 +6.5**
baz=47
LAO LASA Array 47.46 291 *e*P **P 15 54 35.6 +0.4**
comp=Z,1µm,1.8s,mb6.5
LAO LR LR
comp=Z,24µm,20.0s,MS6.2
LAO LASA Array 47.46 291 *e*P **P 15 54 35.6 +0.3**
comp=Z,1µm,1.8s,mb6.5
TRF Thorofare Moun 47.47 332 *e*P **P 15 54 34.2 -0.9**
comp=Z,419nm,2.1s,mb6.0
TRF Thorofare Moun 47.47 332 *e*P **P 15 54 34.2 -0.9**
comp=Z,419nm,2.1s,mb6.0
CHUM Lake Minchumin 47.50 333 *e*P **P 15 54 34.5 -0.8**
comp=Z,79nm,1.2s,mb5.6
CHUM Lake Minchumin 47.50 333 *e*P **P 15 54 34.5 -0.8**
comp=Z,79nm,1.2s,mb5.6
KTH Kantishna Hill 47.51 332 *e*P **P 15 54 33.9 -1.6**
KTH Kantishna Hill 47.51 332 *e*P **P 15 54 33.9 -1.5**
B18A Beardsley Farm 47.53 295 ⇑P **P 15 54 35.9 +0.1**
baz=47,SNR=100
B18A ⇑S **S 16 01 37.0 +6.7**
baz=47
FVM French Village 47.74 272 *e*P **P 15 54 36.7 -0.9**
FVM pmax pmax
comp=Z,151nm,0.9s,mb6.0
FVM French Village 47.74 272 *e*P **P 15 54 36.7 -0.8**
comp=Z,151nm,0.9s,mb6.0
FVM French Village 47.74 272 *e*P **P 15 54 36.7 -0.9**
comp=Z,151nm,0.9s,mb6.0
A16A West Butte Ran 47.81 297 ⇑P **P 15 54 37.2 -0.7**
baz=48,SNR=37
EGMT Eagleton 47.82 295 ⇑P **P 15 54 38.5 +0.5**
baz=48,SNR=199
EGMT Eagleton 47.82 295 *e*P **P 15 54 38.3 +0.3**
comp=Z,1µm,1.4s,mb6.7
EGMT LR LR
comp=Z,64µm,20.0s,MS6.6
EGMT Eagleton 47.82 295 *e*P **P 15 54 38.3 +0.3**
comp=Z,1µm,1.4s,mb6.7
NVS Novosibirsk 47.99 49⇑*i*P **P 15 54 39.9 +0.6**
NVS *e* 15 56 35.4
NVS *e*S **S 16 01 32.8 -3.9**
NVS pmax pmax
comp=Z,386nm,1.8s,mb6.1
NVS pmax pmax
comp=N,137nm,1.7s
NVS pmax pmax
comp=E,233nm,2.4s
NVS pmax pmax
comp=Z,250nm,2.3s,mb5.8
NVS pmax pmax
comp=N,230nm,2.7s
NVS pmax pmax
comp=E,120nm,2.7s
NVS smax
comp=N,197nm,2.5s
NVS smax
comp=E,99nm,2.5s
B17A L&G Farms, Che 48.02 296 ⇓P **P 15 54 39.9 +0.3**
baz=48,SNR=141
CCM Cathedral Cave 48.05 272 *e*P **P 15 54 38.5 -1.4**
CCM pmax pmax
comp=Z,24nm,0.6s,mb5.4
CCM MLR MLR
comp=Z,14µm,19.0s,MS6.0
CCM Cathedral Cave 48.05 272 *e*P **P 15 54 38.5 -1.4**
comp=Z,24nm,0.6s,mb5.4
CCM LR LR
comp=Z,14µm,19.0s,MS6.0
CCM Cathedral Cave 48.05 272 *e*P **P 15 54 38.5 -1.4**
comp=Z,24nm,0.6s,mb5.4
SWET Sewanee 48.07 266 *e*P **P 15 54 39.3 -0.8**
comp=Z,99nm,1.1s,mb5.8
SWET Sewanee 48.07 266 *e*P **P 15 54 39.3 -0.8**
comp=Z,99nm,1.1s,mb5.8
WVT Waverly 48.14 268 *e*P **P 15 54 39.0 -1.7**
WVT pmax pmax
comp=Z,51nm,1.1s,mb5.5
WVT MLR MLR
comp=Z,19µm,19.0s,MS6.1
WVT Waverly 48.14 268 *e*P **P 15 54 39.0 -1.7**
comp=Z,51nm,1.1s,mb5.5
WVT LR LR
comp=Z,19µm,19.0s,MS6.1
WVT Waverly 48.14 268 *e*P **P 15 54 39.0 -1.7**
comp=Z,51nm,1.1s,mb5.5
BILL Bilibino 48.19 356⇑*i*P **P 15 54 40.9 +0.3**
BILL *e* 15 56 31.0
BILL *i*S **S 16 01 45.1 +6.0**
BILL pmax pmax
comp=Z,182nm,1.6s,mb5.9
BILL MLR MLR
comp=Z,20µm,18.0s,MS6.1
BILL Bilibino 48.19 356 *e*P **P 15 54 40.6 0.0**
comp=Z,342nm,1.7s,mb6.1
BILL LR LR
comp=Z,22µm,19.0s,MS6.2
BILL Bilibino 48.19 356 *e*P **P 15 54 40.6 0.0**
comp=Z,342nm,1.7s,mb6.1
PNL Peninsula 48.20 323 *e*P **P 15 54 39.9 -0.9**
comp=Z,193nm,1.7s,mb5.9
PNL Peninsula 48.20 323 *e*P **P 15 54 39.9 -0.9**
comp=Z,193nm,1.7s,mb5.9
A15A Johnson Ranch, 48.23 298 ⇓P **P 15 54 40.7 -0.4**
baz=48,SNR=130
B16A M & M Farms, S 48.28 297 ⇑P **P 15 54 41.5 -0.1**
baz=48,SNR=198
PPLA Purkeypile 48.36 333 *e*P **P 15 54 40.5 -1.5**
comp=Z,151nm,1.4s,mb5.8
PPLA Purkeypile 48.36 333 *e*P **P 15 54 40.5 -1.5**
comp=Z,151nm,1.4s,mb5.8
UTMT University of 48.42 269 P **P 15 54 42.8 0.0**
comp=Z,403nm,1.0s,mb6.4
UTMT University of 48.42 269 P **P 15 54 42.8 0.0**
comp=Z,403nm,1.0s,mb6.4
A14A Double T Ranch 48.50 298 ⇓P **P 15 54 42.9 -0.3**
baz=48,SNR=68
D18A Linhart Farms, 48.51 294 ⇓P **P 15 54 43.7 +0.3**
baz=48,SNR=59
GOGA Godfrey 48.52 262 *e*P **P 15 54 43.7 +0.1**
GOGA pmax pmax
comp=Z,122nm,1.3s,mb5.8
GOGA MLR MLR
comp=Z,27µm,20.0s,MS6.2
GOGA Godfrey 48.52 262 *e*P **P 15 54 43.7 +0.1**
comp=Z,122nm,1.3s,mb5.8
GOGA LR LR
comp=Z,27µm,20.0s,MS6.2
GOGA Godfrey 48.52 262 *e*P **P 15 54 43.7 +0.1**
comp=Z,122nm,1.3s,mb5.8
DIV Divide 48.52 328 *e*P **P 15 54 42.3 -1.0**
comp=Z,45nm,1.0s,mb5.5
DIV Divide 48.52 328 *e*P **P 15 54 42.3 -1.0**
comp=Z,45nm,1.0s,mb5.5
C17A Wharram Farm, 48.54 296 ⇑P **P 15 54 43.7 +0.1**
baz=48,SNR=124
PARMO Parma 48.55 270 *e*P **P 15 54 43.0 -0.8**
PARMO Parma 48.55 270 *e*P **P 15 54 43.0 -0.8**
TNA Tin City 48.55 342 *e*P **P 15 54 43.4 0.0**
comp=Z,321nm,1.4s,mb6.2
TNA Tin City 48.55 342 *e*P **P 15 54 43.3 -0.1**
comp=Z,321nm,1.4s,mb6.2
WALA Waterton Lakes 48.62 299 *e*P **P 15 54 43.5 -0.7**
comp=Z,17nm,1.7s,mb4.8
WALA Waterton Lakes 48.62 299 *e*P **P 15 54 43.5 -0.7**
comp=Z,17nm,1.7s,mb4.8
RSSD Black Hills 48.63 288 *e*P **P 15 54 44.1 -0.2**
RSSD pmax pmax
comp=Z,44nm,0.8s,mb5.5
RSSD MLR MLR
comp=Z,30µm,20.0s,MS6.3
RSSD Black Hills 48.63 288 *e*P **P 15 54 44.1 -0.2**
comp=Z,44nm,0.8s,mb5.5
RSSD LR LR
comp=Z,30µm,20.0s,MS6.3
RSSD Black Hills 48.63 288 *e*P **P 15 54 44.1 -0.2**
comp=Z,44nm,0.8s,mb5.5
GLAT Glass 48.67 269 *e*P **P 15 54 44.5 -0.2**
GLAT Glass 48.67 269 *e*P **P 15 54 44.5 -0.2**
B15A Bradely Ranch, 48.70 297 ⇑P **P 15 54 44.2 -0.6**
baz=48,SNR=101
C16A Fuhringer Ranc 48.80 296 ⇑P **P 15 54 45.2 -0.3**
baz=48,SNR=145
PMR Palmer 48.88 330 *e*P **P 15 54 46.2 +0.2**
PMR pmax pmax
comp=Z,124nm,1.5s,mb5.7
PMR Palmer 48.88 330 *e*P **P 15 54 46.2 +0.2**
comp=Z,124nm,1.5s,mb5.7
PMR Palmer 48.88 330 *e*P **P 15 54 46.2 +0.2**
comp=Z,124nm,1.5s,mb5.7
D17A Six Diamond Ra 48.90 295 ⇓P **P 15 54 46.6 +0.3**
baz=49,SNR=121
A13A Flathead Natio 48.92 299 ⇓P **P 15 54 45.8 -0.6**
baz=49,SNR=5.1
B14A Marquette Ranc 48.94 298 ⇓P **P 15 54 46.0 -0.6**
baz=49,SNR=16
HALT Halls 48.99 269 *e*P **P 15 54 45.8 -1.4**
HALT Halls 48.99 269 *e*P **P 15 54 45.8 -1.4**
E18A Harlowton 49.06 294 ⇑P **P 15 54 48.1 +0.5**
baz=49,SNR=192
TTA Tatalina 49.08 335 *e*P **P 15 54 46.9 -0.6**
TTA Tatalina 49.08 335 *e*P **P 15 54 46.9 -0.6**
LKFR Kufra 49.13 123 *e*P **P 15 54 49.2 +0.8**
SNR=23
C15A Salmond Ranch, 49.16 297 ⇑P **P 15 54 47.8 -0.5**
baz=49,SNR=75
PLAL Pickwick Lake 49.21 267 *e*P **P 15 54 46.7 -2.2**
comp=Z,126nm,1.1s,mb5.9
PLAL LR LR
comp=Z,33µm,19.0s,MS6.3
PLAL Pickwick Lake 49.21 267 *e*P **P 15 54 46.7 -2.2**
comp=Z,126nm,1.1s,mb5.9
GNAR Gosnell 49.25 270 *e*P **P 15 54 48.7 -0.5**
comp=Z,4µm,1.1s,mb7.3
GNAR Gosnell 49.25 270 *e*P **P 15 54 48.7 -0.4**
comp=Z,4µm,1.1s,mb7.3
ZAA0 Zalesovo Array 49.26 49 *e*P **P 15 54 47.9 -1.1**
ZAA0 Zalesovo Array 49.26 49 *e*P **P 15 54 47.9 -1.1**
ZALV Zalesovo Beam 49.26 49 P **P 15 54 48.1 -0.8**
comp=Z,11nm,1.0s,mb4.9,baz=331,slow=7.5,SNR=23
ZALV LR LR 16 17 21.8
comp=Z,14µm,18.5s,MS6.0,baz=324,slow=38
SIT Sitka 49.30 319 *e*P **P 15 54 49.3 0.0**
SIT pmax pmax
comp=Z,170nm,1.5s,mb5.8
SIT Sitka 49.30 319 *e*P **P 15 54 49.3 0.0**
comp=Z,170nm,1.5s,mb5.9
SIT Sitka 49.30 319 *e*P **P 15 54 49.3 0.0**
comp=Z,170nm,1.5s,mb5.9
D16A Dana Ranch, Ca 49.34 296 ⇓P **P 15 54 49.9 +0.1**
baz=49,SNR=16
A12A Yaak River Ran 49.39 300 ⇓P **P 15 54 49.4 -0.7**
baz=49
B13A Whitefish 49.39 299 ⇓P **P 15 54 49.7 -0.4**
baz=49,SNR=43
RC01 Rabbit Creek A 49.46 330 *e*P **P 15 54 50.0 -0.4**
RC01 Rabbit Creek A 49.46 330 *e*P **P 15 54 50.0 -0.5**
F18A Big Timber 49.52 293 ⇑P **P 15 54 51.3 +0.2**
baz=49,SNR=173
E17A Martinsdale 49.53 295 ⇓P **P 15 54 51.3 +0.2**
baz=49,SNR=118
KSU1 Kansas State U 49.54 278 *e*P **P 15 54 49.4 -1.9**
comp=Z,133nm,1.1s,mb5.9
KSU1 LR LR
comp=Z,24µm,22.0s,MS6.2
KSU1 Kansas State U 49.54 278 *e*P **P 15 54 49.4 -2.0**
comp=Z,133nm,1.1s,mb5.9
GCMT Greycliff 49.59 293 *e*P **P 15 54 51.8 +0.1**
comp=Z,160nm,1.5s,mb5.8
GCMT Greycliff 49.59 293 *e*P **P 15 54 51.8 +0.1**
comp=Z,160nm,1.5s,mb5.8
C14A Swan Lake 49.61 298 ⇓P **P 15 54 51.1 -0.7**
baz=49,SNR=28
YBMT Yellow Bay 49.63 298 *e*P **P 15 54 51.3 -0.7**
comp=Z,123nm,1.5s,mb5.7
YBMT Yellow Bay 49.63 298 *e*P **P 15 54 51.3 -0.6**
comp=Z,123nm,1.5s,mb5.7
A11A Hall Mountain, 49.65 301 ⇓P **P 15 54 52.0 0.0**
baz=49,SNR=69
HRY Holter Researc 49.72 296 *e*P **P 15 54 52.6 +0.1**
comp=Z,618nm,1.4s,mb6.4
HRY Holter Researc 49.72 296 *e*P **P 15 54 52.7 +0.1**
comp=Z,618nm,1.4s,mb6.4
D15A Lincoln 49.72 296 ⇓P **P 15 54 52.0 -0.6**
baz=50,SNR=37
B12A Libby 49.75 300 ⇑P **P 15 54 52.3 -0.5**
baz=50
KURK Kurchatov 49.77 55 P **P 15 54 53.5 +0.5**
comp=Z,335nm,1.1s,mb6.3,SNR=12
KURK Kurchatov 49.77 55*c*e**P P 15 54 52.9 -0.1**
KURK pmax pmax
comp=Z,69nm,1.2s,mb5.6
KURK MLR MLR
comp=Z,38µm,19.0s,MS6.4
KURK Kurchatov 49.77 55 *e*P **P 15 54 53.4 +0.4**
comp=Z,75nm,1.1s,mb5.6
KURK LR LR
comp=Z,39µm,20.0s,MS6.4
KURK Kurchatov 49.77 55 P **P 15 54 54.0 +1.0**
SNR=39
KURK P 15 54 54.0
SNR=39
KURK Kurchatov 49.77 55 *e*P **P 15 54 53.4 +0.4**
comp=Z,75nm,1.1s,mb5.6
E16A East Helena 49.80 295 ⇓P **P 15 54 53.4 +0.2**
baz=50,SNR=250
JTMT Jette 49.83 298 *e*P **P 15 54 52.8 -0.7**
comp=Z,99nm,1.6s,mb5.6
JTMT Jette 49.83 298 *e*P **P 15 54 52.8 -0.7**
comp=Z,99nm,1.6s,mb5.6
HBAR Harrisburg 49.87 270 *e*P **P 15 54 54.2 +0.3**
HBAR Harrisburg 49.87 270 *e*P **P 15 54 54.2 +0.3**
F17A Fitzpatrick Pl 49.90 294 ⇑P **P 15 54 54.5 +0.5**
baz=50,SNR=82
BHD Baghdad 49.90 95 *e*P **P 15 54 55.0 +0.8**
BHD *e*PP PP 15 56 54.0 +5.3
BHD *e*PPP 15 57 48.0
BHD *e*S **S 16 02 07.0 +3.0**
SWMT Swartz Lake 49.92 298 *e*P **P 15 54 53.1 -1.0**
comp=Z,89nm,1.5s,mb5.6
SWMT Swartz Lake 49.92 298 *e*P **P 15 54 53.1 -1.0**
comp=Z,89nm,1.5s,mb5.6
SLMT Seeley Lake 49.94 297 *e*P **P 15 54 53.4 -0.8**
comp=Z,59nm,0.6s,mb5.8
SLMT Seeley Lake 49.94 297 *e*P **P 15 54 53.4 -0.9**
comp=Z,59nm,0.6s,mb5.8
G18A Lazy EL Ranch, 49.94 293 ⇑P **P 15 54 54.2 -0.2**
baz=50,SNR=38
BSMT Bassoo Peak 49.95 299 *e*P **P 15 54 54.3 0.0**
comp=Z,390nm,1.7s,mb6.2
BSMT Bassoo Peak 49.95 299 *e*P **P 15 54 54.3 0.0**
comp=Z,390nm,1.7s,mb6.2
CRAG Craig 49.99 316 *e*P **P 15 54 55.4 +0.8**
comp=Z,272nm,1.7s,mb6.0
CRAG Craig 49.99 316 *e*P **P 15 54 55.4 +0.8**
comp=Z,272nm,1.7s,mb6.0
C13A Hot Springs 50.00 298 ⇑P **P 15 54 54.8 +0.1**
baz=50,SNR=82
B11A Sandpoint 50.07 300 ⇓P **P 15 54 54.5 -0.8**
baz=50,SNR=25
D14A Greenough 50.08 297 ⇑P **P 15 54 54.5 -0.8**
baz=50,SNR=41
A10A Northport 50.08 301 ⇑P **P 15 54 54.9 -0.4**
baz=50
CHMT Chamberlain Mo 50.11 297 P **P 15 54 53.9 -1.7**
comp=Z,117nm,1.9s,mb5.6
CHMT Chamberlain Mo 50.11 297 P **P 15 54 53.9 -1.7**
comp=Z,117nm,1.9s,mb5.6
MID Middleton Isla 50.16 327 P **P 15 54 55.9 +0.1**
MID pmax pmax
comp=Z,383nm,1.8s,mb6.1
MID Middleton Isla 50.16 327 P **P 15 54 55.9 +0.2**
comp=Z,383nm,1.8s,mb6.1
MID Middleton Isla 50.16 327 P **P 15 54 55.9 +0.1**
comp=Z,383nm,1.8s,mb6.1
E15A Deer Lodge 50.27 296 ⇑P **P 15 54 56.4 -0.4**
baz=50,SNR=41
SEW Seward 50.28 329 *e*P **P 15 54 56.0 -0.7**
comp=Z,100nm,1.5s,mb5.6
SEW Seward 50.28 329 *e*P **P 15 54 56.0 -0.7**

comp=Z,100nm,1.5s,mb5.6
C12B Naegeli Ranch, 50.33 299 ⇑P P 15 54 57.2 0.0
baz=50,SNR=15
OGNE Ogallala 50.37 284 eP P 15 54 57.5 -0.2
comp=Z,256nm,1.5s,mb6.0
OGNE LR LR
comp=Z,24µm,19.0s,MS6.2
OGNE Ogallala 50.37 284 eP P 15 54 57.5 -0.1
comp=Z,256nm,1.5s,mb6.0
LRAL Lakeview Retre 50.39 265 eP P 15 54 57.3 -0.5
comp=Z,108nm,1.0s,mb5.8
LRAL LR LR
comp=Z,27µm,20.0s,MS6.3
LRAL Lakeview Retre 50.39 265 eP P 15 54 57.3 -0.5
comp=Z,108nm,1.0s,mb5.8
F16A Kennard Place, 50.39 295 ⇓P P 15 54 57.7 0.0
baz=50,SNR=31
G17A Pierce Place, 50.41 294 ⇓P P 15 54 58.3 +0.4
baz=50,SNR=18
D13A Huson 50.44 298 ⇓P P 15 54 57.9 -0.1
baz=50,SNR=18
NEW Newport 50.50 301 eP P 15 54 57.9 -0.6
NEW pmax pmax
comp=Z,88nm,1.6s
NEW MLR MLR
comp=Z,45µm,21.0s
NEW Newport 50.50 301 eP P 15 54 57.9 -0.6
comp=Z,88nm,1.6s,mb5.4
NEW LR LR
comp=Z,45µm,21.0s,MS6.5
NEW Newport 50.50 301 eP P 15 54 57.9 -0.6
comp=Z,88nm,1.6s,mb5.4
BOZ Bozeman (W) 50.51 295 ⇓P P 15 54 59.3 +0.7
baz=50,SNR=245
BOZ Bozeman (W) 50.51 295 eP P 15 54 59.1 +0.5
BOZ pmax pmax
comp=Z,478nm,1.5s,mb6.2
BOZ MLR MLR
comp=Z,52µm,21.0s,MS6.5
BOZ Bozeman (W) 50.51 295 eP P 15 54 59.1 +0.5
comp=Z,478nm,1.5s,mb6.2
BOZ LR LR
comp=Z,52µm,21.0s,MS6.5
BOZ Bozeman (W) 50.51 295 eP P 15 54 59.1 +0.5
comp=Z,478nm,1.5s,mb6.2
B10A Chitwood Farm, 50.51 301 ⇓P P 15 54 58.0 -0.6
baz=50
PNT Penticton 50.57 303 P P 15 54 59.0 0.0
PNT Penticton 50.57 303 P P 15 54 59.0 0.0
E14A Clinton 50.62 297 ⇓P P 15 54 59.0 -0.4
baz=50,SNR=26
SVW2 Sparrevohn 50.68 333 eP P 15 54 58.3 -1.3
SVW2 Sparrevohn 50.68 333 eP P 15 54 58.3 -1.4
RSO Redoubt South 50.68 331 eP P 15 54 58.4 -1.3
comp=Z,77nm,0.9s,mb5.6
RSO Redoubt South 50.68 331 eP P 15 54 58.4 -1.3
comp=Z,77nm,0.9s,mb5.6
LRM Limekiln Ridge 50.69 295 eP P 15 54 59.9 0.0
comp=Z,1µm,1.5s,mb6.7
LRM Limekiln Ridge 50.69 295 eP P 15 54 59.9 -0.1
comp=Z,1µm,1.5s,mb6.7
F15A Butte 50.69 295 ⇓P P 15 55 00.2 +0.2
baz=50,SNR=90
GAMB Gambell 50.74 344 eP P 15 54 60.0 -0.2
comp=Z,331nm,1.4s,mb6.1
GAMB Gambell 50.74 344 eP P 15 55 00.0 -0.1
comp=Z,331nm,1.4s,mb6.1
B09A Rice 50.76 301 ⇑P P 15 55 00.4 0.0
baz=50,SNR=49
E13A Victor 50.87 297 ⇑P P 15 55 00.6 -0.7
baz=51,SNR=14
YNR Norris Junctio 50.89 293 eP P 15 55 02.1 +0.7
comp=Z,183nm,1.5s,mb5.8
YNR Norris Junctio 50.89 293 eP P 15 55 02.1 +0.6
comp=Z,183nm,1.5s,mb5.8
LKWY Lake 50.90 293 eP P 15 55 02.2 +0.7
LKWY pmax pmax
comp=Z,359nm,1.7s,mb6.0
LKWY MLR MLR
comp=Z,134µm,19.0s,MS7.0
LKWY Lake 50.90 293 eP P 15 55 02.2 +0.7
comp=Z,359nm,1.7s,mb6.0
LKWY LR LR
comp=Z,134µm,19.0s,MS7.0
LKWY Lake 50.90 293 eP P 15 55 02.2 +0.7
comp=Z,359nm,1.7s,mb6.0
G16A Moss Hill, Enn 50.92 294 ⇑P P 15 55 01.9 +0.2
baz=51,SNR=13
C10A Spilker Farm, 50.94 300 ⇓P P 15 55 01.1 -0.7
baz=51
YMR Madison River 51.04 293 eP P 15 55 04.1 +1.5
comp=Z,332nm,1.4s,mb6.1
YMR Madison River 51.04 293 eP P 15 55 04.1 +1.5
comp=Z,332nm,1.4s,mb6.1
F14A Wisdom 51.06 296 ⇓P P 15 55 02.3 -0.5
baz=51
A07A Ashnola River, 51.08 303 ⇑P P 15 55 02.6 -0.2
baz=51,SNR=71
QLMT Earthquake Lak 51.10 294 eP P 15 55 02.3 -0.8
comp=Z,98nm,1.5s,mb5.5
QLMT Earthquake Lak 51.10 294 eP P 15 55 02.3 -0.7
comp=Z,98nm,1.5s,mb5.5
H17A Grant Village 51.11 293 ⇓P P 15 55 04.7 +1.6
baz=51,SNR=121
DLMT Dillon 51.13 295 eP P 15 55 03.2 0.0
comp=Z,262nm,1.6s,mb5.9
DLMT Dillon 51.13 295 eP P 15 55 03.2 -0.1
comp=Z,262nm,1.6s,mb5.9
H16A Russell Place, 51.13 294 ⇓P P 15 55 03.8 +0.6
baz=51,SNR=79
CBKS Cedar Bluff 51.14 280 eP P 15 55 02.0 -1.5
CBKS pmax pmax
comp=Z,429nm,1.8s,mb6.1
CBKS MLR MLR
comp=Z,36µm,20.0s,MS6.4
CBKS Cedar Bluff 51.14 280 eP P 15 55 02.0 -1.4
comp=Z,429nm,1.8s,mb6.1
CBKS LR LR
comp=Z,36µm,20.0s,MS6.4
CBKS Cedar Bluff 51.14 280 eP P 15 55 02.0 -1.5
comp=Z,429nm,1.8s,mb6.1
YFT Old Faithful 51.17 293 eP P 15 55 04.9 +1.3
comp=Z,62nm,0.8s,mb5.6
YFT Old Faithful 51.17 293 eP P 15 55 04.9 +1.3
comp=Z,62nm,0.8s,mb5.6
BBB Bella Bella 51.17 311 P P 15 55 03.7 +0.2
comp=Z,130nm,1.3s,mb5.7,baz=46,slow=3.7,SNR=29
BBB Bella Bella 51.17 311 P P 15 55 03.7 +0.2
BBB Bella Bella 51.17 311 P P 15 55 03.7 +0.2
D11A Klaveano Farm, 51.20 299 ⇑P P 15 55 02.6 -1.3
baz=51,SNR=23
DPW Davenport 51.24 301 P P 15 55 04.0 -0.1
DPW Davenport 51.24 301 P P 15 55 04.0 -0.1
G15A Dillon 51.24 295 ⇑P P 15 55 04.4 +0.3
baz=51,SNR=22
B08A Colville Reser 51.26 302 ⇓P P 15 55 03.6 -0.7
baz=51,SNR=21
UALR University of 51.27 271 eP P 15 55 03.3 -1.2
comp=Z,402nm,1.8s,mb6.0
UALR University of 51.27 271 eP P 15 55 03.3 -1.2
comp=Z,402nm,1.8s,mb6.0
C09A Chrisman Ranch 51.32 301 ⇓P P 15 55 04.0 -0.7
baz=51,SNR=12
L22A Ellis Ranch, M 51.34 288 ⇑P P 15 55 05.1 +0.2
baz=51
I18A Diamond G Ranc 51.37 292 ⇓P P 15 55 05.6 +0.4
baz=51,SNR=45
E12A Beaver Dam Sad 51.43 298 ⇑P P 15 55 05.1 -0.4
baz=51,SNR=69
F13A Darby 51.46 297 ⇑P P 15 55 05.4 -0.4
baz=51,SNR=38
I17A Pilgrim Ck. 51.50 293 ⇑P P 15 55 06.9 +0.8
baz=51,SNR=16
PHWY Pilot Hill 51.54 287 eP P 15 55 06.1 -0.3
comp=Z,96nm,0.8s,mb5.8
PHWY Pilot Hill 51.54 287 eP P 15 55 06.1 -0.3
comp=Z,96nm,0.8s,mb5.8
D10A Wagner Farm, O 51.56 300 ⇑P P 15 55 05.3 -1.2
baz=51,SNR=22
G14A Jackson 51.57 296 ⇓P P 15 55 06.5 -0.1
baz=51
K20A Yellowstone Ra 51.62 290 ⇑P P 15 55 06.4 -0.6
baz=51,SNR=101
IMW Indian Meadow 51.67 293 eP P 15 55 08.1 +0.7
comp=Z,352nm,1.4s,mb6.1
IMW Indian Meadow 51.67 293 eP P 15 55 08.1 +0.8
comp=Z,352nm,1.4s,mb6.1
MCMT McKenzie Canyo 51.67 295 eP P 15 55 07.6 +0.3
comp=Z,121nm,1.6s,mb5.6
MCMT McKenzie Canyo 51.67 295 eP P 15 55 07.6 +0.3
comp=Z,121nm,1.6s,mb5.6
K19A Absolon Red Bu 51.70 290 ⇓P P 15 55 06.5 -1.0
baz=52,SNR=83
E11A Bogner Ranch, 51.73 299 ⇓P P 15 55 06.9 -0.9
baz=52,SNR=65
A05A Maple Falls 51.74 305 ⇓P P 15 55 06.8 -1.0
baz=52
H15A Lima 51.76 295 ⇑P P 15 55 08.5 +0.5
baz=52,SNR=44
LOHW Long Hollow 51.77 292 eP P 15 55 08.4 +0.3
comp=Z,222nm,1.5s,mb5.9
LOHW Long Hollow 51.77 292 eP P 15 55 08.4 +0.3
comp=Z,222nm,1.5s,mb5.9
L21A Rawlins 51.79 289 ⇓P P 15 55 08.1 -0.2
baz=52
OD2 Odessa Site #2 51.83 301 P P 15 55 07.9 -0.6
OD2 Odessa Site #2 51.83 301 P P 15 55 07.9 -0.6
F12A Elk City 51.85 297 ⇑P P 15 55 08.1 -0.6
baz=52,SNR=38
J18A Kendall Valley 51.86 292 ⇓P P 15 55 09.2 +0.4
baz=52,SNR=96
I16A Newdale 51.91 293 ⇓P P 15 55 10.0 +0.9
baz=52,SNR=8.9
B06A Marblemount 51.92 304 ⇑P P 15 55 07.1 -2.0
baz=52
D09A Jones Farm, Ri 51.95 301 ⇑P P 15 55 08.4 -1.0
baz=52
SNOW Snow King Moun 51.95 292 P P 15 55 08.8 -0.6
comp=Z,374nm,1.4s,mb6.1
SNOW Snow King Moun 51.95 292 P P 15 55 08.8 -0.7
comp=Z,374nm,1.4s,mb6.1
RWWY Rawlins 51.95 288 eP P 15 55 09.0 -0.5
comp=Z,460nm,1.6s,mb6.2
RWWY Rawlins 51.95 288 eP P 15 55 09.0 -0.5
comp=Z,460nm,1.6s,mb6.2
E10A Myers Farm, Un 51.97 299 ⇓P P 15 55 08.3 -1.3
baz=52
RPW Rockport 51.99 304 eP P 15 55 11.8 +2.1
comp=Z,30nm,1.5s,mb5.0
G13A Cobalt 52.00 296 ⇑P P 15 55 09.6 -0.2
baz=52,SNR=66
MIAR Mount Ida 52.01 272 eP P 15 55 08.8 -1.2
MIAR pmax pmax
comp=Z,95nm,1.1s,mb5.6
MIAR MLR MLR
comp=Z,11µm,21.0s,MS5.9
MIAR Mount Ida 52.01 272 eP P 15 55 08.8 -1.2
comp=Z,95nm,1.1s,mb5.6
MIAR LR LR
comp=Z,11µm,21.0s,MS5.9
MIAR Mount Ida 52.01 272 eP P 15 55 08.8 -1.2
comp=Z,95nm,1.1s,mb5.6
TPAW Teton Pass 52.01 293 eP P 15 55 10.5 +0.6
comp=Z,301nm,1.4s,mb6.0
TPAW Teton Pass 52.01 293 eP P 15 55 10.5 +0.6
comp=Z,301nm,1.4s,mb6.0
VAN Vannovskaya 52.01 80 ⇓iP P 15 55 12.3 +2.3
VAN eS S 16 02 33.8 +0.7
J17A Brown Place, J 52.02 292 ⇓P P 15 55 10.5 +0.5
baz=52,SNR=39
ABKT Ailbek 52.03 80 P P 15 55 11.6 +1.5
comp=Z,311nm,1.6s,mb6.0,SNR=24
BW06 Boulder Array 52.04 291 ⇓P P 15 55 09.7 -0.4
baz=52,SNR=329
BW06 Boulder Array 52.04 291 eP P 15 55 09.3 -0.8
comp=Z,219nm,0.9s,mb6.1
BW06 LR LR
comp=Z,19µm,19.0s,MS6.2
BW06 Boulder Array 52.04 291 eP P 15 55 09.3 -0.8
comp=Z,219nm,0.9s,mb6.1
PDAR Pinedale Array 52.04 291 P P 15 55 09.6 -0.6
comp=Z,139nm,0.7s,mb6.0,baz=58,slow=5.6,SNR=191
PDAR LR LR 16 16 05.6
comp=Z,34µm,18.3s,MS6.4,baz=39,slow=35
PDAR Pinedale Array 52.04 291 P P 15 55 09.6 -0.5
H14A Leadore 52.05 295 ⇑P P 15 55 10.7 +0.5
baz=52,SNR=59
REDW Red Top Meadow 52.07 292 eP P 15 55 10.6 +0.2
comp=Z,327nm,1.4s,mb6.1
REDW Red Top Meadow 52.07 292 eP P 15 55 10.6 +0.2
comp=Z,327nm,1.4s,mb6.1
M21A Separation Pea 52.09 288 ⇑P P 15 55 10.0 -0.5
baz=52,SNR=85
F11A Grangeville 52.09 298 ⇓P P 15 55 09.7 -0.8
baz=52,SNR=42
BRAL Brewton 52.14 264 eP P 15 55 10.3 -0.7
comp=Z,141nm,0.9s,mb5.9
BRAL LR LR
comp=Z,68µm,19.0s,MS6.7
BRAL Brewton 52.14 264 eP P 15 55 10.3 -0.7
comp=Z,141nm,0.9s,mb5.9
L20A Wausutter 52.16 289 ⇓P P 15 55 10.9 -0.2
baz=52,SNR=33
D08A Wollman Farm, 52.18 301 ⇑P P 15 55 10.2 -0.9
baz=52,SNR=5.4
DWPF Disney 52.20 257 eP P 15 55 12.1 +0.6
comp=Z,409nm,1.5s,mb6.1
DWPF LR LR
comp=Z,17µm,19.0s,MS6.1
DWPF Disney 52.20 257 eP P 15 55 12.1 +0.6
comp=Z,409nm,1.5s,mb6.1
I15A Monteview 52.21 294 ⇓P P 15 55 12.1 +0.8
baz=52,SNR=32
ETW Entiat 52.26 302 eP P 15 55 10.8 -0.8
comp=Z,47nm,1.3s,mb5.3
ETW Entiat 52.26 302 eP P 15 55 10.8 -0.9
comp=Z,47nm,1.3s,mb5.3
RRI2 Red Ridge 52.28 293 eP P 15 55 12.4 +0.5
comp=Z,137nm,0.9s,mb5.9
E09A Wood Farm, Sta 52.34 300 ⇓P P 15 55 11.4 -0.9
baz=52
K18A Toltan Ranch, 52.34 291 ⇑P P 15 55 12.2 -0.2
baz=52,SNR=72
JCW Jim Creek 52.36 304 P P 15 55 12.5 +0.1
comp=Z,14nm,0.8s,mb5.0
JCW Jim Creek 52.36 304 P P 15 55 12.5 +0.1
comp=Z,14nm,0.8s,mb5.0
N22A Wattenberg Ran 52.37 287 ⇓P P 15 55 13.0 +0.4
baz=52,SNR=11
YAK Yakutsk 52.42 17 eP P 15 55 15.0 +2.3
YAK e 15 56 23.8
YAK e 15 57 14.7
YAK ePPP 15 58 21.4
YAK eS S 16 02 34.5 -3.6
YAK e 16 04 58.0
YAK pmax pmax
comp=Z,39nm,1.0s,mb5.3
YAK pmax pmax
comp=N,28nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,102nm,2.0s,mb5.4
YAK pmax pmax
comp=N,137nm,3.0s
YAK pmax pmax
comp=E,111nm,2.8s
YAK smax
comp=N,662nm,6.8s
YAK smax
comp=E,3µm,10.9s
YAK Yakutsk 52.42 17 eP P 15 55 11.5 -1.2
comp=E,121nm,1.4s,mb5.6
YAK LR LR
comp=Z,15µm,20.0s,MS6.0
YAK Yakutsk 52.42 17 eP P 15 55 11.5 -1.2
comp=Z,121nm,1.4s,mb5.6
F10A Beach Ranch, E 52.44 299 ⇑P P 15 55 12.1 -1.0
baz=52,SNR=15
H13A Challis 52.45 296 ⇑P P 15 55 13.2 +0.1
baz=52,SNR=99
L19A Farson 52.51 290 ⇓P P 15 55 13.1 -0.5
baz=52,SNR=67
M20A Sweetwater, Wa 52.53 289 ⇑P P 15 55 13.5 -0.3
baz=52,SNR=27
G11A Walters Elk Ra 52.55 298 ⇓P P 15 55 12.9 -0.9
baz=52,SNR=54
K17A Gardner Place, 52.61 292 ⇓P P 15 55 14.2 -0.2
baz=52,SNR=8.8
VBMS Vicksburg 52.63 268 P P 15 55 12.7 -1.9
comp=Z,190nm,0.9s,mb6.0
VBMS LR LR
comp=Z,25µm,19.0s,MS6.3
VBMS Vicksburg 52.63 268 P P 15 55 12.7 -2.0
comp=Z,190nm,0.9s,mb6.0
I14A Mackay 52.66 295 ⇑P P 15 55 15.1 +0.4
baz=52,SNR=36
AHID Auburn Hatcher 52.67 292 eP P 15 55 14.4 -0.4
comp=Z,177nm,1.4s,mb5.8
AHID LR LR
comp=Z,22µm,21.0s,MS6.2
AHID Auburn Hatcher 52.67 292 eP P 15 55 14.4 -0.4
comp=Z,177nm,1.4s,mb5.8
J15A Blackfoot 52.69 294 ⇑P P 15 55 16.0 +1.1
baz=52,SNR=62
H12A Diamond D Ranc 52.70 296 ⇑P P 15 55 14.9 -0.1
baz=52,SNR=36
E08A Dider Farm, El 52.71 301 ⇓P P 15 55 14.2 -0.9
baz=52
K16A Soda Springs 52.81 293 ⇑P P 15 55 16.3 +0.4
baz=53,SNR=41
ISCO Idaho Springs 52.85 286 eP P 15 55 15.9 -0.3
ISCO pmax pmax
comp=Z,91nm,1.5s,mb5.5
ISCO MLR MLR
comp=Z,23µm,20.0s,MS6.2
ISCO Idaho Springs 52.85 286 eP P 15 55 15.8 -0.3
comp=Z,91nm,1.5s,mb5.5
ISCO LR LR
comp=Z,23µm,20.0s,MS6.2
ISCO Idaho Springs 52.85 286 eP P 15 55 15.9 -0.3
comp=Z,91nm,1.5s,mb5.5
N21A Black Mountain 52.85 288 ⇓P P 15 55 16.0 -0.2
baz=53,SNR=31
M19A Rock Springs 52.92 290 ⇓P P 15 55 16.0 -0.6
baz=53
F09A S2 Ranch, Elgi 52.92 299 ⇓P P 15 55 15.9 -0.7
baz=53
LNOR Lincton Mounta 52.93 300 P P 15 55 14.4 -2.3
LNOR pmax pmax
comp=Z,22nm,1.5s,mb4.9
LNOR Lincton Mounta 52.93 300 P P 15 55 14.4 -2.3
comp=Z,44nm,1.5s,mb5.2
LNOR Lincton Mounta 52.93 300 P P 15 55 14.4 -2.3
comp=Z,44nm,1.5s,mb5.2
I13A Wildhorse Cree 52.93 295 ⇓P P 15 55 16.9 +0.2
baz=53,SNR=52
L18A Fontenelle, Gr 52.93 291 ⇓P P 15 55 16.4 -0.4
baz=53,SNR=106
E07A Sunnyside 52.95 301 ⇑P P 15 55 16.8 0.0
baz=53
G10A Bishop Farm, J 52.97 298 ⇑P P 15 55 15.9 -1.1
baz=53,SNR=19
HAWA Hanford 52.97 301 eP P 15 55 15.7 -1.3
comp=Z,61nm,1.4s,mb5.3
HAWA LR LR
comp=Z,32µm,20.0s,MS6.4
HAWA Hanford 52.97 301 eP P 15 55 15.7 -1.3
comp=Z,61nm,1.4s,mb5.3
RSW Rattlesnake Hi 52.99 301 P P 15 55 17.4 +0.3
comp=Z,24nm,1.1s,mb5.0
RSW Rattlesnake Hi 52.99 301 P P 15 55 17.4 +0.3
comp=Z,24nm,1.1s,mb5.0
H11A Donnelly 53.03 297 ⇑P P 15 55 16.6 -0.8
baz=53,SNR=31
KDAK Kodiak Island 53.08 330 P P 15 55 17.0 -0.6
comp=Z,397nm,1.5s,mb6.1,SNR=12
KDAK Kodiak Island 53.08 330 eP P 15 55 16.8 -0.8
KDAK pmax pmax
comp=Z,236nm,1.6s,mb5.9
KDAK MLR MLR
comp=Z,41µm,22.0s,MS6.4
KDAK Kodiak Island 53.08 330 eP P 15 55 16.8 -0.8
comp=Z,236nm,1.6s,mb5.9
KDAK LR LR
comp=Z,41µm,22.0s,MS6.4
KDAK Kodiak Island 53.08 330 eP P 15 55 16.8 -0.8
comp=Z,236nm,1.6s,mb5.9
N20A Spence Gulch, 53.10 289 ⇓P P 15 55 18.0 0.0
baz=53,SNR=153
L17A Cokeville 53.13 292 ⇓P P 15 55 17.5 -0.7
baz=53,SNR=48
TORD Torodi Ar. Bea 53.16 152 P P 15 55 17.6 -1.1
comp=Z,72nm,0.8s,mb5.6,baz=341,slow=8.3,SNR=54
TORD LR LR 16 16 24.0
comp=Z,13µm,19.6s,MS6.0,baz=315,slow=34
F08A Pendleton 53.18 300 ⇑P P 15 55 18.0 -0.5
baz=53
J14A Carey 53.19 294 ⇓P P 15 55 19.1 +0.5
baz=53,SNR=43
GNW Green Mountain 53.21 304 eP P 15 55 16.6 -2.1
comp=Z,48nm,1.5s,mb5.2
GNW Green Mountain 53.21 304 eP P 15 55 16.6 -2.1
comp=Z,48nm,1.5s,mb5.2
D05A Enumclaw 53.22 303 ⇑P P 15 55 18.7 -0.1
baz=53
O21A Pagoda 53.29 288 ⇓P P 15 55 19.6 +0.2
baz=53,SNR=26
K15A Arbon 53.32 293 ⇓P P 15 55 20.3 +0.7
baz=53,SNR=60
SEY Seymchan 53.32 4ceP P 15 55 19.5 +0.2
HLID Hailey 53.34 295 ⇑P P 15 55 20.0 +0.2
baz=53,SNR=48
HLID Hailey 53.34 295 eP P 15 55 19.7 -0.1
comp=Z,182nm,1.7s,mb5.7
HLID LR LR
comp=Z,44µm,22.0s,MS6.5
HLID Hailey 53.34 295 eP P 15 55 19.7 -0.1
comp=Z,182nm,1.7s,mb5.7
M18A Lyman 53.36 290 ⇓P P 15 55 19.2 -0.7
baz=53,SNR=6.5
J13A Cove Ranch, Pi 53.39 295 ⇑P P 15 55 20.3 +0.2
baz=53,SNR=39
H10A Noah's Angus R 53.41 298 ⇑P P 15 55 18.8 -1.4
baz=53,SNR=36
L16A Fish Haven 53.43 292 ⇓P P 15 55 20.5 +0.1
baz=53,SNR=26
N19A John Jarvie Ra 53.44 289 ⇓P P 15 55 20.0 -0.4
baz=53,SNR=14
I12A Atlanta 53.44 296 ⇑P P 15 55 20.2 -0.3
baz=53,SNR=11
LON Longmire 53.52 303 eP P 15 55 19.2 -1.8
LON pmax pmax
comp=Z,155nm,1.7s,mb5.7
LON Longmire 53.52 303 eP P 15 55 19.2 -1.8
comp=Z,155nm,1.7s,mb5.7
LON Longmire 53.52 303 eP P 15 55 19.2 -1.8
comp=Z,155nm,1.7s,mb5.7
M17A Scullys Gap (B 53.57 291 ⇓P P 15 55 21.1 -0.3
baz=53,SNR=22
N18A Larsen Ranch, 53.57 290 ⇑P P 15 55 21.4 0.0
baz=53,SNR=60
I11A Placerville 53.67 297 ⇑P P 15 55 21.0 -1.2
baz=53
G08A Pilot Rock 53.68 300 ⇓P P 15 55 21.3 -0.9
baz=53,SNR=20
O20A White River Ci 53.68 288 ⇑P P 15 55 22.5 +0.2
baz=54,SNR=37
K14A Jones Ranch, D 53.70 294 ⇑P P 15 55 23.0 +0.7
baz=54,SNR=24
H09A Durkee 53.70 298 ⇓P P 15 55 22.1 -0.3
baz=53,SNR=87
NLWA Neilton Lookou 53.74 305 ⇑P P 15 55 23.1 +0.5
baz=54,SNR=42
NLWA Neilton Lookou 53.74 305 eP P 15 55 22.7 +0.1
comp=Z,379nm,1.5s,mb6.1
NLWA LR LR
comp=Z,111µm,19.0s,MS6.9
NLWA Neilton Lookou 53.74 305 eP P 15 55 22.7 +0.1
comp=Z,379nm,1.5s,mb6.1
OHAK Old Harbor 53.75 330 eP P 15 55 21.4 -1.1
comp=Z,349nm,1.6s,mb6.0
OHAK Old Harbor 53.75 330 eP P 15 55 21.4 -1.1
comp=Z,349nm,1.6s,mb6.0
BOD Bodaibo 53.78 28 eP P 15 55 22.8 +0.1
BOD pmax pmax
comp=Z,72nm,1.8s,mb5.3
GRTK Grand Turk 53.80 242 P P 15 55 19.1 -4.2
GRTK LR LR
comp=Z,16µm,22.0s,MS6.0
HWUT Hardware Ranch 53.83 292 eP P 15 55 23.0 -0.4
comp=Z,322nm,1.1s,mb6.2
HWUT LR LR
comp=Z,19µm,20.0s,MS6.1
HWUT Hardware Ranch 53.83 292 eP P 15 55 23.0 -0.3
comp=Z,322nm,1.1s,mb6.2
L15A Malad City 53.83 293 ⇓P P 15 55 23.6 +0.2
baz=54,SNR=102
I10A Payette 53.85 297 ⇑P P 15 55 22.7 -0.8
baz=54
ANWB Willy Bob 53.89 230 PFAKE 15 55 30.0 +6.0
ANWB LR LR
comp=Z,12µm,22.0s,MS5.9
O19A Miners Draw (B 53.91 289 ⇑P P 15 55 24.3 +0.3

baz=54,SNR=58
SMCO Snowmass 53.95 286 *e*P **P 15 55 24.2 -0.1**
comp=Z,120nm,1.4s,mb5.6
SMCO Snowmass 53.95 286 *e*P **P 15 55 24.2 0.0**
comp=Z,120nm,1.4s,mb5.6
K13A Stover Farm, H 53.98 294 ⇑P **P 15 55 25.6 +1.2**
baz=54,SNR=34
MFID Camas Ranch 54.03 296 ⇓P **P 15 55 23.8 -1.0**
baz=54,SNR=15
N17A Moffit Pass 54.08 291 ⇑P **P 15 55 25.4 +0.2**
baz=54,SNR=48
M16A Huntsville 54.10 292 ⇑P **P 15 55 25.6 +0.3**
baz=54,SNR=56
WMOK Wichita Mounta 54.14 277 *e*P **P 15 55 24.9 -0.8**
WMOK pmax pmax
comp=Z,99nm,1.4s,mb5.5
WMOK MLR MLR
comp=Z,28µm,21.0s,MS6.3
WMOK Wichita Mounta 54.14 277 *e*P **P 15 55 24.9 -0.8**
comp=Z,99nm,1.4s,mb5.5
WMOK LR LR
comp=Z,28µm,21.0s,MS6.3
WMOK Wichita Mounta 54.14 277 *e*P **P 15 55 24.9 -0.8**
comp=Z,99nm,1.4s,mb5.5
L14A Malta 54.15 293 ⇑P **P 15 55 26.4 +0.7**
baz=54,SNR=99
MIB Mutribah 54.17 95 *e*P **P 15 55 25.4 -0.6**
MIB AMb AMB 15 55 33.2
comp=Z,249nm,2.1s,mb5.8
HVU Hansel Valley 54.18 293 *e*P **P 15 55 25.8 -0.1**
HVU pmax pmax
comp=Z,323nm,1.8s,mb6.0
HVU Hansel Valley 54.18 293 *e*P **P 15 55 25.8 -0.1**
comp=Z,323nm,1.8s,mb6.0
HVU Hansel Valley 54.18 293 *e*P **P 15 55 25.8 -0.1**
comp=Z,323nm,1.8s,mb6.0
Q22A Crested Butte, 54.18 286 ⇑P **P 15 55 26.3 +0.3**
baz=54,SNR=29
H08A Prairie City 54.22 299 ⇑P **P 15 55 25.2 -0.9**
baz=54,SNR=11
P20A De Beque 54.27 288 ⇓P **P 15 55 26.5 -0.1**
baz=54,SNR=19
O18A Roosevelt 54.31 290 ⇑P **P 15 55 26.9 +0.1**
baz=54,SNR=11
M15A Larsen Ranch, 54.31 292 ⇑P **P 15 55 27.0 +0.1**
baz=54,SNR=48
I09A Lost Marbles R 54.31 298 ⇓P **P 15 55 26.3 -0.6**
baz=54
K12A Draper Farm, C 54.32 295 ⇓P **P 15 55 27.5 +0.6**
baz=54,SNR=50
E03A Lebam 54.34 304 ⇓P **P 15 55 27.2 +0.1**
baz=54
G06A Carlson Farm, 54.36 301 ⇑P **P 15 55 27.4 +0.2**
baz=54,SNR=27
N16A Rees Ranch, Co 54.38 291 ⇑P **P 15 55 27.7 +0.3**
baz=54,SNR=72
MK31 Makanchi Array 54.39 55 *e*P **P 15 55 28.0 +0.7**
MK31 Makanchi Array 54.39 55 *e*P **P 15 55 28.0 +0.7**
MKAR Makanchi Array 54.39 55 P **P 15 55 27.5 +0.1**
comp=Z,15nm,0.8s,mb5.0,baz=345,slow=5.9,SNR=59
MKAR LR LR 16 18 58.3
comp=Z,20µm,20.0s,MS6.2,baz=323,slow=36
MKAR Makanchi Array 54.39 55 *ce*P **P 15 55 29.0 +1.6**
MKAR pmax pmax
comp=Z,15nm,0.8s
L13A Double Diamond 54.39 294 ⇑P **P 15 55 28.3 +0.9**
baz=54,SNR=15
J10A Berg Farm, Mel 54.39 297 ⇑P **P 15 55 26.5 -0.9**
baz=54
P19A Cripple Cowboy 54.41 288 ⇑P **P 15 55 27.7 +0.1**
baz=54,SNR=64
USP Ospenovka 54.41 63 P **P 15 55 30.6 +3.0**
SNR=22
SPUT South Promonto 54.44 292 *e*P **P 15 55 27.8 0.0**
comp=Z,447nm,1.5s,mb6.2
SPUT South Promonto 54.44 292 *e*P **P 15 55 27.8 0.0**
comp=Z,447nm,1.5s,mb6.2
F04A Amboy 54.44 303 ⇓P **P 15 55 27.2 -0.5**
baz=54,SNR=20
Q21A Lamborn Mesa, 54.49 287 ⇑P **P 15 55 28.7 +0.5**
baz=54,SNR=30
SDCO Great Sand Dun 54.52 284 *e*P **P 15 55 28.3 -0.1**
comp=Z,159nm,1.8s,mb5.8
SDCO LR LR
comp=Z,20µm,20.0s,MS6.2
SDCO Great Sand Dun 54.52 284 *e*P **P 15 55 28.3 -0.1**
comp=Z,159nm,1.8s,mb5.8
NAY Al-Naaiem 54.60 95 *e*P **P 15 55 28.2 -0.9**
NAY AMb AMB 15 55 35.2
comp=Z,92nm,1.9s,mb5.5
JLU Jordanelle 54.62 291 *e*P **P 15 55 29.1 0.0**
comp=Z,108nm,1.1s,mb5.8
JLU Jordanelle 54.62 291 *e*P **P 15 55 29.1 0.0**
comp=Z,108nm,1.1s,mb5.8
EKS2 Erkin-Say 54.63 64 P **P 15 55 32.7 +3.5**
SNR=56
EKS2 Erkin-Say 54.63 64 *e*P **P 15 55 32.2 +3.0**
comp=Z,86nm,1.3s,mb5.6
EKS2 LR LR
comp=Z,26µm,20.0s,MS6.3
M14A Sheep Mountain 54.64 293 ⇓P **P 15 55 29.7 +0.4**
baz=54,SNR=133
R22A Saguache, Gunn 54.65 286 ⇑P **P 15 55 30.1 +0.7**
baz=54,SNR=29
K11A Parker Ranch, 54.65 296 ⇓P **P 15 55 29.6 +0.2**
baz=54,SNR=56
O17A Robinson Place 54.67 290 ⇑P **P 15 55 29.7 +0.2**
baz=54,SNR=32
HOOD Mount Hood Mea 54.67 302 *e*P **P 15 55 29.2 -0.2**
comp=Z,241nm,1.6s,mb6.0
HOOD Mount Hood Mea 54.67 302 *e*P **P 15 55 29.2 -0.2**
comp=Z,241nm,1.6s,mb6.0
Q20A Ridgley Place, 54.69 287 ⇓P **P 15 55 29.5 -0.1**
baz=54,SNR=57
DAU Daniels Canyon 54.70 291 *e*P **P 15 55 30.0 +0.3**
DAU pmax pmax
comp=Z,206nm,1.5s,mb5.9
DAU Daniels Canyon 54.70 291 *e*P **P 15 55 30.0 +0.3**
comp=Z,206nm,1.5s,mb5.9
DAU Daniels Canyon 54.70 291 *e*P **P 15 55 30.0 +0.3**
comp=Z,206nm,1.5s,mb5.9
CHMS Chumysh 54.74 63 P **P 15 55 33.9 +3.9**
SNR=12
CBYP Canovanas 54.77 235 P **P 15 55 28.1 -2.3**
comp=Z,156nm,1.2s,mb5.9
CBYP Canovanas 54.77 235 P **P 15 55 28.1 -2.3**
comp=Z,156nm,1.2s,mb5.9
L12A House Creek Ra 54.77 295 ⇑P **P 15 55 30.9 +0.6**
baz=54,SNR=15
MTP Monte Pirata 54.82 235 *e*P **P 15 55 30.5 -0.3**
comp=Z,226nm,1.4s,mb6.0
MTP Monte Pirata 54.82 235 *e*P **P 15 55 30.5 -0.3**
comp=Z,226nm,1.4s,mb6.0
N15A Stansbury Isla 54.82 292 ⇑P **P 15 55 30.4 -0.1**
baz=55
FRU Bishkek 54.82 64 *e*P **P 15 55 33.5 +2.9**
FRU *e*S **S 16 03 18.5 +7.4**
FRU pmax pmax
comp=Z,290nm,2.5s,mb5.9
FRU smax
comp=E,1µm,4.0s
FRU MLR MLR
comp=Z,24µm,16.0s,MS6.4
J09A Fry Pan Ranch, 54.85 298 ⇓P **P 15 55 30.1 -0.6**
baz=55,SNR=80
NATX Nacogdoches 54.85 271 PFAKE 15 55 40.0 +9.1
NATX LR LR
comp=Z,19µm,19.0s,MS6.2
NOQ North Oquirrh 54.85 292 *e*P **P 15 55 30.4 -0.4**
comp=Z,354nm,1.4s,mb6.2
NOQ North Oquirrh 54.85 292 *e*P **P 15 55 30.5 -0.3**
comp=Z,354nm,1.4s,mb6.2
F03A Seaside 54.86 304 ⇑P **P 15 55 30.8 0.0**
baz=55,SNR=16
KBD Kabd 54.86 95 *e*P **P 15 55 30.2 -0.8**
KBD AMb AMB 15 55 38.4
comp=Z,137nm,2.1s,mb5.6
R21A Cimarron 54.87 286 ⇑P **P 15 55 31.5 +0.5**
baz=55,SNR=22
U26A Atchley Ranch, 54.90 282 ⇓P **P 15 55 31.3 +0.1**
baz=55,SNR=6.7
I07A Izee 54.91 299 ⇑P **P 15 55 30.6 -0.5**
baz=55,SNR=49
P18A Preston Nutter 54.94 289 ⇓P **P 15 55 31.5 0.0**
baz=55,SNR=68
AAK Ala-Archa 54.94 64 P **P 15 55 35.3 +3.9**
comp=Z,206nm,1.3s,mb6.0,SNR=16
AAK Ala-Archa 54.94 64 P **P 15 55 35.5 +4.1**
SNR=22
AAK Ala-Archa 54.94 64 *e*P **P 15 55 33.4 +2.0**
AAK pmax pmax
comp=Z,62nm,1.3s,mb5.5
AAK MLR MLR
comp=Z,29µm,21.0s,MS6.3
AAK Ala-Archa 54.94 64 *e*P **P 15 55 33.4 +1.9**
comp=Z,62nm,1.3s,mb5.5
AAK LR LR
comp=Z,29µm,21.0s,MS6.3
AAK Ala-Archa 54.94 64 P **P 15 55 34.4 +2.9**
SNR=44
AAK P 15 55 34.4
SNR=44
O16A Springville 54.98 291 ⇓P **P 15 55 31.7 0.0**
baz=55,SNR=34
K10A MacKenzie Ranc 54.98 297 ⇑P **P 15 55 31.9 +0.2**
baz=55,SNR=108
BGU Big Grassy Mou 55.00 292 *e*P **P 15 55 31.9 +0.1**
comp=Z,376nm,2.0s,mb6.1
BGU Big Grassy Mou 55.00 292 *e*P **P 15 55 31.9 0.0**
comp=Z,376nm,2.0s,mb6.1
SJG San Juan 55.02 235 PFAKE 15 55 40.0 +7.8
SJG LR LR
comp=Z,55µm,22.0s,MS6.6
AGPR Aguadilla, PR 55.05 237 *e*P **P 15 55 35.6 +3.2**
comp=Z,542nm,1.9s,mb6.3
AML Almayashu 55.05 65 P **P 15 55 36.1 +3.9**
SNR=42
AML Almayashu 55.05 65 *e*P **P 15 55 35.2 +3.0**
comp=Z,52nm,1.1s,mb5.5
AML LR LR
comp=Z,24µm,20.0s,MS6.3
L11A Cat Creek Ranc 55.05 295 ⇑P **P 15 55 32.3 +0.1**
baz=55,SNR=21
G04A Mulino 55.08 302 ⇑P **P 15 55 31.4 -0.9**
baz=55
M13A Montello 55.09 294 ⇓P **P 15 55 33.3 +0.7**
baz=55,SNR=30
M13A Montello 55.09 294 *e*P **P 15 55 33.1 +0.5**
comp=Z,225nm,1.6s,mb6.0
M13A Montello 55.09 294 *e*P **P 15 55 33.1 +0.6**
comp=Z,225nm,1.6s,mb6.0
KBK Karagaybulak 55.10 63 P **P 15 55 36.8 +4.3**
SNR=12
J08A Circle Bar Ran 55.12 298 ⇑P **P 15 55 31.7 -1.0**
baz=55,SNR=46
N14A Grayback Hills 55.12 292 ⇓P **P 15 55 33.1 +0.4**
baz=55,SNR=27
TKM2 Tokmak 2 55.13 63 P **P 15 55 37.1 +4.3**
SNR=26
TKM2 Tokmak 2 55.13 63 *e*P **P 15 55 36.3 +3.5**
TKM2 pmax pmax
comp=Z,47nm,1.3s,mb5.4
TKM2 MLR MLR
comp=Z,32µm,22.0s,MS6.3
TKM2 Tokmak 2 55.13 63 *e*P **P 15 55 36.3 +3.4**
comp=Z,47nm,1.3s,mb5.4
TKM2 LR LR
comp=Z,32µm,22.0s,MS6.3
U25A Circle Dot Ran 55.18 283 ⇓P **P 15 55 33.9 +0.6**
baz=55
MPU Maple Canyon 55.19 291 *e*P **P 15 55 33.5 +0.2**
comp=Z,330nm,1.4s,mb6.2
MPU Maple Canyon 55.19 291 *e*P **P 15 55 33.5 +0.2**
comp=Z,330nm,1.4s,mb6.2
P17A Butcher Ranch, 55.28 290 ⇑P **P 15 55 33.7 -0.2**
baz=55,SNR=33
AMTX Amarillo 55.28 279 *e*P **P 15 55 34.9 +0.9**
comp=Z,46nm,1.0s,mb5.5
AMTX LR LR
comp=Z,41µm,19.0s,MS6.5
AMTX Amarillo 55.28 279 *e*P **P 15 55 34.9 +0.9**
comp=Z,46nm,1.0s,mb5.5
UCH Uchtor 55.29 64 P **P 15 55 38.1 +4.1**
SNR=48
UCH Uchtor 55.29 64 *e*P **P 15 55 36.7 +2.7**
comp=Z,50nm,1.2s,mb5.4
UCH LR LR
comp=Z,25µm,21.0s,MS6.3
UCH Uchtor 55.29 64 *e*P **P 15 55 36.7 +2.7**
comp=Z,50nm,1.2s,mb5.4
O15A The Old Anders 55.31 292 ⇓P **P 15 55 34.5 +0.4**
baz=55
QRN Al-Qurain 55.33 95 *e*P **P 15 55 34.2 -0.2**
QRN AMb AMB 15 55 42.0
comp=Z,495nm,2.0s,mb6.2
Q18A Rafter H Ranch 55.34 289 ⇑P **P 15 55 34.0 -0.3**
baz=55,SNR=69
M12A Wells 55.35 294 ⇓P **P 15 55 35.2 +0.8**
baz=55,SNR=21
AAA Alma-Ata 55.37 62 *i* P **P 15 55 40.5 +6.0**
AAA *i* S **S 16 03 34.6 +16**
AAA pmax pmax
comp=Z,700nm,2.8s,mb6.2
AAA MLR MLR
comp=Z,99µm,10.0s,MS7.2
R20A Redvale 55.37 287 ⇓P **P 15 55 34.6 0.0**
baz=55,SNR=33
L10A Juniper Basin 55.41 296 ⇑P **P 15 55 35.3 +0.5**
baz=55,SNR=78
H04A Detroit Lake 55.41 302 ⇑P **P 15 55 34.4 -0.4**
baz=55,SNR=37
PV04 Paradox Valley 55.42 287 *e*P **P 15 55 34.5 -0.4**
PV04 Paradox Valley 55.42 287 *e*P **P 15 55 34.5 -0.4**
NLU North Lily Min 55.42 291 *e*P **P 15 55 35.4 +0.4**
comp=Z,217nm,1.3s,mb6.0
NLU North Lily Min 55.42 291 *e*P **P 15 55 35.3 +0.4**
comp=Z,217nm,1.3s,mb6.0
V26A Tequesquite Ra 55.42 282 ⇑P **P 15 55 34.7 -0.3**
baz=55,SNR=21
CRPR Cabo Rojo, PR 55.47 236 P **P 15 55 36.6 +1.1**
comp=Z,200nm,1.9s,mb5.8
CRPR Cabo Rojo, PR 55.47 236 P **P 15 55 36.6 +1.1**
comp=Z,200nm,1.9s,mb5.8
SRU San Rafael 55.49 289 ⇓P **P 15 55 35.1 -0.3**
baz=55,SNR=76
SRU San Rafael 55.49 289 *e*P **P 15 55 35.0 -0.5**
SRU pmax pmax
comp=Z,426nm,1.6s,mb6.2
SRU San Rafael 55.49 289 *e*P **P 15 55 35.0 -0.5**
comp=Z,426nm,1.6s,mb6.2
SRU San Rafael 55.49 289 *e*P **P 15 55 35.0 -0.5**
comp=Z,426nm,1.6s,mb6.2
PV01 Paradox Valley 55.50 287 *e*P **P 15 55 35.3 -0.2**
comp=Z,21µm,1.5s
PV01 Paradox Valley 55.50 287 *e*P **P 15 55 35.3 -0.2**
comp=Z,10µm,1.5s
DUG Dugway 55.52 292 ⇓P **P 15 55 36.3 +0.6**
baz=55,SNR=61
DUG Dugway 55.52 292 *e*P **P 15 55 36.0 +0.3**
DUG pmax pmax
comp=Z,490nm,1.7s,mb6.3
DUG MLR MLR
comp=Z,15µm,20.0s,MS6.1
DUG Dugway 55.52 292 *e*P **P 15 55 36.0 +0.3**
comp=Z,490nm,1.7s,mb6.3
DUG LR LR
comp=Z,15µm,20.0s,MS6.1
DUG Dugway 55.52 292 *e*P **P 15 55 36.0 +0.3**
comp=Z,490nm,1.7s,mb6.3
N13A Wendover, West 55.53 293 ⇑P **P 15 55 36.7 +1.0**
baz=55,SNR=20
N13A Wendover, West 55.53 293 *e*P **P 15 55 36.5 +0.8**
comp=Z,276nm,1.4s,mb6.1
N13A Wendover, West 55.53 293 *e*P **P 15 55 36.5 +0.8**
comp=Z,276nm,1.4s,mb6.1
P16A Fountain Green 55.54 290 ⇑P **P 15 55 36.4 +0.6**
baz=55
HEBO Mount Hebo 55.55 303 P **P 15 55 36.4 +0.7**
comp=Z,570nm,1.7s,mb6.3
HEBO Mount Hebo 55.55 303 P **P 15 55 36.4 +0.7**
comp=Z,570nm,1.7s,mb6.3
U24A Moreno Valley 55.55 283 ⇑P **P 15 55 36.9 +1.0**
baz=55
S21A Coal Bank Pass 55.57 286 ⇑P **P 15 55 36.2 +0.2**
baz=55,SNR=10
TMUT Trail Mountain 55.62 290 *e*P **P 15 55 36.1 -0.3**
comp=Z,93nm,0.9s,mb5.8
TMUT Trail Mountain 55.62 290 *e*P **P 15 55 36.1 -0.3**
comp=Z,93nm,0.9s,mb5.8
R19A Curley Farm, L 55.66 288 ⇓P **P 15 55 36.6 0.0**
baz=55,SNR=20
CHGN Chignik 55.69 333 *e*P **P 15 55 35.4 -1.1**
CHGN Chignik 55.69 333 *e*P **P 15 55 35.4 -1.2**
M11A Holland Ranch, 55.69 295 ⇑P **P 15 55 37.8 +1.0**
baz=55,SNR=26
KZA Kyzart 55.71 64 P **P 15 55 40.8 +3.8**
SNR=22
W27A Bowe Ranch, En 55.73 281 ⇓P **P 15 55 37.5 +0.3**
baz=56,SNR=39
T22A Edith 55.73 285 ⇓P **P 15 55 37.5 +0.3**
baz=56,SNR=50
V25A Rancho No Teng 55.75 282 ⇑P **P 15 55 37.6 +0.2**
baz=56
P15A Leamington 55.83 291 ⇑P **P 15 55 38.4 +0.5**
baz=56,SNR=59
R18A Canyonlands Na 55.84 288 ⇑P **P 15 55 38.1 +0.1**
baz=56,SNR=103
N12A Clover Valley, 55.88 294 ⇑P **P 15 55 39.4 +1.2**
baz=56,SNR=34
N12A Clover Valley, 55.88 294 *e*P **P 15 55 39.0 +0.9**
comp=Z,322nm,1.6s,mb6.1
N12A Clover Valley, 55.88 294 *e*P **P 15 55 39.0 +0.8**
comp=Z,322nm,1.6s,mb6.1
M10A I.L. Ranch, Tu 55.91 296 ⇓P **P 15 55 39.0 +0.6**
baz=56,SNR=17
COR Corvallis 55.91 303 *e*P **P 15 55 37.4 -1.0**
COR pmax pmax
comp=Z,264nm,1.5s,mb6.0
COR MLR MLR
comp=Z,45µm,19.0s,MS6.6
COR Corvallis 55.91 303 *e*P **P 15 55 37.4 -1.0**
comp=Z,264nm,1.5s,mb6.0
COR LR LR
comp=Z,45µm,19.0s,MS6.6
COR Corvallis 55.91 303 *e*P **P 15 55 37.4 -1.0**
comp=Z,264nm,1.5s,mb6.0
Q16A Castle Valley 55.93 290 ⇓P **P 15 55 38.7 +0.1**
baz=56,SNR=44
ULHL Ulahol 55.96 63 P **P 15 55 42.8 +4.1**
SNR=20
WVOR Wild Horse Val 55.97 298 *e*P **P 15 55 37.9 -0.9**
WVOR pmax pmax
comp=Z,148nm,1.6s,mb5.8
WVOR MLR MLR
comp=Z,63µm,20.0s,MS6.7
WVOR Wild Horse Val 55.97 298 *e*P **P 15 55 37.9 -0.9**
comp=Z,148nm,1.6s,mb5.8
WVOR LR LR
comp=Z,63µm,20.0s,MS6.7
WVOR Wild Horse Val 55.97 298 *e*P **P 15 55 37.9 -0.9**
comp=Z,148nm,1.6s,mb5.8
W26A Owens Ranch, T 56.01 281 ⇓P **P 15 55 39.6 +0.3**
baz=56
ELK Elko 56.05 294 *e*P **P 15 55 40.1 +0.7**
ELK pmax pmax
comp=Z,255nm,1.7s
ELK MLR MLR
comp=Z,3µm,20.0s
ELK Elko 56.05 294 *e*P **P 15 55 40.1 +0.7**
comp=Z,255nm,1.7s,mb6.0
ELK LR LR
comp=Z,3µm,20.0s,MS5.3
ELK Elko 56.05 294 *e*P **P 15 55 40.1 +0.7**
comp=Z,255nm,1.7s,mb6.0
O13A Hicks Ranch, I 56.06 293 ⇑P **P 15 55 40.6 +1.1**
baz=56,SNR=17
S19A Harvey Farm, M 56.06 287 ⇑P **P 15 55 39.8 +0.3**
baz=56,SNR=78
X27A F and S Farms, 56.10 280 ⇓P **P 15 55 39.9 +0.1**
baz=56,SNR=5.3
P14A Drum Mountains 56.14 292 ⇑P **P 15 55 41.1 +1.0**
baz=56,SNR=164
SDDR Presa de Saban 56.16 241 *e*P **P 15 55 40.7 +0.3**
comp=Z,108nm,1.1s,mb5.8
SDDR LR LR
comp=Z,20µm,19.0s,MS6.2
SDDR Presa de Saban 56.16 241 *e*P **P 15 55 40.7 +0.3**
comp=Z,108nm,1.1s,mb5.8
R17A Hanksville Air 56.16 289 ⇑P **P 15 55 40.1 -0.2**
baz=56,SNR=171
N11A Elko Archery C 56.19 294 ⇑P **P 15 55 40.9 +0.5**
baz=56
MOY Mondy 56.19 39 *e*P **P 15 55 42.9 +2.6**
MOY pmax pmax
comp=Z,462nm,3.4s
W25A X Bar L Ranch, 56.21 282 ⇓P **P 15 55 40.4 -0.2**
baz=56,SNR=13
MVCO Mesa Verde 56.25 286 ⇑P **P 15 55 41.4 +0.5**
baz=56,SNR=21
MVCO Mesa Verde 56.25 286 *e*P **P 15 55 41.1 +0.2**
comp=Z,244nm,1.6s,mb6.0
MVCO LR LR
comp=Z,24µm,19.0s,MS6.3
MVCO Mesa Verde 56.25 286 *e*P **P 15 55 41.1 +0.2**
comp=Z,244nm,1.6s,mb6.0
O12A Currie 56.25 293 ⇓P **P 15 55 41.9 +1.0**
baz=56,SNR=51
Q15A Fillmore 56.36 291 ⇑P **P 15 55 42.2 +0.6**
baz=56,SNR=60
FDF Fort de France 56.41 229 *e*P **P 15 55 42.1 -0.2**
FDF pmax pmax
comp=Z,329nm,1.2s,mb6.2
FDF MLR MLR
comp=Z,16µm,19.0s,MS6.1
FDF Fort de France 56.41 229 *e*P **P 15 55 42.1 -0.2**
comp=Z,329nm,1.2s,mb6.2
FDF LR LR
comp=Z,16µm,19.0s,MS6.1
FDF Fort de France 56.41 229 *e*P **P 15 55 42.1 -0.2**
comp=Z,329nm,1.2s,mb6.2
S18A Hurst Farm, Bl 56.47 288 ⇓P **P 15 55 42.7 +0.2**
baz=56,SNR=106
X26A CR and CF Fran 56.49 281 ⇓P **P 15 55 42.9 +0.3**
baz=56,SNR=18
V23A Ortiz Mt. (NFS 56.50 284 ⇑P **P 15 55 43.8 +1.1**
baz=56,SNR=9.2
MSTX Muleshoe 56.53 280 ⇑P **P 15 55 42.8 -0.1**
baz=56,SNR=10
IRK Irkutsk 56.57 37 *e*P **P 15 55 43.1 +0.1**
IRK *e* 15 57 58.8
IRK pmax pmax
comp=Z,170nm,1.9s,mb5.8
N10A Dunphy 56.58 295 ⇑P **P 15 55 43.9 +0.7**
baz=56
K05A Summer Lake 56.59 300 ⇓P **P 15 55 44.1 +0.9**
baz=56,SNR=54
R16A Teasdale 56.59 289 ⇑P **P 15 55 43.5 +0.2**
baz=56,SNR=83
W24A Lazy 6 Ranch, 56.62 283 ⇑P **P 15 55 44.2 +0.7**
baz=56,SNR=24
P13A Bates Ranch, G 56.64 292 ⇓P **P 15 55 44.7 +1.0**
baz=56,SNR=100
V22A San Miguel Ran 56.67 284 ⇓P **P 15 55 44.5 +0.6**
baz=56,SNR=26
MSU Marysvale 56.69 290 *e*P **P 15 55 44.4 +0.4**
MSU *e* 15 57 47.8
MSU pmax pmax
comp=Z,90nm,0.9s,mb5.8
MSU Marysvale 56.69 290 *e*P **P 15 55 44.4 +0.4**
comp=Z,90nm,0.9s,mb5.8
MSU *e*PP PP 15 57 47.8 -1.9
MSU Marysvale 56.69 290 *e*P **P 15 55 44.4 +0.4**
comp=Z,90nm,0.9s,mb5.8
CLNS Chul'man 56.72 22 *e*P **P 15 55 46.8 +2.9**
CLNS *e**PP pP 15 55 55.8 +8.7
CLNS *e* 15 57 48.2
CLNS *e*S **S 16 03 42.8 +6.8**
CLNS *e*S **S 16 03 44.9 +8.9**
CLNS pmax pmax
comp=N,44nm,1.4s
CLNS pmax pmax
comp=E,12nm,1.4s
CLNS pmax pmax
comp=N,34nm,1.7s
CLNS pmax pmax
comp=E,19nm,1.8s
CLNS smax
comp=N,1µm,10.6s
CLNS smax
comp=E,2µm,13.6s
CLNS MLR MLR
comp=E,7µm,16.0s,MS6.0
CLNS MLR MLR
comp=N,8µm,17.0s,MS6.0
O11A Cowboy Ranch, 56.74 294 ⇓P **P 15 55 45.4 +1.1**
baz=56,SNR=92
Q14A Sevier Lake (B 56.74 291 ⇓P **P 15 55 45.2 +0.8**
baz=56,SNR=132
Y27A Causey 56.78 280 ⇑P **P 15 55 44.3 -0.4**
baz=57,SNR=10
T19A Beclabito 56.79 287 ⇑P **P 15 55 44.6 -0.2**
baz=57,SNR=13
GTBY Guantanamo Bay 56.81 246 *e*P **P 15 55 46.7 +1.6**
comp=N,223nm,1.5s,mb6.0

GTBY LR LR
comp=Z,20µm,21.0s,MS6.2
S17A Black Ridge (B 56.86 289 ⇓P **P 15 55 45.2 0.0**
baz=57,SNR=125
X25A Clemmons Ranch 56.88 282 ⇑P **P 15 55 46.1 +0.7**
baz=57
T18A Mexican Hat 56.89 287 ⇑P **P 15 55 45.7 +0.2**
baz=57,SNR=190
TLY Talaya 56.91 38 P **P 15 55 49.8 +4.4**
comp=Z,109nm,0.7s,mb6.0,SNR=7.7
TLY Talaya 56.91 38 *eP* **P 15 55 47.6 +2.2**
TLY *e* 15 57 48.3
TLY *eS* **S 16 03 44.6 +5.9**
TLY *eSS* SS 16 07 36.4 +10
TLY pmax pmax
comp=Z,29nm,1.4s,mb5.1
TLY MLR MLR
comp=Z,19µm,16.0s,MS6.3
TLY Talaya 56.91 38 *eP* **P 15 55 45.3 -0.1**
comp=Z,19nm,1.0s,mb5.1
TLY LR LR
comp=Z,23µm,20.0s,MS6.3
TLY Talaya 56.91 38 P **P 15 55 49.9 +4.5**
SNR=15
TLY P 15 55 49.9
SNR=15
TLY Talaya 56.91 38 *eP* **P 15 55 45.3 -0.1**
comp=Z,19nm,1.0s,mb5.1
HKT Hockley 56.92 271 *eP* **P 15 55 44.9 -0.8**
HKT pmax pmax
comp=Z,32nm,1.0s,mb5.3
HKT MLR MLR
comp=Z,17µm,20.0s,MS6.2
HKT Hockley 56.92 271 *eP* **P 15 55 44.9 -0.8**
comp=Z,32nm,1.0s,mb5.3
HKT LR LR
comp=Z,17µm,20.0s,MS6.2
HKT Hockley 56.92 271 *eP* **P 15 55 44.9 -0.8**
comp=Z,32nm,1.0s,mb5.3
O10A Cortez Mining, 56.94 295 ⇓P **P 15 55 46.5 +0.7**
baz=57,SNR=18
U20A Newcomb 56.96 286 ⇓P **P 15 55 46.1 +0.1**
baz=57,SNR=22
R15A Junction 56.98 290 ⇑P **P 15 55 46.7 +0.6**
baz=57,SNR=14
W23A Werner Place, 56.98 283 ⇓P **P 15 55 46.7 +0.6**
baz=57,SNR=8.7
SDPT Sand Point 56.99 334 P **P 15 55 44.9 -0.9**
comp=Z,400nm,1.6s,mb6.2
SDPT Sand Point 56.99 334 P **P 15 55 44.9 -1.0**
comp=Z,400nm,1.6s,mb6.2
P12A McGill 56.99 293 ⇑P **P 15 55 47.2 +1.1**
baz=57,SNR=69
Y26A Elida 57.03 280 ⇓P **P 15 55 47.1 +0.6**
baz=57
MOD Modoc 57.07 299 *eP* **P 15 55 46.7 0.0**
comp=Z,159nm,1.6s,mb5.8
MOD LR LR
comp=Z,34µm,20.0s,MS6.4
MOD Modoc 57.07 299 *eP* **P 15 55 46.7 +0.1**
comp=Z,159nm,1.6s,mb5.8
Q13A Wheeler Ranch, 57.07 292 ⇓P **P 15 55 47.7 +1.0**
baz=57,SNR=54
V21A Milan 57.07 285 ⇓P **P 15 55 47.0 +0.3**
baz=57,SNR=18
BMN Battle Mountai 57.11 295 *eP* **P 15 55 46.8 -0.2**
BMN pmax pmax
comp=Z,78nm,1.6s,mb5.5
BMN MLR MLR
comp=Z,44µm,21.0s,MS6.5
BMN Battle Mountai 57.11 295 *eP* **P 15 55 46.8 -0.2**
comp=Z,78nm,1.6s,mb5.5
BMN LR LR
comp=Z,44µm,21.0s,MS6.5
BMN Battle Mountai 57.11 295 *eP* **P 15 55 46.8 -0.2**
comp=Z,78nm,1.6s,mb5.5
X24A Lazy VL Ranch, 57.18 282 ⇑P **P 15 55 48.4 +0.9**
baz=57
R14A James Farms, M 57.22 291 ⇑P **P 15 55 48.9 +1.1**
baz=57,SNR=13
P11A Circle Ranch, 57.27 294 ⇑P **P 15 55 49.1 +1.0**
baz=57
Z27A Tatum 57.28 280 ⇓P **P 15 55 47.9 -0.3**
baz=57,SNR=23
ANMO Albuquerque 57.30 283 *eP* **P 15 55 48.9 +0.6**
ANMO pmax pmax
comp=Z,18nm,0.8s
ANMO MLR MLR
comp=Z,24µm,19.0s
ANMO Albuquerque 57.30 283 *eP* **P 15 55 48.9 +0.5**
comp=Z,4.6nm,0.8s,mb4.6
ANMO LR LR
comp=Z,24µm,19.0s,MS6.3
ANMO Albuquerque 57.30 283 *eP* **P 15 55 48.9 +0.6**
comp=Z,4.6nm,0.8s,mb4.6
U19A Dine' College, 57.33 286 ⇓P **P 15 55 48.3 -0.2**
baz=57,SNR=13
Q12A Willow Creek R 57.33 293 ⇓P **P 15 55 49.6 +1.1**
baz=57,SNR=42
W22A Albuquerque 57.37 284 ⇓P **P 15 55 49.8 +0.9**
baz=57
BBGH Gun Hill 57.39 226 PFAKE 15 56 00.0 +11
BBGH LR LR
comp=Z,24µm,21.0s,MS6.3
T17A Navajo Res., N 57.40 288 ⇓P **P 15 55 48.7 -0.3**
baz=57,SNR=23
Y25A Mesa, Roswell 57.41 281 ⇓P **P 15 55 49.4 +0.3**
baz=57,SNR=64
V20A Brimhall 57.43 285 ⇑P **P 15 55 49.3 0.0**
baz=57,SNR=40
S15A Panguitch 57.47 290 ⇑P **P 15 55 50.6 +1.0**
baz=57,SNR=30
HUMO Hull Mountain 57.48 301 PFAKE 15 56 00.0 +10
HUMO LR LR
comp=Z,42µm,19.0s,MS6.6
P10A Eureka 57.50 294 ⇑P **P 15 55 50.6 +0.9**
baz=57,SNR=21
U18A Rough Rock, Ch 57.50 287 ⇑P **P 15 55 49.9 +0.1**
baz=57,SNR=83
Z26A Caprock 57.65 280 ⇑P **P 15 55 50.9 0.0**
baz=58,SNR=44
W21A San Fidel 57.66 284 ⇑P **P 15 55 51.5 +0.6**
baz=57
U17A Shonto 57.68 288 ⇓P **P 15 55 51.1 +0.1**
baz=58,SNR=26
T16A Glen Canyon Da 57.70 289 ⇑P **P 15 55 50.6 -0.6**
baz=58,SNR=17
R13A O'Grain Ranch, 57.71 291 ⇑P **P 15 55 52.2 +1.0**
baz=58,SNR=111
Y24A Capitan 57.73 282 ⇑P **P 15 55 52.1 +0.7**
baz=58,SNR=53
S14A Cedar City 57.74 291 ⇑P **P 15 55 52.1 +0.7**
baz=58,SNR=36
V19A Window Rock 57.75 286 ⇑P **P 15 55 51.2 -0.3**
baz=58,SNR=7.6
Q11A Duckwater 57.83 293 ⇓P **P 15 55 53.0 +0.9**
baz=58,SNR=24
R12A Pony Springs, 57.84 292 ⇑P **P 15 55 52.8 +0.7**
baz=58,SNR=32
127A Arkansas Junct 57.89 279 ⇓P **P 15 55 52.0 -0.6**
baz=58,SNR=6.3
X22A Bernardo 57.91 283 ⇑P **P 15 55 54.1 +1.4**
baz=58,SNR=30
Z25A Roswell 57.97 281 ⇓P **P 15 55 53.4 +0.3**
baz=58,SNR=26
ZAK Zakamensk 57.98 39 *eP* **P 15 55 54.2 +1.2**
ZAK *e* 15 59 23.3
ZAK pmax pmax
comp=Z,39nm,1.1s,mb5.3
Y23A Lovelace Mesa, 57.99 282 ⇓P **P 15 55 54.0 +0.8**
baz=58,SNR=42
CCUT Cedar City 57.99 291 *eP* **P 15 55 54.0 +0.7**
comp=Z,325nm,1.5s,mb6.1
CCUT Cedar City 57.99 291 *eP* **P 15 55 54.0 +0.8**
comp=Z,325nm,1.5s,mb6.1
T15A Red Dirt Ranch 58.04 289 ⇓P **P 15 55 53.1 -0.5**
baz=58,SNR=62
BNM Barren Site 58.05 283 *eP* **P 15 55 54.3 +0.6**
comp=Z,154nm,1.4s,mb5.8
BNM Barren Site 58.05 283 *eP* **P 15 55 54.3 +0.6**
comp=Z,154nm,1.4s,mb5.8
LAZ Ladron 58.05 284 *eP* **P 15 55 54.4 +0.7**
comp=Z,107nm,1.4s,mb5.7
LAZ Ladron 58.05 284 *eP* **P 15 55 54.4 +0.7**
comp=Z,107nm,1.4s,mb5.7
V18A Ganado 58.13 287 ⇓P **P 15 55 53.8 -0.4**
baz=58,SNR=22
YBH Yreka Blue Hor 58.14 300 *eP* **P 15 55 52.4 -1.8**
YBH pmax pmax
comp=Z,66nm,1.5s
YBH MLR MLR
comp=Z,23µm,19.0s
YBH Yreka Blue Hor 58.14 300 *eP* **P 15 55 52.4 -1.8**
comp=Z,66nm,1.5s,mb5.4
YBH LR LR
comp=Z,23µm,19.0s,MS6.3
YBH Yreka Blue Hor 58.14 300 *eP* **P 15 55 52.4 -1.8**
comp=Z,66nm,1.5s,mb5.4
Q10A Clear Creek Ra 58.15 294 ⇑P **P 15 55 55.4 +1.1**
baz=58,SNR=118
S13A Holt Ranch, En 58.17 291 ⇑P **P 15 55 55.2 +0.7**
baz=58,SNR=121
KSH Kashi 58.18 65 P **P 15 55 58.8 +4.3**
KSH *eP* pP 15 56 02.8 +5.1
KSH *eS* sP 15 56 06.0 +7.1
KSH *ePcP* PcP 15 56 47.0 +1.1
KSH *ePP* PP 15 58 09.8 +6.9
KSH *eScP* ScP 16 00 46.0 +0.3
KSH *ePcS* PcS 16 00 48.3 +1.0
KSH *eS* **S 16 04 00.3 +4.6**
KSH *eSS* sS 16 04 08.0 +7.1
KSH *eScS* ScS 16 05 43.0 -0.8
KSH *eSS* SS 16 07 54.0 +7.5
KSH pmax pmax
comp=Z,290nm,1.8s,mb6.0
KSH LR LR
comp=N,21µm,11.4s,MS6.6
KSH LR LR
comp=E,25µm,15.5s,MS6.6
KSH LR LR
comp=Z,24µm,16.2s,MS6.4
LENM Lemitar 58.18 283 *eP* **P 15 55 55.0 +0.4**
comp=Z,112nm,1.4s,mb5.7
LENM Lemitar 58.18 283 *eP* **P 15 55 55.0 +0.4**
comp=Z,112nm,1.4s,mb5.7
Z24A Sheeppen Canyo 58.20 281 ⇓P **P 15 55 55.4 +0.6**
baz=58,SNR=38
126A Clayton Basin, 58.20 280 ⇓P **P 15 55 54.7 -0.1**
baz=58,SNR=13
JCT Junction City 58.21 275 *eP* **P 15 55 53.9 -0.9**
JCT pmax pmax
comp=Z,135nm,0.9s,mb6.0
JCT MLR MLR
comp=Z,14µm,19.0s,MS6.1
JCT Junction City 58.21 275 *eP* **P 15 55 53.9 -1.0**
comp=Z,135nm,0.9s,mb6.0
JCT LR LR
comp=Z,14µm,19.0s,MS6.1
JCT Junction City 58.21 275 *eP* **P 15 55 53.9 -0.9**
comp=Z,135nm,0.9s,mb6.0
R11A Troy Canyon, C 58.23 293 ⇓P **P 15 55 55.5 +0.7**
baz=58,SNR=166
Y22D IRIS PASSCAL I 58.24 283 ⇓P **P 15 55 56.0 +1.0**
baz=58
X21A Alamocita Cree 58.29 284 ⇓P **P 15 55 56.5 +1.2**
baz=58,SNR=172
DBIC Dimbokro 58.35 161 P **P 15 55 55.0 -0.9**
comp=Z,48nm,1.1s,mb5.4,baz=347,slow=10,SNR=9.0
DBIC LR LR 16 18 52.3
comp=Z,15µm,18.4s,MS6.1,baz=343,slow=34
DBIC Dimbokro 58.35 161 *eP* **P 15 55 54.4 -1.5**
DBIC pmax pmax
comp=Z,341nm,1.8s
DBIC MLR MLR
comp=Z,13µm,20.0s
DBIC Dimbokro 58.35 161 *eP* **P 15 55 54.4 -1.5**
comp=Z,341nm,1.8s,mb6.1
DBIC LR LR
comp=Z,13µm,20.0s,MS6.0
DBIC Dimbokro 58.35 161 *eP* **P 15 55 54.4 -1.5**
comp=Z,341nm,1.8s,mb6.1
TIC Toumodi 58.35 161 *eP* **P 15 55 57.0 +1.1**
comp=Z,282nm,1.2s,mb6.2
Y22A Socorro 58.38 283 ⇑P **P 15 55 56.9 +1.0**
baz=58,SNR=67
W19A Sanders 58.41 286 ⇓P **P 15 55 55.7 -0.4**
baz=58
227A Bennet, Jal 58.43 279 ⇑P **P 15 55 55.8 -0.5**
baz=58,SNR=8.6
125A Gardner Draw, 58.47 280 ⇓P **P 15 55 56.2 -0.5**
baz=58,SNR=23
U15A North Rim 58.51 289 ⇑P **P 15 55 56.3 -0.5**
baz=58,SNR=161
X20A Quemado 58.52 285 ⇓P **P 15 55 57.6 +0.7**
baz=58,SNR=131
W18A Petrified Fore 58.55 286 ⇑P **P 15 55 57.2 0.0**
baz=58
S12A Delamar Landin 58.56 292 ⇓P **P 15 55 58.2 +1.0**
baz=58,SNR=63
V17A Tonalea, Kykot 58.57 287 ⇑P **P 15 55 57.5 +0.3**
baz=58,SNR=316
R10A Warm Springs 58.57 293 ⇓P **P 15 55 58.2 +1.0**
baz=58,SNR=17
Y21A Point of Rocks 58.62 284 ⇑P **P 15 55 59.0 +1.4**
baz=58,SNR=93
Z23A Rita Site, Whi 58.64 282 ⇓P **P 15 55 58.7 +1.0**
baz=58,SNR=29
KIC Kosan Boka 58.67 161 *eP* **P 15 55 59.1 +1.0**
comp=Z,778nm,1.9s,mb6.4
T13A Saint George 58.67 291 ⇓P **P 15 55 59.0 +1.0**
baz=58,SNR=78
GDL2 Guadalupe Moun 58.73 280 *eP* **P 15 55 57.7 -0.8**
comp=Z,96nm,1.2s,mb5.7
GDL2 Guadalupe Moun 58.73 280 *eP* **P 15 55 57.7 -0.8**
comp=Z,96nm,1.2s,mb5.7
226A Malaga, Loving 58.74 280 ⇑P **P 15 55 58.5 0.0**
baz=58,SNR=22
328A Wristen Ranch, 58.76 278 ⇓P **P 15 55 57.9 -0.8**
baz=59
LIC Lamto 58.76 161 *eP* **P 15 55 59.8 +1.0**
comp=Z,356nm,1.3s,mb5.9,baz=348
LIC *e*MLR MLR
comp=Z,19µm,19.0s,MS5.9
LIC Lamto 58.76 161 *eP* **P 15 55 59.8 +1.0**
comp=Z,178nm,1.3s,mb5.9
LIC LR LR
comp=Z,10µm,19.0s,MS5.9
LIC Lamto 58.76 161 *eP* **P 15 55 59.8 +1.0**
comp=Z,178nm,1.3s,mb5.9
124A Stringfield Ra 58.78 281 ⇓P **P 15 55 59.3 +0.6**
baz=59,SNR=58
BEKR Beckwourth 58.83 297 ⇓P **P 15 55 59.0 0.0**
baz=59,SNR=13
U14A Mt Trumbull 58.89 290 ⇓P **P 15 55 59.3 -0.2**
baz=59,SNR=24
WMQ Urumqi 58.89 53 P **P 15 56 02.8 +3.4**
WMQ pP pP 15 56 07.0 +4.4
WMQ PcP PcP 15 56 54.3 +5.7
WMQ PP PP 15 58 14.3 +5.3
WMQ S **S 16 04 06.5 +1.8**
WMQ sS sS 16 04 12.0 +2.0
WMQ ScS ScS 16 05 48.5 -0.4
WMQ SS SS 16 08 01.0 +3.6
WMQ LR LR
comp=N,15µm,20.0s,MS6.6
WMQ LR LR
comp=E,41µm,18.0s,MS6.6
WMQ LR LR
comp=Z,26µm,20.0s,MS6.3
S11A Rachel 58.89 292 ⇑P **P 15 56 00.4 +0.9**
baz=59
WUAZ Wupatki 58.90 288 ⇑P **P 15 55 59.7 +0.1**
baz=59,SNR=107
WUAZ Wupatki 58.90 288 *eP* **P 15 55 59.5 -0.1**
comp=Z,213nm,0.9s,mb6.2
WUAZ LR LR
comp=Z,27µm,19.0s,MS6.4
WUAZ Wupatki 58.90 288 *eP* **P 15 55 59.5 -0.1**
comp=Z,213nm,0.9s,mb6.2
X19A St. Johns 58.95 285 ⇓P **P 15 56 00.1 +0.2**
baz=59,SNR=54
Z22A Elephant Butte 58.96 283 ⇓P **P 15 56 00.8 +0.8**
baz=59,SNR=116
V15A Kaibab Nationa 58.98 289 ⇓P **P 15 56 00.5 +0.4**
baz=59,SNR=176
W17A Winslow 59.00 287 ⇓P **P 15 56 00.6 +0.3**
baz=59,SNR=41
S10A Tonopah Range, 59.00 293 ⇓P **P 15 56 00.7 +0.5**
baz=59,SNR=51
Y20A Horse Springs, 59.01 284 ⇑P **P 15 56 01.5 +1.1**
baz=59,SNR=84
225A Deer Hill, Car 59.01 280 ⇑P **P 15 56 00.1 -0.3**
baz=59,SNR=34
GRGR Grenville 59.01 228 PFAKE 15 56 10.0 +9.5
GRGR LR LR
comp=Z,14µm,20.0s,MS6.1
CIT Chita 59.06 31 *eP* **P 15 56 05.4 +4.9**
CIT pmax pmax
comp=Z,484nm,1.9s,mb6.2
WDC Whiskeytown Da 59.06 300 *eP* **P 15 55 58.7 -1.9**
WDC pmax pmax
comp=Z,121nm,1.8s,mb5.6
WDC MLR MLR
comp=Z,42µm,19.0s,MS6.6
WDC Whiskeytown Da 59.06 300 *eP* **P 15 55 58.7 -2.0**
comp=Z,121nm,1.8s,mb5.6
WDC LR LR
comp=Z,42µm,19.0s,MS6.6
WDC Whiskeytown Da 59.06 300 *eP* **P 15 55 58.7 -1.9**
comp=Z,121nm,1.8s,mb5.6
WCN Washoe City 59.08 297 ⇓P **P 15 56 01.3 +0.5**
baz=59,SNR=33
TPH Tonopah 59.12 294 PFAKE 15 56 10.0 +8.9
TPH LR LR
comp=Z,56µm,20.0s,MS6.7
X18A Snowflake 59.14 286 ⇑P **P 15 56 00.9 -0.4**
baz=59
123A Bell Site, Whi 59.19 282 ⇑P **P 15 56 02.2 +0.6**
baz=59
U13A Pakoon Wash 59.21 290 ⇓P **P 15 56 02.6 +0.8**
baz=59,SNR=88
Z21A St. Cloud Mine 59.22 283 ⇑P **P 15 56 02.9 +1.1**
baz=59,SNR=44
NVAR Mina Array Bea 59.25 295 P **P 15 56 00.7 -1.3**
comp=Z,7.8nm,0.9s,mb4.7,baz=48,slow=5.0,SNR=27
NVAR PP PP 15 58 16.3 +3.9
comp=Z,4.3nm,0.9s,baz=42,slow=5.2,SNR=4.1
NVAR PKP2bc 16 25 51.9
comp=Z,0.7nm,0.9s,baz=144,slow=5.5,SNR=4.5
NVAR Mina Array Bea 59.25 295 P **P 15 56 00.7 -1.3**
NVAR PP PP 15 58 16.3 +3.9
NVAR ⇑*e* 16 25 51.9
NVAR Mina Array Bea 59.25 295 P **P 15 56 00.7 -1.3**
T12A Moapa 59.26 291 ⇓P **P 15 56 02.3 +0.2**
baz=59
428A Kincaid Ranch, 59.27 278 ⇑P **P 15 56 02.1 0.0**
baz=59,SNR=85
MTDJ Mount Denham 59.32 247 P **P 15 56 03.0 +0.3**
MTDJ LR LR
comp=Z,11µm,19.0s,MS6.0
MTDJ Mount Denham 59.32 247 P **P 15 56 03.0 +0.3**
326A Caldwell Ranch 59.32 279 ⇑P **P 15 56 02.7 +0.2**
baz=59,SNR=20
W16A Flagstaff 59.33 288 ⇓P **P 15 56 02.9 +0.3**
baz=59,SNR=31
Y19A Nutrioso 59.34 285 ⇓P **P 15 56 03.6 +0.9**
baz=59,SNR=59
U12A Valley of Fire 59.44 291 ⇑P **P 15 56 03.5 +0.2**
baz=59,SNR=13
122A Conniff Cattle 59.45 282 ⇓P **P 15 56 04.2 +0.8**
baz=59
427A Hayter Ranch, 59.47 278 ⇓P **P 15 56 03.5 -0.1**
baz=59,SNR=21
V14A Boquillas Ranc 59.53 289 ⇑P **P 15 56 04.2 +0.3**
baz=59,SNR=104
W15A Williams 59.57 288 ⇓P **P 15 56 04.7 +0.5**
baz=59,SNR=25
KBL Kabul 59.59 73 *eP* **P 15 56 06.4 +2.1**
KBL pmax pmax
comp=Z,92nm,1.5s,mb5.6
KBL Kabul 59.59 73 *eP* **P 15 56 06.3 +2.0**
comp=Z,92nm,1.5s,mb5.6
MNTX Cornudas Mount 59.61 280 *eP* **P 15 56 03.4 -1.1**
comp=Z,22nm,1.0s,mb5.1
MNTX LR LR
comp=Z,26µm,19.0s,MS6.4
MNTX Cornudas Mount 59.61 280 *eP* **P 15 56 03.4 -1.1**
comp=Z,22nm,1.0s,mb5.1
X17A Forest Lakes 59.67 287 ⇑P **P 15 56 05.4 +0.5**
baz=60,SNR=36
V13A Grand Canyon W 59.70 290 ⇑P **P 15 56 05.4 +0.3**
baz=60,SNR=51
325A Bean Ranch, Si 59.71 280 ⇓P **P 15 56 04.3 -0.9**
baz=60,SNR=9.1
Z20A Nine Sixteen R 59.78 284 ⇓P **P 15 56 06.4 +0.8**
baz=60,SNR=126
U11A Corn Creek 59.79 291 ⇓P **P 15 56 06.1 +0.3**
baz=60
528A Cox Ranch, San 59.80 277 ⇑P **P 15 56 05.0 -0.8**
baz=60,SNR=10
223A Chaparral, Ant 59.80 281 ⇓P **P 15 56 05.4 -0.4**
baz=60
324A Moseley Ranch, 59.87 280 ⇓P **P 15 56 05.6 -0.7**
baz=60,SNR=28
X16A Lo Mia Camp, P 59.87 287 ⇑P **P 15 56 06.7 +0.4**
baz=60,SNR=97
W14A Seligman 59.88 289 ⇓P **P 15 56 06.5 +0.1**
baz=60,SNR=16
KVTX Kingsville 59.90 271 PFAKE 15 56 20.0 +13
KVTX LR LR
comp=Z,28µm,21.0s,MS6.4
426A McDonald Obser 59.90 279 ⇓P **P 15 56 06.1 -0.4**
baz=60,SNR=39
Z19A T-Link Ranch, 59.91 285 ⇑P **P 15 56 07.4 +0.8**
baz=60,SNR=33
121A Cookes Peak, D 59.93 283 ⇑P **P 15 56 07.4 +0.7**
baz=60,SNR=44
222A Williams Famil 60.00 282 ⇓P **P 15 56 07.3 +0.1**
baz=60,SNR=22
GRAC Grapevine Rang 60.11 293 ⇑P **P 15 56 08.0 +0.1**
baz=60,SNR=11
X15A Humboldt 60.15 288 ⇑P **P 15 56 08.1 -0.1**
baz=60,SNR=38
MLAC Mammoth Lakes 60.15 295 ⇑P **P 15 56 09.0 +0.8**
baz=60
527A Woodward Ranch 60.17 278 ⇑P **P 15 56 07.7 -0.7**
baz=60,SNR=32
V12A Nelson 60.17 291 ⇑P **P 15 56 08.2 -0.2**
baz=60,SNR=44
U10A Ash Meadows, A 60.18 292 ⇓P **P 15 56 08.9 +0.5**
baz=60,SNR=15
425A Indio Mountain 60.22 280 ⇓P **P 15 56 07.7 -1.0**
baz=60,SNR=12
Y17A Roosevelt 60.24 286 ⇓P **P 15 56 09.3 +0.5**
baz=60,SNR=63
120A U Bar Ranch, L 60.28 284 ⇓P **P 15 56 09.5 +0.4**
baz=60,SNR=86
W13A Hualapai Mount 60.31 289 ⇓P **P 15 56 09.3 0.0**
baz=60,SNR=30
Y16A Circle Bar Ran 60.35 287 ⇑P **P 15 56 10.3 +0.8**
baz=60,SNR=78
FURC Furnace Creek, 60.36 293 ⇑P **P 15 56 09.9 +0.3**
baz=60
119A Ashpeak Ranch, 60.38 284 ⇓P **P 15 56 10.5 +0.7**
baz=60,SNR=75
TIN Tinemaha 60.41 294 ⇑P **P 15 56 10.0 +0.1**
baz=60
Z18A Geronimo 60.42 285 ⇑P **P 15 56 10.7 +0.6**
baz=60
628A Black Gap, Mar 60.42 277 ⇓P **P 15 56 09.5 -0.7**
baz=60,SNR=28
CMB Columbia Colle 60.42 296 *eP* **P 15 56 09.3 -0.7**
CMB pmax pmax
comp=Z,82nm,1.5s,mb5.5
CMB MLR MLR
comp=Z,42µm,19.0s,MS6.6
CMB Columbia Colle 60.42 296 *eP* **P 15 56 09.3 -0.7**
comp=Z,82nm,1.5s,mb5.5
CMB LR LR
comp=Z,42µm,19.0s,MS6.6
CMB Columbia Colle 60.42 296 *eP* **P 15 56 09.3 -0.7**
comp=Z,82nm,1.5s,mb5.5
Z17A San Carlos Hig 60.42 286 ⇓P **P 15 56 11.0 +0.9**
baz=60,SNR=8.5
X14A Yava 60.44 288 ⇑P **P 15 56 10.3 +0.2**
baz=60,SNR=29
526A Mary Lane Ranc 60.45 278 ⇓P **P 15 56 10.4 0.0**
baz=60,SNR=26
W12A Cal Nev Ari 60.55 290 ⇑P **P 15 56 10.9 0.0**
baz=60
SHOC Shoshone 60.61 292 ⇑P **P 15 56 11.6 +0.2**
baz=60,SNR=8.9
HOPS Hopland 60.64 299 P **P 15 56 10.2 -1.3**
comp=Z,324nm,1.5s,mb6.2
HOPS LR LR
comp=Z,39µm,19.0s,MS6.6
HOPS Hopland 60.64 299 P **P 15 56 10.2 -1.3**
comp=Z,324nm,1.5s,mb6.2
Y15A Casa Rosa Ranc 60.65 288 ⇓P **P 15 56 11.8 +0.2**
baz=60,SNR=30
627A Terlingua Ranc 60.67 277 ⇓P **P 15 56 11.5 -0.4**
baz=60,SNR=48
118A Homack Ranch, 60.77 285 ⇑P **P 15 56 13.3 +0.8**

baz=61,SNR=128
220A Playas Peak, P 60.79 283 ⇑P **P 15 56 13.0 +0.4**
baz=61,SNR=74
Z16A Peralta Trail, 60.79 286 ⇑P **P 15 56 13.0 +0.4**
baz=61,SNR=16
DAC Darwin (Calif) 60.82 293 PFAKE 15 56 20.0 +7.2
DAC LR LR
comp=Z,36μm,20.0s,MS6.5
LDFC Landfair 60.84 290 *e*P **P 15 56 12.8 -0.1**
comp=Z,164nm,0.8s,mb6.2
LDFC Landfair 60.84 290 *e*P **P 15 56 12.8 -0.1**
comp=Z,164nm,0.8s,mb6.2
TUQ Turquoise Moun 60.86 291 ⇓P **P 15 56 13.4 +0.3**
baz=61
CWC Cottonwood Cre 60.88 294 ⇓P **P 15 56 13.3 +0.2**
baz=61
TXAR Lajitas Array 60.89 278 P **P 15 56 12.8 -0.6**
comp=Z,14nm,0.9s,mb5.1,baz=36,slow=4.7,SNR=44
TXAR LR LR 16 21 51.4
comp=Z,21μm,18.8s,MS6.3,baz=5.0,slow=35
TXAR PKP2bc 16 25 42.2
comp=Z,0.2nm,0.5s,baz=214,slow=4.1,SNR=5.4
TXAR Lajitas Array 60.89 278 P **P 15 56 12.8 -0.6**
TXAR LR LR 16 21 51.4
TXAR ⇑*e* 16 25 42.2
TXAR Lajitas Array 60.89 278 P **P 15 56 12.8 -0.6**
NEE2 Needles Airpor 60.90 290 ⇑P **P 15 56 13.0 -0.3**
baz=61
626A Big Bend Ranch 60.91 278 ⇓P **P 15 56 13.4 0.0**
baz=61,SNR=69
Y14A Wickenburg 60.94 288 ⇑P **P 15 56 13.5 -0.1**
baz=61,SNR=18
MPMC Manual Prospec 60.97 293 ⇓P **P 15 56 14.4 +0.6**
baz=61,SNR=40
219A White Tail Can 61.02 284 ⇓P **P 15 56 15.0 +0.8**
baz=61,SNR=140
PDMCI Parker Dam,Lak 61.10 289 ⇓P **P 15 56 15.0 +0.2**
baz=61,SNR=26
Z15A Gila River Ind 61.14 287 ⇑P **P 15 56 15.4 +0.4**
baz=61
SONM Songino Array 61.15 38 P **P 15 56 15.4 +0.6**
comp=Z,15nm,1.0s,mb5.1,baz=326,slow=5.6,SNR=51
SONM LR LR 16 24 16.4
comp=Z,31μm,19.3s,MS6.5,baz=348,slow=38
SONM Songino Array 61.15 38 P **P 15 56 15.4 +0.5**
117A Oracle 61.16 285 ⇑P **P 15 56 15.9 +0.7**
baz=61,SNR=117
320A Kipp Ranch, An 61.28 283 ⇑P **P 15 56 16.5 +0.6**
baz=61,SNR=25
ULN Ulaanbaatar 61.30 37 *e*P **P 15 56 16.8 +0.9**
ULN pmax pmax
comp=Z,278nm,2.0s,mb6.0
ULN MLR MLR
comp=Z,22μm,20.0s,MS6.3
ULN Ulaanbaatar 61.30 37 *e*P **P 15 56 16.8 +1.0**
comp=Z,278nm,2.0s,mb6.0
ULN LR LR
comp=Z,22μm,20.0s,MS6.3
ULN Ulaanbaatar 61.30 37 P **P 15 56 18.3 +2.5**
SNR=44
ULN P 15 56 18.3
SNR=44
ULN Ulaanbaatar 61.30 37 *e*P **P 15 56 16.8 +0.9**
comp=Z,278nm,2.0s,mb6.0
MCCM Marconi Confer 61.30 298 *e*P **P 15 56 16.2 +0.2**
comp=Z,210nm,1.4s,mb6.1
MCCM LR LR
comp=Z,37μm,19.0s,MS6.5
MCCM Marconi Confer 61.30 298 *e*P **P 15 56 16.2 +0.2**
comp=Z,210nm,1.4s,mb6.1
GMRC Granite Mounta 61.32 291 ⇓P **P 15 56 16.5 +0.3**
baz=61,SNR=104
GSC Goldstone 61.34 292 ⇓P **P 15 56 16.7 +0.4**
baz=61,SNR=26
GSC Goldstone 61.34 292 *e*P **P 15 56 16.6 +0.3**
GSC pmax pmax
comp=Z,175nm,1.6s,mb5.9
GSC Goldstone 61.34 292 *e*P **P 15 56 16.6 +0.2**
comp=Z,175nm,1.6s,mb5.9
GSC Goldstone 61.34 292 *e*P **P 15 56 16.5 +0.2**
comp=Z,175nm,1.6s,mb5.9
218A Dragoon 61.38 285 ⇓P **P 15 56 17.1 +0.5**
baz=61,SNR=30
Y13A Salome 61.39 289 ⇑P **P 15 56 16.7 0.0**
baz=61,SNR=12
TUC Tucson 61.41 285 *e*P **P 15 56 16.9 +0.1**
TUC pmax pmax
comp=Z,102nm,0.9s,mb6.0
TUC MLR MLR
comp=Z,13μm,19.0s,MS6.1
TUC Tucson 61.41 285 *e*P **P 15 56 16.9 +0.1**
comp=Z,102nm,0.9s,mb6.0
TUC LR LR
comp=Z,13μm,19.0s,MS6.1
TUC Tucson 61.41 285 *e*P **P 15 56 16.9 +0.1**
comp=Z,102nm,0.9s,mb6.0
Z14A Wintersburg 61.41 288 ⇓P **P 15 56 16.9 +0.1**
baz=61,SNR=21
RCTC Rector, Farmer 61.46 294 ⇓P **P 15 56 16.8 -0.3**
baz=61
LRMC Laurel Mountai 61.55 293 ⇑P **P 15 56 18.1 +0.4**
baz=61,SNR=13
HEC Hector,Ludlow 61.55 291 ⇓P **P 15 56 18.1 +0.4**
baz=61,SNR=15
319A Douglas 61.57 284 ⇓P **P 15 56 18.3 +0.4**
baz=61,SNR=65
116A Eloy 61.58 286 ⇓P **P 15 56 18.4 +0.4**
baz=61,SNR=28
IRM Iron Mountain 61.65 290 ⇓P **P 15 56 18.4 +0.1**
baz=61,SNR=58
115A Sonoran Desert 61.68 287 ⇓P **P 15 56 19.2 +0.6**
baz=62,SNR=111
ISA Isabella 61.71 294 ⇓P **P 15 56 19.1 +0.3**
baz=62,SNR=40
ISA Isabella 61.71 294 *e*P **P 15 56 19.1 +0.3**
ISA pmax pmax
comp=Z,161nm,1.4s,mb6.0
ISA Isabella 61.71 294 *e*P **P 15 56 19.1 +0.3**
comp=Z,161nm,1.4s,mb6.0
ISA Isabella 61.71 294 *e*P **P 15 56 19.1 +0.3**
comp=Z,161nm,1.4s,mb6.0
Y12C Blythe 61.74 289 ⇓P **P 15 56 19.5 +0.5**
baz=62,SNR=19
RRX Edison Barstow 61.78 292 ⇑P **P 15 56 19.9 +0.6**
baz=62
VES Vestal, Richgr 61.80 294 ⇓P **P 15 56 18.9 -0.5**
baz=62
318A Bisbee 61.82 284 ⇓P **P 15 56 19.8 +0.2**
baz=62,SNR=104
Z13A Yuma Proving G 61.85 288 ⇓P **P 15 56 20.1 +0.3**
baz=62,SNR=57
217A Green Valley 61.88 285 ⇓P **P 15 56 20.7 +0.7**
baz=62,SNR=108
114A Black Gap (USA 61.91 287 ⇓P **P 15 56 20.5 +0.3**
baz=62,SNR=42
SAO San Andreas Ge 61.94 297 *e*P **P 15 56 19.8 -0.6**
SAO pmax pmax
comp=Z,102nm,1.6s,mb5.7
SAO MLR MLR
comp=Z,46μm,19.0s,MS6.7
SAO San Andreas Ge 61.94 297 *e*P **P 15 56 19.8 -0.6**
comp=Z,102nm,1.6s,mb5.7
SAO LR LR
comp=Z,46μm,19.0s,MS6.7
SAO San Andreas Ge 61.94 297 *e*P **P 15 56 19.8 -0.6**
comp=Z,102nm,1.6s,mb5.7
216A Three Points, 61.96 286 ⇑P **P 15 56 21.2 +0.7**
baz=62,SNR=28
NAZ Nazwa, Dubai 62.00 90 P **P 15 56 24.2 +3.3**
SNR=15
NAZ Nazwa, Dubai 62.00 90 P **P 15 56 20.6 -0.3**
SNR=16
TEIG Tepich 62.07 259 P **P 15 56 20.0 -1.3**
comp=Z,70nm,1.3s,mb5.6
TEIG LR LR
comp=Z,26μm,19.0s,MS6.4
TEIG Tepich 62.07 259 P **P 15 56 20.0 -1.4**
comp=Z,70nm,1.3s,mb5.6
BELC Belle Mtn. 62.13 291 ⇓P **P 15 56 22.8 +1.1**
baz=62,SNR=89
ASUD Al Ashush, Dub 62.17 91 P **P 15 56 24.7 +2.7**
SNR=8.4
ASUD Al Ashush, Dub 62.17 91 P **P 15 56 21.7 -0.3**
SNR=11
FAQ Al Faqa, Dubai 62.18 90 P **P 15 56 24.9 +2.8**
SNR=16
FAQ Al Faqa, Dubai 62.18 90 P **P 15 56 21.4 -0.7**
SNR=7.6

EDW2 Edwards Air Fo 62.19 293 ⇑P **P 15 56 22.7 +0.7**
baz=62,SNR=26
BC3 Big Chuckw Mtn 62.21 290 ⇑P **P 15 56 23.1 +0.9**
baz=62,SNR=70
113A Mohawk Valley, 62.27 288 ⇓P **P 15 56 22.8 +0.2**
baz=62,SNR=20
BBRC Big Bear Sol-O 62.29 291 ⇑P **P 15 56 23.8 +1.1**
baz=62
HATD Hatta, Dubai 62.35 90 P **P 15 56 23.9 +0.7**
SNR=50
HATD Hatta, Dubai 62.35 90 P **P 15 56 23.1 -0.1**
SNR=27
QUE Quetta 62.44 77 *e*P **P 15 56 16.0 -7.8**
QUE *e*S **S 16 04 53.0 +2.5**
GLA Glamis 62.47 289 ⇑P **P 15 56 24.5 +0.6**
baz=62,SNR=33
GLA Glamis 62.47 289 *e*P **P 15 56 24.0 +0.1**
GLA pmax pmax
comp=Z,252nm,1.3s,mb6.2
GLA Glamis 62.47 289 *e*P **P 15 56 24.0 +0.1**
comp=Z,252nm,1.3s,mb6.2
GLA Glamis 62.47 289 *e*P **P 15 56 24.0 +0.1**
comp=Z,252nm,1.3s,mb6.2
214A Organ Pipe Nat 62.57 287 ⇓P **P 15 56 24.7 +0.1**
baz=62,SNR=35
BFSC Mount Baldy St 62.61 292 ⇑P **P 15 56 25.3 +0.5**
baz=62
SMMC Simmler 62.63 295 ⇑P **P 15 56 24.7 -0.3**
baz=62
PFO Pinyon Flat Ob 62.66 291 P **P 15 56 26.0 +0.8**
comp=Z,217nm,1.8s,mb6.0,SNR=11
PFO Pinyon Flat Ob 62.66 291 ⇑P **P 15 56 25.8 +0.5**
baz=62,SNR=18
PFO Pinyon Flat Ob 62.66 291 *e*P **P 15 56 25.3 +0.1**
PFO pmax pmax
comp=Z,149nm,1.5s,mb5.9
PFO MLR MLR
comp=Z,8μm,20.0s,MS5.9
PFO Pinyon Flat Ob 62.66 291 *e*P **P 15 56 25.3 +0.1**
comp=Z,93nm,1.5s,mb5.7
PFO LR LR
comp=Z,20μm,20.0s,MS6.3
PFO Pinyon Flat Ob 62.66 291 *e*P **P 15 56 25.3 +0.1**
comp=Z,93nm,1.5s,mb5.7
OSI Osito Adit 62.72 293 ⇑P **P 15 56 26.2 +0.6**
baz=62
MWC Mount Wilson 62.79 292 *e*P **P 15 56 26.4 +0.4**
MWC pmax pmax
comp=Z,58nm,1.1s,mb5.6
MWC Mount Wilson 62.79 292 *e*P **P 15 56 26.4 +0.4**
comp=Z,58nm,1.1s,mb5.6
MWC Mount Wilson 62.79 292 *e*P **P 15 56 26.4 +0.4**
comp=Z,58nm,1.1s,mb5.6
112A Yuma 62.81 289 ⇑P **P 15 56 26.7 +0.4**
baz=63
DECC Green Verdugo 62.88 293 ⇓P **P 15 56 26.7 +0.1**
baz=63
PASC Pasadena Art C 62.88 292 *e*P **P 15 56 25.8 -0.9**
comp=Z,23nm,0.8s,mb5.4
PASC Pasadena Art C 62.88 292 *e*P **P 15 56 25.8 -0.9**
comp=Z,23nm,0.8s,mb5.4
PKM Peak Mountain 62.92 294 ⇑P **P 15 56 27.4 +0.5**
baz=63
SWSC Sam W. Stewart 62.97 290 ⇑P **P 15 56 27.8 +0.5**
baz=63,SNR=10
MURC Murrieta 62.98 291 ⇑P **P 15 56 27.6 +0.3**
baz=63
HIA Hailar 62.99 28 *e*P **P 15 56 28.1 +0.9**
HIA pmax pmax
comp=Z,273nm,1.8s
HIA MLR MLR
comp=Z,23μm,20.0s
HIA Hailar 62.99 28 *e*P **P 15 56 28.1 +0.9**
comp=Z,273nm,1.8s,mb6.1
HIA LR LR
comp=Z,23μm,20.0s,MS6.3
HIA Hailar 62.99 28 *e*P **P 15 56 28.1 +0.9**
comp=Z,273nm,1.8s,mb6.1
PEA0B Petropavlovsk- 63.27 1 *e*P **P 15 56 30.6 +1.6**
PEA0B Petropavlovsk- 63.27 1 *e*P **P 15 56 30.5 +1.5**
PETK Petropavlovsk- 63.27 1 P **P 15 56 29.3 +0.3**
comp=Z,40nm,1.0s,mb5.5,baz=54,slow=7.5,SNR=26
PETK LR LR 16 24 46.8
comp=Z,10μm,18.9s,MS6.0,baz=179,slow=37
PETK Petropavlovsk- 63.27 1 P **P 15 56 29.3 +0.3**
PETK LR LR 16 24 46.8
MONP Monument Peak 63.27 290 ⇓P **P 15 56 30.1 +0.8**
baz=63,SNR=28
SBC Santa Barbara 63.27 294 ⇓P **P 15 56 29.9 +0.6**
baz=63
BLG Laguna Peak 63.30 293 ⇓P **P 15 56 29.6 +0.2**
baz=63
FMP Fort Macarthur 63.33 292 ⇓P **P 15 56 29.6 -0.1**
baz=63
DVTC Desert V Tower 63.34 290 ⇑P **P 15 56 30.4 +0.7**
baz=63,SNR=13
PET Petropavlovsk 63.36 0 *e*P **P 15 56 30.8 +1.3**
PET *e*S **S 16 05 00.2 -1.2**
PET *e*SS SS 16 09 07.6 +0.8
PET pmax pmax
comp=Z,141nm,1.2s,mb6.0
PET pmax pmax
comp=Z,300nm,5.2s
PET pmax pmax
comp=Z,900nm,4.9s
PET MLR MLR
comp=Z,17μm,19.0s,MS6.2
PET MLR MLR
comp=Z,15μm,18.0s
PET Petropavlovsk 63.36 0 *e*P **P 15 56 28.0 -1.5**
comp=Z,155nm,1.1s,mb6.0
PET LR LR
comp=Z,16μm,19.0s,MS6.2
PET Petropavlovsk 63.36 0 *e*P **P 15 56 28.0 -1.5**
comp=Z,155nm,1.1s,mb6.0
109C Camp Elliot, M 63.55 291 ⇑P **P 15 56 31.6 +0.5**
baz=63
BAR Barrett 63.56 290 *e*P **P 15 56 31.4 +0.2**
comp=Z,106nm,1.5s,mb5.7
BAR Barrett 63.56 290 *e*P **P 15 56 31.4 +0.2**
comp=Z,106nm,1.5s,mb5.7
BSC Santa Cruz Isl 63.63 294 ⇓P **P 15 56 32.1 +0.5**
baz=63
CIS Catalina Islan 63.64 292 ⇓P **P 15 56 32.2 +0.5**
baz=63
SCI San Clemente I 64.07 292 ⇑P **P 15 56 35.2 +0.7**
baz=64
THN Thein Dam 64.19 69 *e*P **P 15 56 36.1 +0.7**
KLR Kul'dur 65.14 19 *e*P **P 15 56 38.6 -2.7**
KLR *e* 15 59 07.0
KLR *e*S S 16 05 22.5 -1.1
KLR pmax pmax
comp=Z,130nm,2.2s,mb5.6
KLR pmax pmax
comp=Z,2μm,12.0s
KLR smax
comp=N,2μm,15.0s
KLR smax
comp=E,5μm,15.0s
SDV Santo Domingo 65.16 236 *e*P **P 15 56 41.2 -0.6**
comp=E,38nm,0.8s,mb5.5
SDV LR LR
comp=Z,3μm,22.0s,MS5.5
SDV Santo Domingo 65.16 236 *e*P **P 15 56 41.2 -0.6**
comp=Z,38nm,0.8s,mb5.5
SKR Severo-Kuril's 65.68 2 *e*P **P 15 56 42.0 -2.8**
SKR *e*PPP 16 00 54.0
SKR *e*PS 16 06 08.0
SKR *e* 16 06 34.0
SKR MLR MLR
comp=N,15μm,16.0s,MS6.4
SKR MLR MLR
comp=E,14μm,16.0s,MS6.4
SKR MLR MLR
comp=Z,11μm,16.0s,MS6.2
SMLA Simla 65.93 68 *e*P **P 15 56 47.4 +0.7**
HABR Khabarovsk 66.34 17 *de*P **P 15 56 50.1 +1.1**
HABR *e**PP pP 15 56 54.3 +2.0
HABR *e**SP sP 15 56 55.5 +2.0
HABR 15 57 19.8
HABR *e* 15 59 18.2
HABR *e*S S 16 05 42.1 +3.9
HABR *e*SS SS 16 10 04.0 +11
HABR pmax pmax
comp=Z,1μm,5.7s
HABR pmax pmax
comp=N,59nm,2.1s

HABR pmax pmax
comp=Z,116nm,2.1s,mb5.5
HABR pmax pmax
comp=E,45nm,1.8s
HABR MLR MLR
comp=E,9μm,15.0s,MS6.2
HABR MLR MLR
comp=Z,12μm,15.0s,MS6.2
HABR MLR MLR
comp=N,7μm,15.0s,MS6.2
GTA Gaotai 66.91 46 ⇑P **P 15 56 54.5 +1.7**
GTA pP pP 15 56 57.8 +1.8
GTA sP sP 15 57 00.3 +3.1
GTA PP PP 15 59 23.8 +4.2
GTA S S 16 05 48.8 +3.5
GTA sS sS 16 05 54.8 +4.1
GTA SS SS 16 10 09.3 +6.7
GTA pmax pmax
comp=Z,2μm,5.9s
GTA LR LR
comp=N,22μm,15.5s,MS6.6
GTA LR LR
comp=E,26μm,18.1s,MS6.6
GTA LR LR
comp=Z,42μm,16.1s,MS6.8
DDI Dehra Dun 67.00 68 *e*P **P 15 56 55.2 +1.7**
DDI *ex* x 16 00 05.3
TGUH Tegucigalpa,Un 67.12 255 *e*P **P 15 56 53.8 -0.6**
comp=Z,34nm,0.5s,mb5.6
TGUH LR LR
comp=Z,10μm,20.0s,MS6.0
TGUH Tegucigalpa,Un 67.12 255 *e*P **P 15 56 53.8 -0.6**
comp=Z,34nm,0.5s,mb5.6
NDI New Delhi 68.09 70 *e*P **P 15 57 00.0 -0.5**
NDI *ex* x 16 06 48.0
BCIP Isla Barro Col 68.44 245 PFAKE 15 57 10.0 +7.3
BCIP LR LR
comp=Z,8μm,21.0s,MS5.9
YSS Yuzh-Sakhalins 68.69 12 *k*e*P **P 15 57 07.8 +3.9**
YSS *e* 15 57 27.0
YSS *e* 15 59 42.0
YSS *e*S S 16 06 14.0 +7.5
YSS *e*PS 16 06 33.0
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
YSS MLR MLR
comp=N,11μm,16.0s,MS6.3
YSS MLR MLR
comp=Z,10μm,16.0s,MS6.2
YSS MLR MLR
comp=E,9μm,18.0s,MS6.3
YSS Yuzh-Sakhalins 68.69 12 *e*P **P 15 57 05.0 +1.1**
comp=E,90nm,1.0s,mb5.7
YSS LR LR
comp=Z,3μm,19.0s,MS5.6
AJM Ajmer 68.95 73 *i*P **P 15 57 06.0 +0.1**
HHC Hu-ho-hao-te 69.01 37 *e*P **P 15 57 07.8 +1.8**
HHC pP pP 15 57 12.5 +3.2
HHC sP sP 15 57 14.5 +4.0
HHC PcP PcP 15 57 32.5 +2.4
HHC PP PP 15 59 42.0 +4.2
HHC ScP 16 01 33.5
HHC S S 16 06 11.5 +1.0
HHC sS sS 16 06 18.3 +2.5
HHC ScS ScS 16 07 04.0 -2.3
HHC SS SS 16 10 38.0 +2.9
HHC pmax pmax
comp=Z,62nm,1.3s,mb5.4
HHC pmax pmax
comp=Z,2μm,6.1s
HHC LR LR
comp=N,20μm,17.8s,MS6.5
HHC LR LR
comp=E,7μm,15.9s,MS6.5
HHC LR LR
comp=Z,24μm,17.8s,MS6.5
MDJ Mudanjiang 69.30 22 P **P 15 57 05.8 -1.9**
MDJ PcP PcP 15 57 29.8 -1.5
MDJ S S 16 06 17.8 +4.0
MDJ SS SS 16 10 35.0 -4.3
MDJ pmax pmax
comp=Z,69nm,1.8s,mb5.3
MDJ pmax pmax
comp=Z,910nm,11.2s
MDJ LR LR
comp=N,7μm,29.3s,MS6.0
MDJ LR LR
comp=E,10μm,25.7s,MS6.0
MDJ LR LR
comp=Z,8μm,29.3s,MS5.8
MDJ Mudanjiang 69.30 22 *e*P **P 15 57 06.4 -1.3**
comp=Z,225nm,1.8s,mb5.8
MDJ LR LR
comp=Z,11μm,21.0s,MS6.1
MDJ Mudanjiang 69.30 22 *e*P **P 15 57 06.4 -1.3**
comp=Z,225nm,1.8s,mb5.8
CN2 Changchun 69.36 25 *e*P **P 15 57 07.5 -0.6**
CN2 *es*P sP 15 57 14.5 +1.9
CN2 PP PP 15 59 43.0 +2.3
CN2 *e*S S 16 06 20.3 +5.8
CN2 pmax pmax
comp=Z,40nm,1.3s,mb5.2
CN2 pmax pmax
comp=Z,2μm,6.0s
CN2 LR LR
comp=N,15μm,15.0s,MS6.4
CN2 LR LR
comp=E,9μm,15.0s,MS6.4
CN2 LR LR
comp=Z,14μm,18.0s,MS6.2
JTS JuntasAbangare 69.52 251 PFAKE 15 57 20.0 +11
JTS LR LR
comp=Z,6μm,20.0s,MS5.9
ROSC El Rosal 70.24 238 P **P 15 57 15.0 +1.1**
comp=Z,48nm,0.7s,mb5.5,baz=105,slow=10,SNR=15
ROSC El Rosal 70.24 238 *e*P **P 15 57 14.7 +0.8**
ROSC El Rosal 70.24 238 *e*P **P 15 57 14.6 +0.7**
RCBR Riachuelo 70.49 196 PFAKE 15 57 30.0 +15
RCBR LR LR
comp=Z,16μm,19.0s,MS6.3
WNDE Wendo Genet 70.63 115 *e*P **P 15 57 19.2 +2.9**
SNY Shenyang 70.89 27 ⇑P **P 15 57 20.0 +2.4**
SNY S S 16 06 41.0 +8.5
SNY pmax pmax
comp=Z,48nm,1.7s,mb5.2
SNY pmax pmax
comp=Z,1μm,12.0s
SNY LR LR
comp=N,13μm,15.3s,MS6.4
SNY LR LR
comp=E,7μm,12.9s,MS6.4
SNY LR LR
comp=Z,12μm,18.6s
BJI Beijing 70.95 34 P **P 15 57 21.5 +3.6**
BJI S S 16 06 29.8 -3.4
BJI SS SS 16 11 03.5 -1.3
BJI pmax pmax
comp=Z,79nm,1.1s,mb5.6
BJI pmax pmax
comp=Z,2μm,8.1s
BJI LR LR
comp=N,47μm,18.9s,MS6.8
BJI LR LR
comp=E,16μm,19.8s,MS6.8
BJI LR LR
comp=Z,33μm,20.3s,MS6.6
BJT Baijiatuau 70.97 34 *e*P **P 15 57 19.4 +1.4**
BJT pmax pmax
comp=Z,332nm,1.6s
BJT MLR MLR
comp=Z,47μm,20.0s
BJT Baijiatuau 70.97 34 *e*P **P 15 57 19.4 +1.3**
comp=Z,332nm,1.6s,mb6.0
BJT LR LR
comp=Z,47μm,20.0s,MS6.7
BJT Baijiatuau 70.97 34 *e*P **P 15 57 19.4 +1.4**
comp=Z,332nm,1.6s,mb6.0
VLA Vladivostok 71.13 21 P **P 15 57 20.0 +1.0**
VLA *e*S S 16 06 41.0 +5.8
LZH Lanzhou 71.22 45 *e*P **P 15 57 21.5 +1.9**
LZH pP pP 15 57 25.3 +2.4
LZH sP sP 15 57 27.8 +3.7
LZH PP PP 16 00 01.0 +4.1
LZH S S 16 06 44.3 +7.8
LZH sS sS 16 06 49.0 +7.2

LZH SS SS 16 11 09.0 -0.2
LZH pmax pmax
comp=Z,180nm,1.6s,mb5.8
LZH pmax pmax
comp=Z,510nm,4.0s
LZH LR LR
comp=E,19μm,18.5s
LZH LR LR
comp=Z,23μm,19.4s,MS6.5
ASAJ Asahikawa 71.49 12 P **P 15 57 22.1 +1.0**
comp=Z,16nm,1.0s,mb4.9,baz=302,slow=12,SNR=8.8
KKN Kakani 72.15 63 *e*P **P 15 57 26.4 +1.1**
comp=Z,133nm,1.3s,mb5.7
KKN Kakani 72.15 63 *e*P **P 15 57 26.4 +1.1**
KKN pmax pmax
comp=Z,133nm,1.3s,mb5.7
KKN Kakani 72.15 63 *e*P **P 15 57 26.4 +1.1**
comp=Z,133nm,1.3s,mb5.7
TIY Taiyuan 72.19 37 *e*P **P 15 57 29.8 +4.4**
TIY PP PP 16 00 07.8 +2.7
TIY sS sS 16 06 59.8 +6.9
TIY pmax pmax
comp=Z,1μm,5.5s
TIY LR LR
comp=N,15μm,15.0s,MS6.4
TIY LR LR
comp=E,9μm,15.8s,MS6.4
TIY LR LR
comp=Z,10μm,16.7s,MS6.2
DMN Daman 72.24 64 *e*P **P 15 57 28.0 +2.1**
comp=Z,114nm,1.1s,mb5.7
DMN Daman 72.24 64 *e*P **P 15 57 28.0 +2.1**
comp=Z,114nm,1.1s,mb5.7
GUN Gumba 72.28 63 *e*P **P 15 57 27.8 +1.7**
comp=Z,131nm,1.1s,mb5.8
GUN Gumba 72.28 63 *e*P **P 15 57 27.8 +1.7**
comp=Z,131nm,1.1s,mb5.8
PKI Pulchoki 72.39 63 *e*P **P 15 57 29.3 +2.5**
comp=Z,238nm,1.7s,mb5.9
PKI Pulchoki 72.39 63 *e*P **P 15 57 29.3 +2.5**
PKI pmax pmax
comp=Z,238nm,1.7s,mb5.8
PKI Pulchoki 72.39 63 *e*P **P 15 57 29.3 +2.5**
comp=Z,238nm,1.7s,mb5.8
LSA Lhasa 72.69 58 P **P 15 57 31.0 +2.5**
LSA pP pP 15 57 40.3 +8.5
LSA sP sP 15 57 44.0 +11
LSA LR LR
comp=N,4μm,37.8s
LSA LR LR
comp=E,11μm,29.4s
LSA LR LR
comp=Z,7μm,49.3s
LSA Lhasa 72.69 58 *e*P **P 15 57 30.1 +1.6**
LSA pmax pmax
comp=Z,129nm,1.6s,mb5.6
LSA MLR MLR
comp=Z,14μm,19.0s,MS6.2
LSA Lhasa 72.69 58 *e*P **P 15 57 30.1 +1.6**
comp=Z,130nm,1.6s,mb5.6
LSA LR LR
comp=Z,14μm,19.0s,MS6.2
LSA Lhasa 72.69 58 *e*P **P 15 57 30.1 +1.6**
comp=Z,129nm,1.6s,mb5.6
BHPL Bhopal 72.98 72 *e*P **P 15 57 30.6 +0.3**
BHPL AMb AMB 15 57 38.8
comp=Z,193nm,1.6s,mb5.8
DL2 Dalian 73.29 30⇓*i*P **P 15 57 34.5 +2.6**
DL2 PP PP 16 00 14.0 -0.5
DL2 S S 16 07 08.0 +7.9
DL2 SKS 16 07 33.5
DL2 SS SS 16 11 44.5 +3.9
DL2 pmax pmax
comp=Z,730nm,7.7s
DL2 LR LR
comp=N,9μm,18.7s
DL2 LR LR
comp=Z,13μm,19.7s,MS6.2
ERM Erimo 73.63 12 P **P 15 57 31.3 -2.6**
ERM pmax pmax
comp=Z,100nm,1.3s,mb5.6
ERM MLR MLR
comp=Z,6μm,19.0s,MS5.9
ERM Erimo 73.63 12 P **P 15 57 31.3 -2.6**
comp=Z,100nm,1.3s,mb5.6
ERM LR LR
comp=Z,6μm,19.0s,MS5.9
JBP Jabalpur 74.12 70 *e*P **P 15 57 36.4 -0.6**
JBP *ex* x 16 07 15.8
XAN Xi'an 74.65 41 P **P 15 57 40.5 +0.5**
XAN sP sP 15 57 46.3 +1.9
XAN PcP PcP 15 57 51.5 -2.7
XAN PP PP 16 00 34.5 +8.3
XAN S S 16 07 24.5 +9.0
XAN SKS 16 07 47.5
XAN ScS ScS 16 07 52.0 +0.8
XAN LR LR
comp=N,21μm,19.9s,MS6.5
XAN LR LR
comp=E,5μm,18.3s,MS6.5
XAN LR LR
comp=Z,9μm,19.6s,MS6.1
MBAR Mbarara 74.69 126 P **P 15 57 43.8 +3.4**
comp=Z,80nm,2.0s,mb5.3,SNR=10
TIA Tai'an 74.81 34 P **P 15 57 43.0 +2.1**
TIA LR LR
comp=N,4μm,17.0s,MS6.0
TIA LR LR
comp=E,6μm,17.0s,MS6.0
POO Poona 75.63 77 *e*P **P 15 57 44.9 -0.9**
POO AMb AMB 15 57 54.1
comp=Z,198nm,1.5s,mb5.8
INCN Inchon 75.69 26 PFAKE 15 58 00.0 +14
INCN LR LR
comp=Z,9μm,19.0s,MS6.1
KSRS Korea Array 75.97 25 P **P 15 57 48.4 +0.9**
comp=Z,2.3nm,0.9s,baz=359,slow=5.0,SNR=6.9
KSRS LR LR 16 34 28.4
comp=Z,15μm,18.1s,MS6.3,baz=92,slow=38
CD2 Chengdu 75.97 47 P **P 15 57 48.5 +0.9**
CD2 pP pP 15 57 52.5 +1.6
CD2 sP sP 15 57 54.3 +2.2
CD2 PP PP 16 00 40.5 +3.0
CD2 S S 16 07 28.5 -1.8
CD2 SKS 16 07 53.3
CD2 SS SS 16 12 22.5 +0.7
CD2 pmax pmax
comp=Z,60nm,1.8s,mb5.2
CD2 pmax pmax
comp=Z,1μm,6.9s
CD2 LR LR
comp=N,31μm,20.2s
CD2 LR LR
comp=Z,22μm,18.4s,MS6.5
OTAV Otavalo 76.05 240 *e*P **P 15 57 48.4 +0.2**
comp=Z,117nm,1.6s,mb5.6
OTAV LR LR
comp=Z,6μm,21.0s,MS5.9
OTAV Otavalo 76.05 240 *e*P **P 15 57 48.4 +0.2**
comp=Z,117nm,1.6s,mb5.6
SHL Shillong 76.69 59 *e*P **P 15 57 52.0 +0.2**
SHL *ex* x 16 07 51.0
KAD Karad 76.86 78 *e*P **P 15 57 53.6 +0.8**
KAD AMb AMB 15 58 01.0
comp=Z,182nm,1.9s,mb5.7
KMBO Kilima Mbogo 77.60 119 P **P 15 57 58.0 +1.1**
comp=Z,1.5nm,0.7s,baz=352,slow=22,SNR=9.8
KMBO LR LR 16 35 15.1
comp=Z,10μm,19.3s,MS6.1,baz=303,slow=38
KMBO Kilima Mbogo 77.60 119 *e*P **P 15 58 00.7 +3.8**
KMBO pmax pmax
comp=Z,125nm,2.1s
KMBO MLR MLR
comp=Z,9μm,19.0s
KMBO Kilima Mbogo 77.60 119 *e*P **P 15 58 00.7 +3.8**
comp=Z,125nm,2.1s,mb5.5
KMBO LR LR
comp=Z,9μm,19.0s,MS6.1
KMBO Kilima Mbogo 77.60 119 P **P 15 58 02.0 +5.1**
SNR=7.7
KMBO P 15 58 02.0
SNR=7.7
KMBO Kilima Mbogo 77.60 119 *e*P **P 15 58 00.7 +3.8**
comp=Z,125nm,2.1s,mb5.5
CAL Calcutta 78.06 63 *e*P **P 15 58 06.6 +7.2**
CAL *e*S S 16 08 06.8 +14

IMP Imphal 78.17 57 *ex* **P 15 58 04.0 +3.9**
ENH Enshi 78.34 42 *e*P **P 15 58 01.3 +0.4**
comp=Z,86nm,1.3s,mb5.5
ENH LR LR
comp=Z,43μm,21.0s,MS6.8
ENH Enshi 78.34 42 *e*P **P 15 58 01.3 +0.4**
comp=Z,86nm,1.3s,mb5.5
MAJO Matsushiro 78.49 17 P **P 15 58 03.7 +2.0**
MAJO pmax pmax
comp=Z,192nm,1.9s,mb5.7
MAJO MLR MLR
comp=Z,6μm,19.0s,MS6.0
MAJO Matsushiro 78.49 17 P **P 15 58 03.7 +2.1**
comp=Z,192nm,1.9s,mb5.7
MAJO LR LR
comp=Z,6μm,19.0s,MS6.0
MAT Matsushiro 78.49 17 P **P 15 58 01.9 +0.2**
MAT S S 16 08 00.0 +2.5
MJAR Matsushiro Arr 78.49 17 P **P 15 58 02.1 +0.4**
comp=Z,7.5nm,0.9s,mb4.6,baz=336,slow=5.6,SNR=8.8
MJAR LR LR 16 34 39.3
comp=Z,5μm,18.4s,MS5.9,baz=340,slow=37
MJAR Matsushiro Arr 78.49 17 P **P 15 58 02.1 +0.4**
HYB Hyderabad 78.63 74 *i*P **P 15 58 05.0 +2.3**
HYB *e*S S 16 08 04.0 +4.5
HYB LR LR 16 33 00.0
comp=Z,21nm,24.0s
NJ2 Nanjing 79.20 34 *e*P **P 15 58 07.0 +1.4**
NJ2 pP pP 15 58 12.0 +3.1
NJ2 sP sP 15 58 14.3 +4.2
NJ2 S S 16 08 09.5 +4.3
NJ2 sS sS 16 08 19.0 +8.3
NJ2 SS SS 16 13 16.0 +5.7
NJ2 pmax pmax
comp=Z,70nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,1μm,8.6s
NJ2 LR LR
comp=N,19μm,29.0s,MS6.3
NJ2 LR LR
comp=E,12μm,27.3s,MS6.3
NJ2 LR LR
comp=Z,27μm,29.0s,MS6.4
WHN Wuhan 79.47 38 *e*P **P 15 58 10.0 +2.9**
SHEL Horse Pasture 80.53 165 PFAKE 15 58 20.0 +7.2
SHEL LR LR
comp=Z,7μm,20.0s,MS6.0
SSE Sheshan 80.68 32 *e*P **P 15 58 11.5 -2.2**
SSE S S 16 08 18.8 -2.0
SSE pmax pmax
comp=Z,22nm,0.7s,mb5.2
SSE pmax pmax
comp=Z,85nm,3.5s
SSE LR LR
comp=N,24μm,19.6s,MS6.6
SSE LR LR
comp=E,5μm,19.6s,MS6.6
SSE LR LR
comp=Z,25μm,19.7s,MS6.6
KMI Kunming 80.99 50 P **P 15 58 18.5 +3.1**
KMI pP pP 15 58 21.5 +2.8
KMI PP PP 16 01 24.8 +5.3
KMI S S 16 08 25.8 +1.6
KMI sS sS 16 08 31.0 +1.3
KMI SKS 16 08 32.5
KMI SS SS 16 13 42.5 +5.1
KMI pmax pmax
comp=Z,36nm,2.0s,mb5.0
KMI pmax pmax
comp=Z,560nm,3.8s
KMI LR LR
comp=N,11μm,19.3s,MS6.3
KMI LR LR
comp=E,8μm,19.3s,MS6.3
KMI LR LR
comp=Z,13μm,23.9s,MS6.2
GYA Guiyang 81.03 46⇑*i*P **P 15 58 14.8 -0.8**
GYA PP PP 16 01 21.3 +1.5
GYA S S 16 08 21.5 -3.1
GYA SKS 16 08 29.5
GYA SS SS 16 13 37.8 -0.2
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,180nm,6.4s
GYA LR LR
comp=N,34μm,19.8s,MS6.7
GYA LR LR
comp=E,15μm,20.6s,MS6.7
GYA LR LR
comp=Z,28μm,20.5s,MS6.6
PAYG Puerto Ayora 81.63 251 PFAKE 15 58 30.0 +11
PAYG LR LR
comp=Z,5μm,20.0s,MS5.9
ATAH Atahualpa 82.80 237 P **P 15 58 26.5 +1.5**
comp=Z,15nm,1.0s,mb5.0,baz=21,slow=5.0,SNR=8.0
SIV San Ignacio 85.46 218 P **P 15 58 38.7 +0.4**
comp=Z,14nm,0.9s,mb5.1,baz=36,slow=5.2,SNR=21
SIV San Ignacio 85.46 218 P **P 15 58 38.7 +0.4**
CHG Chiang Mai 85.47 55⇓P **P 15 58 39.9 +1.3**
comp=Z,35nm,1.9s,mb5.2
CHTO Chiang Mai 85.47 55 *e*P **P 15 58 38.7 +0.1**
CHTO pmax pmax
comp=Z,107nm,1.8s,mb5.7
CHTO MLR MLR
comp=Z,10μm,19.0s,MS6.2
CHTO Chiang Mai 85.47 55 *e*P **P 15 58 38.7 +0.1**
comp=Z,107nm,1.8s,mb5.7
CHTO LR LR
comp=Z,10μm,19.0s,MS6.2
CHTO Chiang Mai 85.47 55 P **P 15 58 42.4 +3.8**
SNR=35
CHTO P 15 58 42.4
SNR=35
CHTO Chiang Mai 85.47 55 *e*P **P 15 58 38.7 +0.1**
comp=Z,107nm,1.8s,mb5.7
CMAR Chiang Mai Arr 85.80 56 P **P 15 58 40.9 +0.6**
comp=Z,6.7nm,1.0s,mb4.8,baz=324,slow=5.2,SNR=19
CMAR LR LR 16 40 18.3
comp=Z,8μm,18.6s,MS6.2,baz=67,slow=38
CMAR Chiang Mai Arr 85.80 56 P **P 15 58 40.8 +0.6**
QZH Quanzhou 85.92 36⇓*i*P **P 15 58 43.0 +2.3**
QZH PP PP 16 02 06.5 +6.8
QZH SKS 16 09 07.0
QZH S S 16 09 15.5 +1.5
QZH pmax pmax
comp=Z,2μm,4.2s
QZH LR LR
comp=N,19μm,15.9s,MS6.7
QZH LR LR
comp=E,14μm,13.9s,MS6.7
QZH LR LR
comp=Z,28μm,21.7s
GZH Guangzhou 86.23 41 P **P 15 58 39.0 -3.3**
GZH S S 16 09 15.0 -2.1
GZH LR LR
comp=N,6μm,22.8s,MS6.3
GZH LR LR
comp=E,13μm,18.4s,MS6.3
GZH LR LR
comp=Z,16μm,17.5s,MS6.5
MIDW Midway 86.27 339 *e*P **P 15 58 41.7 -0.8**
MIDW LR LR
comp=Z,6μm,20.0s,MS6.0
MIDW Midway 86.27 339 *e*P **P 15 58 41.7 -0.7**
TATO Taipei 86.62 34 PFAKE 15 58 50.0 +5.8
TATO LR LR
comp=Z,40μm,19.0s,MS6.8
NNA Nana 86.72 234 P **P 15 58 46.4 +1.8**
comp=Z,9.5nm,0.5s,mb5.2,baz=2.6,slow=2.3,SNR=7.6
NNA Nana 86.72 234 P **P 15 58 46.9 +2.2**
comp=Z,204nm,1.6s,mb6.1
NNA LR LR
comp=Z,9μm,20.0s,MS6.2
YHNB Yeheng 86.88 34 PFAKE 15 59 00.0 +14
YHNB LR LR
comp=Z,40μm,19.0s,MS6.8
BDT Bhumibol Dam 86.93 56 P **P 15 58 49.0 +3.2**
LSZ Lusaka 87.50 133 *e*P **P 15 58 49.0 +0.6**
LSZ pmax pmax
comp=Z,231nm,1.9s,mb6.1
LSZ MLR MLR
comp=Z,11μm,20.0s,MS6.3
LSZ Lusaka 87.50 133 *e*P **P 15 58 49.0 +0.6**
comp=Z,58nm,1.9s,mb5.5
LSZ LR LR
comp=Z,11μm,20.0s,MS6.3
LSZ Lusaka 87.50 133 P **P 15 58 53.8 +5.4**
SNR=18
LSZ P 15 58 53.8
SNR=18
LSZ Lusaka 87.50 133 *e*P **P 15 58 49.0 +0.6**
comp=Z,58nm,1.9s,mb5.5
LPAZ La Paz 87.81 225 P **P 15 58 51.8 +2.0**
comp=Z,6.6nm,0.8s,mb4.9,baz=33,slow=4.4,SNR=10.0
LPAZ LR LR 16 36 56.2
comp=Z,10μm,19.2s,MS6.2,baz=209,slow=35
LPAZ La Paz 87.81 225 *e*P **P 15 58 46.7 -3.1**
LPAZ 15 58 51.8
LPAZ pmax pmax
comp=Z,32nm,1.5s
LPAZ La Paz 87.81 225 *e*P **P 15 58 46.7 -3.1**
comp=Z,32nm,1.5s,mb5.3
LPAZ P 15 58 51.8
LPAZ LR LR 16 36 56.2
LPAZ La Paz 87.81 225 P **P 15 58 51.8 +2.0**
TSUM Tsumeb 88.12 144 *e*P **P 15 58 52.2 +0.9**
comp=Z,28nm,1.8s,mb5.2
TSUM LR LR
comp=Z,11μm,20.0s,MS6.3
TSUM Tsumeb 88.12 144 *e*P **P 15 58 52.2 +1.0**
comp=Z,28nm,1.8s,mb5.2
MSEY Mahe Island 88.26 104 PFAKE 15 59 00.0 +7.8
MSEY LR LR
comp=Z,5μm,19.0s,MS5.9
KIP Kipapa 88.57 321 PFAKE 15 59 00.0 +6.4
KIP LR LR
comp=Z,7μm,20.0s,MS6.1
PALK Pallekele 88.62 76 P **P 15 58 59.5 +5.6**
comp=Z,309nm,1.8s,mb6.3,SNR=5.5
PALK Pallekele 88.62 76 *e*P **P 15 58 53.8 -0.1**
PALK pmax pmax
comp=Z,338nm,1.8s,mb6.4
PALK Pallekele 88.62 76 *e*P **P 15 58 53.8 -0.2**
comp=Z,338nm,1.8s,mb6.4
PALK Pallekele 88.62 76 *e*P **P 15 58 53.8 -0.1**
comp=Z,338nm,1.8s,mb6.4
QIZ Qiongzhong 88.98 46 P **P 15 58 54.0 -1.6**
QIZ sP sP 15 59 01.3 +1.2
QIZ S S 16 09 35.0 -8.6
QIZ sS sS 16 09 50.3 +1.2
QIZ LR LR
comp=N,12μm,17.3s,MS6.4
QIZ LR LR
comp=E,3μm,19.5s,MS6.4
QIZ LR LR
comp=Z,20μm,18.9s,MS6.6
QIZ Qiongzhong 88.98 46 PFAKE 15 59 10.0 +14
QIZ LR LR
comp=Z,18μm,19.0s,MS6.5
KKTK Khon Kaen 89.14 53 P **P 15 58 58.0 +1.6**
POHA Pohakuloa 89.44 318 PFAKE 15 59 10.0 +12
POHA LR LR
comp=Z,12μm,22.0s,MS6.3
CPUP Villa Florida 94.40 212 P **P 15 59 21.1 +0.8**
comp=Z,2.0nm,0.6s,mb4.7,baz=342,slow=1.8,SNR=4.9
CPUP LR LR 16 36 29.2
comp=Z,13μm,21.6s,MS6.4,baz=358,slow=32
CPUP Villa Florida 94.40 212 P **P 15 59 21.1 +0.8**
BCPH Baguio City Da 94.61 37⇓*e*P **P 15 59 23.0 +1.3**
LBTB Lobatse 95.86 139 P **P 15 59 26.7 -0.3**
LBTB pmax pmax
comp=Z,91nm,1.8s,mb5.9
LBTB MLR MLR
comp=Z,18μm,20.0s,MS6.5
LBTB Lobatse 95.86 139 P **P 15 59 26.7 -0.3**
comp=Z,90nm,1.8s,mb5.9
LBTB LR LR
comp=Z,18μm,20.0s,MS6.5
LBTB Lobatse 95.86 139 P **P 15 59 26.7 -0.3**
comp=Z,90nm,1.8s,mb5.9
JOHN Johnston Islan 95.97 330 PFAKE 15 59 40.0 +12
JOHN LR LR
comp=Z,9μm,20.0s,MS6.2
WAKE Wake Island 96.82 353 PFAKE 15 59 40.0 +8.3
WAKE LR LR
comp=Z,3μm,21.0s,MS5.8
ABPO Ambohimpanom 97.80 118 PFAKE 15 59 50.0 +14
ABPO LR LR
comp=Z,6μm,20.0s,MS6.1
DGAR Diego Garcia 98.12 90 PFAKE 15 59 50.0 +12
DGAR LR LR
comp=Z,9μm,20.0s,MS6.3
KULM Kulim 98.53 59 PFAKE 15 59 50.0 +10
KULM LR LR
comp=Z,10μm,21.0s,MS6.3
BOSA Boshof 99.15 140 LR LR 16 44 43.3
comp=Z,24μm,21.4s,MS6.7,baz=340,slow=36
BOSA Boshof 99.15 140 PFAKE 15 59 50.0 +8.2
BOSA LR LR
comp=Z,24μm,21.0s,MS6.7
LCO Las Campanas 100.54 223 PFAKE 16 00 00.0 +11
LCO LR LR
comp=Z,14μm,20.0s,MS6.5
SUR Sutherland 101.52 145 PFAKE 16 00 00.0 +7.0
SUR LR LR
comp=Z,16μm,21.0s,MS6.5
GUMO Guam 101.93 14 PFAKE 16 00 00.0 +5.2
GUMO LR LR
comp=Z,3μm,21.0s,MS5.8
RER Riviere de l'E 103.15 111 PFAKE 16 00 10.0 +10
RER LR LR
comp=Z,5μm,19.0s,MS6.1
DAV Davao City (W) 104.83 34 PFAKE 16 00 20.0 +12
DAV LR LR
comp=Z,11μm,20.0s,MS6.4
KSM Kuching 105.56 51 PFAKE 16 04 30.0 +6.0
KSM LR LR
comp=Z,7μm,20.0s,MS6.2
TRQA Tornquist 106.72 213 PFAKE 16 04 40.0 +15
TRQA LR LR
comp=Z,13μm,22.0s,MS6.4
XMAS Kiritimati 106.74 314 PFAKE 16 04 40.0 +14
XMAS LR LR
comp=Z,17μm,19.0s,MS6.6
TAOE Nuku Hiva Isla 110.47 293 *e*PP PP 16 05 04.5 -4.0
comp=Z,315nm,26.9s
TAOE *e*SP SP 16 14 37.7 +0.3
comp=Z,6μm,27.0s
TAOE Nuku Hiva Isla 110.47 293 *e*PS PS 16 14 39.0 +1.3
comp=Z,3μm,27.2s
TAOE *e*SS SS 16 20 38.6 +2.3
comp=Z,8μm,28.0s
TAOE *e*LQ 16 31 39.6
comp=Z,10μm,31.5s
TAOE *e*LR LR 16 37 12.0
comp=Z,14μm,23.2s,baz=31
PLCA Paso Flores 111.45 218 PFAKE 16 04 40.0 +5.9
PLCA LR LR
comp=Z,7μm,20.0s,MS6.2
COCO West Island 112.94 70 PFAKE 16 04 50.0 +12
COCO LR LR
comp=Z,7μm,20.0s,MS6.2
RPN Rapa Nui 113.30 256 PFAKE 16 04 50.0 +12
RPN LR LR
comp=Z,3μm,20.0s,MS5.8
TARA Tarawa 114.04 345 PFAKE 16 04 50.0 +10
TARA LR LR
comp=Z,6μm,20.0s,MS6.2
RKT Rikitea 121.03 281 *e*PS PS 16 16 14.3 +0.7
comp=Z,626nm,26.2s
RKT *e*SS SS 16 22 57.4 +2.6
comp=Z,4μm,29.5s
RKT *e*LQ 16 36 52.5
comp=Z,6μm,40.0s
RKT *e*LR LR 16 42 09.1
comp=Z,7μm,23.2s
PPT Papeete 122.13 298 *e*PP PP 16 06 25.7 -4.4
comp=Z,416nm,26.2s
PPT *e*SP SP 16 16 20.1 -3.1
comp=Z,3μm,27.2s
PPT *e*SS SS 16 23 11.0 +2.4
comp=Z,14μm,33.8s
PPT *e*LR LR 16 42 28.0
comp=Z,15μm,22.0s,baz=21
FUNA Funafuti 122.82 336 PFAKE 16 05 10.0 +13
FUNA LR LR
comp=Z,8μm,19.0s,MS6.4
KAKA Kakadu 125.55 32 *e*PKP PKPdf 16 05 03.7 +1.7
comp=Z,54nm,1.4s
HNR Honiara 125.56 359 PFAKE 16 05 10.0 +8.0
HNR LR LR

comp=Z,3μm,20.0s,MS6.0
AFI Afiamalu 126.05 324 PFAKE 16 05 10.0 +7.1
AFI LR LR
comp=Z,6μm,20.0s,MS6.3
RAR Rarotonga 129.24 307 PFAKE 16 05 20.0 +11
RAR LR LR
comp=Z,7μm,19.0s,MS6.4
MBWA Marble Bar 129.86 50 PFAKE 16 05 20.0 +10
MBWA LR LR
comp=Z,3μm,20.0s,MS6.0
MSVF Nonsavu 132.02 335 PFAKE 16 05 20.0 +5.8
MSVF LR LR
comp=Z,7μm,20.0s,MS6.3
PMSA Palmer Station 132.26 203 PFAKE 16 05 20.0 +6.9
PMSA LR LR
comp=Z,6μm,19.0s,MS6.3
WRAB Tennant Creek 132.96 32 PFAKE 16 05 30.0 +14
WRAB LR LR
comp=Z,7μm,20.0s,MS6.4
PAF Port-aux-Franc 133.23 116 PFAKE 16 05 30.0 +15
PAF LR LR
comp=Z,9μm,22.0s,MS6.4
CTAO Charters Tower 135.32 17 PFAKE 16 05 30.0 +10
CTAO LR LR
comp=Z,4μm,22.0s,MS6.1
ASAR Alice Springs 136.44 34 PKP PKPdf 16 05 21.0 -1.3
comp=Z,4.9nm,0.7s,baz=348,slow=1.9,SNR=18
ASAR Alice Springs 136.44 34 PKIKP PKPdf 16 05 21.0 -1.3
DZM Mont Dzumac 137.84 350 *e*SS SS 16 26 20.6 -0.4
comp=Z,3μm,27.9s
DZM *e*LQ 16 43 54.0
DZM *e*LR LR 16 49 27.4
comp=Z,8μm,23.5s
NWAO Narrogin (SRO) 139.67 60 PFAKE 16 05 40.0 +12
NWAO LR LR
comp=Z,4μm,21.0s,MS6.1
RAO Raoul Island 142.29 326 PFAKE 16 05 40.0 +7.2
RAO LR LR
comp=Z,7μm,20.0s,MS6.4
MAW Mawson 144.16 139 *e*PKP PKPdf 16 05 36.7 +1.9
comp=Z,67nm,1.1s
MAW Mawson 144.16 139 PKP PKPdf 16 05 35.6 +0.7
comp=Z,52nm,0.9s,baz=313,slow=4.5,SNR=35
MAW Mawson 144.16 139 *e*PKPdf PKPdf 16 05 35.1 +0.3
MAW LR LR
comp=Z,14μm,21.0s,MS6.7
MAW Mawson 144.16 139 *e*PKIKP PKPdf 16 05 35.2 +0.4
BBOO Buckleboo 145.71 36 *e*PKP PKPdf 16 05 36.2 -2.5
comp=Z,80nm,2.0s
STKA Stephens Creek 146.09 27 *e*PKP PKPdf 16 05 39.7 +0.4
comp=Z,31nm,1.0s
STKA Stephens Creek 146.09 27 PKPbc PKPbc 16 05 40.0 -0.2
comp=Z,16nm,0.8s,baz=341,slow=3.1,SNR=17
STKA Stephens Creek 146.09 27 *e*PKPdf PKPdf 16 05 39.2 -0.2
STKA Stephens Creek 146.09 27 *e*PKIKP PKPdf 16 05 39.2 -0.1
ARMA Armidale 146.12 11 *e*PKP PKPdf 16 05 38.6 -0.8
ARMA Armidale 146.12 11 *e*PKPdf PKPdf 16 05 37.8 -1.7
ARMA Armidale 146.12 11 *e*PKIKP PKPdf 16 05 37.8 -1.6
MGCD Mangrove Creek 148.84 13 *e*PKP PKPab 16 05 50.1 -1.6
comp=Z,187nm,1.7s
RIV Riverview 149.46 13 *e*PKP PKPab 16 05 52.9 -1.3
OUZ Omahuta 149.88 336 *e*PKPbc PKPbc 16 05 48.5 -1.7
OUZ Omahuta 149.88 336 *e*PKPbc PKPbc 16 05 48.5 -1.8
CAN Canberra 150.69 17 PKIKP PKPbc 16 05 49.8 -2.4
CNB Canberra Magne 150.72 16 *e*PKP PKPbc 16 05 53.7 +1.4
ARPS Mount Arapiles 150.86 29 *e*PKP PKPbc 16 05 53.3 +0.7
comp=Z,320nm,1.4s
URZ Urewera 152.09 329 PKP PKPdf 16 05 48.3 -0.5
comp=Z,13nm,1.0s,baz=333,slow=12,SNR=5.0
URZ PKPbc PKPbc 16 05 55.2 -0.2
comp=Z,16nm,0.8s,baz=121,slow=2.8,SNR=7.3
URZ Urewera 152.09 329 *e*PKPdf PKPdf 16 05 50.6 +1.8
URZ Urewera 152.09 329 *e*PKIKP PKPdf 16 05 50.6 +1.8
SNZO South Karori 155.54 331 PFAKE 16 06 00.0 +6.4
SNZO LR LR
comp=Z,6μm,20.0s,MS6.5
TAU Tasmania Unive 157.87 23 PFAKE 16 06 10.0 +14
TAU LR LR
comp=Z,14μm,22.0s,MS6.8
RPZ Rata Peaks 158.59 336 PKPab PKPab 16 06 31.3 -1.2
comp=Z,7.7nm,0.9s,baz=21,slow=7.6,SNR=3.5
CASY Casey 159.88 118 PFAKE 16 06 10.0 +12
CASY LR LR
comp=Z,5μm,20.0s,MS6.3
SBA Scott Base 165.83 187 PFAKE 16 06 10.0 +6.3
SBA LR LR
comp=Z,7μm,21.0s

*CSEM **29** 15:50:01.1, 63°.91N×21°.17W, h6km, ML4.0, After REY*
REY 29 15:50:01.1, 63°.91N×21°.17W, h6km, ML2.4, ML4.0, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**301**	P	Pg	15 50 02.8	+0.1
IBJA				S	Sg	15 50 04.2	+0.4
ISAN	**Sandskeio**	**0.23**	**310**	P	Pg	15 50 05.7	+0.2
ISAN				S	Sg	15 50 09.2	+0.6
IVOS	**Vogsosar**	**0.24**	**256**	P	Pg	15 50 05.8	0.0
IVOS				S	Sg	15 50 09.7	+0.7
IASM	**Asmuli**	**0.26**	**107**	P	Pg	15 50 06.1	0.0
IASM				S	Sg	15 50 10.1	+0.6
IKAS	**Kald??rsel**	**0.32**	**291**	P	Pg	15 50 07.3	0.0
IKAS				S	Sg	15 50 12.2	+0.7
ISAU	**Saurbar**	**0.34**	**76**	P	Pg	15 50 07.5	-0.2
ISAU				S	Sg	15 50 12.5	+0.3
IKRI	**Krysuvik**	**0.40**	**266**	S	Sg	15 50 14.1	+0.1
IKUD	**Kuludalsa**	**0.51**	**323**	P	Pg	15 50 10.0	-1.0
IKUD				S	Sg	15 50 17.5	-0.1
IHAU	**Haukadalur**	**0.54**	**83**	S	Sg	15 50 18.3	0.0
IGYG	**Gygjarholskot**	**0.56**	**48**	P	Pg	15 50 11.2	-0.7
IGYG				S	Sg	15 50 19.1	0.0
IMID	**Miomork**	**0.63**	**113**	P	Pg	15 50 12.5	-0.6
IMID				S	Sg	15 50 21.2	0.0
INYL	**Nylenda**	**0.69**	**276**	P	Pg	15 50 13.1	-1.3
INYL				S	Sg	15 50 22.9	-0.5
IASB	**`sbjarnarst**	**0.84**	**356**	S	Sg	15 50 27.2	-1.0
IESK	**Eystri-Skogar**	**0.86**	**116**	P	Pg	15 50 16.0	-1.5
IESK				S	Sg	15 50 28.0	-0.7

*CSEM **29** 15:50:52.8, 63°.98N×21°.06W, h4km, ML3.8, After REY*
REY 29 15:50:52.8, 63°.98N×21°.06W, h4km, ML2.3, ML3.8, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISOL	**Solvholt**	**0.07**	**132**	P	Pg	15 50 54.5	+0.2
ISOL				S	Sg	15 50 56.0	+0.7
IBJA	**Bjarnastaoir**	**0.11**	**254**	P	Pg	15 50 55.4	+0.4
IBJA				S	Sg	15 50 57.5	+1.0
IKRO	**Krokur**	**0.12**	**349**	P	Pg	15 50 55.5	+0.2
IKRO				S	Sg	15 50 57.5	+0.6
IHEI	**Heioarbar**	**0.24**	**341**	P	Pg	15 50 57.5	+0.1
IHEI				S	Sg	15 51 01.0	+0.5
ISAN	**Sandskeio**	**0.24**	**290**	S	Sg	15 51 01.1	+0.6
IASM	**Asmuli**	**0.24**	**126**	P	Pg	15 50 57.7	+0.2
IASM				S	Sg	15 51 01.3	+0.6
ISAU	**Saurbar**	**0.29**	**87**	P	Pg	15 50 58.4	+0.1
ISAU				S	Sg	15 51 02.7	+0.7
IKAS	**Kald??rsel**	**0.35**	**278**	P	Pg	15 50 59.6	+0.1
IKAS				S	Sg	15 51 04.9	+0.8
IKRI	**Krysuvik**	**0.46**	**258**	P	Pg	15 51 01.0	-0.6
IGYG	**Gygjarholskot**	**0.48**	**50**	S	Sg	15 51 08.5	+0.2
IHAU	**Haukadalur**	**0.48**	**90**	P	Pg	15 51 01.9	-0.2
IHAU				S	Sg	15 51 08.7	+0.3
IKUD	**Kuludalsa**	**0.50**	**315**	P	Pg	15 51 01.4	-0.9
IKUD				S	Sg	15 51 08.5	-0.2
IVOG	**Vogar**	**0.59**	**270**	P	Pg	15 51 03.4	-0.6
IMID	**Miomork**	**0.61**	**121**	S	Sg	15 51 12.3	-0.2
IGRV	**Grindav??k**	**0.63**	**260**	P	Pg	15 51 04.0	-0.8
INYL	**Nylenda**	**0.74**	**271**	P	Pg	15 51 05.8	-1.1
INYL				S	Sg	15 51 16.0	-0.5
IASB	**`sbjarnarst**	**0.78**	**352**	P	Pg	15 51 06.6	-1.2
IASB				S	Sg	15 51 17.3	-0.6

*CSEM **29** 15:52:01.3, 63°.92N×21°.16W, h4km, ML4.1, After REY*
REY 29 15:52:01.3, 63°.92N×21°.16W, h4km, ML2.8, ML4.1, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**291**	P	Pg	15 52 03.0	+0.2
IBJA				S	Sg	15 52 04.5	+0.7
ISOL	**Solvholt**	**0.09**	**85**	P	Pg	15 52 03.4	+0.2
ISOL				S	Sg	15 52 05.2	+0.7
ISAN	**Sandskeio**	**0.23**	**307**	P	Pg	15 52 05.8	+0.1
IVOS	**Vogsosar**	**0.25**	**255**	P	Pg	15 52 06.1	-0.1
IVOS				S	Sg	15 52 09.9	+0.5
IASM	**Asmuli**	**0.26**	**110**	S	Sg	15 52 10.3	+0.8
IKAS	**Kald??rsel**	**0.32**	**289**	P	Pg	15 52 07.6	+0.1
IKAS				S	Sg	15 52 12.7	+1.0
ISAU	**Saurbar**	**0.33**	**78**	P	Pg	15 52 07.6	-0.1
ISAU				S	Sg	15 52 12.6	+0.5
IKRI	**Krysuvik**	**0.41**	**264**	S	Sg	15 52 14.5	0.0
IKUD	**Kuludalsa**	**0.51**	**322**	P	Pg	15 52 10.4	-0.7
IKUD				S	Sg	15 52 16.8	-0.9
IHAU	**Haukadalur**	**0.53**	**84**	P	Pg	15 52 10.9	-0.5
IHAU				S	Sg	15 52 18.6	+0.4
IGYG	**Gygjarholskot**	**0.55**	**48**	P	Pg	15 52 11.2	-0.6
IGYG				S	Sg	15 52 19.1	+0.2
IVOG	**Vogar**	**0.55**	**276**	P	Pg	15 52 11.2	-0.6
IVOG				S	Sg	15 52 19.0	+0.1
IVES	**Vestmannaeyjar**	**0.62**	**141**	P	Pg	15 52 12.6	-0.5
IVES				S	Sg	15 52 21.0	-0.1
IMID	**Miomork**	**0.62**	**115**	S	Sg	15 52 21.4	+0.1
INYL	**Nylenda**	**0.70**	**275**	P	Pg	15 52 13.6	-1.1
INYL				S	Sg	15 52 23.5	-0.3
IASB	**`sbjarnarst**	**0.83**	**355**	P	Pg	15 52 16.1	-1.2
IASB				S	Sg	15 52 27.5	-0.6
IESK	**Eystri-Skogar**	**0.86**	**117**	P	Pg	15 52 16.2	-1.5
IESK				S	Sg	15 52 28.0	-0.8
IVAT	**Vatnsfell**	**1.02**	**74**	P	Pg	15 52 19.3	-1.5
IVAT				S	Sg	15 52 33.2	-0.8
IHVO	**Lagu-Hvolar**	**1.10**	**110**	P	Pg	15 52 20.0	-2.4
IHVO				S	Sg	15 52 35.5	-1.1
ISKR	**Skrokkalda**	**1.37**	**61**	P	Pn	15 52 25.5	-1.6
IKAL	**Kalfafell**	**1.53**	**87**	P	Pn	15 52 27.4	-1.9
IGRF	**Grimsfjall**	**1.77**	**72**	P	Pn	15 52 31.5	-1.1
ISVA	**Svartarkot**	**2.20**	**48**	P	Pn	15 52 38.2	-0.3
IKRE	**Kreppuhraun**	**2.25**	**65**	P	Pn	15 52 38.6	-0.6

*CSEM **29** 15:55:02.0, 63°.91N×21°.16W, h5km, ML3.7, After REY*
REY 29 15:55:02.0, 63°.91N×21°.16W, h5km, ML3.0, ML3.7, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**303**	P	Pg	15 55 03.9	+0.2
IBJA				S	Sg	15 55 05.4	+0.6
IKRO	**Krokur**	**0.20**	**5**	P	Pg	15 55 06.1	+0.3
IKRO				S	Sg	15 55 09.1	+0.7
ISAN	**Sandskeio**	**0.24**	**310**	P	Pg	15 55 06.7	+0.1
ISAN				S	Sg	15 55 10.4	+0.7
IVOS	**Vogsosar**	**0.25**	**258**	P	Pg	15 55 06.8	0.0
IVOS				S	Sg	15 55 10.8	+0.8
IASM	**Asmuli**	**0.25**	**106**	P	Pg	15 55 06.8	-0.1
IASM				S	Sg	15 55 10.9	+0.8
IKAS	**Kald??rsel**	**0.33**	**291**	P	Pg	15 55 08.2	-0.1
IKAS				S	Sg	15 55 13.4	+0.8
ISAU	**Saurbar**	**0.34**	**75**	P	Pg	15 55 08.3	-0.2
ISAU				S	Sg	15 55 13.5	+0.5
IKRI	**Krysuvik**	**0.41**	**267**	P	Pg	15 55 09.5	-0.3
IKRI				S	Sg	15 55 14.9	-0.2
IKUD	**Kuludalsa**	**0.52**	**323**	P	Pg	15 55 11.1	-0.9
IHAU	**Haukadalur**	**0.53**	**82**	P	Pg	15 55 11.7	-0.5
IHAU				S	Sg	15 55 19.1	0.0
IVOG	**Vogar**	**0.55**	**277**	P	Pg	15 55 12.0	-0.5
IVOG				S	Sg	15 55 19.7	+0.1
IGYG	**Gygjarholskot**	**0.56**	**47**	P	Pg	15 55 12.1	-0.7
IGYG				S	Sg	15 55 19.8	-0.2
IVES	**Vestmannaeyjar**	**0.60**	**140**	P	Pg	15 55 13.1	-0.5
IMID	**Miomork**	**0.62**	**113**	P	Pg	15 55 13.2	-0.6
IMID				S	Sg	15 55 21.9	+0.1
INYL	**Nylenda**	**0.70**	**276**	P	Pg	15 55 14.4	-1.0
INYL				S	Sg	15 55 23.9	-0.6
IASB	**`sbjarnarst**	**0.85**	**355**	P	Pg	15 55 16.4	-1.9
IASB				S	Sg	15 55 28.4	-0.9
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	15 55 17.0	-1.3
IESK				S	Sg	15 55 29.0	-0.3
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	15 55 19.9	-1.7
IVAT				S	Sg	15 55 33.9	-1.0
IHVO	**Lagu-Hvolar**	**1.10**	**109**	P	Pg	15 55 20.7	-2.3
IHVO				S	Sg	15 55 36.2	-1.0
ISNB	**Snabyli**	**1.13**	**97**	P	Pg	15 55 21.6	-2.1
ISNB				S	Sg	15 55 37.5	-0.9

*CSEM **29** 15:55:05.0, 63°.93N×21°.18W, h4km, ML4.8, After REY*
REY 29 15:55:05.0, 63°.93N×21°.18W, h4km, ML2.9, ML4.8, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.06**	**288**	P	Pg	15 55 06.5	+0.2
IBJA				S	Sg	15 55 07.8	+0.6
IKRO	**Krokur**	**0.17**	**8**	P	Pg	15 55 08.5	+0.1
IKRO				S	Sg	15 55 11.4	+0.7
ISAN	**Sandskeio**	**0.22**	**307**	P	Pg	15 55 09.4	+0.2
ISAN				S	Sg	15 55 13.0	+1.0
IVOS	**Vogsosar**	**0.24**	**252**	P	Pg	15 55 09.7	0.0
IVOS				S	Sg	15 55 13.7	+0.8
IASM	**Asmuli**	**0.27**	**110**	S	Sg	15 55 14.4	+0.8
IHEI	**Heioarbar**	**0.28**	**355**	P	Pg	15 55 10.4	+0.1
IHEI				S	Sg	15 55 14.2	+0.3
IKAS	**Kald??rsel**	**0.31**	**288**	P	Pg	15 55 11.1	+0.1
IKAS				S	Sg	15 55 16.2	+1.1
ISAU	**Saurbar**	**0.34**	**79**	P	Pg	15 55 11.5	-0.1
ISAU				S	Sg	15 55 16.6	+0.6
IKRI	**Krysuvik**	**0.40**	**263**	P	Pg	15 55 12.5	-0.2
IKUD	**Kuludalsa**	**0.50**	**323**	P	Pg	15 55 13.9	-0.7
IKUD				S	Sg	15 55 20.9	-0.2
IHAU	**Haukadalur**	**0.54**	**85**	P	Pg	15 55 14.8	-0.5
IHAU				S	Sg	15 55 22.5	+0.3
IVOG	**Vogar**	**0.54**	**275**	P	Pg	15 55 14.9	-0.4
IVOG				S	Sg	15 55 22.8	+0.5
IGYG	**Gygjarholskot**	**0.55**	**50**	P	Pg	15 55 15.3	-0.3
IGYG				S	Sg	15 55 22.9	+0.2
IVES	**Vestmannaeyjar**	**0.63**	**140**	S	Sg	15 55 25.5	+0.4
IMID	**Miomork**	**0.63**	**115**	P	Pg	15 55 16.5	-0.6
IMID				S	Sg	15 55 25.2	-0.1
INYL	**Nylenda**	**0.69**	**275**	P	Pg	15 55 17.0	-1.2
INYL				S	Sg	15 55 27.0	-0.2
IASB	**`sbjarnarst**	**0.83**	**356**	P	Pg	15 55 19.5	-1.3
IASB				S	Sg	15 55 31.1	-0.4
IESK	**Eystri-Skogar**	**0.87**	**117**	P	Pg	15 55 20.3	-1.3
IESK				S	Sg	15 55 32.5	-0.3
IVAT	**Vatnsfell**	**1.03**	**74**	P	Pg	15 55 23.3	-1.4
IVAT				S	Sg	15 55 35.8	-2.1
IHVO	**Lagu-Hvolar**	**1.11**	**110**	P	Pg	15 55 24.6	-1.7
IHVO				S	Sg	15 55 39.6	-1.1
ISNB	**Snabyli**	**1.15**	**99**	P	Pg	15 55 25.3	-1.6
ISNB				S	Sg	15 55 40.8	-0.9

*CSEM **29** 16:02:34.7, 63°.91N×21°.16W, h5km, ML3.6, After REY*
REY 29 16:02:34.7, 63°.91N×21°.16W, h5km, ML3.3, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**300**	P	Pg	16 02 36.5	+0.2
IBJA				S	Sg	16 02 38.0	+0.6
ISOL	**Solvholt**	**0.10**	**79**	P	Pg	16 02 36.9	+0.2
ISOL				S	Sg	16 02 38.7	+0.6
IKRO	**Krokur**	**0.19**	**6**	P	Pg	16 02 38.6	+0.2
IKRO				S	Sg	16 02 41.8	+0.9
ISAN	**Sandskeio**	**0.23**	**309**	P	Pg	16 02 39.4	+0.2
ISAN				S	Sg	16 02 43.1	+0.9
IVOS	**Vogsosar**	**0.25**	**257**	P	Pg	16 02 39.5	0.0
IVOS				S	Sg	16 02 43.6	+0.9
IASM	**Asmuli**	**0.26**	**107**	P	Pg	16 02 39.8	+0.2
IASM				S	Sg	16 02 43.7	+0.7
IHEI	**Heioarbar**	**0.29**	**354**	P	Pg	16 02 40.4	+0.1
IHEI				S	Sg	16 02 45.2	+1.0
IKAS	**Kald??rsel**	**0.32**	**291**	P	Pg	16 02 41.0	+0.1
IKAS				S	Sg	16 02 46.1	+0.9
ISAU	**Saurbar**	**0.34**	**76**	P	Pg	16 02 41.1	-0.1
ISAU				S	Sg	16 02 46.2	+0.5
IKRI	**Krysuvik**	**0.41**	**266**	P	Pg	16 02 42.2	-0.3
IKRI				S	Sg	16 02 47.9	+0.2
IKUD	**Kuludalsa**	**0.52**	**323**	P	Pg	16 02 43.9	-0.7
IKUD				S	Sg	16 02 51.5	+0.2
IHAU	**Haukadalur**	**0.53**	**83**	P	Pg	16 02 44.4	-0.5
IHAU				S	Sg	16 02 52.0	+0.2
IVOG	**Vogar**	**0.55**	**277**	P	Pg	16 02 44.7	-0.5
IVOG				S	Sg	16 02 52.5	+0.2
IGYG	**Gygjarholskot**	**0.56**	**48**	P	Pg	16 02 44.9	-0.5
IGYG				S	Sg	16 02 52.8	+0.2
IGRV	**Grindav??k**	**0.57**	**265**	P	Pg	16 02 44.9	-0.8
IGRV				S	Sg	16 02 52.9	-0.3
IVES	**Vestmannaeyjar**	**0.61**	**140**	P	Pg	16 02 45.9	-0.5
IVES				S	Sg	16 02 54.6	+0.3
IMID	**Miomork**	**0.62**	**114**	S	Sg	16 02 54.7	+0.1
INYL	**Nylenda**	**0.70**	**276**	P	Pg	16 02 46.9	-1.2
INYL				S	Sg	16 02 56.8	-0.3
IASB	**`sbjarnarst**	**0.84**	**355**	P	Pg	16 02 49.5	-1.4
IASB				S	Sg	16 03 01.2	-0.6
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	16 02 49.8	-1.3
IESK				S	Sg	16 03 01.5	-0.6
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	16 02 52.8	-1.5
IVAT				S	Sg	16 03 06.6	-1.0
IHVO	**Lagu-Hvolar**	**1.10**	**110**	P	Pg	16 02 54.0	-1.8
IHVO				S	Sg	16 03 09.0	-1.0
ISNB	**Snabyli**	**1.14**	**98**	P	Pg	16 02 54.5	-2.0
ISNB				S	Sg	16 03 09.9	-1.3
IHVE	**Hveravellir**	**1.19**	**35**	P	Pg	16 02 54.9	-2.5
IHVE				S	Sg	16 03 11.2	-1.6
ISKR	**Skrokkalda**	**1.38**	**61**	P	Pn	16 02 58.6	-1.9
ISKR				S	Sb	16 03 17.0	-1.8
IKAL	**Kalfafell**	**1.54**	**87**	P	Pn	16 03 01.1	-1.6
IFAG	**Fagurholsmyri**	**2.00**	**89**	P	Pn	16 03 08.3	-0.7
ISVA	**Svartarkot**	**2.21**	**48**	P	Pn	16 03 11.5	-0.5
IHRN	**Hraun**	**2.25**	**11**	P	Pn	16 03 11.0	-0.8
IKRE	**Kreppuhraun**	**2.26**	**65**	P	Pn	16 03 12.2	-0.4

*CSEM **29** 16:05:34.2, 64°.03N×21°.16W, h4km, ML3.5, After REY*
REY 29 16:05:34.2, 64°.03N×21°.16W, h4km, ML3.0, ML3.5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.07**	**13**	P	Pg	16 05 35.9	+0.2
IKRO				S	Sg	16 05 37.1	+0.4
IBJA	**Bjarnastaoir**	**0.11**	**217**	P	Pg	16 05 36.6	+0.2
IBJA				S	Sg	16 05 38.5	+0.7
ISOL	**Solvholt**	**0.14**	**138**	P	Pg	16 05 37.1	+0.2
ISOL				S	Sg	16 05 39.4	+0.6
IHEI	**Heioarbar**	**0.17**	**348**	P	Pg	16 05 37.8	+0.2
IHEI				S	Sg	16 05 40.5	+0.7
ISAN	**Sandskeio**	**0.18**	**277**	P	Pg	16 05 37.9	+0.1
ISAN				S	Sg	16 05 40.8	+0.6
IKAS	**Kald??rsel**	**0.31**	**268**	S	Sg	16 05 44.9	+0.8
IASM	**Asmuli**	**0.31**	**130**	P	Pg	16 05 40.1	-0.1
IASM				S	Sg	16 05 44.7	+0.5
ISAU	**Saurbar**	**0.33**	**97**	P	Pg	16 05 40.4	-0.1
ISAU				S	Sg	16 05 45.1	+0.3
IKUD	**Kuludalsa**	**0.43**	**313**	P	Pg	16 05 41.4	-1.0
IKUD				S	Sg	16 05 47.0	-1.0
IKRI	**Krysuvik**	**0.43**	**250**	S	Sg	16 05 48.3	+0.1
IGYG	**Gygjarholskot**	**0.48**	**58**	P	Pg	16 05 43.0	-0.4
IGYG				S	Sg	16 05 49.6	-0.1
IHAU	**Haukadalur**	**0.53**	**96**	P	Pg	16 05 43.8	-0.5
IHAU				S	Sg	16 05 51.2	0.0
IVOG	**Vogar**	**0.55**	**264**	S	Sg	16 05 52.1	+0.3
IMID	**Miomork**	**0.68**	**123**	P	Pg	16 05 46.3	-0.8
INYL	**Nylenda**	**0.70**	**266**	S	Sg	16 05 56.1	-0.6
IVES	**Vestmannaeyjar**	**0.71**	**146**	P	Pg	16 05 47.0	-0.7
IVES				S	Sg	16 05 56.9	0.0
IASB	**`sbjarnarst**	**0.72**	**354**	P	Pg	16 05 46.9	-1.1
IASB				S	Sg	16 05 56.8	-0.6
IESK	**Eystri-Skogar**	**0.91**	**123**	P	Pg	16 05 50.2	-1.5
IESK				S	Sg	16 06 02.5	-1.0
IVAT	**Vatnsfell**	**0.99**	**80**	P	Pg	16 05 51.5	-1.7
IVAT				S	Sg	16 06 04.9	-1.2
IHVO	**Lagu-Hvolar**	**1.14**	**115**	P	Pg	16 05 54.2	-1.9
IHVO				S	Sg	16 06 10.0	-0.9
ISNB	**Snabyli**	**1.16**	**104**	P	Pg	16 05 54.2	-2.1
ISNB				S	Sg	16 06 09.5	-1.8
ISKR	**Skrokkalda**	**1.32**	**65**	P	Pn	16 05 56.7	-2.6
IKAL	**Kalfafell**	**1.53**	**92**	P	Pn	16 06 00.4	-1.8
IFAG	**Fagurholsmyri**	**1.99**	**93**	P	Pn	16 06 07.4	-1.1
IHRN	**Hraun**	**2.13**	**11**	P	Pn	16 06 09.3	-1.2

*CSEM **29** 16:14:52.8, 63°.89N×21°.17W, h7km, ML3.9, After REY*
REY 29 16:14:52.8, 63°.89N×21°.17W, h7km, ML3.6, ML3.9, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**313**	P	Pg	16 14 55.0	+0.2
IBJA				S	Sg	16 14 56.7	+0.5
ISOL	**Solvholt**	**0.11**	**68**	P	Pg	16 14 55.2	+0.1
ISOL				S	Sg	16 14 57.2	+0.5
IKRO	**Krokur**	**0.21**	**6**	P	Pg	16 14 57.0	0.0
IKRO				S	Sg	16 15 00.4	+0.6
IVOS	**Vogsosar**	**0.24**	**261**	P	Pg	16 14 57.6	+0.1
IVOS				S	Sg	16 15 01.5	+0.7
ISAN	**Sandskeio**	**0.24**	**313**	P	Pg	16 14 57.8	+0.2
ISAN				S	Sg	16 15 01.5	+0.6
IASM	**Asmuli**	**0.25**	**103**	P	Pg	16 14 57.8	+0.1
IASM				S	Sg	16 15 01.7	+0.6
IHEI	**Heioarbar**	**0.31**	**354**	P	Pg	16 14 58.9	0.0
IHEI				S	Sg	16 15 03.4	+0.4
IKAS	**Kald??rsel**	**0.33**	**294**	P	Pg	16 14 59.3	+0.1
IKAS				S	Sg	16 15 04.4	+0.8
ISAU	**Saurbar**	**0.35**	**73**	P	Pg	16 14 59.4	-0.1
ISAU				S	Sg	16 15 04.3	+0.2
IKRI	**Krysuvik**	**0.40**	**269**	P	Pg	16 15 00.3	-0.3
IKRI				S	Sg	16 15 05.8	-0.1
IKUD	**Kuludalsa**	**0.53**	**325**	P	Pg	16 15 02.2	-0.9
IKUD				S	Sg	16 15 09.8	-0.2
IHAU	**Haukadalur**	**0.54**	**81**	P	Pg	16 15 02.7	-0.4
IHAU				S	Sg	16 15 10.1	0.0
IVOG	**Vogar**	**0.55**	**279**	P	Pg	16 15 02.7	-0.6
IVOG				S	Sg	16 15 10.7	+0.2
IGRV	**Grindav??k**	**0.57**	**267**	P	Pg	16 15 03.0	-

ISOL	**Solvholt**	**0.10**	**77**	P	Pg	16 16 34.6	+0.2
ISOL				S	Sg	16 16 36.4	+0.6
IKRO	**Krokur**	**0.19**	**6**	P	Pg	16 16 36.5	+0.3
ISAN	**Sandskeio**	**0.23**	**310**	P	Pg	16 16 37.2	+0.3
ISAN				S	Sg	16 16 40.9	+0.9
IVOS	**Vogsosar**	**0.25**	**258**	P	Pg	16 16 37.3	+0.2
IVOS				S	Sg	16 16 41.2	+0.9
IASM	**Asmuli**	**0.25**	**106**	P	Pg	16 16 37.5	+0.2
IASM				S	Sg	16 16 41.3	+0.7
IHEI	**Heioarbar**	**0.30**	**354**	P	Pg	16 16 38.2	+0.1
IHEI				S	Sg	16 16 42.6	+0.6
IKAS	**Kald??rsel**	**0.33**	**291**	P	Pg	16 16 38.7	0.0
IKAS				S	Sg	16 16 43.6	+0.7
ISAU	**Saurbar**	**0.34**	**75**	P	Pg	16 16 38.8	-0.1
ISAU				S	Sg	16 16 44.0	+0.6
IKRI	**Krysuvik**	**0.41**	**266**	P	Pg	16 16 39.9	-0.3
IKRI				S	Sg	16 16 45.7	+0.3
IKUD	**Kuludalsa**	**0.52**	**323**	P	Pg	16 16 41.6	-0.8
IKUD				S	Sg	16 16 49.2	+0.1
IHAU	**Haukadalur**	**0.53**	**83**	P	Pg	16 16 42.2	-0.4
IHAU				S	Sg	16 16 49.8	+0.3
IVOG	**Vogar**	**0.55**	**277**	P	Pg	16 16 42.4	-0.5
IVOG				S	Sg	16 16 50.4	+0.4
IGYG	**Gygjarholskot**	**0.56**	**47**	P	Pg	16 16 42.6	-0.5
IGYG				S	Sg	16 16 50.6	+0.2
IGRV	**Grindav??k**	**0.57**	**266**	P	Pg	16 16 42.7	-0.7
IGRV				S	Sg	16 16 50.7	-0.1
IVES	**Vestmannaeyjar**	**0.61**	**140**	P	Pg	16 16 43.6	-0.4
IVES				S	Sg	16 16 52.3	+0.4
IMID	**Miomork**	**0.62**	**113**	P	Pg	16 16 43.7	-0.6
IMID				S	Sg	16 16 52.3	0.0
INYL	**Nylenda**	**0.70**	**276**	P	Pg	16 16 44.7	-1.1
INYL				S	Sg	16 16 54.3	-0.5
IASB	**`sbjarnarst**	**0.85**	**355**	P	Pg	16 16 47.3	-1.3
IASB				S	Sg	16 16 58.9	-0.7
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	16 16 47.4	-1.3
IESK				S	Sg	16 16 59.0	-0.7
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	16 16 50.5	-1.6
IVAT				S	Sg	16 17 04.4	-0.9
IHVO	**Lagu-Hvolar**	**1.10**	**109**	P	Pg	16 16 51.6	-1.8
IHVO				S	Sg	16 17 06.5	-1.1
ISNB	**Snabyli**	**1.14**	**98**	P	Pg	16 16 52.2	-1.9
ISNB				S	Sg	16 17 07.6	-1.2
IKAL	**Kalfafell**	**1.54**	**87**	P	Pn	16 16 58.7	-1.8
IKAL				S	Sn	16 17 18.5	-2.4
IFAG	**Fagurholsmyri**	**2.00**	**89**	P	Pn	16 17 05.5	-1.3
ISVA	**Svartarkot**	**2.21**	**48**	P	Pn	16 17 08.9	-0.9
IHRN	**Hraun**	**2.26**	**11**	P	Pn	16 17 09.5	-0.9
IKRE	**Kreppuhraun**	**2.26**	**65**	P	Pn	16 17 09.7	-0.7

*CSEM **29** 16:36:06.3, 63°.92N×21°.16W, h6km, ML3.5, After REY*
REY 29 16:36:06.3, 63°.92N×21°.16W, h6km, ML3.2, ML3.5,
Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**296**	P	Pg	16 36 08.1	+0.2
IBJA				S	Sg	16 36 09.5	+0.5
ISOL	**Solvholt**	**0.10**	**82**	P	Pg	16 36 08.4	0.0
ISOL				S	Sg	16 36 10.1	+0.3
IKRO	**Krokur**	**0.18**	**6**	P	Pg	16 36 10.0	+0.1
IKRO				S	Sg	16 36 13.0	+0.6
ISAN	**Sandskeio**	**0.23**	**308**	P	Pg	16 36 10.9	+0.1
ISAN				S	Sg	16 36 14.4	+0.6
IVOS	**Vogsosar**	**0.25**	**255**	P	Pg	16 36 11.1	0.0
IVOS				S	Sg	16 36 14.7	+0.3
IASM	**Asmuli**	**0.26**	**109**	P	Pg	16 36 11.2	-0.1
IASM				S	Sg	16 36 15.1	+0.5
IHEI	**Heioarbar**	**0.29**	**354**	P	Pg	16 36 11.8	-0.1
IHEI				S	Sg	16 36 16.0	+0.4
IKAS	**Kald??rsel**	**0.32**	**290**	P	Pg	16 36 12.5	0.0
IKAS				S	Sg	16 36 17.4	+0.7
ISAU	**Saurbar**	**0.34**	**77**	P	Pg	16 36 12.6	-0.2
ISAU				S	Sg	16 36 17.5	+0.2
IKRI	**Krysuvik**	**0.41**	**265**	P	Pg	16 36 13.7	-0.4
IKRI				S	Sg	16 36 19.3	-0.1
IKUD	**Kuludalsa**	**0.51**	**323**	P	Pg	16 36 15.4	-0.8
IKUD				S	Sg	16 36 22.4	-0.4
IHAU	**Haukadalur**	**0.53**	**84**	P	Pg	16 36 15.9	-0.6
IHAU				S	Sg	16 36 23.4	0.0
IVOG	**Vogar**	**0.55**	**276**	P	Pg	16 36 16.1	-0.7
IVOG				S	Sg	16 36 24.1	+0.2
IGYG	**Gygjarholskot**	**0.56**	**48**	P	Pg	16 36 16.3	-0.6
IGYG				S	Sg	16 36 24.1	0.0
IGRV	**Grindav??k**	**0.57**	**265**	P	Pg	16 36 16.4	-0.9
IGRV				S	Sg	16 36 24.9	+0.1
IVES	**Vestmannaeyjar**	**0.61**	**140**	P	Pg	16 36 17.5	-0.6
IVES				S	Sg	16 36 26.3	+0.3
IMID	**Miomork**	**0.62**	**114**	P	Pg	16 36 17.5	-0.7
IMID				S	Sg	16 36 26.1	-0.2
INYL	**Nylenda**	**0.70**	**275**	P	Pg	16 36 18.4	-1.3
INYL				S	Sg	16 36 28.0	-0.7
IASB	**`sbjarnarst**	**0.84**	**355**	P	Pg	16 36 20.9	-1.5
IASB				S	Sg	16 36 32.3	-0.9
IESK	**Eystri-Skogar**	**0.86**	**116**	P	Pg	16 36 21.3	-1.4
IESK				S	Sg	16 36 32.9	-0.9
IVAT	**Vatnsfell**	**1.02**	**74**	P	Pg	16 36 24.2	-1.7
IVAT				S	Sg	16 36 38.0	-1.2
IHVO	**Lagu-Hvolar**	**1.10**	**110**	P	Pg	16 36 25.4	-2.0
IHVO				S	Sg	16 36 40.3	-1.4
ISNB	**Snabyli**	**1.14**	**98**	P	Pg	16 36 25.9	-2.2
ISNB				S	Sg	16 36 41.5	-1.3
IHVE	**Hveravellir**	**1.18**	**35**	P	Pg	16 36 26.3	-2.6
IHVE				S	Sg	16 36 42.1	-2.2
ISKR	**Skrokkalda**	**1.38**	**61**	P	Pn	16 36 30.0	-2.0
ISKR				S	Sb	16 36 48.4	-1.8
IKAL	**Kalfafell**	**1.54**	**87**	P	Pn	16 36 32.6	-1.6
IFAG	**Fagurholsmyri**	**2.00**	**89**	P	Pn	16 36 39.1	-1.4
ISVA	**Svartarkot**	**2.21**	**48**	P	Pn	16 36 42.9	-0.5
IHRN	**Hraun**	**2.25**	**11**	P	Pn	16 36 43.1	-0.9
IHRN				S	Sn	16 37 11.4	-0.6
IKRE	**Kreppuhraun**	**2.25**	**65**	P	Pn	16 36 43.3	-0.8
IBRU	**Bruarjokull**	**2.39**	**65**	P	Pn	16 36 45.6	-0.3
IHVA	**Hvannstoosfjol**	**2.52**	**63**	P	Pn	16 36 48.0	+0.2

*CSEM **29** 16:50:43.9±0.1, 63°.91N×21°.16W, h10km, ML4.2, Error ellipse: s-maj=1.7km s-min=1.1km az=20.0*
REY 29 16:50:44.5, 63°.90N×21°.16W, h4km, ML3.8, ML4.2,
Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**307**	P	Pg	16 50 46.5	+0.3
IBJA				S	Sg	16 50 48.2	+0.9
ISOL	**Solvholt**	**0.10**	**72**	P	Pg	16 50 46.8	+0.3
ISOL				S	Sg	16 50 48.7	+0.8
IKRO	**Krokur**	**0.20**	**5**	P	Pg	16 50 48.7	+0.3
IKRO				S	Sg	16 50 51.9	+0.8
ISAN	**Sandskeio**	**0.24**	**311**	P	Pg	16 50 49.3	+0.2
ISAN				S	Sg	16 50 53.1	+0.8
IVOS	**Vogsosar**	**0.24**	**259**	P	Pg	16 50 49.3	+0.1
IVOS				S	Sg	16 50 53.1	+0.7
IASM	**Asmuli**	**0.25**	**105**	P	Pg	16 50 49.5	+0.2
IASM				S	Sg	16 50 53.4	+0.8
IHEI	**Heioarbar**	**0.30**	**354**	P	Pg	16 50 50.4	0.0
IHEI				S	Sg	16 50 55.0	+0.7
IKAS	**Kald??rsel**	**0.33**	**293**	P	Pg	16 50 50.9	+0.1
IKAS				S	Sg	16 50 56.0	+0.9
ISAU	**Saurbar**	**0.34**	**74**	P	Pg	16 50 51.0	-0.1
ISAU				S	Sg	16 50 56.1	+0.6
IKRI	**Krysuvik**	**0.41**	**267**	P	Pg	16 50 52.0	-0.3
IKRI				S	Sg	16 50 57.7	+0.2
IKUD	**Kuludalsa**	**0.53**	**324**	P	Pg	16 50 53.8	-0.8
IKUD				S	Sg	16 51 01.3	-0.2
IHAU	**Haukadalur**	**0.53**	**82**	P	Pg	16 50 54.3	-0.4
IHAU				S	Sg	16 51 01.8	+0.2
IGYG	**Gygjarholskot**	**0.57**	**47**	P	Pg	16 50 54.8	-0.5
IGYG				S	Sg	16 51 02.7	0.0
IVES	**Vestmannaeyjar**	**0.60**	**139**	P	Pg	16 50 55.6	-0.4
IVES				S	Sg	16 51 04.1	+0.3
IMID	**Miomork**	**0.61**	**113**	P	Pg	16 50 55.7	-0.6
IMID				S	Sg	16 51 04.4	+0.2
IASB	**`sbjarnarst**	**0.86**	**355**	P	Pg	16 50 59.5	-1.4
IASB				S	Sg	16 51 11.3	-0.7

*IDC **29** 16:51:42.9±0.8, 52°.01N×177°.54W, h0km, mb4.0/15, mb1 4.3/17, mb1mx4.0/31, mbtmp4.1/17, ML3.1/1, Error ellipse: s-maj=25.4km s-min=15.0km az=0.0*
*ISCJB **29** 16:51:44.4±1.9, 52°.14N±0°.07×177°.63W±0°.05, h20km±14km, mb4.1/20, Error ellipse: s-maj=12.6km s-min=5.1km az=171.6*
*NEIC **29** 16:51:47.0±2.1, 51°.94N×177°.59W, h30km±16km, mb4.5/9, ML4.1(AEIC), Error ellipse: s-maj=16.1km s-min=5.8km az=170.0*
ISC 29 16:51:46.9±2.1, 52°.09N±0°.08×177°.64W±0°.05, h25km±15km, n224, σ0°64/224, mb4.1/20, 96C-88D,
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**2.03**	**251**	P	**Pn**	**16 52 17.5**	**-2.0**
AMKA				S	**Sn**	**16 52 43.0**	**-1.0**
SMY	**Shemya**	**5.10**	**280**	P	**Pn**	**16 53 02.4**	**+0.8**
FX1	**Attu Island--F**	**5.68**	**282**	P	**Pn**	**16 53 10.1**	**+0.6**
UNV	**Unalaska Valle**	**6.95**	**71**	*e*Pn	**Pn**	**16 53 26.7**	**-0.4**
AKUT	**Akutan**	**7.43**	**69**	*e*Pn	**Pn**	**16 53 33.3**	**-0.3**
SDPT	**Sand Point**	**10.68**	**65**	*e*Pn	**Pn**	**16 54 18.6**	**+0.6**
OHAK	**Old Harbor** 53nm,1.3s	**14.96**	**60**	*e*P	**Pn**	**16 55 19.5**	**+3.1**
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=88,slow=19,SNR=4.2	**15.00**	**284**	Pn	**Pn**	**16 55 17.8**	**+0.7**
PETK	**Petropavlovsk-**	**15.00**	**284**	Pn	**Pn**	**16 55 17.8**	**+0.7**
SVW2	**Sparrevohn**	**15.06**	**45**	*e*Pn	**Pn**	**16 55 17.7**	**0.0**
KDAK	**Kodiak Island**	**15.43**	**58**	Pn	**Pn**	**16 55 21.8**	**-0.8**
TTA	**Tatalina**	**15.81**	**38**	*e*P	**Pn**	**16 55 32.3**	**+4.8**
RSO	**Redoubt South**	**16.07**	**49**	*e*Pn	**Pn**	**16 55 33.8**	**+2.9**
RC01	**Rabbit Creek A**	**17.68**	**48**	Pn	**Pn**	**16 55 48.5**	**-2.5**
KTH	**Kantishna Hill** 26nm,1.0s	**18.11**	**40**	*e*Pn	**Pn**	**16 55 57.3**	**+0.9**
DIV	**Divide** 16nm,1.0s	**19.55**	**50**	*e*P	**Pn**	**16 56 12.3**	**-1.4**
BMRM	**Bremner River** 34nm,1.2s	**20.07**	**51**	*e*P	**P**	**16 56 18.0**	**+0.1**
PAX	**Paxson** 24nm,1.0s	**20.18**	**45**	*e*P	**P**	**16 56 19.3**	**+0.1**
MENT	**Mentasta**	**20.93**	**46**	*e*P	**P**	**16 56 26.3**	**-1.0**
INK	**Inuvik** 2.9nm,0.7s,mb3.9,baz=242,slow=9.9,SNR=8.8	**26.46**	**36**	P	**P**	**16 57 21.2**	**-0.2**
YKA	**Yellowknife Ar** 1.6nm,0.8s,mb4.0,baz=282,slow=8.5,SNR=12	**34.22**	**47**	P	**P**	**16 58 29.3**	**-0.7**
A07A	**Ashnola River,** baz=36	**35.69**	**72**	⇑P	**P**	**16 58 43.0**	**+0.2**
B08A	**Colville Reser** baz=37	**36.62**	**72**	⇑P	**P**	**16 58 50.4**	**-0.4**
H04A	**Detroit Lake** baz=37,SNR=5.8	**36.77**	**79**	⇓P	**P**	**16 58 52.6**	**+0.5**
D08A	**Wollman Farm,** baz=37	**37.50**	**74**	⇑P	**P**	**16 58 58.6**	**+0.3**
G08A	**Pilot Rock** baz=38	**38.39**	**76**	⇑P	**P**	**16 59 06.1**	**+0.3**
K05A	**Summer Lake** baz=38,SNR=6.0	**38.62**	**81**	⇑P	**P**	**16 59 09.2**	**+1.5**
I07A	**Izee** baz=39,SNR=11	**38.71**	**78**	⇓P	**P**	**16 59 08.7**	**+0.2**
WDC	**Whiskeytown Da** 5.6nm,1.1s,mb4.2	**38.85**	**85**	*e*P	**P**	**16 59 10.3**	**+0.6**
E10A	**Myers Farm, Un** baz=39	**38.87**	**73**	⇑P	**P**	**16 59 09.2**	**-0.6**
H08A	**Prairie City** baz=39	**38.98**	**77**	⇑P	**P**	**16 59 10.7**	**0.0**
E11A	**Bogner Ranch,** baz=39	**39.47**	**73**	⇑P	**P**	**16 59 14.2**	**-0.5**
G10A	**Bishop Farm, J** baz=39,SNR=5.8	**39.49**	**75**	⇑P	**P**	**16 59 14.4**	**-0.6**
J08A	**Circle Bar Ran** baz=40	**39.73**	**78**	⇓P	**P**	**16 59 17.5**	**+0.4**
A14A	**Double T Ranch** baz=40	**39.75**	**68**	⇑P	**P**	**16 59 16.3**	**-0.9**
G11A	**Walters Elk Ra** baz=40	**39.94**	**74**	⇓P	**P**	**16 59 18.5**	**-0.2**
H10A	**Noah's Angus R** baz=40	**40.09**	**76**	⇑P	**P**	**16 59 19.6**	**-0.4**
B14A	**Marquette Ranc** baz=40	**40.15**	**69**	⇑P	**P**	**16 59 19.6**	**-0.9**
WVOR	**Wild Horse Val** 6.4nm,0.5s,mb4.6	**40.16**	**80**	*e*P	**P**	**16 59 19.1**	**-1.5**
J09A	**Fry Pan Ranch,** baz=40,SNR=5.6	**40.17**	**78**	⇓P	**P**	**16 59 20.9**	**+0.2**
F12A	**Elk City** baz=40	**40.35**	**73**	⇓P	**P**	**16 59 21.5**	**-0.6**
H11A	**Donnelly** baz=40	**40.47**	**75**	⇑P	**P**	**16 59 23.0**	**-0.1**
E13A	**Victor** baz=41	**40.61**	**72**	⇓P	**P**	**16 59 24.0**	**-0.3**
BEKR	**Beckwourth** baz=40	**40.61**	**84**	⇑P	**P**	**16 59 25.3**	**+1.0**
G12A	**Big Creek, Yel** baz=41	**40.64**	**74**	⇑P	**P**	**16 59 24.0**	**-0.5**
D14A	**Greenough** baz=41	**40.67**	**71**	⇑P	**P**	**16 59 24.2**	**-0.6**
C15A	**Salmond Ranch,** baz=41	**40.83**	**69**	⇑P	**P**	**16 59 25.3**	**-0.7**
I11A	**Placerville** baz=41	**40.94**	**76**	⇓P	**P**	**16 59 26.8**	**-0.2**
K10A	**MacKenzie Ranc** baz=41,SNR=9.0	**41.03**	**78**	⇓P	**P**	**16 59 28.2**	**+0.4**
D15A	**Lincoln** baz=41	**41.26**	**70**	⇑P	**P**	**16 59 29.1**	**-0.5**
MFID	**Camas Ranch** baz=41	**41.30**	**77**	⇓P	**P**	**16 59 29.8**	**-0.1**
G13A	**Cobalt** baz=41	**41.31**	**74**	⇓P	**P**	**16 59 29.8**	**-0.3**
C16A	**Fuhringer Ranc** baz=41	**41.31**	**69**	⇑P	**P**	**16 59 29.3**	**-0.7**
A17A	**Triple J Farms** baz=41	**41.32**	**67**	⇑P	**P**	**16 59 29.2**	**-0.9**
WCN	**Washoe City** baz=41	**41.33**	**84**	⇓P	**P**	**16 59 31.3**	**+1.1**
I12A	**Atlanta** baz=41	**41.50**	**76**	⇑P	**P**	**16 59 31.3**	**-0.3**
K11A	**Parker Ranch,** baz=41	**41.54**	**78**	⇓P	**P**	**16 59 32.2**	**+0.2**
H13A	**Challis** baz=42	**41.59**	**74**	⇓P	**P**	**16 59 32.1**	**-0.2**
L10A	**Juniper Basin** baz=42	**41.67**	**79**	⇑P	**P**	**16 59 33.4**	**+0.3**
J12A	**Stokes Ranch,** baz=42	**41.83**	**76**	⇑P	**P**	**16 59 33.8**	**-0.5**
M10A	**I.L. Ranch, Tu** baz=42	**41.96**	**79**	⇑P	**P**	**16 59 35.6**	**+0.1**
I13A	**Wildhorse Cree** baz=42,SNR=6.4	**42.04**	**75**	⇑P	**P**	**16 59 35.6**	**-0.4**
L11A	**Cat Creek Ranc** baz=42,SNR=7.1	**42.06**	**78**	⇓P	**P**	**16 59 36.6**	**+0.3**
HLID	**Hailey** baz=42,SNR=5.6	**42.06**	**76**	⇑P	**P**	**16 59 36.2**	**0.0**
H14A	**Leadore** baz=42	**42.09**	**74**	⇑P	**P**	**16 59 35.7**	**-0.7**
MCMT	**McKenzie Canyo** 0.8nm,0.5s,mb3.6	**42.27**	**73**	*e*P	**P**	**16 59 36.7**	**-1.2**
J13A	**Cove Ranch, Pi** baz=42,SNR=6.9	**42.30**	**76**	⇓P	**P**	**16 59 37.9**	**-0.2**
K12A	**Draper Farm, C** baz=42,SNR=5.1	**42.30**	**77**	⇓P	**P**	**16 59 38.2**	**+0.1**
I14A	**Mackay** baz=42	**42.42**	**75**	⇓P	**P**	**16 59 38.9**	**-0.2**
M11A	**Holland Ranch,** baz=42	**42.47**	**79**	⇑P	**P**	**16 59 40.0**	**+0.4**
L12A	**House Creek Ra** baz=42,SNR=12	**42.51**	**78**	⇑P	**P**	**16 59 40.4**	**+0.5**
BOZ	**Bozeman (W)** baz=42,SNR=5.2	**42.54**	**71**	⇑P	**P**	**16 59 39.1**	**-1.0**
J14A	**Carey** baz=43	**42.73**	**75**	⇓P	**P**	**16 59 41.8**	**+0.1**
NVAR	**Mina Array Bea** 3.2nm,0.7s,mb4.1,baz=292,slow=7.6,SNR=27	**42.76**	**84**	P	**P**	**16 59 42.6**	**+0.7**
NVAR				PcP	PcP	17 01 32.6	-0.4
M12A	**Wells** baz=43	**43.01**	**79**	⇑P	**P**	**16 59 44.0**	**+0.1**
E18A	**Harlowton** baz=43	**43.03**	**69**	⇑P	**P**	**16 59 43.4**	**-0.6**
L13A	**Double Diamond** baz=43	**43.19**	**77**	⇑P	**P**	**16 59 45.8**	**+0.4**
N12A	**Clover Valley,** baz=43,SNR=5.1	**43.27**	**79**	⇓P	**P**	**16 59 46.2**	**+0.1**
H16A	**Russell Place,** baz=43	**43.29**	**72**	⇓P	**P**	**16 59 45.4**	**-0.8**
O11A	**Cowboy Ranch,** baz=43	**43.33**	**81**	⇑P	**P**	**16 59 46.8**	**+0.3**
M13A	**Montello** baz=43	**43.49**	**78**	⇑P	**P**	**16 59 48.1**	**+0.2**
L14A	**Malta** baz=44,SNR=6.0	**43.65**	**77**	⇑P	**P**	**16 59 48.8**	**-0.3**
Q10A	**Clear Creek Ra** baz=44,SNR=8.6	**43.68**	**83**	⇑P	**P**	**16 59 50.0**	**+0.6**
K15A	**Arbon** baz=44	**43.69**	**76**	⇓P	**P**	**16 59 49.7**	**+0.3**
O12A	**Currie** baz=44,SNR=9.5	**43.80**	**80**	⇓P	**P**	**16 59 50.5**	**+0.2**
H17A	**Grant Village** baz=44	**43.86**	**72**	⇓P	**P**	**16 59 50.6**	**-0.1**
M14A	**Sheep Mountain** baz=44	**43.90**	**77**	⇑P	**P**	**16 59 51.1**	**0.0**
R10A	**Warm Springs** baz=44	**44.07**	**83**	⇑P	**P**	**16 59 53.1**	**+0.6**
Q11A	**Duckwater** baz=44,SNR=5.7	**44.12**	**82**	⇑P	**P**	**16 59 53.1**	**+0.2**
S10A	**Tonopah Range,** baz=44,SNR=8.6	**44.12**	**84**	⇑P	**P**	**16 59 53.3**	**+0.4**
P12A	**McGill** baz=44	**44.19**	**81**	⇓P	**P**	**16 59 54.1**	**+0.6**
ISA	**Isabella** baz=44	**44.41**	**88**	⇓P	**P**	**16 59 55.4**	**+0.1**
R11A	**Troy Canyon, C** baz=44,SNR=11	**44.47**	**83**	⇓P	**P**	**16 59 55.8**	**+0.1**
P13A	**Bates Ranch, G** baz=45	**44.74**	**80**	⇑P	**P**	**16 59 58.3**	**+0.4**
L16A	**Fish Haven** baz=45	**44.74**	**76**	⇑P	**P**	**16 59 57.8**	**0.0**
MPMC	**Manual Prospec** baz=45,SNR=5.4	**44.76**	**86**	⇓P	**P**	**16 59 58.4**	**+0.3**
FURC	**Furnace Creek,** baz=45	**44.88**	**85**	⇑P	**P**	**16 59 59.6**	**+0.5**
DUG	**Dugway** baz=45,SNR=5.3	**45.01**	**79**	⇑P	**P**	**16 59 60.0**	**-0.1**
LRMC	**Laurel Mountai** baz=45	**45.02**	**87**	⇓P	**P**	**16 59 59.3**	**-0.9**
M16A	**Huntsville** baz=45	**45.05**	**77**	⇓P	**P**	**17 00 00.2**	**-0.1**
Q13A	**Wheeler Ranch,** baz=45,SNR=6.8	**45.05**	**81**	⇓P	**P**	**17 00 00.8**	**+0.4**
R12A	**Pony Springs,** baz=45	**45.08**	**82**	⇓P	**P**	**17 00 01.2**	**+0.6**
K18A	**Toltan Ranch,** baz=45	**45.20**	**74**	⇑P	**P**	**17 00 01.0**	**-0.5**
P14A	**Drum Mountains** baz=45,SNR=6.1	**45.23**	**79**	⇓P	**P**	**17 00 01.8**	**0.0**
T11A	**Corn Creek, Al** baz=45	**45.40**	**83**	⇑P	**P**	**17 00 03.4**	**+0.3**
PDAR	**Pinedale Array** 2.7nm,0.6s,mb4.3,baz=312,slow=4.1,SNR=22	**45.41**	**74**	P	**P**	**17 00 02.0**	**-1.2**
Q14A	**Sevier Lake (B** baz=45,SNR=10.0	**45.48**	**80**	⇑P	**P**	**17 00 04.0**	**+0.2**
M17A	**Scullys Gap (B** baz=45	**45.53**	**76**	⇑P	**P**	**17 00 03.4**	**-0.7**
R13A	**O'Grain Ranch,** baz=45	**45.56**	**82**	⇑P	**P**	**17 00 05.2**	**+0.7**
GSC	**Goldstone** baz=46	**45.68**	**87**	⇑P	**P**	**17 00 06.0**	**+0.6**
K19A	**Absolon Red Bu** baz=46	**45.80**	**73**	⇑P	**P**	**17 00 05.3**	**-0.9**
O16A	**Springville** baz=46	**45.80**	**78**	⇑P	**P**	**17 00 06.6**	**+0.4**
BFSC	**Mount Baldy St** baz=46	**45.85**	**88**	⇑P	**P**	**17 00 06.9**	**+0.1**
S13A	**Holt Ranch, En** baz=46,SNR=6.8	**46.01**	**82**	⇑P	**P**	**17 00 08.3**	**+0.3**
U12A	**Valley of Fire** baz=46	**46.34**	**84**	⇑P	**P**	**17 00 11.1**	**+0.6**
R15A	**Junction** baz=46	**46.58**	**80**	⇓P	**P**	**17 00 13.1**	**+0.7**
V12A	**Nelson** baz=46	**46.60**	**85**	⇑P	**P**	**17 00 13.2**	**+0.6**
U13A	**Pakoon Wash** baz=46,SNR=7.0	**46.70**	**83**	⇑P	**P**	**17 00 13.9**	**+0.5**
P17A	**Butcher Ranch,** baz=47	**46.71**	**78**	⇓P	**P**	**17 00 13.4**	**-0.1**
GMRC	**Granite Mounta** baz=46,SNR=5.5	**46.73**	**86**	⇑P	**P**	**17 00 13.8**	**+0.1**
Q16A	**Castle Valley** baz=47	**46.80**	**79**	⇓P	**P**	**17 00 14.4**	**+0.2**
S15A	**Panguitch** baz=47	**46.87**	**81**	⇓P	**P**	**17 00 15.5**	**+0.8**
P18A	**Preston Nutter** baz=47	**46.91**	**77**	⇑P	**P**	**17 00 15.3**	**+0.3**
R16A	**Teasdale** baz=47	**47.01**	**80**	⇑P	**P**	**17 00 17.0**	**+1.2**
PFO	**Pinyon Flat Ob** baz=47	**47.02**	**88**	⇓P	**P**	**17 00 16.0**	**+0.1**
BELC	**Belle Mtn.** baz=47	**47.04**	**87**	⇓P	**P**	**17 00 16.1**	**0.0**
V13A	**Grand Canyon W** baz=47	**47.05**	**84**	⇓P	**P**	**17 00 16.9**	**+0.7**
SRU	**San Rafael** baz=47	**47.07**	**78**	⇓P	**P**	**17 00 16.6**	**+0.4**
O19A	**Miners Draw (B** baz=47,SNR=5.1	**47.17**	**76**	⇓P	**P**	**17 00 16.5**	**-0.5**
U14A	**Mt Trumbull** baz=47	**47.18**	**83**	⇓P	**P**	**17 00 17.5**	**+0.4**
L21A	**Rawlins** baz=47	**47.19**	**73**	⇓P	**P**	**17 00 16.1**	**-1.0**
T15A	**Red Dirt Ranch** baz=47	**47.28**	**82**	⇑P	**P**	**17 00 18.4**	**+0.5**
Q18A	**Rafter H Ranch** baz=47	**47.31**	**78**	⇑P	**P**	**17 00 18.1**	**-0.1**
N20A	**Spence Gulch,** baz=47	**47.35**	**75**	⇑P	**P**	**17 00 17.8**	**-0.7**
R17A	**Hanksville Air** baz=47	**47.40**	**79**	⇑P	**P**	**17 00 19.0**	**+0.2**
M21A	**Separation Pea** baz=47	**47.41**	**74**	⇓P	**P**	**17 00 18.2**	**-0.7**
IRM	**Iron Mountain** baz=47	**47.45**	**87**	⇑P	**P**	**17 00 19.6**	**+0.3**
MONP	**Monument Peak** baz=47	**47.53**	**89**	⇑P	**P**	**17 00 19.7**	**-0.1**
BC3	**Big Chuckw Mtn** baz=47	**47.61**	**87**	⇓P	**P**	**17 00 19.0**	**-1.5**
W13A	**Hualapai Mount** baz=47,SNR=5.5	**47.61**	**85**	⇓P	**P**	**17 00 20.5**	**0.0**
P19A	**Cripple Cowboy** baz=48	**47.67**	**77**	⇑P	**P**	**17 00 20.7**	**-0.2**
U15A	**North Rim** baz=48,SNR=13	**47.71**	**82**	⇓P	**P**	**17 00 21.5**	**+0.2**
V14A	**Boquillas Ranc** baz=48,SNR=5.8	**47.73**	**84**	⇓P	**P**	**17 00 21.8**	**+0.4**
T16A	**Glen Canyon Da** baz=48	**47.83**	**81**	⇓P	**P**	**17 00 21.9**	**-0.3**
S17A	**Black Ridge (B** baz=48,SNR=11	**47.84**	**80**	⇓P	**P**	**17 00 22.2**	**-0.1**
R18A	**Canyonlands Na** baz=48	**47.91**	**79**	⇓P	**P**	**17 00 22.3**	**-0.5**
Q19A	**Hogan Spring (** baz=48	**47.93**	**78**	⇓P	**P**	**17 00 22.2**	**-0.8**
PDMCI	**Parker Dam,Lak** baz=48	**47.98**	**86**	⇑P	**

T19A	Beclabito baz=49,SNR=5.1	49.44	80	⇓P	P	17 00 34.3	-0.2
X16A	Lo Mia Camp, P baz=49	49.56	84	⇓P	P	17 00 35.9	+0.4
V18A	Ganado baz=50	49.62	81	⇓P	P	17 00 36.4	+0.4
S21A	Coal Bank Pass baz=50	49.65	78	⇓P	P	17 00 36.2	0.0
SPITS	Spitsbergen Ar 5.3nm,0.7s,mb4.7,baz=55,slow=7.2,SNR=13	49.71	356	P	P	17 00 36.9	+0.7
115A	Sonoran Desert baz=50	50.24	86	⇓P	P	17 00 41.3	+0.6
214A	Organ Pipe Nat baz=50	50.39	87	⇑P	P	17 00 41.6	-0.3
X18A	Snowflake baz=50	50.40	82	⇑P	P	17 00 42.4	+0.5
Y17A	Roosevelt baz=50	50.41	84	⇓P	P	17 00 42.6	+0.6
V20A	Brimhall baz=50	50.46	80	⇓P	P	17 00 42.6	+0.3
T22A	Edith baz=50	50.60	78	⇑P	P	17 00 43.6	+0.2
X19A	St. Johns baz=51	50.87	82	⇑P	P	17 00 45.8	+0.3
V21A	Milan baz=51	50.96	80	⇑P	P	17 00 46.2	+0.1
117A	Oracle baz=51	51.24	85	⇓P	P	17 00 48.5	+0.3
X20A	Quemado baz=51,SNR=5.4	51.28	81	⇑P	P	17 00 48.5	0.0
V22A	San Miguel Ran baz=51	51.33	79	⇓P	P	17 00 48.5	-0.3
118A	Homack Ranch, baz=52,SNR=7.2	51.67	84	⇓P	P	17 00 51.8	+0.3
X21A	Alamocita Cree baz=52,SNR=6.7	51.78	81	⇓P	P	17 00 52.3	0.0
Y20A	Horse Springs, baz=52	51.78	82	⇑P	P	17 00 52.5	+0.3
218A	Dragoon baz=52	52.08	85	⇑P	P	17 00 55.3	+0.8
X22A	Bernardo baz=52	52.21	80	⇑P	P	17 00 56.1	+0.7
ECSD	EROS Data Cent 7.0nm,0.7s,mb4.7	52.27	65	*e*P	P	17 00 56.8	+1.0
318A	Bisbee baz=52	52.48	85	⇑P	P	17 00 57.7	+0.2
219A	White Tail Can baz=52	52.54	84	⇑P	P	17 00 58.2	+0.3
120A	U Bar Ranch, L baz=52	52.55	83	⇑P	P	17 00 58.5	+0.5
W24A	Lazy 6 Ranch, baz=53	52.71	79	⇓P	P	17 00 59.2	+0.1
220A	Playas Peak, P baz=53	53.06	84	⇓P	P	17 01 01.8	+0.1
121A	Cookes Peak, D baz=53	53.08	83	⇑P	P	17 01 02.3	+0.4
Z22A	Elephant Butte baz=53	53.09	81	⇓P	P	17 01 02.3	+0.3
Y23A	Lovelace Mesa, baz=53,SNR=5.3	53.18	80	⇓P	P	17 01 02.4	-0.3
W25A	X Bar L Ranch, baz=53	53.27	78	⇓P	P	17 01 03.1	-0.2
320A	Kipp Ranch, An baz=53	53.45	84	⇑P	P	17 01 04.9	+0.2
Y24A	Capitan baz=53,SNR=12	53.56	80	⇑P	P	17 01 05.1	-0.3
Y25A	Mesa, Roswell baz=54	54.01	79	⇓P	P	17 01 08.8	+0.1
X26A	CR and CF Fran baz=54	54.12	78	⇑P	P	17 01 08.5	-1.0
224A	Corundas Mount baz=55	54.78	81	⇓P	P	17 01 13.8	-0.5
Z26A	Caprock baz=55	54.89	79	⇑P	P	17 01 14.4	-0.7
125A	Gardner Draw, baz=55	54.90	80	⇑P	P	17 01 15.0	-0.2
Y27A	Causey baz=55	54.96	78	⇑P	P	17 01 15.7	0.0
MSTX	Muleshoe baz=55	55.14	78	⇓P	P	17 01 16.2	-0.7
325A	Bean Ranch, Si baz=55	55.60	82	⇑P	P	17 01 20.2	-0.1
226A	Malaga, Loving baz=56	55.65	80	⇓P	P	17 01 20.1	-0.5
425A	Indio Mountain baz=56	56.01	82	⇓P	P	17 01 22.9	-0.3
526A	Mary Lane Ranc baz=57	57.06	82	⇓P	P	17 01 30.2	-0.5
626A	Big Bend Ranch baz=57	57.40	83	⇓P	P	17 01 32.2	-0.9
ARCES	ARCESS Array B 1.7nm,0.7s,mb4.2,baz=20,slow=3.9,SNR=5.6	57.51	351	P	P	17 01 33.4	+0.1
TXAR	Lajitas Array 1.9nm,0.7s,mb4.3,baz=298,slow=5.3,SNR=7.8	57.84	82	P	P	17 01 35.5	-0.6
627A	Terlingua Ranc baz=58	57.92	82	⇓P	P	17 01 36.0	-0.7
628A	Black Gap, Mar baz=58	58.21	82	⇓P	P	17 01 37.7	-1.1
KURK	Kurchatov 0.2nm,0.5s,mb3.4,baz=42,slow=6.7,SNR=3.5	59.05	314	P	P	17 01 45.5	+1.1
MKAR	Makanchi Array 0.2nm,0.2s,mb3.7,baz=62,slow=6.7,SNR=2.4	60.15	309	P	P	17 01 54.4	+2.5
BVAR	Borovoye Array 0.6nm,0.5s,mb4.0,baz=71,slow=5.5,SNR=5.9	60.81	320	P	P	17 01 56.4	0.0
KMI	Kunming	64.34	278	P	P	17 02 19.0	-1.3
KMI				sP	sP	17 02 20.0	-11
KMI	comp=Z,4.0nm,0.7s,mb4.6			pmax	pmax		
FINES	FINESS Array B comp=Z,1.1nm,0.6s,mb4.1,baz=39,slow=5.3,SNR=3.9	65.25	348	P	P	17 02 25.4	-0.3
CMAR	Chiang Mai Arr comp=Z,0.4nm,0.6s,mb3.5,baz=29,slow=7.7,SNR=4.3	71.65	277	P	P	17 03 08.1	+1.7
AKASG	Malin Array Be comp=Z,0.4nm,0.4s,mb3.7,baz=19,slow=5.9,SNR=3.3	75.09	343	P	P	17 03 25.3	-0.8
ASAR	Alice Springs comp=Z,0.7nm,0.6s,mb4.1,baz=22,slow=5.6,SNR=18	86.50	223	P	P	17 04 26.4	-0.8
QSPA	South Pole Qui comp=Z,0.7nm,0.6s,baz=296,slow=3.9,SNR=9.8	141.84	180	PKP	PKPdf	17 11 13.2	-1.2

*DJA **29** 17:00:45.3±23S×99.70E,h36km,MLv3.8/5*
*IDC **29** 17:00:51.8±3.7,2.52S×99.84E,h0km,mb3.6/4,mb1 3.6/4, mb1mx3.4/23,mbtmp3.6/4,MS2.9/1,Ms1 2.9/1, ms1mx2.6/27,Error ellipse: s-maj=169.7km s-min=25.8km az=56.0*
*ISCJB **29** 17:00:55.4±1.1,2.71S±0.08×99.8E±0.1,h45km±7km, mb3.6/4,Error ellipse: s-maj=20.6km s-min=11.2km az=158.4*

ISC 29 17:00:56.7±1.1,2.69S±0.08×99.9E±0.1,h36km±8km,n11, σ0.89/12,mb3.6/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.17	116	P	Pn	17 01 04.7	+1.4
PPSI				S	Sn	17 01 06.6	-1.2
SISI	Saibi	1.56	330	P	Px	17 01 10.8	
SISI				S	Sn	17 01 41.5	+0.6
PDSI	Padang	1.87	19	P	Pn	17 01 25.4	-0.7
PDSI				S	Sn	17 01 49.0	+0.5
PPI	Padang Panjang	2.28	14	P	Pn	17 01 32.3	+0.4
SDSI	Sungai Dareh	2.35	42	P	Pn	17 01 32.6	-0.1
MNSI	Mandailing Nat	3.47	355	P	Pn	17 01 48.2	-0.1
NWAO	Narrogin (SRO) comp=Z,18nm,18.6s,baz=170,slow=36	34.21	153	LR	LR	17 21 28.3	
ASAR	Alice Springs 0.6nm,0.7s,mb3.4,baz=300,slow=8.4,SNR=16	38.97	125	P	P	17 08 20.9	+1.3
SONM	Songino Array 0.5nm,0.4s,mb3.8,baz=191,slow=6.9,SNR=3.5	50.64	6	P	P	17 09 51.5	-0.6
MKAR	Makanchi Array 0.3nm,0.3s,mb3.8,baz=148,slow=8.0,SNR=3.9	51.65	345	P	P	17 09 59.9	+0.1
KURK	Kurchatov 0.2nm,0.4s,mb3.5,baz=156,slow=6.9,SNR=2.5	56.23	344	P	P	17 10 31.5	-1.7

*ISCJB **29** 17:07:31.4±0.3,63.89N±0.02×21.17W±0.03,h11km±2km, mb3.6/7,Error ellipse: s-maj=4.0km s-min=2.3km az=7.0*
*CSEM **29** 17:07:31.6±0.1,63.92N×21.14W,h5km,ML4.2,Error ellipse: s-maj=3.5km s-min=2.1km az=11.0*
*REY **29** 17:07:32.0,63.89N×21.17W,h4km,ML4.1,ML4.2*
*IDC **29** 17:07:32.0±1.0,63.96N×21.21W,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.5/30,mbtmp3.6/7,ML3.8/1,Error ellipse: s-maj=20.0km s-min=10.6km az=82.0*
*NEIC **29** 17:07:33.5±0.7,64.03N×21.20W,h10km,mb4.0/1,Error ellipse: s-maj=14.4km s-min=10.3km az=50.0*

ISC 29 17:07:31.9±0.3,63.89N±0.02×21.14W±0.03,h4km±2km, n54,σ0.86/83,mb3.6/7,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	Bjarnastaoir	0.09	307	P	Pg	17 07 34.0	+0.3
IBJA				S	Sg	17 07 35.5	+0.6
ISOL	Solvholt	0.10	68	P	Pg	17 07 34.3	+0.5
ISOL				S	Sg	17 07 36.3	+1.2
IKRO	Krokur	0.21	3	P	Pg	17 07 36.2	+0.3
IKRO				S	Sg	17 07 39.6	+1.0
IASM	Asmuli	0.24	104	P	Pg	17 07 37.0	+0.5
IASM				S	Sg	17 07 41.0	+1.3
ISAN	Sandskeio	0.25	311	P	Pg	17 07 36.9	+0.2
ISAN				S	Sg	17 07 40.7	+0.7
IVOS	Vogsosar	0.25	261	P	Pg	17 07 36.8	+0.1
IVOS				S	Sg	17 07 40.8	+0.8
IHEI	Heioarbar	0.31	352	P	Pg	17 07 38.0	+0.1
ISAU	Saurbar	0.34	73	P	Pg	17 07 38.5	+0.2
ISAU				S	Sg	17 07 43.7	+1.0
IKAS	Kald??rsel	0.34	293	P	Pg	17 07 38.5	+0.1
IKAS				S	Sg	17 07 43.7	+0.9
IKRI	Krysuvik	0.41	268	P	Pg	17 07 39.4	-0.4
IKRI				S	Sg	17 07 45.2	0.0
IHAU	Haukadalur	0.53	81	P	Pg	17 07 41.8	-0.1
IHAU				S	Sg	17 07 49.6	+0.8
IKUD	Kuludalsa	0.54	323	P	Pg	17 07 41.4	-0.8
IKUD				S	Sg	17 07 49.0	-0.1
IVOG	Vogar	0.56	278	P	Pg	17 07 41.9	-0.7
IVOG				S	Sg	17 07 49.8	0.0
IGYG	Gygjarholskot	0.56	46	P	Pg	17 07 42.4	-0.3
IGYG				S	Sg	17 07 50.6	+0.6
IGRV	Grindav??k	0.58	267	P	Pg	17 07 42.2	-0.8
IGRV				S	Sg	17 07 50.5	-0.1
IVES	Vestmannaeyjar	0.59	139	P	Pg	17 07 43.1	-0.1
IVES				S	Sg	17 07 51.7	+0.8
IMID	Miomork	0.61	112	P	Pg	17 07 43.3	-0.2
IMID				S	Sg	17 07 52.0	+0.7
INYL	Nylenda	0.71	277	P	Pg	17 07 44.3	-1.2
INYL				S	Sg	17 07 54.3	-0.4
IESK	Eystri-Skogar	0.84	115	P	Pg	17 07 47.0	-0.9
IESK				S	Sg	17 07 58.5	-0.3
BORG	Borgarnes 462nm,0.3s,baz=179,slow=7.4,SNR=62	0.86	355	Pg	Pg	17 07 46.6	-1.8
BORG				Lg		17 07 58.8	
	1μm,0.3s,baz=262,slow=23,SNR=62						
BORG	Borgarnes	0.86	355	*e*P	Pg	17 07 46.1	-2.3
BORG				Pg	Pg	17 07 46.6	-1.8
BORG				Lg		17 07 58.8	
BORG	Borgarnes	0.86	355	*e*P	Pg	17 07 46.1	-2.3
BORG	Borgarnes	0.86	355	Pg	Pg	17 07 46.6	-1.8
IASB	`sbjarnarst	0.86	355	P	Pg	17 07 47.0	-1.4
IASB				S	Sg	17 07 59.0	-0.5
IVAT	Vatnsfell	1.02	72	P	Pg	17 07 50.3	-1.1
IVAT				S	Sg	17 08 04.7	0.0
IHVO	Lagu-Hvolar	1.09	109	P	Pg	17 07 51.4	-1.3
IHVO				S	Sg	17 08 06.3	-0.4
ISNB	Snabyli	1.12	97	P	Pg	17 07 51.8	-1.6
ISNB				S	Sg	17 08 07.3	-0.7
ISKR	Skrokkalda	1.38	60	P	Pn	17 07 56.2	-1.6
ISKR				S	Sb	17 08 15.0	-1.1
IKAL	Kalfafell	1.53	86	P	Pn	17 07 58.7	-1.2
IKAL				S	Sn	17 08 19.5	-0.6
IGRF	Grimsfjall	1.77	71	P	Pn	17 08 02.8	-0.5
IFAG	Fagurholsmyri	1.99	89	P	Pn	17 08 05.1	-1.1
IFAG				S	Sn	17 08 30.6	-0.8
ISVA	Svartarkot	2.21	47	P	Pn	17 08 08.9	-0.4
ISVA				S	Sn	17 08 38.3	+1.2
IKRE	Kreppuhraun	2.26	65	P	Pn	17 08 09.8	-0.1
IHRN	Hraun	2.27	11	P	Pn	17 08 09.4	-0.6
IHRN				S	Sn	17 08 39.3	+0.9
IBRU	Bruarjokull	2.39	65	P	Pn	17 08 11.8	+0.1
SCO	Scoresbysund	6.63	358	*i* P	Pn	17 09 18.1	+8.3
SCO				*i* S	Sn	17 10 41.5	+16
EKA	Eskdalemuir Ar baz=317,slow=13,SNR=14	12.46	125	Pn	Pn	17 10 31.1	+1.3
EKA	Eskdalemuir Ar	12.46	125	Pn	Pn	17 10 31.0	+1.3
SPB4	Spitsbergen Ar	18.21	24	*e*P	Pn	17 11 44.5	-0.6
SPB4	Spitsbergen Ar	18.21	24	*e*P	Pn	17 11 44.5	-0.5
FINES	FINESS Array B 1.6nm,0.7s,mb3.5,baz=309,slow=9.6,SNR=5.7	21.43	75	P	P	17 12 21.7	+1.3
FINES	FINESS Array B	21.43	75	P	P	17 12 21.7	+1.3
CLL	Collm 8.0nm,1.2s,mb4.0	21.88	109	*i* P	P	17 12 27.9	+2.5
CLL				*e*		17 12 56.0	
CLL	Collm comp=Z,8.0nm,1.2s,mb4.0	21.88	109	*i* P	P	17 12 27.9	+2.5
CLL				*e*PPP		17 12 56.0	
CLL	Collm	21.88	109	*i* P	P	17 12 27.9	+2.5
SCHQ	Schefferville comp=Z,3.5nm,0.7s,mb3.9,baz=56,slow=11,SNR=4.3	24.46	270	P	P	17 12 52.1	+0.8
SCHQ	Schefferville	24.46	270	P	P	17 12 52.2	+0.9
YKA	Yellowknife Ar comp=Z,0.3nm,0.7s,mb3.1,baz=48,slow=8.5,SNR=5.7	38.57	312	P	P	17 14 54.9	-0.2
YKA	Yellowknife Ar	38.57	312	P	P	17 14 54.9	-0.2
KURK	Kurchatov comp=Z,0.2nm,0.6s,mb3.4,baz=324,slow=7.4,SNR=3.0	49.87	55	P	P	17 16 27.4	+1.7
KURK	Kurchatov	49.87	55	P	P	17 16 27.4	+1.8
PDAR	Pinedale Array comp=Z,0.8nm,0.7s,mb3.8,baz=41,slow=6.0,SNR=6.7	51.99	291	P	P	17 16 43.2	+1.5
PDAR	Pinedale Array	51.99	291	P	P	17 16 43.2	+1.4
TORD	Torodi Ar. Bea comp=Z,0.5nm,0.7s,mb3.6,baz=335,slow=6.9,SNR=2.9	53.14	152	P	P	17 16 50.9	+0.4

*ISCJB **29** 17:09:42.1±0.3,63.88N±0.02×21.17W±0.03,h10km±2km, mb3.5/6,Error ellipse: s-maj=3.8km s-min=2.2km az=11.1*
*REY **29** 17:09:42.5,63.89N×21.17W,h3km,ML3.8,ML3.9*
*CSEM **29** 17:09:42.4±0.1,63.90N×21.13W,h2km,ML3.9,Error ellipse: s-maj=3.3km s-min=1.9km az=12.0*
*IDC **29** 17:09:43.5±1.1,63.96N×21.26W,h0km,mb3.5/6, mb1 3.7/7,mb1mx3.4/29,mbtmp3.5/7,ML3.7/1,Error ellipse: s-maj=22.6km s-min=10.4km az=79.0*
*NEIC **29** 17:09:44.6±0.8,63.97N×21.15W,h10km,mb3.7/1,Error ellipse: s-maj=19.9km s-min=10.5km az=57.0*

ISC 29 17:09:42.6±0.3,63.89N±0.02×21.14W±0.03,h2km±3km, n47,σ0.89/73,mb3.5/6,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	Bjarnastaoir	0.09	308	P	Pg	17 09 44.6	+0.2
ISOL	Solvholt	0.10	66	P	Pg	17 09 44.9	+0.4
ISOL				S	Sg	17 09 47.2	+1.5
IKRO	Krokur	0.21	3	P	Pg	17 09 46.9	+0.3
IKRO				S	Sg	17 09 50.5	+1.2
IASM	Asmuli	0.24	103	P	Pg	17 09 47.6	+0.4
IASM				S	Sg	17 09 51.6	+1.3
ISAN	Sandskeio	0.25	312	P	Pg	17 09 47.5	0.0
ISAN				S	Sg	17 09 51.6	+0.9
IVOS	Vogsosar	0.25	262	P	Pg	17 09 47.3	-0.1
IVOS				S	Sg	17 09 51.3	+0.6
IHEI	Heioarbar	0.31	352	P	Pg	17 09 48.7	+0.1
IHEI				S	Sg	17 09 54.0	+1.3
ISAU	Saurbar	0.34	72	P	Pg	17 09 49.2	+0.2
ISAU				S	Sg	17 09 54.6	+1.2
IKAS	Kald??rsel	0.34	293	P	Pg	17 09 49.1	0.0
IKAS				S	Sg	17 09 54.3	+0.7
IKRI	Krysuvik	0.41	269	P	Pg	17 09 50.0	-0.5
IKRI				S	Sg	17 09 56.3	+0.4
IHAU	Haukadalur	0.53	81	P	Pg	17 09 52.6	-0.1
IHAU				S	Sg	17 10 00.4	+0.9
IKUD	Kuludalsa	0.54	324	P	Pg	17 09 52.1	-0.8
IKUD				S	Sg	17 10 00.0	+0.1
IVOG	Vogar	0.56	279	P	Pg	17 09 52.7	-0.6
IVOG				S	Sg	17 10 01.1	+0.6
IGYG	Gygjarholskot	0.56	46	P	Pg	17 09 53.1	-0.3
IGYG				S	Sg	17 10 01.5	+0.7
IGRV	Grindav??k	0.58	267	P	Pg	17 09 52.8	-1.0
IGRV				S	Sg	17 10 01.3	0.0
IVES	Vestmannaeyjar	0.59	139	P	Pg	17 09 53.6	-0.3
IVES				S	Sg	17 10 02.5	+1.0
IMID	Miomork	0.60	112	P	Pg	17 09 53.9	-0.3
IMID				S	Sg	17 10 02.8	+0.8
INYL	Nylenda	0.71	278	P	Pg	17 09 55.0	-1.2
INYL				S	Sg	17 10 04.8	-0.6
IESK	Eystri-Skogar	0.84	115	P	Pg	17 09 57.7	-0.9
IESK				S	Sg	17 10 09.7	+0.2
BORG	Borgarnes 681nm,0.3s,baz=181,slow=7.4,SNR=17	0.86	355	Pg	Pg	17 09 57.8	-1.4
BORG				Lg		17 10 10.2	
	438nm,0.3s,baz=255,slow=21,SNR=21						
BORG	Borgarnes	0.86	355	Pg	Pg	17 09 57.8	-1.4
BORG				Lg		17 10 10.1	
IASB	`sbjarnarst	0.86	355	P	Pg	17 09 57.8	-1.4
IASB				S	Sg	17 10 10.1	-0.3
IVAT	Vatnsfell	1.02	72	P	Pg	17 10 01.1	-1.1
IVAT				S	Sg	17 10 15.3	-0.1
IHVO	Lagu-Hvolar	1.08	109	P	Pg	17 10 02.1	-1.3
IHVO				S	Sg	17 10 17.2	-0.2
ISNB	Snabyli	1.12	97	P	Pg	17 10 02.5	-1.6
ISNB				S	Sg	17 10 18.3	-0.4
ISKR	Skrokkalda	1.38	60	P	Pn	17 10 07.3	-1.6
ISKR				S	Sg	17 10 25.6	-1.3
IKAL	Kalfafell	1.53	86	P	Pn	17 10 09.2	-1.7
IKAL				S	Sn	17 10 30.3	-1.0
IGRF	Grimsfjall	1.78	71	P	Pn	17 10 13.6	-0.7
IFAG	Fagurholsmyri	1.99	88	P	Pn	17 10 16.4	-0.8
IFAG				S	Sn	17 10 41.8	-0.8
ISVA	Svartarkot	2.22	47	P	Pn	17 10 19.9	-0.5
IKRE	Kreppuhraun	2.26	64	P	Pn	17 10 20.5	-0.4
IHRN	Hraun	2.27	11	P	Pn	17 10 20.0	-1.1
IHRN				S	Sn	17 10 49.5	-0.1
EKA	Eskdalemuir Ar baz=319,slow=13,SNR=4.2	12.46	125	Pn	Pn	17 12 42.2	+1.5
EKA	Eskdalemuir Ar	12.46	125	Pn	Pn	17 12 42.2	+1.5
DSB	Dublin 16nm,0.8s	13.12	138	*e*P	Pn	17 12 50.1	+0.4
DSB	Dublin 16nm,0.8s	13.12	138	*e*P	Pn	17 12 50.1	+0.4
FINES	FINESS Array B 3.3nm,0.7s,mb3.8,baz=284,slow=5.6,SNR=7.3	21.43	75	P	P	17 14 32.9	+1.3
FINES	FINESS Array B	21.43	75	P	P	17 14 32.8	+1.3
YKA	Yellowknife Ar 0.2nm,0.5s,mb3.1,baz=42,slow=9.4,SNR=4.0	38.57	312	P	P	17 17 07.2	+1.0
YKA	Yellowknife Ar	38.57	312	P	P	17 17 07.2	+1.0
KURK	Kurchatov 0.6nm,0.9s,mb3.6,baz=340,slow=5.0,SNR=3.7	49.87	55	P	P	17 18 38.8	+2.0
KURK	Kurchatov 1.0nm,1.0s,mb3.8	49.87	55	*e*P	P	17 18 37.7	+1.0
KURK	Kurchatov 1.0nm,1.0s,mb3.8	49.87	55	*e*P	P	17 18 37.7	+0.9
PDAR	Pinedale Array 0.4nm,0.6s,mb3.5,baz=54,slow=8.1,SNR=4.0	52.00	291	P	P	17 18 54.0	+1.2
PDAR	Pinedale Array	52.00	291	P	P	17 18 54.0	+1.1
TORD	Torodi Ar. Bea 0.4nm,0.9s,mb3.4,baz=340,slow=12,SNR=2.9	53.13	152	P	P	17 19 02.5	+0.9
MKAR	Makanchi Array 0.1nm,0.3s,mb3.2,baz=349,slow=4.4,SNR=3.3	54.48	55	P	P	17 19 13.0	+1.9

*CSEM **29** 17:11:40.1,63.92N×21.16W,h5km,ML3.6,After REY*

REY 29 17:11:40.1,63.92N×21.16W,h5km,ML3.3,ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	Bjarnastaoir	0.07	296	P	Pg	17 11 41.9	+0.2
IBJA				S	Sg	17 11 43.4	+0.6
ISOL	Solvholt	0.10	82	P	Pg	17 11 42.2	+0.1
ISOL				S	Sg	17 11 44.0	+0.6
IKRO	Krokur	0.18	5	P	Pg	17 11 43.9	+0.2
IKRO				S	Sg	17 11 46.9	+0.7
ISAN	Sandskeio	0.23	308	P	Pg	17 11 44.8	+0.2
ISAN				S	Sg	17 11 48.4	+0.8
IVOS	Vogsosar	0.25	256	P	Pg	17 11 44.9	0.0
IVOS				S	Sg	17 11 48.9	+0.7
IASM	Asmuli	0.25	109	P	Pg	17 11 45.1	+0.1
IASM				S	Sg	17 11 49.0	+0.7
IHEI	Heioarbar	0.29	353	P	Pg	17 11 45.7	0.0
IHEI				S	Sg	17 11 50.1	+0.7
IKAS	Kald??rsel	0.33	290	P	Pg	17 11 46.4	0.0
IKAS				S	Sg	17 11 51.4	+0.8
ISAU	Saurbar	0.34	77	P	Pg	17 11 46.4	-0.2
ISAU				S	Sg	17 11 51.4	+0.5
IKRI	Krysuvik	0.41	265	S	Sg	17 11 53.1	-0.1
IKUD	Kuludalsa	0.52	323	P	Pg	17 11 49.2	-0.8
IKUD				S	Sg	17 11 56.4	-0.3
IHAU	Haukadalur	0.53	84	P	Pg	17 11 49.8	-0.4
IHAU				S	Sg	17 11 57.3	+0.2
IVOG	Vogar	0.55	276	P	Pg	17 11 50.0	-0.6
IVOG				S	Sg	17 11 57.8	+0.1
IGYG	Gygjarholskot	0.55	48	P	Pg	17 11 50.2	-0.5
IGYG				S	Sg	17 11 57.8	-0.1
IVES	Vestmannaeyjar	0.61	140	P	Pg	17 11 51.3	-0.5
IVES				S	Sg	17 12 00.3	+0.5
IMID	Miomork	0.62	114	P	Pg	17 11 51.3	-0.7
IMID				S	Sg	17 12 00.0	0.0
INYL	Nylenda	0.70	276	P	Pg	17 11 52.3	-1.2
INYL				S	Sg	17 12 01.9	-0.7
IASB	`sbjarnarst	0.84	355	P	Pg	17 11 54.8	-1.4
IASB				S	Sg	17 12 06.4	-0.7
IESK	Eystri-Skogar	0.85	117	P	Pg	17 11 55.1	-1.4
IESK				S	Sg	17 12 06.8	-0.7
IVAT	Vatnsfell	1.02	74	P	Pg	17 11 57.9	-1.8
IVAT				S	Sg	17 12 11.7	-1.2
IHVO	Lagu-Hvolar	1.10	110	P	Pg	17 11 58.8	-2.3
IHVO				S	Sg	17 12 14.0	-1.4
ISNB	Snabyli	1.14	98	P	Pg	17 11 59.6	-2.2
ISNB				S	Sg	17 12 15.2	-1.3
ISKR	Skrokkalda	1.37	61	P	Pn	17 12 03.7	-2.2
ISKR				S	Sb	17 12 22.0	-2.0
IKAL	Kalfafell	1.53	87	P	Pn	17 12 06.6	-1.5
IKAL				S	Sn	17 12 27.0	-1.4
IGRF	Grimsfjall	1.77	72	P	Pn	17 12 10.6	-0.8
IFAG	Fagurholsmyri	1.99	89	P	Pn	17 12 13.3	-1.1
IFAG				S	Sn	17 12 38.7	-1.0
ISVA	Svartarkot	2.21	48	P	Pn	17 12 16.7	-0.6
IHRN	Hraun	2.25	11	P	Pn	17 12 17.3	-0.6
IHRN				S	Sn	17 12 46.6	+0.6
IKRE	Kreppuhraun	2.25	65	P	Pn	17 12 17.5	-0.5

*CSEM **29** 17:14:41.9,63.94N×21.15W,h4km,ML3.8,After REY*

REY 29 17:14:41.9,63.94N×21.15W,h4km,ML3.7,ML3.8, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	Bjarnastaoir	0.07	275	P	Pg	17 14 43.7	+0.3
ISOL	Solvholt	0.09	97	P	Pg	17 14 44.0	+0.2
ISOL				S	Sg	17 14 45.7	+0.7
IKRO	Krokur	0.16	5	P	Pg	17 14 45.3	+0.3
IKRO				S

ISNB				S	Sg	17 15 17.1	-1.2
IHVE	**Hveravellir**	**1.16**	**36**	S	Sg	17 15 17.6	-1.5
ISKR	**Skrokkalda**	**1.36**	**62**	P	Pn	17 15 05.4	-2.2
ISKR				S	Sg	17 15 23.9	-1.6
IKAL	**Kalfafell**	**1.53**	**88**	P	Pn	17 15 08.2	-1.7
IKAL				S	Sn	17 15 28.7	-1.5
IGRF	**Grimsfjall**	**1.76**	**73**	P	Pn	17 15 12.2	-0.9
ISVA	**Svartarkot**	**2.19**	**48**	P	Pn	17 15 18.2	-0.7
ISVA				S	Sn	17 15 46.6	+0.2
IHRN	**Hraun**	**2.22**	**11**	S	Sn	17 15 47.8	+0.5
IKRE	**Kreppuhraun**	**2.24**	**66**	P	Pn	17 15 19.3	-0.4
IHVA	**Hvannstoosfjol**	**2.50**	**64**	P	Pn	17 15 23.6	+0.3

CASC 29 17:21:39.9±2.3, 8°.42N×82°.96W, h3km, MD4.0, MW4.4, 3C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**319**	⇑*i*P	Pg	17 21 46.5	+0.6
ACR				⇑*e*P		17 21 46.5	
BRU2	**Volcan**	**0.46**	**36**	⇓*i*P	Pg	17 21 50.0	+1.3
BRU2				*e*S	Sg	17 21 58.1	+3.4
BAR1		**0.89**	**337**	⇓*e*P	Pg	17 21 56.7	-0.2
BAR1				⇓*i*P		17 21 56.8	
BAR1				*e*S	Sg	17 22 09.8	+1.3
BAR1				*e*S	Sg	17 22 10.4	+1.9
CNI	**Changuinola**	**1.09**	**24**	⇓*i*P	Pg	17 22 00.5	-0.3
BUS	**Buena Vista**	**1.38**	**325**	*e*P	Pn	17 22 04.7	-1.3
URSC	**Urasca**	**1.62**	**330**	⇑*i*P	Pn	17 22 08.5	-0.9
URSC				*e*P		17 22 08.6	
PRS1	**Puriscal**	**2.05**	**320**	⇓*e*P	Pn	17 22 15.3	0.0
PRS1				*e*P		17 22 15.3	
CGA2	**Cerro Gallo 2**	**2.17**	**317**	*e*P	Pn	17 22 16.9	-0.1
FORC	**Fortuna**	**2.64**	**321**	*e*P	Pn	17 22 26.5	+3.0

*CSEM **29** 17:22:31.3, 64°.02N×21°.20W, h5km, ML3.9, After REY*

REY 29 17:22:31.3, 64°.02N×21°.20W, h5km, ML3.4, ML3.9, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.08**	**27**	P	Pg	17 22 33.3	+0.2
IKRO				S	Sg	17 22 34.9	+0.6
IBJA	**Bjarnastaoir**	**0.09**	**209**	P	Pg	17 22 33.5	+0.3
IBJA				S	Sg	17 22 35.1	+0.6
ISOL	**Solvholt**	**0.15**	**130**	P	Pg	17 22 34.4	+0.1
ISOL				S	Sg	17 22 36.8	+0.6
ISAN	**Sandskeio**	**0.16**	**281**	P	Pg	17 22 34.8	+0.3
ISAN				S	Sg	17 22 37.5	+0.8
IHEI	**Heioarbar**	**0.18**	**356**	P	Pg	17 22 35.0	+0.2
IHEI				S	Sg	17 22 37.9	+0.8
IKAS	**Kald??rsel**	**0.28**	**270**	P	Pg	17 22 37.0	+0.2
IKAS				S	Sg	17 22 41.3	+0.8
IASM	**Asmuli**	**0.32**	**126**	P	Pg	17 22 37.5	0.0
IASM				S	Sg	17 22 42.2	+0.5
ISAU	**Saurbar**	**0.35**	**95**	P	Pg	17 22 37.9	-0.1
ISAU				S	Sg	17 22 42.9	+0.3
IKRI	**Krysuvik**	**0.41**	**250**	P	Pg	17 22 38.9	-0.3
IKRI				S	Sg	17 22 44.7	+0.1
IKUD	**Kuludalsa**	**0.42**	**316**	P	Pg	17 22 39.0	-0.3
IKUD				S	Sg	17 22 44.6	-0.2
IGYG	**Gygjarholskot**	**0.51**	**59**	P	Pg	17 22 40.5	-0.5
IGYG				S	Sg	17 22 47.5	0.0
IVOG	**Vogar**	**0.53**	**265**	P	Pg	17 22 40.9	-0.5
IVOG				S	Sg	17 22 48.3	+0.1
IHAU	**Haukadalur**	**0.55**	**95**	P	Pg	17 22 41.3	-0.5
IHAU				S	Sg	17 22 48.9	0.0
IGRV	**Grindav??k**	**0.58**	**254**	P	Pg	17 22 41.7	-0.7
IGRV				S	Sg	17 22 49.7	-0.1
INYL	**Nylenda**	**0.68**	**266**	P	Pg	17 22 43.2	-1.1
INYL				S	Sg	17 22 52.6	-0.5
IMID	**Miomork**	**0.69**	**122**	P	Pg	17 22 43.7	-0.8
IMID				S	Sg	17 22 53.0	-0.5
IVES	**Vestmannaeyjar**	**0.71**	**145**	P	Pg	17 22 44.3	-0.6
IVES				S	Sg	17 22 54.2	+0.1
IASB	**`sbjarnarst**	**0.73**	**356**	P	Pg	17 22 44.2	-1.1
IASB				S	Sg	17 22 54.1	-0.6
IESK	**Eystri-Skogar**	**0.93**	**122**	P	Pg	17 22 47.6	-1.4
IESK				S	Sg	17 22 59.9	-1.1
IVAT	**Vatnsfell**	**1.02**	**80**	P	Pg	17 22 49.1	-1.7
IVAT				S	Sg	17 23 02.4	-1.5
IHVE	**Hveravellir**	**1.11**	**39**	P	Pg	17 22 50.1	-2.4
IHVE				S	Sg	17 23 04.8	-2.0
IHVO	**Lagu-Hvolar**	**1.16**	**114**	P	Pg	17 22 51.7	-1.8
IHVO				S	Sg	17 23 07.5	-1.0
ISNB	**Snabyli**	**1.18**	**103**	P	Pg	17 22 51.7	-2.1
ISNB				S	Sg	17 23 07.7	-1.3

*CSEM **29** 17:22:52.5, 64°.01N×21°.16W, h4km, ML3.8, After REY*

REY 29 17:22:52.5, 64°.01N×21°.16W, h4km, ML2.8, ML3.8, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.09**	**224**	P	Pg	17 22 54.6	+0.3
IBJA				S	Sg	17 22 56.2	+0.7
IKRO	**Krokur**	**0.09**	**12**	P	Pg	17 22 54.7	+0.3
IKRO				S	Sg	17 22 56.3	+0.7
ISOL	**Solvholt**	**0.13**	**129**	P	Pg	17 22 55.3	+0.3
ISOL				S	Sg	17 22 57.4	+0.8
ISAN	**Sandskeio**	**0.18**	**285**	P	Pg	17 22 56.4	+0.3
ISAN				S	Sg	17 22 59.3	+0.8
IHEI	**Heioarbar**	**0.19**	**351**	P	Pg	17 22 56.6	+0.3
IHEI				S	Sg	17 22 59.6	+0.8
IVOS	**Vogsosar**	**0.28**	**237**	P	Pg	17 22 58.1	+0.1
IVOS				S	Sg	17 23 02.3	+0.6
IASM	**Asmuli**	**0.30**	**126**	P	Pg	17 22 58.4	+0.2
IASM				S	Sg	17 23 02.8	+0.7
IKAS	**Kald??rsel**	**0.30**	**273**	P	Pg	17 22 58.6	+0.3
IKAS				S	Sg	17 23 03.3	+1.0
ISAU	**Saurbar**	**0.33**	**93**	P	Pg	17 22 58.8	0.0
ISAU				S	Sg	17 23 03.7	+0.6
IKRI	**Krysuvik**	**0.42**	**252**	S	Sg	17 23 06.3	+0.2
IKUD	**Kuludalsa**	**0.44**	**316**	S	Sg	17 23 06.8	+0.1
IGYG	**Gygjarholskot**	**0.50**	**56**	S	Sg	17 23 08.8	+0.3
IHAU	**Haukadalur**	**0.53**	**94**	P	Pg	17 23 02.4	-0.2
IHAU				S	Sg	17 23 09.7	+0.2
IVOG	**Vogar**	**0.54**	**266**	P	Pg	17 23 02.5	-0.4
IVOG				S	Sg	17 23 10.3	+0.4
IMID	**Miomork**	**0.67**	**121**	S	Sg	17 23 13.7	-0.2
IVES	**Vestmannaeyjar**	**0.69**	**145**	S	Sg	17 23 14.8	+0.2
INYL	**Nylenda**	**0.69**	**268**	P	Pg	17 23 04.6	-1.2
INYL				S	Sg	17 23 14.4	-0.4
IASB	**`sbjarnarst**	**0.74**	**355**	S	Sg	17 23 15.9	-0.5
IESK	**Eystri-Skogar**	**0.90**	**122**	P	Pg	17 23 08.4	-1.4
IESK				S	Sg	17 23 20.6	-0.9
IHVO	**Lagu-Hvolar**	**1.14**	**114**	S	Sg	17 23 28.1	-0.9

*IDC **29** 17:34:20.6±1.1, 46°.55N×153°.23E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/27, mbtmp3.7/12, ML3.3/2, Error ellipse: s-maj=27.6km s-min=21.1km az=141.0*
*JMA **29** 17:34:22.0±0.8, 46°.63N×153°.19E, h30km, M4.1*
*ISCJB **29** 17:34:23.7±1.3, 46°.3N±0°.1×153°.0E±0°.2, h37km±12km, mb3.7/10, Error ellipse: s-maj=26.5km s-min=9.2km az=141.8*
*MOS **29** 17:34:24.4±1.1, 46°.56N×153°.10E, h38km, mb4.1/5, Error ellipse: s-maj=20.2km s-min=12.7km az=68.4*
*NEIC **29** 17:34:26.1±0.8, 46°.57N×153°.16E, h35km, mb4.1/1, Error ellipse: s-maj=20.0km s-min=14.4km az=144.0*

ISC 29 17:34:24.9±2.1, 46°.4N±0°.1×153°.1E±0°.1, h31km±16km, n39, σ1§40/46, mb3.7/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.87**	**254**	*e*PN	**Pn**	**17 35 23.5**	**+1.4**
KUR				S	**Sn**	**17 36 08.8**	**+2.3**
KUR				pmax	pmax		
	comp=N,90nm,0.3s						
KUR				pmax	pmax		
	comp=Z,200nm,0.3s						
KUR				smax			
	comp=N,140nm,0.5s						
KUR				smax			
	comp=E,80nm,0.5s						
SKR	**Severo-Kuril's**	**4.71**	**24**	*e*PN	**Pn**	**17 35 34.9**	**+1.1**
SKR				*e*S	**Sn**	**17 36 25.0**	**-2.4**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,50nm,0.5s						
NEM2	**Nemuro 2**	**6.07**	**243**	P	**Pn**	**17 35 50.3**	**-2.1**
NEM2				*e*S	**Sn**	**17 36 56.0**	**-4.7**
JRA	**Rausu**	**6.18**	**249**	P	**Pn**	**17 35 55.0**	**+1.1**
JNK	**Nakash**	**6.60**	**248**	P	**Pn**	**17 35 59.8**	**+0.1**
JNK				*e*S	**Sn**	**17 37 12.7**	**-1.1**
JAK	**Akkeshi**	**6.91**	**243**	P	**Pn**	**17 36 02.1**	**-1.9**
JAK				*e*S	**Sn**	**17 37 16.8**	**-4.7**
JTKR	**Abashiri--Toko**	**6.96**	**253**	P	**Pn**	**17 36 06.0**	**+1.4**
JMP	**Maruseppu**	**7.31**	**254**	P	**Pn**	**17 36 10.9**	**+1.5**
PETK	**Petropavlovsk-**	**7.33**	**22**	Pn	**Pn**	**17 36 07.7**	**-2.0**
	comp=N,0.4nm,0.3s,baz=171,slow=12,SNR=11						
JAR	**Ashorobuto**	**7.34**	**248**	P	**Pn**	**17 36 10.0**	**+0.1**
JOB	**Onbets**	**7.50**	**245**	*e*S	**Sn**	**17 37 32.8**	**-3.1**
JKK2	**Kamakawa 2**	**7.77**	**255**	P	**Pn**	**17 36 17.5**	**+1.8**
ASAJ	**Asahikawa**	**7.78**	**257**	P	**Pn**	**17 36 17.9**	**+2.0**
ASAJ	**Asahikawa**	**7.78**	**257**	Pn	**Pn**	**17 36 17.6**	**+1.7**
	comp=N,0.4nm,0.3s,baz=70,slow=30,SNR=4.9						
JCH	**Churui**	**7.95**	**245**	P	**Pn**	**17 36 16.6**	**-1.6**
JCH				*e*S	**Sn**	**17 37 41.6**	**-5.3**
JNBK	**Urakawa-nobuka**	**8.51**	**245**	P	**Pn**	**17 36 23.9**	**-1.9**
JNB	**Noboribetsu**	**9.50**	**250**	P	**Pn**	**17 36 39.9**	**+0.4**
JKB	**Kayabe**	**9.80**	**247**	P	**Pn**	**17 36 41.3**	**-2.3**
JKB				*e*S	**Sn**	**17 38 25.4**	**-7.1**
JANG	**Nango**	**10.38**	**239**	*e*S	**Sn**	**17 38 35.6**	**-11**
JTH	**Tanohata**	**10.46**	**236**	*e*S	**Sn**	**17 38 36.9**	**-12**
KSRS	**Korea Array**	**20.71**	**253**	P	**P**	**17 39 04.6**	**+2.1**
	comp=N,1.2nm,0.9s,baz=57,slow=9.3,SNR=3.3						
KSRS	**Korea Array**	**20.71**	**253**	P	**P**	**17 39 04.6**	**+2.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**42.83**	**306**	P	**P**	**17 42 18.2**	**-1.4**
	comp=Z,0.4nm,0.5s,mb3.4,baz=99,slow=8.9,SNR=2.4						
KURK	**Kurchatov**	**47.57**	**304**	P	**P**	**17 42 57.6**	**+0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=71,slow=8.5,SNR=13						
KURK	**Kurchatov**	**47.57**	**304**	P	**P**	**17 42 57.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**51.09**	**310**	P	**P**	**17 43 24.4**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.8,baz=50,slow=5.7,SNR=5.1						
RES	**Resolute Bay**	**51.16**	**18**	*e*P	**P**	**17 43 25.2**	**+0.9**
YKA	**Yellowknife Ar**	**51.19**	**37**	P	**P**	**17 43 23.2**	**-1.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=300,slow=7.4,SNR=2.9						
ABKAR	**Akbulak array**	**58.66**	**310**	*e*P	**P**	**17 44 18.9**	**0.0**
	comp=Z,0.9nm,0.6s,mb4.0						
FINES	**FINESS Array B**	**64.36**	**335**	P	**P**	**17 44 57.4**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.2,baz=24,slow=7.1,SNR=7.4						
FINES	**FINESS Array B**	**64.36**	**335**	P	**P**	**17 44 57.4**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**64.36**	**335**	P	**P**	**17 44 57.4**	**+0.3**
NOA	**NORSAR Array B**	**68.56**	**341**	P	**P**	**17 45 24.3**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=26,slow=6.4,SNR=3.4						
NOA	**NORSAR Array B**	**68.56**	**341**	P	**P**	**17 45 24.3**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**71.84**	**326**	P	**P**	**17 45 44.4**	**+0.1**
	comp=Z,0.7nm,0.3s,mb4.0,baz=34,slow=6.2,SNR=5.3						
AKASG	**Malin Array Be**	**71.84**	**326**	P	**P**	**17 45 44.4**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**71.89**	**199**	P	**P**	**17 45 46.0**	**+1.3**
	comp=Z,0.2nm,0.7s,mb3.2,baz=10,slow=7.2,SNR=4.1						
TXAR	**Lajitas Array**	**77.65**	**60**	P	**P**	**17 46 18.8**	**+0.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=349,slow=2.6,SNR=5.0						
TXAR	**Lajitas Array**	**77.65**	**60**	P	**P**	**17 46 18.8**	**+0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

TRN 29 17:36:04.8, 15°.46N×60°.52W, h10km, MD3.6, M3.2(FDF), 1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGG	**Marie-Galante**	**0.89**	**301**	*e*P	Pg	17 36 28.1	+6.2
FDF	**Fort de France**	**0.94**	**220**	*e*P	Pg	17 36 25.7	+2.7
FDF	**Fort de France**	**0.94**	**220**	*e*P	Pg	17 36 25.8	+2.8
FDF				*e*S	Sg	17 36 41.4	+6.1
FDF				*e*S	Sg	17 36 41.8	+6.5
MVM	**Montagne Vaucl**	**0.97**	**202**	⇓*e*P	Pg	17 36 26.6	+3.1
BIM	**Bigot**	**1.08**	**210**	*e*P	Pb	17 36 26.7	+1.2
BIM				*e*S	Sg	17 36 44.9	+5.4
TBG	**Guadaloupe-3**	**1.15**	**290**	*e*P	Pb	17 36 28.4	+1.7
PHG	**Guadaloupe-2**	**1.21**	**297**	*e*P	Pn	17 36 30.1	+2.3
BCG	**Bois Riant Cap**	**1.23**	**301**	*e*P	Pn	17 36 30.2	+2.2
SCG	**Saint Claude**	**1.25**	**297**	*e*P	Pn	17 36 30.3	+2.0
LZG	**Guadaloupe-1**	**1.39**	**299**	*e*P	Pn	17 36 31.7	+1.5
BPA	**Boggy Peak**	**2.03**	**321**	*e*P	Pn	17 36 41.8	+2.7
BPA				*e*S	Sn	17 37 07.3	+2.7
SKI	**Saint Kitts**	**2.83**	**312**	*e*P	Pg	17 37 11.2	+12
SKI				*e*S	Sn	17 37 22.2	-2.0

MAN 29 17:36:58, 7°.35N×123°.94E, h0km, mb3.6, ML2.3, MS1.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.33**	**113**	⇓*i*P	Pg	17 37 05.1	+0.8
CTBH				*i*S	Sg	17 37 12.0	+3.5
PAGZ	**Pagadian**	**0.74**	**312**	*e*P	Pg	17 37 13.2	+1.0
PAGZ				*e*S	Sg	17 37 23.0	+1.0
BUKP	**Musuan**	**1.23**	**65**	*e*P	Pg	17 37 22.8	+1.3
BUKP				*e*S	Sg	17 37 40.5	+3.0

*BJI **29** 17:40:41.8, 41°.87N×82°.71E, h23km, ML2.8/7*

NNC 29 17:40:33.8±5.4, 41°.72N×83°.78E, h0km, mb3.5, mpv3.1, 3C-4D, Error ellipse: s-maj=52.4km s-min=23.4km az=146.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**5.19**	**349**	Pn	Pn	17 41 55.5	+2.9
	0.3nm,0.2s,baz=179,slow=11,SNR=15						
MK31				⇑Pg	Pg	17 42 08.8	-4.3
	1.7nm,0.5s,baz=182,slow=16,SNR=4.2						
MK31				⇓Lg		17 43 13.1	
	2.9nm,0.5s,baz=162,slow=35,SNR=6.1						
TKM2	**Tokmak 2**	**6.19**	**284**	⇓Pn	Pn	17 42 06.3	0.0
	1.1nm,0.5s						
TKM2				⇑Pg	Pg	17 42 21.0	-11
	1.6nm,0.5s						
TKM2				⇓Sn	Sb	17 43 21.2	-16
	7.9nm,0.8s						
KURBB	**Kurchatov Arra**	**9.62**	**340**	⇑Pn	Pn	17 42 54.4	+1.0
	0.5nm,1.1s						
KURBB				⇓Sn	Sn	17 44 43.1	+1.0
	0.5nm,0.8s						

*CSEM **29** 17:44:35.1, 64°.04N×21°.15W, h4km, ML3.6, After REY*

REY 29 17:44:35.1, 64°.04N×21°.15W, h4km, ML3.0, ML3.6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.06**	**13**	P	Pg	17 44 36.6	+0.2
IKRO				S	Sg	17 44 38.0	+0.7
IBJA	**Bjarnastaoir**	**0.12**	**216**	P	Pg	17 44 37.8	+0.4
IBJA				S	Sg	17 44 39.5	+0.5
ISOL	**Solvholt**	**0.14**	**141**	P	Pg	17 44 38.1	+0.2
ISOL				S	Sg	17 44 40.3	+0.5
IHEI	**Heioarbar**	**0.17**	**347**	P	Pg	17 44 38.7	+0.4
IHEI				S	Sg	17 44 41.5	+1.0
ISAN	**Sandskeio**	**0.19**	**275**	P	Pg	17 44 38.8	+0.1
ISAN				S	Sg	17 44 41.9	+0.8
IVOS	**Vogsosar**	**0.31**	**233**	P	Pg	17 44 40.9	-0.1
IVOS				S	Sg	17 44 45.5	+0.5
IKAS	**Kald??rsel**	**0.31**	**267**	P	Pg	17 44 41.0	0.0
IKAS				S	Sg	17 44 46.1	+1.0
IASM	**Asmuli**	**0.31**	**131**	P	Pg	17 44 41.2	+0.1
IASM				S	Sg	17 44 45.5	+0.3
ISAU	**Saurbar**	**0.33**	**99**	P	Pg	17 44 41.3	-0.1
ISAU				S	Sg	17 44 45.8	+0.2
IKUD	**Kuludalsa**	**0.42**	**312**	P	Pg	17 44 42.9	-0.3
IKUD				S	Sg	17 44 48.6	-0.2
IKRI	**Krysuvik**	**0.44**	**249**	P	Pg	17 44 43.4	-0.1
IKRI				S	Sg	17 44 49.5	+0.3
IGYG	**Gygjarholskot**	**0.48**	**59**	P	Pg	17 44 43.8	-0.4
IGYG				S	Sg	17 44 51.0	+0.6
IHAU	**Haukadalur**	**0.53**	**97**	P	Pg	17 44 44.8	-0.4
IHAU				S	Sg	17 44 52.1	+0.1
IVOG	**Vogar**	**0.55**	**263**	P	Pg	17 44 45.4	-0.3
IVOG				S	Sg	17 44 53.3	+0.5
IGRV	**Grindav??k**	**0.60**	**253**	P	Pg	17 44 46.1	-0.6
IMID	**Miomork**	**0.68**	**124**	P	Pg	17 44 47.5	-0.6
IMID				S	Sg	17 44 56.7	-0.2
INYL	**Nylenda**	**0.70**	**265**	P	Pg	17 44 47.3	-1.3
INYL				S	Sg	17 44 57.2	-0.4
IVES	**Vestmannaeyjar**	**0.71**	**147**	P	Pg	17 44 48.1	-0.6
IVES				S	Sg	17 44 57.1	-0.8
IASB	**`sbjarnarst**	**0.71**	**354**	P	Pg	17 44 47.8	-1.0
IASB				S	Sg	17 44 57.8	-0.2
IESK	**Eystri-Skogar**	**0.92**	**124**	P	Pg	17 44 51.2	-1.4
IESK				S	Sg	17 45 03.5	-0.9
IVAT	**Vatnsfell**	**0.99**	**80**	P	Pg	17 44 52.5	-1.6
IVAT				S	Sg	17 45 06.1	-0.8
IHVE	**Hveravellir**	**1.08**	**39**	P	Pg	17 44 53.6	-2.2
IHVE				S	Sg	17 45 08.4	-1.3
IHVO	**Lagu-Hvolar**	**1.15**	**116**	P	Pg	17 44 55.3	-1.7
IHVO				S	Sg	17 45 10.5	-1.3
ISNB	**Snabyli**	**1.16**	**104**	P	Pg	17 44 55.2	-2.0
ISNB				S	Sg	17 45 10.9	-1.3
ISKR	**Skrokkalda**	**1.31**	**65**	P	Pn	17 44 58.1	-2.0
ISKR				S	Sg	17 45 15.2	-2.0
IKAL	**Kalfafell**	**1.53**	**92**	P	Pn	17 45 01.6	-1.5
IKAL				S	Sn	17 45 21.2	-2.2
IGRF	**Grimsfjall**	**1.74**	**76**	P	Pn	17 45 05.0	-1.0
IFAG	**Faguriholsmyri**	**1.99**	**93**	P	Pn	17 45 08.4	-1.0
IFAG				S	Sn	17 45 34.5	-0.3
ISVA	**Svartarkot**	**2.12**	**50**	P	Pn	17 45 10.1	-1.1
ISVA				S	Sn	17 45 37.8	-0.2
IHRN	**Hraun**	**2.12**	**11**	P	Pn	17 45 10.1	-1.2
IHRN				S	Sn	17 45 37.6	-0.4
IKRE	**Kreppuhraun**	**2.20**	**68**	P	Pn	17 45 11.9	-0.4
IHLA	**Hella**	**2.24**	**30**	P	Pn	17 45 12.9	0.0
IBRU	**Bruarjokull**	**2.33**	**68**	P	Pn	17 45 13.9	-0.3
IGRA	**Granastaoir**	**2.42**	**37**	P	Pn	17 45 15.5	+0.2
IREN	**Reynihlio**	**2.43**	**46**	P	Pn	17 45 14.6	-0.8
IHVA	**Hvannstoosfjol**	**2.46**	**66**	P	Pn	17 45 16.0	+0.1
IVSH	**V-Sauoahnukur**	**2.48**	**69**	P	Pn	17 45 16.5	+0.4

*CSEM **29** 17:53:58.1, 63°.90N×21°.17W, h2km, ML3.5, After REY*

REY 29 17:53:58.1, 63°.90N×21°.17W, h2km, ML3.3, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**305**	P	Pg	17 53 59.9	+0.3
IBJA				S	Sg	17 54 01.6	+1.1
ISOL	**Solvholt**	**0.10**	**76**	P	Pg	17 54 00.3	+0.2
ISOL				S	Sg	17 54 02.3	+0.9
IKRO	**Krokur**	**0.20**	**6**	P	Pg	17 54 02.2	+0.3
IKRO				S	Sg	17 54 05.5	+1.1
ISAN	**Sandskeio**	**0.23**	**311**	P	Pg	17 54 03.0	+0.4
ISAN				S	Sg	17 54 06.9	+1.3
IVOS	**Vogsosar**	**0.24**	**258**	P	Pg	17 54 03.0	+0.2
IVOS				S	Sg	17 54 07.1	+1.2
IASM	**Asmuli**	**0.25**	**106**	P	Pg	17 54 03.2	+0.3
IASM				S	Sg	17 54 07.4	+1.2
IHEI	**Heioarbar**	**0.30**	**354**	P	Pg	17 54 04.1	+0.3
IHEI				S	Sg	17 54 08.8	+1.1
IKAS	**Kald??rsel**	**0.33**	**292**	P	Pg	17 54 04.6	+0.3
IKAS				S	Sg	17 54 09.7	+1.2
ISAU	**Saurbar**	**0.34**	**75**	P	Pg	17 54 04.7	+0.1
ISAU				S	Sg	17 54 10.0	+0.9
IKRI	**Krysuvik**	**0.40**	**267**	P	Pg	17 54 05.7	-0.1
IKRI				S	Sg	17 54 11.4	+0.4
IKUD	**Kuludalsa**	**0.52**	**324**	P	Pg	17 54 07.5	-0.6
IKUD				S	Sg	17 54 14.9	+0.1
IHAU	**Haukadalur**	**0.53**	**82**	P	Pg	17 54 08.0	-0.3
IHAU				S	Sg	17 54 15.8	+0.6
IVOG	**Vogar**	**0.55**	**277**	P	Pg	17 54 08.1	-0.4
IVOG				S	Sg	17 54 16.2	+0.6
IGYG	**Gygjarholskot**	**0.56**	**47**	P	Pg	17 54 08.4	-0.5
IGYG				S	Sg	17 54 16.4	+0.2
IGRV	**Grindav??k**	**0.57**	**266**	P	Pg	17 54 08.4	-0.7
IGRV				S	Sg	17 54 16.6	+0.1
IVES	**Vestmannaeyjar**	**0.61**	**139**	P	Pg	17 54 09.5	-0.2
IVES				S	Sg	17 54 18.4	+0.9
IMID	**Miomork**	**0.62**	**113**	P	Pg	17 54 09.5	-0.4
IMID				S	Sg	17 54 18.0	0.0
INYL	**Nylenda**	**0.70**	**276**	P	Pg	17 54 10.4	-1.0
INYL				S	Sg	17 54 20.3	-0.2
IASB	**`sbjarnarst**	**0.85**	**355**	P	Pg	17 54 13.0	-1.4
IASB				S	Sg	17 54 25.0	-0.4
IESK	**Eystri-Skogar**	**0.85**	**116**	P	Pg	17 54 13.2	-1.2
IESK				S	Sg	17 54 24.9	-0.5
IVAT	**Vatnsfell**	**1.03**	**73**	P	Pg	17 54 16.3	-1.5
IVAT				S	Sg	17 54 30.5	-0.6
IHVO	**Lagu-Hvolar**	**1.10**	**109**	P	Pg

comp=Z,10.0nm,0.4s
KDAK Kodiak Island 16.19 57 *e*P **Pn 18 31 26.5 -3.7**
comp=Z,10nm,0.4s
TTA Tatalina 16.63 37 *e*P **Pn 18 31 38.4 +2.7**
RSO Redoubt South 16.87 48 *e*P **Pn 18 31 40.2 +1.4**
PPLA Purkeypile 18.12 41 *e*P **Pn 18 31 55.5 +1.4**
BILL Bilibino 18.28 341 ⇑/P **Pn 18 31 58.5 +2.5**
BILL pmax pmax
comp=Z,20nm,1.2s
BILL Bilibino 18.28 341 *e*P **Pn 18 31 57.6 +1.6**
comp=Z,16nm,0.9s
SEW Seward 18.32 50 *e*P **Pn 18 31 54.7 -1.9**
comp=Z,3μm,0.7s
CHUM Lake Minchumin 18.54 38 *e*P **Pn 18 31 58.7 -0.5**
comp=Z,29μm,1.0s
KTH Kantishna Hill 18.93 40 *e*P **Pn 18 32 03.1 -0.8**
comp=Z,48nm,0.7s
TRF Thorofare Moun 19.14 40 *e*P **Pn 18 32 04.7 -1.6**
comp=Z,4μm,1.0s
BPAW Bear Paw Mtn. 19.16 38 *e*P **Pn 18 32 05.4 -1.2**
comp=Z,2μm,0.7s
SEY Seymchan 19.39 318 *ce*P **Pn 18 32 09.7 +0.3**
MCK McKinley 19.81 40 *e*P **Pn 18 32 10.8 -3.4**
MCK pmax pmax
comp=Z,10μm,0.7s
MCK McKinley 19.81 40 *e*P **Pn 18 32 10.8 -3.4**
comp=Z,10μm,0.7s
COLA College 20.72 38 P **P 18 32 22.1 0.0**
COLA pmax pmax
comp=Z,11nm,0.6s
COLA College 20.72 38 P **P 18 32 22.1 -0.1**
comp=Z,12nm,0.6s
PAX Paxson 20.98 44 *e*P **P 18 32 24.9 0.0**
PAX pmax pmax
comp=Z,120nm,0.6s
PAX Paxson 20.98 44 *e*P **P 18 32 24.9 -0.1**
comp=Z,120nm,0.6s
COLD Coldfoot 21.09 31 *e*P **P 18 32 26.9 +0.8**
comp=Z,106nm,1.2s,mb5.0
MENT Mentasta 21.74 45 *e*P **P 18 32 33.7 +0.7**
EGAK Eagle 23.35 41 *e*P **P 18 32 47.7 -2.1**
comp=Z,9.0nm,0.5s,mb4.5
DAWY Dawson 23.90 43 *e*P **P 18 32 53.2 -1.7**
YSS Yuzh-Sakhalins 25.58 275 *e*P **P 18 33 11.9 +1.7**
YSS *e* pP 18 33 23.5 -0.8
YSS pmax pmax
comp=Z,30nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 25.58 275 *e*P **P 18 33 10.4 +0.1**
comp=Z,27nm,0.7s,mb4.9
ASAJ Asahikawa 26.97 270 P **P 18 33 22.4 -0.5**
comp=Z,21nm,1.1s,mb4.6,baz=64,slow=8.9,SNR=6.9
ASAJ Asahikawa 26.97 270 P **P 18 33 22.4 -0.4**
ASAJ pmax pmax
comp=Z,21nm,1.1s
INK Inuvik 27.28 35 P **P 18 33 24.9 -0.5**
comp=Z,1.2nm,0.4s,mb3.8,baz=233,slow=8.9,SNR=7.1
INK PcP PcP 18 36 43.0 -0.4
comp=Z,2.1nm,0.6s,baz=274,slow=6.1,SNR=6.2
INK Inuvik 27.28 35 P **P 18 33 24.9 -0.5**
INK 18 36 43.0
INK pmax pmax
comp=Z,1.0nm,0.4s
INK pmax pmax
comp=Z,2.0nm,0.6s
YAK Yakutsk 29.59 311 *e*P **P 18 33 48.1 +2.1**
YAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
TIXI Tiksi 30.74 330 *e*P **P 18 33 59.0 +3.0**
TIXI pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
TIXI Tiksi 30.74 330 *e*P **P 18 33 50.6 -5.4**
comp=Z,2.5nm,0.6s,mb4.2
KLR Kul'dur 31.42 286 *e*P **P 18 33 58.2 -4.1**
MJAR Matsushiro Arr 34.05 261 P **P 18 34 24.6 -0.7**
comp=Z,4.9nm,0.9s,mb4.4,baz=51,slow=6.6,SNR=11
MJAR Matsushiro Arr 34.05 261 P **P 18 34 24.6 -0.7**
MJAR pmax pmax
comp=Z,5.0nm,0.9s
MAJO Matsushiro 34.05 261 *e*P **P 18 34 26.1 +0.8**
MAJO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MAJO Matsushiro 34.05 261 *e*P **P 18 34 26.1 +0.7**
comp=Z,9.0nm,0.8s,mb4.8
MAT Matsushiro 34.05 261 P **P 18 34 25.6 +0.3**
MDJ Mudanjiang 34.83 280 P **P 18 34 30.3 -1.6**
MDJ pmax pmax
comp=Z,200nm,3.8s
YKA Yellowknife Ar 35.02 47 P **P 18 34 31.8 -1.5**
comp=Z,1.4nm,0.6s,mb4.1,baz=282,slow=8.5,SNR=15
YKA PcP PcP 18 37 04.5 +0.4
comp=Z,1.5nm,0.8s,baz=286,slow=2.8,SNR=9.1
YKA Yellowknife Ar 35.02 47 P **P 18 34 31.8 -1.6**
YKA 18 37 04.5
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 35.02 47 P **P 18 34 31.8 -1.6**
YKA PcP PcP 18 37 04.5 +0.4
A07A Ashnola River, 36.34 70 ⇑P **P 18 34 45.7 +0.8**
baz=36
G04A Mulino 36.91 77 ⇓P **P 18 34 50.5 +0.8**
baz=37
B08A Colville Reser 37.28 71 ⇑P **P 18 34 53.1 +0.3**
baz=37
H04A Detroit Lake 37.35 78 ⇑P **P 18 34 54.2 +0.7**
baz=37
CN2 Changchun 37.80 281 *e*P **P 18 34 55.8 -1.5**
B09A Rice 37.95 70 ⇑P **P 18 34 58.8 +0.3**
baz=38
A11A Hall Mountain, 38.74 68 ⇑P **P 18 35 05.7 +0.6**
baz=39
B11A Sandpoint 38.99 69 ⇓P **P 18 35 07.0 -0.3**
baz=39
G08A Pilot Rock 39.01 75 ⇓P **P 18 35 08.1 +0.7**
baz=39
D10A Wagner Farm, O 39.12 72 ⇓P **P 18 35 07.9 -0.4**
baz=39
I07A Izee 39.31 77 ⇓P **P 18 35 10.8 +0.8**
baz=39
E10A Myers Farm, Un 39.51 72 ⇑P **P 18 35 12.0 +0.5**
baz=39
RES Resolute Bay 39.60 24 PcP PcP 18 37 17.7 -0.2
comp=Z,1.2nm,0.5s,baz=345,slow=1.7,SNR=6.1
D11A Klaveano Farm, 39.68 71 ⇓P **P 18 35 12.5 -0.6**
baz=40
KSRS Korea Array 39.90 271 P **P 18 35 15.2 +0.3**
comp=Z,2.5nm,0.6s,mb4.1,baz=51,slow=8.0,SNR=11
KSRS Korea Array 39.90 271 P **P 18 35 15.2 +0.3**
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
G10A Bishop Farm, J 40.11 74 ⇓P **P 18 35 17.3 +0.7**
baz=40
BSMT Bassoo Peak 40.20 69 *e*P **P 18 35 17.3 0.0**
comp=Z,7.0nm,0.9s,mb4.4
J08A Circle Bar Ran 40.33 77 ⇑P **P 18 35 19.0 +0.6**
baz=40
C13A Hot Springs 40.41 69 ⇓P **P 18 35 19.6 +0.6**
baz=40
A14A Double T Ranch 40.44 67 ⇓P **P 18 35 18.9 -0.3**
baz=40,SNR=8.3
H10A Noah's Angus R 40.71 75 ⇑P **P 18 35 22.0 +0.4**
baz=41
WVOR Wild Horse Val 40.74 78 *e*P **P 18 35 22.0 +0.2**
WVOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
WVOR Wild Horse Val 40.74 78 *e*P **P 18 35 22.0 +0.2**
comp=Z,4.0nm,0.7s,mb4.2
D13A Huson 40.77 70 ⇑P **P 18 35 21.4 -0.6**
baz=41
J09A Fry Pan Ranch, 40.77 77 ⇑P **P 18 35 22.6 +0.6**
baz=41
B14A Marquette Ranc 40.83 68 ⇓P **P 18 35 21.7 -0.8**
baz=41
A15A Johnson Ranch, 40.83 67 ⇑P **P 18 35 21.7 -0.8**
baz=41
I10A Payette 40.95 75 ⇑P **P 18 35 23.6 +0.1**
baz=41
F12A Elk City 40.99 72 ⇑P **P 18 35 23.4 -0.4**
baz=41
H11A Donnelly 41.09 74 ⇓P **P 18 35 24.9 +0.2**
baz=41
MSO Missoula 41.21 70 *e*P **P 18 35 24.9 -0.7**
comp=Z,2.5nm,0.7s,mb4.0
B15A Bradely Ranch, 41.26 67 ⇑P **P 18 35 25.1 -1.0**
baz=41,SNR=6.7
E13A Victor 41.26 71 ⇓P **P 18 35 25.9 -0.2**
baz=41
D14A Greenough 41.34 70 ⇑P **P 18 35 26.1 -0.6**
baz=41,SNR=6.6
CHMT Chamberlain Mo 41.57 70 *e*P **P 18 35 28.1 -0.5**
comp=Z,1.0nm,0.8s,mb3.5
K10A MacKenzie Ranc 41.63 77 ⇑P **P 18 35 29.5 +0.4**
baz=42
E14A Clinton 41.69 70 ⇑P **P 18 35 29.8 +0.2**
baz=42
B16A M & M Farms, S 41.70 67 ⇓P **P 18 35 28.8 -0.8**
baz=42
H12A Diamond D Ranc 41.87 74 ⇓P **P 18 35 30.8 -0.3**
baz=42
MFID Camas Ranch 41.91 76 ⇓P **P 18 35 31.8 +0.4**
baz=42
D15A Lincoln 41.93 69 ⇓P **P 18 35 30.9 -0.6**
baz=42,SNR=5.2
G13A Cobalt 41.95 72 ⇓P **P 18 35 32.5 +0.8**
baz=42
C16A Fuhringer Ranc 41.99 68 ⇑P **P 18 35 31.4 -0.6**
baz=42,SNR=5.7
A17A Triple J Farms 42.02 66 ⇓P **P 18 35 31.1 -1.1**
baz=42,SNR=7.2
I12A Atlanta 42.12 75 ⇓P **P 18 35 33.6 +0.5**
baz=42
K11A Parker Ranch, 42.14 76 ⇓P **P 18 35 33.6 +0.3**
baz=42
E15A Deer Lodge 42.18 70 ⇑P **P 18 35 33.6 0.0**
baz=42
L10A Juniper Basin 42.27 78 ⇑P **P 18 35 34.5 +0.2**
baz=42
B17A L&G Farms, Che 42.29 67 ⇑P **P 18 35 34.0 -0.4**
baz=42
A18A Metzger Ranch, 42.51 65 ⇑P **P 18 35 35.1 -1.1**
baz=42
M10A I.L. Ranch, Tu 42.54 78 ⇑P **P 18 35 37.1 +0.5**
baz=42
F15A Butte 42.58 71 ⇓P **P 18 35 36.6 -0.2**
baz=42
C17A Wharram Farm, 42.65 67 ⇓P **P 18 35 36.5 -0.9**
baz=42
L11A Cat Creek Ranc 42.65 77 ⇓P **P 18 35 37.6 +0.2**
baz=42,SNR=6.1
I13A Wildhorse Cree 42.66 74 ⇓P **P 18 35 37.2 -0.3**
baz=42,SNR=6.1
HLID Hailey 42.68 74 ⇑P **P 18 35 37.8 +0.1**
baz=42,SNR=7.5
HLID Hailey 42.68 74 *e*P **P 18 35 37.9 +0.2**
comp=Z,4.0nm,1.0s,mb4.1
E16A East Helena 42.69 69 ⇓P **P 18 35 37.4 -0.3**
baz=42
K12A Draper Farm, C 42.90 76 ⇓P **P 18 35 39.9 +0.4**
baz=43
J13A Cove Ranch, Pi 42.92 75 ⇑P **P 18 35 39.5 0.0**
baz=43,SNR=6.9
MCMT McKenzie Canyo 42.92 72 *e*P **P 18 35 39.2 -0.4**
comp=Z,1.8nm,0.5s,mb4.1
D17A Six Diamond Ra 42.94 68 ⇑P **P 18 35 39.7 -0.1**
baz=43
G15A Dillon 42.95 71 ⇓P **P 18 35 39.8 0.0**
baz=43
EGMT Eagleton 43.03 66 *e*P **P 18 35 39.6 -0.8**
comp=Z,6.5nm,0.8s,mb4.4
M11A Holland Ranch, 43.05 78 ⇑P **P 18 35 41.3 +0.6**
baz=43
I14A Mackay 43.05 73 ⇑P **P 18 35 40.7 0.0**
baz=43,SNR=5.9
H15A Lima 43.16 72 ⇑P **P 18 35 41.8 +0.3**
baz=43
BOZ Bozeman (W) 43.20 70 ⇓P **P 18 35 41.8 0.0**
baz=43
BOZ Bozeman (W) 43.20 70 *e*P **P 18 35 41.3 -0.5**
BOZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
BOZ Bozeman (W) 43.20 70 *e*P **P 18 35 41.3 -0.5**
comp=Z,3.7nm,0.8s,mb4.2
E17A Martinsdale 43.21 69 ⇑P **P 18 35 41.6 -0.3**
baz=43
NVAR Mina Array Bea 43.29 83 P **P 18 35 42.9 +0.3**
comp=Z,2.4nm,0.7s,mb4.0,baz=301,slow=7.5,SNR=5.1
NVAR Mina Array Bea 43.29 83 P **P 18 35 42.9 +0.3**
J14A Carey 43.35 74 ⇑P **P 18 35 43.9 +0.8**
baz=43
K13A Stover Farm, H 43.39 75 ⇑P **P 18 35 44.7 +1.2**
baz=43
D18A Linhart Farms, 43.43 67 ⇓P **P 18 35 44.0 +0.3**
baz=43
M12A Wells 43.60 77 ⇓P **P 18 35 45.8 +0.7**
baz=43
F17A Fitzpatrick Pl 43.63 69 ⇑P **P 18 35 45.4 +0.1**
baz=44
E18A Harlowton 43.70 68 ⇓P **P 18 35 45.4 -0.5**
baz=44,SNR=6.6
L13A Double Diamond 43.80 76 ⇑P **P 18 35 47.2 +0.5**
baz=44
N12A Clover Valley, 43.85 78 ⇓P **P 18 35 47.5 +0.4**
baz=44
N12A Clover Valley, 43.85 78 *e*P **P 18 35 47.5 +0.4**
comp=Z,3.5nm,0.5s,mb4.3
O11A Cowboy Ranch, 43.90 79 ⇑P **P 18 35 48.1 +0.5**
baz=44
H16A Russell Place, 43.94 71 ⇓P **P 18 35 47.7 -0.1**
baz=44
F18A Big Timber 44.18 69 ⇑P **P 18 35 49.3 -0.3**
baz=44
L14A Malta 44.26 76 ⇑P **P 18 35 50.7 +0.3**
baz=44
K15A Arbon 44.31 74 ⇓P **P 18 35 51.1 +0.3**
baz=44
O12A Currie 44.38 79 ⇓P **P 18 35 51.7 +0.4**
baz=44
M14A Sheep Mountain 44.50 76 ⇑P **P 18 35 52.7 +0.3**
baz=44
H17A Grant Village 44.51 71 ⇑P **P 18 35 54.3 +1.9**
baz=44,SNR=5.6
S10A Tonopah Range, 44.66 82 ⇑P **P 18 35 54.1 +0.4**
baz=44
Q11A Duckwater 44.68 81 ⇓P **P 18 35 54.1 +0.3**
baz=44
HVU Hansel Valley 44.69 76 *e*P **P 18 35 53.5 -0.3**
HVU pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
HVU Hansel Valley 44.69 76 *e*P **P 18 35 53.5 -0.3**
comp=Z,2.6nm,0.5s,mb4.3
R11A Troy Canyon, C 45.02 81 ⇑P **P 18 35 56.7 +0.2**
baz=45
M15A Larsen Ranch, 45.07 76 ⇓P **P 18 35 56.4 -0.5**
baz=45
P13A Bates Ranch, G 45.32 79 ⇑P **P 18 35 59.0 +0.2**
baz=45
L16A Fish Haven 45.36 75 ⇑P **P 18 35 59.5 +0.4**
baz=45,SNR=6.3
DUG Dugway 45.61 77 *e*P **P 18 36 01.1 0.0**
DUG pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
DUG Dugway 45.61 77 *e*P **P 18 36 01.1 0.0**
comp=Z,3.9nm,0.8s,mb4.4
Q13A Wheeler Ranch, 45.62 80 ⇓P **P 18 36 01.5 +0.3**
baz=46
M16A Huntsville 45.66 75 ⇓P **P 18 36 01.4 -0.1**
baz=46
FCC Fort Churchill 45.75 46 *e*P **P 18 36 01.7 -0.3**
P14A Drum Mountains 45.81 78 ⇑P **P 18 36 02.7 0.0**
baz=46,SNR=5.4
K18A Toltan Ranch, 45.84 73 ⇓P **P 18 36 03.2 +0.3**
baz=46
PDAR Pinedale Array 46.05 73 P **P 18 36 04.6 0.0**
comp=Z,2.8nm,0.6s,mb4.4,baz=309,slow=3.9,SNR=21
Q14A Sevier Lake (B 46.05 79 ⇓P **P 18 36 04.7 0.0**
baz=46,SNR=6.9
K19A Absolon Red Bu 46.44 72 ⇑P **P 18 36 07.0 -0.6**
baz=46,SNR=5.5
ULN Ulaanbaatar 46.48 296 *e*P **P 18 36 09.1 +1.2**
ULN pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ULN Ulaanbaatar 46.48 296 *e*P **P 18 36 09.1 +1.2**
comp=Z,5.0nm,1.0s,mb4.4
Q15A Fillmore 46.60 78 ⇓P **P 18 36 09.3 +0.4**
baz=46
K20A Yellowstone Ra 46.84 72 ⇓P **P 18 36 10.3 -0.5**
baz=47
SONM Songino Array 46.87 297 P **P 18 36 11.1 +0.2**
comp=Z,2.8nm,0.7s,mb4.3,baz=65,slow=8.9,SNR=27
SONM PcP PcP 18 37 43.5 +0.6
comp=Z,0.9nm,0.5s,baz=91,slow=2.7,SNR=6.1
SONM ScP ScP 18 41 35.5 +4.2
comp=Z,0.5nm,0.7s,baz=48,slow=2.1,SNR=4.2
SONM LR LR 18 54 41.1
comp=Z,239nm,21.7s,MS4.1,baz=326,slow=35
SONM Songino Array 46.87 297 P **P 18 36 11.1 +0.2**
SONM 18 37 43.5
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM pmax pmax
comp=N,1.0nm,0.7s
SONM MLR MLR
comp=Z,239nm,21.7s
SONM Songino Array 46.87 297 P **P 18 36 11.1 +0.2**
SONM PcP PcP 18 37 43.5 +0.6
SONM ScP ScP 18 41 35.5 +4.2
SONM LR LR 18 54 41.1
ZAK Zakamensk 47.16 301 *e*P **P 18 36 09.3 -3.8**
ZAK *e* 18 37 42.9
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
R16A Teasdale 47.59 79 ⇓P **P 18 36 17.2 +0.5**
baz=47
M20A Sweetwater, Wa 47.63 73 ⇑P **P 18 36 17.2 +0.3**
baz=48
SRU San Rafael 47.67 77 *e*P **P 18 36 17.0 -0.2**
SRU pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SRU San Rafael 47.67 77 *e*P **P 18 36 17.0 -0.2**
comp=Z,5.4nm,0.7s,mb4.7
O19A Miners Draw (B 47.79 75 ⇓P **P 18 36 18.0 -0.2**
baz=48
L21A Rawlins 47.83 72 ⇓P **P 18 36 17.8 -0.6**
baz=48,SNR=5.5
Q18A Rafter H Ranch 47.91 77 ⇑P **P 18 36 18.6 -0.5**
baz=48
HHC Hu-ho-hao-te 47.93 286 *e*P **P 18 36 19.5 +0.2**
HHC PcP PcP 18 37 46.8 0.0
HHC PP PP 18 38 11.8 +0.4
HHC ScP ScP 18 41 34.5 -1.5
HHC PcS PcS 18 41 41.8 -0.6
HHC S **S 18 43 12.3 -0.1**
HHC ScS ScS 18 46 03.5 -3.4
HHC SS SS 18 46 35.8 -5.5
HHC pmax pmax
comp=Z,12nm,1.1s,mb4.8
HHC pmax pmax
comp=Z,160nm,7.0s
HHC LR LR
comp=N,190nm,16.1s,MS4.3
HHC LR LR
comp=E,190nm,16.8s,MS4.3
HHC LR LR
comp=Z,250nm,17.4s,MS4.2
R17A Hanksville Air 47.98 78 ⇑P **P 18 36 19.7 0.0**
baz=48
U15A North Rim 48.27 81 ⇑P **P 18 36 22.1 +0.2**
baz=48
P19A Cripple Cowboy 48.28 76 ⇑P **P 18 36 21.8 -0.2**
baz=48
L22A Ellis Ranch, M 48.35 71 ⇑P **P 18 36 22.0 -0.5**
baz=48
O20A White River Ci 48.42 75 ⇑P **P 18 36 22.7 -0.4**
baz=48
S17A Black Ridge (B 48.42 79 ⇓P **P 18 36 23.2 +0.2**
baz=48
RSSD Black Hills 48.50 68 *e*P **P 18 36 22.6 -1.0**
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
RSSD Black Hills 48.50 68 *e*P **P 18 36 22.6 -1.1**
comp=Z,1.7nm,0.6s,mb4.2
S18A Hurst Farm, Bl 48.88 78 ⇓P **P 18 36 26.1 -0.5**
baz=49,SNR=7.3
T18A Mexican Hat 49.31 79 ⇓P **P 18 36 29.6 -0.3**
baz=49,SNR=5.4
S19A Harvey Farm, M 49.37 78 ⇓P **P 18 36 30.1 -0.2**
baz=49,SNR=5.9
WUAZ Wupatki 49.42 81 ⇓P **P 18 36 30.8 0.0**
baz=49
V17A Tonalea, Kykot 49.72 81 ⇓P **P 18 36 33.3 +0.3**
baz=50
KBS Kingsbay 49.78 357 *d*P **P 18 36 32.8 -0.1**
Q22A Crested Butte, 50.02 75 ⇑P **P 18 36 35.0 -0.2**
baz=50
T19A Beclabito 50.02 78 ⇑P **P 18 36 35.2 -0.1**
baz=50
MVCO Mesa Verde 50.10 78 ⇓P **P 18 36 35.5 -0.4**
baz=50
SPB4 Spitsbergen Ar 50.36 356 *e*P **P 18 36 36.6 -0.7**
SPB4 *e*PcP PcP 18 37 55.3 +0.3
SPITS Spitsbergen Ar 50.36 356 P **P 18 36 36.3 -1.0**
comp=Z,4.1nm,0.6s,mb4.7,baz=52,slow=6.8,SNR=23
SPITS Spitsbergen Ar 50.36 356 P **P 18 36 36.3 -1.0**
SPITS pmax pmax
comp=Z,4.0nm,0.6s
W18A Petrified Fore 50.70 81 ⇓P **P 18 36 41.2 +0.7**
baz=50
X21A Alamocita Cree 52.35 80 ⇓P **P 18 36 53.2 +0.4**
baz=52
Z20A Nine Sixteen R 52.74 82 ⇓P **P 18 36 56.1 +0.4**
baz=53
X22A Bernardo 52.78 79 ⇑P **P 18 36 55.8 -0.2**
baz=53
Y22A Socorro 53.19 80 ⇑P **P 18 36 59.4 +0.4**
baz=53
W24A Lazy 6 Ranch, 53.30 78 ⇓P **P 18 36 60.0 +0.2**
baz=53
Y23A Lovelace Mesa, 53.76 79 ⇓P **P 18 37 03.4 +0.3**
baz=54
W25A X Bar L Ranch, 53.87 77 ⇓P **P 18 37 04.1 +0.1**
baz=54
Y24A Capitan 54.14 79 ⇑P **P 18 37 06.0 +0.1**
baz=54
ZALV Zalesovo Beam 54.20 314 P **P 18 37 06.2 +0.2**
comp=Z,0.3nm,0.4s,mb3.6,baz=45,slow=10,SNR=2.4
ZALV PcP PcP 18 38 09.8 0.0
comp=Z,3.3nm,0.6s,baz=24,slow=3.6,SNR=13
ZALV Zalesovo Beam 54.20 314 P **P 18 37 06.2 +0.2**
ZALV 18 38 09.8
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ZALV Zalesovo Beam 54.20 314 P **P 18 37 06.2 +0.2**
ZALV PcP PcP 18 38 09.8 0.0
Y25A Mesa, Roswell 54.60 78 ⇑P **P 18 37 08.9 -0.4**
baz=54
LZH Lanzhou 55.63 286 *e*P **P 18 37 18.0 +1.4**
LZH pP pP 18 37 31.0 -0.9
LZH pmax pmax
comp=Z,42nm,1.0s,mb5.4
LZH pmax pmax
comp=Z,190nm,4.5s
MNTX Cornudas Mount 55.69 81 *e*P **P 18 37 17.1 0.0**
comp=Z,3.2nm,0.9s,mb4.3
GTA Gaotai 55.80 292 ⇑P **P 18 37 19.0 +1.2**
GTA pP pP 18 37 32.0 -1.1
GTA PP PP 18 39 25.8 +3.4
GTA S **S 18 45 02.0 +1.6**
GTA SS SS 18 48 47.0 +1.0
GTA pmax pmax
comp=Z,32nm,0.7s,mb5.5
GTA pmax pmax
comp=Z,52nm,5.1s
GTA LR LR
comp=N,150nm,16.9s,MS4.2
GTA LR LR
comp=E,100nm,17.8s,MS4.2
GTA LR LR
comp=Z,170nm,20.5s,MS4.1
ENH Enshi 56.13 277 *e*P **P 18 37 19.5 -0.8**
comp=Z,3.1nm,0.6s,mb4.5
325A Bean Ranch, Si 56.16 81 ⇑P **P 18 37 20.0 -0.5**
baz=56
425A Indio Mountain 56.56 81 ⇑P **P 18 37 23.5 +0.1**
baz=56
ARCES ARCESS Array B 58.10 350 P **P 18 37 32.2 -1.4**
comp=Z,1.6nm,0.4s,mb4.4,baz=21,slow=7.9,SNR=22
ARCES PcP PcP 18 38 24.5 -0.2
comp=Z,2.1nm,0.6s,baz=36,slow=4.5,SNR=4.8
ARCES ARCESS Array B 58.10 350 P **P 18 37 32.2 -1.4**
ARCES 18 38 24.5
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 58.10 350 P **P 18 37 32.2 -1.4**
ARCES PcP PcP 18 38 24.5 -0.2

TXAR Lajitas Array 58.39 82 P **P** **18 37 35.8 -0.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=270,slow=3.4,SNR=10.0
TXAR Lajitas Array 58.39 82 P **P** **18 37 35.8 -0.4**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
627A Terlingua Ranc 58.48 81 ⇓P **P** **18 37 36.2 -0.7**
baz=58
KURK Kurchatov 59.19 314 P **P** **18 37 41.5 +0.1**
comp=Z,1.3nm,0.5s,mb4.2,baz=40,slow=6.2,SNR=12
KURK PcP PcP 18 38 29.6 +0.3
comp=Z,1.2nm,0.6s,baz=46,slow=3.2,SNR=5.9
KURK Kurchatov 59.19 314 P **P** **18 37 41.5 0.0**
KURK 18 38 29.6
KURK pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
CD2 Chengdu 59.22 282 P **P** **18 37 43.3 +1.3**
CD2 pP pP 18 37 56.0 -1.4
CD2 PP PP 18 39 56.0 +2.9
CD2 S **S** **18 45 45.3 -0.2**
CD2 SS SS 18 49 42.0 +1.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,270nm,10.9s
CD2 LR LR
comp=N,230nm,5.9s
CD2 LR LR
comp=Z,220nm,7.1s
MK31 Makanchi Array 60.22 309 *e*P **P** **18 37 48.2 -0.4**
MKAR Makanchi Array 60.22 309 P **P** **18 37 47.0 -1.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=48,slow=9.9,SNR=9.6
MKAR PcP PcP 18 38 33.1 -0.5
comp=Z,0.3nm,0.4s,baz=46,slow=5.2,SNR=3.6
MKAR Makanchi Array 60.22 309 P **P** **18 37 47.0 -1.6**
MKAR 18 38 33.1
MKAR pmax pmax
comp=Z,1.0nm,0.5s
GYA Guiyang 60.58 276 P **P** **18 37 51.3 -0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
BVAR Borovoye Array 61.03 320 P **P** **18 37 53.6 -0.4**
comp=Z,3.7nm,0.5s,mb4.8,baz=47,slow=6.2,SNR=21
BVAR PcP PcP 18 38 36.3 -0.4
comp=Z,3.0nm,0.7s,baz=60,slow=3.3,SNR=6.9
BVAR Borovoye Array 61.03 320 P **P** **18 37 53.6 -0.4**
BVAR 18 38 36.3
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BVAR pmax pmax
comp=Z,3.0nm,0.7s
OLIL Olney 61.09 63 *e*P **P** **18 37 54.0 -0.7**
comp=Z,17nm,0.8s,mb5.2
USIN University of 61.87 64 *e*P **P** **18 37 59.1 -0.9**
comp=Z,17nm,0.5s,mb5.4
ARU Arti 62.71 328 *d i*P **P** **18 38 05.2 -0.1**
ARU S **S** **18 46 35.1 +5.9**
ARU SS SS 18 50 35.4 +1.9
ARU pmax pmax
comp=Z,7.0nm,1.7s,mb4.5
JOF Joensuu 63.63 345 *e*P **P** **18 38 10.0 -1.2**
JOF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
JOF Joensuu 63.63 345 *e*p **P** **18 38 10.0 -1.2**
comp=Z,8.5nm,1.0s,mb4.7
KMI Kunming 63.98 278 P **P** **18 38 14.3 +0.2**
KMI pP pP 18 38 28.5 -1.2
KMI PP PP 18 40 37.5 +2.4
KMI S **S** **18 46 44.8 -1.0**
KMI SS SS 18 50 55.3 +0.5
KMI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KMI LR LR
comp=N,140nm,16.6s,MS4.3
KMI LR LR
comp=E,110nm,18.8s,MS4.3
KMI LR LR
comp=Z,160nm,15.9s,MS4.3
KAF Kangasniemi 65.13 347 *e*P **P** **18 38 19.5 -1.6**
KAF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KAF Kangasniemi 65.13 347 *e*p **P** **18 38 19.5 -1.6**
comp=Z,6.9nm,1.0s,mb4.6
TKL Tuckaleechee C 65.70 63 P **P** **18 38 24.8 -0.4**
comp=Z,12nm,0.8s,mb5.0,baz=307,slow=2.8,SNR=18
TKL Tuckaleechee C 65.70 63 P **P** **18 38 24.8 -0.4**
TKL pmax pmax
comp=Z,12nm,0.8s,mb5.0
TKL Tuckaleechee C 65.70 63 P **P** **18 38 24.8 -0.4**
FINES FINESS Array B 65.81 347 P **P** **18 38 24.3 -1.2**
comp=Z,3.9nm,0.8s,mb4.5,baz=24,slow=7.9,SNR=11
FINES PcP PcP 18 38 54.8 -1.3
comp=Z,2.9nm,0.8s,baz=11,slow=3.9,SNR=4.8
FINES FINESS Array B 65.81 347 P **P** **18 38 24.3 -1.1**
FINES 18 38 54.8
FINES pmax pmax
comp=Z,4.0nm,0.8s
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 65.81 347 P **P** **18 38 24.3 -1.2**
FINES PcP PcP 18 38 54.8 -1.3
AAK Ala-Archa 67.05 310 P **P** **18 38 33.1 -0.6**
comp=Z,1.2nm,0.3s,mb4.3,baz=202,slow=7.8,SNR=4.9
AAK Ala-Archa 67.05 310 *e*P **P** **18 38 33.3 -0.3**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
AAK Ala-Archa 67.05 310 *e*P **P** **18 38 33.3 -0.4**
comp=Z,1.8nm,0.4s,mb4.5
EKS2 Erkin-Say 67.37 310 *e*P **P** **18 38 35.6 0.0**
comp=Z,2.3nm,0.6s,mb4.4
GOGA Godfrey 67.52 64 *e*P **P** **18 38 35.7 -1.1**
GOGA pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GOGA Godfrey 67.52 64 *e*P **P** **18 38 35.7 -1.1**
comp=Z,7.8nm,0.8s,mb4.8
NB2 NORSAR Subarra 67.64 355 P **P** **18 38 36.5 -0.6**
comp=Z,1.4nm,0.8s,mb4.0,baz=8.1,slow=6.2
NOA NORSAR Array B 67.64 355 P **P** **18 38 36.5 -0.5**
comp=Z,1.1nm,0.7s,mb4.0,baz=5.4,slow=6.1,SNR=5.9
NOA PcP PcP 18 39 02.8 -1.0
comp=Z,2.0nm,0.8s,baz=1.2,slow=3.0,SNR=5.1
NOA NORSAR Array B 67.64 355 P **P** **18 38 36.5 -0.6**
NOA 18 39 02.8
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.8s
LSA Lhasa 67.68 290 P **P** **18 38 40.0 +2.2**
LSA pmax pmax
comp=Z,30nm,1.0s,mb5.3
LSA Lhasa 67.68 290 *e*P **P** **18 38 40.2 +2.4**
LSA pmax pmax
comp=Z,42nm,1.0s,mb5.4
LSA Lhasa 67.68 290 *e*P **P** **18 38 40.2 +2.4**
comp=Z,42nm,1.0s,mb5.4
AML Almayashu 67.81 310 *e*P **P** **18 38 39.8 +1.3**
comp=Z,2.5nm,0.9s,mb4.2
ABKAR Akbulak array 68.07 323 *e*P **P** **18 38 39.5 -0.4**
comp=Z,1.0nm,0.5s,mb4.1
JSC Jenkinsville 68.11 62 *e*P **P** **18 38 40.1 -0.4**
CMAR Chiang Mai Arr 71.27 276 P **P** **18 39 00.1 0.0**
comp=Z,2.7nm,0.8s,mb4.3,baz=26,slow=6.6,SNR=25
CMAR Chiang Mai Arr 71.27 276 P **P** **18 39 00.2 +0.1**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
GUN Gumba 72.09 292 *e*P **P** **18 39 05.8 +0.9**
comp=Z,249nm,0.5s
KKN Kakani 72.52 293 *e*P **P** **18 39 08.0 +0.5**
comp=Z,82nm,0.6s
KKN Kakani 72.52 293 *e*P **P** **18 39 08.0 +0.5**
KKN pmax pmax
comp=Z,82nm,0.6s
PKI Pulchoki 72.61 292 *e*P **P** **18 39 08.3 +0.2**
comp=Z,125nm,1.0s
PKI Pulchoki 72.61 292 *e*P **P** **18 39 08.3 +0.2**
PKI pmax pmax
comp=Z,125nm,1.0s
DMN Daman 72.76 293 *e*P **P** **18 39 09.5 +0.5**
comp=Z,73nm,0.9s,mb5.6
VSR Storozhevoye 72.91 336 *e*P **P** **18 39 09.1 -0.4**
VSR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,1.0nm,0.4s
VORD Divnogorie 73.11 336 *e*P **P** **18 39 11.3 +0.7**
VORD pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
VORD pmax pmax
comp=N,7.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
AKASG Malin Array Be 75.60 342 P **P** **18 39 24.5 -0.6**
comp=E,1.9nm,0.4s,mb4.3,baz=19,slow=5.6,SNR=8.6
AKASG Malin Array Be 75.60 342 P **P** **18 39 24.5 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
KBL Kabul 76.02 308 *e*P **P** **18 39 26.6 -1.2**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KBL Kabul 76.02 308 *e*P **P** **18 39 26.6 -1.2**
comp=Z,5.0nm,0.7s,mb4.5
STHS Stebnicka Huta 78.16 347 *e*P **P** **18 39 41.0 +1.5**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
STHS Stebnicka Huta 78.16 347 *e*P **P** **18 39 41.0 +1.5**
KOLS Kolonicke sedl 78.49 346 *e*P **P** **18 39 42.2 +0.9**
KOLS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KOLS Kolonicke sedl 78.49 346 *e*P **P** **18 39 42.2 +0.9**
BAIF Baives 78.88 358 *e*P **P** **18 39 43.8 +0.3**
GRF Grafenberg Arr 78.94 354 *e*P **P** **18 39 44.5 +0.7**
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 79.18 347 *e*P **P** **18 39 44.0 -1.1**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 79.18 347 *e*P **P** **18 39 44.0 -1.1**
TRPA Tarpa 79.23 346 ⇑*i*P **P** **18 39 46.2 +0.8**
BUR08 Bucovina Ar. S 79.27 344 *e*P **P** **18 39 45.5 -0.1**
BURAR Bucovina Array 79.29 344 ⇑P **P** **18 39 45.9 +0.1**
BURAR Bucovina Array 79.29 344 ⇑*i*P **P** **18 39 45.9 +0.1**
VYHS Vyhne 79.39 348 *e*P **P** **18 39 46.9 +0.6**
VYHS pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
VYHS Vyhne 79.39 348 *e*P **P** **18 39 46.9 +0.6**
GERES GERESS Array B 79.59 352 P **P** **18 39 46.9 -0.5**
comp=Z,1.4nm,0.6s,mb4.1,baz=26,slow=6.0,SNR=12
GERES GERESS Array B 79.59 352 P **P** **18 39 46.9 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.6s
FLN La Foliniere 80.19 1 *e*P **P** **18 39 50.3 -0.3**
LDF La Druitiere 80.36 1 *e*P **P** **18 39 50.8 -0.7**
comp=Z,6.8nm,0.6s,mb4.5
DRGR 80.51 345 ⇑P **P** **18 39 53.2 +0.9**
DRGR 80.51 345 ⇑*i*P **P** **18 39 53.2 +0.9**
ROSF Rostrenen 80.54 3 *e*P **P** **18 39 52.2 -0.3**
GRR Gorron 80.56 2 *e*P **P** **18 39 52.3 -0.3**
comp=Z,5.3nm,0.5s,mb4.4
SGMF Saint Gilles 80.65 3 *e*P **P** **18 39 52.9 -0.2**
comp=Z,7.4nm,0.6s,mb4.5
MLR Muntele Rosu 81.22 343 ⇑P **P** **18 39 58.0 +1.9**
MLR Muntele Rosu 81.22 343 ⇑*i*P **P** **18 39 58.0 +1.9**
KBA Koelnbreinsper 81.37 352 ⇓*i*P **P** **18 39 58.1 +1.1**
comp=Z,12nm,0.5s,mb5.0
SOKA Soboth 81.61 351 ⇑*i*P **P** **18 39 59.2 +1.0**
comp=Z,5.3nm,0.6s,mb4.7
FETA Feichten 81.63 354 ⇑*i*P **P** **18 39 59.4 +1.1**
comp=Z,6.9nm,1.1s,mb4.5
LOR Lormes 81.68 358 *e*P **P** **18 39 58.4 -0.2**
comp=Z,9.4nm,0.9s,mb4.4
TIRR Tirgusor 81.73 341 ⇑P **P** **18 39 59.6 +0.7**
TIRR Tirgusor 81.73 341 ⇑*i*P **P** **18 39 59.6 +0.7**
GROS Grobnik 81.78 350 *i* P **P** **18 39 59.4 +0.3**
GZR Gura Zlata 81.86 345 ⇑P **P** **18 40 00.6 +1.1**
GZR Gura Zlata 81.86 345 ⇑*i*P **P** **18 40 00.6 +1.1**
SSF Saint Saulge 81.89 359 *e*P **P** **18 39 59.5 -0.2**
comp=Z,8.0nm,0.9s,mb4.4
AVF Avril sur Loir 82.17 359 *e*P **P** **18 40 00.9 -0.2**
comp=Z,9.5nm,0.9s,mb4.4
AVF Avril sur Loir 82.17 359 *e*P **P** **18 40 00.9 -0.2**
AVF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AVF Avril sur Loir 82.17 359 *e*P **P** **18 40 00.9 -0.2**
comp=Z,4.8nm,0.9s,mb4.4
CABF La Chapelle 82.28 357 *e*P **P** **18 40 01.3 -0.4**
comp=Z,13nm,0.9s,mb4.6
SMF Signal de Mont 82.30 358 *e*P **P** **18 40 01.6 -0.2**
comp=Z,21nm,1.0s,mb4.7
SMF Signal de Mont 82.30 358 *e*P **P** **18 40 01.6 -0.2**
SMF pmax pmax
comp=Z,11nm,1.0s,mb4.7
SMF Signal de Mont 82.30 358 *e*P **P** **18 40 01.6 -0.2**
comp=Z,11nm,1.0s,mb4.7
MFF Saint Martin d 82.35 1 *e*P **P** **18 40 01.9 -0.2**
comp=Z,8.6nm,0.8s,mb4.5
MFF Saint Martin d 82.35 1 *e*P **P** **18 40 01.9 -0.2**
MFF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MFF Saint Martin d 82.35 1 *e*P **P** **18 40 01.9 -0.2**
comp=Z,4.3nm,0.8s,mb4.4
BGF Bois d'Agland 82.41 359 *e*P **P** **18 40 02.1 -0.3**
TCF Toulx Ste Croi 82.68 360 *e*P **P** **18 40 03.5 -0.3**
BOJS Bojanci 82.75 350 *e*P **P** **18 40 04.3 +0.1**
PSI Prapat 83.26 266 P **P** **18 40 07.2 -0.1**
comp=Z,4.8nm,0.4s,mb4.9,baz=32,slow=4.5,SNR=6.1
PSI Prapat 83.26 266 P **P** **18 40 07.2 -0.1**
PSI pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
RJF Les Rejaudoux 83.66 0 *e*P **P** **18 40 08.7 -0.2**
LFF La Frestale 84.03 1 *e*P **P** **18 40 10.8 0.0**
comp=Z,17nm,0.7s,mb5.0
LFF La Frestale 84.03 1 *e*P **P** **18 40 10.8 0.0**
LFF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
LFF La Frestale 84.03 1 *e*P **P** **18 40 10.8 0.0**
comp=Z,8.6nm,0.7s,mb5.0
CAF Calviac 84.04 360 *e*P **P** **18 40 11.0 +0.2**
comp=Z,11nm,0.9s,mb4.7
CAF Calviac 84.04 360 *e*P **P** **18 40 11.0 +0.2**
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
CAF Calviac 84.04 360 *e*P **P** **18 40 11.0 +0.2**
comp=Z,5.6nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.08 358 *e*P **P** **18 40 11.2 +0.2**
HYB Hyderabad 84.45 291 *i* P **P** **18 40 13.0 -0.3**
LASF Ste Croix 84.87 358 *e*P **P** **18 40 15.3 +0.3**
SBF Sospel 84.97 356 *e*P **P** **18 40 15.2 -0.3**
comp=Z,44nm,0.9s,mb5.3
BR131 Keskin Array S 85.02 336 *e*P **P** **18 40 16.1 +0.3**
comp=Z,5.7nm,0.9s,mb4.7
BRTR Keskin Array B 85.02 336 P **P** **18 40 15.8 0.0**
comp=Z,5.7nm,0.8s,mb4.7,baz=56,slow=2.5,SNR=18
BRTR Keskin Array B 85.02 336 P **P** **18 40 15.9 0.0**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
FRF La Foret Royal 85.31 356 *e*P **P** **18 40 16.9 -0.3**
MTLF Montolieu 85.63 360 *e*P **P** **18 40 18.9 +0.1**
comp=Z,15nm,1.2s,mb4.8
ASAR Alice Springs 85.69 223 P **P** **18 40 18.9 -0.3**
comp=Z,1.9nm,0.8s,mb4.4,baz=24,slow=5.6,SNR=22
ASAR Alice Springs 85.69 223 P **P** **18 40 18.9 -0.3**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
SJPF Ste Jean 85.82 2 *e*P **P** **18 40 19.8 0.0**
comp=Z,5.9nm,0.7s,mb4.6
SJPF Ste Jean 85.82 2 *e*P **P** **18 40 19.8 0.0**
SJPF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
SJPF Ste Jean 85.82 2 *e*P **P** **18 40 19.8 0.0**
comp=Z,3.0nm,0.7s,mb4.6
EPF Esparros 85.93 1 *e*P **P** **18 40 20.4 +0.1**
ETSF Etsaut 86.05 2 *e*P **P** **18 40 21.3 +0.4**
comp=Z,5.5nm,0.7s,mb4.6
ETSF Etsaut 86.05 2 *e*P **P** **18 40 21.3 +0.4**
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
ETSF Etsaut 86.05 2 *e*P **P** **18 40 21.3 +0.4**
comp=Z,2.8nm,0.7s,mb4.6
PGF Pioggiola 86.20 355 *e*P **P** **18 40 21.4 -0.3**
comp=Z,36nm,0.9s,mb5.3
ESDC Sonseca Array 89.16 4 P **P** **18 40 35.1 -0.8**
comp=Z,1.8nm,0.6s,mb4.6,baz=347,slow=3.9,SNR=8.1
STKA Stephens Creek 90.10 213 P **P** **18 40 40.3 +0.3**
comp=Z,2.6nm,0.7s,mb4.7,baz=334,slow=8.8,SNR=6.7
TORD Torodi Ar. Bea 115.71 360 PKP PKPdf 18 46 22.1 -0.7
comp=Z,0.6nm,0.5s,baz=343,slow=2.2,SNR=10
DBIC Dimbokro 121.88 8 PKP PKPdf 18 46 34.2 -0.5
comp=Z,2.8nm,0.4s,baz=116,slow=7.4,SNR=11
DBIC Dimbokro 121.88 8 PKIKP PKPdf 18 46 34.3 -0.4
DBIC pmax pmax
comp=Z,3.0nm,0.4s
TSUM Tsumeb 145.48 333 *e*PKPdf PKPdf 18 47 17.9 -0.4
MAW Mawson 146.67 218 PKPbc PKPbc 18 47 20.3 -0.2
comp=Z,2.7nm,0.8s,baz=106,slow=7.0,SNR=4.7
MAW Mawson 146.67 218 PKP2 PKPbc 18 47 20.3 -0.3
MAW pmax pmax
comp=Z,3.0nm,0.8s
MAW Mawson 146.67 218 PKPbc PKPbc 18 47 20.3 -0.2
LBTB Lobatse 147.89 316 *e*PKP2 PKPbc 18 47 25.7 +0.4
BOSA Boshof 151.15 313 PKPbc PKPbc 18 47 33.7 +0.5
comp=Z,6.2nm,0.7s,baz=44,slow=3.0,SNR=27
BOSA Boshof 151.15 313 PKIKP PKPbc 18 47 33.7 +0.5
BOSA pmax pmax
comp=Z,6.0nm,0.7s

IDC 29 18:28:11.0±1.3, 31°.14N×103°.63E, h0km, mb3.2/4, mb1 3.3/6, mb1mx3.2/26, mbtmp3.3/6, ML3.1/2, Error ellipse: s-maj=35.2km s-min=22.9km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.32**	**200**	Pn	Pn	18 31 22.9	+1.5
	0.0nm,0.3s,baz=5.7,slow=10.0,SNR=2.9						
SONM	**Songino Array**	**16.81**	**6**	Pn	Pn	18 32 08.0	+0.4
	0.1nm,0.3s,baz=186,slow=8.8,SNR=3.9						
KSRS	**Korea Array**	**21.01**	**66**	P	P	18 32 56.1	+0.1
	1.4nm,0.7s,baz=264,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**22.69**	**320**	P	P	18 33 14.2	+0.3
	0.4nm,0.7s,baz=123,slow=10,SNR=4.3						
KURK	**Kurchatov**	**26.98**	**324**	P	P	18 33 54.0	-0.2
	0.4nm,0.7s,baz=132,slow=8.9,SNR=4.2						
ASAR	**Alice Springs**	**61.73**	**148**	P	P	18 38 30.9	-0.3
	0.3nm,0.9s,baz=338,slow=7.0,SNR=3.0						

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*ISCJB **29** 18:32:57.6±0.3, 10°.92N±0°.02×62°.36W±0°.02, h102km±3km, mb4.0/12, Error ellipse: s-maj=4.3km s-min=2.9km az=36.0*
*FUNV **29** 18:32:59.5, 10°.92N×62°.30W, h86km, MW3.8*
*TRN **29** 18:33:00.8, 10°.94N×62°.19W, h93km, MD4.0*
*NEIC **29** 18:33:00.7, 10°.93N×62°.24W, h91km, MD4.0(TRN), After TRN.*
*IDC **29** 18:33:00.6±1.2, 11°.10N×62°.55W, h115km±8km, mb3.7/12, mb1 3.8/14, mb1mx3.7/28, mbtmp3.7/14, MS3.0/1, Ms1 3.0/1, ms1mx2.9/38, Error ellipse: s-maj=22.3km s-min=7.1km az=133.0*
ISC 29 18:32:58.5±0.3, 10°.92N±0°.02×62°.35W±0°.02, h97km±3km, n81, σ1.11/124, mb4.0/12, 4C-7D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.30**	**155**	⇑*i*P	Pn	18 33 12.4	-0.4
GUIV				eS	Sn	18 33 21.4	-1.8
TCE	**Chacachacare**	**0.63**	**111**	*e*P	Pn	18 33 15.5	+0.5
TCE				eS	Sn	18 33 27.0	-0.3
TCE	**Chacachacare**	**0.63**	**111**	*e*P	Pn	18 33 15.5	+0.5
TCE				eS	Sn	18 33 27.0	-0.3
ITEV	**Isla Los Testi**	**0.88**	**299**	⇓*i*P	Pn	18 33 17.4	0.0
ITEV				eS	Sn	18 33 30.7	-0.8
CRUV	**Carupano**	**0.90**	**254**	⇓*i*P	Pn	18 33 17.7	+0.1
CRUV				eS	Sn	18 33 31.3	-0.7
GUNV	**Guanoco**	**0.95**	**218**	⇓*e*P	Pn	18 33 18.6	+0.4
GUNV				eS	Sn	18 33 32.2	-0.8
TRN	**Trinidad (W)**	**0.97**	**106**	⇓*i*P	Pn	18 33 19.0	+0.7
TRN	**Trinidad (W)**	**0.97**	**106**	⇓*i*P	Pn	18 33 19.0	+0.7
ALNG	**Atlantic LNG**	**0.98**	**138**	*e*P	Pn	18 33 20.4	+1.9
ALNG				eS	Sn	18 33 33.1	-0.4
ALNG	**Atlantic LNG**	**0.98**	**138**	*e*P	Pn	18 33 19.1	+0.6
ALNG				eS	Sn	18 33 33.1	-0.4
BUAY	**Buenos Aires**	**1.04**	**141**	*e*P	Pn	18 33 21.5	+2.4
BUAY				eS	Sn	18 33 35.1	+0.5
BUAY	**Buenos Aires**	**1.04**	**141**	*e*P	Pn	18 33 20.5	+1.4
BUAY				eS	Sn	18 33 35.1	+0.5
TPP	**Pointe-a-Pierr**	**1.07**	**124**	*e*P	Pn	18 33 20.0	+0.5
TPP				eS	Sn	18 33 35.6	+0.4
TPP	**Pointe-a-Pierr**	**1.07**	**124**	*e*P	Pn	18 33 20.0	+0.5
TPP				eS	Sn	18 33 35.6	+0.4
SIPA	**Siparia**	**1.14**	**133**	*e*P	Pn	18 33 22.2	+2.0
SIPA				eS	Sn	18 33 35.8	-0.8
SIPA	**Siparia**	**1.14**	**133**	*e*P	Pn	18 33 22.2	+2.0
SIPA				eS	Sn	18 33 35.8	-0.8
TBH	**Brigand Hill**	**1.33**	**109**	*e*P	Pn	18 33 23.5	+0.9
TBH				eS	Sn	18 33 38.0	-2.8
TBH	**Brigand Hill**	**1.33**	**109**	*e*P	Pn	18 33 23.5	+0.9
TBH				eS	Sn	18 33 38.5	-2.3
GRGR	**Grenville**	**1.38**	**30**	*e*P	Pn	18 33 22.9	-0.3
GRW	**Mount Saint Ca**	**1.40**	**29**	*e*P	Pn	18 33 24.7	+1.3
GRW	**Mount Saint Ca**	**1.40**	**29**	*e*P	Pn	18 33 24.7	+1.3
GRHS	**Sauteurs**	**1.47**	**28**	*e*P	Pn	18 33 25.3	+1.1
GRHS				eS	Sn	18 33 43.1	-0.5
GRHS	**Sauteurs**	**1.47**	**28**	*e*P	Pn	18 33 25.3	+1.1
GRHS				eS	Sn	18 33 43.1	-0.5
GRSS	**Sisters**	**1.55**	**28**	*e*P	Pn	18 33 26.1	+0.9
GRSS				eS	Sn	18 33 46.5	+1.1
GRSS	**Sisters**	**1.55**	**28**	*e*P	Pn	18 33 26.1	+0.9
GRSS				eS	Sn	18 33 45.7	+0.3
GRIC	**Isle de Caille**	**1.55**	**29**	*e*P	Pn	18 33 26.2	+1.0
GRIC				eS	Sn	18 33 45.2	-0.2
TPR	**Prospect**	**1.57**	**80**	*e*S	Sn	18 33 44.0	-1.9
BOT	**Bacolet**	**1.62**	**81**	*e*P	Pn	18 33 26.6	+0.5
BOT				eS	Sn	18 33 47.2	+0.1
BOT	**Bacolet**	**1.62**	**81**	*e*P	Pn	18 33 26.6	+0.5
BOT				eS	Sn	18 33 45.6	-1.4
GRCU	**Cariacou**	**1.77**	**30**	*e*P	Pn	18 33 28.5	+0.5
GRCU				eS	Sn	18 33 51.9	+1.4
GRCU	**Cariacou**	**1.77**	**30**	*e*P	Pn	18 33 28.5	+0.5
GRCU				eS	Sn	18 33 50.2	-0.3
TOSP	**Speyside**	**1.82**	**78**	*e*P	Pn	18 33 27.9	-0.7
TOSP				eS	Sn	18 33 49.7	-1.8
ORIV	**Oritupano**	**2.12**	**210**	*e*P	Pn	18 33 33.0	+0.6
ORIV				eS	Sn	18 33 58.1	-0.3
IBAV	**Isla La Blanqu**	**2.36**	**293**	⇓*i*P	Pn	18 33 35.9	+0.3
PCRV	**Puerto La Cruz**	**2.37**	**252**	P	Pn	18 33 36.8	+1.0
	41nm,0.3s,baz=98,slow=4.2,SNR=76						
PCRV				S	Sn	18 34 04.3	0.0
	44nm,0.3s,baz=289,slow=14,SNR=12						
PCRV				LR	LR	18 34 46.7	
	comp=Z,352nm,19.4s,baz=297,slow=48						
PCRV	**Puerto La Cruz**	**2.37**	**252**	⇓*i*P	Pn	18 33 36.7	+0.9
PCRV				eS	Sn	18 34 02.0	-2.3
FCV	**Fort Charlotte**	**2.47**	**26**	*e*P	Pn	18 33 37.6	+0.5
FCV				eS	Sn	18 34 08.5	+1.8
FCV	**Fort Charlotte**	**2.47**	**26**	*e*P	Pn	18 33 37.6	+0.5
FCV				eS	Sn	18 34 06.5	-0.3
SVB	**Belmont**	**2.57**	**25**	*e*P	Pn	18 33 39.5	+1.1
SVB	**Belmont**	**2.57**	**25**	*e*P	Pn	18 33 39.5	+1.1
SVB				eS	Sn	18 34 12.8	+3.7
SVV	**Soufriere Volc**	**2.63**	**25**	*e*P	Pn	18 33 42.5	+3.3
SVV	**Soufriere Volc**	**2.63**	**25**	*e*P	Pn	18 33 40.6	+1.4
SVV				eS	Sn	18 34 09.8	-0.7
SSV	**Crater Summit**	**2.64**	**25**	*e*P	Pn	18 33 41.9	+2.4
SSV				eS	Sn	18 34 11.3	+0.4
SSV	**Crater Summit**	**2.64**	**25**	*e*P	Pn	18 33 41.9	+2.4
SSV				eS	Sn	18 34 09.6	-1.3
BHS	**Barnard House**	**2.65**	**27**	*e*P	Pn	18 33 42.9	+3.4
BHS				eS	Sn	18 34 09.7	-1.2
BHS	**Barnard House**	**2.65**	**27**	*e*P	Pn	18 33 40.9	+1.5
BHS				eS	Sn	18 34 09.7	-1.2
RIOV	**Rio Grande**	**2.88**	**169**	⇑*i*P	Pn	18 33 42.5	-0.2
MCLT	**Moule a Chique**	**3.09**	**26**	*e*P	Pn	18 33 46.4	+0.9
MCLT				eS	Sn	18 34 21.2	-0.4
MCLT	**Moule a Chique**	**3.09**	**26**	*e*P	Pn	18 33 46.4	+0.9
MCLT				eS	Sn	18 34 21.2	-0.4
PRGV	**PARIAGUAN**	**3.12**	**227**	*e*P	Pn	18 33 45.9	+0.1
SLB	**Belfond**	**3.16**	**24**	*e*P	Pn	18 33 48.5	+2.2
SLB				eS	Sn	18 34 21.7	-1.5
SLB	**Belfond**	**3.16**	**24**	*e*P	Pn	18 33 48.5	+2.2
SLB				eS	Sn	18 34 21.7	-1.5
SLPE	**Piton Saint Es**	**3.19**	**24**	eS	Sn	18 34 22.6	-1.3
GURV	**El Guri**	**3.23**	**193**	⇑*i*P	Pn	18 33 46.7	-0.5
CUPV	**Ccepira**	**3.49**	**256**	⇑*e*P	Pn	18 33 51.7	+0.9
BIRV	**Birongo**	**3.88**	**264**	*e*P	Pn	18 33 57.2	+1.2
MERV	**Las Mercedes**	**4.23**	**247**	*e*P	Pn	18 34 00.8	0.0
MERV				eS	Sn	18 34 45.8	-3.2
LUEV	**Luepa**	**5.12**	**170**	*e*P	Pn	18 34 11.3	-1.6
LZG	**Guadaloupe-1**	**5.22**	**6**	*e*P	Pn	18 34 22.7	+8.5
CAOV	**Caicara del Or**	**5.30**	**228**	*e*P	Pn	18 34 14.8	-0.5
TURV	**Turiamo**	**5.42**	**266**	*e*P	Pn	18 34 17.7	+0.9

BAUV	El Baul	5.94	251	*e*P	Pn	18 34 22.9	-1.1
SKI	Saint Kitts	6.38	357	*e*P	Pn	18 34 34.3	+4.3
SKI				*e*S	Sn	18 35 40.2	-1.2
SKI	Saint Kitts	6.38	357	*e*P	Pn	18 34 34.3	+4.3
SKI				*e*S	Sn	18 35 40.2	-1.2
SDV	Santo Domingo	8.41	257	P	Pn	18 34 58.7	+1.1
	0.8nm,0.3s,baz=71,slow=10,SNR=4.3						
ATAH	Atahualpa	23.92	223	P	P	18 38 06.5	+2.9
	6.1nm,0.6s,mb4.1,baz=82,slow=7.1,SNR=3.1						
SADO	Sadowa	36.69	340	P	P	18 39 54.7	-1.3
	3.7nm,0.6s,mb4.5,baz=162,slow=3.2,SNR=2.5						
SADO	Sadowa	36.69	340	P	P	18 39 54.7	-1.3
TXAR	Lajitas Array	42.62	302	P	P	18 40 44.1	-1.3
	0.9nm,0.7s,mb3.6,baz=111,slow=10.0,SNR=6.5						
TXAR				PcP	PcP	18 42 34.9	-1.2
	0.6nm,0.6s,baz=125,slow=6.6,SNR=5.7						
SCHQ	Schefferville	43.94	356	P	P	18 40 54.9	-0.8
	1.6nm,0.6s,mb4.0,baz=221,slow=19,SNR=4.1						
PDAR	Pinedale Array	51.78	317	P	P	18 41 54.5	-1.8
	2.5nm,0.6s,mb4.4,baz=108,slow=8.9,SNR=16						
TORD	Torodi Ar. Bea	62.53	81	P	P	18 43 12.9	+0.3
	0.7nm,0.6s,mb3.8,baz=250,slow=10,SNR=4.1						
YKA	Yellowknife Ar	63.52	336	P	P	18 43 15.1	-3.1
	0.4nm,0.3s,mb3.7,baz=107,slow=7.3,SNR=4.3						
NB2	NORSAR Subarra	72.56	29	P	P	18 44 15.4	+0.5
	comp=Z,0.7nm,0.6s,mb3.7,baz=262,slow=6.5						
NOA	NORSAR Array B	72.56	29	P	P	18 44 15.8	+0.9
	comp=Z,1.2nm,0.8s,mb3.8,baz=261,slow=6.0,SNR=4.4						
SPITS	Spitsbergen Ar	77.07	12	P	P	18 44 40.0	-0.6
	comp=Z,0.7nm,0.4s,mb3.8,baz=166,slow=1.4,SNR=7.1						
SPITS	Spitsbergen Ar	77.07	12	P	P	18 44 40.0	-0.6
ARCES	ARCESS Array B	79.10	21	P	P	18 44 51.4	-0.5
	comp=Z,2.4nm,0.8s,mb4.1,baz=279,slow=7.2,SNR=3.9						
FINES	FINESS Array B	79.74	29	P	P	18 44 55.2	-0.3
	comp=Z,1.9nm,0.4s,mb4.2,baz=264,slow=4.2,SNR=22						
BRTR	Keskin Array B	87.66	50	P	P	18 45 36.9	+0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=280,slow=6.4,SNR=4.5						
CMAR	Chiang Mai Arr	145.46	32	PKPbc	PKPbc	18 52 24.6	-1.7
	comp=Z,0.8nm,0.6s,baz=328,slow=5.1,SNR=8.7						
CMAR				pPKPbc	pPKPbc	18 52 52.2	-0.4
	comp=Z,0.5nm,0.6s,baz=311,slow=4.0,SNR=6.7						

*CSEM **29** 18:43:59.7, 63°.94N×21°.13W, h9km,*

REY 29 18:43:59.7, 63°.94N×21°.13W, h9km, ML3.1, ML3.5,

Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**272**	P	Pg	18 44 01.9	+0.1
IBJA				S	Sg	18 44 03.6	+0.3
ISOL	**Solvholt**	**0.08**	**100**	P	Pg	18 44 01.9	0.0
ISOL				S	Sg	18 44 03.5	+0.1
IKRO	**Krokur**	**0.15**	**1**	P	Pg	18 44 03.0	0.0
IKRO				S	Sg	18 44 05.3	0.0
ISAN	**Sandskeio**	**0.23**	**300**	P	Pg	18 44 04.2	0.0
ISAN				S	Sg	18 44 07.6	+0.3
IASM	**Asmuli**	**0.25**	**116**	P	Pg	18 44 04.7	0.0
IASM				S	Sg	18 44 08.5	+0.4
IHEI	**Heioarbar**	**0.26**	**350**	P	Pg	18 44 04.9	0.0
IHEI				S	Sg	18 44 08.7	+0.2
ISAU	**Saurbar**	**0.32**	**81**	P	Pg	18 44 05.7	-0.3
ISAU				S	Sg	18 44 10.3	+0.1
IKAS	**Kald??rsel**	**0.33**	**284**	P	Pg	18 44 06.1	0.0
IKAS				S	Sg	18 44 10.8	+0.3
IKRI	**Krysuvik**	**0.42**	**262**	P	Pg	18 44 07.4	-0.5
IKRI				S	Sg	18 44 13.2	-0.3
IKUD	**Kuludalsa**	**0.50**	**320**	P	Pg	18 44 08.4	-1.0
IKUD				S	Sg	18 44 15.5	-0.5
IHAU	**Haukadalur**	**0.51**	**87**	P	Pg	18 44 09.1	-0.5
IHAU				S	Sg	18 44 16.2	-0.2
IGYG	**Gygjarholskot**	**0.53**	**49**	P	Pg	18 44 09.1	-0.8
IGYG				S	Sg	18 44 16.3	-0.4
IVOG	**Vogar**	**0.56**	**273**	P	Pg	18 44 09.7	-0.8
IVOG				S	Sg	18 44 17.7	-0.1
IGRV	**Grindav??k**	**0.59**	**262**	P	Pg	18 44 10.3	-0.8
IGRV				S	Sg	18 44 18.5	-0.4
IMID	**Miomork**	**0.62**	**117**	P	Pg	18 44 11.0	-0.7
IVES	**Vestmannaeyjar**	**0.63**	**143**	P	Pg	18 44 11.3	-0.5
IVES				S	Sg	18 44 20.1	+0.2
INYL	**Nylenda**	**0.71**	**273**	P	Pg	18 44 11.8	-1.6
INYL				S	Sg	18 44 21.8	-0.8
IASB	**`sbjarnarst**	**0.81**	**354**	P	Pg	18 44 13.7	-1.6
IASB				S	Sg	18 44 24.8	-1.1
IESK	**Eystri-Skogar**	**0.86**	**119**	P	Pg	18 44 14.8	-1.3
IESK				S	Sg	18 44 26.7	-0.6
IHVO	**Lagu-Hvolar**	**1.10**	**111**	P	Pg	18 44 18.8	-1.9
IHVO				S	Sg	18 44 33.3	-1.7
ISNB	**Snabyli**	**1.13**	**100**	P	Pg	18 44 19.2	-2.1
ISNB				S	Sg	18 44 34.3	-1.6
ISKR	**Skrokkalda**	**1.35**	**61**	P	Pn	18 44 23.1	-1.6
ISKR				S	Sb	18 44 40.8	-1.6

*ISCJB **29** 19:19:48.6±0.5, 31°.54N±0°.04×104°.21E±0°.06, h10km, mb3.7/8, Error ellipse: s-maj=7.6km s-min=5.2km az=28.0*
*IDC **29** 19:19:49.5±1.1, 31°.68N×104°.25E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/28, mbtmp3.7/11, ML3.4/2, Error ellipse: s-maj=34.2km s-min=20.8km az=53.0*
*NEIC **29** 19:19:51.0±0.4, 31°.68N×104°.23E, h10km, mb3.7/1, Error ellipse: s-maj=10.9km s-min=7.4km az=61.0*
*BJI **29** 19:19:50.7, 31°.53N×104°.37E, h18km, mb4.4/3, ML3.6/13, Ms3.5/5, Ms7 3.6/5*

ISC 29 19:19:51.1±0.6, 31°.67N±0°.05×104°.22E±0°.05, h10km, n23, σ0§92/29, mb3.6/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.86**	**208**	Pg	**Pg**	**19 20 02.5**	**-5.2**
CD2				Sg	**Sg**	**19 20 12.5**	**-6.4**
CD2				smax			
	comp=N,6μm,0.7s						
LZH	**Lanzhou**	**4.41**	**356**	Pg	**Pg**	**19 21 13.3**	**-2.4**
LZH				Sg	**Sg**	**19 22 13.5**	**+0.7**
LZH				smax			
	comp=N,91nm,0.8s						
LZH				smax			
	comp=E,91nm,0.7s						
LZH				LR	LR		
	comp=E,450nm,7.7s						
LZH				LR	LR		
	comp=Z,590nm,8.4s						
XAN	**Xi'an**	**4.60**	**58**	Pn	**Pn**	**19 21 01.0**	**+0.2**
XAN				Pg	**Pg**	**19 21 16.0**	**-3.3**
XAN				Sn	**Sn**	**19 21 56.0**	**+1.7**
XAN				Sg	**Sg**	**19 22 17.8**	**-1.2**
XAN				smax			
	comp=N,150nm,0.9s						
XAN				smax			
	comp=E,82nm,1.0s						
ENH	**Enshi**	**4.73**	**106**	*e*P	**Pn**	**19 21 02.8**	**+0.3**
GTA	**Gaotai**	**8.51**	**336**	P	**Pn**	**19 21 58.5**	**+4.1**
GTA				S	**Sn**	**19 23 35.5**	**+5.0**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				LR	LR		
	comp=N,220nm,10.1s						
GTA				LR	LR		
	comp=E,190nm,11.9s						
GTA				LR	LR		
	comp=Z,220nm,11.6s						
CMAR	**Chiang Mai Arr**	**14.00**	**201**	Pn	**Pn**	**19 23 09.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=8.7,slow=11,SNR=4.1						
SONM	**Songino Array**	**16.23**	**5**	Pn	**Pn**	**19 23 39.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=7.1						
KSRS	**Korea Array**	**20.33**	**67**	P	**P**	**19 24 27.2**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=262,slow=10,SNR=5.2						
CN2	**Changchun**	**20.63**	**48**	*e*P	**P**	**19 24 32.3**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	**Makanchi Array**	**22.62**	**318**	*e*P	**P**	**19 24 52.6**	**+0.7**
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**19 24 52.4**	**+0.5**
	comp=Z,1.0nm,0.6s,mb3.5,baz=113,slow=14,SNR=15						
MKAR	**Makanchi Array**	**22.62**	**318**	P	**P**	**19 24 52.4**	**+0.5**
ZALV	**Zalesovo Beam**	**26.25**	**334**	P	**P**	**19 25 26.3**	**0.0**
	comp=Z,0.8nm,0.4s,mb3.6,baz=134,slow=8.5,SNR=6.8						
ZALV	**Zalesovo Beam**	**26.25**	**334**	P	**P**	**19 25 26.3**	**0.0**
KURK	**Kurchatov**	**26.85**	**323**	P	**P**	**19 25 31.8**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.4,baz=128,slow=9.0,SNR=8.3						
KURK	**Kurchatov**	**26.85**	**323**	*e*P	**P**	**19 25 30.8**	**-0.9**
	comp=Z,1.7nm,1.0s,mb3.5						
BVAR	**Borovoye Array**	**32.41**	**321**	P	**P**	**19 26 21.1**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.4,baz=134,slow=8.3,SNR=2.2						

ARCES	ARCESS Array B	56.78	336	P	P	19 29 34.9	-0.1
	comp=Z,1.8nm,0.9s,mb4.1,baz=96,slow=6.4,SNR=3.4						
FINES	FINESS Array B	57.15	326	P	P	19 29 37.2	-0.5
	comp=Z,1.0nm,0.8s,mb3.9,baz=72,slow=8.9,SNR=2.9						
ASAR	Alice Springs	61.92	149	P	P	19 30 11.2	+0.1
	comp=Z,0.5nm,1.0s,mb3.6,baz=334,slow=7.0,SNR=4.6						
KTH	Kantishna Hill	68.33	28	*e*P	P	19 30 51.8	-0.3
YKA	Yellowknife Ar	81.12	17	P	P	19 32 05.6	-0.7
	comp=Z,0.6nm,0.5s,mb3.8,baz=329,slow=5.5,SNR=4.7						
YKA	Yellowknife Ar	81.12	17	P	P	19 32 05.6	-0.7

*CSEM **29** 19:22:55.6±1.1, 36°.08N×21°.85E, h5km, MD2.9, Error ellipse: s-maj=20.7km s-min=10.3km az=41.0*
*THE **29** 19:22:55.9, 36°.08N×21°.25E, h31km±41km, ML3.1/1, Error ellipse: s-maj=41.7km s-min=1.8km az=352.0*
*ATH **29** 19:22:56.8, 36°.14N×21°.87E, h9km±2km, MD2.9/3*

ISC 29 19:22:55.6±1.7, 36°.09N±0°.06×21°.77E±0°.10, h10km±10km, n20, σ1§04/34, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**358**	*e*PG	**Pg**	**19 23 11.0**	**-0.3**
PYL				*e*SB	**Sg**	**19 23 21.9**	**+0.1**
PYL	**PYLOS**	**0.81**	**358**	P	**Pg**	**19 23 11.3**	**0.0**
PYL				S	**Sg**	**19 23 24.5**	**+2.7**
PYL	**PYLOS**	**0.81**	**358**	*e*Pg	**Pg**	**19 23 11.0**	**-0.3**
PYL	**PYLOS**	**0.81**	**358**	P	**Pg**	**19 23 11.3**	**0.0**
PYL				*e*Sb	**Sg**	**19 23 21.9**	**+0.1**
PYL				S	**Sg**	**19 23 24.5**	**+2.7**
KYTH	**Kithira**	**1.04**	**79**	*e*PB	**Pg**	**19 23 14.9**	**-0.8**
KYTH	**Kithira**	**1.04**	**79**	*e*Pb	**Pg**	**19 23 14.9**	**-0.8**
ITM	**Ithomi**	**1.10**	**6**	*e*PB	**Pg**	**19 23 16.4**	**-0.4**
ITM				*e*SB	**Sg**	**19 23 31.5**	**+0.4**
ITM	**Ithomi**	**1.10**	**6**	P	**Pg**	**19 23 16.3**	**-0.5**
ITM				S	**Sg**	**19 23 31.4**	**+0.3**
ITM	**Ithomi**	**1.10**	**6**	*e*Pb	**Pg**	**19 23 16.4**	**-0.4**
ITM				S	**Sg**	**19 23 31.4**	**+0.3**
VLI	**Veliai**	**1.13**	**56**	*e*PB	**Pg**	**19 23 16.6**	**-0.8**
VLI				*e*SB	**Sg**	**19 23 30.7**	**-1.4**
VLI	**Veliai**	**1.13**	**56**	*e*Pb	**Pg**	**19 23 16.6**	**-0.8**
VLI				*e*Sb	**Sg**	**19 23 30.7**	**-1.4**
VLX	**Vlachokerasia**	**1.37**	**21**	*e*PG	**Pn**	**19 23 20.8**	**0.0**
VLX				*e*SB	**Sb**	**19 23 39.1**	**+0.1**
VLX	**Vlachokerasia**	**1.37**	**21**	P	**Pn**	**19 23 20.8**	**0.0**
VLX				S	**Sg**	**19 23 41.4**	**+1.6**
VLX	**Vlachokerasia**	**1.37**	**21**	P	**Pn**	**19 23 20.8**	**0.0**
VLX				*e*Sb	**Sb**	**19 23 39.1**	**+0.1**
VLX				S	**Sg**	**19 23 41.4**	**+1.6**
KARN	**Karanos**	**1.87**	**111**	P	**Pg**	**19 23 31.7**	**+0.1**
KARN				S	**Sg**	**19 23 58.1**	**+2.2**
KARN	**Karanos**	**1.87**	**111**	P	**Pg**	**19 23 31.7**	**+0.1**
GUR	**Goura**	**1.90**	**14**	*e*PN	**Pg**	**19 23 30.5**	**-1.6**
GUR	**Goura**	**1.90**	**14**	P	**Pg**	**19 23 31.6**	**-0.5**
GUR	**Goura**	**1.90**	**14**	*e*Pn	**Pg**	**19 23 30.5**	**-1.6**
GUR	**Goura**	**1.90**	**14**	P	**Pg**	**19 23 31.6**	**-0.5**

*ATH **29** 19:23:17.4, 39°.83N×25°.63E, h21km±1km, MD3.1/3*
*ISCJB **29** 19:23:18.0±0.3, 39°.83N±0°.02×25°.60E±0°.03, h10km, Error ellipse: s-maj=3.7km s-min=2.7km az=30.1*
*CSEM **29** 19:23:18.1±0.2, 39°.81N×25°.59E, h10km, MD3.1, Error ellipse: s-maj=5.1km s-min=4.0km az=47.0*
*THE **29** 19:23:18.3, 39°.81N×25°.61E, h11km±1km, ML3.0/5, Error ellipse: s-maj=1.5km s-min=0.6km az=219.0*
*DDA **29** 19:23:21.5, 39°.97N×25°.96E, h5km±3km, Md2.9*
*NEIC **29** 19:23:21.0, 39°.97N×25°.95E, h5km, MD3.1(ATH), MD3.1(ISK), After ISK.*
*ISK **29** 19:23:21.3, 39°.97N×25°.95E, h3km, MD3.1*

ISC 29 19:23:18.0±0.5, 39°.83N±0°.02×25°.59E±0°.03, h6km±4km, n54, σ1§00/79, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.32**	**282**	*e*PB	**Pg**	**19 23 25.2**	**+0.9**
LIA				*e*SB	**Sg**	**19 23 30.4**	**+1.8**
LIA	**Limnos Island**	**0.32**	**282**	P	**Pg**	**19 23 25.2**	**+0.9**
LIA				S	**Sg**	**19 23 30.7**	**+2.1**
LIA	**Limnos Island**	**0.32**	**282**	P	**Pg**	**19 23 25.2**	**+0.9**
LIA				*e*Sb	**Sg**	**19 23 30.4**	**+1.8**
LIA				S	**Sg**	**19 23 30.7**	**+2.1**
BOZC	**Bozcaada**	**0.35**	**88**	*i* P	**Pg**	**19 23 24.4**	**-0.5**
BOZC				*i* S	**Sg**	**19 23 29.4**	**-0.1**
GADA	**Gvkgeada**	**0.43**	**33**	*e*PG	**Pg**	**19 23 26.5**	**+0.1**
GADA				*e*SG	**Sg**	**19 23 30.2**	**-1.8**
GADA	**Gvkgeada**	**0.43**	**33**	*e*Pg	**Pg**	**19 23 26.5**	**+0.2**
GADA				*e*Sg	**Sg**	**19 23 30.2**	**-1.8**
EZN	**Ezine**	**0.56**	**90**	*e*PG	**Pg**	**19 23 27.5**	**-1.4**
EZN	**Ezine**	**0.56**	**90**	*e*Pg	**Pg**	**19 23 27.5**	**-1.4**
SIGR	**SIGRI**	**0.65**	**162**	P	**Pg**	**19 23 29.6**	**-0.9**
SIGR				S	**Sg**	**19 23 39.3**	**+0.4**
SIGR	**SIGRI**	**0.65**	**162**	P	**Pg**	**19 23 29.6**	**-0.9**
SIGR				S	**Sg**	**19 23 39.3**	**+0.4**
PRK	**Paraskevi**	**0.78**	**138**	*e*PN	**Pg**	**19 23 32.4**	**-0.7**
PRK				*e*SN	**Sg**	**19 23 43.0**	**-0.2**
PRK	**Paraskevi**	**0.78**	**138**	P	**Pg**	**19 23 32.4**	**-0.7**
PRK				S	**Sg**	**19 23 43.7**	**+0.5**
PRK	**Paraskevi**	**0.78**	**138**	P	**Pg**	**19 23 32.4**	**-0.7**
PRK				*e*Sn	**Sg**	**19 23 43.0**	**-0.2**
PRK				S	**Sg**	**19 23 43.7**	**+0.5**
AYVA	**Ayvalik**	**0.99**	**121**	*i* P	**Pg**	**19 23 37.0**	**-0.1**
AYVA				*i* S	**Sg**	**19 23 51.5**	**+1.5**
AYVA	**Ayvalik**	**0.99**	**121**	*i* P	**Pg**	**19 23 37.0**	**-0.1**
AYVA				*i* S	**Sg**	**19 23 51.5**	**+1.5**
ENEZ	**Enez**	**1.00**	**25**	*e*PG	**Pg**	**19 23 37.1**	**-0.1**
ENEZ	**Enez**	**1.00**	**25**	*e*Pg	**Pg**	**19 23 37.1**	**-0.1**
LPK	**Lapseki**	**1.05**	**58**	*e*PG	**Pg**	**19 23 36.9**	**-1.2**
LPK	**Lapseki**	**1.05**	**58**	*e*Pg	**Pg**	**19 23 36.9**	**-1.2**
ALN	**Alexandroupoli**	**1.12**	**18**	P	**Pg**	**19 23 39.2**	**-0.3**
ALN				S	**Sg**	**19 23 55.2**	**+1.1**
ALN	**Alexandroupoli**	**1.12**	**18**	P	**Pg**	**19 23 39.2**	**-0.3**
ALN				S	**Sg**	**19 23 55.2**	**+1.1**
RDO	**Rodhopi**	**1.32**	**358**	*e*PN	**Pn**	**19 23 42.2**	**-0.7**
RDO	**Rodhopi**	**1.32**	**358**	*e*Pn	**Pn**	**19 23 42.2**	**-0.7**
KAVA	**Kavala**	**1.43**	**325**	P	**Pn**	**19 23 44.1**	**-0.3**
KAVA				S	**Sb**	**19 24 02.7**	**-0.7**
KAVA	**Kavala**	**1.43**	**325**	P	**Pn**	**19 23 44.1**	**-0.3**
KAVA				S	**Sb**	**19 24 02.7**	**-0.7**
PAIG	**Paliouri**	**1.48**	**274**	P	**Pn**	**19 23 44.2**	**-0.9**
PAIG				S	**Sn**	**19 24 03.9**	**-0.8**
PAIG	**Paliouri**	**1.48**	**274**	P	**Pn**	**19 23 44.2**	**-0.9**
PAIG				S	**Sn**	**19 24 03.9**	**-0.8**
CHOS	**Chios island**	**1.48**	**166**	P	**Pn**	**19 23 43.9**	**-1.3**
CHOS				S	**Sn**	**19 24 04.0**	**-0.9**
CHOS	**Chios island**	**1.48**	**166**	P	**Pn**	**19 23 43.9**	**-1.3**
CHOS				S	**Sn**	**19 24 04.0**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.48**	**54**	*e*PN	**Pn**	**19 23 44.4**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.48**	**54**	*e*Pn	**Pn**	**19 23 44.4**	**-0.8**
BALY	**Balya**	**1.56**	**93**	*i* P	**Pn**	**19 23 45.7**	**-0.6**
BALY				*i* S	**Sn**	**19 24 06.8**	**0.0**
BALY	**Balya**	**1.56**	**93**	*i* P	**Pn**	**19 23 45.7**	**-0.6**
BALY				*i* S	**Sn**	**19 24 06.8**	**-0.1**
BALB	**Balikesir**	**1.77**	**95**	*e*PN	**Pn**	**19 23 49.9**	**+0.7**
BALB	**Balikesir**	**1.77**	**95**	*e*Pn	**Pn**	**19 23 49.9**	**+0.7**
EDC	**Edincik**	**1.82**	**73**	*e*PN	**Pn**	**19 23 50.6**	**+0.9**
EDC	**Edincik**	**1.82**	**73**	*e*Pn	**Pn**	**19 23 50.6**	**+0.8**
BNT	**Bandirma**	**1.86**	**73**	*e*PN	**Pn**	**19 23 50.1**	**-0.2**
IZM	**Izmir**	**1.93**	**137**	*e*PN	**Pn**	**19 23 55.5**	**+4.1**
SRS	**Serrai**	**2.00**	**311**	P	**Pn**	**19 23 52.1**	**-0.1**
SRS	**Serrai**	**2.00**	**311**	P	**Pn**	**19 23 52.1**	**-0.1**
NVR	**Nevrokopi**	**2.01**	**320**	*e*PN	**Pn**	**19 23 52.4**	**-0.1**
NVR	**Nevrokopi**	**2.01**	**320**	*e*Pn	**Pn**	**19 23 52.4**	**-0.1**
CRLT	**Corlu**	**2.09**	**51**	*e*PN	**Pn**	**19 23 54.7**	**+1.2**
CRLT	**Corlu**	**2.09**	**51**	*e*Pn	**Pn**	**19 23 54.7**	**+1.2**
EDRB	**Edirne**	**2.20**	**23**	*e*PN	**Pn**	**19 23 57.0**	**+2.0**
EDRB	**Edirne**	**2.20**	**23**	*e*Pn	**Pn**	**19 23 57.0**	**+2.0**
DST	**Dursunbey**	**2.35**	**94**	*e*PN	**Pn**	**19 23 58.8**	**+1.6**
DST	**Dursunbey**	**2.35**	**94**	*e*Pn	**Pn**	**19 23 58.8**	**+1.7**
CTKS	**Kestanelik-??a**	**2.63**	**57**	*e*PN	**Pn**	**19 24 00.8**	**-0.2**
CTKS	**Kestanelik-??a**	**2.63**	**57**	*e*Pn	**Pn**	**19 24 00.8**	**-0.1**
KULA	**Kula-Manisa**	**2.72**	**118**	*e*PN	**Pn**	**19 24 05.1**	**+2.9**
YLV	**Yalova**	**2.99**	**75**	*e*PN	**Pn**	**19 24 07.2**	**+1.4**
YLV	**Yalova**	**2.99**	**75**	*e*Pn	**Pn**	**19 24 07.2**	**+1.3**

*ISCJB **29** 19:44:03.2±1.4, 18°.9S±0°.2×177°.8W±0°.2, h600km±16km, mb3.6/5, Error ellipse: s-maj=36.6km s-min=21.6km az=151.1*

*NEIC **29** 19:44:03.7±1.2, 18°.90S×177°.76W, h592km±14km, mb3.8/1, Error ellipse: s-maj=31.0km s-min=18.9km az=139.0*
*IDC **29** 19:44:06.0±4.1, 19°.03S×177°.74W, h622km±56km, mb3.0/4, mb1 3.3/5, mb1mx3.0/15, mbtmp3.0/5, Error ellipse: s-maj=48.2km s-min=15.7km az=157.0*

ISC 29 19:44:04.1±1.4, 18°.9S±0°.2×177°.8W±0°.2, h594km±15km, n7, σ0§73/8, mb3.6/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.11**	**286**	*e*P	**P**	**19 45 29.8**	**-0.1**
URZ	**Urewera**	**19.79**	**192**	P	**P**	**19 47 55.6**	**-0.3**
	0.6nm,0.3s,baz=143,slow=20,SNR=4.0						
STKA	**Stephens Creek**	**38.67**	**242**	P	**P**	**19 50 39.0**	**+0.8**
	1.0nm,0.5s,mb3.6,baz=70,slow=5.7,SNR=5.7						
WRAB	**Tennant Creek**	**45.02**	**260**	*e*P	**P**	**19 51 27.9**	**-0.3**
	2.1nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**45.08**	**255**	P	**P**	**19 51 28.9**	**+0.2**
	0.8nm,0.4s,mb3.6,baz=92,slow=7.3,SNR=23						
ASAR				S	**S**	**19 57 25.1**	**-0.5**
	0.7nm,0.7s,baz=92,slow=15,SNR=6.1						
NVAR	**Mina Array Bea**	**79.74**	**43**	P	**P**	**19 55 10.7**	**-0.7**
	1.2nm,0.8s,mb3.3,baz=229,slow=8.2,SNR=6.9						
TXAR	**Lajitas Array**	**86.04**	**57**	P	**P**	**19 55 43.7**	**+0.7**
	1.6nm,0.8s,mb3.7,baz=215,slow=7.0,SNR=17						

*CSEM **29** 20:13:21.7, 63°.89N×21°.17W, h4km, ML3.7, After REY*

REY 29 20:13:21.7, 63°.89N×21°.17W, h4km, ML3.6, ML3.7,

Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**314**	P	Pg	20 13 23.8	+0.4
ISOL	**Solvholt**	**0.11**	**68**	P	Pg	20 13 24.1	+0.2
ISOL				S	Sg	20 13 26.0	+0.7
IVOS	**Vogsosar**	**0.24**	**261**	P	Pg	20 13 26.4	+0.1
IVOS				S	Sg	20 13 30.5	+1.0
ISAN	**Sandskeio**	**0.24**	**314**	P	Pg	20 13 26.6	+0.2
ISAN				S	Sg	20 13 30.6	+1.0
IASM	**Asmuli**	**0.25**	**103**	P	Pg	20 13 26.7	+0.1
IASM				S	Sg	20 13 30.7	+0.9
IHEI	**Heioarbar**	**0.31**	**355**	P	Pg	20 13 27.8	+0.1
IHEI				S	Sg	20 13 33.0	+1.2
IKAS	**Kald??rsel**	**0.33**	**294**	P	Pg	20 13 28.1	+0.1
IKAS				S	Sg	20 13 33.4	+1.1
ISAU	**Saurbar**	**0.35**	**73**	P	Pg	20 13 28.3	-0.1
ISAU				S	Sg	20 13 33.5	+0.6
IKRI	**Krysuvik**	**0.40**	**269**	P	Pg	20 13 29.2	-0.2
IKRI				S	Sg	20 13 34.9	+0.3
IKUD	**Kuludalsa**	**0.53**	**325**	P	Pg	20 13 31.1	-0.8
IKUD				S	Sg	20 13 39.0	+0.2
IHAU	**Haukadalur**	**0.54**	**81**	P	Pg	20 13 31.5	-0.5
IHAU				S	Sg	20 13 39.4	+0.4
IVOG	**Vogar**	**0.55**	**279**	P	Pg	20 13 31.9	-0.3
IVOG				S	Sg	20 13 39.8	+0.5
IGRV	**Grindav??k**	**0.57**	**267**	P	Pg	20 13 31.8	-0.8
IGRV				S	Sg	20 13 39.8	-0.2
IGYG	**Gygjarholskot**	**0.57**	**46**	P	Pg	20 13 32.1	-0.6
IVES	**Vestmannaeyjar**	**0.60**	**138**	P	Pg	20 13 32.7	-0.4
IVES				S	Sg	20 13 41.3	+0.5
IMID	**Miomork**	**0.62**	**112**	P	Pg	20 13 32.9	-0.6
IMID				S	Sg	20 13 41.7	+0.3
INYL	**Nylenda**	**0.70**	**278**	P	Pg	20 13 33.9	-1.2
INYL				S	Sg	20 13 43.7	-0.4
IESK	**Eystri-Skogar**	**0.85**	**115**	P	Pg	20 13 36.7	-1.2
IESK				S	Sg	20 13 48.6	-0.3
IASB	**`sbjarnarst**	**0.86**	**356**	P	Pg	20 13 36.8	-1.5
IASB				S	Sg	20 13 49.0	-0.5
IVAT	**Vatnsfell**	**1.03**	**72**	P	Pg	20 13 39.9	-1.6
IVAT				S	Sg	20 13 54.0	-

	comp=E,1μm,0.8s						
LZH				LR	LR		
	comp=E,3μm,7.4s						
LZH				LR	LR		
	comp=Z,3μm,8.4s						
ENH	**Enshi**	**4.11**	**119**	*e*P	**Pn**	**20 41 10.3**	**-0.2**
GYA	**Guiyang**	**5.98**	**168**	Pn	**Pn**	**20 41 40.8**	**+4.6**
GYA				smax			
	comp=N,190nm,1.0s						
GYA				smax			
	comp=E,260nm,0.9s						
KMI	**Kunming**	**7.55**	**198**	Pn	Px	20 42 09.8	
KMI				Sn	**Sn**	**20 43 23.8**	**+0.4**
KMI				smax			
	comp=N,28nm,1.3s						
KMI				smax			
	comp=E,41nm,1.4s						
KMI				LR	LR		
	comp=N,330nm,6.7s						
KMI				LR	LR		
	comp=E,630nm,7.5s						
KMI				LR	LR		
	comp=Z,190nm,7.0s						
WHN	**Wuhan**	**7.91**	**101**	P	**Pn**	**20 42 10.0**	**+7.4**
WHN				S	**Sn**	**20 43 31.8**	**-0.4**
WHN				LR	LR		
	comp=N,1μm,4.2s						
WHN				LR	LR		
	comp=E,2μm,7.1s						
WHN				LR	LR		
	comp=Z,970nm,10.6s						
GTA	**Gaotai**	**8.35**	**329**	*e*P	**Pn**	**20 42 08.3**	**-0.3**
GTA				pP		20 42 11.5	
GTA				sP		20 42 14.5	
GTA				S	**Sn**	**20 43 44.5**	**+1.5**
GTA				sS		20 43 49.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,7.1s						
GTA				LR	LR		
	comp=N,550nm,13.1s						
GTA				LR	LR		
	comp=E,710nm,11.6s						
GTA				LR	LR		
	comp=Z,340nm,10.4s						
CMAR	**Chiang Mai Arr**	**14.98**	**204**	Pn	**Pn**	**20 43 40.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=11,slow=8.3,SNR=4.1						
CMAR				LR	LR	20 50 06.2	
	comp=Z,75nm,19.0s,baz=30,slow=40						
SONM	**Songino Array**	**15.49**	**3**	Pn	**Pn**	**20 43 45.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=9.5						
SONM				Lg		20 48 11.8	
	comp=Z,0.1nm,0.3s,baz=176,slow=25,SNR=3.8						
SONM				LR	LR	20 50 22.9	
	comp=Z,95nm,20.5s,baz=0.0,slow=40						
KSRS	**Korea Array**	**19.20**	**68**	P	**Pn**	**20 44 32.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=253,slow=11,SNR=11						
MK31	**Makanchi Array**	**22.77**	**316**	*e*P	**P**	**20 45 09.8**	**-0.2**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**20 45 09.7**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.3,baz=117,slow=13,SNR=11						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**20 45 42.1**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.2,baz=127,slow=6.3,SNR=2.6						
AAK	**Ala-Archa**	**26.41**	**302**	LR	LR	20 57 18.8	
	comp=Z,47nm,19.0s,MS3.1,baz=181,slow=39						
KURK	**Kurchatov**	**26.91**	**321**	P	**P**	**20 45 50.9**	**+2.2**
	comp=Z,0.7nm,0.7s,mb3.3,baz=124,slow=10,SNR=7.6						
KURK	**Kurchatov**	**26.91**	**321**	*e*P	**P**	**20 45 49.0**	**+0.3**
	comp=Z,1.2nm,0.8s,mb3.5						
PETK	**Petropavlovsk-**	**42.57**	**45**	LR	LR	21 07 58.5	
	comp=Z,46nm,19.1s,MS3.4,baz=50,slow=39						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**20 49 56.6**	**+2.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=133,slow=6.1,SNR=2.9						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**20 49 56.6**	**+2.6**
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**20 50 28.9**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.7,baz=331,slow=6.6,SNR=3.2						
YKA	**Yellowknife Ar**	**80.20**	**18**	P	**P**	**20 52 16.6**	**-1.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=328,slow=4.4,SNR=3.8						

*IDC **29** 20:47:18.8±4.6, 30°.05N×113°.68W, h0km, mb1 3.6/3, mb1mx3.4/23, mbtmp3.1/3, ML3.5/3, Error ellipse: s-maj=72.1km s-min=15.9km az=41.0*

NEIC 29 20:47:13.7±2.9, 29°.90N×114°.27W, h10km, ML3.5, Error ellipse: s-maj=47.0km s-min=11.1km az=28.0, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLA	**Glamis**	**3.18**	**352**	*e*Pn	Pn	20 48 04.9	+1.2
BAR	**Barrett**	**3.45**	**324**	*e*P	Pn	20 48 06.3	-1.2
TUC	**Tucson**	**3.84**	**50**	*e*P	Pn	20 48 11.9	-0.9
PFO	**Pinyon Flat Ob**	**4.14**	**334**	*e*P	Pn	20 48 17.8	+0.8
MNTX	**Cornudas Mount**	**7.86**	**75**	*e*P	Pn	20 49 07.3	-0.7
	1.8nm,0.7s						
NVAR	**Mina Array Bea**	**9.14**	**340**	Pn	Pn	20 49 34.0	+8.4
	0.1nm,0.3s,baz=157,slow=14,SNR=3.2						
NVAR				Lg		20 52 09.4	
	baz=159,slow=26,SNR=2.2						
TXAR	**Lajitas Array**	**9.25**	**91**	Pn	Pn	20 49 27.8	+0.6
	0.2nm,0.3s,baz=261,slow=12,SNR=7.4						
TXAR				Pg	Pn	20 49 42.4	+15
	0.2nm,0.3s,baz=263,slow=14,SNR=11						
TXAR				Lg		20 52 06.8	
	baz=282,slow=24,SNR=3.6						
TXAR	**Lajitas Array**	**9.25**	**91**	Pn	Pn	20 49 27.8	+0.6
TXAR				Pg	Pn	20 49 42.4	+15
TXAR				Lg		20 52 06.8	
JCT	**Junction City**	**12.54**	**84**	P	Pn	20 50 12.3	+0.1
	3.4nm,0.4s						
PDAR	**Pinedale Array**	**13.39**	**15**	Pn	Pn	20 50 30.2	+6.4
	0.1nm,0.3s,baz=183,slow=12,SNR=5.8						

IDC 29 20:48:56.8±2.2, 31°.03N×104°.01E, h0km, mb3.3/3, mb1 3.3/5, mb1mx3.2/26, mbtmp3.3/5, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/19, Error ellipse: s-maj=39.3km s-min=35.2km az=7.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.34**	**201**	Pn	Pn	20 52 07.2	-0.3
	0.0nm,0.3s,baz=11,slow=9.6,SNR=3.0						
SONM	**Songino Array**	**16.88**	**6**	Pn	Pn	20 52 53.7	-0.7
	0.1nm,0.3s,baz=190,slow=13,SNR=4.4						
SONM				LR	LR	20 59 47.4	
	comp=Z,40nm,18.2s,baz=178,slow=38						
KSRS	**Korea Array**	**20.76**	**66**	P	P	20 53 39.1	-0.1
	1.1nm,0.5s,baz=255,slow=9.2,SNR=5.3						
MKAR	**Makanchi Array**	**22.98**	**319**	P	P	20 54 03.5	+0.7
	0.3nm,0.6s,baz=114,slow=12,SNR=3.9						
KURK	**Kurchatov**	**27.25**	**323**	P	P	20 54 42.2	-0.4
	0.4nm,0.7s,baz=129,slow=9.9,SNR=3.1						

*IDC **29** 20:49:42.0±1.9, 13°.03S×167°.16E, h0km, mb4.1/6, mb1 4.1/6, mb1mx4.0/15, mbtmp4.1/6, Error ellipse: s-maj=67.3km s-min=30.9km az=117.0*

ISC 29 20:49:48.7±4.1, 12°.95±0°.4×166°.9E±0°.8, h35km, n13, σ0s91/6, mb4.0/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.95**	**227**	P	**P**	**20 55 54.1**	**+0.5**
	1.8nm,0.7s,mb3.9,baz=330,slow=16,SNR=5.6						
STKA				PcP	PcP	20 58 54.6	-1.2
	2.1nm,0.6s,baz=15,slow=1.9,SNR=7.7						
ASAR	**Alice Springs**	**33.04**	**246**	P	**P**	**20 56 20.2**	**-0.8**
	1.2nm,0.8s,mb3.9,baz=74,slow=9.6,SNR=8.2						
ASAR				PcP	PcP	20 59 02.8	-1.5
	0.2nm,0.4s,baz=65,slow=2.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	**73.91**	**294**	P	**P**	**21 01 21.4**	**+0.7**
	0.7nm,0.9s,mb3.6,baz=124,slow=5.1,SNR=5.9						
SONM	**Songino Array**	**80.84**	**324**	P	**P**	**21 01 59.3**	**+0.4**
	0.7nm,0.9s,mb3.6,baz=159,slow=2.0,SNR=5.8						
MKAR	**Makanchi Array**	**95.66**	**317**	P	**P**	**21 03 10.8**	**+0.1**
	1.1nm,0.7s,mb4.4,baz=87,slow=7.6,SNR=17						
ZALV	**Zalesovo Beam**	**95.73**	**324**	P	**P**	**21 03 09.8**	**-1.0**
	0.8nm,0.6s,mb4.3,baz=125,slow=3.8,SNR=4.9						
ARCES	**ARCESS Array B**	**118.42**	**346**	PKP	PKPdf	21 08 30.8	-1.2
	2.3nm,1.1s,baz=50,slow=2.8,SNR=4.0						
ORIF	**Oris-en-Rattie**	**144.23**	**337**	*e*PKP1	PKPdf	21 09 19.7	-1.4
	16nm,0.8s						
TCF	**Toulx Ste Croi**	**144.31**	**342**	*e*PKP1	PKPdf	21 09 19.5	-1.6
	5.1nm,0.8s						
SBF	**Sospel**	**144.47**	**334**	*e*PKP1	PKPdf	21 09 19.7	-1.8
MFF	**Saint Martin d**	**144.69**	**345**	*e*PKP1	PKPdf	21 09 20.8	-1.0
	10nm,0.8s						
ESDC	**Sonseca Array**	**152.15**	**345**	PKPab	PKPab	21 09 51.2	+0.8
	1.0nm,0.7s,baz=8.4,slow=4.3,SNR=5.5						
TORD	**Torodi Ar. Bea**	**165.60**	**273**	PKPab	PKPab	21 10 48.5	-0.9
	0.6nm,0.7s,baz=73,slow=5.3,SNR=4.3						

*JMA **29** 21:23:49.3±0.4, 32°.70N×138°.09E, h373km, M3.1*
*ISCJB **29** 21:23:53.0±0.7, 32°.96N±0°.09×138°.0E±0°.1, h347km±7km, mb3.0/5, Error ellipse: s-maj=16.2km s-min=13.0km az=44.3*
*NEIC **29** 21:23:54.7±0.8, 33°.32N×138°.73E, h373km±8km, mb3.2/1, Error ellipse: s-maj=16.8km s-min=11.7km az=106.0*
*IDC **29** 21:23:54.6±1.7, 33°.32N×138°.73E, h370km±16km, mb2.8/4, mb1 2.9/5, mb1mx2.7/25, mbtmp2.7/5, Error ellipse: s-maj=34.7km s-min=25.7km az=72.0*

ISC 29 21:23:54.3±0.7, 32°.99N±0°.09×138°.0E±0°.1, h340km±7km, n22, σ0s78/27, mb3.0/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK04	**Tokai 4**	**1.39**	**357**	P	**Pn**	**21 24 41.6**	**+0.9**
JIE	**Ise**	**1.75**	**323**	P	**Pn**	**21 24 43.0**	**+0.1**
JWZ	**Kozaga**	**1.97**	**286**	P	**Pn**	**21 24 43.7**	**-0.7**
JWY	**Kouya**	**2.34**	**302**	P	**Pn**	**21 24 47.3**	**+0.2**
JOD2	**Odawara 2**	**2.45**	**22**	P	**Pn**	**21 24 48.4**	**+0.4**
JOD2				*e*S	**S**	**21 25 33.0**	**+1.9**
JYN	**Shimob**	**2.54**	**10**	P	**Pn**	**21 24 50.1**	**+1.3**
BSO1	**Boso 1**	**3.00**	**56**	P	**Pn**	**21 24 51.2**	**-1.6**
BSO1				*e*S	**S**	**21 25 35.7**	**-4.1**
JAI	**Aioi**	**3.06**	**286**	P	**Pn**	**21 24 52.8**	**-0.5**
JRY	**Ryogami san**	**3.11**	**14**	P	**Pn**	**21 24 54.5**	**+0.7**
JRY				*e*S	**S**	**21 25 42.4**	**+0.7**
JWT	**Wachi**	**3.13**	**318**	P	**Pn**	**21 24 54.0**	**0.0**
JMN	**Monobe**	**3.51**	**283**	P	**Pn**	**21 24 57.3**	**-0.3**
MJAR	**Matsushiro Arr**	**3.55**	**3**	P	**Pn**	**21 24 58.1**	**+0.1**
	1.1nm,0.3s,baz=183,slow=10,SNR=15						
MJAR				S	**S**	**21 25 48.1**	**-1.1**
	baz=165,slow=19,SNR=3.3						
MAJO	**Matsushiro**	**3.55**	**3**	*e*Pn	**Pn**	**21 24 57.7**	**-0.3**
MAT	**Matsushiro**	**3.55**	**3**	P	**Pn**	**21 24 58.2**	**+0.2**
MAT				S	**S**	**21 25 48.1**	**-1.2**
NACB	**Ninganchiao**	**16.84**	**243**	P	**P**	**21 27 35.6**	**+6.3**
YULB	**Yu-li**	**17.52**	**241**	P	**P**	**21 27 43.4**	**+6.8**
SONM	**Songino Array**	**28.01**	**311**	P	**P**	**21 29 15.2**	**+0.4**
	0.4nm,0.5s,mb2.9,baz=119,slow=7.8,SNR=3.9						
MKAR	**Makanchi Array**	**44.01**	**305**	P	**P**	**21 31 29.3**	**+0.3**
	0.3nm,0.4s,mb2.8,baz=99,slow=8.9,SNR=3.8						
KURK	**Kurchatov**	**46.32**	**311**	*e*P	**P**	**21 31 46.3**	**-0.6**
	1.0nm,0.7s,mb3.0						
WRAB	**Tennant Creek**	**52.74**	**184**	*e*P	**P**	**21 32 35.1**	**-0.1**
ASAR	**Alice Springs**	**56.47**	**184**	P	**P**	**21 33 01.9**	**+0.2**
	0.3nm,0.5s,mb2.9,baz=3.7,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**68.70**	**28**	P	**P**	**21 34 15.4**	**-6.0**
	0.7nm,0.8s,mb3.4,baz=307,slow=6.1,SNR=3.6						

*CSEM **29** 21:25:32.6, 64°.00N×21°.16W, h5km, ML3.6, After REY*

REY 29 21:25:32.6, 64°.00N×21°.16W, h5km, ML3.1, ML3.6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.08**	**228**	P	Pg	21 25 34.6	+0.2
IBJA				S	Sg	21 25 36.3	+0.7
IKRO	**Krokur**	**0.10**	**11**	P	Pg	21 25 34.9	+0.2
IKRO				S	Sg	21 25 36.7	+0.6
ISOL	**Solvholt**	**0.12**	**127**	P	Pg	21 25 35.1	+0.1
ISOL				S	Sg	21 25 37.1	+0.4
ISAN	**Sandskeio**	**0.19**	**287**	P	Pg	21 25 36.5	+0.2
ISAN				S	Sg	21 25 39.5	+0.7
IHEI	**Heioarbar**	**0.20**	**351**	P	Pg	21 25 36.7	+0.1
IHEI				S	Sg	21 25 39.6	+0.4
IVOS	**Vogsosar**	**0.28**	**238**	P	Pg	21 25 38.0	0.0
IVOS				S	Sg	21 25 42.4	+0.7
IASM	**Asmuli**	**0.29**	**124**	P	Pg	21 25 38.2	-0.1
IASM				S	Sg	21 25 42.5	+0.4
IKAS	**Kald??rsel**	**0.30**	**274**	P	Pg	21 25 38.5	0.0
IKAS				S	Sg	21 25 43.3	+0.9
ISAU	**Saurbar**	**0.33**	**92**	P	Pg	21 25 38.8	-0.2
ISAU				S	Sg	21 25 43.4	+0.1
IKRI	**Krysuvik**	**0.42**	**253**	P	Pg	21 25 40.3	-0.4
IKRI				S	Sg	21 25 46.2	0.0
IKUD	**Kuludalsa**	**0.45**	**316**	P	Pg	21 25 40.6	-0.6
IKUD				S	Sg	21 25 46.8	-0.2
IGYG	**Gygjarholskot**	**0.50**	**56**	P	Pg	21 25 41.7	-0.5
IGYG				S	Sg	21 25 48.6	-0.1
IHAU	**Haukadalur**	**0.53**	**93**	P	Pg	21 25 42.3	-0.4
IHAU				S	Sg	21 25 49.4	-0.2
IVOG	**Vogar**	**0.54**	**267**	P	Pg	21 25 42.4	-0.6
IVOG				S	Sg	21 25 50.3	+0.3
IGRV	**Grindav??k**	**0.59**	**256**	P	Pg	21 25 43.1	-0.8
IGRV				S	Sg	21 25 51.1	-0.4
IMID	**Miomork**	**0.66**	**121**	P	Pg	21 25 44.5	-0.8
IMID				S	Sg	21 25 53.5	-0.4
IVES	**Vestmannaeyjar**	**0.68**	**145**	P	Pg	21 25 45.0	-0.7
IVES				S	Sg	21 25 54.0	-0.5
INYL	**Nylenda**	**0.69**	**268**	P	Pg	21 25 44.8	-1.1
INYL				S	Sg	21 25 54.3	-0.6
IASB	**`sbjarnarst**	**0.75**	**355**	P	Pg	21 25 45.5	-1.5
IASB				S	Sg	21 25 56.2	-0.6
IESK	**Eystri-Skogar**	**0.90**	**121**	P	Pg	21 25 48.3	-1.5
IESK				S	Sg	21 26 00.4	-1.0
IVAT	**Vatnsfell**	**1.00**	**78**	P	Pg	21 25 50.1	-1.7
IVAT				S	Sg	21 26 03.5	-1.3
IHVE	**Hveravellir**	**1.11**	**38**	P	Pg	21 25 51.5	-2.4
IHVE				S	Sg	21 26 06.1	-2.2
IHVO	**Lagu-Hvolar**	**1.13**	**114**	P	Pg	21 25 52.4	-1.9
IHVO				S	Sg	21 26 07.2	-1.8
ISNB	**Snabyli**	**1.15**	**102**	P	Pg	21 25 52.5	-2.2
ISNB				S	Sg	21 26 08.0	-1.6
ISKR	**Skrokkalda**	**1.33**	**64**	P	Pn	21 25 55.7	-2.1
IKAL	**Kalfafell**	**1.53**	**90**	P	Pn	21 25 59.1	-1.5
IKAL				S	Sn	21 26 19.1	-1.7
IGRF	**Grimsfjall**	**1.75**	**75**	P	Pn	21 26 01.5	-2.1
IFAG	**Fagurholsmyri**	**2.00**	**92**	P	Pn	21 26 05.6	-1.3
IFAG				S	Sn	21 26 31.5	-0.7
ISVA	**Svartarkot**	**2.15**	**50**	P	Pn	21 26 08.1	-0.9
IHRN	**Hraun**	**2.16**	**11**	P	Pn	21 26 08.0	-1.2
IKRE	**Kreppuhraun**	**2.22**	**67**	P	Pn	21 26 09.3	-0.7
IHLA	**Hella**	**2.28**	**30**	P	Pn	21 26 10.2	-0.6

*BJI **29** 21:50:41.2, 31°.83N×104°.51E, h9km, mB4.5/1, mb3.9/2, ML3.9/12, Ms3.6/7, Ms7 3.3/6*
*IDC **29** 21:50:41.2±1.1, 31°.84N×104°.50E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.6/28, mbtmp3.6/12, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/34, Error ellipse: s-maj=35.1km s-min=21.7km az=53.0*
*NEIC **29** 21:50:43.1±0.4, 31°.83N×104°.35E, h10km, mb3.9/1, Error ellipse: s-maj=9.4km s-min=6.4km az=70.0*

ISC 29 21:50:42.5±1.1, 31°.81N±0°.03×104°.42E±0°.05, h7km±7km, n33, σ0s92/39, mb3.6/10, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.07**	**213**	Pg	**Pg**	**21 51 02.8**	**-0.2**
CD2				Sg	**Sg**	**21 51 17.0**	**+0.2**
CD2				smax			
	comp=N,9μm,0.7s						
LZH	**Lanzhou**	**4.29**	**354**	⇑Pn	**Pn**	**21 51 51.0**	**+2.8**
LZH				Sn	**Sn**	**21 52 43.5**	**+5.0**
LZH				Sg	**Sg**	**21 52 59.0**	**-1.3**
LZH				smax			
	comp=N,160nm,1.0s						
LZH				smax			
	comp=E,180nm,0.8s						
LZH				LR	LR		
	comp=N,420nm,5.2s						
LZH				LR	LR		
	comp=Z,590nm,6.2s						
XAN	**Xi'an**	**4.38**	**58**	Pn	**Pn**	**21 51 49.5**	**0.0**
XAN				Sg	**Sg**	**21 52 56.3**	**-7.1**
XAN				smax			
	comp=N,360nm,0.6s						
XAN				smax			
	comp=E,150nm,0.8s						
ENH	**Enshi**	**4.61**	**108**	*e*Pn	**Pn**	**21 51 54.6**	**+2.0**
ENH				Sn	**Sn**	**21 52 46.3**	**-0.1**
GYA	**Guiyang**	**5.68**	**159**	Pn	**Pn**	**21 52 08.0**	**+0.6**
GYA				smax			
	comp=N,120nm,0.8s						
GYA				smax			
	comp=E,160nm,0.9s						
KMI	**Kunming**	**6.83**	**193**	Pn	**Pb**	**21 52 35.0**	**-6.6**
KMI				Sn	**Sn**	**21 53 41.0**	**-0.1**
KMI				smax			
	comp=N,17nm,1.2s						
KMI				smax			
	comp=E,15nm,1.0s						
GTA	**Gaotai**	**8.46**	**335**	*e*P	**Pn**	**21 52 48.0**	**+2.5**
GTA				S	**Sn**	**21 54 23.3**	**+2.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				LR	LR		
	comp=N,150nm,12.8s						
GTA				LR	LR		
	comp=E,210nm,11.9s						
GTA				LR	LR		
	comp=Z,120nm,10.7s						
CHTO	**Chiang Mai**	**13.86**	**202**	Pn	**Pn**	**21 53 59.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.19**	**202**	Pn	**Pn**	**21 54 04.5**	**+0.6**
	baz=12,slow=12,SNR=2.3						
SONM	**Songino Array**	**16.07**	**5**	Pn	**Pn**	**21 54 28.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=171,slow=10,SNR=8.1						
SONM				LR	LR	22 00 17.6	
	comp=Z,54nm,20.6s,baz=170,slow=36						
KSRS	**Korea Array**	**20.12**	**67**	P	**P**	**21 55 15.9**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=258,slow=9.9,SNR=3.4						
MK31	**Makanchi Array**	**22.63**	**318**	*e*P	**P**	**21 55 44.6**	**+0.7**
MKAR	**Makanchi Array**	**22.63**	**318**	P	**P**	**21 55 45.0**	**+1.1**
	comp=Z,1.4nm,0.8s,mb3.5,baz=108,slow=12,SNR=11						
UCH	**Uchtor**	**25.93**	**302**	*e*P	**P**	**21 56 15.7**	**+0.4**
	comp=Z,3.6nm,1.4s,mb3.7						
AAK	**Ala-Archa**	**26.04**	**303**	LR	LR	22 08 25.4	
	comp=Z,35nm,20.4s,baz=262,slow=41						
AAK	**Ala-Archa**	**26.04**	**303**	P	**P**	**21 56 15.2**	**-1.2**
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**21 56 17.9**	**+0.2**
	comp=Z,1.0nm,0.5s,mb3.6,baz=125,slow=9.9,SNR=5.3						
AML	**Almayashu**	**26.50**	**302**	P	**P**	**21 56 20.6**	**+0.1**
EKS2	**Erkin-Say**	**26.56**	**303**	*e*P	**P**	**21 56 20.7**	**-0.3**
KURK	**Kurchatov**	**26.85**	**322**	P	**P**	**21 56 23.7**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.3,baz=136,slow=8.3,SNR=5.9						
KURK	**Kurchatov**	**26.85**	**322**	*e*P	**P**	**21 56 22.8**	**-0.7**
BVAR	**Borovoye Array**	**32.41**	**321**	P	**P**	**21 57 13.2**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.3,baz=101,slow=7.8,SNR=2.4						
BRVK	**Borovoye**	**32.48**	**321**	P	**P**	**21 57 13.6**	**+0.1**
ARU	**Arti**	**40.04**	**322**	*e*P	**P**	**21 58 17.5**	**-0.6**
KEV	**Kevo**	**56.20**	**336**	P	**P**	**22 00 22.2**	**-0.5**
ARCES	**ARCESS Array B**	**56.73**	**336**	P	**P**	**22 00 25.1**	**-1.3**
	comp=Z,1.8nm,0.9s,mb4.1,baz=106,slow=8.7,SNR=2.9						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**22 00 29.2**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=106,slow=9.6,SNR=6.4						
CSS	**Prodhromos**	**58.28**	**294**	*e*P	**P**	**22 00 37.8**	**-0.2**
ASAR	**Alice Springs**	**61.96**	**149**	P	**P**	**22 01 03.0**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.6,baz=337,slow=6.7,SNR=3.6						
NOA	**NORSAR Array B**	**64.21**	**327**	P	**P**	**22 01 16.8**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=69,slow=8.4,SNR=2.6						
GVD	**Gavdhos**	**65.43**	**297**	P	**P**	**22 01 24.7**	**-1.5**
WLF	**Walferdange**	**71.39**	**317**	P	**P**	**22 02 02.7**	**-0.5**
YKA	**Yellowknife Ar**	**80.94**	**17**	P	**P**	**22 02 57.0**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=327,slow=5.3,SNR=3.7						

*IDC **29** 22:30:34.4±1.4, 32°.44N×75°.93E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/29, mbtmp3.8/11, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.1/34, Error ellipse: s-maj=26.8km s-min=22.7km az=73.0*
*BJI **29** 22:30:36.7, 32°.27N×77°.06E, h32km, ML3.3/2*
*ISCJB **29** 22:30:38.2±0.9, 32°.70N±0°.03×76°.06E±0°.04, h28km±8km, mb3.6/7, Error ellipse: s-maj=6.9km s-min=3.6km az=145.8*
*NDI **29** 22:30:39.8±2.7, 32°.62N×75°.91E, h33km, ML3.6*
*NEIC **29** 22:30:41.2±1.9, 32°.59N×76°.09E, h46km±15km, mb3.5/3, Error ellipse: s-maj=17.6km s-min=12.8km az=167.0*

ISC 29 22:30:39.5±1.0, 32°.65N±0°.03×76°.06E±0°.04, h23km±8km, n36, σ1s36/56, mb3.6/7, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.36**	**234**	*ex*	**Pb**	**22 30 41.2**	**-6.2**
THN				*e*S	**Sb**	**22 30 51.3**	**-1.4**
JMU	**Jammu**	**0.98**	**274**	*e*P	**Pn**	**22 30 57.5**	**-0.4**
JMU				*ex*	x	22 31 17.5	
BHK	**Bhakra**	**1.26**	**166**	*e*P	**Pn**	**22 30 55.0**	**-6.7**
BHK				*e*S	**Sn**	**22 31 12.4**	**-5.5**
SDNR	**Sundarnagar**	**1.38**	**146**	*ex*	**Pn**	**22 31 00.5**	**-2.8**
SDNR				*e*S	**Sn**	**22 31 20.5**	**-0.2**
SMLA	**Simla**	**1.78**	**148**	*e*P	**Pn**	**22 31 08.1**	**-0.7**
SMLA				*e*S	**Sn**	**22 31 31.5**	**+0.8**
SMLA				*ex*	x	22 31 32.0	
	comp=N,6μm,0.3s						
SMLA				*ex*	x	22 31 33.1	
	comp=E,4μm,0.3s						
KLP	**Kalpa**	**2.16**	**120**	*e*P	**Pn**	**22 31 14.9**	**+0.8**
KLP				*e*S	**Sn**	**22 31 42.3**	**+2.2**
KLP				AML	AML	22 31 47.2	
	comp=N,558nm,0.2s						
KLP				AML	AML	22 31 48.1	
	comp=E,864nm,0.5s						
DDI	**Dehra Dun**	**2.87**	**143**	*e*P	**Pn**	**22 31 24.0**	**+0.1**
DDI				*e*S	**Sn**	**22 31 57.2**	**-0.5**
JOSI	**Joshimath**	**3.64**	**124**	*e*P	**Pn**	**22 31 35.8**	**+1.5**
JOS

BVAR	Borovoye Array	20.77	350	P	P	22 35 18.7	+0.1
	comp=E,2.2nm,0.4s,baz=156,slow=11,SNR=26						
BRVK	Borovoye	20.82	350	eP	P	22 35 19.4	+0.3
	comp=E,4.7nm,0.8s						
ZALV	Zalesovo Beam	22.15	14	P	P	22 35 33.1	-0.7
	comp=E,0.7nm,0.3s,mb3.6,baz=226,slow=8.1,SNR=5.6						
AKTK	Aktyubinsk	22.22	328	P	P	22 35 35.5	+1.3
AKTO	Aktyubinsk	22.22	328	P	P	22 35 35.5	+1.3
	comp=E,2.5nm,0.5s,mb3.5,baz=125,slow=10,SNR=9.8						
CMAR	Chiang Mai Arr	24.94	119	P	P	22 36 00.1	-1.0
	comp=E,0.8nm,0.3s,mb3.7,baz=292,slow=9.5,SNR=2.6						
SONM	Songino Array	27.46	48	P	P	22 36 24.5	+0.9
	comp=E,0.3nm,0.5s,mb3.1,baz=238,slow=10,SNR=3.6						
CSS	Prodhromos	35.39	286	P	P	22 37 34.7	+1.2
FINES	FINESS Array B	42.99	327	P	P	22 38 35.9	-0.7
	comp=E,0.4nm,0.4s,mb3.5,baz=122,slow=10,SNR=3.7						
ARCES	ARCESS Array B	46.28	338	P	P	22 39 03.0	+0.2
	comp=E,1.6nm,0.9s,mb3.9,baz=116,slow=8.5,SNR=4.7						
TORD	Torodi Ar. Bea	69.95	273	P	P	22 41 46.3	-3.0
	comp=E,0.3nm,0.5s,mb3.5,baz=48,slow=4.8,SNR=5.6						

BJI ***29*** *22:58:03.9, 32°.47N×105°.27E, h10km, mB4.4/3, mb0.0/4, ML3.9/15, Ms4.1/4, Ms7 3.9/2*
IDC ***29*** *22:58:03.9±1.1, 32°.29N×105°.06E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/28, mbtmp3.7/11, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/38, Error ellipse: s-maj=34.8km s-min=20.9km az=54.0*
ISCJB ***29*** *22:58:05.9±1.0, 32°.34N±0°.03×105°.20E±0°.05, h31km±8km, mb3.6/9, Error ellipse: s-maj=7.9km s-min=5.7km az=168.1*
NEIC ***29*** *22:58:05.5±0.4, 32°.31N×105°.00E, h10km, mb3.8/3, Error ellipse: s-maj=8.4km s-min=5.9km az=81.0*
ISC 29 22:58:05.6±1.1, 32°.36N±0°.03×105°.16E±0°.05, h13km±8km, n31, σ1§17/42, mb3.6/9, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.88	220	Pn	Pn	22 58 37.5	+0.2
CD2				Pg	Pg	22 58 39.8	-1.7
CD2				Sg	Sg	22 59 06.8	+0.9
CD2				smax			
	comp=N,4µm,0.7s						
XAN	Xi'an	3.57	61	Pn	Pn	22 58 59.0	-1.7
XAN				Pg	Pb	22 59 08.0	-0.6
XAN				Sn	Sn	22 59 36.0	-6.7
XAN				Sg	Sb	22 59 49.3	-2.5
XAN				smax			
	comp=N,490nm,1.0s						
XAN				smax			
	comp=E,200nm,0.8s						
LZH	Lanzhou	3.87	344	⇑Pn	Pn	22 59 04.8	0.0
LZH				Pg	Pb	22 59 15.3	+1.6
LZH				Sn	Sn	22 59 48.5	-1.7
LZH				Sg	Sb	23 00 02.0	+1.5
LZH				smax			
	comp=N,860nm,0.5s						
LZH				smax			
	comp=E,2µm,1.0s						
LZH				LR	LR		
	comp=E,2µm,4.5s						
LZH				LR	LR		
	comp=Z,3µm,6.8s						
ENH	Enshi	4.25	118	ePn	Pn	22 59 11.5	+1.5
ENH				eS	Sb	23 00 16.6	+5.2
GYA	Guiyang	6.03	167	Pn	Pn	22 59 38.0	+3.6
GYA				smax			
	comp=N,140nm,0.9s						
GYA				smax			
	comp=E,180nm,0.8s						
KMI	Kunming	7.52	197	Pn	Pn	22 59 55.0	+0.1
KMI				Sn	Sn	23 01 19.3	-0.7
KMI				smax			
	comp=N,19nm,0.8s						
KMI				smax			
	comp=E,23nm,0.6s						
WHN	Wuhan	8.06	101	⇓P	Pn	23 00 03.3	+1.0
WHN				S	Sn	23 01 26.8	-6.5
WHN				LR	LR		
	comp=N,1µm,11.0s						
GTA	Gaotai	8.26	330	eP	Pn	23 00 03.3	-1.8
GTA				pP		23 00 06.8	
GTA				sP		23 00 09.3	
GTA				S	Sn	23 01 36.5	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,78nm,3.9s						
GTA				LR	LR		
	comp=N,230nm,10.7s						
GTA				LR	LR		
	comp=E,220nm,10.1s						
CHTO	Chiang Mai	14.60	204	Pn	Pn	23 01 30.8	-1.1
CMAR	Chiang Mai Arr	14.93	204	Pn	Pn	23 01 35.4	-1.1
	comp=E,0.3nm,0.3s,baz=12,slow=11,SNR=4.1						
SONM	Songino Array	15.48	3	Pn	Pn	23 01 43.5	-0.1
	baz=186,slow=13,SNR=2.9						
ULN	Ulaanbaatar	15.55	5	ePn	Pn	23 01 45.6	+1.2
	comp=E,1.7nm,0.6s						
KSRS	Korea Array	19.33	68	P	Pn	23 02 30.8	-0.8
	comp=E,0.3nm,0.3s,baz=252,slow=10,SNR=5.3						
HIA	Hailar	20.11	29	P	P	23 02 40.9	+1.9
MK31	Makanchi Array	22.66	316	eP	P	23 03 06.1	-0.2
MKAR	Makanchi Array	22.66	316	P	P	23 03 05.2	-1.1
	comp=E,0.3nm,0.3s,mb3.2,baz=111,slow=13,SNR=7.0						
MKAR	Makanchi Array	22.66	316	P	P	23 03 05.2	-1.1
KSH	Kashi	24.61	295	P	P	23 03 29.0	+3.5
KSH				pmax	pmax		
	comp=Z,46nm,4.8s						
ZALV	Zalesovo Beam	26.01	332	P	P	23 03 38.6	+0.6
	comp=Z,0.6nm,0.3s,mb3.6,baz=119,slow=8.6,SNR=3.0						
UCH	Uchtor	26.17	301	eP	P	23 03 40.1	+0.4
	comp=Z,2.2nm,1.0s,mb3.6						
AAK	Ala-Archa	26.27	302	P	P	23 03 40.1	-0.4
AML	Almayashu	26.75	300	eP	P	23 03 45.1	+0.2
KURK	Kurchatov	26.81	321	P	P	23 03 45.4	+0.1
	comp=Z,0.5nm,0.5s,mb3.3,baz=130,slow=9.4,SNR=6.3						
KURK	Kurchatov	26.81	321	eP	P	23 03 44.8	-0.5
	comp=Z,1.1nm,0.5s,mb3.6						
ARU	Arti	40.01	321	eP	P	23 05 39.5	-0.3
PETK	Petropavlovsk-	42.67	45	LR	LR	23 25 19.8	
	comp=Z,19nm,20.8s,baz=202,slow=38						
ARCES	ARCESS Array B	56.49	335	P	P	23 07 48.0	+1.1
	comp=Z,1.8nm,0.7s,mb4.2,baz=68,slow=6.7,SNR=4.6						
FINES	FINESS Array B	57.03	326	P	P	23 07 51.8	+1.0
	comp=Z,0.7nm,0.7s,mb3.8,baz=101,slow=6.2,SNR=5.1						
ASAR	Alice Springs	62.11	150	P	P	23 08 26.4	+0.1
	comp=Z,0.3nm,0.3s,mb3.9,baz=336,slow=7.0,SNR=6.5						
NOA	NORSAR Array B	64.09	327	P	P	23 08 39.8	+0.8
	comp=Z,0.3nm,0.5s,mb3.6,baz=68,slow=8.2,SNR=2.6						
YKA	Yellowknife Ar	80.23	18	P	P	23 10 17.2	+1.7
	comp=Z,0.4nm,0.6s,mb3.5,baz=327,slow=5.6,SNR=2.9						

BJI ***29*** *23:10:58.7, 44°.37N×80°.96E, h22km, ML2.9/5*
NNC 29 23:11:02.9±4.2, 44°.81N×80°.94E, h0km, mb3.6, mpv3.2, 7C-6D, Error ellipse: s-maj=62.8km s-min=17.2km az=130.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.20	25	⇓Pn	Pn	23 11 41.5	+0.9
	2.3nm,0.2s,baz=199,slow=15,SNR=95						
MK31				⇑Lg		23 12 13.3	
	22nm,0.5s,baz=198,slow=28,SNR=6.6						
KNDC	Almaty	3.28	242	⇓Pn	Pn	23 11 57.9	+2.5
	8.4nm,0.3s						
KNDC				⇓Sn	Sn	23 12 31.7	-3.4
	41nm,0.6s						
TKM2	Tokmak 2	4.30	246	⇑Pn	Pn	23 12 12.0	+2.5
	3.6nm,0.6s						
TKM2				⇓Sn	Sn	23 13 02.9	+2.6
	14nm,0.6s						
KURBB	Kurchatov Arra	6.04	345	⇑Pn	Pn	23 12 33.1	-0.2
KURBB				⇑Sn	Sn	23 13 43.2	+0.2
	0.7nm,0.6s						
KURBB				⇑Lg		23 14 18.4	
	4.7nm,0.9s						
KURK	Kurchatov	6.11	346	⇓Pn	Pn	23 12 35.1	+0.7
	5.5nm,1.9s						
KURK				⇑Lg		23 14 17.5	
	9.1nm,0.6s						
KK31	Karatay Array	7.72	261	⇑Pn	Pn	23 13 02.0	+5.6
	0.4nm,0.6s						
KK31				⇓Lg		23 15 00.5	
	2.6nm,0.7s,baz=76,slow=28,SNR=10.0						

IDC ***29*** *23:12:18.8±1.1, 31°.61N×104°.17E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.5/28, mbtmp3.6/10, ML3.3/1, Error ellipse: s-maj=33.6km s-min=21.3km az=55.0*
NEIC ***29*** *23:12:19.9±0.6, 31°.57N×104°.18E, h10km, mb4.0/2, Error ellipse: s-maj=13.9km s-min=9.5km az=78.0*
BJI ***29*** *23:12:19.8, 31°.33N×104°.35E, h14km, ML3.5/11, Ms3.3/3, Ms7 3.4/3*
ISC 29 23:12:19.3±1.0, 31°.46N±0°.03×104°.10E±0°.05, h5km±7km, n22, σ1§20/30, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.62	208	Pg	Pg	23 12 30.5	-0.8
CD2				Sg	Sg	23 12 39.5	+0.1
CD2				smax			
	comp=N,5µm,0.6s						
LZH	Lanzhou	4.62	357	Pg	Pg	23 13 48.3	+0.5
LZH				Sn	Sb	23 14 37.5	+0.8
LZH				Sg	Sg	23 14 50.8	+3.1
LZH				smax			
	comp=N,41nm,0.5s						
LZH				smax			
	comp=E,54nm,0.7s						
LZH				LR	LR		
	comp=E,110nm,6.5s						
LZH				LR	LR		
	comp=Z,120nm,8.9s						
ENH	Enshi	4.78	103	ePn	Pn	23 13 30.9	-1.2
ENH				eS	Sg	23 14 49.3	-3.7
XAN	Xi'an	4.81	56	Pn	Pn	23 13 32.5	+0.1
XAN				Pg	Pb	23 13 46.8	+2.7
XAN				Sn	Sn	23 14 28.5	0.0
XAN				Sg	Sg	23 14 47.5	-6.3
XAN				smax			
	comp=N,100nm,0.9s						
XAN				smax			
	comp=E,61nm,0.9s						
GYA	Guiyang	5.47	155	Pg	Pn	23 13 47.5	+6.0
GYA				Sg	Sn	23 14 46.8	+2.0
GYA				smax			
	comp=N,110nm,0.8s						
GYA				smax			
	comp=E,110nm,0.9s						
CHTO	Chiang Mai	13.43	201	Pn	Pn	23 15 31.3	+0.7
CMAR	Chiang Mai Arr	13.76	201	Pn	Pn	23 15 38.4	+3.3
	baz=9.9,slow=11,SNR=2.5						
SONM	Songino Array	16.45	5	Pn	Pn	23 16 09.9	-0.8
	comp=E,0.1nm,0.3s,baz=190,slow=7.3,SNR=2.9						
KSRS	Korea Array	20.51	67	P	P	23 16 57.6	-0.7
	comp=E,0.5nm,0.4s,baz=253,slow=9.3,SNR=3.4						
CN2	Changchun	20.85	48	eP	P	23 17 03.5	+1.6
MKAR	Makanchi Array	22.71	319	P	P	23 17 22.2	+0.4
	comp=E,0.3nm,0.3s,mb3.2,baz=111,slow=11,SNR=4.2						
UCH	Uchtor	25.88	303	P	P	23 17 51.8	-0.1
ZALV	Zalesovo Beam	26.40	334	P	P	23 17 56.5	-0.1
	comp=E,1.4nm,0.5s,mb3.8,baz=135,slow=9.4,SNR=6.4						
ZALV	Zalesovo Beam	26.40	334	P	P	23 17 56.5	-0.1
KURK	Kurchatov	26.96	323	P	P	23 18 01.4	-0.2
	comp=E,0.3nm,0.4s,mb3.2,baz=126,slow=9.5,SNR=2.7						
KURK	Kurchatov	26.96	323	eP	P	23 18 01.4	-0.3
	comp=E,1.1nm,0.5s,mb3.6						
KIV	Kislovodsk	49.11	303	eP	P	23 21 05.5	-2.3
	comp=E,1.4nm,0.5s,mb4.2						
ARCES	ARCESS Array B	56.93	336	P	P	23 22 03.2	-1.9
	comp=E,2.5nm,0.9s,mb4.2,baz=67,slow=7.1,SNR=3.4						
ARCES	ARCESS Array B	56.93	336	P	P	23 22 03.2	-1.9
FINES	FINESS Array B	57.27	326	P	P	23 22 07.0	-0.5
	comp=E,0.6nm,0.4s,mb3.9,baz=87,slow=8.2,SNR=4.9						
ASAR	Alice Springs	61.80	149	P	P	23 22 40.0	+0.8
	comp=E,0.3nm,0.8s,mb3.5,baz=339,slow=7.3,SNR=4.6						
YKA	Yellowknife Ar	81.35	17	P	P	23 24 35.9	-0.7
	comp=E,0.6nm,0.6s,mb3.7,baz=324,slow=6.1,SNR=3.4						

ISCJB ***29*** *23:27:37.8±0.5, 36°.51N±0°.02×9°.72W±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=3.6km az=178.2*
MDD ***29*** *23:27:41.0±0.9, 36°.44N×9°.97W, h50km±38km, mb4.2/12, Error ellipse: s-maj=10.0km s-min=5.2km az=83.0, PRIMO*
NEIC ***29*** *23:27:41.5, 36°.52N×9°.99W, h40km, MG2.9(MDD), After MDD.*
INMG ***29*** *23:27:42.7±1.3, 36°.56N×9°.82W, h15km±5km, MD2.8, ML2.4, Error ellipse: s-maj=5.5km s-min=3.0km az=54.0*
LDG ***29*** *23:27:42.4±0.3, 36°.58N×9°.91W, h20km, Ml3.2/4, Error ellipse: s-maj=5.2km s-min=3.3km az=36.0*
CNRM ***29*** *23:27:42.6, 36°.34N×9°.81W, h30km, MD3.2*
CSEM ***29*** *23:27:42.4±0.4, 36°.64N×9°.74W, h20km, ML3.3/17, Error ellipse: s-maj=7.1km s-min=4.8km az=57.0*
ISC 29 23:27:40.1±0.5, 36°.55N±0°.02×9°.70W±0°.04, h10km, n222, σ1§33/425, 6D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.91	50	iP	Pg	23 28 00.3	+2.7
PFVI				eS	Sg	23 28 13.5	+4.0
PFVI				A		23 28 14.2	
	75nm,0.2s						
PFVI	Vila Bisbo	0.91	50	⇓P	Pg	23 28 00.3	+2.7
PFVI				eS	Sg	23 28 10.9	+1.3
PFVI				S	Sg	23 28 13.0	+3.5
PFVI	Vila Bisbo	0.91	50	⇓P	Pg	23 28 00.3	+2.7
	11nm,0.1s,SNR=18						
PFVI				S	Sg	23 28 13.5	+4.0
	147nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.91	50	⇓P	Pg	23 28 00.3	+2.7
	11nm,0.1s,SNR=18						
PFVI				S	Sg	23 28 13.5	+4.0
	147nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	0.91	50	P	Pg	23 28 00.3	+2.7
	11nm,0.1s,SNR=18						
PFVI				eS	Sg	23 28 13.5	+4.0
	75nm,0.2s						
MORF	Marmelete	1.13	48	eP	Pb	23 28 03.3	+1.6
MORF				eS	Sb	23 28 18.7	+2.2
MORF				A		23 28 19.6	
	108nm,0.1s						
MORF	Marmelete	1.13	48	eP	Pb	23 28 03.3	+1.6
MORF				eS	Sb	23 28 18.7	+2.2
MORF	Marmelete	1.13	48	P	Pb	23 28 03.4	+1.6
MORF				S	Sb	23 28 18.7	+2.2
MORF	Marmelete	1.13	48	P	Pb	23 28 03.4	+1.6
MORF				S	Sb	23 28 18.7	+2.2
MORF	Marmelete	1.13	48	eP	Pb	23 28 03.3	+1.6
MORF				eS	Sb	23 28 18.7	+2.2
	108nm,0.1s						
PTEO	Sao Teotonio	1.27	38	eP	Pn	23 28 04.9	+1.1
PTEO				eS	Sb	23 28 21.7	+1.3
PTEO				A		23 28 23.6	
	60nm,0.2s						
PTEO	Sao Teotonio	1.27	38	eP	Pn	23 28 05.4	+1.6
PTEO				eS	Sb	23 28 22.1	+1.7
PTEO	Sao Teotonio	1.27	38	P	Pn	23 28 04.9	+1.1
PTEO				S	Sb	23 28 21.7	+1.3
	30nm,0.2s						
PTEO	Sao Teotonio	1.27	38	P	Pn	23 28 04.9	+1.1
PTEO				S	Sb	23 28 21.7	+1.3
	30nm,0.2s						
PTEO	Sao Teotonio	1.27	38	eP	Pn	23 28 05.4	+1.6
PTEO				eS	Sb	23 28 21.7	+1.3
	60nm,0.2s						
PBDV	Barranco-do-Ve	1.58	63	ePn	Pn	23 28 09.7	+1.6
PBDV				eSn	Sn	23 28 29.7	+1.1
PBDV				A		23 28 31.3	
	17nm,0.4s						
PBDV	Barranco-do-Ve	1.58	63	P	Pn	23 28 09.7	+1.6
PBDV				S	Sn	23 28 29.7	+1.1
	17nm,0.4s						
PBDV	Barranco-do-Ve	1.58	63	P	Pn	23 28 09.7	+1.6
PBDV				S	Sn	23 28 29.7	+1.1
	17nm,0.4s						
PBDV	Barranco-do-Ve	1.58	63	ePn	Pn	23 28 09.7	+1.6
PBDV				eSn	Sn	23 28 29.7	+1.1
	17nm,0.4s						
PCVE	Castro Verde	1.71	50	ePn	Pn	23 28 12.7	+2.7
PCVE				eSn	Sn	23 28 34.2	+2.3
PCVE				A		23 28 36.2	
	32nm,0.4s						
PCVE	Castro Verde	1.71	50	P	Pn	23 28 12.7	+2.7
PCVE				S	Sn	23 28 34.2	+2.3
	32nm,0.4s						
PCVE	Castro Verde	1.71	50	P	Pn	23 28 12.7	+2.7
PCVE				S	Sn	23 28 34.2	+2.3
	32nm,0.4s						
PCVE	Castro Verde	1.71	50	ePn	Pn	23 28 12.7	+2.7
PCVE				eSn	Sn	23 28 34.2	+2.3
	32nm,0.4s						
PVAQ	Vaqueiros	1.80	61	ePn	Pn	23 28 12.7	+1.5
PVAQ				eSn	Sn	23 28 35.0	+0.9
PVAQ				A		23 28 37.8	
	22nm,0.1s						
PVAQ	Vaqueiros	1.80	61	P	Pn	23 28 12.7	+1.5
PVAQ				S	Sn	23 28 35.0	+0.9
	22nm,0.1s						
PVAQ	Vaqueiros	1.80	61	P	Pn	23 28 12.7	+1.5
PVAQ				S	Sn	23 28 35.0	+0.9
	22nm,0.1s						
PVAQ	Vaqueiros	1.80	61	ePn	Pn	23 28 12.7	+1.5
PVAQ				eSn	Sn	23 28 35.0	+0.9
	22nm,0.1s						
EGRO	El Granado	2.03	60	P	Pn	23 28 15.8	+1.5
EGRO				S	Sn	23 28 40.4	+0.7
EGRO	El Granado	2.03	60	P	Pn	23 28 15.8	+1.5
	1.6nm,0.1s,SNR=13						
EGRO				S	Sn	23 28 40.4	+0.7
	16nm,0.1s,SNR=10						
EGRO	El Granado	2.03	60	P	Pn	23 28 15.8	+1.5
	1.6nm,0.1s,SNR=13						
EGRO				S	Sn	23 28 40.4	+0.7
	16nm,0.1s,SNR=10						
EGRO	El Granado	2.03	60	P	Pn	23 28 15.8	+1.5
	1.6nm,0.1s,SNR=13						
EGRO				S	Sn	23 28 40.4	+0.7
	16nm,0.1s,SNR=10						
PBEJ	Beja	2.08	44	ePn	Pn	23 28 15.9	+0.9
PBEJ				eSn	Sn	23 28 41.5	+0.6
PBEJ				A		23 28 43.7	
	19nm,0.2s						
PBEJ	Beja	2.08	44	eP	Pn	23 28 16.0	+1.0
PBEJ				eS	Sn	23 28 41.7	+0.8
PBEJ	Beja	2.08	44	P	Pn	23 28 15.9	+0.9
PBEJ				S	Sn	23 28 41.5	+0.6
	9.5nm,0.2s						
PBEJ	Beja	2.08	44	P	Pn	23 28 15.9	+0.9
PBEJ				S	Sn	23 28 41.5	+0.6
	9.5nm,0.2s						
PBEJ	Beja	2.08	44	eP	Pn	23 28 16.0	+1.0
PBEJ				eSn	Sn	23 28 41.5	+0.6
	19nm,0.2s						
MOE	Montemor	2.25	28	ePn	Pn	23 28 18.4	+1.1
MOE				eSn	Sn	23 28 44.9	-0.1
MOE	Montemor	2.25	28	eS	Sn	23 28 45.1	+0.1
MOE	Montemor	2.25	28	ePn	Pn	23 28 18.4	+1.1
MOE				eSn	Sn	23 28 44.9	-0.1
EVOP	Sao Brissos	2.34	32	ePn	Pn	23 28 19.2	+0.6
EVOP				eSn	Sn	23 28 45.9	-1.5
	9.2nm,0.2s						
EVO	Evora	2.39	34	ePn	Pn	23 28 19.2	-0.1
EVO				eSn	Sn	23 28 45.9	-2.8
	18nm,0.2s						
EVO	Evora	2.39	34	ePn	Pn	23 28 19.9	+0.6
EVO				eSn	Sn	23 28 48.3	-0.4
EVO				A		23 28 49.6	
	33nm,0.1s						
EVO	Evora	2.39	34	eP	Pn	23 28 19.9	+0.6
EVO				eS	Sn	23 28 48.3	-0.4
EVO	Evora	2.39	34	P	Pn	23 28 19.9	+0.6
EVO				S	Sn	23 28 48.3	-0.4
	33nm,0.1s						
EVO	Evora	2.39	34	P	Pn	23 28 19.9	+0.6
EVO				S	Sn	23 28 48.3	-0.4
	33nm,0.1s						
EVO	Evora	2.39	34	ePn	Pn	23 28 19.9	+0.6
EVO				eSn	Sn	23 28 48.3	-0.4
	33nm,0.1s						
PBAR	Barrancos	2.67	52	ePn	Pn	23 28 24.5	+1.4
PBAR				eSn	Sn	23 28 55.7	+0.2
PBAR				A		23 29 04.2	
	6.9nm,0.3s						
PBAR	Barrancos	2.67	52	P	Pn	23 28 24.5	+1.4
PBAR				S	Sn	23 28 55.7	+0.2
	6.9nm,0.3s						
PBAR	Barrancos	2.67	52	P	Pn	23 28 24.5	+1.4
PBAR				S	Sn	23 28 55.7	+0.2
	6.9nm,0.3s						
PBAR	Barrancos	2.67	52	ePn	Pn	23 28 24.5	+1.4
PBAR				eSn	Sn	23 28 55.7	+0.2
	6.9nm,0.3s						
EMIN	Mina Concepcio	2.71	62	P	Pn	23 28 24.5	+0.9
EMIN				S	Sn	23 28 56.0	-0.5
EMIN	Mina Concepcio	2.71	62	P	Pn	23 28 24.5	+0.9
	0.3nm,0.1s,SNR=18						
EMIN				S	Sn	23 28 56.0	-0.5
	7.9nm,0.2s,SNR=12						
EMIN	Mina Concepcio	2.71	62	P	Pn	23 28 24.9	+0.9
	0.3nm,0.1s,SNR=18						
EMIN				S	Sn	23 28 56.0	-0.5
	7.9nm,0.2s,SNR=12						
EMIN	Mina Concepcio	2.71	62	P	Pn	23 28 24.5	+0.9
	0.3nm,0.1s,SNR=18						
EMIN				S	Sn	23 28 56.0	-0.4
	7.9nm,0.2s,SNR=12						
PESTR	Estremoz	2.86	35	ePn	Pn	23 28 26.1	+0.4
PESTR				eSn	Sn	23 28 59.6	-0.5
PESTR				A		23 29 02.8	
	5.0nm,0.9s						
PESTR	Estremoz	2.86	35	eP	Pn	23 28 26.1	+0.4
PESTR				eS	Sn	23 28 59.6	-0.5
PESTR	Estremoz	2.86	35	P	Pn	23 28 26.1	+0.4
PESTR				S	Sn	23 28 59.6	-0.5
	5.0nm,0.9s						
PESTR	Estremoz	2.86	35	P	Pn	23 28 26.1	+0.4
PESTR				S	Sn	23 28 59.6	-0.5
	5.0nm,0.9s						
PESTR	Estremoz	2.86	35	ePn	Pn	23 28 26.1	+0.4
PESTR				eSn	Sn	23 28 59.6	-0.5
	5.0nm,0.9s						
EBAD	Badajoz	3.07	43	P	Pn	23 28 29.1	+0.6
EBAD				S	Sn	23 29 04.5	-0.8
EBAD	Badajoz	3.07	43	P	Pn	23 28 29.1	+0.6
	1.0nm,0.1s,SNR=24						
EBAD				S	Sn	23 29 04.5	-0.8
	10.0nm,0.1s,SNR=5.0						
EBAD	Badajoz	3.07	43	P	Pn	23 28 29.1	+0.6
	1.0nm,0.1s,SNR=24						
EBAD				S	Sn	23 29 04.5	-0.8
	10.0nm,0.1s,SNR=5.0						
EBAD	Badajoz	3.07	43	P	Pn	23 28 29.1	+0.5
	1.0nm,0.1s,SNR=24						
EBAD				S	Sn	23 29 04.5	-0.8
	10.0nm,0.1s,SNR=5.0						
ESPR	Espera	3.10	83	P	Pn	23 28 30.3	+1.3
ESPR				S	Sn	23 29 05.8	-0.4
ESPR	Espera	3.10	83	P	Pn	23 28 30.3	+1.3
	3.3nm,0.1s,SNR=17						
ESPR				S	Sn	23 29 05.8	-0.4
	40nm,0.2s,SNR=7.0						
ESPR	Espera	3.10	83	P	Pn	23 28 30.3	+1.3
	3.3nm,0.1s,SNR=17						
ESPR				S	Sn	23 29 05.8	-0.4
	40nm,0.2s,SNR=7.0						
ESPR	Espera	3.10	83	P	Pn	23 28 30.3	+1.2
	3.3nm,0.1s,SNR=17						
ESPR				S	Sn	23 29 05.8	-0.4
	40nm,0.2s,SNR=7.0						
PTOM	Tomar	3.23	18	ePn	Pn	23 28 31.4	+0.6
PTOM				eSn	Sn	23 29 07.7	-1.6
PTOM				A		23 29 09.0	
	10nm,0.2s						
PTOM	Tomar	3.23	18	eP	Pn	23 28 31.4	+0.6
PTOM				eS	Sn	23 29 08.5	-0.8
PTOM	Tomar	3.23	18	P	Pn	23 28 31.4	+0.6
PTOM				S	Sn	23 29 07.7	-1.6
	5.2nm,0.2s						
PTOM	Tomar	3.23	18	P	Pn	23 28 31.4	+0.6
PTOM				S	Sn	23 29 07.7	-1.6
	5.2nm,0.2s						
PTOM	Tomar	3.23	18	ePn	Pn	23 28 31.4	+0.6
PTOM				eSn	Sn	23 29 07.7	-1.6
	10nm,0.2s						
PTOM				eS	Sn	23 29 08.5	-0.8
PMRV	Marv??o	3.41	32	ePn	Pn	23 28 33.9	+0.7
PMRV				eSn	Sn	23 29 12.3	-1.4
PMRV				A		23 29 15.2	
	10nm,0.2s						
PMRV	Marv??o	3.41	32	eP	Pn	23 28 33.9	+0.7
PMRV				eS	Sn	23 29 12.3	-1.4

PMRV Marv??o 3.41 32 P Pn 23 28 33.9 +0.7
PMRV S Sn 23 29 12.3 -1.4
5.2nm,0.2s
PMRV Marv??o 3.41 32 P Pn 23 28 33.9 +0.7
PMRV S Sn 23 29 12.3 -1.4
5.2nm,0.2s
PMRV Marv??o 3.41 32 ePn Pn 23 28 33.9 +0.7
PMRV eSn Sn 23 29 12.3 -1.4
10nm,0.2s
EJIF Jimena Fronter 3.41 90 P Pn 23 28 36.8 +3.6
EJIF S Sn 23 29 15.9 +2.1
EJIF Jimena Fronter 3.41 90 P Pn 23 28 34.6 +1.3
0.6nm,0.2s,SNR=4.0
EJIF S Sn 23 29 13.3 -0.5
2.8nm,0.2s,SNR=7.9
EJIF Jimena Fronter 3.41 90 P Pn 23 28 34.6 +1.3
0.6nm,0.2s,SNR=4.0
EJIF S Sn 23 29 13.3 -0.5
2.8nm,0.2s,SNR=7.9
EJIF Jimena Fronter 3.41 90 P Pn 23 28 36.8 +3.5
0.6nm,0.2s,SNR=4.0
EJIF S Sn 23 29 15.9 +2.1
2.8nm,0.2s,SNR=7.9
PCBR Castelo Branco 3.73 27 ePn Pn 23 28 38.3 +0.7
PCBR eSn Sn 23 29 20.1 -1.4
PCBR A 23 29 22.2
4.1nm,0.3s
PCBR Castelo Branco 3.73 27 eP Pn 23 28 38.6 +1.0
PCBR Castelo Branco 3.73 27 P Pn 23 28 38.3 +0.7
PCBR S Sn 23 29 20.1 -1.4
2.0nm,0.3s
PCBR Castelo Branco 3.73 27 P Pn 23 28 38.3 +0.7
PCBR S Sn 23 29 20.1 -1.4
2.0nm,0.3s
PCBR Castelo Branco 3.73 27 ePn Pn 23 28 38.3 +0.7
PCBR Castelo Branco 3.73 27 eP Pn 23 28 38.6 +1.0
PCBR eSn Sn 23 29 20.1 -1.4
4.1nm,0.3s
ECAB El Cabril 3.74 65 P Pn 23 28 39.0 +1.2
ECAB S Sn 23 29 20.4 -1.4
ECAB El Cabril 3.74 65 P Pn 23 28 39.0 +1.2
0.8nm,0.1s,SNR=7.9
ECAB S Sn 23 29 20.4 -1.4
3.7nm,0.1s,SNR=7.9
ECAB El Cabril 3.74 65 P Pn 23 28 39.0 +1.2
0.8nm,0.1s,SNR=7.9
ECAB S Sn 23 29 20.4 -1.4
3.7nm,0.1s,SNR=7.9
ECAB El Cabril 3.74 65 P Pn 23 28 39.0 +1.2
0.8nm,0.1s,SNR=7.9
ECAB S Sn 23 29 20.4 -1.5
3.7nm,0.1s,SNR=7.9
EMIJ Mijas 3.97 88 P Pn 23 28 41.2 +0.3
EMIJ S Sn 23 29 26.5 -1.0
EMIJ Mijas 3.97 88 P Pn 23 28 41.2 +0.3
0.4nm,0.2s,SNR=4.0
EMIJ S Sn 23 29 26.5 -1.0
2.8nm,0.2s,SNR=4.7
EMIJ Mijas 3.97 88 P Pn 23 28 41.2 +0.3
0.4nm,0.2s,SNR=4.0
EMIJ S Sn 23 29 26.5 -1.0
2.8nm,0.2s,SNR=4.7
EMIJ Mijas 3.97 88 P Pn 23 28 41.2 +0.3
0.4nm,0.2s,SNR=4.0
EMIJ S Sn 23 29 26.5 -1.0
2.8nm,0.2s,SNR=4.7
MTE Manteigas 4.20 23 ePn Pn 23 28 44.6 +0.4
MTE eSn Sn 23 29 30.6 -2.7
MTE A 23 29 36.4
5.0nm,0.6s
MTE Manteigas 4.20 23 eS Sn 23 29 30.9 -2.3
MTE Manteigas 4.20 23 ePn Pn 23 28 44.6 +0.4
MTE eSn Sn 23 29 30.6 -2.7
5.0nm,0.6s
MTE eS Sn 23 29 30.9 -2.4
EADA Adamuz 4.39 67 ⇓P Pn 23 28 48.4 +1.7
EADA S Sn 23 29 35.8 -2.1
EADA Adamuz 4.39 67 ⇓P Pn 23 28 48.4 +1.7
3.0nm,0.2s,SNR=18
EADA S Sn 23 29 35.8 -2.1
1.7nm,0.1s,SNR=4.5
EADA Adamuz 4.39 67 ⇓P Pn 23 28 48.4 +1.7
3.0nm,0.2s,SNR=18
EADA S Sn 23 29 35.8 -2.1
1.7nm,0.1s,SNR=4.5
EADA Adamuz 4.39 67 P Pn 23 28 48.4 +1.7
3.0nm,0.2s,SNR=18
EADA S Sn 23 29 35.8 -2.1
1.7nm,0.1s,SNR=4.5
PVIS Viseu 4.40 18 ePn Pn 23 28 46.7 -0.1
PVIS eSn Sn 23 29 36.0 -2.1
PVIS A 23 29 39.2
5.0nm,0.3s
PVIS Viseu 4.40 18 eP Pn 23 28 46.9 +0.1
PVIS Viseu 4.40 18 P Pn 23 28 46.7 -0.1
PVIS S Sn 23 29 36.0 -2.1
2.5nm,0.3s
PVIS Viseu 4.40 18 P Pn 23 28 46.7 -0.1
PVIS S Sn 23 29 36.0 -2.1
2.5nm,0.3s
PVIS Viseu 4.40 18 eP Pn 23 28 46.9 +0.1
PVIS eSn Sn 23 29 36.0 -2.1
5.0nm,0.3s
MIF Mishlifen 4.82 129 P Pn 23 28 53.0 +0.3
MIF S Sn 23 29 44.5 -4.1
MIF Mishlifen 4.82 129 P Pn 23 28 53.0 +0.3
MIF S Sn 23 29 44.5 -4.1
MIF Mishlifen 4.82 129 i P Pn 23 28 53.0 +0.3
PVRL Vila Real 4.97 18 ePn Pn 23 28 54.7 0.0
PVRL eSn Sn 23 29 48.2 -4.0
PVRL A 23 29 52.6
7.0nm,0.1s
PVRL Vila Real 4.97 18 eP Pn 23 28 54.9 +0.2
PVRL Vila Real 4.97 18 P Pn 23 28 54.7 0.0
PVRL S Sn 23 29 48.2 -4.0
3.5nm,0.1s
PVRL Vila Real 4.97 18 P Pn 23 28 54.7 0.0
PVRL S Sn 23 29 48.2 -4.0
3.5nm,0.1s
PVRL Vila Real 4.97 18 eP Pn 23 28 54.9 +0.2
PVRL eSn Sn 23 29 48.2 -4.0
7.0nm,0.1s
EBAN Banos Encina 4.98 69 P Pn 23 28 56.2 +1.3
EBAN S Sn 23 29 51.7 -0.7
EBAN Banos Encina 4.98 69 P Pn 23 28 56.2 +1.3
2.0nm,0.1s,SNR=7.9
EBAN S Sn 23 29 51.7 -0.7
1.9nm,0.1s,SNR=4.0
EBAN Banos Encina 4.98 69 P Pn 23 28 56.2 +1.3
2.0nm,0.1s,SNR=7.9
EBAN S Sn 23 29 51.7 -0.7
1.9nm,0.1s,SNR=4.0
EBAN Banos Encina 4.98 69 P Pn 23 28 56.2 +1.3
2.0nm,0.1s,SNR=7.9
EBAN S Sn 23 29 51.7 -0.8
1.9nm,0.1s,SNR=4.0
KIB El Ksiba 4.98 142 P Pn 23 28 54.0 -0.9
KIB S Sn 23 29 46.0 -6.5
KIB El Ksiba 4.98 142 P Pn 23 28 54.0 -0.9
KIB S Sn 23 29 46.0 -6.5
KIB El Ksiba 4.98 142 eP Pn 23 28 54.0 -0.9
CIA Chichaoua 5.03 171 P Pn 23 28 53.0 -2.6
CIA S Sn 23 29 44.5 -9.2
CIA Chichaoua 5.03 171 P Pn 23 28 53.0 -2.6
CIA S Sn 23 29 44.5 -9.2
CIA Chichaoua 5.03 171 i P Pn 23 28 53.0 -2.6
MVO Moncorvo 5.06 24 ePn Pn 23 28 56.0 +0.1
MVO eSn Sn 23 29 51.8 -2.6
MVO A 23 29 54.5
4.4nm,0.4s
MVO Moncorvo 5.06 24 P Pn 23 28 56.0 +0.1
MVO S Sn 23 29 52.2 -2.2
MVO Moncorvo 5.06 24 P Pn 23 28 56.0 +0.1
2.8nm,0.3s,SNR=7.2
MVO S Sn 23 29 52.3 -2.2
3.7nm,0.1s,SNR=7.9
MVO Moncorvo 5.06 24 P Pn 23 28 56.0 +0.1
2.8nm,0.3s,SNR=7.2
MVO S Sn 23 29 52.3 -2.2
3.7nm,0.1s,SNR=7.9
MVO Moncorvo 5.06 24 P Pn 23 28 56.0 +0.1
2.8nm,0.3s,SNR=7.2
MVO eSn Sn 23 29 51.8 -2.6
4.4nm,0.4s
MVO S Sn 23 29 52.3 -2.1
3.7nm,0.1s,SNR=7.9
EQUE Quentar 5.06 81 P Pn 23 28 57.3 +1.3
0.2nm,0.1s,SNR=7.9
EQUE S Sn 23 29 53.2 -1.3
0.4nm,0.1s,SNR=7.9
EQUE Quentar 5.06 81 P Pn 23 28 57.3 +1.3
0.2nm,0.1s,SNR=7.9
EQUE S Sn 23 29 53.2 -1.3
0.4nm,0.1s,SNR=7.9
EQUE Quentar 5.06 81 P Pn 23 28 57.3 +1.3
0.2nm,0.1s,SNR=7.9
EQUE S Sn 23 29 53.2 -1.3
0.4nm,0.1s,SNR=7.9
TZC Tazercounte 5.13 148 P Pn 23 28 55.0 -1.9
TZC S Sn 23 29 48.0 -8.2
TZC Tazercounte 5.13 148 P Pn 23 28 55.0 -1.9
TZC S Sn 23 29 48.0 -8.2
TZC Tazercounte 5.13 148 eP Pn 23 28 55.0 -1.9
TZK Tazeka 5.13 117 P Pn 23 28 56.0 -1.0
TZK S Sn 23 29 50.0 -6.3
TZK Tazeka 5.13 117 P Pn 23 28 56.0 -1.0
TZK S Sn 23 29 50.0 -6.3
TZK Tazeka 5.13 117 i P Pn 23 28 56.0 -1.0
CZD Col de Zad 5.19 131 P Pn 23 28 57.0 -0.8
CZD S Sn 23 29 52.0 -5.7
CZD Col de Zad 5.19 131 P Pn 23 28 57.0 -0.8
CZD S Sn 23 29 52.0 -5.7
CZD Col de Zad 5.19 131 eP Pn 23 28 57.0 -0.8
PCAB Cabril 5.32 14 ePn Pn 23 28 59.0 -0.5
PCAB eSn Sn 23 29 57.2 -3.6
PCAB A 23 30 01.4
4.5nm,0.2s
PCAB Cabril 5.32 14 eP Pn 23 28 59.1 -0.4
PCAB Cabril 5.32 14 P Pn 23 28 59.0 -0.5
PCAB S Sn 23 29 57.2 -3.6
2.2nm,0.2s
PCAB Cabril 5.32 14 P Pn 23 28 59.0 -0.5
PCAB S Sn 23 29 57.2 -3.6
2.2nm,0.2s
PCAB Cabril 5.32 14 eP Pn 23 28 59.1 -0.4
PCAB eSn Sn 23 29 57.2 -3.6
4.5nm,0.2s
EQES Quesada 5.44 75 P Pn 23 29 02.2 +1.0
EQES S Sn 23 30 02.6 -1.2
EQES Quesada 5.44 75 P Pn 23 29 02.2 +1.0
0.2nm,0.1s,SNR=7.9
EQES S Sn 23 30 02.6 -1.2
2.2nm,0.2s,SNR=7.9
EQES Quesada 5.44 75 P Pn 23 29 02.2 +1.0
0.2nm,0.1s,SNR=7.9
EQES S Sn 23 30 02.6 -1.2
2.2nm,0.2s,SNR=7.9
EQES Quesada 5.44 75 P Pn 23 29 02.2 +1.0
0.2nm,0.1s,SNR=7.9
EQES S Sn 23 30 02.6 -1.2
2.2nm,0.2s,SNR=7.9
ELOB Lobios 5.46 13 P Pn 23 29 00.8 -0.7
ELOB S Sn 23 29 58.9 -5.4
ELOB Lobios 5.46 13 P Pn 23 29 00.8 -0.7
1.2nm,0.1s,SNR=11
ELOB S Sn 23 29 58.9 -5.4
1.2nm,0.1s,SNR=7.9
ELOB Lobios 5.46 13 P Pn 23 29 00.8 -0.7
1.2nm,0.1s,SNR=11
ELOB S Sn 23 29 58.9 -5.4
1.2nm,0.1s,SNR=7.9
ELOB Lobios 5.46 13 P Pn 23 29 00.8 -0.7
1.2nm,0.1s,SNR=11
ELOB S Sn 23 29 58.9 -5.5
1.2nm,0.1s,SNR=7.9
EBER Berja 5.48 84 S Sn 23 30 05.7 +0.8
0.4nm,0.1s,SNR=4.0
EBER Berja 5.48 84 S Sn 23 30 05.7 +0.8
0.4nm,0.1s,SNR=4.0
EBER Berja 5.48 84 S Sn 23 30 05.7 +0.9
0.4nm,0.1s,SNR=4.0
ESDC Sonseca Array 5.50 54 P Pn 23 29 03.2 +1.3
ESDC S Sn 23 30 04.3 -0.8
ESDC Sonseca Array 5.50 54 P Pn 23 29 03.2 +1.3
1.5nm,0.1s,baz=240,slow=14,SNR=14
ESDC S Sn 23 30 04.3 -0.8
5.0nm,0.2s,baz=241,slow=23,SNR=31
ESDC Sonseca Array 5.50 54 P Pn 23 29 03.2 +1.3
1.5nm,0.1s,baz=240,slow=14,SNR=14
ESDC S Sn 23 30 04.3 -0.8
5.0nm,0.2s,baz=241,slow=23,SNR=31
ESDC Sonseca Array 5.50 54 P Pn 23 29 03.2 +1.3
1.5nm,0.1s,baz=240,slow=14,SNR=14
ESDC S Sn 23 30 04.3 -0.9
5.0nm,0.2s,slow=23,SNR=31
OUK Oukaimeden 5.54 164 P Pn 23 29 00.0 -2.5
OUK S Sn 23 29 57.0 -9.2
OUK Oukaimeden 5.54 164 P Pn 23 29 00.0 -2.5
OUK S Sn 23 29 57.0 -9.2
PBRG Braganca 5.73 23 ePn Pn 23 29 05.5 +0.3
PBRG eSn Sn 23 30 07.4 -3.6
PBRG A 23 30 10.1
2.2nm,0.3s
PBRG Braganca 5.73 23 P Pn 23 29 05.5 +0.3
PBRG S Sn 23 30 07.4 -3.6
1.1nm,0.3s
PBRG Braganca 5.73 23 P Pn 23 29 05.5 +0.3
PBRG S Sn 23 30 07.4 -3.6
1.1nm,0.3s
PBRG Braganca 5.73 23 ePn Pn 23 29 05.5 +0.3
PBRG eSn Sn 23 30 07.4 -3.6
2.2nm,0.3s
PBRG eS Sn 23 30 09.1 -1.9
EHUE Huescar 5.81 75 P Pn 23 29 08.2 +1.8
EHUE S Sn 23 30 11.3 -1.7
EHUE Huescar 5.81 75 P Pn 23 29 08.2 +1.8
0.3nm,0.1s,SNR=7.9
EHUE S Sn 23 30 11.3 -1.7
0.7nm,0.1s,SNR=7.9
EHUE Huescar 5.81 75 P Pn 23 29 08.2 +1.8
0.3nm,0.1s,SNR=7.9
EHUE S Sn 23 30 11.3 -1.7
0.7nm,0.1s,SNR=7.9
EHUE Huescar 5.81 75 P Pn 23 29 08.2 +1.9
0.3nm,0.1s,SNR=7.9
EHUE S Sn 23 30 11.3 -1.7
0.7nm,0.1s,SNR=7.9
ECAL Calabor 5.86 22 P Pn 23 29 07.1 +0.2
ECAL S Sn 23 30 09.9 -4.2
ECAL Calabor 5.86 22 P Pn 23 29 07.1 +0.2
0.9nm,0.2s,SNR=7.9
ECAL S Sn 23 30 09.9 -4.2
1.1nm,0.1s,SNR=7.9
ECAL Calabor 5.86 22 P Pn 23 29 07.1 +0.2
0.9nm,0.2s,SNR=7.9
ECAL S Sn 23 30 09.9 -4.2
1.1nm,0.1s,SNR=7.9
ECAL Calabor 5.86 22 P Pn 23 29 07.1 +0.2
0.9nm,0.2s,SNR=7.9
ECAL S Sn 23 30 09.9 -4.2
1.1nm,0.1s,SNR=7.9
GUD Guadarrama 5.96 45 P Pn 23 29 09.3 +0.9
GUD S Sn 23 30 14.9 -1.9
GUD Guadarrama 5.96 45 P Pn 23 29 09.3 +0.9
1.1nm,0.2s,SNR=7.9
GUD S Sn 23 30 14.9 -1.9
3.5nm,0.2s,SNR=7.9
GUD Guadarrama 5.96 45 P Pn 23 29 09.3 +0.9
1.1nm,0.2s,SNR=7.9
GUD S Sn 23 30 14.9 -1.9
3.5nm,0.2s,SNR=7.9
GUD Guadarrama 5.96 45 P Pn 23 29 09.3 +0.9
1.1nm,0.2s,SNR=7.9
GUD S Sn 23 30 14.9 -1.8
3.5nm,0.2s,SNR=7.9
EVIA Vianos 6.08 68 P Pn 23 29 10.9 +0.8
EVIA S Sn 23 30 17.0 -2.7
EVIA Vianos 6.08 68 P Pn 23 29 10.9 +0.8
0.6nm,0.1s,SNR=7.9
EVIA S Sn 23 30 17.0 -2.7
1.6nm,0.2s,SNR=7.9
EVIA Vianos 6.08 68 P Pn 23 29 10.9 +0.8
0.6nm,0.1s,SNR=7.9
EVIA S Sn 23 30 17.0 -2.7
1.6nm,0.2s,SNR=7.9
EVIA Vianos 6.08 68 P Pn 23 29 10.9 +0.9
0.6nm,0.1s,SNR=7.9
EVIA S Sn 23 30 17.0 -2.7
1.6nm,0.2s,SNR=7.9
ZFT Errachidia 6.31 134 P Pn 23 29 11.0 -2.2
ZFT S Sn 23 30 19.0 -6.3
ZFT Errachidia 6.31 134 P Pn 23 29 11.0 -2.2
ZFT S Sn 23 30 19.0 -6.3
STS Santiago 6.39 8 P Pn 23 29 12.9 -1.3
STS S Sn 23 30 23.1 -4.2
STS Santiago 6.39 8 P Pn 23 29 12.9 -1.3
0.8nm,0.2s,SNR=7.9
STS S Sn 23 30 21.8 -5.5
0.9nm,0.1s,SNR=4.0
STS Santiago 6.39 8 P Pn 23 29 12.9 -1.3
0.8nm,0.2s,SNR=7.9
STS S Sn 23 30 21.8 -5.5
0.9nm,0.1s,SNR=4.0
STS Santiago 6.39 8 P Pn 23 29 12.9 -1.3
0.8nm,0.2s,SNR=7.9
STS S Sn 23 30 23.1 -4.2
0.9nm,0.1s,SNR=4.0
EMAZ Mazaricos 6.42 5 P Pn 23 29 12.8 -1.8
EMAZ S Sn 23 30 20.0 -7.9
EMAZ Mazaricos 6.42 5 P Pn 23 29 12.9 -1.7
3.1nm,0.1s,SNR=16
EMAZ S Sn 23 30 20.0 -7.9
6.6nm,0.2s,SNR=5.1
EMAZ Mazaricos 6.42 5 P Pn 23 29 12.9 -1.7
3.1nm,0.1s,SNR=16
EMAZ S Sn 23 30 20.0 -7.9
6.6nm,0.2s,SNR=5.1
EMAZ Mazaricos 6.42 5 P Pn 23 29 12.9 -1.7
3.1nm,0.1s,SNR=16
ETOB Tobarra 6.80 70 P Pn 23 29 21.0 +1.1
ETOB S Sn 23 30 34.5 -2.9
ETOB Tobarra 6.80 70 P Pn 23 29 21.0 +1.1
0.2nm,0.1s,SNR=7.9
ETOB S Sn 23 30 34.5 -2.9
0.9nm,0.2s,SNR=7.9
ETOB Tobarra 6.80 70 P Pn 23 29 21.0 +1.1
0.2nm,0.1s,SNR=7.9
ETOB S Sn 23 30 34.5 -2.9
0.9nm,0.2s,SNR=7.9
ETOB Tobarra 6.80 70 P Pn 23 29 21.0 +1.1
0.2nm,0.1s,SNR=7.9
ETOB S Sn 23 30 34.5 -2.9
0.9nm,0.2s,SNR=7.9
EPON Pontenova 7.05 15 P Pn 23 29 23.1 -0.1
EPON S Sn 23 30 40.9 -2.5
EPON Pontenova 7.05 15 P Pn 23 29 23.1 -0.1
0.3nm,0.1s,SNR=7.9
EPON S Sn 23 30 40.9 -2.5
0.5nm,0.1s,SNR=4.0
EPON Pontenova 7.05 15 P Pn 23 29 23.1 -0.1
0.3nm,0.1s,SNR=7.9
EPON S Sn 23 30 40.9 -2.5
0.5nm,0.1s,SNR=4.0
EPON Pontenova 7.05 15 P Pn 23 29 23.1 -0.2
0.3nm,0.1s,SNR=7.9
EPON S Sn 23 30 40.9 -2.5
0.5nm,0.1s,SNR=4.0
ETOR Torete 7.34 52 P Pn 23 29 28.1 +0.8
ETOR S Sn 23 30 47.1 -3.6
ETOR Torete 7.34 52 P Pn 23 29 28.1 +0.8
3.2nm,0.2s,SNR=7.9
ETOR S Sn 23 30 47.1 -3.6
2.0nm,0.1s,SNR=7.9
ETOR Torete 7.34 52 P Pn 23 29 28.1 +0.8
3.2nm,0.2s,SNR=7.9
ETOR S Sn 23 30 47.1 -3.6
2.0nm,0.1s,SNR=7.9
ETOR Torete 7.34 52 P Pn 23 29 28.1 +0.8
3.2nm,0.2s,SNR=7.9
ETOR S Sn 23 30 47.1 -3.6
2.0nm,0.1s,SNR=7.9
EARI Arriondas 7.58 26 P Pn 23 29 32.3 +1.9
EARI Arriondas 7.58 26 P Pn 23 29 32.3 +1.9
0.4nm,0.3s,SNR=4.0
EARI Arriondas 7.58 26 P Pn 23 29 32.3 +1.9
0.4nm,0.3s,SNR=4.0
EARI Arriondas 7.58 26 P Pn 23 29 32.3 +1.8
0.4nm,0.3s,SNR=4.0
SJPF Ste Jean 9.24 42 ePn Pn 23 29 53.1 -0.2
SJPF eSn Sn 23 31 32.3 -5.0
0.9nm,0.3s
SJPF Ste Jean 9.24 42 P Pn 23 29 53.1 -0.2
SJPF S Sn 23 31 32.3 -5.0
0.4nm,0.3s
SJPF Ste Jean 9.24 42 P Pn 23 29 53.1 -0.2
SJPF S Sn 23 31 32.3 -5.0
0.4nm,0.3s
SJPF Ste Jean 9.24 42 ePn Pn 23 29 53.1 -0.2
ETSF Etsaut 9.47 45 ePn Pn 23 29 55.9 -0.6
ETSF eSn Sn 23 31 37.2 -5.8
0.6nm,0.2s
ETSF Etsaut 9.47 45 P Pn 23 29 55.9 -0.6
ETSF S Sn 23 31 37.2 -5.8
0.3nm,0.2s
ETSF Etsaut 9.47 45 P Pn 23 29 55.9 -0.6
ETSF S Sn 23 31 37.2 -5.8
0.3nm,0.2s
ETSF Etsaut 9.47 45 ePn Pn 23 29 55.9 -0.6
EPF Esparros 10.08 47 ePn Pn 23 30 04.8 0.0
EPF eSn Sn 23 31 51.4 -6.4
1.2nm,0.4s
EPF Esparros 10.08 47 P Pn 23 30 04.8 0.0
EPF S Sn 23 31 51.4 -6.4
0.6nm,0.4s
EPF Esparros 10.08 47 P Pn 23 30 04.8 0.0
EPF S Sn 23 31 51.4 -6.4
0.6nm,0.4s
EPF Esparros 10.08 47 ePn Pn 23 30 04.8 0.0

IDC ***29*** *23:30:21.9±1.4, 25°.23N×128°.17E, h0^{km}, mb3.7/10, mb1 3.8/10, mb1mx3.7/24, mbtmp3.7/10, Error ellipse: s-maj=54.9km s-min=23.5km az=78.0*
ISCJB ***29*** *23:30:24.2±0.5, 25°.20N±0°.03×128°.20E±0°.05, h33^{km}, mb3.6/10, Error ellipse: s-maj=6.2km s-min=4.9km az=5.8*
JMA ***29*** *23:30:25.4±0.5, 25°.27N×128°.15E, h73^{km}, M2.7*
NEIC ***29*** *23:30:26.6±0.6, 25°.25N×128°.14E, h35^{km}, mb3.7/1, Error ellipse: s-maj=17.1km s-min=9.8km az=84.0*
ISC 29 23:30:25.4±1.5**, 25°.24N**±0°.04×**128°.15E**±0°.05**, h27**^{km}±10^{km}**, n29, σ1^s.06**/40**, mb3.6**/10**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	0.96	338	P	Pn	23 30 43.3	+0.2
JJT2				S	Sb	23 30 57.2	+1.5
NAH1	Naha	1.04	337	P	Pn	23 30 45.0	+0.8
NAH1				S	Sn	23 30 58.4	+0.5
JAGN	Aguni-jima	1.57	329	P	Pn	23 30 51.7	+0.2
JAGN				S	Sn	23 31 11.4	+0.5
JOW	Kunigami	1.59	4	P	Pn	23 30 51.4	-0.3
JOW				S	Sn	23 31 10.6	-0.8
JOW	Kunigami	1.59	4	Pn	Pn	23 30 51.4	-0.3
	16nm,0.3s,baz=189,slow=11,SNR=17						
JOW				Sn	Sn	23 31 10.2	-1.2
	22nm,0.3s,baz=121,slow=27,SNR=9.0						
JKE	Kume jima 2	1.63	312	P	Pn	23 30 52.1	-0.3
JKE				S	Sn	23 31 12.3	-0.2
JIH	Iheya	1.79	355	P	Pn	23 30 55.0	+0.4
JIH				S	Sn	23 31 14.5	-1.9
JTK	Tokunoshima	2.63	16	P	Pn	23 31 06.2	+0.1
JTK				S	Sn	23 31 35.5	-1.7
JMZ	Minamidaito 2	2.83	78	P	Pn	23 31 06.2	-2.7
JMZ				S	Sn	23 31 37.9	-4.3
JTJ	Tarama	3.19	260	P	Pn	23 31 12.5	-1.2
JTJ				S	Sn	23 31 48.4	-2.4
JAM	Amami Oshima	3.41	22	P	Pn	23 31 17.6	+0.7
JIJ	Ishigaki jima	3.74	257	P	Pn	23 31 20.0	-1.4
JIJ				eS	Sn	23 32 00.4	-4.2
TATO	Taipei	6.04	269	Pn	Pn	23 31 52.4	-0.6
MDJ	Mudanjiang	19.36	3	P	Pn	23 34 48.5	-1.6
ULN	Ulaanbaatar	28.06	329	P	P	23 36 14.4	0.0
SONM	Songino Array	28.34	328	P	P	23 36 17.1	+0.2
	0.3nm,0.7s,mb3.0,baz=154,slow=8.3,SNR=2.3						
MKAR	Makanchi Array	42.14	313	P	P	23 38 15.8	+0.4
	0.4nm,0.3s,mb3.5,baz=91,slow=11,SNR=7.1						
MKAR	Makanchi Array	42.14	313	P	P	23 38 15.8	+0.4
ZALV	Zalesovo Beam	42.99	323	P	P	23 38 22.6	+0.4
	0.7nm,0.5s,mb3.7,baz=99,slow=9.8,SNR=4.2						
FITZ	Fitzroy Crossi	43.15	183	eP	P	23 38 24.7	+0.9
WRAB	Tennant Creek	45.31	172	P	P	23 38 40.8	-0.3
KURK	Kurchatov	45.49	317	P	P	23 38 42.5	+0.2
	0.4nm,0.3s,mb3.7,baz=107,slow=8.1,SNR=3.9						
KURK	Kurchatov	45.49	317	eP	P	23 38 42.9	+0.6
	0.7nm,0.6s,mb3.7						
ASAR	Alice Springs	48.94	173	P	P	23 39 09.5	+0.2

0.7nm,0.8s,mb3.8,baz=12,slow=9.5,SNR=5.6
BVAR Borovoye Array 50.96 319 P P 23 39 26.5 +2.1
0.3nm,0.5s,mb3.5,baz=106,slow=9.4,SNR=3.5
FINES FINESS Array B 73.68 331 P P 23 41 57.5 +1.0
0.8nm,0.7s,mb3.7,baz=106,slow=5.1,SNR=2.8
AKASG Malin Array Be 76.23 320 P P 23 42 12.1 +0.7
0.6nm,0.4s,mb3.9,baz=64,slow=5.9,SNR=2.9
BRTR Keskin Array B 77.58 308 P P 23 42 20.9 +1.7
2.1nm,1.2s,mb4.0,baz=64,slow=10,SNR=3.8
NOA NORSAR Array B 80.16 334 P P 23 42 34.2 +1.3
0.4nm,0.7s,mb3.5,baz=57,slow=4.9,SNR=3.0

NIED ***29*** *23:43:00, 46°.20N×151°.70E, h47km, Mw4.3 Best double couple: M₀3.21000×10¹⁵ NP1:φ₀225.00000°, δ56.00000°, λ63.00000°. NP2:φ₀88.00000°, δ43.00000°, λ124.00000°.*
JMA ***29*** *23:43:46.9±0.6, 46°.16N×151°.70E, h30km, M5.0*
ISCJB ***29*** *23:43:49.7±0.4, 46°.21N±0°.03×151°.24E±0°.03, h84km±4km, mb4.3/80, Error ellipse: s-maj=5.8km s-min=2.9km az=154.5*
SKHL ***29*** *23:43:49.1±1.0, 46°.06N×151°.66E, h76km±42km, mb4.9/6*
MOS ***29*** *23:43:50.5±0.8, 46°.26N×151°.26E, h92km, mb4.4/44, Error ellipse: s-maj=8.5km s-min=6.1km az=72.5*
IDC ***29*** *23:43:51.8±0.7, 46°.35N×151°.25E, h84km±6km, mb3.9/24, mb1 4.1/27, mb1mx4.0/33, mbtmp3.9/27, MS3.2/8, Ms1 3.2/8, ms1mx3.0/37, Error ellipse: s-maj=17.1km s-min=10.1km az=164.0*
BJI ***29*** *23:43:51.0, 46°.05N×151°.29E, h93km, mB4.8/18, mb4.6/25*
NEIC ***29*** *23:43:51.2±0.5, 46°.24N×151°.23E, h84km±4km, mb4.4/51, Error ellipse: s-maj=5.1km s-min=2.7km az=156.0*
ISC 29 23:43:51.8±0.4, 46°.25N±0°.03×151°.18E±0°.03, h86km±3km, h88km±2.7km: pP-P, n452, σ0°72/478, mb4.3/80, 118C-104D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.53**	**247**	⇑ *i*PN	**Pn**	**23 44 31.7**	**+0.8**
KUR				*e*S	**Sn**	**23 45 02.5**	**+1.6**
KUR				pmax	pmax		
	comp=Z,500nm,0.6s						
KUR	**Kuril'sk**	**2.53**	**247**	⇑ *i*P	**Pn**	**23 44 31.4**	**+0.5**
KUR				AMB	AMB	23 44 32.0	
	comp=Z,150nm,0.6s						
KUR				AMB	AMB	23 44 32.0	
	comp=Z,110nm,0.6s						
KUR				AMB	AMB	23 44 32.0	
	comp=Z,500nm,0.6s						
KUR				*i*S	**Sn**	**23 45 02.4**	**+1.5**
KUR				A		23 45 06.0	
	comp=Z,8μm,2.0s						
KUR				A		23 45 13.7	
	comp=Z,2μm,0.8s						
KUR				A		23 45 13.7	
	comp=Z,4μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**4.36**	**241**	PN	**Pn**	**23 44 56.7**	**+1.0**
YUK				*e*S	**Sn**	**23 45 48.2**	**+2.9**
YUK				pmax	pmax		
	comp=N,180nm,0.4s						
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				pmax	pmax		
	comp=E,330nm,0.5s						
YUK				pmax	pmax		
	comp=Z,700nm,1.5s						
YUK				smax			
	comp=N,5μm,0.8s						
YUK				smax			
	comp=E,5μm,0.7s						
YUK				smax			
	comp=N,3μm,0.6s						
YUK				smax			
	comp=E,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.36**	**241**	*e*P	**Pn**	**23 44 56.7**	**+1.0**
YUK				AMB	AMB	23 45 01.5	
	comp=E,180nm,0.3s						
YUK				AMB	AMB	23 45 01.5	
	comp=E,350nm,0.3s						
YUK				AMB	AMB	23 45 01.5	
	comp=E,330nm,0.5s						
YUK				AMB	AMB	23 45 09.8	
	comp=E,700nm,1.5s						
YUK				*e*S	**Sn**	**23 45 48.2**	**+2.9**
YUK				A		23 46 02.6	
	comp=E,5μm,0.8s						
YUK				A		23 46 02.6	
	comp=E,5μm,0.7s						
YUK				A		23 46 03.0	
	comp=E,3μm,0.6s						
YUK				A		23 46 03.0	
	comp=E,3μm,0.6s						
NEM2	**Nemuro 2**	**4.82**	**235**	P	**Pn**	**23 45 00.4**	**-1.5**
NEM2				*e*S	**Sn**	**23 45 54.4**	**-2.1**
JRA	**Rausu**	**4.87**	**244**	P	**Pn**	**23 45 04.6**	**+2.0**
JNK	**Nakash**	**5.30**	**242**	P	**Pn**	**23 45 09.0**	**+0.6**
JNK				*e*S	**Sn**	**23 46 09.3**	**+1.1**
SKR	**Severo-Kuril's**	**5.52**	**35**	*e*PN	**Pn**	**23 45 09.5**	**-1.8**
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR	**Severo-Kuril's**	**5.52**	**35**	*e*P	**Pn**	**23 45 09.5**	**-1.8**
SKR				AMB	AMB	23 45 11.9	
	comp=N,80nm,0.4s						
SKR				AMB	AMB	23 45 11.9	
	comp=N,70nm,0.5s						
SKR				AMB	AMB	23 45 11.9	
	comp=N,140nm,0.5s						
SKR				*e*S	**Sn**	**23 46 05.0**	**-8.4**
SKR				A		23 46 40.0	
	comp=N,150nm,0.5s						
SKR				A		23 46 40.0	
	comp=N,90nm,0.5s						
JTKR	**Abashiri--Toko**	**5.63**	**249**	P	**Pn**	**23 45 14.9**	**+2.1**
JAK	**Akkeshi**	**5.65**	**237**	P	**Pn**	**23 45 11.7**	**-1.5**
JAK				*e*S	**Sn**	**23 46 14.2**	**-2.5**
YSS	**Yuzh-Sakhalins**	**5.84**	**280**	*e*PN	**Pn**	**23 45 19.5**	**+3.7**
YSS				*e*S	**Sn**	**23 46 25.5**	**+4.1**
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				smax			
	comp=N,80nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**5.84**	**280**	*e*Pn	**Pn**	**23 45 17.4**	**+1.6**
YSS	**Yuzh-Sakhalins**	**5.84**	**280**	*e*P	**Pn**	**23 45 19.5**	**+3.7**
YSS				AMB	AMB	23 45 20.0	
	comp=Z,90nm,1.0s						
YSS				*e*S	**Sn**	**23 46 25.5**	**+4.1**
YSS				A		23 46 28.5	
	comp=Z,80nm,1.0s						
YSS				AMS	AMS	23 47 46.0	
	comp=Z,500nm,16.0s						
JMP	**Maruseppu**	**5.97**	**251**	P	**Pn**	**23 45 20.0**	**+2.5**
JAR	**Ashorobuto**	**6.04**	**243**	P	**Pn**	**23 45 19.2**	**+0.7**
JAR				*e*S	**Sn**	**23 46 29.8**	**+3.6**
JSE	**Soyaes**	**6.16**	**261**	P	**Pn**	**23 45 24.0**	**+3.8**
JOB	**Onbets**	**6.22**	**240**	P	**Pn**	**23 45 20.4**	**-0.5**
JOB				*e*S	**Sn**	**23 46 30.2**	**-0.3**
JKK2	**Kamakawa 2**	**6.42**	**251**	P	**Pn**	**23 45 25.7**	**+2.0**
ASAJ	**Asahikawa**	**6.43**	**254**	P	**Pn**	**23 45 27.1**	**+3.3**
ASAJ	**Asahikawa**	**6.43**	**254**	P	**Pn**	**23 45 26.2**	**+2.5**
	comp=Z,11nm,0.3s,baz=73,slow=9.8,SNR=65						
ASAJ				S	**Sn**	**23 46 42.9**	**+7.3**
	baz=312,slow=16,SNR=2.2						
ASAJ				LR	LR	23 48 00.9	
	comp=Z,197nm,20.7s,baz=113,slow=38						
ASAJ	**Asahikawa**	**6.43**	**254**	PN	**Pn**	**23 45 26.3**	**+2.5**
ASAJ				S	**Sn**	**23 46 42.9**	**+7.3**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,197nm,20.7s						
JCH	**Churui**	**6.67**	**240**	P	**Pn**	**23 45 26.2**	**-0.9**
JCH				*e*S	**Sn**	**23 46 39.2**	**-2.3**
JAB	**Ashibetsu**	**6.93**	**250**	P	**Pn**	**23 45 32.4**	**+1.8**
ERM	**Erimo**	**7.15**	**237**	*e*PN	**Pn**	**23 45 34.1**	**+0.4**
JNBK	**Urakawa-nobuka**	**7.23**	**240**	P	**Pn**	**23 45 32.9**	**-1.8**
JNBK				*e*S	**Sn**	**23 46 53.4**	**-1.9**
TYV	**Tymovskoe**	**7.29**	**312**	*e*P	**Pn**	**23 45 38.0**	**+2.5**
TYV				AMB	AMB	23 45 39.0	
	comp=Z,22nm,0.8s						
TYV				AMB	AMB	23 45 39.0	
	comp=Z,11nm,0.8s						
TYV				*e*S	**Sn**	**23 47 02.0**	**+5.3**
TYV				A		23 47 04.0	
	comp=Z,48nm,1.0s						
TYV				A		23 47 04.0	
	comp=Z,66nm,1.0s						
PEA0B	**Petropavlovsk-**	**8.06**	**29**	*e*Pn	**Pn**	**23 45 44.3**	**-1.6**
PEA0B				*e*Sn	**Sn**	**23 47 17.9**	**+2.6**
PETK	**Petropavlovsk-**	**8.06**	**29**	P	**Pn**	**23 45 44.4**	**-1.5**
	comp=Z,2.0nm,0.3s,baz=201,slow=12,SNR=22						
PETK				LR	LR	23 48 54.5	
	comp=Z,101nm,20.3s,baz=225,slow=38						
PETK	**Petropavlovsk-**	**8.06**	**29**	PN	**Pn**	**23 45 44.4**	**-1.5**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,101nm,20.3s						
PETK	**Petropavlovsk-**	**8.06**	**29**	P	**Pn**	**23 45 44.4**	**-1.5**
PETK				LR	LR	23 48 54.5	
JNB	**Noboribetsu**	**8.19**	**246**	P	**Pn**	**23 45 47.2**	**-0.6**
JNB				*e*S	**Sn**	**23 47 17.4**	**-1.2**
PET	**Petropavlovsk**	**8.33**	**33**	*e*Pn	**Pn**	**23 45 49.8**	**+0.2**
PET				*e*Sn	**Sn**	**23 47 21.9**	**-0.1**
JKB	**Kayabe**	**8.50**	**243**	P	**Pn**	**23 45 50.4**	**-1.7**
JKB				*e*S	**Sn**	**23 47 21.1**	**-5.2**
JSH	**Shimam**	**8.74**	**250**	P	**Pn**	**23 45 56.1**	**+0.8**
JYM2	**Yakumo 2**	**8.79**	**246**	P	**Pn**	**23 45 55.3**	**-0.7**
JTM	**Tenmabayashi**	**9.15**	**237**	*e*S	**Sn**	**23 47 34.3**	**-7.7**
JANG	**Nango**	**9.17**	**234**	*e*S	**Sn**	**23 47 33.0**	**-9.5**
JTH	**Tanohata**	**9.28**	**230**	*e*S	**Sn**	**23 47 33.9**	**-11**
NKL	**Nikolayevsk**	**9.68**	**319**	*e*P	**Pn**	**23 46 06.0**	**-2.0**
NKL				AMB	AMB	23 46 07.5	
	comp=Z,17nm,1.1s						
NKL				AMB	AMB	23 46 07.5	
	comp=Z,28nm,1.1s						
NKL				*e*L		23 48 50.0	
NKL				AMS	AMS	23 50 16.0	
	comp=Z,350nm,16.0s						
JRG	**Rokugo**	**10.33**	**232**	*e*S	**Sn**	**23 48 02.4**	**-8.5**
JIO	**Ouri**	**10.65**	**226**	*e*S	**Sn**	**23 48 04.8**	**-14**
KLR	**Kul'dur**	**13.40**	**290**	*e*PN	**Pn**	**23 46 58.2**	**-0.1**
MJAR	**Matsushiro Arr**	**13.72**	**230**	P	**Pn**	**23 46 59.8**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=32,slow=12,SNR=5.9						
MJAR				LR	LR	23 52 35.6	
	comp=Z,61nm,19.8s,baz=185,slow=38						
MJAR	**Matsushiro Arr**	**13.72**	**230**	P	**Pn**	**23 46 59.8**	**-2.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,61nm,19.8s						
MDJ	**Mudanjiang**	**15.24**	**272**	P	**Pn**	**23 47 25.0**	**+3.0**
MDJ				S	**S**	**23 50 17.8**	**-3.4**
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.1s						
MDJ				LR	LR		
	comp=N,44nm,22.7s						
MDJ				LR	LR		
	comp=E,73nm,32.9s						
MDJ				LR	LR		
	comp=Z,100nm,31.2s						
MDJ	**Mudanjiang**	**15.24**	**272**	*e*Pn	**Pn**	**23 47 22.3**	**+0.3**
	comp=Z,15nm,0.8s						
SEY	**Seymchan**	**16.73**	**2d**	*i*P	**Pn**	**23 47 40.7**	**+0.2**
ZEA	**Zeya**	**17.05**	**305**	*e*P	**Pn**	**23 47 44.5**	**0.0**
ZEA				AMB	AMB	23 47 45.8	
	comp=Z,24nm,1.0s						
ZEA				AMB	AMB	23 47 45.8	
	comp=Z,35nm,1.0s						
CN2	**Changchun**	**18.33**	**272**	*e*P	**Pn**	**23 48 00.5**	**+0.5**
CN2				*es*P	sP	23 48 26.0	-0.6
CN2				*e*S	**S**	**23 51 18.0**	**-5.9**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
KSRS	**Korea Array**	**19.37**	**251**	P	**Pn**	**23 48 12.4**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=57,slow=11,SNR=15						
KSRS				LR	LR	23 55 11.2	
	comp=Z,60nm,18.1s,baz=353,slow=35						
KSRS	**Korea Array**	**19.37**	**251**	P	**Pn**	**23 48 12.4**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,60nm,18.1s						
YAK	**Yakutsk**	**20.05**	**330**	*e*P	**P**	**23 48 20.9**	**+3.2**
YAK				*e**PP		23 48 37.4	
YAK				*e*S	**S**	**23 51 56.6**	**-1.4**
YAK				*e**SS	sS	23 52 29.5	+3.7
YAK				*e*		23 59 44.3	
YAK				pmax	pmax		
	comp=Z,73nm,0.9s						
YAK				pmax	pmax		
	comp=E,22nm,1.1s						
YAK				pmax	pmax		
	comp=N,18nm,0.9s						
YAK				smax			
	comp=E,77nm,2.7s						
YAK				smax			
	comp=N,54nm,2.4s						
YAK	**Yakutsk**	**20.05**	**330**	*e*P	**P**	**23 48 17.9**	**+0.2**
	comp=N,79nm,0.7s						
INCN	**Inchon**	**20.21**	**253**	P	**P**	**23 48 19.2**	**-0.3**
HIA	**Hailar**	**21.27**	**290**	*e*P	**P**	**23 48 32.2**	**+1.3**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HIA	**Hailar**	**21.27**	**290**	*e*P	**P**	**23 48 32.2**	**+1.4**
	comp=Z,7.9nm,0.8s,mb4.1						
BILL	**Bilibino**	**23.19**	**14**	P	**P**	**23 48 50.6**	**-0.1**
BILL	**Bilibino**	**23.19**	**14**	P	**P**	**23 48 50.5**	**-0.1**
BOD	**Bodaibo**	**25.29**	**311**	*e*P	pP	23 49 25.4	-3.8
TIXI	**Tiksi**	**27.59**	**345**	*e*P	**P**	**23 49 29.5**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb3.7						
HHC	**Hu-ho-hao-te**	**28.99**	**274**	*e*P	**P**	**23 49 43.5**	**+0.3**
HHC				pP	pP	23 50 05.5	+2.7
HHC				sP	sP	23 50 17.3	+4.5
HHC				PP	PP	23 50 41.0	-8.9
HHC				PcP	PcP	23 52 49.5	-0.1
HHC				S	**S**	**23 54 26.5**	**-1.4**
HHC				sS	sS	23 55 04.5	+2.7
HHC				SS	SS	23 56 02.5	-31
HHC				ScP	ScP	23 56 21.0	-2.2
HHC				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7						
HHC				pmax	pmax		
	comp=Z,66nm,5.3s						
HHC				LR	LR		
	comp=N,280nm,8.6s						
HHC				LR	LR		
	comp=E,220nm,7.9s						
HHC				LR	LR		
	comp=Z,200nm,10.3s						
ULN	**Ulaanbaatar**	**29.80**	**289**	*e*P	**P**	**23 49 49.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
ULN	**Ulaanbaatar**	**29.80**	**289**	*e*P	**P**	**23 49 49.1**	**-1.2**
	comp=Z,1.3nm,0.8s,mb3.6						
SONM	**Songino Array**	**30.24**	**290**	P	**P**	**23 49 55.0**	**+0.8**
	comp=Z,0.8nm,0.6s,mb3.5,baz=70,slow=8.3,SNR=6.7						
SONM				LR	LR	00 01 60.0	
	comp=Z,51nm,18.7s,baz=190,slow=36						
SONM	**Songino Array**	**30.24**	**290**	P	**P**	**23 49 55.0**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,51nm,18.7s						
ZAK	**Zakamensk**	**31.68**	**295**	*e*P	**P**	**23 50 05.8**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
TATO	**Taipei**	**31.85**	**238**	P	**P**	**23 50 08.4**	**-0.1**
SSLB	**Suanglung**	**33.06**	**238**	P	**P**	**23 50 15.7**	**-3.5**
TTA	**Tatalina**	**33.68**	**41**	*e*P	**P**	**23 50 23.3**	**-0.8**
TWG	**Pinlang**	**33.74**	**236**	P	**P**	**23 50 23.8**	**-1.2**
PPLA	**Purkeypile**	**35.43**	**41**	*e*P	**P**	**23 50 38.9**	**-0.2**
	comp=Z,17nm,1.4s,mb4.7						
KDAK	**Kodiak Island**	**35.45**	**50**	*i*P	**P**	**23 50 38.0**	**-1.4**
BPAW	**Bear Paw Mtn.**	**35.99**	**39**	*e*P	**P**	**23 50 43.4**	**-0.5**
	comp=Z,5.5nm,0.9s,mb4.5						
TRF	**Thorofare Moun**	**36.29**	**40**	*e*P	**P**	**23 50 45.2**	**-1.3**
	comp=Z,4.6nm,0.7s,mb4.5						
COLD	**Coldfoot**	**36.50**	**34**	*e*P	**P**	**23 50 47.1**	**-1.1**
	comp=Z,2.7nm,0.9s,mb4.2						
LZH	**Lanzhou**	**36.56**	**271**	*e*P	**P**	**23 50 52.3**	**+3.1**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
LZH				pmax	pmax		
	comp=Z,110nm,4.8s						
MCK	**McKinley**	**36.90**	**40**	*e*P	**P**	**23 50 51.0**	**-0.6**
MCK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
MCK	**McKinley**	**36.90**	**40**	*e*P	**P**	**23 50 51.0**	**-0.6**
	comp=Z,11nm,1.1s,mb4.7						
COLA	**College**	**37.36**	**38**	*e*P	**P**	**23 50 54.5**	**-1.0**
COLA				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
COLA	**College**	**37.36**	**38**	*e*P	**P**	**23 50 54.5**	**-1.1**
	comp=Z,17nm,0.7s,mb5.1						
CD2	**Chengdu**	**39.50**	**264**	P	**P**	**23 51 12.8**	**-1.1**
CD2				pP	pP	23 51 35.5	+1.4
CD2				sP	sP	23 51 47.0	+3.0
CD2				PP	PP	23 52 49.0	+3.0
CD2				S	**S**	**23 57 06.8**	**-3.0**
CD2				sS	sS	23 57 46.0	+1.5
CD2				SS	SS	23 59 58.0	-9.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,5.1s						
CD2				LR	LR		
	comp=N,120nm,7.4s						
CD2				LR	LR		
	comp=Z,220nm,5.9s						
EGAK	**Eagle**	**40.22**	**38**	*e*P	**P**	**23 51 18.2**	**-1.2**
	comp=Z,12nm,0.6s,mb4.9						
GYA	**Guiyang**	**40.30**	**256**	P	**P**	**23 51 21.5**	**+1.0**
GYA				pP	pP	23 51 42.0	+1.2
GYA				sP	sP	23 51 52.8	+2.1
GYA				PP	PP	23 52 59.8	+5.1
GYA				PcP	PcP	23 53 23.8	+1.2
GYA				ScP	ScP	23 57 05.0	+1.1
GYA				PcS	PcS	23 57 13.5	+0.2
GYA				S	**S**	**23 57 22.0**	**+0.3**
GYA				sS	sS	23 57 58.0	+1.4
GYA				ScS	ScS	00 01 16.0	-2.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
DAWY	**Dawson**	**41.07**	**39**	*e*P	**P**	**23 51 26.1**	**-0.4**
ZALV	**Zalesovo Beam**	**41.82**	**306**	P	**P**	**23 51 31.0**	**-1.6**
	comp=Z,0.2nm,0.3s,mb3.3,baz=56,slow=5.6,SNR=2.3						
ZALV				PcP	PcP	23 53 27.4	+0.4
	comp=Z,0.5nm,0.4s,baz=85,slow=4.6,SNR=3.1						
ZALV				pPcP		23 53 48.5	
	comp=Z,1.5nm,0.6s,baz=70,slow=3.0,SNR=7.1						
ZALV				LR	LR	00 10 07.5	
	comp=Z,40nm,19.7s,baz=61,slow=38						
ZALV	**Zalesovo Beam**	**41.82**	**306**	P	**P**	**23 51 31.0**	**-1.7**
ZALV						23 53 27.4	
ZALV						23 53 48.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,40nm,19.7s						
INK	**Inuvik**	**42.79**	**32**	*e*P	**P**	**23 51 40.4**	**0.0**
INK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
INK	**Inuvik**	**42.79**	**32**	*e*P	**P**	**23 51 40.4**	**0.0**
	comp=Z,7.8nm,0.7s,mb4.5						
KMI	**Kunming**	**43.83**	**258**	P	**P**	**23 51 52.0**	**+2.7**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**45.98**	**297**	*e*P	**P**	**23 52 06.3**	**+0.2**
MKAR	**Makanchi Array**	**45.98**	**297**	P	**P**	**23 52 06.8**	**+0.7**
	comp=Z,2.8nm,0.7s,mb4.1,baz=68,slow=8.8,SNR=27						
MKAR				PcP	PcP	23 53 41.5	+0.2
	comp=Z,0.3nm,0.2s,baz=59,slow=4.4,SNR=2.0						
MKAR				pPcP		23 54 02.8	
	comp=Z,0.3nm,0.3s,baz=61,slow=5.0,SNR=4.0						
MKAR				LR	LR	00 12 26.2	
	comp=Z,42nm,18.5s,baz=251,slow=37						
MKAR	**Makanchi Array**	**45.98**	**297**	P	**P**	**23 52 06.8**	**+0.7**
MKAR						23 53 41.5	
MKAR						23 54 02.8	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,42nm,18.5s						
KURK	**Kurchatov**	**46.52**	**303**	P	**P**	**23 52 10.2**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.0,baz=72,slow=8.8,SNR=12						
KURK	**Kurchatov**	**46.52**	**303**	*e*P	**P**	**23 52 09.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
KURK	**Kurchatov**	**46.52**	**303**	*e*P	**P**	**23 52 09.9**	**-0.4**
	comp=Z,1.6nm,0.5s,mb4.0						
DLBC	**Dease Lake**	**46.90**	**45**	P	**P**	**23 52 13.6**	**+0.5**
	comp=Z,4.1nm,0.6s,mb4.4,baz=298,slow=14,SNR=6.3						
DLBC	**Dease Lake**	**46.90**	**45**	*e*P	**P**	**23 52 13.0**	**-0.1**
LSA	**Lhasa**	**48.96**	**272**	*e*P	**P**	**23 52 29.4**	**0.0**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**48.96**	**272**	*e*P	**P**	**23 52 29.4**	**0.0**
	comp=Z,6.3nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**50.14**	**309**	P	**P**	**23 52 38.1**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=52,slow=10,SNR=6.4						
BVAR				pPcP		23 54 17.2	
	comp=Z,0.6nm,0.5s,baz=84,slow=5.9,SNR=3.6						
BVAR				LR	LR	00 15 15.4	
	comp=Z,50nm,19.3s,baz=72,slow=38						
BVAR	**Borovoye Array**	**50.14**	**309**	P	**P**	**23 52 38.1**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,50nm,19.3s						
BRVK	**Borovoye**	**50.18**	**309**	*e*P	**P**	**23 52 37.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	**50.18**	**309**	*e*P	**P**	**23 52 37.6**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.4						
CHTO	**Chiang Mai**	**50.70**	**255**	*e*P	**P**	**23 52 42.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**50.70**	**255**	*e*P	**P**	**23 52 42.2**	**-0.4**
	comp=Z,2.6nm,0.6s,mb4.4						
POHA	**Pohakuloa**	**50.76**	**103**	*e*P	**P**	**23 52 42.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**50.95**	**255**	P	**P**	**23 52 45.5**	**+1.0**
	comp=Z,1.4nm,0.4s,mb4.3,baz=39,slow=7.7,SNR=6.8						
CMAR	**Chiang Mai Arr**	**50.95**	**255**	P	**P**	**23 52 45.5**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SHL	**Shillong**	**51.02**	**267**	*e*P	**P**	**23 52 48.5**	**+3.5**
RES	**Resolute Bay**	**51.73**	**18**	*e*P	**P**	**23 52 49.6**	**-0.1**
YKA	**Yellowknife Ar**	**52.12**	**36**	P	**P**	**23 52 52.0**	**-0.6**
	comp=Z,6.0nm,0.7s,mb4.8,baz=300,slow=6.8,SNR=18						
YKA	**Yellowknife Ar**	**52.12**	**36**	P	**P**	**23 52 52.0**	**-0.7**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YKA	**Yellowknife Ar**	**52.12**	**36**	P	**P**	**23 52 52.0**	**-0.6**
AAK	**Ala-Archa**	**52.85**	**296**	P	**P**	**23 52 59.9**	**+1.5**
	comp=

KSH LR LR
comp=Z,150nm,5.5s
AML Almayashu 53.62 296 *eP* **P 23 53 04.0 0.0**
comp=Z,1.8nm,0.7s,mb4.2
GUN Gumba 53.70 274 *eP* **P 23 53 05.6 +0.7**
KKN Kakani 54.20 274 *eP* **P 23 53 09.0 +0.6**
PKI Pulchoki 54.24 274 *eP* **P 23 53 09.4 +0.6**
comp=Z,9.3nm,0.5s,mb5.1
PKI Pulchoki 54.24 274 *eP* **P 23 53 09.9 +1.1**
PKIN Phulchoki 54.25 274 *eP* **P 23 53 09.9 +1.1**
DMN Daman 54.43 274 *eP* **P 23 53 11.3 +1.2**
comp=Z,21nm,0.8s,mb5.2
ARU Arti 54.47 317 *c iP* **P 23 53 09.7 -0.3**
ARU *PP pP 23 53 28.0 -3.2
ARU *e* 23 54 13.2
ARU *e* 23 55 09.4
ARU S **S 00 00 42.9 +1.0**
ARU SS SS 00 04 19.2 -5.5
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
ARU Arti 54.47 317 *eP* **P 23 53 09.5 -0.5**
comp=Z,3.0nm,0.9s,mb4.3
NLWA Neilton Lookou 55.27 55 ⇑P **P 23 53 16.0 +0.1**
baz=55
NLWA Neilton Lookou 55.27 55 *eP* **P 23 53 15.0 -0.9**
comp=Z,7.9nm,0.9s,mb4.7
E03A Lebam 55.90 56 ⇑P **P 23 53 20.8 +0.3**
baz=56
B08A Colville Reser 57.28 52 ⇓P **P 23 53 30.1 0.0**
baz=57
G04A Mulino 57.28 57 ⇓P **P 23 53 30.4 +0.2**
baz=57
EDM Edmonton 57.62 45 *eP* **P 23 53 32.3 -0.2**
ABKAR Akbulak array 57.71 309 *eP* **P 23 53 33.8 +0.6**
comp=Z,3.0nm,0.5s,mb4.6
H04A Detroit Lake 57.75 57 ⇑P **P 23 53 33.7 +0.2**
baz=58,SNR=5.4
ARCES ARCESS Array B 57.88 340 P **P 23 53 34.2 +0.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=26,slow=9.0,SNR=3.4
ARCES ARCESS Array B 57.88 340 P **P 23 53 34.2 +0.2**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
NEW Newport 58.54 52 *eP* **P 23 53 38.8 -0.2**
NEW pmax pmax
comp=Z,9.0nm,1.3s
NEW Newport 58.54 52 *eP* **P 23 53 38.8 -0.2**
comp=Z,8.7nm,1.3s,mb4.6
A11A Hall Mountain, 58.54 51 ⇑P **P 23 53 39.3 +0.3**
baz=58
YBH Yreka Blue Hor 59.16 60 P **P 23 53 43.6 +0.2**
comp=Z,2.0nm,0.6s,mb4.3,baz=5.0,slow=6.3,SNR=7.0
YBH Yreka Blue Hor 59.16 60 P **P 23 53 43.6 +0.2**
YBH pmax pmax
comp=Z,2.0nm,0.6s
G08A Pilot Rock 59.26 55 ⇓P **P 23 53 43.8 -0.2**
baz=59
E10A Myers Farm, Un 59.59 53 ⇓P **P 23 53 45.9 -0.4**
baz=59
A13A Flathead Natio 59.60 50 ⇓P **P 23 53 45.8 -0.4**
baz=59
K05A Summer Lake 59.65 59 ⇑P **P 23 53 47.6 +0.8**
baz=59,SNR=7.4
I07A Izee 59.66 57 ⇑P **P 23 53 46.9 +0.1**
baz=59
D11A Klaveano Farm, 59.69 52 ⇓P **P 23 53 46.4 -0.5**
baz=59
WALA Waterton Lakes 59.79 49 P **P 23 53 47.2 -0.4**
F10A Beach Ranch, E 59.83 54 ⇓P **P 23 53 47.4 -0.5**
baz=60
H08A Prairie City 59.88 56 ⇑P **P 23 53 48.6 +0.3**
baz=60
B13A Whitefish 59.90 50 ⇑P **P 23 53 48.5 +0.1**
baz=60
G09A Cove 59.94 55 ⇓P **P 23 53 48.6 0.0**
baz=60
WDC Whiskeytown Da 59.95 61 *eP* **P 23 53 47.9 -0.9**
WDC pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
WDC Whiskeytown Da 59.95 61 *eP* **P 23 53 47.9 -0.9**
comp=Z,5.0nm,1.1s,mb4.5
A14A Double T Ranch 60.09 49 ⇑P **P 23 53 49.4 -0.2**
baz=60
E11A Bogner Ranch, 60.17 53 ⇓P **P 23 53 49.7 -0.6**
baz=60
C13A Hot Springs 60.26 51 ⇓P **P 23 53 50.6 -0.2**
baz=60
G10A Bishop Farm, J 60.30 54 ⇑P **P 23 53 50.9 -0.2**
baz=60,SNR=5.7
A15A Johnson Ranch, 60.45 49 ⇓P **P 23 53 51.5 -0.6**
baz=60
F11A Grangeville 60.48 53 ⇑P **P 23 53 52.5 +0.1**
baz=60
E12A Beaver Dam Sad 60.49 53 ⇑P **P 23 53 52.0 -0.4**
baz=60
MOD Modoc 60.50 59 *eP* **P 23 53 52.9 +0.4**
B14A Marquette Ranc 60.55 50 ⇓P **P 23 53 52.6 -0.2**
baz=60
C14A Swan Lake 60.65 50 ⇑P **P 23 53 53.1 -0.4**
baz=60
SWMT Swartz Lake 60.68 51 *eP* **P 23 53 54.2 +0.5**
D13A Huson 60.68 51 ⇑P **P 23 53 53.4 -0.3**
baz=60
J08A Circle Bar Ran 60.69 57 ⇓P **P 23 53 54.2 +0.3**
baz=60,SNR=5.2
G11A Walters Elk Ra 60.71 54 ⇑P **P 23 53 54.0 0.0**
baz=60
I09A Lost Marbles R 60.74 56 ⇓P **P 23 53 54.3 +0.1**
baz=60
H10A Noah's Angus R 60.94 55 ⇑P **P 23 53 55.2 -0.3**
baz=61,SNR=5.1
B15A Bradely Ranch, 60.95 49 ⇓P **P 23 53 55.2 -0.3**
baz=61
KBL Kabul 61.00 291 *eP* **P 23 53 56.4 +0.3**
KBL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KBL Kabul 61.00 291 *eP* **P 23 53 56.4 +0.3**
comp=Z,3.7nm,0.9s,mb4.4
F12A Elk City 61.06 53 ⇓P **P 23 53 56.5 +0.2**
baz=61,SNR=6.7
A16A West Butte Ran 61.06 48 ⇓P **P 23 53 55.7 -0.5**
baz=61
SLMT Seeley Lake 61.11 51 *eP* **P 23 53 56.7 +0.1**
J09A Fry Pan Ranch, 61.12 56 ⇓P **P 23 53 56.7 0.0**
baz=61,SNR=7.1
MSO Missoula 61.12 51 *eP* **P 23 53 56.9 +0.2**
comp=Z,5.6nm,1.0s,mb4.5
D14A Greenough 61.20 51 ⇓P **P 23 53 57.0 -0.3**
baz=61,SNR=11
I10A Payette 61.21 55 ⇑P **P 23 53 55.7 -1.6**
baz=61
E13A Victor 61.23 52 ⇓P **P 23 53 57.0 -0.4**
baz=61
C15A Salmond Ranch, 61.26 50 ⇑P **P 23 53 57.7 +0.1**
baz=61,SNR=11
H11A Donnelly 61.28 54 ⇓P **P 23 53 57.4 -0.5**
baz=61,SNR=5.6
SUMG Summit 61.28 3 *eP* **P 23 53 57.7 +0.3**
comp=Z,210nm,3.0s
B16A M & M Farms, S 61.34 49 ⇑P **P 23 53 57.7 -0.4**
baz=61
G12A Big Creek, Yel 61.41 54 ⇑P **P 23 53 58.2 -0.4**
baz=61
CHMT Chamberlain Mo 61.44 51 *eP* **P 23 53 58.9 0.0**
A17A Triple J Farms 61.53 48 ⇓P **P 23 53 59.1 -0.3**
baz=61
F13A Darby 61.55 53 ⇓P **P 23 53 59.2 -0.4**
baz=61
E14A Clinton 61.62 52 ⇑P **P 23 53 59.6 -0.5**
baz=61
C16A Fuhringer Ranc 61.70 49 ⇑P **P 23 54 00.3 -0.3**
baz=61
BEKR Beckwourth 61.70 61 ⇑P **P 23 54 00.8 0.0**
baz=62
FFC Flin Flon 61.98 39 *eP* **P 23 54 02.0 -0.3**
FFC pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
FFC Flin Flon 61.98 39 *eP* **P 23 54 02.0 -0.3**
comp=Z,5.5nm,1.0s,mb4.5
K10A MacKenzie Ranc 61.98 56 ⇓P **P 23 54 02.5 0.0**
baz=62,SNR=7.8
A18A Metzger Ranch, 61.98 48 ⇓P **P 23 54 01.9 -0.6**
baz=62
H12A Diamond D Ranc 62.03 54 ⇓P **P 23 54 02.5 -0.3**
baz=62
G13A Cobalt 62.04 53 ⇑P **P 23 54 02.6 -0.3**
baz=62
F14A Wisdom 62.06 52 ⇓P **P 23 54 02.8 -0.3**
baz=62
E15A Deer Lodge 62.08 51 ⇑P **P 23 54 02.9 -0.3**
baz=62
MFID Camas Ranch 62.18 55 ⇓P **P 23 54 03.8 -0.1**
baz=62
D16A Dana Ranch, Ca 62.28 50 ⇓P **P 23 54 04.3 -0.2**
baz=62,SNR=6.9
C17A Wharram Farm, 62.32 49 ⇑P **P 23 54 04.1 -0.6**
baz=62
I12A Atlanta 62.34 55 ⇑P **P 23 54 04.7 -0.3**
baz=62,SNR=5.7
B18A Beardsley Farm 62.35 48 ⇓P **P 23 54 04.7 -0.2**
baz=62
H13A Challis 62.35 54 ⇓P **P 23 54 04.7 -0.3**
baz=62,SNR=7.1
FCC Fort Churchill 62.41 32 *eP* **P 23 54 04.2 -1.0**
comp=Z,0.2nm,0.5s,mb3.4
WCN Washoe City 62.42 61 ⇑P **P 23 54 05.4 -0.1**
baz=62
K11A Parker Ranch, 62.47 56 ⇑P **P 23 54 06.0 +0.2**
baz=62
F15A Butte 62.52 52 ⇑P **P 23 54 06.0 -0.1**
baz=62,SNR=6.6
E16A East Helena 62.53 51 ⇓P **P 23 54 06.0 -0.1**
baz=62
LRM Limekiln Ridge 62.56 52 *eP* **P 23 54 06.8 +0.4**
EGMT Eagleton 62.60 48 ⇓P **P 23 54 06.0 -0.5**
baz=62
L10A Juniper Basin 62.64 57 ⇓P **P 23 54 06.8 -0.2**
baz=62,SNR=5.1
D17A Six Diamond Ra 62.66 50 ⇓P **P 23 54 07.0 0.0**
baz=62,SNR=5.2
J12A Stokes Ranch, 62.70 55 ⇑P **P 23 54 07.2 -0.1**
baz=62,SNR=5.7
CMB Columbia Colle 62.82 63 *eP* **P 23 54 08.6 +0.4**
CMB pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CMB Columbia Colle 62.82 63 *eP* **P 23 54 08.6 +0.3**
comp=Z,5.0nm,1.0s,mb4.4
I13A Wildhorse Cree 62.84 54 ⇓P **P 23 54 08.4 +0.2**
baz=63
HLID Hailey 62.89 55 ⇑P **P 23 54 08.8 +0.2**
baz=63
HLID Hailey 62.89 55 *eP* **P 23 54 08.2 -0.4**
HLID *ePcP PcP 23 54 45.9 -0.2
M10A I.L. Ranch, Tu 62.95 57 ⇑P **P 23 54 09.5 +0.5**
baz=63,SNR=5.0
G15A Dillon 62.95 52 ⇓P **P 23 54 09.1 +0.1**
baz=63
MCMT McKenzie Canyo 62.97 53 *eP* **P 23 54 08.8 -0.3**
comp=Z,0.5nm,0.6s,mb3.6
L11A Cat Creek Ranc 63.00 56 ⇑P **P 23 54 09.8 +0.4**
baz=63,SNR=6.3
E17A Martinsdale 63.01 50 ⇓P **P 23 54 09.7 +0.4**
baz=63
F16A Kennard Place, 63.03 51 ⇑P **P 23 54 09.5 0.0**
baz=63
BOZ Bozeman (W) 63.12 51 ⇓P **P 23 54 10.2 +0.2**
baz=63,SNR=8.4
BOZ Bozeman (W) 63.12 51 *eP* **P 23 54 10.5 +0.5**
BOZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BOZ Bozeman (W) 63.12 51 *eP* **P 23 54 10.5 +0.4**
comp=Z,2.9nm,0.6s,mb4.4
J13A Cove Ranch, Pi 63.13 55 ⇑P **P 23 54 10.4 +0.2**
baz=63
K12A Draper Farm, C 63.20 56 ⇑P **P 23 54 10.6 0.0**
baz=63
I14A Mackay 63.20 54 ⇓P **P 23 54 11.1 +0.4**
baz=63,SNR=6.6
H15A Lima 63.22 53 ⇑P **P 23 54 10.4 -0.4**
baz=63
G16A Moss Hill, Enn 63.29 52 ⇓P **P 23 54 11.3 +0.1**
baz=63,SNR=5.8
L12A House Creek Ra 63.44 56 ⇓P **P 23 54 12.9 +0.6**
baz=63
E18A Harlowton 63.45 50 ⇑P **P 23 54 12.1 -0.1**
baz=63
M11A Holland Ranch, 63.45 57 ⇑P **P 23 54 13.0 +0.7**
baz=63
F17A Fitzpatrick Pl 63.47 51 ⇓P **P 23 54 12.9 +0.5**
baz=63
N10A Dunphy 63.48 58 ⇑P **P 23 54 12.9 +0.4**
baz=63
J14A Carey 63.55 54 ⇑P **P 23 54 13.6 +0.7**
baz=63,SNR=7.1
NVAR Mina Array Bea 63.85 61 P **P 23 54 15.2 +0.2**
comp=Z,3.0nm,0.7s,mb4.3,baz=297,slow=7.1,SNR=27
NVAR pP pP 23 54 37.1 +0.3
comp=Z,1.3nm,0.7s,baz=298,slow=8.0,SNR=2.8
FINES FINESS Array B 63.91 334 P **P 23 54 13.9 -1.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=38,slow=6.3,SNR=12
FINES FINESS Array B 63.91 334 P **P 23 54 13.9 -1.1**
FINES pmax pmax
comp=Z,2.0nm,0.6s
H16A Russell Place, 63.93 52 ⇑P **P 23 54 15.0 -0.4**
baz=64
M12A Wells 63.97 57 ⇑P **P 23 54 16.5 +0.8**
baz=64
F18A Big Timber 63.98 50 ⇓P **P 23 54 16.0 +0.3**
baz=64,SNR=5.9
L13A Double Diamond 64.09 56 ⇓P **P 23 54 17.1 +0.6**
baz=64
J15A Blackfoot 64.11 54 ⇓P **P 23 54 17.2 +0.6**
baz=64
K14A Jones Ranch, D 64.24 55 ⇓P **P 23 54 18.0 +0.5**
baz=64
O11A Cowboy Ranch, 64.35 58 ⇑P **P 23 54 18.7 +0.5**
baz=64,SNR=5.1
H17A Grant Village 64.49 52 ⇑P **P 23 54 20.2 +1.1**
baz=64
K15A Arbon 64.51 54 ⇑P **P 23 54 19.9 +0.6**
baz=64
L14A Malta 64.53 55 ⇓P **P 23 54 19.8 +0.4**
baz=64
Q10A Clear Creek Ra 64.75 60 ⇓P **P 23 54 21.0 +0.2**
baz=64
O12A Currie 64.80 58 ⇓P **P 23 54 21.1 -0.1**
baz=65,SNR=8.6
M14A Sheep Mountain 64.81 56 ⇑P **P 23 54 21.3 +0.1**
baz=65
TPAW Teton Pass 64.87 53 *eP* **P 23 54 22.9 +1.3**
comp=Z,6.5nm,0.8s,mb4.5
K16A Soda Springs 64.95 54 ⇑P **P 23 54 22.2 +0.1**
baz=65
REDW Red Top Meadow 65.01 53 *eP* **P 23 54 23.3 +0.8**
comp=Z,10nm,1.3s,mb4.5
L15A Malad City 65.04 55 ⇑P **P 23 54 23.3 +0.6**
baz=65
J17A Brown Place, J 65.09 53 ⇑P **P 23 54 23.5 +0.5**
baz=65
DGMT Dagmar 65.11 45 ⇓P **P 23 54 23.3 +0.2**
baz=65
PKM Peak Mountain 65.17 65 ⇓P **P 23 54 24.3 +0.7**
baz=65
S10A Tonopah Range, 65.21 61 ⇑P **P 23 54 24.1 +0.2**
baz=65
P12A McGill 65.22 58 ⇑P **P 23 54 24.2 +0.3**
baz=65
N14A Grayback Hills 65.33 56 ⇑P **P 23 54 24.6 +0.1**
baz=65
GRAC Grapevine Rang 65.33 62 ⇑P **P 23 54 25.0 +0.4**
baz=65
M15A Larsen Ranch, 65.35 55 ⇑P **P 23 54 24.8 0.0**
baz=65
SBC Santa Barbara 65.53 65 ⇓P **P 23 54 25.8 -0.1**
baz=65
R11A Troy Canyon, C 65.54 60 ⇑P **P 23 54 25.9 -0.1**
baz=65,SNR=7.9
L16A Fish Haven 65.57 54 ⇓P **P 23 54 26.3 +0.2**
baz=65
J18A Kendall Valley 65.57 53 ⇑P **P 23 54 26.1 0.0**
baz=65
P13A Bates Ranch, G 65.75 58 ⇑P **P 23 54 27.2 -0.1**
baz=66
HWUT Hardware Ranch 65.76 55 *eP* **P 23 54 28.0 +0.6**
comp=Z,3.6nm,0.6s,mb4.4
L17A Cokeville 65.83 54 ⇓P **P 23 54 27.3 -0.5**
baz=66
MPMC Manual Prospec 65.87 63 ⇑P **P 23 54 28.9 +0.8**
baz=66
BSC Santa Cruz Isl 65.87 66 ⇓P **P 23 54 29.1 +0.9**
baz=66
K18A Toltan Ranch, 65.94 53 ⇑P **P 23 54 29.0 +0.5**
baz=66
DUG Dugway 65.97 57 ⇑P **P 23 54 29.0 +0.3**
baz=66,SNR=7.1
DUG Dugway 65.97 57 *eP* **P 23 54 28.9 +0.2**
DUG pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
DUG Dugway 65.97 57 *eP* **P 23 54 28.9 +0.2**
comp=Z,5.3nm,0.8s,mb4.4
FURC Furnace Creek, 65.99 62 ⇓P **P 23 54 29.3 +0.4**
baz=66
Q13A Wheeler Ranch, 66.08 58 ⇑P **P 23 54 29.4 0.0**
baz=66,SNR=6.5
BW06 Boulder Array 66.12 53 ⇑P **P 23 54 29.6 0.0**
baz=66,SNR=7.4
BW06 Boulder Array 66.12 53 *eP* **P 23 54 29.2 -0.5**
comp=Z,4.3nm,0.9s,mb4.3
PDAR Pinedale Array 66.12 53 P **P 23 54 29.4 -0.2**
comp=Z,4.0nm,0.8s,mb4.3,baz=298,slow=2.0,SNR=36
PDAR pP pP 23 54 50.8 -0.8
comp=Z,1.3nm,0.7s,baz=316,slow=3.4,SNR=4.6
CTAO Charters Tower 66.17 185 *eP* **P 23 54 29.7 -0.4**
P14A Drum Mountains 66.22 57 ⇑P **P 23 54 30.4 0.0**
baz=66
EDW2 Edwards Air Fo 66.32 64 ⇓P **P 23 54 31.3 +0.2**
baz=66
M17A Scullys Gap (B 66.36 54 ⇓P **P 23 54 31.1 -0.1**
baz=66
T11A Corn Creek, Al 66.48 60 ⇓P **P 23 54 31.3 -0.7**
baz=66
Q14A Sevier Lake (B 66.49 58 ⇑P **P 23 54 32.3 +0.2**
baz=66,SNR=6.9
N17A Moffit Pass 66.61 55 ⇑P **P 23 54 32.9 +0.1**
baz=66
O16A Springville 66.72 56 ⇓P **P 23 54 33.7 +0.2**
baz=66
GSC Goldstone 66.78 63 ⇓P **P 23 54 34.0 0.0**
baz=67
S13A Holt Ranch, En 67.07 59 ⇓P **P 23 54 36.4 +0.6**
baz=67
V11A Goodsprings 67.27 62 ⇓P **P 23 54 37.0 0.0**
baz=67
L20A Wamsutter 67.30 53 ⇓P **P 23 54 37.5 +0.4**
baz=67
HEC Hector,Ludlow 67.39 63 ⇑P **P 23 54 37.9 +0.1**
baz=67
T13A Saint George 67.42 60 ⇑P **P 23 54 38.4 +0.5**
baz=67
WRAB Tennant Creek 67.61 197 *eP* **P 23 54 38.7 -0.5**
WRAB pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
WRAB Tennant Creek 67.61 197 *eP* **P 23 54 38.6 -0.5**
comp=Z,2.8nm,0.7s,mb4.2
V12A Nelson 67.70 61 ⇓P **P 23 54 40.3 +0.5**
baz=68
M20A Sweetwater, Wa 67.73 53 ⇓P **P 23 54 40.0 +0.1**
baz=68
Q16A Castle Valley 67.77 57 ⇑P **P 23 54 40.4 +0.3**
baz=68
U13A Pakoon Wash 67.78 60 ⇑P **P 23 54 40.4 +0.1**
baz=68,SNR=6.1
P18A Preston Nutter 67.82 56 ⇑P **P 23 54 40.7 +0.2**
baz=68
GMRC Granite Mounta 67.83 63 ⇓P **P 23 54 41.1 +0.4**
baz=68
R16A Teasdale 68.01 57 ⇑P **P 23 54 41.9 +0.2**
baz=68
SRU San Rafael 68.01 56 ⇑P **P 23 54 41.4 -0.3**
baz=68,SNR=5.8
SRU San Rafael 68.01 56 *eP* **P 23 54 42.0 +0.3**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
SRU San Rafael 68.01 56 *eP* **P 23 54 42.0 +0.3**
comp=Z,7.3nm,0.9s,mb4.5
FITZ Fitzroy Crossi 68.09 206 *eP* **P 23 54 42.1 -0.2**
M21A Separation Pea 68.11 52 ⇓P **P 23 54 42.2 0.0**
baz=68
N20A Spence Gulch, 68.13 53 ⇓P **P 23 54 42.6 +0.2**
baz=68
V13A Grand Canyon W 68.14 61 ⇑P **P 23 54 42.6 0.0**
baz=68
RSSD Black Hills 68.16 49 *eP* **P 23 54 42.1 -0.4**
RSSD pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
RSSD Black Hills 68.16 49 *eP* **P 23 54 42.0 -0.5**
comp=Z,1.6nm,0.4s,mb4.2
Q18A Rafter H Ranch 68.24 56 ⇑P **P 23 54 42.8 -0.3**
baz=68
U14A Mt Trumbull 68.25 60 ⇑P **P 23 54 43.9 +0.7**
baz=68
NB2 NORSAR Subarra 68.26 340 P **P 23 54 42.6 -0.2**
comp=Z,1.0nm,0.8s,mb3.7,baz=30,slow=6.5
NOA NORSAR Array B 68.26 340 P **P 23 54 41.7 -1.2**
comp=Z,1.2nm,0.6s,mb3.9,baz=30,slow=6.4,SNR=6.6
NOA NORSAR Array B 68.26 340 P **P 23 54 41.7 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 68.26 340 P **P 23 54 41.7 -1.2**
L22A Ellis Ranch, M 68.32 52 ⇑P **P 23 54 43.6 +0.1**
baz=68
HFS Hagfors 68.45 339 P **P 23 54 42.9 -1.1**
comp=Z,0.9nm,0.5s,mb3.9,baz=47,slow=6.9,SNR=9.1
HFS Hagfors 68.45 339 P **P 23 54 42.9 -1.1**
HFS pmax pmax
comp=Z,1.0nm,0.5s
P19A Cripple Cowboy 68.54 55 ⇑P **P 23 54 44.8 -0.2**
baz=68
IRM Iron Mountain 68.56 63 ⇑P **P 23 54 46.0 +0.8**
baz=68
W13A Hualapai Mount 68.71 61 ⇓P **P 23 54 46.3 +0.2**
baz=68
BC3 Big Chuckw Mtn 68.71 63 ⇑P **P 23 54 46.5 +0.4**
baz=68
U15A North Rim 68.78 59 ⇓P **P 23 54 46.9 +0.4**
baz=68
V14A Boquillas Ranc 68.82 60 ⇑P **P 23 54 47.1 +0.4**
baz=69,SNR=7.2
Q19A Hogan Spring (68.84 56 ⇓P **P 23 54 46.5 -0.4**
baz=69
S17A Black Ridge (B 68.84 57 ⇑P **P 23 54 47.0 +0.2**
baz=69,SNR=6.6
R18A Canyonlands Na 68.86 56 ⇑P **P 23 54 47.1 +0.1**
baz=69
O21A Pagoda 69.00 54 ⇑P **P 23 54 47.5 -0.3**
baz=69
PDMCI Parker Dam,Lak 69.09 62 ⇑P **P 23 54 48.5 +0.1**
baz=69
W14A Seligman 69.12 61 ⇑P **P 23 54 49.0 +0.4**
baz=69,SNR=5.9
AGMN Agassiz Refuge 69.19 41 *eP* **P 23 54 48.1 -0.8**
comp=Z,3.4nm,0.8s,mb4.2
V15A Kaibab Nationa 69.26 60 ⇓P **P 23 54 49.9 +0.4**
baz=69
S18A Hurst Farm, Bl 69.28 57 ⇑P **P 23 54 49.3 -0.2**
baz=69,SNR=6.7
R19A Curley Farm, L 69.29 56 ⇓P **P 23 54 49.7 +0.1**
baz=69
U17A Shonto 69.63 58 ⇓P **P 23 54 52.7 +0.9**
baz=69
T18A Mexican Hat 69.72 57 ⇑P **P 23 54 51.7 -0.6**
baz=70
X14A Yava 69.73 61 ⇑P **P 23 54 52.9 +0.4**
baz=70
S19A Harvey Farm, M 69.74 56 ⇓P **P 23 54 52.5 +0.1**
baz=70,SNR=6.5
R20A Redvale 69.87 56 ⇓P **P 23 54 53.3 0.0**
baz=70
Y14A Wickenburg 70.02 62 ⇑P **P 23 54 54.4 +0.2**
baz=70
X15A Humboldt 70.12 61 ⇑P **P 23 54 55.0 +0.2**
baz=70
Z13A Yuma Proving G 70.12 63 ⇓P **P 23 54 55.6 +0.8**
baz=70
V17A Tonalea, Kykot 70.21 59 ⇑P **P 23 54 55.7 +0.4**
baz=70,SNR=8.8
R21A Cimarron 70.22 55 ⇓P **P 23 54 55.6 +0.3**
baz=70
Q22A Crested Butte, 70.24 54 ⇓P **P 23 54 55.7 +0.2**
baz=70
ISCO Idaho Springs 70.31 53 *eP* **P 23 54 56.6 +0.7**
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ISCO Idaho Springs 70.31 53 *eP* **P 23 54 56.6 +0.7**
comp=Z,3.8nm,0.8s,mb4.3
T19A Beclabito 70.43 57 ⇓P **P 23 54 56.5 -0.1**
baz=70
MVCO Mesa Verde 70.47 56 ⇑P **P 23 54 57.2 +0.3**
baz=70
S21A Coal Bank Pass 70.57 56 ⇑P **P 23 54 57.6 +0.2**
baz=70
V18A Ganado 70.66 58 ⇓P **P 23 54 58.5 +0.4**
baz=70
U19A Dine' College, 70.69 58 ⇑P **P 23 54 58.6 +0.4**

	baz=70						
R22A	Saguache, Gunn	70.77	55	⇑P	P	23 54 59.0	+0.3
	baz=70						
114A	Black Gap (USA	70.90	62	⇑P	P	23 54 59.7	+0.1
	baz=71						
AKASG	Malin Array Be	71.20	325	P	P	23 55 00.3	-0.8
	comp=Z,0.5nm,0.4s,mb3.7,baz=35,slow=5.7,SNR=3.3						
AKASG	Malin Array Be	71.20	325	P	P	23 55 00.3	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	71.33	197	P	P	23 55 02.3	+0.3
	comp=Z,2.6nm,0.8s,mb4.1,baz=17,slow=5.8,SNR=17						
ASAR				pP	pP	23 55 24.4	+0.1
	comp=Z,1.2nm,0.7s,baz=16,slow=6.2,SNR=4.4						
ASAR	Alice Springs	71.33	197	P	P	23 55 02.3	+0.3
ASAR				*PP	pP	23 55 24.4	+0.2
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EYMN	Ely	71.41	39	eP	P	23 55 01.6	-0.8
	comp=Z,10nm,1.1s,mb4.6						
SDCO	Great Sand Dun	71.81	54	eP	P	23 55 04.7	-0.3
Y18A	Canyon Day Jun	71.93	60	⇓P	P	23 55 06.3	+0.5
	baz=72						
ECSD	EROS Data Cent	72.19	45	eP	P	23 55 06.1	-1.0
	comp=Z,5.3nm,0.7s,mb4.5						
X20A	Quemado	72.32	58	⇓P	P	23 55 08.5	+0.4
	baz=72						
118A	Homack Ranch,	72.76	61	⇑P	P	23 55 10.7	0.0
	baz=72						
X21A	Alamocita Cree	72.81	58	⇓P	P	23 55 11.1	+0.2
	baz=73						
V23A	Ortiz Mt. (NFS	72.83	56	⇓P	P	23 55 11.5	+0.4
	baz=73						
217A	Green Valley	72.84	62	⇑P	P	23 55 11.5	+0.3
	baz=73						
ANMO	Albuquerque	73.23	57	P	P	23 55 13.6	+0.2
	comp=Z,2.5nm,0.8s,mb4.1,baz=326,slow=9.6,SNR=6.7						
ANMO	Albuquerque	73.23	57	P	P	23 55 13.6	+0.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	Albuquerque	73.23	57	eP	P	23 55 13.5	+0.1
	comp=Z,1.0nm,0.8s,mb3.7						
318A	Bisbee	73.58	62	⇑P	P	23 55 15.9	+0.3
	baz=73						
120A	U Bar Ranch, L	73.63	60	⇓P	P	23 55 16.3	+0.4
	baz=73						
219A	White Tail Can	73.64	61	⇓P	P	23 55 15.7	-0.2
	baz=73						
W24A	Lazy 6 Ranch,	73.65	56	⇓P	P	23 55 15.9	-0.1
	baz=73						
220A	Playas Peak, P	74.15	60	⇓P	P	23 55 19.0	+0.1
	baz=74						
121A	Cookes Peak, D	74.15	60	⇓P	P	23 55 19.3	+0.4
	baz=74						
W25A	X Bar L Ranch,	74.19	56	⇓P	P	23 55 18.8	-0.2
	baz=74						
SCHQ	Schefferville	74.28	22	P	P	23 55 18.8	-0.5
	comp=Z,2.2nm,0.5s,mb4.1,baz=357,slow=12,SNR=7.9						
SCHQ	Schefferville	74.28	22	eP	P	23 55 18.3	-0.9
Y24A	Capitan	74.55	57	⇑P	P	23 55 21.3	+0.1
	baz=74						
X25A	Clemmons Ranch	74.57	56	⇓P	P	23 55 21.8	+0.5
	baz=74						
BUR08	Bucovina Ar. S	75.24	326	eP	P	23 55 24.4	-0.5
BUR08				ePcP	PcP	23 55 37.6	-0.3
124A	Stringfield Ra	75.41	58	⇑P	P	23 55 26.2	0.0
	baz=75						
224A	Corundas Mount	75.82	58	⇓P	P	23 55 28.3	-0.2
	baz=76						
Z26A	Caprock	75.86	57	⇓P	P	23 55 28.7	0.0
	baz=76						
Y27A	Causey	75.89	56	⇑P	P	23 55 28.4	-0.5
	baz=76						
125A	Gardner Draw,	75.91	57	⇑P	P	23 55 29.3	+0.3
	baz=76						
MSTX	Muleshoe	76.06	55	⇓P	P	23 55 30.0	+0.1
	baz=76						
MORC	Moravsky Berou	76.24	331	P	P	23 55 29.9	-0.7
Z27A	Tatum	76.28	56	⇓P	P	23 55 31.2	+0.2
	baz=76						
325A	Bean Ranch, Si	76.65	59	⇑P	P	23 55 33.3	+0.1
	baz=76						
226A	Malaga, Loving	76.67	58	⇓P	P	23 55 33.3	0.0
	baz=76						
PSZ	Piszkesteto	77.01	329	P	P	23 55 34.5	-0.4
425A	Indio Mountain	77.06	59	⇑P	P	23 55 35.4	-0.1
	baz=77						
326A	Caldwell Ranch	77.28	58	⇓P	P	23 55 36.7	-0.1
	baz=77						
426A	McDonald Obser	77.72	58	⇑P	P	23 55 39.3	+0.1
	baz=78						
WMOK	Wichita Mounta	77.73	52	eP	P	23 55 38.6	-0.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
WMOK	Wichita Mounta	77.73	52	eP	P	23 55 38.6	-0.6
	comp=Z,5.9nm,0.9s,mb4.3						
328A	Wristen Ranch,	77.92	57	⇑P	P	23 55 40.2	-0.1
	baz=78						
427A	Hayter Ranch,	77.95	58	⇑P	P	23 55 40.7	+0.2
	baz=78						
526A	Mary Lane Ranc	78.12	59	⇑P	P	23 55 41.6	+0.1
	baz=78						
STKA	Stephens Creek	78.24	188	eP	P	23 55 40.9	-0.8
GERES	GERESS Array B	78.30	333	P	P	23 55 42.4	+0.3
	comp=Z,0.4nm,0.4s,mb3.5,baz=38,slow=6.8,SNR=5.6						
527A	Woodward Ranch	78.34	59	⇓P	P	23 55 42.9	+0.2
	baz=78						
626A	Big Bend Ranch	78.46	59	⇑P	P	23 55 43.5	+0.2
	baz=78						
428A	Kincaid Ranch,	78.47	58	⇑P	P	23 55 43.4	0.0
	baz=78						
528A	Cox Ranch, San	78.82	58	⇑P	P	23 55 45.2	0.0
	baz=79						
TXAR	Lajitas Array	78.90	59	P	P	23 55 45.4	-0.3
	comp=Z,4.3nm,0.5s,mb4.5,baz=300,slow=4.1,SNR=82						
TXAR				pP	pP	23 56 07.5	-0.8
	comp=Z,1.0nm,0.8s,baz=296,slow=4.4,SNR=2.5						
TXAR	Lajitas Array	78.90	59	P	P	23 55 45.4	-0.3
TXAR				*PP	pP	23 56 07.5	-0.8
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
627A	Terlingua Ranc	78.98	59	⇓P	P	23 55 46.2	0.0
	baz=79						
628A	Black Gap, Mar	79.25	59	⇓P	P	23 55 47.4	-0.3
	baz=79						
CDF	Champ du Feu	80.60	337	eP	P	23 55 54.9	+0.3
	comp=Z,3.2nm,0.6s,mb4.0						
CDF	Champ du Feu	80.60	337	eP	P	23 55 54.9	+0.3
CDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
CDF	Champ du Feu	80.60	337	eP	P	23 55 54.9	+0.3
	comp=Z,1.6nm,0.6s,mb4.0						
MIAR	Mount Ida	80.67	49	eP	P	23 55 54.8	-0.4
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MIAR	Mount Ida	80.67	49	eP	P	23 55 54.8	-0.5
	comp=Z,5.1nm,0.8s,mb4.4						
MMAI	Mount Meron Ar	82.13	310	P	P	23 56 04.5	+1.6
	comp=Z,0.8nm,0.4s,mb3.9,baz=55,slow=7.2,SNR=6.4						
LDF	La Druitiere	82.28	341	eP	P	23 56 02.7	-0.7
LOR	Lormes	82.56	338	eP	P	23 56 05.1	+0.2
	comp=Z,4.3nm,0.7s,mb4.1						
LOR	Lormes	82.56	338	eP	P	23 56 05.1	+0.2
LOR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
LOR	Lormes	82.56	338	eP	P	23 56 05.1	+0.2
	comp=Z,2.2nm,0.7s,mb4.1						
GRR	Gorron	82.63	342	eP	P	23 56 05.4	+0.1
	comp=Z,5.6nm,0.6s,mb4.2						
GRR	Gorron	82.63	342	eP	P	23 56 05.4	+0.1
GRR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
GRR	Gorron	82.63	342	eP	P	23 56 05.4	+0.1
	comp=Z,2.8nm,0.6s,mb4.3						
SSF	Saint Saulge	82.84	338	eP	P	23 56 06.4	0.0
	comp=Z,2.7nm,0.7s,mb3.9						
SSF	Saint Saulge	82.84	338	eP	P	23 56 06.4	0.0
SSF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
SSF	Saint Saulge	82.84	338	eP	P	23 56 06.4	0.0
	comp=Z,1.4nm,0.7s,mb3.9						
SGMF	Saint Gilles	83.12	343	eP	P	23 56 07.4	-0.4
AVF	Avril sur Loir	83.13	338	eP	P	23 56 07.8	-0.1
	comp=Z,1.5nm,0.5s,mb3.8						
AVF	Avril sur Loir	83.13	338	eP	P	23 56 07.8	-0.1
AVF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
AVF	Avril sur Loir	83.13	338	eP	P	23 56 07.8	-0.1
	comp=Z,0.8nm,0.5s,mb3.8						
SMF	Signal de Mont	83.14	338	eP	P	23 56 08.2	+0.3
SWET	Sewanee	83.98	44	eP	P	23 56 11.7	-0.7
MFF	Saint Martin d	84.16	341	eP	P	23 56 13.4	+0.2
TKL	Tuckaleechee C	84.64	42	P	P	23 56 14.8	-1.0
	comp=Z,2.9nm,0.7s,mb4.3,baz=176,slow=2.9,SNR=4.2						
TKL	Tuckaleechee C	84.64	42	P	P	23 56 14.8	-1.0
TKL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TKL	Tuckaleechee C	84.64	42	P	P	23 56 14.8	-1.0
TORD	Torodi Ar. Bea	114.81	327	PKP	PKiKP	00 02 21.4	-1.2
	comp=Z,0.2nm,0.6s,baz=94,slow=1.6,SNR=4.8						
CPUP	Villa Florida	149.87	59	PKPbc	PKPbc	00 03 31.2	-0.7
	comp=Z,0.9nm,0.4s,baz=290,slow=4.0,SNR=5.6						

*ISCJB **29** 23:44:07.2±2.0, 25°.8S±0°.1×177°.7W±0°.1, h198km±18km, mb3.9/11, Error ellipse: s-maj=23.3km s-min=20.1km az=165.1*
*NEIC **29** 23:44:07.7±1.6, 25°.79S×177°.56W, h196km±14km, mb4.2/4, Error ellipse: s-maj=17.7km s-min=13.1km az=173.0*
*IDC **29** 23:44:07.8±2.6, 25°.82S×177°.59W, h194km±22km, mb3.8/8, mb1 4.0/9, mb1mx3.9/16, mbtmp3.9/9, Error ellipse: s-maj=19.6km s-min=18.7km az=49.0*
ISC 29 23:44:07.7±2.0, 25°.8S±0°.1×177.7W±0°.1, h188km±18km, n35, σ0§65/19, mb4.1/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.46	184	P	Pn	23 45 02.2	-0.1
	73nm,0.3s,baz=256,slow=23,SNR=5.9						
RAO				S	Sn	23 45 37.1	-8.0
	84nm,0.3s,baz=323,slow=20,SNR=4.4						
TAU	Tasmania Unive	33.28	230	P	P	23 50 26.6	-0.7
CTA	Charters Tower	33.63	272	P	P	23 50 31.9	+1.3
	8.2nm,0.6s,mb4.7,baz=96,slow=12,SNR=11						
CTAO	Charters Tower	33.63	272	eP	P	23 50 31.8	+1.2
	6.7nm,0.4s,mb4.7						
STKA	Stephens Creek	36.05	251	P	P	23 50 51.4	+0.3
	1.4nm,0.5s,mb3.8,baz=122,slow=16,SNR=3.0						
ASAR	Alice Springs	43.84	262	P	P	23 51 54.4	-1.0
	2.1nm,0.3s,mb4.2,baz=89,slow=7.3,SNR=22						
WRAB	Tennant Creek	44.41	267	eP	P	23 52 00.1	+0.2
	6.8nm,0.8s,mb4.3						
SBA	Scott Base	52.65	184	eP	P	23 53 03.2	+1.3
	0.9nm,0.5s,mb3.8						
FITZ	Fitzroy Crossi	52.81	266	eP	P	23 53 04.3	+0.3
	3.3nm,0.6s,mb4.2						
MBWA	Marble Bar	57.15	261	P	P	23 53 34.3	-0.7
QSPA	South Pole Qui	64.31	180	P	P	23 54 22.3	-0.2
	2.7nm,0.8s,mb4.1,baz=347,slow=1.9,SNR=10						
QSPA	South Pole Qui	64.31	180	P	P	23 54 22.3	-0.2
MAW	Mawson	76.73	200	P	P	23 55 37.2	-0.5
	3.8nm,0.5s,mb4.3,baz=138,slow=8.7,SNR=20						
PETK	Petropavlovsk-	81.43	345	P	P	23 56 02.8	-0.3
	2.1nm,0.6s,mb4.0,baz=113,slow=6.0,SNR=7.5						
NVAR	Mina Array Bea	84.66	43	P	P	23 56 20.4	+0.3
	0.8nm,0.6s,mb3.6,baz=226,slow=8.0,SNR=6.6						
NVAR	Mina Array Bea	84.66	43	P	P	23 56 20.4	+0.3
MDJ	Mudanjiang	85.00	325	P	P	23 56 22.1	+0.4
PDAR	Pinedale Array	92.59	43	P	P	23 56 57.0	-0.5
	0.5nm,0.7s,mb3.8,baz=214,slow=1.1,SNR=3.7						
ZALV	Zalesovo Beam	114.74	320	PKP	PKiKP	00 02 24.2	-1.0
	0.5nm,0.6s,baz=197,slow=1.5,SNR=2.7						
MKAR	Makanchi Array	114.98	312	PKP	PKiKP	00 02 24.4	-1.5
	0.3nm,0.3s,baz=101,slow=1.6,SNR=4.4						
KURK	Kurchatov	118.02	316	PKP	PKPdf	00 02 30.4	-1.2
	0.4nm,0.5s,baz=114,slow=1.2,SNR=2.8						
BOSA	Boshof	121.60	204	PKP	PKPdf	00 02 38.9	-0.4
	3.7nm,1.1s,baz=153,slow=4.5,SNR=4.2						
ARCES	ARCESS Array B	134.14	349	PKP	PKPdf	00 03 01.2	-0.7
	1.1nm,0.5s,baz=2,9,slow=2.4,SNR=8.7						
ARCES	ARCESS Array B	134.14	349	PKP	PKPdf	00 03 01.2	-0.7
FINES	FINESS Array B	140.89	342	PKhKP		00 03 06.8	
	0.3nm,0.4s,baz=32,slow=3.1,SNR=5.2						
FINES				PKP	PKPdf	00 03 12.8	-1.7
	1.3nm,0.8s,baz=64,slow=4.4,SNR=3.7						
NOA	NORSAR Array B	144.23	353	PKP	PKPdf	00 03 18.3	-2.1
	2.8nm,0.8s,baz=17,slow=2.4,SNR=16						
IZAR	Zarasai	145.36	336	eP	PKPdf	00 03 22.7	+0.1
IDID	Didziasalis	145.51	335	eP	PKPdf	00 03 23.0	+0.2
ISAL	Salakas	145.54	336	eP	PKPdf	00 03 23.1	+0.2
IIGN	Ignalina	145.68	336	eP	PKPdf	00 03 23.6	+0.5
AKASG	Malin Array Be	147.69	327	PKPbc	PKPbc	00 03 28.6	-1.1
	1.7nm,0.4s,baz=44,slow=4.0,SNR=11						
MMAI	Mount Meron Ar	150.38	292	PKPbc	PKPbc	00 03 37.7	+0.7
	2.2nm,0.4s,baz=81,slow=6.9,SNR=20						
BRTR	Keskin Array B	150.39	306	PKPbc	PKPbc	00 03 36.2	-0.5
	1.1nm,0.5s,baz=140,slow=4.0,SNR=8.3						
BRTR				PKPab	PKPab	00 03 43.6	-0.3
	1.3nm,0.6s,baz=88,slow=4.0,SNR=6.5						
TORD	Torodi Ar. Bea	167.42	177	PKP	PKPdf	00 03 50.3	-1.5
	1.9nm,1.3s,baz=149,slow=1.1,SNR=3.9						
TORD				PKPab	PKPab	00 04 56.8	-1.1
	0.5nm,0.9s,baz=190,slow=3.3,SNR=6.1						
TORD	Torodi Ar. Bea	167.42	177	PKP	PKPdf	00 03 50.3	-1.6
TORD				PKPab	PKPab	00 04 56.8	-1.1

*ISCJB **29** 23:50:57.4±0.3, 32°.77N±0°.03×105°.78E±0°.04, h10km, mb4.0/19, Error ellipse: s-maj=5.2km s-min=4.2km az=29.8*
*IDC **29** 23:50:58.2±1.1, 32°.80N×105°.72E, h0km, mb4.0/11, mb1 4.0/13, mb1mx3.9/29, mbtmp3.9/13, ML4.0/2, Error ellipse: s-maj=36.6km s-min=21.1km az=65.0*
*NEIC **29** 23:50:59.5±0.3, 32°.78N×105°.69E, h10km, mb4.1/6, Error ellipse: s-maj=6.3km s-min=5.2km az=76.0*
*MOS **29** 23:50:59.4±1.1, 32°.77N×105°.82E, h26km, mb4.2/16, Error ellipse: s-maj=14.9km s-min=8.8km az=102.5*
*BJI **29** 23:51:00.4, 32°.80N×105°.47E, h16km, mB4.5/3, mb4.2/5, ML4.2/12, Ms4.0/4, Ms7 3.6/6*
ISC 29 23:50:59.5±0.3, 32°.74N±0°.03×105°.71E±0°.03, h10km, n57, σ1§02/68, mb4.0/19, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.47	223	Pn	Pn	23 51 39.8	0.0
CD2				Pg	Pg	23 51 44.0	-2.8
CD2				Sg	Sg	23 52 16.0	-2.9
CD2				smax			
	comp=N,2μm,0.9s						
XAN	Xi'an	2.98	63	Pn	Pn	23 51 49.8	+3.0
XAN				Pg	Pg	23 51 57.0	+0.4
XAN				Sn	Sn	23 52 22.8	+0.2
XAN				Sg	Sg	23 52 33.8	-1.4
XAN				smax			
	comp=N,390nm,0.8s						
XAN				smax			
	comp=E,220nm,0.6s						
LZH	Lanzhou	3.67	336	⇓Pn	Pn	23 51 58.8	+2.5
LZH				Pg	Pg	23 52 08.5	-1.4
LZH				Sn	Sn	23 52 42.5	+2.8
LZH				Sg	Sg	23 52 54.0	-3.5
LZH				smax			
	comp=N,800nm,0.5s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=E,3μm,5.6s						
LZH				LR	LR		
	comp=Z,3μm,8.0s						
ENH	Enshi	4.06	126	ePn	Pn	23 52 02.9	+1.2
ENH				ePg	Pg	23 52 15.9	-1.3
ENH				eSg	Sg	23 53 10.1	+0.3
GYA	Guiyang	6.32	172	Pn	Pn	23 52 34.3	+1.6
GYA				smax			
	comp=N,110nm,0.9s						
GYA				smax			
	comp=E,140nm,0.8s						
WHN	Wuhan	7.69	104	P	Pg	23 53 26.5	-0.1
KMI	Kunming	8.03	200	P	Pn	23 53 01.0	+4.9
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
GTA	Gaotai	8.19	326	eP	Pn	23 52 59.0	+0.7
GTA				pP		23 53 02.3	
GTA				sP		23 53 05.5	
GTA				S	Sn	23 54 31.3	+0.5
GTA				sS		23 54 37.3	
GTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,41nm,4.2s						
GTA				LR	LR		
	comp=N,320nm,7.7s						
GTA				LR	LR		
	comp=E,210nm,9.5s						
GTA				LR	LR		
	comp=Z,310nm,12.8s						
BJT	Baijiatuau	11.12	46	eP	Pn	23 53 37.2	-1.3
SONM	Songino Array	15.08	2	Pn	Pn	23 54 32.0	-0.5
	comp=Z,0.2nm,0.3s,baz=171,slow=10,SNR=3.5						
SONM				Lg		23 58 53.6	
	comp=Z,0.2nm,0.3s,baz=198,slow=27,SNR=2.9						
CHTO	Chiang Mai	15.14	205	eP	Pn	23 54 33.5	0.0
CMAR	Chiang Mai Arr	15.47	205	Pn	Pn	23 54 37.8	-0.1
	comp=Z,0.5nm,0.3s,baz=14,slow=11,SNR=3.4						
CMAR	Chiang Mai Arr	15.47	205	P	Pn	23 54 37.8	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	Makanchi Array	22.71	315	eP	P	23 56 01.1	-0.2
MKAR	Makanchi Array	22.71	315	P	P	23 56 01.6	+0.4
	comp=Z,1.9nm,0.6s,mb3.7,baz=114,slow=13,SNR=19						
MKAR	Makanchi Array	22.71	315	P	P	23 56 01.7	+0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TKM2	Tokmak 2	25.74	302	eP	P	23 56 29.9	-0.2
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
TKM2	Tokmak 2	25.74	302	eP	P	23 56 29.9	-0.2
	comp=Z,2.0nm,0.5s,mb3.9						
ZALV	Zalesovo Beam	25.89	331	P	P	23 56 31.1	-0.3
	comp=Z,0.6nm,0.4s,mb3.5,baz=138,slow=9.7,SNR=4.1						
ZALV	Zalesovo Beam	25.89	331	P	P	23 56 31.1	-0.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
UCH	Uchtor	26.38	300	eP	P	23 56 36.4	+0.5
	comp=Z,4.6nm,1.1s,mb3.9						
AAK	Ala-Archa	26.47	301	P	P	23 56 38.2	+1.5
	comp=Z,1.8nm,0.4s,mb4.0,baz=187,slow=6.6,SNR=4.2						
AAK	Ala-Archa	26.47	301	P	P	23 56 38.2	+1.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
AAK	Ala-Archa	26.47	301	P	P	23 56 36.8	+0.1
KURK	Kurchatov	26.81	320	P	P	23 56 40.0	+0.3
	comp=Z,1.1nm,0.6s,mb3.6,baz=137,slow=8.8,SNR=8.5						
KURK	Kurchatov	26.81	320	P	P	23 56 40.0	+0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
KURK	Kurchatov	26.81	320	eP	P	23 56 39.8	+0.2
	comp=Z,2.4nm,0.8s,mb3.8						
AML	Almayashu	26.96	300	eP	P	23 56 41.1	0.0
KBL	Kabul	30.48	284	eP	P	23 57 12.3	-0.2
KBL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
KBL	Kabul	30.48	284	eP	P	23 57 12.3	-0.2
	comp=Z,1.6nm,0.4s,mb4.1						
BRVK	Borovoye	32.47	319	ceP	P	23 57 30.7	+0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
YAK	Yakutsk	33.09	21	P	P	23 57 34.8	-0.4
ABKAR	Akbulak array	37.64	310	eP	P	23 58 14.1	-0.4
	comp=Z,1.3nm,0.6s,mb3.8						
ARU	Arti	40.00	321	P	P	23 58 34.8	+0.6
ARU	Arti	40.00	321	eP	P	23 58 34.0	-0.1
	comp=Z,5.5nm,1.1s,mb4.2						
TIXI	Tiksi	40.88	11	eP	P	23 58 40.3	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
JOF	Joensuu	54.38	327	eP	P	00 00 24.6	-1.6
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
JOF	Joensuu	54.38	327	ep	P	00 00 24.6	-1.6
	comp=Z,3.1nm,0.7s,mb4.3						
ARCES	ARCESS Array B	56.34	335	P	P	00 00 40.2	+0.1
	comp=Z,2.7nm,0.9s,mb4.3,baz=68,slow=9.8,SNR=4.7						
ARCES	ARCESS Array B	56.34	335	P	P	00 00 40.2	+0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	56.34	335	P	P	00 00 40.2	0.0
FINES	FINESS Array B	56.98	326	P	P	00 00 44.9	+0.1
	comp=Z,2.0nm,0.5s,mb4.5,baz=93,slow=7.9,SNR=26						
FINES	FINESS Array B	56.98	326	P	P	00 00 44.9	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	56.98	326	P	P	00 00 44.9	+0.1
AKASG	Malin Array Be	57.27	313	P	P	00 00 46.6	-0.5
	comp=Z,1.6nm,0.5s,mb4.3,baz=69,slow=6.3,SNR=4.6						
AKASG	Malin Array Be	57.27	313	ceP	P	00 00 46.7	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	62.21	151	P	P	00 01 22.1	+0.7
	comp=Z,1.2nm,0.5s,mb4.3,baz=334,slow=7.3,SNR=4.2						
ASAR	Alice Springs	62.21	151	P	P	00 01 22.1	+0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	63.18	326	P	P	00 01 27.0	-0.4
	comp=Z,0.5nm,0.4s,mb4.0,baz=76,slow=8.3,SNR=5.2						
HFS	Hagfors	63.18	326	P	P	00 01 27.0	-0.4
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	64.02	327	P	P	00 01 32.0	-0.9
	comp=Z,0.6nm,0.6s,mb3.8,baz=71,slow=6.5						
NOA	NORSAR Array B	64.02	327	P	P	00 01 32.2	-0.7
	comp=Z,1.4nm,0.8s,mb4.1,baz=71,slow=6.7,SNR=5.6						
NOA	NORSAR Array B	64.02	327	P	P	00 01 32.2	-0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	64.02	327	P	P	00 01 32.2	-0.7
YKA	Yellowknife Ar	79.72	18	P	P	00 03 08.0	+0.9
	comp=Z,0.6nm,0.7s,mb3.6,baz=338,slow=4.8,SNR=2.9						
YKA	Yellowknife

	baz=336						
NWF				S	Sb	00 12 49.6	-0.1
	baz=336						
TWA	**Mucha**	**1.05**	**323**	*eP*	**Pb**	**00 12 36.8**	**+0.3**
	baz=325						
TWA				*eS*	**Sb**	**00 12 50.7**	**+0.6**
	baz=325						
EHY	**Hungye**	**1.07**	**234**	*eP*	**Pb**	**00 12 36.1**	**-0.9**
	baz=232						
TWF1	**Yuli**	**1.19**	**229**	*eP*	**Pn**	**00 12 37.5**	**-1.3**
	baz=227						
TWF1				*eS*	**Sb**	**00 12 52.4**	**-1.8**
	baz=227						
TWS1	**Kuangyinshan**	**1.23**	**321**	*eP*	**Pn**	**00 12 39.0**	**-0.4**
	baz=322						
TWS1				*eS*	**Sb**	**00 12 55.6**	**0.0**
	baz=322						
NSTT	**Nanjuang**	**1.26**	**293**	*eP*	**Pn**	**00 12 40.1**	**+0.3**
	baz=293						
SMLT	**Sun Moon Lake**	**1.28**	**259**	*eP*	**Pn**	**00 12 40.2**	**+0.1**
	baz=258						
TYC	**Yuchr**	**1.31**	**260**	*eP*	**Pn**	**00 12 40.5**	**0.0**
	baz=259						
TYC				S	**Sb**	**00 12 57.0**	**-0.8**
	baz=259						
IRIF	**Iriomote-Funau**	**1.34**	**81**	P	**Pn**	**00 12 40.8**	**-0.2**
IRIF				*eS*	**Sb**	**00 12 58.2**	**-0.5**
YUS	**Yu-Shan**	**1.37**	**242**	P	**Pn**	**00 12 41.0**	**-0.3**
	baz=240						
YUS				S	**Sn**	**00 12 57.6**	**-1.7**
	baz=240						
TWQ1	**Liyutan**	**1.39**	**279**	*eP*	**Pn**	**00 12 41.3**	**-0.3**
	baz=278						
HATJ	**Hateruma jima**	**1.40**	**93**	P	**Pn**	**00 12 42.7**	**+0.9**
HATJ				*eS*	**Sn**	**00 13 00.5**	**+0.3**
ALS	**Alishan**	**1.48**	**245**	P	**Pn**	**00 12 42.8**	**-0.1**
	baz=244						
ALS				*eS*	**Sn**	**00 13 00.8**	**-1.3**
	baz=244						
ELDTW	**Lidau**	**1.49**	**231**	*eP*	**Pn**	**00 12 41.8**	**-1.2**
	baz=229						
CHN5	**Tsauling**	**1.56**	**250**	P	**Pn**	**00 12 44.3**	**+0.4**
	baz=249						
CHN5				S	**Sn**	**00 13 04.3**	**+0.4**
	baz=249						
JKRS	**Kuro-shima**	**1.59**	**86**	P	**Pn**	**00 12 45.0**	**+0.6**
JKRS				*eS*	**Sn**	**00 13 04.7**	**-0.1**
JIJ	**Ishigaki jima**	**1.72**	**82**	P	**Pn**	**00 12 45.6**	**-0.6**
JIJ				*eS*	**Sn**	**00 13 07.0**	**-1.0**
WTP	**Ta-pu**	**1.76**	**240**	P	**Pn**	**00 12 47.2**	**+0.5**
	baz=238						
WTP				*eS*	**Sn**	**00 13 09.9**	**+0.9**
	baz=238						
TWK	**Hsinying**	**1.85**	**242**	*eP*	**Pn**	**00 12 48.7**	**+0.7**
	baz=241						
TWK				*eS*	**Sn**	**00 13 11.7**	**+0.5**
	baz=241						
CHN1	**Nanshi**	**1.86**	**240**	*eP*	**Pn**	**00 12 49.3**	**+1.2**
	baz=238						
CHN1				*eS*	**Sn**	**00 13 12.2**	**+0.8**
	baz=238						
SGST	**Jiashian**	**1.87**	**236**	*eP*	**Pn**	**00 12 49.1**	**+0.8**
	baz=235						
SGST				*eS*	**Sn**	**00 13 12.8**	**+1.0**
	baz=235						
SSD	**Sandimen**	**2.05**	**228**	*eP*	**Pn**	**00 12 52.0**	**+1.4**
	baz=226						
SSD				*eS*	**Sn**	**00 13 17.1**	**+1.1**
	baz=226						
JTJ	**Tarama**	**2.27**	**77**	*eS*	**Sn**	**00 13 20.9**	**-0.7**

BJI 30 00:17:11.5,41.34N×123.36E,h28km,ML3.5/6,1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNY	**Shenyang**	**0.51**	**18**	⇑Pg	Pb	00 17 21.5	-0.6
SNY				Sg	Sb	00 17 31.0	+1.8
SNY				smax			
	comp=N,800nm,0.4s						
SNY				smax			
	comp=E,560nm,0.4s						
DL2	**Dalian**	**2.77**	**209**	Sg	Sn	00 18 28.0	+1.5
DL2				smax			
	comp=N,130nm,0.7s						
DL2				smax			
	comp=E,110nm,0.6s						
CN2	**Changchun**	**2.90**	**31**	*e*Pg	Pn	00 18 03.8	+8.0
CN2				Sg	Sn	00 18 44.5	+15
CN2				smax			
	comp=N,160nm,0.6s						
CN2				smax			
	comp=E,120nm,0.6s						

*ISCJB **30** 00:22:41.8±0.5,26.07N±0.06×98.73E±0.05,h10km, mb3.7/14,MS3.1/2,Error ellipse: s-maj=9.4km s-min=5.4km az=17.1*
*IDC **30** 00:22:42.9±1.4,26.15N×98.61E,h0km,mb3.8/9, mb1 3.8/10,mb1mx3.6/27,mbtmp3.8/10,ML4.2/1,MS3.2/2, Ms1 3.2/2,ms1mx2.5/37,Error ellipse: s-maj=52.8km s-min=18.8km az=84.0*
*BJI **30** 00:22:45.2,25.90N×98.48E,h19km,ML3.9/7,Ms3.6/1, Ms7 3.2/1*
*NEIC **30** 00:22:48.0±1.5,26.07N×98.71E,h44km±21km,mb3.7/6, Error ellipse: s-maj=14.9km s-min=11.3km az=137.0*

ISC 30 00:22:44.2±0.5,26.15N±0.06×98.73E±0.05,h10km,n25, σ0.82/27,mb3.7/14,MS3.1/2,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.76**	**105**	Pg	**Pg**	**00 23 54.5**	**-1.9**
KMI				Sg	**Sg**	**00 24 46.5**	**+1.3**
KMI				smax			
	comp=N,150nm,1.0s						
KMI				smax			
	comp=E,93nm,0.8s						
KMI				LR	LR		
	comp=N,650nm,6.6s						
KMI				LR	LR		
	comp=E,270nm,6.3s						
KMI				LR	LR		
	comp=Z,190nm,6.7s						
SHL	**Shillong**	**6.19**	**266**	*e*PN	**Pb**	**00 24 26.5**	**-5.7**
SHL				*e*SN	**Sn**	**00 25 27.5**	**+0.8**
CHTO	**Chiang Mai**	**7.31**	**178**	Pn	**Pn**	**00 24 32.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**7.66**	**178**	Pn	**Pn**	**00 24 35.1**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=348,slow=13,SNR=8.2						
CMAR				Pg	**Pg**	**00 25 02.6**	**-8.3**
	comp=Z,1.2nm,0.3s,baz=356,slow=17,SNR=20						
CMAR				Lg		00 26 49.2	
	comp=Z,0.4nm,0.3s,baz=0.5,slow=29,SNR=6.5						
SONM	**Songino Array**	**22.47**	**14**	P	**P**	**00 27 44.4**	**+1.0**
	comp=Z,1.8nm,0.8s,mb3.6,baz=196,slow=10,SNR=14						
ULN	**Ulaanbaatar**	**22.64**	**15**	*e*P	**P**	**00 27 45.9**	**+0.6**
	comp=Z,1.0nm,0.4s,mb3.6						
MK31	**Makanchi Array**	**24.38**	**332**	*e*P	**P**	**00 28 02.5**	**+0.1**
MKAR	**Makanchi Array**	**24.38**	**332**	P	**P**	**00 28 03.6**	**+1.1**
	comp=Z,1.6nm,0.6s,mb3.6,baz=136,slow=9.0,SNR=17						
UCH	**Uchtor**	**25.53**	**315**	*e*P	**P**	**00 28 13.8**	**+0.8**
	comp=Z,1.9nm,0.8s,mb3.7						
AAK	**Ala-Archa**	**25.75**	**316**	P	**P**	**00 28 15.6**	**+0.6**
	comp=Z,0.7nm,0.3s,mb3.6,baz=31,slow=5.4,SNR=6.1						
AAK	**Ala-Archa**	**25.75**	**316**	P	**P**	**00 28 15.4**	**+0.4**
	comp=Z,0.8nm,0.4s,mb3.6						
AML	**Almayashu**	**26.01**	**314**	*e*P	**P**	**00 28 17.4**	**+0.1**
	comp=Z,3.5nm,0.9s,mb3.9						
KURK	**Kurchatov**	**28.96**	**333**	LR	LR	00 41 47.7	
	comp=Z,37nm,19.1s,MS3.0,baz=175,slow=40						
KURK	**Kurchatov**	**28.96**	**333**	*e*P	**P**	**00 28 42.9**	**-0.8**
	comp=Z,0.6nm,0.4s,mb3.7						
ZALV	**Zalesovo Beam**	**29.62**	**343**	P	**P**	**00 28 49.1**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.6,baz=159,slow=7.8,SNR=4.9						
BVAR	**Borovoye Array**	**34.19**	**329**	P	**P**	**00 29 29.4**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.1,baz=247,slow=38,SNR=3.2						
ABKAR	**Akbulak array**	**37.79**	**318**	*e*P	**P**	**00 30 00.3**	**-0.3**
	comp=Z,0.6nm,0.6s,mb3.5						
YSS	**Yuzh-Sakhalins**	**40.35**	**47**	P	**P**	**00 30 22.3**	**+0.3**
YAK	**Yakutsk**	**41.41**	**22**	*e*P	**P**	**00 30 30.2**	**-0.3**
AKASG	**Malin Array Be**	**57.42**	**315**	P	**P**	**00 32 31.7**	**-1.3**
	comp=Z,0.5nm,0.4s,mb3.9,baz=76,slow=6.6,SNR=4.8						
FINES	**FINESS Array B**	**59.12**	**328**	P	**P**	**00 32 44.6**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.9,baz=116,slow=17,SNR=3.4						
ARCES	**ARCESS Array B**	**59.89**	**337**	P	**P**	**00 32 50.0**	**+0.2**
	comp=Z,1.1nm,0.9s,mb3.9,baz=91,slow=6.7,SNR=3.6						
NOA	**NORSAR Array B**	**66.30**	**328**	P	**P**	**00 33 31.2**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.5,baz=96,slow=7.6,SNR=3.3						
NOA				LR	LR	01 04 48.4	
	comp=Z,17nm,18.7s,MS3.3,baz=265,slow=38						
NOA	**NORSAR Array B**	**66.30**	**328**	P	**P**	**00 33 31.2**	**-1.3**
NOA				LR	LR	01 04 48.4	
VSL	**Villasalto**	**73.41**	**306**	*e*P	**P**	**00 34 16.0**	**-0.7**

IDC 30 00:31:45.4±6.8,24.42N×108.70W,h0km,mb1 3.7/3, mb1mx3.5/21,mbtmp3.2/3,ML3.8/2,Error ellipse: s-maj=82.7km s-min=29.3km az=160.0,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.64**	**41**	Pn	Pn	00 33 24.9	+0.6
	0.2nm,0.3s,baz=211,slow=14,SNR=17						
TXAR				Sn	Sn	00 34 42.5	+1.7
	0.8nm,0.3s,baz=224,slow=22,SNR=11						
TXAR				Lg		00 35 14.0	
	baz=228,slow=24,SNR=2.4						
NVAR	**Mina Array Bea**	**16.18**	**332**	Pn	Pn	00 35 37.0	+2.9
	0.0nm,0.3s,baz=161,slow=8.6,SNR=5.8						
PDAR	**Pinedale Array**	**18.32**	**358**	P	Pn	00 36 01.6	+0.8
	0.1nm,0.3s,baz=169,slow=12,SNR=6.8						

*DDA **30** 00:43:33.8,40.53N×33.01E,h16km±1km,Md3.0*
*ISK **30** 00:43:33.5,40.53N×33.00E,h5km,MD3.3*
*ISCJB **30** 00:43:34.5±0.3,40.55N±0.03×33.01E±0.03,h10km,Error ellipse: s-maj=4.0km s-min=3.0km az=152.2*
*CSEM **30** 00:43:34.1±0.1,40.53N×33.01E,h2km,MD3.0,Error ellipse: s-maj=1.8km s-min=1.4km az=144.0*

ISC 30 00:43:34.6±0.5,40.54N±0.03×33.00E±0.03,h5km±5km, n47,σ0.69/64,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.33**	**99**	*i* P	**Pg**	**00 43 40.9**	**0.0**
ELDT				*i* S	**Sg**	**00 43 45.9**	**+0.7**
ELDT	**Eldivan**	**0.33**	**99**	*i* P	**Pg**	**00 43 40.9**	**0.0**
ELDT				*i* S	**Sg**	**00 43 45.9**	**+0.7**
CANT	**Cankiri**	**0.47**	**82**	PG	**Pg**	**00 43 43.5**	**-0.2**
CANT				*e*SG	**Sg**	**00 43 50.5**	**+0.7**
LOD	**Lodumlu**	**0.68**	**196**	*e*PG	**Pg**	**00 43 46.7**	**-0.9**
LOD				*e*SG	**Sg**	**00 43 56.2**	**-0.2**
LOD	**Lodumlu**	**0.68**	**196**	*e*Pg	**Pg**	**00 43 46.7**	**-0.9**
LOD				*e*Sg	**Sg**	**00 43 56.2**	**-0.2**
SGKT	**Sivrigoynuk**	**0.72**	**273**	*i* P	**Pg**	**00 43 48.3**	**-0.2**
SGKT				*i* S	**Sg**	**00 43 58.0**	**+0.1**
SGKT	**Sivrigoynuk**	**0.72**	**273**	*i* P	**Pg**	**00 43 48.3**	**-0.2**
SGKT				*i* S	**Sg**	**00 43 58.0**	**+0.2**
SAFT	**Safranbolu**	**0.74**	**341**	*e*PG	**Pg**	**00 43 48.4**	**-0.3**
SAFT	**Safranbolu**	**0.74**	**341**	*e*Pg	**Pg**	**00 43 48.4**	**-0.3**
ILGA	**Ilgaz**	**0.74**	**47**	*i* P	**Pg**	**00 43 48.4**	**-0.4**
ILGA				*i* S	**Sg**	**00 43 59.0**	**+0.5**
ILGA	**Ilgaz**	**0.74**	**47**	*i* P	**Pg**	**00 43 48.4**	**-0.4**
ILGA				*i* S	**Sg**	**00 43 59.0**	**+0.5**
TOS	**Tosya**	**0.92**	**57**	*e*PG	**Pg**	**00 43 51.4**	**-0.8**
TOS	**Tosya**	**0.92**	**57**	*e*Pg	**Pg**	**00 43 51.4**	**-0.8**
BBAL	**Bala**	**1.00**	**175**	*e*P	**Pg**	**00 43 53.2**	**-0.6**
BBAL				*i* S	**Sg**	**00 44 08.4**	**+1.6**
BBAL	**Bala**	**1.00**	**175**	*e*P	**Pg**	**00 43 53.2**	**-0.6**
BBAL				*i* S	**Sg**	**00 44 08.4**	**+1.6**
BALT	**Daday**	**1.03**	**16**	*i* P	**Pg**	**00 43 54.2**	**-0.1**
BALT				*i* S	**Sg**	**00 44 08.5**	**+0.8**
BALT	**Daday**	**1.03**	**16**	*i* P	**Pg**	**00 43 54.2**	**-0.2**
BALT				*i* S	**Sg**	**00 44 08.5**	**+0.8**
CORM	**Corum**	**1.29**	**106**	*e*PN	**Pn**	**00 43 58.6**	**-0.6**
CORM	**Corum**	**1.29**	**106**	*e*Pn	**Pn**	**00 43 58.6**	**-0.7**
CTKT	**Corum**	**1.36**	**86**	*i* P	**Pn**	**00 43 59.4**	**-0.8**
CTKT	**Corum**	**1.36**	**86**	*i* P	**Pn**	**00 43 59.4**	**-0.8**
MDU	**Mudurnu**	**1.37**	**267**	*e*PN	**Pn**	**00 44 00.3**	**+0.1**
MDU	**Mudurnu**	**1.37**	**267**	*e*Pn	**Pn**	**00 44 00.3**	**0.0**
CDAG	**Cicekdag**	**1.40**	**131**	*i* P	**Pn**	**00 43 59.7**	**-0.9**
CDAG				*i* S	**Sb**	**00 44 18.7**	**-0.5**
CDAG	**Cicekdag**	**1.40**	**131**	*i* P	**Pn**	**00 43 59.7**	**-1.0**
CDAG				*i* S	**Sb**	**00 44 18.7**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.58**	**227**	*e*PN	**Pn**	**00 44 02.5**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.58**	**227**	*e*Pn	**Pn**	**00 44 02.5**	**-0.7**
BYBT	**Boyabat**	**1.62**	**55**	*e*PN	**Pn**	**00 44 03.7**	**-0.1**
BYBT	**Boyabat**	**1.62**	**55**	*e*Pn	**Pn**	**00 44 03.7**	**-0.1**
KIZT	**Kizilcal**	**1.87**	**208**	*e*PN	**Pn**	**00 44 07.1**	**-0.1**
KIZT	**Kizilcal**	**1.87**	**208**	*e*Pn	**Pn**	**00 44 07.1**	**-0.1**
GULT	**Gulveren**	**1.90**	**267**	*e*PN	**Pn**	**00 44 07.4**	**-0.2**
GULT	**Gulveren**	**1.90**	**267**	*e*Pn	**Pn**	**00 44 07.4**	**-0.2**
ESKT	**Eskisehir**	**1.94**	**239**	*e*PN	**Pn**	**00 44 07.3**	**-1.0**
ESKT	**Eskisehir**	**1.94**	**239**	*e*P	**Pn**	**00 44 07.4**	**-0.8**
ESKT				*e*S	**Sn**	**00 44 35.1**	**+2.1**
ESKT	**Eskisehir**	**1.94**	**239**	*e*Pn	**Pn**	**00 44 07.3**	**-0.9**
SEYT	**Eskypehyr**	**1.94**	**239**	*e*P	**Pn**	**00 44 07.4**	**-0.8**
SEYT				*e*S	**Sn**	**00 44 35.1**	**+2.1**
DIKM	**Dikmen**	**2.03**	**56**	*e*PN	**Pn**	**00 44 09.8**	**+0.4**
DIKM	**Dikmen**	**2.03**	**56**	*e*Pn	**Pn**	**00 44 09.8**	**+0.4**
GPA	**Golpazari**	**2.07**	**264**	*e*PN	**Pn**	**00 44 10.3**	**+0.3**
GPA	**Golpazari**	**2.07**	**264**	*e*Pn	**Pn**	**00 44 10.3**	**+0.3**
SULT	**Sultanhani-AKS**	**2.38**	**170**	*e*PN	**Pn**	**00 44 14.7**	**+0.6**
SULT	**Sultanhani-AKS**	**2.38**	**170**	*e*Pn	**Pn**	**00 44 14.7**	**+0.6**
ALT	**Altintas**	**2.68**	**237**	*e*PN	**Pn**	**00 44 18.9**	**+0.5**
ALT	**Altintas**	**2.68**	**237**	*e*Pn	**Pn**	**00 44 18.9**	**+0.6**
SVSK	**Karacayir**	**3.12**	**100**	*e*PN	**Pn**	**00 44 25.1**	**+0.8**
SVSK	**Karacayir**	**3.12**	**100**	*e*Pn	**Pn**	**00 44 25.2**	**+0.8**

IDC 30 00:57:56.6±2.1,7.08S×148.13E,h0km,mb4.0/7, mb1 4.2/7,mb1mx4.0/15,mbtmp4.0/7,MS3.4/1,Ms1 3.3/1, ms1mx2.7/19,Error ellipse: s-maj=65.0km s-min=21.7km az=100.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.42**	**218**	P	P	01 02 46.1	-0.2
	2.7nm,0.5s,baz=58,slow=9.2,SNR=28						
FITZ	**Fitzroy Crossi**	**24.50**	**241**	P	P	01 03 17.3	-0.5
	2.4nm,0.3s,baz=76,slow=8.6,SNR=22						
STKA	**Stephens Creek**	**25.42**	**193**	P	P	01 03 26.6	+0.6
	1.9nm,0.5s,baz=355,slow=9.4,SNR=3.7						
STKA				LR	LR	01 14 22.8	
	comp=Z,82nm,19.3s,baz=25,slow=39						
MJAR	**Matsushiro Arr**	**44.38**	**349**	P	P	01 06 09.0	+0.1
	0.7nm,0.4s,baz=186,slow=9.4,SNR=4.6						
KSRS	**Korea Array**	**48.16**	**338**	P	P	01 06 38.0	-0.7
	0.8nm,0.7s,baz=163,slow=9.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**54.75**	**298**	P	P	01 07 29.7	+1.3
	0.6nm,0.3s,baz=45,slow=6.5,SNR=5.0						
MKAR	**Makanchi Array**	**79.04**	**320**	P	P	01 10 02.4	-0.3
	0.5nm,0.5s,baz=99,slow=6.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	**146.44**	**283**	PKPbc	PKPbc	01 17 39.8	-1.0
	0.8nm,0.6s,baz=78,slow=3.7,SNR=4.9						

*KRSC **30** 01:04:38.5±1.3,52.37N×156.81E,h297km±37km,ML4.0*
*MOS **30** 01:04:38.0±1.0,52.69N×155.92E,h273km,mb3.6/3,Error ellipse: s-maj=25.3km s-min=18.7km az=67.7*
*ISCJB **30** 01:04:39.0±0.5,52.66N±0.09×156.1E±0.2,h285km±5km, mb3.4/8,Error ellipse: s-maj=18.4km s-min=10.4km az=38.1*
*NEIC **30** 01:04:39.9±0.9,52.83N×156.02E,h276km±8km,mb3.4/1, Error ellipse: s-maj=26.2km s-min=13.0km az=182.0*
*IDC **30** 01:04:40.0±0.9,52.81N×156.01E,h278km±6km,mb3.2/7, mb1 3.3/7,mb1mx3.0/26,mbtmp3.2/7,Error ellipse: s-maj=33.5km s-min=17.9km az=179.0*

ISC 30 01:04:40.0±0.5,52.64N±0.09×156.1E±0.2,h280km±5km, n31,σ1.11/39,mb3.4/8,1C,Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.53**	**133**	*e*P	**Pn**	**01 05 16.9**	**+0.6**
MIPR				*e*S	**S**	**01 05 45.2**	**+0.1**
PETK	**Petropavlovsk-**	**1.06**	**63**	P	**Pn**	**01 05 18.0**	**-0.4**
	3.0nm,0.3s,baz=42,slow=3.7,SNR=38						
PETK				S	**S**	**01 05 49.0**	**+0.2**
	0.7nm,0.3s,baz=308,slow=22,SNR=5.1						
PETK	**Petropavlovsk-**	**1.06**	**63**	PN	**Pn**	**01 05 18.0**	**-0.4**
PETK				S	**S**	**01 05 49.0**	**+0.2**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**1.06**	**63**	P	**Pn**	**01 05 18.0**	**-0.4**
PETK				S	**S**	**01 05 49.0**	**+0.2**
RUS	**Russkaya**	**1.47**	**97**	*e*P	**Pn**	**01 05 20.0**	**-0.9**
RUS				*e*S	**S**	**01 05 50.1**	**-3.2**
GNL	**Ganaly**	**1.52**	**45**	*e*P	**Pn**	**01 05 21.1**	**-0.1**
PET	**Petropavlovsk**	**1.58**	**75**	S	**S**	**01 05 54.1**	**-0.5**
AVH	**Avacha**	**1.70**	**67**	*e*P	**Pn**	**01 05 22.6**	**+0.1**
SKR	**Severo-Kuril's**	**1.96**	**180**	*e*PN	Px	01 05 41.5	
SKR				*e*	**S**	**01 06 02.1**	**+2.1**
SPN	**Mys Shipunski**	**2.41**	**77**	*e*P	**Pn**	**01 05 26.5**	**-1.9**
SPN				*e*S	**S**	**01 06 01.1**	**-5.8**
MKZ	**Mys Kozlova**	**3.85**	**58**	*e*P	**Pn**	**01 05 41.5**	**-1.8**
MKZ				*e*S	**S**	**01 06 27.2**	**-6.7**
KMNR	**Kamenistaya**	**3.95**	**36**	*e*P	**Pn**	**01 05 45.6**	**+1.2**
ZLN	**Zelenaya**	**4.35**	**37**	*e*P	**Pn**	**01 05 50.7**	**+1.7**
CIRR	**Tsirk**	**4.41**	**36**	P	**Pn**	**01 05 49.1**	**-0.5**
BDR	**Baidarnaya**	**4.92**	**35**	*e*P	**Pn**	**01 05 56.6**	**+1.0**
SRKR	**Sorokina**	**4.98**	**34**	P	**Pn**	**01 05 57.1**	**+0.9**
SMKR	**Semkarok**	**5.03**	**36**	*e*P	**Pn**	**01 05 57.7**	**+0.9**
KBTR	**Krutoberegovo**	**5.30**	**45**	*e*P	**Pn**	**01 05 59.3**	**-0.8**
KBTR				*e*S	**S**	**01 06 58.4**	**-5.9**
BILL	**Bilibino**	**16.21**	**14**⇑	*e*P	**P**	**01 08 13.1**	**+2.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BBB	**Bella Bella**	**44.19**	**59**	P	**P**	**01 12 20.2**	**-1.0**
	comp=Z,4.4nm,0.6s,mb3.8,baz=246,slow=10.0,SNR=3.1						
KURK	**Kurchatov**	**45.91**	**300**	*e*P	**P**	**01 12 33.6**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
KURK	**Kurchatov**	**45.91**	**300**	*e*P	**P**	**01 12 33.6**	**-1.1**
	comp=Z,0.8nm,0.4s,mb3.4						
MK31	**Makanchi Array**	**46.16**	**294**	*e*P	**P**	**01 12 35.9**	**-0.8**
MKAR	**Makanchi Array**	**46.16**	**294**	P	**P**	**01 12 35.6**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.1,baz=48,slow=7.2,SNR=4.9						
BVAR	**Borovoye Array**	**48.76**	**307**	P	**P**	**01 12 55.2**	**-1.3**
	comp=Z,1.0nm,0.4s,mb3.5,baz=57,slow=6.9,SNR=8.0						
BVAR	**Borovoye Array**	**48.76**	**307**	P	**P**	**01 12 55.2**	**-1.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**59.83**	**58**	P	**P**	**01 14 16.9**	**+1.0**
	comp=Z,0.7nm,0.7s,mb3.3,baz=318,slow=2.0,SNR=5.9						
TXAR	**Lajitas Array**	**73.01**	**64**	P	**P**	**01 15 39.6**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.1,baz=296,slow=5.0,SNR=7.2						
BRTR	**Keskin Array B**	**75.39**	**318**	P	**P**	**01 15 53.1**	**+0.3**
	comp=Z,1.0nm,0.9s,mb3.4,baz=24,slow=11,SNR=3.3						
BRTR	**Keskin Array B**	**75.39**	**318**	P	**P**	**01 15 53.1**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**78.41**	**201**	P	**P**	**01 16 10.8**	**+1.2**
	comp=Z,0.3nm,0.5s,mb3.3,baz=17,slow=5.0,SNR=3.9						

IDC 30 01:40:14.7±20.0,46.90N×118.22E,h0km,mb3.6/4, mb1 3.6/4,mb1mx3.4/25,mbtmp3.6/4,Error ellipse: s-maj=332.2km s-min=157.2km az=91.0,Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**22.26**	**301**	P	P	01 45 13.0	+0.1
	0.3nm,0.3s,baz=83,slow=4.5,SNR=2.3						
MKAR	**Makanchi Array**	**24.44**	**283**	P	P	01 45 35.2	+0.3
	0.2nm,0.3s,baz=82,slow=8.8,SNR=3.0						
KURK	**Kurchatov**	**26.14**	**293**	P	P	01 45 50.4	+0.2
	1.4nm,0.6s,baz=80,slow=8.6,SNR=7.5						
BVAR	**Borovoye Array**	**30.89**	**299**	P	P	01 46 32.9	+0.3
	0.5nm,0.3s,baz=83,slow=9.6,SNR=6.0						

KRSC 30 02:00:50.6±0.4,53.45N×161.06E,h37km±36km,ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.72**	**241**	*e*P	Pn	02 01 04.4	+0.2
SPN				*e*S	Sn	02 01 14.2	+0.3
NLC	**Nalytchevo**	**1.07**	**255**	*e*P	Pn	02 01 09.4	+0.4
NLC				*e*S	Sn	02 01 23.2	+0.6
KII	**Karymskiy**	**1.12**	**302**	*e*P	Pn	02 01 09.5	-0.3
KII				*e*S	Sn	02 01 23.2	-0.8
MKZ	**Mys Kozlova**	**1.18**	**19**	*e*P	Pn	02 01 09.7	-0.8
MKZ				*e*S	Sn	02 01 23.2	-2.1
AVH	**Avacha**	**1.40**	**263**	*e*P	Pn	02 01 14.8	+1.2
AVH				*e*S	Sn	02 01 33.0	+2.1
PET	**Petropavlovsk**	**1.51**	**255**	*e*P	Pn	02 01 15.9	+0.8
PET				*e*S	Sn	02 01 34.4	+0.9
RUS	**Russkaya**	**1.85**	**238**	*e*P	Pn	02 01 20.4	+0.7
RUS				*e*S	Sn	02 01 42.4	+0.6
GNL	**Ganaly**	**1.88**	**279**	*e*P	Pn	02 01 21.9	+1.8
TUMR	**Tumrok**	**1.91**	**344**	*e*P	Pn	02 01 21.6	+1.0
TUMR				*e*S	Sn	02 01 44.0	+0.6
GRL	**Gorelyy**	**2.02**	**245**	*e*P	Pn	02 01 23.4	+1.4
KMNR	**Kamenistaya**	**2.36**	**349**	*e*P	Pn	02 01 28.8	+2.0

ARTV	**Artvin**	**1.46**	**44**	*i* P	**Pn**	**02 13 29.6**	**-0.3**
ARTV				*i* S	**Sb**	**02 13 49.0**	**-0.5**
ARTV	**Artvin**	**1.46**	**44**	*i* P	**Pn**	**02 13 29.6**	**-0.3**
ARTV				*i* S	**Sb**	**02 13 49.0**	**-0.4**
BCA	**Borcka**	**1.52**	**31**	*e*PN	**Pn**	**02 13 30.8**	**0.0**
BCA	**Borcka**	**1.52**	**31**	*e*Pn	**Pn**	**02 13 30.8**	**0.0**
PTK	**Pertek**	**1.55**	**217**	*e*PN	**Pn**	**02 13 30.5**	**-0.7**
PTK	**Pertek**	**1.55**	**217**	*e*Pn	**Pn**	**02 13 30.5**	**-0.7**
ESPY	**Espiye-Giresun**	**1.61**	**299**	*e*PN	**Pn**	**02 13 31.9**	**-0.1**
ESPY	**Espiye-Giresun**	**1.61**	**299**	*e*Pn	**Pn**	**02 13 31.9**	**0.0**
KEMA	**Kemaliye**	**1.83**	**242**	*i* P	**Pn**	**02 13 35.0**	**0.0**
KEMA				*i* S	**Sn**	**02 14 02.4**	**+3.9**
KEMA	**Kemaliye**	**1.83**	**242**	*i* P	**Pn**	**02 13 35.0**	**0.0**
AGRB	**Hanur-Agry**	**1.94**	**106**	*e*PN	**Pn**	**02 13 37.0**	**+0.4**
AGRB	**Hanur-Agry**	**1.94**	**106**	*e*Pn	**Pn**	**02 13 37.0**	**+0.5**
BTMT	**Batman**	**2.07**	**160**	*e*PN	**Pn**	**02 13 39.0**	**+0.7**
DARE	**Darende-Malaty**	**2.45**	**242**	*e*PN	**Pn**	**02 13 50.5**	**+6.9**
SVSK	**Karacayir**	**2.76**	**266**	*e*PN	**Pn**	**02 13 48.9**	**+1.2**
SVSK	**Karacayir**	**2.76**	**266**	*e*Pn	**Pn**	**02 13 48.9**	**+1.1**
CLDR	**Caldiran**	**2.77**	**110**	*e*PN	**Pn**	**02 13 47.6**	**-0.3**
CLDR	**Caldiran**	**2.77**	**110**	*e*Pn	**Pn**	**02 13 47.6**	**-0.3**

*NEIC **30** 02:20:28.6, 17°.17N×100°.52W, h6km, MD3.5(MEX), After MEX.*

MEX 30 02:20:28.6±1.2, 17°.17N×100°.52W, h6km±8km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.27**	**116**	*i* P	Pg	02 20 33.6	-0.3
CAIG				*i* S	Sg	02 20 37.0	-0.5
CAIG	**El Cayaco**	**0.27**	**116**	*i* P	Pg	02 20 33.6	-0.3
CAIG				*i* S	Sg	02 20 37.0	-0.5
ACX	**Acapulco**	**0.65**	**117**	*i* P	Pg	02 20 41.2	+0.1
ACX				*i* S	Sg	02 20 48.8	-0.9
ACX	**Acapulco**	**0.65**	**117**	*i* P	Pg	02 20 41.2	+0.1
ACX				*i* S	Sg	02 20 48.8	-0.9
ZIIG	**Zihuatanejo**	**1.00**	**296**	*i* P	Pg	02 20 44.2	-3.6
ZIIG				*i* S	Sg	02 20 56.6	-4.2
ZIIG	**Zihuatanejo**	**1.00**	**296**	*i* P	Pg	02 20 44.2	-3.6
ZIIG				*i* S	Sg	02 20 56.6	-4.2
PNIG	**Pinotepa**	**2.42**	**108**	*i* P	Pn	02 21 05.6	-3.2
PNIG				*i* S	Sn	02 21 33.4	-5.3
PNIG	**Pinotepa**	**2.42**	**108**	*i* P	Pn	02 21 05.6	-3.2
PNIG				*i* S	Sn	02 21 33.4	-5.3

*CSEM **30** 02:42:22.3, 63°.95N×21°.16W, h6km, ML3.6, After REY*

REY 30 02:42:22.3, 63°.95N×21°.16W, h6km, ML3.3, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.07**	**263**	P	Pg	02 42 24.1	+0.2
IBJA				S	Sg	02 42 25.4	+0.4
ISOL	**Solvholt**	**0.10**	**104**	P	Pg	02 42 24.5	+0.1
ISOL				S	Sg	02 42 26.2	+0.4
IKRO	**Krokur**	**0.15**	**6**	P	Pg	02 42 25.4	+0.1
IKRO				S	Sg	02 42 27.8	+0.5
ISAN	**Sandskeio**	**0.21**	**300**	P	Pg	02 42 26.5	+0.1
ISAN				S	Sg	02 42 29.9	+0.7
IHEI	**Heioarbar**	**0.25**	**352**	P	Pg	02 42 27.2	0.0
IASM	**Asmuli**	**0.27**	**116**	P	Pg	02 42 27.5	0.0
IASM				S	Sg	02 42 31.5	+0.5
IKAS	**Kald??rsel**	**0.31**	**283**	P	Pg	02 42 28.4	0.0
IKAS				S	Sg	02 42 33.2	+0.7
ISAU	**Saurbar**	**0.33**	**83**	P	Pg	02 42 28.5	-0.2
ISAU				S	Sg	02 42 33.3	+0.3
IKRI	**Krysuvik**	**0.41**	**260**	P	Pg	02 42 29.8	-0.4
IKRI				S	Sg	02 42 35.4	-0.2
IKUD	**Kuludalsa**	**0.48**	**320**	P	Pg	02 42 30.8	-0.8
IKUD				S	Sg	02 42 37.7	-0.2
IHAU	**Haukadalur**	**0.53**	**88**	P	Pg	02 42 31.9	-0.5
IHAU				S	Sg	02 42 39.2	0.0
IGYG	**Gygjarholskot**	**0.53**	**51**	P	Pg	02 42 31.9	-0.6
IGYG				S	Sg	02 42 39.1	-0.2
IVOG	**Vogar**	**0.55**	**272**	P	Pg	02 42 32.1	-0.7
IVOG				S	Sg	02 42 39.9	0.0
IGRV	**Grindav??k**	**0.58**	**261**	P	Pg	02 42 32.6	-0.9
IGRV				S	Sg	02 42 41.2	+0.2
IMID	**Miomork**	**0.64**	**117**	P	Pg	02 42 33.8	-0.7
IMID				S	Sg	02 42 42.5	-0.3
IVES	**Vestmannaeyjar**	**0.64**	**142**	P	Pg	02 42 34.0	-0.6
IVES				S	Sg	02 42 43.0	+0.1
INYL	**Nylenda**	**0.70**	**272**	P	Pg	02 42 34.3	-1.4
INYL				S	Sg	02 42 44.0	-0.7
IASB	**`sbjarnarst**	**0.80**	**355**	P	Pg	02 42 36.3	-1.4
IASB				S	Sg	02 42 47.2	-0.8
IESK	**Eystri-Skogar**	**0.87**	**119**	P	Pg	02 42 37.5	-1.5
IESK				S	Sg	02 42 49.7	-0.6
IVAT	**Vatnsfell**	**1.01**	**76**	S	Sg	02 42 53.7	-1.1
IHVO	**Lagu-Hvolar**	**1.11**	**112**	P	Pg	02 42 41.8	-1.8
ISNB	**Snabyli**	**1.14**	**100**	P	Pg	02 42 42.0	-2.1
ISNB				S	Sg	02 42 57.7	-1.2
IHVE	**Hveravellir**	**1.15**	**36**	P	Pg	02 42 41.7	-2.6
IHVE				S	Sg	02 42 57.1	-2.1
IHRN	**Hraun**	**2.21**	**11**	P	Pn	02 42 58.5	-1.0

*IDC **30** 02:46:23.8±2.0, 13°.20N×95°.07E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/25, mbtmp3.7/5, ML3.9/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/31, Error ellipse: s-maj=65.6km s-min=27.4km az=62.0*

*ISCJB **30** 02:46:27.5±1.2, 13°.2N±0°.1×95°.3E±0°.1, h33km, mb3.9/8, MS3.2/4, Error ellipse: s-maj=20.1km s-min=14.9km az=5.5*

*NEIC **30** 02:46:29.8±1.1, 13°.26N×95°.29E, h35km, mb4.0/3, Error ellipse: s-maj=23.9km s-min=17.4km az=57.0*

ISC 30 02:46:29.8±1.2, 13°.3N±0°.1×95°.3E±0°.1, h35km, n19, σ0§95/14, mb3.9/8, MS3.2/4, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**5.29**	**63**	P	**Pn**	**02 47 46.0**	**-0.4**
BDT	**Bhumibol Dam**	**5.35**	**42**	P	**Pn**	**02 47 48.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**6.25**	**34**	Pn	**Pn**	**02 47 59.9**	**+0.2**
0.7nm,0.3s,baz=222,slow=15,SNR=4.9							
PSI	**Prapat**	**11.02**	**160**	LR	LR	02 53 56.0	
comp=Z,184nm,18.1s,baz=157,slow=41							
SHL	**Shillong**	**12.63**	**346**	*e*P	**Pn**	**02 49 24.0**	**-3.1**
PALK	**Pallekele**	**15.51**	**249**	LR	LR	02 55 34.2	
comp=Z,76nm,20.6s,baz=100,slow=36							
LZH	**Lanzhou**	**23.99**	**17**	*e*P	**P**	**02 51 47.5**	**+6.3**
LZH				pP		02 51 55.0	
LZH				sP	sP	02 52 00.5	+5.1
LZH				pmax	pmax		
comp=Z,22nm,1.5s,mb4.4							
LZH				pmax	pmax		
comp=Z,110nm,5.3s							
GTA	**Gaotai**	**26.34**	**8**	*e*P	**P**	**02 52 09.8**	**+7.3**
GTA				pP	pP	02 52 14.0	+1.5
GTA				sP	sP	02 52 17.3	+0.5
GTA				pmax	pmax		
comp=Z,3.0nm,0.9s,mb3.8							
TKM2	**Tokmak 2**	**34.07**	**334**	*e*P	**P**	**02 53 12.2**	**+1.4**
comp=Z,3.0nm,0.9s,mb4.2							
MK31	**Makanchi Array**	**35.15**	**344**	*e*P	**P**	**02 53 21.1**	**+1.0**
MKAR	**Makanchi Array**	**35.15**	**344**	P	**P**	**02 53 19.8**	**-0.4**
comp=Z,0.2nm,0.3s,mb3.6,baz=149,slow=9.6,SNR=6.5							
MKAR				LR	LR	03 09 19.4	
comp=Z,30nm,21.3s,MS3.0,baz=180,slow=39							
SONM	**Songino Array**	**35.69**	**13**	LR	LR	03 10 13.1	
comp=Z,69nm,19.0s,MS3.4,baz=277,slow=40							
KSRS	**Korea Array**	**37.77**	**45**	LR	LR	03 09 33.4	
comp=Z,27nm,18.7s,MS3.1,baz=189,slow=37							
KURK	**Kurchatov**	**39.72**	**343**	P	**P**	**02 53 57.6**	**-1.2**
comp=Z,1.3nm,0.8s,mb3.7,baz=154,slow=8.0,SNR=8.8							
KURK	**Kurchatov**	**39.72**	**343**	*e*P	**P**	**02 53 58.8**	**0.0**
comp=Z,2.4nm,0.9s,mb3.9							
ZALV	**Zalesovo Beam**	**41.41**	**351**	P	**P**	**02 54 11.5**	**-1.2**
comp=Z,0.7nm,0.4s,mb3.7,baz=168,slow=8.3,SNR=3.0							
BVAR	**Borovoye Array**	**44.32**	**339**	LR	LR	03 15 22.9	
comp=Z,44nm,20.3s,MS3.4,baz=117,slow=39							
ABKAR	**Akbulak array**	**46.14**	**328**	*e*P	**P**	**02 54 51.2**	**+0.4**
comp=Z,1.4nm,0.8s,mb3.9							
ASAR	**Alice Springs**	**52.69**	**134**	P	**P**	**02 55 40.9**	**-0.2**
comp=Z,0.2nm,0.3s,mb3.5,baz=316,slow=6.0,SNR=4.1							

CASC 30 02:50:30.1±1.6, 8°.06N×82°.90W, h3km, MD3.8, MW4.2, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.64**	**336**	*e*P	Pg	02 50 42.8	+0.3
ACR				*e*S	Sg	02 50 53.8	+3.0
BRU2	**Volcan**	**0.76**	**16**	⇑*i*P	Pg	02 50 45.7	+1.0
BRU2				*e*S	Sg	02 50 57.7	+3.2
BAR1		**1.24**	**341**	*e*P	Pg	02 50 53.0	-0.9
CNI	**Changuinola**	**1.40**	**16**	*e*P	Pn	02 50 56.2	-0.4
CNI				*e*S	Sg	02 51 13.8	-1.3
BUS	**Buena Vista**	**1.71**	**330**	*e*P	Pn	02 51 00.8	0.0
URSC	**Urasca**	**1.96**	**334**	⇑*e*P	Pn	02 51 04.8	+0.5
URSC				*e*S	Sn	02 51 30.6	+1.2
PRS1	**Puriscal**	**2.36**	**324**	*e*P	Pn	02 51 08.2	-1.6

CASC 30 03:01:14.0±1.9, 9°.07N×83°.08W, h39km±14km, MD3.3, MW3.7, 2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**0.28**	**306**	⇓*e*P	Pn	03 01 22.4	+0.4
BAR1				*e*S	Sn	03 01 28.1	+0.6
ACR	**Cerro Adams**	**0.43**	**192**	*e*P	Pn	03 01 23.6	-0.2
BRU2	**Volcan**	**0.47**	**126**	*e*P	Pn	03 01 23.8	-0.6
BRU2				*e*S	Sn	03 01 33.3	+1.7
BUS	**Buena Vista**	**0.82**	**306**	*e*P	Pn	03 01 30.0	+0.9
BUS				*e*S	Sn	03 01 41.1	+1.1
PRS1	**Puriscal**	**1.51**	**307**	⇓*e*P	Pn	03 01 40.1	+1.5

*PGC **30** 03:04:26.4±16.0, 60°.35N×141°.21W, h5km, ML2.7/4, 152km Wnw of Yakutat, Ak Southeastern Alaska*

NEIC 30 03:04:25.5, 60°.33N×141°.23W, h15km, ML2.9(AEIC), ML3.1(PMR), 2D, After AEIC., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**1.14**	**125**	P	Pb	03 04 44.3	-2.5
BMRM	**Bremner River**	**1.78**	**292**	P	Pn	03 04 55.1	-0.6
HYT	**Haines Junctio**	**1.90**	**73**	⇑Pn	Pn	03 05 00.5	+3.2
HYT				⇑Sg	Sg	03 05 24.5	-2.2
EYAK	**Cordova Ski Ar**	**2.25**	**278**	P	Pn	03 05 01.5	-0.6
DIV	**Divide**	**2.37**	**292**	*e*Pn	Pn	03 05 03.2	-0.5
DIV				*e*Sn	Sn	03 05 31.5	-1.1
PLBC	**Pleasant Camp**	**2.60**	**108**	⇓Pn	Pn	03 05 07.9	+0.9
PLBC				⇑Pg	Pg	03 05 13.4	-2.0
MID	**Middleton Isla**	**2.73**	**253**	*e*P	Pn	03 05 11.1	+2.4
WHY	**Whitehorse**	**3.16**	**81**	P	Pn	03 05 14.5	-0.1
WHY	**Whitehorse**	**3.16**	**81**	⇑Pn	Pn	03 05 14.8	+0.2
WHY				⇓Sn	Sn	03 05 52.9	+1.0
DAWY	**Dawson**	**3.85**	**12**	P	Pn	03 05 23.8	-0.2
DAWY	**Dawson**	**3.85**	**12**	⇑Pn	Pn	03 05 25.1	+1.0
DAWY				⇑Sn	Sn	03 06 10.2	+1.4
DAWY				⇑Sg	Sg	03 06 24.9	-3.9
PMR	**Palmer**	**4.05**	**292**	*e*Pn	Pn	03 05 27.4	+0.5
RC01	**Rabbit Creek A**	**4.25**	**284**	*e*Pn	Pn	03 05 28.6	-1.0
EGAK	**Eagle**	**4.46**	**0**	*e*Pn	Pn	03 05 32.1	-0.3
EGAK				*e*Sg	Sg	03 06 46.3	-2.3
IL1	**Eielson Array**	**5.17**	**332**	P	Pn	03 05 40.6	-1.5
TRF	**Thorofare Moun**	**5.30**	**310**	P	Pn	03 05 43.7	-0.3
KTH	**Kantishna Hill**	**5.60**	**309**	P	Pn	03 05 46.6	-1.5
BM3	**Burnt Mountain**	**7.27**	**350**	P	Pn	03 06 11.3	+0.4

*THE **30** 03:47:14.3, 36°.00N×21°.31E, h13km±5km, ML3.4/1, Error ellipse: s-maj=8.4km s-min=1.4km az=252.0*

*ATH **30** 03:47:17.1, 36°.14N×21°.81E, h38km±2km, MD3.1/3*

*CSEM **30** 03:47:18.3±0.7, 36°.17N×21°.84E, h19km, MD3.1, Error ellipse: s-maj=18.8km s-min=7.2km az=54.0*

ISC 30 03:47:11.8±2.6, 35°.98N±0°.07×21°.2E±0°.2, h15km±9km, n15, σ1§33/29, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**1.02**	**26**	*e*PN	**Pg**	**03 47 32.1**	**+0.5**
PYL				*e*SN	**Sg**	**03 47 43.1**	**-1.8**
PYL	**PYLOS**	**1.02**	**26**	P	**Pg**	**03 47 32.1**	**+0.5**
PYL				S	**Sg**	**03 47 46.5**	**+1.6**
PYL	**PYLOS**	**1.02**	**26**	P	**Pg**	**03 47 32.1**	**+0.5**
PYL				*e*Sn	**Sg**	**03 47 43.1**	**-1.8**
PYL				S	**Sg**	**03 47 46.5**	**+1.6**
ITM	**Ithomi**	**1.34**	**26**	*e*PN	**Pn**	**03 47 37.3**	**+1.2**
ITM				*e*SN	**Sn**	**03 47 51.8**	**-1.8**
ITM	**Ithomi**	**1.34**	**26**	P	**Pn**	**03 47 37.4**	**+1.3**
ITM				S	**Sn**	**03 47 55.0**	**+1.4**
ITM	**Ithomi**	**1.34**	**26**	*e*Pn	**Pn**	**03 47 37.3**	**+1.2**
ITM				*e*Sn	**Sn**	**03 47 51.8**	**-1.8**
ITM				S	**Sn**	**03 47 55.0**	**+1.4**
KYTH	**Kithira**	**1.52**	**78**	*e*PN	**Pn**	**03 47 36.2**	**-2.4**
KYTH	**Kithira**	**1.52**	**78**	*e*Pn	**Pn**	**03 47 36.2**	**-2.4**
VLI	**Veliai**	**1.59**	**62**	*e*PN	**Pn**	**03 47 37.5**	**-2.0**
VLI				*e*SN	**Sn**	**03 47 52.3**	**-7.6**
VLI	**Veliai**	**1.59**	**62**	*e*Pn	**Pn**	**03 47 37.5**	**-2.0**
VLI				*e*Sn	**Sn**	**03 47 52.3**	**-7.6**
VLX	**Vlachokerasia**	**1.69**	**34**	*e*PB	**Pn**	**03 47 40.3**	**-0.5**
VLX	**Vlachokerasia**	**1.69**	**34**	P	**Pn**	**03 47 41.7**	**+0.9**
VLX				S	**Sn**	**03 48 02.3**	**+0.1**
VLX	**Vlachokerasia**	**1.69**	**34**	P	**Pn**	**03 47 41.7**	**+0.9**
VLX				S	**Sn**	**03 48 02.3**	**+0.1**
KARN	**Karanos**	**2.29**	**104**	P	**Pn**	**03 47 49.6**	**+0.5**
KARN				S	**Sn**	**03 48 18.2**	**+1.1**
KARN	**Karanos**	**2.29**	**104**	P	**Pn**	**03 47 49.6**	**+0.5**
KARN				S	**Sn**	**03 48 18.2**	**+1.1**

*ISCJB **30** 03:50:51.8±0.4, 32°.49N±0°.04×105°.15E±0°.05, h10km, mb3.9/14, Error ellipse: s-maj=6.9km s-min=5.5km az=30.1*

*IDC **30** 03:50:51.1±1.2, 32°.53N×105°.36E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.8/27, mbtmp3.9/12, ML4.2/2, Error ellipse: s-maj=52.6km s-min=21.4km az=63.0*

*BJI **30** 03:50:52.9, 32°.38N×105°.32E, h10km, ML3.7/10, Ms3.5/3, Ms7 3.5/3*

*NEIC **30** 03:50:52.2±0.4, 32°.51N×105°.50E, h10km, mb4.0/5, Error ellipse: s-maj=12.7km s-min=7.0km az=51.0*

ISC 30 03:50:53.6±0.4, 32°.42N±0°.03×105°.07E±0°.05, h10km, n25, σ1§30/33, mb3.9/14, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**217**	Pn	**Pn**	**03 51 25.3**	**-0.5**
CD2				Pg	**Pg**	**03 51 27.0**	**-2.6**
CD2				Sn	**Sn**	**03 51 50.5**	**+1.0**
CD2				Sg	**Sg**	**03 51 52.3**	**-1.7**
CD2				smax			
comp=N,3μm,0.6s							
XAN	**Xi'an**	**3.61**	**62**	Pg	**Pn**	**03 51 51.8**	**+2.3**
XAN				Sg	**Sg**	**03 52 49.0**	**-0.4**
XAN				smax			
comp=N,160nm,0.6s							
XAN				smax			
comp=E,92nm,0.7s							
LZH	**Lanzhou**	**3.79**	**345**	⇑Pn	**Pn**	**03 51 55.0**	**+2.9**
LZH				Pg	**Pg**	**03 52 05.3**	**-0.9**
LZH				Sn	**Sn**	**03 52 40.5**	**+3.8**
LZH				Sg	**Sg**	**03 52 53.3**	**-2.1**
LZH				smax			
comp=N,500nm,1.0s							
LZH				smax			
comp=E,800nm,1.2s							
LZH				LR	LR		
comp=N,2μm,8.0s							
LZH				LR	LR		
comp=Z,3μm,9.1s							
ENH	**Enshi**	**4.34**	**118**	*e*Pg	**Pb**	**03 52 09.6**	**-0.4**
GYA	**Guiyang**	**6.11**	**166**	Pn	**Pn**	**03 52 23.5**	**-0.4**
GYA				smax			
comp=N,50nm,0.8s							
GYA				smax			
comp=E,50nm,0.7s							
GTA	**Gaotai**	**8.17**	**330**	*e*P	**Pn**	**03 52 42.8**	**-9.4**
GTA				pP		03 52 47.0	
GTA				sP		03 52 50.8	
GTA				S	**Sn**	**03 54 16.0**	**-8.5**
GTA				sS		03 54 19.3	
GTA				SS		03 54 43.5	
GTA				pmax	pmax		
comp=Z,3.0nm,0.7s							
GTA				pmax	pmax		
comp=Z,66nm,5.4s							
GTA				LR	LR		
comp=N,250nm,11.3s							
GTA				LR	LR		
comp=E,140nm,10.1s							
GTA				LR	LR		
comp=Z,230nm,10.1s							
CMAR	**Chiang Mai Arr**	**14.96**	**203**	Pn	**Pn**	**03 54 27.4**	**+2.2**
comp=Z,1.0nm,0.3s,baz=17,slow=9.3,SNR=4.1							
SONM	**Songino Array**	**15.43**	**3**	Pn	**Pn**	**03 54 30.3**	**-0.8**
comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=3.7							
MK31	**Makanchi Array**	**22.56**	**316**	*e*P	**P**	**03 55 54.6**	**+0.8**
MKAR	**Makanchi Array**	**22.56**	**316**	P	**P**	**03 55 54.0**	**+0.2**
comp=Z,1.1nm,0.4s,mb3.6,baz=108,slow=12,SNR=13							
TKM2	**Tokmak 2**	**25.46**	**303**	*e*P	**P**	**03 56 23.3**	**+1.7**
comp=Z,1.9nm,0.6s,mb3.8							
ZALV	**Zalesovo Beam**	**25.92**	**332**	P	**P**	**03 56 24.7**	**-1.0**
comp=Z,1.0nm,0.4s,mb3.7,baz=129,slow=6.6,SNR=5.2							
UCH	**Uchtor**	**26.08**	**301**	*e*P	**P**	**03 56 29.7**	**+2.5**
comp=Z,5.2nm,1.1s,mb4.0							
AML	**Almayashu**	**26.65**	**300**	*e*P	**P**	**03 56 34.1**	**+1.7**
comp=Z,1.6nm,0.6s,mb3.7							
KURK	**Kurchatov**	**26.71**	**321**	P	**P**	**03 56 33.5**	**+0.7**
comp=Z,1.1nm,0.6s,mb3.6,baz=135,slow=8.0,SNR=8.5							
KURK	**Kurchatov**	**26.71**	**321**	*e*P	**P**	**03 56 33.4**	**+0.5**
comp=Z,2.6nm,0.9s,mb3.8							
BVAR	**Borovoye Array**	**32.29**	**320**	P	**P**	**03 57 23.3**	**+0.9**
comp=Z,0.5nm,0.5s,mb3.6,baz=120,slow=5.6,SNR=3.9							
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**03 58 07.4**	**+0.6**
comp=Z,2.3nm,0.8s,mb4.1							
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**	**04 00 33.6**	**-1.1**
comp=Z,1.1nm,0.6s,mb4.0,baz=63,slow=8.4,SNR=6.3							
BRTR	**Keskin Array B**	**56.81**	**299**	P	**P**	**04 00 38.2**	**+0.1**
comp=Z,0.5nm,0.6s,mb3.7,baz=26,slow=7.0,SNR=3.8							
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**04 00 37.9**	**-0.8**
comp=Z,2.3nm,0.8s,mb4.3,baz=90,slow=5.7,SNR=5.7							
AKASG	**Malin Array Be**	**57.09**	**313**	P	**P**	**04 00 39.1**	**-0.8**
comp=Z,0.3nm,0.2s,mb3.9,baz=72,slow=6.7,SNR=4.1							
ASAR	**Alice Springs**	**62.20**	**150**	P	**P**	**04 01 14.5**	**-0.9**
comp=Z,0.7nm,0.7s,mb3.9,baz=325,slow=6.6,SNR=5.7							
NB2	**NORSAR Subarra**	**63.99**	**327**	P	**P**	**04 01 25.9**	**-0.9**
comp=Z,0.8nm,0.6s,mb3.9,baz=72,slow=6.9							
NOA	**NORSAR Array B**	**63.99**	**327**	P	**P**	**04 01 25.6**	**-1.3**
comp=Z,1.4nm,0.7s,mb4.1,baz=72,slow=7.0,SNR=8.0							

*ISCJB **30** 04:02:52.3±1.0, 8°.41N±0°.04×82°.82W±0°.04, h3km±5km, mb4.1/38, MS3.5/13, Error ellipse: s-maj=8.1km s-min=4.7km az=35.6*

*IDC **30** 04:02:52.7±0.8, 8°.40N×82°.78W, h0km, mb3.9/11, mb1 4.2/12, mb1mx4.0/20, mbtmp3.9/12, ML3.7/1, MS3.4/15, Ms1 3.4/15, ms1mx3.3/29, Error ellipse: s-maj=37.7km s-min=16.0km az=63.0*

*CASC **30** 04:02:53.7±3.8, 8°.40N×82°.95W, h5km, MD4.6, mb4.3(NEIC)*

*NEIC **30** 04:02:58.1±0.9, 8°.41N×82°.84W, h36km±9km, mb4.3/30, Error ellipse: s-maj=10.6km s-min=6.2km az=49.0*

ISC 30 04:02:53.9±0.9, 8°.46N±0°.05×82°.80W±0°.04, h0km±5km, n227, σ0§88/224, mb4.2/38, MS3.5/13, 79C-65D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.35**	**18**	⇓*i*P	**Pg**	**04 03 03.2**	**+2.6**
BRU2				*e*S	**Sg**	**04 03 11.4**	**+6.2**
ACR	**Cerro Adams**	**0.41**	**298**	⇑*i*P	**Pg**	**04 02 59.9**	**-1.9**
ACR				*e*S	**Sg**	**04 03 05.4**	**-1.8**
BAR1		**0.93**	**327**	⇓*i*P	**Pg**	**04 03 10.2**	**-1.6**
BAR1				*e*S	**Sg**	**04 03 24.7**	**+0.9**
CNI	**Changuinola**	**0.99**	**16**	⇑*i*P	**Pg**	**04 03 14.0**	**+1.0**
BUS	**Buena Vista**	**1.44**	**319**	⇓*i*P	**Pn**	**04 03 18.4**	**-2.9**
LIO	**Limon**	**1.55**	**351**	*e*P	**Pn**	**04 03 21.4**	**-1.5**
LIO				*e*S	**Sn**	**04 03 43.7**	**+0.1**
QCR	**Quepos**	**1.66**	**305**	*e*P	**Pn**	**04 03 19.6**	**-4.6**
QCR				*e*S	**Sn**	**04 03 42.8**	**-3.3**
URSC	**Urasca**	**1.67**	**325**	*e*P	**Pn**	**04 03 20.5**	**-3.9**
SJS	**Escuela Geolog**	**1.92**	**320**	*e*P	**Pn**	**04 03 25.4**	**-2.5**
PRS1	**Puriscal**	**2.13**	**316**	⇑*i*P	**Pn**	**04 03 28.0**	**-2.7**
CGA2	**Cerro Gallo 2**	**2.26**	**313**	*e*P	**Pn**	**04 03 30.0**	**-2.6**
JCR	**Jicaral**	**2.67**	**301**	*e*P	**Pn**	**04 03 34.4**	**-3.8**
FORC	**Fortuna**	**2.72**	**317**	*e*P	**Pn**	**04 03 36.9**	**-2.0**
JTS	**JuntasAbangare**	**2.80**	**311**	*e*Pn	**Pn**	**04 03 39.8**	**-0.2**
JTS				*e*Sn	**Sn**	**04 04 13.1**	**-1.3**
BCIP	**Isla Barro Col**	**3.01**	**76**	*e*Pn	**Pn**	**04 03 43.4**	**+0.5**
AMAS	**Alto Masis**	**3.04**	**315**	*i* P	**Pn**	**04 03 44.9**	**+1.6**
CUI	**Cuipilapa**	**3.19**	**313**	*i* P	**Pn**	**04 03 46.4**	**+1.0**
VCR	**Vista de Mar**	**3.25**	**301**	*e*P	**Pn**	**04 03 42.4**	**-3.8**
UPIG		**3.27**	**80**	*e*P	**Pn**	**04 03 45.9**	**-0.6**
UPIG				*e*S	**Sn**	**04 04 32.6**	**+6.5**
MESS	**M

	baz=31					
MNTX	Cornudas Mount	31.24 321	eP	P	04 09 15.3	0.0
	3.0nm,1.3s,mb3.1					
125A	Gardner Draw,	31.46 323	⇓P	P	04 09 18.4	+1.1
	baz=32					
224A	Corundas Mount	31.58 321	⇑P	P	04 09 18.8	+0.4
	baz=32					
124A	Stringfield Ra	31.97 322	⇓P	P	04 09 22.6	+0.8
	baz=32					
121A	Cookes Peak, D	33.31 319	⇑P	P	04 09 34.5	+0.9
	baz=33					
220A	Playas Peak, P	33.40 318	⇓P	P	04 09 35.1	+0.8
	baz=34,SNR=6.0					
319A	Douglas	33.58 316	⇓P	P	04 09 36.8	+0.9
	baz=34					
Y22A	Socorro	33.74 322	⇓P	P	04 09 38.1	+0.9
	baz=34					
120A	U Bar Ranch, L	33.87 319	⇓P	P	04 09 39.3	+0.9
	baz=34					
219A	White Tail Can	33.95 317	⇑P	P	04 09 39.5	+0.5
	baz=34,SNR=5.7					
318A	Bisbee	34.11 316	⇑P	P	04 09 40.9	+0.5
	baz=34					
ANMO	Albuquerque	34.14 324	eP	P	04 09 40.3	-0.4
	1.2nm,0.9s,mb3.8					
Z20A	Nine Sixteen R	34.21 319	⇑P	P	04 09 42.5	+1.2
	baz=34					
119A	Ashpeak Ranch,	34.45 318	⇑P	P	04 09 44.2	+0.8
	baz=34					
X21A	Alamocita Cree	34.58 322	⇑P	P	04 09 45.3	+0.7
	baz=35					
Y20A	Horse Springs,	34.59 321	⇑P	P	04 09 45.0	+0.4
	baz=35					
Z19A	T-Link Ranch,	34.76 319	⇑P	P	04 09 46.0	-0.1
	baz=35					
118A	Homack Ranch,	34.81 318	⇑P	P	04 09 46.6	0.0
	baz=35					
217A	Green Valley	34.87 316	⇑P	P	04 09 47.6	+0.5
	baz=35,SNR=6.1					
JFWS	Jewell Farm	34.94 350	eP	P	04 09 46.4	-1.1
	6.4nm,0.8s,mb4.6					
TUC	Tucson	35.17 316	eP	P	04 09 50.1	+0.5
	3.8nm,1.1s,mb4.2					
117A	Oracle	35.29 317	⇑P	P	04 09 51.4	+0.7
	baz=35,SNR=5.7					
Z17A	San Carlos Hig	35.55 318	⇓P	P	04 09 53.1	+0.2
	baz=36					
Y18A	Canyon Day Jun	35.56 319	⇑P	P	04 09 53.1	+0.1
	baz=36					
SDCO	Great Sand Dun	35.65 328	eP	P	04 09 53.6	-0.1
	0.9nm,0.9s,mb3.6					
116A	Eloy	35.94 316	⇓P	P	04 09 56.6	+0.3
	baz=36,SNR=6.7					
X18A	Snowflake	35.98 320	⇑P	P	04 09 57.1	+0.5
	baz=36					
214A	Organ Pipe Nat	36.38 314	⇑P	P	04 10 00.6	+0.6
	baz=36,SNR=5.9					
115A	Sonoran Desert	36.38 316	⇑P	P	04 10 00.2	+0.1
	baz=36					
X17A	Forest Lakes	36.41 319	⇓P	P	04 10 00.9	+0.6
	baz=36					
Y16A	Circle Bar Ran	36.57 318	⇓P	P	04 10 02.5	+0.8
	baz=37,SNR=8.1					
114A	Black Gap (USA	36.87 315	⇑P	P	04 10 04.6	+0.4
	baz=37					
X16A	Lo Mia Camp, P	36.87 319	⇓P	P	04 10 04.5	+0.3
	baz=37					
MVCO	Mesa Verde	36.90 325	⇑P	P	04 10 05.1	+0.7
	baz=37					
T19A	Beclabito	36.94 324	⇓P	P	04 10 05.5	+0.7
	baz=37					
ECSD	EROS Data Cent	37.15 343	eP	P	04 10 05.0	-1.4
	5.4nm,1.1s,mb4.2					
U18A	Rough Rock, Ch	37.16 323	⇓P	P	04 10 07.6	+0.9
	baz=37					
Y15A	Casa Rosa Ranc	37.18 317	⇑P	P	04 10 07.3	+0.4
	baz=37					
V17A	Tonalea, Kykot	37.21 321	⇓P	P	04 10 07.5	+0.4
	baz=37					
Z14A	Wintersburg	37.26 316	⇓P	P	04 10 08.0	+0.5
	baz=37					
W16A	Flagstaff	37.35 319	⇓P	P	04 10 08.7	+0.5
	baz=37					
X15A	Humboldt	37.44 318	⇓P	P	04 10 09.3	+0.3
	baz=38					
113A	Mohawk Valley,	37.49 315	⇑P	P	04 10 09.9	+0.3
	baz=38					
WUAZ	Wupatki	37.51 320	⇑P	P	04 10 09.8	+0.2
	baz=38					
Y14A	Wickenburg	37.63 317	⇑P	P	04 10 10.9	+0.3
	baz=38					
Z13A	Yuma Proving G	37.66 315	⇓P	P	04 10 11.4	+0.5
	baz=38					
X14A	Yava	37.86 318	⇑P	P	04 10 13.3	+0.7
	baz=38					
Y13A	Salome	38.12 316	⇓P	P	04 10 15.0	+0.2
	baz=38					
V15A	Kaibab Nationa	38.20 320	⇑P	P	04 10 16.2	+0.7
	baz=38,SNR=7.3					
W14A	Seligman	38.43 318	⇓P	P	04 10 18.3	+0.9
	baz=38					
Q19A	Hogan Spring (	38.55 326	⇓P	P	04 10 19.2	+0.9
	baz=39					
X13A	Yucca	38.56 317	⇑P	P	04 10 19.0	+0.5
	baz=39					
Y12C	Blythe	38.56 315	⇑P	P	04 10 18.9	+0.3
	baz=39					
PDMCI	Parker Dam,Lak	38.60 316	⇑P	P	04 10 19.4	+0.5
	baz=39					
U15A	North Rim	38.66 321	⇓P	P	04 10 19.9	+0.6
	baz=39					
V14A	Boquillas Ranc	38.69 319	⇓P	P	04 10 20.4	+0.8
	baz=39					
W13A	Hualapai Mount	38.89 318	⇓P	P	04 10 22.0	+0.8
	baz=39					
SWSC	Sam W. Stewart	39.03 313	⇑P	P	04 10 22.6	+0.1
	baz=39					
T15A	Red Dirt Ranch	39.09 321	⇑P	P	04 10 23.7	+0.8
	baz=39					
BC3	Big Chuckw Mtn	39.16 315	⇓P	P	04 10 23.4	-0.2
	baz=39					
U14A	Mt Trumbull	39.22 320	⇓P	P	04 10 25.0	+1.1
	baz=39					
IRM	Iron Mountain	39.22 315	⇓P	P	04 10 24.6	+0.5
	baz=39					
SRU	San Rafael	39.37 325	⇓P	P	04 10 26.4	+1.2
	baz=40					
V13A	Grand Canyon W	39.40 318	⇑P	P	04 10 25.9	+0.4
	baz=40					
U13A	Pakoon Wash	39.72 319	⇓P	P	04 10 29.0	+0.8
	baz=40					
BELC	Belle Mtn.	39.73 315	⇓P	P	04 10 28.7	+0.4
	baz=40					
PFO	Pinyon Flat Ob	39.85 314	⇑P	P	04 10 29.6	+0.3
	baz=40					
V12A	Nelson	39.90 318	⇓P	P	04 10 30.3	+0.6
	baz=40					
GMRC	Granite Mounta	39.91 316	⇑P	P	04 10 30.3	+0.5
	baz=40					
S13A	Holt Ranch, En	40.36 321	⇑P	P	04 10 34.3	+0.8
	baz=40					
HEC	Hector,Ludlow	40.40 315	⇓P	P	04 10 34.8	+0.9
	baz=40					
Q14A	Sevier Lake (B	40.88 323	⇓P	P	04 10 38.7	+0.8
	baz=41					
GSC	Goldstone	40.99 316	⇑P	P	04 10 39.2	+0.5
	baz=41					
GSC	Goldstone	40.99 316	eP	P	04 10 39.3	+0.6
	9.9nm,1.2s,mb4.4					
T11A	Corn Creek, Al	41.02 319	⇑P	P	04 10 39.9	+1.0
	baz=41					
AGMN	Agassiz Refuge	41.21 347	eP	P	04 10 38.4	-2.0
	8.2nm,1.3s,mb4.3					
U10A	Ash Meadows, A	41.27 318	⇑P	P	04 10 42.0	+0.9
	baz=41					
Q13A	Wheeler Ranch,	41.31 322	⇑P	P	04 10 41.6	+0.2
	baz=41,SNR=6.7					
DUG	Dugway	41.40 325	⇑P	P	04 10 42.0	0.0
	baz=42					
DUG	Dugway	41.40 325	eP	P	04 10 41.4	-0.7
	1.7nm,0.9s,mb3.8					
BW06	Boulder Array	41.47 330	eP	P	04 10 41.7	-0.8
	1.7nm,0.8s,mb3.8					
PDAR	Pinedale Array	41.47 330	P	P	04 10 41.2	-1.3
	0.3nm,0.5s,mb3.3,baz=122,slow=14,SNR=4.1					
PDAR			PcP	PcP	04 12 39.6	-0.8
	0.7nm,0.9s,baz=116,slow=6.8,SNR=3.9					
EDW2	Edwards Air Fo	41.59 314	⇑P	P	04 10 44.2	+0.5
	baz=42					
S11A	Rachel	41.59 319	⇑P	P	04 10 45.5	+1.9
	baz=42					
K18A	Toltan Ranch,	41.61 329	⇓P	P	04 10 44.6	+0.9
	baz=42					
P13A	Bates Ranch, G	41.62 323	⇑P	P	04 10 44.8	+1.0
	baz=42					
FURC	Furnace Creek,	41.66 317	⇑P	P	04 10 45.1	+0.9
	baz=42					
HWUT	Hardware Ranch	41.67 327	eP	P	04 10 42.3	-1.9
	2.6nm,0.7s,mb4.1					
Q12A	Willow Creek R	41.86 322	⇓P	P	04 10 46.1	+0.3
	baz=42					
MPMC	Manual Prospec	41.86 316	⇓P	P	04 10 46.2	+0.3
	baz=42					
R11A	Troy Canyon, C	41.91 320	⇓P	P	04 10 46.6	+0.4
	baz=42					
J18A	Kendall Valley	42.02 330	⇑P	P	04 10 47.0	-0.1
	baz=42					
CFAA	Coronel Fontan	42.20 161	P	P	04 10 46.7	-2.0
	0.4nm,1.0s,mb3.1,baz=318,slow=8.1,SNR=4.2					
CFAA	Coronel Fontan	42.20 161	P	P	04 10 46.7	-2.0
Q11A	Duckwater	42.25 321	⇓P	P	04 10 49.5	+0.5
	baz=42					
GRAC	Grapevine Rang	42.29 318	⇑P	P	04 10 49.8	+0.4
	baz=42					
S10A	Tonopah Range,	42.30 319	⇑P	P	04 10 49.1	-0.4
	baz=42,SNR=5.8					
ARVC	Arvin	42.31 314	⇓P	P	04 10 50.0	+0.5
	baz=42					
ISA	Isabella	42.33 315	⇑P	P	04 10 50.2	+0.5
	baz=42					
REDW	Red Top Meadow	42.55 330	eP	P	04 10 50.6	-0.8
	5.9nm,1.2s,mb4.2					
M14A	Sheep Mountain	42.57 326	⇓P	P	04 10 52.0	+0.4
	baz=43					
O12A	Currie	42.57 323	⇑P	P	04 10 51.9	+0.3
	baz=43					
VES	Vestal, Richgr	42.85 315	⇑P	P	04 10 54.0	+0.1
	baz=43					
J16A	Bone	42.87 329	⇑P	P	04 10 54.0	+0.1
	baz=43					
ULM	Lac du Bonnet	43.06 348	P	P	04 10 52.7	-2.7
	5.7nm,0.8s,mb4.3,baz=174,slow=8.5,SNR=5.3					
ULM			LR	LR	04 30 16.6	
	comp=Z,58nm,21.0s,MS3.5,baz=185,slow=38					
ULM	Lac du Bonnet	43.06 348	eP	P	04 10 53.5	-1.8
	7.9nm,1.0s,mb4.4					
K14A	Jones Ranch, D	43.18 327	⇑P	P	04 10 56.2	-0.3
	baz=43					
J15A	Blackfoot	43.38 328	⇓P	P	04 10 57.3	-0.8
	baz=44					
G18A	Lazy EL Ranch,	43.38 332	⇓P	P	04 10 57.6	-0.5
	baz=44					
NVAR	Mina Array Bea	43.70 319	P	P	04 11 01.3	+0.6
	2.8nm,0.9s,mb4.0,baz=136,slow=7.6,SNR=18					
H16A	Russell Place,	43.72 331	⇑P	P	04 11 00.3	-0.5
	baz=44					
DGMT	Dagmar	43.77 339	eP	P	04 10 59.8	-1.4
	12nm,0.9s,mb4.6					
F18A	Big Timber	43.90 333	⇑P	P	04 11 01.5	-0.7
	baz=44					
L12A	House Creek Ra	43.93 325	⇑P	P	04 11 02.6	0.0
	baz=44					
I14A	Mackay	44.28 328	⇓P	P	04 11 05.1	-0.2
	baz=44					
J13A	Cove Ranch, Pi	44.30 327	⇑P	P	04 11 05.3	-0.2
	baz=44					
H15A	Lima	44.35 329	⇓P	P	04 11 05.4	-0.4
	baz=44					
L11A	Cat Creek Ranc	44.37 325	⇓P	P	04 11 05.3	-0.8
	baz=44					
WAKR	Walker	44.48 318	eP	P	04 11 07.5	+0.4
E18A	Harlowton	44.49 333	⇑P	P	04 11 07.0	0.0
	baz=45					
HLID	Hailey	44.54 327	⇑P	P	04 11 06.9	-0.5
	baz=45					
BOZ	Bozeman (W)	44.59 331	⇓P	P	04 11 07.4	-0.4
	baz=45					
BOZ	Bozeman (W)	44.59 331	eP	P	04 11 06.5	-1.4
	3.1nm,1.2s,mb4.1					
MCMT	McKenzie Canyo	44.60 330	eP	P	04 11 07.5	-0.3
	0.9nm,1.0s,mb3.6					
G15A	Dillon	44.66 330	⇑P	P	04 11 08.0	-0.4
	baz=45					
J12A	Stokes Ranch,	44.70 326	⇓P	P	04 11 08.1	-0.6
	baz=45					
H14A	Leadore	44.71 329	⇓P	P	04 11 08.6	-0.2
	baz=45					
L10A	Juniper Basin	44.72 324	⇑P	P	04 11 08.4	-0.6
	baz=45					
E17A	Martinsdale	44.84 333	⇑P	P	04 11 09.8	0.0
	baz=45					
K11A	Parker Ranch,	44.91 325	⇑P	P	04 11 10.2	-0.2
	baz=45					
MFID	Camas Ranch	45.21 326	⇑P	P	04 11 12.4	-0.4
	baz=45					
E16A	East Helena	45.27 332	⇑P	P	04 11 12.7	-0.5
	baz=45					
D17A	Six Diamond Ra	45.28 333	⇓P	P	04 11 13.1	-0.2
	baz=45					
K10A	MacKenzie Ranc	45.39 325	⇑P	P	04 11 13.5	-0.7
	baz=46					
E15A	Deer Lodge	45.64 331	⇑P	P	04 11 15.5	-0.7
	baz=46					
C17A	Wharram Farm,	45.68 334	⇑P	P	04 11 16.0	-0.5
	baz=46					
BEKR	Beckwourth	45.82 319	⇓P	P	04 11 17.5	-0.2
	baz=46					
B18A	Beardsley Farm	45.85 335	⇓P	P	04 11 17.2	-0.6
	baz=46					
D15A	Lincoln	46.04 332	⇑P	P	04 11 19.5	+0.2
	baz=46					
WVOR	Wild Horse Val	46.21 323	eP	P	04 11 20.1	-0.6
	9.1nm,1.0s,mb4.8					
OHCM	Honcut	46.28 318	eP	P	04 11 22.0	+0.7
E13A	Victor	46.41 330	⇓P	P	04 11 21.2	-1.0
	baz=46					
F12A	Elk City	46.47 329	⇑P	P	04 11 21.9	-0.7
	baz=47					
D14A	Greenough	46.53 331	⇓P	P	04 11 22.4	-0.7
	baz=47					
C15A	Salmond Ranch,	46.62 333	⇓P	P	04 11 23.1	-0.7
	baz=47					
A17A	Triple J Farms	46.66 335	⇑P	P	04 11 23.7	-0.5
	baz=47					
B16A	M & M Farms, S	46.69 334	⇓P	P	04 11 23.3	-1.0
	baz=47					
B15A	Bradely Ranch,	46.99 333	⇓P	P	04 11 26.2	-0.5
	baz=47					
D13A	Huson	47.00 331	⇑P	P	04 11 25.8	-1.0
	baz=47					
E11A	Bogner Ranch,	47.36 329	⇓P	P	04 11 28.2	-1.4
	baz=47					
A15A	Johnson Ranch,	47.56 334	⇓P	P	04 11 30.0	-1.1
	baz=48,SNR=5.5					
A14A	Double T Ranch	47.86 333	⇓P	P	04 11 32.8	-0.7
	baz=48					
SCHQ	Schefferville	47.97 12	P	P	04 11 33.2	-1.0
	3.3nm,0.8s,mb4.5,baz=48,slow=5.6,SNR=3.6					
SCHQ			LR	LR	04 33 18.3	
	comp=Z,58nm,19.0s,MS3.6,baz=270,slow=38					
FFC	Flin Flon	48.62 345	eP	P	04 11 38.2	-1.0
	5.1nm,1.1s,mb4.5					
EDM	Edmonton	51.02 337	eP	P	04 11 55.9	-1.7
YKA	Yellowknife Ar	58.68 343	P	P	04 12 51.3	-1.6
	2.6nm,1.0s,mb4.2,baz=137,slow=7.2,SNR=13					
YKA			LR	LR	04 40 57.6	
	comp=Z,4.3nm,18.7s,MS2.6,baz=120,slow=39					
YKA	Yellowknife Ar	58.68 343	P	P	04 12 51.3	-1.6
YKA			LR	LR	04 40 57.6	
INK	Inuvik	68.38 342	eP	P	04 13 56.3	-0.6
	8.9nm,1.2s,mb4.9					
BMRM	Bremner River	69.17 333	eP	P	04 14 00.9	-1.2
	7.3nm,1.0s,mb4.9					
EGAK	Eagle	69.24 337	eP	P	04 14 01.6	-0.8
	5.0nm,1.0s,mb4.7					
RSO	Redoubt South	72.84 331	eP	P	04 14 23.8	-0.5
MDT	Midelt	75.56 58	LR	LR	04 42 11.7	
	comp=Z,28nm,18.2s,MS3.6,baz=218,slow=31					
JMIC	Jan Mayen	76.94 19	LR	LR	04 50 29.4	
	comp=Z,21nm,19.5s,MS3.5,baz=249,slow=37					
TORD	Torodi Ar. Bea	82.79 78	P	P	04 15 19.9	-0.8
	0.6nm,0.8s,mb3.9,baz=265,slow=4.5,SNR=3.8					
SPITS	Spitsbergen Ar	83.66 12	LR	LR	04 54 35.7	
	comp=Z,41nm,18.4s,MS3.8,baz=245,slow=37					
NOA	NORSAR Array B	84.61 29	P	P	04 15 30.1	+1.0
	1.2nm,1.0s,mb4.1,baz=277,slow=5.0,SNR=2.4					
NOA			LR	LR	04 50 14.0	
	comp=Z,29nm,19.1s,MS3.7,baz=325,slow=34					
GERES	GERESS Array B	87.95 41	LR	LR	04 48 07.3	
	comp=Z,44nm,19.2s,MS3.9,baz=114,slow=31					
FINES	FINESS Array B	91.47 27	LR	LR	04 51 31.5	
	comp=Z,43nm,21.9s,MS3.9,baz=346,slow=32					
WMQ	Urumqi	127.26 9	ePKP	PKPdf	04 22 00.0	-0.8
HHC	Hu-ho-hao-te	129.18 346	ePKP	PKPdf	04 22 02.5	-2.0
HHC			sPKP		04 22 17.0	
HHC			PP	PP	04 24 14.0	+2.7
HHC			PKS		04 25 37.8	
HHC			SKS	SKSdf	04 29 09.5	-8.1
HHC			SKKS	SKKSac	04 31 00.8	-10
HHC			SS	SS	04 41 29.5	-2.4
HHC			AMB	AMB		
	comp=Z,60nm,7.2s					
HHC			LR	LR		
	comp=N,110nm,22.0s,MS4.7					
HHC			LR	LR		
	comp=E,130nm,22.4s,MS4.7					
HHC			LR	LR		
	comp=Z,41nm,20.7s,MS4.1					
LZH	Lanzhou	135.25 352	ePKP	PKPdf	04 22 09.8	-6.3
CD2	Chengdu	140.35 351	PKP	PKPdf	04 22 23.0	-2.7
ASAR	Alice Springs	141.77 242	PKhKP		04 22 22.9	
	comp=Z,1.4nm,0.8s,baz=81,slow=2.1,SNR=7.8					

*ISK **30** 04:04:52.5, 40°.14N×40°.57E, h10km, MD3.0*
*ISCJB **30** 04:04:53.1±0.5, 40°.14N±0°.06×40°.56E±0°.04, h10km, Error ellipse: s-maj=9.1km s-min=3.7km az=13.6*
*CSEM **30** 04:04:53.4±0.2, 40°.16N×40°.53E, h12km, MD3.0, Error ellipse: s-maj=6.8km s-min=3.6km az=13.0*
*DDA **30** 04:04:53.6, 40°.07N×40°.54E, h7km±1km, Md3.1*
ISC 30 04:04:53.6±0.5, **40°.12N**±0°.06×**40°.55E**±0°.04, **h11**km±8km, **n18**, σ0°.86/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.66**	**109**	*e*PG	**Pg**	**04 05 05.7**	**-0.8**
EZM				*e*SG	**Sg**	**04 05 15.2**	**+0.1**
ERZM	**Erzurum**	**0.67**	**109**	*i* P	**Pg**	**04 05 06.2**	**-0.3**
ERZM				*i* S	**Sg**	**04 05 16.1**	**+0.9**
ERZM	**Erzurum**	**0.67**	**109**	*i* P	**Pg**	**04 05 06.2**	**-0.3**
ERZM				*i* S	**Sg**	**04 05 16.1**	**+0.9**
GUMT	**Gumushane**	**0.88**	**293**	*e*PG	**Pg**	**04 05 10.2**	**-0.5**
GUMT				*e*SG	**Sg**	**04 05 23.1**	**+0.9**
GUMT	**Gumushane**	**0.88**	**293**	*e*Pg	**Pg**	**04 05 10.2**	**-0.5**
GUMT				*e*Sg	**Sg**	**04 05 23.1**	**+0.9**
EZC	**Erzincan**	**0.99**	**249**	*e*PG	**Pg**	**04 05 12.1**	**-0.6**
KELT	**Kelkit**	**0.99**	**272**	*i* P	**Pg**	**04 05 12.8**	**+0.1**
KELT				*i* S	**Sg**	**04 05 26.8**	**+1.2**
KELT	**Kelkit**	**0.99**	**272**	*i* P	**Pg**	**04 05 12.8**	**+0.1**
KELT				*i* S	**Sg**	**04 05 26.8**	**+1.2**
KTUT	**Trabzon**	**1.05**	**326**	*e*PG	**Pg**	**04 05 12.5**	**-1.3**
KTUT	**Trabzon**	**1.05**	**326**	*e*Pg	**Pg**	**04 05 12.5**	**-1.3**
DDEM	**Demirkent**	**1.20**	**50**	*i* P	**Pn**	**04 05 16.2**	**-0.1**
DDEM				*i* S	**Sb**	**04 05 34.6**	**+2.8**
DDEM	**Demirkent**	**1.20**	**50**	*i* P	**Pn**	**04 05 16.2**	**-0.1**
DDEM				*i* S	**Sb**	**04 05 34.6**	**+2.8**
PTK	**Pertek**	**1.52**	**216**	*e*PN	**Pn**	**04 05 20.8**	**+0.2**
PTK	**Pertek**	**1.52**	**216**	*e*Pn	**Pn**	**04 05 20.8**	**+0.1**
BCA	**Borcka**	**1.56**	**31**	*e*PN	**Pn**	**04 05 20.5**	**-0.7**
BCA	**Borcka**	**1.56**	**31**	*e*Pn	**Pn**	**04 05 20.5**	**-0.7**
ESPY	**Espiye-Giresun**	**1.60**	**300**	*e*PN	**Pn**	**04 05 21.4**	**-0.4**
ESPY	**Espiye-Giresun**	**1.60**	**300**	*e*Pn	**Pn**	**04 05 21.4**	**-0.4**

*ISCJB **30** 04:30:13.6±1.0, 51°.55N±0°.05×16°.04E±0°.04, h0km, Error ellipse: s-maj=7.1km s-min=3.4km az=13.3*
*CSEM **30** 04:30:15.3±0.6, 51°.54N×16°.03E, h2km, ML3.1/5, Error ellipse: s-maj=10.7km s-min=5.4km az=4.0*
*PRU **30** 04:30:16.6, 51°.51N×16°.03E, h0km*
*WAR **30** 04:30:16.9, 51°.54N×16°.02E, ML2.4, Mining Induced*
ISC 30 04:30:15.1±1.0, **51°.55N**±0°.05×**16°.04E**±0°.04, **h0**km, **n22**, σ0°.88/41, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**167**	*e*Sg	**Sg**	**04 30 39.2**	**+0.7**
UPC	**Upice**	**1.05**	**181**	*e*PG	**Pg**	**04 30 35.7**	**+0.5**
UPC	**Upice**	**1.05**	**181**	Pg	**Pg**	**04 30 35.7**	**+0.5**
DPC	**Dobruska-Polom**	**1.22**	**172**	*e*PG	**Pg**	**04 30 38.8**	**+0.3**
DPC				*e*SG	**Sg**	**04 30 54.4**	**+0.2**
	comp=Z,12nm,0.3s						
DPC	**Dobruska-Polom**	**1.22**	**172**	Pg	**Pg**	**04 30 38.8**	**+0.3**
DPC				Sg	**Sg**	**04 30 54.4**	**+0.2**
	comp=Z,12nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**223**	*e*PG	**Pg**	**04 30 42.2**	**+0.5**
PVCC				*e*SG	**Sg**	**04 31 00.5**	**+0.9**
	comp=Z,53nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**223**	Pg	**Pg**	**04 30 42.2**	**+0.5**
PVCC				Sg	**Sg**	**04 31 00.5**	**+0.9**
	comp=Z,53nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**244**	PG	**Pg**	**04 30 43.9**	**+0.3**
BRG				SG	**Sg**	**04 31 03.7**	**+0.9**
	comp=Z,31nm,0.6s						
PRU	**Pruhonice**	**1.83**	**212**	*e*PG	**Pg**	**04 30 49.8**	**-0.5**
PRU				*e*SG	**Sg**	**04 31 13.8**	**-0.2**
	comp=Z,9.7nm,0.2s						
PRU	**Pruhonice**	**1.83**	**212**	Pg	**Pg**	**04 30 49.8**	**-0.5**
PRU				Sg	**Sg**	**04 31 13.8**	**-0.2**
	comp=Z,9.7nm,0.2s						
CLL	**Collm**	**1.92**	**264**	*e*Pg	**Pg**	**04 30 51.0**	**-0.9**
CLL				*e*Sg	**Sg**	**04 31 17.0**	**+0.3**
	comp=Z,16nm,0.5s						
MORC	**Moravsky Berou**	**2.02**	**151**	*e*Pn	**Pn**	**04 30 50.6**	**+0.2**
MORC				*e*Sg	**Sg**	**04 31 18.7**	**-1.3**
OKC	**Ostrava-Krasne**	**2.18**	**141**	*e*SG	**Sg**	**04 31 26.2**	**+1.1**
OKC	**Ostrava-Krasne**	**2.18**	**141**	Sg	**Sg**	**04 31 26.2**	**+1.1**
NKC	**Novy Kostel**	**2.63**	**241**	*e*PN	**Pn**	**04 30 59.3**	**+0.5**
NKC				*e*PG	**Pg**	**04 31 04.9**	**-0.7**
NKC				*e*SG	**Sg**	**04 31 40.4**	**+0.8**
	comp=Z,16nm,0.4s						
NKC	**Novy Kostel**	**2.63**	**241**	Pn	**Pn**	**04 30 59.3**	**+0.5**
NKC	**Novy Kostel**	**2.63**	**241**	Pg	**Pg**	**04 31 04.9**	**-0.7**
NKC				Sg	**Sg**	**04 31 40.4**	**+0.8**
	comp=Z,16nm,0.4s						
OJC	**Ojcow**	**2.73**	**118**	*e*Pg	**Pg**	**04 31 06.9**	**-0.5**
OJC				*e*Sg	**Sg**	**04 31 42.8**	**+0.1**
OJC	**Ojcow**	**2.73**	**118**	*e*Pg	**Pg**	**04 31 06.9**	**-0.5**
OJC				*e*Sg	**Sg**	**04 31 42.8**	**+0.1**
KHC	**Kasperske Hory**	**2.90**	**214**	*e*PN	**Pn**	**04 31 03.3**	**+0.9**
KHC				*e*PG	**Pg**	**04 31 08.4**	**-2.2**
KHC				*e*SN	**Sn**	**04 31 35.0**	**-2.9**
KHC				*e*SG	**Sg**	**04 31 47.0**	**-1.1**
	comp=Z,3.7nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**214**	Pn	**Pn**	**04 31 03.3**	**+0.9**
KHC	**Kasperske Hory**	**2.90**	**214**	Pg	**Pg**	**04 31 08.4**	**-2.2**
KHC				Sn	**Sn**	**04 31

Also felt at Angwin, Cazadero, Clearlake, Clearlake Oaks, Glen Ellen, Greenbrae, Guerneville, Inverness, Lakeport, Lower Lake, Monte Rio, Saint Helena, San Anselmo, Sausalito, Tracy, Vacaville, Windsor and Yountville.

ISC 30 04:48:35.9±0.7,38°66N±0°04×122°92W±0°06,h10km,n47,σ1§41/56,mb3.9/2,MS3.4/7,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPS	**Hopland**	**0.35**	**340**	*eP*g	**Pg**	**04 48 43.1**	**+0.1**
HOPS				*eS*g	**Sg**	**04 48 45.7**	**-2.0**
MCCM	**Marconi Confer**	**0.52**	**177**	*eP*g	**Pg**	**04 48 49.3**	**+3.4**
WDC	**Whiskeytown Da**	**1.94**	**8**	*eP*n	**Pn**	**04 49 07.8**	**-1.1**
CMB	**Columbia Colle**	**2.08**	**107**	*eP*n	**Pn**	**04 49 10.2**	**-0.7**
CMB				*eS*g	**Sn**	**04 49 35.3**	**-1.6**
SAO	**San Andreas Ge**	**2.22**	**148**	*eP*n	**Pn**	**04 49 12.1**	**-0.7**
YBH	**Yreka Blue Hor**	**3.07**	**3**	Pn	**Pn**	**04 49 26.6**	**+2.1**
	1.5nm,0.3s,baz=206,slow=9.0,SNR=21						
YBH				Sn	**Sn**	**04 50 09.0**	**+7.7**
	baz=122,slow=12,SNR=4.7						
YBH				LR	LR	04 50 44.2	
	comp=Z,964nm,19.7s,baz=165,slow=42						
YBH	**Yreka Blue Hor**	**3.07**	**3**	*eP*n	**Pn**	**04 49 25.7**	**+1.2**
NVAR	**Mina Array Bea**	**3.62**	**92**	Pn	**Pn**	**04 49 31.8**	**-0.2**
	5.3nm,0.3s,baz=270,slow=15,SNR=107						
NVAR				Pg	**Pg**	**04 49 39.6**	**-5.7**
	26nm,0.3s,baz=280,slow=17,SNR=14						
NVAR				Sn	**Sn**	**04 50 23.4**	**+8.5**
	9.5nm,0.3s,baz=268,slow=31,SNR=4.2						
NVAR				Lg		04 50 36.7	
	6.3nm,0.3s,baz=328,slow=19,SNR=4.6						
MOD	**Modoc**	**3.81**	**31**	*eP*n	**Pn**	**04 49 34.4**	**-0.1**
MOD				*eS*g	**Sb**	**04 50 24.3**	**-4.9**
HUMO	**Hull Mountain**	**3.94**	**360**	*eP*n	**Pn**	**04 49 38.4**	**+2.0**
TPH	**Tonopah**	**4.51**	**96**	*eP*n	**Pn**	**04 49 41.9**	**-2.3**
ISA	**Isabella**	**4.64**	**129**	*eP*n	**Pn**	**04 49 47.2**	**+1.2**
ISA				*eS*g	**Sb**	**04 50 52.6**	**-0.7**
BMN	**Battle Mountai**	**4.74**	**66**	*eP*n	**Pn**	**04 49 47.5**	**0.0**
WVOR	**Wild Horse Val**	**4.98**	**39**	Pn	**Pn**	**04 49 48.4**	**-2.3**
WVOR				*eS*g	**Sg**	**04 51 15.8**	**0.0**
PASC	**Pasadena Art C**	**5.88**	**138**	*eP*n	**Pn**	**04 50 03.6**	**+0.5**
	96nm,0.7s						
PASC				*eP*g	**Pb**	**04 50 15.1**	**-3.5**
PASC				*eS*g	**Sg**	**04 51 37.5**	**-7.2**
MWC	**Mount Wilson**	**5.91**	**137**	*eP*n	**Pn**	**04 49 59.8**	**-3.7**
	24nm,1.0s						
MWC				*eP*g	**Pg**	**04 50 21.9**	**-7.2**
MWC				*eS*g	**Sg**	**04 51 36.9**	**-8.8**
GSC	**Goldstone**	**5.93**	**123**	*eP*n	**Pn**	**04 50 05.3**	**+1.6**
	11nm,0.7s						
GSC				*eS*g	**Sb**	**04 51 34.2**	**+3.8**
ELK	**Elko**	**6.27**	**68**	Pn	**Pn**	**04 50 08.8**	**+0.3**
	0.5nm,0.3s,baz=248,slow=12,SNR=17						
ELK				Sn	**Sn**	**04 51 21.6**	**+1.4**
	0.3nm,0.3s,baz=63,slow=5.5,SNR=3.1						
ELK				Lg		04 51 53.2	
	0.9nm,0.3s,baz=110,slow=10,SNR=3.7						
ELK	**Elko**	**6.27**	**68**	Pn	**Pn**	**04 50 08.8**	**+0.3**
ELK				Sn	**Sn**	**04 51 21.6**	**+1.4**
ELK				Lg		04 51 53.2	
N12A	**Clover Valley,**	**6.45**	**68**	*eP*n	**Pn**	**04 50 11.5**	**+0.6**
	9.0nm,0.6s						
N12A				*eS*g	**Sb**	**04 51 49.3**	**+4.0**
N13A	**Wendover, West**	**7.06**	**69**	*eP*g	**Pb**	**04 50 30.6**	**-7.9**
LDFC	**Landfair**	**7.21**	**117**	*eP*n	**Pn**	**04 50 23.5**	**+2.2**
	24nm,1.0s						
ARUT	**Antelope Range**	**7.51**	**94**	*eP*n	**Pn**	**04 50 27.4**	**+2.0**
	13nm,1.0s						
CCUT	**Cedar City**	**7.61**	**95**	*eP*n	**Pn**	**04 50 26.3**	**-0.6**
	11nm,1.1s						
CCUT				*eP*g	**Pg**	**04 50 59.1**	**-2.5**
BGU	**Big Grassy Mou**	**7.94**	**70**	*eP*n	**Pn**	**04 50 30.1**	**-1.3**
	4.0nm,0.8s						
BGU				*eS*g	Sx	04 52 46.9	
DUG	**Dugway**	**7.97**	**76**	*eP*n	**Pn**	**04 50 32.7**	**+1.0**
	13nm,1.0s						
MSU	**Marysvale**	**8.41**	**88**	*eP*n	**Pn**	**04 50 38.7**	**+0.9**
	6.9nm,1.1s						
MSO	**Missoula**	**10.49**	**36**	*eP*n	**Pn**	**04 51 07.7**	**+1.4**
	2.4nm,0.9s						
PDAR	**Pinedale Array**	**10.94**	**64**	Pn	**Pn**	**04 51 17.1**	**+4.8**
	0.1nm,0.3s,baz=257,slow=14,SNR=18						
ANMO	**Albuquerque**	**13.70**	**101**	LR	LR	04 57 22.1	
	comp=Z,364nm,21.8s,baz=111,slow=38						
SDCO	**Great Sand Dun**	**13.73**	**88**	*eP*n	**Pn**	**04 51 44.5**	**-6.1**
	3.2nm,1.3s						
BBB	**Bella Bella**	**14.00**	**347**	LR	LR	04 56 58.9	
	comp=Z,201nm,21.6s,baz=201,slow=36						
EDM	**Edmonton**	**15.99**	**21**	*eP*n	**Pn**	**04 52 14.5**	**-6.2**
TXAR	**Lajitas Array**	**18.44**	**115**	Pn	**Pn**	**04 52 55.1**	**+3.5**
	0.0nm,0.3s,baz=304,slow=9.7,SNR=16						
TXAR				LR	LR	05 00 47.8	
	comp=Z,132nm,21.5s,baz=200,slow=40						
ECSD	**EROS Data Cent**	**20.39**	**67**	*eP*	**P**	**04 53 12.4**	**-0.4**
	12nm,1.3s						
FFC	**Flin Flon**	**21.42**	**35**	*eP*	**P**	**04 53 22.8**	**-1.0**
	7.0nm,1.0s,mb4.0						
ULM	**Lac du Bonnet**	**22.38**	**50**	P	**P**	**04 53 35.4**	**+1.3**
	2.7nm,0.6s,mb3.9,baz=260,slow=13,SNR=3.0						
ULM				LR	LR	05 01 46.5	
	comp=Z,81nm,20.8s,MS3.1,baz=308,slow=35						
YKA	**Yellowknife Ar**	**24.40**	**9**	LR	LR	05 04 53.6	
	comp=Z,13nm,18.5s,MS2.5,baz=355,slow=40						
INK	**Inuvik**	**30.27**	**352**	LR	LR	05 08 43.0	
	comp=Z,230nm,18.0s,MS3.9,baz=102,slow=40						
PETK	**Petropavlovsk-**	**54.32**	**313**	LR	LR	05 18 10.6	
	comp=Z,28nm,19.0s,MS3.3,baz=242,slow=33						
NOA	**NORSAR Array B**	**73.85**	**21**	LR	LR	05 34 04.4	
	comp=Z,26nm,18.2s,MS3.6,baz=85,slow=37						
SONM	**Songino Array**	**83.35**	**329**	LR	LR	05 35 26.2	
	comp=Z,48nm,19.6s,MS3.9,baz=99,slow=34						
JOW	**Kunigami**	**86.92**	**302**	LR	LR	05 34 32.4	
	comp=Z,44nm,21.5s,MS3.8,baz=242,slow=32						
NJ2	**Nanjing**	**89.19**	**312**	*eP*	**P**	**05 01 35.5**	**+3.5**
WMQ	**Urumqi**	**93.35**	**338**	*eP*	**P**	**05 01 47.8**	**-3.3**
LZH	**Lanzhou**	**93.99**	**324**	*eP*	**P**	**05 01 54.3**	**+0.1**
LZH				pP	pP	05 01 57.8	+0.3
LZH				sP	sP	05 01 58.8	+0.1
CD2	**Chengdu**	**98.26**	**321**	P	**P**	**05 02 09.3**	**-4.4**

*NEIC **30** 05:26:07.9, 15°25N×60°98W, h21km, MD3.7(TRN), After TRN.*

TRN 30 05:26:07.1,15°31N×60°85W,h25km,MD3.7,M2.9(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.39**	**273**	*eP*	Pb	05 26 08.1	-7.4
DLPL				*eS*	Sb	05 26 28.1	+6.9
DWS	**Wesley**	**0.51**	**300**	*eP*	Pb	05 26 19.1	+1.5
DWS				*eS*	Sb	05 26 26.9	+2.2
DWS	**Wesley**	**0.51**	**300**	*eP*	Pb	05 26 19.1	+1.5
DWS				*eS*	Sb	05 26 27.7	+3.0
FDF	**Fort de France**	**0.65**	**207**	*eP*g	Pb	05 26 21.9	+2.1
FDF				*eS*g	Sb	05 26 32.9	+4.4
FDF	**Fort de France**	**0.65**	**207**	*eP*	Pb	05 26 22.2	+2.4
FDF	**Fort de France**	**0.65**	**207**	*eP*	Pb	05 26 22.2	+2.4
FDF				*eS*	Sb	05 26 32.9	+4.5
FDF				*eS*	Sb	05 26 33.4	+5.0
MGG	**Marie-Galante**	**0.75**	**323**	*eP*	Pb	05 26 22.9	+1.2
MVM	**Montagne Vaucl**	**0.75**	**183**	*eP*	Pb	05 26 23.0	+1.3
BIM	**Bigot**	**0.82**	**195**	*eP*	Pb	05 26 24.2	+1.4
BIM				*eS*	Sb	05 26 36.6	+3.3
TBG	**Guadaloupe-3**	**0.94**	**305**	*eP*	Pn	05 26 26.2	+1.4
DEG	**La Desirade**	**1.02**	**348**	*eP*	Pn	05 26 25.2	-0.6
DEG				*eS*	Sb	05 26 40.1	+1.1
PHG	**Guadaloupe-2**	**1.04**	**312**	*eP*	Pn	05 26 27.8	+1.7
HMG	**Houelmont**	**1.06**	**309**	*eP*	Pn	05 26 28.2	+1.9
BCG	**Bois Riant Cap**	**1.07**	**316**	*eP*	Pn	05 26 28.0	+1.5
SCG	**Saint Claude**	**1.07**	**312**	*eP*	Pn	05 26 28.2	+1.6
SCG				*eS*	Sb	05 26 43.4	+2.8
LZG	**Guadaloupe-1**	**1.22**	**313**	*eP*	Pn	05 26 30.1	+1.6
SLB	**Belfond**	**1.49**	**187**	*eP*	Pn	05 26 34.6	+2.3
SLB				*eS*	Sn	05 26 53.3	+2.4
SLB	**Belfond**	**1.49**	**187**	*eP*	Pn	05 26 34.6	+2.3
SLB				*eS*	Sn	05 26 53.3	+2.4
MCLT	**Moule a Chique**	**1.60**	**183**	*eP*	Pn	05 26 36.1	+2.3
MCLT				*eS*	Sn	05 26 55.5	+1.9
MCLT	**Moule a Chique**	**1.60**	**183**	*eP*	Pn	05 26 36.1	+2.3
MCLT				*eS*	Sn	05 26 55.5	+1.9
SVB	**Belmont**	**2.06**	**191**	*eP*	Pn	05 26 41.5	+1.3
SVB				*eS*	Sn	05 27 08.0	+2.8
SVB	**Belmont**	**2.06**	**191**	*eP*	Pn	05 26 41.5	+1.3
SVB				*eS*	Sn	05 27 08.0	+2.8
SKI	**Saint Kitts**	**2.71**	**318**	*eP*	Pn	05 26 51.7	+2.6
SKI				*eS*	Sn	05 27 23.9	+2.8
SKI	**Saint Kitts**	**2.71**	**318**	*eP*	Pn	05 26 51.7	+2.6
SKI				*eS*	Sn	05 27 23.9	+2.8

CASC 30 05:26:58.6±3.1,8°43N×82°96W,h1km±9km,MD3.9,3C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**318**	↑*iP*	Pg	05 27 05.1	+0.6
BRU2	**Volcan**	**0.45**	**36**	↓*iP*	Pg	05 27 09.4	+2.1
BRU2				*eS*	Sg	05 27 16.9	+3.7
BAR1		**0.88**	**337**	↑*iP*	Pg	05 27 16.1	+0.5
BAR1				*eS*	Sg	05 27 29.2	+2.2
CNI	**Changuinola**	**1.08**	**24**	↓*iP*	Pg	05 27 19.7	+0.4
BUS	**Buena Vista**	**1.37**	**325**	*eP*	Pn	05 27 23.0	-1.9
BUS				*eS*	Sg	05 27 43.8	+1.0
QCR	**Quepos**	**1.55**	**310**	↑*iP*	Pn	05 27 27.1	-0.3
QCR				*eS*	Sn	05 27 48.0	-0.2
URSC	**Urasca**	**1.62**	**330**	*eP*	Pn	05 27 25.6	-2.7
PRS1	**Puriscal**	**2.04**	**319**	*eP*	Pn	05 27 35.0	+0.8
PRS1				*eS*	Sn	05 28 01.4	+1.0
CGA2	**Cerro Gallo 2**	**2.17**	**317**	*eP*	Pn	05 27 37.8	+1.9
CGA2				*eS*	Sn	05 28 05.2	+1.7

*NEIC **30** 05:34:20.0, 36°98N×29°21E, h5km, mb4.2/12, ML4.1(ISK), After ISK.*
*MOS **30** 05:34:20.9±1.1, 36°98N×29°20E, h6km, mb4.3/16, Error ellipse: s-maj=6.7km s-min=4.9km az=97.5*
*ISK **30** 05:34:20.5, 36°98N×29°21E, h5km, ML4.1*
*HLW **30** 05:34:20.0, 37°28N×29°29E, h33km±44km, Ml4.2*
*IDC **30** 05:34:20.9±0.8, 36°97N×29°22E, h0km, mb4.0/10, mb1 4.1/19, mb1mx4.0/34, mbtmp4.0/19, ML4.1/8, MS3.2/13, Ms1 3.2/13, ms1mx3.0/35, Error ellipse: s-maj=15.5km s-min=14.4km az=177.0*
*ISCJB **30** 05:34:21.1±0.4, 36°91N±0°01×29°21E±0°02, h6km±3km, mb4.0/21, MS3.3/8, Error ellipse: s-maj=2.2km s-min=2.1km az=37.1*
*DDA **30** 05:34:22.1, 37°01N×29°19E, h7km±4km, Ml4.1*
*CSEM **30** 05:34:22.2±0.1, 36°95N×29°19E, h2km, mb4.0/17, Ms2.8, Mw3.8, Error ellipse: s-maj=2.4km s-min=2.1km az=48.0*
*THE **30** 05:34:22.6, 36°94N×29°29E, h0km±1km, ML4.8/2, Error ellipse: s-maj=2.0km s-min=1.1km az=142.0*
*NIC **30** 05:34:24.1±0.3, 37°00N×29°14E, h15km, ML3.4, MW3.8*
ISC 30 05:34:22.2±0.4,36°94N±0°01×29°21E±0°02,h1km±3km, n426,σ1§09/477,mb4.0/21,MS3.3/8,8C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**48**	PG	**Pg**	**05 34 27.6**	**-0.7**
GLHS				*eSG*	**Sg**	**05 34 32.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.32**	**48**	*i* Pg	**Pg**	**05 34 27.6**	**-0.7**
GLHS				*eSg*	**Sg**	**05 34 32.6**	**+0.2**
FETY	**Fethiye**	**0.32**	**198**	PG	**Pg**	**05 34 28.5**	**+0.1**
FETY	**Fethiye**	**0.32**	**198**	*i* Pg	**Pg**	**05 34 28.5**	**+0.1**
GOLH	**Golhisar**	**0.41**	**44**	*i* P	**Pg**	**05 34 29.5**	**-0.5**
GOLH	**Golhisar**	**0.41**	**44**	*i* S	**Sg**	**05 34 36.0**	**+0.7**
GOLH	**Golhisar**	**0.41**	**44**	*i* P	**Pg**	**05 34 29.5**	**-0.5**
GOLH				*i* S	**Sg**	**05 34 36.0**	**+0.6**
TURN	**Turunc**	**0.49**	**262**	*i* P	**Pg**	**05 34 36.9**	**+5.4**
TURN	**Turunc**	**0.49**	**262**	*i* S	**Sg**	**05 34 48.9**	**+11**
ELL	**Elmali**	**0.60**	**109**	*eP*G	**Pg**	**05 34 33.0**	**-0.6**
ELL	**Elmali**	**0.60**	**109**	*eP*g	**Pg**	**05 34 33.0**	**-0.6**
DNZL	**Cakiroluk**	**0.76**	**350**	*i* P	**Pg**	**05 34 35.1**	**-1.6**
DNZL	**Cakiroluk**	**0.76**	**350**	*i* S	**Sg**	**05 34 47.8**	**+1.3**
DNZL	**Cakiroluk**	**0.76**	**350**	*i* P	**Pg**	**05 34 35.1**	**-1.6**
DNZL				*i* S	**Sg**	**05 34 47.8**	**+1.3**
YER	**Yerkesik**	**0.76**	**285**	*eP*G	**Pg**	**05 34 36.5**	**-0.3**
YER	**Yerkesik**	**0.76**	**285**	*eP*g	**Pg**	**05 34 36.5**	**-0.3**
AKAS	**Kas**	**0.78**	**155**	*i* P	**Pg**	**05 34 37.2**	**+0.1**
AKAS	**Kas**	**0.78**	**155**	*i* S	**Sg**	**05 34 51.3**	**+4.1**
AKAS	**Kas**	**0.78**	**155**	*i* P	**Pg**	**05 34 37.2**	**+0.1**
AKAS				*i* S	**Sg**	**05 34 51.3**	**+4.1**
DENT	**Denizli**	**0.82**	**350**	*eP*G	**Pg**	**05 34 36.4**	**-1.6**
DENT	**Denizli**	**0.82**	**350**	*eP*g	**Pg**	**05 34 36.4**	**-1.6**
KSL	**Kastellorizon**	**0.85**	**159**	*eP*	**Pg**	**05 34 38.5**	**+0.1**
KORT	**Korkueli**	**0.92**	**86**	*i* P	**Pg**	**05 34 38.1**	**-1.7**
KORT	**Korkueli**	**0.92**	**86**	*i* S	**Sg**	**05 34 54.6**	**+2.9**
KORT	**Korkueli**	**0.92**	**86**	*i* P	**Pg**	**05 34 38.1**	**-1.7**
KORT				*i* S	**Sg**	**05 34 54.6**	**+2.9**
ARG	**Arkhangelos**	**1.13**	**230**	*eP*	**Pg**	**05 34 44.0**	**+0.1**
ARG	**Arkhangelos**	**1.13**	**230**	P	**Pg**	**05 34 43.4**	**-0.5**
ARG				S	**Sg**	**05 35 02.8**	**+4.3**
ARG	**Arkhangelos**	**1.13**	**230**	P	**Pg**	**05 34 44.0**	**+0.1**
ARG				S	**Sg**	**05 35 02.8**	**+4.3**
ANTB	**Antalya**	**1.16**	**92**	*eP*N	**Pn**	**05 34 44.1**	**-1.5**
ANTB	**Antalya**	**1.16**	**92**	*eP*n	**Pn**	**05 34 44.1**	**-1.4**
MLSB	**Milas**	**1.20**	**288**	*eP*N	**Pn**	**05 34 44.6**	**-1.4**
MLSB	**Milas**	**1.20**	**288**	*eP*n	**Pn**	**05 34 44.6**	**-1.4**
BCK	**Bucak**	**1.22**	**65**	*eP*N	**Pn**	**05 34 44.3**	**-2.1**
AYDN	**Tasoluk**	**1.28**	**305**	*i* P	**Pg**	**05 34 45.8**	**-0.8**
AYDN	**Tasoluk**	**1.28**	**305**	*i* S	**Sg**	**05 35 05.7**	**+2.5**
AYDN	**Tasoluk**	**1.28**	**305**	*i* P	**Pg**	**05 34 45.8**	**-0.9**
AYDN				*i* S	**Sg**	**05 35 05.7**	**+2.5**
DAT	**Datca**	**1.32**	**261**	*eP*N	**Pn**	**05 34 47.2**	**-0.5**
DAT	**Datca**	**1.32**	**261**	*eP*n	**Pn**	**05 34 47.2**	**-0.6**
ISP	**Isparta**	**1.37**	**50**	*eP*N	**Pn**	**05 34 47.0**	**-1.4**
ISP	**Isparta**	**1.37**	**50**	↓*iP*	**Pn**	**05 34 47.7**	**-0.7**
ISP				S	**Sg**	**05 35 07.2**	**+1.0**
ISP	**Isparta**	**1.37**	**50**	P	**Pn**	**05 34 47.6**	**-0.8**
ISP	**Isparta**	**1.37**	**50**	↓*iP*	**Pn**	**05 34 47.7**	**-0.7**
ISP				S	**Sg**	**05 35 07.2**	**+1.0**
ISP	**Isparta**	**1.37**	**50**	P	**Pn**	**05 34 46.8**	**-1.6**
ISP				S	**Sg**	**05 35 06.2**	**0.0**
ISP	**Isparta**	**1.37**	**50**	*eP*n	**Pn**	**05 34 47.0**	**-1.4**
ISP	**Isparta**	**1.37**	**50**	P	**Pn**	**05 34 47.7**	**-0.7**
ISP				S	**Sg**	**05 35 06.2**	**0.0**
KHL	**Karahalli**	**1.40**	**10**	*eP*N	**Pn**	**05 34 47.9**	**-1.0**
KHL	**Karahalli**	**1.40**	**10**	*eP*n	**Pn**	**05 34 47.9**	**-0.9**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**05 34 48.9**	**-0.1**
BDRM	**Kayabasi**	**1.42**	**275**	*i* S	**Sg**	**05 35 09.5**	**+1.8**
BDRM	**Kayabasi**	**1.42**	**275**	*i* P	**Pn**	**05 34 48.9**	**-0.1**
BDRM				*i* S	**Sg**	**05 35 09.5**	**+1.8**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**05 34 47.7**	**-1.7**
KHAL	**Karahalli**	**1.44**	**9**	*i* S	**Sg**	**05 35 09.8**	**+1.2**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**05 34 47.7**	**-1.7**
KHAL				*i* S	**Sg**	**05 35 09.8**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.53**	**69**	*eP*N	**Pn**	**05 34 49.9**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.53**	**69**	*eP*n	**Pn**	**05 34 49.9**	**-0.7**
KULA	**Kula-Manisa**	**1.63**	**345**	*eP*N	**Pn**	**05 34 51.0**	**-1.0**
KULA	**Kula-Manisa**	**1.63**	**345**	*eP*n	**Pn**	**05 34 51.0**	**-1.0**
MANT	**Manisa**	**1.63**	**342**	*i* P	**Pn**	**05 34 51.1**	**-0.9**
MANT	**Manisa**	**1.63**	**342**	*i* S	**Sn**	**05 35 13.9**	**+0.4**
MANT	**Manisa**	**1.63**	**342**	*i* P	**Pn**	**05 34 51.1**	**-0.9**
MANT				*i* S	**Sn**	**05 35 13.9**	**+0.3**
NIS1	**Nisyros Isl.**	**1.66**	**259**	P	**Pn**	**05 34 53.4**	**+1.0**
NIS1				S	**Sn**	**05 35 16.1**	**+1.7**
NIS1	**Nisyros Isl.**	**1.66**	**259**	P	**Pn**	**05 34 53.4**	**+1.0**
NIS1				S	**Sn**	**05 35 16.1**	**+1.7**
GCAM	**G?zelcaml?**	**1.74**	**296**	*i* P	**Pn**	**05 34 53.7**	**+0.1**
GCAM	**G?zelcaml?**	**1.74**	**296**	*i* S	**Sn**	**05 35 17.1**	**+0.7**
GCAM	**G?zelcaml?**	**1.74**	**296**	*i* P	**Pn**	**05 34 53.7**	**+0.1**
GCAM				*i* S	**Sn**	**05 35 17.1**	**+0.7**
SHUT	**Suhut-Afyon**	**1.93**	**33**	*eP*N	**Pn**	**05 34 55.3**	**-0.8**
SHUT	**Suhut-Afyon**	**1.93**	**33**	*eP*n	**Pn**	**05 34 55.3**	**-0.8**
SMG	**Samos**	**2.04**	**293**	*eP*	**Pn**	**05 34 58.0**	**+0.4**
SMG	**Samos**	**2.04**	**293**	P	**Pn**	**05 34 57.6**	**0.0**
SMG	**Samos**	**2.04**	**293**	P	**Pn**	**05 34 57.6**	**0.0**
IZM	**Izmir**	**2.12**	**314**	*eP*N	**Pn**	**05 34 58.2**	**-0.5**
IZM	**Izmir**	**2.12**	**314**	*eP*n	**Pn**	**05 34 58.2**	**-0.5**
DEMI	**Demirci**	**2.13**	**350**	*i* P	**Pn**	**05 34 58.2**	**-0.7**
DEMI	**Demirci**	**2.13**	**350**	*i* P	**Pn**	**05 34 58.2**	**-0.7**
GDZ	**Gediz**	**2.15**	**6**	*i* P	**Pn**	**05 34 58.5**	**-0.7**
GDZ	**Gediz**	**2.15**	**6**	*i* P	**Pn**	**05 34 58.5**	**-0.7**
KARP	**Karpathos**	**2.16**	**230**	*eP*	**Pn**	**05 35 00.0**	**+0.7**
KARP	**Karpathos**	**2.16**	**230**	P	**Pg**	**05 35 03.7**	**+0.1**
KARP	**Karpathos**	**2.16**	**230**	P	**Pg**	**05 35 03.7**	**+0.1**
AKHS	**Akhisar**	**2.22**	**331**	*i* P	**Pn**	**05 34 59.1**	**-1.1**
AKHS	**Akhisar**	**2.22**	**331**	*i* S	**Sn**	**05 35 27.2**	**-1.1**
AKHS	**Akhisar**	**2.22**	**331**	*i* P	**Pn**	**05 34 59.1**	**-1.1**
AKHS				*i* S	**Sn**	**05 35 27.2**	**-1.1**
ALT	**Altintas**	**2.23**	**18**	*eP*N	**Pn**	**05 34 59.3**	**-0.9**
ALT	**Altintas**	**2.23**	**18**	*eP*n	**Pn**	**05 34 59.3**	**-0.9**
BLCB	**Balcova**	**2.24**	**311**	*eP*N	**Pn**	**05 35 00.0**	**-0.4**
BLCB	**Balcova**	**2.24**	**311**	P	**Pn**	**05 34 59.9**	**-0.5**
BLCB				S	**Sn**	**05 35 27.9**	**-0.8**
BLCB	**Balcova**	**2.24**	**311**	*eP*n	**Pn**	**05 35 00.0**	**-0.4**
BLCB				S	**Sn**	**05 35 27.9**	**-0.8**
BOLV	**Bolvadin**	**2.25**	**37**	*i* P	**Pn**	**05 35 00.8**	**+0.3**
BOLV	**Bolvadin**	**2.25**	**37**	*i* S	**Sn**	**05 35 30.4**	**+1.6**
BOLV	**Bolvadin**	**2.25**	**37**	*i* P	**Pn**	**05 35 00.8**	**+0.3**
BOLV				*i* S	**Sn**	**05 35 30.4**	**+1.6**
GAZI	**Gazipasa**	**2.60**	**105**	*i* P	**Pn**	**05 35 06.8**	**+1.5**
GAZI	**Gazipasa**	**2.60**	**105**	*i* S	**Sn**	**05 35 39.7**	**+2.1**
GAZI	**Gazipasa**	**2.60**	**105**	*i* P	**Pn**	**05 35 06.8**	**+1.5**
GAZI				*i* S	**Sn**	**05 35 39.7**	**+2.1**
HDMB	**Hadim**	**2.63**	**89**	*eP*N	**Pn**	**05 35 05.7**	**-0.1**
HDMB	**Hadim**	**2.63**	**89**	*eP*n	**Pn**	**05 35 05.7**	**0.0**
DST	**Dursunbey**	**2.70**	**350**	*eP*N	**Pn**	**05 35 06.3**	**-0.3**
DST	**Dursunbey**	**2.70**	**350**	*eP*n	**Pn**	**05 35 06.3**	**-0.4**
KONT	**Konya--Tatoy**	**2.70**	**67**	*eP*N	**Pn**	**05 35 06.6**	**-0.1**
KONT	**Konya--Tatoy**	**2.70**	**67**	*eP*n	**Pn**	**05 35 06.6**	**-0.1**
LADK	**Ladik-KONYA**	**2.81**	**62**	*eP*N	**Pn**	**05 35 08.1**	**-0.1**
LADK	**Ladik-KONYA**	**2.81**	**62**	*eP*n	**Pn**	**05 35 08.1**	**-0.1**
KIZT	**Kizilcal**	**2.87**	**47**	*eP*N	**Pn**	**05 35 08.8**	**-0.2**
KIZT	**Kizilcal**	**2.87**	**47**	*eP*n	**Pn**	**05 35 08.8**	**-0.2**
ESKT	**Eskisehir**	**2.88**	**26**	*eP*N	**Pn**	**05 35 09.2**	**0.0**
ESKT	**Eskisehir**	**2.88**	**26**	*eP*n	**Pn**	**05 35 09.2**	**0.0**
CHOS	**Chios island**	**2.88**	**301**	P	**Pn**	**05 35 09.5**	**+0.3**
CHOS				S	**Sn**	**05 35 45.6**	**+1.0**
CHOS	**Chios island**	**2.88**	**301**	P	**Pn**	**05 35 09.5**	**+0.3**
CHOS				S	**Sn**	**05 35 45.6**	**+1.0**
BALB	**Balikesir**	**2.89**	**339**	*eP*N	**Pn**	**05 35 09.1**	**-0.2**
BALB	**Balikesir**	**2.89**	**339**	*eP*n	**Pn**	**05 35 09.1**	**-0.2**
APE	**Apeiranthos**	**2.94**	**274**	*eP*	**Pn**	**05 35 10.5**	**+0.4**
APE	**Apeiranthos**	**2.94**	**274**	⇑*iP*	**Pn**	**05 35 10.9**	**+0.8**
APE				S	**Sn**	**05 35 46.5**	**+0.5**
APE	**Apeiranthos**	**2.94**	**274**	⇑*iP*	**Pn**	**05 35 10.9**	**+0.8**
APE				S	**Sn**	**05 35 46.5**	**+0.5**
APE	**Apeiranthos**	**2.94**	**274**	P	**Pn**	**05 35 10.4**	**+0.3**
APE				S	**Sn**	**05 35 46.7**	**+0.7**
APE	**Apeiranthos**	**2.94**	**274**	P	**Pn**	**05 35 10.4**	**+0.3**
APE				S	**Sn**	**05 35 46.5**	**+0.5**
BALY	**Balya**	**3.06**	**336**	*i* P	**Pn**	**05 35 11.4**	**-0.2**
BALY	**Balya**	**3.06**	**336**	*i* P	**Pn**	**05 35 11.4**	**-0.2**

CTYL	Yal??k??y-??at	4.58	351	*e*Pn	Pn	05 35 33.2 +0.6
ALN	Alexandroupoli	4.65	329	P	Pn	05 35 33.3 -0.3
ALN	Alexandroupoli	4.65	329	P	Pn	05 35 33.3 -0.3
GVD	Gavdhos	4.66	245	*e*P	Pn	05 35 36.0 +2.4
GVD	Gavdhos	4.66	245	*e*Pn	Pn	05 35 35.8 +2.2
GVD	Gavdhos	4.66	245	*e*Pn	Pn	05 35 35.8 +2.2
KARA	Karaisali	4.69	84	*e*PN	Pn	05 35 35.1 +1.1
KARA	Karaisali	4.69	84	*e*Pn	Pn	05 35 35.1 +1.1
KDZE	Karadeniz Ereo	4.70	21	*e*PN	Pn	05 35 34.6 +0.4
KDZE	Karadeniz Ereo	4.70	21	*e*Pn	Pn	05 35 34.6 +0.4
CDAG	Cicekdag	4.87	55	*i* P	Pn	05 35 37.1 +0.6
CDAG	Cicekdag	4.87	55	*i* S	Sn	05 36 33.6 +0.2
CDAG	Cicekdag	4.87	55	*i* P	Pn	05 35 37.1 +0.6
CDAG				*i* S	Sn	05 36 33.7 +0.3
KRTS	Karatas	4.97	92	*e*PN	Pn	05 35 39.1 +1.2
KRTS	Karatas	4.97	92	*e*Pn	Pn	05 35 39.1 +1.2
KYTH	Kithira	5.01	264	*e*P	Pn	05 35 41.5 +3.1
CEYT	Ceyhan	5.24	87	*e*PN	Pn	05 35 43.0 +1.4
CEYT	Ceyhan	5.24	87	*e*Pn	Pn	05 35 43.0 +1.4
EDRB	Edirne	5.25	339	*e*PN	Pn	05 35 42.0 +0.2
EDRB	Edirne	5.25	339	*e*Pn	Pn	05 35 42.0 +0.2
KOZT	Kozan	5.31	82	*e*PN	Pn	05 35 44.0 +1.4
CORM	Corum	5.34	51	*e*PN	Pn	05 35 43.4 +0.4
CORM	Corum	5.34	51	*e*Pn	Pn	05 35 43.4 +0.4
HMAT	Matruh	6.09	197	P	Pn	05 35 52.5 -0.8
	baz=197					
HMAT				S	Sn	05 36 59.4 -4.2
	baz=197					
HMAT	Matruh	6.09	197	P	Pn	05 35 52.5 -0.8
HMAT				S	Sn	05 36 59.4 -4.2
HWQ	Hawqa	6.10	114	*e*Pn	Pn	05 35 54.2 +0.8
HWQ	Hawqa	6.10	114	*e*Pn	Pn	05 35 54.2 +0.7
KMRS	Kahramanmaras	6.17	82	*e*PN	Pn	05 35 56.1 +1.8
KMRS	Kahramanmaras	6.17	82	*e*Pn	Pn	05 35 56.2 +1.9
SARI	SarD1z-Kayseri	6.18	71	*e*PN	Pn	05 35 52.3 -2.2
SLUM		6.36	212	P	Pn	05 35 57.2 +0.1
	baz=212					
SLUM				S	Sn	05 37 03.7 -6.6
	baz=212					
SLUM		6.36	212	P	Pn	05 35 57.2 +0.1
SLUM				S	Sn	05 37 03.7 -6.6
RCY	Rachaya	6.42	121	*e*Pn	Pn	05 35 57.1 -0.7
RCY	Rachaya	6.42	121	*e*Pn	Pn	05 35 57.1 -0.7
MMAI	Mount Meron Ar	6.42	126	Pn	Pn	05 35 57.5 -0.4
	comp=N,38nm,0.3s,baz=317,slow=12,SNR=47					
MMAI				Sn	Sn	05 37 06.8 -5.0
	comp=N,4.6nm,0.3s,baz=300,slow=18,SNR=3.3					
MMAI				LR	LR	05 38 57.5
	comp=N,84nm,20.9s,baz=295,slow=43					
RSH		7.05	147	P	Pn	05 36 05.2 -1.3
AMAG	Maghara	7.11	151	P	Pn	05 36 05.9 -1.4
	baz=152					
AMAG	Maghara	7.11	151	P	Pn	05 36 05.9 -1.4
HLW	Helwan	7.29	165	P	Pn	05 36 09.6 -0.1
	baz=166					
HLW	Helwan	7.29	165	P	Pn	05 36 09.6 -0.2
KOT	Kottamia	7.33	162	P	Pn	05 36 09.4 -1.0
	baz=163					
KOT				AMP		05 37 00.0
	comp=E,60μm,0.3s,logA/T=5.2,baz=163					
KOT	Kottamia	7.33	162	P	Pn	05 36 09.4 -1.0
HHAG	Hagoal	7.38	160	P	Pn	05 36 10.0 -1.0
	baz=161					
HHAG	Hagoal	7.38	160	P	Pn	05 36 10.0 -1.0
HNAT	Natroun	7.38	170	P	Pn	05 36 10.2 -0.9
	baz=171					
HNAT	Natroun	7.38	170	P	Pn	05 36 10.2 -0.9
AYT	Al 'Ayyat	7.40	167	P	Pn	05 36 11.7 +0.4
	baz=167					
AYT	Al 'Ayyat	7.40	167	P	Pn	05 36 11.7 +0.4
TIRR	Tirgusor	7.53	356	*e*Pn	Pn	05 36 12.2 -0.8
	comp=E,18nm,1.1s					
TIRR	Tirgusor	7.53	356	⇑*i*P	Pn	05 36 13.0 -0.1
TIRR	Tirgusor	7.53	356	*e*Pn	Pn	05 36 12.2 -0.9
	comp=E,18nm,1.1s					
TIRR	Tirgusor	7.53	356	P	Pn	05 36 13.0 -0.1
HSAF	As Saff	7.56	164	P	Pn	05 36 13.7 +0.1
	baz=165					
HSAF	As Saff	7.56	164	P	Pn	05 36 13.7 +0.1
GLL	Jalalah	7.64	163	P	Pn	05 36 13.9 -0.6
	baz=164					
GLL	Jalalah	7.64	163	P	Pn	05 36 13.9 -0.7
SUZ		7.70	156	P	Pn	05 36 14.9 -0.5
	baz=157					
SUZ		7.70	156	P	Pn	05 36 14.9 -0.6
HARR	Harsova	7.80	353	⇑*i*P	Pn	05 36 19.2 +2.5
ASF	Jabal al Asfar	7.93	125	Pn	Pn	05 36 19.2 +0.6
	comp=E,2.0nm,0.3s,baz=176,slow=4.7,SNR=17					
ASF				Sn	Sn	05 37 45.0 -3.9
	baz=24,slow=20,SNR=1.7					
ASF				LR	LR	05 40 12.3
	comp=E,65nm,21.9s,baz=343,slow=44					
ASF	Jabal al Asfar	7.93	125	P	Pn	05 36 19.2 +0.6
ASF						05 37 45.0
ASF				pmax	pmax	
	comp=Z,2.0nm,0.3s					
ASF				MLR	MLR	
	comp=Z,65nm,21.9s					
HNKL	Nakhl	8.05	149	P	Pn	05 36 18.7 -1.6
	baz=150					
HNKL	Nakhl	8.05	149	P	Pn	05 36 18.7 -1.5
BARS	Barje	8.16	318	*i* Pn	Pn	05 36 23.0 +1.3
SWA2		8.30	203	P	Pn	05 36 23.6 0.0
	baz=203					
SWA2				S	Sn	05 37 51.3 -6.6
	baz=203					
SWA2				AMP		05 38 00.0
	comp=E,130μm,0.4s,logA/T=5.6,baz=203					
SWA2		8.30	203	P	Pn	05 36 23.6 0.0
SWA2				S	Sn	05 37 51.3 -6.6
SEV	Sevastopol'	8.31	23	*e*P	Pn	05 36 23.3 -0.5
SEV				pmax	pmax	
	comp=Z,2.0nm,0.2s					
SEV	Sevastopol'	8.31	23	*e*P	Pn	05 36 23.3 -0.5
	comp=Z,2.0nm,0.2s					
YAL	Yalta	8.42	25	*e*P	Pn	05 36 25.6 +0.4
YAL				pmax	pmax	
	comp=Z,44nm,0.9s					
YAL	Yalta	8.42	25	*e*P	Pn	05 36 25.6 +0.4
	comp=Z,44nm,0.9s					
NISS		8.51	322	*i* Pn	Pn	05 36 27.7 +1.2
EIL	Elat	8.70	145	Pn	Pn	05 36 27.8 -1.3
	comp=Z,6.7nm,0.3s,baz=340,slow=13,SNR=25					
EIL				Sn	Sn	05 38 00.5 -7.4
	comp=Z,1.3nm,0.3s,baz=325,slow=19,SNR=3.2					
EIL				LR	LR	05 40 54.5
	comp=Z,45nm,19.0s,baz=232,slow=45					
EIL	Elat	8.70	145	Pn	Pn	05 36 27.8 -1.3
SIM	Simferopol'	8.82	23	*e*P	Pn	05 36 32.8 +2.1
SIM				*e*S	Sn	05 38 14.4 +3.8
SIM				pmax	pmax	
	comp=Z,23nm,0.9s					
SIM				smax		
	comp=N,25nm,0.8s					
SIM				smax		
	comp=E,15nm,0.7s					
SIM	Simferopol'	8.82	23	*e*P	Pn	05 36 32.8 +2.1
	comp=E,23nm,0.9s					
MLR	Muntele Rosu	8.88	345	Pn	Pn	05 36 32.4 +0.8
	comp=E,1.0nm,0.3s,baz=184,slow=4.7,SNR=14					
MLR				Lg		05 39 08.3
	baz=147,slow=17,SNR=2.0					
MLR	Muntele Rosu	8.88	345	⇑*i*P	Pn	05 36 32.8 +1.2
MLR	Muntele Rosu	8.88	345	Pn	Pn	05 36 32.4 +0.8
MLR	Muntele Rosu	8.88	345	P	Pn	05 36 32.8 +1.2
HBST	Basata	8.99	147	P	Pn	05 36 31.8 -1.4
	baz=148					
HBST	Basata	8.99	147	P	Pn	05 36 31.8 -1.3
GRB	Gharib	9.16	160	P	Pn	05 36 35.2 -0.3
	baz=160					
GRB	Gharib	9.16	160	P	Pn	05 36 35.2 -0.2
HKAT	Jabal Katrina	9.31	153	P	Pn	05 36 36.6 -0.9
	baz=154					
HKAT	Jabal Katrina	9.31	153	P	Pn	05 36 36.6 -0.9
GZR	Gura Zlata	9.73	332	⇓*i*P	Pn	05 36 42.9 -0.3
GZR	Gura Zlata	9.73	332	⇓*i*P	Pn	05 36 42.9 -0.3
SHRM		9.94	154	P	Pn	05 36 45.0 -1.1
	baz=155					
SHRM		9.94	154	P	Pn	05 36 45.0 -1.1
ANN	Anapa	10.02	36	*e*P	Pn	05 36 43.8 -3.3
ANN				pmax	pmax	
	comp=Z,22nm,0.9s					
TIP	Timpagrande	10.07	287	*e*Pn	Pn	05 36 49.2 +1.4
	comp=Z,43nm,1.4s					
TIP	Timpagrande	10.07	287	*e*Pn	Pn	05 36 49.2 +1.4
	comp=Z,43nm,1.4s					
HHRG	Al Ghardaqah	10.38	158	P	Pn	05 36 50.9 -1.2
	baz=159					
HHRG	Al Ghardaqah	10.38	158	P	Pn	05 36 50.9 -1.2
SOC	Sochi	10.41	47	*e*P	Pn	05 36 55.8 +3.3
SOC				*e*		05 38 46.9
SOC				MLR	MLR	
	comp=Z,5μm,14.0s					
BURAR	Bucovina Array	11.06	346	⇓P	Pn	05 37 03.2 +1.8
BURAR	Bucovina Array	11.06	346	⇓*i*P	Pn	05 37 03.2 +1.8
BURAR	Bucovina Array	11.06	346	⇓*i*P	Pn	05 37 03.2 +1.8
BUR08	Bucovina Ar. S	11.10	346	*e*Pn	Pn	05 37 02.1 +0.2
BUR08	Bucovina Ar. S	11.10	346	*e*Pn	Pn	05 37 02.1 +0.2
HDK1	Dakhla	11.37	179	P	Pn	05 37 06.8 +1.1
	baz=179					
HDK1	Dakhla	11.37	179	P	Pn	05 37 06.8 +1.1
KIV	Kislovodsk	12.42	52	*i* P	Pn	05 37 22.3 +2.3
KIV	Kislovodsk	12.42	52	*i* P	Pn	05 37 22.3 +2.3
GNI	Garni	12.58	71	LR	LR	05 43 20.7
	comp=Z,147nm,19.1s,baz=276,slow=43					
GNI	Garni	12.58	71	*e*P	Pn	05 37 21.7 -0.5
GNI	Garni	12.58	71	*e*P	Pn	05 37 21.7 -0.5
AKASG	Malin Array Be	13.75	0	Pn	Pn	05 37 35.8 -2.4
	baz=186,slow=12,SNR=4.4					
AKASG	Malin Array Be	13.75	0	P	Pn	05 37 35.8 -2.4
OKC	Ostrava-Krasne	15.17	332	*e*P	Pn	05 38 03.8 +6.4
VRAC	Vranov	15.38	327	Pn	Pn	05 38 05.0 +4.7
	comp=Z,0.4nm,0.3s,baz=253,slow=17,SNR=5.4					
VRAC				LR	LR	05 43 08.8
	comp=Z,73nm,19.9s,baz=114,slow=34					
VRAC	Vranov	15.38	327	P	Pn	05 38 05.0 +4.7
	comp=Z,73nm,19.9s					
KEST	Kesra	16.05	272	Pn	Pn	05 38 08.4 -0.7
	comp=Z,0.1nm,0.3s,baz=151,slow=10,SNR=3.2					
DPC	Dobruska-Polom	16.29	329	*e*P	Pn	05 38 11.8 -0.3
DPC				MLR	MLR	
	comp=N,200nm,18.7s					
GEC2	GERESS Array S	16.41	321	*e*P	Pn	05 38 15.8 +2.2
GEC2				pmax	pmax	
	comp=Z,2μm,1.1s					
GEC2	GERESS Array S	16.41	321	*e*P	Pn	05 38 15.8 +2.3
	comp=Z,2μm,1.1s					
GEC2	GERESS Array S	16.41	321	*e*P	Pn	05 38 15.8 +2.2
	comp=Z,2μm,1.1s					
GERES	GERESS Array B	16.41	321	Pn	Pn	05 38 14.7 +1.1
	comp=Z,0.2nm,0.3s,baz=130,slow=12,SNR=11					
GERES				LR	LR	05 44 42.8
	comp=Z,80nm,18.3s,baz=310,slow=38					
GERES	GERESS Array B	16.41	321	P	Pn	05 38 14.7 +1.1
	comp=Z,80nm,18.3s					
KHC	Kasperske Hory	16.66	322	*e*P	Pn	05 38 20.5 +3.8
PRU	Pruhonice	16.79	326	*e*P	Pn	05 38 21.5 +3.1
DAVOX	Davos/Dischmat	17.39	310	P	Pn	05 38 27.1 +1.2
	comp=Z,0.3nm,0.3s,baz=254,slow=19,SNR=2.4					
DAVOX				LR	LR	05 45 15.3
	comp=Z,70nm,18.4s,baz=86,slow=38					
DAVOX	Davos/Dischmat	17.39	310	P	Pn	05 38 27.2 +1.2
BRG	Berggiesshubel	17.69	327	*e*(P)	Pn	05 38 33.0 +3.3
	comp=Z,6.3nm,1.0s					
BRG				*e*		05 38 41.4
	comp=Z,4.2nm,0.8s					
BRG	Berggiesshubel	17.69	327	P	Pn	05 38 33.0 +3.3
CLL	Collm	18.42	326	*e*P	Pn	05 38 39.0 +0.4
CLL				MLR	MLR	
	comp=Z,100nm,17.9s					
CLL	Collm	18.42	326	*es*P	sP	05 38 39.0 -0.2
CLL				*e*PPP		05 38 55.0
CLL				*e*		05 39 01.0
CLL	Collm	18.42	326	*e*P	Pn	05 38 39.0 +0.4
	comp=Z,100nm,17.9s					
MOX	Moxa	18.61	323	*e*P	Pn	05 38 42.3 +1.3
MOX				pmax	pmax	
	comp=Z,13nm,1.4s					
MOX	Moxa	18.61	323	*e*P	Pn	05 38 42.3 +1.3
	comp=Z,13nm,1.4s					
MOX	Moxa	18.61	323	*e*P	Pn	05 38 42.3 +1.3
	comp=Z,13nm,1.4s					
OBN	Obninsk	18.86	13	⇑*e*P	Pn	05 38 44.2 +0.2
OBN				pmax	pmax	
	comp=Z,8.0nm,0.8s					
OBN	Obninsk	18.86	13	*e*P	Pn	05 38 44.2 +0.2
	comp=Z,8.0nm,0.8s					
LPG	La Plagne	18.88	304	*e*P	Pn	05 38 43.6 -0.7
	comp=Z,29nm,1.0s					
LPG	La Plagne	18.88	304	*e*P	Pn	05 38 43.6 -0.7
LPG				pmax	pmax	
	comp=Z,14nm,1.0s					
LPG	La Plagne	18.88	304	*e*P	Pn	05 38 43.6 -0.7
	comp=Z,14nm,1.0s					
LPG	La Plagne	18.88	304	*e*P	Pn	05 38 43.6 -0.7
	comp=Z,14nm,1.0s					
LPL	La Plagne	18.90	304	*e*P	Pn	05 38 43.6 -1.0
LPL	La Plagne	18.90	304	*e*P	Pn	05 38 43.6 -1.0
ORIF	Oris-en-Rattie	19.30	302	*e*P	Pn	05 38 48.1 -1.2
	comp=Z,13nm,0.8s					
ORIF				*e*MLR	MLR	
	comp=Z,92nm,20.5s					
ORIF	Oris-en-Rattie	19.30	302	*e*P	Pn	05 38 48.1 -1.2
ORIF				pmax	pmax	
	comp=Z,6.0nm,0.8s					
ORIF	Oris-en-Rattie	19.30	302	*e*P	Pn	05 38 48.1 -1.2
	comp=Z,6.3nm,0.8s					
ORIF	Oris-en-Rattie	19.30	302	*e*P	Pn	05 38 48.1 -1.2
	comp=Z,6.3nm,0.8s					
CABF	La Chapelle	19.70	307	*e*P	Pn	05 38 53.2 -0.9
	comp=Z,52nm,1.3s					
CABF	La Chapelle	19.70	307	*e*P	Pn	05 38 53.2 -0.9
CABF				pmax	pmax	
	comp=Z,26nm,1.3s					
CABF	La Chapelle	19.70	307	*e*P	Pn	05 38 53.2 -0.9
	comp=Z,26nm,1.3s					
CABF	La Chapelle	19.70	307	*e*P	Pn	05 38 53.2 -0.9
	comp=Z,26nm,1.3s					
CDF	Champ du Feu	19.71	312	*e*P	Pn	05 38 53.3 -0.9
	comp=Z,47nm,1.5s					
CDF	Champ du Feu	19.71	312	*e*P	Pn	05 38 53.3 -0.9
CDF				pmax	pmax	
	comp=Z,24nm,1.5s					
CDF	Champ du Feu	19.71	312	*e*P	Pn	05 38 53.3 -0.9
	comp=Z,24nm,1.5s					
CDF	Champ du Feu	19.71	312	*e*P	Pn	05 38 53.3 -0.9
	comp=Z,24nm,1.5s					
HAU	Haudompre	20.08	311	*e*P	P	05 38 56.5 -0.4
HAU				*e*MLR	MLR	
	comp=Z,111nm,20.5s,MS2.9					
HAU	Haudompre	20.08	311	*e*P	P	05 38 56.5 -0.4
HAU				LR	LR	
	comp=Z,110nm,20.5s,MS3.2					
HAU	Haudompre	20.08	311	*e*P	P	05 38 56.5 -0.4
VIVF	Saint-Julien-l	20.11	301	*e*P	P	05 38 56.4 -0.8
	comp=Z,38nm,1.0s					
VIVF	Saint-Julien-l	20.11	301	*e*P	P	05 38 56.4 -0.8
VIVF				pmax	pmax	
	comp=Z,19nm,1.0s					
VIVF	Saint-Julien-l	20.11	301	*e*P	P	05 38 56.4 -0.8
	comp=Z,19nm,1.0s					
VIVF	Saint-Julien-l	20.11	301	*e*P	P	05 38 56.4 -0.8
	comp=Z,19nm,1.0s					
SMF	Signal de Mont	21.17	305	*e*P	P	05 39 07.9 -0.8
	comp=Z,25nm,1.0s,mb4.2					
SMF	Signal de Mont	21.17	305	*e*P	P	05 39 07.9 -0.8
SMF				pmax	pmax	
	comp=Z,12nm,1.0s,mb4.2					
SMF	Signal de Mont	21.17	305	*e*P	P	05 39 07.9 -0.8
	comp=Z,12nm,1.0s,mb4.2					
SMF	Signal de Mont	21.17	305	*e*P	P	05 39 07.9 -0.8
	comp=Z,12nm,1.0s,mb4.2					
LOR	Lormes	21.36	307	*e*P	P	05 39 09.3 -1.5
LOR				*e*MLR	MLR	
	comp=Z,68nm,21.8s,MS2.7					
LOR	Lormes	21.36	307	*e*P	P	05 39 09.3 -1.5
LOR				LR	LR	
	comp=Z,70nm,21.8s,MS3.0					
LOR	Lormes	21.36	307	*e*P	P	05 39 09.3 -1.5
AVF	Avril sur Loir	21.54	305	*e*P	P	05 39 11.5 -1.1
AVF	Avril sur Loir	21.54	305	*e*P	P	05 39 11.5 -1.1
MTLF	Montolieu	21.54	296	*e*P	P	05 39 12.2 -0.6
MTLF	Montolieu	21.54	296	*e*P	P	05 39 12.2 -0.6
VSU	Vasula	21.59	356	⇑*i*P	P	05 39 15.1 +2.0
VSU				pmax	pmax	
	comp=Z,13nm,0.9s,mb4.4					
VSU	Vasula	21.59	356	*i* P	P	05 39 15.1 +2.0
	comp=Z,13nm,0.9s,mb4.4					
GIVF	Givet	21.91	315	*e*P	P	05 39 15.4 -1.3
	comp=Z,39nm,1.1s,mb4.4					
GIVF	Givet	21.91	315	*e*P	P	05 39 15.4 -1.3
GIVF				pmax	pmax	
	comp=Z,19nm,1.1s,mb4.4					
GIVF	Givet	21.91	315	*e*P	P	05 39 15.4 -1.3
	comp=Z,19nm,1.1s,mb4.5					
GIVF	Givet	21.91	315	*e*P	P	05 39 15.4 -1.3
	comp=Z,19nm,1.1s,mb4.4					
BAIF	Baives	22.25	314	*e*P	P	05 39 18.7 -1.5
	comp=Z,14nm,0.8s,mb4.2					
BAIF	Baives	22.25	314	*e*P	P	05 39 18.7 -1.5
BAIF				pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.1					
BAIF	Baives	22.25	314	*e*P	P	05 39 18.7 -1.5
	comp=Z,7.3nm,0.8s,mb4.2					
BAIF	Baives	22.25	314	*e*P	P	05 39 18.7 -1.5
	comp=Z,7.2nm,0.8s,mb4.2					
MFF	Saint Martin d	23.80	303	*e*P	P	05 39 34.4 -2.0
	comp=Z,17nm,1.1s,mb4.2					
MFF	Saint Martin d	23.80	303	*e*P	P	05 39 34.4 -2.0
MFF				pmax	pmax	
	comp=Z,9.0nm,1.1s,mb4.2					
MFF	Saint Martin d	23.80	303	*e*P	P	05 39 34.4 -2.0
	comp=Z,8.6nm,1.1s,mb4.2					
MFF	Saint Martin d	23.80	303	*e*P	P	05 39 34.4 -2.0
	comp=Z,8.6nm,1.1s,mb4.2					
FINES	FINESS Array B	24.60	356	P	P	05 39 42.8 -0.8
	comp=Z,2.5nm,0.6s,mb4.1,baz=153,slow=9.8,SNR=9.1					
FINES				LR	LR	05 48 45.4
	comp=Z,47nm,20.9s,MS3.0,baz=221,slow=35					
FINES	FINESS Array B	24.60	356	P	P	05 39 42.8 -0.8
FINES				pmax	pmax	
	comp=Z,3.0nm,0.6s					
FINES				MLR	MLR	
	comp=Z,47nm,21.0s					
FINES	FINESS Array B	24.60	356	P	P	05 39 42.8 -0.8
	comp=Z,47nm,21.0s					
AKTK	Aktyubinsk	24.63	48	P	P	05 39 42.1 -1.9
AKTK	Aktyubinsk	24.63	48	P	P	05 39 42.1 -1.9
	comp=Z,2.0nm,0.7s,mb4.0					
AKTO	Aktyubinsk	24.63	48	P	P	05 39 42.1 -1.9
	comp=Z,2.3nm,0.7s,mb4.0,baz=258,slow=8.4,SNR=7.4					
AKTO	Aktyubinsk	24.63	48	P	P	05 39 42.1 -1.9
AKTO				pmax	pmax	
	comp=Z,2.0nm,0.7s,mb4.0					
TAM	Tamanrasset	24.82	242	*e*P	P	05 39 45.9 0.0
TAM				pmax	pmax	
	comp=Z,3.0nm,1.0s,mb4.0					
TAM	Tamanrasset	24.82	242	*e*P	P	05 39 45.9 0.0
	comp=Z,2.6nm,1.0s,mb3.9					
TAM	Tamanrasset	24.82	242	*e*P	P	05 39 45.9 0.0
	comp=Z,2.6nm,1.0s,mb3.9					
HFS	Hagfors	25.25	342	P	P	05 39 48.0 -1.4
	comp=Z,6.0nm,0.9s,mb4.3,baz=144,slow=5.5,SNR=9.5					
HFS				LR	LR	05 51 05.0
	comp=Z,78nm,19.5s,MS3.2,baz=340,slow=40					
HFS	Hagfors	25.25	342	P	P	05 39 48.0 -1.4
HFS				pmax	pmax	
	comp=Z,6.0nm,0.9s					
HFS				MLR	MLR	
	comp=Z,78nm,19.5s					
HFS	Hagfors	25.25	342	P	P	05 39 48.0 -1.4
	comp=Z,78nm,19.5s					
ABKAR	Akbulak array	25.41	51	*e*P	P	05 39 49.3 -1.7
	comp=Z,1.2nm,0.6s,mb3.8					
ABKAR	Akbulak array	25.41	51	*e*P	P	05 39 49.3 -1.7
	comp=Z,1.2nm,0.6s,mb3.8					
ESDC	Sonseca Array	26.09	286	P	P	05 39 55.6 -1.7
	comp=Z,1.6nm,0.6s,mb3.8,baz=78,slow=10,SNR=6.2					
ESDC	Sonseca Array	26.09	286	P	P	05 39 55.6 -1.7
NOA	NORSAR Array B	26.67	340	P	P	05 40 00.8 -1.5
	comp=Z,0.9nm,0.8s,mb3.6,baz=146,slow=9.0,SNR=4.0					
NOA				LR	LR	05 52 17.3
	comp=Z,68nm,19.2s,MS3.2,baz=150,slow=40					
NOA	NORSAR Array B	26.67	340	P	P	05 40 00.8 -1.5
NOA				pmax	pmax	
	comp=Z,1.0nm,0.8s					
NOA				MLR	MLR	
	comp=Z,68nm,19.2s					
NOA	NORSAR Array B	26.67	340	P	P	05 40 00.8 -1.5
	comp=Z,68nm,19.2s					
EKA	Eskdalemuir Ar	28.62	320	P	P	05 40 17.8 -2.1
	comp=Z,1.2nm,0.9s,mb3.7,baz=120,slow=9.9,SNR=3.5					
EKA	Eskdalemuir Ar	28.62	320	P	P	05 40 17.8 -2.1
EKA				pmax	pmax	
	comp=Z,1.0nm,0.9s					
EKA	Eskdalemuir Ar	28.62	320	P	P	05 40 17.8 -2.1
	comp=Z,1.0nm,0.9s,mb3.6					
ARCES	ARCESS Array B	32.71	358	P	P	05 40 55.1 -0.7
	comp=Z,3.9nm,0.8s,mb4.4,baz=121,slow=4.5,SNR=6.5					
ARCES	ARCESS Array B	32.71	358	P	P	05 40 55.1 -0.7
ARCES				pmax	pmax	
	comp=Z,4.0nm,0.8s					
ARCES	ARCESS Array B	32.71	358	P	P	05 40 55.1 -0.7
	comp=Z,4.0nm,0.8s,mb4.4					
BVAR	Borovoye Array	32.74	47	LR	LR	05 57 02.5
	comp=Z,81nm,20.1s,MS3.4,baz=224,slow=42					
TORD	Torodi Ar. Bea	34.16	233	P	P	05 41 07.7 -1.3
	comp=Z,4.7nm,0.7s,mb4.5,baz=33,slow=8.6,SNR=52					
AAK	Ala-Archa	34.94	66	*e*P	P	05 41 15.3 -0.2
AAK				pmax	pmax	
	comp=Z,2.0nm,1.2s,mb3.9					
AAK	Ala-Archa	34.94	66	*e*P	P	05 41 15.3 -0.2
	comp=Z,2.0nm,1.2s,mb3.9					
KURK	Kurchatov	37.51	52	*ce*P	P	05 41 37.1 -0.2
KURK				pmax	pmax	
	comp=Z,7.0nm,2.0s,mb4.0					
KURK	Kurchatov	37.51	52	*e*P	P	05 41 37.1 -0.2
	comp=Z,7.0nm,2.0s,mb4.0					
MK31	Makanchi Array	40.05	59	*e*P	P	05 41 56.7 -2.1
MKAR	Makanchi Array	40.05	59	P	P	05 41 56.4 -2.4
	comp=Z,1.9nm,0.8s,mb3.8,baz=288,slow=5.8,SNR=9.0					
MKAR	Makanchi Array	40.05	59	P	P	05 41 56.4 -2.4
MKAR				pmax	pmax	
	comp=Z,2.0nm,0.8s					
ZALV	Zalesov

KTK1 AML AML 05 37 09.6
comp=N,19nm,0.5s
KTK1 Kautokeino 3.27 265 P **Pn 05 36 13.7 +1.1**
HEF Hetta 3.31 254 *e*P **Pn 05 36 13.9 +0.6**
HEF *e*S **Sn 05 36 54.0 +0.7**
HEF MSG 05 37 10.2
comp=Z,5.1nm,0.2s
HEF Hetta 3.31 254 P **Pn 05 36 13.9 +0.6**
HEF S **Sn 05 36 54.0 +0.7**
comp=Z,5.1nm,0.2s
KU6 Riekki 3.63 196 *e*P **Pn 05 36 18.0 +0.4**
KU6 *e*S **Sn 05 36 59.9 -1.2**
KU6 Riekki 3.63 196 P **Pn 05 36 17.9 +0.3**
KU6 S **Sn 05 36 59.8 -1.3**
RNF Rovaniemi 3.76 222 *e*P **Pn 05 36 19.4 0.0**
RNF *e*S **Sn 05 37 04.2 0.0**
RNF Rovaniemi 3.76 222 P **Pn 05 36 19.3 -0.1**
RNF S **Sn 05 37 04.2 -0.1**
KIF Kilpisjarvi 4.13 268 *e*P **Pn 05 36 24.9 +0.5**
KIF *e*S **Sn 05 37 12.3 -0.9**
SPA0 Spitsbergen Ar 9.70 340 Pn **Pn 05 37 39.4 -1.4**
baz=142,slow=18
SPA0 Spitsbergen Ar 9.70 340 *e*P **Pn 05 37 39.4 -1.4**

CASC ***30*** *05:35:36.4±5.0, 8.°39N×82.°90W, h0km±9km, MD4.4, ML4.4, mb4.8(NEIC)*
MOS ***30*** *05:35:38.1±1.2, 8.°50N×82.°81W, h23km, mb5.0/55, MS4.6/4, Error ellipse: s-maj=10.9km s-min=4.9km az=112.8*
ISCJB ***30*** *05:35:39.1±0.6, 8.°45N±0.°03×82.°85W±0.°02, h30km±3km, mb4.7/148, MS4.5/24, Error ellipse: s-maj=6.1km s-min=2.7km az=20.6*
NEIC ***30*** *05:35:41.2±0.3, 8.°39N×82.°92W, h35km, mb4.8/133, Error ellipse: s-maj=6.4km s-min=4.0km az=204.0*
GCMT ***30*** *05:35:41.2±0.2, 8.°37N×82.°81W, h12km, MW5.1/87, Moment Tensor Solution. s51,c64; s87,c140; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.71±.10; Mθθ-3.02±.09; Mφφ-1.70±.13; Mrθ0.27±.32; Mφθ2.27±.07; Mrφ1.33±.39; Best double couple: Mφ4.90200×10¹⁶ NP1:φs=114.00000°, δ43.00000°, λ70.00000°. NP2: φs=320.00000°, δ50.00000°, λ108.00000°. Principal axes: T 5.0440, Plg76.0000°, Azm293.0000°; N -0.2930, Plg14.0000°, Azm129.0000°; P -4.7610, Plg4.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***30*** *05:35:42.9±2.0, 8.°42N×82.°88W, h54km±18km, mb4.2/22, mb1 4.4/29, mb1mx4.3/32, mbtmp4.3/29, ML4.0/5, MS4.4/23, Ms1 4.4/23, ms1mx4.4/23 Error ellipse: s-maj=16.8km s-min=9.6km az=54.0*
ISC 30 05:35:40.7±0.7, 8.°47N±0.°04×82.°85W±0.°02, h27km±4km, n662, σ0.°94/639, mb4.7/148, MS4.5/24, 160C-154D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.36**	**301**	⇑*i*P	**Pb**	**05 35 42.3**	**-6.5**
ACR				*e*S	**Sb**	**05 35 51.5**	**-2.9**
BRU2	**Volcan**	**0.36**	**26**	⇓*i*P	**Pb**	**05 35 46.0**	**-2.9**
BRU2				*e*S	**Sb**	**05 35 54.9**	**+0.5**
BAR1		**0.90**	**330**	⇓*i*P	**Pb**	**05 35 52.6**	**-5.1**
BAR1				*e*S	**Sb**	**05 36 10.1**	**+0.9**
CNI	**Changuinola**	**1.00**	**19**	⇓*e*P	**Pn**	**05 35 56.3**	**-2.8**
BUS	**Buena Vista**	**1.41**	**321**	⇑*i*P	**Pn**	**05 36 00.5**	**-4.1**
LIO	**Limon**	**1.54**	**353**	⇑*i*P	**Pn**	**05 36 04.5**	**-2.0**
QCR	**Quepos**	**1.61**	**306**	⇑*i*P	**Pn**	**05 36 02.6**	**-4.8**
QCR				*e*S	**Sn**	**05 36 25.7**	**-1.6**
URSC	**Urasca**	**1.64**	**326**	⇓*i*P	**Pn**	**05 36 04.3**	**-3.5**
SJS	**Escuela Geolog**	**1.89**	**321**	⇑*i*P	**Pn**	**05 36 09.4**	**-1.8**
SJS				*e*S	**Sn**	**05 36 35.0**	**+0.8**
PRS1	**Puriscal**	**2.09**	**316**	⇑*i*P	**Pn**	**05 36 10.4**	**-3.6**
PRS1				*e*S	**Sn**	**05 36 36.9**	**-2.2**
CGA2	**Cerro Gallo 2**	**2.22**	**314**	⇑*i*P	**Pn**	**05 36 13.2**	**-2.5**
JCR	**Jicaral**	**2.62**	**302**	*e*P	**Pn**	**05 36 17.3**	**-4.1**
FORC	**Fortuna**	**2.68**	**318**	*i*P	**Pn**	**05 36 20.2**	**-1.9**
JTS	**JuntasAbangare**	**2.75**	**311**	*e*Pn	**Pn**	**05 36 23.4**	**+0.2**
JTS				*e*Sn	**Sn**	**05 36 57.5**	**+1.9**
JTS	**JuntasAbangare**	**2.75**	**311**	*e*P	**Pn**	**05 36 23.4**	**+0.3**
JTS				*e*S	**Sb**	**05 37 01.1**	**-1.6**
BCIP	**Isla Barro Col**	**3.06**	**77**	*e*Pn	**Pn**	**05 36 26.2**	**-1.2**
BCIP	**Isla Barro Col**	**3.06**	**77**	*e*P	**Pn**	**05 36 26.2**	**-1.2**
BCIP				⇓*i*P		05 36 26.3	
BCIP				AML	AML	05 37 27.9	
	comp=E,3μm,0.6s						
BCIP				AML	AML	05 37 41.6	
	comp=N,2μm,0.6s						
PTEN	**Parque Tenorio**	**3.07**	**317**	*i*P	**Pn**	**05 36 28.4**	**+0.8**
PTEN				*i*S	**Sb**	**05 37 10.2**	**-1.5**
CUI	**Cuipilapa**	**3.15**	**314**	*i*P	**Pn**	**05 36 29.1**	**+0.4**
CUI				*i*S	**Sb**	**05 37 13.1**	**-1.0**
VCR	**Vista de Mar**	**3.20**	**301**	⇑*i*P	**Pn**	**05 36 25.8**	**-3.5**
MESS	**Mesas**	**3.23**	**315**	*i*P	**Pn**	**05 36 30.0**	**+0.2**
LIM1	**Limonal**	**3.24**	**313**	*i*P	**Pn**	**05 36 29.0**	**-1.0**
UPIG		**3.32**	**81**	*e*P	**Pn**	**05 36 28.1**	**-2.9**
UPIG				*e*S	**Sb**	**05 37 30.7**	**+12**
UPIG		**3.32**	**81**	⇓*e*P	**Pn**	**05 36 29.0**	**-2.0**
UPIG				*e*P		05 36 35.6	
UPIG				*e*S	**Sn**	**05 37 10.9**	**+1.2**
UPIG				*e*S	**Sn**	**05 37 18.2**	**+8.6**
NY14	**Universidad de**	**3.42**	**310**	*i*P	**Pn**	**05 36 31.4**	**-0.9**
LAPC	**Finca la Perla**	**3.42**	**312**	*i*P	**Pn**	**05 36 32.3**	**-0.1**
BUEV	**Buena Vista**	**3.42**	**313**	*i*P	**Pn**	**05 36 32.7**	**+0.3**
GB1A	**Borinquen Arri**	**3.43**	**313**	*i*P	**Pn**	**05 36 33.3**	**+0.8**
GBS3	**Finca Las Im¯¡**	**3.45**	**312**	⇓*i*P	**Pn**	**05 36 32.2**	**-0.6**
SSN	**San Juan del S**	**4.08**	**314**	*e*P	**Pn**	**05 36 42.3**	**+0.8**
CONN	**Concepcion**	**4.12**	**319**	*e*P	**Pn**	**05 36 43.0**	**+1.1**
APON	**Apoyo**	**4.67**	**318**	*e*P	**Pn**	**05 36 50.5**	**+1.0**
TICN	**Ticuantepe**	**4.86**	**317**	*e*P	**Pn**	**05 36 52.9**	**+0.7**
CRUN	**El Crucero**	**4.87**	**316**	*e*P	**Sn**	**05 37 50.4**	**+2.5**
WILN	**Americas 2**	**4.92**	**319**	*e*P	**Pn**	**05 36 53.5**	**+0.5**
MGAN	**Managua**	**4.95**	**318**	*e*P	**Pn**	**05 36 53.8**	**+0.3**
HUEN		**5.05**	**320**	*e*P	**Pn**	**05 36 55.1**	**+0.4**
CSAN		**5.10**	**317**	*e*P	**Pn**	**05 36 55.7**	**+0.3**
CNGN	**Cerro Negro**	**5.51**	**317**	*e*P	**Pn**	**05 37 02.3**	**+1.2**
CNCH	**Conchagua**	**6.84**	**315**	*e*P	**Pn**	**05 37 20.4**	**+1.0**
CNCH				*e*P		05 37 20.5	
TGUH	**Tegucigalpa,Un**	**7.05**	**322**	*e*Pn	**Pn**	**05 37 24.4**	**+2.1**
TGUH	**Tegucigalpa,Un**	**7.05**	**322**	*e*P	**Pn**	**05 37 23.4**	**+1.1**
TGUH				*e*P		05 37 24.3	
TGUH				AML	AML	05 37 51.3	
	comp=N,374nm,0.7s						
TGUH				*e*S	**Sb**	**05 39 11.8**	**+5.6**
BLLM	**Bellamira**	**7.24**	**314**	*e*P	**Pn**	**05 37 25.5**	**+0.6**
LFRS	**El Faro**	**7.96**	**311**	*e*P	**Pn**	**05 37 34.5**	**-0.3**
TOLC	**Tolima**	**8.40**	**117**	*e*P	**Pn**	**05 37 40.9**	**+0.1**
SBLS	**San Blas**	**8.52**	**309**	*e*P	**Pn**	**05 37 43.2**	**+0.7**
RBDL	**Robledal**	**8.74**	**311**	*e*P	**Pn**	**05 37 45.5**	**0.0**
ROSC	**El Rosal**	**9.19**	**112**	P	**Pn**	**05 37 54.5**	**+2.8**
	comp=N,0.9nm,0.3s,baz=77,slow=3.8,SNR=18						
ROSC				S	**Sn**	**05 39 41.5**	**+7.1**
	comp=N,0.3nm,0.3s,baz=90,slow=20,SNR=2.4						
ROSC				LR	LR	05 41 05.5	
	comp=N,2μm,20.0s,baz=346,slow=35						
ROSC	**El Rosal**	**9.19**	**112**	*e*Pn	**Pn**	**05 37 54.5**	**+2.8**
ROSC	**El Rosal**	**9.19**	**112**	*e*P	**Pn**	**05 37 55.0**	**+3.3**
OTAV	**Otavalo**	**9.28**	**152**	*e*Pn	**Pn**	**05 37 52.4**	**-0.4**
	comp=N,87nm,1.3s						
OTAV	**Otavalo**	**9.28**	**152**	*e*P	**Pn**	**05 37 52.1**	**-0.7**
OCAC	**Ocana**	**9.44**	**91**	*e*P	**Pn**	**05 37 57.3**	**+2.2**
BARC	**Barichara**	**9.76**	**100**	*e*P	**Pn**	**05 38 09.0**	**+10**
APG	**El Apazote**	**9.89**	**312**	P	**Pn**	**05 38 02.0**	**+0.8**
	comp=N,3.1nm,0.3s,baz=143,slow=10.0,SNR=35						
APG				LR	LR	05 41 56.6	
	comp=N,3μm,21.1s,baz=326,slow=38						
MTDJ	**Mount Denham**	**10.99**	**28**	*e*Pn	**Pn**	**05 38 16.5**	**+0.1**
SDV	**Santo Domingo**	**12.09**	**87**	P	**Pn**	**05 38 33.6**	**+2.2**
	comp=N,0.3nm,0.3s,baz=287,slow=7.4,SNR=6.5						
SDV				S	**Sn**	**05 40 46.9**	**+1.5**
	comp=N,0.4nm,0.3s,baz=293,slow=21,SNR=1.8						
SDV				LR	LR	05 43 56.6	
	comp=N,3μm,19.3s,baz=278,slow=41						
SDV	**Santo Domingo**	**12.09**	**87**	*e*Pn	**Pn**	**05 38 34.1**	**+2.7**
TEIG	**Tepich**	**12.81**	**336**	*e*Pn	**Pn**	**05 38 45.7**	**+4.4**
LMGC	**Las Mercedes**	**12.84**	**26**	*e*P	**Pn**	**05 38 43.4**	**+1.7**
MASC	**Masc**	**14.32**	**35**	*e*P	**Pn**	**05 39 06.1**	**+4.3**
CMIG	**Matias Romero**	**14.52**	**307**	P	**Pn**	**05 39 04.2**	**-0.5**
	comp=N,1.2nm,0.3s,baz=117,slow=10,SNR=15						
CMIG				LR	LR	05 44 48.0	
	comp=N,1μm,20.1s,baz=125,slow=38						
SDDR	**Presa de Saban**	**15.34**	**46**	*e*Pn	**Pn**	**05 39 14.5**	**-1.0**
	comp=N,97nm,1.1s						
ATAH	**Atahualpa**	**16.12**	**164**	P	**Pn**	**05 39 26.7**	**+1.0**
	comp=N,0.2nm,0.3s,baz=350,slow=8.7,SNR=4.4						
ATAH				LR	LR	05 44 51.4	
	comp=N,3μm,21.0s,baz=334,slow=34						
GRTK	**Grand Turk**	**17.20**	**40**	*e*P	**Pn**	**05 39 41.8**	**+2.6**
	comp=N,119nm,1.1s						
CRPR	**Cabo Rojo, PR**	**18.01**	**57**	*e*Pn	**Pn**	**05 39 49.5**	**+0.2**
	comp=N,162nm,2.3s						
PCRV	**Puerto La Cruz**	**18.06**	**83**	P	**Pn**	**05 39 51.7**	**+1.8**
	comp=N,1.5nm,0.3s,baz=260,slow=2.4,SNR=6.1						
MPR	**Mayaguez**	**18.09**	**56**	*e*P	**Pn**	**05 39 55.4**	**+5.2**
AGP	**Aguadilla**	**18.18**	**55**	*e*P	**Pn**	**05 39 57.0**	**+5.6**
AGPR	**Aguadilla, PR**	**18.24**	**55**	*e*P	**Pn**	**05 39 54.2**	**+2.1**
	comp=N,92nm,1.1s						
LRS	**Lares**	**18.37**	**56**	*e*P	**Pn**	**05 39 56.8**	**+3.1**
OBIP	**Obispado Ponce**	**18.44**	**57**	*e*P	**Pn**	**05 39 57.1**	**+2.5**
	comp=N,61nm,1.1s						
AOPR	**Arecibo Observ**	**18.47**	**56**	*e*P	**Pn**	**05 39 57.4**	**+2.4**
	comp=N,34nm,1.1s						
CELP	**Cerrillos**	**18.48**	**57**	*e*Pn	**Pn**	**05 39 57.0**	**+1.9**
SJG	**San Juan**	**18.86**	**58**	P	**Pn**	**05 39 59.8**	**+0.1**
	comp=N,15nm,0.3s,baz=193,slow=14,SNR=3.7						
SJG				LR	LR	05 46 55.0	
	comp=N,9μm,18.4s,baz=266,slow=36						
SJG	**San Juan**	**18.86**	**58**	P	**Pn**	**05 39 59.8**	**+0.2**
SJG				pmax	pmax		
	comp=Z,15nm,0.3s						
SJG				MLR	MLR		
	comp=Z,9μm,18.4s						
SJG	**San Juan**	**18.86**	**58**	*e*P	**Pn**	**05 39 60.0**	**+0.3**
	comp=Z,99nm,0.6s						
HUMP	**Col San Antoni**	**19.12**	**58**	*e*Pn	**Pn**	**05 40 04.9**	**+2.0**
	comp=Z,100nm,1.3s						
CBYP	**Canovanas**	**19.18**	**58**	*e*Pn	**Pn**	**05 40 05.3**	**+1.8**
	comp=Z,357nm,1.8s						
MTP	**Monte Pirata**	**19.35**	**59**	*e*Pn	**Pn**	**05 40 04.5**	**-1.1**
	comp=Z,70nm,0.9s						
CDVI	**St. Croix**	**19.87**	**61**	*e*Pn	**Pn**	**05 40 11.6**	**-0.1**
	comp=Z,126nm,0.9s						
STVI	**Saint Thomas**	**19.97**	**59**	*e*Pn	**Pn**	**05 40 13.8**	**+0.8**
	comp=Z,70nm,1.1s						
GRGR	**Grenville**	**21.17**	**78**	*e*P	**P**	**05 40 25.1**	**+0.9**
	comp=Z,204nm,1.0s,mb5.4						
NNA	**Nana**	**21.18**	**164**	P	**P**	**05 40 23.4**	**-0.8**
	comp=Z,80nm,1.0s,mb5.0,baz=341,slow=12,SNR=19						
NNA				LR	LR	05 47 56.7	
	comp=Z,504nm,20.2s,MS3.9,baz=56,slow=35						
NNA	**Nana**	**21.18**	**164**	P	**P**	**05 40 23.4**	**-0.8**
NNA				pmax	pmax		
	comp=Z,80nm,1.0s						
NNA				MLR	MLR		
	comp=Z,504nm,20.2s						
NNA	**Nana**	**21.18**	**164**	*e*P	**P**	**05 40 23.2**	**-1.0**
	comp=Z,100nm,1.0s,mb5.1						
FDF	**Fort de France**	**22.14**	**72**	*e*P	**P**	**05 40 34.2**	**-0.4**
FDF				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.2						
FDF	**Fort de France**	**22.14**	**72**	*e*P	**P**	**05 40 34.2**	**-0.5**
	comp=Z,112nm,1.2s,mb5.2						
BRAL	**Brewton**	**22.77**	**351**	*e*P	**P**	**05 40 44.8**	**+3.6**
	comp=Z,111nm,1.1s,mb5.2						
HKT	**Hockley**	**24.59**	**332**	*e*P	**P**	**05 40 58.3**	**-0.5**
HKT				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.7						
HKT	**Hockley**	**24.59**	**332**	*e*P	**P**	**05 40 58.3**	**-0.5**
	comp=Z,30nm,1.2s,mb4.7						
VBMS	**Vicksburg**	**24.68**	**344**	*e*P	**P**	**05 41 00.1**	**+0.5**
	comp=Z,94nm,1.1s,mb5.2						
LRAL	**Lakeview Retre**	**24.75**	**352**	*e*P	**P**	**05 41 00.8**	**+0.7**
	comp=Z,40nm,0.9s,mb4.9						
GOGA	**Godfrey**	**24.83**	**359**	*e*P	**P**	**05 41 01.3**	**+0.4**
GOGA				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.2						
GOGA	**Godfrey**	**24.83**	**359**	*e*P	**P**	**05 41 01.3**	**+0.4**
	comp=Z,58nm,0.8s,mb5.2						
JSC	**Jenkinsville**	**25.73**	**3**	*e*P	**P**	**05 41 09.6**	**+0.5**
SWET	**Sewanee**	**26.77**	**354**	*e*P	**P**	**05 41 17.7**	**-0.7**
PLAL	**Pickwick Lake**	**26.82**	**350**	*e*P	**P**	**05 41 18.9**	**0.0**
	comp=Z,26nm,1.3s,mb4.6						
CPCT	**Cooper Cave**	**26.90**	**357**	*e*P	**P**	**05 41 20.2**	**+0.6**
JCT	**Junction City**	**27.04**	**326**	*e*P	**P**	**05 41 19.2**	**-1.7**
JCT				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.5						
JCT	**Junction City**	**27.04**	**326**	*e*P	**P**	**05 41 19.2**	**-1.7**
	comp=Z,19nm,1.3s,mb4.5						
TKL	**Tuckaleechee C**	**27.08**	**358**	P	**P**	**05 41 20.8**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.0,baz=179,slow=8.4,SNR=3.5						
TKL				LR	LR	05 52 41.1	
	comp=Z,1μm,18.1s,MS4.5,baz=180,slow=38						
TKL	**Tuckaleechee C**	**27.08**	**358**	*e*P	**P**	**05 41 21.2**	**0.0**
UALR	**University of**	**27.60**	**343**	*e*P	**P**	**05 41 24.9**	**-1.0**
	comp=Z,24nm,0.9s,mb4.8						
MIAR	**Mount Ida**	**27.76**	**341**	*e*P	**P**	**05 41 26.5**	**-0.9**
MIAR				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
MIAR	**Mount Ida**	**27.76**	**341**	*e*P	**P**	**05 41 26.5**	**-0.8**
	comp=Z,17nm,0.9s,mb4.7						
HBAR	**Harrisburg**	**27.89**	**346**	*e*P	**P**	**05 41 28.1**	**-0.4**
WVT	**Waverly**	**27.91**	**351**	*e*P	**P**	**05 41 27.5**	**-1.1**
WVT				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.7						
WVT	**Waverly**	**27.91**	**351**	*e*P	**P**	**05 41 27.4**	**-1.2**
	comp=Z,16nm,0.9s,mb4.6						
TZTN	**Tazewell**	**27.96**	**359**	*e*P	**P**	**05 41 29.9**	**+0.9**
	comp=Z,18nm,1.1s,mb4.6						
628A	**Black Gap, Mar**	**28.12**	**321**	⇑P	**P**	**05 41 30.9**	**+0.2**
	baz=28						
627A	**Terlingua Ranc**	**28.42**	**320**	⇓P	**P**	**05 41 33.0**	**-0.3**
	baz=28,SNR=7.2						
TXAR	**Lajitas Array**	**28.51**	**319**	P	**P**	**05 41 34.6**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.6,baz=128,slow=11,SNR=7.6						
TXAR				PcP	PcP	05 44 45.3	-0.2
	comp=Z,1.8nm,0.9s,baz=152,slow=5.7,SNR=6.3						
TXAR				LR	LR	05 53 50.6	
	comp=Z,339nm,21.2s,MS3.9,baz=305,slow=38						
TXAR	**Lajitas Array**	**28.51**	**319**	P	**P**	**05 41 34.6**	**+0.5**
TXAR						05 44 45.3	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR				MLR	MLR		
	comp=Z,339nm,21.2s						
528A	**Cox Ranch, San**	**28.53**	**322**	⇓P	**P**	**05 41 34.2**	**-0.1**
	baz=29						
LPAZ	**La Paz**	**28.59**	**149**	P	**P**	**05 41 32.9**	**-2.0**
	comp=Z,5.1nm,0.9s,mb4.2,baz=334,slow=14,SNR=13						
LPAZ	**La Paz**	**28.59**	**149**	P	**P**	**05 41 32.9**	**-1.9**
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPAZ	**La Paz**	**28.59**	**149**	*e*P	**P**	**05 41 32.9**	**-2.0**
	comp=Z,4.7nm,0.8s,mb4.3						
ELN	**Prospectdale**	**28.70**	**3**	*e*P	**P**	**05 41 38.0**	**+2.3**
BLA	**Blacksburg**	**28.70**	**4**	*e*P	**P**	**05 41 36.0**	**+0.3**
BLA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
BLA	**Blacksburg**	**28.70**	**4**	*e*P	**P**	**05 41 36.0**	**+0.3**
	comp=Z,15nm,0.9s,mb4.7						
PARMO	**Parma**	**28.76**	**348**	*e*P	**P**	**05 41 36.3**	**+0.1**
428A	**Kincaid Ranch,**	**28.87**	**323**	⇓P	**P**	**05 41 37.0**	**-0.3**
	baz=29,SNR=7.5						
626A	**Big Bend Ranch**	**28.96**	**319**	⇑P	**P**	**05 41 38.2**	**0.0**
	baz=29						
527A	**Woodward Ranch**	**29.03**	**321**	⇑P	**P**	**05 41 38.5**	**-0.3**
	baz=29,SNR=13						
526A	**Mary Lane Ranc**	**29.28**	**320**	⇑P	**P**	**05 41 41.0**	**+0.1**
	baz=29						
328A	**Wristen Ranch,**	**29.42**	**324**	⇓P	**P**	**05 41 42.1**	**-0.1**
	baz=30						
SIUC	**Southern Illin**	**29.68**	**350**	*e*P	**P**	**05 41 43.2**	**-1.2**
	comp=Z,12nm,0.4s,mb5.0						
USIN	**University of**	**29.69**	**352**	*e*P	**P**	**05 41 44.4**	**-0.1**
	comp=Z,33nm,0.9s,mb5.1						
WCI	**Wyandotte Cave**	**29.80**	**355**	*e*P	**P**	**05 41 44.8**	**-0.6**
WCI				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
WCI	**Wyandotte Cave**	**29.80**	**355**	*e*P	**P**	**05 41 44.8**	**-0.6**
	comp=Z,29nm,0.9s,mb5.0						
WMOK	**Wichita Mounta**	**29.96**	**333**	*e*P	**P**	**05 41 46.6**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
WMOK	**Wichita Mounta**	**29.96**	**333**	*e*P	**P**	**05 41 46.6**	**-0.3**
	comp=Z,5.5nm,1.0s,mb4.2						
FVM	**French Village**	**30.18**	**348**	*e*P	**P**	**05 41 48.4**	**-0.3**
FVM				pmax	pmax		
	comp=Z,39nm,1.5s,mb4.9						
FVM	**French Village**	**30.18**	**348**	*e*P	**P**	**05 41 48.4**	**-0.4**
	comp=Z,39nm,1.5s,mb4.9						
425A	**Indio Mountain**	**30.34**	**320**	⇓P	**P**	**05 41 50.3**	**+0.1**
	baz=30,SNR=7.5						
CCM	**Cathedral Cave**	**30.42**	**347**	*e*P	**P**	**05 41 49.4**	**-1.5**
CCM				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
CCM	**Cathedral Cave**	**30.42**	**347**	*e*P	**P**	**05 41 49.4**	**-1.5**
	comp=Z,25nm,0.9s,mb5.0						
OLIL	**Olney**	**30.50**	**352**	*e*P	**P**	**05 41 51.1**	**-0.5**
	comp=Z,42nm,0.8s,mb5.3						
226A	**Malaga, Loving**	**30.67**	**323**	⇓P	**P**	**05 41 53.8**	**+0.5**
	baz=31						
325A	**Bean Ranch, Si**	**30.72**	**321**	⇑P	**P**	**05 41 54.0**	**+0.3**
	baz=31,SNR=8.9						
BLO	**Bloomington**	**30.75**	**354**	*e*P	**P**	**05 41 52.5**	**-1.3**
BLO				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.1						
BLO	**Bloomington**	**30.75**	**354**	*e*P	**P**	**05 41 52.5**	**-1.3**
	comp=Z,24nm,0.8s,mb5.1						
SLM	**Saint Louis**	**30.77**	**349**	*e*P	**P**	**05 41 53.1**	**-0.9**
SLM				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.3						
SLM	**Saint Louis**	**30.77**	**349**	*e*P	**P**	**05 41 53.1**	**-0.9**
	comp=Z,44nm,0.9s,mb5.3						
GDL2	**Guadalupe Moun**	**30.93**	**323**	*e*P	**P**	**05 41 56.8**	**+1.4**
	comp=Z,0.9nm,0.4s,mb4.0						
324A	**Moseley Ranch,**	**31.09**	**320**	⇑P	**P**	**05 41 56.9**	**0.0**
	baz=31,SNR=15						
225A	**Deer Hill, Car**	**31.14**	**322**	⇑P	**P**	**05 41 57.6**	**+0.3**
	baz=31						
MCWV	**Mont Chateau**	**31.18**	**4**	*e*P	**P**	**05 41 59.5**	**+1.9**
	comp=Z,22nm,1.2s,mb4.9						
MNTX	**Cornudas Mount**	**31.20**	**321**	*e*P	**P**	**05 41 56.6**	**-1.3**
	comp=Z,6.6nm,1.1s,mb4.4						
125A	**Gardner Draw,**	**31.43**	**323**	⇓P	**P**	**05 41 59.7**	**-0.2**
	baz=32,SNR=9.2						
224A	**Corundas Mount**	**31.55**	**321**	⇑P	**P**	**05 42 01.4**	**+0.5**
	baz=32,SNR=9.0						
ACSO	**Alum Creek Sta**	**31.63**	**360**	*e*P	**P**	**05 42 01.8**	**+0.3**
	comp=Z,37nm,1.1s,mb5.1						
Z25A	**Roswell**	**31.90**	**324**	⇓P	**P**	**05 42 04.0**	**-0.1**
	baz=32						
124A	**Stringfield Ra**	**31.93**	**322**	⇑P	**P**	**05 42 05.0**	**+0.6**
	baz=32,SNR=8.2						
MVL	**Millersville**	**31.93**	**9**	*e*P	**P**	**05 42 08.4**	**+4.2**
	comp=Z,11nm,1.0s,mb4.6						
W27A	**Bowe Ranch, En**	**32.31**	**328**	⇓P	**P**	**05 42 08.2**	**+0.6**
	baz=32						
Z24A	**Sheeppen Canyo**	**32.32**	**323**	⇑P	**P**	**05 42 08.1**	**+0.4**
	baz=32						
SSPA	**Standing Stone**	**32.34**	**7**	*e*P	**P**	**05 42 08.0**	**+0.2**
	comp=Z,6.4nm,0.9s,mb4.5						
Y25A	**Mesa, Roswell**	**32.35**	**325**	⇓P	**P**	**05 42 07.8**	**-0.2**
	baz=32						
HDIL	**Hopedale**	**32.47**	**351**	*e*P	**P**	**05 42 08.1**	**-0.8**
	comp=Z,32nm,0.8s,mb5.2						
SIV	**San Ignacio**	**32.49**	**138**	P	**P**	**05 42 06.7**	**-2.6**
	comp=Z,5.0nm,0.8s,mb4.4,baz=322,slow=9.9,SNR=17						
Y24A	**Capitan**	**32.78**	**324**	⇓P	**P**	**05 42 12.2**	**+0.4**
	baz=33						
122A	**Conniff Cattle**	**32.89**	**321**	⇓P	**P**	**05 42 13.9**	**+1.2**
	baz=33						
KSU1	**Kansas State U**	**32.91**	**340**	*e*P	**P**	**05 42 11.7**	**-1.1**
	comp=Z,28nm,0.8s,mb5.2						
221A	**Mesquite Ranch**	**32.94**	**319**	⇑P	**P**	**05 42 14.4**	**+1.2**
	baz=33						
320A	**Kipp Ranch, An**	**33.01**	**317**	⇑P	**P**	**05 42 14.7**	**+0.9**
	baz=33,SNR=15						
Y23A	**Lovelace Mesa,**	**33.15**	**323**	⇑P	**P**	**05 42 15.4**	**+0.4**
	baz=33						
V26A	**Tequesquite Ra**	**33.25**	**328**	⇑P	**P**	**05 42 17.1**	**+1.3**
	baz=33						
121A	**Cookes Peak, D**	**33.28

X17A **Forest Lakes** 36.37 319 ⇓P P 05 42 43.7 +0.9
baz=36,SNR=14
Y16A **Circle Bar Ran** 36.53 318 ⇓P P 05 42 45.1 +0.9
baz=37,SNR=21
OGNE **Ogallala** 36.56 335 eP P 05 42 43.5 -0.8
comp=Z,29nm,0.9s,mb5.1
R22A **Saguache, Gunn** 36.64 328 ⇑P P 05 42 46.0 +1.0
baz=37,SNR=6.1
U19A **Dine' College,** 36.65 323 ⇑P P 05 42 45.3 +0.2
baz=37
V18A **Ganado** 36.70 322 ⇓P P 05 42 46.2 +0.6
baz=37
114A **Black Gap (USA** 36.83 315 ⇓P P 05 42 46.8 0.0
baz=37,SNR=25
X16A **Lo Mia Camp, P** 36.83 319 ⇓P P 05 42 47.4 +0.7
baz=37,SNR=17
MVCO **Mesa Verde** 36.87 325 ⇓P P 05 42 47.5 +0.5
baz=37
MVCO **Mesa Verde** 36.87 325 eP P 05 42 47.2 +0.2
comp=Z,44nm,1.8s,mb5.0
T19A **Beclabito** 36.91 324 ⇓P P 05 42 48.1 +0.7
baz=37
U18A **Rough Rock, Ch** 37.13 323 ⇑P P 05 42 49.2 -0.1
baz=37
ECSD **EROS Data Cent** 37.13 343 eP P 05 42 47.0 -2.1
comp=Z,16nm,1.0s,mb4.8
Y15A **Casa Rosa Ranc** 37.14 317 ⇑P P 05 42 49.9 +0.5
baz=37,SNR=18
V17A **Tonalea, Kykot** 37.17 321 ⇓P P 05 42 49.5 -0.1
baz=37,SNR=16
Q22A **Crested Butte,** 37.19 328 ⇓P P 05 42 50.1 +0.4
baz=37,SNR=6.9
Z14A **Wintersburg** 37.22 316 ⇓P P 05 42 50.5 +0.4
baz=37,SNR=6.0
ISCO **Idaho Springs** 37.25 330 eP P 05 42 51.8 +1.6
ISCO pmax pmax
comp=Z,40nm,2.3s,mb4.8
ISCO **Idaho Springs** 37.25 330 eP P 05 42 51.8 +1.6
comp=Z,40nm,2.3s,mb4.8
X15A **Humboldt** 37.40 318 ⇑P P 05 42 52.5 +1.0
baz=37,SNR=20
113A **Mohawk Valley,** 37.45 315 ⇓P P 05 42 52.4 +0.4
baz=38
SMCO **Snowmass** 37.46 329 eP P 05 42 54.5 +2.5
comp=Z,5.6nm,0.8s,mb4.5
WUAZ **Wupatki** 37.47 320 ⇓P P 05 42 52.5 +0.3
baz=38,SNR=6.7
WUAZ **Wupatki** 37.47 320 eP P 05 42 53.5 +1.3
comp=Z,8.6nm,0.9s,mb4.6
R20A **Redvale** 37.49 326 ⇓P P 05 42 53.1 +0.8
baz=38
PV01 **Paradox Valley** 37.56 326 eP P 05 42 53.7 +0.9
comp=Z,277nm,1.0s,mb5.9
Y14A **Wickenburg** 37.59 317 ⇑P P 05 42 53.5 +0.3
baz=38,SNR=19
S19A **Harvey Farm, M** 37.60 325 ⇑P P 05 42 53.6 +0.4
baz=38
T18A **Mexican Hat** 37.61 323 ⇓P P 05 42 53.8 +0.4
baz=38
Z13A **Yuma Proving G** 37.62 315 ⇓P P 05 42 53.8 +0.4
baz=38,SNR=12
X14A **Yava** 37.82 318 ⇓P P 05 42 56.0 +0.8
baz=38,SNR=16
COWI **Conover** 37.89 353 eP P 05 42 53.4 -2.0
comp=Z,12nm,1.0s,mb4.6
112A **Yuma** 37.91 314 ⇑P P 05 42 56.3 +0.4
baz=38
PV04 **Paradox Valley** 37.93 326 eP P 05 42 57.4 +1.5
PV10 **Paradox Valley** 37.99 326 eP P 05 42 55.7 -0.8
comp=Z,137nm,0.9s,mb5.7
Q20A **Ridgley Place,** 37.99 327 ⇓P P 05 42 58.0 +1.4
baz=38
R19A **Curley Farm, L** 38.05 325 ⇓P P 05 42 57.4 +0.4
baz=38,SNR=6.7
S18A **Hurst Farm, Bl** 38.06 324 ⇓P P 05 42 58.3 +1.2
baz=38
T17A **Navajo Res., N** 38.07 323 ⇑P P 05 42 58.2 +1.0
baz=38
Y13A **Salome** 38.08 316 ⇓P P 05 42 58.1 +0.8
baz=38,SNR=19
V15A **Kaibab Nationa** 38.17 320 ⇓P P 05 42 58.7 +0.7
baz=38,SNR=27
GLA **Glamis** 38.36 314 ⇓P P 05 42 59.9 +0.2
baz=38,SNR=14
GLA **Glamis** 38.36 314 eP P 05 43 00.3 +0.6
GLA pmax pmax
comp=Z,40nm,0.9s,mb5.2
GLA **Glamis** 38.36 314 eP P 05 43 00.3 +0.6
comp=Z,40nm,0.9s,mb5.2
W14A **Seligman** 38.39 318 ⇓P P 05 43 00.4 +0.5
baz=38,SNR=6.3
R18A **Canyonlands Na** 38.48 325 ⇑P P 05 43 01.1 +0.5
baz=38,SNR=5.8
Q19A **Hogan Spring (** 38.52 326 ⇑P P 05 43 02.2 +1.3
baz=39
X13A **Yucca** 38.52 317 ⇑P P 05 43 01.5 +0.4
baz=39,SNR=9.0
Y12C **Blythe** 38.52 315 ⇓P P 05 43 01.4 +0.4
baz=39,SNR=9.7
PDMCI **Parker Dam,Lak** 38.57 316 ⇓P P 05 43 02.0 +0.6
baz=39,SNR=8.9
U15A **North Rim** 38.62 321 ⇑P P 05 43 02.9 +1.1
baz=39
V14A **Boquillas Ranc** 38.66 319 ⇓P P 05 43 03.4 +1.3
baz=39,SNR=12
O20A **White River Ci** 38.83 328 ⇑P P 05 43 04.8 +1.4
baz=39
P19A **Cripple Cowboy** 38.85 327 ⇓P P 05 43 04.8 +1.1
baz=39
W13A **Hualapai Mount** 38.85 318 ⇓P P 05 43 04.6 +0.8
baz=39,SNR=9.2
N21A **Black Mountain** 38.92 330 ⇑P P 05 43 05.2 +0.9
baz=39
R17A **Hanksville Air** 38.97 324 ⇑P P 05 43 05.2 +0.5
baz=39,SNR=12
SWSC **Sam W. Stewart** 38.99 313 ⇑P P 05 43 05.7 +0.7
baz=39
T15A **Red Dirt Ranch** 39.05 321 ⇓P P 05 43 06.4 +1.0
baz=39
Q18A **Rafter H Ranch** 39.11 326 ⇓P P 05 43 07.2 +1.4
baz=39,SNR=5.6
BC3 **Big Chuckw Mtn** 39.12 315 ⇑P P 05 43 06.3 +0.2
baz=39,SNR=9.9
U14A **Mt Trumbull** 39.18 320 ⇓P P 05 43 07.4 +0.9
baz=39,SNR=13
IRM **Iron Mountain** 39.18 315 ⇓P P 05 43 06.9 +0.3
baz=39,SNR=10.0
R16A **Teasdale** 39.33 323 ⇓P P 05 43 08.3 +0.6
baz=39
SRU **San Rafael** 39.33 325 ⇓P P 05 43 08.0 +0.2
baz=39,SNR=11
SRU **San Rafael** 39.33 325 eP P 05 43 08.1 +0.3
SRU pmax pmax
comp=Z,13nm,1.0s,mb4.6
SRU **San Rafael** 39.33 325 eP P 05 43 08.1 +0.3
comp=Z,13nm,1.0s,mb4.6
N20A **Spence Gulch,** 39.35 329 ⇓P P 05 43 08.6 +0.8
baz=39,SNR=8.0
V13A **Grand Canyon W** 39.36 319 ⇑P P 05 43 08.6 +0.6
baz=39
L22A **Ellis Ranch, M** 39.38 332 ⇑P P 05 43 09.2 +1.1
baz=40
O19A **Miners Draw (B** 39.41 328 ⇑P P 05 43 09.4 +1.1
baz=40
MONP **Monument Peak** 39.41 313 ⇑P P 05 43 08.8 +0.3
baz=39
RWWY **Rawlins** 39.48 331 eP P 05 43 09.4 +0.4
comp=Z,7.1nm,0.9s,mb4.4
M21A **Separation Pea** 39.49 331 ⇑P P 05 43 10.3 +1.3
baz=40
T14A **Hurricane** 39.51 321 ⇑P P 05 43 09.9 +0.6
baz=40
LDFC **Landfair** 39.66 317 eP P 05 43 12.0 +1.4
comp=Z,16nm,0.9s,mb4.8
U13A **Pakoon Wash** 39.68 319 ⇑P P 05 43 11.8 +1.1
baz=40
BELC **Belle Mtn.** 39.69 315 ⇑P P 05 43 11.0 +0.2
baz=40,SNR=12
R15A **Junction** 39.75 323 ⇑P P 05 43 12.1 +0.9
baz=40
L21A **Rawlins** 39.76 331 ⇓P P 05 43 11.8 +0.4
baz=40
PFO **Pinyon Flat Ob** 39.81 314 ⇑P P 05 43 12.2 +0.3
baz=40,SNR=6.7
PFO **Pinyon Flat Ob** 39.81 314 eP P 05 43 13.5 +1.7
PFO pmax pmax
comp=Z,22nm,0.9s,mb4.9
PFO **Pinyon Flat Ob** 39.81 314 eP P 05 43 13.5 +1.7
comp=Z,22nm,0.9s,mb4.9
O18A **Roosevelt** 39.85 327 ⇑P P 05 43 12.8 +0.7
baz=40
V12A **Nelson** 39.86 318 ⇓P P 05 43 12.9 +0.7
baz=40,SNR=11
GMRC **Granite Mounta** 39.88 316 ⇓P P 05 43 12.6 +0.3
baz=40,SNR=9.5
MSU **Marysvale** 39.89 323 eP P 05 43 12.5 +0.1
MSU pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
MSU **Marysvale** 39.89 323 eP P 05 43 12.5 +0.1
comp=Z,8.0nm,1.5s,mb4.2
109C **Camp Elliot, M** 39.91 312 ⇓P P 05 43 12.6 -0.1
baz=40
CCUT **Cedar City** 39.99 321 eP P 05 43 14.5 +1.2
comp=Z,1.6nm,0.8s,mb3.8
T13A **Saint George** 40.01 320 ⇓P P 05 43 14.3 +0.9
baz=40
EYMN **Ely** 40.02 351 eP P 05 43 11.4 -1.9
comp=Z,11nm,1.0s,mb4.5
RSSD **Black Hills** 40.02 336 eP P 05 43 13.2 -0.2
RSSD pmax pmax
comp=Z,75nm,2.5s,mb5.0
RSSD **Black Hills** 40.02 336 eP P 05 43 13.2 -0.3
comp=Z,75nm,2.5s,mb5.0
N18A **Larsen Ranch,** 40.18 328 ⇑P P 05 43 15.0 +0.2
baz=40
ARUT **Antelope Range** 40.19 321 eP P 05 43 14.8 -0.1
ARUT pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
ARUT **Antelope Range** 40.19 321 eP P 05 43 14.8 -0.1
comp=Z,4.8nm,0.7s,mb4.3
O17A **Robinson Place** 40.20 326 ⇑P P 05 43 15.7 +0.8
baz=40,SNR=13
L20A **Wamsutter** 40.27 330 ⇑P P 05 43 16.0 +0.5
baz=40
P16A **Fountain Green** 40.31 325 ⇑P P 05 43 17.0 +1.1
baz=40
S13A **Holt Ranch, En** 40.32 321 ⇓P P 05 43 16.6 +0.6
baz=40,SNR=16
MURC **Murrieta** 40.34 313 ⇓P P 05 43 16.8 +0.6
baz=40
HEC **Hector,Ludlow** 40.36 316 ⇓P P 05 43 17.0 +0.6
baz=40,SNR=9.1
TUQ **Turquoise Moun** 40.42 317 ⇓P P 05 43 17.1 +0.3
baz=40
BBRC **Big Bear Sol-O** 40.48 314 ⇓P P 05 43 18.3 +0.9
baz=40
SHPR **Sheep Range** 40.51 318 eP P 05 43 19.6 +2.0
O16A **Springville** 40.63 326 ⇓P P 05 43 19.3 +0.7
baz=41
DAU **Daniels Canyon** 40.64 326 eP P 05 43 20.7 +2.1
P15A **Leamington** 40.64 324 ⇑P P 05 43 19.1 +0.4
baz=41
R13A **O'Grain Ranch,** 40.76 321 ⇑P P 05 43 20.3 +0.7
baz=41,SNR=8.7
K20A **Yellowstone Ra** 40.76 331 ⇓P P 05 43 19.7 +0.2
baz=41
L19A **Farson** 40.84 329 ⇓P P 05 43 20.4 +0.1
baz=41
Q14A **Sevier Lake (B** 40.85 323 ⇑P P 05 43 20.9 +0.5
baz=41,SNR=10
JLU **Jordanelle** 40.88 326 eP P 05 43 20.4 -0.1
comp=Z,4.6nm,1.0s,mb4.1
SHOC **Shoshone** 40.91 317 ⇑P P 05 43 21.6 +0.6
baz=41,SNR=8.6
GSC **Goldstone** 40.95 316 ⇑P P 05 43 21.7 +0.5
baz=41,SNR=9.4
GSC **Goldstone** 40.95 316 eP P 05 43 22.4 +1.2
GSC pmax pmax
comp=Z,23nm,1.1s,mb4.7
GSC **Goldstone** 40.95 316 eP P 05 43 22.4 +1.2
comp=Z,22nm,1.1s,mb4.7
S12A **Delamar Landin** 40.96 320 ⇑P P 05 43 22.2 +0.9
baz=41
T11A **Corn Creek, Al** 40.98 319 ⇑P P 05 43 22.3 +0.9
baz=41,SNR=9.5
BFSC **Mount Baldy St** 40.99 314 ⇓P P 05 43 22.5 +0.9
baz=41,SNR=5.1
L18A **Fontenelle, Gr** 41.06 329 ⇓P P 05 43 22.9 +0.8
baz=41
M17A **Scullys Gap (B** 41.06 328 ⇓P P 05 43 22.2 +0.2
baz=41,SNR=18
K19A **Absolon Red Bu** 41.13 331 ⇓P P 05 43 22.6 0.0
baz=41,SNR=9.0
AGMN **Agassiz Refuge** 41.19 347 eP P 05 43 20.5 -2.5
comp=Z,22nm,1.2s,mb4.7
U10A **Ash Meadows, A** 41.24 318 ⇓P P 05 43 24.4 +0.8
baz=41,SNR=13
R12A **Pony Springs,** 41.25 321 ⇓P P 05 43 24.2 +0.6
baz=41,SNR=8.7
MWC **Mount Wilson** 41.27 314 eP P 05 43 25.2 +1.3
MWC pmax pmax
comp=Z,18nm,1.2s,mb4.6
MWC **Mount Wilson** 41.27 314 eP P 05 43 25.2 +1.3
comp=Z,18nm,1.2s,mb4.6
Q13A **Wheeler Ranch,** 41.27 322 ⇑P P 05 43 24.3 +0.5
baz=41,SNR=22
DUG **Dugway** 41.37 325 ⇓P P 05 43 25.5 +0.9
baz=41
BW06 **Boulder Array** 41.44 330 ⇑P P 05 43 24.7 -0.4
baz=42
BW06 **Boulder Array** 41.44 330 eP P 05 43 24.3 -0.8
comp=Z,5.1nm,1.0s,mb4.1
PDAR **Pinedale Array** 41.44 330 P P 05 43 23.9 -1.2
comp=Z,1.9nm,0.7s,mb3.8,baz=128,slow=9.6,SNR=14
PDAR PcP PcP 05 45 21.6 -1.2
comp=Z,2.1nm,1.0s,baz=108,slow=3.3,SNR=5.2
PDAR LR LR 06 03 34.1
comp=Z,277nm,19.6s,MS4.1,baz=266,slow=40
M16A **Huntsville** 41.47 327 ⇓P P 05 43 25.7 +0.3
baz=42
EDW2 **Edwards Air Fo** 41.55 314 ⇑P P 05 43 26.6 +0.5
baz=42,SNR=10
S11A **Rachel** 41.56 319 ⇑P P 05 43 27.5 +1.4
baz=42,SNR=6.6
K18A **Toltan Ranch,** 41.58 329 ⇑P P 05 43 26.8 +0.5
baz=42,SNR=14
P13A **Bates Ranch, G** 41.59 323 ⇓P P 05 43 27.4 +1.0
baz=42,SNR=10
L17A **Cokeville** 41.62 328 ⇑P P 05 43 26.4 -0.2
baz=42,SNR=9.4
FURC **Furnace Creek,** 41.62 317 ⇓P P 05 43 27.4 +0.7
baz=42
HWUT **Hardware Ranch** 41.63 327 eP P 05 43 26.7 -0.1
comp=Z,15nm,1.0s,mb4.6
LRMC **Laurel Mountai** 41.65 315 ⇓P P 05 43 27.1 +0.1
baz=42
Q12A **Willow Creek R** 41.82 322 ⇑P P 05 43 28.7 +0.3
baz=42,SNR=8.5
MPMC **Maual Prospec** 41.82 316 ⇑P P 05 43 28.4 0.0
baz=42,SNR=16
R11A **Troy Canyon, C** 41.87 320 ⇓P P 05 43 29.5 +0.8
baz=42,SNR=8.4
OSI **Osito Adit** 41.94 314 eP P 05 43 30.7 +1.3
comp=Z,9.4nm,0.3s,mb4.9
BGU **Big Grassy Mou** 41.98 325 eP P 05 43 28.4 -1.1
comp=Z,10nm,1.1s,mb4.4
BGU ePcP PcP 05 45 24.8 +0.3
J18A **Kendall Valley** 41.99 330 ⇓P P 05 43 29.2 -0.5
baz=42,SNR=22
N14A **Grayback Hills** 42.01 325 ⇓P P 05 43 29.7 -0.2
baz=42,SNR=17
M15A **Larsen Ranch,** 42.02 326 ⇓P P 05 43 30.6 +0.7
baz=42
K17A **Gardner Place,** 42.11 329 ⇑P P 05 43 30.8 +0.2
baz=42
P12A **McGill** 42.14 322 ⇑P P 05 43 30.9 0.0
baz=42,SNR=6.7
AHID **Auburn Hatcher** 42.21 329 eP P 05 43 30.3 -1.2
comp=Z,63nm,2.4s,mb4.8
AHID ePcP PcP 05 45 26.2 +0.9
Q11A **Duckwater** 42.21 321 ⇑P P 05 43 31.9 +0.4
baz=42,SNR=8.0
CFAA **Coronel Fontan** 42.23 161 P P 05 43 30.1 -1.6
comp=Z,1.5nm,1.1s,mb3.5,baz=334,slow=8.4,SNR=9.4
GRAC **Grapevine Rang** 42.25 318 ⇓P P 05 43 32.5 +0.6
baz=42
S10A **Tonopah Range,** 42.26 319 ⇑P P 05 43 32.6 +0.6
baz=42,SNR=22
ARVC **Arvin** 42.27 314 ⇓P P 05 43 32.4 +0.3
baz=42,SNR=13
R10A **Warm Springs** 42.29 320 ⇓P P 05 43 32.8 +0.6
baz=42,SNR=8.8
ISA **Isabella** 42.29 315 ⇑P P 05 43 32.3 +0.1
baz=42,SNR=9.6
ISA **Isabella** 42.29 315 eP P 05 43 33.4 +1.2
ISA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
ISA **Isabella** 42.29 315 eP P 05 43 33.4 +1.1
comp=Z,10nm,0.9s,mb4.5
L15A **Malad City** 42.35 327 ⇓P P 05 43 32.3 -0.4
baz=42,SNR=7.0
HVU **Hansel Valley** 42.41 326 eP P 05 43 32.5 -0.6
HVU pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
HVU **Hansel Valley** 42.41 326 eP P 05 43 32.5 -0.6
comp=Z,7.7nm,1.1s,mb4.2
J17A **Brown Place, J** 42.45 330 ⇑P P 05 43 33.2 -0.1
baz=42,SNR=8.1
REDW **Red Top Meadow** 42.52 330 eP P 05 43 33.4 -0.5
comp=Z,19nm,1.4s,mb4.6
O12A **Currie** 42.54 323 ⇑P P 05 43 34.9 +0.7
baz=43,SNR=7.9
M14A **Sheep Mountain** 42.54 326 ⇓P P 05 43 34.2 +0.1
baz=43,SNR=19
SNOW **Snow King Moun** 42.54 330 eP P 05 43 33.7 -0.4
comp=Z,14nm,1.1s,mb4.6
CPUP **Villa Florida** 42.55 145 P P 05 43 33.7 -0.8
comp=Z,3.7nm,0.9s,mb4.1,baz=306,slow=8.4,SNR=6.8
CPUP LR LR 06 02 55.5
comp=Z,346nm,19.2s,MS4.3,baz=307,slow=38
CPUP **Villa Florida** 42.55 145 eP P 05 43 34.0 -0.4
CPUP pmax pmax
comp=Z,15nm,0.8s
CPUP **Villa Florida** 42.55 145 eP P 05 43 34.0 -0.5
comp=Z,15nm,0.8s,mb4.8
LOHW **Long Hollow** 42.58 330 eP P 05 43 34.4 0.0
comp=Z,8.0nm,1.3s,mb4.3
N13A **Wendover, West** 42.60 324 ⇑P P 05 43 34.7 0.0
baz=43
N13A **Wendover, West** 42.60 324 eP P 05 43 35.3 +0.6
comp=Z,35nm,1.1s,mb5.0
TPAW **Teton Pass** 42.66 330 eP P 05 43 35.9 +0.9
comp=Z,8.4nm,1.0s,mb4.4
Q10A **Clear Creek Ra** 42.67 320 ⇑P P 05 43 36.0 +0.8
baz=43,SNR=7.9
VES **Vestal, Richgr** 42.81 315 ⇑P P 05 43 36.8 +0.3
baz=43,SNR=14
J16A **Bone** 42.84 329 ⇑P P 05 43 36.7 +0.2
baz=43
L14A **Malta** 42.84 326 ⇓P P 05 43 36.4 -0.1
baz=43,SNR=10
PKM **Peak Mountain** 42.86 313 ⇑P P 05 43 37.1 +0.2
baz=43
K15A **Arbon** 42.90 328 ⇓P P 05 43 37.3 +0.3
baz=43
M13A **Montello** 42.91 325 ⇓P P 05 43 37.4 +0.3
baz=43,SNR=13
M13A **Montello** 42.91 325 eP P 05 43 36.9 -0.3
comp=Z,14nm,1.2s,mb4.6
M13A ePcP PcP 05 45 27.5 -0.1
IMW **Indian Meadow** 42.95 330 eP P 05 43 37.5 +0.1
comp=Z,4.8nm,0.8s,mb4.3
O11A **Cowboy Ranch,** 43.00 322 ⇑P P 05 43 37.9 0.0
baz=43
LAO **LASA Array** 43.01 336 eP P 05 43 36.6 -1.3
comp=Z,24nm,1.0s,mb4.9
ULM **Lac du Bonnet** 43.04 348 P P 05 43 35.7 -2.3
comp=Z,36nm,1.0s,mb5.1,baz=160,slow=8.0,SNR=20
ULM LR LR 06 02 51.8
comp=Z,412nm,18.2s,MS4.4,baz=38,slow=38
ULM **Lac du Bonnet** 43.04 348 P P 05 43 35.7 -2.4
ULM pmax pmax
comp=Z,36nm,1.0s
ULM MLR MLR
comp=Z,412nm,18.2s
ULM **Lac du Bonnet** 43.04 348 eP P 05 43 35.7 -2.4
comp=Z,32nm,1.0s,mb5.0
N12A **Clover Valley,** 43.08 324 ⇓P P 05 43 38.7 +0.1
baz=43
N12A **Clover Valley,** 43.08 324 eP P 05 43 37.5 -1.1
comp=Z,7.3nm,0.9s,mb4.4
K14A **Jones Ranch, D** 43.15 327 ⇓P P 05 43 38.0 -1.1
baz=43,SNR=26
RCTC **Rector, Farmer** 43.16 316 ⇑P P 05 43 39.1 -0.2
baz=43,SNR=8.4
P10A **Eureka** 43.18 321 ⇓P P 05 43 40.3 +0.9
baz=43
SMMC **Simmler** 43.19 314 ⇑P P 05 43 39.1 -0.5
baz=43,SNR=7.4
I16A **Newdale** 43.20 330 ⇓P P 05 43 39.2 -0.3
baz=43
MTUM **Tungsten Hills** 43.24 317 eP P 05 43 41.7 +1.7
L13A **Double Diamond** 43.26 326 ⇑P P 05 43 39.7 -0.3
baz=43,SNR=5.9
J15A **Blackfoot** 43.35 328 ⇑P P 05 43 40.2 -0.4
baz=43,SNR=8.8
G18A **Lazy EL Ranch,** 43.35 332 ⇑P P 05 43 39.9 -0.8
baz=43,SNR=9.1
M12A **Wells** 43.37 324 ⇑P P 05 43 40.4 -0.5
baz=43
N11A **Elko Archery C** 43.47 323 ⇓P P 05 43 41.6 -0.1
baz=44
NVAR **Mina Array Bea** 43.66 319 P P 05 43 44.5 +1.2
comp=Z,13nm,0.9s,mb4.6,baz=130,slow=6.6,SNR=55
NVAR PcP PcP 05 45 31.2 +0.9
comp=Z,2.0nm,0.9s,baz=140,slow=3.8,SNR=4.1
NVAR **Mina Array Bea** 43.66 319 P P 05 43 44.5 +1.2
NVAR PcP PcP 05 45 31.2 +0.9
H16A **Russell Place,** 43.69 331 ⇑P P 05 43 43.1 -0.2
baz=44
K13A **Stover Farm, H** 43.71 326 ⇑P P 05 43 43.5 -0.1
baz=44
DGMT **Dagmar** 43.75 339 ⇑P P 05 43 43.0 -0.8
baz=44,SNR=14
DGMT **Dagmar** 43.75 339 eP P 05 43 43.1 -0.8
comp=Z,48nm,0.9s,mb5.2
J14A **Carey** 43.87 328 ⇑P P 05 43 44.5 -0.4
baz=44,SNR=16
F18A **Big Timber** 43.87 333 ⇓P P 05 43 44.0 -0.8
baz=44,SNR=15
M11A **Holland Ranch,** 43.89 324 ⇑P P 05 43 44.8 -0.2
baz=44
L12A **House Creek Ra** 43.90 325 ⇓P P 05 43 44.4 -0.7
baz=44,SNR=5.4
G17A **Pierce Place,** 43.90 332 ⇓P P 05 43 45.0 -0.1
baz=44
BMN **Battle Mountai** 44.13 322 eP P 05 43 46.9 -0.1
BMN pmax pmax
comp=Z,15nm,0.8s,mb4.8
BMN **Battle Mountai** 44.13 322 eP P 05 43 46.9 -0.2
comp=Z,15nm,0.8s,mb4.8
K12A **Draper Farm, C** 44.16 326 ⇓P P 05 43 46.4 -0.8
baz=44,SNR=6.4
I14A **Mackay** 44.25 328 ⇓P P 05 43 46.9 -1.0
baz=44,SNR=9.9
J13A **Cove Ranch, Pi** 44.27 327 ⇓P P 05 43 47.8 -0.2
baz=44,SNR=16
F17A **Fitzpatrick Pl** 44.30 332 ⇑P P 05 43 47.7 -0.6
baz=44,SNR=10
H15A **Lima** 44.32 329 ⇑P P 05 43 48.4 0.0
baz=44,SNR=20
L11A **Cat Creek Ranc** 44.33 325 ⇑P P 05 43 47.9 -0.7
baz=44,SNR=13
G16A **Moss Hill, Enn** 44.34 331 ⇑P P 05 43 48.3 -0.4
baz=44,SNR=12
WAKR **Walker** 44.45 318 eP P 05 43 50.4 +0.8
HLID **Hailey** 44.51 327 ⇑P P 05 43 49.3 -0.6
baz=45,SNR=19
HLID **Hailey** 44.51 327 eP P 05 43 49.6 -0.4
comp=Z,7.7nm,0.9s,mb4.5
HLID ePcP PcP 05 45 34.2 +1.2
BOZ **Bozeman (W)** 44.56 331 ⇑P P 05 43 49.9 -0.5
baz=45,SNR=17
BOZ **Bozeman (W)** 44.56 331 eP P 05 43 49.5 -0.9
BOZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
BOZ **Bozeman (W)** 44.56 331 eP P 05 43 49.5 -0.9
comp=Z,9.4nm,1.1s,mb4.5
MCMT **McKenzie Canyo** 44.57 330 eP P 05 43 50.5 +0.1
comp=Z,3.3nm,1.1s,mb4.1
I13A **Wildhorse Cree** 44.59 328 ⇓P P 05 43 50.1 -0.5
baz=45,SNR=17
G15A **Dillon** 44.63 330 ⇑P P 05 43 50.7 -0.3
baz=45,SNR=8.4
F16A **Kennard Place,** 44.66 331 ⇓P P 05 43 50.5 -0.7
baz=45
J12A **Stokes Ranch,** 44.67 326 ⇓P P 05 43 50.2 -1.0
baz=45,SNR=13
H14A **Leadore** 44.68 329 ⇓P P 05 43 51.3 -0.1
baz=45,SNR=11
L10A **Juniper Basin** 44.69 324 ⇑P P 05 43 50.5 -1.0
baz=45
E17A **Martinsdale** 44.81 333 ⇓P P 05 43 51.7 -0.7
baz=45,SNR=5.7

DLMT **Dillon** 44.83 330 *e*P P 05 43 51.9 -0.6
comp=Z,14nm,1.3s,mb4.6
CMB **Columbia Colle** 44.83 317 *e*P P 05 43 52.3 -0.4
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
CMB **Columbia Colle** 44.83 317 *e*P P 05 43 52.3 -0.3
comp=Z,8.1nm,1.0s,mb4.5
K11A **Parker Ranch,** 44.88 325 ⇑P P 05 43 52.4 -0.6
baz=45,SNR=19
D18A **Linhart Farms,** 44.90 334 ⇓P P 05 43 52.7 -0.4
baz=45,SNR=13
I12A **Atlanta** 45.05 327 ⇑P P 05 43 53.8 -0.5
baz=45
PAHR **Pah Rah Range** 45.07 320 *e*P P 05 43 55.8 +1.3
comp=Z,42nm,1.9s,mb4.9
LRM **Limekiln Ridge** 45.09 331 *e*P P 05 43 54.8 +0.2
H13A **Challis** 45.10 328 ⇓P P 05 43 54.2 -0.5
baz=45,SNR=8.6
F15A **Butte** 45.12 331 ⇑P P 05 43 54.7 -0.1
baz=45,SNR=6.7
MFID **Camas Ranch** 45.18 326 ⇓P P 05 43 54.7 -0.7
baz=45,SNR=12
E16A **East Helena** 45.24 332 ⇑P P 05 43 55.1 -0.7
baz=45,SNR=9.8
D17A **Six Diamond Ra** 45.26 333 ⇑P P 05 43 55.3 -0.5
baz=45,SNR=17
K10A **MacKenzie Ranc** 45.36 325 ⇓P P 05 43 56.2 -0.6
baz=45,SNR=11
H12A **Diamond D Ranc** 45.41 328 ⇓P P 05 43 56.4 -0.7
baz=46,SNR=5.5
G13A **Cobalt** 45.46 329 ⇓P P 05 43 56.8 -0.7
baz=46
EGMT **Eagleton** 45.52 335 ⇑P P 05 43 57.1 -0.9
baz=46,SNR=9.3
EGMT **Eagleton** 45.52 335 *e*P P 05 43 57.1 -0.9
comp=Z,17nm,1.1s,mb4.9
D16A **Dana Ranch, Ca** 45.55 333 ⇑P P 05 43 57.8 -0.4
baz=46,SNR=15
I11A **Placerville** 45.58 326 ⇓P P 05 43 57.9 -0.5
baz=46
E15A **Deer Lodge** 45.61 331 ⇑P P 05 43 58.2 -0.5
baz=46
C17A **Wharram Farm,** 45.66 334 ⇑P P 05 43 58.5 -0.5
baz=46,SNR=12
BEKR **Beckwourth** 45.78 319 ⇑P P 05 44 00.4 +0.2
baz=46,SNR=5.7
B18A **Beardsley Farm** 45.82 335 ⇑P P 05 43 59.8 -0.5
baz=46,SNR=14
F13A **Darby** 45.99 329 ⇑P P 05 44 00.9 -0.8
baz=46,SNR=6.1
D15A **Lincoln** 46.01 332 ⇓P P 05 44 01.0 -0.8
baz=46,SNR=7.6
E14A **Clinton** 46.02 331 ⇓P P 05 44 00.9 -1.0
baz=46,SNR=7.2
H11A **Donnelly** 46.12 327 ⇑P P 05 44 02.1 -0.6
baz=46,SNR=9.5
I10A **Payette** 46.15 326 ⇓P P 05 44 02.2 -0.8
baz=46
B17A **L&G Farms, Che** 46.17 334 ⇑P P 05 44 02.7 -0.4
baz=46
WVOR **Wild Horse Val** 46.18 323 *e*P P 05 44 02.4 -0.9
WVOR pmax pmax
comp=Z,20nm,0.8s,mb5.1
WVOR **Wild Horse Val** 46.18 323 *e*P P 05 44 02.4 -0.8
comp=Z,20nm,0.8s,mb5.1
C16A **Fuhringer Ranc** 46.22 333 ⇓P P 05 44 02.6 -0.8
baz=46
J09A **Fry Pan Ranch,** 46.22 325 ⇑P P 05 44 02.8 -0.7
baz=46,SNR=15
OHCM **Honcut** 46.24 318 *e*P P 05 44 04.7 +0.9
CHMT **Chamberlain Mo** 46.26 331 *e*P P 05 44 02.3 -1.5
comp=Z,2.3nm,1.2s,mb4.0
A18A **Metzger Ranch,** 46.26 336 ⇓P P 05 44 02.4 -1.4
baz=46,SNR=20
E13A **Victor** 46.38 330 ⇓P P 05 44 03.6 -1.2
baz=46,SNR=9.7
F12A **Elk City** 46.44 329 ⇑P P 05 44 04.0 -1.2
baz=46,SNR=13
H10A **Noah's Angus R** 46.45 327 ⇓P P 05 44 04.2 -1.2
baz=46,SNR=7.5
D14A **Greenough** 46.50 331 ⇓P P 05 44 04.4 -1.2
baz=47
MSO **Missoula** 46.53 331 *e*P P 05 44 04.8 -1.1
comp=Z,6.4nm,1.2s,mb4.4
C15A **Salmond Ranch,** 46.59 333 ⇓P P 05 44 05.8 -0.6
baz=47,SNR=13
I09A **Lost Marbles R** 46.60 325 ⇑P P 05 44 05.2 -1.3
baz=47,SNR=12
SLMT **Seeley Lake** 46.61 331 *e*P P 05 44 06.6 0.0
comp=Z,5.6nm,1.0s,mb4.5
A17A **Triple J Farms** 46.63 335 ⇓P P 05 44 05.5 -1.3
baz=47,SNR=10
J08A **Circle Bar Ran** 46.64 324 ⇓P P 05 44 05.7 -1.1
baz=47,SNR=10.0
G11A **Walters Elk Ra** 46.72 328 ⇑P P 05 44 05.7 -1.7
baz=47,SNR=8.6
MOD **Modoc** 46.88 322 *e*P P 05 44 08.9 +0.2
comp=Z,6.6nm,1.2s,mb4.4
LBCM **Butte Creek Ri** 46.95 320 P P 05 44 08.8 -0.4
B15A **Bradely Ranch,** 46.96 333 ⇓P P 05 44 08.4 -0.9
baz=47,SNR=17
D13A **Huson** 46.97 331 ⇓P P 05 44 07.8 -1.5
baz=47
F11A **Grangeville** 46.99 328 ⇑P P 05 44 07.9 -1.6
baz=47,SNR=7.7
H09A **Durkee** 47.00 326 ⇓P P 05 44 08.1 -1.6
baz=47
E12A **Beaver Dam Sad** 47.05 329 ⇑P P 05 44 08.8 -1.2
baz=47
G10A **Bishop Farm, J** 47.10 327 ⇑P P 05 44 09.2 -1.3
baz=47
LTIM **Timbered Crate** 47.22 320 P P 05 44 10.9 -0.5
B14A **Marquette Ranc** 47.32 333 ⇑P P 05 44 12.0 -0.1
baz=47,SNR=15
E11A **Bogner Ranch,** 47.33 329 ⇑P P 05 44 10.5 -1.7
baz=47,SNR=7.3
D12A **Red Ives Fores** 47.38 330 ⇓P P 05 44 11.1 -1.4
baz=48
C13A **Hot Springs** 47.44 331 ⇑P P 05 44 12.3 -0.6
baz=48,SNR=5.3
H08A **Prairie City** 47.47 325 ⇑P P 05 44 12.2 -1.1
baz=48
LASM **Arnica Sink** 47.50 320 P P 05 44 14.0 +0.4
A15A **Johnson Ranch,** 47.53 334 ⇓P P 05 44 12.8 -0.9
baz=48,SNR=22
F10A **Beach Ranch, E** 47.61 328 ⇑P P 05 44 13.2 -1.1
baz=48
BSMT **Bassoo Peak** 47.66 331 *e*P P 05 44 14.3 -0.5
I07A **Izee** 47.67 324 ⇑P P 05 44 14.0 -0.9
baz=48,SNR=11
A14A **Double T Ranch** 47.84 333 ⇓P P 05 44 15.5 -0.6
baz=48,SNR=10
D11A **Klaveano Farm,** 47.86 329 ⇑P P 05 44 15.2 -1.1
baz=48
B13A **Whitefish** 47.88 332 ⇓P P 05 44 15.7 -0.7
baz=48,SNR=8.7
C12B **Naegeli Ranch,** 47.89 331 ⇑P P 05 44 16.3 -0.2
baz=48,SNR=6.7
SCHQ **Schefferville** 47.98 12 P P 05 44 15.8 -1.2
comp=Z,10nm,0.9s,mb4.8,baz=167,slow=5.0,SNR=6.3
SCHQ LR LR 06 05 25.3
comp=Z,814nm,18.1s,MS4.7,baz=20,slow=37
SCHQ **Schefferville** 47.98 12 *e*P P 05 44 15.7 -1.4
comp=Z,17nm,1.1s,mb5.0
G08A **Pilot Rock** 48.10 326 ⇓P P 05 44 17.5 -0.7
baz=48
WALA **Waterton Lakes** 48.12 333 *e*P P 05 44 18.3 +0.1
comp=Z,0.3nm,0.9s
A13A **Flathead Natio** 48.26 332 ⇑P P 05 44 18.7 -0.6
baz=48
BUOR **Burton Butte** 48.29 321 P P 05 44 21.4 +1.7
YBH **Yreka Blue Hor** 48.29 320 *e*P P 05 44 19.1 -0.6
YBH pmax pmax
comp=Z,3.0nm,0.6s
YBH **Yreka Blue Hor** 48.29 320 *e*P P 05 44 19.1 -0.6
comp=Z,3.1nm,0.6s,mb4.5
D10A **Wagner Farm, O** 48.34 329 ⇑P P 05 44 19.4 -0.6
baz=48
B12A **Libby** 48.48 331 ⇓P P 05 44 20.9 -0.2
baz=49
KHMM **Horse Mountain** 48.51 319 *e*P P 05 44 22.7 +1.3
FFC **Flin Flon** 48.60 345 *e*P P 05 44 20.6 -1.3
FFC pmax pmax
comp=Z,21nm,1.0s,mb5.1
FFC **Flin Flon** 48.60 345 *e*P P 05 44 20.6 -1.2
comp=Z,21nm,1.0s,mb5.1
B11A **Sandpoint** 48.83 331 ⇓P P 05 44 23.2 -0.6
baz=49,SNR=5.3

NEW **Newport** 49.08 330 *e*P P 05 44 24.8 -0.9
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW **Newport** 49.08 330 *e*P P 05 44 24.8 -0.8
comp=Z,8.2nm,1.0s,mb4.7
A11A **Hall Mountain,** 49.18 331 ⇑P P 05 44 26.3 -0.2
baz=49
H04A **Detroit Lake** 49.59 324 ⇑P P 05 44 29.4 -0.2
baz=50,SNR=10
B09A **Rice** 49.69 330 ⇑P P 05 44 29.4 -1.0
baz=50
B08A **Colville Reser** 50.25 329 ⇓P P 05 44 34.2 -0.4
baz=50
MPOR **Mary's Peak** 50.30 323 P P 05 44 36.4 +1.4
LON **Longmire** 50.57 326 *e*P P 05 44 36.6 -0.4
LON pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LON **Longmire** 50.57 326 *e*P P 05 44 36.6 -0.4
comp=Z,5.0nm,0.9s,mb4.4
HEBO **Mount Hebo** 50.80 323 *e*P P 05 44 38.4 -0.5
comp=Z,343nm,2.2s,mb5.9
FCC **Fort Churchill** 50.91 352 *e*P P 05 44 37.0 -2.4
comp=Z,0.6nm,0.9s,mb3.5
D05A **Enumclaw** 50.93 326 ⇑P P 05 44 39.1 -0.6
baz=51
EDM **Edmonton** 50.99 337 *e*P P 05 44 38.3 -1.8
A07A **Ashnola River,** 51.22 329 ⇑P P 05 44 41.8 -0.1
baz=51,SNR=5.5
RPW **Rockport** 51.43 328 *e*P P 05 44 42.4 -1.1
comp=Z,2.1nm,0.8s,mb4.1
E03A **Lebam** 51.44 325 ⇑P P 05 44 43.8 +0.2
baz=52
NLWA **Neilton Lookou** 52.09 326 ⇑P P 05 44 48.3 -0.2
baz=52
NLWA **Neilton Lookou** 52.09 326 *e*P P 05 44 48.2 -0.2
comp=Z,9.7nm,0.8s,mb4.8
YKA **Yellowknife Ar** 58.66 343 P P 05 45 34.0 -1.4
comp=Z,11nm,0.9s,mb4.9,baz=139,slow=7.0,SNR=41
YKA LR LR 06 14 14.3
comp=Z,60nm,18.6s,MS3.8,baz=15,slow=39
YKA **Yellowknife Ar** 58.66 343 P P 05 45 34.0 -1.5
YKA pmax pmax
comp=Z,11nm,0.9s
YKA MLR MLR
comp=Z,60nm,18.6s
YKA **Yellowknife Ar** 58.66 343 P P 05 45 34.0 -1.4
YKA LR LR 06 14 14.3
TAOE **Nuku Hiva Isla** 59.61 255 *e*S S 05 53 49.8 -2.2
comp=Z,134nm,25.7s
TAOE *e*LR LR 06 03 10.9
comp=Z,425nm,24.8s
RKT **Rikitea** 59.86 237 *e*S S 05 53 50.0 -4.9
comp=Z,427nm,31.0s
RKT *e*LR LR 06 03 22.9
comp=Z,2µm,25.8s,baz=55
RKT **Rikitea** 59.86 237 *e*S S 05 53 50.0 -4.9
DLBC **Dease Lake** 61.44 334 *e*P P 05 45 53.9 -0.7
DAWY **Dawson** 68.21 337 *e*P P 05 46 38.0 -0.7
INK **Inuvik** 68.35 342 *e*P P 05 46 39.0 -0.4
INK pmax pmax
comp=Z,40nm,1.2s
INK **Inuvik** 68.35 342 *e*P P 05 46 39.0 -0.5
comp=Z,40nm,1.2s,mb5.3
BMRM **Bremner River** 69.14 333 *e*P P 05 46 44.5 0.0
comp=Z,11nm,0.6s,mb5.0
EGAK **Eagle** 69.22 337 *e*P P 05 46 44.5 -0.4
comp=Z,15nm,1.0s,mb4.9
SUMG **Summit** 69.37 13 *e*P P 05 46 44.2 -1.5
SUMG pmax pmax
comp=Z,42nm,0.9s
SUMG **Summit** 69.37 13 *e*P P 05 46 44.2 -1.5
comp=Z,42nm,0.9s,mb5.4
MENT **Mentasta** 69.49 335 *e*P P 05 46 46.9 +0.2
DIV **Divide** 69.73 333 *e*P P 05 46 48.1 0.0
comp=Z,11nm,0.8s,mb4.8
PPT **Papeete** 70.79 248 *e*S S 05 56 07.1 -1.9
comp=Z,93nm,24.5s
PPT *e*LR LR 06 08 21.5
comp=Z,408nm,24.5s,baz=62
PPT **Papeete** 70.79 248 LR LR 06 09 45.7
comp=Z,393nm,19.1s,MS4.7,baz=95,slow=29
PMR **Palmer** 71.41 332 *e*P P 05 46 58.0 -0.4
PMR pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
PMR **Palmer** 71.41 332 *e*P P 05 46 58.0 -0.4
comp=Z,8.7nm,1.0s,mb4.6
RC01 **Rabbit Creek A** 71.55 332 *e*P P 05 46 58.8 -0.4
comp=Z,26nm,1.4s,mb5.0
COLA **College** 71.90 336 *e*P P 05 46 59.7 -1.5
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA **College** 71.90 336 *e*P P 05 46 59.7 -1.5
comp=Z,8.9nm,0.8s,mb4.8
MCK **McKinley** 71.98 335 *e*P P 05 47 01.6 -0.1
MCK pmax pmax
comp=Z,25nm,1.2s,mb5.0
MCK **McKinley** 71.98 335 *e*P P 05 47 01.6 -0.1
comp=Z,25nm,1.2s,mb5.0
KDAK **Kodiak Island** 72.12 328 *e*P P 05 47 02.1 -0.6
KDAK pmax pmax
comp=Z,15nm,0.9s,mb4.9
KDAK **Kodiak Island** 72.12 328 *e*P P 05 47 02.1 -0.6
comp=Z,15nm,0.9s,mb4.9
OHAK **Old Harbor** 72.37 327 *e*P P 05 47 04.6 +0.4
comp=Z,25nm,0.9s,mb5.1
TRF **Thorofare Moun** 72.47 334 *e*P P 05 47 04.4 -0.3
comp=Z,18nm,1.0s,mb5.0
KTH **Kantishna Hill** 72.77 334 *e*P P 05 47 05.8 -0.7
comp=Z,11nm,1.0s,mb4.8
RSO **Redoubt South** 72.81 331 *e*P P 05 47 06.5 -0.3
BPAW **Bear Paw Mtn.** 72.95 335 *e*P P 05 47 06.7 -0.8
comp=Z,18nm,1.0s,mb4.9
PPLA **Purkeypile** 73.15 333 *e*P P 05 47 07.8 -0.9
comp=Z,42nm,1.5s,mb5.1
COLD **Coldfoot** 73.56 338 *e*P P 05 47 11.7 +0.6
comp=Z,12nm,0.9s,mb4.8
SVW2 **Sparrevohn** 74.31 331 *e*P P 05 47 13.8 -1.7
TTA **Tatalina** 74.86 333 *e*P P 05 47 17.8 -0.9
CHGN **Chignik** 75.00 326 *e*P P 05 47 19.1 -0.5
ESDC **Sonseca Array** 76.11 51 LR LR 06 18 12.0
comp=Z,290nm,18.8s,MS4.6,baz=285,slow=34
TIC **Toumodi** 77.06 85 *e*P P 05 47 31.4 -0.9
comp=Z,37nm,1.1s,mb5.2
LIC **Lamto** 77.11 86 *e*P P 05 47 31.7 -0.8
comp=Z,80nm,1.1s,mb5.5
DBIC **Dimbokro** 77.22 85 P P 05 47 32.3 -0.8
comp=Z,8.8nm,0.8s,mb4.7,baz=263,slow=6.4,SNR=7.8
DBIC LR LR 06 18 59.7
comp=Z,143nm,21.0s,MS4.3,baz=267,slow=34
DBIC **Dimbokro** 77.22 85 *e*P P 05 47 32.6 -0.5
DBIC pmax pmax
comp=Z,29nm,1.2s
DBIC **Dimbokro** 77.22 85 *e*P P 05 47 32.6 -0.5
comp=Z,29nm,1.2s,mb5.1
EKA **Eskdalemuir Ar** 77.22 35 P P 05 47 31.9 -0.5
comp=Z,0.7nm,0.6s,mb3.8,baz=260,slow=4.8,SNR=4.0
EKA **Eskdalemuir Ar** 77.22 35 P P 05 47 31.9 -0.4
EKA pmax pmax
comp=Z,1.0nm,0.6s
KIC **Kosan Boka** 77.37 85 *e*P P 05 47 33.1 -0.9
comp=Z,55nm,1.1s,mb5.4
KBS **Kingsbay** 82.68 11*c* *i*P P 05 48 01.9 +0.5
KBS pmax pmax
comp=Z,37nm,1.2s,mb5.3
TORD **Torodi Ar. Bea** 82.84 78 P P 05 48 02.5 -1.0
comp=Z,4.1nm,0.9s,mb4.4,baz=274,slow=4.7,SNR=13
TORD LR LR 06 24 17.8
comp=Z,179nm,19.1s,MS4.5,baz=290,slow=35
SPITS **Spitsbergen Ar** 83.66 12 P P 05 48 05.2 -1.4
comp=Z,11nm,1.0s,mb4.9,baz=259,slow=20,SNR=4.9
SPITS **Spitsbergen Ar** 83.66 12 P P 05 48 05.2 -1.3
SPITS pmax pmax
comp=Z,11nm,1.0s
NB2 **NORSAR Subarra** 84.63 29 P P 05 48 10.3 -1.4
comp=Z,9.5nm,1.1s,mb4.8,baz=280,slow=5.3
NOA **NORSAR Array B** 84.63 29 P P 05 48 10.8 -1.0
comp=Z,2.9nm,1.0s,mb4.3,baz=276,slow=5.2,SNR=3.8
NOA LR LR 06 23 42.9
comp=Z,243nm,19.0s,MS4.6,baz=270,slow=34
TAM **Tamanrasset** 85.28 68 *e*P P 05 48 16.8 +1.0
TAM pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
TAM **Tamanrasset** 85.28 68 *e*P P 05 48 16.8 +1.0
comp=Z,4.7nm,1.0s,mb4.6
HFS **Hagfors** 85.98 30 P P 05 48 17.0 -1.4
comp=Z,3.3nm,0.9s,mb4.6,baz=306,slow=3.5,SNR=5.3
HFS **Hagfors** 85.98 30 P P 05 48 17.0 -1.5

HFS pmax pmax
comp=Z,3.0nm,0.9s
KEST **Kesra** 86.90 55 LR LR 06 25 23.0
comp=Z,68nm,18.7s,MS4.1,baz=218,slow=34
NKC **Novy Kostel** 86.94 40 AMS AMS 06 22 00.0
comp=Z,500nm,21.8s
CLL **Collm** 87.11 39 *e*P P 05 48 24.0 -0.2
CLL pmax pmax
comp=Z,11nm,1.4s,mb4.9
CLL MLR MLR
comp=Z,300nm,17.8s,MS4.8
CLL **Collm** 87.11 39 *e*P P 05 48 24.0 -0.2
comp=Z,11nm,1.4s,mb4.9
CLL LR LR
comp=Z,300nm,17.8s,MS4.8
CLL **Collm** 87.11 39 *e*P P 05 48 24.0 -0.2
comp=Z,11nm,1.4s,mb4.9
CLL *e*pPP 05 51 56.0
CLL *e*SS SS 06 04 54.0 +8.9
BRG **Berggiesshubel** 87.77 39 *e*P P 05 48 28.4 +1.0
comp=Z,5.2nm,1.0s,mb4.7
BRG
comp=N,267nm,19.4s
BRG
comp=E,185nm,16.8s
BRG
comp=Z,364nm,23.0s
KHC **Kasperske Hory** 87.85 41 AMS AMS 06 21 50.0
comp=Z,600nm,18.2s
GERES **GERESS Array B** 87.98 41 P P 05 48 27.3 -1.1
comp=Z,0.5nm,0.6s,mb3.9,baz=261,slow=7.6,SNR=6.3
GERES LR LR 06 22 19.5
comp=Z,524nm,20.7s,MS4.9,baz=272,slow=32
PVCC **Panska Ves** 88.22 39 AMS AMS 06 23 30.0
comp=Z,400nm,18.6s
PRU **Pruhonice** 88.31 40 AMS AMS 06 22 10.0
comp=Z,700nm,21.1s
ARCES **ARCESS Array B** 88.44 20 P P 05 48 27.6 -2.5
comp=Z,7.0nm,1.0s,mb4.8,baz=316,slow=3.3,SNR=6.1
ARCES **ARCESS Array B** 88.44 20 P P 05 48 27.7 -2.5
ARCES pmax pmax
comp=Z,7.0nm,1.0s
TREC **Trest** 89.05 40 AMS AMS 06 22 40.0
comp=Z,800nm,21.1s
DPC **Dobruska-Polom** 89.36 39 AMS AMS 06 24 40.0
comp=Z,400nm,18.0s
BILL **Bilibino** 89.83 339⇓ *e*P P 05 48 36.9 +0.1
BILL *e* pP 05 48 45.2 -0.2
BILL pmax pmax
comp=Z,19nm,1.2s,mb5.3
BILL **Bilibino** 89.83 339 *e*P P 05 48 36.8 +0.1
comp=Z,33nm,1.4s,mb5.5
OKC **Ostrava-Krasne** 90.62 39 AMS AMS 06 25 10.0
comp=Z,600nm,21.1s
FINES **FINESS Array B** 91.49 27 P P 05 48 43.5 -1.1
comp=Z,2.7nm,0.9s,mb4.6,baz=213,slow=6.6,SNR=5.5
FINES LR LR 06 24 03.1
comp=Z,397nm,21.9s,MS4.8,baz=0.6,slow=32
LVZ **Lovozero** 92.15 20 *e*P P 05 48 46.6 -1.0
LVZ pmax pmax
comp=Z,15nm,1.3s,mb5.2
VSU **Vasula** 92.86 30⇑ *i*P P 05 48 49.5 -1.5
VSU pmax pmax
comp=Z,15nm,1.2s,mb5.3
AKASG **Malin Array Be** 97.10 36 LR LR 06 30 12.9
comp=Z,448nm,19.7s,MS5.0,baz=290,slow=34
TIXI **Tiksi** 97.34 350 *e*P P 05 49 09.8 -1.5
TIXI *e*PS PS 06 01 57.0 -1.4
TIXI *e*SS SS 06 07 07.8 -3.0
TIXI pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
TIXI MLR MLR
comp=Z,288nm,20.0s,MS4.8
SEY **Seymchan** 97.36 338⇑ *i*P P 05 49 12.6 +1.1
QSPA **South Pole Qui** 98.46 180 *e*P P 05 49 16.3 +0.3
comp=Z,3.0nm,0.9s,mb4.8
OBN **Obninsk** 99.18 30 *e*P P 05 49 20.6 +0.8
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,300nm,19.0s,MS4.8
DZM **Mont Dzumac** 112.27 250 *e*LR LR 06 27 41.0
comp=Z,110nm,24.1s
KURK **Kurchatov** 118.91 13 *i* PKIKP PKPdf 05 54 23.6 -3.3
CN2 **Changchun** 121.99 336 *e*PKP PKPdf 05 54 27.8 -5.3
CN2 *es*PKP 05 54 42.3
CN2 PP PP 05 56 05.8 -0.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,330nm,20.0s,MS5.1
CN2 LR LR
comp=E,220nm,20.0s,MS5.1
CN2 LR LR
comp=Z,400nm,19.0s,MS5.1
SONM **Songino Array** 123.35 353 PKP PKPdf 05 54 33.7 -1.9
comp=Z,0.8nm,0.7s,baz=261,slow=1.3,SNR=4.0
SONM **Songino Array** 123.35 353 PKIKP PKPdf 05 54 33.7 -1.8
SONM pmax pmax
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 123.42 12 PKP PKPdf 05 54 33.0 -2.7
comp=Z,0.6nm,0.8s,baz=328,slow=3.4,SNR=4.0
MKAR **Makanchi Array** 123.42 12*c* *i*PKIKP PKPdf 05 54 34.4 -1.3
MKAR pmax pmax
comp=Z,1.0nm,0.8s
AAK **Ala-Archa** 125.10 20*c* *i*PKIKP PKPdf 05 54 39.6 +0.5
AAK pmax pmax
comp=Z,2.0nm,1.2s
KSRS **Korea Array** 126.00 330 PKP PKPdf 05 54 39.8 -1.1
comp=Z,5.6nm,0.8s,baz=20,slow=1.3,SNR=20
KSRS **Korea Array** 126.00 330 PKIKP PKPdf 05 54 39.8 -1.1
KSRS pmax pmax
comp=Z,6.0nm,0.8s
WMQ **Urumqi** 127.26 9 *e*PKP PKPdf 05 54 43.0 -0.2
HHC **Hu-ho-hao-te** 129.16 346 *e*PKP PKPdf 05 54 46.3 -0.6
HHC *s*PKP 05 55 00.8
HHC PP PP 05 56 58.5 +4.7
HHC PKS 05 58 21.8
HHC SKS SKSdf 06 01 46.8 -10
HHC SKKS SKKSac 06 03 45.8 -4.8
HHC SS SS 06 14 13.5 +1.9
HHC AMB AMB
comp=Z,70nm,7.5s
HHC LR LR
comp=N,290nm,20.6s,MS5.0
HHC LR LR
comp=E,170nm,21.1s,MS5.0
HHC LR LR
comp=Z,300nm,22.2s,MS4.9
GTA **Gaotai** 132.31 357 *e*PKP PKPdf 05 54 52.0 -0.9
NJ2 **Nanjing** 134.69 334 *e*PKP PKPdf 05 54 57.5 -0.1
LZH **Lanzhou** 135.24 352 *e*PKP PKPdf 05 54 56.0 -2.5
LZH *s*PKP 05 55 11.5
CD2 **Chengdu** 140.34 351 PKP PKPdf 05 55 06.5 -1.5
ASAR **Alice Springs** 141.73 242 PKhKP 05 55 03.6
comp=Z,4.0nm,0.9s,baz=122,slow=3.8,SNR=10
ASAR PKP PKPdf 05 55 09.0 -1.7
comp=Z,4.2nm,0.8s,baz=130,slow=3.7,SNR=20
ASAR **Alice Springs** 141.73 242 PKHKP 05 55 03.6
ASAR 05 55 09.0
ASAR pmax pmax
comp=Z,4.0nm,0.9s
ASAR pmax pmax
comp=Z,4.0nm,0.8s
GYA **Guiyang** 144.08 345 *e*PKP PKPdf 05 55 13.0 -1.8
GYA *e*PKP *e*PKPdf 05 55 25.8 +2.1
GYA PP PP 05 58 30.0 +2.7
GYA PKS 05 58 47.8
GYA SS SS 06 17 09.5 0.0
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,120nm,20.4s,MS4.8
GYA LR LR
comp=E,110nm,21.8s,MS4.8
GYA LR LR
comp=Z,130nm,22.4s,MS4.7
KAKA **Kakadu** 145.07 260 *e*PKPdf PKPdf 05 55 15.5 -1.3
SHL **Shillong** 145.79 8 *e*P PKPdf 05 55 18.0 +0.2
KMI **Kunming** 146.17 351 PKPbc PKPbc 05 55 14.5 -4.9
KMI pPKP pPKPdf 05 55 28.0 +0.6
KMI *s*PKP 05 55 32.0
KMI PP PP 05 58 43.3 +3.6
KMI SS SS 06 17 33.0 -0.3
KMI AMB AMB
comp=Z,96nm,4.4s

KMI LR LR
comp=N,220nm,19.2s,MS5.0
KMI LR LR
comp=E,110nm,23.7s,MS5.0
KMI LR LR
comp=Z,230nm,22.6s,MS4.9
HYB Hyderabad 148.39 36 *i* PKP PKPdf 05 55 23.5 +1.2
NWAO Narrogin (SRO) 149.37 215 PKPbc PKPbc 05 55 26.1 -1.8
baz=140,slow=5.3
FITZ Fitzroy Crossi 150.70 248 PKPbc PKPbc 05 55 29.7 -1.8
comp=Z,8.2nm,0.8s,baz=200,slow=2.6,SNR=7.3
CMAR Chiang Mai Arr 153.19 356 PKP PKPdf 05 55 28.6 -1.2
comp=Z,4.6nm,1.0s,baz=310,slow=2.6,SNR=9.4
CMAR PKPbc PKPbc 05 55 35.3 -1.8
comp=Z,3.3nm,0.7s,baz=334,slow=3.3,SNR=12
CMAR Chiang Mai Arr 153.19 356 PKIKP PKPdf 05 55 28.6 -1.1
CMAR 05 55 35.3
CMAR pmax pmax
comp=Z,5.0nm,1.0s
CMAR pmax pmax
comp=Z,3.0nm,0.7s

ISK ***30*** *05:38:15.8, 36°.97N×29°.21E, h6km, MD3.4*
ISCJB ***30*** *05:38:16.6±0.5, 36°.96N±0°.03×29°.25E±0°.03, h5km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=143.6*
CSEM ***30*** *05:38:16.8±0.1, 36°.96N×29°.23E, h8km, MD3.4, Error ellipse: s-maj=4.1km s-min=3.1km az=169.0*
NEIC ***30*** *05:38:16.0, 36°.96N×29°.23E, h8km, MD3.4(ISK), After ISK.*
DDA ***30*** *05:38:17.4, 37°.01N×29°.19E, h7km±6km, Md3.2*
ISC 30 05:38:17.0±0.5, 36°.96N±0°.03×29°.23E±0°.03, h7km±4km, n65, σ0s87/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**47**	PG	**Pg**	**05 38 21.9**	**-0.7**
GLHS				*e*SG	**Sg**	**05 38 27.0**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.29**	**47**	*i* Pg	**Pg**	**05 38 22.0**	**-0.7**
GLHS				*e*Sg	**Sg**	**05 38 27.0**	**+0.5**
FETY	**Fethiye**	**0.35**	**201**	PG	**Pg**	**05 38 23.0**	**-0.8**
FETY				*e*SG	**Sg**	**05 38 28.8**	**+0.5**
FETY	**Fethiye**	**0.35**	**201**	*i* Pg	**Pg**	**05 38 23.0**	**-0.8**
FETY				*e*Sg	**Sg**	**05 38 28.8**	**+0.5**
GOLH	**Golhisar**	**0.38**	**43**	*i* P	**Pg**	**05 38 24.1**	**-0.4**
GOLH				*i* S	**Sg**	**05 38 31.3**	**+1.8**
GOLH	**Golhisar**	**0.38**	**43**	*i* P	**Pg**	**05 38 24.1**	**-0.3**
GOLH				*i* S	**Sg**	**05 38 31.3**	**+1.9**
ELL	**Elmali**	**0.58**	**111**	*e*PG	**Pg**	**05 38 28.0**	**-0.2**
ELL	**Elmali**	**0.58**	**111**	*e*Pg	**Pg**	**05 38 28.0**	**-0.2**
DNZL	**Cakiroluk**	**0.74**	**348**	*i* P	**Pg**	**05 38 30.0**	**-1.3**
DNZL				*i* S	**Sg**	**05 38 41.9**	**+0.9**
DNZL	**Cakiroluk**	**0.74**	**348**	*i* P	**Pg**	**05 38 30.0**	**-1.3**
DNZL				*i* S	**Sg**	**05 38 41.9**	**+0.9**
YER	**Yerkesik**	**0.78**	**283**	*e*PG	**Pg**	**05 38 31.1**	**-1.0**
YER	**Yerkesik**	**0.78**	**283**	*e*Pg	**Pg**	**05 38 31.1**	**-0.9**
AKAS	**Kas**	**0.78**	**158**	*i* P	**Pg**	**05 38 32.2**	**+0.2**
AKAS				*i* S	**Sg**	**05 38 47.5**	**+5.2**
AKAS	**Kas**	**0.78**	**158**	*i* P	**Pg**	**05 38 32.2**	**+0.1**
KSL	**Kastellorizon**	**0.86**	**161**	*e*P	**Pg**	**05 38 34.1**	**+0.6**
ANTB	**Antalya**	**1.14**	**93**	*e*PN	**Pn**	**05 38 38.4**	**-1.0**
ANTB	**Antalya**	**1.14**	**93**	*e*Pn	**Pn**	**05 38 38.4**	**-1.0**
ARG	**Arkhangelos**	**1.16**	**231**	*e*P	**Pg**	**05 38 38.1**	**-1.2**
ARG	**Arkhangelos**	**1.16**	**231**	P	**Pg**	**05 38 39.4**	**+0.1**
ARG	**Arkhangelos**	**1.16**	**231**	P	**Pg**	**05 38 39.4**	**+0.1**
BCK	**Bucak**	**1.19**	**65**	*e*PN	**Pn**	**05 38 38.9**	**-1.3**
BCK	**Bucak**	**1.19**	**65**	*e*Pn	**Pn**	**05 38 38.9**	**-1.2**
MLSB	**Milas**	**1.21**	**286**	*e*PN	**Pn**	**05 38 38.9**	**-1.6**
MLSB	**Milas**	**1.21**	**286**	*e*Pn	**Pn**	**05 38 38.9**	**-1.5**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**05 38 41.0**	**-0.4**
AYDN				*i* S	**Sb**	**05 39 00.2**	**+1.8**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**05 38 41.0**	**-0.4**
AYDN				*i* S	**Sb**	**05 39 00.2**	**+1.9**
ISP	**Isparta**	**1.34**	**49**	*e*PN	**Pn**	**05 38 41.8**	**-0.4**
ISP	**Isparta**	**1.34**	**49**	P	**Pn**	**05 38 43.4**	**+1.2**
ISP	**Isparta**	**1.34**	**49**	*e*Pn	**Pn**	**05 38 41.8**	**-0.4**
ISP	**Isparta**	**1.34**	**49**	P	**Pn**	**05 38 43.4**	**+1.2**
DAT	**Datca**	**1.35**	**261**	*e*PN	**Pn**	**05 38 41.9**	**-0.4**
DAT	**Datca**	**1.35**	**261**	*e*Pn	**Pn**	**05 38 41.9**	**-0.4**
KHL	**Karahalli**	**1.38**	**9**	*e*PN	**Pn**	**05 38 42.0**	**-0.8**
KHL	**Karahalli**	**1.38**	**9**	*e*Pn	**Pn**	**05 38 42.0**	**-0.7**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**05 38 44.2**	**+0.7**
BDRM				*i* S	**Sn**	**05 39 03.5**	**+0.9**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**05 38 44.2**	**+0.7**
BDRM				*i* S	**Sn**	**05 39 03.5**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*PN	**Pn**	**05 38 44.4**	**0.0**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*Pn	**Pn**	**05 38 44.4**	**0.0**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**05 38 45.3**	**-0.7**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn	**Pn**	**05 38 45.3**	**-0.7**
SHUT	**Suhut-Afyon**	**1.90**	**33**	*e*PN	**Pn**	**05 38 49.5**	**-0.4**
SHUT	**Suhut-Afyon**	**1.90**	**33**	*e*Pn	**Pn**	**05 38 49.5**	**-0.4**
SMG	**Samos**	**2.05**	**292**	*e*P	**Pn**	**05 38 51.7**	**-0.3**
SMG	**Samos**	**2.05**	**292**	P	**Pn**	**05 38 52.2**	**+0.2**
SMG	**Samos**	**2.05**	**292**	P	**Pn**	**05 38 52.2**	**+0.2**
IZM	**Izmir**	**2.12**	**313**	*e*PN	**Pn**	**05 38 52.8**	**-0.1**
IZM	**Izmir**	**2.12**	**313**	*e*Pn	**Pn**	**05 38 52.8**	**-0.1**
KARP	**Karpathos**	**2.19**	**231**	*e*P	**Pn**	**05 38 54.9**	**+1.0**
BLCB	**Balcova**	**2.25**	**310**	*e*PN	**Pn**	**05 38 53.6**	**-1.0**
BLCB	**Balcova**	**2.25**	**310**	*e*Pn	**Pn**	**05 38 53.7**	**-0.9**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**05 38 59.3**	**-0.3**
HDMB	**Hadim**	**2.60**	**89**	*e*Pn	**Pn**	**05 38 59.3**	**-0.3**
KONT	**Konya--Tatoy**	**2.67**	**67**	*e*PN	**Pn**	**05 39 00.9**	**+0.4**
KONT	**Konya--Tatoy**	**2.67**	**67**	*e*Pn	**Pn**	**05 39 01.0**	**+0.5**
LADK	**Ladik-KONYA**	**2.78**	**63**	*e*PN	**Pn**	**05 39 02.1**	**+0.1**
LADK	**Ladik-KONYA**	**2.78**	**63**	*e*Pn	**Pn**	**05 39 02.1**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**05 39 03.2**	**+0.4**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**05 39 03.2**	**+0.4**
NPS	**Neapolis**	**3.39**	**241**	*e*P	**Pn**	**05 39 11.7**	**+1.4**
NPS	**Neapolis**	**3.39**	**241**	P	**Pn**	**05 39 14.3**	**+4.0**
NPS	**Neapolis**	**3.39**	**241**	P	**Pn**	**05 39 14.3**	**+4.0**
LAST	**Lasithi**	**3.53**	**241**	P	**Pn**	**05 39 16.0**	**+3.7**
LAST	**Lasithi**	**3.53**	**241**	P	**Pn**	**05 39 16.0**	**+3.7**
IKL	**Isikli**	**3.65**	**100**	*e*PN	**Pn**	**05 39 15.1**	**+1.2**
IKL	**Isikli**	**3.65**	**100**	*e*Pn	**Pn**	**05 39 15.1**	**+1.1**

IDC ***30*** *05:39:14.3±1.0, 6°.09S×103°.12E, h0km, mb4.3/14, mb1 4.3/15, mb1mx4.2/24, mbtmp4.3/15, ML3.7/1, MS3.4/3, Ms1 3.5/3, ms1mx3.0/25, Error ellipse: s-maj=42.0km s-min=18.1km az=52.0*
ISCJB ***30*** *05:39:18.4±0.8, 6°.18S±0°.06×103°.14E±0°.05, h46km±6km, mb4.4/26, MS3.7/4, Error ellipse: s-maj=12.2km s-min=6.1km az=36.5*
DJA ***30*** *05:39:18, 6°.21S×103°.21E, h13km, MLv4.7/14*
NEIC ***30*** *05:39:20.3±0.4, 6°.07S×103°.09E, mb4.6/11, Error ellipse: s-maj=12.6km s-min=8.1km az=73.0*
BJI ***30*** *05:39:21.7, 5°.28S×102°.91E, h15km, mB5.0/6, mb4.8/12, Ms5.0/2, Ms7 4.7/2*
ISC 30 05:39:20.3±0.7, 6°.16S±0°.06×103°.18E±0°.05, h43km±6km, h39km±2.7km: pP-P, n70, σ0s86/67, mb4.4/26, MS3.7/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.43**	**38**	P	**Pn**	**05 39 43.0**	**-0.8**
KASI	**Kota Agung**	**1.46**	**65**	P	**Pn**	**05 39 42.3**	**-1.8**
KASI				S	**Sn**	**05 39 54.6**	**-7.4**
MNAI	**Manna**	**1.80**	**353**	P	**Pn**	**05 39 48.5**	**-0.3**
MDSI	**Maura Dua**	**1.94**	**31**	P	**Pn**	**05 39 50.4**	**-0.3**
BLSI	**Bandar Lampung**	**2.20**	**69**	P	**Pn**	**05 39 54.9**	**+0.6**
CGJI	**Cibinong**	**2.54**	**100**	P	**Pn**	**05 39 58.1**	**-0.9**
CGJI				S	**Sn**	**05 40 29.1**	**+0.3**
KSI	**Kapahiang**	**2.55**	**347**	P	**Pn**	**05 39 59.4**	**+0.2**
KSI				S	**Sn**	**05 40 33.7**	**+4.7**
RBSI	**Rajabasa**	**2.57**	**83**	P	**Pn**	**05 39 59.2**	**-0.2**
DBJI	**Dramaga**	**3.57**	**97**	P	**Pn**	**05 40 13.3**	**+0.1**
CBJI	**Citeko**	**3.66**	**94**	P	**Pn**	**05 40 16.6**	**+2.2**
KRJI	**Kerinci**	**4.38**	**337**	P	**Pn**	**05 40 25.1**	**+0.8**
PPBI	**Pangkal Pinang**	**4.95**	**37**	P	**Pn**	**05 40 32.6**	**+0.5**
SDSI	**Sungai Dareh**	**5.47**	**341**	P	**Pn**	**05 40 38.5**	**-0.8**
	38nm,0.8s						
PDSI	**Padang**	**5.87**	**332**	P	**Pn**	**05 40 44.1**	**-0.7**
SISI	**Saibi**	**6.29**	**319**	P	**Pn**	**05 40 50.6**	**0.0**
	74nm,0.9s,0.6nm						
PPI	**Padang Panjang**	**6.30**	**334**	P	**Pn**	**05 40 53.2**	**+2.5**
	37nm,0.9s,9μm0.4nm						
BKNI	**Bangkinang**	**6.78**	**342**	P	**Pn**	**05 40 59.2**	**+1.9**
	69nm,0.7s,981nm0.6nm						
MYKOM	**Kota Tinggi**	**7.92**	**5**	P	**Pn**	**05 41 13.6**	**+0.7**
	28nm,1.0s,0.1nm						
COCO	**West Island**	**8.67**	**226**	*e*Pn	**Pn**	**05 41 21.9**	**-1.3**
PWJI	**Pagerwojo**	**8.76**	**103**	P	**Pn**	**05 41 24.1**	**-0.4**
PSI	**Prapat**	**9.86**	**334**	Pn	**Pn**	**05 41 35.3**	**-4.2**
	0.8nm,0.3s,baz=165,slow=12,SNR=3.6						
CM31	**Chiang Mai Arr**	**24.81**	**350**	*e*P	**P**	**05 44 37.2**	**-1.3**
	3.9nm,0.4s,mb4.3						
CMAR	**Chiang Mai Arr**	**24.81**	**350**	P	**P**	**05 44 37.3**	**-1.2**
	8.9nm,0.7s,mb4.4,baz=182,slow=8.9,SNR=35						
CMAR				LR	LR	05 55 02.2	
	comp=Z,114nm,18.1s,MS3.4,baz=170,slow=38						
FITZ	**Fitzroy Crossi**	**24.93**	**120**	LR	LR	05 53 55.0	
	comp=Z,86nm,21.5s,MS3.2,baz=318,slow=35						
CHTO	**Chiang Mai**	**25.16**	**351**	*e*P	**P**	**05 44 39.9**	**-1.8**
	7.8nm,0.8s,mb4.3						
QIZ	**Qiongzhong**	**25.87**	**15**	*e*P	**P**	**05 44 48.0**	**-0.2**
	14nm,1.1s,mb4.4						
PALK	**Pallekele**	**26.09**	**300**	LR	LR	05 53 11.6	
	comp=Z,86nm,21.9s,MS3.2,baz=338,slow=32						
ASAR	**Alice Springs**	**34.29**	**124**	P	**P**	**05 46 03.0**	**+0.4**
	0.3nm,0.3s,mb3.7,baz=295,slow=7.1,SNR=4.2						
ODAN	**Odare**	**36.21**	**336**	*e*P	**P**	**05 46 18.9**	**-0.2**
TAPN	**Taplejung**	**36.51**	**337**	*e*P	**P**	**05 46 21.6**	**-0.1**
	43nm,0.9s,mb5.3						
RAMN	**Ramite**	**36.62**	**335**	*e*P	**P**	**05 46 22.8**	**+0.2**
JIRN	**Jiri**	**37.41**	**335**	*e*P	**P**	**05 46 28.4**	**-0.9**
GUN	**Gumba**	**37.76**	**335**	*e*P	**P**	**05 46 31.9**	**-0.4**
DMN	**Daman**	**37.84**	**333**	*e*P	**P**	**05 46 32.5**	**-0.4**
	17nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**44.05**	**131**	P	**P**	**05 47 24.6**	**+0.5**
	1.6nm,0.5s,mb4.0,baz=327,slow=18,SNR=6.5						
STKA	**Stephens Creek**	**44.05**	**131**	*e*P	**P**	**05 47 25.1**	**+1.0**
	1.7nm,1.0s,mb3.7						
STKA				*e*pP	pP	05 47 35.9	-0.1
GTA	**Gaotai**	**45.44**	**356**	*e*P	**P**	**05 47 35.5**	**+0.5**
GTA				pP	pP	05 47 39.8	-7.2
GTA				sP	sP	05 47 42.8	-9.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
KSRS	**Korea Array**	**49.15**	**26**	P	**P**	**05 48 03.4**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.4,baz=223,slow=7.6,SNR=10						
KSH	**Kashi**	**51.93**	**333**	*e*P	**P**	**05 48 24.0**	**-0.9**
KSH				*e*pP	pP	05 48 34.3	-2.7
KSH				*e*sP	sP	05 48 38.3	-3.7
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KSH				pmax	pmax		
	comp=Z,93nm,4.8s						
KSH				LR	LR		
	comp=N,450nm,11.6s,MS4.8						
KSH				LR	LR		
	comp=E,400nm,16.4s,MS4.8						
KSH				LR	LR		
	comp=Z,180nm,7.1s						
SONM	**Songino Array**	**53.83**	**3**	P	**P**	**05 48 39.3**	**+0.7**
	comp=Z,13nm,0.7s,mb4.9,baz=179,slow=9.1,SNR=74						
ULN	**Ulaanbaatar**	**53.90**	**3**	*e*P	**P**	**05 48 38.7**	**-0.5**
	comp=Z,8.1nm,0.9s,mb4.7						
ULN				*e*pP	pP	05 48 50.7	-0.7
ULHL	**Ulahol**	**54.06**	**335**	P	**P**	**05 48 41.2**	**+0.7**
	SNR=6.5						
KZA	**Kyzart**	**54.34**	**335**	P	**P**	**05 48 43.5**	**+1.0**
	SNR=9.8						
TKM2	**Tokmak 2**	**54.89**	**335**	P	**P**	**05 48 47.2**	**+0.7**
	SNR=13						
TKM2	**Tokmak 2**	**54.89**	**335**	*e*P	**P**	**05 48 46.6**	**+0.1**
	comp=Z,9.3nm,0.8s,mb4.9						
AML	**Almayashu**	**55.06**	**333**	P	**P**	**05 48 48.6**	**+0.8**
	SNR=5.7						
AML	**Almayashu**	**55.06**	**333**	*e*P	**P**	**05 48 47.9**	**+0.2**
	comp=Z,135nm,0.6s						
EKS2	**Erkin-Say**	**55.45**	**334**	P	**P**	**05 48 51.8**	**+1.3**
	SNR=6.7						
EKS2	**Erkin-Say**	**55.45**	**334**	*e*P	**P**	**05 48 51.5**	**+1.0**
	comp=Z,8.0nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**55.88**	**343**	*e*P	**P**	**05 48 53.4**	**-0.2**
MK31				*e*pP	pP	05 49 04.6	-1.2
MKAR	**Makanchi Array**	**55.88**	**343**	P	**P**	**05 48 53.5**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.8,baz=142,slow=8.0,SNR=47						
KURK	**Kurchatov**	**60.48**	**342**	*e*P	**P**	**05 49 25.2**	**-0.4**
	comp=Z,6.4nm,0.9s,mb4.7						
ZAA0	**Zalesovo Array**	**61.84**	**348**	*e*P	**P**	**05 49 34.7**	**-0.1**
ZALV	**Zalesovo Beam**	**61.84**	**348**	P	**P**	**05 49 33.9**	**-0.8**
	comp=Z,3.8nm,0.4s,mb4.9,baz=163,slow=4.4,SNR=18						
ZALV	**Zalesovo Beam**	**61.84**	**348**	P	**P**	**05 49 33.9**	**-0.8**
BVAR	**Borovoye Array**	**65.16**	**339**	P	**P**	**05 49 56.1**	**-0.6**
	comp=Z,1.8nm,0.4s,mb4.4,baz=142,slow=8.5,SNR=8.0						
ABKAR	**Akbulak array**	**66.78**	**331**	*e*P	**P**	**05 50 07.3**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.5						
AKTK	**Aktyubinsk**	**68.50**	**331**	P	**P**	**05 50 17.5**	**-0.5**
AKTO	**Aktyubinsk**	**68.50**	**331**	P	**P**	**05 50 17.5**	**-0.5**
	comp=Z,0.5nm,0.3s,mb3.9,baz=153,slow=16,SNR=2.7						
BRTR	**Keskin Array B**	**78.44**	**312**	P	**P**	**05 51 17.5**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.5,baz=81,slow=5.4,SNR=3.2						
AKASG	**Malin Array Be**	**84.69**	**322**	P	**P**	**05 51 49.6**	**+0.1**
	comp=Z,1.6nm,0.7s,mb4.3,baz=74,slow=6.3,SNR=5.9						
BUR08	**Bucovina Ar. S**	**86.47**	**318**	*e*P	**P**	**05 52 01.2**	**+2.8**
FINES	**FINESS Array B**	**89.24**	**332**	P	**P**	**05 52 12.3**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.5,baz=132,slow=8.0,SNR=4.5						
FINES	**FINESS Array B**	**89.24**	**332**	P	**P**	**05 52 12.3**	**+0.9**
HFS	**Hagfors**	**95.03**	**330**	P	**P**	**05 52 38.3**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.5,baz=145,slow=5.4,SNR=3.6						
NOA	**NORSAR Array B**	**96.29**	**331**	P	**P**	**05 52 44.5**	**+0.6**
	comp=Z,0.7nm,0.8s,mb4.1,baz=97,slow=4.4,SNR=2.7						
NVAR	**Mina Array Bea**	**130.62**	**43**	PKP	PKPdf	05 58 28.2	+1.3
	comp=Z,0.1nm,0.4s,baz=258,slow=4.3,SNR=3.6						
TXAR	**Lajitas Array**	**145.75**	**44**	PKPbc	PKPbc	05 58 56.4	+1.1
	comp=Z,5.1nm,0.7s,baz=296,slow=1.3,SNR=54						
JCT	**Junction City**	**147.57**	**39**	*e*PKPbc	PKPbc	05 59 01.2	+0.7
TKL	**Tuckaleechee C**	**149.95**	**11**	PKPbc	PKPbc	05 59 05.3	-1.2
	comp=Z,2.8nm,0.8s,baz=150,slow=6.7,SNR=3.8						

ISK ***30*** *05:56:58.0, 36°.97N×29°.22E, h2km, MD3.1*
ISCJB ***30*** *05:56:59.1±0.5, 36°.95N±0°.03×29°.24E±0°.03, h3km±5km, Error ellipse: s-maj=4.8km s-min=4.1km az=144.1*
CSEM ***30*** *05:56:59.1±0.1, 36°.95N×29°.25E, h8km, MD3.1, Error ellipse: s-maj=1.6km s-min=1.5km az=144.0*
DDA ***30*** *05:56:59.3, 36°.97N×29°.24E, h7km±5km, Md3.1*
ISC 30 05:56:59.5±0.5, 36°.95N±0°.03×29°.24E±0°.03, h6km±4km, n48, σ0s80/65, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**46**	PG	**Pg**	**05 57 04.6**	**-0.6**
GLHS				*e*SG	**Sg**	**05 57 09.5**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.29**	**46**	*i* Pg	**Pg**	**05 57 04.6**	**-0.6**
GLHS				*e*Sg	**Sg**	**05 57 09.5**	**+0.4**
FETY	**Fethiye**	**0.34**	**201**	PG	**Pg**	**05 57 05.9**	**-0.2**
FETY				*e*SG	**Sg**	**05 57 11.6**	**+1.1**
FETY	**Fethiye**	**0.34**	**201**	*i* Pg	**Pg**	**05 57 05.9**	**-0.2**
FETY				*e*Sg	**Sg**	**05 57 11.6**	**+1.1**
GOLH	**Golhisar**	**0.39**	**42**	*i* P	**Pg**	**05 57 06.6**	**-0.4**
GOLH				*i* S	**Sg**	**05 57 13.4**	**+1.4**
GOLH	**Golhisar**	**0.39**	**42**	*i* P	**Pg**	**05 57 06.6**	**-0.3**
GOLH				*i* S	**Sg**	**05 57 13.4**	**+1.4**
ELL	**Elmali**	**0.58**	**111**	*e*PG	**Pg**	**05 57 10.2**	**-0.4**
ELL	**Elmali**	**0.58**	**111**	*e*Pg	**Pg**	**05 57 10.2**	**-0.4**
DNZL	**Cakiroluk**	**0.75**	**348**	*i* P	**Pg**	**05 57 13.7**	**-0.2**
DNZL				*i* S	**Sg**	**05 57 23.9**	**+0.2**
DNZL	**Cakiroluk**	**0.75**	**348**	*i* P	**Pg**	**05 57 13.7**	**-0.2**
DNZL				*i* S	**Sg**	**05 57 23.9**	**+0.2**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**05 57 15.2**	**+0.8**
AKAS				*i* S	**Sg**	**05 57 29.9**	**+5.4**
AKAS	**Kas**	**0.78**	**157**	*i* P	**Pg**	**05 57 15.2**	**+0.8**
YER	**Yerkesik**	**0.78**	**284**	*e*PG	**Pg**	**05 57 13.4**	**-1.1**
YER	**Yerkesik**	**0.78**	**284**	*e*Pg	**Pg**	**05 57 13.4**	**-1.1**
DENT	**Denizli**	**0.82**	**349**	*e*PG	**Pg**	**05 57 14.2**	**-1.0**
DENT	**Denizli**	**0.82**	**349**	*e*Pg	**Pg**	**05 57 14.2**	**-1.0**
KORT	**Korkueli**	**0.89**	**87**	*i* P	**Pg**	**05 57 15.8**	**-0.9**
KORT				*i* S	**Sg**	**05 57 32.0**	**+3.8**
KORT	**Korkueli**	**0.89**	**87**	*i* P	**Pg**	**05 57 15.8**	**-0.8**
KORT				*i* S	**Sg**	**05 57 32.0**	**+3.8**
ANTB	**Antalya**	**1.14**	**92**	*e*PN	**Pn**	**05 57 21.2**	**-0.7**
ANTB	**Antalya**	**1.14**	**92**	*e*Pn	**Pn**	**05 57 21.2**	**-0.7**
BCK	**Bucak**	**1.19**	**64**	*e*PN	**Pn**	**05 57 21.9**	**-0.8**
BCK	**Bucak**	**1.19**	**64**	*e*Pn	**Pn**	**05 57 21.9**	**-0.8**
MLSB	**Milas**	**1.22**	**287**	*e*PN	**Pn**	**05 57 21.2**	**-1.7**
MLSB	**Milas**	**1.22**	**287**	*e*Pn	**Pn**	**05 57 21.2**	**-1.8**
AYDN	**Tasoluk**	**1.29**	**304**	*i* P	**Pn**	**05 57 23.4**	**-0.6**
AYDN				*i* S	**Sb**	**05 57 42.4**	**+1.4**
AYDN	**Tasoluk**	**1.29**	**304**	*i* P	**Pn**	**05 57 23.4**	**-0.6**
AYDN				*i* S	**Sb**	**05 57 42.4**	**+1.4**
DAT	**Datca**	**1.35**	**261**	*e*PN	**Pn**	**05 57 24.5**	**-0.3**
DAT	**Datca**	**1.35**	**261**	*e*Pn	**Pn**	**05 57 24.5**	**-0.3**
ISP	**Isparta**	**1.35**	**48**	*e*PN	**Pn**	**05 57 24.4**	**-0.4**
ISP	**Isparta**	**1.35**	**48**	*e*Pn	**Pn**	**05 57 24.4**	**-0.4**
KHL	**Karahalli**	**1.39**	**9**	*e*PN	**Pn**	**05 57 24.9**	**-0.4**
KHL	**Karahalli**	**1.39**	**9**	*e*Pn	**Pn**	**05 57 25.0**	**-0.3**
KHAL	**Karahalli**	**1.43**	**8**	*i* P	**Pn**	**05 57 26.0**	**+0.1**
KHAL				*i* S	**Sb**	**05 57 46.2**	**+1.3**
KHAL	**Karahalli**	**1.43**	**8**	*i* P	**Pn**	**05 57 26.0**	**+0.1**
KHAL				*i* S	**Sb**	**05 57 46.2**	**+1.3**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**05 57 27.2**	**+1.2**
BDRM				*i* S	**Sb**	**05 57 45.8**	**+0.6**
BDRM	**Kayabasi**	**1.44**	**275**	*i* P	**Pn**	**05 57 27.2**	**+1.2**
BDRM				*i* S	**Sb**	**05 57 45.8**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*PN	**Pn**	**05 57 27.4**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.50**	**69**	*e*Pn	**Pn**	**05 57 27.4**	**+0.5**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**05 57 28.1**	**-0.4**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn	**Pn**	**05 57 28.2**	**-0.4**
ALT	**Altintas**	**2.21**	**18**	*e*PN	**Pn**	**05 57 36.5**	**-0.1**
ALT	**Altintas**	**2.21**	**18**	*e*Pn	**Pn**	**05 57 36.5**	**-0.1**
HDMB	**Hadim**	**2.60**	**89**	*e*PN	**Pn**	**05 57 42.8**	**+0.8**
HDMB	**Hadim**	**2.60**	**89**	*e*Pn	**Pn**	**05 57 42.8**	**+0.8**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*PN	**Pn**	**05 57 43.3**	**+0.3**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*Pn	**Pn**	**05 57 43.3**	**+0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**	**05 57 45.1**	**-0.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**	**05 57 45.1**	**-0.2**

MOS ***30*** *06:07:41.2±1.2, 8°.49N×82°.65W, h10km, mb4.6/19, Error ellipse: s-maj=26.5km s-min=8.4km az=114.7*
CASC ***30*** *06:07:41.5±4.9, 8°.38N×82°.93W, h0km±16km, MD4.3, mb4.4(NEIC)*
ISCJB ***30*** *06:07:43.9±0.8, 8°.49N±0°.04×82°.82W±0°.04, h17km±5km, mb4.2/36, MS4.3/3, Error ellipse: s-maj=8.2km s-min=5.3km az=32.1*
IDC ***30*** *06:07:47.8±2.2, 8°.48N×82°.98W, h46km±23km, mb3.7/9, mb1 4.0/14, mb1mx3.8/26, mbtmp3.8/14, ML3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/29, Error ellipse: s-maj=31.6km s-min=14.5km az=57.0*
NEIC ***30*** *06:07:48.0±0.9, 8°.51N×82°.93W, h38km±8km, mb4.4/30, Error ellipse: s-maj=12.3km s-min=7.3km az=224.0*
ISC 30 06:07:45.5±0.8, 8°.56N±0°.04×82°.81W±0°.04, h13km±4km, n261, σ0s97/259, mb4.2/36, MS4.3/3, 92C-79D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.26**	**27**	*i* P	**Pg**	**06 07

HDIL	Hopedale	32.38	351	eP	P	06 14 14.5	-0.4
	comp=Z,10nm,0.7s,mb4.8						
Y24A	Capitan	32.73	324	⇑P	P	06 14 18.2	+0.2
	baz=33						
320A	Kipp Ranch, An	32.97	317	⇓P	P	06 14 20.9	+0.7
	baz=33						
V26A	Tequesquite Ra	33.19	328	⇑P	P	06 14 23.9	+1.8
	baz=33						
121A	Cookes Peak, D	33.23	319	⇑P	P	06 14 23.8	+1.4
	baz=33,SNR=5.5						
220A	Playas Peak, P	33.32	318	⇓P	P	06 14 24.3	+1.0
	baz=33,SNR=6.4						
319A	Douglas	33.51	316	⇓P	P	06 14 25.7	+0.9
	baz=34						
Y22A	Socorro	33.65	322	⇑P	P	06 14 26.8	+0.7
	baz=34						
120A	U Bar Ranch, L	33.79	319	⇑P	P	06 14 28.7	+1.3
	baz=34						
219A	White Tail Can	33.87	317	⇑P	P	06 14 28.5	+0.5
	baz=34						
318A	Bisbee	34.03	316	⇑P	P	06 14 30.0	+0.6
	baz=34						
Z20A	Nine Sixteen R	34.13	319	⇓P	P	06 14 31.3	+1.0
	baz=34,SNR=6.5						
119A	Ashpeak Ranch,	34.37	318	⇑P	P	06 14 33.0	+0.7
	baz=34						
218A	Dragoon	34.38	316	⇑P	P	06 14 33.0	+0.5
	baz=34						
X21A	Alamocita Cree	34.50	322	⇓P	P	06 14 34.7	+1.3
	baz=34						
Y20A	Horse Springs,	34.51	321	⇓P	P	06 14 34.5	+1.0
	baz=34						
118A	Homack Ranch,	34.73	317	⇓P	P	06 14 36.5	+1.0
	baz=35						
217A	Green Valley	34.80	316	⇑P	P	06 14 36.8	+0.7
	baz=35						
Y19A	Nutrioso	35.09	320	⇓P	P	06 14 39.5	+1.0
	baz=35						
117A	Oracle	35.21	317	⇑P	P	06 14 40.2	+0.6
	baz=35,SNR=5.5						
X19A	St. Johns	35.42	321	⇓P	P	06 14 42.2	+0.9
	baz=36						
Z17A	San Carlos Hig	35.47	318	⇑P	P	06 14 42.6	+0.8
	baz=36						
Y18A	Canyon Day Jun	35.48	319	⇑P	P	06 14 43.0	+1.1
	baz=36						
116A	Eloy	35.87	316	⇑P	P	06 14 45.6	+0.4
	baz=36,SNR=6.1						
X18A	Snowflake	35.90	320	⇓P	P	06 14 46.4	+0.8
	baz=36						
Z16A	Peralta Trail,	36.13	317	⇑P	P	06 14 47.9	+0.4
	baz=36						
214A	Organ Pipe Nat	36.30	314	⇓P	P	06 14 49.4	+0.5
	baz=36,SNR=5.9						
115A	Sonoran Desert	36.31	316	⇓P	P	06 14 49.5	+0.4
	baz=36						
X17A	Forest Lakes	36.33	319	⇓P	P	06 14 50.1	+0.9
	baz=36						
Y16A	Circle Bar Ran	36.49	318	⇓P	P	06 14 51.6	+1.0
	baz=36						
114A	Black Gap (USA	36.79	315	⇓P	P	06 14 53.8	+0.6
	baz=37,SNR=7.2						
X16A	Lo Mia Camp, P	36.79	319	⇑P	P	06 14 53.9	+0.8
	baz=37						
ECSD	EROS Data Cent	37.06	343	eP	P	06 14 53.1	-2.1
	comp=Z,10nm,1.4s,mb4.5						
Y15A	Casa Rosa Ranc	37.10	317	⇑P	P	06 14 56.0	+0.2
	baz=37						
V17A	Tonalea, Kykot	37.13	321	⇓P	P	06 14 56.6	+0.6
	baz=37						
Z14A	Wintersburg	37.18	316	⇓P	P	06 14 57.0	+0.5
	baz=37						
X15A	Humboldt	37.36	318	⇓P	P	06 14 58.6	+0.6
	baz=37						
113A	Mohawk Valley,	37.42	315	⇓P	P	06 14 59.1	+0.6
	baz=37						
WUAZ	Wupatki	37.43	320	⇑P	P	06 14 59.2	+0.7
	baz=38						
Y14A	Wickenburg	37.55	317	⇓P	P	06 14 59.9	+0.3
	baz=38,SNR=6.1						
Z13A	Yuma Proving G	37.58	315	⇓P	P	06 15 00.5	+0.6
	baz=38						
X14A	Yava	37.78	317	⇑P	P	06 15 02.0	+0.5
	baz=38						
V15A	Kaibab Nationa	38.12	320	⇓P	P	06 15 05.4	+1.0
	baz=38,SNR=8.1						
GLA	Glamis	38.32	314	⇓P	P	06 15 07.0	+0.8
	baz=38						
W14A	Seligman	38.35	318	⇑P	P	06 15 07.3	+1.0
	baz=38						
X13A	Yucca	38.48	317	⇓P	P	06 15 08.4	+0.9
	baz=38						
Y12C	Blythe	38.49	315	⇑P	P	06 15 08.0	+0.5
	baz=38						
PDMCI	Parker Dam,Lak	38.53	316	⇑P	P	06 15 08.7	+0.8
	baz=39						
V14A	Boquillas Ranc	38.61	319	⇑P	P	06 15 09.8	+1.2
	baz=39						
W13A	Hualapai Mount	38.81	318	⇑P	P	06 15 11.4	+1.2
	baz=39						
R17A	Hanksville Air	38.92	324	⇓P	P	06 15 11.7	+0.7
	baz=39						
T15A	Red Dirt Ranch	39.00	321	⇑P	P	06 15 13.0	+1.2
	baz=39						
BC3	Big Chuckw Mtn	39.09	314	⇓P	P	06 15 13.1	+0.6
	baz=39						
U14A	Mt Trumbull	39.13	320	⇓P	P	06 15 13.9	+1.0
	baz=39						
IRM	Iron Mountain	39.15	315	⇑P	P	06 15 13.4	+0.3
	baz=39						
U13A	Pakoon Wash	39.64	319	⇓P	P	06 15 17.9	+0.7
	baz=40						
BELC	Belle Mtn.	39.66	315	⇑P	P	06 15 17.7	+0.4
	baz=40						
PFO	Pinyon Flat Ob	39.77	314	⇑P	P	06 15 18.9	+0.6
	baz=40						
V12A	Nelson	39.82	318	⇓P	P	06 15 19.3	+0.7
	baz=40						
GMRC	Granite Mounta	39.84	316	⇑P	P	06 15 19.2	+0.4
	baz=40						
ARUT	Antelope Range	40.14	321	eP	P	06 15 22.3	+1.0
ARUT				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ARUT	Antelope Range	40.14	321	eP	P	06 15 22.3	+1.0
	comp=Z,2.4nm,0.9s,mb3.9						
S13A	Holt Ranch, En	40.28	321	⇑P	P	06 15 23.3	+0.9
	baz=40						
MURC	Murrieta	40.30	313	⇓P	P	06 15 23.2	+0.5
	baz=40						
R13A	O'Grain Ranch,	40.71	321	⇑P	P	06 15 27.2	+1.2
	baz=41						
Q14A	Sevier Lake (B	40.80	323	⇑P	P	06 15 27.5	+0.7
	baz=41						
SHOC	Shoshone	40.88	317	⇓P	P	06 15 28.0	+0.6
	baz=41						
GSC	Goldstone	40.91	316	⇓P	P	06 15 28.5	+0.8
	baz=41						
GSC	Goldstone	40.91	316	eP	P	06 15 28.6	+0.9
GSC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
GSC	Goldstone	40.91	316	eP	P	06 15 28.6	+0.9
	comp=Z,7.9nm,1.0s,mb4.3						
T11A	Corn Creek, Al	40.94	319	⇓P	P	06 15 28.9	+1.0
	baz=41						
L18A	Fontenelle, Gr	41.00	329	⇑P	P	06 15 28.5	+0.2
	baz=41						
M17A	Scullys Gap (B	41.01	328	⇑P	P	06 15 28.7	+0.3
	baz=41						
AGMN	Agassiz Refuge	41.12	347	eP	P	06 15 27.7	-1.4
	comp=Z,7.3nm,1.1s,mb4.2						
R12A	Pony Springs,	41.20	321	⇑P	P	06 15 30.7	+0.7
	baz=41						
Q13A	Wheeler Ranch,	41.23	322	⇑P	P	06 15 30.9	+0.6
	baz=41,SNR=5.8						
PDAR	Pinedale Array	41.38	330	P	P	06 15 27.8	-3.6
	comp=Z,0.3nm,0.5s,mb3.1,baz=111,slow=8.1,SNR=3.9						
PDAR				PcP	PcP	06 17 27.8	-1.7
	comp=Z,0.4nm,0.6s,baz=145,slow=5.4,SNR=3.7						
EDW2	Edwards Air Fo	41.52	314	⇑P	P	06 15 32.9	+0.2
	baz=42						
K18A	Toltan Ranch,	41.52	329	⇑P	P	06 15 32.9	+0.4
	baz=42						
P13A	Bates Ranch, G	41.54	323	⇓P	P	06 15 33.4	+0.6
	baz=42						
FURC	Furnace Creek,	41.58	317	⇑P	P	06 15 34.2	+1.0
	baz=42						
HWUT	Hardware Ranch	41.58	327	eP	P	06 15 32.9	-0.2
	comp=Z,6.3nm,1.3s,mb4.1						
HWUT				ePcP	PcP	06 17 29.9	-0.4
LRMC	Laurel Mountai	41.62	315	⇑P	P	06 15 33.9	+0.4
	baz=42						
Q12A	Willow Creek R	41.77	322	⇑P	P	06 15 34.5	-0.2
	baz=42						
MPMC	Manual Prospec	41.78	316	⇑P	P	06 15 35.1	+0.2
	baz=42						
R11A	Troy Canyon, C	41.83	320	⇓P	P	06 15 36.0	+0.9
	baz=42						
J18A	Kendall Valley	41.93	330	⇓P	P	06 15 35.7	-0.2
	baz=42						
Q11A	Duckwater	42.17	321	⇑P	P	06 15 38.6	+0.6
	baz=42						
S10A	Tonopah Range,	42.22	319	⇓P	P	06 15 39.2	+0.8
	baz=42,SNR=6.6						
ARVC	Arvin	42.24	314	⇑P	P	06 15 39.0	+0.4
	baz=42						
R10A	Warm Springs	42.24	320	⇓P	P	06 15 39.2	+0.6
	baz=42						
ISA	Isabella	42.26	315	⇓P	P	06 15 39.0	+0.3
	baz=42						
ISA	Isabella	42.26	315	eP	P	06 15 39.3	+0.6
ISA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
ISA	Isabella	42.26	315	eP	P	06 15 39.3	+0.5
	comp=Z,5.5nm,1.0s,mb4.1						
L15A	Malad City	42.30	327	⇑P	P	06 15 38.8	-0.1
	baz=42						
CFAA	Coronel Fontan	42.30	161	P	P	06 15 36.5	-2.5
	comp=Z,0.5nm,1.1s,mb3.1,baz=299,slow=1.6,SNR=5.2						
J17A	Brown Place, J	42.39	330	⇑P	P	06 15 40.3	+0.6
	baz=42						
M14A	Sheep Mountain	42.49	326	⇑P	P	06 15 40.9	+0.5
	baz=42						
O12A	Currie	42.49	323	⇓P	P	06 15 40.3	-0.3
	baz=42						
N13A	Wendover, West	42.55	324	⇓P	P	06 15 41.9	+0.9
	baz=43						
VES	Vestal, Richgr	42.77	315	⇓P	P	06 15 43.7	+0.8
	baz=43						
L14A	Malta	42.78	326	⇓P	P	06 15 43.7	+0.8
	baz=43						
ULM	Lac du Bonnet	42.96	348	P	P	06 15 41.5	-2.7
	comp=Z,10nm,1.0s,mb4.5,baz=162,slow=8.6,SNR=6.4						
ULM	Lac du Bonnet	42.96	348	eP	P	06 15 42.1	-2.1
ULM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULM	Lac du Bonnet	42.96	348	eP	P	06 15 42.1	-2.1
	comp=Z,4.7nm,0.9s,mb4.2						
K14A	Jones Ranch, D	43.10	327	⇓P	P	06 15 44.9	-0.5
	baz=43						
M12A	Wells	43.32	324	⇓P	P	06 15 47.3	0.0
	baz=43						
N11A	Elko Archery C	43.42	323	⇓P	P	06 15 48.7	+0.6
	baz=44						
NVAR	Mina Array Bea	43.62	319	P	P	06 15 47.5	-2.2
	comp=Z,2.9nm,0.9s,mb4.0,baz=138,slow=7.4,SNR=18						
DGMT	Dagmar	43.68	339	⇑P	P	06 15 49.9	-0.1
	baz=44						
DGMT	Dagmar	43.68	339	eP	P	06 15 48.8	-1.2
	comp=Z,14nm,1.0s,mb4.7						
F18A	Big Timber	43.81	333	⇓P	P	06 15 50.0	-1.1
	baz=44						
J14A	Carey	43.81	327	⇓P	P	06 15 50.6	-0.6
	baz=44						
L12A	House Creek Ra	43.85	325	⇑P	P	06 15 51.4	-0.1
	baz=44						
K12A	Draper Farm, C	44.10	326	⇑P	P	06 15 52.9	-0.7
	baz=44						
J13A	Cove Ranch, Pi	44.21	327	⇓P	P	06 15 54.0	-0.4
	baz=44						
F17A	Fitzpatrick Pl	44.24	332	⇓P	P	06 15 54.5	-0.1
	baz=44						
H15A	Lima	44.26	329	⇑P	P	06 15 54.6	-0.1
	baz=44,SNR=5.5						
L11A	Cat Creek Ranc	44.28	325	⇑P	P	06 15 54.6	-0.4
	baz=44						
G16A	Moss Hill, Enn	44.28	331	⇑P	P	06 15 54.0	-0.9
	baz=44						
WAKR	Walker	44.41	318	eP	P	06 15 57.2	+1.1
HLID	Hailey	44.45	327	⇓P	P	06 15 55.9	-0.4
	baz=44						
BOZ	Bozeman (W)	44.50	331	⇑P	P	06 15 56.1	-0.6
	baz=45						
BOZ	Bozeman (W)	44.50	331	eP	P	06 15 55.5	-1.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
BOZ	Bozeman (W)	44.50	331	eP	P	06 15 55.5	-1.2
	comp=Z,1.9nm,1.0s,mb3.9						
MCMT	McKenzie Canyo	44.51	329	eP	P	06 15 56.6	-0.2
	comp=Z,1.0nm,0.9s,mb3.6						
I13A	Wildhorse Cree	44.53	328	⇑P	P	06 15 56.7	-0.2
	baz=45						
G15A	Dillon	44.57	330	⇑P	P	06 15 56.7	-0.5
	baz=45						
J12A	Stokes Ranch,	44.62	326	⇓P	P	06 15 57.0	-0.7
	baz=45						
H14A	Leadore	44.62	329	⇑P	P	06 15 57.4	-0.3
	baz=45						
E17A	Martinsdale	44.75	333	⇑P	P	06 15 57.9	-0.7
	baz=45						
K11A	Parker Ranch,	44.83	325	⇑P	P	06 15 59.0	-0.3
	baz=45						
D18A	Linhart Farms,	44.84	334	⇑P	P	06 15 58.8	-0.5
	baz=45						
MFID	Camas Ranch	45.13	326	⇑P	P	06 16 01.4	-0.3
	baz=45						
E16A	East Helena	45.18	332	⇓P	P	06 16 01.8	-0.2
	baz=45						
D17A	Six Diamond Ra	45.19	333	⇑P	P	06 16 01.7	-0.4
	baz=45						
K10A	MacKenzie Ranc	45.31	325	⇑P	P	06 16 02.4	-0.7
	baz=45						
H12A	Diamond D Ranc	45.35	328	⇓P	P	06 16 02.8	-0.6
	baz=45						
EGMT	Eagleton	45.46	335	⇑P	P	06 16 04.0	-0.3
	baz=46						
D16A	Dana Ranch, Ca	45.49	333	⇓P	P	06 16 04.2	-0.3
	baz=46						
E15A	Deer Lodge	45.55	331	⇑P	P	06 16 04.5	-0.5
	baz=46						
C17A	Wharram Farm,	45.59	334	⇓P	P	06 16 04.8	-0.5
	baz=46						
BEKR	Beckwourth	45.74	319	⇑P	P	06 16 07.0	+0.4
	baz=46						
B18A	Beardsley Farm	45.76	335	⇓P	P	06 16 06.3	-0.3
	baz=46						
F13A	Darby	45.93	329	⇓P	P	06 16 07.3	-0.7
	baz=46						
D15A	Lincoln	45.95	332	⇓P	P	06 16 07.5	-0.6
	baz=46						
E14A	Clinton	45.96	331	⇓P	P	06 16 07.3	-0.9
	baz=46						
H11A	Donnelly	46.07	327	⇑P	P	06 16 08.1	-1.0
	baz=46						
B17A	L&G Farms, Che	46.11	334	⇑P	P	06 16 08.9	-0.5
	baz=46						
WVOR	Wild Horse Val	46.13	323	eP	P	06 16 08.4	-1.3
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WVOR	Wild Horse Val	46.13	323	eP	P	06 16 08.4	-1.3
	comp=Z,6.2nm,0.8s,mb4.6						
A18A	Metzger Ranch,	46.20	335	⇑P	P	06 16 08.9	-1.2
	baz=46,SNR=6.1						
E13A	Victor	46.32	330	⇑P	P	06 16 10.1	-0.9
	baz=46						
F12A	Elk City	46.38	329	⇑P	P	06 16 10.2	-1.4
	baz=46						
H10A	Noah's Angus R	46.39	327	⇑P	P	06 16 10.3	-1.4
	baz=46						
C15A	Salmond Ranch,	46.52	332	⇓P	P	06 16 11.9	-0.7
	baz=47						
I09A	Lost Marbles R	46.55	325	⇓P	P	06 16 11.8	-1.1
	baz=47						
A17A	Triple J Farms	46.57	335	⇑P	P	06 16 12.0	-1.0
	baz=47						
J08A	Circle Bar Ran	46.59	324	⇑P	P	06 16 11.9	-1.4
	baz=47						
B15A	Bradely Ranch,	46.90	333	⇑P	P	06 16 14.4	-1.2
	baz=47,SNR=6.3						
B14A	Marquette Ranc	47.26	333	⇑P	P	06 16 17.9	-0.5
	baz=47,SNR=11						
A15A	Johnson Ranch,	47.47	334	⇑P	P	06 16 18.5	-1.5
	baz=48,SNR=6.1						
F10A	Beach Ranch, E	47.55	328	⇓P	P	06 16 19.8	-0.9
	baz=48						
I07A	Izee	47.62	324	⇓P	P	06 16 19.7	-1.7
	baz=48						
A14A	Double T Ranch	47.77	333	⇓P	P	06 16 21.3	-1.1
	baz=48						
B13A	Whitefish	47.82	332	⇓P	P	06 16 22.4	-0.4
	baz=48						
C12B	Naegeli Ranch,	47.83	331	⇑P	P	06 16 22.2	-0.7
	baz=48						
FFC	Flin Flon	48.52	345	eP	P	06 16 26.4	-1.7
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
FFC	Flin Flon	48.52	345	eP	P	06 16 26.4	-1.7
	comp=Z,5.0nm,0.9s,mb4.5						
B11A	Sandpoint	48.77	331	⇓P	P	06 16 29.4	-0.7
	baz=49						
D09A	Jones Farm, Ri	48.83	328	⇑P	P	06 16 31.4	+0.8
	baz=49						
G06A	Carlson Farm,	48.96	325	⇓P	P	06 16 32.3	+0.7
	baz=49						
FCC	Fort Churchill	50.83	352	eP	P	06 16 44.0	-1.6
	comp=Z,0.1nm,0.7s						
EDM	Edmonton	50.93	337	eP	P	06 16 44.9	-1.5
YKA	Yellowknife Ar	58.59	343	P	P	06 17 39.9	-1.9
	comp=Z,2.5nm,0.7s,mb4.3,baz=141,slow=7.0,SNR=15						
YKA	Yellowknife Ar	58.59	343	P	P	06 17 39.9	-1.9
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAWY	Dawson	68.14	337	eP	P	06 18 44.1	-1.0
INK	Inuvik	68.28	342	eP	P	06 18 45.4	-0.5
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
INK	Inuvik	68.28	342	eP	P	06 18 45.4	-0.5
	comp=Z,8.3nm,1.1s,mb4.7						
EGAK	Eagle	69.15	337	eP	P	06 18 50.7	-0.6
	comp=Z,3.6nm,0.9s,mb4.3						
SUMG	Summit	69.27	13	eP	P	06 18 49.7	-2.3
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SUMG	Summit	69.27	13	eP	P	06 18 49.6	-2.3
	comp=Z,8.0nm,1.0s,mb4.6						
SEW	Seward	71.07	331	eP	P	06 19 02.5	-0.7
	comp=Z,5.8nm,1.0s,mb4.5						
MCK	McKinley	71.91	335	eP	P	06 19 08.3	+0.1
MCK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MCK	McKinley	71.91	335	eP	P	06 19 08.3	0.0
	comp=Z,3.8nm,0.9s,mb4.3						
OHAK	Old Harbor	72.31	327	eP	P	06 19 10.1	-0.7
	comp=Z,11nm,1.0s,mb4.7						
TRF	Thorofare Moun	72.40	334	eP	P	06 19 10.7	-0.5
	comp=Z,3.5nm,1.0s,mb4.2						
RSO	Redoubt South	72.75	331	eP	P	06 19 12.8	-0.5
BPAW	Bear Paw Mtn.	72.89	335	eP	P	06 19 12.9	-1.2
	comp=Z,3.0nm,0.9s,mb4.2						
PPLA	Purkeypile	73.08	333	eP	P	06 19 14.4	-0.8
	comp=Z,2.3nm,0.8s,mb4.2						
TORD	Torodi Ar. Bea	82.78	78	P	P	06 20 08.8	-1.3
	comp=Z,0.5nm,0.9s,mb3.5,baz=290,slow=4.9,SNR=2.6						
BILL	Bilibino	89.76	339	⇓eP	P	06 20 43.1	-0.3
BILL				e	pP	06 20 46.3	-1.3
BILL				e		06 20 51.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.7						
VSU	Vasula	92.76	30	i P	P	06 20 53.6	-3.9
VSU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.1						
CN2	Changchun	121.93	336	ePKP	PKPdf	06 26 39.5	-0.4
CN2				PP	PP	06 28 16.5	+3.8
CN2				SS	SS	06 44 51.0	+1.5
CN2				LR	LR		
	comp=N,360nm,21.0s,MS5.0						
CN2				LR	LR		
	comp=E,170nm,21.0s,MS5.0						
CN2				LR	LR		
	comp=Z,100nm,5.0s						
AAK	Ala-Archa	125.00	20c	i PKIKP	PKPdf	06 26 47.7	+1.8
AAK				pmax	pmax		
	comp=Z,2.0nm,2.5s						
WMQ	Urumqi	127.16	9	ePKP	PKPdf	06 26 48.8	-1.2
HHC	Hu-ho-hao-te	129.09	346	ePKP	PKPdf	06 26 52.3	-1.4
HHC				sPKP		06 27 06.5	
HHC				PP	PP	06 29 04.0	+3.8
HHC				PKS		06 30 27.5	
HHC				SKS	SKSdf	06 33 58.8	-6.6
HHC				SKKS	SKKSac	06 35 52.5	-6.1
HHC				SS	SS	06 46 21.3	+2.4
HHC				AMB	AMB		
	comp=Z,100nm,7.3s						
HHC				LR	LR		
	comp=N,95nm,21.6s,MS4.7						
HHC				LR	LR		
	comp=E,120nm,20.1s,MS4.7						
HHC				LR	LR		
	comp=Z,120nm,20.9s,MS4.6						
NJ2	Nanjing	134.62	334	ePKP	PKPdf	06 27 03.3	-1.2
CD2	Chengdu	140.26	351	PKP	PKPdf	06 27 12.0	-2.9
ASAR	Alice Springs	141.81	242	PKP	PKPdf	06 27 13.7	-4.1
	comp=Z,1.1nm,0.8s,baz=116,slow=1.6,SNR=7.3						
ASAR	Alice Springs	141.81	242	PKIKP	PKPdf	06 27 13.7	-4.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GYA	Guiyang	144.00	345	ePKP	PKPdf	06 27 19.0	-2.7
GYA				pPKP	pPKPdf	06 27 31.0	+5.0
GYA				PP	PP	06 30 36.0	+2.3
GYA				AMB	AMB		
	comp=Z,70nm,7.8s						

UPA ***30*** *06:22:10.9, 8°.38N×83°.06W, h9km, MD2.9*
UCR ***30*** *06:22:11.4, 8°.39N×83°.05W, h3km, MD3.5*

CASC 30 06:22:10.9±1.5, 8°.40N×83°.03W, h3km, MD3.6, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.29	331	⇓eP	Pg	06 22 17.5	+1.0
ACR				eS	Sg	06 22 22.6	+2.3
BAR1		0.89	342	eP	Pg	06 22 27.6	-0.3
BAR1				eS	Sg	06 22 41.5	+2.1
CNI	Changuinola	1.13	26	⇑iP	Pg	06 22 31.9	-0.8
BUS	Buena Vista	1.36	328	eP	Pn	06 22 36.1	-0.7
BUS				eS	Sg	06 22 55.1	+0.5
PRS1	Puriscal	2.02	321	eP	Pn	06 22 46.7	+0.7

ISK ***30*** *06:36:45.8, 37°.02N×29°.13E, h4km, MD3.0*
ISCJB ***30*** *06:36:47.7±0.7, 36°.94N±0°.03×29°.27E±0°.05, h2km±8km, Error ellipse: s-maj=7.0km s-min=5.1km az=16.4*
CSEM ***30*** *06:36:47.9±0.2, 36°.95N×29°.29E, h2km, MD3.0, Error ellipse: s-maj=3.8km s-min=3.0km az=94.0*
DDA ***30*** *06:36:48.8, 37°.02N×29°.23E, h7km±4km, Md2.9*

ISC 30 06:36:48.0±0.6, 36°.94N±0°.03×29°.26E±0°.05, h6km±7km, n20, σ0.84/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.29	42	ePG	Pg	06 36 52.7	-1.0
GLHS				eSG	Sg	06 36 57.9	+0.4
GLHS	Glhisar (BURDU	0.29	42	ePg	Pg	06 36 52.7	-1.0
GLHS				eSg	Sg	06 36 57.9	+0.4
FETY	Fethiye	0.34	205	ePG	Pg	06 36 54.0	-0.5
FETY				eSG	Sg	06 36 59.8	+0.9
FETY	Fethiye	0.34	205	ePg	Pg	06 36 54.1	-0.4
FETY				eSg	Sg	06 36 59.8	+0.9
ELL	Elmali	0.56

HDMB	**Hadim**	**2.59**	**89**	*e*PN	**Pn**	**06 37 31.0 +0.7**
HDMB	**Hadim**	**2.59**	**89**	*e*Pn	**Pn**	**06 37 31.0 +0.7**

*ISCJB **30** 06:43:21.6±0.2, 37°.83N±0°.01×112°.49W±0°.01, h10km, Error ellipse: s-maj=1.7km s-min=1.5km az=140.0*
*NEIC **30** 06:43:21.9±0.5, 37°.87N×112°.56W, h5km, ML2.9, Error ellipse: s-maj=6.2km s-min=5.7km az=207.0*
*IDC **30** 06:43:22.1±0.9, 37°.90N×112°.40W, h0km, mb1 3.2/5, mb1mx3.2/27, mbtmp2.9/5, ML3.0/5, Error ellipse: s-maj=13.7km s-min=8.2km az=37.0*
ISC 30 06:43:21.6±0.2, 37°.82N±0°.01×112°.47W±0°.01, h10km, n92, σ1§18/143, 52C-47D, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S15A	**Panguitch** baz=0.1,SNR=1000	**0.17**	**150**	⇓P	**Pg**	**06 43 24.7**	**-0.6**
R15A	**Junction** baz=0.4,SNR=376	**0.42**	**21**	P	**Pg**	**06 43 29.1**	**-0.7**
S14A	**Cedar City** baz=0.6,SNR=134	**0.56**	**264**	⇓P	**Pg**	**06 43 31.4**	**-1.1**
S14A	baz=0.6			⇓S	**Sg**	**06 43 38.9**	**-0.9**
R14A	**James Farms, M** baz=0.7,SNR=72	**0.64**	**318**	⇓P	**Pg**	**06 43 33.4**	**-0.7**
R14A	baz=0.7			⇑S	**Sg**	**06 43 42.7**	**+0.2**
CCUT	**Cedar City**	**0.76**	**249**	*e*Pg	**Pg**	**06 43 34.9**	**-1.4**
T15A	**Red Dirt Ranch** baz=0.8,SNR=207	**0.81**	**175**	⇓P	**Pg**	**06 43 35.8**	**-1.4**
T15A	baz=0.8			⇓S	**Sg**	**06 43 46.9**	**-0.8**
T14A	**Hurricane** baz=0.9,SNR=116	**0.90**	**213**	⇑P	**Pg**	**06 43 37.4**	**-1.6**
T14A	baz=0.9			⇑S	**Sg**	**06 43 49.9**	**-0.9**
R16A	**Teasdale** baz=0.9,SNR=98	**0.91**	**59**	⇓P	**Pg**	**06 43 37.8**	**-1.3**
R16A	baz=0.9			⇑S	**Sg**	**06 43 50.3**	**-0.5**
S13A	**Holt Ranch, En** baz=1.1,SNR=330	**1.13**	**258**	⇓P	**Pb**	**06 43 41.8**	**-1.4**
S13A	baz=1.1			⇓S	**Sb**	**06 43 57.5**	**-0.5**
T16A	**Glen Canyon Da** baz=1.1,SNR=61	**1.14**	**137**	⇑P	**Pb**	**06 43 41.7**	**-1.7**
T16A	baz=1.1			⇓S	**Sb**	**06 43 57.2**	**-1.0**
Q15A	**Fillmore** baz=1.2,SNR=58	**1.18**	**3**	⇓P	**Pb**	**06 43 43.2**	**-0.9**
R13A	**O'Grain Ranch,** baz=1.3,SNR=1000	**1.24**	**287**	⇓P	**Pn**	**06 43 44.3**	**-0.7**
Q14A	**Sevier Lake (B** baz=1.3,SNR=110	**1.32**	**332**	P	**Pn**	**06 43 45.8**	**-0.4**
S17A	**Black Ridge (B** baz=1.3,SNR=368	**1.34**	**98**	⇑P	**Pn**	**06 43 45.7**	**-0.6**
S17A	baz=1.3			⇓S	**Sb**	**06 44 03.3**	**-0.6**
T13A	**Saint George** baz=1.4,SNR=55	**1.40**	**235**	⇑P	**Pn**	**06 43 46.6**	**-0.5**
T13A	baz=1.4			⇓S	**Sn**	**06 44 05.2**	**-0.5**
U15A	**North Rim** baz=1.4,SNR=305	**1.40**	**174**	⇑P	**Pn**	**06 43 46.4**	**-0.8**
U15A	baz=1.4			⇑S	**Sn**	**06 44 04.7**	**-1.0**
Q16A	**Castle Valley** baz=1.5,SNR=103	**1.50**	**43**	⇑P	**Pn**	**06 43 48.3**	**-0.3**
Q16A	baz=1.5			⇓S	**Sn**	**06 44 08.0**	**-0.1**
R17A	**Hanksville Air** baz=1.5,SNR=323	**1.51**	**66**	⇑P	**Pn**	**06 43 48.7**	**0.0**
R17A	baz=1.5			⇓S	**Sn**	**06 44 08.5**	**+0.1**
U14A	**Mt Trumbull** baz=1.5,SNR=203	**1.51**	**202**	⇑P	**Pn**	**06 43 48.1**	**-0.6**
T17A	**Navajo Res., N** baz=1.5	**1.56**	**121**	⇓Pb	**Pb**	**06 43 49.9**	**-0.7**
T17A	baz=1.5			⇓Sb	**Sb**	**06 44 10.5**	**+0.1**
Q13A	**Wheeler Ranch,** baz=1.7,SNR=93	**1.66**	**313**	⇓P	**Pn**	**06 43 50.7**	**-0.1**
Q13A	baz=1.7			⇑Sb	**Sb**	**06 44 14.3**	**+1.0**
P15A	**Leamington** baz=1.8	**1.75**	**5**	⇓Sb	**Sb**	**06 44 17.1**	**+1.2**
R12A	**Pony Springs,** baz=1.8,SNR=260	**1.76**	**287**	⇑P	**Pn**	**06 43 52.1**	**-0.1**
R12A	baz=1.8			⇑Sb	**Sb**	**06 44 16.8**	**+0.6**
TMUT	**Trail Mountain**	**1.77**	**34**	*e*Pn	**Pn**	**06 43 53.2**	**+0.9**
P14A	**Drum Mountains** baz=1.9,SNR=19	**1.83**	**345**	⇑P	**Pn**	**06 43 52.7**	**-0.4**
U13A	**Pakoon Wash** baz=1.8,SNR=78	**1.84**	**221**	⇑Pb	**Pb**	**06 43 53.9**	**-1.6**
U13A	baz=1.8			⇑Sb	**Sb**	**06 44 18.5**	**-0.1**
U17A	**Shonto** baz=1.9	**1.89**	**130**	⇑Pb	**Pb**	**06 43 55.6**	**-0.6**
U17A	baz=1.9			⇑Sb	**Sb**	**06 44 20.2**	**+0.4**
P16A	**Fountain Green** baz=1.9,SNR=12	**1.89**	**19**	⇓Pb	**Pb**	**06 43 55.1**	**-1.2**
S18A	**Hurst Farm, Bl** baz=1.9	**1.97**	**93**	⇓Pb	**Pb**	**06 43 56.8**	**-0.7**
S18A	baz=1.9			⇓Sb	**Sb**	**06 44 22.5**	**+0.4**
SRU	**San Rafael** baz=2.0	**2.00**	**49**	⇑Pb	**Pb**	**06 43 56.9**	**-1.1**
SRU	baz=2.0			⇓Sb	**Sb**	**06 44 23.6**	**+0.7**
SRU	**San Rafael**	**2.00**	**49**	*e*Pn	**Pn**	**06 43 56.8**	**+1.4**
V15A	**Kaibab Nationa** baz=2.0	**2.02**	**173**	⇑Pb	**Pb**	**06 43 57.2**	**-1.1**
V15A	baz=2.0			⇑Sb	**Sb**	**06 44 23.4**	**0.0**
P13A	**Bates Ranch, G** baz=2.1,SNR=13	**2.03**	**324**	⇓P	**Pn**	**06 43 55.6**	**-0.3**
P13A	baz=2.1			⇑Sb	**Sb**	**06 44 25.8**	**+1.9**
R18A	**Canyonlands Na** baz=2.1,SNR=164	**2.11**	**74**	Pb	**Pb**	**06 43 58.8**	**-1.1**
R18A	baz=2.1			⇓Sb	**Sb**	**06 44 26.2**	**+0.1**
P17A	**Butcher Ranch,** baz=2.1,SNR=6.3	**2.13**	**39**	⇑Pb	**Pb**	**06 43 59.0**	**-1.4**
P17A	baz=2.1			⇑Sb	**Sb**	**06 44 26.9**	**0.0**
U12A	**Valley of Fire** baz=2.2	**2.16**	**231**	⇑Pb	**Pb**	**06 43 60.0**	**-0.8**
U12A	baz=2.2			⇓Sb	**Sb**	**06 44 28.4**	**+0.8**
T18A	**Mexican Hat** baz=2.2,SNR=153	**2.18**	**108**	Pb	**Pb**	**06 43 59.3**	**-1.8**
T18A	baz=2.2			⇑Sb	**Sb**	**06 44 28.3**	**+0.2**
Q12A	**Willow Creek R** baz=2.2	**2.22**	**304**	⇓P	**Pn**	**06 43 58.5**	**+0.1**
Q18A	**Rafter H Ranch** baz=2.2,SNR=22	**2.23**	**54**	⇑Pb	**Pb**	**06 44 00.7**	**-1.4**
Q18A	baz=2.2			⇓Sb	**Sb**	**06 44 31.2**	**+1.4**
V14A	**Boquillas Ranc** baz=2.2	**2.24**	**193**	⇑Pb	**Pb**	**06 44 00.8**	**-1.4**
V14A	baz=2.2			⇓Sb	**Sb**	**06 44 30.4**	**+0.4**
T11A	**Corn Creek, Al** baz=2.3	**2.26**	**256**	⇓P	**Pn**	**06 43 59.2**	**+0.1**
V13A	**Grand Canyon W** baz=2.3	**2.31**	**212**	⇑Sb	**Sb**	**06 44 32.4**	**+0.4**
DUG	**Dugway** baz=2.4	**2.38**	**354**	⇓P	**Pn**	**06 44 00.6**	**-0.2**
DUG	baz=2.4			⇑Sb	**Sb**	**06 44 36.2**	**+2.1**
DUG	**Dugway**	**2.38**	**354**	*e*Pn	**Pn**	**06 44 00.7**	**0.0**
DUG				*e*Pg	**Pg**	**06 44 04.9**	**-2.4**
DUG				*e*Sg	**Sg**	**06 44 36.7**	**-1.5**
WUAZ	**Wupatki** baz=2.4	**2.46**	**159**	⇓Sb	**Sb**	**06 44 36.8**	**+0.4**
WUAZ	**Wupatki**	**2.46**	**159**	*e*Pn	**Pn**	**06 44 03.3**	**+1.4**
WUAZ				*e*Sn	**Sn**	**06 44 36.5**	**+4.5**
O16A	**Springville** baz=2.5	**2.50**	**17**	⇓P	**Pn**	**06 44 01.8**	**-0.5**
O16A	baz=2.5			⇑Sb	**Sb**	**06 44 40.6**	**+3.3**
P18A	**Preston Nutter**	**2.50**	**43**	⇑Pb	**Pb**	**06 44 05.3**	**-1.4**
P18A	baz=2.5			⇑Sb	**Sb**	**06 44 39.0**	**+1.4**
U18A	**Rough Rock, Ch** baz=2.5	**2.51**	**123**	⇓Pb	**Pb**	**06 44 04.9**	**-1.8**
U18A	baz=2.5			⇓Sb	**Sb**	**06 44 38.0**	**+0.4**
R11A	**Troy Canyon, C** baz=2.5,SNR=28	**2.51**	**283**	⇑P	**Pn**	**06 44 02.1**	**-0.5**
R11A	baz=2.5			⇓Sb	**Sb**	**06 44 39.5**	**+1.6**
P12A	**McGill** baz=2.5	**2.52**	**312**	⇓P	**Pn**	**06 44 02.7**	**+0.1**
P12A	baz=2.5			⇓Sb	**Sb**	**06 44 39.9**	**+1.9**
R19A	**Curley Farm, L** baz=2.6	**2.58**	**79**	⇑Sb	**Sb**	**06 44 40.4**	**+0.8**
V17A	**Tonalea, Kykot** baz=2.6	**2.58**	**148**	⇓Sb	**Sb**	**06 44 40.0**	**+0.4**
S11A	**Rachel** baz=2.6	**2.60**	**267**	⇑Sb	**Sb**	**06 44 43.0**	**+2.6**
S19A	**Harvey Farm, M** baz=2.6	**2.64**	**91**	⇑Sb	**Sb**	**06 44 42.6**	**+1.1**
W15A	**Williams** baz=2.6	**2.64**	**176**	⇑Sb	**Sb**	**06 44 42.5**	**+0.9**
W14A	**Seligman** baz=2.6	**2.65**	**191**	⇑Sb	**Sb**	**06 44 41.9**	**+0.1**
O17A	**Robinson Place** baz=2.7	**2.73**	**29**	⇑Sb	**Sb**	**06 44 45.8**	**+1.9**
W16A	**Flagstaff** baz=2.8	**2.83**	**164**	⇓Sb	**Sb**	**06 44 47.4**	**+0.6**
V12A	**Nelson** baz=2.8	**2.83**	**223**	⇓Sb	**Sb**	**06 44 48.1**	**+1.1**
PV04	**Paradox Valley**	**2.87**	**77**	*e*Pn	**Pn**	**06 44 10.0**	**+2.6**
PV04				*e*Sg	**Sg**	**06 44 49.6**	**-4.2**
T19A	**Beclabito** baz=2.9	**2.92**	**109**	⇑Sb	**Sb**	**06 44 50.0**	**+0.5**
V18A	**Ganado** baz=2.9	**2.93**	**135**	⇑Sb	**Sb**	**06 44 50.9**	**+1.0**
W13A	**Hualapai Mount** baz=2.9	**2.95**	**203**	⇑Sb	**Sb**	**06 44 51.1**	**+0.8**
U19A	**Dine' College,** baz=3.0	**3.02**	**119**	⇑Sb	**Sb**	**06 44 53.5**	**+1.0**
W17A	**Winslow** baz=3.1	**3.08**	**152**	⇓Sb	**Sb**	**06 44 55.0**	**+0.8**
V11A	**Goodsprings** baz=3.1	**3.09**	**231**	⇑Sb	**Sb**	**06 44 55.7**	**+1.2**
PV01	**Paradox Valley**	**3.10**	**83**	*e*Pn	**Pn**	**06 44 12.7**	**+2.1**
MVCO	**Mesa Verde**	**3.22**	**100**	*e*Pn	**Pn**	**06 44 14.2**	**+2.0**
MVCO				*e*Pg	**Pg**	**06 44 21.1**	**-2.2**
MVCO				*e*Sg	**Sg**	**06 45 03.0**	**-1.9**
R20A	**Redvale** baz=3.2	**3.25**	**82**	⇓Sb	**Sb**	**06 45 01.0**	**+1.9**
N13A	**Wendover, West**	**3.31**	**337**	*e*Pg	**Pg**	**06 44 23.2**	**-1.9**
X15A	**Humboldt** baz=3.3	**3.33**	**177**	⇑Sb	**Sb**	**06 45 03.1**	**+1.6**
X14A	**Yava** baz=3.4	**3.36**	**186**	⇑Sb	**Sb**	**06 45 03.9**	**+1.6**
U10A	**Ash Meadows, A** baz=3.4,SNR=11	**3.39**	**247**	⇑P	**Pn**	**06 44 15.1**	**+0.5**
X13A	**Yucca** baz=3.4	**3.41**	**199**	⇑Sb	**Sb**	**06 45 05.2**	**+1.7**
Q20A	**Ridgley Place,** baz=3.5	**3.47**	**70**	⇓Sb	**Sb**	**06 45 07.0**	**+1.6**
ELK	**Elko** 0.4nm,0.3s,baz=144,slow=12,SNR=7.9	**3.62**	**324**	Pn	**Pn**	**06 44 19.2**	**+1.4**
ELK	0.7nm,0.3s,baz=324,slow=20,SNR=17			Pg	**Pg**	**06 44 27.7**	**-3.4**
ELK	0.7nm,0.3s,baz=185,slow=6.9,SNR=5.6			Lg		06 45 14.8
ELK	**Elko**	**3.62**	**324**	Pn	**Pn**	**06 44 19.2**	**+1.5**
ELK				Pg	**Pg**	**06 44 27.7**	**-3.4**
ELK				Lg		06 45 14.8
M15A	**Larsen Ranch,** baz=3.7,SNR=8.5	**3.63**	**0**	⇓P	**Pn**	**06 44 18.6**	**+0.7**
M13A	**Montello**	**3.77**	**340**	*e*Pn	**Pn**	**06 44 19.7**	**-0.1**
M13A				*e*Pg	**Pg**	**06 44 29.4**	**-4.4**
HWUT	**Hardware Ranch**	**3.84**	**10**	*e*Pn	**Pn**	**06 44 21.2**	**+0.4**
HWUT				*e*Pg	**Pg**	**06 44 32.3**	**-2.9**
HWUT				*e*Sg	**Sg**	**06 45 24.9**	**-0.1**
M12A	**Wells** baz=4.1,SNR=5.5	**4.05**	**333**	⇓P	**Pn**	**06 44 23.1**	**-0.6**
GSC	**Goldstone**	**4.30**	**236**	*e*Pn	**Pn**	**06 44 27.6**	**+0.5**
GSC				*e*Pg	**Pg**	**06 44 39.0**	**-5.1**
MPMC	**Manual Prospec** baz=4.4,SNR=9.4	**4.39**	**248**	⇑P	**Pn**	**06 44 28.5**	**+0.2**
SMCO	**Snowmass**	**4.52**	**71**	*e*Pn	**Pn**	**06 44 34.2**	**+4.2**
SMCO				*e*Sg	**Sg**	**06 45 43.6**	**-3.1**
NVAR	**Mina Array Bea** 0.4nm,0.3s,baz=99,slow=13,SNR=8.3	**4.64**	**279**	Pn	**Pn**	**06 44 33.1**	**+1.3**
NVAR	1.6nm,0.3s,baz=89,slow=15,SNR=26			Pg	**Pg**	**06 44 45.9**	**-4.7**
NVAR	1.7nm,0.3s,baz=26,slow=17,SNR=4.7			Lg		06 45 48.8
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=210,slow=17,SNR=6.9	**5.42**	**23**	Pn	**Pn**	**06 44 44.5**	**+2.0**
PDAR	0.2nm,0.3s,baz=208,slow=13,SNR=9.0			Pg	**Pg**	**06 45 01.3**	**-4.0**
LAZ	**Ladron** 2.5nm,0.5s	**5.50**	**127**	*e*Pn	**Pn**	**06 44 45.4**	**+1.8**
LAZ				*e*Pg	**Pg**	**06 45 05.2**	**-1.8**
LAZ				*e*Sg	**Sg**	**06 46 11.4**	**-6.9**
SDCO	**Great Sand Dun** 5.1nm,0.9s	**5.52**	**89**	*e*Pn	**Pn**	**06 44 46.3**	**+2.5**
SDCO				*e*Pg	**Pg**	**06 45 02.5**	**-4.9**
ANMO	**Albuquerque** 1.1nm,0.3s,baz=314,slow=13,SNR=23	**5.63**	**119**	Pn	**Pn**	**06 44 46.8**	**+1.4**
ANMO	0.5nm,0.3s,baz=195,slow=19,SNR=3.9			Lg		06 46 13.5
LOHW	**Long Hollow** 2.6nm,0.7s	**5.95**	**13**	*e*Pg	**Pg**	**06 45 13.1**	**-2.5**
TXAR	**Lajitas Array** 0.0nm,0.3s,baz=359,slow=9.0,SNR=3.0	**11.20**	**137**	Pn	**Pn**	**06 46 08.1**	**+6.3**
TXAR	0.1nm,0.3s,baz=308,slow=31,SNR=4.1			Lg		06 49 13.7

*IDC **30** 06:53:33.3±0.8, 14°.51S×76°.08W, h0km, mb4.5/14, mb1 4.7/16, mb1mx4.6/20, mbtmp4.5/16, ML3.6/3, MS4.3/7, Ms1 4.3/7, ms1mx4.0/20, Error ellipse: s-maj=28.3km s-min=15.6km az=53.0*
*NEIC **30** 06:53:35.7±3.5, 14°.38S×75°.89W, h10km±21km, mb4.7/49, ML4.5(LIM), Error ellipse: s-maj=12.9km s-min=5.7km az=51.0*
NEIC Felt [II] at Chincha Alta and Ica.
*ISCJB **30** 06:53:37.6±0.3, 14°.42S±0°.06×76°.06W±0°.07, h33km, mb4.6/60, MS4.4/6, Error ellipse: s-maj=11.4km s-min=5.8km az=140.6*
*MOS **30** 06:53:38.3±1.1, 14°.27S×76°.07W, h33km, mb4.8/28, Error ellipse: s-maj=20.8km s-min=8.1km az=116.8*
*BJI **30** 06:53:38.0, 13°.89S×76°.48W, h30km, mB5.2/4, Ms5.2/3, Ms7 5.0/3*
ISC 30 06:53:39.8±0.3, 14°.34S±0°.07×75°.80W±0°.08, h35km, (h31km±5.1km:pP-P), n415, σ0§52/393, mb4.6/60, MS4.4/6, 146C-127D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana** 27nm,0.3s,baz=163,slow=13,SNR=53	**2.55**	**336**	Pn	**Pn**	**06 54 17.4**	**-1.2**
NNA	158nm,0.3s,baz=261,slow=20,SNR=9.5			Sn	**Sn**	**06 54 48.1**	**-0.4**
NNA	comp=Z,3μm,18.1s,baz=182,slow=44			LR	LR	06 55 29.3	
NNA	**Nana**	**2.55**	**336**	P	**Pn**	**06 54 17.5**	**-1.1**
NNA						06 54 48.1	
NNA	comp=Z,27nm,0.3s			pmax	pmax		
NNA	comp=N,158nm,0.3s			smax			
NNA	comp=Z,3μm,18.2s			MLR	MLR		
NNA	**Nana**	**2.55**	**336**	*e*Pn	**Pn**	**06 54 17.4**	**-1.2**
NNA				*e*Sn	**Sn**	**06 54 48.9**	**+0.4**
LPAZ	**La Paz** comp=Z,13nm,0.3s,baz=279,slow=6.1,SNR=302	**7.65**	**106**	Pn	**Pn**	**06 55 35.1**	**+6.3**
LPAZ	comp=Z,1μm,18.3s,baz=285,slow=44			LR	LR	06 59 15.5	
LPAZ	**La Paz**	**7.65**	**106**	P	**Pn**	**06 55 35.1**	**+6.3**
LPAZ	comp=Z,13nm,0.3s			pmax	pmax		
LPAZ	comp=Z,1μm,18.3s			MLR	MLR		
LPAZ	**La Paz**	**7.65**	**106**	*e*Pn	**Pn**	**06 55 34.6**	**+5.9**
ATAH	**Atahualpa** comp=Z,2.8nm,0.3s,baz=178,slow=2.3,SNR=19	**7.72**	**340**	Pn	**Pn**	**06 55 30.2**	**+0.4**
ATAH	comp=Z,6.8nm,0.3s,baz=89,slow=7.9,SNR=3.9			Sn	**Sn**	**06 57 02.0**	**+5.9**
SIV	**San Ignacio** comp=Z,0.4nm,0.3s,baz=267,slow=15,SNR=22	**14.31**	**98**	Pn	**Pn**	**06 56 59.6**	**-0.4**
SIV	comp=Z,0.2nm,0.3s,baz=142,slow=15,SNR=3.1			Sn	**Sn**	**06 59 48.9**	**+11**
SIV	comp=Z,0.1nm,0.3s,baz=221,slow=19,SNR=1.7			Lg		07 01 19.3	
OTAV	**Otavalo**	**14.72**	**350**	*e*P	**Pn**	**06 57 12.4**	**+6.9**
OTAV				*e*S	**Sn**	**07 00 00.8**	**+13**
CFAA	**Coronel Fontan** comp=Z,0.0nm,0.3s,baz=329,slow=13,SNR=12	**18.53**	**159**	P	**Pn**	**06 57 51.8**	**-1.9**
CFAA	comp=Z,49nm,21.3s,baz=351,slow=32			LR	LR	07 03 28.0	
ROSC	**El Rosal** comp=Z,0.3nm,0.3s,baz=225,slow=17,SNR=2.7	**19.13**	**4**	P	**Pn**	**06 58 05.6**	**+4.6**
ROSC	comp=Z,0.3nm,0.3s,baz=255,slow=20,SNR=2.8			S	**S**	**07 01 46.4**	**+11**
CPUP	**Villa Florida** comp=Z,20nm,1.0s,mb4.4,baz=291,slow=9.8,SNR=17	**21.00**	**127**	P	**P**	**06 58 20.4**	**+0.1**
CPUP	comp=Z,658nm,18.3s,MS4.0,baz=80,slow=41			LR	LR	07 08 07.0	
CPUP	**Villa Florida**	**21.00**	**127**	P	**P**	**06 58 20.4**	**+0.1**
CPUP	comp=Z,20nm,1.0s			pmax	pmax		
CPUP	comp=Z,658nm,18.3s			MLR	MLR		
CPUP	**Villa Florida** comp=Z,75nm,1.0s,mb5.0	**21.00**	**127**	*e*P	**P**	**06 58 20.4**	**+0.2**
SDV	**Santo Domingo** comp=Z,20nm,0.8s,mb4.6,baz=219,slow=7.1,SNR=26	**23.64**	**13**	P	**P**	**06 58 49.2**	**+1.1**
SDV	comp=Z,2.1nm,0.7s,baz=229,slow=20,SNR=2.8			S	**S**	**07 03 21.7**	**+21**
SDV	**Santo Domingo** comp=Z,33nm,1.0s,mb4.7	**23.64**	**13**	*e*P	**P**	**06 58 49.2**	**+1.2**
PCRV	**Puerto La Cruz** comp=Z,16nm,0.9s,mb4.5,baz=229,slow=11,SNR=3.6	**26.75**	**25**	P	**P**	**06 59 18.4**	**+2.0**
PCRV	comp=Z,1μm,18.7s,MS4.4,baz=202,slow=38			LR	LR	07 10 49.1	
CMIG	**Matias Romero** comp=Z,252nm,18.7s,MS4.0,baz=218,slow=33	**36.47**	**328**	LR	LR	07 13 22.8	
TEIG	**Tepich**	**36.47**	**340**	*e*P	**P**	**07 00 38.8**	**-2.9**
LRAL	**Lakeview Retre** comp=Z,12nm,1.2s,mb4.8	**48.30**	**347**	*e*P	**P**	**07 02 16.9**	**-0.8**
JCT	**Junction City**	**50.19**	**333**	*e*P	**P**	**07 02 32.5**	**+0.3**
JCT	comp=Z,6.0nm,0.9s,mb4.6			pmax	pmax		
JCT	**Junction City** comp=Z,5.5nm,0.9s,mb4.6	**50.19**	**333**	*e*P	**P**	**07 02 32.5**	**+0.3**
SWET	**Sewanee**	**50.21**	**349**	*e*P	**P**	**07 02 30.5**	**-1.7**
PLAL	**Pickwick Lake** comp=Z,5.1nm,1.0s,mb4.5	**50.41**	**347**	*e*P	**P**	**07 02 32.4**	**-1.4**
628A	**Black Gap, Mar** baz=51,SNR=11	**50.81**	**329**	⇑P	**P**	**07 02 37.1**	**+0.1**
627A	**Terlingua Ranc** baz=51,SNR=7.8	**51.03**	**329**	⇑P	**P**	**07 02 38.4**	**-0.1**
TXAR	**Lajitas Array** comp=Z,3.1nm,0.9s,mb4.2,baz=146,slow=9.1,SNR=31	**51.08**	**328**	P	**P**	**07 02 38.5**	**-0.4**
TXAR	comp=Z,217nm,18.6s,MS4.2,baz=60,slow=34			LR	LR	07 22 55.1	
TXAR	**Lajitas Array**	**51.08**	**328**	P	**P**	**07 02 38.5**	**-0.5**
TXAR				LR	LR	07 22 55.1	
528A	**Cox Ranch, San** baz=51,SNR=8.8	**51.32**	**330**	⇓P	**P**	**07 02 40.4**	**-0.3**
WVT	**Waverly**	**51.47**	**348**	*e*P	**P**	**07 02 39.5**	**-2.2**
WVT	comp=Z,2.0nm,0.8s,mb4.1			pmax	pmax		
WVT	**Waverly** comp=Z,1.7nm,0.8s,mb4.0	**51.47**	**348**	*e*P	**P**	**07 02 39.5**	**-2.2**
MIAR	**Mount Ida**	**51.47**	**341**	*e*P	**P**	**07 02 40.8**	**-0.9**
MIAR	comp=Z,9.0nm,1.2s,mb4.6			pmax	pmax		
MIAR	**Mount Ida** comp=Z,9.1nm,1.2s,mb4.6	**51.47**	**341**	*e*P	**P**	**07 02 40.8**	**-0.9**
626A	**Big Bend Ranch** baz=52,SNR=26	**51.49**	**328**	⇑P	**P**	**07 02 42.0**	**0.0**
527A	**Woodward Ranch** baz=52,SNR=8.4	**51.71**	**329**	⇑P	**P**	**07 02 43.3**	**-0.4**
428A	**Kincaid Ranch,** baz=52	**51.73**	**330**	⇑P	**P**	**07 02 43.6**	**-0.2**
526A	**Mary Lane Ranc** baz=52,SNR=10	**51.88**	**329**	⇓P	**P**	**07 02 44.7**	**-0.2**
427A	**Hayter Ranch,** baz=52	**52.18**	**330**	⇑P	**P**	**07 02 46.6**	**-0.6**
328A	**Wristen Ranch,** baz=52,SNR=7.8	**52.34**	**331**	⇓P	**P**	**07 02 47.7**	**-0.6**
426A	**McDonald Obser** baz=52,SNR=8.3	**52.34**	**329**	⇓P	**P**	**07 02 48.1**	**-0.2**
425A	**Indio Mountain** baz=53,SNR=12	**52.92**	**328**	⇑P	**P**	**07 02 52.2**	**-0.5**
227A	**Bennet, Jal** baz=53	**53.09**	**331**	⇓P	**P**	**07 02 53.3**	**-0.5**
WCI	**Wyandotte Cave**	**53.21**	**350**	*e*P	**P**	**07 02 53.1**	**-1.5**
WCI				*e*	pP	07 03 00.5	-4.6
WCI	comp=Z,16nm,0.9s,mb5.0			pmax	pmax		
WCI	**Wyandotte Cave** comp=Z,16nm,0.9s,mb5.0	**53.21**	**350**	*e*P	**P**	**07 02 53.1**	**-1.4**
WCI				*e*	pP	07 03 00.5	-4.6
SIUC	**Southern Illin** comp=Z,10nm,0.6s,mb4.9	**53.29**	**347**	*e*P	**P**	**07 02 54.5**	**-0.7**
325A	**Bean Ranch, Si** baz=53,SNR=12	**53.38**	**329**	⇑P	**P**	**07 02 55.5**	**-0.5**
226A	**Malaga, Loving** baz=54,SNR=7.8	**53.52**	**330**	⇑P	**P**	**07 02 56.9**	**-0.1**
127A	**Arkansas Junct** baz=54	**53.67**	**331**	⇓P	**P**	**07 02 57.5**	**-0.6**
324A	**Moseley Ranch,** baz=54	**53.70**	**328**	⇓P	**P**	**07 02 57.6**	**-0.7**
225A	**Deer Hill, Car** baz=54,SNR=6.7	**53.91**	**329**	⇓P	**P**	**07 02 59.8**	**-0.1**
126A	**Clayton Basin,** baz=54	**53.95**	**330**	⇓P	**P**	**07 02 59.6**	**-0.6**
OLIL	**Olney** comp=Z,19nm,1.0s,mb5.0	**54.03**	**348**	*e*P	**P**	**07 02 59.1**	**-1.5**
OLIL				*e*	pP	07 03 07.0	-4.2
Z27A	**Tatum** baz=54,SNR=6.0	**54.13**	**332**	⇓P	**P**	**07 03 00.5**	**-0.9**
224A	**Corundas Mount** baz=54,SNR=8.3	**54.23**	**329**	⇑P	**P**	**07 03 01.4**	**-0.8**
125A	**Gardner Draw,** baz=54,SNR=7.0	**54.27**	**330**	⇓P	**P**	**07 03 01.8**	**-0.7**
Z26A	**Caprock** baz=54	**54.45**	**331**	⇑P	**P**	**07 03 03.1**	**-0.7**
MSTX	**Muleshoe** baz=54	**54.48**	**332**	⇑P	**P**	**07 03 03.5**	**-0.4**
Y27A	**Causey** baz=55,SNR=9.2	**54.58**	**332**	⇑P	**P**	**07 03 03.7**	**-1.0**
124A	**Stringfield Ra** baz=55,SNR=12	**54.70**	**329**	⇑P	**P**	**07 03 05.5**	**-0.1**
ACSO	**Alum Creek Sta**	**54.70**	**353**	*e*P	**P**	**07 03 04.6**	**-0.8**
Z25A	**Roswell** baz=55,SNR=6.6	**54.81**	**330**	⇓P	**P**	**07 03 05.8**	**-0.6**
Z24A	**Sheeppen Canyo** baz=55,SNR=15	**55.16**	**330**	⇑P	**P**	**07 03 08.4**	**-0.5**
X27A	**F and S Farms,** baz=55	**55.19**	**333**	⇑P	**P**	**07 03 08.7**	**-0.4**
320A	**Kipp Ranch, An** baz=55	**55.23**	**326**	⇓P	**P**	**07 03 08.9**	**-0.5**
Y25A	**Mesa, Roswell** baz=55,SNR=6.1	**55.32**	**331**	⇓P	**P**	**07 03 09.3**	**-0.7**
X26A	**CR and CF Fran** baz=56	**55.43**	**332**	⇓P	**P**	**07 03 10.3**	**-0.5**
W27A	**Bowe Ranch, En** baz=56	**55.52**	**333**	⇓P	**P**	**07 03 11.5**	**0.0**
Z23A	**Rita Site, Whi** baz=56	**55.54**	**329**	⇓P	**P**	**07 03 11.6**	**0.0**
220A	**Playas Peak, P** baz=56,SNR=10	**55.66**	**326**	⇑P	**P**	**07 03 12.4**	**-0.1**
319A	**Douglas** baz=56	**55.67**	**325**	⇓P	**P**	**07 03

baz=56
V26A **Tequesquite Ra** 56.46 333 ⇓P P 07 03 17.7 -0.5
baz=56
218A **Dragoon** 56.55 325 ⇑P P 07 03 18.7 -0.2
baz=57
Z20A **Nine Sixteen R** 56.63 327 ⇑P P 07 03 19.5 +0.1
baz=57,SNR=5.6
217A **Green Valley** 56.83 324 ⇑P P 07 03 20.7 -0.2
baz=57,SNR=7.2
Y21A **Point of Rocks** 56.86 328 ⇓P P 07 03 21.6 +0.5
baz=57,SNR=7.3
V25A **Rancho No Teng** 56.87 332 ⇓P P 07 03 20.4 -0.7
baz=57
LAZ **Ladron** 56.90 329 *eP* P 07 03 21.3 0.0
comp=Z,2.7nm,1.2s,mb4.2
U26A **Atchley Ranch,** 56.94 333 ⇑P P 07 03 21.5 -0.1
baz=57
ANMO **Albuquerque** 57.01 330 *eP* P 07 03 22.4 +0.3
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO **Albuquerque** 57.01 330 *eP* P 07 03 22.4 +0.3
comp=Z,4.7nm,1.0s,mb4.5
118A **Homack Ranch,** 57.01 326 ⇑P P 07 03 22.0 -0.2
baz=57,SNR=5.8
Y20A **Horse Springs,** 57.14 328 ⇑P P 07 03 23.2 +0.2
baz=57,SNR=5.4
TUC **Tucson** 57.21 325 *eP* P 07 03 23.6 0.0
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
TUC **Tucson** 57.21 325 *eP* P 07 03 23.6 0.0
comp=Z,3.9nm,1.0s,mb4.4
U25A **Circle Dot Ran** 57.24 333 ⇓P P 07 03 23.5 -0.2
baz=57
X21A **Alamocita Cree** 57.26 329 ⇓P P 07 03 24.1 +0.2
baz=57,SNR=5.3
216A **Three Points,** 57.36 324 ⇓P P 07 03 24.6 -0.1
baz=57
117A **Oracle** 57.38 325 ⇑P P 07 03 24.7 -0.1
baz=57,SNR=9.3
Y19A **Nutrioso** 57.63 327 ⇑P P 07 03 26.9 +0.4
baz=58,SNR=9.0
U24A **Moreno Valley** 57.64 332 ⇓P P 07 03 26.6 +0.1
baz=58
X20A **Quemado** 57.70 328 ⇑P P 07 03 27.1 +0.1
baz=58
W21A **San Fidel** 57.72 329 ⇑P P 07 03 27.3 +0.1
baz=58
Y18A **Canyon Day Jun** 57.91 326 ⇑P P 07 03 28.1 -0.3
baz=58
116A **Eloy** 57.91 324 ⇓P P 07 03 28.4 -0.1
baz=58,SNR=6.9
V22A **San Miguel Ran** 58.00 330 ⇓P P 07 03 29.3 +0.2
baz=58,SNR=11
214A **Organ Pipe Nat** 58.11 323 ⇓P P 07 03 29.8 -0.1
baz=58,SNR=6.1
Y17A **Roosevelt** 58.28 326 ⇑P P 07 03 30.8 -0.4
baz=58
115A **Sonoran Desert** 58.31 324 ⇓P P 07 03 31.4 +0.1
baz=58
X18A **Snowflake** 58.44 327 ⇓P P 07 03 32.4 +0.2
baz=58
V20A **Brimhall** 58.67 329 ⇓P P 07 03 33.9 +0.1
baz=59
114A **Black Gap (USA** 58.73 324 ⇓P P 07 03 34.2 -0.1
baz=59
X17A **Forest Lakes** 58.75 326 ⇑P P 07 03 35.0 +0.7
baz=59
Y16A **Circle Bar Ran** 58.77 325 ⇓P P 07 03 34.5 0.0
baz=59
SDCO **Great Sand Dun** 58.84 333 *eP* P 07 03 34.8 -0.1
comp=Z,7.8nm,1.1s,mb4.7
SDCO *e* pP 07 03 47.4 +1.8
SADO **Sadowa** 58.90 357 P P 07 03 33.9 -1.3
comp=Z,3.3nm,0.8s,mb4.4,baz=230,slow=6.7,SNR=5.1
X16A **Lo Mia Camp, P** 59.15 326 ⇑P P 07 03 37.3 +0.2
baz=59,SNR=7.9
113A **Mohawk Valley,** 59.25 323 ⇑P P 07 03 37.7 -0.2
baz=59
Y15A **Casa Rosa Ranc** 59.30 325 ⇑P P 07 03 38.1 0.0
baz=59,SNR=7.1
V18A **Ganado** 59.34 328 ⇑P P 07 03 38.3 -0.1
baz=59
U19A **Dine' College,** 59.42 329 ⇓P P 07 03 38.8 -0.2
baz=60
X15A **Humboldt** 59.64 325 ⇑P P 07 03 40.6 +0.1
baz=60,SNR=6.8
Y14A **Wickenburg** 59.66 324 ⇓P P 07 03 40.4 -0.3
baz=60,SNR=5.7
V17A **Tonalea, Kykot** 59.72 327 ⇑P P 07 03 41.2 +0.2
baz=60,SNR=14
T19A **Beclabito** 59.76 329 ⇓P P 07 03 41.5 +0.3
baz=60
MVCO **Mesa Verde** 59.80 330 ⇓P P 07 03 41.4 -0.2
baz=60
MVCO **Mesa Verde** 59.80 330 *eP* P 07 03 41.7 +0.2
comp=Z,3.9nm,0.9s,mb4.4
R22A **Saguache, Gunn** 59.80 332 ⇑P P 07 03 41.1 -0.5
baz=60
S21A **Coal Bank Pass** 59.82 331 ⇑P P 07 03 42.2 +0.5
baz=60
U18A **Rough Rock, Ch** 59.86 329 ⇓P P 07 03 42.1 +0.1
baz=60
WUAZ **Wupatki** 59.95 327 ⇓P P 07 03 42.8 +0.2
baz=60
WUAZ **Wupatki** 59.95 327 *eP* P 07 03 43.1 +0.5
comp=Z,4.0nm,0.8s,mb4.5
X14A **Yava** 59.99 325 ⇓P P 07 03 42.8 -0.1
baz=60,SNR=12
Y12C **Blythe** 60.40 323 ⇓P P 07 03 46.0 +0.3
baz=60
U17A **Shonto** 60.40 328 ⇓P P 07 03 46.2 +0.5
baz=60
T18A **Mexican Hat** 60.42 329 ⇑P P 07 03 45.2 -0.6
baz=60,SNR=8.4
R20A **Redvale** 60.52 331 ⇑P P 07 03 46.5 0.0
baz=61,SNR=7.7
S19A **Harvey Farm, M** 60.53 330 ⇑P P 07 03 46.3 -0.2
baz=61,SNR=7.3
PV01 **Paradox Valley** 60.57 331 *eP* P 07 03 47.1 +0.3
comp=Z,412nm,0.9s
ISCO **Idaho Springs** 60.59 334 *eP* P 07 03 47.2 +0.3
ISCO pmax pmax
comp=Z,7.0nm,1.5s,mb4.6
ISCO **Idaho Springs** 60.59 334 *eP* P 07 03 47.2 +0.3
comp=Z,7.1nm,1.5s,mb4.6
V15A **Kaibab Nationa** 60.60 326 ⇓P P 07 03 47.4 +0.3
baz=61
X13A **Yucca** 60.61 324 ⇓P P 07 03 47.4 +0.2
baz=61
W14A **Seligman** 60.64 325 ⇓P P 07 03 47.4 0.0
baz=61
SMCO **Snowmass** 60.67 333 *eP* P 07 03 48.1 +0.7
comp=Z,5.7nm,1.0s,mb4.7
T17A **Navajo Res., N** 60.78 328 ⇑P P 07 03 48.5 +0.2
baz=61
ECSD **EROS Data Cent** 60.84 343 *eP* P 07 03 47.7 -0.9
comp=Z,18nm,1.4s,mb5.0
S18A **Hurst Farm, Bl** 60.91 329 ⇑P P 07 03 49.2 0.0
baz=61,SNR=6.9
V14A **Boquillas Ranc** 60.97 326 ⇓P P 07 03 50.1 +0.5
baz=61,SNR=7.5
PV10 **Paradox Valley** 60.98 330 *eP* P 07 03 49.1 -0.6
comp=Z,55nm,0.8s,mb5.7
W13A **Hualapai Mount** 61.01 325 ⇑P P 07 03 50.0 +0.1
baz=61
R19A **Curley Farm, L** 61.02 330 ⇑P P 07 03 49.7 -0.1
baz=61
IRM **Iron Mountain** 61.05 323 ⇑P P 07 03 50.4 +0.2
baz=61,SNR=7.9
U15A **North Rim** 61.12 327 ⇑P P 07 03 50.8 +0.3
baz=61,SNR=5.8
R18A **Canyonlands Na** 61.41 330 ⇓P P 07 03 52.3 -0.2
baz=62
PFO **Pinyon Flat Ob** 61.44 322 ⇑P P 07 03 53.1 +0.3
baz=62
PFO **Pinyon Flat Ob** 61.44 322 *eP* P 07 03 53.6 +0.8
PFO pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
PFO **Pinyon Flat Ob** 61.44 322 *eP* P 07 03 53.6 +0.8
comp=Z,8.5nm,1.1s,mb4.8
BELC **Belle Mtn.** 61.44 322 ⇓P P 07 03 52.7 -0.1
baz=62
U14A **Mt Trumbull** 61.59 326 ⇑P P 07 03 54.1 +0.4
baz=62,SNR=8.5
V13A **Grand Canyon W** 61.61 325 ⇑P P 07 03 54.0 +0.1
baz=62,SNR=5.1
GMRC **Granite Mounta** 61.79 323 ⇑P P 07 03 55.1 0.0
baz=62
R17A **Hanksville Air** 61.83 329 ⇓P P 07 03 55.2 -0.1
baz=62,SNR=11
P19A **Cripple Cowboy** 61.96 331 ⇑P P 07 03 56.3 +0.2
baz=62
V12A **Nelson** 62.00 325 ⇑P P 07 03 56.3 -0.2
baz=62
U13A **Pakoon Wash** 62.01 326 ⇓P P 07 03 56.8 +0.2
baz=62
T14A **Hurricane** 62.02 327 ⇑P P 07 03 56.9 +0.3
baz=62,SNR=7.1
O20A **White River Ci** 62.02 332 ⇓P P 07 03 56.3 -0.3
baz=62,SNR=5.2
Q18A **Rafter H Ranch** 62.08 330 ⇑P P 07 03 56.8 -0.2
baz=62,SNR=5.7
R16A **Teasdale** 62.11 329 ⇑P P 07 03 57.0 -0.2
baz=62
N21A **Black Mountain** 62.21 333 ⇑P P 07 03 58.0 +0.2
baz=62,SNR=7.7
HEC **Hector,Ludlow** 62.22 323 ⇑P P 07 03 57.7 -0.3
baz=62
SRU **San Rafael** 62.28 330 ⇑P P 07 03 58.1 -0.2
baz=62
SRU **San Rafael** 62.28 330 *eP* P 07 03 57.9 -0.4
SRU pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
SRU **San Rafael** 62.28 330 *eP* P 07 03 57.9 -0.5
comp=Z,6.1nm,1.0s,mb4.7
U12A **Valley of Fire** 62.34 325 ⇑P P 07 03 59.2 +0.4
baz=62
V11A **Goodsprings** 62.41 324 ⇑P P 07 03 59.6 +0.3
baz=62
T13A **Saint George** 62.43 326 ⇑P P 07 03 59.7 +0.3
baz=62
Q16A **Castle Valley** 62.45 329 ⇑P P 07 03 59.4 0.0
baz=62
CCUT **Cedar City** 62.53 327 *eP* P 07 04 01.3 +1.3
comp=Z,4.5nm,1.0s,mb4.5
P18A **Preston Nutter** 62.55 331 ⇑P P 07 04 00.3 +0.2
baz=63
O19A **Miners Draw (B** 62.55 332 ⇓P P 07 03 60.0 -0.2
baz=63,SNR=12
N20A **Spence Gulch,** 62.60 333 ⇑P P 07 04 00.2 -0.2
baz=63,SNR=7.3
MSU **Marysvale** 62.64 328 *eP* P 07 04 00.8 +0.1
P17A **Butcher Ranch,** 62.66 330 ⇓P P 07 04 00.9 0.0
baz=63
SHPR **Sheep Range** 62.74 325 *eP* P 07 04 02.1 +0.7
ARUT **Antelope Range** 62.74 327 *eP* P 07 04 02.5 +1.0
ARUT pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ARUT **Antelope Range** 62.74 327 *eP* P 07 04 02.5 +1.0
comp=Z,9.4nm,1.0s,mb4.9
S13A **Holt Ranch, En** 62.81 327 ⇓P P 07 04 02.5 +0.6
baz=63,SNR=20
M21A **Separation Pea** 62.83 334 ⇓P P 07 04 02.1 +0.1
baz=63,SNR=5.8
RWWY **Rawlins** 62.84 334 *eP* P 07 04 02.3 +0.3
comp=Z,12nm,1.3s,mb4.9
O18A **Roosevelt** 62.94 331 ⇓P P 07 04 02.8 +0.1
baz=63,SNR=6.2
SHOC **Shoshone** 62.94 324 ⇑P P 07 04 02.6 -0.3
baz=63
N19A **John Jarvie Ra** 63.05 332 ⇓P P 07 04 03.1 -0.3
baz=63,SNR=7.2
SNCC **San Nicolas Is** 63.08 319 ⇓P P 07 04 03.3 -0.5
baz=63
M20A **Sweetwater, Wa** 63.09 333 ⇓P P 07 04 03.8 +0.1
baz=63
Q15A **Fillmore** 63.11 329 ⇓P P 07 04 03.9 +0.1
baz=63
L21A **Rawlins** 63.13 334 ⇓P P 07 04 03.6 -0.3
baz=63,SNR=5.6
O17A **Robinson Place** 63.23 331 ⇑P P 07 04 05.0 +0.3
baz=63,SNR=11
T11A **Corn Creek, Al** 63.30 325 ⇑P P 07 04 05.5 +0.3
baz=63,SNR=11
R13A **O'Grain Ranch,** 63.32 327 ⇑P P 07 04 05.9 +0.6
baz=63,SNR=5.2
U10A **Ash Meadows, A** 63.34 324 ⇑P P 07 04 05.6 +0.1
baz=63
N18A **Larsen Ranch,** 63.35 332 ⇑P P 07 04 05.2 -0.2
baz=63,SNR=6.3
Q14A **Sevier Lake (B** 63.56 328 ⇓P P 07 04 07.4 +0.5
baz=64,SNR=11
EYMN **Ely** 63.56 348 *eP* P 07 04 05.4 -1.3
comp=Z,6.2nm,1.0s,mb4.6
RSSD **Black Hills** 63.62 338 *eP* P 07 04 07.6 +0.5
RSSD *e* pP 07 04 19.8 +1.9
RSSD pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
RSSD **Black Hills** 63.62 338 *eP* P 07 04 07.6 +0.4
comp=Z,1.1nm,0.6s,mb4.1
RSSD *e* pP 07 04 19.8 +1.9
DAU **Daniels Canyon** 63.65 330 *eP* P 07 04 07.7 +0.3
FURC **Furnace Creek,** 63.67 324 ⇓P P 07 04 07.9 +0.3
baz=64
MPMC **Manual Prospec** 63.75 323 ⇑P P 07 04 08.3 +0.1
baz=64
R12A **Pony Springs,** 63.76 327 ⇑P P 07 04 09.0 +0.8
baz=64,SNR=11
N17A **Moffit Pass** 63.86 331 ⇑P P 07 04 09.4 +0.7
baz=64
S11A **Rachel** 63.88 325 ⇑P P 07 04 09.6 +0.5
baz=64
JLU **Jordanelle** 63.88 330 *eP* P 07 04 09.8 +0.9
M18A **Lyman** 63.89 332 ⇑P P 07 04 08.4 -0.6
baz=64
P14A **Drum Mountains** 63.91 329 ⇓P P 07 04 09.5 +0.4
baz=64,SNR=5.1
Q13A **Wheeler Ranch,** 63.92 328 ⇓P P 07 04 09.5 +0.3
baz=64,SNR=9.1
ISA **Isabella** 64.06 322 ⇓P P 07 04 10.4 +0.2
baz=64
N16A **Rees Ranch, Co** 64.10 331 ⇓P P 07 04 10.9 +0.5
baz=64
L19A **Farson** 64.10 333 ⇓P P 07 04 10.2 -0.2
baz=64,SNR=5.6
K20A **Yellowstone Ra** 64.11 334 ⇑P P 07 04 09.9 -0.5
baz=64
M17A **Scullys Gap (B** 64.20 332 ⇑P P 07 04 10.7 -0.3
baz=64
DUG **Dugway** 64.24 329 ⇑P P 07 04 11.7 +0.4
baz=64,SNR=12
DUG **Dugway** 64.24 329 *eP* P 07 04 11.7 +0.4
DUG pmax pmax
comp=Z,12nm,0.9s,mb4.9
DUG **Dugway** 64.24 329 *eP* P 07 04 11.7 +0.4
comp=Z,12nm,0.9s,mb4.9
L18A **Fontenelle, Gr** 64.27 332 ⇓P P 07 04 11.0 -0.5
baz=64,SNR=6.0
P13A **Bates Ranch, G** 64.29 328 ⇑P P 07 04 12.2 +0.5
baz=64,SNR=7.3
R11A **Troy Canyon, C** 64.30 326 ⇓P P 07 04 12.1 +0.4
baz=64,SNR=7.6
GRAC **Grapevine Rang** 64.34 324 ⇑P P 07 04 11.6 -0.4
baz=64
Q12A **Willow Creek R** 64.41 327 ⇑P P 07 04 12.8 +0.4
baz=64
K19A **Absolon Red Bu** 64.46 334 ⇑P P 07 04 12.6 -0.1
baz=64
S10A **Tonopah Range,** 64.55 325 ⇑P P 07 04 13.7 +0.3
baz=65,SNR=9.0
R10A **Warm Springs** 64.65 326 ⇓P P 07 04 14.8 +0.7
baz=65,SNR=5.0
Q11A **Duckwater** 64.70 326 ⇑P P 07 04 14.9 +0.5
baz=65,SNR=10
HWUT **Hardware Ranch** 64.72 331 *eP* P 07 04 14.3 -0.1
comp=Z,9.5nm,0.9s,mb4.8
BW06 **Boulder Array** 64.73 333 ⇓P P 07 04 14.3 -0.1
baz=65
BW06 **Boulder Array** 64.73 333 *eP* P 07 04 13.7 -0.7
comp=Z,3.6nm,1.1s,mb4.3
PDAR **Pinedale Array** 64.73 333 P P 07 04 13.8 -0.7
comp=Z,1.9nm,1.0s,mb4.1,baz=141,slow=5.7,SNR=13
P12A **McGill** 64.76 327 ⇑P P 07 04 15.2 +0.4
baz=65,SNR=7.5
L17A **Cokeville** 64.79 332 ⇓P P 07 04 14.5 -0.3
baz=65
K18A **Toltan Ranch,** 64.84 333 ⇑P P 07 04 15.3 +0.1
baz=65,SNR=8.8
AGMN **Agassiz Refuge** 64.86 345 *eP* P 07 04 14.2 -1.0
comp=Z,12nm,0.8s,mb5.0
AGMN *e* 07 04 21.5
N14A **Grayback Hills** 64.92 329 ⇓P P 07 04 16.1 +0.4
baz=65
Q10A **Clear Creek Ra** 65.09 326 ⇓P P 07 04 17.6 +0.7
baz=65,SNR=5.5
O12A **Currie** 65.27 328 ⇑P P 07 04 18.4 +0.4
baz=65,SNR=12
J18A **Kendall Valley** 65.29 333 ⇑P P 07 04 17.6 -0.4
baz=65,SNR=6.1
L15A **Malad City** 65.42 331 ⇑P P 07 04 18.4 -0.5
baz=66,SNR=5.6
HVU **Hansel Valley** 65.43 330 *eP* P 07 04 18.3 -0.7
HVU pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
HVU **Hansel Valley** 65.43 330 *eP* P 07 04 18.3 -0.7
comp=Z,7.4nm,1.0s,mb4.7
M14A **Sheep Mountain** 65.49 330 ⇑P P 07 04 19.1 -0.3
baz=66,SNR=11
I18A **Diamond G Ranc** 65.59 334 ⇑P P 07 04 19.9 -0.1
baz=66,SNR=5.4
O11A **Cowboy Ranch,** 65.64 327 ⇑P P 07 04 20.7 +0.3
baz=66,SNR=5.4
K16A **Soda Springs** 65.69 332 ⇑P P 07 04 21.0 +0.3
baz=66
J17A **Brown Place, J** 65.71 333 ⇑P P 07 04 21.0 +0.2
baz=66
REDW **Red Top Meadow** 65.77 333 *eP* P 07 04 20.6 -0.6
comp=Z,7.1nm,1.3s,mb4.5
L14A **Malta** 65.85 330 ⇓P P 07 04 21.2 -0.5
baz=66,SNR=7.3
LOHW **Long Hollow** 65.86 333 *eP* P 07 04 21.9 +0.2
comp=Z,2.4nm,0.8s,mb4.3
NVAR **Mina Array Bea** 65.86 324 P P 07 04 21.6 -0.3
comp=Z,2.0nm,0.8s,mb4.2,baz=141,slow=6.7,SNR=17
TPAW **Teton Pass** 65.92 333 *eP* P 07 04 21.6 -0.6
comp=Z,2.1nm,0.7s,mb4.3
K15A **Arbon** 66.01 331 ⇑P P 07 04 22.7 -0.1
baz=66
J16A **Bone** 66.05 332 ⇓P P 07 04 22.8 -0.2
baz=66
M12A **Wells** 66.20 329 ⇑P P 07 04 23.9 -0.1
baz=66
K14A **Jones Ranch, D** 66.21 331 ⇑P P 07 04 23.6 -0.4
baz=66,SNR=6.8
L13A **Double Diamond** 66.23 330 ⇑P P 07 04 24.3 +0.1
baz=66
IMW **Indian Meadow** 66.24 333 *eP* P 07 04 24.5 +0.3
comp=Z,4.7nm,1.0s,mb4.5
I16A **Newdale** 66.46 333 ⇑P P 07 04 26.0 +0.4
baz=66
J15A **Blackfoot** 66.52 332 ⇓P P 07 04 26.0 0.0
baz=67,SNR=5.7
LKWY **Lake** 66.53 334 *eP* P 07 04 27.6 +1.5
LKWY pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LKWY **Lake** 66.53 334 *eP* P 07 04 27.6 +1.6
comp=Z,3.5nm,0.5s,mb4.7
M11A **Holland Ranch,** 66.66 328 ⇑P P 07 04 27.0 +0.1
baz=67,SNR=6.6
ULM **Lac du Bonnet** 66.69 346 P P 07 04 25.8 -1.1
comp=Z,7.2nm,0.9s,mb4.7,baz=149,slow=5.0,SNR=5.7
ULM **Lac du Bonnet** 66.69 346 *eP* P 07 04 25.7 -1.2
ULM *e* pP 07 04 33.3 -4.4
ULM pmax pmax
comp=Z,6.0nm,0.6s
ULM **Lac du Bonnet** 66.69 346 *eP* P 07 04 25.6 -1.2
comp=Z,5.8nm,0.6s,mb4.8
ULM *e* pP 07 04 33.3 -4.4
K13A **Stover Farm, H** 66.72 330 ⇑P P 07 04 27.8 +0.5
baz=67
G18A **Lazy EL Ranch,** 66.79 335 ⇓P P 07 04 27.6 0.0
baz=67,SNR=11
L12A **House Creek Ra** 66.80 329 ⇓P P 07 04 27.9 +0.1
baz=67
J14A **Carey** 66.96 331 ⇓P P 07 04 29.2 +0.3
baz=67,SNR=8.8
I15A **Monteview** 67.01 332 ⇑P P 07 04 29.6 +0.5
baz=67
H16A **Russell Place,** 67.01 333 ⇓P P 07 04 29.5 +0.4
baz=67,SNR=9.2
K12A **Draper Farm, C** 67.11 330 ⇑P P 07 04 30.1 +0.3
baz=67,SNR=14
L11A **Cat Creek Ranc** 67.18 329 ⇑P P 07 04 30.4 +0.2
baz=67,SNR=9.2
WCN **Washoe City** 67.28 324 ⇑P P 07 04 31.3 +0.3
baz=67
F18A **Big Timber** 67.33 335 ⇑P P 07 04 30.9 -0.1
baz=67,SNR=8.7
J13A **Cove Ranch, Pi** 67.33 331 ⇑P P 07 04 31.2 0.0
baz=67,SNR=7.6
PAHR **Pah Rah Range** 67.35 325 *eP* P 07 04 32.6 +1.2
I14A **Mackay** 67.40 331 ⇓P P 07 04 32.0 +0.4
baz=68,SNR=8.7
DGMT **Dagmar** 67.43 340 ⇓P P 07 04 32.4 +0.7
baz=68
DGMT **Dagmar** 67.43 340 *eP* P 07 04 32.3 +0.6
comp=Z,10nm,1.0s,mb4.8
L10A **Juniper Basin** 67.48 328 ⇓P P 07 04 32.3 +0.2
baz=68,SNR=11
H15A **Lima** 67.56 332 ⇑P P 07 04 33.0 +0.4
baz=68,SNR=6.0
HLID **Hailey** 67.57 331 ⇑P P 07 04 32.8 +0.1
baz=68,SNR=7.8
HLID **Hailey** 67.57 331 *eP* P 07 04 32.9 +0.2
comp=Z,3.4nm,0.8s,mb4.4
HLID *e* pP 07 04 41.5 -1.9
J12A **Stokes Ranch,** 67.66 330 ⇓P P 07 04 33.2 -0.1
baz=68
G16A **Moss Hill, Enn** 67.67 333 ⇑P P 07 04 33.4 +0.2
baz=68,SNR=5.6
I13A **Wildhorse Cree** 67.70 331 ⇑P P 07 04 33.9 +0.5
baz=68,SNR=12
F17A **Fitzpatrick Pl** 67.72 334 ⇑P P 07 04 33.6 +0.1
baz=68
K11A **Parker Ranch,** 67.77 329 ⇓P P 07 04 33.9 0.0
baz=68
H14A **Leadore** 67.89 332 ⇑P P 07 04 35.0 +0.3
baz=68,SNR=8.4
G15A **Dillon** 67.92 333 ⇓P P 07 04 34.7 -0.1
baz=68,SNR=6.5
BOZ **Bozeman (W)** 67.92 334 ⇓P P 07 04 34.4 -0.4
baz=68,SNR=8.4
BOZ **Bozeman (W)** 67.92 334 *eP* P 07 04 34.3 -0.5
BOZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BOZ **Bozeman (W)** 67.92 334 *eP* P 07 04 34.3 -0.5
comp=Z,3.7nm,1.0s,mb4.4
E18A **Harlowton** 67.94 335 ⇑P P 07 04 35.3 +0.3
baz=68
BEKR **Beckwourth** 68.01 324 ⇓P P 07 04 35.6 +0.1
baz=68
F16A **Kennard Place,** 68.03 334 ⇓P P 07 04 35.4 -0.1
baz=68
I12A **Atlanta** 68.09 330 ⇓P P 07 04 36.2 +0.3
baz=68
DLMT **Dillon** 68.12 333 *eP* P 07 04 36.3 +0.3
comp=Z,6.0nm,1.0s,mb4.6
DLMT *e* 07 04 43.4
MFID **Camas Ranch** 68.14 330 ⇓P P 07 04 36.3 +0.1
baz=68,SNR=8.9
K10A **MacKenzie Ranc** 68.19 329 ⇓P P 07 04 36.7 +0.1
baz=68,SNR=8.1
E17A **Martinsdale** 68.24 335 ⇑P P 07 04 36.8 -0.1
baz=68
H13A **Challis** 68.25 331 ⇓P P 07 04 37.0 0.0
baz=68,SNR=7.7
D18A **Linhart Farms,** 68.41 336 ⇓P P 07 04 38.3 +0.5
baz=68
F15A **Butte** 68.45 333 ⇓P P 07 04 38.4 +0.3
baz=68
H12A **Diamond D Ranc** 68.52 331 ⇓P P 07 04 38.7 +0.1
baz=69
I11A **Placerville** 68.57 330 ⇑P P 07 04 38.6 -0.4
baz=69,SNR=7.3
J10A **Berg Farm, Mel** 68.61 329 ⇓P P 07 04 39.3 +0.1
baz=69
G13A **Cobalt** 68.65 332 ⇓P P 07 04 39.5 +0.1
baz=69
D17A **Six Diamond Ra** 68.73 335 ⇑P P 07 04 39.7 -0.2
baz=69,SNR=6.6
E15A **Deer Lodge** 68.97 334 ⇑P P 07 04 41.5 +0.2
baz=69
D16A **Dana Ranch, Ca** 68.98 335 ⇑P P 07 04 41.8 +0.3
baz=69
J09A **Fry Pan Ranch,** 69.05 329 ⇓P P 07 04 42.4 +0.5
baz=69
EGMT **Eagleton** 69.06 336 ⇑P P 07 04 41.9 0.0
baz=69
EGMT **Eagleton** 69.06 336 *eP* P 07 04 41.1 -0.8
comp=Z,5.0nm,0.9s,mb4.4
C17A **Wharram Farm,** 69.14 335 ⇓P P 07 04 42.5 +0.1
baz=69
H11A **Donnelly** 69.19 330 ⇑P P 07 04 42.6 -0.2
baz=69

F13A	Darby	69.22	332	⇓P		P	07 04 43.0	0.0
	baz=69,SNR=5.4							
E14A	Clinton	69.33	333	⇓P		P	07 04 44.1	+0.5
	baz=69							
MOD	Modoc	69.37	326	eP		P	07 04 44.4	+0.5
	comp=Z,3.9nm,0.8s,mb4.4							
B18A	Beardsley Farm	69.38	337	⇑P		P	07 04 43.7	-0.1
	baz=70							
D15A	Lincoln	69.40	334	⇑P		P	07 04 44.1	0.0
	baz=70							
J08A	Circle Bar Ran	69.42	328	⇑P		P	07 04 44.0	-0.3
	baz=70							
LTIM	Timbered Crate	69.53	325	P		P	07 04 45.1	+0.2
F12A	Elk City	69.62	332	⇑P		P	07 04 45.6	+0.2
	baz=70							
E13A	Victor	69.66	333	⇑P		P	07 04 45.9	+0.2
	baz=70,SNR=9.2							
C16A	Fuhringer Ranc	69.68	335	⇓P		P	07 04 45.8	+0.1
	baz=70							
G11A	Walters Elk Ra	69.83	331	⇓P		P	07 04 46.5	-0.2
	baz=70,SNR=6.0							
A18A	Metzger Ranch,	69.83	337	⇑P		P	07 04 46.3	-0.3
	baz=70							
D14A	Greenough	69.85	334	⇑P		P	07 04 47.0	+0.2
	baz=70							
C15A	Salmond Ranch,	70.01	335	⇓P		P	07 04 48.4	+0.6
	baz=70,SNR=5.9							
F11A	Grangeville	70.14	331	⇑P		P	07 04 48.2	-0.3
	baz=70,SNR=7.8							
G10A	Bishop Farm, J	70.15	330	⇓P		P	07 04 48.9	+0.2
	baz=70,SNR=7.8							
A17A	Triple J Farms	70.18	336	⇑P		P	07 04 48.6	-0.2
	baz=70,SNR=5.6							
E12A	Beaver Dam Sad	70.26	332	⇓P		P	07 04 49.5	+0.2
	baz=70							
D13A	Huson	70.28	333	⇓P		P	07 04 49.8	+0.4
	baz=70							
H08A	Prairie City	70.35	329	⇑P		P	07 04 50.1	+0.2
	baz=70,SNR=11							
SWMT	Swartz Lake	70.40	334	eP		P	07 04 50.6	+0.4
B15A	Bradely Ranch,	70.42	335	⇓P		P	07 04 50.3	+0.1
	baz=70							
I07A	Izee	70.47	328	⇓P		P	07 04 50.7	+0.1
	baz=70,SNR=6.2							
C14A	Swan Lake	70.49	334	⇑P		P	07 04 51.1	+0.4
	baz=71							
E11A	Bogner Ranch,	70.51	332	⇑P		P	07 04 50.9	+0.1
	baz=71							
D12A	Red Ives Fores	70.64	333	⇑P		P	07 04 52.1	+0.5
	baz=71							
B14A	Marquette Ranc	70.75	335	⇓P		P	07 04 52.0	-0.3
	baz=71,SNR=5.1							
C13A	Hot Springs	70.78	333	⇑P		P	07 04 52.8	+0.4
	baz=71,SNR=9.1							
BSMT	Bassoo Peak	71.00	333	eP		P	07 04 54.8	+1.0
BSMT				e			07 05 02.0	
A15A	Johnson Ranch,	71.01	335	⇑P		P	07 04 53.8	0.0
	baz=71							
G08A	Pilot Rock	71.05	329	⇓P		P	07 04 54.3	+0.1
	baz=71							
C12B	Naegeli Ranch,	71.19	333	⇑P		P	07 04 55.5	+0.5
	baz=71							
B13A	Whitefish	71.26	334	⇓P		P	07 04 55.9	+0.5
	baz=71							
A14A	Double T Ranch	71.29	335	⇓P		P	07 04 55.7	+0.2
	baz=71							
VIPM	Ingram Point	71.33	328	P		P	07 04 56.7	+0.8
A13A	Flathead Natio	71.67	334	⇓P		P	07 04 58.1	+0.3
	baz=72							
B12A	Libby	71.82	333	⇓P		P	07 04 58.9	+0.1
	baz=72							
H04A	Detroit Lake	72.27	327	⇑P		P	07 05 01.2	-0.3
	baz=72							
FFC	Flin Flon	72.29	344	ceP		P	07 05 01.4	0.0
NEW	Newport	72.34	332	eP		P	07 05 01.9	0.0
NEW				pmax		pmax		
	comp=Z,5.0nm,0.9s							
NEW	Newport	72.34	332	eP		P	07 05 01.9	+0.1
	comp=Z,5.3nm,0.9s,mb4.5							
B09A	Rice	72.92	332	⇓P		P	07 05 05.2	-0.1
	baz=73							
F04A	Amboy	73.24	328	⇑P		P	07 05 07.5	+0.2
	baz=73							
DBIC	Dimbokro	73.39	78	P		P	07 05 09.3	+0.5
	comp=Z,7.6nm,0.8s,mb4.7,baz=248,slow=5.2,SNR=5.0							
DBIC				LR		LR	07 35 43.3	
	comp=Z,493nm,20.1s,MS4.8,baz=291,slow=34							
DBIC	Dimbokro	73.39	78	eP		P	07 05 09.3	+0.4
	comp=Z,10.0nm,0.9s,mb4.8							
D05A	Enumclaw	73.88	329	⇓P		P	07 05 11.3	+0.4
	baz=74							
A07A	Ashnola River,	74.40	331	⇓P		P	07 05 14.2	+0.2
	baz=74							
EDM	Edmonton	74.61	338	eP		P	07 05 14.0	-1.1
NLWA	Neilton Lookou	74.96	328	⇑P		P	07 05 18.0	+0.7
	baz=75							
QSPA	South Pole Qui	75.81	180	eP		P	07 05 21.5	-0.2
	comp=Z,5.7nm,0.9s,mb4.5							
TORD	Torodi Ar. Bea	81.44	74	P		P	07 05 54.5	+0.6
	comp=Z,24nm,0.9s,mb5.1,baz=259,slow=5.0,SNR=55							
YKA	Yellowknife Ar	82.37	343	P		P	07 05 57.0	-0.7
	comp=Z,3.4nm,1.1s,mb4.2,baz=142,slow=5.0,SNR=9.0							
YKA	Yellowknife Ar	82.37	343	P		P	07 05 57.0	-0.7
YKA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
YKA	Yellowknife Ar	82.37	343	P		P	07 05 57.0	-0.7
DLBC	Dease Lake	84.91	335	P		P	07 06 11.0	+0.2
	comp=Z,5.1nm,0.9s,mb4.7,baz=116,slow=2.5,SNR=7.6							
DLBC	Dease Lake	84.91	335	eP		P	07 06 10.9	+0.1
ESDC	Sonseca Array	85.60	47	P		P	07 06 15.5	+0.8
	comp=Z,0.4nm,0.4s,mb4.0,baz=260,slow=8.7,SNR=4.0							
TAM	Tamanrasset	87.70	66	eP		P	07 06 27.5	+2.1
TAM				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.5							
TAM	Tamanrasset	87.70	66	eP		P	07 06 27.4	+2.1
	comp=Z,1.8nm,0.7s,mb4.4							
SUMG	Summit	90.14	11	eP		P	07 06 37.0	+1.3
SUMG				pmax		pmax		
	comp=Z,60nm,2.0s							
SUMG	Summit	90.14	11	eP		P	07 06 37.0	+1.2
	comp=Z,60nm,2.0s,mb5.6							
INK	Inuvik	92.06	342	eP		P	07 06 44.2	-0.5
INK				pmax		pmax		
	comp=Z,2.0nm,0.8s							
INK	Inuvik	92.06	342	eP		P	07 06 44.2	-0.5
	comp=Z,2.3nm,0.8s,mb4.6							
MAW	Mawson	92.96	165	P		P	07 06 47.6	-1.5
	comp=Z,4.2nm,0.9s,mb4.9,baz=203,slow=2.6,SNR=6.6							
MAW	Mawson	92.96	165	P		P	07 06 47.6	-1.5
MAW				pmax		pmax		
	comp=Z,4.0nm,0.9s							
GERES	GERESS Array B	100.32	42	P		Pdif	07 07 22.5	-0.1
	comp=Z,0.3nm,0.3s,baz=249,slow=3.7,SNR=5.4							
SEY	Seymchan	120.96	337	c iPKIKP		PKPdf	07 12 26.8	-1.3
AKTK	Aktyubinsk	128.19	36	PKP		PKPdf	07 12 41.9	-0.4
AKTO	Aktyubinsk	128.19	36	PKP		PKPdf	07 12 41.9	-0.4
	comp=Z,1.4nm,0.7s,baz=256,slow=3.6,SNR=5.4							
AKTO	Aktyubinsk	128.19	36	PKIKP		PKPdf	07 12 41.9	-0.4
AKTO				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ABKAR	Akbulak array	129.85	37	ePKPdf		PKPdf	07 12 46.3	+0.8
ASAR	Alice Springs	132.35	218	PKP		PKPdf	07 12 49.9	-1.2
	comp=Z,1.6nm,1.0s,baz=159,slow=2.5,SNR=6.8							
ASAR	Alice Springs	132.35	218	PKIKP		PKPdf	07 12 49.9	-1.2
ASAR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
ZALV	Zalesovo Beam	137.64	17	PKP		PKPdf	07 12 59.8	-0.2
	comp=Z,3.5nm,0.8s,baz=298,slow=3.2,SNR=7.2							
ZALV	Zalesovo Beam	137.64	17	PKIKP		PKPdf	07 12 59.8	-0.2
ZALV				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KURK	Kurchatov	138.22	24	c iPKIKP		PKPdf	07 13 02.8	+1.6
KURK				pmax		pmax		
	comp=Z,6.0nm,1.7s							
KURK	Kurchatov	138.22	24	ePKPdf		PKPdf	07 13 01.7	+0.5
MKAR	Makanchi Array	142.81	25	PKP		PKPdf	07 13 08.5	-1.1
	comp=Z,1.0nm,0.8s,baz=8.5,slow=2.5,SNR=6.2							
MKAR	Makanchi Array	142.81	25	PKIKP		PKPdf	07 13 08.5	-1.1
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ZAK	Zakamensk	144.05	1	ePKIKP		PKPdf	07 13 09.2	-2.4
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KSH	Kashi	144.74	39	PKP		PKPdf	07 13 13.5	+0.3
ULN	Ulaanbaatar	146.49	357	ePKP2		PKPab	07 13 17.8	-0.5
SONM	Songino Array	146.55	357	PKPbc		PKPdf	07 13 16.4	+0.4
	comp=Z,6.2nm,0.8s,baz=329,slow=1.6,SNR=28							
SONM	Songino Array	146.55	357	PKP2		PKPdf	07 13 16.4	+0.4
SONM				pmax		pmax		
	comp=Z,6.0nm,0.8s							
WMQ	Urumqi	147.40	22	ePKPbc		PKPdf	07 13 17.5	-0.1
KSRS	Korea Array	148.78	322	PKPbc		PKPdf	07 13 20.2	+0.1
	comp=Z,1.8nm,0.7s,baz=357,slow=1.7,SNR=7.7							
KSRS	Korea Array	148.78	322	PKIKP		PKPdf	07 13 20.2	+0.1
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.7s							
HHC	Hu-ho-hao-te	152.82	348	ePKPbc		PKPdf	07 13 27.3	+1.1
HHC				pPKP		pPKPdf	07 13 38.0	+0.3
HHC				sPKP			07 13 41.5	
HHC				PKS			07 17 00.5	
HHC				PP		PP	07 17 21.0	+4.9
HHC				SKS		SKSdf	07 20 29.5	-1.3
HHC				SKKS		SKKSac	07 24 04.8	-0.1
HHC				AMB		AMB		
	comp=Z,180nm,7.0s							
HHC				LR		LR		
	comp=N,140nm,24.3s,MS5.0							
HHC				LR		LR		
	comp=E,230nm,22.9s,MS5.0							
HHC				LR		LR		
	comp=Z,210nm,21.6s,MS4.9							
GTA	Gaotai	154.73	8	ePKPbc		PKPdf	07 13 29.8	+0.9
GTA				pPKP		pPKPdf	07 13 34.3	-6.1
GTA				sPKP			07 13 37.3	
NJ2	Nanjing	157.86	325	ePKP		PKPdf	07 13 33.8	+0.5
LZH	Lanzhou	158.34	1	ePKP		PKPdf	07 13 34.0	+0.3
LZH				pPKP		pPKPdf	07 13 45.8	+0.6
CD2	Chengdu	163.50	1	PKP		PKPdf	07 13 39.8	+0.4
GYA	Guiyang	167.72	350	PKP		PKPdf	07 13 41.0	-2.0
GYA				PKPab		PKPab	07 14 50.0	+0.7
GYA				PKS			07 17 12.8	
GYA				PP		PP	07 18 39.8	+3.3
GYA				AMB		AMB		
	comp=Z,90nm,8.4s							

ISK ***30*** *07:04:59.5, 37°.32N×28°.30E, h5km, MD2.5*
CSEM ***30*** *07:05:00.4±0.8, 37°.28N×28°.35E, h10km, MD2.5, Error ellipse: s-maj=14.6km s-min=7.8km az=77.0*
ISC 30 07:05:00.6±2.3, 37°.28N±0°.05×28°.4E±0°.1, h10km±18km, n10, σ0°82/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.15	201	ePG	Pg	07 05 04.0	+0.1
YER				eSG	Sg	07 05 06.3	0.0
YER	Yerkesik	0.15	201	ePg	Pg	07 05 04.0	0.0
YER				eSg	Sg	07 05 06.3	0.0
MLSB	Milas	0.46	273	ePG	Pg	07 05 08.2	-1.4
MLSB				eSG	Sg	07 05 14.3	-1.4
MLSB	Milas	0.46	273	ePg	Pg	07 05 08.2	-1.4
MLSB				eSg	Sg	07 05 14.3	-1.3
AYDN	Tasoluk	0.54	316	i P	Pg	07 05 11.1	0.0
AYDN	Tasoluk	0.54	316	i P	Pg	07 05 11.1	0.0
AYDN				i S	Sg	07 05 19.1	+1.0
BDRM	Kayabasi	0.75	254	i P	Pg	07 05 16.0	+0.8
BDRM	Kayabasi	0.75	254	i P	Pg	07 05 16.0	+0.8
BDRM				i S	Sg	07 05 25.7	+0.7
DAT	Datca	0.82	229	ePG	Pg	07 05 15.8	-0.7
DAT				eSG	Sg	07 05 28.0	+0.7
DAT	Datca	0.82	229	ePg	Pg	07 05 15.9	-0.6
DAT				eSg	Sg	07 05 28.0	+0.7

NEIC ***30*** *07:06:59.9, 16°.80N×94°.06W, h146km, MD4.0(MEX), After MEX.*
MEX 30 07:06:59.7±1.1, 16°.78N×94°.06W, h148km±13km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.89	90	i P	Pn	07 07 22.2	-1.2
TGIG				i S	Sn	07 07 39.0	-2.4
PCIG		1.34	143	i P	Pn	07 07 26.7	-0.7
PCIG				i S	Sn	07 07 47.0	-1.7
SCX	San Cristobal	1.36	92	i P	Pn	07 07 27.1	-0.6
SCX				i S	Sn	07 07 47.2	-1.8
CCIG	Comitan	1.91	105	i P	Pn	07 07 32.6	-1.0
CCIG				i S	Sn	07 07 58.2	-1.4
CCIG	Comitan	1.91	105	i P	Pn	07 07 32.6	-1.0
CCIG				i S	Sn	07 07 58.2	-1.4
HUIG	Huatulco	2.21	243	i P	Pn	07 07 34.7	-2.5
HUIG				i S	Sn	07 08 04.8	-1.3
HUIG	Huatulco	2.21	243	i P	Pn	07 07 34.5	-2.8
HUIG				i S	Sn	07 08 04.8	-1.3
THIG		2.54	137	eP	Pn	07 07 39.7	-1.5
THIG				i S	Sn	07 08 11.8	-1.4
VHO	Vista Hermosa	2.58	277	i P	Pn	07 07 41.1	-0.6
VHO				i S	Sn	07 08 13.2	-0.9
VHO	Vista Hermosa	2.58	277	i P	Pn	07 07 41.1	-0.6
VHO				i S	Sn	07 08 13.7	-0.4
TPIG	Tehuac#an	3.55	298	eP	Pn	07 07 53.7	-0.4
TPIG				i S	Sn	07 08 34.8	-1.4
PNIG	Pinotepa	3.92	265	eP	Pn	07 07 57.6	-1.3
PNIG				i S	Sn	07 08 42.3	-2.6
PNIG	Pinotepa	3.92	265	eP	Pn	07 07 57.6	-1.3
PNIG				i S	Sn	07 08 42.3	-2.6

IDC ***30*** *07:09:30.4±1.3, 46°.90N×153°.25E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.5/6, ML2.9/1, Error ellipse: s-maj=41.4km s-min=31.5km az=104.0*
MOS ***30*** *07:09:33.6±2.4, 46°.94N×152°.87E, h33km, mb4.2/2, Error ellipse: s-maj=57.9km s-min=20.4km az=76.9*
ISCJB ***30*** *07:09:37.7±3.8, 46°.9N±0°.2×153°.1E±0°.3, h67km±33km, mb3.2/5, Error ellipse: s-maj=38.0km s-min=36.9km az=161.8*
ISC 30 07:09:39.6±3.5, 46°.9N±0°.2×153°.1E±0°.3, h68km±31km, n10, σ0°21/10, mb3.2/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.27	26	ePN	Pn	07 10 42.0	0.0
SKR				e		07 11 31.0	
PETK	Petropavlovsk-	6.88	24	Pn	Pn	07 11 11.7	-5.9
	0.2nm,0.3s,baz=230,slow=21,SNR=4.5						
MKAR	Makanchi Array	46.88	297	P	P	07 18 02.4	-0.3
	0.6nm,0.4s,mb3.8,baz=61,slow=8.4,SNR=3.3						
FINES	FINESS Array B	63.91	335	P	P	07 20 04.9	+0.2
FINES	FINESS Array B	63.91	335	P	P	07 20 04.9	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	68.09	341	P	P	07 20 31.9	+0.4
	comp=Z,0.6nm,0.8s,mb3.5,baz=30,slow=6.5						
NOA	NORSAR Array B	68.09	341	P	P	07 20 31.6	+0.1
	comp=Z,0.7nm,0.6s,mb3.7,baz=28,slow=6.1,SNR=4.1						
NOA	NORSAR Array B	68.09	341	P	P	07 20 31.6	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	72.35	198	P	P	07 20 58.1	+0.1
	comp=Z,0.2nm,0.5s,mb3.2,baz=12,slow=4.9,SNR=3.8						
TXAR	Lajitas Array	77.41	61	P	P	07 21 27.1	-0.2
	comp=Z,0.1nm,0.8s,mb2.6,baz=219,slow=2.3,SNR=2.6						

IDC 30 07:19:22.4±1.3, 15°.60S×69°.03W, h172km±21km, mb3.8/2, mb1 3.6/4, mb1mx3.2/18, mbtmp3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/28, Error ellipse: s-maj=99.2km s-min=19.9km az=12.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.11	128	P	Pn	07 19 50.8	+0.6
	41nm,0.3s,baz=304,slow=7.3,SNR=769						
SIV	San Ignacio	7.67	94	P	Pn	07 21 11.5	+0.1
	1.4nm,0.3s,baz=282,slow=9.4,SNR=29						
SIV				S	Sn	07 22 38.2	+0.7
	0.3nm,0.3s,baz=351,slow=19,SNR=8.2						
NNA	Nana	8.39	294	P	Pn	07 21 21.1	+0.2
	1.6nm,0.3s,baz=120,slow=13,SNR=8.4						
PCRV	Puerto La Cruz	25.97	10	LR	LR	07 34 45.6	
	comp=Z,74nm,18.2s,baz=92,slow=36						
DBIC	Dimbokro	67.29	76	P	P	07 29 59.3	+0.3
	4.9nm,0.8s,baz=219,slow=6.5,SNR=3.6						
TORD	Torodi Ar. Bea	75.56	72	P	P	07 30 48.5	0.0
	0.6nm,0.5s,baz=256,slow=4.5,SNR=13						

NIED ***30*** *07:25:00.30°.80N×142°.00E, h8km, Mw5.7 Best double couple: M0 3.39000×10^17 NP1:φ0=30.00000°, δ72.00000°, λ118.00000°. NP2:φ0=151.00000°, δ33.00000°, λ35.00000°.*
IDC ***30*** *07:25:36.8±0.5, 30°.74N×141°.62E, h0km, mb4.9/23, mb1 5.1/26, mb1mx5.1/27, mbtmp4.9/26, ML4.6/3, MS5.5/37, Ms1 5.5/37, ms1mx5.4/46, Error ellipse: s-maj=14.6km s-min=12.9km az=98.0*
BJI ***30*** *07:25:37.6, 30°.74N×141°.84E, h36km, mB5.6/44, mb5.1/62, Ms5.8/76, Ms7 5.7/63*
JMA ***30*** *07:25:37.8±0.1, 30°.78N×142°.00E, h39km, M5.7*
NEIC ***30*** *07:25:39.8±0.1, 30°.80N×141°.52E, h16km, mb5.5/231, MS5.5/195, MW5.6, MW5.7, MW5.6(NIED), Error ellipse: s-maj=3.6km s-min=2.8km az=157.0, Moment Tensor Solution. s128 Moment tensor: Scale 10^17Nm; Mrr2.05; Mθθ-0.33; Mφφ-1.72; Mrθ0.47; Mrφ-0.02; Mθφ2.58; Best double couple: M0 3.20000×10^17 NP1:φ1=177.00000°, δ18.00000°, λ79.00000°. NP2:φ2=8.00000°, δ72.00000°, λ94.00000°. Principal axes: T 3.4100, Plg62.0000°, Azm283.0000°; N -0.3600, Plg3.0000°, Azm187.0000°; P -3.0500, Plg27.0000°, Azm95.0000°;*
MOS ***30*** *07:25:39.8±0.8, 30°.86N×141°.51E, h24km, mb5.7/141, MS5.6/104 Error ellipse: s-maj=7.0km s-min=3.8km az=109.2*
GCMT ***30*** *07:25:39.8±0.1, 30°.60N×141°.82E, h19km, MW5.8/110, Moment Tensor Solution. s94,c189; s110,c308; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr4.03±.06; Mθθ0.71±.04; Mφφ-4.74±.05; Mrθ0.03±.10; Mθφ1.12±.04; Mφr3.38±.12; Best double couple: M0 5.63500×10^17 NP1:φ1=158.00000°, δ28.00000°, λ73.00000°. NP2:φ2=357.00000°, δ64.00000°, λ99.00000°. Principal axes: T 5.2160, Plg70.0000°, Azm285.0000°; N 0.8410, Plg8.0000°, Azm173.0000°; P -6.0550, Plg18.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
SZGRF ***30*** *07:25:41.0, 31°.01N×142°.44E, h37km, mb5.5, MS5.6, Southeast of Honshu, Japan*
ISCJB ***30*** *07:25:41.0±0.1, 30°.79N±0°.02×141°.52E±0°.02, h34km, mb5.4/323, MS5.6/272, Error ellipse: s-maj=2.4km s-min=1.9km az=23.0*
DJA ***30*** *07:25:47, 30°.84N×141°.49E, h71km, Mw5.8/23*
ISC 30 07:25:42.7±0.1, 30°.78N±0°.02×141°.53E±0°.02, h36km, h36km±1.3km: pP-P, n1304, σ0°81/1225, mb5.4/323, MS5.6/272, 238C-171D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.75	328	P	Pn	07 26 24.3	+0.1
JHJ2				eS	Sn	07 26 58.0	+1.9
JHJ	Hachijo jima 2	2.77	328	Pn	Pn	07 26 24.3	-0.2
	180nm,0.3s,baz=136,slow=15,SNR=39						
JHJ				Sn	Sn	07 26 57.7	+1.0
	579nm,0.3s,baz=83,slow=21,SNR=6.0						
JHJ				LR	LR	07 27 38.8	
	comp=Z,88μm,18.2s,baz=158,slow=43						
JMY	Miyakejima3	3.70	333	P	Pn	07 26 36.9	-0.4
JMY				eS	Sn	07 27 20.7	+1.0
CBIJ	Chichi jima	3.71	171	P	Pn	07 26 34.5	-3.0
CBIJ				eS	Sn	07 27 15.8	-4.2
CBIJ	Chichi jima	3.71	171	Pn	Pn	07 26 33.9	-3.6
	48nm,0.3s,baz=286,slow=21,SNR=34						
CBIJ				Sn	Sn	07 27 16.8	-3.3
	257nm,0.3s,baz=73,slow=23,SNR=6.8						
BSO1	Boso 1	3.89	353	P	Pn	07 26 38.3	-1.7
BSO1				eS	Sn	07 27 23.8	-0.6
JKO	Kozu shima	3.96	330	P	Pn	07 26 41.1	+0.3
JKO				eS	Sn	07 27 28.1	+2.1
BSO2	Boso 2	4.02	351	eS	Sn	07 27 28.2	+0.7
BSO3	Boso 3	4.10	348	P	Pn	07 26 42.2	-0.7
JHHJ	Haha-jima-NKT	4.17	172	P	Pn	07 26 40.3	-3.5
JHHJ				eS	Sn	07 27 27.4	-4.0
JIM2	Oshima 3	4.31	336	P	Pn	07 26 44.9	-0.8
JIM2				eS	Sn	07 27 33.3	-1.4
TATJ	Tateyama 2	4.46	342	P	Pn	07 26 47.8	0.0
TATJ				eS	Sn	07 27 36.8	-1.6
JIZS	Izushimoda	4.52	331	P	Pn	07 26 49.1	+0.5
JYO	Yokosk	4.70	341	eS	Sn	07 27 45.0	+0.6
JCN	Nagara	4.76	347	P	Pn	07 26 53.4	+1.5
JCN				eS	Sn	07 27 46.7	+0.9
JOD2	Odawara 2	4.92	336	P	Pn	07 26 53.6	-0.5
JOD2				eS	Sn	07 27 51.1	+1.3
CHOJ	Chosi	4.94	354	P	Pn	07 26 53.5	-0.9
CHOJ				eS	Sn	07 27 48.2	-2.1
SHZ3	Shizuoka 3	5.11	328	P	Pn	07 26 58.8	+2.1
TOK	Tokyo	5.12	344	eS	Sn	07 27 52.9	-1.7
HMMJ	Hamamatsu 2	5.18	323	eS	Sn	07 27 58.8	+2.7
JYN	Shimob	5.33	333	P	Pn	07 27 01.0	+1.3
JYN				eS	Sn	07 28 09.1	+9.2
JHU	Hanno	5.40	340	P	Pn	07 27 00.0	-0.7
JIE	Ise	5.44	313	P	Pn	07 27 03.8	+2.6
JWZ	Kozaga	5.64	301	P	Pn	07 27 07.0	+3.0
JRY	Ryogami san	5.67	338	P	Pn	07 27 03.9	-0.5
JRY				eS	Sn	07 28 09.8	+1.6
MJAR	Matsushiro Arr	6.38	335	Pn	Pn	07 27 15.3	+1.1
	26nm,0.3s,baz=155,slow=10,SNR=213						
MJAR				Sn	Sn	07 28 30.3	+4.6
	8.0nm,0.3s,baz=233,slow=31,SNR=2.7						
MJAR				LR	LR	07 29 50.2	
	comp=Z,30μm,18.9s,baz=180,slow=40						
MJAR	Matsushiro Arr	6.38	335	P	Pn	07 27 15.3	+1.2
MJAR						07 28 30.3	
MJAR				pmax	pmax		
	comp=Z,26nm,0.3s						
MJAR				smax			
	comp=N,8.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,30μm,18.9s						
MJAR	Matsushiro Arr	6.38	335	Pn	Pn	07 27 15.3	+1.1
MJAR				Sn	Sn	07 28 30.3	+4.6
MJAR				LR	LR	07 29 50.2	
MAJO	Matsushiro	6.38	335	eP	Pn	07 27 15.2	+1.0
MAT	Matsushiro	6.38	335	P	Pn	07 27 13.8	-0.4
MAT				eS	Sn	07 28 24.0	-1.8
MAT	Matsushiro	6.38	335	P	Pn	07 27 15.6	+1.4

ASAJ	**Asahikawa**	**13.34**	**3**	Pn	**Pn**	**07 28 46.2**	**-3.2**
	comp=Z,8.6nm,0.3s,baz=202,slow=13,SNR=24						
ASAJ				LR	LR	07 34 05.6	
	comp=Z,17μm,20.0s,baz=191,slow=38						
ASAJ	**Asahikawa**	**13.34**	**3**	P	**Pn**	**07 28 46.3**	**-3.1**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,17μm,20.0s						
YUK	**Yuzh-Kuril'sk**	**13.67**	**13**	*e*P	**Pn**	**07 28 53.2**	**-0.7**
YUK				pmax	pmax		
	comp=N,210nm,0.5s						
YUK				pmax	pmax		
	comp=E,120nm,0.4s						
YUK				MLR	MLR		
	comp=Z,3μm,11.0s						
YUK				MLR	MLR		
	comp=N,14μm,12.0s						
YUK				MLR	MLR		
	comp=E,29μm,14.0s						
INCN	**Inchon**	**14.03**	**302**	*e*P	**Pn**	**07 29 05.1**	**+6.3**
	comp=E,383nm,1.3s						
INCN	**Inchon**	**14.03**	**302**	Pn	**Pn**	**07 29 06.1**	**+7.3**
	SNR=17						
INCN				Pn	**Pn**	**07 29 06.1**	**+7.3**
	SNR=17						
VLA	**Vladivostok**	**14.52**	**331**	P	**Pn**	**07 28 57.0**	**-8.4**
VLA				MLR	MLR		
	comp=Z,15μm,18.4s						
KUR	**Kuril'sk**	**15.26**	**17**	*e*P	**Pn**	**07 29 08.0**	**-7.4**
KUR				pmax	pmax		
	comp=N,190nm,1.0s						
KUR				pmax	pmax		
	comp=E,150nm,1.0s						
KUR				pmax	pmax		
	comp=Z,410nm,1.0s						
KUR				MLR	MLR		
	comp=N,18μm,10.0s						
KUR				MLR	MLR		
	comp=E,12μm,10.0s						
KUR				MLR	MLR		
	comp=Z,12μm,10.0s						
YSS	**Yuzh-Sakhalins**	**16.18**	**3⇑**	*i*P	**Pn**	**07 29 23.8**	**-3.4**
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				MLR	MLR		
	comp=Z,17μm,17.0s						
YSS				MLR	MLR		
	comp=N,14μm,15.0s						
YSS	**Yuzh-Sakhalins**	**16.18**	**3**	*e*P	**Pn**	**07 29 24.2**	**-3.0**
	comp=N,236nm,0.9s						
MDJ	**Mudanjiang**	**16.71**	**329**	P	**Pn**	**07 29 32.5**	**-1.4**
MDJ				pP	pP	07 29 37.5	-7.6
MDJ				S	**S**	**07 32 40.5**	**-7.9**
MDJ				PcP	PcP	07 34 19.5	-2.1
MDJ				ScP	ScP	07 37 54.3	+0.8
MDJ				PcS	PcS	07 37 56.3	-1.0
MDJ				pmax	pmax		
	comp=Z,24nm,0.9s						
MDJ				LR	LR		
	comp=N,11μm,19.7s						
MDJ				LR	LR		
	comp=E,12μm,18.9s						
MDJ				LR	LR		
	comp=Z,16μm,15.4s						
MDJ	**Mudanjiang**	**16.71**	**329**	*e*P	**Pn**	**07 29 32.1**	**-1.8**
	comp=Z,90nm,0.9s						
GUMO	**Guam**	**17.38**	**169**	P	**Pn**	**07 29 43.0**	**+0.5**
	comp=Z,7.5nm,0.3s,baz=258,slow=1.4,SNR=14						
GUMO				LR	LR	07 34 47.5	
	comp=Z,11μm,20.9s,baz=360,slow=32						
GUMO	**Guam**	**17.38**	**169**	P	**Pn**	**07 29 43.0**	**+0.5**
GUMO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,11μm,20.9s						
GUMO	**Guam**	**17.38**	**169**	*e*P	**Pn**	**07 29 42.0**	**-0.5**
	comp=Z,2μm,1.2s						
SSE	**Sheshan**	**17.46**	**276**	⇑P	**Pn**	**07 29 44.8**	**+1.4**
SSE				S	**S**	**07 32 58.5**	**-5.4**
SSE				sS	sS	07 33 10.0	-8.6
SSE				pmax	pmax		
	comp=Z,24nm,0.7s						
SSE				pmax	pmax		
	comp=Z,4μm,9.3s						
SSE				LR	LR		
	comp=N,4μm,16.4s						
SSE				LR	LR		
	comp=E,17μm,16.4s						
SSE				LR	LR		
	comp=Z,25μm,16.1s						
CN2	**Changchun**	**18.20**	**320**	*e*P	**Pn**	**07 29 51.3**	**-1.0**
CN2				PP		07 30 07.3	
CN2				*e*S	**S**	**07 33 09.8**	**-8.9**
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,3μm,7.0s						
CN2				LR	LR		
	comp=N,12μm,14.0s						
CN2				LR	LR		
	comp=E,17μm,14.0s						
CN2				LR	LR		
	comp=Z,16μm,16.0s						
DL2	**Dalian**	**18.21**	**302**	P	**Pn**	**07 29 51.0**	**-1.6**
DL2				S	**S**	**07 33 14.0**	**-5.1**
DL2				pmax	pmax		
	comp=Z,40nm,0.7s						
DL2				LR	LR		
	comp=N,8μm,18.3s						
DL2				LR	LR		
	comp=E,10μm,17.1s						
DL2				LR	LR		
	comp=Z,14μm,17.2s						
UGL	**Uglegorsk**	**18.28**	**1⇑**	*i*P	**Pn**	**07 29 56.0**	**+2.7**
UGL				*e*S	**S**	**07 33 21.0**	**+0.7**
UGL				pmax	pmax		
	comp=Z,46nm,0.7s						
UGL				pmax	pmax		
	comp=N,3μm,10.0s						
UGL				pmax	pmax		
	comp=E,800nm,10.0s						
UGL				smax			
	comp=N,4μm,10.0s						
UGL				smax			
	comp=E,9μm,10.0s						
UGL				MLR	MLR		
	comp=N,13μm,16.0s						
UGL				MLR	MLR		
	comp=E,7μm,14.0s						
HABR	**Khabarovsk**	**18.35**	**346***c*	*i*P	**Pn**	**07 29 54.1**	**-0.1**
HABR				*e*S	**S**	**07 33 21.9**	**+0.2**
HABR				pmax	pmax		
	comp=Z,555nm,2.2s						
HABR				pmax	pmax		
	comp=N,365nm,2.3s						
HABR				pmax	pmax		
	comp=E,263nm,2.3s						
HABR				MLR	MLR		
	comp=N,6μm,14.0s						
HABR				MLR	MLR		
	comp=Z,15μm,16.0s						
HABR				MLR	MLR		
	comp=E,9μm,16.0s						
TATO	**Taipei**	**18.63**	**257**	*e*P	**Pn**	**07 29 59.0**	**+1.3**
	comp=E,481nm,1.2s						
YHNB	**Yeheng**	**18.84**	**256**	*e*P	**Pn**	**07 30 00.5**	**+0.2**
	comp=E,207nm,0.9s						
NACB	**Ninganchiao**	**18.86**	**254**	*e*P	**Pn**	**07 29 59.7**	**-0.8**
	comp=E,102nm,0.8s						
NJ2	**Nanjing**	**19.39**	**280**	*e*P	**Pn**	**07 30 07.3**	**+0.4**
NJ2				pP	pP	07 30 11.0	-3.9
NJ2				PP		07 30 24.3	
NJ2				S	**S**	**07 33 31.0**	**-12**
NJ2				pmax	pmax		
	comp=Z,90nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,3μm,10.7s						
NJ2				LR	LR		
	comp=N,8μm,14.8s						
NJ2				LR	LR		
	comp=E,20μm,18.8s						
NJ2				LR	LR		
	comp=Z,22μm,19.1s						
YULB	**Yu-li**	**19.44**	**253**	*e*P	**Pn**	**07 30 07.1**	**-0.5**
	comp=Z,286nm,0.8s						
SSLB	**Suanglung**	**19.55**	**254**	*e*P	**Pn**	**07 30 08.8**	**0.0**
	comp=Z,801nm,1.1s						
KLR	**Kul'dur**	**19.86**	**341**	*e*P	**Pn**	**07 30 05.0**	**-7.3**
KLR				*e*S	**S**	**07 33 54.5**	**+2.4**
KLR				pmax	pmax		
	comp=E,150nm,2.2s						
KLR				pmax	pmax		
	comp=Z,260nm,2.2s						
KLR				pmax	pmax		
	comp=E,1μm,11.0s						
KLR				pmax	pmax		
	comp=Z,3μm,11.0s						
KLR				smax			
	comp=N,2μm,16.0s						
KLR				smax			
	comp=E,3μm,16.0s						
TWG	**Pinlang**	**19.89**	**251**	*e*P	**Pn**	**07 30 12.5**	**-0.3**
	comp=E,373nm,1.1s						
TPUB	**Ta-pu**	**20.03**	**253**	*e*P	**P**	**07 30 14.4**	**+1.8**
	comp=E,461nm,1.1s						
TPUB				*e*PcP	PcP	07 34 25.0	-2.6
TIA	**Tai'an**	**21.04**	**291**	*e*P	**P**	**07 30 22.8**	**-0.6**
TIA				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.1						
TIA				pmax	pmax		
	comp=Z,410nm,9.0s						
TIA				LR	LR		
	comp=N,9μm,15.0s,MS5.3						
TIA				LR	LR		
	comp=E,5μm,15.0s,MS5.3						
QZH	**Quanzhou**	**21.08**	**260⇑**	*i*P	**P**	**07 30 24.3**	**+0.4**
QZH				S	**S**	**07 34 19.0**	**+2.4**
QZH				pmax	pmax		
	comp=Z,300nm,1.3s,mb5.5						
QZH				pmax	pmax		
	comp=Z,3μm,8.9s						
QZH				LR	LR		
	comp=N,23μm,16.4s,MS5.7						
QZH				LR	LR		
	comp=E,13μm,14.4s,MS5.7						
QZH				LR	LR		
	comp=Z,37μm,20.6s						
APYP	**Conner**	**22.47**	**240**	*e*P	**P**	**07 30 37.8**	**-1.0**
BJT	**Baijiatuau**	**22.57**	**301**	*e*P	**P**	**07 30 38.4**	**-1.4**
BJT				pmax	pmax		
	comp=Z,132nm,0.9s						
BJT				MLR	MLR		
	comp=Z,28μm,19.0s						
BJT	**Baijiatuau**	**22.57**	**301**	*e*P	**P**	**07 30 38.4**	**-1.4**
	comp=Z,132nm,0.9s,mb5.4						
BJT				LR	LR		
	comp=Z,28μm,19.0s,MS5.7						
BJI	**Beijing**	**22.58**	**301**	P	**P**	**07 30 38.0**	**-1.8**
BJI				sP	sP	07 30 52.3	-1.5
BJI				S	**S**	**07 34 34.5**	**-11**
BJI				sS	sS	07 34 59.8	-1.0
BJI				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.0						
BJI				pmax	pmax		
	comp=Z,2μm,9.1s						
BJI				LR	LR		
	comp=N,9μm,15.8s,MS5.8						
BJI				LR	LR		
	comp=E,29μm,16.4s,MS5.8						
BJI				LR	LR		
	comp=Z,19μm,18.5s,MS5.6						
PIP	**Pasuquin**	**22.66**	**242⇑**	*e*P	**P**	**07 30 38.0**	**-2.8**
SKR	**Severo-Kuril's**	**22.67**	**25**	*e*P	**P**	**07 30 38.5**	**-2.2**
SKR				*e*S	**S**	**07 34 40.0**	**-6.6**
SKR				*e*SS		07 35 32.0	
SKR				pmax	pmax		
	comp=Z,480nm,1.5s,mb5.7						
SKR				smax			
	comp=N,5μm,14.0s						
SKR				smax			
	comp=E,11μm,16.0s						
SKR				MLR	MLR		
	comp=N,4μm,10.0s,MS5.5						
SKR				MLR	MLR		
	comp=E,8μm,10.0s,MS5.5						
SKR				MLR	MLR		
	comp=Z,9μm,10.0s,MS5.5						
WHN	**Wuhan**	**23.36**	**276**	⇓P	**P**	**07 30 47.0**	**-1.2**
WHN				PP		07 31 14.0	
WHN				pmax	pmax		
	comp=Z,4μm,9.9s						
WHN				LR	LR		
	comp=N,18μm,14.8s,MS6.0						
WHN				LR	LR		
	comp=E,41μm,15.6s,MS6.0						
WHN				LR	LR		
	comp=Z,4μm,9.9s						
PVCP	**Virac**	**23.42**	**227**	*e*P	**P**	**07 30 48.8**	**0.0**
BALP	**Baler**	**23.61**	**235**	*e*P	**P**	**07 30 51.2**	**+0.7**
BOLP	**Bolinao**	**24.39**	**239**	*e*P	**P**	**07 30 55.8**	**-1.8**
HIA	**Hailar**	**24.74**	**324**	*e*P	**P**	**07 31 00.0**	**-0.6**
HIA				pmax	pmax		
	comp=Z,425nm,1.3s						
HIA				MLR	MLR		
	comp=Z,7μm,19.0s						
HIA	**Hailar**	**24.74**	**324**	*e*P	**P**	**07 30 60.0**	**-0.6**
	comp=Z,425nm,1.3s,mb5.8						
HIA				LR	LR		
	comp=Z,7μm,19.0s,MS5.2						
TIY	**Taiyuan**	**24.96**	**294**	*e*P	**P**	**07 31 01.0**	**-1.7**
TIY				PP		07 31 42.8	
TIY				S	**S**	**07 35 29.8**	**+5.8**
TIY				pmax	pmax		
	comp=Z,1μm,10.6s						
TIY				LR	LR		
	comp=N,4μm,14.8s,MS5.7						
TIY				LR	LR		
	comp=E,18μm,15.5s,MS5.7						
TIY				LR	LR		
	comp=Z,24μm,17.1s,MS5.8						
TGY	**Tagaytay City**	**25.18**	**233**	P	**P**	**07 31 06.1**	**+1.3**
	comp=Z,156nm,0.3s,mb6.0,baz=124,slow=16,SNR=7.2						
TGY				LR	LR	07 41 30.3	
	comp=Z,46nm,18.1s,baz=103,slow=38						
TGY	**Tagaytay City**	**25.18**	**233**	P	**P**	**07 31 06.1**	**+1.2**
TGY				pmax	pmax		
	comp=Z,156nm,0.3s						
TGY				MLR	MLR		
	comp=Z,46nm,18.1s						
TGY	**Tagaytay City**	**25.18**	**233**	P	**P**	**07 31 06.1**	**+1.3**
TGY				LR	LR	07 41 30.3	
PETK	**Petropavlovsk-**	**25.23**	**23**	P	**P**	**07 31 06.1**	**+1.1**
	comp=Z,3.7nm,0.6s,mb4.1,baz=219,slow=2.5,SNR=5.2						
PETK	**Petropavlovsk-**	**25.23**	**23**	P	**P**	**07 31 06.1**	**+1.1**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
WAKE	**Wake Island**	**25.42**	**111**	*e*P	**P**	**07 31 06.5**	**-0.5**
	comp=Z,2μm,2.7s,mb6.2						
PET	**Petropavlovsk**	**25.49**	**24**	*e*P	**P**	**07 31 10.9**	**+3.5**
PET				*e*S	**S**	**07 35 32.1**	**0.0**
PET				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.0						
PET				pmax	pmax		
	comp=Z,1μm,9.9s						
PET	**Petropavlovsk**	**25.49**	**24**	*e*P	**P**	**07 31 11.1**	**+3.7**
	comp=Z,138nm,1.3s,mb5.3						
PET				LR	LR		
	comp=Z,6μm,19.0s,MS5.2						
HKC	**Hong Kong Obse**	**25.84**	**258**	P	**P**	**07 31 12.0**	**+1.2**
HKC				S	**S**	**07 35 48.0**	**+10**
LUBP	**Lubang**	**25.91**	**234**	*e*P	**P**	**07 31 12.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**26.18**	**301**	⇑P	**P**	**07 31 12.5**	**-1.3**
HHC				PP		07 31 53.5	
HHC				PcP	PcP	07 34 39.8	-0.3
HHC				S	**S**	**07 35 41.8**	**-1.5**
HHC				SS		07 36 47.3	
HHC				ScP	ScP	07 38 18.8	+1.7
HHC				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.0						
HHC				pmax	pmax		
	comp=Z,1μm,8.0s						
HHC				LR	LR		
	comp=N,9μm,16.0s,MS5.6						
HHC				LR	LR		
	comp=E,11μm,15.2s,MS5.6						
HHC				LR	LR		
	comp=Z,16μm,15.1s,MS5.7						
GZH	**Guangzhou**	**26.22**	**260**	P	**P**	**07 31 08.8**	**-5.5**
GZH				S	**S**	**07 35 35.3**	**-8.9**
GZH				LR	LR		
	comp=N,8μm,16.7s,MS5.6						
GZH				LR	LR		
	comp=E,13μm,21.2s,MS5.6						
GZH				LR	LR		
	comp=Z,26μm,17.3s,MS5.8						
BTO	**Baotou**	**27.28**	**300**	*e*P	**P**	**07 31 22.5**	**-1.2**
BTO				S	**S**	**07 36 09.5**	**+8.9**
BTO				LR	LR		
	comp=N,7μm,15.7s,MS5.6						
BTO				LR	LR		
	comp=E,9μm,15.2s,MS5.6						
ENH	**Enshi**	**27.56**	**277**	*e*P	**P**	**07 31 24.9**	**-1.3**
	comp=E,46nm,0.5s,mb5.4						
ENH				LR	LR		
	comp=Z,16μm,21.0s,MS5.6						
XAN	**Xi'an**	**27.66**	**285**	P	**P**	**07 31 25.3**	**-1.8**
XAN				pP	pP	07 31 38.5	+1.2
XAN				S	**S**	**07 36 15.5**	**+8.8**
XAN				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
XAN				LR	LR		
	comp=N,5μm,18.2s,MS5.2						
XAN				LR	LR		
	comp=E,2μm,19.7s,MS5.2						
XAN				LR	LR		
	comp=Z,3μm,16.7s,MS4.9						
DAV	**Davao City (W)**	**27.92**	**216**	LR	LR	07 41 26.5	
	comp=Z,7μm,18.8s,MS5.3,baz=220,slow=34						
DAV	**Davao City (W)**	**27.92**	**216**	PFAKE		07 31 40.0	+10
DAV				LR	LR		
	comp=Z,9μm,19.0s,MS5.4						
CLNS	**Chul'man**	**28.53**	**341**	*e*P	**P**	**07 31 34.7**	**+0.1**
CLNS				*e*		07 32 25.2	
CLNS				*e*PPP		07 32 32.0	
CLNS				*e*		07 34 47.9	
CLNS				*e*S	**S**	**07 36 18.8**	**-1.0**
CLNS				*e*SS	SS	07 37 37.5	-44
CLNS				pmax	pmax		
	comp=Z,127nm,1.5s,mb5.4						
CLNS				pmax	pmax		
	comp=N,176nm,1.7s						
CLNS				pmax	pmax		
	comp=E,59nm,1.4s						
CLNS				pmax	pmax		
	comp=E,37nm,1.1s						
CLNS				pmax	pmax		
	comp=N,88nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.1						
CLNS				smax			
	comp=E,2μm,14.1s						
CLNS				smax			
	comp=N,3μm,13.8s						
CLNS				MLR	MLR		
	comp=E,2μm,14.0s,MS5.3						
CLNS				MLR	MLR		
	comp=Z,5μm,16.0s,MS5.2						
CLNS				MLR	MLR		
	comp=N,5μm,16.0s,MS5.3						
CIT	**Chita**	**29.54**	**324**	*e*P	**P**	**07 31 44.2**	**+0.6**
CIT				pmax	pmax		
	comp=Z,336nm,3.1s						
GYA	**Guiyang**	**30.83**	**271⇑**	*i*P	**P**	**07 31 56.3**	**+1.0**
GYA				pP	pP	07 32 02.0	-3.6
GYA				PP	PP	07 32 58.0	-7.3
GYA				PcP	PcP	07 34 54.0	+2.1
GYA				S	**S**	**07 36 54.0**	**-2.7**
GYA				SS	SS	07 38 37.0	-32
GYA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
GYA				pmax	pmax		
	comp=Z,150nm,4.9s						
GYA				LR	LR		
	comp=N,3μm,17.6s,MS5.2						
GYA				LR	LR		
	comp=E,3μm,17.0s,MS5.2						
GYA				LR	LR		
	comp=Z,4μm,18.0s,MS5.1						
QIZ	**Qiongzhong**	**30.92**	**255**	P	**P**	**07 31 56.3**	**+0.1**
QIZ				pP	pP	07 32 00.5	-6.0
QIZ				S	**S**	**07 36 56.8**	**-1.4**
QIZ				sS	sS	07 37 10.5	-4.7
QIZ				pmax	pmax		
	comp=Z,12nm,1.9s,mb4.4						
QIZ				LR	LR		
	comp=N,5μm,17.1s,MS5.3						
QIZ				LR	LR		
	comp=E,2μm,17.6s,MS5.3						
QIZ				LR	LR		
	comp=Z,9μm,20.3s,MS5.4						
QIZ	**Qiongzhong**	**30.92**	**255**	PFAKE		07 32 10.0	+14
QIZ				LR	LR		
	comp=Z,10μm,20.0s,MS5.5						
ULN	**Ulaanbaatar**	**31.33**	**313**	*e*P	**P**	**07 31 59.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.5						
ULN	**Ulaanbaatar**	**31.33**	**313**	*e*P	**P**	**07 31 59.9**	**+0.4**
	comp=Z,90nm,1.2s,mb5.5						
ULN	**Ulaanbaatar**	**31.33**	**313**	P	**P**	**07 32 00.4**	**+0.9**
	SNR=40						
ULN				P		07 32 00.4	
	SNR=40						
SONM	**Songino Array**	**31.74**	**313**	P	**P**	**07 32 03.6**	**+0.6**
	comp=Z,30nm,1.0s,mb5.1,baz=115,slow=8.4,SNR=49						
SONM				LR	LR	07 45 36.4	
	comp=Z,10μm,18.6s,MS5.5,baz=112,slow=38						
SONM	**Songino Array**	**31.74**	**313**	P	**P**	**07 32 03.6**	**+0.5**
SONM				pmax	pmax		
	comp=Z,30nm,1.0s						
SONM				MLR	MLR		
	comp=Z,10μm,18.6s						
LZH	**Lanzhou**	**31.76**	**290**	P	**P**	**07 32 03.0**	**-0.4**
LZH				pP	pP	07 32 14.5	+0.8
LZH				sP	sP	07 32 19.8	+1.8
LZH				PP	PP	07 33 08.0	-7.4
LZH				pmax	pmax		
	comp=Z,89nm,1.3s,mb5.4						
LZH				pmax	pmax		
	comp=Z,440nm,5.2s						
LZH				LR	LR		
	comp=E,13μm,14.4s						
LZH				LR	LR		
	comp=Z,15μm,16.1s,MS5.8						
YAK	**Yakutsk**	**32.20**	**350**	*e*P	**P**	**07 32 05.6**	**-1.4**
YAK				*e*PP	pP	07 32 14.5	-2.8
YAK				*e*PPP		07 33 20.0	
YAK				*e*		07 35 01.1	
YAK				*e*S	**S**	**07 37 14.1**	**-3.2**
YAK				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.4						
YAK				pmax	pmax		
	comp=N,25nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.4						
YAK				pmax	pmax		
	comp=E,41nm,1.3s						
YAK				pmax	pmax		
	comp=N,34nm,1.0s						
YAK				smax			
	comp=E,292nm,4.0s						
YAK				smax			
	comp=N,87nm,2.2s						
YAK				MLR	MLR		
	comp=Z,5μm,15.0s,MS5.3						
YAK				MLR	MLR		
	comp=E,4μm,15.0s,MS5.3						
YAK				MLR	MLR		
	comp=N,3μm,15.0s,MS5.3						
YAK	**Yakutsk**	**32.20**	**350**	*e*P	**P**	**07 32 06.5**	**-0.4**
	comp=N,79nm,0.7s,mb5.7						
CD2	**Chengdu**	**32.33**	**280**	P	**P**	**07 32 06.5**	**-2.0**
CD2				pP	pP	07 32 18.5	-0.3
CD2				sP	sP	07 32 24.0	+0.9
CD2				PP	PP	07 33 15.5	-6.3
CD2				S	**S**	**07 37 16.0**	**-4.0**
CD2				sS	sS	07 37 36.0	-1.0
CD2				SS	SS	07 39 12.5	-27
CD2				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.6						
CD2				pmax	pmax		
	comp=Z,990nm,11.2s						
CD2				LR	LR		
	comp=N,19μm,18.0s						
CD2				LR	LR		
	comp=Z,16μm,20.4s,MS5.7						
SEY	**Seymchan**	**32.92**	**9***c*	*i*P	**P**	**07 32 12.8**	**-0.4**

BOD	**Bodaibo**	**33.01 333**	*i* P	**P**	**07 32 13.9**	**-0.2**
BOD			pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5					
MYLDM	**Lahad Datu**	**33.43 225**	P	**P**	**07 32 20.3**	**+2.0**
SDKM	**Sandakan**	**33.88 227**	P	**P**	**07 32 25.8**	**+3.6**
SDKM	**Sandakan**	**33.88 227**	P	**P**	**07 32 25.8**	**+3.6**
KKM	**Kota Kinabalu**	**34.21 229**	P	**P**	**07 32 28.1**	**+3.1**
KKM	**Kota Kinabalu**	**34.21 229**	P	**P**	**07 32 28.1**	**+3.1**
KKM	**Kota Kinabalu**	**34.21 229**	*e*P	**P**	**07 32 27.0**	**+2.0**
	comp=Z,60nm,1.0s,mb5.5					
KKM			LR	LR		
	comp=Z,8μm,19.0s,MS5.5					
ZAK	**Zakamensk**	**34.53 316**	*e*P	**P**	**07 32 28.1**	**+0.7**
ZAK			pmax	pmax		
	comp=Z,65nm,1.5s,mb5.3					
KMI	**Kunming**	**34.60 270**	P	**P**	**07 32 27.5**	**-0.9**
KMI			pP	pP	07 32 37.5	-1.2
KMI			sP	sP	07 32 41.5	-1.5
KMI			PP	PP	07 33 44.0	-3.1
KMI			S	**S**	**07 37 52.5**	**-2.9**
KMI			sS	sS	07 38 09.3	-3.1
KMI			pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0					
KMI			pmax	pmax		
	comp=Z,620nm,8.0s					
KMI			LR	LR		
	comp=N,5μm,13.9s,MS5.5					
KMI			LR	LR		
	comp=E,5μm,15.8s,MS5.5					
KMI			LR	LR		
	comp=Z,8μm,15.8s,MS5.5					
IRK	**Irkutsk**	**34.64 319**⇑	*i*P	**P**	**07 32 29.1**	**+0.8**
IRK			pmax	pmax		
	comp=Z,231nm,1.9s,mb5.8					
TLY	**Talaya**	**34.78 318**	P	**P**	**07 32 30.1**	**+0.6**
	comp=Z,442nm,1.2s,mb6.3,SNR=40					
TLY	**Talaya**	**34.78 318***c*	*i*P	**P**	**07 32 30.1**	**+0.6**
TLY			*e*		07 33 51.3	
TLY			*e*S	**S**	**07 38 03.3**	**+5.8**
TLY			*e*SS	SS	07 40 06.9	-22
TLY			pmax	pmax		
	comp=Z,219nm,1.8s,mb5.8					
TLY			MLR	MLR		
	comp=Z,2μm,17.0s,MS4.8					
TLY	**Talaya**	**34.78 318**	*e*P	**P**	**07 32 30.9**	**+1.4**
	comp=Z,394nm,1.8s,mb6.0					
TLY			LR	LR		
	comp=Z,12μm,19.0s,MS5.6					
TLY	**Talaya**	**34.78 318**	P	**P**	**07 32 31.2**	**+1.7**
	SNR=94					
TLY			P		07 32 31.2	
	SNR=94					
GTA	**Gaotai**	**34.95 296**	⇑P	**P**	**07 32 30.0**	**-1.2**
GTA			pP	pP	07 32 39.3	-2.2
GTA			sP	sP	07 32 43.5	-2.3
GTA			PP	PP	07 33 50.3	-0.4
GTA			S	**S**	**07 37 56.0**	**-4.4**
GTA			ScP	ScP	07 38 46.0	+0.1
GTA			ScS	ScS	07 42 50.5	+1.1
GTA			pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9					
GTA			pmax	pmax		
	comp=Z,910nm,8.6s					
GTA			LR	LR		
	comp=N,11μm,17.2s,MS5.9					
GTA			LR	LR		
	comp=E,17μm,18.7s,MS5.9					
GTA			LR	LR		
	comp=Z,22μm,17.5s,MS6.0					
MIDW	**Midway**	**35.73 83**	PFAKE		07 32 50.0	+12
MIDW			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
MOY	**Mondy**	**36.32 317**	*e*P	**P**	**07 32 42.5**	**-0.3**
MOY			pmax	pmax		
	comp=Z,197nm,3.0s					
BILL	**Bilibino**	**40.02 14***c*	*i*P	**P**	**07 33 12.9**	**-0.8**
BILL			*e**PP	pP	07 33 18.0	-6.2
BILL			*e*		07 34 53.0	
BILL			*e*		07 35 16.4	
BILL			*i*S	**S**	**07 39 14.1**	**-2.6**
BILL			pmax	pmax		
	comp=Z,35nm,1.7s,mb4.8					
BILL			MLR	MLR		
	comp=Z,5μm,16.0s,MS5.4					
BILL	**Bilibino**	**40.02 14**	*e*P	**P**	**07 33 13.2**	**-0.6**
	comp=Z,46nm,1.0s,mb5.2					
CHTO	**Chiang Mai**	**40.23 263**	*e*P	**P**	**07 33 15.6**	**-0.5**
CHTO			pmax	pmax		
	comp=Z,39nm,1.2s,mb5.0					
CHTO			MLR	MLR		
	comp=Z,9μm,20.0s,MS5.6					
CHTO	**Chiang Mai**	**40.23 263**	*e*P	**P**	**07 33 15.6**	**-0.5**
	comp=Z,39nm,1.2s,mb5.0					
CHTO			LR	LR		
	comp=Z,9μm,20.0s,MS5.6					
CHTO	**Chiang Mai**	**40.23 263**	P	**P**	**07 33 15.9**	**-0.2**
	SNR=11					
CHTO			P		07 33 15.9	
	SNR=11					
CM31	**Chiang Mai Arr**	**40.39 262**	*e*P	**P**	**07 33 17.6**	**+0.2**
	comp=Z,8.4nm,0.6s,mb4.7					
CM31			LR	LR		
	comp=Z,10μm,20.0s,MS5.7					
CMAR	**Chiang Mai Arr**	**40.39 262**	P	**P**	**07 33 16.7**	**-0.7**
	comp=Z,8.6nm,0.8s,mb4.5,baz=51,slow=7.2,SNR=27					
CMAR			PcP	PcP	07 35 21.8	+1.6
	comp=Z,3.8nm,0.8s,baz=74,slow=1.2,SNR=4.8					
CMAR			LR	LR	07 50 37.1	
	comp=Z,11μm,20.1s,MS5.7,baz=74,slow=37					
CMAR	**Chiang Mai Arr**	**40.39 262**	P	**P**	**07 33 16.7**	**-0.7**
CMAR					07 35 21.8	
CMAR			pmax	pmax		
	comp=Z,9.0nm,0.8s					
CMAR			pmax	pmax		
	comp=Z,4.0nm,0.8s					
CMAR			MLR	MLR		
	comp=Z,11μm,20.1s					
NST	**Nakhon Sawan**	**40.66 258**	P	**P**	**07 33 20.0**	**+0.4**
BDT	**Bhumibol Dam**	**40.88 261**	P	**P**	**07 33 21.0**	**-0.4**
TIXI	**Tiksi**	**41.50 354**	*i*P	**P**	**07 33 24.8**	**-1.1**
TIXI			*e*		07 35 01.5	
TIXI			*e*S	**S**	**07 39 37.8**	**-0.8**
TIXI			*e*SS	SS	07 42 42.6	-1.1
TIXI			*e*		07 43 24.1	
TIXI			pmax	pmax		
	comp=Z,22nm,0.8s,mb4.8					
TIXI			MLR	MLR		
	comp=Z,4μm,15.0s,MS5.4					
TIXI	**Tiksi**	**41.50 354**	*e*P	**P**	**07 33 24.6**	**-1.3**
	comp=Z,23nm,0.9s,mb4.8					
TIXI			LR	LR		
	comp=Z,2μm,19.0s,MS5.0					
KSM	**Kuching**	**41.52 231**	P	**P**	**07 33 27.6**	**+1.0**
KSM	**Kuching**	**41.52 231**	P	**P**	**07 33 27.6**	**+1.0**
KSM	**Kuching**	**41.52 231**	*e*P	**P**	**07 33 26.8**	**+0.1**
KSM			LR	LR		
	comp=Z,5μm,20.0s,MS5.4					
LSA	**Lhasa**	**43.24 282**	P	**P**	**07 33 39.5**	**-1.1**
LSA			LR	LR		
	comp=N,3μm,19.8s,MS5.7					
LSA			LR	LR		
	comp=E,9μm,21.9s,MS5.7					
LSA			LR	LR		
	comp=Z,12μm,21.9s,MS5.8					
LSA	**Lhasa**	**43.24 282**	*e*P	**P**	**07 33 41.2**	**+0.6**
LSA			pmax	pmax		
	comp=Z,39nm,1.0s,mb5.1					
LSA			MLR	MLR		
	comp=Z,13μm,20.0s,MS5.8					
LSA	**Lhasa**	**43.24 282**	*e*P	**P**	**07 33 41.2**	**+0.6**
	comp=Z,40nm,1.0s,mb5.1					
LSA			LR	LR		
	comp=Z,13μm,20.0s,MS5.8					
UNV	**Unalaska Valle**	**43.59 43**	*e*P	**P**	**07 33 43.9**	**+0.8**
	comp=Z,41nm,0.9s,mb5.2					
UNV			*e*pP	pP	07 33 52.5	-1.1
HNR	**Honiara**	**43.71 153**	PFAKE		07 34 00.0	+16
HNR			LR	LR		
	comp=Z,8μm,22.0s,MS5.6					
SHL	**Shillong**	**43.79 276**	*e*P	**P**	**07 33 45.0**	**-0.1**
SHL			*i*x	x	07 43 45.0	
WMQ	**Urumqi**	**44.03 303**	P	**P**	**07 33 48.0**	**+1.2**
WMQ			sP	sP	07 34 03.0	+1.4
WMQ			PP	PP	07 35 32.0	+2.4
WMQ			PcP	PcP	07 35 33.3	+1.5
WMQ			S	**S**	**07 40 17.5**	**+1.0**
WMQ			sS	sS	07 40 35.8	+1.9
WMQ			SS	SS	07 43 29.0	-5.2
WMQ			ScS	ScS	07 43 41.5	-1.1
WMQ			pmax	pmax		
	comp=Z,51nm,2.0s,mb4.9					
WMQ			pmax	pmax		
	comp=Z,1μm,4.5s					
WMQ			LR	LR		
	comp=N,4μm,13.0s,MS5.7					
WMQ			LR	LR		
	comp=E,5μm,15.0s,MS5.7					
WMQ			LR	LR		
	comp=Z,2μm,18.0s,MS5.1					
KAKA	**Kakadu**	**44.11 193**	*e*P	**P**	**07 33 46.2**	**-1.4**
	comp=Z,87nm,0.8s,mb5.5					
KAKA	**Kakadu**	**44.11 193**	*e*P	**P**	**07 33 46.5**	**-1.1**
	comp=Z,246nm,0.8s,mb6.0					
COEN	**Coen**	**44.50 178**	*e*P	**P**	**07 33 50.0**	**-0.7**
	comp=Z,376nm,0.8s,mb6.3					
SNG	**Songkhla**	**44.88 247**	P	**P**	**07 33 55.0**	**+1.1**
	comp=Z,160nm,0.8s,mb5.9					
KULM	**Kulim**	**46.00 245**	P	**P**	**07 34 03.3**	**+0.6**
KULM	**Kulim**	**46.00 245**	P	**P**	**07 34 03.3**	**+0.6**
KULM	**Kulim**	**46.00 245**	*e*P	**P**	**07 34 03.0**	**+0.2**
	comp=Z,62nm,1.1s,mb5.5					
KULM			LR	LR		
	comp=Z,4μm,19.0s,MS5.3					
IPM	**Ipoh**	**46.22 244**	P	**P**	**07 34 05.0**	**+0.6**
IPM	**Ipoh**	**46.22 244**	P	**P**	**07 34 05.0**	**+0.6**
ZAA0	**Zalesovo Array**	**46.38 317**	*e*P	**P**	**07 34 05.2**	**0.0**
ZALV	**Zalesovo Beam**	**46.38 317**	P	**P**	**07 34 04.8**	**-0.4**
	comp=Z,5.3nm,0.4s,mb4.8,baz=94,slow=7.9,SNR=16					
ZALV			PcP	PcP	07 35 39.5	-0.2
	comp=Z,8.6nm,0.6s,baz=99,slow=4.1,SNR=4.3					
ZALV			LR	LR	07 54 26.0	
	comp=Z,7μm,18.4s,MS5.6,baz=345,slow=37					
ZALV	**Zalesovo Beam**	**46.38 317**	P	**P**	**07 34 04.8**	**-0.4**
ZALV					07 35 39.5	
ZALV			pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8					
ZALV			pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9					
ZALV			MLR	MLR		
	comp=Z,7μm,18.4s,MS5.6					
ZALV	**Zalesovo Beam**	**46.38 317**	P	**P**	**07 34 04.8**	**-0.4**
ZALV			PcP	PcP	07 35 39.5	-0.2
ZALV			LR	LR	07 54 26.0	
JOHN	**Johnston Islan**	**46.58 96**	PFAKE		07 34 20.0	+13
JOHN			LR	LR		
	comp=Z,5μm,21.0s,MS5.4					
TAPN	**Taplejung**	**46.80 280**	*e*P	**P**	**07 34 08.3**	**-0.6**
	comp=Z,73nm,0.9s,mb5.6					
ODAN	**Odare**	**47.22 279**	*e*P	**P**	**07 34 11.0**	**-1.2**
	comp=Z,115nm,0.7s,mb5.9					
NVS	**Novosibirsk**	**47.39 318**⇑	*i*P	**P**	**07 34 12.6**	**-0.5**
NVS			*e*S	**S**	**07 41 09.3**	**+4.7**
NVS			pmax	pmax		
	comp=Z,310nm,2.1s,mb5.9					
NVS			pmax	pmax		
	comp=N,55nm,1.6s					
NVS			pmax	pmax		
	comp=E,191nm,1.7s					
NVS			smax			
	comp=N,106nm,2.1s					
NVS			smax			
	comp=E,160nm,2.1s					
MK31	**Makanchi Array**	**47.75 307**	*e*P	**P**	**07 34 16.3**	**+0.3**
MKAR	**Makanchi Array**	**47.75 307**	P	**P**	**07 34 16.5**	**+0.5**
	comp=E,21nm,0.6s,mb5.3,baz=86,slow=11,SNR=124					
MKAR			LR	LR	07 55 15.6	
	comp=E,6μm,20.2s,MS5.5,baz=92,slow=37					
MKAR	**Makanchi Array**	**47.75 307**	P	**P**	**07 34 16.5**	**+0.5**
MKAR			pmax	pmax		
	comp=Z,21nm,0.6s					
MKAR			MLR	MLR		
	comp=Z,6μm,20.2s					
MKAR	**Makanchi Array**	**47.75 307**	P	**P**	**07 34 16.5**	**+0.5**
MKAR			LR	LR	07 55 15.6	
RAMN	**Ramite**	**47.86 280**	*e*P	**P**	**07 34 16.2**	**-1.0**
	comp=Z,251nm,1.2s,mb6.1					
CAL	**Calcutta**	**47.88 274**	*e*P	**P**	**07 34 17.5**	**+0.1**
CAL			*e*x	x	07 36 06.4	
JIRN	**Jiri**	**47.99 281**	*e*P	**P**	**07 34 18.3**	**+0.1**
	comp=Z,22nm,0.3s,mb5.7					
GUN	**Gumba**	**48.18 281**	*e*P	**P**	**07 34 19.2**	**-0.4**
	comp=Z,274nm,0.9s,mb6.3					
PKI	**Pulchoki**	**48.68 281**	*e*P	**P**	**07 34 22.0**	**-1.5**
	comp=Z,223nm,1.4s,mb6.0					
PKI	**Pulchoki**	**48.68 281**	*e*P	**P**	**07 34 22.0**	**-1.5**
PKI			pmax	pmax		
	comp=Z,223nm,1.4s,mb6.0					
KKN	**Kakani**	**48.72 281**	*e*P	**P**	**07 34 23.0**	**-0.8**
	comp=Z,151nm,1.0s,mb6.0					
KKN	**Kakani**	**48.72 281**	*e*P	**P**	**07 34 23.0**	**-0.8**
KKN			pmax	pmax		
	comp=Z,151nm,1.0s,mb6.0					
PSI	**Prapat**	**48.90 244**	LR	LR	07 52 16.5	
	comp=Z,2μm,20.0s,MS5.1,baz=57,slow=33					
DMN	**Daman**	**48.92 281**	*e*P	**P**	**07 34 24.5**	**-0.8**
	comp=Z,86nm,1.0s,mb5.8					
KURK	**Kurchatov**	**50.04 312**	P	**P**	**07 34 33.8**	**+0.2**
	comp=Z,707nm,0.9s,mb6.7,SNR=27					
KURK	**Kurchatov**	**50.04 312**	LR	LR	07 56 46.1	
	comp=Z,8μm,18.2s,MS5.8,baz=75,slow=37					
KURK	**Kurchatov**	**50.04 312**	*e*P	**P**	**07 34 33.3**	**-0.3**
KURK			*e**PP	pP	07 34 44.4	+0.2
KURK			pmax	pmax		
	comp=Z,155nm,1.0s,mb6.0					
KURK			MLR	MLR		
	comp=Z,10μm,20.0s,MS5.8					
KURK	**Kurchatov**	**50.04 312**	*e*P	**P**	**07 34 33.3**	**-0.2**
	comp=Z,154nm,1.0s,mb6.0					
KURK			*e*pP	pP	07 34 44.4	+0.2
KURK			LR	LR		
	comp=Z,10μm,20.0s,MS5.8					
SVW2	**Sparrevohn**	**50.54 34**	*e*P	**P**	**07 34 37.2**	**+0.1**
TTA	**Tatalina**	**50.59 32**	*e*P	**P**	**07 34 38.4**	**+0.9**
CTA	**Charters Tower**	**50.78 174**	*e*P	**P**	**07 34 39.2**	**-0.1**
	comp=Z,36nm,1.0s,mb5.2					
CTA			*e*S	**S**	**07 41 52.2**	**-0.4**
CTAO	**Charters Tower**	**50.78 174**	*e*P	**P**	**07 34 39.6**	**+0.3**
CTAO			*e**PP	pP	07 34 52.2	+2.2
CTAO			pmax	pmax		
	comp=Z,156nm,1.4s,mb5.8					
CTAO			MLR	MLR		
	comp=Z,3μm,20.0s,MS5.3					
CTAO	**Charters Tower**	**50.78 174**	*e*P	**P**	**07 34 39.6**	**+0.3**
	comp=Z,156nm,1.4s,mb5.8					
CTAO			*e*pP	pP	07 34 52.2	+2.2
CTAO			LR	LR		
	comp=Z,3μm,20.0s,MS5.3					
WRAB	**Tennant Creek**	**50.89 189**	P	**P**	**07 34 38.0**	**-2.2**
	comp=Z,916nm,0.7s,mb6.8,SNR=48					
WRAB	**Tennant Creek**	**50.89 189**	*e*P	**P**	**07 34 38.5**	**-1.7**
WRAB			pmax	pmax		
	comp=Z,202nm,1.1s,mb6.0					
WRAB			MLR	MLR		
	comp=Z,3μm,19.0s,MS5.4					
WRAB	**Tennant Creek**	**50.89 189**	*e*P	**P**	**07 34 38.5**	**-1.7**
	comp=Z,202nm,1.1s,mb6.0					
WRAB			LR	LR		
	comp=Z,3μm,19.0s,MS5.4					
FITZ	**Fitzroy Crossi**	**50.94 200**	*e*P	**P**	**07 34 39.2**	**-1.4**
	comp=Z,64nm,0.8s,mb5.6					
FITZ			*e*S	**S**	**07 41 51.0**	**-4.0**
FITZ			*e*		07 44 30.1	
FITZ	**Fitzroy Crossi**	**50.94 200**	*e*P	**P**	**07 34 39.4**	**-1.3**
	comp=Z,60nm,1.0s,mb5.5					
OHAK	**Old Harbor**	**51.41 39**	*e*P	**P**	**07 34 43.1**	**-0.7**
	comp=Z,49nm,0.9s,mb5.4					
KDAK	**Kodiak Island**	**51.81 38**	P	**P**	**07 34 45.0**	**-1.7**
	comp=Z,508nm,1.2s,mb6.3,SNR=11					
KDAK	**Kodiak Island**	**51.81 38**	*e*P	**P**	**07 34 45.7**	**-1.0**
KDAK			pmax	pmax		
	comp=Z,79nm,0.9s,mb5.6					
KDAK			MLR	MLR		
	comp=Z,6μm,20.0s,MS5.6					
KDAK	**Kodiak Island**	**51.81 38**	*e*P	**P**	**07 34 45.7**	**-1.0**
	comp=Z,79nm,0.9s,mb5.6					
KDAK			LR	LR		
	comp=Z,6μm,20.0s,MS5.6					
RSO	**Redoubt South**	**51.85 35**	*e*P	**P**	**07 34 47.0**	**0.0**
RSO			*e*pP	pP	07 34 57.4	-0.3
AAA	**Alma-Ata**	**51.86 303**	*i*P	**P**	**07 34 48.1**	**+0.8**
AAA			*e*S	**S**	**07 42 06.8**	**-0.6**
AAA			pmax	pmax		
	comp=Z,2μm,13.5s					
AAA			smax			
	comp=E,1μm,14.4s					
AAA			MLR	MLR		
	comp=Z,11μm,17.0s,MS6.0					
PPLA	**Purkeypile**	**52.33 32**	*e*P	**P**	**07 34 50.6**	**+0.1**
	comp=Z,79nm,1.2s,mb5.5					
CHUM	**Lake Minchumin**	**52.37 31**	*e*P	**P**	**07 34 51.2**	**+0.4**
	comp=Z,46nm,1.1s,mb5.3					
ULHL	**Ulahol**	**52.54 302**	P	**P**	**07 34 53.4**	**+1.0**
	SNR=21					
TKM2	**Tokmak 2**	**52.89 303**	P	**P**	**07 34 55.8**	**+0.8**
	SNR=32					
TKM2	**Tokmak 2**	**52.89 303**	*e*P	**P**	**07 34 55.9**	**+0.9**
TKM2			pmax	pmax		
	comp=Z,128nm,1.5s,mb5.6					
TKM2			MLR	MLR		
	comp=Z,6μm,19.0s,MS5.7					
TKM2	**Tokmak 2**	**52.89 303**	*e*P	**P**	**07 34 55.9**	**+0.8**
	comp=Z,128nm,1.5s,mb5.6					
TKM2			LR	LR		
	comp=Z,6μm,19.0s,MS5.7					
KTH	**Kantishna Hill**	**52.95 31**	*e*P	**P**	**07 34 54.9**	**-0.2**
	comp=Z,83nm,1.4s,mb5.5					
BPAW	**Bear Paw Mtn.**	**52.97 31**	*e*P	**P**	**07 34 55.1**	**-0.2**
	comp=Z,17nm,0.9s,mb5.0					
FUNA	**Funafuti**	**53.21 131**	PFAKE		07 35 10.0	+12
FUNA			LR	LR		
	comp=Z,7μm,19.0s,MS5.8					
TRF	**Thorofare Moun**	**53.23 31**	*e*P	**P**	**07 34 56.5**	**-0.7**
	comp=Z,20nm,0.9s,mb5.0					
KSH	**Kashi**	**53.26 299**	P	**P**	**07 35 02.3**	**+4.5**
KSH			*e*PcS	PcS	07 39 57.8	-6.3
KSH			*e*S	**S**	**07 42 32.5**	**+5.9**
KSH			pmax	pmax		
	comp=Z,11nm,0.5s,mb5.0					
KSH			pmax	pmax		
	comp=Z,490nm,3.8s					
KSH			LR	LR		
	comp=N,4μm,17.6s,MS5.6					
KSH			LR	LR		
	comp=E,4μm,19.9s,MS5.6					
KSH			LR	LR		
	comp=Z,4μm,20.2s,MS5.5					
KZA	**Kyzart**	**53.30 302**	P	**P**	**07 35 00.1**	**+2.2**
	SNR=36					
RC01	**Rabbit Creek A**	**53.37 34**	*e*P	**P**	**07 34 58.5**	**+0.3**
	comp=Z,35nm,1.1s,mb5.2					
KBK	**Karagaybulak**	**53.41 303**	P	**P**	**07 34 60.0**	**+1.1**
	SNR=18					
SEW	**Seward**	**53.48 36**	*e*P	**P**	**07 34 57.6**	**-1.5**
	comp=Z,55nm,1.0s,mb5.4					
FRU	**Bishkek**	**53.62 303**	*e*P	**P**	**07 35 01.0**	**+0.7**
FRU			pmax	pmax		
	comp=Z,256nm,2.2s,mb5.8					
USP	**Ospenovka**	**53.62 303**	P	**P**	**07 35 01.1**	**+0.7**
	SNR=13					
COLD	**Coldfoot**	**53.63 27**	*e*P	**P**	**07 35 00.5**	**+0.4**
	comp=Z,43nm,1.5s,mb5.2					
PMR	**Palmer**	**53.67 34**	*e*P	**P**	**07 34 58.8**	**-1.6**
PMR			pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1					
PMR	**Palmer**	**53.67 34**	*e*P	**P**	**07 34 58.8**	**-1.6**
	comp=Z,23nm,1.0s,mb5.1					
AAK	**Ala-Archa**	**53.74 303**	P	**P**	**07 35 02.3**	**+1.0**
	comp=Z,115nm,1.0s,mb5.8,SNR=11					
AAK	**Ala-Archa**	**53.74 303**	P	**P**	**07 35 02.1**	**+0.9**
	SNR=10.0					
AAK	**Ala-Archa**	**53.74 303**	LR	LR	07 58 56.9	
	comp=Z,7μm,20.1s,MS5.7,baz=67,slow=37					
AAK	**Ala-Archa**	**53.74 303***c*	*i*P	**P**	**07 35 01.4**	**+0.1**
AAK			pmax	pmax		
	comp=Z,31nm,2.5s,mb4.8					
AAK			MLR	MLR		
	comp=Z,4μm,21.0s,MS5.4					
AAK	**Ala-Archa**	**53.74 303**	*e*P	**P**	**07 35 01.3**	**0.0**
	comp=Z,54nm,1.3s,mb5.3					
AAK			LR	LR		
	comp=Z,7μm,20.0s,MS5.7					
AAK	**Ala-Archa**	**53.74 303**	P	**P**	**07 35 01.9**	**+0.6**
	SNR=26					
AAK			P		07 35 01.9	
	SNR=26					
UCH	**Uchtor**	**53.80 302**	P	**P**	**07 35 03.6**	**+1.9**
	SNR=26					
UCH	**Uchtor**	**53.80 302**	*e*P	**P**	**07 35 03.1**	**+1.4**
	comp=Z,45nm,1.1s,mb5.3					
UCH			LR	LR		
	comp=Z,6μm,22.0s,MS5.6					
MCK	**McKinley**	**53.85 31**	*e*P	**P**	**07 35 01.6**	**-0.1**
MCK			pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2					
MCK	**McKinley**	**53.85 31**	*e*P	**P**	**07 35 01.6**	**-0.1**
	comp=Z,26nm,0.8s,mb5.2					
DDI	**Dehra Dun**	**53.98 287**	*e*P	**P**	**07 35 01.6**	**-1.6**
DDI			*e*x	x	07 37 05.0	
EKS2	**Erkin-Say**	**54.26 303**	P	**P**	**07 35 05.4**	**+0.4**
	SNR=9.8					
EKS2	**Erkin-Say**	**54.26 303**	*e*P	**P**	**07 35 05.2**	**+0.1**
	comp=Z,30nm,1.1s,mb5.1					
EKS2			LR	LR		
	comp=Z,6μm,19.0s,MS5.7					
COLA	**College**	**54.38 30**	*e*P	**P**	**07 35 06.0**	**+0.4**
COLA			pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0					
COLA			MLR	MLR		
	comp=Z,1μm,19.0s,MS5.1					
COLA	**College**	**54.38 30**	*e*P	**P**	**07 35 06.0**	**+0.5**
	comp=Z,16nm,0.8s,mb5.0					
COLA			LR	LR		
	comp=Z,1μm,19.0s,MS5.1					
AML	**Almayashu**	**54.42 302**	P	**P**	**07 35 07.4**	**+1.2**
	SNR=52					
AML	**Almayashu**	**54.42 302**	*e*P	**P**	**07 35 07.4**	**+1.2**
	comp=Z,86nm,0.2s,mb6.3					
AML			LR	LR		
	comp=Z,4μm,21.0s,MS5.5					
SMLA	**Simla**	**54.46 288**	*i*P	**P**	**07 35 04.7**	**-2.0**
KIP	**Kipapa**	**54.53 84**	*i*P	**P**	**07 35 04.5**	**-2.8**
KIP	**Kipapa**	**54.53 84**	PFAKE		07 35 20.0	+13
KIP			LR	LR		
	comp=Z,6μm,19.0s,MS5.7					
ASAR	**Alice Springs**	**54.62 189**	P	**P**	**07 35 06.0**	**-1.7**
	comp=Z,21nm,0.8s,mb5.2,baz=12,slow=8.8,SNR=128					
ASAR	**Alice Springs**	**54.62 189**	P	**P**	**07 35 06.1**	**-1.6**
ASAR			pmax	pmax		
	comp=Z,21nm,0.8s					
JBP	**Jabalpur**	**54.79 278**⇑	*e*P	**P**	**07 35 08.2**	**-0.9**
JBP			*e*x	x	07 43 09.6	
BVAR	**Borovoye Array**	**54.98 316**	P	**P**	**07 35 10.1**	**0.0**
	comp=Z,12nm,0.6s,mb5.2,baz=92,slow=7.6,SNR=42					
BVAR			LR	LR	07 59 44.1	
	comp=Z,9μm,18.5s,MS5.9,baz=82,slow=37					
BVAR	**Borovoye Array**	**54.98 316**	P	**P**	**07 35 10.1**	**0.0**
BVAR			pmax	pmax		
	comp=Z,12nm,0.6s					
BVAR			MLR	MLR		
	comp=Z,9μm,18.5s					
BHK	**Bhakra**	**54.99 289**	*e*x	x	07 35 05.4	
BRVK	**Borovoye**	**55.04 316**	P	**P**	**07 35 10.4**	**-0.1**
	comp=Z,243nm,1.1s,mb6.1,SNR=22					
BRVK	**Borovoye**	**55.04 316**	*e*P	**P**	**07 35 11.0**	**+0.5**
BRVK			pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4					
BRVK			MLR	MLR		
	comp=Z,7μm,19.0s,MS5.8					
BRVK	**Borovoye**	**55.04 316**	*e*P	**P**	**07 35 11.0**	**+0.5**
	comp=Z,22nm,0.6s,mb5.4					
BRVK			LR	LR		
	comp=Z,7μm,19.0s,MS5.8					
BRVK	**Borovoye**	**55.04 316**	P	**P**	**07 35 10.9**	**+0.4**
	SNR=28					
BRVK			P		07 35 10.9	
	SNR=28					

comp=Z,163nm,1.5s,mb5.8
EGAK Eagle 57.24 30 *e*P **P 07 35 25.0 -1.0**
comp=Z,14nm,0.7s,mb5.1
EGAK LR LR
comp=Z,2μm,20.0s,MS5.2
POHA Pohakuloa 57.32 85 PFAKE 07 35 40.0 +13
POHA LR LR
comp=Z,6μm,20.0s,MS5.7
NOUC Port Laguerre 57.70 153 *e*P **P 07 35 30.3 +0.5**
DZM Mont Dzumac 57.73 152 *e*S **S 07 43 29.5 +3.1**
comp=Z,5μm,26.3s
DZM *e*SS SS 07 47 19.1 +1.4
comp=Z,978nm,23.4s
DZM *e*LQ 07 49 48.3
comp=Z,4μm,31.1s
DZM *e*LR LR 07 52 28.5
comp=Z,6μm,24.6s
DZM Mont Dzumac 57.73 152 *e*P **P 07 35 31.6 +1.6**
DZM Mont Dzumac 57.73 152 *e*P **P 07 35 32.1 +2.1**
comp=Z,198nm,1.1s,mb6.1
DAWY Dawson 58.06 31 *e*P **P 07 35 31.9 0.0**
AJM Ajmer 58.09 284 *e*P **P 07 35 31.0 -1.6**
HYB Hyderabad 58.34 272 *i* P **P 07 35 33.0 -1.5**
PNL Peninsula 58.57 36 *e*P **P 07 35 34.3 -1.1**
comp=Z,33nm,1.1s,mb5.3
HYT Haines Junctio 59.33 34 *e*P **P 07 35 43.8 +3.1**
MSVF Nonsavu 59.66 139 PFAKE 07 36 00.0 +17
MSVF LR LR
comp=Z,4μm,19.0s,MS5.5
KBL Kabul 59.92 295 *e*P **P 07 35 45.5 +0.3**
KBL pmax pmax
comp=Z,106nm,1.0s,mb5.8
KBL Kabul 59.92 295 *e*P **P 07 35 45.5 +0.2**
comp=Z,106nm,1.0s,mb5.8
INK Inuvik 59.95 25 P **P 07 35 44.0 -0.8**
comp=Z,14nm,0.8s,mb5.0,baz=286,slow=6.7,SNR=31
INK LR LR 08 05 28.4
comp=Z,2μm,18.9s,MS5.3,baz=139,slow=40
INK Inuvik 59.95 25 P **P 07 35 44.0 -0.8**
INK pmax pmax
comp=Z,14nm,0.8s
INK MLR MLR
comp=Z,2μm,18.9s
INK Inuvik 59.95 25 *e*P **P 07 35 43.7 -1.1**
comp=Z,28nm,1.0s,mb5.2
SVE Sverdlovsk 59.99 321⇓*e*P **P 07 35 45.8 +0.5**
SVE *e* 07 38 02.1
SVE *e*S **S 07 44 00.5 +5.5**
SVE *e* 07 45 35.5
SVE pmax pmax
comp=Z,87nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,5μm,17.0s,MS5.7
COCO West Island 60.57 232 PFAKE 07 36 00.0 +10
COCO LR LR
comp=Z,2μm,19.0s,MS5.3
SKAG Skagway 60.64 36 *e*P **P 07 35 52.3 +2.6**
comp=Z,47nm,1.3s,mb5.5
ARU Arti 61.19 321 P **P 07 35 53.7 +0.2**
comp=Z,754nm,0.6s,SNR=18
ARU Arti 61.19 321*c i*P **P 07 35 53.6 +0.1**
ARU *e* 07 36 36.1
ARU *e* 07 38 04.3
ARU S **S 07 44 14.1 +3.7**
ARU 07 45 38.5
ARU SS SS 07 48 04.6 -5.7
ARU SSS 07 50 54.7
ARU pmax pmax
comp=Z,148nm,1.2s,mb6.0
ARU MLR MLR
comp=Z,5μm,17.0s,MS5.8
ARU Arti 61.19 321 *e*P **P 07 35 53.4 -0.1**
comp=Z,95nm,0.8s,mb6.0
ARU LR LR
comp=Z,5μm,19.0s,MS5.7
PALK Pallekele 61.30 261 LR LR 08 02 56.3
comp=Z,2μm,20.0s,MS5.3,baz=66,slow=36
SOKR Solikamsk 61.42 325*c i*P **P 07 35 55.2 +0.2**
SOKR S **S 07 44 14.9 +1.7**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb5.3
SOKR MLR MLR
comp=Z,6μm,17.0s,MS5.8
ARMA Armidale 61.61 170 *e*P **P 07 35 58.1 +1.6**
ARMA *e*S **S 07 44 10.4 -5.7**
ARMA Armidale 61.61 170 *e*P **P 07 35 57.8 +1.3**
comp=Z,66nm,1.1s,mb5.7
POO Poona 61.90 276⇓*i x* x 07 35 55.0
comp=Z,80nm,1.0s
KAD Karad 62.15 274 *e*P **P 07 36 00.0 -0.5**
ABKAR Akbulak array 62.15 313 *e*P **P 07 36 00.2 +0.1**
comp=Z,18nm,0.5s,mb5.5
STKA Stephens Creek 62.31 180 *e*P **P 07 36 00.3 -0.9**
comp=Z,17nm,0.8s,mb5.2
STKA *i* S **S 07 44 20.3 -4.6**
STKA Stephens Creek 62.31 180 P **P 07 36 00.0 -1.2**
comp=Z,19nm,0.8s,mb5.3,baz=355,slow=8.8,SNR=15
STKA LR LR 08 04 12.3
comp=Z,4μm,20.3s,MS5.5,baz=359,slow=37
STKA Stephens Creek 62.31 180 *e*P **P 07 36 01.9 +0.7**
comp=Z,4.5nm,0.8s,mb4.7
FORT Forrest 62.54 193 *e*P **P 07 36 01.3 -1.5**
comp=Z,124nm,0.8s,mb6.1
FORT Forrest 62.54 193 *e*P **P 07 36 01.8 -0.9**
comp=Z,210nm,0.9s,mb6.3
AKTO Aktyubinsk 63.02 315 LR LR 08 04 33.8
comp=Z,5μm,20.0s,MS5.7,baz=289,slow=37
AFI Afiamalu 63.15 128 PFAKE 07 36 20.0 +13
AFI LR LR
comp=Z,3μm,19.0s,MS5.5
DLBC Dease Lake 63.55 36 P **P 07 36 09.6 +0.3**
comp=Z,6.7nm,0.8s,mb4.7,baz=297,slow=7.7,SNR=13
DLBC PcP PcP 07 36 43.1 -2.4
comp=Z,14nm,1.1s,baz=59,slow=3.7,SNR=3.3
DLBC Dease Lake 63.55 36 *e*P **P 07 36 10.0 +0.8**
TRD Trivandrum 63.87 264⇓*ex* x 07 36 24.0
KLBR Kellerberrin 66.00 202 *e*P **P 07 36 24.3 -1.1**
comp=Z,72nm,0.9s,mb5.7
CNB Canberra Magne 66.15 173 *e*P **P 07 36 25.5 -0.8**
ALE Alert 66.33 3 P **P 07 36 27.6 +0.6**
comp=Z,152nm,1.7s,mb5.8,SNR=5.6
SPITS Spitsbergen Ar 66.67 349 LR LR 08 06 23.0
comp=Z,3μm,20.8s,MS5.5,baz=45,slow=37
SPB4 Spitsbergen Ar 66.67 349 *e*P **P 07 36 29.5 +0.3**
SPB4 *e*pP pP 07 36 39.7 -0.5
KBS Kingsbay 66.83 351 *e*P **P 07 36 30.6 +0.4**
KBS AMB AMB 07 36 41.2
comp=Z,56nm,3.2s
KBS *e*S S 07 45 23.5 +3.8
KBS AMS AMS 08 06 56.3
comp=Z,1μm,15.5s,MS5.3
KBS Kingsbay 66.83 351*c i*P **P 07 36 30.3 +0.1**
KBS MLR MLR
comp=Z,2μm,18.0s,MS5.3
KBS Kingsbay 66.83 351 PFAKE 07 36 40.0 +10
KBS LR LR
comp=Z,2μm,19.0s,MS5.3
ABKT Ailbek 67.06 301 P **P 07 36 33.3 +1.0**
comp=Z,419nm,1.0s,mb6.4,SNR=19
NWAO Narrogin (SRO) 67.40 202 *e*P **P 07 36 32.4 -1.9**
NWAO pmax pmax
comp=Z,70nm,1.0s
NWAO MLR MLR
comp=Z,1μm,20.0s
NWAO Narrogin (SRO) 67.40 202 *e*P **P 07 36 32.4 -1.9**
comp=Z,70nm,1.0s,mb5.6
NWAO LR LR
comp=Z,1μm,20.0s,MS5.2
LVZ Lovozero 67.87 337 *i* P **P 07 36 36.6 -0.3**
LVZ pmax pmax
comp=Z,32nm,1.2s,mb5.2
LVZ MLR MLR
comp=Z,4μm,20.0s,MS5.7
LVZ Lovozero 67.87 337 PFAKE 07 36 50.0 +13
LVZ LR LR
comp=Z,4μm,20.0s,MS5.7
TOO Toolangi 68.09 177 *e*P **P 07 36 38.0 -0.6**
APA Apatity 68.44 337⇑*i*P **P 07 36 40.9 +0.4**
APA *i* 07 36 46.0
APA *i* 07 37 00.0
APA *i* 07 39 10.0
APA *i* PPP 07 40 59.0
APA *i* S S 07 45 39.0 -0.3
APA *i* 07 46 30.0
APA *i* SS SS 07 50 11.0 +8.5
APA pmax pmax
comp=Z,68nm,0.8s,mb5.7
BJO Bjornoya 68.49 346 *e*S S 07 45 44.0 +4.2
BJO AMS AMS 08 09 57.8
comp=Z,3μm,20.5s,MS5.5
YKA Yellowknife Ar 69.19 29 P **P 07 36 44.3 -1.0**
comp=Z,7.0nm,0.8s,mb4.6,baz=295,slow=6.0,SNR=20
YKA PKP2bc 08 04 58.3
comp=Z,0.5nm,0.7s,baz=117,slow=4.4,SNR=3.8
YKA LR LR 08 09 40.7
comp=Z,119nm,18.2s,MS4.2,baz=225,slow=38
YKA Yellowknife Ar 69.19 29 P **P 07 36 44.3 -1.0**
YKA ⇑*e* 08 04 58.3
YKA LR LR 08 09 40.7
KEV Kevo 69.33 340 *e*P **P 07 36 46.1 +0.1**
KEV *e**PP pP 07 37 00.4 +3.4
KEV pmax pmax
comp=Z,43nm,1.1s,mb5.3
KEV MLR MLR
comp=Z,5μm,19.0s,MS5.8
KEV Kevo 69.33 340 *e*P **P 07 36 46.1 +0.1**
comp=Z,43nm,1.1s,mb5.3
KEV *e*pP pP 07 37 00.4 +3.3
KEV LR LR
comp=Z,5μm,19.0s,MS5.8
KEV Kevo 69.33 340 *ep* **P 07 36 45.5 -0.5**
comp=Z,7.8nm,0.8s,mb4.7
ARCES ARCESS Array B 69.89 340 P **P 07 36 49.4 -0.1**
comp=Z,11nm,0.7s,mb4.9,baz=70,slow=10,SNR=27
ARCES ARCESS Array B 69.89 340 P **P 07 36 49.4 0.0**
ARCES pmax pmax
comp=Z,11nm,0.7s
NLWA Neilton Lookou 70.93 46 ⇑P **P 07 36 56.3 +0.1**
baz=71
NLWA Neilton Lookou 70.93 46 *e*P **P 07 36 56.7 +0.5**
comp=Z,40nm,1.2s,mb5.2
NLWA LR LR
comp=Z,2μm,21.0s,MS5.3
RAO Raoul Island 71.10 143 PFAKE 07 37 10.0 +13
RAO LR LR
comp=Z,3μm,19.0s,MS5.6
A05A Maple Falls 71.33 44 ⇓P **P 07 36 58.8 +0.2**
baz=71
E03A Lebam 71.48 46 ⇑P **P 07 36 59.9 +0.3**
baz=71
GNW Green Mountain 71.50 45 *e*P **P 07 37 00.8 +1.2**
comp=Z,22nm,1.2s,mb5.0
MBW Mount Baker 71.53 44 P **P 07 36 59.9 +0.1**
JOF Joensuu 71.55 333 *e*P **P 07 36 59.6 0.0**
JOF pmax pmax
comp=Z,16nm,0.4s,mb5.3
JOF Joensuu 71.55 333 *ep* **P 07 36 59.6 0.0**
comp=Z,16nm,0.4s,mb5.3
TRO Tromso 71.66 342 *e*P **P 07 36 59.7 -0.5**
TRO AMB AMB 07 37 12.8
comp=Z,50nm,1.5s,mb5.2
TRO *e*S S 07 46 19.5 +2.5
TRO AMS AMS 08 13 36.1
comp=Z,6μm,18.7s,MS5.8
F03A Seaside 71.75 47 ⇑P **P 07 37 01.7 +0.6**
baz=72
JCW Jim Creek 71.77 44 *e*P **P 07 37 02.2 +1.0**
RPW Rockport 71.91 44 *e*P **P 07 37 02.5 +0.4**
comp=Z,4.9nm,1.1s,mb4.3
D05A Enumclaw 72.18 45 ⇑P **P 07 37 04.4 +0.7**
baz=72
OUZ Omahuta 72.25 153 *e*P **P 07 37 07.1 +3.0**
comp=Z,109nm,1.4s,mb5.6
A07A Ashnola River, 72.31 43 ⇓P **P 07 37 04.2 -0.3**
baz=72,SNR=8.9
MOS Moscow 72.37 325 *e*P **P 07 37 03.6 -1.1**
MOS *e* 07 37 20.3
MOS *e* 07 39 43.4
MOS *e*PPP 07 41 32.2
MOS *e*S S 07 46 23.8 -1.6
MOS pmax pmax
comp=Z,176nm,1.4s,mb5.8
MOS pmax pmax
comp=Z,200nm,1.0s,mb6.0
MOS MLR MLR
comp=Z,8μm,17.0s,MS6.1
MPOR Mary's Peak 72.37 48 P **P 07 37 06.3 +1.4**
VRHR Novokhopersk 72.43 319 *e*P **P 07 37 05.2 0.0**
VRHR *i **PP pP 07 37 12.0 -4.3
VRHR *e*S S 07 46 27.1 +0.7
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,5.0nm,0.3s
VRHR smax
comp=N,630nm,9.7s
VRHR smax
comp=Z,40nm,10.0s
VRHR smax
comp=E,260nm,8.9s
VRHR MLR MLR
comp=N,4μm,16.0s,MS5.8
VRHR MLR MLR
comp=Z,4μm,16.0s,MS5.8
VRHR MLR MLR
comp=E,2μm,17.0s,MS5.8
MAK Makhachkala 72.46 310 *e*P **P 07 37 04.4 -1.1**
MAK *e* 07 37 24.2
MAK *e*PPP 07 41 24.3
MAK *e*S S 07 46 32.0 +5.1
MAK pmax pmax
comp=E,147nm,1.0s
MAK pmax pmax
comp=Z,285nm,1.3s,mb6.0
MAK pmax pmax
comp=N,270nm,1.1s
MAK pmax pmax
comp=Z,1μm,3.1s
MAK smax
comp=E,6μm,10.6s
MAK MLR MLR
comp=E,24μm,23.0s
MAK MLR MLR
comp=Z,16μm,17.0s
MAK MLR MLR
comp=N,10μm,17.0s
F04A Amboy 72.46 47 ⇑P **P 07 37 05.3 -0.2**
baz=72
LON Longmire 72.48 46 *e*P **P 07 37 06.7 +1.2**
LON pmax pmax
comp=Z,28nm,1.3s,mb5.0
LON Longmire 72.48 46 *e*P **P 07 37 06.7 +1.2**
comp=Z,28nm,1.3s,mb5.0
COR Corvallis 72.49 48 *e*P **P 07 37 06.5 +0.9**
COR pmax pmax
comp=Z,93nm,1.3s,mb5.5
COR MLR MLR
comp=Z,3μm,19.0s,MS5.5
COR Corvallis 72.49 48 *e*P **P 07 37 06.5 +0.8**
comp=Z,93nm,1.3s,mb5.5
COR LR LR
comp=Z,3μm,19.0s,MS5.5
G04A Mulino 72.75 47 ⇑P **P 07 37 07.3 +0.2**
baz=72
H04A Detroit Lake 73.17 48 ⇓P **P 07 37 09.2 -0.4**
baz=73
OBN Obninsk 73.20 325 P **P 07 37 09.4 -0.2**
comp=Z,454nm,1.2s,mb6.3,SNR=6.2
OBN Obninsk 73.20 325α*i*P **P 07 37 09.8 +0.2**
OBN *i* 07 37 12.2
OBN *e* pP 07 37 20.1 -0.6
OBN 07 37 28.0
OBN *e* 07 39 54.4
OBN *e*PPP 07 41 36.4
OBN *e*S S 07 46 40.1 +5.2
OBN *e* 07 47 21.6
OBN pmax pmax
comp=Z,107nm,1.2s,mb5.7
OBN MLR MLR
comp=Z,7μm,16.0s,MS6.0
OBN Obninsk 73.20 325 *e*P **P 07 37 09.8 +0.2**
comp=Z,91nm,1.0s,mb5.7
OBN LR LR
comp=Z,4μm,19.0s,MS5.8
B08A Colville Reser 73.25 43 ⇑P **P 07 37 10.1 +0.1**
baz=73,SNR=8.7
VFP Flag Point 73.34 47 P **P 07 37 12.2 +1.6**
TAU Tasmania Unive 73.52 176 *e*P **P 07 37 11.6 +0.2**
TAU pmax pmax
comp=Z,65nm,1.1s,mb5.5
TAU MLR MLR
comp=Z,3μm,19.0s,MS5.6
TAU Tasmania Unive 73.52 176 *e*P **P 07 37 11.6 +0.2**
comp=Z,65nm,1.1s,mb5.5
TAU LR LR
comp=Z,3μm,19.0s,MS5.6
HUMO Hull Mountain 73.60 50 *e*P **P 07 37 13.0 +0.8**
comp=Z,25nm,1.1s,mb5.0
HUMO LR LR
comp=Z,4μm,19.0s,MS5.7
KTRM Thompson Ridge 73.63 51 P **P 07 37 14.1 +1.7**
VSR Storozhevoye 73.74 320 *e*P **P 07 37 13.0 +0.1**
VSR *e**SP sP 07 37 23.0 -5.2
VSR *e* 07 39 56.0
VSR *e*PPP 07 41 38.7
VSR *e*S S 07 46 40.4 -0.8
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,200nm,8.2s
VSR pmax pmax
comp=N,50nm,8.0s
VSR pmax pmax
comp=E,80nm,8.2s
VSR smax
comp=N,400nm,9.3s
VSR smax
comp=Z,150nm,10.2s
VSR smax
comp=E,250nm,9.9s
VSR MLR MLR
comp=N,2μm,15.0s,MS5.8
VSR MLR MLR
comp=E,4μm,15.0s,MS5.8
VSR MLR MLR
comp=Z,5μm,15.0s,MS5.9
VORD Divnogorie 73.79 320 *e*P **P 07 37 13.3 +0.1**
VORD *e*S S 07 46 40.3 -1.5
VORD pmax pmax
comp=Z,10.0nm,0.3s,mb5.2
VORD pmax pmax
comp=N,9.0nm,0.4s
VORD pmax pmax
comp=E,20nm,0.4s
VORD smax
comp=N,350nm,9.2s
VORD smax
comp=Z,160nm,9.1s
VORD smax
comp=E,260nm,10.8s
G06A Carlson Farm, 73.89 47 ⇓P **P 07 37 13.9 0.0**
baz=74,SNR=10.0
B09A Rice 73.92 43 ⇑P **P 07 37 14.3 +0.3**
baz=74,SNR=6.3
KAF Kangasniemi 73.92 334 *e*P **P 07 37 13.5 -0.3**
KAF pmax pmax
comp=Z,22nm,0.4s,mb5.4
KAF Kangasniemi 73.92 334 *ep* **P 07 37 13.5 -0.3**
comp=Z,22nm,0.4s,mb5.5
HATD Hatta, Dubai 74.02 290 P **P 07 37 15.9 +0.9**
SNR=21
HAWA Hanford 74.04 45 PFAKE 07 37 30.0 +15
HAWA LR LR
comp=Z,1μm,19.0s,MS5.3
C09A Chrisman Ranch 74.14 44 ⇑P **P 07 37 15.4 +0.1**
baz=74
YBH Yreka Blue Hor 74.16 51 *e*P **P 07 37 15.4 -0.1**
YBH pmax pmax
comp=Z,34nm,1.1s
YBH MLR MLR
comp=Z,3μm,19.0s
YBH Yreka Blue Hor 74.16 51 *e*P **P 07 37 15.4 -0.1**
comp=Z,34nm,1.1s,mb5.2
YBH LR LR
comp=Z,3μm,19.0s,MS5.7
EDM Edmonton 74.23 37 *e*P **P 07 37 15.5 -0.2**
VIPM Ingram Point 74.24 47 P **P 07 37 15.8 -0.1**
NAZ Nazwa, Dubai 74.33 290 P **P 07 37 17.2 +0.4**
SNR=15
GOF Gofitskoye 74.39 313 *e*P **P 07 37 26.4 +10**
GOF pmax pmax
comp=Z,60nm,1.3s,mb5.4
FINES FINESS Array B 74.41 333 P **P 07 37 16.7 +0.1**
comp=Z,22nm,0.5s,mb5.4,baz=55,slow=5.8,SNR=105
FINES LR LR 08 12 32.6
comp=Z,2μm,18.2s,MS5.5,baz=61,slow=38
FINES FINESS Array B 74.41 333 P **P 07 37 16.7 +0.1**
FINES pmax pmax
comp=Z,22nm,0.5s
FINES MLR MLR
comp=Z,2μm,18.2s
D09A Jones Farm, Ri 74.47 44 ⇓P **P 07 37 17.5 +0.3**
baz=74
FAQ Al Faqa, Dubai 74.49 290 P **P 07 37 18.2 +0.4**
SNR=9.3
B10A Chitwood Farm, 74.52 43 ⇓P **P 07 37 17.6 +0.1**
baz=74
DGRG David-gareji 74.55 309 P **P 07 37 17.9 +0.1**
NEW Newport 74.59 43 *e*P **P 07 37 17.8 -0.1**
NEW pmax pmax
comp=Z,43nm,1.0s
NEW MLR MLR
comp=Z,1μm,21.0s
NEW Newport 74.59 43 *e*P **P 07 37 17.8 -0.1**
comp=Z,43nm,1.0s,mb5.3
NEW LR LR
comp=Z,1μm,21.0s,MS5.2
A11A Hall Mountain, 74.70 42 ⇓P **P 07 37 18.5 0.0**
baz=74,SNR=11
ASUD Al Ashush, Dub 74.76 290 P **P 07 37 20.2 +0.9**
SNR=7.9
WDC Whiskeytown Da 74.80 52 *e*P **P 07 37 19.9 +0.6**
WDC pmax pmax
comp=Z,27nm,1.1s,mb5.1
WDC MLR MLR
comp=Z,4μm,20.0s,MS5.7
WDC Whiskeytown Da 74.80 52 *e*P **P 07 37 19.9 +0.7**
comp=Z,27nm,1.1s,mb5.1
WDC LR LR
comp=Z,4μm,20.0s,MS5.7
MTA Mtatsminda 74.83 310 P **P 07 37 19.6 +0.2**
E09A Wood Farm, Sta 74.83 45 ⇑P **P 07 37 19.6 +0.3**
baz=75
TBLG Delisi 74.84 310 *e*P **P 07 37 20.4 +0.9**
TBLG Delisi 74.84 310 P **P 07 37 20.4 +0.9**
K05A Summer Lake 74.90 49 ⇑P **P 07 37 19.7 -0.1**
baz=75,SNR=26
ZEI Tsey 74.91 311 *e*P **P 07 37 19.0 -0.9**
ZEI pmax pmax
comp=Z,109nm,1.9s,mb5.5
G08A Pilot Rock 74.92 46 ⇓P **P 07 37 19.9 +0.1**
baz=75
B11A Sandpoint 74.95 42 ⇑P **P 07 37 19.9 0.0**
baz=75,SNR=9.8
LNOR Lincton Mounta 75.05 45 *e*P **P 07 37 21.8 +1.2**
LNOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LNOR Lincton Mounta 75.05 45 *e*P **P 07 37 21.8 +1.2**
comp=Z,3.0nm,0.8s,mb4.3
KEH Kehvi 75.10 310 P **P 07 37 21.2 +0.2**
KIV Kislovodsk 75.13 312 P **P 07 37 22.0 +0.9**
comp=Z,410nm,1.0s,mb6.3,SNR=6.7
KIV Kislovodsk 75.13 312α*e*P **P 07 37 22.0 +0.9**
KIV *e* 07 37 28.7
KIV *e* 07 37 37.2
KIV *e* 07 40 08.5
KIV *e*PPP 07 41 56.8
KIV *i* S S 07 47 04.1 +7.1
KIV *e* 07 47 41.4
KIV pmax pmax
comp=Z,128nm,1.3s,mb5.7
KIV MLR MLR
comp=Z,4μm,18.0s,MS5.8
KIV Kislovodsk 75.13 312 *e*P **P 07 37 22.1 +1.0**
comp=Z,188nm,1.3s,mb5.9
KIV LR LR
comp=Z,4μm,19.0s,MS5.8
KIV Kislovodsk 75.13 312 P **P 07 37 22.7 +1.6**
SNR=16
KIV P 07 37 22.7
SNR=16
GOR Gori 75.14 310 P **P 07 37 23.3 +2.1**
I07A Izee 75.15 47 ⇑P **P 07 37 21.2 -0.1**

baz=75,SNR=13
HOPS Hopland 75.17 53 PFAKE 07 37 30.0 +8.6
HOPS LR LR
comp=Z,4µm,19.0s,MS5.7
LTIM Timbered Crate 75.23 51 P **P 07 37 21.5 -0.2**
B12A Libby 75.38 42 ⇑P **P 07 37 22.4 0.0**
baz=75
H08A Prairie City 75.47 47 ⇑P **P 07 37 22.5 -0.6**
baz=75,SNR=18
E10A Myers Farm, Un 75.47 44 ⇑P **P 07 37 22.8 -0.2**
baz=75
GNI Garni 75.58 308 LR LR 08 14 05.3
comp=Z,2µm,18.5s,MS5.4,baz=61,slow=38
GNI Garni 75.58 308 *c i P* **P 07 37 25.2 +1.4**
GNI pmax pmax
comp=Z,55nm,1.3s
GNI MLR MLR
comp=Z,2µm,19.0s
GNI Garni 75.58 308 *eP* **P 07 37 25.0 +1.2**
comp=Z,124nm,1.1s,mb5.8
GNI LR LR
comp=Z,2µm,19.0s,MS5.4
F10A Beach Ranch, E 75.65 45 ⇑P **P 07 37 24.0 -0.1**
baz=75
D11A Klaveano Farm, 75.65 44 ⇑P **P 07 37 23.4 -0.7**
baz=75,SNR=32
MOD Modoc 75.67 50 *eP* **P 07 37 24.0 -0.3**
comp=Z,28nm,1.1s,mb5.1
MOD LR LR
comp=Z,3µm,20.0s,MS5.7
MCCM Marconi Confer 75.70 54 PFAKE 07 37 40.0 +16
MCCM LR LR
comp=Z,2µm,19.0s,MS5.4
A13A Flathead Natio 75.82 41 ⇓P **P 07 37 24.7 -0.3**
baz=76,SNR=6.5
C12B Naegeli Ranch, 75.83 43 ⇑P **P 07 37 25.1 +0.1**
baz=76,SNR=9.2
VSU Vasula 75.91 331 *c i P* **P 07 37 25.5 +0.2**
VSU pmax pmax
comp=Z,114nm,1.1s,mb5.7
VSU MLR MLR
comp=Z,2µm,15.0s,MS5.5
H09A Durkee 76.02 46 ⇑P **P 07 37 26.1 -0.1**
baz=76,SNR=10
WALA Waterton Lakes 76.04 41 *eP* **P 07 37 26.4 +0.2**
comp=Z,0.9nm,0.7s
G10A Bishop Farm, J 76.05 45 ⇓P **P 07 37 26.3 -0.1**
baz=76,SNR=26
E11A Bogner Ranch, 76.07 44 ⇑P **P 07 37 25.9 -0.5**
baz=76,SNR=16
B13A Whitefish 76.08 42 ⇑P **P 07 37 26.5 +0.1**
baz=76,SNR=27
DGAR Diego Garcia 76.14 253 PFAKE 07 37 40.0 +13
DGAR LR LR
comp=Z,2µm,20.0s,MS5.5
J08A Circle Bar Ran 76.15 48 ⇓P **P 07 37 27.0 +0.1**
baz=76,SNR=35
BSMT Bassoo Peak 76.16 42 *eP* **P 07 37 27.2 +0.2**
comp=Z,9.2nm,0.8s,mb4.8
D12A Red Ives Fores 76.23 43 ⇑P **P 07 37 27.1 -0.3**
baz=76
URZ Urewera 76.29 152 *eP* **P 07 37 25.9 -1.6**
comp=Z,45nm,1.1s,mb5.3
JMIC Jan Mayen 76.31 350 *eP* **P 07 37 28.9 +1.5**
JMIC *eS* S 07 47 11.2 +2.1
JMIC AMS AMS 08 14 41.2
comp=Z,628nm,25.6s,MS4.8
JMIC Jan Mayen 76.31 350 LR LR 08 14 51.3
comp=Z,728nm,18.1s,MS5.0,baz=60,slow=39
I09A Lost Marbles R 76.31 47 ⇑P **P 07 37 27.9 +0.1**
baz=76,SNR=19
F11A Grangeville 76.34 45 ⇑P **P 07 37 27.9 -0.1**
baz=76,SNR=18
A14A Double T Ranch 76.36 41 ⇓P **P 07 37 28.1 +0.1**
baz=76,SNR=19
C13A Hot Springs 76.37 42 ⇓P **P 07 37 28.1 0.0**
baz=76,SNR=36
E12A Beaver Dam Sad 76.43 44 ⇑P **P 07 37 28.3 -0.2**
baz=76
RAR Rarotonga 76.46 125 PFAKE 07 37 40.0 +11
RAR LR LR
comp=Z,4µm,21.0s,MS5.7
WVOR Wild Horse Val 76.50 49 *eP* **P 07 37 28.6 -0.3**
WVOR pmax pmax
comp=Z,65nm,1.4s,mb5.4
WVOR Wild Horse Val 76.50 49 *eP* **P 07 37 28.6 -0.3**
comp=Z,65nm,1.4s,mb5.4
JTMT Jette 76.51 42 *eP* **P 07 37 29.1 +0.2**
comp=Z,41nm,0.9s,mb5.4
G11A Walters Elk Ra 76.52 45 ⇑P **P 07 37 28.7 -0.3**
baz=76,SNR=40
YBMT Yellow Bay 76.60 42 *eP* **P 07 37 29.9 +0.5**
comp=Z,27nm,0.9s,mb5.2
BEKR Beckwourth 76.61 52 ⇑P **P 07 37 29.4 -0.2**
baz=76,SNR=37
J09A Fry Pan Ranch, 76.61 47 ⇑P **P 07 37 29.4 -0.2**
baz=76,SNR=32
H10A Noah's Angus R 76.63 46 ⇓P **P 07 37 29.5 -0.2**
baz=76,SNR=31
D13A Huson 76.74 43 ⇓P **P 07 37 29.5 -0.7**
baz=76,SNR=14
A15A Johnson Ranch, 76.75 41 ⇓P **P 07 37 29.7 -0.5**
baz=76,SNR=24
B14A Marquette Ranc 76.77 41 ⇓P **P 07 37 30.5 +0.2**
baz=76,SNR=29
SWMT Swartz Lake 76.79 42 *eP* **P 07 37 30.2 -0.3**
comp=Z,44nm,1.0s,mb5.3
C14A Swan Lake 76.80 42 ⇓P **P 07 37 30.5 -0.1**
baz=76
I10A Payette 76.84 46 ⇑P **P 07 37 30.9 +0.1**
baz=77,SNR=9.9
SUMG Summit 76.93 360 *eP* **P 07 37 32.3 +1.5**
comp=Z,44nm,1.1s,mb5.3
F12A Elk City 76.95 44 ⇓P **P 07 37 31.1 -0.3**
baz=77,SNR=18
H11A Donnelly 77.02 46 ⇓P **P 07 37 31.2 -0.7**
baz=77,SNR=24
NSS Namsos 77.17 340 *eP* **P 07 37 31.2 -1.1**
NSS *eS* S 07 47 21.8 +3.0
MSO Missoula 77.18 43 *eP* **P 07 37 33.4 +0.7**
comp=Z,22nm,1.1s,mb5.0
MSO LR LR
comp=Z,772nm,19.0s,MS5.0
SOC Sochi 77.19 313 *eP* **P 07 37 32.6 -0.2**
SOC *e*PP* pP 07 37 42.9 -1.1
SOC *e* 07 37 47.2
SOC *e* 07 40 24.4
SOC *eS* S 07 47 21.8 +2.1
SOC *e*SS* sS 07 47 37.0 -1.1
SOC *eSS* SS 07 52 26.1 +9.1
SOC *eSSS* 07 55 35.0
SOC pmax pmax
comp=Z,2µm,0.8s
SOC MLR MLR
comp=Z,165µm,14.0s
DBAD Bademkaya 77.19 310 *i P* **P 07 37 33.7 +0.8**
B15A Bradely Ranch, 77.20 41 ⇓P **P 07 37 32.8 +0.1**
baz=77,SNR=41
J10A Berg Farm, Mel 77.20 47 ⇑P **P 07 37 32.7 -0.2**
baz=77,SNR=7.6
SLMT Seeley Lake 77.22 42 *eP* **P 07 37 32.7 -0.2**
comp=Z,38nm,0.7s,mb5.4
E13A Victor 77.23 43 ⇑P **P 07 37 32.7 -0.3**
baz=77,SNR=13
WCN Washoe City 77.29 52 ⇓P **P 07 37 33.3 -0.2**
baz=77,SNR=14
D14A Greenough 77.30 43 ⇑P **P 07 37 33.1 -0.3**
baz=77,SNR=20
SAO San Andreas Ge 77.35 55 PFAKE 07 37 50.0 +16
SAO LR LR
comp=Z,4µm,19.0s,MS5.7
C15A Salmond Ranch, 77.45 42 ⇓P **P 07 37 34.3 +0.1**
baz=77,SNR=35
K10A MacKenzie Ranc 77.46 48 ⇓P **P 07 37 34.0 -0.3**
baz=77,SNR=22
CMB Columbia Colle 77.48 53 *eP* **P 07 37 34.3 -0.2**
CMB pmax pmax
comp=Z,53nm,1.1s,mb5.4
CMB MLR MLR
comp=Z,2µm,22.0s,MS5.4
CMB Columbia Colle 77.48 53 *eP* **P 07 37 34.3 -0.3**
comp=Z,53nm,1.1s,mb5.4
CMB LR LR
comp=Z,2µm,22.0s,MS5.4
F13A Darby 77.49 44 ⇑P **P 07 37 33.8 -0.7**
baz=77,SNR=21
HOMI Horasan 77.54 309 *i P* **P 07 37 36.9 +2.0**

CHMT Chamberlain Mo 77.54 43 *eP* **P 07 37 34.8 +0.1**
comp=Z,13nm,1.1s,mb4.8
B16A M & M Farms, S 77.62 41 ⇓P **P 07 37 34.9 -0.3**
baz=77
E14A Clinton 77.66 43 ⇓P **P 07 37 34.8 -0.6**
baz=77,SNR=9.3
IZAR Zarasai 77.75 328 *eP* **P 07 37 35.9 +0.2**
MNK Minsk 77.77 327 *eP* **P 07 37 35.0 -0.9**
MNK *e* 07 40 34.0
MNK *eS* S 07 47 30.0 +4.4
MNK MLR MLR
comp=Z,8µm,16.0s,MS6.2
IDID Didziasalis 77.79 328 *eP* **P 07 37 36.2 +0.3**
MFID Camas Ranch 77.79 47 ⇓P **P 07 37 35.9 -0.3**
baz=78,SNR=17
H12A Diamond D Ranc 77.81 45 ⇑P **P 07 37 36.0 -0.3**
baz=78,SNR=19
D15A Lincoln 77.89 42 ⇑P **P 07 37 36.6 -0.1**
baz=78,SNR=9.9
A17A Triple J Farms 77.90 40 ⇓P **P 07 37 36.7 +0.1**
baz=78
G13A Cobalt 77.91 45 ⇑P **P 07 37 36.0 -0.8**
baz=78,SNR=16
ISAL Salakas 77.92 328 *eP* **P 07 37 36.8 +0.2**
ANN Anapa 77.98 315 *eP* **P 07 37 36.2 -1.0**
ANN *e* 07 37 52.2
ANN *e* 07 40 39.2
ANN *eS* S 07 47 26.3 -1.8
ANN pmax pmax
comp=Z,233nm,2.4s,mb5.7
ANN MLR MLR
comp=N,4µm,17.0s,MS5.8
ANN MLR MLR
comp=E,2µm,17.0s,MS5.8
ANN MLR MLR
comp=Z,4µm,17.0s,MS5.8
K11A Parker Ranch, 78.00 47 ⇓P **P 07 37 37.1 -0.2**
baz=78,SNR=35
SNZO South Karori 78.00 155 *eP* **P 07 37 38.1 +1.0**
comp=Z,89nm,1.0s,mb5.7
SNZO LR LR
comp=Z,3µm,19.0s,MS5.6
IIGN Ignalina 78.01 328 *eP* **P 07 37 37.2 +0.1**
NACGM Naroch 78.02 328 *eP* **P 07 37 35.0 -2.2**
I12A Atlanta 78.03 46 ⇓P **P 07 37 36.8 -0.7**
baz=78,SNR=14
F14A Wisdom 78.05 44 ⇑P **P 07 37 37.0 -0.6**
baz=78,SNR=14
L10A Juniper Basin 78.07 48 ⇑P **P 07 37 37.4 -0.3**
baz=78,SNR=15
E15A Deer Lodge 78.15 43 ⇓P **P 07 37 37.7 -0.4**
baz=78,SNR=24
H13A Challis 78.17 45 ⇑P **P 07 37 38.2 -0.1**
baz=78,SNR=31
B17A L&G Farms, Che 78.20 41 ⇓P **P 07 37 38.3 -0.1**
baz=78,SNR=22
M10A I.L. Ranch, Tu 78.31 49 ⇓P **P 07 37 39.3 +0.2**
baz=78,SNR=21
SCO Scoresbysund 78.33 354 *i P* **P 07 37 39.1 +0.4**
SCO *i S* S 07 47 35.2 +4.1
SCO pmax pmax
comp=Z,16nm,1.1s,mb4.9
SCO MLR MLR
comp=Z,590nm,19.0s,MS4.9
SCO Scoresbysund 78.33 354 *i P* **P 07 37 39.1 +0.4**
comp=Z,16nm,1.1s,mb4.9
SCO *i S* S 07 47 35.2 +4.1
SCO
comp=Z,590nm,19.0s
J12A Stokes Ranch, 78.34 47 ⇑P **P 07 37 38.9 -0.3**
baz=78,SNR=14
A18A Metzger Ranch, 78.38 40 ⇑P **P 07 37 39.0 -0.3**
baz=78,SNR=24
BMN Battle Mountai 78.42 50 *eP* **P 07 37 39.8 +0.1**
BMN pmax pmax
comp=Z,30nm,1.2s,mb5.1
BMN MLR MLR
comp=Z,3µm,19.0s,MS5.7
BMN Battle Mountai 78.42 50 *eP* **P 07 37 39.8 +0.1**
comp=Z,30nm,1.2s,mb5.1
BMN LR LR
comp=Z,3µm,19.0s,MS5.7
D16A Dana Ranch, Ca 78.46 42 ⇑P **P 07 37 39.6 -0.2**
baz=78,SNR=28
UMR Umm Al-Rimmam 78.47 297 *eP* **P 07 37 40.1 -0.1**
UMR AMb AMB 07 37 44.7
comp=Z,147nm,0.7s,mb6.0
HRY Holter Researc 78.47 42 *eP* **P 07 37 40.0 +0.2**
comp=Z,24nm,0.7s,mb5.2
L11A Cat Creek Ranc 78.48 48 ⇑P **P 07 37 40.1 0.0**
baz=78,SNR=32
KOPT Kop Dagi 78.48 310 *i P* **P 07 37 42.5 +2.4**
MSL Mosul 78.51 305 *eP* **P 07 37 40.0 -0.3**
MSL *eS* S 07 47 38.0 +3.8
F15A Butte 78.55 43 ⇑P **P 07 37 39.9 -0.4**
baz=78,SNR=95
KHZ Kahutara 78.57 156 *eP* **P 07 37 38.9 -1.3**
comp=Z,71nm,0.8s,mb5.7
C17A Wharram Farm, 78.58 41 ⇑P **P 07 37 40.0 -0.4**
baz=78,SNR=18
LRM Limekiln Ridge 78.59 43 *eP* **P 07 37 40.6 0.0**
comp=Z,623nm,1.1s,mb6.5
I13A Wildhorse Cree 78.60 46 ⇑P **P 07 37 40.3 -0.3**
baz=78,SNR=32
HLID Hailey 78.60 46 ⇑P **P 07 37 40.6 -0.1**
baz=78,SNR=28
HLID Hailey 78.60 46 *eP* **P 07 37 40.6 0.0**
comp=Z,16nm,1.0s,mb4.9
HLID LR LR
comp=Z,2µm,19.0s,MS5.4
MIB Mutribah 78.63 298 *eP* **P 07 37 41.1 0.0**
MIB AMb AMB 07 37 45.5
comp=Z,152nm,0.7s,mb6.0
E16A East Helena 78.66 42 ⇑P **P 07 37 40.5 -0.4**
baz=78,SNR=16
KBD Kabd 78.66 297 *eP* **P 07 37 41.1 -0.2**
KBD AMb AMB 07 37 45.3
comp=Z,160nm,1.2s,mb5.8
H14A Leadore 78.68 45 ⇓P **P 07 37 40.8 -0.3**
baz=78,SNR=14
QRN Al-Qurain 78.70 297 *eP* **P 07 37 41.2 -0.2**
QRN AMb AMB 07 37 45.3
comp=Z,272nm,1.2s,mb6.1
NVAR Mina Array Bea 78.71 52 P **P 07 37 40.9 -0.5**
comp=Z,12nm,0.6s,mb5.0,baz=286,slow=5.1,SNR=92
B18A Beardsley Farm 78.71 40 ⇑P **P 07 37 41.0 -0.2**
baz=78,SNR=34
DLMT Dillon 78.75 44 *eP* **P 07 37 41.3 -0.1**
comp=Z,56nm,1.2s,mb5.4
K12A Draper Farm, C 78.78 47 ⇑P **P 07 37 41.3 -0.3**
baz=78,SNR=15
J13A Cove Ranch, Pi 78.83 46 ⇑P **P 07 37 41.4 -0.6**
baz=79,SNR=18
M11A Holland Ranch, 78.84 48 ⇓P **P 07 37 41.7 -0.3**
baz=79,SNR=23
MCMT McKenzie Canyo 78.88 44 *eP* **P 07 37 41.9 -0.3**
comp=Z,4.5nm,1.0s,mb4.3
D17A Six Diamond Ra 78.89 41 ⇑P **P 07 37 42.0 -0.2**
baz=79,SNR=32
RDF Al-Radifah 78.89 297 *eP* **P 07 37 42.5 -0.1**
RDF AMb AMB 07 37 46.8
comp=Z,265nm,1.3s,mb6.0
RPZ Rata Peaks 78.91 159 *eP* **P 07 37 42.6 +0.6**
comp=Z,54nm,0.9s,mb5.5
G15A Dillon 78.92 44 ⇑P **P 07 37 41.9 -0.5**
baz=79,SNR=26
FFC Flin Flon 78.93 32 P **P 07 37 41.9 -0.3**
comp=Z,141nm,0.9s,mb5.9,SNR=7.9
FFC Flin Flon 78.93 32 *eP* **P 07 37 41.2 -1.0**
FFC pmax pmax
comp=Z,26nm,0.9s,mb5.2
FFC MLR MLR
comp=Z,2µm,20.0s,MS5.4
FFC Flin Flon 78.93 32 *eP* **P 07 37 41.2 -1.1**
comp=Z,26nm,0.9s,mb5.2
FFC LR LR
comp=Z,2µm,20.0s,MS5.4
EGMT Eagleton 78.93 40 ⇑P **P 07 37 41.7 -0.7**
baz=79,SNR=19
EGMT Eagleton 78.93 40 *eP* **P 07 37 42.0 -0.4**
comp=Z,62nm,1.4s,mb5.3
EGMT LR LR
comp=Z,1µm,20.0s,MS5.2
L12A House Creek Ra 78.96 47 ⇓P **P 07 37 42.5 -0.2**
baz=79,SNR=31
O10A Cortez Mining, 78.96 50 ⇑P **P 07 37 43.0 +0.3**
baz=79

NAY Al-Naaiem 78.97 297 *eP* **P 07 37 42.4 -0.6**
NAY AMb AMB 07 37 47.4
comp=Z,173nm,0.9s,mb6.0
I14A Mackay 79.00 45 ⇓P **P 07 37 43.0 +0.2**
baz=79,SNR=109
SMMC Simmler 79.09 55 ⇑P **P 07 37 43.7 +0.2**
baz=79
F16A Kennard Place, 79.09 43 ⇓P **P 07 37 43.1 -0.2**
baz=79,SNR=26
H15A Lima 79.12 44 ⇑P **P 07 37 43.0 -0.5**
baz=79,SNR=16
BOZ Bozeman (W) 79.17 43 ⇑P **P 07 37 43.4 -0.3**
baz=79,SNR=33
BOZ Bozeman (W) 79.17 43 *eP* **P 07 37 43.6 -0.1**
BOZ pmax pmax
comp=Z,29nm,1.3s,mb5.0
BOZ MLR MLR
comp=Z,1µm,19.0s,MS5.2
BOZ Bozeman (W) 79.17 43 *eP* **P 07 37 43.6 -0.1**
comp=Z,29nm,1.3s,mb5.0
BOZ LR LR
comp=Z,1µm,19.0s,MS5.2
E17A Martinsdale 79.17 42 ⇑P **P 07 37 43.5 -0.2**
baz=79,SNR=24
N11A Elko Archery C 79.19 49 ⇑P **P 07 37 44.0 0.0**
baz=79,SNR=8.2
KELT Kelkit 79.24 310 *i P* **P 07 37 46.0 +1.7**
J14A Carey 79.28 46 ⇓P **P 07 37 44.7 +0.3**
baz=79,SNR=41
K13A Stover Farm, H 79.28 47 ⇓P **P 07 37 44.6 +0.2**
baz=79,SNR=26
G16A Moss Hill, Enn 79.29 44 ⇑P **P 07 37 44.1 -0.3**
baz=79,SNR=32
AKASG Malin Array Be 79.33 323 P **P 07 37 44.1 -0.4**
comp=Z,9.8nm,0.4s,mb5.1,baz=48,slow=5.7,SNR=49
AKASG PP PP 07 40 42.7 -1.4
comp=Z,5.6nm,1.0s,baz=54,slow=8.3,SNR=4.3
AKASG LR LR 08 15 25.4
comp=Z,6µm,19.6s,MS6.0,baz=45,slow=38
AKASG Malin Array Be 79.33 323 *cePP* **P 07 37 44.0 -0.5**
AKASG *e* 07 40 46.5
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKASG Malin Array Be 79.33 323 P **P 07 37 44.1 -0.4**
AKASG PP PP 07 40 42.7 -1.4
AKASG LR LR 08 15 25.4
AKBB Malin Array Si 79.33 323 *eP* **P 07 37 44.1 -0.4**
P10A Eureka 79.33 50 ⇓P **P 07 37 44.9 +0.2**
baz=79,SNR=8.0
KIEV Kiev 79.34 323 *eP* **P 07 37 44.4 -0.2**
KIEV pmax pmax
comp=Z,36nm,0.8s,mb5.3
KIEV MLR MLR
comp=Z,6µm,20.0s,MS5.9
KIEV Kiev 79.34 323 *eP* **P 07 37 44.4 -0.2**
comp=Z,36nm,0.8s,mb5.3
KIEV LR LR
comp=Z,6µm,20.0s,MS5.9
D18A Linhart Farms, 79.37 41 ⇓P **P 07 37 45.0 +0.2**
baz=79,SNR=16
M12A Wells 79.41 48 ⇑P **P 07 37 45.3 +0.2**
baz=79,SNR=24
PKM Peak Mountain 79.42 56 ⇑P **P 07 37 45.4 +0.1**
baz=79
VES Vestal, Richgr 79.47 55 ⇑P **P 07 37 45.0 -0.6**
baz=79,SNR=12
I15A Monteview 79.55 45 ⇓P **P 07 37 46.1 +0.3**
baz=79,SNR=11
ELK Elko 79.55 49 *eP* **P 07 37 47.4 +1.5**
ELK pmax pmax
comp=Z,39nm,1.3s
ELK MLR MLR
comp=Z,4µm,19.0s
ELK Elko 79.55 49 *eP* **P 07 37 47.4 +1.5**
comp=Z,39nm,1.3s,mb5.2
ELK LR LR
comp=Z,4µm,19.0s,MS5.8
FCC Fort Churchill 79.56 26 *eP* **P 07 37 45.6 +0.1**
comp=Z,1.4nm,1.3s
F17A Fitzpatrick Pl 79.59 43 ⇓P **P 07 37 46.1 0.0**
baz=79,SNR=24
O11A Cowboy Ranch, 79.60 49 ⇓P **P 07 37 46.1 -0.1**
baz=79,SNR=8.9
TPH Tonopah 79.62 52 PFAKE 07 38 00.0 +14
TPH LR LR
comp=Z,3µm,20.0s,MS5.6
N12A Clover Valley, 79.62 49 ⇑P **P 07 37 46.5 +0.1**
baz=79,SNR=13
N12A Clover Valley, 79.62 49 *eP* **P 07 37 46.7 +0.4**
comp=Z,41nm,1.1s,mb5.3
N12A *ep*P pP 07 37 58.4 +0.9
E18A Harlowton 79.66 42 ⇑P **P 07 37 46.2 -0.2**
baz=79,SNR=14
L13A Double Diamond 79.67 47 ⇑P **P 07 37 46.7 +0.1**
baz=79
QLMT Earthquake Lak 79.73 44 *eP* **P 07 37 47.6 +0.8**
comp=Z,26nm,1.0s,mb5.1
Q10A Clear Creek Ra 79.79 51 ⇓P **P 07 37 46.9 -0.3**
baz=80,SNR=11
HFS Hagfors 79.83 336 LR LR 08 15 45.1
comp=Z,3µm,19.8s,MS5.6,baz=39,slow=38
P11A Circle Ranch, 79.84 50 ⇓P **P 07 37 47.4 -0.1**
baz=80
CWC Cottonwood Cre 79.87 54 ⇓P **P 07 37 47.6 -0.1**
baz=80
G17A Pierce Place, 79.87 43 ⇓P **P 07 37 47.5 -0.1**
baz=80,SNR=12
SIM Simferopol' 79.89 317 *eP* **P 07 37 52.3 +4.6**
SIM *e* 07 40 56.0
SIM *eS* S 07 47 52.5 +4.0
SIM pmax pmax
comp=Z,28nm,0.7s,mb5.3
SIM pmax pmax
comp=Z,190nm,10.6s
SIM MLR MLR
comp=Z,3µm,19.8s,MS5.7
J15A Blackfoot 79.91 45 ⇑P **P 07 37 48.1 +0.3**
baz=80,SNR=19
K14A Jones Ranch, D 79.91 46 ⇓P **P 07 37 47.8 0.0**
baz=80,SNR=16
H16A Russell Place, 79.91 44 ⇓P **P 07 37 47.9 +0.2**
baz=80,SNR=23
M13A Montello 79.92 48 ⇑P **P 07 37 47.7 -0.2**
baz=80,SNR=9.1
M13A Montello 79.92 48 *eP* **P 07 37 49.5 +1.7**
comp=Z,24nm,1.0s,mb5.1
ISA Isabella 79.99 55 ⇑P **P 07 37 47.8 -0.6**
baz=80,SNR=7.3
ISA Isabella 79.99 55 *eP* **P 07 37 47.7 -0.7**
ISA pmax pmax
comp=Z,26nm,1.4s,mb5.0
ISA Isabella 79.99 55 *eP* **P 07 37 47.7 -0.7**
comp=Z,26nm,1.4s,mb5.0
NB2 NORSAR Subarra 79.99 338 P **P 07 37 47.9 0.0**
comp=Z,437nm,2.5s,mb5.9,baz=41,slow=5.3
NOA NORSAR Array B 79.99 338 P **P 07 37 47.5 -0.4**
comp=Z,22nm,0.9s,mb5.1,baz=42,slow=5.3,SNR=73
NOA LR LR 08 16 31.2
comp=Z,4µm,19.5s,MS5.8,baz=45,slow=38
NOA NORSAR Array B 79.99 338 P **P 07 37 47.6 -0.3**
NOA pmax pmax
comp=Z,22nm,0.9s
NOA MLR MLR
comp=Z,4µm,19.5s
ARVC Arvin 80.01 55 ⇑P **P 07 37 48.5 0.0**
baz=80
GRAC Grapevine Rang 80.07 53 ⇓P **P 07 37 48.5 -0.3**
baz=80,SNR=21
YMR Madison River 80.10 44 *eP* **P 07 37 50.1 +1.3**
comp=Z,54nm,1.1s,mb5.4
O12A Currie 80.12 49 ⇑P **P 07 37 48.4 -0.6**
baz=80,SNR=30
S10A Tonopah Range, 80.12 52 ⇓P **P 07 37 49.0 -0.1**
baz=80,SNR=32
R10A Warm Springs 80.13 51 ⇑P **P 07 37 48.9 -0.2**
baz=80,SNR=12
F18A Big Timber 80.14 42 ⇑P **P 07 37 49.0 0.0**
baz=80,SNR=19
L14A Malta 80.14 47 ⇓P **P 07 37 48.7 -0.4**
baz=80,SNR=22
N13A Wendover, West 80.16 48 ⇓P **P 07 37 49.5 +0.3**
baz=80,SNR=11
N13A Wendover, West 80.16 48 *eP* **P 07 37 50.7 +1.5**
comp=Z,31nm,1.0s,mb5.2
KEMA Kemaliye 80.20 310 *i P* **P 07 37 51.2 +1.7**
I16A Newdale 80.22 45 ⇑P **P 07 37 50.1 +0.6**
baz=80,SNR=36

SUW Suwalki 80.22 328 *e*P P 07 37 49.1 -0.2
comp=Z,200nm,1.3s,mb5.9
SUW *e*PcP PcP 07 37 52.5 -3.9
SUW *e*pP pP 07 37 56.8 -3.7
SUW *e*PP PP 07 40 47.3 -4.1
SUW *e*S S 07 47 56.5 +4.8
SUW LMZ 08 17 00.1
comp=Z,4μm,17.5s
SUW Suwalki 80.22 328⇑*e*P P 07 37 49.1 -0.2
SUW *e**PP pP 07 37 56.8 -3.7
SUW *e* 07 40 47.3
SUW *e*S S 07 47 56.5 +4.8
SUW pmax pmax
comp=Z,200nm,1.3s,mb5.9
SUW MLR MLR
comp=Z,4μm,17.5s,MS5.8
SUW Suwalki 80.22 328⇑*e*P P 07 37 49.1 -0.2
SUW *e*PcP PcP 07 37 52.5 -3.9
SUW *e*pP pP 07 37 56.8 -3.7
SUW *e*PP PP 07 40 47.3 -4.1
SUW *e*S S 07 47 56.5 +4.8
K15A Arbon 80.23 46 ⇓P P 07 37 49.7 +0.1
baz=80,SNR=13
YNR Norris Junctio 80.24 44 *e*P P 07 37 52.3 +2.7
comp=Z,22nm,1.0s,mb5.0
NAO01 NORSAR Array S 80.25 338 *e*P P 07 37 49.0 -0.3
comp=Z,37nm,1.2s,mb5.2
NAO01 LR LR
comp=Z,4μm,19.0s,MS5.8
Q11A Duckwater 80.27 51 ⇓P P 07 37 49.3 -0.6
baz=80,SNR=13
DAC Darwin (Calif) 80.29 54 PFAKE 07 38 00.0 +10
DAC LR LR
comp=Z,3μm,19.0s,MS5.6
YFT Old Faithful 80.29 44 *e*P P 07 37 53.3 +3.4
comp=Z,27nm,0.8s,mb5.2
M14A Sheep Mountain 80.36 47 ⇓P P 07 37 50.4 +0.1
baz=80,SNR=43
P12A McGill 80.44 50 ⇓P P 07 37 51.0 +0.3
baz=80,SNR=15
MPMC Manual Prospec 80.47 54 ⇑P P 07 37 50.5 -0.5
baz=80,SNR=24
J16A Bone 80.47 45 ⇑P P 07 37 51.6 +0.8
baz=80
H17A Grant Village 80.48 44 ⇑P P 07 37 52.3 +1.4
baz=80,SNR=45
LKWY Lake 80.49 44 *e*P P 07 37 53.2 +2.3
LKWY pmax pmax
comp=Z,47nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,2μm,20.0s,MS5.5
LKWY Lake 80.49 44 *e*P P 07 37 53.2 +2.3
comp=Z,47nm,1.0s,mb5.4
LKWY LR LR
comp=Z,2μm,20.0s,MS5.5
IMW Indian Meadow 80.54 44 *e*P P 07 37 52.3 +1.1
comp=Z,40nm,1.0s,mb5.3
DCID1 Drake Creek 80.56 45 *e*P P 07 37 52.8 +1.4
comp=Z,85nm,1.1s,mb5.6
G18A Lazy EL Ranch, 80.56 43 ⇓P P 07 37 52.7 +1.4
baz=80
HVU Hansel Valley 80.57 47 *e*P P 07 37 52.5 +1.1
HVU pmax pmax
comp=Z,45nm,1.2s,mb5.3
HVU Hansel Valley 80.57 47 *e*P P 07 37 52.5 +1.1
comp=Z,45nm,1.2s,mb5.3
R11A Troy Canyon, C 80.58 51 ⇑P P 07 37 50.9 -0.6
baz=80,SNR=23
RRI2 Red Ridge 80.61 45 *e*P P 07 37 52.7 +1.1
comp=Z,30nm,0.8s,mb5.3
LRMC Laurel Mountai 80.63 54 ⇓P P 07 37 51.9 0.0
baz=80
O13A Hicks Ranch, I 80.69 49 ⇓P P 07 37 52.3 +0.3
baz=80
L15A Malad City 80.69 47 ⇑P P 07 37 52.1 0.0
baz=80,SNR=25
FURC Furnace Creek, 80.69 53 ⇑P P 07 37 51.8 -0.4
baz=80,SNR=9.7
Q12A Willow Creek R 80.72 50 ⇑P P 07 37 52.5 +0.3
baz=80,SNR=9.7
EDW2 Edwards Air Fo 80.73 55 ⇓P P 07 37 51.8 -0.6
baz=80,SNR=10
I17A Pilgrim Ck. 80.74 44 ⇓P P 07 37 53.3 +1.0
baz=80,SNR=10
TPAW Teton Pass 80.76 45 *e*P P 07 37 53.6 +1.3
comp=Z,26nm,0.8s,mb5.2
N14A Grayback Hills 80.81 48 ⇓P P 07 37 52.5 -0.2
baz=81,SNR=15
S11A Rachel 80.84 52 ⇑P P 07 37 53.2 +0.3
baz=81,SNR=16
REDW Red Top Meadow 80.89 45 *e*P P 07 37 53.7 +0.6
comp=Z,36nm,1.3s,mb5.1
SNOW Snow King Moun 80.89 45 *e*P P 07 37 54.1 +1.0
comp=Z,27nm,0.9s,mb5.2
LOHW Long Hollow 80.90 44 *e*P P 07 37 54.1 +1.0
comp=Z,15nm,1.0s,mb4.9
M15A Larsen Ranch, 80.95 47 ⇓P P 07 37 53.8 +0.4
baz=81,SNR=12
J17A Brown Place, J 80.97 45 ⇑P P 07 37 53.8 +0.3
baz=81,SNR=12
MWC Mount Wilson 81.02 56 *e*P P 07 37 54.2 +0.3
MWC pmax pmax
comp=Z,34nm,1.3s,mb5.1
MWC Mount Wilson 81.02 56 *e*P P 07 37 54.2 +0.3
comp=Z,34nm,1.3s,mb5.1
P13A Bates Ranch, G 81.03 49 ⇓P P 07 37 53.9 0.0
baz=81,SNR=16
AHID Auburn Hatcher 81.07 45 *e*P P 07 37 55.3 +1.2
comp=Z,23nm,0.8s,mb5.2
AHID LR LR
comp=Z,2μm,22.0s,MS5.4
U10A Ash Meadows, A 81.08 53 ⇑P P 07 37 54.3 0.0
baz=81,SNR=14
K17A Gardner Place, 81.19 45 ⇑P P 07 37 55.2 +0.5
baz=81
N15A Stansbury Isla 81.22 48 ⇑P P 07 37 55.3 +0.4
baz=81
R12A Pony Springs, 81.24 51 ⇓P P 07 37 55.1 0.0
baz=81,SNR=10
L16A Fish Haven 81.28 46 ⇑P P 07 37 55.6 +0.4
baz=81,SNR=22
BFSC Mount Baldy St 81.29 55 ⇑P P 07 37 56.0 +0.6
baz=81,SNR=8.2
Q13A Wheeler Ranch, 81.30 50 ⇓P P 07 37 56.3 +1.0
baz=81,SNR=13
I18A Diamond G Ranc 81.32 44 ⇑P P 07 37 56.3 +0.9
baz=81
GSC Goldstone 81.34 54 ⇓P P 07 37 56.1 +0.5
baz=81
GSC Goldstone 81.34 54 *e*P P 07 37 56.5 +0.9
GSC pmax pmax
comp=Z,28nm,1.2s,mb5.1
GSC Goldstone 81.34 54 *e*P P 07 37 56.5 +0.9
comp=Z,28nm,1.2s,mb5.1
SHOC Shoshone 81.39 53 ⇑P P 07 37 55.7 -0.2
baz=81
DUG Dugway 81.41 48 ⇓P P 07 37 55.8 -0.1
baz=81,SNR=42
DUG Dugway 81.41 48 *e*P P 07 37 55.9 0.0
DUG pmax pmax
comp=Z,47nm,1.1s,mb5.3
DUG MLR MLR
comp=Z,3μm,19.0s,MS5.7
DUG Dugway 81.41 48 *e*P P 07 37 55.9 0.0
comp=Z,47nm,1.1s,mb5.3
DUG LR LR
comp=Z,3μm,19.0s,MS5.7
T11A Corn Creek, Al 81.41 52 ⇓P P 07 37 56.0 0.0
baz=81,SNR=26
HWUT Hardware Ranch 81.42 47 *e*P P 07 37 56.0 0.0
comp=Z,62nm,1.1s,mb5.5
HWUT LR LR
comp=Z,1μm,19.0s,MS5.2
FOO Floro 81.44 341 *e*P P 07 37 57.1 +1.4
FOO AMB AMB 07 38 44.9
comp=Z,93nm,2.0s,mb5.4
FOO *e*SKS 07 48 12.7
FOO AMS AMS 08 17 37.3
comp=Z,3μm,15.0s,MS5.8
J18A Kendall Valley 81.48 45 ⇓P P 07 37 55.8 -0.4
baz=81,SNR=28
M16A Huntsville 81.55 47 ⇑P P 07 37 56.1 -0.5
baz=81,SNR=15
P14A Drum Mountains 81.57 49 ⇑P P 07 37 56.7 -0.1
baz=81,SNR=27
KONO Kongsberg 81.57 338 *e*P P 07 37 54.1 -2.3
KONO *e*S S 07 48 08.8 +3.2
KONO AMS AMS 08 17 10.5
comp=Z,3μm,18.5s,MS5.7
KONO Kongsberg 81.57 338 *e*P P 07 37 56.7 +0.3
KONO pmax pmax
comp=Z,47nm,1.5s,mb5.2
KONO MLR MLR
comp=Z,4μm,19.0s,MS5.8
KONO Kongsberg 81.57 338 *e*P P 07 37 56.7 +0.4
comp=Z,47nm,1.5s,mb5.2
KONO LR LR
comp=Z,4μm,19.0s,MS5.8
L17A Cokeville 81.58 46 ⇓P P 07 37 56.3 -0.5
baz=81,SNR=24
O15A The Old Anders 81.58 48 ⇑P P 07 37 56.8 0.0
baz=81
NOQ North Oquirrh 81.60 48 *e*P P 07 37 57.2 +0.3
comp=Z,92nm,1.1s,mb5.6
LAO LASA Array 81.66 40 *e*P P 07 37 57.6 +0.4
comp=Z,34nm,1.1s,mb5.2
LAO LR LR
comp=Z,994nm,20.0s,MS5.2
DGMT Dagmar 81.69 38 *e*P P 07 37 56.9 -0.3
comp=Z,50nm,1.2s,mb5.3
DGMT LR LR
comp=Z,1μm,20.0s,MS5.3
KIS Kishinev 81.74 320⇑*i*P P 07 37 55.0 -2.5
comp=Z,1μm,8.0s
KIS Kishinev 81.74 320 *e*PP PP 07 41 04.0 -0.1
KIS *e*S S 07 47 50.0 -18
KIS LRM 08 16 40.0
comp=Z,5μm,16.0s
KIS Kishinev 81.74 320*c i*P P 07 37 55.0 -2.5
KIS *e* 07 41 04.0
KIS *e* 07 48 10.0
KIS pmax pmax
comp=Z,1.0nm,8.0s
KIS MLR MLR
comp=N,5μm,16.0s,MS6.0
KIS MLR MLR
comp=E,2μm,16.0s,MS6.0
KIS MLR MLR
comp=Z,5μm,16.0s,MS6.0
KIS MLR MLR
comp=Z,5μm,16.0s
R13A O'Grain Ranch, 81.75 50 ⇓P P 07 37 57.5 -0.2
baz=82,SNR=10
Q14A Sevier Lake (B 81.76 49 ⇓P P 07 37 57.7 -0.1
baz=82,SNR=38
PPT Papeete 81.78 116 *e*S S 07 48 09.3 +0.4
comp=Z,3μm,32.0s
PPT *e*SS SS 07 53 27.1 -0.8
comp=Z,732nm,24.8s
PPT *e*LQ 07 59 52.5
comp=Z,2μm,29.0s
PPT *e*LR LR 08 03 24.2
comp=Z,3μm,22.5s,baz=305
PPT Papeete 81.78 116 LR LR 08 12 32.5
comp=Z,2μm,18.7s,MS5.5,baz=300,slow=34
K18A Toltan Ranch, 81.79 45 ⇑P P 07 37 58.1 +0.2
baz=82,SNR=20
BBRC Big Bear Sol-O 81.80 55 ⇑P P 07 37 57.9 -0.2
baz=82
GZT Gaziantep 81.83 309 *i* P P 07 37 59.3 +1.1
CTKT Corum 81.86 313 *i* P P 07 37 58.8 +0.5
TUQ Turquoise Moun 81.88 54 ⇓P P 07 37 58.4 -0.1
baz=82,SNR=17
N16A Rees Ranch, Co 81.90 47 ⇓P P 07 37 57.9 -0.6
baz=82,SNR=16
HEC Hector,Ludlow 81.92 54 ⇑P P 07 37 58.1 -0.6
baz=82
MURC Murrieta 81.95 56 ⇑P P 07 37 58.2 -0.7
baz=82,SNR=6.9
BW06 Boulder Array 82.01 45 ⇓P P 07 37 58.9 -0.1
baz=82,SNR=34
BW06 Boulder Array 82.01 45 *e*P P 07 37 59.0 0.0
comp=Z,18nm,0.9s,mb5.0
BW06 LR LR
comp=Z,2μm,20.0s,MS5.4
PDAR Pinedale Array 82.01 45 P P 07 37 59.0 -0.1
comp=Z,7.2nm,0.8s,mb4.7,baz=294,slow=2.6,SNR=39
PDAR LR LR 08 17 22.6
comp=Z,1μm,18.1s,MS5.3,baz=317,slow=38
V11A Goodsprings 82.01 53 ⇑P P 07 37 58.4 -0.7
baz=82,SNR=16
NLU North Lily Min 82.01 48 *e*P P 07 37 59.7 +0.6
comp=Z,18nm,0.9s,mb5.0
T12A Moapa 82.03 52 ⇓P P 07 37 59.1 -0.1
baz=82,SNR=8.0
JLU Jordanelle 82.05 47 *e*P P 07 37 59.7 +0.4
comp=Z,46nm,1.1s,mb5.3
M17A Scullys Gap (B 82.06 46 ⇑P P 07 37 59.2 -0.1
baz=82,SNR=17
P15A Leamington 82.09 49 ⇑P P 07 37 59.4 -0.1
baz=82,SNR=16
SFJD Kangerlussuaq 82.10 5 *e*P P 07 37 58.8 -0.2
SFJD pmax pmax
comp=Z,14nm,0.9s,mb4.9
SFJD Kangerlussuaq 82.10 5 PFAKE 07 38 10.0 +11
SFJD LR LR
comp=Z,1μm,20.0s,MS5.3
SFJD Kangerlussuaq 82.10 5 *i* P P 07 37 58.8 -0.2
comp=Z,14nm,0.9s,mb4.9
S13A Holt Ranch, En 82.14 51 ⇓P P 07 38 00.1 +0.2
baz=82,SNR=28
L18A Fontenelle, Gr 82.19 46 ⇓P P 07 38 00.0 0.0
baz=82,SNR=12
BALT Daday 82.23 314 *i* P P 07 38 00.9 +0.7
O16A Springville 82.24 48 ⇑P P 07 38 00.5 +0.2
baz=82,SNR=17
N17A Moffit Pass 82.25 47 ⇑P P 07 38 00.2 -0.1
baz=82,SNR=7.5
MPU Maple Canyon 82.26 48 *e*P P 07 38 00.5 +0.1
comp=Z,48nm,1.1s,mb5.3
DAU Daniels Canyon 82.28 47 *e*P P 07 38 00.4 -0.1
DAU pmax pmax
comp=Z,52nm,1.0s,mb5.4
DAU Daniels Canyon 82.28 47 *e*P P 07 38 00.4 -0.1
comp=Z,52nm,1.0s,mb5.4
ILGA Ilgaz 82.30 313 *i* P P 07 38 02.0 +1.4
U12A Valley of Fire 82.30 52 ⇓P P 07 38 00.3 -0.4
baz=82,SNR=6.9
R14A James Farms, M 82.31 50 ⇓P P 07 38 01.0 +0.4
baz=82
ARUT Antelope Range 82.31 51 *e*P P 07 38 00.9 +0.2
ARUT pmax pmax
comp=Z,29nm,1.0s,mb5.2
ARUT Antelope Range 82.31 51 *e*P P 07 38 00.9 +0.2
comp=Z,29nm,1.0s,mb5.2
BER Bergen 82.33 340 *e*P P 07 38 05.5 +5.1
BER *e*SKS 07 48 19.3
BER AMS AMS 08 20 37.3
comp=Z,4μm,18.9s,MS5.8
Q15A Fillmore 82.34 49 ⇓P P 07 38 00.3 -0.5
baz=82,SNR=12
WAR Warsaw 82.36 328 *e*P P 07 38 01.3 +0.6
WAR *e*S S 07 48 20.8 +6.8
WAR LMZ 08 17 08.2
comp=Z,5μm,20.5s
WAR Warsaw 82.36 328 *e*P P 07 38 01.3 +0.6
WAR *e*S S 07 48 20.8 +6.8
109C Camp Elliot, M 82.39 56 ⇑P P 07 38 01.3 +0.1
baz=82
K19A Absolon Red Bu 82.40 44 ⇓P P 07 38 00.6 -0.5
baz=82,SNR=18
GMRC Granite Mounta 82.41 54 ⇓P P 07 38 00.9 -0.4
baz=82,SNR=14
T13A Saint George 82.41 51 ⇓P P 07 38 01.3 0.0
baz=82,SNR=19
M18A Lyman 82.46 46 ⇓P P 07 38 01.4 0.0
baz=82,SNR=13
V12A Nelson 82.47 53 ⇑P P 07 38 01.1 -0.5
baz=82,SNR=19
P16A Fountain Green 82.47 48 ⇑P P 07 38 01.6 +0.1
baz=82,SNR=8.3
PFO Pinyon Flat Ob 82.47 55 P P 07 38 00.0 -1.6
comp=Z,154nm,1.1s,mb5.8,SNR=6.2
PFO Pinyon Flat Ob 82.47 55 ⇓P P 07 38 00.8 -0.9
baz=82,SNR=12
PFO Pinyon Flat Ob 82.47 55 *e*P P 07 38 00.2 -1.4
PFO pmax pmax
comp=Z,42nm,1.0s,mb5.3
PFO MLR MLR
comp=Z,2μm,19.0s,MS5.5
PFO Pinyon Flat Ob 82.47 55 *e*P P 07 38 00.2 -1.4
comp=Z,42nm,1.0s,mb5.3
PFO LR LR
comp=Z,2μm,19.0s,MS5.5
CCUT Cedar City 82.49 51 *e*P P 07 38 01.9 +0.3
comp=Z,19nm,1.0s,mb5.0
LVV L'vov 82.50 325 *e*P P 07 38 01.0 -0.5
LVV *e* 07 41 14.8
LVV *e*S S 07 48 17.0 +1.5
LVV MLR MLR
comp=Z,7μm,17.0s,MS6.1
LVV MLR MLR
comp=N,4μm,16.0s,MS6.1
LVV MLR MLR
comp=E,5μm,17.0s,MS6.1
S14A Cedar City 82.50 50 ⇑P P 07 38 01.3 -0.4
baz=82,SNR=6.0
L19A Farson 82.51 45 ⇓P P 07 38 01.9 +0.2
baz=82,SNR=22
ANDN Andirin 82.53 309 *i* P P 07 38 03.2 +1.4
BELC Belle Mtn. 82.59 55 ⇓P P 07 38 01.6 -0.6
baz=82,SNR=14
W12A Cal Nev Ari 82.68 53 ⇓P P 07 38 02.4 -0.2
baz=82
CDAG Cicekdag 82.69 312 *i* P P 07 38 03.5 +0.9
U13A Pakoon Wash 82.70 52 ⇓P P 07 38 02.6 -0.1
baz=82,SNR=38
MVU Marysvale 82.73 49 PFAKE 07 38 10.0 +7.1
MVU LR LR
comp=Z,3μm,19.0s,MS5.7
O17A Robinson Place 82.73 47 ⇓P P 07 38 02.6 -0.3
baz=82,SNR=32
MSU Marysvale 82.74 49 *e*P P 07 38 03.3 +0.4
MSU pmax pmax
comp=Z,27nm,0.7s,mb5.4
MSU Marysvale 82.74 49 *e*P P 07 38 03.3 +0.3
comp=Z,27nm,0.7s,mb5.4
ELDT Eldivan 82.80 313 *i* P P 07 38 04.4 +1.2
K20A Yellowstone Ra 82.80 44 ⇓P P 07 38 03.0 -0.1
baz=82,SNR=7.2
BAR Barrett 82.81 56 *e*P P 07 38 02.5 -0.9
comp=Z,33nm,1.3s,mb5.2
R15A Junction 82.84 50 ⇓P P 07 38 03.6 +0.1
baz=83,SNR=9.9
MONP Monument Peak 82.88 56 ⇑P P 07 38 03.5 -0.3
baz=83,SNR=11
T14A Hurricane 82.94 51 ⇓P P 07 38 04.0 0.0
baz=83,SNR=14
N18A Larsen Ranch, 82.96 46 ⇑P P 07 38 04.1 +0.1
baz=83,SNR=33
M19A Rock Springs 82.97 46 ⇓P P 07 38 03.9 -0.1
baz=83
V13A Grand Canyon W 82.99 52 ⇑P P 07 38 04.2 -0.1
baz=83,SNR=24
BSD Bornholm Skovb 83.00 332⇑*i*P P 07 38 03.4 -0.6
BSD *i* S S 07 48 18.3 -2.1
BSD pmax pmax
comp=Z,35nm,1.2s,mb5.3
BSD MLR MLR
comp=Z,2μm,18.0s,MS5.6
BSD Bornholm Skovb 83.00 332⇑*i*P P 07 38 03.4 -0.6
comp=Z,35nm,1.2s,mb5.3
BSD *i* S S 07 48 18.3 -2.1
BSD
comp=Z,2μm,18.0s
S15A Panguitch 83.08 50 ⇑P P 07 38 05.1 +0.4
baz=83
BR131 Keskin Array S 83.10 312 *e*P P 07 38 05.6 +0.9
comp=Z,61nm,1.0s,mb5.6
BR131 LR LR
comp=Z,1μm,20.0s,MS5.3
BRTR Keskin Array B 83.10 312 P P 07 38 05.2 +0.4
comp=Z,17nm,0.6s,mb5.2,baz=104,slow=3.6,SNR=78
BRTR LR LR 08 19 12.9
comp=Z,1μm,18.1s,MS5.3,baz=209,slow=39
BRTR Keskin Array B 83.10 312 P P 07 38 05.2 +0.4
BRTR pmax pmax
comp=Z,17nm,0.6s
BRTR MLR MLR
comp=Z,1μm,18.1s
IRM Iron Mountain 83.10 54 ⇑P P 07 38 04.7 -0.2
baz=83,SNR=18
P17A Butcher Ranch, 83.14 48 ⇑P P 07 38 04.9 0.0
baz=83,SNR=10
O18A Roosevelt 83.15 47 ⇑P P 07 38 05.1 +0.1
baz=83,SNR=24
BC3 Big Chuckw Mtn 83.16 55 ⇓P P 07 38 04.7 -0.5
baz=83,SNR=20
COBT Iskenderun 83.16 308 *i* P P 07 38 06.9 +1.7
Q16A Castle Valley 83.17 49 ⇑P P 07 38 04.9 -0.3
baz=83,SNR=21
L20A Wamsutter 83.18 45 ⇓P P 07 38 05.0 -0.1
baz=83,SNR=12
DVTC Desert V Tower 83.23 56 ⇑P P 07 38 05.4 -0.1
baz=83
U14A Mt Trumbull 83.23 52 ⇑P P 07 38 05.6 +0.1
baz=83,SNR=18
KWP Kalwaria Pacla 83.28 325 *e*P P 07 38 06.0 +0.5
comp=Z,500nm,2.6s,mb6.1
KWP *e*PcP PcP 07 38 09.1 -0.8
KWP *e*S S 07 48 29.7 +6.3
KWP LMZ 08 18 42.6
comp=Z,10μm,16.3s
KWP Kalwaria Pacla 83.28 325⇑*e*P P 07 38 06.0 +0.5
KWP *e* 07 38 09.1
KWP *e*S S 07 48 29.7 +6.3
KWP pmax pmax
comp=Z,500nm,2.6s,mb6.1
KWP MLR MLR
comp=Z,10μm,16.3s,MS6.3
KWP Kalwaria Pacla 83.28 325⇑*e*P P 07 38 06.0 +0.5
KWP *e*PcP PcP 07 38 09.1 -0.8
KWP *e*S S 07 48 29.7 +6.3
BUR08 Bucovina Ar. S 83.28 322 *e*P P 07 38 06.0 +0.5
BUR08 *e*pP pP 07 38 18.4 +1.6
BUR01 Bucovina Ar. S 83.29 322 P P 07 38 06.7 +1.1
BURAR Bucovina Array 83.29 322 P P 07 38 06.6 +1.0
BURAR Bucovina Array 83.29 322⇓*i*P P 07 38 05.6 0.0
SWSC Sam W. Stewart 83.30 56 ⇓P P 07 38 05.5 -0.4
baz=83
N19A John Jarvie Ra 83.31 46 ⇑P P 07 38 05.8 0.0
baz=83,SNR=11
R16A Teasdale 83.32 49 ⇓P P 07 38 05.9 0.0
baz=83,SNR=25
GKP Gorka Klasztor 83.35 330 *e*P P 07 38 06.1 +0.3
GKP *e*PcP PcP 07 38 08.2 -2.0
GKP *e*S S 07 48 25.6 +1.6
GKP LMZ 08 19 36.2
comp=Z,5μm,17.6s
GKP Gorka Klasztor 83.35 330 *e*P P 07 38 06.1 +0.3
GKP *e*PcP PcP 07 38 08.2 -1.9
GKP *e*S S 07 48 25.6 +1.7
P18A Preston Nutter 83.36 48 ⇓P P 07 38 06.2 +0.1
baz=83
YURE YUREGIR 83.41 309 *i* P P 07 38 08.2 +1.7
T15A Red Dirt Ranch 83.43 51 ⇑P P 07 38 06.4 -0.1
baz=83,SNR=16
W13A Hualapai Mount 83.47 53 ⇑P P 07 38 07.1 +0.4
baz=83,SNR=10
SRU San Rafael 83.48 48 ⇑P P 07 38 06.5 -0.3
baz=83,SNR=14
SRU San Rafael 83.48 48 *e*P P 07 38 05.7 -1.0
SRU pmax pmax
comp=Z,29nm,0.8s,mb5.4
SRU San Rafael 83.48 48 *e*P P 07 38 05.7 -1.1
comp=Z,29nm,0.8s,mb5.3
TIRR Tirgusor 83.49 318 *e*P P 07 38 06.5 -0.2
TIRR pmax pmax
comp=Z,87nm,1.6s,mb5.5
TIRR Tirgusor 83.49 318 *e*P P 07 38 06.5 -0.2
comp=Z,87nm,1.6s,mb5.5
TIRR Tirgusor 83.49 318⇑*i*P P 07 38 07.6 +0.9
COP Copenhagen 83.56 334 *i* P P 07 38 02.7 -4.1
COP *i* S S 07 48 21.3 -4.6
COP pmax pmax
comp=Z,26nm,0.8s,mb5.4
COP MLR MLR
comp=Z,1μm,18.0s,MS5.3
COP Copenhagen 83.56 334 *i* P P 07 38 02.7 -4.1
comp=Z,26nm,0.8s,mb5.4
COP *i* S S 07 48 21.3 -4.6
COP
comp=Z,1μm,18.0s
M20A Sweetwater, Wa 83.58 45 ⇑P P 07 38 07.3 +0.1
baz=83,SNR=12
SGKT Sivrigoynuk 83.61 314 *i* P P 07 38 08.4 +1.0
HARR Harsova 83.62 319 ⇑P P 07 38 08.4 +1.0
HARR Harsova 83.62 319⇑*i*P P 07 38 08.4 +1.0
O19A Miners Draw (B 83.69 47 ⇓P P 07 38 07.9 +0.1
baz=83,SNR=12

V14A Boquillas Ranc 83.71 52 ⇑P **P 07 38 08.3 +0.4**
baz=84,SNR=20
PDMCI Parker Dam,Lak 83.73 54 ⇑P **P 07 38 08.0 -0.1**
baz=84
GULE Gulek 83.73 310 *i* P **P 07 38 09.8 +1.7**
Q18A Rafter H Ranch 83.73 48 ⇓P **P 07 38 07.9 -0.1**
baz=84
R17A Hanksville Air 83.75 49 ⇓P **P 07 38 08.2 +0.1**
baz=84,SNR=20
Y12C Blythe 83.76 54 ⇓P **P 07 38 08.4 +0.1**
baz=84,SNR=9.3
X13A Yucca 83.78 53 ⇑P **P 07 38 07.9 -0.5**
baz=84,SNR=10
L21A Rawlins 83.79 44 ⇓P **P 07 38 08.5 +0.2**
baz=84,SNR=14
U15A North Rim 83.82 51 ⇑P **P 07 38 08.5 0.0**
baz=84,SNR=18
BORG Borgarnes 83.85 353 *e*P **P 07 38 08.8 +0.7**
BORG *e**PP pP 07 38 19.6 +0.2
BORG pmax pmax
comp=Z,56nm,1.2s
BORG MLR MLR
comp=Z,900nm,20.0s
BORG Borgarnes 83.85 353 *e*P **P 07 38 08.8 +0.7**
comp=Z,56nm,1.2s,mb5.6
BORG *e*pP pP 07 38 19.6 +0.2
BORG LR LR
comp=Z,900nm,20.0s,MS5.2
N20A Spence Gulch, 83.91 46 ⇓P **P 07 38 08.9 0.0**
baz=84,SNR=46
GLA Glamis 83.92 55 ⇑P **P 07 38 08.7 -0.4**
baz=84,SNR=7.5
GLA Glamis 83.92 55 *e*P **P 07 38 09.9 +0.8**
GLA pmax pmax
comp=Z,33nm,1.0s,mb5.4
GLA Glamis 83.92 55 *e*P **P 07 38 09.9 +0.7**
comp=Z,33nm,1.0s,mb5.4
KOLS Kolonicke sedl 83.95 325 *e*P **P 07 38 09.0 +0.1**
comp=Z,108nm,2.5s,mb5.5
KOLS *e*S S 07 48 29.4 -0.8
KOLS LR LR
comp=Z,5μm,16.8s,MS6.0
KOLS Kolonicke sedl 83.95 325 *e*P **P 07 38 09.0 +0.1**
W14A Seligman 83.96 53 ⇑P **P 07 38 09.0 -0.3**
baz=84,SNR=17
M21A Separation Pea 84.01 45 ⇓P **P 07 38 09.0 -0.4**
baz=84,SNR=12
RWWY Rawlins 84.05 45 *e*P **P 07 38 11.0 +1.4**
comp=Z,60nm,1.3s,mb5.6
PSN Preselentsi 84.09 318 *e*P **P 07 38 11.0 +1.2**
S17A Black Ridge (B 84.13 50 ⇓P **P 07 38 09.5 -0.7**
baz=84,SNR=13
STHS Stebnicka Huta 84.14 325 *e*P **P 07 38 10.7 +0.8**
STHS pmax pmax
comp=Z,18nm,1.1s,mb5.1
STHS Stebnicka Huta 84.14 325 *e*P **P 07 38 10.7 +0.8**
comp=Z,18nm,1.1s,mb5.1
STHS Stebnicka Huta 84.14 325 *e*P **P 07 38 10.7 +0.8**
UZH Uzhgorod 84.14 324 *e*P **P 07 38 10.7 +0.8**
UZH *i* S S 07 48 35.0 +2.9
UZH *e* 07 49 26.7
UZH *e* 07 54 07.0
UZH MLR MLR
comp=N,2μm,18.0s,MS5.9
UZH MLR MLR
comp=E,4μm,18.0s,MS5.9
UZH MLR MLR
comp=Z,3μm,18.0s,MS5.7
P19A Cripple Cowboy 84.16 47 ⇓P **P 07 38 10.2 0.0**
baz=84,SNR=42
MUD Monsted U'grnd 84.17 336 *i* P **P 07 38 07.3 -2.6**
MUD pmax pmax
comp=Z,19nm,1.0s,mb5.2
MUD MLR MLR
comp=Z,2μm,18.0s,MS5.6
MUD Monsted U'grnd 84.17 336 *i* P **P 07 38 07.3 -2.6**
comp=Z,19nm,1.0s,mb5.2
MUD
comp=Z,2μm,18.0s
Y13A Salome 84.21 54 ⇑P **P 07 38 10.3 -0.3**
baz=84
MLR Muntele Rosu 84.23 320 P **P 07 38 10.6 +0.1**
MLR Muntele Rosu 84.23 320 ⇓*i*P **P 07 38 11.0 +0.5**
V15A Kaibab Nationa 84.24 52 ⇑P **P 07 38 10.7 0.0**
baz=84,SNR=18
OJC Ojcow 84.29 327 *e*P **P 07 38 10.2 -0.5**
OJC *e*pP pP 07 38 18.9 -3.0
OJC *e*PP PP 07 41 25.0 +0.1
OJC *e*S S 07 48 34.0 +0.4
OJC *e*ScS ScS 07 48 45.1 -0.3
OJC *e*SS SS 07 54 02.9 +0.4
OJC L 08 18 48.9
comp=Z,5.2nm,18.4s
OJC Ojcow 84.29 327 *e*P **P 07 38 10.2 -0.5**
OJC *e**PP pP 07 38 18.9 -3.0
OJC *e* 07 41 25.0
OJC *e*S S 07 48 34.0 +0.4
OJC *e*SS SS 07 54 02.9 +0.4
OJC MLR MLR
comp=Z,5μm,18.4s,MS6.0
OJC Ojcow 84.29 327 *e*P **P 07 38 10.2 -0.5**
OJC *e*pP pP 07 38 18.9 -3.0
OJC *e*PP PP 07 41 25.0 +0.1
OJC *e*S S 07 48 34.0 +0.4
OJC *e*ScS ScS 07 48 45.1 -0.3
OJC *e*SS SS 07 54 02.9 +0.4
R18A Canyonlands Na 84.30 48 ⇓P **P 07 38 10.3 -0.7**
baz=84,SNR=15
L22A Ellis Ranch, M 84.32 44 ⇓P **P 07 38 10.8 -0.2**
baz=84
O20A White River Ci 84.33 46 ⇑P **P 07 38 10.9 -0.2**
baz=84,SNR=28
TRPA Tarpa 84.34 324 ⇑*i*P **P 07 38 11.1 +0.1**
112A Yuma 84.38 55 ⇓P **P 07 38 11.3 -0.1**
baz=84
N21A Black Mountain 84.41 45 ⇓P **P 07 38 11.1 -0.4**
baz=84,SNR=20
RSSD Black Hills 84.44 41 *e*P **P 07 38 12.4 +0.8**
RSSD pmax pmax
comp=Z,15nm,1.2s,mb5.0
RSSD MLR MLR
comp=Z,1μm,19.0s,MS5.3
RSSD Black Hills 84.44 41 *e*P **P 07 38 12.4 +0.9**
comp=Z,15nm,1.2s,mb5.0
RSSD LR LR
comp=Z,1μm,19.0s,MS5.3
T17A Navajo Res., N 84.49 50 ⇑P **P 07 38 11.5 -0.4**
baz=84
X14A Yava 84.50 53 ⇑P **P 07 38 12.0 0.0**
baz=84,SNR=14
W15A Williams 84.53 52 ⇑P **P 07 38 12.2 0.0**
baz=84,SNR=10.0
TAOE Nuku Hiva Isla 84.59 104 *e*S S 07 48 33.5 -4.1
comp=Z,654nm,24.9s
TAOE *e*SS SS 07 54 05.0 -4.5
comp=Z,492nm,25.3s
TAOE *e*LQ 08 00 35.8
comp=Z,2μm,29.2s
TAOE *e*LR LR 08 04 39.5
comp=Z,4μm,23.3s,baz=295
NIE Niedzica 84.59 326 *e*P **P 07 38 13.3 +1.1**
NIE *e**PP pP 07 38 20.9 -2.6
HWQ Hawqa 84.61 307 *e*P **P 07 38 12.3 -0.3**
P20A De Beque 84.61 47 ⇑P **P 07 38 12.6 +0.1**
baz=84,SNR=16
S18A Hurst Farm, Bl 84.63 49 ⇓P **P 07 38 12.6 0.0**
baz=84,SNR=15
Z13A Yuma Proving G 84.67 54 ⇑P **P 07 38 12.9 0.0**
baz=84,SNR=25
ULM Lac du Bonnet 84.68 33 P **P 07 38 11.2 -1.4**
comp=Z,2.0nm,0.5s,mb4.5,baz=317,slow=7.2,SNR=2.6
ULM LR LR 08 19 59.6
comp=Z,1μm,18.3s,MS5.4,baz=66,slow=38
R19A Curley Farm, L 84.76 48 ⇑P **P 07 38 13.2 0.0**
baz=84,SNR=26
O21A Pagoda 84.76 46 ⇓P **P 07 38 12.8 -0.4**
baz=84
U17A Shonto 84.81 50 ⇑P **P 07 38 13.7 +0.1**
baz=85,SNR=20
113A Mohawk Valley, 84.82 55 ⇑P **P 07 38 13.4 -0.3**
baz=85,SNR=12
PRD Provadia 84.84 318 *e*P **P 07 38 13.0 -0.6**
PV10 Paradox Valley 84.85 48 *e*P **P 07 38 13.7 0.0**
comp=Z,2μm,0.9s
PV04 Paradox Valley 84.93 48 *e*P **P 07 38 14.6 +0.5**
X15A Humboldt 84.94 53 ⇑P **P 07 38 14.2 0.0**
baz=85,SNR=25
WUAZ Wupatki 84.95 52 ⇑P **P 07 38 14.4 +0.1**
baz=85,SNR=19
WUAZ Wupatki 84.95 52 *e*P **P 07 38 14.2 -0.1**
comp=Z,54nm,1.1s,mb5.6
ESKT Eskisehir 84.97 313 *i* P **P 07 38 15.3 +1.0**
Q20A Ridgley Place, 84.99 47 ⇑P **P 07 38 14.5 +0.1**
baz=85,SNR=37
BHL Bhannes 85.02 307 *e*P **P 07 38 14.4 -0.3**
T18A Mexican Hat 85.02 49 ⇓P **P 07 38 13.7 -0.9**
baz=85,SNR=16
N22A Wattenberg Ran 85.04 45 ⇑P **P 07 38 14.7 +0.1**
baz=85,SNR=10
Z14A Wintersburg 85.07 54 ⇓P **P 07 38 14.7 -0.3**
baz=85
W16A Flagstaff 85.08 52 ⇑P **P 07 38 14.9 0.0**
baz=85
ASF Jabal al Asfar 85.10 305 LR LR 08 23 23.0
comp=Z,1μm,18.7s,MS5.3,baz=115,slow=41
DRGR 85.13 323 P **P 07 38 15.4 +0.4**
DRGR 85.13 323 ⇑*i*P **P 07 38 14.8 -0.2**
KECS Kecovo 85.14 325 *e*P **P 07 38 15.3 +0.4**
KECS pmax pmax
comp=Z,11nm,1.6s,mb4.7
KECS Kecovo 85.14 325 *e*P **P 07 38 15.3 +0.4**
comp=Z,11nm,1.6s,mb4.8
KECS *e*PP PP 07 41 30.8 -1.0
KECS Kecovo 85.14 325 *e*P **P 07 38 15.3 +0.4**
KECS *e*PP PP 07 41 30.8 -1.0
RAC Raciborz 85.14 327 *e*P **P 07 38 15.4 +0.5**
RAC *e*S S 07 48 43.5 +1.5
RAC MLR MLR
comp=N,3μm,17.0s
RAC MLR MLR
comp=Z,3μm,20.0s,MS5.7
S19A Harvey Farm, M 85.15 49 ⇑P **P 07 38 14.6 -0.7**
baz=85,SNR=13
Y15A Casa Rosa Ranc 85.17 53 ⇓P **P 07 38 15.0 -0.4**
baz=85,SNR=26
V17A Tonalea, Kykot 85.28 51 ⇓P **P 07 38 15.8 -0.2**
baz=85,SNR=45
PV01 Paradox Valley 85.29 48 *e*P **P 07 38 15.8 -0.2**
comp=Z,2μm,0.7s
OKC Ostrava-Krasne 85.33 327 *e*P **P 07 38 15.6 -0.3**
OKC *e*pP pP 07 38 26.8 -0.4
OKC *e*PP PP 07 41 36.8 +3.4
OKC *e*S S 07 48 45.4 +1.5
OKC AMS AMS 08 26 10.0
comp=Z,3μm,14.4s
PHWY Pilot Hill 85.34 44 *e*P **P 07 38 16.8 +0.7**
comp=Z,64nm,1.6s,mb5.5
R20A Redvale 85.38 48 ⇓P **P 07 38 16.0 -0.4**
baz=85,SNR=22
U18A Rough Rock, Ch 85.44 50 ⇑P **P 07 38 16.9 +0.2**
baz=85,SNR=20
114A Black Gap (USA 85.45 55 ⇓P **P 07 38 16.3 -0.5**
baz=85
KSP Ksiaz 85.47 329 *e*P **P 07 38 16.8 +0.2**
comp=Z,300nm,3.0s
KSP *e*PcP PcP 07 38 19.9 +0.3
KSP *e*pP pP 07 38 27.3 -0.6
KSP *e*S S 07 48 47.2 +2.0
KSP LMZ 08 21 14.2
comp=Z,8μm,17.3s
KSP Ksiaz 85.47 329 ⇑*e*P **P 07 38 16.7 +0.1**
KSP *e*PP PP 07 41 36.7 +2.2
KSP *e*S S 07 48 45.0 -0.2
KSP *e*SS SS 07 54 18.0 -1.7
X16A Lo Mia Camp, P 85.52 52 ⇓P **P 07 38 17.2 +0.1**
baz=85,SNR=17
MORC Moravsky Berou 85.66 327 *e*P **P 07 38 17.8 +0.3**
MORC pmax pmax
comp=Z,105nm,1.7s,mb5.8
MORC Moravsky Berou 85.66 327 *e*P **P 07 38 17.8 +0.2**
comp=Z,105nm,1.7s,mb5.8
MORC Moravsky Berou 85.66 327 ⇑*i*P **P 07 38 17.9 +0.4**
Z15A Gila River Ind 85.66 54 ⇓P **P 07 38 17.7 -0.2**
baz=85
BSEG Bad Segeberg 85.68 334 *e*P **P 07 38 17.0 -0.5**
comp=Z,53nm,1.3s,mb5.6
MMAI Mount Meron Ar 85.69 306 P **P 07 38 18.7 +0.7**
comp=Z,16nm,0.8s,mb5.3,baz=47,slow=6.1,SNR=11
MMAI LR LR 08 21 33.2
comp=Z,2μm,19.1s,MS5.5,baz=55,slow=39
SMCO Snowmass 85.69 46 *e*P **P 07 38 18.7 +0.8**
comp=Z,40nm,1.0s,mb5.6
T19A Beclabito 85.76 49 ⇑P **P 07 38 18.1 -0.2**
baz=86,SNR=17
Y16A Circle Bar Ran 85.80 53 ⇓P **P 07 38 18.4 -0.2**
baz=86,SNR=11
V18A Ganado 85.80 51 ⇓P **P 07 38 18.4 -0.2**
baz=86,SNR=26
R21A Cimarron 85.80 47 ⇓P **P 07 38 18.9 +0.4**
baz=86
PSZ Piszkesteto 85.81 325 *e*P **P 07 38 18.5 +0.2**
PSZ pmax pmax
comp=Z,30nm,1.3s,mb5.4
PSZ MLR MLR
comp=Z,5μm,20.0s,MS5.9
PSZ Piszkesteto 85.81 325 *e*P **P 07 38 18.5 +0.2**
comp=Z,30nm,1.3s,mb5.4
PSZ LR LR
comp=Z,5μm,20.0s,MS5.9
PSZ Piszkesteto 85.81 325 ⇓*i*P **P 07 38 18.4 +0.1**
DPC Dobruska-Polom 85.81 328 *e*P **P 07 38 18.6 +0.3**
DPC *e*pP pP 07 38 29.3 -0.3
DPC *e*PP PP 07 41 39.9 +2.7
DPC *e*S S 07 48 46.7 -1.9
DPC AMS AMS 08 21 00.0
comp=Z,5μm,14.7s
UPC Upice 85.84 329 *e*P **P 07 38 18.8 +0.4**
UPC *e*pP pP 07 38 29.8 +0.1
MVCO Mesa Verde 85.88 49 ⇑P **P 07 38 18.6 -0.3**
baz=86,SNR=15
MVCO Mesa Verde 85.88 49 *e*P **P 07 38 18.9 0.0**
comp=Z,19nm,0.9s,mb5.3
MVCO LR LR
comp=Z,2μm,20.0s,MS5.5
Q22A Crested Butte, 85.92 47 ⇓P **P 07 38 19.6 +0.6**
baz=86,SNR=35
VYHS Vyhne 85.93 326 *e*P **P 07 38 19.1 +0.2**
comp=Z,32nm,1.4s,mb5.4
VYHS *e*PP PP 07 41 40.6 +2.3
VYHS *e*S S 07 48 48.0 -1.8
VYHS *e*SS SS 07 54 30.4 +3.8
VYHS LR LR
comp=Z,2μm,17.7s,MS5.6
VYHS Vyhne 85.93 326 *e*P **P 07 38 19.1 +0.2**
VYHS *e*PP PP 07 41 40.6 +2.3
VYHS *e*S S 07 48 48.0 -1.8
VYHS *e*SS SS 07 54 30.4 +3.8
115A Sonoran Desert 85.94 54 ⇓P **P 07 38 19.4 +0.1**
baz=86,SNR=15
214A Organ Pipe Nat 85.94 55 ⇑P **P 07 38 19.2 -0.2**
baz=86,SNR=15
U19A Dine' College, 85.95 50 ⇑P **P 07 38 19.4 +0.2**
baz=86,SNR=32
GAZI Gazipasa 85.95 310 *i* P **P 07 38 17.9 -1.4**
X17A Forest Lakes 86.00 52 ⇑P **P 07 38 19.6 +0.1**
baz=86,SNR=14
CSS Prodhromos 86.00 309 *e*P **P 07 38 19.0 -0.6**
comp=Z,36nm,0.8s,mb5.7
GZR Gura Zlata 86.01 322 ⇓P **P 07 38 18.7 -0.7**
GZR Gura Zlata 86.01 322 ⇓*i*P **P 07 38 18.7 -0.7**
AGMN Agassiz Refuge 86.03 34 *e*P **P 07 38 18.3 -1.1**
comp=Z,22nm,1.3s,mb5.2
AGMN LR LR
comp=Z,2μm,19.0s,MS5.4
S21A Coal Bank Pass 86.07 48 ⇓P **P 07 38 19.6 -0.2**
baz=86,SNR=10
KOLL Kolacno 86.08 326 *e*P **P 07 38 21.1 +1.4**
KOLL Kolacno 86.08 326 *e*P **P 07 38 21.1 +1.4**
Z16A Peralta Trail, 86.14 53 ⇑P **P 07 38 20.1 -0.2**
baz=86,SNR=14
ISCO Idaho Springs 86.16 45 *e*P **P 07 38 21.8 +1.6**
ISCO pmax pmax
comp=Z,39nm,1.4s,mb5.4
ISCO MLR MLR
comp=Z,2μm,20.0s,MS5.4
ISCO Idaho Springs 86.16 45 *e*P **P 07 38 21.8 +1.6**
comp=Z,39nm,1.4s,mb5.5
ISCO LR LR
comp=Z,2μm,20.0s,MS5.4
ISP Isparta 86.18 312 PFAKE 07 38 30.0 +10
ISP LR LR
comp=Z,2μm,19.0s,MS5.6
Y17A Roosevelt 86.34 53 ⇓P **P 07 38 21.0 -0.2**
baz=86,SNR=14
116A Eloy 86.38 54 ⇑P **P 07 38 21.2 -0.3**
baz=86,SNR=13
R22A Saguache, Gunn 86.39 47 ⇑P **P 07 38 21.9 +0.6**
baz=86,SNR=17
V19A Window Rock 86.39 50 ⇑P **P 07 38 21.6 +0.2**
baz=86
VRAC Vranov 86.42 327 LR LR 08 16 46.9
comp=Z,1μm,21.0s,MS5.2,baz=41,slow=36
VRAC Vranov 86.42 327 P **P 07 38 21.8 +0.5**
VRAC Vranov 86.42 327 ⇑*i*P **P 07 38 21.6 +0.3**
PVCC Panska Ves 86.46 329 *e*P **P 07 38 22.1 +0.6**
PVCC *e*pP pP 07 38 32.7 -0.1
PVCC *e*PP PP 07 41 42.0 -0.5
PVCC *e*S S 07 48 57.0 +2.1
PVCC AMS AMS 08 22 00.0
comp=Z,3μm,14.5s
X18A Snowflake 86.47 52 ⇑P **P 07 38 21.8 0.0**
baz=86,SNR=8.7
BZS Buzias 86.48 322 P **P 07 38 21.7 0.0**
BRG Berggiesshubel 86.49 330 *e*P **P 07 38 21.3 -0.3**
comp=Z,97nm,2.3s,mb5.6
BRG Berggiesshubel 86.49 330 *e*P **P 07 38 21.4 -0.2**
comp=Z,86nm,2.0s,mb5.6
BRG *i* pP 07 38 33.0 +0.2
comp=Z,84nm,1.7s
BRG PP PP 07 41 45.0 +2.4
BRG S S 07 48 53.0 -2.1
BRG SS SS 07 54 39.0 +4.4
BRG *e*PKPPKP 08 04 29.4
comp=Z,2.3nm,0.5s
BRG
comp=N,2μm,16.8s
BRG
comp=E,4μm,17.4s
BRG
comp=Z,2μm,15.1s
BRG Berggiesshubel 86.49 330 *e*P **P 07 38 21.4 -0.2**
BRG *i* pP 07 38 33.1 +0.2
BRG 07 41 45.0
BRG S S 07 48 53.0 -2.1
BRG SS SS 07 54 39.0 +4.4
BRG Berggiesshubel 86.49 330 *e*P **P 07 38 21.4 -0.2**
BRG *i* pP 07 38 33.0 +0.2
BRG PP PP 07 41 45.0 +2.4
BRG S S 07 48 53.0 -2.1
BRG SS SS 07 54 39.0 +4.4
BRG *e*P'P' 08 04 29.4
KHAL Karahalli 86.51 313 *i* P **P 07 38 21.7 -0.2**
CLL Collm 86.57 331 *e*P **P 07 38 21.2 -0.8**
comp=Z,68nm,1.9s,mb5.5
CLL *e*pP pP 07 38 32.5 -0.8
CLL Collm 86.57 331 ⇑*i*P **P 07 38 21.2 -0.8**
CLL *i* pP 07 38 32.3 -1.0
CLL *e*S S 07 48 54.0 -1.9
CLL pmax pmax
comp=Z,61nm,1.4s,mb5.6
CLL MLR MLR
comp=Z,4μm,16.5s,MS5.9
CLL Collm 86.57 331 ⇑*i*P **P 07 38 21.2 -0.8**
comp=Z,61nm,1.4s,mb5.6
CLL *i* pP 07 38 32.3 -1.0
CLL *e*S S 07 48 54.0 -1.9
CLL LR LR
comp=Z,4μm,16.5s,MS5.9
CLL Collm 86.57 331 ⇑*i*P **P 07 38 21.2 -0.8**
comp=Z,61nm,1.4s,mb5.6
CLL *i* pP 07 38 32.3 -1.0
comp=Z,101nm,1.5s
CLL *e* 07 39 23.0
CLL *e*PP PP 07 41 44.0 +0.7
CLL *e* 07 41 59.0
CLL *e* 07 44 12.0
CLL *e*S S 07 48 54.0 -1.9
CLL *e*PS 07 50 01.0
CLL *e*PPS 07 50 20.0
CLL *e* 07 51 45.0
CLL *e* 07 52 54.0
CLL *e*SS SS 07 54 40.0 +4.3
CLL *e* 07 59 24.0
CLL *e*SSS 08 00 54.0
V20A Brimhall 86.72 50 ⇓P **P 07 38 22.8 -0.3**
baz=86,SNR=13
Z17A San Carlos Hig 86.82 53 ⇑P **P 07 38 23.4 -0.2**
baz=87
BALY Balya 86.83 315 *i* P **P 07 38 23.5 0.0**
Y18A Canyon Day Jun 86.84 52 ⇓P **P 07 38 23.9 +0.2**
baz=87,SNR=14
PRA Prague 86.86 329 P **P 07 38 24.0 +0.6**
PRA pP pP 07 38 34.0 -0.7
PRU Pruhonice 86.87 329 *e*P **P 07 38 24.2 +0.7**
PRU *e* pP 07 38 34.4 -0.4
PRU *e* 07 48 56.1
PRU MLR MLR
comp=Z,4μm,15.8s,MS5.9
PRU smax
comp=N,4.0nm,0.4s
PRU Pruhonice 86.87 329 *e*P **P 07 38 24.2 +0.7**
PRU *e*pP pP 07 38 34.4 -0.4
PRU *e*PP PP 07 41 37.3 -8.5
PRU *e*S S 07 48 56.1 -2.8
PRU AMS AMS 08 21 50.0
comp=N,4μm,15.8s
216A Three Points, 86.87 54 ⇓P **P 07 38 24.1 +0.2**
baz=87,SNR=13
TREC Trest 86.94 328 *e*P **P 07 38 24.1 +0.2**
TREC *e*pP pP 07 38 34.1 -1.1
TREC *e*PP PP 07 41 47.4 +1.0
TREC AMS AMS 08 20 00.0
comp=N,4μm,18.2s
ZST Bratislava 86.97 326 *e*S S 07 49 04.3 +4.3
X19A St. Johns 86.97 51 ⇑P **P 07 38 24.6 +0.3**
baz=87,SNR=24
T22A Edith 87.02 48 ⇓P **P 07 38 25.1 +0.6**
baz=87,SNR=20
117A Oracle 87.05 54 ⇑P **P 07 38 24.5 -0.2**
baz=87,SNR=12
TUC Tucson 87.17 54 *e*P **P 07 38 25.9 +0.6**
TUC pmax pmax
comp=Z,19nm,1.3s,mb5.2
TUC Tucson 87.17 54 *e*P **P 07 38 25.9 +0.6**
comp=Z,19nm,1.3s,mb5.2
CLZ Clausthal 87.25 332 *e*P **P 07 38 24.9 -0.4**
comp=Z,39nm,1.5s,mb5.4
CLZ Clausthal 87.25 332 *e*P **P 07 38 24.9 -0.4**
CLZ pmax pmax
comp=Z,39nm,1.5s,mb5.4
V21A Milan 87.26 50 ⇑P **P 07 38 26.0 +0.3**
baz=87,SNR=12
Y19A Nutrioso 87.27 52 ⇓P **P 07 38 25.7 -0.1**
baz=87,SNR=12
RZN Rozhen 87.33 318 *e*P **P 07 38 25.1 -0.8**
X20A Quemado 87.44 51 ⇑P **P 07 38 27.0 +0.4**
baz=87,SNR=12
217A Green Valley 87.45 54 ⇑P **P 07 38 26.5 -0.2**
baz=87,SNR=9.4
TANN Tannenbergstha 87.46 330 *e*P **P 07 38 26.1 -0.2**
comp=Z,40nm,2.0s,mb5.3
TANN *e*pP pP 07 38 36.6 -1.1
TANN *e*PP PP 07 41 50.4 -0.1
SDCO Great Sand Dun 87.47 47 *e*P **P 07 38 27.1 +0.4**
comp=Z,32nm,1.6s,mb5.3
SDCO LR LR
comp=Z,2μm,19.0s,MS5.5
118A Homack Ranch, 87.54 53 ⇓P **P 07 38 27.0 -0.1**
baz=87
OGNE Ogallala 87.59 43 *e*P **P 07 38 27.6 +0.5**
comp=Z,10nm,0.7s,mb5.2
OGNE LR LR
comp=Z,1μm,22.0s,MS5.2
NKC Novy Kostel 87.60 330 *e*P **P 07 38 27.6 +0.6**
NKC *e*pP pP 07 38 38.1 -0.3
NKC *e*SKS 07 48 57.8
NKC AMS AMS 08 26 00.0
comp=Z,3μm,15.4s
VTS Vitosha 87.61 319 *e*P **P 07 38 29.4 +2.2**
MOX Moxa 87.65 331 *e*P **P 07 38 26.7 -0.5**
comp=Z,88nm,2.6s,mb5.5
MOX *e*pP pP 07 38 37.3 -1.3
MOX *e*PP PP 07 41 52.5 +0.5
MOX Moxa 87.65 331 *e*P **P 07 38 27.5 +0.3**
MOX *e* 07 41 54.0
MOX *e*S S 07 49 02.0 -4.4

MOX pmax pmax
comp=Z,64nm,1.8s,mb5.5
MOX MLR MLR
comp=Z,2μm,19.0s,MS5.6
MOX Moxa 87.65 331 eP **P 07 38 27.5 +0.3**
comp=Z,64nm,1.8s,mb5.5
MOX ePP PP 07 41 54.0 +2.0
MOX eS S 07 49 02.0 -4.4
MOX LR LR
comp=Z,2μm,19.0s,MS5.6
V22A San Miguel Ran 87.67 49 ⇓P **P 07 38 27.2 -0.4**
baz=87
AKAS Kas 87.72 311 i P **P 07 38 27.1 -0.8**
CONA Conrad Observa 87.75 327⇑iP **P 07 38 27.7 -0.1**
comp=Z,42nm,1.5s,mb5.4
218A Dragoon 87.87 54 ⇑P **P 07 38 28.9 +0.2**
baz=88
Y20A Horse Springs, 87.89 51 ⇑P **P 07 38 29.7 +0.9**
baz=88,SNR=20
IBBN Ibbenburen 87.92 334 eP **P 07 38 27.7 -0.8**
comp=Z,71nm,1.7s,mb5.6
IBBN ePP PP 07 41 54.1 0.0
KHC Kasperske Hory 87.92 329 eP **P 07 38 28.5 -0.1**
KHC e pP 07 38 38.3 -1.6
KHC e 07 41 51.3
KHC e 07 48 59.2
KHC MLR MLR
comp=Z,7μm,15.0s,MS6.2
KHC smax
comp=N,4.0nm,0.5s
KHC Kasperske Hory 87.92 329 eP **P 07 38 28.5 0.0**
comp=N,36nm,1.4s,mb5.4
KHC Kasperske Hory 87.92 329 eP **P 07 38 28.5 -0.1**
KHC epP pP 07 38 38.3 -1.6
KHC ePP PP 07 41 51.3 -2.9
KHC eSKS 07 48 59.2
KHC AMS AMS 08 22 20.0
comp=N,7μm,15.0s
X21A Alamocita Cree 87.97 51 ⇑P **P 07 38 29.3 +0.2**
baz=88,SNR=14
ROTZ Rotzenmuhle 88.05 330 eP **P 07 38 29.1 -0.1**
comp=Z,109nm,2.3s,mb5.7
ROTZ epP pP 07 38 39.7 -0.8
ROTZ ePP PP 07 41 56.1 +0.8
GEC2 GERESS Array S 88.08 329 eP **P 07 38 28.5 -0.8**
comp=Z,8.0nm,1.3s,mb4.8
GEC2 ePP PP 07 41 56.1 +0.6
GEC2 GERESS Array S 88.08 329 eP **P 07 38 28.5 -0.8**
GEC2 e 07 41 56.1
GEC2 pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
GERES GERESS Array B 88.08 329 P **P 07 38 28.6 -0.7**
comp=Z,1.2nm,0.6s,mb4.3,baz=45,slow=2.1,SNR=10
GERES PP PP 07 42 05.4 +10
comp=Z,2.5nm,0.9s,baz=53,slow=9.0,SNR=5.2
GERES LR LR 08 21 23.1
comp=Z,5μm,18.1s,MS5.9,baz=47,slow=38
GERES GERESS Array B 88.08 329 P **P 07 38 28.6 -0.7**
GERES 07 42 05.4
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES pmax pmax
comp=Z,3.0nm,0.9s
GERES MLR MLR
comp=Z,5μm,18.1s
UBBA Unterbreizbach 88.19 332 eP **P 07 38 29.1 -0.7**
comp=Z,96nm,2.6s,mb5.6
UBBA ePP PP 07 41 56.6 +0.3
Z20A Nine Sixteen R 88.21 52 ⇑P **P 07 38 30.8 +0.6**
baz=88,SNR=19
318A Bisbee 88.22 54 ⇓P **P 07 38 30.4 +0.1**
baz=88,SNR=14
WET Wettzell 88.22 329 eP **P 07 38 29.7 -0.3**
comp=Z,43nm,2.1s,mb5.3
WET epP pP 07 38 40.3 -1.0
WET ePP PP 07 41 58.0 +1.3
WET Wettzell 88.22 329 eP **P 07 38 29.7 -0.3**
WET e*PP pP 07 38 40.3 -1.0
WET e 07 41 58.0
WET pmax pmax
comp=Z,43nm,2.1s,mb5.3
EYMN Ely 88.34 33 eP **P 07 38 31.3 +0.7**
comp=Z,39nm,1.3s,mb5.5
EYMN LR LR
comp=Z,2μm,19.0s,MS5.5
219A White Tail Can 88.40 53 ⇓P **P 07 38 31.9 +0.7**
baz=88
LAZ Ladron 88.42 50 eP **P 07 38 32.1 +0.8**
comp=Z,13nm,1.7s,mb4.9
120A U Bar Ranch, L 88.51 53 ⇑P **P 07 38 33.1 +1.4**
baz=88
GRA1 Grafenberg Arr 88.53 330 eP **P 07 38 31.2 -0.2**
comp=Z,59nm,1.9s,mb5.6
GRA1 eS S 07 49 16.0 +1.2
GRA1 LR LR
comp=Z,2μm,20.2s,MS5.6
GRF Grafenberg Arr 88.53 330 eP **P 07 38 31.2 -0.2**
comp=Z,59nm,1.9s,mb5.6
GRF eS S 07 49 16.0 +1.2
GRF eL 08 20 51.7
comp=Z,2μm,20.2s
GRF Grafenberg Arr 88.53 330 eP **P 07 38 31.2 -0.2**
GRF eS S 07 49 16.0 +1.2
GRF pmax pmax
comp=Z,59nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,2μm,20.2s,MS5.6
GRF Grafenberg Arr 88.53 330 eP **P 07 38 31.2 -0.2**
GRF eS S 07 49 16.0 +1.2
GRF pmax pmax
comp=Z,59nm,1.9s,mb5.6
GRF MLR MLR
comp=Z,2μm,20.2s,MS5.6
ANMO Albuquerque 88.55 50 eP **P 07 38 32.9 +1.1**
ANMO pmax pmax
comp=Z,14nm,1.3s
ANMO MLR MLR
comp=Z,4μm,19.0s
ANMO Albuquerque 88.55 50 eP **P 07 38 32.9 +1.1**
comp=Z,14nm,1.3s,mb5.1
ANMO LR LR
comp=Z,4μm,19.0s,MS5.9
MOA Molln 88.55 328⇑iP **P 07 38 31.5 -0.1**
comp=Z,22nm,1.4s,mb5.3
WTSB Winterswijk 88.55 334 eP **P 07 38 33.1 +1.6**
comp=Z,25nm,1.6s,mb5.3
319A Douglas 88.75 54 ⇓P **P 07 38 33.9 +1.1**
baz=88
ECSD EROS Data Cent 88.77 38 eP **P 07 38 32.3 -0.4**
comp=Z,25nm,1.1s,mb5.5
ECSD LR LR
comp=Z,2μm,19.0s,MS5.5
BUG Bochum-Univer 88.79 333 eP **P 07 38 31.5 -1.1**
comp=Z,14nm,1.0s,mb5.2
BUG ePP PP 07 42 01.8 +0.7
BNM Barren Site 88.91 50 eP **P 07 38 36.0 +2.4**
comp=Z,8.4nm,1.2s,mb5.0
220A Playas Peak, P 88.96 53 ⇑P **P 07 38 34.8 +0.9**
baz=89
MSEY Mahe Island 88.98 264 PFAKE 07 38 50.0 +16
MSEY LR LR
comp=Z,2μm,19.0s,MS5.5
U25A Circle Dot Ran 88.99 47 ⇓P **P 07 38 34.8 +0.9**
baz=89
PERS Pernice 89.03 326 eP **P 07 38 33.1 -0.8**
PERS ePP PP 07 42 05.6 +2.4
PERS eS S 07 49 22.7 +3.1
PERS eSS SS 07 55 07.4 -4.4
SOKA Soboth 89.04 326⇓iP **P 07 38 33.3 -0.6**
comp=Z,29nm,1.2s,mb5.5
W24A Lazy 6 Ranch, 89.07 49 ⇓P **P 07 38 35.3 +1.0**
baz=89
ESK Eskdalemuir 89.08 341 eP **P 07 38 31.5 -2.4**
ESK pmax pmax
comp=Z,47nm,1.5s,mb5.6
ESK MLR MLR
comp=Z,2μm,19.0s,MS5.5
ESK Eskdalemuir 89.08 341 eP **P 07 38 31.5 -2.4**
comp=Z,47nm,1.5s,mb5.6
ESK LR LR
comp=Z,2μm,19.0s,MS5.5
121A Cookes Peak, D 89.10 52 ⇓P **P 07 38 35.3 +0.8**
baz=89
V25A Rancho No Teng 89.20 48 ⇑P **P 07 38 35.9 +1.0**
baz=89
Z22A Elephant Butte 89.23 51 ⇑P **P 07 38 36.5 +1.4**
baz=89
TNS Taunus Mts 89.28 332 eP **P 07 38 34.4 -0.5**
comp=Z,51nm,1.7s,mb5.6
TNS ePP PP 07 42 05.8 +0.8
TNS Taunus Mts 89.28 332 eP **P 07 38 34.4 -0.5**
TNS e 07 42 05.8
TNS pmax pmax
comp=Z,51nm,1.7s,mb5.6
OBKA Obir 89.39 327⇑iP **P 07 38 35.6 0.0**
comp=Z,11nm,1.1s,mb5.1
U26A Atchley Ranch, 89.41 47 ⇓P **P 07 38 36.6 +0.8**
baz=89
KBA Koelnbreinsper 89.54 328⇑iP **P 07 38 35.7 -0.5**
comp=Z,49nm,2.1s,mb5.5
FUR Furstenfeldbru 89.66 329 eP **P 07 38 36.4 -0.4**
comp=Z,139nm,2.0s,mb5.9
FUR Furstenfeldbru 89.66 329 eP **P 07 38 36.4 -0.4**
FUR pmax pmax
comp=Z,139nm,2.0s,mb5.9
W25A X Bar L Ranch, 89.68 48 ⇓P **P 07 38 37.8 +0.6**
baz=89
MYKA Terra Mystica 89.73 327⇑iP **P 07 38 36.0 -1.1**
comp=Z,18nm,1.1s,mb5.3
LJU Ljubljana 89.74 326 i P **P 07 38 36.8 -0.4**
LJU ePP PP 07 42 13.8 +5.0
BOJS Bojanci 89.78 325 i P **P 07 38 36.9 -0.5**
BOJS ePP PP 07 42 11.2 +2.0
BOJS e 07 49 07.4
BOJS eS S 07 49 26.4 -0.2
HGN Heimansgroeve 89.84 334 eP **P 07 38 36.4 -1.1**
comp=Z,22nm,2.7s,mb5.0
VOY Vojsko 90.05 327 eP **P 07 38 37.7 -0.9**
VOY e 07 38 44.5
JAVS Javornik 90.07 326 i P **P 07 38 37.6 -1.1**
JAVS ePP PP 07 42 13.5 +2.0
JAVS eS S 07 49 31.4 +2.1
STU Stuttgart 90.09 331 eP **P 07 38 38.1 -0.7**
comp=Z,12nm,0.7s,mb5.3
STU Stuttgart 90.09 331 eP **P 07 38 38.4 -0.4**
STU epP pP 07 38 49.1 -1.0
ABTA Abfaltersbach 90.17 328⇓iP **P 07 38 37.9 -1.2**
comp=Z,21nm,1.2s,mb5.3
TIR Tirane 90.29 320 PFAKE 07 38 50.0 +10
TIR LR LR
comp=Z,4μm,19.0s,MS5.9
CBKS Cedar Bluff 90.31 43 eP **P 07 38 40.7 +0.7**
CBKS e*PP pP 07 38 52.5 +1.1
CBKS pmax pmax
comp=Z,14nm,0.8s,mb5.3
CBKS MLR MLR
comp=Z,1μm,19.0s,MS5.4
CBKS Cedar Bluff 90.31 43 eP **P 07 38 40.7 +0.7**
comp=Z,14nm,0.8s,mb5.3
CBKS epP pP 07 38 52.5 +1.1
CBKS LR LR
comp=Z,1μm,19.0s,MS5.4
Y25A Mesa, Roswell 90.33 50 ⇓P **P 07 38 41.0 +0.8**
baz=90
TRI Trieste 90.35 326 PFAKE 07 38 50.0 +10
TRI LR LR
comp=Z,2μm,20.0s,MS5.6
BCLA Clavier 90.36 334 P **P 07 38 40.3 +0.3**
comp=Z,22nm,1.8s,mb5.2
RETA Reutte 90.40 329⇑iP **P 07 38 40.0 -0.3**
comp=Z,35nm,1.6s,mb5.4
UCC Uccle 90.41 334 P **P 07 38 39.8 -0.4**
comp=Z,31nm,1.9s,mb5.3
X26A CR and CF Fran 90.51 49 ⇑P **P 07 38 41.1 0.0**
baz=90
124A Stringfield Ra 90.57 51 ⇑P **P 07 38 41.4 0.0**
baz=90
WLF Walferdange 90.63 333 P **P 07 38 40.2 -1.1**
comp=Z,34nm,1.7s,mb5.4
WLF Walferdange 90.63 333 eP **P 07 38 41.0 -0.3**
comp=Z,88nm,1.9s,mb5.8
WLF epP pP 07 38 52.3 -0.3
WLF Walferdange 90.63 333 eP **P 07 38 41.7 +0.4**
WLF pmax pmax
comp=Z,76nm,1.5s,mb5.8
WLF MLR MLR
comp=Z,3μm,22.0s,MS5.7
WLF Walferdange 90.63 333 eP **P 07 38 41.7 +0.4**
comp=Z,76nm,1.5s,mb5.8
WLF LR LR
comp=Z,3μm,22.0s,MS5.7
SNF Seneffe 90.67 334 P **P 07 38 41.3 -0.1**
comp=Z,25nm,1.7s,mb5.3
W27A Bowe Ranch, En 90.67 48 ⇓P **P 07 38 42.0 +0.3**
baz=90
Z25A Roswell 90.71 50 ⇑P **P 07 38 41.9 -0.1**
baz=90
FETA Feichten 90.77 329⇑iP **P 07 38 41.7 -0.2**
comp=Z,24nm,1.1s,mb5.4
GIVF Givet 90.80 334 eP **P 07 38 41.8 -0.2**
comp=Z,189nm,1.8s,mb5.8
GIVF Givet 90.80 334 eP **P 07 38 41.8 -0.2**
GIVF pmax pmax
comp=Z,95nm,1.8s,mb5.8
GIVF Givet 90.80 334 eP **P 07 38 41.8 -0.2**
comp=Z,95nm,1.8s,mb5.8
COWI Conover 90.80 33 eP **P 07 38 42.6 +0.5**
comp=Z,28nm,1.3s,mb5.4
COWI epP pP 07 38 56.0 +2.5
COWI LR LR
comp=Z,2μm,19.0s,MS5.5
BFO Black Forest 90.80 331 eP **P 07 38 41.1 -1.0**
comp=Z,24nm,1.5s,mb5.3
BFO Black Forest 90.80 331 eP **P 07 38 41.1 -1.0**
BFO pmax pmax
comp=Z,24nm,1.5s,mb5.3
DOU Dourbes 90.89 334 P **P 07 38 42.3 -0.2**
comp=Z,9.7nm,1.7s,mb4.9
224A Corundas Mount 90.91 51 ⇓P **P 07 38 43.2 +0.3**
baz=91
DAVA Damuels 90.94 329⇑iP **P 07 38 42.4 -0.3**
comp=Z,56nm,1.3s,mb5.7
BAIF Baives 91.06 334 eP **P 07 38 42.9 -0.4**
125A Gardner Draw, 91.13 51 ⇑P **P 07 38 43.7 -0.2**
baz=91
CDF Champ du Feu 91.17 331 eP **P 07 38 43.7 -0.1**
comp=Z,110nm,1.5s,mb5.7
CDF Champ du Feu 91.17 331 eP **P 07 38 43.7 -0.1**
CDF pmax pmax
comp=Z,55nm,1.5s,mb5.7
CDF Champ du Feu 91.17 331 eP **P 07 38 43.7 -0.1**
comp=Z,55nm,1.5s,mb5.7
Z26A Caprock 91.20 50 ⇓P **P 07 38 44.0 -0.2**
baz=91
MNTX Cornudas Mount 91.23 52 eP **P 07 38 44.3 -0.1**
comp=Z,17nm,1.5s,mb5.2
MNTX LR LR
comp=Z,2μm,19.0s,MS5.5
FELD Feldberg im Sc 91.29 331 eP **P 07 38 43.3 -1.1**
SCHQ Schefferville 91.31 16 P **P 07 38 44.4 +0.1**
comp=Z,1.7nm,0.9s,mb4.4,baz=238,slow=19,SNR=2.2
SCHQ LR LR 08 26 48.6
comp=Z,1μm,19.0s,MS5.3,baz=237,slow=40
SCHQ Schefferville 91.31 16 eP **P 07 38 45.7 +1.4**
comp=Z,32nm,1.5s,mb5.4
SCHQ LR LR
comp=Z,1μm,19.0s,MS5.4
324A Moseley Ranch, 91.32 52 ⇑P **P 07 38 44.7 -0.1**
baz=91
Y27A Causey 91.35 49 ⇓P **P 07 38 44.9 0.0**
baz=91
ECH Echery 91.38 331 eP **P 07 38 43.6 -1.2**
ECH Echery 91.38 331 eP **P 07 38 43.9 -0.9**
ECH pmax pmax
comp=Z,42nm,1.4s,mb5.6
ECH MLR MLR
comp=Z,2μm,20.0s,MS5.5
ECH Echery 91.38 331 eP **P 07 38 43.9 -0.9**
comp=Z,42nm,1.4s,mb5.6
ECH LR LR
comp=Z,2μm,20.0s,MS5.5
ATD Arta Tunnel 91.50 284 LR LR 08 20 59.0
comp=Z,1μm,21.6s,MS5.3,baz=159,slow=36
GDL2 Guadalupe Moun 91.61 51 eP **P 07 38 47.0 +0.8**
comp=Z,11nm,1.1s,mb5.1
AMTX Amarillo 91.66 47 PFAKE 07 39 00.0 +14
AMTX LR LR
comp=Z,2μm,19.0s,MS5.6
Z27A Tatum 91.67 49 ⇓P **P 07 38 46.4 0.0**
baz=91
MOF Molkenrain 91.67 331 eP **P 07 38 45.4 -0.7**
325A Bean Ranch, Si 91.71 52 ⇓P **P 07 38 46.6 0.0**
baz=92
HINF Hinteralfeld 91.82 331 eP **P 07 38 46.2 -0.6**
comp=Z,112nm,1.6s,mb5.6
HINF Hinteralfeld 91.82 331 eP **P 07 38 46.2 -0.6**
HINF pmax pmax
comp=Z,56nm,1.6s,mb5.6
HINF Hinteralfeld 91.82 331 eP **P 07 38 46.2 -0.6**
comp=Z,56nm,1.6s,mb5.7
SCIA State Center 91.83 38 eP **P 07 38 47.9 +0.9**
comp=Z,26nm,0.9s,mb5.6
SCIA LR LR
comp=Z,2μm,19.0s,MS5.5
THEF They Montfort 91.85 332 eP **P 07 38 46.4 -0.5**
HAU Haudompre 91.88 332 eP **P 07 38 46.7 -0.4**
comp=Z,94nm,1.6s,mb5.6
HAU eMLR MLR
comp=Z,2μm,18.0s,MS5.3
HAU Haudompre 91.88 332 eP **P 07 38 46.7 -0.4**
HAU pmax pmax
comp=Z,47nm,1.6s,mb5.6
HAU MLR MLR
comp=Z,2μm,18.0s,MS5.6
HAU Haudompre 91.88 332 eP **P 07 38 46.7 -0.4**
comp=Z,47nm,1.6s,mb5.6
HAU LR LR
comp=Z,2μm,18.0s,MS5.6
KSU1 Kansas State U 91.93 41 eP **P 07 38 47.7 +0.2**
comp=Z,28nm,0.7s,mb5.7
KSU1 epP pP 07 39 00.4 +1.5
KSU1 LR LR
comp=Z,1μm,21.0s,MS5.4
MEZF Maizieres J'vi 92.00 333 eP **P 07 38 47.8 +0.2**
comp=Z,186nm,1.4s,mb5.9
MEZF Maizieres J'vi 92.00 333 eP **P 07 38 47.8 +0.2**
comp=Z,186nm,1.4s,mb6.2
425A Indio Mountain 92.06 52 ⇑P **P 07 38 48.4 +0.1**
baz=92
LOMF Lomont 92.20 331 eP **P 07 38 48.3 -0.3**
JFWS Jewell Farm 92.62 35 eP **P 07 38 50.9 +0.3**
JFWS pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
JFWS MLR MLR
comp=Z,1μm,19.0s,MS5.4
JFWS Jewell Farm 92.62 35 eP **P 07 38 50.9 +0.2**
comp=Z,5.3nm,0.6s,mb5.2
JFWS LR LR
comp=Z,1μm,19.0s,MS5.4
426A McDonald Obser 92.78 52 ⇓P **P 07 38 51.5 -0.1**
baz=92
AQU L'Aquila 92.99 324 PFAKE 07 39 00.0 +7.7
AQU LR LR
comp=Z,4μm,20.0s,MS5.9
427A Hayter Ranch, 93.09 51 ⇓P **P 07 38 52.9 -0.1**
baz=93
CABF La Chapelle 93.09 331 eP **P 07 38 52.8 +0.1**
comp=Z,127nm,1.6s,mb5.8
CABF La Chapelle 93.09 331 eP **P 07 38 52.8 +0.1**
CABF pmax pmax
comp=Z,64nm,1.6s,mb5.8
CABF La Chapelle 93.09 331 eP **P 07 38 52.8 +0.1**
comp=Z,64nm,1.6s,mb5.8
VLC Villacollemand 93.10 327 PFAKE 07 39 00.0 +7.2
VLC LR LR
comp=Z,4μm,20.0s,MS5.9
526A Mary Lane Ranc 93.11 52 ⇑P **P 07 38 53.0 -0.1**
baz=93
328A Wristen Ranch, 93.15 51 ⇑P **P 07 38 53.4 +0.1**
baz=93
527A Woodward Ranch 93.38 52 ⇓P **P 07 38 54.2 -0.1**
baz=93
626A Big Bend Ranch 93.39 53 ⇓P **P 07 38 54.4 0.0**
baz=93
LOR Lormes 93.47 333 eP **P 07 38 54.1 -0.3**
comp=Z,143nm,1.6s,mb5.8
LOR eMLR MLR
comp=Z,2μm,20.2s,MS5.3
LOR Lormes 93.47 333 eP **P 07 38 54.1 -0.3**
LOR pmax pmax
comp=Z,71nm,1.6s,mb5.8
LOR MLR MLR
comp=Z,2μm,20.3s,MS5.7
LOR Lormes 93.47 333 eP **P 07 38 54.1 -0.3**
comp=Z,71nm,1.6s,mb5.8
LOR LR LR
comp=Z,2μm,20.3s,MS5.7
TIP Timpagrande 93.51 320 PFAKE 07 39 10.0 +15
TIP LR LR
comp=Z,3μm,19.0s,MS5.7
WMOK Wichita Mounta 93.57 46 eP **P 07 38 54.7 -0.5**
WMOK pmax pmax
comp=Z,25nm,1.4s,mb5.5
WMOK Wichita Mounta 93.57 46 eP **P 07 38 54.6 -0.5**
comp=Z,25nm,1.4s,mb5.5
428A Kincaid Ranch, 93.64 51 ⇑P **P 07 38 55.9 +0.3**
baz=93
LPL La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
comp=Z,99nm,1.4s,mb5.7
LPL La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
LPL pmax pmax
comp=Z,50nm,1.4s,mb5.8
LPL La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
comp=Z,50nm,1.4s,mb5.8
LPG La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
comp=Z,152nm,1.6s,mb5.9
LPG La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
LPG pmax pmax
comp=Z,76nm,1.6s,mb5.9
LPG La Plagne 93.69 330 eP **P 07 38 55.6 +0.1**
comp=Z,76nm,1.6s,mb5.9
SSF Saint Saulge 93.78 333 eP **P 07 38 55.6 -0.3**
comp=Z,46nm,1.1s,mb5.5
SSF Saint Saulge 93.78 333 eP **P 07 38 55.6 -0.3**
SSF pmax pmax
comp=Z,23nm,1.1s,mb5.5
SSF Saint Saulge 93.78 333 eP **P 07 38 55.6 -0.3**
comp=Z,23nm,1.1s,mb5.5
GLMI Grayling 93.82 31 eP **P 07 38 56.2 0.0**
comp=Z,30nm,0.7s,mb5.8
GLMI LR LR
comp=Z,1μm,20.0s,MS5.4
FLN La Foliniere 93.85 336 eP **P 07 38 55.7 -0.4**
comp=Z,172nm,1.7s,mb5.9
FLN eMLR MLR
comp=Z,4μm,18.0s,MS5.6
FLN La Foliniere 93.85 336 eP **P 07 38 55.7 -0.4**
FLN pmax pmax
comp=Z,86nm,1.7s,mb5.9
FLN MLR MLR
comp=Z,4μm,18.0s,MS5.9
FLN La Foliniere 93.85 336 eP **P 07 38 55.7 -0.4**
comp=Z,86nm,1.7s,mb5.9
FLN LR LR
comp=Z,4μm,18.0s,MS5.9
TXAR Lajitas Array 93.85 53 P **P 07 38 56.4 -0.2**
comp=Z,13nm,0.8s,mb5.4,baz=298,slow=2.8,SNR=83
TXAR LR LR 08 23 00.6
comp=Z,4μm,18.1s,MS5.9,baz=10.0,slow=37
TXAR Lajitas Array 93.85 53 P **P 07 38 56.4 -0.2**
TXAR pmax pmax
comp=Z,13nm,0.8s
TXAR MLR MLR
comp=Z,4μm,18.1s
LDF La Druitiere 93.86 336 eP **P 07 38 55.8 -0.4**
comp=Z,197nm,1.7s,mb6.0
LDF La Druitiere 93.86 336 eP **P 07 38 55.8 -0.4**
LDF pmax pmax
comp=Z,99nm,1.7s,mb6.0
LDF La Druitiere 93.86 336 eP **P 07 38 55.8 -0.4**
comp=Z,99nm,1.7s,mb6.0
528A Cox Ranch, San 93.93 51 ⇑P **P 07 38 56.6 -0.3**
baz=94
627A Terlingua Ranc 93.96 52 ⇑P **P 07 38 56.9 -0.2**
baz=94
SMF Signal de Mont 93.98 332 eP **P 07 38 56.4 -0.4**
comp=Z,156nm,1.6s,mb5.9
SMF Signal de Mont 93.98 332 eP **P 07 38 56.4 -0.4**
SMF pmax pmax
comp=Z,78nm,1.6s,mb5.9
SMF Signal de Mont 93.98 332 eP **P 07 38 56.4 -0.4**
comp=Z,78nm,1.6s,mb5.9
AVF Avril sur Loir 94.06 333 eP **P 07 38 56.9 -0.3**
comp=Z,112nm,1.3s,mb5.8
AVF Avril sur Loir 94.06 333 eP **P 07 38 56.9 -0.3**
AVF pmax pmax
comp=Z,56nm,1.3s,mb5.8
AVF Avril sur Loir 94.06 333 eP **P 07 38 56.9 -0.3**
comp=Z,56nm,1.3s,mb5.8
BNI Bardonecchia 94.08 330 eP **P 07 38 59.4 +2.1**

BNI pmax pmax
comp=Z,33nm,1.3s,mb5.6
BNI MLR MLR
comp=Z,4μm,19.0s,MS5.8
BNI Bardonecchia 94.08 330 *e*P **P 07 38 59.4 +2.1**
comp=Z,33nm,1.3s,mb5.6
BNI LR LR
comp=Z,4μm,19.0s,MS5.8
628A Black Gap, Mar 94.28 52 ⇑P **P 07 38 58.3 -0.3**
baz=94
MBDF Montbardon 94.30 329 *e*P **P 07 38 57.7 -0.6**
GRR Gorron 94.30 336 *e*P **P 07 38 58.0 -0.2**
comp=Z,79nm,1.2s,mb5.7
GRR Gorron 94.30 336 *e*P **P 07 38 58.0 -0.2**
GRR pmax pmax
comp=Z,39nm,1.2s,mb5.7
GRR Gorron 94.30 336 *e*P **P 07 38 58.0 -0.2**
comp=Z,40nm,1.2s,mb5.7
BGF Bois d'Agland 94.45 333 *e*P **P 07 38 58.8 -0.2**
comp=Z,77nm,1.4s,mb5.6
BGF Bois d'Agland 94.45 333 *e*P **P 07 38 58.8 -0.2**
BGF pmax pmax
comp=Z,39nm,1.4s,mb5.6
BGF Bois d'Agland 94.45 333 *e*P **P 07 38 58.8 -0.2**
comp=Z,39nm,1.4s,mb5.6
ORIF Oris-en-Rattie 94.53 330 *e*P **P 07 38 59.2 -0.2**
comp=Z,45nm,1.2s,mb5.5
ORIF *e*MLR MLR
comp=Z,4μm,18.2s,MS5.7
ORIF Oris-en-Rattie 94.53 330 *e*P **P 07 38 59.2 -0.2**
ORIF pmax pmax
comp=Z,23nm,1.2s,mb5.5
ORIF Oris-en-Rattie 94.53 330 *e*P **P 07 38 59.2 -0.2**
comp=Z,23nm,1.2s,mb5.5
PLDF La Plantade 94.62 332 *e*P **P 07 38 59.3 -0.5**
CEL Celeste 94.63 320 PFAKE 07 39 10.0 +10
CEL LR LR
comp=Z,2μm,20.0s,MS5.6
SBF Sospel 94.68 329 *e*P **P 07 38 59.5 -0.6**
AGO Saint Agoulin 94.75 332 *e*P **P 07 38 59.7 -0.7**
SSB Saint Sauveur 94.81 331 *e*P **P 07 39 00.1 -0.5**
SSB pmax pmax
comp=Z,35nm,1.5s,mb5.6
SSB MLR MLR
comp=Z,2μm,19.0s,MS5.5
SSB Saint Sauveur 94.81 331 *e*P **P 07 39 00.1 -0.5**
comp=Z,35nm,1.5s,mb5.6
SSB LR LR
comp=Z,2μm,19.0s,MS5.5
HDIL Hopedale 94.85 36 *e*P **P 07 39 00.8 -0.1**
comp=Z,16nm,0.8s,mb5.5
HDIL *e*pP pP 07 39 12.8 +0.5
HDIL LR LR
comp=Z,2μm,19.0s,MS5.6
TCF Toulx Ste Croi 94.92 333 *e*P **P 07 39 01.0 -0.1**
comp=Z,113nm,1.7s,mb5.7
TCF Toulx Ste Croi 94.92 333 *e*P **P 07 39 01.0 -0.1**
TCF pmax pmax
comp=Z,57nm,1.7s,mb5.7
TCF Toulx Ste Croi 94.92 333 *e*P **P 07 39 01.0 -0.1**
comp=Z,56nm,1.7s,mb5.7
PGF Pioggiola 94.98 327 *e*P **P 07 39 00.7 -0.8**
SGMF Saint Gilles 95.00 337 *e*P **P 07 39 01.3 -0.1**
comp=Z,108nm,1.7s,mb5.7
SGMF Saint Gilles 95.00 337 *e*P **P 07 39 01.3 -0.1**
SGMF pmax pmax
comp=Z,54nm,1.7s,mb5.7
SGMF Saint Gilles 95.00 337 *e*P **P 07 39 01.3 -0.1**
comp=Z,54nm,1.7s,mb5.7
VIVF Saint-Julien-l 95.09 331 *e*P **P 07 39 01.8 -0.1**
comp=Z,56nm,1.3s,mb5.5
VIVF Saint-Julien-l 95.09 331 *e*P **P 07 39 01.8 -0.1**
VIVF pmax pmax
comp=Z,28nm,1.3s,mb5.5
VIVF Saint-Julien-l 95.09 331 *e*P **P 07 39 01.8 -0.1**
comp=Z,28nm,1.3s,mb5.5
ROSF Rostrenen 95.17 337 *e*P **P 07 39 02.0 -0.2**
comp=Z,84nm,1.4s,mb5.7
ROSF Rostrenen 95.17 337 *e*P **P 07 39 02.0 -0.2**
ROSF pmax pmax
comp=Z,42nm,1.4s,mb5.7
ROSF Rostrenen 95.17 337 *e*P **P 07 39 02.0 -0.2**
comp=Z,42nm,1.4s,mb5.7
LBL Lubilhac 95.38 332 *e*P **P 07 39 03.3 +0.1**
SMRF Simiane la Rot 95.41 330 *e*P **P 07 39 03.5 +0.1**
LMR La Mourre 95.51 329 *e*P **P 07 39 03.0 -0.9**
MFF Saint Martin d 95.55 335 *e*P **P 07 39 04.1 +0.1**
comp=Z,116nm,1.5s,mb5.8
MFF Saint Martin d 95.55 335 *e*P **P 07 39 04.1 +0.1**
MFF pmax pmax
comp=Z,58nm,1.5s,mb5.8
MFF Saint Martin d 95.55 335 *e*P **P 07 39 04.1 +0.1**
comp=Z,58nm,1.5s,mb5.8
CCM Cathedral Cave 95.65 39 *e*P **P 07 39 04.1 -0.5**
CCM pmax pmax
comp=Z,12nm,0.9s,mb5.3
CCM MLR MLR
comp=Z,1μm,19.0s,MS5.3
CCM Cathedral Cave 95.65 39 *e*P **P 07 39 04.1 -0.5**
comp=Z,12nm,0.9s,mb5.3
CCM LR LR
comp=Z,1μm,19.0s,MS5.3
JCT Junction City 95.71 50 *e*P **P 07 39 04.7 -0.4**
JCT pmax pmax
comp=Z,13nm,0.8s,mb5.4
JCT MLR MLR
comp=Z,3μm,19.0s,MS5.8
JCT Junction City 95.71 50 *e*P **P 07 39 04.7 -0.3**
comp=Z,13nm,0.8s,mb5.4
JCT LR LR
comp=Z,3μm,19.0s,MS5.8
RJF Les Rejaudoux 96.01 333 *e*P **P 07 39 06.3 +0.2**
comp=Z,105nm,1.5s,mb5.8
RJF *e*MLR MLR
comp=Z,3μm,21.8s,MS5.4
RJF Les Rejaudoux 96.01 333 *e*P **P 07 39 06.3 +0.2**
RJF pmax pmax
comp=Z,53nm,1.5s,mb5.8
RJF MLR MLR
comp=Z,3μm,21.8s,MS5.7
RJF Les Rejaudoux 96.01 333 *e*P **P 07 39 06.3 +0.2**
comp=Z,52nm,1.5s,mb5.7
RJF LR LR
comp=Z,3μm,21.8s,MS5.7
LASF Ste Croix 96.07 331 *e*P **P 07 39 06.5 +0.1**
comp=Z,90nm,1.7s,mb5.6
CAF Calviac 96.10 332 *e*P **P 07 39 07.0 +0.4**
comp=Z,70nm,1.4s,mb5.6
CAF Calviac 96.10 332 *e*P **P 07 39 07.0 +0.4**
CAF pmax pmax
comp=Z,35nm,1.4s,mb5.6
CAF Calviac 96.10 332 *e*P **P 07 39 07.0 +0.4**
comp=Z,35nm,1.4s,mb5.6
AAM Ann Arbor 96.23 32 PFAKE 07 39 20.0 +13
AAM LR LR
comp=Z,2μm,19.0s,MS5.5
RKT Rikitea 96.26 113 *e*SKSac SKSac 07 49 42.2 +0.7
comp=Z,625nm,28.9s
RKT Rikitea 96.26 113 *e*PS PS 07 51 48.0 -1.0
comp=Z,1μm,29.2s
RKT *e*SS SS 07 56 56.6 -1.6
comp=Z,764nm,26.8s
RKT *e*LR LR 08 09 52.3
comp=Z,2μm,23.2s,baz=306
LFF La Frestale 96.61 333 *e*P **P 07 39 07.8 -1.1**
MIAR Mount Ida 96.84 43 *e*P **P 07 39 09.4 -0.7**
MIAR pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
MIAR MLR MLR
comp=Z,1μm,19.0s,MS5.5
MIAR Mount Ida 96.84 43 *e*P **P 07 39 09.4 -0.7**
comp=Z,10nm,0.9s,mb5.3
MIAR LR LR
comp=Z,1μm,19.0s,MS5.5
WDD Wield Dalam 97.11 319 PFAKE 07 39 20.0 +8.7
WDD LR LR
comp=Z,2μm,19.0s,MS5.5
DRV Dumont d'Urvil 97.14 181 S S 07 50 39.0 +8.6
DRV L 08 06 00.0
DRV R 08 13 00.0
VSL Villasalto 97.14 325 PFAKE 07 39 20.0 +8.6
VSL LR LR
comp=Z,2μm,20.0s,MS5.6
ERPA Erie 98.00 30 PFAKE 07 39 30.0 +15
ERPA LR LR
comp=Z,1μm,20.0s,MS5.5
LONY Lake Ozonia 98.06 25 PFAKE 07 39 30.0 +15
LONY LR LR
comp=Z,2μm,21.0s,MS5.5
NATX Nacogdoches 98.12 46 PFAKE 07 39 30.0 +14
NATX LR LR
comp=Z,1μm,19.0s,MS5.4
ACSO Alum Creek Sta 98.18 33 PFAKE 07 39 30.0 +14
ACSO LR LR
comp=Z,2μm,19.0s,MS5.6
HKT Hockley 98.62 48 PFAKE 07 39 30.0 +12
HKT LR LR
comp=Z,2μm,20.0s,MS5.7
NCB Newcomb 98.75 25 PFAKE 07 39 30.0 +12
NCB LR LR
comp=Z,2μm,20.0s,MS5.5
KVTX Kingsville 98.89 51 PFAKE 07 39 30.0 +11
KVTX LR LR
comp=Z,3μm,19.0s,MS5.7
PKME Peaks-Kenny Pk 99.29 22 PFAKE 07 39 30.0 +9.1
PKME LR LR
comp=Z,2μm,20.0s,MS5.6
LBNH Lisbon 99.33 24 PFAKE 07 39 30.0 +8.9
LBNH LR LR
comp=Z,1μm,19.0s,MS5.5
BINY Binghamton 99.59 27 PFAKE 07 39 30.0 +7.8
BINY LR LR
comp=Z,2μm,19.0s,MS5.7
CASY Casey 99.62 192 PFAKE 07 39 30.0 +7.7
CASY LR LR
comp=Z,988nm,20.0s,MS5.3
PLAL Pickwick Lake 99.64 39 PFAKE 07 39 30.0 +7.6
PLAL LR LR
comp=Z,1μm,19.0s,MS5.4
MCWV Mont Chateau 100.07 31 PFAKE 07 39 40.0 +16
MCWV LR LR
comp=Z,2μm,20.0s,MS5.5
SSPA Standing Stone 100.12 29 PFAKE 07 39 40.0 +15
SSPA LR LR
comp=Z,1μm,20.0s,MS5.3
VBMS Vicksburg 100.28 43 PFAKE 07 39 40.0 +15
VBMS LR LR
comp=Z,2μm,20.0s,MS5.5
LRAL Lakeview Retre 101.69 40 PFAKE 07 39 40.0 +8.5
LRAL LR LR
comp=Z,1μm,20.0s,MS5.4
BLA Blacksburg 101.80 33 PFAKE 07 39 40.0 +8.0
BLA LR LR
comp=Z,1μm,19.0s,MS5.5
CBN Corbin 102.36 30 PFAKE 07 39 50.0 +15
CBN LR LR
comp=Z,1μm,19.0s,MS5.5
MVO Moncorvo 102.74 336 *e*LQ 08 19 58.8
MVO *e*LR LR 08 23 05.4
comp=Z,1μm,18.0s
KMBO Kilima Mbogo 102.84 276 P Pdif 07 39 37.7 +1.1
comp=Z,2.7nm,0.4s,baz=183,slow=24,SNR=7.1
KMBO Kilima Mbogo 102.84 276 P Pdif 07 39 37.7 +1.1
KMBO LR LR
comp=Z,1μm,20.0s,MS5.4
ESLA Sonseca Array 102.92 333 PFAKE 07 39 50.0 +13
ESLA LR LR
comp=Z,10μm,19.0s,MS6.4
ABPO Ambohimpanom 103.06 256 PFAKE 07 39 50.0 +12
ABPO LR LR
comp=Z,975nm,20.0s,MS5.3
BRAL Brewton 103.17 41 PFAKE 07 39 50.0 +12
BRAL LR LR
comp=Z,1μm,19.0s,MS5.4
PAB San Pablo 103.18 334 PFAKE 07 39 50.0 +12
PAB LR LR
comp=Z,2μm,20.0s,MS5.6
GOGA Godfrey 103.30 37 PFAKE 07 39 50.0 +11
GOGA LR LR
comp=Z,3μm,19.0s,MS5.8
MTE Manteigas 103.60 336 *e*LR LR 08 21 58.2
comp=Z,2μm,18.0s
MTE Manteigas 103.60 336 PFAKE 07 39 50.0 +10
MTE LR LR
comp=Z,3μm,19.0s,MS5.8
PMRV Marv??o 104.41 336 *e*LR LR 08 22 35.0
comp=Z,3μm,16.0s
CNNC Cliffs of the 104.58 32 PFAKE 07 40 00.0 +16
CNNC LR LR
comp=Z,2μm,19.0s,MS5.6
PESTR Estremoz 104.98 335 *e*LQ 08 18 36.0
PESTR *e*LR LR 08 24 33.9
comp=Z,2μm,20.0s
NHSC New Hope 105.22 35 PFAKE 07 44 10.0 +8.4
NHSC LR LR
comp=Z,2μm,19.0s,MS5.6
PBAR Barrancos 105.39 335 *e*LQ 08 21 04.5
PBAR *e*LR LR 08 23 54.1
comp=Z,3μm,18.0s
EVOP Sao Brissos 105.47 336 *e*PP PP 07 44 11.3 +1.9
EVOP *e*S SKSac 07 50 27.5 +1.4
EVOP *e*S SKSac 07 50 27.5 +1.4
EVOP AMS AMS 08 32 42.6
comp=Z,2μm,23.8s,MS5.6
PCVE Castro Verde 106.24 335 *e*LQ 08 21 40.7
PCVE *e*LR LR 08 24 27.4
comp=Z,3μm,20.0s
PVAQ Vaqueiros 106.32 335 *e*LQ 08 21 41.1
PVAQ *e*LR LR 08 27 19.9
comp=Z,3μm,18.0s
PBDV Barranco-do-Ve 106.54 335 *e*LQ 08 21 52.5
PBDV *e*LR LR 08 25 34.6
comp=Z,3μm,18.0s
SFS San Fernando 106.58 333 PFAKE 07 44 20.0 +16
SFS LR LR
comp=Z,3μm,21.0s,MS5.9
MORF Marmelete 106.75 336 *e*LQ 08 21 43.5
MORF *e*LR LR 08 26 17.4
comp=Z,2μm,18.0s
PFVI Vila Bisbo 106.96 336 *e*LQ 08 22 04.2
PFVI *e*LR LR 08 26 08.4
comp=Z,2μm,18.0s
DWPF Disney 108.53 39 PFAKE 07 44 20.0 +12
DWPF LR LR
comp=Z,2μm,20.0s,MS5.6
RTC Rabat Centre 109.01 333 PFAKE 07 44 20.0 +11
RTC LR LR
comp=Z,1μm,21.0s,MS5.5
SBA Scott Base 109.43 175 PFAKE 07 44 20.0 +12
SBA LR LR
comp=Z,791nm,20.0s,MS5.3
TEIG Tepich 110.28 50 PFAKE 07 44 20.0 +8.6
TEIG LR LR
comp=Z,1μm,20.0s,MS5.5
CMLA Cha da Macela 110.75 349 PFAKE 07 44 20.0 +8.2
CMLA LR LR
comp=Z,878nm,21.0s,MS5.3
TAM Tamanrasset 112.04 316 PFAKE 07 44 30.0 +15
TAM LR LR
comp=Z,1μm,20.0s,MS5.5
BBSR BB Station 112.46 24 PFAKE 07 44 30.0 +15
BBSR LR LR
comp=Z,982nm,20.0s,MS5.4
MAW Mawson 113.92 204 PFAKE 07 44 30.0 +13
MAW LR LR
comp=Z,1μm,19.0s,MS5.6
TGUH Tegucigalpa,Un 115.29 54 PFAKE 07 44 30.0 +9.0
TGUH LR LR
comp=Z,2μm,19.0s,MS5.7
LSZ Lusaka 117.54 268 PFAKE 07 44 40.0 +15
LSZ LR LR
comp=Z,2μm,21.0s,MS5.7
MTDJ Mount Denham 118.48 43 PFAKE 07 44 40.0 +13
MTDJ LR LR
comp=Z,1μm,20.0s,MS5.5
GTBY Guantanamo Bay 118.51 40 PFAKE 07 44 40.0 +13
GTBY LR LR
comp=Z,2μm,19.0s,MS5.6
GRTK Grand Turk 119.28 35 PFAKE 07 44 40.0 +11
GRTK LR LR
comp=Z,1μm,20.0s,MS5.6
JTS JuntasAbangare 119.53 55 PFAKE 07 44 40.0 +11
JTS LR LR
comp=Z,906nm,21.0s,MS5.4
QSPA South Pole Qui 120.54 180 *e*PKPdf PKPdf 07 44 28.8 -0.4
QSPA LR LR
comp=Z,1μm,21.0s,MS5.6
SDDR Presa de Saban 121.32 37 PFAKE 07 44 40.0 +7.4
SDDR LR LR
comp=Z,2μm,20.0s,MS5.7
TORD Torodi Ar. Bea 121.71 312 PKP PKPdf 07 44 32.5 -0.9
comp=Z,1.5nm,0.5s,baz=20,slow=1.6,SNR=22
TORD PP PP 07 46 00.4 -5.2
comp=Z,4.3nm,0.9s,baz=30,slow=4.6,SNR=6.2
TORD PKKPbc PKKPbc 07 54 34.1 +2.7
comp=Z,2.0nm,1.0s,baz=219,slow=3.6,SNR=5.5
PAYG Puerto Ayora 122.55 69 PFAKE 07 44 50.0 +15
PAYG LR LR
comp=Z,1μm,20.0s,MS5.5
LBTB Lobatse 123.75 259 PFAKE 07 44 50.0 +13
LBTB LR LR
comp=Z,1μm,21.0s,MS5.6
BCIP Isla Barro Col 123.86 52 PFAKE 07 44 50.0 +12
BCIP LR LR
comp=Z,922nm,20.0s,MS5.4
SJG San Juan 124.58 32 PFAKE 07 44 50.0 +11
SJG LR LR
comp=Z,3μm,19.0s,MS5.9
BOSA Boshof 125.28 255 PKP PKPdf 07 44 40.5 +0.7
comp=Z,1.9nm,0.6s,baz=131,slow=8.4,SNR=3.7
BOSA Boshof 125.28 255 PKP PKPdf 07 44 40.5 +0.7
BOSA LR LR
comp=Z,1μm,20.0s,MS5.5
ANWB Willy Bob 126.87 28 PFAKE 07 44 50.0 +6.8
ANWB LR LR
comp=Z,703nm,19.0s,MS5.4
TSUM Tsumeb 128.36 269 PFAKE 07 45 00.0 +14
TSUM LR LR
comp=Z,2μm,21.0s,MS5.8
FDF Fort de France 129.77 29 PFAKE 07 45 00.0 +11
FDF LR LR
comp=Z,1μm,20.0s,MS5.5
SDV Santo Domingo 129.93 43 PKP PKPdf 07 44 49.4 +0.2
comp=Z,14nm,0.9s,baz=40,slow=3.8,SNR=7.8
SDV Santo Domingo 129.93 43 *e*PKPdf PKPdf 07 44 49.5 +0.3
SDV LR LR
comp=Z,499nm,19.0s,MS5.2
SUR Sutherland 130.04 252 PFAKE 07 45 00.0 +11
SUR LR LR
comp=Z,839nm,20.0s,MS5.4
ROSC El Rosal 130.71 50 PKP PKPdf 07 44 51.7 +1.1
comp=Z,1.7nm,0.4s,baz=259,slow=19,SNR=4.4
ROSC El Rosal 130.71 50 *e*PKPdf PKPdf 07 44 52.9 +2.3
DBIC Dimbokro 130.78 313 PKP PKPdf 07 44 50.9 +0.1
comp=Z,3.6nm,0.6s,baz=44,slow=3.3,SNR=4.5
DBIC Dimbokro 130.78 313 PKP PKPdf 07 44 50.9 +0.1
DBIC LR LR
comp=Z,2μm,19.0s,MS5.8
OTAV Otavalo 131.10 59 *e*PKPdf PKPdf 07 44 52.8 +1.4
OTAV LR LR
comp=Z,757nm,20.0s,MS5.4
BBGH Gun Hill 131.85 28 PFAKE 07 45 00.0 +7.2
BBGH LR LR
comp=Z,2μm,22.0s,MS5.8
GRGR Grenville 131.87 31 PFAKE 07 45 00.0 +7.2
GRGR LR LR
comp=Z,954nm,21.0s,MS5.5
NNA Nana 139.94 71 PFAKE 07 45 20.0 +12
NNA LR LR
comp=Z,1μm,21.0s,MS5.7
SHEL Horse Pasture 146.68 289 PFAKE 07 45 30.0 +10
SHEL LR LR
comp=Z,1μm,19.0s,MS5.7
LPAZ La Paz 149.34 69 PKP PKPdf 07 45 24.8 +0.9
comp=Z,5.6nm,1.0s,baz=356,slow=3.7,SNR=7.3
LPAZ PKPbc PKPbc 07 45 29.8 +1.5
comp=Z,16nm,0.9s,baz=348,slow=4.0,SNR=12
LPAZ La Paz 149.34 69 *e*PKPdf PKPdf 07 45 25.1 +1.2
LPAZ *e*PKPbc PKPbc 07 45 30.5 +2.2
LPAZ *e*PKPab PKPab 07 45 34.9 +1.9
LPAZ LR LR
comp=Z,1μm,19.0s,MS5.7
LCO Las Campanas 152.05 95 *e*PKPbc PKPbc 07 45 35.0 +0.6
LCO LR LR
comp=Z,2μm,20.0s,MS5.9
RCBR Riachuelo 155.06 354 PFAKE 07 45 40.0 +7.4
RCBR LR LR
comp=Z,1μm,19.0s,MS5.7
TRQA Tornquist 159.32 117 PFAKE 07 45 50.0 +13
TRQA LR LR
comp=Z,2μm,19.0s,MS5.9
CPUP Villa Florida 162.85 80 PKP PKPdf 07 45 41.8 +0.4
comp=Z,6.9nm,0.9s,baz=302,slow=2.6,SNR=5.9
CPUP Villa Florida 162.85 80 PKP PKPdf 07 45 41.8 +0.4
CPUP LR LR
comp=Z,267nm,20.0s

*CSEM **30** 07:33:14.1, 63°.89N×22°.12W, h6km, ML3.5, After REY*
REY 30 07:33:14.1, 63°.89N×22°.12W, h6km, ML2.8, ML3.5,
Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRI	**Krysuvik**	**0.02**	**118**	P	Pg	07 33 15.4	+0.1
IKRI				S	Sg	07 33 16.2	+0.1
IVOG	**Vogar**	**0.15**	**304**	P	Pg	07 33 17.3	+0.2
IVOG				S	Sg	07 33 19.8	+0.7
IGRV	**Grindav??k**	**0.15**	**259**	P	Pg	07 33 17.4	+0.2
IGRV				S	Sg	07 33 19.8	+0.5
IKAS	**Kald??rsel**	**0.18**	**41**	P	Pg	07 33 17.8	+0.1
IKAS				S	Sg	07 33 21.1	+1.0
IVOS	**Vogsosar**	**0.19**	**101**	P	Pg	07 33 18.0	+0.2
IVOS				S	Sg	07 33 20.9	+0.6
INYL	**Nylenda**	**0.29**	**288**	P	Pg	07 33 19.5	-0.2
INYL				S	Sg	07 33 23.6	+0.1
ISAN	**Sandskeio**	**0.29**	**55**	P	Pg	07 33 19.8	0.0
ISAN				S	Sg	07 33 24.0	+0.3
IBJA	**Bjarnastaoir**	**0.36**	**80**	P	Pg	07 33 21.0	-0.2
IBJA				S	Sg	07 33 26.3	+0.4
IKUD	**Kuludalsa**	**0.45**	**14**	P	Pg	07 33 22.0	-0.7
IKUD				S	Sg	07 33 28.0	-0.6
IKRO	**Krokur**	**0.49**	**64**	P	Pg	07 33 23.0	-0.5
IHEI	**Heioarbar**	**0.50**	**51**	P	Pg	07 33 23.0	-0.7
IHEI				S	Sg	07 33 30.2	0.0
ISOL	**Solvholt**	**0.52**	**85**	P	Pg	07 33 23.4	-0.7
ISOL				S	Sg	07 33 30.5	-0.4
IASM	**Asmuli**	**0.67**	**94**	P	Pg	07 33 25.9	-1.0
IASM				S	Sg	07 33 35.1	-0.5
ISAU	**Saurbar**	**0.76**	**81**	P	Pg	07 33 27.4	-1.2
ISAU				S	Sg	07 33 37.9	-0.6
IGYG	**Gygjarholskot**	**0.93**	**64**	P	Pg	07 33 30.0	-1.8
IGYG				S	Sg	07 33 42.6	-1.2
IASB	**`sbjarnarst**	**0.93**	**21**	P	Pg	07 33 29.9	-2.0
IASB				S	Sg	07 33 42.3	-1.7
IVES	**Vestmannaeyjar**	**0.93**	**118**	P	Pg	07 33 30.1	-1.8
IVES				S	Sg	07 33 42.0	-2.0
IHAU	**Haukadalur**	**0.95**	**84**	P	Pg	07 33 30.6	-1.8
IHAU				S	Sg	07 33 43.8	-0.9
IMID	**Miomork**	**1.02**	**102**	P	Pg	07 33 31.4	-2.2
IMID				S	Sg	07 33 44.7	-2.1
IESK	**Eystri-Skogar**	**1.24**	**106**	P	Pb	07 33 34.3	-3.6
IESK				S	Sg	07 33 50.3	-3.7
IVAT	**Vatnsfell**	**1.44**	**77**	P	Pn	07 33 38.3	-2.3
IVAT				S	Sb	07 33 57.2	-2.6
IHVE	**Hveravellir**	**1.48**	**47**	P	Pn	07 33 39.0	-2.2
ISNB	**Snabyli**	**1.55**	**94**	P	Pn	07 33 39.3	-2.9
ISNB				S	Sn	07 33 59.5	-3.1
ISKR	**Skrokkalda**	**1.77**	**66**	P	Pn	07 33 43.7	-1.4
ISKR				S	Sn	07 34 06.6	-1.2
IKAL	**Kalfafell**	**1.96**	**86**	P	Pn	07 33 46.5	-1.2
IKAL				S	Sn	07 34 11.1	-1.4
IFAG	**Fagurholsmyri**	**2.42**	**88**	P	Pn	07 33 53.8	-0.2

IDC 30 07:42:21.1±0.9, 30°.62N×141°.64E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.3/2, Error ellipse: s-maj=35.5km s-min=19.5km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.54**	**172**	Pn	Pn	07 43 17.9	+0.6
	2.4nm,0.3s,baz=279,slow=19,SNR=2.4						
CBIJ				Sn	Sn	07 43 58.9	-1.0
	12nm,0.3s,baz=298,slow=23,SNR=4.8						
MJAR	**Matsushiro Arr**	**6.57**	**335**	Pn	Pn	07 43 59.9	+1.0
	1.5nm,0.3s,baz=152,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**47.92**	**307**	P	P	07 51 00.8	-0.2
	0.3nm,0.3s,baz=81,slow=11,SNR=3.8						
KURK	**Kurchatov**	**50.22**	**313**	P	P	07 51 18.7	+0.1
	1.0nm,0.4s,baz=89,slow=7.4,SNR=4.1						
ASAR	**Alice Springs**	**54.48**	**189**	P	P	07 51 50.7	+0.3
	0.3nm,0.4s,baz=4.6,slow=5.9,SNR=9.5						
FINES	**FINESS Array B**	**74.59**	**333**	P	P	07 54 01.5	-0.1
	0.6nm,0.4s,baz=64,slow=6.3,SNR=3.5						

NVAR Mina Array Bea 78.73 52 P P 07 54 25.6 +0.2
0.1nm,0.5s,baz=304,slow=6.4,SNR=3.5
TXAR Lajitas Array 93.87 53 P P 07 55 41.0 +0.3
0.4nm,0.9s,baz=336,slow=2.7,SNR=3.8

*ISK **30** 07:45:46.4, 36°.98N×29°.19E, h8km, MD2.9*
*ISCJB **30** 07:45:47.5±0.5, 36°.93N±0°.03×29°.23E±0°.04, h10km, Error ellipse: s-maj=5.2km s-min=4.3km az=15.9*
*CSEM **30** 07:45:47.2±0.3, 36°.95N×29°.21E, h8km, MD2.9, Error ellipse: s-maj=5.8km s-min=5.6km az=21.0*
*DDA **30** 07:45:48.0, 36°.99N×29°.21E, h7km±5km, Md2.8*
ISC 30 07:45:47.6±0.5, 36°.95N±0°.03×29°.21E±0°.04, h6km±7km, n22, σ0°92/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**48**	*e*PG	**Pg**	**07 45 52.7**	**-0.9**
GLHS				*e*SG	**Sg**	**07 45 57.8**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.31**	**48**	*e*Pg	**Pg**	**07 45 52.7**	**-0.9**
GLHS				*e*Sg	**Sg**	**07 45 57.8**	**+0.1**
FETY	**Fethiye**	**0.33**	**199**	*e*PG	**Pg**	**07 45 53.6**	**-0.4**
FETY				*e*SG	**Sg**	**07 45 59.5**	**+1.2**
FETY	**Fethiye**	**0.33**	**199**	*e*Pg	**Pg**	**07 45 53.6**	**-0.4**
FETY				*e*Sg	**Sg**	**07 45 59.5**	**+1.2**
ELL	**Elmali**	**0.59**	**110**	*e*PG	**Pg**	**07 45 58.6**	**-0.4**
ELL	**Elmali**	**0.59**	**110**	*e*Pg	**Pg**	**07 45 58.6**	**-0.4**
DNZL	**Cakiroluk**	**0.75**	**350**	*i* P	**Pg**	**07 46 00.3**	**-1.7**
DNZL				*i* S	**Sg**	**07 46 13.3**	**+1.4**
DNZL	**Cakiroluk**	**0.75**	**350**	*i* P	**Pg**	**07 46 00.3**	**-1.8**
DNZL				*i* S	**Sg**	**07 46 13.3**	**+1.5**
YER	**Yerkesik**	**0.77**	**284**	*e*PG	**Pg**	**07 46 01.6**	**-0.7**
YER	**Yerkesik**	**0.77**	**284**	*e*Pg	**Pg**	**07 46 01.6**	**-0.8**
AKAS	**Kas**	**0.78**	**156**	*i* P	**Pg**	**07 46 03.0**	**+0.5**
AKAS				*i* S	**Sg**	**07 46 16.7**	**+4.0**
AKAS	**Kas**	**0.78**	**156**	*i* P	**Pg**	**07 46 03.0**	**+0.4**
AKAS				*i* S	**Sg**	**07 46 16.7**	**+4.0**
KORT	**Korkueli**	**0.91**	**86**	*i* P	**Pg**	**07 46 05.3**	**+0.2**
KORT				*i* S	**Sg**	**07 46 21.4**	**+4.5**
KORT	**Korkueli**	**0.91**	**86**	*i* P	**Pg**	**07 46 05.3**	**+0.2**
KORT				*i* S	**Sg**	**07 46 21.4**	**+4.5**
AYDN	**Tasoluk**	**1.28**	**304**	*i* P	**Pn**	**07 46 13.0**	**+1.0**
AYDN				*i* S	**Sg**	**07 46 28.9**	**+0.2**
AYDN	**Tasoluk**	**1.28**	**304**	*i* P	**Pn**	**07 46 13.0**	**+1.0**
AYDN				*i* S	**Sg**	**07 46 29.0**	**+0.2**
DAT	**Datca**	**1.33**	**261**	*e*PN	**Pn**	**07 46 11.1**	**-1.6**
DAT	**Datca**	**1.33**	**261**	*e*Pn	**Pn**	**07 46 11.1**	**-1.6**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**07 46 14.4**	**+0.2**
KHAL				*i* S	**Sb**	**07 46 34.1**	**+0.8**
KHAL	**Karahalli**	**1.44**	**9**	*i* P	**Pn**	**07 46 14.4**	**+0.3**
KHAL				*i* S	**Sb**	**07 46 34.1**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.52**	**69**	*e*PN	**Pn**	**07 46 14.9**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.52**	**69**	*e*Pn	**Pn**	**07 46 14.9**	**-0.4**

*NEIC **30** 07:47:45.5, 17°.41N×101°.52W, h9km, MD4.0(MEX), After MEX.*
MEX 30 07:47:45.4±1.0, 17°.41N×101°.53W, h9km±9km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.21**	**17**	*i* P	Pg	07 47 48.5	-1.2
ZIIG				*i* S	Sg	07 47 53.2	+0.7
ZIIG	**Zihuatanejo**	**0.21**	**17**	*i* P	Pg	07 47 48.5	-1.2
ZIIG				*i* S	Sg	07 47 53.2	+0.7
CAIG	**El Cayaco**	**1.26**	**106**	*i* P	Pn	07 48 06.1	-3.1
CAIG				*i* S	Sb	07 48 20.7	-4.9
CAIG	**El Cayaco**	**1.26**	**106**	*i* P	Pn	07 48 06.1	-3.1
CAIG				*i* S	Sb	07 48 20.7	-4.9
ACX	**Acapulco**	**1.63**	**109**	*i* P	Pn	07 48 11.2	-3.1
ACX				*i* S	Sn	07 48 30.0	-5.5
ACX	**Acapulco**	**1.63**	**109**	*i* P	Pn	07 48 11.2	-3.1
ACX				*i* S	Sn	07 48 30.0	-5.5
MMIG	**Aquila**	**1.94**	**297**	*e*P	Pn	07 48 15.8	-2.8
MMIG				*i* S	Sn	07 48 37.2	-6.0
PLIG	**Platanillo**	**2.16**	**63**	*i* P	Pn	07 48 18.0	-3.7
PLIG				*i* S	Sn	07 48 43.5	-5.2
PLIG	**Platanillo**	**2.16**	**63**	*i* P	Pn	07 48 18.0	-3.7
PLIG				*i* S	Sn	07 48 43.5	-5.2
MOIG	**Morelia**	**2.28**	**8**	*i* P	Pn	07 48 21.2	-2.1
MOIG				*i* S	Sn	07 48 46.5	-5.1
MOIG	**Morelia**	**2.28**	**8**	*i* P	Pn	07 48 21.2	-2.1
MOIG				*i* S	Sn	07 48 46.5	-5.1
YAIG	**Yautepec**	**2.75**	**58**	*i* P	Pn	07 48 27.3	-2.4
YAIG				*i* S	Sn	07 48 59.1	-4.1
YAIG	**Yautepec**	**2.75**	**58**	*i* P	Pn	07 48 27.3	-2.4
YAIG				*i* S	Sn	07 48 59.1	-4.1
PBVM	**Pinon**	**3.08**	**49**	*i* P	Pn	07 48 32.7	-1.6
PBVM				*i* S	Sn	07 49 06.7	-4.5
PBVM	**Pinon**	**3.08**	**49**	*i* P	Pn	07 48 32.7	-1.6
PBVM				*i* S	Sn	07 49 06.7	-4.5
PNIG	**Pinotepa**	**3.41**	**107**	*i* P	Pn	07 48 35.6	-3.2
PNIG				*i* S	Sn	07 49 12.2	-7.2
PNIG	**Pinotepa**	**3.41**	**107**	*i* P	Pn	07 48 35.6	-3.2
PNIG				*i* S	Sn	07 49 15.8	-3.6
TPIG	**Tehuac#an**	**4.09**	**75**	*i* S	Sn	07 49 32.5	-3.8
VHO	**Vista Hermosa**	**4.59**	**93**	*e*P	Pn	07 48 53.7	-1.4
VHO				*i* S	Sn	07 49 45.5	-3.2
VHO	**Vista Hermosa**	**4.59**	**93**	*e*P	Pn	07 48 53.7	-1.4
VHO				*i* S	Sn	07 49 45.5	-3.2

*IDC **30** 07:48:15.1±1.1, 30°.69N×141°.71E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, ML3.2/2, Error ellipse: s-maj=46.9km s-min=22.4km az=78.0*
*ISCJB **30** 07:48:16.4±2.4, 30°.70N±0°.07×141°.5E±0°.2, h23km±20km, mb3.7/4, Error ellipse: s-maj=32.3km s-min=6.8km az=163.2*
*JMA **30** 07:48:17.3±0.1, 30°.75N×141°.77E, h47km, M4.0*
ISC 30 07:48:18.2±2.6, 30°.68N±0°.07×141°.5E±0°.2, h22km±21km, n13, σ0°94/18, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.84**	**329**	Pn	**Pn**	**07 48 59.4**	**-2.9**
JHJ	21nm,0.3s,baz=106,slow=20,SNR=2.3			Sn	**Sn**	**07 49 35.1**	**-0.8**
CBIJ	**Chichi jima**	**3.62**	**171**	*e*S	**Sn**	**07 49 54.1**	**-0.9**
CBIJ	**Chichi jima**	**3.62**	**171**	Pn	**Pn**	**07 49 12.2**	**-0.8**
CBIJ	37nm,0.3s,baz=68,slow=23,SNR=3.9 2.0nm,0.3s,baz=90,slow=20,SNR=2.0			Sn	**Sn**	**07 49 51.2**	**-3.7**
BSO1	**Boso 1**	**3.99**	**354**	P	**Pn**	**07 49 17.6**	**-0.4**
BSO3	**Boso 3**	**4.20**	**349**	P	**Pn**	**07 49 20.5**	**-0.4**
JHU	**Hanno**	**5.49**	**341**	P	**Pn**	**07 49 38.8**	**+0.2**
JHU				*e*S	**Sn**	**07 50 41.1**	**+0.1**
JRY	**Ryogami san**	**5.75**	**338**	P	**Pn**	**07 49 43.9**	**+1.6**
JRY				*e*S	**Sn**	**07 50 47.3**	**-0.3**
JAG	**Ashikaga**	**5.98**	**344**	P	**Pn**	**07 49 45.5**	**+0.1**
JAG				*e*S	**Sn**	**07 50 52.4**	**-0.8**
MJAR	**Matsushiro Arr**	**6.46**	**336**	Pn	**Pn**	**07 49 53.6**	**+1.5**
MKAR	**Makanchi Array**	**47.80**	**307**	P	**P**	**07 56 55.0**	**+1.2**
ASAR	**Alice Springs**	**54.53**	**189**	P	**P**	**07 57 45.2**	**+0.7**
FINES	**FINESS Array B**	**74.49**	**333**	P	**P**	**07 59 54.8**	**+0.2**
NVAR	**Mina Array Bea**	**78.77**	**52**	P	**P**	**08 00 19.4**	**+0.1**

1.8nm,0.5s,baz=60,slow=7.1,SNR=4.1 0.3nm,0.6s,baz=73,slow=4.7,SNR=5.5
IDC 30 07:58:00.4±1.6, 3°.98S×141°.79E, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/14, mbtmp4.2/6, Error ellipse: s-maj=61.1km s-min=23.4km az=88.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.00**	**201**	P	P	08 02 45.5	-0.2
FITZ	**Fitzroy Crossi**	**21.14**	**227**	P	P	08 02 47.3	+0.2
STKA	**Stephens Creek**	**27.75**	**180**	P	P	08 03 52.0	+1.1
MKAR	**Makanchi Array**	**72.67**	**322**	P	P	08 09 30.4	+0.3
BVAR	**Borovoye Array**	**82.11**	**325**	P	P	08 10 23.2	+0.3
MAW	**Mawson**	**82.12**	**202**	P	P	08 10 21.7	-0.9

1.2nm,0.5s,baz=85,slow=7.1,SNR=4.1
LPAZ La Paz 144.21 125 PKP PKPdf 08 17 38.9 -0.5
1.8nm,0.5s,baz=279,slow=0.3,SNR=10

KRSC 30 07:59:21.4±0.2, 53°.15N×160°.61E, h36km±36km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.36**	**262**	*e*P	Pn	07 59 30.7	+0.6
SPN				*i* S	Sn	07 59 37.2	+1.2
NLC	**Nalytchevo**	**0.76**	**272**	*e*P	Pn	07 59 36.0	+0.4
NLC				*i* S	Sn	07 59 45.6	-0.3
KII	**Karymskiy**	**1.13**	**323**	*e*P	Pn	07 59 41.2	+0.6
KII				*i* S	Sn	07 59 55.7	+0.9
AVH	**Avacha**	**1.13**	**277**	*e*P	Pn	07 59 42.1	+1.4
AVH				*i* S	Sn	07 59 56.8	+1.8
PET	**Petropavlovsk**	**1.19**	**265**	*e*P	Pn	07 59 42.1	+0.7
PET				*i* S	Sn	07 59 57.3	+1.0
MKZ	**Mys Kozlova**	**1.56**	**25**	*e*P	Pn	07 59 46.2	-0.3
MKZ				*i* S	Sn	08 00 04.3	-1.2
GRL	**Gorelyy**	**1.65**	**250**	*e*P	Pn	07 59 49.8	+2.0
GRL				*i* S	Sn	08 00 10.7	+2.9
GNL	**Ganaly**	**1.69**	**290**	*e*P	Pn	07 59 50.4	+2.1
GNL				*i* S	Sn	08 00 11.3	+2.6
TUMR	**Tumrok**	**2.15**	**353**	*e*P	Pn	07 59 56.9	+2.2
MIPR	**Malaya Ipel'ka**	**2.50**	**251**	*e*P	Pn	08 00 02.3	+2.8
KMNR	**Kamenistaya**	**2.62**	**355**	*e*P	Pn	08 00 04.1	+3.0
KMNR				*i* S	Sn	08 00 36.3	+4.6
BZMR	**Bezymyannaya**	**2.79**	**359**	*e*P	Pn	08 00 07.5	+4.0
KIRR	**Kirishev**	**2.81**	**357**	*e*P	Pn	08 00 07.1	+3.3
KPT	**Kopyto**	**2.83**	**356**	P	Pn	08 00 06.7	+2.7
ZLN	**Zelenaya**	**2.88**	**2**	*e*P	Pn	08 00 07.6	+3.0
ZLN				*i* S	Sn	08 00 42.1	+4.1
CIRR	**Tsirk**	**2.97**	**1**	*e*P	Pn	08 00 08.9	+2.9
CIRR				*i* S	Sn	08 00 44.1	+3.7
KRSR	**Krestovskiy**	**3.07**	**360**	*e*P	Pn	08 00 10.3	+2.9
SRDR	**Sredinnyy**	**3.22**	**351**	*e*P	Pn	08 00 11.3	+2.0
KBTR	**Krutoberegovo**	**3.32**	**22**	*e*P	Pn	08 00 13.2	+2.4
KBTR				*i* S	Sn	08 00 51.6	+2.6
BDR	**Baidarnaya**	**3.44**	**6**	*e*P	Pn	08 00 16.1	+3.7
BDR				*i* S	Sn	08 00 56.2	+4.3
SMKR	**Semkarok**	**3.48**	**8**	*e*P	Pn	08 00 16.0	+3.1
SMKR				*i* S	Sn	08 00 57.2	+4.5
SRKR	**Sorokina**	**3.53**	**5**	*e*P	Pn	08 00 16.8	+3.2
SRKR				*i* S	Sn	08 00 56.6	+2.6

IDC 30 08:00:08.8±3.1, 52°.29N×35°.45E, h0km, mb1 3.4/4, mb1mx3.2/25, mbtmp3.4/4, ML3.1/4, Error ellipse: s-maj=34.4km s-min=12.7km az=115.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**4.20**	**250**	Pn	Pn	08 01 12.0	-2.1
AKASG	1.5nm,0.3s,baz=60,slow=16,SNR=3.4 2.8nm,0.3s,baz=59,slow=15,SNR=7.6			Pg	Pg	08 01 22.4	-6.9
AKASG	2.2nm,0.3s,baz=59,slow=18,SNR=2.3			Sn	Sn	08 02 01.7	-2.2
AKASG	4.1nm,0.3s,baz=68,slow=30,SNR=5.7			Lg		08 02 17.4	
FINES	**FINESS Array B**	**10.50**	**335**	Pn	Pn	08 02 34.4	-6.0
FINES	0.3nm,0.3s,baz=152,slow=13,SNR=7.6			Sn	Sn	08 04 29.4	-9.1
FINES	0.4nm,0.3s,baz=149,slow=22,SNR=6.5			Lg		08 05 30.5	
VRAC	**Vranov**	**12.29**	**263**	Sn	Sn	08 05 14.6	-8.0
HFS	**Hagfors**	**14.37**	**312**	Pn	Pn	08 03 25.9	-7.3
HFS	0.2nm,0.3s,baz=132,slow=13,SNR=4.8 0.1nm,0.3s,baz=94,slow=19,SNR=1.7			Sn	Sn	08 05 57.9	-15
HFS	0.1nm,0.3s,baz=134,slow=24,SNR=2.0			Lg		08 07 29.9	
ARCES	**ARCESS Array B**	**17.92**	**349**	Pn	Pn	08 04 14.4	-4.6

0.2nm,0.3s,baz=165,slow=10,SNR=7.9

*IDC **30** 08:02:27.4±0.7, 5°.36N×94°.30E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.1/29, mbtmp4.3/18, ML4.4/1, Error ellipse: s-maj=24.1km s-min=15.6km az=53.0*
*BJI **30** 08:02:31.3, 5°.02N×94°.27E, h59km, mb4.9/3*
*ISCJB **30** 08:02:32.2±1.1, 5°.24N±0°.06×94°.26E±0°.06, h53km±10km, mb4.4/28, Error ellipse: s-maj=11.8km s-min=8.0km az=143.8*
*NEIC **30** 08:02:33.7±0.3, 5°.35N×94°.23E, mb4.5/11, Error ellipse: s-maj=9.4km s-min=5.8km az=218.0*
NEIC Felt [II] at Banda Aceh.
*DJA **30** 08:02:36, 5°.06N×94°.53E, h30km, MLv4.8/6*
ISC 30 08:02:33.6±0.9, 5°.30N±0°.06×94°.25E±0°.05, h46km±9km, n60, σ0°92/59, mb4.4/28, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.06**	**79**	P	**Pn**	**08 02 51.9**	**-0.1**
BSI				S	**Sn**	**08 03 05.8**	**+0.2**
TSI	**Tuntungan**	**4.65**	**112**	P	**Pn**	**08 03 36.9**	**-4.5**
PSI	**Prapat**	**5.28**	**118**	Pn	**Pn**	**08 03 51.7**	**+1.8**
PSI	16nm,0.3s,baz=301,slow=13,SNR=30 **Prapat**	**5.28**	**118**	Pn	**Pn**	**08 03 51.7**	**+1.8**
TRSI	**Tarutung**	**5.71**	**125**	P	**Pn**	**08 03 49.9**	**-6.0**
KULM	**Kulim**	**6.37**	**90**	*e*Pn	**Pn**	**08 04 04.8**	**-0.2**
KULM	36nm,0.6s			*e*Sn	**Sn**	**08 05 15.3**	**-1.1**
KULM	**Kulim**	**6.37**	**90**	P	**Pn**	**08 04 05.2**	**+0.3**
IPM	59nm,0.8s,0.2nm **Ipoh**	**6.80**	**97**	P	**Pn**	**08 04 11.7**	**+0.9**
MNSI	40nm,0.7s,0.2nm **Mandailing Nat**	**6.95**	**130**	P	**Pn**	**08 04 13.1**	**+0.2**
SISI	65nm,0.7s,1.2nm **Saibi**	**8.16**	**144**	P	**Pn**	**08 04 28.7**	**-0.8**
PALK	39nm,0.7s,0.2nm **Pallekele**	**13.61**	**279**	Pn	**Pn**	**08 05 42.9**	**-1.3**
PALK	1.8nm,0.3s,baz=105,slow=17,SNR=5.6 3.2nm,0.3s,baz=165,slow=21,SNR=8.5			Sn	**Sn**	**08 08 00.9**	**-13**
PALK	**Pallekele**	**13.61**	**279**	*e*Pn	**Pn**	**08 05 42.8**	**-1.3**
PALK				Sn	**Sn**	**08 08 00.9**	**-13**
CMAR	**Chiang Mai Arr**	**13.86**	**19**	Pn	**Pn**	**08 05 49.5**	**+2.1**
MDSI	2.5nm,0.3s,baz=209,slow=15,SNR=34 **Maura Dua**	**13.88**	**134**	P	**Pn**	**08 05 46.3**	**-1.5**
CHTO	15nm,0.9s **Chiang Mai**	**14.19**	**18**	*e*P	**Pn**	**08 05 56.2**	**+4.3**
CHTO	7.2nm,0.5s **Chiang Mai**	**14.19**	**18**	P	**Pn**	**08 05 56.5**	**+4.5**
KSM	**Kuching**	**16.47**	**103**	*e*P	**Pn**	**08 06 22.6**	**+1.0**
QIZ	11nm,0.6s **Qiongzhong**	**20.43**	**47**	*e*P	**P**	**08 07 06.2**	**-1.0**
RAMN	10nm,0.6s **Ramite**	**22.74**	**342**	*e*P	**P**	**08 07 30.7**	**-1.1**
TAPN	28nm,0.7s,mb4.8 **Taplejung**	**22.80**	**345**	*e*P	**P**	**08 07 30.9**	**-1.5**
JIRN	18nm,0.5s,mb4.7 **Jiri**	**23.53**	**342**	*e*P	**P**	**08 07 39.6**	**-0.2**
PKI	**Pulchoki**	**23.70**	**340**	*e*P	**P**	**08 07 41.9**	**+0.6**
GUN	**Gumba**	**23.86**	**341**	*e*P	**P**	**08 07 42.4**	**-0.4**
LSA	17nm,0.5s,mb4.8 **Lhasa**	**24.45**	**353**	P	**P**	**08 07 50.5**	**+2.3**
ENH	**Enshi**	**28.69**	**28**	*e*P	**P**	**08 08 25.0**	**-1.4**
GTA	8.0nm,0.5s,mb4.7 **Gaotai**	**34.33**	**8**	*e*P	**P**	**08 09 10.8**	**-5.0**
GTA				pP	pP	08 09 15.5	-13
GTA				sP	sP	08 09 18.3	-15
GTA	comp=Z,3.0nm,0.7s,mb4.3			pmax	pmax		
FITZ	**Fitzroy Crossi**	**38.72**	**128**	P	**P**	**08 09 53.4**	**-0.1**
AML	comp=Z,4.0nm,0.5s,mb4.4,baz=333,slow=4.5,SNR=2.2 **Almayashu**	**40.99**	**337**	*e*P	**P**	**08 10 12.9**	**+0.9**
AAK	comp=Z,148nm,0.6s,mb5.8 **Ala-Archa**	**41.11**	**338**	P	**P**	**08 10 17.0**	**+4.0**
AAK	comp=Z,2.9nm,0.7s,mb4.0,baz=275,slow=14,SNR=7.3 **Ala-Archa**	**41.11**	**338**	*e*P	**P**	**08 10 16.5**	**+3.5**
MK31	comp=Z,2.6nm,0.6s,mb4.0 **Makanchi Array**	**42.61**	**348**	*e*P	**P**	**08 10 25.6**	**+0.3**
MKAR	**Makanchi Array**	**42.61**	**348**	P	**P**	**08 10 25.4**	**+0.1**
SONM	comp=Z,3.8nm,0.5s,mb4.4,baz=163,slow=7.5,SNR=25 **Songino Array**	**43.64**	**12**	P	**P**	**08 10 32.8**	**-0.7**
SONM	comp=Z,2.4nm,0.8s,mb4.0,baz=191,slow=8.3,SNR=10			PcP	PcP	08 12 20.8	+0.5
	comp=Z,0.5nm,0.5s,baz=215,slow=2.4,SNR=2.5						
SONM				ScP	ScP	08 16 08.7	+0.4
KSRS	comp=Z,0.6nm,0.8s,baz=204,slow=5.8,SNR=3.7 **Korea Array**	**44.35**	**39**	P	**P**	**08 10 39.4**	**0.0**
WRAB	comp=Z,1.2nm,0.6s,mb3.8,baz=229,slow=5.5,SNR=2.7 **Tennant Creek**	**46.72**	**124**	*e*P	**P**	**08 10 58.5**	**+0.1**
WRAB	comp=Z,8.9nm,0.6s,mb4.9			*e*pP	pP	08 11 11.0	0.0
KURK	**Kurchatov**	**47.12**	**346**	P	**P**	**08 11 01.1**	**0.0**
KURK	comp=Z,3.2nm,0.5s,mb4.5,baz=179,slow=6.6,SNR=6.9 **Kurchatov**	**47.12**	**346**	*e*P	**P**	**08 11 01.0**	**-0.1**
ASAR	comp=Z,1.9nm,0.4s,mb4.4 **Alice Springs**	**48.21**	**128**	P	**P**	**08 11 09.7**	**-0.2**
ZAA0	comp=Z,2.1nm,0.6s,mb4.4,baz=302,slow=7.8,SNR=19 **Zalesovo Array**	**49.11**	**353**	*e*P	**P**	**08 11 16.4**	**+0.1**
ZAA0				*e*pP	pP	08 11 28.8	-0.2
ZALV	comp=Z,3.2nm,0.5s,mb4.8,baz=192,slow=7.9,SNR=17 **Zalesovo Beam**	**49.11**	**353**	P	**P**	**08 11 16.4**	**+0.1**
ZALV	comp=Z,5.4nm,0.5s,mb4.8,baz=192,slow=7.9,SNR=17 **Zalesovo Beam**	**49.11**	**353**	P	**P**	**08 11 16.4**	**+0.1**
CBIJ	**Chichi jima**	**50.48**	**59**	P	**P**	**08 11 25.8**	**-1.5**
BVAR	comp=Z,38nm,0.6s,mb5.6,baz=289,slow=18,SNR=2.4 **Borovoye Array**	**51.45**	**342**	P	**P**	**08 11 33.9**	**-0.2**
BRVK	comp=Z,1.3nm,0.5s,mb4.1,baz=147,slow=11,SNR=6.8 **Borovoye**	**51.54**	**342**	*e*P	**P**	**08 11 34.3**	**-0.3**
ABKAR	comp=Z,2.7nm,0.5s,mb4.4 **Akbulak array**	**52.54**	**332**	*e*P	**P**	**08 11 42.0**	**-0.3**
AKTK	comp=Z,2.8nm,0.6s,mb4.4 **Aktyubinsk**	**54.26**	**332**	P	**P**	**08 11 55.2**	**+0.4**
AKTO	**Aktyubinsk**	**54.26**	**332**	P	**P**	**08 11 55.2**	**+0.4**
STKA	comp=Z,0.6nm,0.5s,mb3.8,baz=99,slow=13,SNR=2.0 **Stephens Creek**	**58.27**	**133**	P	**P**	**08 12 24.2**	**+0.5**
BRTR	comp=Z,1.5nm,0.7s,mb4.1,baz=325,slow=13,SNR=3.2 **Keskin Array B**	**64.20**	**312**	P	**P**	**08 13 02.7**	**-1.1**
BOSA	comp=Z,1.5nm,0.8s,mb4.1,baz=128,slow=8.0,SNR=5.9 **Boshof**	**74.33**	**238**	P	**P**	**08 14 08.5**	**+1.7**
FINES	comp=Z,4.3nm,0.9s,mb4.4,baz=35,slow=6.4,SNR=3.2 **FINESS Array B**	**75.03**	**332**	P	**P**	**08 14 09.5**	**-0.6**
ARCES	comp=Z,1.3nm,0.6s,mb4.0,baz=114,slow=4.8,SNR=5.5 **ARCESS Array B**	**77.71**	**340**	P	**P**	**08 14 26.3**	**+1.1**
GERES	comp=Z,1.4nm,0.8s,mb4.0,baz=107,slow=6.3,SNR=5.4 **GERESS Array B**	**79.81**	**319**	P	**P**	**08 14 37.8**	**+0.7**
DAVOX	comp=Z,1.5nm,0.7s,mb4.0,baz=79,slow=6.9,SNR=7.9 **Davos/Dischmat**	**82.32**	**316**	P	**P**	**08 14 51.0**	**+0.5**
SPITS	comp=Z,2.7nm,0.5s,mb4.4,baz=145,slow=12,SNR=3.7 **Spitsbergen Ar**	**82.37**	**348**	P	**P**	**08 14 50.0**	**-0.1**
NVAR	comp=Z,0.9nm,0.4s,mb4.0,baz=112,slow=9.1,SNR=5.5 **Mina Array Bea**	**127.04**	**32**	PKP	PKPdf	08 21 34.7	+1.6
PDAR	comp=Z,0.2nm,0.5s,baz=322,slow=2.8,SNR=2.8 **Pinedale Array**	**127.51**	**22**	PKP	PKPdf	08 21 34.3	+0.5
TXAR	comp=Z,0.2nm,0.6s,baz=149,slow=6.0,SNR=2.3 **Lajitas Array**	**141.50**	**26**	PKhKP		08 21 56.0	
TXAR	comp=Z,0.1nm,0.5s,baz=243,slow=2.2,SNR=4.4			PKP	PKPdf	08 22 03.0	+2.6
CPUP	comp=Z,0.2nm,0.5s,baz=273,slow=0.8,SNR=7.8 **Villa Florida**	**145.73**	**229**	PKPbc	PKPbc	08 22 09.3	+1.0
CPUP	comp=Z,1.6nm,0.7s,baz=61,slow=4.7,SNR=5.5 **Villa Florida**	**145.73**	**229**	PKPbc	PKPbc	08 22 09.3	+1.0

*ISCJB **30** 08:34:33.6±0.8, 7°.30S±0°.05×129°.51E±0°.07, h104km±14km, mb3.9/3, Error ellipse: s-maj=11.9km s-min=7.6km az=160.4*
*IDC **30** 08:34:33.4±5.8, 7°.20S×129°.23E, h79km±53km, mb3.9/4, mb1 4.1/6, mb1mx3.7/19, mbtmp4.0/6, ML4.7/2, Error ellipse: s-maj=49.2km s-min=26.6km az=53.0*
*DJA **30** 08:34:35, 7°.11S×129°.72E, h161km, MLv4.7/6*
ISC 30 08:34:34.3±0.8, 7°.28S±0°.05×129°.46E±0°.07, h88km±13km, n21, σ1°34/25, mb3.9/3, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.65**	**64**	P	**Pn**	**08 35 29.7**	**+1.2**
TLE				S	**Sn**	**08 36 09.6**	**-0.9**
AAI	**Ambon**	**3.79**	**341**	P	**Pn**	**08 35 32.2**	**+1.8**
NLAI	**Namlea**	**4.65**	**330**	P	**Pn**	**08 35 45.5**	**+3.3**
KAKA	**Kakadu**	**6.14**	**152**	*e*P	**Pn**	**08 36 04.3**	**+1.8**
KAKA	99nm,0.2s			*e*S	**Sn**	**08 37 10.8**	**-0.6**
KAKA	**Kakadu**	**6.14**	**152**	P	**Pn**	**08 36 04.7**	**+2.2**
SWI	170nm,0.5s,5.5nm **Sorong**	**6.62**	**16**	P	**Pn**	**08 36 08.3**	**-0.8**
SWI	53nm,0.8s,2μm0.5nm			S	**Sn**	**08 37 18.5**	**-4.7**
FITZ	53nm,0.8s,2μm0.5nm **Fitzroy Crossi**	**11.38**	**199**	P	**Pn**	**08 37 13.1**	**-0.8**
FITZ	8.1nm,0.3s,baz=36,slow=11,SNR=104			S	**Sn**	**08 39 12.7**	**-6.4**
FITZ	8.8nm,0.3s,baz=116,slow=19,SNR=14 **Fitzroy Crossi**	**11.38**	**199**	P	**Pn**	**08 37 13.7**	**-0.1**
WRAB	59nm,0.7s **Tennant Creek**	**13.44**	**160**	P	**Pn**	**08 37 39.2**	**-2.2**
COEN	17nm,0.7s **Coen**	**15.02**	**117**	*e*P	**Pn**	**08 38 00.9**	**-1.0**
QIS	**Mount Isa**	**16.46**	**144**	*e*P	**Pn**	**08 38 19.6**	**-0.3**
MBWA	2.6nm,0.2s **Marble Bar**	**16.70**	**213**	*e*P	**Pn**	**08 38 23.1**	**+0.3**
MBWA	**Marble Bar**	**16.70**	**213**	P	**Pn**	**08 38 21.7**	**-1.1**
ASAR	18nm,0.6s **Alice Springs**	**16.84**	**166**	P	**Pn**	**08 38

TXAR				PcP	PcP	08 46 42.4	+1.1
	0.4nm,0.8s,baz=141,slow=4.8,SNR=5.3						
PDAR	**Pinedale Array**	**53.65**	**332**	**P**		**08 46 23.1**	**+0.1**
	0.4nm,0.5s,mb3.7,baz=128,slow=9.6,SNR=5.1						
NVAR	**Mina Array Bea**	**55.30**	**323**	**P**		**08 46 36.1**	**+1.1**
	0.3nm,0.5s,mb3.6,baz=128,slow=6.6,SNR=3.9						
ULM	**Lac du Bonnet**	**55.37**	**347**	**P**		**08 46 33.9**	**-1.5**
	1.1nm,0.5s,mb4.2,baz=145,slow=1.3,SNR=3.2						
YKA	**Yellowknife Ar**	**71.05**	**343**	**P**		**08 48 17.8**	**-0.9**
	0.4nm,0.6s,mb3.4,baz=121,slow=7.3,SNR=3.4						

*ISCJB **30** 08:40:47.8±0.8, 60°.04N±0°.05×22°.92E±0°.06, h0km, Error ellipse: s-maj=7.7km s-min=4.2km az=165.7*
*IDC **30** 08:40:49.9±2.1, 59°.85N×23°.14E, h0km, mb1 3.0/4, mb1mx2.9/27, mbtmp2.9/4, ML2.5/4, Error ellipse: s-maj=29.2km s-min=7.5km az=153.0*
*HEL **30** 08:40:49.0±0.6, 59°.82N×23°.00E, h0km, ML1.6, Explosion*
ISC 30 08:40:49.2±0.8, 59°.91N±0°.06×23°.05E±0°.06, h0km, n14, σ1§36/24, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.74**	**65**	PG	**Pg**	**08 41 02.7**	**-0.6**
MEF				SG	**Sg**	**08 41 13.3**	**+0.3**
MEF				RG		08 41 18.6	
RAF	**Rauma**	**1.29**	**331**	PG	**Pg**	**08 41 13.9**	**+0.1**
	baz=151						
RAF				SG	**Sg**	**08 41 33.1**	**+2.7**
RAF				MSG		08 41 33.1	
	comp=Z,3.8nm,0.1s						
RAF				RG		08 41 37.6	
PVF	**Pernaja**	**1.54**	**64**	PG	**Pg**	**08 41 17.6**	**-1.0**
PVF				SG	**Sg**	**08 41 40.1**	**+1.5**
PVF				MSG		08 41 40.1	
	comp=Z,1.7nm,0.1s						
FIA0	**FINESS Array S**	**2.14**	**43**	PN	**Pn**	**08 41 28.1**	**+2.0**
	baz=225						
FIA0				SG	**Sg**	**08 41 57.1**	**-0.8**
FIA0				MSG		08 41 57.1	
	comp=Z,4.4nm,0.2s						
FINES	**FINESS Array B**	**2.14**	**43**	Pn	**Pn**	**08 41 28.2**	**+2.1**
	comp=Z,1.9nm,0.3s,baz=226,slow=15,SNR=46						
FINES				Lg		08 41 56.9	
	comp=Z,2.6nm,0.3s,baz=228,slow=26,SNR=19						
FIA1	**FINESS Array S**	**2.14**	**43**	PN	**Pn**	**08 41 28.6**	**+2.6**
FIA1				SG	**Sg**	**08 41 57.6**	**-0.3**
VJF	**Virojoki**	**2.33**	**72**	PN	**Pn**	**08 41 28.2**	**-0.6**
VJF				SG	**Sg**	**08 42 02.5**	**-1.5**
VJF				MSG		08 42 02.5	
	comp=Z,3.7nm,0.2s						
KEF	**Keuruu**	**2.43**	**21**	PN	**Pn**	**08 41 33.3**	**+3.2**
KEF				SG	**Sg**	**08 42 06.6**	**-0.6**
KEF				MSG		08 42 06.6	
	comp=Z,2.6nm,0.4s						
KAF	**Kangasniemi**	**2.72**	**34**	PN	**Pn**	**08 41 36.0**	**+2.0**
KAF				SG	**Sg**	**08 42 12.9**	**-3.5**
KAF				MSG		08 42 12.9	
	comp=Z,1.5nm,0.4s						
VAF	**Ylistaro**	**3.15**	**357**	SG	**Sg**	**08 42 26.7**	**-3.5**
VAF				MSG		08 42 26.7	
	comp=Z,2.1nm,0.2s						
SUF	**Sumiainen**	**3.19**	**27**	SG	**Sg**	**08 42 26.7**	**-4.8**
SUF				MSG		08 42 26.7	
	comp=Z,0.7nm,0.4s						
SUF				SG	**Sg**	**08 42 26.7**	**-4.8**
SUF				MSG		08 42 26.7	
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**4.70**	**277**	Pn	**Pn**	**08 42 00.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=92,slow=15,SNR=6.6						
HFS				Sn	**Sn**	**08 42 55.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=87,slow=28,SNR=5.9						
HFS				Lg		08 43 11.1	
	comp=Z,0.3nm,0.3s,baz=90,slow=32,SNR=6.2						
NOA	**NORSAR Array B**	**5.96**	**286**	Pn	**Pn**	**08 42 17.8**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=91,slow=13,SNR=1.5						
ARCES	**ARCESS Array B**	**9.72**	**5**	Pn	**Pn**	**08 43 10.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=182,slow=13,SNR=21						

*ISCJB **30** 08:44:04.9±0.6, 36°.98N±0°.05×29°.20E±0°.04, h8km±8km, Error ellipse: s-maj=7.7km s-min=5.4km az=170.2*
*DDA **30** 08:44:04.8, 37°.03N×29°.19E, h7km±5km, Md2.6*
*CSEM **30** 08:44:04.8±0.2, 36°.97N×29°.22E, h10km, MD3.0, Error ellipse: s-maj=5.7km s-min=3.8km az=166.0*
*ISK **30** 08:44:04.5, 36°.97N×29°.22E, h10km, MD3.0*
ISC 30 08:44:05.3±0.7, 36°.98N±0°.05×29°.21E±0°.04, h12km±8km, n16, σ0§85/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*PG	**Pg**	**08 44 10.5**	**-0.8**
GLHS				*e*SG	**Sg**	**08 44 15.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*Pg	**Pg**	**08 44 10.5**	**-0.8**
GLHS				*e*Sg	**Sg**	**08 44 15.6**	**+0.2**
FETY	**Fethiye**	**0.35**	**196**	*e*PG	**Pg**	**08 44 11.3**	**-1.1**
FETY				*e*SG	**Sg**	**08 44 17.8**	**+0.7**
FETY	**Fethiye**	**0.35**	**196**	*e*Pg	**Pg**	**08 44 11.3**	**-1.1**
FETY				*e*Sg	**Sg**	**08 44 17.8**	**+0.7**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**08 44 19.8**	**+4.8**
TURN				*i* S	**Sg**	**08 44 32.3**	**+11**
TURN	**Turunc**	**0.49**	**258**	*i* P	**Pg**	**08 44 19.8**	**+4.8**
TURN				*i* S	**Sg**	**08 44 32.3**	**+11**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**08 44 16.4**	**-0.7**
ELL				*e*SG	**Sg**	**08 44 25.4**	**+0.3**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**08 44 16.5**	**-0.6**
ELL				*e*Sg	**Sg**	**08 44 25.4**	**+0.3**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**08 44 19.6**	**-0.3**
YER				*e*SG	**Sg**	**08 44 30.8**	**+0.9**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**	**08 44 19.6**	**-0.4**
YER				*e*Sg	**Sg**	**08 44 30.8**	**+0.9**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**08 44 21.7**	**-1.3**
KORT				*i* S	**Sg**	**08 44 36.8**	**+1.8**
KORT	**Korkueli**	**0.92**	**88**	*i* P	**Pg**	**08 44 21.7**	**-1.3**
KORT				*i* S	**Sg**	**08 44 36.8**	**+1.9**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*PN	**Pn**	**08 44 32.2**	**0.0**
SUTC	**Sutluce-Ispart**	**1.52**	**70**	*e*Pn	**Pn**	**08 44 32.2**	**-0.1**
HDMB	**Hadim**	**2.63**	**89**	*e*PN	**Pn**	**08 44 47.8**	**+0.3**
HDMB	**Hadim**	**2.63**	**89**	*e*Pn	**Pn**	**08 44 47.8**	**+0.3**

*CSEM **30** 08:47:00.9, 63°.94N×21°.51W, h6km, ML3.6, After REY*
REY 30 08:47:00.9, 63°.94N×21°.51W, h6km, ML2.9, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.09**	**86**	P	Pg	08 47 03.0	+0.1
IBJA				S	Sg	08 47 05.0	+0.7
ISAN	**Sandskeio**	**0.12**	**348**	P	Pg	08 47 03.6	+0.2
ISAN				S	Sg	08 47 06.1	+1.0
IVOS	**Vogsosar**	**0.12**	**224**	P	Pg	08 47 03.6	+0.2
IVOS				S	Sg	08 47 05.9	+0.8
IKAS	**Kald??rsel**	**0.17**	**299**	P	Pg	08 47 04.6	+0.3
IKAS				S	Sg	08 47 08.1	+1.5
IKRO	**Krokur**	**0.23**	**47**	P	Pg	08 47 05.4	-0.1
IKRO				S	Sg	08 47 09.2	+0.6
ISOL	**Solvholt**	**0.25**	**92**	P	Pg	08 47 05.8	0.0
ISOL				S	Sg	08 47 09.7	+0.6
IKRI	**Krysuvik**	**0.26**	**256**	P	Pg	08 47 05.8	-0.1
IHEI	**Heioarbar**	**0.29**	**25**	P	Pg	08 47 06.3	-0.2
IHEI				S	Sg	08 47 10.6	+0.3
IVOG	**Vogar**	**0.39**	**275**	P	Pg	08 47 08.1	-0.3
IVOG				S	Sg	08 47 13.7	+0.2
IASM	**Asmuli**	**0.41**	**104**	P	Pg	08 47 08.6	-0.2
IASM				S	Sg	08 47 14.8	+0.6
IKUD	**Kuludalsa**	**0.41**	**338**	P	Pg	08 47 08.4	-0.5
IKUD				S	Sg	08 47 14.3	0.0
IGRV	**Grindav??k**	**0.42**	**259**	P	Pg	08 47 08.6	-0.5
IGRV				S	Sg	08 47 14.7	+0.1
ISAU	**Saurbar**	**0.49**	**84**	P	Pg	08 47 09.8	-0.5
ISAU				S	Sg	08 47 17.1	+0.5
INYL	**Nylenda**	**0.54**	**274**	P	Pg	08 47 10.5	-0.8
INYL				S	Sg	08 47 18.6	+0.3
IGYG	**Gygjarholskot**	**0.67**	**58**	P	Pg	08 47 12.7	-1.0
IGYG				S	Sg	08 47 22.3	0.0
IHAU	**Haukadalur**	**0.68**	**87**	P	Pg	08 47 13.1	-0.9
IHAU				S	Sg	08 47 22.8	-0.1
IVES	**Vestmannaeyjar**	**0.74**	**132**	S	Sg	08 47 24.8	+0.2
IMID	**Miomork**	**0.78**	**111**	P	Pg	08 47 14.8	-0.9
IMID				S	Sg	08 47 26.2	+0.4
IASB	**`sbjarnarst**	**0.82**	**6**	P	Pg	08 47 14.9	-1.6
IASB				S	Sg	08 47 26.3	-0.8
IESK	**Eystri-Skogar**	**1.01**	**113**	P	Pg	08 47 18.5	-1.7
IESK				S	Sg	08 47 33.0	-0.2
IFAG	**Fagurholsmyri**	**2.15**	**90**	P	Pn	08 47 37.0	-0.2
IHRN	**Hraun**	**2.26**	**15**	P	Pn	08 47 38.1	-0.6
IHRN				S	Sn	08 48 07.3	+0.4
ISVA	**Svartarkot**	**2.31**	**51**	P	Pn	08 47 39.3	-0.1
ISVA				S	Sn	08 48 08.2	+0.1
IKRE	**Kreppuhraun**	**2.39**	**67**	P	Pn	08 47 40.0	-0.5
IHLA	**Hella**	**2.41**	**32**	P	Pn	08 47 40.4	-0.5
IBRU	**Bruarjokull**	**2.52**	**67**	P	Pn	08 47 42.7	+0.4

*ISCJB **30** 08:49:10.2±0.7, 59°.39N±0°.03×27°.4E±0°.1, h0km, Error ellipse: s-maj=7.7km s-min=3.6km az=174.3*
*CSEM **30** 08:49:11.6±0.3, 59°.38N×27°.41E, h2km, ML2.5, Error ellipse: s-maj=7.0km s-min=2.9km az=92.0, Mining explosion.*
*BER **30** 08:49:13.9±3.6, 59°.33N×27°.25E, h2km±18km, ML2.5(NAO)*
*NAO **30** 08:49:14.0±1.1, 59°.31N×27°.07E, ML2.5*
*UPP **30** 08:49:15.0, 59°.23N×26°.77E, h0km*
*IDC **30** 08:49:16.6±1.3, 59°.46N×27°.08E, h0km, mb1 3.2/4, mb1mx3.0/27, mbtmp3.1/4, ML3.0/4, Error ellipse: s-maj=23.3km s-min=12.3km az=84.0*
ISC 30 08:49:13.4±0.6, 59°.35N±0°.02×27°.17E±0°.09, h0km, n27, σ1§37/41, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.92**	**194**	Pg	**Pg**	**08 49 30.9**	**0.0**
VSU				Lg		08 49 41.8	
VSU	**Vasula**	**0.92**	**194**	*e*P	**Pg**	**08 49 30.5**	**-0.4**
	SNR=90						
VSU	**Vasula**	**0.92**	**194**	Pg	**Pg**	**08 49 30.9**	**0.0**
VSU				*e*S	**Sg**	**08 49 41.5**	**-1.2**
	71nm,0.3s,SNR=90						
VSU				Lg		08 49 41.8	
VJF	**Virojoki**	**1.21**	**9**	Pg	**Pg**	**08 49 36.9**	**+0.3**
VJF				Sg	**Sg**	**08 49 53.7**	**+1.4**
PVF	**Pernaja**	**1.37**	**332**	Pg	**Pg**	**08 49 39.7**	**+0.1**
PVF				Sg	**Sg**	**08 49 57.8**	**+0.5**
MEF	**Metsahovi**	**1.65**	**303**	Pg	**Pg**	**08 49 44.6**	**-0.4**
MEF				*e*S	**Sn**	**08 50 06.0**	**+0.6**
	SNR=50						
MEF				Sg	**Sg**	**08 50 08.0**	**+1.7**
MTSE	**Matsula**	**1.84**	**251**	Pn	**Pn**	**08 49 47.3**	**+1.1**
MTSE				Sg	**Sg**	**08 50 11.5**	**-1.1**
FIA0	**FINESS Array S**	**2.17**	**346**	Pn	**Pn**	**08 49 52.0**	**+1.2**
	baz=163,slow=18						
FIA0				Pg	**Pg**	**08 49 53.5**	**-1.5**
	baz=165,slow=16						
FIA0				Lg		08 50 23.3	
	baz=167,slow=37						
FIA0	**FINESS Array S**	**2.17**	**346**	Pn	**Pn**	**08 49 52.0**	**+1.3**
	baz=163,slow=16,SNR=50						
FIA0	**FINESS Array S**	**2.17**	**346**	Pg	**Pg**	**08 49 53.5**	**-1.5**
	baz=165,slow=16						
FIA0				Sg	**Sg**	**08 50 22.4**	**-0.7**
FIA0				Lg		08 50 23.3	
	baz=167,slow=30,SNR=21						
FINES	**FINESS Array B**	**2.17**	**346**	Pn	**Pn**	**08 49 51.9**	**+1.2**
	2.9nm,0.3s,baz=164,slow=16,SNR=46						
FINES				Sn	**Sn**	**08 50 21.4**	**+3.1**
	4.8nm,0.3s,baz=163,slow=24,SNR=5.8						
FIA1	**FINESS Array S**	**2.17**	**346**	Pn	**Pn**	**08 49 52.2**	**+1.5**
FIA1				Sg	**Sg**	**08 50 21.7**	**-1.4**
KAF	**Kangasniemi**	**2.81**	**352**	Pn	**Pn**	**08 50 00.6**	**+1.2**
KAF				Sg	**Sg**	**08 50 41.1**	**-2.4**
KEF	**Keuruu**	**3.05**	**339**	Sg	**Sg**	**08 50 47.5**	**-3.6**
RAF	**Rauma**	**3.18**	**304**	Pn	**Pn**	**08 50 07.0**	**+2.5**
RAF				*e*S	**Sn**	**08 50 43.2**	**+0.1**
	SNR=50						
SUF	**Sumiainen**	**3.42**	**352**	Pn	**Pn**	**08 50 10.5**	**+2.6**
SUF				Sg	**Sg**	**08 50 59.7**	**-3.4**
JOF	**Joensuu**	**4.11**	**28**	Sg	**Sg**	**08 51 20.6**	**-4.6**
UMAU	**Umeaa**	**5.50**	**329**	P	**Pn**	**08 50 38.5**	**+2.1**
HFS	**Hagfors**	**6.86**	**282**	Pn	**Pn**	**08 50 54.4**	**-0.6**
	baz=105,slow=10						
HFS				Lg		08 52 44.6	
	baz=90,slow=28						
HFS	**Hagfors**	**6.86**	**282**	Pn	**Pn**	**08 50 54.4**	**-0.6**
	baz=105,slow=9.5,SNR=7.8						
NB2	**NORSAR Subarra**	**8.13**	**289**	Pn	**Pn**	**08 51 10.3**	**-2.1**
	baz=93,slow=12						
NB2				Lg		08 53 28.2	
NB2	**NORSAR Subarra**	**8.13**	**289**	Pn	**Pn**	**08 51 10.3**	**-2.1**
	baz=93,slow=12,SNR=4.6						
NOA	**NORSAR Array B**	**8.13**	**289**	Pn	**Pn**	**08 51 11.3**	**-1.1**
	0.3nm,0.3s,baz=92,slow=13,SNR=5.7						
AKASG	**Malin Array Be**	**8.74**	**171**	Pn	**Pn**	**08 51 20.9**	**0.0**
	0.7nm,0.3s,baz=352,slow=13,SNR=3.6						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**08 51 39.6**	**-2.0**
	baz=174,slow=16						
ARA0				Sn	**Sn**	**08 53 29.8**	**-7.3**
	baz=174,slow=28						
ARA0				Lg		08 54 28.4	
	baz=174,slow=37						
ARA0	**ARCESS Array S**	**10.26**	**357**	Pn	**Pn**	**08 51 39.6**	**-1.9**
	baz=174,slow=14,SNR=5.9						
ARCES	**ARCESS Array B**	**10.26**	**357**	Pn	**Pn**	**08 51 41.0**	**-0.6**
	0.2nm,0.3s,baz=178,slow=14,SNR=9.4						

DJA 30 08:58:58, 9°.91S×108°.69E, h10km, MLv4.4/11, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**2.20**	**8**	P	Pn	08 59 35.9	+1.3
UGM	**Wanagama**	**2.69**	**43**	P	Pn	08 59 43.5	+2.2
PCJI	**Pacitan**	**2.99**	**55**	P	Pn	08 59 45.7	+0.2
PCJI				S	Sn	09 00 23.0	+1.6
PWJI	**Pagerwojo**	**3.60**	**59**	P	Pn	08 59 54.9	+1.0
PWJI				S	Sn	09 00 36.6	0.0
SJI	**Sawahan**	**3.73**	**55**	P	Pn	08 59 57.0	+1.3
CGJI	**Cibinong**	**4.42**	**318**	P	Pn	09 00 07.0	+1.8
CGJI				S	Sn	09 00 56.7	0.0
GRJI	**Gresik**	**4.79**	**52**	P	Pn	09 00 12.3	+2.1
GMJI	**Gumukmas**	**4.97**	**71**	P	Pn	09 00 14.2	+1.5
KLI	**Kotabumi**	**6.29**	**323**	P	Pn	09 00 32.8	+1.9
	98nm,0.3s,4μm0.8nm						
SRBI	**Singaraja**	**6.69**	**75**	P	Pn	09 00 36.3	-0.1
	83nm,1.3s,0.4nm						
MDSI	**Maura Dua**	**7.00**	**320**	P	Pn	09 00 40.5	-0.2
	7.0nm,1.1s,0.1nm						
MNAI	**Manna**	**7.92**	**314**	P	Pn	09 00 53.4	+0.1
	285nm,1.5s,1.4nm						
COCO	**West Island**	**11.86**	**258**	P	Pn	09 01 46.9	-0.4
	136nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.34**	**118**	P	Pn	09 03 08.0	-4.7

*IDC **30** 08:59:06.2±4.0, 64°.62N×33°.68E, h0km, mb1 2.9/3, mb1mx2.8/26, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=50.6km s-min=11.1km az=103.0*
*ISCJB **30** 08:59:12.6±0.7, 64°.77N±0°.02×30°.8E±0°.1, h0km, Error ellipse: s-maj=7.6km s-min=3.5km az=4.6*
*CSEM **30** 08:59:13.1±0.6, 64°.81N×30°.97E, h1km, ML2.5, Error ellipse: s-maj=16.4km s-min=6.4km az=89.0, Mining explosion.*
*HEL **30** 08:59:14.3±0.3, 64°.75N×30°.88E, h0km, ML2.5, ML2.2(NAO), Explosion*
*BER **30** 08:59:16.8±5.2, 64°.78N×30°.45E, h0km±27km, ML2.2(NAO)*
*NAO **30** 08:59:18.4±1.7, 64°.81N×29°.66E, ML2.2*
ISC 30 08:59:13.3±0.7, 64°.75N±0°.02×30°.7E±0°.1, h0km, n41, σ1§56/73, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.33**	**345**	*e*P	**Pg**	**08 59 38.7**	**-0.1**
KU6				*e*S	**Sg**	**08 59 58.1**	**+2.0**
KU6	**Riekki**	**1.33**	**345**	P	**Pg**	**08 59 38.6**	**-0.2**
KU6				S	**Sg**	**08 59 58.0**	**+2.0**
MSF	**Maaselka**	**1.37**	**330**	*e*P	**Pg**	**08 59 39.4**	**-0.1**
MSF				*e*S	**Sg**	**08 59 58.8**	**+1.6**
MSF	**Maaselka**	**1.37**	**330**	P	**Pg**	**08 59 39.3**	**-0.2**
MSF				S	**Sg**	**08 59 58.7**	**+1.6**
KJN	**Kajaani**	**1.46**	**244**	*e*P	**Pn**	**08 59 39.9**	**-1.0**
KJN				*e*S	**Sg**	**09 00 00.6**	**+0.4**
KJN	**Kajaani**	**1.46**	**244**	P	**Pn**	**08 59 39.8**	**-1.1**
KJN				S	**Sg**	**09 00 00.5**	**+0.3**
JOF	**Joensuu**	**1.85**	**171**	*e*P	**Pn**	**08 59 46.0**	**-0.3**
JOF				*e*S	**Sn**	**09 00 11.0**	**+0.7**
JOF	**Joensuu**	**1.85**	**171**	P	**Pn**	**08 59 45.9**	**-0.4**
JOF				S	**Sn**	**09 00 11.0**	**+0.7**
OUL	**Oulu**	**2.08**	**282**	*e*P	**Pn**	**08 59 52.2**	**+2.8**
OUL				*e*S	**Sn**	**09 00 16.9**	**+0.9**
OUL	**Oulu**	**2.08**	**282**	P	**Pn**	**08 59 52.1**	**+2.7**
OUL				S	**Sn**	**09 00 16.8**	**+0.9**
RNF	**Rovaniemi**	**2.70**	**316**	*e*PG	**Pg**	**09 00 03.9**	**-1.1**
RNF				*e*S	**Sn**	**09 00 34.2**	**+3.0**
RNF				*e*SG	**Sg**	**09 00 38.6**	**-1.4**
RNF	**Rovaniemi**	**2.70**	**316**	Pg	**Pg**	**09 00 03.9**	**-1.1**
RNF				S	**Sn**	**09 00 34.1**	**+2.9**
RNF				Sg	**Sg**	**09 00 38.5**	**-1.4**
SUF	**Sumiainen**	**2.87**	**227**	*e*PB	**Pb**	**09 00 04.3**	**-1.0**
SUF				*e*SB	**Sb**	**09 00 40.2**	**-0.7**
SUF	**Sumiainen**	**2.87**	**227**	Pb	**Pb**	**09 00 04.3**	**-1.0**
SUF				Sb	**Sb**	**09 00 40.2**	**-0.8**
VRF	**Varrio**	**3.05**	**352**	*e*PB	**Pb**	**09 00 06.7**	**-1.7**
VRF				*e*SG	**Sg**	**09 00 47.9**	**-3.2**
VRF	**Varrio**	**3.05**	**352**	Pb	**Pb**	**09 00 06.7**	**-1.7**
VRF				Sg	**Sg**	**09 00 47.9**	**-3.3**
KAF	**Kangasniemi**	**3.30**	**219**	*e*PB	**Pb**	**09 00 11.2**	**-1.4**
KAF				*e*SG	**Sg**	**09 00 57.5**	**-1.8**
KAF	**Kangasniemi**	**3.30**	**219**	Pb	**Pb**	**09 00 11.2**	**-1.5**
KAF				Sg	**Sg**	**09 00 57.4**	**-1.8**
KEF	**Keuruu**	**3.68**	**228**	*e*P	**Pn**	**09 00 14.9**	**+3.5**
KEF				*e*S	**Sn**	**09 00 57.7**	**+2.3**
KEF	**Keuruu**	**3.68**	**228**	P	**Pn**	**09 00 14.8**	**+3.4**
KEF				S	**Sn**	**09 00 57.7**	**+2.3**
FIA0	**FINESS Array S**	**3.93**	**215**	Pn	**Pn**	**09 00 17.8**	**+3.1**
	baz=24,slow=14						
FIA0				Pg	**Pg**	**09 00 25.6**	**-2.8**
	baz=38,slow=12						
FIA0				Sn	**Sn**	**09 01 03.1**	**+1.7**
	baz=42,slow=28						
FIA0				Lg		09 01 13.2	
	baz=41,slow=28						
FIA0	**FINESS Array S**	**3.93**	**215**	*e*P	**Pn**	**09 00 17.8**	**+3.1**
FIA0				*e*PG	**Pg**	**09 00 25.6**	**-2.8**
FIA0				*e*S	**Sn**	**09 01 03.1**	**+1.7**
FIA0				*e*SB	**Sb**	**09 01 13.2**	**+2.0**
FIA0	**FINESS Array S**	**3.93**	**215**	P	**Pn**	**09 00 17.8**	**+3.1**
FIA0	**FINESS Array S**	**3.93**	**215**	Pg	**Pg**	**09 00 25.6**	**-2.9**
FIA0				S	**Sn**	**09 01 03.1**	**+1.7**
FIA0				Lg		09 01 13.2	
	baz=41,slow=28,SNR=6.8						
FIA0				Sb	**Sb**	**09 01 13.2**	**+1.9**
FINES	**FINESS Array B**	**3.93**	**215**	Pn	**Pn**	**09 00 16.5**	**+1.8**
	0.4nm,0.3s,baz=36,slow=13,SNR=4.2						
FINES				Pg	**Pg**	**09 00 25.9**	**-2.6**
	0.4nm,0.3s,baz=34,slow=16,SNR=7.0						
FINES				Sn	**Sn**	**09 01 13.1**	**+12**
	1.6nm,0.3s,baz=30,slow=27,SNR=12						
VAF	**Ylistaro**	**3.94**	**248**	*e*SG	**Sg**	**09 01 18.4**	**-1.5**
VAF	**Ylistaro**	**3.94**	**248**	Sg	**Sg**	**09 01 18.3**	**-1.5**
VJF	**Virojoki**	**4.47**	**200**	*e*SG	**Sg**	**09 01 32.0**	**-4.6**
VJF				MSG		09 01 35.0	
	comp=Z,5.6nm,0.3s						
HEF	**Hetta**	**4.63**	**326**	*e*SG	**Sg**	**09 01 36.2**	**-5.7**
HEF				MSG		09 01 39.0	
	comp=Z,4.7nm,0.4s						
HEF	**Hetta**	**4.63**	**326**	Sg	**Sg**	**09 01 36.1**	**-5.8**
	comp=Z,12nm,0.3s						
PVF	**Pernaja**	**4.77**	**210**	MSG		09 01 43.9	
	comp=Z,12nm,0.3s						
ARA0	**ARCESS Array S**	**5.22**	**339**	Pn	**Pn**	**09 00 32.6**	**+0.1**
	baz=152,slow=14						
ARA0				Sn	**Sn**	**09 01 30.8**	**-2.5**
	baz=163,slow=28						
ARA0				Lg		09 01 54.2	
	baz=160,slow=28						
ARA0	**ARCESS Array S**	**5.22**	**339**	*e*P	**Pn**	**09 00 32.6**	**+0.1**
ARA0				*e*S	**Sn**	**09 01 30.8**	**-2.5**
ARA0				*e*SG	**Sg**	**09 01 54.2**	**-6.6**
ARA0	**ARCESS Array S**	**5.22**	**339**	P	**Pn**	**09 00 32.5**	**0.0**
ARA0				S	**Sn**	**09 01 30.7**	**-2.6**
ARA0				Sn	**Sn**	**09 01 30.8**	**-2.5**
	baz=163,slow=25						
ARA0				Sg	**Sg**	**09 01 54.2**	**-6.6**
ARCES	**ARCESS Array B**	**5.22**	**339**	Pn	**Pn**	**09 00 32.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=18						
ARCES				Sn	**Sn**	**09 01 35.4**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=153,slow=24,SNR=6.9						
ARCES				Lg		09 01 55.6	
	comp=Z,0.7nm,0.3s,baz=139,slow=38,SNR=3.9						
HFS	**Hagfors**	**9.13**	**247**	Lg		09 03 53.6	
	baz=61,slow=28						
HFS	**Hagfors**	**9.13**	**247**	Lg		09 03 53.6	
	baz=61,slow=28						
HFS	**Hagfors**	**9.13**	**247**	*e*SG	Sx	09 03 53.6	
NB2	**NORSAR Subarra**	**9.63**	**256**	Lg		09 04 12.3	
NB2	**NORSAR Subarra**	**9.63**	**256**	*e*SG	Sx	09 04 12.3	
NOA	**NORSAR Array B**	**9.63**	**256**	Pn	**Pn**	**09 01 38.1**	**+5.3**
	comp=Z,0.1nm,0.3s,baz=63,slow=13,SNR=2.5						

*ISCJB **30** 08:59:59.3±0.4,

ZAK	**Zakamensk**	**18.60**	**358**	*e*P	**Pn**	**09 04 19.5**	**+0.7**
ZAK				pmax	pmax		
comp=Z,4.0nm,1.2s							
KSRS	**Korea Array**	**20.16**	**67**	P	**P**	**09 04 35.4**	**-0.3**
comp=Z,2.3nm,0.8s,baz=256,slow=11,SNR=7.0							
KSRS	**Korea Array**	**20.16**	**67**	P	**P**	**09 04 35.4**	**-0.3**
KSRS				pmax	pmax		
comp=Z,2.0nm,0.8s							
MK31	**Makanchi Array**	**22.64**	**318**	*e*P	**P**	**09 05 02.6**	**+0.4**
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**09 05 02.5**	**+0.2**
comp=Z,2.8nm,0.6s,mb3.9,baz=110,slow=13,SNR=20							
MKAR	**Makanchi Array**	**22.64**	**318**	P	**P**	**09 05 02.5**	**+0.3**
MKAR				pmax	pmax		
comp=Z,3.0nm,0.6s							
TKM2	**Tokmak 2**	**25.32**	**304**	*e*P	**P**	**09 05 28.7**	**+0.6**
TKM2				pmax	pmax		
comp=Z,2.0nm,0.7s,mb3.8							
TKM2	**Tokmak 2**	**25.32**	**304**	*e*P	**P**	**09 05 28.7**	**+0.6**
comp=Z,2.4nm,0.7s,mb3.8							
UCH	**Uchtor**	**25.91**	**302**	*e*P	**P**	**09 05 35.0**	**+1.6**
comp=Z,7.1nm,1.1s,mb4.1							
ZAA0	**Zalesovo Array**	**26.22**	**333**	*e*P	**P**	**09 05 35.7**	**-0.4**
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**09 05 35.6**	**-0.5**
comp=Z,3.9nm,0.7s,mb4.0,baz=127,slow=9.5,SNR=13							
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**09 05 35.6**	**-0.5**
ZALV				pmax	pmax		
comp=Z,4.0nm,0.7s,mb4.1							
ZALV	**Zalesovo Beam**	**26.22**	**333**	P	**P**	**09 05 35.6**	**-0.5**
AML	**Almayashu**	**26.48**	**302**	*e*P	**P**	**09 05 39.6**	**+0.9**
comp=Z,4.5nm,0.8s,mb4.0							
EKS2	**Erkin-Say**	**26.55**	**303**	*e*P	**P**	**09 05 39.5**	**+0.3**
comp=Z,1.0nm,0.4s,mb3.7							
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**09 05 41.5**	**-0.4**
comp=Z,2.5nm,0.6s,mb3.9,baz=131,slow=8.3,SNR=28							
KURK	**Kurchatov**	**26.86**	**322**	P	**P**	**09 05 41.5**	**-0.4**
KURK				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.0							
KURK	**Kurchatov**	**26.86**	**322**	*e*P	**P**	**09 05 41.4**	**-0.4**
comp=Z,1.5nm,0.4s,mb3.9							
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**09 06 30.9**	**-0.3**
comp=Z,1.1nm,0.5s,mb3.9,baz=106,slow=10.0,SNR=6.6							
BVAR	**Borovoye Array**	**32.42**	**321**	P	**P**	**09 06 30.9**	**-0.2**
BVAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
ABKAR	**Akbulak array**	**37.41**	**311**	*e*P	**P**	**09 07 14.2**	**-0.1**
comp=Z,2.1nm,0.6s,mb4.1							
ARU	**Arti**	**40.05**	**322**	*e*P	**P**	**09 07 36.3**	**0.0**
ARU				pmax	pmax		
comp=Z,15nm,0.8s,mb4.8							
ARU	**Arti**	**40.05**	**322**	*e*P	**P**	**09 07 36.3**	**-0.1**
comp=Z,15nm,0.8s,mb4.8							
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**09 09 43.8**	**-0.6**
comp=Z,1.4nm,0.8s,mb4.0,baz=66,slow=6.9,SNR=5.5							
BRTR	**Keskin Array B**	**56.62**	**299**	P	**P**	**09 09 43.8**	**-0.6**
BRTR				pmax	pmax		
comp=Z,1.0nm,0.8s							
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**09 09 44.0**	**-0.8**
comp=Z,1.3nm,0.7s,mb4.1,baz=82,slow=8.7,SNR=5.5							
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**09 09 44.0**	**-0.8**
ARCES				pmax	pmax		
comp=Z,1.0nm,0.7s							
ARCES	**ARCESS Array B**	**56.74**	**336**	P	**P**	**09 09 44.0**	**-0.8**
AKBB	**Malin Array Si**	**57.10**	**313**	*e*P	**P**	**09 09 48.4**	**+0.8**
KIEV	**Kiev**	**57.11**	**313**	*e*P	**P**	**09 09 48.7**	**+1.0**
KIEV				pmax	pmax		
comp=Z,12nm,0.8s,mb5.0							
KIEV	**Kiev**	**57.11**	**313**	*e*P	**P**	**09 09 48.6**	**+0.9**
comp=Z,12nm,0.8s,mb5.0							
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**09 09 47.0**	**-0.7**
comp=Z,2.8nm,0.5s,mb4.6,baz=93,slow=7.7,SNR=12							
FINES	**FINESS Array B**	**57.14**	**326**	P	**P**	**09 09 47.0**	**-0.8**
FINES				pmax	pmax		
comp=Z,3.0nm,0.5s							
WRAB	**Tennant Creek**	**58.90**	**147**	*e*P	**P**	**09 09 59.6**	**-0.9**
WRAB				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.6							
WRAB	**Tennant Creek**	**58.90**	**147**	*e*P	**P**	**09 09 59.6**	**-0.9**
comp=Z,3.8nm,0.6s,mb4.6							
KWP	**Kalwaria Pacla**	**61.42**	**313**	*e*P	**P**	**09 10 17.3**	**-0.3**
KWP				pmax	pmax		
comp=Z,12nm,0.9s,mb5.0							
KWP	**Kalwaria Pacla**	**61.42**	**313**	*e*P	**P**	**09 10 17.3**	**-0.3**
comp=Z,12nm,0.9s,mb5.0							
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**09 10 20.4**	**-0.9**
comp=Z,1.1nm,0.5s,mb4.2,baz=338,slow=6.7,SNR=13							
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**09 10 20.4**	**-0.9**
ASAR				pmax	pmax		
comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**61.94**	**149**	P	**P**	**09 10 20.4**	**-0.9**
NB2	**NORSAR Subarra**	**64.22**	**327**	P	**P**	**09 10 34.3**	**-1.7**
comp=Z,1.4nm,0.6s,mb4.2,baz=74,slow=6.9							
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**09 10 34.2**	**-1.8**
comp=Z,0.9nm,0.5s,mb4.1,baz=74,slow=6.8,SNR=9.0							
NOA	**NORSAR Array B**	**64.22**	**327**	P	**P**	**09 10 34.2**	**-1.8**
NOA				pmax	pmax		
comp=Z,1.0nm,0.5s							
INK	**Inuvik**	**71.44**	**19**	*e*P	**P**	**09 11 20.5**	**-0.9**
INK				pmax	pmax		
comp=Z,3.0nm,1.0s							
INK	**Inuvik**	**71.44**	**19**	*e*P	**P**	**09 11 20.5**	**-0.9**
comp=Z,2.8nm,1.0s,mb4.2							
STKA	**Stephens Creek**	**72.44**	**147**	P	**P**	**09 11 29.1**	**+1.3**
comp=Z,1.5nm,0.6s,mb4.1,baz=308,slow=5.3,SNR=4.5							
STKA	**Stephens Creek**	**72.44**	**147**	*e*P	**P**	**09 11 29.1**	**+1.3**
comp=Z,0.9nm,1.0s,mb3.6							
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**09 12 14.5**	**-1.2**
comp=Z,0.5nm,0.5s,mb3.7,baz=326,slow=5.2,SNR=3.2							
YKA	**Yellowknife Ar**	**80.98**	**17**	P	**P**	**09 12 14.5**	**-1.2**
YKA				pmax	pmax		
comp=Z,1.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**93.66**	**288**	P	**P**	**09 13 17.4**	**-1.0**
comp=Z,0.5nm,1.1s,mb3.9,baz=146,slow=2.8,SNR=1.9							

CSEM 30 09:04:00.0, 45°79N×15°32E, h0km, ML0.5, 2C, Mining explosion. After LJU, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRES	**Cresnjev**	**0.10**	**69⇑**	*i*Pg	Pg	09 04 01.9	-0.1
CRES				*i* Sg	Sg	09 04 03.8	+0.5
CRES							
comp=Z,41nm,0.3s							
CRES	**Cresnjev**	**0.10**	**69⇑**	*i*Pg	Pg	09 04 01.9	-0.1
CRES				*i* Sg	Sg	09 04 03.8	+0.5
comp=Z,41nm,0.3s							
LEGS	**Legarje**	**0.16**	**359**	*i* Pg	Pg	09 04 02.9	-0.2
LEGS				*i* Sg	Sg	09 04 05.8	+0.7
LEGS	**Legarje**	**0.16**	**359**	*i* Pg	Pg	09 04 02.9	-0.2
LEGS				*i* Sg	Sg	09 04 05.8	+0.7
BOJS	**Bojanci**	**0.29**	**189**	*i* Pg	Pg	09 04 05.2	-0.3
BOJS				*i* Sg	Sg	09 04 10.2	+0.9
BOJS							
comp=Z,17nm,0.6s							
BOJS	**Bojanci**	**0.29**	**189**	*i* Pg	Pg	09 04 05.2	-0.3
BOJS				*i* Sg	Sg	09 04 10.1	+0.8
comp=Z,17nm,0.6s							
VISS	**Visnje**	**0.34**	**272**	*i* Sg	Sg	09 04 11.6	+0.8
VISS	**Visnje**	**0.34**	**272**	*i* Sg	Sg	09 04 11.6	+0.8

*ISCJB **30** 09:08:30.0±0.5, 32°06N±0°04×105°00E±0°04, h10km, mb3.4/5, Error ellipse: s-maj=6.1km s-min=5.0km az=147.9*
*IDC **30** 09:08:31.0±1.3, 32°04N×104°75E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.5/27, mbtmp3.6/6, ML4.5/1, Error ellipse: s-maj=62.3km s-min=21.8km az=64.0*
*NEIC **30** 09:08:32.3±0.7, 32°04N×104°93E, h10km, mb3.9/1, Error ellipse: s-maj=17.6km s-min=11.0km az=55.0*
*BJI **30** 09:08:32.6, 32°18N×104°73E, h10km, ML3.4/10, Ms3.4/2, Ms7 3.4/2*
ISC 30 09:08:32.4±0.5, 32°08N±0°04×104°89E±0°05, h10km, n13, σ1°24/20, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.52**	**220**	Pg	**Pg**	**09 09 00.5**	**-1.0**
CD2				Sg	**Sg**	**09 09 22.0**	**+0.8**
CD2				smax			
comp=N,2μm,0.5s							
XAN	**Xi'an**	**3.91**	**59**	Pn	**Pn**	**09 09 36.0**	**+3.5**
XAN				Pg	**Pg**	**09 09 48.0**	**+0.7**
XAN				Sn	**Sn**	**09 10 22.0**	**+3.6**
XAN				Sg	**Sg**	**09 10 35.5**	**-2.4**
XAN				smax			
comp=N,110nm,0.8s							
XAN				smax			
comp=E,60nm,0.8s							
LZH	**Lanzhou**	**4.09**	**348**	Pg	**Pg**	**09 09 46.8**	**-4.0**
LZH				Sn	**Sn**	**09 10 23.8**	**+0.9**
LZH				Sg	**Sg**	**09 10 36.3**	**-7.4**
LZH				smax			
comp=N,260nm,0.7s							
LZH				smax			
comp=E,580nm,1.0s							
LZH				LR	LR		
comp=E,720nm,6.4s							
LZH				LR	LR		
comp=Z,980nm,7.8s							
ENH	**Enshi**	**4.33**	**113**	*e*Pg	**Pg**	**09 09 53.4**	**-2.0**
ENH				*e*Sg	**Sg**	**09 10 51.9**	**+0.3**
GYA	**Guiyang**	**5.81**	**164**	Pn	**Pn**	**09 10 04.8**	**+6.1**
GYA				smax			
comp=N,90nm,0.9s							
GYA				smax			
comp=E,60nm,0.7s							
GTA	**Gaotai**	**8.39**	**332**	*e*P	**Pn**	**09 10 27.0**	**-7.1**
GTA				pP		09 10 31.5	
GTA				sP		09 10 34.8	
GTA				pmax	pmax		
comp=Z,2.0nm,1.2s							
CMAR	**Chiang Mai Arr**	**14.59**	**203**	Pn	**Pn**	**09 11 59.3**	**+0.4**
comp=Z,0.7nm,0.3s,baz=11,slow=10,SNR=2.4							
SONM	**Songino Array**	**15.78**	**4**	Pn	**Pn**	**09 12 17.3**	**+2.8**
baz=198,slow=13,SNR=5.3							
MKAR	**Makanchi Array**	**22.70**	**317**	P	**P**	**09 13 33.2**	**-0.9**
comp=Z,0.6nm,0.5s,mb3.2,baz=119,slow=12,SNR=4.6							
ZALV	**Zalesovo Beam**	**26.15**	**333**	P	**P**	**09 14 06.7**	**+0.1**
comp=Z,0.5nm,0.4s,mb3.4,baz=123,slow=10,SNR=2.3							
KURK	**Kurchatov**	**26.88**	**322**	P	**P**	**09 14 12.7**	**-0.6**
comp=Z,0.2nm,0.5s,mb3.0,baz=136,slow=8.8,SNR=4.8							
WRAB	**Tennant Creek**	**58.92**	**147**	P	**P**	**09 18 31.8**	**0.0**
comp=Z,0.5nm,0.6s,mb3.7							
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**09 18 53.0**	**+0.2**
comp=Z,0.4nm,0.6s,mb3.8,baz=335,slow=6.4,SNR=8.1							

*CSEM **30** 09:19:09.2±0.3, 34°23N×25°40E, h5km, MD3.4, Error ellipse: s-maj=10.4km s-min=5.9km az=66.0*
*HLW **30** 09:19:09.6, 34°51N×25°52E, h31km±28km, Ml3.0*
*NEIC **30** 09:19:11.4, 34°27N×25°25E, h25km, MD3.4(ATH), After ATH.*
*ATH **30** 09:19:11.4, 34°27N×25°25E, h25km±3km, MD3.4/10*
ISC 30 09:19:12.3±1.3, 34°23N±0°04×25°44E±0°08, h32km±14km, n35, σ0°79/42, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.68**	**18**	*e*PN	**Pb**	**09 19 25.4**	**-0.3**
XRY	**Khrisi**	**0.68**	**18**	*e*Pn	**Pb**	**09 19 25.4**	**-0.3**
LAST	**Lasithi**	**0.93**	**2**	*e*PN	**Pn**	**09 19 29.1**	**-0.1**
LAST				*e*SN	**Sb**	**09 19 42.4**	**+0.5**
LAST	**Lasithi**	**0.93**	**2**	*e*Pn	**Pn**	**09 19 29.1**	**-0.1**
SIVA	**Sivas**	**0.94**	**327**	*e*PN	**Pn**	**09 19 26.3**	**-3.0**
SIVA	**Sivas**	**0.94**	**327**	*e*Pn	**Pn**	**09 19 26.3**	**-3.0**
NPS	**Neapolis**	**1.04**	**8**	*e*PN	**Pn**	**09 19 31.0**	**+0.3**
NPS	**Neapolis**	**1.04**	**8**	*e*Pn	**Pn**	**09 19 31.0**	**+0.3**
ZKR	**Zakros**	**1.09**	**36**	*e*PN	**Pn**	**09 19 33.1**	**+1.7**
ZKR				*e*SN	**Sn**	**09 19 49.9**	**+4.5**
ZKR	**Zakros**	**1.09**	**36**	*e*Pn	**Pn**	**09 19 33.1**	**+1.7**
ZKR				*e*Sn	**Sn**	**09 19 49.9**	**+4.5**
IDI	**Anoyia**	**1.14**	**337**	*e*PN	**Pn**	**09 19 31.9**	**-0.2**
IDI	**Anoyia**	**1.14**	**337**	*e*Pn	**Pn**	**09 19 31.9**	**-0.2**
GVD	**Gavdhos**	**1.27**	**299**	*e*PN	**Pn**	**09 19 33.5**	**-0.3**
GVD	**Gavdhos**	**1.27**	**299**	*e*Pn	**Pn**	**09 19 33.5**	**-0.3**
VAM	**Vamos**	**1.55**	**319**	*e*PN	**Pn**	**09 19 37.4**	**-0.3**
VAM	**Vamos**	**1.55**	**319**	*e*Pn	**Pn**	**09 19 37.4**	**-0.3**
KARN	**Karanos**	**1.71**	**313**	*e*PN	**Pn**	**09 19 39.8**	**-0.1**
KARN	**Karanos**	**1.71**	**313**	*e*Pn	**Pn**	**09 19 39.8**	**-0.1**
KARP	**Karpathos**	**1.93**	**47**	*e*PB	**Pb**	**09 19 46.7**	**-0.2**
SLUM		**2.74**	**184**	P	**Pn**	**09 19 55.2**	**+1.1**
baz=186							
SLUM				AMP		09 20 00.0	
comp=N,40μm,0.1s,logA/T=5.4,baz=186							
SLUM				S	**Sn**	**09 20 27.0**	**+0.9**
baz=186							
SLUM		**2.74**	**184**	P	**Pn**	**09 19 55.2**	**+1.1**
SLUM				S	**Sn**	**09 20 27.0**	**+0.9**
HMAT	**Matruh**	**3.43**	**155**	P	**Pn**	**09 20 03.8**	**+0.2**
baz=158							
HMAT				AMP		09 20 00.0	
comp=N,10μm,0.2s,logA/T=4.6,baz=158							
HMAT	**Matruh**	**3.43**	**155**	P	**Pn**	**09 20 03.8**	**+0.2**
SWA2		**4.97**	**180**	P	**Pn**	**09 20 25.8**	**+1.0**
baz=181							
SWA2				AMP		09 21 00.0	
comp=E,50μm,0.3s,logA/T=5.2,baz=181							
SWA2				S	**Sn**	**09 21 20.6**	**-0.7**
baz=181							
SWA2		**4.97**	**180**	P	**Pn**	**09 20 25.8**	**+1.0**
SWA2				S	**Sn**	**09 21 20.6**	**-0.7**
GLL	**Jalalah**	**7.07**	**129**	P	**Pn**	**09 20 53.3**	**-0.3**
baz=131							
GLL	**Jalalah**	**7.07**	**129**	P	**Pn**	**09 20 53.3**	**-0.3**
AMAG	**Maghara**	**7.48**	**116**	P	**Pn**	**09 20 58.3**	**-1.0**
baz=118							
AMAG	**Maghara**	**7.48**	**116**	P	**Pn**	**09 20 58.3**	**-0.9**
SUZ		**7.65**	**123**	P	**Pn**	**09 21 01.1**	**-0.5**
baz=124							
SUZ		**7.65**	**123**	P	**Pn**	**09 21 01.2**	**-0.4**
HNKL	**Nakhl**	**8.42**	**118**	P	**Pn**	**09 21 11.8**	**-0.4**
baz=120							
HNKL	**Nakhl**	**8.42**	**118**	P	**Pn**	**09 21 11.8**	**-0.4**
TR2		**9.18**	**127**	P	**Pn**	**09 21 21.7**	**-0.8**
baz=128							
TR2		**9.18**	**127**	P	**Pn**	**09 21 21.7**	**-0.8**

*ISK **30** 09:22:00.4, 37°44N×28°07E, h11km, MD2.7*
*ISCJB **30** 09:22:01.6±0.7, 37°38N±0°03×28°08E±0°05, h10km, Error ellipse: s-maj=5.6km s-min=4.7km az=155.1*
*CSEM **30** 09:22:01.4±0.2, 37°38N×28°10E, h20km, MD2.7, Error ellipse: s-maj=3.9km s-min=3.3km az=66.0*
*DDA **30** 09:22:02.2, 37°35N×28°03E, h7km±1km, Md2.4*
ISC 30 09:22:01.9±0.7, 37°39N±0°03×28°09E±0°05, h10km, n16, σ0°93/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.27**	**250**	*e*PG	**Pg**	**09 22 06.3**	**-0.9**
MLSB				*e*SG	**Sg**	**09 22 10.9**	**0.0**
MLSB	**Milas**	**0.27**	**250**	*e*Pg	**Pg**	**09 22 06.4**	**-0.9**
MLSB				*e*Sg	**Sg**	**09 22 10.9**	**0.0**
YER	**Yerkesik**	**0.29**	**148**	*e*PG	**Pg**	**09 22 07.8**	**0.0**
YER				*e*SG	**Sg**	**09 22 13.1**	**+1.3**
YER	**Yerkesik**	**0.29**	**148**	*e*Pg	**Pg**	**09 22 07.8**	**0.0**
YER				*e*Sg	**Sg**	**09 22 13.1**	**+1.4**
AYDN	**Tasoluk**	**0.32**	**329**	*i* P	**Pg**	**09 22 09.3**	**+0.9**
AYDN				*i* S	**Sg**	**09 22 14.1**	**+1.4**
AYDN	**Tasoluk**	**0.32**	**329**	*i* P	**Pg**	**09 22 09.3**	**+1.0**
AYDN				*i* S	**Sg**	**09 22 14.1**	**+1.4**
BDRM	**Kayabasi**	**0.61**	**238**	*i* P	**Pg**	**09 22 12.8**	**-0.9**
BDRM				*i* S	**Sg**	**09 22 21.0**	**-0.7**
BDRM	**Kayabasi**	**0.61**	**238**	*i* P	**Pg**	**09 22 12.8**	**-0.9**
BDRM				*i* S	**Sg**	**09 22 21.0**	**-0.6**
TURN	**Turunc**	**0.66**	**141**	*i* P	**Pg**	**09 22 13.8**	**-0.8**
TURN	**Turunc**	**0.66**	**141**	*i* P	**Pg**	**09 22 13.8**	**-0.8**
GCAM	**G?zelcaml?**	**0.75**	**295**	*i* P	**Pg**	**09 22 16.4**	**0.0**
GCAM	**G?zelcaml?**	**0.75**	**295**	*i* P	**Pg**	**09 22 16.4**	**0.0**
DAT	**Datca**	**0.77**	**212**	*e*PG	**Pg**	**09 22 16.9**	**0.0**
DAT				*e*SG	**Sg**	**09 22 28.1**	**+1.2**
DAT	**Datca**	**0.77**	**212**	*e*Pg	**Pg**	**09 22 16.9**	**+0.1**
DAT				*e*Sg	**Sg**	**09 22 28.1**	**+1.2**
KULA	**Kula-Manisa**	**1.21**	**22**	*e*PN	**Pn**	**09 22 23.3**	**-1.7**
KULA	**Kula-Manisa**	**1.21**	**22**	*e*Pn	**Pn**	**09 22 23.3**	**-1.6**

CASC 30 09:41:18.7±1.9, 8°44N×83°01W, h4km, MD3.7, 2C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.27**	**323⇓**	*e*P	Pg	09 41 24.2	+0.4
ACR				*e*S	Sg	09 41 28.6	+1.2
BRU2	**Volcan**	**0.47**	**41⇓**	*i*P	Pg	09 41 29.0	+1.3
BRU2				*e*S	Sg	09 41 37.5	+3.6
BAR1		**0.85**	**339**	*e*P	Pg	09 41 35.0	-0.2
CNI	**Changuinola**	**1.08**	**26⇑**	*e*P	Pg	09 41 39.2	-0.3
BUS	**Buena Vista**	**1.34**	**326**	*e*P	Pn	09 41 43.0	-1.1
QCR	**Quepos**	**1.51**	**311⇑**	*e*P	Pn	09 41 46.0	-0.5
QCR				*e*S	Sn	09 42 06.1	-0.5
URSC	**Urasca**	**1.58**	**331**	*e*P	Pn	09 41 47.2	-0.3
URSC				*e*S	Sn	09 42 09.2	+0.7
PRS1	**Puriscal**	**2.00**	**320**	*e*P	Pn	09 41 53.4	0.0
CGA2	**Cerro Gallo 2**	**2.13**	**317**	*e*P	Pn	09 41 57.2	+2.2
CGA2				*e*S	Sn	09 42 23.2	+1.2

*ISCJB **30** 09:51:01.7±0.4, 6°79N±0°04×73°01W±0°05, h166km±4km, mb3.8/17, Error ellipse: s-maj=8.1km s-min=5.7km az=33.2*
*IDC **30** 09:51:01.8±0.6, 6°72N×73°00W, h156km±6km, mb3.6/12, mb1 3.8/15, mb1mx3.7/23, mbtmp3.7/15, Error ellipse: s-maj=15.5km s-min=7.0km az=131.0*
*FUNV **30** 09:51:02.0, 6°72N×73°16W, h171km, MW4.0*
*NEIC **30** 09:51:02.8±0.7, 6°71N×73°05W, h164km±6km, mb4.0/7, Error ellipse: s-maj=9.8km s-min=8.9km az=127.0*
ISC 30 09:51:02.6±0.4, 6°79N±0°04×73°01W±0°05, h159km±4km, n51, σ1°01/55, mb3.8/17, 1C-8D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.27**	**33⇑**	*e*P	**Pn**	**09 51 31.8**	**+1.1**
CAPV				*e*S	**Sn**	**09 51 53.6**	**+1.3**
ROSC	**El Rosal**	**2.33**	**214**	P	**Pn**	**09 51 43.0**	**+0.9**
94nm,0.3s,baz=20,slow=2.5,SNR=160							
ROSC				S	**Sn**	**09 52 11.1**	**-1.5**
121nm,0.3s,baz=100,slow=16,SNR=18							
SOCV	**Socops**	**2.60**	**55⇓**	*i*P	**Pn**	**09 51 46.5**	**+1.0**
SOCV				*e*S	**Sn**	**09 52 18.8**	**+0.2**
VIGV	**El Vigia**	**2.61**	**39⇓**	*i*P	**Pn**	**09 51 46.4**	**+0.8**
VIGV				*e*S	**Sn**	**09 52 19.1**	**+0.3**
SDV	**Santo Domingo**	**3.15**	**48**	P	**Pn**	**09 51 53.1**	**+0.9**
76nm,0.3s,baz=244,slow=5.2,SNR=324							
SDV				S	**Sn**	**09 52 30.8**	**+0.1**
55nm,0.3s,baz=289,slow=5.1,SNR=19							
SDV	**Santo Domingo**	**3.15**	**48**	P	**Pn**	**09 51 53.1**	**+0.9**
SDV				S	**Sn**	**09 52 30.8**	**+0.1**
ELOV	**Elorza**	**3.51**	**86⇓**	*i*P	**Pn**	**09 51 57.8**	**+0.9**
VIRV	**Villa del Rosa**	**3.74**	**9⇓**	*i*P	**Pn**	**09 51 58.7**	**-1.1**
VIRV				*e*S	**Sn**	**09 52 41.9**	**-2.4**
QARV	**Quebrada Arrib**	**4.19**	**36⇓**	*i*P	**Pn**	**09 52 06.1**	**+0.4**
SANV	**Sanarito**	**4.37**	**52**	*e*P	**Pn**	**09 52 08.0**	**0.0**
CURV	**Curarigua**	**4.40**	**43⇓**	*e*P	**Pn**	**09 52 08.5**	**+0.1**
DABV	**Dabajuro**	**4.73**	**30**	*e*P	**Pn**	**09 52 12.8**	**+0.1**
SIQV	**Siquisique**	**4.97**	**39⇓**	*i*P	**Pn**	**09 52 15.4**	**-0.5**
BAUV	**El Baul**	**5.37**	**66⇓**	*i*P	**Pn**	**09 52 19.9**	**-1.1**
IMOV	**Isla Los Monje**	**5.91**	**20**	*e*P	**Pn**	**09 52 27.3**	**-1.0**
MONV	**Montecano**	**5.95**	**30**	*e*P	**Pn**	**09 52 27.7**	**-1.0**
TURV	**Turiamo**	**6.27**	**54**	*e*P	**Pn**	**09 52 32.3**	**-0.8**
CAOV	**Caicara del Or**	**6.66**	**85**	*e*P	**Pn**	**09 52 37.2**	**-1.0**
BCIP	**Isla Barro Col**	**7.16**	**290**	*e*Pn	**Pn**	**09 52 41.8**	**-3.1**
BIRV	**Birongo**	**7.61**	**61**	*e*P	**Pn**	**09 52 50.1**	**-0.6**
CUPV	**Cœpira**	**7.85**	**65**	*e*P	**Pn**	**09 52 53.4**	**-0.6**
OTAV	**Otavalo**	**8.47**	**220**	*e*Pn	**Pn**	**09 53 01.9**	**-0.5**
5.3nm,0.5s							
PCRV	**Puerto La Cruz**	**8.94**	**67**	P	**Pn**	**09 53 09.6**	**+1.1**
0.4nm,0.3s,baz=177,slow=6.2,SNR=3.1							
PCRV	**Puerto La Cruz**	**8.94**	**67**	*e*P	**Pn**	**09 53 08.0**	**-0.5**
MTDJ	**Mount Denham**	**12.19**	**339**	*e*Pn	**Pn**	**09 53 53.2**	**+2.0**
53nm,0.7s							
MTDJ				*e*Sn	**Sn**	**09 56 03.1**	**-3.1**
SDDR	**Presa de Saban**	**12.24**	**8**	*e*Pn	**Pn**	**09 53 54.4**	**+2.7**
9.8nm,0.6s							
SDDR				*e*Sn	**Sn**	**09 56 07.2**	**-0.1**
ATAH	**Atahualpa**	**14.71**	**202**	P	**Pn**	**09 54 27.2**	**+4.0**
0.3nm,0.3s,baz=23,slow=13,SNR=1.9							
LPAZ	**La Paz**	**23.43**	**168**	P	**P**	**09 55 58.7**	**+1.1**
0.6nm,0.3s,mb3.5,baz=338,slow=5.6,SNR=7.2							
TXAR	**Lajitas Array**	**36.56**	**312**	P	**P**	**09 57 53.2**	**-0.1**
0.5nm,0.6s,mb3.3,baz=126,slow=9.7,SNR=9.9							
TXAR				PcP	PcP	10 00 14.2	+0.9
0.5nm,0.6s,baz=134,slow=5.5,SNR=7.8							
EYMN	**Ely**	**43.93**	**342**	*e*P	**P**	**09 58 53.3**	**-0.3**
3.9nm,0.5s,mb4.3							
ISCO	**Idaho Springs**	**44.00**	**323**	*e*P	**P**	**09 58 55.3**	**+1.1**
1.3nm,0.9s,mb3.6							
WUAZ	**Wupatki**	**45.32**	**315**	*e*P	**P**	**09 59 05.5**	**+0.7**
2.7nm,0.9s,mb3

SMG	**Samos**	**0.15**	**339**	*e*PG	**Pg**	**10 08 35.1**	**-0.1**
SMG				*e*SG	**Sg**	**10 08 36.8**	**-0.6**
SMG	**Samos**	**0.15**	**339**	*e*Pg	**Pg**	**10 08 35.1**	**-0.1**
SMG				*e*Sg	**Sg**	**10 08 36.8**	**-0.6**
GCAM	**G?zelcaml?**	**0.29**	**63**	⇓*i*Pg	**Pg**	**10 08 37.9**	**+0.1**
GCAM				*i* Sg	**Sg**	**10 08 41.8**	**+0.1**
BDRM	**Kayabasi**	**0.66**	**139**	⇓*i*P	**Pg**	**10 08 45.1**	**+0.4**
BDRM				*i* S	**Sg**	**10 08 55.2**	**+1.9**
BDRM	**Kayabasi**	**0.66**	**139**	*i* P	**Pg**	**10 08 45.1**	**+0.4**
BDRM				*i* S	**Sg**	**10 08 55.2**	**+1.8**
MLSB	**Milas**	**0.75**	**111**	*e*PG	**Pg**	**10 08 45.6**	**-0.7**
MLSB				*e*SG	**Sg**	**10 08 55.5**	**-0.5**
MLSB	**Milas**	**0.75**	**111**	*e*Pg	**Pg**	**10 08 45.6**	**-0.7**
MLSB				*e*Sg	**Sg**	**10 08 55.5**	**-0.6**
AYDN	**Tasoluk**	**0.78**	**83**	⇓*i*P	**Pg**	**10 08 47.0**	**0.0**
AYDN				*i* S	**Sg**	**10 08 57.1**	**0.0**
AYDN	**Tasoluk**	**0.78**	**83**	*i* P	**Pg**	**10 08 47.0**	**0.0**
AYDN				*i* S	**Sg**	**10 08 57.1**	**0.0**
URLA	**Izmir**	**0.83**	**343**	*e*P	**Pg**	**10 08 48.2**	**+0.3**
URLA				*e*S	**Sg**	**10 08 58.1**	**-0.5**
URLA	**Izmir**	**0.83**	**343**	*e*P	**Pg**	**10 08 48.2**	**+0.4**
URLA				*e*S	**Sg**	**10 08 58.2**	**-0.4**
IZM	**Izmir**	**0.87**	**19**	*e*PG	**Pg**	**10 08 49.2**	**+0.4**
IZM				*e*SG	**Sg**	**10 09 01.6**	**+1.5**
IZM	**Izmir**	**0.87**	**19**	*e*Pg	**Pg**	**10 08 49.2**	**+0.4**
DAT	**Datca**	**1.00**	**147**	*e*PG	**Pg**	**10 08 50.8**	**-0.2**
DAT	**Datca**	**1.00**	**147**	*e*Pg	**Pg**	**10 08 50.8**	**-0.3**
CHOS	**Chios island**	**1.06**	**321**	*e*PG	**Pg**	**10 08 52.3**	**+0.1**
CHOS				*e*SG	**Sg**	**10 09 06.0**	**+0.1**
CHOS	**Chios island**	**1.06**	**321**	*e*Pg	**Pg**	**10 08 52.3**	**+0.1**
CHOS				*e*Sg	**Sg**	**10 09 06.0**	**+0.1**
YER	**Yerkesik**	**1.18**	**111**	*e*PN	**Pn**	**10 08 53.0**	**-1.7**
YER	**Yerkesik**	**1.18**	**111**	*e*Pn	**Pn**	**10 08 53.0**	**-1.6**
APE	**Apeiranthos**	**1.20**	**246**	*e*PB	**Pb**	**10 08 55.1**	**+0.2**
APE				*e*SB	**Sb**	**10 09 11.1**	**+0.6**
APE	**Apeiranthos**	**1.20**	**246**	*e*Pb	**Pb**	**10 08 55.1**	**+0.2**
APE				*e*Sb	**Sb**	**10 09 11.1**	**+0.6**
AKHS	**Akhisar**	**1.49**	**28**	*e*P	**Pn**	**10 08 59.6**	**+0.7**
AKHS				*e*S	**Sn**	**10 09 20.1**	**+1.6**
AKHS	**Akhisar**	**1.49**	**28**	*e*P	**Pn**	**10 08 59.6**	**+0.7**
AKHS				*e*S	**Sn**	**10 09 20.0**	**+1.5**
AKS	**Akhisar**	**1.49**	**28**	*e*PN	**Pn**	**10 08 57.4**	**-1.5**
AKS	**Akhisar**	**1.49**	**28**	*e*Pn	**Pn**	**10 08 57.4**	**-1.5**
KULA	**Kula-Manisa**	**1.68**	**55**	*e*PN	**Pn**	**10 08 59.5**	**-1.9**
KULA	**Kula-Manisa**	**1.68**	**55**	*e*Pn	**Pn**	**10 08 59.6**	**-1.9**
PRK	**Paraskevi**	**1.75**	**344**	*e*PG	**Pg**	**10 09 04.3**	**-1.1**
PRK	**Paraskevi**	**1.75**	**344**	*e*Pg	**Pg**	**10 09 04.3**	**-1.1**
BALY	**Balya**	**2.24**	**14**	*e*P	**Pn**	**10 09 12.7**	**+3.5**
BALY				*e*S	**Sn**	**10 09 42.9**	**+5.9**
BALY	**Balya**	**2.24**	**14**	*e*P	**Pn**	**10 09 12.7**	**+3.5**

*ISCJB **30** 10:12:56.0±0.5, 37.°59N±0.°03×26.°92E±0.°04, h6km±6km, Error ellipse: s-maj=5.8km s-min=3.8km az=144.5*
*DDA **30** 10:12:55.9, 37.°61N×26.°91E, h7km±1km, Md2.8*
*ISK **30** 10:12:55.0, 37.°57N×26.°90E, h6km, MD2.8*
*CSEM **30** 10:12:56.0±0.2, 37.°60N×26.°91E, h10km, MD3.0, Error ellipse: s-maj=4.0km s-min=2.7km az=53.0*
*ATH **30** 10:12:56.6, 37.°61N×26.°88E, h10km±6km, MD3.0/3*
ISC 30 10:12:56.3±0.5, 37.°59N±0.°03×26.°90E±0.°04, h8km±8km, n21, σ0°62/40, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.13**	**337**	*e*PG	**Pg**	**10 12 59.1**	**-0.1**
SMG				*e*SG	**Sg**	**10 13 01.3**	**+0.2**
SMG	**Samos**	**0.13**	**337**	*e*Pg	**Pg**	**10 12 59.1**	**-0.1**
SMG				*e*Sg	**Sg**	**10 13 01.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.29**	**67**	⇓*i*Pg	**Pg**	**10 13 02.0**	**+0.1**
GCAM				*i* Sg	**Sg**	**10 13 06.0**	**+0.2**
BDRM	**Kayabasi**	**0.68**	**140**	*e*P	**Pg**	**10 13 09.6**	**+0.2**
BDRM				*e*S	**Sg**	**10 13 19.2**	**+1.0**
BDRM	**Kayabasi**	**0.68**	**140**	*e*P	**Pg**	**10 13 09.6**	**+0.2**
BDRM				*e*S	**Sg**	**10 13 19.2**	**+1.0**
MLSB	**Milas**	**0.76**	**112**	*e*PG	**Pg**	**10 13 09.8**	**-1.0**
MLSB				*e*SG	**Sg**	**10 13 20.6**	**-0.1**
MLSB	**Milas**	**0.76**	**112**	*e*Pg	**Pg**	**10 13 09.9**	**-1.0**
MLSB				*e*Sg	**Sg**	**10 13 20.6**	**-0.1**
AYDN	**Tasoluk**	**0.78**	**84**	*e*P	**Pg**	**10 13 11.1**	**-0.3**
AYDN				*e*S	**Sg**	**10 13 21.3**	**-0.2**
AYDN	**Tasoluk**	**0.78**	**84**	*e*P	**Pg**	**10 13 11.1**	**-0.2**
AYDN				*e*S	**Sg**	**10 13 21.3**	**-0.2**
BLCB	**Balcova**	**0.80**	**8**	*e*PG	**Pg**	**10 13 10.9**	**-0.8**
BLCB				*e*SG	**Sg**	**10 13 22.4**	**+0.2**
BLCB	**Balcova**	**0.80**	**8**	*e*Pg	**Pg**	**10 13 10.9**	**-0.9**
BLCB				*e*Sg	**Sg**	**10 13 22.4**	**+0.2**
URLA	**Izmir**	**0.81**	**343**	*e*P	**Pg**	**10 13 12.2**	**+0.3**
URLA				*e*S	**Sg**	**10 13 22.5**	**+0.1**
URLA	**Izmir**	**0.81**	**343**	*e*P	**Pg**	**10 13 12.2**	**+0.4**
URLA				*e*S	**Sg**	**10 13 22.5**	**+0.2**
IZM	**Izmir**	**0.86**	**19**	*e*PG	**Pg**	**10 13 12.5**	**-0.3**
IZM				*e*SG	**Sg**	**10 13 25.5**	**+1.6**
IZM	**Izmir**	**0.86**	**19**	*e*Pg	**Pg**	**10 13 12.5**	**-0.3**
IZM				*e*Sg	**Sg**	**10 13 25.5**	**+1.6**
DAT	**Datca**	**1.01**	**148**	*e*PG	**Pg**	**10 13 15.2**	**-0.5**
DAT	**Datca**	**1.01**	**148**	*e*Pg	**Pg**	**10 13 15.2**	**-0.6**
CHOS	**Chios island**	**1.04**	**320**	*e*PG	**Pg**	**10 13 15.0**	**-1.3**
CHOS				*e*SB	**Sb**	**10 13 30.0**	**-0.4**
CHOS	**Chios island**	**1.04**	**320**	*e*Pg	**Pg**	**10 13 15.0**	**-1.3**
CHOS				*e*Sb	**Sb**	**10 13 30.0**	**-0.4**
APE	**Apeiranthos**	**1.21**	**245**	*e*PB	**Pb**	**10 13 19.8**	**+0.4**
APE				*e*SB	**Sb**	**10 13 35.8**	**+0.6**
APE	**Apeiranthos**	**1.21**	**245**	*e*Pb	**Pb**	**10 13 19.8**	**+0.4**
APE				*e*Sb	**Sb**	**10 13 35.8**	**+0.6**

*CSEM **30** 10:13:58.4, 64.°01N×21.°17W, h4km, ML3.5, After REY*
REY 30 10:13:58.4, 64.°01N×21.°17W, h4km, ML2.9, ML3.5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.09**	**222**	P	Pg	10 14 00.4	+0.2
IBJA				S	Sg	10 14 02.0	+0.7
IKRO	**Krokur**	**0.09**	**15**	P	Pg	10 14 00.5	+0.2
IKRO				S	Sg	10 14 02.2	+0.7
ISOL	**Solvholt**	**0.13**	**129**	P	Pg	10 14 01.2	+0.3
ISOL				S	Sg	10 14 03.3	+0.6
ISAN	**Sandskeio**	**0.18**	**285**	P	Pg	10 14 02.2	+0.3
ISAN				S	Sg	10 14 05.1	+0.8
IHEI	**Heioarbar**	**0.19**	**352**	P	Pg	10 14 02.4	+0.3
IHEI				S	Sg	10 14 05.4	+0.7
IVOS	**Vogsosar**	**0.28**	**236**	P	Pg	10 14 03.9	+0.1
IVOS				S	Sg	10 14 08.2	+0.7
IKAS	**Kald??rsel**	**0.30**	**273**	P	Pg	10 14 04.4	+0.2
IKAS				S	Sg	10 14 09.1	+1.0
IASM	**Asmuli**	**0.30**	**125**	P	Pg	10 14 04.3	+0.1
IASM				S	Sg	10 14 08.8	+0.6
ISAU	**Saurbar**	**0.33**	**93**	P	Pg	10 14 04.8	0.0
ISAU				S	Sg	10 14 09.5	+0.3
IKRI	**Krysuvik**	**0.42**	**252**	P	Pg	10 14 06.1	-0.4
IKRI				S	Sg	10 14 11.8	-0.1
IKUD	**Kuludalsa**	**0.44**	**316**	P	Pg	10 14 06.2	-0.6
IKUD				S	Sg	10 14 12.4	-0.1
IGYG	**Gygjarholskot**	**0.50**	**57**	P	Pg	10 14 07.6	-0.4
IGYG				S	Sg	10 14 14.4	-0.1
IHAU	**Haukadalur**	**0.53**	**94**	P	Pg	10 14 08.2	-0.4
IHAU				S	Sg	10 14 15.5	0.0
IVOG	**Vogar**	**0.54**	**266**	P	Pg	10 14 08.3	-0.4
IVOG				S	Sg	10 14 16.0	+0.3
IGRV	**Grindav??k**	**0.59**	**255**	P	Pg	10 14 08.9	-0.7
IGRV				S	Sg	10 14 17.2	0.0
IMID	**Miomork**	**0.67**	**121**	P	Pg	10 14 10.5	-0.7
IMID				S	Sg	10 14 19.8	-0.1
INYL	**Nylenda**	**0.69**	**268**	P	Pg	10 14 10.5	-1.1
INYL				S	Sg	10 14 20.2	-0.4
IVES	**Vestmannaeyjar**	**0.69**	**145**	P	Pg	10 14 11.1	-0.5
IVES				S	Sg	10 14 20.9	+0.3
IASB	**`sbjarnarst**	**0.74**	**355**	P	Pg	10 14 11.5	-1.1
IASB				S	Sg	10 14 21.7	-0.6
IESK	**Eystri-Skogar**	**0.91**	**122**	P	Pg	10 14 14.4	-1.3
IESK				S	Sg	10 14 26.8	-0.7
IVAT	**Vatnsfell**	**1.01**	**79**	P	Pg	10 14 16.0	-1.6
IVAT				S	Sg	10 14 29.3	-1.4
IHVE	**Hveravellir**	**1.11**	**38**	P	Pg	10 14 17.2	-2.4
IHVE				S	Sg	10 14 32.0	-2.0
IHVO	**Lagu-Hvolar**	**1.14**	**114**	P	Pg	10 14 18.5	-1.7
IHVO				S	Sg	10 14 33.9	-1.1
ISNB	**Snabyli**	**1.16**	**103**	P	Pg	10 14 18.5	-2.1
ISNB				S	Sg	10 14 34.2	-1.3
ISKR	**Skrokkalda**	**1.33**	**64**	P	Pn	10 14 21.5	-2.3
ISKR				S	Sg	10 14 39.8	-1.4
IKAL	**Kalfafell**	**1.54**	**91**	P	Pn	10 14 24.9	-1.6
IKAL				S	Sn	10 14 45.2	-1.7
IFAG	**Fagurholsmyri**	**2.00**	**92**	P	Pn	10 14 32.2	-0.7

*ISCJB **30** 10:16:08.0±1.8, 32.°99N±0.°07×35.°7E±0.°2, h10km±14km, Error ellipse: s-maj=24.7km s-min=7.8km az=155.4*
*CSEM **30** 10:16:07.3±0.3, 32.°97N×35.°59E, h2km, Mc1.1, Error ellipse: s-maj=6.6km s-min=3.2km az=100.0*
*NSSC **30** 10:16:08, 32.°97N×35.°69E, h10km*
ISC 30 10:16:08.2±1.5, 32.°98N±0.°04×35.°7E±0.°1, h13km±16km, n11, σ0°37/18, 6D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCHB	**Talchebab**	**0.41**	**140**	⇓P	**Pg**	**10 16 16.0**	**-0.3**
TCHB				⇓S	**Sg**	**10 16 22.0**	**+0.2**
TCHB	**Talchebab**	**0.41**	**140**	⇓*i*P	**Pg**	**10 16 16.6**	**+0.3**
TCHB				⇓*i*S	**Sg**	**10 16 22.2**	**+0.4**
RCY	**Rachaya**	**0.52**	**15**	*e*P	**Pg**	**10 16 18.5**	**+0.1**
RCY	**Rachaya**	**0.52**	**15**	*e*P	**Pg**	**10 16 18.5**	**+0.1**
TOTH	**TOTAH**	**0.74**	**59**	⇑P	**Pg**	**10 16 22.0**	**-0.7**
TOTH				⇑S	**Sg**	**10 16 32.0**	**-0.5**
TOTH	**TOTAH**	**0.74**	**59**	⇑*i*P	**Pg**	**10 16 22.8**	**+0.1**
TOTH				⇑*i*S	**Sg**	**10 16 32.9**	**+0.4**
QASN	**Qassioun**	**0.75**	**43**	⇑P	**Pg**	**10 16 22.0**	**-0.8**
QASN				⇑S	**Sg**	**10 16 33.0**	**+0.3**
QASN	**Qassioun**	**0.75**	**43**	⇑*i*P	**Pg**	**10 16 23.0**	**+0.2**
QASN				⇑*i*S	**Sg**	**10 16 33.3**	**+0.6**
SALA	**Sala**	**0.94**	**106**	⇓*i*P	**Pg**	**10 16 26.1**	**-0.3**
SALA				⇓*i*S	**Sg**	**10 16 38.7**	**0.0**
HWQ	**Hawqa**	**1.31**	**10**	*e*P	**Pn**	**10 16 32.5**	**+0.1**
HWQ	**Hawqa**	**1.31**	**10**	*e*P	**Pn**	**10 16 32.5**	**+0.2**

*IDC **30** 10:25:13.4±10.0, 63.°39N×147.°47W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/26, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=194.7km s-min=28.8km az=105.0*
*ISCJB **30** 10:25:17.0±0.4, 63.°84N±0.°04×148.°72W±0.°07, h115km±5km, mb3.3/3, Error ellipse: s-maj=6.2km s-min=5.1km az=144.3*
*PGC **30** 10:25:18.8±52.0, 63.°96N×148.°35W, h1km, ML3.3/1, 101km southwest of Fairbanks, Ak Central Alaska*
*NEIC **30** 10:25:18.2, 63.°83N×148.°79W, h113km, MG3.1(AEIC), After AEIC.*
ISC 30 10:25:18.3±0.4, 63.°84N±0.°04×148.°73W±0.°07, h108km±5km, n37, σ0°76/46, mb3.3/3, 3D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**0.14**	**220**	P	**Pn**	**10 25 33.8**	**+0.6**
MCK				S	**Sn**	**10 25 45.8**	**+1.3**
TRF	**Thorofare Moun**	**0.80**	**241**	P	**Pn**	**10 25 37.9**	**+0.6**
TRF				S	**Sn**	**10 25 52.3**	**+0.7**
KTH	**Kantishna Hill**	**1.02**	**255**	P	**Pn**	**10 25 39.7**	**+0.2**
KTH				S	**Sn**	**10 25 55.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**1.03**	**286**	P	**Pn**	**10 25 39.2**	**-0.3**
BPAW				S	**Sn**	**10 25 55.5**	**-0.1**
COLA	**College**	**1.11**	**20**	P	**Pn**	**10 25 40.6**	**+0.3**
COLA				S	**Sn**	**10 25 57.4**	**+0.3**
IL1	**Eielson Array**	**1.23**	**40**	P	**Pn**	**10 25 41.5**	**-0.3**
CHUM	**Lake Minchumin**	**1.59**	**273**	P	**Pn**	**10 25 45.9**	**-0.1**
PAX	**Paxson**	**1.71**	**119**	P	**Pn**	**10 25 48.0**	**+0.6**
PPLA	**Purkeypile**	**1.82**	**240**	P	**Pn**	**10 25 48.9**	**0.0**
SML	**Sawmill**	**2.05**	**175**	P	**Pn**	**10 25 51.7**	**0.0**
DOT	**Dot Lake**	**2.08**	**93**	P	**Pn**	**10 25 52.1**	**0.0**
PMR	**Palmer**	**2.26**	**185**	*e*P	**Pn**	**10 25 53.8**	**-0.7**
SKT	**Skwentna**	**2.26**	**216**	P	**Pn**	**10 25 54.0**	**-0.4**
MENT	**Mentasta**	**2.43**	**110**	*e*Pn	**Pn**	**10 25 56.7**	**+0.1**
RC01	**Rabbit Creek A**	**2.80**	**190**	*e*Pn	**Pn**	**10 26 01.5**	**+0.1**
IM3	**Indian Mountai**	**3.03**	**317**	P	**Pn**	**10 26 04.0**	**-0.5**
DIV	**Divide**	**3.05**	**152**	P	**Pn**	**10 26 03.6**	**-1.1**
TTA	**Tatalina**	**3.40**	**258**	*e*P	**Pn**	**10 26 08.4**	**-1.1**
TT01	**Tatalina**	**3.41**	**257**	P	**Pn**	**10 26 08.9**	**-0.7**
SLKM	**Skilak Lake**	**3.42**	**192**	P	**Pn**	**10 26 10.0**	**+0.3**
EGAK	**Eagle**	**3.43**	**71**	P	**Pn**	**10 26 09.6**	**-0.2**
COLD	**Coldfoot**	**3.46**	**350**	P	**Pn**	**10 26 10.1**	**0.0**
BMRM	**Bremner River**	**3.46**	**144**	*e*Pn	**Pn**	**10 26 09.3**	**-0.9**
BMRM				*e*Sn	**Sn**	**10 26 49.4**	**-1.1**
EYAK	**Cordova Ski Ar**	**3.59**	**156**	P	**Pn**	**10 26 11.0**	**-0.9**
SEW	**Seward**	**3.77**	**186**	P	**Pn**	**10 26 13.5**	**-0.8**
BM3	**Burnt Mountain**	**3.98**	**24**	P	**Pn**	**10 26 17.0**	**-0.1**
DAWY	**Dawson**	**4.12**	**83**	P	**Pn**	**10 26 19.0**	**-0.1**
DAWY	**Dawson**	**4.12**	**83**	⇓Pn	**Pn**	**10 26 19.1**	**0.0**
DAWY				⇓Sn	**Sn**	**10 27 06.8**	**+0.5**
SVW2	**Sparrevohn**	**4.21**	**232**	*e*P	**Pn**	**10 26 20.8**	**+0.6**
HYT	**Haines Junctio**	**6.04**	**115**	⇑Pn	**Pn**	**10 26 48.6**	**+3.6**
WHY	**Whitehorse**	**7.21**	**110**	⇓Pn	**Pn**	**10 27 01.3**	**+0.5**
INK	**Inuvik**	**7.62**	**47**	Pn	**Pn**	**10 27 05.5**	**-0.9**
	0.6nm,0.3s,baz=244,slow=12,SNR=22						
INK				Sn	**Sn**	**10 28 29.2**	**-1.7**
	baz=167,slow=23,SNR=2.2						
INK	**Inuvik**	**7.62**	**47**	Pn	**Pn**	**10 27 05.5**	**-0.9**
INK				Sn	**Sn**	**10 28 29.2**	**-1.7**
INK	**Inuvik**	**7.62**	**47**	⇑Pn	**Pn**	**10 27 06.9**	**+0.5**
PDAR	**Pinedale Array**	**30.74**	**114**	P	**P**	**10 31 24.4**	**+1.6**
	0.4nm,0.6s,mb3.3,baz=343,slow=4.6,SNR=4.7						
NVAR	**Mina Array Bea**	**31.23**	**130**	P	**P**	**10 31 29.1**	**+1.9**
	0.5nm,0.7s,mb3.3,baz=330,slow=6.8,SNR=4.7						
TXAR	**Lajitas Array**	**44.74**	**119**	P	**P**	**10 33 21.4**	**+0.9**
	0.2nm,0.5s,mb3.1,baz=328,slow=6.8,SNR=6.9						

GUC 30 10:39:19.8±0.7, 35.°35S×72.°65W, h16km±5km, MD4.0, ML3.6, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	**Chanco**	**0.40**	**166**	⇑*i*P	Pg	10 39 28.2	+0.3
CNCO				*i* S	Sg	10 39 33.6	+0.3
CNCO				AML	AML	10 39 34.2	
	comp=E,1μm,0.2s						
TALC	**Talca**	**0.83**	**94**	⇑*i*P	Pb	10 39 34.6	-1.3
TALC				*i* S	Sb	10 39 45.8	-1.1
TALC				AML	AML	10 39 47.4	
	comp=E,8μm,0.2s						
NICH	**Los Niches**	**1.21**	**74**	⇑*i*P	Pn	10 39 41.0	-1.1
NICH				*i* S	Sb	10 39 57.2	-0.6
CCHI	**Chillan**	**1.33**	**160**	⇓*i*P	Pn	10 39 42.6	-1.2
CCHI				*i* S	Sn	10 40 00.1	-1.1
CCHI				AML	AML	10 40 03.0	
	comp=N,844nm,0.9s						
LNV	**Longovilo**	**1.73**	**37**	*e*P	Pn	10 39 48.4	-0.8
CACH	**El Canelo**	**2.09**	**54**	*e*P	Pn	10 39 55.3	+1.1
CHCH	**Chadas Angostu**	**2.17**	**50**	*e*P	Pn	10 39 56.2	+0.9
CHCH				*i* S	Sn	10 40 24.1	+2.2
CLCH	**Cerro Calan**	**2.62**	**42**	*e*P	Pn	10 40 02.3	+0.9
CLCH				*i* S	Sn	10 40 35.1	+2.2
CLCH				AML	AML	10 40 51.2	
	comp=N,816nm,0.6s						
PEL	**Peldehue**	**2.74**	**37**	⇑*i*P	Pn	10 40 03.2	+0.1
PEL				*i* S	Sn	10 40 36.8	+1.0
PEL				AML	AML	10 40 47.6	
	comp=N,714nm,0.6s						

BER 30 10:42:42.7±2.5, 77.°03N×18.°92E, h23km±38km, MD2.3, ML2.5, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.76**	**270**	*e*P	Pb	10 42 53.5	-3.7
HSP				*e*S	Sb	10 43 02.8	-4.4
HOPEN	**Hopen**	**1.50**	**107**	*e*P	Pn	10 43 05.8	-2.2
HOPEN				*e*S	Sn	10 43 25.2	-1.6
HOPEN				AML	AML	10 43 30.6	
	comp=Z,103nm,0.2s						
KBS	**Kingsbay**	**2.40**	**326**	*e*P	Pn	10 43 18.2	-2.3
KBS				*e*Sg	Sn	10 43 55.0	+5.8
KBS				AML	AML	10 44 02.2	
	comp=Z,71nm,0.6s						
BJO	**Bjornoya**	**2.54**	**178**	*e*Pg	Pn	10 43 25.3	+2.9
BJO				*e*Sg	Sn	10 43 59.0	+6.5
BJO				AML	AML	10 44 02.7	
	comp=Z,29nm,0.3s						

*BJI **30** 10:44:07.7, 54.°70S×1.°00E, h10km, mB5.6/11, Ms5.4/10, Ms7 5.0/11*
*ISCJB **30** 10:44:09.4±0.3, 54.°80S±0.°05×1.°1E±0.°1, h10km, mb5.0/29, MS5.2/209, Error ellipse: s-maj=10.7km s-min=6.8km az=2.2*
*MOS **30** 10:44:10.5±2.4, 54.°87S×1.°27E, h10km, mb5.1/8, MS5.1/13, Error ellipse: s-maj=31.1km s-min=13.7km az=90.6*
*IDC **30** 10:44:10.0±0.5, 54.°77S×0.°86E, h0km, mb4.7/16, mb1 4.7/16, mb1mx4.6/20, mbtmp4.7/16, MS5.0/19, Ms1 5.0/19, ms1mx4.8/25, Error ellipse: s-maj=18.7km s-min=14.6km az=117.0*
*GCMT **30** 10:44:11.7±0.4, 54.°92S×1.°51E, h17km, MW5.7/104, Moment Tensor Solution. s88,c168; s104,c279; Duration: 1ŝ7 Moment tensor: Scale 10^17Nm; M_{rr}-0.32±.04; $M_{\theta\theta}$4.01±.05; $M_{\phi\phi}$-3.69±.04; $M_{r\theta}$-0.01±.11; $M_{\theta\phi}$-0.95±.04; $M_{\phi r}$0.30±.11; Best double couple: $M_0$3.97800×10^17 NP1:ϕ_s232.00000°, δ_s86.00000°, λ-177.00000°. NP2:ϕ_s142.00000°, δ_s87.00000°, λ-4.00000°. Principal axes: T 4.1260, Plg1.0000°, Azm187.0000°; N -0.2980, Plg85.0000°, Azm285.0000°; P -3.8300, Plg5.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **30** 10:44:11.7±0.4, 54.°74S×0.°99E, h10km, mb5.2/21, MS5.2/192, MW5.7 Error ellipse: s-maj=14.7km s-min=11.6km az=126.0*
ISC 30 10:44:11.6±3.2, 54.°88S±0.°05×1.°2E±0.°1, h13km±20km, n284, σ0°98/62, mb5.0/29, MS5.2/209, 2C-1D, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.37**	**191**	*e*Pn	**Pn**	**10 48 00.7**	**+0.1**
VNA1				*e*		10 48 03.4	
MAIT	**Maitri**	**16.62**	**168**	*e*P	**Pn**	**10 48 03.0**	**-0.8**
MAIT				*e*S	**Sn**	**10 51 13.3**	**+5.5**
NVL	**N'lazarevskaya**	**16.62**	**168**	⇑*i*P	**Pn**	**10 48 02.7**	**-1.1**
NVL				pmax	pmax		
	comp=Z,5μm,12.4s						
NVL				MLR	MLR		
	comp=Z,5μm,12.0s						
SYO	**Syowa Base**	**22.41**	**144**	⇑*e*P	**P**	**10 49 09.0**	**-0.3**
SYO	**Syowa Base**	**22.41**	**144**	⇓*i*P	**P**	**10 49 18.0**	**+8.7**
SUR	**Sutherland**	**26.43**	**40**	P	**P**	**10 49 50.4**	**+2.6**
	comp=Z,8.2nm,0.8s,mb4.3,baz=242,slow=11,SNR=4.0						
SUR				LR	LR	10 58 39.3	
	comp=Z,1μm,18.1s,MS4.6,baz=30,slow=33						
SUR	**Sutherland**	**26.43**	**40**	*e*P	**P**	**10 49 48.3**	**+0.5**
	comp=Z,25nm,1.1s,mb4.7						
SUR				LR	LR	10 58 39.3	
MAW	**Mawson**	**30.81**	**139**	*e*P	**P**	**10 50 30.5**	**+4.0**
	comp=Z,11nm,1.0s,mb4.6						
MAW	**Mawson**	**30.81**	**139**	P	**P**	**10 50 30.1**	**+3.6**
	comp=Z,7.6nm,0.9s,mb4.5,baz=275,slow=11,SNR=11						
MAW				LR	LR	11 00 32.0	
	comp=Z,4μm,19.1s,MS5.0,baz=272,slow=32						
MAW	**Mawson**	**30.81**	**139**	*e*P	**P**	**10 50 30.9**	**+4.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAW				MLR	MLR		
	comp=Z,5μm,19.0s						
MAW	**Mawson**	**30.81**	**139**	*e*P	**P**	**10 50 30.9**	**+4.4**
	comp=Z,4.0nm,0.8s,mb4.3						
MAW				LR	LR		
	comp=Z,5μm,19.0s,MS5.2						
BOSA	**Boshof**	**31.50**	**43**	P	**P**	**10 50 33.0**	**+0.2**
	comp=Z,17nm,1.1s,mb4.8,baz=206,slow=8.9,SNR=12						
BOSA	**Boshof**	**31.50**	**43**	P	**P**	**10 50 33.0**	**+0.2**
BOSA				LR	LR		
	comp=Z,1μm,22.0s,MS4.5						
PMSA	**Palmer Station**	**32.74**	**226**	LR	LR	11 01 01.1	
	comp=Z,1μm,18.5s,MS4.7,baz=98,slow=31						
PMSA	**Palmer Station**	**32.74**	**226**	P	**P**	**10 50 46.3**	**+2.9**
	comp=Z,178nm,1.3s,mb5.8						
LBTB	**Lobatse**	**34.86**	**41**	P	**P**	**10 51 01.7**	**-0.6**
	comp=Z,16nm,0.7s,mb5.0,baz=223,slow=8.9,SNR=16						
LBTB	**Lobatse**	**34.86**	**41**	*e*P	**P**	**10 51 02.3**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
LBTB				MLR	MLR		
	comp=Z,

LCO Las Campanas 56.55 266 *e*P **P 10 53 53.1 -0.4**
comp=Z,27nm,0.9s,mb5.3
LCO LR LR
comp=Z,2μm,19.0s,MS5.1
RCBR Riachuelo 57.25 315 PFAKE 10 54 10.0 +11
RCBR LR LR
comp=Z,2μm,22.0s,MS5.2
LIC Lamto 61.10 353 *e*P **P 10 54 24.6 -0.6**
comp=Z,116nm,1.4s,mb5.8
KMBO Kilima Mbogo 61.13 42 P **P 10 54 28.3 +2.9**
comp=Z,0.6nm,0.3s,mb4.2,baz=182,slow=24,SNR=6.8
KMBO Kilima Mbogo 61.13 42 *e*P **P 10 54 25.5 +0.1**
KMBO pmax pmax
comp=Z,6.0nm,1.1s
KMBO MLR MLR
comp=Z,1μm,21.0s
KMBO Kilima Mbogo 61.13 42 *e*P **P 10 54 25.5 +0.1**
comp=Z,5.9nm,1.1s,mb4.6
KMBO LR LR
comp=Z,1μm,21.0s,MS5.0
KIC Kosan Boka 61.22 353 *e*P **P 10 54 26.2 +0.2**
comp=Z,68nm,1.5s,mb5.5
TIC Toumodi 61.52 353 *e*P **P 10 54 27.6 -0.4**
comp=Z,139nm,1.5s,mb5.8
DBIC Dimbokro 61.53 353 P **P 10 54 27.5 -0.6**
comp=Z,11nm,1.0s,mb4.9,baz=148,slow=8.8,SNR=6.6
DBIC LR LR 11 14 38.7
comp=Z,1μm,21.2s,MS5.0,baz=148,slow=30
DBIC Dimbokro 61.53 353 *e*P **P 10 54 28.0 -0.1**
DBIC pmax pmax
comp=Z,37nm,1.4s
DBIC MLR MLR
comp=Z,1μm,20.0s
DBIC Dimbokro 61.53 353 *e*P **P 10 54 28.0 -0.1**
comp=Z,37nm,1.4s,mb5.3
DBIC LR LR
comp=Z,1μm,20.0s,MS5.0
LPAZ La Paz 64.94 277 P **P 10 54 50.8 0.0**
comp=Z,12nm,1.0s,mb4.9,baz=110,slow=6.5,SNR=25
LPAZ LR LR 11 21 27.8
comp=Z,768nm,20.8s,MS4.9,baz=126,slow=35
LPAZ La Paz 64.94 277 *e*P **P 10 54 50.8 0.0**
LPAZ pmax pmax
comp=Z,42nm,1.3s
LPAZ MLR MLR
comp=Z,1μm,22.0s
LPAZ La Paz 64.94 277 *e*P **P 10 54 50.8 0.0**
comp=Z,42nm,1.3s,mb5.3
LPAZ LR LR
comp=Z,1μm,22.0s,MS5.1
MSEY Mahe Island 66.29 62 PFAKE 10 55 10.0 +11
MSEY LR LR
comp=Z,1μm,20.0s,MS5.1
TOA0 Torodi Ar. Sit 67.77 1 *e*P **P 10 55 08.1 -0.6**
TORD Torodi Ar. Bea 67.77 1 P **P 10 55 07.6 -1.1**
comp=Z,2.3nm,1.1s,mb4.1,baz=182,slow=6.2,SNR=9.6
TORD LR LR 11 19 34.6
comp=Z,2μm,19.9s,MS5.3,baz=160,slow=31
TORD Torodi Ar. Bea 67.77 1 P **P 10 55 07.6 -1.1**
TORD LR LR 11 19 34.5
DGAR Diego Garcia 73.23 79 PFAKE 10 56 00.0 +18
DGAR LR LR
comp=Z,3μm,22.0s,MS5.5
NNA Nana 73.39 273 PFAKE 10 56 00.0 +17
NNA LR LR
comp=Z,1μm,22.0s,MS5.1
ATD Arta Tunnel 74.87 42 LR LR 11 26 38.3
comp=Z,812nm,18.1s,MS5.1,baz=191,slow=34
NWAO Narrogin (SRO) 76.82 129 PFAKE 10 56 20.0 +17
NWAO LR LR
comp=Z,1μm,19.0s,MS5.2
TAM Tamanrasset 77.44 4 *e*P **P 10 56 08.5 +2.4**
TAM pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
TAM MLR MLR
comp=Z,626nm,19.0s,MS5.0
TAM Tamanrasset 77.44 4 *e*P **P 10 56 08.4 +2.3**
comp=Z,6.4nm,1.3s,mb4.4
TAM LR LR
comp=Z,626nm,19.0s,MS5.0
TAU Tasmania Unive 78.40 155 PFAKE 10 56 20.0 +8.6
TAU LR LR
comp=Z,2μm,19.0s,MS5.4
COCO West Island 83.37 102 PFAKE 10 56 50.0 +12
COCO LR LR
comp=Z,1μm,22.0s,MS5.2
SNZO South Karori 84.02 175 PFAKE 10 56 50.0 +8.7
SNZO LR LR
comp=Z,2μm,20.0s,MS5.4
OTAV Otavalo 84.22 279 *e*P **P 10 56 43.6 +0.9**
comp=Z,43nm,1.4s,mb5.4
OTAV LR LR
comp=Z,1μm,19.0s,MS5.2
GRGR Grenville 84.97 299 PFAKE 10 57 00.0 +14
GRGR LR LR
comp=Z,1μm,20.0s,MS5.2
ROSC El Rosal 85.67 285 LR LR 11 33 28.6
comp=Z,2μm,18.1s,MS5.6,baz=181,slow=35
FDF Fort de France 86.94 301 PFAKE 10 57 10.0 +14
FDF LR LR
comp=Z,546nm,19.0s,MS5.0
SDV Santo Domingo 86.96 290 *e*P **P 10 56 56.0 -0.3**
comp=Z,2.5nm,0.4s,mb4.8
SDV LR LR
comp=Z,631nm,19.0s,MS5.0
STKA Stephens Creek 87.13 147 P **P 10 56 57.1 +0.1**
comp=Z,3.9nm,1.0s,mb4.6,baz=215,slow=3.8,SNR=4.7
STKA Stephens Creek 87.13 147 *e*P **P 10 56 57.0 0.0**
comp=Z,1.5nm,0.9s,mb4.2
URZ Urewera 87.16 177 P **P 10 56 56.7 -0.3**
comp=Z,14nm,1.1s,mb5.1,baz=132,slow=2.0,SNR=3.8
URZ Urewera 87.16 177 *e*P **P 10 56 56.2 -0.8**
comp=Z,42nm,1.4s,mb5.5
MBWA Marble Bar 87.99 125 PFAKE 10 57 10.0 +8.7
MBWA LR LR
comp=Z,2μm,19.0s,MS5.5
RTC Rabat Centre 88.78 353 PFAKE 10 57 20.0 +16
RTC LR LR
comp=Z,1μm,20.0s,MS5.4
ANWB Willy Bob 89.76 302 PFAKE 10 57 20.0 +11
ANWB LR LR
comp=Z,458nm,19.0s,MS4.9
PALK Pallekele 89.91 77 LR LR 11 29 48.4
comp=Z,1μm,19.1s,MS5.4,baz=159,slow=30
PAYG Puerto Ayora 90.30 268 PFAKE 10 57 20.0 +7.8
PAYG LR LR
comp=Z,899nm,21.0s,MS5.2
KEST Kesra 90.52 7 P **P 10 57 12.2 -0.4**
comp=Z,1.2nm,0.8s,mb4.3,baz=198,slow=3.2,SNR=3.0
KEST LR LR 11 34 34.1
comp=Z,336nm,20.1s,MS4.8,baz=158,slow=33
WDD Wield Dalam 91.11 11 PFAKE 10 57 30.0 +15
WDD LR LR
comp=Z,550nm,21.0s,MS5.0
SFS San Fernando 91.20 354 PFAKE 10 57 30.0 +14
SFS LR LR
comp=Z,1μm,19.0s,MS5.3
ASAR Alice Springs 91.93 138 P **P 10 57 19.4 -0.3**
comp=Z,3.8nm,0.9s,mb4.7,baz=194,slow=4.6,SNR=10.0
BCIP Isla Barro Col 92.30 283 PFAKE 10 57 30.0 +8.7
BCIP LR LR
comp=Z,649nm,21.0s,MS5.0
SJG San Juan 92.31 299 PFAKE 10 57 30.0 +8.7
SJG LR LR
comp=Z,5μm,20.0s,MS6.0
MMAI Mount Meron Ar 92.36 28 LR LR 11 36 06.1
comp=Z,1μm,20.3s,MS5.3,baz=195,slow=34
FITZ Fitzroy Crossi 93.38 128 LR LR 11 32 34.0
comp=Z,680nm,21.7s,MS5.1,baz=215,slow=31
CEL Celeste 93.63 12 PFAKE 10 57 40.0 +13
CEL LR LR
comp=Z,820nm,21.0s,MS5.2
CSS Prodhromos 93.66 26 PFAKE 10 57 40.0 +13
CSS LR LR
comp=Z,550nm,19.0s,MS5.0
RKT Rikitea 93.73 220 *e*LR LR 11 27 42.7
comp=Z,805nm,37.0s
PAB San Pablo 94.18 356 PFAKE 10 57 40.0 +11
PAB LR LR
comp=Z,1μm,22.0s,MS5.2
VSL Villasalto 94.27 6 PFAKE 10 57 40.0 +10
VSL LR LR
comp=Z,585nm,20.0s,MS5.0
ESDC Sonseca Array 94.29 356 LR LR 11 34 50.6
comp=Z,552nm,21.7s,MS5.0,baz=155,slow=32
ESLA Sonseca Array 94.29 356 PFAKE 10 57 40.0 +10
ESLA LR LR
comp=Z,6μm,22.0s,MS6.0
TIP Timpagrande 94.64 12 PFAKE 10 57 40.0 +8.6
TIP LR LR
comp=Z,575nm,19.0s,MS5.1
MTE Manteigas 95.20 353 PFAKE 10 57 50.0 +16
MTE LR LR
comp=Z,1μm,22.0s,MS5.4
WRAB Tennant Creek 95.47 136 PFAKE 10 57 50.0 +14
WRAB LR LR
comp=Z,674nm,19.0s,MS5.1
SDDR Presa de Saban 95.69 295 *e*P **P 10 57 35.4 -1.4**
comp=Z,9.4nm,0.9s,mb5.2
SDDR LR LR
comp=Z,813nm,20.0s,MS5.2
ISP Isparta 95.73 23 PFAKE 10 57 50.0 +14
ISP LR LR
comp=Z,484nm,20.0s,MS5.0
JTS JuntasAbangare 96.11 279 PFAKE 10 57 50.0 +11
JTS LR LR
comp=Z,497nm,19.0s,MS5.0
RAO Raoul Island 96.21 181 LR LR 11 35 50.0
comp=Z,554nm,19.1s,MS5.0,baz=164,slow=32
RAO Raoul Island 96.21 181 PFAKE 10 57 50.0 +11
RAO LR LR
comp=Z,1μm,20.0s,MS5.3
PSI Prapat 96.74 95 LR LR 11 33 26.1
comp=Z,546nm,19.3s,MS5.0,baz=242,slow=30
TIR Tirane 97.18 14 PFAKE 10 57 50.0 +7.0
TIR LR LR
comp=Z,805nm,22.0s,MS5.2
AQU L'Aquila 97.42 9 PFAKE 10 58 00.0 +16
AQU LR LR
comp=Z,575nm,20.0s,MS5.1
GRTK Grand Turk 97.70 296 PFAKE 10 58 00.0 +14
GRTK LR LR
comp=Z,909nm,21.0s,MS5.2
BR131 Keskin Array S 98.25 25 PFAKE 10 58 00.0 +12
BR131 LR LR
comp=Z,502nm,21.0s,MS5.0
BRTR Keskin Array B 98.25 25 LR LR 11 44 51.6
comp=Z,259nm,21.9s,MS4.7,baz=193,slow=37
MTDJ Mount Denham 98.41 290 PFAKE 10 58 00.0 +11
MTDJ LR LR
comp=Z,991nm,22.0s,MS5.3
GTBY Guantanamo Bay 98.49 292 PFAKE 10 58 00.0 +11
GTBY LR LR
comp=Z,842nm,22.0s,MS5.2
VLC Villacollemand 98.98 7 PFAKE 10 58 00.0 +9.0
VLC LR LR
comp=Z,504nm,20.0s,MS5.0
CTA Charters Tower 99.59 147 LR LR 11 43 06.4
comp=Z,670nm,19.5s,MS5.2,baz=200,slow=35
CTAO Charters Tower 99.59 147 PFAKE 10 58 10.0 +15
CTAO LR LR
comp=Z,847nm,20.0s,MS5.2
BNI Bardonecchia 99.67 4 PFAKE 10 58 10.0 +15
BNI LR LR
comp=Z,614nm,19.0s,MS5.1
KULM Kulim 99.75 95 PFAKE 10 58 10.0 +15
KULM LR LR
comp=Z,447nm,19.0s,MS5.0
SSB Saint Sauveur 99.83 2 PFAKE 10 58 10.0 +14
SSB LR LR
comp=Z,357nm,20.0s,MS4.9
TGUH Tegucigalpa,Un 100.48 279 PFAKE 10 58 10.0 +11
TGUH LR LR
comp=Z,911nm,19.0s,MS5.3
TRI Trieste 100.78 9 PFAKE 10 58 10.0 +10
TRI LR LR
comp=Z,532nm,20.0s,MS5.0
GNI Garni 101.73 33 PFAKE 10 58 20.0 +16
GNI LR LR
comp=Z,854nm,19.0s,MS5.3
KSM Kuching 102.13 105 PFAKE 10 58 20.0 +14
KSM LR LR
comp=Z,582nm,20.0s,MS5.1
DZM Mont Dzumac 102.33 166 *e*SS SS 11 17 07.3 +13
comp=Z,920nm,26.6s
DZM *e*LR LR 11 31 46.3
comp=Z,2μm,22.7s
ECH Echery 102.85 4 PFAKE 10 58 20.0 +11
ECH LR LR
comp=Z,283nm,20.0s,MS4.8
BFO Black Forest 103.02 5 PFAKE 10 58 20.0 +10
BFO LR LR
comp=Z,504nm,20.0s,MS5.0
PSZ Piszkesteto 103.64 13 PFAKE 10 58 20.0 +7.4
PSZ LR LR
comp=Z,304nm,20.0s,MS4.8
PPT Papeete 103.66 209 *e*SKSac SKSac 11 08 53.4 +1.1
comp=Z,292nm,25.5s
PPT *e*SP SP 11 11 38.0 +1.1
comp=Z,839nm,26.5s
PPT *e*SS SS 11 17 19.0 +6.4
comp=Z,533nm,27.0s
PPT *e*LQ 11 27 31.8
comp=Z,1μm,35.2s
PPT *e*LR LR 11 32 11.7
comp=Z,1μm,24.5s
WLF Walferdange 104.26 3 PFAKE 10 58 30.0 +15
WLF LR LR
comp=Z,662nm,19.0s,MS5.2
KIV Kislovodsk 104.59 30 PFAKE 10 58 30.0 +13
KIV LR LR
comp=Z,743nm,21.0s,MS5.2
KWP Kalwaria Pacla 105.70 14 PFAKE 11 02 50.0 +17
KWP LR LR
comp=Z,707nm,21.0s,MS5.2
TEIG Tepich 105.98 282 PFAKE 11 02 50.0 +15
TEIG LR LR
comp=Z,785nm,22.0s,MS5.2
CLL Collm 106.28 8 *e*PP PP 11 02 53.0 +4.7
CLL *e*SKSac SKSac 11 09 06.0 +3.9
CLL *e*PS PS 11 12 06.0 +0.4
CLL *e*PPS 11 13 05.0
CLL *e*SS SS 11 17 59.0 +9.1
CLL *e*SSS 11 22 30.0
CLL *e* 11 25 48.0
NIL Nilore 107.56 56 PFAKE 11 02 50.0 +13
NIL LR LR
comp=Z,127nm,19.0s,MS4.5
MSVF Nonsavu 107.63 177 PFAKE 11 02 50.0 +12
MSVF LR LR
comp=Z,751nm,21.0s,MS5.2
KIEV Kiev 107.78 18 PFAKE 11 02 50.0 +13
KIEV LR LR
comp=Z,379nm,22.0s,MS4.9
DWPF Disney 108.47 293 PFAKE 11 02 50.0 +11
DWPF LR LR
comp=Z,1μm,20.0s,MS5.4
TAOE Nuku Hiva Isla 108.72 221 *e*SS SS 11 18 36.0 +14
comp=Z,175nm,25.0s
TAOE *e*LR LR 11 34 42.6
comp=Z,776nm,26.7s
KKM Kota Kinabalu 109.18 107 PFAKE 11 02 50.0 +8.9
KKM LR LR
comp=Z,586nm,19.0s,MS5.2
CM31 Chiang Mai Arr 109.33 85 PFAKE 11 02 50.0 +8.8
CM31 LR LR
comp=Z,474nm,19.0s,MS5.1
CHTO Chiang Mai 109.61 85 PFAKE 11 02 50.0 +8.3
CHTO LR LR
comp=Z,542nm,19.0s,MS5.1
ESK Eskdalemuir 109.90 357 *e*PKPdf PKiKP 11 02 41.4 +0.3
ESK LR LR
comp=Z,486nm,20.0s,MS5.1
NHSC New Hope 111.76 297 PFAKE 11 03 00.0 +15
NHSC LR LR
comp=Z,812nm,21.0s,MS5.3
CNNC Cliffs of the 112.28 300 PFAKE 11 03 00.0 +14
CNNC LR LR
comp=Z,703nm,20.0s,MS5.2
OBN Obninsk 113.41 21 PFAKE 11 03 00.0 +12
OBN LR LR
comp=Z,319nm,19.0s,MS4.9
HNR Honiara 113.49 157 PFAKE 11 03 00.0 +11
HNR LR LR
comp=Z,597nm,22.0s,MS5.1
LSA Lhasa 113.71 72 PFAKE 11 03 00.0 +11
LSA LR LR
comp=Z,542nm,20.0s,MS5.2
GOGA Godfrey 113.72 295 PFAKE 11 03 00.0 +11
GOGA LR LR
comp=Z,621nm,22.0s,MS5.2
BRAL Brewton 113.77 290 PFAKE 11 03 00.0 +11
BRAL LR LR
comp=Z,1μm,20.0s,MS5.4
CBN Corbin 114.35 302 PFAKE 11 03 00.0 +10
CBN LR LR
comp=Z,780nm,22.0s,MS5.3
KONO Kongsberg 114.38 5 PFAKE 11 03 00.0 +11
KONO LR LR
comp=Z,454nm,22.0s,MS5.0
AML Almayashu 114.60 51 PFAKE 11 03 00.0 +9.5
AML LR LR
comp=Z,484nm,20.0s,MS5.1
UCH Uchtor 115.05 52 PFAKE 11 03 00.0 +8.6
UCH LR LR
comp=Z,569nm,20.0s,MS5.2
EKS2 Erkin-Say 115.06 51 PFAKE 11 03 00.0 +8.6
EKS2 LR LR
comp=Z,669nm,20.0s,MS5.2
DAV Davao City (W) 115.08 115 PFAKE 11 03 00.0 +7.7
DAV LR LR
comp=Z,769nm,21.0s,MS5.3
BLA Blacksburg 115.09 299 PFAKE 11 03 00.0 +8.4
BLA LR LR
comp=Z,653nm,21.0s,MS5.2
LRAL Lakeview Retre 115.30 292 PFAKE 11 03 00.0 +7.8
LRAL LR LR
comp=Z,569nm,21.0s,MS5.2
AAK Ala-Archa 115.36 51 PFAKE 11 03 00.0 +8.1
AAK LR LR
comp=Z,545nm,21.0s,MS5.1
QIZ Qiongzhong 116.07 94 PFAKE 11 03 10.0 +16
QIZ LR LR
comp=Z,473nm,21.0s,MS5.1
TKM2 Tokmak 2 116.09 52 PFAKE 11 03 10.0 +17
TKM2 LR LR
comp=Z,468nm,20.0s,MS5.1
PKME Peaks-Kenny Pk 116.19 312 PFAKE 11 03 10.0 +17
PKME LR LR
comp=Z,494nm,21.0s,MS5.1
SSPA Standing Stone 116.49 303 PFAKE 11 03 10.0 +16
SSPA LR LR
comp=Z,539nm,22.0s,MS5.1
LBNH Lisbon 116.53 310 PFAKE 11 03 10.0 +16
LBNH LR LR
comp=Z,464nm,20.0s,MS5.1
VBMS Vicksburg 116.58 289 PFAKE 11 03 10.0 +15
VBMS LR LR
comp=Z,617nm,19.0s,MS5.2
MCWV Mont Chateau 116.69 301 PFAKE 11 03 10.0 +15
MCWV LR LR
comp=Z,703nm,21.0s,MS5.3
BINY Binghamton 116.80 306 PFAKE 11 03 10.0 +15
BINY LR LR
comp=Z,712nm,22.0s,MS5.2
FUNA Funafuti 116.81 178 PFAKE 11 03 10.0 +14
FUNA LR LR
comp=Z,8μm,20.0s,MS6.4
KVTX Kingsville 117.15 280 PFAKE 11 03 10.0 +14
KVTX LR LR
comp=Z,563nm,21.0s,MS5.2
NCB Newcomb 117.36 308 PFAKE 11 03 10.0 +14
NCB LR LR
comp=Z,428nm,21.0s,MS5.0
PLAL Pickwick Lake 117.36 292 PFAKE 11 03 10.0 +14
PLAL LR LR
comp=Z,657nm,22.0s,MS5.2
HKT Hockley 117.81 283 PFAKE 11 03 10.0 +13
HKT LR LR
comp=Z,387nm,20.0s,MS5.0
LONY Lake Ozonia 118.02 308 PFAKE 11 03 10.0 +13
LONY LR LR
comp=Z,462nm,22.0s,MS5.1
WVT Waverly 118.10 293 *e*PKIKP PKPdf 11 02 57.8 +0.4
WVT MLR MLR
comp=Z,671nm,20.0s,MS5.3
NATX Nacogdoches 118.53 285 PFAKE 11 03 10.0 +12
NATX LR LR
comp=Z,530nm,22.0s,MS5.1
ERPA Erie 118.64 303 PFAKE 11 03 10.0 +12
ERPA LR LR
comp=Z,560nm,20.0s,MS5.2
ACSO Alum Creek Sta 118.69 300 PFAKE 11 03 10.0 +12
ACSO LR LR
comp=Z,507nm,22.0s,MS5.1
WCI Wyandotte Cave 118.87 296 PFAKE 11 03 10.0 +11
WCI LR LR
comp=Z,551nm,22.0s,MS5.1
GYA Guiyang 120.00 86 Pdif Pdif 10 59 27.8 +2.5
GYA PKP PKPdf 11 03 02.5 +1.1
GYA PP PP 11 04 32.0 +5.7
GYA PKS 11 06 39.5
GYA AMB AMB
comp=Z,120nm,7.8s
GYA LR LR
comp=N,270nm,20.6s,MS4.9
GYA LR LR
comp=E,180nm,21.0s,MS4.9
GYA LR LR
comp=Z,240nm,20.0s,MS4.8
MIAR Mount Ida 120.01 288 PFAKE 11 03 10.0 +8.8
MIAR LR LR
comp=Z,966nm,19.0s,MS5.5
ARU Arti 120.37 33 PFAKE 11 03 10.0 +8.9
ARU LR LR
comp=Z,504nm,20.0s,MS5.2
JCT Junction City 120.46 281 PFAKE 11 03 10.0 +7.8
JCT LR LR
comp=Z,239nm,21.0s,MS4.8
AAM Ann Arbor 120.58 301 PFAKE 11 03 10.0 +8.0
AAM LR LR
comp=Z,701nm,21.0s,MS5.3
CCM Cathedral Cave 121.35 293 PFAKE 11 03 20.0 +16
CCM LR LR
comp=Z,703nm,22.0s,MS5.3
CD2 Chengdu 121.69 80 PKP PKPdf 11 03 07.5 +3.0
CD2 AMB AMB
comp=Z,130nm,5.4s
CD2 LR LR
comp=N,380nm,18.6s
CD2 LR LR
comp=Z,300nm,19.8s,MS4.9
BRVK Borovoye 121.76 42 PFAKE 11 03 20.0 +16
BRVK LR LR
comp=Z,502nm,20.0s,MS5.2
TXAR Lajitas Array 121.81 277 PKP PKPdf 11 03 05.4 +0.6
comp=Z,0.3nm,0.8s,baz=184,slow=3.8,SNR=3.6
MKAR Makanchi Array 122.12 53 PKP PKPdf 11 03 07.8 +3.0
comp=Z,0.3nm,0.2s,baz=254,slow=8.7,SNR=3.4
HDIL Hopedale 122.16 296 PFAKE 11 03 20.0 +15
HDIL LR LR
comp=Z,656nm,20.0s,MS5.3
WMQ Urumqi 122.53 59 Pdif Pdif 10 59 37.5 +0.9
WMQ PKP PKPdf 11 03 07.3 +1.6
WMQ PP PP 11 04 48.8 +5.4
WMQ PKS 11 06 42.8
WMQ SKS SKSdf 11 10 18.5 +1.7
WMQ SKKS SKKSac 11 11 40.3 -0.7
WMQ S Sdif 11 12 37.5 -1.1
WMQ SS SS 11 21 28.5 +4.3
WMQ LR LR
comp=N,370nm,22.0s,MS5.1
WMQ LR LR
comp=E,380nm,24.0s,MS5.1
WMQ LR LR
comp=Z,500nm,24.0s,MS5.1
SCHQ Schefferville 122.72 320 PFAKE 11 03 20.0 +14
SCHQ LR LR
comp=Z,577nm,20.0s,MS5.2
GLMI Grayling 122.90 302 PFAKE 11 03 20.0 +14
GLMI LR LR
comp=Z,651nm,21.0s,MS5.3
WMOK Wichita Mounta 123.04 285 PFAKE 11 03 20.0 +13
WMOK LR LR
comp=Z,586nm,19.0s,MS5.3
KURK Kurchatov 123.38 48 PFAKE 11 03 20.0 +13
KURK LR LR
comp=Z,453nm,20.0s,MS5.1
JFWS Jewell Farm 124.35 297 PFAKE 11 03 20.0 +11
JFWS LR LR
comp=Z,635nm,22.0s,MS5.2
ENH Enshi 124.50 85 PFAKE 11 03 20.0 +10
ENH LR LR
comp=Z,389nm,19.0s,MS5.1
MNTX Cornudas Mount 124.55 277 PFAKE 11 03 20.0 +10
MNTX LR LR
comp=Z,307nm,21.0s,MS4.9
AMTX Amarillo 124.78 283 PFAKE 11 03 20.0 +10

AMTX LR LR
comp=Z,669nm,20.0s,MS5.3
LVZ Lovozero 124.96 15 PFAKE 11 03 20.0 +10
LVZ LR LR
comp=Z,551nm,20.0s,MS5.2
KSU1 Kansas State U 125.00 290 PFAKE 11 03 20.0 +9.4
KSU1 LR LR
comp=Z,478nm,20.0s,MS5.2
SCIA State Center 125.18 294 PFAKE 11 03 20.0 +9.2
SCIA LR LR
comp=Z,680nm,21.0s,MS5.3
LZH Lanzhou 125.54 76 *e*PKP PKPdf 11 03 10.0 -1.7
LZH sPKP 11 03 16.5
LZH PP PP 11 05 07.5 +3.8
LZH SKKS SKKSac 11 11 52.5 -8.2
LZH SS SS 11 22 04.0 +1.6
LZH AMB AMB
comp=Z,140nm,5.9s
KEV Kevo 125.74 11 PFAKE 11 03 20.0 +9.0
KEV LR LR
comp=Z,520nm,21.0s,MS5.2
COWI Conover 126.04 301 PFAKE 11 03 20.0 +7.7
COWI LR LR
comp=Z,691nm,21.0s,MS5.3
CBKS Cedar Bluff 126.51 287 PFAKE 11 03 30.0 +17
CBKS LR LR
comp=Z,727nm,19.0s,MS5.4
YHNB Yeheng 127.10 100 PFAKE 11 03 30.0 +15
YHNB LR LR
comp=Z,533nm,20.0s,MS5.2
ANMO Albuquerque 127.53 279 *e*PKIKP PKPdf 11 03 19.4 +3.8
ANMO MLR MLR
comp=Z,402nm,19.0s
SFJD Kangerlussuaq 127.59 337 PFAKE 11 03 30.0 +15
SFJD LR LR
comp=Z,443nm,19.0s,MS5.2
TUC Tucson 128.11 274 PFAKE 11 03 30.0 +13
TUC LR LR
comp=Z,265nm,19.0s,MS4.9
ECSD EROS Data Cent 128.24 294 *e*PKPdf PKPdf 11 03 18.4 +1.8
ECSD LR LR
comp=Z,503nm,20.0s,MS5.2
EYMN Ely 128.48 301 PFAKE 11 03 30.0 +13
EYMN LR LR
comp=Z,659nm,21.0s,MS5.3
SDCO Great Sand Dun 128.97 282 *e*PKPdf PKPdf 11 03 22.0 +3.8
SDCO LR LR
comp=Z,556nm,22.0s,MS5.2
OGNE Ogallala 129.26 288 PFAKE 11 03 30.0 +11
OGNE LR LR
comp=Z,577nm,20.0s,MS5.3
MVCO Mesa Verde 130.30 280 PFAKE 11 03 30.0 +9.2
MVCO LR LR
comp=Z,562nm,20.0s,MS5.3
ISCO Idaho Springs 130.46 284 PFAKE 11 03 30.0 +9.0
ISCO LR LR
comp=Z,776nm,21.0s,MS5.4
WUAZ Wupatki 130.75 276 PFAKE 11 03 30.0 +8.3
WUAZ LR LR
comp=Z,341nm,19.0s,MS5.1
AGMN Agassiz Refuge 130.91 299 PFAKE 11 03 30.0 +8.5
AGMN LR LR
comp=Z,489nm,21.0s,MS5.2
NJ2 Nanjing 131.22 91 *e*PKP PKPdf 11 03 21.3 -1.4
ULM Lac du Bonnet 132.17 301 PFAKE 11 03 40.0 +16
ULM LR LR
comp=Z,614nm,21.0s,MS5.3
PFO Pinyon Flat Ob 132.32 270 PFAKE 11 03 40.0 +15
PFO LR LR
comp=Z,137nm,21.0s,MS4.6
RSSD Black Hills 132.49 290 *e*PKIKP PKPdf 11 03 27.8 +3.1
RSSD MLR MLR
comp=Z,1μm,22.0s,MS5.5
MVU Marysvale 133.31 278 PFAKE 11 03 40.0 +14
MVU LR LR
comp=Z,756nm,20.0s,MS5.4
KBS Kingsbay 133.71 3 PFAKE 11 03 40.0 +14
KBS LR LR
comp=Z,364nm,21.0s,MS5.1
BW06 Boulder Array 134.65 285 PFAKE 11 03 40.0 +11
BW06 LR LR
comp=Z,681nm,21.0s,MS5.3
PDAR Pinedale Array 134.65 285 PKP PKPdf 11 03 29.4 +0.6
comp=Z,0.5nm,0.8s,baz=151,slow=3.4,SNR=3.8
ZAK Zakamensk 134.79 62 *e*P Pdif 11 00 26.4 -4.7
ZAK pmax pmax
comp=Z,1.0nm,1.4s
DUG Dugway 134.80 280 PFAKE 11 03 40.0 +11
DUG LR LR
comp=Z,468nm,22.0s,MS5.2
SONM Songino Array 134.85 67 PKP PKPdf 11 03 32.3 +3.3
comp=Z,0.5nm,0.6s,baz=228,slow=3.7,SNR=3.3
DAC Darwin (Calif) 134.87 272 PFAKE 11 03 40.0 +11
DAC LR LR
comp=Z,341nm,19.0s,MS5.1
HWUT Hardware Ranch 135.03 282 PFAKE 11 03 40.0 +10
HWUT LR LR
comp=Z,545nm,20.0s,MS5.3
ULN Ulaanbaatar 135.22 67 PFAKE 11 03 40.0 +10
ULN LR LR
comp=Z,354nm,21.0s,MS5.1
BJT Baijiatuau 135.25 81 PFAKE 11 03 40.0 +10
BJT LR LR
comp=Z,288nm,20.0s,MS5.0
BJI Beijing 135.27 81 PKP PKPdf 11 03 30.0 0.0
BJI PP PP 11 06 09.5 +2.6
BJI SS SS 11 24 04.8 +3.0
BJI AMB AMB
comp=Z,130nm,4.1s
BJI LR LR
comp=N,280nm,22.6s,MS5.0
BJI LR LR
comp=E,220nm,21.9s,MS5.0
BJI LR LR
comp=Z,200nm,26.6s,MS4.7
LAO LASA Array 135.31 291 PFAKE 11 03 40.0 +10
LAO LR LR
comp=Z,474nm,20.0s,MS5.2
DGMT Dagmar 135.33 294 PFAKE 11 03 40.0 +10
DGMT LR LR
comp=Z,415nm,20.0s,MS5.2
AHID Auburn Hatcher 135.52 283 PFAKE 11 03 40.0 +10
AHID LR LR
comp=Z,669nm,20.0s,MS5.4
TLY Talaya 135.75 61 PFAKE 11 03 40.0 +9.5
TLY LR LR
comp=Z,454nm,20.0s,MS5.2
TPH Tonopah 135.90 274 PFAKE 11 03 40.0 +8.7
TPH LR LR
comp=Z,482nm,21.0s,MS5.2
LKWY Lake 136.27 286 PFAKE 11 03 40.0 +8.2
LKWY LR LR
comp=Z,1μm,20.0s,MS5.6
ELK Elko 136.55 278 PFAKE 11 03 50.0 +18
ELK LR LR
comp=Z,660nm,21.0s,MS5.3
NVAR Mina Array Bea 136.76 274 PKP PKPdf 11 03 34.7 +1.8
comp=Z,0.8nm,0.9s,baz=169,slow=2.8,SNR=4.3
NVAR Mina Array Bea 136.76 274 PKP PKPdf 11 03 34.7 +1.8
BMN Battle Mountai 137.48 277 PFAKE 11 03 50.0 +16
BMN LR LR
comp=Z,483nm,22.0s,MS5.2
BOZ Bozeman (W) 137.63 286 PFAKE 11 03 50.0 +16
BOZ LR LR
comp=Z,473nm,21.0s,MS5.2
CMB Columbia Colle 137.70 271 PFAKE 11 03 50.0 +15
CMB LR LR
comp=Z,303nm,21.0s,MS5.0
FFC Flin Flon 137.82 303 PFAKE 11 03 50.0 +16
FFC LR LR
comp=Z,624nm,21.0s,MS5.3
HLID Hailey 137.89 282 PFAKE 11 03 50.0 +15
HLID LR LR
comp=Z,491nm,20.0s,MS5.2
DLMT Dillon 137.99 285 *e*PKPdf PKPdf 11 03 35.7 +0.8
EGMT Eagleton 138.03 290 *e*PKPdf PKPdf 11 03 41.6 +6.7
EGMT LR LR
comp=Z,536nm,20.0s,MS5.3
LRM Limekiln Ridge 138.19 286 *e*PKPdf PKPdf 11 03 40.4 +5.1
MCCM Marconi Confer 139.21 270 PFAKE 11 03 50.0 +13
MCCM LR LR
comp=Z,209nm,21.0s,MS4.9
CHMT Chamberlain Mo 139.29 287 *e*PKPdf PKPdf 11 03 43.7 +6.5
INCN Inchon 139.57 92 PFAKE 11 03 50.0 +12
INCN LR LR
comp=Z,372nm,21.0s,MS5.1
WVOR Wild Horse Val 139.58 278 PFAKE 11 03 50.0 +12
WVOR LR LR
comp=Z,423nm,19.0s,MS5.2
MSO Missoula 139.62 286 *e*PKPdf PKPdf 11 03 38.3 +0.4
MSO LR LR
comp=Z,421nm,21.0s,MS5.2
HOPS Hopland 139.90 270 PFAKE 11 03 50.0 +11
HOPS LR LR
comp=Z,309nm,22.0s,MS5.0
MOD Modoc 140.20 276 PFAKE 11 03 50.0 +11
MOD LR LR
comp=Z,182nm,21.0s,MS4.8
WDC Whiskeytown Da 140.64 273 PFAKE 11 03 50.0 +10
WDC LR LR
comp=Z,187nm,21.0s,MS4.8
HUMO Hull Mountain 142.17 275 PFAKE 11 03 50.0 +7.4
HUMO LR LR
comp=Z,119nm,21.0s,MS4.6
NEW Newport 142.21 286 PFAKE 11 03 50.0 +7.5
NEW LR LR
comp=Z,606nm,21.0s,MS5.3
HAWA Hanford 142.50 282 PFAKE 11 04 00.0 +17
HAWA LR LR
comp=Z,437nm,19.0s,MS5.2
WAKE Wake Island 142.78 157 PFAKE 11 04 00.0 +16
WAKE LR LR
comp=Z,347nm,21.0s,MS5.1
HIA Hailar 142.91 73 PFAKE 11 04 00.0 +16
HIA LR LR
comp=Z,589nm,20.0s,MS5.3
CN2 Changchun 142.99 84 *e*PKP PKPdf 11 03 42.0 -2.0
CN2 *e*PP PP 11 06 57.5 +3.0
CN2 AMB AMB
comp=Z,200nm,6.0s
COR Corvallis 143.58 277 PFAKE 11 04 00.0 +15
COR LR LR
comp=Z,474nm,21.0s,MS5.2
BOD Bodaibo 144.04 57 *e*PKIKP PKPdf 11 03 42.2 -3.2
BOD pmax pmax
comp=Z,7.0nm,1.0s
JCW Jim Creek 144.86 283 *e*PKPdf PKPdf 11 03 45.4 -1.7
GNW Green Mountain 145.02 282 *e*PKPdf PKPdf 11 03 46.6 -0.8
NLWA Neilton Lookou 145.52 281 *e*PKPbc PKPbc 11 03 48.3 -0.2
NLWA LR LR
comp=Z,450nm,20.0s,MS5.2
MAJO Matsushiro 145.52 104 PFAKE 11 04 00.0 +11
MAJO LR LR
comp=Z,364nm,22.0s,MS5.1
MJAR Matsushiro Arr 145.52 104 PKPbc PKPbc 11 03 51.4 +2.6
comp=Z,6.4nm,1.1s,baz=225,slow=4.2,SNR=8.0
MDJ Mudanjiang 145.86 86 PKPbc PKPbc 11 03 48.8 -0.8
MDJ Mudanjiang 145.86 86 PFAKE 11 04 00.0 +11
MDJ LR LR
comp=Z,359nm,20.0s,MS5.2
YKA Yellowknife Ar 147.09 310 PKPbc PKPbc 11 03 52.4 -0.2
comp=Z,2.2nm,0.9s,baz=103,slow=2.6,SNR=9.7
KLR Kul'dur 149.62 80 *e*PKIKP PKPdf 11 03 54.6 -0.4
ERM Erimo 152.06 102 PFAKE 11 04 10.0 +11
ERM LR LR
comp=Z,350nm,21.0s,MS5.1
TIXI Tiksi 152.38 33 *i* PKIKP PKPdf 11 04 14.1 +16
TIXI pmax pmax
comp=Z,10.0nm,1.4s
TIXI Tiksi 152.38 33 PFAKE 11 04 10.0 +11
TIXI LR LR
comp=Z,449nm,21.0s,MS5.2
YAK Yakutsk 152.79 54 PFAKE 11 04 10.0 +11
YAK LR LR
comp=Z,435nm,22.0s,MS5.2
YSS Yuzh-Sakhalins 154.78 92 PFAKE 11 04 10.0 +7.2
YSS LR LR
comp=Z,146nm,21.0s,MS4.8
INK Inuvik 155.33 321 PKPab PKPab 11 04 24.5 -3.9
comp=Z,2.1nm,1.0s,baz=112,slow=3.3,SNR=3.1
EGAK Eagle 158.98 313 PFAKE 11 04 20.0 +12
EGAK LR LR
comp=Z,893nm,21.0s,MS5.6
COLA College 161.72 316 PFAKE 11 04 20.0 +9.4
COLA LR LR
comp=Z,590nm,19.0s
PMR Palmer 163.10 305 *e*PKIKP PKPdf 11 04 09.6 -2.5
KDAK Kodiak Island 165.20 292 PFAKE 11 04 30.0 +16
KDAK LR LR
comp=Z,899nm,22.0s
PET Petropavlovsk 166.62 89 PFAKE 11 04 30.0 +15
PET LR LR
comp=Z,717nm,21.0s

CASC 30 10:50:56.5±1.3, 8°.40N×82°.99W, h10km±7km, MD3.5, 3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**325**	⇑*i*P	Pg	10 51 02.5	-0.2
ACR				⇑*e*P		10 51 02.5	
ACR				*e*S	Sg	10 51 08.9	+2.0
BRU2	**Volcan**	**0.49**	**37**	⇓*i*P	Pg	10 51 06.8	+0.7
BRU2				*e*S	Sg	10 51 14.3	+1.7
BAR1		**0.90**	**339**	⇓*e*P	Pg	10 51 12.9	-0.9
BAR1				⇓*i*P		10 51 12.9	
BUS	**Buena Vista**	**1.38**	**327**	*e*P	Pn	10 51 21.1	-0.7
BUS				⇑*i*P		10 51 21.2	
URSC	**Urasca**	**1.63**	**331**	*e*P	Pn	10 51 24.8	-0.4

IDC 30 10:52:07.2±2.4, 4°.76S×153°.93E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/15, mbtmp4.1/3, Error ellipse: s-maj=109.6km s-min=47.2km az=104.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.95**	**224**	P	P	10 57 50.8	+0.2
ASAR				PcP	PcP	11 01 12.6	-0.2
MAW	**Mawson**	**86.04**	**203**	P	P	11 04 49.3	-0.1

0.2nm,0.3s,baz=56,slow=9.0,SNR=6.4
0.5nm,0.7s,baz=55,slow=2.3,SNR=4.4
6.7nm,0.9s,baz=92,slow=7.9,SNR=11
0.6nm,0.5s,baz=120,slow=5.5,SNR=3.6

BVAR Borovoye Array 89.89 323 P P 11 05 08.2 +0.1

CASC 30 10:58:44.3±4.4, 8°.45N×82°.93W, h0km±13km, MD4.3, 6C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**311**	⇑*i*P	Pg	10 58 50.7	+0.5
ACR				*e*S	Sg	10 58 57.0	+2.8
BRU2	**Volcan**	**0.41**	**35**	⇓*i*P	Pg	10 58 54.4	+2.2
BRU2				*e*S	Sg	10 59 02.6	+4.9
BAR1		**0.87**	**335**	⇓*i*P	Pg	10 59 01.0	0.0
BAR1				*e*S	Sg	10 59 13.6	+1.3
CNI	**Changuinola**	**1.04**	**23**	*e*P	Pg	10 59 04.9	+0.6
BUS	**Buena Vista**	**1.36**	**323**	⇑*i*P	Pg	10 59 08.9	-1.6
BUS				*e*P		10 59 09.0	
LIO	**Limon**	**1.54**	**356**	⇓*i*P	Pn	10 59 10.9	-2.2
LIO				⇑*i*P		10 59 12.0	
QCR	**Quepos**	**1.55**	**309**	⇑*i*P	Pn	10 59 10.9	-2.3
QCR				*e*S	Sn	10 59 35.9	+1.8
URSC	**Urasca**	**1.61**	**329**	⇑*i*P	Pn	10 59 12.6	-1.4
URSC				⇑*i*P		10 59 12.6	
SJS	**Escuela Geolog**	**1.84**	**323**	*e*P	Pn	10 59 15.9	-1.3
CGA2	**Cerro Gallo 2**	**2.17**	**316**	*e*P	Pn	10 59 21.5	-0.2
CGA2				*e*S	Sn	10 59 48.7	-0.5
JCR	**Jicaral**	**2.56**	**303**	*e*P	Pn	10 59 26.3	-0.7
FORC	**Fortuna**	**2.63**	**320**	*e*P	Pn	10 59 27.8	-0.3
CHPA	**Chiripa**	**2.77**	**316**	*i* P	Pn	10 59 34.4	+4.3
AMAS	**Alto Masis**	**2.95**	**317**	*i* P	Pn	10 59 34.9	+2.4
AMAS				*i* S	Sn	11 00 12.7	+4.0
PTEN	**Parque Tenorio**	**3.02**	**318**	*i* P	Pn	10 59 36.9	+3.4
VCR	**Vista de Mar**	**3.14**	**302**	*e*P	Pn	10 59 33.9	-1.1
BCIP	**Isla Barro Col**	**3.14**	**77**	*e*P	Pn	10 59 35.2	+0.1
MESS	**Mesas**	**3.18**	**316**	*i* P	Pn	10 59 39.3	+3.6
LIM1	**Limonal**	**3.19**	**314**	*i* P	Pn	10 59 38.6	+2.8
NY14	**Universidad de**	**3.37**	**311**	*i* P	Pn	10 59 41.2	+3.0
GBS2	**Las Lilas**	**3.43**	**314**	*i* P	Pn	10 59 41.9	+2.8

*ISCJB **30** 11:03:08.2±0.4, 49°.31N±0°.03×75°.90E±0°.05, h10km, Error ellipse: s-maj=5.0km s-min=3.9km az=43.8*
*NNC **30** 11:03:08.3±0.6, 49°.37N×75°.94E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=5.2km s-min=4.9km az=0.0*
*IDC **30** 11:03:10.0±1.1, 49°.49N×76°.20E, h0km, mb1 3.2/3, mb1mx3.1/27, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=11.0km s-min=7.6km az=32.0*

ISC 30 11:03:10.2±0.4, 49°.36N±0°.03×75°.98E±0°.05, h10km, n12, σ1°18/24, 13C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.08**	**51**	⇓Pn	**Pn**	**11 03 44.6**	**-0.5**
KURBB				⇑Sn	**Sn**	**11 04 10.7**	**-0.3**
KURK	**Kurchatov**	**2.18**	**50**	⇑Pn	**Pn**	**11 03 46.6**	**+0.1**
KURK				⇑Sn	**Sn**	**11 04 15.0**	**+1.5**
KURK	**Kurchatov**	**2.18**	**50**	Pg	**Pn**	**11 03 43.8**	**-2.7**
KURK				Lg		11 04 10.6	
VOSK	**Vostochnaya**	**4.62**	**319**	⇑Pn	**Pn**	**11 04 20.6**	**+0.6**
VOSK				⇑Sn	**Sn**	**11 05 12.4**	**-1.2**
VOSK				⇑Lg		11 05 32.8	
MK31	**Makanchi Array**	**4.95**	**119**	Pn	**Pn**	**11 04 24.4**	**-0.1**
MK31				⇓Sn	**Sn**	**11 05 24.4**	**+2.8**
MK31				⇓Lg		11 05 45.7	
MKAR	**Makanchi Array**	**4.95**	**119**	Pn	**Pn**	**11 04 24.8**	**+0.3**
MKAR				Pg	**Pb**	**11 04 34.8**	**-2.0**
MKAR				Sn	**Sn**	**11 05 23.3**	**+1.7**
MKAR				Lg		11 05 41.7	
BVA0	**Borovoye Array**	**5.08**	**318**	⇑Pg	**Pb**	**11 04 40.0**	**+0.8**
BVA0				Lg		11 05 48.6	
BVAR	**Borovoye Array**	**5.08**	**318**	Pn	**Pn**	**11 04 27.2**	**+0.8**
BVAR				Pg	**Pb**	**11 04 37.3**	**-1.8**
BVAR				Sn	**Sn**	**11 05 26.2**	**+1.2**
BVAR				Lg		11 05 48.8	
ZRNK	**Zerenda**	**5.68**	**312**	⇑Pn	**Pn**	**11 04 35.0**	**+0.5**
ZRNK				⇑Sn	**Sn**	**11 05 40.6**	**+1.0**
ZRNK				⇑Lg		11 06 09.0	
TKM2	**Tokmak 2**	**6.44**	**183**	⇓Pn	**Pn**	**11 04 43.9**	**-1.1**
TKM2				⇓Sn	**Sn**	**11 05 58.9**	**+0.3**
TKM2				⇑Lg		11 06 36.0	
ZALV	**Zalesovo Beam**	**7.17**	**47**	Pn	**Pn**	**11 04 54.1**	**-0.8**
ZALV				Sn	**Sn**	**11 06 14.8**	**-1.5**
KK31	**Karatay Array**	**7.31**	**213**	Pn	**Pn**	**11 04 57.9**	**+1.0**
KK31				⇑Sn	**Sn**	**11 06 18.4**	**-1.5**
KK31				⇑Lg		11 07 01.8	

0.3nm,0.2s,baz=29,slow=13,SNR=5.2
2.2nm,0.6s,baz=27,slow=24,SNR=3.7
0.4nm,0.2s,baz=29,slow=27,SNR=3.8

*NEIC **30** 11:09:34.1±6.2, 6°.59S×129°.98E, h94km±37km, Error ellipse: s-maj=62.2km s-min=34.8km az=177.0*
*IDC **30** 11:09:45.9±8.0, 7°.16S×129°.77E, h185km±71km, mb3.6/1, mb1 3.6/3, mb1mx3.2/17, mbtmp3.5/3, MS4.4/2, Ms1 4.4/2, ms1mx3.2/24, Error ellipse: s-maj=88.4km s-min=44.4km az=76.0*

ISC 30 11:09:41.5±2.9, 7°.0S±0°.1×130°.1E±0°.1, h140km±21km, n9, σ1°38/9, mb4.4/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.10**	**158**	*e*Pn	**Pn**	**11 11 08.0**	**-1.6**
KAKA				*e*Sn	**Sn**	**11 12 20.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**11.83**	**201**	P	**Pn**	**11 12 24.7**	**-1.2**
FITZ				S	**Sn**	**11 14 37.6**	**+1.1**
WRAB	**Tennant Creek**	**13.48**	**163**	*e*Pn	**Pn**	**11 12 46.2**	**-1.0**
ASAR	**Alice Springs**	**16.94**	**168**	P	**Pn**	**11 13 31.9**	**+1.6**
ASAR				S	**S**	**11 16 36.8**	**-2.2**
STKA	**Stephens Creek**	**26.95**	**158**	P	**P**	**11 15 10.2**	**+0.2**
RPZ	**Rata Peaks**	**51.16**	**142**	*e*P	**P**	**11 18 31.5**	**+1.2**
AFI	**Afiamalu**	**57.46**	**102**	LR	LR	11 43 47.2	
MKAR	**Makanchi Array**	**68.30**	**327**	LR	LR	11 51 35.2	
LPAZ	**La Paz**	**150.64**	**142**	PKPbc	PKPbc	11 29 17.8	-0.3

0.6nm,0.3s,baz=24,slow=11,SNR=39
1.5nm,0.3s,baz=109,slow=17,SNR=7.5
0.5nm,0.3s,baz=346,slow=9.1,SNR=38
0.3nm,0.3s,baz=348,slow=26,SNR=6.7
1.9nm,0.8s,mb3.8,baz=331,slow=10,SNR=3.3
14nm,0.3s,mb5.0
comp=Z,334nm,18.2s,baz=186,slow=35
comp=Z,261nm,20.1s,baz=148,slow=37
0.6nm,0.3s,baz=248,slow=5.4,SNR=6.0

IDC 30 11:20:51.2±1.5, 32°.59S×179°.60W, h0km, mb3.9/2, mb1 3.9/2, mb1mx3.7/15, mbtmp3.9/2, Error ellipse: s-maj=53.1km s-min=37.0km az=65.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.69**	**270**	P	P	11 28 41.8	-0.1
QSPA	**South Pole Qui**	**57.53**	**180**	P	P	11 30 42.2	+0.4
FINES	**FINESS Array B**	**146.69**	**338**	PKPbc	PKPbc	11 40 33.2	-0.9
NOA	**NORSAR Array B**	**150.67**	**349**	PKPbc	PKPbc	11 40 44.5	0.0

0.4nm,0.4s,baz=111,slow=7.2,SNR=9.3
2.0nm,0.8s,baz=324,slow=0.6,SNR=20
1.2nm,0.4s,baz=52,slow=5.2,SNR=9.5
0.6nm,0.5s,baz=15,slow=4.1,SNR=3.5

*IDC **30** 11:34:08.7±1.8, 17°.40N×145°.82E, h206km±17km, mb3.8/8, mb1 4.0/9, mb1mx3.6/23, mbtmp3.8/9, MS2.8/1, Ms1 2.8/1, ms1mx2.3/32, Error ellipse: s-maj=20.2km s-min=14.7km az=103.0*
*ISCJB **30** 11:34:09.1±1.2, 17°.35N±0°.08×145°.7E±0°.1, h220km±11km, mb4.1/30, Error ellipse: s-maj=20.1km s-min=10.6km az=22.2*
*NEIC **30** 11:34:10.0±1.3, 17°.30N×145°.86E, h215km±13km, mb4.3/17, Error ellipse: s-maj=13.3km s-min=10.3km az=102.0*

ISC 30 11:34:09.4±1.2, 17°.39N±0°.08×145°.7E±0°.1, h208km±11km, n42, σ0°65/42, mb4.0/30, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.87**	**192**	P	**Pn**	**11 35 09.6**	**-0.3**
GUMO				S	**Sn**	**11 35 57.7**	**+0.3**
GUMO				LR	LR	11 36 04.4	
GUMO	**Guam**	**3.87**	**192**	P	**Pn**	**11 35 09.6**	**-0.3**
GUMO				S	**Sn**	**11 35 57.7**	**+0.3**
JOW	**Kunigami**	**18.68**	**303**	P	**P**	**11 38 16.7**	**+4.6**
KSRS	**Korea Array**	**25.39**	**325**	pP	pP	11 39 59.0	0.0
WRAB	**Tennant Creek**	**38.73**	**197**	*e*P	**P**	**11 41 14.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**40.42**	**210**	*e*P	**P**	**11 41 28.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**40.42**	**210**	P	**P**	**11 41 27.5**	**-0.1**
ASAR	**Alice Springs**	**42.40**	**196**	P	**P**	**11 41 42.5**	**-1.2**
RMQ	**Roma**	**43.71**	**176**	*e*P	**P**	**11 41 53.4**	**-0.6**

comp=Z,137nm,20.0s,baz=331,slow=30
0.8nm,0.3s,baz=239,slow=13,SNR=9.9
0.7nm,0.3s,baz=230,slow=24,SNR=5.9
0.3nm,0.2s,baz=29,slow=13,SNR=5.2
2.2nm,0.6s,baz=27,slow=24,SNR=3.7
0.4nm,0.2s,baz=29,slow=27,SNR=3.8
12nm,0.8s,mb4.4,baz=38,slow=8.5,SNR=40
0.7nm,0.4s,mb3.4,baz=18,slow=6.5,SNR=17

45nm,1.5s,mb4.6
CMAR Chiang Mai Arr 44.43 279 P **P 11 42 01.2 +1.2**
4.1nm,0.9s,mb3.8,baz=74,slow=6.4,SNR=21
MBWA Marble Bar 46.01 215 *e*P **P 11 42 12.6 +0.4**
CMSA Cobar Meteorol 48.64 180 *e*P **P 11 42 32.1 -0.3**
STKA Stephens Creek 49.14 185 P **P 11 42 35.8 -0.3**
7.2nm,1.1s,mb3.9,baz=355,slow=11,SNR=6.8
BBOO Buckleboo 50.76 191 *e*P **P 11 42 48.3 0.0**
8.2nm,0.6s,mb4.3
FORT Forrest 50.81 200 *e*P **P 11 42 49.5 +0.8**
18nm,0.9s,mb4.5
YNG Young 51.46 177 *e*P **P 11 42 53.5 0.0**
4.4nm,0.8s,mb3.9
MORW Morawa 54.36 212 *e*P **P 11 43 14.7 -0.1**
MKAR Makanchi Array 59.39 314 P **P 11 43 49.2 -0.7**
0.2nm,0.4s,mb3.1,baz=108,slow=9.4,SNR=2.9
CHUM Lake Minchumin 62.29 26 *e*P **P 11 44 09.2 +0.1**
3.6nm,0.8s,mb4.0
BPAW Bear Paw Mtn. 62.91 26 *e*P **P 11 44 12.6 -0.7**
3.7nm,0.9s,mb4.0
PAX Paxson 65.05 28 *e*P **P 11 44 26.6 -0.5**
1.7nm,0.5s,mb3.9
RPZ Rata Peaks 65.08 160 *e*P **P 11 44 26.1 -1.4**
7.2nm,0.8s,mb4.3
BVAR Borovoye Array 67.50 321 P **P 11 44 41.7 -1.1**
0.4nm,0.3s,mb3.5,baz=81,slow=9.5,SNR=5.0
INK Inuvik 70.56 23 P **P 11 45 00.4 -1.0**
2.5nm,0.8s,mb3.9,baz=258,slow=11,SNR=8.7
DLBC Dease Lake 72.37 33 *e*P **P 11 45 12.2 -0.2**
YKA Yellowknife Ar 79.13 28 P **P 11 45 49.5 -1.1**
2.4nm,0.8s,mb3.9,baz=291,slow=5.4,SNR=11
YKA pP pP 11 46 39.9 -0.7
0.9nm,0.8s,baz=292,slow=5.6,SNR=3.7
YKA Yellowknife Ar 79.13 28 P **P 11 45 49.5 -1.1**
YKA pP pP 11 46 39.9 -0.7
CMB Columbia Colle 82.47 53 *e*P **P 11 46 08.8 0.0**
11nm,1.4s,mb4.3
BSMT Bassoo Peak 83.48 42 *e*P **P 11 46 14.5 +0.7**
3.2nm,1.0s,mb4.0
NVAR Mina Array Bea 83.93 52 P **P 11 46 16.6 +0.3**
2.1nm,0.5s,mb4.1,baz=266,slow=6.2,SNR=27
HLID Hailey 85.12 46 *e*P **P 11 46 22.5 +0.3**
1.7nm,0.9s,mb3.8
MCMT McKenzie Canyo 85.75 44 *e*P **P 11 46 25.4 +0.2**
0.7nm,0.8s,mb3.4
YMR Madison River 87.06 44 *e*P **P 11 46 32.7 +1.1**
3.7nm,0.7s,mb4.2
DUG Dugway 87.39 49 *e*P **P 11 46 33.4 +0.2**
14nm,1.4s,mb4.5
ARUT Antelope Range 87.77 51 *e*P **P 11 46 35.8 +0.7**
4.9nm,0.9s,mb4.3
HWUT Hardware Ranch 87.77 47 *e*P **P 11 46 35.2 +0.2**
1.5nm,0.7s,mb3.9
JLU Jordanelle 88.22 48 *e*P **P 11 46 37.3 +0.2**
9.4nm,1.3s,mb4.5
MSU Marysvale 88.44 50 *e*P **P 11 46 39.1 +0.8**
2.3nm,1.0s,mb4.0
SRU San Rafael 89.43 49 *e*P **P 11 46 42.9 0.0**
4.2nm,0.8s,mb4.3
PV01 Paradox Valley 91.22 49 *e*P **P 11 46 51.3 +0.1**
320nm,0.8s
SMCO Snowmass 91.94 48 *e*P **P 11 46 55.1 +0.6**
2.5nm,0.8s,mb4.2
LPAZ La Paz 147.60 93 PKPbc PKPbc 11 53 30.2 +0.2
2.9nm,0.6s,baz=25,slow=2.3,SNR=12

DJA 30 11:34:25.0±86N×96°82E, h30km, MLv3.5/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.88**	**60**	P	Pn	11 34 41.0	-0.3
GSI				S	Sn	11 34 53.8	+0.8
MNSI	**Mandailing Nat**	**2.76**	**91**	P	Pn	11 35 11.8	+4.6
MNSI				S	Sn	11 35 42.0	+2.4
PPI	**Padang Panjang**	**3.81**	**110**	P	Pn	11 35 22.6	+0.9
PPI				S	Sn	11 35 59.1	-6.4
PDSI	**Padang**	**4.04**	**116**	P	Pn	11 35 24.5	-0.4
PDSI				S	Sn	11 36 02.5	-8.8
SDSI	**Sungai Dareh**	**4.94**	**111**	P	Pn	11 35 37.7	+0.5

*ISK **30** 11:48:00.8, 36.°95N×29.°24E, h8km, MD3.2*
*ISCJB **30** 11:48:01.4±0.5, 36.°96N±0.°03×29.°23E±0.°04, h7km±5km, Error ellipse: s-maj=5.5km s-min=4.2km az=35.2*
*CSEM **30** 11:48:01.4±0.1, 36.°96N×29.°23E, h8km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.5km az=154.0*
*DDA **30** 11:48:01.8, 36.°98N×29.°18E, h7km±3km, Md3.1*
*ATH **30** 11:48:03.0, 36.°93N×29.°10E, h24km, MD3.2/4*
ISC 30 11:48:01.8±0.5, 36.°95N±0.°03×29.°23E±0.°04, h10km±4km, n44, σ0°65/56, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**47**	*e*PG	**Pg**	**11 48 07.0**	**-0.7**
GLHS				*e*SG	**Sg**	**11 48 11.9**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**47**	*e*Pg	**Pg**	**11 48 07.0**	**-0.7**
GLHS				*e*Sg	**Sg**	**11 48 11.9**	**+0.1**
FETY	**Fethiye**	**0.34**	**200**	*e*PG	**Pg**	**11 48 08.0**	**-0.5**
FETY				*e*SG	**Sg**	**11 48 13.2**	**+0.2**
FETY	**Fethiye**	**0.34**	**200**	*e*Pg	**Pg**	**11 48 08.0**	**-0.5**
FETY				*e*Sg	**Sg**	**11 48 13.2**	**+0.2**
GOLH	**Golhisar**	**0.39**	**43**	‖ *i*Pg	**Pg**	**11 48 09.1**	**-0.4**
GOLH				*i* Sg	**Sg**	**11 48 15.7**	**+1.0**
TURN	**Turunc**	**0.51**	**261**	*e*P	**Pg**	**11 48 15.8**	**+4.2**
TURN				*e*S	**Sg**	**11 48 27.9**	**+10**
TURN	**Turunc**	**0.51**	**261**	*e*P	**Pg**	**11 48 15.8**	**+4.2**
ELL	**Elmali**	**0.58**	**110**	*e*PG	**Pg**	**11 48 12.4**	**-0.7**
ELL	**Elmali**	**0.58**	**110**	*e*Pg	**Pg**	**11 48 12.4**	**-0.7**
DNZL	**Cakiroluk**	**0.75**	**349**	‖ *i*P	**Pg**	**11 48 15.0**	**-1.2**
DNZL				*i* S	**Sg**	**11 48 27.0**	**+1.0**
DNZL	**Cakiroluk**	**0.75**	**349**	*i* P	**Pg**	**11 48 15.0**	**-1.2**
DNZL				*i* S	**Sg**	**11 48 27.0**	**+1.0**
YER	**Yerkesik**	**0.78**	**284**	*e*PG	**Pg**	**11 48 16.5**	**-0.3**
YER	**Yerkesik**	**0.78**	**284**	*e*Pg	**Pg**	**11 48 16.5**	**-0.3**
AKAS	**Kas**	**0.78**	**157**	*e*P	**Pg**	**11 48 17.2**	**+0.3**
AKAS				*e*S	**Sg**	**11 48 30.4**	**+3.3**
AKAS	**Kas**	**0.78**	**157**	*e*P	**Pg**	**11 48 17.2**	**+0.3**
AKAS				*e*S	**Sg**	**11 48 30.4**	**+3.4**
KSL	**Kastellorizon**	**0.85**	**160**	*e*PN	**Pn**	**11 48 19.8**	**-0.1**
ARG	**Arkhangelos**	**1.15**	**231**	*e*PN	**Pn**	**11 48 23.3**	**-0.7**
ARG	**Arkhangelos**	**1.15**	**231**	*e*Pn	**Pn**	**11 48 23.3**	**-0.7**
BCK	**Bucak**	**1.20**	**65**	*e*PN	**Pn**	**11 48 23.9**	**-0.8**
BCK	**Bucak**	**1.20**	**65**	*e*Pn	**Pn**	**11 48 23.9**	**-0.7**
MLSB	**Milas**	**1.21**	**287**	*e*PN	**Pn**	**11 48 24.1**	**-0.6**
MLSB	**Milas**	**1.21**	**287**	*e*Pn	**Pn**	**11 48 24.1**	**-0.6**
AYDN	**Tasoluk**	**1.28**	**304**	*e*P	**Pn**	**11 48 25.9**	**+0.1**
AYDN				*e*S	**Sb**	**11 48 43.3**	**+0.6**
AYDN	**Tasoluk**	**1.28**	**304**	*e*P	**Pn**	**11 48 25.9**	**+0.1**
AYDN				*e*S	**Sb**	**11 48 43.3**	**+0.7**
DAT	**Datca**	**1.34**	**261**	*e*PN	**Pn**	**11 48 26.7**	**+0.1**
DAT	**Datca**	**1.34**	**261**	*e*Pn	**Pn**	**11 48 26.7**	**+0.1**
ISP	**Isparta**	**1.35**	**49**	*e*PN	**Pn**	**11 48 26.4**	**-0.4**
ISP	**Isparta**	**1.35**	**49**	*e*Pn	**Pn**	**11 48 26.4**	**-0.4**
KHL	**Karahalli**	**1.39**	**10**	*e*PN	**Pn**	**11 48 26.9**	**-0.3**
KHL	**Karahalli**	**1.39**	**10**	*e*Pn	**Pn**	**11 48 26.9**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.51**	**69**	*e*PN	**Pn**	**11 48 29.4**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.51**	**69**	*e*Pn	**Pn**	**11 48 29.4**	**+0.5**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN	**Pn**	**11 48 30.1**	**-0.3**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn	**Pn**	**11 48 30.1**	**-0.3**
SMG	**Samos**	**2.05**	**292**	*e*PN	**Pn**	**11 48 36.9**	**+0.6**
SMG	**Samos**	**2.05**	**292**	*e*Pn	**Pn**	**11 48 36.9**	**+0.6**
KARP	**Karpathos**	**2.18**	**231**	*e*PN	**Pn**	**11 48 38.6**	**+0.5**
KARP	**Karpathos**	**2.18**	**231**	*e*Pn	**Pn**	**11 48 38.6**	**+0.5**
HDMB	**Hadim**	**2.61**	**89**	*e*PN	**Pn**	**11 48 44.4**	**+0.3**
HDMB	**Hadim**	**2.61**	**89**	*e*Pn	**Pn**	**11 48 44.4**	**+0.4**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*PN	**Pn**	**11 48 45.3**	**+0.2**
KONT	**Konya--Tatoy**	**2.68**	**67**	*e*Pn	**Pn**	**11 48 45.3**	**+0.3**
KIZT	**Kizilcal**	**2.85**	**47**	*e*PN	**Pn**	**11 48 47.6**	**+0.3**
KIZT	**Kizilcal**	**2.85**	**47**	*e*Pn	**Pn**	**11 48 47.6**	**+0.3**

*ISCJB **30** 11:57:50.5±0.3, 32.°27N±0.°03×105.°26E±0.°04, h10km, mb3.9/16, Error ellipse: s-maj=5.7km s-min=3.7km az=136.7*
*IDC **30** 11:57:51.0±0.8, 32.°38N×105.°27E, h0km, mb4.0/15, mb1 4.1/17, mb1mx3.9/30, mbtmp4.0/17, ML4.0/2, Error ellipse: s-maj=30.6km s-min=16.1km az=41.0*
*NEIC **30** 11:57:52.3±0.4, 32.°32N×105.°26E, h10km, mb4.3/6, Error ellipse: s-maj=9.1km s-min=6.6km az=207.0*
*BJI **30** 11:57:52.4, 32.°35N×105.°34E, h15km, mb4.1/1, ML4.0/19, Ms4.1/7, Ms7 3.7/7*
*MOS **30** 11:57:53.9±0.9, 32.°35N×105.°27E, h33km, mb4.1/11, Error ellipse: s-maj=18.3km s-min=11.3km az=121.1*
ISC 30 11:57:52.6±0.3, 32.°30N±0.°03×105.°24E±0.°04, h10km, n49, σ0°98/58, mb3.9/16, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.88**	**223**	Pn	**Pn**	**11 58 25.0**	**+0.3**
CD2				Pg	**Pg**	**11 58 26.8**	**-1.8**
CD2				Sn	**Sn**	**11 58 50.5**	**+2.0**
CD2				Sg	**Sg**	**11 58 52.5**	**-0.5**
CD2				smax			
	comp=N,8μm,0.5s						
XAN	**Xi'an**	**3.54**	**60**	Pg	**Pb**	**11 58 55.5**	**+0.3**
XAN				Sn	**Sb**	**11 59 37.5**	**-0.7**
XAN				Sg	**Sg**	**11 59 48.0**	**+1.8**
XAN				smax			
	comp=N,580nm,0.8s						
XAN				smax			
	comp=E,230nm,0.9s						
LZH	**Lanzhou**	**3.95**	**343**	Pn	**Pn**	**11 58 54.0**	**+0.8**
LZH				Pg	**Pg**	**11 59 04.5**	**-3.7**
LZH				Sn	**Sn**	**11 59 40.5**	**+1.0**
LZH				Sg	**Sg**	**11 59 52.0**	**-7.3**
LZH				smax			
	comp=N,1μm,0.9s						
LZH				smax			
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=E,2μm,4.4s						
LZH				LR	LR		
	comp=Z,2μm,5.7s						
ENH	**Enshi**	**4.16**	**118**	*e*Pg	**Pg**	**11 59 10.9**	**-1.4**
KMI	**Kunming**	**7.48**	**198**	Pn	**Pn**	**11 59 43.0**	**+1.2**
KMI				Sn	**Sn**	**12 01 07.0**	**+0.3**
KMI				smax			
	comp=N,20nm,0.8s						
KMI				smax			
	comp=E,35nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.91**	**204**	Pn	**Pn**	**12 01 25.1**	**+1.6**
	comp=E,0.3nm,0.3s,baz=18,slow=11,SNR=10						
TAPN	**Taplejung**	**15.99**	**257**	*e*P	**Pn**	**12 01 37.0**	**-0.6**
	comp=E,10.0nm,0.7s						
ODAN	**Odare**	**16.45**	**255**	*e*P	**Pn**	**12 01 43.7**	**+0.3**
	comp=E,7.8nm,0.4s						
GUN	**Gumba**	**17.31**	**260**	*e*P	**Pn**	**12 01 54.4**	**0.0**
PKI	**Pulchoki**	**17.82**	**260**	*e*P	**Pn**	**12 02 00.5**	**-0.2**
PKI				pmax	pmax		
	comp=Z,20nm,0.6s						
PKI	**Pulchoki**	**17.82**	**260**	*e*P	**Pn**	**12 02 00.5**	**-0.2**
	comp=Z,20nm,0.6s						
PKIN	**Phulchoki**	**17.83**	**260**	*e*P	**Pn**	**12 02 00.5**	**-0.3**
	comp=Z,20nm,0.6s						
DMN	**Daman**	**18.06**	**260**	*e*P	**Pn**	**12 02 02.8**	**-0.8**
	comp=Z,27nm,0.8s						
ZAK	**Zakamensk**	**18.12**	**356**	*e*P	**Pn**	**12 02 08.1**	**+3.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSRS	**Korea Array**	**19.29**	**68**	P	**Pn**	**12 02 17.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=255,slow=9.6,SNR=11						
JOW	**Kunigami**	**20.75**	**99**	P	**P**	**12 02 33.2**	**-0.2**
	comp=Z,7.6nm,0.4s,baz=99,slow=27,SNR=7.3						
MK31	**Makanchi Array**	**22.75**	**316**	*e*P	**P**	**12 02 56.0**	**+1.3**
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**12 02 55.7**	**+0.9**
	comp=Z,2.5nm,0.7s,mb3.8,baz=108,slow=12,SNR=7.8						
MKAR	**Makanchi Array**	**22.75**	**316**	P	**P**	**12 02 55.7**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**12 03 25.1**	**-1.1**
	comp=Z,0.7nm,0.4s,mb3.6,baz=129,slow=12,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.09**	**332**	P	**P**	**12 03 25.1**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**12 03 32.8**	**-0.8**
	comp=Z,1.4nm,0.7s,mb3.6,baz=130,slow=8.7,SNR=8.2						
KURK	**Kurchatov**	**26.90**	**321**	P	**P**	**12 03 32.8**	**-0.7**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**12 04 24.4**	**+1.5**
	comp=Z,0.5nm,0.4s,mb3.7,baz=101,slow=15,SNR=2.9						
BVAR	**Borovoye Array**	**32.48**	**320**	P	**P**	**12 04 24.4**	**+1.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ABKAR	**Akbulak array**	**37.62**	**310**	*e*P	**P**	**12 05 07.1**	**-0.3**
	comp=Z,1.4nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**39.05**	**312**	P	**P**	**12 05 19.2**	**-0.1**
AKTO	**Aktyubinsk**	**39.05**	**312**	P	**P**	**12 05 19.2**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.8,baz=114,slow=22,SNR=4.6						
AKTO	**Aktyubinsk**	**39.05**	**312**	P	**P**	**12 05 19.2**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**12 07 34.2**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.2,baz=58,slow=9.1,SNR=5.5						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**12 07 34.2**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**56.57**	**336**	P	**P**	**12 07 34.2**	**-0.7**
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**12 07 37.6**	**-0.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=90,slow=6.2,SNR=5.1						
BRTR	**Keskin Array B**	**57.00**	**299**	P	**P**	**12 07 37.6**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**12 07 38.3**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.1,baz=90,slow=9.5,SNR=4.2						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**12 07 38.3**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**57.28**	**313**	P	**P**	**12 07 39.4**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.8,baz=68,slow=6.9,SNR=4.7						
WRAB	**Tennant Creek**	**58.94**	**148**	*e*P	**P**	**12 07 52.8**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	**58.94**	**148**	*e*P	**P**	**12 07 52.8**	**+0.6**
	comp=Z,3.5nm,0.5s,mb4.7						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**12 08 13.6**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.3,baz=332,slow=6.7,SNR=20						
ASAR	**Alice Springs**	**62.03**	**150**	P	**P**	**12 08 13.6**	**+0.5**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	**Hagfors**	**63.32**	**326**	P	**P**	**12 08 22.6**	**+1.2**
	comp=Z,0.7nm,0.6s,mb4.0,baz=76,slow=6.3,SNR=5.0						
HFS	**Hagfors**	**63.32**	**326**	P	**P**	**12 08 22.6**	**+1.2**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**64.17**	**327**	P	**P**	**12 08 24.8**	**-2.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=71,slow=7.4						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**12 08 25.6**	**-1.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=71,slow=6.9,SNR=5.6						
NOA	**NORSAR Array B**	**64.17**	**327**	P	**P**	**12 08 25.6**	**-1.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**67.41**	**314**	P	**P**	**12 08 48.5**	**+0.5**
	comp=Z,0.2nm,0.2s,mb3.7,baz=50,slow=12,SNR=3.7						
YKA	**Yellowknife Ar**	**80.26**	**18**	P	**P**	**12 10 01.8**	**-1.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=316,slow=4.3,SNR=4.2						
YKA	**Yellowknife Ar**	**80.26**	**18**	P	**P**	**12 10 01.8**	**-1.3**

*UPA **30** 11:58:22.0, 8.°42N×83.°00W, h0km, MW4.1*
*UCR **30** 11:58:23.4, 8.°47N×82.°98W, h4km, MD3.8*
CASC 30 11:58:22.4±2.1, 8.°41N×83.°01W, h4km, MD3.8, 1C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.29**	**327**	‖ *e*P	Pg	11 58 28.2	+0.3
ACR				*e*S	Sg	11 58 32.8	+1.0
BRU2	**Volcan**	**0.50**	**40**	‖ *i*P	Pg	11 58 32.9	+0.9
BRU2				*e*S	Sg	11 58 41.5	+3.0
BAR1		**0.88**	**340**	*e*P	Pg	11 58 38.6	-0.7
CNI	**Changuinola**	**1.11**	**26**	‖ *e*P	Pg	11 58 43.4	-0.4
CNI				*e*S	Sg	11 58 59.5	+1.2
BUS	**Buena Vista**	**1.36**	**327**	*e*P	Pn	11 58 47.2	-1.0
QCR	**Quepos**	**1.52**	**312**	‖ *e*P	Pn	11 58 50.3	-0.1
QCR				*e*S	Sn	11 59 10.2	-0.4
URSC	**Urasca**	**1.60**	**332**	‖ *e*P	Pn	11 58 51.6	0.0
URSC				*e*S	Sn	11 59 12.9	+0.1
CGA2	**Cerro Gallo 2**	**2.15**	**318**	*e*P	Pn	11 59 00.7	+1.7
CGA2				*e*S	Sn	11 59 28.6	+2.5

*MOS **30** 12:21:03.4±1.2, 21.°63N×142.°86E, h309km, mb4.3/22, Error ellipse: s-maj=14.3km s-min=7.6km az=101.0*
*JMA **30** 12:21:03.9±0.3, 21.°63N×143.°29E, h336km, M4.8*
*ISCJB **30** 12:21:05.1±0.6, 21.°62N±0.°03×142.°90E±0.°04, h324km±5km, mb4.2/50, Error ellipse: s-maj=5.8km s-min=5.3km az=143.4*
*BJI **30** 12:21:05.2, 21.°74N×143.°09E, h332km, mB4.5/11, mb4.5/18*
*IDC **30** 12:21:05.2±1.3, 21.°60N×142.°97E, h317km±12km, mb4.0/17, mb1 4.0/21, mb1mx4.0/28, mbtmp4.0/21, Error ellipse: s-maj=14.2km s-min=9.4km az=80.0*
*NEIC **30** 12:21:06.6±0.9, 21.°58N×142.°93E, h330km±10km, mb4.3/17, Error ellipse: s-maj=6.5km s-min=6.4km az=123.0*
ISC 30 12:21:06.4±0.6, 21.°65N±0.°04×142.°96E±0.°04, h323km±5km, n286, σ0°70/297, mb4.2/50, 75C-76D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**5.01**	**352**	P	**Pn**	**12 22 24.4**	**-0.5**
JHHJ				S	**S**	**12 23 27.2**	**-1.0**
CBIJ	**Chichi jima**	**5.47**	**353**	P	**Pn**	**12 22 29.2**	**-0.9**
CBIJ				*e*S	**S**	**12 23 36.1**	**-1.6**
CBIJ	**Chichi jima**	**5.47**	**353**	P	**Pn**	**12 22 29.3**	**-0.8**
	78nm,0.3s,baz=153,slow=5.4,SNR=35						
CBIJ				S	**S**	**12 23 36.3**	**-1.4**
	57nm,0.3s,baz=118,slow=23,SNR=6.4						
GUMO	**Guam**	**8.22**	**167**	P	**Pn**	**12 23 02.7**	**-0.2**
	16nm,0.3s,baz=163,slow=3.7,SNR=14						
GUMO	**Guam**	**8.22**	**167**	P	**Pn**	**12 23 02.7**	**-0.2**
GUMO				pmax	pmax		
	comp=Z,16nm,0.3s						
BSO1	**Boso 1**	**13.07**	**353**	P	**Pn**	**12 24 01.4**	**+0.2**
BSO1				*e*S	**S**	**12 26 21.6**	**-4.0**
JIE	**Ise**	**13.84**	**338**	P	**Pn**	**12 24 11.4**	**+1.1**
JOD2	**Odawara 2**	**13.98**	**347**	P	**Pn**	**12 24 11.9**	**-0.1**
JOD2				S	**S**	**12 26 41.4**	**-2.7**
MRT2	**Murotomisaki 2**	**14.06**	**328**	P	**P**	**12 24 14.3**	**+2.5**
JOW	**Kunigami**	**14.35**	**294**	P	**P**	**12 24 18.4**	**+3.2**
JOW	**Kunigami**	**14.35**	**294**	P	**P**	**12 24 16.6**	**+1.5**
	comp=Z,1.3nm,0.3s,baz=152,slow=13,SNR=5.8						
JTO	**Tosashimizu**	**14.35**	**323**	P	**P**	**12 24 17.8**	**+2.7**
JRY	**Ryogami san**	**14.75**	**347**	P	**P**	**12 24 19.4**	**0.0**
JRY				*e*S	**S**	**12 26 55.4**	**-4.1**
JSU	**Suzuyama**	**14.87**	**314**	P	**P**	**12 24 22.8**	**+2.0**
MJAR	**Matsushiro Arr**	**15.41**	**345**	P	**P**	**12 24 26.1**	**-0.5**
	comp=Z,2.5nm,0.3s,baz=159,slow=8.9,SNR=21						
MJAR				S	**S**	**12 27 10.4**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=100,slow=7.0,SNR=5.9						
MJAR	**Matsushiro Arr**	**15.41**	**345**	P	**P**	**12 24 26.1**	**-0.5**
MJAR				S	**S**	**12 27 10.4**	**-2.3**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**15.41**	**345**	*e*P	**P**	**12 24 26.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAJO	**Matsushiro**	**15.41**	**345**	*e*P	**P**	**12 24 26.2**	**-0.4**
	comp=Z,21nm,0.8s						
MAT	**Matsushiro**	**15.41**	**345**	P	**P**	**12 24 26.2**	**-0.4**
MAT				S	**S**	**12 27 10.1**	**-2.7**
MAT	**Matsushiro**	**15.41**	**345**	P	**P**	**12 24 26.6**	**0.0**
MAT				*e*S	**S**	**12 27 09.9**	**-2.9**
JSJ	**Shimokoshiki**	**15.48**	**313**	P	**P**	**12 24 29.1**	**+1.7**
JNU	**Nakatsue**	**15.66**	**319**	P	**P**	**12 24 31.2**	**+1.8**
JHS	**Saijyo**	**15.86**	**329**	P	**P**	**12 24 33.1**	**+1.5**
JSD	**Sado**	**16.83**	**347**	P	**P**	**12 24 41.9**	**-0.1**
JSD				*e*S	**S**	**12 27 38.1**	**-2.9**
JMK	**Ichinoseki**	**17.31**	**355**	P	**P**	**12 24 48.1**	**+0.9**
JAH	**Hinai**	**18.59**	**354**	P	**P**	**12 25 02.3**	**+1.4**
KSRS	**Korea Array**	**20.43**	**324**	P	**P**	**12 25 19.4**	**-0.8**
	comp=Z,22nm,0.6s,baz=147,slow=8.9,SNR=106						
KSRS	**Korea Array**	**20.43**	**324**	P	**P**	**12 25 19.4**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,22nm,0.6s						
SSE	**Sheshan**	**21.63**	**300**	*e*P	**P**	**12 25 31.0**	**-0.2**
SSE				pmax	pmax		
	comp=Z,62nm,0.7s,mb5.0						
SSE				pmax	pmax		
	comp=Z,16nm,3.5s						
ASAJ	**Asahikawa**	**22.41**	**359**	P	**P**	**12 25 39.0**	**+0.9**
	comp=Z,6.8nm,0.6s,mb4.0,baz=127,slow=12,SNR=8.0						
ASAJ	**Asahikawa**	**22.41**	**359**	P	**P**	**12 25 39.0**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NJ2	**Nanjing**	**23.82**	**301**	*e*P	**P**	**12 25 51.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.0						
MDJ	**Mudanjiang**	**25.43**	**337**	P	**P**	**12 26 05.0**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,12nm,1.7s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,120nm,3.9s						
KLR	**Kul'dur**	**28.93**	**345**	*e*P	**P**	**12 26 32.8**	**-3.5**
HHC	**Hu-ho-hao-te**	**32.71**	**313**	*e*P	**P**	**12 27 11.3**	**+1.8**
HHC				pP	pP	12 28 13.8	+2.4
HHC				PP	PP	12 28 37.0	+5.8
HHC				sP	sP

FITZ	Fitzroy Crossi	42.99	205	eP	P	12 28 33.4	-1.5
	comp=Z,3.5nm,0.4s,mb3.8						
ASAR	Alice Springs	45.90	192	P	P	12 28 55.8	-1.8
	comp=Z,3.2nm,0.6s,mb3.6,baz=14,slow=9.9,SNR=53						
ASAR				ScP	ScP	12 33 51.7	+1.4
	comp=Z,0.4nm,0.9s,baz=19,slow=6.1,SNR=4.4						
BILL	Bilibino	48.61	11⇑	eP	P	12 29 17.7	-0.1
BILL				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.3						
BILL	Bilibino	48.61	11	eP	P	12 29 17.9	+0.1
TAPN	Taplejung	50.26	288	eP	P	12 29 31.1	+0.2
WMQ	Urumqi	50.45	310	eP	P	12 29 33.3	+1.3
ODAN	Odare	50.60	288	eP	P	12 29 33.3	-0.1
	comp=Z,19nm,0.8s,mb4.4						
TIXI	Tiksi	50.68	354	eP	P	12 29 32.6	-0.6
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.1						
TIXI	Tiksi	50.68	354	eP	P	12 29 32.6	-0.6
	comp=Z,9.2nm,0.5s,mb4.3						
RAMN	Ramite	51.29	288	eP	P	12 29 38.4	-0.1
GUN	Gumba	51.81	289	eP	P	12 29 42.6	+0.3
KKN	Kakani	52.36	289	eP	P	12 29 45.8	-0.5
CMSA	Cobar Meteorol	52.95	177	eP	P	12 29 49.5	-0.8
STKA	Stephens Creek	53.24	181	eP	P	12 29 50.7	-1.7
	comp=Z,4.2nm,1.1s,mb3.7						
STKA	Stephens Creek	53.24	181	P	P	12 29 50.8	-1.6
	comp=Z,3.5nm,0.6s,mb3.9,baz=9.2,slow=7.6,SNR=14						
STKA	Stephens Creek	53.24	181	P	P	12 29 50.8	-1.6
STKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZAA0	Zalesovo Array	54.12	322	eP	P	12 29 58.2	-0.3
ZALV	Zalesovo Beam	54.12	322	P	P	12 29 58.2	-0.4
	comp=Z,7.4nm,0.5s,mb4.3,baz=102,slow=7.2,SNR=35						
ZALV				PcP	PcP	12 30 57.7	-1.0
	comp=Z,4.6nm,0.4s,baz=128,slow=3.8,SNR=11						
ZALV	Zalesovo Beam	54.12	322	P	P	12 29 58.2	-0.4
ZALV						12 30 57.7	
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.2						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.2						
ZALV	Zalesovo Beam	54.12	322	P	P	12 29 58.2	-0.4
ZALV				PcP	PcP	12 30 57.7	-1.0
MK31	Makanchi Array	54.58	313	eP	P	12 30 02.3	+0.3
MK31				e		12 31 00.3	
MKAR	Makanchi Array	54.58	313	P	P	12 30 02.2	+0.3
	comp=Z,4.0nm,0.6s,mb4.0,baz=86,slow=9.7,SNR=53						
MKAR				PcP	PcP	12 31 00.3	-0.3
	comp=Z,1.3nm,0.4s,baz=76,slow=5.1,SNR=7.7						
MKAR	Makanchi Array	54.58	313	P	P	12 30 02.3	+0.3
MKAR						12 31 00.3	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YNG	Young	55.88	175	eP	P	12 30 10.4	-0.8
	comp=Z,1.9nm,0.7s,mb3.5						
KURK	Kurchatov	57.37	317	eP	P	12 30 21.3	-0.2
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
KURK	Kurchatov	57.37	317	eP	P	12 30 21.3	-0.2
	comp=Z,9.7nm,0.7s,mb4.2						
SVW2	Sparrevohn	57.55	30	eP	P	12 30 23.3	+0.7
TTA	Tatalina	57.84	28	eP	P	12 30 24.9	+0.4
KDAK	Kodiak Island	58.36	35	eP	P	12 30 28.0	-0.2
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
KDAK	Kodiak Island	58.36	35	eP	P	12 30 28.0	-0.2
	comp=Z,4.5nm,0.6s,mb4.0						
RSO	Redoubt South	58.76	31	eP	P	12 30 31.2	+0.3
PMR	Palmer	60.70	31	eP	P	12 30 43.5	-0.5
BVAR	Borovoye Array	62.57	320	P	P	12 30 56.8	+0.2
	comp=Z,26nm,0.3s,mb5.2,baz=93,slow=8.0,SNR=90						
BVAR	Borovoye Array	62.57	320	P	P	12 30 56.8	+0.2
BVAR				pmax	pmax		
	comp=Z,26nm,0.3s						
BRVK	Borovoye	62.64	320	eP	P	12 30 57.0	0.0
BRVK				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
BRVK	Borovoye	62.64	320	eP	P	12 30 57.0	0.0
	comp=Z,20nm,0.8s,mb4.7						
BMRM	Bremner River	62.80	32	eP	P	12 30 58.1	+0.2
	comp=Z,7.6nm,0.5s,mb4.5						
EGAK	Eagle	64.62	27	eP	P	12 31 09.1	-0.6
	comp=Z,2.8nm,0.7s,mb4.0						
KBL	Kabul	65.18	299	eP	P	12 31 14.3	+0.5
KBL				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
KBL	Kabul	65.18	299	eP	P	12 31 14.3	+0.5
	comp=Z,11nm,1.0s,mb4.5						
DAWY	Dawson	65.36	28	eP	P	12 31 14.8	+0.4
HYT	Haines Junctio	66.27	32	eP	P	12 31 23.7	+3.5
DLBC	Dease Lake	70.28	34	eP	P	12 31 45.7	+0.7
NLWA	Neilton Lookou	76.46	44	⇓P	P	12 32 21.8	+0.8
	baz=76						
YKA	Yellowknife Ar	76.59	28	P	P	12 32 21.0	-0.4
	comp=Z,8.1nm,0.6s,mb4.7,baz=291,slow=5.8,SNR=41						
YKA	Yellowknife Ar	76.59	28	P	P	12 32 21.0	-0.4
YKA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
E03A	Lebam	76.91	45	⇓P	P	12 32 24.2	+0.7
	baz=77						
JCW	Jim Creek	77.46	43	eP	P	12 32 27.1	+0.6
A07A	Ashnola River,	78.16	42	⇓P	P	12 32 30.4	+0.1
	baz=78						
KEV	Kevo	78.34	341	eP	P	12 32 30.4	-0.5
KEV				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.8						
KEV	Kevo	78.34	341	ep	P	12 32 30.4	-0.5
	comp=Z,8.0nm,0.4s,mb4.8						
H04A	Detroit Lake	78.41	47	⇑P	P	12 32 31.8	0.0
	baz=78						
ARCES	ARCESS Array B	78.90	341	P	P	12 32 33.8	-0.2
	comp=Z,8.3nm,0.5s,mb4.8,baz=77,slow=8.8,SNR=95						
ARCES	ARCESS Array B	78.90	341	P	P	12 32 33.8	-0.2
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.5s						
B08A	Colville Reser	79.04	42	⇑P	P	12 32 35.3	+0.2
	baz=79						
B09A	Rice	79.76	42	⇓P	P	12 32 39.3	+0.3
	baz=80						
K05A	Summer Lake	79.95	48	⇑P	P	12 32 40.3	+0.2
	baz=80						
D09A	Jones Farm, Ri	80.15	43	⇑P	P	12 32 41.3	+0.3
	baz=80						
JOF	Joensuu	80.27	334	eP	P	12 32 39.8	-1.6
JOF				pmax	pmax		
	comp=Z,11nm,0.3s,mb5.1						
JOF	Joensuu	80.27	334	ep	P	12 32 39.8	-1.6
	comp=Z,11nm,0.3s,mb5.1						
G08A	Pilot Rock	80.36	45	⇓P	P	12 32 42.2	0.0
	baz=80						
I07A	Izee	80.42	46	⇑P	P	12 32 42.2	-0.4
	baz=80						
EDM	Edmonton	80.75	36	eP	P	12 32 44.5	+0.4
J08A	Circle Bar Ran	81.38	47	⇑P	P	12 32 47.6	0.0
	baz=81						
D11A	Klaveano Farm,	81.41	43	⇑P	P	12 32 47.4	-0.2
	baz=81						
G10A	Bishop Farm, J	81.57	45	⇓P	P	12 32 48.4	-0.1
	baz=81						
WVOR	Wild Horse Val	81.61	48	eP	P	12 32 49.1	+0.3
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
WVOR	Wild Horse Val	81.61	48	eP	P	12 32 49.0	+0.2
	comp=Z,1.5nm,0.8s,mb3.9						
I09A	Lost Marbles R	81.65	46	⇓P	P	12 32 49.0	0.0
	baz=82						
E11A	Bogner Ranch,	81.75	43	⇑P	P	12 32 49.4	-0.1
	baz=82						
J09A	Fry Pan Ranch,	81.87	47	⇑P	P	12 32 50.0	-0.2
	baz=82						
F11A	Grangeville	81.97	44	⇓P	P	12 32 50.5	-0.1
	baz=82						
D12A	Red Ives Fores	82.02	43	⇑P	P	12 32 50.9	0.0
	baz=82						
B13A	Whitefish	82.05	41	⇓P	P	12 32 51.5	+0.5
	baz=82						
BSMT	Bassoo Peak	82.06	42	eP	P	12 32 51.8	+0.8
H10A	Noah's Angus R	82.08	45	⇓P	P	12 32 50.7	-0.5
	baz=82						
G11A	Walters Elk Ra	82.08	44	⇓P	P	12 32 50.8	-0.4
	baz=82						
E12A	Beaver Dam Sad	82.14	43	⇓P	P	12 32 51.3	-0.1
	baz=82						
C13A	Hot Springs	82.26	42	⇑P	P	12 32 52.1	0.0
	baz=82						
KIV	Kislovodsk	82.31	314⇑	eP	P	12 32 54.4	+2.0
KIV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
A14A	Double T Ranch	82.44	40	⇓P	P	12 32 53.4	+0.4
	baz=82,SNR=5.0						
H11A	Donnelly	82.52	45	⇑P	P	12 32 53.1	-0.4
	baz=82						
YBMT	Yellow Bay	82.53	41	eP	P	12 32 53.9	+0.4
D13A	Huson	82.57	42	⇓P	P	12 32 53.3	-0.4
	baz=82						
F12A	Elk City	82.60	44	⇑P	P	12 32 54.1	+0.2
	baz=82						
KAF	Kangasniemi	82.68	335	eP	P	12 32 52.0	-1.9
KAF	Kangasniemi	82.68	335	ep	P	12 32 52.0	-1.9
K10A	MacKenzie Ranc	82.69	47	⇓P	P	12 32 54.7	+0.3
	baz=82						
C14A	Swan Lake	82.74	41	⇓P	P	12 32 54.4	-0.1
	baz=83						
B14A	Marquette Ranc	82.78	41	⇑P	P	12 32 54.9	+0.1
	baz=83						
A15A	Johnson Ranch,	82.85	40	⇑P	P	12 32 55.1	0.0
	baz=83,SNR=8.4						
FINES	FINESS Array B	83.14	334	P	P	12 32 54.9	-1.4
	comp=Z,6.4nm,0.4s,mb4.8,baz=65,slow=4.6,SNR=67						
FINES	FINESS Array B	83.14	334	P	P	12 32 54.9	-1.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MFID	Camas Ranch	83.14	46	⇓P	P	12 32 56.9	+0.2
	baz=83						
D14A	Greenough	83.17	42	⇑P	P	12 32 56.6	-0.1
	baz=83						
B15A	Bradely Ranch,	83.23	41	⇓P	P	12 32 56.8	-0.2
	baz=83,SNR=8.8						
SMMC	Simmler	83.24	55	⇑P	P	12 32 57.4	+0.1
	baz=83						
K11A	Parker Ranch,	83.26	47	⇓P	P	12 32 57.6	+0.3
	baz=83						
NVAR	Mina Array Bea	83.34	51	P	P	12 32 58.0	+0.2
	comp=Z,3.2nm,0.7s,mb4.2,baz=271,slow=5.5,SNR=27						
H12A	Diamond D Ranc	83.34	45	⇓P	P	12 32 57.7	+0.1
	baz=83						
CHMT	Chamberlain Mo	83.39	42	eP	P	12 32 57.7	-0.2
	comp=Z,1.0nm,0.5s,mb3.9						
M10A	I.L. Ranch, Tu	83.40	48	⇓P	P	12 32 58.1	0.0
	baz=83						
C15A	Salmond Ranch,	83.43	41	⇓P	P	12 32 58.3	+0.2
	baz=83,SNR=6.6						
I12A	Atlanta	83.46	45	⇓P	P	12 32 57.8	-0.4
	baz=83						
G13A	Cobalt	83.52	44	⇑P	P	12 32 58.2	-0.4
	baz=83,SNR=6.7						
L11A	Cat Creek Ranc	83.69	47	⇓P	P	12 32 59.8	+0.3
	baz=84						
J12A	Stokes Ranch,	83.70	46	⇓P	P	12 32 59.9	+0.4
	baz=84						
B16A	M & M Farms, S	83.71	40	⇑P	P	12 32 59.3	-0.1
	baz=84,SNR=8.5						
H13A	Challis	83.72	45	⇑P	P	12 32 59.8	+0.2
	baz=84,SNR=5.4						
C16A	Fuhringer Ranc	83.95	41	⇑P	P	12 33 00.4	-0.3
	baz=84,SNR=7.5						
E15A	Deer Lodge	83.98	42	⇓P	P	12 33 00.7	-0.2
	baz=84,SNR=7.4						
HLID	Hailey	84.03	45	⇑P	P	12 33 01.1	-0.1
	baz=84						
HLID	Hailey	84.03	45	eP	P	12 33 01.5	+0.3
A17A	Triple J Farms	84.08	39	⇓P	P	12 33 01.3	0.0
	baz=84,SNR=7.0						
K12A	Draper Farm, C	84.08	46	⇓P	P	12 33 01.3	-0.1
	baz=84						
I13A	Wildhorse Cree	84.08	45	⇓P	P	12 33 01.8	+0.4
	baz=84						
MIB	Mutribah	84.14	300	eP	P	12 33 01.2	-0.8
MIB				AMb	AMB	12 33 02.7	
	comp=Z,29nm,0.7s,mb5.2						
L12A	House Creek Ra	84.20	47	⇓P	P	12 33 02.6	+0.5
	baz=84,SNR=7.0						
J13A	Cove Ranch, Pi	84.25	46	⇑P	P	12 33 02.3	0.0
	baz=84,SNR=5.1						
ISA	Isabella	84.26	54	⇓P	P	12 33 01.7	-0.8
	baz=84						
H14A	Leadore	84.28	44	⇓P	P	12 33 02.6	+0.2
	baz=84						
RDF	Al-Radifah	84.28	299	eP	P	12 33 02.1	-0.7
RDF				AMb	AMB	12 33 04.3	
	comp=Z,24nm,1.5s,mb4.8						
B17A	L&G Farms, Che	84.31	40	⇓P	P	12 33 02.3	-0.1
	baz=84,SNR=15						
F15A	Butte	84.32	43	⇑P	P	12 33 02.5	0.0
	baz=84,SNR=11						
LRM	Limekiln Ridge	84.36	43	eP	P	12 33 03.0	+0.3
HRY	Holter Researc	84.36	42	eP	P	12 33 03.4	+0.6
NAY	Al-Naaiem	84.42	299	eP	P	12 33 02.6	-0.8
NAY				AMb	AMB	12 33 04.0	
	comp=Z,12nm,0.7s,mb4.8						
I14A	Mackay	84.51	45	⇑P	P	12 33 03.6	+0.1
	baz=84						
E16A	East Helena	84.54	42	⇑P	P	12 33 03.6	0.0
	baz=84,SNR=9.3						
Q10A	Clear Creek Ra	84.56	50	⇓P	P	12 33 04.4	+0.5
	baz=84						
M12A	Wells	84.56	48	⇑P	P	12 33 04.3	+0.4
	baz=84,SNR=8.0						
O11A	Cowboy Ranch,	84.57	49	⇑P	P	12 33 04.0	+0.1
	baz=84						
A18A	Metzger Ranch,	84.59	39	⇑P	P	12 33 03.6	-0.3
	baz=84,SNR=6.1						
K13A	Stover Farm, H	84.62	46	⇑P	P	12 33 04.4	+0.3
	baz=84						
N12A	Clover Valley,	84.71	48	⇓P	P	12 33 05.0	+0.4
	baz=85						
J14A	Carey	84.72	45	⇑P	P	12 33 05.0	+0.4
	baz=85,SNR=11						
P11A	Circle Ranch,	84.73	50	⇓P	P	12 33 04.7	0.0
	baz=85						
H15A	Lima	84.75	44	⇑P	P	12 33 04.9	+0.2
	baz=85						
S10A	Tonopah Range,	84.77	51	⇓P	P	12 33 05.0	0.0
	baz=85,SNR=6.1						
R10A	Warm Springs	84.84	51	⇓P	P	12 33 05.3	0.0
	baz=85						
MPMC	Manual Prospec	84.84	53	⇓P	P	12 33 05.2	-0.2
	baz=85						
B18A	Beardsley Farm	84.87	40	⇓P	P	12 33 05.0	-0.3
	baz=85,SNR=8.6						
D17A	Six Diamond Ra	84.88	41	⇑P	P	12 33 05.3	0.0
	baz=85,SNR=6.4						
F16A	Kennard Place,	84.89	43	⇓P	P	12 33 05.2	-0.2
	baz=85,SNR=5.3						
L13A	Double Diamond	84.95	47	⇓P	P	12 33 06.2	+0.4
	baz=85						
BOZ	Bozeman (W)	84.95	43	⇓P	P	12 33 05.8	+0.1
	baz=85,SNR=8.5						
BOZ	Bozeman (W)	84.95	43	eP	P	12 33 05.9	+0.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
BOZ	Bozeman (W)	84.95	43	eP	P	12 33 05.9	+0.2
	comp=Z,2.4nm,0.5s,mb4.3						
G16A	Moss Hill, Enn	85.02	43	⇓P	P	12 33 06.1	+0.1
	baz=85,SNR=8.7						
EGMT	Eagleton	85.05	40	⇑P	P	12 33 06.1	0.0
	baz=85						
E17A	Martinsdale	85.08	42	⇑P	P	12 33 06.8	+0.5
	baz=85						
Q11A	Duckwater	85.08	50	⇓P	P	12 33 06.5	0.0
	baz=85,SNR=5.6						
M13A	Montello	85.10	47	⇑P	P	12 33 06.5	0.0
	baz=85						
O12A	Currie	85.15	49	⇓P	P	12 33 06.7	-0.1
	baz=85,SNR=7.0						
FURC	Furnace Creek,	85.15	53	⇑P	P	12 33 06.8	0.0
	baz=85						
R11A	Troy Canyon, C	85.33	51	⇑P	P	12 33 07.7	0.0
	baz=85,SNR=5.4						
P12A	McGill	85.36	49	⇓P	P	12 33 08.1	+0.2
	baz=85						
D18A	Linhart Farms,	85.40	41	⇓P	P	12 33 07.9	+0.1
	baz=85						
J15A	Blackfoot	85.41	45	⇑P	P	12 33 08.9	+0.9
	baz=85,SNR=5.8						
F17A	Fitzpatrick Pl	85.45	42	⇑P	P	12 33 08.2	+0.1
	baz=85						
L14A	Malta	85.45	47	⇓P	P	12 33 08.5	+0.3
	baz=85						
S11A	Rachel	85.50	51	⇓P	P	12 33 08.8	+0.2
	baz=85						
U10A	Ash Meadows, A	85.56	53	⇓P	P	12 33 09.2	+0.3
	baz=85						
Q12A	Willow Creek R	85.59	50	⇑P	P	12 33 09.1	+0.1
	baz=86						
M14A	Sheep Mountain	85.60	47	⇑P	P	12 33 09.2	+0.3
	baz=86						
H16A	Russell Place,	85.61	43	⇓P	P	12 33 09.6	+0.7
	baz=86,SNR=5.4						
E18A	Harlowton	85.61	41	⇑P	P	12 33 09.1	+0.2
	baz=86,SNR=6.3						
N14A	Grayback Hills	85.99	48	⇓P	P	12 33 10.6	-0.2
	baz=86						
P13A	Bates Ranch, G	86.00	49	⇑P	P	12 33 10.8	-0.1
	baz=86						
J16A	Bone	86.00	45	⇓P	P	12 33 11.2	+0.3
	baz=86						
SUMG	Summit	86.01	0	eP	P	12 33 11.1	+0.7
F18A	Big Timber	86.04	42	⇓P	P	12 33 11.1	+0.1
	baz=86						
L15A	Malad City	86.04	46	⇑P	P	12 33 10.9	-0.2
	baz=86						
R12A	Pony Springs,	86.04	50	⇑P	P	12 33 11.4	+0.2
	baz=86						
T11A	Corn Creek, Al	86.05	52	⇑P	P	12 33 11.0	-0.3
	baz=86						
IMW	Indian Meadow	86.16	44	eP	P	12 33 13.2	+1.5
Q13A	Wheeler Ranch,	86.20	50	⇓P	P	12 33 12.7	+0.7
	baz=86						
M15A	Larsen Ranch,	86.23	47	⇑P	P	12 33 11.8	-0.2
	baz=86						
TUQ	Turquoise Moun	86.26	53	⇑P	P	12 33 12.3	-0.1
	baz=86						
V11A	Goodsprings	86.46	53	⇑P	P	12 33 13.1	-0.2
	baz=86						
DUG	Dugway	86.52	48	⇑P	P	12 33 13.4	-0.1
	baz=86						
PFO	Pinyon Flat Ob	86.59	55	⇑P	P	12 33 13.4	-0.6
	baz=86						
P14A	Drum Mountains	86.60	49	⇓P	P	12 33 13.5	-0.4
	baz=86						
L16A	Fish Haven	86.67	46	⇓P	P	12 33 14.4	+0.3
	baz=86						
Q14A	Sevier Lake (B	86.71	49	⇓P	P	12 33 14.3	-0.2
	baz=87						
GMRC	Granite Mounta	86.72	54	⇓P	P	12 33 14.4	-0.2
	baz=87						
BELC	Belle Mtn.	86.78	55	⇓P	P	12 33 14.3	-0.6
	baz=87						
S13A	Holt Ranch, En	86.89	51	⇓P	P	12 33 15.1	-0.2
	baz=87						
MONP	Monument Peak	86.91	56	⇑P	P	12 33 15.4	-0.1
	baz=87						
V12A	Nelson	86.94	53	⇑P	P	12 33 15.9	+0.3
	baz=87						
L17A	Cokeville	87.01	46	⇑P	P	12 33 16.1	+0.4
	baz=87						
J18A	Kendall Valley	87.07	44	⇓P	P	12 33 16.3	+0.3
	baz=87						
U13A	Pakoon Wash	87.31	52	⇑P	P	12 33 17.5	+0.2
	baz=87						
BC3	Big Chuckw Mtn	87.34	55	⇑P	P	12 33 17.3	-0.2
	baz=87						
IRM	Iron Mountain	87.36	54	⇑P	P	12 33 17.2	-0.4
	baz=87						
AKASG	Malin Array Be	87.43	324	P	P	12 33 15.7	-1.8
	comp=Z,1.2nm,0.5s,mb4.0,baz=46,slow=5.4,SNR=6.2						
AKASG	Malin Array Be	87.43	324	P	P	12 33 15.7	-1.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
M17A	Scullys Gap (B	87.43	46	⇓P	P	12 33 17.1	-0.6
	baz=87						
V13A	Grand Canyon W	87.53	52	⇑P	P	12 33 18.4	+0.1
	baz=87						
BW06	Boulder Array	87.57	45	⇓P	P	12 33 18.2	-0.2
	baz=87						
PDAR	Pinedale Array	87.57	45	P	P	12 33 17.6	-0.8
	comp=Z,0.6nm,0.5s,mb3.7,baz=152,slow=2.9,SNR=8.1						
U14A	Mt Trumbull	87.88	52	⇑P	P	12 33 20.5	+0.6
	baz=88						
W13A	Hualapai Mount	87.92	53	⇑P	P	12 33 20.3	0.0
	baz=88						
K20A	Yellowstone Ra	88.42	44	⇓P	P	12 33 22.0	-0.4
	baz=88						
W14A	Seligman	88.46	53	⇓P	P	12 33 22.6	-0.2
	baz=88						
U15A	North Rim	88.52	51	⇓P	P	12 33 23.1	0.0
	baz=88						
SRU	San Rafael	88.59	48	⇑P	P	12 33 23.2	-0.1
	baz=88						
SRU	San Rafael	88.59	48	eP	P	12 33 23.2	-0.1
SRU				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
SRU	San Rafael	88.59	48	eP	P	12 33 23.2	-0.1
	comp=Z,2.1nm,0.5s,mb4.2						
R17A	Hanksville Air	88.77	49	⇑P	P	12 33 23.7	-0.4
	baz=89						
V15A	Kaibab Nationa	88.87	52	⇑P	P	12 33 24.6	-0.1
	baz=89						
Z13A	Yuma Proving G	88.89	55	⇓P	P	12 33 24.8	0.0
	baz=89						
NOA	NORSAR Array B	88.92	339	P	P	12 33 22.7	-1.6
	comp=Z,1.2nm,0.7s,mb3.9,baz=47,slow=5.5,SNR=12						
NOA	NORSAR Array B	88.92	339	P	P	12 33 22.7	-1.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
113A	Mohawk Valley,	88.99	55	⇑P	P	12 33 25.1	-0.2
	baz=89						
X15A	Humboldt	89.41	53	⇑P	P	12 33 27.1	-0.1
	baz=89						
P19A	Cripple Cowboy	89.41	47	⇓P	P	12 33 27.3	+0.2
	baz=89						
M21A	Separation Pea	89.56	45	⇓P	P	12 33 27.4	-0.3
	baz=89						
Y15A	Casa Rosa Ranc	89.57	54	⇑P	P	12 33 28.1	+0.1
	baz=89						
N21A	Black Mountain	89.86	46	⇓P	P	12 33 29.1	-0.1
	baz=90						
V17A	Tonalea, Kykot	89.97	51	⇑P	P	12 33 29.5	-0.2
	baz=90						
Q20A	Ridgley Place,	90.20	48	⇓P	P	12 33 30.8	0.0
	baz=90						
BRTR	Keskin Array B	90.22	313	P	P	12 33 30.1	-0.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=102,slow=2.6,SNR=8.2						
BRTR	Keskin Array B	90.22	313	P	P	12 33 30.2	-0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
T19A	Beclabito	90.68	50	⇓P	P	12 33 33.2	+0.1
	baz=90						
Y17A	Roosevelt	90.79	53	⇓P	P	12 33 33.1	-0.5
	baz=91						
Q22A	Crested Butte,	91.19	47	⇑

ERPM				AML	AML	12 24 22.7	
	comp=Z,310nm,0.3s						
SEK	**Senekal**	**1.68**	**154**	*e*P	Pn	12 24 03.2	+0.4
SEK				*e*S	Sn	12 24 25.8	+0.8
SEK				AML	AML	12 24 35.0	
	comp=Z,135nm,0.4s						
SLR	**Silverton**	**1.73**	**52**	*e*P	Pn	12 24 04.7	+1.3
SLR				*e*S	Sn	12 24 26.9	+0.8
SLR				AML	AML	12 24 32.4	
	comp=Z,1μm,0.4s						
HVD	**Gariep Dam**	**3.94**	**196**	*e*P	Pn	12 24 33.8	0.0
HVD				*e*S	Sn	12 25 20.7	0.0
HVD				AML	AML	12 25 39.0	
	comp=Z,43nm,0.4s						
KSD	**Kokstad**	**4.38**	**149**	*e*P	Pn	12 24 39.9	0.0
KSD				*e*S	Sn	12 25 30.2	-1.3
KSD				AML	AML	12 25 48.7	
	comp=Z,71nm,0.5s						
PKA	**Prieska**	**4.54**	**230**	*e*P	Pn	12 24 43.0	+0.8
PKA				*e*S	Sn	12 25 34.9	-0.7
PKA				AML	AML	12 25 55.0	
	comp=Z,85nm,0.6s						
UPI	**Upington**	**5.14**	**251**	*e*P	Pn	12 24 50.9	+0.5
UPI				*e*S	Sn	12 25 48.9	-1.4
UPI				AML	AML	12 26 16.8	
	comp=Z,45nm,0.4s						
MOPA	**Mopani**	**5.32**	**53**	*e*P	Pn	12 24 53.7	+0.8
MOPA				*e*S	Sn	12 25 52.6	-2.2
MOPA				AML	AML	12 26 24.3	
	comp=Z,210nm,0.4s						
MSNA	**Messina**	**5.34**	**34**	*e*P	Pn	12 24 52.8	-0.4
MSNA				*e*S	Sn	12 25 51.7	-3.6
MSNA				AML	AML	12 26 30.6	
	comp=Z,44nm,0.4s						
CVNA	**Calvinia**	**7.70**	**231**	*e*P	Pn	12 25 26.0	+0.5
CVNA				*e*S	Sn	12 26 49.4	-3.9
CVNA				AML	AML	12 27 35.1	
	comp=Z,43nm,0.4s						

*CSEM **30** 12:32:38.2±0.3,50°.33N×18°.62E,h1km,ML2.5/4,Error ellipse: s-maj=7.1km s-min=3.2km az=175.0*
*PRU **30** 12:32:38.6,50°.29N×18°.63E,h0km*
WAR 30 12:32:38.3,50°.23N×18°.69E,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.53**	**222**	*e*PG	Pg	12 32 49.7	+1.2
OKC				*e*SG	Sg	12 32 56.6	+1.3
	comp=Z,34nm,0.9s						
OKC	**Ostrava-Krasne**	**0.53**	**222**	Pg	Pg	12 32 49.7	+1.2
OKC				Sg	Sg	12 32 56.6	+1.3
	comp=Z,34nm,0.9s						
OJC	**Ojcow**	**0.71**	**91**	*e*Pg	Pg	12 32 52.5	+0.6
OJC				*e*Sg	Sg	12 33 03.4	+2.3
OJC	**Ojcow**	**0.71**	**91**	*e*Pg	Pg	12 32 52.5	+0.6
OJC				*e*Sg	Sg	12 33 03.4	+2.3
MORC	**Moravsky Berou**	**0.87**	**239**	*e*Pg	Pg	12 32 55.5	+0.5
MORC				*e*Sg	Sg	12 33 07.4	+1.1
DPC	**Dobruska-Polom**	**1.53**	**275**	*e*PG	Pg	12 33 06.6	-0.9
DPC				*e*SG	Sg	12 33 26.4	-0.9
	comp=Z,14nm,0.5s						
DPC	**Dobruska-Polom**	**1.53**	**275**	Pg	Pg	12 33 06.6	-0.9
DPC				Sg	Sg	12 33 26.4	-0.9
	comp=Z,14nm,0.5s						
VRAC	**Vranov**	**1.65**	**237**	*e*Sg	Sg	12 33 31.6	+0.4
UPC	**Upice**	**1.74**	**280**	*e*SG	Sg	12 33 33.0	-1.1
UPC	**Upice**	**1.74**	**280**	Sg	Sg	12 33 33.0	-1.1
PRU	**Pruhonice**	**2.69**	**266**	*e*SG	Sg	12 34 01.9	-2.6
	comp=Z,4.3nm,0.4s						
PRU	**Pruhonice**	**2.69**	**266**	Sg	Sg	12 34 01.9	-2.6
	comp=Z,4.3nm,0.4s						
KHC	**Kasperske Hory**	**3.50**	**254**	*e*SG	Sg	12 34 28.7	-2.0
	comp=Z,3.6nm,0.5s						
KHC	**Kasperske Hory**	**3.50**	**254**	Sg	Sg	12 34 28.7	-2.0
	comp=Z,3.6nm,0.5s						

*PGC **30** 12:38:30.0±1.6,50°.46N×130°.41W,h10km,ML4.1/14, Mw4.8,213km west of Pt. Hardy, Bc Vancouver Island Region*
*NEIC **30** 12:38:30.0,50°.46N×130°.41W,h10km,mb4.4/43, MW4.8(PGC),After PGC.*
*GCMT **30** 12:38:30.0±0.2,50°.37N×130°.39W,h16km±1km,MW5.0/82, Moment Tensor Solution. s29,c39; s82,c139; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.00±.12; Mθθ-3.55±.10; Mφφ3.55±.10; Mrθ0.17±.29; Mrφ1.51±.10; Mθφ0.52±.27; Best double couple: M0=3.89500×10^16^ NP1:φs326.00000°,δ84.00000°,λ175.00000°. NP2: φs57.00000°,δ85.00000°,λ6.00000°. Principal axes: T 3.9320, Plg8.0000°, Azm282.0000°; N -0.0720, Plg82.0000°, Azm95.0000°; P -3.8590, Plg1.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **30** 12:38:33.5±0.3,50°.65N±0°.03×129°.86W±0°.05,h13km, mb4.4/30,MS4.1/24 Error ellipse: s-maj=4.9km s-min=2.9km az=141.6*
*IDC **30** 12:38:34.2±0.9,50°.63N×129°.75W,h0km,mb4.0/9, mb1 4.2/16,mb1mx4.0/32,mbtmp4.0/16,ML3.9/7,MS4.0/27, Ms1 4.0/27,ms1mx4.0/37,Error ellipse: s-maj=17.8km s-min=8.7km az=76.0*
ISC 30 12:38:35.2±1.4,50°.68N±0°.03×129°.85W±0°.05,h11km±9km, h14km±1.0km:pP-P,n193,σ1§28/194,mb4.4/30,MS4.1/24, 12D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.09**	**91**	*e*Pn	**Pn**	**12 38 54.3**	**-2.1**
HOLB				*e*Sn	**Sn**	**12 39 10.7**	**-0.8**
HOLB	**Holberg**	**1.09**	**91**	⇑Pn	**Pn**	**12 38 54.3**	**-2.1**
HOLB				⇑Sn	**Sn**	**12 39 10.7**	**-0.8**
HOLB	**Holberg**	**1.09**	**91**	⇑Pn	**Pn**	**12 38 54.3**	**-2.1**
HOLB				⇑Sn	**Sn**	**12 39 10.7**	**-0.8**
BPBC	**Brooks Peninsu**	**1.43**	**110**	*e*Pn	**Pn**	**12 38 57.5**	**-3.5**
BPBC	**Brooks Peninsu**	**1.43**	**110**	⇓Pn	**Pn**	**12 38 57.5**	**-3.5**
BPBC	**Brooks Peninsu**	**1.43**	**110**	⇓Pn	**Pn**	**12 38 57.5**	**-3.5**
PHC	**Port Hardy**	**1.54**	**88**	*e*Pn	**Pn**	**12 39 00.7**	**-1.8**
PHC				*e*Sn	**Sn**	**12 39 22.1**	**-0.4**
PHC	**Port Hardy**	**1.54**	**88**	⇑Pn	**Pn**	**12 39 00.7**	**-1.8**
PHC				⇑Sn	**Sn**	**12 39 22.1**	**-0.4**
PHC	**Port Hardy**	**1.54**	**88**	⇑Pn	**Pn**	**12 39 00.7**	**-1.8**
PHC				⇑Sn	**Sn**	**12 39 22.1**	**-0.4**
MAYB	**Maynard**	**1.73**	**98**	*e*Pn	**Pn**	**12 39 03.0**	**-2.1**
MAYB	**Maynard**	**1.73**	**98**	⇓Pn	**Pn**	**12 39 03.0**	**-2.1**
MAYB	**Maynard**	**1.73**	**98**	⇓Pn	**Pn**	**12 39 03.0**	**-2.1**
BBB	**Bella Bella**	**1.86**	**35**	Pn	**Pn**	**12 39 05.2**	**-1.7**
	32nm,0.3s,baz=228,slow=14,SNR=909						
BBB				Sn	**Sn**	**12 39 30.6**	**+0.2**
	244nm,0.3s,baz=208,slow=17,SNR=10						
BBB				LR	LR	12 39 59.7	
	comp=Z,2μm,18.6s,baz=226,slow=46						
BBB	**Bella Bella**	**1.86**	**35**	⇑Pn	**Pn**	**12 39 05.5**	**-1.4**
BBB				⇑Sn	**Sn**	**12 39 30.4**	**-0.1**
BBB	**Bella Bella**	**1.86**	**35**	⇑Pn	**Pn**	**12 39 05.5**	**-1.4**
BBB				⇑Sn	**Sn**	**12 39 30.4**	**-0.1**
EDB	**Eliza Dome**	**1.93**	**114**	*e*Pn	**Pn**	**12 39 04.6**	**-3.3**
EDB	**Eliza Dome**	**1.93**	**114**	⇑Pn	**Pn**	**12 39 04.6**	**-3.3**
EDB	**Eliza Dome**	**1.93**	**114**	⇑Pn	**Pn**	**12 39 04.6**	**-3.3**
WOSB	**Woss**	**2.16**	**103**	⇓Pn	**Pn**	**12 39 09.2**	**-1.8**
WOSB	**Woss**	**2.16**	**103**	⇓Pn	**Pn**	**12 39 09.2**	**-1.8**
BNB	**Barry Inlet**	**2.24**	**329**	⇓Pn	**Pn**	**12 39 06.0**	**-6.2**
BNB				⇑Sn	**Sn**	**12 39 31.2**	**-8.6**
BNB	**Barry Inlet**	**2.24**	**329**	⇓Pn	**Pn**	**12 39 06.0**	**-6.2**
BNB				⇑Sn	**Sn**	**12 39 31.2**	**-8.6**
NCRB	**Newcastle Ridg**	**2.44**	**95**	⇑Pn	**Pn**	**12 39 13.2**	**-1.6**
NCRB	**Newcastle Ridg**	**2.44**	**95**	⇑Pn	**Pn**	**12 39 13.2**	**-1.6**
ETB	**Estevan Point**	**2.50**	**120**	⇑Pn	**Pn**	**12 39 12.2**	**-3.5**
ETB	**Estevan Point**	**2.50**	**120**	⇑Pn	**Pn**	**12 39 12.2**	**-3.5**
BCBC	**Bella Coola**	**2.57**	**47**	⇓Pn	**Pn**	**12 39 17.2**	**+0.4**
BCBC				⇑Sn	**Sn**	**12 39 49.0**	**+1.1**
BCBC	**Bella Coola**	**2.57**	**47**	⇓Pn	**Pn**	**12 39 17.2**	**+0.4**
BCBC				⇑Sn	**Sn**	**12 39 49.0**	**+1.1**
GDR	**Gold River**	**2.61**	**109**	⇓Pn	**Pn**	**12 39 14.6**	**-2.7**
GDR	**Gold River**	**2.61**	**109**	⇓Pn	**Pn**	**12 39 14.6**	**-2.7**
MOBC	**Moresby Island**	**2.80**	**333**	⇑Pn	**Pn**	**12 39 13.9**	**-6.0**
MOBC				⇑Sn	**Sn**	**12 39 47.5**	**-6.1**
MOBC	**Moresby Island**	**2.80**	**333**	⇑Pn	**Pn**	**12 39 13.9**	**-6.0**
MOBC				⇑Sn	**Sn**	**12 39 47.5**	**-6.1**
CBB	**Campbell River**	**2.94**	**101**	⇑Pn	**Pn**	**12 39 20.3**	**-1.5**
CBB	**Campbell River**	**2.94**	**101**	⇑Pn	**Pn**	**12 39 20.3**	**-1.5**
DIB	**Dawson Inlet,**	**3.01**	**328**	⇑Pn	**Pn**	**12 39 16.6**	**-6.1**
DIB	**Dawson Inlet,**	**3.01**	**328**	⇑Pn	**Pn**	**12 39 16.6**	**-6.1**
OZB	**Mount Ozzard**	**3.30**	**120**	P	**Pn**	**12 39 23.3**	**-3.4**
OZB	**Mount Ozzard**	**3.30**	**120**	⇑Pn	**Pn**	**12 39 23.3**	**-3.4**
OZB	**Mount Ozzard**	**3.30**	**120**	⇑Pn	**Pn**	**12 39 23.3**	**-3.4**
OBC	**Olympics--Boni**	**4.61**	**123**	P	**Pn**	**12 39 43.8**	**-0.8**
PGC	**Sidney**	**4.62**	**114**	*e*Pn	**Pn**	**12 39 43.3**	**-1.6**
OOW	**Octopus West**	**4.73**	**126**	P	**Pn**	**12 39 45.4**	**-1.1**
MCW	**Mount Constitu**	**4.97**	**111**	P	**Pn**	**12 39 49.6**	**-0.1**
NLWA	**Neilton Lookou**	**5.12**	**128**	*e*Pn	**Pn**	**12 39 49.4**	**-2.4**
NLWA				*e*Sn	**Sn**	**12 40 50.2**	**-0.7**
CRAG	**Craig**	**5.19**	**339**	*e*P	**Pn**	**12 39 48.3**	**-4.4**
VDB	**Vedder Mountai**	**5.28**	**105**	P	**Pn**	**12 39 54.0**	**+0.2**
MBW	**Mount Baker**	**5.49**	**107**	P	**Pn**	**12 39 57.4**	**+0.6**
CMW	**Cultus Mountai**	**5.51**	**111**	P	**Pn**	**12 39 57.0**	**-0.1**
GNW	**Green Mountain**	**5.56**	**121**	*e*Pn	**Pn**	**12 39 57.2**	**-0.6**
	10nm,0.5s						
JCW	**Jim Creek**	**5.73**	**113**	P	**Pn**	**12 40 00.2**	**+0.1**
RPW	**Rockport**	**5.86**	**109**	P	**Pn**	**12 40 01.4**	**-0.5**
LON	**Longmire**	**6.61**	**123**	*e*Pn	**Pn**	**12 40 11.5**	**-0.7**
ETW	**Entiat**	**6.96**	**113**	*e*Pn	**Pn**	**12 40 17.9**	**+1.0**
COR	**Corvallis**	**7.53**	**142**	*e*Pn	**Pn**	**12 40 21.8**	**-3.0**
DLBC	**Dease Lake**	**7.78**	**359**	Pn	**Pn**	**12 40 28.4**	**+0.3**
	2.2nm,0.3s,baz=193,slow=15,SNR=32						
DLBC				Sn	**Sn**	**12 41 56.6**	**+0.5**
	0.2nm,0.3s,baz=357,slow=22,SNR=2.3						
DLBC				Lg		12 42 41.6	
	0.4nm,0.3s,baz=92,slow=22,SNR=4.4						
DLBC	**Dease Lake**	**7.78**	**359**	*e*Pn	**Pn**	**12 40 28.1**	**-0.1**
OD2	**Odessa Site #2**	**8.02**	**110**	*e*Pn	**Pn**	**12 40 30.4**	**-1.2**
RSW	**Rattlesnake Hi**	**8.04**	**118**	*e*Pn	**Pn**	**12 40 31.0**	**-0.9**
HAWA	**Hanford**	**8.08**	**118**	*e*Pn	**Pn**	**12 40 32.0**	**-0.3**
NEW	**Newport**	**8.63**	**101**	*e*Pn	**Pn**	**12 40 39.8**	**-0.1**
LNOR	**Lincton Mounta**	**9.08**	**117**	*e*Pn	**Pn**	**12 40 46.1**	**0.0**
YBH	**Yreka Blue Hor**	**10.22**	**148**	Pn	**Pn**	**12 41 03.4**	**+1.7**
	0.1nm,0.3s,baz=340,slow=13,SNR=16						
YBH				LR	LR	12 44 12.0	
	comp=Z,718nm,21.8s,baz=330,slow=33						
BSMT	**Bassoo Peak**	**10.24**	**100**	*e*Pn	**Pn**	**12 41 03.2**	**+1.3**
WALA	**Waterton Lakes**	**10.42**	**93**	*e*Pn	**Pn**	**12 41 07.2**	**+2.9**
EDM	**Edmonton**	**10.50**	**70**	*e*Pn	**Pn**	**12 41 08.2**	**+2.8**
JTMT	**Jette**	**10.60**	**100**	*e*Pn	**Pn**	**12 41 07.9**	**+1.1**
KHMM	**Horse Mountain**	**10.69**	**154**	*e*Pn	**Pn**	**12 41 08.5**	**+0.5**
YBMT	**Yellow Bay**	**10.73**	**99**	*e*Pn	**Pn**	**12 41 09.6**	**+1.0**
SWMT	**Swartz Lake**	**10.87**	**101**	*e*Pn	**Pn**	**12 41 11.2**	**+0.7**
HYT	**Haines Junctio**	**11.04**	**340**	*e*Pn	**Pn**	**12 41 13.1**	**+0.3**
MSO	**Missoula**	**11.18**	**104**	*e*Pn	**Pn**	**12 41 14.9**	**+0.1**
WVOR	**Wild Horse Val**	**11.28**	**133**	*e*Pn	**Pn**	**12 41 17.3**	**+1.1**
	7.8nm,1.0s						
SLMT	**Seeley Lake**	**11.29**	**101**	*e*Pn	**Pn**	**12 41 16.4**	**+0.1**
CHMT	**Chamberlain Mo**	**11.57**	**103**	*e*Pn	**Pn**	**12 41 20.7**	**+0.5**
KCPM	**Cahto Peak**	**11.84**	**156**	*e*Pn	**Pn**	**12 41 25.6**	**+1.7**
LRM	**Limekiln Ridge**	**12.56**	**106**	*e*Pn	**Pn**	**12 41 33.8**	**0.0**
HLID	**Hailey**	**12.68**	**118**	*e*Pn	**Pn**	**12 41 36.4**	**+1.1**
DLMT	**Dillon**	**12.71**	**108**	*e*Pn	**Pn**	**12 41 35.6**	**-0.1**
OHCM	**Honcut**	**12.78**	**149**	*e*Pn	**Pn**	**12 41 37.3**	**+0.6**
MCMT	**McKenzie Canyo**	**12.84**	**111**	*e*Pn	**Pn**	**12 41 37.4**	**0.0**
	4.7nm,0.5s						
BOZ	**Bozeman (W)**	**13.15**	**105**	*e*Pn	**Pn**	**12 41 42.4**	**+0.6**
EGMT	**Eagleton**	**13.36**	**94**	*e*Pn	**Pn**	**12 41 46.1**	**+1.5**
QLMT	**Earthquake Lak**	**13.69**	**108**	*e*Pn	**Pn**	**12 41 48.7**	**-0.3**
YMR	**Madison River**	**14.05**	**108**	*e*Pn	**Pn**	**12 41 53.4**	**-0.7**
	36nm,0.7s						
YNR	**Norris Junctio**	**14.20**	**107**	*e*Pn	**Pn**	**12 41 58.1**	**+2.1**
ELK	**Elko**	**14.21**	**129**	Pn	**Pn**	**12 41 57.2**	**+1.0**
	0.1nm,0.3s,baz=295,slow=12,SNR=5.7						
ELK				LR	LR	12 47 16.4	
	comp=Z,598nm,18.6s,baz=320,slow=37						
ELK	**Elko**	**14.21**	**129**	Pn	**Pn**	**12 41 57.2**	**+1.0**
ELK				LR	LR	12 47 16.4	
YFT	**Old Faithful**	**14.25**	**109**	*e*Pn	**Pn**	**12 41 54.1**	**-2.6**
GCMT	**Greycliff**	**14.30**	**102**	*e*Pn	**Pn**	**12 41 57.6**	**+0.3**
	23nm,0.5s						
DAWY	**Dawson**	**14.35**	**343**	*e*Pn	**Pn**	**12 41 59.0**	**+1.0**
MENT	**Mentasta**	**14.40**	**334**	*e*P	**Pn**	**12 42 02.4**	**+3.7**
LKWY	**Lake**	**14.45**	**107**	*e*Pn	**Pn**	**12 41 57.0**	**-2.5**
YKA	**Yellowknife Ar**	**14.47**	**29**	Pn	**Pn**	**12 41 57.6**	**-2.0**
	0.5nm,0.3s,baz=221,slow=12,SNR=14						
YKA				Sn	**Sn**	**12 44 33.4**	**-6.3**
	0.3nm,0.3s,baz=223,slow=22,SNR=6.5						
YKA				LR	LR	12 47 52.7	
	comp=Z,83nm,18.2s,baz=50,slow=39						
YKA	**Yellowknife Ar**	**14.47**	**29**	Pn	**Pn**	**12 41 57.6**	**-1.9**
YKA				Sn	**Sn**	**12 44 33.4**	**-6.3**
YKA				LR	LR	12 47 52.7	
IMW	**Indian Meadow**	**14.49**	**111**	*e*Pn	**Pn**	**12 42 01.0**	**+1.0**
DCID1	**Drake Creek**	**14.52**	**112**	*e*P	**Pn**	**12 42 08.3**	**+7.9**
RRI2	**Red Ridge**	**14.59**	**113**	*e*Pn	**Pn**	**12 41 58.2**	**-3.1**
TPAW	**Teton Pass**	**14.72**	**112**	*e*P	**Pn**	**12 42 04.6**	**+1.5**
NVAR	**Mina Array Bea**	**14.73**	**142**	Pn	**Pn**	**12 42 03.3**	**0.0**
	0.1nm,0.3s,baz=315,slow=12,SNR=14						
HVU	**Hansel Valley**	**14.76**	**120**	*e*P	**Pn**	**12 42 06.3**	**+2.6**
REDW	**Red Top Meadow**	**14.85**	**112**	*e*P	**Pn**	**12 42 08.1**	**+3.1**
LOHW	**Long Hollow**	**14.86**	**111**	*e*Pn	**Pn**	**12 42 07.2**	**+2.3**
AHID	**Auburn Hatcher**	**15.07**	**114**	*e*Pn	**Pn**	**12 42 08.1**	**+0.2**
	24nm,0.9s						
BGU	**Big Grassy Mou**	**15.22**	**123**	*e*P	**Pn**	**12 42 12.1**	**+2.2**
	18nm,1.2s						
PMR	**Palmer**	**15.26**	**323**	*e*P	**Pn**	**12 42 12.3**	**+2.1**
SPUT	**South Promonto**	**15.26**	**121**	*e*P	**Pn**	**12 42 13.1**	**+2.6**
EGAK	**Eagle**	**15.34**	**341**	*e*P	**Pn**	**12 42 09.8**	**-1.5**
	10nm,0.8s						
HWUT	**Hardware Ranch**	**15.55**	**119**	*e*P	**Pn**	**12 42 17.2**	**+3.0**
	98nm,1.8s						
MTUM	**Tungsten Hills**	**15.57**	**144**	*e*P	**Pn**	**12 42 20.0**	**+5.5**
DUG	**Dugway**	**15.86**	**125**	*e*P	**Pn**	**12 42 23.1**	**+4.8**
	16nm,0.9s						
NOQ	**North Oquirrh**	**15.90**	**122**	*e*P	**Pn**	**12 42 19.0**	**+0.3**
	18nm,0.8s						
BW06	**Boulder Array**	**15.97**	**112**	*e*Pn	**Pn**	**12 42 21.8**	**+2.2**
	51nm,1.4s						
PDAR	**Pinedale Array**	**15.97**	**112**	Pn	**Pn**	**12 42 22.1**	**+2.5**
	0.5nm,0.3s,baz=314,slow=9.5,SNR=102						
PDAR				LR	LR	12 48 37.4	
	comp=Z,741nm,18.1s,baz=322,slow=38						
LAO	**LASA Array**	**16.08**	**95**	*e*P	**Pn**	**12 42 21.5**	**+0.4**
	24nm,0.9s						
JLU	**Jordanelle**	**16.30**	**121**	*e*P	**Pn**	**12 42 24.3**	**+0.5**
	8.4nm,0.9s						
NLU	**North Lily Min**	**16.42**	**124**	*e*P	**Pn**	**12 42 24.9**	**-0.5**
	17nm,0.8s						
DAU	**Daniels Canyon**	**16.54**	**121**	*e*Pn	**Pn**	**12 42 27.8**	**+0.9**
DGMT	**Dagmar**	**16.76**	**88**	*e*P	**Pn**	**12 42 32.3**	**+2.6**
	49nm,0.8s						
COLA	**College**	**17.06**	**333**	P	**Pn**	**12 42 36.0**	**+2.7**
	15nm,1.3s						
FFC	**Flin Flon**	**17.32**	**66**	*e*P	**Pn**	**12 42 34.6**	**-2.0**
	14nm,0.6s						
ARUT	**Antelope Range**	**17.39**	**132**	*e*P	**Pn**	**12 42 38.2**	**+0.6**
	20nm,0.7s						
MSU	**Marysvale**	**17.45**	**127**	*e*P	**Pn**	**12 42 37.1**	**-1.2**
CCUT	**Cedar City**	**17.62**	**132**	*e*P	**Pn**	**12 42 39.4**	**-1.0**
	108nm,2.5s						
SVW2	**Sparrevohn**	**17.68**	**316**	*e*P	**Pn**	**12 42 39.3**	**-1.8**
INK	**Inuvik**	**17.78**	**356**	P	**Pn**	**12 42 41.6**	**-0.7**
	0.1nm,0.3s,baz=185,slow=11,SNR=4.7						
INK				LR	LR	12 49 36.7	
	comp=Z,728nm,18.8s,baz=352,slow=37						
SRU	**San Rafael**	**17.86**	**123**	*e*P	**Pn**	**12 42 44.2**	**+0.7**
	9.3nm,0.9s						
RWWY	**Rawlins**	**18.01**	**111**	*e*P	**Pn**	**12 42 44.9**	**-0.4**
	177nm,2.5s						
GSC	**Goldstone**	**18.04**	**143**	*e*P	**Pn**	**12 42 47.0**	**+1.3**
	231nm,2.8s						
MWC	**Mount Wilson**	**18.56**	**148**	*e*P	**Pn**	**12 42 51.4**	**-0.6**
	23nm,1.0s						
RSSD	**Black Hills**	**18.61**	**101**	*e*P	**Pn**	**12 42 53.6**	**+1.0**
	46nm,1.8s						
TTA	**Tatalina**	**18.69**	**321**	*e*P	**Pn**	**12 42 51.7**	**-1.7**
LDFC	**Landfair**	**18.91**	**140**	*e*P	**Pn**	**12 42 56.7**	**+0.5**
	12nm,0.7s						
PV04	**Paradox Valley**	**19.25**	**122**	*e*P	**Pn**	**12 42 59.8**	**-0.6**
PV01	**Paradox Valley**	**19.62**	**122**	*e*P	**Pn**	**12 43 03.9**	**-0.9**
	1μm,0.7s						
PFO	**Pinyon Flat Ob**	**19.68**	**145**	*e*P	**Pn**	**12 43 04.1**	**-1.4**
	7.5nm,0.9s						
SMCO	**Snowmass**	**19.77**	**117**	*e*P	**Pn**	**12 43 06.0**	**-0.6**
	10nm,0.8s						
ISCO	**Idaho Springs**	**20.14**	**113**	*e*P	**P**	**12 43 07.0**	**-2.1**
	120nm,2.6s						
WUAZ	**Wupatki**	**20.20**	**132**	*e*P	**P**	**12 43 10.4**	**+0.6**
	120nm,0.9s						
MVCO	**Mesa Verde**	**20.34**	**123**	*e*P	**P**	**12 43 08.4**	**-2.9**
	17nm,0.9s						
GLA	**Glamis**	**20.79**	**142**	*e*P	**P**	**12 43 16.5**	**+0.3**
	59nm,1.5s						
ULM	**Lac du Bonnet**	**21.53**	**78**	P	**P**	**12 43 24.0**	**0.0**
	25nm,0.8s,mb4.7,baz=290,slow=10,SNR=12						
ULM				LR	LR	12 52 20.6	
	comp=Z,495nm,20.0s,MS3.9,baz=114,slow=38						
OGNE	**Ogallala**	**21.58**	**106**	*e*P	**P**	**12 43 25.7**	**+1.0**
	126nm,1.6s,mb5.1						
SDCO	**Great Sand Dun**	**21.60**	**117**	*e*P	**P**	**12 43 25.6**	**+0.7**
	9.4nm,0.9s,mb4.2						
FCC	**Fort Churchill**	**21.95**	**55**	*e*P	**P**	**12 43 30.3**	**+1.8**
	0.4nm,0.8s						
AGMN	**Agassiz Refuge**	**22.10**	**83**	*e*P	**P**	**12 43 30.4**	**+0.3**
	34nm,0.8s,mb4.8						
ANMO	**Albuquerque**	**23.12**	**124**	P	**P**	**12 43 41.2**	**+0.1**
	4.2nm,0.9s,mb3.9,baz=328,slow=9.6,SNR=15						
ANMO				LR	LR	12 52 35.7	
	comp=Z,505nm,19.0s,MS4.0,baz=321,slow=36						
ANMO	**Albuquerque**	**23.12**	**124**	*e*P	**P**	**12 43 39.9**	**-1.2**
	87nm,2.5s,mb4.7						
LAZ	**Ladron**	**23.19**	**126**	*e*P	**P**	**12 43 42.4**	**+0.6**
	22nm,2.0s,mb4.2						
LENM	**Lemitar**	**23.46**	**126**	*e*P	**P**	**12 43 44.0**	**-0.7**
	5.3nm,0.9s,mb4.0						
ECSD	**EROS Data Cent**	**23.48**	**94**	*e*P	**P**	**12 43 44.5**	**-0.2**
	22nm,0.9s,mb4.6						
LPM	**Los Pinos Moun**	**23.52**	**125**	*e*P	**P**	**12 43 45.6**	**+0.2**
BNM	**Barren Site**	**23.65**	**125**	*e*P	**P**	**12 43 46.9**	**+0.3**
	12nm,1.1s,mb4.2						
EYMN	**Ely**	**24.97**	**81**	*e*P	**P**	**12 43 58.9**	**+0.5**
	13nm,0.9s,mb4.5						
AMTX	**Amarillo**	**25.80**	**117**	*e*P	**P**	**12 44 06.4**	**+0.3**
	25nm,0.8s,mb4.8						
MNTX	**Cornudas Mount**	**26.23**	**127**	*e*P	**P**	**12 44 09.8**	**-0.1**
	5.3nm,0.9s,mb4.1						
COWI	**Conover**	**27.17**	**84**	*e*P	**P**	**12 44 17.2**	**-1.1**
	7.3nm,0.8s,mb4.3						
WMOK	**Wichita Mounta**	**27.57**	**113**	*e*P	**P**	**12 44 22.1**	**+0.1**
	9.9nm,0.8s,mb4.5						
RES	**Resolute Bay**	**28.08**	**19**	LR	LR	12 55 57.7	
	comp=Z,581nm,21.0s,MS4.2,baz=129,slow=37						
TXAR	**Lajitas Array**	**29.00**	**127**	P	**P**	**12 44 34.9**	**0.0**
	2.6nm,0.8s,mb4.0,baz=320,slow=6.8,SNR=33						
TXAR				LR	LR	12 56 57.3	
	comp=Z,336nm,19.1s,MS4.0,baz=5.0,slow=38						
JCT	**Junction City**	**30.14**	**121**	*e*P	**P**	**12 44 44.2**	**-0.6**
	10nm,0.8s,mb4.6						
MIAR	**Mount Ida**	**30.81**	**108**	*e*P	**P**	**12 44 51.2**	**+0.4**
	10nm,1.3s,mb4.5						
PLAL	**Pickwick Lake**	**33.91**	**101**	*e*P	**P**	**12 45 16.6**	**-1.3**
	5.7nm,0.8s,mb4.5						
SCHQ	**Schefferville**	**37.23**	**58**	LR	LR	12 59 42.4	
	comp=Z,618nm,19.5s,MS4.4,baz=318,slow=34						
PETK	**Petropavlovsk-**	**43.02**	**303**	LR	LR	13 03 03.2	
	comp

	comp=Z,48nm,3.7s					
KMI				LR	LR	
	comp=N,120nm,18.3s,MS4.4					
KMI				LR	LR	
	comp=E,82nm,19.3s,MS4.4					
KMI				LR	LR	
	comp=Z,110nm,21.4s,MS4.3					
MMAI	**Mount Meron Ar**	**95.66**	**12**	LR	LR	13 37 32.1
	comp=Z,50nm,20.4s,MS4.0,baz=350,slow=37					
CMAR	**Chiang Mai Arr**	**98.92**	**314**	LR	LR	13 44 05.3
	comp=Z,69nm,18.5s,MS4.2,baz=190,slow=40					
CPUP	**Villa Florida**	**99.72**	**120**	LR	LR	13 40 29.4
	comp=Z,107nm,19.6s,MS4.4,baz=336,slow=37					

CASC 30 12:46:31.2±2.0, 8°.44N×82°.98W, h3km, MD3.6, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.29**	**318**	⇑iP	Pg	12 46 37.4	+0.7
ACR				eS	Sg	12 46 42.0	+1.6
BRU2	**Volcan**	**0.45**	**39**	⇓iP	Pg	12 46 41.0	+1.2
BRU2				eS	Sg	12 46 49.2	+3.5
BAR1		**0.86**	**337**	⇓iP	Pg	12 46 47.7	-0.1
BAR1				eS	Sg	12 47 01.0	+1.9
BUS	**Buena Vista**	**1.35**	**325**	⇑iP	Pn	12 46 55.7	-1.3
QCR	**Quepos**	**1.53**	**310**	eP	Pn	12 46 59.7	+0.2
QCR				eS	Sn	12 47 21.2	+1.3
URSC	**Urasca**	**1.60**	**330**	eP	Pn	12 46 58.0	-2.4
CGA2	**Cerro Gallo 2**	**2.15**	**317**	eP	Pn	12 47 09.2	+1.2

ISK 30 12:49:46.7, 40°.51N×32°.49E, h12km, MD2.9
ISCJB 30 12:49:47.5±0.7, 40°.50N±0°.04×32°.45E±0°.04, h5km±7km, Error ellipse: s-maj=7.5km s-min=4.6km az=159.5
CSEM 30 12:49:47.8±0.1, 40°.52N×32°.43E, h8km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.8km az=161.0
DDA 30 12:49:47.3, 40°.34N×32°.44E, h7km±3km, Md2.8
ISC 30 12:49:48.3±0.7, 40°.52N±0°.04×32°.44E±0°.04, h10km±6km, n20, σ0.86/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKT	**Sivrigoynuk**	**0.30**	**280**	iP	Pg	12 49 54.8	+0.5
SGKT				iS	Sg	12 50 02.6	+4.2
SGKT	**Sivrigoynuk**	**0.30**	**280**	iP	Pg	12 49 54.8	+0.5
SAFT	**Safranbolu**	**0.74**	**14**	ePG	Pg	12 50 02.1	-0.5
SAFT				eSG	Sg	12 50 12.0	-0.4
SAFT	**Safranbolu**	**0.74**	**14**	ePg	Pg	12 50 02.1	-0.5
SAFT				eSg	Sg	12 50 12.0	-0.4
ELDT	**Eldivan**	**0.75**	**92**	eP	Pg	12 50 02.2	-0.6
ELDT				iS	Sg	12 50 12.8	+0.2
ELDT	**Eldivan**	**0.75**	**92**	eP	Pg	12 50 02.2	-0.6
ELDT				iS	Sg	12 50 12.8	+0.2
MDU	**Mudurnu**	**0.94**	**267**	ePG	Pg	12 50 05.6	-0.8
MDU				eSG	Sg	12 50 19.9	+1.3
MDU	**Mudurnu**	**0.94**	**267**	ePg	Pg	12 50 05.6	-0.7
MDU				eSg	Sg	12 50 19.9	+1.3
ILGA	**Ilgaz**	**1.10**	**61**	iP	Pb	12 50 10.8	+1.4
ILGA				iS	Sb	12 50 27.7	+3.9
ILGA	**Ilgaz**	**1.10**	**61**	iP	Pb	12 50 10.8	+1.4
BALT	**Daday**	**1.24**	**35**	iP	Pn	12 50 11.8	+0.2
BALT				iS	Sb	12 50 27.7	-0.1
BALT	**Daday**	**1.24**	**35**	iP	Pn	12 50 11.9	+0.3
BALT				iS	Sb	12 50 27.7	0.0
SVRH	**Sivrihisar-ESK**	**1.28**	**214**	ePN	Pn	12 50 11.1	-1.1
SVRH				eSN	Sn	12 50 29.3	-0.1
SVRH	**Sivrihisar-ESK**	**1.28**	**214**	ePn	Pn	12 50 11.1	-1.1
SVRH				eSn	Sn	12 50 29.3	-0.1
GULT	**Gulveren**	**1.47**	**267**	ePN	Pn	12 50 14.5	-0.3
GULT	**Gulveren**	**1.47**	**267**	ePn	Pn	12 50 14.5	-0.3
CORM	**Corum**	**1.71**	**101**	ePN	Pn	12 50 16.4	-1.6
CORM	**Corum**	**1.71**	**101**	ePn	Pn	12 50 16.4	-1.6
CDAG	**Cicekdag**	**1.73**	**121**	eP	Pn	12 50 18.6	+0.3
CDAG				iS	Sn	12 50 41.5	+1.1
CDAG	**Cicekdag**	**1.73**	**121**	eP	Pn	12 50 18.6	+0.3
CDAG				iS	Sn	12 50 41.5	+1.1

ISK 30 12:57:55.5, 36°.97N×29°.23E, h7km, MD3.0
ISCJB 30 12:57:56.3±0.6, 36°.93N±0°.03×29°.24E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=4.5km az=143.1
CSEM 30 12:57:56.3±0.2, 36°.95N×29°.21E, h8km, MD3.0, Error ellipse: s-maj=4.9km s-min=4.6km az=4.0
DDA 30 12:57:58.2, 37°.04N×29°.20E, h7km±4km, Md2.9
ISC 30 12:57:56.5±0.6, 36°.94N±0°.03×29°.21E±0°.04, h7km±6km, n32, σ0.87/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**46**	ePG	Pg	12 58 01.7	-1.0
GLHS				eSG	Sg	12 58 06.3	-0.5
GLHS	**Glhisar (BURDU**	**0.32**	**46**	ePg	Pg	12 58 01.7	-1.0
GLHS				eSg	Sg	12 58 06.3	-0.6
FETY	**Fethiye**	**0.32**	**199**	ePG	Pg	12 58 02.8	+0.1
FETY	**Fethiye**	**0.32**	**199**	ePg	Pg	12 58 02.8	+0.1
GOLH	**Golhisar**	**0.41**	**43**	iP	Pg	12 58 04.1	-0.3
GOLH				iS	Sg	12 58 10.8	+1.0
GOLH	**Golhisar**	**0.41**	**43**	iP	Pg	12 58 04.1	-0.3
GOLH				iS	Sg	12 58 10.8	+1.0
TURN	**Turunc**	**0.49**	**263**	eP	Pg	12 58 10.8	+4.8
TURN				iS	Sg	12 58 23.4	+11
TURN	**Turunc**	**0.49**	**263**	eP	Pg	12 58 10.8	+4.8
ELL	**Elmali**	**0.59**	**108**	ePG	Pg	12 58 07.6	-0.3
ELL	**Elmali**	**0.59**	**108**	ePg	Pg	12 58 07.6	-0.2
DNZL	**Cakiroluk**	**0.76**	**350**	iP	Pg	12 58 11.0	-0.2
DNZL				iS	Sg	12 58 21.7	+0.6
DNZL	**Cakiroluk**	**0.76**	**350**	iP	Pg	12 58 11.0	-0.2
DNZL				iS	Sg	12 58 21.7	+0.6
AKAS	**Kas**	**0.77**	**156**	iP	Pg	12 58 11.7	+0.4
AKAS				iS	Sg	12 58 27.8	+6.5
AKAS	**Kas**	**0.77**	**156**	iP	Pg	12 58 11.7	+0.4
YER	**Yerkesik**	**0.77**	**285**	ePG	Pg	12 58 10.9	-0.4
YER	**Yerkesik**	**0.77**	**285**	ePg	Pg	12 58 10.9	-0.4
DENT	**Denizli**	**0.83**	**350**	ePG	Pg	12 58 11.2	-1.2
DENT	**Denizli**	**0.83**	**350**	ePg	Pg	12 58 11.2	-1.2
KORT	**Korkueli**	**0.91**	**86**	eP	Pg	12 58 16.1	+2.0
KORT				iS	Sg	12 58 29.6	+3.7
KORT	**Korkueli**	**0.91**	**86**	eP	Pg	12 58 16.1	+2.1
KORT				iS	Sg	12 58 29.6	+3.7
MLSB	**Milas**	**1.20**	**288**	ePN	Pn	12 58 18.8	-0.9
MLSB	**Milas**	**1.20**	**288**	ePn	Pn	12 58 18.8	-0.9
AYDN	**Tasoluk**	**1.28**	**305**	iP	Pn	12 58 21.6	+0.7
AYDN				iS	Sb	12 58 39.0	+1.3
AYDN	**Tasoluk**	**1.28**	**305**	iP	Pn	12 58 21.5	+0.6
AYDN				iS	Sb	12 58 39.0	+1.3
DAT	**Datca**	**1.33**	**261**	ePN	Pn	12 58 21.4	0.0
DAT	**Datca**	**1.33**	**261**	ePn	Pn	12 58 21.5	+0.1
KHL	**Karahalli**	**1.41**	**10**	ePN	Pn	12 58 21.7	-0.8
KHL	**Karahalli**	**1.41**	**10**	ePn	Pn	12 58 21.7	-0.8
KHAL	**Karahalli**	**1.45**	**9**	iP	Pn	12 58 23.0	-0.1
KHAL				iS	Sn	12 58 43.0	+0.6
KHAL	**Karahalli**	**1.45**	**9**	iP	Pn	12 58 23.0	-0.1
KHAL				iS	Sn	12 58 43.0	+0.6
SUTC	**Sutluce-Ispart**	**1.52**	**69**	ePN	Pn	12 58 22.9	-1.2
SUTC	**Sutluce-Ispart**	**1.52**	**69**	ePn	Pn	12 58 22.9	-1.3

CASC 30 13:17:02.3±3.8, 8°.04N×82°.79W, h22km±15km, MD4.5, mb4.4(NEIC)
IDC 30 13:17:06.5±0.7, 8°.52N×82°.73W, h0km, mb4.1/9, mb1 4.3/12, mb1mx4.1/24, mbtmp4.2/12, ML3.4/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/31, Error ellipse: s-maj=42.9km s-min=14.1km az=64.0
NEIC 30 13:17:11.8±0.4, 8°.53N×82°.75W, h35km, mb4.3/24, ML4.1(UCR), Error ellipse: s-maj=16.8km s-min=7.7km az=56.0
ISC 30 13:17:11.9±0.7, 8°.58N±0°.05×82°.81W±0°.05, h31km±4km, n71, σ1.47/71, mb4.3/33, MS3.3/4, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.24**	**28**	⇓iP	Pb	13 17 16.5	-2.3
BRU2				eS	Sb	13 17 25.2	+1.8
ACR	**Cerro Adams**	**0.36**	**281**	⇑iP	Pb	13 17 13.1	-7.3
ACR				eS	Sb	13 17 26.8	+0.7
BAR1		**0.82**	**323**	⇓iP	Pn	13 17 23.3	-4.0
BAR1				eS	Sn	13 17 44.6	+6.1
CNI	**Changuinola**	**0.88**	**19**	eP	Pn	13 17 27.0	-1.1
BUS	**Buena Vista**	**1.35**	**316**	⇑iP	Pn	13 17 31.9	-2.7
LIO	**Limon**	**1.43**	**351**	eP	Pn	13 17 35.7	0.0
URSC	**Urasca**	**1.57**	**322**	eP	Pn	13 17 34.4	-3.2
QCR	**Quepos**	**1.58**	**302**	⇓eP	Pn	13 17 32.7	-5.1
QCR				eS	Sn	13 17 59.1	+1.9
SJS	**Escuela Geolog**	**1.83**	**318**	eP	Pn	13 17 39.1	-2.0
CGA2	**Cerro Gallo 2**	**2.17**	**311**	eP	Pn	13 17 42.6	-3.2
JCR	**Jicaral**	**2.60**	**299**	eP	Pn	13 17 47.4	-4.4
FORC	**Fortuna**	**2.62**	**316**	eP	Pn	13 17 48.5	-3.6
BCIP	**Isla Barro Col**	**2.99**	**79**	Pn	Pn	13 17 57.5	+0.4
BCIP				eSn	Sn	13 18 48.8	+17
VCR	**Vista de Mar**	**3.18**	**299**	eP	Pn	13 17 54.1	-5.7
TGUH	**Tegucigalpa,Un**	**6.99**	**322**	ePn	Pn	13 18 54.7	+2.7
OTAV	**Otavalo**	**9.36**	**152**	ePn	Pn	13 19 24.8	+0.2
	14nm,1.1s						
APG	**El Apazote**	**9.84**	**311**	Pn	Pn	13 19 32.5	+1.2
	0.5nm,0.3s,baz=148,slow=20,SNR=9.7						
APG				Sn	Sn	13 21 24.8	+4.0
	0.3nm,0.3s,baz=358,slow=22,SNR=1.8						
APG				LR	LR	13 23 37.2	
	comp=Z,137nm,19.4s,baz=34,slow=39						
SDV	**Santo Domingo**	**12.04**	**88**	Pn	Pn	13 20 05.3	+3.9
	0.2nm,0.3s,baz=288,slow=15,SNR=3.0						
SDV				LR	LR	13 24 37.6	
	comp=Z,119nm,19.8s,baz=132,slow=38						
CMIG	**Matias Romero**	**14.49**	**307**	Pn	Pn	13 20 33.9	-1.0
	0.1nm,0.3s,baz=122,slow=8.0,SNR=4.3						
ATAH	**Atahualpa**	**16.09**	**164**	Pn	Pn	13 20 56.6	+0.7
	0.1nm,0.3s,baz=342,slow=12,SNR=3.6						
ATAH				LR	LR	13 26 49.1	
	comp=Z,81nm,18.6s,baz=262,slow=36						
NNA	**Nana**	**21.28**	**164**	P	P	13 21 54.4	-1.5
	33nm,0.9s,mb4.6,baz=331,slow=8.5,SNR=8.4						
LRAL	**Lakeview Retre**	**24.64**	**352**	eP	P	13 22 32.3	+2.6
	6.4nm,0.8s,mb4.2						
GOGA	**Godfrey**	**24.72**	**359**	P	P	13 22 28.4	-2.0
	9.9nm,0.8s,mb4.4						
CPCT	**Cooper Cave**	**26.79**	**357**	eP	P	13 22 45.9	-3.2
JCT	**Junction City**	**26.96**	**326**	eP	P	13 22 52.1	+1.4
	2.5nm,0.3s,mb4.2						
TKL	**Tuckaleechee C**	**26.97**	**358**	LR	LR	13 34 03.4	
	comp=Z,73nm,18.1s,MS3.3,baz=265,slow=38						
MIAR	**Mount Ida**	**27.67**	**341**	eP	P	13 22 55.5	-1.5
	4.3nm,0.9s,mb4.1						
LPAZ	**La Paz**	**28.66**	**150**	P	P	13 23 06.3	+0.2
	1.8nm,0.9s,mb3.8,baz=334,slow=14,SNR=4.4						
LPAZ	**La Paz**	**28.66**	**150**	eP	P	13 23 05.4	-0.6
	2.0nm,0.8s,mb3.9						
CCM	**Cathedral Cave**	**30.32**	**347**	P	P	13 23 20.0	-0.5
	5.7nm,0.9s,mb4.3						
GDL2	**Guadalupe Moun**	**30.86**	**323**	eP	P	13 23 18.4	-7.0
ECSD	**EROS Data Cent**	**37.03**	**343**	eP	P	13 24 17.6	-1.2
	7.6nm,1.2s,mb4.4						
WUAZ	**Wupatki**	**37.41**	**320**	eP	P	13 24 23.8	+1.6
	3.8nm,1.0s,mb4.2						
GLA	**Glamis**	**38.31**	**314**	eP	P	13 24 31.2	+1.4
	7.7nm,0.8s,mb4.5						
SRU	**San Rafael**	**39.26**	**325**	eP	P	13 24 39.9	+2.2
	3.5nm,1.0s,mb4.0						
GSC	**Goldstone**	**40.90**	**316**	eP	P	13 24 52.5	+1.2
	6.2nm,0.9s,mb4.2						
AGMN	**Agassiz Refuge**	**41.09**	**347**	eP	P	13 24 51.6	-1.1
	14nm,1.4s,mb4.4						
PDAR	**Pinedale Array**	**41.36**	**330**	P	P	13 24 55.4	+0.5
	0.4nm,0.7s,baz=129,slow=11,SNR=3.9						
HWUT	**Hardware Ranch**	**41.56**	**327**	eP	P	13 25 00.5	+3.8
	7.4nm,1.3s,mb4.2						
HWUT				ePcP	PcP	13 26 54.5	+0.9
ISA	**Isabella**	**42.24**	**315**	eP	P	13 25 04.0	+1.7
	6.0nm,1.1s,mb4.1						
CFAA	**Coronel Fontan**	**42.32**	**161**	P	P	13 25 01.4	-1.5
	0.7nm,0.9s,mb3.3,baz=347,slow=8.2,SNR=5.6						
REDW	**Red Top Meadow**	**42.44**	**329**	eP	P	13 25 03.4	-0.4
	4.7nm,1.1s,mb4.0						
ULM	**Lac du Bonnet**	**42.94**	**348**	P	P	13 25 06.9	-0.8
	8.8nm,0.8s,mb4.5,baz=165,slow=7.2,SNR=7.7						
ULM	**Lac du Bonnet**	**42.94**	**348**	eP	P	13 25 06.7	-1.0
	9.2nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**43.60**	**319**	P	P	13 25 15.2	+1.9
	3.2nm,0.9s,mb4.0,baz=138,slow=7.1,SNR=14						
HLID	**Hailey**	**44.43**	**327**	eP	P	13 25 20.2	+0.4
	3.3nm,1.2s,mb3.9						
HLID				ePcP	PcP	13 27 06.1	+2.9
BOZ	**Bozeman (W)**	**44.49**	**331**	eP	P	13 25 20.3	+0.1
	18nm,2.3s,mb4.4						
MCMT	**McKenzie Canyo**	**44.49**	**329**	eP	P	13 25 19.4	-0.9
	1.4nm,1.1s,mb3.6						
LRM	**Limekiln Ridge**	**45.01**	**331**	eP	P	13 25 24.4	0.0
	14nm,1.1s,mb4.7						
WVOR	**Wild Horse Val**	**46.11**	**323**	eP	P	13 25 31.1	-2.1
	7.6nm,0.9s,mb4.6						
OHCM	**Honcut**	**46.19**	**318**	eP	P	13 25 35.2	+1.4
PLCA	**Paso Flores**	**50.35**	**168**	P	P	13 26 03.4	-2.5
	5.8nm,0.8s,mb4.6,baz=345,slow=10,SNR=10						
PLCA	**Paso Flores**	**50.35**	**168**	P	P	13 26 03.4	-2.5
EDM	**Edmonton**	**50.91**	**337**	eP	P	13 26 10.2	+0.3
YKA	**Yellowknife Ar**	**58.56**	**343**	P	P	13 27 03.9	-1.3
	1.8nm,0.8s,mb4.1,baz=137,slow=6.9,SNR=11						
YKA				LR	LR	13 53 51.4	
	comp=Z,3.9nm,18.7s,MS2.5,baz=225,slow=38						
YKA	**Yellowknife Ar**	**58.56**	**343**	P	P	13 27 03.9	-1.3
YKA				LR	LR	13 53 51.4	
RES	**Resolute Bay**	**66.43**	**357**	eP	P	13 27 58.7	+1.0
DAWY	**Dawson**	**68.12**	**337**	eP	P	13 28 08.7	+0.1
EGAK	**Eagle**	**69.13**	**337**	eP	P	13 28 14.7	-0.1
	3.4nm,0.9s,mb4.3						
SUMG	**Summit**	**69.24**	**13**	eP	P	13 28 13.7	-1.7
	10.0nm,0.8s,mb4.8						
KTH	**Kantishna Hill**	**72.69**	**334**	eP	P	13 28 32.5	-3.9
	1.1nm,0.2s,mb4.4						
RSO	**Redoubt South**	**72.74**	**331**	eP	P	13 28 37.5	+0.8
TIC	**Toumodi**	**77.00**	**85**	eP	P	13 29 04.1	+1.7
	10.0nm,0.2s,mb5.4						
LIC	**Lamto**	**77.05**	**86**	eP	P	13 29 04.5	+1.9
	41nm,1.2s,mb5.2						
KIC	**Kosan Boka**	**77.31**	**85**	eP	P	13 29 06.1	+2.0
	35nm,1.2s,mb5.2						
TORD	**Torodi Ar. Bea**	**82.77**	**78**	P	P	13 29 34.1	+0.5
	0.9nm,0.8s,mb3.8,baz=299,slow=6.4,SNR=3.3						
NOA	**NORSAR Array B**	**84.51**	**29**	LR	LR	14 04 04.5	
	comp=Z,22nm,19.6s,MS3.5,baz=255,slow=33						
GERES	**GERESS Array B**	**87.87**	**41**	LR	LR	14 03 48.0	
	comp=Z,56nm,19.4s,MS4.0,baz=275,slow=32						
KSRS	**Korea Array**	**125.93**	**330**	PKP	PKPdf	13 36 10.4	-0.8
	1.3nm,0.6s,baz=45,slow=1.8,SNR=7.2						
ASAR	**Alice Springs**	**141.82**	**242**	PKhKP		13 36 35.6	
	1.7nm,0.8s,baz=116,slow=2.9,SNR=10						
CMAR	**Chiang Mai Arr**	**153.08**	**356**	PKP	PKPdf	13 36 59.4	-0.5
	0.4nm,0.7s,baz=268,slow=2.2,SNR=5.1						
CMAR				PKPbc	PKPbc	13 37 07.0	-0.2
	1.1nm,0.8s,baz=332,slow=3.5,SNR=5.3						

CSEM 30 13:17:22.9±0.1, 37°.01N×29°.12E, h8km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.9km az=166.0
ISK 30 13:17:22.1, 37°.00N×29°.14E, h7km, MD3.1
ISCJB 30 13:17:23.5±0.6, 36°.98N±0°.03×29°.17E±0°.03, h1km±7km, Error ellipse: s-maj=4.6km s-min=4.1km az=34.7
DDA 30 13:17:24.2, 36°.97N×29°.20E, h7km±4km, Md3.0
ISC 30 13:17:24.0±0.5, 36°.98N±0°.03×29°.17E±0°.03, h8km±6km, n37, σ1.30/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**56**	ePG	Pg	13 17 29.0	-1.2
GLHS				eSG	Sg	13 17 34.1	-0.3
GLHS	**Glhisar (BURDU**	**0.32**	**56**	ePg	Pg	13 17 29.0	-1.3
GLHS				eSg	Sg	13 17 34.2	-0.3
FETY	**Fethiye**	**0.35**	**191**	ePG	Pg	13 17 30.0	-0.9
FETY				eSG	Sg	13 17 35.2	-0.3
FETY	**Fethiye**	**0.35**	**191**	ePg	Pg	13 17 30.0	-0.9
FETY				eSg	Sg	13 17 35.3	-0.2
GOLH	**Golhisar**	**0.41**	**51**	iP	Pg	13 17 31.4	-0.6
GOLH				iS	Sg	13 17 38.1	+0.8
GOLH	**Golhisar**	**0.41**	**51**	iP	Pg	13 17 31.4	-0.5
GOLH				iS	Sg	13 17 38.1	+0.8
TURN	**Turunc**	**0.47**	**257**	eP	Pg	13 17 38.7	+5.7
TURN				iS	Sg	13 17 50.3	+11
ELL	**Elmali**	**0.64**	**111**	ePG	Pg	13 17 35.3	-1.0
ELL				eSG	Sg	13 17 45.2	+0.6
ELL	**Elmali**	**0.64**	**111**	ePg	Pg	13 17 35.3	-1.0
ELL				eSg	Sg	13 17 45.3	+0.7
DNZL	**Cakiroluk**	**0.71**	**352**	iP	Pg	13 17 37.0	-0.7
DNZL				iS	Sg	13 17 48.9	+1.8
DNZL	**Cakiroluk**	**0.71**	**352**	iP	Pg	13 17 37.0	-0.8
DNZL				iS	Sg	13 17 48.9	+1.8
YER	**Yerkesik**	**0.72**	**283**	ePG	Pg	13 17 36.0	-2.0
YER	**Yerkesik**	**0.72**	**283**	ePg	Pg	13 17 36.0	-2.0
DENT	**Denizli**	**0.78**	**352**	ePG	Pg	13 17 37.0	-2.0
DENT	**Denizli**	**0.78**	**352**	ePg	Pg	13 17 37.0	-2.0
AKAS	**Kas**	**0.82**	**155**	iP	Pg	13 17 40.6	+0.8
AKAS				iS	Sg	13 17 53.4	+2.9
AKAS	**Kas**	**0.82**	**155**	iP	Pg	13 17 40.6	+0.7
AKAS				iS	Sg	13 17 53.4	+2.8
KORT	**Korkueli**	**0.95**	**88**	iP	Pg	13 17 41.8	-0.5
KORT				iS	Sg	13 17 56.0	+1.5
KORT	**Korkueli**	**0.95**	**88**	iP	Pg	13 17 41.8	-0.4
KORT				iS	Sg	13 17 56.0	+1.5
MLSB	**Milas**	**1.16**	**286**	ePN	Pn	13 17 44.0	-2.5
MLSB	**Milas**	**1.16**	**286**	ePn	Pn	13 17 44.0	-2.5
AYDN	**Tasoluk**	**1.23**	**304**	iP	Pg	13 17 48.8	+1.1
AYDN				iS	Sg	13 18 06.2	+2.6
AYDN	**Tasoluk**	**1.23**	**304**	iP	Pg	13 17 48.8	+1.1
DAT	**Datca**	**1.30**	**259**	ePN	Pn	13 17 47.4	-1.1
DAT	**Datca**	**1.30**	**259**	ePn	Pn	13 17 47.4	-1.1
KHL	**Karahalli**	**1.37**	**12**	ePN	Pn	13 17 48.7	-0.7
KHL	**Karahalli**	**1.37**	**12**	ePn	Pn	13 17 48.7	-0.7
BDRM	**Kayabasi**	**1.38**	**274**	iP	Pn	13 17 51.2	+1.7
BDRM				iS	Sb	13 18 09.7	+1.8
BDRM	**Kayabasi**	**1.38**	**274**	iP	Pn	13 17 51.2	+1.6
BDRM				iS	Sb	13 18 09.7	+1.8
KHAL	**Karahalli**	**1.41**	**10**	iP	Pn	13 17 50.8	+0.8
KHAL				iS	Sb	13 18 10.0	+1.3
KHAL	**Karahalli**	**1.41**	**10**	iP	Pn	13 17 50.8	+0.8
KHAL				iS	Sb	13 18 10.0	+1.2
SUTC	**Sutluce-Ispart**	**1.54**	**71**	ePN	Pn	13 17 51.0	-0.8
SUTC	**Sutluce-Ispart**	**1.54**	**71**	ePn	Pn	13 17 51.0	-0.8
KULA	**Kula-Manisa**	**1.58**	**345**	ePN	Pn	13 17 50.7	-1.6
KULA	**Kula-Manisa**	**1.58**	**345**	ePn	Pn	13 17 50.7	-1.7
HDMB	**Hadim**	**2.66**	**89**	ePN	Pn	13 18 07.0	-0.1
HDMB	**Hadim**	**2.66**	**89**	ePn	Pn	13 18 07.0	-0.1

CSEM 30 13:31:57.1, 39°.87N×33°.20E, h7km, MD2.8, After DDA
DDA 30 13:31:57.1, 39°.87N×33°.20E, h7km±7km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.64**	**16**	iP	Pg	13 32 08.6	-0.9
ELDT				iS	Sg	13 32 19.0	+1.1
ELDT	**Eldivan**	**0.64**	**16**	iP	Pg	13 32 08.6	-0.9
ELDT				iS	Sg	13 32 19.0	+1.1
CDAG	**Cicekdag**	**0.94**	**105**	eP	Pg	13 32 15.9	+0.8
CDAG				iS	Sg	13 32 27.5	+0.2
CDAG	**Cicekdag**	**0.94**	**105**	eP	Pg	13 32 15.9	+0.8
CDAG				iS	Sg	13 32 27.5	+0.3
SGKT	**Sivrigoynuk**	**1.12**	**309**	iP	Pg	13 32 18.3	-0.3
SGKT				iS	Sg	13 32 31.6	-1.6
SGKT	**Sivrigoynuk**	**1.12**	**309**	iP	Pg	13 32 18.3	-0.3
SGKT				iS	Sg	13 32 31.6	-1.6
ILGA	**Ilgaz**	**1.25**	**18**	eP	Pn	13 32 21.7	+0.8
ILGA				iS	Sg	13 32 40.6	+3.5
ILGA	**Ilgaz**	**1.25**	**18**	eP	Pn	13 32 21.7	+0.8
ILGA				iS	Sg	13 32 40.6	+3.5
CTKT	**Corum**	**1.43**	**58**	iP	Pn	13 32 25.5	+2.0
CTKT				iS	Sb	13 32 45.9	+3.4
CTKT	**Corum**	**1.43**	**58**	iP	Pn	13 32 25.5	+2.1
CTKT				iS	Sb	13 32 45.9	+3.4
BALT	**Daday**	**1.67**	**5**	iP	Pn	13 32 27.8	+1.1
BALT				iS	Sn	13 32 46.8	-1.6
BALT	**Daday**	**1.67**	**5**	iP	Pn	13 32 27.8	+1.1
BALT				iS	Sn	13 32 46.8	-1.6

CSEM 30 13:32:02.6, 38°.13N×32°.63E, h17km, MD2.9, After ISK
ISK 30 13:32:02.6, 38°.13N×32°.63E, h17km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADK	**Ladik-KONYA**	**0.22**	**288**	ePG	Pg	13 32 08.1	+0.4
LADK				eSG	Sg	13 32 12.2	+1.0
LADK	**Ladik-KONYA**	**0.22**	**288**	ePg	Pg	13 32 08.1	+0.4
LADK				eSg	Sg	13 32 12.2	+1.0
KONT	**Konya--Tatoy**	**0.28**	**229

YUK	**Yuzh-Kuril'sk**	**5.49 242**	*e*PN	**Pn**	**13 57 34.0**	**+0.3**
YUK			*e*S	**Sn**	**13 58 37.0**	**+1.5**
YUK			pmax	pmax		
	comp=N,230nm,0.5s					
YUK			pmax	pmax		
	comp=Z,230nm,0.5s					
YUK			smax			
	comp=N,2μm,1.0s					
YUK			smax			
	comp=E,1μm,0.8s					
YUK			smax			
	comp=N,700nm,0.7s					
YUK			smax			
	comp=E,580nm,0.5s					
YUK	**Yuzh-Kuril'sk**	**5.49 242**	*e*P	**Pn**	**13 57 34.0**	**+0.3**
YUK			AMB	AMB	13 57 37.7	
	comp=E,230nm,0.5s					
YUK			*e*S	**Sn**	**13 58 37.0**	**+1.5**
YUK			A		13 58 55.0	
	comp=E,1μm,0.8s					
YUK			A		13 58 55.0	
	comp=E,2μm,1.0s					
YUK			A		13 58 57.5	
	comp=E,580nm,0.5s					
YUK			A		13 58 57.5	
	comp=E,700nm,0.7s					
NEM2	**Nemuro 2**	**5.95 237**	P	**Pn**	**13 57 37.3**	**-2.6**
NEM2			*e*S	**Sn**	**13 58 42.3**	**-4.3**
JRA	**Rausu**	**6.00 244**	P	**Pn**	**13 57 41.2**	**+0.6**
JRA			*e*S	**Sn**	**13 58 49.7**	**+1.8**
JNK	**Nakash**	**6.43 243**	P	**Pn**	**13 57 46.3**	**-0.3**
JNK			*e*S	**Sn**	**13 58 58.5**	**0.0**
JTKR	**Abashiri--Toko**	**6.75 249**	P	**Pn**	**13 57 51.9**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.77 275**	*e*PN	**Pn**	**13 57 53.0**	**+1.9**
YSS			pmax	pmax		
	comp=E,60nm,1.0s					
YSS			pmax	pmax		
	comp=Z,50nm,1.0s					
YSS			MLR	MLR		
	comp=Z,500nm,16.0s					
YSS	**Yuzh-Sakhalins**	**6.77 275**	*e*P	**Pn**	**13 57 53.4**	**+2.2**
	comp=Z,58nm,1.0s					
YSS	**Yuzh-Sakhalins**	**6.77 275**	*e*P	**Pn**	**13 57 53.0**	**+1.9**
YSS			AMB	AMB	13 57 57.5	
	comp=Z,50nm,1.0s					
YSS			AMB	AMB	13 57 57.5	
	comp=Z,60nm,1.0s					
YSS			*e*S	**Sn**	**13 59 06.0**	**-0.7**
YSS			AMS	AMS	14 00 24.0	
	comp=Z,500nm,16.0s					
JAK	**Akkeshi**	**6.78 239**	P	**Pn**	**13 57 48.8**	**-2.5**
JAK			*e*S	**Sn**	**13 59 02.6**	**-4.5**
JMP	**Maruseppu**	**7.08 250**	P	**Pn**	**13 57 56.7**	**+1.2**
PEA0B	**Petropavlovsk-**	**7.13 25**	*e*Pn	**Pn**	**13 57 58.0**	**+1.9**
PETK	**Petropavlovsk-**	**7.13 25**	P	**Pn**	**13 57 55.6**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=182,slow=11,SNR=17					
PETK			LR	LR	14 01 05.7	
	comp=Z,52nm,19.1s,baz=205,slow=41					
PETK	**Petropavlovsk-**	**7.13 25**	PN	**Pn**	**13 57 55.7**	**-0.4**
PETK			pmax	pmax		
	comp=Z,1.0nm,0.3s					
PETK			MLR	MLR		
	comp=Z,52nm,19.1s					
JAR	**Ashorobuto**	**7.17 244**	P	**Pn**	**13 57 56.6**	**-0.1**
JAR			*e*S	**Sn**	**13 59 17.8**	**+1.1**
JOB	**Onbets**	**7.35 241**	*e*S	**Sn**	**13 59 17.7**	**-3.3**
PET	**Petropavlovsk**	**7.36 30**	*e*PN	**Pn**	**13 58 01.6**	**+2.3**
PET			MLR	MLR		
	comp=Z,100nm,14.0s					
PET	**Petropavlovsk**	**7.36 30**	*e*Pn	**Pn**	**13 58 02.1**	**+2.8**
	comp=Z,18nm,1.0s					
PET			*e*Sn	**Sn**	**13 59 21.6**	**+0.3**
UGL	**Uglegorsk**	**7.46 292**	*e*P	**Pn**	**13 58 04.5**	**+4.0**
UGL			AMB	AMB	13 58 05.5	
	comp=Z,23nm,0.7s					
ASAJ	**Asahikawa**	**7.54 253**	P	**Pn**	**13 58 03.8**	**+2.1**
ASAJ	**Asahikawa**	**7.54 253**	P	**Pn**	**13 58 03.0**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=80,slow=17,SNR=18					
ASAJ			LR	LR	14 00 48.0	
	comp=Z,218nm,19.3s,baz=159,slow=36					
ASAJ	**Asahikawa**	**7.54 253**	PN	**Pn**	**13 58 03.1**	**+1.4**
ASAJ			pmax	pmax		
	comp=Z,2.0nm,0.3s					
ASAJ			MLR	MLR		
	comp=Z,218nm,19.3s					
JKK2	**Kamakawa 2**	**7.54 251**	P	**Pn**	**13 58 03.3**	**+1.6**
JCH	**Churui**	**7.80 241**	*e*S	**Sn**	**13 59 26.6**	**-5.5**
JBT2	**Biratori 2**	**8.32 245**	*e*S	**Sn**	**13 59 42.9**	**-1.9**
JNBK	**Urakawa-nobuka**	**8.36 241**	P	**Pn**	**13 58 10.4**	**-2.6**
JNB	**Noboribetsu**	**9.31 247**	*e*S	**Sn**	**14 00 06.6**	**-2.6**
JKB	**Kayabe**	**9.63 244**	P	**Pn**	**13 58 27.8**	**-2.6**
JKB			*e*S	**Sn**	**14 00 10.4**	**-6.6**
NKL	**Nikolayevsk**	**9.99 314**	*e*P	**Pn**	**13 58 33.0**	**-2.1**
NKL			AMB	AMB	13 58 35.0	
	comp=Z,17nm,1.0s					
NKL			AMB	AMB	13 58 35.0	
	comp=Z,22nm,1.0s					
NKL			*e*L		14 01 32.0	
NKL			AMS	AMS	14 02 38.0	
	comp=Z,300nm,17.0s					
NKL			AMS	AMS	14 02 38.0	
	comp=Z,400nm,17.0s					
JTM	**Tenmabayashi**	**10.27 239**	*e*S	**Sn**	**14 00 22.4**	**-10**
JANG	**Nango**	**10.29 236**	*e*S	**Sn**	**14 00 22.2**	**-11**
JTH	**Tanohata**	**10.39 233**	*e*S	**Sn**	**14 00 23.2**	**-12**
OFUJ	**Ofunato**	**11.11 230**	*e*S	**Sn**	**14 00 40.5**	**-13**
JIO	**Ouri**	**11.74 229**	*e*S	**Sn**	**14 00 54.5**	**-14**
HABR	**Khabarovsk**	**11.98 285**	*e*PN	**Pn**	**13 59 01.3**	**-1.0**
HABR			MLR	MLR		
	comp=Z,228nm,17.0s					
MJAR	**Matsushiro Arr**	**14.83 232**	P	**Pn**	**13 59 41.6**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=41,slow=9.7,SNR=11					
MJAR			LR	LR	14 05 45.7	
	comp=Z,73nm,19.9s,baz=20,slow=38					
MJAR	**Matsushiro Arr**	**14.83 232**	P	**Pn**	**13 59 41.7**	**+0.9**
MJAR			pmax	pmax		
	comp=Z,1.0nm,0.3s					
MJAR			MLR	MLR		
	comp=Z,73nm,19.9s					
MAJO	**Matsushiro**	**14.83 232**	*e*P	**Pn**	**13 59 44.0**	**+3.2**
MAJO			pmax	pmax		
	comp=Z,10.0nm,0.5s					
MAJO	**Matsushiro**	**14.83 232**	*e*Pn	**Pn**	**13 59 44.0**	**+3.3**
	comp=Z,10nm,0.5s					
MAT	**Matsushiro**	**14.83 232**	P	**Pn**	**13 59 45.5**	**+4.7**
MDJ	**Mudanjiang**	**16.23 271**	*e*Pn	**Pn**	**13 59 58.7**	**+0.1**
	comp=Z,3.1nm,0.4s					
YAK	**Yakutsk**	**20.12 328**	*e*P	**P**	**14 00 47.9**	**+4.5**
YAK			pmax	pmax		
	comp=Z,14nm,0.9s					
YAK			pmax	pmax		
	comp=E,5.0nm,1.0s					
YAK			pmax	pmax		
	comp=N,4.0nm,0.9s					
YAK	**Yakutsk**	**20.12 328**	*e*P	**P**	**14 00 44.5**	**+1.1**
	comp=N,15nm,0.5s					
KSRS	**Korea Array**	**20.48 252**	P	**P**	**14 00 49.1**	**+1.6**
	comp=N,4.1nm,0.6s,baz=61,slow=9.2,SNR=17					
KSRS	**Korea Array**	**20.48 252**	P	**P**	**14 00 49.2**	**+1.6**
KSRS			pmax	pmax		
	comp=Z,4.0nm,0.6s					
KS15	**Wonju Array Si**	**20.52 252**	*e*P	**P**	**14 00 50.0**	**+2.1**
BILL	**Bilibino**	**22.44 13**	P	**P**	**14 01 08.0**	**-0.3**
BILL			pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.6					
BILL			MLR	MLR		
	comp=Z,100nm,17.0s,MS3.3					
BILL	**Bilibino**	**22.44 13**	*e*P	**P**	**14 01 07.6**	**-0.6**
	comp=Z,2.1nm,0.8s,mb3.6					
TIXI	**Tiksi**	**27.35 344**	*e*P	**P**	**14 01 53.4**	**-0.4**
TIXI			pmax	pmax		
	comp=Z,3.0nm,1.9s,mb3.5					
YHNB	**Yeheng**	**33.27 239**	*e*P	**P**	**14 02 45.7**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.5					
GTA	**Gaotai**	**38.63 279**	*e*P	**P**	**14 03 34.8**	**+2.6**
GTA			pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9					
ZALV	**Zalesovo Beam**	**42.32 306**	P	**P**	**14 04 01.1**	**-1.3**
	comp=Z,1.6nm,0.4s,mb4.0,baz=62,slow=7.6,SNR=9.0					
ZALV			PcP	PcP	14 05 54.4	-0.7
	comp=Z,0.5nm,0.3s,baz=64,slow=3.4,SNR=6.6					
ZALV	**Zalesovo Beam**	**42.32 306**	P	**P**	**14 04 01.1**	**-1.4**
ZALV					14 05 54.4	
ZALV			pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1					
ZALV			pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9					
MKAR	**Makanchi Array**	**46.63 297**	P	**P**	**14 04 36.3**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=62,slow=8.6,SNR=6.8					
MKAR			PcP	PcP	14 06 09.4	-0.5
	comp=Z,0.8nm,0.5s,baz=58,slow=1.5,SNR=3.8					
MKAR	**Makanchi Array**	**46.63 297**	P	**P**	**14 04 36.3**	**-0.6**
MKAR					14 06 09.4	
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
LSA	**Lhasa**	**49.93 273**	*e*P	**P**	**14 05 04.4**	**+1.8**
LSA			pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1					
LSA	**Lhasa**	**49.93 273**	*e*P	**P**	**14 05 04.4**	**+1.8**
	comp=Z,11nm,0.6s,mb5.1					
BVAR	**Borovoye Array**	**50.58 309**	P	**P**	**14 05 06.8**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=67,slow=13,SNR=5.0					
BVAR			PcP	PcP	14 06 23.6	-0.5
	comp=Z,0.4nm,0.3s,baz=101,slow=3.0,SNR=4.2					
BVAR	**Borovoye Array**	**50.58 309**	P	**P**	**14 05 06.8**	**-0.4**
BVAR					14 06 23.6	
BVAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
YKA	**Yellowknife Ar**	**51.10 37**	P	**P**	**14 05 11.3**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=298,slow=6.8,SNR=3.3					
YKA	**Yellowknife Ar**	**51.10 37**	P	**P**	**14 05 11.3**	**+0.3**
CHTO	**Chiang Mai**	**51.80 256**	*e*P	**P**	**14 05 16.6**	**-0.1**
CHTO			pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3					
CHTO	**Chiang Mai**	**51.80 256**	*e*P	**P**	**14 05 16.6**	**-0.1**
	comp=Z,4.2nm,0.9s,mb4.4					
CMAR	**Chiang Mai Arr**	**52.05 256**	P	**P**	**14 05 19.6**	**+1.0**
	comp=Z,2.1nm,0.8s,mb4.1,baz=35,slow=7.1,SNR=14					
CMAR			LR	LR	14 29 22.8	
	comp=Z,15nm,19.7s,MS3.0,baz=195,slow=38					
CMAR	**Chiang Mai Arr**	**52.05 256**	P	**P**	**14 05 19.6**	**+1.0**
CMAR			pmax	pmax		
	comp=Z,2.0nm,0.8s					
CMAR			MLR	MLR		
	comp=Z,15nm,19.7s					
TAPN	**Taplejung**	**53.76 273**	*e*P	**P**	**14 05 31.2**	**+0.1**
	comp=Z,21nm,0.8s,mb5.1					
ODAN	**Odare**	**54.29 273**	*e*P	**P**	**14 05 36.4**	**+1.4**
JIRN	**Jiri**	**54.61 274**	*e*P	**P**	**14 05 37.6**	**+0.3**
	comp=Z,9.3nm,0.3s,mb5.3					
GUN	**Gumba**	**54.66 275**	*e*P	**P**	**14 05 37.5**	**-0.2**
	comp=Z,14nm,0.5s,mb5.3					
RAMN	**Ramite**	**54.78 273**	*e*P	**P**	**14 05 38.5**	**0.0**
	comp=Z,31nm,0.6s,mb5.5					
KKN	**Kakani**	**55.15 275**	*e*P	**P**	**14 05 41.3**	**+0.1**
	comp=Z,27nm,0.6s,mb5.5					
PKI	**Pulchoki**	**55.20 275**	*e*P	**P**	**14 05 41.4**	**-0.2**
	comp=Z,12nm,0.5s,mb5.2					
PKI	**Pulchoki**	**55.20 275**	*e*P	**P**	**14 05 42.8**	**+1.2**
PKIN	**Phulchoki**	**55.20 275**	*e*P	**P**	**14 05 42.8**	**+1.2**
	comp=Z,17nm,0.5s,mb5.3					
DMN	**Daman**	**55.38 275**	*e*P	**P**	**14 05 43.2**	**+0.3**
	comp=Z,44nm,0.9s,mb5.5					
ARCES	**ARCESS Array B**	**57.72 341**	P	**P**	**14 05 58.5**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.9,baz=30,slow=8.2,SNR=10					
ARCES	**ARCESS Array B**	**57.72 341**	P	**P**	**14 05 58.5**	**-0.3**
ARCES			pmax	pmax		
	comp=Z,1.0nm,0.4s					
ABKAR	**Akbulak array**	**58.15 310**	*e*P	**P**	**14 06 00.9**	**-1.3**
	comp=Z,0.9nm,0.4s,mb4.2					
SUMG	**Summit**	**60.70 4**	*e*P	**P**	**14 06 19.6**	**+0.2**
	comp=Z,7.6nm,0.9s,mb4.8					
FFC	**Flin Flon**	**60.94 40**	*i* P	**P**	**14 06 21.6**	**+0.4**
JOF	**Joensuu**	**61.16 333**	*e*P	**P**	**14 06 21.2**	**-1.4**
JOF			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2					
JOF	**Joensuu**	**61.16 333**	*e*p	**P**	**14 06 21.2**	**-1.4**
	comp=Z,1.1nm,0.5s,mb4.2					
LRM	**Limekiln Ridge**	**61.45 52**	*e*P	**P**	**14 06 25.0**	**+0.1**
	comp=Z,17nm,0.9s,mb5.2					
NVAR	**Mina Array Bea**	**62.72 62**	P	**P**	**14 06 33.7**	**+0.2**
	comp=Z,0.9nm,0.9s,mb3.9,baz=274,slow=8.3,SNR=5.9					
NVAR			pP	pP	14 06 47.0	-1.7
	comp=Z,0.7nm,0.6s,baz=293,slow=7.3,SNR=6.0					
KAF	**Kangasniemi**	**63.27 335**	*e*P	**P**	**14 06 35.3**	**-1.5**
KAF			pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7					
KAF	**Kangasniemi**	**63.27 335**	*e*p	**P**	**14 06 35.3**	**-1.5**
	comp=Z,2.6nm,0.5s,mb4.6					
FINES	**FINESS Array B**	**63.87 335**	P	**P**	**14 06 40.0**	**-0.8**
	comp=Z,3.6nm,0.4s,mb4.7,baz=31,slow=8.1,SNR=26					
FINES	**FINESS Array B**	**63.87 335**	P	**P**	**14 06 40.0**	**-0.7**
FINES			pmax	pmax		
	comp=Z,4.0nm,0.4s					
FINES	**FINESS Array B**	**63.87 335**	P	**P**	**14 06 40.0**	**-0.8**
PDAR	**Pinedale Array**	**65.00 54**	P	**P**	**14 06 48.1**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=329,slow=2.6,SNR=4.9					
PDAR			pP	pP	14 06 59.6	-4.1
	comp=Z,1.4nm,0.9s,baz=264,slow=1.5,SNR=6.5					
NB2	**NORSAR Subarra**	**68.09 341**	P	**P**	**14 07 07.2**	**-0.6**
	comp=Z,3.6nm,0.6s,mb4.6,baz=28,slow=6.5					
NOA	**NORSAR Array B**	**68.09 341**	P	**P**	**14 07 07.5**	**-0.3**
	comp=Z,2.8nm,0.5s,mb4.5,baz=28,slow=6.4,SNR=22					
NOA	**NORSAR Array B**	**68.09 341**	P	**P**	**14 07 07.6**	**-0.2**
NOA			pmax	pmax		
	comp=Z,3.0nm,0.5s					
WRAB	**Tennant Creek**	**68.42 198**	*e*P	**P**	**14 07 08.3**	**-2.0**
WRAB			pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8					
WRAB	**Tennant Creek**	**68.42 198**	*e*P	**P**	**14 07 08.3**	**-2.0**
	comp=Z,13nm,1.3s,mb4.8					
AKASG	**Malin Array Be**	**71.33 326**	P	**P**	**14 07 27.3**	**-0.7**
	comp=Z,2.5nm,0.4s,mb4.5,baz=31,slow=5.4,SNR=7.4					
AKASG	**Malin Array Be**	**71.33 326**	P	**P**	**14 07 27.3**	**-0.6**
AKASG			pmax	pmax		
	comp=Z,3.0nm,0.4s					
AKASG	**Malin Array Be**	**71.33 326**	P	**P**	**14 07 27.3**	**-0.7**
ASAR	**Alice Springs**	**72.13 198**	P	**P**	**14 07 32.2**	**-0.7**
	comp=Z,1.2nm,0.6s,mb4.0,baz=12,slow=6.1,SNR=32					
ASAR			pP	pP	14 07 46.9	-1.6
	comp=Z,0.9nm,0.7s,baz=13,slow=5.3,SNR=5.7					
ASAR	**Alice Springs**	**72.13 198**	P	**P**	**14 07 32.2**	**-0.7**
ASAR			*PP	pP	14 07 46.9	-1.5
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.7s					
STHS	**Stebnicka Huta**	**75.32 330**	*e*P	**P**	**14 07 52.4**	**+1.0**
STHS			pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1					
STHS	**Stebnicka Huta**	**75.32 330**	*e*P	**P**	**14 07 52.4**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.2					
STHS			*e*PcP	PcP	14 08 02.6	-1.9
STHS	**Stebnicka Huta**	**75.32 330**	*e*P	**P**	**14 07 52.4**	**+1.0**
STHS			*e*PCP	PcP	14 08 02.6	-1.9
BUR08	**Bucovina Ar. S**	**75.36 326**	*e*P	**P**	**14 07 51.7**	**0.0**
KOLS	**Kolonicke sedl**	**75.37 329**	*e*P	**P**	**14 07 51.8**	**+0.1**
KOLS			pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3					
KOLS	**Kolonicke sedl**	**75.37 329**	*e*P	**P**	**14 07 51.8**	**+0.1**
	comp=Z,3.7nm,1.1s,mb4.2					
KOLS	**Kolonicke sedl**	**75.37 329**	*e*P	**P**	**14 07 51.8**	**+0.1**
CLL	**Collm**	**76.30 335**	*i*P	**P**	**14 07 56.4**	**-0.6**
CLL			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5					
CLL	**Collm**	**76.30 335**	*i*P	**P**	**14 07 56.4**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.5					
CLL	**Collm**	**76.30 335**	*i*P	**P**	**14 07 56.4**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.5					
VYHS	**Vyhne**	**76.94 330**	*e*P	**P**	**14 08 00.9**	**+0.3**
VYHS			pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1					
VYHS	**Vyhne**	**76.94 330**	*e*P	**P**	**14 08 00.9**	**+0.3**
	comp=Z,2.9nm,1.3s,mb4.0					
VYHS			*e*PP	PcP	14 08 14.8	+3.3
VYHS	**Vyhne**	**76.94 330**	*e*P	**P**	**14 08 00.9**	**+0.3**
VYHS			*e*PCP	PcP	14 08 14.8	+3.3
TXAR	**Lajitas Array**	**77.77 60**	P	**P**	**14 08 05.1**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.5,baz=301,slow=5.1,SNR=6.0					
TXAR			pP	pP	14 08 17.6	-3.8
	comp=Z,1.2nm,0.6s,baz=295,slow=4.1,SNR=12					
TXAR	**Lajitas Array**	**77.77 60**	P	**P**	**14 08 05.1**	**-0.5**
TXAR			*PP	pP	14 08 17.6	-3.7
TXAR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
BRTR	**Keskin Array B**	**78.14 316**	P	**P**	**14 08 08.1**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.1,baz=65,slow=5.1,SNR=10					
BRTR	**Keskin Array B**	**78.14 316**	P	**P**	**14 08 08.1**	**+0.6**
BRTR			pmax	pmax		
	comp=Z,2.0nm,0.8s					
GERES	**GERESS Array B**	**78.28 334**	P	**P**	**14 08 08.1**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=18,slow=5.6,SNR=9.4					
GERES			LR	LR	14 47 06.7	
	comp=Z,38nm,19.2s,MS3.7,baz=67,slow=39					
GERES	**GERESS Array B**	**78.28 334**	P	**P**	**14 08 08.1**	**0.0**
GERES			pmax	pmax		
	comp=Z,1.0nm,0.5s					
GERES			MLR	MLR		
	comp=Z,38nm,19.2s					
MMAI	**Mount Meron Ar**	**82.54 311**	P	**P**	**14 08 31.6**	**+0.3**
	comp=Z,2.8nm,0.5s,mb4.6,baz=39,slow=6.8,SNR=8.0					
PLCA	**Paso Flores**	**148.55 95**	PKPbc	PKPbc	14 15 53.3	-1.2
	comp=Z,2.4nm,0.9s,baz=308,slow=4.7,SNR=3.1					
PLCA			pPKPbc	pPKPbc	14 16 08.2	-2.7
	comp=Z,3.5nm,0.7s,baz=249,slow=4.0,SNR=4.9					
CPUP	**Villa Florida**	**148.75 60**	pPKPbc	pPKPbc	14 16 08.2	-3.7
	comp=Z,0.6nm,0.4s,baz=223,slow=1.5,SNR=2.2					

*ISCJB **30** 14:00:45.4±1.0,26°.04S±0°.09×29°.1E±0°.1,h10km,mb3.7/1,*
Error ellipse: s-maj=16.1km s-min=9.1km az=43.7
*NEIC **30** 14:00:46.9±0.9,26°.11S×29°.27E,h5km,mb3.6/1,Error*
ellipse: s-maj=17.9km s-min=11.0km az=138.0
*IDC **30** 14:00:48.8±2.0,26°.12S×29°.05E,h0km,mb3.6/1,*
mb1 3.5/4,mb1mx3.3/25,mbtmp3.5/4,ML3.0/3,Error
ellipse: s-maj=26.5km s-min=20.8km az=139.0

ISC 30 14:00:47.9±1.0,26°.04S±0°.08×29°.12E±0°.10,h10km,n10,
σ1§34/13,mb3.7/1,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.34**	**287**	Pn	**Pn**	**14 01 43.1**	**+2.8**
	0.9nm,0.3s,baz=115,slow=12,SNR=13						
LBTB				Pg	**Pg**	**14 01 50.2**	**-1.8**
	6.0nm,0.3s,baz=117,slow=17,SNR=72						
LBTB				Lg		14 02 33.7	
	9.4nm,0.3s,baz=30,slow=22,SNR=33						
LBTB	**Lobatse**	**3.34**	**287**	Pn	**Pn**	**14 01 43.1**	**+2.8**
LBTB				Pg	**Pg**	**14 01 50.2**	**-1.8**
LBTB				Lg		14 02 33.7	
BOSA	**Boshof**	**4.29**	**232**	Pn	**Pn**	**14 01 54.0**	**+0.9**
	0.4nm,0.3s,baz=53,slow=12,SNR=5.6						
BOSA				Pg	**Pg**	**14 02 01.9**	**-8.1**
	0.5nm,0.3s,baz=56,slow=14,SNR=10						
BOSA				Lg		14 03 01.1	
	9.8nm,0.3s,baz=144,slow=20,SNR=17						
SUR	**Sutherland**	**9.62**	**227**	Pn	**Pn**	**14 03 08.1**	**+1.7**
	0.3nm,0.3s,baz=78,slow=14,SNR=12						
SUR				Lg		14 05 50.5	
	1.2nm,0.3s,baz=148,slow=18,SNR=4.6						
SUR	**Sutherland**	**9.62**	**227**	*e*Pn	**Pn**	**14 03 06.2**	**-0.2**
	18nm,1.1s						
SUR				Sn	**Sn**	**14 04 53.5**	**-1.1**
LSZ	**Lusaka**	**10.75**	**355**	*e*Pn	**Pn**	**14 03 21.7**	**-0.2**
	4.6nm,0.8s						
LSZ				*e*Sn	**Sn**	**14 05 17.4**	**-5.0**
TSUM	**Tsumeb**	**12.64**	**300**	Lg		14 07 29.6	
	0.2nm,0.3s,baz=237,slow=18,SNR=5.7						
ABPO	**Ambohimpanom**	**18.12**	**71**	P	**Pn**	**14 04 58.7**	**-1.1**
	4.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**47.22**	**322**	P	**P**	**14 09 22.5**	**+1.3**
	0.6nm,0.6s,mb3.7,baz=137,slow=7.0,SNR=6.1						
NVAR	**Mina Array Bea**	**149.96**	**302**	PKPbc	PKPbc	14 20 42.0	+3.4
	0.3nm,0.5s,baz=90,slow=3.6,SNR=3.6						

*TAP **30** 14:38:56.8,24°.68N×122°.21E,h86km,ML3.8,C*
*ISCJB **30** 14:38:57.5±0.5,24°.61N±0°.03×122°.28E±0°.02,h78km±5km,*
Error ellipse: s-maj=5.9km s-min=2.8km az=164.5
*JMA **30** 14:38:57.0±0.2,24°.82N×122°.31E,h82km,M2.6*

ISC 30 14:38:58.0±0.6,24°.62N±0°.03×122°.28E±0°.02,h76km±6km,
n45,σ0§90/89,5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.39**	**269**	*i* P	**Pn**	**14 39 10.1**	**-0.4**
	baz=257						
TWC				S	**Sn**	**14 39 19.7**	**+0.1**
	baz=257						
TWB1	**Santiao Chiao**	**0.47**	**326**	*i*P	**Pn**	**14 39 10.5**	**-0.7**
	baz=325						
TWB1				S	**Sn**	**14 39 20.0**	**-0.9**
	baz=325						
ILA	**Ilan**	**0.50**	**287**	*e*P	**Pn**	**14 39 11.2**	**-0.3**
	baz=284						
ILA				*e*S	**Sn**	**14 39 21.6**	**+0.3**
	baz=284						
ENA	**Nanau**	**0.52**	**249**	*i*P	**Pn**	**14 39 11.7**	**+0.1**
	baz=237						
ENA				*e*S	**Sn**	**14 39 22.7**	**+1.1**
	baz=237						
TWE	**Neicheng**	**0.56**	**281**	*i*P	**Pn**	**14 39 11.7**	**-0.3**
	baz=281						
TWE				*e*S	**Sn**	**14 39 22.1**	**-0.2**
	baz=281						
NWF	**Wu-fen Shan**	**0.64**	**315**	*i* P	**Pn**	**14 39 12.0**	**-0.7**
	baz=307						
NWF				S	**Sn**	**14 39 22.8**	**-0.9**
	baz=307						
ENTT	**Nioudou**	**0.65**	**272**	*i*P	**Pn**	**14 39 12.8**	**0.0**
	baz=271						
ENTT				*e*S	**Sn**	**14 39 24.9**	**+1.1**
	baz=271						
YOJ	**Yonaguni jima**	**0.69**	**103**	P	**Pn**	**14 39 13.3**	**+0.1**
YOJ				S	**Sn**	**14 39 25.2**	**+0.7**
TWA	**Mucha**	**0.73**	**300**	P	**Pn**	**14 39 12.8**	**-0.9**
	baz=291						
TWA				S	**Sn**	**14 39 24.0**	**-1.3**
	baz=291						
TWD	**Chiawan**	**0.82**	**229**

JKRS	**Kuro-shima**	**1.62 103**	P	**Pn**	**14 39 24.9 +0.1**
JKRS			*e*S	**Sn**	**14 39 45.5 +0.4**
WNT	**Mingjian**	**1.63 244**	*e*P	**Pn**	**14 39 25.3 +0.4**
	baz=251				
WNT			S	**Sn**	**14 39 46.1 +0.9**
	baz=251				
YUS	**Yu-Shan**	**1.65 227**	P	**Pn**	**14 39 25.8 +0.7**
	baz=217				
YUS			*e*S	**Sn**	**14 39 46.2 +0.5**
	baz=217				
JIJ	**Ishigaki jima**	**1.72 98**	P	**Pn**	**14 39 25.4 -0.6**
JIJ			*e*S	**Sn**	**14 39 46.5 -0.8**
CHKT	**Chengkung**	**1.73 209**	*e*P	**Pn**	**14 39 25.0 -1.2**
	baz=198				
CHKT			*e*S	**Sn**	**14 39 45.4 -2.1**
	baz=198				
ALS	**Alishan**	**1.74 231**	*i* P	**Pn**	**14 39 27.4 +1.1**
	baz=221				
ALS			*e*S	**Sn**	**14 39 49.6 +1.8**
	baz=221				
CHN5	**Tsauling**	**1.78 236**	P	**Pn**	**14 39 27.4 +0.6**
	baz=244				
CHN5			*e*S	**Sn**	**14 39 49.6 +0.9**
	baz=244				
WGK	**Gukeng**	**1.82 240**	*e*P	**Pn**	**14 39 28.0 +0.6**
	baz=248				
WGK			*e*S	**Sn**	**14 39 51.1 +1.4**
	baz=248				
ELDTW	**Lidau**	**1.83 219**	P	**Pn**	**14 39 26.8 -0.7**
	baz=218				
ELDTW			*e*S	**Sn**	**14 39 49.5 -0.4**
	baz=218				
WTP	**Ta-pu**	**2.04 228**	P	**Pn**	**14 39 31.1 +0.7**
	baz=227				
WTP			*e*S	**Sn**	**14 39 56.4 +1.3**
	baz=227				
TWG	**Pinlang**	**2.10 212**	*e*P	**Pn**	**14 39 30.4 -0.8**
	baz=211				
TWG			*e*S	**Sn**	**14 39 53.9 -2.6**
	baz=211				
TWK	**Hsinying**	**2.12 231**	P	**Pn**	**14 39 31.9 +0.6**
	baz=230				
TWK			*e*S	**Sn**	**14 39 57.7 +0.9**
	baz=230				
CHN1	**Nanshi**	**2.14 229**	*e*P	**Pn**	**14 39 32.1 +0.4**
	baz=228				
CHN1			*e*S	**Sn**	**14 39 58.9 +1.4**
	baz=228				
SGST	**Jiashian**	**2.18 226**	P	**Pn**	**14 39 33.0 +0.9**
	baz=225				
SGST			*e*S	**Sn**	**14 39 59.2 +0.9**
	baz=225				
JTJ	**Tarama**	**2.21 89**	P	**Pn**	**14 39 32.4 -0.2**
JTJ			S	**Sn**	**14 39 59.8 +0.8**
ECL	**Taimali**	**2.35 211**	*e*P	**Pn**	**14 39 33.0 -1.5**
	baz=206				
ECL			*e*S	**Sn**	**14 40 00.6 -1.8**
	baz=206				
SSD	**Sandimen**	**2.40 219**	P	**Pn**	**14 39 36.0 +0.9**
	baz=219				
SSD			S	**Sn**	**14 40 04.0 +0.5**
	baz=219				
EAST	**Anshuo**	**2.58 211**	*e*P	**Pn**	**14 39 38.2 +0.5**
	baz=204				
EAST			S	**Sn**	**14 40 07.0 -1.1**
	baz=204				
LAY	**Lan-yu**	**2.65 195**	*e*P	**Pn**	**14 39 37.5 -1.1**
	baz=192				
LAY			*e*S	**Sn**	**14 40 07.0 -2.8**
	baz=192				
PNG	**Penghu**	**2.70 248**	*e*P	**Pn**	**14 39 37.7 -1.5**
	baz=247				
PNG			*e*S	**Sn**	**14 40 08.5 -2.3**
	baz=247				
JOGS	**Gusukube**	**2.85 86**	*e*S	**Sn**	**14 40 15.5 +1.0**

DJA 30 14:56:26, 9°.89S×114°.04E, h13km, MLv3.8/10, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.52**	**46**	P	Pn	14 56 52.3	-0.7
NBBI	**Negara**	**1.61**	**21**	P	Pn	14 56 54.0	-0.2
DNP	**Denpasar**	**1.67**	**44**	P	Pn	14 56 55.5	+0.5
BYJI	**Banyuwangi**	**1.69**	**11**	P	Pn	14 56 56.0	+0.7
GMJI	**Gumukmas**	**1.71**	**340**	P	Pn	14 56 54.5	-1.0
GMJI				S	Sn	14 57 17.9	+0.6
ABJI	**Asem Bagus**	**2.09**	**5**	P	Pn	14 57 02.1	+1.4
SRBI	**Singaraja**	**2.13**	**33**	P	Pn	14 57 01.4	0.0
KHKI	**Kahang-Kahang**	**2.17**	**46**	P	Pn	14 57 01.8	0.0
KMMI	**Kalianget**	**2.82**	**359**	P	Pn	14 57 12.5	+1.7
PWJI	**Pagerwojo**	**2.88**	**310**	P	Pn	14 57 11.7	0.0
PCJI	**Pacitan**	**3.29**	**301**	P	Pn	14 57 18.3	+1.0
UGM	**Wanagama**	**3.99**	**299**	P	Pn	14 57 27.6	+0.7

MAN 30 15:02:49, 16°.38N×122°.07E, h50km, mb4.5, ML3.4, MS3.2, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.61**	**337**	*e*P	Pn	15 03 02.9	+1.3
CAUP				*e*S	Sn	15 03 08.8	-1.9
PALP	**Palanan**	**0.76**	**27**	*e*P	Pn	15 03 05.4	+1.8
PALP				*e*S	Sn	15 03 17.0	+2.9
BALP	**Baler**	**0.79**	**217**	*e*P	Pn	15 03 05.0	+1.1
BALP				*e*S	Sn	15 03 13.2	-1.7
PCPH	**Palayan**	**1.24**	**229**	⇑*e*P	Pn	15 03 11.6	+1.7
CVP	**Callao Caves**	**1.34**	**350**	⇑*e*P	Pn	15 03 12.2	+0.9
BCPH	**Baguio City Da**	**1.43**	**270**	⇑*i*P	Pn	15 03 14.9	+2.4
POLP	**Polilio Island**	**1.65**	**184**	*e*P	Pn	15 03 16.9	+1.4
POLP				*e*S	Sn	15 03 37.4	+1.9
APYP	**Conner**	**1.67**	**332**	*e*P	Pn	15 03 16.6	+0.7
APYP				*e*S	Sn	15 03 32.5	-3.7
ABRA	**Dolores**	**1.81**	**314**	*e*P	Pn	15 03 18.6	+0.9
ABRA				*e*S	Sn	15 03 29.8	-10
BOLP	**Bolinao**	**2.07**	**270**	*e*P	Pn	15 03 24.4	+3.1
GQP	**Guinayangan**	**2.49**	**172**	*e*P	Pn	15 03 29.1	+2.1
GQP				*e*S	Sn	15 03 57.5	+1.3
BOAC	**Boac**	**2.91**	**184**	*e*P	Pn	15 03 35.1	+2.2
AUQP	**San Andres**	**3.10**	**169**	*e*P	Px	15 03 51.0	
LUBP	**Lubang**	**3.17**	**214**	*e*P	Pn	15 03 37.8	+1.5
PVCP	**Virac**	**3.42**	**144**	*e*P	Pn	15 03 41.1	+1.2
CNP	**Cataraman**	**4.59**	**146**	*e*P	Pn	15 03 58.4	+2.5

MAN 30 15:25:06, 16°.84N×120°.16E, h29km, mb4.7, ML3.5, MS3.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.51**	**208**	*e*P	Pb	15 25 18.0	+1.4
BOLP				*e*S	Sb	15 25 27.8	+4.1
BCPH	**Baguio City Da**	**0.60**	**138**	⇑*i*P	Pb	15 25 19.8	+1.7
ABRA	**Dolores**	**0.96**	**33**	*e*P	Pn	15 25 24.2	+0.6
ABRA				*e*S	Sn	15 25 38.2	+1.8
APYP	**Conner**	**1.45**	**45**	*e*P	Pn	15 25 31.6	+1.3
APYP				*e*S	Sn	15 25 49.1	+0.7
CAUP	**Cauayan**	**1.59**	**86**	*e*P	Pn	15 25 36.9	+4.7
CAUP				*e*S	Sn	15 25 54.0	+2.1
BALP	**Baler**	**1.74**	**128**	*e*P	Pn	15 25 38.1	+3.9
BALP				*e*S	Sn	15 25 56.5	+1.0
LUBP	**Lubang**	**3.08**	**178**	*e*P	Pn	15 25 57.4	+4.6

LDG ***30*** *15:35:56.4±0.1, 44°.93N×80°.89E, h10km, Mb4.4/22, Ms3.1/6, Error ellipse: s-maj=7.8km s-min=5.1km az=48.0*
BJI ***30*** *15:35:58.1, 44°.91N×81°.17E, h18km, mB4.6/1, mb4.2/5, ML4.4/10, Ms3.7/2, Ms7 3.6/2*
IDC ***30*** *15:35:58.5±0.7, 45°.01N×80°.74E, h0km, mb4.0/12, mb1 4.1/17, mb1mx3.9/29, mbtmp3.9/17, ML3.6/4, MS3.3/7, Ms1 3.3/7, ms1mx2.8/46, Error ellipse: s-maj=11.7km s-min=8.5km az=117.0*
NNC ***30*** *15:35:59.3±0.7, 44°.92N×80°.95E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=8.8km s-min=4.0km az=136.0*
NEIC ***30*** *15:36:00.4±0.3, 45°.10N×80°.74E, h10km, mb4.5/26, Error ellipse: s-maj=6.0km s-min=5.3km az=146.0*
MOS ***30*** *15:36:02.3±1.1, 45°.13N×80°.69E, h33km, mb4.4/31, Error ellipse: s-maj=8.2km s-min=5.5km az=117.6*
ISC 30 15:36:01.4±1.2, 45°.14N±0°.03×80°.71E±0°.04, h12km±7km, n172, σ1§04/186, mb4.3/43, MS3.4/12, 19C-9D,

Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.98**	**33**	⇑Pn	**Pn**	**15 36 35.9**	**+1.1**
	18nm,0.2s,baz=207,slow=14,SNR=1740						
MK31				⇑Sn	**Sn**	**15 37 03.4**	**+3.8**
	137nm,0.3s,baz=206,slow=29,SNR=3.5						
MK31	**Makanchi Array**	**1.98**	**33**	*e*Pn	**Pn**	**15 36 35.4**	**+0.5**
MK31				*e*Sn	**Sn**	**15 37 03.0**	**+3.4**
MKAR	**Makanchi Array**	**1.98**	**33**	Pn	**Pn**	**15 36 35.7**	**+0.9**
	54nm,0.3s,baz=205,slow=14,SNR=694						
MKAR				Lg		15 37 03.4	
	281nm,0.3s,baz=201,slow=22,SNR=30						
AAA	**Alma-Ata**	**3.29**	**237**	*i* PN	**Pb**	**15 37 00.6**	**+0.9**
AAA				*i* S	**Sg**	**15 37 45.8**	**-1.2**
AAA				pmax	pmax		
	comp=Z,448nm,0.3s						
KNDC	**Almaty**	**3.31**	**236**	⇓Pn	**Pn**	**15 36 53.1**	**+0.1**
	comp=Z,116nm,0.4s						
KNDC				⇓Lg		15 37 45.2	
	comp=Z,2μm,0.5s						
TKM2	**Tokmak 2**	**4.30**	**241**	⇑Pn	**Pn**	**15 37 07.4**	**+0.7**
	comp=Z,16nm,0.6s						
TKM2				⇓Pg	**Pg**	**15 37 19.0**	**-4.8**
	comp=Z,43nm,0.5s						
TKM2				⇑Lg		15 38 16.0	
	comp=Z,593nm,0.6s						
TKM2	**Tokmak 2**	**4.30**	**241**	P	**Pn**	**15 37 06.9**	**+0.2**
	SNR=14						
TKM2	**Tokmak 2**	**4.30**	**241**	*e*Pn	**Pn**	**15 37 06.2**	**-0.5**
TKM2				*e*Sn	**Sn**	**15 37 59.2**	**+2.4**
ULHL	**Ulahol**	**4.34**	**230**	P	**Pn**	**15 37 07.1**	**-0.1**
	SNR=20						
CHMS	**Chumysh**	**4.80**	**246**	P	**Pn**	**15 37 13.7**	**+0.2**
	SNR=13						
USP	**Ospenovka**	**4.84**	**249**	P	**Pn**	**15 37 14.6**	**+0.5**
	SNR=29						
KBK	**Karagaybulak**	**4.85**	**241**	P	**Pn**	**15 37 14.4**	**+0.3**
	SNR=50						
FRU	**Bishkek**	**4.96**	**244**	*e*PN	**Pn**	**15 37 16.0**	**+0.2**
FRU				*i*		15 37 34.0	
FRU				*e*S	**Sg**	**15 38 36.0**	**-4.8**
FRU				pmax	pmax		
	comp=Z,134nm,1.2s						
FRU				pmax	pmax		
	comp=E,684nm,1.4s						
KZA	**Kyzart**	**5.01**	**234**	P	**Pn**	**15 37 17.3**	**+0.9**
	SNR=17						
AAK	**Ala-Archa**	**5.14**	**243**	P	**Pn**	**15 37 18.9**	**+0.6**
	SNR=12						
AAK	**Ala-Archa**	**5.14**	**243**	Pn	**Pn**	**15 37 18.3**	**+0.1**
	comp=E,0.1nm,0.3s,baz=70,slow=6.7,SNR=18						
AAK				Lg		15 38 42.2	
	comp=E,0.6nm,0.3s,baz=323,slow=21,SNR=15						
AAK				LR	LR	15 39 37.6	
	comp=E,258nm,18.1s,baz=46,slow=43						
AAK	**Ala-Archa**	**5.14**	**243**	*e*PN	**Pn**	**15 37 17.8**	**-0.4**
AAK				*e*S	**Sg**	**15 38 37.1**	**-9.4**
AAK				pmax	pmax		
	comp=Z,102nm,0.6s						
AAK	**Ala-Archa**	**5.14**	**243**	*e*Pn	**Pn**	**15 37 17.8**	**-0.4**
	comp=Z,102nm,0.6s						
AAK				*e*S	**Sg**	**15 38 37.1**	**-9.4**
WMQ	**Urumqi**	**5.17**	**102**	*e*Pg	**Pn**	**15 37 18.5**	**-0.1**
WMQ				Sg	**Sb**	**15 38 34.0**	**+0.2**
WMQ				smax			
	comp=N,630nm,0.9s						
WMQ				smax			
	comp=E,430nm,0.7s						
UCH	**Uchtor**	**5.36**	**239**	P	**Pn**	**15 37 22.1**	**+1.0**
	SNR=17						
UCH	**Uchtor**	**5.36**	**239**	*e*P	**Pn**	**15 37 21.5**	**+0.4**
	comp=E,82nm,0.6s						
UCH				*e*Sn	**Sn**	**15 38 25.1**	**+2.4**
EKS2	**Erkin-Say**	**5.59**	**246**	P	**Pn**	**15 37 24.9**	**+0.6**
	SNR=31						
EKS2	**Erkin-Say**	**5.59**	**246**	*e*Pn	**Pn**	**15 37 24.6**	**+0.3**
	comp=E,88nm,0.8s						
KURBB	**Kurchatov Arra**	**5.67**	**346**	⇑Pn	**Pn**	**15 37 28.9**	**+3.4**
	comp=E,5.4nm,0.7s						
KURBB				⇑Lg		15 39 08.5	
	comp=E,139nm,0.8s						
KURK	**Kurchatov**	**5.75**	**347**	⇑Pn	**Pn**	**15 37 28.7**	**+2.2**
	comp=E,22nm,0.6s						
KURK				⇑Lg		15 39 09.7	
	comp=E,793nm,1.2s						
KURK	**Kurchatov**	**5.75**	**347**	Pn	**Pn**	**15 37 25.6**	**-0.9**
	comp=E,0.4nm,0.3s,baz=307,slow=5.9,SNR=37						
KURK				Sn	**Sn**	**15 38 33.7**	**+1.3**
	comp=E,3.3nm,0.3s,baz=161,slow=22,SNR=12						
KURK				Lg		15 39 05.8	
	comp=E,4.4nm,0.3s,baz=189,slow=30,SNR=7.6						
KURK				LR	LR	15 40 07.4	
	comp=E,150nm,20.4s,baz=165,slow=43						
KURK	**Kurchatov**	**5.75**	**347**	*e*Pn	**Pn**	**15 37 27.5**	**+1.0**
	comp=E,32nm,0.7s						
KURK				*e*Sn	**Sn**	**15 38 32.3**	**0.0**
AML	**Almayashu**	**5.91**	**242**	P	**Pn**	**15 37 30.3**	**+1.5**
	SNR=18						
AML	**Almayashu**	**5.91**	**242**	*e*Pn	**Pn**	**15 37 29.6**	**+0.8**
	comp=E,97nm,0.6s						
AML				*e*Sn	**Sn**	**15 38 38.9**	**+2.5**
KSH	**Kashi**	**6.63**	**214**	*e*Pn	**Pn**	**15 37 43.3**	**+4.7**
KSH				Sn	**Sn**	**15 39 00.0**	**+6.0**
KSH				smax			
	comp=N,120nm,0.9s						
KSH				smax			
	comp=E,230nm,1.1s						
KK31	**Karatay Array**	**7.62**	**258**	⇓Pn	**Pn**	**15 37 53.1**	**+0.9**
	comp=E,2.0nm,0.3s,baz=68,slow=15,SNR=50						
KK31				⇑Lg		15 40 01.9	
	comp=E,77nm,0.6s,baz=72,slow=28,SNR=12						
ZAA0	**Zalesovo Array**	**9.21**	**15**	*e*Pn	**Pn**	**15 38 13.8**	**-0.1**
ZAA0				*e*Sn	**Sn**	**15 39 58.7**	**+1.4**
ZALV	**Zalesovo Beam**	**9.21**	**15**	Pn	**Pn**	**15 38 14.2**	**+0.3**
	comp=E,2.0nm,0.3s,baz=196,slow=13,SNR=68						
ZALV				Lg		15 40 58.6	
	comp=E,1.6nm,0.3s,baz=197,slow=24,SNR=5.3						
NVS	**Novosibirsk**	**9.84**	**9**	*e*P	**Pn**	**15 38 23.4**	**+0.8**
NVS				*e*		15 40 11.1	
VOSK	**Vostochnaya**	**9.92**	**323**	⇓Pn	**Pn**	**15 38 27.8**	**+4.2**
	comp=E,7.4nm,0.8s						
VOSK				⇑Lg		15 41 22.8	
	comp=E,268nm,1.1s						
BVA0	**Borovoye Array**	**10.38**	**323**	⇓Pn	**Pn**	**15 38 35.3**	**+5.2**
	comp=E,0.1nm,0.5s,baz=138,slow=14,SNR=30						
BVA0				⇓Lg		15 41 36.7	
	comp=E,11nm,0.9s,baz=132,slow=32,SNR=4.1						
BVAR	**Borovoye Array**	**10.38**	**323**	Pn	**Pn**	**15 38 30.5**	**+0.5**
	comp=E,0.6nm,0.3s,baz=140,slow=12,SNR=12						
BVAR				Lg		15 41 35.5	
	comp=E,2.5nm,0.3s,baz=130,slow=26,SNR=4.6						
BVAR				LR	LR	15 42 50.2	
	comp=E,177nm,21.1s,baz=131,slow=39						
BRVK	**Borovoye**	**10.45**	**323**	*e*P	**Pn**	**15 38 34.7**	**+3.7**
ZRNK	**Zerenda**	**10.95**	**320**	⇑Pn	**Pn**	**15 38 38.9**	**+1.1**
	comp=E,3.0nm,0.7s						
ZRNK				⇑Lg		15 41 54.4	
	comp=E,121nm,1.0s						
AB31	**Akbulak array**	**14.69**	**294**	⇑Pn	**Pn**	**15 39 27.4**	**-1.5**
	comp=E,4.4nm,0.6s,baz=96,slow=15,SNR=30						
AB31				⇑Lg		15 43 56.1	
	comp=E,19nm,0.9s,baz=94,slow=30,SNR=3.7						
ABKAR	**Akbulak array**	**14.69**	**294**	*e*Pn	**Pn**	**15 39 26.5**	**-2.4**
	comp=E,4.2nm,0.5s						
ZAK	**Zakamensk**	**16.03**	**63**	*e*P	**Pn**	**15 39 47.1**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKTK	**Aktyubinsk**	**16.12**	**297**	Pn	**Pn**	**15 39 47.1**	**-0.6**
AKTK				LR	LR	15 46 32.7	
AKTO	**Aktyubinsk**	**16.12**	**297**	⇑Pn	**Pn**	**15 39 46.4**	**-1.2**
	comp=Z,2.4nm,0.9s						
AKTO				⇑Lg		15 44 41.0	
	comp=Z,4.7nm,1.3s						
AKTO	**Aktyubinsk**	**16.12**	**297**	Pn	**Pn**	**15 39 47.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=102,slow=13,SNR=19						
AKTO				LR	LR	15 46 32.7	
	comp=Z,136nm,19.3s,baz=275,slow=39						
SVE	**Sverdlovsk**	**17.14**	**320**	*e*P	**Pn**	**15 40 00.6**	**+0.1**
SVE				*e*S	**Sn**	**15 43 10.0**	**-0.9**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SVE				MLR	MLR		
	comp=Z,116nm,10.0s						
LSA	**Lhasa**	**17.48**	**148**	P	Px	15 40 13.5	
LSA	**Lhasa**	**17.48**	**148**	*e*P	**Pn**	**15 40 08.3**	**+3.3**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**17.48**	**148**	*e*Pn	**Pn**	**15 40 08.3**	**+3.3**
	comp=Z,10nm,0.8s						
GUN	**Gumba**	**17.69**	**165**	*e*P	**Pn**	**15 40 01.9**	**-5.7**
	comp=Z,85nm,1.1s						
KKN	**Kakani**	**17.70**	**167**	*e*P	**Pn**	**15 40 07.6**	**-0.1**
	comp=Z,15nm,0.5s						
KKN	**Kakani**	**17.70**	**167**	*e*P	**Pn**	**15 40 07.6**	**-0.1**
KKN				pmax	pmax		
	comp=Z,15nm,0.5s						
SONM	**Songino Array**	**17.87**	**72**	Pn	**Pn**	**15 40 06.2**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=295,slow=18,SNR=5.1						
SONM				Lg		15 45 28.9	
	comp=Z,0.2nm,0.3s,baz=276,slow=30,SNR=6.7						
ARU	**Arti**	**17.90**	**317**	*d i*P	**Pn**	**15 40 13.6**	**+3.6**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
PKIN	**Phulchoki**	**17.93**	**166**	*e*P	**Pn**	**15 40 06.0**	**-4.5**
PKI	**Pulchoki**	**17.93**	**166**	*e*P	**Pn**	**15 40 05.0**	**-5.6**
PKI	**Pulchoki**	**17.93**	**166**	*e*P	**Pn**	**15 40 06.0**	**-4.6**
SOKR	**Solikamsk**	**20.38**	**324**	*e*P	**P**	**15 40 47.5**	**+10**
SOKR				pmax	pmax		
	comp=Z,20nm,1.1s						
SOKR				MLR	MLR		
	comp=Z,90nm,17.0s,MS3.2						
SHL	**Shillong**	**21.52**	**151**	*e*P	**P**	**15 40 51.0**	**+0.8**
BOD	**Bodaibo**	**24.02**	**46**	*e*P	**P**	**15 41 12.4**	**-3.5**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
GNI	**Garni**	**26.77**	**272**	LR	LR	15 53 52.5	
	comp=Z,33nm,20.6s,MS2.9,baz=277,slow=40						
KIV	**Kislovodsk**	**26.96**	**281**	P	**P**	**15 41 46.0**	**+3.3**
KIV						15 42 24.0	
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.5						
ENH	**Enshi**	**27.00**	**113**	*e*Pn	**P**	**15 41 43.0**	**-0.2**
	comp=Z,10nm,1.0s,mb4.3						
VORD	**Divnogorie**	**28.00**	**297**	*e*P	**P**	**15 41 51.9**	**0.0**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,8.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
VSR	**Storozhevoye**	**28.06**	**298**	*e*P	**P**	**15 41 52.7**	**+0.2**
VSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
VSR				pmax	pmax		
	comp=E,6.0nm,0.7s						
OBN	**Obninsk**	**29.54**	**306**	⇓*e*P	**P**	**15 42 06.3**	**+0.8**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.5						
ANN	**Anapa**	**30.35**	**285**	*e*P	**P**	**15 42 12.4**	**-0.4**
ANN				*e*S	**S**	**15 47 14.1**	**+1.3**
ANN				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.2						
CM31	**Chiang Mai Arr**	**30.64**	**144**	*e*P	**P**	**15 42 13.3**	**-2.3**
	comp=Z,0.7nm,0.4s,mb3.8						
CMAR	**Chiang Mai Arr**	**30.64**	**144**	P	**P**	**15 42 15.1**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.8,baz=317,slow=8.2,SNR=8.9						
CMAR	**Chiang Mai Arr**	**30.64**	**144**	P	**P**	**15 42 15.1**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YAK	**Yakutsk**	**32.64**	**41**	*e*P	**P**	**15 42 33.9**	**+1.1**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
YAK				MLR	MLR		
	comp=Z,124nm,13.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,50nm,16.0s,MS3.7						
YAK				MLR	MLR		
	comp=E,111nm,19.0s,MS3.7						
AKASG	**Malin Array Be**	**34.36**	**298**	P	**P**	**15 42 47.9**	**0.0**
	comp=E,3.7nm,0.6s,mb4.5,baz=68,slow=8.9,SNR=8.1						
AKASG	**Malin Array Be**	**34.36**	**298**	P	**P**	**15 42 47.9**	**0.0**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	**Keskin Array B**	**34.77**	**278**	P	**P**	**15 42 51.9**	**+0.3**
	comp=Z,1.3nm,0.6s,mb4.0,baz=92,slow=7.3,SNR=7.6						
BRTR	**Keskin Array B**	**34.77**	**278**	P	**P**	**15 42 51.9**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**34.95**	**24**	*e*P	**P**	**15 42 53.9**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
FINES	**FINESS Array B**	**35.27**	**317**	P	**P**	**15 42 55.9**	**+0.3**
	comp=Z,1.5nm,1.0s,mb3.9,baz=51,slow=4.4,SNR=2.8						
FINES	**FINESS Array B**	**35.27**	**317**	P	**P**	**15 42 55.9**	**+0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	**Korea Array**	**35.87**	**85**	P	**P**	**15 43 01.6**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.1,baz=288,slow=7.9,SNR=6.4						
KSRS	**Korea Array**	**35.87**	**85**	P	**P**	**15 43 01.6**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ARCES	**ARCESS Array B**	**36.54**	**331**	P	**P**	**15 43 06.5**	**+0.1**
	comp=Z,1.3nm,0.8s,mb3.8,baz=92,slow=14,SNR=3.8						
ARCES	**ARCESS Array B**	**36.54**	**331**	P	**P**	**15 43 06.6**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**37.67**	**294**	*e*P	**P**	**15 43 15.3**	**-1.0**
STHS	**Stebnicka Huta**	**39.66**	**298**	*e*P	**P**	**15 43 34.5**	**+1.6**
STHS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
STHS	**Stebnicka Huta**	**39.66**	**298**	*e*P	**P**	**15 43 34.5**	**+1.6**
	comp=Z,2.2nm,0.9s,mb3.9						
STHS				*e*PP	sP	15 43 47.6	+10
STHS				*e*		15 59 40.8	
STHS	**Stebnicka Huta**	**39.66**	**298**	*e*P	**P**	**15 43 34.5**	**+1.6**
STHS				*e*		15 43 47.6	
STHS				*e*		15 59 40.8	
NIE	**Niedzica**	**40.24**	**298**	*e*P	**P**	**15 43 39.4**	**+1.6**
OJC	**Ojcow**	**40.32**	**300**	*e*P	**P**	**15 43 38.3**	**-0.1**
KECS	**Kecovo**	**40.42**	**297**	*e*P	**P**	**15 43 37.0**	**-2.3**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
KECS	**Kecovo**	**40.42**	**297**	*e*P	**P**	**15 43 37.0**	**-2.3**
	comp=Z,1.5nm,0.8s,mb3.8						
KECS	**Kecovo**

GIVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
GIVF Givet 49.33 305 *e*P **P 15 44 50.5 +0.3**
comp=Z,4.7nm,0.6s,mb4.7
HAU Haudompre 49.34 302 *e*P **P 15 44 49.8 -0.5**
HAU *e*MLR MLR
comp=Z,40nm,17.8s,MS3.2
HAU Haudompre 49.34 302 *e*P **P 15 44 49.8 -0.5**
HAU LR LR
comp=Z,40nm,17.8s,MS3.5
BAIF Baives 49.71 305 *e*P **P 15 44 53.2 +0.1**
MEZF Maizieres J'vi 49.90 303 *e*P **P 15 44 54.8 +0.3**
comp=Z,27nm,0.8s,mb5.0
MEZF Maizieres J'vi 49.90 303 *e*P **P 15 44 54.8 +0.3**
comp=Z,27nm,0.8s,mb5.3
CABF La Chapelle 50.12 300 *e*P **P 15 44 55.7 -0.5**
comp=Z,14nm,1.0s,mb4.6
CABF La Chapelle 50.12 300 *e*P **P 15 44 55.7 -0.5**
CABF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
CABF La Chapelle 50.12 300 *e*P **P 15 44 55.7 -0.5**
comp=Z,6.8nm,1.0s,mb4.6
LPG La Plagne 50.22 298 *e*P **P 15 44 57.5 +0.4**
comp=Z,18nm,0.8s,mb4.8
LPG La Plagne 50.22 298 *e*P **P 15 44 57.5 +0.4**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 50.22 298 *e*P **P 15 44 57.5 +0.4**
comp=Z,8.8nm,0.8s,mb4.8
LPL La Plagne 50.23 298 *e*P **P 15 44 57.4 +0.3**
comp=Z,19nm,0.7s,mb4.9
LPL La Plagne 50.23 298 *e*P **P 15 44 57.4 +0.3**
LPL pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
LPL La Plagne 50.23 298 *e*P **P 15 44 57.4 +0.3**
comp=Z,9.6nm,0.7s,mb4.9
ORIF Oris-en-Rattie 51.04 298 *e*P **P 15 45 02.6 -0.6**
ORIF *e*MLR MLR
comp=Z,33nm,20.5s,MS3.0
LOR Lormes 51.17 302 *e*P **P 15 45 02.9 -1.3**
comp=Z,4.0nm,0.7s,mb4.2
LOR *e*MLR MLR
comp=Z,33nm,17.8s,MS3.1
LOR Lormes 51.17 302 *e*P **P 15 45 02.9 -1.3**
LOR pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
LOR MLR MLR
comp=Z,30nm,17.8s,MS3.4
LOR Lormes 51.17 302 *e*P **P 15 45 02.9 -1.3**
comp=Z,2.0nm,0.7s,mb4.2
LOR LR LR
comp=Z,30nm,17.8s,MS3.4
SMF Signal de Mont 51.48 301 *e*P **P 15 45 05.6 -0.9**
comp=Z,6.8nm,0.7s,mb4.4
SMF Signal de Mont 51.48 301 *e*P **P 15 45 05.6 -0.9**
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SMF Signal de Mont 51.48 301 *e*P **P 15 45 05.6 -0.9**
comp=Z,3.4nm,0.7s,mb4.4
SSF Saint Saulge 51.48 302 *e*P **P 15 45 05.4 -1.1**
comp=Z,2.8nm,0.6s,mb4.0
SSF Saint Saulge 51.48 302 *e*P **P 15 45 05.4 -1.1**
SSF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
SSF Saint Saulge 51.48 302 *e*P **P 15 45 05.4 -1.1**
comp=Z,1.4nm,0.6s,mb4.1
AVF Avril sur Loir 51.70 301 *e*P **P 15 45 07.3 -0.8**
VIVF Saint-Julien-l 51.82 299 *e*P **P 15 45 08.2 -0.9**
comp=Z,7.6nm,0.7s,mb4.5
VIVF Saint-Julien-l 51.82 299 *e*P **P 15 45 08.2 -0.9**
VIVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VIVF Saint-Julien-l 51.82 299 *e*P **P 15 45 08.2 -0.9**
comp=Z,3.8nm,0.7s,mb4.4
BGF Bois d'Agland 52.12 301 *e*P **P 15 45 10.4 -0.9**
TCF Toulx Ste Croi 52.63 301 *e*P **P 15 45 14.6 -0.5**
comp=Z,3.9nm,0.6s,mb4.2
TCF Toulx Ste Croi 52.63 301 *e*P **P 15 45 14.6 -0.5**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
TCF Toulx Ste Croi 52.63 301 *e*P **P 15 45 14.6 -0.5**
comp=Z,2.0nm,0.6s,mb4.2
LASF Ste Croix 52.72 298 *e*P **P 15 45 15.5 -0.2**
comp=Z,11nm,1.0s,mb4.5
LDF La Druitiere 52.90 305 *e*P **P 15 45 16.1 -0.9**
FLN La Foliniere 53.03 305 *e*P **P 15 45 16.9 -1.1**
comp=Z,7.2nm,0.6s,mb4.5
FLN *e*MLR MLR
comp=Z,61nm,20.0s,MS3.3
FLN La Foliniere 53.03 305 *e*P **P 15 45 16.9 -1.1**
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
FLN MLR MLR
comp=Z,60nm,20.0s,MS3.6
FLN La Foliniere 53.03 305 *e*P **P 15 45 16.9 -1.1**
comp=Z,3.6nm,0.6s,mb4.5
FLN LR LR
comp=Z,60nm,20.0s,MS3.6
CAF Calviac 53.40 300 *e*P **P 15 45 20.7 -0.1**
GRR Gorron 53.43 305 *e*P **P 15 45 20.0 -0.9**
comp=Z,8.6nm,0.6s,mb4.5
GRR Gorron 53.43 305 *e*P **P 15 45 20.0 -0.9**
GRR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
GRR Gorron 53.43 305 *e*P **P 15 45 20.0 -0.9**
comp=Z,4.3nm,0.6s,mb4.6
RJF Les Rejaudoux 53.55 300 *e*P **P 15 45 21.7 -0.1**
comp=Z,8.8nm,0.8s,mb4.5
RJF *e*MLR MLR
comp=Z,51nm,22.5s,MS3.2
RJF Les Rejaudoux 53.55 300 *e*P **P 15 45 21.7 -0.1**
RJF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
RJF MLR MLR
comp=Z,50nm,22.5s,MS3.5
RJF Les Rejaudoux 53.55 300 *e*P **P 15 45 21.7 -0.1**
comp=Z,4.4nm,0.8s,mb4.4
RJF LR LR
comp=Z,50nm,22.5s,MS3.5
MFF Saint Martin d 53.90 303 *e*P **P 15 45 23.4 -1.0**
LFF La Frestale 54.20 300 *e*P **P 15 45 26.4 -0.2**
SGMF Saint Gilles 54.48 305 *e*P **P 15 45 27.9 -0.7**
ROSF Rostrenen 54.85 306 *e*P **P 15 45 30.6 -0.7**
comp=Z,3.9nm,0.5s,mb4.4
ROSF Rostrenen 54.85 306 *e*P **P 15 45 30.6 -0.7**
ROSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
ROSF Rostrenen 54.85 306 *e*P **P 15 45 30.6 -0.7**
comp=Z,2.0nm,0.5s,mb4.4
QUIF Quistinic 55.00 305 *e*P **P 15 45 30.9 -1.5**
comp=Z,7.6nm,0.7s,mb4.6
QUIF Quistinic 55.00 305 *e*P **P 15 45 30.9 -1.5**
QUIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
QUIF Quistinic 55.00 305 *e*P **P 15 45 30.9 -1.5**
comp=Z,3.8nm,0.7s,mb4.5
YKA Yellowknife Ar 72.01 7 P **P 15 47 22.9 -1.7**
comp=Z,0.5nm,0.7s,mb3.5,baz=43,slow=43,SNR=3.6
YKA Yellowknife Ar 72.01 7 P **P 15 47 22.9 -1.7**
YKA pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 73.08 272 P **P 15 47 29.1 -2.6**
comp=Z,1.3nm,0.5s,mb4.1,baz=36,slow=5.5,SNR=24
ASAR Alice Springs 83.87 132 P **P 15 48 30.3 -0.6**
comp=Z,1.0nm,0.8s,mb4.0,baz=314,slow=4.8,SNR=5.4
ASAR Alice Springs 83.87 132 P **P 15 48 30.3 -0.6**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
BOSA Boshof 89.07 226 P **P 15 48 54.4 -1.8**
comp=Z,4.7nm,1.0s,mb4.8,baz=90,slow=5.1,SNR=3.3
BOSA Boshof 89.07 226 P **P 15 48 54.4 -1.9**
BOSA pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
BOSA Boshof 89.07 226 P **P 15 48 54.4 -1.8**
ARUT Antelope Range 96.47 11 *e*P **P 15 49 31.7 +1.2**
ARUT pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
ARUT Antelope Range 96.47 11 *e*P **P 15 49 31.6 +1.1**
comp=Z,1.5nm,0.9s,mb4.4

ISCJB ***30*** *15:36:56.5±0.6, 37°.93N×0°.03×26°.88E±0°.04, h9km±5km, Error ellipse: s-maj=5.7km s-min=4.5km az=145.0*
CSEM ***30*** *15:36:56.3±0.2, 37°.92N×26°.90E, h10km, MD3.0, Error ellipse: s-maj=4.1km s-min=3.6km az=62.0*
DDA ***30*** *15:36:56.8, 37°.93N×26°.91E, h10km±3km, Md2.6*

ATH ***30*** *15:36:57.6, 37°.90N×26°.79E, h4km, MD3.0/3*
ISC 30 15:36:56.7±0.5, 37°.92N±0°.03×26°.88E±0°.04, h11km±5km, n16, σ0°.63/32, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.22**	**188**	*e*PG	**Pg**	**15 37 01.1**	**-0.2**
SMG				*e*SG	**Sg**	**15 37 04.6**	**+0.2**
SMG	**Samos**	**0.22**	**188**	*e*Pg	**Pg**	**15 37 01.1**	**-0.2**
SMG				*e*Sg	**Sg**	**15 37 04.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.36**	**128**	*i* P	**Pg**	**15 37 03.6**	**-0.2**
GCAM				*i* S	**Sg**	**15 37 09.7**	**+1.0**
GCAM	**G?zelcaml?**	**0.36**	**128**	*i* P	**Pg**	**15 37 03.6**	**-0.3**
GCAM				*i* S	**Sg**	**15 37 09.7**	**+1.0**
URLA	**Izmir**	**0.49**	**333**	*i* P	**Pg**	**15 37 06.2**	**0.0**
URLA				*i* S	**Sg**	**15 37 13.4**	**+0.7**
URLA	**Izmir**	**0.49**	**333**	*i* P	**Pg**	**15 37 06.2**	**-0.1**
URLA				*i* S	**Sg**	**15 37 13.4**	**+0.6**
CHOS	**Chios island**	**0.80**	**306**	*e*PB	**Pb**	**15 37 12.3**	**-0.2**
CHOS				*e*SG	**Sg**	**15 37 22.2**	**-0.3**
CHOS	**Chios island**	**0.80**	**306**	*e*Pb	**Pb**	**15 37 12.3**	**-0.2**
CHOS				*e*Sg	**Sg**	**15 37 22.2**	**-0.3**
AYDN	**Tasoluk**	**0.84**	**108**	*e*P	**Pg**	**15 37 10.8**	**-2.0**
AYDN				*i* S	**Sg**	**15 37 24.0**	**+0.3**
AYDN	**Tasoluk**	**0.84**	**108**	*e*P	**Pg**	**15 37 10.8**	**-2.0**
AYDN				*i* S	**Sg**	**15 37 24.0**	**+0.2**
AKHS	**Akhisar**	**1.20**	**37**	*i* P	**Pn**	**15 37 19.7**	**+0.3**
AKHS				*i* S	**Sb**	**15 37 35.6**	**+0.5**
AKHS	**Akhisar**	**1.20**	**37**	*i* P	**Pn**	**15 37 19.7**	**+0.3**
AKHS				*i* S	**Sb**	**15 37 35.6**	**+0.5**
APE	**Apeiranthos**	**1.37**	**232**	*e*PB	**Pb**	**15 37 22.4**	**+0.1**
APE				*e*SB	**Sb**	**15 37 40.1**	**+0.3**
APE	**Apeiranthos**	**1.37**	**232**	*e*Pb	**Pb**	**15 37 22.4**	**+0.1**
APE				*e*Sb	**Sb**	**15 37 40.1**	**+0.3**
BALY	**Balya**	**1.90**	**18**	*i* P	**Pn**	**15 37 28.4**	**-0.7**
BALY				*i* S	**Sn**	**15 37 53.1**	**+0.1**
BALY	**Balya**	**1.90**	**18**	*i* P	**Pn**	**15 37 28.4**	**-0.7**
BALY				*i* S	**Sn**	**15 37 53.1**	**+0.1**

NEIC ***30*** *15:39:37.7, 15°.72N×94°.94W, h20km, mb4.0/1, MD4.1(MEX), After MEX.*
MEX 30 15:39:37.7±0.5, 15°.72N×94°.94W, h20km±15km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.12**	**273**	*e*P	Pn	15 39 55.2	-3.1
HUIG				*i* S	Sb	15 40 08.6	-4.0
HUIG	**Huatulco**	**1.12**	**273**	*e*P	Pn	15 39 55.2	-3.1
HUIG				*i* S	Sb	15 40 08.6	-4.0
PCIG		**1.66**	**90**	*e*P	Pn	15 40 02.7	-3.0
PCIG				*i* S	Sn	15 40 21.6	-4.8
TGIG		**2.04**	**59**	*i* P	Pn	15 40 08.5	-2.4
TGIG				*i* S	Sn	15 40 32.0	-3.8
VHO	**Vista Hermosa**	**2.18**	**308**	*i* P	Pn	15 40 11.0	-1.9
VHO				*i* S	Sn	15 40 36.1	-3.3
VHO	**Vista Hermosa**	**2.18**	**308**	*i* P	Pn	15 40 11.0	-1.9
VHO				*i* S	Sn	15 40 36.1	-3.3
SCX	**San Cristobal**	**2.44**	**65**	*i* P	Pn	15 40 12.7	-3.6
SCX				*i* S	Sn	15 40 38.2	-7.4
SCX	**San Cristobal**	**2.44**	**65**	*i* P	Pn	15 40 12.7	-3.6
SCX				*i* S	Sn	15 40 38.2	-7.4
THIG		**2.71**	**107**	*i* P	Pn	15 40 15.6	-4.4
THIG				*i* S	Sn	15 40 49.1	-3.1
CCIG	**Comitan**	**2.75**	**78**	*i* P	Pn	15 40 18.9	-1.9
CCIG				*i* S	Sn	15 40 50.6	-2.9
CCIG	**Comitan**	**2.75**	**78**	*i* P	Pn	15 40 18.9	-1.9
CCIG				*i* S	Sn	15 40 50.6	-2.9
PNIG	**Pinotepa**	**3.13**	**283**	*e*P	Pn	15 40 23.9	-2.1
PNIG				*i* S	Sn	15 40 58.9	-3.9
PNIG	**Pinotepa**	**3.13**	**283**	*e*P	Pn	15 40 23.9	-2.1
PNIG				*i* S	Sn	15 40 58.9	-3.9
TPIG	**Tehuac#an**	**3.55**	**320**	*i* S	Sn	15 41 09.8	-3.2
LVIG	**Laguna Verde**	**4.22**	**341**	*i* P	Pn	15 40 41.6	+0.7
LVIG	**Laguna Verde**	**4.22**	**341**	*i* P	Pn	15 40 41.6	+0.7
TEIG	**Tepich** 14nm,0.5s	**7.77**	**54**	*e*Pn	Pn	15 41 24.1	-5.5
TEIG				*e*Sn	Sn	15 42 53.7	-3.3
PAYG	**Puerto Ayora** 8.3nm,0.6s	**16.92**	**164**	*e*P	Pn	15 43 33.2	-0.3

NIED ***30*** *15:47:00, 25°.20N×128°.10E, h5km, Mw4.6 Best double couple: M0=7.65000×10^15 NP1:φ=238.00000°, δ=65.00000°, λ=-85.00000°. NP2:φ=47.00000°, δ=26.00000°, λ=-100.00000°.*
ISCJB ***30*** *15:47:13.6±1.0, 25°.13N±0°.03×128°.10E±0°.03, h7km±6km, mb4.7/80, MS4.0/22, Error ellipse: s-maj=4.8km s-min=3.5km az=139.2*
IDC ***30*** *15:47:14.7±0.5, 25°.12N×128°.03E, h0km, mb4.5/28, mb1 4.5/31, mb1mx4.5/37, mbtmp4.4/31, ML3.2/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/26, Error ellipse: s-maj=16.4km s-min=12.0km az=82.0*
MOS ***30*** *15:47:17.6±1.5, 25°.07N×128°.07E, h32km, mb4.8/48, MS4.1/17, Error ellipse: s-maj=9.6km s-min=6.2km az=114.2*
JMA ***30*** *15:47:17.3±0.2, 25°.23N×128°.11E, h67km±3km, M5.2*
BJI ***30*** *15:47:18.2, 25°.20N×128°.29E, h46km, mB4.7/14, mb4.4/21, Ms4.5/17, Ms7 4.3/16*
NEIC ***30*** *15:47:19.5±0.4, 25°.07N×127°.97E, h35km, mb4.7/32, MS4.5/3, MW4.5(NIED), Error ellipse: s-maj=9.4km s-min=6.8km az=144.0*
SZGRF ***30*** *15:47:23.5, 25°.56N×128°.49E, h23km, mb4.6, MS4.6, Ryukyu Islands, Japan*
DJA ***30*** *15:47:37, 24°.84N×127°.98E, h198km, mb4.6/14*
ISC 30 15:47:14.6±0.9, 25°.14N±0°.03×128°.07E±0°.03, h1km±5km, n203, σ1°.18/227, mb4.7/80, MS4.0/22, 4C-6D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.03**	**344**	P	**Pg**	**15 47 35.4**	**+1.0**
JJT2				S	**Sg**	**15 47 48.9**	**+1.0**
NAH1	**Naha**	**1.11**	**342**	P	**Pg**	**15 47 36.3**	**+0.4**
NAH1				*e*S	**Sg**	**15 47 49.7**	**-0.7**
JAGN	**Aguni-jima**	**1.62**	**333**	P	**Pn**	**15 47 43.8**	**-0.5**
JAGN				*e*S	**Sn**	**15 48 03.0**	**-2.9**
JKE	**Kume jima 2**	**1.65**	**316**	P	**Pn**	**15 47 44.2**	**-0.5**
JOW	**Kunigami**	**1.69**	**6**	P	**Pn**	**15 47 43.7**	**-1.6**
JOW				S	**Sn**	**15 48 03.2**	**-4.5**
JOW	**Kunigami** 112nm,0.3s,baz=185,slow=14,SNR=132	**1.69**	**6**	Pn	**Pn**	**15 47 44.1**	**-1.2**
JOW	262nm,0.3s,baz=43,slow=24,SNR=15			Sn	**Sn**	**15 48 03.3**	**-4.4**
JOW	comp=Z,2μm,18.1s,baz=226,slow=47			LR	LR	15 48 35.5	
JIH	**Iheya**	**1.89**	**357**	P	**Pn**	**15 47 47.0**	**-1.0**
JIH				S	**Sn**	**15 48 08.2**	**-4.3**
JOGS	**Gusukube**	**2.45**	**262**	P	**Pn**	**15 47 56.4**	**+0.7**
JOGS				*e*S	**Sn**	**15 48 25.9**	**-0.3**
JMJ	**Miyako jima 2**	**2.54**	**263**	*e*S	**Sn**	**15 48 27.8**	**-0.7**
JTK	**Tokunoshima**	**2.75**	**16**	P	**Pn**	**15 47 58.7**	**-1.1**
JTK				*e*S	**Sn**	**15 48 26.8**	**-6.9**
JMZ	**Minamidaito 2**	**2.93**	**76**	P	**Pn**	**15 47 58.5**	**-3.8**
JMZ				*e*S	**Sn**	**15 48 29.3**	**-8.8**
JTJ	**Tarama**	**3.10**	**261**	P	**Pn**	**15 48 04.9**	**+0.3**
JTJ				*e*S	**Sn**	**15 48 41.0**	**-1.3**
JAM	**Amami Oshima**	**3.54**	**23**	P	**Pn**	**15 48 09.8**	**-0.8**
JAM				*e*S	**Sn**	**15 48 46.4**	**-6.7**
JZK	**Kikaishima**	**3.59**	**28**	P	**Pn**	**15 48 10.7**	**-0.7**
JZK				*e*S	**Sn**	**15 48 49.7**	**-4.7**
JIJ	**Ishigaki jima**	**3.65**	**259**	P	**Pn**	**15 48 12.1**	**-0.1**
JIJ				S	**Sn**	**15 48 52.6**	**-3.4**
JKRS	**Kuro-shima**	**3.80**	**257**	P	**Pn**	**15 48 13.0**	**-1.3**
JKRS				*e*S	**Sn**	**15 48 58.8**	**-0.9**
IRIF	**Iriomote-Funau**	**4.03**	**259**	P	**Pn**	**15 48 18.3**	**+0.9**
IRIF				*e*S	**Sn**	**15 49 04.1**	**-1.1**
HATJ	**Hateruma jima**	**4.03**	**255**	P	**Pn**	**15 48 16.9**	**-0.5**
HATJ				*e*S	**Sn**	**15 49 03.7**	**-1.6**
YOJ	**Yonaguni jima**	**4.65**	**263**	P	**Pn**	**15 48 26.4**	**+0.5**
JNN	**Nakanoshima**	**4.95**	**18**	P	**Pn**	**15 48 28.6**	**-1.5**
JNN				*e*S	**Sn**	**15 49 21.9**	**-6.1**
NACB	**Ninganchiao** 51nm,0.8s	**5.97**	**262**	*e*Pn	**Pn**	**15 48 42.1**	**-2.0**
TATO	**Taipei** 212nm,1.2s	**5.97**	**270**	*e*Pn	**Pn**	**15 48 46.5**	**+2.4**
YHNB	**Yeheng** 72nm,1.1s	**6.10**	**267**	*e*Pn	**Pn**	**15 48 47.1**	**+1.3**
YULB	**Yu-li** 58nm,0.8s	**6.42**	**256**	*e*Pn	**Pn**	**15 48 47.7**	**-2.6**
SSLB	**Suanglung** 45nm,0.6s	**6.62**	**260**	*e*Pn	**Pn**	**15 48 51.1**	**-2.0**
TWG	**Pinlang** 98nm,0.6s	**6.80**	**252**	*e*Pn	**Pn**	**15 48 52.6**	**-3.0**
TPUB	**Ta-pu** 48nm,0.6s	**7.03**	**256**	*e*Pn	**Pn**	**15 48 57.8**	**-0.9**
JTZ	**Takazaki**	**7.24**	**21**	P	**Pn**	**15 49 00.5**	**-1.0**
JIU2	**Izumi 2**	**7.76**	**17**	P	**Pn**	**15 49 08.6**	**-0.1**
KS15	**Wonju Array Si**	**12.27**	**359**	Pn	**Pn**	**15 50 11.5**	**+1.1**
KSRS	**Korea Array** 0.1nm,0.3s,baz=175,slow=14,SNR=9.1	**12.28**	**359**	Pn	**Pn**	**15 50 09.7**	**-0.8**
KSRS				LR	LR	15 55 46.8	
	comp=Z,387nm,18.6s,baz=172,slow=42						
WHN	**Wuhan**	**13.28**	**297**	P	**Pn**	**15 50 29.0**	**+4.8**
WHN				S	**Sn**	**15 52 55.0**	**+2.5**
WHN				LR	LR		
	comp=N,3μm,10.5s						
WHN				LR	LR		
	comp=E,3μm,9.2s						
WHN				LR	LR		
	comp=Z,4μm,10.6s						
MAJO	**Matsushiro**	**14.30**	**35**	*e*P	**Pn**	**15 50 42.1**	**+3.8**
MAJO				pmax	pmax		
	comp=Z,118nm,1.6s						
MAJO	**Matsushiro**	**14.30**	**35**	*e*Pn	**Pn**	**15 50 42.1**	**+3.8**
	comp=Z,118nm,1.6s						
MAT	**Matsushiro**	**14.30**	**35**	P	**Pn**	**15 50 37.6**	**-0.7**
MAT				*e*S	**Sn**	**15 53 13.0**	**-4.6**
MJAR	**Matsushiro Arr**	**14.30**	**35**	Pn	**Pn**	**15 50 39.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=4.2						
SNY	**Shenyang**	**17.05**	**348**	⇑P	**Pn**	**15 51 15.5**	**+1.2**
SNY				pmax	pmax		
	comp=Z,23nm,2.2s						
SNY				pmax	pmax		
	comp=Z,430nm,3.5s						
SNY				LR	LR		
	comp=N,940nm,11.2s						
SNY				LR	LR		
	comp=Z,1μm,11.3s						
ENH	**Enshi**	**17.23**	**291**	*e*Pn	**Pn**	**15 51 14.4**	**-2.1**
	comp=Z,28nm,1.4s						
VLA	**Vladivostok**	**18.21**	**9**	P	**Pn**	**15 51 24.0**	**-4.6**
VLA				MLR	MLR		
	comp=Z,400nm,10.6s						
TIY	**Taiyuan**	**18.27**	**317**	*e*P	**Pn**	**15 51 31.8**	**+2.4**
TIY				S	**Sn**	**15 54 58.5**	**+4.5**
TIY				pmax	pmax		
	comp=Z,260nm,4.6s						
TIY				LR	LR		
	comp=N,500nm,8.1s						
TIY				LR	LR		
	comp=E,490nm,11.6s						
TIY				LR	LR		
	comp=Z,530nm,10.8s						
CN2	**Changchun**	**18.74**	**354**	*e*P	**Pn**	**15 51 34.0**	**-1.1**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=N,470nm,15.0s						
CN2				LR	LR		
	comp=E,560nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
GYA	**Guiyang**	**19.32**	**279**	P	**Pn**	**15 51 47.8**	**+5.6**
GUMO	**Guam** baz=195,slow=9.4,SNR=3.8	**19.55**	**123**	P	**Pn**	**15 51 45.3**	**+0.2**
GUMO				LR	LR	15 57 06.3	
	comp=Z,254nm,20.6s,baz=301,slow=30						
GUMO	**Guam**	**19.55**	**123**	*e*P	**Pn**	**15 51 44.6**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,207nm,1.4s						
GUMO	**Guam**	**19.55**	**123**	*e*P	**Pn**	**15 51 44.6**	**-0.4**
	comp=Z,207nm,1.4s						
ERM	**Erimo**	**20.95**	**33**	*i* P	**P**	**15 51 57.0**	**-1.9**
ASAJ	**Asahikawa**	**22.33**	**28**	P	**P**	**15 52 14.2**	**+0.5**
	comp=Z,14nm,0.8s,mb4.4,baz=240,slow=22,SNR=4.1						
ASAJ	**Asahikawa**	**22.33**	**28**	P	**P**	**15 52 14.2**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI	**Kunming**	**22.93**	**275**	P	**P**	**15 52 22.3**	**+2.1**
KMI				pP		15 52 33.0	
KMI				sP	sP	15 52 37.8	+17
KMI				PP		15 52 55.5	
KMI				PcP	PcP	15 56 08.0	-2.9
KMI				S	**S**	**15 56 31.0**	**-0.4**
KMI				sS	sS	15 56 48.8	+17
KMI				pmax	pmax		
	comp=Z,34nm,1.2s,mb4.8						
KMI				LR	LR		
	comp=N,500nm,9.7s						
KMI				LR	LR		
	comp=E,430nm,10.3s						
KMI				LR	LR		
	comp=Z,480nm,12.6s,MS4.1						
HABR	**Khabarovsk**	**23.93**	**12**	*e*P	**P**	**15 52 28.7**	**-1.3**
HABR				*e**PP		15 52 37.6	
HABR				*e**SP	sP	15 52 41.8	+11
HABR				*e*PPP		15 53 05.4	
HABR				*e*		15 56 09.2	
HABR				S	**S**	**15 56 44.0**	**-3.2**
HABR				*e**SS	sS	15 56 59.4	+12
HABR				*e*SSS		15 57 39.7	
HABR				*e*		16 03 32.8	
HABR				pmax	pmax		
	comp=Z,54nm,1.6s,mb4.8						
HABR				pmax	pmax		
	comp=N,31nm,1.9s						
HABR				pmax	pmax		
	comp=E,46nm,2.3s						
HABR				MLR	MLR		
	comp=Z,397nm,14.0s,MS4.0						
KLR	**Kul'dur**	**24.22**	**6**	*e*P	**P**	**15 52 28.8**	**-3.9**
KLR				*e*		15 53 12.7	
KLR				*e*S	**S**	**15 56 45.5**	**-6.4**
KLR				pmax	pmax		
	comp=E,45nm,2.0s						
KLR				pmax	pmax		
	comp=Z,130nm,2.0s,mb5.1						
KLR				MLR	MLR		
	comp=Z,900nm,10.5s,MS4.5						
YSS	**Yuzh-Sakhalins**	**24.71**	**25**	*e*P	**P**	**15 52 39.5**	**+2.3**
YSS				*e*		15 52 47.0	
YSS				*e*		15 52 54.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
YSS				pmax	pmax		
	comp=Z,500nm,2.0s,mb5.9						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.1						
YSS	**Yuzh-Sakhalins**	**24.71**	**25**	*e*P	**P**	**15 52 38.6**	**+1.3**
	comp=Z,109nm,1.1s,mb5.5						
GTA	**Gaotai**	**27.67**	**308**	*e*P	**P**	**15 53 03.3**	**-0.7**
GTA				pP		15 53 14.8	
GTA				sP	sP	15 53 20.5	+16
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
GTA				pmax	pmax		
	comp=Z,96nm,7.4s						
GTA				LR	LR		
	comp=N,430nm,12.2s,MS4.5						
GTA				LR	LR		
	comp=E,480nm,10.1s,MS4.5						
GTA				LR	LR		
	comp=Z,400nm,10.1s,MS4.3						
CHTO	**Chiang Mai**	**27.70**	**263**	*e*P	**P**	**15 53 03.7**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
CHTO	**Chiang Mai**	**27.70**	**263**	*e*P	**P**	**15 53 03.7**	**-0.8**
	comp=Z,14nm,1.3s,mb4.6						
CMAR	**Chiang Mai Arr**	**27.81**	**262**	P	**P**	**15 53 05.5**	**0.0**
	comp=Z,1.8nm,0.9s,mb3.9,baz=62,slow=8.1,SNR=10						
CMAR	**Chiang Mai Arr**	**27.81**	**262**	P	**P**	**15 53 05.6**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**28.11**	**329**	*e*P	**P**	**15 53 08.2**	**+0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**28.11**	**329**	*e*P	**P**	**15 53 08.2**	**+0.4**
	comp=Z,8.1nm,0.9s,mb4.5						
SONM	**Songino Array**	**28.39**	**328**	P	**P**	**15 53 09.8**	**-0.6**
	comp=Z,2.7nm,0.6s,mb4.3,baz=142,slow=9.2,SNR=8.0						
SONM				LR	LR	16 07 27.3	
	comp=Z,214nm,18.0s,MS3.8,baz=294,slow=43						
SONM	**

SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM MLR MLR
comp=Z,214nm,18.0s
KSM Kuching 29.11 219 *e*P **P 15 53 17.6 +0.5**
comp=Z,11nm,0.9s,mb4.7
KSM *e* 15 53 27.9
TLY Talaya 32.39 331 *e*P **P 15 53 45.1 -0.6**
TLY pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TLY MLR MLR
comp=Z,176nm,13.0s,MS3.9
SHL Shillong 32.64 279 *e*P **P 15 53 54.0 +5.8**
LSA Lhasa 32.99 286 P **P 15 53 55.3 +4.0**
LSA Lhasa 32.99 286 *e*P **P 15 53 54.8 +3.5**
LSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LSA Lhasa 32.99 286 *e*P **P 15 53 54.8 +3.6**
comp=Z,9.4nm,0.8s,mb4.8
PETK Petropavlovsk- 35.70 31 P **P 15 54 15.6 +1.2**
comp=Z,6.8nm,0.9s,mb4.5,baz=187,slow=8.8,SNR=6.6
PETK LR LR 16 10 35.8
comp=Z,34nm,18.2s,MS3.1,baz=83,slow=39
PETK Petropavlovsk- 35.70 31 P **P 15 54 15.6 +1.2**
PETK pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
PETK MLR MLR
comp=Z,34nm,18.2s,MS3.1
PSI Prapat 35.79 236 P **P 15 54 15.2 -0.4**
comp=Z,6.8nm,0.7s,mb4.6,baz=86,slow=1.4,SNR=7.8
PSI Prapat 35.79 236 P **P 15 54 15.2 -0.4**
PSI pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
TAPN Taplejung 36.16 283 *e*P **P 15 54 20.1 +1.4**
comp=Z,93nm,1.3s,mb5.4
ODAN Odare 36.50 282 *e*P **P 15 54 22.9 +1.3**
comp=Z,72nm,1.0s,mb5.5
YAK Yakutsk 36.90 1 *c i*P **P 15 54 23.5 -1.0**
YAK *e**PP 15 54 33.1
YAK *e*PPP 15 55 58.2
YAK *e* 15 56 49.0
YAK *e*S **S 16 00 02.2 -7.7**
YAK *e*SS SS 16 02 30.7 -20
YAK pmax pmax
comp=Z,37nm,0.9s,mb5.1
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=N,23nm,1.3s
YAK pmax pmax
comp=Z,35nm,2.3s,mb4.7
YAK pmax pmax
comp=N,10.0nm,1.5s
YAK pmax pmax
comp=E,13nm,2.3s
YAK smax
comp=N,108nm,4.3s
YAK smax
comp=E,39nm,3.6s
YAK MLR MLR
comp=Z,194nm,12.0s,MS4.1
YAK MLR MLR
comp=N,114nm,11.0s,MS4.0
YAK MLR MLR
comp=E,70nm,11.0s,MS4.0
YAK Yakutsk 36.90 1 *e*P **P 15 54 21.9 -2.6**
comp=E,55nm,1.0s,mb5.2
RAMN Ramite 37.19 282 *e*P **P 15 54 29.9 +2.4**
comp=E,53nm,1.2s,mb5.1
GUN Gumba 37.72 284 *e*P **P 15 54 32.5 +0.5**
comp=E,26nm,0.8s,mb5.0
PKI Pulchoki 38.17 283 *e*P **P 15 54 37.5 +1.7**
KKN Kakani 38.26 284 *e*P **P 15 54 37.4 +0.9**
comp=E,44nm,1.0s,mb5.2
DMN Daman 38.43 283 *e*P **P 15 54 38.9 +0.9**
comp=E,56nm,1.1s,mb5.2
KNA Kununurra 40.65 179 *e*P **P 15 54 55.8 -0.6**
comp=E,42nm,0.9s,mb5.2
MKAR Makanchi Array 42.16 313 P **P 15 55 08.1 -0.5**
comp=E,3.4nm,0.6s,mb4.3,baz=94,slow=11,SNR=25
MKAR LR LR 16 14 25.1
comp=E,103nm,18.9s,MS3.7,baz=169,slow=39
MKAR Makanchi Array 42.16 313 P **P 15 55 08.1 -0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR MLR MLR
comp=Z,103nm,19.0s
MKAR Makanchi Array 42.16 313 P **P 15 55 08.1 -0.5**
MKAR LR LR 16 14 25.1
ZAA0 Zalesovo Array 43.03 324 *e*P **P 15 55 14.2 -1.4**
ZALV Zalesovo Beam 43.03 324 P **P 15 55 14.3 -1.3**
comp=Z,5.6nm,0.6s,mb4.5,baz=115,slow=6.9,SNR=24
ZALV Zalesovo Beam 43.03 324 P **P 15 55 14.3 -1.3**
ZALV pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ZALV Zalesovo Beam 43.03 324 P **P 15 55 14.3 -1.3**
FITZ Fitzroy Crossi 43.05 183 *e*P **P 15 55 15.3 -0.7**
comp=Z,19nm,0.9s,mb4.8
FITZ Fitzroy Crossi 43.05 183 P **P 15 55 15.6 -0.5**
comp=Z,9.1nm,0.8s,mb4.6,baz=5.4,slow=6.5,SNR=14
NVS Novosibirsk 44.24 324 *e*P **P 15 55 24.1 -1.2**
NVS pmax pmax
comp=N,17nm,2.6s
NVS pmax pmax
comp=Z,29nm,2.6s,mb4.5
NVS pmax pmax
comp=E,13nm,2.2s
WRAB Tennant Creek 45.22 172 *e*P **P 15 55 31.6 -1.8**
WRAB pmax pmax
comp=Z,13nm,1.0s,mb4.8
WRAB Tennant Creek 45.22 172 *e*P **P 15 55 31.6 -1.9**
comp=Z,13nm,1.0s,mb4.8
KURK Kurchatov 45.52 317 P **P 15 55 35.0 -0.5**
comp=Z,6.6nm,0.8s,mb4.7,baz=105,slow=8.8,SNR=22
KURK Kurchatov 45.52 317 *d i*P **P 15 55 34.5 -1.1**
KURK pmax pmax
comp=Z,24nm,2.5s,mb4.8
TKM2 Tokmak 2 46.19 306 *e*P **P 15 55 41.7 +0.7**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
TKM2 Tokmak 2 46.19 306 *e*P **P 15 55 41.7 +0.6**
comp=Z,6.6nm,0.8s,mb4.7
TIXI Tiksi 46.54 0 *i*P **P 15 55 43.2 -0.2**
TIXI pmax pmax
comp=Z,18nm,2.0s,mb4.8
TIXI MLR MLR
comp=Z,205nm,9.0s
TIXI Tiksi 46.54 0 *e*P **P 15 55 43.2 -0.1**
comp=Z,23nm,1.5s,mb5.1
UCH Uchtor 46.94 305 *e*P **P 15 55 48.4 +1.5**
comp=Z,9.1nm,0.8s,mb5.0
AAK Ala-Archa 46.98 306 P **P 15 55 46.3 -0.9**
comp=Z,1.1nm,0.4s,mb4.3,baz=152,slow=15,SNR=2.6
AAK Ala-Archa 46.98 306 P **P 15 55 46.3 -0.9**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
AAK Ala-Archa 46.98 306 P **P 15 55 46.3 -1.0**
EKS2 Erkin-Say 47.51 306 *e*P **P 15 55 50.6 -0.8**
comp=Z,2.9nm,0.9s,mb4.4
CTA Charters Tower 48.31 157 *e*P **P 15 55 57.8 +0.1**
comp=Z,5.3nm,0.6s,mb4.8
CTAO Charters Tower 48.31 157 *e*P **P 15 55 56.2 -1.5**
CTAO pmax pmax
comp=Z,21nm,1.2s,mb5.1
CTAO Charters Tower 48.31 157 *e*P **P 15 55 56.2 -1.5**
comp=Z,21nm,1.2s,mb5.2
BILL Bilibino 48.75 18 ‖ *e*P **P 15 56 00.9 +0.4**
BILL pmax pmax
comp=Z,13nm,1.7s,mb4.7
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.0
BILL Bilibino 48.75 18 *e*P **P 15 55 59.7 -0.8**
comp=Z,18nm,1.5s,mb4.9
ASAR Alice Springs 48.84 173 P **P 15 56 01.6 -0.2**
comp=Z,4.2nm,0.8s,mb4.5,baz=1.4,slow=14,SNR=51
ASAR PcP PcP 15 57 26.1 -0.3
comp=Z,1.7nm,0.8s,baz=357,slow=4.4,SNR=4.7
ASAR Alice Springs 48.84 173 P **P 15 56 01.6 -0.1**
ASAR 15 57 26.1
ASAR pmax pmax
comp=Z,4.0nm,0.8s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 50.99 319 P **P 15 56 18.2 +0.3**
comp=Z,3.3nm,0.6s,mb4.5,baz=93,slow=8.7,SNR=15
BVAR LR LR 16 19 35.9
comp=Z,198nm,20.2s,MS4.1,baz=89,slow=38
BVAR Borovoye Array 50.99 319 P **P 15 56 18.2 +0.4**
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR MLR MLR
comp=Z,198nm,20.2s
BRVK Borovoye 51.06 319 *de*P **P 15 56 19.2 +0.8**
BRVK pmax pmax
comp=Z,17nm,1.7s,mb4.7
KBL Kabul 51.43 295 *e*P **P 15 56 20.8 -0.6**
KBL pmax pmax
comp=Z,12nm,0.8s,mb4.9
KBL Kabul 51.43 295 *e*P **P 15 56 20.8 -0.6**
comp=Z,12nm,0.8s,mb4.9
FORT Forrest 55.60 180 *e*P **P 15 56 52.1 +0.2**
comp=Z,19nm,0.8s,mb5.2
SVE Sverdlovsk 57.03 323 ‖ *e*P **P 15 57 00.7 -1.2**
SVE *e*S **S 16 04 58.1 +0.8**
SVE pmax pmax
comp=Z,11nm,0.9s,mb4.9
SVE MLR MLR
comp=Z,248nm,15.0s,MS4.4
ABKAR Akbulak array 57.29 314 *e*P **P 15 57 03.7 -0.2**
comp=Z,6.1nm,0.8s,mb4.7
STKA Stephens Creek 58.15 166 *e*P **P 15 57 09.4 -0.6**
comp=Z,4.7nm,0.9s,mb4.5
STKA Stephens Creek 58.15 166 P **P 15 57 09.7 -0.3**
comp=Z,5.5nm,0.9s,mb4.6,baz=350,slow=6.9,SNR=12
STKA LR LR 16 21 55.1
comp=Z,103nm,18.2s,MS4.0,baz=23,slow=36
STKA Stephens Creek 58.15 166 *e*P **P 15 57 09.2 -0.7**
comp=Z,1.6nm,1.0s,mb4.0
ARU Arti 58.16 322 *c i*P **P 15 57 11.9 +2.1**
ARU *e* 15 59 18.9
ARU S **S 16 05 14.8 +2.7**
ARU SS SS 16 09 01.4 -1.7
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ARU MLR MLR
comp=Z,279nm,18.0s,MS4.4
CMSA Cobar Meteorol 58.82 162 *e*P **P 15 57 15.0 +0.3**
RSO Redoubt South 63.17 33 *e*P **P 15 57 43.5 -0.5**
PPLA Purkeypile 63.29 30 *e*P **P 15 57 44.7 0.0**
comp=Z,12nm,1.2s,mb4.9
BPAW Bear Paw Mtn. 63.76 29 *e*P **P 15 57 47.9 +0.2**
comp=Z,8.8nm,1.2s,mb4.9
PAX Paxson 66.34 30 *e*P **P 15 58 04.3 -0.3**
PAX pmax pmax
comp=Z,150nm,0.6s
PAX Paxson 66.34 30 *e*P **P 15 58 04.3 -0.3**
comp=Z,150nm,0.6s
ZEI Tsey 69.29 308 *e*P **P 15 58 23.5 -0.1**
ZEI pmax pmax
comp=Z,16nm,1.3s,mb5.1
GNI Garni 69.39 306 P **P 15 58 25.9 +1.6**
comp=Z,3.8nm,0.6s,mb4.8,baz=131,slow=11,SNR=3.5
GNI Garni 69.39 306 P **P 15 58 25.9 +1.7**
GNI pmax pmax
comp=Z,4.0nm,0.6s
GNI Garni 69.39 306 P **P 15 58 25.9 +1.6**
KIV Kislovodsk 69.82 310 ‖ *e*P **P 15 58 29.1 +2.3**
KIV *e* 15 58 40.0
KIV *e* 15 58 51.1
KIV pmax pmax
comp=Z,50nm,1.7s,mb5.4
MOS Moscow 69.85 323 *e*P **P 15 58 26.3 -0.5**
MOS pmax pmax
comp=Z,56nm,0.9s,mb5.7
VORD Divnogorie 70.15 318 *e*P **P 15 58 28.9 +0.2**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
VORD pmax pmax
comp=E,9.0nm,0.4s
VSR Storozhevoye 70.16 318 *e*P **P 15 58 29.4 +0.6**
VSR pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,5.0nm,0.5s
OBN Obninsk 70.60 322 *ke*P **P 15 58 32.2 +0.8**
OBN *i* *PP 15 58 42.8
OBN *i* 15 58 49.1
OBN S S 16 07 44.0 -2.0
OBN *e* 16 08 31.1
OBN pmax pmax
comp=Z,50nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
JOF Joensuu 70.92 331 *e*P **P 15 58 32.5 -0.7**
JOF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
JOF Joensuu 70.92 331 *ep* **P 15 58 32.5 -0.7**
comp=Z,8.4nm,0.8s,mb4.9
ARCES ARCESS Array B 70.97 339 P **P 15 58 35.2 +1.9**
comp=Z,4.6nm,0.9s,mb4.6,baz=59,slow=5.9,SNR=9.1
ARCES ARCESS Array B 70.97 339 P **P 15 58 35.3 +1.9**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
FINES FINESS Array B 73.74 331 P **P 15 58 50.5 +0.4**
comp=Z,2.6nm,0.5s,mb4.5,baz=68,slow=6.1,SNR=31
FINES FINESS Array B 73.74 331 P **P 15 58 50.5 +0.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 73.74 331 P **P 15 58 50.5 +0.4**
AKASG Malin Array Be 76.27 320 P **P 15 59 04.9 +0.1**
comp=Z,4.6nm,0.6s,mb4.8,baz=56,slow=6.0,SNR=16
AKASG Malin Array Be 76.27 320 P **P 15 59 04.9 0.0**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKBB Malin Array Si 76.27 320 *e*P **P 15 59 03.5 -1.4**
KIEV Kiev 76.28 320 *e*P **P 15 59 04.2 -0.7**
KIEV pmax pmax
comp=Z,14nm,1.0s,mb5.0
KIEV Kiev 76.28 320 *e*P **P 15 59 04.2 -0.7**
comp=Z,14nm,1.0s,mb5.1
RES Resolute Bay 76.64 11 P **P 15 59 06.8 +0.2**
BR131 Keskin Array S 77.59 308 *e*P **P 15 59 11.0 -1.5**
comp=Z,4.4nm,0.9s,mb4.6
BRTR Keskin Array B 77.59 308 P **P 15 59 13.2 +0.7**
comp=Z,4.9nm,0.9s,mb4.7,baz=98,slow=5.4,SNR=21
BRTR LR LR 16 39 53.4
comp=Z,24nm,21.1s,MS3.5,baz=218,slow=41
BRTR Keskin Array B 77.59 308 P **P 15 59 13.3 +0.8**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR MLR MLR
comp=Z,24nm,21.1s
ASF Jabal al Asfar 77.99 300 P **P 15 59 15.9 +1.0**
comp=Z,4.5nm,1.0s,mb4.6
ASF Jabal al Asfar 77.99 300 P **P 15 59 15.9 +1.0**
ASF pmax pmax
comp=Z,5.0nm,1.0s
MMAI Mount Meron Ar 78.83 301 P **P 15 59 20.4 +0.8**
comp=Z,1.5nm,0.7s,mb4.1,baz=89,slow=7.7,SNR=3.8
YKA Yellowknife Ar 79.57 25 P **P 15 59 22.7 -0.3**
comp=Z,2.4nm,0.9s,mb4.1,baz=295,slow=5.4,SNR=7.7
YKA LR LR 16 37 15.1
comp=Z,2.9nm,18.5s,MS2.6,baz=190,slow=38
YKA Yellowknife Ar 79.57 25 P **P 15 59 22.7 -0.3**
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA MLR MLR
comp=Z,3.0nm,18.5s
YKA Yelloweknife Ar 79.57 25 P **P 15 59 22.7 -0.3**
YKA LR LR 16 37 15.1
LVV L'vov 79.66 320 *e*P **P 15 59 30.6 +6.8**
HFS Hagfors 79.72 332 P **P 15 59 25.5 +1.7**
comp=Z,2.3nm,0.6s,mb4.3,baz=106,slow=5.1
HFS Hagfors 79.72 332 P **P 15 59 25.5 +1.7**
HFS pmax pmax
comp=Z,2.0nm,0.6s
BUR08 Bucovina Ar. S 79.94 318 *e*P **P 15 59 26.1 +0.8**
NB2 NORSAR Subarra 80.22 334 P **P 15 59 25.9 -0.7**
comp=Z,4.3nm,0.7s,mb4.5,baz=54,slow=5.6
NOA NORSAR Array B 80.22 334 P **P 15 59 26.2 -0.4**
comp=Z,3.3nm,0.7s,mb4.4,baz=54,slow=5.4,SNR=14
NOA NORSAR Array B 80.22 334 P **P 15 59 26.2 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.7s
MLR Muntele Rosu 80.42 316 P **P 15 59 29.6 +1.7**
comp=Z,3.6nm,0.5s,mb4.5
MLR Muntele Rosu 80.42 316 P **P 15 59 29.6 +1.6**
MLR pmax pmax
comp=Z,4.0nm,0.5s
EIL Elat 80.49 298 P **P 15 59 28.6 -0.1**
comp=Z,3.3nm,0.8s,mb4.3
KOLS Kolonicke sedl 81.09 320 *e*P **P 15 59 33.5 +2.0**
KOLS *e* 15 59 43.1
KOLS pmax pmax
comp=Z,4.0nm,1.5s,mb4.2
KOLS Kolonicke sedl 81.09 320 *e*P **P 15 59 33.5 +2.0**
comp=Z,4.2nm,1.5s,mb4.2
KOLS *e* 15 59 43.1
KOLS Kolonicke sedl 81.09 320 *e*P **P 15 59 33.5 +2.0**
KOLS *e*pP 15 59 43.1
OJC Ojcow 81.88 322 *e*P **P 15 59 36.2 +0.6**
SUMG Summit 82.11 356 *e*P **P 15 59 34.5 -1.9**
comp=Z,16nm,1.0s,mb5.1
KECS Kecovo 82.34 320 *e*P **P 15 59 42.2 +4.1**
KECS pmax pmax
comp=Z,4.0nm,1.5s,mb4.3
KECS Kecovo 82.34 320 *e*P **P 15 59 42.2 +4.1**
comp=Z,3.7nm,1.5s,mb4.3
KECS Kecovo 82.34 320 *e*P **P 15 59 42.2 +4.1**
VYHS Vyhne 83.29 321 *e*P **P 15 59 45.1 +2.1**
VYHS *e* 15 59 55.2
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
VYHS Vyhne 83.29 321 *e*P **P 15 59 45.1 +2.1**
comp=Z,3.5nm,1.1s,mb4.5
VYHS *e* 15 59 55.2
VYHS Vyhne 83.29 321 *e*P **P 15 59 45.1 +2.1**
VYHS *e*pP 15 59 55.2
VRAC Vranov 84.13 322 P **P 15 59 49.5 +2.2**
comp=Z,3.2nm,0.6s,mb4.8
VRAC Vranov 84.13 322 P **P 15 59 49.5 +2.2**
VRAC pmax pmax
comp=Z,3.0nm,0.6s
BRG Berggiesshubel 84.71 324 *e*P **P 15 59 51.7 +1.5**
comp=Z,13nm,1.6s,mb4.9
BRG
comp=N,99nm,21.1s
BRG
comp=E,1μm,20.9s
BRG
comp=Z,179nm,18.5s
CLL Collm 84.96 325 *e*P **P 15 59 52.0 +0.5**
CLL *i* 16 00 02.4
CLL pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
CLL MLR MLR
comp=Z,200nm,19.6s,MS4.5
CLL Collm 84.96 325 *e*P **P 15 59 52.0 +0.5**
comp=Z,9.0nm,1.1s,mb4.9
CLL *i* 16 00 02.4
CLL LR LR
comp=Z,200nm,19.6s,MS4.5
CLL Collm 84.96 325 *e*P **P 15 59 52.0 +0.5**
comp=Z,9.0nm,1.1s,mb4.9
CLL *i* pP 16 00 02.4
CLL *i* (sP) sP 16 00 08.6 +17
CLL *e*PP PP 16 03 08.0 +0.5
CLL LmH 16 41 00.0
comp=N,100nm,18.9s
CLL LmH 16 41 00.0
comp=E,200nm,18.9s
CLL LmH 16 41 00.0
comp=Z,200nm,19.6s
IDI Anoyia 85.76 307 P **P 15 59 55.7 -0.1**
KHC Kasperske Hory 85.89 323 *e*P **P 15 59 57.3 +1.2**
KHC pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
KHC Kasperske Hory 85.89 323 *e*P **P 15 59 57.3 +1.2**
comp=Z,1.5nm,0.9s,mb4.1
GERES GERESS Array B 85.98 323 P **P 15 59 57.8 +1.2**
comp=Z,2.1nm,0.8s,mb4.3,baz=46,slow=3.9,SNR=14
GERES GERESS Array B 85.98 323 P **P 15 59 57.8 +1.2**
GERES pmax pmax
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 86.74 45 LR LR 16 32 20.2
comp=Z,48nm,19.6s,MS3.9,baz=154,slow=31
GRA1 Grafenberg Arr 86.82 325 *e*P **P 16 00 03.2 +2.5**
comp=Z,5.0nm,0.9s,mb4.7
GRA1 *e*pP 16 00 10.0
GRA1 LR LR
comp=Z,200nm,19.8s,MS4.5
GRF Grafenberg Arr 86.82 325 *e*P **P 16 00 03.2 +2.5**
comp=Z,5.0nm,0.9s,mb4.7
GRF *e*pP 16 00 10.0
GRF *e*L 16 41 55.0
comp=Z,216nm,19.8s
GRF Grafenberg Arr 86.82 325 *e*P **P 16 00 03.2 +2.5**
GRF *e**PP 16 00 10.0
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
GRF MLR MLR
comp=Z,200nm,19.8s,MS4.5
GRF Grafenberg Arr 86.82 325 *e*P **P 16 00 03.2 +2.5**
GRF *e**PP 16 00 10.0
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
GRF MLR MLR
comp=Z,200nm,19.8s,MS4.5
FFC Flin Flon 89.63 26 *i*P **P 16 00 14.3 +0.3**
EGMT Eagleton 90.62 35 *e*P **P 16 00 18.1 -0.6**
comp=Z,6.3nm,0.8s,mb5.0
PPT Papeete 90.67 109 LR LR 16 33 29.1
comp=Z,12nm,21.7s,MS3.3,baz=288,slow=31
HLID Hailey 90.82 40 *e*P **P 16 00 19.8 +0.1**
comp=Z,8.9nm,1.6s,mb4.8
NVAR Mina Array Bea 91.36 46 P **P 16 00 22.5 +0.1**
comp=Z,0.7nm,0.8s,mb4.0,baz=281,slow=4.1,SNR=6.7

ISCJB ***30*** *15:55:49.6±1.3,31°.1N±0°.1×104°.2E±0°.1,h10km,mb3.3/3,*
Error ellipse: s-maj=22.5km s-min=10.4km az=141.7
IDC ***30*** *15:55:49.6±1.6,31°.58N×104°.82E,h0km,mb3.4/3,*
mb1 3.5/4,mb1mx3.3/26,mbtmp3.4/4,ML3.8/1,MS3.7/1,
Ms1 3.8/1,ms1mx2.8/15,Error ellipse: s-maj=77.7km
s-min=24.5km az=59.0
ISC 30 15:55:51.6±1.4,31°.1N±0°.1×104°.1E±0°.1,h10km,n6,
σ0.72/6,mb3.3/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.34**	**232**	Pg			**Pg**	**15 55 57.5**	**-0.8**
CD2				Sg			**Sg**	**15 56 03.3**	**+0.5**
CD2				smax					
	comp=N,6μm,0.6s								
CMAR	**Chiang Mai Arr**	**13.44**	**201**	Pn			**Pn**	**15 59 10.1**	**+7.8**
	comp=N,0.1nm,0.3s,baz=8.3,slow=8.8,SNR=8.9								
MKAR	**Makanchi Array**	**22.95**	**319**	P			**P**	**16 00 56.4**	**+0.5**
	comp=N,0.8nm,0.7s,mb3.2,baz=114,slow=12,SNR=5.9								
KURK	**Kurchatov**	**27.22**	**323**	P			**P**	**16 01 35.0**	**-0.4**
	comp=N,0.7nm,0.8s,mb3.2,baz=126,slow=9.9,SNR=6.2								
ASAR	**Alice Springs**	**61.52**	**149**	P			**P**	**16 06 09.0**	**+0.2**
	comp=N,0.2nm,0.7s,mb3.4,baz=338,slow=7.2,SNR=7.1								
ESDC	**Sonseca Array**	**82.99**	**312**	LR			LR	16 48 50.1	
	comp=N,44nm,21.5s,baz=70,slow=38								

ISK ***30*** *16:31:18.9,36°.97N×29°.50E,h5km,MD2.8*
DDA ***30*** *16:31:19.1,37°.00N×29°.20E,h7km±5km,Md2.5*
ISCJB ***30*** *16:31:20.1±0.6,37°.03N±0°.04×29°.42E±0°.06,h10km,Error*
ellipse: s-maj=7.2km s-min=5.3km az=173.6
CSEM ***30*** *16:31:20.3±0.6,37°.03N×29°.47E,h10km,MD2.8,Error*
ellipse: s-maj=15.0km s-min=8.4km az=101.0
ISC 30 16:31:20.5±0.7,37.03N±0°.04×29.42E±0°.07,h8km±12km,
n16,σ1.11/23,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.14**	**27**	*e*PG			**Pg**	**16 31 23.2**	**-0.3**
GLHS				*e*SG			**Sg**	**16 31 26.9**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.14**	**27**	*e*Pg			**Pg**	**16 31 23.2**	**-0.3**
GLHS				*e*Sg			**Sg**	**16 31 26.9**	**+1.4**
FETY	**Fethiye**	**0.48**	**214**	*e*PG			**Pg**	**16 31 29.1**	**-0.7**
FETY	**Fethiye**	**0.48**	**214**	*e*Pg			**Pg**	**16 31 29.1**	**-0.7**
ELL	**Elmali**	**0.48**	**126**	*e*PG			**Pg**	**16 31 28.0**	**-1.9**
ELL	**Elmali**	**0.48**	**126**	*e*Pg			**Pg**	**16 31 28.0**	**-1.9**
DNZL	**Cakiroluk**	**0.72**	**336**	*i* P			**Pg**	**16 31 33.0**	**-1.4**
DNZL				*i* S			**Sg**	**16 31 43.3**	**-0.5**
DNZL	**Cakiroluk**	**0.72**	**336**	*i* P			**Pg**	**16 31 33.0**	**-1.4**
DNZL				*i* S			**Sg**	**16 31 43.3**	**-0.5**
KORT	**Korkueli**	**0.74**	**92**	*i* P			**Pg**	**16 31 35.7**	**+0.8**
KORT				*i* S			**Sg**	**16 31 50.7**	**+6.1**
KORT	**Korkueli**	**0.74**	**92**	*i* P			**Pg**	**16 31 35.7**	**+0.8**
AKAS	**Kas**	**0.81**	**169**	*e*P			**Pg**	**16 31 32.3**	**-3.8**

AKAS				*i* S		**Sg**	**16 31 47.4 +0.7**
AKAS	**Kas**	**0.81**	**169**	*e*P		**Pg**	**16 31 32.3 -3.8**
AKAS				*i* S		**Sg**	**16 31 47.4 +0.7**
YER	**Yerkesik**	**0.92**	**277**	*e*PG		**Pg**	**16 31 39.1 +1.0**
YER	**Yerkesik**	**0.92**	**277**	*e*Pg		**Pg**	**16 31 39.1 +1.0**
DAT	**Datca**	**1.51**	**259**	*e*PN		**Pn**	**16 31 48.9 +1.0**
DAT	**Datca**	**1.51**	**259**	*e*Pn		**Pn**	**16 31 48.9 +1.0**

*IDC **30** 16:44:50.9±1.4, 13°.41N×121°.87E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=56.9km s-min=13.4km az=44.0*
*MAN **30** 16:44:55, 13°.03N×120°.79E, h14km, mb4.8, ML3.7, MS3.7*
*NEIC **30** 16:44:55.8±0.7, 13°.19N×121°.54E, h35km, mb4.4/3, Error ellipse: s-maj=26.2km s-min=12.6km az=47.0*
*ISCJB **30** 16:44:56.5±0.5, 12°.98N±0°.03×120°.80E±0°.05, h42km±9km, mb3.9/7, Error ellipse: s-maj=8.1km s-min=5.3km az=8.1*
ISC 30 16:44:57.8±0.5, 12°.94N±0°.03×120°.83E±0°.05, h39km±10km, n24, σ1§00/30, mb3.9/7, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.56**	**149**	*e*P	**Pn**	**16 45 08.5**	**-0.8**
SJMP				*e*S	**Sn**	**16 45 17.4**	**+0.1**
LUBP	**Lubang**	**0.97**	**324**	*e*P	**Pn**	**16 45 11.2**	**-3.7**
BOAC	**Boac**	**1.11**	**62**	*e*P	**Pn**	**16 45 13.0**	**-3.9**
BOAC				*e*S	**Sn**	**16 45 32.2**	**+1.1**
BUSP	**Coron**	**1.12**	**213**	*e*P	**Pn**	**16 45 18.4**	**+1.5**
BUSP				*e*S	**Sn**	**16 45 30.2**	**-0.9**
TGY	**Tagaytay City**	**1.16**	**5**	Pg	**Pn**	**16 45 14.0**	**-3.5**
	400nm,0.3s,baz=216,slow=2.6,SNR=44						
TGY				Lg		16 45 28.4	
	671nm,0.3s,baz=17,slow=20,SNR=23						
TGY	**Tagaytay City**	**1.16**	**5**	*i*P	**Pn**	**16 45 13.9**	**-3.6**
OTRP	**Odiongan**	**1.30**	**116**	*e*P	**Pn**	**16 45 19.2**	**-0.3**
OTRP				*e*S	**Sn**	**16 45 34.0**	**-1.6**
AUQP	**San Andres**	**1.84**	**78**	*e*P	**Pn**	**16 45 27.2**	**+0.3**
CUYO	**Cuyo Island**	**2.09**	**175**	*e*P	**Pn**	**16 45 30.7**	**+0.4**
CUYO				*e*S	**Sn**	**16 45 54.8**	**-0.3**
ENPP	**El Nido**	**2.21**	**219**	*e*P	**Pn**	**16 45 33.3**	**+1.4**
PCPH	**Palayan**	**2.62**	**6**	⇑*e*P	**Pn**	**16 45 36.5**	**-1.1**
BALP	**Baler**	**2.88**	**15**	*e*P	**Pn**	**16 45 41.2**	**0.0**
BALP				*e*S	**Sn**	**16 46 15.6**	**+1.1**
GUIM	**Jordan**	**2.88**	**143**	*e*P	**Pn**	**16 45 42.7**	**+1.5**
PVCP	**Virac**	**3.30**	**78**	*e*P	**Pn**	**16 45 47.2**	**+0.2**
BOLP	**Bolinao**	**3.53**	**346**	*e*P	**Pn**	**16 45 49.2**	**-1.0**
APYP	**Conner**	**4.91**	**5**	*e*P	**Pn**	**16 46 13.8**	**+4.7**
CMAR	**Chiang Mai Arr**	**21.76**	**287**	P	**P**	**16 49 51.8**	**+5.5**
	1.0nm,0.8s,mb3.3,baz=102,slow=8.1,SNR=8.2						
GUMO	**Guam**	**23.41**	**86**	P	**P**	**16 49 55.1**	**-8.5**
	50nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**35.28**	**158**	P	**P**	**16 51 45.1**	**-4.0**
	3.5nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**38.57**	**161**	P	**P**	**16 52 17.1**	**+0.1**
	0.6nm,0.7s,mb3.5,baz=337,slow=7.4,SNR=12						
MK31	**Makanchi Array**	**46.71**	**324**	*e*P	**P**	**16 53 23.7**	**+0.8**
MKAR	**Makanchi Array**	**46.71**	**324**	P	**P**	**16 53 22.6**	**-0.3**
	1.0nm,0.7s,mb3.8,baz=113,slow=9.3,SNR=8.4						
KURK	**Kurchatov**	**50.89**	**327**	*e*P	**P**	**16 53 53.7**	**-1.1**
	2.6nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**56.47**	**326**	P	**P**	**16 54 36.2**	**+0.5**
	0.4nm,0.6s,mb3.6,baz=100,slow=7.9,SNR=3.2						

*ISCJB **30** 17:15:59.7±0.5, 35°.78N±0°.03×78°.59E±0°.05, h111km±9km, mb3.5/5, Error ellipse: s-maj=7.2km s-min=3.7km az=162.9*
*BJI **30** 17:15:59.8, 36°.02N×78°.37E, h15km, ML4.0/5*
*NEIC **30** 17:16:00.8±0.5, 35°.81N×78°.50E, h99km±9km, mb3.6/2, Error ellipse: s-maj=11.8km s-min=5.3km az=61.0*
*IDC **30** 17:16:05.7±4.1, 36°.14N×78°.47E, h124km±41km, mb3.2/6, mb1 3.4/11, mb1mx3.2/29, mbtmp3.3/11, Error ellipse: s-maj=34.5km s-min=18.0km az=43.0*
ISC 30 17:16:01.2±0.4, 35°.78N±0°.03×78°.59E±0°.05, h107km±8km, n58, σ1§14/72, mb3.5/5, 1C-3D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**4.10**	**216**	*e*P	**Pn**	**17 17 03.1**	**+1.3**
THN				*e*S	**Sn**	**17 17 48.3**	**-0.5**
KLP	**Kalpa**	**4.24**	**184**	*e*P	**Pn**	**17 17 05.4**	**+1.7**
KLP				*e*S	**Sn**	**17 17 52.0**	**-0.3**
KSH	**Kashi**	**4.27**	**332**	⇓*i*Pn	**Pn**	**17 17 01.8**	**-2.2**
KSH				Sn	**Sn**	**17 17 45.8**	**-7.0**
KSH				smax			
	comp=N,510nm,0.6s						
KSH				smax			
	comp=E,450nm,0.4s						
SDNR	**Sundarnagar**	**4.48**	**198**	*ex*	**Pn**	**17 17 09.7**	**+2.8**
SDNR				*e*S	**Sn**	**17 17 59.1**	**+1.2**
BHK	**Bhakra**	**4.71**	**203**	*ex*	**Sn**	**17 18 01.2**	**-2.4**
SMLA	**Simla**	**4.79**	**195**	*e*P	**Pn**	**17 17 11.9**	**+0.8**
SMLA				*e*S	**Sn**	**17 18 04.6**	**-0.8**
JOSI	**Joshimath**	**5.27**	**171**	*ex*	**Pn**	**17 17 22.6**	**+5.0**
JOSI				*e*S	**Sn**	**17 18 16.7**	**-0.5**
DDI	**Dehra Dun**	**5.46**	**185**	*ex*	x	17 17 24.7	
DDI				*e*S	**Sn**	**17 18 22.7**	**+0.9**
CEP	**Cherat**	**5.83**	**252**	P	**Pn**	**17 17 23.5**	**-1.7**
SARP	**Sargodha**	**6.25**	**234**	P	**Pn**	**17 17 30.4**	**-0.4**
ULHL	**Ulahol**	**6.71**	**345**	P	**Pn**	**17 17 37.9**	**+0.9**
	SNR=19						
KZA	**Kyzart**	**6.81**	**339**	P	**Pn**	**17 17 38.4**	**+0.1**
	SNR=12						
NDI	**New Delhi**	**7.17**	**190**	*e*P	**Pn**	**17 17 44.0**	**+0.6**
NDI				*ex*	x	17 18 58.0	
UCH	**Uchtor**	**7.18**	**335**	P	**Pn**	**17 17 43.2**	**-0.1**
	SNR=38						
UCH	**Uchtor**	**7.18**	**335**	*e*Pn	**Pn**	**17 17 42.9**	**-0.4**
	comp=E,15nm,0.4s						
AML	**Almayashu**	**7.40**	**330**	P	**Pn**	**17 17 46.3**	**-0.1**
	SNR=6.4						
AML	**Almayashu**	**7.40**	**330**	*e*Pn	**Pn**	**17 17 46.0**	**-0.4**
	comp=E,30nm,0.4s						
KBK	**Karagaybulak**	**7.42**	**339**	P	**Pn**	**17 17 48.3**	**+1.6**
	SNR=7.9						
TKM2	**Tokmak 2**	**7.50**	**343**	P	**Pn**	**17 17 48.5**	**+0.7**
	SNR=13						
TKM2	**Tokmak 2**	**7.50**	**343**	*e*Pn	**Pn**	**17 17 48.3**	**+0.6**
	comp=E,6.1nm,0.4s						
AAK	**Ala-Archa**	**7.54**	**336**	P	**Pn**	**17 17 48.6**	**+0.3**
	SNR=8.0						
AAK	**Ala-Archa**	**7.54**	**336**	P	**Pn**	**17 17 48.7**	**+0.3**
	comp=E,0.1nm,0.3s,baz=146,slow=11,SNR=13						
AAK	**Ala-Archa**	**7.54**	**336**	*e*Pn	**Pn**	**17 17 48.4**	**0.0**
	comp=E,10nm,0.6s						
SONA	**Sohna**	**7.62**	**190**	*e*P	**Pn**	**17 17 48.8**	**-0.6**
SONA				*e*S	**Sn**	**17 19 10.3**	**-3.8**
SONA				AML	AML	17 19 13.2	
	comp=E,65nm,0.5s						
SONA				AML	AML	17 19 13.9	
	comp=N,62nm,0.2s						
CHMS	**Chumysh**	**7.80**	**339**	P	Px	17 18 54.2	
	SNR=7.3						
EKS2	**Erkin-Say**	**7.82**	**333**	P	**Pn**	**17 17 54.9**	**+2.8**
	SNR=7.7						
EKS2	**Erkin-Say**	**7.82**	**333**	*e*Pn	**Pn**	**17 17 52.9**	**+0.8**
	comp=N,5.7nm,0.4s						
EKS2				*e*Sn	**Sn**	**17 19 14.8**	**-4.1**
KBL	**Kabul**	**7.92**	**264**	*e*Pn	**Pn**	**17 17 49.7**	**-3.8**
	comp=N,28nm,0.4s						
KHET	**Khetri**	**8.04**	**198**	*e*P	**Pn**	**17 17 54.7**	**-0.4**
KHET				*e*S	**Sn**	**17 19 19.8**	**-4.6**
KHET				AML	AML	17 19 20.4	
	comp=N,39nm,0.3s						
KHET				AML	AML	17 19 20.5	
	comp=E,26nm,0.3s						
USP	**Ospenovka**	**8.12**	**338**	P	Px	17 18 56.1	
	SNR=8.3						
KK31	**Karatay Array**	**9.62**	**322**	⇓Pn	Px	17 18 47.3	
	comp=E,1.7nm,0.2s,baz=180,slow=14,SNR=31						
KK31				⇑Sn	**Sn**	**17 19 54.6**	**-7.9**
	comp=E,3.9nm,0.4s,baz=180,slow=19,SNR=8.3						
KKN	**Kakani**	**9.79**	**143**	*e*Pn	**Pn**	**17 18 20.2**	**+1.3**
KKN				*e*Sn	**Sn**	**17 20 05.9**	**-1.0**
	comp=E,28nm,0.5s						
DMN	**Daman**	**9.85**	**144**	*e*Pn	**Pn**	**17 18 21.2**	**+1.4**
DMN				*e*Sn	**Sn**	**17 20 07.4**	**-1.1**
	comp=E,48nm,0.6s						
AJM	**Ajmer**	**9.87**	**201**	*e*P	**Pn**	**17 18 19.6**	**-0.5**
AJM				*e*S	**Sn**	**17 20 03.9**	**-5.0**
GUN	**Gumba**	**9.99**	**140**	*e*Pn	**Pn**	**17 18 23.6**	**+1.9**
JIRN	**Jiri**	**10.36**	**139**	*e*Pn	**Pn**	**17 18 28.3**	**+1.6**
JIRN				*e*Sn	**Sn**	**17 20 18.8**	**-2.0**
	comp=E,19nm,0.3s						
RAMN	**Ramite**	**11.14**	**140**	*e*Pn	**Pn**	**17 18 37.5**	**+0.2**
RAMN				*e*Sn	**Sn**	**17 20 36.7**	**-3.2**
	comp=E,38nm,0.6s						
MK31	**Makanchi Array**	**11.35**	**13**	*e*Pn	**Pn**	**17 18 38.4**	**-1.4**
MKAR	**Makanchi Array**	**11.35**	**13**	P	**Pn**	**17 18 38.5**	**-1.3**
	comp=E,3.7nm,0.3s,baz=190,slow=12,SNR=57						
MKAR				S	**Sn**	**17 20 37.1**	**-7.4**
	comp=E,2.5nm,0.3s,baz=201,slow=27,SNR=7.4						
TAPN	**Taplejung**	**11.44**	**135**	*e*Pn	**Pn**	**17 18 41.8**	**+0.5**
ODAN	**Odare**	**11.64**	**137**	*e*Pn	**Pn**	**17 18 44.1**	**+0.2**
ODAN				*e*Sn	**Sn**	**17 20 47.4**	**-4.5**
	comp=E,26nm,0.5s						
BHPL	**Bhopal**	**12.54**	**185**	*e*P	**Pn**	**17 18 50.7**	**-5.0**
BHPL				*e*S	**Sn**	**17 20 58.6**	**-15**
KURK	**Kurchatov**	**14.93**	**0**	P	**Pn**	**17 19 25.3**	**-1.2**
	comp=E,0.1nm,0.3s,baz=193,slow=9.5,SNR=15						
KURK	**Kurchatov**	**14.93**	**0**	*e*Pn	**Pn**	**17 19 23.9**	**-2.5**
	comp=E,1.6nm,0.4s						
BVAR	**Borovoye Array**	**18.19**	**344**	P	**P**	**17 20 05.8**	**+0.5**
	comp=E,0.3nm,0.3s,baz=158,slow=13,SNR=7.2						
BRVK	**Borovoye**	**18.24**	**344**	*e*P	**P**	**17 20 05.0**	**-0.9**
	comp=E,6.3nm,1.1s						
ZAA0	**Zalesovo Array**	**18.68**	**12**	*e*P	**P**	**17 20 10.5**	**-0.2**
ZALV	**Zalesovo Beam**	**18.68**	**12**	P	**P**	**17 20 11.1**	**+0.4**
	comp=E,0.3nm,0.3s,baz=199,slow=13,SNR=8.7						
AB31	**Akbulak array**	**19.17**	**320**	Pn	Px	17 20 37.0	
	comp=E,0.3nm,0.3s,baz=130,slow=10,SNR=8.4						
AB31				⇓Sn	Sx	17 23 18.4	
	comp=E,0.3nm,0.3s,baz=151,slow=23,SNR=4.2						
ABKAR	**Akbulak array**	**19.17**	**320**	*e*P	**P**	**17 20 15.0**	**-1.1**
	comp=E,0.8nm,0.4s						
AKTK	**Aktyubinsk**	**20.88**	**321**	P	**P**	**17 20 35.0**	**+0.5**
AKTO	**Aktyubinsk**	**20.88**	**321**	P	**P**	**17 20 35.0**	**+0.5**
	comp=E,0.7nm,0.3s,baz=124,slow=15,SNR=3.4						
CMAR	**Chiang Mai Arr**	**24.93**	**128**	P	**P**	**17 21 20.4**	**+5.9**
	comp=E,1.8nm,0.8s,mb3.6,baz=314,slow=10,SNR=17						
BRTR	**Keskin Array B**	**35.48**	**290**	P	**P**	**17 22 48.3**	**+1.0**
	comp=E,0.3nm,0.4s,mb3.5,baz=48,slow=6.4,SNR=2.6						
FINES	**FINESS Array B**	**41.56**	**325**	P	**P**	**17 23 37.5**	**-0.4**
	comp=E,1.0nm,0.6s,mb3.7,baz=99,slow=12,SNR=5.4						
FINES	**FINESS Array B**	**41.56**	**325**	P	**P**	**17 23 37.5**	**-0.4**
ARCES	**ARCESS Array B**	**44.22**	**336**	P	**P**	**17 23 59.6**	**+0.4**
	comp=E,0.9nm,0.7s,mb3.6,baz=104,slow=7.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**71.87**	**273**	P	**P**	**17 27 13.4**	**+0.5**
	comp=E,0.3nm,1.0s,mb3.1,baz=39,slow=3.2,SNR=2.8						

IDC 30 17:18:39.2±20.0, 2°.88N×94°.87E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/25, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=441.9km s-min=111.4km az=136.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.99**	**14**	Pn	Pn	17 22 25.9	+0.2
	0.0nm,0.3s,baz=204,slow=12,SNR=6.3						
MKAR	**Makanchi Array**	**45.09**	**348**	P	P	17 26 56.8	-0.3
	0.5nm,0.4s,baz=151,slow=7.7,SNR=4.5						
KURK	**Kurchatov**	**49.60**	**346**	P	P	17 27 31.9	-0.3
	0.1nm,0.4s,baz=165,slow=7.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**51.57**	**352**	P	P	17 27 46.7	-0.3
	0.7nm,0.5s,baz=167,slow=7.0,SNR=4.1						
BVAR	**Borovoye Array**	**53.93**	**342**	P	P	17 28 04.6	+0.1
	0.3nm,0.5s,baz=149,slow=11,SNR=3.8						

*NIED **30** 17:22:00, 46°.80N×152°.90E, h8km, Mw3.9 Best double couple: M0=8.52000×10^14 NP1:φ=321.00000°, δ=83.00000°, λ=68.00000°. NP2:φ=213.00000°, δ=23.00000°, λ=161.00000°.*
*ISCJB **30** 17:22:14.1±0.9, 46°.75N±0°.09×152°.8E±0°.1, h50km±8km, mb3.9/17, Error ellipse: s-maj=19.1km s-min=5.5km az=138.1*
*SKHL **30** 17:22:14.6±2.5, 46°.74N×153°.13E, h83km±15km, mb5.1/3, msh5.8/3*
*JMA **30** 17:22:14.1±0.7, 46°.76N×152°.93E, h30km, M4.4*
*MOS **30** 17:22:15.2±1.1, 46°.85N×152°.81E, h59km, mb4.4/8, Error ellipse: s-maj=13.8km s-min=8.4km az=63.2*
*NEIC **30** 17:22:17.6±1.1, 46°.80N×152°.80E, h66km±8km, mb3.4/1, Error ellipse: s-maj=16.1km s-min=7.5km az=139.0*
*BJI **30** 17:22:18.4, 47°.06N×152°.50E, h42km, Ms4.2/1, Ms7 4.1/1*
*IDC **30** 17:22:20.6±2.5, 46°.86N×152°.70E, h90km±21km, mb3.7/17, mb1 3.8/19, mb1mx3.7/30, mbtmp3.7/19, MS3.2/1, Ms1 3.2/1, ms1mx2.3/40, Error ellipse: s-maj=21.8km s-min=13.0km az=134.0*
ISC 30 17:22:16.6±0.8, 46°.73N±0°.09×152°.9E±0°.1, h58km±7km, n73, σ1§20/89, mb3.9/17, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.79**	**249**	PN	**Pn**	**17 23 14.0**	**+1.6**
KUR				*e*S	**Sn**	**17 23 58.0**	**+2.4**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,340nm,0.7s						
KUR				smax			
	comp=E,390nm,0.7s						
KUR	**Kuril'sk**	**3.79**	**249**	*e*P	**Pn**	**17 23 14.0**	**+1.6**
KUR				AMB	AMB	17 23 14.5	
	comp=E,80nm,0.5s						
KUR				*e*S	**Sn**	**17 23 58.0**	**+2.4**
KUR				A		17 24 12.0	
	comp=E,340nm,0.7s						
KUR				A		17 24 12.0	
	comp=E,390nm,0.7s						
SKR	**Severo-Kuril's**	**4.51**	**27**	*e*PN	**Pn**	**17 23 19.1**	**-3.2**
SKR				pmax	pmax		
	comp=Z,60nm,0.3s						
SKR	**Severo-Kuril's**	**4.51**	**27**	*e*P	**Pn**	**17 23 19.1**	**-3.2**
SKR				AMB	AMB	17 23 21.0	
	comp=Z,60nm,0.3s						
SKR				*ex*	rx	17 23 21.9	
SKR				*ex*	rx	17 23 37.0	
SKR				*e*S	**Sn**	**17 24 06.0**	**-7.3**
SKR				A		17 24 12.5	
	comp=Z,110nm,0.3s						
SKR				A		17 24 12.5	
	comp=Z,60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.61**	**244**	*e*PN	**Pn**	**17 23 37.9**	**+0.4**
YUK				*e*S	**Sn**	**17 24 42.5**	**+1.9**
YUK				pmax	pmax		
	comp=Z,140nm,0.4s						
YUK				smax			
	comp=N,230nm,0.5s						
YUK				smax			
	comp=E,330nm,0.5s						
YUK				smax			
	comp=E,700nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**5.61**	**244**	*e*P	**Pn**	**17 23 37.9**	**+0.4**
YUK				AMB	AMB	17 23 39.0	
	comp=E,140nm,0.4s						
YUK				*e*S	**Sn**	**17 24 42.5**	**+1.9**
YUK				A		17 25 01.3	
	comp=E,230nm,0.5s						
YUK				A		17 25 01.3	
	comp=E,330nm,0.5s						
YUK				A		17 25 05.0	
	comp=E,700nm,0.8s						
NEM2	**Nemuro 2**	**6.06**	**239**	P	**Pn**	**17 23 41.6**	**-1.9**
NEM2				*e*S	**Sn**	**17 24 46.1**	**-5.3**
JRA	**Rausu**	**6.12**	**246**	P	**Pn**	**17 23 45.4**	**+1.0**
JNK	**Nakash**	**6.55**	**244**	P	**Pn**	**17 23 50.6**	**+0.3**
JNK				*e*S	**Sn**	**17 25 02.8**	**-0.8**
JTKR	**Abashiri--Toko**	**6.88**	**250**	P	**Pn**	**17 23 55.9**	**+1.1**
JAK	**Akkeshi**	**6.89**	**240**	P	**Pn**	**17 23 53.1**	**-1.9**
JAK				*e*S	**Sn**	**17 25 06.7**	**-5.3**
YSS	**Yuzh-Sakhalins**	**6.93**	**276**	*e*PN	**Pn**	**17 23 57.0**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.93**	**276**	*e*Pn	**Pn**	**17 23 57.1**	**+1.6**
	comp=E,10nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.93**	**276**	*e*P	**Pn**	**17 23 57.0**	**+1.5**
PEA0B	**Petropavlovsk-**	**7.11**	**24**	*e*Pn	**Pn**	**17 23 57.9**	**0.0**
PETK	**Petropavlovsk-**	**7.11**	**24**	P	**Pn**	**17 23 59.0**	**+1.2**
	comp=E,0.8nm,0.3s,baz=165,slow=12,SNR=15						
PETK				S	**Sn**	**17 25 23.6**	**+6.4**
	baz=161,slow=18,SNR=2.1						
PETK	**Petropavlovsk-**	**7.11**	**24**	PN	**Pn**	**17 23 59.0**	**+1.1**
PETK				S	**Sn**	**17 25 23.6**	**+6.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JMP	**Maruseppu**	**7.22**	**251**	P	**Pn**	**17 24 01.1**	**+1.7**
JAR	**Ashorobuto**	**7.29**	**245**	P	**Pn**	**17 24 00.9**	**+0.4**
JAR				*e*S	**Sn**	**17 25 22.0**	**+0.2**
PET	**Petropavlovsk**	**7.33**	**29**	*e*PN	**Pn**	**17 24 00.1**	**-0.8**
JOB	**Onbets**	**7.47**	**242**	P	**Pn**	**17 24 02.0**	**-0.8**
JOB				*e*S	**Sn**	**17 25 21.8**	**-4.2**
ASAJ	**Asahikawa**	**7.67**	**254**	P	**Pn**	**17 24 08.1**	**+2.4**
ASAJ	**Asahikawa**	**7.67**	**254**	P	**Pn**	**17 24 07.8**	**+2.2**
	comp=Z,1.8nm,0.3s,baz=80,slow=20,SNR=17						
ASAJ	**Asahikawa**	**7.67**	**254**	PN	**Pn**	**17 24 07.9**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JKK2	**Kamakawa 2**	**7.68**	**252**	P	**Pn**	**17 24 07.4**	**+1.7**
JCH	**Churui**	**7.92**	**242**	P	**Pn**	**17 24 07.7**	**-1.3**
JCH				*e*S	**Sn**	**17 25 31.5**	**-5.5**
ERM	**Erimo**	**8.39**	**239**	*i* PN	**Pn**	**17 24 15.3**	**-0.2**
JBT2	**Biratori 2**	**8.45**	**246**	P	**Pn**	**17 24 16.2**	**0.0**
JNBK	**Urakawa-nobuka**	**8.48**	**242**	P	**Pn**	**17 24 15.2**	**-1.5**
JNB	**Noboribetsu**	**9.44**	**247**	P	**Pn**	**17 24 29.6**	**-0.2**
JNB				*e*S	**Sn**	**17 26 11.1**	**-3.3**
JKB	**Kayabe**	**9.76**	**245**	P	**Pn**	**17 24 32.1**	**-2.0**
JKB				*e*S	**Sn**	**17 26 14.4**	**-7.7**
JYM2	**Yakumo 2**	**10.05**	**247**	P	**Pn**	**17 24 37.0**	**-1.1**
JTM	**Tenmabayashi**	**10.38**	**239**	P	**Pn**	**17 24 39.4**	**-3.3**
JTM				*e*S	**Sn**	**17 26 27.9**	**-10**
JANG	**Nango**	**10.39**	**236**	*e*S	**Sn**	**17 26 26.5**	**-11**
JTH	**Tanohata**	**10.49**	**234**	*e*S	**Sn**	**17 26 28.5**	**-12**
MAJO	**Matsushiro**	**14.93**	**232**	*e*P	**Pn**	**17 25 43.7**	**-0.4**
MJAR	**Matsushiro Arr**	**14.93**	**232**	P	**Pn**	**17 25 49.4**	**+5.3**
	comp=Z,0.5nm,0.3s,baz=39,slow=8.9,SNR=9.0						
MJAR	**Matsushiro Arr**	**14.93**	**232**	P	**Pn**	**17 25 49.4**	**+5.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**20.24**	**328**	P	**P**	**17 26 46.5**	**-0.2**
KSRS	**Korea Array**	**20.62**	**252**	P	**P**	**17 26 53.0**	**+1.9**
	comp=Z,1.7nm,0.5s,baz=60,slow=9.6,SNR=9.5						
KSRS	**Korea Array**	**20.62**	**252**	P	**P**	**17 26 53.0**	**+2.0**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BILL	**Bilibino**	**22.45**	**13**	P	**P**	**17 27 10.8**	**+0.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
BILL	**Bilibino**	**22.45**	**13**	P	**P**	**17 27 10.8**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.4						
INK	**Inuvik**	**41.77**	**32**	P	**P**	**17 29 59.7**	**+0.1**
	comp=Z,3.4nm,0.9s,mb4.0,baz=155,slow=3.2,SNR=4.2						
INK	**Inuvik**	**41.77**	**32**	P	**P**	**17 29 59.7**	**0.0**
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**41.77**	**32**	P	**P**	**17 29 59.7**	**+0.1**
ZALV	**Zalesovo Beam**	**42.48**	**306**	P	**P**	**17 30 03.7**	**-1.9**
	comp=Z,0.4nm,0.3s,mb3.5,baz=99,slow=3.6,SNR=2.6						
ZALV				LR	LR	17 49 02.1	
	comp=Z,30nm,18.4s,baz=199,slow=38						
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**17 30 39.2**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=60,slow=7.3,SNR=5.3						
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**17 30 39.2**	**-0.9**
BVAR	**Borovoye Array**	**50.73**	**309**	P	**P**	**17 31 10.5**	**+0.3**
	comp=Z,0.4nm,0.4s,mb3.7,baz=49,slow=6.0,SNR=3.9						
RES	**Resolute Bay**	**50.91**	**18**	P	**P**	**17 31 11.4**	**+0.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=346,slow=8.3,SNR=4.0						
RES	**Resolute Bay**	**50.91**	**18**	P	**P**	**17 31 11.4**	**+0.1**
RES				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
CMAR	**Chiang Mai Arr**	**52.19**	**256**	P	**P**	**17 31 22.6**	**+1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=32,slow=7.1,SNR=11						
CMAR	**Chiang Mai Arr**	**52.19**	**256**	P	**P**	**17 31 22.6**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**63.98**	**335**	P	**P**	**17 32 42.3**	**-1.1**
	comp=Z,2.3nm,0.4s,mb4.6,baz=34,slow=7.5,SNR=20						
FINES	**FINESS Array B**	**63.98**	**335**	P	**P**	**17 32 42.3**	**-1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDAR	**Pinedale Array**	**64.90**	**54**	P	**P**	**17 32 50.4**	**+0.7**
	comp=Z,0.2nm,0.6s,mb3.4,baz=294,slow=4.7,SNR=3.8						
NB2	**NORSAR Subarra**	**68.19**	**341**	P	**P**	**17 33 09.5**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.2,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**17 33 09.5**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.3,baz=28,slow=6.3,SNR=11						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**17 33 09.5**	**-0.8**
N

CDRU S **S** **17 24 03.5 -0.3**
294nm,1.2s
SNAL S. Angelo Dei 0.42 33⇓*i*Pg Pn 17 23 33.0 +0.1
SNAL Sg **S** **17 24 05.1 +1.1**
759nm,1.6s
SNAL S. Angelo Dei 0.42 33⇓*i*P Pn 17 23 33.0 +0.1
SNAL S **S** **17 24 05.1 +1.1**
759nm,1.6s
MRLC Muro Lucano 0.48 67 *i*Pg Pn 17 23 33.2 +0.2
MRLC Sg **S** **17 24 04.4 +0.1**
MRLC Muro Lucano 0.48 67 *i*Pg Pn 17 23 33.2 +0.2
MRLC Sg **S** **17 24 04.4 +0.1**
MRLC Muro Lucano 0.48 67 *i*P Pn 17 23 33.2 +0.2
MRLC S **S** **17 24 04.4 +0.1**
CAFE Carife 0.52 29⇓*i*Pg Pn 17 23 33.4 +0.3
CAFE Sg **S** **17 24 05.0 +0.6**
96nm,0.5s
CAFE Carife 0.52 29⇓*i*P Pn 17 23 33.4 +0.3
CAFE S **S** **17 24 05.0 +0.6**
96nm,0.5s
MRB1 Monte Rocchett 0.56 5⇓*i*Pg Pn 17 23 33.3 +0.1
MRB1 Monte Rocchett 0.56 5⇓*i*Pg Pn 17 23 33.3 +0.1
342nm,0.5s
MRB1 Monte Rocchett 0.56 5⇓*i*P Pn 17 23 33.3 +0.1
342nm,0.5s
BULG Bulgheria - Ca 0.61 144⇓*i*Pg Pn 17 23 33.6 +0.1
BULG Sg **S** **17 24 04.8 -0.3**
493nm,0.9s
BULG Bulgheria - Ca 0.61 144⇓*i*P Pn 17 23 33.6 +0.1
BULG S **S** **17 24 04.8 -0.3**
493nm,0.9s
PSB1 Pescosannita 0.65 354⇓*i*Pg Pn 17 23 33.5 0.0
PSB1 Pescosannita 0.65 354⇓*i*Pg Pn 17 23 33.5 0.0
218nm,1.0s
PSB1 Pescosannita 0.65 354⇓*i*P Pn 17 23 33.5 0.0
218nm,1.0s
MGR Morigerati 0.66 131⇓*i*Pg Pn 17 23 33.5 -0.1
MGR Sg **S** **17 24 04.6 -0.7**
MGR Morigerati 0.66 131⇓*i*Pg Pn 17 23 33.5 -0.1
MGR Sg **S** **17 24 04.6 -0.7**
745nm,1.4s
MGR Morigerati 0.66 131⇓*i*P Pn 17 23 33.5 -0.1
MGR S **S** **17 24 04.6 -0.7**
745nm,1.4s
SGTA Sant Agata di 0.66 32⇓*i*Pg Pn 17 23 33.5 0.0
SGTA Sg **S** **17 24 04.9 -0.2**
278nm,0.5s
SGTA Sant Agata di 0.66 32⇓*i*P Pn 17 23 33.5 0.0
SGTA S **S** **17 24 04.9 -0.2**
278nm,0.5s
VULT Monte Vulture 0.66 55⇓*i*Pg Pn 17 23 33.1 -0.4
187nm,0.4s
VULT Monte Vulture 0.66 55⇓*i*P Pn 17 23 33.1 -0.4
187nm,0.4s
MCEL Monticello 0.73 110⇓*i*Pg Pn 17 23 34.0 +0.2
MCEL Sg **S** **17 24 05.5 -0.1**
483nm,1.3s
MCEL Monticello 0.73 110⇓*i*P Pn 17 23 34.0 +0.2
MCEL S **S** **17 24 05.5 -0.1**
483nm,1.3s
FG5 Orsara di Pugl 0.76 21⇓*i*Pg Pn 17 23 34.1 +0.3
FG5 Orsara di Pugl 0.76 21⇓*i*P Pn 17 23 34.1 +0.3
MOCO Biccari - m.te 0.82 13⇓*i*Pg Pn 17 23 34.3 +0.3
210nm,0.5s
SIRI Monte Sirino - 0.83 118 Pg Pn 17 23 33.9 -0.3
163nm,0.6s
SIRI Monte Sirino - 0.83 118 P Pn 17 23 33.9 -0.3
163nm,0.6s
SACR S. Croce Del S 0.84 350⇓*i*Pg Pn 17 23 34.1 0.0
SACR Sg **S** **17 24 08.2 +2.0**
239nm,0.8s
SACR S. Croce Del S 0.84 350⇓*i*P Pn 17 23 34.1 0.0
SACR S **S** **17 24 08.2 +2.0**
239nm,0.8s
PALZ Palazzo San Ge 0.88 65⇓*i*Pg Pn 17 23 34.1 -0.2
PALZ Sg **S** **17 24 05.8 -0.8**
758nm,1.0s
PALZ Palazzo San Ge 0.88 65⇓*i*P Pn 17 23 34.1 -0.2
PALZ S **S** **17 24 05.8 -0.8**
758nm,1.0s
PTRP Pietrapertosa 0.88 93 Pg Pn 17 23 34.8 +0.5
PTRP Pietrapertosa 0.88 93 Pg Pn 17 23 34.8 +0.5
428nm,1.3s
PTRP Pietrapertosa 0.88 93 P Pn 17 23 34.8 +0.5
428nm,1.3s
SGG Gregorio Mates 0.91 334⇓*i*Pg Pn 17 23 34.7 +0.3
SGG Gregorio Mates 0.91 334⇓*i*Pg Pn 17 23 34.7 +0.3
678nm,1.1s
SGG Gregorio Mates 0.91 334⇓*i*P Pn 17 23 34.7 +0.3
678nm,1.1s
MSC Monte Massico 0.94 311⇑*e*Pg Pn 17 23 43.4 +8.9
MODR Mondragone 0.97 307⇓*i*Pg Pn 17 23 34.9 +0.3
151nm,0.6s
MODR Mondragone 0.97 307⇓*i*P Pn 17 23 34.9 +0.3
151nm,0.6s
SCHR S. Chirico Rap 0.97 112⇑*i*Pg Pn 17 23 34.7 0.0
SCHR Sg **S** **17 24 06.7 -0.6**
107nm,0.6s
SCHR S. Chirico Rap 0.97 112⇑*i*P Pn 17 23 34.7 0.0
SCHR S **S** **17 24 06.7 -0.6**
107nm,0.6s
VAGA Valle Agricola 0.98 329⇓*i*Pg Pn 17 23 35.1 +0.4
VAGA Sg **S** **17 24 09.5 +2.2**
316nm,0.5s
VAGA Valle Agricola 0.98 329⇓*i*P Pn 17 23 35.1 +0.4
VAGA S **S** **17 24 09.5 +2.2**
316nm,0.5s
BSSO Busso 1.00 347⇓*i*Pg Pn 17 23 35.2 +0.4
BSSO Sg **S** **17 24 09.3 +1.9**
451nm,0.7s
BSSO Busso 1.00 347⇓*i*P Pn 17 23 35.2 +0.4
BSSO S **S** **17 24 09.3 +1.9**
451nm,0.7s
RFI Roccamonfina 1.01 316⇑*i*Pg Pn 17 23 35.4 +0.6
RFI Roccamonfina 1.01 316⇑*i*Pg Pn 17 23 35.4 +0.6
23nm,0.4s
RFI Roccamonfina 1.01 316⇑*i*P Pn 17 23 35.4 +0.6
23nm,0.4s
CIGN Sant'Elia a Pi 1.08 0⇓*i*Pg Pn 17 23 34.9 -0.2
CIGN Sant'Elia a Pi 1.08 0⇓*i*Pg Pn 17 23 34.9 -0.2
257nm,0.8s
CIGN Sant'Elia a Pi 1.08 0⇓*i*P Pn 17 23 34.9 -0.2
257nm,0.8s
MRVN Minervino Murg 1.09 63⇓*i*Pg Pn 17 23 34.8 -0.4
MRVN Sg **S** **17 24 06.3 -2.0**
92nm,0.8s
MRVN Minervino Murg 1.09 63⇓*i*P Pn 17 23 34.8 -0.4
MRVN S **S** **17 24 06.3 -2.0**
92nm,0.8s
VENT Ventotene 1.15 282⇓*i*Pg Pn 17 23 35.9 +0.4
VENT Ventotene 1.15 282⇓*i*Pg Pn 17 23 35.9 +0.4
276nm,0.5s
VENT Ventotene 1.15 282⇓*i*P Pn 17 23 35.9 +0.4
276nm,0.5s
MIGL Miglionico 1.17 88⇓*i*Pg Pn 17 23 35.1 -0.6
MIGL Sg **S** **17 24 07.2 -1.8**
1µm,1.1s
MIGL Miglionico 1.17 88⇓*i*P Pn 17 23 35.1 -0.6
MIGL S **S** **17 24 07.2 -1.8**
1µm,1.1s
MIDA Miranda 1.18 335⇓*i*Pg Pn 17 23 36.2 +0.6
MIDA Miranda 1.18 335⇓*i*Pg Pn 17 23 36.2 +0.6
487nm,0.5s
MIDA Miranda 1.18 335⇓*i*P Pn 17 23 36.2 +0.6
487nm,0.5s
CRAC Craco 1.19 100 Pg Pn 17 23 35.8 0.0
473nm,1.2s
CRAC Craco 1.19 100 P Pn 17 23 35.8 0.0
473nm,1.2s
RGNG Rignano Grg 1.22 25⇓*i*Pg Pn 17 23 35.2 -0.6
RGNG Rignano Grg 1.22 25⇓*i*Pg Pn 17 23 35.2 -0.6
RGNG Rignano Grg 1.22 25⇓*i*P Pn 17 23 35.2 -0.6
TRIV Trivento 1.22 347⇓*i*Pg Pn 17 23 36.0 +0.1
181nm,0.6s
TRIV Trivento 1.22 347⇓*i*P Pn 17 23 36.0 +0.1
181nm,0.6s
CERA Filignano 1.22 327⇓*i*Pg Pn 17 23 36.1 +0.2
285nm,0.6s
CERA Filignano 1.22 327⇓*i*P Pn 17 23 36.1 +0.2
285nm,0.6s
FG2 Serracapriola 1.25 9⇓*i*Pg Pn 17 23 35.5 -0.5
FG2 Serracapriola 1.25 9⇓*i*Pg Pn 17 23 35.5 -0.5
1µm,0.4s
FG2 Serracapriola 1.25 9⇓*i*P Pn 17 23 35.5 -0.5
1µm,0.4s
RNI2 Rionero Sannit 1.26 334⇓*i*Pg Pn 17 23 37.1 +1.0
404nm,0.4s
RNI2 Rionero Sannit 1.26 334⇓*i*P Pn 17 23 37.1 +1.0
404nm,0.4s
ORI Oriolo Calabro 1.29 113⇑*i*Pg Pn 17 23 36.3 0.0
505nm,0.6s
ORI Oriolo Calabro 1.29 113⇑*i*P Pn 17 23 36.3 0.0
505nm,0.6s
AMUR Altamura 1.33 75⇓*i*Pg Pn 17 23 36.2 -0.3
AMUR Sg **S** **17 24 09.1 -1.5**
334nm,0.8s
AMUR Altamura 1.33 75⇓*i*P Pn 17 23 36.2 -0.3
AMUR S **S** **17 24 09.1 -1.5**
334nm,0.8s
SGRT San Giovanni R 1.34 28⇓*i*Pg Pn 17 23 36.0 -0.5
SGRT Sg **S** **17 24 08.7 -1.9**
SGRT San Giovanni R 1.34 28⇓*i*P Pn 17 23 36.0 -0.5
SGRT S **S** **17 24 08.7 -1.9**
MSAG Monte S. Angel 1.37 33⇓*i*Pg Pn 17 23 36.3 -0.4
MSAG Sg **S** **17 24 09.0 -1.9**
364nm,0.6s
MSAG Monte S. Angel 1.37 33⇓*i*P Pn 17 23 36.3 -0.4
MSAG S **S** **17 24 09.0 -1.9**
364nm,0.6s
MATE Matera 1.37 86⇓*i*Pg Pn 17 23 36.3 -0.5
MATE Sg **S** **17 24 09.5 -1.5**
556nm,1.0s
MATE Matera 1.37 86⇓*i*P Pn 17 23 36.3 -0.5
MATE S **S** **17 24 09.5 -1.5**
556nm,1.0s
SDI San Donato 1.40 324⇓*i*Pg Pn 17 23 37.4 +0.5
287nm,0.4s
SDI San Donato 1.40 324⇓*i*P Pn 17 23 37.4 +0.5
287nm,0.4s
FRES Fresagrandinar 1.41 353⇓*i*Pg Pn 17 23 36.8 -0.1
FRES Sg **S** **17 24 11.4 +0.1**
648nm,0.7s
FRES Fresagrandinar 1.41 353⇓*i*P Pn 17 23 36.8 -0.1
FRES S **S** **17 24 11.4 +0.1**
648nm,0.7s
POFI Posta Fibreno 1.46 322⇓*i*Pg Pn 17 23 37.9 +0.7
POFI Sg **S** **17 24 13.0 +1.2**
231nm,0.4s
POFI Posta Fibreno 1.46 322⇓*i*P Pn 17 23 37.9 +0.7
POFI S **S** **17 24 13.0 +1.2**
231nm,0.4s
LTRZ Laterza 1.46 88⇑*i*Pg Pn 17 23 36.8 -0.5
LTRZ Sg **S** **17 24 10.3 -1.7**
LTRZ Laterza 1.46 88⇑*i*Pg Pn 17 23 36.8 -0.5
LTRZ Sg **S** **17 24 10.3 -1.7**
316nm,0.9s
LTRZ Laterza 1.46 88⇑*i*P Pn 17 23 36.8 -0.5
LTRZ S **S** **17 24 10.3 -1.7**
316nm,0.9s
LPEL Lama dei Pelig 1.57 340⇓*i*Pg Pn 17 23 37.9 0.0
167nm,0.6s
LPEL Lama dei Pelig 1.57 340⇓*i*P Pn 17 23 37.9 0.0
167nm,0.6s
GIUL Giuliano Di Ro 1.59 309⇓*i*Pg Pn 17 23 38.4 +0.3
GIUL Sg **S** **17 24 14.5 +1.1**
300nm,0.8s
GIUL Giuliano Di Ro 1.59 309⇓*i*P Pn 17 23 38.4 +0.3
GIUL S **S** **17 24 14.5 +1.1**
300nm,0.8s
VVLD Villa Vallelon 1.62 324⇓*i*Pg Pn 17 23 38.8 +0.5
VVLD Sg **S** **17 24 14.5 +0.8**
VVLD Villa Vallelon 1.62 324⇓*i*Pg Pn 17 23 38.8 +0.5
VVLD Sg **S** **17 24 14.5 +0.8**
424nm,0.5s
VVLD Villa Vallelon 1.62 324⇓*i*P Pn 17 23 38.8 +0.5
VVLD S **S** **17 24 14.5 +0.8**
424nm,0.5s
INTR Introdacqua 1.62 333⇓*i*Pg Pn 17 23 38.9 +0.6
INTR Introdacqua 1.62 333⇓*i*Pg Pn 17 23 38.9 +0.6
304nm,0.5s
INTR Introdacqua 1.62 333⇓*i*P Pn 17 23 38.9 +0.6
304nm,0.5s
NOCI Noci 1.66 82 Pg Pn 17 23 38.3 -0.3
NOCI Sg **S** **17 24 12.3 -2.0**
285nm,1.0s
NOCI Noci 1.66 82 P Pn 17 23 38.3 -0.3
NOCI S **S** **17 24 12.3 -2.0**
285nm,1.0s
CARO Carolei 1.66 142⇑*e*Pg Pn 17 23 37.5 -1.2
CARO Sg **S** **17 24 12.4 -2.1**
542nm,0.6s
CARO Carolei 1.66 142⇑*e*P Pn 17 23 37.5 -1.2
CARO S **S** **17 24 12.4 -2.1**
542nm,0.6s
CAFR Castel Frentan 1.71 346⇓*i*Pg Pn 17 23 39.0 +0.1
638nm,0.6s
CAFR Castel Frentan 1.71 346⇓*i*P Pn 17 23 39.0 +0.1
638nm,0.6s
GUAR Guarcino 1.71 316⇓*i*Pg Pn 17 23 39.5 +0.6
GUAR Guarcino 1.71 316⇓*i*Pg Pn 17 23 39.5 +0.6
458nm,0.4s
GUAR Guarcino 1.71 316⇓*i*P Pn 17 23 39.5 +0.6
458nm,0.4s
TAR1 Taranto 1.81 91 *e*P Pn 17 23 39.1 -0.6
FAGN Fagnano 1.96 330⇓*i*Pg Pn 17 23 41.5 +0.8
528nm,0.4s
FAGN Fagnano 1.96 330⇓*i*P Pn 17 23 41.5 +0.8
528nm,0.4s
VCEL Villa Celiera 1.99 337⇓*i*Pg Pn 17 23 41.2 +0.3
314nm,0.8s
VCEL Villa Celiera 1.99 337⇓*i*P Pn 17 23 41.2 +0.3
314nm,0.8s
TIP Timpagrande 1.99 134⇑*i*Pn Pn 17 23 40.3 -0.8
TIP ⇑*i*Pg Pn **17 23 40.4 -0.7**
TIP *e*Sn **S** **17 24 14.3 -4.5**
TIP Sg **S** **17 24 16.8 -2.1**
TIP Timpagrande 1.99 134⇑*i*Pg Pn 17 23 40.4 -0.7
TIP Sg **S** **17 24 16.8 -2.1**
264nm,0.5s
TIP Timpagrande 1.99 134⇑*i*P Pn 17 23 40.4 -0.7
TIP S **S** **17 24 16.8 -2.1**
264nm,0.5s
CERT Cerreto 2.00 314⇓*i*Pg Pn 17 23 41.5 +0.5
CERT Cerreto 2.00 314⇓*i*Pg Pn 17 23 41.5 +0.5
166nm,0.5s
CERT Cerreto 2.00 314⇓*i*P Pn 17 23 41.5 +0.5
166nm,0.5s
LAV9 Lanuvio 2.00 304 Pg Pn 17 23 42.2 +1.2
LAV9 Lanuvio 2.00 304 Pg Pn 17 23 42.2 +1.2
542nm,0.2s
LAV9 Lanuvio 2.00 304 P Pn 17 23 42.2 +1.2
542nm,0.2s
SLNA Salina 2.01 182⇑*i*Pg Pn 17 23 41.6 +0.3
SLNA Salina 2.01 182⇑*i*Pg Pn 17 23 41.6 +0.3
1µm,0.6s
SLNA Salina 2.01 182⇑*i*P Pn 17 23 41.6 +0.3
1µm,0.6s
IFIL Filicudi I Eol 2.02 188⇑*i*Pg Pn 17 23 41.2 -0.2
307nm,0.7s
IFIL Filicudi I Eol 2.02 188⇑*i*P Pn 17 23 41.2 -0.2
307nm,0.7s
RDP Rocca di Papa 2.03 306⇓*i*Pg Pn 17 23 42.3 +1.0
679nm,0.5s
RDP Rocca di Papa 2.03 306⇓*i*P Pn 17 23 42.3 +1.0
679nm,0.5s
SERS Sersale 2.06 138⇑*i*Pg Pn 17 23 40.9 -0.8
SERS Sg **S** **17 24 18.2 -1.6**
364nm,0.6s
SERS Sersale 2.06 138⇑*i*P Pn 17 23 40.9 -0.8
SERS S **S** **17 24 18.2 -1.6**
364nm,0.6s
MA9 Marino 2.07 306⇓*i*Pg Pn 17 23 42.6 +1.0
MA9 Marino 2.07 306⇓*i*Pg Pn 17 23 42.6 +1.0
446nm,0.5s
MA9 Marino 2.07 306⇓*i*P Pn 17 23 42.6 +1.0
446nm,0.5s
IACL Alicudi 2.08 192⇑*i*Pg Pn 17 23 41.8 -0.1
347nm,0.7s
IACL Alicudi 2.08 192⇑*i*P Pn 17 23 41.8 -0.1
347nm,0.7s
GRI Girifalco 2.10 146 Pg Pn 17 23 41.5 -0.5
GRI Girifalco 2.10 146 P Pn 17 23 41.5 -0.5
JOPP Joppolo 2.10 159⇑*i*Pg Pn 17 23 41.0 -1.0
223nm,0.5s
JOPP Joppolo 2.10 159⇑*i*P Pn 17 23 41.0 -1.0
223nm,0.5s
AQU L'Aquila 2.11 328 *e*Pn Pn 17 23 42.7 +0.8
AQU L'Aquila 2.11 328⇑*i*P Pn 17 23 42.7 +0.8
AQU L'Aquila 2.11 328⇓*i*Pg Pn 17 23 42.8 +0.9
258nm,0.8s
AQU L'Aquila 2.11 328⇓*i*P Pn 17 23 42.8 +0.9
258nm,0.8s
LLI Lipari 2.13 179⇑*i*Pg Pn 17 23 42.7 +0.5
2µm,0.6s
LLI Lipari 2.13 179⇑*i*P Pn 17 23 42.7 +0.5
2µm,0.6s
FIAM Fiamignano 2.16 322⇓*i*Pg Pn 17 23 43.2 +0.9
FIAM Fiamignano 2.16 322⇓*i*Pg Pn 17 23 43.2 +0.9
300nm,1.0s
FIAM Fiamignano 2.16 322⇓*i*P Pn 17 23 43.2 +0.9
300nm,1.0s
MTCE Montecelio 2.18 312⇓*i*Pg Pn 17 23 42.9 +0.4
MTCE Montecelio 2.18 312⇓*i*Pg Pn 17 23 42.9 +0.4
231nm,1.0s
MTCE Montecelio 2.18 312⇓*i*P Pn 17 23 42.9 +0.4
231nm,1.0s
VPL Vulcano Piano 2.19 178⇑*i*Pg Pn 17 23 42.6 -0.2
VPL Vulcano Piano 2.19 178⇑*i*P Pn 17 23 42.6 -0.2
ROM9 Roma 2.20 306 Pg Pn 17 23 43.7 +1.1
ROM9 Roma 2.20 306 Pg Pn 17 23 43.7 +1.1
771nm,0.8s
ROM9 Roma 2.20 306 P Pn 17 23 43.7 +1.1
771nm,0.8s
CAMP Campotosto 2.26 331⇓*i*Pg Pn 17 23 43.9 +0.8
66nm,1.0s
CAMP Campotosto 2.26 331⇓*i*P Pn 17 23 43.9 +0.8
66nm,1.0s
TERO Teramo 2.27 335⇓*i*Pg Pn 17 23 43.3 +0.1
TERO Teramo 2.27 335⇓*i*Pg Pn 17 23 43.3 +0.1
227nm,0.9s
TERO Teramo 2.27 335⇓*i*P Pn 17 23 43.3 +0.1
227nm,0.9s
USI Ustica 2.29 216 Pg Pn 17 23 44.0 +0.4
USI Ustica 2.29 216 Pg Pn 17 23 44.0 +0.4
150nm,0.4s
USI Ustica 2.29 216 P Pn 17 23 44.0 +0.4
150nm,0.4s
MSRU Castanea 2.35 168⇑*i*Pg Pn 17 23 43.3 -0.8
498nm,0.8s
MSRU Castanea 2.35 168⇑*i*P Pn 17 23 43.3 -0.8
498nm,0.8s
SCLL Scilla 2.40 165⇑*i*Pg Pn 17 23 43.3 -1.2
SCLL Scilla 2.40 165⇑*i*Pg Pn 17 23 43.3 -1.2
126nm,0.3s
SCLL Scilla 2.40 165⇑*i*P Pn 17 23 43.3 -1.2
126nm,0.3s
PLAC Placanica 2.43 150⇑*e*Pg Pn 17 23 43.7 -1.1
225nm,0.5s
PLAC Placanica 2.43 150⇑*e*P Pn 17 23 43.7 -1.1
225nm,0.5s
CEL Celeste 2.43 161⇑*i*Pn Pn 17 23 43.3 -1.5
CEL Celeste 2.43 161⇑*i*Pg Pn 17 23 43.3 -1.5
281nm,0.3s
CEL Celeste 2.43 161⇑*i*P Pn 17 23 43.3 -1.5
281nm,0.3s
MSCL Scilla 2.44 163⇑*e*Pg Pn 17 23 43.4 -1.4
479nm,0.7s
MSCL Scilla 2.44 163⇑*e*P Pn 17 23 43.4 -1.4
479nm,0.7s
OFFI Offida 2.53 339⇓*i*Pg Pn 17 23 46.3 +0.8
1µm,0.7s
OFFI Offida 2.53 339⇓*i*P Pn 17 23 46.3 +0.8
1µm,0.7s
MTTG Motta San Giov 2.64 166⇑*i*Pg Pn 17 23 46.1 -0.6
MTTG Motta San Giov 2.64 166⇑*i*Pg Pn 17 23 46.1 -0.6
581nm,0.5s
MTTG Motta San Giov 2.64 166⇑*i*P Pn 17 23 46.1 -0.6
581nm,0.5s
TOLF Tolfa 2.65 305⇓*i*Pg Pn 17 23 47.2 +0.7
TOLF Tolfa 2.65 305⇓*i*Pg Pn 17 23 47.2 +0.7
118nm,0.6s
TOLF Tolfa 2.65 305⇓*i*P Pn 17 23 47.2 +0.7
118nm,0.6s
MMME Mongiuffi-Meli 2.65 174⇑*i*Pg Pn 17 23 47.1 +0.4
MMME Mongiuffi-Meli 2.65 174⇑*i*P Pn 17 23 47.1 +0.4
SOI Samo 2.65 160 Pg Pn 17 23 45.6 -1.2
280nm,0.4s
SOI Samo 2.65 160 P Pn 17 23 45.6 -1.2
280nm,0.4s
GIB Gibilmanna 2.67 195 Pg Pn 17 23 46.8 -0.1
293nm,0.8s
GIB Gibilmanna 2.67 195 P Pn 17 23 46.8 -0.1
293nm,0.8s
MPAZ Palizzi 2.75 162⇑*i*Pg Pn 17 23 46.7 -1.0
964nm,0.4s
MPAZ Palizzi 2.75 162⇑*i*P Pn 17 23 46.7 -1.0
964nm,0.4s
SCTE Santa Cesarea 2.77 99⇑*i*Pg Pn 17 23 47.4 -0.4
SCTE Sg **S** **17 24 28.8 -2.1**
507nm,0.8s
SCTE Santa Cesarea 2.77 99⇑*i*P Pn 17 23 47.4 -0.4
SCTE S **S** **17 24 28.8 -2.1**
507nm,0.8s
FDMO Fiordimonte 2.81 332⇓*i*Pg Pn 17 23 48.7 +0.6
FDMO Sg **S** **17 24 30.9 -0.5**
571nm,1.8s
FDMO Fiordimonte 2.81 332⇓*i*P Pn 17 23 48.7 +0.6
FDMO S **S** **17 24 30.9 -0.5**
571nm,1.8s
CESI CESI - Serrava 2.85 329⇓*i*Pg Pn 17 23 48.9 +0.4
CESI Sg **S** **17 24 32.5 +0.3**
195nm,1.0s
CESI CESI - Serrava 2.85 329⇓*i*P Pn 17 23 48.9 +0.4
CESI S **S** **17 24 32.5 +0.3**
195nm,1.0s
GALF Gagliano Caste 2.87 185 Pg Pn 17 23 49.6 +0.8
GALF Gagliano Caste 2.87 185 P Pn 17 23 49.6 +0.8
CORL Corleone 2.95 205⇑*i*Pg Pn 17 23 50.4 +0.8
291nm,0.7s
CORL Corleone 2.95 205⇑*i*P Pn 17 23 50.4 +0.8
291nm,0.7s
ECNV Catenanuova 2.98 183⇑*i*Pg Pn 17 23 50.6 +0.8
ECNV Catenanuova 2.98 183⇑*i*P Pn 17 23 50.6 +0.8
RESU Resuttano 3.00 193⇑*i*Pg Pn 17 23 51.6 +1.6
281nm,0.8s
RESU Resuttano 3.00 193⇑*i*P Pn 17 23 51.6 +1.6
281nm,0.8s
SNTG Esanatoglia 3.05 332⇓*i*Pg Pn 17 23 50.9 +0.5
SNTG Esanatoglia 3.05 332⇓*i*Pg Pn 17 23 50.9 +0.5
98nm,0.2s
SNTG Esanatoglia 3.05 332⇓*i*P Pn 17 23 50.9 +0.5
98nm,0.2s
CING Cingoli 3.08 336⇓*i*Pg Pn 17 23 50.3 -0.3
CING Cingoli 3.08 336⇓*i*Pg Pn 17 23 50.3 -0.3
138nm,0.9s
CING Cingoli 3.08 336⇓*i*P Pn 17 23 50.3 -0.3
138nm,0.9s
LATE Laterza 3.09 312⇓*i*Pg Pn 17 23 51.5 +0.7
12nm,0.5s
LATE Laterza 3.09 312⇓*i*P Pn 17 23 51.5 +0.7
12nm,0.5s
ERC Erice 3.10 216 Pg Pn 17 23 52.8 +1.7
ERC Erice 3.10 216 Pg Pn 17 23 52.8 +1.7
363nm,0.7s
ERC Erice 3.10 216 P Pn 17 23 52.8 +1.7
363nm,0.7s
STON Ston 3.11 41⇑*i*Pn Pn 17 23 51.2 +0.3
STON Ston 3.11 41⇑*i*Pn Pn 17 23 51.2 +0.3
VAE Valguarnera 3.11 187 P Pn 17 23 52.0 +0.8
9.2nm,0.3s,baz=13,slow=1.1,SNR=19
VAE Valguarnera 3.11 187 P Pn 17 23 52.0 +0.8
AOI Ancona 3.13 342⇓*i*Pg Pn 17 23 50.6 -0.5
AOI Ancona 3.13 342⇓*i*Pg Pn 17 23 50.6 -0.5
119nm,0.9s
AOI Ancona 3.13 342⇓*i*P Pn 17 23 50.6 -0.5
119nm,0.9s
MGAB Montegabbione 3.13 319⇓*i*Pg Pn 17 23 52.0 +0.8
MGAB Montegabbione 3.13 319⇓*i*Pg Pn 17 23 52.0 +0.8
56nm,0.5s
MGAB Montegabbione 3.13 319⇓*i*P Pn 17 23 52.0 +0.8
56nm,0.5s
SACS San Casciano d 3.19 316⇓*i*Pg Pn 17 23 52.6 +0.8
92nm,1.0s
MURB Monte Urbino 3.22 327 Pg Pn 17 23 52.5 +0.4
MURB Monte Urbino 3.22 327 Pg Pn 17 23 52.5 +0.4
267nm,0.9s
MURB Monte Urbino 3.22 327 P Pn 17 23 52.5 +0.4
267nm,0.9s
ARVD Arcevia 3.27 334⇓*i*Pg Pn 17 23 52.6 +0.1
ARVD Sg **S** **17 24 38.3 -1.2**
148nm,0.7s
ARVD Arcevia 3.27 334⇓*i*P Pn 17 23 52.6 +0.1
ARVD S **S** **17 24 38.3 -1.2**
148nm,0.7s
HCY Herceg Novi 3.29 54⇑*i*Pn Pn 17 23 53.2 +0.5
HCY *e*Sn **S** **17 24 38.7 -1.2**
HCY Herceg Novi 3.29 54⇑*i*Pn Pn 17 23 53.2 +0.5

HCY eSn S 17 24 38.7 -1.2
RAFF Raffo Rosso 3.37 187 Pg Pn 17 23 53.5 -0.3
RAFF Raffo Rosso 3.37 187 Pg Pn 17 23 53.5 -0.3
110nm,0.5s
RAFF Raffo Rosso 3.37 187 P Pn 17 23 53.5 -0.3
110nm,0.5s
HVZN Vizzini 3.39 183⇑ iPg Pn 17 23 53.7 -0.3
HVZN Vizzini 3.39 183⇑ iPg Pn 17 23 53.7 -0.3
463nm,0.5s
HVZN Vizzini 3.39 183⇑ iP Pn 17 23 53.7 -0.3
463nm,0.5s
SSY Sortino 3.42 178⇑ iPg Pn 17 23 53.5 -0.7
SSY Sortino 3.42 178⇑ iPg Pn 17 23 53.5 -0.7
367nm,0.7s
SSY Sortino 3.42 178⇑ iP Pn 17 23 53.5 -0.7
367nm,0.7s
ARCI Arcidosso 3.43 313⇓ iPg Pn 17 23 56.2 +2.0
383nm,3.1s
ARCI Arcidosso 3.43 313⇓ iP Pn 17 23 56.2 +2.0
383nm,3.1s
FAVR Favara 3.44 197 Pg Pn 17 23 55.3 +0.8
FAVR Favara 3.44 197 Pg Pn 17 23 55.3 +0.8
150nm,0.4s
FAVR Favara 3.44 197 P Pn 17 23 55.3 +0.8
150nm,0.4s
PIEI Pieia 3.45 330 Pg Pn 17 23 54.7 +0.4
PIEI Pieia 3.45 330 Pg Pn 17 23 54.7 +0.4
91nm,1.2s
PIEI Pieia 3.45 330 P Pn 17 23 54.7 +0.4
91nm,1.2s
BUM Brajici-Budva 3.46 59⇓ iPn Pn 17 23 55.2 +0.7
BUM eSn S 17 24 40.9 -2.3
BUM Brajici-Budva 3.46 59⇓ iPn Pn 17 23 55.2 +0.7
BUM eSn S 17 24 40.9 -2.3
FSSB Fossombrone 3.50 334⇓ iPg Pn 17 23 55.0 +0.2
FSSB Fossombrone 3.50 334⇓ iPg Pn 17 23 55.0 +0.2
255nm,0.2s
FSSB Fossombrone 3.50 334⇓ iP Pn 17 23 55.0 +0.2
255nm,0.2s
CAFI Castiglion Fio 3.52 322 Pg Pn 17 23 55.9 +0.8
CAFI Castiglion Fio 3.52 322 P Pn 17 23 55.9 +0.8
BADI Badiali 3.54 327 Pg Pn 17 23 55.9 +0.6
83nm,0.9s
BADI Badiali 3.54 327 P Pn 17 23 55.9 +0.6
83nm,0.9s
ULC Ulcinj 3.56 66⇑ iPn Pn 17 23 56.0 +0.5
ULC eSn S 17 24 42.6 -2.4
ULC Ulcinj 3.56 66⇑ iPn Pn 17 23 56.0 +0.5
ULC eSn S 17 24 42.6 -2.4
BRY Bratogost 3.58 48⇓ iPn Pn 17 23 56.2 +0.4
BRY eSn S 17 24 43.6 -1.8
BRY Bratogost 3.58 48⇓ iPn Pn 17 23 56.2 +0.4
BRY eSn S 17 24 43.6 -1.8
HMDC Modica 3.61 182⇑ iPg Pn 17 23 56.1 -0.2
HMDC Modica 3.61 182⇑ iPg Pn 17 23 56.1 -0.2
473nm,1.2s
HMDC Modica 3.61 182⇑ iP Pn 17 23 56.1 -0.2
473nm,1.2s
HAVL Avola 3.61 177⇑ iPg Pn 17 23 55.5 -0.8
HAVL Avola 3.61 177⇑ iPg Pn 17 23 55.5 -0.8
456nm,0.3s
HAVL Avola 3.61 177⇑ iP Pn 17 23 55.5 -0.8
456nm,0.3s
PARC Parchiule 3.66 328 Pg Pn 17 23 57.1 +0.6
85nm,1.0s
PARC Parchiule 3.66 328 P Pn 17 23 57.1 +0.6
85nm,1.0s
CRE Caprese Michel 3.75 325 Pg Pn 17 23 57.5 -0.1
141nm,2.2s
CRE Caprese Michel 3.75 325 P Pn 17 23 57.5 -0.1
141nm,2.2s
PDG Podgorica 3.76 59⇑ iPn Pn 17 23 58.5 +0.8
PDG eSn S 17 24 46.7 -2.2
TTG Podgorica 3.76 59⇑ iPn Pn 17 23 58.5 +0.8
TTG eSn S 17 24 46.7 -2.2
TTG Podgorica 3.76 59 iP Pn 17 23 58.5 +0.8
TTG eS S 17 24 46.7 -2.2
NKY Niksic 3.79 53⇓ iPn Pn 17 23 58.6 +0.6
NKY eSn S 17 24 47.6 -1.9
NKY Niksic 3.79 53⇓ iPn Pn 17 23 58.6 +0.6
NKY eSn S 17 24 47.6 -1.9
RSM Repubblica di 3.82 332 Pg Pn 17 23 58.8 +0.6
22nm,0.3s
RSM Repubblica di 3.82 332 P Pn 17 23 58.8 +0.6
22nm,0.3s
TIR Tirane 3.83 77 eP Pn 17 23 59.1 +0.6
TIR Tirane 3.83 77 eP Pn 17 23 59.1 +0.6
KEK Kerkira 3.85 101 eP Pn 17 23 58.5 -0.2
KEK Kerkira 3.85 101 P Pn 17 23 58.6 -0.1
KEK Kerkira 3.85 101 P Pn 17 23 58.6 -0.1
CSNT Castellina Chi 3.95 318⇓ iPg Pn 17 24 00.6 +0.9
CSNT Castellina Chi 3.95 318⇓ iPg Pn 17 24 00.6 +0.9
111nm,1.5s
CSNT Castellina Chi 3.95 318⇓ iP Pn 17 24 00.6 +0.9
111nm,1.5s
ASQU Asqua 3.97 325 Pg Pn 17 24 00.0 +0.2
165nm,1.7s
ASQU Asqua 3.97 325 P Pn 17 24 00.0 +0.2
165nm,1.7s
UPM Unac-Piva 3.98 47⇓ iPn Pn 17 24 00.4 +0.4
UPM eSn S 17 24 50.8 -2.3
UPM Unac-Piva 3.98 47⇓ iPn Pn 17 24 00.4 +0.4
UPM eSn S 17 24 50.8 -2.3
NVLJ Novalja 3.99 360 ePn Pn 17 24 00.2 +0.1
NVLJ Novalja 3.99 360 ePn Pn 17 24 00.1 0.0
IGT Igoumenitsa 4.29 102 P Pn 17 24 03.6 +0.1
IGT Igoumenitsa 4.29 102 P Pn 17 24 03.6 +0.1
PVY Plav 4.30 60⇑ iPn Pn 17 24 04.8 +1.2
PVY eSn S 17 24 57.4 -2.2
56nm,0.5s
PVY Plav 4.30 60⇑ iPn Pn 17 24 04.8 +1.2
PVY eSn S 17 24 57.4 -2.2
56nm,0.5s
PLE Pljevlja 4.33 49⇑ iPn Pn 17 24 05.3 +1.4
PLE eSn S 17 24 57.9 -2.3
PLE Pljevlja 4.33 49⇑ iPn Pn 17 24 05.3 +1.4
PLE eSn S 17 24 57.9 -2.3
VSL Villasalto 4.38 258⇓ iPn Pn 17 24 04.6 +0.2
VSL ⇓ iPg Pn 17 24 04.8 +0.3
VSL Villasalto 4.38 258⇓ iPg Pn 17 24 04.8 +0.3
62nm,1.5s
VSL Villasalto 4.38 258⇓ iPn Pn 17 24 04.6 +0.1
BEY Berane 4.39 57⇓ iPn Pn 17 24 06.0 +1.5
BEY eSn S 17 24 59.6 -1.7
IVA Berane 4.39 57⇓ iPn Pn 17 24 06.0 +1.5
IVA eSn S 17 24 59.6 -1.7
IVA Berane 4.39 57⇓ iPn Pn 17 24 06.0 +1.5
IVA eSn S 17 24 59.6 -1.7
OSPF L'Ospedale 4.45 286 eP Pn 17 24 04.8 -0.4
OSPF L'Ospedale 4.45 286 eP Pn 17 24 04.8 -0.4
OHR Ohrid 4.50 81 i Pn Pn 17 24 06.6 +0.8
OHR i Sn S 17 25 03.3 -0.4
OHR Ohrid 4.50 81 i Pn Pn 17 24 06.6 +0.8
OHR i Sn S 17 25 03.2 -0.5
MAIM Mastiano 4.68 317 P Pn 17 24 07.4 -0.3
BBLS Lazići 4.69 44⇑ iPn Pn 17 24 08.5 +0.6
WDD Wield Dalam 4.71 184 ePn Pn 17 24 08.0 -0.3
WDD Wield Dalam 4.71 184⇑ iPg Pn 17 24 08.4 +0.1
140nm,0.7s
WDD Wield Dalam 4.71 184 ePn Pn 17 24 08.0 -0.3
WDD Wield Dalam 4.71 184⇑ iP Pn 17 24 08.4 +0.1
140nm,0.7s
PGF Pioggiola 4.85 296 eP Pn 17 24 09.1 -0.6
82nm,0.6s
PGF Pioggiola 4.85 296 eP Pn 17 24 09.1 -0.6
41nm,0.6s
KRUS Krusevo 4.87 79 i Pn Pn 17 24 10.0 0.0
KRUS i Sn S 17 25 09.4 -1.8
KRUS Krusevo 4.87 79 i Pn Pn 17 24 10.0 0.0
KRUS i Sn S 17 25 09.3 -1.9
BIA Bitola 4.89 83 i Pn Pn 17 24 11.1 +0.8
BIA i Sn S 17 25 11.0 -0.7
BIA Bitola 4.89 83 P Pn 17 24 11.0 +0.7
BIA Bitola 4.89 83 P Pn 17 24 11.0 +0.7
BIA i Sn S 17 25 11.0 -0.8
SARO Sassorosso 4.91 319 P Pn 17 24 09.6 -0.8
FNA Florina 4.92 85 P Pn 17 24 11.2 +0.6
FNA Florina 4.92 85 P Pn 17 24 11.2 +0.6
BOJS Bojanci 4.94 3 ePn Pn 17 24 11.4 +0.7
BOJS eSn S 17 25 10.9 -1.6
BOJS Bojanci 4.94 3 ePn Pn 17 24 11.4 +0.8
BOJS eSn S 17 25 10.9 -1.6

KNDS Knezji Dol 4.97 356 i Pn Pn 17 24 11.3 +0.3
KNDS eSn S 17 25 12.0 -1.1
KNDS Knezji Dol 4.97 356 i Pn Pn 17 24 11.3 +0.3
KNDS eSn S 17 25 12.0 -1.1
VLS Valsamata 5.01 117 eP Pn 17 24 11.0 -0.7
VLS Valsamata 5.01 117 P Pn 17 24 10.9 -0.8
VLS Valsamata 5.01 117 P Pn 17 24 10.9 -0.8
DIVS Divibare 5.16 45⇑ iPn Pn 17 24 13.7 +0.4
KFL Anninata 5.18 116 P Pn 17 24 13.1 -0.6
TRI Trieste 5.20 351 eP Pn 17 24 12.7 -1.0
TRI eS S 17 25 15.5 -2.5
TRI Trieste 5.20 351 eP Pn 17 24 12.7 -1.0
TRI eS S 17 25 15.5 -2.5
GRAM Graiana 5.30 319 P Pn 17 24 15.1 +0.2
GRUS Gruza 5.44 51 i Pn Pn 17 24 16.0 -0.5
VOY Vojsko 5.51 353 ePn Pn 17 24 17.2 -0.1
VOY eSn S 17 25 23.9 -0.6
VOY Vojsko 5.51 353 ePn Pn 17 24 17.2 -0.1
VOY eSn S 17 25 23.9 -0.6
SC2M Scurtabo 5.51 316 P Pn 17 24 16.9 -0.5
THL Klokotos Trika 5.55 98 P Pn 17 24 18.5 +0.6
THL Klokotos Trika 5.55 98 P Pn 17 24 18.5 +0.6
EVR Evrytania 5.57 105 eP Pn 17 24 20.0 +1.8
BARS Barje 5.64 64⇑ iPn Pn 17 24 19.6 +0.7
EFP Efpalio 5.82 109 P Pn 17 24 22.2 +1.0
EFP Efpalio 5.82 109 P Pn 17 24 22.2 +1.0
FGSL Fruska Gora 5.83 37⇑ iPn Pn 17 24 21.4 +0.3
VAY Valandovo 5.85 80 i Pn Pn 17 24 21.4 0.0
VAY Valandovo 5.85 80 i Pn Pn 17 24 21.4 0.0
AGG Agios Georgios 5.92 103 P Pn 17 24 23.5 +1.2
AGG Agios Georgios 5.92 103 P Pn 17 24 23.5 +1.2
OBKA Obir 5.94 358 eP Pn 17 24 23.1 +0.7
OBKA Obir 5.94 358⇑ iPn Pn 17 24 22.6 +0.3
40nm,0.5s,SNR=37
OBKA Obir 5.94 358 P Pn 17 24 22.6 +0.2
40nm,0.5s,SNR=37
LAKA Lakka 5.95 111 P Pn 17 24 23.8 +1.1
LAKA Lakka 5.95 111 P Pn 17 24 23.8 +1.1
NISS 5.96 59 i Pn Pn 17 24 23.9 +1.2
TRIZ Trizonia 5.97 109 P Pn 17 24 24.1 +1.2
TRIZ Trizonia 5.97 109 P Pn 17 24 24.1 +1.2
KALE Kalithea 6.01 109 P Pn 17 24 24.6 +1.3
KALE Kalithea 6.01 109 P Pn 17 24 24.6 +1.3
KNT Kendrikon 6.09 82 P Pn 17 24 25.0 +0.8
KNT Kendrikon 6.09 82 P Pn 17 24 25.0 +0.8
SOKA Soboth 6.10 1⇑ iPn Pn 17 24 24.6 +0.3
13nm,0.4s
SOKA Soboth 6.10 1 P Pn 17 24 24.6 +0.3
13nm,0.4s
MYKA Terra Mystica 6.12 352⇑ iPn Pn 17 24 25.1 +0.6
29nm,0.4s
MYKA Terra Mystica 6.12 352 P Pn 17 24 25.1 +0.5
29nm,0.4s
PCP Piancastagn 6.14 312 P Pn 17 24 24.4 -0.5
RORO Rocca Rossa 6.18 307 P Pn 17 24 24.9 -0.4
IMI Imperia 6.18 305 P Pn 17 24 25.7 +0.4
PKSM Moragy 6.26 25 ⇑ iP Pn 17 24 26.4 +0.2
PKSM Moragy 6.26 25⇑ iP Pn 17 24 26.4 +0.2
PKSM Moragy 6.26 25⇑ eP Pn 17 24 26.4 +0.2
NEGI Seborga 6.27 304 P Pn 17 24 26.5 +0.2
DSF Desfina 6.28 108 P Pn 17 24 26.8 +0.2
DSF Desfina 6.28 108 P Pn 17 24 26.8 +0.2
GUR Goura 6.34 112 P Pn 17 24 28.8 +1.4
GUR Goura 6.34 112 P Pn 17 24 28.8 +1.4
RONM Roccetta Nervi 6.35 304 P Pn 17 24 27.1 -0.2
MONE Monesi 6.35 306 P Pn 17 24 27.6 +0.3
ABTA Abfaltersbach 6.41 345⇑ iPn Pn 17 24 28.8 +0.8
109nm,0.6s,SNR=101
ABTA Abfaltersbach 6.41 345 P Pn 17 24 28.8 +0.8
109nm,0.6s,SNR=101
SAOF Saorge 6.43 304 eP Pn 17 24 29.1 +0.8
SAOF Saorge 6.43 304 eP Pn 17 24 29.1 +0.8
ITM Ithomi 6.44 119 eP Pn 17 24 28.5 0.0
ITM Ithomi 6.44 119 P Pn 17 24 27.8 -0.7
ITM Ithomi 6.44 119 P Pn 17 24 27.8 -0.7
ROTM Rocchetta Tana 6.45 314 P Pn 17 24 29.0 +0.6
SBF Sospel 6.45 303 eP Pn 17 24 28.4 -0.1
98nm,0.6s
SBF Sospel 6.45 303 eP Pn 17 24 28.4 -0.1
49nm,0.6s
XOR Xorichti 6.48 98 P Pn 17 24 28.9 0.0
XOR Xorichti 6.48 98 P Pn 17 24 28.9 0.0
PYL PYLOS 6.48 122 P Pn 17 24 28.2 -0.9
PYL PYLOS 6.48 122 P Pn 17 24 28.2 -0.9
LUCF Luceram 6.52 303 eP Pn 17 24 30.4 +1.1
LUCF Luceram 6.52 303 eP Pn 17 24 30.4 +1.1
PLG Polygyros 6.52 89 P Pn 17 24 31.8 +2.4
PLG Polygyros 6.52 89 P Pn 17 24 31.8 +2.4
KEST Kesra 6.52 224 P Pn 17 24 30.3 +0.8
0.3nm,0.3s,baz=4.3,slow=3.6,SNR=9.4
KBA Koelnbreinsper 6.60 351 eP Pn 17 24 31.1 +0.9
KBA eS S 17 25 45.5 -2.7
KBA Koelnbreinsper 6.60 351⇑ ePn Pn 17 24 31.1 +0.8
50nm,0.9s,SNR=11
KBA Koelnbreinsper 6.60 351 P Pn 17 24 31.0 +0.8
50nm,0.9s,SNR=11
ENR Entracque 6.63 306 P Pn 17 24 31.2 +0.5
TOUF Mont Tournerai 6.64 304 eP Pn 17 24 32.2 +1.5
TOUF Mont Tournerai 6.64 304 eP Pn 17 24 32.2 +1.5
ARSA Arzberg 6.69 4 eP Pn 17 24 31.9 +0.6
ARSA Arzberg 6.69 4⇑ ePn Pn 17 24 31.7 +0.4
37nm,0.5s,SNR=32
ARSA Arzberg 6.69 4 P Pn 17 24 31.7 +0.4
37nm,0.5s,SNR=32
CALN Calern 6.75 301 eP Pn 17 24 33.3 +1.2
CALN Calern 6.75 301 eP Pn 17 24 33.3 +1.2
LTK Loutraki 6.75 110 P Pn 17 24 32.9 +0.7
LTK Loutraki 6.75 110 P Pn 17 24 32.9 +0.7
FRF La Foret Royal 6.83 299 eP Pn 17 24 32.1 -1.0
26nm,0.6s
FRF La Foret Royal 6.83 299 eP Pn 17 24 32.1 -1.0
13nm,0.6s
LMR La Mourre 6.84 297 eP Pn 17 24 31.6 -1.6
12nm,0.6s
LMR La Mourre 6.84 297 eP Pn 17 24 31.6 -1.6
6.2nm,0.6s
MUGIO Muggio 6.85 323⇑ iPn Pn 17 24 31.6 -1.6
129nm,0.2s
MUGIO Muggio 6.85 323⇑ iPn Pn 17 24 31.6 -1.6
129nm,0.2s
FUORN Ofenpass-Fuorn 6.92 332⇑ iPn Pn 17 24 34.7 +0.6
52nm,0.8s
FUORN Ofenpass-Fuorn 6.92 332⇑ iPn Pn 17 24 34.7 +0.6
52nm,0.8s
PZZ Stroppo 6.97 307 P Pn 17 24 34.2 -0.5
BZS Buzias 7.04 42 ⇓ P Pn 17 24 36.6 +1.1
BZS Buzias 7.04 42⇓ iP Pn 17 24 36.6 +1.1
BZS Buzias 7.04 42⇓ iP Pn 17 24 36.6 +1.1
WTTA Wattenberg 7.09 342 eP Pn 17 24 37.9 +1.7
WTTA Wattenberg 7.09 342⇑ iPn Pn 17 24 37.4 +1.2
24nm,0.4s,SNR=22
WTTA Wattenberg 7.09 342 P Pn 17 24 37.4 +1.2
24nm,0.4s,SNR=22
FETA Feichten 7.12 336⇑ iPn Pn 17 24 37.2 +0.7
167nm,0.8s
FETA Feichten 7.12 336 P Pn 17 24 37.2 +0.7
167nm,0.8s
WATA Walderalm 7.17 342 ePn Pn 17 24 38.4 +1.2
62nm,0.6s,SNR=38
WATA Walderalm 7.17 342 P Pn 17 24 38.4 +1.2
62nm,0.6s,SNR=38
DAVOX Davos/Dischmat 7.19 331 P Pn 17 24 38.9 +1.4
11nm,0.3s,baz=124,slow=5.0,SNR=48
DAVOX Davos/Dischmat 7.19 331 P Pn 17 24 38.9 +1.5
TRAV Traversella 7.20 316 P Pn 17 24 35.3 -2.2
SOP Sopron 7.21 9⇑ eP Pn 17 24 38.3 +0.7
RSP Reno Superiore 7.24 312 P Pn 17 24 36.6 -1.4
MOA Molln 7.29 357 eP Pn 17 24 39.2 +0.6
MOA Molln 7.29 357⇑ ePn Pn 17 24 39.1 +0.6
27nm,0.5s,SNR=28
MOA Molln 7.29 357 P Pn 17 24 39.1 +0.5
27nm,0.5s,SNR=28
MBDF Montbardon 7.29 307 eP Pn 17 24 39.6 +1.0
265nm,0.6s
MBDF Montbardon 7.29 307 eP Pn 17 24 39.6 +1.0
132nm,0.6s
MOTA Moosalm 7.30 339 ePn Pn 17 24 39.9 +1.2
148nm,1.0s,SNR=57
MOTA Moosalm 7.30 339 P Pn 17 24 39.9 +1.2
148nm,1.0s,SNR=57
VLI Veliai 7.37 119 eP Pn 17 24 40.5 +0.8
CONA Conrad Observa 7.39 5⇓ ePn Pn 17 24 40.3 +0.6
28nm,0.9s,SNR=21

CONA Conrad Observa 7.39 5 P Pn 17 24 40.3 +0.6
28nm,0.9s,SNR=21
FUSIO Fusio 7.42 324⇑ iPn Pn 17 24 38.7 -1.5
226nm,0.2s
FUSIO Fusio 7.42 324⇑ iPn Pn 17 24 38.7 -1.5
226nm,0.2s
MMK Mattmark 7.45 320⇓ iPn Pn 17 24 39.2 -1.4
77nm,0.2s
MMK Mattmark 7.45 320⇓ iPn Pn 17 24 39.2 -1.4
77nm,0.2s
GZR Gura Zlata 7.52 48 ⇓ P Pn 17 24 42.9 +1.5
GZR Gura Zlata 7.52 48⇓ iP Pn 17 24 42.9 +1.5
GZR Gura Zlata 7.52 48⇓ iP Pn 17 24 42.9 +1.5
BUD Budapest 7.52 22⇑ ePn Pn 17 24 44.0 +2.7
BUD Budapest 7.52 22⇑ eP Pn 17 24 44.0 +2.7
BNI Bardonecchia 7.52 309 eP Pn 17 24 42.0 +0.6
BNI Bardonecchia 7.52 309 eP Pn 17 24 42.0 +0.6
RETA Reutte 7.53 338 i Pn Pn 17 24 42.1 +0.6
53nm,0.9s,SNR=19
RETA Reutte 7.53 338 P Pn 17 24 42.1 +0.6
53nm,0.9s,SNR=19
PLONS Plons/SG 7.61 330⇑ iPn Pn 17 24 43.0 +0.6
32nm,0.3s
DAVA Damuels 7.63 333 eP Pn 17 24 43.5 +0.8
DAVA Damuels 7.63 333⇑ ePn Pn 17 24 43.0 +0.3
52nm,0.8s,SNR=20
DAVA Damuels 7.63 333 P Pn 17 24 43.0 +0.3
52nm,0.8s,SNR=20
KYTH Kithira 7.69 121 eP Pn 17 24 44.0 +0.4
SMRF Simiane la Rot 7.71 299 eP Pn 17 24 44.6 +0.9
28nm,0.9s
SMRF Simiane la Rot 7.71 299 eP Pn 17 24 44.6 +0.9
14nm,0.9s
LPG La Plagne 7.74 312 eP Pn 17 24 44.2 +0.2
213nm,0.7s
LPG La Plagne 7.74 312 eP Pn 17 24 44.2 +0.2
107nm,0.7s
DIX Grande Dixence 7.75 318⇑ iPn Pn 17 24 43.9 -0.3
31nm,0.2s
DIX Grande Dixence 7.75 318⇑ iPn Pn 17 24 43.9 -0.3
31nm,0.2s
LPL La Plagne 7.76 312 eP Pn 17 24 44.6 +0.3
116nm,0.5s
LPL La Plagne 7.76 312 eP Pn 17 24 44.6 +0.3
58nm,0.5s
LIENZ Kamor/St.Gall 7.77 332⇑ iPn Pn 17 24 44.4 0.0
27nm,0.8s
LIENZ Kamor/St.Gall 7.77 332⇑ iPn Pn 17 24 44.4 0.0
27nm,0.8s
ZST Bratislava 7.78 11 eP Pn 17 24 45.8 +1.3
ZST Bratislava 7.78 11 ePN Pn 17 24 45.8 +1.3
ZST Bratislava 7.78 11 eP Pn 17 24 45.8 +1.3
MUO Muotathal 7.83 327⇑ iPn Pn 17 24 45.2 0.0
51nm,0.2s
MUO Muotathal 7.83 327⇑ iPn Pn 17 24 45.2 0.0
51nm,0.2s
BNALP Bannalp 7.85 325⇑ iPn Pn 17 24 45.2 -0.2
70nm,0.3s
BNALP Bannalp 7.85 325⇑ iPn Pn 17 24 45.2 -0.2
70nm,0.3s
LKBD Leukerbad 7.86 320⇑ iPn Pn 17 24 45.6 +0.1
LKBD Leukerbad 7.86 320⇑ iPn Pn 17 24 45.6 +0.1
HASLI Hasliberg/Brie 7.88 324⇑ iPn Pn 17 24 45.8 0.0
58nm,0.3s
HASLI Hasliberg/Brie 7.88 324⇑ iPn Pn 17 24 45.8 0.0
58nm,0.3s
RSL Roselend 7.92 313 eP Pn 17 24 47.3 +1.0
RSL Roselend 7.92 313 eP Pn 17 24 47.3 +1.0
ORIF Oris-en-Rattie 7.93 306 eP Pn 17 24 46.5 +0.1
55nm,0.6s
ORIF Oris-en-Rattie 7.93 306 eP Pn 17 24 46.5 +0.1
28nm,0.6s
GDM Grand'Maison 7.94 309 eP Pn 17 24 47.8 +1.3
GDM Grand'Maison 7.94 309 eP Pn 17 24 47.8 +1.3
SENIN Lac Senin/Sane 8.00 319⇑ iPn Pn 17 24 46.5 -0.8
71nm,0.2s
SENIN Lac Senin/Sane 8.00 319⇑ iPn Pn 17 24 46.5 -0.8
71nm,0.2s
EMV Vieux Emosson 8.01 316⇑ iPn Pn 17 24 46.7 -0.6
104nm,0.3s
EMV Vieux Emosson 8.01 316⇑ iPn Pn 17 24 46.7 -0.6
104nm,0.3s
FUR Furstenfeldbru 8.02 342 eP Pn 17 24 47.5 0.0
FUR Furstenfeldbru 8.02 342 eP Pn 17 24 47.5 0.0
FUR Furstenfeldbru 8.02 342 eP Pn 17 24 47.5 0.0
GRYON Gryon 8.02 318⇑ iPn Pn 17 24 46.9 -0.6
GRYON Gryon 8.02 318⇑ iPn Pn 17 24 46.9 -0.6
SALAN Lac Salanfe 8.02 317⇑ iPn Pn 17 24 47.0 -0.5
SALAN Lac Salanfe 8.02 317⇑ iPn Pn 17 24 47.0 -0.5
RDO Rodhopi 8.08 82 P Pn 17 24 48.6 +0.3
RDO Rodhopi 8.08 82 P Pn 17 24 48.6 +0.3
WILA Wila 8.09 330⇑ iPn Pn 17 24 48.0 -0.3
91nm,0.3s
WILA Wila 8.09 330⇑ iPn Pn 17 24 48.0 -0.3
91nm,0.3s
AIGLE Aigle 8.16 318⇑ iPn Pn 17 24 48.0 -1.2
39nm,0.2s
AIGLE Aigle 8.16 318⇑ iPn Pn 17 24 48.0 -1.2
39nm,0.2s
PSZ Piszkesteto 8.17 24 ePn Pn 17 24 49.7 +0.4
PSZ Piszkesteto 8.17 24⇑ e Pn 17 24 49.8 +0.5
PSZ Piszkesteto 8.17 24⇓ iP Pn 17 24 49.7 +0.4
PSZ Piszkesteto 8.17 24⇓ iP Pn 17 24 49.7 +0.4
GRN Grenoble 8.18 308 eP Pn 17 24 50.4 +0.9
GRN Grenoble 8.18 308 eP Pn 17 24 50.4 +0.9
OG01 Vacheresse 8.30 317 eP Pn 17 24 49.9 -0.9
OG01 Vacheresse 8.30 317 eP Pn 17 24 49.9 -0.9
GEC2 GERESS Array S 8.31 354 eP Pn 17 24 51.5 +0.5
GEC2 GERESS Array S 8.31 354 eP Pn 17 24 51.5 +0.5
GERES GERESS Array B 8.31 354 P Pn 17 24 50.4 -0.6
1.6nm,0.3s,baz=167,slow=12,SNR=64
GERES GERESS Array B 8.31 354 P Pn 17 24 50.4 -0.6
GERES pmax pmax
comp=Z,2.0nm,0.3s
GERES GERESS Array B 8.31 354 P Pn 17 24 50.4 -0.6
comp=Z,2.0nm,0.3s
KOLL Kolacno 8.38 16 eP Pn 17 24 52.6 +0.7
KOLL Kolacno 8.38 16 ePN Pn 17 24 52.6 +0.7
KOLL Kolacno 8.38 16 eP Pn 17 24 52.6 +0.7
DRGR 8.40 40 ⇑ P Pn 17 24 53.5 +1.4
DRGR 8.40 40⇑ iP Pn 17 24 53.5 +1.4
DRGR 8.40 40⇑ iP Pn 17 24 53.5 +1.4
VYHS Vyhne 8.40 18 ePn Pn 17 24 52.4 +0.3
VYHS e 17 24 59.6
VYHS Vyhne 8.40 18 ePN Pn 17 24 52.4 +0.3
VYHS e 17 24 59.6
VYHS Vyhne 8.40 18 eP Pn 17 24 52.4 +0.3
BALST Balsthal 8.53 325⇑ iPn Pn 17 24 52.5 -1.1
comp=Z,61nm,0.3s
BALST Balsthal 8.53 325⇑ iPn Pn 17 24 52.5 -1.1
comp=Z,61nm,0.3s
SLE Schleitheim 8.54 329⇑ iPn Pn 17 24 52.7 -1.1
comp=Z,48nm,0.4s
SLE Schleitheim 8.54 329⇑ iPn Pn 17 24 52.7 -1.1
comp=Z,48nm,0.4s
KHC Kasperske Hory 8.61 354 ePn Pn 17 24 54.1 -0.5
KHC Kasperske Hory 8.61 354 eP Pn 17 24 54.5 -0.1
KHC ex x 17 24 59.7
KHC Kasperske Hory 8.61 354 ePn Pn 17 24 54.1 -0.5
KHC Kasperske Hory 8.61 354 P Pn 17 24 54.5 -0.1
GIMEL St. Georges / 8.65 316⇑ iPn Pn 17 24 53.8 -1.4
comp=Z,18nm,0.4s
GIMEL St. Georges / 8.65 316⇑ iPn Pn 17 24 53.8 -1.4
comp=Z,18nm,0.4s
VIVF Saint-Julien-I 8.66 303 eP Pn 17 24 54.2 -1.1
comp=Z,21nm,0.7s
VIVF Saint-Julien-I 8.66 303 eP Pn 17 24 54.2 -1.1
comp=Z,10nm,0.7s
WET Wettzell 8.69 351 eP Pn 17 24 55.2 -0.4
WET Wettzell 8.69 351 eP Pn 17 24 55.2 -0.4
BBS Basel-Blauen 8.71 325 eP Pn 17 24 54.9 -0.9
BBS Basel-Blauen 8.71 325 eP Pn 17 24 54.9 -0.9
BBS Basel-Blauen 8.71 325 eP Pn 17 24 54.9 -0.9
SPAK Spaichingen-Ko 8.71 332 eP Pn 17 24 55.8 -0.1
SPAK Spaichingen-Ko 8.71 332 eP Pn 17 24 55.8 -0.1
TREC Trest 8.73 3 eP Pn 17 24 57.3 +1.2
TREC ex x 17 25 02.6
TREC Trest 8.73 3 P Pn 17 24 57.3 +1.2
CABF La Chapelle 8.79 316 eP Pn 17 24 55.7 -1.2
comp=Z,108nm,0.5s
CABF La Chapelle 8.79 316 eP Pn 17 24 55.7 -1.2
comp=Z,54nm,0.5s
BRANT Les Verrieres 8.81 319⇑ iPn Pn 17 24 55.7 -1.4
comp=Z,60nm,0.3s
BRANT Les Verrieres 8.81 319⇑ iPn Pn 17 24 55.7 -1.4

comp=Z,60nm,0.3s
VRAC Vranov 8.82 7 P Pn 17 24 58.1 +0.9
comp=Z,4.3nm,0.3s,baz=193,slow=12,SNR=59
VRAC Vranov 8.82 7⇑ i P Pn 17 24 58.0 +0.8
VRAC Vranov 8.82 7 e Pn Pn 17 24 57.9 +0.7
FELD Feldberg im Sc 8.82 328 e P Pn 17 24 56.5 -0.7
FELD Feldberg im Sc 8.82 328 e P Pn 17 24 56.5 -0.7
KECS Kecovo 8.85 25 e Pn Pn 17 24 59.1 +1.5
KECS e 17 25 04.7
KECS Kecovo 8.85 25 e PN Pn 17 24 59.1 +1.5
KECS e 17 25 04.7
LASF Ste Croix 8.90 297 e P Pn 17 24 57.2 -1.1
comp=Z,17nm,0.9s
LASF Ste Croix 8.90 297 e P Pn 17 24 57.2 -1.1
comp=Z,8.3nm,0.9s
LOMF Lomont 8.93 322 e P Pn 17 24 57.7 -0.9
LOMF Lomont 8.93 322 e P Pn 17 24 57.7 -0.9
SSB Saint Sauveur 8.94 305 e P Pn 17 24 58.1 -0.6
SSB Saint Sauveur 8.94 305 e Pn Pn 17 24 58.0 -0.7
SSB Saint Sauveur 8.94 305 e P Pn 17 24 58.0 -0.7
BFO Black Forest 9.07 331 e P Pn 17 25 00.5 +0.3
BFO Black Forest 9.07 331 e Pn Pn 17 24 59.6 -0.7
BFO Black Forest 9.07 331 e P Pn 17 24 59.6 -0.6
STU Stuttgart 9.15 336 e P Pn 17 25 01.8 +0.6
STU Stuttgart 9.15 336 e P Pn 17 25 01.8 +0.6
MOF Molkenrain 9.16 325 e P Pn 17 25 00.8 -0.7
MOF Molkenrain 9.16 325 e P Pn 17 25 00.8 -0.7
LIBD Limburg 9.20 328 e P Pn 17 25 02.2 +0.3
LIBD Limburg 9.20 328 e P Pn 17 25 02.2 +0.3
GVD Gavdhos 9.25 125 e Pn Pn 17 25 02.2 -0.5
comp=Z,61nm,0.3s
GVD Gavdhos 9.25 125 e Pn Pn 17 25 02.2 -0.6
comp=Z,61nm,0.3s
HINF Hinteralfeld 9.26 324 e P Pn 17 25 01.4 -1.2
comp=Z,38nm,0.2s
HINF Hinteralfeld 9.26 324 e P Pn 17 25 01.4 -1.2
comp=Z,19nm,0.2s
ROTZ Rotzenmuhle 9.39 349 e P Pn 17 25 04.2 +0.1
MORC Moravsky Berou 9.39 11 e Pn Pn 17 25 04.8 +0.6
MORC Moravsky Berou 9.39 11⇑ i P Pn 17 25 05.0 +0.8
MORC Moravsky Berou 9.39 11⇑ i P Pn 17 25 05.0 +0.8
PRU Pruhonice 9.42 359 e P Pn 17 25 04.6 +0.1
PRU ex x 17 25 10.0
PRU Pruhonice 9.42 359 P Pn 17 25 04.6 +0.1
ECH Echery 9.44 327 e P Pn 17 25 04.8 0.0
ECH Echery 9.44 327 e Pn Pn 17 25 04.0 -0.7
ECH Echery 9.44 327 e P Pn 17 25 04.0 -0.8
MLR Muntele Rosu 9.46 55 P Pn 17 25 07.6 +2.5
comp=Z,2.0nm,0.3s,baz=215,slow=4.1,SNR=30
MLR Muntele Rosu 9.46 55 P Pn 17 25 07.6 +2.5
MLR pmax pmax
comp=Z,2.0nm,0.3s
MLR Muntele Rosu 9.46 55⇓ i P Pn 17 25 07.2 +2.1
MLR Muntele Rosu 9.46 55⇓ i P Pn 17 25 07.2 +2.1
GRA1 Grafenberg Arr 9.48 345 e P Pn 17 25 05.4 +0.1
GRA1 Grafenberg Arr 9.48 345 e P Pn 17 25 05.4 +0.1
GRF Grafenberg Arr 9.48 345 e P Pn 17 25 05.4 +0.1
GRF Grafenberg Arr 9.48 345 e P Pn 17 25 05.4 +0.1
IDI Anoyia 9.49 121 P Pn 17 25 05.4 -0.2
comp=Z,3.4nm,0.3s,baz=309,slow=13,SNR=18
IDI Anoyia 9.49 121 P Pn 17 25 05.4 -0.2
CDF Champ du Feu 9.54 328 e P Pn 17 25 06.2 +0.2
comp=Z,114nm,0.6s
CDF Champ du Feu 9.54 328 e P Pn 17 25 06.2 +0.2
comp=Z,57nm,0.6s
OKC Ostrava-Krasne 9.54 13 e P Pn 17 25 07.0 +1.0
OKC ex x 17 25 11.7
OKC Ostrava-Krasne 9.54 13 P Pn 17 25 07.0 +1.0
HAU Haudompre 9.63 323 e P Pn 17 25 06.0 -1.1
comp=Z,49nm,0.4s
HAU Haudompre 9.63 323 e P Pn 17 25 06.0 -1.1
comp=Z,24nm,0.4s
NIE Niedzica 9.64 22 e P Pn 17 25 09.5 +2.3
NIE Niedzica 9.64 22 e P Pn 17 25 09.5 +2.3
NKC Novy Kostel 9.81 351 e P Pn 17 25 11.6 +2.3
NKC ex x 17 25 15.0
NKC Novy Kostel 9.81 351 P Pn 17 25 11.6 +2.3
DPC Dobruska-Polom 9.83 5 e P Pn 17 25 10.4 +0.9
DPC ex x 17 25 14.5
DPC Dobruska-Polom 9.83 5 P Pn 17 25 10.4 +0.9
PLDF La Plantade 9.84 307 e P Pn 17 25 09.7 0.0
PLDF La Plantade 9.84 307 e P Pn 17 25 09.7 0.0
MTLF Montolieu 9.85 290 e P Pn 17 25 08.9 -1.0
comp=Z,20nm,0.8s
MTLF Montolieu 9.85 290 e P Pn 17 25 08.9 -1.0
MTLF pmax pmax
comp=Z,10.0nm,0.8s
MTLF Montolieu 9.85 290 e P Pn 17 25 08.9 -1.0
comp=Z,9.9nm,0.8s
MTLF Montolieu 9.85 290 e P Pn 17 25 08.9 -1.0
comp=Z,9.9nm,0.8s
KOLS Kolonicke sedl 9.86 30 e Pn Pn 17 25 11.6 +1.7
KOLS e 17 25 16.3
KOLS Kolonicke sedl 9.86 30 e PN Pn 17 25 11.6 +1.7
KOLS e 17 25 16.3
KOLS Kolonicke sedl 9.86 30 e P Pn 17 25 11.6 +1.7
STHS Stebnicka Huta 9.91 25 e P Pn 17 25 13.2 +2.6
STHS Stebnicka Huta 9.91 25 e PN Pn 17 25 13.2 +2.6
STHS Stebnicka Huta 9.91 25 e P Pn 17 25 13.2 +2.6
THEF They Montfort 9.96 323 e P Pn 17 25 10.4 -0.7
PVCC Panska Ves 9.96 359 P Pn 17 25 11.9 +0.8
UPC Upice 9.96 4 e P Pn 17 25 12.2 +1.0
UPC ex x 17 25 15.7
UPC Upice 9.96 4 P Pn 17 25 12.2 +1.0
SMF Signal de Mont 10.05 311 e P Pn 17 25 10.2 -2.2
comp=Z,30nm,0.4s
SMF Signal de Mont 10.05 311 e P Pn 17 25 10.2 -2.2
SMF pmax pmax
comp=Z,15nm,0.4s
SMF Signal de Mont 10.05 311 e P Pn 17 25 10.2 -2.2
comp=Z,15nm,0.4s
PYM Petit Puy Mans 10.11 305 e P Pn 17 25 13.5 +0.4
PYM Petit Puy Mans 10.11 305 e P Pn 17 25 13.5 +0.4
AGO Saint Agoulin 10.18 306 e P Pn 17 25 13.9 +0.1
AGO Saint Agoulin 10.18 306 e P Pn 17 25 13.9 +0.1
BUR08 Bucovina Ar. S 10.23 43 Pn Pn 17 25 16.6 +2.1
BUR08 Bucovina Ar. S 10.23 43 Pn Pn 17 25 16.6 +2.1
OJC Ojcow 10.24 18 e P Pn 17 25 15.0 +0.5
OJC e 17 25 18.5
OJC Ojcow 10.24 18 e P Pn 17 25 15.0 +0.5
OJC e 17 25 18.5
BRG Berggiesshubel 10.32 357 e P Pn 17 25 16.2 +0.6
BRG Berggiesshubel 10.32 357 e P Pn 17 25 16.2 +0.7
comp=Z,11nm,0.7s
BRG i 17 25 20.4
comp=Z,41nm,0.9s
BRG Berggiesshubel 10.32 357 e P Pn 17 25 16.2 +0.6
MOX Moxa 10.33 348 e P Pn 17 25 16.8 +1.1
MOX Moxa 10.33 348 e P Pn 17 25 16.4 +0.7
MOX Moxa 10.33 348 e P Pn 17 25 16.4 +0.7
CAF Calviac 10.39 299 e P Pn 17 25 16.7 +0.2
comp=Z,30nm,0.7s
CAF Calviac 10.39 299 e P Pn 17 25 16.7 +0.2
CAF pmax pmax
comp=Z,15nm,0.7s
CAF Calviac 10.39 299 e P Pn 17 25 16.7 +0.2
comp=Z,15nm,0.7s
CAF Calviac 10.39 299 e P Pn 17 25 16.7 +0.2
comp=Z,15nm,0.7s
LOR Lormes 10.40 314 e P Pn 17 25 14.2 -2.3
comp=Z,9.6nm,0.3s
LOR Lormes 10.40 314 e P Pn 17 25 14.2 -2.3
LOR pmax pmax
comp=Z,5.0nm,0.3s
LOR Lormes 10.40 314 e P Pn 17 25 14.2 -2.3
comp=Z,4.8nm,0.3s
AVF Avril sur Loir 10.42 310 e P Pn 17 25 14.6 -2.2
comp=Z,13nm,0.2s
AVF Avril sur Loir 10.42 310 e P Pn 17 25 14.6 -2.2
AVF pmax pmax
comp=Z,7.0nm,0.2s
AVF Avril sur Loir 10.42 310 e P Pn 17 25 14.6 -2.2
comp=Z,6.7nm,0.2s
HARR Harsova 10.44 63 ⇑P Pn 17 25 17.7 +0.6
HARR Harsova 10.44 63⇑ i P Pn 17 25 17.7 +0.6
ZKR Zakros 10.47 118 P Pn 17 25 20.6 +3.0
ZKR Zakros 10.47 118 P Pn 17 25 20.6 +3.0
SSF Saint Saulge 10.48 312 e P Pn 17 25 14.8 -2.7
comp=Z,7.8nm,0.3s
SSF Saint Saulge 10.48 312 e P Pn 17 25 14.8 -2.7
SSF pmax pmax
comp=Z,4.0nm,0.3s
SSF Saint Saulge 10.48 312 e P Pn 17 25 14.8 -2.7
comp=Z,3.9nm,0.3s
EPOB Poblet 10.49 279 P Pn 17 25 19.7 +2.0
comp=Z,7.9nm,0.7s
EPOB Poblet 10.49 279 P Pn 17 25 19.7 +2.0
comp=Z,7.9nm,0.7s
MEZF Maizieres J'vi 10.59 322 e P Pn 17 25 21.0 +2.2
comp=Z,71nm,0.6s
MEZF Maizieres J'vi 10.59 322 e P Pn 17 25 21.0 +2.2
comp=Z,71nm,0.6s
MEZF Maizieres J'vi 10.59 322 e P Pn 17 25 21.0 +2.2
comp=Z,36nm,0.6s
BGF Bois d'Agland 10.59 308 e P Pn 17 25 17.5 -1.4
comp=Z,17nm,0.3s
BGF Bois d'Agland 10.59 308 e P Pn 17 25 17.5 -1.4
BGF pmax pmax
comp=Z,8.0nm,0.3s
BGF Bois d'Agland 10.59 308 e P Pn 17 25 17.5 -1.4
comp=Z,8.4nm,0.3s
KWP Kalwaria Pacla 10.60 29 e P Pn 17 25 21.9 +3.0
KWP e 17 25 24.3
KWP Kalwaria Pacla 10.60 29 e P Pn 17 25 21.7 +2.8
comp=Z,21nm,0.4s
KWP Kalwaria Pacla 10.60 29 e P Pn 17 25 21.9 +3.0
TNS Taunus Mts 10.66 337 e P Pn 17 25 23.1 +3.4
TNS Taunus Mts 10.66 337 e P Pn 17 25 23.1 +3.4
TIRR Tirgusor 10.70 64 e Pn Pn 17 25 20.8 +0.5
comp=Z,23nm,0.8s
TIRR Tirgusor 10.70 64⇑ i P Pn 17 25 21.1 +0.9
TIRR Tirgusor 10.70 64 e Pn Pn 17 25 20.8 +0.6
comp=Z,23nm,0.8s
TIRR Tirgusor 10.70 64⇑ i P Pn 17 25 21.1 +0.9
UBBA Unterbreizbach 10.80 343 e P Pn 17 25 22.8 +1.4
CLL Collm 10.82 354 e P Pn 17 25 22.5 +0.9
CLL Collm 10.82 354⇑ i P Pn 17 25 22.4 +0.8
CLL pmax pmax
comp=Z,12nm,0.8s
CLL Collm 10.82 354⇑ i P Pn 17 25 22.4 +0.8
comp=Z,12nm,0.8s
CLL i 17 25 25.6
CLL Collm 10.82 354⇑ i P Pn 17 25 22.4 +0.8
comp=Z,12nm,0.8s
CLL i Pmax 17 25 25.6
comp=Z,33nm,1.0s
CLL e 17 26 46.0
CLL e 17 28 06.0
CLL Collm 10.82 354 i P Pn 17 25 22.4 +0.8
comp=Z,12nm,0.8s
TCF Toulx Ste Croi 10.85 306 e P Pn 17 25 21.4 -0.7
comp=Z,37nm,0.9s
TCF Toulx Ste Croi 10.85 306 e P Pn 17 25 21.4 -0.7
TCF pmax pmax
comp=Z,18nm,0.9s
TCF Toulx Ste Croi 10.85 306 e P Pn 17 25 21.4 -0.7
comp=Z,18nm,0.9s
TCF Toulx Ste Croi 10.85 306 e P Pn 17 25 21.4 -0.7
comp=Z,18nm,0.9s
RJF Les Rejaudoux 10.89 300 e P Pn 17 25 22.5 -0.1
comp=Z,18nm,0.8s
RJF Les Rejaudoux 10.89 300 e P Pn 17 25 22.5 -0.1
RJF pmax pmax
comp=Z,9.0nm,0.8s
RJF Les Rejaudoux 10.89 300 e P Pn 17 25 22.5 -0.1
comp=Z,8.9nm,0.8s
RJF Les Rejaudoux 10.89 300 e P Pn 17 25 22.5 -0.1
comp=Z,8.9nm,0.8s
WLF Walferdange 10.99 329 e P Pn 17 25 24.5 +0.8
WLF pmax pmax
comp=Z,40nm,0.8s
WLF Walferdange 10.99 329 e Pn Pn 17 25 24.5 +0.9
comp=Z,40nm,0.8s
WLF e 17 25 26.7
WLF Walferdange 10.99 329 P Pn 17 25 24.3 +0.6
comp=Z,22nm,0.9s
ERTA Horta de San J 11.06 277 P Pn 17 25 27.2 +2.5
comp=Z,36nm,1.7s
ERTA Horta de San J 11.06 277 P Pn 17 25 27.2 +2.5
comp=Z,36nm,1.7s
EPF Esparros 11.15 287 e P Pn 17 25 25.7 0.0
comp=Z,8.0nm,0.7s
EPF Esparros 11.15 287 e P Pn 17 25 25.7 0.0
EPF pmax pmax
comp=Z,4.0nm,0.7s
EPF Esparros 11.15 287 e P Pn 17 25 25.7 0.0
comp=Z,4.0nm,0.7s
EPF Esparros 11.15 287 e P Pn 17 25 25.7 0.0
comp=Z,4.0nm,0.7s
TLCR 11.20 61 ⇑P Pn 17 25 27.7 +1.4
TLCR 11.20 61⇑ i P Pn 17 25 27.7 +1.4
TLCR 11.20 61⇑ i P Pn 17 25 27.7 +1.4
EBIE Bielsa 11.25 286 P Pn 17 25 28.8 +1.9
comp=Z,5.0nm,0.4s
EBIE Bielsa 11.25 286 P Pn 17 25 28.8 +1.8
comp=Z,5.0nm,0.4s
LFF La Frestale 11.29 297 e P Pn 17 25 27.5 +0.1
comp=Z,13nm,0.5s
LFF La Frestale 11.29 297 e P Pn 17 25 27.5 +0.1
LFF pmax pmax
comp=Z,6.0nm,0.5s
LFF La Frestale 11.29 297 e P Pn 17 25 27.5 +0.1
comp=Z,6.4nm,0.5s
LFF La Frestale 11.29 297 e P Pn 17 25 27.5 +0.1
comp=Z,6.4nm,0.5s
ESAC San Caprasio 11.65 281 P Pn 17 25 35.2 +3.3
comp=Z,21nm,0.6s
REYF Montagne du Re 11.69 287 e P Pn 17 25 32.1 -0.2
REYF Montagne du Re 11.69 287 e P Pn 17 25 32.1 -0.2
CLZ Clausthal 11.70 346 e P Pn 17 25 33.2 +0.9
CLZ Clausthal 11.70 346 e P Pn 17 25 33.2 +0.9
EMOS Mosqueruela 11.72 274 P Pn 17 25 36.4 +3.7
comp=Z,11nm,0.8s
ETSF Etsaut 11.79 286 e P Pn 17 25 31.4 -2.1
comp=Z,29nm,0.8s
ETSF Etsaut 11.79 286 e P Pn 17 25 31.4 -2.1
ETSF pmax pmax
comp=Z,15nm,0.8s
ETSF Etsaut 11.79 286 e P Pn 17 25 31.4 -2.1
comp=Z,15nm,0.8s
ETSF Etsaut 11.79 286 e P Pn 17 25 31.4 -2.1
comp=Z,15nm,0.8s
MEM Membach 11.80 331 P Pn 17 25 36.3 +2.7
comp=Z,50nm,0.9s
MEM Membach 11.80 331 P Pn 17 25 36.3 +2.7
comp=Z,50nm,0.9s
GIVF Givet 11.87 327 e P Pn 17 25 35.8 +1.5
comp=Z,140nm,0.7s
GIVF Givet 11.87 327 e P Pn 17 25 35.8 +1.5
GIVF pmax pmax
comp=Z,70nm,0.7s
GIVF Givet 11.87 327 e P Pn 17 25 35.8 +1.5
comp=Z,70nm,0.7s
GIVF Givet 11.87 327 e P Pn 17 25 35.8 +1.5
comp=Z,70nm,0.7s
BCLA Clavier 11.92 329 P Pn 17 25 36.2 +1.2
BCLA Clavier 11.92 329 P Pn 17 25 36.1 +1.1
KIS Kishinev 11.92 53 ⇑ i P Pn 17 25 36.0 +0.9
comp=Z,200nm,0.8s
KIS e p P 17 26 15.0
KIS e S **S 17 27 46.0 -1.7**
KIS Kishinev 11.92 53α i P Pn 17 25 36.0 +0.9
KIS e S **S 17 27 46.0 -1.7**
KIS pmax pmax
comp=Z,200nm,0.8s
KIS pmax pmax
comp=Z,200nm,1.0s
KIS Kishinev 11.92 53⇑ i P Pn 17 25 36.0 +0.9
comp=Z,200nm,0.8s
HGN Heimansgroeve 11.96 331⇑ i P Pn 17 25 38.1 +2.7
comp=Z,146nm,0.9s
HGN Heimansgroeve 11.96 331⇑ i P Pn 17 25 38.1 +2.7
comp=Z,146nm,0.9s
DOU Dourbes 11.96 326 P Pn 17 25 36.5 +1.0
comp=Z,20nm,0.9s
DOU Dourbes 11.96 326 P Pn 17 25 36.4 +0.9
comp=Z,20nm,0.9s
BEBN Eben Emael 12.08 331 P Pn 17 25 39.9 +3.0
comp=Z,25nm,1.1s
BEBN Eben Emael 12.08 331 P Pn 17 25 39.8 +2.9
comp=Z,25nm,1.1s
BUG Bochum--Univer 12.09 337 e P Pn 17 25 40.6 +3.6
BAIF Baives 12.10 325 e P Pn 17 25 37.9 +0.8
comp=Z,23nm,0.4s
BAIF Baives 12.10 325 e P Pn 17 25 37.9 +0.8
BAIF pmax pmax
comp=Z,12nm,0.4s
BAIF Baives 12.10 325 e P Pn 17 25 37.9 +0.8
comp=Z,12nm,0.4s
BAIF Baives 12.10 325 e P Pn 17 25 37.9 +0.8
comp=Z,12nm,0.4s
ECHE Chera 12.20 271 P Pn 17 25 42.6 +4.1
ECHE pmax pmax
comp=Z,21nm,1.3s
ECHE Chera 12.20 271 P Pn 17 25 42.6 +4.0
comp=Z,20nm,1.3s
SJPF Ste Jean 12.30 287 e P Pn 17 25 38.9 -0.7
comp=Z,25nm,0.8s
SJPF Ste Jean 12.30 287 e P Pn 17 25 38.9 -0.7
SJPF pmax pmax
comp=Z,13nm,0.8s
SJPF Ste Jean 12.30 287 e P Pn 17 25 38.9 -0.7
comp=Z,13nm,0.8s
SJPF Ste Jean 12.30 287 e P Pn 17 25 38.9 -0.7
comp=Z,13nm,0.8s
NRDL Niedersach Rie 12.37 346 e P Pn 17 25 42.9 +2.5
SNF Seneffe 12.40 327 P Pn 17 25 42.0 +1.2
comp=Z,15nm,0.9s
SNF Seneffe 12.40 327 P Pn 17 25 42.0 +1.2
comp=Z,15nm,0.9s
MFF Saint Martin d 12.46 304 e P Pn 17 25 41.5 0.0
comp=Z,27nm,0.6s
MFF Saint Martin d 12.46 304 e P Pn 17 25 41.5 0.0
MFF pmax pmax
comp=Z,14nm,0.6s
MFF Saint Martin d 12.46 304 e P Pn 17 25 41.5 0.0
comp=Z,14nm,0.6s
MFF Saint Martin d 12.46 304 e P Pn 17 25 41.5 0.0
comp=Z,14nm,0.6s
EALK Alkurruntz 12.51 288 P Pn 17 25 43.1 +0.9
comp=Z,18nm,1.0s
EALK Alkurruntz 12.51 288 P Pn 17 25 43.1 +0.9
comp=Z,18nm,1.0s
ELIZ Elizondo 12.52 287 P Pn 17 25 43.3 +0.9
ELIZ pmax pmax
comp=Z,34nm,1.0s
ELIZ Elizondo 12.52 287 P Pn 17 25 43.3 +0.9
comp=Z,34nm,1.0s
ELIZ Elizondo 12.52 287 P Pn 17 25 43.3 +0.9
comp=Z,34nm,1.0s
UCC Uccle 12.59 328 P Pn 17 25 42.6 -0.4
comp=Z,63nm,1.0s
UCC Uccle 12.59 328 P Pn 17 25 42.6 -0.5
comp=Z,63nm,1.0s
WTSB Winterswijk 12.69 337⇑ i P Pn 17 25 46.5 +2.3
comp=Z,67nm,1.2s
WTSB Winterswijk 12.69 337⇑ i P Pn 17 25 46.5 +2.3
comp=Z,67nm,1.2s
IBBN Ibbenburen 12.72 340 e P Pn 17 25 47.4 +2.8
GKP Gorka Klasztor 12.80 6 e P Pn 17 25 47.7 +2.1
GKP e 17 25 49.7
GKP Gorka Klasztor 12.80 6 e P Pn 17 25 47.7 +2.2
GKP e 17 25 49.7
GKP Gorka Klasztor 12.80 6 e P Pn 17 25 47.7 +2.2
ETOR Torete 12.88 277 P Pn 17 25 47.9 +1.2
ETOR pmax pmax
comp=Z,16nm,0.4s
ETOR Torete 12.88 277 P Pn 17 25 47.9 +1.3
comp=Z,16nm,0.4s
ETOR Torete 12.88 277 P Pn 17 25 47.9 +1.2
comp=Z,16nm,0.4s
ECRI Cripan 13.20 285 P Pn 17 25 50.4 -0.1
ECRI pmax pmax
comp=Z,13nm,0.6s
ECRI Cripan 13.20 285 P Pn 17 25 50.4 0.0
comp=Z,13nm,0.6s
ECRI Cripan 13.20 285 P Pn 17 25 50.4 -0.1
comp=Z,13nm,0.6s
LDF La Druitiere 13.36 312 e P Pn 17 25 50.7 -1.7
comp=Z,19nm,0.5s
LDF La Druitiere 13.36 312 e P Pn 17 25 50.7 -1.7
LDF pmax pmax
comp=Z,9.0nm,0.5s
LDF La Druitiere 13.36 312 e P Pn 17 25 50.7 -1.7
comp=Z,9.4nm,0.5s
LDF La Druitiere 13.36 312 e P Pn 17 25 50.7 -1.7
comp=Z,9.4nm,0.5s
EVIA Vianos 13.56 267 P Pn 17 25 56.9 +2.0
EVIA pmax pmax
comp=Z,8.0nm,0.7s
EVIA Vianos 13.56 267 P Pn 17 25 56.9 +2.0
comp=Z,7.8nm,0.7s
FLN La Foliniere 13.65 312 e P Pn 17 25 54.1 -1.7
comp=Z,13nm,0.2s
FLN La Foliniere 13.65 312 e P Pn 17 25 54.1 -1.7
FLN pmax pmax
comp=Z,7.0nm,0.2s
FLN La Foliniere 13.65 312 e P Pn 17 25 54.1 -1.7
comp=Z,6.7nm,0.2s
GRR Gorron 13.68 310 e P Pn 17 25 54.3 -1.9
comp=Z,15nm,0.3s
GRR Gorron 13.68 310 e P Pn 17 25 54.3 -1.9
GRR pmax pmax
comp=Z,7.0nm,0.3s
GRR Gorron 13.68 310 e P Pn 17 25 54.3 -1.9
comp=Z,7.4nm,0.3s
GRR Gorron 13.68 310 e P Pn 17 25 54.3 -1.9
comp=Z,7.4nm,0.3s
BSEG Bad Segeberg 13.72 348 e P Pn 17 25 56.7 +0.1
BSEG Bad Segeberg 13.72 348 e P Pn 17 25 56.7 +0.1
ENIJ Nijar 13.83 260 P Pn 17 25 59.4 +1.4
ENIJ pmax pmax
comp=Z,5.0nm,0.4s
ENIJ Nijar 13.83 260 P Pn 17 25 59.4 +1.4
comp=Z,4.5nm,0.4s
KIEV Kiev 14.21 40 e P P 17 26 00.7 -0.8
KIEV e S **S 17 28 33.0 -4.3**
KIEV pmax pmax
comp=Z,10.0nm,0.3s
KIEV Kiev 14.21 40 e P P 17 26 00.7 -0.8
comp=Z,9.7nm,0.3s
KIEV e S **S 17 28 33.0 -4.3**
KIEV Kiev 14.21 40 e P P 17 26 00.7 -0.8
comp=Z,10.0nm,0.3s
EQES Quesada 14.21 265 P P 17 26 05.6 +3.8
comp=Z,14nm,0.9s
AKASG Malin Array Be 14.22 40 P P 17 26 02.0 +0.3
comp=Z,1.9nm,0.3s,baz=230,slow=11,SNR=6.8
AKASG S **S 17 28 32.5 -5.1**
comp=Z,0.7nm,0.3s,baz=230,slow=20,SNR=7.4
AKASG Malin Array Be 14.22 40 P P 17 26 02.0 +0.4
AKASG S **S 17 28 32.5 -5.0**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG smax
comp=N,1.0nm,0.3s
AKASG Malin Array Be 14.22 40 P P 17 26 02.0 +0.3
AKASG S **S 17 28 32.5 -5.1**
AKASG Malin Array Be 14.22 40 P P 17 26 02.0 +0.4
comp=N,2.0nm,0.3s
AKBB Malin Array Si 14.22 40 e P P 17 26 01.1 -0.5
AKBB Malin Array Si 14.22 40 e P P 17 26 01.0 -0.6
BR131 Keskin Array S 14.36 87⇓ i P P 17 26 05.1 +1.8
comp=N,9.8nm,0.6s
BR131 Keskin Array S 14.36 87⇓ i P P 17 26 05.1 +1.8
comp=N,9.8nm,0.6s
BRTR Keskin Array B 14.36 87 P P 17 26 05.3 +2.0
comp=N,1.7nm,0.3s,baz=274,slow=9.7,SNR=107
BRTR Keskin Array B 14.36 87 P P 17 26 05.4 +2.1
BRTR pmax pmax
comp=Z,2.0nm,0.3s
BRTR Keskin Array B 14.36 87 P P 17 26 05.3 +2.0
ESDC Sonseca Array 14.47 273 P P 17 26 04.1 -0.5
baz=73,slow=11
ESDC Sonseca Array 14.47 273 P P 17 26 06.0 +1.4
comp=Z,4.4nm,0.7s
ESLA Sonseca Array 14.47 273 e Pn Pn 17 26 04.6 -1.0
comp=Z,1.2nm,0.8s
ESLA Sonseca Array 14.47 273 e Pn Pn 17 26 04.6 -1.0
comp=Z,1.2nm,0.8s
GUD Guadarrama 14.48 276 P P 17 26 05.0 +0.3
GUD pmax pmax
comp=Z,18nm,0.8s
GUD Guadarrama 14.48 276 P P 17 26 05.0 +0.3
comp=Z,18nm,0.8s
GUD Guadarrama 14.48 276 P P 17 26 05.0 +0.3
comp=Z,18nm,0.8s
BSD Bornholm Skovb 14.55 0 e P P 17 26 05.1 -0.1
BSD pmax pmax
comp=Z,26nm,0.8s
BSD Bornholm Skovb 14.55 0 i P P 17 26 05.1 -0.1
comp=Z,26nm,0.8s
BSD Bornholm Skovb 14.55 0 e P P 17 26 05.1 -0.1
comp=Z,26nm,0.8s
SUW Suwalki 14.55 20 e P P 17 26 05.7 +0.4

SUW e 17 26 07.5
SUW Suwalki 14.55 20 eP **P 17 26 05.3 0.0**
comp=Z,44nm,0.4s
SUW Suwalki 14.55 20 eP **P 17 26 05.7 +0.4**
SGMF Saint Gilles 14.63 307 eP **P 17 26 04.1 -2.1**
comp=Z,15nm,0.6s
SGMF Saint Gilles 14.63 307 eP **P 17 26 04.1 -2.1**
SGMF pmax pmax
comp=Z,7.0nm,0.6s
SGMF Saint Gilles 14.63 307 eP **P 17 26 04.1 -2.1**
comp=Z,7.4nm,0.6s
SGMF Saint Gilles 14.63 307 eP **P 17 26 04.1 -2.1**
comp=Z,7.4nm,0.6s
JQE Queens East 14.76 311 eP **P 17 26 06.0 -1.6**
JQE Queens East 14.76 311 eP **P 17 26 06.1 -1.5**
JLP Les Platons 14.82 311 eP **P 17 26 06.2 -2.0**
JLP Les Platons 14.82 311 eP **P 17 26 06.2 -2.1**
EALB Alboran 14.83 258 P **P 17 26 09.9 +1.3**
comp=Z,39nm,1.0s
QUIF Quistinic 14.87 306 eP **P 17 26 07.0 -1.8**
comp=Z,25nm,0.7s
QUIF Quistinic 14.87 306 eP **P 17 26 07.0 -1.8**
QUIF pmax pmax
comp=Z,12nm,0.7s
QUIF Quistinic 14.87 306 eP **P 17 26 07.0 -1.8**
comp=Z,12nm,0.7s
QUIF Quistinic 14.87 306 eP **P 17 26 07.0 -1.8**
comp=Z,12nm,0.7s
ROSF Rostrenen 15.10 307 eP **P 17 26 09.8 -1.6**
comp=Z,28nm,0.6s
ROSF Rostrenen 15.10 307 eP **P 17 26 09.8 -1.6**
ROSF pmax pmax
comp=Z,14nm,0.6s
ROSF Rostrenen 15.10 307 eP **P 17 26 09.8 -1.6**
comp=Z,14nm,0.6s
EARI Arriondas 15.21 287 P **P 17 26 13.1 +0.4**
comp=Z,7.1nm,0.6s
EARI Arriondas 15.21 287 P **P 17 26 13.1 +0.4**
comp=Z,7.1nm,0.6s
CSS Prodhromos 15.60 105 ePn **Pn 17 26 15.8 -3.2**
comp=Z,12nm,0.5s
EMIJ Mijas 15.90 262 P **P 17 26 22.7 +2.4**
comp=Z,15nm,1.3s
ECAL Calabor 16.33 282 P **P 17 26 25.1 +0.2**
comp=Z,6.5nm,0.5s
ECAL Calabor 16.33 282 P **P 17 26 25.1 +0.2**
comp=Z,6.5nm,0.5s
MUD Monsted U'grnd 16.33 349 *i* P **P 17 26 25.0 +0.3**
MUD pmax pmax
comp=Z,12nm,0.9s
MUD Monsted U'grnd 16.33 349 *i* P **P 17 26 25.0 +0.3**
comp=Z,12nm,0.9s
MUD Monsted U'grnd 16.33 349 *i* P **P 17 26 25.0 +0.3**
comp=Z,12nm,0.9s
DYA Yadsworthy 16.44 313 eP **P 17 26 24.7 -1.2**
DYA AMb AMB 17 26 31.0
comp=Z,58nm,1.4s
DYA Yadsworthy 16.44 313 eP **P 17 26 24.7 -1.2**
comp=Z,58nm,1.4s
IIGN Ignalina 16.58 23 eP **P 17 26 27.8 +0.4**
IIGN Ignalina 16.58 23 eP **P 17 26 27.8 +0.4**
MVO Moncorvo 16.60 279 eP **P 17 26 28.0 +0.2**
comp=Z,14nm,1.6s
MVO Moncorvo 16.60 279 P **P 17 26 29.5 +1.7**
MVO Moncorvo 16.60 279 eP **P 17 26 28.0 +0.2**
comp=Z,14nm,1.6s
ESPR Espera 16.61 264 P **P 17 26 29.2 +1.1**
comp=Z,4.3nm,1.6s
EPON Pontenova 16.63 287 P **P 17 26 28.2 +0.1**
comp=Z,21nm,0.9s
EPON Pontenova 16.63 287 P **P 17 26 28.2 +0.1**
comp=Z,21nm,0.9s
IDID Didziasalis 16.71 24 eP **P 17 26 28.8 0.0**
IDID Didziasalis 16.71 24 eP **P 17 26 28.8 0.0**
ISAL Salakas 16.74 23 eP **P 17 26 29.1 0.0**
ISAL Salakas 16.74 23 eP **P 17 26 29.1 0.0**
IZAR Zarasai 16.93 22 eP **P 17 26 30.9 -0.3**
IZAR Zarasai 16.93 22 eP **P 17 26 30.9 -0.3**
EMIN Mina Concepcio 16.96 267 P **P 17 26 32.1 +0.3**
comp=Z,12nm,1.3s
EMIN Mina Concepcio 16.96 267 P **P 17 26 32.1 +0.3**
comp=Z,12nm,1.3s
EBAD Badajoz 16.97 271 P **P 17 26 32.5 +0.6**
comp=Z,18nm,2.2s
EBAD Badajoz 16.97 271 P **P 17 26 32.5 +0.6**
comp=Z,18nm,2.2s
HTR Trewern Hill 16.97 319⇑ eP **P 17 26 30.4 -1.3**
HTR Trewern Hill 16.97 319⇑ eP **P 17 26 30.5 -1.2**
CCA1 Carnmenellis 17.05 311 eP **P 17 26 31.1 -1.5**
CCA1 AMb AMB 17 26 41.5
comp=Z,47nm,1.9s
CCA1 Carnmenellis 17.05 311 P **P 17 26 31.1 -1.5**
CCA1 AMb AMB 17 26 41.5
comp=Z,47nm,1.9s
CCA1 Carnmenellis 17.05 311 eP **P 17 26 31.1 -1.5**
comp=Z,47nm,1.9s
MTE Manteigas 17.08 277 eP **P 17 26 32.5 -0.5**
comp=Z,18nm,1.2s
MTE Manteigas 17.08 277 eP **P 17 26 32.5 -0.5**
comp=Z,18nm,1.2s
ANN Anapa 17.08 68 eP **P 17 26 32.9 -0.1**
ANN eS **S 17 29 35.0 +0.1**
ANN pmax pmax
comp=Z,135nm,0.6s
ANN Anapa 17.08 68 eP **P 17 26 32.9 -0.1**
comp=Z,135nm,0.6s
ANN eS **S 17 29 35.0 +0.1**
PMRV Marv??o 17.12 273 eP **P 17 26 33.8 +0.3**
comp=Z,12nm,1.7s
PMRV Marv??o 17.12 273 eP **P 17 26 33.8 +0.3**
comp=Z,12nm,1.7s
PBAR Barrancos 17.13 269 eP **P 17 26 33.6 0.0**
comp=Z,16nm,1.7s
PBAR Barrancos 17.13 269 eP **P 17 26 33.6 0.0**
comp=Z,16nm,1.7s
LHO Holmfirth 17.23 324⇑ eP **P 17 26 33.4 -1.0**
LHO Holmfirth 17.23 324⇑ eP **P 17 26 33.4 -1.0**
GOTU Gotland 17.29 7 P **P 17 26 35.0 -0.1**
PVIS Viseu 17.30 278 eP **P 17 26 35.3 -0.1**
comp=Z,17nm,1.4s
PVIS Viseu 17.30 278 eP **P 17 26 35.3 -0.1**
comp=Z,17nm,1.4s
ELOB Lobios 17.32 282 P **P 17 26 36.8 +1.1**
comp=Z,36nm,2.0s
MDT Midelt 17.44 250 P **P 17 26 37.0 0.0**
comp=Z,0.2nm,0.3s,baz=18,slow=5.2,SNR=5.0
MDT Midelt 17.44 250 P **P 17 26 37.0 0.0**
MMAI Mount Meron Ar 18.04 108 P **P 17 26 44.4 +0.9**
comp=Z,5.1nm,0.3s,baz=295,slow=9.9,SNR=80
WLF1 Llynfaes 18.24 321⇑ eP **P 17 26 44.2 -1.1**
WLF1 AMb AMB 17 26 45.4
comp=Z,57nm,1.7s
WLF1 Llynfaes 18.24 321⇑ eP **P 17 26 44.2 -1.1**
comp=Z,57nm,1.7s
SOC Sochi 18.64 73 *i* P **P 17 26 51.1 +1.3**
SOC Sochi 18.64 73 *i* P **P 17 26 51.1 +1.3**
ECK Cauldkaine Hil 18.89 327 eP **P 17 26 50.4 -1.8**
ECK Cauldkaine Hil 18.89 327 eP **P 17 26 50.4 -1.8**
EKA Eskdalemuir Ar 19.00 327 P **P 17 26 51.9 -1.5**
baz=140,slow=12,SNR=29
EKA Eskdalemuir Ar 19.00 327 P **P 17 26 51.9 -1.5**
EKA pmax pmax
comp=Z,1.0nm,0.3s
EKA Eskdalemuir Ar 19.00 327 P **P 17 26 51.9 -1.5**
comp=Z,1.0nm,0.3s
ESK Eskdalemuir 19.01 327 *i* P **P 17 26 53.1 -0.4**
ESK Eskdalemuir 19.01 327 eP **P 17 26 51.9 -1.6**
comp=Z,37nm,1.4s
ESK Eskdalemuir 19.01 327 eP **P 17 26 51.9 -1.6**
comp=Z,37nm,1.4s
GCD Castle Douglas 19.02 325⇑ eP **P 17 26 51.9 -1.7**
GCD Castle Douglas 19.02 325⇑ eP **P 17 26 51.9 -1.7**
ESY Stoneypath 19.19 329 eP **P 17 26 54.2 -1.2**
ESY Stoneypath 19.19 329 eP **P 17 26 54.2 -1.2**
DSB Dublin 19.20 318 eP **P 17 26 54.1 -1.4**
comp=Z,13nm,0.5s
DSB Dublin 19.20 318 eP **P 17 26 54.1 -1.4**
comp=Z,13nm,0.5s
GAL1 Galloway 19.36 324 eP **P 17 26 55.1 -2.1**
GAL1 AMb AMB 17 26 59.2
comp=Z,32nm,1.4s
GAL1 Galloway 19.36 324 eP **P 17 26 55.1 -2.1**
comp=Z,32nm,1.4s
KONO Kongsberg 19.39 352 eP **P 17 26 55.7 -1.7**
KONO pmax pmax
comp=Z,35nm,1.1s
KONO Kongsberg 19.39 352 eP **P 17 26 55.7 -1.7**
comp=Z,35nm,1.1s
KONO Kongsberg 19.39 352 eP **P 17 26 55.7 -1.7**
comp=Z,35nm,1.1s
EDI Edinburgh 19.43 328 eP **P 17 26 56.2 -1.7**
EDI AMb AMB 17 27 10.8
comp=Z,46nm,1.3s
EDI Edinburgh 19.43 328 eP **P 17 26 56.2 -1.7**
comp=Z,46nm,1.3s
GMM Mts of Mourne 19.55 321 eP **P 17 26 57.6 -1.6**
GMM Mts of Mourne 19.55 321 eP **P 17 26 57.6 -1.6**
ASF Jabal al Asfar 19.56 108 P **P 17 27 00.8 +1.2**
comp=Z,2.0nm,0.3s,baz=182,slow=4.3,SNR=29
ASF Jabal al Asfar 19.56 108 P **P 17 27 00.8 +1.2**
ASF pmax pmax
comp=Z,2.0nm,0.3s
HFS Hagfors 19.60 358 P **P 17 26 58.0 -1.7**
comp=Z,3.1nm,0.3s,baz=185,slow=13,SNR=79
HFS Hagfors 19.60 358 P **P 17 26 58.0 -1.6**
HFS pmax pmax
comp=Z,3.0nm,0.3s
HFS Hagfors 19.60 358 P **P 17 26 58.0 -1.6**
comp=Z,3.0nm,0.3s
EIL Elat 19.63 117 P **P 17 27 00.6 +0.2**
comp=Z,0.4nm,0.3s,baz=337,slow=7.7,SNR=11
EIL S **S 17 30 36.7 +12**
comp=Z,0.1nm,0.3s,baz=348,slow=19,SNR=3.2
EIL Elat 19.63 117 P **P 17 27 00.6 +0.2**
EIL S **S 17 30 36.7 +12**
EIL Elat 19.63 117 P **P 17 27 00.6 +0.2**
EBH Black Hill 19.78 329 eP **P 17 26 58.5 -3.1**
EBH Black Hill 19.78 329 eP **P 17 26 58.5 -3.1**
VSR Storozhevoye 19.87 50 eP **P 17 27 01.1 -1.5**
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR Storozhevoye 19.87 50 eP **P 17 27 01.1 -1.5**
EAB Aberfoyle 20.08 328 eP **P 17 27 01.9 -2.8**
EAB Aberfoyle 20.08 328 eP **P 17 27 01.9 -2.8**
MME1 Meikle Cairn 20.35 331⇑ eP **P 17 27 04.7 -2.9**
MME1 Meikle Cairn 20.35 331⇑ eP **P 17 27 04.7 -2.8**
OBN Obninsk 20.44 37 P **P 17 27 10.0 +1.4**
OBN e 17 28 37.4
OBN eS **S 17 30 36.1 -1.5**
OBN pmax pmax
comp=Z,4.0nm,0.5s
OBN Obninsk 20.44 37 P **P 17 27 10.0 +1.4**
comp=Z,4.0nm,0.5s
OBN eS **S 17 30 36.1 -1.5**
NAO01 NORSAR Array S 20.45 354 eP **P 17 27 07.2 -1.3**
comp=Z,11nm,0.6s
NAO01 NORSAR Array S 20.45 354 eP **P 17 27 07.2 -1.3**
comp=Z,11nm,0.6s
NB2 NORSAR Subarra 20.62 355 P **P 17 27 08.2 -2.0**
comp=Z,6.9nm,0.5s,baz=171,slow=10
NB2 NORSAR Subarra 20.62 355 P **P 17 27 08.2 -2.0**
comp=Z,6.9nm,0.5s,baz=171,slow=10.0,SNR=3.4
NOA NORSAR Array B 20.62 355 P **P 17 27 08.4 -1.8**
comp=Z,8.9nm,0.6s,baz=172,slow=10,SNR=49
NOA NORSAR Array B 20.62 355 P **P 17 27 08.4 -1.8**
NOA pmax pmax
comp=Z,9.0nm,0.6s
NOA NORSAR Array B 20.62 355 P **P 17 27 08.4 -1.8**
comp=Z,9.0nm,0.6s
MCD Coleburn Disti 20.65 332⇑ eP **P 17 27 08.1 -2.5**
MCD Coleburn Disti 20.65 332⇑ eP **P 17 27 08.1 -2.5**
KIV Kislovodsk 20.80 71 P **P 17 27 13.0 +0.9**
KIV e 17 28 41.9
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV Kislovodsk 20.80 71 P **P 17 27 13.0 +0.9**
comp=Z,10.0nm,1.1s
KAR1 Arisaig 21.18 327 eP **P 17 27 13.4 -2.0**
KAR1 Arisaig 21.18 327 eP **P 17 27 13.4 -2.0**
KSB Sheil Bridge 21.21 329 eP **P 17 27 13.7 -2.0**
KSB Sheil Bridge 21.21 329 eP **P 17 27 13.7 -2.0**
MVH1 Achvaich 21.24 331 eP **P 17 27 13.8 -2.2**
MVH1 Achvaich 21.24 331 eP **P 17 27 13.8 -2.1**
KAC Achnashellach 21.36 329 eP **P 17 27 14.9 -2.1**
KAC Achnashellach 21.36 329 eP **P 17 27 14.9 -2.1**
KPL Plockton 21.39 329 eP **P 17 27 15.5 -1.8**
KPL AMb AMB 17 27 17.0
comp=Z,61nm,1.5s,mb4.7
KPL Plockton 21.39 329 eP **P 17 27 15.5 -1.8**
comp=Z,61nm,1.5s,mb4.7
ORE Reay 21.55 333⇑ eP **P 17 27 16.8 -2.0**
ORE Reay 21.55 333⇑ eP **P 17 27 16.8 -2.0**
ZEI Tsey 21.73 75 eP **P 17 27 23.9 +3.3**
ZEI pmax pmax
comp=Z,5.0nm,0.5s,mb4.1
FINES FINESS Array B 21.99 14 P **P 17 27 22.4 -0.3**
comp=Z,14nm,0.3s,mb4.7,baz=191,slow=9.1,SNR=202
FINES S **S 17 31 06.5 +3.9**
comp=Z,2.9nm,0.8s,baz=192,slow=18,SNR=5.9
FINES FINESS Array B 21.99 14 P **P 17 27 22.4 -0.3**
FINES S **S 17 31 06.5 +4.0**
FINES pmax pmax
comp=Z,14nm,0.3s
FINES smax
comp=N,3.0nm,0.8s
FINES FINESS Array B 21.99 14 P **P 17 27 22.4 -0.3**
comp=N,14nm,0.3s,mb4.8
LRW Lerwick 22.00 338 eP **P 17 27 21.1 -1.7**
LRW AMb AMB 17 27 31.0
comp=Z,79nm,1.3s,mb4.9
LRW Lerwick 22.00 338 eP **P 17 27 21.1 -1.7**
comp=Z,79nm,1.3s,mb4.9
KAF Kangasniemi 22.65 14 eP **P 17 27 27.7 -1.0**
KAF Kangasniemi 22.65 14 ep **P 17 27 27.7 -1.0**
KAF Kangasniemi 22.65 14 eP **P 17 27 27.7 -1.0**
GNI Garni 22.69 81 P **P 17 27 31.4 +1.9**
comp=Z,9.5nm,0.5s,mb4.4,baz=286,slow=5.7,SNR=9.5
GNI Garni 22.69 81 P **P 17 27 31.4 +2.0**
GNI pmax pmax
comp=Z,10.0nm,0.5s
GNI Garni 22.69 81 eP **P 17 27 30.8 +1.4**
comp=Z,17nm,0.8s,mb4.4
GNI Garni 22.69 81 eP **P 17 27 30.8 +1.4**
comp=Z,17nm,0.8s,mb4.4
JOF Joensuu 24.43 18 eP **P 17 27 42.8 -2.0**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.6
JOF Joensuu 24.43 18 ep **P 17 27 42.8 -2.0**
comp=Z,1.0nm,0.3s,mb3.6
JOF Joensuu 24.43 18 eP **P 17 27 42.8 -2.0**
comp=Z,1.0nm,0.3s,mb3.6
MIB Mutribah 28.46 102 eP **P 17 28 21.2 +0.2**
MIB AMb AMB 17 28 22.1
comp=Z,40nm,0.6s,mb5.0
MIB Mutribah 28.46 102 eP **P 17 28 21.2 +0.1**
comp=Z,41nm,0.6s,mb5.0
NAY Al-Naaiem 28.67 103 eP **P 17 28 22.8 -0.1**
NAY AMb AMB 17 28 23.0
comp=Z,16nm,1.4s,mb4.2
NAY Al-Naaiem 28.67 103 eP **P 17 28 22.8 -0.2**
comp=Z,16nm,1.4s,mb4.3
UMR Umm Al-Rimmam 28.87 102 eP **P 17 28 24.6 -0.1**
UMR AMb AMB 17 28 25.3
comp=Z,30nm,0.5s,mb5.0
UMR Umm Al-Rimmam 28.87 102 eP **P 17 28 24.6 -0.1**
comp=Z,30nm,0.5s,mb5.0
ARCES ARCESS Array B 29.56 8 P **P 17 28 29.0 -1.3**
comp=Z,0.9nm,0.5s,mb3.6,baz=190,slow=9.6,SNR=29
ARCES PcP PcP 17 31 25.4 -1.1
comp=Z,0.9nm,0.6s,baz=247,slow=1.9,SNR=4.2
ARCES ScP ScP 17 34 36.4 -2.2
comp=Z,0.7nm,0.5s,baz=164,slow=3.7,SNR=11
ARCES ARCESS Array B 29.56 8 P **P 17 28 29.0 -1.3**
ARCES 17 31 25.4
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES pmax pmax
comp=N,1.0nm,0.5s
ARCES ARCESS Array B 29.56 8 P **P 17 28 29.0 -1.3**
comp=N,1.0nm,0.5s,mb3.6
ARCES ARCESS Array B 29.56 8 PcP PcP 17 31 25.4 -1.1
comp=N,1.0nm,0.5s
TOA0 Torodi Ar. Sit 29.68 207 eP **P 17 28 30.8 -1.1**
TOA0 Torodi Ar. Sit 29.68 207 eP **P 17 28 30.8 -1.1**
TORD Torodi Ar. Bea 29.68 207 P **P 17 28 30.9 -1.0**
comp=N,1.9nm,0.3s,mb4.0,baz=15,slow=9.3,SNR=29
TORD PcP PcP 17 31 26.7 -1.0
comp=N,0.4nm,0.6s,baz=23,slow=2.3,SNR=3.3
TORD ScP ScP 17 34 37.7 -2.1
baz=270,slow=1.4
KEV Kevo 29.93 8 eP **P 17 28 32.8 -0.7**
KEV Kevo 29.93 8 ep **P 17 28 32.8 -0.7**
KEV Kevo 29.93 8 eP **P 17 28 32.8 -0.7**
AKTK Aktyubinsk 31.38 57 P **P 17 28 46.4 -0.1**
AKTK Aktyubinsk 31.38 57 P **P 17 28 46.4 -0.1**
comp=N,3.0nm,0.4s,mb4.2
AKTO Aktyubinsk 31.38 57 P **P 17 28 46.4 -0.1**
comp=N,2.6nm,0.3s,mb4.2,baz=264,slow=7.3,SNR=14
AKTO Aktyubinsk 31.38 57 P **P 17 28 46.4 -0.1**
AKTO pmax pmax
comp=Z,3.0nm,0.4s,mb4.2
ARU Arti 32.34 46*d i*P **P 17 28 54.6 -0.1**
ARU S **S 17 33 47.3 +2.1**
ARU SS SS 17 36 17.1 -1.9
ARU pmax pmax
comp=Z,12nm,0.8s,mb4.5
ARU Arti 32.34 46 eP **P 17 28 54.4 -0.2**
comp=Z,8.4nm,0.4s,mb4.6
ARU Arti 32.34 46 eP **P 17 28 54.4 -0.3**
comp=Z,8.4nm,0.4s,mb4.6
ARU S **S 17 33 47.3 +2.1**
ABKAR Akbulak array 32.63 59 eP **P 17 28 57.4 +0.1**
comp=Z,1.8nm,0.4s,mb4.0
ABKAR Akbulak array 32.63 59 eP **P 17 28 57.4 +0.1**
comp=Z,1.8nm,0.4s,mb4.0
DBIC Dimbokro 38.11 213 P **P 17 29 42.6 -1.4**
comp=Z,2.9nm,0.3s,mb4.2,baz=7.6,slow=10,SNR=14
DBIC Dimbokro 38.11 213 P **P 17 29 42.6 -1.4**
DBIC pmax pmax
comp=Z,3.0nm,0.3s
DBIC Dimbokro 38.11 213⇑ *i*P **P 17 29 42.5 -1.5**
comp=Z,2.8nm,0.4s,mb4.0
DBIC Dimbokro 38.11 213 P **P 17 29 42.6 -1.4**
comp=Z,3.0nm,0.3s,mb4.2
TIC Toumodi 38.20 213 eP **P 17 29 44.3 -0.5**
comp=Z,14nm,0.2s,mb5.0
KIC Kosan Boka 38.34 213 eP **P 17 29 44.6 -1.3**
comp=Z,112nm,1.8s,mb5.0
LIC Lamto 38.58 213 eP **P 17 29 46.7 -1.2**
comp=Z,20nm,0.5s,mb4.8
LIC Lamto 38.58 213 eP **P 17 29 45.8 -2.1**
comp=Z,6.2nm,0.4s,mb4.1
LIC Lamto 38.58 213 eP **P 17 29 45.8 -2.1**
comp=Z,3.1nm,0.4s,mb4.1
BRVK Borovoye 38.94 52*d i*P **P 17 29 51.3 +0.9**
BRVK pmax pmax
comp=Z,15nm,0.7s,mb4.5
BRVK Borovoye 38.94 52 eP **P 17 29 51.1 +0.7**
comp=Z,15nm,0.7s,mb4.5
BRVK Borovoye 38.94 52 eP **P 17 29 51.2 +0.8**
comp=Z,15nm,0.7s,mb4.5
BVAR Borovoye Array 39.01 52 P **P 17 29 51.7 +0.7**
comp=Z,2.6nm,0.3s,mb4.1,baz=274,slow=7.3,SNR=43
BVAR Borovoye Array 39.01 52 P **P 17 29 51.7 +0.7**
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR Borovoye Array 39.01 52 P **P 17 29 51.7 +0.7**
comp=Z,3.0nm,0.4s,mb4.1
EKS2 Erkin-Say 43.29 67 P **P 17 30 27.2 +1.4**
SNR=11
EKS2 Erkin-Say 43.29 67⇓ *i*P **P 17 30 26.7 +1.0**
comp=Z,15nm,0.5s,mb4.5
EKS2 Erkin-Say 43.29 67⇓ *i*P **P 17 30 26.7 +1.0**
comp=Z,15nm,0.5s,mb4.5
AML Almayashu 43.40 68 P **P 17 30 28.6 +2.0**
SNR=5.8
AML Almayashu 43.40 68 eP **P 17 30 27.2 +0.6**
comp=Z,3.5nm,0.5s,mb3.9
AML Almayashu 43.40 68 eP **P 17 30 27.2 +0.6**
comp=Z,3.5nm,0.5s,mb3.9
USP Ospenovka 43.61 66 P **P 17 30 29.3 +1.1**
SNR=7.6
AAK Ala-Archa 43.80 67 P **P 17 30 30.7 +0.9**
comp=Z,2.6nm,0.4s,mb3.9,baz=263,slow=2.2,SNR=7.3
AAK Ala-Archa 43.80 67 P **P 17 30 30.7 +0.9**
AAK pmax pmax
comp=Z,3.0nm,0.4s,mb3.9
AAK Ala-Archa 43.80 67 eP **P 17 30 30.1 +0.3**
comp=Z,3.6nm,0.6s,mb3.8
AAK Ala-Archa 43.80 67 eP **P 17 30 30.1 +0.3**
comp=Z,3.6nm,0.6s,mb3.8
UCH Uchtor 43.94 67 P **P 17 30 32.2 +1.2**
SNR=7.0
UCH Uchtor 43.94 67 eP **P 17 30 31.9 +1.0**
comp=Z,3.3nm,0.8s,mb3.6
UCH Uchtor 43.94 67 eP **P 17 30 31.9 +1.0**
comp=Z,3.3nm,0.8s,mb3.6
SFJD Kangerlussuaq 43.96 329 P **P 17 30 29.7 -1.0**
SFJD Kangerlussuaq 43.96 329 P **P 17 30 29.7 -1.0**
KBK Karagaybulak 44.11 67 P **P 17 30 29.1 -3.1**
SNR=6.0
KURK Kurchatov 44.39 55 P **P 17 30 32.6 -1.7**
comp=Z,3.2nm,0.3s,mb4.0,baz=308,slow=5.1,SNR=71
KURK PcP PcP 17 32 10.7 -1.4
comp=Z,0.7nm,0.6s,baz=284,slow=3.9,SNR=3.3
KURK Kurchatov 44.39 55*de*P **P 17 30 34.4 +0.1**
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.1
KURK Kurchatov 44.39 55⇓ eP **P 17 30 34.3 0.0**
comp=Z,8.0nm,0.3s,mb4.4
KURK Kurchatov 44.39 55⇓ eP **P 17 30 34.3 0.0**
comp=Z,8.0nm,0.3s,mb4.4
KZA Kyzart 44.51 67 P **P 17 30 37.0 +1.6**
SNR=22
ULHL Ulahol 45.15 67 P **P 17 30 41.7 +1.4**
SNR=5.6
KSH Kashi 45.92 70⇓ *i*P **P 17 30 46.3 -0.1**
KSH *ep*P pP 17 31 51.3 +1.8
KSH *e*PcP PcP 17 32 17.0 -0.7
KSH *es*P sP 17 32 26.0 +2.0
KSH *e*PP PP 17 32 38.0 -0.5
KSH *e*ScP ScP 17 35 38.3 -2.5
KSH *e*PcS PcS 17 36 10.5 -2.4
KSH *e*S **S 17 37 04.5 -2.6**
KSH *es*S sS 17 39 02.0 +2.4
KSH *e*ScS ScS 17 40 04.0 -4.2
KSH *e*SS SS 17 40 31.0 -4.9
KSH pmax pmax
comp=Z,3.0nm,0.3s,mb4.1
KSH pmax pmax
comp=Z,60nm,4.5s
KSH LR LR
comp=N,75nm,5.4s
KSH LR LR
comp=E,95nm,5.1s
KSH LR LR
comp=Z,92nm,5.6s
NVS Novosibirsk 46.27 48 eP **P 17 30 49.5 +0.6**
NVS pmax pmax
comp=Z,7.0nm,0.5s,mb4.2
NVS pmax pmax
comp=E,3.0nm,0.8s
NVS Novosibirsk 46.27 48 eP **P 17 30 49.5 +0.6**
comp=E,7.0nm,0.5s,mb4.2
ZAA0 Zalesovo Array 47.37 49⇓ eP **P 17 30 57.4 0.0**
ZAA0 Zalesovo Array 47.37 49⇓ eP **P 17 30 57.4 0.0**
ZALV Zalesovo Beam 47.37 49 P **P 17 30 57.5 +0.1**
comp=E,8.0nm,0.3s,mb4.5,baz=283,slow=7.0,SNR=36
ZALV Zalesovo Beam 47.37 49 P **P 17 30 57.5 +0.1**
ZALV pmax pmax
comp=Z,8.0nm,0.3s,mb4.5
ZALV Zalesovo Beam 47.37 49 P **P 17 30 57.5 +0.1**
comp=Z,8.0nm,0.3s,mb4.5
MK31 Makanchi Array 47.78 59⇓ eP **P 17 31 00.6 0.0**
MK31 Makanchi Array 47.78 59 eP **P 17 31 00.6 0.0**
MKAR Makanchi Array 47.78 59 P **P 17 31 00.8 +0.2**
comp=Z,8.5nm,0.4s,mb4.5,baz=292,slow=6.1,SNR=102
MKAR PcP PcP 17 32 24.0 -0.2
comp=Z,0.9nm,0.7s,baz=288,slow=4.1,SNR=3.5
MKAR ScP ScP 17 35 46.7 -1.8
comp=Z,0.4nm,0.6s,baz=336,slow=3.2,SNR=3.7
MKAR Makanchi Array 47.78 59 P **P 17 31 00.8 +0.2**
MKAR 17 32 24.0
MKAR pmax pmax
comp=Z,9.0nm,0.4s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 47.78 59 P **P 17 31 00.8 +0.2**
comp=Z,9.0nm,0.4s,mb4.5
MKAR Makanchi Array 47.78 59 PcP PcP 17 32 24.0 -0.2
comp=Z,1.0nm,0.7s

WMQ	**Urumqi**	**52.40**	**61**	*e*P	**P**	**17 31 37.3**	**+2.2**
SCHQ	**Schefferville**	**53.72**	**315**	P	**P**	**17 31 43.4**	**-1.0**
	comp=Z,4.1nm,0.3s,mb4.2,baz=59,slow=7.9,SNR=10						
SCHQ	**Schefferville**	**53.72**	**315**	P	**P**	**17 31 43.4**	**-1.0**
RES	**Resolute Bay**	**56.22**	**342**	P	**P**	**17 32 03.4**	**+1.4**
	comp=Z,1.2nm,0.6s,mb3.5,baz=79,slow=3.5,SNR=2.9						
RES	**Resolute Bay**	**56.22**	**342**	P	**P**	**17 32 03.4**	**+1.4**
RES				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
RES	**Resolute Bay**	**56.22**	**342**	P	**P**	**17 32 03.4**	**+1.4**
	comp=Z,1.0nm,0.6s,mb3.4						
MOY	**Mondy**	**57.37**	**48**	*e*P	**P**	**17 32 11.3**	**+1.0**
MOY	**Mondy**	**57.37**	**48**	*e*P	**P**	**17 32 11.3**	**+1.0**
TLY	**Talaya**	**58.84**	**47**	*e*P	**P**	**17 32 21.4**	**+1.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
TLY	**Talaya**	**58.84**	**47**	*e*P	**P**	**17 32 21.4**	**+1.0**
	comp=Z,6.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**62.26**	**50**	P	**P**	**17 32 43.7**	**+0.2**
	comp=Z,3.2nm,0.6s,mb4.1,baz=261,slow=5.9,SNR=5.7						
SONM	**Songino Array**	**62.26**	**50**	P	**P**	**17 32 43.7**	**+0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**62.26**	**50**	P	**P**	**17 32 43.7**	**+0.2**
	comp=Z,3.0nm,0.6s,mb4.1						
LZH	**Lanzhou**	**66.96**	**62**	*e*P	**P**	**17 33 14.8**	**+0.9**
LZH				pP	pP	17 34 27.5	+5.2
LZH				sP	sP	17 34 58.0	+2.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
PALK	**Pallekele**	**66.97**	**100**	P	**P**	**17 33 13.8**	**-0.4**
	comp=Z,18nm,0.9s,mb4.8,baz=325,slow=8.2,SNR=7.4						
PALK	**Pallekele**	**66.97**	**100**	P	**P**	**17 33 13.8**	**-0.4**
PALK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
PALK	**Pallekele**	**66.97**	**100**	P	**P**	**17 33 13.8**	**-0.4**
	comp=Z,18nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**69.20**	**54**	*e*P	**P**	**17 33 27.0**	**-0.6**
HHC				PcP	PcP	17 33 49.5	+0.3
HHC				pP	pP	17 34 39.3	+2.8
HHC				sP	sP	17 35 12.8	+3.3
HHC				PP	PP	17 36 06.3	+1.7
HHC				ScP		17 37 20.0	
HHC				S	S	17 42 05.3	-2.7
HHC				ScS	ScS	17 42 53.0	-5.4
HHC				SS	SS	17 46 39.0	-1.4
HHC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,200nm,17.9s						
HHC				LR	LR		
	comp=E,130nm,17.1s						
HHC				LR	LR		
	comp=Z,230nm,18.1s						
BOSA	**Boshof**	**69.50**	**170**	P	**P**	**17 33 29.1**	**-0.3**
	comp=Z,1.9nm,0.3s,mb4.3,baz=336,slow=5.7,SNR=17						
BOSA	**Boshof**	**69.50**	**170**	P	**P**	**17 33 29.1**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
BOSA	**Boshof**	**69.50**	**170**	P	**P**	**17 33 29.1**	**-0.3**
	comp=Z,2.0nm,0.3s,mb4.3						
YKA	**Yellowknife Ar**	**69.59**	**338**	P	**P**	**17 33 29.6**	**+0.1**
	comp=Z,1.6nm,0.7s,mb3.8,baz=38,slow=5.2,SNR=7.3						
YKA	**Yellowknife Ar**	**69.59**	**338**	P	**P**	**17 33 29.6**	**+0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**69.59**	**338**	P	**P**	**17 33 29.6**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.0						
CD2	**Chengdu**	**69.86**	**66**	P	**P**	**17 33 31.0**	**-0.8**
CD2				pP	pP	17 34 43.3	+2.4
CD2				sP	sP	17 35 16.5	+2.7
CD2				S	S	17 42 13.5	-2.5
CD2				SS	SS	17 46 50.5	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,130nm,6.0s						
EYMN	**Ely**	**70.43**	**317**	*e*P	**P**	**17 33 33.0**	**-1.9**
	comp=Z,3.3nm,0.6s,mb4.2						
EYMN	**Ely**	**70.43**	**317**	*e*P	**P**	**17 33 33.0**	**-1.9**
	comp=Z,3.3nm,0.6s,mb4.2						
ULM	**Lac du Bonnet**	**71.14**	**321**	P	**P**	**17 33 38.8**	**-0.3**
	comp=Z,4.5nm,0.5s,mb4.3,baz=66,slow=5.6,SNR=4.8						
ULM	**Lac du Bonnet**	**71.14**	**321**	P	**P**	**17 33 38.8**	**-0.3**
KMI	**Kunming**	**72.56**	**72**	P	**P**	**17 33 46.8**	**-1.2**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.0						
CM31	**Chiang Mai Arr**	**73.80**	**79**	*e*P	**P**	**17 33 53.9**	**-1.3**
	comp=Z,1.1nm,0.4s,mb3.8						
CM31	**Chiang Mai Arr**	**73.80**	**79**	*e*P	**P**	**17 33 53.9**	**-1.4**
	comp=Z,1.1nm,0.4s,mb3.8						
CMAR	**Chiang Mai Arr**	**73.80**	**79**	P	**P**	**17 33 54.8**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.1,baz=304,slow=7.1,SNR=24						
CMAR	**Chiang Mai Arr**	**73.80**	**79**	P	**P**	**17 33 54.8**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.80**	**79**	P	**P**	**17 33 54.8**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.1						
GYA	**Guiyang**	**74.56**	**68**	P	**P**	**17 33 59.0**	**-0.5**
GYA				pP	pP	17 35 12.8	+3.2
GYA				PP	PP	17 36 51.8	+1.3
GYA				S	S	17 43 07.0	-2.3
GYA				SKS		17 43 32.0	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
MDJ	**Mudanjiang**	**76.92**	**42**	P	**P**	**17 34 12.3**	**-0.2**
MDJ				S	S	17 43 28.5	-5.8
MDJ				pmax	pmax		
	comp=Z,170nm,3.6s						
MDJ				LR	LR		
	comp=N,120nm,22.2s						
MDJ				LR	LR		
	comp=E,86nm,19.2s						
MDJ				LR	LR		
	comp=Z,160nm,30.4s						
NJ2	**Nanjing**	**79.27**	**57**	*e*P	**P**	**17 34 25.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
KSRS	**Korea Array**	**81.07**	**48**	P	**P**	**17 34 34.9**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.0,baz=327,slow=4.0,SNR=6.3						
KSRS	**Korea Array**	**81.07**	**48**	P	**P**	**17 34 34.9**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
KSRS	**Korea Array**	**81.07**	**48**	P	**P**	**17 34 34.9**	**-0.1**
	comp=Z,1.0nm,0.5s,mb3.8						
PDAR	**Pinedale Array**	**83.06**	**322**	P	**P**	**17 34 45.4**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.7,baz=54,slow=5.8,SNR=6.8						
ASAR	**Alice Springs**	**126.67**	**91**	PKP	PKPdf	17 41 19.6	-1.2
	comp=Z,0.6nm,0.5s,baz=302,slow=1.6,SNR=25						
ASAR	**Alice Springs**	**126.67**	**91**	PKIKP	PKPdf	17 41 19.7	-1.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

MAN 30 17:41:28, 15.°65N×120.°03E, h17km, mb4.7, ML3.6, MS3.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.73**	**352**	*e*P	Pb	17 41 41.7	-0.6
BOLP				*e*S	Sb	17 41 48.4	-3.7
BCPH	**Baguio City Da**	**0.90**	**36**	↑*i*P	Pb	17 41 45.1	-0.1
BALP	**Baler**	**1.50**	**86**	*e*P	Pn	17 41 55.1	+1.0
BALP				*e*S	Sn	17 42 13.3	+0.1
LUBP	**Lubang**	**1.92**	**174**	*e*P	Pn	17 42 00.7	+0.9
LUBP				*e*S	Sn	17 42 24.6	+1.0
CAUP	**Cauayan**	**2.15**	**53**	*e*P	Pn	17 42 04.2	+1.1
APYP	**Conner**	**2.49**	**28**	*e*P	Sn	17 42 40.3	+2.5
ENPP	**El Nido**	**4.46**	**188**	*e*P	Pn	17 42 33.5	-1.3

IDC ***30*** *17:43:00.9±0.5, 25.°21N×128.°14E, h0km, mb4.5/21, mb1 4.6/23, mb1mx4.6/28, mbtmp4.5/23, ML3.3/2, MS3.8/15, Ms1 3.8/15, ms1mx3.5/35, Error ellipse: s-maj=16.9km s-min=13.1km az=85.0*

NIED ***30*** *17:43:00, 25.°20N×128.°20E, h5km, Mw4.6 Best double couple: M0=9.99000×10^15 NP1:φ=236.00000°, δ=64.00000°, λ=-83.00000°. NP2:φ=41.00000°, δ=27.00000°, λ=-103.00000°.*

SZGRF ***30*** *17:43:01.0, 23.°66N×128.°11E, h33km, mb5.0, MS4.6, Southeast of Ryukyu Islands, Japan*

ISCJB ***30*** *17:43:01.4±0.8, 25.°18N±0.°02×128.°10E±0.°03, h11km±5km, mb4.9/118, MS4.1/32, Error ellipse: s-maj=4.3km s-min=3.5km az=140.7*

JMA ***30*** *17:43:03.3±0.2, 25.°23N×128.°16E, h67km±4km, M5.2*

BJI ***30*** *17:43:04.3, 25.°27N×128.°07E, h26km, mB4.8/36, mb4.6/48, Ms4.6/47, Ms7 4.4/42*

MOS ***30*** *17:43:05.1±1.4, 25.°32N×128.°18E, h33km, mb5.0/51, MS4.1/19, Error ellipse: s-maj=9.0km s-min=5.2km az=109.9*

NEIC ***30*** *17:43:06.5±0.3, 25.°20N×128.°06E, h35km, mb5.0/61, MS4.5/3, MW4.6(NIED), Error ellipse: s-maj=7.8km s-min=5.4km az=154.0*

DJA ***30*** *17:43:20, 25.°08N×128.°05E, h158km, mb4.7/18*

ISC 30 17:43:02.7±0.8, 25.°22N±0.°03×128.°08E±0.°03, h8km±4km, h33km±.6km: pP-P, n310, σ1.915/337, mb4.9/118, MS4.1/32, 15C-10D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.96**	**342**	P	**Pg**	**17 43 21.6**	**+0.3**
JJT2				*e*S	**Sg**	**17 43 35.2**	**+1.4**
NAH1	**Naha**	**1.04**	**341**	P	**Pg**	**17 43 22.6**	**-0.2**
NAH1				*e*S	**Sg**	**17 43 36.5**	**+0.2**
JAGN	**Aguni-jima**	**1.56**	**331**	P	**Pn**	**17 43 30.1**	**-0.7**
JAGN				*e*S	**Sn**	**17 43 49.6**	**-1.6**
JKE	**Kume jima 2**	**1.60**	**314**	P	**Pn**	**17 43 30.9**	**-0.5**
JKE				*e*S	**Sn**	**17 43 50.7**	**-1.6**
JOW	**Kunigami**	**1.62**	**6**	P	**Pn**	**17 43 29.7**	**-1.9**
JOW				*e*S	**Sn**	**17 43 48.6**	**-4.1**
JOW	**Kunigami**	**1.62**	**6**	Pn	**Pn**	**17 43 29.8**	**-1.8**
	135nm,0.3s,baz=184,slow=14,SNR=171						
JOW				Sn	**Sn**	**17 43 48.6**	**-4.1**
	265nm,0.3s,baz=138,slow=22,SNR=18						
JIH	**Iheya**	**1.81**	**357**	P	**Pn**	**17 43 33.2**	**-1.1**
JIH				*e*S	**Sn**	**17 43 53.6**	**-3.9**
JOGS	**Gusukube**	**2.46**	**260**	P	**Pn**	**17 43 42.8**	**-0.4**
JOGS				*e*S	**Sn**	**17 44 12.1**	**-1.4**
JMJ	**Miyako jima 2**	**2.56**	**262**	P	**Pn**	**17 43 44.0**	**-0.5**
JMJ				*e*S	**Sn**	**17 44 14.4**	**-1.3**
JTK	**Tokunoshima**	**2.68**	**17**	P	**Pn**	**17 43 44.1**	**-2.0**
JTK				*e*S	**Sn**	**17 44 13.5**	**-5.3**
JMZ	**Minamidaito 2**	**2.91**	**77**	P	**Pn**	**17 43 44.3**	**-5.0**
JMZ				*e*S	**Sn**	**17 44 16.0**	**-8.4**
JTJ	**Tarama**	**3.12**	**260**	P	**Pn**	**17 43 51.3**	**-0.9**
JTJ				*e*S	**Sn**	**17 44 27.0**	**-2.6**
JAM	**Amami Oshima**	**3.46**	**23**	P	**Pn**	**17 43 55.7**	**-1.3**
JAM				*e*S	**Sn**	**17 44 32.1**	**-6.1**
JZK	**Kikaishima**	**3.52**	**28**	P	**Pn**	**17 43 56.6**	**-1.1**
JZK				*e*S	**Sn**	**17 44 35.3**	**-4.3**
JIJ	**Ishigaki jima**	**3.67**	**257**	P	**Pn**	**17 43 58.2**	**-1.6**
JIJ				*e*S	**Sn**	**17 44 39.8**	**-3.6**
JKRS	**Kuro-shima**	**3.82**	**256**	P	**Pn**	**17 44 00.7**	**-1.2**
IRIF	**Iriomote-Funau**	**4.05**	**258**	P	**Pn**	**17 44 03.8**	**-1.2**
JNN	**Nakanoshima**	**4.88**	**19**	P	**Pn**	**17 44 13.4**	**-3.0**
TATO	**Taipei**	**5.98**	**269**	P	**Pn**	**17 44 32.9**	**+1.4**
NACB	**Ninganchiao**	**5.99**	**261**	*e*P	**Pn**	**17 44 29.3**	**-2.3**
	60nm,0.8s						
YHNB	**Yeheng**	**6.11**	**266**	*e*P	**Pn**	**17 44 33.4**	**+0.2**
	372nm,1.5s						
YULB	**Yu-li**	**6.44**	**255**	*e*P	**Pn**	**17 44 34.1**	**-3.8**
	102nm,0.8s						
SSLB	**Suanglung**	**6.64**	**259**	*e*P	**Pn**	**17 44 38.0**	**-2.6**
	52nm,0.7s						
TWG	**Pinlang**	**6.83**	**251**	*e*P	**Pn**	**17 44 40.3**	**-3.0**
	147nm,0.7s						
TPUB	**Ta-pu**	**7.06**	**256**	*e*P	**Pn**	**17 44 45.0**	**-1.3**
	83nm,0.8s						
JFI	**Itaya**	**8.43**	**13**	P	**Pn**	**17 45 05.3**	**+0.2**
NJ2	**Nanjing**	**10.58**	**312**	*e*P	**Pn**	**17 45 37.5**	**+2.9**
NJ2				pP		17 45 44.5	
NJ2				PP		17 45 46.0	
NJ2				sP		17 45 49.3	
NJ2				S	**Sn**	**17 47 33.0**	**-0.4**
NJ2				sS		17 47 45.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,240nm,9.6s						
NJ2				LR	LR		
	comp=N,1μm,9.3s						
NJ2				LR	LR		
	comp=E,2μm,8.8s						
NJ2				LR	LR		
	comp=Z,2μm,8.2s						
KSRS	**Korea Array**	**12.20**	**359**	Pn	**Pn**	**17 45 56.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=176,slow=13,SNR=12						
KSRS				LR	LR	17 51 32.6	
	comp=Z,429nm,18.2s,baz=66,slow=42						
MAJO	**Matsushiro**	**14.24**	**35**	*e*P	**Pn**	**17 46 33.7**	**+9.0**
MAJO				pmax	pmax		
	comp=Z,137nm,1.6s						
MAJO	**Matsushiro**	**14.24**	**35**	*e*P	**Pn**	**17 46 33.7**	**+9.0**
	comp=Z,138nm,1.6s						
MAT	**Matsushiro**	**14.24**	**35**	P	**Pn**	**17 46 33.1**	**+8.4**
MAT				*e*S	**Sn**	**17 49 15.0**	**+12**
MJAR	**Matsushiro Arr**	**14.24**	**35**	Pn	**Pn**	**17 46 24.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=233,slow=10,SNR=4.3						
TIA	**Tai'an**	**14.44**	**322**	*e*P	**Pn**	**17 46 29.0**	**+1.6**
TIA				LR	LR		
	comp=N,900nm,10.0s						
TIA				LR	LR		
	comp=E,250nm,10.0s						
DL2	**Dalian**	**14.70**	**340**	P	**Pn**	**17 46 28.5**	**-2.4**
DL2				S	**Sn**	**17 49 08.0**	**-6.0**
DL2				pmax	pmax		
	comp=Z,20nm,1.1s						
DL2				pmax	pmax		
	comp=Z,150nm,8.0s						
DL2				LR	LR		
	comp=N,520nm,10.0s						
DL2				LR	LR		
	comp=E,440nm,10.8s						
DL2				LR	LR		
	comp=Z,710nm,10.4s						
SNY	**Shenyang**	**16.98**	**348**	↓*i*P	**Pn**	**17 47 00.8**	**+0.2**
SNY				S	**Sn**	**17 49 59.0**	**-10**
SNY				pmax	pmax		
	comp=Z,39nm,1.6s						
SNY				pmax	pmax		
	comp=Z,520nm,3.7s						
SNY				LR	LR		
	comp=N,1μm,11.0s						
SNY				LR	LR		
	comp=Z,1μm,10.5s						
ENH	**Enshi**	**17.20**	**291**	*e*P	**Pn**	**17 47 05.4**	**+1.9**
	comp=Z,83nm,1.5s						
BJI	**Beijing**	**17.83**	**329**	P	**Pn**	**17 47 12.8**	**+1.6**
BJI				sP	sP	17 47 26.5	+11
BJI				S	**Sn**	**17 50 33.5**	**+3.4**
BJI				pmax	pmax		
	comp=Z,38nm,0.8s						
BJI				LR	LR		
	comp=N,660nm,10.8s						
BJI				LR	LR		
	comp=E,540nm,12.4s						
BJI				LR	LR		
	comp=Z,340nm,26.1s						
QIZ	**Qiongzhong**	**17.97**	**254**	P	**Pn**	**17 47 13.0**	**-0.1**
QIZ				S	**Sn**	**17 50 30.0**	**-3.7**
QIZ				LR	LR		
	comp=N,460nm,9.9s						
QIZ				LR	LR		
	comp=Z,370nm,7.7s						
VLA	**Vladivostok**	**18.13**	**9**	P	**Pn**	**17 47 12.0**	**-2.9**
VLA				MLR	MLR		
	comp=Z,600nm,11.5s						
DAV	**Davao City (W)**	**18.20**	**188**	LR	LR	17 52 35.6	
	comp=Z,401nm,18.8s,baz=339,slow=32						
TIY	**Taiyuan**	**18.22**	**317**	*e*P	**Pn**	**17 47 16.3**	**+0.3**
TIY				pmax	pmax		
	comp=Z,280nm,8.1s						
TIY				LR	LR		
	comp=N,920nm,8.3s						
TIY				LR	LR		
	comp=E,520nm,6.8s						
TIY				LR	LR		
	comp=Z,520nm,9.6s						
CN2	**Changchun**	**18.67**	**354**	*e*P	**Pn**	**17 47 21.0**	**-0.4**
CN2				*e*sP	sP	17 47 33.5	+9.2
CN2				*e*S	**Sn**	**17 50 46.5**	**-3.7**
CN2				*e*SS		17 51 11.0	
CN2				pmax	pmax		
	comp=Z,50nm,1.5s						
CN2				pmax	pmax		
	comp=Z,240nm,5.0s						
CN2				LR	LR		
	comp=N,930nm,12.0s						
CN2				LR	LR		
	comp=E,530nm,12.0s						
CN2				LR	LR		
	comp=Z,890nm,12.0s						
XAN	**Xi'an**	**18.81**	**302**	P	**Pn**	**17 47 22.0**	**-1.2**
XAN				sP	sP	17 47 34.0	+8.0
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,72nm,7.4s						
GYA	**Guiyang**	**19.31**	**278**	↑*i*P	**Pn**	**17 47 31.3**	**+1.9**
GYA				pP	pP	17 47 39.8	+9.2
GYA				sP	sP	17 47 45.0	+13
GYA				PP		17 47 48.3	
GYA				S	**Sn**	**17 51 00.5**	**-5.6**
GYA				sS	sS	17 51 12.5	+2.1
GYA				SS		17 51 26.0	
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,6μm,15.4s						
GYA				LR	LR		
	comp=E,4μm,14.3s						
GYA				LR	LR		
	comp=Z,5μm,15.0s						
MDJ	**Mudanjiang**	**19.40**	**3**	P	**Pn**	**17 47 30.0**	**-0.2**
MDJ				pP	pP	17 47 38.3	+7.0
MDJ				sP	sP	17 47 42.0	+10
MDJ				PcP	PcP	17 51 51.5	+0.8
MDJ				ScP	ScP	17 55 24.8	-2.2
MDJ				PcS	PcS	17 55 29.3	+1.7
MDJ				ScS	ScS	17 59 05.3	-3.4
MDJ				pmax	pmax		
	comp=Z,18nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.9s						
MDJ				LR	LR		
	comp=N,240nm,8.1s						
MDJ				LR	LR		
	comp=E,450nm,12.8s						
MDJ				LR	LR		
	comp=Z,590nm,10.0s						
GUMO	**Guam**	**19.59**	**123**	P	**Pn**	**17 47 33.5**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=247,slow=6.0,SNR=4.6						
GUMO				LR	LR	17 53 02.7	
	comp=Z,207nm,20.8s,baz=298,slow=31						
GUMO	**Guam**	**19.59**	**123**	P	**Pn**	**17 47 33.5**	**+0.8**
GUMO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,207nm,20.8s						
HHC	**Hu-ho-hao-te**	**20.79**	**323**	*e*P	**P**	**17 47 45.3**	**+1.0**
HHC				pP		17 47 54.5	
HHC				sP	sP	17 47 58.5	+11
HHC				PP		17 48 07.8	
HHC				S	**S**	**17 51 30.8**	**-5.7**
HHC				sS	sS	17 51 45.3	+5.2
HHC				PcP	PcP	17 51 54.0	+0.7
HHC				SS		17 52 02.5	
HHC				ScP	ScP	17 55 26.8	-3.6
HHC				pmax	pmax		
	comp=Z,33nm,1.4s						
HHC				pmax	pmax		
	comp=Z,260nm,4.9s						
HHC				LR	LR		
	comp=N,980nm,9.2s						
HHC				LR	LR		
	comp=E,460nm,8.3s						
HHC				LR	LR		
	comp=Z,870nm,9.3s						
ERM	**Erimo**	**20.89**	**33**	*e*P	**P**	**17 47 42.5**	**-2.8**
ERM				pmax	pmax		
	comp=Z,63nm,0.8s						
ERM	**Erimo**	**20.89**	**33**	*e*P	**P**	**17 47 42.5**	**-2.8**
	comp=Z,64nm,0.8s						
KDM	**Kudat**	**21.14**	**212**	P	**P**	**17 47 38.5**	**-10**
BTO	**Baotou**	**21.51**	**320**	*e*P	**P**	**17 47 52.0**	**0.0**
MYLDM	**Lahad Datu**	**21.94**	**206**	P	**P**	**17 47 47.1**	**-10**
CD2	**Chengdu**	**22.18**	**290**	P	**P**	**17 48 00.0**	**+0.7**
CD2				pP		17 48 09.0	
CD2				sP	sP	17 48 13.3	+11
CD2				PP		17 48 26.8	
CD2				S	**S**	**17 51 56.5**	**-7.4**
CD2				sS	sS	17 52 11.5	+4.0
CD2				SS		17 52 36.5	
CD2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
CD2				pmax	pmax		
	comp=Z,460nm,3.8s						
CD2				LR	LR		
	comp=N,2μm,10.8s						
CD2				LR	LR		
	comp=Z,2μm,10.2s,MS4.8						
KKM	**Kota Kinabalu**	**22.19**	**213**	P	**P**	**17 47 49.8**	**-10**
ASAJ	**Asahikawa**	**22.26**	**28**	P	**P**	**17 48 00.8**	**+0.8**
	comp=Z,19nm,0.9s,mb4.5,baz=243,slow=16,SNR=6.3						
ASAJ				LR	LR	17 56 59.0	
	comp=Z,140nm,18.6s,MS3.4,baz=49,slow=38						
ASAJ	**Asahikawa**	**22.26**	**28**	P	**P**	**17 48 00.9**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,19nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,140nm,18.7s						
KMI	**Kunming**	**22.92**	**275**	P	**P**	**17 48 08.8**	**+1.5**
KMI				pP		17 48 18.8	
KMI				sP	sP	17 48 23.0	+12
KMI				PP		17 48 38.8	
KMI				S	**S**	**17 52 11.0**	**-6.7**
KMI				sS	sS	17 52 28.0	+6.3
KMI				SS		17 52 55.5	
KMI				pmax	pmax		
	comp=Z,45nm,1.4s,mb4.7						
KMI				pmax	pmax		
	comp=Z,310nm,6.7s						
KMI				LR	LR		
	comp=N,490nm,10.2s,MS4.4						
KMI				LR	LR		
	comp=E,580nm,10.9s,MS4.4						
KMI				LR	LR		
	comp=Z,500nm,11.6s,MS4.2						
TSM	**Tawau**	**23.00**	**207**	P	**P**	**17 47 58.3**	**-10**
LZH	**Lanzhou**	**23.43**	**303**	P	**P**	**17 48 12.5**	**-0.1**
LZH				pP		17 48 22.8	
LZH				sP	sP	17 48 27.5	+12
LZH				S	**S**	**17 52 24.3**	**-1.6**
LZH				pmax	pmax		
	comp=Z,77nm,1.4s,mb4.9						
LZH				pmax	pmax		
	comp=Z,170nm,4.5s						
LZH				LR	LR		
	comp=E,830nm,13.2s						
LZH				LR	LR		
	comp=Z,980nm,14.5s,MS4.4						
HABR	**Khabarovsk**	**23.86**	**12**	*ce*P	**P**	**17 48 14.6**	**-1.8**
HABR				*e**PP		17 48 23.3	
HABR				*e**SP	sP	17 48 27.7	+7.9
HABR				*e*		17 48 42.4	
HABR				*e*S	**S**	**17 52 29.5**	**-2.9**
HABR				***SS	sS	17 52 44.8	+8.5
HABR				*e*SS		17 53 10.1	
HABR						17 59 18.5	
HABR				pmax	pmax		
	comp=Z,83nm,2.1s,mb4.8						
HABR				pmax	pmax		
	comp=N,48nm,1.8s						
HABR				pmax	pmax		
	comp=E,65nm,2.3s						
HABR				MLR	MLR		
	comp=Z,251nm,15.0s,MS3.8						
KLR	**Kul'dur**	**24.14**	**6**	*e*P	**P**	**17 48 14.0**	**-5.1**
KLR				*e*S	**S**	**17 52 32.0**	**-5.1**
KLR				pmax	pmax		
	comp=E,54nm,2.0s						
KLR				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.2						
KL

YSS pmax pmax
comp=Z,60nm,1.0s,mb5.1
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.1
YSS Yuzh-Sakhalins 24.64 25 *e*P **P 17 48 23.9 +0.2**
comp=Z,305nm,1.3s,mb5.7
KKTK Khon Kaen 25.17 254 P **P 17 48 30.5 +1.7**
comp=Z,309nm,1.0s,mb5.8
GTA Gaotai 27.63 308 *e*P **P 17 48 49.3 -1.4**
GTA pP pP 17 48 59.0 +5.9
GTA sP sP 17 49 03.3 +9.2
GTA PP 17 49 38.0
GTA S **S 17 53 27.3 -5.3**
GTA sS sS 17 53 42.5 +5.9
GTA SS 17 54 48.8
GTA pmax pmax
comp=Z,9.0nm,1.3s,mb4.2
GTA pmax pmax
comp=Z,170nm,6.5s
GTA LR LR
comp=N,440nm,14.0s,MS4.3
GTA LR LR
comp=E,350nm,15.8s,MS4.3
GTA LR LR
comp=Z,270nm,14.0s,MS4.0
CHG Chiang Mai 27.71 263 ⇑P **P 17 48 52.4 +0.7**
comp=Z,19nm,0.9s,mb4.7
CHTO Chiang Mai 27.71 263 *e*P **P 17 48 52.2 +0.5**
CHTO pmax pmax
comp=Z,28nm,1.3s,mb4.7
CHTO Chiang Mai 27.71 263 *e*P **P 17 48 52.2 +0.5**
comp=Z,28nm,1.3s,mb4.7
CMAR Chiang Mai Arr 27.83 262 P **P 17 48 54.2 +1.5**
comp=Z,2.1nm,0.9s,mb3.8,baz=60,slow=7.8,SNR=16
CMAR PcP PcP 17 52 09.9 +1.0
comp=Z,0.6nm,0.8s,baz=67,slow=3.0,SNR=4.7
CMAR LR LR 18 01 01.6
comp=Z,36nm,19.8s,MS3.0,baz=90,slow=39
CMAR Chiang Mai Arr 27.83 262 P **P 17 48 54.3 +1.6**
CMAR 17 52 10.0
CMAR pmax pmax
comp=Z,2.0nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.9s
CMAR MLR MLR
comp=Z,36nm,19.8s
ULN Ulaanbaatar 28.05 329 *e*P **P 17 48 53.0 -1.4**
ULN pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
ULN Ulaanbaatar 28.05 329 *e*P **P 17 48 53.0 -1.4**
comp=Z,6.6nm,0.7s,mb4.4
SONM Songino Array 28.33 328 P **P 17 48 55.7 -1.2**
comp=Z,5.6nm,0.9s,mb4.2,baz=126,slow=7.5,SNR=5.4
SONM LR LR 18 01 36.5
comp=Z,303nm,20.7s,MS3.9,baz=81,slow=39
SONM Songino Array 28.33 328 P **P 17 48 55.7 -1.2**
SONM pmax pmax
comp=Z,6.0nm,1.0s
SONM MLR MLR
comp=Z,303nm,20.7s
KSM Kuching 29.17 219 *e*P **P 17 49 04.9 +0.2**
comp=Z,76nm,1.6s,mb5.2
TLY Talaya 32.33 331 *e*P **P 17 49 32.0 -0.2**
TLY *e*S **S 17 54 43.3 -2.8**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,248nm,13.0s,MS4.1
TLY Talaya 32.33 331 *e*P **P 17 49 31.3 -0.9**
comp=Z,2.5nm,0.7s,mb4.2
SHL Shillong 32.64 279 *e*P **P 17 49 35.0 -0.2**
LSA Lhasa 32.98 286 P **P 17 49 39.8 +1.6**
MOY Mondy 33.51 329 *e*P **P 17 49 50.8 +8.2**
BOD Bodaibo 34.09 347 *e*P **P 17 49 47.2 -0.3**
PETK Petropavlovsk- 35.63 31 P **P 17 49 59.8 -1.1**
comp=Z,5.3nm,0.9s,mb4.5,baz=237,slow=5.1,SNR=5.4
PETK LR LR 18 04 34.1
comp=Z,30nm,20.9s,MS3.0,baz=358,slow=36
PETK Petropavlovsk- 35.63 31 P **P 17 49 59.8 -1.1**
PETK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
PETK MLR MLR
comp=Z,30nm,20.9s,MS3.0
PSI Prapat 35.83 236 P **P 17 50 03.1 +0.1**
comp=Z,14nm,1.2s,mb4.8,baz=338,slow=4.0,SNR=8.1
PSI Prapat 35.83 236 P **P 17 50 03.2 +0.1**
PSI pmax pmax
comp=Z,14nm,1.2s,mb4.8
PET Petropavlovsk 36.03 31 *e*P **P 17 50 03.7 -0.6**
PET pmax pmax
comp=Z,42nm,1.7s,mb5.1
PET Petropavlovsk 36.03 31 *e*P **P 17 50 03.9 -0.4**
comp=Z,22nm,0.9s,mb5.1
TAPN Taplejung 36.15 282 *e*P **P 17 50 07.3 +1.6**
comp=Z,122nm,1.1s,mb5.7
ODAN Odare 36.48 282 *e*P **P 17 50 10.2 +1.7**
comp=Z,132nm,1.0s,mb5.8
YAK Yakutsk 36.82 1 *c i*P **P 17 50 09.6 -1.3**
YAK *e**PP pP 17 50 19.2 +5.9
YAK *e* 17 52 27.2
YAK *e*S **S 17 55 49.9 -5.2**
YAK *e*SS SS 17 58 25.2 -11
YAK *e* 18 00 23.2
YAK pmax pmax
comp=Z,53nm,1.0s,mb5.3
YAK pmax pmax
comp=N,31nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,21nm,1.7s,mb4.7
YAK pmax pmax
comp=N,19nm,1.6s
YAK pmax pmax
comp=E,14nm,2.0s
YAK smax
comp=N,119nm,5.1s
YAK smax
comp=E,32nm,3.5s
YAK MLR MLR
comp=Z,188nm,11.0s,MS4.1
YAK MLR MLR
comp=N,130nm,12.0s,MS4.1
YAK MLR MLR
comp=E,167nm,14.0s,MS4.1
YAK Yakutsk 36.82 1 *e*P **P 17 50 09.6 -1.3**
comp=E,67nm,1.0s,mb5.4
YAK *e* 17 50 19.8
RAMN Ramite 37.17 282 *e*P **P 17 50 14.9 +0.5**
comp=E,99nm,1.4s,mb5.5
WMQ Urumqi 37.65 310 P **P 17 50 19.5 +1.3**
WMQ sP sP 17 50 34.0 +12
WMQ PP PP 17 51 49.5 +5.4
WMQ S **S 17 56 06.5 -1.7**
WMQ sS sS 17 56 24.0 +12
WMQ SS SS 17 58 40.8 -12
WMQ ScS ScS 18 00 27.8 -4.1
WMQ pmax pmax
comp=Z,15nm,1.1s,mb4.6
WMQ LR LR
comp=N,140nm,22.0s,MS3.7
WMQ LR LR
comp=E,83nm,27.0s,MS3.7
WMQ LR LR
comp=Z,190nm,19.5s
GUN Gumba 37.71 284 *e*P **P 17 50 20.6 +1.7**
comp=Z,192nm,1.3s,mb5.7
PKI Pulchoki 38.16 283 *e*P **P 17 50 23.9 +1.2**
comp=Z,82nm,1.1s,mb5.4
PKI Pulchoki 38.16 283 *e*P **P 17 50 23.9 +1.2**
PKI pmax pmax
comp=Z,82nm,1.1s,mb5.4
KKN Kakani 38.25 284 *e*P **P 17 50 24.6 +1.1**
comp=Z,95nm,1.2s,mb5.4
KKN Kakani 38.25 284 *e*P **P 17 50 24.6 +1.1**
KKN pmax pmax
comp=Z,95nm,1.2s,mb5.4
BOK Bokaro 38.30 277 *e*P **P 17 50 25.4 +1.4**
DMN Daman 38.42 283 *e*P **P 17 50 25.2 +0.3**
comp=Z,101nm,1.2s,mb5.4
MK31 Makanchi Array 42.11 313 *e*P **P 17 50 54.5 -0.8**
MKAR Makanchi Array 42.11 313 P **P 17 50 54.6 -0.7**
comp=Z,6.5nm,0.6s,mb4.4,baz=93,slow=11,SNR=56
MKAR PcP PcP 17 52 48.8 -1.1
comp=Z,4.7nm,0.9s,baz=44,slow=1.5,SNR=5.1
MKAR LR LR 18 10 11.8
comp=Z,129nm,19.4s,MS3.8,baz=280,slow=39
MKAR Makanchi Array 42.11 313 P **P 17 50 54.6 -0.7**
MKAR 17 52 48.8
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR pmax pmax
comp=Z,5.0nm,1.0s
MKAR MLR MLR
comp=Z,129nm,19.5s
ZAA0 Zalesovo Array 42.97 324 *e*P **P 17 51 00.7 -1.5**
ZALV Zalesovo Beam 42.97 324 P **P 17 51 00.6 -1.5**
comp=Z,6.6nm,0.8s,mb4.4,baz=109,slow=7.6,SNR=23
ZALV LR LR 18 10 26.8
comp=Z,167nm,19.0s,MS4.0,baz=63,slow=38
ZALV Zalesovo Beam 42.97 324 P **P 17 51 00.6 -1.6**
ZALV pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
ZALV MLR MLR
comp=Z,167nm,19.0s,MS4.0
FITZ Fitzroy Crossi 43.12 183 *e*P **P 17 51 01.7 -2.0**
comp=Z,17nm,1.0s,mb4.7
FITZ Fitzroy Crossi 43.12 183 LR LR 18 08 11.1
comp=Z,70nm,18.4s,MS3.6,baz=2.4,slow=35
FITZ Fitzroy Crossi 43.12 183 *e*P **P 17 51 02.2 -1.5**
comp=Z,39nm,1.5s,mb4.9
KLP Kalpa 43.99 290 *e*P **P 17 51 10.3 -0.4**
KLP AMb AMB 17 51 15.5
comp=Z,14nm,1.0s,mb4.7
NVS Novosibirsk 44.18 324 *e*P **P 17 51 10.5 -1.4**
NVS *e*S **S 17 57 42.4 -2.8**
NVS pmax pmax
comp=Z,33nm,2.2s,mb4.7
NVS pmax pmax
comp=N,13nm,2.1s
NVS pmax pmax
comp=E,28nm,2.1s
NVS smax
comp=E,14nm,1.9s
NVS smax
comp=N,11nm,2.1s
DDI Dehra Dun 44.27 288 *ex* **P 17 51 14.0 +1.0**
AGRA Agra 44.78 284 *e*P **P 17 51 15.6 -1.5**
AGRA AMb AMB 17 51 19.9
comp=Z,62nm,0.3s,mb5.9
SMLA Simla 44.95 290 *e*P **P 17 51 17.6 -0.8**
SMLA AMb AMB 17 51 40.8
comp=Z,72nm,0.0s
BISR Bishrakh 45.02 286 *e*P **P 17 51 16.9 -2.1**
WRAB Tennant Creek 45.29 172 *e*P **P 17 51 19.5 -1.6**
WRAB pmax pmax
comp=Z,42nm,1.3s,mb5.1
WRAB Tennant Creek 45.29 172 *e*P **P 17 51 19.5 -1.5**
comp=Z,42nm,1.3s,mb5.1
KKR Kurukshetra 45.37 288 *e*P **P 17 51 21.9 +0.1**
SONA Sohna 45.37 286 *e*P **P 17 51 20.6 -1.2**
SONA AMb AMB 17 51 25.7
comp=Z,34nm,1.1s,mb5.1
KURK Kurchatov 45.46 317 P **P 17 51 22.9 +0.7**
comp=Z,76nm,1.0s,mb5.5,SNR=12
KURK Kurchatov 45.46 317 *c i*P **P 17 51 21.8 -0.4**
KURK pmax pmax
comp=Z,28nm,1.7s,mb4.8
KURK Kurchatov 45.46 317 *e*P **P 17 51 20.8 -1.4**
comp=Z,13nm,1.0s,mb4.7
ULHL Ulahol 45.62 305 P **P 17 51 23.8 +0.3**
SNR=11
KSH Kashi 45.66 301 P **P 17 51 28.0 +4.1**
KSH *e*pP pP 17 51 37.0 +11
KSH *e*sP sP 17 51 41.3 +14
KSH *e*PcP PcP 17 53 01.3 -0.8
KSH *e*PP PP 17 53 17.3 +6.5
KSH *e*ScP ScP 17 56 51.0 -4.4
KSH *e*PcS PcS 17 56 54.0 -2.1
KSH *e*S **S 17 58 08.8 +1.8**
KSH *e*ScS ScS 18 01 17.0 -3.8
KSH pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KSH pmax pmax
comp=Z,110nm,5.7s
KSH LR LR
comp=N,170nm,8.4s
KSH LR LR
comp=E,210nm,9.0s
KSH LR LR
comp=Z,210nm,6.6s
BHPL Bhopal 46.01 279 *e*P **P 17 51 25.4 -1.6**
BHPL AMb AMB 17 51 28.2
comp=Z,16nm,0.3s,mb5.4
TKM2 Tokmak 2 46.15 306 P **P 17 51 28.3 +0.5**
SNR=14
TKM2 Tokmak 2 46.15 306 *e*P **P 17 51 28.0 +0.2**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TKM2 Tokmak 2 46.15 306 *e*P **P 17 51 28.0 +0.2**
comp=Z,9.0nm,0.8s,mb4.8
KZA Kyzart 46.34 305 P **P 17 51 30.4 +1.2**
SNR=7.4
TIXI Tiksi 46.47 0 *e*P **P 17 51 28.0 -1.8**
TIXI pmax pmax
comp=Z,28nm,2.0s,mb4.8
TIXI MLR MLR
comp=Z,265nm,9.0s
TIXI Tiksi 46.47 0 *e*P **P 17 51 28.6 -1.2**
comp=Z,41nm,1.8s,mb5.1
KHET Khetri 46.52 286 *e*P **P 17 51 30.5 -0.3**
KHET AMb AMB 17 51 35.4
comp=Z,16nm,1.4s,mb4.8
HYB Hyderabad 46.57 271 *i* P **P 17 51 32.0 +0.6**
KBK Karagaybulak 46.61 306 P **P 17 51 33.3 +1.9**
SNR=8.7
UCH Uchtor 46.90 305 P **P 17 51 35.3 +1.6**
SNR=21
UCH Uchtor 46.90 305 *e*P **P 17 51 35.1 +1.5**
comp=Z,11nm,0.8s,mb4.8
AAK Ala-Archa 46.94 306 LR LR 18 14 52.8
comp=Z,333nm,21.8s,MS4.3,baz=146,slow=41
AAK Ala-Archa 46.94 306 *ce*P **P 17 51 35.7 +1.8**
AAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.8
AML Almayashu 47.50 305 *e*P **P 17 51 38.9 +0.6**
comp=Z,7.1nm,1.0s,mb4.7
CTA Charters Tower 48.38 157 *e*P **P 17 51 43.1 -2.1**
comp=Z,8.2nm,0.9s,mb4.8
CTA Charters Tower 48.38 157 P **P 17 51 44.3 -1.0**
comp=Z,8.4nm,1.0s,mb4.7,baz=346,slow=9.5,SNR=6.6
CTA Charters Tower 48.38 157 P **P 17 51 44.3 -0.9**
CTA pmax pmax
comp=Z,8.0nm,1.0s
BILL Biiibino 48.67 18 ⇓*e*P **P 17 51 47.0 0.0**
BILL *e* 17 51 55.4
BILL pmax pmax
comp=Z,19nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,100nm,14.0s,MS4.0
ASAR Alice Springs 48.92 173 P **P 17 51 48.1 -1.2**
comp=Z,4.9nm,0.9s,mb4.5,baz=0.4,slow=7.4,SNR=26
ASAR Alice Springs 48.92 173 P **P 17 51 48.1 -1.2**
ASAR pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 50.94 319 P **P 17 52 04.8 +0.4**
comp=Z,3.7nm,0.6s,mb4.5,baz=98,slow=8.4,SNR=33
BVAR LR LR 18 15 00.9
comp=Z,270nm,20.5s,MS4.2,baz=88,slow=38
BVAR Borovoye Array 50.94 319 P **P 17 52 04.8 +0.3**
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BVAR MLR MLR
comp=Z,270nm,20.5s
JASL Jaisalmer 51.01 285 *e*P **P 17 52 05.7 +0.3**
JASL AMb AMB 17 52 09.1
comp=Z,28nm,1.1s,mb5.1
BRVK Borovoye 51.01 319 P **P 17 52 04.2 -0.8**
comp=Z,63nm,1.2s,mb5.4,SNR=5.3
BRVK Borovoye 51.01 319 *ce*P **P 17 52 04.6 -0.4**
BRVK pmax pmax
comp=Z,16nm,1.2s,mb4.8
BRVK Borovoye 51.01 319 *e*P **P 17 52 04.5 -0.5**
comp=Z,18nm,1.1s,mb4.9
KBL Kabul 51.40 295 *e*P **P 17 52 08.8 +0.6**
KBL pmax pmax
comp=Z,43nm,1.2s,mb5.2
KBL Kabul 51.40 295 *e*P **P 17 52 08.8 +0.6**
comp=Z,43nm,1.2s,mb5.2
MORW Morawa 55.20 193 *e*P **P 17 52 34.7 -1.3**
FORT Forrest 55.68 180 *e*P **P 17 52 38.4 -1.1**
comp=Z,20nm,0.9s,mb5.1
SVE Sverdlovsk 56.98 323 ⇓*e*P **P 17 52 48.5 0.0**
SVE *e*PPP 17 56 20.7
SVE *e* 18 02 30.9
SVE pmax pmax
comp=Z,20nm,1.3s,mb5.0
SVE MLR MLR
comp=Z,279nm,17.0s,MS4.4
ABKAR Akbulak array 57.24 314 *e*P **P 17 52 50.6 +0.1**
comp=Z,7.0nm,0.7s,mb4.8
ARU Arti 58.10 322 *d i*P **P 17 52 56.6 +0.1**
ARU *e* 17 53 44.4
ARU *e* 17 55 03.5
ARU S **S 18 00 58.3 +0.7**
ARU SS SS 18 04 43.3 -5.3
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.8
ARU MLR MLR
comp=Z,335nm,19.0s,MS4.5
ARU Arti 58.10 322 *e*P **P 17 52 55.4 -1.1**
comp=Z,9.5nm,1.0s,mb4.8
STKA Stephens Creek 58.22 166 *e*P **P 17 52 56.1 -1.4**
comp=Z,4.3nm,1.8s,mb4.2
STKA Stephens Creek 58.22 166 P **P 17 52 55.8 -1.7**
comp=Z,5.6nm,0.9s,mb4.6,baz=339,slow=6.5,SNR=9.0
STKA LR LR 18 16 15.2
comp=Z,106nm,19.4s,MS4.0,baz=24,slow=34
CMSA Cobar Meteorol 58.89 162 *e*P **P 17 53 01.3 -0.9**
SOKR Solikamsk 59.16 326 *d i*P **P 17 53 04.3 +0.5**
SOKR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SOKR MLR MLR
comp=Z,290nm,23.0s,MS4.3
ABKT Ailbek 59.68 301 P **P 17 53 09.9 +2.1**
comp=Z,101nm,1.2s,mb5.7,SNR=5.2
TTA Tatalina 61.47 30 *e*P **P 17 53 20.0 +0.5**
SVW2 Sparrevohn 61.69 32 *e*P **P 17 53 22.4 +1.3**
YNG Young 62.25 161 *e*P **P 17 53 23.7 -1.4**
comp=Z,5.7nm,0.9s,mb4.7
RSO Redoubt South 63.11 33 *e*P **P 17 53 31.2 +0.7**
CHUM Lake Minchumin 63.11 29 *e*P **P 17 53 31.5 +1.0**
comp=Z,16nm,1.0s,mb5.1
PPLA Purkeypile 63.22 30 *e*P **P 17 53 31.5 +0.2**
comp=Z,39nm,1.4s,mb5.3
BPAW Bear Paw Mtn. 63.69 29 *e*P **P 17 53 34.5 +0.2**
comp=Z,17nm,1.1s,mb5.0
KTH Kantishna Hill 63.75 30 *e*P **P 17 53 34.9 +0.1**
comp=Z,20nm,1.5s,mb4.9
COLD Coldfoot 63.83 25 *e*P **P 17 53 34.8 -0.5**
comp=Z,10nm,1.2s,mb4.7
MCK McKinley 64.62 29 *e*P **P 17 53 40.0 -0.5**
MCK pmax pmax
comp=Z,22nm,0.9s,mb5.2
MCK McKinley 64.62 29 *e*P **P 17 53 40.0 -0.5**
comp=Z,22nm,0.9s,mb5.2
PAX Paxson 66.27 30 *e*P **P 17 53 51.5 +0.4**
PAX pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
PAX Paxson 66.27 30 *e*P **P 17 53 51.5 +0.3**
comp=Z,6.4nm,0.8s,mb4.7
BMRM Bremner River 67.02 32 *e*P **P 17 53 56.2 +0.2**
comp=Z,61nm,1.5s,mb5.4
MENT Mentasta 67.06 30 *e*P **P 17 53 56.5 +0.3**
EGAK Eagle 67.81 28 *e*P **P 17 54 00.8 -0.1**
comp=Z,4.5nm,0.9s,mb4.5
VRHR Novokhopersk 68.64 317 *e*P **P 17 54 06.7 +0.3**
VRHR *e**PP pP 17 54 16.3 +7.4
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,8.0nm,0.7s
APA Apatity 68.72 336 ⇑*e*P **P 17 53 57.0 -10**
APA MLR MLR
comp=Z,200nm,14.0s,MS4.5
DAWY Dawson 68.72 28 *e*P **P 17 54 06.3 -0.3**
ZEI Tsey 69.25 308 *e*P **P 17 54 10.8 +0.5**
ZEI pmax pmax
comp=Z,20nm,0.9s,mb5.0
GNI Garni 69.35 306 *c i*P **P 17 54 11.8 +0.8**
GNI pmax pmax
comp=Z,19nm,1.5s
KIV Kislovodsk 69.78 310 P **P 17 54 15.1 +1.5**
comp=Z,293nm,0.9s,mb6.2,SNR=7.7
KIV Kislovodsk 69.78 310 *ce*P **P 17 54 14.3 +0.7**
KIV *e**PP pP 17 54 24.1 +8.0
KIV *e* 17 54 34.0
KIV pmax pmax
comp=Z,60nm,1.7s,mb5.2
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
KIV Kislovodsk 69.78 310 *e*P **P 17 54 15.2 +1.7**
comp=Z,84nm,1.3s,mb5.5
MOS Moscow 69.80 323 *e*P **P 17 54 12.8 -0.6**
MOS *e* 17 54 33.0
MOS pmax pmax
comp=Z,67nm,1.0s,mb5.5
INK Inuvik 69.87 23 *e*P **P 17 54 12.5 -1.2**
INK *e* 17 54 23.2
INK pmax pmax
comp=Z,16nm,1.1s
INK Inuvik 69.87 23 *e*P **P 17 54 12.5 -1.2**
comp=Z,16nm,1.1s,mb4.9
INK *e* 17 54 23.2
VOR Voronezh 69.95 319 *e*P **P 17 54 13.0 -1.5**
VOR pmax pmax
comp=Z,140nm,1.2s,mb5.8
VORD Divnogorie 70.10 318 *e*P **P 17 54 15.6 +0.2**
VORD *e**PP pP 17 54 24.7 +6.7
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 70.11 318 *e*P **P 17 54 15.6 +0.1**
VSR *e**PP pP 17 54 24.9 +6.9
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,1.4s
KBS Kingsbay 70.21 349 *ce*P **P 17 54 17.6 +1.9**
KBS pmax pmax
comp=Z,19nm,1.2s,mb4.9
OBN Obninsk 70.54 322 P **P 17 54 18.6 +0.6**
comp=Z,238nm,0.6s,mb6.3,SNR=5.0
OBN Obninsk 70.54 322 *d i*P **P 17 54 18.6 +0.6**
OBN *i* *PP pP 17 54 27.6 +7.0
OBN *e* 17 54 36.5
OBN pmax pmax
comp=Z,69nm,1.7s,mb5.3
OBN Obninsk 70.54 322 *e*P **P 17 54 19.0 +1.0**
comp=Z,75nm,1.3s,mb5.5
ARCES ARCESS Array B 70.90 339 P **P 17 54 19.6 -0.4**
comp=Z,5.2nm,0.9s,mb4.5,baz=54,slow=6.2,SNR=9.9
ARCES ARCESS Array B 70.90 339 P **P 17 54 19.6 -0.3**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ANN Anapa 73.12 312 *e*P **P 17 54 42.0 +8.2**
ANN pmax pmax
comp=Z,32nm,0.8s,mb5.3
FINES FINESS Array B 73.68 331 P **P 17 54 36.5 -0.2**
comp=Z,4.3nm,0.7s,mb4.5,baz=71,slow=6.0,SNR=23
FINES FINESS Array B 73.68 331 P **P 17 54 36.5 -0.2**
FINES pmax pmax
comp=Z,4.0nm,0.7s
VSU Vasula 74.53 328 *d i*P **P 17 54 42.7 +1.0**
SIM Simferopol' 75.29 313 *e*P **P 17 54 48.4 +2.0**
SIM pmax pmax
comp=Z,15nm,1.1s,mb4.8
SIM MLR MLR
comp=Z,80nm,19.6s,MS4.0
MICGM Minsk 75.49 324 *e* **P 17 54 46.0 -1.3**
MNK Minsk 75.51 324 *e*P **P 17 54 46.0 -1.5**
IDID Didziasalis 75.77 325 *e*P **P 17 54 50.1 +1.2**
IZAR Zarasai 75.85 325 *e*P **P 17 54 50.1 +0.8**
ISAL Salakas 75.98 325 *e*P **P 17 54 51.3 +1.1**
IIGN Ignalina 76.03 325 *e*P **P 17 54 51.6 +1.2**
AKASG Malin Array Be 76.21 320 P **P 17 54 51.0 -0.6**
comp=Z,15nm,0.9s,mb4.9,baz=57,slow=6.2,SNR=41
AKASG LR LR 18 30 46.4
comp=Z,202nm,21.5s,MS4.4,baz=50,slow=38
AKASG Malin Array Be 76.21 320 *ce*P **P 17 54 51.7 +0.2**

AKASG pmax pmax
comp=Z,15nm,0.9s
AKBB Malin Array Si 76.21 320 *e*P **P 17 54 50.8 -0.7**
AKBB *e* 17 55 00.7
KIEV Kiev 76.22 320 *e*P **P 17 54 50.6 -1.0**
KIEV *e* 17 55 00.8
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.9
KIEV Kiev 76.22 320 *e*P **P 17 54 50.6 -1.0**
comp=Z,12nm,0.8s,mb4.9
KIEV *e* 17 55 00.8
DAG Danmarks Havn 76.24 353 ⇓*i*P **P 17 54 51.2 -0.1**
DAG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
DAG Danmarks Havn 76.24 353 ⇓*i*P **P 17 54 51.2 -0.1**
comp=Z,2.2nm,0.8s,mb4.1
RES Resolute Bay 76.57 11 *e*P **P 17 54 52.8 -0.4**
RES *e* 17 55 02.4
RES pmax pmax
comp=Z,13nm,1.0s,mb4.8
RES Resolute Bay 76.57 11 *e*P **P 17 54 52.8 -0.4**
comp=Z,13nm,1.0s,mb4.8
RES *e* 17 55 02.4
BR131 Keskin Array S 77.55 308 *e*P **P 17 54 59.6 +0.3**
comp=Z,8.9nm,0.9s,mb4.7
BRTR Keskin Array B 77.55 308 P **P 17 54 59.7 +0.4**
comp=Z,8.6nm,0.9s,mb4.7,baz=96,slow=5.0,SNR=41
BRTR LR LR 18 32 23.3
comp=Z,35nm,18.2s,MS3.7,baz=245,slow=38
BRTR Keskin Array B 77.55 308 *ce*P **P 17 54 59.9 +0.6**
BRTR pmax pmax
comp=Z,9.0nm,0.9s
SUW Suwalki 78.19 324 *e*P **P 17 55 03.0 +0.4**
SUW *e* 17 55 12.9
SUW pmax pmax
comp=Z,36nm,0.9s,mb5.3
SUW Suwalki 78.19 324 *e*P **P 17 55 03.0 +0.4**
comp=Z,36nm,0.9s,mb5.3
SUW *e* 17 55 12.8
MMAI Mount Meron Ar 78.80 301 P **P 17 55 05.7 -0.7**
comp=Z,0.5nm,0.4s,mb3.8,baz=123,slow=6.2,SNR=5.5
YKA Yellowknife Ar 79.50 25 P **P 17 55 09.2 -0.4**
comp=Z,4.0nm,0.9s,mb4.3,baz=298,slow=5.6,SNR=17
YKA Yellowknife Ar 79.50 25 P **P 17 55 09.2 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 79.50 25 P **P 17 55 09.2 -0.4**
BUR08 Bucovina Ar. S 79.89 318 *e*P **P 17 55 13.2 +1.1**
BUR08 *e* 17 55 23.0
NB2 NORSAR Subarra 80.16 334 P **P 17 55 12.4 -0.8**
comp=Z,0.7nm,0.7s,mb3.7,baz=60,slow=5.9
NOA NORSAR Array B 80.16 334 P **P 17 55 12.6 -0.7**
comp=Z,7.5nm,0.9s,mb4.6,baz=53,slow=5.3,SNR=28
NOA NORSAR Array B 80.16 334 P **P 17 55 12.6 -0.6**
NOA pmax pmax
comp=Z,8.0nm,0.9s
KWP Kalwaria Pacla 80.46 321 *e*P **P 17 55 15.8 +0.7**
KWP Kalwaria Pacla 80.46 321 P **P 17 55 15.5 +0.4**
KWP pmax pmax
comp=Z,20nm,0.9s,mb5.0
KWP Kalwaria Pacla 80.46 321 P **P 17 55 15.5 +0.5**
comp=Z,20nm,0.9s,mb5.0
KOLS Kolonicke sedl 81.03 320 *e*P **P 17 55 19.4 +1.2**
KOLS *e* 17 55 29.1
KOLS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
KOLS Kolonicke sedl 81.03 320 *e*P **P 17 55 19.4 +1.2**
comp=Z,7.8nm,1.5s,mb4.4
KOLS *e* pP 17 55 22.1 +1.3
KOLS *e* 17 55 29.1
KOLS Kolonicke sedl 81.03 320 *e*P **P 17 55 19.4 +1.2**
KOLS *e*PCP PcP 17 55 22.1 -2.5
KOLS *e*pP pP 17 55 29.1 +8.3
UZH Uzhgorod 81.17 320 *e*P **P 17 55 20.6 +1.7**
UZH *e* 17 55 28.4
UZH *e* 17 55 36.0
STHS Stebnicka Huta 81.40 321 *e*P **P 17 55 21.5 +1.4**
STHS *e* 17 55 36.0
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
STHS Stebnicka Huta 81.40 321 *e*P **P 17 55 21.5 +1.4**
comp=Z,2.6nm,1.1s,mb4.1
STHS *e* 17 55 36.0
STHS Stebnicka Huta 81.40 321 *e*P **P 17 55 21.5 +1.4**
STHS *e*pP pP 17 55 36.0 +13
OJC Ojcow 81.83 322 *e*P **P 17 55 22.0 -0.3**
OJC *e*PcP PcP 17 55 27.5 -0.5
NIE Niedzica 81.93 321 *e*P **P 17 55 24.5 +1.6**
SUMG Summit 82.03 356 *e*P **P 17 55 23.4 +0.4**
comp=Z,22nm,0.9s,mb5.1
SUMG *e* 17 55 33.5
KECS Kecovo 82.29 320 *e*P **P 17 55 27.8 +3.0**
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
KECS Kecovo 82.29 320 *e*P **P 17 55 27.8 +3.0**
comp=Z,3.2nm,1.3s,mb4.1
KECS Kecovo 82.29 320 *e*P **P 17 55 27.8 +3.0**
RZN Rozhen 82.88 313 *e*P **P 17 55 29.3 +1.3**
VYHS Vyhne 83.23 321 *e*P **P 17 55 30.7 +1.0**
VYHS *e* 17 55 40.3
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
VYHS Vyhne 83.23 321 *e*P **P 17 55 30.7 +1.0**
comp=Z,6.2nm,1.1s,mb4.5
VYHS *e* 17 55 40.3
VYHS *e* 17 55 52.0
VYHS Vyhne 83.23 321 *e*P **P 17 55 30.7 +1.0**
VYHS *e*pP pP 17 55 40.3 +8.0
VYHS *e* 17 55 52.0
MORC Moravsky Berou 83.30 322 *e*P **P 17 55 31.0 +1.0**
MORC pmax pmax
comp=Z,15nm,1.5s,mb4.8
MORC Moravsky Berou 83.30 322 *e*P **P 17 55 30.9 +0.9**
comp=Z,15nm,1.5s,mb4.8
KSP Ksiaz 83.42 324 *e*P **P 17 55 31.5 +0.9**
VTS Vitosha 83.45 314 P **P 17 55 31.0 0.0**
MMB Musomiste 83.58 313 P **P 17 55 31.8 +0.1**
DPC Dobruska-Polom 83.67 323 *e*P **P 17 55 32.1 +0.2**
DPC *e*pP pP 17 55 42.9 +8.4
DPC AMS AMS 18 35 40.0
comp=Z,200nm,15.6s
UPC Upice 83.75 323 *e*P **P 17 55 34.0 +1.7**
UPC *e*pP pP 17 55 43.2 +8.2
RUE Ruedersdorf 83.84 326 *e*P **P 17 55 34.0 +1.2**
comp=Z,18nm,0.7s,mb5.3
KKB Krupnik 83.88 313 P **P 17 55 33.1 -0.1**
PVCC Panska Ves 84.52 324 *e*P **P 17 55 37.3 +1.1**
PVCC *e*pP pP 17 55 46.9 +8.1
PVCC AMS AMS 18 36 00.0
comp=Z,200nm,20.2s
BRG Berggiesshubel 84.66 324 *e*P **P 17 55 38.0 +1.1**
comp=Z,13nm,1.3s,mb4.9
BRG *e*pP pP 17 55 47.3 +7.8
BRG Berggiesshubel 84.66 324 *e*PKP **P 17 55 37.8 +0.9**
comp=Z,13nm,1.3s,mb4.9
BRG *e* 17 55 47.1
comp=Z,18nm,1.4s
TREC Trest 84.69 323 *e*P **P 17 55 38.1 +0.9**
TREC MLR MLR
comp=Z,200nm,19.7s,MS4.5
TREC Trest 84.69 323 *e*P **P 17 55 38.1 +0.9**
TREC AMS AMS 18 36 00.0
comp=Z,200nm,19.7s
BSEG Bad Segeberg 84.71 328 *e*P **P 17 55 37.6 +0.5**
comp=Z,8.0nm,0.9s,mb4.8
PRU Pruhonice 84.83 324 *e*P **P 17 55 39.4 +1.6**
PRU *e*pP pP 17 55 48.7 +8.3
PRU *ex* x 17 55 56.0
PRU AMS AMS 18 36 10.0
comp=Z,200nm,19.0s
CLL Collm 84.90 325 *e*P **P 17 55 38.8 +0.6**
comp=Z,12nm,1.1s,mb4.9
CLL *e*pP pP 17 55 48.5 +7.7
CLL Collm 84.90 325 ⇓*i*P **P 17 55 38.2 0.0**
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.9
CLL MLR MLR
comp=Z,300nm,19.0s,MS4.7
CLL Collm 84.90 325 *i*P **P 17 55 38.2 0.0**
comp=Z,12nm,1.1s,mb4.9
CLL *i* pP 17 55 39.4 -1.4
CLL LR LR
comp=Z,300nm,19.0s,MS4.7
CLL Collm 84.90 325 *i*P **P 17 55 38.2 0.0**
comp=Z,13nm,1.0s,mb5.0
CLL LmH 17 37 00.0
comp=Z,300nm,19.0s
CLL *i*pP pP 17 55 48.6 +7.8
CLL *i*(sP) sP 17 55 55.0 +13
CLL *i* 17 55 59.4
CLL *e*PP PP 17 58 54.0 -0.1
CLL *e*pPP 17 59 00.0
CONA Conrad Observa 85.23 321 ⇑*i*P **P 17 55 41.2 +1.4**
comp=Z,13nm,1.1s,mb5.0
TANN Tannenbergstha 85.69 325 *e*P **P 17 55 43.3 +1.2**
comp=Z,9.0nm,1.3s,mb4.8
GUNZ Gunzen 85.79 325 *e*pP pP 17 55 53.6 +8.4
NKC Novy Kostel 85.81 325 *e*P **P 17 55 43.6 +0.9**
NKC *e*pP pP 17 55 53.0 +7.7
KHC Kasperske Hory 85.83 323 *e*P **P 17 55 44.3 +1.4**
comp=Z,22nm,1.8s,mb5.1
KHC Kasperske Hory 85.83 323 *e*P **P 17 55 44.0 +1.2**
KHC *e*pP pP 17 55 53.2 +7.7
KHC *ex* x 17 56 00.4
KHC AMS AMS 18 36 40.0
comp=Z,200nm,18.7s
GEC2 GERESS Array S 85.92 323 *e*P **P 17 55 43.9 +0.6**
comp=Z,7.0nm,1.1s,mb4.8
GEC2 *e*pP pP 17 55 53.9 +8.0
GEC2 GERESS Array S 85.92 323 *e*P **P 17 55 43.9 +0.6**
GEC2 *e*PP pP 17 55 53.9 +8.0
GEC2 pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
GERES GERESS Array B 85.92 323 P **P 17 55 44.1 +0.8**
comp=Z,2.6nm,0.8s,mb4.5,baz=63,slow=3.3,SNR=21
GERES GERESS Array B 85.92 323 P **P 17 55 44.1 +0.8**
GERES pmax pmax
comp=Z,3.0nm,0.8s
CLZ Clausthal 85.93 327 *e*P **P 17 55 44.5 +1.2**
comp=Z,9.0nm,1.0s,mb5.0
CLZ Clausthal 85.93 327 *e*P **P 17 55 44.5 +1.2**
CLZ pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
HUMO Hull Mountain 86.08 44 *e*P **P 17 55 44.1 -0.1**
comp=Z,6.2nm,1.1s,mb4.8
MOA Molln 86.17 322 ⇑*i*P **P 17 55 45.1 +0.6**
comp=Z,5.4nm,0.8s,mb4.8
ROTZ Rotzenmuhle 86.20 324 *e*P **P 17 55 46.2 +1.5**
comp=Z,10.0nm,1.0s,mb5.0
ROTZ *e*pP pP 17 55 55.6 +8.3
GRA1 Grafenberg Arr 86.77 325 *e*P **P 17 55 48.5 +1.1**
comp=Z,12nm,0.9s,mb5.1
GRA1 *e*pP pP 17 55 58.7 +8.6
GRA1 LR LR
comp=Z,200nm,21.0s,MS4.5
GRF Grafenberg Arr 86.77 325 *e*P **P 17 55 48.5 +1.1**
comp=Z,12nm,0.9s,mb5.1
GRF *e*pP pP 17 55 58.7 +8.6
GRF *e*L 18 38 13.0
comp=Z,229nm,21.0s
GRF Grafenberg Arr 86.77 325 *e*P **P 17 55 48.5 +1.1**
GRF *e*PP pP 17 55 58.7 +8.6
GRF pmax pmax
comp=Z,12nm,0.9s,mb5.1
GRF MLR MLR
comp=Z,200nm,21.0s,MS4.5
GRF Grafenberg Arr 86.77 325 *e*P **P 17 55 48.5 +1.1**
GRF *e*PP pP 17 55 58.7 +8.6
GRF pmax pmax
comp=Z,12nm,0.9s,mb5.1
GRF MLR MLR
comp=Z,200nm,21.0s,MS4.5
MOD Modoc 88.12 44 *e*P **P 17 55 54.1 -0.1**
comp=Z,8.8nm,1.1s,mb4.9
MOD *e* 17 56 04.5
MEM Membach 88.85 327 P **P 17 55 56.0 -1.4**
WLF Walferdange 89.38 327 P **P 17 56 00.0 +0.1**
comp=Z,10.0nm,2.1s,mb4.8
WLF Walferdange 89.38 327 *e*P **P 17 55 59.8 -0.1**
comp=Z,10.0nm,1.1s,mb5.1
FFC Flin Flon 89.56 26 *e*P **P 17 55 59.7 -0.9**
FFC *e* 17 56 10.0
FFC pmax pmax
comp=Z,19nm,1.4s,mb5.2
FFC Flin Flon 89.56 26 *e*P **P 17 55 59.7 -1.0**
comp=Z,19nm,1.4s,mb5.2
FFC *e* 17 56 10.0
DLMT Dillon 90.71 38 *e*P **P 17 56 06.1 -0.1**
comp=Z,4.3nm,0.9s,mb4.8
HLID Hailey 90.76 40 *e*P **P 17 56 07.0 +0.6**
comp=Z,5.2nm,1.2s,mb4.7
KMBO Kilima Mbogo 91.22 269 *i*P **P 17 56 03.5 -5.7**
KMBO pmax pmax
comp=Z,4μm,0.3s
NVAR Mina Array Bea 91.31 46 P **P 17 56 09.3 +0.1**
comp=Z,1.5nm,0.9s,mb4.3,baz=270,slow=5.0,SNR=12
NVAR Mina Array Bea 91.31 46 P **P 17 56 09.3 +0.1**
PDAR Pinedale Array 94.04 39 P **P 17 56 21.0 -0.7**
comp=Z,0.6nm,0.9s,mb4.0,baz=341,slow=3.1,SNR=4.9
SDV Santo Domingo 141.52 31 PKP PKPdf 18 02 34.8 -0.6
comp=Z,6.6nm,0.9s,baz=302,slow=4.5,SNR=7.9
ATAH Atahualpa 148.89 59 PKPbc PKPbc 18 02 52.9 +0.9
comp=Z,8.4nm,0.9s,baz=358,slow=9.0,SNR=3.6
LPAZ La Paz 162.45 63 PKP PKPdf 18 03 06.7 +0.8
comp=Z,0.4nm,0.4s,baz=232,slow=7.5,SNR=3.9
LPAZ PKPab PKPab 18 03 51.9 -1.6
comp=Z,1.4nm,0.9s,baz=276,slow=3.2,SNR=3.9
LPAZ La Paz 162.45 63 PKIKP PKPdf 18 03 06.7 +0.8
LPAZ 18 03 51.9
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
CPUP Villa Florida 175.00 104 PKP PKPdf 18 03 13.7 0.0
comp=Z,0.4nm,0.4s,baz=50,slow=11,SNR=2.9

ISCJB ***30*** *17:49:44.4±1.0, 1°.3S±0°.1×89°.04E±0°.09, h10km, mb3.6/13, Error ellipse: s-maj=19.8km s-min=11.7km az=24.6*
IDC ***30*** *17:49:44.6±1.2, 1°.48S×88°.91E, h0km, mb3.5/9, mb1 3.6/10, mb1mx3.5/26, mbtmp3.5/10, ML4.3/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=36.2km s-min=19.2km az=50.0*
NEIC ***30*** *17:49:46.7±1.0, 1°.32S×89°.02E, h10km, mb3.8/4, Error ellipse: s-maj=20.4km s-min=12.5km az=204.0*
ISC 30 17:49:46.6±1.0, 1°.4S±0°.1×89°.03E±0°.09, h10km, n19, σ19°16/20, mb3.6/13, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**10.73**	**67**	Pn	**Pn**	**17 52 20.0**	**-0.5**
	0.4nm,0.3s,baz=258,slow=15,SNR=3.0						
PSI				LR	LR	17 56 22.3	
	comp=Z,148nm,18.5s,baz=315,slow=37						
PALK	**Pallekele**	**11.95**	**316**	Pn	**Pn**	**17 52 37.2**	**0.0**
	8.5nm,0.3s,baz=132,slow=12,SNR=44						
PALK				Sn	**Sn**	**17 54 38.3**	**-12**
	4.3nm,0.3s,baz=205,slow=23,SNR=7.9						
PALK	**Pallekele**	**11.95**	**316**	*e*Pn	**Pn**	**17 52 37.0**	**-0.2**
	22nm,0.4s						
PALK				*e*Sn	**Sn**	**17 54 34.6**	**-16**
KULM	**Kulim**	**13.37**	**60**	P	**Pn**	**17 52 55.5**	**-1.1**
	14nm,1.1s						
KSM	**Kuching**	**21.47**	**83**	*e*P	**P**	**17 54 37.8**	**+2.2**
	2.8nm,0.7s,mb3.7						
CM31	**Chiang Mai Arr**	**21.99**	**26**	*e*P	**P**	**17 54 41.3**	**+0.2**
	1.4nm,0.6s,mb3.6						
CMAR	**Chiang Mai Arr**	**21.99**	**26**	P	**P**	**17 54 42.1**	**+1.1**
	0.7nm,0.8s,mb3.1,baz=218,slow=12,SNR=5.5						
CHTO	**Chiang Mai**	**22.31**	**25**	*e*P	**P**	**17 54 41.0**	**-3.5**
	3.8nm,0.9s,mb3.8						
EKS2	**Erkin-Say**	**45.94**	**344**	*e*P	**P**	**17 58 11.5**	**+1.8**
	2.7nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**48.33**	**354**	P	**P**	**17 58 28.7**	**+0.4**
	0.1nm,0.4s,mb3.2,baz=162,slow=9.8,SNR=2.8						
ASAR	**Alice Springs**	**48.77**	**121**	P	**P**	**17 58 32.0**	**-0.1**
	0.2nm,0.5s,mb3.4,baz=294,slow=7.3,SNR=5.5						
SONM	**Songino Array**	**51.30**	**15**	P	**P**	**17 58 53.3**	**+2.4**
	1.1nm,0.5s,mb4.0,baz=195,slow=10,SNR=2.7						
KURK	**Kurchatov**	**52.65**	**352**	P	**P**	**17 59 00.2**	**-0.7**
	0.1nm,0.3s,mb3.3,baz=185,slow=7.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**55.24**	**357**	P	**P**	**17 59 18.4**	**-1.4**
	0.5nm,0.5s,mb3.8,baz=172,slow=5.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**55.24**	**357**	P	**P**	**17 59 18.4**	**-1.4**
BVAR	**Borovoye Array**	**56.41**	**347**	P	**P**	**17 59 27.3**	**-0.9**
	0.4nm,0.7s,mb3.5,baz=134,slow=4.2,SNR=2.8						
STKA	**Stephens Creek**	**58.03**	**127**	P	**P**	**17 59 39.6**	**-0.4**
	1.0nm,0.7s,mb4.0,baz=299,slow=7.1,SNR=2.8						
BRTR	**Keskin Array B**	**64.99**	**316**	P	**P**	**18 00 26.8**	**-0.2**
	0.3nm,0.6s,mb3.5,baz=125,slow=7.6,SNR=3.0						
TXAR	**Lajitas Array**	**149.68**	**22**	PKPbc	PKPbc	18 09 37.8	+0.4
	0.1nm,0.5s,baz=50,slow=1.4,SNR=2.8						
TXAR				PKPab	PKPab	18 09 42.6	+0.1
	0.1nm,0.4s,baz=179,slow=0.4,SNR=5.1						

ISCJB ***30*** *17:57:09.5±1.9, 36°.11N±0°.04×142°.01E±0°.09, h29km±20km, mb3.5/3, Error ellipse: s-maj=12.5km s-min=6.4km az=1.6*
JMA ***30*** *17:57:09.2±0.2, 36°.08N×142°.02E, h61km, M3.0*
IDC ***30*** *17:57:10.3±2.2, 36°.68N×141°.88E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.4/4, Error ellipse: s-maj=49.5km s-min=33.2km az=48.0*
ISC 30 17:57:09.4±1.8, 36°.11N±0°.04×142°.01E±0°.09, h20km±14km, n16, σ0°78/27, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.02**	**247**	P	**Pb**	**17 57 27.8**	**-0.6**
CHOJ				*e*S	**Sb**	**17 57 41.5**	**+0.1**
JHO	**Hitachi**	**1.27**	**294**	P	**Pn**	**17 57 31.0**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.39**	**316**	P	**Pn**	**17 57 33.2**	**-0.5**
ONAJ				*e*S	**Sn**	**17 57 51.4**	**-0.1**
JFK	**Kawauchi**	**1.55**	**324**	P	**Pn**	**17 57 35.6**	**-0.3**
JFK				*e*S	**Sn**	**17 57 55.0**	**-0.5**
BSO1	**Boso 1**	**1.68**	**211**	P	**Pn**	**17 57 37.0**	**-0.7**
BSO1				*e*S	**Sn**	**17 57 58.4**	**-0.2**
BSO3	**Boso 3**	**1.79**	**224**	P	**Pn**	**17 57 38.5**	**-0.7**
JFT	**Otama**	**1.95**	**317**	P	**Pn**	**17 57 42.1**	**+0.8**
JFT				*e*S	**Sn**	**17 58 03.7**	**-1.5**
JMM	**Marumori**	**2.01**	**331**	P	**Pn**	**17 57 43.1**	**+0.9**
JMM				*e*S	**Sn**	**17 58 06.0**	**-0.7**
JAG	**Ashikaga**	**2.09**	**279**	P	**Pn**	**17 57 42.8**	**-0.6**
JAG				*e*S	**Sn**	**17 58 08.8**	**0.0**
JFY	**Yanaizu**	**2.26**	**306**	P	**Pn**	**17 57 46.4**	**+0.7**
JFY				*e*S	**Sn**	**17 58 12.9**	**-0.1**
JKT	**Katashina**	**2.32**	**287**	P	**Pn**	**17 57 47.0**	**+0.5**
JKT				*e*S	**Sn**	**17 58 15.7**	**+1.2**
MJAR	**Matsushiro Arr**	**3.10**	**279**	Pn	**Pn**	**17 57 57.8**	**+0.6**
	4.2nm,0.3s,baz=84,slow=9.6,SNR=42						
MJAR				Sn	**Sn**	**17 58 35.5**	**+1.8**
	1.2nm,0.3s,baz=149,slow=18,SNR=4.4						
MAT	**Matsushiro**	**3.10**	**279**	P	**Pn**	**17 57 57.8**	**+0.5**
MAT				*e*S	**Sn**	**17 58 32.6**	**-1.2**
MKAR	**Makanchi Array**	**45.02**	**303**	P	**P**	**18 05 24.4**	**+0.9**
	0.4nm,0.6s,mb3.4,baz=85,slow=9.8,SNR=4.8						
KURK	**Kurchatov**	**46.88**	**309**	P	**P**	**18 05 39.0**	**+0.9**
	0.8nm,0.5s,mb3.9,baz=82,slow=7.7,SNR=6.4						
ASAR	**Alice Springs**	**59.94**	**189**	P	**P**	**18 07 22.0**	**+7.9**
	0.2nm,0.7s,mb3.3,baz=19,slow=9.6,SNR=3.2						

NIED ***30*** *18:09:00.25°.30N×128°.10E, h5km, Mw4.5 Best double couple: M0=5.48000×10^15 NP1:φ0=236.00000°, δ68.00000°, λ-84.00000°. NP2:φ0=41.00000°, δ23.00000°, λ-104.00000°.*
ISCJB ***30*** *18:09:40.3±0.9, 25°.20N±0°.03×128°.14E±0°.03, h21km±5km, mb4.4/50, MS4.3/7, Error ellipse: s-maj=5.9km s-min=4.0km az=136.9*
MOS ***30*** *18:09:41.4±0.9, 25°.16N×128°.19E, h30km, mb4.5/27, Error ellipse: s-maj=11.9km s-min=7.4km az=118.4*
BJI ***30*** *18:09:42.3, 25°.13N×128°.10E, h31km, mB4.7/18, mb4.3/31, Ms4.6/20, Ms7 4.4/20*
JMA ***30*** *18:09:42.2±0.2, 25°.26N×128°.13E, h61km±5km, M4.0*
NEIC ***30*** *18:09:43.7±0.5, 25°.10N×128°.08E, h35km, mb4.7/25, MW4.4(NIED), Error ellipse: s-maj=11.1km s-min=8.3km az=138.0*
IDC ***30*** *18:09:43.4±0.5, 25°.19N×128°.23E, h31km±2km, mb3.9/18, mb1 4.0/20, mb1mx4.0/28, mbtmp3.9/20, ML3.6/1, MS4.2/3, Ms1 4.2/3, ms1mx3.2/21, Error ellipse: s-maj=18.2km s-min=10.9km az=74.0*
ISC 30 18:09:41.2±1.3, 25°.24N±0°.03×128°.10E±0°.03, h14km±8km, h33km±9km; pP-P, n132, σ19°19/154, mb4.4/50, MS4.3/7, 3C, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.95**	**340**	P	**Pb**	**18 09 59.7**	**+0.3**
JJT2				S	**Sb**	**18 10 11.8**	**-0.1**
NAH1	**Naha**	**1.03**	**339**	P	**Pb**	**18 10 00.9**	**+0.1**
NAH1				S	**Sb**	**18 10 14.2**	**0.0**
JAGN	**Aguni-jima**	**1.55**	**330**	P	**Pn**	**18 10 08.3**	**-0.1**
JAGN				S	**Sn**	**18 10 27.3**	**-1.0**
JOW	**Kunigami**	**1.59**	**6**	P	**Pn**	**18 10 08.1**	**-0.9**
JOW	**Kunigami**	**1.59**	**6**	Pn	**Pn**	**18 10 08.0**	**-1.0**
	38nm,0.3s,baz=181,slow=14,SNR=322						
JOW				Sn	**Sn**	**18 10 27.1**	**-2.3**
	122nm,0.3s,baz=172,slow=19,SNR=12						
JOW				LR	LR	18 10 59.2	
	comp=Z,810nm,18.2s,baz=174,slow=46						
JOW	**Kunigami**	**1.59**	**6**	Pn	**Pn**	**18 10 08.0**	**-1.0**
JOW				Sn	**Sn**	**18 10 27.1**	**-2.3**
JOW				LR	LR	18 10 59.2	
JKE	**Kume jima 2**	**1.60**	**313**	P	**Pn**	**18 10 09.1**	**-0.1**
JIH	**Iheya**	**1.79**	**356**	P	**Pn**	**18 10 11.3**	**-0.4**
JIH				*e*S	**Sn**	**18 10 32.5**	**-1.8**
JOGS	**Gusukube**	**2.49**	**259**	P	**Pn**	**18 10 21.5**	**+0.1**
JOGS				*e*S	**Sn**	**18 10 49.5**	**-2.1**
JMJ	**Miyako jima 2**	**2.58**	**261**	P	**Pn**	**18 10 22.2**	**-0.4**
JMJ				*e*S	**Sn**	**18 10 52.4**	**-1.5**
JTK	**Tokunoshima**	**2.65**	**16**	P	**Pn**	**18 10 22.4**	**-1.1**
JTK				S	**Sn**	**18 10 51.3**	**-4.1**
JMZ	**Minamidaito 2**	**2.87**	**78**	P	**Pn**	**18 10 22.3**	**-4.3**
JMZ				*e*S	**Sn**	**18 10 54.9**	**-6.1**
JTJ	**Tarama**	**3.15**	**260**	P	**Pn**	**18 10 29.4**	**-0.9**
JTJ				*e*S	**Sn**	**18 11 06.5**	**-1.2**
JAM	**Amami Oshima**	**3.43**	**23**	P	**Pn**	**18 10 33.4**	**-0.9**
JAM				*e*S	**Sn**	**18 11 13.2**	**-1.6**
JZK	**Kikaishima**	**3.49**	**28**	P	**Pn**	**18 10 34.6**	**-0.4**
JZK				*e*S	**Sn**	**18 11 13.9**	**-2.2**
JIJ	**Ishigaki jima**	**3.70**	**257**	P	**Pn**	**18 10 36.5**	**-1.5**
JIJ				*e*S	**Sn**	**18 11 18.6**	**-2.9**
JKRS	**Kuro-shima**	**3.85**	**256**	P	**Pn**	**18 10 39.6**	**-0.5**
IRIF	**Iriomote-Funau**	**4.08**	**258**	P	**Pn**	**18 10 43.5**	**+0.4**
YULB	**Yu-li**	**6.47**	**255**	*e*Pn	**Pn**	**18 11 12.2**	**-3.9**
SSLB	**Suanglung**	**6.67**	**259**	*e*Pn	**Pn**	**18 11 16.1**	**-2.7**
TWG	**Pinlang**	**6.87**	**251**	*e*Pn	**Pn**	**18 11 17.2**	**-4.2**
TPUB	**Ta-pu**	**7.09**	**256**	*e*Pn	**Pn**	**18 11 23.0**	**-1.6**
TPUB				*e*Sn	**Sn**	**18 12 41.6**	**-3.4**
NJ2	**Nanjing**	**10.58**	**312**	*e*P	**Pn**	**18 12 18.0**	**+5.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**12.18**	**359**	Pn	**Pn**	**18 12 33.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=94,slow=19,SNR=9.7						
WHN	**Wuhan**	**13.26**	**297**	*e*P	**Pn**	**18 12 47.5**	**-1.5**
WHN				S	**Sn**	**18 15 18.5**	**+2.2**
MJAR	**Matsushiro Arr**	**14.21**	**35**	Pn	**Pn**	**18 13 01.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=223,slow=9.3,SNR=3.2						
ENH	**Enshi**	**17.22**	**291**	P	**Pn**	**18 13 42.2**	**+0.8**
	comp=Z,17nm,1.1s						
BJT	**Baijiatuau**	**17.81**	**329**	P	**Pn**	**18 13 49.8**	**+1.2**
BJI	**Beijing**	**17.82**	**329**	P	**Pn**	**18 13 51.0**	**+2.2**
BJI				S	**Sn**	**18 17 12.3**	**+5.0**
BJI				pmax	pmax		
	comp=Z,19nm,0.8s						
BJI				pmax	pmax		
	comp=Z,200nm,4.2s						
BJI				LR	LR		
	comp=N,800nm,20.4s						
BJI				LR	LR		
	comp=E,750nm,21.6s						
BJI				LR	LR		
	comp=Z,530nm,23.0s						
CN2	**Changchun**	**18.64**	**354**	*e*P	**Pn**	**18 13 57.3**	**-1.5**
CN2				*e*sP	sP	18 14 09.8	+5.7
CN2				*e*S	**Sn**	**18 17 22.3**	**-4.7**
CN2				*e*SS		18 17 47.5	
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,600nm,11.0s						
CN2				LR	LR		
	comp=E,600nm,11.0s						
CN2				LR	LR		
	comp=Z,700nm,12.0s						
GYA	**Guiyang**	**19.34**	**278**	⇑*i*P	**Pn**	**18 14 09.0**	**+1.7**
GYA				pP	pP	18 14 16.0	+5.9
GYA				sP	sP	18 14 22.0	+10
GYA				PP		18 14 26.5	

GYA S **Sn** **18 17 38.0 -6.0**
GYA sS sS 18 17 51.3 +0.3
GYA SS 18 18 03.8
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,80nm,4.8s
GYA LR LR
comp=N,590nm,15.0s
GYA LR LR
comp=E,440nm,14.8s
GYA LR LR
comp=Z,580nm,15.2s
MDJ Mudanjiang 19.37 3 P **Pn** **18 14 10.0 +2.5**
MDJ pP pP 18 14 17.8 +7.5
MDJ sP sP 18 14 21.8 +10
MDJ S **Sn** **18 17 48.5 +4.0**
MDJ PcP PcP 18 18 27.8 -0.3
MDJ ScP ScP 18 22 02.0 -1.7
MDJ PcS PcS 18 22 05.5 +0.4
MDJ ScS ScS 18 25 45.8 +0.4
MDJ pmax pmax
comp=Z,120nm,4.7s
MDJ LR LR
comp=N,660nm,9.0s
MDJ LR LR
comp=E,150nm,8.5s
MDJ LR LR
comp=Z,850nm,10.3s
HHC Hu-ho-hao-te 20.79 323 *e*P **P** **18 14 25.5 +3.6**
HHC pP 18 14 34.5
HHC sP sP 18 14 38.8 +11
HHC PP 18 14 48.5
HHC S **S** **18 18 12.5 -1.1**
HHC sS sS 18 18 27.3 +7.5
HHC PcP PcP 18 18 32.3 +1.5
HHC SS 18 18 46.5
HHC ScP ScP 18 22 04.5 -2.7
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,250nm,6.9s
HHC LR LR
comp=N,960nm,9.4s
HHC LR LR
comp=E,540nm,10.3s
HHC LR LR
comp=Z,750nm,10.6s,MS4.3
ASAJ Asahikawa 22.22 28 P **P** **18 14 38.4 +1.1**
comp=Z,7.6nm,0.9s,mb4.1,baz=218,slow=12,SNR=3.0
ASAJ Asahikawa 22.22 28 P **P** **18 14 38.4 +1.1**
ASAJ pmax pmax
comp=Z,8.0nm,0.9s
KMI Kunming 22.95 275 P **P** **18 14 46.8 +1.6**
KMI pP 18 14 56.5
KMI sP sP 18 15 01.3 +10
KMI S **S** **18 18 47.5 -7.6**
KMI pmax pmax
comp=Z,14nm,1.2s,mb4.3
LZH Lanzhou 23.44 303 *e*P **P** **18 14 50.8 +0.5**
LZH pP 18 15 00.5
LZH sP sP 18 15 05.8 +10
LZH PP 18 15 23.0
LZH *e*S **S** **18 18 59.3 -3.7**
LZH sS sS 18 19 16.3 +6.5
LZH SS 18 19 47.3
LZH pmax pmax
comp=Z,43nm,1.5s,mb4.7
LZH pmax pmax
comp=Z,130nm,5.3s
LZH LR LR
comp=E,640nm,12.0s
LZH LR LR
comp=Z,1μm,14.1s,MS4.4
KLR Kul'dur 24.11 6 *e*P **P** **18 14 52.7 -3.7**
KLR pmax pmax
comp=Z,50nm,1.8s,mb4.6
YSS Yuzh-Sakhalins 24.61 25 *e*P **P** **18 15 02.0 +1.1**
YSS *e* 18 15 14.0
YSS Yuzh-Sakhalins 24.61 25 *e*P **P** **18 15 01.8 +0.8**
comp=Z,102nm,1.0s,mb5.3
GTA Gaotai 27.63 308 *e*P **P** **18 15 27.8 -0.6**
GTA pP pP 18 15 37.0 +4.5
GTA sP sP 18 15 41.8 +7.5
GTA PP 18 16 16.0
GTA S **S** **18 20 04.5 -5.2**
GTA sS sS 18 20 20.3 +3.7
GTA pmax pmax
comp=Z,4.0nm,1.3s,mb3.9
GTA pmax pmax
comp=Z,80nm,6.0s
GTA LR LR
comp=N,370nm,14.3s,MS4.3
GTA LR LR
comp=E,470nm,16.6s,MS4.3
GTA LR LR
comp=Z,620nm,19.6s,MS4.2
CHTO Chiang Mai 27.74 263 P **P** **18 15 29.5 0.0**
CHTO pmax pmax
comp=Z,9.0nm,1.5s,mb4.2
CHTO Chiang Mai 27.74 263 P **P** **18 15 29.5 0.0**
comp=Z,9.2nm,1.5s,mb4.2
CMAR Chiang Mai Arr 27.86 262 P **P** **18 15 32.3 +1.7**
comp=Z,0.8nm,0.8s,mb3.4,baz=65,slow=8.4,SNR=6.7
CMAR pP pP 18 15 40.0 +5.3
comp=Z,0.8nm,0.8s,baz=60,slow=7.9,SNR=4.6
CMAR Chiang Mai Arr 27.86 262 P **P** **18 15 32.3 +1.7**
CMAR *PP pP 18 15 40.1 +5.3
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.8s
ULN Ulaanbaatar 28.04 329 *e*P **P** **18 15 34.5 +2.6**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
ULN Ulaanbaatar 28.04 329 *e*P **P** **18 15 34.5 +2.6**
comp=Z,5.3nm,0.8s,mb4.2
SONM Songino Array 28.32 328 P **P** **18 15 37.0 +2.6**
comp=Z,0.9nm,0.5s,mb3.7,baz=140,slow=12,SNR=4.2
SONM pP pP 18 15 45.7 +7.0
comp=Z,1.8nm,0.5s,baz=149,slow=10.0,SNR=3.9
SONM Songino Array 28.32 328 P **P** **18 15 37.0 +2.6**
SONM *PP pP 18 15 45.7 +7.1
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM pmax pmax
comp=Z,2.0nm,0.5s
LSA Lhasa 32.99 286 P **P** **18 16 25.5 +10**
LSA Lhasa 32.99 286 *e*P **P** **18 16 17.6 +1.7**
LSA *e* 18 16 27.4
LSA pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
LSA Lhasa 32.99 286 *e*P **P** **18 16 17.6 +1.7**
comp=Z,5.6nm,0.7s,mb4.6
LSA *e* 18 16 27.4
YAK Yakutsk 36.79 1 *e*P **P** **18 16 47.6 -0.7**
YAK *e* 18 16 57.5
YAK pmax pmax
comp=Z,20nm,1.0s,mb4.9
YAK pmax pmax
comp=N,13nm,1.2s
YAK Yakutsk 36.79 1 *e*P **P** **18 16 48.0 -0.2**
comp=N,28nm,0.8s,mb5.2
YAK *e* 18 16 58.0
WMQ Urumqi 37.65 310 *e*P **P** **18 16 57.5 +1.7**
GUN Gumba 37.72 284 *e*P **P** **18 16 58.4 +1.8**
PKI Pulchoki 38.17 283 *e*P **P** **18 17 01.7 +1.2**
comp=N,41nm,1.2s,mb5.0
PKI Pulchoki 38.17 283 *e*P **P** **18 17 01.7 +1.2**
PKI pmax pmax
comp=Z,41nm,1.2s,mb5.0
KKN Kakani 38.27 283 *e*P **P** **18 17 01.9 +0.7**
comp=Z,35nm,1.1s,mb5.0
KKN Kakani 38.27 283 *e*P **P** **18 17 01.9 +0.7**
KKN pmax pmax
comp=Z,35nm,1.1s,mb5.0
DMN Daman 38.44 283 *e*P **P** **18 17 02.3 -0.4**
comp=Z,27nm,1.0s,mb4.9
MK31 Makanchi Array 42.11 313 *e*P **P** **18 17 31.9 -1.0**
MK31 *e* 18 17 42.6
MKAR Makanchi Array 42.11 313 P **P** **18 17 32.9 0.0**
comp=Z,2.4nm,0.6s,mb4.0,baz=94,slow=11,SNR=31
MKAR pP pP 18 17 42.6 +5.4
comp=Z,4.3nm,0.6s,baz=95,slow=11,SNR=17
MKAR Makanchi Array 42.11 313 P **P** **18 17 32.9 0.0**
MKAR *PP pP 18 17 42.6 +5.5
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,4.0nm,0.6s
ZAA0 Zalesovo Array 42.97 324 *e*P **P** **18 17 39.0 -0.7**
ZAA0 *e* 18 17 48.8
ZALV Zalesovo Beam 42.97 324 P **P** **18 17 39.1 -0.6**
comp=Z,1.3nm,0.6s,mb3.9,baz=110,slow=8.5,SNR=5.7
ZALV pP pP 18 17 48.3 +4.3
comp=Z,3.6nm,0.7s,baz=107,slow=8.0,SNR=10
ZALV Zalesovo Beam 42.97 324 P **P** **18 17 39.1 -0.6**
ZALV *PP pP 18 17 48.3 +4.3
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
FITZ Fitzroy Crossi 43.15 183 P **P** **18 17 39.5 -2.0**
comp=Z,2.6nm,0.6s,mb4.1,baz=17,slow=7.1,SNR=7.8
WRAB Tennant Creek 45.31 172 *e*P **P** **18 17 57.3 -1.5**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
WRAB Tennant Creek 45.31 172 *e*P **P** **18 17 57.3 -1.5**
comp=Z,3.7nm,0.7s,mb4.3
KURK Kurchatov 45.46 317 P **P** **18 17 59.9 +0.2**
comp=Z,1.7nm,0.6s,mb4.0,baz=106,slow=8.8,SNR=20
KURK pP pP 18 18 09.3 +5.3
comp=Z,6.5nm,0.9s,baz=106,slow=9.2,SNR=17
KURK Kurchatov 45.46 317 P **P** **18 17 59.9 +0.2**
KURK *PP pP 18 18 09.3 +5.3
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KURK pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
KURK Kurchatov 45.46 317 *e*P **P** **18 17 59.0 -0.8**
comp=Z,7.5nm,0.9s,mb4.5
KURK *e* 18 18 09.7
KSH Kashi 45.67 301 *e*P **P** **18 18 05.5 +3.9**
KSH *e*pP pP 18 18 14.5 +8.6
KSH *e*sP sP 18 18 18.5 +11
KSH *e*PcP PcP 18 19 42.5 +2.9
KSH *e*PP PP 18 19 52.8 +4.3
KSH *e*ScP ScP 18 23 31.5 -0.7
KSH *e*PcS PcS 18 23 35.5 +1.8
KSH *e*S **S** **18 24 46.8 +2.7**
KSH *e*sS sS 18 25 02.0 +11
KSH *e*ScS ScS 18 27 55.8 -1.8
KSH *e*SS SS 18 28 02.5 -5.8
KSH pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KSH pmax pmax
comp=Z,120nm,5.4s
KSH LR LR
comp=N,160nm,9.0s
KSH LR LR
comp=E,250nm,9.1s
KSH LR LR
comp=Z,210nm,9.6s
TKM2 Tokmak 2 46.16 306 *e*P **P** **18 18 06.5 +1.1**
TKM2 *e* 18 18 16.1
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TKM2 Tokmak 2 46.16 306 *e*P **P** **18 18 06.5 +1.1**
comp=Z,2.7nm,0.8s,mb4.2
TKM2 *e* 18 18 16.1
UCH Uchtor 46.91 305 *e*P **P** **18 18 12.8 +1.6**
comp=Z,6.3nm,0.8s,mb4.6
UCH *e* 18 18 22.9
BILL Bilibino 48.64 18 P **P** **18 18 34.0 +10**
BILL *e* pP 18 18 39.6 +11
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ASAR Alice Springs 48.94 173 P **P** **18 18 26.1 -1.0**
comp=Z,2.7nm,0.7s,mb4.4,baz=360,slow=10,SNR=38
ASAR pP pP 18 18 36.4 +5.0
comp=Z,0.6nm,0.7s,baz=0.0,slow=16,SNR=3.2
ASAR PcP PcP 18 19 50.2 -1.0
comp=Z,1.2nm,0.8s,baz=344,slow=3.7,SNR=5.8
ASAR Alice Springs 48.94 173 P **P** **18 18 26.1 -1.0**
ASAR *PP pP 18 18 36.4 +5.0
ASAR 18 19 50.2
ASAR pmax pmax
comp=Z,3.0nm,0.7s
ASAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 50.94 319 P **P** **18 18 43.2 +1.2**
comp=Z,1.4nm,0.5s,mb4.1,baz=93,slow=8.6,SNR=14
BVAR pP pP 18 18 53.3 +6.9
comp=Z,2.9nm,0.6s,baz=79,slow=5.8,SNR=14
BVAR Borovoye Array 50.94 319 P **P** **18 18 43.2 +1.2**
BVAR *PP pP 18 18 53.3 +7.0
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 51.01 319 *e*P **P** **18 18 42.4 -0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BRVK Borovoye 51.01 319 *e*P **P** **18 18 42.4 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
KBL Kabul 51.41 295 *e*P **P** **18 18 47.4 +1.5**
KBL *e* 18 18 57.2
KBL pmax pmax
comp=Z,15nm,1.0s,mb4.9
KBL Kabul 51.41 295 *e*P **P** **18 18 47.4 +1.5**
comp=Z,15nm,1.0s,mb4.9
KBL *e* 18 18 57.2
ABKAR Akbulak array 57.24 314 *e*P **P** **18 19 28.4 +0.3**
comp=Z,6.3nm,0.8s,mb4.7
ABKAR *e* 18 19 38.4
ARU Arti 58.10 322 *e*P **P** **18 19 33.5 -0.5**
ARU *e* 18 19 42.6
ARU pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
ARU Arti 58.10 322 *e*P **P** **18 19 33.5 -0.5**
comp=Z,6.3nm,1.3s,mb4.5
ARU *e* 18 19 42.6
STKA Stephens Creek 58.24 166 P **P** **18 19 33.8 -1.3**
comp=Z,2.5nm,0.6s,mb4.4,baz=3.0,slow=7.5,SNR=8.8
STKA pP pP 18 19 44.0 +4.5
comp=Z,2.0nm,0.8s,baz=107,slow=4.5,SNR=3.2
TTA Tatalina 61.44 30 P **P** **18 19 57.3 +0.5**
TTA *e* 18 20 06.4
TTA pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
TTA Tatalina 61.44 30 P **P** **18 19 57.3 +0.4**
comp=Z,3.7nm,1.2s,mb4.4
TTA *e* 18 20 06.4
MCK McKinley 64.59 29 *e*P **P** **18 20 17.8 0.0**
MCK *e* 18 20 28.2
MCK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MCK McKinley 64.59 29 *e*P **P** **18 20 17.8 0.0**
comp=Z,6.5nm,0.8s,mb4.7
MCK *e* 18 20 28.2
APA Apatity 68.71 336 *e*P **P** **18 20 44.6 +0.6**
APA MLR MLR
comp=Z,200nm,15.0s,MS4.5
ZEI Tsey 69.25 308 *e*P **P** **18 20 48.3 +0.4**
ZEI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KIV Kislovodsk 69.78 310 *e*P **P** **18 20 52.8 +1.7**
KIV *e* 18 21 02.3
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIV Kislovodsk 69.78 310 *e*P **P** **18 20 52.1 +1.0**
comp=Z,17nm,1.0s,mb4.9
INK Inuvik 69.84 23 P **P** **18 20 51.5 +0.5**
INK pmax pmax
comp=Z,9.0nm,1.2s
INK Inuvik 69.84 23 P **P** **18 20 51.5 +0.5**
comp=Z,8.5nm,1.2s,mb4.5
VORD Divnogorie 70.10 318 *e*P **P** **18 20 53.3 +0.4**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VORD pmax pmax
comp=E,7.0nm,0.6s
VSR Storozhevoye 70.11 318 *e*P **P** **18 20 52.9 -0.1**
VSR pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
OBN Obninsk 70.54 322 P **P** **18 20 56.0 +0.5**
OBN *i* 18 21 05.8
OBN pmax pmax
comp=Z,11nm,1.8s,mb4.5
ARCES ARCESS Array B 70.88 339 P **P** **18 20 58.0 +0.6**
comp=Z,2.8nm,1.0s,mb4.2,baz=15,slow=5.1,SNR=3.7
ARCES pP pP 18 21 06.4 +4.5
comp=Z,2.6nm,0.9s,baz=75,slow=9.4,SNR=3.4
ARCES ARCESS Array B 70.88 339 P **P** **18 20 58.0 +0.6**
ARCES *PP pP 18 21 06.4 +4.5
ARCES pmax pmax
comp=Z,3.0nm,1.0s
ARCES pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 73.67 331 P **P** **18 21 14.4 +0.3**
comp=Z,1.0nm,0.5s,mb4.0,baz=61,slow=4.9,SNR=14
FINES pP pP 18 21 24.0 +5.4
comp=Z,2.2nm,0.6s,baz=73,slow=6.5,SNR=5.7
FINES FINESS Array B 73.67 331 P **P** **18 21 14.4 +0.3**
FINES *PP pP 18 21 24.0 +5.4
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 76.21 320 P **P** **18 21 29.1 +0.1**
comp=Z,2.1nm,0.6s,mb4.2,baz=55,slow=6.8,SNR=10
AKASG pP pP 18 21 39.4 +5.8
comp=Z,6.9nm,0.8s,baz=58,slow=6.3,SNR=9.4
AKASG Malin Array Be 76.21 320 P **P** **18 21 29.2 +0.2**
AKASG *PP pP 18 21 39.4 +5.8
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 76.21 320 *e*P **P** **18 21 28.8 -0.2**
KIEV Kiev 76.22 320 *e*P **P** **18 21 28.9 -0.2**
KIEV *e* 18 21 38.9
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIEV Kiev 76.22 320 *e*P **P** **18 21 28.9 -0.2**
comp=Z,7.1nm,0.8s,mb4.7
KIEV *e* 18 21 38.9
KIEV *e* 18 23 42.8
BR131 Keskin Array S 77.55 308 *e*P **P** **18 21 37.5 +0.7**
comp=Z,4.0nm,0.9s,mb4.3
BR131 *e* 18 21 47.5
BRTR Keskin Array B 77.55 308 P **P** **18 21 37.7 +0.9**
comp=Z,1.8nm,0.9s,mb4.0,baz=94,slow=4.9,SNR=11
BRTR pP pP 18 21 47.5 +6.1
comp=Z,3.6nm,0.9s,baz=77,slow=5.6,SNR=11
BRTR Keskin Array B 77.55 308 P **P** **18 21 37.7 +0.9**
BRTR *PP pP 18 21 47.5 +6.1
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR pmax pmax
comp=Z,4.0nm,0.9s
SUW Suwalki 78.19 324 P **P** **18 21 40.7 +0.6**
SUW *e* 18 21 50.3
SUW pmax pmax
comp=Z,21nm,0.8s,mb5.1
SUW Suwalki 78.19 324 P **P** **18 21 40.7 +0.6**
comp=Z,21nm,0.8s,mb5.1
SUW *e* 18 21 50.3
YKA Yellowknife Ar 79.47 25 P **P** **18 21 47.3 +0.4**
comp=Z,0.8nm,0.8s,mb3.7,baz=287,slow=5.7,SNR=4.1
YKA pP pP 18 21 57.3 +5.8
comp=Z,2.1nm,0.8s,baz=301,slow=5.1,SNR=8.5
YKA Yellowknife Ar 79.47 25 P **P** **18 21 47.3 +0.3**
YKA *PP pP 18 21 57.3 +5.8
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 79.47 25 P **P** **18 21 47.4 +0.4**
YKA pP pP 18 21 57.3 +5.8
BUR08 Bucovina Ar. S 79.88 318 *e*P **P** **18 21 50.0 +0.5**
BUR08 *e* 18 21 59.8
NB2 NORSAR Subarra 80.15 334 P **P** **18 21 50.3 -0.4**
comp=Z,0.9nm,0.6s,mb3.9,baz=54,slow=5.6
NOA NORSAR Array B 80.15 334 P **P** **18 21 50.6 0.0**
comp=Z,2.4nm,0.9s,mb4.1,baz=53,slow=5.4,SNR=7.9
NOA pP pP 18 22 00.7 +5.5
comp=Z,4.3nm,0.8s,baz=53,slow=5.4,SNR=14
NOA NORSAR Array B 80.15 334 P **P** **18 21 50.7 0.0**
NOA *PP pP 18 22 00.7 +5.5
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA pmax pmax
comp=Z,4.0nm,0.8s
SUMG Summit 82.01 356 P **P** **18 22 00.9 +0.5**
comp=Z,8.7nm,1.0s,mb4.6
SUMG *e* 18 22 11.6
CLL Collm 84.89 325 *e*P **P** **18 22 17.0 +1.4**
CLL *i* pP pP 18 22 26.9 +6.7
CLL *e*(sP) sP 18 22 32.0 +10
GERES GERESS Array B 85.92 323 P **P** **18 22 21.6 +0.8**
comp=Z,0.7nm,0.7s,mb4.0,baz=33,slow=3.2,SNR=7.0
GERES pP pP 18 22 31.1 +5.8
comp=Z,1.6nm,0.7s,baz=48,slow=4.0,SNR=10.0
GERES GERESS Array B 85.92 323 P **P** **18 22 21.6 +0.8**
GERES *PP pP 18 22 31.1 +5.8
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,2.0nm,0.7s
DAVOX Davos/Dischmat 89.21 323 LR LR 19 02 47.7
comp=Z,100nm,21.6s,MS4.2,baz=80,slow=36
PPT Papeete 90.67 109 LR LR 18 54 27.2
comp=Z,326nm,20.0s,MS4.8,baz=208,slow=30
NVAR Mina Array Bea 91.27 46 P **P** **18 22 45.5 -1.0**
comp=Z,0.4nm,0.6s,mb4.0,baz=248,slow=3.8,SNR=3.1
NVAR pP pP 18 22 56.4 +5.3
comp=Z,0.9nm,0.8s,baz=278,slow=3.9,SNR=4.0
SCHQ Schefferville 99.23 9 LR LR 19 07 23.9
comp=Z,52nm,20.8s,MS4.0,baz=147,slow=35

NIED ***30*** *18:11:00,25°.30N×128°.10E,h5km,Mw4.7 Best double couple: M0 1.36000×10^16 NP1:φs=228.00000°,δ64.00000°, λ-87.00000°. NP2:φs=42.00000°,δ26.00000°,λ-96.00000°.*
SZGRF ***30*** *18:11:40.6,24°.86N×130°.87E,h34km,mb5.1,MS4.9, Southeast of Ryukyu Islands, Japan*
ISCJB ***30*** *18:11:47.0±0.1,25°.26N±0°.02×127°.99E±0°.02,h33km, mb4.9/101,MS4.3/34,Error ellipse: s-maj=3.2km s-min=2.4km az=162.5*
MOS ***30*** *18:11:46.2±1.2,25°.27N×128°.20E,h34km,mb5.1/51, MS4.2/18,Error ellipse: s-maj=8.2km s-min=4.7km az=111.9*
JMA ***30*** *18:11:46.4±0.3,25°.34N×128°.07E,h69km,M5.2*
BJI ***30*** *18:11:46.7,25°.33N×128°.07E,h35km,mB4.9/35,mb4.7/53, Ms4.7/49,Ms7 4.5/47*
IDC ***30*** *18:11:47.5±0.4,25°.23N×128°.19E,h34km±2km,mb4.4/25, mb1 4.5/28,mb1mx4.5/33,mbtmp4.4/28,ML3.8/3,MS3.9/12, Ms1 3.9/12,ms1mx3.5/24,Error ellipse: s-maj=14.2km s-min=9.7km az=73.0*
NEIC ***30*** *18:11:47.5±0.2,25°.19N×128°.15E,h35km,mb5.1/48, MS4.8/4,MW4.7(NIED),Error ellipse: s-maj=5.8km s-min=4.8km az=138.0*
GCMT ***30*** *18:11:47.5±0.3,25°.16N×128°.13E,h12km,MW4.8/68, Moment Tensor Solution. s20,c21; s68,c101; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.79±.06; Mθθ1.07±.06; Mφφ0.71±.06; Mrθ0.75±.28; Mrφ0.75±.05; Mθφ0.47±.29; Best double couple: M0 1.94000×10^16 NP1:φs49.00000°,δ32.00000°,λ-95.00000°. NP2: φs234.00000°,δ59.00000°,λ-87.00000°. Principal axes: T 1.8730, Plg14.0000°, Azm322.0000°; N 0.1310, Plg2.0000°, Azm53.0000°; P -2.0060, Plg76.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***30*** *18:12:02,24°.98N×128°.04E,h167km,mb5.0/24*
ISC 30 18:11:48.5±0.1,25°.26N±0°.02×127°.99E±0°.02,h35km, h35km±.6km:pP-P,n449,σ1°.07/478,mb4.9/101,MS4.3/34, 72C-74D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.90**	**346**	P	**Pn**	**18 12 03.4**	**-1.3**
JJT2				*e*S	**Sn**	**18 12 14.6**	**-1.9**

NAH1	**Naha**	**0.98**	**344**	P	**Pn**	**18 12 04.1**	**-1.7**
NAH1				S	**Sn**	**18 12 17.4**	**-1.0**
JKE	**Kume jima 2**	**1.52**	**315**	P	**Pn**	**18 12 12.3**	**-0.9**
JKE				*e*S	**Sn**	**18 12 32.0**	**+0.3**
JOW	**Kunigami**	**1.58**	**9**	Pn	**Pn**	**18 12 11.5**	**-2.6**
	155nm,0.3s,baz=185,slow=13,SNR=12						
JOW				Sn	**Sn**	**18 12 29.9**	**-3.5**
	345nm,0.3s,baz=99,slow=27,SNR=13						
JOW	**Kunigami**	**1.58**	**9**	Pn	**Pn**	**18 12 11.5**	**-2.6**
JOW				Sn	**Sn**	**18 12 29.9**	**-3.5**
JIH	**Iheya**	**1.77**	**359**	P	**Pn**	**18 12 14.9**	**-1.7**
JIH				S	**Sn**	**18 12 35.0**	**-2.9**
JOGS	**Gusukube**	**2.40**	**259**	P	**Pn**	**18 12 24.8**	**-0.5**
JOGS				*e*S	**Sn**	**18 12 53.1**	**-0.4**
JMJ	**Miyako jima 2**	**2.49**	**260**	P	**Pn**	**18 12 25.9**	**-0.6**
JMJ				*e*S	**Sn**	**18 12 56.0**	**+0.3**
JTK	**Tokunoshima**	**2.66**	**19**	P	**Pn**	**18 12 25.5**	**-3.4**
JTK				*e*S	**Sn**	**18 12 53.8**	**-6.0**
JMZ	**Minamidaito 2**	**2.97**	**79**	P	**Pn**	**18 12 25.9**	**-7.3**
JMZ				*e*S	**Sn**	**18 12 57.0**	**-11**
JTJ	**Tarama**	**3.05**	**259**	P	**Pn**	**18 12 33.4**	**-0.9**
JTJ				*e*S	**Sn**	**18 13 08.3**	**-1.2**
JAM	**Amami Oshima**	**3.45**	**24**	P	**Pn**	**18 12 36.2**	**-3.6**
JAM				*e*S	**Sn**	**18 13 13.6**	**-5.9**
JZK	**Kikaishima**	**3.52**	**30**	P	**Pn**	**18 12 37.4**	**-3.3**
JZK				*e*S	**Sn**	**18 13 16.8**	**-4.3**
JIJ	**Ishigaki jima**	**3.61**	**256**	P	**Pn**	**18 12 40.4**	**-1.6**
JIJ				*e*S	**Sn**	**18 13 21.5**	**-1.9**
JKRS	**Kuro-shima**	**3.76**	**255**	P	**Pn**	**18 12 42.7**	**-1.4**
JKRS				*e*S	**Sn**	**18 13 28.7**	**+1.6**
IRIF	**Iriomote-Funau**	**3.98**	**257**	P	**Pn**	**18 12 44.9**	**-2.2**
IRIF				*e*S	**Sn**	**18 13 30.6**	**-1.9**
HATJ	**Hateruma jima**	**3.99**	**253**	P	**Pn**	**18 12 45.0**	**-2.2**
HATJ				*e*S	**Sn**	**18 13 30.1**	**-2.7**
YOJ	**Yonaguni jima**	**4.59**	**261**	P	**Pn**	**18 12 55.5**	**0.0**
JNN	**Nakanoshima**	**4.86**	**20**	P	**Pn**	**18 12 56.2**	**-2.9**
JNN				*e*S	**Sn**	**18 13 48.4**	**-5.8**
NACB	**Ninganchiao**	**5.92**	**261**	*e*P	**Pn**	**18 13 11.2**	**-2.5**
	81nm,0.3s						
YHNB	**Yeheng**	**6.03**	**266**	*e*P	**Pn**	**18 13 15.2**	**-0.1**
	385nm,1.1s						
YULB	**Yu-li**	**6.38**	**254**	*e*Pn	**Pn**	**18 13 16.0**	**-4.1**
SSLB	**Suanglung**	**6.58**	**259**	*e*Pn	**Pn**	**18 13 19.7**	**-3.1**
TWG	**Pinlang**	**6.78**	**250**	*e*Pn	**Pn**	**18 13 21.2**	**-4.3**
TPUB	**Ta-pu**	**7.00**	**255**	*e*Pn	**Pn**	**18 13 26.6**	**-1.9**
TPUB				*e*Sn	**Sn**	**18 14 44.1**	**-2.8**
JIU2	**Izumi 2**	**7.67**	**18**	P	**Pn**	**18 13 35.6**	**-2.1**
NJ2	**Nanjing**	**10.49**	**312**	*e*P	**Pn**	**18 14 19.0**	**+2.6**
NJ2				pP		18 14 26.0	
NJ2				PP		18 14 27.5	
NJ2				sP		18 14 30.8	
NJ2				S	**Sn**	**18 16 16.0**	**+3.3**
NJ2				sS		18 16 27.0	
NJ2				pmax	pmax		
	comp=Z,270nm,8.0s						
NJ2				LR	LR		
	comp=N,2μm,12.6s						
NJ2				LR	LR		
	comp=E,2μm,9.5s						
NJ2				LR	LR		
	comp=Z,2μm,10.0s						
KSRS	**Korea Array**	**12.15**	**360**	Pn	**Pn**	**18 14 37.9**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=177,slow=14,SNR=14						
KSRS				LR	LR	18 20 14.2	
	comp=Z,561nm,18.6s,baz=178,slow=42						
WHN	**Wuhan**	**13.16**	**297**	P	**Pn**	**18 14 54.0**	**+1.1**
WHN				S	**Sn**	**18 17 21.8**	**+3.8**
WHN				LR	LR		
	comp=N,2μm,10.3s						
WHN				LR	LR		
	comp=E,4μm,9.0s						
WHN				LR	LR		
	comp=Z,3μm,13.0s						
MAJO	**Matsushiro**	**14.25**	**35**	P	**Pn**	**18 15 05.0**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,54nm,1.1s						
MAJO	**Matsushiro**	**14.25**	**35**	P	**Pn**	**18 15 05.0**	**-2.8**
	comp=Z,54nm,1.1s						
MAT	**Matsushiro**	**14.25**	**35**	P	**Pn**	**18 15 05.0**	**-2.7**
MAT				*e*S	**Sn**	**18 17 57.0**	**+12**
MJAR	**Matsushiro Arr**	**14.25**	**35**	Pn	**Pn**	**18 15 06.0**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=248,slow=13,SNR=4.6						
DL2	**Dalian**	**14.63**	**340**	P	**Pn**	**18 15 10.3**	**-2.6**
DL2				S	**Sn**	**18 17 45.5**	**-8.2**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,160nm,9.0s						
DL2				LR	LR		
	comp=N,610nm,10.2s						
DL2				LR	LR		
	comp=E,410nm,9.2s						
DL2				LR	LR		
	comp=Z,880nm,10.0s						
SNY	**Shenyang**	**16.92**	**349**	⇑P	**Pn**	**18 15 43.5**	**+1.0**
SNY				S	**Sn**	**18 18 49.0**	**-0.5**
SNY				pmax	pmax		
	comp=Z,35nm,2.0s						
SNY				pmax	pmax		
	comp=Z,540nm,4.2s						
SNY				LR	LR		
	comp=N,1μm,12.8s						
SNY				LR	LR		
	comp=Z,1μm,10.9s						
ENH	**Enshi**	**17.12**	**291**	*e*P	**Pn**	**18 15 46.7**	**+1.7**
	comp=Z,101nm,1.3s						
BJT	**Baijiatuau**	**17.74**	**329**	*e*P	**Pn**	**18 15 53.5**	**+0.8**
BJT				pmax	pmax		
	comp=Z,37nm,0.4s						
BJT	**Baijiatuau**	**17.74**	**329**	*e*P	**Pn**	**18 15 53.5**	**+0.8**
	comp=Z,37nm,0.4s						
BJI	**Beijing**	**17.75**	**329**	P	**Pn**	**18 15 54.8**	**+1.9**
BJI				sP	sP	18 16 07.3	+0.3
BJI				S	**Sn**	**18 19 14.3**	**+4.7**
BJI				pmax	pmax		
	comp=Z,42nm,1.0s						
BJI				pmax	pmax		
	comp=Z,650nm,4.7s						
BJI				LR	LR		
	comp=N,810nm,10.5s						
BJI				LR	LR		
	comp=E,580nm,12.5s						
BJI				LR	LR		
	comp=Z,530nm,22.2s						
QIZ	**Qiongzhong**	**17.91**	**253**	P	**Pn**	**18 15 53.8**	**-1.2**
QIZ				S	**Sn**	**18 19 12.5**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,97nm,6.5s						
QIZ				LR	LR		
	comp=N,550nm,10.1s						
QIZ				LR	LR		
	comp=E,120nm,10.3s						
QIZ				LR	LR		
	comp=Z,390nm,15.2s						
QIZ	**Qiongzhong**	**17.91**	**253**	P	**Pn**	**18 15 56.1**	**+1.2**
	comp=Z,33nm,1.3s						
VLA	**Vladivostok**	**18.10**	**9**	P	**Pn**	**18 15 58.0**	**+0.9**
VLA				MLR	MLR		
	comp=Z,600nm,11.3s						
TIY	**Taiyuan**	**18.14**	**317**	*e*P	**Pn**	**18 15 58.0**	**+0.4**
TIY				LR	LR		
	comp=N,1μm,9.2s						
TIY				LR	LR		
	comp=E,410nm,12.0s						
TIY				LR	LR		
	comp=Z,730nm,11.8s						
DAV	**Davao City (W)**	**18.24**	**188**	LR	LR	18 21 45.3	
	comp=Z,462nm,21.0s,baz=0.5,slow=33						
CN2	**Changchun**	**18.61**	**354**	*e*P	**Pn**	**18 16 01.0**	**-2.3**
CN2				*es*P	sP	18 16 13.5	-2.9
CN2				*e*S	**Sn**	**18 19 26.0**	**-4.3**
CN2				*e*SS		18 19 51.0	
CN2				pmax	pmax		
	comp=Z,60nm,1.3s						
CN2				LR	LR		
	comp=N,810nm,11.0s						
CN2				LR	LR		
	comp=E,880nm,11.0s						
CN2				LR	LR		
	comp=Z,910nm,12.0s						
GYA	**Guiyang**	**19.23**	**278**	⇑*i*P	**Pn**	**18 16 11.0**	**+0.1**
GYA				pP	pP	18 16 20.5	+1.5
GYA				sP	sP	18 16 26.8	+3.4
GYA				PP		18 16 29.3	
GYA				S	**Sn**	**18 19 41.3**	**-4.3**
GYA				sS	sS	18 19 55.0	-5.4
GYA				SS		18 20 06.8	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,4.8s						
GYA				LR	LR		
	comp=N,4μm,15.0s						
GYA				LR	LR		
	comp=E,3μm,14.6s						
GYA				LR	LR		
	comp=Z,5μm,15.0s						
MDJ	**Mudanjiang**	**19.35**	**3**	P	**Pn**	**18 16 12.8**	**+0.6**
MDJ				pP	pP	18 16 20.8	+0.7
MDJ				sP	sP	18 16 25.3	+0.7
MDJ				S	**Sn**	**18 19 48.5**	**+0.3**
MDJ				PcP	PcP	18 20 32.3	+0.3
MDJ				ScP	ScP	18 24 04.8	-0.6
MDJ				PcS	PcS	18 24 09.5	+0.5
MDJ				ScS	ScS	18 27 46.3	-0.8
MDJ				pmax	pmax		
	comp=Z,21nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,180nm,6.4s						
MDJ				LR	LR		
	comp=N,430nm,8.1s						
MDJ				LR	LR		
	comp=E,380nm,9.7s						
MDJ				LR	LR		
	comp=Z,850nm,10.7s						
GUMO	**Guam**	**19.68**	**123**	P	**Pn**	**18 16 11.8**	**-4.5**
	comp=Z,0.9nm,0.3s,baz=307,slow=11,SNR=3.6						
GUMO				LR	LR	18 21 44.2	
	comp=Z,378nm,19.6s,baz=140,slow=31						
GUMO	**Guam**	**19.68**	**123**	P	**Pn**	**18 16 11.8**	**-4.5**
GUMO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,378nm,19.6s						
HHC	**Hu-ho-hao-te**	**20.71**	**323**	*e*P	**P**	**18 16 27.0**	**+1.2**
HHC				pP		18 16 36.3	
HHC				sP	sP	18 16 40.3	+0.9
HHC				PP		18 16 49.3	
HHC				S	**S**	**18 20 13.5**	**-1.6**
HHC				sS	sS	18 20 26.8	-3.0
HHC				PcP	PcP	18 20 36.0	+1.4
HHC				SS		18 20 44.3	
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,280nm,5.0s						
HHC				LR	LR		
	comp=N,970nm,9.4s						
HHC				LR	LR		
	comp=E,550nm,8.9s						
HHC				LR	LR		
	comp=Z,740nm,9.1s						
ERM	**Erimo**	**20.89**	**33**	*e*P	**P**	**18 16 24.8**	**-2.9**
ERM				pmax	pmax		
	comp=Z,57nm,1.0s						
ERM	**Erimo**	**20.89**	**33**	*e*P	**P**	**18 16 24.8**	**-2.9**
	comp=Z,57nm,1.0s						
BTO	**Baotou**	**21.42**	**320**	*e*P	**P**	**18 16 32.8**	**-0.6**
MYLDM	**Lahad Datu**	**21.95**	**206**	P	**P**	**18 16 40.3**	**+1.1**
SDKM	**Sandakan**	**22.08**	**210**	P	**P**	**18 16 40.9**	**+0.2**
CD2	**Chengdu**	**22.09**	**290**	P	**P**	**18 16 41.0**	**+0.3**
CD2				pP		18 16 50.0	
CD2				sP	sP	18 16 54.3	-0.1
CD2				PP		18 17 07.5	
CD2				S	**S**	**18 20 37.5**	**-4.8**
CD2				sS	sS	18 20 52.3	-4.9
CD2				SS		18 21 16.8	
CD2				pmax	pmax		
	comp=Z,100nm,0.7s,mb5.3						
CD2				pmax	pmax		
	comp=Z,180nm,8.3s						
CD2				LR	LR		
	comp=N,2μm,10.1s						
CD2				LR	LR		
	comp=Z,3μm,9.5s						
KKM	**Kota Kinabalu**	**22.19**	**213**	P	**P**	**18 16 42.2**	**+0.4**
KKM	**Kota Kinabalu**	**22.19**	**213**	*e*P	**P**	**18 16 41.0**	**-0.8**
	comp=Z,34nm,0.9s,mb4.8						
ASAJ	**Asahikawa**	**22.25**	**29**	P	**P**	**18 16 40.0**	**-2.2**
	comp=Z,15nm,0.7s,mb4.5,baz=251,slow=15,SNR=5.4						
ASAJ				LR	LR	18 25 50.3	
	comp=Z,200nm,18.4s,MS3.6,baz=61,slow=38						
ASAJ	**Asahikawa**	**22.25**	**29**	P	**P**	**18 16 40.1**	**-2.2**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,201nm,18.4s						
KMI	**Kunming**	**22.84**	**275**	P	**P**	**18 16 49.0**	**+0.3**
KMI				pP		18 16 58.0	
KMI				sP	sP	18 17 01.5	-1.0
KMI				PP		18 17 18.8	
KMI				S	**S**	**18 20 51.5**	**-4.5**
KMI				sS	sS	18 21 06.0	-6.0
KMI				SS		18 21 35.0	
KMI				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.1						
KMI				LR	LR		
	comp=N,660nm,10.0s,MS4.5						
KMI				LR	LR		
	comp=E,750nm,12.0s,MS4.5						
KMI				LR	LR		
	comp=Z,640nm,11.7s,MS4.3						
TSM	**Tawau**	**23.00**	**207**	P	**P**	**18 16 50.6**	**+0.1**
LZH	**Lanzhou**	**23.34**	**303**	P	**P**	**18 16 54.0**	**+0.1**
LZH				pP		18 17 03.8	
LZH				sP	sP	18 17 08.0	+0.3
LZH				PP		18 17 25.3	
LZH				*e*S	**S**	**18 21 02.3**	**-1.7**
LZH				sS	sS	18 21 17.0	-3.3
LZH				SS		18 21 50.0	
LZH				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.7						
LZH				pmax	pmax		
	comp=Z,170nm,4.1s						
LZH				LR	LR		
	comp=E,2μm,12.4s						
LZH				LR	LR		
	comp=Z,2μm,14.1s,MS4.7						
HABR	**Khabarovsk**	**23.82**	**12**	*de*P	**P**	**18 16 56.7**	**-1.5**
HABR				*e**PP		18 17 05.5	
HABR				*e**SP	sP	18 17 09.8	-2.6
HABR				*e*		18 17 24.4	
HABR				*e*		18 20 37.2	
HABR				*e*S	**S**	**18 21 11.2**	**-0.3**
HABR				*e**SS	sS	18 21 27.1	-0.8
HABR				SS		18 21 52.3	
HABR						18 28 02.4	
HABR				pmax	pmax		
	comp=Z,53nm,1.8s,mb4.7						
HABR				pmax	pmax		
	comp=E,53nm,2.0s						
HABR				pmax	pmax		
	comp=Z,48nm,1.0s,mb4.9						
HABR				pmax	pmax		
	comp=N,19nm,1.0s						
HABR				MLR	MLR		
	comp=Z,482nm,13.0s,MS4.2						
KLR	**Kul'dur**	**24.11**	**6**	*e*P	**P**	**18 16 55.8**	**-5.0**
KLR				*e*S	**S**	**18 21 06.0**	**-10**
KLR				pmax	pmax		
	comp=Z,130nm,2.0s,mb5.0						
KLR				MLR	MLR		
	comp=Z,1μm,11.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**24.63**	**25**	*ce*P	**P**	**18 17 04.5**	**-1.1**
YSS				*e*		18 17 16.0	
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.1						
YSS	**Yuzh-Sakhalins**	**24.63**	**25**	*e*P	**P**	**18 17 04.5**	**-1.1**
	comp=Z,290nm,1.1s,mb5.7						
KKTK	**Khon Kaen**	**25.11**	**254**	P	**P**	**18 17 11.0**	**+0.7**
	comp=Z,617nm,0.9s,mb6.1						
BTM	**Bintulu**	**26.21**	**216**	P	**P**	**18 17 19.9**	**-0.3**
SBUM	**Sibu**	**27.30**	**216**	P	**P**	**18 17 29.3**	**-0.7**
GTA	**Gaotai**	**27.54**	**308**	*e*P	**P**	**18 17 31.0**	**-1.0**
GTA				pP	pP	18 17 40.3	-1.7
GTA				sP	sP	18 17 44.5	-1.7
GTA				PP		18 18 19.0	
GTA				S	**S**	**18 22 07.3**	**-3.5**
GTA				sS	sS	18 22 25.5	-1.8
GTA				SS		18 23 28.3	
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3						
GTA				pmax	pmax		
	comp=Z,160nm,7.1s						
GTA				LR	LR		
	comp=N,630nm,11.3s,MS4.6						
GTA				LR	LR		
	comp=E,520nm,11.0s,MS4.6						
GTA				LR	LR		
	comp=Z,490nm,10.7s,MS4.3						
CHG	**Chiang Mai**	**27.64**	**262**	⇑P	**P**	**18 17 34.4**	**+1.3**
	comp=Z,29nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**27.64**	**262**	*e*P	**P**	**18 17 34.1**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
CHTO	**Chiang Mai**	**27.64**	**262**	*e*P	**P**	**18 17 34.0**	**+0.9**
	comp=Z,28nm,1.0s,mb4.8						
CM31	**Chiang Mai Arr**	**27.76**	**262**	*e*P	**P**	**18 17 34.7**	**+0.6**
	comp=Z,4.4nm,1.0s,mb4.0						
CM31				*e*	pP	18 17 46.0	+1.9
CMAR	**Chiang Mai Arr**	**27.76**	**262**	P	**P**	**18 17 35.4**	**+1.3**
	comp=Z,4.0nm,1.0s,mb4.0,baz=61,slow=7.9,SNR=14						
CMAR				PcP	PcP	18 20 50.6	+0.4
	comp=Z,1.7nm,0.9s,baz=53,slow=0.8,SNR=6.1						
CMAR				LR	LR	18 30 32.5	
	comp=Z,103nm,20.3s,MS3.4,baz=253,slow=40						
CMAR	**Chiang Mai Arr**	**27.76**	**262**	P	**P**	**18 17 35.4**	**+1.3**
CMAR						18 20 50.7	
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,103nm,20.3s						
ULN	**Ulaanbaatar**	**27.97**	**329**	*e*P	**P**	**18 17 35.0**	**-0.7**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**27.97**	**329**	*e*P	**P**	**18 17 35.0**	**-0.7**
	comp=Z,12nm,0.8s,mb4.6						
SONM	**Songino Array**	**28.25**	**328**	P	**P**	**18 17 37.2**	**-1.1**
	comp=Z,2.0nm,0.4s,mb4.1,baz=140,slow=9.4,SNR=3.6						
SONM				LR	LR	18 30 47.6	
	comp=Z,440nm,18.6s,MS4.1,baz=94,slow=40						
SONM	**Songino Array**	**28.25**	**328**	P	**P**	**18 17 37.2**	**-1.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,440nm,18.6s						
KSM	**Kuching**	**29.16**	**219**	P	**P**	**18 17 45.4**	**-1.2**
KSM	**Kuching**	**29.16**	**219**	*e*P	**P**	**18 17 46.1**	**-0.6**
	comp=Z,97nm,1.5s,mb5.3						
ZAK	**Zakamensk**	**31.50**	**329**	*e*P	**P**	**18 18 05.0**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TLY	**Talaya**	**32.25**	**331**	*e*P	**P**	**18 18 13.9**	**+0.4**
TLY				*e*S	**S**	**18 23 22.8**	**-1.6**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
TLY				MLR	MLR		
	comp=Z,323nm,13.0s,MS4.2						
SHL	**Shillong**	**32.55**	**278**	*e*P	**P**	**18 18 20.0**	**+3.5**
SHL				*i*S	**S**	**18 23 35.0**	**+5.3**
KULM	**Kulim**	**32.88**	**237**	P	**P**	**18 18 17.5**	**-1.9**
KULM	**Kulim**	**32.88**	**237**	P	**P**	**18 18 19.0**	**-0.5**
	comp=Z,46nm,1.4s,mb5.2						
KULM				*e*	pP	18 18 30.0	+0.5
LSA	**Lhasa**	**32.89**	**286**	*e*P	**P**	**18 18 21.4**	**+2.0**
LSA				*e*	pP	18 18 31.6	+2.1
LSA				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
LSA	**Lhasa**	**32.89**	**286**	*e*P	**P**	**18 18 21.4**	**+1.9**
	comp=Z,19nm,0.7s,mb5.1						
LSA				*e*	pP	18 18 31.6	+2.1
IPM	**Ipoh**	**33.12**	**236**	P	**P**	**18 18 19.7**	**-1.8**
MOY	**Mondy**	**33.43**	**329**	*e*P	**P**	**18 18 22.6**	**-1.3**
BOD	**Bodaibo**	**34.03**	**347**	*e*P	**P**	**18 18 28.4**	**-0.6**
PETK	**Petropavlovsk-**	**35.63**	**31**	P	**P**	**18 18 41.9**	**-1.0**
	comp=Z,5.7nm,1.0s,mb4.4,baz=330,slow=8.6,SNR=3.6						
PETK				LR	LR	18 33 15.6	
	comp=Z,34nm,18.9s,baz=358,slow=36						
PETK	**Petropavlovsk-**	**35.63**	**31**	P	**P**	**18 18 41.9**	**-1.0**
PETK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
PETK				MLR	MLR		
	comp=Z,34nm,18.9s						
PSI	**Prapat**	**35.80**	**236**	P	**P**	**18 18 45.1**	**+0.4**
	comp=Z,23nm,1.0s,mb5.1,baz=17,slow=4.4,SNR=16						
PSI				PcP	PcP	18 21 11.9	-0.2
	comp=Z,13nm,0.9s,baz=56,slow=3.6,SNR=8.3						
PSI	**Prapat**	**35.80**	**236**	P	**P**	**18 18 45.1**	**+0.4**
PSI						18 21 11.9	
PSI				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
PSI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
PET	**Petropavlovsk**	**36.03**	**32**	*e*P	**P**	**18 18 44.7**	**-1.6**
PET				*e*		18 18 51.3	
PET				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.4						
PET	**Petropavlovsk**	**36.03**	**32**	*e*P	**P**	**18 18 44.7**	**-1.6**
	comp=Z,59nm,1.3s,mb5.4						
PET				*e*		18 18 51.3	
YAK	**Yakutsk**	**36.78**	**1**	*c i*P	**P**	**18 18 51.5**	**-1.0**
YAK				*e**PP	pP	18 19 00.9	-1.7
YAK				*e*		18 20 12.8	
YAK				*e*PPP		18 20 35.4	
YAK				*e*		18 21 12.8	
YAK				*e*S	**S**	**18 24 31.6**	**-2.3**
YAK				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=N,23nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
YAK				smax			
	comp=E,120nm,3.8s						
YAK				smax			
	comp=N,55nm,3.0s						
YAK				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,132nm,11.0s,MS4.1						
YAK				MLR	MLR		
	comp=E,149nm,15.0s,MS4.1						
YAK	**Yakutsk**	**36.78**	**1**	*e*P	**P**	**18 18 51.4**	**-1.1**
	comp=E,119nm,0.9s,mb5.7						
YAK				*e*	pP	18 19 01.3	-1.4
WMQ	**Urumqi**	**37.56**	**310**	P	**P**	**18 19 01.0**	**+1.6**
WMQ				sP	sP	18 19 15.5	+1.7
WMQ				PP	PP	18 20 31.3	+5.9
WMQ				PcP	PcP	18 21 17.5	+0.6
WMQ				S	**S**	**18 24 48.5**	**+2.2**
WMQ				sS	sS	18 25 05.5	+2.4
WMQ				SS	SS	18 27 24.5	-7.3
WMQ				ScS	ScS	18 29 09.5	-0.4
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,490nm,8.0s						
WMQ				LR	LR		
	comp=E,530nm,11.0s						
WMQ				LR	LR		
	comp=Z,300nm,20.0s						
GUN	**Gumba**	**37.62**	**284**	*e*P	**P**	**18 19 00.8**	**+0.7**
	comp=Z,211nm,1.4s,mb5.7						
KAKA	**Kakadu**	**37.99**	**173**	*e*P	**P**	**18 18 59.6**	**-3.6**
	comp=Z,9.8nm,0.6s,mb4.7						
PKI	**Pulchoki**	**38.07**	**283**	*e*P	**P**	**18 19 05.0**	**+1.0**
	comp=Z,59nm,0.8s,mb5.4						
PKI	**Pulchoki**	**38.07**	**283**	*e*P	**P**	**18 19 05.0**	**+1.0**
PKI				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.4						
KKN	**Kakani**	**38.16**	**283**	*e*P	**P**	**18 19 05.9**	**+1.2**
	comp=Z,166nm,1.3s,mb5.6						
KKN	**Kakani**	**38.16**	**283**	*e*P	**P**	**18 19 05.9**	**+1.2**
KKN				pmax	pmax		
	comp=Z,166nm,1.3s,mb5.6						
DMN	**Daman**	**38.34**	**283**	*e*P	**P**	**18 19 07.5**	**+1.3**
	comp=Z,180nm,1.4s,mb5.6						
COEN	**Coen**	**41.70**	**158**	*e*P	**P**	**18 19 31.6**	**-2.5**
	comp=Z,219nm,1.1s,mb5.7

MK31 Makanchi Array 42.02 313 *e*P **P** **18 19 35.8 -0.7**
MK31 *e* pP 18 19 46.4 -0.3
MKAR Makanchi Array 42.02 313 P **P** **18 19 36.4 -0.1**
comp=Z,8.5nm,0.7s,mb4.5,baz=89,slow=12,SNR=36
MKAR pP pP 18 19 46.5 -0.3
comp=Z,8.4nm,0.6s,baz=92,slow=10,SNR=13
MKAR PcP PcP 18 21 30.8 -0.3
comp=Z,2.3nm,0.7s,baz=83,slow=4.6,SNR=3.9
MKAR LR LR 18 39 03.4
comp=Z,212nm,18.6s,MS4.0,baz=124,slow=39
MKAR Makanchi Array 42.02 313 P **P** **18 19 36.4 -0.1**
MKAR *PP pP 18 19 46.5 -0.2
MKAR 18 21 30.8
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MKAR pmax pmax
comp=Z,8.0nm,0.6s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,212nm,18.6s
MKAR Makanchi Array 42.02 313 P **P** **18 19 36.4 -0.1**
MKAR pP pP 18 19 46.5 -0.3
MKAR PcP PcP 18 21 30.8 -0.3
MKAR LR LR 18 39 03.4
ZAA0 Zalesovo Array 42.89 324 *e*P **P** **18 19 42.2 -1.2**
ZALV Zalesovo Beam 42.89 324 P **P** **18 19 42.5 -1.0**
comp=Z,4.1nm,0.5s,mb4.4,baz=116,slow=8.8,SNR=9.5
ZALV pP pP 18 19 53.2 -0.5
comp=Z,9.6nm,0.6s,baz=110,slow=8.1,SNR=13
ZALV LR LR 18 39 18.1
comp=Z,251nm,18.3s,MS4.2,baz=74,slow=38
ZALV Zalesovo Beam 42.89 324 P **P** **18 19 42.5 -0.9**
ZALV *PP pP 18 19 53.2 -0.5
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
ZALV pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
ZALV MLR MLR
comp=Z,251nm,18.3s,MS4.2
ZALV Zalesovo Beam 42.89 324 P **P** **18 19 42.5 -1.0**
ZALV pP pP 18 19 53.2 -0.5
ZALV LR LR 18 39 18.1
FITZ Fitzroy Crossi 43.16 183 ⇓*i*P **P** **18 19 43.4 -2.5**
comp=Z,43nm,0.8s,mb5.2
FITZ Fitzroy Crossi 43.16 183 P **P** **18 19 43.6 -2.3**
comp=Z,24nm,0.7s,mb5.0,baz=21,slow=6.4,SNR=34
FITZ PcP PcP 18 21 33.9 -1.2
comp=Z,6.7nm,0.8s,baz=35,slow=4.8,SNR=3.7
FITZ Fitzroy Crossi 43.16 183 *e*P **P** **18 19 43.3 -2.6**
comp=Z,21nm,0.6s,mb5.0
NVS Novosibirsk 44.10 324 *e*P **P** **18 19 52.3 -0.8**
NVS *e*S **S** **18 26 24.8 +1.5**
NVS pmax pmax
comp=Z,34nm,1.9s,mb4.8
NVS pmax pmax
comp=N,19nm,2.0s
NVS pmax pmax
comp=E,25nm,2.0s
NVS smax
comp=E,15nm,2.1s
NDI New Delhi 45.11 286 *e*P **P** **18 20 02.0 +0.4**
WRAB Tennant Creek 45.35 172 P **P** **18 20 01.0 -2.4**
comp=E,300nm,1.0s,mb6.1,SNR=11
WRAB Tennant Creek 45.35 172 *e*P **P** **18 20 00.8 -2.6**
WRAB pmax pmax
comp=Z,57nm,1.1s,mb5.3
WRAB Tennant Creek 45.35 172 *e*P **P** **18 20 00.8 -2.6**
comp=Z,57nm,1.1s,mb5.3
KURK Kurchatov 45.38 317 P **P** **18 20 03.0 -0.4**
comp=Z,5.1nm,0.7s,mb4.4,baz=108,slow=9.0,SNR=14
KURK pP pP 18 20 14.2 +0.5
comp=Z,15nm,0.9s,baz=106,slow=8.2,SNR=15
KURK PcP PcP 18 21 42.6 +0.3
comp=Z,2.1nm,0.9s,baz=110,slow=3.5,SNR=2.9
KURK Kurchatov 45.38 317 P **P** **18 20 03.0 -0.4**
KURK *PP pP 18 20 14.3 +0.6
KURK 18 21 42.6
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KURK pmax pmax
comp=Z,15nm,0.9s,mb4.8
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KURK Kurchatov 45.38 317 *e*P **P** **18 20 01.7 -1.7**
comp=Z,29nm,1.4s,mb4.9
KSH Kashi 45.57 301 P **P** **18 20 09.0 +3.9**
KSH *e*pP pP 18 20 18.3 +2.8
KSH *e*sP sP 18 20 22.5 +2.9
KSH *e*PcP PcP 18 21 46.0 +2.7
KSH *e*PP PP 18 21 56.0 +3.9
KSH *e*ScP ScP 18 25 35.0 +1.5
KSH *e*PcS PcS 18 25 39.3 +2.0
KSH *e*S **S** **18 26 49.8 +4.7**
KSH *e*sS sS 18 27 06.0 +3.9
KSH *e*ScS ScS 18 29 59.5 +0.7
KSH *e*SS SS 18 30 06.0 -3.3
KSH pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KSH LR LR
comp=N,160nm,9.0s
KSH LR LR
comp=E,250nm,9.1s
KSH LR LR
comp=Z,210nm,9.6s
TKM2 Tokmak 2 46.06 306 *e*P **P** **18 20 09.3 +0.4**
TKM2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
TKM2 Tokmak 2 46.06 306 *e*P **P** **18 20 09.3 +0.4**
comp=Z,9.4nm,0.7s,mb4.8
TIXI Tiksi 46.42 0 *e*P **P** **18 20 10.7 -0.6**
TIXI pmax pmax
comp=Z,26nm,1.9s,mb4.8
TIXI MLR MLR
comp=Z,397nm,10.0s,MS4.7
HYB Hyderabad 46.50 270 *i*P **P** **18 20 14.0 +1.3**
UCH Uchtor 46.81 305 *e*P **P** **18 20 16.8 +1.9**
comp=Z,14nm,1.1s,mb4.8
AAK Ala-Archa 46.85 306 P **P** **18 20 14.3 -0.8**
comp=Z,1.0nm,0.3s,mb4.2,baz=136,slow=8.1,SNR=2.4
AAK PcP PcP 18 21 48.4 +0.7
comp=Z,1.0nm,0.3s,baz=18,slow=3.2,SNR=3.1
AAK Ala-Archa 46.85 306 P **P** **18 20 14.3 -0.8**
AAK 18 21 48.4
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
AAK Ala-Archa 46.85 306 P **P** **18 20 14.3 -0.8**
AAK PcP PcP 18 21 48.4 +0.7
CTA Charters Tower 48.45 157 ⇓*i*P **P** **18 20 25.8 -1.9**
comp=Z,19nm,0.8s,mb5.2
BILL Bilibino 48.66 18 ⇑*e*P **P** **18 20 27.6 -1.1**
BILL *i* pP 18 20 38.5 -0.6
BILL *e* 18 21 57.6
BILL pmax pmax
comp=Z,20nm,1.7s,mb4.9
BILL MLR MLR
comp=Z,100nm,13.0s,MS4.0
ASAR Alice Springs 48.97 173 P **P** **18 20 29.8 -1.9**
comp=Z,16nm,0.7s,mb5.1,baz=0.2,slow=7.9,SNR=58
ASAR pP pP 18 20 41.5 -0.6
comp=Z,6.3nm,0.7s,baz=6.0,slow=7.6,SNR=6.5
ASAR PcP PcP 18 21 54.0 -1.4
comp=Z,5.4nm,0.8s,baz=351,slow=3.9,SNR=7.6
ASAR Alice Springs 48.97 173 P **P** **18 20 29.8 -1.8**
ASAR *PP pP 18 20 41.5 -0.6
ASAR 18 21 54.0
ASAR pmax pmax
comp=Z,16nm,0.7s
ASAR pmax pmax
comp=Z,6.0nm,0.7s
ASAR pmax pmax
comp=Z,5.0nm,0.8s
BVAR Borovoye Array 50.86 319 P **P** **18 20 46.2 +0.5**
comp=Z,4.2nm,0.7s,mb4.5,baz=102,slow=8.5,SNR=9.5
BVAR pP pP 18 20 57.0 +0.9
comp=Z,4.9nm,0.6s,baz=81,slow=9.3,SNR=8.0
BVAR LR LR 18 44 04.0
comp=Z,440nm,19.2s,MS4.5,baz=89,slow=38
BVAR Borovoye Array 50.86 319 P **P** **18 20 46.2 +0.5**
BVAR *PP pP 18 20 57.0 +0.9
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR pmax pmax
comp=Z,5.0nm,0.6s
BVAR MLR MLR
comp=Z,440nm,19.2s
BRVK Borovoye 50.92 319 P **P** **18 20 46.2 0.0**
comp=Z,90nm,1.1s,mb5.6,SNR=6.5
BRVK Borovoye 50.92 319*c i*P **P** **18 20 46.2 0.0**
BRVK pmax pmax
comp=Z,17nm,1.2s,mb4.8
BRVK Borovoye 50.92 319 *e*P **P** **18 20 46.3 +0.1**
KBL Kabul 51.31 295 *e*P **P** **18 20 50.8 +1.4**
KBL *e* pP 18 21 00.7 +0.8
KBL pmax pmax
comp=Z,26nm,0.9s,mb5.2
KBL Kabul 51.31 295 *e*P **P** **18 20 50.8 +1.4**
comp=Z,26nm,0.9s,mb5.2
KBL *e* pP 18 21 00.7 +0.8
FORT Forrest 55.72 180 *e*P **P** **18 21 19.5 -2.1**
comp=Z,52nm,0.9s,mb5.6
FORT Forrest 55.72 180 *e*P **P** **18 21 19.7 -1.9**
comp=Z,69nm,0.9s,mb5.7
SVE Sverdlovsk 56.90 323 *e*P **P** **18 21 30.0 +0.3**
SVE pmax pmax
comp=Z,18nm,1.4s,mb4.9
SVE MLR MLR
comp=Z,344nm,16.0s,MS4.5
KLBR Kellerberrin 57.37 190 *e*P **P** **18 21 31.1 -2.2**
comp=Z,17nm,0.8s,mb5.1
ARU Arti 58.02 322*c i*P **P** **18 21 37.7 0.0**
ARU *e* 18 23 45.3
ARU *e*PPP 18 25 05.6
ARU S **S** **18 29 38.8 +3.1**
ARU SS SS 18 33 22.7 -4.1
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.6
ARU MLR MLR
comp=Z,516nm,19.0s,MS4.7
ARU Arti 58.02 322 *e*P **P** **18 21 37.5 -0.1**
comp=Z,14nm,1.0s,mb4.9
ARU *e* pP 18 21 47.5 -0.8
STKA Stephens Creek 58.28 166 *e*P **P** **18 21 37.0 -2.7**
comp=Z,12nm,0.6s,mb5.1
STKA Stephens Creek 58.28 166 P **P** **18 21 37.4 -2.3**
comp=Z,16nm,0.7s,mb5.2,baz=342,slow=7.0,SNR=27
STKA Stephens Creek 58.28 166 *e*P **P** **18 21 37.4 -2.3**
comp=Z,2.9nm,0.8s,mb4.4
IMYA Miami 58.29 298 *e*P **P** **18 21 41.0 +1.1**
SOKR Solikamsk 59.08 326*d i*P **P** **18 21 46.6 +1.6**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,260nm,20.0s,MS4.3
IKRD Kardeh 59.48 299 *e*P **P** **18 21 43.9 -4.3**
TTA Tatalina 61.47 30 *e*P **P** **18 22 01.2 -0.1**
SVW2 Sparrevohn 61.69 32 *e*P **P** **18 22 03.1 +0.3**
KDAK Kodiak Island 63.42 36 *i*P **P** **18 22 13.6 -0.8**
CNB Canberra Magne 63.55 161 *e*P **P** **18 22 14.8 -0.7**
MCK McKinley 64.62 29 *e*P **P** **18 22 21.3 -0.9**
TOO Toolangi 64.63 165 *e*P **P** **18 22 21.5 -1.0**
VRHR Novokhopersk 68.56 317 *e*P **P** **18 22 48.2 +0.6**
VRHR *e**SP sP 18 22 57.6 -4.8
VRHR pmax pmax
comp=Z,20nm,1.0s,mb5.0
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.5s
APA Apatity 68.65 336 ⇑*e*P **P** **18 22 58.0 +10**
APA MLR MLR
comp=Z,100nm,14.0s,MS4.2
ZEI Tsey 69.16 308 *e*P **P** **18 22 51.5 0.0**
ZEI *e* pP 18 23 02.8 +0.5
ZEI pmax pmax
comp=Z,19nm,1.0s,mb5.0
GNI Garni 69.26 306*c i*P **P** **18 22 52.6 +0.5**
GNI pmax pmax
comp=Z,36nm,1.7s
KIV Kislovodsk 69.69 310 P **P** **18 22 56.6 +1.9**
comp=Z,312nm,1.5s,mb6.0,SNR=8.9
KIV Kislovodsk 69.69 310*a i*P **P** **18 22 56.4 +1.7**
KIV *i **PP pP 18 23 06.0 +0.5
KIV *e* 18 23 15.5
KIV pmax pmax
comp=Z,85nm,1.7s,mb5.4
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.1
KIV Kislovodsk 69.69 310 *e*P **P** **18 22 55.9 +1.2**
comp=Z,82nm,1.2s,mb5.5
KIV *e* pP 18 23 06.1 +0.6
MOS Moscow 69.71 323 *e*P **P** **18 22 54.3 -0.3**
MOS *e* 18 23 14.3
MOS pmax pmax
comp=Z,97nm,2.0s,mb5.4
MOS pmax pmax
comp=Z,200nm,1.9s,mb5.7
INK Inuvik 69.86 23 LR LR 18 57 26.5
comp=Z,23nm,20.2s,MS3.4,baz=198,slow=39
INK Inuvik 69.86 23 *e*P **P** **18 22 54.8 -0.5**
INK pmax pmax
comp=Z,35nm,1.4s
INK Inuvik 69.86 23 *e*P **P** **18 22 54.8 -0.5**
comp=Z,35nm,1.4s,mb5.1
VOR Voronezh 69.87 319 *e*P **P** **18 22 54.0 -1.6**
VOR pmax pmax
comp=Z,140nm,1.2s,mb5.8
VORD Divnogorie 70.01 318 *e*P **P** **18 22 56.7 +0.1**
VORD *e**SP sP 18 23 06.2 -5.2
VORD pmax pmax
comp=Z,30nm,1.1s,mb5.1
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,20nm,0.6s
VSR Storozhevoye 70.02 318 *e*P **P** **18 22 56.8 +0.2**
VSR *e**SP sP 18 23 06.4 -5.1
VSR pmax pmax
comp=Z,30nm,1.3s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,20nm,1.1s
KEV Kevo 70.26 339 *e*P **P** **18 22 57.1 -0.6**
KEV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KEV Kevo 70.26 339 *ep* **P** **18 22 57.1 -0.6**
comp=Z,13nm,0.8s,mb4.9
OBN Obninsk 70.46 322 P **P** **18 22 59.1 -0.1**
comp=Z,219nm,0.6s,SNR=5.7
OBN Obninsk 70.46 322*de*P **P** **18 22 59.0 -0.2**
OBN *i **PP pP 18 23 09.4 -0.6
OBN *i* 18 23 17.0
OBN pmax pmax
comp=Z,80nm,1.6s,mb5.4
OBN MLR MLR
comp=Z,100nm,13.0s,MS4.2
JOF Joensuu 70.78 331 *e*P **P** **18 23 00.8 -0.2**
JOF pmax pmax
comp=Z,21nm,0.8s,mb5.1
JOF Joensuu 70.78 331 *ep* **P** **18 23 00.8 -0.2**
comp=Z,21nm,0.8s,mb5.1
ARCES ARCESS Array B 70.83 339 P **P** **18 23 00.9 -0.3**
comp=Z,2.9nm,0.8s,mb4.2,baz=61,slow=6.1,SNR=11
ARCES pP pP 18 23 11.2 -0.8
comp=Z,7.5nm,0.8s,baz=52,slow=8.3,SNR=9.6
ARCES ARCESS Array B 70.83 339 P **P** **18 23 00.9 -0.3**
ARCES *PP pP 18 23 11.2 -0.8
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES pmax pmax
comp=Z,8.0nm,0.8s
SOC Sochi 71.86 310 *e*P **P** **18 23 07.5 -0.4**
SOC *e**PP pP 18 23 17.5 -1.3
SOC *e*S S 18 32 24.9 -1.3
SOC pmax pmax
comp=Z,577nm,0.8s
SOC MLR MLR
comp=Z,6μm,18.0s
ANN Anapa 73.04 312 *e*P **P** **18 23 24.4 +9.5**
ANN pmax pmax
comp=Z,63nm,1.2s,mb5.4
KAF Kangasniemi 73.24 331 *e*P **P** **18 23 15.0 -0.8**
KAF pmax pmax
comp=Z,13nm,0.9s,mb4.9
KAF Kangasniemi 73.24 331 *ep* **P** **18 23 15.0 -0.8**
comp=Z,13nm,0.9s,mb4.9
FINES FINESS Array B 73.60 331 P **P** **18 23 18.1 +0.2**
comp=Z,3.3nm,0.4s,mb4.6,baz=63,slow=5.5,SNR=31
FINES pP pP 18 23 28.1 -0.7
comp=Z,7.9nm,0.7s,baz=57,slow=7.0,SNR=11
FINES FINESS Array B 73.60 331 P **P** **18 23 18.1 +0.2**
FINES *PP pP 18 23 28.1 -0.7
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES pmax pmax
comp=Z,8.0nm,0.7s
SIM Simferopol' 75.20 313 *e*P **P** **18 23 29.6 +2.0**
SIM pmax pmax
comp=Z,20nm,1.1s,mb5.0
SIM MLR MLR
comp=Z,90nm,19.4s,MS4.1
MICGM Minsk 75.40 324 *e* **P** **18 23 24.0 -4.5**
MNK Minsk 75.43 324 *e*P **P** **18 23 24.0 -4.7**
IDID Didziasalis 75.69 325 *e*P **P** **18 23 31.1 +1.0**
IZAR Zarasai 75.77 325 *e*P **P** **18 23 31.1 +0.6**
NACGM Naroch 75.83 324 *e* **P** **18 23 31.0 0.0**
ISAL Salakas 75.90 325 *e*P **P** **18 23 32.5 +1.1**
IIGN Ignalina 75.94 325 *e*P **P** **18 23 32.5 +0.9**
AKASG Malin Array Be 76.13 320 P **P** **18 23 32.6 -0.1**
comp=Z,12nm,0.8s,mb4.9,baz=57,slow=5.7,SNR=25
AKASG pP pP 18 23 43.0 -0.6
comp=Z,17nm,0.8s,baz=57,slow=6.2,SNR=17
AKASG Malin Array Be 76.13 320 P **P** **18 23 32.7 0.0**
AKASG *PP pP 18 23 43.0 -0.6
AKASG pmax pmax
comp=Z,13nm,0.8s
AKASG pmax pmax
comp=Z,17nm,0.8s
AKBB Malin Array Si 76.13 320 *e*P **P** **18 23 32.5 -0.2**
KIEV Kiev 76.14 320 *e*P **P** **18 23 32.4 -0.4**
KIEV pmax pmax
comp=Z,23nm,0.9s,mb5.1
KIEV Kiev 76.14 320 *e*P **P** **18 23 32.4 -0.4**
comp=Z,23nm,0.9s,mb5.1
DAG Danmarks Havn 76.18 353 ⇑*i*P **P** **18 23 32.7 +0.1**
DAG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
DAG Danmarks Havn 76.18 353 ⇑*i*P **P** **18 23 32.7 +0.1**
comp=Z,4.0nm,1.0s,mb4.3
BR131 Keskin Array S 77.46 308 *e*P **P** **18 23 41.0 +0.5**
comp=Z,11nm,0.9s,mb4.8
BR131 *e* pP 18 23 51.2 -0.2
BRTR Keskin Array B 77.46 308 P **P** **18 23 41.2 +0.8**
comp=Z,6.9nm,0.9s,mb4.6,baz=96,slow=5.0,SNR=18
BRTR pP pP 18 23 51.5 +0.1
comp=Z,10nm,0.8s,baz=87,slow=5.4,SNR=13
BRTR Keskin Array B 77.46 308 P **P** **18 23 41.3 +0.8**
BRTR *PP pP 18 23 51.5 +0.1
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BRTR pmax pmax
comp=Z,11nm,0.8s
SUW Suwalki 78.11 324 *e*P **P** **18 23 44.3 +0.5**
SUW Suwalki 78.11 324 *e*P **P** **18 23 43.9 +0.1**
SUW *e* pP 18 23 54.4 -0.3
SUW pmax pmax
comp=Z,43nm,1.0s,mb5.3
SUW Suwalki 78.11 324 *e*P **P** **18 23 43.9 +0.1**
comp=Z,43nm,1.0s,mb5.3
SUW *e* pP 18 23 54.4 -0.3
MMAI Mount Meron Ar 78.71 301 P **P** **18 23 48.8 +1.3**
comp=Z,3.0nm,0.9s,mb4.2,baz=86,slow=6.9,SNR=7.0
MMAI pP pP 18 23 59.0 +0.5
comp=Z,3.7nm,0.7s,baz=65,slow=10,SNR=6.3
TIRR Tirgusor 79.14 314 ⇓P **P** **18 23 50.6 +0.9**
TIRR Tirgusor 79.14 314 ⇓*i*P **P** **18 23 50.6 +0.9**
RPZ Rata Peaks 79.20 150 P **P** **18 23 47.4 -2.3**
comp=Z,20nm,0.8s,mb5.1,baz=30,slow=3.0,SNR=9.3
HARR Harsova 79.36 314 ⇓P **P** **18 23 51.3 +0.4**
HARR Harsova 79.36 314 ⇓*i*P **P** **18 23 51.3 +0.4**
YKA Yellowknife Ar 79.49 25 P **P** **18 23 49.9 -1.3**
comp=Z,3.5nm,0.8s,mb4.3,baz=299,slow=5.4,SNR=15
YKA pP pP 18 24 01.1 -1.0
comp=Z,3.1nm,0.7s,baz=301,slow=5.1,SNR=8.4
YKA Yellowknife Ar 79.49 25 P **P** **18 23 49.9 -1.3**
YKA *PP pP 18 24 01.1 -1.1
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA pmax pmax
comp=Z,3.0nm,0.7s
LVV L'vov 79.52 320 *e*P **P** **18 23 51.6 0.0**
BUR01 Bucovina Ar. S 79.80 318 P **P** **18 23 54.4 +1.2**
BURAR Bucovina Array 79.80 318 ⇓P **P** **18 23 54.5 +1.3**
BURAR Bucovina Array 79.80 318 ⇓*i*P **P** **18 23 54.5 +1.3**
NB2 NORSAR Subarra 80.08 334 P **P** **18 23 53.8 -0.7**
comp=Z,21nm,1.2s,mb4.9,baz=54,slow=5.3
NB2 NORSAR Subarra 80.08 334 P **P** **18 23 53.8 -0.7**
baz=54,slow=5.3
NOA NORSAR Array B 80.08 334 P **P** **18 23 54.2 -0.3**
comp=Z,6.8nm,0.9s,mb4.6,baz=53,slow=5.5,SNR=14
NOA pP pP 18 24 04.3 -1.1
comp=Z,12nm,0.8s,baz=53,slow=5.3,SNR=20
NOA NORSAR Array B 80.08 334 P **P** **18 23 54.2 -0.3**
NOA *PP pP 18 24 04.3 -1.1
NOA pmax pmax
comp=Z,7.0nm,0.9s
NOA pmax pmax
comp=Z,12nm,0.8s
NOA NORSAR Array B 80.08 334 P **P** **18 23 54.2 -0.3**
NOA pP pP 18 24 04.3 -1.1
MLR Muntele Rosu 80.29 316 P **P** **18 23 56.8 +0.9**
MLR Muntele Rosu 80.29 316 ⇑*i*P **P** **18 23 57.1 +1.2**
KWP Kalwaria Pacla 80.37 320 *e*P **P** **18 23 57.7 +1.5**
KOLS Kolonicke sedl 80.95 320 *e*P **P** **18 24 00.0 +0.7**
KOLS *e* pP 18 24 11.9 +1.6
KOLS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
KOLS Kolonicke sedl 80.95 320 *e*P **P** **18 24 00.0 +0.7**
comp=Z,7.1nm,1.4s,mb4.4
KOLS *e* pP 18 24 11.9 +1.6
KOLS Kolonicke sedl 80.95 320 *e*P **P** **18 24 00.0 +0.7**
KOLS *e*pP pP 18 24 11.9 +1.6
TRPA Tarpa 81.17 319 ⇓*i*P **P** **18 24 01.9 +1.4**
SZH Strazhica 81.28 314 P **P** **18 24 01.8 +0.6**
STHS Stebnicka Huta 81.32 321 *e*P **P** **18 24 03.0 +1.7**
STHS *e* pP 18 24 10.5 -1.8
STHS *e* 18 24 18.5
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
STHS Stebnicka Huta 81.32 321 *e*P **P** **18 24 03.0 +1.7**
comp=Z,3.0nm,1.1s,mb4.1
STHS *e* pP 18 24 10.5 -1.8
STHS *e* 18 24 18.5
STHS Stebnicka Huta 81.32 321 *e*P **P** **18 24 03.0 +1.7**
STHS *e*pP pP 18 24 10.5 -1.8
STHS *e*sP sP 18 24 18.5 +2.2
DRGR 81.70 318 ⇓*i*P **P** **18 24 04.5 +1.1**
OJC Ojcow 81.74 322 *e*P **P** **18 24 03.7 +0.2**
OJC *e*PcP PcP 18 24 09.1 -0.1
SUMG Summit 81.98 356 *e*P **P** **18 24 04.6 +0.2**
comp=Z,45nm,1.1s,mb5.3
SUMG *e* pP 18 24 15.1 -0.3
KECS Kecovo 82.21 320 *e*P **P** **18 24 07.9 +1.9**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 82.21 320 *e*P **P** **18 24 07.9 +1.9**
comp=Z,2.6nm,1.1s,mb4.1
KECS Kecovo 82.21 320 *e*P **P** **18 24 07.9 +1.9**
GZR Gura Zlata 82.32 317 P **P** **18 24 08.2 +1.6**
RZN Rozhen 82.79 313 P **P** **18 24 10.2 +1.0**
PSZ Piszkesteto 82.83 320 *e*P **P** **18 24 10.4 +1.1**
OKC Ostrava-Krasne 82.85 322 *e*P **P** **18 24 09.9 +0.6**
OKC *e**PP pP 18 24 19.7 -0.6
OKC MLR MLR
comp=Z,300nm,21.4s,MS4.6
OKC Ostrava-Krasne 82.85 322 *e*P **P** **18 24 09.9 +0.6**
OKC *e*pP pP 18 24 19.7 -0.6
OKC AMS AMS 19 03 20.0
comp=Z,300nm,21.4s
NLWA Neilton Lookou 83.12 41 ⇑P **P** **18 24 11.0 +0.2**
baz=83
VYHS Vyhne 83.15 321 *e*P **P** **18 24 12.1 +1.2**
VYHS *e* pP 18 24 22.0 +0.1
VYHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
VYHS Vyhne 83.15 321 *e*P **P** **18 24 12.1 +1.2**
comp=Z,6.5nm,1.2s,mb4.5
VYHS *e* pP 18 24 22.0 +0.1
VYHS *e* 18 24 34.3
VYHS Vyhne 83.15 321 *e*P **P** **18 24 12.1 +1.2**
VYHS *e*pP pP 18 24 21.9 0.0
VYHS *e* 18 24 34.3

MORC **Moravsky Berou** 83.22 322 ⇓*i*P P 18 24 12.6 +1.4
KSP **Ksiaz** 83.34 324 *e*P P 18 24 12.8 +1.0
KSP **Ksiaz** 83.34 324 *e*P P 18 24 13.3 +1.5
KSP *e*pP pP 18 24 23.9 +1.1
VTS **Vitosha** 83.36 314 P P 18 24 13.3 +1.2
MMB **Musomiste** 83.50 313 P P 18 24 10.5 -2.3
DPC **Dobruska-Polom** 83.59 323 *e*P P 18 24 14.3 +1.2
DPC *e**PP pP 18 24 25.4 +1.3
DPC MLR MLR
comp=Z,300nm,17.0s,MS4.7
DPC **Dobruska-Polom** 83.59 323 *e*P P 18 24 14.3 +1.2
DPC *e*pP pP 18 24 25.4 +1.3
DPC AMS AMS 19 04 20.0
comp=Z,300nm,17.0s
MUD **Monsted U'grnd** 83.65 331 *e*P P 18 24 14.8 +1.5
MUD pmax pmax
comp=Z,15nm,1.1s,mb5.0
MUD **Monsted U'grnd** 83.65 331 *i* P P 18 24 14.8 +1.5
comp=Z,15nm,1.1s,mb5.0
KKB **Krupnik** 83.79 313 P P 18 24 15.2 +0.9
VRAC **Vranov** 83.99 322 P P 18 24 16.3 +1.1
VRAC **Vranov** 83.99 322 ⇓*i*P P 18 24 16.9 +1.7
A07A **Ashnola River,** 84.26 38 ⇑P P 18 24 16.6 0.0
baz=84
PKSM **Moragy** 84.43 319 ⇓*i*P P 18 24 18.5 +1.0
PVCC **Panska Ves** 84.43 324 *e*P P 18 24 18.3 +0.9
PVCC *e**PP pP 18 24 28.8 +0.3
PVCC MLR MLR
comp=Z,300nm,20.0s,MS4.7
PVCC **Panska Ves** 84.43 324 *e*P P 18 24 18.3 +0.9
PVCC *e*pP pP 18 24 28.8 +0.3
PVCC AMS AMS 19 04 40.0
comp=Z,300nm,20.0s
BRG **Berggiesshubel** 84.57 324 *e*P P 18 24 19.0 +0.9
comp=Z,15nm,1.1s,mb5.0
BRG *e*pP pP 18 24 28.6 -0.6
BRG **Berggiesshubel** 84.57 324 *e*P P 18 24 18.9 +0.7
comp=Z,19nm,1.4s,mb5.0
BRG **Berggiesshubel** 84.57 324 *e*P P 18 24 18.9 +0.8
BRG **Berggiesshubel** 84.57 324 *e*P P 18 24 18.9 +0.7
TREC **Trest** 84.61 323 *e*P P 18 24 19.3 +1.0
TREC *e**PP pP 18 24 29.5 +0.1
TREC MLR MLR
comp=Z,200nm,15.6s,MS4.6
TREC **Trest** 84.61 323 *e*P P 18 24 19.3 +1.0
TREC *e*pP pP 18 24 29.5 +0.1
TREC AMS AMS 19 04 30.0
comp=Z,200nm,15.6s
PRU **Pruhonice** 84.75 324 *e*P P 18 24 20.4 +1.4
PRU *e**PP pP 18 24 29.3 -0.7
PRU MLR MLR
comp=Z,300nm,19.7s,MS4.7
PRU **Pruhonice** 84.75 324 *e*P P 18 24 20.4 +1.4
PRU *e*pP pP 18 24 29.3 -0.7
PRU AMS AMS 19 04 40.0
comp=Z,300nm,19.7s
CLL **Collm** 84.82 325 *e*P P 18 24 20.0 +0.6
comp=Z,20nm,0.9s,mb5.2
CLL *e*pP pP 18 24 29.4 -1.0
CLL **Collm** 84.82 325 ⇑*i*P P 18 24 20.0 +0.6
CLL *i* pP 18 24 30.1 -0.3
CLL *e* 18 24 36.0
CLL pmax pmax
comp=Z,14nm,1.1s,mb5.0
CLL MLR MLR
comp=Z,400nm,19.8s,MS4.8
CLL **Collm** 84.82 325 ⇑*i*P P 18 24 20.0 +0.6
comp=Z,14nm,1.1s,mb5.0
CLL *i* pP 18 24 30.1 -0.3
CLL *e* 18 24 36.0
CLL LR LR
comp=Z,400nm,19.8s,MS4.8
CLL **Collm** 84.82 325 ⇑*i*P P 18 24 20.0 +0.6
comp=Z,14nm,1.1s,mb5.0
CLL ⇓*i*pP pP 18 24 30.1 -0.3
comp=Z,20nm,0.9s
CLL *e*(sP) sP 18 24 36.0 +1.6
CLL *e* 18 24 41.0
CLL Lm 19 05 00.0
comp=Z,400nm,19.8s
H04A **Detroit Lake** 85.50 42 ⇓P P 18 24 23.0 0.0
baz=85
TANN **Tannenbergstha** 85.61 325 *e*P P 18 24 24.5 +1.2
comp=Z,9.0nm,1.1s,mb4.9
KHC **Kasperske Hory** 85.75 323 *e*P P 18 24 25.2 +1.2
KHC *e**PP pP 18 24 34.0 -1.1
KHC MLR MLR
comp=Z,300nm,18.8s,MS4.7
KHC **Kasperske Hory** 85.75 323 *e*P P 18 24 25.2 +1.2
KHC *e*pP pP 18 24 34.0 -1.1
KHC AMS AMS 19 05 20.0
comp=Z,300nm,18.8s
GEC2 **GERESS Array S** 85.84 323 *e*P P 18 24 25.4 +0.9
comp=Z,14nm,1.0s,mb5.2
GEC2 *e*pP pP 18 24 35.4 -0.1
GEC2 **GERESS Array S** 85.84 323 *e*P P 18 24 24.7 +0.2
GEC2 *e* pP 18 24 35.3 -0.2
GEC2 **GERESS Array S** 85.84 323 *e*P P 18 24 24.7 +0.2
GEC2 *e* pP 18 24 35.3 -0.2
GERES **GERESS Array B** 85.84 323 P P 18 24 25.1 +0.6
comp=Z,3.7nm,0.9s,mb4.6,baz=45,slow=4.2,SNR=15
GERES pP pP 18 24 35.6 +0.1
comp=Z,6.0nm,0.8s,baz=57,slow=4.9,SNR=20
GERES **GERESS Array B** 85.84 323 P P 18 24 25.1 +0.6
GERES *PP pP 18 24 35.6 +0.1
GERES pmax pmax
comp=Z,4.0nm,0.9s
GERES pmax pmax
comp=Z,6.0nm,0.8s
MOX **Moxa** 85.92 325 *e*P P 18 24 26.0 +1.1
comp=Z,16nm,1.5s,mb5.0
MOX **Moxa** 85.92 325 *e*P P 18 24 26.7 +1.8
MOX pmax pmax
comp=Z,36nm,2.0s,mb5.3
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.7
MOX **Moxa** 85.92 325 *e*P P 18 24 26.7 +1.8
comp=Z,36nm,2.0s,mb5.3
MOX LR LR
comp=Z,300nm,20.0s,MS4.7
WET **Wettzell** 86.12 323 *e*P P 18 24 27.5 +1.6
comp=Z,32nm,1.9s,mb5.2
WET **Wettzell** 86.12 323 *e*P P 18 24 27.5 +1.6
WET pmax pmax
comp=Z,32nm,1.9s,mb5.2
WET **Wettzell** 86.12 323 *e*P P 18 24 27.5 +1.6
comp=Z,32nm,1.9s,mb5.2
ROTZ **Rotzenmuhle** 86.12 324 *e*P P 18 24 27.3 +1.4
comp=Z,31nm,1.6s,mb5.3
ROTZ *e*pP pP 18 24 37.0 +0.1
UBBA **Unterbreizbach** 86.64 326 *e*P P 18 24 29.3 +0.9
comp=Z,4.0nm,0.8s,mb4.7
GRA1 **Grafenberg Arr** 86.68 324 *e*P P 18 24 28.9 +0.3
comp=Z,29nm,1.3s,mb5.3
GRA1 *e*pP pP 18 24 39.7 0.0
GRA1 LR LR
comp=Z,400nm,20.2s,MS4.8
GRF **Grafenberg Arr** 86.68 324 *e*P P 18 24 28.9 +0.3
comp=Z,29nm,1.3s,mb5.3
GRF *e*pP pP 18 24 39.7 0.0
GRF *e*L 19 06 23.2
comp=Z,427nm,20.2s
GRF **Grafenberg Arr** 86.68 324 *e*P P 18 24 28.9 +0.3
GRF *e**PP pP 18 24 39.7 0.0
GRF pmax pmax
comp=Z,29nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,400nm,20.2s,MS4.8
GRF **Grafenberg Arr** 86.68 324 *e*P P 18 24 28.9 +0.3
comp=Z,29nm,1.3s,mb5.3
GRF *e*pP pP 18 24 39.7 0.0
GRF LR LR
comp=Z,400nm,20.2s,MS4.8
YBH **Yreka Blue Hor** 86.71 45 P P 18 24 28.4 -0.6
comp=Z,5.7nm,1.0s,mb4.8,baz=210,slow=0.7,SNR=7.1
YBH **Yreka Blue Hor** 86.71 45 P P 18 24 28.4 -0.5
YBH pmax pmax
comp=Z,6.0nm,1.0s
K05A **Summer Lake** 87.33 43 ⇑P P 18 24 32.0 +0.1
baz=87
I07A **Izee** 87.45 42 ⇓P P 18 24 32.7 +0.2
baz=87
FUR **Furstenfeldbru** 87.55 323 *e*pP pP 18 24 44.1 +0.1
D11A **Klaveano Farm,** 87.63 38 ⇓P P 18 24 33.2 -0.1
baz=88
H08A **Prairie City** 87.71 41 ⇓P P 18 24 33.9 +0.1
baz=88
B13A **Whitefish** 87.87 36 ⇓P P 18 24 34.1 -0.4
baz=88
A14A **Double T Ranch** 88.07 35 ⇑P P 18 24 35.0 -0.3
baz=88,SNR=8.0
E11A **Bogner Ranch,** 88.10 39 ⇓P P 18 24 35.0 -0.5
baz=88
MOD **Modoc** 88.14 44 *e*P P 18 24 35.3 -0.5
comp=Z,17nm,1.3s,mb5.1
G10A **Bishop Farm, J** 88.19 40 ⇓P P 18 24 36.0 0.0
baz=88
C13A **Hot Springs** 88.23 37 ⇓P P 18 24 36.4 +0.2
baz=88
A15A **Johnson Ranch,** 88.42 35 ⇓P P 18 24 36.2 -0.8
baz=88
J08A **Circle Bar Ran** 88.47 42 ⇑P P 18 24 37.8 +0.4
baz=88
B14A **Marquette Ranc** 88.52 36 ⇑P P 18 24 37.5 +0.1
baz=88,SNR=6.0
I09A **Lost Marbles R** 88.57 41 ⇓P P 18 24 38.1 +0.3
baz=88
G11A **Walters Elk Ra** 88.62 39 ⇑P P 18 24 37.5 -0.5
baz=88
H10A **Noah's Angus R** 88.81 40 ⇓P P 18 24 38.7 -0.2
baz=89
J09A **Fry Pan Ranch,** 88.92 42 ⇑P P 18 24 39.6 +0.1
baz=89
B15A **Bradely Ranch,** 88.92 36 ⇓P P 18 24 39.0 -0.3
baz=89
F12A **Elk City** 88.99 39 ⇑P P 18 24 39.1 -0.7
baz=89
BFO **Black Forest** 89.02 325 *e*P P 18 24 39.6 -0.2
comp=Z,23nm,1.9s,mb5.2
BFO **Black Forest** 89.02 325 *e*P P 18 24 39.6 -0.2
BFO pmax pmax
comp=Z,23nm,1.9s,mb5.2
BFO **Black Forest** 89.02 325 *e*P P 18 24 39.6 -0.2
comp=Z,23nm,1.9s,mb5.2
SLMT **Seeley Lake** 89.08 37 *e*P P 18 24 39.1 -1.0
comp=Z,1.8nm,0.7s,mb4.5
SLMT *e* pP 18 24 50.0 -1.3
H11A **Donnelly** 89.17 40 ⇑P P 18 24 40.5 -0.1
baz=89
BEKR **Beckwourth** 89.21 46 ⇑P P 18 24 41.0 +0.1
baz=89
C15A **Salmond Ranch,** 89.23 36 ⇑P P 18 24 40.7 -0.1
baz=89,SNR=5.1
A17A **Triple J Farms** 89.49 34 ⇑P P 18 24 41.2 -0.8
baz=89,SNR=6.6
CDF **Champ du Feu** 89.52 325 *e*P P 18 24 41.8 -0.4
FFC **Flin Flon** 89.55 26 *i* P P 18 24 41.8 -0.4
C16A **Fuhringer Ranc** 89.67 36 ⇓P P 18 24 42.8 -0.1
baz=90
K10A **MacKenzie Ranc** 89.77 42 ⇑P P 18 24 43.5 +0.1
baz=90
B17A **L&G Farms, Che** 89.85 35 ⇓P P 18 24 43.1 -0.7
baz=90,SNR=7.4
H12A **Diamond D Ranc** 89.93 40 ⇓P P 18 24 44.4 +0.2
baz=90
A18A **Metzger Ranch,** 89.94 34 ⇓P P 18 24 44.1 -0.1
baz=90
MFID **Camas Ranch** 90.03 41 ⇓P P 18 24 44.5 -0.1
baz=90,SNR=5.2
E15A **Deer Lodge** 90.04 37 ⇑P P 18 24 44.6 -0.1
baz=90
H13A **Challis** 90.27 39 ⇓P P 18 24 46.3 +0.5
baz=90
K11A **Parker Ranch,** 90.28 41 ⇑P P 18 24 46.1 +0.3
baz=90,SNR=5.3
B18A **Beardsley Farm** 90.31 34 ⇑P P 18 24 46.1 +0.2
baz=90
L10A **Juniper Basin** 90.42 42 ⇑P P 18 24 46.8 +0.3
baz=90
F15A **Butte** 90.48 37 ⇓P P 18 24 47.1 +0.4
baz=90
E16A **East Helena** 90.50 37 ⇓P P 18 24 47.0 +0.3
baz=90
J12A **Stokes Ranch,** 90.56 41 ⇓P P 18 24 46.9 -0.2
baz=90
EGMT **Eagleton** 90.56 35 ⇑P P 18 24 47.2 +0.2
baz=90
D17A **Six Diamond Ra** 90.64 36 ⇑P P 18 24 46.7 -0.7
baz=90
M10A **I.L. Ranch, Tu** 90.69 43 ⇑P P 18 24 47.6 -0.2
baz=90
I13A **Wildhorse Cree** 90.73 40 ⇑P P 18 24 47.7 -0.2
baz=91,SNR=5.1
HLID **Hailey** 90.77 40 ⇓P P 18 24 48.4 +0.3
baz=91,SNR=6.4
PPT **Papeete** 90.78 109 *e*LR LR 18 24 46.4
comp=Z,200nm,28.0s
L11A **Cat Creek Ranc** 90.80 42 ⇑P P 18 24 48.4 +0.2
baz=91,SNR=8.9
G15A **Dillon** 90.90 38 ⇑P P 18 24 49.0 +0.3
baz=91
E17A **Martinsdale** 90.98 36 ⇓P P 18 24 49.5 +0.5
baz=91
F16A **Kennard Place,** 90.99 37 ⇓P P 18 24 49.4 +0.3
baz=91
J13A **Cove Ranch, Pi** 91.01 40 ⇓P P 18 24 50.1 +0.9
baz=91
K12A **Draper Farm, C** 91.03 41 ⇓P P 18 24 50.0 +0.6
baz=91
D18A **Linhart Farms,** 91.07 35 ⇑P P 18 24 49.7 +0.3
baz=91
BOZ **Bozeman (W)** 91.08 37 ⇑P P 18 24 50.2 +0.8
baz=91
I14A **Mackay** 91.11 39 ⇑P P 18 24 50.6 +0.9
baz=91
M11A **Holland Ranch,** 91.20 42 ⇑P P 18 24 51.4 +1.2
baz=91
L12A **House Creek Ra** 91.26 42 ⇑P P 18 24 50.9 +0.5
baz=91,SNR=5.9
NVAR **Mina Array Bea** 91.33 46 P P 18 24 50.7 -0.1
comp=Z,2.4nm,0.9s,mb4.5,baz=280,slow=5.4,SNR=14
NVAR **Mina Array Bea** 91.33 46 P P 18 24 50.7 -0.1
E18A **Harlowton** 91.42 36 ⇓P P 18 24 50.7 -0.3
baz=91,SNR=10
J14A **Carey** 91.44 40 ⇓P P 18 24 52.1 +0.9
baz=91
K13A **Stover Farm, H** 91.51 41 ⇑P P 18 24 52.4 +0.8
baz=91
LPG **La Plagne** 91.64 323 *e*P P 18 24 50.8 -1.3
comp=Z,8.7nm,0.9s,mb4.8
LPG **La Plagne** 91.64 323 *e*P P 18 24 50.8 -1.3
LPG pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
LPG **La Plagne** 91.64 323 *e*P P 18 24 50.8 -1.3
comp=Z,4.3nm,0.9s,mb4.8
M12A **Wells** 91.75 42 ⇓P P 18 24 53.2 +0.5
baz=92
P10A **Eureka** 91.84 44 ⇓P P 18 24 53.7 +0.6
baz=92
H16A **Russell Place,** 91.88 38 ⇓P P 18 24 54.2 +1.0
baz=92
L13A **Double Diamond** 91.93 41 ⇓P P 18 24 54.5 +0.9
baz=92
F18A **Big Timber** 91.95 36 ⇑P P 18 24 54.0 +0.4
baz=92
N12A **Clover Valley,** 92.00 43 ⇓P P 18 24 55.0 +1.2
baz=92
J15A **Blackfoot** 92.02 39 ⇓P P 18 24 55.5 +1.6
baz=92
K14A **Jones Ranch, D** 92.11 40 ⇑P P 18 24 55.2 +0.8
baz=92
CASY **Casey** 92.22 187 *e*P P 18 24 52.9 -1.1
M13A **Montello** 92.23 42 ⇑P P 18 24 56.0 +1.1
baz=92
P11A **Circle Ranch,** 92.32 44 ⇑P P 18 24 56.5 +1.1
baz=92
Q10A **Clear Creek Ra** 92.33 45 ⇑P P 18 24 55.0 -0.5
baz=92,SNR=6.4
L14A **Malta** 92.38 41 ⇑P P 18 24 56.6 +1.0
baz=92
SMF **Signal de Mont** 92.44 325 *e*P P 18 24 54.2 -1.6
H17A **Grant Village** 92.44 38 ⇑P P 18 24 57.7 +1.9
baz=92
O12A **Currie** 92.53 43 ⇑P P 18 24 56.7 +0.4
baz=92,SNR=5.6
M14A **Sheep Mountain** 92.64 41 ⇑P P 18 24 57.4 +0.5
baz=92,SNR=5.2
RLMT **Red Lodge** 92.69 37 ⇓P P 18 24 57.3 +0.3
baz=92
R10A **Warm Springs** 92.71 45 ⇑P P 18 24 57.7 +0.6
baz=92
S10A **Tonopah Range,** 92.73 46 ⇓P P 18 24 57.5 +0.2
baz=93
GRAC **Grapevine Rang** 92.75 47 ⇓P P 18 24 57.7 +0.3
baz=93
ISA **Isabella** 92.76 48 ⇓P P 18 24 56.5 -1.0
baz=93
Q11A **Duckwater** 92.80 44 ⇑P P 18 24 58.1 +0.5
baz=93
P12A **McGill** 92.90 44 ⇓P P 18 24 58.2 +0.2
baz=93
R11A **Troy Canyon, C** 93.13 45 ⇓P P 18 24 58.8 -0.4
baz=93,SNR=5.7
MPMC **Manual Prospec** 93.20 48 ⇓P P 18 24 59.1 -0.4
baz=93,SNR=7.5
FURC **Furnace Creek,** 93.38 47 ⇓P P 18 25 00.8 +0.4
baz=93
LRMC **Laurel Mountai** 93.39 48 ⇑P P 18 25 00.7 +0.3
baz=93
P13A **Bates Ranch, G** 93.47 43 ⇑P P 18 25 00.4 -0.2
baz=93,SNR=5.3
J18A **Kendall Valley** 93.51 38 ⇑P P 18 25 01.2 +0.5
baz=93
TCF **Toulx Ste Croi** 93.52 326 *e*P P 18 25 00.3 -0.5
comp=Z,6.1nm,1.0s,mb4.7
TCF **Toulx Ste Croi** 93.52 326 *e*P P 18 25 00.3 -0.5
TCF pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
TCF **Toulx Ste Croi** 93.52 326 *e*P P 18 25 00.3 -0.5
comp=Z,3.0nm,1.0s,mb4.7
EDW2 **Edwards Air Fo** 93.52 49 ⇓P P 18 25 01.2 +0.2
baz=93
Q13A **Wheeler Ranch,** 93.76 44 ⇑P P 18 25 02.6 +0.5
baz=94
U10A **Ash Meadows, A** 93.76 47 ⇓P P 18 25 02.7 +0.6
baz=94
R12A **Pony Springs,** 93.76 44 ⇑P P 18 25 02.3 +0.2
baz=94,SNR=5.3
P14A **Drum Mountains** 93.97 43 ⇓P P 18 25 03.4 +0.5
baz=94
PDAR **Pinedale Array** 94.05 39 P P 18 25 02.4 -0.9
comp=Z,0.8nm,0.8s,mb4.2,baz=336,slow=3.3,SNR=5.9
GSC **Goldstone** 94.08 48 ⇑P P 18 25 03.8 +0.2
baz=94
Q14A **Sevier Lake (B** 94.20 43 ⇓P P 18 25 04.9 +0.9
baz=94
TUQ **Turquoise Moun** 94.60 47 ⇓P P 18 25 05.7 -0.2
baz=94
HEC **Hector,Ludlow** 94.67 48 ⇓P P 18 25 06.4 +0.1
baz=94
S13A **Holt Ranch, En** 94.68 45 ⇑P P 18 25 06.9 +0.6
baz=94
T13A **Saint George** 94.99 45 ⇓P P 18 25 07.8 +0.1
baz=95
GMRC **Granite Mounta** 95.15 48 ⇓P P 18 25 08.5 0.0
baz=95
PFO **Pinyon Flat Ob** 95.29 49 ⇓P P 18 25 08.9 -0.3
baz=95
BELC **Belle Mtn.** 95.37 49 ⇓P P 18 25 09.6 +0.1
baz=95
MONP **Monument Peak** 95.72 50 ⇓P P 18 25 11.5 +0.4
baz=96
IRM **Iron Mountain** 95.86 48 ⇑P P 18 25 12.0 +0.3
baz=96
BC3 **Big Chuckw Mtn** 95.94 49 ⇑P P 18 25 12.5 +0.4
baz=96
N20A **Spence Gulch,** 96.04 39 ⇓P P 18 25 12.6 +0.2
baz=96
V14A **Boquillas Ranc** 96.34 46 ⇑P P 18 25 14.7 +0.8
baz=96
U15A **North Rim** 96.38 45 ⇓P P 18 25 14.8 +0.7
baz=96
P19A **Cripple Cowboy** 96.40 41 ⇑P P 18 25 14.1 +0.1
baz=96
W14A **Seligman** 96.60 46 ⇑P P 18 25 15.8 +0.7
baz=96
R18A **Canyonlands Na** 96.65 42 ⇓P P 18 25 15.1 -0.1
baz=96
GLA **Glamis** 96.72 49 ⇓P P 18 25 15.5 -0.1
baz=97
Z13A **Yuma Proving G** 97.43 48 ⇑P P 18 25 19.5 +0.6
baz=97
SCHQ **Schefferville** 99.22 9 LR LR 19 16 04.4
comp=Z,45nm,19.3s,MS4.0,baz=143,slow=39
TORD **Torodi Ar. Bea** 115.23 300 PKP PKiKP 18 30 25.5 -1.6
comp=Z,0.5nm,0.9s,baz=36,slow=2.5,SNR=4.6
TORD PP PP 18 31 28.6 +1.4
comp=Z,2.1nm,1.2s,baz=40,slow=5.4,SNR=4.8
SDV **Santo Domingo** 141.51 30 *e*PKPdf PKPdf 18 31 16.0 -0.8
PLCA **Paso Flores** 158.16 139 PKP PKPdf 18 31 44.6 +2.8
comp=Z,3.8nm,1.2s,baz=169,slow=5.6,SNR=3.3
PLCA PKPab PKPab 18 32 14.4 -1.3
comp=Z,4.5nm,0.8s,baz=217,slow=3.2,SNR=8.0
PLCA **Paso Flores** 158.16 139 PKIKP PKPdf 18 31 44.6 +2.7
PLCA 18 32 14.4
PLCA pmax pmax
comp=Z,4.0nm,1.2s
PLCA pmax pmax
comp=Z,5.0nm,0.8s
LPAZ **La Paz** 162.49 62 PKP PKPdf 18 31 48.2 +0.8
comp=Z,2.2nm,1.0s,baz=274,slow=4.6,SNR=5.3
LPAZ **La Paz** 162.49 62 PKIKP PKPdf 18 31 48.2 +0.8
LPAZ pmax pmax
comp=Z,2.0nm,1.0s
LPAZ **La Paz** 162.49 62 PKP PKPdf 18 31 48.2 +0.8
CPUP **Villa Florida** 175.09 104 PKP PKPdf 18 31 55.1 -0.1
comp=Z,0.8nm,0.5s,baz=288,slow=9.6,SNR=2.7
CPUP **Villa Florida** 175.09 104 PKIKP PKPdf 18 31 55.1 -0.1
CPUP pmax pmax
comp=Z,1.0nm,0.5s

KRSC 30 18:13:01.1±0.6, 53°.64N×161°.08E, h27km±26km, ML3.9,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.83	230	*e*P		Pb	18 13 16.2	-0.7
SPN				*i* S		Sb	18 13 27.1	-0.6
MKZ	**Mys Kozlova**	0.99	22	*e*P		Pn	18 13 18.0	-1.2
MKZ				*i* S		Sb	18 13 30.2	-2.1
KII	**Karymskiy**	1.04	293	*e*P		Pn	18 13 19.0	-0.9
KII				*i* S		Sn	18 13 32.1	-1.5
NLC	**Nalytchevo**	1.14	246	*e*P		Pn	18 13 20.8	-0.4
NLC				*i* S		Sn	18 13 35.2	-0.7
AVH	**Avacha**	1.45	256	*e*P		Pn	18 13 25.7	+0.2
AVH				*i* S		Sn	18 13 43.9	+0.3
PET	**Petropavlovsk**	1.58	248	*e*P		Pn	18 13 27.2	-0.1
PET				*i* S		Sn	18 13 46.2	-0.6
TUMR	**Tumrok**	1.73	342	*e*P		Pn	18 13 30.0	+0.6
TUMR				*i* S		Sn	18 13 50.7	+0.1
GNL	**Ganaly**	1.87	273	*e*P		Pn	18 13 31.9	+0.7
GRL	**Gorelyy**	2.12	240	*e*P		Pn	18 13 35.7	+1.1
GRL				*i* S		Sn	18 14 01.3	+1.3
KMNR	**Kamenistaya**	2.18	347	*e*P		Pn	18 13 36.9	+1.4
KMNR				*i* S		Sn	18 14 03.1	+1.6
BZMR	**Bezymyannaya**	2.33	352	*e*P		Pn	18 13 39.7	+2.2
BZMR				*i* S		Sn	18 14 07.4	+2.2
KIRR	**Kirishev**	2.36	350	*e*P		Pn	18 13 40.0	+2.0
KIRR				*i* S		Sn	18 14 08.7	+2.7
KPT	**Kopyto**	2.38	348	*e*P		Pn	18 13 39.8	+1.5
KPT				*i* S		Sn	18 14 08.7	+2.1
ZLN	**Zelenaya**	2.39	356	*e*P		Pn	18 13 39.8	+1.4
ZLN				*i* S		Sn	18 14 08.6	+1.9
CIRR	**Tsirk**	2.49	356	*e*P		Pn	18 13 41.3	+1.5
CIRR				*i* S		Sn	18 14 10.7	+1.5
KOZ	**Kozyrevsk**	2.52	344	*e*P		Pn	18 13 41.0	+0.8
KOZ				*i* S		Sn	18 14 10.0	0.0
KRSR	**Krestovskiy**	2.60	354	*e*P		Pn	18 13 42.9	+1.6
KLY	**Klyuchi**	2.69	355	*e*P		Pn	18 13 43.4	+0.9
KLY				*i* S		Sn	18 14 14.7	+0.5
KBTR	**Krutoberegovo**	2.76	21	*e*P		Pn	18 13 44.7	+1.2
KBTR				*i* S		Sn	18 14 16.0	+0.1
SRDR	**Sredinnyy**	2.80	344	*e*P		Pn	18 13 45.1	+1.1
SRDR				*i* S		Sn	18 14 17.2	+0.4
BDR	**Baidarnaya**	2.94	1	*e*P		Pn	18 13 48.1	+2.2
BDR				*i* S		Sn	18 14 22.4	+2.2
MIPR	**Malaya Ipel'ka**	2.95	244	*e*P		Pn	18 13 47.8	+1.7
SMKR	**Semkarok**	2.96	4	*e*P		Pn	18 13 47.7	+1.5
SMKR				*i* S		Sn	18 14 21.6	+0.9
SRKR	**Sorokina**	3.02	1	*e*P		Pn	18 13 48.3	+1.2
SRKR				*i* S		Sn	18 14 23.7	+1.4
BKI	**Bering**	3.26	59	*e*P		Pn	18 13 49.7	-0.6

BKI			*i* S	Sn	18 14 24.5	-3.7
ALID	**Alaid**	**4.39 233**	*e*P	Pn	18 14 09.0	+3.2

DJA 30 18:35:02,5.11S×128.01E±,h27km,MLv3.5/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.43**	**7**	P	Pn	18 35 26.0	-0.1
AAI				S	Sn	18 35 44.5	+0.5
NLAI	**Namlea**	**2.07**	**334**	P	Pn	18 35 36.0	+1.0
NLAI				S	Sn	18 36 01.2	+1.3
TLE	**Tual**	**4.74**	**97**	P	Pn	18 36 11.8	+0.1

*IDC **30** 18:43:14.6±1.8,36.24N×29.19E,h0km,mb3.5/1,*
mb1 3.3/4,mb1mx3.1/25,mbtmp3.3/4,ML3.2/3,Error
ellipse: s-maj=36.9km s-min=21.9km az=162.0
*DDA **30** 18:43:17.2,36.43N×28.99E,h7km±5km,Md3.1*
*ATH **30** 18:43:17.4,36.44N×29.20E,h48km±11km,MD3.4/10*
*ISK **30** 18:43:18.1,36.48N×29.09E,h16km,MD3.2*
*CSEM **30** 18:43:18.3±0.1,36.45N×29.11E,h15km,MD3.4, Error*
ellipse: s-maj=4.0km s-min=2.6km az=156.0
*NEIC **30** 18:43:18.0,36.52N×29.04E,h17km,MD3.2(ISK),*
MD3.4(ATH), After ISK.

ISC 30 18:43:19.4±0.5,36.38N±0.03×29.16E±0.03,h32km±5km,
n79,σ1.06/110,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.38**	**112**	*i* P	**Pb**	**18 43 27.9**	**-0.2**
AKAS				*i* S	**Sb**	**18 43 35.7**	**+1.5**
AKAS	**Kas**	**0.38**	**112**	*i* P	**Pb**	**18 43 27.9**	**-0.3**
AKAS				*i* S	**Sb**	**18 43 35.7**	**+1.5**
KSL	**Kastellorizon**	**0.41**	**124**	*e*P	**Pb**	**18 43 28.1**	**-0.4**
TURN	**Turunc**	**0.67**	**318**	*i* P	**Pb**	**18 43 33.5**	**+0.9**
TURN				*i* S	**Sb**	**18 43 46.1**	**+4.4**
TURN	**Turunc**	**0.67**	**318**	*i* P	**Pb**	**18 43 33.5**	**+0.8**
ELL	**Elmali**	**0.70**	**58**	*e*PG	**Pb**	**18 43 32.1**	**-1.2**
ELL				*e*SG	**Sb**	**18 43 43.1**	**+0.4**
ELL	**Elmali**	**0.70**	**58**	*e*Pg	**Pb**	**18 43 32.1**	**-1.2**
ELL				*e*Sg	**Sb**	**18 43 43.1**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.82**	**19**	*e*PG	**Pn**	**18 43 33.1**	**-1.6**
GLHS				*e*SG	**Sb**	**18 43 44.2**	**-1.8**
GLHS	**Glhisar (BURDU**	**0.82**	**19**	*e*Pg	**Pn**	**18 43 33.1**	**-1.6**
GLHS				*e*Sg	**Sb**	**18 43 44.2**	**-1.8**
ARG	**Arkhangelos**	**0.85**	**259**	*e*P	**Pn**	**18 43 34.4**	**-0.7**
ARG				*e*S	**Sb**	**18 43 47.3**	**+0.4**
ARG	**Arkhangelos**	**0.85**	**259**	*e*P	**Pn**	**18 43 34.4**	**-0.7**
ARG				*e*S	**Sb**	**18 43 47.3**	**+0.4**
GOLH	**Golhisar**	**0.92**	**20**	*i* P	**Pn**	**18 43 35.1**	**-0.9**
GOLH				*i* S	**Sn**	**18 43 49.0**	**+0.9**
GOLH	**Golhisar**	**0.92**	**20**	*i* P	**Pn**	**18 43 35.1**	**-0.9**
GOLH				*i* S	**Sn**	**18 43 49.0**	**+0.9**
YER	**Yerkesik**	**1.04**	**317**	*e*PG	**Pn**	**18 43 36.5**	**-1.1**
YER	**Yerkesik**	**1.04**	**317**	*e*Pg	**Pn**	**18 43 36.5**	**-1.2**
KORT	**Korkueli**	**1.14**	**57**	*i* P	**Pn**	**18 43 40.5**	**+1.4**
KORT				*i* S	**Sn**	**18 43 57.8**	**+4.2**
KORT	**Korkueli**	**1.14**	**57**	*i* P	**Pn**	**18 43 40.5**	**+1.4**
KORT				*i* S	**Sn**	**18 43 57.8**	**+4.2**
ANTB	**Antalya**	**1.31**	**66**	*e*PN	**Pn**	**18 43 42.9**	**+1.5**
ANTB	**Antalya**	**1.31**	**66**	*e*Pn	**Pn**	**18 43 42.9**	**+1.5**
DNZL	**Cakiroluk**	**1.31**	**356**	*i* P	**Pn**	**18 43 41.4**	**-0.1**
DNZL				*i* S	**Sn**	**18 43 59.0**	**+1.0**
DNZL	**Cakiroluk**	**1.31**	**356**	*i* P	**Pn**	**18 43 41.4**	**-0.1**
DNZL				*i* S	**Sn**	**18 43 59.0**	**+1.1**
DAT	**Datca**	**1.32**	**286**	*e*PN	**Pn**	**18 43 41.3**	**-0.3**
DAT				*e*SN	**Sn**	**18 43 58.4**	**+0.2**
DAT	**Datca**	**1.32**	**286**	*e*Pn	**Pn**	**18 43 41.3**	**-0.3**
DAT				*e*Sn	**Sn**	**18 43 58.4**	**+0.3**
DENT	**Denizli**	**1.38**	**356**	*e*PN	**Pn**	**18 43 41.9**	**-0.5**
DENT	**Denizli**	**1.38**	**356**	*e*Pn	**Pn**	**18 43 41.9**	**-0.5**
MLSB	**Milas**	**1.44**	**310**	*e*PN	**Pn**	**18 43 43.0**	**-0.3**
MLSB	**Milas**	**1.44**	**310**	*e*Pn	**Pn**	**18 43 43.0**	**-0.2**
BDRM	**Kayabasi**	**1.54**	**297**	*i* P	**Pn**	**18 43 44.4**	**-0.2**
BDRM				*i* S	**Sn**	**18 44 06.8**	**+3.3**
BDRM	**Kayabasi**	**1.54**	**297**	*i* P	**Pn**	**18 43 44.4**	**-0.2**
BDRM				*i* S	**Sn**	**18 44 06.8**	**+3.3**
BCK	**Bucak**	**1.57**	**46**	*e*PN	**Pn**	**18 43 46.1**	**+1.0**
BCK	**Bucak**	**1.57**	**46**	*e*Pn	**Pn**	**18 43 46.1**	**+1.1**
AYDN	**Tasoluk**	**1.64**	**322**	*i* P	**Pn**	**18 43 46.7**	**+0.7**
AYDN				*i* S	**Sn**	**18 44 07.7**	**+1.7**
AYDN	**Tasoluk**	**1.64**	**322**	*i* P	**Pn**	**18 43 46.7**	**+0.7**
AYDN				*i* S	**Sn**	**18 44 07.7**	**+1.7**
ISP	**Isparta**	**1.82**	**36**	*e*Pn	**Pn**	**18 43 46.6**	**-1.8**
ISP	**Isparta**	**1.82**	**36**	*e*Pn	**Pn**	**18 43 46.6**	**-1.8**
KARP	**Karpathos**	**1.82**	**244**	*e*P	**Pn**	**18 43 49.0**	**+0.5**
KARP	**Karpathos**	**1.82**	**244**	*e*P	**Pn**	**18 43 49.0**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.84**	**53**	*e*PN	**Pn**	**18 43 50.1**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.84**	**53**	*e*Pn	**Pn**	**18 43 50.1**	**+1.4**
KHL	**Karahalli**	**1.96**	**8**	*e*PN	**Pn**	**18 43 50.5**	**+0.1**
KHL	**Karahalli**	**1.96**	**8**	*e*Pn	**Pn**	**18 43 50.6**	**+0.2**
KHAL	**Karahalli**	**2.01**	**7**	*i* P	**Pn**	**18 43 49.9**	**-1.1**
KHAL				*i* S	**Sn**	**18 44 13.4**	**-1.6**
KHAL	**Karahalli**	**2.01**	**7**	*i* P	**Pn**	**18 43 49.9**	**-1.1**
KHAL				*i* S	**Sn**	**18 44 13.4**	**-1.6**
GCAM	**G?zelcaml?**	**2.03**	**311**	*i* P	**Pn**	**18 43 51.6**	**+0.3**
GCAM				*i* S	**Sn**	**18 44 15.4**	**-0.2**
GCAM	**G?zelcaml?**	**2.03**	**311**	*i* P	**Pn**	**18 43 51.6**	**+0.2**
GCAM				*i* S	**Sn**	**18 44 15.4**	**-0.2**
KULA	**Kula-Manisa**	**2.17**	**350**	*e*PN	**Pn**	**18 43 52.4**	**-0.9**
KULA	**Kula-Manisa**	**2.17**	**350**	*e*Pn	**Pn**	**18 43 52.4**	**-0.9**
SMG	**Samos**	**2.29**	**306**	*e*P	**Pn**	**18 43 54.2**	**-0.7**
SMG	**Samos**	**2.29**	**306**	*e*P	**Pn**	**18 43 54.2**	**-0.7**
SHUT	**Suhut-Afyon**	**2.44**	**27**	*e*PN	**Pn**	**18 43 56.9**	**0.0**
SHUT	**Suhut-Afyon**	**2.44**	**27**	*e*Pn	**Pn**	**18 43 56.9**	**0.0**
BLCB	**Balcova**	**2.62**	**321**	*e*PN	**Pn**	**18 43 59.2**	**-0.3**
BLCB	**Balcova**	**2.62**	**321**	*e*Pn	**Pn**	**18 43 59.2**	**-0.3**
ZKR	**Zakros**	**2.71**	**243**	*e*P	**Pn**	**18 44 01.2**	**+0.6**
ZKR	**Zakros**	**2.71**	**243**	*e*P	**Pn**	**18 44 01.2**	**+0.6**
ALT	**Altintas**	**2.78**	**15**	*e*PN	**Pn**	**18 44 01.0**	**-0.6**
ALT	**Altintas**	**2.78**	**15**	*e*Pn	**Pn**	**18 44 01.0**	**-0.6**
NPS	**Neapolis**	**3.09**	**250**	*e*P	**Pn**	**18 44 05.5**	**-0.4**
NPS	**Neapolis**	**3.09**	**250**	*e*P	**Pn**	**18 44 05.5**	**-0.4**
LAST	**Lasithi**	**3.23**	**249**	*e*P	**Pn**	**18 44 07.6**	**-0.3**
LAST	**Lasithi**	**3.23**	**249**	*e*P	**Pn**	**18 44 07.6**	**-0.3**
IDI	**Anoyia**	**3.64**	**254**	Pn	**Pn**	**18 44 12.9**	**-0.5**
IDI	1.8nm,0.3s,baz=78,slow=15,SNR=17			Sn	**Sn**	**18 44 54.0**	**-1.3**
	1.7nm,0.3s,baz=106,slow=24,SNR=7.7						
IDI	**Anoyia**	**3.64**	**254**	*e*P	**Pn**	**18 44 12.8**	**-0.6**
IDI	**Anoyia**	**3.64**	**254**	*e*P	**Pn**	**18 44 12.8**	**-0.6**
SIVA	**Sivas**	**3.79**	**250**	*e*P	**Pn**	**18 44 16.8**	**+1.2**
SIVA	**Sivas**	**3.79**	**250**	*e*P	**Pn**	**18 44 16.8**	**+1.2**
VAM	**Vamos**	**4.14**	**258**	P	**Pn**	**18 44 23.5**	**+3.1**
KARN	**Karanos**	**4.37**	**259**	*e*P	**Pn**	**18 44 23.5**	**0.0**
KARN	**Karanos**	**4.37**	**259**	*e*P	**Pn**	**18 44 23.5**	**0.0**
GVD	**Gavdhos**	**4.41**	**251**	Pn	**Pn**	**18 44 24.0**	**-0.1**
GVD	**Gavdhos**	**4.41**	**251**	Pn	**Pn**	**18 44 24.0**	**-0.1**
BR131	**Keskin Array S**	**4.86**	**45**	*e*Pn	**Pn**	**18 44 30.7**	**+0.4**
BR131				*e*Sn	**Sn**	**18 45 27.1**	**+1.7**
BR131	**Keskin Array S**	**4.86**	**45**	*e*Pn	**Pn**	**18 44 30.7**	**+0.4**
BR131				*e*Sn	**Sn**	**18 45 27.1**	**+1.7**
BRTR	**Keskin Array B**	**4.86**	**45**	Pn	**Pn**	**18 44 30.8**	**+0.5**
BRTR	0.2nm,0.3s,baz=226,slow=15,SNR=7.4			Sn	**Sn**	**18 45 27.2**	**+1.8**
	0.2nm,0.3s,baz=226,slow=24,SNR=3.7						
BRTR	**Keskin Array B**	**4.86**	**45**	Pn	**Pn**	**18 44 30.8**	**+0.5**
BRTR				Sn	**Sn**	**18 45 27.2**	**+1.8**
VLI	**Veliai**	**5.03**	**276**	P	**Pn**	**18 44 34.2**	**+1.7**
VLI	**Veliai**	**5.03**	**276**	P	**Pn**	**18 44 34.2**	**+1.7**
MMAI	**Mount Meron Ar**	**6.14**	**121**	Pn	**Pn**	**18 44 46.9**	**-0.9**
MMAI	2.5nm,0.3s,baz=302,slow=12,SNR=23			Sn	**Sn**	**18 45 54.4**	**-2.4**
	1.9nm,0.3s,baz=306,slow=25,SNR=6.3						
TORD	**Torodi Ar. Bea**	**33.80**	**234**	P	**P**	**18 49 57.3**	**-1.2**
	0.4nm,0.5s,baz=35,slow=8.8,SNR=9.5						

*IDC **30** 18:49:59.6±5.0,10.82N×84.83W,h0km,mb3.9/2,*
mb1 4.2/4,mb1mx3.7/22,mbtmp3.8/4,ML3.5/2,Error
ellipse: s-maj=184.9km s-min=71.9km az=36.0
*NEIC **30** 18:50:03.8±1.2,10.21N×86.05W,h10km,MD4.1(HDC),*
Error ellipse: s-maj=27.3km s-min=11.4km az=197.0
NEIC Felt at Sardinal.
*ISCJB **30** 18:50:09.6±0.4,10.63N±0.04×85.79W±0.04,h42km±7km,*
mb3.7/2,Error ellipse: s-maj=8.2km s-min=3.2km
az=136.6
*CASC **30** 18:50:10.0±2.0,10.66N×85.76W,h33km±2km,MD3.4,*
ML3.3

ISC 30 18:50:10.1±0.5,10.64N±0.03×85.77W±0.03,h32km±3km,
n54,σ0.85/75,mb3.7/2,3C-6D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.24**	**87**	*i* P	**Pb**	**18 50 17.6**	**+0.6**
NY14				*i* S	**Sb**	**18 50 24.0**	**+2.4**
GBS3	**Finca Las lm¨¡**	**0.34**	**65**	*i* P	**Pb**	**18 50 18.0**	**-0.4**
GBS3				*i* S	**Sb**	**18 50 24.5**	**+0.6**
LAPC	**Finca la Perla**	**0.36**	**69**	⇓*i* P	**Pb**	**18 50 18.1**	**-0.5**
LAPC				*i* S	**Sb**	**18 50 24.5**	**+0.2**
GBS2	**Las Lilas**	**0.37**	**58**	*i* P	**Pb**	**18 50 18.5**	**-0.2**
A495	**El Viejo**	**0.40**	**128**	⇓*i* P	**Pb**	**18 50 18.7**	**-0.3**
A495				*i* S	**Sb**	**18 50 25.9**	**+0.8**
GB1A	**Borinquen Arri**	**0.41**	**64**	*i* P	**Pb**	**18 50 18.9**	**-0.4**
GPS2	**Hotel Rinc¨‡n**	**0.43**	**74**	⇓*i* P	**Pb**	**18 50 19.1**	**-0.5**
GPS2				*i* S	**Sb**	**18 50 26.6**	**+0.6**
GPS1	**Guardaparques**	**0.44**	**72**	⇓*i* P	**Pb**	**18 50 19.2**	**-0.5**
GPS1				*i* S	**Sb**	**18 50 26.6**	**+0.3**
A494	**Palo Verde**	**0.51**	**125**	⇓*i* P	**Pb**	**18 50 20.0**	**-0.7**
A494				*i* S	**Sb**	**18 50 28.3**	**+0.3**
LIM1	**Limonal**	**0.52**	**83**	⇓*i* P	**Pb**	**18 50 20.1**	**-0.8**
LIM1				*i* S	**Sb**	**18 50 28.6**	**+0.3**
VCR	**Vista de Mar**	**0.53**	**164**	⇑*e*P	**Pb**	**18 50 20.5**	**-0.6**
GUAB	**Guayabo de Bag**	**0.54**	**82**	*i* P	**Pb**	**18 50 20.2**	**-1.1**
GUAB				*i* S	**Sb**	**18 50 29.0**	**+0.1**
COLC	**Colonia**	**0.56**	**87**	*i* P	**Pb**	**18 50 20.7**	**-0.9**
MESS	**Mesas**	**0.58**	**80**	*i* P	**Pb**	**18 50 20.9**	**-1.0**
CUI	**Cuipilapa**	**0.60**	**88**	*i* P	**Pb**	**18 50 21.2**	**-1.0**
CUI				*i* S	**Sb**	**18 50 30.5**	**0.0**
SSN	**San Juan del S**	**0.67**	**353**	*e*P	**Pn**	**18 50 22.6**	**-0.7**
SSN				*e*S	**Sb**	**18 50 32.4**	**0.0**
AMAS	**Alto Masis**	**0.77**	**92**	*i* P	**Pn**	**18 50 23.8**	**-1.0**
AMAS				*i* S	**Sb**	**18 50 35.2**	**0.0**
PTEN	**Parque Tenorio**	**0.78**	**84**	*i* P	**Pn**	**18 50 24.1**	**-0.7**
PTEN				*i* S	**Sn**	**18 50 36.1**	**+0.7**
CHPA	**Chiripa**	**0.87**	**103**	*i* P	**Pn**	**18 50 25.2**	**-1.0**
CHPA				*i* S	**Sn**	**18 50 38.4**	**+0.6**
JTS	**JuntasAbangare**	**0.88**	**113**	*e*Pg	**Pn**	**18 50 24.7**	**-1.6**
JTS				*e*Sg	**Sn**	**18 50 37.9**	**0.0**
CONN	**Concepcion**	**0.93**	**9**	⇑*i* P	**Pn**	**18 50 26.7**	**-0.3**
JCR	**Jicaral**	**1.02**	**140**	⇑*e*P	**Pn**	**18 50 26.9**	**-1.2**
JCR				*e*S	**Sn**	**18 50 41.9**	**+0.5**
CASO	**Castillo**	**1.04**	**101**	*i* P	**Pn**	**18 50 27.7**	**-0.8**
APON	**Apoyo**	**1.30**	**347**	*e*P	**Pn**	**18 50 32.5**	**+0.3**
MASN	**Masaya**	**1.39**	**345**	*e*P	**Pn**	**18 50 32.8**	**-0.6**
CGA2	**Cerro Gallo 2**	**1.43**	**115**	*e*P	**Pn**	**18 50 33.8**	**0.0**
CGA2				*e*S	**Sn**	**18 50 53.7**	**+2.2**
CRUN	**El Crucero**	**1.44**	**339**	*e*P	**Pn**	**18 50 34.8**	**+0.8**
TICN	**Ticuantepe**	**1.46**	**342**	*e*P	**Pn**	**18 50 34.5**	**+0.2**
WILN	**Americas 2**	**1.57**	**345**	*e*P	**Pn**	**18 50 35.6**	**-0.2**
MGAN	**Managua**	**1.57**	**343**	*e*P	**Pn**	**18 50 35.8**	**-0.1**
XAVN	**Gruta Xavier**	**1.60**	**340**	*e*P	**Pn**	**18 50 36.5**	**+0.3**
CSAN		**1.66**	**338**	*e*P	**Pn**	**18 50 36.9**	**-0.1**
COPN	**Copaltepe**	**1.73**	**332**	*e*P	**Pn**	**18 50 37.6**	**-0.4**
COPN				*e*S	**Sn**	**18 50 58.8**	**-0.3**
HUEN		**1.74**	**347**	*e*P	**Pn**	**18 50 37.5**	**-0.5**
LAJ	**Bijagual**	**1.80**	**115**	*e*P	**Pn**	**18 50 34.0**	**-4.9**
LAJ				*e*S	**Sn**	**18 50 56.5**	**-4.2**
MOMN	**Momotombo**	**1.92**	**337**	*e*P	**Pn**	**18 50 40.8**	**+0.3**
QCR	**Quepos**	**1.99**	**127**	*e*P	**Pn**	**18 50 42.7**	**+1.1**
MIRN	**Miramar**	**2.02**	**333**	*e*P	**Pn**	**18 50 42.0**	**+0.1**
CNGN	**Cerro Negro**	**2.06**	**334**	*e*P	**Pn**	**18 50 42.8**	**+0.3**
CNGN				*e*P		18 50 43.0	
CNGN				*e*S	**Sn**	**18 51 08.1**	**+0.9**
CNGN				AML	AML	18 51 16.7	
	comp=E,657nm,0.4s						
URSC	**Urasca**	**2.12**	**112**	*e*P	**Pn**	**18 50 44.4**	**+1.1**
TEL3	**Telica 3**	**2.19**	**331**	*e*P	**Pn**	**18 50 44.7**	**+0.3**
BUS	**Buena Vista**	**2.26**	**118**	*e*P	**Pn**	**18 50 46.9**	**+1.6**
BAR1		**2.79**	**128**	*e*P	**Pn**	**18 50 52.6**	**0.0**
ACR	**Cerro Adams**	**3.24**	**127**	*e*P	**Pn**	**18 50 59.1**	**+0.4**
CNCH	**Conchagua**	**3.31**	**323**	*e*P	**Pn**	**18 51 00.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.70**	**337**	*e*Pn	**Pn**	**18 51 05.6**	**+0.5**
TGUH				*e*Sn	**Sn**	**18 51 51.4**	**+3.7**
TGUH	**Tegucigalpa,Un**	**3.70**	**337**	*e*P	**Pn**	**18 51 05.7**	**+0.5**
LFRS	**El Faro**	**4.38**	**313**	*e*P	**Pn**	**18 51 14.9**	**+0.5**
LFRS				*e*S	**Sn**	**18 52 03.5**	**-0.8**
APG	**El Apazote**	**6.31**	**314**	Pn	**Pn**	**18 51 43.1**	**+2.2**
	comp=E,0.5nm,0.3s,baz=140,slow=17,SNR=4.8						
CMIG	**Matias Romero**	**10.93**	**307**	Pn	**Pn**	**18 52 46.7**	**+2.4**
	comp=E,0.5nm,0.3s,baz=138,slow=11,SNR=4.9						
CMIG	**Matias Romero**	**10.93**	**307**	Pn	**Pn**	**18 52 46.7**	**+2.4**
TXAR	**Lajitas Array**	**25.01**	**321**	P	**P**	**18 55 29.1**	**-2.2**
	comp=E,2.2nm,0.7s,mb3.8,baz=146,slow=9.7,SNR=15						
NVAR	**Mina Array Bea**	**40.14**	**319**	P	**P**	**18 57 41.8**	**-1.4**
	comp=E,1.1nm,0.7s,mb3.7,baz=127,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**140.08**	**246**	PKP	PKPdf	19 09 33.0	-3.2
	comp=E,0.2nm,0.5s,baz=97,slow=2.4,SNR=4.1						

*ISCJB **30** 19:00:35.8±1.1,33.02N±0.03×76.10E±0.06,h1km±8km,*
mb3.2/2,Error ellipse: s-maj=9.0km s-min=5.8km
az=170.3
*NDI **30** 19:00:35.8±2.4,32.71N×75.06E,h33km,ML3.5*
*IDC **30** 19:00:37.5±5.6,32.94N×75.80E,h0km,mb3.2/3,*
mb1 3.1/5,mb1mx3.0/27,mbtmp3.1/5,ML2.8/2,MS3.3/1,
Ms1 3.3/1,ms1mx2.4/21,Error ellipse: s-maj=144.8km
s-min=28.2km az=125.0

ISC 30 19:00:38.0±1.0,32.97N±0.04×76.07E±0.06,h6km±7km,
n14,σ1.07/18,mb3.2/2,Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.61**	**209**	*e*P	**Pg**	**19 00 48.9**	**-0.8**
THN				*e*S	**Sg**	**19 00 58.9**	**+1.2**
BHK	**Bhakra**	**1.58**	**169**	*e*P	**Pn**	**19 01 03.0**	**-3.5**
BHK				*e*S	**Sn**	**19 01 25.4**	**-1.7**
SDNR	**Sundarnagar**	**1.65**	**152**	*e*P	**Pn**	**19 01 08.1**	**+0.6**
SDNR				*e*S	**Sn**	**19 01 30.1**	**+1.1**
SMLA	**Simla**	**2.06**	**153**	*i* P	**Pn**	**19 01 13.8**	**+0.6**
SMLA				*i* S	**Sn**	**19 01 39.2**	**+0.1**
SMLA				*i* S	**Sn**	**19 01 39.2**	**+0.2**
SMLA				*ex*	x	19 01 42.6	
	comp=E,1μm,0.3s						
SMLA				*ex*	x	19 01 43.5	
	comp=N,2μm,0.3s						
KLP	**Kalpa**	**2.34**	**127**	*e*P	**Pg**	**19 01 21.0**	**-1.8**
KLP				*e*S	**Sg**	**19 01 53.8**	**+0.6**
KLP				AML	AML	19 01 59.0	
	comp=E,220nm,0.3s						
KLP				AML	AML	19 01 59.3	
	comp=N,307nm,0.4s						
DDI	**Dehra Dun**	**3.14**	**147**	*ex*	**Pg**	**19 01 45.0**	**+6.9**
SONA	**Sohna**	**4.78**	**169**	*e*S	Sx	19 02 35.8	
KHET	**Khetri**	**4.88**	**183**	*e*S	Sx	19 02 34.3	
KHET				AML	AML	19 03 19.9	
	comp=N,24nm,0.4s						
KHET				AML	AML	19 03 20.6	
	comp=E,18nm,0.5s						
MKAR	**Makanchi Array**	**14.60**	**17**	Pn	**Pn**	**19 04 05.5**	**+0.5**
	comp=E,0.0nm,0.3s,baz=200,slow=17,SNR=2.6						
MKAR				Sn	**Sn**	**19 06 46.8**	**-0.4**
	comp=E,0.1nm,0.3s,baz=200,slow=21,SNR=6.6						
KURK	**Kurchatov**	**17.83**	**5**	P	**Pn**	**19 04 45.8**	**-0.8**
	comp=E,0.0nm,0.3s,baz=190,slow=11,SNR=2.5						
BVAR	**Borovoye Array**	**20.46**	**350**	P	**P**	**19 05 16.4**	**+0.3**
	comp=E,0.2nm,0.3s,baz=179,slow=16,SNR=3.1						
ZALV	**Zalesovo Beam**	**21.88**	**14**	P	**P**	**19 05 33.2**	**+1.8**
	comp=E,0.5nm,0.5s,mb3.2,baz=201,slow=15,SNR=3.0						
JOW	**Kunigami**	**45.30**	**83**	LR	LR	19 30 37.1	
	comp=E,34nm,18.9s,baz=89,slow=40						
TORD	**Torodi Ar. Bea**	**69.94**	**273**	P	**P**	**19 11 49.6**	**-0.8**
	comp=E,0.1nm,0.4s,mb3.1,baz=41,slow=5.1,SNR=6.4						

*ISCJB **30** 19:01:43.1±0.6,38.90N±0.03×26.15E±0.05,h9km±5km,*
Error ellipse: s-maj=6.7km s-min=4.3km az=173.1
*CSEM **30** 19:01:43.1±0.2,38.89N×26.14E,h15km,ML2.7/4,Error*
ellipse: s-maj=4.1km s-min=2.7km az=82.0
*THE **30** 19:01:43.2,38.89N×26.13E,h8km±1km,ML2.7/4,Error*
ellipse: s-maj=1.8km s-min=0.5km az=92.0
*DDA **30** 19:01:43.2,38.93N×26.20E,h7km±5km,Md2.6*

ISC 30 19:01:43.4±0.6,38.90N±0.03×26.13E±0.05,h14km±5km,
n15,σ0.54/30,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.36**	**18**	P	**Pg**	**19 01 50.8**	**0.0**
PRK				S	**Sg**	**19 01 55.8**	**+0.1**
SIGR	**SIGRI**	**0.38**	**325**	P	**Pg**	**19 01 51.1**	**0.0**
SIGR				S	**Sg**	**19 01 56.3**	**+0.1**
SIGR	**SIGRI**	**0.38**	**325**	P	**Pg**	**19 01 51.1**	**0.0**
SIGR				S	**Sg**	**19 01 56.3**	**+0.1**
CHOS	**Chios island**	**0.52**	**187**	P	**Pg**	**19 01 53.1**	**-0.5**
CHOS				S	**Sg**	**19 02 00.6**	**+0.1**
CHOS	**Chios island**	**0.52**	**187**	P	**Pg**	**19 01 53.1**	**-0.5**
CHOS				S	**Sg**	**19 02 00.6**	**+0.1**
AYVA	**Ayvalik**	**0.60**	**47**	*i* P	**Pg**	**19 01 54.5**	**-0.6**
AYVA				*i* S	**Sg**	**19 02 03.3**	**+0.2**
AYVA	**Ayvalik**	**0.60**	**47**	*i* P	**Pg**	**19 01 54.5**	**-0.6**
AYVA				*i* S	**Sg**	**19 02 03.3**	**+0.3**
URLA	**Izmir**	**0.65**	**146**	*i* P	**Pg**	**19 01 55.3**	**-0.8**
URLA				*i* S	**Sg**	**19 02 06.0**	**+1.3**
URLA	**Izmir**	**0.65**	**146**	*i* P	**Pg**	**19 01 55.3**	**-0.8**
URLA				*i* S	**Sg**	**19 02 06.1**	**+1.4**
BOZC	**Bozcaada**	**0.94**	**356**	*i* P	**Pb**	**19 02 00.9**	**-0.6**
BOZC				*i* S	**Sb**	**19 02 14.0**	**+0.2**
LIA	**Limnos Island**	**1.24**	**324**	P	**Pn**	**19 02 05.7**	**-0.5**
LIA				S	**Sb**	**19 02 23.3**	**+1.0**
LIA	**Limnos Island**	**1.24**	**324**	P	**Pn**	**19 02 05.7**	**-0.5**
LIA				S	**Sb**	**19 02 23.3**	**+1.0**
BALY	**Balya**	**1.43**	**54**	*i* P	**Pn**	**19 02 08.6**	**-0.3**
BALY				*i* S	**Sn**	**19 02 27.5**	**+0.1**
BALY	**Balya**	**1.43**	**54**	*i* P	**Pn**	**19 02 08.6**	**-0.2**
BALY				*i* S	**Sn**	**19 02 27.5**	**+0.2**

MAN 30 19:04:49,18.73N×121.26E,h17km,mb4.4,ML3.3,MS3.1,
1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.73**	**237**	⇑*i* P	Pb	19 04 59.5	-3.8
APYP	**Conner**	**0.86**	**181**	*e*P	Pb	19 05 05.6	+0.1
APYP				*e*S	Sb	19 05 20.0	+3.2
SGCP	**Mt. Cagua**	**0.89**	**123**	*e*P	Pb	19 05 05.2	-0.8
ABRA	**Dolores**	**1.19**	**206**	*e*P	Pn	19 05 09.8	-1.1
ABRA				*e*S	Sb	19 05 26.4	+0.1
CAUP	**Cauayan**	**1.86**	**163**	*e*P	Pn	19 05 23.4	+3.3
PALP	**Palanan**	**2.00**	**146**	*e*P	Pn	19 05 22.8	+0.9
PALP				*e*S	Sn	19 05 48.0	+1.5
BOLP	**Bolinao**	**2.67**	**209**	*e*P	Pn	19 05 33.0	+1.8
BALP	**Baler**	**2.99**	**174**	*e*P	Pn	19 05 37.2	+1.6

*ISCJB **30** 19:06:41.5±2.2,8.14S±0.09×125.15E±0.1,h60km±20km,*
mb3.9/7,Error ellipse: s-maj=26.2km s-min=7.1km
az=148.0
*NEIC **30** 19:06:42.9±1.8,8.21S×125.47E,h55km±18km,mb4.0/4,*
Error ellipse: s-maj=28.1km s-min=10.0km az=55.0
*IDC **30** 19:06:47.2±5.6,8.26S×125.27E,h90km±53km,mb3.5/4,*
mb1 3.5/7,mb1mx3.3/19,mbtmp3.4/7,ML3.6/3,Error
*ellipse: s-maj=86.9km s-min=16.1km

0.2nm,0.7s,mb2.9,baz=134,slow=5.0,SNR=4.2
ULN Ulaanbaatar 82.22 324 *e*P **P 19 30 59.3 +0.1**
1.6nm,0.9s,mb3.6
SONM Songino Array 82.58 324 P **P 19 31 02.8 +1.7**
1.0nm,0.8s,mb3.6,baz=111,slow=3.2,SNR=2.3
MKAR Makanchi Array 97.30 316 P **P 19 32 10.9 0.0**
0.6nm,0.8s,mb4.0,baz=99,slow=5.4,SNR=7.4
ZALV Zalesovo Beam 97.48 324 P **P 19 32 11.2 -0.3**
0.7nm,0.7s,mb4.1,baz=102,slow=6.1,SNR=3.2
ARCES ARCESS Array B 120.30 345 PKP PKPdf 19 37 27.2 -0.5
0.8nm,0.4s,baz=80,slow=2.1,SNR=23
FINES FINESS Array B 125.79 338 PKP PKPdf 19 37 38.1 -0.3
0.6nm,0.6s,baz=20,slow=4.4,SNR=4.0
HAU Haudompre 143.31 339 *e*PKP1 PKPdf 19 38 08.0 -3.5
CABF La Chapelle 144.59 338 *e*PKP1 PKPdf 19 38 14.0 +0.2
FLN La Foliniere 144.65 346 *e*PKP1 PKPdf 19 38 13.1 -0.7
5.7nm,0.5s
LDF La Drutiere 144.72 346 *e*PKP1 PKPdf 19 38 13.3 -0.6
4.3nm,0.6s
LOR Lormes 144.80 340 *e*PKP1 PKPdf 19 38 14.2 +0.1
GRR Gorron 145.08 346 *e*PKP1 PKPbc 19 38 14.8 +0.5
10nm,0.5s
SSF Saint Saulge 145.09 341 *e*PKP1 PKPbc 19 38 15.3 +0.9
17nm,0.7s
LPL La Plagne 145.26 336 *e*PKP1 PKPbc 19 38 16.2 +1.2
9.9nm,0.6s
LPG La Plagne 145.27 336 *e*PKP1 PKPbc 19 38 16.3 +1.3
11nm,0.7s
SMF Signal de Mont 145.35 340 *e*PKP1 PKPbc 19 38 15.1 -0.1
AVF Avril sur Loir 145.38 341 *e*PKP1 PKPbc 19 38 14.8 -0.5
SGMF Saint Gilles 145.58 348 *e*PKP1 PKPbc 19 38 16.3 +0.5
ROSF Rostrenen 145.63 349 *e*PKP1 PKPbc 19 38 16.2 +0.2
BGF Bois d'Agland 145.75 341 *e*PKP1 PKPbc 19 38 17.1 +0.7
9.1nm,0.5s
ORIF Oris-en-Rattie 146.09 336 *e*PKP1 PKPbc 19 38 18.2 +0.7
14nm,0.6s
TCF Toulx Ste Croi 146.19 341 *e*PKP1 PKPbc 19 38 18.4 +0.6
3.9nm,0.5s
SBF Sospel 146.32 333 *e*PKP1 PKPbc 19 38 18.5 +0.3
22nm,0.8s
MFF Saint Martin d 146.57 344 *e*PKP1 PKPbc 19 38 19.4 +0.5
9.6nm,0.6s
PGF Pioggiola 146.63 330 *e*PKP1 PKPbc 19 38 19.4 +0.2
FRF La Foret Royal 146.90 334 *e*PKP1 PKPbc 19 38 20.2 +0.3
SMRF Simiane la Rot 147.00 336 *e*PKP1 PKPbc 19 38 21.0 +0.8
LMR La Mourre 147.14 334 *e*PKP1 PKPbc 19 38 20.8 +0.2
RJF Les Rejaudoux 147.29 341 *e*PKP1 PKPbc 19 38 21.5 +0.6
6.0nm,0.7s
CAF Calviac 147.45 340 *e*PKP1 PKPbc 19 38 22.1 +0.7
LASF Ste Croix 147.57 338 *e*PKP1 PKPbc 19 38 22.6 +0.9
5.5nm,0.8s
LFF La Frestale 147.85 342 *e*PKP1 PKPbc 19 38 23.1 +0.7
11nm,0.7s
MTLF Montolieu 148.80 339 *e*PKP1 PKPbc 19 38 25.6 +0.6
3.9nm,0.7s
EPF Esparros 149.70 341 *e*PKP1 PKPbc 19 38 28.1 +0.9
3.7nm,0.8s
ETSF Etsaut 150.10 342 *e*PKP1 PKPbc 19 38 29.3 +1.1
6.0nm,0.6s
KEST Kesra 151.30 321 PKPbc PKPbc 19 38 31.8 +0.6
1.3nm,0.9s,baz=321,slow=6.1,SNR=6.2

BJI ***30*** *19:26:22.3,56.°31N×161.°38W,h123km,mB5.0/5,mb4.7/8*
ISCJB ***30*** *19:26:24.0±0.3,56.°17N±0.°03×161.°10W±0.°05,*
h142km±2km,mb4.0/33,Error ellipse: s-maj=5.3km
s-min=3.9km az=142.7
NEIC ***30*** *19:26:26.5,55.°88N×160.°91W,h152km,mb4.2/18,After AEIC.*
IDC ***30*** *19:26:26.8±5.7,56.°23N×161.°21W,h162km±52km,*
mb3.5/14,mb1 3.6/16,mb1mx3.4/29,mbtmp3.5/16,Error
ellipse: s-maj=24.4km s-min=13.6km az=30.0
ISC 30 19:26:25.1±0.3,56.°17N±0.°03×161.°14W±0.°05,
h137km±2km,h150km±5.2km:pP-P,n295,∘0%69/309,
mb4.0/33,105C-102D,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.90**	**155**	*e*Pn		**Pn**		**19 26 47.4**	**-0.3**
SDPT				*e*Sn		**Sn**		**19 27 04.6**	**-0.2**
CHGN	**Chignik**	**1.53**	**84**	*e*Pn		**Pn**		**19 26 54.2**	**+0.4**
CHGN				*e*Sn		**Sn**		**19 27 16.3**	**+0.5**
FALS	**False Pass**	**1.84**	**226**	P		**Pn**		**19 26 57.5**	**+0.1**
FALS				*e*Sn		**Sn**		**19 27 15.7**	**-6.6**
FALS				S		**Sn**		**19 27 22.9**	**+0.6**
AKUT	**Akutan**	**3.35**	**234**	*e*Pn		**Pn**		**19 27 16.4**	**+0.1**
AKUT				*e*Sn		**Sn**		**19 27 49.1**	**-6.9**
AKGG	**Akutan Green G**	**3.41**	**237**	P		**Pn**		**19 27 17.8**	**+0.7**
AKLV	**Akutan Long Va**	**3.42**	**236**	P		**Pn**		**19 27 17.6**	**+0.4**
UNV	**Unalaska Valle**	**3.87**	**235**	*e*Pn		**Pn**		**19 27 22.3**	**-0.8**
UNV				*e*Sn		**Sn**		**19 28 03.8**	**-4.3**
OHAK	**Old Harbor**	**4.46**	**73**	*e*P		**Pn**		**19 27 28.8**	**-2.0**
OKFG	**Magazine Ridge**	**4.80**	**238**	P		**Pn**		**19 27 35.7**	**+0.3**
KDAK	**Kodiak Island**	**4.95**	**67**	*e*Pn		**Pn**		**19 27 36.1**	**-1.3**
KDAK				*e*Sn		**Sn**		**19 28 29.9**	**-3.9**
AUL	**Augustine Lava**	**5.23**	**49**	P		**Pn**		**19 27 43.6**	**+2.5**
NIKO	**Nikolski**	**5.51**	**238**	*e*Pn		**Pn**		**19 27 44.6**	**-0.4**
NIKO				*e*Sn		**Sn**		**19 28 45.4**	**-1.9**
SVW2	**Sparrevohn**	**5.73**	**28**	*e*P		**Pn**		**19 27 48.8**	**+1.0**
RSO	**Redoubt South**	**6.17**	**42**	*e*Pn		**Pn**		**19 27 55.1**	**+1.4**
SLKM	**Skilak Lake**	**7.20**	**48**	P		**Pn**		**19 28 08.3**	**+0.8**
TTG1	**Tatalina**	**7.24**	**19**	P		**Pn**		**19 28 09.8**	**+1.7**
TTA	**Tatalina**	**7.26**	**19**	*e*Pn		**Pn**		**19 28 09.4**	**+1.0**
SEW	**Seward**	**7.33**	**53**	P		**Pn**		**19 28 08.9**	**-0.4**
FIB	**Fire Island**	**7.59**	**44**	*e*Pn		**Pn**		**19 28 13.5**	**+0.6**
RC01	**Rabbit Creek A**	**7.72**	**46**	*e*Pn		**Pn**		**19 28 13.4**	**-1.2**
RC01				*e*Sn		**Sn**		**19 29 38.0**	**-2.4**
PPLA	**Purkeypile**	**8.13**	**30**	P		**Pn**		**19 28 23.0**	**+3.0**
PMR	**Palmer**	**8.25**	**44**	*e*Pn		**Pn**		**19 28 19.6**	**-2.0**
7.6nm,0.5s									
PMR				P				19 28 21.9	
PMR				*e*Sn		**Sn**		**19 29 48.8**	**-4.4**
SML	**Sawmill**	**8.69**	**44**	*e*Pn		**Pn**		**19 28 21.0**	**-6.5**
2.5nm,0.4s									
SML				*e*Sn		**Sn**		**19 29 56.5**	**-7.1**
CHUM	**Lake Minchumin**	**8.90**	**26**	*e*Pn		**Pn**		**19 28 32.7**	**+2.4**
KTH	**Kantishna Hill**	**9.00**	**30**	P		**Pn**		**19 28 33.1**	**+1.5**
KTH				*e*Sn		**Sn**		**19 30 11.4**	**+0.1**
TRF	**Thorofare Moun**	**9.11**	**32**	*e*Pn		**Pn**		**19 28 33.5**	**+0.4**
TRF				*e*Sn		**Sn**		**19 30 13.4**	**-0.4**
EYAK	**Cordova Ski Ar**	**9.20**	**55**	P		**Pn**		**19 28 32.8**	**-1.5**
DIV	**Divide**	**9.42**	**52**	*e*Pn		**Pn**		**19 28 35.9**	**-1.3**
106nm,0.7s									
DIV				*e*Sn		**Sn**		**19 30 14.0**	**-7.2**
BPAW	**Bear Paw Mtn.**	**9.42**	**28**	*e*Pn		**Pn**		**19 28 38.8**	**+1.6**
BMRM	**Bremner River**	**9.87**	**54**	*e*Pn		**Pn**		**19 28 41.7**	**-1.6**
39nm,0.4s									
BMRM				*e*Sn		**Sn**		**19 30 24.4**	**-7.8**
PAX	**Paxson**	**10.45**	**43**	*e*Pn		**Pn**		**19 28 48.7**	**-2.3**
PAX				*e*Sn		**Sn**		**19 30 38.0**	**-8.1**
MENT	**Mentasta**	**11.11**	**45**	*e*Pn		**Pn**		**19 28 58.7**	**-1.0**
COLD	**Coldfoot**	**12.22**	**20**	*e*Pn		**Pn**		**19 29 16.3**	**+2.1**
5.5nm,0.7s									
EGAK	**Eagle**	**13.04**	**40**	*e*Pn		**Pn**		**19 29 24.8**	**0.0**
DAWY	**Dawson**	**13.36**	**45**	*e*Pn		**Pn**		**19 29 29.4**	**+0.5**
SKAG	**Skagway**	**14.11**	**66**	*e*Pn		**Pn**		**19 29 39.5**	**+1.1**
SIT	**Sitka**	**14.21**	**76**	*e*P		**Pn**		**19 29 39.5**	**-0.4**
14nm,0.8s									
CRAG	**Craig**	**15.72**	**81**	Pn		**Pn**		**19 29 59.4**	**+0.8**
INK	**Inuvik**	**17.49**	**35**	P		**Pn**		**19 30 17.2**	**-2.8**
0.7nm,0.3s,baz=237,slow=10,SNR=12									
INK	**Inuvik**	**17.49**	**35**	*e*P		**Pn**		**19 30 17.2**	**-2.8**
16nm,1.0s									
INK				*e*				19 30 46.8	
BBB	**Bella Bella**	**19.62**	**88**	P		**P**		**19 30 43.2**	**+0.7**
0.1nm,0.3s,baz=315,slow=7.1,SNR=2.8									
PETK	**Petropavlovsk-**	**23.77**	**280**	P		**P**		**19 31 24.0**	**-0.5**
1.0nm,0.5s,mb3.6,baz=71,slow=12,SNR=4.1									
YKW3	**Yellowknife Ar**	**24.09**	**55**	*e*P		**P**		**19 31 25.7**	**-1.7**
0.1nm,0.9s									
YKW3				*e*pP				19 31 58.5	
YKA	**Yellowknife Ar**	**24.10**	**56**	P		**P**		**19 31 27.2**	**-0.3**
1.2nm,0.4s,mb3.8,baz=276,slow=9.4,SNR=14									
YKA				pP				19 31 58.2	
3.0nm,0.8s,baz=275,slow=10,SNR=5.9									
YKA	**Yellowknife Ar**	**24.10**	**56**	P		**P**		**19 31 27.2**	**-0.3**
YKA				pP				19 31 58.2	
NLWA	**Neilton Lookou**	**24.40**	**95**	⇓P		**P**		**19 31 30.6**	**+0.2**
baz=24									
A07A	**Ashnola River,**	**25.44**	**89**	⇑P		**P**		**19 31 40.5**	**+0.7**
baz=25									
YBH	**Yreka Blue Hor**	**28.64**	**104**	P		**P**		**19 32 09.1**	**+0.7**
0.8nm,0.4s,mb3.8,baz=339,slow=2.4,SNR=3.2									
I07A	**Izee**	**28.84**	**97**	⇓P		**P**		**19 32 10.4**	**+0.3**
baz=29									
K05A	**Summer Lake**	**28.96**	**100**	⇓P		**P**		**19 32 11.8**	**+0.5**
baz=29									
H08A	**Prairie City**	**29.03**	**96**	⇓P		**P**		**19 32 11.5**	**-0.4**
baz=29									
A14A	**Double T Ranch**	**29.37**	**84**	⇑P		**P**		**19 32 14.7**	**-0.1**
baz=29,SNR=6.4									
G10A	**Bishop Farm, J**	**29.41**	**93**	⇓P		**P**		**19 32 15.5**	**+0.2**
baz=29									
C13A	**Hot Springs**	**29.43**	**87**	⇓P		**P**		**19 32 15.8**	**+0.4**
baz=29									
F11A	**Grangeville**	**29.59**	**91**	⇑P		**P**		**19 32 16.9**	**+0.1**
baz=29									
YBMT	**Yellow Bay**	**29.65**	**86**	*e*P		**P**		**19 32 16.7**	**-0.6**
A15A	**Johnson Ranch,**	**29.75**	**83**	⇓P		**P**		**19 32 18.2**	**+0.1**
baz=30									
G11A	**Walters Elk Ra**	**29.82**	**92**	⇑P		**P**		**19 32 19.2**	**+0.4**
baz=30									
MOD	**Modoc**	**29.83**	**101**	*e*P		**P**		**19 32 18.6**	**-0.4**
J08A	**Circle Bar Ran**	**29.88**	**97**	⇑P		**P**		**19 32 19.0**	**-0.4**
baz=30									
H10A	**Noah's Angus R**	**30.06**	**94**	⇓P		**P**		**19 32 21.1**	**+0.2**
baz=30									
F12A	**Elk City**	**30.18**	**91**	⇑P		**P**		**19 32 22.0**	**+0.1**
baz=30									
B15A	**Bradely Ranch,**	**30.20**	**84**	⇑P		**P**		**19 32 22.1**	**-0.1**
baz=30									
J09A	**Fry Pan Ranch,**	**30.29**	**96**	⇑P		**P**		**19 32 23.2**	**+0.2**
baz=30									
D14A	**Greenough**	**30.37**	**87**	⇓P		**P**		**19 32 23.6**	**0.0**
baz=30									
H11A	**Donnelly**	**30.39**	**93**	⇑P		**P**		**19 32 24.0**	**+0.1**
baz=30									
C15A	**Salmond Ranch,**	**30.48**	**85**	⇑P		**P**		**19 32 24.7**	**+0.1**
baz=30,SNR=6.6									
F13A	**Darby**	**30.67**	**90**	⇑P		**P**		**19 32 26.1**	**-0.2**
baz=30									
E14A	**Clinton**	**30.77**	**88**	⇑P		**P**		**19 32 27.1**	**0.0**
baz=31									
A17A	**Triple J Farms**	**30.89**	**82**	⇓P		**P**		**19 32 27.7**	**-0.5**
baz=31,SNR=5.8									
I11A	**Placerville**	**30.92**	**94**	⇑P		**P**		**19 32 27.7**	**-0.8**
baz=31									
D15A	**Lincoln**	**30.95**	**86**	⇑P		**P**		**19 32 29.1**	**+0.4**
baz=31									
H12A	**Diamond D Ranc**	**31.14**	**92**	⇑P		**P**		**19 32 30.3**	**-0.1**
baz=31									
K10A	**MacKenzie Ranc**	**31.15**	**96**	⇑P		**P**		**19 32 30.8**	**+0.3**
baz=31									
G13A	**Cobalt**	**31.15**	**91**	⇑P		**P**		**19 32 30.7**	**+0.2**
baz=31									
B17A	**L&G Farms, Che**	**31.20**	**83**	⇓P		**P**		**19 32 30.9**	**0.0**
baz=31									
BEKR	**Beckwourth**	**31.21**	**104**	⇑P		**P**		**19 32 31.4**	**+0.3**
baz=31									
MFID	**Camas Ranch**	**31.31**	**95**	⇑P		**P**		**19 32 32.0**	**+0.1**
baz=31									
A18A	**Metzger Ranch,**	**31.38**	**81**	⇓P		**P**		**19 32 31.9**	**-0.6**
baz=31									
I12A	**Atlanta**	**31.46**	**93**	⇓P		**P**		**19 32 33.4**	**+0.2**
baz=31									
D16A	**Dana Ranch, Ca**	**31.49**	**86**	⇑P		**P**		**19 32 33.7**	**+0.2**
baz=31									
C17A	**Wharram Farm,**	**31.59**	**84**	⇑P		**P**		**19 32 34.7**	**+0.4**
baz=31									
K11A	**Parker Ranch,**	**31.62**	**96**	⇑P		**P**		**19 32 35.1**	**+0.4**
baz=31									
B18A	**Beardsley Farm**	**31.70**	**82**	⇓P		**P**		**19 32 35.0**	**-0.4**
baz=32									
E16A	**East Helena**	**31.71**	**86**	⇓P		**P**		**19 32 35.8**	**+0.3**
baz=32									
L10A	**Juniper Basin**	**31.83**	**97**	⇓P		**P**		**19 32 37.0**	**+0.4**
baz=32									
D17A	**Six Diamond Ra**	**31.90**	**85**	⇓P		**P**		**19 32 37.3**	**+0.2**
baz=32									
EGMT	**Eagleton**	**31.93**	**83**	⇓P		**P**		**19 32 37.4**	**+0.1**
baz=32									
EGMT	**Eagleton**	**31.93**	**83**	*e*P		**P**		**19 32 36.4**	**-0.9**
5.8nm,0.9s,mb4.3									
H14A	**Leadore**	**31.93**	**91**	⇑P		**P**		**19 32 37.6**	**+0.3**
baz=32									
I13A	**Withorse Cree**	**31.95**	**92**	⇓P		**P**		**19 32 37.8**	**+0.3**
baz=32									
M10A	**I.L. Ranch, Tu**	**32.17**	**98**	⇑P		**P**		**19 32 39.8**	**+0.3**
baz=32									
L11A	**Cat Creek Ranc**	**32.17**	**96**	⇑P		**P**		**19 32 40.1**	**+0.6**
baz=32									
E17A	**Martinsdale**	**32.21**	**86**	⇓P		**P**		**19 32 40.1**	**+0.3**
baz=32									
J13A	**Cove Ranch, Pi**	**32.25**	**93**	⇑P		**P**		**19 32 40.3**	**+0.2**
baz=32									
BOZ	**Bozeman (W)**	**32.27**	**88**	⇑P		**P**		**19 32 40.6**	**+0.3**
baz=32									
I14A	**Mackay**	**32.31**	**92**	⇑P		**P**		**19 32 41.2**	**+0.5**
baz=32									
H15A	**Lima**	**32.33**	**90**	⇓P		**P**		**19 32 41.3**	**+0.4**
baz=32									
K12A	**Draper Farm, C**	**32.34**	**95**	⇑P		**P**		**19 32 41.3**	**+0.4**
baz=32									
D18A	**Linhart Farms,**	**32.37**	**84**	⇑P		**P**		**19 32 41.8**	**+0.6**
baz=32,SNR=6.9									
G16A	**Moss Hill, Enn**	**32.42**	**89**	⇑P		**P**		**19 32 42.0**	**+0.3**
baz=32									
L12A	**House Creek Ra**	**32.59**	**96**	⇑P		**P**		**19 32 43.2**	**0.0**
baz=32									
F17A	**Fitzpatrick Pl**	**32.66**	**87**	⇓P		**P**		**19 32 44.1**	**+0.4**
baz=32									
J14A	**Carey**	**32.66**	**93**	⇓P		**P**		**19 32 44.1**	**+0.4**
baz=32									
E18A	**Harlowton**	**32.68**	**85**	⇑P		**P**		**19 32 44.8**	**+0.9**
baz=32									
M12A	**Wells**	**33.14**	**97**	⇑P		**P**		**19 32 48.0**	**0.0**
baz=33									
J15A	**Blackfoot**	**33.22**	**92**	⇓P		**P**		**19 32 49.2**	**+0.6**
baz=33									
NVAR	**Mina Array Bea**	**33.36**	**104**	P		**P**		**19 32 50.2**	**+0.3**
1.7nm,0.7s,mb3.9,baz=303,slow=7.9,SNR=16									
NVAR				PcP		PcP		19 35 26.9	-1.3
0.1nm,0.4s,baz=320,slow=2.6,SNR=3.8									
NVAR	**Mina Array Bea**	**33.36**	**104**	P		**P**		**19 32 50.2**	**+0.3**
NVAR				PcP		PcP		19 35 26.9	-1.3
K14A	**Jones Ranch, D**	**33.36**	**93**	⇓P		**P**		**19 32 49.7**	**-0.1**
baz=33									
ELK	**Elko**	**33.41**	**98**	P		**P**		**19 32 50.5**	**+0.2**
1.9nm,0.7s,mb3.9,baz=304,slow=9.8,SNR=7.9									
M13A	**Montello**	**33.59**	**96**	⇑P		**P**		**19 32 52.2**	**+0.4**
baz=33									
M13A	**Montello**	**33.59**	**96**	*e*P		**P**		**19 32 51.5**	**-0.4**
2.4nm,0.8s,mb4.0									
O11A	**Cowboy Ranch,**	**33.60**	**99**	⇓P		**P**		**19 32 51.7**	**-0.3**
baz=33									
L14A	**Malta**	**33.66**	**94**	⇑P		**P**		**19 32 53.2**	**+0.7**
baz=34									
RLMT	**Red Lodge**	**33.91**	**87**	⇓P		**P**		**19 32 55.5**	**+1.0**
baz=34									
RLMT	**Red Lodge**	**33.91**	**87**	*e*P		**P**		**19 32 54.4**	**-0.1**
1.4nm,0.7s,mb3.8									
M14A	**Sheep Mountain**	**33.95**	**95**	⇑P		**P**		**19 32 54.8**	**-0.2**
baz=34									
O12A	**Currie**	**34.02**	**98**	⇓P		**P**		**19 32 55.8**	**+0.3**
baz=34									
M15A	**Larsen Ranch,**	**34.48**	**94**	⇓P		**P**		**19 32 59.6**	**+0.1**
baz=34									
Q11A	**Duckwater**	**34.51**	**101**	⇓P		**P**		**19 32 59.7**	**-0.1**
baz=34,SNR=5.1									
R10A	**Warm Springs**	**34.55**	**102**	⇓P		**P**		**19 33 00.6**	**+0.5**
baz=34									
S10A	**Tonopah Range,**	**34.65**	**103**	⇑P		**P**		**19 33 01.0**	**0.0**
baz=34									
L16A	**Fish Haven**	**34.68**	**93**	⇓P		**P**		**19 33 01.9**	**+0.7**
baz=34									
J18A	**Kendall Valley**	**34.69**	**90**	⇓P		**P**		**19 33 01.4**	**+0.1**
baz=34									
R11A	**Troy Canyon, C**	**34.90**	**101**	⇓P		**P**		**19 33 02.8**	**-0.3**
baz=35,SNR=8.4									
L17A	**Cokeville**	**34.94**	**92**	⇑P		**P**		**19 33 03.9**	**+0.5**
baz=35									
P13A	**Bates Ranch, G**	**34.98**	**98**	⇑P		**P**		**19 33 04.2**	**+0.4**
baz=35									
DUG	**Dugway**	**35.14**	**96**	*e*P		**P**		**19 33 04.8**	**-0.4**
4.1nm,1.1s,mb4.0									
BW06	**Boulder Array**	**35.23**	**90**	⇑P		**P**		**19 33 05.7**	**-0.3**
baz=35									
BW06	**Boulder Array**	**35.23**	**90**	*e*P		**P**		**19 33 05.3**	**-0.7**
17nm,2.3s,mb4.3									
PDAR	**Pinedale Array**	**35.24**	**90**	P		**P**		**19 33 05.7**	**-0.3**
1.7nm,0.7s,mb3.8,baz=320,slow=5.0,SNR=16									
Q13A	**Wheeler Ranch,**	**35.33**	**99**	⇓P		**P**		**19 33 06.9**	**0.0**
baz=35									
P14A	**Drum Mountains**	**35.41**	**97**	⇓P		**P**		**19 33 07.7**	**+0.1**
baz=35									
M17A	**Scullys Gap (B**	**35.47**	**93**	⇓P		**P**		**19 33 07.8**	**-0.2**
baz=35									
L18A	**Fontenelle, Gr**	**35.52**	**92**	⇓P		**P**		**19 33 08.6**	**+0.2**
baz=35									
MPMC	**Manual Prospec**	**35.54**	**106**	⇓P		**P**		**19 33 08.8**	**+0.2**
baz=35									
K19A	**Absolon Red Bu**	**35.60**	**89**	⇓P		**P**		**19 33 09.0**	**-0.1**
baz=35									
Q14A	**Sevier Lake (B**	**35.72**	**98**	⇓P		**P**		**19 33 10.5**	**+0.4**
baz=36									
L19A	**Farson**	**35.78**	**91**	⇑P		**P**		**19 33 10.7**	**+0.1**
baz=36									
LRMC	**Laurel Mountai**	**35.87**	**107**	⇑P		**P**		**19 33 11.2**	**-0.3**
baz=36									
U10A	**Ash Meadows, A**	**35.90**	**104**	⇓P		**P**		**19 33 12.1**	**+0.4**
baz=36									
T11A	**Corn Creek, Al**	**35.90**	**102**	⇑P		**P**		**19 33 11.3**	**-0.4**
baz=36									
S13A	**Holt Ranch, En**	**36.40**	**100**	⇑P		**P**		**19 33 15.4**	**-0.6**
baz=36									
L20A	**Wamsutter**	**36.41**	**90**	⇓P		**P**		**19 33 15.8**	**-0.2**
baz=36									
N19A	**John Jarvie Ra**	**36.69**	**92**	⇑P		**P**		**19 33 17.9**	**-0.5**
baz=36									
T13A	**Saint George**	**36.78**	**101**	⇓P		**P**		**19 33 19.6**	**+0.4**
baz=37									
V11A	**Goodsprings**	**36.81**	**104**	⇓P		**P**		**19 33 19.5**	**0.0**
baz=37									
M20A	**Sweetwater, Wa**	**36.84**	**91**	⇓P		**P**		**19 33 20.0**	**+0.3**
baz=37									
Q16A	**Castle Valley**	**36.94**	**96**	⇓P		**P**		**19 33 20.8**	**+0.3**
baz=37									
L21A	**Rawlins**	**36.99**	**89**	⇓P		**P**		**19 33 20.7**	**-0.2**
baz=37									
HEC	**Hector,Ludlow**	**37.08**	**106**	⇑P		**P**		**19 33 22.0**	**+0.3**
baz=37									
O19A	**Miners Draw (B**	**37.12**	**93**	⇑P		**P**		**19 33 22.0**	**-0.1**
baz=37									
SRU	**San Rafael**	**37.16**	**95**	⇑P		**P**		**19 33 22.3**	**0.0**
baz=37									
SRU	**San Rafael**	**37.16**	**95**	*e*P		**P**		**19 33 22.4**	**0.0**
11nm,0.9s,mb4.5									
U13A	**Pakoon Wash**	**37.19**	**102**	⇓P		**P**		**19 33 23.1**	**+0.4**
baz=37									
R16A	**Teasdale**	**37.21**	**97**	⇓P		**P**		**19 33 22.8**	**0.0**
baz=37,SNR=5.2									
V12A	**Nelson**	**37.21**	**103**	⇓P		**P**		**19 33 23.2**	**+0.3**
baz=37									
M21A	**Separation Pea**	**37.23**	**90**	⇑P		**P**		**19 33 22.7**	**-0.2**
baz=37									
N20A	**Spence Gulch,**	**37.24**	**91**	⇑P		**P**		**19 33 23.5**	**+0.4**
baz=37									
Q18A	**Rafter H Ranch**	**37.38**	**95**	⇓P		**P**		**19 33 24.3**	**+0.1**
baz=37									
RSSD	**Black Hills**	**37.45**	**84**	*e*P		**P**		**19 33 24.7**	**0.0**
3.5nm,0.7s,mb4.1									
GMRC	**Granite Mounta**	**37.48**	**105**	⇑P		**P**		**19 33 25.1**	**0.0**
baz=37									
R17A	**Hanksville Air**	**37.54**	**96**	⇑P		**P**		**19 33 25.4**	**-0.2**
baz=37,SNR=6.5									
LDFC	**Landfair**	**37.55**	**104**	*e*P		**P**		**19 33 24.1**	**-1.6**
V13A	**Grand Canyon W**	**37.59**	**102**	⇑P		**P**		**19 33 26.4**	**+0.3**
baz=37									
U14A	**Mt Trumbull**	**37.62**	**101**	⇓P		**P**		**19 33 26.3**	**0.0**
baz=37,SNR=5.9									
T15A	**Red Dirt Ranch**	**37.62**	**100**	⇓P		**P**		**19 33 26.4**	**+0.2**
baz=37									
P19A	**Cripple Cowboy**	**37.66**	**94**	⇓P		**P**		**19 33 26.0**	**-0.6**
baz=37,SNR=8.3									
N21A	**Black Mountain**	**37.71**	**91**	⇑P		**P**		**19 33 27.0**	**0.0**
baz=38									
O20A	**White River Ci**	**37.73**	**92**	⇓P		**P**		**19 33 27.2**	**0.0**
baz=38									
BELC	**Belle Mtn.**	**37.89**	**106**	⇑P		**P**		**19 33 28.2**	**-0.3**
baz=38									

3.6nm,0.6s,mb4.2
117A **Oracle** 41.82 103 ⇑P P 19 34 01.3 +0.2
baz=42,SNR=5.9
X21A **Alamocita Cree** 42.04 98 ⇓P P 19 34 03.3 +0.5
baz=42,SNR=17
Y20A **Horse Springs,** 42.11 99 ⇑P P 19 34 03.7 +0.3
baz=42,SNR=5.3
118A **Homack Ranch,** 42.19 102 ⇑P P 19 34 04.0 0.0
baz=42,SNR=6.0
W23A **Werner Place,** 42.42 96 ⇑P P 19 34 06.1 +0.2
baz=42
X22A **Bernardo** 42.43 97 ⇓P P 19 34 06.5 +0.6
baz=42
Y21A **Point of Rocks** 42.43 98 ⇓P P 19 34 06.5 +0.5
baz=42
119A **Ashpeak Ranch,** 42.46 101 ⇓P P 19 34 06.7 +0.4
baz=42
U25A **Circle Dot Ran** 42.49 93 ⇓P P 19 34 06.5 +0.1
baz=42
Z20A **Nine Sixteen R** 42.59 100 ⇑P P 19 34 07.6 +0.3
baz=42,SNR=7.5
218A **Dragoon** 42.66 103 ⇑P P 19 34 08.3 +0.5
baz=42
V25A **Rancho No Teng** 42.78 94 ⇑P P 19 34 08.5 -0.3
baz=43
W24A **Lazy 6 Ranch,** 42.80 95 ⇑P P 19 34 09.1 +0.2
baz=43
U26A **Atchley Ranch,** 42.87 93 ⇓P P 19 34 09.2 -0.3
baz=43,SNR=6.0
Y22A **Socorro** 42.87 98 ⇓P P 19 34 09.8 +0.3
baz=43
BNM **Barren Site** 42.90 97 *e*P P 19 34 09.8 0.0
1.5nm,0.8s,mb3.7
Z21A **St. Cloud Mine** 42.95 99 ⇑P P 19 34 10.8 +0.7
baz=43
219A **White Tail Can** 43.07 102 ⇑P P 19 34 11.3 +0.2
baz=43,SNR=7.5
318A **Bisbee** 43.10 103 ⇑P P 19 34 11.6 +0.2
baz=43
V26A **Tequesquite Ra** 43.28 93 ⇓P P 19 34 12.6 -0.2
baz=43
W25A **X Bar L Ranch,** 43.32 94 ⇓P P 19 34 13.2 +0.1
baz=43
Y23A **Lovelace Mesa,** 43.38 97 ⇓P P 19 34 13.7 +0.1
baz=43
Z22A **Elephant Butte** 43.38 98 ⇑P P 19 34 13.8 +0.1
baz=43,SNR=6.1
121A **Cookes Peak, D** 43.47 100 ⇑P P 19 34 14.4 +0.1
baz=43
319A **Douglas** 43.53 102 ⇓P P 19 34 15.1 +0.2
baz=43
220A **Playas Peak, P** 43.54 101 ⇑P P 19 34 15.4 +0.5
baz=43
X25A **Clemmons Ranch** 43.72 95 ⇓P P 19 34 16.4 +0.1
baz=44
Y24A **Capitan** 43.73 96 ⇓P P 19 34 16.9 +0.5
baz=44
221A **Mesquite Ranch** 43.87 100 ⇑P P 19 34 17.4 -0.2
baz=44
320A **Kipp Ranch, An** 43.98 102 ⇑P P 19 34 18.6 +0.2
baz=44
X26A **CR and CF Fran** 44.17 94 ⇑P P 19 34 19.5 -0.4
baz=44
Z24A **Sheeeppen Canyo** 44.21 97 ⇑P P 19 34 19.8 -0.4
baz=44
124A **Stringfield Ra** 44.64 98 ⇓P P 19 34 23.6 0.0
baz=44
Y27A **Causey** 45.03 94 ⇓P P 19 34 26.7 0.0
baz=45
Z26A **Caprock** 45.03 96 ⇑P P 19 34 27.0 +0.2
baz=45
224A **Corundas Mount** 45.07 98 ⇓P P 19 34 26.7 -0.3
baz=45,SNR=7.8
125A **Gardner Draw,** 45.11 97 ⇑P P 19 34 27.6 +0.3
baz=45
225A **Deer Hill, Car** 45.43 98 ⇓P P 19 34 30.1 +0.2
baz=45
126A **Clayton Basin,** 45.47 96 ⇓P P 19 34 30.4 +0.1
baz=45
324A **Moseley Ranch,** 45.57 99 ⇓P P 19 34 31.0 -0.1
baz=45
127A **Arkansas Junct** 45.82 96 ⇑P P 19 34 32.8 -0.1
baz=46
226A **Malaga, Loving** 45.87 97 ⇑P P 19 34 33.1 -0.2
baz=46
325A **Bean Ranch, Si** 45.91 98 ⇑P P 19 34 33.5 -0.2
baz=46
425A **Indio Mountain** 46.35 99 ⇓P P 19 34 37.3 +0.2
baz=46
326A **Caldwell Ranch** 46.50 98 ⇓P P 19 34 38.6 +0.3
baz=46
WMOK **Wichita Mounta** 46.85 90 *e*P P 19 34 39.7 -1.3
4.5nm,0.8s,mb4.2
426A **McDonald Obser** 46.97 98 ⇓P P 19 34 41.3 -0.6
baz=47
328A **Wristen Ranch,** 47.10 96 ⇑P P 19 34 42.4 -0.6
baz=47
427A **Hayter Ranch,** 47.17 97 ⇓P P 19 34 43.0 -0.6
baz=47
526A **Mary Lane Ranc** 47.40 99 ⇑P P 19 34 45.0 -0.3
baz=47
527A **Woodward Ranch** 47.60 98 ⇓P P 19 34 46.3 -0.5
baz=47
428A **Kincaid Ranch,** 47.67 97 ⇓P P 19 34 47.0 -0.3
baz=48
626A **Big Bend Ranch** 47.76 99 ⇑P P 19 34 47.6 -0.5
baz=48
TXAR **Lajitas Array** 48.19 99 P P 19 34 50.7 -0.7
4.8nm,0.8s,mb4.2,baz=303,slow=5.8,SNR=50
TXAR PcP PcP 19 36 15.4 -1.0
0.4nm,0.7s,baz=318,slow=1.2,SNR=4.0
TXAR **Lajitas Array** 48.19 99 P P 19 34 50.7 -0.7
TXAR PcP PcP 19 36 15.4 -1.0
627A **Terlingua Ranc** 48.25 99 ⇑P P 19 34 51.5 -0.4
baz=48
628A **Black Gap, Mar** 48.50 98 ⇑P P 19 34 53.4 -0.4
baz=48
SCHQ **Schefferville** 49.32 50 P P 19 34 58.4 -1.2
2.0nm,0.7s,mb3.9,baz=276,slow=9.2,SNR=4.1
SCHQ **Schefferville** 49.32 50 P P 19 34 58.4 -1.2
JCT **Junction City** 49.46 95 *e*P P 19 34 59.4 -1.6
6.5nm,0.8s,mb4.3
ARCES **ARCESS Array B** 54.51 357 P P 19 35 36.6 -1.3
1.1nm,0.7s,mb3.7,baz=2.7,slow=5.7,SNR=2.9
HHC **Hu-ho-hao-te** 55.94 294 *e*P P 19 35 50.5 +2.0
HHC pP pP 19 36 23.5 +3.0
HHC PcP PcP 19 36 46.8 +1.4
HHC PP PP 19 37 59.0 +4.7
HHC ScP ScP 19 40 31.5 +0.2
HHC PcS PcS 19 40 46.5 +0.7
HHC S S 19 43 26.0 +0.5
HHC ScS ScS 19 45 21.8 -1.9
HHC SS SS 19 47 15.5 +2.8
HHC pmax pmax
comp=Z,12nm,1.1s,mb4.6
HHC pmax pmax
comp=Z,110nm,5.5s
HHC LR LR
comp=N,140nm,15.7s
HHC LR LR
comp=E,120nm,15.6s
HHC LR LR
comp=Z,95nm,15.8s
NJ2 **Nanjing** 58.66 282 *e*P P 19 36 10.8 +3.1
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
KURK **Kurchatov** 62.56 322 pP pP 19 37 11.0 +4.4
comp=Z,0.9nm,0.9s,baz=36,slow=6.8,SNR=7.7
FINES **FINESS Array B** 62.59 356 P P 19 36 32.7 -1.2
comp=Z,0.5nm,0.4s,mb3.7,baz=356,slow=8.6,SNR=6.4
FINES **FINESS Array B** 62.59 356 P P 19 36 32.7 -1.2
NOA **NORSAR Array B** 62.98 4 P P 19 36 36.3 -0.2
comp=Z,0.3nm,0.6s,mb3.3,baz=341,slow=8.2,SNR=2.6
BVAR **Borovoye Array** 63.23 328 pP pP 19 37 14.3 +3.3
comp=Z,0.7nm,0.6s,baz=24,slow=8.1,SNR=4.3
LZH **Lanzhou** 63.48 296 *e*P P 19 36 44.5 +4.3
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.7
MKAR **Makanchi Array** 64.51 317 P P 19 36 44.5 -2.2
comp=Z,0.3nm,0.7s,mb3.2,baz=66,slow=4.9,SNR=3.1
MKAR pP pP 19 37 23.6 +4.0
comp=Z,0.4nm,0.7s,baz=57,slow=9.2,SNR=3.8
WMQ **Urumqi** 64.80 312 *e*P P 19 36 51.8 +3.1
CD2 **Chengdu** 67.61 292 P P 19 37 08.0 +1.2
CD2 pP pP 19 37 42.0 +2.1
CD2 PP PP 19 39 40.8 +3.7
CD2 S S 19 45 51.3 -1.3
CD2 sS sS 19 46 50.8 +1.1
CD2 SS SS 19 50 16.0 +0.8
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CD2 pmax pmax
comp=Z,120nm,4.9s
GYA **Guiyang** 69.63 287 P P 19 37 20.0 +0.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KMI **Kunming** 72.79 289 P P 19 37 37.5 -0.9
KMI pP pP 19 38 14.5 +2.6
KMI pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
AKASG **Malin Array Be** 73.15 353 P P 19 37 38.6 -1.5
comp=Z,0.6nm,0.4s,mb3.7,baz=7.8,slow=5.6,SNR=3.4
AKASG **Malin Array Be** 73.15 353 P P 19 37 38.6 -1.4
CMAR **Chiang Mai Arr** 80.25 288 P P 19 38 19.0 -1.4
comp=Z,0.9nm,0.6s,mb3.6,baz=21,slow=5.6,SNR=7.6
QSPA **South Pole Qui** 145.95 180 PKPbc PKPbc 19 45 44.9 -1.7
comp=Z,1.5nm,0.6s,baz=55,slow=0.8,SNR=6.4

IDC 30 19:31:57.8±8.8, 34°.98N×82°.38E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=144.0km s-min=85.8km az=111.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	11.80	360	Pn	Pn	19 34 49.0	+1.7
	0.1nm,0.3s,baz=181,slow=12,SNR=8.9						
MKAR				Sn	Sn	19 36 56.3	-3.4
	0.1nm,0.3s,baz=183,slow=22,SNR=2.8						
KURK	**Kurchatov**	15.96	351	Pn	Pn	19 35 41.3	-2.3
	0.0nm,0.3s,baz=171,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	19.04	4	P	Pn	19 36 20.2	-1.8
	0.1nm,0.3s,baz=198,slow=9.1,SNR=2.0						
BVAR	**Borovoye Array**	19.95	338	P	Pn	19 36 31.0	-1.8
	0.2nm,0.3s,baz=150,slow=10,SNR=6.7						

*ISCJB **30** 19:42:53.6±1.3, 36°.9N±0°.1×26°.70E±0°.09, h82km±40km, Error ellipse: s-maj=24.5km s-min=6.0km az=153.4*
*CSEM **30** 19:42:54.8±0.6, 36°.91N×26°.67E, h60km, MD3.0, Error ellipse: s-maj=16.6km s-min=6.4km az=160.0*
*ATH **30** 19:42:54.9, 36°.82N×26°.59E, h42km±6km, MD3.0/8*
*NEIC **30** 19:42:54.9, 36°.82N×26°.59E, h42km, MD3.0(ATH), After ATH.*

ISC 30 19:42:54.6±1.2, 36°.9N±0°.1×26°.68E±0°.09, h66km±59km, n20, σ1s00/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	1.35	120	*e*P	Pn	19 43 19.0	+1.6
ARG				*e*S	Sn	19 43 37.0	+2.5
ARG	**Arkhangelos**	1.35	120	*e*P	Pn	19 43 19.0	+1.6
ARG				*e*S	Sn	19 43 37.0	+2.5
KARP	**Karpathos**	1.41	164	*e*P	Pn	19 43 19.1	+0.9
KARP				*e*S	Sn	19 43 36.1	+0.2
KARP	**Karpathos**	1.41	164	*e*P	Pn	19 43 19.1	+0.9
KARP				*e*S	Sn	19 43 36.1	+0.2
TURN	**Turunc**	1.54	91	*i* P	Pn	19 43 19.1	-0.8
TURN	**Turunc**	1.54	91	*i* P	Pn	19 43 19.1	-0.8
TURN				*i* S	Sn	19 43 37.5	-1.6
ZKR	**Zakros**	1.82	192	*e*P	Pn	19 43 23.8	+0.1
ZKR				*e*S	Sn	19 43 45.5	-0.3
ZKR	**Zakros**	1.82	192	*e*P	Pn	19 43 23.8	+0.1
ZKR				*e*S	Sn	19 43 45.5	-0.3
NPS	**Neapolis**	1.85	208	*e*P	Pn	19 43 24.0	-0.1
NPS	**Neapolis**	1.85	208	*e*P	Pn	19 43 24.0	-0.1
LAST	**Lasithi**	1.99	210	*e*P	Pn	19 43 25.6	-0.4
LAST				*e*S	Sn	19 43 48.8	-1.1
LAST	**Lasithi**	1.99	210	*e*P	Pn	19 43 25.6	-0.4
LAST				*e*S	Sn	19 43 48.8	-1.1
IDI	**Anoyia**	2.17	223	*e*P	Pn	19 43 28.4	0.0
IDI				*e*S	Sn	19 43 53.1	-1.1
IDI	**Anoyia**	2.17	223	*e*P	Pn	19 43 28.4	0.0
IDI				*e*S	Sn	19 43 53.1	-1.1
SIVA	**Sivas**	2.42	219	*e*P	Pn	19 43 32.0	+0.2
SIVA				*e*S	Sn	19 44 00.3	+0.1
SIVA	**Sivas**	2.42	219	*e*P	Pn	19 43 32.0	+0.2
SIVA				*e*S	Sn	19 44 00.3	+0.1
AKAS	**Kas**	2.45	105	*i* P	Pn	19 43 32.3	+0.2
AKAS	**Kas**	2.45	105	*i* P	Pn	19 43 32.3	+0.1
AKAS				*i* S	Sn	19 43 59.7	-1.3
KARN	**Karanos**	2.69	237	*e*P	Pn	19 43 37.2	+1.7
KARN	**Karanos**	2.69	237	*e*P	Pn	19 43 37.2	+1.7

IDC 30 19:49:13.3±1.2, 32°.10N×104°.63E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=60.4km s-min=20.7km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	14.52	202	Pn	Pn	19 52 41.3	+1.2
	0.0nm,0.3s,baz=11,slow=10,SNR=3.0						
SONM	**Songino Array**	15.77	4	Pn	Pn	19 52 59.0	+2.4
	0.1nm,0.3s,baz=187,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	22.54	317	P	P	19 54 15.2	+0.5
	0.5nm,0.6s,baz=105,slow=12,SNR=6.1						
ZALV	**Zalesovo Beam**	26.03	333	P	P	19 54 48.1	+0.2
	1.3nm,0.6s,baz=132,slow=9.9,SNR=6.9						
KURK	**Kurchatov**	26.73	322	P	P	19 54 54.0	-0.3
	0.4nm,0.7s,baz=127,slow=9.1,SNR=5.4						
ARCES	**ARCESS Array B**	56.53	336	P	P	19 58 56.2	-0.8
	1.3nm,0.8s,baz=89,slow=6.7,SNR=5.0						
ASAR	**Alice Springs**	62.12	150	P	P	19 59 36.1	0.0
	0.7nm,0.9s,baz=336,slow=6.6,SNR=10						

KRSC 30 19:53:55.4±0.3, 54°.30N×158°.71E, h305km±34km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	0.76	217	*e*P	Pn	19 54 35.2	-0.1
AVH	**Avacha**	1.04	179	*e*P	Pn	19 54 38.3	+1.8
SPN	**Mys Shipunski**	1.44	147	*e*S	S	19 55 12.3	-0.8
KMNR	**Kamenistaya**	1.70	30	*e*P	Pn	19 54 41.8	+1.6
MKZ	**Mys Kozlova**	1.78	81	*e*P	Pn	19 54 41.8	+0.9
MKZ				*e*S	S	19 55 14.5	-2.6
ZLN	**Zelenaya**	2.10	34	*e*P	Pn	19 54 45.0	+1.8
KBTR	**Krutoberegovo**	3.03	49	*e*P	Pn	19 54 53.0	+1.4
KBTR				*e*S	S	19 55 36.5	-0.1

*HLW **30** 19:57:34.8, 34°.90N×24°.27E, h33km±29km, Ml2.5*
*ISCJB **30** 19:57:36.7±1.4, 34°.40N±0°.06×23°.91E±0°.08, h19km±13km, Error ellipse: s-maj=12.7km s-min=8.0km az=148.8*
*CSEM **30** 19:57:36.3±0.6, 34°.43N×23°.93E, h20km, MD3.5, Error ellipse: s-maj=18.5km s-min=9.3km az=66.0*
*ATH **30** 19:57:36.0, 34°.42N×23°.92E, h25km±2km, MD3.5/11*
*NEIC **30** 19:57:36.0, 34°.42N×23°.92E, h25km, MD3.5(ATH), After ATH.*

ISC 30 19:57:36.6±1.4, 34°.40N±0°.06×23°.97E±0°.08, h13km±10km, n31, σ1s23/41, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.45	12	*e*PB	Pg	19 57 45.4	-0.1
GVD				*e*SB	Sg	19 57 52.3	+0.8
GVD	**Gavdhos**	0.45	12	*e*Pb	Pg	19 57 45.4	-0.1
GVD				*e*Sb	Sg	19 57 52.3	+0.8
SIVA	**Sivas**	0.93	48	*e*PN	Pg	19 57 54.5	0.0
SIVA				*e*SN	Sg	19 58 07.9	+1.3
SIVA	**Sivas**	0.93	48	*e*Pn	Pg	19 57 54.5	0.0
SIVA				*e*Sn	Sg	19 58 07.9	+1.3
KARN	**Karanos**	1.00	357	*e*PN	Pg	19 57 55.1	-0.8
KARN				*e*SN	Sg	19 58 08.7	-0.3
KARN	**Karanos**	1.00	357	*e*Pn	Pg	19 57 55.1	-0.8
KARN				*e*Sn	Sg	19 58 08.7	-0.3
VAM	**Vamos**	1.02	11	*e*PN	Pg	19 57 55.0	-1.3
VAM	**Vamos**	1.02	11	*e*Pn	Pg	19 57 55.0	-1.3
IDI	**Anoyia**	1.16	40	*e*PB	Pn	19 57 57.6	-0.9
IDI	**Anoyia**	1.16	40	*e*Pb	Pn	19 57 57.6	-0.9
LAST	**Lasithi**	1.46	58	*e*PN	Pn	19 58 03.1	+0.6
LAST	**Lasithi**	1.46	58	*e*Pn	Pn	19 58 03.1	+0.6
NPS	**Neapolis**	1.60	57	*e*PN	Pn	19 58 05.4	+0.9
NPS	**Neapolis**	1.60	57	*e*Pn	Pn	19 58 05.4	+0.9
KYTH	**Kithira**	2.03	338	*e*PB	Pn	19 58 10.2	-0.2
KYTH	**Kithira**	2.03	338	*e*Pb	Pn	19 58 10.2	-0.2
VLI	**Veliai**	2.46	340	*e*PB	Pn	19 58 17.1	+0.7
VLI	**Veliai**	2.46	340	*e*Pb	Pn	19 58 17.1	+0.7
KARP	**Karpathos**	2.86	65	*e*PN	Pn	19 58 22.5	+0.7
KARP	**Karpathos**	2.86	65	*e*Pn	Pn	19 58 22.5	+0.7
SLUM		3.08	160	P	Pn	19 58 26.9	+2.0
	baz=166						
SLUM				AMP		19 59 00.0	
	comp=E,10μm,0.2s,logA/T=4.6,baz=166						
SLUM				S	Sn	19 59 03.3	+1.7
	baz=166						
SLUM		3.08	160	P	Pn	19 58 26.9	+2.0
SLUM				S	Sn	19 59 03.3	+1.7
ITM	**Ithomi**	3.23	330	*e*PN	Pn	19 58 27.1	+0.1
ITM	**Ithomi**	3.23	330	*e*Pn	Pn	19 58 27.1	+0.1
HMAT	**Matruh**	4.22	141	P	Pn	19 58 41.1	+0.6
	baz=147						
HMAT				S	Sn	19 59 27.6	-2.1
	baz=147						
HMAT	**Matruh**	4.22	141	P	Pn	19 58 41.1	+0.6
HMAT				S	Sn	19 59 27.6	-2.0
AMAG	**Maghara**	8.65	113	P	Pn	19 59 38.5	-2.9
	baz=117						
AMAG	**Maghara**	8.65	113	P	Pn	19 59 38.5	-2.9
RSH		8.90	110	P	Pn	19 59 41.7	-3.2
HNKL	**Nakhl**	9.58	115	P	Pn	19 59 51.9	-2.2
	baz=118						
HNKL	**Nakhl**	9.58	115	P	Pn	19 59 51.9	-2.3

IDC 30 19:58:10.2±2.0, 33°.44S×179°.25W, h0km, mb3.6/1, mb1 3.8/2, mb1mx3.6/15, mbtmp3.7/2, ML3.4/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/15, Error ellipse: s-maj=53.7km s-min=44.6km az=108.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	4.32	16	LR	LR	20 00 06.2	
	comp=Z,161nm,20.6s,baz=179,slow=27						
RAO				Sn	Sn	20 00 09.6	+1.3
	46nm,0.3s,baz=108,slow=20,SNR=4.8						
URZ	**Urewera**	5.65	211	Pn	Pn	19 59 35.5	0.0
	1.1nm,0.3s,baz=358,slow=12,SNR=13						
URZ				Sn	Sn	20 00 35.9	-5.1
	1.6nm,0.3s,baz=114,slow=18,SNR=2.3						
STKA	**Stephens Creek**	32.87	262	LR	LR	20 17 06.5	
	comp=Z,83nm,19.5s,baz=24,slow=35						
CTA	**Charters Tower**	33.38	285	LR	LR	20 16 28.4	
	comp=Z,50nm,19.5s,baz=47,slow=33						
ASAR	**Alice Springs**	41.99	271	P	P	20 06 03.2	0.0
	1.9nm,1.1s,baz=110,slow=7.2,SNR=15						
CFAA	**Coronel Fontan**	88.27	127	LR	LR	20 46 07.7	
	comp=Z,10nm,18.7s,baz=152,slow=33						
FINES	**FINESS Array B**	147.58	337	PKPbc	PKPbc	20 17 55.0	-0.7
	2.3nm,0.8s,baz=46,slow=4.2,SNR=8.1						
TORD	**Torodi Ar. Bea**	159.79	183	PKPab	PKPab	20 18 50.0	-0.4
	0.9nm,1.0s,baz=173,slow=1.1,SNR=3.7						

CASC 30 20:09:37.0±1.9, 8°.40N×83°.02W, h11km±10km, MD3.6, 2C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	0.29	329	⇑*i*P	Pg	20 09 43.2	+0.2
ACR				⇑*e*P		20 09 43.2	
ACR				*e*S	Sg	20 09 48.7	+1.8
BRU2	**Volcan**	0.51	39	*e*P	Pg	20 09 46.9	0.0
BRU2				*e*S	Sg	20 09 54.6	+1.0
BAR1		0.89	341	*i* P	Pg	20 09 53.6	-0.6
BAR1				*e*P		20 09 53.6	
BUS	**Buena Vista**	1.36	327	*e*P	Pn	20 10 01.2	-0.8
BUS				*e*P		20 10 01.7	
BUS				*e*S	Sb	20 10 21.4	+1.4
BUS				*e*S	Sb	20 10 21.7	+1.7
URSC	**Urasca**	1.61	332	*e*P	Pn	20 10 05.3	-0.1

*NEIC **30** 20:13:55.3, 15°.98N×99°.09W, h20km, MD3.6(MEX), After MEX.*

MEX 30 20:13:55.3±0.8, 15°.98N×99°.09W, h20km±20km, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	1.02	66	*i* P	Pb	20 14 12.2	-2.1
PNIG				*i* S	Sb	20 14 23.6	-3.5
PNIG	**Pinotepa**	1.02	66	*i* P	Pb	20 14 12.2	-2.1
PNIG				*i* S	Sb	20 14 23.6	-3.5
ACX	**Acapulco**	1.18	318	*i* P	Pn	20 14 13.2	-3.6
ACX				*i* S	Sb	20 14 26.1	-5.9
ACX	**Acapulco**	1.18	318	*i* P	Pn	20 14 13.2	-3.6
ACX				*i* S	Sb	20 14 26.1	-5.9
CAIG	**El Cayaco**	1.55	314	*i* P	Pn	20 14 19.8	-1.9
CAIG				*i* S	Sn	20 14 37.5	-3.8
CAIG	**El Cayaco**	1.55	314	*i* P	Pn	20 14 19.8	-1.9
CAIG				*i* S	Sn	20 14 37.5	-3.8
PLIG	**Platanillo**	2.43	351	*i* P	Pn	20 14 32.5	-1.4
PLIG				*i* S	Sn	20 14 59.7	-3.4
PLIG	**Platanillo**	2.43	351	*i* P	Pn	20 14 32.5	-1.4
PLIG				*i* S	Sn	20 14 59.7	-3.4
VHO	**Vista Hermosa**	2.51	64	*i* P	Pn	20 14 34.1	-0.9
VHO				*i* S	Sn	20 15 01.4	-3.6
VHO	**Vista Hermosa**	2.51	64	*i* P	Pn	20 14 34.1	-0.9
VHO				*i* S	Sn	20 15 01.4	-3.6
ZIIG	**Zihuatanejo**	2.79	306	*i* P	Pn	20 14 37.4	-1.4
ZIIG				*i* S	Sn	20 15 07.7	-4.2
ZIIG	**Zihuatanejo**	2.79	306	*i* P	Pn	20 14 37.4	-1.4
ZIIG				*i* S	Sn	20 15 07.7	-4.2

*IDC **30** 20:29:46.4±1.1, 32°.43N×105°.14E, h0km, mb3.8/11, mb1 3.8/12, mb1mx3.7/25, mbtmp3.7/12, ML3.6/1, Error ellipse: s-maj=35.7km s-min=23.1km az=55.0*
*NEIC **30** 20:29:47.9±0.4, 32°.38N×105°.12E, h10km, mb4.3/7, Error ellipse: s-maj=15.4km s-min=7.8km az=55.0*
*BJI **30** 20:29:48.8, 32°.55N×105°.13E, h8km, mb3.8/2, ML3.6/13, Ms3.1/2, Ms7 3.4/2*

ISC 30 20:29:47.1±0.9, 32°.51N±0°.04×105°.34E±0°.04, h3km±6km, n31, σ1s27/40, mb4.0/17, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	2.08	221	Pn	Pn	20 30 23.5	+0.6
CD2				Pg	Pg	20 30 26.8	-0.2
CD2				Sn	Sn	20 30 51.0	+1.6
CD2				Sg	Sg	20 30 53.8	-0.3
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	3.37	62	Pn	Pn	20 30 43.5	+2.9
XAN				Pg	Pg	20 30 51.0	-0.7
XAN				Sg	Sg	20 31 35.0	-0.3
XAN				smax			
	comp=N,250nm,0.7s						
XAN				smax			
	comp=E,98nm,0.9s						
LZH	**Lanzhou**	3.78	341	Pn	Pn	20 30 49.3	+3.1
LZH				Sn	Sn	20 31 34.0	+2.8
LZH				Sg	Sg	20 31 45.0	-3.5
LZH				smax			
	comp=N,170nm,0.6s						
LZH				smax			
	comp=E,310nm,0.6s						
LZH				LR	LR		
	comp=N,310nm,4.8s						
LZH				LR	LR		
	comp=Z,540nm,5.7s						
ENH	**Enshi**	4.19	121	*e*Pn	Pn	20 30 54.4	+2.5
ENH				*e*Sg	Sg	20 32 02.2	+0.6
GYA	**Guiyang**	6.14	169	Pn	Pn	20 31 21.3	+2.7
GYA				smax			
	comp=N,50nm,0.7s						
GYA				smax			
	comp=E,40nm,0.7s						
WHN	**Wuhan**	7.94	102	P	Pn	20 31 36.3	-7.1
WHN				S	Sn	20 33 12.0	-1.7
GTA	**Gaotai**	8.21	329	*e*P	Pn	20 31 47.8	+0.6
GTA				pP		20 31 52.5	
GTA				sP		20 31 55.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	15.13	204	Pn	Pn	20 33 21.0	-0.8
	comp=Z,0.1nm,0.3s,baz=16,slow=14,SNR=3.3						
MK31	**Makanchi Array**	22.66	316	*e*P	P	20 34 49.4	+0.1
MKAR	**Makanchi Array**	22.66	316	P	P	20 34 49.5	+0.1

comp=Z,0.6nm,0.4s,mb3.3,baz=106,slow=13,SNR=9.8
TKM2 Tokmak 2 25.60 303 *e*P **P 20 35 15.7 -1.8**
comp=Z,1.4nm,0.8s,mb3.5
ZALV Zalesovo Beam 25.95 332 P **P 20 35 20.7 +0.1**
comp=Z,0.4nm,0.4s,mb3.4,baz=145,slow=11,SNR=3.6
ZALV Zalesovo Beam 25.95 332 P **P 20 35 20.7 +0.1**
UCH Uchtor 26.23 301 *e*P **P 20 35 22.4 -0.8**
comp=Z,3.5nm,1.1s,mb3.8
KURK Kurchatov 26.79 321 P **P 20 35 28.8 +0.6**
comp=Z,0.6nm,0.5s,mb3.4,baz=135,slow=9.1,SNR=6.7
KURK Kurchatov 26.79 321 *e*P **P 20 35 28.4 +0.2**
comp=Z,0.7nm,0.5s,mb3.5
KKM Kota Kinabalu 28.21 157 P **P 20 35 39.4 -1.8**
comp=Z,7.2nm,0.9s,mb4.3
KSM Kuching 31.22 170 *e*P **P 20 36 04.4 -3.5**
comp=Z,8.1nm,1.2s,mb4.4
PETK Petropavlovsk- 42.46 45 P **P 20 37 44.5 +1.4**
comp=Z,4.8nm,1.0s,mb4.1,baz=102,slow=14,SNR=3.6
ARCES ARCESS Array B 56.42 335 P **P 20 39 29.1 -0.4**
comp=Z,2.3nm,0.9s,mb4.2,baz=72,slow=7.8,SNR=6.5
BRTR Keskin Array B 56.97 299 P **P 20 39 32.9 -1.0**
comp=Z,0.3nm,0.4s,mb3.7,baz=93,slow=8.7,SNR=2.8
FINES FINESS Array B 57.00 326 P **P 20 39 32.3 -1.4**
comp=Z,0.9nm,0.8s,mb3.9,baz=98,slow=12,SNR=5.3
AKASG Malin Array Be 57.20 313 P **P 20 39 34.8 -0.5**
comp=Z,0.6nm,0.4s,mb4.0,baz=64,slow=8.5,SNR=3.8
WRAB Tennant Creek 59.07 148 *e*P **P 20 39 48.7 0.0**
comp=Z,29nm,1.7s,mb5.0
ASAR Alice Springs 62.16 150 P **P 20 40 10.0 +0.3**
comp=Z,0.4nm,0.8s,mb3.6,baz=337,slow=6.1,SNR=3.5
NB2 NORSAR Subarra 64.05 327 P **P 20 40 20.7 -1.1**
comp=Z,0.4nm,0.6s,mb3.6,baz=73,slow=6.5
NOA NORSAR Array B 64.05 327 P **P 20 40 21.1 -0.8**
comp=Z,0.7nm,0.6s,mb3.9,baz=71,slow=6.9,SNR=4.7
LPG La Plagne 73.06 313 *e*P **P 20 41 19.3 +0.9**
comp=Z,6.0nm,0.7s,mb4.4
LPG La Plagne 73.06 313 *e*P **P 20 41 19.3 +0.9**
comp=Z,3.0nm,0.7s,mb4.3
LPL La Plagne 73.06 313 *e*P **P 20 41 19.1 +0.7**
TORD Torodi Ar. Bea 94.20 288 P **P 20 43 06.2 -1.8**
comp=Z,2.0nm,0.8s,mb4.6,baz=251,slow=6.6,SNR=9.9

ISCJB ***30*** *20:40:49.9±0.5, 41°.60N±0°.04×20°.08E±0°.05, h10km, Error ellipse: s-maj=7.4km s-min=2.6km az=41.0*
CSEM ***30*** *20:40:50.3±0.3, 41°.59N×20°.08E, h2km, ML2.7, Error ellipse: s-maj=8.9km s-min=3.2km az=39.0*
SKO ***30*** *20:40:51.3, 41°.63N×20°.11E, h3km, ML1.9*
PDG ***30*** *20:40:52.5±0.2, 41°.68N×19°.97E, h11km, ML2.0/9, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
ISC 30 20:40:50.4±0.6, 41°.57N±0°.04×20°.05E±0°.05, h6km±7km, n28, σ1.9 01/55, 10C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.48**	**346**	*e*Pg	**Pg**	**20 41 04.8**	**+5.1**
ULC	**Ulcinj**	**0.71**	**303**	↑*i*Pg	**Pg**	**20 41 03.9**	**-0.2**
ULC				*e*Sg	**Sg**	**20 41 13.6**	**+0.2**
ULC	**Ulcinj**	**0.71**	**303**	↑*i*Pg	**Pg**	**20 41 03.9**	**-0.2**
ULC				*e*Sg	**Sg**	**20 41 13.6**	**+0.2**
OHR	**Ohrid**	**0.73**	**129**	*e*Pg	**Pg**	**20 41 04.1**	**-0.2**
OHR				*e*Sg	**Sg**	**20 41 14.9**	**+1.1**
OHR				*e*Lg		20 41 16.9	
	comp=E,30nm,0.5s						
OHR	**Ohrid**	**0.73**	**129**	*e*Pg	**Pg**	**20 41 04.1**	**-0.3**
OHR				*e*Sg	**Sg**	**20 41 14.9**	**+1.1**
OHR				*e*Lg		20 41 16.9	
	comp=E,30nm,0.5s						
BCI	**Bajram Curri**	**0.79**	**1**	*e*Pg	**Pg**	**20 40 59.0**	**-6.6**
BCI				*i* Sg	**Sg**	**20 41 07.8**	**-8.1**
KRUS	**Krusevo**	**0.92**	**102**	*i* Pg	**Pg**	**20 41 07.2**	**-0.9**
KRUS				*i* Sg	**Sg**	**20 41 19.6**	**-0.5**
KRUS	**Krusevo**	**0.92**	**102**	*i* Pg	**Pg**	**20 41 07.1**	**-1.0**
KRUS				*i* Sg	**Sg**	**20 41 19.6**	**-0.5**
PVY	**Plav**	**1.02**	**357**	↑*i*Pg	**Pg**	**20 41 09.8**	**-0.2**
PVY				*e*Sg	**Sg**	**20 41 23.9**	**+0.6**
PVY	**Plav**	**1.02**	**357**	↑*i*Pg	**Pg**	**20 41 09.8**	**-0.2**
PVY				*e*Sg	**Sg**	**20 41 23.9**	**+0.6**
PDG	**Podgorica**	**1.04**	**326**	↑*i*Pg	**Pg**	**20 41 09.3**	**-1.0**
PDG				*e*Sg	**Sg**	**20 41 24.3**	**+0.5**
TTG	**Podgorica**	**1.04**	**326**	↑*i*Pg	**Pg**	**20 41 09.3**	**-1.0**
TTG				*e*Sg	**Sg**	**20 41 24.3**	**+0.5**
BIA	**Bitola**	**1.11**	**120**	*i* Pg	**Pg**	**20 41 12.2**	**+0.6**
BIA				*i* Sg	**Sg**	**20 41 26.4**	**+0.4**
BIA	**Bitola**	**1.11**	**120**	*i* Pg	**Pg**	**20 41 12.1**	**+0.5**
BIA				*i* Sg	**Sg**	**20 41 26.4**	**+0.4**
BUM	**Brajici-Budva**	**1.12**	**311**	↓*i*Pg	**Pg**	**20 41 11.4**	**-0.6**
BUM				*e*Sg	**Sg**	**20 41 28.1**	**+1.5**
BUM	**Brajici-Budva**	**1.12**	**311**	↓*i*Pg	**Pg**	**20 41 11.4**	**-0.6**
BUM				*e*Sg	**Sg**	**20 41 28.1**	**+1.5**
BEY	**Berane**	**1.30**	**355**	↓*i*Pg	**Pn**	**20 41 14.4**	**-0.7**
BEY				*e*Sg	**Sg**	**20 41 33.2**	**+0.9**
IVA	**Berane**	**1.30**	**355**	↓*i*Pg	**Pn**	**20 41 14.4**	**-0.7**
IVA				*e*Sg	**Sg**	**20 41 33.2**	**+0.9**
HCY	**Herceg Novi**	**1.45**	**308**	↓*i*Pg	**Pn**	**20 41 17.1**	**0.0**
HCY				*e*Sg	**Sg**	**20 41 38.8**	**+1.8**
HCY	**Herceg Novi**	**1.45**	**308**	↓*i*Pg	**Pn**	**20 41 17.1**	**0.0**
HCY				*e*Sg	**Sg**	**20 41 38.8**	**+1.8**
NKY	**Niksic**	**1.47**	**328**	↓*i*Pg	**Pn**	**20 41 17.0**	**-0.3**
NKY				*e*Sg	**Sg**	**20 41 38.7**	**+1.2**
NKY	**Niksic**	**1.47**	**328**	↓*i*Pg	**Pn**	**20 41 17.0**	**-0.3**
NKY				*e*Sg	**Sg**	**20 41 38.7**	**+1.2**
BRY	**Bratogost**	**1.73**	**320**	↑*i*Pn	**Pn**	**20 41 22.0**	**+1.0**
BRY				*e*Sn	**Sg**	**20 41 45.7**	**-0.4**
BRY	**Bratogost**	**1.73**	**320**	↑*i*Pn	**Pn**	**20 41 22.0**	**+1.0**
BRY				*e*Sn	**Sg**	**20 41 45.7**	**-0.4**
PLE	**Pljevlja**	**1.82**	**345**	↑*i*Pn	**Pn**	**20 41 22.7**	**+0.5**
PLE				*e*Sn	**Sg**	**20 41 47.1**	**-1.8**
PLE	**Pljevlja**	**1.82**	**345**	↑*i*Pn	**Pn**	**20 41 22.7**	**+0.5**
PLE				*e*Sn	**Sg**	**20 41 47.1**	**-1.8**
STON	**Ston**	**2.17**	**307**	*e*Pn	**Pg**	**20 41 29.4**	**-2.7**
STON				Sn	**Sg**	**20 41 58.0**	**-2.3**
STON	**Ston**	**2.17**	**307**	*e*Pn	**Pg**	**20 41 29.3**	**-2.8**
STON				Sn	**Sg**	**20 41 57.9**	**-2.3**

NIED ***30*** *20:56:00, 25°.20N×128°.20E, h5km, Mw4.3 Best double couple: M0=2.81000×10^15 NP1:φ=239.00000°, δ=69.00000°, λ=-84.00000°. NP2:φ=42.00000°, δ=22.00000°, λ=-106.00000°.*
ISCJB ***30*** *20:56:10.9±1.1, 25°.14N±0°.03×128°.15E±0°.03, h10km±7km, mb4.4/50, MS3.7/12, Error ellipse: s-maj=5.7km s-min=4.4km az=44.9*
IDC ***30*** *20:56:10.9±0.7, 25°.25N×128°.29E, h0km, mb4.1/16, mb1 4.3/17, mb1mx4.2/23, mbtmp4.1/17, ML3.4/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/26, Error ellipse: s-maj=25.4km s-min=15.0km az=73.0*
JMA ***30*** *20:56:13.0±0.2, 25°.18N×128°.23E, h61km, M3.9*
MOS ***30*** *20:56:14.8±1.4, 25°.24N×128°.14E, h33km, mb4.5/31, Error ellipse: s-maj=14.7km s-min=7.0km az=117.9*
BJI ***30*** *20:56:15.3, 25°.11N×128°.09E, h39km, mB4.8/18, mb4.4/27, Ms4.3/22, Ms7 4.0/22*
NEIC ***30*** *20:56:16.1±0.6, 25°.11N×128°.00E, h35km, mb4.5/21, MS4.2/1, MW4.2(NIED), Error ellipse: s-maj=12.5km s-min=8.6km az=140.0*
DJA ***30*** *20:56:39, 24°.85N×128°.00E, h249km, mb4.3/11*
ISC 30 20:56:12.7±0.9, 25°.20N±0°.03×128°.09E±0°.03, h9km±5km, h34km±1.2km: pP-P, n147, σ1.9 03/165, mb4.4/50, MS3.7/12, 7C-5D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.99**	**342**	P	**Pg**	**20 56 32.1**	**+0.4**
JJT2				*e*S	**Sg**	**20 56 46.1**	**+1.6**
NAH1	**Naha**	**1.07**	**340**	P	**Pg**	**20 56 33.0**	**-0.2**
NAH1				*e*S	**Sg**	**20 56 47.0**	**0.0**
JAGN	**Aguni-jima**	**1.58**	**331**	P	**Pn**	**20 56 40.7**	**-0.2**
JAGN				S	**Sn**	**20 57 00.4**	**-1.1**
JKE	**Kume jima 2**	**1.63**	**314**	P	**Pn**	**20 56 41.2**	**-0.3**
JKE				*e*S	**Sn**	**20 57 02.7**	**+0.1**
JOW	**Kunigami**	**1.64**	**6**	P	**Pn**	**20 56 40.1**	**-1.6**
JOW				*e*S	**Sn**	**20 56 59.3**	**-3.6**
JOW	**Kunigami**	**1.64**	**6**	Pn	**Pn**	**20 56 40.1**	**-1.5**
	29nm,0.3s,baz=183,slow=12,SNR=86						
JOW				Sn	**Sn**	**20 56 57.8**	**-5.0**
	54nm,0.3s,baz=114,slow=27,SNR=18						
JIH	**Iheya**	**1.83**	**357**	P	**Pn**	**20 56 43.6**	**-0.8**
JIH				*e*S	**Sn**	**20 57 04.8**	**-2.9**
JOGS	**Gusukube**	**2.48**	**260**	P	**Pn**	**20 56 53.7**	**+0.5**
JOGS				*e*S	**Sn**	**20 57 22.5**	**-1.0**
JMJ	**Miyako jima 2**	**2.57**	**262**	P	**Pn**	**20 56 54.8**	**+0.4**
JMJ				*e*S	**Sn**	**20 57 25.2**	**-0.6**
JTK	**Tokunoshima**	**2.69**	**16**	P	**Pn**	**20 56 54.8**	**-1.4**
JTK				*e*S	**Sn**	**20 57 22.7**	**-6.2**
JMZ	**Minamidaito 2**	**2.90**	**77**	P	**Pn**	**20 56 54.9**	**-4.1**
JMZ				*e*S	**Sn**	**20 57 25.8**	**-8.1**
JTJ	**Tarama**	**3.13**	**261**	P	**Pn**	**20 57 01.9**	**-0.2**
JTJ				*e*S	**Sn**	**20 57 39.5**	**-0.1**
JAM	**Amami Oshima**	**3.48**	**23**	P	**Pn**	**20 57 06.2**	**-0.8**
JAM				*e*S	**Sn**	**20 57 42.2**	**-6.1**
JZK	**Kikaishima**	**3.53**	**28**	P	**Pn**	**20 57 06.7**	**-1.0**
JIJ	**Ishigaki jima**	**3.68**	**258**	P	**Pn**	**20 57 09.4**	**-0.4**
JIJ				*e*S	**Sn**	**20 57 50.3**	**-3.1**
JKRS	**Kuro-shima**	**3.83**	**256**	P	**Pn**	**20 57 11.7**	**-0.2**
JKRS				*e*S	**Sn**	**20 57 56.6**	**-0.5**
IRIF	**Iriomote-Funau**	**4.06**	**259**	P	**Pn**	**20 57 15.0**	**+0.1**
HATJ	**Hateruma jima**	**4.06**	**255**	P	**Pn**	**20 57 15.5**	**+0.5**
JNN	**Nakanoshima**	**4.89**	**18**	P	**Pn**	**20 57 25.7**	**-0.7**
TATO	**Taipei**	**5.99**	**269**	*e*Pn	**Pn**	**20 57 36.4**	**-5.1**
NACB	**Ninganchiao**	**6.00**	**262**	*e*Pn	**Pn**	**20 57 39.6**	**-2.0**
YHNB	**Yeheng**	**6.12**	**267**	*e*Pn	**Pn**	**20 57 44.1**	**+0.9**
	71nm,1.0s						
YULB	**Yu-li**	**6.45**	**255**	*e*Pn	**Pn**	**20 57 44.9**	**-2.9**
SSLB	**Suanglung**	**6.65**	**259**	*e*Pn	**Pn**	**20 57 48.5**	**-2.1**
TWG	**Pinlang**	**6.84**	**251**	*e*Pn	**Pn**	**20 57 50.0**	**-3.2**
TPUB	**Ta-pu**	**7.07**	**256**	*e*Pn	**Pn**	**20 57 54.3**	**-2.0**
NJ2	**Nanjing**	**10.60**	**312**	*e*P	**Pn**	**20 58 50.0**	**+5.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**12.22**	**359**	Pn	**Pn**	**20 59 05.7**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=181,slow=16,SNR=6.2						
KSRS				LR	LR	21 04 02.6	
	comp=Z,59nm,20.4s,baz=169,slow=39						
MJAR	**Matsushiro Arr**	**14.25**	**35**	Pn	**Pn**	**20 59 43.9**	**+9.2**
	comp=Z,0.1nm,0.3s,baz=218,slow=12,SNR=5.9						
BJI	**Beijing**	**17.86**	**329**	P	**Pn**	**21 00 22.0**	**+0.7**
BJI				sP	sP	21 00 34.5	+8.8
BJI				S	**Sn**	**21 03 43.5**	**+3.0**
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI				LR	LR		
	comp=N,190nm,20.5s						
BJI				LR	LR		
	comp=E,200nm,20.5s						
BJI				LR	LR		
	comp=Z,88nm,23.9s						
CN2	**Changchun**	**18.69**	**354**	*e*P	**Pn**	**21 00 32.0**	**+0.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA	**Guiyang**	**19.33**	**278**	↑*i*P	**Pn**	**21 00 40.0**	**+0.6**
GYA				pP	pP	21 00 48.3	+7.5
GYA				sP	sP	21 00 53.8	+12
GYA				PP		21 00 58.0	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,80nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,15.0s						
GYA				LR	LR		
	comp=E,340nm,14.8s						
GYA				LR	LR		
	comp=Z,480nm,15.2s						
GUMO	**Guam**	**19.57**	**123**	LR	LR	21 06 12.3	
	comp=Z,55nm,20.8s,baz=292,slow=31						
HHC	**Hu-ho-hao-te**	**20.82**	**323**	*e*P	**P**	**21 00 57.8**	**+3.4**
HHC				pP		21 01 06.8	
HHC				sP	sP	21 01 11.0	+13
HHC				PP		21 01 20.8	
HHC				S	**S**	**21 04 44.5**	**-2.2**
HHC				sS	sS	21 04 59.5	+8.7
HHC				PcP	PcP	21 05 04.3	+1.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=N,150nm,7.5s						
HHC				LR	LR		
	comp=E,170nm,6.5s						
HHC				LR	LR		
	comp=Z,170nm,8.5s						
CD2	**Chengdu**	**22.20**	**290**	P	**P**	**21 01 09.0**	**-0.3**
CD2				pP		21 01 18.0	
CD2				sP	sP	21 01 22.3	+9.3
CD2				PP		21 01 35.5	
CD2				S	**S**	**21 05 05.5**	**-8.5**
CD2				SS		21 05 45.0	
CD2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
CD2				pmax	pmax		
	comp=Z,80nm,4.1s						
CD2				LR	LR		
	comp=N,410nm,9.5s						
CD2				LR	LR		
	comp=Z,410nm,8.9s						
KMI	**Kunming**	**22.94**	**275**	P	**P**	**21 01 18.3**	**+1.0**
KMI				pP		21 01 27.8	
KMI				sP	sP	21 01 32.0	+11
KMI				PP		21 01 47.0	
KMI				S	**S**	**21 05 18.3**	**-9.4**
KMI				sS	sS	21 05 34.5	+2.4
KMI				SS		21 06 00.8	
KMI				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.5						
KMI				LR	LR		
	comp=N,140nm,10.3s,MS3.9						
KMI				LR	LR		
	comp=E,160nm,10.3s,MS3.9						
KMI				LR	LR		
	comp=Z,170nm,10.3s,MS3.8						
LZH	**Lanzhou**	**23.46**	**303**	*e*P	**P**	**21 01 26.8**	**+4.2**
LZH				pP		21 01 36.3	
LZH				sP	sP	21 01 40.5	+14
LZH				pmax	pmax		
	comp=Z,42nm,1.4s,mb4.7						
LZH				pmax	pmax		
	comp=Z,210nm,5.4s						
HABR	**Khabarovsk**	**23.87**	**11**	*e*P	**P**	**21 01 25.6**	**-0.8**
HABR				*e**SP	sP	21 01 40.0	+10
HABR				PPP		21 02 02.2	
HABR				*e*SS		21 06 22.8	
HABR				*e*SSS		21 06 37.7	
HABR				*e*		21 12 30.6	
HABR				pmax	pmax		
	comp=Z,47nm,2.2s,mb4.5						
HABR				pmax	pmax		
	comp=E,37nm,1.9s						
HABR				pmax	pmax		
	comp=N,39nm,2.1s						
YSS	**Yuzh-Sakhalins**	**24.66**	**25**	*e*P	**P**	**21 01 33.0**	**-0.6**
YSS				*e*		21 01 44.0	
YSS	**Yuzh-Sakhalins**	**24.66**	**25**	*e*P	**P**	**21 01 33.0**	**-0.5**
	comp=N,110nm,1.1s,mb5.3						
GTA	**Gaotai**	**27.65**	**308**	*e*P	**P**	**21 02 01.3**	**+0.6**
GTA				pP	pP	21 02 10.5	+7.1
GTA				sP	sP	21 02 14.8	+10
GTA				PP		21 02 52.5	
GTA				S	**S**	**21 06 42.8**	**+0.1**
GTA				sS	sS	21 06 58.0	+11
GTA				SS		21 08 04.5	
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
GTA				pmax	pmax		
	comp=Z,42nm,5.4s						
GTA				LR	LR		
	comp=N,140nm,9.8s						
GTA				LR	LR		
	comp=E,160nm,9.5s						
GTA				LR	LR		
	comp=Z,130nm,10.7s,MS3.8						
CHTO	**Chiang Mai**	**27.72**	**263**	*e*P	**P**	**21 02 01.1**	**-0.5**
CHTO				*e*		21 02 13.4	
CHTO				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.3						
CHTO	**Chiang Mai**	**27.72**	**263**	*e*P	**P**	**21 02 01.1**	**-0.5**
	comp=Z,11nm,1.5s,mb4.3						
CHTO				*e*		21 02 13.4	
CMAR	**Chiang Mai Arr**	**27.84**	**262**	P	**P**	**21 02 04.5**	**+1.8**
	comp=Z,0.7nm,0.5s,mb3.6,baz=62,slow=7.9,SNR=7.6						
CMAR	**Chiang Mai Arr**	**27.84**	**262**	P	**P**	**21 02 04.5**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ULN	**Ulaanbaatar**	**28.07**	**329**	P	**P**	**21 02 03.2**	**-1.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.2						
ULN	**Ulaanbaatar**	**28.07**	**329**	P	**P**	**21 02 03.2**	**-1.2**
	comp=Z,7.6nm,1.4s,mb4.1						
SONM	**Songino Array**	**28.36**	**328**	P	**P**	**21 02 07.6**	**+0.6**
	comp=Z,1.3nm,0.6s,mb3.7,baz=128,slow=51,SNR=2.7						
SONM	**Songino Array**	**28.36**	**328**	P	**P**	**21 02 07.6**	**+0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSA	**Lhasa**	**33.00**	**286**	*e*P	**P**	**21 02 49.3**	**+1.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LSA	**Lhasa**	**33.00**	**286**	*e*P	**P**	**21 02 49.3**	**+1.2**
	comp=Z,4.7nm,0.7s,mb4.5						
PETK	**Petropavlovsk-**	**35.64**	**31**	LR	LR	21 16 53.9	
	comp=Z,25nm,21.5s,MS2.9,baz=67,slow=35						
YAK	**Yakutsk**	**36.84**	**1**	*e*P	**P**	**21 03 19.9**	**-1.0**
YAK				*e*		21 03 29.6	
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK	**Yakutsk**	**36.84**	**1**	*e*P	**P**	**21 03 19.9**	**-1.0**
	comp=N,36nm,1.0s,mb5.2						
YAK				*e*		21 03 30.1	
WMQ	**Urumqi**	**37.67**	**310**	*e*P	**P**	**21 03 29.3**	**+1.1**
WMQ				LR	LR		
	comp=N,40nm,24.0s,MS3.3						
WMQ				LR	LR		
	comp=E,47nm,27.0s,MS3.3						
WMQ				LR	LR		
	comp=Z,44nm,18.0s						
MK31	**Makanchi Array**	**42.13**	**313**	*e*P	**P**	**21 04 05.3**	**0.0**
MKAR	**Makanchi Array**	**42.13**	**313**	P	**P**	**21 04 05.0**	**-0.3**
	comp=Z,1.7nm,0.6s,mb3.9,baz=94,slow=11,SNR=15						
MKAR				LR	LR	21 23 22.0	
	comp=Z,32nm,19.5s,MS3.2,baz=274,slow=39						
MKAR	**Makanchi Array**	**42.13**	**313**	P	**P**	**21 04 05.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,32nm,19.5s						
MKAR	**Makanchi Array**	**42.13**	**313**	P	**P**	**21 04 05.0**	**-0.3**
MKAR				LR	LR	21 23 22.0	
ZAA0	**Zalesovo Array**	**43.00**	**324**	*e*P	**P**	**21 04 11.1**	**-1.1**
ZALV	**Zalesovo Beam**	**43.00**	**324**	P	**P**	**21 04 11.2**	**-1.0**
	comp=Z,1.5nm,0.5s,mb3.9,baz=112,slow=7.6,SNR=7.7						
ZALV				LR	LR	21 23 26.3	
	comp=Z,41nm,20.6s,MS3.3,baz=79,slow=38						
ZALV	**Zalesovo Beam**	**43.00**	**324**	P	**P**	**21 04 11.2**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,41nm,20.6s,MS3.3						
WRAB	**Tennant Creek**	**45.27**	**172**	*e*P	**P**	**21 04 28.8**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**45.27**	**172**	*e*P	**P**	**21 04 28.8**	**-1.9**
	comp=Z,14nm,1.1s,mb4.7						
KURK	**Kurchatov**	**45.49**	**317**	*e*P	**P**	**21 04 31.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
KURK	**Kurchatov**	**45.49**	**317**	*e*P	**P**	**21 04 31.5**	**-0.7**
	comp=Z,6.9nm,1.2s,mb4.4						
TKM2	**Tokmak 2**	**46.18**	**306**	*e*P	**P**	**21 04 38.4**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**46.18**	**306**	*e*P	**P**	**21 04 38.4**	**+0.7**
	comp=Z,3.7nm,0.8s,mb4.4						
TIXI	**Tiksi**	**46.49**	**0**	*e*P	**P**	**21 04 40.2**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.0s,mb4.4						
TIXI	**Tiksi**	**46.49**	**0**	*e*P	**P**	**21 04 39.0**	**-0.7**
	comp=Z,2.9nm,1.0s,mb4.2						
UCH	**Uchtor**	**46.92**	**305**	*e*P	**P**	**21 04 45.1**	**+1.5**
	comp=Z,4.8nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**48.90**	**173**	P	**P**	**21 04 58.8**	**-0.2**
	comp=Z,2.2nm,0.6s,mb4.3,baz=2.5,slow=15,SNR=40						
ASAR				PcP	PcP	21 06 23.0	-0.4
	comp=Z,1.4nm,0.8s,baz=350,slow=3.5,SNR=5.3						
ASAR	**Alice Springs**	**48.90**	**173**	P	**P**	**21 04 58.8**	**-0.2**
ASAR						21 06 23.0	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**50.96**	**319**	P	**P**	**21 05 15.5**	**+1.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=92,slow=9.2,SNR=9.4						
BVAR				LR	LR	21 28 01.1	
	comp=Z,66nm,21.8s,MS3.6,baz=174,slow=37						
BVAR	**Borovoye Array**	**50.96**	**319**	P	**P**	**21 05 15.5**	**+1.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,67nm,21.8s						
BRVK	**Borovoye**	**51.03**	**319**	*de*P	**P**	**21 05 16.0**	**+1.0**
KBL	**Kabul**	**51.42**	**295**	*e*P	**P**	**21 05 19.4**	**+1.2**
KBL				*e*		21 05 30.2	
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KBL	**Kabul**	**51.42**	**295**	*e*P	**P**	**21 05 19.4**	**+1.2**
	comp=Z,9.6nm,0.9s,mb4.7						
KBL				*e*		21 05 30.2	
ABKAR	**Akbulak array**	**57.26**	**314**	*e*P	**P**	**21 06 01.1**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.2						
ABKAR				*e*		21 06 11.3	
ARU	**Arti**	**58.13**	**322**	*d i*P	**P**	**21 06 06.8**	**+0.4**
ARU				S	**S**	**21 14 07.1**	**-0.5**
ARU				SS	SS	21 17 57.1	-1.6
ARU				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.2						
STKA	**Stephens Creek**	**58.20**	**166**	P	**P**	**21 06 06.5**	**-0.7**
	comp=Z,3.9nm,0.7s,mb4.5,baz=346,slow=8.0,SNR=13						
STKA				LR	LR	21 30 27.8	
	comp=Z,89nm,18.0s,MS3.9,baz=24,slow=35						
STKA	**Stephens Creek**	**58.20**	**166**	P	**P**	**21 06 06.5**	**-0.7**
STKA				LR	LR	21 30 27.8	
SOKR	**Solikamsk**	**59.19**	**326**	*d i*P	**P**	**21 06 19.5**	**+5.8**
SOKR				pm

comp=Z,2.0nm,0.8s,mb4.1,baz=22,slow=6.8,SNR=3.8
ARCES ARCESS Array B 70.92 339 P **P 21 07 28.7 -1.2**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
KAF Kangasniemi 73.34 331 *eP* **P 21 07 44.0 -0.5**
KAF Kangasniemi 73.34 331 *ep* **P 21 07 44.0 -0.5**
FINES FINESS Array B 73.70 331 P **P 21 07 47.0 +0.4**
comp=Z,1.2nm,0.5s,mb4.1,baz=66,slow=6.1,SNR=20
FINES FINESS Array B 73.70 331 P **P 21 07 47.0 +0.4**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 73.70 331 P **P 21 07 47.0 +0.4**
IDID Didziasalis 75.79 325 *eP* **P 21 08 00.0 +1.2**
IZAR Zarasai 75.87 325 *eP* **P 21 08 00.0 +0.7**
ISAL Salakas 76.01 325 *eP* **P 21 08 00.8 +0.8**
IIGN Ignalina 76.05 325 *eP* **P 21 08 00.8 +0.5**
AKASG Malin Array Be 76.23 320 P **P 21 08 01.4 0.0**
comp=Z,3.1nm,0.7s,mb4.4,baz=58,slow=6.0,SNR=13
AKASG Malin Array Be 76.23 320 P **P 21 08 01.5 0.0**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 76.25 320 *eP* **P 21 08 00.9 -0.6**
KIEV *e* 21 08 11.6
KIEV pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KIEV Kiev 76.25 320 *eP* **P 21 08 00.9 -0.6**
comp=Z,4.3nm,1.0s,mb4.3
KIEV *e* 21 08 11.6
BR131 Keskin Array S 77.57 308 *eP* **P 21 08 09.9 +0.7**
comp=Z,2.5nm,0.6s,mb4.3
BRTR Keskin Array B 77.57 308 P **P 21 08 10.2 +0.9**
comp=Z,2.3nm,0.9s,mb4.1,baz=98,slow=5.1,SNR=12
BRTR Keskin Array B 77.57 308 P **P 21 08 10.2 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 79.51 25 P **P 21 08 19.5 0.0**
comp=Z,2.4nm,1.0s,mb4.1,baz=299,slow=5.4,SNR=8.0
YKA Yellowknife Ar 79.51 25 P **P 21 08 19.5 0.0**
YKA pmax pmax
comp=Z,2.0nm,1.0s
BUR08 Bucovina Ar. S 79.91 318 *eP* **P 21 08 22.1 +0.1**
BUR08 *e* 21 08 32.5
BURAR Bucovina Array 79.91 318 ⇑*iP* **P 21 08 22.6 +0.7**
NB2 NORSAR Subarra 80.18 334 P **P 21 08 22.6 -0.5**
comp=Z,7.6nm,1.2s,mb4.5,baz=54,slow=5.3
NOA NORSAR Array B 80.18 334 P **P 21 08 22.4 -0.7**
comp=Z,2.6nm,0.9s,mb4.2,baz=52,slow=5.4,SNR=12
NOA LR LR 21 47 13.3
comp=Z,30nm,20.9s,MS3.6,baz=305,slow=38
NOA NORSAR Array B 80.18 334 P **P 21 08 22.4 -0.7**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA MLR MLR
comp=Z,30nm,20.9s
NOA NORSAR Array B 80.18 334 P **P 21 08 22.4 -0.7**
NOA LR LR 21 47 13.2
MLR Muntele Rosu 80.40 316 ⇑*iP* **P 21 08 25.2 +0.6**
KWP Kalwaria Pacla 80.48 321 *eP* **P 21 08 25.8 +0.8**
KWP *e* 21 08 35.2
KWP pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KWP Kalwaria Pacla 80.48 321 *eP* **P 21 08 25.8 +0.8**
comp=Z,4.2nm,0.7s,mb4.5
KWP *e* 21 08 35.2
KOLS Kolonicke sedl 81.06 320 *eP* **P 21 08 35.2 +7.1**
KOLS *e* 21 08 50.7
KOLS Kolonicke sedl 81.06 320 *e*PCP PcP
KOLS *e* 21 08 50.7 +0.7
STHS Stebnicka Huta 81.42 321 *eP* **P 21 08 29.8 -0.2**
STHS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
STHS Stebnicka Huta 81.42 321 *eP* **P 21 08 29.8 -0.2**
comp=Z,1.2nm,0.8s,mb3.9
STHS Stebnicka Huta 81.42 321 *eP* **P 21 08 29.8 -0.2**
DRGR 81.81 318 ⇓*iP* **P 21 08 33.3 +1.2**
SUMG Summit 82.05 356 *eP* **P 21 08 33.7 +0.8**
comp=Z,10nm,1.0s,mb4.7
SUMG *e* 21 08 44.0
KECS Kecovo 82.31 320 *eP* **P 21 08 36.6 +1.9**
KECS *e* 21 08 49.0
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KECS Kecovo 82.31 320 *eP* **P 21 08 36.6 +1.9**
comp=Z,1.1nm,0.7s,mb3.9
KECS *e* 21 08 49.0
KECS Kecovo 82.31 320 *eP* **P 21 08 36.6 +1.9**
KECS *ep*P pP 21 08 49.0 +11
VYHS Vyhne 83.26 321 *eP* **P 21 08 41.0 +1.4**
VYHS *e* 21 08 50.8
VYHS pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
VYHS Vyhne 83.26 321 *eP* **P 21 08 41.0 +1.4**
comp=Z,2.1nm,1.2s,mb4.0
VYHS *e* 21 08 50.8
VYHS *e* 21 09 04.3
VYHS Vyhne 83.26 321 *eP* **P 21 08 41.0 +1.4**
VYHS *ep*P pP 21 08 50.8 +8.2
VYHS *e* 21 09 04.3
DPC Dobruska-Polom 83.69 323 *eP* **P 21 08 44.0 +2.2**
DPC *ep*P pP 21 08 52.9 +8.1
BRG Berggiesshubel 84.68 325 *eP* **P 21 08 46.0 -0.8**
comp=Z,1.2nm,0.5s,mb4.2
CLL Collm 84.93 325 *i*P **P 21 08 48.6 +0.5**
CLL *i* 21 08 58.6
CLL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CLL MLR MLR
comp=Z,100nm,20.0s,MS4.2
CLL Collm 84.93 325 *i*P **P 21 08 48.6 +0.5**
comp=Z,4.0nm,0.9s,mb4.5
CLL *i* 21 08 58.6
CLL LR LR
comp=Z,100nm,20.0s,MS4.2
CLL Collm 84.93 325 *i*P **P 21 08 48.6 +0.5**
comp=Z,4.0nm,0.9s,mb4.5
CLL *i*pP pP 21 08 58.6 +7.6
comp=Z,6.0nm,0.9s
CLL Lm 21 50 00.0
comp=Z,100nm,20.0s
KHC Kasperske Hory 85.85 323 *eP* **P 21 08 54.0 +1.3**
KHC *ep*P pP 21 09 04.0 +8.3
GEC2 GERESS Array S 85.95 323 *eP* **P 21 08 53.8 +0.6**
comp=Z,553nm,0.8s
GEC2 *e* 21 09 03.8
GERES GERESS Array B 85.95 323 P **P 21 08 54.1 +0.9**
comp=Z,1.3nm,0.9s,mb4.2,baz=44,slow=4.4,SNR=7.1
GERES LR LR 21 50 04.3
comp=Z,57nm,21.4s,MS3.9,baz=101,slow=38
GERES GERESS Array B 85.95 323 P **P 21 08 54.1 +0.9**
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES MLR MLR
comp=Z,57nm,21.4s
FFC Flin Flon 89.57 26 *ce*P **P 21 09 11.4 +0.9**
NVAR Mina Array Bea 91.31 46 P **P 21 09 17.4 -1.5**
comp=Z,0.8nm,0.9s,mb4.0,baz=272,slow=4.6,SNR=5.6
PDAR Pinedale Array 94.05 39 P **P 21 09 31.3 -0.2**
comp=Z,0.2nm,0.3s,mb4.0,baz=284,slow=4.5,SNR=2.6

*IDC **30** 21:02:45.1±6.1, 18°.75S×177°.86W, h512km±70km, mb3.1/6, mb1 3.4/7, mb1mx3.2/16, mbtmp3.2/7, Error ellipse: s-maj=35.6km s-min=24.3km az=173.0*
*ISCJB **30** 21:02:46.7±1.4, 18°.8S±0°.2×178°.0W±0°.2, h540km±16km, mb3.5/7, Error ellipse: s-maj=32.2km s-min=22.2km az=40.1*
*NEIC **30** 21:02:47.2±1.2, 18°.82S×177°.93W, h536km±12km, mb3.8/1, Error ellipse: s-maj=25.4km s-min=17.1km az=130.0*
ISC 30 21:02:47.3±1.5, 18°.8S±0°.2×177°.9W±0°.2, h536km±15km, n16, σ0°62/10, mb3.5/7, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.98**	**285**	*e*Pn	**P**	**21 04 08.1**	**+0.1**
URZ	**Urewera**	**19.83**	**192**	P	**P**	**21 06 41.8**	**-0.6**
	1.7nm,0.3s,baz=318,slow=1.1,SNR=14						
STKA	**Stephens Creek**	**38.59**	**242**	P	**P**	**21 09 25.2**	**+0.7**
	0.4nm,0.3s,mb3.4,baz=74,slow=10,SNR=5.6						
WRAB	**Tennant Creek**	**44.91**	**260**	*e*P	**P**	**21 10 13.8**	**-0.7**
	1.9nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**44.98**	**255**	P	**P**	**21 10 15.3**	**+0.2**
	4.1nm,0.6s,mb4.2,baz=88,slow=8.9,SNR=81						
PETK	**Petropavlovsk-**	**74.69**	**345**	P	**P**	**21 13 30.8**	**-1.1**
	2.9nm,0.7s,mb3.8,baz=116,slow=5.8,SNR=7.3						
NVAR	**Mina Array Bea**	**79.78**	**44**	P	**P**	**21 13 59.8**	**-0.1**
	0.4nm,0.6s,mb3.0,baz=224,slow=7.6,SNR=3.6						
TXAR	**Lajitas Array**	**86.11**	**57**	P	**P**	**21 14 32.6**	**+0.7**
	0.3nm,0.7s,mb3.0,baz=213,slow=7.5,SNR=2.9						
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**21 14 49.2**	**+0.7**
	0.4nm,0.6s,mb3.4,baz=144,slow=3.8,SNR=5.2						
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**21 14 49.2**	**+0.7**
ARCES	**ARCESS Array B**	**127.31**	**350**	PKP	PKPdf	21 20 49.5	-0.9
	0.4nm,0.4s,baz=11,slow=1.2,SNR=8.2						
BRTR	**Keskin Array B**	**145.76**	**314**	PKPbc	PKPbc	21 21 25.8	-0.9
	0.6nm,0.6s,baz=114,slow=3.1,SNR=4.5						
CLL	**Collm**	**146.47**	**348**	⇓*iP*	PKPdf	21 21 27.4	+1.5
CLL	**Collm**	**146.47**	**348**	⇓*i*PKPbc	PKPbc	21 21 27.4	-0.9
	comp=Z,4.0nm,0.9s						
MMAI	**Mount Meron Ar**	**147.03**	**302**	PKPbc	PKPbc	21 21 30.2	-0.2
	comp=Z,0.9nm,0.5s,baz=97,slow=3.4,SNR=4.9						
GERES	**GERESS Array B**	**148.63**	**345**	PKPbc	PKPbc	21 21 33.4	-0.5
	comp=Z,0.6nm,0.7s,baz=33,slow=3.7,SNR=4.7						

*NSSP **30** 21:03:40.9, 40°.30N×46°.57E, h10km, Ms3.0*
*CSEM **30** 21:03:42.9±0.3, 40°.34N×46°.78E, h2km, ML3.0, Error ellipse: s-maj=9.2km s-min=5.8km az=109.0*
*MOS **30** 21:03:42.4±0.8, 40°.26N×46°.82E, h10km, mb4.3/1, Error ellipse: s-maj=57.2km s-min=18.9km az=85.2*
*ISCJB **30** 21:03:43.4±0.8, 40°.33N±0°.03×46°.79E±0°.05, h7km±8km, Error ellipse: s-maj=7.0km s-min=5.2km az=33.4*
*TEH **30** 21:03:45.0, 40°.49N×47°.00E, h18km*
ISC 30 21:03:44.0±0.8, 40°.30N±0°.04×46°.87E±0°.05, h16km±7km, n33, σ1°09/60, 7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKZ		**0.49**	**191**	⇓*iP*	**Pg**	**21 03 53.4**	**-0.4**
STKZ				⇓*iS*	**Sg**	**21 04 01.1**	**+0.7**
STKZ		**0.49**	**191**	⇓P	**Pg**	**21 03 53.4**	**-0.4**
STKZ				S	**Sg**	**21 04 01.1**	**+0.7**
VADZ	**Vardenis**	**0.87**	**262**	*e*P	**Pg**	**21 04 07.5**	**+6.6**
VADZ				*e*S	**Sg**	**21 04 14.5**	**+2.2**
GRS	**Goris**	**0.90**	**208**	⇓*iP*	**Pg**	**21 03 59.0**	**-2.4**
GRS				⇓*iS*	**Sg**	**21 04 13.0**	**-0.1**
GRS	**Goris**	**0.90**	**208**	⇓P	**Pg**	**21 03 59.0**	**-2.4**
GRS				S	**Sg**	**21 04 13.0**	**-0.1**
AKT	**Akhty**	**1.35**	**29**	⇓*i*PG	**Pn**	**21 04 07.5**	**-0.7**
AKT				*i* S	**Sn**	**21 04 24.5**	**-1.3**
AKT				pmax	pmax		
	comp=Z,73nm,0.2s						
AKT	**Akhty**	**1.35**	**29**	*i* Pg	**Pn**	**21 04 07.5**	**-0.7**
	comp=Z,73nm,0.2s						
AKT				*i* Sg	**Sn**	**21 04 24.5**	**-1.3**
DGRG	**David-gareji**	**1.62**	**316**	P	**Pn**	**21 04 12.0**	**+0.1**
DGRG				S	**Sn**	**21 04 33.9**	**+1.5**
KAPZ	**Kaputan**	**1.66**	**272**	*e*P	**Pn**	**21 04 07.8**	**-4.6**
KAPZ				*e*S	**Sn**	**21 04 29.4**	**-4.1**
KAPZ	**Kaputan**	**1.66**	**272**	P	**Pn**	**21 04 07.8**	**-4.7**
KAPZ				S	**Sn**	**21 04 29.4**	**-4.1**
IMRD	**Marand**	**1.82**	**210**	*e*Pn	**Pb**	**21 04 17.9**	**+1.0**
IMRD				*e*	**Pg**	**21 04 20.1**	**+1.1**
	comp=Z,4μm,0.1s						
KMKR	**Kumukh**	**1.84**	**5**	*e*PN	**Pn**	**21 04 15.0**	**+0.1**
KMKR				pmax	pmax		
	comp=Z,32nm,0.3s						
KMKR	**Kumukh**	**1.84**	**5**	*e*Pn	**Pn**	**21 04 15.0**	**+0.1**
	comp=Z,32nm,0.3s						
URKR	**Urkarakh**	**1.95**	**17**	*e*PN	**Pn**	**21 04 18.0**	**+1.5**
URKR	**Urkarakh**	**1.95**	**17**	*e*Pn	**Pn**	**21 04 18.0**	**+1.5**
IHRS	**Heris**	**1.98**	**176**	*e*Pn	**Pg**	**21 04 20.0**	**-2.0**
IHRS				*e*		21 04 25.1	
	comp=Z,2μm,0.1s						
IHRS				*e*Sn	**Sg**	**21 04 46.6**	**-1.1**
AMBZ	**Amberd**	**2.00**	**273**	*e*P	**Pn**	**21 04 17.5**	**+0.4**
AMBZ				*e*S	**Sn**	**21 04 41.0**	**-0.7**
AMBZ	**Amberd**	**2.00**	**273**	P	**Pn**	**21 04 17.5**	**+0.4**
AMBZ				S	**Sn**	**21 04 41.0**	**-0.8**
STEZ	**Stepenevan**	**2.01**	**291**	*e*P	**Pn**	**21 04 17.0**	**-0.2**
STEZ				*e*S	**Sn**	**21 04 42.0**	**0.0**
STE	**Stepanavan**	**2.03**	**291**	P	**Pn**	**21 04 17.0**	**-0.5**
STE				S	**Sn**	**21 04 42.0**	**-0.5**
MTA	**Mtatsminda**	**2.10**	**312**	P	**Pn**	**21 04 18.5**	**-0.1**
MTA				S	**Sn**	**21 04 44.7**	**+0.3**
ARUZ	**Aruch**	**2.13**	**271**	*e*P	**Pn**	**21 04 18.7**	**-0.2**
ARUZ				*e*S	**Sn**	**21 04 43.4**	**-1.5**
ARUZ	**Aruch**	**2.13**	**271**	P	**Pn**	**21 04 18.7**	**-0.2**
ARUZ				S	**Sn**	**21 04 43.4**	**-1.5**
ITBZ	**Tabriz**	**2.14**	**195**	*e*Pn	**Pb**	**21 04 23.2**	**+0.9**
ITBZ				*e*	**Pg**	**21 04 24.6**	**-0.4**
	comp=Z,1μm,0.2s						
TBLG	**Delisi**	**2.16**	**312**	*e*PN	**Pn**	**21 04 19.4**	**+0.1**
TBLG				*e*S	**Sn**	**21 04 46.5**	**+0.8**
TBLG	**Delisi**	**2.16**	**312**	P	**Pn**	**21 04 19.5**	**+0.2**
TBLG				S	**Sn**	**21 04 46.5**	**+0.8**
TBLG	**Delisi**	**2.16**	**312**	*e*Pn	**Pn**	**21 04 19.4**	**+0.1**
TBLG				*e*Sb	**Sn**	**21 04 46.5**	**+0.8**
ISHB	**Shabestar**	**2.23**	**206**	*e*Pn	**Pb**	**21 04 24.7**	**+0.7**
ISHB				*e*		21 04 26.4	
	comp=Z,795nm,0.1s						
UNCR	**Uncukul**	**2.42**	**359**	*e*PN	**Pn**	**21 04 25.0**	**+2.2**
UNCR				*e*S	**Sb**	**21 04 56.0**	**-0.6**
UNCR				pmax	pmax		
	comp=Z,19nm,0.3s						
UNCR	**Uncukul**	**2.42**	**359**	*e*Pn	**Pn**	**21 04 25.0**	**+2.2**
	comp=Z,19nm,0.3s						
UNCR				*e*Sn	**Sb**	**21 04 56.0**	**-0.6**
ISRB	**Sarab**	**2.54**	**166**	*e*Pn	**Pn**	**21 04 27.9**	**+3.3**
ISRB				*e*		21 04 41.4	
	comp=Z,713nm,0.2s						
KEH	**Kehvi**	**2.99**	**313**	P	**Pn**	**21 04 31.5**	**+0.8**
KEH				S	**Sb**	**21 05 09.4**	**-3.7**
ONI	**Oni**	**3.44**	**313**	P	**Pb**	**21 04 44.4**	**-0.2**
ONI				S	**Sb**	**21 05 24.2**	**-1.9**

IDC 30 21:24:43.4±1.6, 6°.97N×34°.38W, h0km, mb4.1/4, mb1 4.1/4, mb1mx3.5/24, mbtmp4.1/4, Error ellipse: s-maj=90.5km s-min=24.5km az=154.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**29.31**	**89**	P	P	21 30 48.5	+0.4
	1.7nm,0.6s,baz=255,slow=12,SNR=3.8						
TORD	**Torodi Ar. Bea**	**36.02**	**77**	P	P	21 31 46.3	-0.4
	5.3nm,0.8s,baz=270,slow=8.8,SNR=29						
LPAZ	**La Paz**	**40.62**	**235**	P	P	21 32 26.0	+0.6
	1.2nm,0.7s,baz=36,slow=8.7,SNR=3.3						
KEST	**Kesra**	**49.17**	**48**	P	P	21 33 33.6	+0.2
	1.0nm,0.7s,baz=217,slow=15,SNR=4.1						

*HLW **30** 21:57:23.9, 37°.23N×29°.32E, h33km±35km, Ml3.6*
*NEIC **30** 21:57:24.0, 36°.97N×29°.23E, h13km, MD3.6(ISK), After ISK.*
*ISK **30** 21:57:24.8, 36°.97N×29°.24E, h12km, MD3.7*
*IDC **30** 21:57:24.8±1.1, 36°.98N×29°.25E, h0km, mb3.5/3, mb1 3.6/9, mb1mx3.5/27, mbtmp3.6/9, ML3.6/6, Error ellipse: s-maj=20.2km s-min=18.1km az=136.0*
*DDA **30** 21:57:25.1, 36°.98N×29°.22E, h20km±1km, Md3.6*
*CSEM **30** 21:57:25.6±0.1, 36°.97N×29°.25E, h5km, MD3.7, Error ellipse: s-maj=2.5km s-min=2.3km az=174.0*
*ISCJB **30** 21:57:25.4±0.4, 36°.93N±0°.02×29°.29E±0°.02, h12km±3km, mb3.4/3, Error ellipse: s-maj=3.0km s-min=2.6km az=144.5*
*THE **30** 21:57:28.6, 36°.89N×29°.24E, h17km±6km, ML4.0/2, Error ellipse: s-maj=6.2km s-min=1.7km az=127.0*
ISC 30 21:57:25.7±0.4, 36°.95N±0°.02×29°.26E±0°.02, h5km±3km, n170, σ0°94/206, mb3.4/3, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**44**	PG	**Pg**	**21 57 30.9**	**-0.3**
GLHS				*e*SG	**Sg**	**21 57 35.8**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.28**	**44**	*i* Pg	**Pg**	**21 57 30.9**	**-0.3**
GLHS				*e*Sg	**Sg**	**21 57 35.8**	**+0.8**
FETY	**Fethiye**	**0.34**	**204**	PG	**Pg**	**21 57 32.3**	**-0.1**
FETY				*e*SG	**Sg**	**21 57 36.8**	**-0.1**
FETY	**Fethiye**	**0.34**	**204**	*i* Pg	**Pg**	**21 57 32.3**	**-0.1**
FETY				*e*Sg	**Sg**	**21 57 36.8**	**-0.1**
GOLH	**Golhisar**	**0.38**	**41**	*i* P	**Pg**	**21 57 32.9**	**-0.1**
GOLH				*i* S	**Sg**	**21 57 39.4**	**+1.5**
GOLH	**Golhisar**	**0.38**	**41**	*i* P	**Pg**	**21 57 32.9**	**-0.1**
GOLH				*i* S	**Sg**	**21 57 39.4**	**+1.5**
TURN	**Turunc**	**0.53**	**262**	*i* P	**Pg**	**21 57 40.7**	**+4.8**
TURN				*i* S	**Sg**	**21 57 52.1**	**+9.3**
ELL	**Elmali**	**0.56**	**111**	*e*PG	**Pg**	**21 57 36.5**	**0.0**
ELL	**Elmali**	**0.56**	**111**	*e*Pg	**Pg**	**21 57 36.5**	**-0.1**
DNZL	**Cakiroluk**	**0.76**	**347**	*i* P	**Pg**	**21 57 38.9**	**-1.4**
DNZL				*i* S	**Sg**	**21 57 50.9**	**+0.8**
DNZL	**Cakiroluk**	**0.76**	**347**	*i* P	**Pg**	**21 57 38.8**	**-1.5**
DNZL				*i* S	**Sg**	**21 57 50.9**	**+0.8**
AKAS	**Kas**	**0.77**	**158**	*i* P	**Pg**	**21 57 40.8**	**+0.3**
AKAS				*i* S	**Sg**	**21 57 55.4**	**+4.9**
AKAS	**Kas**	**0.77**	**158**	*i* P	**Pg**	**21 57 40.8**	**+0.3**
AKAS				*i* S	**Sg**	**21 57 55.4**	**+4.9**
YER	**Yerkesik**	**0.80**	**283**	*e*PG	**Pg**	**21 57 40.5**	**-0.5**
YER	**Yerkesik**	**0.80**	**283**	*e*Pg	**Pg**	**21 57 40.6**	**-0.5**
DENT	**Denizli**	**0.82**	**348**	*e*PG	**Pg**	**21 57 40.8**	**-0.7**
DENT	**Denizli**	**0.82**	**348**	*e*Pg	**Pg**	**21 57 40.8**	**-0.7**
KSL	**Kastellorizon**	**0.84**	**162**	*e*P	**Pg**	**21 57 42.6**	**+0.7**
KORT	**Korkueli**	**0.88**	**86**	*i* P	**Pg**	**21 57 41.9**	**-0.7**
KORT				*i* S	**Sg**	**21 57 59.3**	**+5.3**
KORT	**Korkueli**	**0.88**	**86**	*i* P	**Pg**	**21 57 41.9**	**-0.7**
ANTB	**Antalya**	**1.12**	**92**	*e*PN	**Pn**	**21 57 47.2**	**-0.9**
ANTB	**Antalya**	**1.12**	**92**	*e*Pn	**Pn**	**21 57 47.2**	**-0.8**
ARG	**Arkhangelos**	**1.17**	**231**	*e*P	**Pg**	**21 57 47.2**	**-0.9**
ARG	**Arkhangelos**	**1.17**	**231**	P	**Pg**	**21 57 47.6**	**-0.5**
ARG	**Arkhangelos**	**1.17**	**231**	P	**Pg**	**21 57 47.0**	**-1.1**
ARG				S	**Sg**	**21 58 02.0**	**-1.3**
ARG	**Arkhangelos**	**1.17**	**231**	P	**Pg**	**21 57 47.6**	**-0.5**
ARG				S	**Sg**	**21 58 02.0**	**-1.3**
BCK	**Bucak**	**1.18**	**64**	*e*PN	**Pn**	**21 57 47.9**	**-1.0**
BCK	**Bucak**	**1.18**	**64**	*e*Pn	**Pn**	**21 57 47.9**	**-0.9**
MLSB	**Milas**	**1.23**	**287**	*e*PN	**Pn**	**21 57 48.3**	**-1.3**
MLSB	**Milas**	**1.23**	**287**	*e*Pn	**Pn**	**21 57 48.3**	**-1.2**
AYDN	**Tasoluk**	**1.31**	**303**	*i* P	**Pn**	**21 57 49.5**	**-1.1**
AYDN				*i* S	**Sg**	**21 58 07.9**	**+0.1**
AYDN	**Tasoluk**	**1.31**	**303**	*i* P	**Pn**	**21 57 49.5**	**-1.1**
AYDN				*i* S	**Sg**	**21 58 07.9**	**+0.2**
ISP	**Isparta**	**1.34**	**48**	*e*PN	**Pn**	**21 57 50.1**	**-0.9**
ISP	**Isparta**	**1.34**	**48**	P	**Pn**	**21 57 51.8**	**+0.8**
ISP	**Isparta**	**1.34**	**48**	P	**Pn**	**21 57 51.1**	**+0.1**
ISP				S	**Sb**	**21 58 09.5**	**+0.8**
DAT	**Datca**	**1.36**	**261**	*e*PN	**Pn**	**21 57 50.1**	**-1.3**
DAT	**Datca**	**1.36**	**261**	*e*Pn	**Pn**	**21 57 50.1**	**-1.3**
KHL	**Karahalli**	**1.39**	**9**	*e*PN	**Pn**	**21 57 50.5**	**-1.1**
KHL	**Karahalli**	**1.39**	**9**	*e*Pn	**Pn**	**21 57 50.6**	**-1.1**
KHAL	**Karahalli**	**1.43**	**7**	*i* P	**Pn**	**21 57 51.8**	**-0.5**
KHAL				*i* S	**Sb**	**21 58 12.0**	**+0.7**
KHAL	**Karahalli**	**1.43**	**7**	*i* P	**Pn**	**21 57 51.8**	**-0.5**
KHAL				*i* S	**Sb**	**21 58 12.0**	**+0.7**
BDRM	**Kayabasi**	**1.45**	**275**	*i* P	**Pn**	**21 57 52.3**	**-0.3**
BDRM				*i* S	**Sn**	**21 58 12.9**	**+0.9**
BDRM	**Kayabasi**	**1.45**	**275**	*i* P	**Pn**	**21 57 52.3**	**-0.3**
BDRM				*i* S	**Sn**	**21 58 12.9**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.49**	**69**	*e*PN	**Pn**	**21 57 52.3**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.49**	**69**	*e*Pn	**Pn**	**21 57 52.3**	**-0.8**
KULA	**Kula-Manisa**	**1.63**	**343**	*e*PN	**Pn**	**21 57 53.8**	**-1.2**
KULA	**Kula-Manisa**	**1.63**	**343**	*e*Pn	**Pn**	**21 57 53.8**	**-1.2**
NIS1	**Nisyros Isl.**	**1.70**	**259**	P	**Pn**	**21 57 57.3**	**+1.3**
NIS1				S	**Sn**	**21 58 17.4**	**-0.8**
NIS1	**Nisyros Isl.**	**1.70**	**259**	P	**Pn**	**21 57 57.3**	**+1.3**
NIS1				S	**Sn**	**21 58 17.4**	**-0.8**
GCAM	**G?zelcaml?**	**1.78**	**295**	*i* P	**Pn**	**21 57 57.1**	**+0.1**
GCAM	**G?zelcaml?**	**1.78**	**295**	*i* P	**Pn**	**21 57 57.1**	**+0.1**
SHUT	**Suhut-Afyon**	**1.90**	**32**	*e*PN	**Pn**	**21 57 58.0**	**-0.7**
SHUT	**Suhut-Afyon**	**1.90**	**32**	*e*Pn	**Pn**	**21 57 58.1**	**-0.6**
SMG	**Samos**	**2.07**	**292**	*e*P	**Pn**	**21 58 01.1**	**0.0**
SMG	**Samos**	**2.07**	**292**	P	**Pn**	**21 58 01.4**	**+0.3**
SMG	**Samos**	**2.07**	**292**	P	**Pn**	**21 58 01.4**	**+0.3**
DEMI	**Demirci**	**2.13**	**349**	*i* P	**Pn**	**21 58 01.5**	**-0.4**
DEMI	**Demirci**	**2.13**	**349**	*i* P	**Pn**	**21 58 01.5**	**-0.4**
IZM	**Izmir**	**2.14**	**313**	*e*PN	**Pn**	**21 58 01.1**	**-1.0**
KARP	**Karpathos**	**2.20**	**231**	*e*P	**Pn**	**21 58 04.1**	**+1.3**
KARP	**Karpathos**	**2.20**	**231**	P	**Pn**	**21 58 04.4**	**+1.6**
KARP	**Karpathos**	**2.20**	**231**	P	**Pn**	**21 58 04.4**	**+1.6**
ALT	**Altintas**	**2.21**	**18**	*e*PN	**Pn**	**21 58 01.9**	**-1.0**
ALT	**Altintas**	**2.21**	**18**	*e*Pn	**Pn**	**21 58 01.9**	**-1.0**
BOLV	**Bolvadin**	**2.22**	**37**	*i* P	**Pn**	**21 58 04.1**	**+1.0**
BOLV	**Bolvadin**	**2.22**	**37**	*i* P	**Pn**	**21 58 04.1**	**+1.0**
AKS	**Akhisar**	**2.24**	**330**	*e*PN	**Pn**	**21 58 02.5**	**-0.9**
AKS	**Akhisar**	**2.24**	**330**	*e*Pn	**Pn**	**21 58 02.5**	**-0.9**
BLCB	**Balcova**	**2.27**	**310**	*e*PN	**Pn**	**21 58 03.0**	**-0.7**
BLCB	**Balcova**	**2.27**	**310**	P	**Pn**	**21 58 03.8**	**0.0**
BLCB				S	**Sn**	**21 58 31.2**	**-0.8**
BLCB	**Balcova**	**2.27**	**310**	*e*Pn	**Pn**	**21 58 03.0**	**-0.8**
BLCB	**Balcova**	**2.27**	**310**	P	**Pn**	**21 58 03.8**	**0.0**
BLCB				S	**Sn**	**21 58 31.2**	**-0.8**
HDMB	**Hadim**	**2.59**	**89**	*e*PN	**Pn**	**21 58 08.0**	**-0.2**
HDMB	**Hadim**	**2.59**	**89**	*e*Pn	**Pn**	**21 58 08.0**	**-0.2**
KONT	**Konya--Tatoy**	**2.66**	**67**	*e*PN	**Pn**	**21 58 09.0**	**-0.2**
KONT	**Konya--Tatoy**	**2.66**	**67**	*e*Pn	**Pn**	**21 58 09.0**	**-0.2**
DST	**Dursunbey**	**2.69**	**350**	*e*PN	**Pn**	**21 58 09.1**	**-0.6**
DST	**Dursunbey**	**2.69**	**350**	*e*Pn	**Pn**	**21 58 09.1**	**-0.6**
LADK	**Ladik-KONYA**	**2.77**	**62**	*e*PN	**Pn**	**21 58 10.3**	**-0.3**
LADK	**Ladik-KONYA**	**2.77**	**62**	*e*Pn	**Pn**	**21 58 10.3**	**-0.4**
KIZT	**Kizilcal**	**2.83**	**46**	*e*PN	**Pn**	**21 58 11.2**	**-0.3**
KIZT	**Kizilcal**	**2.83**	**46**	*e*Pn	**Pn**	**21 58 11.2**	**-0.3**
ESKT	**Eskisehir**	**2.85**	**26**	*e*PN	**Pn**	**21 58 11.5**

KARA	**Karaisali**	**4.65**	**84**	*e*PN	**Pn**	**21 58 37.4 +0.9**
KARA	**Karaisali**	**4.65**	**84**	*e*Pn	**Pn**	**21 58 37.4 +0.9**
GVD	**Gavdhos**	**4.70**	**245**	*e*P	**Pn**	**21 58 39.7 +2.5**
GVD	**Gavdhos**	**4.70**	**245**	*e*Pn	**Pn**	**21 58 40.0 +2.8**
GVD	**Gavdhos**	**4.70**	**245**	*e*Pn	**Pn**	**21 58 40.0 +2.8**
HMAT	**Matruh**	**6.11**	**198**	P	**Pn**	**21 58 56.4 -0.2**
	baz=198					
HMAT				AMP		22 00 00.0
	comp=E,20μm,0.6s,logA/T=4.5,baz=198					
HMAT	**Matruh**	**6.11**	**198**	P	**Pn**	**21 58 56.4 -0.2**
MMAI	**Mount Meron Ar**	**6.39**	**126**	Pn	**Pn**	**21 59 00.7 +0.2**
	comp=E,6.3nm,0.3s,baz=310,slow=12,SNR=52					
MMAI				Sn	**Sn**	**22 00 12.1 -1.8**
	comp=E,2.1nm,0.3s,baz=309,slow=29,SNR=4.4					
SLUM		**6.39**	**213**	P	**Pn**	**21 59 00.2 -0.3**
	baz=212					
SLUM				AMP		22 00 00.0
	comp=E,50μm,0.5s,logA/T=5.0,baz=212					
SLUM				S	**Sn**	**22 00 07.8 -6.0**
	baz=212					
SLUM		**6.39**	**213**	P	**Pn**	**21 59 00.2 -0.3**
SLUM				S	**Sn**	**22 00 07.8 -6.0**
AMAG	**Maghara**	**7.10**	**151**	P	**Pn**	**21 59 09.5 -0.7**
	baz=152					
AMAG	**Maghara**	**7.10**	**151**	P	**Pn**	**21 59 09.5 -0.7**
HNAT	**Natroun**	**7.39**	**171**	P	**Pn**	**21 59 13.3 -0.9**
	baz=171					
HNAT	**Natroun**	**7.39**	**171**	P	**Pn**	**21 59 13.3 -0.9**
TIRR	**Tirgusor**	**7.53**	**355**	⇑*i*P	**Pn**	**21 59 18.6 +2.6**
GLL	**Jalalah**	**7.64**	**164**	P	**Pn**	**21 59 17.5 -0.1**
	baz=164					
GLL	**Jalalah**	**7.64**	**164**	P	**Pn**	**21 59 17.5 -0.1**
SUZ		**7.70**	**156**	P	**Pn**	**21 59 17.9 -0.5**
	baz=157					
SUZ		**7.70**	**156**	P	**Pn**	**21 59 17.9 -0.5**
ASF	**Jabal al Asfar**	**7.90**	**125**	Pn	**Pn**	**21 59 22.8 +1.5**
	comp=E,0.3nm,0.3s,baz=193,slow=12,SNR=2.9					
HNKL	**Nakhl**	**8.04**	**149**	P	**Pn**	**21 59 21.7 -1.4**
	baz=150					
HNKL				S	**Sn**	**22 00 46.4 -7.9**
	baz=150					
HNKL	**Nakhl**	**8.04**	**149**	P	**Pn**	**21 59 21.7 -1.4**
HNKL				S	**Sn**	**22 00 46.4 -8.0**
EIL	**Elat**	**8.68**	**145**	Pn	**Pn**	**21 59 31.2 -0.7**
	comp=E,1.3nm,0.3s,baz=341,slow=17,SNR=14					
EIL	**Elat**	**8.68**	**145**	Pn	**Pn**	**21 59 31.2 -0.8**
MLR	**Muntele Rosu**	**8.89**	**345**	Pn	**Pn**	**21 59 35.3 +0.6**
	comp=E,0.2nm,0.3s,baz=234,slow=4.5,SNR=4.6					
MLR	**Muntele Rosu**	**8.89**	**345**	⇑*i*P	**Pn**	**21 59 32.2 -2.5**
MLR	**Muntele Rosu**	**8.89**	**345**	Pn	**Pn**	**21 59 35.3 +0.6**
TR2		**9.33**	**155**	P	**Pn**	**21 59 39.8 -1.1**
	baz=156					
TR2		**9.33**	**155**	P	**Pn**	**21 59 39.8 -1.1**
FINES	**FINESS Array B**	**24.60**	**356**	P	**P**	**22 02 46.0 -0.4**
	comp=E,0.6nm,0.7s,mb3.2,baz=168,slow=9.8,SNR=3.8					
FINES	**FINESS Array B**	**24.60**	**356**	P	**P**	**22 02 46.0 -0.4**
TORD	**Torodi Ar. Bea**	**34.20**	**233**	P	**P**	**22 04 11.6 -0.6**
	comp=E,0.4nm,0.6s,mb3.5,baz=32,slow=8.6,SNR=7.8					
MKAR	**Makanchi Array**	**40.02**	**59**	P	**P**	**22 05 00.5 -0.9**
	comp=E,0.2nm,0.2s,mb3.4,baz=278,slow=8.2,SNR=3.2					

CSEM ***30*** *22:05:30.9, 64.°05N×21.°16W, h4km, ML3.6, After REY*

REY 30 22:05:30.9, 64.°05N×21.°16W, h4km, ML3.1, ML3.6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.05**	**21**	P	Pg	22 05 32.2	+0.2
IKRO				S	Sg	22 05 33.3	+0.6
IBJA	**Bjarnastaoir**	**0.13**	**210**	P	Pg	22 05 33.7	+0.3
IBJA				S	Sg	22 05 35.9	+0.9
IHEI	**Heioarbar**	**0.15**	**347**	P	Pg	22 05 34.2	+0.4
IHEI				S	Sg	22 05 36.7	+0.9
ISOL	**Solvholt**	**0.16**	**143**	P	Pg	22 05 34.2	+0.3
ISOL				S	Sg	22 05 36.8	+0.8
ISAN	**Sandskeio**	**0.18**	**271**	P	Pg	22 05 34.7	+0.3
ISAN				S	Sg	22 05 37.5	+0.7
IKAS	**Kald??rsel**	**0.31**	**264**	P	Pg	22 05 37.0	+0.2
IKAS				S	Sg	22 05 41.6	+0.8
IVOS	**Vogsosar**	**0.32**	**230**	P	Pg	22 05 37.0	+0.1
IVOS				S	Sg	22 05 41.8	+0.8
IASM	**Asmuli**	**0.33**	**132**	P	Pg	22 05 37.2	+0.1
IASM				S	Sg	22 05 42.1	+0.7
ISAU	**Saurbar**	**0.33**	**101**	P	Pg	22 05 37.3	0.0
ISAU				S	Sg	22 05 42.3	+0.7
IKUD	**Kuludalsa**	**0.41**	**311**	P	Pg	22 05 38.4	-0.4
IKUD				S	Sg	22 05 44.2	0.0
IKRI	**Krysuvik**	**0.44**	**247**	P	Pg	22 05 39.1	-0.3
IKRI				S	Sg	22 05 45.6	+0.5
IGYG	**Gygjarholskot**	**0.47**	**61**	P	Pg	22 05 39.6	-0.3
IGYG				S	Sg	22 05 46.2	+0.2
IHAU	**Haukadalur**	**0.53**	**99**	P	Pg	22 05 40.8	-0.3
IHAU				S	Sg	22 05 48.3	+0.3
IVOG	**Vogar**	**0.55**	**262**	P	Pg	22 05 40.9	-0.5
IVOG				S	Sg	22 05 48.8	+0.2
IGRV	**Grindav??k**	**0.61**	**252**	P	Pg	22 05 41.8	-0.7
IMID	**Miomork**	**0.69**	**125**	P	Pg	22 05 43.4	-0.7
IMID				S	Sg	22 05 52.8	-0.2
IASB	**`sbjarnarst**	**0.70**	**354**	P	Pg	22 05 43.3	-1.0
IASB				S	Sg	22 05 53.0	-0.4
INYL	**Nylenda**	**0.70**	**264**	P	Pg	22 05 43.3	-1.0
INYL				S	Sg	22 05 53.0	-0.4
IVES	**Vestmannaeyjar**	**0.73**	**147**	P	Pg	22 05 44.2	-0.6
IVES				S	Sg	22 05 54.4	+0.2
IESK	**Eystri-Skogar**	**0.93**	**124**	P	Pg	22 05 47.2	-1.4
IESK				S	Sg	22 05 59.8	-0.8
IVAT	**Vatnsfell**	**0.99**	**81**	P	Pg	22 05 48.4	-1.5
IVAT				S	Sg	22 06 01.7	-1.0
IHVE	**Hveravellir**	**1.07**	**39**	P	Pg	22 05 49.3	-2.1
IHVE				S	Sg	22 06 04.1	-1.2
IHVO	**Lagu-Hvolar**	**1.16**	**116**	P	Pg	22 05 51.2	-1.8
IHVO				S	Sg	22 06 06.9	-1.0
ISNB	**Snabyli**	**1.16**	**105**	P	Pg	22 05 51.2	-1.9
ISNB				S	Sg	22 06 07.0	-1.2
ISKR	**Skrokkalda**	**1.31**	**66**	P	Pn	22 05 53.9	-2.1
ISKR				S	Sg	22 06 11.1	-1.8
IKAL	**Kalfafell**	**1.53**	**92**	P	Pn	22 05 57.5	-1.5
IKAL				S	Sn	22 06 17.6	-1.8
IFAG	**Fagurholsmyri**	**2.00**	**93**	P	Pn	22 06 04.3	-1.1
IHRN	**Hraun**	**2.11**	**12**	P	Pn	22 06 05.8	-1.2
IHRN				S	Sn	22 06 33.3	-0.3
ISVA	**Svartarkot**	**2.11**	**51**	P	Pn	22 06 06.1	-0.9
IKRE	**Kreppuhraun**	**2.20**	**68**	P	Pn	22 06 07.8	-0.4

ISCJB ***30*** *22:05:53.4±0.5, 32.°27N±0.°05×105.°17E±0.°07, h10km, mb3.7/15, Error ellipse: s-maj=9.1km s-min=5.7km az=33.0*

IDC ***30*** *22:05:53.8±1.1, 32.°32N×105.°11E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.7/26, mbtmp3.8/12, ML3.4/1, Error ellipse: s-maj=42.6km s-min=20.3km az=43.0*

BJI ***30*** *22:05:56.2, 32.°35N×105.°17E, h10km, mb3.7/1, ML3.8/13, Ms3.5/3, Ms7 3.4/3*

NEIC ***30*** *22:05:57.1±0.7, 32.°52N×105.°08E, h10km, mb3.8/4, Error ellipse: s-maj=18.8km s-min=11.4km az=58.0*

ISC 30 22:05:55.3±0.5, 32.°28N±0.°05×105.°16E±0.°06, h10km, n28, σ0992/34, mb3.7/15, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.82**	**221**	Pg	**Pg**	**22 06 29.5**	**-0.7**
CD2				Sg	**Sg**	**22 06 53.5**	**-0.2**
CD2				smax			
	comp=N,3μm,0.7s						
XAN	**Xi'an**	**3.61**	**60**	Pn	**Pn**	**22 06 52.3**	**+1.0**
XAN				Pg	**Pg**	**22 07 03.3**	**-1.2**
XAN				Sg	**Sg**	**22 07 46.0**	**-5.2**
XAN				smax			
	comp=N,300nm,0.7s						
XAN				smax			
	comp=E,140nm,0.6s						
LZH	**Lanzhou**	**3.95**	**344**	Pn	**Pn**	**22 06 58.5**	**+2.6**
LZH				Pg	**Pg**	**22 07 09.0**	**-1.9**
LZH				Sn	**Sn**	**22 07 42.3**	**0.0**
LZH				Sg	**Sg**	**22 07 57.0**	**-5.1**
LZH				smax			
	comp=N,600nm,0.6s						
LZH				smax			
	comp=E,830nm,0.8s						
LZH				LR	LR		
	comp=E,2μm,6.8s						
LZH				LR	LR		
	comp=Z,2μm,7.6s						
ENH	**Enshi**	**4.21**	**117**	*e*Pn	**Pn**	**22 07 05.8**	**+6.2**
GYA	**Guiyang**	**5.95**	**167**	Pn	**Pn**	**22 07 28.5**	**+5.0**
GYA				smax			
	comp=N,90nm,0.9s						
GYA				smax			
	comp=E,70nm,0.6s						
GTA	**Gaotai**	**8.33**	**330**	*e*P	**Pn**	**22 08 04.3**	**+8.2**
GTA				pP		22 08 09.0	
GTA				sP		22 08 12.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.86**	**204**	Pn	**Pn**	**22 09 30.7**	**+5.2**
	comp=Z,0.1nm,0.3s,baz=210,slow=26,SNR=3.1						
ULN	**Ulaanbaatar**	**15.63**	**5**	*e*Pn	**Pn**	**22 09 36.0**	**+0.5**
KSRS	**Korea Array**	**19.36**	**68**	P	**Pn**	**22 10 22.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=254,slow=10,SNR=7.1						
MK31	**Makanchi Array**	**22.71**	**316**	*e*P	**P**	**22 10 57.3**	**+0.2**
MKAR	**Makanchi Array**	**22.71**	**316**	P	**P**	**22 10 57.3**	**+0.2**
	comp=Z,1.9nm,0.8s,mb3.6,baz=104,slow=12,SNR=13						
TKM2	**Tokmak 2**	**25.59**	**303**	*e*P	**P**	**22 11 25.3**	**+0.7**
	comp=Z,1.0nm,0.5s,mb3.6						
ZALV	**Zalesovo Beam**	**26.08**	**332**	P	**P**	**22 11 28.2**	**-0.6**
	comp=Z,0.8nm,0.4s,mb3.6,baz=138,slow=11,SNR=4.3						
KURK	**Kurchatov**	**26.87**	**321**	P	**P**	**22 11 36.1**	**+0.1**
	comp=Z,1.1nm,0.6s,mb3.6,baz=125,slow=11,SNR=4.4						
KURK	**Kurchatov**	**26.87**	**321**	*e*P	**P**	**22 11 34.7**	**-1.3**
	comp=Z,3.7nm,1.1s,mb3.8						
BVAR	**Borovoye Array**	**32.45**	**320**	P	**P**	**22 12 26.0**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.3,baz=111,slow=7.9,SNR=2.7						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**22 13 10.1**	**+0.3**
	comp=Z,1.0nm,0.5s,mb3.8						
AKTK	**Aktyubinsk**	**39.01**	**312**	P	**P**	**22 13 21.9**	**+0.2**
AKTO	**Aktyubinsk**	**39.01**	**312**	P	**P**	**22 13 21.9**	**+0.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=84,slow=9.2,SNR=2.8						
ARU	**Arti**	**40.07**	**321**	*e*P	**P**	**22 13 31.0**	**+0.5**
	comp=Z,1.4nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**56.56**	**336**	P	**P**	**22 15 37.3**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=98,slow=5.6,SNR=2.7						
BRTR	**Keskin Array B**	**56.95**	**299**	P	**P**	**22 15 44.1**	**+3.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=74,slow=5.1,SNR=3.8						
FINES	**FINESS Array B**	**57.10**	**326**	P	**P**	**22 15 40.8**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=201,slow=35,SNR=7.6						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**22 16 16.6**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=331,slow=6.3,SNR=7.1						
HFS	**Hagfors**	**63.30**	**326**	P	**P**	**22 16 22.8**	**-1.2**
	comp=Z,0.4nm,0.3s,mb4.0,baz=93,slow=10,SNR=5.0						
NB2	**NORSAR Subarra**	**64.15**	**327**	P	**P**	**22 16 32.6**	**+3.0**
	comp=Z,0.4nm,0.5s,mb3.7,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.15**	**327**	P	**P**	**22 16 28.4**	**-1.2**
	comp=Z,0.4nm,0.7s,mb3.6,baz=153,slow=21,SNR=2.4						
YKA	**Yellowknife Ar**	**80.30**	**18**	P	**P**	**22 18 05.8**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=328,slow=5.1,SNR=6.6						

CSEM ***30*** *22:07:32.7, 64.°05N×21.°17W, h4km, ML4.0, After REY*

REY 30 22:07:32.7, 64.°05N×21.°17W, h4km, ML3.4, ML4.0, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRO	**Krokur**	**0.06**	**21**	P	Pg	22 07 34.2	+0.2
IKRO				S	Sg	22 07 35.3	+0.4
IBJA	**Bjarnastaoir**	**0.12**	**211**	P	Pg	22 07 35.3	+0.3
IBJA				S	Sg	22 07 37.5	+0.9
ISOL	**Solvholt**	**0.15**	**140**	P	Pg	22 07 35.8	+0.1
ISOL				S	Sg	22 07 38.4	+0.7
IHEI	**Heioarbar**	**0.16**	**349**	P	Pg	22 07 36.0	+0.2
IHEI				S	Sg	22 07 38.8	+0.9
ISAN	**Sandskeio**	**0.18**	**274**	P	Pg	22 07 36.4	+0.2
ISAN				S	Sg	22 07 39.3	+0.8
IKAS	**Kald??rsel**	**0.30**	**266**	P	Pg	22 07 38.7	+0.2
IKAS				S	Sg	22 07 43.2	+0.7
IVOS	**Vogsosar**	**0.31**	**231**	P	Pg	22 07 38.6	0.0
IVOS				S	Sg	22 07 43.3	+0.7
IASM	**Asmuli**	**0.32**	**131**	P	Pg	22 07 38.8	-0.1
IASM				S	Sg	22 07 43.6	+0.5
ISAU	**Saurbar**	**0.34**	**99**	P	Pg	22 07 39.1	0.0
ISAU				S	Sg	22 07 44.0	+0.5
IKUD	**Kuludalsa**	**0.42**	**312**	P	Pg	22 07 40.1	-0.6
IKUD				S	Sg	22 07 46.0	-0.1
IKRI	**Krysuvik**	**0.44**	**248**	P	Pg	22 07 40.7	-0.3
IKRI				S	Sg	22 07 46.8	+0.1
IGYG	**Gygjarholskot**	**0.48**	**60**	P	Pg	22 07 41.4	-0.5
IGYG				S	Sg	22 07 48.1	0.0
IHAU	**Haukadalur**	**0.53**	**98**	P	Pg	22 07 42.5	-0.4
IHAU				S	Sg	22 07 50.1	+0.2
IVOG	**Vogar**	**0.55**	**263**	P	Pg	22 07 42.7	-0.5
IVOG				S	Sg	22 07 50.3	+0.1
IGRV	**Grindav??k**	**0.60**	**252**	P	Pg	22 07 43.6	-0.6
IMID	**Miomork**	**0.69**	**124**	P	Pg	22 07 45.2	-0.7
IMID				S	Sg	22 07 54.7	0.0
INYL	**Nylenda**	**0.70**	**265**	P	Pg	22 07 45.0	-1.0
INYL				S	Sg	22 07 54.7	-0.3
IASB	**`sbjarnarst**	**0.71**	**354**	P	Pg	22 07 45.2	-1.1
IASB				S	Sg	22 07 55.1	-0.4
IVES	**Vestmannaeyjar**	**0.72**	**147**	P	Pg	22 07 45.8	-0.7
IVES				S	Sg	22 07 55.9	+0.1
IESK	**Eystri-Skogar**	**0.92**	**124**	P	Pg	22 07 48.9	-1.5
IESK				S	Sg	22 08 01.4	-0.9
IVAT	**Vatnsfell**	**1.00**	**81**	P	Pg	22 07 50.1	-1.7
IVAT				S	Sg	22 08 03.7	-1.0
IHVE	**Hveravellir**	**1.08**	**39**	P	Pg	22 07 51.1	-2.3
IHVE				S	Sg	22 08 05.9	-1.5
IHVO	**Lagu-Hvolar**	**1.15**	**116**	P	Pg	22 07 53.0	-1.8
IHVO				S	Sg	22 08 08.6	-1.1
ISNB	**Snabyli**	**1.16**	**104**	P	Pg	22 07 53.0	-2.0
ISNB				S	Sg	22 08 08.5	-1.5
ISKR	**Skrokkalda**	**1.32**	**66**	P	Pn	22 07 55.6	-2.2
ISKR				S	Sg	22 08 13.1	-1.9
IKAL	**Kalfafell**	**1.54**	**92**	P	Pn	22 07 59.0	-1.8
IKAL				S	Sn	22 08 19.2	-1.9
IGRF	**Grimsfjall**	**1.74**	**76**	P	Pn	22 08 02.4	-1.2
IFAG	**Fagurholsmyri**	**2.00**	**93**	P	Pn	22 08 06.0	-1.1
IFAG				S	Sn	22 08 32.2	-0.3
IHRN	**Hraun**	**2.12**	**12**	P	Pn	22 08 07.2	-1.6
ISVA	**Svartarkot**	**2.12**	**51**	P	Pn	22 08 07.5	-1.3
IKRE	**Kreppuhraun**	**2.21**	**68**	P	Pn	22 08 09.4	-0.6

CSEM ***30*** *23:04:50.1, 64.°00N×21.°06W, h5km, ML4.1, After REY*

REY 30 23:04:50.1, 64.°00N×21.°06W, h5km, ML3.8, ML4.1, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISOL	**Solvholt**	**0.09**	**145**	P	Pg	23 04 52.2	+0.2
ISOL				S	Sg	23 04 53.8	+0.5
IKRO	**Krokur**	**0.10**	**345**	P	Pg	23 04 52.4	+0.3
IKRO				S	Sg	23 04 54.1	+0.6
IBJA	**Bjarnastaoir**	**0.12**	**241**	P	Pg	23 04 52.9	+0.4
IBJA				S	Sg	23 04 54.9	+0.7
IHEI	**Heioarbar**	**0.21**	**339**	P	Pg	23 04 54.4	+0.2
IHEI				S	Sg	23 04 57.4	+0.4
ISAN	**Sandskeio**	**0.23**	**283**	P	Pg	23 04 54.7	+0.1
ISAN				S	Sg	23 04 58.0	+0.4
IASM	**Asmuli**	**0.26**	**131**	P	Pg	23 04 55.3	+0.2
IASM				S	Sg	23 04 59.2	+0.7
ISAU	**Saurbar**	**0.28**	**93**	P	Pg	23 04 55.6	0.0
ISAU				S	Sg	23 04 59.7	+0.4
IVOS	**Vogsosar**	**0.32**	**242**	P	Pg	23 04 56.3	0.0
IVOS				S	Sg	23 05 00.6	+0.1
IKAS	**Kald??rsel**	**0.35**	**273**	P	Pg	23 04 56.9	+0.1
IKAS				S	Sg	23 05 02.1	+0.8
IGYG	**Gygjarholskot**	**0.46**	**53**	P	Pg	23 04 58.7	-0.3
IGYG				S	Sg	23 05 05.0	0.0
IKRI	**Krysuvik**	**0.47**	**255**	P	Pg	23 04 58.6	-0.4
IKRI				S	Sg	23 05 05.1	0.0
IKUD	**Kuludalsa**	**0.48**	**312**	P	Pg	23 04 58.6	-0.7
IKUD				S	Sg	23 05 05.5	0.0
IHAU	**Haukadalur**	**0.48**	**94**	P	Pg	23 04 59.0	-0.4
IHAU				S	Sg	23 05 05.9	+0.2
IVOG	**Vogar**	**0.59**	**267**	P	Pg	23 05 00.6	-0.8
IVOG				S	Sg	23 05 09.4	+0.4
IMID	**Miomork**	**0.63**	**123**	P	Pg	23 05 01.5	-0.6
IMID				S	Sg	23 05 10.2	0.0
IGRV	**Grindav??k**	**0.63**	**257**	P	Pg	23 05 01.4	-0.8
IVES	**Vestmannaeyjar**	**0.66**	**148**	P	Pg	23 05 02.3	-0.4
IVES				S	Sg	23 05 11.6	+0.3
INYL	**Nylenda**	**0.74**	**268**	P	Pg	23 05 03.0	-1.3
INYL				S	Sg	23 05 13.2	-0.6
IASB	**`sbjarnarst**	**0.76**	**351**	P	Pg	23 05 03.4	-1.2
IASB				S	Sg	23 05 13.7	-0.7
IESK	**Eystri-Skogar**	**0.86**	**123**	P	Pg	23 05 05.3	-1.3
IESK				S	Sg	23 05 17.0	-0.8
IVAT	**Vatnsfell**	**0.96**	**78**	P	Pg	23 05 07.0	-1.5
IVAT				S	Sg	23 05 19.8	-1.1
IHVE	**Hveravellir**	**1.08**	**36**	P	Pg	23 05 08.6	-2.3
IHVE				S	Sg	23 05 23.7	-1.2
IHVO	**Lagu-Hvolar**	**1.09**	**115**	P	Pg	23 05 09.4	-1.6
IHVO				S	Sg	23 05 24.2	-1.0
ISNB	**Snabyli**	**1.11**	**103**	P	Pg	23 05 09.5	-1.8
ISNB				S	Sg	23 05 24.6	-1.1
ISKR	**Skrokkalda**	**1.29**	**63**	P	Pn	23 05 12.6	-2.2
ISKR				S	Sg	23 05 29.9	-1.7
IKAL	**Kalfafell**	**1.49**	**91**	P	Pn	23 05 15.9	-1.6
IKAL				S	Sn	23 05 35.4	-1.9
IGRF	**Grimsfjall**	**1.71**	**75**	P	Pn	23 05 19.4	-1.1
IFAG	**Fagurholsmyri**	**1.95**	**92**	P	Pn	23 05 22.8	-1.0
IFAG				S	Sn	23 05 48.1	-0.5
ISVA	**Svartarkot**	**2.11**	**49**	P	Pn	23 05 24.8	-1.3
IHRN	**Hraun**	**2.15**	**10**	P	Pn	23 05 25.5	-1.1
IKRE	**Kreppuhraun**	**2.18**	**67**	P	Pn	23 05 26.4	-0.5

FUNV 30 23:06:26.4, 6.°74N×73.°07W, h173km, MW3.6, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.35**	**34**	⇓*i*P	Pn	23 06 55.8	-0.6
CAPV				*e*S	Sn	23 07 17.2	-2.3
SOCV	**Socops**	**2.68**	**55**	*e*P	Pn	23 07 10.4	-0.4
SOCV				*e*S	Sn	23 07 42.5	-2.7
VIGV	**El Vigia**	**2.69**	**39**	*e*P	Pn	23 07 10.0	-0.9
VIGV				*e*S	Sn	23 07 42.0	-3.5
VIRV	**Villa del Rosa**	**3.80**	**10**	*e*P	Pn	23 07 22.7	-2.1
VIRV				*e*S	Sn	23 08 06.2	-4.2
SANV	**Sanarito**	**4.45**	**52**	*e*P	Pn	23 07 31.9	-1.1
CURV	**Curarigua**	**4.48**	**43**	*e*P	Pn	23 07 32.4	-1.0
CURV				*e*S	Sn	23 08 20.2	-5.7
BAUV	**El Baul**	**5.44**	**66**	*e*P	Pn	23 07 43.8	-2.2
BAUV				*e*S	Sn	23 08 41.6	-6.9

MOS ***30*** *23:22:24.2±0.8, 4.°18S×152.°51E, h37km, mb5.0/15, Error ellipse: s-maj=13.4km s-min=7.9km az=112.7*

IDC ***30*** *23:22:24.1±1.8, 4.°27S×152.°69E, h33km±12km, mb4.6/17, mb1 4.7/17, mb1mx4.7/18, mbtmp4.5/17, MS4.1/14, Ms1 4.1/14, ms1mx4.0/20, Error ellipse: s-maj=20.5km s-min=12.9km az=86.0*

ISCJB ***30*** *23:22:26.7±1.2, 4.°32S±0.°04×152.°62E±0.°05, h65km±11km, mb4.9/71, Error ellipse: s-maj=8.3km s-min=7.1km az=154.0*

BJI ***30*** *23:22:27.7, 4.°00S×152.°94E, h74km, mB5.2/28, mb5.0/43, Ms4.8/29, Ms7 4.5/30*

GCMT ***30*** *23:22:29.2±0.2, 4.°23S×152.°78E, h41km±1km, MW5.1/90, Moment Tensor Solution. s61,c73; s90,c137; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.57±.20; Mθθ6.14±.14; Mφφ-5.57±.16; Mrθ1.02±.17; Mrφ0.08±.15; Mθφ-2.19±.18; Best double couple: M0:6.35300×10^16 NP1:φs46.00000°, δ69.00000°, λ-171.00000°. NP2: φs313.00000°, δ82.00000°, λ-21.00000°. Principal axes: T 6.2970, Plg9.0000°, Azm1.0000°; N 0.1110, Plg67.0000°, Azm113.0000°; P -6.4090, Plg21.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***30*** *23:22:29.2±1.0, 4.°30S×152.°63E, h77km±8km, mb5.0/37 Error ellipse: s-maj=6.6km s-min=5.6km az=73.0*

NEIC Felt at Kokopo.

DJA ***30*** *23:22:41, 4.°33S×152.°25E, h151km, mb5.1/24*

ISC 30 23:22:30.0±1.0, 4.°36S±0.°04×152.°61E±0.°05, h80km±9km, h75km±2.5km: pP-P, n297, σ1°14/148, mb4.8/71, 18C-7D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.86**	**125**	*e*P	**Pn**	**23 24 33.3**	**-1.9**
HNR				*e*		23 26 15.3	
HNR				pmax	pmax		
	comp=Z,426nm,0.8s						
HNR	**Honiara**	**8.86**	**125**	*e*Pn	**Pn**	**23 24 33.3**	**-1.9**
	comp=Z,426nm,0.8s						
HNR				*e*Sn	**Sn**	**23 26 15.3**	**+1.8**
COEN	**Coen**	**13.33**	**224**	*e*Pn	**Pn**	**23 25 36.9**	**+1.0**
	comp=Z,405nm,0.8s						
COEN				*e*P		23 25 44.3	
CTA	**Charters Tower**	**16.82**	**201**	*e*P	**Pn**	**23 26 21.6**	**+1.1**
	comp=Z,15nm,0.9s						
CTA				*e*S	**S**	**23 29 32.0**	**-0.9**
CTA	**Charters Tower**	**16.82**	**201**	Pn	**Pn**	**23 26 21.8**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=26,slow=16,SNR=6.6						
CTA				LR	LR	23 31 59.7	
	comp=Z,1μm,21.7s,baz=23,slow=34

comp=Z,3.1nm,18.4s,baz=304,slow=33
KMBL Kambalda 39.44 223 *e*P **P 23 29 51.9 -0.6**
comp=Z,103nm,0.8s,mb5.7
URZ Urewera 40.46 150 P **P 23 29 59.8 -1.0**
comp=Z,7.6nm,0.6s,mb4.7,baz=132,slow=15,SNR=2.9
URZ Urewera 40.46 150 *e*P **P 23 30 01.4 +0.6**
comp=Z,20nm,0.9s,mb5.0
YULB Yu-li 41.16 313 *e*P **P 23 30 06.4 -0.3**
comp=Z,40nm,0.8s,mb5.3
NACB Ninganchiao 41.43 315 *e*P **P 23 30 08.8 -0.1**
comp=Z,47nm,0.9s,mb5.3
SSLB Suanglung 41.65 314 *e*P **P 23 30 11.3 +0.6**
comp=Z,27nm,0.8s,mb5.0
YHNB Yeheng 41.90 315 *e*P **P 23 30 13.6 +0.9**
comp=Z,47nm,0.8s,mb5.3
KHZ Kahutara 42.24 157 *e*P **P 23 30 14.8 -0.5**
comp=Z,104nm,1.5s,mb5.3
RPZ Rata Peaks 42.45 160 P **P 23 30 17.6 +0.6**
comp=Z,24nm,0.6s,mb5.1,baz=328,slow=1.8,SNR=17
RPZ Rata Peaks 42.45 160 *e*P **P 23 30 17.9 +0.9**
comp=Z,53nm,0.7s,mb5.4
MORW Morawa 42.48 231 *e*P **P 23 30 16.6 -0.9**
MJAR Matsushiro Arr 42.85 343 P **P 23 30 17.9 -2.5**
comp=Z,3.1nm,0.8s,mb4.1,baz=164,slow=8.2,SNR=8.2
MJAR LR LR 23 47 59.3
comp=Z,169nm,18.7s,baz=190,slow=36
KSRS Korea Array 47.52 333 P **P 23 30 57.0 -0.3**
comp=Z,9.2nm,0.8s,mb4.7,baz=151,slow=8.1,SNR=36
KSRS LR LR 23 50 43.2
comp=Z,86nm,19.1s,baz=135,slow=36
QIZ Qiongzhong 48.08 300 P **P 23 31 01.5 -0.5**
QIZ S **S 23 37 54.0 -0.9**
QIZ pmax pmax
comp=Z,16nm,1.7s,mb4.6
QIZ LR LR
comp=N,210nm,20.2s
QIZ LR LR
comp=E,160nm,22.7s
QIZ LR LR
comp=Z,470nm,24.2s
INCN Inchon 48.13 332 *e*P **P 23 31 02.0 -0.1**
comp=Z,68nm,0.8s,mb5.5
NJ2 Nanjing 48.38 321 *e*P **P 23 31 04.5 +0.4**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
WHN Wuhan 50.41 316 P **P 23 31 19.5 0.0**
WHN S **S 23 38 24.0 -3.1**
WHN LR LR
comp=Z,680nm,25.4s
YSS Yuzh-Sakhalins 51.83 351 *e*P **P 23 31 38.5 +8.7**
YSS pmax pmax
comp=Z,60nm,1.4s,mb5.4
TIA Tai'an 52.25 324 *e*P **P 23 31 32.5 -0.7**
MDJ Mudanjiang 52.94 340 P **P 23 31 37.0 -1.1**
MDJ pP pP 23 31 56.5 -1.6
MDJ sP sP 23 32 04.5 -2.5
MDJ PcP PcP 23 32 44.8 -1.2
MDJ PP PP 23 33 35.5 -3.1
MDJ ScP ScP 23 36 33.8 -2.8
MDJ S **S 23 39 02.8 +1.4**
MDJ ScS ScS 23 41 21.0 +0.8
MDJ SS SS 23 42 41.0 -0.7
MDJ pmax pmax
comp=Z,17nm,2.2s,mb4.7
MDJ pmax pmax
comp=Z,160nm,4.8s
MDJ LR LR
comp=N,180nm,26.1s
MDJ LR LR
comp=E,300nm,36.2s
MDJ LR LR
comp=Z,88nm,30.1s
ENH Enshi 53.72 313 *e*P **P 23 31 43.2 -0.9**
comp=Z,14nm,0.9s,mb5.0
CN2 Changchun 53.82 336 *e*P **P 23 31 46.8 +2.2**
CN2 *es*P sP 23 32 14.5 +1.0
CN2 *e*S **S 23 39 14.5 +1.2**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
CN2 pmax pmax
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,300nm,18.0s
CN2 LR LR
comp=E,400nm,18.0s
CN2 LR LR
comp=Z,600nm,19.0s
GYA Guiyang 53.98 307 P **P 23 31 47.0 +0.9**
GYA pP pP 23 32 07.5 +1.4
GYA sP sP 23 32 15.8 +0.8
GYA PcP PcP 23 32 52.5 +2.1
GYA PP PP 23 33 51.8 +3.5
GYA ScP ScP 23 36 42.0 +0.4
GYA PcS PcS 23 36 50.0 +0.1
GYA S **S 23 39 16.5 +0.4**
GYA sS sS 23 39 49.0 -1.2
GYA ScS ScS 23 41 26.8 -1.5
GYA SS SS 23 42 58.0 -0.7
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,690nm,18.0s
GYA LR LR
comp=E,540nm,19.8s
GYA LR LR
comp=Z,880nm,18.2s
BJI Beijing 55.42 326 P **P 23 31 56.5 +0.3**
BJI sP sP 23 32 22.8 -2.5
BJI S **S 23 39 37.3 +2.3**
BJI pmax pmax
comp=Z,11nm,0.8s,mb4.9
BJI LR LR
comp=N,190nm,18.5s
BJI LR LR
comp=E,140nm,22.8s
BJI LR LR
comp=Z,110nm,23.8s
KLR Kul'dur 56.37 344 *e*P **P 23 31 59.3 -3.5**
KMI Kunming 56.58 304 P **P 23 32 08.5 +3.7**
KMI pP pP 23 32 25.0 0.0
KMI S **S 23 39 48.5 -2.5**
KMI pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KMI LR LR
comp=N,220nm,12.1s
KMI LR LR
comp=E,210nm,20.4s
KMI LR LR
comp=Z,300nm,19.4s
PET Petropavlovsk 57.39 4 *e*P **P 23 32 14.2 +4.2**
PET *e*S **S 23 40 07.1 +6.5**
PET *e*SS SS 23 43 49.7 -1.8
PET pmax pmax
comp=Z,24nm,1.9s,mb4.9
PET MLR MLR
comp=Z,100nm,19.0s
PETK Petropavlovsk- 57.41 4 P **P 23 32 10.2 +0.1**
comp=Z,2.8nm,0.5s,mb4.5,baz=179,slow=6.3,SNR=19
PETK LR LR 23 52 52.6
comp=Z,118nm,20.6s,baz=118,slow=32
CMAR Chiang Mai Arr 57.52 295 P **P 23 32 10.3 -1.2**
comp=Z,3.9nm,0.7s,mb4.5,baz=112,slow=5.2,SNR=14
CMAR LR LR 23 55 46.9
comp=Z,116nm,20.9s,baz=289,slow=35
CHTO Chiang Mai 57.63 295 *e*P **P 23 32 11.1 -1.2**
CHTO pmax pmax
comp=Z,16nm,1.2s,mb4.9
CHTO Chiang Mai 57.63 295 *e*P **P 23 32 11.1 -1.2**
comp=Z,16nm,1.2s,mb4.9
PPT Papeete 58.04 108 *e*LR LR 23 49 23.2
comp=Z,237nm,32.8s
CD2 Chengdu 58.31 310 P **P 23 32 16.8 -0.1**
CD2 PP PP 23 34 29.0 +2.2
CD2 S **S 23 40 06.8 -6.6**
CD2 SS SS 23 44 02.0 -4.7
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,90nm,5.1s
CD2 LR LR
comp=N,290nm,6.8s
CD2 LR LR
comp=Z,310nm,8.9s
HHC Hu-ho-hao-te 58.58 324 *e*P **P 23 32 19.5 +1.0**
HHC pP pP 23 32 39.0 +0.2
HHC sP sP 23 32 47.8 +0.1
HHC PP PP 23 34 32.0 +3.0
HHC ScP ScP 23 37 00.0 -1.5
HHC PcS PcS 23 37 09.5 -0.2
HHC S **S 23 40 17.3 +0.8**
HHC sS sS 23 40 51.0 -0.1
HHC ScS ScS 23 41 59.5 -1.5
HHC SS SS 23 44 13.0 +2.4
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.1
HHC pmax pmax
comp=Z,120nm,5.0s
HHC LR LR
comp=N,170nm,13.2s
HHC LR LR
comp=E,160nm,12.6s
HHC LR LR
comp=Z,210nm,16.9s
HIA Hailar 60.55 336 *e*P **P 23 32 31.6 -0.3**
HIA pmax pmax
comp=Z,7.0nm,0.6s
HIA Hailar 60.55 336 *e*P **P 23 32 31.6 -0.3**
comp=Z,6.6nm,0.6s,mb4.8
LZH Lanzhou 60.78 316 P **P 23 32 35.3 +1.5**
LZH PP PP 23 34 52.0 +3.3
LZH ScP ScP 23 37 06.0 -5.4
LZH PcS PcS 23 37 21.0 +1.4
LZH *e*S **S 23 40 40.0 -5.1**
LZH SS SS 23 44 42.5 -2.9
LZH pmax pmax
comp=Z,48nm,1.3s,mb5.4
LZH pmax pmax
comp=Z,140nm,4.0s
GTA Gaotai 65.20 317 *e*P **P 23 33 04.0 +1.0**
GTA pP pP 23 33 23.8 +0.2
GTA sP sP 23 33 32.8 +0.3
GTA PP PP 23 35 30.8 +3.3
GTA S S 23 41 42.0 +1.8
GTA pmax pmax
comp=Z,13nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,84nm,6.5s
GTA LR LR
comp=N,110nm,14.3s
GTA LR LR
comp=E,130nm,16.9s
GTA LR LR
comp=Z,190nm,18.4s
ULN Ulaanbaatar 65.52 328 *e*P **P 23 33 05.6 +0.7**
ULN pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ULN Ulaanbaatar 65.52 328 *e*P **P 23 33 05.6 +0.7**
comp=Z,6.7nm,0.9s,mb4.5
SONM Songino Array 65.85 328 P **P 23 33 07.3 +0.3**
comp=Z,4.2nm,0.6s,mb4.5,baz=143,slow=5.8,SNR=11
SONM LR LR 00 02 37.4
comp=Z,184nm,18.2s,baz=108,slow=37
SHL Shillong 65.92 300 *e*P **P 23 33 10.0 +2.1**
TAOE Nuku Hiva Isla 66.87 98 *e*LR LR 23 53 08.8
comp=Z,300nm,33.3s
LSA Lhasa 67.83 304 P **P 23 33 21.5 +1.5**
CASY Casey 68.38 197 *e*P **P 23 33 23.2 +0.5**
CASY Casey 68.38 197 *e*P **P 23 33 22.9 +0.1**
comp=Z,23nm,0.9s,mb5.0
YAK Yakutsk 68.50 349 *e*P **P 23 33 27.6 +4.1**
YAK pmax pmax
comp=Z,13nm,0.7s,mb4.9
ZAK Zakamensk 69.02 329 ⇓*i*P **P 23 33 27.0 +0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.4
BOD Bodaibo 69.31 339 *e*P **P 23 33 27.4 -1.2**
BOD pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
TLY Talaya 69.60 330 *e*P **P 23 33 30.6 +0.1**
TLY *e* pP 23 33 50.9 -0.4
TLY *e*S S 23 42 39.0 +6.6
TLY *e* 23 43 32.2
TLY *e*SS SS 23 47 06.1 +4.1
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
TLY MLR MLR
comp=Z,92nm,17.0s
BILL Bilibino 72.87 5 P **P 23 33 52.0 +2.1**
BILL *e* pP 23 34 08.9 -2.0
BILL S S 23 43 11.0 +1.4
BILL Bilibino 72.87 5 *e*P **P 23 33 48.4 -1.5**
comp=Z,0.4nm,0.8s
SBA Scott Base 73.83 177 *e*P **P 23 33 57.8 +2.3**
SBA pmax pmax
comp=Z,26nm,1.0s,mb4.9
SBA Scott Base 73.83 177 *e*P **P 23 33 57.8 +2.3**
comp=Z,26nm,1.0s,mb4.9
MIR Mirnyy 74.27 201 ⇑*i*P **P 23 33 59.2 +1.0**
MIR pmax pmax
comp=Z,70nm,1.0s,mb5.3
WMQ Urumqi 75.29 317 P **P 23 34 05.3 +0.8**
WMQ pmax pmax
comp=Z,7.0nm,1.2s,mb4.3
WMQ LR LR
comp=N,59nm,28.0s
WMQ LR LR
comp=E,75nm,25.0s
WMQ LR LR
comp=Z,98nm,23.5s
HYB Hyderabad 76.17 289 *i* P **P 23 34 10.0 -0.1**
SVW2 Sparrevohn 76.49 23 *e*P **P 23 34 12.0 +1.0**
TTA Tatalina 77.43 21 *e*P **P 23 34 17.8 +1.6**
TIXI Tiksi 77.43 352 *e*P **P 23 34 16.8 +0.7**
TIXI pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
CHUM Lake Minchumin 79.34 22 *e*P **P 23 34 25.8 -0.9**
comp=Z,31μm,1.0s
KTH Kantishna Hill 79.68 22 *e*P **P 23 34 26.5 -2.1**
comp=Z,9.8nm,1.0s,mb4.6
MK31 Makanchi Array 79.87 319 *e*P **P 23 34 29.9 -0.1**
MKAR Makanchi Array 79.87 319 P **P 23 34 29.7 -0.3**
comp=Z,3.7nm,0.8s,mb4.2,baz=93,slow=7.3,SNR=29
MKAR PKKPbc PKKPbc 23 53 15.9 -1.7
comp=Z,0.2nm,0.6s,baz=298,slow=2.6,SNR=3.5
MKAR LR LR 00 09 28.7
comp=Z,92nm,19.3s,baz=238,slow=35
MKAR Makanchi Array 79.87 319 P **P 23 34 29.7 -0.3**
MKAR PKKPbc PKKPbc 23 53 15.9 -1.7
MKAR LR LR 00 09 28.7
BPAW Bear Paw Mtn. 79.95 22 *e*P **P 23 34 28.6 -1.4**
comp=Z,12nm,1.2s,mb4.6
ZAA0 Zalesovo Array 80.68 326 *e*P **P 23 34 33.2 -1.0**
ZALV Zalesovo Beam 80.68 326 P **P 23 34 33.2 -0.9**
comp=Z,2.6nm,0.7s,mb4.2,baz=108,slow=6.0,SNR=13
ZALV LR LR 00 10 47.8
comp=Z,84nm,20.4s,baz=262,slow=36
NVS Novosibirsk 81.86 327 *e*P **P 23 34 39.7 -0.7**
NVS pmax pmax
comp=Z,22nm,2.1s,mb4.6
NVS pmax pmax
comp=E,12nm,1.7s
COLD Coldfoot 81.90 19 *e*P **P 23 34 40.0 -0.4**
comp=E,7.0nm,1.0s,mb4.5
KSH Kashi 82.50 311 *e*P **P 23 34 46.3 +2.2**
KSH *e*pP pP 23 35 06.0 +0.5
KSH *e*sP sP 23 35 14.3 +0.2
KSH *e*PP PP 23 37 57.0 +2.5
KSH *e*S S 23 44 54.3 -0.3
KSH *e*sS sS 23 45 29.3 -1.8
KSH *e*SS SS 23 50 19.0 +1.3
KSH pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
KSH pmax pmax
comp=Z,81nm,5.1s
KSH LR LR
comp=N,100nm,5.9s
KSH LR LR
comp=E,81nm,4.9s
KSH LR LR
comp=Z,140nm,5.2s
ULHL Ulahol 82.88 313 P **P 23 34 46.4 +0.4**
SNR=5.7
KURK Kurchatov 83.31 322 PKiKP PKiKP 23 40 04.4 -1.0
comp=Z,0.5nm,0.7s,baz=89,slow=1.8,SNR=3.6
KURK Kurchatov 83.31 322 *e*P **P 23 34 47.5 -0.5**
KURK pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
KURK Kurchatov 83.31 322 *e*P **P 23 34 47.5 -0.5**
comp=Z,5.4nm,0.9s,mb4.4
TKM2 Tokmak 2 83.49 314 P **P 23 34 49.5 +0.4**
SNR=8.0
TKM2 Tokmak 2 83.49 314 *e*P **P 23 34 49.5 +0.4**
TKM2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
TKM2 Tokmak 2 83.49 314 *e*P **P 23 34 49.5 +0.3**
comp=Z,5.9nm,0.9s,mb4.4
KZA Kyzart 83.57 313 P **P 23 34 51.0 +1.5**
SNR=16
EGAK Eagle 84.03 23 *e*P **P 23 34 50.7 -0.6**
CHMS Chumysh 84.11 314 P **P 23 34 52.4 +0.1**
SNR=7.1
HYT Haines Junctio 84.13 28 *e*P **P 23 34 54.2 +2.3**
UCH Uchtor 84.13 313 P **P 23 34 53.7 +1.3**
SNR=17
UCH Uchtor 84.13 313 *e*P **P 23 34 53.5 +1.1**
comp=Z,16nm,1.1s,mb4.8
AAK Ala-Archa 84.23 313 P **P 23 34 53.7 +0.8**
SNR=5.8
AAK Ala-Archa 84.23 313 *e*P **P 23 34 53.3 +0.4**
AAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
AAK Ala-Archa 84.23 313 *e*P **P 23 34 53.3 +0.4**
comp=Z,5.5nm,0.7s,mb4.5
USP Ospenovka 84.35 314 P **P 23 34 54.0 +0.5**
SNR=14
DAWY Dawson 84.46 24 *e*P **P 23 34 53.5 0.0**
AML Almayashu 84.71 313 P **P 23 34 56.5 +1.1**
SNR=40
AML Almayashu 84.71 313 *e*P **P 23 34 56.6 +1.3**
comp=Z,31nm,0.9s,mb5.2
EKS2 Erkin-Say 84.75 313 *e*P **P 23 34 56.3 +0.8**
comp=Z,9.0nm,0.9s,mb4.7
MAW Mawson 85.91 203 *e*P **P 23 35 01.0 +0.2**
comp=Z,22nm,0.6s,mb5.3
MAW Mawson 85.91 203 P **P 23 35 00.8 0.0**
comp=Z,30nm,0.8s,mb5.3,baz=91,slow=6.5,SNR=65
MAW LR LR 00 10 10.0
comp=Z,208nm,20.3s,baz=81,slow=33
MAW Mawson 85.91 203 *e*P **P 23 35 01.0 +0.2**
MAW pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 87.16 305 *e*P **P 23 35 06.1 -1.5**
KBL pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KBL Kabul 87.16 305 *e*P **P 23 35 06.1 -1.5**
comp=Z,2.7nm,0.7s,mb4.3
INK Inuvik 88.11 21 *e*P **P 23 35 10.4 -1.0**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 88.11 21 *e*P **P 23 35 10.4 -1.0**
comp=Z,4.8nm,1.0s,mb4.5
BVAR Borovoye Array 88.78 323 P **P 23 35 13.5 -1.4**
comp=Z,4.0nm,0.7s,mb4.6,baz=104,slow=6.3,SNR=27
BRVK Borovoye 88.84 323 *e*P **P 23 35 13.7 -1.5**
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BRVK Borovoye 88.84 323 *e*P **P 23 35 13.7 -1.4**
comp=Z,7.2nm,0.9s,mb4.7
NVAR Mina Array Bea 91.96 52 P **P 23 35 29.1 -0.9**
comp=Z,1.6nm,0.8s,mb4.3,baz=248,slow=6.6,SNR=13
ABKAR Akbulak array 95.02 319 *e*P **P 23 35 41.4 -2.5**
comp=Z,1.4nm,0.8s,mb4.4
YKA Yellowknife Ar 95.12 28 P **P 23 35 42.5 -1.5**
comp=Z,1.5nm,0.7s,mb4.6,baz=269,slow=4.6,SNR=14
YKA PKKPbc PKKPbc 23 52 37.4 -3.5
comp=Z,1.0nm,0.7s,baz=81,slow=2.8,SNR=8.5
YKA LR LR 00 14 41.7
comp=Z,11nm,21.0s,baz=330,slow=33
YKA Yellowknife Ar 95.12 28 P **P 23 35 42.5 -1.5**
YKA PKKPbc PKKPbc 23 52 37.4 -3.5
YKA LR LR 00 14 41.7
LRM Limekiln Ridge 96.54 45 *e*P **P 23 35 52.5 +1.7**
PDAR Pinedale Array 98.69 48 P **P 23 35 58.8 -1.9**
comp=Z,1.0nm,0.9s,mb4.3,baz=264,slow=3.0,SNR=7.8
PDAR LR LR 00 13 57.0
comp=Z,126nm,20.2s,baz=258,slow=31
TXAR Lajitas Array 104.08 61 PKiKP PKiKP 23 40 42.4 +0.5
comp=Z,0.3nm,0.8s,baz=213,slow=4.3,SNR=4.1
TXAR PKKPbc PKKPbc 23 52 14.8 +0.5
comp=Z,0.3nm,0.7s,baz=111,slow=6.9,SNR=6.0
ARCES ARCESS Array B 106.39 343 PKiKP PKiKP 23 40 44.6 -0.3
comp=Z,2.4nm,0.8s,baz=217,slow=1.2,SNR=5.8
FINES FINESS Array B 110.57 336 PKiKP PKiKP 23 40 52.4 -0.7
comp=Z,2.2nm,0.7s,baz=83,slow=4.3,SNR=8.4
AKASG Malin Array Be 114.03 324 PKP PKiKP 23 40 59.1 -0.8
comp=Z,3.8nm,0.6s,baz=60,slow=2.4,SNR=18
AKBB Malin Array Si 114.03 324 *e*PKiKP PKiKP 23 40 58.9 -1.0
KIEV Kiev 114.04 324 *e*PKIKP PKiKP 23 40 58.5 -1.5
BR131 Keskin Array S 114.87 312 *e*PKP PKiKP 23 41 01.0 -0.9
BRTR Keskin Array B 114.87 312 PKP PKiKP 23 41 00.9 -1.0
comp=Z,1.2nm,0.9s,baz=127,slow=3.3,SNR=5.7
BRTR Keskin Array B 114.87 312 PKP PKiKP 23 41 00.9 -1.0
MMAI Mount Meron Ar 115.09 304 PKP PKiKP 23 41 01.6 -0.9
comp=Z,0.9nm,0.7s,baz=30,slow=3.8,SNR=3.7
NB2 NORSAR Subarra116.43 340 PKPdf PKPdf 23 41 02.1 -2.2
comp=Z,0.8nm,0.7s,baz=44,slow=1.9
NOA NORSAR Array B116.43 340 PKP PKPdf 23 41 03.1 -1.1
comp=Z,1.5nm,0.6s,baz=46,slow=1.9,SNR=14
NAO01 NORSAR Array S 116.69 340 *e*PKPdf PKPdf 23 41 04.1 -0.6
WCI Wyandotte Cave 116.88 49 *e*PKIKP PKPdf 23 41 05.3 -0.5
TIRR Tirgusor 117.00 318 ⇑PKIKP PKPdf 23 41 05.8 -0.1
TIRR Tirgusor 117.00 318 ⇑*i*P PKPdf 23 41 05.8 -0.1
BUR08 Bucovina Ar. S 117.72 323 *e*PKPdf PKPdf 23 41 07.6 +0.5
BURAR Bucovina Array 117.73 323 ⇓PKIKP PKPdf 23 41 05.6 -1.6
BURAR Bucovina Array 117.73 323 ⇓*i*P PKPdf 23 41 05.6 -1.6
MLR Muntele Rosu 118.20 320 PKP PKPdf 23 41 07.4 -0.7
comp=Z,1.9nm,0.6s,baz=116,slow=16,SNR=6.5
MLR Muntele Rosu 118.20 320 ⇑*i*P PKPdf 23 41 06.4 -1.7
KOLS Kolonicke sedl 118.84 325 *e*PKIKP PKPdf 23 41 09.8 +0.6
KOLS Kolonicke sedl 118.84 325 *e*PKP PKPdf 23 41 09.8 +0.6
STHS Stebnicka Huta 119.18 326 *e*PKIKP PKPdf 23 41 10.2 +0.3
STHS Stebnicka Huta 119.18 326 *e*PKP PKPdf 23 41 10.2 +0.3
TKL Tuckaleechee C 119.56 51 *e*PKIKP PKPdf 23 41 10.8 -0.3
DRGR 119.62 323 ⇑PKIKP PKPdf 23 41 10.5 -0.3
DRGR 119.62 323 ⇑*i*P PKPdf 23 41 10.4 -0.4
NIE Niedzica 119.69 326 *e*PKIKP PKPdf 23 41 11.6 +0.7
BOSA Boshof 119.74 234 PKP PKPdf 23 41 11.8 +0.1
comp=Z,1.8nm,0.7s,baz=285,slow=2.0,SNR=4.9
KECS Kecovo 120.09 325 *e*PKIKP PKPdf 23 41 09.9 -1.8
KECS Kecovo 120.09 325 *e*PKP PKPdf 23 41 09.9 -1.8
PLCA Paso Flores 120.24 143 PKP PKPdf 23 41 12.4 +0.2
comp=Z,1.4nm,0.8s,baz=129,slow=5.9,SNR=4.5
PSZ Piszkesteto 120.72 325 *e*PKPdf PKPdf 23 41 12.5 -0.4
PSZ Piszkesteto 120.72 325 ⇓*i*P PKPdf 23 41 12.7 -0.2
BZS Buzias 120.85 322 ⇑PKIKP PKPdf 23 41 13.0 -0.2
BZS Buzias 120.85 322 ⇑*i*P PKPdf 23 41 13.0 -0.2
LBTB Lobatse 120.86 238 *e*PKIKP PKPdf 23 41 13.9 0.0
MORC Moravsky Berou 121.00 328 *e*PKPdf PKPdf 23 41 13.2 -0.2
MORC Moravsky Berou 121.00 328 ⇓*i*P PKPdf 23 41 13.7 +0.3
VYHS Vyhne 121.01 326 *e*PKIKP PKPdf 23 41 13.2 -0.2
VYHS Vyhne 121.01 326 *e*PKP PKPdf 23 41 13.2 -0.2
KOLL Kolacno 121.21 326 *e*PKIKP PKPdf 23 41 14.0 +0.2
KOLL Kolacno 121.21 326 *e*PKP PKPdf 23 41 14.0 +0.2
LSZ Lusaka 121.62 249 *e*PKIKP PKPdf 23 41 15.5 0.0
VRAC Vranov 121.78 328 PKP PKPdf 23 41 12.6 -2.3
comp=Z,2.7nm,0.8s,baz=170,slow=3.1,SNR=4.4
VRAC Vranov 121.78 328 ⇑*i*P PKPdf 23 41 12.9 -2.0
BSEG Bad Segeberg 121.83 335 *e*PKPdf PKPdf 23 41 15.1 +0.3
JSC Jenkinsville 121.94 52 *e*PKIKP PKPdf 23 41 15.7 0.0
ZST Bratislava 122.14 326 *e*PKIKP PKPdf 23 41 16.4 +0.8
ZST Bratislava 122.14 326 *e*PKP PKPdf 23 41 16.4 +0.8
BRG Berggiesshubel 122.19 330 *e*PKPdf PKPdf 23 41 15.8 +0.2
BRG Berggiesshubel 122.19 330 *e*PKP PKPdf 23 41 15.5 -0.2
comp=Z,6.8nm,0.8s
PKSM Moragy 122.35 324 ⇓PKIKP PKPdf 23 41 15.9 -0.2
PKSM Moragy 122.35 324 ⇓*i*P PKPdf 23 41 15.9 -0.2
CLL Collm 122.38 331 *e*PKPdf PKPdf 23 41 16.0 0.0
CLL Collm 122.38 331 ⇑*i*PKIKP PKPdf 23 41 15.9 -0.1
CLL *e* 23 41 23.0
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 122.38 331 ⇑*i*PKP PKPdf 23 41 15.9 -0.1
CLL *e* 23 41 23.0
CLL Collm 122.38 331 ⇑*i*PKPdf PKPdf 23 41 15.9 -0.1
comp=Z,10.0nm,0.7s
CLL *e* 23 41 23.0
CLL *e*PKSdf 23 44 53.0
CLL *e*SSP 23 59 51.0
SKO Skopje 122.67 318 *i* PKP PKPdf 23 41 17.0 +0.2
IDI Anoyia 122.85 310 PKP PKPdf 23 41 17.4 0.0
comp=Z,7.7nm,0.7s,baz=211,slow=11,SNR=7.6
NRDL Niedersach Rie 122.92 334 *e*PKPdf PKPdf 23 41 17.2 +0.2
CSNA Conrad Observa 122.98 327 ⇑*i*PKPdf PKPdf 23 41 17.1 -0.1
comp=Z,5.2nm,0.6s

NCB	Newcomb	123.00	39	ePKPdf	PKPdf	23 41 17.0	-0.4
KRUS	Krusevo	123.07	318	i PKP	PKPdf	23 41 16.6	-1.0
TANN	Tannenbergstha	123.21	331	ePKPdf	PKPdf	23 41 17.6	0.0
CLZ	Clausthal	123.25	333	ePKPdf	PKPdf	23 41 18.2	+0.6
KHC	Kasperske Hory	123.47	329	ePKPdf	PKPdf	23 41 17.8	-0.4
MOX	Moxa	123.47	331	ePKPdf	PKPdf	23 41 18.0	-0.1
MOX	Moxa	123.47	331	ePKP	PKPdf	23 41 17.9	-0.2
GEC2	GERESS Array S	123.58	329	ePKPdf	PKPdf	23 41 18.4	0.0
GERES	GERESS Array B	123.58	329	PKP	PKPdf	23 41 18.4	0.0
	comp=Z,5.2nm,0.7s,baz=71,slow=1.5,SNR=60						
GVD	Gavdhos	123.63	309	ePKPdf	PKPdf	23 41 18.3	-0.6
WET	Wettzell	123.82	329	ePKPdf	PKPdf	23 41 18.9	+0.1
GRA1	Grafenberg Arr	124.29	331	ePKPdf	PKPdf	23 41 19.5	-0.2
GRF	Grafenberg Arr	124.29	331	ePKPdf	PKPdf	23 41 19.5	-0.2
BUG	Bochum--Univer	124.91	334	ePKPdf	PKPdf	23 41 20.9	+0.1
TNS	Taunus Mts	125.25	333	ePKPdf	PKPdf	23 41 21.1	-0.4
ABTA	Abfaltersbach	125.51	327	⇑i PKPdf	PKPdf	23 41 21.4	-0.7
	comp=Z,7.4nm,0.8s						
WTTA	Wattenberg	125.65	328	⇑i PKPdf	PKPdf	23 41 22.6	+0.2
	comp=Z,16nm,0.9s						
MOTA	Moosalm	125.88	329	⇑i PKPdf	PKPdf	23 41 22.5	-0.3
	comp=Z,8.8nm,0.6s						
STU	Stuttgart	125.89	331	ePKPdf	PKPdf	23 41 23.1	+0.3
STU	Stuttgart	125.89	331	ePKPdf	PKPdf	23 41 23.1	+0.3
MEM	Membach	126.06	334	PKP	PKPdf	23 41 22.3	-0.7
FETA	Feichten	126.28	328	⇑i PKPdf	PKPdf	23 41 23.7	+0.1
	comp=Z,11nm,0.8s						
BCLA	Clavier	126.50	335	PKP	PKPdf	23 41 23.5	-0.5
DAVA	Damuels	126.55	329	⇑i PKPdf	PKPdf	23 41 24.3	+0.2
	comp=Z,11nm,0.8s						
UCC	Uccle	126.61	335	PKP	PKPdf	23 41 24.6	+0.4
BFO	Black Forest	126.62	331	ePKPdf	PKPdf	23 41 23.9	-0.3
WLF	Walferdange	126.68	333	PKP	PKPdf	23 41 24.0	-0.3
WLF	Walferdange	126.68	333	ePKPdf	PKPdf	23 41 24.3	0.0
WLF	Walferdange	126.68	333	ePKPdf	PKPdf	23 41 24.4	+0.1
LCO	Las Campanas	126.81	131	ePKPdf	PKPdf	23 41 25.9	+0.8
DAVOX	Davos/Dischmat	126.88	329	PKP	PKPdf	23 41 25.0	+0.3
	comp=Z,9.0nm,0.7s						
GIVF	Givet	126.94	335	ePKIKP	PKPdf	23 41 24.0	-0.8
	comp=Z,18nm,0.8s						
DOU	Dourbes	127.05	335	PKP	PKPdf	23 41 24.8	-0.2
CDF	Champ du Feu	127.06	332	ePKIKP	PKPdf	23 41 22.9	-2.2
BAIF	Baives	127.24	335	ePKIKP	PKPdf	23 41 24.5	-0.8
	comp=Z,10nm,0.9s						
AQU	L'Aquila	127.61	322	ePKIKP	PKPdf	23 41 27.4	+1.1
HINF	Hinteralfeld	127.69	331	ePKIKP	PKPdf	23 41 24.3	-2.0
	comp=Z,17nm,0.9s						
HAU	Haudompre	127.79	332	ePKIKP	PKPdf	23 41 25.4	-1.1
	comp=Z,16nm,0.7s						
CABF	La Chapelle	128.91	331	ePKIKP	PKPdf	23 41 28.3	-0.3
	comp=Z,18nm,0.9s						
LPL	La Plagne	129.35	329	ePKIKP	PKPdf	23 41 29.1	-0.4
	comp=Z,5.0nm,0.5s						
LPG	La Plagne	129.35	329	ePKIKP	PKPdf	23 41 29.2	-0.3
LOR	Lormes	129.48	333	ePKIKP	PKPdf	23 41 29.1	-0.6
	comp=Z,6.7nm,0.7s						
BNI	Bardonecchia	129.70	329	ePKIKP	PKPdf	23 41 30.9	+0.7
SSF	Saint Saulge	129.80	333	ePKIKP	PKPdf	23 41 29.7	-0.6
	comp=Z,12nm,0.8s						
SMF	Signal de Mont	129.95	332	ePKIKP	PKPdf	23 41 29.9	-0.7
	comp=Z,13nm,0.9s						
AVF	Avril sur Loir	130.07	333	ePKIKP	PKPdf	23 41 29.8	-1.0
	comp=Z,3.7nm,0.7s						
PGF	Pioggiola	130.09	325	ePKIKP	PKPdf	23 41 30.2	-0.8
	comp=Z,56nm,1.2s						
SBF	Sospel	130.10	327	ePKIKP	PKPdf	23 41 30.0	-1.0
LDF	La Druitiere	130.16	337	ePKIKP	PKPdf	23 41 29.3	-1.6
	comp=Z,6.7nm,0.8s						
FLN	La Foliniere	130.16	337	ePKIKP	PKPdf	23 41 29.5	-1.4
	comp=Z,11nm,0.8s						
ORIF	Oris-en-Rattie	130.20	329	ePKIKP	PKPdf	23 41 30.5	-0.6
	comp=Z,14nm,0.8s						
BGF	Bois d'Agland	130.47	333	ePKIKP	PKPdf	23 41 31.0	-0.6
	comp=Z,15nm,0.7s						
GRR	Gorron	130.61	337	ePKIKP	PKPdf	23 41 31.2	-0.6
	comp=Z,10nm,0.7s						
FRF	La Foret Royal	130.73	328	ePKIKP	PKPdf	23 41 31.3	-0.9
	comp=Z,16nm,1.0s						
LMR	La Mourre	130.96	327	ePKIKP	PKPdf	23 41 31.8	-0.8
	comp=Z,9.4nm,0.8s						
TCF	Toulx Ste Croi	130.97	333	ePKIKP	PKPdf	23 41 32.1	-0.4
	comp=Z,15nm,0.7s						
SMRF	Simiane la Rot	131.01	329	ePKIKP	PKPdf	23 41 32.6	-0.1
	comp=Z,19nm,0.9s						
SGMF	Saint Gilles	131.37	338	ePKIKP	PKPdf	23 41 31.8	-1.5
	comp=Z,11nm,0.7s						
ROSF	Rostrenen	131.57	339	ePKIKP	PKPdf	23 41 32.7	-0.9
MFF	Saint Martin d	131.75	335	ePKIKP	PKPdf	23 41 33.4	-0.6
	comp=Z,7.8nm,0.8s						
LASF	Ste Croix	131.82	330	ePKIKP	PKPdf	23 41 33.9	-0.3
	comp=Z,12nm,0.8s						
QUIF	Quistinic	131.88	338	ePKIKP	PKPdf	23 41 33.2	-1.0
	comp=Z,9.8nm,0.9s						
RJF	Les Rejaudoux	132.03	333	ePKIKP	PKPdf	23 41 34.1	-0.5
CAF	Calviac	132.06	332	ePKIKP	PKPdf	23 41 34.5	-0.2
	comp=Z,4.9nm,0.8s						
LFF	La Frestale	132.66	333	ePKIKP	PKPdf	23 41 35.6	-0.2
	comp=Z,4.7nm,0.6s						
MTLF	Montolieu	133.17	330	ePKIKP	PKPdf	23 41 36.4	-0.4
	comp=Z,4.4nm,0.7s						
ROSC	El Rosal	133.21	87	SKPbc	SKPbc	23 45 04.8	+5.8
	comp=Z,4.4nm,0.3s,baz=91,slow=23,SNR=4.9						
KEST	Kesra	133.95	317	PKP	PKPdf	23 41 39.0	+0.5
	comp=Z,1.3nm,0.7s,baz=150,slow=8.1,SNR=5.1						
KEST				SKPbc	SKPbc	23 45 05.4	+4.6
	comp=Z,1.8nm,0.9s,baz=207,slow=3.4,SNR=4.9						
EPF	Esparros	134.31	332	ePKIKP	PKPdf	23 41 38.5	-0.5
	comp=Z,14nm,1.2s						
LPAZ	La Paz	134.79	118	PKP	PKPdf	23 41 40.2	-0.4
	comp=Z,4.6nm,0.8s,baz=124,slow=0.5,SNR=18						
LPAZ				SKP		23 45 12.4	
	comp=Z,16nm,1.0s,baz=290,slow=1.5,SNR=26						
LPAZ	La Paz	134.79	118	ePKPdf	PKPdf	23 41 41.9	+1.3
ETSF	Etsaut	134.83	332	ePKIKP	PKPdf	23 41 40.7	+0.8
	comp=Z,12nm,0.6s						
SJPF	Ste Jean	134.97	333	ePKIKP	PKPdf	23 41 40.6	+0.4
SDV	Santo Domingo	136.83	82	ePKPdf	PKPdf	23 41 44.8	+0.3
CPUP	Villa Florida	137.92	138	PKP	PKPdf	23 41 46.5	+0.3
	comp=Z,4.8nm,0.9s,baz=177,slow=18,SNR=3.1						
CPUP	Villa Florida	137.92	138	PKP	PKPdf	23 41 46.5	+0.3
ESDC	Sonseca Array	138.95	332	PKP	PKPdf	23 41 47.8	+0.1
	comp=Z,0.8nm,0.6s,baz=27,slow=2.5,SNR=5.3						
MVO	Moncorvo	139.05	336	ePKPdf	PKPdf	23 41 49.6	+1.8
MTE	Manteigas	139.91	336	ePKPdf	PKPdf	23 41 49.5	+0.1
PCBR	Castelo Branco	140.35	336	ePKPdf	PKPdf	23 41 50.8	+0.6
PMRV	Marv??o	140.67	335	ePKPdf	PKPdf	23 41 53.9	+3.1
EVO	Evora	141.68	335	ePKPdf	PKPdf	23 41 55.8	+3.1
MORF	Marmelete	142.99	335	ePKPdf	PKPdf	23 41 58.8	+3.8
TAM	Tamanrasset	143.28	303	ePKIKP	PKPdf	23 41 54.8	-1.1
TOA0	Torodi Ar. Sit	149.99	289	ePKPdf	PKPdf	23 42 06.4	-1.0
TOA0				ePKPbc	PKPbc	23 42 11.7	-0.7
TORD	Torodi Ar. Bea	149.99	289	PKP	PKPdf	23 42 06.6	-0.8
	comp=Z,25nm,0.9s,baz=42,slow=1.6,SNR=57						
TORD				PKPbc	PKPbc	23 42 11.7	-0.7
	comp=Z,26nm,0.9s,baz=70,slow=2.2,SNR=136						
KIC	Kosan Boka	157.37	276	ePKP1	PKPab	23 42 49.1	-0.5
KIC	Kosan Boka	157.37	276	ePKP2	PKPab	23 42 56.1	+6.5
	comp=Z,40nm,0.9s						
DBIC	Dimbokro	157.46	277	PKPab	PKPab	23 42 50.2	+0.2
	comp=Z,9.4nm,0.9s,baz=67,slow=2.8,SNR=9.0						
TIC	Toumodi	157.62	277	ePKP1	PKPab	23 42 49.3	-1.4
TIC	Toumodi	157.62	277	ePKP2	PKPab	23 42 56.1	+5.4
	comp=Z,25nm,0.9s						
LIC	Lamto	157.66	276	ePKP1	PKPab	23 42 50.0	-0.9
LIC	Lamto	157.66	276	ePKP2	PKPab	23 42 56.8	+5.9
	comp=Z,35nm,1.1s						
LIC	Lamto	157.66	276	ePKP2	PKPab	23 42 50.3	-0.6
	comp=Z,32nm,1.1s						

*IDC **30** 23:35:25.9±8.1, 10°.95N×125°.62E, h48km±78km, mb3.6/8, mb1 3.7/8, mb1mx3.4/21, mbtmp3.6/8, MS3.8/3, Ms1 3.8/3, ms1mx3.2/20, Error ellipse: s-maj=53.4km s-min=16.8km az=70.0*

*NEIC **30** 23:35:27.0±6.6, 10°.94N×125°.69E, h58km±61km, mb4.0/3, Error ellipse: s-maj=34.4km s-min=11.5km az=67.0*

*ISCJB **30** 23:35:27.4±1.4, 11°.03N±0°.06×125°.8E±0°.1, h80km±12km, mb4.0/11, Error ellipse: s-maj=20.4km s-min=9.5km az=164.1*

*MAN **30** 23:35:27, 11°.08N×125°.81E, h45km, mb4.6, ML3.5, MS3.4*

ISC 30 23:35:28.6±1.3, 11°.02N±0°.07×125°.8E±0°.1, h74km±12km, n32, σ0=92/31, mb4.0/11, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**1.18**	**272**	*eP*	**Pn**	**23 35 48.8**	**-0.9**
OCLP				*eS*	**Sn**	**23 36 00.2**	**-5.2**
MSLP	**Maasin**	**1.28**	**227**	*eP*	**Pn**	**23 35 51.0**	**0.0**
MSLP				*eS*	**Sn**	**23 36 03.1**	**-4.6**
LLP	**Lapu-Lapu**	**1.94**	**249**	⇑*eP*	**Pn**	**23 35 58.7**	**-0.9**
LLP				*eS*	**Sn**	**23 36 22.7**	**-0.5**
TBP	**Tagbilaran**	**2.33**	**236**	*eP*	**Pn**	**23 36 04.9**	**+0.1**
PVCP	**Virac**	**3.03**	**328**	*eP*	**Pn**	**23 36 13.4**	**-1.0**
SNPH	**Sibulan**	**3.03**	**237**	*eP*	**Pn**	**23 36 15.2**	**+0.8**
SNPH				*eS*	**Sn**	**23 37 06.4**	**+17**
RCP	**Roxas**	**3.06**	**280**	⇓*eP*	**Pn**	**23 36 16.3**	**+1.6**
GUIM	**Jordan**	**3.19**	**263**	*eP*	**Pn**	**23 36 16.5**	**0.0**
BUKP	**Musuan**	**3.21**	**193**	*eP*	**Pn**	**23 36 17.4**	**+0.6**
DCPH	**Dipolog City**	**3.42**	**225**	⇑*eP*	**Pn**	**23 36 19.4**	**-0.3**
OTRP	**Odiongan**	**3.95**	**290**	*eP*	**Pn**	**23 36 26.6**	**-0.2**
PAGZ	**Pagadian**	**3.96**	**217**	*eP*	**Pn**	**23 36 28.5**	**+1.5**
KAKA	**Kakadu**	**24.48**	**164**	*eP*	**P**	**23 40 39.6**	**-1.2**
	12nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**35.37**	**167**	P	**P**	**23 42 16.3**	**-0.9**
	0.6nm,0.4s,mb3.8,baz=350,slow=7.1,SNR=14						
ASAR				PcP	PcP	23 44 45.9	-0.1
	0.2nm,0.7s,baz=351,slow=2.4,SNR=4.0						
FORT	**Forrest**	**41.61**	**177**	*eP*	**P**	**23 43 09.2**	**-0.3**
STKA	**Stephens Creek**	**45.25**	**161**	P	**P**	**23 43 39.0**	**+0.3**
	2.8nm,0.4s,mb4.4,baz=346,slow=8.5,SNR=15						
PETK	**Petropavlovsk-**	**49.15**	**25**	P	**P**	**23 44 09.9**	**+1.2**
	1.5nm,0.8s,mb4.0,baz=245,slow=2.8,SNR=4.2						
MKAR	**Makanchi Array**	**51.16**	**323**	P	**P**	**23 44 24.4**	**+0.2**
	0.2nm,0.4s,mb3.5,baz=108,slow=9.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**53.76**	**331**	P	**P**	**23 44 42.7**	**-0.5**
	0.4nm,0.4s,mb3.9,baz=24,slow=28,SNR=3.1						
ZALV	**Zalesovo Beam**	**53.76**	**331**	P	**P**	**23 44 42.7**	**-0.5**
TKM2	**Tokmak 2**	**53.82**	**316**	*eP*	**P**	**23 44 42.1**	**-1.7**
	0.6nm,0.5s,mb3.9						
UCH	**Uchtor**	**54.33**	**314**	*eP*	**P**	**23 44 49.7**	**+2.1**
	1.6nm,1.0s,mb4.0						
KURK	**Kurchatov**	**55.20**	**325**	P	**P**	**23 44 53.8**	**+0.1**
	0.6nm,0.6s,mb3.8,baz=124,slow=7.5,SNR=5.1						
KURK	**Kurchatov**	**55.20**	**325**	*eP*	**P**	**23 44 55.3**	**+1.6**
	1.2nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**83.34**	**340**	P	**P**	**23 47 47.2**	**+0.1**
	2.1nm,0.9s,mb4.0,baz=77,slow=6.5,SNR=10						
ARCES	**ARCESS Array B**	**83.34**	**340**	P	**P**	**23 47 47.2**	**+0.1**
BRTR	**Keskin Array B**	**84.71**	**300**	LR	LR	00 28 18.0	
	comp=Z,20nm,20.7s,baz=273,slow=38						
FINES	**FINESS Array B**	**85.02**	**332**	P	**P**	**23 47 55.2**	**-0.6**
	1.5nm,1.1s,mb3.8,baz=100,slow=2.3,SNR=4.3						
AKASG	**Malin Array Be**	**85.70**	**321**	LR	LR	00 29 30.0	
	comp=Z,92nm,21.9s,baz=55,slow=38						
NOA	**NORSAR Array B**	**91.89**	**334**	LR	LR	00 35 43.9	
	comp=Z,52nm,19.6s,baz=65,slow=39						
TXAR	**Lajitas Array**	**117.68**	**49**	PKP	PKPdf	23 54 07.8	+0.9
	0.1nm,0.4s,baz=119,slow=2.5,SNR=4.4						
PLCA	**Paso Flores**	**147.07**	**157**	PKPbc	PKPbc	23 55 03.9	+0.6
	1.4nm,0.5s,baz=102,slow=1.8,SNR=7.5						

CASC 30 23:38:03.9±5.8, 8°.42N×82°.96W, h3km±31km, MD3.9, 5C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.46**	**36**	⇑*iP*	Pg	23 38 14.1	+1.4
BRU2				*eS*	Sg	23 38 22.9	+4.3
BAR1		**0.89**	**337**	⇓*iP*	Pg	23 38 20.8	-0.2
BAR1				⇓*iP*		23 38 20.8	
BAR1				*eS*	Sg	23 38 29.2	-3.2
CNI	**Changuinola**	**1.08**	**24**	⇑*iP*	Pg	23 38 24.6	0.0
BUS	**Buena Vista**	**1.38**	**325**	*eP*	Pn	23 38 28.7	-1.4
BUS				*eP*		23 38 28.8	
BUS				*eS*	Sg	23 38 48.1	0.0
BUS				*eS*	Sg	23 38 48.5	+0.4
QCR	**Quepos**	**1.55**	**310**	*eP*	Pn	23 38 30.9	-1.6
QCR				⇑*iP*		23 38 31.5	
QCR				*eS*	Sn	23 38 52.8	-0.4
QCR				*eS*	Sn	23 38 53.0	-0.2
LIO	**Limon**	**1.57**	**357**	*eP*	Pn	23 38 33.5	+0.7
URSC	**Urasca**	**1.62**	**330**	⇑*iP*	Pn	23 38 32.2	-1.2
URSC				⇑*eP*		23 38 32.2	
URSC				*eS*	Sn	23 38 53.6	-1.3
URSC				*eS*	Sn	23 38 54.0	-0.9
LAJ	**Bijagual**	**1.83**	**321**	*eP*	Pn	23 38 39.0	+2.7
SJS	**Escuela Geolog**	**1.85**	**324**	*eS*	Sn	23 39 04.9	+4.2
CGA2	**Cerro Gallo 2**	**2.17**	**317**	*eP*	Pn	23 38 41.8	+0.8
CGA2				*eS*	Sn	23 39 08.8	+0.3
JCR	**Jicaral**	**2.56**	**304**	*eP*	Pn	23 38 47.3	+1.0
CHPA	**Chiripa**	**2.78**	**316**	*i P*	Pn	23 38 54.0	+4.6
CHPA				*i S*	Sn	23 39 28.2	+4.7
AMAS	**Alto Masis**	**2.96**	**317**	*i P*	Pn	23 38 55.4	+3.5
AMAS				*i S*	Sn	23 39 32.6	+4.7
CUI	**Cuipilapa**	**3.11**	**316**	*i P*	Pn	23 38 56.9	+3.0
VCR	**Vista de Mar**	**3.13**	**303**	*eP*	Pn	23 38 55.7	+1.4
LIM1	**Limonal**	**3.20**	**315**	*i P*	Pn	23 38 58.2	+3.1

*ISK **30** 23:42:55.9, 36°.99N×29°.16E, h6km, MD3.2*

*ISCJB **30** 23:42:56.9±0.4, 36°.96N±0°.03×29°.19E±0°.03, h10km, Error ellipse: s-maj=4.9km s-min=3.8km az=6.0*

*CSEM **30** 23:42:56.6±0.1, 36°.97N×29°.20E, h5km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.6km az=23.0*

*DDA **30** 23:42:56.9, 36°.99N×29°.16E, h7km±4km, Md3.0*

ISC 30 23:42:56.9±0.6, 36°.97N±0°.03×29°.17E±0°.03, h7km±5km, n44, σ0=87/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*ePG*	**Pg**	**23 43 02.5**	**-0.8**
GLHS				*eSG*	**Sg**	**23 43 08.0**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.33**	**55**	*ePg*	**Pg**	**23 43 02.5**	**-0.8**
GLHS				*eSg*	**Sg**	**23 43 08.0**	**+0.4**
FETY	**Fethiye**	**0.34**	**191**	*ePG*	**Pg**	**23 43 03.2**	**-0.3**
FETY	**Fethiye**	**0.34**	**191**	*ePg*	**Pg**	**23 43 03.2**	**-0.3**
TURN	**Turunc**	**0.46**	**258**	*i P*	**Pg**	**23 43 11.4**	**+5.6**
TURN				*i S*	**Sg**	**23 43 22.9**	**+11**
ELL	**Elmali**	**0.64**	**110**	*ePG*	**Pg**	**23 43 08.5**	**-0.6**
ELL	**Elmali**	**0.64**	**110**	*ePg*	**Pg**	**23 43 08.5**	**-0.6**
YER	**Yerkesik**	**0.72**	**284**	*ePG*	**Pg**	**23 43 10.9**	**0.0**
YER	**Yerkesik**	**0.72**	**284**	*ePg*	**Pg**	**23 43 10.9**	**0.0**
DNZL	**Cakiroluk**	**0.73**	**353**	*i P*	**Pg**	**23 43 09.9**	**-1.0**
DNZL				*i S*	**Sg**	**23 43 21.3**	**+0.9**
DNZL	**Cakiroluk**	**0.73**	**353**	*i P*	**Pg**	**23 43 09.9**	**-1.0**
DNZL				*i S*	**Sg**	**23 43 21.3**	**+0.9**
DENT	**Denizli**	**0.79**	**352**	*ePG*	**Pg**	**23 43 10.4**	**-1.8**
DENT	**Denizli**	**0.79**	**352**	*ePg*	**Pg**	**23 43 10.4**	**-1.8**
AKAS	**Kas**	**0.81**	**154**	*i P*	**Pg**	**23 43 12.7**	**+0.1**
AKAS				*i S*	**Sg**	**23 43 30.2**	**+7.0**
AKAS	**Kas**	**0.81**	**154**	*i P*	**Pg**	**23 43 12.7**	**+0.1**
KORT	**Korkueli**	**0.95**	**88**	*i P*	**Pg**	**23 43 15.6**	**+0.4**
KORT				*i S*	**Sg**	**23 43 29.8**	**+2.3**
KORT	**Korkueli**	**0.95**	**88**	*i P*	**Pg**	**23 43 15.6**	**+0.5**
KORT				*i S*	**Sg**	**23 43 29.8**	**+2.3**
MLSB	**Milas**	**1.16**	**287**	*ePN*	**Pn**	**23 43 18.0**	**-1.5**
MLSB	**Milas**	**1.16**	**287**	*ePn*	**Pn**	**23 43 18.0**	**-1.5**
ANTB	**Antalya**	**1.20**	**93**	*ePN*	**Pn**	**23 43 19.3**	**-0.7**
ANTB	**Antalya**	**1.20**	**93**	*ePn*	**Pn**	**23 43 19.3**	**-0.7**
AYDN	**Tasoluk**	**1.24**	**304**	*i P*	**Pg**	**23 43 20.5**	**-0.2**
AYDN				*i S*	**Sg**	**23 43 37.7**	**+1.0**
AYDN	**Tasoluk**	**1.24**	**304**	*i P*	**Pg**	**23 43 20.5**	**-0.2**
AYDN				*i S*	**Sg**	**23 43 37.7**	**+1.0**
DAT	**Datca**	**1.30**	**260**	*ePN*	**Pn**	**23 43 21.9**	**+0.4**
DAT	**Datca**	**1.30**	**260**	*ePn*	**Pn**	**23 43 21.9**	**+0.5**
BDRM	**Kayabasi**	**1.38**	**275**	*i P*	**Pn**	**23 43 23.9**	**+1.3**
BDRM				*i S*	**Sb**	**23 43 42.2**	**+1.3**
BDRM	**Kayabasi**	**1.38**	**275**	*i P*	**Pn**	**23 43 23.9**	**+1.3**
BDRM				*i S*	**Sb**	**23 43 42.2**	**+1.3**
KHL	**Karahalli**	**1.38**	**12**	*ePN*	**Pn**	**23 43 21.7**	**-0.9**
KHL	**Karahalli**	**1.38**	**12**	*ePn*	**Pn**	**23 43 21.7**	**-0.9**
KHAL	**Karahalli**	**1.42**	**10**	*i P*	**Pn**	**23 43 23.1**	**-0.1**
KHAL				*i S*	**Sb**	**23 43 43.2**	**+1.1**
KHAL	**Karahalli**	**1.42**	**10**	*i P*	**Pn**	**23 43 23.1**	**-0.1**
KHAL				*i S*	**Sb**	**23 43 43.2**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*ePN*	**Pn**	**23 43 24.8**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.55**	**70**	*ePn*	**Pn**	**23 43 24.8**	**-0.1**
KULA	**Kula-Manisa**	**1.59**	**346**	*ePN*	**Pn**	**23 43 24.9**	**-0.7**
KULA	**Kula-Manisa**	**1.59**	**346**	*ePn*	**Pn**	**23 43 24.9**	**-0.7**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*ePN*	**Pn**	**23 43 29.7**	**-0.5**
SHUT	**Suhut-Afyon**	**1.93**	**34**	*ePn*	**Pn**	**23 43 29.7**	**-0.4**
IZM	**Izmir**	**2.08**	**314**	*ePN*	**Pn**	**23 43 31.9**	**-0.3**
DEMI	**Demirci**	**2.10**	**350**	*i P*	**Pn**	**23 43 32.8**	**+0.3**
DEMI	**Demirci**	**2.10**	**350**	*i P*	**Pn**	**23 43 32.8**	**+0.3**
BLCB	**Balcova**	**2.20**	**311**	*ePN*	**Pn**	**23 43 33.4**	**-0.4**
BLCB	**Balcova**	**2.20**	**311**	*ePn*	**Pn**	**23 43 33.4**	**-0.5**
HDMB	**Hadim**	**2.66**	**89**	*ePN*	**Pn**	**23 43 41.0**	**+0.8**
HDMB	**Hadim**	**2.66**	**89**	*ePn*	**Pn**	**23 43 41.0**	**+0.8**

KRSC 31 00:01:12.7±1.7, 52°.81N×154°.79E, h570km±60km, ML4.5, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.32**	**113**	*eP*	P	00 02 23.6	+1.9
ALID	**Alaid**	**2.00**	**166**	*eP*	P	00 02 27.4	+3.2
GNL	**Ganaly**	**2.09**	**64**	*eP*	P	00 02 26.6	+2.2
AVH	**Avacha**	**2.43**	**78**	*eP*	P	00 02 27.1	+1.1
KMNR	**Kamenistaya**	**4.35**	**45**	P	P	00 02 41.6	+3.3
MKZ	**Mys Kozlova**	**4.48**	**64**	*eP*	P	00 02 42.7	+3.4
MKZ				*i S*	S	00 03 46.8	-3.6
KBTR	**Krutoberegovo**	**5.78**	**51**	*eP*	P	00 02 52.8	+2.7
KBTR				*eS*	S	00 04 07.6	-2.4

KRSC 31 00:51:57.5±0.1, 55°.35N×166°.46E, h19km±21km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.32**	**243**	*i P*	Pg	00 52 05.3	+1.0
BKI				*i S*	Sg	00 52 11.4	+2.4
KBTR	**Krutoberegovo**	**2.23**	**294**	*eP*	Pn	00 52 33.4	0.0
KBTR				*eS*	Sn	00 53 00.3	0.0
MKZ	**Mys Kozlova**	**2.84**	**256**	*eP*	Pn	00 52 42.9	+1.1
MKZ				*eS*	Sn	00 53 15.8	+0.4
SMKR	**Semkarok**	**3.07**	**296**	*eP*	Pn	00 52 47.0	+2.2
SMKR				*eS*	Sn	00 53 22.9	+2.0
BDR	**Baidarnaya**	**3.19**	**295**	*eP*	Pn	00 52 49.2	+2.6
SRKR	**Sorokina**	**3.25**	**296**	*eP*	Pn	00 52 49.9	+2.6
SRKR				*eS*	Sn	00 53 28.1	+2.7
ZLN	**Zelenaya**	**3.27**	**284**	*eP*	Pn	00 52 50.2	+2.5
ZLN				*eS*	Sn	00 53 29.5	+3.5
CIRR	**Tsirk**	**3.32**	**286**	*eP*	Pn	00 52 50.9	+2.6
CIRR				*eS*	Sn	00 53 28.3	+1.1
BZMR	**Bezymyannaya**	**3.43**	**282**	*eP*	Pn	00 52 54.1	+4.2
KIRR	**Kirishev**	**3.52**	**282**	*eP*	Pn	00 52 53.9	+2.8
KMNR	**Kamenistaya**	**3.56**	**279**	*eP*	Pn	00 52 54.7	+3.1
KMNR				*eS*	Sn	00 53 38.2	+5.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT				*e*S	**Sn**	**01 11 13.0**	**-1.7**
JFK	**Kawauchi**	**4.29**	**7**	P	**Pn**	**01 10 34.7**	**-1.8**
CBIJ	**Chichi jima**	**6.22**	**164**	P	**Pn**	**01 11 00.1**	**-2.3**
	22nm,0.3s,baz=287,slow=20,SNR=7.4						
CBIJ				S	**Sn**	**01 12 07.0**	**-5.4**
	40nm,0.3s,baz=282,slow=22,SNR=12						
KSRS	**Korea Array**	**10.94**	**297**	P	**Pn**	**01 12 06.6**	**+1.2**
	0.2nm,0.3s,baz=107,slow=14,SNR=2.5						
ZALV	**Zalesovo Beam**	**43.93**	**315**	P	**P**	**01 17 25.0**	**-0.6**
	0.6nm,0.4s,mb3.6,baz=82,slow=15,SNR=3.3						
ZALV				PcP	PcP	01 19 08.3	-0.7
	0.5nm,0.5s,baz=70,slow=1.7,SNR=3.7						
MK31	**Makanchi Array**	**45.48**	**305**	*e*P	**P**	**01 17 38.0**	**0.0**
MKAR	**Makanchi Array**	**45.48**	**305**	P	**P**	**01 17 38.2**	**+0.2**
	0.7nm,0.4s,mb3.6,baz=83,slow=9.9,SNR=8.9						
COEN	**Coen**	**46.87**	**176**	*e*P	**P**	**01 17 49.9**	**+0.8**
	30nm,0.6s,mb5.1						
KURK	**Kurchatov**	**47.67**	**311**	P	**P**	**01 17 55.1**	**+0.1**
	0.9nm,0.5s,mb3.7,baz=91,slow=7.6,SNR=10						
KURK	**Kurchatov**	**47.67**	**311**	*e*P	**P**	**01 17 54.5**	**-0.4**
	1.5nm,0.7s,mb3.7						
BVAR	**Borovoye Array**	**52.55**	**314**	P	**P**	**01 18 31.2**	**-0.6**
	0.3nm,0.3s,mb3.5,baz=129,slow=5.9,SNR=4.1						
BVAR				PcP	PcP	01 19 39.1	-1.0
	0.3nm,0.4s,baz=278,slow=39,SNR=3.1						
WRAB	**Tennant Creek**	**53.03**	**187**	*e*P	**P**	**01 18 34.5**	**-1.0**
	5.9nm,0.4s,mb4.7						
ASAR	**Alice Springs**	**56.77**	**187**	P	**P**	**01 19 01.9**	**-0.5**
	3.4nm,0.5s,mb4.5,baz=4.6,slow=7.0,SNR=55						
ASAR				PcP	PcP	01 19 57.8	+1.2
	1.2nm,0.5s,baz=6.8,slow=3.7,SNR=5.6						
ABKAR	**Akbulak array**	**59.76**	**312**	*e*P	**P**	**01 19 22.3**	**-0.7**
	0.6nm,0.3s,mb3.9						
FORT	**Forrest**	**64.56**	**192**	*e*P	**P**	**01 19 54.9**	**-0.1**
	14nm,0.5s,mb5.0						
STKA	**Stephens Creek**	**64.64**	**179**	P	**P**	**01 19 55.5**	**0.0**
	1.0nm,0.3s,mb4.1,baz=310,slow=8.1,SNR=4.5						
FINES	**FINESS Array B**	**71.84**	**333**	P	**P**	**01 20 39.6**	**-0.4**
	0.6nm,0.3s,mb3.8,baz=58,slow=6.9,SNR=15						
NB2	**NORSAR Subarra**	**77.43**	**337**	P	**P**	**01 21 12.0**	**-0.3**
	comp=Z,1.0nm,0.7s,mb3.5,baz=45,slow=5.9						
NOA	**NORSAR Array B**	**77.43**	**337**	P	**P**	**01 21 12.2**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.4,baz=43,slow=5.5,SNR=5.6						
NVAR	**Mina Array Bea**	**78.17**	**52**	P	**P**	**01 21 18.8**	**+1.9**
	comp=Z,0.4nm,0.6s,mb3.2,baz=316,slow=6.3,SNR=3.4						
BRTR	**Keskin Array B**	**80.72**	**311**	P	**P**	**01 21 31.1**	**+0.5**
	comp=Z,0.7nm,0.5s,mb3.5,baz=129,slow=5.3,SNR=7.4						
PDAR	**Pinedale Array**	**81.15**	**44**	P	**P**	**01 21 33.6**	**+0.7**
	comp=Z,0.2nm,0.4s,mb3.1,baz=261,slow=3.6,SNR=2.9						
TXAR	**Lajitas Array**	**93.32**	**52**	P	**P**	**01 22 33.9**	**+1.6**
	comp=Z,0.9nm,0.7s,mb4.0,baz=290,slow=2.9,SNR=16						
TOA0	**Torodi Ar. Sit**	**119.32**	**312**	*e*PKPdf	PKPdf	01 28 05.2	-1.1
TORD	**Torodi Ar. Bea**	**119.32**	**312**	PKP	PKPdf	01 28 05.3	-1.0
	comp=Z,0.3nm,0.5s,baz=37,slow=1.1,SNR=26						

BJI ***31*** *01:24:00.9, 27.°10N×54.°57E, h14km, mB5.2/10, mb4.8/25, Ms4.7/13, Ms7 4.4/12*
THR ***31*** *01:24:03.5±0.3, 26.°54N×55.°34E, h16km±5km, ML4.3*
IDC ***31*** *01:24:04.0±0.7, 26.°83N×55.°26E, h0km, mb4.2/25, mb1 4.3/29, mb1mx4.2/34, mbtmp4.2/29, ML3.8/2, MS3.5/20, Ms1 3.5/20, ms1mx3.3/36, Error ellipse: s-maj=15.5km s-min=12.0km az=167.0*
NEIC ***31*** *01:24:05.7, 26.°76N×55.°29E, h14km, mb4.5/51, ML4.3(THR), MN4.5(TEH), After THR.*
CSEM ***31*** *01:24:05.1±0.2, 26.°71N×55.°29E, h10km, mb4.5/80, Error ellipse: s-maj=5.4km s-min=4.0km az=162.0*
TEH ***31*** *01:24:08.4, 26.°85N×55.°32E, h5km*
MOS ***31*** *01:24:08.8±0.8, 26.°80N×55.°24E, h51km, mb4.5/57, Error ellipse: s-maj=7.8km s-min=4.3km az=121.9*
OMAN ***31*** *01:24:14.5±2.1, 26.°41N×55.°57E, h10km, Error ellipse: s-maj=60.7km s-min=12.2km az=94.0*
SZGRF ***31*** *01:24:23.1, 28.°32N×55.°05E, h33km, mb4.0, Southern Iran*
ISC 31 01:24:06.8±0.6, 26.°74N±0.°02×55.°28E±0.°02, h18km±3km, h14km±.6km: pP-P, n526, σ1.°09/547, mb4.4/101, MS3.5/23, 22C-9D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.03**	**50**	Pg	**Pg**	**01 24 24.0**	**-2.8**
BNDS	**Bandar-Abbas**	**1.03**	**50**	*e*Pg	**Pg**	**01 24 24.7**	**-2.1**
BNDS	**Bandar-Abbas**	**1.03**	**50**	*e*Pg	**Pg**	**01 24 24.7**	**-2.1**
IBND	**Bandar-abas**	**1.33**	**58**	*e*Pg	**Pg**	**01 24 31.0**	**-1.4**
IBND				*e*		01 24 32.2	
	comp=Z,8μm,0.1s						
IBND				*e*Sg	**Sg**	**01 24 46.9**	**-2.9**
NAZ	**Nazwa, Dubai**	**1.78**	**169**	⇑P	**Pg**	**01 24 40.6**	**-0.5**
	SNR=22						
NAZ				⇑P		01 24 40.6	
	SNR=22						
NAZ				ml		01 24 44.7	
	SNR=272						
NAZ				ml		01 24 44.7	
	SNR=272						
NAZ	**Nazwa, Dubai**	**1.78**	**169**	P	**Pg**	**01 24 40.6**	**-0.4**
	SNR=22						
FAQ	**Al Faqa, Dubai**	**2.01**	**172**	⇓P	**Pg**	**01 24 43.6**	**-1.8**
	SNR=76						
FAQ				⇓P		01 24 43.6	
	SNR=76						
FAQ				ml		01 24 54.9	
	SNR=267						
FAQ				ml		01 24 54.9	
	SNR=267						
FAQ				⇑Sn	**Sn**	**01 25 06.0**	**+1.6**
FAQ				⇑Sn	**Sn**	**01 25 06.0**	**+1.6**
FAQ	**Al Faqa, Dubai**	**2.01**	**172**	P	**Pb**	**01 24 43.6**	**+0.8**
	SNR=76						
FAQ				Sn	**Sn**	**01 25 06.0**	**+1.6**
HATD	**Hatta, Dubai**	**2.06**	**158**	⇑P	**Pb**	**01 24 43.7**	**+0.2**
	SNR=27						
HATD				⇑P		01 24 43.7	
	SNR=27						
HATD				ml		01 24 53.8	
	SNR=247						
HATD				ml		01 24 53.8	
	SNR=247						
HATD	**Hatta, Dubai**	**2.06**	**158**	P	**Pb**	**01 24 43.7**	**+0.1**
	SNR=27						
ASUD	**Al Ashush, Dub**	**2.11**	**179**	⇑P	**Pg**	**01 24 45.6**	**-1.7**
	SNR=138						
ASUD				⇑P		01 24 45.6	
	SNR=138						
ASUD				ml		01 24 53.6	
	baz=0.0,slow=0.0,SNR=263						
ASUD				ml		01 24 53.6	
	baz=0.0,slow=0.0,SNR=263						
ASUD	**Al Ashush, Dub**	**2.11**	**179**	P	**Pg**	**01 24 45.6**	**-1.7**
	SNR=138						
GHIR	**Ghir-Karzin**	**2.55**	**308**	Pn	**Pn**	**01 24 48.0**	**+0.8**
GHIR				Sg	**Sg**	**01 25 25.0**	**-3.8**
GHIR	**Ghir-Karzin**	**2.55**	**308**	*e*Pn	**Pn**	**01 24 48.7**	**+1.5**
GHIR				*e*Sg	**Sg**	**01 25 28.6**	**-0.2**
GHIR				AML	AML	01 25 37.9	
	comp=E,2μm,0.5s						
GHIR				AML	AML	01 25 40.5	
	comp=N,2μm,0.7s						
GHIR	**Ghir-Karzin**	**2.55**	**308**	*e*Pn	**Pn**	**01 24 48.7**	**+1.5**
GHIR				*e*Sg	**Sg**	**01 25 25.6**	**-3.2**
IMOK	**Mouk**	**3.23**	**316**	Pn	**Pn**	**01 24 59.5**	**+3.0**
IMOK	**Mouk**	**3.23**	**316**	*e*Pn	**Pn**	**01 24 59.6**	**+3.1**
IMOK				*e*		01 26 02.5	
	comp=Z,22μm,0.4s						
IMOK	**Mouk**	**3.23**	**316**	*e*Pn	**Pn**	**01 24 59.6**	**+3.1**
ISRV	**Sarvestan**	**3.25**	**324**	Pn	**Pn**	**01 24 58.9**	**+2.0**
ISRV				Sg	**Sg**	**01 25 47.6**	**-3.7**
ISRV	**Sarvestan**	**3.25**	**324**	*e*Pn	**Pn**	**01 24 58.9**	**+2.0**
ISRV				*e*Sg	**Sg**	**01 25 47.7**	**-3.6**
ISRV				*e*		01 26 18.8	
	comp=Z,31μm,0.5s						
ISRV	**Sarvestan**	**3.25**	**324**	*e*Pn	**Pn**	**01 24 58.9**	**+2.0**
ISRV				*e*Sg	**Sg**	**01 25 47.7**	**-3.6**
KRBR	**Kerman**	**3.48**	**22**	*e*P	**Pn**	**01 25 01.0**	**+1.0**
KRBR	**Kerman**	**3.48**	**22**	*e*Pn	**Pn**	**01 25 01.8**	**+1.7**
KRBR				AML	AML	01 25 54.1	
	comp=E,296nm,0.5s						
KRBR				AML	AML	01 25 54.4	
	comp=N,459nm,0.7s						
KRBR	**Kerman**	**3.48**	**22**	*e*P	**Pn**	**01 25 01.0**	**+1.0**
KRBR	**Kerman**	**3.48**	**22**	*e*Pn	**Pn**	**01 25 01.6**	**+1.6**
IPAR	**Pars**	**3.66**	**328**	Pn	**Pn**	**01 25 04.3**	**+1.8**
IPAR	**Pars**	**3.66**	**328**	*e*Pn	**Pn**	**01 25 04.3**	**+1.8**
IPAR				*e*		01 26 25.2	
	comp=Z,7μm,0.5s						
IPAR	**Pars**	**3.66**	**328**	*e*Pn	**Pn**	**01 25 04.3**	**+1.8**
SLWS		**4.61**	**246**	P	**Pn**	**01 25 17.1**	**+1.6**
SLWS		**4.61**	**246**	P	**Pn**	**01 25 17.1**	**+1.6**
IMEH	**Mehriz**	**4.67**	**353**	Pn	**Pn**	**01 25 17.9**	**+1.6**
IMEH	**Mehriz**	**4.67**	**353**	*e*Pn	**Pn**	**01 25 18.0**	**+1.7**
IMEH				*e*		01 25 22.8	
	comp=Z,2μm,0.2s						
IMEH	**Mehriz**	**4.67**	**353**	*e*Pn	**Pn**	**01 25 18.0**	**+1.7**
BTHS		**4.82**	**237**	P	**Pn**	**01 25 19.6**	**+1.1**
BTHS		**4.82**	**237**	P	**Pn**	**01 25 19.5**	**+1.0**
IBAF	**Bafgh**	**4.84**	**3**	Pn	**Pn**	**01 25 19.9**	**+1.3**
IBAF	**Bafgh**	**4.84**	**3**	*e*Pn	**Pn**	**01 25 19.9**	**+1.3**
IBAF				*e*		01 25 29.3	
	comp=Z,5μm,0.2s						
IBAF	**Bafgh**	**4.84**	**3**	*e*Pn	**Pn**	**01 25 19.9**	**+1.3**
ISAD	**Sadrabad**	**5.34**	**345**	Pn	**Pn**	**01 25 27.6**	**+2.1**
ISAD	**Sadrabad**	**5.34**	**345**	*e*Pn	**Pn**	**01 25 27.7**	**+2.2**
ISAD				*e*		01 25 34.8	
	comp=Z,3μm,0.3s						
ISAD	**Sadrabad**	**5.34**	**345**	*e*Pn	**Pn**	**01 25 27.7**	**+2.2**
BOQSS		**5.37**	**262**	P	**Pn**	**01 25 28.9**	**+3.0**
ICHK	**Chekchek**	**5.54**	**352**	Pn	**Pn**	**01 25 29.3**	**+1.1**
ICHK	**Chekchek**	**5.54**	**352**	*e*Pn	**Pn**	**01 25 29.4**	**+1.2**
ICHK				*e*		01 25 35.1	
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**5.54**	**352**	*e*Pn	**Pn**	**01 25 29.4**	**+1.2**
IGAR	**Gharneh**	**6.31**	**334**	*e*Pn	**Pn**	**01 25 40.0**	**+1.2**
IGAR				*e*		01 25 47.4	
	comp=Z,1μm,0.1s						
IKOO	**Kooshah**	**6.53**	**29**	*e*Pn	**Pn**	**01 25 42.6**	**+0.8**
IKOO				*e*		01 26 15.0	
	comp=Z,1μm,0.5s						
IKOO	**Kooshah**	**6.53**	**29**	*e*Pn	**Pn**	**01 25 42.6**	**+0.8**
IZEF	**Zefreh**	**6.64**	**338**	Pn	**Pn**	**01 25 43.8**	**+0.3**
IZEF	**Zefreh**	**6.64**	**338**	*e*Pn	**Pn**	**01 25 43.8**	**+0.3**
IZEF				*e*		01 25 45.6	
	comp=Z,991nm,0.2s						
IZEF	**Zefreh**	**6.64**	**338**	*e*Pn	**Pn**	**01 25 43.8**	**+0.3**
ITEG	**Tejag**	**6.83**	**25**	*e*Pn	**Pn**	**01 25 46.0**	**-0.1**
ITEG				*e*		01 28 22.7	
	comp=Z,517nm,0.5s						
ITEG	**Tejag**	**6.83**	**25**	*e*Pn	**Pn**	**01 25 46.0**	**-0.1**
IPIR	**Pirpir**	**7.04**	**328**	Pn	**Pn**	**01 25 50.3**	**+1.4**
IPIR	**Pirpir**	**7.04**	**328**	*e*Pn	**Pn**	**01 25 50.4**	**+1.5**
IPIR				*e*		01 27 11.1	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**7.04**	**328**	*e*Pn	**Pn**	**01 25 50.4**	**+1.5**
KBD	**Kabd**	**7.13**	**292**	*e*P	**Pn**	**01 25 50.6**	**+0.4**
KBD				AML	AML	01 27 16.3	
	comp=Z,56nm,0.3s						
KBD	**Kabd**	**7.13**	**292**	*e*P	**Pn**	**01 25 50.6**	**+0.4**
RDF	**Al-Radifah**	**7.18**	**289**	*e*P	**Pn**	**01 25 51.7**	**+0.9**
RDF				AML	AML	01 27 13.8	
	comp=Z,95nm,0.5s						
RDF	**Al-Radifah**	**7.18**	**289**	*e*P	**Pn**	**01 25 51.7**	**+0.9**
IDAH	**Dahanechah**	**7.18**	**33**	*e*Pn	**Pn**	**01 25 53.4**	**+2.5**
IDAH				*e*		01 27 56.1	
	comp=Z,329nm,0.3s						
IDAH	**Dahanechah**	**7.18**	**33**	*e*Pn	**Pn**	**01 25 53.4**	**+2.5**
UMR	**Umm Al-Rimmam**	**7.24**	**294**	*e*P	**Pn**	**01 25 52.6**	**+1.0**
UMR	**Umm Al-Rimmam**	**7.24**	**294**	*e*P	**Pn**	**01 25 52.6**	**+1.0**
IKLH	**Kolahrood**	**7.30**	**335**	Pn	**Pn**	**01 25 53.5**	**+1.1**
IKLH				Sn	**Sn**	**01 27 11.5**	**-3.3**
IKLH	**Kolahrood**	**7.30**	**335**	*e*Pn	**Pn**	**01 25 53.6**	**+1.2**
IKLH				*e*		01 26 11.3	
	comp=Z,530nm,0.2s						
IKLH				*e*Sn	**Sn**	**01 27 11.5**	**-3.3**
IKLH	**Kolahrood**	**7.30**	**335**	*e*Pn	**Pn**	**01 25 53.6**	**+1.2**
IKLH				*e*Sn	**Sn**	**01 27 11.5**	**-3.3**
NAY	**Al-Naaiem**	**7.53**	**291**	*e*P	**Pn**	**01 25 56.3**	**+0.7**
NAY				AML	AML	01 27 21.1	
	comp=Z,78nm,0.6s						
NAY	**Al-Naaiem**	**7.53**	**291**	*e*P	**Pn**	**01 25 56.3**	**+0.7**
MIB	**Mutribah**	**7.63**	**295**	*e*P	**Pn**	**01 25 57.5**	**+0.4**
MIB				AML	AML	01 27 23.0	
	comp=Z,60nm,0.6s						
MIB	**Mutribah**	**7.63**	**295**	*e*P	**Pn**	**01 25 57.5**	**+0.4**
ISFB	**Sefidab**	**8.02**	**342**	Pn	**Pn**	**01 26 02.4**	**0.0**
ISFB	**Sefidab**	**8.02**	**342**	*e*Pn	**Pn**	**01 26 02.5**	**+0.1**
ISFB				*e*		01 26 24.2	
	comp=Z,325nm,0.3s						
ISFB	**Sefidab**	**8.02**	**342**	*e*Pn	**Pn**	**01 26 02.5**	**+0.1**
LYLS		**8.69**	**239**	P	**Pn**	**01 26 10.9**	**-0.7**
IANJ	**Anjilo**	**8.78**	**353**	Pn	**Pn**	**01 26 13.2**	**+0.5**
IANJ	**Anjilo**	**8.78**	**353**	*e*Pn	**Pn**	**01 26 13.2**	**+0.5**
IANJ				*e*		01 26 19.9	
	comp=Z,1μm,0.3s						
IANJ	**Anjilo**	**8.78**	**353**	*e*Pn	**Pn**	**01 26 13.2**	**+0.5**
ISHM	**Shahmirzad**	**9.19**	**350**	Pn	**Pn**	**01 26 19.1**	**+0.6**
ISHM	**Shahmirzad**	**9.19**	**350**	*e*Pn	**Pn**	**01 26 19.1**	**+0.6**
ISHM				*e*		01 26 45.8	
	comp=Z,396nm,0.3s						
ISHM	**Shahmirzad**	**9.19**	**350**	*e*Pn	**Pn**	**01 26 19.1**	**+0.6**
IDMV	**Damavand**	**9.23**	**343**	Pn	**Pn**	**01 26 18.7**	**-0.3**
IDMV	**Damavand**	**9.23**	**343**	*e*Pn	**Pn**	**01 26 18.7**	**-0.3**
IDMV				*e*		01 26 30.8	
	comp=Z,352nm,0.3s						
IDMV	**Damavand**	**9.23**	**343**	*e*Pn	**Pn**	**01 26 18.7**	**-0.3**
IRAZ	**Razeghan**	**9.78**	**333**	Pn	**Pn**	**01 26 26.2**	**-0.2**
IRAZ	**Razeghan**	**9.78**	**333**	*e*Pn	**Pn**	**01 26 26.2**	**-0.2**
IRAZ				*e*		01 28 39.0	
	comp=Z,409nm,0.4s						
IRAZ	**Razeghan**	**9.78**	**333**	*e*Pn	**Pn**	**01 26 26.2**	**-0.2**
IPRN	**Peran**	**9.80**	**346**	Pn	**Pn**	**01 26 28.1**	**+1.4**
IPRN	**Peran**	**9.80**	**346**	*e*Pn	**Pn**	**01 26 28.2**	**+1.5**
IPRN				*e*		01 26 42.0	
	comp=Z,750nm,0.4s						
IPRN	**Peran**	**9.80**	**346**	*e*Pn	**Pn**	**01 26 28.2**	**+1.5**
IMOG	**Moghan**	**9.96**	**19**	Pn	**Pn**	**01 26 30.4**	**+1.5**
IMOG	**Moghan**	**9.96**	**19**	*e*Pn	**Pn**	**01 26 30.4**	**+1.5**
IMOG				*e*		01 26 39.6	
	comp=Z,250nm,0.6s						
IMOG	**Moghan**	**9.96**	**19**	*e*Pn	**Pn**	**01 26 30.4**	**+1.5**
IKOM	**Komasi**	**9.99**	**320**	Pn	**Pn**	**01 26 29.5**	**+0.2**
IKOM	**Komasi**	**9.99**	**320**	*e*Pn	**Pn**	**01 26 29.5**	**+0.2**
IKOM				*e*		01 26 37.9	
	comp=Z,2μm,0.3s						
IKOM	**Komasi**	**9.99**	**320**	*e*Pn	**Pn**	**01 26 29.5**	**+0.2**
IPAY	**Payeh**	**10.18**	**17**	Pn	**Pn**	**01 26 32.6**	**+0.6**
IPAY	**Payeh**	**10.18**	**17**	*e*Pn	**Pn**	**01 26 32.6**	**+0.6**
IPAY				*e*		01 26 42.5	
	comp=Z,414nm,0.5s						
IPAY	**Payeh**	**10.18**	**17**	*e*Pn	**Pn**	**01 26 32.6**	**+0.6**
IKRD	**Kardeh**	**10.37**	**15**	Pn	**Pn**	**01 26 38.7**	**+4.1**
IKRD	**Kardeh**	**10.37**	**15**	*e*Pn	**Pn**	**01 26 38.7**	**+4.1**
IKRD				*e*		01 26 46.8	
	comp=Z,191nm,0.4s						
IDHR	**Dehrash**	**11.02**	**318**	Pn	**Pn**	**01 26 44.1**	**+0.7**
IDHR	**Dehrash**	**11.02**	**318**	*e*Pn	**Pn**	**01 26 44.2**	**+0.8**
IDHR				*e*		01 28 51.8	
	comp=N,2μm,0.2s						
IDHR	**Dehrash**	**11.02**	**318**	*e*Pn	**Pn**	**01 26 44.2**	**+0.8**
BHD	**Baghdad**	**11.46**	**307**	*e*Pn	**Pn**	**01 26 50.0**	**+0.4**
BHD				*e*Sn	**Sn**	**01 28 53.0**	**-4.2**
BHD				*e*Sg	Sx	01 30 21.0	
BHD	**Baghdad**	**11.46**	**307**	*e*Pn	**Pn**	**01 26 50.0**	**+0.4**
KBL	**Kabul**	**14.16**	**53**	*e*P	**Pn**	**01 27 29.0**	**+2.6**
KBL				pmax	pmax		
	comp=Z,16nm,1.1s						
KBL	**Kabul**	**14.16**	**53**	*e*Pn	**Pn**	**01 27 29.0**	**+2.6**
	comp=Z,16nm,1.1s						
KBL	**Kabul**	**14.16**	**53**	*e*Pn	**Pn**	**01 27 29.0**	**+2.6**
	comp=Z,16nm,1.1s						
HAKT	**HAKKARI**	**14.56**	**321**	*i* P	**Pn**	**01 27 29.9**	**-1.9**
DHBB	**Dhamar BB**	**15.81**	**222**	*e*P	**Pn**	**01 27 49.0**	**+0.5**
GNI	**Garni**	**15.99**	**329**	Pn	**Pn**	**01 27 50.4**	**-0.3**
	baz=147,slow=3.0,SNR=1.8						
GNI				LR	LR	01 35 04.8	
	comp=Z,85nm,18.5s,baz=321,slow=42						
GNI	**Garni**	**15.99**	**329**	*e*Pn	**Pn**	**01 27 56.4**	**+5.8**
	comp=Z,30nm,0.9s						
GNI				LR	LR	01 35 04.8	
BEST	**Besiri**	**16.22**	**317**	*i* P	**Pn**	**01 27 57.0**	**+3.4**
ASF	**Jabal al Asfar**	**16.89**	**293**	Pn	**Pn**	**01 28 02.2**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=308,slow=4.2,SNR=10						
ASF				Sn	**Sn**	**01 30 58.9**	**-11**
	comp=Z,0.3nm,0.3s,baz=198,slow=16,SNR=4.1						
ASF				LR	LR	01 36 09.5	
	comp=Z,126nm,20.4s,baz=184,slow=43						
ASF	**Jabal al Asfar**	**16.89**	**293**	P	**Pn**	**01 28 02.2**	**-0.1**
ASF						01 30 58.9	
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF				MLR	MLR		
	comp=Z,127nm,20.4s						
HOMI	**Horasan**	**17.31**	**323**	*i* P	**Pn**	**01 28 10.2**	**+2.7**
MAK	**Makhachkala**	**17.38**	**341**	P	**Pn**	**01 28 06.0**	**-2.2**
MAK				*e*S	**Sn**	**01 31 18.3**	**-2.9**
MAK				MLR	MLR		
	comp=Z,130nm,10.0s						
ERZM	**Erzurum**	**17.51**	**322**	*i* P	**Pn**	**01 28 10.9**	**+1.1**
ERZM	**Erzurum**	**17.51**	**322**	*i* P	**Pn**	**01 28 10.9**	**+1.0**
DDEM	**Demirkent**	**18.01**	**325**	*i* P	**Pn**	**01 28 20.3**	**+4.2**
DAGI	**Agillar**	**18.06**	**326**	*i* P	**Pn**	**01 28 20.5**	**+3.8**
ARTV	**Artvin**	**18.14**	**326**	*i* P	**Pn**	**01 28 25.0**	**+7.4**
EIL	**Elat**	**18.15**	**284**	P	**Pn**	**01 28 17.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=144,slow=8.7,SNR=3.7						
EIL				LR	LR	01 36 44.9	
	comp=Z,185nm,20.2s,baz=296,slow=42						
EIL	**Elat**	**18.15**	**284**	P	**Pn**	**01 28 17.8**	**-0.1**
EIL				LR	LR	01 36 44.9	
EIL	**Elat**	**18.15**	**284**	P	**Pn**	**01 28 17.8**	**-0.1**
MMAI	**Mount Meron Ar**	**18.32**	**295**	P	**Pn**	**01 28 19.3**	**-0.7**
	baz=101,slow=15,SNR=6.0						
MMAI				S	**Sn**	**01 31 34.4**	**-10**
	comp=Z,0.3nm,0.3s,baz=98,slow=39,SNR=2.8						
MMAI				LR	LR	01 37 15.5	
	comp=Z,238nm,18.5s,baz=85,slow=43						
GZT	**Gaziantep**	**18.34**	**310**	*i* P	**Pn**	**01 28 20.7**	**+0.5**
KUZU	**Kuzuini**	**18.40**	**307**	*i* P	**Pn**	**01 28 20.5**	**-0.4**
KUZU	**Kuzuini**	**18.40**	**307**	*i* P	**Pn**	**01 28 20.5**	**-0.4**
ZEI	**Tsey**	**18.49**	**333**	*e*P	**Pn**	**01 28 24.6**	**+2.6**
ZEI				pmax	pmax		
	comp=Z,26nm,0.7s						
COBT	**Iskenderun**	**18.88**	**306**	*i* P	**Pn**	**01 28 27.4**	**+0.7**
COBT	**Iskenderun**	**18.88**	**306**	*i* P	**Pn**	**01 28 27.4**	**+0.7**
ATD	**Arta Tunnel**	**19.13**	**220**	P	**Pn**	**01 28 31.6**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=267,slow=23,SNR=2.8						
ATD				LR	LR	01 36 14.8	
	comp=Z,192nm,21.8s,baz=17,slow=38						
ATD	**Arta Tunnel**	**19.13**	**220**	P	**Pn**	**01 28 31.6**	**+1.7**
ATD				LR	LR	01 36 14.8	
ANDN	**Andirin**	**19.30**	**309**	*i* P	**Pn**	**01 28 34.7**	**+3.0**
PINB	**Pinarbasi**	**19.80**	**312**	*i* P	**Pn**	**01 28 41.9**	**+4.1**
GRSN	**GIRESUNGRSN**	**19.94**	**319**	*i* P	**Pn**	**01 28 38.7**	**-0.7**
GRSN	**GIRESUNGRSN**	**19.94**	**319**	*i* P	**Pn**	**01 28 38.7**	**-0.7**
KIV	**Kislovodsk**	**19.97**	**333**	*d i* P	**Pn**	**01 28 39.6**	**-0.1**
KIV				pmax	pmax		
	comp=Z,22nm,1.2s						
KIV	**Kislovodsk**	**19.97**	**333**	*e*P	**Pn**	**01 28 39.7**	**0.0**
	comp=Z,55nm,0.9s						
KIV	**Kislovodsk**	**19.97**	**333**	*i* P	**Pn**	**01 28 39.6**	**-0.1**
	comp=Z,22nm,1.2s						
DDI	**Dehra Dun**	**20.32**	**75**	*ex*	x	01 28 45.0	
AVNT	**Avonos**	**20.90**	**310**	*i* P	**P**	**01 28 50.5**	**+2.4**
SOC	**Sochi**	**21.02**	**327**	*e*P	**P**	**01 28 54.2**	**+4.9**
SOC				*e*		01 29 23.0	
SOC				*e*S	**S**	**01 32 40.7**	**-1.9**
SOC				pmax	pmax		
	comp=Z,889nm,0.8s						
SOC				MLR	MLR		
	comp=Z,3μm,9.0s						
KSH	**Kashi**	**21.45**	**48**	*e*P	**P**	**01 28 47.3**	**-6.7**
KSH				*e*pP		01 28 51.0	
KSH				*e*sP	sP	01 28 54.5	-7.0
KSH				*e*PP		01 29 09.0	
KSH				*e*S	**S**	**01 32 32.0**	**-19**
KSH				*e*PcP	PcP	01 32 55.0	-1.9
KSH				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.3						
KSH				pmax	pm

comp=E,30nm,0.7s,mb4.9
VORD Divnogorie 27.09 338 *e*P **P 01 29 50.6 +2.4**
VORD pmax pmax
comp=Z,9.0nm,0.8s,mb4.3
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,40nm,0.9s
IDI Anoyia 27.32 296 P **P 01 29 50.2 -0.3**
comp=E,4.2nm,0.7s,mb4.1,baz=92,slow=12,SNR=3.5
IDI Anoyia 27.32 296 P **P 01 29 50.2 -0.3**
VSR Storozhevoye 27.34 338 *e*P **P 01 29 50.2 -0.3**
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR Storozhevoye 27.34 338 *e*P **P 01 29 50.2 -0.3**
GVD Gavdhos 27.90 294 *e*P **P 01 29 55.7 0.0**
comp=E,11nm,0.6s,mb4.7
GVD Gavdhos 27.90 294 *e*P **P 01 29 55.7 0.0**
comp=E,11nm,0.6s,mb4.7
TIRR Tirgusor 27.91 316 *e*P **P 01 29 54.5 -1.2**
TIRR pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
TIRR Tirgusor 27.91 316 *e*P **P 01 29 54.5 -1.2**
comp=Z,5.6nm,0.9s,mb4.2
TIRR Tirgusor 27.91 316 ⇓*i*P **P 01 29 59.9 +4.2**
TIRR Tirgusor 27.91 316 *e*P **P 01 29 54.5 -1.2**
comp=Z,6.0nm,0.9s,mb4.2
BRVK Borovoye 28.57 19 *e*P **P 01 30 01.1 -0.4**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
BRVK Borovoye 28.57 19 *e*P **P 01 30 01.1 -0.4**
comp=Z,3.6nm,0.9s,mb4.1
BRVK Borovoye 28.57 19 *e*P **P 01 30 01.1 -0.4**
comp=Z,4.0nm,0.9s,mb4.2
BVAR Borovoye Array 28.58 19 P **P 01 30 01.1 -0.4**
comp=Z,3.3nm,0.8s,mb4.1,baz=197,slow=7.5,SNR=16
BVAR LR LR 01 43 17.9
comp=Z,230nm,18.1s,MS3.8,baz=20,slow=40
BVAR Borovoye Array 28.58 19 P **P 01 30 01.1 -0.4**
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR MLR MLR
comp=Z,230nm,18.1s
BVAR Borovoye Array 28.58 19 P **P 01 30 01.1 -0.4**
comp=Z,230nm,18.1s
MK31 Makanchi Array 29.24 40 *e*P **P 01 30 07.5 0.0**
MK31 Makanchi Array 29.24 40 *e*P **P 01 30 07.5 0.0**
MKAR Makanchi Array 29.24 40 P **P 01 30 07.3 -0.1**
comp=Z,1.4nm,0.8s,mb3.8,baz=224,slow=6.7,SNR=12
MKAR LR LR 01 42 07.9
comp=Z,69nm,21.6s,MS3.2,baz=60,slow=37
MKAR Makanchi Array 29.24 40 P **P 01 30 07.4 -0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR MLR MLR
comp=Z,69nm,21.6s
MKAR Makanchi Array 29.24 40 P **P 01 30 07.4 -0.1**
comp=Z,69nm,21.6s
ARU Arti 29.76 4 P **P 01 30 05.7 -6.3**
KURK Kurchatov 29.84 30 P **P 01 30 11.9 -0.8**
comp=Z,2.6nm,0.9s,mb4.0,baz=231,slow=8.3,SNR=16
KURK LR LR 01 41 52.3
comp=Z,56nm,20.9s,MS3.2,baz=215,slow=36
KURK Kurchatov 29.84 30 *ce*P **P 01 30 12.3 -0.4**
KURK pmax pmax
comp=Z,5.0nm,1.7s,mb4.0
KURK Kurchatov 29.84 30 *e*P **P 01 30 12.4 -0.3**
comp=Z,3.8nm,1.1s,mb4.0
KURK Kurchatov 29.84 30 *e*P **P 01 30 12.3 -0.4**
comp=Z,5.0nm,1.7s,mb4.0
MLR Muntele Rosu 29.95 316 P **P 01 30 13.7 0.0**
comp=Z,1.5nm,0.8s,mb3.8
MLR LR LR 01 44 19.8
comp=Z,117nm,19.4s,MS3.5,baz=332,slow=41
MLR Muntele Rosu 29.95 316 P **P 01 30 13.7 -0.1**
MLR pmax pmax
comp=Z,2.0nm,0.8s
MLR MLR MLR
comp=Z,117nm,19.4s
MLR Muntele Rosu 29.95 316 ⇑*i*P **P 01 30 14.7 +0.9**
MLR Muntele Rosu 29.95 316 P **P 01 30 13.7 -0.1**
comp=Z,117nm,19.4s
VAY Valandovo 30.55 307 *i*P **P 01 30 18.8 -0.4**
VAY Valandovo 30.55 307 *i*P **P 01 30 18.7 -0.5**
AKASG Malin Array Be 31.10 327 P **P 01 30 22.8 -1.1**
comp=Z,2.9nm,0.6s,mb4.3,baz=135,slow=8.3,SNR=11
AKASG Malin Array Be 31.10 327 P **P 01 30 22.8 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 31.10 327 P **P 01 30 22.8 -1.1**
AKASG Malin Array Be 31.10 327 P **P 01 30 22.8 -1.1**
comp=Z,3.0nm,0.6s,mb4.3
AKBB Malin Array Si 31.10 327 *e*P **P 01 30 23.0 -0.9**
AKBB Malin Array Si 31.10 327 *e*P **P 01 30 23.0 -0.9**
KIEV Kiev 31.10 327 *e*P **P 01 30 22.7 -1.2**
KIEV pmax pmax
comp=Z,12nm,0.9s,mb4.7
KIEV Kiev 31.10 327 *e*P **P 01 30 22.7 -1.2**
comp=Z,12nm,0.9s,mb4.7
KIEV Kiev 31.10 327 *e*P **P 01 30 22.7 -1.2**
comp=Z,12nm,0.9s,mb4.7
WMQ Urumqi 31.21 48 *e*P **P 01 30 26.0 +1.0**
WMQ pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
WMQ LR LR
comp=N,250nm,27.0s,MS3.7
WMQ LR LR
comp=E,68nm,30.0s,MS3.7
WMQ LR LR
comp=Z,140nm,22.0s
BIA Bitola 31.36 306 *i*P **P 01 30 31.8 +5.5**
BURAR Bucovina Array 31.44 319 ⇑P **P 01 30 27.5 +0.6**
BURAR Bucovina Array 31.44 319 ⇑*i*P **P 01 30 27.5 +0.6**
BURAR Bucovina Array 31.44 319 ⇑*i*P **P 01 30 27.5 +0.6**
BUR08 Bucovina Ar. S 31.46 320 *e*P **P 01 30 27.4 +0.3**
BUR08 Bucovina Ar. S 31.46 320 *e*P **P 01 30 27.4 +0.3**
OBN Obninsk 31.47 339 ⇑*e*P **P 01 30 25.7 -1.3**
OBN *e* 01 31 29.3
OBN *e* 01 33 19.8
OBN *e*SS SS 01 37 13.7 -35
OBN pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
OBN Obninsk 31.47 339 *e*P **P 01 30 25.7 -1.3**
comp=Z,4.0nm,0.5s,mb4.5
OBN Obninsk 31.47 339 *e*PcP PcP 01 33 19.8 -0.1
KRUS Krusevo 31.52 306 *i*P **P 01 30 28.9 +1.2**
KRUS Krusevo 31.52 306 *i*P **P 01 30 28.8 +1.1**
SKO Skopje 31.56 307 *i*P **P 01 30 22.2 -5.9**
MOS Moscow 31.67 341 *e*P **P 01 30 23.2 -5.7**
MOS pmax pmax
comp=Z,40nm,1.1s,mb5.2
OHR Ohrid 31.77 306 *i*P **P 01 30 30.2 +0.3**
OHR Ohrid 31.77 306 *i*P **P 01 30 30.1 +0.2**
DRGR 32.54 317 ⇑P **P 01 30 37.6 +1.0**
DRGR 32.54 317 ⇑*i*P **P 01 30 37.5 +0.9**
DRGR 32.54 317 ⇑*i*P **P 01 30 37.5 +0.9**
BZS Buzias 32.73 314 ⇑P **P 01 30 31.6 -6.7**
BZS Buzias 32.73 314 ⇑*i*P **P 01 30 31.6 -6.7**
UZH Uzhgorod 33.64 319 *e*P **P 01 30 40.0 -6.2**
UZH *i* 01 30 55.6
KOLS Kolonicke sedl 33.80 320 *e*P **P 01 30 48.5 +0.9**
KOLS pmax pmax
comp=Z,16nm,1.0s,mb4.9
KOLS Kolonicke sedl 33.80 320 *e*P **P 01 30 48.5 +0.9**
KOLS *e*pP pP 01 30 51.8 -1.3
KOLS Kolonicke sedl 33.80 320 *e*P **P 01 30 48.5 +0.9**
comp=Z,16nm,1.0s,mb4.9
KWP Kalwaria Pacla 33.90 321 *e*P **P 01 30 48.4 0.0**
KWP pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KWP Kalwaria Pacla 33.90 321 *e*P **P 01 30 48.4 0.0**
comp=Z,4.6nm,1.1s,mb4.3
KWP Kalwaria Pacla 33.90 321 ⇓*i*P **P 01 30 48.6 +0.2**
KWP Kalwaria Pacla 33.90 321 *e*P **P 01 30 48.4 0.0**
comp=Z,5.0nm,1.1s,mb4.4
TIP Timpagrande 34.37 301 *e*P **P 01 30 50.9 -1.8**
comp=Z,28nm,1.7s,mb4.9
TIP Timpagrande 34.37 301 *e*P **P 01 30 50.9 -1.8**
comp=Z,28nm,1.7s,mb4.9
STHS Stebnicka Huta 34.62 320 *e*P **P 01 30 56.0 +1.3**
STHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
STHS Stebnicka Huta 34.62 320 *e*P **P 01 30 56.0 +1.3**
STHS *e*pP pP 01 30 58.9 -1.4
STHS Stebnicka Huta 34.62 320 *e*P **P 01 30 56.0 +1.3**
comp=Z,2.0nm,1.1s,mb4.0
KECS Kecovo 34.64 318 *e*P **P 01 30 55.6 +0.7**
KECS *e* 01 31 04.7
KECS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KECS Kecovo 34.64 318 *e*P **P 01 30 55.6 +0.7**
KECS *e*pP pP 01 30 59.6 -0.9
KECS *e*sP sP 01 31 04.7 +2.0
NVS Novosibirsk 34.71 28 *e*P **P 01 30 55.5 +0.1**
NVS *e*S **S 01 36 22.3 -2.2**
NVS pmax pmax
comp=Z,12nm,1.5s,mb4.6
NVS pmax pmax
comp=N,10.0nm,1.4s
NVS smax
comp=N,9.0nm,1.7s
NVS Novosibirsk 34.71 28 *e*P **P 01 30 55.5 +0.1**
comp=N,9.0nm,1.7s,mb4.4
NVS *e*S **S 01 36 22.3 -2.2**
PSZ Piszkesteto 34.76 317 *e*P **P 01 30 53.7 -2.2**
PSZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
PSZ Piszkesteto 34.76 317 *e*P **P 01 30 53.7 -2.2**
comp=Z,4.2nm,1.0s,mb4.3
PSZ Piszkesteto 34.76 317 *e*P **P 01 30 53.7 -2.2**
comp=Z,4.0nm,1.0s,mb4.3
ZAA0 Zalesovo Array 34.83 31 *e*P **P 01 30 55.6 -0.8**
ZAA0 Zalesovo Array 34.83 31 *e*P **P 01 30 55.6 -0.8**
ZALV Zalesovo Beam 34.83 31 P **P 01 30 54.9 -1.5**
comp=Z,7.7nm,0.7s,mb4.7,baz=241,slow=9.1,SNR=23
ZALV LR LR 01 45 36.2
comp=Z,47nm,18.4s,MS3.3,baz=235,slow=37
ZALV Zalesovo Beam 34.83 31 P **P 01 30 54.9 -1.5**
ZALV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ZALV MLR MLR
comp=Z,47nm,18.5s,MS3.3
PKSM Moragy 34.88 314 ⇓P **P 01 30 56.8 -0.2**
PKSM Moragy 34.88 314 ⇓*i*P **P 01 30 56.8 -0.2**
PKSM Moragy 34.88 314 P **P 01 30 56.8 -0.2**
IIGN Ignalina 35.53 331 *e*P **P 01 31 02.4 0.0**
IIGN Ignalina 35.53 331 *e*P **P 01 31 02.4 0.0**
VYHS Vyhne 35.64 317 *e*P **P 01 31 04.9 +1.4**
VYHS pmax pmax
comp=Z,4.0nm,1.9s,mb4.0
VYHS Vyhne 35.64 317 *e*P **P 01 31 04.9 +1.4**
comp=Z,4.4nm,1.9s,mb4.1
VYHS Vyhne 35.64 317 *e*P **P 01 31 04.9 +1.4**
VYHS Vyhne 35.64 317 *e*P **P 01 31 04.9 +1.4**
comp=Z,4.0nm,1.9s,mb4.0
ISAL Salakas 35.71 332 *e*P **P 01 31 03.8 -0.2**
ISAL Salakas 35.71 332 *e*P **P 01 31 03.8 -0.2**
IZAR Zarasai 35.78 332 *e*P **P 01 31 03.8 -0.8**
IZAR Zarasai 35.78 332 *e*P **P 01 31 03.8 -0.8**
OJC Ojcow 35.83 320 *e*P **P 01 31 03.6 -1.4**
OJC Ojcow 35.83 320 *e*P **P 01 31 03.6 -1.4**
MORC Moravsky Berou 36.94 319 *e*P **P 01 31 14.0 -0.6**
MORC pmax pmax
comp=Z,11nm,1.3s,mb4.5
MORC Moravsky Berou 36.94 319 *e*P **P 01 31 14.0 -0.6**
comp=Z,11nm,1.3s,mb4.5
MORC Moravsky Berou 36.94 319 ⇑*i*P **P 01 31 10.4 -4.2**
MORC Moravsky Berou 36.94 319 *e*P **P 01 31 14.0 -0.6**
comp=Z,11nm,1.3s,mb4.5
DPC Dobruska-Polom 37.89 319 *e*P **P 01 31 21.9 -0.7**
DPC *e*pP pP 01 31 26.5 -1.8
DPC Dobruska-Polom 37.89 319 *e*P **P 01 31 21.9 -0.7**
TREC Trest 37.98 317 *e*P **P 01 31 23.2 -0.2**
UPC Upice 38.14 319 *e*P **P 01 31 25.1 +0.4**
UPC *e*pP pP 01 31 28.8 -1.5
UPC Upice 38.14 319 *e*P **P 01 31 25.1 +0.4**
PRU Pruhonice 38.81 318 *e*P **P 01 31 30.5 +0.1**
PRU MLR MLR
comp=N,100nm,19.7s
PRU Pruhonice 38.81 318 *e*P **P 01 31 30.5 +0.1**
comp=N,100nm,19.7s
GERES GERESS Array B 38.93 316 P **P 01 31 30.6 -0.7**
comp=N,0.3nm,0.5s,mb3.3,baz=148,slow=31,SNR=6.4
GERES PcP PcP 01 33 42.0 +0.2
comp=N,1.1nm,1.0s,baz=123,slow=3.6,SNR=4.5
GERES LR LR 01 49 20.2
comp=N,55nm,19.1s,MS3.4,baz=112,slow=39
GERES GERESS Array B 38.93 316 P **P 01 31 30.6 -0.8**
GERES 01 33 42.0
GERES pmax pmax
comp=Z,1.0nm,1.0s
GERES MLR MLR
comp=Z,55nm,19.2s
GERES GERESS Array B 38.93 316 P **P 01 31 30.6 -0.8**
comp=Z,1.0nm,1.0s,mb3.5
GERES GERESS Array B 38.93 316 PcP PcP 01 33 42.0 +0.2
comp=Z,55nm,19.2s
GTA Gaotai 39.03 60 *e*P **P 01 31 33.5 +1.1**
GTA pP pP 01 31 38.0 0.0
GTA sP sP 01 31 41.0 +0.7
GTA pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
KHC Kasperske Hory 39.10 316 *e*P **P 01 31 32.1 -0.7**
comp=Z,8.5nm,1.1s,mb4.4
KHC Kasperske Hory 39.10 316 *e*P **P 01 31 32.2 -0.6**
KHC *e*pP pP 01 31 36.1 -2.3
KHC *e*x x 01 31 42.0
KHC Kasperske Hory 39.10 316 *e*P **P 01 31 32.2 -0.6**
JOF Joensuu 39.47 343 *e*P **P 01 31 34.2 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
JOF Joensuu 39.47 343 *e*p **P 01 31 34.2 -1.5**
comp=Z,3.4nm,0.7s,mb4.2
JOF Joensuu 39.47 343 *e*P **P 01 31 34.2 -1.5**
comp=Z,3.0nm,0.7s,mb4.1
BRG Berggiesshubel 39.49 319 *e*P **P 01 31 30.1 -6.0**
comp=Z,2.2nm,0.8s,mb3.9
BRG *e* 01 31 41.3
comp=Z,4.8nm,1.0s
FINES FINESS Array B 39.86 339 P **P 01 31 37.8 -1.1**
comp=Z,2.7nm,0.5s,mb4.2,baz=146,slow=9.1,SNR=16
FINES FINESS Array B 39.86 339 P **P 01 31 37.8 -1.2**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 39.86 339 P **P 01 31 37.8 -1.2**
comp=Z,3.0nm,0.5s,mb4.3
KEST Kesra 39.98 295 P **P 01 31 41.4 +1.0**
comp=Z,0.7nm,0.8s,mb3.5,baz=79,slow=6.5,SNR=6.3
MOTA Moosalm 40.16 313 ⇓*i*P **P 01 31 40.4 -1.3**
comp=Z,3.8nm,0.7s,mb4.3
MOTA Moosalm 40.16 313 P **P 01 31 40.4 -1.2**
comp=Z,3.8nm,0.7s,mb4.3
CLL Collm 40.20 319 *e*P **P 01 31 41.0 -1.0**
CLL pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
CLL Collm 40.20 319 *e*P **P 01 31 41.0 -1.0**
comp=Z,2.0nm,0.9s,mb3.9
CLL *i* pP 01 31 45.3 -2.3
CLL Collm 40.20 319 *e*P **P 01 31 41.0 -1.0**
comp=Z,2.0nm,0.9s,mb3.9
CLL *i* pP pP 01 31 45.3 -2.3
CLL *i* 01 31 51.0
CLL *i* 01 32 03.1
CLL Collm 40.20 319 *e*P **P 01 31 41.0 -1.0**
comp=Z,2.0nm,0.9s,mb3.9
KAF Kangasniemi 40.28 339 *e*P **P 01 31 42.3 -0.2**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KAF Kangasniemi 40.28 339 *e*p **P 01 31 42.3 -0.2**
comp=Z,2.1nm,0.5s,mb4.1
KAF Kangasniemi 40.28 339 *e*P **P 01 31 42.3 -0.2**
comp=Z,2.0nm,0.5s,mb4.1
FETA Feichten 40.32 312 ⇑*i*P **P 01 31 42.5 -0.5**
comp=Z,9.6nm,0.7s,mb4.6
FETA Feichten 40.32 312 P **P 01 31 42.5 -0.5**
comp=Z,9.6nm,0.7s,mb4.6
PGF Pioggiola 40.69 305 *e*P **P 01 31 45.1 -1.0**
PGF Pioggiola 40.69 305 *e*P **P 01 31 45.1 -1.0**
GRA1 Grafenberg Arr 40.74 316 *e*P **P 01 31 50.2 +3.8**
comp=Z,4.0nm,1.1s,mb4.0
GRF Grafenberg Arr 40.74 316 *e*P **P 01 31 50.2 +3.8**
comp=Z,4.0nm,1.1s,mb4.0
GRF Grafenberg Arr 40.74 316 *e*P **P 01 31 50.2 +3.8**
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
GRF Grafenberg Arr 40.74 316 *e*P **P 01 31 50.2 +3.8**
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
CHTO Chiang Mai 40.87 92 *e*P **P 01 31 47.9 0.0**
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
CHTO Chiang Mai 40.87 92 *e*P **P 01 31 47.9 0.0**
comp=Z,3.9nm,0.7s,mb4.2
CHTO Chiang Mai 40.87 92 *e*P **P 01 31 47.9 0.0**
comp=Z,4.0nm,0.7s,mb4.2
DAVA Damuels 40.95 312 ⇑*i*P **P 01 31 47.1 -1.1**
comp=Z,12nm,0.5s,mb4.8
DAVA Damuels 40.95 312 P **P 01 31 47.1 -1.1**
comp=Z,12nm,0.5s,mb4.8
CMAR Chiang Mai Arr 40.99 92 P **P 01 31 49.8 +0.9**
comp=Z,1.2nm,0.3s,mb4.0,baz=291,slow=9.6,SNR=9.4
CMAR Chiang Mai Arr 40.99 92 P **P 01 31 49.8 +1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 40.99 92 P **P 01 31 49.8 +1.0**
comp=Z,1.0nm,0.3s,mb3.9
SBF Sospel 42.00 307 *e*P **P 01 31 55.9 -0.9**
comp=Z,48nm,1.2s,mb4.7
SBF Sospel 42.00 307 *e*P **P 01 31 55.9 -0.9**
SBF pmax pmax
comp=Z,24nm,1.2s,mb4.7
SBF Sospel 42.00 307 *e*P **P 01 31 55.9 -0.9**
comp=Z,24nm,1.2s,mb4.7
SBF Sospel 42.00 307 *e*P **P 01 31 55.9 -0.9**
comp=Z,24nm,1.2s,mb4.7
LZH Lanzhou 42.12 65 *e*P **P 01 31 58.0 +0.1**
LZH pP pP 01 32 02.0 -1.6
LZH sP sP 01 32 04.5 -1.3
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.5
CD2 Chengdu 42.42 73 P **P 01 32 00.5 +0.1**
CD2 pP pP 01 32 05.0 -1.1
CD2 sP sP 01 32 07.3 -1.1
CD2 PP PP 01 33 42.0 +3.2
CD2 S **S 01 38 21.5 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.7
CD2 pmax pmax
comp=Z,100nm,5.3s
CD2 LR LR
comp=N,280nm,4.8s
CD2 LR LR
comp=Z,170nm,6.2s
KMI Kunming 42.52 81 P **P 01 32 05.5 +4.1**
KMI pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
MBDF Montbardon 42.59 308 *e*P **P 01 32 01.1 -0.5**
MBDF Montbardon 42.59 308 *e*P **P 01 32 01.1 -0.5**
LPG La Plagne 42.72 309 *e*P **P 01 32 02.7 0.0**
comp=Z,6.0nm,0.6s,mb4.2
LPG La Plagne 42.72 309 *e*P **P 01 32 02.7 0.0**
LPG pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
LPG La Plagne 42.72 309 *e*P **P 01 32 02.7 0.0**
comp=Z,3.0nm,0.6s,mb4.2
LPG La Plagne 42.72 309 *e*P **P 01 32 02.7 0.0**
comp=Z,3.0nm,0.6s,mb4.2
CDF Champ du Feu 42.91 313 *e*P **P 01 32 03.6 -0.6**
CDF Champ du Feu 42.91 313 *e*P **P 01 32 03.6 -0.6**
ECH Echery 42.95 313 *e*P **P 01 32 02.5 -2.0**
ECH pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
ECH Echery 42.95 313 *e*P **P 01 32 02.5 -2.0**
comp=Z,4.8nm,0.9s,mb4.2
ECH Echery 42.95 313 *e*P **P 01 32 02.5 -2.0**
comp=Z,5.0nm,0.9s,mb4.2
HINF Hinteralfeld 43.06 312 *e*P **P 01 32 04.8 -0.6**
HINF Hinteralfeld 43.06 312 *e*P **P 01 32 04.8 -0.6**
CABF La Chapelle 43.35 311 *e*P **P 01 32 07.3 -0.5**
comp=Z,6.9nm,0.7s,mb4.2
CABF La Chapelle 43.35 311 *e*P **P 01 32 07.3 -0.5**
CABF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
CABF La Chapelle 43.35 311 *e*P **P 01 32 07.3 -0.5**
comp=Z,3.5nm,0.7s,mb4.2
CABF La Chapelle 43.35 311 *e*P **P 01 32 07.3 -0.5**
comp=Z,3.5nm,0.7s,mb4.2
ZAK Zakamensk 43.37 44 *e*P **P 01 32 08.2 +0.3**
ZAK *e* 01 32 26.6
ZAK pmax pmax
comp=Z,2.0nm,1.5s,mb3.6
ZAK Zakamensk 43.37 44 *e*P **P 01 32 08.2 +0.3**
comp=Z,2.0nm,1.5s,mb3.6
HAU Haudompre 43.43 313 *e*P **P 01 32 07.9 -0.5**
HAU *e*MLR MLR
comp=Z,52nm,18.5s,MS3.2
HAU Haudompre 43.43 313 *e*P **P 01 32 07.9 -0.5**
HAU LR LR
comp=Z,50nm,18.5s,MS3.5
HAU Haudompre 43.43 313 *e*P **P 01 32 07.9 -0.5**
WLF Walferdange 43.91 315 *e*P **P 01 32 11.6 -0.6**
WLF pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
WLF Walferdange 43.91 315 *e*P **P 01 32 11.6 -0.6**
comp=Z,8.7nm,1.1s,mb4.4
WLF Walferdange 43.91 315 *e*P **P 01 32 11.6 -0.6**
comp=Z,9.0nm,1.1s,mb4.4
VIVF Saint-Julien-l 44.09 308 *e*P **P 01 32 13.5 -0.2**
VIVF Saint-Julien-l 44.09 308 *e*P **P 01 32 13.5 -0.2**
MEZF Maizieres J'vi 44.38 313 *e*P **P 01 32 14.9 -1.1**
MEZF Maizieres J'vi 44.38 313 *e*P **P 01 32 14.9 -1.1**
LASF Ste Croix 44.59 307 *e*P **P 01 32 16.7 -1.1**
comp=Z,38nm,1.4s,mb4.7
LASF Ste Croix 44.59 307 *e*P **P 01 32 16.7 -1.1**
comp=Z,19nm,1.4s,mb4.7
BCLA Clavier 44.61 316 P **P 01 32 18.4 +0.6**
BCLA Clavier 44.61 316 P **P 01 32 18.4 +0.6**
GIVF Givet 44.84 315 *e*P **P 01 32 19.3 -0.4**
GIVF Givet 44.84 315 *e*P **P 01 32 19.3 -0.4**
SONM Songino Array 44.85 48 P **P 01 32 20.1 +0.3**
comp=Z,2.4nm,0.7s,mb4.1,baz=251,slow=9.2,SNR=7.5
SONM Songino Array 44.85 48 P **P 01 32 20.1 +0.3**
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 44.85 48 P **P 01 32 20.1 +0.3**
comp=Z,2.0nm,0.7s,mb4.1
SMF Signal de Mont 44.89 310 *e*P **P 01 32 18.7 -1.4**
comp=Z,19nm,1.1s,mb4.5
SMF Signal de Mont 44.89 310 *e*P **P 01 32 18.7 -1.4**
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
SMF Signal de Mont 44.89 310 *e*P **P 01 32 18.7 -1.4**
comp=Z,9.6nm,1.1s,mb4.6
SMF Signal de Mont 44.89 310 *e*P **P 01 32 18.7 -1.4**
comp=Z,9.6nm,1.1s,mb4.6
LOR Lormes 44.97 311 *e*P **P 01 32 19.5 -1.2**
LOR *e*MLR MLR
comp=Z,68nm,21.0s,MS3.2
LOR Lormes 44.97 311 *e*P **P 01 32 19.5 -1.2**
LOR LR LR
comp=Z,70nm,21.0s,MS3.6
LOR Lormes 44.97 311 *e*P **P 01 32 19.5 -1.2**
DOU Dourbes 44.98 315 P **P 01 32 21.3 +0.5**
comp=Z,6.2nm,1.9s,mb4.1
DOU Dourbes 44.98 315 P **P 01 32 21.3 +0.5**
comp=Z,6.2nm,1.9s,mb4.1
SSF Saint Saulge 45.17 311 *e*P **P 01 32 21.2 -1.2**
comp=Z,21nm,1.2s,mb4.6
SSF Saint Saulge 45.17 311 *e*P **P 01 32 21.2 -1.2**
SSF pmax pmax
comp=Z,11nm,1.2s,mb4.6
SSF Saint Saulge 45.17 311 *e*P **P 01 32 21.2 -1.2**
comp=Z,11nm,1.2s,mb4.5
SSF Saint Saulge 45.17 311 *e*P **P 01 32 21.2 -1.2**
comp=Z,11nm,1.2s,mb4.6
BAIF Baives 45.22 315 *e*P **P 01 32 22.3 -0.4**
comp=Z,19nm,0.9s,mb4.6
BAIF Baives 45.22 315 *e*P **P 01 32 22.3 -0.4**
BAIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
BAIF Baives 45.22 315 *e*P **P 01 32 22.3 -0.4**
comp=Z,9.5nm,0.9s,mb4.6
BAIF Baives 45.22 315 *e*P **P 01 32 22.3 -0.4**
comp=Z,9.5nm,0.9s,mb4.6
AVF Avril sur Loir 45.24 310 *e*P **P 01 32 22.7 -0.2**
comp=Z,6.3nm,0.8s,mb4.2
AVF Avril sur Loir 45.24 310 *e*P **P 01 32 22.7 -0.2**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
AVF Avril sur Loir 45.24 310 *e*P **P 01 32 22.7 -0.2**
comp=Z,3.2nm,0.8s,mb4.2
AVF Avril sur Loir 45.24 310 *e*P **P 01 32 22.7 -0.2**

comp=Z,3.2nm,0.8s,mb4.2
NB2 NORSAR Subarra 45.27 332 P **P** **01 32 21.3 -1.7**
comp=Z,2.6nm,0.6s,mb4.2,baz=119,slow=7.9
NB2 NORSAR Subarra 45.27 332 P **P** **01 32 21.3 -1.7**
comp=Z,2.6nm,0.6s,mb4.2,baz=119,slow=7.8,SNR=8.7
NOA NORSAR Array B 45.27 332 P **P** **01 32 21.8 -1.2**
comp=Z,3.3nm,0.8s,mb4.2,baz=118,slow=7.8,SNR=16
NOA LR LR 01 54 45.3
comp=Z,37nm,19.1s,MS3.3,baz=90,slow=41
NOA NORSAR Array B 45.27 332 P **P** **01 32 21.8 -1.2**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA MLR MLR
comp=Z,37nm,19.2s
NOA NORSAR Array B 45.27 332 P **P** **01 32 21.8 -1.2**
comp=Z,37nm,19.2s
ULN Ulaanbaatar 45.29 48 *eP* **P** **01 32 23.1 -0.2**
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ULN Ulaanbaatar 45.29 48 *eP* **P** **01 32 23.1 -0.2**
comp=Z,4.4nm,0.9s,mb4.3
ULN Ulaanbaatar 45.29 48 *eP* **P** **01 32 23.1 -0.2**
comp=Z,4.0nm,0.9s,mb4.2
BGF Bois d'Agland 45.56 310 *eP* **P** **01 32 24.1 -1.3**
comp=Z,13nm,0.8s,mb4.6
BGF Bois d'Agland 45.56 310 *eP* **P** **01 32 24.1 -1.3**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BGF Bois d'Agland 45.56 310 *eP* **P** **01 32 24.1 -1.3**
comp=Z,6.3nm,0.8s,mb4.6
BGF Bois d'Agland 45.56 310 *eP* **P** **01 32 24.1 -1.3**
comp=Z,6.3nm,0.8s,mb4.6
GYA Guiyang 45.68 78 P **P** **01 32 27.8 +1.1**
GYA PcP PcP 01 34 05.8 +1.1
GYA PP PP 01 34 16.0 +2.2
GYA ScP ScP 01 37 58.0 +1.2
GYA S **S** **01 39 10.0 +0.9**
GYA ScS ScS 01 42 21.5 -1.0
GYA SS SS 01 42 26.8 -6.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GYA LR LR
comp=N,340nm,16.9s,MS4.5
GYA LR LR
comp=E,390nm,17.0s,MS4.5
GYA LR LR
comp=Z,430nm,17.2s,MS4.5
MTLF Montolieu 45.72 305 *eP* **P** **01 32 26.4 -0.4**
MTLF Montolieu 45.72 305 *eP* **P** **01 32 26.4 -0.4**
OPO Ambohidratompo 45.72 191 P **P** **01 32 28.6 +1.7**
comp=Z,2.1nm,0.8s,mb4.1,baz=140,slow=18,SNR=4.0
OPO Ambohidratompo 45.72 191 P **P** **01 32 28.6 +1.7**
CAF Calviac 45.94 308 *eP* **P** **01 32 27.6 -0.9**
comp=Z,11nm,0.9s,mb4.5
CAF Calviac 45.94 308 *eP* **P** **01 32 27.6 -0.9**
CAF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CAF Calviac 45.94 308 *eP* **P** **01 32 27.6 -0.9**
comp=Z,5.6nm,0.9s,mb4.5
CAF Calviac 45.94 308 *eP* **P** **01 32 27.6 -0.9**
comp=Z,5.6nm,0.9s,mb4.5
TCF Toulx Ste Croi 45.97 310 *eP* **P** **01 32 27.6 -1.1**
comp=Z,7.9nm,0.9s,mb4.3
TCF Toulx Ste Croi 45.97 310 *eP* **P** **01 32 27.6 -1.1**
TCF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TCF Toulx Ste Croi 45.97 310 *eP* **P** **01 32 27.6 -1.1**
comp=Z,4.0nm,0.9s,mb4.3
TCF Toulx Ste Croi 45.97 310 *eP* **P** **01 32 27.6 -1.1**
comp=Z,4.0nm,0.9s,mb4.3
KEV Kevo 46.08 347 *eP* **P** **01 32 27.9 -1.3**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KEV Kevo 46.08 347 *ep* **P** **01 32 27.9 -1.3**
comp=Z,6.4nm,0.7s,mb4.7
KEV Kevo 46.08 347 *eP* **P** **01 32 27.9 -1.3**
comp=Z,6.0nm,0.7s,mb4.6
ARCES ARCESS Array B 46.21 346 P **P** **01 32 29.9 -0.3**
comp=Z,1.3nm,0.5s,mb4.1,baz=148,slow=7.8,SNR=12
ARCES ARCESS Array B 46.21 346 P **P** **01 32 29.9 -0.4**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 46.21 346 P **P** **01 32 29.9 -0.3**
ARCES ARCESS Array B 46.21 346 P **P** **01 32 29.9 -0.4**
comp=Z,1.0nm,0.5s,mb4.0
RJF Les Rejaudoux 46.36 308 *eP* **P** **01 32 31.1 -0.7**
comp=Z,18nm,1.1s,mb4.6
RJF *e*MLR MLR
comp=Z,65nm,17.8s,MS3.3
RJF Les Rejaudoux 46.36 308 *eP* **P** **01 32 31.1 -0.7**
RJF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
RJF MLR MLR
comp=Z,70nm,17.8s,MS3.7
RJF Les Rejaudoux 46.36 308 *eP* **P** **01 32 31.1 -0.7**
comp=Z,8.9nm,1.1s,mb4.6
RJF LR LR
comp=Z,70nm,17.8s,MS3.7
RJF Les Rejaudoux 46.36 308 *eP* **P** **01 32 31.1 -0.7**
comp=Z,8.9nm,1.1s,mb4.6
LFF La Frestale 46.88 308 *eP* **P** **01 32 35.2 -0.7**
LFF La Frestale 46.88 308 *eP* **P** **01 32 35.2 -0.7**
ETSF Etsaut 47.73 305 *eP* **P** **01 32 42.2 -0.4**
ETSF Etsaut 47.73 305 *eP* **P** **01 32 42.2 -0.4**
LDF La Druitiere 47.79 312 *eP* **P** **01 32 42.2 -0.7**
LDF La Druitiere 47.79 312 *eP* **P** **01 32 42.2 -0.7**
FLN La Foliniere 48.05 313 *eP* **P** **01 32 44.1 -0.8**
comp=Z,12nm,0.8s,mb4.7
FLN *e*MLR MLR
comp=Z,73nm,18.8s,MS3.4
FLN La Foliniere 48.05 313 *eP* **P** **01 32 44.1 -0.8**
FLN pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
FLN MLR MLR
comp=Z,70nm,18.8s,MS3.7
FLN La Foliniere 48.05 313 *eP* **P** **01 32 44.1 -0.8**
comp=Z,5.9nm,0.8s,mb4.7
FLN LR LR
comp=Z,70nm,18.8s,MS3.7
FLN La Foliniere 48.05 313 *eP* **P** **01 32 44.1 -0.8**
comp=Z,5.9nm,0.8s,mb4.7
HHC Hu-ho-hao-te 48.08 58 *eP* **P** **01 32 47.5 +2.3**
HHC pP pP 01 32 51.8 +0.8
HHC sP sP 01 32 54.5 +1.3
HHC PcP PcP 01 34 15.0 +2.1
HHC PP PP 01 34 39.3 +1.9
HHC ScP ScP 01 38 07.8 +1.2
HHC S **S** **01 39 46.3 +3.4**
HHC sS sS 01 39 53.0 +0.7
HHC ScS ScS 01 42 36.8 -0.9
HHC SS SS 01 43 08.5 -3.3
HHC pmax pmax
comp=Z,16nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,120nm,7.1s
HHC LR LR
comp=N,110nm,14.9s,MS4.2
HHC LR LR
comp=E,120nm,12.1s,MS4.2
HHC LR LR
comp=Z,99nm,12.9s,MS4.0
CART Cartagena 48.22 298 *eP* **P** **01 32 45.2 -1.2**
comp=Z,59nm,1.1s,mb5.5
CART Cartagena 48.22 298 *eP* **P** **01 32 45.2 -1.2**
comp=Z,59nm,1.1s,mb5.5
SJPF Ste Jean 48.23 305 *eP* **P** **01 32 46.0 -0.4**
comp=Z,7.7nm,0.8s,mb4.5
SJPF Ste Jean 48.23 305 *eP* **P** **01 32 46.0 -0.4**
SJPF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SJPF Ste Jean 48.23 305 *eP* **P** **01 32 46.0 -0.4**
comp=Z,3.8nm,0.8s,mb4.5
SJPF Ste Jean 48.23 305 *eP* **P** **01 32 46.0 -0.4**
comp=Z,3.8nm,0.8s,mb4.5
GRR Gorron 48.26 312 *eP* **P** **01 32 46.0 -0.5**
GRR Gorron 48.26 312 *eP* **P** **01 32 46.0 -0.5**
ESDC Sonseca Array 50.39 301 P **P** **01 33 02.2 -0.8**
comp=Z,0.6nm,0.4s,mb4.0,baz=73,slow=6.9,SNR=11
ESDC Sonseca Array 50.39 301 P **P** **01 33 02.2 -0.8**
ESDC Sonseca Array 50.39 301 P **P** **01 33 02.2 -0.8**
BOD Bodaibo 51.21 36 *eP* **P** **01 33 07.6 -1.2**
BOD pmax pmax
comp=Z,13nm,1.1s,mb4.8
BOD Bodaibo 51.21 36 *eP* **P** **01 33 07.6 -1.2**
comp=Z,13nm,1.1s,mb4.8
TOA0 Torodi Ar. Sit 51.81 266 *eP* **P** **01 33 13.2 -0.7**
TOA0 Torodi Ar. Sit 51.81 266 *eP* **P** **01 33 13.2 -0.7**
TORD Torodi Ar. Bea 51.81 266 P **P** **01 33 13.7 -0.3**
comp=Z,6.2nm,0.8s,mb4.6,baz=60,slow=7.0,SNR=34
TORD LR LR 01 57 04.6
comp=Z,117nm,19.2s,MS3.9,baz=80,slow=38
MVO Moncorvo 52.61 303 *eP* **P** **01 33 20.2 +0.7**
comp=Z,14nm,1.1s,mb4.8
MVO Moncorvo 52.61 303 *eP* **P** **01 33 20.2 +0.7**
comp=Z,14nm,1.1s,mb4.8
PBAR Barancos 52.92 299 *eP* **P** **01 33 21.7 -0.2**
comp=Z,17nm,1.2s,mb4.9
PBAR Barrancos 52.92 299 *eP* **P** **01 33 21.7 -0.2**
comp=Z,17nm,1.2s,mb4.9
PVIS Viseu 53.30 302 *eP* **P** **01 33 25.3 +0.6**
comp=Z,18nm,1.4s,mb4.8
PVIS Viseu 53.30 302 *eP* **P** **01 33 25.3 +0.6**
comp=Z,18nm,1.4s,mb4.8
EVO Evora 53.64 300 *eP* **P** **01 33 28.3 +1.1**
EVO Evora 53.64 300 *eP* **P** **01 33 28.3 +1.1**
PTOM Tomar 53.81 301 *eP* **P** **01 33 28.6 +0.2**
comp=Z,34nm,1.8s,mb5.0
PTOM Tomar 53.81 301 *eP* **P** **01 33 28.6 +0.2**
comp=Z,34nm,1.8s,mb5.0
NJ2 Nanjing 54.95 68 *eP* **P** **01 33 37.5 +0.7**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
CN2 Changchun 58.11 53 *eP* **P** **01 33 59.5 +0.4**
LBTB Lobatse 58.89 212 *eP* **P** **01 34 04.9 +0.2**
LBTB pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LBTB Lobatse 58.89 212 *eP* **P** **01 34 04.9 +0.2**
comp=Z,4.3nm,0.8s,mb4.5
LBTB Lobatse 58.89 212 *eP* **P** **01 34 04.9 +0.2**
comp=Z,4.0nm,0.8s,mb4.5
TIXI Tiksi 59.70 21 *eP* **P** **01 34 07.6 -2.1**
TIXI pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
TIXI Tiksi 59.70 21 *eP* **P** **01 34 09.0 -0.7**
comp=Z,5.8nm,1.1s,mb4.5
TIXI Tiksi 59.70 21 *eP* **P** **01 34 07.6 -2.1**
comp=Z,8.0nm,1.4s,mb4.6
DBIC Dimbokro 60.40 262 P **P** **01 34 14.8 -0.6**
comp=Z,2.1nm,0.5s,mb4.5,baz=32,slow=6.7,SNR=5.3
DBIC LR LR 02 02 16.5
comp=Z,66nm,19.3s,MS3.8,baz=126,slow=38
DBIC Dimbokro 60.40 262 P **P** **01 34 14.9 -0.5**
DBIC pmax pmax
comp=Z,2.0nm,0.5s
DBIC MLR MLR
comp=Z,67nm,19.3s
DBIC Dimbokro 60.40 262 *eP* **P** **01 34 14.8 -0.6**
comp=Z,8.9nm,1.0s,mb4.8
DBIC Dimbokro 60.40 262 P **P** **01 34 14.9 -0.5**
comp=Z,67nm,19.3s
MDJ Mudanjiang 60.93 52 P **P** **01 34 17.5 -1.1**
MDJ PP PP 01 36 31.5 -1.1
MDJ PcS PcS 01 39 03.8 -0.7
MDJ S **S** **01 42 36.0 +0.2**
MDJ ScS ScS 01 44 08.8 0.0
MDJ pmax pmax
comp=Z,12nm,2.0s,mb4.7
MDJ pmax pmax
comp=Z,280nm,4.8s
MDJ LR LR
comp=N,58nm,26.8s,MS3.6
MDJ LR LR
comp=E,28nm,28.2s,MS3.6
MDJ LR LR
comp=Z,50nm,24.7s,MS3.6
KSRS Korea Array 61.10 60 P **P** **01 34 19.0 -0.9**
comp=Z,1.6nm,0.6s,mb4.3,baz=277,slow=7.4,SNR=4.3
KSRS LR LR 02 04 42.6
comp=Z,42nm,19.6s,MS3.6,baz=19,slow=40
KSRS Korea Array 61.10 60 P **P** **01 34 19.0 -0.9**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,42nm,19.6s,MS3.6
KSRS Korea Array 61.10 60 P **P** **01 34 19.0 -0.9**
comp=Z,42nm,19.6s
BOSA Boshof 62.13 210 P **P** **01 34 27.3 +0.6**
comp=Z,2.0nm,0.8s,mb4.3,baz=128,slow=22,SNR=5.2
BOSA LR LR 02 02 31.9
comp=Z,63nm,19.0s,MS3.8,baz=175,slow=37
BOSA Boshof 62.13 210 P **P** **01 34 27.3 +0.6**
BOSA pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
BOSA MLR MLR
comp=Z,63nm,19.0s,MS3.8
BOSA Boshof 62.13 210 *eP* **P** **01 34 26.5 -0.3**
comp=Z,7.1nm,1.1s,mb4.7
BOSA Boshof 62.13 210 *eP* **P** **01 34 26.5 -0.2**
comp=Z,7.1nm,1.1s,mb4.7
JOW Kunigami 64.24 72 LR LR 02 08 15.5
comp=Z,63nm,19.0s,MS3.8,baz=137,slow=41
SUMG Summit 65.84 341 *eP* **P** **01 34 51.0 +0.4**
comp=Z,9.4nm,0.9s,mb4.8
SUMG Summit 65.84 341 *eP* **P** **01 34 51.0 +0.4**
comp=Z,9.4nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 69.33 47 *iP* **P** **01 35 12.0 -1.1**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 69.33 47 *i P* **P** **01 35 12.0 -1.1**
comp=Z,30nm,1.0s,mb5.2
COLD Coldfoot 84.38 10 *eP* **P** **01 36 37.3 -0.2**
comp=Z,3.1nm,0.9s,mb4.4
COLD Coldfoot 84.38 10 *eP* **P** **01 36 37.3 -0.2**
comp=Z,3.0nm,0.9s,mb4.4
INK Inuvik 85.01 3 *eP* **P** **01 36 40.0 -0.7**
INK pmax pmax
comp=Z,6.0nm,1.5s
INK Inuvik 85.01 3 *eP* **P** **01 36 40.0 -0.7**
comp=Z,6.1nm,1.5s,mb4.5
INK Inuvik 85.01 3 *eP* **P** **01 36 40.0 -0.7**
comp=Z,6.0nm,1.5s,mb4.5
CHUM Lake Minchumin 87.10 12 *eP* **P** **01 36 51.1 0.0**
comp=Z,8.1nm,0.9s,mb5.0
CHUM Lake Minchumin 87.10 12 *eP* **P** **01 36 51.1 0.0**
comp=Z,8.1nm,0.9s,mb5.0
BPAW Bear Paw Mtn. 87.14 11 *eP* **P** **01 36 50.7 -0.6**
comp=Z,8.4nm,1.0s,mb4.9
BPAW Bear Paw Mtn. 87.14 11 *eP* **P** **01 36 50.7 -0.6**
comp=Z,8.4nm,1.0s,mb4.9
EGAK Eagle 87.89 7 *eP* **P** **01 36 54.3 -0.6**
comp=Z,5.0nm,1.0s,mb4.7
EGAK Eagle 87.89 7 *eP* **P** **01 36 54.3 -0.6**
comp=Z,5.0nm,1.0s,mb4.7
DAWY Dawson 88.77 6 *eP* **P** **01 36 58.4 -0.7**
DAWY Dawson 88.77 6 *eP* **P** **01 36 58.4 -0.6**
YKA Yellowknife Ar 90.71 355 P **P** **01 37 07.4 -0.7**
comp=Z,1.3nm,0.8s,mb4.3,baz=4.4,slow=4.8,SNR=12
YKA LR LR 02 21 39.6
comp=Z,2.5nm,19.8s,MS2.6,baz=100,slow=38
YKA Yellowknife Ar 90.71 355 P **P** **01 37 07.4 -0.8**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA MLR MLR
comp=Z,3.0nm,19.8s
YKA Yellowknife Ar 90.71 355 P **P** **01 37 07.4 -0.8**
comp=Z,3.0nm,19.8s
ASAR Alice Springs 90.97 116 P **P** **01 37 09.3 -0.7**
comp=Z,0.7nm,0.8s,mb4.0,baz=301,slow=3.8,SNR=5.5
ASAR Alice Springs 90.97 116 P **P** **01 37 09.4 -0.6**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 90.97 116 P **P** **01 37 09.4 -0.6**
comp=Z,1.0nm,0.8s,mb4.2

CASC 31 01:30:23.0±2.5, 13°.60N×91°.10W, h16km±19km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.88**	**17**	*eP*	Pb	01 30 39.5	-0.4
JAT	**Jato**	**0.88**	**324**	*eP*	Pb	01 30 38.0	-2.0
PCG	**Pacaya**	**0.93**	**31**	*eP*	Pb	01 30 41.2	+0.5
NBG	**Las Nubes**	**1.23**	**37**	*eP*	Pn	01 30 45.5	+0.1
SBLS	**San Blas**	**1.46**	**80**	*eP*	Pn	01 30 47.7	-0.9
SBLS				*e*S	Sn	01 31 06.5	-0.9
BOQS	**Boqueron**	**1.78**	**85**	*eP*	Pn	01 30 54.2	+1.2
LFRS	**El Faro**	**1.99**	**89**	*eP*	Pn	01 30 55.5	-0.4
LFRS				*e*S	Sn	01 31 22.2	+1.8
MRL	**Marmol**	**2.00**	**43**	*eP*	Pn	01 30 57.2	+1.1
SNVI	**San Vicente**	**2.20**	**89**	*eP*	Pn	01 30 59.1	+0.2
SNVI				*e*S	Sn	01 31 27.8	+2.0

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*CSEM **31** 01:49:15.3±0.3, 35°.67N×26°.18E, h2km, MD3.2, Error ellipse: s-maj=9.8km s-min=6.0km az=163.0*
*NEIC **31** 01:49:15.8, 35°.37N×26°.24E, h54km, MD3.2(ATH), After ATH.*
*ATH **31** 01:49:15.8, 35°.37N×26°.24E, h54km±7km, MD3.2/8*
*ISCJB **31** 01:49:16.5±0.9, 35°.6N±0°.1×26°.19E±0°.05, h25km±12km, Error ellipse: s-maj=18.1km s-min=6.3km az=167.7*
ISC 31 01:49:17.5±1.1, 35°.4N±0°.2×26°.21E±0°.06, h47km±31km, n25, σ0s90/33, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.28**	**179**	*eP*	**Pn**	**01 49 25.6**	**-0.5**
ZKR				*e*S	**Sn**	**01 49 32.5**	**+0.3**
ZKR	**Zakros**	**0.28**	**179**	*eP*	**Pn**	**01 49 25.6**	**-0.5**
ZKR				*e*S	**Sn**	**01 49 32.5**	**+0.3**
NPS	**Neapolis**	**0.51**	**256**	*eP*	**Pn**	**01 49 27.8**	**-0.8**
NPS				*e*S	**Sn**	**01 49 36.1**	**-0.4**
NPS	**Neapolis**	**0.51**	**256**	*eP*	**Pn**	**01 49 27.8**	**-0.8**
NPS				*e*S	**Sn**	**01 49 36.1**	**-0.4**
LAST	**Lasithi**	**0.64**	**249**	*eP*	**Pn**	**01 49 30.4**	**+0.1**
LAST				*e*S	**Sn**	**01 49 40.1**	**+0.5**
LAST	**Lasithi**	**0.64**	**249**	*eP*	**Pn**	**01 49 30.4**	**+0.1**
LAST				*e*S	**Sn**	**01 49 40.1**	**+0.5**
KARP	**Karpathos**	**0.79**	**78**	*eP*	**Pn**	**01 49 31.0**	**-1.3**
KARP	**Karpathos**	**0.79**	**78**	*eP*	**Pn**	**01 49 31.0**	**-1.3**
IDI	**Anoyia**	**1.08**	**265**	*eP*	**Pn**	**01 49 36.2**	**-0.1**
IDI				*e*S	**Sn**	**01 49 51.2**	**+1.0**
IDI	**Anoyia**	**1.08**	**265**	*eP*	**Pn**	**01 49 36.2**	**-0.1**
IDI				*e*S	**Sn**	**01 49 51.2**	**+1.0**
VAM	**Vamos**	**1.64**	**271**	P	**Pn**	**01 49 47.7**	**+3.8**
VAM	**Vamos**	**1.64**	**271**	P	**Pn**	**01 49 47.7**	**+3.8**
ARG	**Arkhangelos**	**1.76**	**62**	*eP*	**Pn**	**01 49 45.5**	**0.0**
ARG	**Arkhangelos**	**1.76**	**62**	*eP*	**Pn**	**01 49 45.5**	**0.0**
KARN	**Karanos**	**1.87**	**271**	*eP*	**Pn**	**01 49 46.7**	**-0.4**
KARN	**Karanos**	**1.87**	**271**	*eP*	**Pn**	**01 49 46.7**	**-0.4**
TURN	**Turunc**	**2.44**	**52**	*eP*	**Pn**	**01 49 49.1**	**-5.6**
AYDN	**Tasoluk**	**2.63**	**30**	*i P*	**Pn**	**01 50 00.3**	**+2.8**
AYDN	**Tasoluk**	**2.63**	**30**	*i P*	**Pn**	**01 50 00.3**	**+2.8**
KYTH	**Kithira**	**2.73**	**290**	*eP*	**Pn**	**01 49 58.0**	**-0.8**
KYTH	**Kithira**	**2.73**	**290**	*eP*	**Pn**	**01 49 58.0**	**-0.8**
AKAS	**Kas**	**2.88**	**72**	*i P*	**Pn**	**01 50 02.1**	**+1.1**
AKAS	**Kas**	**2.88**	**72**	*i P*	**Pn**	**01 50 02.1**	**+1.2**
VLI	**Veliai**	**2.96**	**297**	P	**Pn**	**01 50 01.5**	**-0.5**
VLI	**Veliai**	**2.96**	**297**	P	**Pn**	**01 50 01.5**	**-0.5**

IDC 31 01:49:18.8±2.2, 32°.10N×104°.83E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/25, mbtmp3.5/6, ML4.6/1, Error ellipse: s-maj=51.4km s-min=42.3km az=71.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.59**	**203**	Pn	Pn	01 52 46.2	-0.2
	0.8nm,0.3s,baz=8.6,slow=9.4,SNR=3.0						
MKAR	**Makanchi Array**	**22.66**	**317**	P	P	01 54 21.5	+0.1
	0.2nm,0.4s,baz=104,slow=9.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.11**	**333**	P	P	01 54 53.3	-0.8
	0.4nm,0.3s,baz=139,slow=13,SNR=2.6						
KURK	**Kurchatov**	**26.84**	**322**	P	P	01 55 01.0	+0.3
	0.2nm,0.3s,baz=134,slow=8.1,SNR=2.7						
FINES	**FINESS Array B**	**57.09**	**326**	P	P	01 59 06.7	+0.2
	0.5nm,0.4s,baz=100,slow=9.5,SNR=9.2						
YKA	**Yellowknife Ar**	**80.56**	**17**	P	P	02 01 32.7	+0.1
	0.2nm,0.5s,baz=331,slow=5.0,SNR=3.2						

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*IDC **31** 02:05:33.5±5.1, 32°.23N×19°.69E, h0km, mb3.7/1, mb1 3.5/6, mb1mx3.3/30, mbtmp3.5/6, ML3.2/5, MS2.5/1, Ms1 2.5/1, ms1mx1.9/48, Error ellipse: s-maj=85.4km s-min=23.9km az=3.0*
*CSEM **31** 02:05:36.8±0.3, 32°.47N×19°.54E, h15km, ML3.4, Error ellipse: s-maj=10.7km s-min=8.9km az=61.0*
*NEIC **31** 02:05:41.2±0.9, 32°.99N×19°.85E, h10km, mb3.3/2, Error ellipse: s-maj=13.7km s-min=10.4km az=179.0*
ISC 31 02:05:37.0±2.0, 32°.52N±0°.04×19°.55E±0°.04, h12km±13km, n35, σ1s29/50, mb3.6/2, 2C, Near coast of Libya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LJBD	**Adjabya**	**1.69**	**161**	*eP*	**Pn**	**02 06 06.4**	**+0.1**
	SNR=46						
LJBD				*e*S	**Sn**	**02 06 28.8**	**+0.9**
	283nm,0.6s,SNR=46						
LUJL	**Ujela**	**3.71**	**156**	*eP*	**Pn**	**02 06 33.3**	**-0.7**
	SNR=45						
LTBQ	**Tobruq**	**3.73**	**96**	*eP*	**Pn**	**02 06 34.7**	**+0.4**
	SNR=45						
LTBQ				*e*S	**Sn**	**02 07 18.7**	**+0.6**
	56nm,0.6s,SNR=45						
LZLA	**Zalla**	**4.31**	**204**	*eP*	**Pn**	**02 06 40.4**	**-1.9**
	SNR=45						
GVD	**Gavdhos**	**4.43**	**57**	*e*Pn	**Pn**	**02 06 43.8**	**-0.1**
GVD				*e*Sn	**Sn**	**02 07 31.1**	**-4.3**
GVD	**Gavdhos**	**4.43**	**57**	*e*Pn	**Pn**	**02 06 43.8**	**-0.1**
GVD				*e*Sn	**Sn**	**02 07 31.1**	**-4.3**
LJFR	**Jufra**	**4.69**	**224**	*eP*	**Pn**	**02 06 44.2**	**-3.3**
	SNR=45						
IDI	**Anoyia**	**5.22**	**57**	Pn	**Pn**	**02 06 55.2**	**+0.4**
	1.0nm,0.3s,baz=262,slow=18,SNR=18						
IDI				Sn	**Sn**	**02 07 54.8**	**-0.2**
	2.6nm,0.3s,baz=34,slow=17,SNR=8.4						
IDI	**Anoyia**	**5.22**	**57**	Pn	**Pn**	**02 06 55.2**	**+0.4**
IDI				Sn	**Sn**	**02 07 54.8**	**-0.2**
HAVL	**Avola**	**5.74**	**322**	Pn	**Pn**	**02 07 02.8**	**+1.0**
HAVL				Sn	**Sn**	**02 08 07.7**	**+0.2**
HAVL	**Avola**	**5.74**	**322**	Pn	**Pn**	**02 07 02.8**	**+1.0**
HAVL				Sn	**Sn**	**02 08 07.7**	**+0.2**
SOI	**Samo**	**6.23**	**334**	Pn	**Pn**	**02 07 10.0**	**+1.3**
	304nm,5.2s						
SOI	**Samo**	**6.23**	**334**	Pn	**Pn**	**02 07 10.0**	**+1.3**
	304nm,5.2s						
RAFF	**Raffo Rosso**	**6.34**	**319**	Pn	**Pn**	**02 07 12.6**	**+2.5**
	126nm,1.8s						
RAFF	**Raffo Rosso**	**6.34**	**319**	Pn	**Pn**	**02 07 12.6**	**+2.5**
	126nm,1.8s						
CEL	**Celeste**	**6.46**	**333**	*e*Pn	**Pn**	**02 07 12.4**	**+0.6**
CEL				*e*Sn	**Sn**	**02 08 22.8**	**-2.5**
CEL	**Celeste**	**6.46**	**333**	*e*Pn	**Pn**	**02 07 12.4**	**+0.6**
CEL				*e*Sn	**Sn**	**02 08 22.8**	**-2.5**
VAE	**Valguarnera**	**6.50**	**321**	Pn	**Pn**	**02 07 16.3**	**+3.9**
	1.9nm,0.3s,baz=315,slow=11,SNR=7.6						
VAE				Sn	**Sn**	**02 08 29.6**	**+3.2**
	1.3nm,0.3s,baz=301,slow=12,SNR=2.2						
VAE	**Valguarnera**	**6.50**	**321**	Pn	**Pn**	**02 07 16.3**	**+3.9**
VAE				Sn	**Sn**	**02 08 29.6**	**+3.2**
KEST	**Kesra**	**9.05**	**294**	Pn	**Pn**	**02 07 49.0**	**+1.7**
	0.0nm,0.3s,baz=122,slow=13,SNR=3.1						
KEST				Sn	**Sn**	**02 09 28.4**	**-0.7**
	0.0nm,0.3s,baz=20,slow=23,SNR=2.4						
STON	**Ston**	**10.44**	**352**	⇑*i*Pn	**Pn**	**02 08 05.3**	**-1.0**
STON				Sn	**Sn**	**02 09 55.8**	**-7.3**
STON	**Ston**	**10.44**	**352**	⇑*i*Pn	**Pn**	**02 08 05.3**	**-1.0**
CSS	**Prodhromos**	**11.72**	**74**	*e*Pn	**Pn**	**02 08 21.9**	**-2.0**
CSS				*e*Sn	**Sn**	**02 10 27.1**	**-7.6**
CSS	**Prodhromos**	**11.72**	**74**	*e*Pn	**Pn**	**02 08 22.0**	**-2.0**
NVLJ	**Novalja**	**12.57**	**344**	*e*Pn	**Pn**	**02 08 33.6**	**-1.8**
NVLJ				Sn	**Sn**	**02 10 48.5**	**-6.7**
NVLJ	**Novalja**	**12.57**	**344**	*e*Pn	**Pn**	**02 08 33.6**	**-1.8**
MMAI	**Mount Meron Ar**	**13.35**	**84**	Pn	**Pn**	**02 08 42.7**	**-3.5**
	0.5nm,0.3s,baz=267,slow=12,SNR=5.5						
MMAI				Sn	**Sn**	**02 11 15.1**	**+0.6**
	0.8nm,0.3s,baz=266,slow=39,SNR=5.3						
BRTR	**Keskin Array B**	**13.46**	**54**	Pn	**Pn**	**02 08 48.2**	**+0.6**
	0.1nm,0.3s,baz=241,slow=16,SNR=2.2						
BRTR	**Keskin Array B**	**13.46**	**54**	Pn	**Pn**	**02 08 48.2**	**+0.6**
TAM	**Tamanrasset**	**15.75**	**236**	P	sP	02 09 28.9	+1.2
	0.8nm,0.8s						
DAVOX	**Davos/Dischmat**	**16.05**	**335**	LR	LR	02 16 16.5	
	comp=Z,16nm,19.4s,baz=83,slow=39						
AKBB	**Malin Array Si**	**19.52**	**19**	*eP*	**Pn**	**02 10 00.5**	**-4.7**
AKBB	**Malin Array Si**	**19.52**	**19**	*eP*	**Pn**	**02 10 00.5**	**-4.7**
HFS	**Hagfors**	**27.89**	**354**	P	**P**	**02 11 26.4**	**+0.1**
	0.6nm,0.7s,mb3.4,baz=163,slow=16,SNR=4.8						
DBIC	**Dimbokro**	**34.32**	**227**	P	**P**	**02 12 33.0**	**+10**
	0.8nm,0.6s,mb3.8						

IDC 31 02:19:27.1±15.0, 0°.47N×17°.73W, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/26, mbtmp3.7/5, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=395.4km

s-min=61.6km az=179.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**14.24**	**64**	Pn	Pn	02 22 51.0	+0.8
	1.1nm,0.3s,baz=236,slow=13,SNR=16						
TORD	**Torodi Ar. Bea**	**23.00**	**56**	P	P	02 24 33.9	+0.1
	2.3nm,0.9s,baz=240,slow=10,SNR=16						
MDT	**Midelt**	**34.47**	**20**	LR	LR	02 39 59.9	
	comp=Z,40nm,20.6s,baz=172,slow=36						
BRTR	**Keskin Array B**	**60.88**	**44**	P	P	02 29 41.5	-0.2
	0.5nm,0.8s,baz=232,slow=5.5,SNR=3.1						
AKASG	**Malin Array Be**	**63.87**	**31**	P	P	02 30 00.6	-1.0
	0.2nm,0.3s,baz=227,slow=5.1,SNR=4.3						
FINES	**FINESS Array B**	**69.27**	**21**	P	P	02 30 36.9	+1.0
	0.6nm,0.6s,baz=234,slow=4.8,SNR=5.6						

*ISCJB **31** 02:22:23.3±2.6, 42°.12S±0°.07×72°.5W±0°.2, h1km±15km, mb3.8/3, Error ellipse: s-maj=23.5km s-min=10.6km az=164.7*
*NEIC **31** 02:22:23.0, 41°.97S×72°.19W, h9km, ML4.4(GUC), After GUC.*
*GUC **31** 02:22:23.8±1.0, 41°.97S×72°.20W, h9km±13km, ML4.4*
*IDC **31** 02:22:24.8±1.3, 41°.90S×72°.64W, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.6/15, mbtmp3.5/5, ML2.6/1, Error ellipse: s-maj=32.6km s-min=16.2km az=135.0*

ISC 31 02:22:25.9±1.6, 42°.02S±0°.09×72°.4W±0°.2, h8km±6km, n9, σ1§20/12, mb3.6/3, 2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.11**	**356**	⇓*i*P	**Pg**	**02 22 28.1**	**-0.3**
HOCH				*i*S	**Sg**	**02 22 30.6**	**+0.5**
HOCH				AML	AML	02 22 33.4	
	comp=N,107μm,0.3s						
OSCH	**Osorno**	**1.54**	**339**	*i*P	**Pn**	**02 22 52.5**	**-1.2**
OSCH				*i*S	**Sn**	**02 23 14.0**	**+0.1**
PLCA	**Paso Flores**	**1.89**	**48**	Pn	**Pn**	**02 23 00.3**	**+1.8**
	comp=N,35nm,0.3s,baz=228,slow=16,SNR=549						
PLCA				Lg		02 23 26.6	
	comp=N,110nm,0.3s,baz=135,slow=21,SNR=23						
VLCH	**Valdivia**	**2.30**	**343**	⇓*i*P	**Pn**	**02 23 04.1**	**0.0**
VLCH				*i*S	**Sn**	**02 23 35.6**	**+2.9**
VLCH				AML	AML	02 23 42.5	
	comp=N,4μm,0.7s						
CFAA	**Coronel Fontan**	**10.91**	**19**	Pn	**Pn**	**02 25 00.1**	**-2.2**
	comp=N,0.1nm,0.3s,baz=207,slow=11,SNR=5.6						
CPUP	**Villa Florida**	**19.96**	**43**	P	**Pn**	**02 26 59.4**	**-0.8**
	comp=N,0.2nm,0.3s,baz=207,slow=14,SNR=2.0						
LPAZ	**La Paz**	**25.90**	**9**	P	**P**	**02 27 58.9**	**+0.5**
	comp=N,2.3nm,0.7s,mb3.8,baz=190,slow=5.0,SNR=9.9						
QSPA	**South Pole Qui**	**48.23**	**180**	P	**P**	**02 31 07.8**	**+1.2**
	comp=N,1.2nm,1.1s,mb3.9,baz=142,slow=17,SNR=4.7						
TXAR	**Lajitas Array**	**76.64**	**332**	P	**P**	**02 34 15.9**	**-1.1**
	comp=N,0.2nm,0.6s,mb3.2,baz=152,slow=8.6,SNR=3.7						

*ISCJB **31** 02:23:10.6±0.7, 25°.5S±0°.2×70°.0E±0°.2, h10km, mb3.8/10, MS3.8/7, Error ellipse: s-maj=22.9km s-min=20.6km az=42.3*
*IDC **31** 02:23:10.8±0.8, 25°.50S×69°.99E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, MS3.8/7, Ms1 3.8/7, ms1mx3.4/33, Error ellipse: s-maj=26.2km s-min=24.4km az=145.0*
*NEIC **31** 02:23:12.4±0.5, 25°.51S×69°.98E, h10km, mb3.9/1, Error ellipse: s-maj=16.9km s-min=15.2km az=132.0*

ISC 31 02:23:12.7±0.7, 25°.5S±0°.1×70°.0E±0°.2, h10km, n17, σ0§46/12, mb3.8/10, MS3.8/7, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**34.20**	**19**	LR	LR	02 40 24.9	
	comp=Z,121nm,19.5s,MS3.6,baz=230,slow=30						
BOSA	**Boshof**	**39.79**	**255**	LR	LR	02 44 28.2	
	comp=Z,152nm,18.1s,MS3.9,baz=160,slow=32						
MAW	**Mawson**	**42.35**	**184**	LR	LR	02 43 58.9	
	comp=Z,97nm,20.6s,MS3.7,baz=100,slow=30						
TSUM	**Tsumeb**	**48.63**	**266**	P	**P**	**02 31 57.3**	**+0.4**
	1.0nm,0.9s,mb3.9,baz=111,slow=17,SNR=23						
TSUM	**Tsumeb**	**48.63**	**266**	P	**P**	**02 31 57.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**51.98**	**36**	P	**P**	**02 32 22.9**	**+0.7**
	0.7nm,0.3s,mb4.0,baz=226,slow=6.2,SNR=4.0						
CMAR				LR	LR	02 50 34.7	
	comp=Z,79nm,18.2s,MS3.8,baz=105,slow=32						
ASAR	**Alice Springs**	**57.64**	**103**	P	**P**	**02 33 03.1**	**-0.2**
	0.8nm,0.7s,mb3.9,baz=251,slow=6.5,SNR=6.3						
QSPA	**South Pole Qui**	**64.64**	**180**	P	**P**	**02 33 49.9**	**0.0**
	3.6nm,1.0s,mb4.4,baz=280,slow=2.9,SNR=8.6						
MK31	**Makanchi Array**	**72.80**	**9**	*e*P	**P**	**02 34 41.0**	**-0.1**
MKAR	**Makanchi Array**	**72.80**	**9**	P	**P**	**02 34 40.0**	**-1.1**
	0.7nm,0.7s,mb3.7,baz=180,slow=4.9,SNR=4.4						
BRTR	**Keskin Array B**	**73.21**	**331**	P	**P**	**02 34 43.6**	**-0.1**
	0.5nm,0.7s,mb3.6,baz=165,slow=5.1,SNR=3.9						
ABKAR	**Akbulak array**	**74.95**	**353**	*e*P	**P**	**02 34 54.0**	**+0.4**
	0.9nm,0.8s,mb3.8						
TORD	**Torodi Ar. Bea**	**76.77**	**292**	P	**P**	**02 35 04.5**	**-0.3**
	0.7nm,0.8s,mb3.6,baz=107,slow=4.2,SNR=8.1						
TORD				LR	LR	03 09 41.8	
	comp=Z,37nm,19.0s,MS3.7,baz=170,slow=36						
DBIC	**Dimbokro**	**79.32**	**283**	LR	LR	03 09 23.5	
	comp=Z,62nm,21.0s,MS3.9,baz=146,slow=35						
SONM	**Songino Array**	**79.99**	**24**	P	**P**	**02 35 22.3**	**+0.4**
	0.2nm,0.3s,mb3.5,baz=90,slow=3.7,SNR=2.0						
ZALV	**Zalesovo Beam**	**80.14**	**9**	P	**P**	**02 35 22.5**	**-0.1**
	0.3nm,0.3s,mb3.7,baz=182,slow=6.8,SNR=2.4						
MJAR	**Matsushiro Arr**	**89.06**	**48**	LR	LR	03 12 03.1	
	comp=Z,59nm,19.0s,MS4.0,baz=35,slow=33						

*IDC **31** 02:30:42.5±1.1, 15°.07N×94°.63W, h0km, mb3.7/9, mb1 4.0/12, mb1mx3.9/25, mbtmp3.7/12, ML3.1/2, Error ellipse: s-maj=28.9km s-min=14.7km az=43.0*
*ISCJB **31** 02:30:44.9±1.8, 15°.10N±0°.06×94°.68W±0°.03, h22km±13km, mb3.8/18, Error ellipse: s-maj=9.4km s-min=4.3km az=6.9*
*NEIC **31** 02:30:46.5, 15°.07N×94°.85W, h16km, mb3.9/14, MD4.2(MEX), After MEX.*
*MEX **31** 02:30:46.5±1.9, 15°.07N×94°.85W, h16km±93km, MD4.2*

ISC 31 02:30:44.2±2.1, 15°.10N±0°.05×94°.65W±0°.03, h4km±13km, n132, σ0§88/146, mb3.8/18, 44C-42D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.50**	**66**	*e*P	**Pn**	**02 31 10.9**	**-1.0**
PCIG				*i*S	**Sn**	**02 31 32.0**	**0.0**
HUIG	**Huatulco**	**1.56**	**295**	*i*P	**Pn**	**02 31 07.6**	**-5.0**
HUIG				*i*S	**Sn**	**02 31 24.1**	**-9.2**
HUIG	**Huatulco**	**1.56**	**295**	*i*P	**Pn**	**02 31 07.6**	**-5.0**
HUIG				*i*S	**Sn**	**02 31 24.1**	**-9.2**
CMIG	**Matias Romero**	**1.99**	**353**	Pn	**Pn**	**02 31 16.8**	**-1.8**
	74nm,0.3s,baz=162,slow=12,SNR=779						
CMIG				Lg		02 31 40.9	
	85nm,0.3s,baz=34,slow=20,SNR=33						
CMIG	**Matias Romero**	**1.99**	**353**	Pn	**Pn**	**02 31 16.8**	**-1.8**
CMIG				Lg		02 31 40.9	
TGIG		**2.22**	**41**	*e*P	**Pn**	**02 31 22.3**	**+0.5**
TGIG				*i*S	**Sn**	**02 31 49.3**	**-0.3**
THIG		**2.31**	**94**	*e*P	**Pn**	**02 31 23.5**	**+0.5**
THIG				*i*S	**Sn**	**02 31 52.0**	**+0.1**
SCX	**San Cristobal**	**2.53**	**50**	*i*P	**Pn**	**02 31 28.1**	**+2.1**
SCX				*i*S	**Sn**	**02 31 56.4**	**-0.8**
SCX	**San Cristobal**	**2.53**	**50**	*i*P	**Pn**	**02 31 28.1**	**+2.1**
SCX				*i*S	**Sn**	**02 31 56.4**	**-0.8**
CCIG	**Comitan**	**2.69**	**64**	*e*P	**Pn**	**02 31 30.9**	**+2.7**
CCIG				*i*S	**Sn**	**02 32 02.5**	**+1.3**
CCIG	**Comitan**	**2.69**	**64**	*e*P	**Pn**	**02 31 30.9**	**+2.7**
CCIG				*i*S	**Sn**	**02 32 02.5**	**+1.3**
VHO	**Vista Hermosa**	**2.80**	**315**	*i*P	**Pn**	**02 31 28.1**	**-1.7**
VHO				*i*S	**Sn**	**02 31 58.1**	**-5.9**
VHO	**Vista Hermosa**	**2.80**	**315**	*i*P	**Pn**	**02 31 28.1**	**-1.7**
VHO				*i*S	**Sn**	**02 31 58.1**	**-5.9**
PNIG	**Pinotepa**	**3.59**	**291**	*e*P	**Pn**	**02 31 35.8**	**-4.7**
PNIG				*i*S	**Sn**	**02 32 14.9**	**-8.5**
PNIG	**Pinotepa**	**3.59**	**291**	*e*P	**Pn**	**02 31 35.8**	**-4.7**
PNIG				*i*S	**Sn**	**02 32 14.9**	**-8.5**
APG	**El Apazote**	**4.04**	**91**	Pn	**Pn**	**02 31 46.0**	**-0.8**
	1.0nm,0.3s,baz=292,slow=11,SNR=18						
APG				Lg		02 32 51.0	
	7.6nm,0.3s,baz=106,slow=19,SNR=5.7						
TPIG	**Tehuac#an**	**4.20**	**322**	*i*P	**Pn**	**02 31 42.6**	**-6.4**
TPIG				*i*S	**Sn**	**02 32 33.1**	**-5.4**
TEIG	**Tepich**	**7.93**	**49**	*e*Pn	**Pn**	**02 32 41.0**	**+0.8**
	34nm,0.5s						
TEIG				*e*Sn	**Sn**	**02 34 10.7**	**+0.3**
628A	**Black Gap, Mar**	**16.21**	**333**	⇓P	**Pn**	**02 34 32.9**	**+0.1**
	baz=16,SNR=6.1						
627A	**Terlingua Ranc**	**16.40**	**332**	⇓P	**Pn**	**02 34 36.8**	**+1.5**
	baz=16,SNR=10						
TXAR	**Lajitas Array**	**16.43**	**331**	Pn	**Pn**	**02 34 36.1**	**+0.4**
	0.0nm,0.3s,baz=159,slow=14,SNR=11						
528A	**Cox Ranch, San**	**16.76**	**335**	⇑P	**Pn**	**02 34 40.1**	**+0.3**
	baz=17						
626A	**Big Bend Ranch**	**16.84**	**330**	⇑P	**Pn**	**02 34 41.8**	**+1.0**
	baz=17						
527A	**Woodward Ranch**	**17.09**	**333**	⇓P	**Pn**	**02 34 44.8**	**+0.8**
	baz=17,SNR=8.1						
428A	**Kincaid Ranch,**	**17.21**	**336**	⇑P	**Pn**	**02 34 45.8**	**+0.3**
	baz=17						
526A	**Mary Lane Ranc**	**17.24**	**331**	⇓P	**Pn**	**02 34 46.5**	**+0.6**
	baz=17						
427A	**Hayter Ranch,**	**17.61**	**334**	⇑P	**Pn**	**02 34 50.6**	**+0.1**
	baz=18						
426A	**McDonald Obser**	**17.73**	**333**	⇓P	**Pn**	**02 34 52.2**	**+0.3**
	baz=18,SNR=6.1						
328A	**Wristen Ranch,**	**17.84**	**337**	⇑P	**Pn**	**02 34 53.7**	**+0.3**
	baz=18						
425A	**Indio Mountain**	**18.27**	**330**	⇓P	**Pn**	**02 34 58.8**	**+0.2**
	baz=18						
325A	**Bean Ranch, Si**	**18.75**	**332**	⇑P	**Pn**	**02 35 04.1**	**-0.4**
	baz=19						
226A	**Malaga, Loving**	**18.96**	**335**	⇓P	**Pn**	**02 35 05.7**	**-1.3**
	baz=19						
GDL2	**Guadalupe Moun**	**19.19**	**334**	*e*P	**Pn**	**02 35 10.7**	**+0.9**
	1.8nm,0.7s						
MIAR	**Mount Ida**	**19.39**	**3**	*e*P	**Pn**	**02 35 10.1**	**-2.0**
	7.6nm,1.3s						
224A	**Corundas Mount**	**19.59**	**331**	⇑P	**Pn**	**02 35 13.0**	**-1.6**
	baz=20						
125A	**Gardner Draw,**	**19.71**	**334**	⇓P	**Pn**	**02 35 13.5**	**-2.5**
	baz=20						
CPRX	**Cap Rock**	**19.72**	**336**	*e*P	**Pn**	**02 35 14.9**	**-1.2**
	3.7nm,0.9s						
Z27A	**Tatum**	**19.73**	**338**	⇑P	**Pn**	**02 35 14.3**	**-1.9**
	baz=20						
WMOK	**Wichita Mounta**	**19.90**	**350**	*e*P	**Pn**	**02 35 19.7**	**+1.4**
	7.1nm,1.1s						
Z26A	**Caprock**	**19.97**	**337**	⇑P	**Pn**	**02 35 16.8**	**-2.4**
	baz=20						
124A	**Stringfield Ra**	**20.09**	**333**	⇑P	**P**	**02 35 18.5**	**-0.3**
	baz=20						
Z25A	**Roswell**	**20.27**	**335**	⇑P	**P**	**02 35 19.6**	**-1.1**
	baz=20						
320A	**Kipp Ranch, An**	**20.55**	**324**	⇑P	**P**	**02 35 24.6**	**+0.8**
	baz=20						
Z24A	**Sheeppen Canyo**	**20.59**	**334**	⇓P	**P**	**02 35 24.3**	**+0.1**
	baz=20						
AMTX	**Amarillo**	**20.69**	**343**	*e*P	**P**	**02 35 25.5**	**+0.3**
	6.7nm,0.8s						
Y25A	**Mesa, Roswell**	**20.82**	**336**	⇓P	**P**	**02 35 26.4**	**-0.3**
	baz=21						
X27A	**F and S Farms,**	**20.90**	**340**	⇓P	**P**	**02 35 26.5**	**-1.0**
	baz=21						
Z23A	**Rita Site, Whi**	**20.91**	**332**	⇑P	**P**	**02 35 27.2**	**-0.5**
	baz=21						
220A	**Playas Peak, P**	**20.98**	**325**	⇑P	**P**	**02 35 28.5**	**+0.1**
	baz=21,SNR=5.8						
319A	**Douglas**	**21.01**	**323**	⇓P	**P**	**02 35 29.9**	**+1.1**
	baz=21						
X26A	**CR and CF Fran**	**21.05**	**339**	⇑P	**P**	**02 35 27.0**	**-2.2**
	baz=21						
121A	**Cookes Peak, D**	**21.07**	**328**	⇑P	**P**	**02 35 29.7**	**+0.3**
	baz=21						
Y24A	**Capitan**	**21.13**	**334**	⇓P	**P**	**02 35 29.1**	**-0.9**
	baz=21,SNR=6.6						
W27A	**Bowe Ranch, En**	**21.27**	**341**	⇑P	**P**	**02 35 30.0**	**-1.6**
	baz=21						
219A	**White Tail Can**	**21.46**	**324**	⇑P	**P**	**02 35 34.1**	**+0.5**
	baz=21						
318A	**Bisbee**	**21.48**	**322**	⇓P	**P**	**02 35 34.6**	**+0.8**
	baz=21						
120A	**U Bar Ranch, L**	**21.53**	**326**	⇓P	**P**	**02 35 35.0**	**+0.6**
	baz=22						
X24A	**Lazy VL Ranch,**	**21.68**	**335**	⇑P	**P**	**02 35 36.0**	**0.0**
	baz=22						
Y22A	**Socorro**	**21.81**	**331**	⇓P	**P**	**02 35 37.1**	**-0.2**
	baz=22						
BNM	**Barren Site**	**21.84**	**332**	*e*P	**P**	**02 35 38.0**	**+0.4**
	1.8nm,0.8s,mb3.5						
W25A	**X Bar L Ranch,**	**21.89**	**338**	⇓P	**P**	**02 35 37.7**	**-0.5**
	baz=22,SNR=5.3						
X23A	**Hourglass Bar**	**22.01**	**334**	⇓P	**P**	**02 35 39.6**	**+0.1**
	baz=22						
V26A	**Tequesquite Ra**	**22.18**	**340**	⇓P	**P**	**02 35 40.6**	**-0.7**
	baz=22						
217A	**Green Valley**	**22.21**	**321**	⇑P	**P**	**02 35 42.4**	**+0.7**
	baz=22						
W24A	**Lazy 6 Ranch,**	**22.23**	**336**	⇑P	**P**	**02 35 41.6**	**-0.3**
	baz=22						
LAZ	**Ladron**	**22.28**	**332**	*e*P	**P**	**02 35 43.1**	**+0.8**
	3.1nm,1.4s,mb3.5						
118A	**Homack Ranch,**	**22.34**	**324**	⇑P	**P**	**02 35 43.4**	**+0.3**
	baz=22						
ANMO	**Albuquerque**	**22.44**	**334**	P	**P**	**02 35 44.5**	**+0.5**
	1.4nm,0.8s,mb3.4,baz=152,slow=10,SNR=4.8						
Y20A	**Horse Springs,**	**22.46**	**329**	⇑P	**P**	**02 35 44.3**	**-0.1**
	baz=22						
V25A	**Rancho No Teng**	**22.50**	**338**	⇑P	**P**	**02 35 44.3**	**-0.4**
	baz=22						
TUC	**Tucson**	**22.57**	**322**	*e*P	**P**	**02 35 46.1**	**+0.6**
	3.4nm,1.0s,mb3.7						
X21A	**Alamocita Cree**	**22.61**	**331**	⇑P	**P**	**02 35 46.3**	**+0.4**
	baz=23						
U26A	**Atchley Ranch,**	**22.71**	**341**	⇓P	**P**	**02 35 45.8**	**-1.1**
	baz=23,SNR=8.1						
117A	**Oracle**	**22.73**	**323**	⇑P	**P**	**02 35 47.6**	**+0.4**
	baz=23						
U25A	**Circle Dot Ran**	**22.93**	**339**	⇑P	**P**	**02 35 49.1**	**-0.2**
	baz=23						
Y19A	**Nutrioso**	**22.95**	**327**	⇑P	**P**	**02 35 49.5**	**-0.1**
	baz=23						
X20A	**Quemado**	**23.03**	**330**	⇑P	**P**	**02 35 50.9**	**+0.6**
	baz=23						
X19A	**St. Johns**	**23.34**	**328**	⇓P	**P**	**02 35 53.9**	**+0.3**
	baz=23						
V22A	**San Miguel Ran**	**23.45**	**334**	⇓P	**P**	**02 35 54.3**	**-0.5**
	baz=24						
214A	**Organ Pipe Nat**	**23.58**	**319**	⇑P	**P**	**02 35 56.2**	**+0.1**
	baz=24						
Y17A	**Roosevelt**	**23.61**	**325**	⇑P	**P**	**02 35 56.8**	**+0.3**
	baz=24						
X18A	**Snowflake**	**23.76**	**327**	⇑P	**P**	**02 35 57.8**	**+0.1**
	baz=24						
SDV	**Santo Domingo**	**24.28**	**102**	P	**P**	**02 36 02.8**	**+0.1**
	1.3nm,0.6s,mb3.6,baz=270,slow=20,SNR=2.0						
X16A	**Lo Mia Camp, P**	**24.48**	**325**	⇓P	**P**	**02 36 05.8**	**+1.4**
	baz=24						
SDCO	**Great Sand Dun**	**24.52**	**339**	*e*P	**P**	**02 36 05.5**	**+0.8**
	3.8nm,1.2s,mb3.8						
Y15A	**Casa Rosa Ranc**	**24.65**	**323**	⇓P	**P**	**02 36 07.1**	**+1.1**
	baz=25						
113A	**Mohawk Valley,**	**24.72**	**319**	⇓P	**P**	**02 36 07.1**	**+0.6**
	baz=25						
U19A	**Dine' College,**	**24.79**	**331**	⇓P	**P**	**02 36 07.4**	**+0.3**
	baz=25						
Z13A	**Yuma Proving G**	**24.93**	**320**	⇓P	**P**	**02 36 09.7**	**+1.2**
	baz=25						
X15A	**Humboldt**	**24.98**	**324**	⇑P	**P**	**02 36 08.8**	**-0.1**
	baz=25						
V17A	**Tonalea, Kykot**	**25.04**	**328**	⇓P	**P**	**02 36 10.1**	**+0.7**
	baz=25,SNR=5.0						
WUAZ	**Wupatki**	**25.26**	**327**	⇓P	**P**	**02 36 12.3**	**+0.8**
	baz=25						
WUAZ	**Wupatki**	**25.26**	**327**	*e*P	**P**	**02 36 12.1**	**+0.6**
	6.4nm,1.0s,mb4.1						
PV01	**Paradox Valley**	**26.04**	**334**	*e*P	**P**	**02 36 19.9**	**+1.5**
P20A	**De Beque**	**27.13**	**336**	⇑P	**P**	**02 36 28.7**	**+0.3**
	baz=27						
T13A	**Saint George**	**27.75**	**325**	⇓P	**P**	**02 36 33.6**	**-0.3**
	baz=28						
N20A	**Spence Gulch,**	**28.24**	**338**	⇓P	**P**	**02 36 37.1**	**-1.2**
	baz=28						
ECSD	**EROS Data Cent**	**28.59**	**357**	*e*P	**P**	**02 36 40.7**	**-0.6**
	3.9nm,1.1s,mb4.0						
PDAR	**Pinedale Array**	**30.40**	**338**	P	**P**	**02 36 57.2**	**-0.2**
	0.5nm,0.8s,mb3.3,baz=159,slow=13,SNR=3.8						
M14A	**Sheep Mountain**	**30.89**	**332**	⇑P	**P**	**02 37 01.9**	**+0.2**
	baz=31						
NVAR	**Mina Array Bea**	**31.23**	**323**	P	**P**	**02 37 05.6**	**+0.8**
	0.8nm,0.8s,mb3.6,baz=131,slow=9.0,SNR=5.8						
NVAR	**Mina Array Bea**	**31.23**	**323**	P	**P**	**02 37 05.6**	**+0.8**
L14A	**Malta**	**31.27**	**333**	⇑P	**P**	**02 37 04.9**	**-0.2**
	baz=31						
M12A	**Wells**	**31.56**	**330**	⇑P	**P**	**02 37 07.9**	**+0.3**
	baz=32						
RLMT	**Red Lodge**	**32.38**	**341**	⇑P	**P**	**02 37 14.8**	**+0.1**
	baz=32						
L11A	**Cat Creek Ranc**	**32.53**	**330**	⇓P	**P**	**02 37 16.3**	**+0.1**
	baz=32						
J13A	**Cove Ranch, Pi**	**32.77**	**333**	⇑P	**P**	**02 37 18.5**	**+0.2**
	baz=33						
L10A	**Juniper Basin**	**32.82**	**329**	⇓P	**P**	**02 37 19.1**	**+0.4**
	baz=33						
HLID	**Hailey**	**33.01**	**333**	⇓P	**P**	**02 37 20.9**	**+0.5**
	baz=33						
HLID	**Hailey**	**33.01**	**333**	*e*P	**P**	**02 37 20.9**	**+0.5**
	3.6nm,1.2s,mb4.2						
AGMN	**Agassiz Refuge**	**33.12**	**359**	*e*P	**P**	**02 37 19.7**	**-1.5**
	5.7nm,0.8s,mb4.5						
F18A	**Big Timber**	**33.22**	**341**	⇓P	**P**	**02 37 22.4**	**+0.2**
	baz=33						
MCMT	**McKenzie Canyo**	**33.40**	**336**	*e*P	**P**	**02 37 25.1**	**+1.4**
	1.8nm,0.9s,mb4.0						
H14A	**Leadore**	**33.43**	**335**	⇑P	**P**	**02 37 23.9**	**-0.1**
	baz=34						
F17A	**Fitzpatrick Pl**	**33.53**	**340**	⇓P	**P**	**02 37 24.8**	**0.0**
	baz=34						
G15A	**Dillon**	**33.55**	**337**	⇓P	**P**	**02 37 25.8**	**+0.8**
	baz=34						
H13A	**Challis**	**33.75**	**334**	⇓P	**P**	**02 37 27.0**	**+0.3**
	baz=34						
E18A	**Harlowton**	**33.87**	**341**	⇑P	**P**	**02 37 27.9**	**+0.1**
	baz=34						
H12A	**Diamond D Ranc**	**33.99**	**334**	⇑P	**P**	**02 37 29.1**	**+0.2**
	baz=34						
H11A	**Donnelly**	**34.62**	**333**	⇑P	**P**	**02 37 34.1**	**-0.3**
	baz=35						
D17A	**Six Diamond Ra**	**34.63**	**341**	⇓P	**P**	**02 37 32.9**	**-1.5**
	baz=35						
G12A	**Big Creek, Yel**	**34.66**	**334**	⇑P	**P**	**02 37 35.0**	**+0.3**
	baz=35						
F12A	**Elk City**	**35.13**	**335**	⇓P	**P**	**02 37 38.0**	**-0.7**
	baz=35						
G11A	**Walters Elk Ra**	**35.28**	**333**	⇓P	**P**	**02 37 39.8**	**-0.2**
	baz=35						
G09A	**Cove**	**35.86**	**332**	⇓P	**P**	**02 37 46.3**	**+1.3**
	baz=36						
LPAZ	**La Paz**	**40.72**	**139**	P	**P**	**02 38 25.4**	**-0.9**
	1.2nm,0.8s,mb3.5,baz=332,slow=7.0,SNR=4.4						
YKA	**Yellowknife Ar**	**49.40**	**348**	P	**P**	**02 39 33.3**	**-1.3**
	0.9nm,0.7s,mb3.9,baz=152,slow=7.4,SNR=6.4						
PLCA	**Paso Flores**	**59.88**	**159**	P	**P**	**02 40 49.5**	**-1.6**
	1.7nm,0.7s,mb4.2,baz=304,slow=1.8,SNR=4.1						
PLCA	**Paso Flores**	**59.88**	**159**	P	**P**	**02 40 49.5**	**-1.6**
ESDC	**Sonseca Array**	**81.04**	**51**	P	**P**	**02 42 59.1**	**-1.4**
	0.8nm,0.7s,mb3.7,baz=288,slow=4.2,SNR=4.4						
NOA	**NORSAR Array B**	**84.40**	**28**	P	**P**	**02 43 17.0**	**-0.6**
	0.7nm,0.8s,mb3.8,baz=295,slow=5.3,SNR=3.1						
HHC	**Hu-ho-hao-te**	**119.26**	**337**	*e*PKP	PKPdf	02 49 34.5	-0.5
HHC				sPKP		02 49 49.0	
HHC				PP	PP	02 51 05.0	+11
HHC				PKS		02 53 10.0	
HHC				SKS	SKSdf	02 56 42.0	-6.0
HHC				SKKS	SKKSac	02 57 54.0	-2.7
HHC				SS	SS	03 07 29.3	+13
HHC				AMB	AMB		
	comp=Z,91nm,5.9s						
HHC				LR	LR		
	comp=N,73nm,19.4s						
HHC				LR	LR		
	comp=E,70nm,18.6s						
HHC				LR	LR		
	comp=Z,89nm,18.8s						

*DDA **31** 02:35:17.7, 39°.79N×25°.46E, h22km±1km, Md3.2*
*NEIC **31** 02:35:19.9, 39°.79N×25°.61E, h22km, MD3.3(ATH), After ATH.*
*ISCJB **31** 02:35:19.2±0.4, 39°.83N±0°.02×25°.60E±0°.02, h2km±3km, Error ellipse: s-maj=3.1km s-min=2.3km az=21.9*
*ATH **31** 02:35:19.9, 39°.79N×25°.61E, h22km, MD3.3/9*
*ISK **31** 02:35:20.0, 39°.81N×25°.70E, h5km, MD3.3*
*CSEM **31** 02:35:20.4±0.1, 39°.81N×25°.60E, h10km, MD3.3, Error ellipse: s-maj=2.5km s-min=1.9km az=26.0*
*THE **31** 02:35:20.3, 39°.81N×25°.62E, h7km, ML3.1/11, Error ellipse: s-maj=1.1km s-min=0.4km az=75.0*
*SOF **31** 02:35:24.3, 40°.13N×25°.48E, h18km, MD2.8*

ISC 31 02:35:20.2±0.4, 39°.82N±0°.02×25°.61E±0°.02, h6km±3km, n114, σ0§81/160, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.33**	**283**	*e*PB	**Pg**	**02 35 27.2**	**+0.5**
LIA				*e*SB	**Sg**	**02 35 32.8**	**+1.7**

PAIG	Paliouri	1.49	275	P	Pn	02 35 46.3	-1.0
PAIG				S	Sn	02 36 07.0	0.0
BALY	Balya	1.55	92	*i* P	Pn	02 35 48.0	-0.3
BALY				*i* S	Sn	02 36 08.4	-0.3
BALY	Balya	1.55	92	*i* P	Pn	02 35 48.0	-0.3
BALY				*i* S	Sn	02 36 08.4	-0.3
MFT	Murefte	1.60	53	*e*PN	Pn	02 35 49.3	+0.3
MFT	Murefte	1.60	53	*e*Pn	Pn	02 35 49.3	+0.3
URLA	Izmir	1.65	152	*i* P	Pn	02 35 48.5	-1.0
URLA				*i* S	Sn	02 36 12.7	+1.6
URLA	Izmir	1.65	152	*i* P	Pn	02 35 48.5	-1.1
URLA				*i* S	Sn	02 36 12.7	+1.6
PLG	Polygyros	1.75	289	*e*PN	Pn	02 35 50.8	-0.1
PLG	Polygyros	1.75	289	P	Pn	02 35 50.6	-0.3
PLG				S	Sn	02 36 14.1	+0.7
PLG	Polygyros	1.75	289	*e*Pn	Pn	02 35 50.8	-0.1
PLG				S	Sn	02 36 14.1	+0.7
BALB	Balikesir	1.76	95	*e*PN	Pn	02 35 50.9	-0.3
BALB	Balikesir	1.76	95	*e*Pn	Pn	02 35 50.9	-0.2
EDC	Edincik	1.81	72	*e*PN	Pn	02 35 51.7	-0.1
EDC	Edincik	1.81	72	*e*Pn	Pn	02 35 51.7	-0.1
BLCB	Balcova	1.82	142	*e*PN	Pn	02 35 51.9	0.0
BLCB	Balcova	1.82	142	*e*Pn	Pn	02 35 51.9	0.0
KDZ	Kurdzhali	1.83	356	P	Pn	02 35 51.5	-0.6
KDZ	Kurdzhali	1.83	356	P	Pn	02 35 51.5	-0.6
BNT	Bandirma	1.85	73	*e*PN	Pn	02 35 52.1	-0.3
TKR	Tekirdag	1.88	51	*e*PN	Pn	02 35 52.6	-0.2
TKR	Tekirdag	1.88	51	*e*Pn	Pn	02 35 52.6	-0.2
IZM	Izmir	1.92	137	*e*PN	Pn	02 35 54.2	+0.9
IZM	Izmir	1.92	137	*e*Pn	Pn	02 35 54.2	+0.9
XOR	Xorichti	1.92	257	P	Pn	02 35 52.2	-1.1
XOR				S	Sn	02 36 17.7	0.0
AKS	Akhisar	1.95	118	*e*PN	Pn	02 35 53.7	-0.1
AKS	Akhisar	1.95	118	*e*Pn	Pn	02 35 53.7	-0.1
AKHS	Akhisar	1.95	118	*i* P	Pn	02 35 53.6	-0.1
AKHS				*i* S	Sn	02 36 18.0	-0.6
AKHS	Akhisar	1.95	118	*i* P	Pn	02 35 53.6	-0.2
AKHS				*i* S	Sn	02 36 18.0	-0.6
RZN	Rozhen	1.98	340	P	Pn	02 35 54.2	0.0
RZN	Rozhen	1.98	340	P	Pn	02 35 54.2	0.0
SOH	Sokhos	1.99	301	*e*PB	Pb	02 35 54.1	-2.6
SRS	Serrai	2.01	311	P	Pn	02 35 54.1	-0.4
SRS				S	Sn	02 36 19.9	0.0
SRS	Serrai	2.01	311	P	Pn	02 35 54.1	-0.4
SRS				S	Sn	02 36 19.9	0.0
NVR	Nevrokopi	2.02	320	*e*PB	Pb	02 35 54.7	-2.6
HORT	Hortiatis	2.07	293	P	Pn	02 35 55.2	-0.2
HORT	Hortiatis	2.07	293	P	Pn	02 35 55.2	-0.2
CRLT	Corlu	2.08	51	*e*PN	Pn	02 35 55.8	+0.2
CRLT	Corlu	2.08	51	*e*Pn	Pn	02 35 55.8	+0.2
KCT	Karacabey	2.16	77	*e*PN	Pn	02 35 56.6	0.0
KCT	Karacabey	2.16	77	*e*Pn	Pn	02 35 56.6	0.0
EDRB	Edirne	2.20	23	*e*PN	Pn	02 35 58.2	+1.1
EDRB	Edirne	2.20	23	*e*Pn	Pn	02 35 58.2	+1.0
DURS	Dursunbey	2.22	95	*i* P	Pn	02 35 58.2	+0.8
DURS				*i* S	Sn	02 36 24.7	-0.5
DURS	Dursunbey	2.22	95	*i* P	Pn	02 35 58.2	+0.7
DURS				*i* S	Sn	02 36 24.7	-0.5
MMB	Musomiste	2.27	322	P	Pn	02 35 58.3	+0.2
MMB	Musomiste	2.27	322	P	Pn	02 35 58.3	+0.2
DST	Dursunbey	2.34	94	*e*PN	Pn	02 35 59.0	-0.1
DST	Dursunbey	2.34	94	*e*Pn	Pn	02 35 59.0	-0.1
LIT	Litokhoron	2.41	278	*e*PN	Pn	02 36 00.3	+0.3
LIT	Litokhoron	2.41	278	*e*Pn	Pn	02 36 00.3	+0.3
CTKS	Kestanelik-??a	2.62	56	*e*PN	Pn	02 36 03.5	+0.5
CTKS	Kestanelik-??a	2.62	56	*e*Pn	Pn	02 36 03.5	+0.5
CTYL	Yal??k??y-??at	2.63	50	*e*PN	Pn	02 36 03.8	+0.7
CTYL	Yal??k??y-??at	2.63	50	*e*Pn	Pn	02 36 03.8	+0.8
AGG	Agios Georgios	2.66	254	*e*PN	Pn	02 36 03.9	+0.4
AGG	Agios Georgios	2.66	254	*e*Pn	Pn	02 36 03.9	+0.4
JMB	Yambol	2.74	15	Pg	Pg	02 36 14.1	+1.4
BGKT	Bogazkoy	2.77	60	*e*PN	Pn	02 36 05.6	+0.6
BGKT	Bogazkoy	2.77	60	*e*Pn	Pn	02 36 05.6	+0.6
KKB	Krupnik	2.80	318	Pg	Pg	02 36 13.3	-0.5
KKB	Krupnik	2.80	318	Pg	Pg	02 36 13.3	-0.5
ISK	Istanbul-Kandi	2.91	64	*e*PN	Pn	02 36 07.5	+0.6
ISK	Istanbul-Kandi	2.91	64	*e*Pn	Pn	02 36 07.5	+0.5
PGB	Panagyurishte	2.93	339	Pg	Pg	02 36 16.1	-0.3
PGB	Panagyurishte	2.93	339	Pg	Pg	02 36 16.1	-0.3
YLV	Yalova	2.98	74	*e*PN	Pn	02 36 08.4	+0.5
YLV	Yalova	2.98	74	*e*Pn	Pn	02 36 08.4	+0.5
KLYT	Kilyos	2.98	60	*e*PN	Pn	02 36 08.5	+0.5
KLYT	Kilyos	2.98	60	*e*Pn	Pn	02 36 08.5	+0.6
VTS	Vitosha	3.31	328	Pg	Pg	02 36 24.9	+1.4
VTS	Vitosha	3.31	328	Pg	Pg	02 36 24.9	+1.4
SILT	Sile	3.35	65	*e*PN	Pn	02 36 13.8	+0.8
SILT	Sile	3.35	65	*e*Pn	Pn	02 36 13.8	+0.8
SZH	Strazhica	3.45	4	P	Pn	02 36 16.2	+1.9
SZH	Strazhica	3.45	4	P	Pn	02 36 16.2	+1.9
MPEP	Malo Peshtene	3.80	339	Pg	Pg	02 36 31.9	-1.0

*IDC **31** 02:46:16.6±0.8, 6°.98S×155°.60E, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.5/16, mbtmp4.4/13, MS3.5/8, Ms1 3.5/8, ms1mx3.3/22, Error ellipse: s-maj=33.5km s-min=16.8km az=90.0*
*ISCJB **31** 02:46:27.2±2.0, 7°.13S±0°.07×155°.56E±0°.10, h92km±18km, mb4.6/32, Error ellipse: s-maj=15.8km s-min=11.8km az=5.1*
*NEIC **31** 02:46:28.1±2.7, 7°.03S×155°.50E, h86km±23km, mb4.8/15, Error ellipse: s-maj=15.9km s-min=11.2km az=79.0*
*BJI **31** 02:46:28.2, 7°.28S×155°.69E, h107km, mB5.1/11, mb4.9/16*
ISC 31 02:46:30.4±2.0, 7°.15S±0°.07×155°.51E±0°.10, h105km±17km, h113km±1.1km; pP-P, n56, σ1.9°02/53, mb4.6/32,
Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	13.88	240	*e*P	Pn	02 49 42.6	0.0
COEN	Coen	13.88	240	*e*Pn	Pn	02 49 42.3	-0.3
	269nm,0.9s						
COEN				*e*P		02 49 49.0	
CTA	Charters Tower	15.68	214	*e*P	Pn	02 50 05.3	-0.2
	16nm,0.7s						
CTA	Charters Tower	15.68	214	Pn	Pn	02 50 05.4	-0.1
	1.1nm,0.3s,baz=42,slow=13,SNR=19						
CTAO	Charters Tower	15.68	214	*e*Pn	Pn	02 50 05.6	+0.1
	37nm,1.0s						
EIDS	Eidsvold	18.60	193	*e*P	P	02 50 39.9	+0.4
	72nm,1.4s						
GUMO	Guam	23.16	333	LR	LR	02 59 01.0	
	comp=Z,81nm,19.4s,baz=134,slow=33						
KAKA	Kakadu	23.38	255	*e*P	P	02 51 29.8	-0.1
	17nm,0.6s,mb4.5						
KAKA	Kakadu	23.38	255	*e*P	P	02 51 29.8	0.0
	46nm,0.6s,mb5.0						
ARMA	Armidale	23.43	188	*e*P	P	02 51 30.7	+0.5
ARMA	Armidale	23.43	188	*e*P	P	02 51 31.4	+1.2
	68nm,1.6s,mb4.7						
WRAB	Tennant Creek	24.14	236	*e*P	P	02 51 37.1	+0.3
	46nm,1.3s,mb4.7						
ASAR	Alice Springs	26.45	229	P	P	02 51 57.1	-0.6
	3.7nm,0.8s,mb3.8,baz=61,slow=8.4,SNR=17						
STKA	Stephens Creek	27.82	206	*e*P	P	02 52 09.3	-0.5
	5.1nm,0.7s,mb4.2						
STKA	Stephens Creek	27.82	206	P	P	02 52 09.6	-0.2
	6.7nm,0.8s,mb4.2,baz=30,slow=12,SNR=11						
STKA				LR	LR	03 02 22.7	
	comp=Z,171nm,21.2s,baz=27,slow=34						
STKA	Stephens Creek	27.82	206	*e*P	P	02 52 09.4	-0.3
	5.5nm,1.4s,mb3.9						
CNB	Canberra Magne	28.59	191	*e*P	P	02 52 17.2	+0.6
FITZ	Fitzroy Crossi	31.06	247	*e*P	P	02 52 38.5	-0.2
	30nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	31.06	247	*e*P	P	02 52 38.3	-0.4
	14nm,0.6s,mb4.9						
ARPS	Mount Arapiles	32.01	201	*e*P	P	02 52 46.7	-0.1
	24nm,0.8s,mb5.0						
FORT	Forrest	34.83	224	*e*P	P	02 53 10.9	-0.5
	16nm,0.6s,mb5.0						
MBWA	Marble Bar	37.27	244	*e*P	P	02 53 31.4	-0.8
	7.9nm,0.8s,mb4.7						
RPZ	Rata Peaks	38.89	162	P	P	02 53 45.0	-0.5
	12nm,0.8s,mb4.8,baz=318,slow=5.7,SNR=6.2						
MEEK	Meekatharra	40.05	237	*e*P	P	02 53 55.5	0.0
KKM	Kota Kinabalu	41.34	288	*e*P	P	02 54 05.8	-0.5
	17nm,0.9s,mb4.9						
MJAR	Matsushiro Arr	46.39	341	P	P	02 54 42.3	-4.0
	1.5nm,0.5s,mb4.0,baz=170,slow=7.8,SNR=5.4						
KSRS	Korea Array	51.31	332	P	P	02 55 21.9	-2.0
	2.5nm,0.7s,mb4.4,baz=153,slow=8.3,SNR=8.8						
KSRS				LR	LR	03 14 41.0	
	comp=Z,29nm,21.9s,baz=156,slow=33						
ASAJ	Asahikawa	52.35	348	LR	LR	03 14 36.8	
	comp=Z,72nm,20.3s,baz=190,slow=33						
KULM	Kulim	56.12	281	*e*P	P	02 55 58.6	-0.8
	9.4nm,0.8s,mb4.9						
MDJ	Mudanjiang	56.57	338	P	P	02 56 02.0	0.0
MDJ				sP	sP	02 56 37.0	-2.2
MDJ				PP	PP	02 58 08.0	-1.1
MDJ				PcS	PcS	03 00 56.5	-1.5
MDJ				S	S	03 03 36.3	-9.4
MDJ				pmax	pmax		
	comp=Z,140nm,4.5s						
CN2	Changchun	57.55	335	*e*P	P	02 56 11.5	+2.6
CN2				*e*pP	pP	02 56 38.5	+3.9
CN2				*e*S	S	03 03 59.0	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
GYA	Guiyang	57.95	307	P	P	02 56 13.5	+1.4
GYA				pP	pP	02 56 41.3	+3.5
GYA				sP	sP	02 56 54.0	+4.6
GYA				PcP	PcP	02 57 04.0	+0.8
GYA				PP	PP	02 58 25.8	+4.0
GYA				ScP	ScP	03 00 53.0	-0.9
GYA				PcS	PcS	03 01 04.5	-0.3
GYA				S	S	03 04 03.5	-1.0
GYA				sS	sS	03 04 51.0	+2.5
GYA				SS	SS	03 07 57.5	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,570nm,18.9s						
GYA				LR	LR		
	comp=E,580nm,19.0s						
GYA				LR	LR		
	comp=Z,470nm,18.6s						
PETK	Petropavlovsk-	60.05	2	P	P	02 56 25.7	-0.4
	comp=Z,2.4nm,0.7s,mb4.3,baz=149,slow=5.7,SNR=6.0						
PETK				LR	LR	03 16 51.7	
	comp=Z,54nm,21.3s,baz=310,slow=31						
KMI	Kunming	60.53	304	P	P	02 56 33.0	+3.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
KMI				LR	LR		
	comp=Z,51nm,19.1s						
CMAR	Chiang Mai Arr	61.31	295	P	P	02 56 35.9	+0.6
	comp=Z,9.4nm,0.7s,mb5.0,baz=122,slow=5.4,SNR=36						
CHTO	Chiang Mai	61.43	296	*e*P	P	02 56 36.2	+0.1
	comp=Z,4.0nm,0.8s,mb4.5						
CD2	Chengdu	62.30	310	P	P	02 56 43.8	+2.1
CD2				pP	pP	02 57 11.0	+3.3
CD2				sP	sP	02 57 23.8	+4.5
CD2				S	S	03 05 00.5	+0.5
CD2				sS	sS	03 05 46.5	+2.0
CD2				SS	SS	03 09 07.5	+2.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.4						
CD2				pmax	pmax		
	comp=Z,170nm,5.4s						
CD2				LR	LR		
	comp=N,230nm,5.3s						
CD2				LR	LR		
	comp=Z,230nm,7.7s						
LZH	Lanzhou	64.78	315	*e*P	P	02 57 01.0	+3.0
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GTA	Gaotai	69.20	317	*e*P	P	02 57 26.5	+0.6
GTA				pP	pP	02 57 54.0	+1.7
GTA				sP	sP	02 58 07.0	+3.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	69.41	327	*e*P	P	02 57 26.8	-0.2
	comp=Z,5.2nm,1.0s,mb4.3						
SONM	Songino Array	69.74	327	P	P	02 57 28.8	-0.2
	comp=Z,4.7nm,0.8s,mb4.4,baz=142,slow=6.6,SNR=14						
WMQ	Urumqi	79.29	317	*e*P	P	02 58 25.5	+1.2
WMQ				LR	LR		
	comp=Z,38nm,25.5s						
MK31	Makanchi Array	83.86	319	*e*P	P	02 58 47.5	-0.9
MKAR	Makanchi Array	83.86	319	P	P	02 58 47.6	-0.7
	comp=Z,2.5nm,0.8s,mb4.1,baz=92,slow=6.6,SNR=20						
MAW	Mawson	84.45	203	P	P	02 58 52.1	+1.1
	comp=Z,3.9nm,1.0s,mb4.2,baz=144,slow=2.7,SNR=4.6						
ZALV	Zalesovo Beam	84.59	326	P	P	02 58 50.0	-1.9
	comp=Z,1.3nm,0.5s,mb4.1,baz=108,slow=4.7,SNR=5.0						
HYT	Haines Junctio	85.28	27	*e*P	P	02 58 59.3	+4.1
EGAK	Eagle	85.46	23	*e*P	P	02 58 56.7	+0.7
	comp=Z,44nm,2.6s,mb4.9						
INK	Inuvik	89.69	21	LR	LR	03 35 30.2	
	comp=Z,62nm,19.9s,baz=267,slow=33						
INK	Inuvik	89.69	21	*e*P	P	02 59 16.2	0.0
	comp=Z,3.2nm,1.1s,mb4.4						
BVAR	Borovoye Array	92.73	323	P	P	02 59 28.3	-2.3
	comp=Z,0.3nm,0.5s,mb3.9,baz=134,slow=6.4,SNR=2.5						
BVAR				LR	LR	03 37 27.8	
	comp=Z,63nm,20.3s,baz=315,slow=33						
YKA	Yellowknife Ar	96.23	28	P	P	02 59 45.4	-1.1
	comp=Z,1.0nm,0.7s,mb4.3,baz=267,slow=4.8,SNR=9.6						
YKA				LR	LR	03 39 26.9	
	comp=Z,3.0nm,19.1s,baz=60,slow=33						
FINES	FINESS Array B	114.29	336	PKP	PKiKP	03 04 57.0	-0.3
	comp=Z,0.4nm,0.3s,baz=82,slow=2.7,SNR=9.1						
GERES	GERESS Array B	127.45	329	PKP	PKPdf	03 05 25.3	+2.3
	comp=Z,0.6nm,0.8s,baz=132,slow=2.0,SNR=4.4						
TAM	Tamanrasset	147.20	302	*e*PKPbc	PKPbc	03 06 03.3	+1.0
TORD	Torodi Ar. Bea	153.56	285	PKPbc	PKPbc	03 06 17.2	-0.6
	comp=Z,0.2nm,0.3s,baz=89,slow=1.9,SNR=23						

DHMR 31 03:06:43.4±0.9, 12°.60N×40°.54E, h28km±371km, ML3.5, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DESE	Dese	1.72	211	*e*PN	Pn	03 07 40.5	+29
DESE				*e*S	Sn	03 08 14.9	+42
TRBA	At Turbah	3.54	79	*i* P	Pn	03 07 38.9	+2.3
TRBA				*i* S	Sn	03 08 23.2	+5.6
TRBA				AML	AML	03 08 48.5	
	comp=N,205nm,0.8s						
DHBB	Dhamar BB	4.23	62	*i* P	Pn	03 07 49.0	+3.1
DHBB				*i* S	Sn	03 08 39.3	+4.8
LBOS		4.76	74	*i* S	Sn	03 08 48.7	+1.1

*CSEM **31** 03:07:19.1, 37°.00N×29°.19E, h20km, MD3.3, After DDA*
*IDC **31** 03:07:19.1±1.8, 36°.75N×29°.36E, h0km, mb3.4/1, mb1 3.1/4, mb1mx3.0/24, mbtmp3.1/4, ML3.0/3, Error ellipse: s-maj=37.0km s-min=20.6km az=161.0*
*DDA **31** 03:07:19.1, 37°.00N×29°.19E, h20km±2km, Md3.3*
ISC 31 03:07:20.4±0.7, 37°.01N±0°.03×29°.17E±0°.03, h2km±6km, n26, σ1.9°13/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.39	53	*i* P	Pg	03 07 26.8	-1.1
GOLH				*i* S	Sg	03 07 33.3	+0.4
GOLH	Golhisar	0.39	53	*i* P	Pg	03 07 26.8	-1.0
GOLH				*i* S	Sg	03 07 33.3	+0.4
TURN	Turunc	0.47	254	*i* P	Pg	03 07 34.0	+4.5
TURN				*i* S	Sg	03 07 45.3	+10
TURN	Turunc	0.47	254	*i* P	Pg	03 07 34.0	+4.5
TURN				*i* S	Sg	03 07 45.3	+10
DNZL	Cakiroluk	0.69	352	*i* P	Pg	03 07 32.3	-1.4
DNZL				*i* S	Sg	03 07 43.6	+1.0
DNZL	Cakiroluk	0.69	352	*i* P	Pg	03 07 32.3	-1.3
DNZL				*i* S	Sg	03 07 43.6	+1.0
AKAS	Kas	0.85	156	*i* P	Pg	03 07 34.9	-1.7
AKAS				*i* S	Sg	03 07 50.9	+3.3
AKAS	Kas	0.85	156	*i* P	Pg	03 07 34.9	-1.7
AKAS				*i* S	Sg	03 07 50.9	+3.3
KORT	Korkueli	0.94	90	*i* P	Pg	03 07 37.9	-0.6
KORT	Korkueli	0.94	90	*i* P	Pg	03 07 37.9	-0.6
AYDN	Tasoluk	1.22	303	*i* P	Pg	03 07 42.6	-1.2
AYDN				*i* S	Sg	03 08 01.0	+1.4
AYDN	Tasoluk	1.22	303	*i* P	Pg	03 07 42.6	-1.2
AYDN				*i* S	Sg	03 08 01.0	+1.4
BDRM	Kayabasi	1.38	273	*i* P	Pn	03 07 46.4	-0.4
BDRM				*i* S	Sg	03 08 05.4	+0.6
BDRM	Kayabasi	1.38	273	*i* P	Pn	03 07 46.4	-0.3
BDRM				*i* S	Sg	03 08 05.4	+0.5
KHAL	Karahalli	1.39	10	*i* P	Pn	03 07 45.8	-0.9
KHAL				*i* S	Sg	03 08 06.3	+1.4
KHAL	Karahalli	1.39	10	*i* P	Pn	03 07 45.8	-1.0
KHAL				*i* S	Sg	03 08 06.3	+1.4
GCAM	G?zelcaml?	1.69	295	*i* P	Pn	03 07 50.6	-0.4
GCAM	G?zelcaml?	1.69	295	*i* P	Pn	03 07 50.6	-0.4
DEMI	Demirci	2.06	350	*i* P	Pn	03 07 55.1	-1.0
DEMI	Demirci	2.06	350	*i* P	Pn	03 07 55.2	-0.9
GAZI	Gazipasa	2.64	106	*e*P	Pn	03 08 05.3	+1.2
GAZI				*i* S	Sn	03 08 38.0	+1.3
GAZI	Gazipasa	2.64	106	*e*P	Pn	03 08 05.3	+1.2
GAZI				*i* S	Sn	03 08 38.0	+1.3
IDI	Anoyia	3.87	245	Pn	Pn	03 08 21.7	+0.8
	1.1nm,0.3s,baz=76,slow=19,SNR=13						
IDI				Sn	Sn	03 09 07.5	+0.7
	1.1nm,0.3s,baz=300,slow=14,SNR=4.1						
BRTR	Keskin Array B	4.44	51	Pn	Pn	03 08 29.1	+0.4
	0.2nm,0.3s,baz=236,slow=18,SNR=8.1						
BRTR				Sn	Sn	03 09 20.7	-0.2
	0.2nm,0.3s,baz=226,slow=25,SNR=5.6						
MMAI	Mount Meron Ar	6.48	126	Pn	Pn	03 08 53.2	-3.6
	1.4nm,0.3s,baz=305,slow=12,SNR=9.8						
MMAI				Sn	Sn	03 10 03.1	-8.1
	baz=312,slow=28,SNR=2.0						
TORD	Torodi Ar. Bea	34.18	233	P	P	03 14 05.3	-1.9
	0.3nm,0.6s,baz=33,slow=8.3,SNR=8.7						

*IDC **31** 03:09:37.7±1.5, 51°.50N×179°.73W, h0km, mb3.9/17, mb1 4.1/18, mb1mx3.9/30, mbtmp3.9/18, ML3.5/1, Error ellipse: s-maj=41.7km s-min=18.7km az=0.0*
*NEIC **31** 03:09:38.5±0.9, 51°.25N×179°.78W, h10km, mb4.1/10, ML3.6(AEIC), Error ellipse: s-maj=24.2km s-min=6.6km az=179.0*
*ISCJB **31** 03:09:40.3±1.4, 51°.3N±0°.2×179°.84W±0°.09, h33km±11km, mb4.0/26, Error ellipse: s-maj=25.9km s-min=9.2km az=0.1*
*MOS **31** 03:09:42.1±0.6, 51°.53N×179°.73W, h43km, mb4.3/16, Error ellipse: s-maj=22.6km s-min=12.0km az=117.5*
ISC 31 03:09:43.7±1.7, 51°.4N±0°.2×179°.77W±0°.09, h41km±12km, n51, σ0.9°70/53, mb4.0/26, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.58	264	P	Pn	03 09 50.6	-4.9
AMKA				S	Sn	03 09 56.9	-7.1
SMY	Shemya	3.99	291	P	Pn	03 10 41.8	-0.5
SMY				S	Sn	03 11 28.5	+0.7
FX1	Attu Island--F	4.58	291	P	Pn	03 10 50.6	+0.3
PETK	Petropavlovsk-	13.88	286	Pn	Pn	03 12 54.1	-3.5
	0.3nm,0.3s,baz=113,slow=17,SNR=3.8						
KTH	Kantishna Hill	19.46	40	*e*P	Pn	03 14 08.6	+0.6
	7.3nm,0.7s						
BPAW	Bear Paw Mtn.	19.68	39	*e*P	Pn	03 14 11.0	+0.5
	2.1nm,0.6s						
EGAK	Eagle	23.90	41	*e*P	P	03 14 54.0	+0.9
	3.9nm,0.9s,mb3.8						
MDJ	Mudanjiang	33.96	279	P	P	03 16 24.5	+1.7
MDJ				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,210nm,4.4s						
YKA	Yellowknife Ar	35.63	46	P	P	03 16 36.3	-0.6
	comp=Z,0.7nm,0.5s,mb3.9,baz=281,slow=7.4,SNR=9.0						
YKA	Yellowknife Ar	35.63	46	P	P	03 16 36.3	-0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOD	Bodaibo	37.45	306	*e*P	P	03 16 51.9	-0.7
HLID	Hailey	43.51	74	*e*P	P	03 17 43.3	+0.6
	comp=Z,0.9nm,0.9s,mb3.5						
BOZ	Bozeman (W)	44.00	70	*e*P	P	03 17 46.7	0.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
BOZ	Bozeman (W)	44.00	70	*e*P	P	03 17 46.7	0.0
	comp=Z,1.2nm,0.6s,mb3.8						
SONM	Songino Array	46.07	296	P	P	03 18 04.0	+0.9
	comp=Z,0.5nm,0.4s,mb3.8,baz=72,slow=9.3,SNR=4.2						
SONM	Songino Array	46.07	296	P	P	03 18 04.0	+0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BW06	Boulder Array	46.87	72	*e*P	P	03 18 09.3	-0.1
	comp=Z,1.0nm,0.8s,mb3.8						
PDAR	Pinedale Array	46.87	72	P	P	03 18 09.4	0.0
	comp=Z,0.8nm,0.7s,mb3.8,baz=315,slow=3.5,SNR=7.3						
SPITS	Spitsbergen Ar	50.27	356	P	P	03 18 35.6	+0.5
	comp=Z,0.8nm,0.4s,mb4.1,baz=32,slow=7.9,SNR=11						
SPITS	Spitsbergen Ar	50.27	356	P	P	03 18 35.6	+0.5
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	53.54	313	P	P	03 18 59.5	-0.3
	comp=Z,0.4nm,0.4s,mb3.7,baz=48,slow=6.6,SNR=2.7						
ARCES	ARCESS Array B	57.92	350	P	P	03 19 30.7	-0.2
	comp=Z,2.1nm,0.8s,mb4.2,baz=24,slow=11,SNR=3.9						
ARCES	ARCESS Array B	57.92	350	P	P	03 19 30.7	-0.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurch

*DJA **31** 03:16:02, 17.°03S×174.°77W, h109km, mb5.2/16*
*BJI **31** 03:16:12.2, 17.°30S×175.°10W, h219km, mB5.1/10, mb4.9/15*
*NEIC **31** 03:16:15.2±1.0, 17.°26S×175.°07W, h220km±9km, mb4.8/17, Error ellipse: s-maj=12.2km s-min=6.8km az=133.0*
*GCMT **31** 03:16:15.2±0.3, 17.°32S×174.°67W, h265km±2km, MW5.1/58, Moment Tensor Solution. s36,c41; s58,c75; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.19±.18; Mθθ=0.64±.22; Mφφ=2.56±.21; Mrθ=-0.15±.20; Mθφ=1.15±.17; Mφr=-4.50±.17; Best double couple: M=5.48000×10^16 NP1:φs=218.00000°, δ=20.00000°, λ=-60.00000°. NP2: φs=7.00000°, δ=73.00000°, λ=-100.00000°. Principal axes: T 5.2770, Plg=27.0000°, Azm=105.0000°; N 0.4120, Plg=10.0000°, Azm=10.0000°; P -5.6840, Plg=61.0000°, Azm=262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **31** 03:16:15.4±0.4, 17.°36S±0.°07×175.°03W±0.°09, h234km, mb4.6/37 Error ellipse: s-maj=13.2km s-min=8.1km az=37.1*
*IDC **31** 03:16:18.3±0.8, 17.°43S×175.°05W, h251km±7km, mb4.0/12, mb1 4.1/12, mb1mx4.0/17, mbtmp4.0/12, Error ellipse: s-maj=19.2km s-min=11.2km az=126.0*
ISC 31 03:16:17.0±0.4, **17.°35S**±0.°07×**175.°00W**±0.°09, **h236**km, **h236**km±5.6km; **pP-P, n165,** σ0=**91**/66, **mb4.6**/37, **4C-13D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.62**	**43**	P	**Pn**	**03 17 25.3**	**-2.5**
	36nm,0.3s,baz=23,slow=5.3,SNR=31						
AFI				S	**S**	**03 18 17.4**	**-6.5**
	57nm,0.3s,baz=42,slow=22,SNR=8.0						
AFI	**Afiamalu**	**4.62**	**43**	*e*Pn	**Pn**	**03 17 25.6**	**-2.2**
AFI				*e*Sn	**S**	**03 18 16.1**	**-7.8**
MSVF	**Nonsavu**	**6.64**	**266**	*e*Pn	**Pn**	**03 17 57.8**	**+4.8**
	120nm,0.9s						
DZM	**Mont Dzumac**	**18.09**	**252**	*e*LR	LR	03 24 30.4	
	193nm,31.1s						
URZ	**Urewera**	**21.95**	**197**	P	**P**	**03 20 50.0**	**-1.6**
	38nm,0.5s,mb5.2,baz=26,slow=4.7,SNR=29						
URZ				S	**S**	**03 24 40.5**	**+3.8**
	47nm,0.8s,baz=200,slow=23,SNR=17						
URZ	**Urewera**	**21.95**	**197**	*e*P	**P**	**03 20 51.5**	**-0.1**
	39nm,0.6s,mb5.1						
PAE	**Paea**	**24.25**	**95**	*e*T		03 46 26.9	
	3.3nm,0.3s						
PPT	**Papeete**	**24.25**	**94**	*e*LR	LR	03 26 30.5	
	604nm,27.5s						
MEH	**Mehetia**	**25.67**	**95**	*e*T		03 48 12.4	
	76nm,0.2s						
KHZ	**Kahutara**	**26.84**	**199**	*e*P	**P**	**03 21 36.2**	**+0.6**
	13nm,0.5s,mb4.8						
RPZ	**Rata Peaks**	**28.81**	**201**	P	**P**	**03 21 52.5**	**-0.7**
	12nm,0.6s,mb4.7,baz=260,slow=1.0,SNR=8.8						
ARMA	**Armidale**	**33.04**	**241**	*e*P	**P**	**03 22 31.1**	**+0.7**
ARMA	**Armidale**	**33.04**	**241**	*e*P	**P**	**03 22 31.1**	**+0.7**
CNB	**Canberra Magne**	**36.35**	**233**	*e*P	**P**	**03 22 58.9**	**+0.2**
CTA	**Charters Tower**	**36.74**	**260**	ǁ*i*P	**P**	**03 23 01.3**	**-0.8**
	0.4nm,0.3s,mb3.4						
CTA	**Charters Tower**	**36.74**	**260**	*e*P	**P**	**03 23 01.3**	**-0.8**
	16nm,0.9s,mb4.5						
CTAO	**Charters Tower**	**36.74**	**260**	*e*P	**P**	**03 23 01.2**	**-0.9**
	21nm,0.9s,mb4.7						
RKT	**Rikitea**	**37.91**	**105**	*e*T		04 03 03.1	
	1.5nm,0.1s						
TOO	**Toolangi**	**40.05**	**232**	ǁ*i*P	**P**	**03 23 29.4**	**0.0**
COEN	**Coen**	**40.36**	**269**	*e*P	**P**	**03 23 32.2**	**0.0**
COEN	**Coen**	**40.36**	**269**	*e*P	**P**	**03 23 32.0**	**-0.2**
	76nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**41.75**	**241**	ǁ*i*P	**P**	**03 23 43.7**	**+0.4**
	0.1nm,0.3s						
STKA	**Stephens Creek**	**41.75**	**241**	ǁ*i*P	**P**	**03 23 43.7**	**+0.4**
	46nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**41.75**	**241**	P	**P**	**03 23 43.7**	**+0.4**
	51nm,0.8s,mb5.0,baz=90,slow=9.6,SNR=107						
STKA	**Stephens Creek**	**41.75**	**241**	*e*P	**P**	**03 23 43.6**	**+0.2**
	13nm,0.9s,mb4.4						
BBOO	**Buckleboo**	**46.52**	**241**	ǁ*i*P	**P**	**03 24 20.7**	**-0.4**
	22nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**47.92**	**259**	*e*P	**P**	**03 24 30.5**	**-1.5**
	11nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**48.07**	**254**	P	**P**	**03 24 32.6**	**-0.5**
	168nm,0.7s,mb5.5,baz=88,slow=8.6,SNR=1452						
ASAR				S	**S**	**03 31 08.5**	**-4.9**
	2.4nm,1.0s,baz=87,slow=17,SNR=8.5						
KAKA	**Kakadu**	**50.85**	**268**	*e*P	**P**	**03 24 53.8**	**-0.4**
	5.2nm,0.6s,mb4.1						
KAKA	**Kakadu**	**50.85**	**268**	*e*P	**P**	**03 24 54.5**	**+0.3**
	14nm,0.6s,mb4.6						
KAKA	**Kakadu**	**50.85**	**268**	*e*P	**P**	**03 24 54.1**	**-0.1**
	32nm,0.6s,mb4.9						
FORT	**Forrest**	**53.18**	**244**	*e*P	**P**	**03 25 10.0**	**-1.2**
	30nm,0.8s,mb4.8						
FORT	**Forrest**	**53.18**	**244**	*e*P	**P**	**03 25 09.9**	**-1.2**
	32nm,0.8s,mb4.8						
KNA	**Kununurra**	**53.76**	**263**	*e*P	**P**	**03 25 14.9**	**-0.7**
	16nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**56.32**	**260**	*e*P	**P**	**03 25 32.9**	**-1.0**
	6.1nm,0.6s,mb4.3						
MBWA	**Marble Bar**	**61.36**	**255**	*e*P	**P**	**03 26 07.4**	**-1.0**
	35nm,1.1s,mb4.9						
KLBR	**Kellerberrin**	**61.98**	**243**	*e*P	**P**	**03 26 11.6**	**-0.8**
	30nm,0.7s,mb5.0						
CASY	**Casey**	**68.01**	**205**	*e*P	**P**	**03 26 50.9**	**+0.5**
	11nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**69.45**	**321**	P	**P**	**03 26 59.2**	**-0.6**
	3.6nm,0.9s,mb4.0,baz=152,slow=4.3,SNR=6.3						
MAT	**Matsushiro**	**69.45**	**321**	P	**P**	**03 26 59.3**	**-0.5**
KKM	**Kota Kinabalu**	**71.77**	**283**	*e*P	**P**	**03 27 13.8**	**-0.5**
	6.3nm,0.5s,mb4.5						
ASAJ	**Asahikawa**	**72.40**	**329**	P	**P**	**03 27 17.6**	**+0.4**
	7.1nm,0.8s,mb4.4,baz=202,slow=14,SNR=3.6						
QSPA	**South Pole Qui**	**72.71**	**180**	*e*P	**P**	**03 27 20.2**	**+1.5**
	17nm,1.2s,mb4.6						
PETK	**Petropavlovsk-**	**74.02**	**343**	P	**P**	**03 27 25.3**	**-1.3**
	1.3nm,0.5s,mb3.8,baz=144,slow=2.8,SNR=4.2						
PETK	**Petropavlovsk-**	**74.02**	**343**	P	**P**	**03 27 25.3**	**-1.3**
PFO	**Pinyon Flat Ob**	**75.37**	**47**	P	**P**	**03 27 35.1**	**+0.4**
	1.9nm,0.7s,mb3.9,baz=195,slow=2.1,SNR=3.7						
KSM	**Kuching**	**75.84**	**276**	*e*P	**P**	**03 27 38.8**	**+0.8**
	47nm,1.2s,mb5.0						
KSRS	**Korea Array**	**76.48**	**317**	P	**P**	**03 27 41.6**	**+0.7**
	4.9nm,1.1s,mb4.1,baz=128,slow=6.4,SNR=13						
NVAR	**Mina Array Bea**	**76.80**	**42**	P	**P**	**03 27 43.0**	**+0.3**
	0.6nm,0.7s,baz=227,slow=8.3,SNR=5.5						
NVAR				pP	pP	03 28 41.9	+3.4
	1.0nm,0.9s,baz=234,slow=7.5,SNR=4.0						
NVAR	**Mina Array Bea**	**76.80**	**42**	P	**P**	**03 27 43.0**	**+0.3**
NVAR				pP	pP	03 28 41.9	+3.4
NJ2	**Nanjing**	**80.12**	**308**	*e*P	**P**	**03 28 03.0**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
CN2	**Changchun**	**81.60**	**321**	*e*P	**P**	**03 28 10.3**	**+1.8**
CN2				*ep*P	pP	03 29 04.3	-0.7
CN2				*e*S	S	03 38 02.0	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**82.97**	**56**	P	**P**	**03 28 16.8**	**+0.8**
	comp=Z,0.8nm,1.0s,mb3.4,baz=232,slow=6.2,SNR=6.5						
TXAR				pP	pP	03 29 16.0	+3.4
	comp=Z,0.7nm,1.0s,baz=224,slow=3.5,SNR=4.0						
COLA	**College**	**84.56**	**11**	*e*P	**P**	**03 28 22.0**	**-1.1**
	comp=Z,6.0nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**84.73**	**42**	P	**P**	**03 28 23.6**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=284,slow=7.3,SNR=3.3						
PDAR				pP	pP	03 29 24.4	+2.9
	comp=Z,1.5nm,0.8s,baz=220,slow=2.3,SNR=10						
MAW	**Mawson**	**85.47**	**199**	*e*P	**P**	**03 28 28.0**	**+0.2**
	comp=Z,1.0nm,0.9s,mb3.5						
MAW	**Mawson**	**85.47**	**199**	*e*P	**P**	**03 28 28.2**	**+0.4**
	comp=Z,4.4nm,0.7s,mb4.3						
MAW	**Mawson**	**85.47**	**199**	P	**P**	**03 28 27.7**	**-0.1**
	comp=Z,6.3nm,0.8s,mb4.4,baz=132,slow=6.2,SNR=12						
MAW	**Mawson**	**85.47**	**199**	*e*P	**P**	**03 28 28.2**	**+0.4**
	comp=Z,1.6nm,1.0s,mb3.7						
ENH	**Enshi**	**86.67**	**303**	*e*P	**P**	**03 28 34.6**	**+0.3**
	comp=Z,5.3nm,0.4s,mb4.6						
GYA	**Guiyang**	**87.60**	**299**	P	**P**	**03 28 39.5**	**+0.6**
GYA				pP	pP	03 29 36.0	-0.2
GYA				PP	PP	03 32 10.5	+2.6
GYA				SKS		03 38 43.0	
GYA				S	S	03 38 59.5	-0.9
GYA				sS	sS	03 40 37.8	-3.1
GYA				SS	SS	03 44 54.3	+1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC	**Hu-ho-hao-te**	**89.22**	**313**	*e*P	**P**	**03 28 47.5**	**+1.3**
HHC				pP	pP	03 29 42.0	-1.7
HHC				sP	sP	03 30 05.8	-2.5
HHC				PP	PP	03 32 23.0	+2.5
HHC				SKS		03 38 53.8	
HHC				S	S	03 39 15.8	+0.8
HHC				sS	sS	03 40 52.3	-3.6
HHC				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.0						
HHC				pmax	pmax		
	comp=Z,99nm,4.8s						
HHC				LR	LR		
	comp=N,160nm,18.1s						
HHC				LR	LR		
	comp=E,450nm,18.1s						
HHC				LR	LR		
	comp=Z,160nm,17.3s						
KMI	**Kunming**	**90.48**	**296**	P	**P**	**03 28 53.8**	**+1.4**
KMI				S	S	03 39 25.5	-1.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,74nm,7.0s						
KMI				LR	LR		
	comp=N,170nm,9.2s						
KMI				LR	LR		
	comp=E,210nm,16.9s						
KMI				LR	LR		
	comp=Z,140nm,13.1s						
CD2	**Chengdu**	**91.51**	**302**	P	**P**	**03 28 57.5**	**+0.4**
CD2				pP	pP	03 29 52.5	-2.1
CD2				sP	sP	03 30 15.5	-3.8
CD2				PP	PP	03 32 41.5	+2.6
CD2				SKS		03 39 07.0	
CD2				S	S	03 39 35.3	-1.0
CD2				sS	sS	03 41 11.8	-5.9
CD2				SS	SS	03 45 51.3	+2.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,200nm,5.4s						
CMAR	**Chiang Mai Arr**	**91.77**	**289**	P	**P**	**03 28 59.4**	**+0.9**
	comp=Z,1.7nm,0.3s,mb4.4,baz=104,slow=2.9,SNR=12						
CHTO	**Chiang Mai**	**91.87**	**289**	*e*P	**P**	**03 28 59.3**	**+0.4**
	comp=Z,6.2nm,0.8s,mb4.6						
LZH	**Lanzhou**	**93.14**	**307**	*e*P	**P**	**03 29 04.5**	**+0.1**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
BVAR	**Borovoye Array**	**118.45**	**321**	PKP	PKPdf	03 34 34.8	-1.4
	comp=Z,0.8nm,0.4s,baz=20,slow=1.7,SNR=5.7						
ARCES	**ARCESS Array B**	**126.30**	**351**	PKP	PKPdf	03 34 49.3	-1.5
	comp=Z,1.5nm,0.8s,baz=38,slow=2.2,SNR=7.9						
FINES	**FINESS Array B**	**133.48**	**346**	PKP	PKPdf	03 35 04.5	-0.2
	comp=Z,0.4nm,0.5s,baz=35,slow=7.0,SNR=6.9						
KIS	**Kishinev**	**144.50**	**332**	*e*P	PKPdf	03 35 20.0	-5.2
NRDL	**Niedersach Rie**	**144.70**	**355**	*e*PKPbc	PKPdf	03 35 24.3	-1.0
KWP	**Kalwaria Pacla**	**144.76**	**340**	*e*PKPdf	PKPdf	03 35 24.2	-1.4
KWP	**Kalwaria Pacla**	**144.76**	**340**	ǁ*i*P	PKPdf	03 35 24.4	-1.1
IBBN	**Ibbenburen**	**145.05**	**357**	*e*PKPbc	PKPbc	03 35 25.6	-0.3
OJC	**Ojcow**	**145.11**	**343**	*e*PKP	PKPdf	03 35 25.0	-1.1
CLZ	**Clausthal**	**145.32**	**354**	*e*PKPbc	PKPbc	03 35 26.3	-0.4
KSP	**Ksiaz**	**145.38**	**347**	*e*PKP	PKPdf	03 35 26.8	+0.2
STHS	**Stebnicka Huta**	**145.41**	**341**	*e*PKP	PKPdf	03 35 27.6	+1.0
STHS	**Stebnicka Huta**	**145.41**	**341**	*e*PKP	PKPdf	03 35 27.6	+1.0
KOLS	**Kolonicke sedl**	**145.50**	**340**	*e*PKP	PKPdf	03 35 27.6	+0.8
KOLS				*e*		03 35 38.1	
KOLS	**Kolonicke sedl**	**145.50**	**340**	*e*PKP	PKPdf	03 35 27.6	+0.8
KOLS				*e*		03 35 38.1	
CLL	**Collm**	**145.52**	**351**	*e*PKPbc	PKPbc	03 35 26.9	-0.5
CLL	**Collm**	**145.52**	**351**	ǁ*i*PKP	PKPdf	03 35 26.5	-0.3
CLL	**Collm**	**145.52**	**351**	ǁ*i*PKPbc	PKPbc	03 35 26.5	-0.9
	comp=Z,29nm,1.4s						
BUR08	**Bucovina Ar. S**	**145.53**	**336**	*e*PKPbc	PKPbc	03 35 27.4	-0.1
BURAR	**Bucovina Array**	**145.55**	**336**	ǁ*i*P	PKPdf	03 35 27.8	+0.9
NIE	**Niedzica**	**145.69**	**342**	*e*PKP	PKPdf	03 35 28.3	+1.2
UPC	**Upice**	**145.76**	**347**	*e*PKP	PKPdf	03 35 27.5	+0.3
UPC				*ep*PKP	pPKPdf	03 36 32.6	+4.8
BRG	**Berggiesshubel**	**145.79**	**350**	*e*PKPbc	PKPbc	03 35 28.1	-0.1
BRG	**Berggiesshubel**	**145.79**	**350**	*e*P	PKPdf	03 35 27.9	+0.6
	comp=Z,24nm,1.7s						
DPC	**Dobruska-Polom**	**145.84**	**347**	*e*PKP	PKPdf	03 35 28.3	+0.9
DPC				*ep*PKP	pPKPdf	03 36 32.0	+4.1
OKC	**Ostrava-Krasne**	**145.90**	**345**	*e*PKP	PKPdf	03 35 28.0	+0.5
OKC				*ep*PKP	pPKPdf	03 36 32.1	+4.1
PVCC	**Panska Ves**	**146.02**	**349**	*e*PKP	PKPdf	03 35 28.7	+1.1
MORC	**Moravsky Berou**	**146.10**	**345**	*e*PKPbc	PKPbc	03 35 28.8	-0.4
MORC	**Moravsky Berou**	**146.10**	**345**	ǁ*i*P	PKPdf	03 35 29.3	+1.5
MOX	**Moxa**	**146.36**	**352**	*e*PKPbc	PKPbc	03 35 29.3	-0.6
MOX				*ep*PKPbc	pPKPbc	03 36 33.8	+4.3
MOX	**Moxa**	**146.36**	**352**	*e*PKP	PKPdf	03 35 29.7	+1.5
MOX				*e*		03 36 33.9	
UBBA	**Unterbreizbach**	**146.37**	**354**	*e*PKPbc	PKPbc	03 35 29.5	-0.4
KECS	**Kecovo**	**146.47**	**341**	*e*PKP	PKPdf	03 35 30.2	+1.7
KECS				*e*		03 35 43.4	
KECS	**Kecovo**	**146.47**	**341**	*e*PKP	PKPdf	03 35 30.2	+1.7
KECS				*e*		03 35 43.4	
TANN	**Tannenbergstha**	**146.47**	**351**	*e*PKPbc	PKPbc	03 35 30.2	0.0
TANN				*ep*PKPbc	pPKPbc	03 36 36.6	+6.7
PRU	**Pruhonice**	**146.54**	**349**	*e*PKP	PKPdf	03 35 30.4	+1.9
PRU				*ep*PKP	pPKPdf	03 36 34.7	+5.6
TIRR	**Tirgusor**	**146.56**	**329**	ǁ*i*P	PKPdf	03 35 30.2	+1.4
BR131	**Keskin Array S**	**146.62**	**318**	*e*PKPbc	PKPbc	03 35 30.8	-0.2
BRTR	**Keskin Array B**	**146.62**	**318**	PKPbc	PKPbc	03 35 30.1	-0.8
	comp=Z,4.7nm,1.0s,baz=230,slow=3.1,SNR=25						
UCC	**Uccle**	**146.62**	**1**	PKP	PKPdf	03 35 30.9	+2.2
BEBN	**Eben Emael**	**146.62**	**359**	PKP	PKPdf	03 35 29.1	+0.4
NKC	**Novy Kostel**	**146.65**	**351**	*e*PKP	PKPdf	03 35 29.6	+0.9
NKC				*ep*PKP	pPKPdf	03 36 38.6	+9.3
VRAC	**Vranov**	**146.76**	**346**	ǁ*i*P	PKPdf	03 35 29.3	+0.4
MEM	**Membach**	**146.81**	**359**	E	PKPab	03 35 33.9	+0.9
SNF	**Seneffe**	**146.91**	**1**	PKP	PKPdf	03 35 30.8	+1.6
MLR	**Muntele Rosu**	**146.93**	**333**	ǁ*i*P	PKPdf	03 35 31.4	+2.0
VYHS	**Vyhne**	**146.94**	**343**	*e*PKP	PKPdf	03 35 31.2	+1.9
VYHS				*e*		03 35 47.3	
VYHS	**Vyhne**	**146.94**	**343**	*e*PKP	PKPdf	03 35 31.2	+1.9
VYHS				*e*		03 35 47.3	
KOLL	**Kolacno**	**146.99**	**344**	*e*PKP	PKPbc	03 35 32.0	+0.3
KOLL	**Kolacno**	**146.99**	**344**	*e*PKP	PKPbc	03 35 32.0	+0.3
BCLA	**Clavier**	**147.01**	**360**	PKP	PKPdf	03 35 29.5	+0.2
ROTZ	**Rotzenmuhle**	**147.14**	**351**	*e*PKPbc	PKPbc	03 35 31.9	-0.2
ROTZ				*ep*PKPbc	pPKPbc	03 36 36.2	+4.3
PSZ	**Piszkesteto**	**147.15**	**341**	*e*PKPdf	PKPdf	03 35 28.4	-1.3
PSZ				*e*PKPbc	PKPbc	03 35 31.1	-1.1
PSZ	**Piszkesteto**	**147.15**	**341**	ǁ*i*P	PKPbc	03 35 31.9	-0.3
DRGR		**147.19**	**337**	ǁ*i*P	PKPbc	03 35 31.9	-0.4
GIVF	**Givet**	**147.32**	**0**	*e*PKP1	PKPdf	03 35 30.9	+1.0
DOU	**Dourbes**	**147.33**	**0**	PKPdf	PKPdf	03 35 29.1	-0.7
DOU				PKPbc	PKPbc	03 35 32.0	-0.6
GRA1	**Grafenberg Arr**	**147.34**	**353**	*e*PKPbc	PKPbc	03 35 32.5	-0.1
GRF	**Grafenberg Arr**	**147.34**	**353**	*e*PKPbc	PKPbc	03 35 32.5	-0.1
BAIF	**Baives**	**147.36**	**1**	*e*PKP1	PKPdf	03 35 31.1	+1.2
	comp=Z,28nm,1.4s						
KHC	**Kasperske Hory**	**147.54**	**349**	*e*PKPbc	PKPbc	03 35 32.4	-0.8
KHC	**Kasperske Hory**	**147.54**	**349**	*e*PKP	PKPbc	03 35 32.7	-0.5
KHC				*ep*PKP	pPKPdf	03 36 40.1	+9.3
WET	**Wettzell**	**147.64**	**350**	*e*PKPbc	PKPbc	03 35 33.6	+0.1
ZST	**Bratislava**	**147.68**	**345**	*e*PKP	PKPbc	03 35 34.3	+0.7
ZST	**Bratislava**	**147.68**	**345**	*e*PKP	PKPbc	03 35 34.3	+0.7
WLF	**Walferdange**	**147.75**	**359**	PKPbc	PKPdf	03 35 32.2	+1.7
WLF	**Walferdange**	**147.75**	**359**	*e*PKPbc	PKPbc	03 35 33.6	-0.1
WLF				*ep*PKPbc	pPKPbc	03 36 37.8	+4.2
WLF	**Walferdange**	**147.75**	**359**	*e*PKPbc	PKPbc	03 35 32.7	-1.0
GEC2	**GERESS Array S**	**147.79**	**349**	*e*PKPbc	PKPbc	03 35 33.8	-0.1
GEC2				*ep*PKPbc	pPKPbc	03 36 41.1	+7.3
GERES	**GERESS Array B**	**147.79**	**349**	PKPbc	PKPbc	03 35 33.8	-0.1
	comp=Z,1.1nm,0.6s,baz=29,slow=3.0,SNR=16						
FLN	**La Foliniere**	**148.35**	**7**	*e*PKP1	PKPdf	03 35 33.3	+1.7
STU	**Stuttgart**	**148.47**	**355**	*e*PKPbc	PKPbc	03 35 35.5	-0.1
MMAI	**Mount Meron Ar**	**148.51**	**305**	PKPbc	PKPbc	03 35 36.4	+0.2
	comp=Z,6.2nm,0.8s,baz=61,slow=6.9,SNR=14						
LDF	**La Druitiere**	**148.56**	**7**	*e*PKP1	PKPdf	03 35 33.8	+1.9
	comp=Z,42nm,1.6s						
BZS	**Buzias**	**148.58**	**337**	ǁ*i*P	PKPbc	03 35 36.1	+0.1
GRR	**Gorron**	**148.67**	**8**	*e*PKP1	PKPbc	03 35 34.3	-1.8
	comp=Z,18nm,1.0s						
FUR	**Furstenfeldbru**	**148.84**	**352**	*e*PKPbc	PKPbc	03 35 36.6	0.0
MEZF	**Maizieres J'vi**	**148.93**	**360**	*e*PKP1	PKPbc	03 35 35.5	-1.3
	comp=Z,34nm,1.4s						
CDF	**Champ du Feu**	**148.96**	**357**	*e*PKP1	PKPbc	03 35 35.3	-1.6
	comp=Z,22nm,1.3s						
BFO	**Black Forest**	**148.98**	**356**	*e*PKPbc	PKPbc	03 35 36.8	-0.1
PKSM	**Moragy**	**149.06**	**341**	ǁ*i*P	PKPbc	03 35 36.6	-0.6
HAU	**Haudompre**	**149.40**	**358**	*e*PKP1	PKPbc	03 35 36.4	-1.6
	comp=Z,14nm,1.0s						
HINF	**Hinteralfeld**	**149.57**	**358**	*e*PKP1	PKPbc	03 35 36.5	-1.9
LOR	**Lormes**	**150.15**	**2**	*e*PKP1	PKPbc	03 35 38.3	-1.5
GCIS	**Gornji Cirnik**	**150.21**	**345**	*i* PKPbc	PKPbc	03 35 39.6	-0.4
LJU	**Ljubljana**	**150.31**	**347**	*e*PKPbc	PKPbc	03 35 39.8	-0.5
SSF	**Saint Saulge**	**150.34**	**2**	*e*PKP1	PKPbc	03 35 38.8	-1.5
	comp=Z,54nm,1.7s						
MFF	**Saint Martin d**	**150.52**	**7**	*e*PKP1	PKPbc	03 35 38.8	-1.9
	comp=Z,50nm,1.8s						
AVF	**Avril sur Loir**	**150.61**	**2**	*e*PKP1	PKPbc	03 35 39.0	-1.9
	comp=Z,20nm,1.4s						
BOJS	**Bojanci**	**150.65**	**345**	*e*PKPbc	PKPbc	03 35 40.9	-0.2
SMF	**Signal de Mont**	**150.77**	**2**	*e*PKP1	PKPbc	03 35 39.4	-1.9
	comp=Z,43nm,1.6s						
CABF	**La Chapelle**	**150.81**	**358**	*e*PKP1	PKPbc	03 35 40.4	-1.0
	comp=Z,23nm,1.1s						
BGF	**Bois d'Agland**	**150.82**	**3**	*e*PKP1	PKPbc	03 35 39.8	-1.6
	comp=Z,14nm,1.1s						
TCF	**Toulx Ste Croi**	**151.05**	**4**	*e*PKP1	PKPbc	03 35 40.0	-1.9
	comp=Z,13nm,1.3s						
LPG	**La Plagne**	**151.89**	**357**	*e*PKP1	PKPbc	03 35 43.2	-0.7
	comp=Z,8.1nm,1.0s						
RJF	**Les Rejaudoux**	**151.97**	**5**	*e*PKP1	PKPbc	03 35 42.3	-1.8
ORIF	**Oris-en-Rattie**	**152.50**	**359**	*e*PKP1	PKPbc	03 35 43.8	-1.5
SMRF	**Simiane la Rot**	**153.45**	**359**	*e*PKP1	PKPbc	03 35 44.5	-2.9
	comp=Z,33nm,1.4s						

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*IDC **31** 03:44:56.7±0.8, 4.°39N×96.°37E, h0km, mb4.0/16, mb1 4.1/17, mb1mx3.9/24, mbtmp4.0/17, ML4.0/1, MS3.5/9, Ms1 3.5/9, ms1mx3.1/40, Error ellipse: s-maj=31.3km s-min=14.7km az=48.0*
*ISCJB **31** 03:44:57.8±3.7, 4.°41N±0.°09×96.°36E±0.°09, h17km±26km, mb4.2/21, MS3.5/6, Error ellipse: s-maj=18.8km s-min=9.9km az=136.6*
*NEIC **31** 03:45:00.5±6.4, 4.°40N×96.°37E, h26km±43km, mb4.4/5, Error ellipse: s-maj=27.8km s-min=6.8km az=51.0*
*DJA **31** 03:45:03, 4.°67N×96.°60E, h10km, MLv4.9/8*
ISC 31 03:45:02.4±1.5, **4.°46N**±0.°08×**96.°41E**±0.°09, **h35**km±13km, **n47,** σ0=**96**/43, **mb4.2**/21, **MS3.5**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.00**	**123**	Pn	**Pn**	**03 45 49.5**	**+2.0**
	50nm,0.3s,baz=313,slow=12,SNR=218						
PSI				Lg		03 46 32.8	
	122nm,0.3s,baz=222,slow=11,SNR=14						
PSI				LR	LR	03 47 11.3	
	comp=Z,722nm,19.2s,baz=119,slow=44						
KULM	**Kulim**	**4.31**	**79**	P	**Pn**	**03 46 05.1**	**-0.4**
KULM	**Kulim**	**4.31**	**79**	*e*Pn	**Pn**	**03 46 04.6**	**-0.9**
KULM				*e*Sn	**Sn**	**03 46 53.2**	**-1.4**
**I

ROSC	El Rosal	19.89	357	*e*P	Pn	04 20 04.4	-1.3
PLCA	Paso Flores	25.61	175	P	P	04 20 58.2	-1.4
	1.5nm,0.7s,mb3.5,baz=348,slow=6.5,SNR=4.4						
PLCA	Paso Flores	25.61	175	*e*P	P	04 20 58.7	-0.9
	2.0nm,0.8s,mb3.6						
TXAR	Lajitas Array	53.01	327	P	P	04 24 47.5	+1.2
	0.1nm,0.5s,mb3.1,baz=146,slow=6.6,SNR=2.9						
TXAR				pP	pP	04 25 12.2	+2.2
	0.3nm,0.7s,baz=142,slow=7.8,SNR=3.4						
DBIC	Dimbokro	71.26	77	P	P	04 26 49.4	+0.7
	2.6nm,0.8s,mb4.1,baz=209,slow=7.5,SNR=3.1						
TORD	Torodi Ar. Bea	79.42	73	P	P	04 27 35.2	-0.2
	0.7nm,0.9s,mb3.5,baz=241,slow=5.2,SNR=6.5						
TORD				pP	pP	04 28 02.0	+1.3
	0.5nm,0.9s,baz=260,slow=6.4,SNR=2.3						
TORD	Torodi Ar. Bea	79.42	73	P	P	04 27 35.2	-0.2
TORD				pP	pP	04 28 02.0	+1.3
YKA	Yellowknife Ar	83.84	342	pP	pP	04 28 26.2	+3.1
	0.4nm,0.8s,baz=139,slow=4.7,SNR=4.4						

IDC ***31*** *04:19:26.7±1.1,37°.64N×77°.02E,h0km,mb3.5/5,*
mb1 3.5/11,mb1mx3.4/29,mbtmp3.4/11,ML3.3/6,Error
ellipse: s-maj=24.5km s-min=17.0km az=84.0
ISCJB ***31*** *04:19:27.8±0.7,37°.91N±0°.04×76°.96E±0°.08,h10km,*
mb3.4/5,Error ellipse: s-maj=8.9km s-min=5.3km
az=162.4
NEIC ***31*** *04:19:28.1±1.1,37°.60N×77°.26E,h10km,Error ellipse:*
s-maj=18.5km s-min=12.9km az=114.0
BJI ***31*** *04:19:34.7,38°.05N×77°.09E,h30km,ML3.5/6*
ISC 31 04:19:29.2±0.7,37°.81N±0°.04×76°.99E±0°.08,h10km,n28,
σ1§36/41,mb3.4/5,3C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.88	335	⇓*i*Pg	Pg	04 20 03.0	-2.3
KSH				Sg	Sg	04 20 27.8	-1.9
KSH				smax			
	comp=N,480nm,0.3s						
KSH				smax			
	comp=E,440nm,0.4s						
KZA	Kyzart	4.47	343	P	Pn	04 20 41.6	+4.6
	SNR=17						
ULHL	Ulahol	4.47	353	P	Pn	04 20 42.3	+5.4
	SNR=10.0						
UCH	Uchtor	4.80	337	P	Pn	04 20 46.2	+4.6
	SNR=15						
UCH	Uchtor	4.80	337	*e*Pn	Pn	04 20 45.7	+4.1
	comp=E,12nm,0.5s						
UCH				*e*Pg	Pg	04 21 00.5	-0.7
UCH				*e*Sg	Sg	04 22 04.1	+0.7
AML	Almayashu	5.00	331	P	Pn	04 20 48.2	+3.8
	SNR=10						
AML	Almayashu	5.00	331	*e*Pn	Pn	04 20 47.7	+3.4
	comp=E,11nm,0.5s						
AML				*e*Pg	Pg	04 21 07.2	+2.2
AML				*e*Sg	Sg	04 22 13.2	+3.4
KBK	Karagaybulak	5.09	343	P	Pn	04 20 50.5	+5.0
	SNR=6.7						
AAK	Ala-Archa	5.18	339	Pn	Pn	04 20 51.1	+4.3
	comp=E,0.0nm,0.3s,baz=144,slow=11,SNR=7.4						
AAK				Pg	Pg	04 21 06.1	-2.3
	comp=E,0.0nm,0.3s,baz=136,slow=7.1,SNR=9.6						
AAK				Lg		04 22 14.2	
	comp=E,0.0nm,0.3s,baz=350,slow=20,SNR=5.8						
AAK	Ala-Archa	5.18	339	Pn	Pn	04 20 51.1	+4.3
AAK				Pg	Pg	04 21 06.1	-2.3
AAK				Lg		04 22 14.2	
TKM2	Tokmak 2	5.21	349	⇑Pn	Pn	04 20 52.0	+4.7
	comp=E,3.4nm,0.5s						
TKM2				⇑Lg		04 22 14.8	
	comp=E,47nm,1.4s						
TKM2	Tokmak 2	5.21	349	P	Pn	04 20 52.2	+5.0
	SNR=11						
TKM2	Tokmak 2	5.21	349	*e*Pn	Pn	04 20 51.7	+4.5
	comp=E,9.9nm,0.4s						
TKM2				*e*Pg	Pg	04 21 05.8	-3.3
TKM2				*e*Sg	Sg	04 22 16.5	-0.1
EKS2	Erkin-Say	5.43	334	*e*Pn	Pn	04 20 55.5	+5.2
EKS2				*e*Pg	Pg	04 21 11.3	-1.9
EKS2				*e*Sg	Sg	04 22 23.8	+0.2
KBL	Kabul	7.21	245	*e*Pn	Pn	04 21 15.5	+0.9
	comp=E,11nm,0.5s						
KK31	Karatay Array	7.23	319	⇓Pn	Pn	04 21 17.0	+2.0
	comp=E,0.6nm,0.3s,baz=128,slow=12,SNR=24						
KK31				⇑Sn	Sn	04 22 35.9	-1.2
	comp=E,1.0nm,0.4s						
KK31				⇓Lg		04 23 15.7	
	comp=E,6.9nm,0.9s						
MKAR	Makanchi Array	9.79	22	Pn	Pn	04 21 51.3	+1.2
	comp=E,0.3nm,0.3s,baz=193,slow=11,SNR=4.8						
MKAR				Sn	Sn	04 23 41.0	+1.0
	comp=E,0.1nm,0.3s,baz=200,slow=21,SNR=3.7						
KURK	Kurchatov	12.96	5	Pn	Pn	04 22 33.0	-0.2
	comp=E,0.0nm,0.3s,baz=191,slow=12,SNR=2.9						
KURK				Lg		04 26 26.4	
	comp=E,0.0nm,0.3s,baz=184,slow=25,SNR=3.9						
BVAR	Borovoye Array	15.89	345	Pn	Pn	04 23 12.0	-0.8
	comp=E,0.2nm,0.3s,baz=148,slow=9.3,SNR=2.9						
ZALV	Zalesovo Beam	17.02	16	Pn	Pn	04 23 26.3	-0.8
	comp=E,0.2nm,0.3s,baz=197,slow=8.6,SNR=3.2						
AKTK	Aktyubinsk	18.50	319	P	Pn	04 23 46.0	+0.6
AKTO	Aktyubinsk	18.50	319	P	Pn	04 23 46.0	+0.6
	comp=E,0.1nm,0.3s,baz=132,slow=12,SNR=2.8						
BRTR	Keskin Array B	33.62	287	P	P	04 26 08.7	-1.0
	comp=E,0.4nm,0.8s,mb3.4,baz=72,slow=4.7,SNR=2.7						
FINES	FINESS Array B	39.16	324	P	P	04 26 58.3	+1.5
	comp=E,1.8nm,0.9s,mb3.8,baz=126,slow=9.7,SNR=3.7						
TORD	Torodi Ar. Bea	70.50	272	P	P	04 30 43.4	-1.0
	comp=E,0.3nm,0.5s,mb3.5,baz=48,slow=5.6,SNR=13						
TORD	Torodi Ar. Bea	70.50	272	P	P	04 30 43.4	-1.0
YKA	Yellowknife Ar	79.61	5	P	P	04 31 36.7	+0.5
	comp=E,0.2nm,0.6s,mb3.2,baz=344,slow=6.4,SNR=2.9						
ASAR	Alice Springs	81.21	129	P	P	04 31 43.8	-1.5
	comp=E,0.2nm,0.6s,mb3.2,baz=335,slow=4.2,SNR=3.3						

NAO ***31*** *04:32:35.5,45°.14N×25°.19E,h33km,mb3.3*
ISCJB ***31*** *04:32:42.5±0.2,45°.69N±0°.02×26°.59E±0°.03,h149km±2km,*
mb3.5/10,Error ellipse: s-maj=3.9km s-min=3.3km
az=18.7
MOS ***31*** *04:32:42.4±0.8,45°.70N×26°.58E,h151km,mb3.6/6,Error*
ellipse: s-maj=8.4km s-min=5.3km az=118.0
IDC ***31*** *04:32:43.3±0.5,45°.76N×26°.45E,h139km±3km,mb3.3/8,*
mb1 3.2/15,mb1mx3.1/29,mbtmp3.1/15,MS2.7/1,
Ms1 2.7/1,ms1mx2.0/30,Error ellipse: s-maj=15.5km
s-min=10.5km az=124.0
BUC ***31*** *04:32:43.3±1.0,45°.66N×26°.60E,h148km±10km,MD4.7/3,*
Error ellipse: s-maj=7.0km s-min=6.4km az=26.0
CSEM ***31*** *04:32:43.1±0.1,45°.68N×26°.58E,h145km±1km,mb3.6/7,*
Error ellipse: s-maj=3.6km s-min=2.9km az=27.0
NEIC ***31*** *04:32:43.4±0.4,45°.68N×26°.52E,h143km±5km,mb3.6/5,*
Error ellipse: s-maj=7.0km s-min=5.2km az=218.0
SOF ***31*** *04:32:44.4,45°.75N×26°.43E,h45km,MD3.8*
ISC 31 04:32:43.5±0.2,45°.69N±0°.02×26°.59E±0°.03,h146km±2km,
n190,σ0§94/236,mb3.5/10,25C-39D,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.17	14	⇑*i*P	Pn	04 33 03.4	+0.3
PLOR				*i*S	Sn	04 33 18.2	+0.1
PLOR	Plostina	0.17	14	⇑*i*P	Pn	04 33 03.4	+0.3
PLOR	Plostina	0.17	14	⇑*i*P	Pn	04 33 03.4	+0.3
PLOR				*i*S	Sn	04 33 18.2	+0.1
VRI	Vrincioaia	0.20	28	⇑*i*P	Pn	04 33 03.0	-0.2
VRI	Vrincioaia	0.20	28	⇑*i*P	Pn	04 33 03.0	-0.2
VRI	Vrincioaia	0.20	28	⇑*i*P	Pn	04 33 03.0	-0.2
ODB	Odobesti	0.34	75	P	Pn	04 33 04.9	+1.3
ODB	Odobesti	0.34	75	P	Pn	04 33 04.9	+1.3
MLR	Muntele Rosu	0.49	247	P	Pn	04 33 04.6	+0.3
	191nm,0.3s,baz=34,slow=1.7,SNR=1620						
MLR				S	Sn	04 33 19.7	-0.3
	488nm,0.3s,baz=220,slow=23,SNR=74						
MLR	Muntele Rosu	0.49	247	P	Pn	04 33 04.6	+0.4
MLR				S	Sn	04 33 19.7	-0.3
MLR				pmax	pmax		
	comp=Z,191nm,0.3s						
MLR				smax			
	comp=N,488nm,0.3s						
MLR	Muntele Rosu	0.49	247	⇑*i*P	Pn	04 33 04.7	+0.5
MLR				*i*S	Sn	04 33 20.5	+0.5
MLR	Muntele Rosu	0.49	247	⇑*i*P	Pn	04 33 04.7	+0.5
MLR	Muntele Rosu	0.49	247	P	Pn	04 33 04.6	+0.4
	comp=N,191nm,0.3s						
MLR				*i*S	Sn	04 33 20.5	+0.5
ISR	Istrita	0.57	183	⇓*i*P	Pn	04 33 05.4	+0.7
ISR	Istrita	0.57	183	⇓*i*P	Pn	04 33 05.4	+0.7
ISR	Istrita	0.57	183	⇓*i*P	Pn	04 33 05.4	+0.7
AMRR	Amara	1.20	154	⇓*i*P	Pn	04 33 10.1	+0.5
AMRR				*i*S	Sn	04 33 30.0	+0.5
AMRR	Amara	1.20	154	⇓*i*P	Pn	04 33 10.1	+0.5
AMRR	Amara	1.20	154	⇓*i*P	Pn	04 33 10.1	+0.5
AMRR				*i*S	Sn	04 33 30.0	+0.5
CFR	Carcaliu	1.20	114	P	Pn	04 33 09.6	0.0
CFR	Carcaliu	1.20	114	⇑*i*P	Pn	04 33 09.7	+0.1
CFR				*i*S	Sn	04 33 29.6	+0.1
CFR	Carcaliu	1.20	114	⇑*i*P	Pn	04 33 09.7	+0.1
CFR	Carcaliu	1.20	114	⇑*i*P	Pn	04 33 09.7	+0.1
CFR				*i*S	Sn	04 33 29.6	+0.1
HARR	Harsova	1.38	136	⇑P	Pn	04 33 11.7	+0.3
HARR	Harsova	1.38	136	⇓*i*P	Pn	04 33 11.7	+0.3
HARR	Harsova	1.38	136	⇓*i*P	Pn	04 33 11.7	+0.3
HARR	Harsova	1.38	136	⇓*i*P	Pn	04 33 11.7	+0.3
LEOM	Leova	1.40	55	⇑*i*P	Pn	04 33 12.1	+0.6
LEOM				*i*S	Sn	04 33 33.1	+0.1
LEOM	Leova	1.40	55	⇑*i*P	Pn	04 33 12.1	+0.6
LEOM	Leova	1.40	55	⇑*i*P	Pn	04 33 12.1	+0.6
LEOM				*i*S	Sn	04 33 33.1	+0.1
BUC1	Bucharest	1.40	197	P	Pn	04 33 11.9	+0.3
BUC1				S	Sn	04 33 32.3	-0.7
BUC1	Bucharest	1.40	197	⇓*i*P	Pn	04 33 11.9	+0.3
BUC1				*i*S	Sn	04 33 32.8	-0.2
BUC1	Bucharest	1.40	197	⇓*i*P	Pn	04 33 11.9	+0.3
BUC1	Bucharest	1.40	197	⇓*i*P	Pn	04 33 11.9	+0.3
BUC1				*i*S	Sn	04 33 32.8	-0.2
MDB	Medias	1.61	287	⇓*i*P	Pn	04 33 14.5	+0.7
MDB	Medias	1.61	287	⇓*i*P	Pn	04 33 14.5	+0.7
MDB	Medias	1.61	287	⇓*i*P	Pn	04 33 14.5	+0.7
TLCR		1.64	107	⇑P	Pn	04 33 14.4	+0.2
TLCR				S	Sn	04 33 38.0	+0.3
TLCR		1.64	107	⇓*i*P	Pn	04 33 14.4	+0.2
TLCR				*i*S	Sn	04 33 38.0	+0.3
TLCR		1.64	107	⇓*i*P	Pn	04 33 14.4	+0.2
TLCR		1.64	107	⇓*i*P	Pn	04 33 14.4	+0.2
TLCR				*i*S	Sn	04 33 38.0	+0.3
IAS	Iasi	1.65	24	*i*S	Sn	04 33 36.9	-1.0
IAS	Iasi	1.65	24	S	Sn	04 33 36.9	-1.0
IAS	Iasi	1.65	24	*i*S	Sn	04 33 36.9	-1.0
CVD	Cernavoda	1.71	143	⇑P	Pn	04 33 15.2	+0.2
CVD				S	Sn	04 33 38.0	-1.1
CVD	Cernavoda	1.71	143	⇓*i*P	Pn	04 33 15.2	+0.2
CVD				*i*S	Sn	04 33 38.0	-1.1
CVD	Cernavoda	1.71	143	⇓*i*P	Pn	04 33 15.2	+0.2
CVD	Cernavoda	1.71	143	⇓*i*P	Pn	04 33 15.2	+0.2
CVD				*i*S	Sn	04 33 38.0	-1.1
TIRR	Tirgusor	1.78	133	*e*Pn	Pn	04 33 15.6	-0.2
TIRR				*e*Sn	Sn	04 33 38.7	-1.8
TIRR	Tirgusor	1.78	133	⇓*i*P	Pn	04 33 16.0	+0.2
TIRR				*i*S	Sn	04 33 39.2	-1.3
TIRR	Tirgusor	1.78	133	⇓*i*P	Pn	04 33 16.0	+0.2
TIRR	Tirgusor	1.78	133	*e*Pn	Pn	04 33 15.6	-0.2
TIRR	Tirgusor	1.78	133	⇓*i*P	Pn	04 33 16.0	+0.2
TIRR				*e*Sn	Sn	04 33 38.7	-1.8
TIRR				*i*S	Sn	04 33 39.2	-1.3
KIS	Kishinev	2.02	49	*e*P	Pn	04 33 17.0	-1.5
KIS				*i*S	Sn	04 33 42.0	-3.5
	comp=N,2μm,0.5s						
KIS	Kishinev	2.02	49	⇓P	Pn	04 33 19.2	+0.7
KIS				S	Sn	04 33 45.0	-0.5
KIS	Kishinev	2.02	49	⇓*i*P	Pn	04 33 19.1	+0.6
KIS				*i*S	Sn	04 33 45.0	-0.5
KIS	Kishinev	2.02	49	⇓*i*P	Pn	04 33 19.1	+0.6
KIS	Kishinev	2.02	49	⇓*i*P	Pn	04 33 19.1	+0.6
KIS				*i*S	Sn	04 33 45.0	-0.5
BUR01	Bucovina Ar. S	2.15	334	P	Pn	04 33 21.3	+1.3
BUR01	Bucovina Ar. S	2.15	334	P	Pn	04 33 21.3	+1.3
BURAR	Bucovina Array	2.15	334	P	Pn	04 33 21.7	+1.7
BURAR	Bucovina Array	2.15	334	⇑*i*P	Pn	04 33 21.8	+1.8
BURAR				*i*S	Sn	04 33 49.4	+1.2
BURAR	Bucovina Array	2.15	334	⇑*i*P	Pn	04 33 21.8	+1.8
BURAR	Bucovina Array	2.15	334	P	Pn	04 33 21.7	+1.7
BURAR				*i*S	Sn	04 33 49.4	+1.2
BUR08	Bucovina Ar. S	2.18	334	*e*Pn	Pn	04 33 21.4	+1.0
BUR08	Bucovina Ar. S	2.18	334	*e*Pn	Pn	04 33 21.4	+1.0
ZIMR		2.21	204	⇓*i*P	Pn	04 33 20.7	-0.1
ZIMR				*i*S	Sn	04 33 49.3	-0.2
ZIMR		2.21	204	⇓*i*P	Pn	04 33 20.7	-0.1
PSN	Preselentsi	2.30	150	*i*P	Pn	04 33 22.6	+0.7
PSN	Preselentsi	2.30	150	*i*P	Pn	04 33 22.6	+0.7
SZH	Strazhica	2.46	191	P	Pn	04 33 23.8	-0.1
SZH	Strazhica	2.46	191	P	Pn	04 33 23.8	-0.1
PRD	Provadia	2.55	167	P	Pn	04 33 25.9	+0.9
PRD	Provadia	2.55	167	P	Pn	04 33 25.9	+0.9
DEV	Deva	2.59	276	⇓P	Pn	04 33 26.7	+1.3
DEV				S	Sn	04 33 58.3	+0.6
DEV	Deva	2.59	276	⇑*i*P	Pn	04 33 26.7	+1.3
DEV	Deva	2.59	276	⇑*i*P	Pn	04 33 26.7	+1.3
DEV	Deva	2.59	276	⇑*i*P	Pn	04 33 26.7	+1.3
DEV				S	Sn	04 33 58.3	+0.6
PVL	Pavlikeni	2.63	200	P	Pn	04 33 27.1	+1.2
PVL	Pavlikeni	2.63	200	P	Pn	04 33 27.1	+1.2
GZR	Gura Zlata	2.70	265	⇓*i*P	Pn	04 33 27.1	+0.4
GZR	Gura Zlata	2.70	265	⇓*i*P	Pn	04 33 27.1	+0.4
GZR	Gura Zlata	2.70	265	⇓*i*P	Pn	04 33 27.1	+0.4
DRGR		2.91	294	⇓*i*P	Pn	04 33 29.1	-0.3
DRGR		2.91	294	⇓*i*P	Pn	04 33 29.1	-0.3
DRGR		2.91	294	⇓*i*P	Pn	04 33 29.1	-0.3
MPEP	Malo Peshtene	3.10	222	P	Pn	04 33 31.7	-0.1
JMB	Yambol	3.22	180	P	Pn	04 33 33.6	+0.2
JMB	Yambol	3.22	180	P	Pn	04 33 33.6	+0.2
BZS	Buzias	3.49	271	⇑*i*P	Pn	04 33 36.8	-0.1
BZS	Buzias	3.49	271	⇑*i*P	Pn	04 33 36.8	-0.1
BZS	Buzias	3.49	271	⇑*i*P	Pn	04 33 36.8	-0.1
VTS	Vitosha	3.94	219	P	Pn	04 33 42.8	+0.1
VTS	Vitosha	3.94	219	P	Pn	04 33 42.8	+0.1
NISS		4.03	237	*e*Pn	Pn	04 33 43.0	-0.9
KDZ	Kurdzhali	4.12	192	P	Pn	04 33 45.2	0.0
KDZ	Kurdzhali	4.12	192	P	Pn	04 33 45.2	0.0
UZH	Uzhgorod	4.16	317	⇓*i*P	Pn	04 33 44.8	-0.7
UZH	Uzhgorod	4.16	317	*i*P	Pn	04 33 44.8	-0.7
RZN	Rozhen	4.22	199	P	Pn	04 33 46.1	-0.4
RZN	Rozhen	4.22	199	P	Pn	04 33 46.1	-0.4
KOLS	Kolonicke sedl	4.38	319	*e*P	Pn	04 33 49.3	+0.8
KOLS	Kolonicke sedl	4.38	319	*e*P	Pn	04 33 49.2	+0.7
KOLS	Kolonicke sedl	4.38	319	*e*P	Pn	04 33 49.3	+0.8
LVV	L'vov	4.48	338	*e*P	Pn	04 33 47.1	-2.7
LVV	L'vov	4.48	338	*e*P	Pn	04 33 47.1	-2.7
GRUS	Gruza	4.55	249	*i* Pn	Pn	04 33 49.1	-1.7
MMB	Musomiste	4.59	208	P	Pn	04 33 51.6	+0.2
MMB	Musomiste	4.59	208	P	Pn	04 33 51.6	+0.2
TRUS	Trudelj	4.63	254	*i* Pn	Pn	04 33 50.2	-1.6
DIVS	Divibare	4.95	254	⇓*i*Pn	Pn	04 33 55.5	-0.6
KECS	Kecovo	5.02	306	*e*P	Pn	04 33 57.2	+0.2
KECS	Kecovo	5.02	306	*e*P	Pn	04 33 57.2	+0.2
PSZ	Piszkesteto	5.11	298	*e*P	Pn	04 33 57.5	-0.7
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PSZ	Piszkesteto	5.11	298	*e*Pn	Pn	04 33 57.5	-0.6
	comp=Z,3.9nm,0.7s						
PSZ	Piszkesteto	5.11	298	*e*P	Pn	04 33 57.5	-0.7
	comp=Z,4.0nm,0.7s						
SEV	Sevastopol'	5.14	100	*i* P	Pn	04 33 57.5	-1.0
SEV				*e*S	Sn	04 34 55.5	-1.6
SEV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
SEV				smax			
	comp=N,8.0nm,0.3s						
SEV				smax			
	comp=E,2.0nm,0.3s						
SEV	Sevastopol'	5.14	100	*i* P	Pn	04 33 57.5	-1.0
	comp=E,6.0nm,0.3s						
SEV				*e*S	Sn	04 34 55.5	-1.6
	comp=E,8.0nm,0.3s						
STHS	Stebnicka Huta	5.20	318	*e*P	Pn	04 34 00.0	+0.7
STHS	Stebnicka Huta	5.20	318	*e*P	Pn	04 34 00.0	+0.7
STHS	Stebnicka Huta	5.20	318	*e*P	Pn	04 34 00.0	+0.7
KIEV	Kiev	5.31	18	*e*P	Pn	04 34 00.0	-0.7
KIEV				*e*		04 34 56.5	
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIEV	Kiev	5.31	18	*e*Pn	Pn	04 33 60.0	-0.8
	comp=Z,3.7nm,0.6s						
KIEV				*e*Sn	Sn	04 34 56.5	-4.6
AKASG	Malin Array Be	5.32	18	P	Pn	04 33 59.5	-1.3
	comp=Z,4.5nm,0.3s,baz=206,slow=12,SNR=15						
AKASG				S	Sn	04 34 57.7	-3.6
	comp=Z,4.6nm,0.3s,baz=203,slow=21,SNR=6.5						
AKASG	Malin Array Be	5.32	18	P	Pn	04 33 59.6	-1.3
AKASG				S	Sn	04 34 57.7	-3.6
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AKASG				smax			
	comp=N,5.0nm,0.3s						
AKASG	Malin Array Be	5.32	18	P	Pn	04 33 59.5	-1.3
AKASG				S	Sn	04 34 57.7	-3.6
AKASG	Malin Array Be	5.32	18	P	Pn	04 33 59.6	-1.3
	comp=N,5.0nm,0.3s						
AKASG				S	Sn	04 34 57.7	-3.6
	comp=N,5.0nm,0.3s						
AKBB	Malin Array Si	5.32	18	*e*Pn	Pn	04 34 00.4	-0.5
AKBB				*e*Sn	Sn	04 34 56.8	-4.5
SIM	Simferopol'	5.36	95	*e*P	Pn	04 34 00.0	-1.5
SIM				*e*S	Sn	04 35 04.3	+2.0
SIM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SIM				smax			
	comp=N,13nm,0.9s						
SIM				smax			
	comp=E,18nm,1.3s						
SIM	Simferopol'	5.36	95	*e*P	Pn	04 34 00.0	-1.5
	comp=E,9.0nm,0.6s						
SIM				*e*S	Sn	04 35 04.3	+2.0
	comp=E,13nm,0.9s						
ALU	Alushta	5.61	98	*e*P	Pn	04 34 03.7	-1.2
ALU				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ALU	Alushta	5.61	98	*e*P	Pn	04 34 03.7	-1.2
	comp=Z,5.0nm,0.3s						
NIE	Niedzica	5.66	314	*e*P	Pn	04 34 06.3	+0.9
NIE	Niedzica	5.66	314	*e*P	Pn	04 34 06.3	+0.9
SUDU	Sudak	5.99	95	*e*P	Pn	04 34 08.6	-1.2
SUDU				*e*S	Sn	04 35 16.9	-0.5
SUDU				pmax	pmax		
	comp=Z,6.0nm,0.3s						
SUDU				smax			
	comp=E,11nm,0.5s						
SUDU				smax			
	comp=E,10.0nm,0.4s						
SUDU	Sudak	5.99	95	*e*P	Pn	04 34 08.6	-1.2
	comp=E,6.0nm,0.3s						
SUDU				*e*S	Sn	04 35 16.9	-0.5
VYHS	Vyhne	5.99	301	*e*P	Pn	04 34 09.9	0.0
VYHS	Vyhne	5.99	301	*e*P	Pn	04 34 09.9	0.0
VYHS	Vyhne	5.99	301	*e*P	Pn	04 34 09.9	0.0
KOLL	Kolacno	6.29	300	*e*P	Pn	04 34 13.8	-0.1
KOLL	Kolacno	6.29	300	*e*P	Pn	04 34 13.8	-0.1
KOLL	Kolacno	6.29	300	*e*P	Pn	04 34 13.8	-0.1
VRAC	Vranov	7.68	302	P	Pn	04 34 31.9	-0.5
	comp=E,0.3nm,0.3s,baz=106,slow=12,SNR=4.9						
VRAC	Vranov	7.68	302	P	Pn	04 34 31.9	-0.5
BR131	Keskin Array S	7.90	136	*e*Pn	Pn	04 34 35.4	0.0
	comp=E,0.7nm,0.5s						
BR131	Keskin Array S	7.90	136	*e*Pn	Pn	04 34 35.4	0.0
	comp=E,0.7nm,0.5s						
BRTR	Keskin Array B	7.90	136	P	Pn	04 34 35.5	0.0
	comp=E,0.2nm,0.3s,baz=320,slow=11,SNR=14						
BRTR	Keskin Array B	7.90	136	P	Pn	04 34 35.5	0.0
GERES	GERESS Array B	9.32	294	P	Pn	04 34 52.1	-2.2
	comp=E,0.1nm,0.3s,baz=102,slow=13,SNR=9.3						
GERES	GERESS Array B	9.32	294	P	Pn	04 34 52.1	-2.2
FINES	FINESS Array B	15.79	359	P	Pn	04 36 17.3	-0.2
	comp=E,0.2nm,0.3s,baz=174,slow=15,SNR=3.8						
FINES				LR	LR	04 42 12.9	
	comp=E,30nm,21.4s,baz=348,slow=36						
FINES	FINESS Array B	15.79	359	P	Pn	04 36 17.3	-0.2
FINES				LR	LR	04 42 12.9	
FINES	FINESS Array B	15.79	359	P	Pn	04 36 17.3	-0.2
	comp=E,30nm,21.5s						
HFS	Hagfors	16.38	337	P	Pn	04 36 23.6	-1.1
	comp=E,0.2nm,0.3s,baz=187,slow=11,SNR=4.3						
HFS	Hagfors	16.38	337	P	Pn	04 36 23.6	-1.1
HFS	Hagfors	16.38	337	P	Pn	04 36 23.6	-1.1
NAO01	NORSAR Array S	17.77	334	*e*P	Pn

KAPI Sn **Sn** **04 36 02.0 +0.1**
16nm,0.3s,baz=165,slow=23,SNR=9.0
FITZ Fitzroy Crossi 12.47 147 P **Pn** **04 37 36.8 +0.2**
0.2nm,0.3s,baz=357,slow=12,SNR=4.2
FITZ Sn **Sn** **04 39 50.9 -4.6**
0.6nm,0.3s,baz=178,slow=14,SNR=6.7
WRAB Tennant Creek 19.62 130 *e*P **Pn** **04 39 07.4 -1.6**
7.8nm,0.9s
ASAR Alice Springs 21.71 139 P **P** **04 39 30.6 +0.4**
7.6nm,0.7s,mb4.2,baz=321,slow=12,SNR=42
ASAR PcP PcP 04 43 29.9 -1.3
0.8nm,0.8s,baz=288,slow=1.8,SNR=5.3
ASAR S **S** **04 43 36.4 +6.1**
1.5nm,1.0s,baz=306,slow=23,SNR=4.7
PSI Prapat 22.10 297 P **P** **04 39 35.0 +0.5**
2.8nm,0.6s,mb3.9,baz=117,slow=18,SNR=2.6
PSI Prapat 22.10 297 P **P** **04 39 35.0 +0.5**
FORT Forrest 24.65 160 *e*P **P** **04 39 59.6 0.0**
26nm,0.8s,mb4.8
COEN Coen 25.05 106 *e*P **P** **04 40 04.1 +0.6**
68nm,0.8s,mb5.2
STKA Stephens Creek 32.29 141 P **P** **04 41 08.8 +0.9**
2.7nm,0.6s,mb4.3,baz=315,slow=11,SNR=6.0
STKA PcP PcP 04 43 55.1 -0.9
0.5nm,0.3s,baz=330,slow=12,SNR=3.9
STKA Stephens Creek 32.29 141 P **P** **04 41 08.8 +0.9**
STKA PcP PcP 04 43 55.1 -0.9
KSRS Korea Array 45.80 11 P **P** **04 43 01.1 +0.4**
3.1nm,0.9s,mb4.2,baz=194,slow=9.3,SNR=10
SONM Songino Array 56.33 350 P **P** **04 44 20.9 +1.2**
1.7nm,0.7s,mb4.2,baz=178,slow=7.4,SNR=4.4
KSH Kashi 61.25 323 P **P** **04 44 54.8 +0.6**
KSH pmax pmax
comp=Z,52nm,4.7s
MK31 Makanchi Array 63.07 333 *e*P **P** **04 45 06.3 +0.1**
MKAR Makanchi Array 63.07 333 P **P** **04 45 06.5 +0.3**
comp=Z,2.1nm,0.7s,mb4.4,baz=130,slow=7.9,SNR=16
EKS2 Erkin-Say 64.54 325 *e*P **P** **04 45 16.6 +0.5**
comp=Z,4.5nm,1.0s,mb4.5
KURK Kurchatov 67.61 334 *e*P **P** **04 45 35.2 -0.3**
comp=Z,2.3nm,0.8s,mb4.3
ZALV Zalesovo Beam 67.65 339 P **P** **04 45 35.1 -0.7**
comp=Z,3.3nm,0.6s,mb4.6,baz=139,slow=4.7,SNR=16
BVAR Borovoye Array 72.91 332 P **P** **04 46 07.9 -0.1**
comp=Z,2.2nm,0.7s,mb4.2,baz=140,slow=7.2,SNR=12
BRVK Borovoye 72.98 332 *e*P **P** **04 46 07.9 -0.5**
comp=Z,3.9nm,0.9s,mb4.3
ABKAR Akbulak array 76.20 325 *e*P **P** **04 46 26.2 -1.0**
comp=Z,2.2nm,0.7s,mb4.2
AKTK Aktyubinsk 77.86 325 P **P** **04 46 36.0 -0.6**
AKTO Aktyubinsk 77.86 325 P **P** **04 46 36.0 -0.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=64,slow=12,SNR=7.1
TKL Tuckaleechee C 145.54 33 PKPbc PKPbc 04 54 17.7 -0.2
comp=Z,3.7nm,0.7s,baz=148,slow=2.5,SNR=6.2
CPUP Villa Florida 145.91 187 PKPbc PKPbc 04 54 18.9 -0.3
comp=Z,0.5nm,0.4s,baz=88,slow=18,SNR=3.2
CPUP Villa Florida 145.91 187 PKPbc PKPbc 04 54 18.9 -0.3

BJI ***31*** *04:37:52.6, 41.°19S×79.°86E, h12km, mB6.1/50, mb5.5/50, Ms6.5/71, Ms7 6.4/60*
MOS ***31*** *04:37:54.7±2.1, 41.°52S×80.°53E, h9km, mb5.8/34, MS6.3/50, Error ellipse: s-maj=12.9km s-min=7.3km az=93.8*
ISCJB ***31*** *04:37:54.1±0.1, 41.°24S±0.°03×80.°53E±0.°04, h10km, mb5.7/133, MS6.3/192, Error ellipse: s-maj=4.5km s-min=3.9km az=0.9*
IDC ***31*** *04:37:54.2±0.3, 41.°29S×80.°53E, h0km, mb5.1/32, mb1 5.1/32, mb1mx5.1/32, mbtmp5.1/32, MS6.3/26, Ms1 6.3/26, ms1mx6.3/30, Error ellipse: s-maj=10.0km s-min=7.5km az=178.0*
NEIC ***31*** *04:37:56.0±0.1, 41.°20S×80.°48E, h9km, mb6.0/67, ME6.9, MS6.3/129, MW6.4, Error ellipse: s-maj=5.7km s-min=4.9km az=32.0 Broadband fault plane solution: P waves. NP1:φs140.00000°, δ88.00000°, λ2.00000°. NP2:φs50.00000°, δ88.00000°, λ178.00000°. Principal axes: T Plg3.0000°, Azm5.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm275.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
TEH ***31*** *04:37:56.0, 41.°39S×80.°41E, h10km*
GCMT ***31*** *04:37:56.2±0.1, 41.°35S×80.°41E, h12km, MW6.4/116, Moment Tensor Solution. s116,c254; s114,c473; Duration: 3s9 Moment tensor: Scale 10^18Nm; Mrr=0.06±.02; Mθθ=4.99±.02; Mφφ=-4.93±.02; Mrθ=0.69±.06; Mθφ=-0.69±.02; Mφr=-0.00±.06; Best double couple: M0=5.05400×10^18 NP1:φs139.00000°, δ84.00000°, λ5.00000°. NP2:φs49.00000°, δ85.00000°, λ174.00000°. Principal axes: T 5.1310, Plg8.0000°, Azm4.0000°; N -0.1530, Plg82.0000°, Azm188.0000°; P -4.9780, Plg1.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
DJA ***31*** *04:38:07, 41.°57S×80.°42E, h98km, Mw6.1/45*
ISC 31 04:37:54.3±1.2, 41.°25S±0.°03×80.°49E±0.°04, h1km±7km, n835, σ1s11/476, mb5.8/133, MS6.3/192, 28C-6D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAF	**Port-aux-Franc**	**10.85**	**218**	*e*P	**Pn**	**04 40 26.4**	**-4.3**
PAF				*e*		04 42 25.7	
PAF				pmax	pmax		
comp=Z,296nm,0.8s							
PAF	**Port-aux-Franc**	**10.85**	**218**	*e*Pn	**Pn**	**04 40 26.4**	**-4.3**
PAF				*e*Sn	**Sn**	**04 42 25.7**	**-7.0**
comp=Z,296nm,0.8s							
MIR	**Mirnyy**	**26.29**	**169**	⇑*i*P	**P**	**04 43 29.0**	**-2.1**
MIR				*e*PPP		04 44 18.0	
MIR				*e*S	**S**	**04 47 49.0**	**-15**
MIR				pmax	pmax		
comp=Z,1μm,1.8s,mb6.2							
MIR				pmax	pmax		
comp=Z,10μm,11.0s							
MIR				pmax	pmax		
comp=N,6μm,13.0s							
MIR				pmax	pmax		
comp=E,3μm,13.0s							
MIR				smax			
comp=N,21μm,18.0s							
MIR				smax			
comp=N,25μm,12.0s							
MIR				MLR	MLR		
comp=N,16μm,14.0s,MS5.8							
MIR				MLR	MLR		
comp=E,10μm,14.0s,MS5.8							
MIR				MLR	MLR		
comp=Z,28μm,14.0s,MS6.0							
MAW	**Mawson**	**28.10**	**194**	*e*P	**P**	**04 43 45.5**	**-1.8**
comp=Z,102nm,0.9s,mb5.7							
MAW	**Mawson**	**28.10**	**194**	P	**P**	**04 43 45.4**	**-1.8**
comp=Z,126nm,0.9s,mb5.7,baz=24,slow=9.5,SNR=86							
MAW				S	**S**	**04 48 25.4**	**-7.4**
comp=Z,2.1nm,1.0s,baz=40,slow=17,SNR=1.5							
MAW				LR	LR	04 52 19.2	
comp=Z,97μm,21.8s,MS6.3,baz=19,slow=31							
MAW	**Mawson**	**28.10**	**194**	P	**P**	**04 43 45.4**	**-1.9**
MAW				S	**S**	**04 48 25.4**	**-7.4**
MAW				pmax	pmax		
comp=Z,126nm,0.9s							
MAW				smax			
comp=N,2.0nm,1.0s							
MAW	**Mawson**	**28.10**	**194**	*e*P	**P**	**04 43 45.0**	**-2.3**
comp=N,32nm,0.9s,mb5.2							
MAW				LR	LR		
comp=Z,94μm,22.0s,MS6.3							
RER	**Riviere de l'E**	**28.97**	**306**	PFAKE		04 44 10.0	+15
RER				LR	LR		
comp=Z,52μm,20.0s,MS6.1							
CASY	**Casey**	**30.15**	**156**	*e*P	**P**	**04 44 03.9**	**-1.5**
CASY				*e*S	**S**	**04 49 02.3**	**-2.6**
CASY	**Casey**	**30.15**	**156**	*e*P	**P**	**04 44 04.0**	**-1.5**
comp=Z,119nm,1.1s,mb5.6							
CASY				LR	LR		
comp=Z,112μm,21.0s,MS6.5							
NWAO	**Narrogin (SRO)**	**30.29**	**86**	P	**P**	**04 44 06.1**	**-1.0**
comp=Z,39nm,1.1s,mb5.1,baz=238,slow=11,SNR=5.0							
NWAO				S	**S**	**04 49 06.5**	**-1.3**
comp=Z,17nm,1.1s,baz=137,slow=11,SNR=2.1							
NWAO				LR	LR	04 53 44.8	
comp=Z,280nm,18.4s,baz=242,slow=31							
NWAO	**Narrogin (SRO)**	**30.29**	**86**	P	**P**	**04 44 06.1**	**-1.0**
NWAO				S	**S**	**04 49 06.6**	**-1.3**
NWAO				pmax	pmax		
comp=Z,39nm,1.1s							
NWAO				smax			
comp=N,17nm,1.1s							
KLBR	**Kellerberrin**	**31.30**	**84**	*e*P	**P**	**04 44 16.5**	**+0.5**
comp=N,194nm,1.6s,mb5.8							
COCO	**West Island**	**32.30**	**31**	PFAKE		04 44 30.0	+5.1
COCO				LR	LR		
comp=Z,47μm,20.0s,MS6.2							
DGAR	**Diego Garcia**	**34.45**	**346**	PFAKE		04 44 50.0	+6.4
DGAR				LR	LR		
comp=Z,38μm,19.0s,MS6.2							
SYO	**Syowa Base**	**35.10**	**204**	⇑*e*P	**P**	**04 44 47.5**	**-1.3**
ABPO	**Ambohimpanom**	**35.98**	**298**	*e*P	**P**	**04 44 57.3**	**+0.5**
ABPO				pmax	pmax		
comp=Z,249nm,2.0s,mb5.7							
ABPO				MLR	MLR		
comp=Z,56μm,20.0s,MS6.3							
ABPO	**Ambohimpanom**	**35.98**	**298**	*e*P	**P**	**04 44 57.3**	**+0.5**
comp=Z,249nm,2.0s,mb5.7							
ABPO				LR	LR		
comp=Z,56μm,20.0s,MS6.3							
OPO	**Ambohidratompo**	**36.32**	**298**	P	**P**	**04 45 01.7**	**+2.0**
comp=Z,20nm,1.2s,mb4.8,baz=118,slow=8.7,SNR=7.3							
OPO				S	**S**	**04 50 41.1**	**-0.5**
comp=Z,0.8nm,0.4s,baz=114,slow=22,SNR=3.1							
MBWA	**Marble Bar**	**38.67**	**71**	*e*P	**P**	**04 45 19.9**	**+0.2**
comp=Z,166nm,1.6s,mb5.4							
MBWA				LR	LR		
comp=Z,32μm,19.0s,MS6.2							
FORT	**Forrest**	**39.44**	**90**	*e*P	**P**	**04 45 27.4**	**+1.4**
comp=Z,115nm,0.7s,mb5.6							
FORT				*e*S	**S**	**04 51 29.4**	**+0.6**
FORT	**Forrest**	**39.44**	**90**	*e*P	**P**	**04 45 27.0**	**+1.0**
comp=Z,162nm,0.8s,mb5.7							
DRV	**Dumont d'Urvil**	**40.99**	**148**	P	**P**	**04 45 38.0**	**-0.4**
DRV				S	**S**	**04 51 46.0**	**-5.1**
DRV				SS	SS	04 54 51.0	-1.3
MSEY	**Mahe Island**	**42.76**	**322**	*e*P	**P**	**04 46 01.2**	**+7.8**
MSEY				pmax	pmax		
comp=Z,176nm,1.3s,mb5.6							
MSEY				MLR	MLR		
comp=Z,24μm,19.0s,MS6.1							
MSEY	**Mahe Island**	**42.76**	**322**	*e*P	**P**	**04 46 01.2**	**+7.8**
comp=Z,176nm,1.3s,mb5.6							
MSEY				LR	LR		
comp=Z,24μm,19.0s,MS6.1							
GRM	**Grahamstown**	**43.08**	**263**	*e*P	**P**	**04 45 56.5**	**+0.5**
GRM				AMS	AMS	04 59 43.6	
comp=Z,77nm,19.3s,MS6.6							
SOE	**Somerset East**	**44.06**	**263**	*e*P	**P**	**04 46 04.9**	**+1.0**
SOE				AMS	AMS	05 00 14.7	
comp=Z,51μm,19.9s,MS6.4							
SEK	**Senekal**	**44.65**	**269**	*e*P	**P**	**04 46 08.0**	**-0.6**
SEK				AMS	AMS	05 00 56.1	
comp=Z,59μm,20.7s,MS6.5							
NVL	**N'lazarevskaya**	**44.71**	**206**	⇓*i*P	**P**	**04 46 09.0**	**+0.5**
NVL				*e*PP		04 46 17.3	
NVL				*e*		04 47 48.5	
NVL				*e*SS	sS	04 52 40.1	-5.8
NVL				pmax	pmax		
comp=Z,201nm,1.4s,mb5.9							
MAIT	**Maitri**	**44.74**	**206**	*e*P	**P**	**04 46 02.5**	**-6.3**
MAIT				*e*PP	PP	04 47 46.7	-6.1
MAIT				*e*S	**S**	**04 52 45.2**	**-0.9**
MAIT				*e*SS	SS	04 55 52.6	-13
FITZ	**Fitzroy Crossi**	**44.88**	**73**	⇓*i*P	**P**	**04 46 10.8**	**+0.3**
comp=Z,66nm,1.3s,mb5.4							
FITZ				*i* S	**S**	**04 52 52.4**	**+3.1**
FITZ	**Fitzroy Crossi**	**44.88**	**73**	P	**P**	**04 46 10.3**	**-0.2**
comp=Z,18nm,1.1s,mb4.9,baz=228,slow=8.4,SNR=12							
FITZ				S	**S**	**04 52 48.2**	**-1.1**
comp=Z,2.6nm,0.9s,baz=304,slow=18,SNR=1.6							
FITZ				LR	LR	05 01 51.6	
comp=Z,26μm,20.7s,MS6.2,baz=242,slow=32							
FITZ	**Fitzroy Crossi**	**44.88**	**73**	*e*P	**P**	**04 46 11.0**	**+0.4**
comp=Z,109nm,1.4s,mb5.6							
HVD	**Gariep Dam**	**45.11**	**265**	⇑*i*P	**P**	**04 46 13.4**	**+1.1**
HVD				AMS	AMS	05 01 06.6	
comp=Z,67μm,19.9s,MS6.6							
ERPM	**east rand prop**	**45.24**	**272**	⇑*i*P	**P**	**04 46 14.8**	**+1.5**
ERPM				AMS	AMS	05 01 34.6	
comp=Z,64μm,20.3s,MS6.5							
SLR	**Silverton**	**45.54**	**273**	⇑*i*P	**P**	**04 46 15.6**	**-0.1**
SLR				AMS	AMS	05 02 11.1	
comp=Z,84μm,18.9s,MS6.7							
PRYS	**Parys**	**45.59**	**271**	⇑*i*P	**P**	**04 46 15.6**	**-0.5**
PRYS				AMS	AMS	05 01 23.8	
comp=Z,35μm,21.8s,MS6.3							
KLOF	**Kloof**	**45.71**	**272**	*e*P	**P**	**04 46 17.4**	**+0.4**
KLOF				AMS	AMS	05 01 39.0	
comp=Z,31μm,21.3s,MS6.2							
MSNA	**Messina**	**46.16**	**278**	⇑*i*P	**P**	**04 46 20.4**	**-0.3**
MSNA				AMS	AMS	05 01 54.3	
comp=Z,74μm,21.2s,MS6.6							
BOSA	**Boshof**	**46.29**	**268**	P	**P**	**04 46 21.2**	**-0.4**
comp=Z,108nm,1.0s,mb5.8,baz=124,slow=7.8,SNR=50							
BOSA				S	**S**	**04 53 10.3**	**+0.8**
comp=Z,1.5nm,0.9s,baz=90,slow=16,SNR=1.6							
BOSA				LR	LR	05 02 11.8	
comp=Z,82μm,18.8s,MS6.7,baz=127,slow=32							
BOSA	**Boshof**	**46.29**	**268**	P	**P**	**04 46 21.3**	**-0.3**
BOSA				S	**S**	**04 53 10.3**	**+0.8**
BOSA				pmax	pmax		
comp=Z,108nm,1.0s,mb5.8							
BOSA				smax			
comp=N,2.0nm,0.9s							
BOSA	**Boshof**	**46.29**	**268**	*e*P	**P**	**04 46 21.8**	**+0.1**
comp=N,135nm,1.0s,mb5.9							
BOSA				LR	LR		
comp=Z,82μm,20.0s,MS6.7							
PSI	**Prapat**	**46.95**	**26**	P	**P**	**04 46 26.6**	**-0.2**
comp=Z,34nm,0.9s,mb5.5,baz=210,slow=5.9,SNR=17							
PSI				S	**S**	**04 53 20.1**	**+1.0**
comp=Z,2.1nm,0.6s,baz=290,slow=23,SNR=1.7							
PSI				LR	LR	05 01 44.1	
comp=Z,56μm,20.3s,MS6.5,baz=200,slow=30							
PSI	**Prapat**	**46.95**	**26**	P	**P**	**04 46 26.7**	**-0.2**
PSI				S	**S**	**04 53 20.1**	**+1.0**
PSI				pmax	pmax		
comp=Z,34nm,0.9s,mb5.5							
PSI				smax			
comp=N,2.0nm,0.6s							
SWZ	**Schweizer**	**46.98**	**269**	⇑*i*P	**P**	**04 46 27.0**	**0.0**
SWZ				AMS	AMS	05 02 15.8	
comp=Z,70μm,21.3s,MS6.6							
ELIM	**Elim**	**47.52**	**257**	⇑*i*P	**P**	**04 46 31.3**	**+0.1**
ASAR	**Alice Springs**	**47.61**	**85**	P	**P**	**04 46 32.4**	**+0.4**
comp=Z,56nm,1.1s,mb5.6,baz=231,slow=7.2,SNR=100							
ASAR				S	**S**	**04 53 30.3**	**+1.8**
comp=Z,0.2nm,0.3s,baz=229,slow=38,SNR=3.3							
ASAR	**Alice Springs**	**47.61**	**85**	P	**P**	**04 46 32.4**	**+0.4**
ASAR				S	**S**	**04 53 30.3**	**+1.9**
ASAR				pmax	pmax		
comp=Z,56nm,1.1s							
PKA	**Prieska**	**47.63**	**265**	⇑*i*P	**P**	**04 46 32.1**	**0.0**
PKA				AMS	AMS	05 02 31.4	
comp=Z,15μm,20.2s,MS6.0							
SUR	**Sutherland**	**47.76**	**261**	P	**P**	**04 46 33.1**	**0.0**
comp=Z,52nm,1.0s,mb5.6,baz=113,slow=5.9,SNR=12							
SUR				S	**S**	**04 53 34.0**	**+3.5**
comp=Z,6.2nm,0.9s,baz=155,slow=6.5,SNR=1.9							
SUR				LR	LR	05 03 01.0	
comp=Z,56μm,18.0s,MS6.6,baz=122,slow=32							
SUR	**Sutherland**	**47.76**	**261**	*e*P	**P**	**04 46 34.1**	**+1.0**
comp=Z,757nm,2.2s,mb6.4							
SUR				LR	LR		
comp=Z,57μm,20.0s,MS6.5							
SUR	**Sutherland**	**47.76**	**261**	P	**P**	**04 46 34.4**	**+1.3**
comp=Z,424nm,1.0s,mb6.5,SNR=5.8							
KGM	**Kluang**	**47.81**	**32**	P	**P**	**04 46 34.9**	**+1.3**
MYKOM	**Kota Tinggi**	**47.82**	**32**	P	**P**	**04 46 35.0**	**+1.3**
LBTB	**Lobatse**	**47.96**	**272**	*e*P	**P**	**04 46 34.3**	**-0.4**
LBTB				pmax	pmax		
comp=Z,135nm,1.0s,mb6.0							
LBTB				MLR	MLR		
comp=Z,43μm,20.0s,MS6.4							
LBTB	**Lobatse**	**47.96**	**272**	*e*P	**P**	**04 46 34.2**	**-0.4**
comp=Z,135nm,1.0s,mb6.0							
LBTB				LR	LR		
comp=Z,43μm,20.0s,MS6.4							
PALK	**Pallekele**	**48.29**	**0**	P	**P**	**04 46 37.4**	**+0.2**
comp=Z,17nm,0.9s,mb5.2,baz=196,slow=7.4,SNR=6.6							
PALK				S	**S**	**04 53 39.5**	**+1.5**
comp=Z,7.7nm,0.9s,baz=214,slow=16,SNR=2.2							
PALK				LR	LR	05 02 55.3	
comp=Z,58μm,19.7s,MS6.6,baz=191,slow=31							
PALK	**Pallekele**	**48.29**	**0**	P	**P**	**04 46 37.4**	**+0.2**
PALK				S	**S**	**04 53 39.5**	**+1.5**
PALK				pmax	pmax		
comp=Z,17nm,0.9s,mb5.2							
PALK				smax			
comp=N,8.0nm,0.9s							
PALK	**Pallekele**	**48.29**	**0**	*e*P	**P**	**04 46 39.0**	**+1.9**
comp=N,516nm,2.1s,mb6.3							
FRIM	**Kepong**	**48.29**	**29**	P	**P**	**04 46 38.5**	**+1.2**
TAU	**Tasmania Unive**	**48.43**	**115**	*e*P	**P**	**04 46 37.5**	**-0.6**
TAU				pmax	pmax		
comp=Z,138nm,1.2s,mb6.0							
TAU				MLR	MLR		
comp=Z,22μm,19.0s,MS6.2							
TAU	**Tasmania Unive**	**48.43**	**115**	*e*P	**P**	**04 46 37.5**	**-0.6**
comp=Z,60nm,1.2s,mb5.6							
TAU				LR	LR		
comp=Z,39μm,19.0s,MS6.4							
MOO	**Moorlands**	**48.52**	**115**	*e*P	**P**	**04 46 38.8**	**0.0**
QSPA	**South Pole Qui**	**48.91**	**180**	P	**P**	**04 46 40.0**	**-1.3**
comp=Z,543nm,1.0s,mb6.5,baz=293,slow=3.6,SNR=181							
QSPA				S	**S**	**04 53 46.6**	**+1.1**
comp=Z,1.0nm,0.9s,baz=263,slow=23,SNR=2.0							
QSPA				LR	LR	05 05 36.0	
comp=Z,175μm,20.1s,MS7.0,baz=123,slow=34							
QSPA	**South Pole Qui**	**48.91**	**180**	*e*P	**P**	**04 46 40.0**	**-1.3**
comp=Z,626nm,1.1s,mb6.6							
QSPA				LR	LR		
comp=Z,177μm,21.0s,MS7.0							
CVNA	**Calvinia**	**48.98**	**261**	⇑*i*P	**P**	**04 46 42.9**	**+0.5**
CVNA				AMS	AMS	05 03 14.6	
comp=Z,75μm,19.6s,MS6.7							
STKA	**Stephens Creek**	**49.07**	**100**	*e*P	**P**	**04 46 42.5**	**-0.7**
comp=Z,24nm,0.6s,mb5.4							
STKA				*e*S	**S**	**04 53 45.2**	**-3.8**
STKA	**Stephens Creek**	**49.07**	**100**	P	**P**	**04 46 42.4**	**-0.8**
comp=Z,25nm,0.8s,mb5.3,baz=226,slow=7.3,SNR=25							
STKA				S	**S**	**04 53 49.9**	**+0.9**
comp=Z,2.2nm,0.9s,baz=199,slow=20,SNR=1.7							
STKA				LR	LR	05 03 28.5	
comp=Z,57μm,21.4s,MS6.5,baz=232,slow=31							
STKA	**Stephens Creek**	**49.07**	**100**	*e*P	**P**	**04 46 43.1**	**-0.1**
comp=Z,47nm,1.6s,mb5.3							
IPM	**Ipoh**	**49.23**	**28**	P	**P**	**04 46 45.5**	**+1.0**
SBA	**Scott Base**	**49.28**	**164**	*e*P	**P**	**04 46 44.1**	**-0.1**
SBA				pmax	pmax		
comp=Z,2μm,2.3s,mb6.6							
SBA				MLR	MLR		
comp=Z,83μm,20.0s,MS6.7							
SBA	**Scott Base**	**49.28**	**164**	*e*P	**P**	**04 46 44.1**	**-0.1**
comp=Z,2μm,2.3s,mb6.6							
SBA				LR	LR		
comp=Z,83μm,20.0s,MS6.7							
TOO	**Toolangi**	**49.31**	**108**	*e*P	**P**	**04 46 45.7**	**+0.8**
TOO				*e*S	**S**	**04 53 46.2**	**-6.0**
UPI	**Upington**	**49.43**	**265**	⇑*i*P	**P**	**04 46 46.4**	**+0.4**
UPI				AMS	AMS	05 03 35.7	
comp=Z,51μm,20.8s,MS6.5							
KULM	**Kulim**	**49.86**	**27**	P	**P**	**04 46 50.3**	**+1.1**
KULM	**Kulim**	**49.86**	**27**	*e*P	**P**	**04 46 48.7**	**-0.6**
comp=Z,157nm,1.5s,mb5.7							
KULM				LR	LR		
comp=Z,41μm,22.0s,MS6.4							
WRAB	**Tennant Creek**	**50.14**	**82**	P	**P**	**04 46 51.6**	**+0.2**
comp=Z,569nm,1.3s,mb6.3,SNR=22							
WRAB	**Tennant Creek**	**50.14**	**82**	*e*P	**P**	**04 46 51.6**	**+0.2**
WRAB				pmax	pmax		
comp=Z,1μm,2.3s,mb6.4							
WRAB				MLR	MLR		
comp=Z,23μm,19.0s,MS6.2							
WRAB	**Tennant Creek**	**50.14**	**82**	*e*P	**P**	**04 46 51.6**	**+0.2**
comp=Z,644nm,2.3s,mb6.2							
WRAB				LR	LR		
comp=Z,55μm,19.0s,MS6.6							
KAPI	**Kappang**	**50.31**	**55**	P	**P**	**04 46 53.2**	**+0.4**
comp=Z,77nm,1.2s,mb5.5,baz=222,slow=6.2,SNR=4.0							
KAPI				S	**S**	**04 54 07.9**	**+1.3**
comp=Z,5.2nm,0.8s,baz=119,slow=16,SNR=2.1							
KAPI	**Kappang**	**50.31**	**55**	*e*P	**P**	**04 46 52.5**	**-0.4**
comp=Z,80nm,1.2s,mb5.5							
KAPI				LR	LR		
comp=Z,7μm,22.0s,MS5.7							
KSM	**Kuching**	**50.42**	**40**	P	**P**	**04 46 55.1**	**+1.6**
KSM	**Kuching**	**50.42**	**40**	*e*P	**P**	**04 46 53.9**	**+0.4**
comp=Z,104nm,1.5s,mb5.5							
KSM				LR	LR		
comp=Z,13μm,19.0s,MS6.0							
KTGM	**Kuala Trenggan**	**50.78**	**30**	P	**P**	**04 46 57.4**	**+1.1**
VNA1	**Neumayer--Stat**	**51.33**	**205**	*e*Pdiff	**P**	**04 47 00.3**	**+0.5**
KOMG	**Komaggas**	**51.52**	**262**	⇑*i*P	**P**	**04 47 02.3**	**+0.5**
KOMG				AMS	AMS	05 04 41.8	
comp=Z,65μm,19.8s,MS6.7							
SNG	**Songkhla**	**51.62**	**26**	P	**P**	**04 47 03.0**	**+0.5**
comp=Z,140nm,0.8s,mb5.9							
LSZ	**Lusaka**	**51.90**	**284**	*e*P	**P**	**04 47 04.8**	**+0.1**
LSZ				pmax	pmax		
comp=Z,288nm,1.6s,mb6.0							
LSZ				MLR	MLR		
comp=Z,37μm,21.0s,MS6.4							
LSZ	**Lusaka**	**51.90**	**284**	*e*P	**P**	**04 47 04.8**	**+0.1**
comp=Z,72nm,1.6s,mb5.3							
LSZ				LR	LR		
comp=Z,37μm,21.0s,MS6.4							
SBUM	**Sibu**	**52.21**	**42**	P	**P**	**04 47 08.5**	**+1.5**
CNB	**Canberra Magne**	**53.11**	**107**	*e*P	**P**	**04 47 14.3**	**+0.8**
CNB				*e*S	**S**	**04 54 37.3**	**-7.5**
BTM	**Bintulu**	**53.29**	**42**	P	**P**	**04 47 16.6**	**+1.6**
KAKA	**Kakadu**	**53.34**	**73**	⇓*i*P	**P**	**04 47 15.6**	**+0.2**
comp=Z,44nm,0.7s,mb5.5							
KAKA	**Kakadu**	**53.34**	**73**	*e*P	**P**	**04 47 15.5**	**+0.1**
comp=Z,175nm,0.8s,mb6.0							
KMBO	**Kilima Mbogo**	**55.80**	**304**	PFAKE		04 47 40.0	+6.7
KMBO				LR	LR		
comp=Z,27μm,20.0s,MS6.3							
NNT	**Nongplab**	**56.45**	**23**	P	**P**	**04 47 39.0**	**+1.2**
TSM	**Tawau**	**56.73**	**46**	P	**P**	**04 47 41.0**	**+1.2**
GOA	**Goa**	**56.79**	**352**	⇓*i*P	**P**	**04 47 40.0**	**-0.1**
GOA				*ex*	x	04 55 30.7	
ARMA	**Armidale**	**57.22**	**104**	*e*P	**P**	**04 47 43.8**	**+0.5**
ARMA	**Armidale**	**57.22**	**104**	*e*P	**P**	**04 47 44.7**	**+1.4**
comp=Z,192nm,1.5s,mb5.9							
KKM	**Kota Kinabalu**	**57.31**	**44**	*e*P	**P**	**04 47 43.5**	**-0.5**
comp=Z,50nm,1.4s,mb5.3							
KKM				LR	LR		
comp=Z,9μ

comp=Z,79nm,1.3s,mb5.6
POO Poona 59.79 353 *e*P **P 04 48 00.9 -0.3**
POO AMb AMB 04 48 06.7
comp=Z,196nm,1.5s,mb5.9
COEN Coen 60.44 83 *e*P **P 04 48 05.7 -0.2**
comp=Z,508nm,1.2s,mb6.4
UBT Ubonrachathani 60.63 27 P **P 04 48 10.0 +3.1**
KKTK Khon Kaen 60.92 25 P **P 04 48 14.5 +5.6**
WNDE Wendo Genet 61.52 311 *e*P **P 04 48 15.7 +2.5**
CM31 Chiang Mai Arr 61.82 20 *e*P **P 04 48 14.9 -0.1**
comp=Z,80nm,0.9s,mb6.0
CM31 LR LR
comp=Z,27μm,21.0s,MS6.4
CMAR Chiang Mai Arr 61.82 20 P **P 04 48 15.2 +0.2**
comp=Z,38nm,0.8s,mb5.7,baz=209,slow=7.3,SNR=63
CMAR LR LR 05 10 36.2
comp=Z,33μm,21.3s,MS6.5,baz=212,slow=32
NGP Nagpur 62.10 358 *e*x x 04 48 12.6
NGP *e*x x 04 48 18.1
comp=Z,113nm,1.4s
NGP *e*x x 04 56 29.9
ODZ Otahua Downs 62.50 127 *e*P **P 04 48 20.4 +1.1**
comp=Z,248nm,1.8s,mb6.1
DAV Davao City (W) 63.39 52 LR LR 05 16 30.0
comp=Z,8μm,18.2s,MS5.9,baz=202,slow=36
DAV Davao City (W) 63.39 52 PFAKE 04 48 40.0 +14
DAV LR LR
comp=Z,8μm,19.0s,MS5.9
RPZ Rata Peaks 63.45 126 P **P 04 48 25.7 0.0**
comp=Z,63nm,0.9s,mb5.7,baz=170,slow=1.9,SNR=6.2
RPZ LR LR 05 07 03.7
comp=Z,7μm,21.6s,MS5.8,baz=237,slow=28
RPZ Rata Peaks 63.45 126 *e*P **P 04 48 26.4 +0.6**
comp=Z,75nm,1.0s,mb5.8
CAL Calcutta 63.88 8 *e*P **P 04 48 29.4 +0.8**
CAL *e*x x 04 57 14.4
JBP Jabalpur 64.09 359⇑ *e*P **P 04 48 29.3 -0.7**
JBP *e*S **S 04 57 07.3 -0.3**
BHPL Bhopal 64.23 357 *e*P **P 04 48 31.3 +0.4**
BHPL AMb AMB 04 48 40.6
comp=Z,156nm,1.1s,mb6.2
DESE Dese 64.28 315 *e*P **P 04 48 39.0 +7.6**
DESE *e*S **S 04 57 25.2 +15**
AGT Agartala 65.57 11 *e*x x 04 48 34.0
AGT *e*x x 04 49 12.0
KHZ Kahutara 65.69 126 *e*P **P 04 48 40.4 0.0**
comp=Z,76nm,0.8s,mb6.0
QIZ Qiongzhong 65.87 31 P **P 04 48 44.0 +2.4**
QIZ pP 04 48 49.0
QIZ S S 04 57 30.5 +0.9
QIZ pmax pmax
comp=Z,23nm,1.6s,mb5.2
QIZ LR LR
comp=N,16μm,22.1s
QIZ LR LR
comp=Z,24μm,20.4s,MS6.4
QIZ Qiongzhong 65.87 31 PFAKE 04 48 50.0 +8.4
QIZ LR LR
comp=Z,25μm,20.0s,MS6.4
TGY Tagaytay City 66.57 43 LR LR 05 15 39.3
comp=Z,21nm,18.4s,baz=344,slow=34
IMP Imphal 66.87 13 *e*P **P 04 48 47.0 -1.0**
SNZO South Karori 67.03 125 PFAKE 04 49 00.0 +11
SNZO LR LR
comp=Z,11μm,19.0s,MS6.1
TURI Tura 67.09 10 *e*x PcP 04 49 19.0 +1.5
TURI *e*x x 04 49 30.5
SHL Shillong 67.31 11 *e*P **P 04 48 50.0 -0.8**
SHL *e*S S 04 57 48.0 +1.1
AJM Ajmer 67.61 354 *e*P **P 04 48 52.8 +0.3**
AJM AMb AMB 04 49 02.5
comp=Z,330nm,1.0s,mb6.5
ODAN Odare 68.07 7 *e*P **P 04 48 55.1 -0.4**
RAMN Ramite 68.09 6 *e*P **P 04 48 55.5 -0.1**
AGRA Agra 68.18 358 *e*P **P 04 48 54.7 -1.4**
AGRA AMb AMB 04 49 05.3
comp=Z,154nm,0.9s,mb6.2
BCPH Baguio City Da 68.31 42 *e*P **P 04 48 57.4 +0.2**
JASL Jaisalmer 68.41 351 *e*P **P 04 48 56.9 -0.7**
JASL *e*P 04 48 57.2
JASL AMb AMB 04 49 06.8
comp=Z,162nm,1.4s,mb6.1
TAPN Taplejung 68.58 7 *e*P **P 04 48 58.6 -0.1**
comp=Z,936nm,1.3s,mb6.9
PKI Pulchoki 68.63 5 *e*P **P 04 48 57.9 -1.1**
comp=Z,953nm,1.7s,mb6.8
PKI Pulchoki 68.63 5 *e*P **P 04 48 59.5 +0.5**
PKI pmax pmax
comp=Z,485nm,1.5s,mb6.5
PKI Pulchoki 68.63 5 *e*P **P 04 48 59.5 +0.5**
comp=Z,485nm,1.5s,mb6.5
PKIN Phulchoki 68.63 5 *e*P **P 04 48 59.5 +0.5**
comp=Z,485nm,1.5s,mb6.5
DMN Daman 68.65 4 *e*P **P 04 48 58.7 -0.4**
comp=Z,804nm,1.4s,mb6.8
KKN Kakani 68.84 5 *e*P **P 04 48 59.7 -0.6**
comp=Z,352nm,1.0s,mb6.5
KKN Kakani 68.84 5 *e*P **P 04 48 59.7 -0.6**
KKN pmax pmax
comp=Z,352nm,1.0s,mb6.5
GUN Gumba 68.99 5 *e*P **P 04 49 01.0 -0.2**
comp=Z,2μm,1.4s
KHET Khetri 69.11 356 *e*P **P 04 49 00.3 -1.7**
KHET AMb AMB 04 49 07.0
comp=Z,96nm,1.0s,mb6.0
KMI Kunming 69.19 22 P **P 04 49 03.5 +1.0**
KMI pP 04 49 09.3
KMI sP sP 04 49 10.8 +8.0
KMI PcP PcP 04 49 28.8 +2.5
KMI PP PP 04 51 39.0 +3.3
KMI ScP 04 53 29.8
KMI PcS 04 53 32.5
KMI S S 04 58 10.8 +1.4
KMI sS sS 04 58 19.0 +9.4
KMI SKS 04 59 02.3
KMI SS SS 05 02 40.8 +4.5
KMI pmax pmax
comp=Z,53nm,1.9s,mb5.5
KMI pmax pmax
comp=Z,2μm,5.6s
KMI LR LR
comp=N,16μm,18.4s
KMI LR LR
comp=E,13μm,24.6s
KMI LR LR
comp=Z,21μm,21.8s,MS6.3
SONA Sohna 69.22 357 *e*P **P 04 49 01.1 -1.5**
BISR Bishrakh 69.53 357 *e*P **P 04 49 03.9 -0.7**
BISR AMb AMB 04 49 05.0
comp=Z,85nm,0.4s,mb6.2
NDI New Delhi 69.65 357 *e*P **P 04 49 04.0 -1.3**
NDI *e*x x 04 58 10.0
OUZ Omahuta 69.90 119 *e*P **P 04 49 08.9 +1.8**
comp=Z,154nm,1.7s,mb5.9
URZ Urewera 70.33 124 P **P 04 49 08.9 -0.7**
comp=Z,51nm,1.0s,mb5.6,baz=233,slow=2.4,SNR=18
URZ Urewera 70.33 124 *e*P **P 04 49 08.6 -1.0**
comp=Z,376nm,1.6s,mb6.3
PTH Pithoragarh 70.45 360 *e*P **P 04 49 08.8 -1.4**
HKC Hong Kong Obse 70.54 33⇓ *i*P **P 04 49 12.0 +1.1**
HKC S S 04 58 24.0 -1.3
PMSA Palmer Station 70.71 195 P **P 04 49 11.5 0.0**
comp=Z,27nm,0.7s,mb5.5,baz=330,slow=8.4,SNR=2.5
PMSA LR LR 05 20 31.0
comp=Z,53μm,19.4s,MS6.8,baz=142,slow=36
GZH Guangzhou 70.91 32 P **P 04 49 13.3 +0.2**
GZH S S 04 58 28.5 -1.0
GZH LR LR
comp=N,11μm,23.7s,MS6.1
GZH LR LR
comp=E,8μm,25.0s,MS6.1
GZH LR LR
comp=Z,24μm,23.7s,MS6.4
KKR Kurukshetra 70.94 357 *e*P **P 04 49 13.2 +0.1**
KKR AMb AMB 04 49 14.1
comp=Z,138nm,0.2s,mb6.7
DDI Dehra Dun 71.25 358 *e*P **P 04 49 13.8 -1.2**
DDI *e*x x 04 56 23.0
LSA Lhasa 71.28 10 P **P 04 49 15.0 -0.3**
LSA pP 04 49 25.0
LSA sP sP 04 49 28.5 +13
LSA PP PP 04 51 58.5 +4.8
LSA S S 04 58 26.5 -7.2
LSA pmax pmax
comp=Z,40nm,2.4s,mb5.1
LSA LR LR
comp=N,29μm,22.1s,MS6.7
LSA LR LR
comp=E,34μm,20.7s,MS6.7
LSA LR LR
comp=Z,86μm,20.7s,MS7.0
LSA Lhasa 71.28 10 *e*P **P 04 49 15.8 +0.5**
LSA pmax pmax
comp=Z,397nm,1.7s,mb6.3
LSA MLR MLR
comp=Z,89μm,20.0s,MS7.0
LSA Lhasa 71.28 10 *e*P **P 04 49 15.8 +0.5**
comp=Z,397nm,1.7s,mb6.3
LSA LR LR
comp=Z,89μm,20.0s,MS7.0
JOSI Joshimath 71.45 359 *e*P **P 04 49 16.4 +0.2**
JOSI AMb AMB 04 49 24.1
comp=Z,487nm,1.7s,mb6.4
GYA Guiyang 71.61 25⇑ *i*P **P 04 49 17.5 +0.2**
GYA PcP PcP 04 49 40.0 +3.4
GYA S S 04 58 41.0 +3.4
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,190nm,5.2s
GYA LR LR
comp=N,36μm,17.9s,MS6.9
GYA LR LR
comp=E,55μm,18.0s,MS6.9
GYA LR LR
comp=Z,62μm,17.0s,MS6.9
IBND Bandar-abas 71.87 338 *e*P **P 04 49 17.6 -1.2**
QUE Quetta 72.18 348 *e*P **P 04 49 12.0 -8.6**
BHK Bhakra 72.40 356 *e*P **P 04 49 20.6 -1.4**
KLP Kalpa 72.45 358 *e*P **P 04 49 22.2 -0.1**
KLP AMb AMB 04 49 36.0
comp=Z,429nm,2.1s,mb6.2
DZM Mont Dzumac 72.86 104 *e*P **P 04 49 26.2 +1.1**
comp=Z,131nm,1.6s,mb5.8
DZM Mont Dzumac 72.86 104 *e*PP PP 04 52 01.7 -5.3
comp=Z,694nm,24.8s
DZM *e*S S 04 58 51.8 -0.7
comp=Z,25μm,28.2s
DZM *e*SS SS 05 03 34.6 +2.5
comp=Z,16μm,26.9s
DZM *e*LQ 05 08 35.3
comp=Z,12μm,32.8s
DZM *e*LR LR 05 11 45.4
comp=Z,50μm,22.2s
THN Thein Dam 73.45 356 *e*P **P 04 49 26.1 -2.1**
YULB Yu-li 74.63 39 *e*P **P 04 49 35.2 0.0**
comp=Z,249nm,1.9s,mb5.9
QZH Quanzhou 74.75 36⇑ *i*P **P 04 49 32.0 -3.9**
QZH S S 04 59 07.0 -6.3
QZH pmax pmax
comp=Z,2μm,10.2s
QZH LR LR
comp=N,8μm,15.9s,MS6.2
QZH LR LR
comp=E,3μm,11.3s,MS6.2
QZH LR LR
comp=Z,11μm,16.7s
SSLB Suanglung 74.81 38 *e*P **P 04 49 36.7 +0.4**
comp=Z,108nm,1.4s,mb5.7
CD2 Chengdu 74.95 21 P **P 04 49 36.0 -1.0**
CD2 PP PP 04 52 23.5 -1.6
CD2 S S 04 59 07.8 -7.6
CD2 SKS 04 59 36.3
CD2 SS SS 05 04 03.5 -1.0
CD2 pmax pmax
comp=Z,200nm,1.0s,mb6.1
CD2 pmax pmax
comp=Z,3μm,7.6s
CD2 LR LR
comp=N,25μm,23.8s
CD2 LR LR
comp=Z,29μm,22.6s,MS6.5
IPAR Pars 75.15 336 *e*P **P 04 49 38.5 +0.4**
YHNB Yeheng 75.76 38 PFAKE 04 49 50.0 +8.2
YHNB LR LR
comp=Z,5μm,20.0s,MS5.8
HNR Honiara 75.94 90 *e*P **P 04 49 43.7 +0.6**
HNR pmax pmax
comp=Z,630nm,1.4s,mb6.5
HNR MLR MLR
comp=Z,11μm,19.0s,MS6.2
HNR Honiara 75.94 90 *e*P **P 04 49 43.7 +0.6**
comp=Z,630nm,1.4s,mb6.5
HNR LR LR
comp=Z,11μm,19.0s,MS6.2
IKOO Kooshah 75.94 341 *e*P **P 04 49 42.8 +0.2**
IDAH Dahanechah 76.04 342 *e*P **P 04 49 41.6 -1.6**
IBAF Bafgh 76.05 338 *e*P **P 04 49 41.6 -1.6**
ENH Enshi 76.05 26 *e*P **P 04 49 42.0 -1.3**
comp=Z,248nm,1.7s,mb6.1
ENH LR LR
comp=Z,18μm,19.0s,MS6.4
TATO Taipei 76.08 38 PFAKE 04 49 50.0 +6.5
TATO LR LR
comp=Z,5μm,21.0s,MS5.8
IMEH Mehriz 76.13 337 *e*P **P 04 49 43.7 0.0**
KBL Kabul 76.15 350 *e*P **P 04 49 44.7 +0.9**
KBL pmax pmax
comp=Z,306nm,1.3s,mb6.3
KBL Kabul 76.15 350 *e*P **P 04 49 44.7 +0.9**
comp=Z,306nm,1.3s,mb6.3
RDF Al-Radifah 76.19 331 *e*P **P 04 49 43.9 -0.2**
RDF AMb AMB 04 49 57.8
comp=Z,307nm,1.4s,mb6.2
KBD Kabd 76.36 331 *e*P **P 04 49 44.9 -0.2**
KBD AMb AMB 04 49 59.3
comp=Z,237nm,1.9s,mb6.0
ITEG Tejag 76.46 341 *e*P **P 04 49 46.0 +0.5**
NAY Al-Naaiem 76.60 330 *e*P **P 04 49 46.0 -0.4**
NAY AMb AMB 04 49 55.1
comp=Z,139nm,1.2s,mb6.0
SHEL Horse Pasture 76.87 260 PFAKE 04 50 00.0 +12
SHEL LR LR
comp=Z,12μm,19.0s,MS6.2
ISAD Sadrabad 76.89 337 *e*P **P 04 49 48.6 +0.6**
MIB Mutribah 77.06 331 *e*P **P 04 49 48.2 -0.8**
MIB AMb AMB 04 50 03.1
comp=Z,293nm,2.4s,mb6.0
IGAR Gharneh 77.85 336 *e*P **P 04 49 51.5 -1.8**
WHN Wuhan 78.00 29 P **P 04 49 54.0 -0.2**
WHN S S 04 59 48.8 +0.1
WHN LR LR
comp=N,25μm,17.4s,MS6.7
WHN LR LR
comp=E,21μm,17.9s,MS6.7
WHN LR LR
comp=Z,51μm,19.5s,MS6.9
IZEF Zefreh 78.22 336 *e*P **P 04 49 54.7 -0.7**
IPIR Pirpir 78.47 335 *e*P **P 04 49 57.9 +1.1**
IKLH Kolahrood 78.84 336 *e*P **P 04 49 58.1 -0.7**
RAO Raoul Island 79.23 119 PFAKE 04 50 10.0 +8.6
RAO LR LR
comp=Z,7μm,20.0s,MS6.0
XAN Xi'an 79.36 24 P **P 04 50 01.0 -0.7**
XAN pP 04 50 04.0
XAN sP sP 04 50 07.5 +5.6
XAN PP PP 04 53 02.0 -0.1
XAN S S 05 00 01.5 -1.7
XAN sS sS 05 00 08.0 +4.5
XAN pmax pmax
comp=Z,18nm,1.5s,mb4.9
XAN pmax pmax
comp=Z,400nm,10.6s
XAN LR LR
comp=N,8μm,23.0s,MS6.1
XAN LR LR
comp=E,5μm,21.5s,MS6.1
XAN LR LR
comp=Z,5μm,25.7s,MS5.8
IMOG Moghan 79.39 343 *e*P **P 04 50 01.5 -0.3**
IMYA Miami 79.45 343 *e*P **P 04 50 00.9 -1.2**
ISRO Mashad 79.56 343 *e*P **P 04 50 02.1 -0.6**
IPAY Payeh 79.80 343 *e*P **P 04 50 02.9 -1.1**
LZH Lanzhou 79.89 19 *e*P **P 04 50 04.5 0.0**
LZH pP 04 50 08.0
LZH sP sP 04 50 10.0 +5.3
LZH PP PP 04 53 05.0 -1.5
LZH S S 05 00 09.0 +0.3
LZH sS sS 05 00 17.0 +8.0
LZH SS SS 05 05 21.0 +2.1
LZH pmax pmax
comp=Z,430nm,1.2s,mb6.2
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=N,22μm,18.8s
LZH LR LR
comp=Z,30μm,19.2s,MS6.7
IAKL Akhelmad 80.00 342 *e*P **P 04 50 04.2 -0.9**
IANJ Anjilo 80.15 338 *e*P **P 04 50 06.4 +0.5**
IKRD Kardeh 80.22 342 *e*P **P 04 50 03.6 -2.6**
IKRD *e*P 04 50 04.4
ILAS Lasjerd 80.34 337 *e*P **P 04 50 06.0 -1.0**
IVRN Varamin 80.35 336 *e*P **P 04 50 05.6 -1.4**
IVRN *e*P 04 50 06.1
KSH Kashi 80.49 356 P **P 04 50 04.8 -2.9**
KSH *e*pP 04 50 08.8
KSH *e*sP sP 04 50 11.8 +3.9
KSH *e*PcP PcP 04 50 13.0 -1.6
KSH *e*PP PP 04 53 07.0 -4.4
KSH *e*S S 05 00 04.5 -10
KSH *e*SKS 05 00 15.5
KSH *e*ScS ScS 05 00 24.0 -11
KSH *e*SS SS 05 05 15.5 -12
KSH pmax pmax
comp=Z,210nm,2.1s,mb5.7
KSH LR LR
comp=N,20μm,19.0s,MS6.6
KSH LR LR
comp=E,10μm,16.4s,MS6.6
KSH LR LR
comp=Z,24μm,19.7s,MS6.5
GUMO Guam 80.58 63 PFAKE 04 50 20.0 +11
GUMO LR LR
comp=Z,2μm,19.0s,MS5.5
ISFR Sfrayin 80.60 342 *e*P **P 04 50 08.3 0.0**
IFIR Firoozkooh 80.64 337 *e*P **P 04 50 10.3 +1.7**
ISHM Shahmirzad 80.64 338 *e*P **P 04 50 10.0 +1.4**
IDMV Damavand 80.80 337 *e*P **P 04 50 08.1 -1.3**
IEMG Emamgholi 80.80 343 *e*P **P 04 50 08.3 -1.1**
IR5 Iran Long-Peri 80.90 336 *e*P **P 04 50 09.0 -0.9**
IKIA Kiasar 80.91 338 *e*P **P 04 50 10.2 +0.2**
JOW Kunigami 80.92 42 LR LR 05 21 16.2
comp=Z,4μm,21.1s,MS5.8,baz=215,slow=32
IR3 Iran Long-Peri 81.01 336 *e*P **P 04 50 09.9 -0.6**
NJ2 Nanjing 81.08 32 *e*P **P 04 50 07.5 -3.5**
NJ2 sP sP 04 50 15.3 +4.1
NJ2 PP PP 04 53 15.8 -0.6
NJ2 S S 05 00 15.0 -6.4
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
NJ2 pmax pmax
comp=Z,2μm,10.6s
NJ2 LR LR
comp=N,10μm,16.7s,MS6.3
NJ2 LR LR
comp=E,6μm,18.2s,MS6.3
NJ2 LR LR
comp=Z,83μm,19.6s,MS7.1
ISHV Shirvan 81.13 342 *e*P **P 04 50 10.2 -0.9**
IGLO Ghaloghah 81.14 339 *e*P **P 04 50 11.5 +0.3**
SSE Sheshan 81.21 34 P **P 04 50 14.3 +2.6**
SSE PP PP 04 53 20.5 +3.0
SSE S S 05 00 27.0 +4.2
SSE sS sS 05 00 32.5 +9.4
SSE pmax pmax
comp=Z,60nm,1.0s,mb5.6
SSE pmax pmax
comp=Z,620nm,12.0s
SSE LR LR
comp=N,6μm,20.0s,MS6.2
SSE LR LR
comp=E,10μm,20.0s,MS6.2
SSE LR LR
comp=Z,6μm,16.9s,MS6.0
BHD Baghdad 81.27 330 *e*P **P 04 50 15.0 +3.0**
BHD *e*S S 05 00 25.0 +1.7
BHD *e*PS 05 01 35.0
IMHD Mahdasht 81.31 336 *e*P **P 04 50 11.3 -0.8**
IPRN Peran 81.33 337 *e*P **P 04 50 10.6 -1.6**
ABKT Ailbek 81.41 342 P **P 04 50 12.3 -0.3**
comp=Z,424nm,1.5s,mb6.2,SNR=20
IGHG Ghaleghazi 81.43 332 *e*P **P 04 50 10.9 -1.9**
VAN Vannovskaya 81.43 342 *e*P **P 04 50 13.1 +0.4**
VAN S S 05 00 27.1 +2.3
EIL Elat 82.17 321 P **P 04 50 17.8 +1.0**
comp=Z,13nm,1.1s,mb5.0,baz=72,slow=1.1,SNR=15
GTA Gaotai 82.19 15⇑ P **P 04 50 16.5 -0.2**
GTA pP 04 50 21.5
GTA sP sP 04 50 24.5 +7.6
GTA PP PP 04 53 25.0 -0.4
GTA S S 05 00 32.5 0.0
GTA sS sS 05 00 40.3 +7.5
GTA SS SS 05 05 57.5 +4.3
GTA pmax pmax
comp=Z,19nm,1.9s,mb4.9
GTA pmax pmax
comp=Z,2μm,4.8s
GTA LR LR
comp=N,10μm,19.3s,MS6.3
GTA LR LR
comp=E,8μm,17.8s,MS6.3
GTA LR LR
comp=Z,10μm,17.5s,MS6.2
KZA Kyzart 83.08 356 P **P 04 50 21.7 +0.4**
SNR=36
ULHL Ulahol 83.20 357 P **P 04 50 22.0 +0.1**
SNR=27
AML Almayashu 83.23 355 P **P 04 50 22.2 +0.2**
SNR=24
AML Almayashu 83.23 355 *e*P **P 04 50 22.1 +0.2**
comp=Z,98nm,1.0s,mb6.0
AML LR LR
comp=Z,29μm,21.0s,MS6.6
UCH Uchtor 83.27 356 P **P 04 50 22.5 +0.3**
SNR=30
UCH Uchtor 83.27 356 PFAKE 04 50 30.0 +7.8
UCH LR LR
comp=Z,32μm,20.0s,MS6.7
ASF Jabal al Asfar 83.39 324 P **P 04 50 24.0 +0.9**
comp=Z,13nm,0.9s,mb5.1,baz=25,slow=1.6,SNR=28
ASF Jabal al Asfar 83.39 324 P **P 04 50 24.0 +0.9**
ASF pmax pmax
comp=Z,13nm,0.9s
KBK Karagaybulak 83.67 356 P **P 04 50 24.8 +0.5**
SNR=15
AAK Ala-Archa 83.68 356 P **P 04 50 24.6 +0.3**
comp=Z,357nm,1.6s,mb6.3,SNR=38
AAK Ala-Archa 83.68 356 P **P 04 50 24.0 -0.3**
SNR=15
AAK Ala-Archa 83.68 356 P **P 04 50 25.0 +0.7**
comp=Z,12nm,0.9s,mb5.2,baz=188,slow=8.4,SNR=2.0
AAK LR LR 05 24 31.8
comp=Z,38μm,19.6s,MS6.8,baz=176,slow=33
AAK Ala-Archa 83.68 356 *c i*P **P 04 50 24.3 0.0**
AAK pmax pmax
comp=Z,80nm,2.5s,mb5.5
AAK MLR MLR
comp=Z,6μm,15.0s,MS6.1
AAK Ala-Archa 83.68 356 *e*P **P 04 50 24.2 -0.1**
comp=Z,349nm,1.8s,mb6.3
AAK LR LR
comp=Z,36μm,20.0s,MS6.8
EKS2 Erkin-Say 83.75 355 P **P 04 50 25.0 +0.4**
SNR=29
EKS2 Erkin-Say 83.75 355 *e*P **P 04 50 25.2 +0.6**
comp=Z,152nm,1.2s,mb6.1
EKS2 LR LR
comp=Z,34μm,21.0s,MS6.7
TIY Taiyuan 83.84 25 *e*P **P 04 50 23.5 -1.8**
TIY S S 05 00 45.0 -4.4
TIY pmax pmax
comp=Z,830nm,12.0s
TIY LR LR
comp=N,16μm,21.0s,MS6.5
TIY LR LR
comp=E,5μm,16.8s,MS6.5
TIY LR LR
comp=Z,13μm,21.6s,MS6.3
FRU Bishkek 83.87 356 *i* P **P 04 50 24.0 -1.3**
FRU *e* 05 00 48.0
FRU *e* 05 01 40.0
FRU pmax pmax
comp=Z,880nm,2.0s,mb6.6
TKM2 Tokmak 2 83.91 356 *e*P **P 04 50 26.3 +0.8**

TKM2				pmax	pmax		
	comp=Z,426nm,2.1s,mb6.3						
TKM2				MLR	MLR		
	comp=Z,24µm,22.0s,MS6.5						
TKM2	**Tokmak 2**	**83.91**	**356**	*e*P	**P**	**04 50 26.3**	**+0.8**
	comp=Z,426nm,2.1s,mb6.3						
TKM2				LR	LR		
	comp=Z,24µm,22.0s,MS6.5						
MSVF	**Nonsavu**	**84.02**	**108**	*e*P	**P**	**04 50 28.8**	**+2.0**
	comp=Z,1µm,2.6s,mb6.8						
MSVF				LR	LR		
	comp=Z,8µm,21.0s,MS6.0						
CHMS	**Chumysh**	**84.03**	**356**	P	**P**	**04 50 25.8**	**-0.2**
	SNR=21						
TIA	**Tai'an**	**84.09**	**29**	*e*P	**P**	**04 50 25.3**	**-1.3**
TIA				S	S	05 00 47.0	-5.0
TIA				SS	SS	05 06 18.0	-3.4
TIA				pmax	pmax		
	comp=Z,72nm,1.2s,mb5.8						
TIA				pmax	pmax		
	comp=Z,440nm,8.0s						
TIA				LR	LR		
	comp=N,6µm,20.0s,MS6.1						
TIA				LR	LR		
	comp=E,5µm,19.0s,MS6.1						
AAA	**Alma-Ata**	**84.20**	**357**	*e*P	**P**	**04 50 26.5**	**-0.4**
AAA				*e*S	S	05 00 55.4	+2.7
AAA				pmax	pmax		
	comp=Z,2µm,3.1s						
AAA				smax			
	comp=N,7µm,17.5s						
AAA				MLR	MLR		
	comp=Z,17µm,17.0s,MS6.5						
ISRB	**Sarab**	**84.22**	**334**	*e*P	**P**	**04 50 26.4**	**-0.8**
USP	**Ospenovka**	**84.31**	**356**	P	**P**	**04 50 27.1**	**-0.4**
	SNR=22						
MSL	**Mosul**	**84.53**	**331**	*e*P	**P**	**04 50 30.0**	**+1.2**
MSL				*e*S	S	05 00 56.0	-0.4
IAZR	**Azarshahr**	**84.65**	**333**	*e*P	**P**	**04 50 27.6**	**-1.8**
MMAI	**Mount Meron Ar**	**84.77**	**323**	P	**P**	**04 50 30.6**	**+0.4**
	comp=Z,17nm,1.0s,mb5.2,baz=131,slow=5.7,SNR=30						
MMAI				LR	LR	05 24 38.2	
	comp=Z,9µm,18.3s,MS6.2,baz=155,slow=33						
IHRS	**Heris**	**84.88**	**334**	*e*P	**P**	**04 50 29.5**	**-1.0**
WMQ	**Urumqi**	**84.94**	**5**	P	**P**	**04 50 30.5**	**-0.2**
WMQ				sP	sP	04 50 36.8	+5.9
WMQ				PP	PP	04 53 49.0	+1.1
WMQ				SKS		05 00 50.8	
WMQ				S	S	05 00 57.5	-2.6
WMQ				sS	sS	05 01 03.5	+3.2
WMQ				SS	SS	05 06 28.0	-5.7
WMQ				pmax	pmax		
	comp=Z,160nm,1.9s,mb5.9						
WMQ				pmax	pmax		
	comp=Z,1µm,3.6s						
WMQ				LR	LR		
	comp=N,22µm,23.5s,MS6.5						
WMQ				LR	LR		
	comp=E,3µm,23.0s,MS6.5						
WMQ				LR	LR		
	comp=Z,39µm,30.0s						
ITBZ	**Tabriz**	**85.10**	**334**	*e*P	**P**	**04 50 29.0**	**-2.6**
ISHB	**Shabestar**	**85.32**	**333**	*e*P	**P**	**04 50 29.6**	**-3.1**
IMRD	**Marand**	**85.68**	**333**	*e*P	**P**	**04 50 35.1**	**+0.6**
BTO	**Baotou**	**85.78**	**22**	*e*P	**P**	**04 50 34.0**	**-0.9**
HHC	**Hu-ho-hao-te**	**86.45**	**23**	⇑P	**P**	**04 50 37.5**	**-0.8**
HHC				pP		04 50 42.3	
HHC				sP	sP	04 50 44.5	+6.0
HHC				PP	PP	04 54 02.3	+2.1
HHC				SKS		05 01 01.0	
HHC				S	S	05 01 13.0	-2.1
HHC				sS	sS	05 01 21.0	+5.6
HHC				SS	SS	05 06 57.8	+1.7
HHC				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.2						
HHC				pmax	pmax		
	comp=Z,910nm,7.5s						
HHC				LR	LR		
	comp=N,17µm,18.0s,MS6.5						
HHC				LR	LR		
	comp=E,8µm,18.8s,MS6.5						
HHC				LR	LR		
	comp=Z,21µm,18.4s,MS6.6						
BJT	**Baijiatuau**	**87.16**	**27**	PFAKE		04 50 50.0	+8.3
BJT				LR	LR		
	comp=Z,18µm,22.0s,MS6.4						
BJI	**Beijing**	**87.18**	**27**	P	**P**	**04 50 43.0**	**+1.2**
BJI				PP	PP	04 54 04.3	-1.8
BJI				S	S	05 01 10.3	-12
BJI				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.4						
BJI				pmax	pmax		
	comp=Z,820nm,11.3s						
BJI				LR	LR		
	comp=N,10µm,23.4s,MS6.4						
BJI				LR	LR		
	comp=E,14µm,21.7s,MS6.4						
BJI				LR	LR		
	comp=Z,16µm,23.6s,MS6.3						
GNI	**Garni**	**87.29**	**333**	*c i*P	**P**	**04 50 42.8**	**+0.4**
GNI				pmax	pmax		
	comp=Z,74nm,2.5s						
GNI				MLR	MLR		
	comp=Z,9µm,20.0s						
GNI	**Garni**	**87.29**	**333**	*e*P	**P**	**04 50 43.6**	**+1.2**
	comp=Z,438nm,1.9s,mb6.4						
GNI				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
CSS	**Prodhromos**	**87.34**	**323**	*e*P	**P**	**04 50 42.4**	**-0.3**
	comp=Z,177nm,1.8s,mb6.0						
CSS				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
MK31	**Makanchi Array**	**87.68**	**1**	*e*P	**P**	**04 50 43.0**	**-1.1**
MKAR	**Makanchi Array**	**87.68**	**1**	P	**P**	**04 50 42.9**	**-1.2**
	comp=Z,15nm,1.1s,mb5.2,baz=152,slow=5.5,SNR=16						
MKAR				LR	LR	05 27 33.4	
	comp=Z,23µm,20.2s,MS6.6,baz=176,slow=34						
DL2	**Dalian**	**88.16**	**31**	⇑*i*P	**P**	**04 50 46.3**	**-0.3**
DL2				SKS		05 01 08.3	
DL2				S	S	05 01 28.5	-3.1
DL2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.7						
DL2				pmax	pmax		
	comp=Z,370nm,6.5s						
DL2				LR	LR		
	comp=N,3µm,18.8s,MS5.9						
DL2				LR	LR		
	comp=E,3µm,18.5s,MS5.9						
DL2				LR	LR		
	comp=Z,5µm,25.7s						
DGRG	**David-gareji**	**88.25**	**334**	P	**P**	**04 50 49.4**	**+2.5**
MTA	**Mtatsminda**	**88.66**	**334**	P	**P**	**04 50 47.0**	**-1.8**
MAK	**Makhachkala**	**88.95**	**336**	*e*P	**P**	**04 50 48.9**	**-1.3**
MAK				*e*S	SKSac	05 01 16.5	-4.0
MAK				*e*		05 01 37.6	
MAK				*e*PS		05 02 39.7	
MAK				*e*SSS		05 11 09.3	
MAK				pmax	pmax		
	comp=Z,127nm,1.1s,mb6.1						
INCN	**Inchon**	**89.00**	**35**	PFAKE		04 51 00.0	+9.4
INCN				LR	LR		
	comp=Z,7µm,21.0s,MS6.0						
KSRS	**Korea Array**	**89.53**	**36**	P	**P**	**04 50 52.4**	**-0.8**
	comp=Z,16nm,0.9s,mb5.3,baz=214,slow=4.1,SNR=14						
KSRS				PP	PP	04 54 27.6	+2.5
	comp=Z,0.5nm,0.3s,baz=205,slow=5.4,SNR=2.5						
KSRS				LR	LR	05 29 37.4	
	comp=Z,6µm,21.6s,MS6.0,baz=111,slow=35						
KSRS	**Korea Array**	**89.53**	**36**	P	**P**	**04 50 52.4**	**-0.7**
KSRS						04 54 27.6	
KSRS				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,6µm,21.6s,MS6.0						
ONI	**Oni**	**89.91**	**334**	P	**P**	**04 50 53.7**	**-1.0**
ZEI	**Tsey**	**89.92**	**334**	*e*P	**P**	**04 51 00.3**	**+5.5**
ZEI				pmax	pmax		
	comp=Z,41nm,1.8s,mb5.4						
TORD	**Torodi Ar. Bea**	**90.33**	**287**	P	**P**	**04 50 57.3**	**0.0**
	comp=Z,3.5nm,1.0s,baz=103,slow=2.8,SNR=19						
TORD				PP	PP	04 54 34.1	+2.5
	comp=Z,6.3nm,1.0s,baz=129,slow=5.1,SNR=4.0						
TORD				LR	LR	05 28 55.9	
	comp=Z,52µm,20.4s,baz=125,slow=34						
KIC	**Kosan Boka**	**90.57**	**278**	*e*P	**P**	**04 50 59.8**	**+1.2**
	comp=Z,293nm,1.6s,mb6.4						
LIC	**Lamto**	**90.69**	**278**	*e*P	**P**	**04 51 01.5**	**+2.3**
	comp=Z,366nm,1.7s,mb6.4						
LIC	**Lamto**	**90.69**	**278**	*e*P	**P**	**04 50 59.3**	**+0.1**
	comp=Z,515nm,1.7s,mb6.3,baz=128						
LIC	**Lamto**	**90.69**	**278**	*e*P	**P**	**04 50 59.3**	**+0.1**
	comp=Z,258nm,1.7s,mb6.3						
CDAG	**Cicekdag**	**90.78**	**326**	*i* P	**P**	**04 51 00.6**	**+1.8**
ARG	**Arkhangelos**	**90.80**	**320**	P	**P**	**04 50 57.1**	**-2.0**
ARG	**Arkhangelos**	**90.80**	**320**	P	**P**	**04 50 57.1**	**-2.0**
DBIC	**Dimbokro**	**90.86**	**278**	P	**P**	**04 51 01.4**	**+1.5**
	comp=Z,16nm,1.1s,mb5.3,baz=83,slow=2.8,SNR=5.2						
DBIC				LR	LR	05 27 54.4	
	comp=Z,37µm,19.4s,MS6.8,baz=119,slow=33						
DBIC	**Dimbokro**	**90.86**	**278**	*e*P	**P**	**04 51 02.3**	**+2.4**
	comp=Z,59nm,1.3s,mb5.8						
DBIC				LR	LR		
	comp=Z,38µm,20.0s,MS6.8						
FUNA	**Funafuti**	**90.93**	**102**	PFAKE		04 51 10.0	+10
FUNA				LR	LR		
	comp=Z,17µm,20.0s,MS6.5						
XRY	**Khrisi**	**90.94**	**318**	*e*P	**P**	**04 50 59.9**	**+0.2**
TIC	**Toumodi**	**90.96**	**278**	*e*P	**P**	**04 51 01.9**	**+1.5**
	comp=Z,560nm,2.0s,mb6.5						
ISP	**Isparta**	**90.97**	**323**	P	**P**	**04 50 58.4**	**-1.4**
ISP				LR	LR		
	comp=Z,6µm,22.0s,MS6.0						
ISP	**Isparta**	**90.97**	**323**	P	**P**	**04 50 58.4**	**-1.4**
BR131	**Keskin Array S**	**91.17**	**326**	*e*P	**P**	**04 51 02.1**	**+1.5**
	comp=Z,11nm,0.8s,mb5.2						
BR131				LR	LR		
	comp=Z,8µm,19.0s,MS6.2						
BRTR	**Keskin Array B**	**91.17**	**326**	P	**P**	**04 51 00.9**	**+0.3**
	comp=Z,5.5nm,1.0s,mb4.8,baz=165,slow=6.4,SNR=26						
BRTR				PP	PP	04 54 41.2	+3.2
	comp=Z,2.3nm,1.1s,baz=157,slow=4.7,SNR=3.2						
BRTR				PKKPbc	PKKPbc	05 08 28.3	+4.4
	comp=Z,0.4nm,0.5s,baz=27,slow=3.5,SNR=3.0						
BRTR				LR	LR	05 29 44.2	
	comp=Z,9µm,20.1s,MS6.2,baz=240,slow=34						
BRTR	**Keskin Array B**	**91.17**	**326**	P	**P**	**04 51 01.0**	**+0.3**
BRTR						04 54 41.2	
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LAST	**Lasithi**	**91.28**	**318**	P	**P**	**04 51 01.2**	**-0.1**
LAST	**Lasithi**	**91.28**	**318**	P	**P**	**04 51 01.2**	**-0.1**
KIV	**Kislovodsk**	**91.38**	**334**	P	**P**	**04 51 02.4**	**+0.9**
	comp=Z,339nm,1.4s,mb6.5,SNR=12						
KIV	**Kislovodsk**	**91.38**	**334**	*c i*P	**P**	**04 51 01.2**	**-0.3**
KIV				*e*		04 54 38.3	
KIV				pmax	pmax		
	comp=Z,111nm,2.5s,mb5.8						
KIV				MLR	MLR		
	comp=Z,8µm,18.0s,MS6.2						
KIV	**Kislovodsk**	**91.38**	**334**	*e*P	**P**	**04 51 03.2**	**+1.7**
	comp=Z,291nm,1.8s,mb6.3						
KIV				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
SNY	**Shenyang**	**91.43**	**31**	⇑P	**P**	**04 50 59.0**	**-2.8**
SNY				SKS		05 01 28.0	
SNY				S	S	05 02 02.3	+0.4
SNY				SS	SS	05 08 07.5	-0.9
SNY				pmax	pmax		
	comp=Z,750nm,8.2s						
SNY				LR	LR		
	comp=N,10µm,19.0s,MS6.3						
SNY				LR	LR		
	comp=E,6µm,19.0s,MS6.3						
SNY				LR	LR		
	comp=Z,11µm,38.7s						
CTKT	**Corum**	**91.44**	**327**	*i* P	**P**	**04 51 05.1**	**+3.2**
SIVA	**Sivas**	**91.50**	**317**	P	**P**	**04 51 01.2**	**-1.1**
SIVA	**Sivas**	**91.50**	**317**	P	**P**	**04 51 01.2**	**-1.1**
KURK	**Kurchatov**	**91.60**	**359**	P	**P**	**04 51 02.1**	**-0.3**
	comp=Z,242nm,1.2s,mb6.4,SNR=12						
KURK	**Kurchatov**	**91.60**	**359**	P	**P**	**04 51 01.5**	**-0.9**
	comp=Z,10nm,0.9s,mb5.2,baz=192,slow=4.3,SNR=4.8						
KURK				PKKPbc	PKKPbc	05 08 28.8	+5.4
	comp=Z,0.5nm,0.6s,baz=351,slow=2.2,SNR=3.6						
KURK				LR	LR	05 31 42.6	
	comp=Z,11µm,18.9s,MS6.3,baz=175,slow=35						
KURK	**Kurchatov**	**91.60**	**359**	*c i*P	**P**	**04 51 01.6**	**-0.8**
KURK				pmax	pmax		
	comp=Z,69nm,2.5s,mb5.5						
KURK				MLR	MLR		
	comp=Z,11µm,14.0s,MS6.5						
KURK	**Kurchatov**	**91.60**	**359**	*e*P	**P**	**04 51 01.3**	**-1.1**
	comp=Z,30nm,0.9s,mb5.6						
KURK				LR	LR		
	comp=Z,13µm,22.0s,MS6.3						
SONM	**Songino Array**	**91.63**	**17**	P	**P**	**04 51 02.2**	**-0.4**
	comp=Z,20nm,1.1s,mb5.4,baz=199,slow=5.6,SNR=14						
SONM				PP	PP	04 54 46.0	+4.5
	comp=Z,3.8nm,1.0s,baz=156,slow=7.8,SNR=3.1						
SONM				PKKPbc	PKKPbc	05 08 28.7	+5.6
	comp=Z,1.1nm,0.5s,baz=103,slow=3.3,SNR=3.8						
SONM				LR	LR	05 33 14.2	
	comp=Z,13µm,18.4s,MS6.4,baz=189,slow=36						
SONM	**Songino Array**	**91.63**	**17**	P	**P**	**04 51 02.2**	**-0.4**
SONM						04 54 46.0	
SONM						05 08 28.7	
SONM				pmax	pmax		
	comp=Z,20nm,1.1s						
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,13µm,18.4s						
IDI	**Anoyia**	**91.67**	**318**	*e*P	**P**	**04 51 04.1**	**+1.0**
GVD	**Gavdhos**	**91.74**	**317**	*e*P	**P**	**04 51 08.1**	**+4.7**
	comp=Z,301nm,1.8s,mb6.3						
GVD	**Gavdhos**	**91.74**	**317**	P	**P**	**04 51 05.5**	**+2.1**
ULN	**Ulaanbaatar**	**91.81**	**18**	*e*P	**P**	**04 51 02.6**	**-0.8**
ULN				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.8						
ULN	**Ulaanbaatar**	**91.81**	**18**	*e*P	**P**	**04 51 02.6**	**-0.8**
	comp=Z,63nm,1.3s,mb5.8						
ELDT	**Eldivan**	**91.90**	**326**	*i* P	**P**	**04 51 11.8**	**+7.7**
ABKAR	**Akbulak array**	**91.93**	**347**	*e*P	**P**	**04 51 03.8**	**-0.1**
	comp=Z,55nm,1.6s,mb5.6						
SOC	**Sochi**	**92.08**	**332**	*d i*P	**P**	**04 51 04.8**	**0.0**
SOC				*e*PP		04 51 11.4	
SOC				*e*		04 54 42.3	
SOC				*e*S	SKSac	05 01 36.1	-2.5
SOC				*e*		05 02 06.0	
SOC				*e*PS	PS	05 03 18.7	+0.7
ILGA	**Ilgaz**	**92.24**	**327**	*i* P	**P**	**04 51 08.3**	**+2.7**
KARN	**Karanos**	**92.26**	**317**	P	**P**	**04 51 06.9**	**+1.1**
SGKT	**Sivrigoynuk**	**92.55**	**325**	*i* P	**P**	**04 51 09.0**	**+2.0**
APE	**Apeiranthos**	**92.75**	**319**	*e*P	**P**	**04 51 08.0**	**0.0**
APE	**Apeiranthos**	**92.75**	**319**	P	**P**	**04 51 07.3**	**-0.7**
BALT	**Daday**	**92.78**	**327**	*i* P	**P**	**04 51 09.7**	**+1.6**
BLCB	**Balcova**	**93.05**	**321**	P	**P**	**04 51 07.6**	**-1.8**
BLCB	**Balcova**	**93.05**	**321**	P	**P**	**04 51 07.6**	**-1.8**
AKTK	**Aktyubinsk**	**93.41**	**346**	P	**P**	**04 51 09.7**	**-1.0**
AKTK				LR	LR	05 29 34.7	
AKTO	**Aktyubinsk**	**93.41**	**346**	P	**P**	**04 51 09.7**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=147,slow=3.6,SNR=10						
AKTO				LR	LR	05 29 34.7	
	comp=Z,8µm,20.7s,MS6.2,baz=321,slow=33						
ZAK	**Zakamensk**	**93.42**	**14**	*e*P	**P**	**04 51 09.2**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.5						
CHOS	**Chios island**	**93.53**	**320**	*e*P	**P**	**04 51 11.6**	**0.0**
CHOS	**Chios island**	**93.53**	**320**	P	**P**	**04 51 04.2**	**-7.4**
MAJO	**Matsushiro**	**93.73**	**43**	*e*P	**P**	**04 51 13.1**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,107nm,1.7s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.8						
MAJO	**Matsushiro**	**93.73**	**43**	*e*P	**P**	**04 51 13.1**	**+0.4**
	comp=Z,107nm,1.7s,mb5.9						
MAJO				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
MAT	**Matsushiro**	**93.73**	**43**	P	**P**	**04 51 12.4**	**-0.2**
MAT				S	S	05 02 18.0	-4.7
MJAR	**Matsushiro Arr**	**93.73**	**43**	P	**P**	**04 51 11.5**	**-1.1**
	comp=Z,6.8nm,0.9s,mb5.0,baz=214,slow=6.8,SNR=4.3						
MJAR				LR	LR	05 30 52.3	
	comp=Z,2µm,21.6s,MS5.6,baz=205,slow=34						
AFI	**Afiamalu**	**93.79**	**112**	PFAKE		04 51 20.0	+6.5
AFI				LR	LR		
	comp=Z,7µm,22.0s,MS6.1						
CN2	**Changchun**	**93.83**	**31**	*e*P	**P**	**04 51 11.5**	**-1.3**
CN2				*e*sP	sP	04 51 18.5	+5.4
CN2				PP	PP	04 55 01.5	+2.6
CN2				SKS		05 01 44.8	
CN2				*e*S	S	05 02 20.0	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				pmax	pmax		
	comp=Z,500nm,9.0s						
CN2				LR	LR		
	comp=N,5µm,21.0s,MS6.2						
CN2				LR	LR		
	comp=E,7µm,21.0s,MS6.2						
CN2				LR	LR		
	comp=Z,6µm,22.0s,MS6.0						
TRQA	**Tornquist**	**93.94**	**209**	*e*P	**P**	**04 51 13.4**	**-0.4**
	comp=Z,28nm,1.1s,mb5.5						
TRQA				LR	LR		
	comp=Z,10µm,20.0s,MS6.3						
ANN	**Anapa**	**93.96**	**331**	*e*P	**P**	**04 51 13.1**	**-0.3**
ANN				*e*PP		04 51 19.7	
ANN				*e*SS	SS	05 08 43.7	-1.0
ANN				pmax	pmax		
	comp=N,114nm,1.4s						
ANN				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.8						
ANN				pmax	pmax		
	comp=E,14nm,1.5s						
ANN				MLR	MLR		
	comp=N,5µm,22.0s,MS6.1						
ANN				MLR	MLR		
	comp=E,6µm,22.0s,MS6.1						
ANN				MLR	MLR		
	comp=Z,5µm,22.0s,MS6.0						
PRK	**Paraskevi**	**94.10**	**321**	P	**P**	**04 51 09.6**	**-4.6**
PRK	**Paraskevi**	**94.10**	**321**	P	**P**	**04 51 09.6**	**-4.6**
TAM	**Tamanrasset**	**94.16**	**297**	*e*P	**P**	**04 51 16.6**	**+1.7**
TAM				pmax	pmax		
	comp=Z,189nm,2.5s,mb6.0						
TAM				MLR	MLR		
	comp=Z,16µm,20.0s,MS6.5						
TAM	**Tamanrasset**	**94.16**	**297**	*e*P	**P**	**04 51 16.6**	**+1.7**
	comp=Z,189nm,2.5s,mb6.0						
TAM				LR	LR		
	comp=Z,16µm,20.0s,MS6.5						
VLY	**Voula,Athens**	**94.22**	**318**	*e*P	**P**	**04 51 15.5**	**+0.7**
MOY	**Mondy**	**94.25**	**13**	*e*P	**P**	**04 51 15.3**	**+0.7**
PLCA	**Paso Flores**	**94.26**	**202**	P	**P**	**04 51 14.2**	**-1.1**
	comp=Z,4.7nm,0.9s,mb4.8,baz=150,slow=3.9,SNR=9.9						
PLCA				PP	PP	04 55 04.8	+3.9
	comp=Z,3.9nm,0.9s,baz=158,slow=8.8,SNR=4.9						
PLCA				LR	LR	05 34 45.9	
	comp=Z,20µm,18.3s,MS6.6,baz=165,slow=36						
PLCA	**Paso Flores**	**94.26**	**202**	P	**P**	**04 51 14.2**	**-1.1**
PLCA						04 55 04.9	
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,20µm,18.3s						
SIGR	**SIGRI**	**94.27**	**321**	P	**P**	**04 51 14.0**	**-1.0**
SIGR	**SIGRI**	**94.27**	**321**	P	**P**	**04 51 14.0**	**-1.0**
NAIG	**Nisos Aigina**	**94.30**	**318**	*e*P	**P**	**04 51 15.7**	**+0.5**
BVAR	**Borovoye Array**	**94.31**	**354**	P	**P**	**04 51 13.2**	**-1.6**
	comp=Z,3.6nm,1.1s,mb4.6,baz=193,slow=5.9,SNR=4.0						
BVAR				LR	LR	05 31 00.6	
	comp=Z,18µm,20.0s,MS6.5,baz=188,slow=34						
ATHU	**Athens Univers**	**94.31**	**319**	P	**P**	**04 51 16.2**	**+1.0**
BRVK	**Borovoye**	**94.35**	**354**	P	**P**	**04 51 14.7**	**-0.3**
	comp=Z,108nm,0.8s,mb6.2,SNR=7.9						
BRVK	**Borovoye**	**94.35**	**354**	*e*P	**P**	**04 51 15.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.5						
BRVK				MLR	MLR		
	comp=Z,17µm,21.0s,MS6.5						
BRVK	**Borovoye**	**94.35**	**354**	*e*P	**P**	**04 51 15.0**	**0.0**
	comp=Z,26nm,1.0s,mb5.5						
BRVK				LR	LR		
	comp=Z,17µm,21.0s,MS6.5						
ATH	**Athens Observa**	**94.35**	**318**	P	**P**	**04 51 16.2**	**+0.8**
PYL	**PYLOS**	**94.53**	**317**	*e*P	**P**	**04 51 16.3**	**0.0**
PYL	**PYLOS**	**94.53**	**317**	P	**P**	**04 51 16.2**	**-0.1**
VLX	**Vlachokerasia**	**94.57**	**317**	*e*P	**P**	**04 51 18.0**	**+1.6**
VLX	**Vlachokerasia**	**94.57**	**317**	P	**P**	**04 51 16.0**	**-0.4**
ITM	**Ithomi**	**94.65**	**317**	*e*P	**P**	**04 51 14.3**	**-2.5**
ITM	**Ithomi**	**94.65**	**317**	P	**P**	**04 51 14.4**	**-2.4**
TLY	**Talaya**	**94.73**	**14**	*e*P	**P**	**04 51 18.4**	**+1.6**
TLY				*e*		04 55 06.7	
TLY				*e*PPP		04 57 08.1	
TLY				*e*		05 01 49.4	
TLY				*e*S	S	05 02 25.4	-5.2
TLY				*e*		05 03 47.9	
TLY				*e*SS	SS	05 09 01.3	+5.9
TLY				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.6						
TLY				MLR	MLR		
	comp=Z,23µm,19.0s,MS6.7						
TLY	**Talaya**	**94.73**	**14**	PFAKE		04 51 30.0	+13
TLY				LR	LR		
	comp=Z,24µm,20.0s,MS6.7						
LTK	**Loutraki**	**94.77**	**318**	*e*P	**P**	**04 51 18.4**	**+1.1**
LTK	**Loutraki**	**94.77**	**318**	P	**P**	**04 51 18.1**	**+0.8**
ZALV	**Zalesovo Beam**	**94.90**	**3**	P	**P**	**04 51 15.8**	**-1.7**
	comp=Z,2.6nm,0.9s,mb4.7,baz=194,slow=3.5,SNR=11						
ZALV				PP	PP	04 55 09.1	+2.1
	comp=Z,4.6nm,0.9s,baz=201,slow=6.3,SNR=6.0						
ZALV	**Zalesovo Beam**	**94.90**	**3**	P	**P**	**04 51 15.8**	**-1.7**
ZALV						04 55 09.1	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.7						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
GUR	**Goura**	**95.02**	**318**	*e*P	**P**	**04 51 20.3**	**+1.8**
GUR	**Goura**	**95.02**	**318**	P	**P**	**04 51 17.8**	**-0.7**
LIA	**Limnos Island**	**95.13**	**321**	P	**P**	**04 51 23.4**	**+4.5**
LIA	**Limnos Island**	**95.13**	**321**	P	**P**	**04 51 23.4**	**+4.5**
AOS	**Alonnisos**	**95.20**	**319**	P	**P**	**04 51 17.3**	**-2.0**
AOS	**Alonnisos**	**95.20**	**319**	P	**P**	**04 51 17.3**	**-2.0**
LKR	**Lokris**	**95.23**	**318**	P	**P**	**04 51 18.9**	**-0.5**
LKR	**Lokris**	**95.23**	**318**	P	**P**	**04 51 18.9**	**-0.5**
ATAL	**Atalanti**	**95.26**	**319**	P	**P**	**04 51 16.7**	**-2.8**
DSF	**Desfina**	**95.29**	**318**	P	**P**	**04 51 16.6**	**-3.1**
SIM	**Simferopol'**	**95.34**	**329**	*e*P	**P**	**04 51 24

PLG	Polygyros	96.34	320	P	P	04 51 25.6 +1.2
KDZ	Kurdzhali	96.39	322	P	P	04 51 25.6 +1.0
THL	Klokotos Trika	96.43	318	eP	P	04 51 25.5 +0.6
THL	Klokotos Trika	96.43	318	P	P	04 51 24.8 -0.1
RAR	Rarotonga	96.47	125	PFAKE		04 51 40.0 +14
RAR				LR	LR	
	comp=Z,6μm,20.0s,MS6.1					
JMB	Yambol	96.50	323	P	P	04 51 28.7 +3.6
JMB	Yambol	96.50	323	P	P	04 51 28.7 +3.6
JMB	Yambol	96.50	323	P	P	04 51 31.2 +6.1
HIA	Hailar	96.54	25	eP	P	04 51 26.0 +0.9
HIA				pmax	pmax	
	comp=Z,145nm,1.7s					
HIA				MLR	MLR	
	comp=Z,12μm,20.0s					
HIA	Hailar	96.54	25	eP	P	04 51 26.0 +0.9
	comp=Z,145nm,1.7s,mb6.3					
HIA				LR	LR	
	comp=Z,12μm,20.0s,MS6.4					
LIT	Litokhoron	96.60	319	P	P	04 51 26.4 +0.8
LIT	Litokhoron	96.60	319	P	P	04 51 26.4 +0.8
PRD	Provadia	96.71	324	P	P	04 51 32.0 +6.0
SOH	Sokhos	96.73	320	P	P	04 51 26.5 +0.3
SOH	Sokhos	96.73	320	P	P	04 51 26.5 +0.3
RZN	Rozhen	96.75	321	P	P	04 51 26.7 +0.4
PSN	Preselentsi	96.75	325	P	P	04 51 31.9 +5.7
SRS	Serrai	96.84	320	P	P	04 51 27.1 +0.4
SRS	Serrai	96.84	320	P	P	04 51 27.1 +0.4
NVR	Nevrokopi	96.89	321	eP	P	04 51 27.7 +0.8
PLD	Plovdiv	97.08	322	P	P	04 51 26.2 -1.5
PLD	Plovdiv	97.08	322	P	P	04 51 26.2 -1.5
PLD	Plovdiv	97.08	322	P	P	04 51 32.9 +5.2
MMB	Musomiste	97.14	321	P	P	04 51 27.2 -0.8
KNT	Kendrikon	97.21	320	P	P	04 51 27.5 -0.9
KNT	Kendrikon	97.21	320	P	P	04 51 27.5 -0.9
CIT	Chita	97.24	20	eP	P	04 51 26.4 -1.8
CIT				e		04 55 31.5
IGT	Igoumenitsa	97.25	317	P	P	04 51 29.0 +0.4
IGT	Igoumenitsa	97.25	317	P	P	04 51 29.0 +0.4
TIRR	Tirgusor	97.27	325	eP	P	04 51 29.3 +0.7
TIRR				pmax	pmax	
	comp=Z,12nm,0.9s,mb5.5					
TIRR	Tirgusor	97.27	325	eP	P	04 51 29.3 +0.7
	comp=Z,12nm,0.9s,mb5.5					
SZH	Strazhica	97.42	323	P	P	04 51 30.1 +0.8
VAY	Valandovo	97.49	320	P	P	04 51 26.2 -3.4
VAY	Valandovo	97.49	320	P	P	04 51 26.2 -3.4
FNA	Florina	97.67	319	P	P	04 51 26.4 -4.0
FNA	Florina	97.67	319	P	P	04 51 26.4 -4.0
WDD	Wield Dalam	97.68	312	PFAKE		04 51 40.0 +9.4
WDD				LR	LR	
	comp=Z,15μm,20.0s,MS6.5					
VRHR	Novokhopersk	98.02	336	eP	P	04 51 33.9 +2.1
VRHR				eS	S	05 02 54.4 -4.7
VRHR				ePS	PS	05 04 20.7 -2.5
VRHR				eSS	SS	05 09 39.4 -2.7
VRHR				pmax	pmax	
	comp=Z,230nm,2.8s,mb6.4					
VRHR				pmax	pmax	
	comp=N,140nm,2.3s					
VRHR				pmax	pmax	
	comp=E,130nm,3.6s					
VRHR				pmax	pmax	
	comp=Z,350nm,8.6s					
VRHR				pmax	pmax	
	comp=N,230nm,8.7s					
VRHR				pmax	pmax	
	comp=E,130nm,15.0s					
VRHR				smax		
	comp=E,1μm,13.7s					
VRHR				smax		
	comp=Z,480nm,11.2s					
VRHR				smax		
	comp=N,400nm,14.7s					
VTS	Vitosha	98.16	321	P	P	04 51 36.0 +3.4
VTS	Vitosha	98.16	321	P	P	04 51 36.0 +3.4
SKO	Skopje	98.54	320	P	P	04 51 40.0 +5.7
VORD	Divnogorie	98.63	335	eP	P	04 51 33.0 -1.5
VORD				eS	S	05 02 59.2 -5.1
VORD				pmax	pmax	
	comp=Z,200nm,5.6s					
VORD				pmax	pmax	
	comp=N,60nm,1.9s					
VORD				pmax	pmax	
	comp=E,30nm,0.9s					
VORD				smax		
	comp=E,1μm,12.7s					
VORD				smax		
	comp=Z,450nm,12.2s					
VORD				smax		
	comp=N,350nm,8.8s					
CEL	Celeste	98.65	314	eP	P	04 51 35.4 +0.5
	comp=N,136nm,1.8s,mb6.4					
CEL				LR	LR	
	comp=Z,6μm,20.0s,MS6.1					
TIR	Tirane	98.85	318	P	P	04 51 38.7 +3.0
TIR				LR	LR	
	comp=Z,5μm,20.0s,MS6.0					
TIR	Tirane	98.85	318	P	P	04 51 38.7 +3.0
TIP	Timpagrande	98.85	315	eP	P	04 51 42.7 +6.9
	comp=Z,69nm,1.8s,mb6.1					
TIP				LR	LR	
	comp=Z,7μm,19.0s,MS6.2					
VSR	Storozhevoye	98.89	335	eP	P	04 51 38.0 +2.4
VSR				e*PP		04 51 46.4
VSR				eS	S	05 03 01.2 -5.2
VSR				eSS	SS	05 09 50.9 -3.4
VSR				pmax	pmax	
	comp=Z,180nm,4.3s					
VSR				pmax	pmax	
	comp=N,130nm,5.2s					
VSR				pmax	pmax	
	comp=E,50nm,3.2s					
VSR				pmax	pmax	
	comp=Z,140nm,6.1s					
VSR				pmax	pmax	
	comp=N,20nm,4.8s					
VSR				pmax	pmax	
	comp=E,60nm,8.9s					
VSR				smax		
	comp=E,1μm,13.0s					
VSR				smax		
	comp=Z,380nm,11.9s					
VSR				smax		
	comp=N,410nm,11.3s					
ARU	Arti	99.07	348c	iP	P	04 51 35.0 -1.3
ARU						04 55 36.6
ARU				S	SKSac	05 02 11.9 -3.1
ARU				pmax	pmax	
	comp=Z,14nm,1.7s,mb5.4					
ARU				MLR	MLR	
	comp=Z,8μm,18.0s,MS6.2					
ARU	Arti	99.07	348	eP	P	04 51 36.5 +0.2
	comp=Z,21nm,1.3s,mb5.7					
ARU				LR	LR	
	comp=Z,7μm,20.0s,MS6.2					
KIS	Kishinev	99.14	327	ePP	PP	04 55 35.0 -4.8
KIS	Kishinev	99.14	327	i PS	PS	05 04 32.0 -3.4
KIS				eSS	SS	05 10 10.0 +12
KIS				LRM		05 34 00.0
	comp=Z,6μm,22.0s					
KIS	Kishinev	99.14	327	eP	P	04 51 39.0 +2.1
KIS				ePPP		04 57 50.0
KIS				eS	SKSac	05 02 14.0 -1.8
KIS				i PS	PS	05 04 32.0 -3.4
KIS				eSS	SS	05 10 10.0 +12
KIS				MLR	MLR	
	comp=Z,5μm,20.0s,MS6.0					
KIS				MLR	MLR	
	comp=N,6μm,22.0s,MS6.1					
KIS				MLR	MLR	
	comp=E,3μm,23.0s,MS6.1					
KIS				MLR	MLR	
	comp=Z,8μm,22.0s					
SVE	Sverdlovsk	99.14	349⇑	eP	P	04 51 37.7 +1.1
SVE				ePPP		04 57 47.9
SVE				eS	SKSac	05 02 13.4 -1.9
SVE				eSS	SS	05 09 59.0 +1.5
SVE				eSSS		05 13 50.8
SVE				pmax	pmax	
	comp=Z,46nm,1.9s,mb5.9					
WAKE	Wake Island	99.67	73	PFAKE		04 51 50.0 +10
WAKE				LR	LR	
	comp=Z,4μm,19.0s,MS6.0					
ERM	Erimo	100.37	42	PFAKE		04 51 50.0 +7.1
ERM				LR	LR	
	comp=Z,4μm,20.0s,MS5.9					
KEST	Kesra	100.58	308	P	Pdif	04 51 44.3 +0.4
	comp=Z,0.9nm,0.6s,baz=348,slow=5.8,SNR=3.9					
DIVS	Divibare	100.83	320	P	Pdif	04 51 43.0 -2.0
HABR	Khabarovsk	101.50	34	P	Pdif	04 51 46.1 -1.9
HABR				eS	Sdif	05 03 22.0 -7.6
HABR				pmax	pmax	
	comp=E,72nm,2.5s					
HABR				pmax	pmax	
	comp=N,11nm,1.2s					
HABR				pmax	pmax	
	comp=Z,38nm,2.3s					
HABR				MLR	MLR	
	comp=Z,9μm,18.0s,MS6.3					
HABR				MLR	MLR	
	comp=N,5μm,19.0s,MS6.3					
HABR				MLR	MLR	
	comp=E,7μm,20.0s,MS6.3					
AKASG	Malin Array Be	101.94	330	P	Pdif	04 51 49.6 -0.3
	comp=E,0.2nm,0.3s,baz=164,slow=3.7,SNR=3.7					
AKASG				PP	PP	04 55 59.7 -1.3
	comp=E,1.5nm,0.8s,baz=134,slow=6.9,SNR=4.3					
AKASG	Malin Array Be	101.94	330	P	Pdif	04 51 49.6 -0.3
AKASG						04 55 59.7
AKASG				pmax	pmax	
	comp=Z,2.0nm,0.8s					
KIEV	Kiev	101.94	330	eP	Pdif	04 51 49.6 -0.3
KIEV				pmax	pmax	
	comp=Z,13nm,1.5s					
KIEV				MLR	MLR	
	comp=Z,7μm,21.0s,MS6.2					
KIEV	Kiev	101.94	330	ePdif	Pdif	04 51 49.6 -0.4
	comp=Z,13nm,1.5s					
KIEV				LR	LR	
	comp=Z,7μm,21.0s,MS6.2					
CPUP	Villa Florida	102.22	218	P	Pdif	04 51 51.7 +0.6
	comp=Z,2.2nm,0.9s,baz=359,slow=16,SNR=2.8					
CPUP	Villa Florida	102.22	218	P	Pdif	04 51 51.7 +0.6
CPUP				LR	LR	
	comp=Z,1μm,20.0s,MS5.5					
SOKR	Solikamsk	102.35	348	eP	Pdif	04 51 54.8 +3.1
SOKR				S	SKSac	05 02 29.0 -1.8
SOKR				PS	PS	05 05 07.6 -1.8
SOKR				pmax	pmax	
	comp=Z,6.0nm,0.5s					
SOKR				MLR	MLR	
	comp=Z,7μm,19.0s,MS6.2					
AQU	L'Aquila	102.90	316	PFAKE		04 52 00.0 +5.8
AQU				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
OBN	Obninsk	103.04	336	PFAKE		04 52 00.0 +5.2
OBN				LR	LR	
	comp=Z,5μm,20.0s,MS6.1					
VSL	Villasalto	103.13	311	PFAKE		04 52 00.0 +4.8
VSL				LR	LR	
	comp=Z,6μm,20.0s,MS6.1					
UZH	Uzhgorod	103.17	325	eP	Pdif	04 51 56.6 +1.2
UZH				e		05 02 31.0
UZH				eS	Sdif	05 03 41.8 -1.7
UZH				e		05 05 17.6
UZH				e		05 10 54.0
MOS	Moscow	103.25	337	eP	Pdif	04 51 49.8 -5.9
MOS				pmax	pmax	
	comp=Z,22nm,0.6s					
LVV	L'vov	103.33	326	eP	Pdif	04 52 02.3 +6.2
LVV				e		05 02 34.7
LVV				eS	Sdif	05 03 46.7 +1.9
LVV				e		05 05 22.7
KOLS	Kolonicke sedl	103.41	325	eP	Pdif	04 52 01.9 +5.5
KOLS	Kolonicke sedl	103.41	325	PDIF	Pdif	04 52 01.9 +5.5
PSZ	Piszkesteto	103.71	323	PFAKE		04 52 10.0 +12
PSZ				LR	LR	
	comp=Z,5μm,21.0s,MS6.0					
KWP	Kalwaria Pacla	103.75	326	PFAKE		04 52 10.0 +12
KWP				LR	LR	
	comp=Z,5μm,19.0s,MS6.1					
VYHS	Vyhne	104.61	323	eP	Pdif	04 52 06.6 +4.8
VYHS	Vyhne	104.61	323	PDIF	Pdif	04 52 06.6 +4.8
TRI	Trieste	105.06	318	PFAKE		04 56 30.0 +12
TRI				LR	LR	
	comp=Z,4μm,20.0s,MS6.0					
LCO	Las Campanas	105.17	206	PFAKE		04 56 30.0 +11
LCO				LR	LR	
	comp=Z,19μm,20.0s,MS6.6					
PPT	Papeete	105.35	131	ePdif	Pdif	04 52 05.3 +0.2
	comp=Z,163nm,26.8s					
PPT	Papeete	105.35	131	ePP	PP	04 56 21.9 -4.2
	comp=Z,379nm,27.0s					
PPT				eSdif	Sdif	05 03 58.7 -3.0
	comp=Z,4μm,26.8s					
PPT	Papeete	105.35	131	ePS	PS	05 05 48.1 +6.8
	comp=Z,2μm,28.0s					
PPT				eSS	SS	05 11 29.6 +6.6
	comp=Z,6μm,27.5s					
PPT				eLQ		05 22 19.7
	comp=Z,49μm,33.5s					
PPT				eLR	LR	05 26 52.3
	comp=Z,15μm,25.8s					
PPT	Papeete	105.35	131	eP	Pdif	04 52 05.3 +0.2
PPT				e		04 56 21.9
PPT				eS	Sdif	05 03 58.7 -3.0
PPT				eSS	SS	05 11 29.6 +6.6
PPT	Papeete	105.35	131	ePdif	Pdif	04 52 05.3 +0.2
PPT				ePP	PP	04 56 21.9 -4.2
PPT				eSdif	Sdif	05 03 58.7 -3.0
PPT				ePS	PS	05 05 48.1 +6.8
PPT				eSS	SS	05 11 29.6 +6.6
PPT				eLQ		05 22 19.7
PGF	Pioggiola	105.40	313	ePKIKP	PKiKP	04 56 16.2 -2.4
	comp=Z,23nm,1.1s					
OJC	Ojcow	105.44	324	ePdiff	Pdif	04 52 09.4 +3.9
OJC				ePKiKP	PKiKP	04 56 22.7 +4.3
OJC				ePP	PP	04 56 33.6 +6.4
OJC				eSKSac	SKSac	05 02 48.1 +2.6
OJC				eSKKSdf	SKKSdf	05 15 09.1 +0.4
OJC				L		05 36 23.3
	comp=Z,7.8nm,22.8s					
RCBR	Riachuelo	105.49	248	PFAKE		04 56 30.0 +10
RCBR				LR	LR	
	comp=Z,14μm,22.0s,MS6.5					
VLC	Villacollemand	105.74	315	PFAKE		04 56 30.0 +11
VLC				LR	LR	
	comp=Z,6μm,21.0s,MS6.1					
OKC	Ostrava-Krasne	105.90	323	ePP	PP	04 56 35.8 +5.2
OKC				eSKS	SKSac	05 02 48.3 +0.7
OKC				eSDIF	Sdif	05 04 04.2 -2.0
OKC				eSP	SP	05 05 45.9 -0.8
OKC				AMS	AMS	05 54 00.0
	comp=Z,3μm,16.6s					
NACGM	Naroch	106.17	331	ePKP	PKiKP	04 56 28.0 +8.5
TREC	Trest	106.73	322	eSKS	SKSac	05 02 52.7 +1.4
TREC				eSDIF	Sdif	05 04 06.0 -7.2
TREC				AMS	AMS	05 51 10.0
	comp=Z,5μm,18.8s					
RJOB	Jochberg	106.94	319	eSdif	Sdif	05 04 09.4 -5.6
DPC	Dobruska-Polom	107.09	323	ePP	PP	04 56 37.1 -2.2
DPC				eSKS	SKSac	05 02 56.2 +3.4
DPC				eSDIF	Sdif	05 04 11.3 -4.9
DPC				eSP	SP	05 06 00.9 +1.9
DPC				AMS	AMS	05 49 30.0
	comp=Z,4μm,18.3s					
GEC2	GERESS Array S	107.26	321	eSdiff	Sdif	05 04 11.3 -6.3
GEC2				eSP	SP	05 06 03.0 +2.1
GEC2	GERESS Array S	107.26	321	ePKP	PKiKP	04 56 21.2 -0.6
GEC2				ePP	PP	04 56 43.0 +2.3
GERES	GERESS Array B	107.26	321	PKiKP	PKiKP	04 56 21.1 -0.6
	comp=Z,0.7nm,0.8s,baz=307,slow=0.7,SNR=3.6					
GERES				PP	PP	04 56 42.9 +2.3
	comp=Z,1.1nm,0.8s,baz=150,slow=5.9,SNR=6.0					
UPC	Upice	107.34	323	ePP	PP	04 56 44.1 +2.9
KHC	Kasperske Hory	107.52	321	ePP	PP	04 56 40.0 -2.5
KHC				eSKS	SKSac	05 02 52.4 -2.4
KHC				ex	x	05 04 07.2
KHC				eSP	SP	05 05 59.8 -3.7
KHC				AMS	AMS	05 42 30.0
	comp=Z,6μm,21.1s					
PRU	Pruhonice	107.66	322	ePP	PP	04 56 44.2 +0.7
PRU				eSKS	SKSac	05 02 57.1 +1.8
PRU				ex	x	05 04 12.7
PRU				AMS	AMS	05 38 00.0
	comp=Z,6μm,22.6s					
WET	Wettzell	107.86	320	eSdiff	Sdif	05 04 17.5 -5.1
RKT	Rikitea	108.00	146	ePS	PS	05 06 13.6 +5.4
	comp=Z,832nm,23.9s					
RKT				eSS	SS	05 12 02.8 +4.5
	comp=Z,5μm,29.5s					
RKT				eLQ		05 22 59.3
	comp=Z,16μm,34.8s					
RKT				eLR	LR	05 28 01.9
	comp=Z,14μm,24.5s					
PVCC	Panska Ves	108.02	322	eSDIF	Sdif	05 04 20.5 -3.4
PVCC				AMS	AMS	05 46 00.0
	comp=Z,4μm,20.2s					
BNI	Bardonecchia	108.32	314	PFAKE		04 56 30.0 +6.1
BNI				LR	LR	
	comp=Z,9μm,20.0s,MS6.3					
BRG	Berggiesshubel	108.54	322	eSdiff	Sdif	05 04 27.3 -1.0
BRG	Berggiesshubel	108.54	322	eP	Pdif	04 52 35.5 +16
	comp=Z,13nm,1.8s					
BRG				e		05 02 55.0
BRG						
	comp=N,5μm,23.7s					
BRG						
	comp=E,4μm,23.3s					
BRG						
	comp=Z,8μm,26.3s					
NKC	Novy Kostel	108.81	321	eSKS	SKSac	05 03 01.8 +1.5
NKC				eSDIF	Sdif	05 04 26.3 -4.2
NKC				AMS	AMS	05 51 40.0
	comp=Z,5μm,17.2s					
TANN	Tannenbergstha	108.92	321	eSdiff	Sdif	05 04 32.4 +0.9
GRF	Grafenberg Arr	109.03	320	eSdiff	Sdif	05 04 33.5 +1.1
GRF				eL		05 45 47.9
	comp=Z,6μm,21.0s					
CLL	Collm	109.27	322	eSdiff	Sdif	05 04 23.2 -11
CLL	Collm	109.27	322	eP	Pdif	04 52 24.0 +1.5
CLL				e		04 56 57.0
CLL				pmax	pmax	
	comp=Z,51nm,2.0s					
CLL				MLR	MLR	
	comp=Z,7μm,26.9s,MS6.1					
CLL	Collm	109.27	322	ePdif	Pdif	04 52 24.0 +1.5
CLL				ePP	PP	04 56 57.0 +1.7
CLL				eSdif	Sdif	05 04 29.0 -5.4
CLL				LR	LR	
	comp=Z,7μm,26.9s,MS6.1					
CLL	Collm	109.27	322	ePdif	Pdif	04 52 24.0 +1.5
CLL				e		04 56 05.0
CLL				e		04 56 36.0
CLL				ePP	PP	04 56 57.0 +1.7
	comp=Z,51nm,2.0s					
CLL				i		04 57 20.3
CLL				eSKSac	SKSac	05 03 06.0 +3.8
CLL				eSKSdf	SKSdf	05 03 36.0 -2.2
CLL				eSdif	Sdif	05 04 29.0 -5.4
CLL				ePS	PS	05 06 20.0 -1.5
CLL				e(PPS)		05 07 38.0
CLL				eSS	SS	05 12 08.0 -9.0
CLL				eSSS		05 16 25.0
CLL				eSSSS		05 19 48.0
CLL				e		05 23 12.0
CLL				LmH		05 46 00.0
	comp=N,5μm,19.1s					
CLL				LmH		05 46 00.0
	comp=E,4μm,21.2s					
STU	Stuttgart	109.42	318	ePP	PP	04 56 57.2 +0.8
MOX	Moxa	109.48	321	eSdiff	Sdif	05 04 31.2 -4.9
BFO	Black Forest	109.57	318	eSdiff	Sdif	05 04 39.7 +2.8
BFO	Black Forest	109.57	318	PFAKE		04 56 40.0 +14
BFO				LR	LR	
	comp=Z,6μm,19.0s,MS6.2					
SSB	Saint Sauveur	109.63	313	PFAKE		04 56 40.0 +14
SSB				LR	LR	
	comp=Z,5μm,19.0s,MS6.1					
RTC	Rabat Centre	109.66	298	PFAKE		04 56 40.0 +13
RTC				LR	LR	
	comp=Z,30μm,20.0s,MS6.9					
RUE	Ruedersdorf	109.71	323	eSdiff	Sdif	05 04 33.5 -4.6
ECH	Echery	110.10	317	PFAKE		04 56 40.0 +13
ECH				LR	LR	
	comp=Z,4μm,21.0s,MS6.0					
CDF	Champ du Feu	110.16	317	ePKIKP	PKiKP	04 56 26.2 -1.0
UBBA	Unterbreizbach	110.37	320	eSdiff	Sdif	05 04 37.9 -5.6
SFS	San Fernando	110.71	301	PFAKE		04 56 40.0 +11
SFS				LR	LR	
	comp=Z,39μm,20.0s,MS7.0					
SMF	Signal de Mont	110.86	314	ePKIKP	PKiKP	04 56 27.2 -1.4
ESDC	Sonseca Array	111.19	305	PKiKP	PKiKP	04 56 30.1 +0.6
	comp=Z,0.3nm,0.6s,baz=71,slow=1.8,SNR=4.8					
ESLA	Sonseca Array	111.19	305	PFAKE		04 56 40.0 +11
ESLA				LR	LR	
	comp=Z,50μm,19.0s,MS7.1					
AVF	Avril sur Loir	111.22	314	ePKIKP	PKiKP	04 56 27.9 -1.4
	comp=Z,18nm,1.7s					
SSF	Saint Saulge	111.30	314	ePKIKP	PKiKP	04 56 28.1 -1.3
PAB	San Pablo	111.35	304	PFAKE		04 56 40.0 +10
PAB				LR	LR	
	comp=Z,10μm,20.0s,MS6.4					
RPN	Rapa Nui	111.36	171	PFAKE		04 56 40.0 +10
RPN				LR	LR	
	comp=Z,16μm,20.0s,MS6.6					
FINES	FINESS Array B	111.42	335	PKiKP	PKiKP	04 56 28.9 -0.2
	comp=Z,1.0nm,0.6s,baz=101,slow=1.9,SNR=5.0					
FINES	FINESS Array B	111.42	335	i PKIKP	PKiKP	04 56 29.0 -0.2
FINES				pmax	pmax	
	comp=Z,1.0nm,0.6s					
WLF	Walferdange	111.53	318	PFAKE		04 56 40.0 +10
WLF				LR	LR	
	comp=Z,6μm,22.0s,MS6.1					
PVAQ	Vaqueiros	112.24	301	ePP	PP	04 57 27.9 +11
PVAQ				eSKS	Sdif	05 05 03.6 +4.5
PVAQ				eLQ		05 25 37.6
PVAQ				eLR	LR	05 33 54.6
	comp=Z,10μm,18.8s					
PBAR	Barrancos	112.25	302	ePP	PP	04 57 28.3 +11
PBAR				eSKS	Sdif	05 05 01.5 +2.3
PBAR				eLQ		05 25 45.6
PBAR				eLR	LR	05 36 54.8
	comp=Z,9μm,17.7s					
PBDV	Barranco-do-Ve	112.28	300	ePP	PP	04 57 30.5 +13
PBDV				eSKS	SKKSac	05 04 35.3 +15
PBDV				eLQ		05 25 44.4
PBDV				eLR	LR	05 32 21.8
	comp=Z,9μm,18.9s					
HGN	Heimansgroeve	112.33	319	ePdif	Pdif	04 52 50.4 +14
HGN	Heimansgroeve	112.33	319	eP	PP	04 57 22.3 +5.0
	comp=Z,32nm,3.0s					
HGN	Heimansgroeve	112.33	319	eSKS	SKSdf	05 03 35.0 -9.1
HGN	Heimansgroeve	112.33	319	Sdif	Sdif	05 04 58.9 -0.9
HGN	Heimansgroeve	112.33	319	eSS	SS	05 12 54.8 -3.0
IBBN	Ibbenburen	112.40	321	eSdiff	Sdif	05 05 00.3 -0.1
PCVE	Castro Verde	112.58	301	ePP	PP	04 57 33.2 +14
PCVE				eSKS	Sdif	05 05 17.3 +15
PCVE				eLQ		05 26 37.7
PCVE				eLR	LR	05 35 10.6
	comp=Z,7μm,18.5s					
WTSB	Winterswijk	112.64	320	eP	PP	04 57 24.6 +5.1
	comp=Z,50nm,2.3s					
MORF	Marmelete	112.79	300	ePP	PP	04 57 24.4 +3.5
MORF				eSKS	PKKPbc	05 07 01.9 -18
MORF				eLR	LR	05 32 19.8
	comp=Z,9μm,19.3s					
PFVI	Vila Bisbo	112.81	300	ePP	PP	04 57 34.1 +13
PFVI				eSKS	Sdif	05 05 13.3 +9.5
PFVI				eLQ		05 32 13.8
PFVI				eLR	LR	05 39 04.1
	comp=Z,12μm,20.1s					
PESTR	Estremoz	113.00	302	ePP	PP	04 57 34.1 +12
PESTR				eSKS	Sdif	05 05 11.4 +5.9
PESTR				eLQ		05 26 21.2
PESTR				eLR	LR	05 33 58.1
	comp=Z,17μm,20.0s					
EVOP	Sao Brissos	113.15	301	ePP	PP	04 57 23.3 -0.1
EVOP				eSS	SS	05 13 10.1 +0.8
EVOP				AMS	AMS	05 47 15.2
	comp=Z,9μm,15.4s,MS6.5					
PMRV	Marv??o	113.20	303	ePP	PP	04 57 34.5 +11
PMRV				eSKS	Sdif	05 05 13.6 +6.5
PMRV				eLQ		05 24 24.9
PMRV				eLR	LR	05 32 15.7
	comp=Z,9μm,17.7s					
MTE	Manteigas	113.84	303	ePP	PP	04 57 40.3 +12
MTE				eSKS	Sdif	05 05 23.0 +10
MTE				eLQ		05 24 29.4
MTE				eLR	LR	05 35 31.1
	comp=Z,12μm,20.1s					

MTE Manteigas 113.84 303 PFAKE 04 56 40.0 +5.5
MTE LR LR
comp=Z,11µm,20.0s,MS6.5
LIS Lisbon 113.92 301 *e*PP PP 04 57 28.8 -0.1
LIS AMS AMS 05 47 53.6
comp=N,10µm,22.2s
MVO Moncorvo 113.95 304 *e*PP PP 04 57 42.9 +14
MVO *e*SKS Sdif 05 05 25.2 +12
MVO *e*LQ 05 24 38.1
MVO *e*LR LR 05 35 35.2
comp=N,10µm,16.5s
PMAFR Mafra 114.14 301 *e*PP PP 04 57 35.0 +4.6
PMAFR *e*SKS Sdif 05 05 27.2 +12
PMAFR *e*LQ 05 26 48.9
PMAFR *e*LR LR 05 33 22.6
comp=N,11µm,19.9s
LVZ Lovozero 114.16 343 PFAKE 04 56 40.0 +5.8
LVZ LR LR
comp=Z,8µm,21.0s,MS6.3
FLN La Foliniere 114.47 314 *e*PKIKP PKiKP 04 56 33.7 -1.7
comp=Z,23nm,1.1s
XMAS Kiritimati 115.05 111 PFAKE 04 56 50.0 +12
XMAS LR LR
comp=Z,8µm,22.0s,MS6.3
QUIF Quistinic 115.46 312 *e*PKIKP PKPdf 04 56 35.7 -1.7
PET Petropavlovsk 115.47 41 *e*P Pdif 04 53 00.5 +10
PET *e* 04 57 38.9
PET *e* 05 03 23.0
PET *e*PS PS 05 07 14.3 -4.8
PET pmax pmax
comp=Z,800nm,12.9s
PET pmax pmax
comp=Z,700nm,13.6s
PET Petropavlovsk 115.47 41 PFAKE 04 56 50.0 +13
PET LR LR
comp=Z,4µm,19.0s,MS6.1
JOHN Johnston Islan 115.78 90 PFAKE 04 56 50.0 +11
JOHN LR LR
comp=Z,13µm,22.0s,MS6.5
LPAZ La Paz 115.79 214 PKP PKPdf 04 56 42.0 +3.0
comp=Z,1.6nm,1.0s,baz=67,slow=1.9,SNR=4.1
LPAZ PP PP 04 57 42.2 +1.2
comp=Z,2.0nm,1.0s,baz=144,slow=8.2,SNR=4.2
LPAZ La Paz 115.79 214 PKIKP PKPdf 04 56 42.1 +3.0
LPAZ 04 57 42.2
LPAZ pmax pmax
comp=Z,2.0nm,1.0s
LPAZ pmax pmax
comp=Z,2.0nm,1.0s
LPAZ La Paz 115.79 214 PKP PKPdf 04 56 42.0 +3.0
LPAZ PP PP 04 57 42.2 +1.2
LPAZ LR LR
comp=Z,9µm,22.0s,MS6.3
KONO Kongsberg 116.14 328 *e*PP PP 04 57 44.0 0.0
KONO *e*SS SS 05 13 41.6 -6.1
KONO AMS AMS 05 53 53.1
comp=Z,5µm,14.8s,MS6.2
KONO Kongsberg 116.14 328 PFAKE 04 56 50.0 +12
KONO LR LR
comp=Z,5µm,19.0s,MS6.2
NOA NORSAR Array B 116.36 329 PKP PKPdf 04 56 38.4 -0.3
comp=Z,1.1nm,0.7s,baz=112,slow=3.4,SNR=6.5
NOA NORSAR Array B 116.36 329 PKIKP PKPdf 04 56 38.4 -0.2
NOA pmax pmax
comp=Z,1.0nm,0.7s
NAO01 NORSAR Array S 116.36 329 *e*PKPdf PKPdf 04 56 39.1 +0.5
NAO01 LR LR
comp=Z,6µm,20.0s,MS6.2
MIDW Midway 116.67 75 PFAKE 04 56 50.0 +10
MIDW LR LR
comp=Z,3µm,19.0s,MS5.9
KEV Kevo 117.36 342 PFAKE 04 56 50.0 +10
KEV LR LR
comp=Z,9µm,22.0s,MS6.3
ARCES ARCESS Array B 117.56 341 PKP PKPdf 04 56 40.6 -0.1
comp=Z,2.3nm,0.8s,baz=163,slow=5.1,SNR=6.0
ARCES PP PP 04 57 58.3 +4.5
comp=Z,3.8nm,1.1s,baz=121,slow=4.7,SNR=3.3
ARCES ARCESS Array B 117.56 341 PKIKP PKPdf 04 56 40.7 -0.1
ARCES 04 57 58.3
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES pmax pmax
comp=Z,4.0nm,1.1s
TIXI Tiksi 117.67 16 *i* PKIKP PKPdf 04 56 41.3 +0.4
TIXI *e*PPP 05 00 25.1
TIXI *e*PS PS 05 07 37.6 -1.0
TIXI pmax pmax
comp=Z,13nm,1.8s
TAOE Nuku Hiva Isla 117.71 133 *e*PP PP 04 57 51.7 -3.1
comp=Z,340nm,25.8s
TAOE Nuku Hiva Isla 117.71 133 *e*PS PS 05 07 42.6 +2.9
comp=Z,2µm,26.0s
TAOE *e*SS SS 05 14 12.3 +4.4
comp=Z,7µm,27.3s
TAOE *e*LQ 05 27 28.3
comp=Z,9µm,34.6s
TAOE *e*LR LR 05 32 37.5
comp=Z,7µm,22.0s
NSS Namsos 118.22 333 *e*PP PP 04 57 51.0 -7.4
NSS *e*SS SS 05 14 10.3 -4.4
NSS AMS AMS 05 46 23.9
comp=Z,9µm,17.4s,MS6.5
BER Bergen 118.30 327 AMS AMS 05 53 50.0
comp=Z,5µm,18.6s,MS6.2
FOO Floro 119.10 328 *e*PP PP 04 58 06.2 +1.6
FOO *e*SS SS 05 14 21.6 -4.6
FOO AMS AMS 05 53 10.4
comp=Z,5µm,25.7s,MS6.0
TRO Tromso 119.31 339 *e*PP PP 04 58 02.2 -3.6
TRO *e*SS SS 05 14 28.8 +0.2
TRO AMS AMS 05 46 17.1
comp=Z,7µm,18.4s,MS6.3
EKA Eskdalemuir Ar 119.43 319 PKP PKPdf 04 56 44.6 -0.1
comp=Z,1.1nm,0.7s,baz=72,slow=3.5,SNR=6.6
EKA Eskdalemuir Ar 119.43 319 PKIKP PKPdf 04 56 44.6 -0.1
EKA pmax pmax
comp=Z,1.0nm,0.7s
ESK Eskdalemuir 119.45 319 PFAKE 04 56 50.0 +5.2
ESK LR LR
comp=Z,7µm,21.0s,MS6.3
BJO Bjornoya 122.37 344 *e*SS SS 05 15 11.2 +3.6
BJO AMS AMS 05 47 56.7
comp=Z,7µm,27.3s,MS6.2
NNA Nana 123.04 207 PFAKE 04 57 00.0 +6.9
NNA LR LR
comp=Z,9µm,19.0s,MS6.4
CMLA Cha da Macela 124.43 293 *e*P PP 04 58 15.6 -26
CMLA *e*SP SP 05 08 29.1 -11
CMLA *e*SKKS SKKSdf 05 14 54.8 +23
CMLA *e*LQ 05 30 48.4
CMLA *e*LR LR 05 35 30.5
CMLA Cha da Macela 124.43 293 PFAKE 04 57 10.0 +15
CMLA LR LR
comp=Z,28µm,21.0s,MS6.9
SPB4 Spitsbergen Ar 125.09 347 *e*PKPdf PKPdf 04 56 55.6 +0.5
BILL Bilibino 126.00 28 *i* PKIKP PKPdf 04 56 59.2 +2.2
BILL *e* 04 58 51.8
KBS Kingsbay 126.24 347 *e*PP PP 04 58 53.1 +0.5
KBS *e*SS SS 05 15 57.2 +0.9
KBS AMS AMS 05 55 51.7
comp=Z,6µm,20.0s,MS6.2
KBS Kingsbay 126.24 347 PFAKE 04 57 10.0 +13
KBS LR LR
comp=Z,6µm,20.0s,MS6.2
KIP Kipapa 127.27 93 PFAKE 04 57 10.0 +9.1
KIP LR LR
comp=Z,7µm,22.0s,MS6.3
JMIC Jan Mayen 128.05 335 *e*PP PP 04 59 04.5 -0.2
JMIC *e*SS SS 05 16 18.2 -0.8
POHA Pohakuloa 128.15 97 PFAKE 04 57 10.0 +7.4
POHA LR LR
comp=Z,11µm,21.0s,MS6.5
ADK Adak 128.26 50 PFAKE 04 57 10.0 +8.2
ADK LR LR
comp=Z,5µm,21.0s,MS6.2
BORG Borgarnes 131.27 326 PFAKE 04 57 20.0 +13
BORG LR LR
comp=Z,7µm,20.0s,MS6.3
DAG Danmarks Havn 131.82 342⇑ *i* PKIKP PKPdf 04 57 09.0 +1.1
DAG pmax pmax
comp=Z,4.0nm,1.0s
DAG Danmarks Havn 131.82 342⇑ *i* P PKPdf 04 57 09.0 +1.1
comp=Z,4.0nm,1.0s
SCO Scoresbysund 132.32 334 *i* P PKPdf 04 57 10.0 +1.0
SCO *e* 04 59 26.1
OTAV Otavalo 134.94 211 *e*PKPdf PKPdf 04 57 17.4 +1.7
OTAV LR LR
comp=Z,6µm,19.0s,MS6.3
BBGH Gun Hill 135.35 243 PFAKE 04 57 30.0 +14
BBGH LR LR
comp=Z,14µm,20.0s,MS6.7
TNA Tin City 135.46 33 *e*PKPdf PKPdf 04 57 15.6 +0.6
GRGR Grenville 136.00 240 PFAKE 04 57 30.0 +12
GRGR LR LR
comp=Z,9µm,21.0s,MS6.5
ROSC El Rosal 137.32 219 PKP PKPdf 04 57 20.3 +0.2
comp=Z,3.3nm,0.4s,baz=105,slow=20,SNR=3.4
ROSC El Rosal 137.32 219 *e*PKPdf PKPdf 04 57 19.9 -0.2
SUMG Summit 137.41 337 *e*PKPdf PKPdf 04 57 18.4 -0.1
SUMG *e*PP PP 05 00 06.8 +2.2
PAYG Puerto Ayora 137.44 194 PFAKE 04 57 30.0 +10
PAYG LR LR
comp=Z,16µm,20.0s,MS6.8
FDF Fort de France 137.56 243 PFAKE 04 57 30.0 +10
FDF LR LR
comp=Z,6µm,21.0s,MS6.3
SDV Santo Domingo 138.87 227 PKP PKPdf 04 57 24.8 +1.8
comp=Z,12nm,1.2s,baz=235,slow=1.8,SNR=4.8
SDV PP PP 05 00 16.5 +2.6
comp=Z,5.4nm,1.1s,baz=343,slow=9.5,SNR=3.1
SDV Santo Domingo 138.87 227 *e*PKPdf PKPdf 04 57 22.4 -0.5
SDV LR LR
comp=Z,7µm,19.0s,MS6.4
ANWB Willy Bob 140.06 245 PFAKE 04 57 40.0 +15
ANWB LR LR
comp=Z,6µm,22.0s,MS6.3
TTA Tatalina 140.76 37 *e*PKIKP PKPdf 04 57 24.7 -0.1
SVW2 Sparrevohn 141.13 40 *e*PKPdf PKPdf 04 57 25.5 0.0
CHUM Lake Minchumin 142.26 35 *e*PKPpre 04 57 21.7
CHUM *e*PKPdf PKPdf 04 57 27.0 -0.4
COLD Coldfoot 142.28 29 *e*PKPdf PKPdf 04 57 27.5 +0.1
BPAW Bear Paw Mtn. 142.79 35 *e*PKPpre 04 57 25.0
BPAW *e*PKPdf PKPdf 04 57 27.8 -0.6
KDAK Kodiak Island 142.88 45 PFAKE 04 57 40.0 +11
KDAK LR LR
comp=Z,10µm,20.0s,MS6.6
MTP Monte Pirata 142.90 242 *e*PKPdf PKPdf 04 57 30.0 -0.1
KTH Kantishna Hill 142.93 35 *e*PKPdf PKPdf 04 57 25.6 -3.1
SFJD Kangerlussuaq 143.02 331 PKP PKPdf 04 57 30.3 +1.5
comp=Z,3.9nm,0.7s,baz=43,slow=11,SNR=2.1
SFJD Kangerlussuaq 143.02 331 *i* P PKPdf 04 57 25.3 -3.4
SFJD *e*PKPdf PKPdf 04 57 29.6 +0.9
SFJD LR LR
comp=Z,10µm,19.0s,MS6.6
SJG San Juan 143.31 241 PFAKE 04 57 40.0 +9.2
SJG LR LR
comp=Z,40µm,21.0s,MS7.2
BCIP Isla Barro Col 143.61 214 *e*PKPdf PKPdf 04 57 32.5 +1.1
BCIP LR LR
comp=Z,11µm,21.0s,MS6.6
COLA College 143.90 33 *e*PKIKP PKPdf 04 57 28.6 -1.7
COLA MLR MLR
comp=Z,8µm,20.0s,MS6.5
PMR Palmer 144.15 38 *e*PKIKP PKPdf 04 57 28.3 -2.5
SEW Seward 144.26 41 *e*PKPdf PKPdf 04 57 31.4 +0.3
PAX Paxson 145.47 35 *e*PKP2 PKPab 04 57 33.4 0.0
DIV Divide 145.83 39 *e*PKPbc PKPbc 04 57 34.5 +0.1
MID Middleton Isla 145.92 42 *e*PKP2 PKPab 04 57 34.8 -0.4
MENT Mentasta 146.24 35 *e*PKPbc PKPbc 04 57 36.0 +0.4
RES Resolute Bay 146.41 358 *e*PKP2 PKPab 04 57 35.9 -0.8
BMRM Bremner River 146.42 39 *e*PKPbc PKPbc 04 57 36.2 +0.1
JTS JuntasAbangare 146.59 207 *e*PKP2 PKPab 04 57 38.6 -0.4
JTS MLR MLR
comp=Z,11µm,21.0s
EGAK Eagle 146.61 31 *e*PKPbc PKPbc 04 57 35.9 -0.6
EGAK LR LR
comp=Z,11µm,22.0s,MS6.6
SDDR Presa de Saban 147.25 236 *e*PKPbc PKPbc 04 57 39.8 0.0
SDDR LR LR
comp=Z,9µm,22.0s,MS6.5
INK Inuvik 147.37 23 *e*PKIKP PKPdf 04 57 37.6 +1.4
DAWY Dawson 147.61 32 *e*PKPbc PKPbc 04 57 38.5 -0.9
DAWY *e*PKPab PKPab 04 57 41.9 +0.2
GRTK Grand Turk 149.00 239 *e*PKPbc PKPbc 04 57 43.5 -0.9
GRTK LR LR
comp=Z,6µm,20.0s,MS6.4
PNL Peninsula 149.28 40 *e*PKPdf PKPdf 04 57 38.6 -1.0
PNL *e*PKPbc PKPbc 04 57 44.0 +0.1
PNL *e*PKPab PKPab 04 57 48.4 -0.1
GTBY Guantanamo Bay 150.29 232 *e*PKPdf PKPdf 04 57 43.2 +0.8
GTBY *e*PKPbc PKPbc 04 57 49.8 +2.3
GTBY LR LR
comp=Z,7µm,19.0s,MS6.5
MTDJ Mount Denham 150.31 226 *e*PKPbc PKPbc 04 57 48.2 +0.6
MTDJ *e*PKPab PKPab 04 57 53.4 -0.4
MTDJ LR LR
comp=Z,10µm,22.0s,MS6.6
TGUH Tegucigalpa,Un 150.88 205 *e*PKPdf PKPdf 04 57 43.5 0.0
TGUH *e*PKPbc PKPbc 04 57 49.0 -0.1
TGUH *e*PKPab PKPab 04 57 56.1 -0.1
TGUH LR LR
comp=Z,14µm,20.0s,MS6.8
BBSR BB Station 150.91 264 *e*PKPdf PKPdf 04 57 43.1 +0.1
BBSR *e*PKPbc PKPbc 04 57 48.6 -0.1
BBSR *e*PKPab PKPab 04 57 54.2 -1.9
BBSR LR LR
comp=Z,6µm,21.0s,MS6.4
SKAG Skagway 151.28 38 *e*PKPdf PKPdf 04 57 43.4 +0.7
SKAG *e*PKPbc PKPbc 04 57 49.7 +1.0
SKAG *e*PKPab PKPab 04 57 56.5 -0.3
CRAG Craig 153.84 46 *e*PKPdf PKPdf 04 57 47.2 +0.6
DLBC Dease Lake 154.20 38 *e*PKPbc PKPdf 04 57 50.2 +3.2
SCHQ Schefferville 154.55 313 PKPbc PKPbc 04 57 54.4 -1.6
comp=Z,3.1nm,0.8s,baz=359,slow=3.5,SNR=3.6
SCHQ PKPab PKPab 04 58 10.7 0.0
comp=Z,6.4nm,0.9s,baz=74,slow=1.6,SNR=5.3
SCHQ Schefferville 154.55 313 *e*PKPbc PKPbc 04 57 54.0 -2.1
SCHQ LR LR
comp=Z,36µm,22.0s,MS7.2
YKA Yellowknife Ar 156.90 18 PKP PKPdf 04 57 50.0 -0.5
comp=Z,1.2nm,1.0s,baz=329,slow=1.1,SNR=6.6
YKA PKPab PKPab 04 58 20.9 +0.5
comp=Z,2.3nm,0.9s,baz=31,slow=0.7,SNR=4.8
YKA PP PP 05 01 57.9 -1.0
comp=Z,1.2nm,1.0s,baz=333,slow=4.6,SNR=4.2
YKA Yellowknife Ar 156.90 18 PKIKP PKPdf 04 57 50.0 -0.5
YKA 05 01 57.9
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 156.90 18 PKP PKPdf 04 57 50.0 -0.5
YKA PKPab PKPab 04 58 20.9 +0.5
YKA PP PP 05 01 57.9 -1.0
TEIG Tepich 156.96 208 PFAKE 04 58 00.0 +8.1
TEIG LR LR
comp=Z,13µm,20.0s,MS6.8
PKME Peaks-Kenny Pk 157.69 291 PFAKE 04 58 00.0 +7.9
PKME LR LR
comp=Z,15µm,21.0s,MS6.8
LBNH Lisbon 159.56 288 PFAKE 04 58 00.0 +5.7
LBNH LR LR
comp=Z,10µm,22.0s,MS6.6
DWPF Disney 160.23 234 PFAKE 04 58 10.0 +14
DWPF LR LR
comp=Z,11µm,20.0s
NCB Newcomb 161.21 287 *e*PKPdf PKPdf 04 57 54.5 -1.6
NCB LR LR
comp=Z,11µm,22.0s
LONY Lake Ozonia 161.46 289 *e*PKPdf PKPdf 04 57 55.6 -0.8
LONY LR LR
comp=Z,11µm,20.0s
NLWA Neilton Lookou 161.56 62 *e*PKPdf PKPdf 04 57 56.0 -0.4
NLWA *e*PKPab PKPab 04 58 41.6 +0.3
NLWA LR LR
comp=Z,19µm,20.0s
MCCM Marconi Confer 161.76 92 PFAKE 04 58 10.0 +13
MCCM LR LR
comp=Z,10µm,19.0s
HOPS Hopland 161.85 89 PFAKE 04 58 10.0 +13
HOPS LR LR
comp=Z,12µm,21.0s
CNNC Cliffs of the 162.00 258 PFAKE 04 58 10.0 +13
CNNC LR LR
comp=Z,17µm,21.0s
FCC Fort Churchill 162.14 351 *e*PKIKP PKPdf 04 57 56.1 -0.5
FCC *e* 04 58 44.1
FCC *e* 05 02 25.6
GNW Green Mountain 162.22 61 *e*PKPdf PKPdf 04 57 56.5 -0.6
COR Corvallis 162.28 71 PFAKE 04 58 10.0 +13
COR LR LR
comp=Z,12µm,20.0s
SAO San Andreas Ge 162.39 98 PFAKE 04 58 10.0 +12
SAO LR LR
comp=Z,12µm,22.0s
BINY Binghamton 162.42 281 *e*PKPdf PKPdf 04 57 56.2 -1.3
BINY *e*PKPab PKPab 04 58 45.6 +0.4
BINY LR LR
comp=Z,12µm,19.0s
HUMO Hull Mountain 162.51 78 *e*PKPdf PKPdf 04 57 55.7 -1.9
HUMO LR LR
comp=Z,12µm,22.0s
MBW Mount Baker 162.51 57 P PKPdf 04 58 02.9 +5.6
WDC Whiskeytown Da 162.59 85 PFAKE 04 58 10.0 +12
WDC LR LR
comp=Z,12µm,21.0s
NHSC New Hope 162.60 248 PFAKE 04 58 10.0 +12
NHSC LR LR
comp=Z,14µm,22.0s
YBH Yreka Blue Hor 162.62 81 PFAKE 04 58 10.0 +12
YBH LR LR
comp=Z,13µm,22.0s
JCW Jim Creek 162.66 59 *e*PKPdf PKPdf 04 57 57.2 -0.3
CBN Corbin 162.70 267 PFAKE 04 58 10.0 +12
CBN LR LR
comp=Z,13µm,21.0s
RPW Rockport 162.86 58 *e*PKPdf PKPdf 04 57 58.9 +1.2
LON Longmire 163.07 64 *e*PKIKP PKPdf 04 57 59.3 +1.4
LON *e* 04 58 49.6
RCS Mount Rainier- 163.10 63 P PKPdf 04 58 04.0 +6.0
CMB Columbia Colle 163.61 94 *e*PKIKP PKPdf 04 58 04.2 +5.4
CMB *e* 04 58 50.9
CMB MLR MLR
comp=Z,16µm,22.0s
PASC Pasadena Art C 163.64 110 *e*PKPdf PKPdf 04 57 59.7 +0.8
SSPA Standing Stone 163.65 275 *e*PKPdf PKPdf 04 57 58.9 +0.2
MWC Mount Wilson 163.75 110 *e*PKPdf PKPdf 04 58 03.3 +4.3
MWC *e*PKPab PKPab 04 58 54.1 +2.8
BAR Barrett 163.86 117 *e*PKPdf PKPdf 04 57 59.4 +0.2
ISA Isabella 164.14 104 *e*PKIKP PKPdf 04 57 59.7 +0.4
ISA *e* 04 58 53.9
VIPM Ingram Point 164.20 71 PKIKP PKPdf 04 58 05.2 +6.1
MOD Modoc 164.43 81 *e*PKPdf PKPdf 04 58 00.5 +1.2
MOD LR LR
comp=Z,7µm,20.0s
PFO Pinyon Flat Ob 164.54 114 PFAKE 04 58 10.0 +10
PFO LR LR
comp=Z,10µm,19.0s
RSW Rattlesnake Hi 164.64 64 *e*PKPdf PKPdf 04 58 00.5 +1.1
BLA Blacksburg 164.67 261 PFAKE 04 58 10.0 +10
BLA LR LR
comp=Z,10µm,21.0s
HAWA Hanford 164.68 64 *e*PKPdf PKPdf 04 57 59.9 +0.5
HAWA *e*PKPab PKPab 04 58 55.1 +0.1
HAWA LR LR
comp=Z,19µm,21.0s
EDM Edmonton 164.81 33 *e*PKIKP PKPdf 04 57 59.4 +0.1
EDM *e* 04 58 55.4
EDM Edmonton 164.81 33 *e*PKPdf PKPdf 04 57 59.4 +0.1
EDM *e*PKPab PKPab 04 58 55.4 +0.1
EDM *e*PP PP 05 02 34.5 -7.3
WRD Warden 164.84 62 P PKPdf 04 58 04.9 +5.3
MCWV Mont Chateau 164.94 270 PFAKE 04 58 10.0 +10
MCWV LR LR
comp=Z,15µm,20.0s
OD2 Odessa Site #2 164.97 59 *e*PKPdf PKPdf 04 58 00.3 +0.7
GOGA Godfrey 165.04 244 *e*PKIKP PKPdf 04 58 00.9 +0.7
GOGA *e* 04 58 58.3
GOGA MLR MLR
comp=Z,10µm,22.0s
DAC Darwin (Calif) 165.05 104 PFAKE 04 58 10.0 +10
DAC LR LR
comp=Z,13µm,20.0s
GSC Goldstone 165.19 108 *e*PKIKP PKPdf 04 58 01.1 +0.8
NVAR Mina Array Bea 165.29 95 PKP PKPdf 04 58 01.7 +1.4
comp=Z,3.0nm,0.9s,baz=199,slow=3.2,SNR=11
NVAR PKPab PKPab 04 58 58.0 0.0
comp=Z,5.8nm,1.0s,baz=234,slow=5.5,SNR=4.4
NVAR PP PP 05 02 47.9 +2.6
comp=Z,0.1nm,0.3s,baz=308,slow=43,SNR=3.8
NVAR Mina Array Bea 165.29 95 PKP PKPdf 04 58 01.7 +1.4
NVAR PKPab PKPab 04 58 58.0 0.0
NVAR PP PP 05 02 47.9 +2.6
GLA Glamis 165.31 119 *e*PKIKP PKPdf 04 58 04.8 +4.4
ERPA Erie 165.38 280 PFAKE 04 58 10.0 +10
ERPA LR LR
comp=Z,11µm,20.0s
LNOR Lincton Mounta 165.64 65 *e*PKIKP PKPdf 04 58 00.6 +0.3
BRAL Brewton 165.67 228 *e*PKPdf PKPdf 04 58 01.7 +0.9
BRAL *e*PKPab PKPab 04 59 01.0 +1.2
BRAL LR LR
comp=Z,14µm,21.0s
NEW Newport 165.68 55 *e*PKIKP PKPdf 04 58 00.7 +0.5
NEW MLR MLR
comp=Z,12µm,22.0s
WVOR Wild Horse Val 165.69 79 *e*PKPdf PKPdf 04 58 02.1 +1.6
WVOR *e*PKPab PKPab 04 59 03.2 +3.6
TPH Tonopah 165.99 97 PFAKE 04 58 10.0 +9.2
TPH LR LR
comp=Z,13µm,20.0s
KVTX Kingsville 166.26 186 PFAKE 04 58 10.0 +8.6
KVTX LR LR
comp=Z,15µm,22.0s
LDFC Landfair 166.28 112 *e*PKPdf PKPdf 04 58 02.9 +1.8
FFC Flin Flon 166.42 6 *e*PKIKP PKPdf 04 58 01.6 +1.0
FFC *e* 04 59 03.6
FFC *e* 05 02 52.5
FFC MLR MLR
comp=Z,17µm,21.0s
TKL Tuckaleechee C 166.46 251 PKP PKPdf 04 58 02.8 +1.5
comp=Z,2.0nm,0.9s,baz=174,slow=1.1,SNR=3.6
TKL Tuckaleechee C 166.46 251 PKIKP PKPdf 04 58 02.8 +1.5
TKL pmax pmax
comp=Z,2.0nm,0.9s
BMN Battle Mountai 166.56 88 *e*PKIKP PKPdf 04 58 03.3 +2.1
BMN MLR MLR
comp=Z,12µm,20.0s
TZTN Tazewell 166.71 254 *e*PKPdf PKPdf 04 58 02.9 +1.4
CPCT Cooper Cave 166.89 249 *e*PKPdf PKPdf 04 58 00.5 -1.2
LRAL Lakeview Retre 167.09 235 *e*PKPdf PKPdf 04 58 02.1 +0.3
LRAL *e*PKPab PKPab 04 59 05.3 -0.7
LRAL LR LR
comp=Z,16µm,20.0s
WALA Waterton Lakes 167.20 48 *e*PKPdf PKPdf 04 58 01.6 +0.2
WALA *e*PKPab PKPab 04 59 06.0 0.0
BSMT Bassoo Peak 167.28 54 *e*PKPdf PKPdf 04 58 02.6 +1.1
BSMT *e*PKPab PKPab 04 59 06.2 -0.1
BSMT *e*PP PP 05 02 57.1 +2.0
TUC Tucson 167.31 131 *e*PKIKP PKPdf 04 58 02.6 +0.6
TUC *e* 05 02 57.9
ACSO Alum Creek Sta 167.42 271 PFAKE 04 58 10.0 +8.2
ACSO LR LR
comp=Z,15µm,21.0s
JTMT Jette 167.63 53 *e*PKPdf PKPdf 04 58 01.8 0.0
JTMT *e*PP PP 05 02 59.3 +2.5
TXAR Lajitas Array 167.64 163 PKP PKPdf 04 58 03.0 +0.6
comp=Z,1.6nm,0.9s,baz=180,slow=2.5,SNR=11
TXAR PKPab PKPab 04 59 09.2 +0.9
comp=Z,3.8nm,1.2s,baz=182,slow=8.8,SNR=2.1
TXAR PP PP 05 03 01.0 +4.9
comp=Z,0.7nm,1.0s,baz=144,slow=4.5,SNR=2.7
TXAR Lajitas Array 167.64 163 PKIKP PKPdf 04 58 03.0 +0.6
TXAR 04 59 09.2
TXAR 05 03 01.0
TXAR pmax pmax
comp=Z,2.0nm,0.9s
TXAR pmax pmax
comp=Z,4.0nm,1.2s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
YBMT Yellow Bay 167.74 53 *e*PKPdf PKPdf 04 58 01.7 -0.1
SWMT Swartz Lake 167.91 54 *e*PKPdf PKPdf 04 58 02.2 +0.3
ELK Elko 168.10 87 *e*PKIKP PKPdf 04 58 03.8 +1.5
ELK MLR MLR
comp=Z,12µm,21.0s
AAM Ann Arbor 168.11 280 PFAKE 04 58 10.0 +7.7
AAM LR LR
comp=Z,15µm,21.0s
MSO Missoula 168.22 57 *e*PKPdf PKPdf 04 58 01.8 -0.3

MSO				LR	LR		
	comp=Z,14μm,21.0s						
N12A	**Clover Valley,**	**168.27**	**87**	*e*PKPdf	PKPdf	04 58 04.0	+1.5
N12A				*e*PKPab	PKPab	04 59 11.6	+0.6
N12A				*e*PP	PP	05 03 03.2	+2.5
SLMT	**Seeley Lake**	**168.33**	**54**	*e*PKPdf	PKPdf	04 58 05.2	+3.0
HKT	**Hockley**	**168.33**	**196**	*e*PKIKP	PKPdf	04 58 03.9	+1.1
HKT				MLR	MLR		
	comp=Z,8μm,19.0s						
VBMS	**Vicksburg**	**168.46**	**221**	PFAKE		04 58 10.0	+7.2
VBMS				LR	LR		
	comp=Z,12μm,20.0s						
GLMI	**Grayling**	**168.53**	**293**	PFAKE		04 58 10.0	+7.6
GLMI				LR	LR		
	comp=Z,17μm,22.0s						
CHMT	**Chamberlain Mo**	**168.62**	**56**	*e*PKPdf	PKPdf	04 58 03.2	+0.7
CCUT	**Cedar City**	**168.67**	**105**	*e*PKPdf	PKPdf	04 58 05.0	+2.3
CCUT				*e*PP	PP	05 03 00.8	-1.8
ARUT	**Antelope Range**	**168.70**	**103**	*e*PKIKP	PKPdf	04 58 04.3	+1.5
HLID	**Hailey**	**168.74**	**73**	*e*PKPdf	PKPdf	04 58 03.7	+1.1
HLID				*e*PP	PP	05 03 04.5	+1.6
HLID				LR	LR		
	comp=Z,17μm,21.0s						
N13A	**Wendover, West**	**168.90**	**87**	*e*PKPdf	PKPdf	04 58 04.5	+1.6
M13A	**Montello**	**168.97**	**85**	*e*PKPdf	PKPdf	04 58 03.9	+1.1
M13A				*e*PP	PP	05 03 04.0	-0.2
PLAL	**Pickwick Lake**	**169.03**	**239**	*e*PKPdf	PKPdf	04 58 02.6	-0.5
PLAL				*e*PKPab	PKPab	04 59 12.7	-1.9
PLAL				LR	LR		
	comp=Z,15μm,20.0s						
WUAZ	**Wupatki**	**169.08**	**118**	*e*PKPdf	PKPdf	04 58 04.2	+1.0
WUAZ				*e*PP	PP	05 03 04.0	-0.5
JCT	**Junction City**	**169.25**	**179**	*e*PKIKP	PKPdf	04 58 03.6	+0.2
JCT				*e*		05 03 03.6	
JCT				MLR	MLR		
	comp=Z,11μm,21.0s						
MNTX	**Cornudas Mount**	**169.36**	**152**	*e*PKPdf	PKPdf	04 58 03.6	+0.1
MNTX				*e*PP	PP	05 03 02.8	-2.3
MNTX				LR	LR		
	comp=Z,9μm,20.0s						
WCI	**Wyandotte Cave**	**169.38**	**258**	*e*PKIKP	PKPdf	04 58 04.8	+1.6
WVT	**Waverly**	**169.53**	**245**	*e*PKIKP	PKPdf	04 58 02.0	-1.4
WVT				*e*		04 59 15.3	
LRM	**Limekiln Ridge**	**169.56**	**60**	*e*PKPdf	PKPdf	04 58 03.3	+0.2
LRM				*e*PKPab	PKPab	04 59 16.7	+0.1
MCMT	**McKenzie Canyo**	**169.61**	**65**	*e*PKPdf	PKPdf	04 58 04.5	+1.4
MCMT				*e*PKPab	PKPab	04 59 16.9	0.0
DLMT	**Dillon**	**169.62**	**62**	*e*PKPdf	PKPdf	04 58 03.9	+0.8
DLMT				*e*PP	PP	05 03 11.8	+4.6
NATX	**Nacogdoches**	**169.75**	**204**	*e*PKPdf	PKPdf	04 58 04.4	+0.7
NATX				LR	LR		
	comp=Z,11μm,21.0s						
BGU	**Big Grassy Mou**	**169.79**	**87**	*e*PKPdf	PKPdf	04 58 05.0	+1.6
DUG	**Dugway**	**169.85**	**92**	*e*PKIKP	PKPdf	04 58 04.9	+1.5
DUG				*e*		05 03 10.0	
DUG				MLR	MLR		
	comp=Z,13μm,22.0s						
MVU	**Marysvale**	**169.86**	**102**	PFAKE		04 58 10.0	+6.5
MVU				LR	LR		
	comp=Z,15μm,22.0s						
MSU	**Marysvale**	**169.89**	**102**	*e*PKIKP	PKPdf	04 58 06.2	+2.7
HVU	**Hansel Valley**	**170.04**	**83**	*e*PKIKP	PKPdf	04 58 05.7	+2.2
HVU				*e*		04 59 20.5	
HVU				*e*		05 03 16.7	
EGMT	**Eagleton**	**170.05**	**44**	*e*PKPdf	PKPdf	04 58 03.5	+0.3
EGMT				LR	LR		
	comp=Z,13μm,21.0s						
BOZ	**Bozeman (W)**	**170.16**	**59**	*e*PKIKP	PKPdf	04 58 04.7	+1.3
BOZ				*e*		04 59 21.6	
BOZ				*e*		05 03 17.0	
BOZ				MLR	MLR		
	comp=Z,10μm,19.0s						
GDL2	**Guadalupe Moun**	**170.16**	**155**	*e*PKPdf	PKPdf	04 58 04.7	+0.8
GDL2				*e*PP	PP	05 03 09.2	+0.2
SPUT	**South Promonto**	**170.26**	**85**	*e*PKPdf	PKPdf	04 58 04.7	+1.0
SPUT				*e*PP	PP	05 03 12.5	+1.8
NLU	**North Lily Min**	**170.36**	**94**	*e*PKPdf	PKPdf	04 58 05.3	+1.6
NLU				*e*PP	PP	05 03 13.5	+2.2
NOQ	**North Oquirrh**	**170.44**	**89**	*e*PKPdf	PKPdf	04 58 05.1	+1.3
QLMT	**Earthquake Lak**	**170.57**	**64**	*e*PKPdf	PKPdf	04 58 05.5	+1.8
QLMT				*e*PKPab	PKPab	04 59 22.7	+1.6
ULM	**Lac du Bonnet**	**170.65**	**345**	PKP	PKPdf	04 58 04.8	+1.3
	comp=Z,3.7nm,0.6s,baz=79,slow=1.4,SNR=4.2						
ULM				PKPab	PKPab	04 59 24.5	+3.4
	comp=Z,9.2nm,1.0s,baz=14,slow=3.8,SNR=3.9						
ULM				PP	PP	05 03 11.6	+0.4
	comp=Z,3.2nm,0.7s,baz=29,slow=4.7,SNR=4.2						
ULM	**Lac du Bonnet**	**170.65**	**345**	*e*PKPdf	PKPdf	04 58 02.9	-0.6
ULM				*e*PKPab	PKPab	04 59 22.0	+0.9
ULM				*e*PP	PP	05 03 11.4	+0.1
ULM				LR	LR		
	comp=Z,17μm,20.0s						
MPU	**Maple Canyon**	**170.70**	**94**	*e*PKPdf	PKPdf	04 58 05.0	+1.1
MPU				*e*PP	PP	05 03 11.1	-1.8
LENM	**Lemitar**	**170.78**	**138**	*e*PKPdf	PKPdf	04 58 04.0	-0.2
TMUT	**Trail Mountain**	**170.85**	**99**	*e*PKPdf	PKPdf	04 58 04.3	+0.3
TMUT				*e*PP	PP	05 03 15.8	+2.2
OLIL	**Olney**	**170.88**	**258**	*e*PKPdf	PKPdf	04 58 05.4	+1.3
LAZ	**Ladron**	**170.88**	**136**	*e*PKPdf	PKPdf	04 58 05.7	+1.5
LAZ				*e*PP	PP	05 03 20.0	+6.9
YMR	**Madison River**	**170.94**	**64**	*e*PKPdf	PKPdf	04 58 05.1	+1.3
YMR				*e*PKPab	PKPab	04 59 24.1	+1.4
HWUT	**Hardware Ranch**	**170.94**	**84**	*e*PKPdf	PKPdf	04 58 05.4	+1.4
HWUT				*e*PP	PP	05 03 13.8	-0.3
HWUT				LR	LR		
	comp=Z,17μm,20.0s						
JLU	**Jordanelle**	**170.94**	**90**	*e*PKPdf	PKPdf	04 58 05.5	+1.5
JLU				*e*PP	PP	05 03 16.7	+2.5
BNM	**Barren Site**	**170.95**	**139**	*e*PKPdf	PKPdf	04 58 05.8	+1.6
BNM				*e*PP	PP	05 03 14.1	+0.8
RRI2	**Red Ridge**	**171.00**	**73**	*e*PKPdf	PKPdf	04 58 05.2	+1.2
DCID1	**Drake Creek**	**171.06**	**71**	*e*PKPdf	PKPdf	04 58 04.1	+0.1
DAU	**Daniels Canyon**	**171.06**	**92**	*e*PKIKP	PKPdf	04 58 06.4	+2.3
DAU				*e*		05 03 21.3	
CPRX	**Cap Rock**	**171.09**	**156**	*e*PKPdf	PKPdf	04 58 05.8	+1.4
CPRX				*e*PP	PP	05 03 13.5	-0.1
YFT	**Old Faithful**	**171.09**	**65**	*e*PKPdf	PKPdf	04 58 04.2	+0.2
YFT				*e*PKPab	PKPab	04 59 24.9	+1.5
YFT				*e*PP	PP	05 03 17.9	+3.3
YNR	**Norris Junctio**	**171.12**	**63**	*e*PKPdf	PKPdf	04 58 05.3	+1.4
YNR				*e*PKPab	PKPab	04 59 22.8	-0.7
IMW	**Indian Meadow**	**171.17**	**69**	*e*PKPdf	PKPdf	04 58 05.4	+1.4
IMW				*e*PP	PP	05 03 17.3	+2.2
EYMN	**Ely**	**171.20**	**322**	*e*PKPdf	PKPdf	04 58 04.1	+0.2
EYMN				*e*PKPab	PKPab	04 59 24.5	+0.8
EYMN				*e*PP	PP	05 03 16.8	+2.3
EYMN				LR	LR		
	comp=Z,17μm,19.0s						
AHID	**Auburn Hatcher**	**171.24**	**76**	*e*PKPdf	PKPdf	04 58 04.2	+0.1
AHID				LR	LR		
	comp=Z,12μm,21.0s						
TPAW	**Teton Pass**	**171.24**	**71**	*e*PKPdf	PKPdf	04 58 05.9	+1.8
TPAW				*e*PP	PP	05 03 20.6	+5.1
SIUC	**Southern Illin**	**171.29**	**249**	*e*PKPdf	PKPdf	04 58 06.7	+2.4
SRU	**San Rafael**	**171.31**	**101**	*e*PKIKP	PKPdf	04 58 05.4	+1.1
REDW	**Red Top Meadow**	**171.34**	**72**	*e*PKPdf	PKPdf	04 58 06.0	+1.9
GCMT	**Greycliff**	**171.34**	**55**	*e*PKPdf	PKPdf	04 58 05.2	+1.2
LKWY	**Lake**	**171.35**	**64**	*e*PKPdf	PKPdf	04 58 04.9	+0.8
LKWY				*e*PKPab	PKPab	04 59 27.6	+3.1
LKWY				LR	LR		
	comp=Z,28μm,21.0s						
SNOW	**Snow King Moun**	**171.39**	**71**	*e*PKPdf	PKPdf	04 58 05.3	+1.2
UALR	**University of**	**171.41**	**223**	*e*PKPdf	PKPdf	04 58 05.1	+0.7
LOHW	**Long Hollow**	**171.47**	**70**	*e*PKPdf	PKPdf	04 58 05.7	+1.5
LOHW				*e*PP	PP	05 03 18.2	+1.6
ANMO	**Albuquerque**	**171.66**	**137**	*e*PKIKP	PKPdf	04 58 05.7	+1.1
ANMO				MLR	MLR		
	comp=Z,12μm,22.0s						
MIAR	**Mount Ida**	**171.82**	**217**	*e*PKIKP	PKPdf	04 58 04.9	+0.2
MIAR				MLR	MLR		
	comp=Z,14μm,22.0s						
RLMT	**Red Lodge**	**171.89**	**58**	*e*PKPdf	PKPdf	04 58 05.0	+0.7
RLMT				LR	LR		
	comp=Z,17μm,19.0s						
MVCO	**Mesa Verde**	**171.94**	**117**	*e*PKPdf	PKPdf	04 58 05.7	+1.0
MVCO				LR	LR		
	comp=Z,11μm,22.0s						
DGMT	**Dagmar**	**172.06**	**23**	*e*PKPdf	PKPdf	04 58 05.3	+1.0
DGMT				*e*PKPab	PKPab	04 59 28.7	+1.3
DGMT				*e*PP	PP	05 03 18.4	0.0
DGMT				LR	LR		
	comp=Z,11μm,19.0s						
HDIL	**Hopedale**	**172.23**	**268**	*e*PKPdf	PKPdf	04 58 04.4	-0.2
HDIL				*e*PKPab	PKPab	04 59 29.1	+0.5
HDIL				LR	LR		
	comp=Z,17μm,21.0s						
PV04	**Paradox Valley**	**172.23**	**109**	*e*PKPdf	PKPdf	04 58 10.5	+5.7
FVM	**French Village**	**172.26**	**248**	*e*PKIKP	PKPdf	04 58 05.4	+0.7
PV01	**Paradox Valley**	**172.35**	**111**	*e*PKPdf	PKPdf	04 58 06.1	+1.3
BW06	**Boulder Array**	**172.37**	**75**	*e*PKPdf	PKPdf	04 58 05.8	+1.2
BW06				LR	LR		
	comp=Z,8μm,20.0s						
PDAR	**Pinedale Array**	**172.37**	**75**	PKP	PKPdf	04 58 05.7	+1.1
	comp=Z,5.1nm,1.1s,baz=90,slow=3.0,SNR=12						
PDAR				PKPab	PKPab	04 59 27.8	-1.4
	comp=Z,2.9nm,1.0s,baz=198,slow=3.3,SNR=4.2						
AGMN	**Agassiz Refuge**	**172.49**	**341**	*e*PKPdf	PKPdf	04 58 04.9	+0.4
AGMN				*e*PKPab	PKPab	04 59 29.5	+0.2
AGMN				*e*PP	PP	05 03 18.2	-2.3
AGMN				LR	LR		
	comp=Z,20μm,22.0s						
LAO	**LASA Array**	**172.73**	**39**	*e*PKPdf	PKPdf	04 58 05.5	+0.8
LAO				LR	LR		
	comp=Z,22μm,20.0s						
CCM	**Cathedral Cave**	**172.87**	**246**	*e*PKIKP	PKPdf	04 58 04.9	-0.1
CCM				*e*		04 59 32.1	
CCM				MLR	MLR		
	comp=Z,10μm,20.0s						
JFWS	**Jewell Farm**	**172.91**	**287**	*e*PKIKP	PKPdf	04 58 05.2	+0.3
JFWS				*e*		05 03 25.9	
JFWS				MLR	MLR		
	comp=Z,16μm,22.0s						
AMTX	**Amarillo**	**173.42**	**164**	*e*PKPdf	PKPdf	04 58 05.8	+0.5
AMTX				*e*PP	PP	05 03 29.7	+4.7
AMTX				LR	LR		
	comp=Z,13μm,22.0s						
WMOK	**Wichita Mounta**	**173.47**	**185**	*e*PKIKP	PKPdf	04 58 05.9	+0.6
WMOK				*e*		05 03 33.0	
SMCO	**Snowmass**	**173.93**	**108**	*e*PKPdf	PKPdf	04 58 06.9	+1.5
SDCO	**Great Sand Dun**	**174.19**	**125**	*e*PKPdf	PKPdf	04 58 06.8	+1.3
SDCO				*e*PP	PP	05 03 31.4	+1.8
SDCO				LR	LR		
	comp=Z,14μm,20.0s						
RWWY	**Rawlins**	**174.20**	**83**	*e*PKPdf	PKPdf	04 58 06.2	+0.8
ISCO	**Idaho Springs**	**175.13**	**105**	*e*PKIKP	PKPdf	04 58 07.2	+1.5
ISCO				MLR	MLR		
	comp=Z,17μm,21.0s						
SCIA	**State Center**	**175.23**	**280**	*e*PKPdf	PKPdf	04 58 04.4	-1.2
SCIA				LR	LR		
	comp=Z,13μm,20.0s						
PHWY	**Pilot Hill**	**175.52**	**87**	*e*PKPdf	PKPdf	04 58 07.2	+1.5
PHWY				*e*PP	PP	05 03 36.8	+0.2
RSSD	**Black Hills**	**175.60**	**48**	*e*PKIKP	PKPdf	04 58 05.8	+0.1
RSSD				*e*		05 03 42.0	
RSSD				MLR	MLR		
	comp=Z,12μm,20.0s						
ECSD	**EROS Data Cent**	**176.72**	**320**	*e*PKPdf	PKPdf	04 58 05.8	-0.2
ECSD				*e*PKPab	PKPab	04 59 49.2	+0.9
ECSD				*e*PP	PP	05 03 42.4	+1.1
ECSD				LR	LR		
	comp=Z,19μm,20.0s						
KSU1	**Kansas State U**	**176.91**	**227**	*e*PKPdf	PKPdf	04 58 07.0	+0.8
KSU1				*e*PKPab	PKPab	04 59 49.0	-0.3
KSU1				LR	LR		
	comp=Z,15μm,21.0s						
CBKS	**Cedar Bluff**	**177.56**	**176**	*e*PKPdf	PKPdf	04 58 06.0	-0.3
CBKS				*e*PKPab	PKPab	04 59 55.8	+3.8
CBKS				*e*PP	PP	05 03 44.5	-0.1
CBKS				LR	LR		
	comp=Z,19μm,22.0s						
OGNE	**Ogallala**	**178.07**	**98**	*e*PKPdf	PKPdf	04 58 07.0	+0.7
OGNE				LR	LR		
	comp=Z,17μm,22.0s						

IDC ***31*** *04:41:32.9±1.0, 23°.30N×44°.92W, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, Error ellipse: s-maj=30.4km s-min=21.3km az=159.0*
ISCJB ***31*** *04:41:33.1±0.7, 23°.4N±0°.1×45°.0W±0°.1, h10km, mb4.0/17, Error ellipse: s-maj=20.9km s-min=12.3km az=159.9*
NEIC ***31*** *04:41:34.4±0.5, 23°.30N×44°.90W, h10km, mb4.3/5, Error ellipse: s-maj=14.4km s-min=8.9km az=158.0*
ISC 31 04:41:34.9±0.6, 23°.4N±0°.1×44°.9W±0°.1, h10km, n23, σ0s61/23, mb4.0/17, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**39.84**	**240**	*e*P	**P**	**04 49 09.1**	**+0.3**
	6.8nm,1.4s,mb4.2						
TORD	**Torodi Ar. Bea**	**45.25**	**95**	P	**P**	**04 49 51.2**	**-1.6**
	1.0nm,0.9s,mb3.7,baz=298,slow=8.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**45.25**	**95**	P	**P**	**04 49 51.2**	**-1.7**
LPAZ	**La Paz**	**45.46**	**212**	P	**P**	**04 49 54.4**	**+0.1**
	1.6nm,0.9s,mb3.8,baz=42,slow=4.7,SNR=4.3						
LPAZ	**La Paz**	**45.46**	**212**	*e*P	**P**	**04 49 54.7**	**+0.3**
	3.8nm,1.2s,mb4.1						
WMOK	**Wichita Mounta**	**47.93**	**296**	*e*P	**P**	**04 50 13.1**	**-0.5**
	2.9nm,0.8s,mb4.4						
GERES	**GERESS Array B**	**52.27**	**45**	P	**P**	**04 50 46.5**	**+0.2**
	0.1nm,0.3s,mb3.2,baz=243,slow=5.8,SNR=4.9						
TXAR	**Lajitas Array**	**52.52**	**290**	P	**P**	**04 50 48.2**	**-0.3**
	0.3nm,1.0s,mb3.2,baz=106,slow=7.9,SNR=3.5						
NB2	**NORSAR Subarra**	**53.59**	**30**	P	**P**	**04 50 56.3**	**+0.4**
	comp=Z,0.8nm,0.8s,mb3.7,baz=251,slow=7.9						
NOA	**NORSAR Array B**	**53.59**	**30**	P	**P**	**04 50 55.9**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=251,slow=7.5,SNR=4.6						
HFS	**Hagfors**	**54.50**	**32**	P	**P**	**04 51 02.1**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.3,baz=232,slow=7.3,SNR=11						
BW06	**Boulder Array**	**56.18**	**307**	*e*P	**P**	**04 51 15.1**	**+0.2**
	comp=Z,6.7nm,1.5s,mb4.5						
PDAR	**Pinedale Array**	**56.18**	**307**	P	**P**	**04 51 15.1**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.7,baz=91,slow=6.5,SNR=5.7						
EVR	**Evrytania**	**58.01**	**58**	*e*P	**P**	**04 51 29.3**	**+1.3**
DUG	**Dugway**	**58.77**	**304**	*e*P	**P**	**04 51 33.7**	**+0.3**
	comp=Z,1.2nm,0.7s,mb4.0						
YKA	**Yellowknife Ar**	**60.18**	**330**	P	**P**	**04 51 41.8**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.5,baz=97,slow=8.0,SNR=6.7						
YKA	**Yellowknife Ar**	**60.18**	**330**	P	**P**	**04 51 41.8**	**-0.8**
FINES	**FINESS Array B**	**60.70**	**31**	P	**P**	**04 51 46.0**	**-0.2**
	comp=Z,1.0nm,0.7s,mb4.1,baz=223,slow=9.3,SNR=3.9						
ARCES	**ARCESS Array B**	**61.50**	**22**	P	**P**	**04 51 50.9**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.5,baz=318,slow=6.5,SNR=6.7						
AKTK	**Aktyubinsk**	**80.13**	**39**	P	**P**	**04 53 45.4**	**+0.2**
AKTO	**Aktyubinsk**	**80.13**	**39**	P	**P**	**04 53 45.4**	**+0.2**
	comp=Z,3.2nm,0.8s,mb4.3,baz=304,slow=8.5,SNR=5.5						
BVAR	**Borovoye Array**	**85.60**	**33**	P	**P**	**04 54 14.2**	**+0.7**
	comp=Z,1.1nm,0.7s,mb4.2,baz=340,slow=3.8,SNR=3.5						
KURK	**Kurchatov**	**91.07**	**32**	P	**P**	**04 54 40.0**	**+0.5**
	comp=Z,1.5nm,0.9s,mb4.3,baz=352,slow=6.3,SNR=2.6						

ISK ***31*** *04:51:45.3, 39°.77N×26°.73E, h6km, MD3.0*
ISCJB ***31*** *04:51:45.6±0.4, 39°.78N±0°.02×26°.75E±0°.02, h2km±4km, Error ellipse: s-maj=3.1km s-min=2.8km az=29.5*
THE ***31*** *04:51:46.2, 39°.75N×26°.77E, h7km±1km, ML3.2/5, Error ellipse: s-maj=1.3km s-min=0.5km az=249.0*
CSEM ***31*** *04:51:46.0±0.1, 39°.78N×26°.73E, h5km, MD3.0, Error ellipse: s-maj=2.4km s-min=2.1km az=113.0*
DDA ***31*** *04:51:46.1, 39°.79N×26°.78E, h16km±2km, Md3.4*
ATH ***31*** *04:51:48.9, 39°.74N×26°.52E, h50km, MD3.1/5*
ISC 31 04:51:46.3±0.3, 39°.78N±0°.02×26°.74E±0°.02, h8km±3km, n75, σ0s76/107, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.32**	**278**	PG	**Pg**	**04 51 52.1**	**-0.5**
EZN				*e*SG	**Sg**	**04 51 57.2**	**+0.4**
EZN	**Ezine**	**0.32**	**278**	*i* Pg	**Pg**	**04 51 52.1**	**-0.5**
EZN				*e*Sg	**Sg**	**04 51 57.2**	**+0.4**
AYVA	**Ayvalik**	**0.48**	**185**	*i* P	**Pg**	**04 51 55.5**	**0.0**
AYVA				*i* S	**Sg**	**04 52 01.8**	**0.0**
AYVA	**Ayvalik**	**0.48**	**185**	*i* P	**Pg**	**04 51 55.5**	**0.0**
AYVA				*i* S	**Sg**	**04 52 01.8**	**+0.1**
BOZC	**Bozcaada**	**0.53**	**276**	*i* P	**Pg**	**04 51 56.7**	**+0.2**
BOZC				*i* S	**Sg**	**04 52 03.9**	**+0.4**
LPK	**Lapseki**	**0.59**	**2**	PG	**Pg**	**04 51 57.0**	**-0.6**
LPK				*e*SG	**Sg**	**04 52 05.8**	**+0.5**
LPK	**Lapseki**	**0.59**	**2**	*i* Pg	**Pg**	**04 51 57.0**	**-0.6**
LPK				*e*Sg	**Sg**	**04 52 05.8**	**+0.5**
PRK	**Paraskevi**	**0.65**	**214**	P	**Pg**	**04 51 58.3**	**-0.4**
PRK				S	**Sg**	**04 52 08.2**	**+1.0**
PRK	**Paraskevi**	**0.65**	**214**	P	**Pg**	**04 51 58.3**	**-0.4**
PRK				S	**Sg**	**04 52 08.2**	**+1.0**
BALY	**Balya**	**0.68**	**93**	*i* P	**Pg**	**04 51 59.1**	**-0.3**
BALY				*i* S	**Sg**	**04 52 08.1**	**-0.1**
BALY	**Balya**	**0.68**	**93**	*i* P	**Pg**	**04 51 59.1**	**-0.3**
BALY				*i* S	**Sg**	**04 52 08.1**	**-0.1**
GADA	**Gvkgeada**	**0.76**	**302**	*e*PG	**Pg**	**04 52 00.4**	**-0.5**
GADA	**Gvkgeada**	**0.76**	**302**	*e*Pg	**Pg**	**04 52 00.4**	**-0.6**
SIGR	**SIGRI**	**0.89**	**230**	P	**Pg**	**04 52 02.8**	**-0.6**
SIGR				S	**Sg**	**04 52 15.8**	**+0.8**
SIGR	**SIGRI**	**0.89**	**230**	P	**Pg**	**04 52 02.8**	**-0.6**
SIGR				S	**Sg**	**04 52 15.8**	**+0.8**
BALB	**Balikesir**	**0.89**	**99**	*e*PG	**Pg**	**04 52 03.0**	**-0.4**
BALB	**Balikesir**	**0.89**	**99**	*e*Pg	**Pg**	**04 52 03.1**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.96**	**20**	*e*PG	**Pg**	**04 52 03.9**	**-0.9**
RKY	**Sarkoy-Tekirda**	**0.96**	**20**	*e*Pg	**Pg**	**04 52 03.9**	**-0.9**
SART	**Tekirdag**	**0.96**	**20**	*i* P	**Pg**	**04 52 04.3**	**-0.5**
SART				*i* S	**Sg**	**04 52 17.3**	**-0.1**
SART	**Tekirdag**	**0.96**	**20**	*i* P	**Pg**	**04 52 04.3**	**-0.5**
SART				*i* S	**Sg**	**04 52 17.3**	**-0.1**
EDC	**Edincik**	**1.03**	**57**	*e*PG	**Pg**	**04 52 06.0**	**0.0**
EDC	**Edincik**	**1.03**	**57**	*e*Pg	**Pg**	**04 52 06.0**	**-0.1**
ENEZ	**Enez**	**1.05**	**335**	*e*PG	**Pg**	**04 52 06.2**	**-0.3**
ENEZ	**Enez**	**1.05**	**335**	*e*Pg	**Pg**	**04 52 06.2**	**-0.3**
BNT	**Bandirma**	**1.07**	**57**	*e*PG	**Pg**	**04 52 06.5**	**-0.3**
LIA	**Limnos Island**	**1.20**	**276**	*e*P	**Pg**	**04 52 08.8**	**-0.6**
LIA	**Limnos Island**	**1.20**	**276**	P	**Pg**	**04 52 08.9**	**-0.5**
LIA				S	**Sg**	**04 52 26.1**	**+1.1**
LIA	**Limnos Island**	**1.20**	**276**	P	**Pg**	**04 52 08.9**	**-0.5**
LIA				S	**Sg**	**04 52 26.1**	**+1.1**
AKHS	**Akhisar**	**1.23**	**137**	*i* P	**Pb**	**04 52 09.3**	**-0.4**
AKHS				*i* S	**Sg**	**04 52 26.6**	**+0.8**
AKHS	**Akhisar**	**1.23**	**137**	*i* P	**Pb**	**04 52 09.3**	**-0.4**
AKHS				*i* S	**Sg**	**04 52 26.6**	**+0.8**
AKS	**Akhisar**	**1.23**	**137**	*e*PN	**Pn**	**04 52 09.0**	**-0.8**
AKS	**Akhisar**	**1.23**	**137**	*e*Pn	**Pn**	**04 52 09.0**	**-0.7**
ALN	**Alexandroupoli**	**1.23**	**335**	*e*P	**Pb**	**04 52 09.9**	**+0.1**
ALN				*e*S	**Sg**	**04 52 26.2**	**+0.3**
ALN	**Alexandroupoli**	**1.23**	**335**	P	**Pb**	**04 52 09.2**	**-0.6**
ALN				S	**Sg**	**04 52 26.8**	**+0.9**
ALN	**Alexandroupoli**	**1.23**	**335**	P	**Pb**	**04 52 09.2**	**-0.6**
ALN				S	**Sg**	**04 52 26.8**	**+0.9**
KCT	**Karacabey**	**1.33**	**68**	*e*PN	**Pn**	**04 52 11.1**	**0.0**
KCT	**Karacabey**	**1.33**	**68**	*e*Pn	**Pn**	**04 52 11.1**	**-0.1**
DURS	**Dursunbey**	**1.35**	**97**	*i* P	**Pn**	**04 52 12.1**	**+0.7**
DURS				*i* S	**Sb**	**04 52 29.1**	**-0.1**
DURS	**Dursunbey**	**1.35**	**97**	*i* P	**Pn**	**04 52 12.1**	**+0.7**
DURS				*i* S	**Sb**	**04 52 29.1**	**-0.2**
BLCB	**Balcova**	**1.42**	**170**	*e*PN	**Pn**	**04 52 11.8**	**-0.5**
BLCB	**Balcova**	**1.42**	**170**	P	**Pn**	**04 52 10.3**	**-2.0**
BLCB				S	**Sb**	**04 52 29.8**	**-1.3**
BLCB	**Balcova**	**1.42**	**170**	P	**Pn**	**04 52 10.3**	**-2.0**
BLCB	**Balcova**	**1.42**	**170**	*e*Pn	**Pn**	**04 52 11.8**	**-0.5**
BLCB				S	**Sb**	**04 52 29.8**	**-1.3**
URLA	**Izmir**	**1.43**	**185**	*i* P	**Pn**	**04 52 11.3**	**-1.1**
URLA				*i* S	**Sb**	**04 52 32.1**	**+0.7**
URLA	**Izmir**	**1.43**	**185**	*i* P	**Pn**	**04 52 11.3**	**-1.2**
URLA				*i* S	**Sb**	**04 52 32.1**	**+0.7**
IZM	**Izmir**	**1.44**	**163**	*e*PN	**Pn**	**04 52 12.2**	**-0.5**
IZM	**Izmir**	**1.44**	**163**	*e*Pn	**Pn**	**04 52 12.2**	**-0.5**
DST	**Dursunbey**	**1.47**	**96**	*e*PN	**Pn**	**04 52 12.9**	**-0.1**
DST	**Dursunbey**	**1.47**	**96**	*e*Pn	**P

JNT	**Takato**	**2.92 261**	P	**Pn**	**05 04 18.1 +0.6**
JGF	**Kuroka**	**3.60 259**	P	**Pn**	**05 04 28.4 +1.6**
JHJ	**Hachijo jima 2**	**3.63 206**	Pn	**Pn**	**05 04 24.8 -2.4**
	comp=Z,273nm,0.3s,baz=257,slow=18,SNR=25				
JHJ			Sn	**Sn**	**05 05 05.6 -3.1**
	comp=Z,416nm,0.3s,baz=72,slow=24,SNR=10				
JHJ			LR	LR	05 05 05.7
	comp=Z,3μm,19.7s,baz=70,slow=27				
ERM	**Erimo**	**5.72 11**	*e*Pn	**Pn**	**05 04 52.0 -3.9**
ERM			*e*Sn	**Sn**	**05 05 58.0 -2.4**
ASAJ	**Asahikawa**	**7.74 5**	Pn	**Pn**	**05 05 22.4 -1.2**
	comp=Z,4.7nm,0.3s,baz=223,slow=12,SNR=16				
ASAJ			Sn	**Sn**	**05 06 48.6 -1.3**
	comp=Z,5.2nm,0.3s,baz=45,slow=32,SNR=2.5				
ASAJ			LR	LR	05 09 16.1
	comp=Z,3μm,20.0s,baz=192,slow=45				
ASAJ	**Asahikawa**	**7.74 5**	P	**Pn**	**05 05 22.5 -1.1**
ASAJ					05 06 48.6
ASAJ			pmax	pmax	
	comp=Z,5.0nm,0.3s				
ASAJ			smax		
	comp=N,5.0nm,0.3s				
ASAJ			MLR	MLR	
	comp=Z,3μm,20.0s				
CBIJ	**Chichi jima**	**9.28 177**	Pn	**Pn**	**05 05 40.2 -4.6**
	comp=Z,19nm,0.3s,baz=75,slow=21,SNR=7.8				
CBIJ			Sn	**Sn**	**05 07 17.2 -11**
	comp=Z,20nm,0.3s,baz=275,slow=22,SNR=4.8				
KUR	**Kuril'sk**	**9.99 26**	*e*P	**Pn**	**05 05 54.0 -0.3**
KUR			*e*S	**Sn**	**05 07 37.5 -7.5**
KUR			pmax	pmax	
	comp=N,50nm,0.7s				
KUR			pmax	pmax	
	comp=Z,100nm,0.7s				
KUR			pmax	pmax	
	comp=E,90nm,0.5s				
KUR			smax		
	comp=N,70nm,0.6s				
KUR			smax		
	comp=E,140nm,0.6s				
VLA	**Vladivostok**	**10.10 315**	*e*P	**Pn**	**05 06 02.3 +6.5**
VLA			pmax	pmax	
	comp=Z,336nm,1.6s				
VLA			MLR	MLR	
	comp=Z,4μm,16.5s				
YSS	**Yuzh-Sakhalins**	**10.58 4**	*e*P	**Pn**	**05 06 01.0 -1.4**
YSS			*e*S	**Sn**	**05 07 54.0 -5.5**
YSS			pmax	pmax	
	comp=N,80nm,1.0s				
YSS			pmax	pmax	
	comp=Z,60nm,1.0s				
YSS			MLR	MLR	
	comp=E,2μm,15.0s				
YSS			MLR	MLR	
	comp=Z,1μm,15.0s				
YSS	**Yuzh-Sakhalins**	**10.58 4**	*e*Pn	**Pn**	**05 06 00.9 -1.6**
KSRS	**Korea Array**	**11.08 280**	Pn	**Pn**	**05 06 11.8 +2.6**
	comp=Z,0.4nm,0.3s,baz=93,slow=13,SNR=31				
KSRS			LR	LR	05 10 32.0
	comp=Z,3μm,18.5s,baz=223,slow=38				
INCN	**Inchon**	**12.10 280**	*e*Pn	**Pn**	**05 06 24.4 +1.0**
MDJ	**Mudanjiang**	**12.33 315**	P	**Pn**	**05 06 26.5 +0.2**
MDJ			pP		05 06 33.0
MDJ			PP		05 06 35.5
MDJ			S	**Sn**	**05 08 40.8 -1.5**
MDJ			SS		05 08 54.0
MDJ			pmax	pmax	
	comp=Z,13nm,1.7s				
MDJ			pmax	pmax	
	comp=Z,300nm,4.5s				
MDJ			LR	LR	
	comp=N,3μm,20.5s				
MDJ			LR	LR	
	comp=E,1μm,20.5s				
MDJ			LR	LR	
	comp=Z,3μm,16.9s				
HABR	**Khabarovsk**	**13.02 340**	P	**Pn**	**05 06 30.6 -5.2**
HABR			*e*		05 08 51.1
HABR			MLR	MLR	
	comp=Z,2μm,16.0s				
CN2	**Changchun**	**14.45 306**	*e*P	**Pn**	**05 06 54.0 -1.3**
CN2			*ep*P	pP	05 07 01.5 -10
CN2			*es*P	sP	05 07 06.3 -10
CN2			*e*S	**Sn**	**05 09 31.3 -2.8**
CN2			pmax	pmax	
	comp=Z,10.0nm,1.0s				
CN2			pmax	pmax	
	comp=Z,200nm,5.0s				
CN2			LR	LR	
	comp=N,4μm,15.0s				
CN2			LR	LR	
	comp=E,4μm,15.0s				
CN2			LR	LR	
	comp=Z,4μm,16.0s				
KLR	**Kul'dur**	**14.74 334**	*e*P	**Pn**	**05 06 50.2 -8.9**
JOW	**Kunigami**	**14.87 234**	Pn	**Pn**	**05 07 02.5 +1.5**
	comp=Z,0.7nm,0.3s,baz=39,slow=15,SNR=2.6				
DL2	**Dalian**	**16.09 285**	P	**Pn**	**05 07 19.3 +2.6**
DL2			*e*S	**S**	**05 10 17.0 -8.9**
DL2			pmax	pmax	
	comp=Z,20nm,1.0s				
DL2			LR	LR	
	comp=N,880nm,13.0s				
DL2			LR	LR	
	comp=E,2μm,13.9s				
DL2			LR	LR	
	comp=Z,2μm,15.5s				
TIA	**Tai'an**	**19.79 277**	*e*P	**Pn**	**05 07 58.0 -4.1**
PETK	**Petropavlovsk-**	**20.13 29**	P	**P**	**05 08 04.0 +0.2**
	comp=Z,4.2nm,0.8s,baz=241,slow=10,SNR=2.9				
PETK	**Petropavlovsk-**	**20.13 29**	P	**P**	**05 08 04.0 +0.2**
PETK			pmax	pmax	
	comp=Z,4.0nm,0.8s				
BJI	**Beijing**	**20.36 288**	P	**P**	**05 08 05.0 -1.3**
BJI			pmax	pmax	
	comp=Z,27nm,1.1s				
BJT	**Baijiatuau**	**20.36 288**	*e*P	**P**	**05 08 04.1 -2.3**
BJT			pmax	pmax	
	comp=Z,26nm,0.6s				
BJT	**Baijiatuau**	**20.36 288**	*e*P	**P**	**05 08 04.1 -2.2**
	comp=Z,26nm,0.6s				
HIA	**Hailar**	**20.52 316**	*e*P	**P**	**05 08 04.7 -3.3**
HIA			pmax	pmax	
	comp=Z,38nm,1.2s				
HIA	**Hailar**	**20.52 316**	*e*P	**P**	**05 08 04.7 -3.3**
	comp=Z,38nm,1.2s				
NRGR	**Nerungri**	**23.27 336**	*e*P	**P**	**05 08 35.6 -1.6**
NRGR			S	**S**	**05 12 45.7 -0.3**
NRGR			smax		
	comp=N,33nm,0.5s				
CLNS	**Chul'man**	**23.36 336**	*e*P	**P**	**05 08 38.0 -0.1**
CLNS			*e**PP		05 08 45.7
CLNS			*e*		05 09 00.8
CLNS			*e*		05 12 27.3
CLNS			*e*S	**S**	**05 12 45.7 -1.8**
CLNS			*e*SS		05 13 24.6
CLNS			pmax	pmax	
	comp=Z,50nm,1.1s,mb4.9				
CLNS			pmax	pmax	
	comp=E,16nm,1.1s				
CLNS			pmax	pmax	
	comp=N,48nm,1.2s				
CLNS			pmax	pmax	
	comp=N,32nm,1.2s				
CLNS			pmax	pmax	
	comp=E,10.0nm,0.8s				
CLNS			pmax	pmax	
	comp=Z,13nm,0.7s,mb4.5				
CLNS			smax		
	comp=N,140nm,11.3s				
CLNS			smax		
	comp=E,290nm,12.9s				
CLNS			MLR	MLR	
	comp=E,958nm,16.0s,MS4.6				
CLNS			MLR	MLR	
	comp=N,1μm,12.0s,MS4.6				
CLNS			MLR	MLR	
	comp=Z,1μm,14.0s,MS4.5				
WHN	**Wuhan**	**23.50 264**	P	**P**	**05 08 38.5 -1.2**
WHN			pmax	pmax	
	comp=Z,94nm,1.3s,mb5.1				
HHC	**Hu-ho-hao-te**	**23.89 290**	*e*P	**P**	**05 08 43.5 +0.3**
HHC			pP		05 08 55.0
HHC			PP		05 09 19.0
HHC			PcP	PcP	05 12 26.0 +1.0
HHC			S	**S**	**05 12 54.0 -2.5**
HHC			SS		05 13 46.8
HHC			ScP	ScP	05 15 59.0 -0.9
HHC			PcS	PcS	05 16 04.3 -0.2
HHC			pmax	pmax	
	comp=Z,19nm,1.2s,mb4.4				
HHC			pmax	pmax	
	comp=Z,550nm,6.0s				
HHC			LR	LR	
	comp=N,5μm,15.7s,MS5.2				
HHC			LR	LR	
	comp=E,5μm,16.2s,MS5.2				
HHC			LR	LR	
	comp=Z,7μm,16.7s,MS5.2				
CIT	**Chita**	**25.30 317**	*e*P	**P**	**05 08 56.3 +0.4**
CIT			*e*		05 09 10.6
CIT			*e*		05 09 34.4
CIT			pmax	pmax	
	comp=Z,160nm,1.7s,mb5.3				
YAK	**Yakutsk**	**26.74 347** *c i*	P	**P**	**05 09 08.1 -0.7**
YAK			*e**PP	pP	05 09 18.0 -2.1
YAK			*e*S	**S**	**05 13 40.6 -0.8**
YAK			*e**SS	sS	05 13 58.4 -1.9
YAK			pmax	pmax	
	comp=Z,129nm,1.3s,mb5.3				
YAK			pmax	pmax	
	comp=N,105nm,1.5s				
YAK			pmax	pmax	
	comp=E,36nm,1.6s				
YAK			smax		
	comp=E,245nm,4.8s				
YAK			smax		
	comp=N,336nm,5.7s				
YAK			MLR	MLR	
	comp=E,835nm,16.0s,MS4.7				
YAK			MLR	MLR	
	comp=N,1μm,13.0s,MS4.7				
YAK			MLR	MLR	
	comp=Z,1μm,13.0s,MS4.7				
YAK	**Yakutsk**	**26.74 347**	*e*P	**P**	**05 09 08.0 -0.8**
	comp=Z,114nm,0.8s,mb5.5				
YAK			*e*	pP	05 09 18.6 -1.5
XAN	**Xi'an**	**26.81 275**	P	**P**	**05 09 08.8 -0.9**
XAN			pP	pP	05 09 19.3 -1.7
XAN			pmax	pmax	
	comp=Z,10.0nm,1.4s,mb4.2				
ENH	**Enshi**	**27.51 267**	*e*P	**P**	**05 09 15.1 -1.0**
	comp=Z,128nm,1.1s,mb5.5				
ENH			*e*	pP	05 09 26.0 -1.4
ULN	**Ulaanbaatar**	**27.90 305**	*e*P	**P**	**05 09 19.5 +0.1**
ULN			pmax	pmax	
	comp=Z,49nm,1.1s,mb5.0				
ULN	**Ulaanbaatar**	**27.90 305**	*e*P	**P**	**05 09 19.5 +0.1**
	comp=Z,49nm,1.1s,mb5.0				
ULN	**Ulaanbaatar**	**27.90 305**	P	**P**	**05 09 20.5 +1.1**
	SNR=13				
ULN			P		05 09 20.5
	SNR=13				
BOD	**Bodaibo**	**28.19 328**	*e*P	**P**	**05 09 21.1 -0.7**
BOD			pmax	pmax	
	comp=Z,22nm,1.3s,mb4.6				
SONM	**Songino Array**	**28.33 305**	P	**P**	**05 09 23.4 +0.2**
	comp=Z,48nm,1.0s,mb5.1,baz=101,slow=8.4,SNR=54				
SONM	**Songino Array**	**28.33 305**	P	**P**	**05 09 23.4 +0.2**
SONM			pmax	pmax	
	comp=Z,48nm,1.0s				
LZH	**Lanzhou**	**30.40 281**	P	**P**	**05 09 44.0 +2.3**
LZH			pP	pP	05 09 53.0 -0.1
LZH			sP	sP	05 09 57.3 -0.8
LZH			PP	PP	05 10 44.0 -6.7
LZH			*e*S	**S**	**05 14 40.0 +0.5**
LZH			sS	sS	05 14 57.0 -1.5
LZH			SS	SS	05 16 20.0 -30
LZH			pmax	pmax	
	comp=Z,39nm,1.0s,mb5.1				
LZH			pmax	pmax	
	comp=Z,310nm,7.8s				
LZH			LR	LR	
	comp=N,2μm,14.8s				
LZH			LR	LR	
	comp=Z,4μm,15.2s,MS5.2				
IRK	**Irkutsk**	**30.70 313**	*e*P	**P**	**05 09 44.2 +0.1**
IRK			*e*		05 10 02.6
IRK			pmax	pmax	
	comp=Z,37nm,1.9s,mb4.9				
TLY	**Talaya**	**30.92 312**	*e*P	**P**	**05 09 46.7 +0.6**
TLY			pmax	pmax	
	comp=Z,46nm,1.2s,mb5.2				
TLY	**Talaya**	**30.92 312**	*e*P	**P**	**05 09 46.6 +0.5**
	comp=Z,49nm,1.2s,mb5.2				
TLY	**Talaya**	**30.92 312**	P	**P**	**05 09 47.5 +1.4**
	SNR=12				
TLY			P		05 09 47.5
	SNR=12				
GYA	**Guiyang**	**31.34 262** ⇑ *i*	P	**P**	**05 09 48.8 -1.3**
GYA			pP	pP	05 10 03.0 +1.5
GYA			PP	PP	05 10 56.8 -4.5
GYA			PcP	PcP	05 12 46.8 +3.5
GYA			S	**S**	**05 14 55.0 +0.6**
GYA			ScP	ScP	05 16 24.8 +1.9
GYA			PcS	PcS	05 16 29.0 +1.3
GYA			SS	SS	05 16 43.5 -26
GYA			pmax	pmax	
	comp=Z,70nm,1.0s,mb5.5				
GYA			pmax	pmax	
	comp=Z,140nm,4.9s				
GYA			LR	LR	
	comp=N,740nm,16.9s,MS4.6				
GYA			LR	LR	
	comp=E,830nm,17.3s,MS4.6				
GYA			LR	LR	
	comp=Z,640nm,17.4s,MS4.3				
CD2	**Chengdu**	**31.91 271**	P	**P**	**05 09 53.0 -2.0**
CD2			pP	pP	05 10 06.0 -0.4
CD2			sP	sP	05 10 10.3 -1.1
CD2			PP	PP	05 11 02.5 -5.0
CD2			S	**S**	**05 15 03.5 +0.4**
CD2			sS	sS	05 15 19.5 -2.7
CD2			SS	SS	05 16 55.3 -26
CD2			pmax	pmax	
	comp=Z,40nm,0.9s,mb5.2				
CD2			pmax	pmax	
	comp=Z,3μm,11.6s				
CD2			LR	LR	
	comp=N,15μm,14.3s				
CD2			LR	LR	
	comp=Z,13μm,19.1s,MS5.6				
MOY	**Mondy**	**32.52 311**	*e*P	**P**	**05 10 00.9 +0.7**
MOY			pmax	pmax	
	comp=Z,39nm,1.8s,mb5.0				
GTA	**Gaotai**	**32.97 288**	*e*P	**P**	**05 10 04.5 +0.3**
GTA			pP	pP	05 10 14.3 -1.4
GTA			sP	sP	05 10 18.5 -2.2
GTA			PP	PP	05 11 14.8 -4.4
GTA			S	**S**	**05 15 20.5 +1.0**
GTA			sS	sS	05 15 36.0 -2.6
GTA			SS	SS	05 17 21.5 -21
GTA			pmax	pmax	
	comp=Z,26nm,1.2s,mb5.0				
GTA			pmax	pmax	
	comp=Z,370nm,6.8s				
GTA			LR	LR	
	comp=N,6μm,21.4s,MS5.5				
GTA			LR	LR	
	comp=E,7μm,18.7s,MS5.5				
GTA			LR	LR	
	comp=Z,10μm,19.6s,MS5.5				
KMI	**Kunming**	**35.09 262**	P	**P**	**05 10 22.0 -0.8**
KMI			pP	pP	05 10 33.5 -0.8
KMI			sP	sP	05 10 37.5 -1.8
KMI			PP	PP	05 11 41.3 -1.6
KMI			S	**S**	**05 15 49.0 -3.6**
KMI			SS	SS	05 18 09.5 -17
KMI			pmax	pmax	
	comp=Z,40nm,1.1s,mb5.3				
KMI			LR	LR	
	comp=N,9μm,16.6s,MS5.7				
KMI			LR	LR	
	comp=E,5μm,16.6s,MS5.7				
KMI			LR	LR	
	comp=Z,10μm,13.9s,MS5.7				
TIXI	**Tiksi**	**35.95 353**	*e*P	**P**	**05 10 28.7 -0.9**
TIXI			pmax	pmax	
	comp=Z,18nm,1.6s,mb4.8				
TIXI			MLR	MLR	
	comp=Z,1μm,14.0s,MS4.8				
TIXI	**Tiksi**	**35.95 353**	*e*P	**P**	**05 10 29.3 -0.3**
	comp=Z,9.6nm,1.0s,mb4.7				
TIXI			*ep*P	pP	05 10 39.7 -1.4
WMQ	**Urumqi**	**41.33 298**	P	**P**	**05 11 16.5 +1.4**
WMQ			pmax	pmax	
	comp=Z,52nm,1.0s,mb5.1				
WMQ			pmax	pmax	
	comp=Z,290nm,4.0s				
WMQ			LR	LR	
	comp=N,6μm,17.5s,MS5.6				
WMQ			LR	LR	
	comp=E,4μm,19.0s,MS5.6				
WMQ			LR	LR	
	comp=Z,5μm,18.0s,MS5.4				
CM31	**Chiang Mai Arr**	**41.56 256**	*e*P	**P**	**05 11 16.9 -0.2**
	comp=Z,4.4nm,0.3s,mb4.6				
CMAR	**Chiang Mai Arr**	**41.56 256**	P	**P**	**05 11 16.1 -1.1**
	comp=Z,8.2nm,0.9s,mb4.4,baz=48,slow=5.9,SNR=26				
CMAR	**Chiang Mai Arr**	**41.56 256**	P	**P**	**05 11 16.1 -1.1**
CMAR			pmax	pmax	
	comp=Z,8.0nm,0.9s				
LSA	**Lhasa**	**42.50 276**	*e*P	**P**	**05 11 26.0 +1.2**
LSA			*e**PP	pP	05 11 36.4 0.0
LSA			pmax	pmax	
	comp=Z,23nm,0.9s,mb4.8				
LSA	**Lhasa**	**42.50 276**	*e*P	**P**	**05 11 25.9 +1.2**
	comp=Z,22nm,0.9s,mb4.8				
LSA			*ep*P	pP	05 11 36.4 0.0
ZALV	**Zalesovo Beam**	**42.51 313**	P	**P**	**05 11 24.8 +0.3**
	comp=Z,25nm,0.8s,mb5.0,baz=91,slow=6.5,SNR=78				
ZALV	**Zalesovo Beam**	**42.51 313**	P	**P**	**05 11 24.8 +0.3**
ZALV			pmax	pmax	
	comp=Z,25nm,0.8s,mb5.0				
NVS	**Novosibirsk**	**43.44 314** ⇑ *i*	P	**P**	**05 11 31.9 -0.2**
NVS			*e*S	**S**	**05 18 00.8 +3.5**
NVS			pmax	pmax	
	comp=Z,52nm,1.1s,mb5.2				
NVS			pmax	pmax	
	comp=E,57nm,1.2s				
NVS			smax		
	comp=E,13nm,1.4s				
MK31	**Makanchi Array**	**44.65 303**	*e*P	**P**	**05 11 42.2 +0.3**
MK31			*e**PP	pP	05 11 52.8 -0.8
MKAR	**Makanchi Array**	**44.65 303**	P	**P**	**05 11 42.1 +0.3**
	comp=E,32nm,1.0s,mb5.1,baz=81,slow=10,SNR=69				
MKAR	**Makanchi Array**	**44.65 303**	P	**P**	**05 11 42.2 +0.3**
MKAR			pmax	pmax	
	comp=Z,32nm,1.0s				
KSM	**Kuching**	**45.28 227**	*e*P	**P**	**05 11 47.4 +0.2**
	comp=Z,11nm,0.9s,mb4.7				
KAPI	**Kappang**	**46.03 211**	P	**P**	**05 11 52.5 -0.6**
	comp=Z,15nm,0.7s,mb5.0,baz=63,slow=8.9,SNR=7.5				
KAPI	**Kappang**	**46.03 211**	*e*P	**P**	**05 11 53.0 -0.1**
	comp=Z,137nm,1.6s,mb5.6				
TAPN	**Taplejung**	**46.21 275**	*e*P	**P**	**05 11 54.4 -0.1**
	comp=Z,47nm,0.8s,mb5.5				
KURK	**Kurchatov**	**46.50 309**	P	**P**	**05 11 56.2 -0.3**
	comp=Z,26nm,0.8s,mb5.2,baz=84,slow=8.2,SNR=80				
KURK	**Kurchatov**	**46.50 309**	*e*P	**P**	**05 11 56.4 -0.1**
KURK			pmax	pmax	
	comp=Z,39nm,0.8s,mb5.4				
KURK	**Kurchatov**	**46.50 309**	*e*P	**P**	**05 11 56.4 -0.1**
	comp=Z,39nm,0.8s,mb5.4				
KURK	**Kurchatov**	**46.50 309**	P	**P**	**05 11 56.7 +0.2**
	SNR=15				
KURK			P		05 11 56.7
	SNR=15				
ODAN	**Odare**	**46.68 274**	*e*P	**P**	**05 11 58.1 -0.1**
	comp=Z,146nm,1.2s,mb5.8				
RAMN	**Ramite**	**47.28 275**	*e*P	**P**	**05 12 03.0 +0.2**
	comp=Z,268nm,1.0s,mb6.1				
JIRN	**Jiri**	**47.30 276**	*e*P	**P**	**05 12 04.1 +1.1**
KDAK	**Kodiak Island**	**47.42 42**	*i* P	**P**	**05 12 05.2 +1.7**
GUN	**Gumba**	**47.45 276**	*e*P	**P**	**05 12 04.4 +0.3**
PKI	**Pulchoki**	**47.97 276**	*e*P	**P**	**05 12 07.9 -0.3**
	comp=Z,122nm,1.3s,mb5.8				
PKI	**Pulchoki**	**47.97 276**	*e*P	**P**	**05 12 08.4 +0.2**
PKI			pmax	pmax	
	comp=Z,62nm,0.9s,mb5.6				
PKI	**Pulchoki**	**47.97 276**	*e*P	**P**	**05 12 08.4 +0.2**
	comp=Z,62nm,0.9s,mb5.6				
PKIN	**Phulchoki**	**47.98 276**	*e*P	**P**	**05 12 08.4 +0.2**
	comp=Z,62nm,0.9s,mb5.6				
KKN	**Kakani**	**47.98 277**	*e*P	**P**	**05 12 08.4 +0.1**
	comp=Z,138nm,1.2s,mb5.9				
KKN	**Kakani**	**47.98 277**	*e*P	**P**	**05 12 08.4 +0.1**
KKN			pmax	pmax	
	comp=Z,138nm,1.2s,mb5.9				
DMN	**Daman**	**48.19 276**	*e*P	**P**	**05 12 10.1 +0.2**
	comp=Z,103nm,1.4s,mb5.7				
KULM	**Kulim**	**48.69 241**	P	**P**	**05 12 14.2 +0.4**
	comp=Z,29nm,1.3s,mb5.1				
KAKA	**Kakadu**	**49.62 192**	*e*P	**P**	**05 12 22.1 +1.3**
	comp=Z,10nm,0.6s,mb5.0				
KAKA	**Kakadu**	**49.62 192**	*e*P	**P**	**05 12 22.7 +1.9**
	comp=Z,93nm,1.0s,mb5.8				
ULHL	**Ulahol**	**49.86 298**	P	**P**	**05 12 23.9 +1.4**
	SNR=10				
COEN	**Coen**	**50.10 178**	*e*P	**P**	**05 12 23.8 -0.6**
TKM2	**Tokmak 2**	**50.13 299**	P	**P**	**05 12 25.8 +1.3**
	SNR=28				
TKM2	**Tokmak 2**	**50.13 299**	*e*P	**P**	**05 12 25.6 +1.1**
TKM2			pmax	pmax	
	comp=Z,54nm,1.2s,mb5.5				
TKM2	**Tokmak 2**	**50.13 299**	*e*P	**P**	**05 12 25.6 +1.0**
	comp=Z,54nm,1.2s,mb5.5				
KZA	**Kyzart**	**50.62 298**	P	**P**	**05 12 30.4 +2.2**
	SNR=15				
KBK	**Karagaybulak**	**50.67 299**	P	**P**	**05 12 29.8 +1.2**
	SNR=20				
CHMS	**Chumysh**	**50.71 299**	P	**P**	**05 12 29.9 +1.1**
	SNR=6.2				
USP	**Ospenovka**	**50.81 300**	P	**P**	**05 12 30.3 +0.6**
	SNR=14				
KSH	**Kashi**	**50.87 295**	*e*P	**P**	**05 12 34.5 +4.3**
KSH			*ep*P	pP	05 12 43.5 +1.4
KSH			*es*P	sP	05 12 47.5 +0.5
KSH			*e*PcP	PcP	05 13 50.5 +4.2
KSH			*e*PP	PP	05 14 31.5 +4.9
KSH			*e*ScP	ScP	05 17 42.8 +3.7
KSH			*e*PcS	PcS	05 17 46.8 +3.0
KSH			*e*S	**S**	**05 19 47.0 +3.5**
KSH			*es*S	sS	05 20 04.5 +1.2
KSH			*e*ScS	ScS	05 22 18.5 +1.1
KSH			*e*SS	SS	05 23 20.5 +2.2
KSH			pmax	pmax	
	comp=Z,11nm,1.3s,mb4.6				
KSH			pmax	pmax	
	comp=Z,280nm,4.8s				
KSH			LR	LR	
	comp=Z,9μm,17.3s,MS5.8				
AAK	**Ala-Archa**	**50.99 299**	P	**P**	**05 12 32.0 +0.9**
	SNR=7.3				
AAK	**Ala-Archa**	**50.99 299**	P	**P**	**05 12 31.7 +0.7**
	comp=Z,6.8nm,0.8s,mb4.6,baz=226,slow=1.4,SNR=20				
AAK	**Ala-Archa**	**50.99 299**	P	**P**	**05 12 31.7 +0.7**
AAK			pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.6				
AAK	**Ala-Archa**	**50.99 299**	*e*P	**P**	**05 12 31.4 +0.4**
	comp=Z,23nm,1.1s,mb5.0				
AAK	**Ala-Archa**	**50.99 299**	P	**P**	**05 12 31.8 +0.8**
	SNR=9.2				
AAK			P		05 12 31.8
	SNR=9.2				
UCH	**Uchtor**	**51.10 298**	P	**P**	**05 12 33.3 +1.4**
	SNR=7.0				
UCH	**Uchtor**	**51.10 298**	*e*P	**P**	**05 12 33.5 +1.7**
	comp=Z,26nm,1.4s,mb5.0				
BVAR	**Borovoye Array**	**51.17 313**	P	**P**	**05 12 32.4 +0.2**
	comp=Z,8.2nm,0.8s,mb4.7,baz=79,slow=7.7,SNR=33				
BVAR	**Borovoye Array**	**51.17 313**	P	**P**	**05 12 32.4 +0.2**
BVAR			pmax	pmax	
	comp=Z,8.0nm,0.8s				
BRVK	**Borovoye**	**51.23 313**	*e*P	**P**	**05 12 32.8 +0.2**
BRVK			pmax	pmax	
	comp=Z,19nm,1.0s,mb5.0				
BRVK	**Borovoye**	**51.23 313**	*e*P	**P**	**05 12 32.8 +0.1**
	comp=Z,19nm,1.0s,mb5.0				
BRVK	**Borovoye**	**51.23 313**	P	**P**	**05 12 33.2 +0.6**
	SNR=8.4				
BRVK			P		05 12 33.2
	SNR=8.4				
EKS2	**Erkin-Say**	**51.49 299**	P	**P**	**05 12 35.5 +0.7**
	SNR=10				
EKS2	**Erkin-Say**	**51.49 299**	*e*P	**P**	**05 12 35.1 +0.4**
	comp=Z,13nm,1.0s,mb4.8				

AML Almayashu 51.71 299 P **P** **05 12 38.1 +1.7**
SNR=40
INK Inuvik 54.85 27 P **P** **05 12 59.5 +0.4**
comp=Z,2.3nm,0.6s,mb4.4,baz=308,slow=5.1,SNR=9.1
INK Inuvik 54.85 27 P **P** **05 12 59.5 +0.4**
INK pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 54.85 27 *e*P **P** **05 12 59.1 0.0**
comp=Z,3.7nm,0.7s,mb4.5
SVE Sverdlovsk 55.77 319⇓ *e*P **P** **05 13 06.3 +0.4**
SVE pmax pmax
comp=Z,50nm,1.2s,mb5.4
FITZ Fitzroy Crossi 56.29 198 *e*P **P** **05 13 09.1 -0.8**
comp=Z,6.3nm,0.6s,mb4.8
FITZ Fitzroy Crossi 56.29 198 P **P** **05 13 09.4 -0.5**
comp=Z,3.9nm,0.8s,mb4.5,baz=53,slow=12,SNR=5.8
WRAB Tennant Creek 56.45 188 *e*P **P** **05 13 10.3 -0.7**
WRAB pmax pmax
comp=Z,15nm,0.9s,mb5.0
WRAB Tennant Creek 56.45 188 *e*P **P** **05 13 10.3 -0.8**
comp=Z,15nm,0.9s,mb5.0
SOKR Solikamsk 56.98 323 *d i*P **P** **05 13 15.2 +0.8**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU Arti 56.99 319 *c i*P **P** **05 13 14.4 -0.1**
ARU *e* 05 15 16.5
ARU S **S** **05 21 05.8 +0.2**
ARU pmax pmax
comp=Z,78nm,1.7s,mb5.5
ARU Arti 56.99 319 *e*P **P** **05 13 14.0 -0.6**
comp=Z,40nm,1.0s,mb5.4
KBL Kabul 57.86 291 *e*P **P** **05 13 20.6 -0.4**
KBL pmax pmax
comp=Z,27nm,1.2s,mb5.2
KBL Kabul 57.86 291 *e*P **P** **05 13 20.6 -0.4**
comp=Z,27nm,1.2s,mb5.2
HYB Hyderabad 58.41 269 *i*P **P** **05 13 25.0 -0.1**
ABKAR Akbulak array 58.52 311 *e*P **P** **05 13 25.2 -0.2**
comp=Z,6.6nm,0.6s,mb4.8
DLBC Dease Lake 58.99 38 P **P** **05 13 28.9 +0.4**
comp=Z,1.3nm,0.6s,mb4.2,baz=330,slow=18,SNR=3.5
DLBC Dease Lake 58.99 38 P **P** **05 13 28.9 +0.4**
ASAR Alice Springs 60.19 188 P **P** **05 13 36.1 -1.0**
comp=Z,2.0nm,0.9s,mb4.2,baz=8.7,slow=5.8,SNR=11
ASAR Alice Springs 60.19 188 P **P** **05 13 36.1 -1.0**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
KBS Kingsbay 61.32 350⇑ *e*P **P** **05 13 45.7 +1.5**
KBS pmax pmax
comp=Z,18nm,1.7s,mb4.9
PALK Pallekele 62.45 258 *e*P **P** **05 13 53.5 +0.8**
PALK pmax pmax
comp=Z,49nm,1.2s,mb5.5
PALK Pallekele 62.45 258 *e*P **P** **05 13 53.5 +0.7**
comp=Z,50nm,1.2s,mb5.5
RES Resolute Bay 63.16 14 P **P** **05 13 54.4 -2.1**
comp=Z,4.4nm,0.7s,mb4.7,baz=312,slow=5.4,SNR=16
RES Resolute Bay 63.16 14 *e*P **P** **05 13 55.3 -1.3**
RES *e**PP pP 05 14 07.6 -1.2
RES pmax pmax
comp=Z,16nm,1.2s,mb5.0
RES Resolute Bay 63.16 14 *e*P **P** **05 13 55.3 -1.3**
comp=Z,16nm,1.2s,mb5.0
RES *e*pP pP 05 14 07.6 -1.2
APA Apatity 63.36 336⇑ *e*P **P** **05 14 08.0 +10**
APA *e* 05 16 16.0
APA pmax pmax
comp=Z,13nm,1.0s,mb5.0
APA MLR MLR
comp=Z,7μm,20.0s,MS5.9
KEV Kevo 64.12 339 *e*P **P** **05 14 04.8 +1.9**
KEV pmax pmax
comp=Z,15nm,1.1s,mb4.9
KEV Kevo 64.12 339 *e*p **P** **05 14 04.8 +1.9**
comp=Z,14nm,1.1s,mb4.9
YKA Yellowknife Ar 64.25 30 P **P** **05 14 02.5 -1.3**
comp=Z,1.7nm,0.7s,mb4.2,baz=301,slow=6.5,SNR=18
YKA Yellowknife Ar 64.25 30 P **P** **05 14 02.5 -1.4**
YKA pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 64.67 340 P **P** **05 14 06.8 +0.3**
comp=Z,4.8nm,0.9s,mb4.5,baz=52,slow=7.9,SNR=10
ARCES ARCESS Array B 64.67 340 P **P** **05 14 06.8 +0.3**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 66.43 355⇑ *i*P **P** **05 14 17.9 +0.1**
DAG pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
DAG MLR MLR
comp=N,4μm,20.0s,MS5.8
DAG MLR MLR
comp=Z,7μm,20.0s,MS5.9
DAG MLR MLR
comp=E,5μm,19.0s,MS5.8
DAG Danmarks Havn 66.43 355⇑ *i*P **P** **05 14 17.9 +0.1**
comp=E,5.0nm,1.0s,mb4.5
DAG
comp=Z,7μm,20.0s
JOF Joensuu 66.63 332 *e*P **P** **05 14 18.2 -1.1**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
JOF Joensuu 66.63 332 *e*p **P** **05 14 18.2 -1.1**
comp=Z,4.9nm,0.7s,mb4.7
CMSA Cobar Meteorol 67.68 176 *e*P **P** **05 14 21.5 -4.7**
MOS Moscow 67.90 324 *e*P **P** **05 14 26.5 -0.9**
MOS *e* 05 14 51.2
MOS pmax pmax
comp=Z,89nm,1.4s,mb5.6
STKA Stephens Creek 67.92 180 *e*P **P** **05 14 22.6 -5.1**
comp=Z,1.3nm,0.5s,mb4.2
STKA Stephens Creek 67.92 180 P **P** **05 14 26.5 -1.2**
comp=Z,4.0nm,0.8s,mb4.5,baz=338,slow=9.2,SNR=9.9
STKA Stephens Creek 67.92 180 *e*P **P** **05 14 29.2 +1.6**
comp=Z,1.4nm,0.9s,mb4.0
FORT Forrest 68.03 193 *e*P **P** **05 14 27.8 -0.7**
comp=Z,24nm,0.8s,mb5.3
FORT *e*pP pP 05 14 37.6 -3.2
OBN Obninsk 68.74 323 *de*P **P** **05 14 33.2 +0.5**
OBN *e**PP pP 05 14 45.7 +0.6
OBN *e* 05 14 56.1
OBN *e* 05 17 03.9
OBN pmax pmax
comp=Z,47nm,1.2s,mb5.3
OBN Obninsk 68.74 323 *e*P **P** **05 14 33.0 +0.3**
comp=Z,11nm,0.4s,mb5.1
KAF Kangasniemi 68.98 333 *e*P **P** **05 14 31.9 -2.1**
KAF pmax pmax
comp=Z,17nm,0.8s,mb5.0
KAF Kangasniemi 68.98 333 *e*p **P** **05 14 31.9 -2.1**
comp=Z,17nm,0.8s,mb5.0,baz=50,slow=5.9
FINES FINESS Array B 69.48 332 P **P** **05 14 37.5 +0.3**
comp=Z,17nm,1.0s,mb5.0,baz=54,slow=9.7,SNR=30
FINES FINESS Array B 69.48 332 P **P** **05 14 37.5 +0.3**
FINES pmax pmax
comp=Z,17nm,1.0s
VSU Vasula 71.12 330 *c i*P **P** **05 14 47.6 +0.4**
VSU pmax pmax
comp=Z,42nm,1.2s,mb5.2
SUMG Summit 71.32 0 *e*P **P** **05 14 48.9 +0.6**
comp=Z,16nm,1.2s,mb4.8
SUMG *e*pP pP 05 15 01.2 +0.5
ZEI Tsey 71.39 310 *e*P **P** **05 14 45.6 -3.6**
ZEI pmax pmax
comp=Z,14nm,1.4s,mb4.7
KIV Kislovodsk 71.50 311 *d i*P **P** **05 14 51.2 +1.4**
KIV *e* 05 15 08.4
KIV pmax pmax
comp=Z,51nm,1.2s,mb5.3
KIV Kislovodsk 71.50 311 *e*P **P** **05 14 51.1 +1.3**
comp=Z,35nm,1.0s,mb5.2
KIV Kislovodsk 71.50 311 P **P** **05 14 51.3 +1.5**
SNR=9.0
KIV P 05 14 51.3
SNR=9.0
GNI Garni 72.27 307⇓ *e*P **P** **05 14 56.2 +1.7**
GNI pmax pmax
comp=Z,31nm,1.7s
SWMT Swartz Lake 72.60 44 *e*P **P** **05 14 58.8 +2.5**
comp=Z,3.9nm,1.0s,mb4.3
SLMT Seeley Lake 73.03 44 *e*P **P** **05 14 60.0 +1.1**
comp=Z,5.3nm,0.8s,mb4.5
IZAR Zarasai 73.07 328 *e*P **P** **05 14 59.0 +0.1**
MICGM Minsk 73.15 326 *e*P **P** **05 14 58.0 -1.5**
MNK Minsk 73.17 326 *e*P **P** **05 14 58.0 -1.6**
ISAL Salakas 73.23 328 *e*P **P** **05 15 00.3 +0.4**
IIGN Ignalina 73.34 327 *e*P **P** **05 15 01.0 +0.4**

NACGM Naroch 73.39 327 *e* **P** **05 15 01.0 +0.2**
CMB Columbia Colle 74.06 54 *e*P **P** **05 15 05.7 +0.6**
CMB pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CMB Columbia Colle 74.06 54 *e*P **P** **05 15 05.7 +0.6**
comp=Z,3.5nm,0.8s,mb4.3
FFC Flin Flon 74.12 33 *i*P **P** **05 15 06.3 +1.2**
LRM Limekiln Ridge 74.45 44 *e*P **P** **05 15 07.4 +0.2**
LRM *e*pP pP 05 15 17.6 -2.1
FCC Fort Churchill 74.47 27 *e*P **P** **05 15 07.3 +0.2**
comp=Z,0.1nm,0.8s
EGMT Eagleton 74.60 41 *e*P **P** **05 15 12.8 +4.7**
comp=Z,26nm,1.6s,mb4.9
NB2 NORSAR Subarra 74.86 337 P **P** **05 15 09.4 +0.1**
comp=Z,25nm,1.0s,mb5.1,baz=38,slow=5.9
NOA NORSAR Array B 74.86 337 P **P** **05 15 09.4 +0.1**
comp=Z,11nm,0.9s,mb4.8,baz=39,slow=5.8,SNR=34
NOA NORSAR Array B 74.86 337 P **P** **05 15 09.5 +0.2**
NOA pmax pmax
comp=Z,11nm,0.9s
AKASG Malin Array Be 74.94 323 P **P** **05 15 09.7 -0.3**
comp=Z,4.8nm,0.5s,mb4.7,baz=46,slow=5.7,SNR=42
AKASG Malin Array Be 74.94 323 P **P** **05 15 09.7 -0.3**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB Malin Array Si 74.94 323 *e*P **P** **05 15 09.3 -0.7**
KIEV Kiev 74.95 323 *e*P **P** **05 15 09.5 -0.5**
KIEV pmax pmax
comp=Z,25nm,1.1s,mb5.1
KIEV Kiev 74.95 323 *e*P **P** **05 15 09.5 -0.5**
comp=Z,25nm,1.1s,mb5.1
BOZ Bozeman (W) 75.01 44 *e*P **P** **05 15 11.8 +1.3**
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BOZ Bozeman (W) 75.01 44 *e*P **P** **05 15 11.8 +1.3**
comp=Z,2.3nm,0.7s,mb4.2
NAO01 NORSAR Array S 75.11 337 *e*P **P** **05 15 10.6 -0.2**
comp=Z,4.3nm,0.7s,mb4.5
NVAR Mina Array Bea 75.19 53 P **P** **05 15 11.9 +0.2**
comp=Z,1.9nm,0.7s,mb4.1,baz=283,slow=5.7,SNR=15
SUW Suwalki 75.55 328 *e*P **P** **05 15 13.8 +0.4**
SUW Suwalki 75.55 328 *e*P **P** **05 15 12.8 -0.6**
SUW pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
SUW Suwalki 75.55 328 *e*P **P** **05 15 12.8 -0.6**
comp=Z,9.7nm,0.5s,mb5.0
N12A Clover Valley, 75.85 50 *e*P **P** **05 15 19.8 +4.4**
comp=Z,4.2nm,0.9s,mb4.4
IMW Indian Meadow 76.46 45 *e*P **P** **05 15 20.5 +1.7**
comp=Z,4.5nm,0.8s,mb4.5
SFJD Kangerlussuaq 76.50 5 *i*P **P** **05 15 18.1 -0.5**
SFJD pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SFJD MLR MLR
comp=Z,10μm,19.0s,MS6.1
SFJD Kangerlussuaq 76.50 5 *i*P **P** **05 15 18.1 -0.5**
comp=Z,6.1nm,0.9s,mb4.5
SFJD
comp=Z,10μm,19.0s
DUG Dugway 77.60 49 *e*P **P** **05 15 25.5 +0.2**
DUG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
DUG Dugway 77.60 49 *e*P **P** **05 15 25.4 +0.2**
comp=Z,3.9nm,0.7s,mb4.5
PDAR Pinedale Array 77.95 45 P **P** **05 15 26.7 -0.4**
comp=Z,0.8nm,0.5s,mb3.9,baz=224,slow=0.8,SNR=7.2
LVV L'vov 78.03 324 *e*P **P** **05 15 27.5 0.0**
KWP Kalwaria Pacla 78.78 325 *e*P **P** **05 15 32.8 +1.2**
KWP Kalwaria Pacla 78.78 325 *e*P **P** **05 15 32.1 +0.5**
KWP pmax pmax
comp=Z,64nm,1.3s,mb5.4
KWP Kalwaria Pacla 78.78 325 *e*P **P** **05 15 32.1 +0.5**
comp=Z,64nm,1.3s,mb5.4
CCUT Cedar City 78.86 52 *e*P **P** **05 15 33.8 +1.4**
comp=Z,2.0nm,0.8s,mb4.1
BUR08 Bucovina Ar. S 78.94 322 *e*P **P** **05 15 32.9 +0.4**
TIRR Tirgusor 79.40 318 *e*P **P** **05 15 35.4 +0.3**
TIRR *e**PP pP 05 15 46.3 -1.4
TIRR pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TIRR Tirgusor 79.40 318 *e*P **P** **05 15 35.4 +0.3**
comp=Z,5.5nm,1.1s,mb4.4
TIRR *e*pP pP 05 15 46.3 -1.4
BR131 Keskin Array S 79.44 312 *e*P **P** **05 15 36.8 +1.4**
comp=Z,10nm,1.1s,mb4.7
BR131 *e*pP pP 05 15 47.1 -0.9
BRTR Keskin Array B 79.44 312 P **P** **05 15 36.2 +0.8**
comp=Z,7.7nm,1.0s,mb4.6,baz=99,slow=3.9,SNR=33
BRTR PP PP 05 18 40.9 +5.4
comp=Z,1.0nm,0.8s,baz=59,slow=5.9,SNR=4.4
BRTR Keskin Array B 79.44 312 P **P** **05 15 36.2 +0.8**
BRTR 05 18 40.9
BRTR pmax pmax
comp=Z,8.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
KOLS Kolonicke sedl 79.47 324 *e*P **P** **05 15 36.0 +0.6**
KOLS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KOLS Kolonicke sedl 79.47 324 *e*P **P** **05 15 36.0 +0.6**
comp=Z,7.3nm,1.1s,mb4.5
KOLS Kolonicke sedl 79.47 324 *e*P **P** **05 15 35.9 +0.5**
STHS Stebnicka Huta 79.61 325 *e*P **P** **05 15 37.7 +1.5**
STHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
STHS Stebnicka Huta 79.61 325 *e*P **P** **05 15 37.7 +1.5**
comp=Z,7.8nm,1.3s,mb4.5
STHS Stebnicka Huta 79.61 325 *e*P **P** **05 15 37.7 +1.5**
SRU San Rafael 79.66 49 *e*P **P** **05 15 35.3 -1.3**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SRU San Rafael 79.66 49 *e*P **P** **05 15 35.3 -1.4**
comp=Z,5.3nm,0.8s,mb4.5
UZH Uzhgorod 79.67 324 *e*P **P** **05 15 37.0 +0.5**
OJC Ojcow 79.69 326 *e*P **P** **05 15 36.3 -0.3**
NIE Niedzica 80.04 326 *e*P **P** **05 15 39.7 +1.2**
KECS Kecovo 80.63 325 *e*P **P** **05 15 42.3 +0.6**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KECS Kecovo 80.63 325 *e*P **P** **05 15 42.3 +0.6**
comp=Z,3.1nm,1.2s,mb4.1
KECS Kecovo 80.63 325 *e*P **P** **05 15 42.3 +0.6**
KSP Ksiaz 80.76 328 *e*P **P** **05 15 43.6 +1.2**
KSP Ksiaz 80.76 328 *e*P **P** **05 15 43.1 +0.8**
MORC Moravsky Berou 81.02 327 *e*P **P** **05 15 44.4 +0.7**
MORC *e**PP pP 05 15 56.5 +0.2
MORC pmax pmax
comp=Z,16nm,1.3s,mb4.8
MORC Moravsky Berou 81.02 327 *e*P **P** **05 15 44.4 +0.7**
comp=Z,16nm,1.3s,mb4.8
MORC *e*pP pP 05 15 56.5 +0.2
PV10 Paradox Valley 81.03 49 *e*P **P** **05 15 45.0 +1.0**
comp=Z,258nm,0.8s
PV10 *e*pP pP 05 15 55.8 -0.8
PV04 Paradox Valley 81.10 49 *e*P **P** **05 15 43.3 -1.0**
PV04 *e*pP pP 05 15 57.4 +0.5
PSZ Piszkesteto 81.31 325 *e*P **P** **05 15 46.0 +0.7**
PSZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
PSZ Piszkesteto 81.31 325 *e*P **P** **05 15 46.0 +0.7**
comp=Z,9.2nm,1.0s,mb4.7
VYHS Vyhne 81.38 326 *e*P **P** **05 15 46.4 +0.7**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
VYHS Vyhne 81.38 326 *e*P **P** **05 15 46.4 +0.7**
comp=Z,6.0nm,1.3s,mb4.4
VYHS *e*PP PP 05 18 51.2 0.0
VYHS Vyhne 81.38 326 *e*P **P** **05 15 46.4 +0.7**
VYHS *e*PP PP 05 18 51.2 0.0
PV01 Paradox Valley 81.47 49 *e*P **P** **05 15 47.7 +1.4**
comp=Z,437nm,0.9s
KOLL Kolacno 81.51 326 *e*P **P** **05 15 48.1 +1.7**
KOLL Kolacno 81.51 326 *e*P **P** **05 15 48.1 +1.7**
BRG Berggiesshubel 81.72 330 *e*P **P** **05 15 47.6 +0.2**
comp=Z,10nm,1.3s,mb4.6
BRG *e* pP 05 16 01.1 +1.1
comp=Z,6.7nm,1.0s
CLL Collm 81.76 330⇑ *i*P **P** **05 15 47.3 -0.3**
CLL *i* pP 05 16 01.1 +0.9
CLL pmax pmax
comp=Z,17nm,1.3s,mb4.8
CLL Collm 81.76 330⇑ *i*P **P** **05 15 47.3 -0.3**
comp=Z,17nm,1.3s,mb4.8
CLL *i* pP 05 16 01.1 +0.9
CLL Collm 81.76 330⇑ *i*P **P** **05 15 47.3 -0.3**
comp=Z,17nm,1.3s,mb4.8
CLL *e*PcP PcP 05 15 53.0 -0.3
CLL *i* pP pP 05 16 01.1 +0.9
MMAI Mount Meron Ar 82.52 306 P **P** **05 15 52.5 +0.5**
comp=Z,2.4nm,0.6s,mb4.4,baz=37,slow=8.4,SNR=10
KHC Kasperske Hory 83.20 329 *e*P **P** **05 15 55.1 -0.1**
KHC *e**PP pP 05 16 09.0 +1.2
KHC pmax pmax
comp=Z,13nm,1.1s,mb4.9
KHC Kasperske Hory 83.20 329 *e*P **P** **05 15 55.1 -0.1**
comp=Z,13nm,1.1s,mb4.9
KHC *e*pP pP 05 16 08.9 +1.1
GERES GERESS Array B 83.37 328 P **P** **05 15 56.3 +0.3**
comp=Z,1.8nm,0.7s,mb4.2,baz=46,slow=5.8,SNR=17
GERES GERESS Array B 83.37 328 P **P** **05 15 56.3 +0.2**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GRA1 Grafenberg Arr 83.73 330 *e*P **P** **05 15 58.3 +0.4**
comp=Z,21nm,1.3s,mb5.1
GRF Grafenberg Arr 83.73 330 *e*P **P** **05 15 58.3 +0.4**
comp=Z,21nm,1.3s,mb5.1
GRF Grafenberg Arr 83.73 330 *e*P **P** **05 15 58.3 +0.4**
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.1
GRF Grafenberg Arr 83.73 330 *e*P **P** **05 15 58.3 +0.4**
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.1
GRF Grafenberg Arr 83.73 330 *e*P **P** **05 15 58.3 +0.4**
comp=Z,21nm,1.3s,mb5.1
HGN Heimansgroeve 84.88 334 *e*P **P** **05 16 03.0 -0.7**
comp=Z,9.7nm,1.6s,mb4.7
MEM Membach 84.98 333 P **P** **05 16 04.2 0.0**
comp=Z,6.4nm,1.4s,mb4.6
BCLA Clavier 85.39 334 P **P** **05 16 04.9 -1.3**
UCC Uccle 85.41 334 P **P** **05 16 05.9 -0.4**
GIVF Givet 85.83 334 *e*P **P** **05 16 08.1 -0.3**
SCHQ Schefferville 85.89 16 P **P** **05 16 08.1 -0.6**
comp=Z,3.5nm,1.1s,mb4.5,baz=348,slow=10,SNR=2.0
SCHQ Schefferville 85.89 16 P **P** **05 16 08.1 -0.6**
DOU Dourbes 85.91 334 P **P** **05 16 08.6 -0.3**
BFO Black Forest 85.97 331 *e*P **P** **05 16 09.0 -0.2**
BFO *e**PP pP 05 16 22.9 +1.0
BFO pmax pmax
comp=Z,19nm,1.3s,mb5.2
BFO Black Forest 85.97 331 *e*P **P** **05 16 09.0 -0.2**
comp=Z,19nm,1.3s,mb5.2
BFO *e*pP pP 05 16 22.9 +1.0
BAIF Baives 86.08 334 *e*P **P** **05 16 09.4 -0.3**
CDF Champ du Feu 86.31 332 *e*P **P** **05 16 10.7 -0.2**
comp=Z,20nm,1.1s,mb5.0
CDF Champ du Feu 86.31 332 *e*P **P** **05 16 10.7 -0.2**
CDF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
CDF Champ du Feu 86.31 332 *e*P **P** **05 16 10.7 -0.2**
comp=Z,10nm,1.1s,mb5.0
ECH Echery 86.52 331 *e*P **P** **05 16 11.6 -0.3**
ECH *e**PP pP 05 16 24.8 +0.2
ECH pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
ECH Echery 86.52 331 *e*P **P** **05 16 11.6 -0.3**
comp=Z,4.6nm,1.1s,mb4.6
ECH *e*pP pP 05 16 24.8 +0.3
HAU Haudompre 87.00 332 *e*P **P** **05 16 13.7 -0.5**
MEZF Maizieres J'vi 87.08 333 *e*P **P** **05 16 14.7 +0.1**
LOR Lormes 88.55 333 *e*P **P** **05 16 21.3 -0.3**
comp=Z,33nm,1.5s,mb5.1
LOR Lormes 88.55 333 *e*P **P** **05 16 21.3 -0.3**
LOR pmax pmax
comp=Z,17nm,1.5s,mb5.2
LOR Lormes 88.55 333 *e*P **P** **05 16 21.3 -0.3**
comp=Z,16nm,1.5s,mb5.1
FLN La Foliniere 88.78 336 *e*P **P** **05 16 22.4 -0.3**
comp=Z,22nm,1.3s,mb5.0
FLN La Foliniere 88.78 336 *e*P **P** **05 16 22.4 -0.3**
FLN pmax pmax
comp=Z,11nm,1.3s,mb5.0
FLN La Foliniere 88.78 336 *e*P **P** **05 16 22.4 -0.3**
comp=Z,11nm,1.3s,mb5.0
LDF La Druitiere 88.81 336 *e*P **P** **05 16 22.6 -0.3**
comp=Z,46nm,1.7s,mb5.2
LDF La Druitiere 88.81 336 *e*P **P** **05 16 22.6 -0.3**
LDF pmax pmax
comp=Z,23nm,1.7s,mb5.2
LDF La Druitiere 88.81 336 *e*P **P** **05 16 22.6 -0.3**
comp=Z,23nm,1.7s,mb5.2
SSF Saint Saulge 88.85 333 *e*P **P** **05 16 22.8 -0.3**
comp=Z,15nm,1.4s,mb4.8
SSF Saint Saulge 88.85 333 *e*P **P** **05 16 22.8 -0.3**
SSF pmax pmax
comp=Z,8.0nm,1.4s,mb4.9
SSF Saint Saulge 88.85 333 *e*P **P** **05 16 22.8 -0.3**
comp=Z,7.7nm,1.4s,mb4.8
SMF Signal de Mont 89.08 332 *e*P **P** **05 16 23.7 -0.5**
comp=Z,33nm,1.5s,mb5.2
SMF Signal de Mont 89.08 332 *e*P **P** **05 16 23.7 -0.5**
SMF pmax pmax
comp=Z,17nm,1.5s,mb5.2
SMF Signal de Mont 89.08 332 *e*P **P** **05 16 23.7 -0.5**
comp=Z,16nm,1.5s,mb5.1
AVF Avril sur Loir 89.14 333 *e*P **P** **05 16 24.2 -0.2**
comp=Z,18nm,1.2s,mb5.0
AVF Avril sur Loir 89.14 333 *e*P **P** **05 16 24.2 -0.2**
AVF pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
AVF Avril sur Loir 89.14 333 *e*P **P** **05 16 24.2 -0.2**
comp=Z,8.9nm,1.2s,mb5.0
GRR Gorron 89.23 336 *e*P **P** **05 16 24.8 0.0**
comp=Z,26nm,1.2s,mb5.1
GRR Gorron 89.23 336 *e*P **P** **05 16 24.8 0.0**
GRR pmax pmax
comp=Z,13nm,1.2s,mb5.1
GRR Gorron 89.23 336 *e*P **P** **05 16 24.8 0.0**
comp=Z,13nm,1.2s,mb5.1
BGF Bois d'Agland 89.52 333 *e*P **P** **05 16 26.1 -0.1**
ORIF Oris-en-Rattie 89.73 330 *e*P **P** **05 16 27.0 -0.2**
SGMF Saint Gilles 89.90 337 *e*P **P** **05 16 27.9 0.0**
TCF Toulx Ste Croi 89.98 333 *e*P **P** **05 16 28.4 0.0**
comp=Z,12nm,1.3s,mb4.8
TCF Toulx Ste Croi 89.98 333 *e*P **P** **05 16 28.4 0.0**
TCF pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
TCF Toulx Ste Croi 89.98 333 *e*P **P** **05 16 28.4 0.0**
comp=Z,5.9nm,1.3s,mb4.8
ROSF Rostrenen 90.05 337 *e*P **P** **05 16 28.7 +0.1**
VIVF Saint-Julien-l 90.26 331 *e*P **P** **05 16 29.4 -0.3**
TXAR Lajitas Array 90.33 53 P **P** **05 16 30.4 0.0**
comp=Z,0.9nm,0.8s,mb4.2,baz=290,slow=3.4,SNR=11
TXAR Lajitas Array 90.33 53 P **P** **05 16 30.4 +0.1**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
MFF Saint Martin d 90.55 335 *e*P **P** **05 16 31.1 +0.1**
comp=Z,20nm,1.2s,mb5.0
MFF Saint Martin d 90.55 335 *e*P **P** **05 16 31.1 +0.1**
MFF pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
MFF Saint Martin d 90.55 335 *e*P **P** **05 16 31.1 +0.1**
comp=Z,9.9nm,1.2s,mb5.0
RJF Les Rejaudoux 91.08 333 *e*P **P** **05 16 33.6 +0.1**
comp=Z,7.4nm,0.8s,mb4.8
RJF Les Rejaudoux 91.08 333 *e*P **P** **05 16 33.6 +0.1**
RJF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
RJF Les Rejaudoux 91.08 333 *e*P **P** **05 16 33.6 +0.1**
comp=Z,3.7nm,0.8s,mb4.8
CAF Calviac 91.20 333 *e*P **P** **05 16 34.4 +0.3**
comp=Z,14nm,1.2s,mb4.9
CAF Calviac 91.20 333 *e*P **P** **05 16 34.4 +0.3**
CAF pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
CAF Calviac 91.20 333 *e*P **P** **05 16 34.4 +0.3**
comp=Z,7.2nm,1.2s,mb4.9
LASF Ste Croix 91.23 331 *e*P **P** **05 16 33.2 -1.1**
comp=Z,41nm,1.5s,mb5.2
LFF La Frestale 91.67 333 *e*P **P** **05 16 36.5 +0.2**
comp=Z,26nm,1.2s,mb5.1
LFF La Frestale 91.67 333 *e*P **P** **05 16 36.5 +0.2**
LFF pmax pmax
comp=Z,13nm,1.2s,mb5.1
LFF La Frestale 91.67 333 *e*P **P** **05 16 36.5 +0.2**
comp=Z,13nm,1.2s,mb5.1
MTLF Montolieu 92.49 332 *e*P **P** **05 16 39.0 -1.1**
ESDC Sonseca Array 97.96 334 P **P** **05 17 04.9 -0.2**
comp=Z,0.1nm,0.2s,mb3.9,baz=282,slow=28,SNR=3.5
TORD Torodi Ar. Bea 117.94 315 PKP PKPdf 05 22 15.9 -0.2
comp=Z,0.4nm,0.6s,baz=12,slow=1.6,SNR=4.8
LPAZ La Paz 146.81 61 PKPbc PKPab 05 23 13.0 +0.1

comp=Z,3.4nm,0.5s,baz=16,slow=7.0,SNR=15
LPAZ La Paz 146.81 61 PKP2 PKPab 05 23 13.0 +0.2
LPAZ pmax pmax
comp=Z,3.0nm,0.5s
LPAZ La Paz 146.81 61 *e*PKPdf PKPab 05 23 11.9 -1.0
PLCA Paso Flores 154.50 110 PKPab PKPab 05 23 44.5 +0.5
comp=Z,1.4nm,0.8s,baz=178,slow=8.1,SNR=3.4
PLCA Paso Flores 154.50 110 PKP2 PKPab 05 23 44.5 +0.5
PLCA pmax pmax
comp=Z,1.0nm,0.9s

*ISCJB **31** 05:06:55.0±0.7, 36°.13N±0°.04×23°.30E±0°.05, h75km±9km, Error ellipse: s-maj=8.7km s-min=4.1km az=137.8*
*ATH **31** 05:06:55.0, 36°.18N×23°.34E, h66km±4km, ML2.8*
*NEIC **31** 05:06:55.0, 36°.18N×23°.34E, h66km, MG2.8(ATH), After ATH.*
*CSEM **31** 05:06:56.1±0.1, 36°.13N×23°.31E, h60km, ML2.8, Error ellipse: s-maj=4.4km s-min=2.1km az=50.0*
*THE **31** 05:06:56.7, 36°.17N×23°.37E, h26km±5km, ML3.6/2, Error ellipse: s-maj=5.4km s-min=1.0km az=238.0*
ISC 31 05:06:56.1±0.6, 36°.14N±0°.04×23°.31E±0°.05, h65km±11km, n66, σ0$58/86, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.26**	**303**	*e*P	**Pn**	**05 07 06.2**	**-0.3**
KYTH	**Kithira**	**0.26**	**303**	*e*P	**Pn**	**05 07 06.2**	**-0.3**
VLI	**Veliai**	**0.65**	**333**	*e*P	**Pn**	**05 07 09.9**	**-0.2**
VLI				*e*S	**Sn**	**05 07 20.1**	**-0.3**
VLI	**Veliai**	**0.65**	**333**	*e*P	**Pn**	**05 07 09.9**	**-0.2**
VLI				*e*S	**Sn**	**05 07 20.1**	**-0.3**
KARN	**Karanos**	**0.89**	**146**	P	**Pn**	**05 07 12.4**	**-0.5**
KARN				S	**Sn**	**05 07 26.1**	**+0.8**
KARN	**Karanos**	**0.89**	**146**	P	**Pn**	**05 07 12.4**	**-0.5**
KARN				S	**Sn**	**05 07 26.1**	**+0.8**
VAM	**Vamos**	**1.03**	**135**	*e*P	**Pn**	**05 07 14.3**	**-0.4**
VAM	**Vamos**	**1.03**	**135**	*e*P	**Pn**	**05 07 14.3**	**-0.4**
VLX	**Vlachokerasia**	**1.44**	**329**	*e*P	**Pn**	**05 07 20.4**	**+0.3**
VLX	**Vlachokerasia**	**1.44**	**329**	P	**Pn**	**05 07 20.8**	**+0.7**
VLX				S	**Sn**	**05 07 38.4**	**+0.3**
VLX	**Vlachokerasia**	**1.44**	**329**	*e*P	**Pn**	**05 07 20.4**	**+0.3**
VLX				S	**Sn**	**05 07 38.4**	**+0.3**
GVD	**Gavdhos**	**1.44**	**154**	*e*P	**Pn**	**05 07 21.5**	**+1.3**
GVD	**Gavdhos**	**1.44**	**154**	P	**Pn**	**05 07 20.5**	**+0.3**
GVD	**Gavdhos**	**1.44**	**154**	P	**Pn**	**05 07 20.5**	**+0.3**
PYL	**PYLOS**	**1.47**	**301**	*e*P	**Pn**	**05 07 19.8**	**-0.7**
PYL	**PYLOS**	**1.47**	**301**	P	**Pn**	**05 07 19.8**	**-0.7**
PYL	**PYLOS**	**1.47**	**301**	*e*P	**Pn**	**05 07 19.8**	**-0.7**
ITM	**Ithomi**	**1.52**	**313**	*e*P	**Pn**	**05 07 21.5**	**+0.3**
ITM	**Ithomi**	**1.52**	**313**	*e*P	**Pn**	**05 07 21.5**	**+0.3**
NAIG	**Nisos Aigina**	**1.62**	**5**	*e*P	**Pn**	**05 07 22.8**	**+0.2**
NAIG	**Nisos Aigina**	**1.62**	**5**	*e*P	**Pn**	**05 07 22.8**	**+0.2**
THR5	**Thira Island,**	**1.67**	**80**	P	**Pn**	**05 07 23.0**	**-0.2**
THR5				S	**Sn**	**05 07 43.5**	**-0.1**
THR5	**Thira Island,**	**1.67**	**80**	P	**Pn**	**05 07 23.0**	**-0.2**
THR5				S	**Sn**	**05 07 43.5**	**-0.1**
VLY	**Voula,Athens**	**1.75**	**13**	*e*P	**Pn**	**05 07 24.0**	**-0.3**
VLY	**Voula,Athens**	**1.75**	**13**	*e*P	**Pn**	**05 07 24.0**	**-0.3**
ATH	**Athens Observa**	**1.86**	**10**	*e*P	**Pn**	**05 07 25.4**	**-0.3**
ATH	**Athens Observa**	**1.86**	**10**	*e*P	**Pn**	**05 07 25.4**	**-0.3**
ATHU	**Athens Univers**	**1.86**	**12**	P	**Pn**	**05 07 25.5**	**-0.3**
ATHU	**Athens Univers**	**1.86**	**12**	P	**Pn**	**05 07 25.5**	**-0.3**
LTK	**Loutraki**	**1.90**	**352**	*e*P	**Pn**	**05 07 26.9**	**+0.6**
LTK	**Loutraki**	**1.90**	**352**	P	**Pn**	**05 07 26.8**	**+0.5**
LTK				S	**Sn**	**05 07 50.2**	**+1.0**
LTK	**Loutraki**	**1.90**	**352**	P	**Pn**	**05 07 26.8**	**+0.5**
LTK				S	**Sn**	**05 07 50.2**	**+1.0**
GUR	**Goura**	**1.96**	**337**	*e*P	**Pn**	**05 07 27.0**	**0.0**
GUR				*e*S	**Sn**	**05 07 49.7**	**-0.8**
GUR	**Goura**	**1.96**	**337**	P	**Pn**	**05 07 28.0**	**+1.0**
GUR	**Goura**	**1.96**	**337**	*e*P	**Pn**	**05 07 27.0**	**0.0**
GUR				*e*S	**Sn**	**05 07 49.7**	**-0.8**
PTL	**Penteli**	**1.96**	**13**	*e*P	**Pn**	**05 07 27.1**	**0.0**
PTL	**Penteli**	**1.96**	**13**	*e*P	**Pn**	**05 07 27.1**	**0.0**
APE	**Apeiranthos**	**2.01**	**62**	*e*P	**Pn**	**05 07 27.8**	**0.0**
APE	**Apeiranthos**	**2.01**	**62**	P	**Pn**	**05 07 27.4**	**-0.4**
APE				S	**Sn**	**05 07 51.4**	**-0.5**
APE	**Apeiranthos**	**2.01**	**62**	*e*P	**Pn**	**05 07 27.8**	**0.0**
APE				S	**Sn**	**05 07 51.4**	**-0.5**
LAST	**Lasithi**	**2.02**	**118**	P	**Pn**	**05 07 27.6**	**-0.3**
LAST				S	**Sn**	**05 07 52.1**	**+0.1**
LAST	**Lasithi**	**2.02**	**118**	P	**Pn**	**05 07 27.6**	**-0.3**
LAST				S	**Sn**	**05 07 52.1**	**+0.1**
NPS	**Neapolis**	**2.07**	**114**	*e*P	**Pn**	**05 07 27.9**	**-0.7**
NPS	**Neapolis**	**2.07**	**114**	*e*P	**Pn**	**05 07 27.9**	**-0.7**
XRY	**Khrisi**	**2.32**	**122**	*e*P	**Pn**	**05 07 32.4**	**+0.4**
XRY	**Khrisi**	**2.32**	**122**	*e*P	**Pn**	**05 07 32.4**	**+0.4**
DSF	**Desfina**	**2.35**	**345**	P	**Pn**	**05 07 33.7**	**+1.3**
DSF	**Desfina**	**2.35**	**345**	P	**Pn**	**05 07 33.7**	**+1.3**
LKR	**Lokris**	**2.52**	**354**	*e*P	**Pn**	**05 07 34.7**	**0.0**
LKR	**Lokris**	**2.52**	**354**	P	**Pn**	**05 07 35.4**	**+0.7**
LKR				S	**Sn**	**05 08 04.2**	**-0.1**
LKR	**Lokris**	**2.52**	**354**	*e*P	**Pn**	**05 07 34.7**	**0.0**
LKR				S	**Sn**	**05 08 04.2**	**-0.1**
EFP	**Efpalio**	**2.54**	**334**	*e*P	**Pn**	**05 07 34.4**	**-0.6**
EFP	**Efpalio**	**2.54**	**334**	*e*P	**Pn**	**05 07 34.4**	**-0.6**
AGG	**Agios Georgios**	**2.98**	**345**	*e*P	**Pn**	**05 07 41.7**	**+0.7**
AGG	**Agios Georgios**	**2.98**	**345**	*e*P	**Pn**	**05 07 41.7**	**+0.7**
CHOS	**Chios island**	**3.13**	**43**	*e*P	**Pn**	**05 07 43.0**	**-0.1**
CHOS	**Chios island**	**3.13**	**43**	*e*P	**Pn**	**05 07 43.0**	**-0.1**
NEO	**Neokhori**	**3.16**	**359**	*e*P	**Pn**	**05 07 44.7**	**+1.2**
NEO	**Neokhori**	**3.16**	**359**	*e*P	**Pn**	**05 07 44.7**	**+1.2**
KARP	**Karpathos**	**3.18**	**100**	*e*P	**Pn**	**05 07 44.0**	**+0.3**
KARP	**Karpathos**	**3.18**	**100**	*e*P	**Pn**	**05 07 44.0**	**+0.3**
KEK	**Kerkira**	**4.52**	**323**	*e*P	**Pn**	**05 08 01.5**	**-0.5**
KEK	**Kerkira**	**4.52**	**323**	*e*P	**Pn**	**05 08 01.5**	**-0.5**
STON	**Ston**	**8.00**	**329**	*e*Pn	**Pn**	**05 08 44.3**	**-5.3**
STON				Sn	**Sn**	**05 10 08.4**	**-10**
NVLJ	**Novalja**	**10.59**	**325**	*e*Pn	**Pn**	**05 09 23.7**	**-1.3**
NVLJ				Sn	**Sn**	**05 11 13.3**	**-8.5**
NVLJ	**Novalja**	**10.59**	**325**	*e*Pn	**Pn**	**05 09 23.6**	**-1.4**

IDC 31 05:10:05.8±2.3, 23°.34N×44°.99W, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/27, mbtmp3.9/11, Error ellipse: s-maj=66.7km s-min=24.1km az=13.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**45.31**	**94**	P	P	05 18 25.1	-0.7
	1.6nm,1.0s,baz=297,slow=7.3,SNR=5.8						
GERES	**GERESS Array B**	**52.31**	**45**	P	P	05 19 19.1	-0.1
	0.6nm,0.7s,baz=250,slow=2.7,SNR=4.0						
NB2	**NORSAR Subarra**	**53.63**	**30**	P	P	05 19 29.2	+0.5
	comp=Z,3.2nm,1.1s,baz=252,slow=7.4						
NOA	**NORSAR Array B**	**53.63**	**30**	P	P	05 19 29.5	+0.8
	comp=Z,1.2nm,0.8s,baz=252,slow=7.4,SNR=4.0						
PDAR	**Pinedale Array**	**56.14**	**307**	P	P	05 19 48.0	+0.8
	comp=Z,1.4nm,1.0s,baz=90,slow=7.4,SNR=8.1						
YKA	**Yellowknife Ar**	**60.16**	**330**	P	P	05 20 15.0	0.0
	comp=Z,0.5nm,0.8s,baz=98,slow=7.9,SNR=8.0						
FINES	**FINESS Array B**	**60.73**	**31**	P	P	05 20 18.3	-0.6
	comp=Z,1.3nm,0.8s,baz=207,slow=5.8,SNR=3.5						
AKASG	**Malin Array Be**	**62.41**	**44**	P	P	05 20 29.9	-0.6
	comp=Z,0.5nm,0.5s,baz=266,slow=5.7,SNR=3.9						
BRTR	**Keskin Array B**	**67.01**	**55**	P	P	05 21 02.0	+1.3
	comp=Z,1.2nm,0.9s,baz=276,slow=6.1,SNR=5.4						
INK	**Inuvik**	**68.00**	**336**	P	P	05 21 05.2	-1.3
	comp=Z,1.5nm,0.8s,baz=62,slow=7.8,SNR=3.8						
BVAR	**Borovoye Array**	**85.64**	**33**	P	P	05 22 46.5	+0.2
	comp=Z,0.7nm,0.6s,baz=266,slow=4.5,SNR=4.7						
KURK	**Kurchatov**	**91.11**	**32**	P	P	05 23 12.8	+0.4
	comp=Z,1.2nm,0.7s,baz=306,slow=4.9,SNR=5.0						

*CSEM **31** 05:13:32.5, 63°.98N×20°.96W, h2km, ML3.6, After REY*
REY 31 05:13:32.5, 63°.98N×20°.96W, h2km, ML3.3, ML3.6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISOL	**Solvholt**	**0.05**	**174**	P	Pg	05 13 33.8	+0.3
ISOL				S	Sg	05 13 34.7	+0.6
IKRO	**Krokur**	**0.14**	**329**	P	Pg	05 13 35.8	+0.6
IKRO				S	Sg	05 13 38.3	+1.3
IBJA	**Bjarnastaoir**	**0.16**	**258**	P	Pg	05 13 36.1	+0.6
IBJA				S	Sg	05 13 39.0	+1.5
IASM	**Asmuli**	**0.21**	**134**	P	Pg	05 13 36.9	+0.4
IASM				S	Sg	05 13 40.3	+1.1
ISAU	**Saurbar**	**0.24**	**87**	P	Pg	05 13 37.4	+0.3
ISAU				S	Sg	05 13 41.1	+0.9
IHEI	**Heioarbar**	**0.25**	**331**	P	Pg	05 13 37.8	+0.4
IHEI				S	Sg	05 13 42.0	+1.4
ISAN	**Sandskeio**	**0.28**	**286**	P	Pg	05 13 38.2	+0.3
ISAN				S	Sg	05 13 42.7	+1.2
IVOS	**Vogsosar**	**0.35**	**249**	P	Pg	05 13 39.4	+0.1
IVOS				S	Sg	05 13 44.8	+1.0
IKAS	**Kald??rsel**	**0.40**	**277**	P	Pg	05 13 40.3	+0.2
IKAS				S	Sg	05 13 46.5	+1.3
IHAU	**Haukadalur**	**0.44**	**91**	P	Pg	05 13 40.8	-0.1
IHAU				S	Sg	05 13 47.3	+0.8
IGYG	**Gygjarholskot**	**0.45**	**47**	P	Pg	05 13 40.9	-0.1
IGYG				S	Sg	05 13 47.4	+0.6
IKRI	**Krysuvik**	**0.51**	**259**	P	Pg	05 13 41.8	-0.3
IKRI				S	Sg	05 13 49.2	+0.5
IKUD	**Kuludalsa**	**0.53**	**311**	P	Pg	05 13 42.1	-0.5
IKUD				S	Sg	05 13 50.1	+0.6
IMID	**Miomork**	**0.57**	**124**	P	Pg	05 13 43.1	-0.4
IMID				S	Sg	05 13 51.4	+0.5
IVES	**Vestmannaeyjar**	**0.61**	**151**	P	Pg	05 13 44.1	-0.1
IVES				S	Sg	05 13 52.9	+0.7
IVOG	**Vogar**	**0.63**	**270**	P	Pg	05 13 44.1	-0.5
IVOG				S	Sg	05 13 53.4	+0.6
IGRV	**Grindav??k**	**0.67**	**260**	P	Pg	05 13 44.7	-0.7
IGRV				S	Sg	05 13 54.9	+0.8
INYL	**Nylenda**	**0.79**	**270**	P	Pg	05 13 46.2	-1.3
INYL				S	Sg	05 13 57.4	-0.3
IASB	**`sbjarnarst**	**0.79**	**348**	P	Pg	05 13 46.6	-1.0
IASB				S	Sg	05 13 57.6	-0.2
IESK	**Eystri-Skogar**	**0.81**	**124**	P	Pg	05 13 46.9	-1.1
IESK				S	Sg	05 13 58.4	0.0
IVAT	**Vatnsfell**	**0.92**	**76**	P	Pg	05 13 48.9	-1.2
IVAT				S	Sg	05 14 01.6	-0.4
IHVO	**Lagu-Hvolar**	**1.04**	**115**	P	Pg	05 13 51.0	-1.4
IHVO				S	Sg	05 14 06.0	+0.1
ISNB	**Snabyli**	**1.06**	**102**	P	Pg	05 13 51.1	-1.6
ISNB				S	Sg	05 14 05.5	-0.9
IHVE	**Hveravellir**	**1.08**	**33**	P	Pg	05 13 51.1	-2.0
IHVE				S	Sg	05 14 07.4	+0.3
ISKR	**Skrokkalda**	**1.26**	**61**	S	Sg	05 14 12.2	-0.9
IKAL	**Kalfafell**	**1.44**	**90**	P	Pn	05 13 57.4	-2.2
IKAL				S	Sg	05 14 17.6	-1.2
IGRF	**Grimsfjall**	**1.67**	**73**	P	Pn	05 14 01.6	-1.1
IGRF				S	Sn	05 14 27.0	+2.3
IFAG	**Fagurholsmyri**	**1.90**	**91**	P	Pn	05 14 04.5	-1.4
IFAG				S	Sn	05 14 30.1	-0.3
ISVA	**Svartarkot**	**2.10**	**48**	P	Pn	05 14 07.2	-1.4
ISVA				S	Sn	05 14 35.6	+0.4
IKRE	**Kreppuhraun**	**2.15**	**66**	P	Pn	05 14 08.3	-0.9
IHRN	**Hraun**	**2.17**	**9**	P	Pn	05 14 08.2	-1.4
IHLA	**Hella**	**2.26**	**28**	P	Pn	05 14 09.7	-1.1
IBRU	**Bruarjokull**	**2.28**	**66**	P	Pn	05 14 10.4	-0.7
ISIG	**Siglufjorour**	**2.33**	**21**	P	Pn	05 14 10.7	-1.1
IREN	**Reynihlio**	**2.41**	**44**	P	Pn	05 14 11.9	-1.0
IHVA	**Hvannstoosfjol**	**2.41**	**64**	P	Pn	05 14 12.2	-0.7
IKVO	**Krokottuvotn**	**2.46**	**43**	P	Pn	05 14 12.7	-0.9
IBRE	**Brettingsstaoi**	**2.51**	**30**	P	Pn	05 14 13.6	-0.7
IGRI	**Grimsey**	**2.86**	**24**	P	Pn	05 14 18.7	-0.3

IDC 31 05:15:05.6±3.6, 7°.36S×126°.63E, h331km±39km, mb3.4/6, mb1 3.5/8, mb1mx3.3/18, mbtmp3.4/8, Error ellipse: s-maj=40.3km s-min=14.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.72**	**185**	P	Pn	05 17 31.5	-0.8
	0.6nm,0.3s,baz=23,slow=11,SNR=21						
FITZ				S	S	05 19 33.3	+0.6
	0.3nm,0.3s,baz=114,slow=7.3,SNR=5.1						
ASAR	**Alice Springs**	**17.66**	**157**	P	P	05 18 50.5	+0.6
	2.0nm,0.3s,baz=333,slow=11,SNR=61						
ASAR				S	S	05 21 55.6	-0.3
	0.2nm,0.3s,baz=338,slow=20,SNR=9.0						
STKA	**Stephens Creek**	**28.11**	**152**	P	P	05 20 28.0	+0.1
	2.7nm,0.4s,baz=326,slow=9.2,SNR=12						
PETK	**Petropavlovsk-**	**65.75**	**20**	P	P	05 25 15.4	0.0
	1.8nm,0.5s,baz=217,slow=1.7,SNR=9.7						
MKAR	**Makanchi Array**	**66.73**	**328**	P	P	05 25 22.2	+0.4
	0.2nm,0.3s,baz=137,slow=8.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**70.46**	**335**	P	P	05 25 44.2	-0.3
	0.5nm,0.4s,baz=120,slow=5.2,SNR=3.1						
KURK	**Kurchatov**	**71.11**	**330**	P	P	05 25 48.5	0.0
	0.5nm,0.5s,baz=127,slow=5.5,SNR=3.6						
AKTO	**Aktyubinsk**	**82.33**	**323**	P	P	05 26 50.4	-0.3
	0.8nm,0.3s,baz=83,slow=8.1,SNR=3.7						
CPUP	**Villa Florida**	**146.29**	**174**	PKPbc	PKPbc	05 34 08.2	-0.1
	0.4nm,0.3s,baz=112,slow=5.4,SNR=4.2						

*NDI **31** 05:15:36.0±3.0, 32°.96N×75°.69E, h10km, ML3.6*
*ISCJB **31** 05:15:38.8±1.2, 32°.76N±0°.05×75°.60E±0°.09, h29km±5km, Error ellipse: s-maj=12.2km s-min=8.9km az=164.6*
ISC 31 05:15:36.6±1.3, 32°.91N±0°.04×75°.57E±0°.09, h23km±7km, n12, σ1$04/23, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.49**	**166**	*e*P	**Pb**	**05 15 46.7**	**+0.2**
THN				*e*S	**Sb**	**05 15 54.1**	**+0.8**
DLH	**Dalhousie**	**0.49**	**138**	*e*P	**Pb**	**05 15 46.0**	**-0.6**
DLH				*e*S	**Sb**	**05 15 52.0**	**-1.4**
BHK	**Bhakra**	**1.65**	**154**	*ex*	**Pn**	**05 16 02.5**	**-1.7**
BHK				*e*S	**Sn**	**05 16 25.8**	**+1.1**
SDNR	**Sundarnagar**	**1.84**	**139**	*e*P	**Pn**	**05 16 07.1**	**+0.4**
SDNR				*ex*	**Sn**	**05 16 28.1**	**-1.2**
SMLA	**Simla**	**2.23**	**142**	*i* P	**Pn**	**05 16 13.5**	**+1.4**
SMLA				*i* P		05 16 15.3	
SMLA				*i* S	**Sn**	**05 16 38.8**	**-0.2**
SMLA				*i* S	**Sn**	**05 16 38.9**	**-0.1**
SMLA				*i* S	**Sn**	**05 16 39.2**	**+0.1**
SMLA				*i* S	**Sn**	**05 16 39.2**	**+0.2**
SMLA				*ex*	x	05 16 42.2	
	comp=N,2μm,0.4s						
SMLA				*ex*	x	05 16 44.6	
	comp=E,1μm,0.4s						
KLP	**Kalpa**	**2.65**	**120**	*e*P	**Pn**	**05 16 19.7**	**+1.7**
KLP				*e*S	**Sn**	**05 16 50.0**	**+0.6**
KLP				AML	AML	05 17 01.1	
	comp=N,642nm,0.7s						
KLP				AML	AML	05 17 07.4	
	comp=E,502nm,0.6s						
DDI	**Dehra Dun**	**3.34**	**140**	*ex*	**Pb**	**05 16 40.5**	**+5.5**
JOSI	**Joshimath**	**4.13**	**124**	*e*P	**Pb**	**05 16 50.1**	**+1.6**
JOSI				*e*S	**Sb**	**05 17 37.0**	**-0.9**
JOSI				AML	AML	05 17 54.1	
	comp=E,180nm,0.6s						
JOSI				AML	AML	05 17 55.7	
	comp=N,144nm,0.6s						
NDI	**New Delhi**	**4.44**	**161**	*e*S	**Pb**	**05 17 03.5**	**+10**
SONA	**Sohna**	**4.82**	**164**	*e*S	**Sn**	**05 17 42.6**	**-0.3**
KHET	**Khetri**	**4.82**	**178**	*e*S	**Sn**	**05 17 42.1**	**-0.9**
KHET				AML	AML	05 18 19.5	
	comp=N,30nm,0.4s						
KHET				AML	AML	05 18 19.7	
	comp=E,28nm,0.7s						
KSH	**Kashi**	**6.60**	**3**	Pn	**Pn**	**05 17 19.0**	**+6.8**
KSH				Sn	**Sn**	**05 18 26.0**	**-0.8**
KSH				smax			
	comp=N,17nm,0.4s						
KSH				smax			
	comp=E,20nm,0.5s						

*DJA **31** 05:18:49, 1°.40S×119°.17E, h3km, MLv4.1/7*
IDC 31 05:18:48.3±1.3, 1°.29S×119°.84E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, ML3.5/1, MS4.1/1, Ms1 4.1/1, ms1mx3.1/24, Error ellipse: s-maj=71.7km s-min=17.4km az=79.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.70**	**181**	Pn	Pn	05 19 44.6	-2.1
	3.6nm,0.3s,baz=1.9,slow=14,SNR=10						
KAPI				Lg		05 20 46.9	
	2.0nm,0.3s,baz=85,slow=23,SNR=5.9						
KAPI				LR	LR	05 21 21.3	
	comp=Z,2μm,19.3s,baz=226,slow=41						
ASAR	**Alice Springs**	**26.09**	**150**	P	P	05 24 24.4	+0.6
	0.8nm,0.7s,baz=345,slow=13,SNR=3.8						
MKAR	**Makanchi Array**	**58.11**	**330**	P	P	05 28 44.5	+1.0
	0.4nm,0.4s,baz=138,slow=8.4,SNR=3.8						
ZALV	**Zalesovo Beam**	**62.23**	**337**	P	P	05 29 10.8	-0.9
	0.6nm,0.4s,baz=125,slow=14,SNR=3.7						
KURK	**Kurchatov**	**62.56**	**332**	P	P	05 29 13.9	0.0
	0.3nm,0.5s,baz=136,slow=6.2,SNR=3.6						

*SZGRF **31** 05:52:37.9, 44°.98N×149°.19E, h33km, mb4.9, Kuril Islands, Russia*
*ISCJB **31** 05:52:40.9±0.5, 44°.33N±0°.04×147°.86E±0°.05, h91km±3km, mb4.5/85, Error ellipse: s-maj=7.0km s-min=4.2km az=141.7*
*BJI **31** 05:52:40.2, 44°.59N×147°.75E, h77km, mB5.3/15, mb4.8/26, Ms4.8/16, Ms7 4.6/16*
*MOS **31** 05:52:41.3±0.9, 44°.45N×147°.81E, h90km, mb4.6/54, Error ellipse: s-maj=8.8km s-min=5.7km az=106.5*
*NEIC **31** 05:52:41.8±0.3, 44°.42N×147°.85E, mb4.6/49, Error ellipse: s-maj=7.9km s-min=4.9km az=145.0*
*SKHL **31** 05:52:42.1±0.3, 44°.30N×147°.88E, h93km±6km, mb5.2/5, msh5.7/1*
*IDC **31** 05:52:42.1±0.7, 44°.45N×147°.82E, h88km±6km, mb4.1/20, mb1 4.2/23, mb1mx4.2/27, mbtmp4.1/23, Error ellipse: s-maj=14.7km s-min=11.4km az=160.0*
*JMA **31** 05:52:42.3±0.3, 43°.98N×147°.93E, h82km, M4.4*
ISC 31 05:52:42.0±0.5, 44°.32N±0°.04×147°.87E±0°.05, h88km±3km, h81km±2.8km:pP-P, n269, σ1$00/292, mb4.5/85, 16C-14D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.91**	**360**	PN	**Pn**	**05 53 00.5**	**0.0**
KUR				*i* S	**Sn**	**05 53 14.5**	**+0.1**
KUR				pmax	pmax		
	comp=N,120nm,0.6s						
KUR				pmax	pmax		
	comp=E,710nm,0.6s						
KUR				pmax	pmax		
	comp=Z,3μm,0.6s						
KUR				smax			
	comp=N,7μm,0.4s						
KUR				smax			
	comp=E,9μm,0.4s						
KUR	**Kuril'sk**	**0.91**	**360**	*e*P	**Pn**	**05 53 00.5**	**0.0**
KUR				AMB	AMB	05 53 04.0	
	comp=E,120nm,0.6s						
KUR				AMB	AMB	05 53 04.0	
	comp=E,710nm,0.6s						
KUR				AMB	AMB	05 53 04.0	
	comp=E,3μm,0.6s						
KUR				*i* S	**Sn**	**05 53 14.5**	**+0.1**
KUR				A		05 53 15.0	
	comp=E,30μm,1.0s						
KUR				A		05 53 15.0	
	comp=E,10μm,1.0s						
KUR				A		05 53 15.5	
	comp=E,7μm,0.4s						
KUR				A		05 53 15.5	
	comp=E,9μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.48**	**260**	*e*PN	**Pn**	**05 53 06.9**	**-0.4**
YUK				*i* S	**Sn**	**05 53 25.3**	**-1.1**
YUK				pmax	pmax		
	comp=N,300nm,0.3s						
YUK				pmax	pmax		
	comp=E,380nm,0.3s						
YUK				pmax	pmax		
	comp=Z,950nm,0.3s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,8μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.48**	**260**	*e*P	**Pn**	**05 53 06.9**	**-0.4**
YUK				AMB	AMB	05 53 11.0	
	comp=N,300nm,0.2s						
YUK				AMB	AMB	05 53 11.0	
	comp=N,380nm,0.2s						
YUK				AMB	AMB	05 53 11.0	
	comp=N,950nm,0.2s						
YUK				*i* S	**Sn**	**05 53 25.3**	**-1.1**
YUK				A		05 53 28.0	
	comp=N,2μm,0.5s						
YUK				A		05 53 28.0	
	comp=N,4μm,0.5s						
YUK				A		05 53 29.9	
	comp=N,8μm,0.5s						
NEM2	**Nemuro 2**	**1.81**	**239**	P	**Pn**	**05 53 10.6**	**-1.0**
NEM2				*e*S	**Sn**	**05 53 32.0**	**-2.2**
JRA	**Rausu**	**2.02**	**260**	P	**Pn**	**05 53 15.0**	**+0.7**
JRA				*e*S	**Sn**	**05 53 40.3**	**+1.4**
JNK	**Nakash**	**2.39**	**253**	P	**Pn**	**05 53 19.5**	**+0.2**
JNK				*e*S	**Sn**	**05 53 47.8**	**-0.1**
JAK	**Akkeshi**	**2.66**	**241**	P	**Pn**	**05 53 21.9**	**-0.9**
JAK				*e*S	**Sn**	**05 53 52.5**	**-1.7**
JTKR	**Abashiri--Toko**	**2.88**	**264**	P	**Pn**	**05 53 26.6**	**+0.9**
JAR	**Ashorobuto**	**3.14**	**252**	P	**Pn**	**05 53 30.1**	**+0.8**
JAR				*e*S	**Sn**	**05 54 06.6**	**+0.8**
JCH	**Churui**	**3.70**	**244**	P	**Pn**	**05 53 36.5**	**-0.4**
JCH				*e*S	**Sn**	**05 54 17.3**	**-2.1**
JKK2	**Kamakawa 2**	**3.72**	**265**	P	**Pn**	**05 53 38.5**	**+1.4**
ASAJ	**Asahikawa**	**3.80**	**269**

comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 10.92 33 P **Pn 05 55 14.0 -1.0**
comp=Z,1.0nm,0.3s,baz=182,slow=7.6,SNR=6.9
PETK Petropavlovsk- 10.92 33 PN **Pn 05 55 14.0 -1.0**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 10.92 33 P **Pn 05 55 14.0 -1.0**
PET Petropavlovsk 11.24 35 *i* PN **Pn 05 55 14.5 -4.9**
KLR Kul'dur 12.09 300 *e*PN **Pn 05 55 30.0 -1.0**
MDJ Mudanjiang 13.06 278 P **Pn 05 55 43.3 -0.6**
MDJ pmax pmax
comp=Z,9.0nm,2.2s
MDJ pmax pmax
comp=Z,680nm,11.0s
CN2 Changchun 16.12 276 *e*P **Pn 05 56 22.8 -0.4**
CN2 *ep*P pP 05 56 34.8 -6.9
CN2 *e*S **S 05 59 17.5 -12**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,15.0s
CN2 LR LR
comp=E,1μm,15.0s
CN2 LR LR
comp=Z,2μm,16.0s
ZEA Zeya 16.43 312 *e*P **Pn 05 56 23.7 -3.2**
ZEA AMB AMB 05 56 25.9
comp=Z,12nm,1.0s
KSRS Korea Array 16.55 252 P **Pn 05 56 28.6 0.0**
comp=Z,0.3nm,0.3s,baz=54,slow=17,SNR=2.9
YAK Yakutsk 20.69 335 *e*P **P 05 57 10.8 -3.8**
YAK pmax pmax
comp=Z,40nm,0.8s
BILL Biiibino 25.67 16 *e*P **P 05 58 03.1 -0.1**
NJ2 Nanjing 25.75 251 *e*P **P 05 58 05.0 +0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
HHC Hu-ho-hao-te 26.82 275 *e*P **P 05 58 14.3 +0.5**
HHC pP pP 05 58 31.8 -1.9
HHC sP sP 05 58 41.0 -2.9
HHC PP 05 59 02.0
HHC PcP PcP 06 01 36.3 +2.0
HHC S **S 06 02 43.3 -0.3**
HHC sS sS 06 03 12.5 -5.6
HHC SS 06 04 01.3
HHC ScP ScP 06 05 07.8 +1.4
HHC PcS PcS 06 05 16.0 +0.4
HHC pmax pmax
comp=Z,23nm,1.1s,mb4.6
HHC pmax pmax
comp=Z,620nm,4.8s
HHC LR LR
comp=N,1μm,14.2s
HHC LR LR
comp=E,790nm,13.5s
HHC LR LR
comp=Z,770nm,17.6s
SONM Songino Array 28.74 292 P **P 05 58 30.4 -0.5**
comp=Z,3.3nm,0.5s,mb4.2,baz=70,slow=8.4,SNR=9.6
SONM Songino Array 28.74 292 P **P 05 58 30.4 -0.5**
SONM pmax pmax
comp=Z,3.0nm,0.5s
TIXI Tiksi 28.91 348 *e*P **P 05 58 28.1 -4.0**
TIXI pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
TIXI Tiksi 28.91 348 *e*P **P 05 58 27.8 -4.3**
comp=Z,3.0nm,0.7s,mb4.0
LZH Lanzhou 34.28 272 *e*P **P 05 59 19.5 -0.1**
LZH PP PP 06 00 36.5 -2.2
LZH pmax pmax
comp=Z,21nm,1.5s,mb4.8
LZH pmax pmax
comp=Z,87nm,4.5s
LZH LR LR
comp=E,750nm,12.2s
LZH LR LR
comp=Z,2μm,15.0s
GTA Gaotai 35.72 279 *e*P **P 05 59 33.3 +1.4**
GTA pP pP 05 59 51.5 -0.8
GTA sP sP 06 00 00.5 -1.9
GTA PP PP 06 00 54.5 0.0
GTA S **S 06 05 05.5 +3.3**
GTA sS sS 06 05 36.5 -0.8
GTA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GTA pmax pmax
comp=Z,790nm,6.8s
GTA LR LR
comp=N,1μm,16.1s
GTA LR LR
comp=E,1μm,16.3s
GTA LR LR
comp=Z,900nm,17.8s
TTA Tatalina 36.66 40 *e*P **P 05 59 40.0 +0.4**
TTA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
TTA Tatalina 36.66 40 *e*P **P 05 59 40.0 +0.3**
comp=Z,4.2nm,0.6s,mb4.5
CD2 Chengdu 36.98 264 P **P 05 59 44.3 +1.5**
CD2 pP pP 06 00 02.5 -0.7
CD2 sP sP 06 00 11.5 -1.8
CD2 PP PP 06 01 12.5 +3.9
CD2 S **S 06 05 23.0 +1.3**
CD2 sS sS 06 05 54.3 -2.6
CD2 SS SS 06 07 55.3 -10
CD2 pmax pmax
comp=Z,10.0nm,0.3s,mb5.2
CD2 pmax pmax
comp=Z,830nm,11.2s
CD2 LR LR
comp=N,1μm,15.5s
CD2 LR LR
comp=Z,950nm,16.0s
GYA Guiyang 37.57 256⇑ *i*P **P 05 59 48.8 +1.0**
GYA pP pP 06 00 07.8 -0.5
GYA sP sP 06 00 17.3 -1.0
GYA PP PP 06 01 19.5 +4.5
GYA PcP PcP 06 02 06.3 +2.4
GYA S **S 06 05 31.3 +0.7**
GYA ScP ScP 06 05 44.8 +1.6
GYA PcS PcS 06 05 53.3 +0.6
GYA SS SS 06 08 09.0 -10
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,540nm,17.9s
GYA LR LR
comp=E,440nm,16.3s
GYA LR LR
comp=Z,540nm,18.4s
CHUM Lake Minchumin 38.36 38 *e*P **P 05 59 55.1 +1.1**
comp=Z,6.5nm,0.7s,mb4.6
KDAK Kodiak Island 38.48 48 *i* P **P 05 59 55.2 +0.1**
KTH Kantishna Hill 38.98 39 *e*P **P 05 59 60.0 +0.8**
comp=Z,11nm,0.9s,mb4.7
KTH *e*PP PP 06 01 29.8 0.0
COLD Coldfoot 39.39 33 *e*P **P 06 00 02.2 -0.4**
comp=Z,3.2nm,0.6s,mb4.3
COLD *ep*P pP 06 00 15.6 -7.6
COLA College 40.30 36 *e*P **P 06 00 10.7 +0.6**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
COLA College 40.30 36 *e*P **P 06 00 10.7 +0.5**
comp=Z,6.0nm,0.8s,mb4.5
ZALV Zalesovo Beam 41.07 307 P **P 06 00 15.7 -0.9**
comp=Z,0.7nm,0.3s,mb3.9,baz=71,slow=11,SNR=6.1
ZALV PcP PcP 06 02 14.3 -0.2
comp=Z,0.9nm,0.4s,baz=101,slow=3.1,SNR=5.4
ZALV Zalesovo Beam 41.07 307 P **P 06 00 15.7 -0.9**
ZALV 06 02 14.4
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KMI Kunming 41.15 258 P **P 06 00 16.8 -0.8**
KMI pmax pmax
comp=Z,11nm,0.5s,mb4.9
WMQ Urumqi 42.37 291 *e*P **P 06 00 29.3 +2.0**
EGAK Eagle 43.16 36 *e*P **P 06 00 33.6 +0.1**
comp=Z,4.7nm,0.6s,mb4.4
MK31 Makanchi Array 44.78 297 *e*P **P 06 00 46.6 0.0**
MKAR Makanchi Array 44.78 297 P **P 06 00 46.7 0.0**
comp=Z,5.6nm,0.5s,mb4.5,baz=73,slow=9.4,SNR=50
MKAR PcP PcP 06 02 27.5 +0.3
comp=Z,0.6nm,0.6s,baz=52,slow=4.0,SNR=3.5
MKAR Makanchi Array 44.78 297 P **P 06 00 46.7 +0.1**
MKAR 06 02 27.5
MKAR pmax pmax
comp=Z,6.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 44.78 297 P **P 06 00 46.7 0.0**
MKAR PcP PcP 06 02 27.5 +0.3
KURK Kurchatov 45.65 304 *e*P **P 06 00 52.1 -1.3**
KURK pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
KURK Kurchatov 45.65 304 *e*P **P 06 00 52.1 -1.3**
comp=Z,8.2nm,0.5s,mb4.7
INK Inuvik 45.65 31 P **P 06 00 53.2 +0.1**
comp=Z,5.1nm,0.5s,mb4.5,baz=292,slow=6.4,SNR=33
INK Inuvik 45.65 31 *e*P **P 06 00 53.5 +0.3**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 45.65 31 *e*P **P 06 00 53.5 +0.3**
comp=Z,4.3nm,0.6s,mb4.4
CMAR Chiang Mai Arr 48.19 254 P **P 06 01 14.2 +0.7**
comp=Z,1.5nm,0.3s,mb4.2,baz=50,slow=8.4,SNR=3.6
CMAR Chiang Mai Arr 48.19 254 P **P 06 01 14.2 +0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
BVAR Borovoye Array 49.55 309 P **P 06 01 22.5 -1.1**
comp=Z,1.8nm,0.4s,mb4.3,baz=84,slow=8.8,SNR=14
BVAR Borovoye Array 49.55 309 P **P 06 01 22.5 -1.0**
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 49.59 309⇓ *e*P **P 06 01 23.9 0.0**
BRVK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ULHL Ulahol 50.63 294 P **P 06 01 32.6 +0.8**
SNR=18
TKM2 Tokmak 2 50.73 295 P **P 06 01 33.4 +0.7**
SNR=14
TKM2 Tokmak 2 50.73 295 *e*P **P 06 01 33.2 +0.6**
TKM2 *e**PP pP 06 01 51.4 -2.6
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TKM2 Tokmak 2 50.73 295 *e*P **P 06 01 33.2 +0.6**
comp=Z,8.7nm,0.8s,mb4.8
TKM2 *ep*P pP 06 01 51.4 -2.7
KBK Karagaybulak 51.28 295 P **P 06 01 37.4 +0.7**
SNR=11
USP Ospenovka 51.28 296 P **P 06 01 37.2 +0.5**
SNR=12
KZA Kyzart 51.36 295 P **P 06 01 39.0 +1.6**
SNR=25
AAK Ala-Archa 51.58 296 P **P 06 01 39.5 +0.5**
SNR=6.0
AAK Ala-Archa 51.58 296 *e*P **P 06 01 39.2 +0.2**
AAK *e**PP pP 06 02 02.7 +2.2
AAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
AAK Ala-Archa 51.58 296 *e*P **P 06 01 39.2 +0.2**
comp=Z,5.4nm,0.6s,mb4.8
AAK *ep*P pP 06 02 02.7 +2.2
EKS2 Erkin-Say 52.03 296 P **P 06 01 42.9 +0.5**
SNR=11
EKS2 Erkin-Say 52.03 296 *e*P **P 06 01 42.2 -0.1**
comp=Z,8.2nm,0.9s,mb4.8
EKS2 *ep*P pP 06 02 04.2 +0.4
KSH Kashi 52.14 291 *e*P **P 06 01 47.8 +4.6**
KSH *ep*P pP 06 02 05.5 +0.8
KSH *e*sP sP 06 02 14.3 -0.2
KSH *e*PcP PcP 06 02 57.5 +3.6
KSH *e*PP PP 06 03 48.5 +6.5
KSH *e*ScP ScP 06 06 45.8 +3.1
KSH *e*PcS PcS 06 06 54.8 +2.6
KSH *e*S **S 06 09 05.5 +4.8**
KSH *e*sS sS 06 09 38.5 +1.1
KSH *e*ScS ScS 06 11 26.5 +2.0
KSH *e*SS SS 06 12 42.0 +3.4
KSH pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KSH pmax pmax
comp=Z,210nm,5.9s
KSH LR LR
comp=N,550nm,11.0s
KSH LR LR
comp=E,510nm,12.3s
KSH LR LR
comp=Z,480nm,16.0s
AML Almayashu 52.34 295 P **P 06 01 45.9 +1.2**
SNR=10
RES Resolute Bay 54.27 17 *e*P **P 06 01 56.7 -1.6**
RES pmax pmax
comp=Z,12nm,0.5s,mb5.2
RES Resolute Bay 54.27 17 *e*P **P 06 01 56.7 -1.6**
comp=Z,12nm,0.5s,mb5.2
ARU Arti 54.29 317 *d i*P **P 06 01 56.5 -2.2**
ARU S **S 06 09 28.5 -0.8**
ARU pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
ARU Arti 54.29 317 *e*P **P 06 01 56.7 -2.0**
comp=Z,6.8nm,0.5s,mb4.9
YKA Yellowknife Ar 55.04 34 P **P 06 02 04.3 +0.3**
comp=Z,1.9nm,0.7s,mb4.2,baz=301,slow=7.1,SNR=14
YKA *e*pP pP 06 02 25.0 -0.7
comp=Z,0.5nm,0.6s,baz=301,slow=6.9,SNR=2.7
YKA Yellowknife Ar 55.04 34 P **P 06 02 04.3 +0.3**
YKA *PP pP 06 02 25.0 -0.7
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA pmax pmax
comp=N,1.0nm,0.6s
APA Apatity 58.07 336⇑ *e*P **P 06 02 23.4 -2.0**
APA pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
APA MLR MLR
comp=Z,2μm,18.0s
KEV Kevo 58.36 339 *e*P **P 06 02 24.6 -2.8**
KEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KEV Kevo 58.36 339 *ep* **P 06 02 24.6 -2.8**
comp=Z,6.7nm,0.4s,mb5.0
ARCES ARCESS Array B 58.89 340 P **P 06 02 28.9 -2.2**
comp=Z,3.7nm,0.5s,mb4.7,baz=46,slow=7.8,SNR=33
ARCES ARCESS Array B 58.89 340 P **P 06 02 29.0 -2.1**
ARCES pmax pmax
comp=Z,4.0nm,0.5s
KBL Kabul 59.49 290 *e*P **P 06 02 34.5 -1.2**
KBL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KBL Kabul 59.49 290 *e*P **P 06 02 34.5 -1.2**
comp=Z,4.5nm,0.7s,mb4.6
JOF Joensuu 61.83 332 *e*P **P 06 02 48.3 -2.9**
JOF pmax pmax
comp=Z,6.0nm,0.3s,mb5.1
JOF Joensuu 61.83 332 *ep* **P 06 02 48.3 -2.9**
comp=Z,5.5nm,0.3s,mb5.1
SUMG Summit 63.32 2 *e*P **P 06 03 00.7 -0.3**
comp=Z,6.5nm,0.5s,mb4.8
KAF Kangasniemi 64.04 334 *e*P **P 06 03 02.7 -3.1**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
KAF Kangasniemi 64.04 334 *ep* **P 06 03 02.7 -3.1**
comp=Z,3.2nm,0.4s,mb4.5,baz=42,slow=6.3
FINES FINESS Array B 64.60 333 P **P 06 03 07.5 -2.0**
comp=Z,7.5nm,0.4s,mb4.8,baz=36,slow=6.3,SNR=98
FINES FINESS Array B 64.60 333 P **P 06 03 07.5 -2.0**
FINES pmax pmax
comp=Z,8.0nm,0.4s
WRAB Tennant Creek 65.13 194 *e*P **P 06 03 11.6 -1.7**
WRAB pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
WRAB Tennant Creek 65.13 194 *e*P **P 06 03 11.6 -1.7**
comp=Z,9.2nm,1.1s,mb4.5
BOZ Bozeman (W) 66.14 49 *e*P **P 06 03 20.3 +0.6**
BOZ *e**PP pP 06 03 40.7 -1.4
BOZ pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
BOZ Bozeman (W) 66.14 49 *e*P **P 06 03 20.2 +0.5**
comp=Z,1.8nm,0.5s,mb4.2
BOZ *ep*P pP 06 03 40.7 -1.4
VSR Storozhevoye 66.64 320 *e*P **P 06 03 22.3 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.3s
NVAR Mina Array Bea 66.83 58 P **P 06 03 24.9 +0.6**
comp=E,1.9nm,0.6s,mb4.1,baz=296,slow=7.2,SNR=16
NVAR pP pP 06 03 47.2 +0.5
comp=E,0.7nm,0.7s,baz=301,slow=7.0,SNR=3.1
NVAR Mina Array Bea 66.83 58 P **P 06 03 24.9 +0.6**
NVAR pP pP 06 03 47.2 +0.5
ASAR Alice Springs 68.85 194 P **P 06 03 37.1 +0.2**
comp=E,1.8nm,0.7s,mb4.0,baz=8.7,slow=6.2,SNR=18
ASAR Alice Springs 68.85 194 P **P 06 03 37.1 +0.2**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
PDAR Pinedale Array 69.14 50 P **P 06 03 39.0 +0.3**
comp=Z,0.8nm,0.7s,mb3.7,baz=297,slow=3.7,SNR=8.1
PDAR pP pP 06 04 01.0 -0.1
comp=Z,0.8nm,0.7s,baz=304,slow=3.4,SNR=3.4
NB2 NORSAR Subarra 69.26 339 P **P 06 03 38.1 -0.9**
comp=Z,6.4nm,0.5s,mb4.7,baz=30,slow=6.5
NOA NORSAR Array B 69.26 339 P **P 06 03 37.8 -1.3**
comp=Z,8.5nm,0.5s,mb4.8,baz=31,slow=6.5,SNR=55
NOA NORSAR Array B 69.26 339 P **P 06 03 37.8 -1.2**
NOA pmax pmax
comp=Z,9.0nm,0.5s
EIDS Eidsvold 69.41 177 *e*P **P 06 03 36.2 -4.1**
comp=Z,45nm,0.8s,mb5.3
KIV Kislovodsk 69.77 312⇑ *i*P **P 06 03 44.0 +1.5**
KIV *e* pP 06 04 01.7 -3.3
KIV *e* 06 06 20.5
KIV pmax pmax
comp=Z,40nm,1.0s,mb5.2
KIV Kislovodsk 69.77 312 *e*P **P 06 03 43.7 +1.2**
comp=Z,26nm,0.7s,mb5.2
ZEI Tsey 69.91 310 *e*P **P 06 03 42.9 -0.5**
ZEI pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
SRU San Rafael 71.03 54 *e*P **P 06 03 50.2 0.0**
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
SRU San Rafael 71.03 54 *e*P **P 06 03 50.2 0.0**
comp=Z,2.5nm,0.8s,mb4.1
GNI Garni 71.21 308 *i* P **P 06 03 53.5 +2.2**
GNI pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 71.43 324 P **P 06 03 51.5 -1.0**
comp=Z,9.8nm,0.6s,mb4.8,baz=38,slow=6.1,SNR=42
AKASG Malin Array Be 71.43 324 P **P 06 03 51.5 -0.9**
AKASG pmax pmax
comp=Z,10.0nm,0.6s
AKBB Malin Array Si 71.43 324 *e*P **P 06 03 51.4 -1.0**
KIEV Kiev 71.44 324 *e*P **P 06 03 51.1 -1.4**
KIEV pmax pmax
comp=Z,20nm,1.1s,mb4.9
KIEV Kiev 71.44 324 *e*P **P 06 03 51.1 -1.4**
comp=Z,20nm,1.1s,mb4.9
PV10 Paradox Valley 72.38 53 *e*P **P 06 03 59.0 +0.7**
comp=Z,65nm,0.7s,mb5.6
KWP Kalwaria Pacla 74.92 327 *e*P **P 06 04 13.6 +0.6**
KWP Kalwaria Pacla 74.92 327 *e*P **P 06 04 13.1 +0.1**
KWP pmax pmax
comp=Z,29nm,1.1s,mb4.9
KWP Kalwaria Pacla 74.92 327 *e*P **P 06 04 13.1 +0.1**
comp=Z,29nm,1.1s,mb4.9
KWP Kalwaria Pacla 74.92 327⇑ *i*P **P 06 04 13.5 +0.5**
BUR08 Bucovina Ar. S 75.47 324 *e*P **P 06 04 16.1 -0.1**
BURAR Bucovina Array 75.48 324⇑ P **P 06 04 16.3 0.0**
BURAR Bucovina Array 75.48 324⇑ *i*P **P 06 04 16.3 0.0**
OJC Ojcow 75.57 329 *e*P **P 06 04 15.8 -0.9**
KOLS Kolonicke sedl 75.65 326 *e*P **P 06 04 17.5 +0.3**
KOLS pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
KOLS Kolonicke sedl 75.65 326 *e*P **P 06 04 17.5 +0.3**
comp=Z,7.6nm,1.2s,mb4.3
KOLS Kolonicke sedl 75.65 326 *e*P **P 06 04 17.5 +0.3**
STHS Stebnicka Huta 75.67 327 *e*P **P 06 04 18.0 +0.7**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
STHS Stebnicka Huta 75.67 327 *e*P **P 06 04 18.0 +0.7**
comp=Z,5.3nm,0.7s,mb4.4
STHS Stebnicka Huta 75.67 327 *e*P **P 06 04 17.9 +0.6**
TLCR 75.78 320⇑ P **P 06 04 18.4 +0.4**
TLCR 75.78 320⇑ *i*P **P 06 04 18.4 +0.4**
STKA Stephens Creek 76.05 186 P **P 06 04 20.2 +0.7**
comp=Z,2.9nm,0.8s,mb4.0,baz=348,slow=9.8,SNR=6.8
STKA Stephens Creek 76.05 186 *e*P **P 06 04 19.9 +0.4**
comp=Z,0.5nm,0.7s,mb3.4
CFR Carcaliu 76.09 321⇑ P **P 06 04 20.2 +0.4**
CFR Carcaliu 76.09 321⇑ *i*P **P 06 04 20.1 +0.3**
TRPA Tarpa 76.18 326⇓ *i*P **P 06 04 21.0 +0.7**
TIRR Tirgusor 76.52 320⇓ P **P 06 04 22.1 -0.1**
TIRR Tirgusor 76.52 320⇓ *i*P **P 06 04 22.1 -0.1**
HARR Harsova 76.56 321⇓ P **P 06 04 23.1 +0.6**
HARR Harsova 76.56 321⇓ *i*P **P 06 04 23.1 +0.6**
MIB Mutribah 76.69 299 *e*P **P 06 04 24.1 +0.7**
MIB AMb AMB 06 04 25.1
comp=Z,26nm,0.8s,mb5.0
KECS Kecovo 76.72 327 *e*P **P 06 04 23.6 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KECS Kecovo 76.72 327 *e*P **P 06 04 23.6 +0.3**
comp=Z,1.5nm,0.8s,mb3.8
KECS Kecovo 76.72 327 *e*P **P 06 04 23.6 +0.3**
MORC Moravsky Berou 76.77 329 *e*P **P 06 04 23.9 +0.4**
MORC pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
MORC Moravsky Berou 76.77 329 *e*P **P 06 04 23.9 +0.3**
comp=Z,9.6nm,0.9s,mb4.5
MORC Moravsky Berou 76.77 329⇓ *i*P **P 06 04 24.3 +0.8**
MLR Muntele Rosu 76.83 322⇓ P **P 06 04 24.8 +0.8**
MLR Muntele Rosu 76.83 322⇓ *i*P **P 06 04 24.8 +0.8**
SCHQ Schefferville 76.91 20 P **P 06 04 23.9 -0.3**
comp=Z,1.5nm,0.5s,mb4.0,baz=315,slow=4.3,SNR=7.7
CLL Collm 77.05 333 *i* P **P 06 04 24.3 -0.8**
CLL *i* 06 04 29.9
CLL pmax pmax
comp=Z,12nm,0.8s,mb4.7
CLL MLR MLR
comp=Z,2μm,20.8s
CLL Collm 77.05 333 *i* P **P 06 04 24.3 -0.8**
comp=Z,12nm,0.8s,mb4.7
CLL *i* 06 04 29.9
CLL LR LR
comp=Z,2μm,20.8s
CLL Collm 77.05 333 *i* P **P 06 04 24.3 -0.8**
comp=Z,12nm,0.8s,mb4.7
CLL *i* 06 04 29.9
QRN Al-Qurain 77.05 297 *e*P **P 06 04 26.3 +0.9**
BRG Berggiesshubel 77.11 332 *e*P **P 06 04 21.4 -4.0**
comp=Z,2.2nm,0.7s,mb4.0
BRG *e* 06 04 24.8
comp=Z,3.5nm,0.8s
NAY Al-Naaiem 77.13 298 *e*P **P 06 04 26.3 +0.4**
NAY AMb AMB 06 04 27.2
comp=Z,8.7nm,0.8s,mb4.6
DRGR 77.18 325⇓ *i*P **P 06 04 25.5 -0.4**
DRGR 77.18 325⇓ *i*P **P 06 04 25.5 -0.4**
VYHS Vyhne 77.34 328 *e*P **P 06 04 27.0 +0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.1
VYHS Vyhne 77.34 328 *e*P **P 06 04 27.0 +0.2**
comp=Z,5.0nm,1.3s,mb4.1
VYHS Vyhne 77.34 328 *e*P **P 06 04 27.0 +0.2**
PSZ Piszkesteto 77.41 327 *e*P **P 06 04 27.7 +0.6**
PSZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
PSZ Piszkesteto 77.41 327 *e*P **P 06 04 27.7 +0.6**
comp=Z,6.0nm,0.9s,mb4.3
PSZ Piszkesteto 77.41 327⇓ *i*P **P 06 04 28.3 +1.2**
KOLL Kolacno 77.44 328 *e*P **P 06 04 27.0 -0.3**
KOLL Kolacno 77.44 328 *e*P **P 06 04 27.0 -0.3**
BRTR Keskin Array B 77.53 314 P **P 06 04 28.4 +0.4**
comp=Z,1.7nm,0.8s,mb3.8,baz=80,slow=4.5,SNR=9.3
BRTR Keskin Array B 77.53 314 P **P 06 04 28.4 +0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ZST Bratislava 78.24 329 *e*P **P 06 04 33.3 +1.5**
ZST pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
ZST Bratislava 78.24 329 *e*P **P 06 04 33.3 +1.5**
comp=Z,7.3nm,0.6s,mb4.6
ZST Bratislava 78.24 329 *e*P **P 06 04 33.3 +1.5**
GZR Gura Zlata 78.27 324⇑ P **P 06 04 32.1 +0.1**
GZR Gura Zlata 78.27 324⇑ *i*P **P 06 04 32.1 +0.1**
BZS Buzias 78.58 325⇑ P **P 06 04 34.0 +0.3**
BZS Buzias 78.58 325⇑ *i*P **P 06 04 34.0 +0.3**

KHC	**Kasperske Hory**	78.71	331	*e*P	P	06 04 34.1	-0.2
KHC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
KHC	**Kasperske Hory**	78.71	331	*e*P	P	06 04 34.1	-0.2
	comp=Z,9.3nm,0.6s,mb4.8						
GERES	**GERESS Array B**	78.91	331	P	P	06 04 35.3	-0.2
	comp=Z,3.0nm,0.6s,mb4.3,baz=32,slow=5.2,SNR=25						
GERES	**GERESS Array B**	78.91	331	P	P	06 04 35.3	-0.1
GERES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GRA1	**Grafenberg Arr**	79.02	333	*e*P	P	06 04 36.2	+0.2
	comp=Z,12nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	79.02	333	*e*P	P	06 04 36.2	+0.2
	comp=Z,12nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	79.02	333	*e*P	P	06 04 36.2	+0.2
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	79.02	333	*e*P	P	06 04 36.2	+0.2
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
MEM	**Membach**	79.81	336	P	P	06 04 41.0	+0.7
BCLA	**Clavier**	80.18	337	P	P	06 04 41.9	-0.4
BAIF	**Baives**	80.81	337	*e*P	P	06 04 45.6	-0.1
CDF	**Champ du Feu**	81.39	335	*e*P	P	06 04 48.9	+0.1
	comp=Z,16nm,1.0s,mb4.5						
CDF	**Champ du Feu**	81.39	335	*e*P	P	06 04 48.9	+0.1
CDF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
CDF	**Champ du Feu**	81.39	335	*e*P	P	06 04 48.9	+0.1
	comp=Z,8.0nm,1.0s,mb4.5						
MMAI	**Mount Meron Ar**	81.54	308	P	P	06 04 50.2	+0.3
	comp=Z,1.0nm,0.4s,mb4.0,baz=36,slow=7.2,SNR=5.6						
TXAR	**Lajitas Array**	81.90	57	P	P	06 04 51.9	+0.1
	comp=Z,3.2nm,0.5s,mb4.4,baz=294,slow=3.9,SNR=79						
TXAR				pP	pP	06 05 14.5	-0.4
	comp=Z,1.8nm,0.6s,baz=295,slow=3.9,SNR=7.1						
TXAR	**Lajitas Array**	81.90	57	P	P	06 04 51.9	+0.1
TXAR				*PP	pP	06 05 14.5	-0.4
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TXAR				pmax	pmax		
	comp=N,2.0nm,0.6s						
TXAR	**Lajitas Array**	81.90	57	P	P	06 04 51.9	+0.1
TXAR				pP	pP	06 05 14.5	-0.4
MEZF	**Maizieres J'vi**	81.98	336	*e*P	P	06 04 51.4	-0.5
HINF	**Hinteralfeld**	82.05	335	*e*P	P	06 04 51.9	-0.4
FLN	**La Foliniere**	83.24	340	*e*P	P	06 04 57.6	-0.8
LDF	**La Druitiere**	83.31	339	*e*P	P	06 04 58.0	-0.7
LOR	**Lormes**	83.44	336	*e*P	P	06 04 58.6	-0.8
	comp=N,10nm,0.9s,mb4.4						
LOR	**Lormes**	83.44	336	*e*P	P	06 04 58.6	-0.8
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
LOR	**Lormes**	83.44	336	*e*P	P	06 04 58.6	-0.8
	comp=Z,5.2nm,0.9s,mb4.4						
GRR	**Gorron**	83.68	340	*e*P	P	06 05 00.2	-0.5
	comp=Z,6.7nm,0.7s,mb4.3						
GRR	**Gorron**	83.68	340	*e*P	P	06 05 00.2	-0.5
GRR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
GRR	**Gorron**	83.68	340	*e*P	P	06 05 00.2	-0.5
	comp=Z,3.3nm,0.7s,mb4.3						
SSF	**Saint Saulge**	83.73	336	*e*P	P	06 05 01.1	+0.2
	comp=Z,6.3nm,0.8s,mb4.2						
SSF	**Saint Saulge**	83.73	336	*e*P	P	06 05 01.1	+0.2
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
SSF	**Saint Saulge**	83.73	336	*e*P	P	06 05 01.1	+0.2
	comp=Z,3.2nm,0.8s,mb4.2						
SMF	**Signal de Mont**	84.01	336	*e*P	P	06 05 01.8	-0.6
	comp=Z,15nm,0.9s,mb4.5						
SMF	**Signal de Mont**	84.01	336	*e*P	P	06 05 01.8	-0.6
SMF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
SMF	**Signal de Mont**	84.01	336	*e*P	P	06 05 01.8	-0.6
	comp=Z,7.7nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	84.02	336	*e*P	P	06 05 01.9	-0.5
	comp=Z,10nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	84.02	336	*e*P	P	06 05 01.9	-0.5
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
AVF	**Avril sur Loir**	84.02	336	*e*P	P	06 05 01.9	-0.5
	comp=Z,5.1nm,0.9s,mb4.3						
LPL	**La Plagne**	84.14	334	*e*P	P	06 05 03.2	+0.1
LPG	**La Plagne**	84.15	334	*e*P	P	06 05 03.2	+0.1
	comp=Z,12nm,0.9s,mb4.4						
LPG	**La Plagne**	84.15	334	*e*P	P	06 05 03.2	+0.1
LPG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
LPG	**La Plagne**	84.15	334	*e*P	P	06 05 03.2	+0.1
	comp=Z,5.8nm,0.9s,mb4.4						
SGMF	**Saint Gilles**	84.22	341	*e*P	P	06 05 03.1	-0.3
	comp=Z,24nm,1.1s,mb4.6						
SGMF	**Saint Gilles**	84.22	341	*e*P	P	06 05 03.1	-0.3
SGMF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
SGMF	**Saint Gilles**	84.22	341	*e*P	P	06 05 03.1	-0.3
	comp=Z,12nm,1.1s,mb4.6						
ROSF	**Rostrenen**	84.31	341	*e*P	P	06 05 03.6	-0.3
	comp=Z,7.5nm,0.8s,mb4.2						
ROSF	**Rostrenen**	84.31	341	*e*P	P	06 05 03.6	-0.3
ROSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ROSF	**Rostrenen**	84.31	341	*e*P	P	06 05 03.6	-0.3
	comp=Z,3.8nm,0.8s,mb4.3						
QUIF	**Quistinic**	84.68	341	*e*P	P	06 05 05.2	-0.5
TCF	**Toulx Ste Croi**	84.80	337	*e*P	P	06 05 05.4	-1.0
ORIF	**Oris-en-Rattie**	84.94	334	*e*P	P	06 05 07.0	-0.1
MFF	**Saint Martin d**	85.15	338	*e*P	P	06 05 08.0	-0.1
	comp=Z,7.4nm,0.7s,mb4.4						
MFF	**Saint Martin d**	85.15	338	*e*P	P	06 05 08.0	-0.1
MFF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MFF	**Saint Martin d**	85.15	338	*e*P	P	06 05 08.0	-0.1
	comp=Z,3.7nm,0.7s,mb4.4						
VIVF	**Saint-Julien-l**	85.38	335	*e*P	P	06 05 10.2	+0.9
	comp=Z,10nm,0.9s,mb4.5						
VIVF	**Saint-Julien-l**	85.38	335	*e*P	P	06 05 10.2	+0.9
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
VIVF	**Saint-Julien-l**	85.38	335	*e*P	P	06 05 10.2	+0.9
	comp=Z,5.3nm,0.9s,mb4.5						
SBF	**Sospel**	85.38	332	*e*P	P	06 05 08.6	-0.7
CAF	**Calviac**	86.09	336	*e*P	P	06 05 13.2	+0.4
	comp=Z,15nm,1.2s,mb4.5						
CAF	**Calviac**	86.09	336	*e*P	P	06 05 13.2	+0.4
CAF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
CAF	**Calviac**	86.09	336	*e*P	P	06 05 13.2	+0.4
	comp=Z,7.6nm,1.2s,mb4.5						
LMR	**La Mourre**	86.16	333	*e*P	P	06 05 12.5	-0.7
	comp=Z,21nm,1.1s,mb4.7						
LMR	**La Mourre**	86.16	333	*e*P	P	06 05 12.5	-0.7
LMR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
LMR	**La Mourre**	86.16	333	*e*P	P	06 05 12.5	-0.7
	comp=Z,10nm,1.1s,mb4.7						
LFF	**La Frestale**	86.45	337	*e*P	P	06 05 14.8	+0.2
MTLF	**Montolieu**	87.49	336	*e*P	P	06 05 19.0	-0.7
ETSF	**Etsaut**	88.69	337	*e*P	P	06 05 27.4	+2.0
	comp=Z,6.4nm,0.6s,mb4.5						
ETSF	**Etsaut**	88.69	337	*e*P	P	06 05 27.4	+2.0
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ETSF	**Etsaut**	88.69	337	*e*P	P	06 05 27.4	+2.0
	comp=Z,3.2nm,0.6s,mb4.5						
PLCA	**Paso Flores**	151.63	96	PKPbc	PKPbc	06 12 25.4	-0.2
	comp=Z,1.2nm,0.6s,baz=227,slow=7.6,SNR=3.8						
PLCA				PKPab	PKPab	06 12 34.0	-0.6
	comp=Z,0.8nm,0.4s,baz=317,slow=6.3,SNR=4.0						

CRAAG ***31*** *06:09:10.0,36.̇69N×4.̇67E,MI3.9*
CSEM ***31*** *06:09:11.9±0.2,36.̇72N×4.̇65E,h2km,ML2.8/5,Error ellipse: s-maj=5.0km s-min=4.0km az=40.0*
MDD ***31*** *06:09:12.5±0.4,36.̇67N×4.̇65E,h0km,mb4.0/10,Error ellipse: s-maj=4.4km s-min=4.1km az=24.0,PRIMO*
MDD EMS: IV INTENSIDAD MAXIMA-CRAAG.
LDG ***31*** *06:09:12.9±0.1,36.̇57N×4.̇76E,h10km,Ml3.1/14,Error ellipse: s-maj=3.1km s-min=2.2km az=35.0*
NEIC ***31*** *06:09:14.8,36.̇80N×4.̇58E,h0km,MG3.8(MDD),After MDD.*
ISC 31 06:09:12.4±0.5,36.̇72N±0.̇06×4.̇68E±0.̇04,h12km±8km, n220,σ1§53/308,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	0.13	224	P	Pg	06 09 13.9	-1.8
AKF	**Akfadou**	0.13	224	P	Pg	06 09 13.9	-1.8
AKF	**Akfadou**	0.13	224	P	Pg	06 09 13.9	-1.8
AKF	**Akfadou**	0.13	224	P	Pg	06 09 13.9	-1.8
SET	**Setif**	0.78	132	P	Pg	06 09 26.0	-1.6
SET	**Setif**	0.78	132	P	Pg	06 09 26.0	-1.6
SET	**Setif**	0.78	132	P	Pg	06 09 26.0	-1.6
SET	**Setif**	0.78	132	P	Pg	06 09 26.0	-1.6
AKET	**Djebel Ketaf**	0.93	224	P	Pg	06 09 28.4	-2.0
AKET	**Djebel Ketaf**	0.93	224	P	Pg	06 09 28.4	-2.0
AKET	**Djebel Ketaf**	0.93	224	P	Pg	06 09 28.4	-2.0
AKET	**Djebel Ketaf**	0.93	224	P	Pg	06 09 28.4	-2.0
CKHR	**Kef el Ahmar**	0.98	136	P	Pg	06 09 29.1	-2.2
CKHR	**Kef el Ahmar**	0.98	136	P	Pg	06 09 29.1	-2.2
CKHR	**Kef el Ahmar**	0.98	136	P	Pg	06 09 29.1	-2.2
CKHR	**Kef el Ahmar**	0.98	136	P	Pg	06 09 29.1	-2.2
DFRA	**Djebel Bou Aff**	0.98	100	P	Pg	06 09 30.7	-0.7
DFRA	**Djebel Bou Aff**	0.98	100	P	Pg	06 09 30.7	-0.7
DFRA	**Djebel Bou Aff**	0.98	100	P	Pg	06 09 30.7	-0.7
DFRA	**Djebel Bou Aff**	0.98	100	P	Pg	06 09 30.7	-0.7
ADJB	**Djebel Djouab**	1.15	241	P	Pg	06 09 33.2	-1.3
ADJB	**Djebel Djouab**	1.15	241	P	Pg	06 09 33.2	-1.3
ADJB	**Djebel Djouab**	1.15	241	P	Pg	06 09 33.2	-1.3
ADJB	**Djebel Djouab**	1.15	241	P	Pg	06 09 33.2	-1.3
ABA	**Alger-Bouzarea**	1.32	274	P	Pn	06 09 35.0	-1.6
ABA	**Alger-Bouzarea**	1.32	274	P	Pn	06 09 35.0	-1.6
ABA	**Alger-Bouzarea**	1.32	274	P	Pn	06 09 35.0	-1.6
ABA	**Alger-Bouzarea**	1.32	274	P	Pn	06 09 35.0	-1.6
EMHD	**Djebel Mahouad**	1.48	250	P	Pg	06 09 39.5	-1.4
EMHD	**Djebel Mahouad**	1.48	250	P	Pg	06 09 39.5	-1.4
EMHD	**Djebel Mahouad**	1.48	250	P	Pg	06 09 39.5	-1.4
EMHD	**Djebel Mahouad**	1.48	250	P	Pg	06 09 39.5	-1.4
CASM	**Ain Smara**	1.53	107	P	Pg	06 09 41.0	-0.9
CASM	**Ain Smara**	1.53	107	P	Pg	06 09 41.0	-0.9
CASM	**Ain Smara**	1.53	107	P	Pg	06 09 41.0	-0.9
CASM	**Ain Smara**	1.53	107	P	Pg	06 09 41.0	-0.9
CTEI	**Djebel Teioual**	1.54	115	P	Pg	06 09 42.3	+0.2
CTEI	**Djebel Teioual**	1.54	115	P	Pg	06 09 42.3	+0.2
CTEI	**Djebel Teioual**	1.54	115	P	Pg	06 09 42.3	+0.2
CTEI	**Djebel Teioual**	1.54	115	P	Pg	06 09 42.3	+0.2
CKFL	**Kef-Lekhel**	1.68	101	P	Pg	06 09 44.3	-0.3
CKFL	**Kef-Lekhel**	1.68	101	P	Pg	06 09 44.3	-0.3
CKFL	**Kef-Lekhel**	1.68	101	P	Pg	06 09 44.3	-0.3
CKFL	**Kef-Lekhel**	1.68	101	P	Pg	06 09 44.3	-0.3
CMAH	**Djebel Manchou**	2.21	92	P	Pg	06 09 51.3	-3.5
CMAH	**Djebel Manchou**	2.21	92	P	Pg	06 09 51.3	-3.5
CMAH	**Djebel Manchou**	2.21	92	P	Pg	06 09 51.3	-3.5
CMAH	**Djebel Manchou**	2.21	92	P	Pg	06 09 51.3	-3.5
EBNR	**Beni Rached**	2.57	261	P	Pn	06 09 50.4	-3.4
EANR	**'Ain N'Sour**	2.99	256	P	Pg	06 10 08.6	-1.1
EANR	**'Ain N'Sour**	2.99	256	P	Pg	06 10 08.6	-1.1
EANR	**'Ain N'Sour**	2.99	256	P	Pg	06 10 08.6	-1.1
ETRT	**Tiaret**	3.04	245	P	Pn	06 10 03.0	+2.7
ETRT	**Tiaret**	3.04	245	P	Pn	06 10 03.0	+2.7
ETRT	**Tiaret**	3.04	245	P	Pn	06 10 03.0	+2.7
ETRT	**Tiaret**	3.04	245	P	Pn	06 10 03.0	+2.7
ETOS	**Mallorca**	3.37	335	Pn	Pn	06 10 05.7	+0.8
ETOS				Sn	Sn	06 10 43.8	-1.0
ETOS	**Mallorca**	3.37	335	P	Pn	06 10 05.1	+0.3
	1.5nm,0.2s,SNR=7.9						
ETOS				S	Sn	06 10 43.8	-1.0
	3.4nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	3.37	335	P	Pn	06 10 05.1	+0.3
	1.5nm,0.2s,SNR=7.9						
ETOS				S	Sn	06 10 43.8	-1.0
	3.4nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	3.37	335	Pn	Pn	06 10 05.7	+0.8
	1.5nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	06 10 43.8	-1.0
	3.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	3.50	312	Pn	Pn	06 10 07.7	+1.1
EIBI				Sn	Sn	06 10 46.0	-1.9
EIBI	**Ibiza**	3.50	312	P	Pn	06 10 07.7	+1.1
	0.8nm,0.1s,SNR=8.7						
EIBI				S	Sn	06 10 46.0	-1.9
	2.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	3.50	312	P	Pn	06 10 07.7	+1.1
	0.8nm,0.1s,SNR=8.7						
EIBI				S	Sn	06 10 46.0	-1.9
	2.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	3.50	312	Pn	Pn	06 10 07.7	+1.1
	0.8nm,0.1s,SNR=8.7						
EIBI				Sn	Sn	06 10 46.0	-1.9
	2.5nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	4.36	298	Pn	Pn	06 10 19.4	+1.0
EBEN				Sn	Sn	06 11 06.6	-2.5
EBEN	**Beniarda**	4.36	298	P	Pn	06 10 19.4	+1.0
	0.4nm,0.3s,SNR=7.9						
EBEN				S	Sn	06 11 06.6	-2.5
	0.3nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	4.36	298	P	Pn	06 10 19.4	+1.0
	0.4nm,0.3s,SNR=7.9						
EBEN				S	Sn	06 11 06.6	-2.5
	0.3nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	4.36	298	Pn	Pn	06 10 19.5	+1.1
EBEN				Sn	Sn	06 11 06.6	-2.5
	0.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	5.30	293	Pn	Pn	06 10 32.4	+1.1
ETOB				Sn	Sn	06 11 31.0	-1.2
ETOB	**Tobarra**	5.30	293	P	Pn	06 10 32.0	+0.7
	1.7nm,0.2s,SNR=12						
ETOB				S	Sn	06 11 29.7	-2.5
	0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	5.30	293	P	Pn	06 10 32.0	+0.7
	1.7nm,0.2s,SNR=12						
ETOB				S	Sn	06 11 29.7	-2.5
	0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	5.30	293	Pn	Pn	06 10 32.4	+1.1
	1.7nm,0.2s,SNR=12						
ETOB				Sn	Sn	06 11 31.0	-1.2
	0.7nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	5.32	342	Pn	Pn	06 10 32.1	+0.5
CFON				Sn	Sn	06 11 32.0	-0.9
CFON	**Fontmartina**	5.32	342	P	Pn	06 10 32.2	+0.5
	44nm,0.2s,SNR=7.9						
CFON				S	Sn	06 11 32.0	-0.9
	12nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	5.32	342	P	Pn	06 10 32.2	+0.5
	44nm,0.2s,SNR=7.9						
CFON				S	Sn	06 11 32.0	-0.9
	12nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	5.32	342	Pn	Pn	06 10 32.2	+0.6
	44nm,0.2s,SNR=7.9						
CFON				Sn	Sn	06 11 32.0	-0.8
	12nm,0.2s,SNR=7.9						
EPOB	**Poblet**	5.40	330	Pn	Pn	06 10 33.9	+1.1
EPOB				Sn	Sn	06 11 31.2	-3.6
EPOB	**Poblet**	5.40	330	P	Pn	06 10 33.6	+0.9
	0.5nm,0.1s,SNR=7.9						
EPOB				S	Sn	06 11 31.2	-3.6
	1.0nm,0.2s,SNR=7.9						
EPOB	**Poblet**	5.40	330	P	Pn	06 10 33.6	+0.9
	0.5nm,0.1s,SNR=7.9						
EPOB				S	Sn	06 11 31.2	-3.6
	1.0nm,0.2s,SNR=7.9						
EPOB	**Poblet**	5.40	330	Pn	Pn	06 10 33.9	+1.1
	0.5nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	06 11 31.2	-3.6
	1.0nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	5.43	314	Pn	Pn	06 10 33.9	+0.8
EMOS				Sn	Sn	06 11 32.9	-2.6
EMOS	**Mosqueruela**	5.43	314	P	Pn	06 10 33.9	+0.8
	0.6nm,0.2s,SNR=11						
EMOS				S	Sn	06 11 32.9	-2.6
	0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	5.43	314	P	Pn	06 10 33.9	+0.8
	0.6nm,0.2s,SNR=11						
EMOS				S	Sn	06 11 32.9	-2.6
	0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	5.43	314	Pn	Pn	06 10 33.9	+0.8
	0.6nm,0.2s,SNR=11						
EMOS				Sn	Sn	06 11 32.9	-2.6
	0.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	5.88	347	P	Pn	06 10 39.8	+0.5
	1.8nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	5.88	347	P	Pn	06 10 39.8	+0.5
	1.8nm,0.3s,SNR=7.9						
EVIA	**Vianos**	6.01	291	Pn	Pn	06 10 41.6	+0.6
EVIA	**Vianos**	6.01	291	P	Pn	06 10 41.6	+0.6
	1.5nm,0.3s,SNR=7.2						
EVIA	**Vianos**	6.01	291	P	Pn	06 10 41.6	+0.6
	1.5nm,0.3s,SNR=7.2						
EVIA	**Vianos**	6.01	291	Pn	Pn	06 10 41.6	+0.6
	1.5nm,0.3s,SNR=7.2						
VALF	**Valcebollere**	6.03	341	P	Pn	06 10 43.1	+1.7
FILF	**Fillols**	6.05	345	P	Pn	06 10 43.5	+1.8
CLLI	**Lliivia**	6.11	341	Pn	Pn	06 10 44.6	+2.1
CLLI	**Lliivia**	6.11	341	P	Pn	06 10 44.6	+2.1
	22nm,0.4s,SNR=7.9						
CLLI	**Lliivia**	6.11	341	P	Pn	06 10 44.6	+2.1
	22nm,0.4s,SNR=7.9						
CLLI	**Lliivia**	6.11	341	Pn	Pn	06 10 44.6	+2.1
	22nm,0.4s,SNR=7.9						
CSOR	**Sort**	6.27	335	Pn	Pn	06 10 46.8	+2.1
CSOR				Sn	Sn	06 11 53.6	-2.6
CSOR	**Sort**	6.27	335	P	Pn	06 10 46.8	+2.1
	4.4nm,0.1s,SNR=7.9						
CSOR				S	Sn	06 11 53.6	-2.6
	13nm,0.3s,SNR=7.9						
CSOR	**Sort**	6.27	335	P	Pn	06 10 46.8	+2.1
	4.4nm,0.1s,SNR=7.9						
CSOR				S	Sn	06 11 53.6	-2.6
	13nm,0.3s,SNR=7.9						
CSOR	**Sort**	6.27	335	Pn	Pn	06 10 46.8	+2.1
	4.4nm,0.1s,SNR=7.9						
CSOR				Sn	Sn	06 11 53.6	-2.6
	13nm,0.3s,SNR=7.9						
EQES	**Quesada**	6.27	282	Pn	Pn	06 10 46.6	+2.0
EQES				Sn	Sn	06 11 54.5	-1.7
EQES	**Quesada**	6.27	282	P	Pn	06 10 46.6	+1.9
	0.3nm,0.1s,SNR=5.3						
EQES				S	Sn	06 11 54.5	-1.7
	0.4nm,0.3s,SNR=7.9						
EQES	**Quesada**	6.27	282	P	Pn	06 10 46.6	+1.9
	0.3nm,0.1s,SNR=5.3						
EQES				S	Sn	06 11 54.5	-1.7
	0.4nm,0.3s,SNR=7.9						
EQES	**Quesada**	6.27	282	Pn	Pn	06 10 46.6	+1.9
	0.3nm,0.1s,SNR=5.3						
EQES				Sn	Sn	06 11 54.5	-1.8
	0.4nm,0.3s,SNR=7.9						
CARF	**Carcanieres**	6.30	342	P	Pn	06 10 47.2	+2.1
CARF	**Carcanieres**	6.30	342	P	Pn	06 10 47.2	+2.1
ESAC	**San Caprasio**	6.39	323	Pn	Pn	06 10 48.3	+2.0
ESAC	**San Caprasio**	6.39	323	P	Pn	06 10 47.6	+1.2
	2.6nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	6.39	323	P	Pn	06 10 47.6	+1.2
	2.6nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	6.39	323	Pn	Pn	06 10 48.3	+2.0
	2.6nm,0.2s,SNR=7.9						
SALF	**Salau**	6.60	337	P	Pn	06 10 51.6	+2.4
SALF	**Salau**	6.60	337	P	Pn	06 10 51.6	+2.4
ETOR	**Torete**	6.66	310	Pn	Pn	06 10 52.0	+1.9
ETOR	**Torete**	6.66	310	P	Pn	06 10 52.5	+2.5
	5.8nm,0.5s,SNR=7.9						
ETOR	**Torete**	6.66	310	P	Pn	06 10 52.5	+2.5
	5.8nm,0.5s,SNR=7.9						
ETOR	**Torete**	6.66	310	Pn	Pn	06 10 52.0	+2.0
	0.5nm,0.1s,SNR=7.9						
PGF	**Pioggiola**	6.70	28	*e*Pn	Pn	06 10 50.5	-0.1
PGF				*e*Sn	Sn	06 12 03.5	-3.3
	3.4nm,0.4s						
PGF	**Pioggiola**	6.70	28	P	Pn	06 10 50.5	-0.1
PGF				S	Sn	06 12 03.5	-3.3
	1.7nm,0.4s						
PGF	**Pioggiola**	6.70	28	P	Pn	06 10 50.5	-0.1
PGF				S	Sn	06 12 03.5	-3.3
	1.7nm,0.4s						
PGF	**Pioggiola**	6.70	28	*e*Pn	Pn	06 10 50.5	-0.1
PGF				*e*Sn	Sn	06 12 03.5	-3.3
	1.7nm,0.4s						
LMR	**La Mourre**	6.75	11	*e*Pn	Pn	06 10 51.9	+0.7
LMR				*e*Sn	Sn	06 12 05.6	-2.4
	2.6nm,0.4s						
LMR	**La Mourre**	6.75	11	P	Pn	06 10 51.9	+0.7
LMR				S	Sn	06 12 05.6	-2.4
	1.3nm,0.4s						
LMR	**La Mourre**	6.75	11	P	Pn	06 10 51.9	+0.7
LMR				S	Sn	06 12 05.6	-2.4
	1.3nm,0.4s						
LMR	**La Mourre**	6.75	11	*e*Pn	Pn	06 10 51.9	+0.7
LMR				*e*Sn	Sn	06 12 05.6	-2.4
	1.3nm,0.4s						
MLS	**Moulis**	6.81	337	P	Pn	06 10 51.7	-0.3

1.9nm,0.3s
SJPF Ste Jean 7.83 326 *e*Pn **Pn 06 11 06.9 +0.9**
SJPF *e*Sn **Sn 06 12 31.6 -2.9**
1.0nm,0.3s
SJPF Ste Jean 7.83 326 P **Pn 06 11 06.9 +0.9**
SJPF S **Sn 06 12 31.6 -2.9**
0.5nm,0.3s
SJPF Ste Jean 7.83 326 P **Pn 06 11 06.9 +0.9**
SJPF S **Sn 06 12 31.6 -2.9**
0.5nm,0.3s
SJPF Ste Jean 7.83 326 *e*Pn **Pn 06 11 06.9 +0.9**
SJPF *e*Sn **Sn 06 12 31.6 -2.9**
0.5nm,0.3s
EALK Alkurruntz 8.04 326 P **Pn 06 11 10.8 +2.0**
3.0nm,0.4s,SNR=7.9
EALK Alkurruntz 8.04 326 P **Pn 06 11 10.8 +2.0**
3.0nm,0.4s,SNR=7.9
VIVF Saint-Julien-I 8.12 360 *e*Pn **Pn 06 11 10.9 +0.8**
VIVF *e*Sn **Sn 06 12 38.8 -3.0**
2.8nm,0.3s
VIVF Saint-Julien-I 8.12 360 Pn **Pn 06 11 10.9 +0.8**
VIVF S **Sn 06 12 38.8 -3.0**
1.4nm,0.3s
VIVF Saint-Julien-I 8.12 360 Pn **Pn 06 11 10.9 +0.8**
VIVF S **Sn 06 12 38.8 -3.0**
1.4nm,0.3s
VIVF Saint-Julien-I 8.12 360 *e*Pn **Pn 06 11 10.9 +0.8**
VIVF *e*Sn **Sn 06 12 38.8 -3.0**
1.4nm,0.3s
MBDF Montbardon 8.15 11 *e*Pn **Pn 06 11 11.4 +1.0**
MBDF *e*Sn **Sn 06 12 39.2 -3.2**
3.3nm,0.3s
MBDF Montbardon 8.15 11 P **Pn 06 11 11.4 +1.0**
MBDF S **Sn 06 12 39.2 -3.2**
1.7nm,0.3s
MBDF Montbardon 8.15 11 P **Pn 06 11 11.4 +1.0**
MBDF S **Sn 06 12 39.2 -3.2**
1.7nm,0.3s
MBDF Montbardon 8.15 11 *e*Pn **Pn 06 11 11.4 +1.0**
MBDF *e*Sn **Sn 06 12 39.2 -3.2**
1.6nm,0.3s
ORIF Oris-en-Rattie 8.24 6 *e*Pn **Pn 06 11 12.4 +0.8**
ORIF *e*Sn **Sn 06 12 41.3 -3.2**
2.7nm,0.4s
ORIF Oris-en-Rattie 8.24 6 P **Pn 06 11 12.4 +0.8**
ORIF S **Sn 06 12 41.3 -3.2**
1.4nm,0.4s
ORIF Oris-en-Rattie 8.24 6 P **Pn 06 11 12.4 +0.8**
ORIF S **Sn 06 12 41.3 -3.2**
1.4nm,0.4s
ORIF Oris-en-Rattie 8.24 6 *e*Pn **Pn 06 11 12.4 +0.8**
ORIF *e*Sn **Sn 06 12 41.3 -3.2**
1.4nm,0.4s
CAF Calviac 8.43 347 *e*Pn **Pn 06 11 15.2 +0.9**
CAF *e*Sn **Sn 06 12 46.3 -2.9**
0.6nm,0.3s
CAF Calviac 8.43 347 P **Pn 06 11 15.2 +0.9**
CAF S **Sn 06 12 46.3 -2.9**
0.3nm,0.3s
CAF Calviac 8.43 347 P **Pn 06 11 15.2 +0.9**
CAF S **Sn 06 12 46.3 -2.9**
0.3nm,0.3s
CAF Calviac 8.43 347 *e*Pn **Pn 06 11 15.2 +0.9**
CAF *e*Sn **Sn 06 12 46.3 -2.9**
0.3nm,0.3s
LFF La Frestale 8.73 341 *e*Pn **Pn 06 11 19.3 +0.9**
LFF La Frestale 8.73 341 P **Pn 06 11 19.3 +0.9**
LFF La Frestale 8.73 341 P **Pn 06 11 19.3 +0.9**
LFF La Frestale 8.73 341 *e*Pn **Pn 06 11 19.3 +0.9**
RJF Les Rejaudoux 8.90 345 *e*Pn **Pn 06 11 21.5 +0.8**
RJF Les Rejaudoux 8.90 345 P **Pn 06 11 21.5 +0.8**
RJF Les Rejaudoux 8.90 345 P **Pn 06 11 21.5 +0.8**
RJF Les Rejaudoux 8.90 345 *e*Pn **Pn 06 11 21.5 +0.8**
ELAN Lanestosa 9.00 319 P **Pn 06 11 23.3 +1.2**
1.2nm,0.6s,SNR=7.9
ELAN Lanestosa 9.00 319 P **Pn 06 11 23.3 +1.2**
1.2nm,0.6s,SNR=7.9
EARI Arriondas 10.03 314 P **Pn 06 11 38.2 +2.0**
2.5nm,0.5s,SNR=7.9
EARI Arriondas 10.03 314 P **Pn 06 11 38.2 +2.0**
2.5nm,0.5s,SNR=7.9
MVO Moncorvo 10.14 299 P **Pn 06 11 38.5 +0.8**
0.8nm,0.3s,SNR=7.9
MVO Moncorvo 10.14 299 P **Pn 06 11 38.5 +0.8**
0.8nm,0.3s,SNR=7.9
ECAL Calabor 10.26 304 P **Pn 06 11 39.9 +0.5**
3.1nm,0.5s,SNR=7.9
ECAL Calabor 10.26 304 P **Pn 06 11 39.9 +0.5**
3.1nm,0.5s,SNR=7.9
MFF Saint Martin d 10.51 341 *e*Pn **Pn 06 11 43.2 +0.5**
MFF Saint Martin d 10.51 341 P **Pn 06 11 43.2 +0.5**
MFF Saint Martin d 10.51 341 P **Pn 06 11 43.2 +0.5**
MFF Saint Martin d 10.51 341 *e*Pn **Pn 06 11 43.2 +0.5**
GRR Gorron 12.35 342 *e*Pn **Pn 06 12 08.3 +0.4**
GRR Gorron 12.35 342 P **Pn 06 12 08.3 +0.4**
GRR Gorron 12.35 342 P **Pn 06 12 08.3 +0.4**
GRR Gorron 12.35 342 *e*Pn **Pn 06 12 08.3 +0.4**
LDF La Druitiere 12.37 345 *e*Pn **Pn 06 12 08.8 +0.6**
LDF La Druitiere 12.37 345 *e*Pn **Pn 06 12 08.8 +0.6**
QUIF Quistinic 12.59 335 *e*Pn **Pn 06 12 11.8 +0.6**
QUIF Quistinic 12.59 335 P **Pn 06 12 11.8 +0.6**
QUIF Quistinic 12.59 335 P **Pn 06 12 11.8 +0.6**
QUIF Quistinic 12.59 335 *e*Pn **Pn 06 12 11.8 +0.6**
FLN La Foliniere 12.61 344 *e*Pn **Pn 06 12 12.0 +0.5**
FLN La Foliniere 12.61 344 P **Pn 06 12 12.0 +0.5**
FLN La Foliniere 12.61 344 P **Pn 06 12 12.0 +0.5**
FLN La Foliniere 12.61 344 *e*Pn **Pn 06 12 12.0 +0.5**
SGMF Saint Gilles 12.69 337 *e*Pn **Pn 06 12 13.2 +0.6**
SGMF Saint Gilles 12.69 337 P **Pn 06 12 13.2 +0.6**
SGMF Saint Gilles 12.69 337 P **Pn 06 12 13.2 +0.6**
SGMF Saint Gilles 12.69 337 *e*Pn **Pn 06 12 13.2 +0.6**
ROSF Rostrenen 12.99 336 *e*Pn **Pn 06 12 17.4 +0.7**
ROSF Rostrenen 12.99 336 P **Pn 06 12 17.4 +0.7**
ROSF Rostrenen 12.99 336 P **Pn 06 12 17.4 +0.7**
ROSF Rostrenen 12.99 336 *e*Pn **Pn 06 12 17.4 +0.7**

*ISCJB **31** 06:13:48.8±0.6, 1°.20N±0°.05×79°.16W±0°.07, h48km±9km, mb4.0/12, Error ellipse: s-maj=11.1km s-min=7.8km az=172.4*
*NEIC **31** 06:13:49.6±1.0, 1°.08N×79°.13W, h46km±11km, mb4.4/6, MD4.6(IGQ), Error ellipse: s-maj=15.8km s-min=6.8km az=62.0*
NEIC Felt at Esmeraldas and Guayaquil.
*IDC **31** 06:13:51.7±2.4, 1°.21N×79°.04W, h65km±25km, mb3.5/8, mb1 3.9/12, mb1mx3.7/23, mbtmp3.7/12, ML3.5/4, Error ellipse: s-maj=31.8km s-min=14.2km az=65.0*
*IGQ **31** 06:13:53.5, 0°.71N×78°.93W, h15km±1km, Mb4.5, Ms4.3, Error ellipse: s-maj=1.4km s-min=0.6km az=56.5*
ISC 31 06:13:50.4±0.6, 1°.14N±0°.04×79°.16W±0°.07, h47km±9km, n52, σ1§23/52, mb4.0/12, 16C-1D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**1.14**	**141**	⇑S	**Sn**	**06 14 16.6**	**-7.9**
OTAV	**Otavalo**	**1.14**	**141**	⇑P	**Pn**	**06 14 06.9**	**-3.1**
OTAV	**Otavalo**	**1.14**	**141**	*e*Pn	**Pn**	**06 14 07.3**	**-2.7**
COTA	**Cotacachi**	**1.15**	**134**	⇑P	**Pn**	**06 14 07.6**	**-2.5**
YANA	**Yana**	**1.38**	**155**	P	**Pn**	**06 14 11.4**	**-1.9**
PINO	**Pino**	**1.40**	**157**	⇑P	**Pn**	**06 14 11.8**	**-1.8**
TERV	**Terraza Guagua**	**1.42**	**157**	P	**Pn**	**06 14 12.0**	**-1.8**
GGP	**Refugio Guagua**	**1.42**	**156**	⇑P	**Pn**	**06 14 12.0**	**-1.8**
JUA2	**San Juan 2**	**1.45**	**157**	P	**Pn**	**06 14 12.3**	**-1.9**
CAYA	**Cayambe**	**1.58**	**132**	⇓P	**Pn**	**06 14 15.2**	**-0.8**
JAMA	**Jama**	**1.74**	**217**	⇑P	**Pn**	**06 14 16.3**	**-1.8**
PITA	**Cotopaxi Volc**	**1.84**	**157**	⇑P	**Pn**	**06 14 19.6**	**+0.1**
ANTI	**Antisana**	**1.87**	**148**	⇑P	**Pn**	**06 14 19.8**	**-0.2**
VC1	**Cotopaxi 1**	**1.93**	**157**	⇑P	**Pn**	**06 14 21.0**	**+0.3**
CHAR	**Charly**	**1.93**	**129**	⇑P	**Pn**	**06 14 21.4**	**+0.7**
CONE	**Cono NE Rev Vo**	**1.94**	**128**	⇑P	**Pn**	**06 14 21.5**	**+0.6**
LAV3	**Lava3-Reventad**	**1.96**	**129**	⇑P	**Pn**	**06 14 21.8**	**+0.6**
COV1	**Cotopaxi Volc**	**1.97**	**155**	⇑P	**Pn**	**06 14 21.6**	**+0.3**
TAMB	**Tambo**	**1.99**	**156**	⇑P	**Pn**	**06 14 22.0**	**+0.5**
PISA	**Pisayambo**	**2.32**	**160**	⇑P	**Pn**	**06 14 27.6**	**+1.6**
JUI6	**Juive**	**2.64**	**165**	P	**Pn**	**06 14 32.0**	**+1.5**
RUN5	**Runtun**	**2.64**	**164**	P	**Pn**	**06 14 32.6**	**+2.0**
BIL2	**Estacion Bilba**	**2.66**	**166**	P	**Pn**	**06 14 32.3**	**+1.5**
IGUA	**Igualata**	**2.66**	**169**	P	**Pn**	**06 14 32.4**	**+1.5**
CHIS	**Cerro-Chispas-**	**2.67**	**216**	P	**Pn**	**06 14 29.2**	**-1.8**
ARRY	**Arrayan**	**2.72**	**165**	⇑P	**Pn**	**06 14 31.9**	**+0.3**
PATA	**Patacocha**	**2.72**	**164**	P	**Pn**	**06 14 33.7**	**+2.0**
RIOE	**Riobamba**	**2.92**	**169**	P	**Pn**	**06 14 36.8**	**+2.4**

MACE	**Macas**	**3.50**	**164**	P	**Pn**	**06 14 44.0**	**+1.6**
ROSC	**El Rosal**	**6.08**	**52**	P	**Pn**	**06 15 18.1**	**+0.3**
	6.8nm,0.3s,baz=234,slow=1.1,SNR=14						
ROSC				S	**Sn**	**06 16 32.5**	**+6.5**
	2.0nm,0.3s,baz=90,slow=19,SNR=6.0						
BCIP	**Isla Barro Col**	**8.00**	**355**	*e*Pn	**Pn**	**06 15 44.6**	**+0.5**
	19nm,1.0s						
ATAH	**Atahualpa**	**8.12**	**175**	P	**Pn**	**06 15 50.5**	**+4.8**
	1.2nm,0.3s,baz=17,slow=16,SNR=5.2						
JTS	**Juntas&Bangare**	**10.76**	**328**	P	**Pn**	**06 16 22.8**	**+0.9**
	0.4nm,0.3s,baz=97,slow=8.5,SNR=5.7						
SDV	**Santo Domingo**	**11.46**	**48**	P	**Pn**	**06 16 31.0**	**-0.5**
	1.1nm,0.3s,baz=239,slow=5.9,SNR=8.8						
LPAZ	**La Paz**	**20.46**	**148**	P	**P**	**06 18 24.6**	**+0.4**
	11nm,0.7s,baz=340,slow=10,SNR=53						
LPAZ	**La Paz**	**20.46**	**148**	*e*P	**P**	**06 18 24.6**	**+0.4**
	12nm,0.7s						
CMIG	**Matias Romero**	**22.15**	**317**	P	**P**	**06 18 41.9**	**-0.5**
	3.7nm,0.8s,mb3.9,baz=105,slow=10,SNR=4.4						
CMIG	**Matias Romero**	**22.15**	**317**	P	**P**	**06 18 41.9**	**-0.5**
CPUP	**Villa Florida**	**34.49**	**144**	P	**P**	**06 20 32.5**	**-1.7**
	1.0nm,0.6s,mb3.9,baz=306,slow=10,SNR=3.9						
CPUP	**Villa Florida**	**34.49**	**144**	P	**P**	**06 20 32.5**	**-1.7**
TXAR	**Lajitas Array**	**36.49**	**322**	P	**P**	**06 20 51.7**	**+0.5**
	0.2nm,0.8s,mb3.1,baz=158,slow=12,SNR=2.8						
TXAR				PcP	PcP	06 23 14.4	0.0
	0.3nm,0.9s,baz=131,slow=4.9,SNR=2.8						
ANMO	**Albuquerque**	**42.17**	**326**	*e*P	**P**	**06 21 39.8**	**+1.1**
	2.8nm,0.9s,mb3.9						
PLCA	**Paso Flores**	**42.41**	**170**	P	**P**	**06 21 40.8**	**+0.4**
	2.6nm,0.8s,mb3.9,baz=310,slow=9.4,SNR=4.9						
SDCO	**Great Sand Dun**	**43.75**	**329**	*e*P	**P**	**06 21 52.1**	**+0.8**
	1.4nm,0.7s,mb3.8						
PV10	**Paradox Valley**	**46.08**	**327**	*e*P	**P**	**06 22 09.7**	**-0.2**
	28nm,0.8s,mb5.2						
RSSD	**Black Hills**	**48.17**	**336**	*e*P	**P**	**06 22 26.4**	**+0.4**
	4.0nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**49.58**	**331**	P	**P**	**06 22 35.9**	**-0.9**
	0.8nm,1.1s,mb3.7,baz=122,slow=8.6,SNR=2.8						
SNOW	**Snow King Moun**	**50.68**	**330**	*e*P	**P**	**06 22 44.8**	**-0.4**
	4.7nm,0.8s,mb4.5						
NVAR	**Mina Array Bea**	**51.59**	**321**	P	**P**	**06 22 52.1**	**0.0**
	1.1nm,0.9s,mb3.8,baz=146,slow=7.3,SNR=7.3						
YKA	**Yellowknife Ar**	**66.69**	**343**	P	**P**	**06 24 34.9**	**-1.2**
	0.3nm,0.7s,mb3.4,baz=141,slow=5.6,SNR=5.2						
YKA	**Yellowknife Ar**	**66.69**	**343**	P	**P**	**06 24 34.9**	**-1.2**
EIDS	**Eidsvold**	**125.93**	**239**	*e*PKPdf	PKPdf	06 32 47.0	-1.1

*ISCJB **31** 06:22:39.8±0.3, 32°.30N±0°.03×105°.16E±0°.04, h10km, mb4.6/48, Error ellipse: s-maj=5.7km s-min=4.3km az=36.3*
*IDC **31** 06:22:40.0±0.7, 32°.33N×105°.10E, h0km, mb4.4/18, mb1 4.5/21, mb1mx4.4/29, mbtmp4.4/21, ML4.1/3, Error ellipse: s-maj=22.7km s-min=14.7km az=45.0*
*NEIC **31** 06:22:42.0±0.3, 32°.33N×105°.06E, h10km, mb4.6/27, Error ellipse: s-maj=8.6km s-min=6.5km az=51.0*
*BJI **31** 06:22:42.1, 32°.32N×105°.11E, h15km, mB4.9/8, mb4.5/16, ML4.3/20, Ms4.3/18, Ms7 4.2/16*
*MOS **31** 06:22:43.8±0.8, 32°.30N×105°.11E, h40km, mb4.7/36, Error ellipse: s-maj=11.8km s-min=5.7km az=108.5*
ISC 31 06:22:40.7±1.0, 32°.32N±0°.03×105°.19E±0°.04, h3km±6km, n137, σ1§07/147, mb4.6/48, 5C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.86**	**221**	Pn	**Pn**	**06 23 14.0**	**+0.6**
CD2				Sg	**Sg**	**06 23 39.0**	**-1.4**
CD2				smax			
	comp=N,15μm,0.7s						
XAN	**Xi'an**	**3.57**	**60**	Pn	**Pn**	**06 23 39.0**	**+2.1**
XAN				Sn	**Sn**	**06 24 18.8**	**-0.8**
XAN				Sg	**Sg**	**06 24 34.0**	**-1.4**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,580nm,0.7s						
XAN				LR	LR		
	comp=N,1μm,10.1s						
XAN				LR	LR		
	comp=E,530nm,11.2s						
XAN				LR	LR		
	comp=Z,470nm,8.9s						
LZH	**Lanzhou**	**3.92**	**344**	Pn	**Pn**	**06 23 44.5**	**+2.8**
LZH				Pg	**Pg**	**06 23 54.5**	**-1.3**
LZH				Sn	**Sn**	**06 24 30.0**	**+1.8**
LZH				Sg	**Sg**	**06 24 43.5**	**-3.1**
LZH				smax			
	comp=N,1μm,0.7s						
LZH				smax			
	comp=E,3μm,0.6s						
LZH				LR	LR		
	comp=E,4μm,4.5s						
LZH				LR	LR		
	comp=Z,6μm,5.8s						
ENH	**Enshi**	**4.21**	**118**	*e*Pn	**Pn**	**06 23 50.5**	**+4.9**
GYA	**Guiyang**	**5.98**	**167**	⇑*e*Pn	**Pn**	**06 24 12.0**	**+2.0**
GYA				smax			
	comp=N,600nm,0.9s						
GYA				smax			
	comp=E,840nm,0.6s						
GYA				LR	LR		
	comp=N,2μm,3.8s						
GYA				LR	LR		
	comp=E,2μm,4.6s						
GYA				LR	LR		
	comp=Z,3μm,4.9s						
KMI	**Kunming**	**7.48**	**197**	Pn	**Pn**	**06 24 32.3**	**+1.6**
KMI				smax			
	comp=N,74nm,1.2s						
KMI				smax			
	comp=E,83nm,0.9s						
KMI				LR	LR		
	comp=N,910nm,14.0s						
KMI				LR	LR		
	comp=E,780nm,13.4s						
WHN	**Wuhan**	**8.03**	**100**	*e*P	**Pn**	**06 24 43.0**	**+4.9**
WHN				S	**Sn**	**06 26 07.5**	**-1.9**
WHN				LR	LR		
	comp=N,3μm,6.5s						
WHN				LR	LR		
	comp=E,3μm,5.0s						
HHC	**Hu-ho-hao-te**	**9.94**	**29**	*e*P	**Pn**	**06 25 12.8**	**+8.5**
HHC				S	**Sn**	**06 27 05.3**	**+9.1**
HHC				sS		06 27 15.0	
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,310nm,4.9s						
HHC				LR	LR		
	comp=N,690nm,5.3s						
HHC				LR	LR		
	comp=E,370nm,5.7s						
HHC				LR	LR		
	comp=Z,420nm,5.6s						
CMAR	**Chiang Mai Arr**	**14.90**	**204**	Pn	**Pn**	**06 26 12.7**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=17,slow=12,SNR=17						
CMAR	**Chiang Mai Arr**	**14.90**	**204**	P	**Pn**	**06 26 12.7**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**15.53**	**3**	Pn	**Pn**	**06 26 21.2**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=195,slow=11,SNR=5.8						
ULN	**Ulaanbaatar**	**15.60**	**5**	*e*P	**Pn**	**06 26 23.4**	**+2.1**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
ULN	**Ulaanbaatar**	**15.60**	**5**	*e*P	**Pn**	**06 26 23.4**	**+2.1**
	comp=Z,19nm,1.3s						
ZAK	**Zakamensk**	**18.11**	**356**	*e*P	**Pn**	**06 26 54.6**	**+1.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSRS	**Korea Array**	**19.33**	**68**	P	**Pn**	**06 27 08.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=254,slow=9.6,SNR=14						
TLY	**Talaya**	**19.38**	**357**	*e*P	**Pn**	**06 27 09.7**	**+1.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MOY	**Mondy**	**19.58**	**352**	*e*P	**Pn**	**06 27 11.6**	**+0.8**
MOY				pmax	pmax		
	comp=Z,15nm,1.6s						
CN2	**Changchun**	**19.59**	**48**	*e*P	**Pn**	**06 27 11.0**	**-0.1**
CN2				*e*S	**Sn**	**06 30 44.5**	**-6.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,720nm,19.0s						
CN2				LR	LR		
	comp=E,1μm,19.0s						
CN2				LR	LR		
	comp=Z,750nm,21.0s						
IRK	**Irkutsk**	**19.92**	**358**	*e*P	**Pn**	**06 27 15.9**	**+1.0**
IRK				pmax	pmax		
	comp=Z,41nm,1.4s						
HIA	**Hailar**	**20.14**	**29**	*e*P	**P**	**06 27 16.7**	**+1.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	**Hailar**	**20.14**	**29**	*e*P	**P**	**06 27 16.6**	**+0.9**
	comp=Z,10nm,0.6s						
MK31	**Makanchi Array**	**22.71**	**316**	*e*P	**P**	**06 27 43.2**	**-0.2**
MKAR	**Makanchi Array**	**22.71**	**316**	P	**P**	**06 27 43.4**	**0.0**
	comp=Z,9.1nm,0.5s,mb4.4,baz=106,slow=12,SNR=55						
MKAR	**Makanchi Array**	**22.71**	**316**	P	**P**	**06 27 43.4**	**0.0**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TKM2	**Tokmak 2**	**25.60**	**303**	P	**P**	**06 28 11.9**	**+0.9**
	SNR=20						
TKM2	**Tokmak 2**	**25.60**	**303**	*e*P	**P**	**06 28 11.6**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
TKM2	**Tokmak 2**	**25.60**	**303**	*e*P	**P**	**06 28 11.6**	**+0.6**
	comp=Z,8.9nm,0.6s,mb4.5						
KZA	**Kyzart**	**25.65**	**301**	P	**P**	**06 28 12.6**	**+1.2**
	SNR=18						
KBK	**Karagaybulak**	**26.00**	**302**	P	**P**	**06 28 16.2**	**+1.6**
	SNR=11						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**06 28 14.5**	**-0.6**
	comp=Z,6.9nm,0.6s,mb4.4,baz=134,slow=9.6,SNR=24						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**06 28 14.5**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
UCH	**Uchtor**	**26.22**	**301**	P	**P**	**06 28 18.3**	**+1.7**
	SNR=22						
UCH	**Uchtor**	**26.22**	**301**	*e*P	**P**	**06 28 17.9**	**+1.3**
	comp=Z,16nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**26.32**	**302**	P	**P**	**06 28 17.5**	**0.0**
	comp=Z,1.4nm,0.4s,mb3.9,baz=131,slow=11,SNR=3.8						
AAK	**Ala-Archa**	**26.32**	**302**	*e*P	**P**	**06 28 18.3**	**+0.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**26.32**	**302**	*e*P	**P**	**06 28 18.3**	**+0.8**
	comp=Z,2.8nm,0.6s,mb4.0						
USP	**Ospenovka**	**26.46**	**303**	P	**P**	**06 28 19.8**	**+0.9**
	SNR=9.5						
AML	**Almayashu**	**26.79**	**300**	P	**P**	**06 28 23.4**	**+1.6**
	SNR=14						
AML	**Almayashu**	**26.79**	**300**	*e*P	**P**	**06 28 23.1**	**+1.3**
	comp=Z,11nm,0.9s,mb4.4						
KURK	**Kurchatov**	**26.86**	**321**	P	**P**	**06 28 22.2**	**-0.1**
	comp=Z,3.8nm,0.4s,mb4.3,baz=128,slow=9.6,SNR=27						
KURK	**Kurchatov**	**26.86**	**321**	*c i*P	**P**	**06 28 22.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**26.86**	**321**	*e*P	**P**	**06 28 21.6**	**-0.7**
	comp=Z,13nm,0.8s,mb4.5						
NVS	**Novosibirsk**	**27.34**	**332**	*e*P	**P**	**06 28 26.8**	**+0.2**
BVAR	**Borovoye Array**	**32.44**	**320**	P	**P**	**06 29 11.9**	**+0.1**
	comp=Z,2.8nm,0.5s,mb4.4,baz=113,slow=9.3,SNR=24						
BVAR	**Borovoye Array**	**32.44**	**320**	P	**P**	**06 29 11.9**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	**Borovoye**	**32.51**	**320**	*ce*P	**P**	**06 29 12.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
BRVK	**Borovoye**	**32.51**	**320**	*e*P	**P**	**06 29 11.9**	**-0.5**
	comp=Z,5.7nm,0.6s,mb4.7						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**06 29 56.2**	**+0.1**
	comp=Z,7.7nm,0.4s,mb4.8						
ARU	**Arti**	**40.06**	**321**	*c i*P	**P**	**06 30 16.8**	**0.0**
ARU				*e*		06 31 47.1	
ARU				S	**S**	**06 36 21.0**	**-2.2**
ARU				SS	SS	06 39 10.9	-9.1
ARU				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.9						
ARU	**Arti**	**40.06**	**321**	*e*P	**P**	**06 30 16.5**	**-0.3**
	comp=Z,26nm,0.9s,mb5.0						
TIXI	**Tiksi**	**41.39**	**11**	*e*P	**P**	**06 30 26.0**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.0						
PETK	**Petropavlovsk-**	**42.68**	**45**	P	**P**	**06 30 38.1**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.2,baz=222,slow=6.0,SNR=4.5						
PETK	**Petropavlovsk-**	**42.68**	**45**	P	**P**	**06 30 38.1**	**-0.3**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ZEI	**Tsey**	**48.74**	**301**	*e*P	**P**	**06 31 25.7**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KIV	**Kislovodsk**	**49.43**	**303**	*e*P	**P**	**06 31 32.7**	**+0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BILL	**Bilibino**	**49.69**	**26**	*e*P	**P**	**06 31 34.4**	**+1.0**
OBN	**Obninsk**	**52.21**	**317**	‖*e*P	**P**	**06 31 52.2**	**-0.3**
OBN				*e**PP	pP	06 32 12.8	+19
OBN				*e*		06 33 02.1	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
ANN	**Anapa**	**53.00**	**304**	*e*P	**P**	**06 31 56.1**	**-2.5**
ANN				*e**PP	pP	06 32 05.0	+5.4
ANN				*e*		06 33 06.8	
ANN				*e*		06 33 56.9	
ANN				*e*S	**S**	**06 39 21.3**	**-7.6**
ANN				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
JOF	**Joensuu**	**54.50**	**327**	*e*P	**P**	**06 32 08.3**	**-1.0**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
JOF	**Joensuu**	**54.50**	**327**	*e*p	**P**	**06 32 08.3**	**-1.0**
	comp=Z,3.9nm,0.8s,mb4.5						
KEV	**Kevo**	**56.01**	**336**	*e*P	**P**	**06 32 18.7**	**-1.3**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
KEV	**Kevo**	**56.01**	**336**	*e*p	**P**	**06 32 18.7**	**-1.3**
	comp=Z,9.9nm,0.7s,mb5.0						
ARCES	**ARCESS Array B**	**56.54**	**335**	P	**P**	**06 32 23.4**	**-0.5**
	comp=Z,3.9nm,0.6s,mb4.6,baz=78,slow=8.1,SNR=21						
ARCES	**ARCESS Array B**	**56.54**	**335**	P	**P**	**06 32 23.4**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KAF	**Kangasniemi**	**56.89**	**327**	*e*P	**P**	**06 32 25.2**	**-1.2**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**56.89**	**327**	*e*p	**P**	**06 32 25.2**	**-1.2**
	comp=Z,4.2nm,0.6s,mb4.7,baz=82,slow=6.8						
**B

comp=Z,4.0nm,0.7s
STHS Stebnicka Huta 62.53 313 *e*P **P 06 33 05.9 +0.4**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
STHS Stebnicka Huta 62.53 313 *e*P **P 06 33 05.9 +0.4**
comp=Z,2.4nm,0.8s,mb4.4
STHS Stebnicka Huta 62.53 313 *e*P **P 06 33 05.9 +0.4**
KECS Kecovo 63.31 312 *e*P **P 06 33 12.4 +1.7**
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
KECS Kecovo 63.31 312 *e*P **P 06 33 12.4 +1.7**
comp=Z,2.7nm,1.3s,mb4.2
KECS Kecovo 63.31 312 *e*P **P 06 33 12.4 +1.7**
NB2 NORSAR Subarra 64.14 327 P **P 06 33 14.6 -1.4**
comp=Z,5.3nm,0.6s,mb4.8,baz=72,slow=6.5
NOA NORSAR Array B 64.14 327 P **P 06 33 14.6 -1.4**
comp=Z,4.2nm,0.5s,mb4.7,baz=72,slow=6.8,SNR=32
NOA NORSAR Array B 64.14 327 P **P 06 33 14.6 -1.4**
NOA pmax pmax
comp=Z,4.0nm,0.5s
VYHS Vyhne 64.34 313 *e*P **P 06 33 17.6 +0.1**
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
VYHS Vyhne 64.34 313 *e*P **P 06 33 17.6 +0.1**
comp=Z,1.7nm,1.0s,mb4.0
VYHS Vyhne 64.34 313 *e*P **P 06 33 17.6 +0.1**
MORC Moravsky Berou 64.68 314 *e*P **P 06 33 18.0 -1.7**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MORC Moravsky Berou 64.68 314 *e*P **P 06 33 18.0 -1.7**
comp=Z,2.8nm,0.7s,mb4.4
OSL Oslo 64.76 326 *i* P **P 06 33 24.5 +4.5**
GVD Gavdhos 65.78 297 *e*P **P 06 33 25.2 -1.9**
comp=Z,7.2nm,0.6s,mb4.9
CLL Collm 66.80 317 *e*P **P 06 33 33.0 -0.4**
CLL *i* 06 33 37.1
CLL Collm 66.80 317 *e*P **P 06 33 33.0 -0.4**
CLL *i* pP pP 06 33 37.1 +2.7
BPAW Bear Paw Mtn. 67.10 28 *e*P **P 06 33 35.0 -0.1**
comp=Z,4.2nm,0.9s,mb4.5
GERES GERESS Array B 67.36 314 P **P 06 33 36.4 -0.6**
comp=Z,1.3nm,0.6s,mb4.1,baz=60,slow=7.9,SNR=7.0
GERES GERESS Array B 67.36 314 P **P 06 33 36.4 -0.6**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GRA1 Grafenberg Arr 68.50 316 *e*P **P 06 33 48.6 +4.5**
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.50 316 *e*P **P 06 33 48.6 +4.5**
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.50 316 *e*P **P 06 33 48.6 +4.5**
GRF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
GRF Grafenberg Arr 68.50 316 *e*P **P 06 33 48.6 +4.5**
GRF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
KDAK Kodiak Island 69.32 34 *i* P **P 06 33 49.6 +0.5**
INK Inuvik 70.71 20 P **P 06 33 57.1 -0.3**
comp=Z,4.6nm,1.0s,mb4.4,baz=312,slow=4.9,SNR=3.5
INK Inuvik 70.71 20 P **P 06 33 57.2 -0.2**
INK pmax pmax
comp=Z,5.0nm,1.0s
CDF Champ du Feu 71.39 316 *e*P **P 06 34 01.3 -0.6**
comp=Z,7.8nm,0.7s,mb4.4
CDF Champ du Feu 71.39 316 *e*P **P 06 34 01.3 -0.6**
CDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CDF Champ du Feu 71.39 316 *e*P **P 06 34 01.3 -0.6**
comp=Z,3.9nm,0.7s,mb4.5
WLF Walferdange 71.46 317 *e*P **P 06 34 02.4 +0.1**
WLF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
WLF Walferdange 71.46 317 *e*P **P 06 34 02.4 +0.1**
comp=Z,7.1nm,0.8s,mb4.7
STKA Stephens Creek 72.53 148 P **P 06 34 08.6 -0.3**
comp=Z,2.6nm,0.7s,mb4.2,baz=336,slow=7.4,SNR=5.3
LPG La Plagne 73.09 313 *e*P **P 06 34 12.4 +0.2**
comp=Z,28nm,0.6s,mb5.0
LPG La Plagne 73.09 313 *e*P **P 06 34 12.4 +0.2**
LPG pmax pmax
comp=Z,14nm,0.6s,mb5.1
LPG La Plagne 73.09 313 *e*P **P 06 34 12.4 +0.2**
comp=Z,14nm,0.6s,mb5.1
LPL La Plagne 73.10 313 *e*P **P 06 34 12.3 +0.1**
comp=Z,24nm,0.6s,mb5.0
LPL La Plagne 73.10 313 *e*P **P 06 34 12.3 +0.1**
LPL pmax pmax
comp=Z,12nm,0.6s,mb5.0
LPL La Plagne 73.10 313 *e*P **P 06 34 12.3 +0.1**
comp=Z,12nm,0.6s,mb5.0
SMF Signal de Mont 74.29 315 *e*P **P 06 34 18.3 -0.8**
comp=Z,11nm,0.9s,mb4.5
SMF Signal de Mont 74.29 315 *e*P **P 06 34 18.3 -0.8**
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SMF Signal de Mont 74.29 315 *e*P **P 06 34 18.3 -0.8**
comp=Z,5.6nm,0.9s,mb4.5
TCF Toulx Ste Croi 75.44 316 *e*P **P 06 34 25.4 -0.4**
CAF Calviac 76.24 315 *e*P **P 06 34 30.4 0.0**
SFJD Kangerlussuaq 79.30 351 *i* P **P 06 34 46.9 -0.2**
comp=Z,7.1nm,0.7s,mb4.7
SFJD *i* 06 35 13.4
YKA Yellowknife Ar 80.26 18 P **P 06 34 52.1 -0.3**
comp=Z,2.5nm,0.5s,mb4.4,baz=326,slow=5.0,SNR=18
YKA Yellowknife Ar 80.26 18 P **P 06 34 52.1 -0.3**
YKA pmax pmax
comp=Z,3.0nm,0.5s
ESDC Sonseca Array 82.88 313 P **P 06 35 06.2 -0.5**
comp=Z,1.0nm,0.8s,mb3.9,baz=44,slow=4.2,SNR=3.6
FFC Flin Flon 90.21 15 *i* P **P 06 35 42.8 +0.5**
TORD Torodi Ar. Bea 94.14 288 P **P 06 36 00.6 -0.6**
comp=Z,1.4nm,1.2s,mb4.3,baz=317,slow=5.9,SNR=3.2
TORD Torodi Ar. Bea 94.14 288 P **P 06 36 00.6 -0.6**
OTAV Otavalo 147.44 7 *e*PKPdf PKPdf 06 42 24.3 +0.1

SZGRF ***31*** *06:23:45.6, 43.°64N×147.°52E, h33km, mb4.6, Kuril Islands, Russia*
BJI ***31*** *06:23:51.2, 43.°35N×145.°86E, h91km, mB5.4/17, mb5.0/26*
ISCJB ***31*** *06:23:51.7±0.2, 43.°36N±0.°03×146.°00E±0.°03, h95km, mb4.7/109, Error ellipse: s-maj=4.8km s-min=2.7km az=150.9*
MOS ***31*** *06:23:52.8±0.8, 43.°41N×145.°86E, h102km, mb4.8/53, Error ellipse: s-maj=9.5km s-min=5.1km az=109.2*
MOS Felt (II) at Yuzhno-Kuril'sk.
NEIC ***31*** *06:23:53.4±0.2, 43.°42N×145.°87E, mb4.6/57, Error ellipse: s-maj=6.2km s-min=3.5km az=153.0*
NEIC Recorded [3 JMA] in eastern Hokkaido.
SKHL ***31*** *06:23:53.6±0.4, 43.°46N×145.°97E, h106km±4km, mb5.1/6, msh5.8/1*
SKHL Felt (III) at Yushno-Kurilsk.
BGS ***31*** *06:23:53.7±1.6, 43.°46N×145.°80E, h94km, mb4.6*
IDC ***31*** *06:23:53.5±0.7, 43.°37N×145.°92E, h99km±4km, mb4.4/21, mb1 4.5/23, mb1mx4.4/28, mbtmp4.4/23, MS2.7/2, Ms1 2.7/2, ms1mx2.7/34, Error ellipse: s-maj=16.5km s-min=8.6km az=1.0*
JMA ***31*** *06:23:54.3±0.1, 43.°35N×145.°94E, h92km±1km, M4.5*
JMA Felt III J1.
ISC 31 06:23:53.6±0.2, 43.°39N±0.°03×145.°93E±0.°03, h97km, h97km±1.0km:pP-P, n314, σ0.81/342, mb4.7/108, 48C-19D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.14**	**261**	⇑P	**Pn**	**06 24 07.3**	**+0.1**
NEM2				*e*S	**Sn**	**06 24 17.1**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**0.65**	**356**	⇓*i*PN	**Pn**	**06 24 10.0**	**-0.2**
YUK				*i* S	**Sn**	**06 24 22.0**	**-0.7**
YUK				pmax	pmax		
	comp=N,4μm,0.3s						
YUK				pmax	pmax		
	comp=Z,11μm,0.3s						
YUK				pmax	pmax		
	comp=N,10μm,0.3s						
YUK				pmax	pmax		
	comp=E,5μm,0.3s						
YUK				pmax	pmax		
	comp=Z,15μm,0.3s						
YUK				smax			
	comp=N,22μm,0.5s						
YUK				smax			
	comp=E,21μm,0.5s						
YUK				smax			
	comp=N,30μm,0.3s						
YUK				smax			
	comp=E,38μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.65**	**356**	⇓*i*P	**Pn**	**06 24 10.0**	**-0.2**
YUK				⇓*i*P		06 24 10.0	
YUK				AMB	AMB	06 24 11.0	
	comp=E,10μm,0.3s						
YUK				AMB	AMB	06 24 11.0	
	comp=E,5μm,0.3s						
YUK				AMB	AMB	06 24 11.0	
	comp=E,15μm,0.3s						
YUK				AMB	AMB	06 24 11.0	
	comp=E,2μm,0.2s						
YUK				AMB	AMB	06 24 11.0	
	comp=E,4μm,0.2s						
YUK				AMB	AMB	06 24 11.0	
	comp=E,11μm,0.2s						
YUK				*i* S	**Sn**	**06 24 22.0**	**-0.7**
YUK				A		06 24 23.0	
	comp=E,22μm,0.5s						
YUK				A		06 24 23.0	
	comp=E,21μm,0.5s						
YUK				A		06 24 24.0	
	comp=E,30μm,0.5s						
YUK				A		06 24 24.0	
	comp=E,38μm,0.5s						
JRA	**Rausu**	**0.80**	**314**	⇓P	**Pn**	**06 24 12.4**	**+0.7**
JRA				*e*S	**Sn**	**06 24 26.3**	**+1.1**
JNK	**Nakash**	**0.90**	**283**	⇓P	**Pn**	**06 24 12.8**	**+0.1**
JNK				*e*S	**Sn**	**06 24 26.4**	**-0.6**
JAK	**Akkeshi**	**0.98**	**247**	⇑P	**Pn**	**06 24 13.8**	**+0.3**
JAK				*e*S	**Sn**	**06 24 28.5**	**0.0**
JAR	**Ashorobuto**	**1.57**	**267**	⇓P	**Pn**	**06 24 21.5**	**+0.9**
JAR				*e*S	**Sn**	**06 24 41.7**	**+0.6**
JTKR	**Abashiri--Toko**	**1.57**	**292**	⇓P	**Pn**	**06 24 21.5**	**+0.9**
JTKR				*e*S	**Sn**	**06 24 41.8**	**+0.7**
JOB	**Onbets**	**1.60**	**253**	P	**Pn**	**06 24 21.8**	**+0.9**
JOB				*e*S	**Sn**	**06 24 41.8**	**+0.1**
JMP	**Maruseppu**	**1.96**	**289**	⇓P	**Pn**	**06 24 26.5**	**+1.0**
JMP				*e*S	**Sn**	**06 24 51.3**	**+1.5**
JCH	**Churui**	**2.03**	**249**	P	**Pn**	**06 24 26.8**	**+0.4**
JCH				*e*S	**Sn**	**06 24 50.3**	**-1.2**
KUR	**Kuril'sk**	**2.31**	**36**	*e*PN	**Pn**	**06 24 30.5**	**+0.4**
KUR				*i* S	**Sn**	**06 24 58.5**	**+0.5**
KUR				pmax	pmax		
	comp=N,110nm,0.6s						
KUR				pmax	pmax		
	comp=E,140nm,0.6s						
KUR				pmax	pmax		
	comp=Z,400nm,0.6s						
KUR				smax			
	comp=N,2μm,0.4s						
KUR				smax			
	comp=E,1μm,0.4s						
KUR	**Kuril'sk**	**2.31**	**36**	*e*P	**Pn**	**06 24 30.5**	**+0.4**
KUR				AMB	AMB	06 24 44.6	
	comp=E,110nm,0.6s						
KUR				AMB	AMB	06 24 44.6	
	comp=E,140nm,0.6s						
KUR				AMB	AMB	06 24 44.6	
	comp=E,400nm,0.6s						
KUR				*i* S	**Sn**	**06 24 58.5**	**+0.5**
KUR				A		06 24 58.8	
	comp=E,7μm,1.0s						
KUR				A		06 24 58.8	
	comp=E,4μm,1.0s						
KUR				A		06 24 59.4	
	comp=E,2μm,0.4s						
KUR				A		06 24 59.4	
	comp=E,1μm,0.4s						
ERM	**Erimo**	**2.46**	**237**	*e*Pn	**Pn**	**06 24 33.3**	**+1.3**
ERM				*e*Sn	**Sn**	**06 25 00.7**	**-0.8**
ERM	**Erimo**	**2.46**	**237**	*e*P	**Pn**	**06 24 33.5**	**+1.5**
ASAJ	**Asahikawa**	**2.52**	**288**	P	**Pn**	**06 24 34.4**	**+1.6**
	comp=E,553nm,0.3s,baz=109,slow=11,SNR=1891						
ASAJ				S	**Sn**	**06 25 04.5**	**+1.6**
	comp=E,100nm,0.3s,baz=150,slow=32,SNR=6.0						
ASAJ				LR	LR	06 25 45.9	
	comp=E,527nm,19.8s,baz=35,slow=45						
ASAJ	**Asahikawa**	**2.52**	**288**	PN	**Pn**	**06 24 34.4**	**+1.6**
ASAJ				S	**Sn**	**06 25 04.6**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,553nm,0.3s						
ASAJ				smax			
	comp=N,100nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,527nm,19.8s						
YSS	**Yuzh-Sakhalins**	**4.21**	**329**	⇑*i*PN	**Pn**	**06 24 56.7**	**+1.2**
YSS				*i* S	**Sn**	**06 25 43.8**	**+0.3**
YSS				pmax	pmax		
	comp=E,50nm,0.6s						
YSS				pmax	pmax		
	comp=Z,70nm,0.6s						
YSS				smax			
	comp=N,350nm,1.3s						
YSS	**Yuzh-Sakhalins**	**4.21**	**329**	*e*Pn	**Pn**	**06 24 56.4**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.21**	**329**	⇑*i*P	**Pn**	**06 24 56.7**	**+1.2**
YSS				AMB	AMB	06 24 57.6	
	comp=N,50nm,0.6s						
YSS				AMB	AMB	06 24 57.6	
	comp=N,70nm,0.6s						
YSS				*i* S	**Sn**	**06 25 43.8**	**+0.3**
YSS				A		06 25 46.0	
	comp=N,350nm,1.0s						
UGL	**Uglegorsk**	**6.29**	**336**	*e*P	**Pn**	**06 25 25.0**	**+1.4**
UGL				AMB	AMB	06 25 26.0	
	comp=N,179nm,1.0s						
TYV	**Tymovskoe**	**7.80**	**345**	*e*P	**Pn**	**06 25 43.0**	**-1.2**
TYV				AMB	AMB	06 25 49.5	
	comp=N,11nm,0.8s						
TYV				AMB	AMB	06 25 49.5	
	comp=N,13nm,0.8s						
TYV				AMB	AMB	06 25 49.5	
	comp=N,22nm,0.8s						
MAJO	**Matsushiro**	**9.04**	**223**	*e*PN	**Pn**	**06 26 00.5**	**-0.7**
MAT	**Matsushiro**	**9.04**	**223**	P	**Pn**	**06 26 00.4**	**-0.8**
MAT				S	**Sn**	**06 27 43.2**	**+2.0**
MJAR	**Matsushiro Arr**	**9.04**	**223**	P	**Pn**	**06 26 00.2**	**-0.9**
	comp=N,0.7nm,0.3s,baz=27,slow=14,SNR=10						
MJAR				S	**Sn**	**06 27 40.0**	**-1.1**
	comp=N,0.4nm,0.3s,baz=315,slow=16,SNR=3.2						
MJAR	**Matsushiro Arr**	**9.04**	**223**	PN	**Pn**	**06 26 00.2**	**-1.0**
MJAR				S	**Sn**	**06 27 40.1**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NKL	**Nikolayevsk**	**10.37**	**342**	*e*P	**Pn**	**06 26 14.0**	**-5.1**
NKL				AMB	AMB	06 26 16.0	
	comp=Z,30nm,1.1s						
KLR	**Kul'dur**	**11.41**	**306**	*e*PN	**Pn**	**06 26 32.0**	**-1.2**
MDJ	**Mudanjiang**	**11.83**	**282**	P	**Pn**	**06 26 36.0**	**-2.9**
MDJ				pmax	pmax		
	comp=Z,20nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,680nm,13.2s						
MDJ				LR	LR		
	comp=N,480nm,27.8s						
MDJ				LR	LR		
	comp=E,1μm,25.4s						
MDJ				LR	LR		
	comp=Z,830nm,25.4s						
PETK	**Petropavlovsk-**	**12.48**	**35**	P	**Pn**	**06 26 44.5**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=174,slow=11,SNR=14						
PETK	**Petropavlovsk-**	**12.48**	**35**	PN	**Pn**	**06 26 44.5**	**-3.0**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CN2	**Changchun**	**14.85**	**279**	*e*P	**Pn**	**06 27 19.8**	**+1.5**
CN2				*e*S	**Sn**	**06 30 01.0**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,990nm,17.0s						
CN2				LR	LR		
	comp=E,750nm,17.0s						
CN2				LR	LR		
	comp=Z,990nm,17.0s						
ZEA	**Zeya**	**16.08**	**317**	*e*P	**Pn**	**06 27 30.3**	**-3.3**
ZEA				AMB	AMB	06 27 33.0	
	comp=Z,12nm,0.6s						
YAK	**Yakutsk**	**20.99**	**338**	*e*P	**P**	**06 28 27.1**	**-1.6**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
NJ2	**Nanjing**	**24.11**	**251**	*e*P	**P**	**06 28 58.3**	**-1.9**
NJ2				pP		06 29 19.8	
NJ2				S	**S**	**06 33 05.0**	**-5.9**
NJ2				sS	sS	06 33 40.5	-7.6
NJ2				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,680nm,8.1s						
NJ2				LR	LR		
	comp=N,360nm,9.5s						
NJ2				LR	LR		
	comp=E,670nm,12.7s						
NJ2				LR	LR		
	comp=Z,790nm,14.1s						
HHC	**Hu-ho-hao-te**	**25.51**	**276**	*e*P	**P**	**06 29 13.3**	**+0.5**
HHC				pP	pP	06 29 34.5	+0.2
HHC				sP	sP	06 29 46.5	+0.9
HHC				PP		06 29 57.3	
HHC				PcP	PcP	06 32 43.0	+1.3
HHC				S	**S**	**06 33 31.0**	**-1.9**
HHC				sS	sS	06 34 09.5	-1.0
HHC				SS		06 34 43.0	
HHC				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,710nm,7.6s						
HHC				LR	LR		
	comp=N,1μm,15.7s						
HHC				LR	LR		
	comp=E,1μm,15.1s						
HHC				LR	LR		
	comp=Z,1μm,16.1s						
BILL	**Bilibino**	**26.96**	**17**	*e*P	**P**	**06 29 25.3**	**-0.2**
BILL				*e*		06 30 13.2	
ULN	**Ulaanbaatar**	**27.35**	**293**	*e*P	**P**	**06 29 29.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**27.35**	**293**	*e*P	**P**	**06 29 29.9**	**+0.7**
	comp=Z,18nm,0.7s,mb4.7						
SONM	**Songino Array**	**27.79**	**293**	P	**P**	**06 29 33.9**	**+0.7**
	comp=Z,27nm,0.7s,mb4.9,baz=88,slow=8.4,SNR=42						
SONM	**Songino Array**	**27.79**	**293**	P	**P**	**06 29 33.9**	**+0.7**
SONM				pmax	pmax		
	comp=Z,27nm,0.7s						
TIXI	**Tiksi**	**29.54**	**349**	*e*P	**P**	**06 29 44.0**	**-4.4**
ZAK	**Zakamensk**	**29.64**	**299**	*e*P	**P**	**06 29 49.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
LZH	**Lanzhou**	**32.89**	**272**	*e*P	**P**	**06 30 19.3**	**+1.0**
LZH				PcP	PcP	06 33 02.0	+1.5
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,70nm,4.5s						
LZH				LR	LR		
	comp=N,1μm,16.7s						
LZH				LR	LR		
	comp=Z,2μm,17.6s						
TNA	**Tin City**	**33.64**	**33**	*e*P	**P**	**06 30 24.1**	**-0.3**
	comp=Z,19nm,0.9s,mb4.9						
CD2	**Chengdu**	**35.48**	**264**	P	**P**	**06 30 41.3**	**+0.6**
CD2				pP	pP	06 31 03.8	+1.0
CD2				sP	sP	06 31 15.3	+1.3
CD2				PP	PP	06 32 03.8	+0.8
CD2				S	**S**	**06 36 08.0**	**-0.8**
CD2				sS	sS	06 36 46.8	-0.3
CD2				SS	SS	06 38 31.5	-15
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,970nm,11.6s						
CD2				LR	LR		
	comp=N,1μm,19.6s						
CD2				LR	LR		
	comp=Z,1μm,17.8s						
GYA	**Guiyang**	**35.97**	**255**	P	**P**	**06 30 44.8**	**-0.1**
GYA				pP	pP	06 31 07.5	+0.4
GYA				sP	sP	06 31 19.3	+1.1
GYA				PP	PP	06 32 10.0	+1.6
GYA				PcP	PcP	06 33 11.8	+2.2
GYA				S	**S**	**06 36 16.0**	**-0.3**
GYA				ScP	ScP	06 36 48.0	+1.2
GYA				PcS	PcS	06 36 57.5	+0.2
GYA				SS	SS	06 38 43.0	-14
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=N,540nm,17.5s						
GYA				LR	LR		
	comp=E,440nm,16.9s						
GYA				LR	LR		
	comp=Z,540nm,18.0s						
TGY	**Tagaytay City**	**36.21**	**224**	LR	LR	06 45 22.3	
	comp=Z,3.1nm,21.6s,baz=256,slow=36						
TTA	**Tatalina**	**38.27**	**39**	*e*P	**P**	**06 31 04.3**	**+0.4**
SVW2	**Sparrevohn**	**38.43**	**42**	*e*P	**P**	**06 31 07.3**	**+2.0**
QIZ	**Qiongzhong**	**38.81**	**243**	P	**P**	**06 31 08.5**	**-0.4**
QIZ				sP	sP	06 31 46.0	+3.6
QIZ				S	**S**	**06 37 00.3**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,290nm,10.5s						
QIZ				LR	LR		
	comp=N,490nm,16.6s						
QIZ				LR	LR		
	comp=Z,630nm,19.4s						
KMI	**Kunming**	**39.57**	**257**	P	**P**	**06 31 14.5**	**-0.7**
KMI				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.5						
CHUM	**Lake Minchumin**	**39.96**	**37**	*e*P	**P**	**06 31 19.2**	**+1.2**
	comp=Z,12nm,0.7s,mb4.8						
ZALV	**Zalesovo Beam**	**40.51**	**307**	P	**P**	**06 31 21.2**	**-1.4**
	comp=Z,3.9nm,0.4s,mb4.6,baz=82,slow=7.5,SNR=18						
ZALV				PcP	PcP	06 33 23.2	0.0
	comp=Z,4.5nm,0.7s,baz=38,slow=3.2,SNR=10						
ZALV	**Zalesovo Beam**	**40.51**	**307**	P	**P**	**06 31 21.2**	**-1.4**
ZALV						06 33 23.2	
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.6						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BPAW	**Bear Paw Mtn.**	**40.55**	**37**	*e*P	**P**	**06 31 23.3**	**+0.5**
	comp=Z,8.9nm,0.7s,mb4.7						
KTH	**Kantishna Hill**	**40.59**	**38**	*e*P	**P**	**06 31 23.9**	**+0.8**
	comp=Z,19nm,0.7s,mb5.0						
COLD	**Coldfoot**	**40.94**	**32**	*e*P	**P**	**06 31 25.7**	**-0.2**
	comp=Z,12nm,0.8s,mb4.8						
NVS	**Novosibirsk**	**41.25**	**309**	*e*P	**P**	**06 31 27.1**	**-1.6**
NVS				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,12nm,1.3s						
WMQ	**Urumqi**	**41.40**	**291**	*e*P	**P**	**06 31 31.8**	**+1.7**
PMR	**Palmer**	**41.52**	**41**	*e*P	**P**	**06 31 31.3**	**+0.5**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
PMR	**Palmer**	**41.52**	**41**	*e*P	**P**	**06 31 31.3**	**+0.5**
	comp=Z,7.1nm,0.8s,mb4.5						
COLA	**College**	**41.89**	**36**	*e*P	**P**	**06 31 34.3**	**+0.5**
COLA				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.1						
COLA	**College**	**41.89**	**36**	*e*P	**P**	**06 31 34.3**	**+0.5**
	comp=Z,29nm,0.7s,mb5.1						
MENT	**Mentasta**	**43.88**	**38**	*e*P	**P**	**06 31 50.5**	**+0.6**
MK31	**Makanchi Array**	**43.96**	**298**	*e*P	**P**	**06 31 50.9**	**+0.1**
MKAR	**Makanchi Array**	**43.96**	**298**	P	**P**	**06 31 50.9**	**+0.1**
	comp=Z,14nm,0.7s,mb4.8,baz=76,slow=10.0,SNR=48						
MKAR				PcP	PcP	06 33 34.9	+0.1
	comp=Z,0.8nm,0.5s,baz=62,slow=6.5,SNR=3.5						
MKAR				S	**S**	**06 38 15.2**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=74,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**43.96**	**298**	P	**P**	**06 31 50.9**	**+0.1**
MKAR						06 33 34.9	
MKAR				S	**S**	**06 38 15.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,14nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EGAK	**Eagle**	**44.75**	**36**	*e*P	**P**	**06 31 56.7**	**0.0**
	comp=Z,78nm,1.5s,mb5.2						
KURK	**Kurchatov**	**44.99**	**304**	P	**P**	**06 31 58.5**	**-0.4**
	comp=Z,7.7nm,0.3s,mb4.9,baz=73,slow=7.0,SNR=37						
KURK				PcP	PcP	06 33 37.4	-0.9
	comp=Z,2.5nm,0.7s,baz=70,slow=3.5,SNR=3.9						
KURK	**Kurchatov**	**44.99**	**304**	P	**P**	**06 31 58.5**	**-0.4**
KURK						06 33 37.4	
KURK				pmax	pmax		

comp=Z,8.0nm,0.3s,mb4.9
KURK pmax pmax

comp=Z,3.0nm,0.7s,mb4.1
KURK Kurchatov 44.99 304 *e*P **P 06 31 58.3 -0.6**
DAWY Dawson 45.62 36 *e*P **P 06 32 03.7 +0.1**
INK Inuvik 47.16 30 P **P 06 32 15.9 +0.2**
comp=Z,16nm,0.5s,mb5.0,baz=295,slow=5.7,SNR=83
INK Inuvik 47.16 30 *e*P **P 06 32 16.1 +0.4**
INK pmax pmax

comp=Z,22nm,0.4s
INK Inuvik 47.16 30 *e*P **P 06 32 16.1 +0.4**
comp=Z,22nm,0.4s,mb5.2
BVAR Borovoye Array 49.04 309 P **P 06 32 30.3 -0.1**
comp=Z,6.2nm,0.4s,mb4.9,baz=78,slow=8.6,SNR=40
BVAR PcP PcP 06 33 52.3 -0.3
comp=Z,1.6nm,0.4s,baz=62,slow=1.9,SNR=4.1
BVAR Borovoye Array 49.04 309 P **P 06 32 30.3 0.0**
BVAR 06 33 52.3
BVAR pmax pmax

comp=Z,6.0nm,0.4s
BVAR pmax pmax

comp=Z,2.0nm,0.4s
BRVK Borovoye 49.09 309 *e*P **P 06 32 30.5 -0.2**
BRVK pmax pmax

comp=Z,4.0nm,0.6s,mb4.5
BRVK Borovoye 49.09 309 *e*P **P 06 32 30.5 -0.2**
comp=Z,3.7nm,0.6s,mb4.5
TAPN Taplejung 49.13 271 *e*P **P 06 32 31.0 -0.3**
comp=Z,6.9nm,0.4s,mb5.0
ODAN Odare 49.64 271 *e*P **P 06 32 36.0 +0.7**
TKM2 Tokmak 2 49.86 295 P **P 06 32 37.6 +0.9**
SNR=19
TKM2 Tokmak 2 49.86 295 *e*P **P 06 32 36.9 +0.2**
TKM2 *e**PP pP 06 33 00.6 +0.6
TKM2 pmax pmax

comp=Z,19nm,0.9s,mb5.0
TKM2 Tokmak 2 49.86 295 *e*P **P 06 32 36.9 +0.2**
comp=Z,19nm,0.9s,mb5.0
TKM2 *e*pP pP 06 33 00.6 +0.7
GUN Gumba 50.14 273 *e*P **P 06 32 38.8 -0.2**
comp=Z,40nm,0.5s,mb5.6
RAMN Ramite 50.17 271 *e*P **P 06 32 39.2 0.0**
comp=Z,34nm,0.4s,mb5.6
KBK Karagaybulak 50.40 295 P **P 06 32 41.5 +0.7**
SNR=8.9
USP Ospenovka 50.42 296 P **P 06 32 41.4 +0.5**
SNR=6.8
KZA Kyzart 50.46 294 P **P 06 32 43.0 +1.7**
SNR=12
PKI Pulchoki 50.68 273 *e*P **P 06 32 42.7 -0.4**
AAK Ala-Archa 50.71 295 P **P 06 32 43.5 +0.4**
comp=Z,4.3nm,0.4s,mb4.8,baz=90,slow=6.0,SNR=8.7
AAK Ala-Archa 50.71 295 P **P 06 32 43.5 +0.4**
AAK pmax pmax

comp=Z,4.0nm,0.4s,mb4.8
AAK Ala-Archa 50.71 295 *e*P **P 06 32 43.1 0.0**
comp=Z,4.0nm,0.6s,mb4.6
EKS2 Erkin-Say 51.17 296 P **P 06 32 47.1 +0.5**
SNR=6.9
AML Almayashu 51.47 295 P **P 06 32 49.8 +1.0**
SNR=7.0
AML Almayashu 51.47 295 *e*P **P 06 32 49.4 +0.6**
comp=Z,4.2nm,0.5s,mb4.7
DLBC Dease Lake 51.55 42 *e*P **P 06 32 50.9 +1.8**
SOKR Solikamsk 53.50 321*d* *i*P **P 06 33 03.3 -0.2**
SOKR pmax pmax

comp=Z,30nm,0.8s,mb5.4
ARU Arti 54.00 317*c* *i*P **P 06 33 06.6 -0.6**
ARU S **S 06 40 35.0 -0.3**
ARU pmax pmax

comp=Z,43nm,1.2s,mb5.3
ARU Arti 54.00 317 *e*P **P 06 33 06.5 -0.7**
comp=Z,17nm,0.6s,mb5.2
RES Resolute Bay 55.57 16 *e*P **P 06 33 17.9 -0.4**
RES pmax pmax

comp=Z,75nm,0.5s,mb6.0
RES Resolute Bay 55.57 16 *e*P **P 06 33 17.9 -0.4**
comp=Z,75nm,0.5s,mb6.0
ABKAR Akbulak array 56.59 308 *e*P **P 06 33 25.9 0.0**
YKA Yellowknife Ar 56.60 33 P **P 06 33 25.7 0.0**
comp=Z,1.7nm,0.4s,mb4.4,baz=303,slow=6.9,SNR=29
YKA Yellowknife Ar 56.60 33 P **P 06 33 25.7 0.0**
YKA pmax pmax

comp=Z,2.0nm,0.4s
YKA Yellowknife Ar 56.60 33 P **P 06 33 25.7 0.0**
KBL Kabul 58.47 289 *e*P **P 06 33 38.4 -0.9**
KBL pmax pmax

comp=Z,4.0nm,0.5s,mb4.7
KBL Kabul 58.47 289 *e*P **P 06 33 38.4 -1.0**
comp=Z,4.3nm,0.5s,mb4.7
KEV Kevo 58.74 339 *e*P **P 06 33 38.4 -2.2**
KEV pmax pmax

comp=Z,12nm,0.7s,mb5.0
KEV Kevo 58.74 339 *e*p **P 06 33 38.4 -2.2**
comp=Z,12nm,0.7s,mb5.0
ARCES ARCESS Array B 59.28 339 P **P 06 33 44.2 -0.1**
comp=Z,9.0nm,0.8s,mb4.8,baz=41,slow=7.4,SNR=13
ARCES ARCESS Array B 59.28 339 P **P 06 33 44.2 -0.1**
ARCES pmax pmax

comp=Z,9.0nm,0.8s
ARCES ARCESS Array B 59.28 339 P **P 06 33 44.2 -0.1**
JOF Joensuu 61.99 332 *e*P **P 06 34 00.6 -2.3**
JOF pmax pmax

comp=Z,42nm,0.5s,mb5.7
JOF Joensuu 61.99 332 *e*p **P 06 34 00.6 -2.3**
comp=Z,42nm,0.5s,mb5.7
KAF Kangasniemi 64.24 333 *e*P **P 06 34 15.2 -2.5**
KAF pmax pmax

comp=Z,22nm,0.7s,mb5.1
KAF Kangasniemi 64.24 333 *e*p **P 06 34 15.2 -2.5**
comp=Z,22nm,0.7s,mb5.1,baz=43,slow=6.2
SUMG Summit 64.30 1 *e*P **P 06 34 18.2 +0.2**
comp=Z,56nm,0.9s,mb5.4
MOR8 Moi Rana 64.58 340 *e*P **P 06 34 17.9 -2.0**
MOR8 AMB AMB 06 34 18.8
comp=Z,44nm,0.8s,mb5.4
FINES FINESS Array B 64.79 333 P **P 06 34 20.8 -0.6**
comp=Z,32nm,0.4s,mb5.5,baz=43,slow=8.0,SNR=142
FINES FINESS Array B 64.79 333 P **P 06 34 20.8 -0.5**
FINES pmax pmax

comp=Z,32nm,0.4s
OBN Obninsk 65.08 323*c* *i*P **P 06 34 22.6 -0.7**
OBN *e**PP pP 06 34 48.0 +0.4
OBN *e* 06 36 44.8
OBN pmax pmax

comp=Z,19nm,0.5s,mb5.2
VRHR Novokhopersk 65.31 318 *e*P **P 06 34 24.1 -0.8**
VRHR pmax pmax

comp=Z,40nm,0.7s,mb5.4
VRHR pmax pmax

comp=N,30nm,0.4s
VRHR pmax pmax

comp=E,10.0nm,0.4s
SLMT Seeley Lake 65.81 47 *e*P **P 06 34 28.7 +0.6**
comp=E,2.6nm,0.8s,mb4.1
SLMT *e*pP pP 06 34 51.6 -0.9
SCO Scoresbysund 66.10 356 *i*P **P 06 34 28.8 -0.8**
SCO pmax pmax

comp=Z,9.0nm,0.8s,mb4.7
SCO Scoresbysund 66.10 356 *i*P **P 06 34 28.8 -0.8**
comp=Z,8.6nm,0.8s,mb4.6
SCO Scoresbysund 66.10 356 *i*P **P 06 34 32.9 +3.3**
VSR Storozhevoye 66.43 319 *e*P **P 06 34 31.7 -0.3**
VSR pmax pmax

comp=Z,40nm,0.5s,mb5.5
VSR pmax pmax

comp=N,20nm,0.8s
VSR pmax pmax

comp=E,20nm,1.2s
NSS Namsos 66.53 340 *e*P **P 06 34 30.5 -1.9**
NSS AMB AMB 06 34 31.5
comp=Z,16nm,0.8s,mb4.9
VORD Divnogorie 66.53 319 *e*P **P 06 34 32.3 -0.4**
VORD pmax pmax

comp=Z,20nm,0.5s,mb5.2
VORD pmax pmax

comp=N,40nm,0.8s
VORD pmax pmax

comp=E,40nm,0.6s
VSU Vasula 66.71 330*c* *i*P **P 06 34 33.4 -0.3**
FCC Fort Churchill 66.78 29 *e*P **P 06 34 33.7 -0.4**
comp=E,0.2nm,0.6s
ASAR Alice Springs 67.63 192 P **P 06 34 40.0 +0.1**
comp=E,0.7nm,0.5s,mb3.8,baz=13,slow=6.8,SNR=5.7
ASAR Alice Springs 67.63 192 P **P 06 34 40.0 +0.2**
ASAR pmax pmax

comp=Z,1.0nm,0.5s
NVAR Mina Array Bea 68.53 57 P **P 06 34 46.2 +0.8**
comp=Z,1.4nm,0.6s,mb3.9,baz=297,slow=6.1,SNR=17
NVAR pP pP 06 35 10.8 +0.7
comp=Z,1.2nm,0.7s,baz=288,slow=7.0,SNR=4.6
IZAR Zarasai 68.87 328 *e*P **P 06 34 47.3 0.0**
ISAL Salakas 69.05 328 *e*P **P 06 34 48.5 +0.1**
IIGN Ignalina 69.17 328 *e*P **P 06 34 49.4 +0.2**
NACGM Naroch 69.29 327 *e* **P 06 34 47.0 -2.9**
KIV Kislovodsk 69.34 311 *e*P **P 06 34 52.3 +1.9**
KIV *e* 06 37 22.8
KIV pmax pmax

comp=Z,21nm,1.0s,mb4.9
ZEI Tsey 69.44 310 *e*P **P 06 34 50.3 -0.7**
ZEI pmax pmax

comp=Z,7.0nm,0.6s,mb4.7
NOA NORSAR Array B 69.62 338 P **P 06 34 51.5 -0.3**
comp=Z,14nm,0.4s,mb5.1,baz=33,slow=6.4,SNR=91
NOA pP pP 06 35 15.9 -0.5
comp=Z,1.9nm,0.7s,baz=34,slow=6.2,SNR=1.3
NOA NORSAR Array B 69.62 338 P **P 06 34 51.5 -0.3**
NOA *PP pP 06 35 15.9 -0.5
NOA pmax pmax

comp=Z,14nm,0.4s
NOA pmax pmax

comp=N,2.0nm,0.7s
NAO01 NORSAR Array S 69.87 338 *e*P **P 06 34 52.5 -0.8**
comp=N,12nm,0.7s,mb4.8
GNI Garni 70.66 307 *i*P **P 06 34 58.4 -0.1**
GNI pmax pmax

comp=Z,4.0nm,0.7s
DUG Dugway 70.67 53 *e*P **P 06 34 59.1 +0.5**
DUG pmax pmax

comp=Z,1.0nm,0.6s,mb3.8
DUG Dugway 70.67 53 *e*P **P 06 34 59.1 +0.5**
comp=Z,1.2nm,0.6s,mb3.9
BW06 Boulder Array 70.82 49 *e*P **P 06 34 59.9 +0.4**
comp=Z,3.4nm,0.9s,mb4.2
PDAR Pinedale Array 70.82 49 P **P 06 35 00.1 +0.7**
comp=Z,1.4nm,0.5s,mb4.0,baz=286,slow=3.0,SNR=19
PDAR pP pP 06 35 24.1 -0.1
comp=Z,0.6nm,0.6s,baz=311,slow=4.2,SNR=2.4
AKASG Malin Array Be 71.34 323 P **P 06 35 02.0 -0.4**
comp=Z,12nm,0.4s,mb5.1,baz=39,slow=5.9,SNR=76
AKASG Malin Array Be 71.34 323 P **P 06 35 02.1 -0.4**
AKASG pmax pmax

comp=Z,12nm,0.4s
AKBB Malin Array Si 71.34 323 *e*P **P 06 35 01.5 -1.0**
AKBB *e**PP pP 06 35 24.2 -3.0
SUW Suwalki 71.35 328 *e*P **P 06 35 01.8 -0.7**
SUW pmax pmax

comp=Z,45nm,0.3s,mb5.8
SUW Suwalki 71.35 328 *e*P **P 06 35 01.8 -0.7**
comp=Z,45nm,0.3s,mb5.8
KIEV Kiev 71.35 323 *e*P **P 06 35 01.7 -0.9**
KIEV pmax pmax

comp=Z,22nm,0.6s,mb5.2
KIEV Kiev 71.35 323 *e*P **P 06 35 01.7 -0.8**
comp=Z,22nm,0.6s,mb5.2
WAL1 Walls 73.35 344 *e*P **P 06 35 14.0 -0.3**
LRW Lerwick 73.37 344 *e*P **P 06 35 13.7 -0.6**
LRW AMb AMB 06 35 17.4
comp=Z,37nm,4.0s
BSD Bornholm Skovb 73.42 333 *i*P **P 06 35 14.5 -0.2**
BSD pmax pmax

comp=Z,28nm,0.8s,mb5.1
BSD Bornholm Skovb 73.42 333 *i*P **P 06 35 14.5 -0.2**
comp=Z,28nm,0.8s,mb5.1
PV10 Paradox Valley 74.07 52 *e*P **P 06 35 20.1 +1.2**
comp=Z,64nm,0.7s,mb5.5
MUD Monsted U'grnd 74.07 337 *i*P **P 06 35 18.2 -0.3**
MUD pmax pmax

comp=Z,8.0nm,0.8s,mb4.5
MUD Monsted U'grnd 74.07 337 *i*P **P 06 35 18.2 -0.3**
comp=Z,8.0nm,0.8s,mb4.5
LVV L'vov 74.22 325 *e*P **P 06 35 19.3 -0.2**
PV01 Paradox Valley 74.50 52 *e*P **P 06 35 22.2 +0.8**
ORE Reay 75.36 344 *e*P **P 06 35 25.4 -0.5**
BUR08 Bucovina Ar. S 75.38 323 *e*P **P 06 35 26.6 +0.4**
BURAR Bucovina Array 75.40 323⇑*i*P **P 06 35 26.6 +0.3**
TLCR 75.58 319⇓*i*P **P 06 35 28.4 +1.0**
FORT Forrest 75.60 196 *e*P **P 06 35 27.8 +0.3**
comp=Z,21nm,0.8s,mb4.9
OJC Ojcow 75.61 328 *i*P **P 06 35 27.2 -0.3**
KOLS Kolonicke sedl 75.63 325 *e*P **P 06 35 28.1 +0.4**
KOLS pmax pmax

comp=Z,6.0nm,0.9s,mb4.3
KOLS Kolonicke sedl 75.63 325 *e*P **P 06 35 28.1 +0.4**
comp=Z,5.8nm,0.9s,mb4.3
KOLS Kolonicke sedl 75.63 325 *e*P **P 06 35 28.1 +0.4**
STHS Stebnicka Huta 75.67 326 *e*P **P 06 35 29.0 +1.1**
STHS pmax pmax

comp=Z,7.0nm,0.7s,mb4.5
STHS Stebnicka Huta 75.67 326 *e*P **P 06 35 29.0 +1.1**
comp=Z,7.4nm,0.7s,mb4.5
STHS Stebnicka Huta 75.67 326 *e*P **P 06 35 29.0 +1.1**
NIE Niedzica 76.05 327 *e*P **P 06 35 31.2 +1.2**
TRPA Tarpa 76.15 325⇑*i*P **P 06 35 31.4 +0.8**
TIRR Tirgusor 76.32 319⇓P **P 06 35 31.9 +0.3**
TIRR Tirgusor 76.32 319⇓*i*P **P 06 35 31.9 +0.3**
HARR Harsova 76.37 320⇓P **P 06 35 31.4 -0.5**
HARR Harsova 76.37 320⇓*i*P **P 06 35 31.4 -0.5**
OKC Ostrava-Krasne 76.56 328 *e*P **P 06 35 33.4 +0.5**
MLR Muntele Rosu 76.69 321⇓P **P 06 35 33.5 -0.2**
MLR Muntele Rosu 76.69 321⇓*i*P **P 06 35 33.5 -0.2**
KECS Kecovo 76.72 326 *e*P **P 06 35 34.6 +0.8**
KECS pmax pmax

comp=Z,3.0nm,0.7s,mb4.1
KECS Kecovo 76.72 326 *e*P **P 06 35 34.6 +0.8**
comp=Z,2.8nm,0.7s,mb4.1
KECS Kecovo 76.72 326 *e*P **P 06 35 34.6 +0.8**
DPC Dobruska-Polom 76.83 330 *e*P **P 06 35 34.8 +0.4**
DPC *ex* x 06 35 54.1
MORC Moravsky Berou 76.84 329 *e*P **P 06 35 34.6 +0.1**
MORC pmax pmax

comp=Z,9.0nm,1.0s,mb4.5
MORC Moravsky Berou 76.84 329 *e*P **P 06 35 34.6 +0.1**
comp=Z,9.0nm,1.0s,mb4.5
MORC Moravsky Berou 76.84 329⇓*i*P **P 06 35 35.2 +0.7**
KPL Plockton 76.85 345⇑*e*P **P 06 35 34.3 -0.1**
KPL AMb AMB 06 35 42.5
comp=Z,35nm,2.9s,mb4.6
DRGR 77.12 324⇑P **P 06 35 36.4 +0.3**
DRGR 77.12 324⇑*i*P **P 06 35 36.4 +0.3**
BR131 Keskin Array S 77.14 313 *e*P **P 06 35 36.7 +0.3**
comp=Z,1.2nm,0.6s,mb3.8
BRTR Keskin Array B 77.15 313 P **P 06 35 36.5 +0.2**
comp=Z,1.8nm,0.7s,mb3.9,baz=74,slow=3.5,SNR=9.6
BRTR pP pP 06 36 01.4 0.0
comp=Z,0.9nm,0.7s,baz=82,slow=7.0,SNR=2.6
BRTR Keskin Array B 77.15 313 P **P 06 35 36.6 +0.2**
BRTR *PP pP 06 36 01.4 0.0
BRTR pmax pmax

comp=Z,2.0nm,0.7s
BRTR pmax pmax

comp=N,1.0nm,0.7s
CLL Collm 77.22 332 *i*P **P 06 35 36.2 -0.4**
CLL *e**PP pP 06 36 01.0 -0.6
CLL pmax pmax

comp=Z,17nm,0.7s,mb4.9
CLL Collm 77.22 332 *i*P **P 06 35 36.2 -0.4**
comp=Z,17nm,0.7s,mb4.9
CLL *e*pP pP 06 36 01.0 -0.6
CLL Collm 77.22 332 *i*P **P 06 35 36.2 -0.4**
comp=Z,17nm,0.7s,mb4.9
CLL *e*pP pP 06 36 01.0 -0.6
CLL *i*PP PP 06 38 26.7 -4.3
comp=Z,4.0nm,0.6s
BRG Berggiesshubel 77.26 331 *e*P **P 06 35 36.3 -0.5**
comp=Z,4.2nm,0.7s,mb4.3
VYHS Vyhne 77.37 327 *e*P **P 06 35 38.0 +0.5**
VYHS pmax pmax

comp=Z,5.0nm,1.4s,mb4.0
VYHS Vyhne 77.37 327 *e*P **P 06 35 38.0 +0.5**
comp=Z,4.5nm,1.4s,mb4.0
VYHS Vyhne 77.37 327 *e*P **P 06 35 38.0 +0.5**
PSZ Piszkesteto 77.41 326 *e*P **P 06 35 38.2 +0.5**
PSZ pmax pmax

comp=Z,6.0nm,1.0s,mb4.3
PSZ Piszkesteto 77.41 326 *e*P **P 06 35 38.2 +0.5**
comp=Z,5.9nm,1.0s,mb4.3
KOLL Kolacno 77.48 327 *e*P **P 06 35 38.7 +0.6**
KOLL Kolacno 77.48 327 *e*P **P 06 35 38.7 +0.6**
ESY Stoneypath 77.55 342 *e*P **P 06 35 38.2 -0.1**
EAB Aberfoyle 77.67 344 *e*P **P 06 35 39.3 +0.3**
EAU Auchinoon 77.80 343 *e*P **P 06 35 40.2 +0.5**
GZR Gura Zlata 78.18 323⇓P **P 06 35 42.3 +0.3**
GZR Gura Zlata 78.18 323⇓*i*P **P 06 35 42.3 +0.3**
ESK Eskdalemuir 78.23 343 *e*P **P 06 35 41.9 -0.2**
ESK AMb AMB 06 35 43.2
comp=Z,31nm,1.9s,mb4.7
ESK Eskdalemuir 78.23 343 *i*P **P 06 35 43.6 +1.5**
SCHQ Schefferville 78.25 19 P **P 06 35 42.0 -0.3**
comp=Z,4.3nm,0.6s,mb4.3,baz=4.2,slow=5.7,SNR=12
SCHQ Schefferville 78.25 19 *e*P **P 06 35 42.1 -0.2**
comp=Z,5.4nm,0.7s,mb4.4
ECK Cauldkaine Hil 78.34 342⇑*e*P **P 06 35 42.4 -0.3**
XAL Allendale 78.43 342 *e*P **P 06 35 42.9 -0.4**
GCD Castle Douglas 78.81 343⇑*e*P **P 06 35 45.1 -0.2**
KHC Kasperske Hory 78.84 330 *e*P **P 06 35 45.7 +0.1**
KHC *e**PP pP 06 36 11.3 +0.6
KHC pmax pmax

comp=Z,5.0nm,0.6s,mb4.5
KHC Kasperske Hory 78.84 330 *e*P **P 06 35 45.7 +0.1**
comp=Z,5.0nm,0.6s,mb4.5
KHC *e*pP pP 06 36 11.3 +0.6
KHC Kasperske Hory 78.84 330 *e*P **P 06 35 45.8 +0.2**
KHC *e*pP pP 06 36 11.4 +0.7
GAL1 Galloway 78.98 343⇑*e*P **P 06 35 46.0 -0.2**
GERES GERESS Array B 79.04 330 P **P 06 35 46.7 0.0**
comp=Z,1.0nm,0.3s,mb4.1,baz=39,slow=5.3,SNR=9.8
GERES pP pP 06 36 12.2 +0.4
comp=Z,0.4nm,0.3s,baz=40,slow=7.8,SNR=2.3
GERES GERESS Array B 79.04 330 P **P 06 35 46.7 0.0**
GERES *PP pP 06 36 12.2 +0.4
GERES pmax pmax

comp=Z,1.0nm,0.4s
HPK Haverah Park 79.13 341 *e*P **P 06 35 47.2 +0.2**
HPK AMb AMB 06 35 50.1
comp=Z,87nm,2.4s,mb5.2
GRA1 Grafenberg Arr 79.20 332 *e*P **P 06 35 47.6 +0.1**
comp=Z,7.0nm,0.9s,mb4.5
GRF Grafenberg Arr 79.20 332 *e*P **P 06 35 47.6 +0.1**
comp=Z,7.0nm,0.9s,mb4.5
GRF Grafenberg Arr 79.20 332 *e*P **P 06 35 47.6 +0.1**
GRF pmax pmax

comp=Z,7.0nm,0.9s,mb4.5
GRF Grafenberg Arr 79.20 332 *e*P **P 06 35 47.6 +0.1**
GRF pmax pmax

comp=Z,7.0nm,0.9s,mb4.5
LHO Holmfirth 79.56 341 *e*P **P 06 35 49.0 -0.4**
GMM Mts of Mourne 79.82 344 *e*P **P 06 35 50.3 -0.5**
MEM Membach 80.09 335 P **P 06 35 52.5 +0.2**
CWF Charnwood Fore 80.17 340 *e*P **P 06 35 52.7 0.0**
CWF AMb AMB 06 36 04.7
comp=Z,15nm,2.3s,mb4.4
BCLA Clavier 80.47 336 P **P 06 35 52.3 -2.1**
comp=Z,6.5nm,2.0s,mb4.1
DSB Dublin 80.84 344 *e*P **P 06 35 56.0 -0.3**
comp=Z,5.9nm,0.8s,mb4.5
MNTX Cornudas Mount 80.87 55 *e*P **P 06 35 57.3 +0.4**
comp=Z,1.7nm,1.0s,mb3.8
MMAI Mount Meron Ar 81.00 307 P **P 06 35 58.1 +0.5**
comp=Z,5.7nm,0.6s,mb4.6,baz=50,slow=7.8,SNR=18
MMAI pP pP 06 36 23.3 +0.6
comp=Z,2.7nm,0.7s,baz=61,slow=9.6,SNR=2.6
GDL2 Guadalupe Moun 81.11 54 *e*P **P 06 35 58.7 +0.5**
comp=Z,0.4nm,0.4s,mb3.6
HTR Trewern Hill 81.25 341⇑*e*P **P 06 35 58.4 -0.1**
HGH Gray Hill 81.55 341⇑*e*P **P 06 35 59.8 -0.3**
CDF Champ du Feu 81.62 334 *e*P **P 06 36 00.2 -0.3**
comp=Z,14nm,0.9s,mb4.5
CDF Champ du Feu 81.62 334 *e*P **P 06 36 00.2 -0.3**
CDF pmax pmax

comp=Z,7.0nm,0.9s,mb4.5
CDF Champ du Feu 81.62 334 *e*P **P 06 36 00.2 -0.3**
comp=Z,6.9nm,0.9s,mb4.5
MEZF Maizieres J'vi 82.24 335 *e*P **P 06 36 03.6 -0.2**
HAU Haudompre 82.27 334 *e*P **P 06 36 03.3 -0.6**
DYA Yadsworthy 82.93 341 *e*P **P 06 36 08.6 -0.5**
CABF La Chapelle 83.58 333 *e*P **P 06 36 10.2 -0.5**
comp=Z,14nm,1.1s,mb4.4
CABF La Chapelle 83.58 333 *e*P **P 06 36 10.2 -0.5**
CABF pmax pmax

comp=Z,7.0nm,1.1s,mb4.4
CABF La Chapelle 83.58 333 *e*P **P 06 36 10.2 -0.5**
comp=Z,7.0nm,1.1s,mb4.4
JLP Les Platons 83.59 340⇑*e*P **P 06 36 10.4 -0.3**
TXAR Lajitas Array 83.59 55 P **P 06 36 11.7 +0.6**
comp=Z,1.4nm,0.7s,mb3.9,baz=289,slow=3.5,SNR=24
TXAR Lajitas Array 83.59 55 P **P 06 36 11.7 +0.6**
TXAR pmax pmax

comp=Z,1.0nm,0.7s
FLN La Foliniere 83.61 338 *e*P **P 06 36 10.2 -0.6**
LDF La Druitiere 83.66 338 *e*P **P 06 36 10.5 -0.6**
LOR Lormes 83.71 335⇑*i*P **P 06 36 10.8 -0.6**
comp=Z,11nm,0.8s,mb4.4
LOR Lormes 83.71 335⇑*i*P **P 06 36 10.8 -0.6**
LOR pmax pmax

comp=Z,5.0nm,0.8s,mb4.4
LOR Lormes 83.71 335⇑*i*P **P 06 36 10.8 -0.6**
comp=Z,5.4nm,0.8s,mb4.4
SSF Saint Saulge 84.00 335 *e*P **P 06 36 12.4 -0.4**
comp=Z,6.2nm,0.8s,mb4.2
SSF Saint Saulge 84.00 335 *e*P **P 06 36 12.4 -0.4**
SSF pmax pmax

comp=Z,3.0nm,0.8s,mb4.2
SSF Saint Saulge 84.00 335 *e*P **P 06 36 12.4 -0.4**
comp=Z,3.1nm,0.8s,mb4.2
GRR Gorron 84.05 338⇑*i*P **P 06 36 12.9 -0.2**
comp=Z,5.4nm,0.5s,mb4.3
GRR Gorron 84.05 338⇑*i*P **P 06 36 12.9 -0.2**
GRR pmax pmax

comp=Z,3.0nm,0.5s,mb4.4
GRR Gorron 84.05 338⇑*i*P **P 06 36 12.9 -0.2**
comp=Z,2.7nm,0.5s,mb4.3
SMF Signal de Mont 84.27 335⇑*i*P **P 06 36 13.8 -0.4**
comp=Z,17nm,0.9s,mb4.6
SMF Signal de Mont 84.27 335⇑*i*P **P 06 36 13.8 -0.4**
SMF pmax pmax

comp=Z,8.0nm,0.9s,mb4.5
SMF Signal de Mont 84.27 335⇑*i*P **P 06 36 13.8 -0.4**
comp=Z,8.4nm,0.9s,mb4.6
AVF Avril sur Loir 84.29 335⇑*i*P **P 06 36 14.0 -0.3**
comp=Z,10nm,0.8s,mb4.4
AVF Avril sur Loir 84.29 335⇑*i*P **P 06 36 14.0 -0.3**
AVF pmax pmax

comp=Z,5.0nm,0.8s,mb4.4
AVF Avril sur Loir 84.29 335⇑*i*P **P 06 36 14.0 -0.3**
comp=Z,5.1nm,0.8s,mb4.4
LPL La Plagne 84.33 332 *e*P **P 06 36 14.8 +0.2**
LPG La Plagne 84.34 332 *e*P **P 06 36 14.4 -0.2**
comp=Z,6.9nm,0.6s,mb4.3
LPG La Plagne 84.34 332 *e*P **P 06 36 14.4 -0.2**
LPG pmax pmax

comp=Z,3.0nm,0.6s,mb4.3
LPG La Plagne 84.34 332 *e*P **P 06 36 14.4 -0.2**
comp=Z,3.5nm,0.6s,mb4.4
SGMF Saint Gilles 84.62 339⇑*i*P **P 06 36 16.0 +0.1**
comp=Z,5.2nm,0.5s,mb4.4
SGMF Saint Gilles 84.62 339⇑*i*P **P 06 36 16.0 +0.1**
SGMF pmax pmax

comp=Z,3.0nm,0.5s,mb4.5
SGMF Saint Gilles 84.62 339⇑*i*P **P 06 36 16.0 +0.1**
comp=Z,2.6nm,0.5s,mb4.4
ROSF Rostrenen 84.72 340⇑*i*P **P 06 36 16.2 -0.3**
comp=Z,52nm,1.1s,mb5.1
ROSF Rostrenen 84.72 340⇑*i*P **P 06 36 16.2 -0.3**
ROSF pmax pmax

comp=Z,26nm,1.1s,mb5.1
ROSF Rostrenen 84.72 340⇑*i*P **P 06 36 16.2 -0.3**
comp=Z,26nm,1.1s,mb5.1
QUIF Quistinic 85.08 340⇑*i*P **P 06 36 18.2 -0.1**
comp=Z,12nm,0.8s,mb4.6
QUIF Quistinic 85.08 340⇑*i*P **P 06 36 18.2 -0.1**
QUIF pmax pmax

comp=Z,6.0nm,0.8s,mb4.6
QUIF Quistinic 85.08 340⇑*i*P **P 06 36 18.2 -0.1**
comp=Z,6.1nm,0.8s,mb4.6
TCF Toulx Ste Croi 85.09 336 *e*P **P 06 36 18.2 -0.1**
ORIF Oris-en-Rattie 85.15 333 *e*P **P 06 36 18.8 +0.1**
comp=Z,8.5nm,0.7s,mb4.5
ORIF Oris-en-Rattie 85.15 333 *e*P **P 06 36 18.8 +0.1**
ORIF pmax pmax

comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 85.15 333 *e*P **P 06 36 18.8 +0.1**
comp=Z,4.3nm,0.7s,mb4.5
MFF Saint Martin d 85.49 337⇑*i*P **P 06 36 20.3 0.0**
comp=Z,16nm,1.0s,mb4.6
MFF Saint Martin d 85.49 337⇑*i*P **P 06 36 20.3 0.0**
MFF pmax pmax

comp=Z,8.0nm,1.0s,mb4.6
MFF Saint Martin d 85.49 337⇑ *i*P P 06 36 20.3 0.0
comp=Z,8.1nm,1.0s,mb4.6
VIVF Saint-Julien-l 85.60 333 *e*P P 06 36 21.0 +0.1
GVD Gavdhos 85.82 316 *e*P P 06 36 22.3 +0.1
comp=Z,10nm,0.4s,mb5.1
PGF Pioggiola 86.12 330 *e*P P 06 36 22.8 -0.7
comp=Z,9.6nm,0.8s,mb4.5
PGF Pioggiola 86.12 330 *e*P P 06 36 22.8 -0.7
PGF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PGF Pioggiola 86.12 330 *e*P P 06 36 22.8 -0.7
comp=Z,4.8nm,0.8s,mb4.5
RJF Les Rejaudoux 86.19 336⇑ *i*P P 06 36 23.8 0.0
comp=Z,20nm,1.2s,mb4.6
RJF Les Rejaudoux 86.19 336⇑ *i*P P 06 36 23.8 0.0
RJF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
RJF Les Rejaudoux 86.19 336⇑ *i*P P 06 36 23.8 0.0
comp=Z,10nm,1.2s,mb4.6
LMR La Mourre 86.33 332 *e*P P 06 36 23.9 -0.6
comp=Z,14nm,1.0s,mb4.6
LMR La Mourre 86.33 332 *e*P P 06 36 23.9 -0.6
LMR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LMR La Mourre 86.33 332 *e*P P 06 36 23.9 -0.6
comp=Z,7.2nm,1.0s,mb4.6
CAF Calviac 86.36 335⇑ *i*P P 06 36 25.3 +0.6
comp=Z,21nm,1.0s,mb4.7
CAF Calviac 86.36 335⇑ *i*P P 06 36 25.3 +0.6
CAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CAF Calviac 86.36 335⇑ *i*P P 06 36 25.3 +0.6
comp=Z,10nm,1.0s,mb4.7
LFF La Frestale 86.75 336 *e*P P 06 36 26.8 +0.3
ETSF Etsaut 88.99 336 *e*P P 06 36 37.6 +0.3
comp=Z,8.4nm,0.8s,mb4.5
ETSF Etsaut 88.99 336 *e*P P 06 36 37.6 +0.3
ETSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ETSF Etsaut 88.99 336 *e*P P 06 36 37.6 +0.3
comp=Z,4.2nm,0.8s,mb4.5
ESDC Sonseca Array 92.95 337 P P 06 36 55.0 -0.8
comp=Z,0.3nm,0.4s,mb3.9,baz=37,slow=3.7,SNR=5.5
TORD Torodi Ar. Bea 114.93 321 PKP PKiKP 06 42 22.1 -1.3
comp=Z,0.3nm,0.9s,baz=35,slow=2.5,SNR=4.2
TORD PP PP 06 43 13.9 -8.6
comp=Z,1.4nm,0.9s,baz=17,slow=8.7,SNR=5.2

*DJA **31** 06:25:39,9°.21S×113°.48E,h62km,MLv4.2/9*
*IDC **31** 06:25:40.5±1.1,8°.98S×113°.58E,h90km±10km,mb3.8/7,*
mb1 3.8/9,mb1mx3.6/21,mbtmp3.8/9,MS3.7/1,Ms1 3.7/1,
ms1mx2.2/32,Error ellipse: s-maj=24.5km s-min=16.8km
az=58.0
*ISCJB **31** 06:25:45.0±4.6,8°.8S±0°.1×113°.8E±0°.2,h149km±43km,*
mb3.9/7,Error ellipse: s-maj=39.9km s-min=15.8km
az=167.7
ISC 31 06:25:45.8±4.8,8°.9S±0°.1×113°.8E±0°.3,h137km±45km,n9,
σ0°28/10,mb4.0/7,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.03**	**57**	P	**Pn**	**06 27 26.3**	**-0.1**
0.8nm,0.3s,baz=255,slow=17,SNR=6.5							
KAPI				S	**Sn**	**06 28 45.0**	**0.0**
1.2nm,0.3s,baz=49,slow=20,SNR=4.5							
KAPI				LR	LR	06 31 05.6	
comp=Z,473nm,18.3s,baz=184,slow=45							
FITZ	**Fitzroy Crossi**	**14.70**	**130**	P	**Pn**	**06 29 07.2**	**+0.1**
0.2nm,0.3s,baz=291,slow=8.6,SNR=4.0							
ASAR	**Alice Springs**	**24.20**	**130**	P	**P**	**06 30 49.5**	**-0.3**
1.6nm,0.5s,mb3.8,baz=303,slow=8.8,SNR=30							
ASAR				pP		06 31 09.8	
0.9nm,0.5s,baz=306,slow=9.2,SNR=4.7							
ASAR				sP	sP	06 31 21.3	-13
0.7nm,0.5s,baz=303,slow=9.3,SNR=2.3							
STKA	**Stephens Creek**	**34.48**	**136**	P	**P**	**06 32 20.9**	**+0.2**
1.8nm,0.6s,mb4.0,baz=306,slow=12,SNR=6.7							
STKA				pP	pP	06 32 40.7	-10
0.9nm,0.4s,baz=262,slow=8.2,SNR=2.1							
SONM	**Songino Array**	**56.84**	**354**	P	**P**	**06 35 16.2**	**+0.4**
2.5nm,0.5s,mb4.3,baz=176,slow=7.4,SNR=5.8							
MKAR	**Makanchi Array**	**62.13**	**336**	P	**P**	**06 35 52.3**	**+0.1**
1.9nm,0.4s,mb4.3,baz=137,slow=7.6,SNR=23							
KURK	**Kurchatov**	**66.73**	**336**	P	**P**	**06 36 21.5**	**-0.5**
0.9nm,0.6s,mb3.8,baz=155,slow=5.6,SNR=4.1							
ZALV	**Zalesovo Beam**	**67.21**	**342**	P	**P**	**06 36 24.7**	**-0.3**
1.3nm,0.4s,mb4.1,baz=147,slow=5.3,SNR=6.4							
BVAR	**Borovoye Array**	**71.86**	**334**	P	**P**	**06 36 53.8**	**+0.3**
0.5nm,0.7s,mb3.4,baz=179,slow=17,SNR=2.8							

KRSC 31 06:32:49.7±0.6,54°.82N×162°.40E,h40km±39km,ML3.7,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.47**	**236**	*i* P	Pn	06 33 01.1	+1.1
MKZ				*i* S	Sn	06 33 08.9	+1.7
TUMR	**Tumrok**	**1.38**	**291**	*e*P	Pn	06 33 13.9	+1.5
TUMR				*i* S	Sn	06 33 31.6	+2.3
KBTR	**Krutoberegovo**	**1.41**	**10**	*e*P	Pn	06 33 14.2	+1.4
KBTR				*i* S	Sn	06 33 32.8	+2.6
ZLN	**Zelenaya**	**1.51**	**323**	*e*P	Pn	06 33 16.4	+2.3
ZLN				*i* S	Sn	06 33 36.1	+3.6
KMNR	**Kamenistaya**	**1.55**	**308**	*e*P	Pn	06 33 16.6	+1.8
KMNR				*i* S	Sn	06 33 35.8	+2.1
BZMR	**Bezymyannaya**	**1.56**	**316**	*e*P	Pn	06 33 16.5	+1.6
CIRR	**Tsirk**	**1.60**	**325**	*e*P	Pn	06 33 17.8	+2.3
CIRR				*i* S	Sn	06 33 38.5	+3.6
KPT	**Kopyto**	**1.69**	**314**	*e*P	Pn	06 33 18.8	+2.1
KPT				*i* S	Sn	06 33 39.7	+2.6
SMKR	**Semkarok**	**1.84**	**344**	*e*P	Pn	06 33 21.2	+2.4
SMKR				*i* S	Sn	06 33 44.6	+3.8
BDR	**Baidarnaya**	**1.88**	**339**	*e*P	Pn	06 33 21.6	+2.4
BDR				*i* S	Sn	06 33 44.7	+3.0
KII	**Karymskiy**	**1.90**	**247**	*e*P	Pn	06 33 21.4	+1.9
KII				*i* S	Sn	06 33 44.4	+2.3
KOZ	**Kozyrevsk**	**1.90**	**312**	*e*P	Pn	06 33 21.8	+2.2
KOZ				*i* S	Sn	06 33 45.3	+3.1
SRKR	**Sorokina**	**1.97**	**340**	*e*P	Pn	06 33 23.1	+2.6
SRKR				*i* S	Sn	06 33 47.6	+3.8
SRDR	**Sredinnyy**	**2.14**	**316**	*e*P	Pn	06 33 24.7	+1.9
SRDR				*i* S	Sn	06 33 50.1	+2.0
AVH	**Avacha**	**2.66**	**236**	*e*P	Pn	06 33 33.0	+3.0
AVH				*i* S	Sn	06 34 04.6	+3.6
GNL	**Ganaly**	**2.85**	**248**	*e*P	Pn	06 33 35.3	+2.7
PET	**Petropavlovsk**	**2.85**	**232**	*e*P	Pn	06 33 35.2	+2.5
PET				*i* S	Sn	06 34 08.5	+2.8

IDC 31 06:40:48.1±1.3,23°.38S×115°.08W,h0km,mb3.6/5,
mb1 4.0/5,mb1mx3.8/14,mbtmp3.6/5,Error ellipse:
s-maj=46.9km s-min=41.2km az=45.0,Southern East
Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**44.57**	**90**	P	P	06 49 02.9	+0.7
1.5nm,1.1s,baz=262,slow=12,SNR=3.2							
TXAR	**Lajitas Array**	**53.54**	**12**	P	P	06 50 11.7	+1.0
0.3nm,0.8s,baz=186,slow=8.0,SNR=2.7							
NVAR	**Mina Array Bea**	**61.55**	**357**	P	P	06 51 08.3	+1.3
0.9nm,0.8s,baz=189,slow=9.8,SNR=7.9							
PDAR	**Pinedale Array**	**66.00**	**4**	P	P	06 51 35.0	-1.3
0.2nm,0.4s,baz=188,slow=40,SNR=3.2							
YKA	**Yellowknife Ar**	**85.57**	**0**	P	P	06 53 27.4	-0.3
0.7nm,1.0s,baz=176,slow=5.5,SNR=7.6							
ZALV	**Zalesovo Beam**	**145.99**	**339**	PKPbc	PKPbc	07 00 29.6	+0.1
0.4nm,0.4s,baz=318,slow=4.0,SNR=2.4							
CMAR	**Chiang Mai Arr**	**147.90**	**268**	PKPbc	PKPbc	07 00 36.3	+0.3
0.9nm,0.5s,baz=210,slow=0.6,SNR=4.7							
BRTR	**Keskin Array B**	**148.95**	**51**	PKPbc	PKPbc	07 00 38.4	+0.3
0.2nm,0.3s,baz=223,slow=6.6,SNR=3.8							
BVAR	**Borovoye Array**	**150.10**	**353**	PKPbc	PKPbc	07 00 40.0	-0.5
1.6nm,0.8s,baz=48,slow=2.2,SNR=4.6							
KURK	**Kurchatov**	**150.70**	**342**	PKPbc	PKPbc	07 00 40.9	-1.1
0.8nm,0.7s,baz=30,slow=1.8,SNR=7.4							
MKAR	**Makanchi Array**	**152.77**	**333**	PKPbc	PKPbc	07 00 46.1	-0.8
0.3nm,0.6s,baz=55,slow=4.6,SNR=4.6							

GUC 31 06:42:39.6±0.3,41°.84S×72°.34W,h12km,ML3.6,1C,
Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCH	**HornopirØn**	**0.09**	**218**	*e*	Pg	06 42 39.5	-2.8
baz=38,slow=11							
HOCH				⇑*i*P		06 42 43.0	
HOCH				*i* S	Sg	06 42 45.5	+1.3
HOCH				AML	AML	06 42 47.5	
comp=N,21μm,0.5s							

IDC 31 06:46:55.4±9.1,25°.31S×179°.57E,h525km±108km,
mb3.0/4,mb1 3.3/4,mb1mx3.1/13,mbtmp3.0/4,Error
ellipse: s-maj=198.6km s-min=39.7km az=162.0,South
of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.86**	**250**	P	P	06 52 54.2	0.0
1.5nm,0.8s,baz=126,slow=8.7,SNR=3.2							
ASAR	**Alice Springs**	**41.44**	**262**	P	P	06 53 56.0	-0.2
0.8nm,0.3s,baz=90,slow=6.8,SNR=24							
NVAR	**Mina Array Bea**	**86.03**	**44**	P	P	06 58 40.9	+0.6
0.5nm,0.6s,baz=215,slow=7.7,SNR=4.3							
TXAR	**Lajitas Array**	**91.50**	**58**	P	P	06 59 06.1	+0.1
0.2nm,0.7s,baz=207,slow=7.0,SNR=4.0							
NOA	**NORSAR Array B**	**143.41**	**351**	PKP	PKPdf	07 05 26.9	-2.4
1.5nm,0.7s,baz=22,slow=3.8,SNR=9.0							
MMAI	**Mount Meron Ar**	**147.90**	**292**	PKPbc	PKPbc	07 05 42.5	+0.8
0.5nm,0.3s,baz=95,slow=3.5,SNR=3.6							

*TAP **31** 07:04:48.0,24°.16N×122°.17E,h38km,ML3.4,C*
*ISCJB **31** 07:04:48.0±0.4,24°.12N±0°.02×122°.17E±0°.02,h28km±3km,*
Error ellipse: s-maj=3.7km s-min=2.6km az=153.5
*JMA **31** 07:04:48.3±0.4,24°.23N×122°.12E,h49km,M2.2*
ISC 31 07:04:48.1±0.4,24°.12N±0°.02×122°.17E±0°.02,h25km±3km,
n45,σ0°90/85,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.50**	**308**	*e*P	**Pb**	**07 04 58.5**	**+0.2**
baz=307							
ENA				*e*S	**Sb**	**07 05 06.2**	**+1.1**
baz=307							
TWD	**Chiawan**	**0.53**	**266**	*i* P	**Pb**	**07 04 58.8**	**+0.1**
baz=251							
TWD				*e*S	**Sb**	**07 05 06.5**	**+0.6**
baz=251							
HWA	**Hwalien**	**0.54**	**255**	*e*P	**Pb**	**07 04 59.4**	**+0.6**
baz=249							
HWA				*i* S	**Sb**	**07 05 07.9**	**+1.7**
baz=249							
TWC	**Suao**	**0.57**	**329**	*i* P	**Pb**	**07 04 59.0**	**-0.4**
baz=333							
TWC				*e*S	**Sb**	**07 05 06.0**	**-1.0**
baz=333							
ESL	**Shilin**	**0.74**	**246**	*e*P	**Pb**	**07 05 01.6**	**-0.7**
baz=233							
ESL				*e*S	**Sb**	**07 05 12.5**	**+0.5**
baz=233							
ILA	**Ilan**	**0.75**	**329**	*e*P	**Pb**	**07 05 04.5**	**+2.1**
baz=328							
TWE	**Neicheng**	**0.75**	**323**	P	**Pb**	**07 05 02.3**	**-0.2**
baz=327							
TWE				S	**Sb**	**07 05 12.3**	**-0.1**
baz=327							
ENTT	**Nioudou**	**0.75**	**313**	*e*P	**Pb**	**07 05 02.3**	**-0.2**
baz=301							
ENTT				*e*S	**Sb**	**07 05 12.9**	**+0.5**
baz=301							
NNS	**Nan Shan**	**0.79**	**294**	*i* P	**Pb**	**07 05 03.0**	**-0.2**
baz=291							
NNS				*i* S	**Sb**	**07 05 13.5**	**0.0**
baz=291							
WHF	**Hehuan Shan**	**0.83**	**272**	P	**Pb**	**07 05 03.5**	**-0.2**
baz=259							
WHF				*e*S	**Sb**	**07 05 14.8**	**+0.3**
baz=259							
YOJ	**Yonaguni jima**	**0.84**	**66**	P	**Pb**	**07 05 04.0**	**0.0**
YOJ				*e*S	**Sb**	**07 05 15.6**	**+0.7**
TWB1	**Santiao Chiao**	**0.90**	**349**	P	**Pb**	**07 05 04.1**	**-0.9**
baz=349							
TWB1				*e*S	**Sb**	**07 05 15.4**	**-1.2**
baz=349							
TWT	**Tachien**	**0.92**	**278**	*e*P	**Pb**	**07 05 05.3**	**0.0**
baz=269							
TWT				S	**Sb**	**07 05 17.4**	**+0.3**
baz=269							
NSK	**Sanguang**	**0.92**	**307**	P	**Pb**	**07 05 04.8**	**-0.7**
baz=293							
NSK				S	**Sb**	**07 05 16.0**	**-1.2**
baz=293							
EHY	**Hungye**	**0.99**	**232**	*e*P	**Pn**	**07 05 05.3**	**-1.0**
baz=229							
EHY				*e*S	**Sb**	**07 05 16.1**	**-3.0**
baz=229							
TWA	**Mucha**	**1.01**	**328**	*e*P	**Pn**	**07 05 06.4**	**-0.2**
baz=326							
TWA				*e*S	**Sb**	**07 05 19.3**	**-0.4**
baz=326							
NWF	**Wu-fen Shan**	**1.01**	**340**	P	**Pn**	**07 05 06.2**	**-0.5**
baz=351							
NWF				S	**Sb**	**07 05 19.3**	**-0.5**
baz=351							
TAP1	**Taipei**	**1.09**	**327**	*e*P	**Pn**	**07 05 06.8**	**-0.9**
baz=325							
TAP1				*e*S	**Sb**	**07 05 22.3**	**+0.4**
baz=325							
TWF1	**Yuli**	**1.11**	**226**	P	**Pn**	**07 05 07.3**	**-0.7**
baz=237							
TWF1				*e*S	**Sb**	**07 05 21.1**	**-1.5**
baz=237							
NSTT	**Nanjuang**	**1.18**	**296**	*e*P	**Pn**	**07 05 09.5**	**+0.5**
baz=293							
NSTT				*e*S	**Sn**	**07 05 23.8**	**-0.5**
baz=293							
SMLT	**Sun Moon Lake**	**1.19**	**259**	P	**Pn**	**07 05 09.1**	**0.0**
baz=256							
SMLT				S	**Sn**	**07 05 24.0**	**-0.5**
baz=256							
TYC	**Yuchr**	**1.22**	**260**	*e*P	**Pn**	**07 05 09.1**	**-0.4**
baz=248							
TYC				S	**Sn**	**07 05 24.3**	**-1.0**
baz=248							
CHKT	**Chengkung**	**1.26**	**216**	*e*P	**Pn**	**07 05 08.5**	**-1.6**
baz=205							
CHKT				*e*S	**Sn**	**07 05 23.1**	**-3.2**
baz=205							
TWY	**Chenhua**	**1.26**	**336**	*e*P	**Pn**	**07 05 10.0**	**-0.2**
baz=348							
TWY				*e*S	**Sn**	**07 05 26.3**	**0.0**
baz=348							
YUS	**Yu-Shan**	**1.28**	**241**	⇓*i*P	**Pn**	**07 05 11.0**	**+0.6**
baz=238							
YUS				*e*S	**Sn**	**07 05 26.4**	**-0.4**
baz=238							
TWQ1	**Liyutan**	**1.29**	**280**	*e*P	**Pn**	**07 05 10.8**	**+0.3**
baz=278							
TWQ1				*e*S	**Sn**	**07 05 26.1**	**-1.0**
baz=278							
NSY	**Sanyi**	**1.32**	**283**	*e*P	**Pn**	**07 05 12.0**	**+1.1**
baz=281							
NSY				*e*S	**Sn**	**07 05 28.8**	**+1.1**
baz=281							
TCU	**Taichung**	**1.36**	**271**	*e*P	**Pn**	**07 05 12.7**	**+1.1**
baz=269							
WNT	**Mingjian**	**1.38**	**260**	*e*P	**Pn**	**07 05 12.6**	**+0.8**
baz=247							
ALS	**Alishan**	**1.39**	**244**	*e*P	**Pn**	**07 05 12.7**	**+0.8**
baz=233							
ALS				*e*S	**Sn**	**07 05 29.3**	**-0.2**
baz=233							
ELDTW	**Lidau**	**1.41**	**229**	*e*P	**Pn**	**07 05 11.2**	**-1.0**
baz=227							
ELDTW				*e*S	**Sn**	**07 05 28.7**	**-1.2**
baz=227							
IRIF	**Iriomote-Funau**	**1.44**	**81**	P	**Pn**	**07 05 12.5**	**-0.1**
IRIF				*e*S	**Sn**	**07 05 30.4**	**-0.4**
CHN5	**Tsauling**	**1.46**	**249**	*e*P	**Pn**	**07 05 13.6**	**+0.7**
baz=236							
CHN5				*e*S	**Sn**	**07 05 31.5**	**+0.2**
baz=236							
HATJ	**Hateruma jima**	**1.50**	**92**	P	**Pn**	**07 05 14.1**	**+0.7**
HATJ				*e*S	**Sn**	**07 05 32.3**	**+0.2**
TWG	**Pinlang**	**1.64**	**218**	*e*P	**Pn**	**07 05 14.8**	**-0.6**
baz=216							
TWG				*e*S	**Sn**	**07 05 34.4**	**-1.3**
baz=216							
WTP	**Ta-pu**	**1.67**	**239**	*e*P	**Pn**	**07 05 16.4**	**+0.6**
baz=237							
WTP				*e*S	**Sn**	**07 05 36.2**	**-0.3**
baz=237							
JKRS	**Kuro-shima**	**1.69**	**86**	P	**Pn**	**07 05 17.2**	**+1.2**
JKRS				*e*S	**Sn**	**07 05 37.6**	**+0.8**
TWK	**Hsinying**	**1.76**	**241**	*e*P	**Pn**	**07 05 18.4**	**+1.4**
baz=239							
TWK				*e*S	**Sn**	**07 05 40.1**	**+1.4**
baz=239							
CHN1	**Nanshi**	**1.77**	**239**	*e*P	**Pn**	**07 05 17.7**	**+0.5**
baz=237							
CHN1				*e*S	**Sn**	**07 05 40.6**	**+1.7**
baz=237							
SGST	**Jiashian**	**1.79**	**235**	*e*P	**Pn**	**07 05 18.3**	**+1.0**
baz=233							
SGST				*e*S	**Sn**	**07 05 40.9**	**+1.7**
baz=233							
JIJ	**Ishigaki jima**	**1.82**	**82**	P	**Pn**	**07 05 17.9**	**+0.1**
JIJ				*e*S	**Sn**	**07 05 39.3**	**-0.8**
ECL	**Taimali**	**1.88**	**217**	*e*P	**Pn**	**07 05 17.8**	**-0.9**
baz=215							
ECL				*e*S	**Sn**	**07 05 39.4**	**-2.3**
baz=215							
SSD	**Sandimen**	**1.97**	**226**	*e*P	**Pn**	**07 05 20.7**	**+0.8**
baz=224							
SSD				*e*S	**Sn**	**07 05 45.2**	**+1.5**
baz=224							
LAY	**Lan-yu**	**2.15**	**195**	*e*P	**Pn**	**07 05 21.3**	**-1.1**
baz=186							
SCZT	**Fangliau**	**2.25**	**220**	*e*P	**Pn**	**07 05 24.6**	**+0.8**
baz=214							

IDC 31 07:16:58.4±1.5,7°.76S×118°.33E,h0km,mb3.5/4,
mb1 3.6/5,mb1mx3.5/20,mbtmp3.5/5,ML3.1/1,Error
ellipse: s-maj=54.4km s-min=27.1km az=59.0,Flores
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.07**	**28**	Pn	Pn	07 17 48.2	-0.1
2.4nm,0.3s,baz=201,slow=8.6,SNR=12							
ASAR	**Alice Springs**	**21.76**	**138**	P	P	07 21 51.9	+0.1
0.6nm,0.3s,baz=313,slow=9.2,SNR=13							
MKAR	**Makanchi Array**	**63.05**	**333**	P	P	07 27 28.6	+1.2
0.5nm,0.7s,baz=134,slow=6.9,SNR=4.8							
KURK	**Kurchatov**	**67.59**	**334**	P	P	07 27 55.4	-1.3
0.2nm,0.7s,baz=127,slow=5.9,SNR=3.3							
ZALV	**Zalesovo Beam**	**67.65**	**339**	P	P	07 27 57.4	+0.3
0.4nm,0.5s,baz=148,slow=6.8,SNR=3.0							

IDC 31 07:17:17.3±1.1,7°.77S×118°.28E,h0km,mb4.0/8,
mb1 4.1/10,mb1mx3.9/21,mbtmp4.0/10,ML3.5/2,Error
ellipse: s-maj=35.2km s-min=21.5km az=66.0,Flores
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.10**	**28**	Pn	Pn	07 18 05.6	-1.9
9.0nm,0.3s,baz=203,slow=9.8,SNR=9.4							
KAPI				Sn	Sn	07 18 46.0	+0.7
18nm,0.3s,baz=76,slow=20,SNR=7.2							
FITZ	**Fitzroy Crossi**	**12.52**	**146**	Pn	Pn	07 20 15.9	-0.9
0.2nm,0.3s,baz=324,slow=14,SNR=3.5							
FITZ				Sn	Sn	07 22 32.4	-4.7
0.6nm,0.3s,baz=176,slow=20,SNR=6.1							
ASAR	**Alice Springs**	**21.78**	**138**	P	P	07 22 11.2	+0.3
4.3nm,0.6s,baz=318,slow=10,SNR=26							
KSRS	**Korea Array**	**45.88**	**11**	P	P	07 25 42.2	+0.7
1.7nm,0.9s,baz=181,slow=8.4,SNR=5.6							
MJAR	**Matsushiro Arr**	**47.88**	**22**	P	P	07 25 57.4	+0.2
0.7nm,0.3s,baz=236,slow=25,SNR=3.2							
SONM	**Songino Array**	**56.35**	**350**	P	P	07 27 02.1	+2.0
0.8nm,0.6s,baz=165,slow=6.0,SNR=2.2							
MKAR	**Makanchi Array**	**63.05**	**333**	P	P	07 27 46.0	-0.2
1.2nm,0.6s,baz=134,slow=7.7,SNR=15							
KURK	**Kurchatov**	**67.59**	**334**	P	P	07 28 15.2	-0.4
0.8nm,0.6s,baz=144,slow=5.6,SNR=5.5							
ZALV	**Zalesovo Beam**	**67.65**	**339**	P	P	07 28 15.4	-0.5
2.4nm,0.6s,baz=132,slow=4.3,SNR=12							
BVAR	**Borovoye Array**	**72.89**	**332**	P	P	07 28 48.0	0.0
0.9nm,0.6s,baz=138,slow=7.2,SNR=5.9							

*ISCJB **31** 07:20:57.9±0.6,32°.56N±0°.08×137°.67E±0°.08,*
h412km±5km,mb3.4/7,Error ellipse: s-maj=13.6km
s-min=9.9km az=146.6
*JMA **31** 07:20:57.5±0.3,32°.41N×137°.66E,h408km,M3.5*
*IDC **31** 07:20:58.4±1.0,32°.54N×137°.16E,h399km±11km,mb3.1/7,*
mb1 3.3/9,mb1mx3.0/27,mbtmp3.1/9,Error ellipse:
s-maj=31.9km s-min=12.7km az=86.0
ISC 31 07:20:59.2±0.6,32°.63N±0°.08×137°.68E±0°.08,h406km±5km,
n30,σ1°08/44,mb3.4/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**1.31**	**3**	P	**Pn**	**07 21 53.1**	**+1.1**
JHJ	**Hachijo jima 2**	**1.83**	**74**	P	**Pn**	**07 21 56.0**	**+1.3**
20nm,0.3s,baz=136,slow=8.4,SNR=4.6							
JHJ				S	**S**	**07 22 43.8**	**+4.2**
18nm,0.3s,baz=48,slow=14,SNR=2.9							
JWZ	**Kozaga**	**1.88**	**299**	P	**Pn**	**07 21 53.9**	**-1.0**
HMMJ	**Hamamatsu 2**	**2.22**	**1**	P	**Pn**	**07 21 58.1**	**+1.1**
JWY	**Kouya**	**2.36**	**313**	P	**Pn**	**07 21 57.8**	**-0.1**
JAO	**Obara**	**2.65**	**352**	P	**Pn**	**07 22 01.1**	**+1.1**
JNY	**Yasuok**	**2.72**	**3**	P	**Pn**	**07 22 01.8**	**+1.2**
JOD2	**Odawara 2**	**2.87**	**24**	P	**Pn**	**07 22 02.6**	**+0.9**
JYN	**Shimob**	**2.95**	**14**	P	**Pn**	**07 22 03.4**	**+1.1**
JAI	**Aioi**	**2.95**	**294**	P	**Pn**	**07 22 01.4**	**-1.0**
BSO3	**Boso 3**	**3.20**	**47**	P	**Pn**	**07 22 03.5**	**-0.9**
BSO3				*e*S	**S**	**07 22 57.3**	**0.0**
BSO4	**Boso 4**	**3.23**	**42**	P	**Pn**	**07 22 04.9**	**+0.3**
BSO4				*e*S	**S**	**07 22 58.6**	**+0.9**
JWT	**Wachi**	**3.25**	**325**	P	**Pn**	**07 22 04.8**	**0.0**
JWT				*e*S	**S**	**07 22 56.7**	**-1.5**
BSO1	**Boso 1**	**3.41**	**53**	P	**Pn**	**07 22 05.0**	**-1.2**
BSO1				*e*S	**S**	**07 22 59.9**	**-0.7**
JHU	**Hanno**	**3.47**	**22**	P	**Pn**	**07 22 07.2**	**+0.5**
JHU				*e*S	**S**	**07 23 00.6**	**-1.0**
JRY	**Ryogami san**	**3.52**	**16**	P	**Pn**	**07 22 08.2**	**+1.0**
JRY				*e*S	**S**	**07 23 03.5**	**+1.1**
MJAR	**Matsushiro Arr**	**3.92**	**6**	P	**Pn**	**07 22 11.6**	**+0.8**
12nm,0.3s,baz=177,slow=9.8,SNR=102							
MJAR				S	**S**	**07 23 09.2**	**+0.2**
baz=190,slow=20,SNR=2.8							
MAT	**Matsushiro**	**3.92**	**6**	P	**Pn**	**07 22 11.4**	**+0.6**
MAT				S	**S**	**07 23 11.8**	**+2.8**
MAT	**Matsushiro**	**3.92**	**6**	P	**Pn**	**07 22 11.4**	**+0.6**

ellipse: s-maj=6.1km s-min=5.7km az=93.0
*BJI **31** 07:34:23.2, 32.65N×105.48E, h16km, mB4.8/12, mb4.3/19, ML4.2/17, Ms4.3/24, Ms7 4.0/23*
*MOS **31** 07:34:24.5±0.8, 32.60N×105.54E, h38km, mb4.7/23, Error ellipse: s-maj=10.9km s-min=6.5km az=110.8*
ISC 31 07:34:23.1±0.2, **32.62N**±0.02×**105.50E**±0.03, **h10**km, **n122**, σ0§**94**/141, **mb4.4**/48, **2C-1D**, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.25**	**221**	Pn	**Pn**	**07 35 00.5**	**+0.1**
CD2				Pg	**Pg**	**07 35 05.0**	**-1.3**
CD2				Sg	**Sg**	**07 35 34.3**	**-1.3**
CD2				smax			
	comp=N,7μm,0.9s						
XAN	**Xi'an**	**3.20**	**63**	Pn	**Pn**	**07 35 14.3**	**+0.9**
XAN				Pg	**Pg**	**07 35 20.5**	**-3.9**
XAN				Sn	**Sn**	**07 35 52.3**	**+0.7**
XAN				Sg	**Sg**	**07 36 01.0**	**-4.9**
XAN				smax			
	comp=N,780nm,0.7s						
XAN				smax			
	comp=E,250nm,0.7s						
XAN				LR	LR		
	comp=N,1μm,9.4s						
XAN				LR	LR		
	comp=E,380nm,7.6s						
XAN				LR	LR		
	comp=Z,470nm,6.8s						
LZH	**Lanzhou**	**3.72**	**339**	Pn	**Pn**	**07 35 22.5**	**+1.9**
LZH				Pg	**Pg**	**07 35 32.3**	**-2.1**
LZH				Sg	**Sg**	**07 36 18.8**	**-3.8**
LZH				smax			
	comp=N,2μm,0.5s						
LZH				smax			
	comp=E,1μm,0.8s						
LZH				LR	LR		
	comp=E,4μm,5.7s						
LZH				LR	LR		
	comp=Z,5μm,6.2s						
ENH	**Enshi**	**4.13**	**123**	*e*Pn	**Pb**	**07 35 34.1**	**-1.9**
ENH				*e*S	**Sb**	**07 36 30.6**	**+4.6**
GYA	**Guiyang**	**6.22**	**170**	Pg	**Pn**	**07 35 48.5**	**-6.5**
GYA				Sg	**Sn**	**07 37 06.0**	**-0.1**
GYA				smax			
	comp=N,250nm,0.8s						
GYA				smax			
	comp=E,370nm,0.7s						
GYA				LR	LR		
	comp=N,3μm,5.8s						
GYA				LR	LR		
	comp=E,2μm,5.0s						
GYA				LR	LR		
	comp=Z,2μm,4.9s						
GYA	**Guiyang**	**6.22**	**170**	Pg	**Pb**	**07 36 05.0**	**-6.5**
GYA				Sg	**Sb**	**07 37 22.5**	**-3.5**
GYA				smax			
	comp=N,260nm,0.8s						
GYA				smax			
	comp=E,120nm,0.9s						
WHN	**Wuhan**	**7.83**	**103**	*e*Pn	**Pn**	**07 36 18.3**	**+1.2**
WHN				Sn	**Sn**	**07 37 43.3**	**-2.5**
WHN				LR	LR		
	comp=N,2μm,4.7s						
WHN				LR	LR		
	comp=E,1μm,3.4s						
KMI	**Kunming**	**7.85**	**199**	P	**Pn**	**07 36 18.0**	**+0.7**
KMI				S	**Sn**	**07 37 47.3**	**+1.1**
KMI				smax			
	comp=N,42nm,0.9s						
KMI				smax			
	comp=E,65nm,0.9s						
KMI				LR	LR		
	comp=N,240nm,8.3s						
KMI				LR	LR		
	comp=E,350nm,10.1s						
KMI				LR	LR		
	comp=Z,260nm,11.9s						
GTA	**Gaotai**	**8.19**	**327**	*e*P	**Pn**	**07 36 22.0**	**0.0**
GTA				pP		07 36 26.5	
GTA				sP		07 36 30.0	
GTA				S	**Sn**	**07 37 52.8**	**-1.8**
GTA				SS		07 38 09.3	
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				pmax	pmax		
	comp=Z,220nm,6.3s						
GTA				LR	LR		
	comp=N,780nm,10.7s						
GTA				LR	LR		
	comp=E,660nm,10.7s						
GTA				LR	LR		
	comp=Z,370nm,10.7s						
HHC	**Hu-ho-hao-te**	**9.55**	**29**	*e*P	**Pn**	**07 36 40.8**	**+0.2**
HHC				pP		07 36 48.0	
HHC				sP		07 36 52.8	
HHC				S	**Sn**	**07 38 28.5**	**+0.6**
HHC				sS		07 38 39.5	
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,360nm,5.7s						
HHC				LR	LR		
	comp=N,490nm,6.0s						
HHC				LR	LR		
	comp=E,730nm,6.0s						
HHC				LR	LR		
	comp=Z,420nm,4.9s						
NJ2	**Nanjing**	**11.32**	**89**	*e*P	**Pn**	**07 37 11.8**	**+7.0**
NJ2				pP		07 37 16.0	
NJ2				sP		07 37 17.5	
NJ2				S	**Sn**	**07 39 19.3**	**+7.9**
NJ2				sS		07 39 24.0	
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,70nm,3.6s						
NJ2				LR	LR		
	comp=N,200nm,8.6s						
NJ2				LR	LR		
	comp=E,260nm,8.5s						
NJ2				LR	LR		
	comp=Z,380nm,10.6s						
SHL	**Shillong**	**13.81**	**243**	*e*P	**Pn**	**07 37 41.0**	**+2.0**
QIZ	**Qiongzhong**	**14.08**	**163**	P	**Pn**	**07 37 43.0**	**+0.3**
QIZ				S	**Sn**	**07 40 20.5**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,20nm,1.5s						
QIZ				LR	LR		
	comp=N,310nm,15.8s						
QIZ				LR	LR		
	comp=Z,400nm,17.1s						
SONM	**Songino Array**	**15.22**	**2**	Pn	**Pn**	**07 37 59.0**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=4.8						
ULN	**Ulaanbaatar**	**15.28**	**4**	*e*P	**Pn**	**07 37 58.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**15.28**	**4**	*e*P	**Pn**	**07 37 58.7**	**0.0**
	comp=Z,4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**15.28**	**204**	Pn	**Pn**	**07 37 59.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=14,slow=11,SNR=12						
TAPN	**Taplejung**	**16.27**	**256**	*e*P	**Pn**	**07 38 16.6**	**+4.8**
	comp=Z,30nm,0.7s						
ODAN	**Odare**	**16.73**	**255**	*e*P	**Pn**	**07 38 17.4**	**-0.2**
RAMN	**Ramite**	**17.34**	**256**	*e*P	**Pn**	**07 38 24.4**	**-0.9**
	comp=Z,64nm,1.0s						
GUN	**Gumba**	**17.58**	**260**	*e*P	**Pn**	**07 38 26.8**	**-1.4**
	comp=Z,53nm,0.9s						
ZAK	**Zakamensk**	**17.83**	**355**	*e*P	**Pn**	**07 38 30.3**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WMQ	**Urumqi**	**17.87**	**314**	*e*P	**Pn**	**07 38 30.8**	**-0.9**
WMQ				LR	LR		
	comp=Z,430nm,19.0s						
PKI	**Pulchoki**	**18.09**	**259**	*e*P	**Pn**	**07 38 34.3**	**-0.2**
	comp=Z,20nm,0.5s						
PKI	**Pulchoki**	**18.09**	**259**	*e*P	**Pn**	**07 38 35.0**	**+0.5**
PKI				pmax	pmax		
	comp=Z,58nm,0.7s						
PKI	**Pulchoki**	**18.09**	**259**	*e*P	**Pn**	**07 38 35.0**	**+0.5**
	comp=Z,58nm,0.7s						
PKIN	**Phulchoki**	**18.09**	**259**	*e*P	**Pn**	**07 38 35.0**	**+0.4**
	comp=Z,58nm,0.7s						
KKN	**Kakani**	**18.12**	**260**	*e*P	**Pn**	**07 38 35.2**	**+0.3**
DMN	**Daman**	**18.32**	**260**	*e*P	**Pn**	**07 38 35.5**	**-1.9**
	comp=Z,39nm,0.9s						
KSRS	**Korea Array**	**18.98**	**69**	P	**Pn**	**07 38 45.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=261,slow=10,SNR=11						
TLY	**Talaya**	**19.10**	**356**	*e*P	**Pn**	**07 38 55.8**	**+9.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	**Changchun**	**19.20**	**49**	*e*P	**Pn**	**07 38 57.5**	**+10**
CN2				*es*P	sP	07 39 04.5	+13
CN2				*e*S	**Sn**	**07 42 28.0**	**+5.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
JOW	**Kunigami**	**20.59**	**100**	P	**P**	**07 39 03.2**	**+1.0**
	comp=Z,14nm,0.8s,baz=78,slow=22,SNR=6.1						
MDJ	**Mudanjiang**	**22.23**	**50**	P	**P**	**07 39 18.0**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,320nm,4.5s						
MDJ				LR	LR		
	comp=N,910nm,20.4s						
MDJ				LR	LR		
	comp=E,830nm,19.8s						
MDJ				LR	LR		
	comp=Z,2μm,16.6s						
MK31	**Makanchi Array**	**22.68**	**315**	*e*P	**P**	**07 39 24.6**	**+0.1**
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**07 39 24.8**	**+0.3**
	comp=Z,7.8nm,0.6s,mb4.3,baz=112,slow=13,SNR=49						
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**07 39 24.8**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	**Makanchi Array**	**22.68**	**315**	P	**P**	**07 39 24.8**	**+0.3**
KSH	**Kashi**	**24.77**	**295**	*e*P	**P**	**07 39 49.0**	**+4.1**
KSH				*ep*P		07 39 53.0	
KSH				*es*P	sP	07 39 56.3	+7.1
KSH				PP		07 40 25.3	
KSH				*e*PcP	PcP	07 43 26.0	+4.6
KSH				*e*S	**S**	**07 44 08.3**	**+1.2**
KSH				*es*S	sS	07 44 15.0	+2.9
KSH				*e*SS		07 45 05.3	
KSH				*e*ScP	ScP	07 47 03.0	+2.6
KSH				*e*PcS	PcS	07 47 05.0	+3.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
KSH				pmax	pmax		
	comp=Z,50nm,4.1s						
KSH				LR	LR		
	comp=N,120nm,5.1s						
KSH				LR	LR		
	comp=E,120nm,6.2s						
KSH				LR	LR		
	comp=Z,170nm,9.2s						
TKM2	**Tokmak 2**	**25.66**	**302**	*e*P	**P**	**07 39 53.9**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**25.66**	**302**	*e*P	**P**	**07 39 53.9**	**+1.0**
	comp=Z,5.4nm,0.9s,mb4.1						
KLR	**Kul'dur**	**25.68**	**42**	*e*P	**P**	**07 39 49.3**	**-3.8**
ZALV	**Zalesovo Beam**	**25.92**	**331**	P	**P**	**07 39 55.6**	**+0.4**
	comp=Z,3.5nm,0.4s,mb4.2,baz=128,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**25.92**	**331**	P	**P**	**07 39 55.6**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.3						
UCH	**Uchtor**	**26.29**	**300**	*e*P	**P**	**07 40 00.7**	**+2.0**
	comp=Z,10.0nm,1.1s,mb4.3						
AAK	**Ala-Archa**	**26.38**	**301**	*e*P	**P**	**07 40 00.2**	**+0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
AAK	**Ala-Archa**	**26.38**	**301**	*e*P	**P**	**07 40 00.2**	**+0.7**
	comp=Z,3.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**26.79**	**320**	P	**P**	**07 40 03.5**	**+0.4**
	comp=Z,3.0nm,0.5s,mb4.1,baz=117,slow=11,SNR=30						
KURK				PcP	PcP	07 43 25.4	-0.4
	comp=Z,1.4nm,0.7s,baz=116,slow=2.0,SNR=4.7						
KURK	**Kurchatov**	**26.79**	**320**	P	**P**	**07 40 03.5**	**+0.4**
KURK						07 43 25.4	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
KURK	**Kurchatov**	**26.79**	**320**	*e*P	**P**	**07 40 03.6**	**+0.5**
	comp=Z,6.6nm,0.8s,mb4.2						
AML	**Almayashu**	**26.87**	**300**	*e*P	**P**	**07 40 05.8**	**+1.9**
	comp=Z,4.1nm,0.7s,mb4.1						
PSI	**Prapat**	**30.29**	**193**	P	**P**	**07 40 34.6**	**0.0**
	comp=Z,10nm,0.7s,mb4.6,baz=353,slow=9.7,SNR=9.2						
PSI	**Prapat**	**30.29**	**193**	P	**P**	**07 40 34.6**	**0.0**
PSI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**32.38**	**320**	P	**P**	**07 40 53.4**	**+0.8**
	comp=Z,1.5nm,0.7s,mb3.9,baz=103,slow=11,SNR=7.8						
BVAR				PcP	PcP	07 43 38.7	-1.3
	comp=Z,1.3nm,0.8s,baz=207,slow=0.7,SNR=4.3						
BVAR	**Borovoye Array**	**32.38**	**320**	P	**P**	**07 40 53.4**	**+0.8**
BVAR						07 43 38.7	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**32.45**	**320**	*c iP*	**P**	**07 40 53.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
BRVK	**Borovoye**	**32.45**	**320**	*e*P	**P**	**07 40 53.4**	**+0.2**
	comp=Z,3.2nm,0.8s,mb4.2						
YAK	**Yakutsk**	**33.28**	**21**	*i* P	**P**	**07 41 00.7**	**+0.3**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
ABKAR	**Akbulak array**	**37.58**	**310**	*e*P	**P**	**07 41 38.2**	**+0.6**
	comp=Z,7.0nm,0.6s,mb4.6						
AKTK	**Aktyubinsk**	**39.00**	**311**	P	**P**	**07 41 50.0**	**+0.5**
AKTO	**Aktyubinsk**	**39.00**	**311**	P	**P**	**07 41 50.0**	**+0.5**
	comp=Z,3.4nm,0.7s,mb4.2,baz=114,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**39.00**	**311**	P	**P**	**07 41 50.0**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
SVE	**Sverdlovsk**	**39.02**	**322**	*e*P	**P**	**07 41 50.6**	**+1.1**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
KAPI	**Kappang**	**39.80**	**157**	P	**P**	**07 41 56.0**	**-0.6**
	baz=326,slow=7.1,SNR=7.0						
ARU	**Arti**	**39.99**	**321**	*c iP*	**P**	**07 41 58.1**	**+0.5**
ARU				*e*		07 43 28.8	
ARU				S	**S**	**07 48 04.4**	**+1.5**
ARU				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
ARU	**Arti**	**39.99**	**321**	*e*P	**P**	**07 41 57.6**	**0.0**
	comp=Z,12nm,0.8s,mb4.7						
TIXI	**Tiksi**	**41.05**	**11**	*e*P	**P**	**07 42 05.5**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
TIXI	**Tiksi**	**41.05**	**11**	*e*P	**P**	**07 42 05.6**	**-0.6**
	comp=Z,5.0nm,0.5s,mb4.4						
MIB	**Mutribah**	**49.29**	**283**	*e*P	**P**	**07 43 12.1**	**-0.1**
MIB				AMb	AMB	07 43 13.1	
	comp=Z,22nm,1.2s,mb5.1						
BILL	**Bilibino**	**49.31**	**26**	*e*P	**P**	**07 43 12.0**	**+0.2**
RDF	**Al-Radifah**	**49.40**	**282**	*e*P	**P**	**07 43 13.0**	**-0.2**
RDF				AMb	AMB	07 43 14.5	
	comp=Z,16nm,0.7s,mb5.2						
KIV	**Kislovodsk**	**49.49**	**302**	*e*P	**P**	**07 43 13.5**	**-0.1**
KIV				*e*S	**S**	**07 50 18.5**	**-2.6**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
NAY	**Al-Naaiem**	**49.55**	**282**	*e*P	**P**	**07 43 13.9**	**-0.3**
NAY				AMb	AMB	07 43 14.7	
	comp=Z,21nm,0.7s,mb5.3						
OBN	**Obninsk**	**52.16**	**317**	*e*P	**P**	**07 43 33.9**	**+0.3**
OBN				*e*		07 45 29.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KNA	**Kununurra**	**53.00**	**152**	*e*P	**P**	**07 43 40.0**	**-0.1**
	comp=Z,9.4nm,0.5s,mb5.0						
JOF	**Joensuu**	**54.39**	**327**	*e*P	**P**	**07 43 49.4**	**-0.4**
JOF				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
JOF	**Joensuu**	**54.39**	**327**	*ep*	**P**	**07 43 49.4**	**-0.4**
	comp=Z,13nm,0.6s,mb5.0						
KEV	**Kevo**	**55.84**	**336**	*e*P	**P**	**07 43 59.5**	**-0.7**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
KEV	**Kevo**	**55.84**	**336**	*ep*	**P**	**07 43 59.5**	**-0.7**
	comp=Z,6.5nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**07 44 03.6**	**-0.5**
	comp=Z,4.6nm,0.6s,mb4.7,baz=74,slow=7.2,SNR=26						
ARCES	**ARCESS Array B**	**56.38**	**335**	P	**P**	**07 44 03.6**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KAF	**Kangasniemi**	**56.78**	**326**	*e*P	**P**	**07 44 05.6**	**-1.4**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
KAF	**Kangasniemi**	**56.78**	**326**	*ep*	**P**	**07 44 05.6**	**-1.4**
	comp=Z,9.0nm,0.6s,mb5.0,baz=82,slow=6.9						
ASF	**Jabal al Asfar**	**56.95**	**290**	P	**P**	**07 44 09.3**	**+0.6**
	comp=Z,0.8nm,0.5s,mb4.0,baz=35,slow=3.9,SNR=3.3						
ASF	**Jabal al Asfar**	**56.95**	**290**	P	**P**	**07 44 09.3**	**+0.6**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**07 44 08.5**	**0.0**
	comp=Z,8.4nm,0.7s,mb4.9,baz=90,slow=8.4,SNR=31						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**07 44 08.5**	**0.0**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRTR	**Keskin Array B**	**57.03**	**299**	P	**P**	**07 44 09.5**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=98,slow=7.3,SNR=8.5						
BRTR	**Keskin Array B**	**57.03**	**299**	P	**P**	**07 44 09.5**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**07 44 09.9**	**-0.4**
	comp=Z,5.9nm,0.6s,mb4.8,baz=69,slow=6.6,SNR=11						
AKASG	**Malin Array Be**	**57.22**	**313**	P	**P**	**07 44 10.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MMAI	**Mount Meron Ar**	**57.84**	**291**	P	**P**	**07 44 15.3**	**+0.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=67,slow=6.6,SNR=3.2						
COEN	**Coen**	**58.67**	**136**	*e*P	**P**	**07 44 20.7**	**-0.2**
WRAB	**Tennant Creek**	**59.09**	**148**	*e*P	**P**	**07 44 23.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**59.09**	**148**	*e*P	**P**	**07 44 23.4**	**-0.3**
	comp=Z,16nm,0.6s,mb5.2						
EIL	**Elat**	**59.41**	**288**	P	**P**	**07 44 25.8**	**-0.2**
	comp=Z,3.7nm,0.8s,mb4.5,baz=8.1,slow=7.1,SNR=3.1						
BUR08	**Bucovina Ar. S**	**60.57**	**310**	*e*P	**P**	**07 44 34.2**	**+0.6**
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**07 44 44.9**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.9,baz=332,slow=6.6,SNR=103						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**07 44 44.9**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OJC	**Ojcow**	**63.14**	**314**	*e*P	**P**	**07 44 50.4**	**-0.5**
NB2	**NORSAR Subarra**	**64.03**	**327**	P	**P**	**07 44 56.1**	**-0.5**
	comp=Z,4.9nm,0.7s,mb4.7,baz=72,slow=6.9						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**07 44 56.0**	**-0.5**
	comp=Z,5.3nm,0.7s,mb4.7,baz=71,slow=6.7,SNR=32						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**07 44 56.1**	**-0.5**
NOA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NAO01	**NORSAR Array S**	**64.25**	**327**	*e*P	**P**	**07 44 56.8**	**-1.2**
	comp=Z,2.2nm,0.6s,mb4.4						
CLL	**Collm**	**66.76**	**317**	*e*P	**P**	**07 45 15.0**	**+0.5**
PPLA	**Purkeypile**	**66.77**	**29**	*e*P	**P**	**07 45 14.5**	**+0.1**
	comp=Z,5.1nm,0.9s,mb4.5						
GERES	**GERESS Array B**	**67.34**	**314**	P	**P**	**07 45 18.5**	**+0.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=64,slow=6.5,SNR=4.5						
COLA	**College**	**67.55**	**26**	*e*P	**P**	**07 45 18.4**	**-0.9**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
COLA	**College**	**67.55**	**26**	*e*P	**P**	**07 45 18.4**	**-0.9**
	comp=Z,5.2nm,1.1s,mb4.5						
INK	**Inuvik**	**70.34**	**20**	*e*P	**P**	**07 45 35.4**	**-1.1**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**70.34**	**20**	*e*P	**P**	**07 45 35.4**	**-1.2**
	comp=Z,1.8nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**72.65**	**148**	P	**P**	**07 45 50.7**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.2,baz=328,slow=9.4,SNR=6.3						
STKA	**Stephens Creek**	**72.65**	**148**	*e*P	**P**	**07 45 50.6**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.6						
LPG	**La Plagne**	**73.08**	**313**	*e*P	**P**	**07 45 54.2**	**+0.8**
	comp=Z,7.5nm,0.5s,mb4.6						
LPL	**La Plagne**	**73.08**	**313**	*e*P	**P**	**07 45 54.1**	**+0.7**
	comp=Z,7.4nm,0.6s,mb4.5						
CMSA	**Cobar Meteorol**	**74.26**	**145**	*e*P	**P**	**07 46 00.8**	**+0.4**
KEST	**Kesra**	**76.21**	**304**	P	**P**	**07 46 12.9**	**+1.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=48,slow=9.0,SNR=4.7						
YKA	**Yellowknife Ar**	**79.90**	**18**	P	**P**	**07 46 30.8**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=326,slow=5.1,SNR=9.4						
YKA	**Yellowknife Ar**	**79.90**	**18**	P	**P**	**07 46 30.8**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**82.87**	**313**	P	**P**	**07 46 47.0**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=124,slow=17,SNR=3.0						
TORD	**Torodi Ar. Bea**	**94.29**	**288**	P	**P**	**07 47 42.1**	**-1.1**
	comp=Z,0.3nm,0.8s,mb3.8,baz=52,slow=4.5,SNR=3.8						
OTAV	**Otavalo**	**147.11**	**7**	*e*PKPdf	PKPab	07 54 07.7	-0.9

IDC 31 07:35:18.5±1.1, **32.39N**×**85.35E**, **h0**km, **mb3.6**/3, **mb1 3.7**/6, **mb1mx3.4**/26, **mbtmp3.5**/6, **ML3.5**/1, **Error ellipse: s-maj=54.0km s-min=22.6km az=51.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.58**	**352**	Pn	Pn	07 38 46.5	+0.5
	0.2nm,0.3s,baz=177,slow=7.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**18.49**	**135**	P	Pn	07 39 37.4	+1.1
	0.6nm,0.3s,baz=320,slow=13,SNR=4.8						
KURK	**Kurchatov**	**18.98**	**347**	P	Pn	07 39 40.3	-1.6
	baz=165,slow=11,SNR=8.5						
AKASG	**Malin Array Be**	**44.66**	**311**	P	P	07 43 32.4	-0.4
	1.0nm,0.6s,baz=81,slow=7.4,SNR=4.9						
ASAR	**Alice Springs**	**72.50**	**134**	P	P	07 46 47.0	-0.2
	0.4nm,0.7s,baz=328,slow=6.6,SNR=2.3						
TORD	**Torodi Ar. Bea**	**77.79**	**278**	P	P	07 47 18.1	+0.1
	0.7nm,0.7s,baz=59,slow=5.1,SNR=5.6						

*MEX **31** 07:44:12.6±1.2, 16.72N×90.52W, h20km, MD4.3*
*NEIC **31** 07:44:12.6, 16.72N×90.52W, h20km, MD4.3(MEX), After MEX.*
*IDC **31** 07:44:12.8±1.1, 16.47N×90.69W, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.7/23, mbtmp3.9/6, ML3.1/3, Error ellipse: s-maj=21.0km s-min=11.7km az=59.0*
*ISCJB **31** 07:44:13.0±1.4, 16.64N±0.03×90.77W±0.03, h15km±9km, mb4.0/3, Error ellipse: s-maj=6.4km s-min=4.4km az=42.7*
*CASC **31** 07:44:17.6±1.5, 16.24N×91.86W, h35km±268km, MD4.1*
ISC 31 07:44:12.3±1.2, **16.61N**±0.03×**90.79W**±0.03, **h2**km±8km, **n37**, σ1§**16**/59, **mb4.0**/3, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.33**

LFRS	El Faro	3.41	150	eP	Pn	07 45 13.4 +7.0
CAHU	Cacacuatique	3.76	138	eP	Pg	07 45 21.9 -2.5
CMIG	Matias Romero	3.95	278	Pn	Pn	07 45 15.6 +1.7
	1.1nm,0.3s,baz=112,slow=10,SNR=13					
CMIG				Pg	Pg	07 45 26.8 -1.3
	4.2nm,0.3s,baz=100,slow=15,SNR=20					
CMIG				Sn	Sn	07 45 58.7 -2.1
	6.5nm,0.3s,baz=355,slow=21,SNR=7.9					
CMIG				Lg		07 46 23.9
	8.9nm,0.3s,baz=13,slow=19,SNR=4.3					
CMIG	Matias Romero	3.95	278	Pn	Pn	07 45 15.6 +1.7
CMIG				Pg	Pg	07 45 26.8 -1.3
CMIG				Sn	Sn	07 45 58.7 -2.1
CMIG				Lg		07 46 23.9
TGUH	Tegucigalpa,Un	4.24	126	eP	Pg	07 45 29.5 -4.0
CNCH	Conchagua	4.38	139	eP	Pn	07 45 28.7 +9.0
HUIG	Huatulco	5.18	261	iP	Pn	07 45 30.4 -0.4
HUIG				iS	Sn	07 46 31.1 0.0
HUIG	Huatulco	5.18	261	iP	Pn	07 45 30.4 -0.4
HUIG				iS	Sn	07 46 31.1 0.0
VHO	Vista Hermosa	5.71	275	eP	Pn	07 45 38.2 +0.1
VHO				iS	Sn	07 46 45.0 +0.8
VHO	Vista Hermosa	5.71	275	eP	Pn	07 45 38.2 +0.1
VHO				iS	Sn	07 46 45.0 +0.8
PNIG	Pinotepa	7.04	269	iP	Pn	07 45 56.6 +0.2
PNIG				iS	Sn	07 47 14.5 -2.6
PNIG	Pinotepa	7.04	269	iP	Pn	07 45 56.6 +0.2
PNIG				iS	Sn	07 47 14.5 -2.6
TXAR	Lajitas Array	17.33	319	P	Pn	07 48 20.2 +4.9
	0.0nm,0.3s,baz=142,slow=9.1,SNR=11					
ROSC	El Rosal	19.92	124	P	Pn	07 48 46.4 -0.6
	0.7nm,0.3s,baz=256,slow=7.7,SNR=5.5					
SDV	Santo Domingo	21.09	109	P	P	07 48 58.5 +0.3
	9.8nm,0.7s,mb4.2,baz=310,slow=5.4,SNR=14					
NVAR	Mina Array Bea	32.47	317	P	P	07 50 46.5 +2.5
	0.7nm,0.7s,mb3.6,baz=129,slow=7.2,SNR=6.9					
YKA	Yellowknife Ar	48.78	346	P	P	07 52 59.6 +1.2
	1.2nm,0.8s,mb4.0,baz=145,slow=7.5,SNR=15					

NIED ***31*** *07:44:00,36.°40N×141.°80E,h17km,Mw4.7 Best double couple: M₀1.19000×10¹⁶ NP1:φ=21.00000°,δ69.00000°, λ94.00000°. NP2:φ=189.00000°,δ21.00000°,λ79.00000°.*
IDC ***31*** *07:44:12.2±0.6,36.°35N×141.°75E,h0km,mb4.2/22, mb1 4.4/27,mb1mx4.3/34,mbtmp4.3/27,ML4.1/4,MS4.2/10, Ms1 4.2/10,ms1mx3.8/40,Error ellipse: s-maj=15.1km s-min=14.5km az=175.0*
BJI ***31*** *07:44:13.3,36.°71N×142.°25E,h35km,mB4.8/16,mb4.5/27, Ms4.5/19,Ms7 4.4/18*
JMA ***31*** *07:44:15.5±0.2,36.°41N×141.°80E,h62km,M4.5*
ISCJB ***31*** *07:44:15.5±1.1,36.°43N±0.°04×141.°75E±0.°04,h28km±7km, mb4.4/60,MS4.4/19,Error ellipse: s-maj=6.8km s-min=5.4km az=149.5*
MOS ***31*** *07:44:19.0±0.9,36.°86N×141.°60E,h37km,mb4.7/33, MS4.5/9,Error ellipse: s-maj=10.6km s-min=6.8km az=105.9*
NEIC ***31*** *07:44:20.2±0.5,36.°78N×141.°60E,h35km,mb4.4/25,Error ellipse: s-maj=15.3km s-min=8.6km az=172.0*
ISC 31 07:44:16.3±0.8,36.°40N±0.°03×141.°71E±0.°04,h21km±5km, h36km±1.5km:pP-P,n158,σ1.9°00/160,mb4.4/60,MS4.4/19, 4C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.94	283	P	Pb	07 44 33.6	-0.3
CHOJ	Chosi	0.98	225	P	Pb	07 44 34.5	-0.1
CHOJ				S	Sb	07 44 49.3	+2.3
ONAJ	Iwakimizuishiy	1.01	314	P	Pb	07 44 34.4	-0.7
JFK	Kawauchi	1.17	326	P	Pn	07 44 37.1	-0.3
JFT	Otama	1.56	316	P	Pn	07 44 43.7	+0.9
JMM	Marumori	1.63	334	↑P	Pn	07 44 43.5	-0.2
JAG	Ashikaga	1.82	271	P	Pn	07 44 46.4	+0.1
BSO1	Boso 1	1.84	199	P	Pn	07 44 45.3	-1.4
BSO3	Boso 3	1.87	212	P	Pn	07 44 46.5	-0.5
JKT	Katashina	2.01	281	P	Pn	07 44 49.9	+1.0
MJAR	Matsushiro Arr	2.82	274	Pn	Pn	07 45 00.1	0.0
	38nm,0.3s,baz=97,slow=8.5,SNR=162						
MJAR				Sn	Sn	07 45 41.8	+8.4
	19nm,0.3s,baz=101,slow=14,SNR=5.7						
MJAR				LR	LR	07 46 16.3	
	comp=Z,4μm,21.2s,baz=120,slow=44						
MJAR	Matsushiro Arr	2.82	274	P	Pn	07 45 00.1	0.0
MJAR						07 45 41.8	
MJAR				pmax	pmax		
	comp=Z,38nm,0.3s						
MJAR				smax			
	comp=N,19nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,4μm,21.2s						
MAJO	Matsushiro	2.82	274	eP	Pn	07 45 01.8	+1.7
MAT	Matsushiro	2.82	274	P	Pn	07 45 01.8	+1.7
MAT				S	Sn	07 45 42.3	+8.8
JHJ	Hachijo jima 2	3.64	206	Pn	Pn	07 45 11.1	-0.2
	comp=Z,204nm,0.3s,baz=67,slow=17,SNR=21						
JHJ				LR	LR	07 45 50.5	
	comp=Z,2μm,20.1s,baz=124,slow=27						
JHJ				Sn	Sn	07 45 50.8	-2.8
	comp=Z,273nm,0.3s,baz=249,slow=23,SNR=9.8						
ERM	Erimo	5.72	11‖	eP	Pn	07 45 37.8	-2.1
ERM	Erimo	5.72	11	ePn	Pn	07 45 33.2	-6.7
	comp=Z,58nm,1.0s						
ASAJ	Asahikawa	7.73	5	Pn	Pn	07 46 05.3	-2.2
	comp=Z,2.2nm,0.3s,baz=209,slow=12,SNR=9.8						
ASAJ	Asahikawa	7.73	5	P	Pn	07 46 05.4	-2.1
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YUK	Yuzh-Kuril'sk	8.26	21	P	Pn	07 46 14.2	-0.5
YUK				eS	Sn	07 47 37.5	-10
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK				smax			
	comp=N,370nm,0.8s						
YUK				smax			
	comp=E,370nm,0.8s						
CBIJ	Chichi jima	9.29	177	Pn	Pn	07 46 24.8	-4.1
	comp=E,20nm,0.3s,baz=291,slow=19,SNR=9.0						
CBIJ				Sn	Sn	07 48 03.5	-9.3
	comp=E,34nm,0.3s,baz=257,slow=20,SNR=5.7						
KUR	Kuril'sk	9.98	26	P	Pn	07 46 44.4	+6.1
KUR				S	Sn	07 48 21.0	-8.5
KUR				smax			
	comp=N,50nm,0.8s						
KUR				smax			
	comp=E,100nm,0.8s						
YSS	Yuzh-Sakhalins	10.57	4	eP	Pn	07 46 45.3	-1.1
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	10.57	4	ePn	Pn	07 46 45.2	-1.2
KSRS	Korea Array	11.08	280	Pn	Pn	07 46 52.4	-1.1
	comp=Z,0.3nm,0.3s,baz=100,slow=15,SNR=3.9						
KSRS				LR	LR	07 51 09.4	
	comp=Z,1μm,19.8s,baz=79,slow=37						
MDJ	Mudanjiang	12.33	315	P	Pn	07 47 09.0	-1.5
MDJ				pmax	pmax		
	comp=Z,310nm,4.3s						
HABR	Khabarovsk	13.02	340	eP	Pn	07 47 24.1	+4.3
HABR				e		07 49 39.6	
HABR				pmax	pmax		
	comp=E,20nm,1.1s						
HABR				pmax	pmax		
	comp=Z,35nm,1.9s						
HABR				pmax	pmax		
	comp=N,23nm,1.6s						
HABR				MLR	MLR		
	comp=Z,768nm,15.0s						
CN2	Changchun	14.46	306	eP	Pn	07 47 41.8	+2.3
CN2				esP	sP	07 47 54.0	-0.8
CN2				eS	Sn	07 50 19.0	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,1μm,16.0s						
CN2				LR	LR		
	comp=E,1μm,16.0s						
CN2				LR	LR		
	comp=Z,1μm,16.0s						
JOW	Kunigami	14.88	234	LR	LR	07 53 24.4	
	comp=Z,622nm,20.6s,baz=100,slow=37						
NJ2	Nanjing	19.38	264	eP	Pn	07 48 47.5	+5.7
NJ2				pP	pP	07 48 51.0	+4.4
NJ2				sP	sP	07 48 54.5	+5.2
NJ2				PP		07 49 03.5	
NJ2				S	Sn	07 52 17.5	-1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,100nm,3.5s						
NJ2				LR	LR		
	comp=N,520nm,14.4s						
NJ2				LR	LR		
	comp=E,660nm,12.8s						
PETK	Petropavlovsk-	20.12	29	LR	LR	07 56 58.0	
	comp=E,174nm,19.1s,MS3.4,baz=208,slow=38						
GUMO	Guam	22.89	172	LR	LR	07 57 06.7	
	comp=E,332nm,19.5s,MS3.8,baz=320,slow=34						
HHC	Hu-ho-hao-te	23.90	290	eP	P	07 49 28.8	+0.3
HHC				pP		07 49 38.0	
HHC				sP	sP	07 49 42.0	+4.5
HHC				PP		07 50 01.5	
HHC				PcP	PcP	07 53 13.3	+2.6
HHC				S	S	07 53 38.3	-5.2
HHC				sS	sS	07 53 53.5	-0.5
HHC				ScP	ScP	07 56 47.3	-0.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=N,380nm,8.6s						
HHC				LR	LR		
	comp=E,480nm,11.4s						
HHC				LR	LR		
	comp=Z,690nm,12.4s,MS4.3						
YAK	Yakutsk	26.73	347	eP	P	07 49 52.5	-1.4
YAK				pmax	pmax		
	comp=Z,37nm,1.2s,mb4.8						
YAK				pmax	pmax		
	comp=E,12nm,1.9s						
YAK				pmax	pmax		
	comp=N,34nm,1.5s						
XAN	Xi'an	26.82	275	P	P	07 49 54.0	-1.0
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
XAN				pmax	pmax		
	comp=Z,22nm,5.3s						
ENH	Enshi	27.52	267	eP	P	07 50 00.5	-0.8
	comp=Z,20nm,0.6s,mb4.9						
ULN	Ulaanbaatar	27.91	305	eP	P	07 50 05.2	+0.6
ULN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.4						
ULN	Ulaanbaatar	27.91	305	eP	P	07 50 05.2	+0.6
	comp=Z,11nm,1.1s,mb4.4						
SONM	Songino Array	28.33	305	P	P	07 50 09.4	+1.0
	comp=Z,8.3nm,0.8s,mb4.4,baz=100,slow=9.4,SNR=23						
SONM				LR	LR	08 01 09.5	
	comp=Z,472nm,21.5s,MS4.0,baz=266,slow=36						
SONM	Songino Array	28.33	305	P	P	07 50 09.4	+1.0
SONM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,472nm,21.5s						
LZH	Lanzhou	30.41	281	eP	P	07 50 28.0	+1.0
LZH				pP	pP	07 50 39.3	+5.9
LZH				sP	sP	07 50 44.0	+7.9
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
LZH				pmax	pmax		
	comp=Z,75nm,4.5s						
LZH				LR	LR		
	comp=E,1μm,15.0s						
LZH				LR	LR		
	comp=Z,1μm,16.2s,MS4.6						
ZAK	Zakamensk	30.85	309	eP	P	07 50 30.8	+0.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
TLY	Talaya	30.92	312	eP	P	07 50 32.2	+0.9
TLY				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.5						
TLY				MLR	MLR		
	comp=Z,894nm,17.0s,MS4.5						
TLY	Talaya	30.92	312	eP	P	07 50 31.9	+0.6
	comp=Z,16nm,1.4s,mb4.7						
GYA	Guiyang	31.35	262	P	P	07 50 38.8	+3.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
CD2	Chengdu	31.92	271	P	P	07 50 43.5	+3.2
CD2				pP	pP	07 50 53.0	+6.2
CD2				sP	sP	07 50 57.3	+7.9
CD2				PP	PP	07 51 49.0	-3.5
CD2				S	S	07 55 50.5	+0.3
CD2				sS	sS	07 56 06.5	+5.6
CD2				SS	SS	07 57 42.5	-25
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,80nm,3.8s						
CD2				LR	LR		
	comp=N,790nm,11.9s						
CD2				LR	LR		
	comp=Z,770nm,19.0s						
MOY	Mondy	32.53	311	eP	P	07 50 46.6	+1.2
GTA	Gaotai	32.98	288	eP	P	07 50 50.0	+0.5
GTA				pP	pP	07 50 59.3	+3.3
GTA				sP	sP	07 51 03.3	+4.7
GTA				S	S	07 56 06.3	-0.3
GTA				sS	sS	07 56 21.5	+4.2
GTA				SS	SS	07 58 09.8	-19
GTA				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
GTA				pmax	pmax		
	comp=Z,35nm,6.5s						
GTA				LR	LR		
	comp=N,460nm,16.1s,MS4.5						
GTA				LR	LR		
	comp=E,610nm,17.2s,MS4.5						
GTA				LR	LR		
	comp=Z,630nm,17.2s,MS4.4						
KMI	Kunming	35.10	262	P	P	07 51 08.0	-0.1
KMI				pP	pP	07 51 19.5	+4.9
KMI				sP	sP	07 51 23.8	+6.5
KMI				PP	PP	07 52 30.0	+2.1
KMI				S	S	07 56 40.0	+0.3
KMI				sS	sS	07 56 57.3	+6.8
KMI				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
KMI				pmax	pmax		
	comp=Z,57nm,3.6s						
KMI				LR	LR		
	comp=N,470nm,15.0s,MS4.6						
KMI				LR	LR		
	comp=E,600nm,14.3s,MS4.6						
KMI				LR	LR		
	comp=Z,670nm,15.4s,MS4.5						
TIXI	Tiksi	35.94	353	eP	P	07 51 13.3	-1.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,399nm,14.0s,MS4.3						
TIXI	Tiksi	35.94	353	eP	P	07 51 13.9	-0.9
	comp=Z,1.7nm,0.8s,mb4.0						
WMQ	Urumqi	41.34	298	eP	P	07 52 01.8	+1.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3						
WMQ				LR	LR		
	comp=N,250nm,22.0s,MS4.1						
WMQ				LR	LR		
	comp=E,40nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,300nm,22.0s,MS4.1						
CMAR	Chiang Mai Arr	41.57	256	P	P	07 52 01.6	-1.0
	comp=Z,1.7nm,0.5s,mb3.9,baz=49,slow=6.6,SNR=9.5						
CMAR	Chiang Mai Arr	41.57	256	P	P	07 52 01.6	-1.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	Zalesovo Beam	42.51	313	P	P	07 52 10.1	+0.3
	comp=Z,10.0nm,1.0s,mb4.5,baz=91,slow=6.2,SNR=23						
ZALV	Zalesovo Beam	42.51	313	P	P	07 52 10.1	+0.2
ZALV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
NVS	Novosibirsk	43.45	314	eP	P	07 52 17.6	+0.2
NVS				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
MK31	Makanchi Array	44.65	303	eP	P	07 52 27.7	+0.5
MKAR	Makanchi Array	44.65	303	P	P	07 52 27.4	+0.2
	comp=Z,3.2nm,0.7s,mb4.3,baz=83,slow=11,SNR=28						
MKAR	Makanchi Array	44.65	303	P	P	07 52 27.4	+0.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TAPN	Taplejung	46.22	275	eP	P	07 52 39.7	-0.2
	comp=Z,18nm,0.8s,mb5.0						
KURK	Kurchatov	46.51	309	P	P	07 52 41.9	+0.1
	comp=Z,4.9nm,0.5s,mb4.7,baz=83,slow=7.8,SNR=26						
KURK	Kurchatov	46.51	309	P	P	07 52 41.9	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
KURK	Kurchatov	46.51	309	eP	P	07 52 41.6	-0.2
	comp=Z,10nm,0.8s,mb4.8						
ODAN	Odare	46.69	274	eP	P	07 52 43.6	0.0
RAMN	Ramite	47.29	275	eP	P	07 52 48.1	-0.1
	comp=Z,97nm,1.1s						
GUN	Gumba	47.45	276	eP	P	07 52 49.1	-0.4
PKI	Pulchoki	47.98	276	eP	P	07 52 52.6	-1.0
PKIN	Phulchoki	47.98	276	eP	P	07 52 53.2	-0.4
KKN	Kakani	47.99	277	eP	P	07 52 53.7	0.0
TKM2	Tokmak 2	50.14	299	eP	P	07 53 10.5	+0.6
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TKM2	Tokmak 2	50.14	299	eP	P	07 53 10.5	+0.6
	comp=Z,6.0nm,0.6s,mb4.8						
AAK	Ala-Archa	51.00	299	P	P	07 53 16.6	+0.2
	comp=Z,1.9nm,0.5s,mb4.3,baz=63,slow=2.3,SNR=3.7						
AAK	Ala-Archa	51.00	299‖	eP	P	07 53 17.2	+0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
AAK				MLR	MLR		
	comp=Z,529nm,18.0s,MS4.6						
BVAR	Borovoye Array	51.17	313	P	P	07 53 17.5	0.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=80,slow=8.1,SNR=9.0						
BVAR	Borovoye Array	51.17	313	P	P	07 53 17.5	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	51.23	313	eP	P	07 53 17.6	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRVK	Borovoye	51.23	313	eP	P	07 53 17.6	-0.4
	comp=Z,3.3nm,0.9s,mb4.3						
AML	Almayashu	51.71	299	eP	P	07 53 23.0	+1.2
	comp=Z,6.9nm,0.5s,mb4.8						
AML				epP	pP	07 53 33.4	+4.9
INK	Inuvik	54.84	27	P	P	07 53 44.0	-0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=285,slow=8.2,SNR=4.1						
INK	Inuvik	54.84	27	eP	P	07 53 44.1	-0.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	54.84	27	eP	P	07 53 44.1	-0.3
	comp=Z,1.3nm,0.7s,mb4.1						
WRAB	Tennant Creek	56.46	188	eP	P	07 54 03.7	+7.2
WRAB				e*PP	pP	07 54 13.4	+10
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
WRAB	Tennant Creek	56.46	188	eP	P	07 54 03.7	+7.2
	comp=Z,6.0nm,0.7s,mb4.7						
WRAB				epP	pP	07 54 13.4	+10
ARU	Arti	56.99	319	iP	P	07 53 59.8	-0.1
ARU				e		07 56 03.5	
ARU				PPP		07 57 20.0	
ARU				S	S	08 01 52.6	-0.2
ARU				SS	SS	08 05 37.0	-3.9
ARU				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
ARU				MLR	MLR		
	comp=Z,504nm,17.0s,MS4.7						
ABKAR	Akbulak array	58.53	311	eP	P	07 54 10.2	-0.7
	comp=Z,1.8nm,0.4s,mb4.5						
AKTK	Aktyubinsk	59.27	312	P	P	07 54 14.9	-1.1
AKTO	Aktyubinsk	59.27	312	P	P	07 54 14.9	-1.1
	comp=Z,2.9nm,0.8s,mb4.3,baz=65,slow=12,SNR=5.2						
ASAR	Alice Springs	60.20	188	P	P	07 54 21.1	-1.5
	comp=Z,1.0nm,0.7s,mb4.0,baz=17,slow=9.7,SNR=12						
ASAR	Alice Springs	60.20	188	P	P	07 54 21.1	-1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RES	Resolute Bay	63.15	14	eP	P	07 54 41.2	-0.7
RES				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
RES	Resolute Bay	63.15	14	eP	P	07 54 41.1	-0.8
	comp=Z,9.7nm,1.2s,mb4.8						
YKA	Yellowknife Ar	64.24	30	P	P	07 54 48.8	-0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=302,slow=6.6,SNR=11						
YKA	Yellowknife Ar	64.24	30	P	P	07 54 48.8	-0.5
ARCES	ARCESS Array B	64.67	340	P	P	07 54 52.2	+0.2
	comp=Z,2.9nm,0.8s,mb4.4,baz=12,slow=17,SNR=4.4						
ARCES	ARCESS Array B	64.67	340	P	P	07 54 52.2	+0.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
STKA	Stephens Creek	67.92	180	P	P	07 55 12.2	-0.9
	comp=Z,1.4nm,0.8s,mb4.0,baz=331,slow=13,SNR=3.4						
OBN	Obninsk	68.74	323‖	eP	P	07 55 19.1	+0.9
OBN				e		07 57 48.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
FINES	FINESS Array B	69.48	332	P	P	07 55 22.6	0.0
	comp=Z,3.5nm,0.8s,mb4.4,baz=60,slow=9.1,SNR=11						
FINES	FINESS Array B	69.48	332	P	P	07 55 22.7	0.0
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	71.50	311	eP	P	07 55 36.2	+0.9
KIV				eS	S	08 04 54.0	+1.2
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SWMT	Swartz Lake	72.58	44	eP	P	07 55 41.4	-0.4
SLMT	Seeley Lake	73.02	44	eP	P	07 55 43.8	-0.5
LRM	Limekiln Ridge	74.43	44	eP	P	07 55 53.9	+1.3
DLMT	Dillon	74.62	45	eP	P	07 55 54.0	+0.2
	comp=Z,2.0nm,0.4s,mb4.4						
NB2	NORSAR Subarra	74.86	337	P	P	07 55 54.4	-0.4
	comp=Z,4.5nm,0.8s,mb4.5,baz=38,slow=5.9						
NOA	NORSAR Array B	74.86	337	P	P	07 55 53.8	-1.0
	comp=Z,3.6nm,0.7s,mb4.4,baz=39,slow=5.8,SNR=16						
NOA	NORSAR Array B	74.86	337	P	P	07 55 53.8	-1.0
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	74.94	323	P	P	07 55 54.1	-1.4
	comp=Z,3.2nm,0.7s,mb4.4,baz=46,slow=5.9,SNR=14						
AKASG	Malin Array Be	74.94	323	ceP	P	07 55 55.0	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOZ	Bozeman (W)	75.00	44	eP	P	07 55 56.4	+0.5
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BOZ	Bozeman (W)	75.00	44	eP	P	07 55 56.4	+0.4
	comp=Z,3.9nm,1.1s,mb4.2						
NVAR	Mina Array Bea	75.18	53	P	P	07 55 57.8	+0.7
	comp=Z,1.8nm,0.8s,mb4.1,baz=282,slow=6.0,SNR=14						
GCMT	Greycliff	76.00	43	eP	P	07 56 05.5	+3.8
	comp=Z,3.2nm,1.1s,mb4.2						
IMW	Indian Meadow	76.45	45	eP	P	07 56 06.2	+1.9
	comp=Z,1.2nm,0.5s,mb4.1						
HWUT	Hardware Ranch	77.48	47	eP	P	07 56 11.4	+1.3
	comp=Z,5.3nm,1.2s,mb4.3						
DUG	Dugway	77.59	49	eP	P	07 56 12.2	+1.5
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
DUG	Dugway	77.59	49	eP	P	07 56 12.2	+1.4
	comp=Z,2.5nm,0.8s,mb4.2						
PDAR	Pinedale Array	77.94	45	P	P	07 56 12.7	+0.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=303,slow=1.5,SNR=8.1						
PDAR				LR	LR	08 28 59.1	
	comp=Z,282nm,18.5s,MS4.6,baz=356,slow=34						
DAU	Daniels Canyon	78.40	48	eP	P	07 56 16.2	+1.0
DAU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
DAU	Daniels Canyon	78.40	48	eP	P	07 56 16.2	+1.0
	comp=Z,6.3nm,1.2s

SRU			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5					
SRU	**San Rafael**	**79.65 49**	*e*P	**P**	**07 56 21.7**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.5					
OJC	**Ojcow**	**79.69 326**	*e*P	**P**	**07 56 21.9**	**-0.2**
MLR	**Muntele Rosu**	**80.02 320**	LR	LR	08 33 28.5	
	comp=Z,323nm,21.4s,MS4.6,baz=300,slow=37					
OKC	**Ostrava-Krasne**	**80.70 327**	AMS	AMS	08 35 30.0	
	comp=Z,200nm,15.5s					
PV10	**Paradox Valley**	**81.01 49**	*e*P	**P**	**07 56 30.1**	**+0.6**
	comp=Z,164nm,0.8s					
DPC	**Dobruska-Polom**	**81.12 328**	*e*P	**P**	**07 56 27.3**	**-2.5**
DPC			MLR	MLR		
	comp=Z,200nm,16.0s,MS4.6					
DPC	**Dobruska-Polom**	**81.12 328**	*e*P	**P**	**07 56 27.3**	**-2.5**
DPC			*ex*	x	07 56 30.2	
DPC			AMS	AMS	08 37 20.0	
	comp=Z,200nm,16.0s					
UPC	**Upice**	**81.13 328**	*e*P	**P**	**07 56 27.6**	**-2.2**
UPC	**Upice**	**81.13 328**	*e*P	**P**	**07 56 27.6**	**-2.2**
PV01	**Paradox Valley**	**81.45 49**	*e*P	**P**	**07 56 32.2**	**+0.4**
	comp=Z,451nm,1.2s					
BRG	**Berggiesshubel**	**81.72 330**	*e*P	**P**	**07 56 28.6**	**-4.3**
	comp=Z,1.5nm,0.6s,mb4.1					
PVCC	**Panska Ves**	**81.72 329**	AMS	AMS	08 35 40.0	
	comp=Z,300nm,17.6s					
CLL	**Collm**	**81.76 330**	*e*P	**P**	**07 56 33.0**	**-0.2**
CLL			pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6					
CLL			MLR	MLR		
	comp=Z,200nm,18.3s,MS4.5					
CLL	**Collm**	**81.76 330**	*e*P	**P**	**07 56 33.0**	**-0.2**
	comp=Z,5.0nm,0.6s,mb4.6					
CLL			LmH		08 36 00.0	
	comp=N,200nm,18.0s					
CLL			LmH		08 36 00.0	
	comp=E,100nm,18.2s					
CLL			LmH		08 36 00.0	
	comp=Z,200nm,18.3s					
VRAC	**Vranov**	**81.78 327**	LR	LR	08 36 42.4	
	comp=Z,284nm,18.3s,MS4.7,baz=302,slow=38					
PRU	**Pruhonice**	**82.14 329**	AMS	AMS	08 37 10.0	
	comp=Z,300nm,14.5s					
TREC	**Trest**	**82.27 328**	AMS	AMS	08 37 10.0	
	comp=Z,300nm,11.6s					
KHC	**Kasperske Hory**	**83.20 329**	*e*P	**P**	**07 56 40.4**	**-0.3**
KHC			MLR	MLR		
	comp=Z,300nm,19.1s,MS4.7					
KHC	**Kasperske Hory**	**83.20 329**	*e*P	**P**	**07 56 40.4**	**-0.3**
KHC			AMS	AMS	08 36 40.0	
	comp=Z,300nm,19.1s					
GERES	**GERESS Array B**	**83.37 328**	P	**P**	**07 56 41.7**	**+0.1**
	comp=Z,0.4nm,0.3s,mb3.9,baz=65,slow=4.7,SNR=7.9					
ECSD	**EROS Data Cent**	**84.27 38**	*e*P	**P**	**07 56 47.0**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.2					
ANMO	**Albuquerque**	**84.81 50**	P	**P**	**07 56 48.8**	**-0.4**
	comp=Z,1.0nm,0.8s,mb4.0,baz=214,slow=5.2,SNR=3.5					
ANMO	**Albuquerque**	**84.81 50**	*e*P	**P**	**07 56 51.1**	**+1.9**
ANMO			pmax	pmax		
	comp=Z,3.0nm,1.1s					
ANMO	**Albuquerque**	**84.81 50**	*e*P	**P**	**07 56 51.1**	**+1.9**
	comp=Z,3.5nm,1.1s,mb4.4					
TXAR	**Lajitas Array**	**90.32 53**	P	**P**	**07 57 15.2**	**-0.6**
	comp=Z,1.1nm,0.8s,mb4.2,baz=290,slow=3.1,SNR=9.5					
TXAR	**Lajitas Array**	**90.32 53**	P	**P**	**07 57 15.3**	**-0.6**
TXAR			pmax	pmax		
	comp=Z,1.0nm,0.8s					
LPAZ	**La Paz**	**146.80 61**	PKPbc	PKPbc	08 03 57.2	0.0
	comp=Z,1.7nm,0.7s,baz=351,slow=3.7,SNR=10					
LPAZ	**La Paz**	**146.80 61**	PKP2	PKPbc	08 03 57.2	0.0
LPAZ			pmax	pmax		
	comp=Z,2.0nm,0.7s					
LPAZ	**La Paz**	**146.80 61**	*e*PKPdf	PKPbc	08 03 56.5	-0.6

NIED ***31*** *07:48:00, 36.°40N×141.°80E, h26km, Mw4.0 Best double couple: M0 1.04000×10^15 NP1:φs 31.00000°, δ61.00000°, λ96.00000°. NP2:φs 198.00000°, δ30.00000°, λ79.00000°.*
IDC ***31*** *07:48:09.2±1.5, 36.°44N×141.°77E, h0km, mb4.1/9, mb1 4.1/13, mb1mx3.9/29, mbtmp4.0/13, ML3.6/4, Error ellipse: s-maj=32.6km s-min=23.6km az=143.0*
JMA ***31*** *07:48:12.0±0.2, 36.°39N×141.°83E, h62km, M3.9*
ISC 31 07:48:12.2±2.3, 36.°44N±0.°05×141.°78E±0.°09, h17km±14km, n25, σ0.°70/29, mb3.9/9, 1C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.99**	**280**	⇓P	**Pb**	**07 48 30.4**	**-0.5**
ONAJ	**Iwakimizuishiy**	**1.03**	**310**	P	**Pb**	**07 48 31.3**	**-0.3**
CHOJ	**Chosi**	**1.05**	**226**	P	**Pb**	**07 48 31.1**	**-0.8**
CHOJ				S	**Sb**	**07 48 46.1**	**+0.8**
JFK	**Kawauchi**	**1.18**	**322**	⇑P	**Pn**	**07 48 33.7**	**-0.1**
JFT	**Otama**	**1.58**	**313**	P	**Pn**	**07 48 40.2**	**+0.8**
JMM	**Marumori**	**1.63**	**331**	P	**Pn**	**07 48 40.2**	**+0.1**
JAG	**Ashikaga**	**1.88**	**270**	P	**Pn**	**07 48 43.4**	**-0.1**
JFY	**Yanaizu**	**1.93**	**301**	P	**Pn**	**07 48 45.2**	**+1.1**
BSO3	**Boso 3**	**1.94**	**213**	P	**Pn**	**07 48 45.4**	**+1.1**
JRY	**Ryogami san**	**2.37**	**261**	P	**Pn**	**07 48 50.1**	**-0.1**
JRY				S	**Sn**	**07 49 18.8**	**-0.1**
MJAR	**Matsushiro Arr**	**2.88**	**273**	Pn	**Pn**	**07 48 58.0**	**+0.7**
	17nm,0.3s,baz=84,slow=10,SNR=14						
MAT	**Matsushiro**	**2.88**	**273**	P	**Pn**	**07 48 58.5**	**+1.2**
MAT				S	**Sn**	**07 49 37.9**	**+6.3**
JHJ	**Hachijo jima 2**	**3.70**	**207**	Pn	**Pn**	**07 49 07.8**	**-0.8**
	36nm,0.3s,baz=336,slow=20,SNR=6.7						
JHJ				Sn	**Sn**	**07 49 46.7**	**-5.0**
	76nm,0.3s,baz=41,slow=19,SNR=5.5						
ASAJ	**Asahikawa**	**7.69**	**4**	Pn	**Pn**	**07 50 03.6**	**+0.3**
	0.6nm,0.3s,baz=266,slow=13,SNR=2.6						
KSRS	**Korea Array**	**11.14**	**279**	Pn	**Pn**	**07 50 48.9**	**-1.8**
	0.2nm,0.3s,baz=95,slow=14,SNR=3.3						
SONM	**Songino Array**	**28.37**	**305**	P	**P**	**07 54 04.5**	**-0.7**
	2.6nm,0.6s,mb4.0,baz=98,slow=9.2,SNR=7.2						
CMAR	**Chiang Mai Arr**	**41.64**	**256**	P	**P**	**07 55 59.0**	**-0.7**
	1.0nm,0.3s,mb3.9,baz=38,slow=7.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**42.54**	**313**	P	**P**	**07 56 06.8**	**+0.2**
	1.8nm,0.6s,mb4.0,baz=86,slow=7.6,SNR=3.5						
MKAR	**Makanchi Array**	**44.69**	**303**	P	**P**	**07 56 24.1**	**+0.1**
	1.2nm,0.6s,mb3.9,baz=83,slow=9.9,SNR=4.4						
KURK	**Kurchatov**	**46.53**	**309**	P	**P**	**07 56 38.7**	**+0.2**
	2.2nm,0.6s,mb4.3,baz=83,slow=7.9,SNR=4.0						
NB2	**NORSAR Subarra**	**74.85**	**337**	P	**P**	**07 59 51.1**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.85**	**337**	P	**P**	**07 59 51.2**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=39,slow=5.7,SNR=6.0						
AKASG	**Malin Array Be**	**74.95**	**323**	P	**P**	**07 59 51.1**	**-1.0**
	comp=Z,1.1nm,0.5s,mb4.0,baz=45,slow=7.4,SNR=4.2						
NVAR	**Mina Array Bea**	**75.11**	**53**	P	**P**	**07 59 54.0**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=292,slow=4.0,SNR=3.8						
BRTR	**Keskin Array B**	**79.47**	**312**	P	**P**	**08 00 17.2**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=79,slow=7.5,SNR=3.3						

MAN 31 07:54:08, 13.°70N×120.°46E, h76km, mb4.2, ML3.0, MS2.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.21**	**280**	*e*P	Pn	07 54 21.2	+1.8
LUBP				*e*S	Sn	07 54 23.8	-3.9
TGY	**Tagaytay City**	**0.61**	**49**	⇑*i*P	Pn	07 54 24.0	+1.6
BOAC	**Boac**	**1.37**	**100**	*e*P	Pn	07 54 32.6	+1.1
SJMP	**San Jose**	**1.39**	**152**	*e*P	Pn	07 54 33.1	+1.4
BUSP	**Coron**	**1.70**	**189**	*e*P	Pn	07 54 36.5	+0.6
OTRP	**Odiongan**	**2.02**	**131**	*e*P	Pn	07 54 41.0	+0.9
ENPP	**El Nido**	**2.67**	**202**	*e*P	Pn	07 54 49.5	+0.6
BOLP	**Bolinao**	**2.72**	**349**	*e*P	Pn	07 54 50.7	+1.2

NIED ***31*** *07:55:00, 36.°40N×141.°80E, h17km, Mw4.7 Best double couple: M0 1.36000×10^16 NP1:φs 17.00000°, δ68.00000°, λ86.00000°. NP2:φs 208.00000°, δ22.00000°, λ100.00000°.*
IDC ***31*** *07:55:44.5±0.5, 36.°34N×141.°82E, h0km, mb4.5/22, mb1 4.6/27, mb1mx4.6/32, mbtmp4.6/27, ML4.4/5, MS4.2/13, Ms1 4.2/13, ms1mx3.9/34, Error ellipse: s-maj=14.8km s-min=13.0km az=150.0*
BJI ***31*** *07:55:46.6, 36.°43N×141.°54E, h19km, mB5.1/24, mb4.9/48, Ms4.7/40, Ms7 4.5/37*
JMA ***31*** *07:55:47.5±0.1, 36.°40N×141.°81E, h70km±3km, M4.7*
JMA Felt II J1.
ISCJB ***31*** *07:55:48.0±0.1, 36.°38N±0.°03×141.°76E±0.°02, h32km, mb4.7/128, MS4.5/34, Error ellipse: s-maj=4.0km s-min=2.5km az=169.8*
NEIC ***31*** *07:55:49.8±0.2, 36.°37N×141.°69E, mb4.8/76, MW4.7(NIED), Error ellipse: s-maj=5.3km s-min=3.6km az=167.0*
NEIC Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi; [1 JMA] in Chiba, Gumma, Miyagi, Saitama and Yamagata.
MOS ***31*** *07:55:50.2±0.7, 36.°72N×141.°65E, h35km, mb5.1/60, MS4.5/16, Error ellipse: s-maj=8.5km s-min=4.6km az=112.6*
SZGRF ***31*** *07:55:51.3, 37.°15N×143.°38E, h33km, mb5.1, Off east coast of Honshu, Japan*
ISC 31 07:55:50.0±0.1, 36.°40N±0.°03×141.°73E±0.°02, h34km, h34km±.6km: pP-P, n383, σ0.°86/406, mb4.7/128, MS4.5/34, 54C-47D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.96**	**283**	⇓P	**Pn**	**07 56 06.1**	**-1.0**
JHO				*e*S	**Sn**	**07 56 20.1**	**+0.6**
CHOJ	**Chosi**	**0.99**	**226**	⇑P	**Pn**	**07 56 06.7**	**-0.8**
CHOJ				S	**Sn**	**07 56 21.5**	**+1.1**
ONAJ	**Iwakimizuishiy**	**1.02**	**313**	⇓P	**Pn**	**07 56 06.8**	**-1.2**
ONAJ				S	**Sn**	**07 56 21.7**	**+0.6**
JFK	**Kawauchi**	**1.18**	**325**	P	**Pn**	**07 56 09.4**	**-0.8**
JFT	**Otama**	**1.58**	**315**	⇓P	**Pn**	**07 56 15.9**	**+0.3**
JMM	**Marumori**	**1.64**	**333**	⇑P	**Pn**	**07 56 15.6**	**-0.9**
JAG	**Ashikaga**	**1.83**	**271**	P	**Pn**	**07 56 18.7**	**-0.4**
BSO1	**Boso 1**	**1.85**	**200**	P	**Pn**	**07 56 17.8**	**-1.5**
BSO3	**Boso 3**	**1.88**	**212**	P	**Pn**	**07 56 18.5**	**-1.3**
JRY	**Ryogami san**	**2.32**	**261**	⇑P	**Pn**	**07 56 25.5**	**-0.3**
JRY				*e*S	**Sn**	**07 56 53.9**	**+0.8**
JNS	**Sasagawa**	**2.39**	**307**	P	**Pn**	**07 56 26.0**	**-0.8**
JOD2	**Odawara 2**	**2.43**	**243**	P	**Pn**	**07 56 27.3**	**0.0**
JOD2				*e*S	**Sn**	**07 56 56.7**	**+0.9**
JMK	**Ichinoseki**	**2.58**	**351**	P	**Pn**	**07 56 28.1**	**-1.2**
MJAR	**Matsushiro Arr**	**2.84**	**274**	Pn	**Pn**	**07 56 33.6**	**+0.7**
	97nm,0.3s,baz=99,slow=8.5,SNR=551						
MJAR				Sn	**Sn**	**07 57 09.3**	**+3.3**
	90nm,0.3s,baz=71,slow=14,SNR=6.4						
MJAR	**Matsushiro Arr**	**2.84**	**274**	Pn	**Pn**	**07 56 33.6**	**+0.7**
MJAR				Sn	**Sn**	**07 57 09.3**	**+3.3**
MAJO	**Matsushiro**	**2.84**	**274**	*e*P	**Pn**	**07 56 34.3**	**+1.3**
MAT	**Matsushiro**	**2.84**	**274**	P	**Pn**	**07 56 34.5**	**+1.5**
MAT				S	**Sn**	**07 57 12.4**	**+6.4**
JHJ	**Hachijo jima 2**	**3.65**	**207**	Pn	**Pn**	**07 56 42.9**	**-1.2**
	151nm,0.3s,baz=294,slow=13,SNR=17						
JHJ				Sn	**Sn**	**07 57 22.0**	**-3.8**
	216nm,0.3s,baz=243,slow=23,SNR=12						
JHJ				LR	LR	07 57 48.8	
	comp=Z,813nm,19.3s,baz=327,slow=34						
ERM	**Erimo**	**5.71**	**11**	⇑*e*P	**Pn**	**07 57 09.7**	**-2.7**
ERM	**Erimo**	**5.71**	**11**	*e*Pn	**Pn**	**07 57 09.4**	**-3.1**
ASAJ	**Asahikawa**	**7.73**	**5**	Pn	**Pn**	**07 57 39.1**	**-1.1**
	3.7nm,0.3s,baz=208,slow=9.6,SNR=16						
ASAJ				Sn	**Sn**	**07 59 04.8**	**-1.7**
	2.7nm,0.3s,baz=67,slow=34,SNR=2.4						
ASAJ				LR	LR	08 01 11.8	
	comp=Z,1μm,21.5s,baz=179,slow=42						
ASAJ	**Asahikawa**	**7.73**	**5**	P	**Pn**	**07 57 39.1**	**-1.1**
ASAJ						07 59 04.8	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,21.5s						
YUK	**Yuzh-Kuril'sk**	**8.25**	**21**	*e*P	**Pn**	**07 57 48.8**	**+1.5**
YUK				*e*S	**Sn**	**07 59 10.7**	**-8.5**
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,380nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,1.0s						
CBIJ	**Chichi jima**	**9.29**	**177**	Pn	**Pn**	**07 57 58.0**	**-3.5**
	comp=E,16nm,0.3s,baz=293,slow=21,SNR=9.2						
CBIJ				Sn	**Sn**	**07 59 33.7**	**-11**
	comp=E,14nm,0.3s,baz=276,slow=23,SNR=4.1						
VLA	**Vladivostok**	**10.11**	**315**	*e*P	**Pn**	**07 58 12.4**	**-0.3**
VLA				pmax	pmax		
	comp=Z,45nm,0.6s						
VLA				MLR	MLR		
	comp=Z,2μm,16.4s						
YSS	**Yuzh-Sakhalins**	**10.57**	**4**	*e*P	**Pn**	**07 58 16.8**	**-2.2**
YSS				*e*S	**Sn**	**08 00 12.0**	**-4.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS				MLR	MLR		
	comp=N,600nm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,15.0s						
YSS	**Yuzh-Sakhalins**	**10.57**	**4**	*e*Pn	**Pn**	**07 58 18.6**	**-0.4**
KSRS	**Korea Array**	**11.10**	**280**	Pn	**Pn**	**07 58 27.6**	**+1.3**
	comp=E,0.8nm,0.3s,baz=95,slow=13,SNR=40						
KSRS				LR	LR	08 02 40.8	
	comp=E,1μm,19.2s,baz=112,slow=37						
KSRS	**Korea Array**	**11.10**	**280**	P	**Pn**	**07 58 27.6**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,1μm,19.2s						
MDJ	**Mudanjiang**	**12.34**	**315**	P	**Pn**	**07 58 44.3**	**+1.0**
MDJ				pP		07 58 51.8	
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,310nm,6.1s						
MDJ				LR	LR		
	comp=N,660nm,20.3s						
MDJ				LR	LR		
	comp=E,550nm,22.1s						
MDJ				LR	LR		
	comp=Z,950nm,19.7s						
HABR	**Khabarovsk**	**13.02**	**340**	*e*P	**Pn**	**07 58 50.1**	**-2.4**
HABR				*e*		08 01 14.3	
HABR				pmax	pmax		
	comp=E,53nm,2.3s						
HABR				pmax	pmax		
	comp=N,58nm,2.1s						
HABR				pmax	pmax		
	comp=Z,107nm,3.1s						
HABR				MLR	MLR		
	comp=Z,1μm,14.0s						
CN2	**Changchun**	**14.47**	**306**	*e*P	**Pn**	**07 59 11.8**	**-0.5**
CN2				*ep*P	pP	07 59 19.0	-8.4
CN2				*es*P	sP	07 59 24.0	-7.7
CN2				*e*S	**Sn**	**08 01 49.0**	**-2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s						
CN2				LR	LR		
	comp=E,1μm,16.0s						
CN2				LR	LR		
	comp=Z,1μm,17.0s						
JOW	**Kunigami**	**14.90**	**234**	Pn	**Pn**	**07 59 21.7**	**+3.5**
	comp=Z,1.6nm,0.3s,baz=31,slow=16,SNR=4.6						
JOW				LR	LR	08 04 56.4	
	comp=Z,578nm,20.5s,baz=122,slow=37						
DL2	**Dalian**	**16.11**	**285**	P	**Pn**	**07 59 35.0**	**+1.1**
DL2				*e*S	**Sn**	**08 02 32.0**	**+0.5**
DL2				pmax	pmax		
	comp=Z,20nm,0.5s						
DL2				LR	LR		
	comp=N,520nm,12.2s						
DL2				LR	LR		
	comp=E,1μm,14.7s						
DL2				LR	LR		
	comp=Z,1μm,15.3s						
NJ2	**Nanjing**	**19.39**	**264**	*e*P	**Pn**	**08 00 11.5**	**-2.9**
NJ2				pP	pP	08 00 20.0	-2.0
NJ2				sP	sP	08 00 24.8	-1.4
NJ2				PP		08 00 28.5	
NJ2				S	**Sn**	**08 03 41.5**	**-9.4**
NJ2				sS	sS	08 03 56.0	-8.7
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,320nm,3.8s						
NJ2				LR	LR		
	comp=N,870nm,12.4s						
NJ2				LR	LR		
	comp=E,750nm,11.3s						
PETK	**Petropavlovsk-**	**20.11**	**29**	P	**P**	**08 00 20.7**	**0.0**
	comp=E,1.7nm,0.8s,baz=39,slow=50,SNR=2.5						
PETK				LR	LR	08 06 59.0	
	comp=E,268nm,19.6s,MS3.6,baz=203,slow=34						
BJI	**Beijing**	**20.38**	**288**	P	**P**	**08 00 23.0**	**-0.8**
BJI				S	**S**	**08 04 08.0**	**-2.2**
BJI				pmax	pmax		
	comp=Z,26nm,0.8s						
BJI				pmax	pmax		
	comp=Z,140nm,4.2s						
BJI				LR	LR		
	comp=N,690nm,13.4s,MS4.3						
BJI				LR	LR		
	comp=E,640nm,14.6s,MS4.3						
BJI				LR	LR		
	comp=Z,350nm,14.9s,MS3.8						
GUMO	**Guam**	**22.89**	**172**	LR	LR	08 08 38.6	
	comp=Z,203nm,19.5s,MS3.6,baz=94,slow=34						
NRGR	**Nerungri**	**23.27**	**336**	*e*P	**P**	**08 00 52.7**	**-1.8**
NRGR				S	**S**	**08 05 00.5**	**-3.5**
NRGR				smax			
	comp=E,21nm,0.4s						
CLNS	**Chul'man**	**23.36**	**336**	*e*P	**P**	**08 00 55.5**	**+0.1**
CLNS				*e**PP		08 01 02.5	
CLNS				*e*		08 01 19.1	
CLNS				*e*		08 04 44.6	
CLNS				*e*S	**S**	**08 05 02.4**	**-3.1**
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,46nm,1.1s,mb4.8						
CLNS				pmax	pmax		
	comp=N,44nm,1.3s						
CLNS				pmax	pmax		
	comp=E,15nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.3						
CLNS				pmax	pmax		
	comp=N,20nm,0.9s						
CLNS				smax			
	comp=E,128nm,13.8s						
CLNS				smax			
	comp=N,142nm,12.8s						
CLNS				MLR	MLR		
	comp=Z,665nm,15.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,624nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,396nm,13.0s,MS4.3						
WHN	**Wuhan**	**23.53**	**264**	P	**P**	**08 00 55.0**	**-2.3**
WHN				S	**S**	**08 04 56.3**	**-12**
WHN				pmax	pmax		
	comp=Z,50nm,1.1s,mb4.9						
WHN				LR	LR		
	comp=N,1μm,11.0s,MS4.9						
WHN				LR	LR		
	comp=E,2μm,12.7s,MS4.9						
WHN				LR	LR		
	comp=Z,3μm,14.8s,MS4.8						
HHC	**Hu-ho-hao-te**	**23.92**	**290**	*e*P	**P**	**08 01 00.3**	**-0.4**
HHC				pP		08 01 09.8	
HHC				sP	sP	08 01 13.5	-0.9
HHC				PP		08 01 34.0	
HHC				PcP	PcP	08 04 45.3	+2.7
HHC				S	**S**	**08 05 12.0**	**-2.9**
HHC				sS	sS	08 05 26.3	-4.4
HHC				SS		08 06 01.3	
HHC				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.4						
HHC				pmax	pmax		
	comp=Z,170nm,4.9s						
HHC				LR	LR		
	comp=N,440nm,13.5s,MS4.4						
HHC				LR	LR		
	comp=E,670nm,12.6s,MS4.4						
HHC				LR	LR		
	comp=Z,680nm,13.7s,MS4.3						
YAK	**Yakutsk**	**26.74**	**347**	*c i*P	**P**	**08 01 25.6**	**-0.5**
YAK				*e**PP	pP	08 01 35.0	-0.7
YAK				*e*		08 02 03.4	
YAK				*e*PPP		08 02 15.5	
YAK				*e*S	**S**	**08 05 58.8**	**-0.5**
YAK				*e**SS	sS	08 06 15.4	+0.1
YAK				*e*SS		08 07 05.5	
YAK				*e*SSS		08 07 19.6	
YAK				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=N,80nm,1.6s						
YAK				pmax	pmax		
	comp=E,23nm,1.4s						
YAK				pmax	pmax		
	comp=Z,42nm,1.1s,mb4.9						
YAK				smax			
	comp=N,69nm,3.0s						
YAK				smax			
	comp=E,129nm,4.3s						
YAK				MLR	MLR		
	comp=Z,614nm,12.0s,MS4.4						
YAK				MLR	MLR		
	comp=N,714nm,17.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,359nm,17.0s,MS4.3						
YAK	**Yakutsk**	**26.74**	**347**	*e*P	**P**	**08 01 26.0**	**-0.1**
	comp=E,114nm,1.0s,mb5.4						
ENH	**Enshi**	**27.54**	**267**	*e*P	**P**	**08 01 32.8**	**-0.8**
	comp=E,87nm,0.7s,mb5.5						
ENH				*e*	pP	08 01 43.3	+0.1
ULN	**Ulaanbaatar**	**27.92**	**305**	*e*P	**P**	**08 01 37.0**	**+0.1**
ULN				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**27.92**	**305**	*e*P	**P**	**08 01 37.0**	**+0.2**
	comp=Z,34nm,1.0s,mb4.9						
BOD	**Bodaibo**	**28.20**	**328**	*e*P	**P**	**08 01 39.0**	**-0.2**
BOD				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
SONM	**Songino Array**	**28.35**	**305**	P	**P**	**08 01 41.4**	**+0.7**
	comp=Z,34nm,0.8s,mb5.0,baz=104,slow=8.3,SNR=60						
SONM				LR	LR	08 13 14.1	
	comp=Z,556nm,19.2s,MS4.2,baz=275,slow=37						
LZH	**Lanzhou**	**30.43**	**281**	⇑P	**P**	**08 02 00.0**	**+0.7**
LZH				pP	pP	08 02 09.8	+0.9
LZH				sP	sP	08 02 14.0	+1.0
LZH				PP	PP	08 02 57.8	-10
LZH				*e*S	**S**	**08 06 56.0**	**-1.9**
LZH				sS	sS	08 07 11.3	-2.6
LZH				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=E,2μm,15.7s						
LZH				LR	LR		
	comp=Z,2μm,17.4s,MS4.8						
IRK	**Irkutsk**	**30.71**	**313**	*e*P	**P**	**08 02 01.5**	**-0.1**
IRK				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.0						
ZAK	**Zakamensk**	**30.86**	**309**	*e*P	**P**	**08 02 02.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.9						
TLY	**Talaya**	**30.94**	**312**	*e*P	**P**	**08 02 04.1**	**+0.6**
TLY				pmax	pmax		

comp=N,740nm,16.5s,MS4.6
GYA LR LR
comp=E,830nm,17.0s,MS4.6
GYA LR LR
comp=Z,640nm,17.3s,MS4.3
CD2 Chengdu 31.93 271 P **P** **08 02 12.5 -0.1**
CD2 pP pP 08 02 22.0 -0.3
CD2 sP sP 08 02 26.3 0.0
CD2 PP PP 08 03 18.5 -6.4
CD2 S **S** **08 07 19.5 -2.0**
CD2 sS sS 08 07 35.5 -2.1
CD2 SS SS 08 09 11.3 -28
CD2 pmax pmax
comp=Z,50nm,0.6s,mb5.5
CD2 pmax pmax
comp=Z,310nm,6.9s
CD2 LR LR
comp=N,700nm,11.9s
CD2 LR LR
comp=Z,900nm,11.9s,MS4.7
QIZ Qiongzhong 32.91 247 P **P** **08 02 21.3 +0.1**
QIZ S **S** **08 07 37.0 +0.2**
QIZ pmax pmax
comp=Z,24nm,1.6s,mb4.9
QIZ LR LR
comp=N,410nm,16.8s
QIZ LR LR
comp=Z,400nm,17.6s,MS4.2
GTA Gaotai 32.99 288 *e*P **P** **08 02 21.8 0.0**
GTA pP pP 08 02 31.0 -0.5
GTA sP sP 08 02 35.0 -0.6
GTA PP PP 08 03 32.0 -4.6
GTA PcP PcP 08 05 05.5 +0.4
GTA S **S** **08 07 36.8 -1.1**
GTA sS sS 08 07 53.5 -0.5
GTA SS SS 08 09 37.0 -24
GTA pmax pmax
comp=Z,13nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,230nm,6.8s
GTA LR LR
comp=N,380nm,16.4s,MS4.5
GTA LR LR
comp=E,670nm,16.1s,MS4.5
GTA LR LR
comp=Z,640nm,16.0s,MS4.4
KMI Kunming 35.12 262 P **P** **08 02 40.0 -0.4**
KMI pP pP 08 02 50.0 -0.1
KMI sP sP 08 02 54.5 +0.3
KMI PP PP 08 03 59.5 -0.8
KMI PcP PcP 08 05 13.5 +2.1
KMI S **S** **08 08 08.0 -3.0**
KMI sS sS 08 08 22.0 -5.2
KMI ScP ScP 08 08 55.5 +1.0
KMI PcS PcS 08 08 59.0 +0.6
KMI SS SS 08 10 23.3 -21
KMI ScS ScS 08 12 58.0 -0.6
KMI pmax pmax
comp=Z,38nm,0.9s,mb5.3
KMI LR LR
comp=N,500nm,12.2s,MS4.7
KMI LR LR
comp=E,710nm,13.6s,MS4.7
KMI LR LR
comp=Z,720nm,13.2s,MS4.6
TIXI Tiksi 35.95 353 *e*P **P** **08 02 46.2 -0.7**
TIXI pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
TIXI MLR MLR
comp=Z,481nm,14.0s,MS4.4
TIXI Tiksi 35.95 353 *e*P **P** **08 02 46.1 -0.8**
comp=Z,5.6nm,0.9s,mb4.5
WMQ Urumqi 41.35 298 P **P** **08 03 34.0 +1.4**
WMQ pmax pmax
comp=Z,49nm,1.0s,mb5.1
WMQ LR LR
comp=N,370nm,21.0s,MS4.3
WMQ LR LR
comp=E,320nm,21.0s,MS4.3
WMQ LR LR
comp=Z,370nm,20.0s,MS4.2
CM31 Chiang Mai Arr 41.59 256 *e*P **P** **08 03 35.2 +0.4**
comp=Z,4.5nm,0.5s,mb4.3
CMAR Chiang Mai Arr 41.59 256 P **P** **08 03 35.0 +0.2**
comp=Z,9.2nm,0.8s,mb4.5,baz=47,slow=5.9,SNR=30
CMAR PcP PcP 08 05 31.3 -0.3
comp=Z,1.1nm,0.3s,baz=60,slow=2.5,SNR=4.4
CMAR LR LR 08 21 36.6
comp=Z,198nm,19.6s,MS4.0,baz=205,slow=37
CMAR Chiang Mai Arr 41.59 256 P **P** **08 03 35.0 +0.2**
CMAR 08 05 31.3
LSA Lhasa 42.52 276 P **P** **08 03 43.3 +1.0**
LSA Lhasa 42.52 276 *e*P **P** **08 03 43.9 +1.6**
LSA *e**PP pP 08 03 53.4 +1.2
LSA pmax pmax
comp=Z,38nm,1.1s,mb5.0
LSA Lhasa 42.52 276 *e*P **P** **08 03 43.9 +1.6**
comp=Z,38nm,1.1s,mb5.0
LSA *e*pP pP 08 03 53.4 +1.2
ZALV Zalesovo Beam 42.53 313 P **P** **08 03 42.3 +0.3**
comp=Z,24nm,0.8s,mb4.9,baz=91,slow=7.4,SNR=83
ZALV PcP PcP 08 05 33.4 -0.7
comp=Z,3.0nm,0.7s,baz=96,slow=2.9,SNR=3.1
ZALV LR LR 08 22 06.2
comp=Z,324nm,19.4s,MS4.2,baz=250,slow=37
ZALV Zalesovo Beam 42.53 313 P **P** **08 03 42.3 +0.3**
ZALV 08 05 33.4
NVS Novosibirsk 43.46 314⇑ *i*P **P** **08 03 49.2 -0.4**
NVS pmax pmax
comp=Z,41nm,1.1s,mb5.1
NVS pmax pmax
comp=E,37nm,1.2s
MK31 Makanchi Array 44.67 303 *e*P **P** **08 03 59.7 +0.3**
MK31 *e**PP pP 08 04 09.5 +0.2
MKAR Makanchi Array 44.67 303 P **P** **08 03 59.6 +0.2**
comp=E,11nm,0.7s,mb4.8,baz=84,slow=11,SNR=90
MKAR LR LR 08 23 30.8
comp=E,296nm,18.0s,MS4.2,baz=120,slow=37
MKAR Makanchi Array 44.67 303 *ce*P **P** **08 03 59.5 +0.1**
MKAR pmax pmax
comp=Z,11nm,0.7s
KSM Kuching 45.30 227 *e*P **P** **08 04 05.3 +0.5**
comp=Z,13nm,0.7s,mb4.9
KAPI Kappang 46.05 211 *e*P **P** **08 04 10.5 -0.1**
comp=Z,36nm,0.9s,mb5.3
KURK Kurchatov 46.52 309 LR LR 08 24 36.1
comp=Z,382nm,19.2s,MS4.4,baz=80,slow=37
KURK Kurchatov 46.52 309 *e*P **P** **08 04 13.7 -0.3**
KURK pmax pmax
comp=Z,38nm,0.9s,mb5.3
KURK Kurchatov 46.52 309 *e*P **P** **08 04 13.7 -0.3**
comp=Z,38nm,0.9s,mb5.3
KAKA Kakadu 49.63 192 *e*P **P** **08 04 37.2 -1.1**
comp=Z,12nm,0.8s,mb5.0
KAKA Kakadu 49.63 192 *e*P **P** **08 04 36.8 -1.4**
comp=Z,56nm,1.1s,mb5.5
TKM2 Tokmak 2 50.16 299 P **P** **08 04 43.4 +1.3**
SNR=48
TKM2 Tokmak 2 50.16 299 *e*P **P** **08 04 43.0 +0.9**
TKM2 pmax pmax
comp=Z,19nm,0.6s,mb5.3
TKM2 Tokmak 2 50.16 299 *e*P **P** **08 04 43.0 +0.9**
comp=Z,19nm,0.6s,mb5.3
KZA Kyzart 50.64 298 P **P** **08 04 47.9 +2.1**
SNR=13
KBK Karagaybulak 50.69 299 P **P** **08 04 47.1 +1.0**
SNR=19
CHMS Chumysh 50.73 299 P **P** **08 04 47.1 +0.7**
SNR=6.2
USP Ospenovka 50.83 300 P **P** **08 04 47.6 +0.4**
SNR=12
FRU Bishkek 50.87 299 *e*P **P** **08 04 48.0 +0.5**
FRU *e* 08 05 04.0
KSH Kashi 50.90 295 *e*P **P** **08 04 52.0 +4.3**
KSH *e*pP pP 08 05 01.0 +3.2
KSH *es*P sP 08 05 05.0 +3.2
KSH *e*PP PP 08 06 49.0 +4.9
KSH *e*ScP ScP 08 09 59.3 +1.7
KSH *e*PcS PcS 08 10 03.0 +1.6
KSH *e*S **S** **08 12 05.5 +3.6**
KSH *es*S sS 08 12 23.0 +4.5
KSH *e*ScS ScS 08 14 36.0 +0.2
KSH *e*SS SS 08 15 40.0 +3.4
KSH pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KSH pmax pmax
comp=Z,110nm,4.0s
KSH LR LR
comp=N,290nm,8.0s
KSH LR LR
comp=E,140nm,6.1s
KSH LR LR
comp=Z,600nm,15.7s,MS4.7
AAK Ala-Archa 51.01 299 LR LR 08 27 52.1
comp=Z,1μm,18.2s,MS5.0,baz=108,slow=38
AAK Ala-Archa 51.01 299 *e*P **P** **08 04 49.0 +0.4**
AAK *e**PP pP 08 04 58.5 -0.2
AAK pmax pmax
comp=Z,11nm,0.6s,mb5.0
AAK Ala-Archa 51.01 299 *e*P **P** **08 04 49.0 +0.4**
comp=Z,11nm,0.6s,mb5.0
AAK *e*pP pP 08 04 58.5 -0.2
UCH Uchtor 51.12 298 P **P** **08 04 50.9 +1.5**
SNR=8.8
UCH Uchtor 51.12 298 *e*P **P** **08 04 50.9 +1.5**
comp=Z,8.9nm,0.8s,mb4.8
BVAR Borovoye Array 51.19 313 P **P** **08 04 49.8 +0.1**
comp=Z,5.6nm,0.7s,mb4.6,baz=77,slow=7.8,SNR=28
BVAR LR LR 08 27 34.0
comp=Z,561nm,19.0s,MS4.6,baz=170,slow=37
BRVK Borovoye 51.24 313 *e*P **P** **08 04 50.4 +0.3**
BRVK pmax pmax
comp=Z,14nm,0.9s,mb4.9
BRVK Borovoye 51.24 313 *e*P **P** **08 04 50.4 +0.3**
comp=Z,14nm,0.9s,mb4.9
EKS2 Erkin-Say 51.51 299 P **P** **08 04 53.4 +1.1**
SNR=7.9
EKS2 Erkin-Say 51.51 299 *e*P **P** **08 04 52.9 +0.5**
comp=Z,10nm,0.8s,mb4.8
EKS2 *e*pP pP 08 05 03.4 +1.0
AML Almayashu 51.73 299 P **P** **08 04 55.6 +1.7**
SNR=35
AML Almayashu 51.73 299 *e*P **P** **08 04 55.3 +1.3**
comp=Z,33nm,0.7s,mb5.4
AML *e*pP pP 08 05 05.6 +1.6
INK Inuvik 54.84 27 P **P** **08 05 16.2 -0.2**
comp=Z,2.2nm,0.6s,mb4.3,baz=286,slow=3.9,SNR=8.0
INK Inuvik 54.84 27 *e*P **P** **08 05 16.8 +0.4**
INK *e**PP pP 08 05 27.7 +1.2
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 54.84 27 *e*P **P** **08 05 16.8 +0.4**
comp=Z,6.2nm,0.9s,mb4.6
INK *e*pP pP 08 05 27.7 +1.1
SVE Sverdlovsk 55.79 319⇓ *e*P **P** **08 05 23.9 +0.5**
SVE pmax pmax
comp=Z,35nm,1.1s,mb5.3
SVE MLR MLR
comp=Z,718nm,15.0s,MS4.9
FITZ Fitzroy Crossi 56.30 198 *e*P **P** **08 05 26.3 -1.1**
comp=Z,20nm,1.7s,mb4.9
WRAB Tennant Creek 56.46 188 *e*P **P** **08 05 27.2 -1.3**
WRAB pmax pmax
comp=Z,16nm,1.0s,mb5.0
WRAB Tennant Creek 56.46 188 *e*P **P** **08 05 27.2 -1.4**
comp=Z,16nm,1.0s,mb5.0
SOKR Solikamsk 56.99 323 *d i*P **P** **08 05 32.5 +0.6**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
SOKR MLR MLR
comp=Z,340nm,18.0s,MS4.5
ARU Arti 57.00 319 *c i*P **P** **08 05 31.9 -0.1**
ARU *e* 08 06 24.2
ARU *e* 08 07 34.5
ARU S **S** **08 13 26.0 +2.1**
ARU SS SS 08 17 16.0 +3.9
ARU pmax pmax
comp=Z,60nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,546nm,18.0s,MS4.7
ARU Arti 57.00 319 *e*P **P** **08 05 32.0 0.0**
comp=Z,38nm,1.1s,mb5.3
ARU *e*pP pP 08 05 40.0 -2.2
KBL Kabul 57.88 291 *e*P **P** **08 05 38.9 +0.3**
KBL pmax pmax
comp=Z,20nm,1.1s,mb5.1
KBL Kabul 57.88 291 *e*P **P** **08 05 38.9 +0.3**
comp=Z,20nm,1.1s,mb5.1
HYB Hyderabad 58.44 269 *i*P **P** **08 05 44.0 +1.3**
ABKAR Akbulak array 58.54 311 *e*P **P** **08 05 42.5 -0.4**
comp=Z,4.7nm,0.5s,mb4.8
DLBC Dease Lake 58.97 38 P **P** **08 05 45.6 -0.2**
comp=Z,2.8nm,0.8s,mb4.3,baz=250,slow=9.3,SNR=5.3
DLBC Dease Lake 58.97 38 *e*P **P** **08 05 46.9 +1.1**
ASAR Alice Springs 60.20 188 P **P** **08 05 53.5 -1.1**
comp=Z,2.5nm,0.8s,mb4.3,baz=7.5,slow=6.7,SNR=22
LVZ Lovozero 62.79 336⇑ *e*P **P** **08 06 11.9 +0.3**
LVZ pmax pmax
comp=Z,39nm,1.4s,mb5.3
LVZ MLR MLR
comp=Z,355nm,19.0s,MS4.6
RES Resolute Bay 63.15 14 *e*P **P** **08 06 13.9 0.0**
RES pmax pmax
comp=Z,12nm,1.0s,mb5.0
RES Resolute Bay 63.15 14 *e*P **P** **08 06 13.9 0.0**
comp=Z,12nm,1.0s,mb5.0
APA Apatity 63.37 336⇓ *e*P **P** **08 06 22.0 +6.6**
APA MLR MLR
comp=Z,400nm,20.0s,MS4.6
KEV Kevo 64.12 339 *e*P **P** **08 06 21.1 +0.7**
KEV pmax pmax
comp=Z,12nm,0.9s,mb4.9
KEV Kevo 64.12 339 *e*p **P** **08 06 21.1 +0.7**
comp=Z,12nm,0.9s,mb4.9
YKA Yellowknife Ar 64.23 30 P **P** **08 06 20.9 -0.3**
comp=Z,2.1nm,0.7s,mb4.3,baz=302,slow=6.6,SNR=27
ARCES ARCESS Array B 64.68 340 P **P** **08 06 24.2 +0.2**
comp=Z,5.4nm,0.8s,mb4.6,baz=46,slow=8.7,SNR=10
DAG Danmarks Havn 66.42 355⇑ *i*P **P** **08 06 35.3 +0.1**
DAG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
DAG Danmarks Havn 66.42 355⇑ *i*P **P** **08 06 35.3 +0.1**
comp=Z,2.5nm,0.9s,mb4.2
JOF Joensuu 66.64 332 *e*P **P** **08 06 35.5 -1.3**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JOF Joensuu 66.64 332 *e*p **P** **08 06 35.5 -1.3**
comp=Z,6.5nm,0.6s,mb4.8
NLWA Neilton Lookou 66.96 47 *e*P **P** **08 06 40.7 +1.7**
comp=Z,13nm,1.1s,mb4.9
NLWA *e*pP pP 08 06 50.6 +1.2
CMSA Cobar Meteorol 67.69 176 *e*P **P** **08 06 43.3 -0.4**
MOS Moscow 67.91 324 *e*P **P** **08 06 43.5 -1.4**
MOS *e* 08 07 10.2
MOS pmax pmax
comp=Z,53nm,0.9s,mb5.6
STKA Stephens Creek 67.92 180 *e*P **P** **08 06 44.1 -1.0**
comp=Z,3.4nm,0.9s,mb4.4
STKA Stephens Creek 67.92 180 P **P** **08 06 44.4 -0.7**
comp=Z,2.3nm,0.8s,mb4.2,baz=338,slow=6.0,SNR=4.7
STKA Stephens Creek 67.92 180 P **P** **08 06 44.4 -0.7**
FORT Forrest 68.05 193 *e*P **P** **08 06 45.0 -1.0**
comp=Z,10nm,0.7s,mb5.0
FORT Forrest 68.05 193 *e*P **P** **08 06 44.8 -1.1**
comp=Z,24nm,0.8s,mb5.3
OBN Obninsk 68.75 323⇓ *e*P **P** **08 06 50.4 +0.2**
OBN *e* 08 07 12.7
OBN *e*SS SS 08 20 17.5 +2.1
OBN pmax pmax
comp=Z,36nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,500nm,17.0s,MS4.8
KAF Kangasniemi 68.98 333 *e*P **P** **08 06 50.2 -1.3**
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KAF Kangasniemi 68.98 333 *e*p **P** **08 06 50.2 -1.3**
comp=Z,7.5nm,0.6s,mb4.8,baz=48,slow=5.8
BBOO Buckleboo 69.06 185 *e*P **P** **08 06 51.3 -0.9**
comp=Z,3.8nm,0.8s,mb4.4
FINES FINESS Array B 69.49 332 P **P** **08 06 54.9 +0.2**
comp=Z,12nm,0.8s,mb4.9,baz=58,slow=7.2,SNR=38
VSR Storozhevoye 69.57 319 *e*P **P** **08 06 55.1 -0.3**
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VSR pmax pmax
comp=E,20nm,1.0s
VORD Divnogorie 69.64 319 *e*P **P** **08 06 55.7 -0.1**
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VORD pmax pmax
comp=N,9.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.8s
EDM Edmonton 69.69 38 *e*P **P** **08 06 56.3 +0.3**
EDM *e**PP pP 08 07 06.8 +0.4
VSU Vasula 71.13 330 *c i*P **P** **08 07 04.8 +0.1**
VSU pmax pmax
comp=Z,38nm,1.2s,mb5.2
SUMG Summit 71.32 0 *e*P **P** **08 07 06.2 +0.5**
comp=Z,6.5nm,0.9s,mb4.6
ZEI Tsey 71.41 310 *e*P **P** **08 07 04.0 -2.7**
ZEI pmax pmax
comp=Z,12nm,1.5s,mb4.6
KIV Kislovodsk 71.51 311 *e*P **P** **08 07 08.2 +0.9**
KIV *e* 08 07 24.9
KIV *e*SS SS 08 21 03.7 +5.4
KIV pmax pmax
comp=Z,27nm,1.0s,mb5.1
D11A Klaveano Farm, 71.52 45⇓ P **P** **08 07 07.0 -0.3**
baz=71
E11A Bogner Ranch, 71.98 45⇑ P **P** **08 07 10.2 +0.1**
baz=72
GNI Garni 72.29 307⇓ *e*P **P** **08 07 13.6 +1.5**
GNI pmax pmax
comp=Z,24nm,1.9s
GNI MLR MLR
comp=Z,216nm,18.0s
E12A Beaver Dam Sad 72.31 45⇓ P **P** **08 07 11.6 -0.4**
baz=72
YBMT Yellow Bay 72.36 43 *e*P **P** **08 07 13.6 +1.2**
comp=Z,4.6nm,1.1s,mb4.3
YBMT *e*pP pP 08 07 23.1 +0.3
A15A Johnson Ranch, 72.42 42⇑ P **P** **08 07 11.7 -1.0**
baz=72
G11A Walters Elk Ra 72.48 46⇓ P **P** **08 07 12.9 -0.2**
baz=72
D13A Huson 72.55 44⇑ P **P** **08 07 13.4 -0.1**
baz=72
SWMT Swartz Lake 72.57 44 *e*P **P** **08 07 15.1 +1.4**
comp=Z,9.5nm,1.2s,mb4.6
SWMT *e*pP pP 08 07 23.8 -0.3
H10A Noah's Angus R 72.65 47⇑ P **P** **08 07 14.1 -0.1**
baz=72
F12A Elk City 72.86 46⇓ P **P** **08 07 14.9 -0.4**
baz=73
B15A Bradely Ranch, 72.90 42⇓ P **P** **08 07 15.1 -0.4**
baz=73,SNR=5.6
MSO Missoula 73.00 44 *e*P **P** **08 07 16.3 +0.1**
comp=Z,3.8nm,1.1s,mb4.2
MSO *e*pP pP 08 07 25.1 -1.5
SLMT Seeley Lake 73.01 44 *e*P **P** **08 07 16.8 +0.6**
comp=Z,14nm,1.2s,mb4.8
SLMT *e*pP pP 08 07 25.2 -1.5
IZAR Zarasai 73.08 328 *e*P **P** **08 07 16.3 -0.1**
D14A Greenough 73.09 44⇑ P **P** **08 07 16.1 -0.7**
baz=73,SNR=5.3
MICGM Minsk 73.16 326 *e*P **P** **08 07 16.0 -1.0**
MNK Minsk 73.18 326 *e*P **P** **08 07 16.0 -1.1**
ISAL Salakas 73.25 328 *e*P **P** **08 07 17.7 +0.3**
IIGN Ignalina 73.35 327 *e*P **P** **08 07 18.5 +0.4**
NACGM Naroch 73.39 327 *e* **P** **08 07 16.0 -2.3**
H12A Diamond D Ranc 73.79 46⇑ P **P** **08 07 21.1 +0.2**
baz=74
E15A Deer Lodge 73.96 44⇑ P **P** **08 07 21.4 -0.4**
baz=74,SNR=5.5
A18A Metzger Ranch, 73.99 41⇓ P **P** **08 07 21.6 -0.3**
baz=74
CMB Columbia Colle 74.03 54 *e*P **P** **08 07 24.1 +1.7**
CMB pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CMB Columbia Colle 74.03 54 *e*P **P** **08 07 24.1 +1.7**
comp=Z,5.7nm,1.1s,mb4.4
I12A Atlanta 74.06 47⇓ P **P** **08 07 22.3 -0.2**
baz=74
FFC Flin Flon 74.10 33 *e*P **P** **08 07 22.1 -0.4**
FFC pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
FFC Flin Flon 74.10 33 *e*P **P** **08 07 22.1 -0.3**
comp=Z,4.1nm,0.7s,mb4.5
H13A Challis 74.13 46⇑ P **P** **08 07 22.6 -0.2**
baz=74,SNR=5.7
D16A Dana Ranch, Ca 74.21 43⇓ P **P** **08 07 22.9 -0.3**
baz=74
B18A Beardsley Farm 74.34 41⇓ P **P** **08 07 23.8 -0.2**
baz=74
F15A Butte 74.39 44⇓ P **P** **08 07 24.5 +0.2**
baz=74,SNR=12
LRM Limekiln Ridge 74.42 44 *e*P **P** **08 07 25.2 +0.7**
LRM *e*pP pP 08 07 34.2 -0.8
E16A East Helena 74.43 43⇑ P **P** **08 07 24.3 -0.3**
baz=74
EGMT Eagleton 74.58 41⇓ P **P** **08 07 24.6 -0.8**
baz=74
EGMT Eagleton 74.58 41 *e*P **P** **08 07 26.0 +0.6**
comp=Z,6.8nm,1.1s,mb4.5
EGMT *e*pP pP 08 07 36.1 +0.3
I13A Wildhorse Cree 74.59 47⇓ P **P** **08 07 25.2 -0.3**
baz=74
DLMT Dillon 74.61 45 *e*P **P** **08 07 26.4 +0.7**
DLMT *e*pP pP 08 07 36.7 +0.5
HLID Hailey 74.62 47 *e*P **P** **08 07 27.3 +1.6**
comp=Z,1.7nm,1.1s,mb3.9
HLID *e*pP pP 08 07 36.8 +0.6
G15A Dillon 74.79 45⇓ P **P** **08 07 25.5 -1.2**
baz=75
NB2 NORSAR Subarra 74.87 337 P **P** **08 07 26.9 +0.1**
comp=Z,20nm,0.9s,mb5.0,baz=39,slow=5.9
NOA NORSAR Array B 74.87 337 P **P** **08 07 26.9 +0.1**
comp=Z,12nm,0.8s,mb4.8,baz=39,slow=5.8,SNR=46
E17A Martinsdale 74.93 43⇑ P **P** **08 07 27.5 +0.1**
baz=75
AKASG Malin Array Be 74.95 323 P **P** **08 07 27.2 -0.3**
comp=Z,12nm,0.7s,mb4.9,baz=46,slow=5.8,SNR=45
AKASG Malin Array Be 74.95 323 *ce*P **P** **08 07 27.2 -0.3**
AKASG pmax pmax
comp=Z,12nm,0.7s
AKBB Malin Array Si 74.95 323 *e*P **P** **08 07 27.2 -0.3**
AKBB *e**PP pP 08 07 38.4 +0.4
KIEV Kiev 74.96 323 *e*P **P** **08 07 27.2 -0.4**
KIEV *e**PP pP 08 07 38.4 +0.3
KIEV pmax pmax
comp=Z,11nm,0.6s,mb5.0
KIEV Kiev 74.96 323 *e*P **P** **08 07 27.2 -0.4**
comp=Z,11nm,0.6s,mb5.0
KIEV *e*pP pP 08 07 38.4 +0.3
I14A Mackay 74.97 46⇓ P **P** **08 07 28.1 +0.4**
baz=75,SNR=11
BOZ Bozeman (W) 74.99 44 P **P** **08 07 28.6 +0.8**
baz=75,SNR=6.1
BOZ Bozeman (W) 74.99 44 *e*P **P** **08 07 28.5 +0.7**
BOZ *e**PP pP 08 07 37.9 -0.4
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BOZ Bozeman (W) 74.99 44 *e*P **P** **08 07 28.5 +0.7**
comp=Z,3.5nm,0.9s,mb4.3
BOZ *e*pP pP 08 07 37.9 -0.4
NAO01 NORSAR Array S 75.12 337 *e*P **P** **08 07 28.1 -0.2**
comp=Z,11nm,0.9s,mb4.8
NVAR Mina Array Bea 75.17 53 P **P** **08 07 30.3 +1.3**
comp=Z,3.3nm,0.9s,mb4.3,baz=287,slow=4.7,SNR=19
J14A Carey 75.29 47⇑ P **P** **08 07 29.2 -0.3**
baz=75
F17A Fitzpatrick Pl 75.38 43⇓ P **P** **08 07 29.4 -0.7**
baz=75
SUW Suwalki 75.56 328 *e*P **P** **08 07 30.7 -0.2**
SUW Suwalki 75.56 328 *e*P **P** **08 07 30.7 -0.2**
M12A Wells 75.57 49⇑ P **P** **08 07 30.6 -0.7**
baz=75,SNR=6.3
H16A Russell Place, 75.77 45⇓ P **P** **08 07 32.3 -0.1**
baz=76
N12A Clover Valley, 75.83 50 *e*P **P** **08 07 34.6 +1.9**
comp=Z,12nm,1.2s,mb4.7
N12A *e*pP pP 08 07 44.0 +0.8
F18A Big Timber 75.90 43⇓ P **P** **08 07 32.7 -0.3**
baz=76
GCMT Greycliff 75.99 43 *e*P **P** **08 07 34.4 +0.9**
comp=Z,3.9nm,1.1s,mb4.2
GCMT *e*pP pP 08 07 43.6 -0.5
M13A Montello 76.06 49⇑ P **P** **08 07 33.9 -0.2**
baz=76
M13A Montello 76.06 49 *e*P **P** **08 07 34.9 +0.8**
comp=Z,3.9nm,0.9s,mb4.3
I16A Newdale 76.14 45⇓ P **P** **08 07 34.4 -0.1**
baz=76,SNR=6.6
O12A Currie 76.35 50⇓ P **P** **08 07 35.6 -0.1**

baz=76,SNR=12
IMW Indian Meadow 76.44 45 *e*P **P 08 07 37.8 +1.6**
IMW *ep*P pP 08 07 47.0 +0.4
M14A Sheep Mountain 76.47 48 ⇊P **P 08 07 36.3 -0.1**
baz=76
S10A Tonopah Range, 76.56 53 ⇊P **P 08 07 36.8 -0.1**
baz=76,SNR=7.2
TPAW Teton Pass 76.68 46 *e*P **P 08 07 39.6 +2.1**
comp=Z,10nm,1.3s,mb4.6
TPAW *ep*P pP 08 07 48.2 +0.2
P12A McGill 76.72 51 ⇑P **P 08 07 37.9 +0.1**
baz=76,SNR=5.8
R11A Troy Canyon, C 76.95 52 ⇊P **P 08 07 39.6 +0.4**
baz=77,SNR=7.0
LAO LASA Array 77.29 41 *e*P **P 08 07 40.4 -0.4**
comp=Z,10nm,1.1s,mb4.7
L16A Fish Haven 77.30 47 ⇊P **P 08 07 40.8 -0.3**
baz=77
DUG Dugway 77.58 49 ⇑P **P 08 07 42.7 +0.1**
baz=77,SNR=7.3
DUG Dugway 77.58 49 *e*P **P 08 07 43.4 +0.8**
DUG *e**PP pP 08 07 53.8 +0.6
DUG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
DUG Dugway 77.58 49 *e*P **P 08 07 43.4 +0.8**
comp=Z,9.1nm,1.0s,mb4.7
DUG *ep*P pP 08 07 53.8 +0.7
L17A Cokeville 77.58 47 ⇑P **P 08 07 42.2 -0.4**
baz=77
R12A Pony Springs, 77.58 51 ⇊P **P 08 07 42.6 -0.1**
baz=77,SNR=5.6
P14A Drum Mountains 77.79 50 ⇊P **P 08 07 43.5 -0.3**
baz=78,SNR=7.6
T11A Corn Creek, Al 77.84 53 ⇑P **P 08 07 44.1 0.0**
baz=78
BW06 Boulder Array 77.93 45 ⇊P **P 08 07 44.3 -0.2**
baz=78
BW06 Boulder Array 77.93 45 *e*P **P 08 07 44.7 +0.2**
comp=Z,3.6nm,1.1s,mb4.2
PDAR Pinedale Array 77.93 45 P **P 08 07 44.5 0.0**
comp=Z,1.4nm,0.8s,mb3.9,baz=301,slow=3.1,SNR=9.7
Q14A Sevier Lake (B 78.02 50 ⇊P **P 08 07 44.8 -0.3**
baz=78
JLU Jordanelle 78.16 48 *e*P **P 08 07 47.3 +1.5**
comp=Z,5.5nm,1.2s,mb4.4
JLU *ep*P pP 08 07 56.6 +0.2
SHPR Sheep Range 78.32 53 *e*P **P 08 07 48.8 +2.0**
DAU Daniels Canyon 78.39 48 *e*P **P 08 07 48.0 +0.9**
DAU *e**PP pP 08 07 57.6 -0.1
MPU Maple Canyon 78.41 49 *e*P **P 08 07 47.4 +0.2**
comp=Z,7.6nm,1.0s,mb4.6
S13A Holt Ranch, En 78.50 52 ⇑P **P 08 07 48.0 +0.1**
baz=78,SNR=5.3
KWP Kalwaria Pacla 78.79 325 *e*P **P 08 07 50.3 +1.1**
KWP Kalwaria Pacla 78.79 325 *e*P **P 08 07 50.3 +1.2**
O17A Robinson Place 78.83 48 ⇑P **P 08 07 49.1 -0.5**
baz=79
CCUT Cedar City 78.84 52 *e*P **P 08 07 50.5 +0.9**
BUR08 Bucovina Ar. S 78.95 322 *e*P **P 08 07 50.6 +0.5**
MSU Marysvale 78.99 50 *e*P **P 08 07 52.5 +2.0**
MSU *e**PP pP 08 08 01.6 +0.6
MSU pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
MSU Marysvale 78.99 50 *e*P **P 08 07 52.5 +2.0**
comp=Z,5.4nm,1.2s,mb4.3
MSU *ep*P pP 08 08 01.6 +0.5
BR131 Keskin Array S 79.46 312 *e*P **P 08 07 53.7 +0.7**
comp=Z,2.8nm,0.6s,mb4.4
BRTR Keskin Array B 79.46 312 P **P 08 07 53.4 +0.3**
comp=Z,7.8nm,1.0s,mb4.6,baz=97,slow=3.9,SNR=28
KOLS Kolonicke sedl 79.48 324 *e*P **P 08 07 53.5 +0.6**
KOLS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 79.48 324 *e*P **P 08 07 53.5 +0.6**
comp=Z,5.1nm,1.1s,mb4.4
KOLS Kolonicke sedl 79.48 324 *e*P **P 08 07 53.5 +0.6**
R16A Teasdale 79.56 50 ⇑P **P 08 07 53.6 0.0**
baz=79,SNR=10
STHS Stebnicka Huta 79.62 325 *e*P **P 08 07 55.2 +1.5**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 79.62 325 *e*P **P 08 07 55.2 +1.5**
comp=Z,4.3nm,0.8s,mb4.4
STHS Stebnicka Huta 79.62 325 *e*P **P 08 07 55.2 +1.5**
SRU San Rafael 79.64 49 ⇊P **P 08 07 53.9 -0.1**
baz=79
SRU San Rafael 79.64 49 *e*P **P 08 07 54.3 +0.3**
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SRU San Rafael 79.64 49 *e*P **P 08 07 54.3 +0.3**
comp=Z,4.4nm,0.9s,mb4.4
UZH Uzhgorod 79.68 324 *e*P **P 08 07 55.0 +1.0**
OJC Ojcow 79.70 326 *i*P **P 08 07 53.9 -0.2**
N20A Spence Gulch, 79.90 46 ⇊P **P 08 07 55.0 -0.4**
baz=80
R17A Hanksville Air 79.95 50 ⇑P **P 08 07 55.6 -0.1**
baz=80
V14A Boquillas Ranc 80.17 53 ⇊P **P 08 07 56.6 -0.3**
baz=80
P19A Cripple Cowboy 80.24 48 ⇑P **P 08 07 56.8 -0.5**
baz=80
X13A Yucca 80.33 54 ⇑P **P 08 07 56.8 -1.0**
baz=80
O20A White River Ci 80.36 47 ⇑P **P 08 07 57.2 -0.6**
baz=80
R18A Canyonlands Na 80.47 49 ⇊P **P 08 07 58.0 -0.6**
baz=80
Q19A Hogan Spring (80.50 48 ⇑P **P 08 07 58.7 0.0**
baz=80
KECS Kecovo 80.64 325 *e*P **P 08 07 59.5 +0.3**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 80.64 325 *e*P **P 08 07 59.5 +0.3**
comp=Z,2.2nm,1.0s,mb4.0
KECS Kecovo 80.64 325 *e*P **P 08 07 59.5 +0.3**
OKC Ostrava-Krasne 80.72 327 *e*P **P 08 08 00.1 +0.5**
OKC MLR MLR
comp=Z,400nm,19.0s,MS4.8
OKC Ostrava-Krasne 80.72 327 *e*P **P 08 08 00.1 +0.5**
OKC AMS AMS 08 46 50.0
comp=Z,400nm,19.0s
KSP Ksiaz 80.77 328 *e*P **P 08 08 00.8 +0.9**
KSP Ksiaz 80.77 328 *e*P **P 08 08 00.3 +0.4**
S18A Hurst Farm, Bl 80.85 50 ⇊P **P 08 08 00.1 -0.5**
baz=81
PV10 Paradox Valley 81.00 49 *e*P **P 08 08 02.2 +0.9**
comp=Z,303nm,0.9s
PV10 *ep*P pP 08 08 12.6 +0.6
MORC Moravsky Berou 81.03 327 *e*P **P 08 08 01.1 -0.1**
MORC pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MORC Moravsky Berou 81.03 327 *e*P **P 08 08 01.1 -0.1**
comp=Z,9.3nm,1.1s,mb4.6
PV04 Paradox Valley 81.07 49 *e*P **P 08 08 04.7 +3.0**
PV04 *ep*P pP 08 08 12.5 +0.2
DPC Dobruska-Polom 81.13 328 *e*P **P 08 08 02.5 +0.7**
DPC *ep*P pP 08 08 14.2 +1.8
DPC AMS AMS 08 47 10.0
comp=Z,300nm,17.8s
T18A Mexican Hat 81.28 50 ⇑P **P 08 08 02.1 -0.7**
baz=81
PSZ Piszkesteto 81.32 325 *e*P **P 08 08 03.3 +0.5**
PSZ pmax pmax
comp=Z,11nm,1.0s,mb4.7
PSZ Piszkesteto 81.32 325 *e*P **P 08 08 03.3 +0.5**
comp=Z,11nm,1.0s,mb4.8
S19A Harvey Farm, M 81.34 49 ⇑P **P 08 08 03.1 -0.1**
baz=81
VYHS Vyhne 81.39 326 *e*P **P 08 08 03.9 +0.7**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 81.39 326 *e*P **P 08 08 03.9 +0.7**
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 81.39 326 *e*P **P 08 08 03.9 +0.7**
X15A Humboldt 81.44 53 ⇊P **P 08 08 04.0 +0.2**
baz=81
PV01 Paradox Valley 81.44 49 *e*P **P 08 08 03.9 +0.3**
comp=Z,643nm,1.1s
PV01 *ep*P pP 08 08 12.9 -1.3
V17A Tonalea, Kykot 81.65 52 ⇑P **P 08 08 05.2 +0.3**
baz=82
SMCO Snowmass 81.72 47 *e*P **P 08 08 05.6 +0.4**
comp=Z,2.6nm,0.8s,mb4.2
SMCO *ep*P pP 08 08 15.5 -0.2
BRG Berggiesshubel 81.72 330 *e*P **P 08 08 05.2 +0.3**
comp=Z,5.2nm,0.8s,mb4.5

PVCC Panska Ves 81.73 329 *e*P **P 08 08 05.3 +0.3**
PVCC MLR MLR
comp=Z,400nm,18.7s,MS4.8
PVCC Panska Ves 81.73 329 *e*P **P 08 08 05.3 +0.3**
PVCC AMS AMS 08 47 20.0
comp=Z,400nm,18.7s
U18A Rough Rock, Ch 81.73 51 ⇑P **P 08 08 04.9 -0.3**
baz=82
CLL Collm 81.77 330 ⇑*i*P **P 08 08 04.8 -0.4**
CLL *e* pP 08 08 16.0 +0.2
CLL pmax pmax
comp=Z,11nm,0.9s,mb4.8
CLL MLR MLR
comp=Z,400nm,17.3s,MS4.8
CLL Collm 81.77 330 ⇑*i*P **P 08 08 04.8 -0.4**
comp=Z,11nm,0.9s,mb4.8
CLL *e* pP 08 08 16.0 +0.2
CLL LR LR
comp=Z,400nm,17.3s,MS4.8
CLL Collm 81.77 330 ⇑*i*P **P 08 08 04.8 -0.4**
comp=Z,11nm,0.9s,mb4.8
CLL *ep*P pP 08 08 16.0 +0.2
X16A Lo Mia Camp, P 81.99 53 ⇑P **P 08 08 06.5 -0.2**
baz=82
MVCO Mesa Verde 82.08 49 *e*P **P 08 08 08.1 +1.1**
comp=Z,13nm,1.5s,mb4.6
MVCO *ep*P pP 08 08 18.2 +0.6
PRU Pruhonice 82.15 329 *e*P **P 08 08 08.1 +0.9**
PRU *ep*P pP 08 08 18.8 +1.0
PRU AMS AMS 08 48 50.0
comp=Z,300nm,15.3s
TREC Trest 82.28 328 *e*P **P 08 08 08.5 +0.6**
TREC MLR MLR
comp=Z,400nm,16.1s,MS4.9
TREC Trest 82.28 328 *e*P **P 08 08 08.5 +0.6**
TREC AMS AMS 08 49 20.0
comp=Z,400nm,16.1s
ZST Bratislava 82.39 326 *e*P **P 08 08 09.8 +1.3**
ZST pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ZST Bratislava 82.39 326 *e*P **P 08 08 09.8 +1.3**
comp=Z,4.4nm,0.7s,mb4.5
ZST Bratislava 82.39 326 *e*P **P 08 08 09.8 +1.3**
MMAI Mount Meron Ar 82.54 306 P **P 08 08 09.7 +0.1**
comp=Z,2.9nm,0.7s,mb4.4,baz=29,slow=12,SNR=8.3
T22A Edith 83.17 49 ⇑P **P 08 08 12.1 -0.7**
baz=83
KHC Kasperske Hory 83.21 329 *e*P **P 08 08 12.6 -0.1**
KHC *e**PP pP 08 08 23.6 +0.3
KHC pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KHC Kasperske Hory 83.21 329 *e*P **P 08 08 12.6 -0.1**
comp=Z,6.1nm,0.9s,mb4.6
KHC *ep*P pP 08 08 23.6 +0.3
KHC Kasperske Hory 83.21 329 *e*P **P 08 08 12.9 +0.2**
KHC *ep*P pP 08 08 23.6 +0.3
KHC AMS AMS 08 49 10.0
comp=Z,300nm,15.0s
GEC2 GERESS Array S 83.38 328 *e*P **P 08 08 13.3 -0.3**
GEC2 pmax pmax
comp=Z,991nm,0.9s
GEC2 GERESS Array S 83.38 328 *e*P **P 08 08 13.3 -0.3**
comp=Z,991nm,0.9s
GERES GERESS Array B 83.38 328 P **P 08 08 13.8 +0.2**
comp=Z,2.5nm,0.7s,mb4.4,baz=36,slow=5.0,SNR=18
SDCO Great Sand Dun 83.53 47 *e*P **P 08 08 14.9 +0.4**
comp=Z,2.4nm,1.2s,mb4.2
GRA1 Grafenberg Arr 83.74 330 *e*P **P 08 08 15.8 +0.4**
comp=Z,16nm,1.3s,mb5.0
GRF Grafenberg Arr 83.74 330 *e*P **P 08 08 15.8 +0.4**
comp=Z,16nm,1.3s,mb5.0
GRF Grafenberg Arr 83.74 330 *e*P **P 08 08 15.8 +0.4**
GRF pmax pmax
comp=Z,16nm,1.3s,mb5.0
GRF Grafenberg Arr 83.74 330 *e*P **P 08 08 15.8 +0.4**
GRF pmax pmax
comp=Z,16nm,1.3s,mb5.0
X20A Quemado 83.79 51 ⇊P **P 08 08 15.3 -0.7**
baz=84
Y20A Horse Springs, 84.28 52 ⇑P **P 08 08 17.6 -0.9**
baz=84
ANMO Albuquerque 84.80 50 P **P 08 08 21.6 +0.5**
comp=Z,1.2nm,0.5s,mb4.2,baz=287,slow=3.6,SNR=8.3
ANMO Albuquerque 84.80 50 *e*P **P 08 08 22.0 +0.9**
ANMO *e**PP pP 08 08 31.4 -0.3
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 84.80 50 *e*P **P 08 08 22.0 +0.9**
comp=Z,3.5nm,1.0s,mb4.4
ANMO *ep*P pP 08 08 31.4 -0.3
219A White Tail Can 84.94 54 ⇊P **P 08 08 21.9 +0.1**
baz=85
MEM Membach 84.99 333 P **P 08 08 21.9 +0.2**
comp=Z,5.7nm,1.1s,mb4.6
U25A Circle Dot Ran 85.08 48 ⇊P **P 08 08 22.1 -0.4**
baz=85
W24A Lazy 6 Ranch, 85.27 49 ⇑P **P 08 08 23.6 +0.1**
baz=85
BCLA Clavier 85.40 334 P **P 08 08 23.4 -0.4**
comp=Z,7.8nm,1.7s,mb4.6
Z22A Elephant Butte 85.59 52 ⇊P **P 08 08 25.1 0.0**
baz=85
SNF Seneffe 85.68 334 P **P 08 08 25.1 -0.1**
comp=Z,6.8nm,1.5s,mb4.7
Y23A Lovelace Mesa, 85.72 51 ⇑P **P 08 08 25.8 +0.1**
baz=86
W25A X Bar L Ranch, 85.84 49 ⇊P **P 08 08 26.1 -0.2**
baz=86
V26A Tequesquite Ra 85.86 48 ⇊P **P 08 08 26.3 -0.1**
baz=86
BFO Black Forest 85.98 331 *e*P **P 08 08 26.0 -0.7**
BFO *e**PP pP 08 08 38.5 +1.1
BFO pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
BFO Black Forest 85.98 331 *e*P **P 08 08 26.0 -0.7**
comp=Z,7.0nm,0.8s,mb4.9
BFO *ep*P pP 08 08 38.5 +1.1
CDF Champ du Feu 86.32 332 *e*P **P 08 08 27.8 -0.6**
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 86.32 332 *e*P **P 08 08 27.8 -0.6**
CDF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
CDF Champ du Feu 86.32 332 *e*P **P 08 08 27.8 -0.6**
comp=Z,7.7nm,1.0s,mb4.9
ECH Echery 86.53 331 *e*P **P 08 08 29.0 -0.4**
ECH *e**PP pP 08 08 39.9 -0.2
ECH pmax pmax
comp=Z,7.0nm,1.4s,mb4.7
ECH Echery 86.53 331 *e*P **P 08 08 29.0 -0.4**
comp=Z,6.6nm,1.4s,mb4.7
ECH *ep*P pP 08 08 39.9 -0.1
W27A Bowe Ranch, En 86.79 48 ⇑P **P 08 08 31.0 0.0**
baz=87
LOR Lormes 88.56 333 *e*P **P 08 08 38.6 -0.6**
SSF Saint Saulge 88.86 333 *e*P **P 08 08 40.1 -0.5**
comp=Z,8.3nm,1.2s,mb4.7
SSF Saint Saulge 88.86 333 *e*P **P 08 08 40.1 -0.5**
SSF pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
SSF Saint Saulge 88.86 333 *e*P **P 08 08 40.1 -0.5**
comp=Z,4.2nm,1.2s,mb4.6
LPG La Plagne 88.92 330 *e*P **P 08 08 40.5 -0.4**
SMF Signal de Mont 89.09 332 *e*P **P 08 08 41.2 -0.5**
comp=Z,22nm,1.2s,mb5.0
SMF Signal de Mont 89.09 332 *e*P **P 08 08 41.2 -0.5**
SMF pmax pmax
comp=Z,11nm,1.3s,mb5.0
SMF Signal de Mont 89.09 332 *e*P **P 08 08 41.2 -0.5**
comp=Z,11nm,1.3s,mb5.0
AVF Avril sur Loir 89.15 333 *e*P **P 08 08 41.5 -0.5**
comp=Z,21nm,1.2s,mb5.0
AVF Avril sur Loir 89.15 333 *e*P **P 08 08 41.5 -0.5**
AVF pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
AVF Avril sur Loir 89.15 333 *e*P **P 08 08 41.5 -0.5**
comp=Z,10nm,1.2s,mb5.0
GRR Gorron 89.24 336 *e*P **P 08 08 42.0 -0.4**
TCF Toulx Ste Croi 89.99 333 *e*P **P 08 08 45.4 -0.5**
comp=Z,16nm,1.3s,mb4.9
TCF Toulx Ste Croi 89.99 333 *e*P **P 08 08 45.4 -0.5**
TCF pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
TCF Toulx Ste Croi 89.99 333 *e*P **P 08 08 45.4 -0.5**
comp=Z,7.8nm,1.3s,mb4.9
528A Cox Ranch, San 90.30 51 ⇑P **P 08 08 47.1 -0.6**
baz=90

TXAR Lajitas Array 90.31 53 P **P 08 08 47.9 +0.2**
comp=Z,1.3nm,0.9s,mb4.3,baz=302,slow=2.8,SNR=13
TXAR Lajitas Array 90.31 53 P **P 08 08 47.9 +0.2**
MFF Saint Martin d 90.55 335 *e*P **P 08 08 48.4 -0.1**
comp=Z,16nm,1.1s,mb5.0
MFF Saint Martin d 90.55 335 *e*P **P 08 08 48.4 -0.1**
MFF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
MFF Saint Martin d 90.55 335 *e*P **P 08 08 48.4 -0.1**
comp=Z,7.8nm,1.1s,mb5.0
RJF Les Rejaudoux 91.08 333 *e*P **P 08 08 50.8 -0.2**
comp=Z,6.3nm,0.7s,mb4.7
RJF Les Rejaudoux 91.08 333 *e*P **P 08 08 50.8 -0.2**
RJF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
RJF Les Rejaudoux 91.08 333 *e*P **P 08 08 50.8 -0.2**
comp=Z,3.2nm,0.7s,mb4.8
CCM Cathedral Cave 91.19 39 *e*P **P 08 08 50.9 -0.8**
CCM pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
CCM Cathedral Cave 91.19 39 *e*P **P 08 08 50.9 -0.8**
comp=Z,1.9nm,0.8s,mb4.5
CAF Calviac 91.20 333 *e*P **P 08 08 51.7 +0.1**
comp=Z,11nm,1.0s,mb4.8
CAF Calviac 91.20 333 *e*P **P 08 08 51.7 +0.1**
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
CAF Calviac 91.20 333 *e*P **P 08 08 51.7 +0.1**
comp=Z,5.3nm,1.0s,mb4.8
LFF La Frestale 91.68 333 *e*P **P 08 08 53.6 -0.2**
MIAR Mount Ida 92.61 43 *e*P **P 08 08 57.6 -0.7**
MIAR pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
MIAR Mount Ida 92.61 43 *e*P **P 08 08 57.6 -0.7**
comp=Z,6.6nm,1.1s,mb5.0
QSPA South Pole Qui 126.14 180 *e*PKPdf PKPdf 08 14 48.1 +0.7
LPAZ La Paz 146.79 61 PKPbc PKPbc 08 15 28.1 -0.9
comp=Z,3.8nm,0.8s,baz=20,slow=5.6,SNR=9.2
LPAZ La Paz 146.79 61 PKIKP PKPbc 08 15 28.1 -0.9
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 146.79 61 *e*PKPdf PKPbc 08 15 28.5 -0.5

SZGRF ***31*** *08:05:20.5, 14°.38N×92°.31W, h33km, mb5.4, Near coast of Chiapas, Mexico*
IDC ***31*** *08:05:26.8±0.5, 16°.46N×90°.62W, h0km, mb4.2/19, mb1 4.5/22, mb1mx4.4/26, mbtmp4.3/22, ML3.8/3, MS4.3/10, Ms1 4.3/10, ms1mx4.0/26, Error ellipse: s-maj=15.5km s-min=9.5km az=70.0*
ISCJB ***31*** *08:05:29.7±0.9, 16°.50N±0°.02×90°.78W±0°.02, h25km±7km, mb4.7/105, MS4.4/9, Error ellipse: s-maj=3.8km s-min=3.0km az=19.9*
NEIC ***31*** *08:05:30.5, 16°.32N×90°.65W, h25km, mb4.8/104, MD4.8(MEX), After MEX.*
NEIC Felt at Belize City, Belize.
MEX ***31*** *08:05:30.5±2.6, 16°.32N×90°.65W, h25km, MD4.8*
CASC ***31*** *08:05:33.1±4.8, 16°.41N×91°.01W, h38km, MD4.7, mb4.8(NEIC)*
ISC 31 08:05:29.3±1.1, 16°.46N±0°.02×90°.78W±0°.02, h10km±7km, n491, g0°.983/516, mb4.7/106, MS4.4/9, 117C-131D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.31**	**262**	*e*P	**Pn**	**08 05 51.8**	**-2.0**
CCIG				*i* S	**Sb**	**08 06 10.0**	**-1.0**
CCIG	**Comitan**	**1.31**	**262**	*e*P	**Pn**	**08 05 51.8**	**-2.0**
CCIG				*i* S	**Sb**	**08 06 10.0**	**-1.0**
APG	**El Apazote**	**1.48**	**168**	Pg	**Pg**	**08 05 53.6**	**-4.2**
	155nm,0.3s,baz=328,slow=9.3,SNR=593						
APG				Lg		08 06 15.1	
	1μm,0.3s,baz=87,slow=20,SNR=22						
TP2	**Tecpan 2**	**1.69**	**188**	*e*P	**Pn**	**08 05 58.8**	**0.0**
MRL	**Marmol**	**1.74**	**143**	*e*P	**Pn**	**08 05 59.1**	**-0.5**
SCX	**San Cristobal**	**1.80**	**279**	*e*P	**Pn**	**08 06 00.5**	**+0.1**
SCX				*i* S	**Sn**	**08 06 23.7**	**+0.4**
SCX	**San Cristobal**	**1.80**	**279**	*e*P	**Pn**	**08 06 00.5**	**+0.1**
SCX				*i* S	**Sn**	**08 06 23.7**	**+0.4**
FG6		**1.89**	**183**	*e*P	**Pn**	**08 06 02.8**	**+1.0**
NBG	**Las Nubes**	**1.91**	**167**	*e*P	**Pn**	**08 06 01.7**	**-0.3**
NBG				*e*S	**Sn**	**08 06 28.3**	**+2.2**
FUG	**Fuego 3**	**2.00**	**182**	*e*P	**Pn**	**08 06 02.9**	**-0.4**
THIG		**2.10**	**223**	*e*P	**Pn**	**08 06 03.7**	**-1.0**
THIG				*i* S	**Sn**	**08 06 26.3**	**-4.6**
TGIG		**2.27**	**278**	*e*P	**Pn**	**08 06 05.7**	**-1.2**
TGIG				*i* S	**Sn**	**08 06 34.9**	**0.0**
JAT	**Jato**	**2.29**	**201**	*e*P	**Pn**	**08 06 08.8**	**+1.7**
PCIG		**2.46**	**253**	*i* P	**Pn**	**08 06 08.1**	**-1.5**
PCIG				*i* S	**Sn**	**08 06 37.6**	**-2.1**
SCIG	**Sabancuy**	**2.52**	**351**	*i* S	**Sn**	**08 06 41.4**	**+0.2**
RTR	**El Retiro**	**2.78**	**157**	*e*P	**Pn**	**08 06 19.4**	**+5.5**
SNJE	**San Jose**	**2.82**	**156**	*e*P	**Pn**	**08 06 18.4**	**+3.9**
SBLS	**San Blas**	**2.84**	**157**	*e*P	**Pn**	**08 06 20.4**	**+5.7**
LBRS	**Las Brisas**	**3.19**	**148**	*e*P	**Pn**	**08 06 19.4**	**-0.2**
LFRS	**El Faro**	**3.27**	**149**	*e*P	**Pn**	**08 06 19.8**	**-0.9**
TUIG	**Tuzandepetl**	**3.81**	**295**	*i* P	**Pn**	**08 06 28.7**	**+0.6**
TUIG				*i* S	**Sn**	**08 07 13.3**	**+0.2**
TUIG	**Tuzandepetl**	**3.81**	**295**	*i* P	**Pn**	**08 06 28.7**	**+0.6**
TUIG				*i* S	**Sn**	**08 07 13.3**	**+0.2**
CMIG	**Matias Romero**	**3.98**	**280**	Pn	**Pn**	**08 06 29.8**	**-0.7**
	3.4nm,0.3s,baz=84,slow=13,SNR=29						
CMIG				Pg	**Pg**	**08 06 42.2**	**-3.4**
	24nm,0.3s,baz=106,slow=11,SNR=25						
CMIG				Sn	**Sn**	**08 07 13.9**	**-3.2**
	44nm,0.3s,baz=61,slow=18,SNR=8.0						
CMIG				Lg		08 07 36.9	
	63nm,0.3s,baz=191,slow=15,SNR=6.8						
CMIG				LR	LR	08 08 29.3	
	comp=Z,5μm,20.3s,baz=86,slow=44						
CMIG	**Matias Romero**	**3.98**	**280**	Pn	**Pn**	**08 06 29.8**	**-0.7**
CMIG				Pg	**Pg**	**08 06 42.2**	**-3.4**
CMIG				Sn	**Sn**	**08 07 13.9**	**-3.2**
CMIG				Lg		08 07 36.9	
CMIG				LR	LR	08 08 29.3	
TGUH	**Tegucigalpa,Un**	**4.15**	**125**	*e*Pn	**Pn**	**08 06 33.8**	**+1.0**
TGUH				*e*S	**Sg**	**08 07 55.2**	**+13**
TEIG	**Tepich**	**4.44**	**32**	*e*Pn	**Pn**	**08 06 37.2**	**+0.5**
TEIG				*e*Sn	**Sn**	**08 07 29.6**	**+1.1**
HUIG	**Huatulco**	**5.17**	**263**	*e*P	**Pn**	**08 06 45.4**	**-1.3**
HUIG				*i* S	**Sn**	**08 07 44.3**	**-2.2**
HUIG	**Huatulco**	**5.17**	**263**	*e*P	**Pn**	**08 06 45.4**	**-1.3**
HUIG				*i* S	**Sn**	**08 07 44.3**	**-2.2**
VHO	**Vista Hermosa**	**5.73**	**277**	*e*P	**Pn**	**08 06 54.5**	**-0.1**
VHO				*i* S	**Sn**	**08 08 01.4**	**+0.9**
VHO	**Vista Hermosa**	**5.73**	**277**	*e*P	**Pn**	**08 06 54.5**	**-0.1**
VHO				*i* S	**Sn**	**08 08 01.4**	**+0.9**
LVIG	**Laguna Verde**	**6.26**	**302**	*i* P	**Pn**	**08 06 58.3**	**-3.6**
LVIG	**Laguna Verde**	**6.26**	**302**	*i* P	**Pn**	**08 06 58.3**	**-3.6**
TPIG	**Tehuac#an**	**6.57**	**288**	*e*P	**Pn**	**08 07 05.7**	**-0.4**
TPIG				*i* S	**Sn**	**08 08 21.4**	**+0.1**
PNIG	**Pinotepa**	**7.05**	**270**	*e*P	**Pn**	**08 07 10.4**	**-2.3**
PNIG	**Pinotepa**	**7.05**	**270**	*e*P	**Pn**	**08 07 10.4**	**-2.3**
JTS	**JuntasAbangare**	**8.35**	**137**	Pn	**Pn**	**08 07 33.9**	**+3.3**
	0.3nm,0.3s,baz=322,slow=17,SNR=3.8						
JTS	**JuntasAbangare**	**8.35**	**137**	*e*Pn	**Pn**	**08 07 34.0**	**+3.4**
MZVM		**8.49**	**290**	*i* P	Px	08 07 42.5	
CAIG	**El Cayaco**	**9.11**	**275**	*e*P	**Pn**	**08 07 32.9**	**-8.1**
CAIG	**El Cayaco**	**9.11**	**275**	*e*P	**Pn**	**08 07 32.9**	**-8.1**
ZIIG	**Zihuatanejo**	**10.28**	**278**	*e*P	**Pn**	**08 07 48.6**	**-8.5**
ZIIG	**Zihuatanejo**	**10.28**	**278**	*e*P	**Pn**	**08 07 48.6**	**-8.5**
LNIG	**Linares**	**11.68**	**317**	*i* P	**Pn**	**08 08 19.4**	**+3.2**
MTDJ	**Mount Denham**	**12.77**	**80**	*e*Pn	**Pn**	**08 08 34.0**	**+2.9**
ANIG	**Ahuacatlan**	**13.79**	**291**	*i* P	**Pn**	**08 08 43.0**	**-2.0**
HKT	**Hockley**	**14.20**	**342**	*e*Pn	**Pn**	**08 08 49.3**	**-1.3**
	10nm,0.9s						
HKT				*e*Sn	**Sn**	**08 11 12.8**	**-16**
DWPF	**Disney**	**14.46**	**35**	*e*Pn	**Pn**	**08 08 54.0**	**-0.1**
	67nm,0.9s						
DWPF				*e*Sn	**Sn**	**08 11 23.8**	**-11**
BRAL	**Brewton**	**14.88**	**13**	*e*P	**Pn**	**08 09 05.5**	**+5.6**
	30nm,0.7s						
GTBY	**Guantanamo Bay**	**15.28**	**75**	*e*P	**Pn**	**08 09 07.8**	**+2.5**
	31nm,0.8s						
NATX	**Nacogdoches**	**15.63**	**348**	*e*P	**Pn**	**08 09 09.9**	**0.0**
	41nm,0.6s						
NATX				*e*S	**Sn**	**08 11 54.2**	**-9.0**
VBMS	**Vicksburg**	**15.69**	**1**	*e*P	**Pn**	**08 09 08.3**	**-2.3**
	89nm,1.0s						
JCT	**Junction City**	**16.21**	**331**	*e*P	**Pn**	**08 09 16.9**	**-0.4**
	59nm,1.4s						

JCT eS Sn 08 12 11.9 -5.3
LRAL Lakeview Retre 16.85 11 eP Pn 08 09 25.0 -0.5
11nm,0.8s
LRAL eS Sn 08 12 24.5 -8.3
628A Black Gap, Mar 17.08 321 ⇓P Pn 08 09 29.1 +0.8
baz=17,SNR=16
HPIG 17.30 310 eP Pn 08 09 31.9 +0.9
627A Terlingua Ranc 17.36 320 P Pn 08 09 32.5 +0.8
baz=17,SNR=30
TXAR Lajitas Array 17.44 319 P Pn 08 09 34.9 +2.0
0.2nm,0.3s,baz=141,slow=8.1,SNR=43
TXAR S Sn 08 12 43.4 -3.8
0.3nm,0.3s,baz=111,slow=6.9,SNR=3.7
TXAR LR LR 08 17 57.9
comp=Z,151nm,18.0s,baz=225,slow=43
TXAR Lajitas Array 17.44 319 P Pn 08 09 34.9 +2.0
TXAR S Sn 08 12 43.4 -3.8
TXAR LR LR 08 17 57.9
528A Cox Ranch, San 17.52 323 ⇑P Pn 08 09 34.0 +0.2
baz=18,SNR=12
428A Kincaid Ranch, 17.88 325 ⇑P Pn 08 09 38.8 +0.5
baz=18
626A Big Bend Ranch 17.89 319 ⇓P Pn 08 09 39.2 +0.8
baz=18,SNR=23
527A Woodward Ranch 17.99 321 ⇓P Pn 08 09 39.8 +0.2
baz=18,SNR=22
GOGA Godfrey 18.12 20 eP Pn 08 09 39.2 -2.0
149nm,1.9s
MIAR Mount Ida 18.18 353 eP Pn 08 09 42.5 +0.5
61nm,1.2s
MIAR eS Sn 08 12 52.3 -13
UALR University of 18.29 356 eP Pn 08 09 43.3 0.0
54nm,1.0s
UALR eS Sn 08 12 50.5 -17
427A Hayter Ranch, 18.38 323 ⇓P Pn 08 09 44.9 +0.5
baz=18,SNR=10.0
328A Wristen Ranch, 18.45 326 ⇓P Pn 08 09 46.1 +0.8
baz=18,SNR=18
PLAL Pickwick Lake 18.60 7 eP Pn 08 09 45.7 -1.4
9.2nm,0.5s
PLAL eS Sn 08 12 59.5 -16
426A McDonald Obser 18.61 322 ⇓P Pn 08 09 47.7 +0.4
baz=19,SNR=18
SDDR Presa de Saban 18.74 79 eP Pn 08 09 50.6 +1.7
112nm,1.7s
HBAR Harrisburg 19.02 0 eP Pn 08 09 51.0 -1.1
326A Caldwell Ranch 19.06 323 ⇓P Pn 08 09 52.4 -0.2
baz=19,SNR=8.1
227A Bennet, Jal 19.20 326 ⇓P Pn 08 09 53.9 -0.5
baz=19,SNR=10
425A Indio Mountain 19.27 320 ⇓P Pn 08 09 54.8 -0.5
baz=19,SNR=12
WMOK Wichita Mounta 19.56 340 eP Pn 08 09 56.9 -1.8
14nm,0.8s
WMOK eS Sn 08 13 22.9 -15
325A Bean Ranch, Si 19.68 321 ⇑P Pn 08 09 58.8 -1.3
baz=20,SNR=10
226A Malaga, Loving 19.68 324 ⇓P Pn 08 09 59.1 -1.0
baz=20,SNR=18
JSC Jenkinsville 19.70 24 eP Pn 08 10 00.6 +0.3
CPCT Cooper Cave 19.72 15 eP Pn 08 09 59.5 -1.0
127A Arkansas Junct 19.75 327 ⇑P Pn 08 09 59.6 -1.4
baz=20
WVT Waverly 19.77 7 eP Pn 08 09 59.4 -1.7
27nm,1.1s
ROSC El Rosal 19.84 124 P Pn 08 10 00.2 -1.9
2.9nm,0.3s,baz=263,slow=22,SNR=8.3
ROSC LR LR 08 17 58.0
comp=Z,622nm,20.3s,baz=28,slow=38
ROSC El Rosal 19.84 124 eP Pn 08 10 02.0 -0.1
GDL2 Guadalupe Moun 19.93 324 eP Pn 08 10 02.2 -0.9
324A Moseley Ranch, 20.04 321 ⇓P P 08 10 02.6 0.0
baz=20,SNR=15
126A Clayton Basin, 20.08 326 P P 08 10 03.3 +0.3
baz=20,SNR=5.5
TKL Tuckaleechee C 20.11 17 P P 08 10 03.6 +0.2
9.3nm,0.9s,baz=183,slow=13,SNR=8.1
TKL S S 08 13 40.5 -8.8
9.2nm,0.9s,baz=80,slow=2.9,SNR=4.1
TKL LR LR 08 18 24.3
comp=Z,1µm,20.6s,MS4.2,baz=197,slow=39
TKL Tuckaleechee C 20.11 17 eP P 08 10 03.6 +0.2
TKL eS S 08 13 37.1 -12
225A Deer Hill, Car 20.13 323 ⇑P P 08 10 03.6 0.0
baz=20,SNR=15
PARMO Parma 20.14 2 eP P 08 10 05.0 +1.4
MNTX Cornudas Mount 20.16 321 eP P 08 10 03.4 -0.5
8.1nm,0.4s
Z27A Tatum 20.19 329 P P 08 10 03.6 -0.6
baz=20,SNR=28
OTAV Otavalo 20.19 142 eP P 08 10 06.2 +1.8
13nm,1.0s
CPRX Cap Rock 20.30 327 eP P 08 10 05.5 +0.1
41nm,1.0s
125A Gardner Draw, 20.44 325 ⇑P P 08 10 06.3 -0.6
baz=20,SNR=16
MSTX Muleshoe 20.50 330 P P 08 10 06.8 -0.8
baz=20,SNR=16
224A Corundas Mount 20.51 322 ⇓P P 08 10 07.1 -0.7
baz=20,SNR=30
Z26A Caprock 20.54 327 ⇓P P 08 10 07.2 -0.9
baz=20,SNR=16
Y27A Causey 20.62 330 ⇓P P 08 10 08.2 -0.7
baz=21,SNR=22
AMTX Amarillo 20.78 334 eP P 08 10 10.1 -0.5
87nm,1.3s
124A Stringfield Ra 20.92 323 ⇑P P 08 10 12.3 +0.1
baz=21,SNR=38
Z25A Roswell 20.94 326 ⇑P P 08 10 12.5 +0.1
baz=21
CGIG 20.95 314 eP P 08 10 13.2 +0.8
Y26A Elida 20.98 328 ⇑P P 08 10 11.8 -0.9
baz=21,SNR=16
TZTN Tazewell 21.01 16 eP P 08 10 13.8 +0.7
133nm,2.3s,mb4.9
SDV Santo Domingo 21.04 109 P P 08 10 15.0 +1.4
58nm,0.8s,mb5.0,baz=313,slow=5.2,SNR=76
SDV LR LR 08 19 06.1
comp=Z,321nm,19.5s,MS3.7,baz=351,slow=39
SDV Santo Domingo 21.04 109 eP P 08 10 14.5 +0.9
47nm,0.7s,mb4.9
X27A F and S Farms, 21.21 331 P P 08 10 14.3 -1.0
baz=21,SNR=12
SIUC Southern Illin 21.22 3 eP P 08 10 15.7 +0.4
80nm,0.6s,mb5.2
Z24A Sheeppen Canyo 21.34 325 ⇑P P 08 10 16.9 +0.3
baz=21,SNR=13
Y25A Mesa, Roswell 21.42 327 ⇑P P 08 10 17.7 +0.2
baz=21,SNR=39
FVM French Village 21.44 1 eP P 08 10 16.9 -0.8
18nm,0.9s,mb4.4
X26A CR and CF Fran 21.47 329 ⇑P P 08 10 17.6 -0.5
baz=21,SNR=11
CCM Cathedral Cave 21.52 359 eP P 08 10 17.7 -0.8
29nm,0.8s,mb4.8
CCM eS S 08 14 18.2 +1.1
W27A Bowe Ranch, En 21.54 332 ⇓P P 08 10 18.5 -0.3
baz=22,SNR=14
USIN University of 21.60 7 eP P 08 10 19.0 -0.3
46nm,0.8s,mb5.0
Z23A Rita Site, Whi 21.78 323 ⇓P P 08 10 21.9 +0.5
baz=22,SNR=9.6
Y24A Capitan 21.82 326 P P 08 10 22.1 +0.2
baz=22,SNR=19
221A Mesquite Ranch 21.86 318 ⇑P P 08 10 22.8 +0.6
baz=22,SNR=9.4
X25A Clemmons Ranch 21.88 328 ⇓P P 08 10 23.2 +0.7
baz=22
W26A Owens Ranch, T 21.89 330 ⇓P P 08 10 22.1 -0.4
baz=22,SNR=8.6
320A Kipp Ranch, An 21.92 316 ⇑P P 08 10 23.2 +0.3
baz=22,SNR=23
WCI Wyandotte Cave 22.04 9 eP P 08 10 24.1 -0.1
32nm,0.7s,mb4.9
WCI eS S 08 14 23.9 -3.4
SLM Saint Louis 22.10 1 eP P 08 10 23.8 -0.9
155nm,1.7s,mb5.2
Y23A Lovelace Mesa, 22.17 325 ⇓P P 08 10 25.7 +0.1
baz=22,SNR=17
Z22A Elephant Butte 22.20 322 ⇑P P 08 10 26.3 +0.4
baz=22,SNR=17
121A Cookes Peak, D 22.21 319 ⇓P P 08 10 26.5 +0.5
baz=22,SNR=21
220A Playas Peak, P 22.27 317 ⇑P P 08 10 27.4 +0.7
baz=22,SNR=19
X24A Lazy VL Ranch, 22.31 327 ⇓P P 08 10 27.6 +0.5
baz=22

OLIL Olney 22.31 6 eP P 08 10 26.9 -0.2
49nm,1.0s,mb4.9
W25A X Bar L Ranch, 22.32 329 ⇑P P 08 10 27.7 +0.5
baz=22,SNR=14
319A Douglas 22.45 315 ⇓P P 08 10 28.8 +0.2
baz=22
V26A Tequesquite Ra 22.47 331 ⇓P P 08 10 28.3 -0.5
baz=22,SNR=32
ELN Prospectdale 22.51 21 eP P 08 10 29.5 +0.3
BLA Blacksburg 22.61 22 eP P 08 10 30.5 +0.3
38nm,1.0s,mb4.8
BNM Barren Site 22.65 324 eP P 08 10 31.4 +0.7
10nm,0.9s,mb4.3
Y22A Socorro 22.69 323 ⇓P P 08 10 32.0 +0.9
baz=23,SNR=24
120A U Bar Ranch, L 22.75 318 ⇓P P 08 10 32.0 +0.2
baz=23,SNR=9.9
LPM Los Pinos Moun 22.77 324 eP P 08 10 33.5 +1.6
W24A Lazy 6 Ranch, 22.79 328 ⇓P P 08 10 32.7 +0.5
baz=23,SNR=15
VWCC Virginia Weste 22.80 23 eP P 08 10 33.0 +0.8
219A White Tail Can 22.82 316 ⇑P P 08 10 32.8 +0.4
baz=23,SNR=14
LENM Lemitar 22.86 323 eP P 08 10 35.5 +2.6
V25A Rancho No Teng 22.90 330 ⇑P P 08 10 33.1 -0.2
baz=23
BLO Bloomington 22.93 9 eP P 08 10 33.2 -0.4
254nm,2.3s,mb5.2
U26A Atchley Ranch, 22.95 332 P P 08 10 33.1 -0.7
baz=23,SNR=18
318A Bisbee 22.98 314 ⇓P P 08 10 34.5 +0.3
baz=23,SNR=10
Z20A Nine Sixteen R 23.10 319 ⇓P P 08 10 35.8 +0.3
baz=23,SNR=8.4
LAZ Ladron 23.12 324 eP P 08 10 37.1 +1.4
93nm,2.1s,mb4.8
KSU1 Kansas State U 23.12 348 eP P 08 10 33.3 -2.3
23nm,0.7s,mb4.7
W23A Wener Place, 23.14 326 ⇓P P 08 10 36.0 +0.1
baz=23,SNR=16
ANMO Albuquerque 23.15 326 P P 08 10 36.2 +0.2
1.7nm,0.5s,mb3.7,baz=141,slow=12,SNR=15
ANMO Albuquerque 23.15 326 eP P 08 10 37.3 +1.3
185nm,2.9s,mb5.0
Y21A Point of Rocks 23.15 322 ⇑P P 08 10 36.7 +0.7
baz=23,SNR=16
U25A Circle Dot Ran 23.26 331 ⇓P P 08 10 37.3 +0.2
baz=23
119A Ashpeak Ranch, 23.33 317 ⇓P P 08 10 37.7 -0.1
baz=23,SNR=7.8
Y20A Horse Springs, 23.50 321 ⇓P P 08 10 40.5 +0.8
baz=24
X21A Alamocita Cree 23.52 323 ⇓P P 08 10 39.8 -0.1
baz=24,SNR=26
SJG San Juan 23.57 82 P P 08 10 40.9 +0.3
51nm,0.3s,mb5.5,baz=0.1,slow=24,SNR=12
SJG LR LR 08 19 19.1
comp=Z,2µm,19.4s,MS4.5,baz=22,slow=36
V23A Ortiz Mt. (NFS 23.61 327 ⇑P P 08 10 40.6 -0.1
baz=24
Z19A T-Link Ranch, 23.64 319 ⇑P P 08 10 41.1 +0.1
baz=24
U24A Moreno Valley 23.68 330 ⇓P P 08 10 41.2 -0.1
baz=24
118A Homack Ranch, 23.68 316 ⇓P P 08 10 41.0 -0.4
baz=24
217A Green Valley 23.74 314 ⇓P P 08 10 42.2 +0.2
baz=24,SNR=20
Z18A Geronimo 24.00 317 ⇑P P 08 10 45.0 +0.6
baz=24,SNR=10
X20A Quemado 24.01 322 ⇑P P 08 10 44.5 +0.1
baz=24,SNR=20
JSRW J. Sargeant Re 24.02 26 eP P 08 10 45.1 +0.6
TUC Tucson 24.03 315 eP P 08 10 45.0 +0.4
170nm,2.3s,mb5.1
HDIL Hopedale 24.04 3 eP P 08 10 44.9 +0.3
183nm,1.9s,mb5.2
Y19A Nutrioso 24.07 320 ⇑P P 08 10 44.7 -0.2
baz=24,SNR=15
V22A San Miguel Ran 24.11 327 ⇓P P 08 10 45.4 +0.1
baz=24,SNR=18
MTP Monte Pirata 24.14 82 eP P 08 10 45.0 -0.7
16nm,0.6s,mb4.6
117A Oracle 24.16 315 ⇓P P 08 10 45.5 -0.3
baz=24,SNR=14
X19A St. Johns 24.41 321 ⇓P P 08 10 48.2 +0.2
baz=24
Z17A San Carlos Hig 24.42 317 ⇓P P 08 10 48.4 +0.2
baz=24,SNR=8.4
V21A Milan 24.43 325 ⇑P P 08 10 48.0 -0.1
baz=24,SNR=12
Y18A Canyon Day Jun 24.44 318 ⇑P P 08 10 49.0 +0.6
baz=24,SNR=12
ACSO Alum Creek Sta 24.64 14 eP P 08 10 50.0 0.0
14nm,0.8s,mb4.5
SDCO Great Sand Dun 24.86 331 eP P 08 10 53.5 +1.4
14nm,1.2s,mb4.4
V20A Brimhall 24.88 324 ⇑P P 08 10 52.8 +0.5
baz=25,SNR=7.8
X18A Snowflake 24.88 320 ⇑P P 08 10 52.4 +0.1
baz=25
Y17A Roosevelt 24.91 317 ⇓P P 08 10 52.6 0.0
baz=25
T22A Edith 24.95 328 ⇓P P 08 10 53.1 +0.2
baz=25,SNR=6.4
Z16A Peralta Trail, 25.08 316 ⇓P P 08 10 53.6 -0.6
baz=25
W18A Petrified Fore 25.14 321 ⇓P P 08 10 55.1 +0.3
baz=25
V19A Window Rock 25.15 323 ⇓P P 08 10 54.9 +0.1
baz=25
115A Sonoran Desert 25.25 314 ⇑P P 08 10 55.7 0.0
baz=25
X17A Forest Lakes 25.29 318 ⇑P P 08 10 57.0 +0.9
baz=25,SNR=7.0
Y16A Circle Bar Ran 25.44 317 ⇓P P 08 10 58.2 +0.7
baz=25,SNR=6.7
U19A Dine' College, 25.65 324 P P 08 10 59.7 +0.4
baz=26,SNR=12
V18A Ganado 25.67 322 ⇓P P 08 10 59.9 +0.5
baz=26,SNR=6.3
X16A Lo Mia Camp, P 25.75 318 ⇓P P 08 11 00.8 +0.5
baz=26
S21A Coal Bank Pass 25.90 328 ⇑P P 08 11 02.0 +0.4
baz=26
MVCO Mesa Verde 25.93 326 ⇑P P 08 11 02.7 +0.9
baz=26,SNR=8.9
MVCO Mesa Verde 25.93 326 eP P 08 11 03.3 +1.5
64nm,1.9s,mb4.8
T19A Beclabito 25.94 325 ⇑P P 08 11 01.3 -0.6
baz=26,SNR=10.0
Y15A Casa Rosa Ranc 26.05 316 ⇑P P 08 11 03.0 0.0
baz=26
U18A Rough Rock, Ch 26.12 323 ⇑P P 08 11 04.3 +0.8
baz=26,SNR=6.8
V17A Tonalea, Kykot 26.12 321 ⇓P P 08 11 03.8 +0.2
baz=26
OGNE Ogallala 26.27 340 eP P 08 11 04.8 0.0
17nm,0.9s,mb4.6
X15A Humboldt 26.31 317 ⇑P P 08 11 05.8 +0.5
baz=26,SNR=6.5
JFWS Jewell Farm 26.37 1 eP P 08 11 05.0 -0.8
102nm,1.8s,mb5.0
WUAZ Wupatki 26.41 320 ⇑P P 08 11 06.5 +0.3
baz=26,SNR=6.1
WUAZ Wupatki 26.41 320 eP P 08 11 06.8 +0.6
113nm,2.4s,mb5.0
WUAZ e 08 11 20.2
Q22A Crested Butte, 26.41 331 ⇑P P 08 11 05.9 -0.3
baz=26
Z13A Yuma Proving G 26.53 313 ⇑P P 08 11 07.3 0.0
baz=26
SSPA Standing Stone 26.55 22 eP P 08 11 07.7 +0.3
49nm,1.8s,mb4.7
ISCO Idaho Springs 26.60 334 eP P 08 11 08.4 +0.5
45nm,2.1s,mb4.6
R20A Redvale 26.61 328 ⇑P P 08 11 08.5 +0.6
baz=27,SNR=8.3
T18A Mexican Hat 26.63 324 ⇑P P 08 11 08.0 -0.2
baz=27
PV01 Paradox Valley 26.66 328 eP P 08 11 09.6 +1.1
S19A Harvey Farm, M 26.67 326 ⇓P P 08 11 08.6 +0.1
baz=27
SMCO Snowmass 26.69 331 eP P 08 11 10.4 +1.7
8.0nm,1.1s,mb4.2
X14A Yava 26.73 316 ⇓P P 08 11 09.1 0.0
baz=27
Y13A Salome 26.99 314 ⇓P P 08 11 11.3 -0.2
baz=27

PV04 Paradox Valley 27.03 327 eP P 08 11 12.8 +1.0
T17A Navajo Res., N 27.06 323 ⇓P P 08 11 12.4 +0.4
baz=27,SNR=7.2
PV10 Paradox Valley 27.09 327 eP P 08 11 12.2 0.0
140nm,0.8s,mb5.5
S18A Hurst Farm, Bl 27.09 325 P P 08 11 13.0 +0.7
baz=27,SNR=12
V15A Kaibab Nationa 27.10 319 ⇑P P 08 11 12.9 +0.5
baz=27,SNR=8.9
R19A Curley Farm, L 27.14 327 ⇓P P 08 11 13.2 +0.5
baz=27
W14A Seligman 27.30 317 ⇓P P 08 11 14.0 -0.2
baz=27,SNR=6.3
X13A Yucca 27.43 315 ⇑P P 08 11 15.3 -0.1
baz=27
T16A Glen Canyon Da 27.46 322 ⇓P P 08 11 16.5 +0.9
baz=27
S17A Black Ridge (B 27.50 324 ⇑P P 08 11 16.3 +0.3
baz=28,SNR=8.8
R18A Canyonlands Na 27.54 326 ⇓P P 08 11 16.2 -0.2
baz=28,SNR=7.5
U15A North Rim 27.57 320 ⇓P P 08 11 16.4 -0.2
baz=28,SNR=8.5
V14A Boquillas Ranc 27.57 318 ⇑P P 08 11 16.8 +0.1
baz=28,SNR=7.8
P20A De Beque 27.62 330 P P 08 11 16.9 -0.1
baz=28
ECSD EROS Data Cent 27.63 351 eP P 08 11 14.9 -2.2
38nm,1.8s,mb4.7
Q19A Hogan Spring (27.64 328 ⇓P P 08 11 17.3 +0.1
baz=28
W13A Hualapai Mount 27.76 316 ⇑P P 08 11 18.5 +0.1
baz=28
N22A Wattenberg Ran 27.79 334 ⇑P P 08 11 18.8 +0.3
baz=28
PHWY Pilot Hill 27.80 336 eP P 08 11 19.0 +0.4
5.9nm,1.0s,mb4.2
T15A Red Dirt Ranch 28.01 321 ⇑P P 08 11 20.5 0.0
baz=28,SNR=6.9
R17A Hanksville Air 28.01 325 ⇓P P 08 11 20.9 +0.4
baz=28,SNR=14
P19A Cripple Cowboy 28.01 329 ⇓P P 08 11 21.3 +0.8
baz=28
BC3 Big Chuckw Mtn 28.04 312 ⇑P P 08 11 21.1 +0.2
baz=28,SNR=7.4
IRM Iron Mountain 28.09 313 ⇑P P 08 11 21.3 0.0
baz=28
U14A Mt Trumbull 28.11 319 ⇓P P 08 11 21.1 -0.4
baz=28,SNR=7.4
Q18A Rafter H Ranch 28.20 327 ⇑P P 08 11 21.7 -0.5
baz=28
N21A Black Mountain 28.22 332 ⇑P P 08 11 21.4 -1.0
baz=28
V13A Grand Canyon W 28.27 317 ⇓P P 08 11 22.6 -0.4
baz=28,SNR=7.1
R16A Teasdale 28.34 324 ⇑P P 08 11 23.1 -0.4
baz=28,SNR=9.4
SRU San Rafael 28.41 326 ⇓P P 08 11 24.5 +0.4
baz=28
SRU San Rafael 28.41 326 eP P 08 11 24.7 +0.6
42nm,2.0s,mb4.7
S15A Panguitch 28.43 322 ⇓P P 08 11 24.9 +0.6
baz=28
T14A Hurricane 28.46 320 ⇓P P 08 11 24.4 -0.2
baz=28,SNR=6.2
LDFC Landfair 28.57 315 eP P 08 11 27.0 +1.4
5.5nm,0.6s,mb4.5
U13A Pakoon Wash 28.60 318 ⇓P P 08 11 25.4 -0.4
baz=29,SNR=12
N20A Spence Gulch, 28.61 332 ⇑P P 08 11 26.5 +0.6
baz=29,SNR=8.0
Q16A Castle Valley 28.62 325 ⇑P P 08 11 26.4 +0.5
baz=29
BINY Binghamton 28.62 23 eP P 08 11 25.5 -0.4
14nm,0.6s,mb4.9
R15A Junction 28.74 323 ⇓P P 08 11 27.6 +0.5
baz=29
V12A Nelson 28.77 316 ⇓P P 08 11 28.1 +0.7
baz=29,SNR=11
GMRC Granite Mounta 28.78 314 ⇑P P 08 11 28.0 +0.5
baz=29,SNR=6.2
P17A Butcher Ranch, 28.79 327 ⇓P P 08 11 28.2 +0.7
baz=29,SNR=5.6
MSU Marysvale 28.89 324 eP P 08 11 29.7 +1.3
T13A Saint George 28.94 319 ⇑P P 08 11 29.2 +0.3
baz=29
CCUT Cedar City 28.95 321 eP P 08 11 29.7 +0.8
52nm,2.4s,mb4.8
S14A Cedar City 28.96 321 ⇓P P 08 11 29.1 +0.1
baz=29,SNR=7.8
U12A Valley of Fire 28.98 318 ⇓P P 08 11 29.7 +0.4
baz=29
O18A Roosevelt 29.00 329 ⇓P P 08 11 29.9 +0.6
baz=29,SNR=7.4
M20A Sweetwater, Wa 29.10 332 ⇑P P 08 11 30.5 +0.3
baz=29
L21A Rawlins 29.14 334 ⇑P P 08 11 31.0 +0.5
baz=29
ARUT Antelope Range 29.15 321 eP P 08 11 32.5 +1.8
12nm,1.1s,mb4.5
V11A Goodsprings 29.22 316 ⇓P P 08 11 31.8 +0.5
baz=29
S13A Holt Ranch, En 29.27 320 ⇑P P 08 11 33.0 +1.2
baz=29,SNR=15
T12A Moapa 29.27 318 ⇑P P 08 11 32.4 +0.6
baz=29
O17A Robinson Place 29.32 328 ⇑P P 08 11 32.5 +0.3
baz=29,SNR=7.5
TUQ Turquoise Moun 29.32 315 ⇓P P 08 11 32.3 0.0
baz=29
Q15A Fillmore 29.34 324 ⇓P P 08 11 32.7 +0.3
baz=29
N18A Larsen Ranch, 29.38 330 ⇑P P 08 11 33.3 +0.6
baz=29,SNR=6.5
SHPR Sheep Range 29.43 317 eP P 08 11 34.4 +1.2
MPU Maple Canyon 29.66 326 eP P 08 11 36.0 +0.8
29nm,1.6s,mb4.8
P15A Leamington 29.69 325 ⇑P P 08 11 35.8 +0.3
baz=30
R13A O'Grain Ranch, 29.72 321 ⇓P P 08 11 36.5 +0.7
baz=30,SNR=7.4
O16A Springville 29.72 327 ⇓P P 08 11 36.2 +0.4
baz=30
DAU Daniels Canyon 29.75 327 eP P 08 11 37.2 +1.2
DAU e 08 11 54.5
RSSD Black Hills 29.77 341 eP P 08 11 35.8 -0.3
60nm,2.7s,mb4.8
Q14A Sevier Lake (B 29.84 323 ⇑P P 08 11 37.5 +0.6
baz=30,SNR=6.8
GSC Goldstone 29.86 314 eP P 08 11 39.1 +2.2
23nm,1.6s,mb4.7
SADO Sadowa 29.88 17 P P 08 11 35.9 -1.2
3.3nm,0.6s,mb4.2,baz=196,slow=7.7,SNR=5.4
SADO LR LR 08 24 46.0
comp=Z,822nm,18.4s,MS4.4,baz=185,slow=39
S12A Delamar Landin 29.89 319 ⇑P P 08 11 38.2 +0.9
baz=30,SNR=7.7
T11A Corn Creek, Al 29.91 319 ⇓P P 08 11 37.6 +0.2
baz=30
L19A Farson 30.12 332 ⇓P P 08 11 38.6 -0.6
baz=30
K20A Yellowstone Ra 30.12 334 ⇑P P 08 11 38.8 -0.5
baz=30
P14A Drum Mountains 30.14 324 ⇑P P 08 11 40.1 +0.6
baz=30,SNR=9.1
U10A Ash Meadows, A 30.15 316 ⇓P P 08 11 39.8 +0.2
baz=30
R12A Pony Springs, 30.20 321 ⇓P P 08 11 40.3 +0.3
baz=30,SNR=7.6
Q13A Wheeler Ranch, 30.25 322 ⇑P P 08 11 40.7 +0.2
baz=30,SNR=9.1
DUG Dugway 30.42 325 eP P 08 11 42.9 +1.0
23nm,1.9s,mb4.6
K19A Absolon Red Bu 30.47 333 ⇑P P 08 11 42.1 -0.2
baz=30
S11A Rachel 30.48 319 ⇑P P 08 11 42.7 +0.2
baz=30,SNR=14
FURC Furnace Creek, 30.53 316 ⇓P P 08 11 43.3 +0.3
baz=30
P13A Bates Ranch, G 30.58 323 ⇓P P 08 11 43.9 +0.5
baz=30,SNR=13
M16A Huntsville 30.60 328 ⇓P P 08 11 44.5 +1.0
baz=31
MPMC Manual Prospec 30.73 315 ⇑P P 08 11 45.1 +0.4
baz=31,SNR=6.4
BW06 Boulder Array 30.74 332 ⇓P P 08 11 44.9 +0.2
baz=31

PDAR **Pinedale Array** 30.74 332 P P 08 11 45.0 +0.3
0.6nm,0.6s,mb3.6,baz=121,slow=9.3,SNR=6.0
Q12A **Willow Creek R** 30.79 322 ⇑P P 08 11 45.5 +0.3
baz=31
HWUT **Hardware Ranch** 30.79 329 *e*P P 08 11 46.1 +0.9
4.1nm,0.9s,mb4.3
NCB **Newcomb** 30.80 24 *e*P P 08 11 44.9 -0.3
10nm,0.6s,mb4.8
R11A **Troy Canyon, C** 30.81 320 ⇓P P 08 11 45.4 0.0
baz=31,SNR=9.2
L17A **Cokeville** 30.82 330 ⇑P P 08 11 45.4 0.0
baz=31
K18A **Toltan Ranch,** 30.85 332 ⇓P P 08 11 45.1 -0.6
baz=31,SNR=6.6
L16A **Fish Haven** 31.03 329 P P 08 11 47.4 +0.1
baz=31,SNR=8.9
BGU **Big Grassy Mou** 31.05 326 *e*P P 08 11 48.3 +0.8
20nm,1.4s,mb4.8
N14A **Grayback Hills** 31.08 326 ⇓P P 08 11 47.9 +0.1
baz=31,SNR=8.8
P12A **McGill** 31.11 322 ⇑P P 08 11 48.0 -0.1
baz=31,SNR=7.9
Q11A **Duckwater** 31.16 321 ⇓P P 08 11 48.8 +0.3
baz=31,SNR=8.3
S10A **Tonopah Range,** 31.19 318 ⇑P P 08 11 48.8 0.0
baz=31,SNR=13
ISA **Isabella** 31.20 313 ⇑P P 08 11 49.5 +0.6
baz=31,SNR=6.2
ISA **Isabella** 31.20 313 *e*P P 08 11 51.4 +2.5
36nm,1.7s,mb4.9
R10A **Warm Springs** 31.22 319 ⇑P P 08 11 50.0 +1.0
baz=31,SNR=7.8
LONY **Lake Ozonia** 31.22 23 *e*P P 08 11 48.2 -0.7
14nm,0.8s,mb4.8
J18A **Kendall Valley** 31.30 332 ⇑P P 08 11 49.9 +0.3
baz=31,SNR=5.8
K17A **Gardner Place,** 31.35 331 ⇓P P 08 11 50.3 +0.3
baz=31
EYMN **Ely** 31.40 359 *e*P P 08 11 48.8 -1.7
7.6nm,0.7s,mb4.6
L15A **Malad City** 31.50 328 P P 08 11 51.7 +0.3
baz=32,SNR=7.2
HVU **Hansel Valley** 31.53 328 *e*P P 08 11 53.2 +1.5
65nm,1.9s,mb5.1
O12A **Currie** 31.54 324 ⇑P P 08 11 52.8 +1.0
baz=32,SNR=7.6
Q10A **Clear Creek Ra** 31.61 320 ⇓P P 08 11 53.0 +0.6
baz=32,SNR=8.5
M14A **Sheep Mountain** 31.63 327 ⇓P P 08 11 52.9 +0.3
baz=32,SNR=10
VES **Vestal, Richgr** 31.72 313 ⇓P P 08 11 53.9 +0.4
baz=32,SNR=8.9
J17A **Brown Place, J** 31.73 332 ⇑P P 08 11 54.1 +0.7
baz=32,SNR=7.9
FRNY **Flat Rock** 31.78 24 *e*P P 08 11 51.4 -2.4
5.9nm,0.7s,mb4.5
REDW **Red Top Meadow** 31.79 332 *e*P P 08 11 54.5 +0.5
121nm,2.0s,mb5.4
REDW *e* 08 12 08.7
SNOW **Snow King Moun** 31.82 332 *e*P P 08 11 55.6 +1.4
185nm,2.5s,mb5.5
LOHW **Long Hollow** 31.87 332 *e*P P 08 11 55.0 +0.3
102nm,2.6s,mb5.2
LOHW *e* 08 12 09.3
TPAW **Teton Pass** 31.93 332 *e*P P 08 11 56.4 +1.2
54nm,1.9s,mb5.1
L14A **Malta** 31.95 327 ⇓P P 08 11 55.5 +0.1
baz=32,SNR=14
M13A **Montello** 31.96 326 ⇑P P 08 11 55.8 +0.2
baz=32,SNR=20
M13A **Montello** 31.96 326 *e*P P 08 11 55.8 +0.3
23nm,1.2s,mb4.9
O11A **Cowboy Ranch,** 31.98 322 ⇑P P 08 11 55.7 0.0
baz=32
AGMN **Agassiz Refuge** 32.02 354 *e*P P 08 11 54.4 -1.5
56nm,2.1s,mb5.0
RCTC **Rector, Farmer** 32.07 314 ⇓P P 08 11 56.7 +0.2
baz=32
N12A **Clover Valley,** 32.10 324 ⇓P P 08 11 57.7 +1.0
baz=32,SNR=5.7
N12A **Clover Valley,** 32.10 324 *e*P P 08 11 57.5 +0.8
2.9nm,0.6s,mb4.3
DCID1 **Drake Creek** 32.12 332 *e*P P 08 11 57.0 +0.2
4.5nm,0.5s,mb4.5
P10A **Eureka** 32.13 321 ⇑P P 08 11 57.5 +0.4
baz=32
IMW **Indian Meadow** 32.25 332 *e*P P 08 11 58.5 +0.6
38nm,2.2s,mb4.8
K14A **Jones Ranch, D** 32.29 328 P P 08 11 58.7 +0.3
baz=32,SNR=10.0
M12A **Wells** 32.41 325 ⇓P P 08 11 59.4 0.0
baz=32,SNR=7.4
RLMT **Red Lodge** 32.52 335 *e*P P 08 12 00.4 0.0
45nm,2.1s,mb5.0
RLMT *e* 08 12 12.3
J15A **Blackfoot** 32.56 330 ⇑P P 08 12 01.5 +0.8
baz=32,SNR=7.9
NVAR **Mina Array Bea** 32.58 318 P P 08 12 02.3 +1.4
8.1nm,0.8s,mb4.7,baz=122,slow=9.1,SNR=71
NVAR PcP PcP 08 14 47.0 -0.4
0.8nm,0.7s,baz=135,slow=3.8,SNR=3.8
NVAR **Mina Array Bea** 32.58 318 P P 08 12 02.3 +1.4
NVAR PcP PcP 08 14 47.0 -0.4
LAO **LASA Array** 32.76 340 *e*P P 08 12 02.0 -0.4
43nm,1.8s,mb5.1
G18A **Lazy EL Ranch,** 32.80 335 P P 08 12 02.3 -0.5
baz=33,SNR=12
L12A **House Creek Ra** 32.97 326 ⇑P P 08 12 04.2 -0.1
baz=33
H16A **Russell Place,** 33.02 333 ⇓P P 08 12 04.6 -0.1
baz=33
J14A **Carey** 33.03 329 ⇓P P 08 12 05.7 +0.9
baz=33,SNR=8.4
GCMT **Greycliff** 33.23 336 *e*P P 08 12 05.7 -0.9
2.2nm,0.6s,mb4.3
K12A **Draper Farm, C** 33.25 327 ⇑P P 08 12 06.5 -0.2
baz=33,SNR=6.1
F18A **Big Timber** 33.35 336 P P 08 12 07.1 -0.4
baz=33,SNR=11
WAKR **Walker** 33.36 317 *e*P P 08 12 08.9 +1.2
L11A **Cat Creek Ranc** 33.38 325 P P 08 12 08.3 +0.4
baz=33,SNR=6.8
M10A **I.L. Ranch, Tu** 33.39 324 ⇑P P 08 12 08.4 +0.4
baz=33,SNR=7.3
J13A **Cove Ranch, Pi** 33.41 328 ⇓P P 08 12 08.6 +0.4
baz=33
I14A **Mackay** 33.44 330 ⇑P P 08 12 08.6 +0.2
baz=33,SNR=6.8
HLID **Hailey** 33.65 328 ⇑P P 08 12 10.0 -0.3
baz=34
HLID **Hailey** 33.65 328 *e*P P 08 12 10.7 +0.4
7.0nm,1.4s,mb4.4
G16A **Moss Hill, Enn** 33.67 333 ⇑P P 08 12 10.0 -0.4
baz=34
L10A **Juniper Basin** 33.72 324 ⇓P P 08 12 10.8 -0.1
baz=34
F17A **Fitzpatrick Pl** 33.73 335 ⇓P P 08 12 10.2 -0.7
baz=34,SNR=5.3
CMB **Columbia Colle** 33.74 315 *e*P P 08 12 10.3 -0.8
14nm,1.5s,mb4.7
I13A **Wildhorse Cree** 33.76 329 ⇓P P 08 12 11.1 -0.1
baz=34,SNR=6.3
DGMT **Dagmar** 33.76 344 *e*P P 08 12 10.2 -0.9
21nm,1.0s,mb5.0
J12A **Stokes Ranch,** 33.78 327 ⇑P P 08 12 10.8 -0.6
baz=34,SNR=8.2
MCMT **McKenzie Canyo** 33.83 331 *e*P P 08 12 13.4 +1.6
2.9nm,0.9s,mb4.2
H14A **Leadore** 33.92 331 ⇓P P 08 12 11.9 -0.7
baz=34,SNR=8.8
BOZ **Bozeman (W)** 33.93 333 ⇓P P 08 12 12.5 -0.1
baz=34,SNR=5.8
BOZ **Bozeman (W)** 33.93 333 *e*P P 08 12 13.3 +0.6
18nm,1.9s,mb4.7
G15A **Dillon** 33.93 332 ⇓P P 08 12 12.8 +0.2
baz=34,SNR=5.8
K11A **Parker Ranch,** 33.94 326 ⇑P P 08 12 12.4 -0.4
baz=34
ULM **Lac du Bonnet** 33.95 354 P P 08 12 10.4 -2.4
3.1nm,0.5s,mb4.5,baz=182,slow=6.3,SNR=3.9
E18A **Harlowton** 33.97 336 ⇓P P 08 12 12.6 -0.4
baz=34,SNR=5.7
PAHR **Pah Rah Range** 33.99 319 *e*P P 08 12 14.4 +1.1
223nm,2.9s,mb5.6
F16A **Kennard Place,** 34.04 334 ⇑P P 08 12 13.9 +0.3
baz=34
DLMT **Dillon** 34.13 332 *e*P P 08 12 14.2 -0.2
45nm,2.1s,mb5.0

I12A **Atlanta** 34.18 328 ⇓P P 08 12 14.9 0.0
baz=34,SNR=5.1
E17A **Martinsdale** 34.26 335 ⇓P P 08 12 15.9 +0.4
baz=34
MFID **Camas Ranch** 34.28 327 ⇑P P 08 12 16.2 +0.5
baz=34
H13A **Challis** 34.30 330 ⇓P P 08 12 16.0 +0.1
baz=34,SNR=14
K10A **MacKenzie Ranc** 34.41 325 ⇓P P 08 12 16.8 0.0
baz=34
LRM **Limekiln Ridge** 34.42 333 *e*P P 08 12 17.6 +0.7
D18A **Linhart Farms,** 34.45 337 P P 08 12 17.3 +0.2
baz=34,SNR=8.4
F15A **Butte** 34.45 333 ⇑P P 08 12 17.2 0.0
baz=34,SNR=12
H12A **Diamond D Ranc** 34.59 329 ⇑P P 08 12 19.1 +0.7
baz=34,SNR=7.2
E16A **East Helena** 34.65 334 ⇓P P 08 12 18.9 0.0
baz=35,SNR=7.1
I11A **Placerville** 34.69 327 ⇓P P 08 12 19.3 0.0
baz=35,SNR=14
BEKR **Beckwourth** 34.71 318 ⇑P P 08 12 19.6 +0.1
baz=35,SNR=16
D17A **Six Diamond Ra** 34.76 336 ⇑P P 08 12 19.6 -0.2
baz=35,SNR=12
E15A **Deer Lodge** 34.98 333 ⇓P P 08 12 21.2 -0.4
baz=35,SNR=7.8
EGMT **Eagleton** 35.13 338 ⇑P P 08 12 22.0 -1.0
baz=35,SNR=18
EGMT **Eagleton** 35.13 338 *e*P P 08 12 22.3 -0.6
64nm,1.6s,mb5.3
WVOR **Wild Horse Val** 35.18 323 *e*P P 08 12 23.0 -0.5
17nm,1.4s,mb4.8
C17A **Wharram Farm,** 35.18 336 ⇓P P 08 12 22.9 -0.5
baz=35
J09A **Fry Pan Ranch,** 35.27 325 ⇑P P 08 12 24.1 -0.2
baz=35,SNR=14
H11A **Donnelly** 35.27 328 ⇓P P 08 12 24.1 -0.2
baz=35,SNR=7.6
D15A **Lincoln** 35.41 334 ⇓P P 08 12 25.7 +0.3
baz=35
B18A **Beardsley Farm** 35.45 338 P P 08 12 25.7 -0.1
baz=35,SNR=8.6
H10A **Noah's Angus R** 35.57 327 ⇓P P 08 12 25.7 -1.1
baz=36
CHMT **Chamberlain Mo** 35.62 333 *e*P P 08 12 27.1 -0.1
2.4nm,1.1s,mb4.0
F12A **Elk City** 35.66 330 ⇑P P 08 12 27.0 -0.6
baz=36,SNR=9.8
E13A **Victor** 35.67 332 ⇑P P 08 12 26.4 -1.3
baz=36
J08A **Circle Bar Ran** 35.67 324 ⇑P P 08 12 27.4 -0.3
baz=36,SNR=21
I09A **Lost Marbles R** 35.67 326 ⇑P P 08 12 26.8 -0.9
baz=36,SNR=8.1
C16A **Fuhringer Ranc** 35.70 336 ⇓P P 08 12 27.4 -0.5
baz=36,SNR=6.2
B17A **L&G Farms, Che** 35.74 337 ⇓P P 08 12 27.3 -0.9
baz=36
MOD **Modoc** 35.84 321 *e*P P 08 12 28.8 -0.4
12nm,1.3s,mb4.7
MSO **Missoula** 35.86 333 *e*P P 08 12 29.1 -0.1
26nm,2.1s,mb4.8
D14A **Greenough** 35.86 333 ⇑P P 08 12 28.5 -0.8
baz=36
G11A **Walters Elk Ra** 35.89 329 ⇓P P 08 12 29.4 -0.2
baz=36
A18A **Metzger Ranch,** 35.91 338 ⇑P P 08 12 29.0 -0.8
baz=36,SNR=10
C15A **Salmond Ranch,** 36.03 335 ⇓P P 08 12 30.1 -0.6
baz=36,SNR=6.1
A17A **Triple J Farms** 36.24 338 ⇓P P 08 12 31.0 -1.5
baz=36,SNR=14
G10A **Bishop Farm, J** 36.25 328 ⇑P P 08 12 31.8 -0.8
baz=36
B15A **Bradely Ranch,** 36.44 335 ⇑P P 08 12 33.4 -0.8
baz=36,SNR=5.3
H08A **Prairie City** 36.54 326 ⇑P P 08 12 34.5 -0.6
baz=36
E11A **Bogner Ranch,** 36.55 330 ⇑P P 08 12 34.5 -0.7
baz=36
G09A **Cove** 36.57 327 ⇑P P 08 12 34.1 -1.4
baz=36
A16A **West Butte Ran** 36.58 337 ⇑P P 08 12 34.3 -1.1
baz=36
D12A **Red Ives Fores** 36.66 332 ⇓P P 08 12 35.8 -0.3
baz=37
I07A **Izee** 36.71 325 ⇑P P 08 12 36.2 -0.4
baz=37
B14A **Marquette Ranc** 36.76 335 ⇑P P 08 12 36.3 -0.7
baz=37
F10A **Beach Ranch, E** 36.77 329 ⇓P P 08 12 36.8 -0.3
baz=37
C13A **Hot Springs** 36.78 333 ⇓P P 08 12 36.5 -0.7
baz=37
A15A **Johnson Ranch,** 37.04 336 ⇑P P 08 12 38.9 -0.4
baz=37,SNR=5.5
B13A **Whitefish** 37.27 334 ⇓P P 08 12 40.9 -0.4
baz=37
A14A **Double T Ranch** 37.31 335 ⇓P P 08 12 41.3 -0.4
baz=37,SNR=12
H04A **Detroit Lake** 38.59 323 ⇓P P 08 12 50.9 -1.6
baz=38
KEBM **Edson Butte** 38.85 320 *e*P P 08 12 55.4 +0.7
154nm,1.6s,mb5.5
FFC **Flin Flon** 39.16 350 *e*P P 08 12 55.8 -1.3
6.7nm,1.1s,mb4.3
LPAZ **La Paz** 39.47 144 P P 08 12 59.0 -1.2
1.3nm,0.7s,mb3.7,baz=343,slow=11,SNR=5.0
EDM **Edmonton** 40.73 339 *e*P P 08 13 09.2 -1.0
EDM *e* 08 13 23.0
FCC **Fort Churchill** 42.30 357 *e*P P 08 13 21.5 -1.6
0.3nm,0.6s
SCHQ **Schefferville** 42.52 20 P P 08 13 23.8 -1.0
5.1nm,0.7s,mb4.4,baz=223,slow=8.1,SNR=15
SCHQ LR LR 08 31 51.0
comp=Z,718nm,20.1s,MS4.6,baz=208,slow=37
SCHQ **Schefferville** 42.52 20 *e*P P 08 13 23.4 -1.4
9.9nm,1.0s,mb4.5
YKA **Yellowknife Ar** 48.93 346 P P 08 14 13.8 -1.6
9.1nm,0.7s,mb4.9,baz=146,slow=7.6,SNR=114
DLBC **Dease Lake** 50.92 335 *e*P P 08 14 31.2 +0.6
CPUP **Villa Florida** 53.54 142 P P 08 14 46.8 -3.8
0.4nm,0.4s,mb3.7,baz=349,slow=10,SNR=2.9
RES **Resolute Bay** 58.27 359 *e*P P 08 15 23.3 -0.5
7.2nm,0.7s,mb4.8
INK **Inuvik** 58.44 343 P P 08 15 24.1 -0.8
4.9nm,0.7s,mb4.7,baz=130,slow=8.6,SNR=20
INK **Inuvik** 58.44 343 *e*P P 08 15 23.8 -1.2
4.2nm,0.6s,mb4.7
INK *e* 08 15 38.7
PLCA **Paso Flores** 59.92 162 P P 08 15 34.6 -1.0
2.6nm,0.9s,mb4.2,baz=333,slow=6.0,SNR=4.4
PLCA **Paso Flores** 59.92 162 P P 08 15 34.6 -1.0
COLA **College** 61.48 336 *e*P P 08 15 45.1 -0.9
2.8nm,0.8s,mb4.4
BPAW **Bear Paw Mtn.** 62.46 335 *e*P P 08 15 51.2 -1.3
4.6nm,0.8s,mb4.7
COLD **Coldfoot** 63.29 338 *e*P P 08 15 58.9 +0.9
90nm,2.4s,mb5.5
SUMG **Summit** 63.56 15 *e*P P 08 15 59.7 -0.1
29nm,1.4s,mb5.1
SVW2 **Sparrevohn** 63.60 331 *e*P P 08 15 59.6 -0.6
PPT **Papeete** 67.06 242 LR LR 08 38 49.1
comp=Z,284nm,19.9s,MS4.5,baz=74,slow=30
DAG **Danmarks Havn** 70.01 13 ⇓*i*P P 08 16 40.2 -0.6
4.7nm,0.6s,mb4.6
ESDC **Sonseca Array** 77.28 52 P P 08 17 22.1 -2.1
0.9nm,0.5s,mb4.0,baz=292,slow=5.1,SNR=8.6
DOU **Dourbes** 80.94 40 P P 08 17 45.5 +1.5
BCLA **Clavier** 81.29 40 P P 08 17 47.4 +1.5
comp=Z,8.6nm,2.4s,mb4.2
NB2 **NORSAR Subarra** 81.44 29 P P 08 17 45.8 -0.6
comp=Z,4.5nm,0.8s,mb4.5,baz=289,slow=5.3
NOA **NORSAR Array B** 81.44 29 P P 08 17 46.5 0.0
comp=Z,2.5nm,0.7s,mb4.2,baz=290,slow=5.2,SNR=18
NOA LR LR 08 51 22.6
comp=Z,293nm,21.4s,MS4.6,baz=285,slow=34
NOA **NORSAR Array B** 81.44 29 P P 08 17 46.5 0.0
NOA LR LR 08 51 22.6
ARCES **ARCESS Array B** 83.44 19 P P 08 17 56.0 -0.8
comp=Z,3.2nm,0.6s,mb4.6,baz=293,slow=4.7,SNR=29
DBIC **Dimbokro** 84.25 85 P P 08 17 58.6 -3.3
comp=Z,3.5nm,0.9s,mb4.5,baz=299,slow=5.4,SNR=3.4
MOX **Moxa** 85.07 39 *e*P P 08 18 05.2 -0.2
GRA1 **Grafenberg Arr** 85.15 40 *e*P P 08 18 05.5 -0.3
comp=Z,36nm,1.9s,mb5.2
GRF **Grafenberg Arr** 85.15 40 *e*P P 08 18 05.5 -0.3

comp=Z,36nm,1.9s,mb5.2
GRF **Grafenberg Arr** 85.15 40 *e*P P 08 18 05.5 -0.3
comp=Z,36nm,1.9s,mb5.2
CLL **Collm** 85.66 38 *i* P P 08 18 07.5 -0.8
comp=Z,7.0nm,0.9s,mb4.9
CLL *i* pP 08 18 10.5 -1.1
CLL *i* 08 18 13.2
CLL **Collm** 85.66 38 *i* P P 08 18 07.5 -0.8
comp=Z,7.0nm,0.9s,mb4.9
CLL *i* PcP PcP 08 18 10.5 -0.7
CLL *i* pP pP 08 18 13.2 +1.6
CLL *es*P sP 08 18 17.0 +4.2
BRG **Berggiesshubel** 86.37 38 *e*P P 08 18 11.3 -0.6
comp=Z,9.5nm,1.2s,mb4.9
BRG
comp=N,292nm,16.3s
BRG
comp=E,184nm,18.4s
BRG
comp=Z,389nm,17.0s
KHC **Kasperske Hory** 86.79 40 *e*P P 08 18 13.3 -0.7
comp=Z,5.4nm,1.1s,mb4.7
GEC2 **GERESS Array S** 86.97 40 *e*P P 08 18 13.6 -1.3
comp=Z,2μm,1.3s
GERES **GERESS Array B** 86.97 40 P P 08 18 14.1 -0.8
comp=Z,1.0nm,0.7s,mb4.2,baz=322,slow=4.1,SNR=8.7
KAF **Kangasniemi** 87.53 25 *e*p P 08 18 15.4 -1.9
comp=Z,3.0nm,0.6s,mb4.7,baz=298,slow=4.6
FINES **FINESS Array B** 87.78 25 P P 08 18 16.9 -1.6
comp=Z,2.6nm,0.6s,mb4.6,baz=318,slow=2.6,SNR=13
TORD **Torodi Ar. Bea** 88.67 77 P P 08 18 20.9 -2.8
comp=Z,0.2nm,0.5s,mb3.7,baz=273,slow=5.5,SNR=5.2
ZST **Bratislava** 89.31 40 *e*P P 08 18 26.0 0.0
comp=Z,16nm,1.8s,mb5.0
ZST **Bratislava** 89.31 40 *e*P P 08 18 26.0 0.0
VYHS **Vyhne** 90.23 39 *e*P P 08 18 30.0 -0.3
comp=Z,6.3nm,2.0s,mb4.6
VYHS *e* 08 18 47.9
VYHS **Vyhne** 90.23 39 *e*P P 08 18 30.0 -0.3
VYHS *e* 08 18 47.9
KOLS **Kolonicke sedl** 92.07 37 *e*P P 08 18 37.8 -1.0
comp=Z,19nm,2.3s,mb5.0
KOLS **Kolonicke sedl** 92.07 37 *e*P P 08 18 37.8 -1.0
HHC **Hu-ho-hao-te** 119.32 341 *e*PKP PKPdf 08 24 19.5 +0.2
HHC sPKP 08 24 33.8
HHC PP PP 08 25 42.8 +3.8
HHC PKS 08 27 54.5
HHC SKS SKSdf 08 31 26.8 -4.9
HHC SKKS SKKSac 08 32 31.5 -9.2
HHC SS SS 08 41 59.3 -1.1
HHC AMB AMB
comp=Z,150nm,5.9s
HHC LR LR
comp=N,180nm,21.7s,MS5.0
HHC LR LR
comp=E,330nm,21.6s,MS5.0
HHC LR LR
comp=Z,180nm,21.5s,MS4.7
WMQ **Urumqi** 120.00 1 *e*PKP PKPdf 08 24 21.3 +0.8
LZH **Lanzhou** 125.94 345 *e*PKP PKPdf 08 24 32.0 -0.2
LZH sPKP 08 24 40.5
CD2 **Chengdu** 130.87 343 PKP PKPdf 08 24 41.5 -0.2
GYA **Guiyang** 134.09 338 *e*Pdif Pdif 08 21 45.0 -1.3
GYA PKP PKPdf 08 24 47.0 -0.9
GYA PKS 08 28 21.5
GYA SKKS SKKSac 08 34 06.0 -8.4
GYA AMB AMB
comp=Z,120nm,7.8s
GYA LR LR
comp=N,120nm,20.7s,MS4.7
GYA LR LR
comp=E,110nm,22.4s,MS4.7
GYA LR LR
comp=Z,130nm,21.0s,MS4.6
KMI **Kunming** 136.62 342 PKP PKPdf 08 24 54.5 +1.9
ASAR **Alice Springs** 137.55 253 PKhKP 08 24 42.7
comp=Z,0.4nm,0.8s,baz=123,slow=4.1,SNR=5.1
ASAR PKP PKPdf 08 24 52.7 -1.6
comp=Z,1.1nm,0.7s,baz=102,slow=2.6,SNR=11
ASAR **Alice Springs** 137.55 253 PKP PKPdf 08 24 52.7 -1.6
CMAR **Chiang Mai Arr** 144.00 344 PKP PKPdf 08 25 02.8 -3.3
comp=Z,0.8nm,0.4s,baz=347,slow=3.7,SNR=4.4

ATH ***31*** *08:19:49.9,36°.21N±20°.92E,h19km±6km,MD3.9/12*
NEIC ***31*** *08:19:49.9,36°.21N±20°.92E,h19km,MD3.9(ATH),After ATH.*
ISCJB ***31*** *08:19:50.8±0.9,36°.21N±0°.04±21°.02E±0°.03,h10km±6km, mb3.5/7,Error ellipse: s-maj=6.2km s-min=4.0km az=171.1*
IDC ***31*** *08:19:50.5±1.7,36°.54N±21°.31E,h0km,mb3.6/8, mb1 3.7/12,mb1mx3.6/30,mbtmp3.6/12,ML3.4/3,Error ellipse: s-maj=38.4km s-min=17.3km az=25.0*
CSEM ***31*** *08:19:52.1±0.3,36°.26N±21°.08E,h10km,ML3.9/5,Error ellipse: s-maj=6.7km s-min=4.4km az=7.0*
THE ***31*** *08:19:53.0,36°.27N±21°.16E,h7km±2km,ML3.9/5,Error ellipse: s-maj=3.7km s-min=2.3km az=102.0*
ROM ***31*** *08:20:16.2±0.1,37°.32N±19°.29E,h10km,Ml3.0/11,Error ellipse: s-maj=7.9km s-min=0.0km az=32.0*
ISC 31 08:19:52.0±1.0,36°.23N±0°.04±21°.10E±0°.03,h9km±6km, n101,σ1°09/123,mb3.5/7,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.84**	**38**	*e*PN	**Pg**	**08 20 07.7**	**-0.5**
PYL				*e*SN	**Sg**	08 20 20.5	+1.3
PYL	**PYLOS**	**0.84**	**38**	P	**Pg**	**08 20 07.4**	**-0.8**
PYL				S	**Sg**	08 20 18.4	-0.8
PYL	**PYLOS**	**0.84**	**38**	*e*Pn	**Pg**	**08 20 07.7**	**-0.5**
PYL				S	**Sg**	08 20 18.4	-0.8
PYL				*e*Sn	**Sg**	08 20 20.5	+1.3
ITM	**Ithomi**	**1.16**	**35**	*e*PN	**Pn**	**08 20 14.5**	**+0.1**
ITM				*e*SN	**Sn**	08 20 32.0	+1.6
ITM	**Ithomi**	**1.16**	**35**	P	**Pb**	**08 20 13.5**	**-0.7**
ITM				S	**Sb**	08 20 30.1	+0.8
ITM	**Ithomi**	**1.16**	**35**	P	**Pb**	**08 20 13.5**	**-0.7**
ITM	**Ithomi**	**1.16**	**35**	*e*Pn	**Pn**	**08 20 14.5**	**+0.1**
ITM				S	**Sb**	08 20 30.1	+0.8
ITM				*e*Sn	**Sn**	08 20 32.0	+1.6
VLX	**Vlachokerasia**	**1.53**	**42**	*e*PN	**Pn**	**08 20 20.0**	**+0.4**
VLX	**Vlachokerasia**	**1.53**	**42**	P	**Pn**	**08 20 19.6**	**0.0**
VLX				S	**Sn**	08 20 40.1	+0.5
VLX	**Vlachokerasia**	**1.53**	**42**	P	**Pn**	**08 20 19.6**	**0.0**
VLX	**Vlachokerasia**	**1.53**	**42**	*e*Pn	**Pn**	**08 20 20.0**	**+0.4**
VLX				S	**Sn**	08 20 40.1	+0.5
VLI	**Veliai**	**1.56**	**71**	*e*PN	**Pn**	**08 20 21.0**	**+1.1**
VLI	**Veliai**	**1.56**	**71**	*e*Pn	**Pn**	**08 20 21.0**	**+1.1**
KYTH	**Kithira**	**1.57**	**88**	*e*PN	**Pn**	**08 20 21.6**	**+1.6**
KYTH	**Kithira**	**1.57**	**88**	*e*Pn	**Pn**	**08 20 21.6**	**+1.6**
RLS	**Riolos of Patr**	**1.85**	**9**	*e*PN	**Pn**	**08 20 24.4**	**+0.5**
RLS	**Riolos of Patr**	**1.85**	**9**	*e*Pn	**Pn**	**08 20 24.4**	**+0.5**
GUR	**Goura**	**1.97**	**30**	*e*PN	**Pn**	**08 20 26.1**	**+0.5**
GUR	**Goura**	**1.97**	**30**	P	**Pn**	**08 20 26.1**	**+0.5**
GUR	**Goura**	**1.97**	**30**	P	**Pn**	**08 20 26.1**	**+0.5**
VLS	**Valsamata**	**1.98**	**348**	P	**Pn**	**08 20 25.7**	**0.0**
VLS	**Valsamata**	**1.98**	**348**	P	**Pn**	**08 20 25.7**	**0.0**
LAKA	**Lakka**	**2.13**	**19**	P	**Pn**	**08 20 28.2**	**+0.5**
LAKA				S	**Sn**	08 20 54.5	+0.3
LAKA	**Lakka**	**2.13**	**19**	P	**Pn**	**08 20 28.2**	**+0.5**
LAKA				S	**Sn**	08 20 54.5	+0.3
EFP	**Efpalio**	**2.29**	**16**	*e*PB	**Pn**	**08 20 30.1**	**+0.2**
EFP	**Efpalio**	**2.29**	**16**	P	**Pn**	**08 20 31.0**	**+1.1**
EFP				S	**Sn**	08 20 57.5	-0.6
EFP	**Efpalio**	**2.29**	**16**	*e*Pb	**Pn**	**08 20 30.1**	**+0.2**
EFP	**Efpalio**	**2.29**	**16**	P	**Pn**	**08 20 31.0**	**+1.1**
EFP				S	**Sn**	08 20 57.5	-0.6
KALE	**Kalithea**	**2.31**	**21**	P	**Pn**	**08 20 31.8**	**+1.6**
KALE				S	**Sn**	08 21 00.6	+1.8
KALE	**Kalithea**	**2.31**	**21**	P	**Pn**	**08 20 31.8**	**+1.6**
KALE				S	**Sn**	08 21 00.6	+1.8
LTK	**Loutraki**	**2.33**	**39**	*e*PN	**Pn**	**08 20 30.4**	**-0.1**
LTK	**Loutraki**	**2.33**	**39**	P	**Pn**	**08 20 29.8**	**-0.7**
LTK	**Loutraki**	**2.33**	**39**	P	**Pn**	**08 20 29.8**	**-0.7**
LTK	**Loutraki**	**2.33**	**39**	*e*Pn	**Pn**	**08 20 30.4**	**-0.1**
KARN	**Karanos**	**2.44**	**109**	P	**Pn**	**08 20 32.0**	**0.0**
KARN	**Karanos**	**2.44**	**109**	P	**Pn**	**08 20 32.0**	**0.0**
NAIG	**Nisos Aigina**	**2.45**	**51**	*e*PN	**Pn**	**08 20 32.0**	**-0.1**
NAIG	**Nisos Aigina**	**2.45**	**51**	*e*Pn	**Pn**	**08 20 32.0**	**-0.1**
DSF	**Desfina**	**2.46**	**27**	P	**Pn**	**08 20 31.3**	**-0.9**
DSF				S	**Sn**	08 21 01.4	-1.0
DSF	**Desfina**	**2.46**	**27**	P	**Pn**	**08 20 31.3**	**-0.9**

DSF				S	Sn	08 21 01.4	-1.0
VAM	**Vamos**	**2.65**	**107**	*e*PN	**Pn**	08 20 35.5	+0.6
VAM	**Vamos**	**2.65**	**107**	*e*Pn	**Pn**	08 20 35.5	+0.6
LKR	**Lokris**	**2.85**	**32**	P	**Pn**	08 20 37.1	-0.6
LKR	**Lokris**	**2.85**	**32**	P	**Pn**	08 20 37.1	-0.6
AGG	**Agios Georgios**	**2.95**	**19**	P	**Pn**	08 20 40.0	+0.9
AGG	**Agios Georgios**	**2.95**	**19**	P	**Pn**	08 20 40.0	+0.9
IDI	**Anoyia**	**3.23**	**106**	Pn	**Pn**	08 20 42.3	-0.5
	1.5nm,0.3s,baz=289,slow=17,SNR=15						
IDI				Sn	**Sn**	08 21 22.2	+0.8
	5.4nm,0.3s,baz=146,slow=23,SNR=6.4						
IDI	**Anoyia**	**3.23**	**106**	Pn	**Pn**	08 20 42.3	-0.5
IDI				Sn	**Sn**	08 21 22.1	+0.7
THL	**Klokotos Trika**	**3.41**	**12**	P	**Pn**	08 20 45.0	-0.3
THL	**Klokotos Trika**	**3.41**	**12**	P	**Pn**	08 20 45.0	-0.3
KEK	**Kerkira**	**3.62**	**344**	*e*PN	**Pn**	08 20 46.5	-1.8
KEK	**Kerkira**	**3.62**	**344**	P	**Pn**	08 20 48.2	-0.1
KEK	**Kerkira**	**3.62**	**344**	*e*Pn	**Pn**	08 20 46.5	-1.8
KEK	**Kerkira**	**3.62**	**344**	P	**Pn**	08 20 48.2	-0.1
AOS	**Alonnisos**	**3.67**	**36**	P	**Pn**	08 20 48.7	-0.2
AOS	**Alonnisos**	**3.67**	**36**	P	**Pn**	08 20 48.7	-0.2
LAST	**Lasithi**	**3.72**	**105**	P	**Pn**	08 20 50.0	+0.3
LAST	**Lasithi**	**3.72**	**105**	P	**Pn**	08 20 50.0	+0.3
MPAZ	**Palizzi**	**4.42**	**294**	Pn	**Pn**	08 20 59.4	+0.2
	54nm,0.8s						
MPAZ	**Palizzi**	**4.42**	**294**	Pn	**Pn**	08 20 59.4	+0.2
	54nm,0.8s						
SOI	**Samo**	**4.43**	**296**	Pn	**Pn**	08 20 59.8	+0.5
	16nm,0.6s						
SOI	**Samo**	**4.43**	**296**	Pn	**Pn**	08 20 59.8	+0.5
	16nm,0.6s						
SERS	**Sersale**	**4.48**	**310**	Pn	**Pn**	08 20 59.7	-0.3
	27nm,0.4s						
SERS	**Sersale**	**4.48**	**310**	Pn	**Pn**	08 20 59.7	-0.3
	27nm,0.4s						
TIP	**Timpagrande**	**4.53**	**312**	Pn	**Pn**	08 21 00.7	0.0
	32nm,0.9s						
TIP	**Timpagrande**	**4.53**	**312**	Pn	**Pn**	08 21 00.7	0.0
	32nm,0.9s						
CEL	**Celeste**	**4.62**	**298**	Pn	**Pn**	08 21 02.1	+0.2
	32nm,0.9s						
CEL	**Celeste**	**4.62**	**298**	Pn	**Pn**	08 21 02.1	+0.2
	32nm,0.9s						
MSCL	**Scilla**	**4.68**	**297**	Pn	**Pn**	08 21 03.2	+0.4
	38nm,0.7s						
MSCL	**Scilla**	**4.68**	**297**	Pn	**Pn**	08 21 03.2	+0.4
	38nm,0.7s						
JOPP	**Joppolo**	**4.78**	**301**	Pn	**Pn**	08 21 04.3	+0.2
	19nm,0.7s						
JOPP	**Joppolo**	**4.78**	**301**	Pn	**Pn**	08 21 04.3	+0.2
	19nm,0.7s						
CARO	**Carolei**	**4.90**	**309**	Pn	**Pn**	08 21 06.6	+0.7
	54nm,0.7s						
CARO	**Carolei**	**4.90**	**309**	Pn	**Pn**	08 21 06.6	+0.7
	54nm,0.7s						
VAE	**Valguarnera**	**5.50**	**285**	Pn	**Pn**	08 21 16.1	+2.0
	1.2nm,0.3s,baz=73,slow=7.5,SNR=4.6						
CRAC	**Craco**	**5.52**	**320**	Pn	**Pn**	08 21 14.7	+0.4
	130nm,1.2s						
CDRU	**Civita di Ruta**	**6.23**	**315**	Pn	**Pn**	08 21 24.4	+0.4
	11nm,0.6s						
MRLC	**Muro Lucano**	**6.30**	**317**	Pn	**Pn**	08 21 26.9	+1.8
CORL	**Corleone**	**6.45**	**287**	Pn	**Pn**	08 21 30.0	+2.9
MCRV	**Calabrutti - M**	**6.50**	**316**	Pn	**Pn**	08 21 28.6	+0.8
	103nm,0.5s						
SGTA	**Sant Agata di**	**6.64**	**319**	Pn	**Pn**	08 21 30.0	+0.3
	31nm,0.7s						
STON	**Ston**	**7.13**	**339**	*e*Pn	**Pn**	08 21 34.2	-2.2
STON				Sn	**Sn**	08 22 50.1	-7.4
STON	**Ston**	**7.13**	**339**	*e*Pn	**Pn**	08 21 34.2	-2.2
MELA	**Melanico ??? S**	**7.17**	**321**	Pn	**Pn**	08 21 37.1	0.0
	53nm,0.8s						
CIGN	**Sant'Elia a Pi**	**7.25**	**320**	Pn	**Pn**	08 21 38.6	+0.5
	29nm,0.8s						
NVLJ	**Novalja**	**9.58**	**332**	*i* Pn	**Pn**	08 22 08.4	-1.6
NVLJ				Sn	**Sn**	08 23 51.8	-5.9
NVLJ	**Novalja**	**9.58**	**332**	*i* Pn	**Pn**	08 22 08.4	-1.6
MLR	**Muntele Rosu**	**9.95**	**20**	Pn	**Pn**	08 22 13.8	-1.3
	0.4nm,0.3s,baz=199,slow=10.0,SNR=3.2						
MLR	**Muntele Rosu**	**9.95**	**20**	Pn	**Pn**	08 22 13.8	-1.3
MMAI	**Mount Meron Ar**	**12.21**	**101**	Pn	**Pn**	08 22 43.9	-2.3
	0.8nm,0.3s,baz=311,slow=11,SNR=3.7						
GERES	**GERESS Array B**	**13.72**	**339**	Pn	**Pn**	08 23 04.8	-1.9
	baz=161,slow=13,SNR=6.6						
ESDC	**Sonseca Array**	**20.04**	**287**	P	**P**	08 24 25.2	0.0
	0.8nm,0.8s,baz=88,slow=13,SNR=4.6						
HFS	**Hagfors**	**24.39**	**351**	P	**P**	08 25 07.3	-3.0
	1.8nm,0.6s,mb3.7,baz=140,slow=12,SNR=7.5						
EKA	**Eskdalemuir Ar**	**25.29**	**327**	P	**P**	08 25 16.5	-2.0
	1.0nm,0.8s,mb3.4,baz=131,slow=10.0,SNR=4.1						
FINES	**FINESS Array B**	**25.43**	**6**	P	**P**	08 25 18.0	-1.8
	1.3nm,0.8s,mb3.5,baz=188,slow=8.4,SNR=3.3						
NB2	**NORSAR Subarra**	**25.61**	**349**	P	**P**	08 25 19.4	-2.0
	comp=Z,0.8nm,0.6s,mb3.4,baz=156,slow=9.3						
NB2	**NORSAR Subarra**	**25.61**	**349**	P	**P**	08 25 19.4	-2.0
	comp=Z,0.8nm,0.6s,mb3.4,SNR=7.2						
NOA	**NORSAR Array B**	**25.61**	**349**	P	**P**	08 25 18.2	-3.1
	comp=Z,1.2nm,0.6s,mb3.6,baz=158,slow=9.0,SNR=7.9						
MKAR	**Makanchi Array**	**45.95**	**57**	P	**P**	08 28 12.0	-3.2
	comp=Z,0.3nm,0.3s,mb3.8,baz=273,slow=7.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**46.67**	**47**	P	**P**	08 28 17.1	-3.6
	comp=Z,0.3nm,0.4s,mb3.6,baz=335,slow=6.4,SNR=2.3						
YKA	**Yellowknife Ar**	**75.38**	**340**	P	**P**	08 31 34.9	-0.6
	comp=Z,0.2nm,0.5s,mb3.3,baz=44,slow=5.2,SNR=3.9						

CASC 31 08:22:45.8±2.4, 8°.46N×83°.00W, h3km, MD3.6, 3C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.25**	**320⇑**	*e*P	Pg	08 22 51.5	+0.8
ACR				*e*S	Sg	08 22 56.0	+2.0
BAR1		**0.83**	**339**	*e*P	Pg	08 23 02.0	+0.1
BAR1				*e*S	Sg	08 23 12.3	-0.4
CNI	**Changuinola**	**1.06**	**27⇑**	*i* P	Pg	08 23 06.7	+0.4
BUS	**Buena Vista**	**1.32**	**326⇓**	*i* P	Pg	08 23 10.2	-0.9
QCR	**Quepos**	**1.50**	**310⇑**	*i* P	Pn	08 23 13.2	-0.4
URSC	**Urasca**	**1.57**	**331**	*e*P	Pn	08 23 14.4	-0.1
CGA2	**Cerro Gallo 2**	**2.12**	**317**	*e*P	Pn	08 23 24.5	+2.4

*SOF **31** 08:24:06.5, 40°.01N×25°.47E, h2km, MD2.9*
*NEIC **31** 08:24:08.6, 40°.02N×25°.46E, h21km, MD3.1(ATH), After ATH.*
*ATH **31** 08:24:08.6, 40°.02N×25°.46E, h21km±2km, MD3.1/6*
*CSEM **31** 08:24:08.8±0.1, 40°.01N×25°.42E, h8km, ML3.0/9, Error ellipse: s-maj=2.8km s-min=2.5km az=38.0*
*THE **31** 08:24:09.6, 40°.00N×25°.44E, h15km±1km, ML3.0/9, Error ellipse: s-maj=1.2km s-min=0.6km az=228.0*
*ISCJB **31** 08:24:09.5±0.4, 40°.01N±0°.02×25°.45E±0°.03, h16km±5km, Error ellipse: s-maj=3.5km s-min=3.1km az=29.9*
*DDA **31** 08:24:10.1, 40°.02N×25°.56E, h7km±3km, Md3.0*
*ISK **31** 08:24:11.0, 40°.05N×25°.63E, h11km, MD2.9*

ISC 31 08:24:09.1±0.4, 40°.01N±0°.02×25°.45E±0°.03, h11km±3km, n56, σ0°.88/92, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.23**	**240**	*e*PB	**Pg**	08 24 14.6	+0.7
LIA				*e*SB	**Sg**	08 24 18.6	+1.4
LIA	**Limnos Island**	**0.23**	**240**	P	**Pg**	08 24 14.4	+0.5
LIA				S	**Sg**	08 24 18.3	+1.1
LIA	**Limnos Island**	**0.23**	**240**	P	**Pg**	08 24 14.4	+0.5
LIA				S	**Sg**	08 24 18.3	+1.1
LIA				*e*Sb	**Sg**	08 24 18.6	+1.4
GADA	**Gvkgeada**	**0.39**	**63**	*e*PG	**Pg**	08 24 16.8	+0.1
GADA				*e*SG	**Sg**	08 24 21.7	-0.3
GADA	**Gvkgeada**	**0.39**	**63**	*e*Pg	**Pg**	08 24 16.8	+0.1
GADA				*e*Sg	**Sg**	08 24 21.7	-0.2
BOZC	**Bozcaada**	**0.50**	**110**	*i* P	**Pg**	08 24 18.7	0.0
BOZC				*i* S	**Sg**	08 24 24.1	-1.2
EZN	**Ezine**	**0.70**	**105**	*e*PG	**Pg**	08 24 22.7	+0.1
EZN				*e*SG	**Sg**	08 24 30.9	-0.9
EZN	**Ezine**	**0.70**	**105**	*e*Pg	**Pg**	08 24 22.7	+0.1
EZN				*e*Sg	**Sg**	08 24 30.9	-0.9
SIGR	**SIGRI**	**0.86**	**158**	P	**Pg**	08 24 25.3	-0.4
SIGR				S	**Sg**	08 24 37.8	+0.9
SIGR	**SIGRI**	**0.86**	**158**	P	**Pg**	08 24 25.3	-0.4
SIGR				S	**Sg**	08 24 37.8	+0.9
ENEZ	**Enez**	**0.90**	**37**	*e*PG	**Pg**	08 24 26.6	+0.2
ENEZ				*e*SG	**Sg**	08 24 37.5	-0.6
ENEZ	**Enez**	**0.90**	**37**	*e*Pg	**Pg**	08 24 26.6	+0.2
ENEZ				*e*Sg	**Sg**	08 24 37.6	-0.6
ALN	**Alexandroupoli**	**0.99**	**27**	*e*PN	**Pn**	08 24 28.1	-0.9
ALN				*e*SN	**Sn**	08 24 40.3	-2.7
ALN	**Alexandroupoli**	**0.99**	**27**	P	**Pg**	08 24 28.2	0.0
ALN				S	**Sg**	08 24 41.9	+0.8
ALN	**Alexandroupoli**	**0.99**	**27**	P	**Pg**	08 24 28.2	0.0
ALN				*e*Sn	**Sn**	08 24 40.3	-2.7
ALN				S	**Sg**	08 24 41.9	+0.8
PRK	**Paraskevi**	**1.00**	**140**	*e*PN	**Pn**	08 24 28.0	-1.0
PRK				*e*SN	**Sn**	08 24 41.5	-1.5
PRK	**Paraskevi**	**1.00**	**140**	P	**Pg**	08 24 27.6	-0.6
PRK				S	**Sg**	08 24 41.6	+0.4
PRK	**Paraskevi**	**1.00**	**140**	P	**Pg**	08 24 27.6	-0.6
PRK	**Paraskevi**	**1.00**	**140**	*e*Pn	**Pn**	08 24 28.0	-1.0
PRK				S	**Sg**	08 24 41.6	+0.4
LPK	**Lapseki**	**1.07**	**70**	*e*PG	**Pg**	08 24 29.6	0.0
LPK	**Lapseki**	**1.07**	**70**	*e*Pg	**Pg**	08 24 29.6	0.0
OUR	**Ouranopolis**	**1.17**	**286**	P	**Pb**	08 24 30.8	-0.5
OUR				S	**Sb**	08 24 46.4	0.0
OUR	**Ouranopolis**	**1.17**	**286**	P	**Pb**	08 24 30.8	-0.5
OUR				S	**Sb**	08 24 46.4	0.0
KAVA	**Kavala**	**1.21**	**324**	P	**Pn**	08 24 31.9	-0.1
KAVA				S	**Sb**	08 24 47.3	-0.4
KAVA	**Kavala**	**1.21**	**324**	P	**Pn**	08 24 31.9	-0.1
KAVA				S	**Sb**	08 24 47.3	-0.4
AOS	**Alonnisos**	**1.48**	**236**	P	**Pn**	08 24 35.3	-0.3
AOS				S	**Sn**	08 24 54.0	-0.9
AOS	**Alonnisos**	**1.48**	**236**	P	**Pn**	08 24 35.3	-0.3
AOS				S	**Sn**	08 24 54.0	-0.9
RKY	**Sarkoy-Tekirda**	**1.48**	**62**	*e*PN	**Pn**	08 24 36.5	+0.8
RKY	**Sarkoy-Tekirda**	**1.48**	**62**	*e*Pn	**Pn**	08 24 36.5	+0.8
SART	**Tekirdag**	**1.49**	**62**	*i* P	**Pn**	08 24 35.9	+0.2
SART				*i* S	**Sn**	08 24 56.4	+1.3
SART	**Tekirdag**	**1.49**	**62**	*i* P	**Pn**	08 24 35.9	+0.2
SART				*i* S	**Sn**	08 24 56.4	+1.3
PLG	**Polygyros**	**1.57**	**284**	*e*PN	**Pn**	08 24 37.5	+0.5
PLG	**Polygyros**	**1.57**	**284**	*e*Pn	**Pn**	08 24 37.5	+0.5
MFT	**Murefte**	**1.60**	**61**	*e*PN	**Pn**	08 24 38.4	+1.1
MFT	**Murefte**	**1.60**	**61**	*e*Pn	**Pn**	08 24 38.4	+1.1
KDZ	**Kurdzhali**	**1.63**	**359**	Pg	**Pg**	08 24 38.9	-1.5
KDZ	**Kurdzhali**	**1.63**	**359**	Pg	**Pg**	08 24 38.9	-1.5
CHOS	**Chios island**	**1.69**	**164**	*e*PN	**Pn**	08 24 38.6	0.0
CHOS	**Chios island**	**1.69**	**164**	P	**Pn**	08 24 38.2	-0.4
CHOS				S	**Sn**	08 24 59.5	-0.7
CHOS	**Chios island**	**1.69**	**164**	P	**Pn**	08 24 38.2	-0.4
CHOS	**Chios island**	**1.69**	**164**	*e*Pn	**Pn**	08 24 38.6	0.0
CHOS				S	**Sn**	08 24 59.5	-0.7
BALY	**Balya**	**1.69**	**99**	*i* P	**Pn**	08 24 41.1	+2.5
BALY				*i* S	**Sn**	08 25 02.6	+2.4
BALY	**Balya**	**1.69**	**99**	*i* P	**Pn**	08 24 41.1	+2.5
BALY				*i* S	**Sn**	08 25 02.6	+2.3
SOH	**Sokhos**	**1.79**	**297**	*e*PN	**Pn**	08 24 40.1	+0.2
SOH	**Sokhos**	**1.79**	**297**	*e*Pn	**Pn**	08 24 40.1	+0.2
SRS	**Serrai**	**1.79**	**309**	P	**Pn**	08 24 39.3	-0.6
SRS				S	**Sn**	08 25 03.0	+0.3
SRS	**Serrai**	**1.79**	**309**	P	**Pn**	08 24 39.3	-0.6
SRS				S	**Sn**	08 25 03.0	+0.3
URLA	**Izmir**	**1.88**	**151**	*i* P	**Pn**	08 24 41.1	0.0
URLA				*i* S	**Sn**	08 25 05.2	+0.4
URLA	**Izmir**	**1.88**	**151**	*i* P	**Pn**	08 24 41.1	0.0
URLA				*i* S	**Sn**	08 25 05.2	+0.4
MMB	**Musomiste**	**2.04**	**321**	P	**Pn**	08 24 43.4	0.0
MMB	**Musomiste**	**2.04**	**321**	P	**Pn**	08 24 43.4	0.0
EDRB	**Edirne**	**2.08**	**28**	*e*PN	**Pn**	08 24 45.3	+1.5
EDRB	**Edirne**	**2.08**	**28**	*e*Pn	**Pn**	08 24 45.3	+1.4
KKB	**Krupnik**	**2.58**	**317**	P	**Pn**	08 24 56.5	+5.8
PGB	**Panagyurishte**	**2.71**	**340**	*e*P	**Pn**	08 24 52.8	+0.2
PGB	**Panagyurishte**	**2.71**	**340**	*e*P	**Pn**	08 24 52.8	+0.2

MEX 31 08:27:02.0±0.5, 16°.37N×90°.91W, h20km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.18**	**266**	*e*P	Pn	08 27 20.0	-3.3
CCIG				*i* S	Sb	08 27 35.5	-3.1
SCX	**San Cristobal**	**1.69**	**283**	*i* P	Pn	08 27 28.7	-1.7
SCX				*i* S	Sn	08 27 49.0	-2.5
THIG		**1.95**	**222**	*i* P	Pn	08 27 31.9	-2.1
THIG				*i* S	Sn	08 27 54.5	-3.4
TGIG		**2.16**	**281**	*e*P	Pn	08 27 34.7	-2.1
TGIG				*i* S	Sn	08 27 59.0	-4.0
PCIG		**2.31**	**254**	*i* P	Pn	08 27 37.1	-1.9
PCIG				*i* S	Sn	08 28 03.0	-3.9

*CSEM **31** 08:29:44.1±0.5, 33°.47N×49°.27E, h2km, ML2.8, Error ellipse: s-maj=24.8km s-min=11.1km az=123.0*
*KISR **31** 08:29:44.6±0.5, 33°.21N×45°.87E, h34km±999km, ML2.4*

TEH 31 08:29:48.0, 33°.53N×49°.17E, h27km, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**1.24**	**35**	*e*Pg	Pn	08 30 05.4	-4.2
IKOM	**Komasi**	**1.52**	**296**	*e*Sg	Sn	08 30 36.2	+3.9
IPIR	**Pirpir**	**1.68**	**120**	*e*Pn	Pn	08 30 14.8	-0.7
IPIR				*e*Sg	Sn	08 30 40.9	+4.8
IPIR				*e*		08 30 44.0	
	comp=Z,1μm,0.2s						
IRAZ	**Razeghan**	**1.98**	**18**	*e*Pn	Pn	08 30 19.8	+0.2
IRAZ				*e*		08 30 24.6	
	comp=Z,2μm,0.2s						
GHVR	**GHOM**	**2.01**	**61**	*e*Pg	Pn	08 30 20.9	+0.8
IKLH	**Kolahrood**	**2.03**	**95**	*e*Pn	Pn	08 30 21.2	+0.8
IKLH				*e*		08 30 51.4	
	comp=N,2μm,0.2s						
IR5	**Iran Long-Peri**	**2.05**	**34**	*e*Pn	Pn	08 30 20.6	0.0
IR5				*e*		08 30 21.2	
	comp=Z,99nm,0.3s						
SNGE	**Sanandaj**	**2.17**	**317**	*e*Pn	Pn	08 30 22.7	+0.4
IVRN	**Varamin**	**2.58**	**55**	*e*Pn	Pn	08 30 27.6	-0.3
IVRN				*e*Pn	Pn	08 30 28.1	+0.2
IVRN				*e*		08 30 36.5	
	comp=Z,567nm,0.1s						
IZEF	**Zefreh**	**2.73**	**102**	*e*Pn	Pn	08 30 30.8	+0.9
IZEF				*e*		08 31 14.9	
	comp=Z,467nm,0.1s						
CHTH	**Charan**	**2.87**	**34**	*e*Pn	Pn	08 30 31.0	-1.0
DAMV	**Damavand**	**3.12**	**47**	*e*Pn	Pn	08 30 35.2	-0.2
DAMV				*e*Sg	Sn	08 31 16.8	+5.0
IDMV	**Damavand**	**3.13**	**48**	*e*Pn	Pn	08 30 35.2	-0.3
IDMV				*e*		08 31 24.2	
	comp=Z,483nm,0.2s						
MIB	**Mutribah**	**4.03**	**203**	*e*P	Pn	08 30 46.2	-1.6
MIB				*e*S	Sn	08 31 32.1	-2.0
MIB				AML	AML	08 31 36.2	
	comp=Z,7.2nm,0.3s						
MIB	**Mutribah**	**4.03**	**203**	*e*P	Pn	08 30 46.2	-1.6
NAY	**Al-Naaiem**	**4.57**	**202**	*e*P	Pn	08 30 53.0	-2.3
NAY				*e*S	Sn	08 31 44.7	-2.8
NAY				AML	AML	08 31 47.2	
	comp=Z,4.1nm,0.4s						
NAY	**Al-Naaiem**	**4.57**	**202**	*e*P	Pn	08 30 53.0	-2.3
NAY				*e*S	Sn	08 31 44.7	-2.8
RDF	**Al-Radifah**	**4.79**	**197**	*e*P	Pn	08 30 58.7	+0.3
RDF	**Al-Radifah**	**4.79**	**197**	*e*P	Pn	08 30 58.7	+0.4

*ISCJB **31** 08:38:08.8±1.7, 36°.15N±0°.07×21°.16E±0°.09, h18km±12km, Error ellipse: s-maj=13.6km s-min=10.4km az=145.2*
*CSEM **31** 08:38:08.3±0.6, 36°.13N×21°.22E, h5km, MD3.6, Error ellipse: s-maj=12.6km s-min=8.0km az=56.0*
*THE **31** 08:38:12.0, 36°.20N×21°.55E, h10km±1km, ML4.0/1, Error ellipse: s-maj=3.2km s-min=1.1km az=271.0*
*ATH **31** 08:38:12.4, 36°.28N×21°.50E, h32km±2km, MD3.6/13*
*NEIC **31** 08:38:12.4, 36°.28N×21°.50E, h32km, MD3.6(ATH), After ATH.*

ISC 31 08:38:09.7±1.8, 36°.18N±0°.07×21°.29E±0°.09, h9km±9km, n42, σ0°.93/53, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.80**	**27**	*e*PN	**Pg**	**08 38 25.4**	**+0.3**
PYL				*e*SN	**Sg**	**08 38 35.3**	**-0.2**
PYL	**PYLOS**	**0.80**	**27**	P	**Pg**	**08 38 25.1**	**0.0**
PYL				S	**Sg**	**08 38 35.8**	**+0.3**
PYL	**PYLOS**	**0.80**	**27**	P	**Pg**	**08 38 25.1**	**0.0**
PYL	**PYLOS**	**0.80**	**27**	*e*Pn	**Pg**	**08 38 25.4**	**+0.3**
PYL				*e*Sn	**Sg**	**08 38 35.3**	**-0.2**
PYL				S	**Sg**	**08 38 35.8**	**+0.3**
ITM	**Ithomi**	**1.12**	**27**	*e*PN	**Pg**	**08 38 30.8**	**-0.4**
ITM				*e*SN	**Sg**	**08 38 43.9**	**-1.9**
ITM	**Ithomi**	**1.12**	**27**	P	**Pg**	**08 38 30.8**	**-0.4**
ITM				S	**Sg**	**08 38 46.4**	**+0.6**
ITM	**Ithomi**	**1.12**	**27**	P	**Pg**	**08 38 30.8**	**-0.4**
ITM				S	**Sg**	**08 38 46.4**	**+0.6**
KYTH	**Kithira**	**1.42**	**86**	*e*PN	**Pn**	**08 38 36.1**	**+0.5**
KYTH	**Kithira**	**1.42**	**86**	*e*Pn	**Pn**	**08 38 36.1**	**+0.5**
VLI	**Veliai**	**1.43**	**68**	*e*PN	**Pn**	**08 38 35.3**	**-0.5**
VLI	**Veliai**	**1.43**	**68**	*e*Pn	**Pn**	**08 38 35.3**	**-0.5**
VLX	**Vlachokerasia**	**1.47**	**36**	*e*PN	**Pn**	**08 38 36.0**	**-0.4**
VLX	**Vlachokerasia**	**1.47**	**36**	P	**Pn**	**08 38 36.1**	**-0.3**
VLX				S	**Sn**	**08 38 54.3**	**-1.5**
VLX	**Vlachokerasia**	**1.47**	**36**	P	**Pn**	**08 38 36.1**	**-0.3**
VLX				S	**Sn**	**08 38 54.3**	**-1.5**
RLS	**Riolos of Patr**	**1.88**	**4**	*e*PB	**Pb**	**08 38 43.0**	**-1.1**
RLS	**Riolos of Patr**	**1.88**	**4**	*e*Pb	**Pb**	**08 38 43.0**	**-1.1**
GUR	**Goura**	**1.94**	**25**	*e*PB	**Pn**	**08 38 43.5**	**+0.7**
GUR	**Goura**	**1.94**	**25**	P	**Pn**	**08 38 43.3**	**+0.5**
GUR	**Goura**	**1.94**	**25**	P	**Pn**	**08 38 43.3**	**+0.5**
LAKA	**Lakka**	**2.13**	**15**	P	**Pn**	**08 38 46.4**	**+1.0**
LAKA	**Lakka**	**2.13**	**15**	P	**Pn**	**08 38 46.4**	**+1.0**
LTK	**Loutraki**	**2.27**	**36**	*e*PB	**Pn**	**08 38 48.2**	**+0.8**
KARN	**Karanos**	**2.28**	**109**	P	**Pn**	**08 38 46.4**	**-1.0**
KARN	**Karanos**	**2.28**	**109**	P	**Pn**	**08 38 46.4**	**-1.0**
KALE	**Kalithea**	**2.31**	**17**	P	**Pn**	**08 38 49.0**	**+1.2**
KALE	**Kalithea**	**2.31**	**17**	P	**Pn**	**08 38 49.0**	**+1.2**
VAM	**Vamos**	**2.49**	**107**	*e*PN	**Pn**	**08 38 50.5**	**+0.1**
VAM	**Vamos**	**2.49**	**107**	*e*Pn	**Pn**	**08 38 50.5**	**+0.1**
VLY	**Voula,Athens**	**2.61**	**50**	*e*PN	**Pn**	**08 38 52.1**	**+0.1**
VLY	**Voula,Athens**	**2.61**	**50**	*e*Pn	**Pn**	**08 38 52.1**	**+0.1**
EVR	**Evrytania**	**2.76**	**9**	*e*PN	**Pn**	**08 38 56.0**	**+1.9**
EVR	**Evrytania**	**2.76**	**9**	*e*Pn	**Pn**	**08 38 56.0**	**+1.9**
AGG	**Agios Georgios**	**2.95**	**16**	*e*PN	**Pn**	**08 38 57.5**	**+0.8**
AGG	**Agios Georgios**	**2.95**	**16**	P	**Pn**	**08 38 57.6**	**+0.9**
AGG	**Agios Georgios**	**2.95**	**16**	*e*Pn	**Pn**	**08 38 57.5**	**+0.8**
THL	**Klokotos Trika**	**3.42**	**9**	*e*PN	**Pn**	**08 39 03.9**	**+0.7**
THL	**Klokotos Trika**	**3.42**	**9**	P	**Pn**	**08 39 03.9**	**+0.7**
THL	**Klokotos Trika**	**3.42**	**9**	P	**Pn**	**08 39 03.9**	**+0.7**
STON	**Ston**	**7.23**	**339**	*e*Pn	**Pn**	**08 39 53.8**	**-1.6**
STON				Sn	**Sn**	**08 41 08.9**	**-8.7**
STON	**Ston**	**7.23**	**339**	*e*Pn	**Pn**	**08 39 53.8**	**-1.7**
NVLJ	**Novalja**	**9.69**	**332**	*e*Pn	**Pn**	**08 40 28.2**	**-1.1**
NVLJ				Sn	**Sn**	**08 42 09.6**	**-8.6**
NVLJ	**Novalja**	**9.69**	**332**	*e*Pn	**Pn**	**08 40 28.2**	**-1.0**

*CSEM **31** 08:39:25.4±0.2, 37°.22N×28°.21E, h8km, MD2.6, Error ellipse: s-maj=4.2km s-min=3.1km az=19.0*

DDA 31 08:39:25.3, 37°.22N×28°.19E, h13km±4km, Md2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**138**	PG	Pg	08 39 27.8	-0.7
YER				SG	Sg	08 39 30.4	-0.3
YER	**Yerkesik**	**0.11**	**138**	*i* Pg	Pg	08 39 27.8	-0.7
YER				*i* Sg	Sg	08 39 30.4	-0.3
MLSB	**Milas**	**0.34**	**283**	*e*PG	Pg	08 39 31.6	-0.6
MLSB	**Milas**	**0.34**	**283**	*e*Pg	Pg	08 39 31.6	-0.6
TURN	**Turunc**	**0

MKZ				*i* S	Sn	09 08 38.5	+0.2
TUMR	**Tumrok**	**3.30**	**15**	P	Pn	09 08 09.9	+4.0
KMNR	**Kamenistaya**	**3.77**	**14**	*e*P	Pn	09 08 15.5	+3.2
CIRR	**Tsirk**	**4.20**	**16**	*e*P	Pn	09 08 22.0	+3.9
SRDR	**Sredinnyy**	**4.26**	**8**	*e*P	Pn	09 08 20.9	+1.9
SMKR	**Semkarok**	**4.78**	**19**	P	Pn	09 08 29.9	+3.9
KBTR	**Krutoberegovo**	**4.78**	**29**	*e*P	Pn	09 08 27.6	+1.5

*IDC **31** 09:11:28.3±2.2,21.08S×168.63E, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/14, mbtmp4.1/5, MS3.3/2, Ms1 3.3/2, ms1mx2.9/21, Error ellipse: s-maj=93.0km s-min=33.0km az=154.0*
*ISCJB **31** 09:11:32.1±3.1,20.4S±0.2×168.3E±0.2, h28km±24km, mb4.0/4, MS3.2/2, Error ellipse: s-maj=41.7km s-min=10.6km az=37.8*
*NOU **31** 09:11:32.0±0.9,20.28S×168.42E, h30km, MD2.8, ML3.4*

ISC 31 09:11:32.0±3.1,20.6S±0.2×168.4E±0.2, h16km±21km, n13, σ0.76/14, mb4.0/4, MS3.2/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.14**	**222**	*e*S	**Sn**	**09 12 33.1**	**0.0**
DZM	**Mont Dzumac**	**2.38**	**231**	*e*P	**Pn**	**09 12 10.1**	**-0.3**
DZM				*e*S	**Sn**	**09 12 38.9**	**-0.3**
DZM				AMP		09 12 53.0	
	comp=Z,2μm,1.5s						
LASL	**Noumea**	**2.42**	**227**	*e*P	**Pn**	**09 12 11.3**	**+0.4**
NORM	**Noumea**	**2.46**	**228**	*e*P	**Pn**	**09 12 11.2**	**-0.2**
NOUC	**Port Laguerre**	**2.50**	**232**	*e*P	**Pn**	**09 12 12.3**	**+0.2**
NOUC				*e*S	**Sn**	**09 12 42.9**	**+0.7**
NOUC				AMP		09 12 57.3	
	comp=Z,63nm,1.7s						
MVNO	**Noumea**	**2.51**	**228**	*e*P	**Pn**	**09 12 12.9**	**+0.8**
MVNO				*e*S	**Sn**	**09 12 42.3**	**-0.1**
AFI	**Afiamalu**	**20.01**	**74**	LR	LR	09 22 03.4	
	comp=Z,81nm,20.3s,MS3.1,baz=163,slow=32						
CTA	**Charters Tower**	**20.81**	**267**	P	**P**	**09 16 12.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=80,slow=11,SNR=2.1						
STKA	**Stephens Creek**	**26.51**	**239**	P	**P**	**09 17 06.8**	**-2.1**
	comp=Z,1.7nm,0.7s,mb3.7,baz=91,slow=10.0,SNR=4.4						
ASAR	**Alice Springs**	**32.10**	**258**	P	**P**	**09 17 58.1**	**-0.4**
	comp=Z,3.0nm,0.7s,mb4.2,baz=84,slow=9.0,SNR=9.8						
GUMO	**Guam**	**41.11**	**324**	LR	LR	09 33 01.0	
	comp=Z,42nm,20.0s,MS3.3,baz=270,slow=31						
CMAR	**Chiang Mai Arr**	**78.37**	**295**	P	**P**	**09 23 33.8**	**+1.6**
	comp=Z,1.5nm,0.3s,mb4.4,baz=124,slow=4.4,SNR=4.2						
NVAR	**Mina Array Bea**	**90.24**	**49**	P	**P**	**09 24 31.9**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.9,baz=236,slow=6.4,SNR=3.7						

*NEIC **31** 09:12:37.5±0.7,4.99S×144.72E, h35km, mb3.6/2, Error ellipse: s-maj=21.5km s-min=12.8km az=114.0*
*ISCJB **31** 09:12:41.9±2.5,4.98S±0.09×144.4E±0.1, h77km±22km, mb4.0/12, Error ellipse: s-maj=23.5km s-min=15.0km az=8.4*
*IDC **31** 09:12:47.7±5.1,5.12S×144.34E, h118km±45km, mb3.8/10, mb1 3.9/10, mb1mx3.7/16, mbtmp3.8/10, Error ellipse: s-maj=30.7km s-min=13.0km az=100.0*

ISC 31 09:12:46.7±2.2,5.09S±0.09×144.3E±0.2, h105km±19km, n23, σ0.90/19, mb4.0/11, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**8.88**	**187**	*e*P	**Pn**	**09 14 52.9**	**+0.7**
KAKA	**Kakadu**	**13.95**	**236**	*e*P	**Pn**	**09 15 58.2**	**-1.6**
	22nm,0.5s						
KAKA	**Kakadu**	**13.95**	**236**	*e*Pn	**Pn**	**09 15 57.9**	**-1.9**
	55nm,0.5s						
KAKA				*e*Sn	**Sn**	**09 18 23.1**	**-10**
WRAB	**Tennant Creek**	**17.65**	**212**	*e*P	**Pn**	**09 16 45.7**	**-0.3**
	2.6nm,1.7s						
KNA	**Kununurra**	**18.57**	**234**	*e*P	**P**	**09 16 56.6**	**+1.0**
	14nm,0.7s						
ASAR	**Alice Springs**	**21.01**	**207**	P	**P**	**09 17 22.1**	**+0.1**
	4.3nm,0.7s,mb3.9,baz=30,slow=14,SNR=20						
ASAR				S	**S**	**09 21 09.3**	**-0.9**
	1.3nm,1.1s,baz=23,slow=22,SNR=4.7						
FITZ	**Fitzroy Crossi**	**22.36**	**233**	P	**P**	**09 17 36.5**	**+0.2**
	1.6nm,0.6s,mb3.5,baz=54,slow=14,SNR=6.2						
KAPI	**Kappang**	**24.45**	**269**	*e*P	**P**	**09 17 56.8**	**+0.8**
	3.4nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**26.77**	**185**	P	**P**	**09 18 16.6**	**-0.2**
	0.9nm,0.5s,mb3.6,baz=343,slow=9.1,SNR=3.1						
CMAR	**Chiang Mai Arr**	**50.46**	**299**	P	**P**	**09 21 33.4**	**-0.7**
	1.3nm,0.3s,mb4.3,baz=119,slow=5.4,SNR=9.6						
LZH	**Lanzhou**	**55.79**	**321**	*e*P	**P**	**09 22 16.5**	**+3.5**
LZH				pP	pP	09 22 22.5	-16
LZH				sP	sP	09 22 24.0	-26
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
PETK	**Petropavlovsk-**	**59.08**	**9**	P	**P**	**09 22 34.0**	**-1.7**
	comp=Z,1.9nm,0.6s,mb4.3,baz=166,slow=8.7,SNR=4.2						
MKAR	**Makanchi Array**	**75.10**	**321**	P	**P**	**09 24 18.2**	**+1.1**
	comp=Z,0.3nm,0.3s,mb3.5,baz=107,slow=7.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**76.82**	**328**	P	**P**	**09 24 26.7**	**-0.2**
	comp=Z,1.3nm,0.6s,mb3.9,baz=99,slow=5.6,SNR=6.8						
ZALV	**Zalesovo Beam**	**76.82**	**328**	P	**P**	**09 24 26.7**	**-0.2**
BVAR	**Borovoye Array**	**84.46**	**324**	P	**P**	**09 25 07.9**	**+0.3**
	comp=Z,1.2nm,0.5s,mb4.0,baz=108,slow=4.8,SNR=7.5						
QSPA	**South Pole Qui**	**84.87**	**180**	P	**P**	**09 25 09.4**	**+0.2**
	comp=Z,1.8nm,0.5s,mb4.2,baz=30,slow=1.0,SNR=26						
YKA	**Yellowknife Ar**	**99.61**	**28**	P	Pdif	09 26 17.3	-0.9
	comp=Z,0.3nm,0.9s,baz=273,slow=5.1,SNR=4.7						
LPAZ	**La Paz**	**141.53**	**124**	PKP	PKPdf	09 32 03.8	-2.7
TORD	**Torodi Ar. Bea**	**142.26**	**285**	PKhKP		09 32 03.4	
	comp=Z,0.2nm,0.4s,baz=78,slow=3.4,SNR=5.4						
TORD				PKP	PKPdf	09 32 07.5	-0.4
	comp=Z,0.2nm,0.4s,baz=60,slow=3.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**142.26**	**285**	PKP	PKPdf	09 32 07.5	-0.4
CPUP	**Villa Florida**	**142.39**	**147**	PKP	PKPdf	09 32 04.5	-3.4
	comp=Z,0.4nm,0.5s,baz=41,slow=6.3,SNR=3.0						
DBIC	**Dimbokro**	**149.28**	**274**	PKPbc	PKPbc	09 32 24.6	+0.3
	comp=Z,3.3nm,0.9s,baz=187,slow=18,SNR=3.7						

*ISCJB **31** 09:14:39.3±0.6,37.23N±0.05×28.23E±0.05, h0km±18km, Error ellipse: s-maj=9.5km s-min=5.0km az=39.2*
*ISK **31** 09:14:39.0,37.25N×28.22E, h5km, MD2.7*
*CSEM **31** 09:14:39.6±0.1,37.23N×28.22E, h5km, MD2.7, Error ellipse: s-maj=2.1km s-min=1.4km az=28.0*
*DDA **31** 09:14:39.4,37.22N×28.20E, h7km±2km, Md2.8*

ISC 31 09:14:39.8±0.6,37.23N±0.05×28.22E±0.05, h4km±14km, n18, σ0.26/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**152**	*e*PG	**Pg**	**09 14 42.0**	**+0.1**
YER	**Yerkesik**	**0.10**	**152**	*e*Pg	**Pg**	**09 14 42.0**	**+0.1**
MLSB	**Milas**	**0.36**	**281**	*e*PG	**Pg**	**09 14 46.4**	**-0.4**
MLSB				*e*SG	**Sg**	**09 14 51.8**	**+0.3**
MLSB	**Milas**	**0.36**	**281**	*e*Pg	**Pg**	**09 14 46.4**	**-0.4**
MLSB				*e*Sg	**Sg**	**09 14 51.8**	**+0.3**
TURN	**Turunc**	**0.47**	**139**	*i* P	**Pg**	**09 14 48.4**	**-0.4**
TURN				*e*S	**Sg**	**09 14 54.9**	**0.0**
TURN	**Turunc**	**0.47**	**139**	*i* P	**Pg**	**09 14 48.4**	**-0.4**
TURN				*e*S	**Sg**	**09 14 54.8**	**0.0**
AYDN	**Tasoluk**	**0.51**	**328**	*i* P	**Pg**	**09 14 49.2**	**-0.5**
AYDN				*i* S	**Sg**	**09 14 56.6**	**+0.3**
AYDN	**Tasoluk**	**0.51**	**328**	*i* P	**Pg**	**09 14 49.2**	**-0.5**
AYDN				*i* S	**Sg**	**09 14 56.6**	**+0.3**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**09 14 52.1**	**-0.1**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**09 14 52.1**	**0.0**
DAT	**Datca**	**0.72**	**226**	*e*PG	**Pg**	**09 14 53.7**	**+0.1**
DAT	**Datca**	**0.72**	**226**	*e*Pg	**Pg**	**09 14 53.7**	**+0.2**
DNZL	**Cakiroluk**	**0.80**	**55**	*i* P	**Pg**	**09 14 55.3**	**+0.1**
DNZL	**Cakiroluk**	**0.80**	**55**	*i* P	**Pg**	**09 14 55.3**	**+0.1**
FETY	**Fethiye**	**0.91**	**130**	*e*PG	**Pg**	**09 14 57.5**	**+0.2**
FETY	**Fethiye**	**0.91**	**130**	*e*Pg	**Pg**	**09 14 57.5**	**+0.3**
ELL	**Elmali**	**1.43**	**109**	*e*PN	**Pn**	**09 15 06.6**	**0.0**
ELL	**Elmali**	**1.43**	**109**	*e*Pn	**Pn**	**09 15 06.6**	**+0.1**

CASC 31 09:19:53.2±2.2,11.36N×86.26W, h57km±17km, MD3.5, 5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.40**	**98**	*i* P	Pn	09 20 04.1	+0.3
APON	**Apoyo**	**0.58**	**19**	*e*P	Pn	09 20 06.6	+0.7
CRUN	**El Crucero**	**0.62**	**356**	*e*P	Pn	09 20 07.4	+1.0
CONN	**Concepcion**	**0.65**	**72**	*e*P	Pn	09 20 07.1	+0.4
TICN	**Ticuantepe**	**0.67**	**2**	*e*P	Pn	09 20 07.2	+0.3
MGAN	**Managua**	**0.78**	**1**	*e*P	Pn	09 20 08.3	0.0
XAVN	**Gruta Xavier**	**0.79**	**355**	*e*P	Pn	09 20 08.7	+0.3
XAVN				*e*S	Sn	09 20 20.4	+0.9
WILN	**Americas 2**	**0.80**	**5**	*e*P	Pn	09 20 08.5	-0.1
WILN				*e*S	Sn	09 20 20.5	+0.7
CSAN		**0.83**	**349**	*e*P	Pn	09 20 08.8	-0.2
APYN	**Apoyeque**	**0.87**	**354**	*e*P	Pn	09 20 09.6	+0.1
APYN				*e*S	Sn	09 20 23.4	+2.0
COPN	**Copaltepe**	**0.88**	**338**	*e*P	Pn	09 20 09.4	-0.1
COPN				*e*S	Sn	09 20 20.1	-1.5
GBS2	**Las Lilas**	**0.94**	**123**	*i* P	Pn	09 20 10.2	-0.2
GBS2				*i* S	Sn	09 20 24.2	+1.1
GBS3	**Finca Las Im¯¡**	**0.97**	**126**	*i* P	Pn	09 20 10.3	-0.5
HUEN		**0.98**	**5**	*i* P	Pn	09 20 10.9	+0.1
HUEN				*e*S	Sn	09 20 24.6	+0.7
GB1A	**Borinquen Arri**	**1.00**	**122**	*i* P	Pn	09 20 11.0	-0.1
LAPC	**Finca la Perla**	**1.00**	**126**	⇓*i*P	Pn	09 20 10.5	-0.6
LAPC				*i* S	Sn	09 20 25.3	+0.9
NY14	**Universidad de**	**1.00**	**135**	*i* P	Pn	09 20 11.6	+0.4
NY14				*i* S	Sn	09 20 25.9	+1.5
BUEV	**Buena Vista**	**1.00**	**124**	*i* P	Pn	09 20 10.9	-0.3
GPS3	**Bodega del ICE**	**1.06**	**124**	⇓*i*P	Pn	09 20 11.7	-0.3
GPS1	**Guardaparques**	**1.06**	**123**	⇓*i*P	Pn	09 20 11.8	-0.2
GPS1				*i* S	Sn	09 20 26.9	+1.0
GPS2	**Hotel Rinc¯‡n**	**1.07**	**124**	⇓*i*P	Pn	09 20 11.9	-0.2
MOMN	**Momotombo**	**1.08**	**345**	*e*P	Pn	09 20 12.6	+0.4
MOMN				*e*S	Sn	09 20 26.2	0.0
MIRN	**Miramar**	**1.16**	**338**	*e*P	Pn	09 20 13.2	-0.1
LIM1	**Limonal**	**1.19**	**124**	⇓*i*P	Pn	09 20 13.6	0.0
LIM1				*i* S	Sn	09 20 29.6	+0.8
GUAB	**Guayabo de Bag**	**1.20**	**123**	*i* P	Pn	09 20 13.7	-0.1
MESS	**Mesas**	**1.21**	**120**	*i* P	Pn	09 20 13.9	0.0
MESS				*i* S	Sn	09 20 31.4	+2.0
CNGN	**Cerro Negro**	**1.21**	**339**	*e*P	Pn	09 20 13.6	-0.4
CNGN				*e*S	Sn	09 20 29.2	-0.3
COLC	**Colonia**	**1.24**	**124**	*i* P	Pn	09 20 14.3	0.0
COLC				*i* S	Sn	09 20 31.8	+1.6
VCR	**Vista de Mar**	**1.37**	**153**	*e*P	Pn	09 20 15.4	-0.7
AMAS	**Alto Masis**	**1.45**	**121**	*i* P	Pn	09 20 17.4	+0.3
AMAS				*i* S	Sn	09 20 36.2	+1.2
CHPA	**Chiripa**	**1.61**	**124**	*i* P	Pn	09 20 19.2	0.0
JCR	**Jicaral**	**1.88**	**143**	*e*P	Pn	09 20 22.5	-0.4
JCR				*e*S	Sn	09 20 46.2	+0.8
CGA2	**Cerro Gallo 2**	**2.21**	**127**	*e*P	Pn	09 20 27.8	+0.3
LAJ	**Bijagual**	**2.57**	**125**	*e*P	Pn	09 20 30.1	-2.4
URSC	**Urasca**	**2.87**	**122**	*e*P	Pn	09 20 37.5	+1.0
BUS	**Buena Vista**	**3.04**	**126**	*e*P	Pn	09 20 40.4	+1.5
BAR1		**3.58**	**126**	*e*P	Pn	09 20 48.0	+1.7
BAR1				*e*S	Sn	09 21 27.8	+0.4
ACR	**Cerro Adams**	**4.06**	**131**	*e*P	Pn	09 20 54.0	+1.1
ACR				*e*S	Sn	09 21 35.7	-3.4

IDC 31 09:32:19.7±1.8,1.74S×152.13E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=112.5km s-min=31.3km az=114.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.12**	**197**	P	Pn	09 36 43.8	-1.3
	0.6nm,0.3s,baz=30,slow=14,SNR=11						
ASAR	**Alice Springs**	**28.05**	**218**	P	P	09 38 13.7	+0.7
	0.8nm,0.4s,baz=51,slow=8.5,SNR=27						
YKA	**Yellowknife Ar**	**93.05**	**28**	P	P	09 45 35.6	+0.5
	0.3nm,0.7s,baz=264,slow=5.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**148.62**	**293**	PKPbc	PKPbc	09 52 08.7	-1.3
	0.6nm,0.4s,baz=63,slow=1.6,SNR=20						

*IDC **31** 10:08:50.5±9.1, 19.02N×108.54W, h0km, mb3.4/4, mb1 3.8/6, mb1mx3.7/21, mbtmp3.5/6, ML3.0/2, MS3.0/5, Ms1 3.0/5, ms1mx2.8/23, Error ellipse: s-maj=135.3km s-min=73.5km az=163.0*
*NEIC **31** 10:08:52.6±1.0, 18.98N×108.75W, h10km, mb3.8/20, Error ellipse: s-maj=15.9km s-min=8.3km az=34.0*
*ISCJB **31** 10:08:57.4±0.9, 19.32N±0.08×108.68W±0.06, h33km, mb3.8/14, MS2.8/2, Error ellipse: s-maj=11.4km s-min=7.6km az=3.0*

ISC 31 10:08:57.8±0.8,19.18N±0.07×108.71W±0.05, h35km, n211, σ0.82/208, mb3.8/14, MS2.8/2, 94C-80D, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**11.10**	**23**	Pn	**Pn**	**10 11 32.4**	**-1.7**
	0.1nm,0.3s,baz=198,slow=15,SNR=16						
626A	**Big Bend Ranch**	**11.14**	**21**	⇑P	**Pn**	**10 11 36.0**	**+1.4**
	baz=11						
627A	**Terlingua Ranc**	**11.32**	**24**	⇓P	**Pn**	**10 11 38.7**	**+1.7**
	baz=12						
628A	**Black Gap, Mar**	**11.55**	**26**	⇓P	**Pn**	**10 11 42.1**	**+1.9**
	baz=12						
526A	**Mary Lane Ranc**	**11.62**	**20**	⇑P	**Pn**	**10 11 42.3**	**+1.1**
	baz=12						
527A	**Woodward Ranch**	**11.86**	**22**	⇑P	**Pn**	**10 11 45.6**	**+1.2**
	baz=12						
320A	**Kipp Ranch, An**	**12.11**	**1**	⇑P	**Pn**	**10 11 47.7**	**-0.1**
	baz=12,SNR=5.8						
319A	**Douglas**	**12.15**	**358**	⇑P	**Pn**	**10 11 48.3**	**-0.1**
	baz=12,SNR=7.6						
318A	**Bisbee**	**12.26**	**355**	⇑P	**Pn**	**10 11 50.5**	**+0.6**
	baz=12,SNR=7.7						
220A	**Playas Peak, P**	**12.67**	**1**	⇑P	**Pn**	**10 11 56.1**	**+0.6**
	baz=13,SNR=11						
217A	**Green Valley**	**12.69**	**352**	⇑P	**Pn**	**10 11 55.9**	**+0.2**
	baz=13,SNR=7.9						
219A	**White Tail Can**	**12.78**	**358**	⇓P	**Pn**	**10 11 57.3**	**+0.4**
	baz=13,SNR=10						
MNTX	**Cornudas Mount**	**12.82**	**13**	*e*Pn	**Pn**	**10 11 59.3**	**+1.7**
KVTX	**Kingsville**	**12.96**	**48**	*e*Pn	**Pn**	**10 11 58.7**	**-0.8**
	21nm,0.5s						
216A	**Three Points,**	**13.01**	**350**	⇓P	**Pn**	**10 12 00.2**	**+0.1**
	baz=13						
224A	**Corundas Mount**	**13.16**	**12**	⇑P	**Pn**	**10 12 02.8**	**+0.7**
	baz=13						
TUC	**Tucson**	**13.21**	**352**	*e*Pn	**Pn**	**10 12 03.4**	**+0.6**
	4.8nm,1.1s						
214A	**Organ Pipe Nat**	**13.25**	**345**	⇑P	**Pn**	**10 12 03.2**	**-0.2**
	baz=14						
CMIG	**Matias Romero**	**13.31**	**97**	LR	LR	10 17 12.3	
	comp=Z,103nm,18.1s,baz=93,slow=38						
120A	**U Bar Ranch, L**	**13.31**	**0**	⇓P	**Pn**	**10 12 04.2**	**0.0**
	baz=14,SNR=8.0						
121A	**Cookes Peak, D**	**13.32**	**3**	⇓P	**Pn**	**10 12 04.8**	**+0.3**
	baz=14						
118A	**Homack Ranch,**	**13.45**	**355**	⇓P	**Pn**	**10 12 06.3**	**+0.1**
	baz=14						
117A	**Oracle**	**13.46**	**353**	⇓P	**Pn**	**10 12 06.7**	**+0.4**
	baz=14						
119A	**Ashpeak Ranch,**	**13.54**	**358**	⇓P	**Pn**	**10 12 07.5**	**+0.1**
	baz=14						
116A	**Eloy**	**13.60**	**349**	⇑P	**Pn**	**10 12 07.0**	**-1.2**
	baz=14						
124A	**Stringfield Ra**	**13.78**	**12**	⇓P	**Pn**	**10 12 08.2**	**-2.4**
	baz=14						
JCT	**Junction City**	**13.85**	**34**	*e*Pn	**Pn**	**10 12 11.2**	**-0.4**
Z17A	**San Carlos Hig**	**14.15**	**354**	⇓P	**Pn**	**10 12 14.8**	**-0.9**
	baz=14						
112A	**Yuma**	**14.31**	**340**	⇓P	**Pn**	**10 12 16.4**	**-1.5**
	baz=14						
Z25A	**Roswell**	**14.49**	**13**	⇑P	**Pn**	**10 12 19.2**	**-1.1**
	baz=15						
Y17A	**Roosevelt**	**14.58**	**353**	⇓P	**Pn**	**10 12 20.7**	**-0.9**
	baz=15,SNR=6.6						
Y20A	**Horse Springs,**	**14.67**	**1**	⇑P	**Pn**	**10 12 22.5**	**-0.4**
	baz=15						
Y21A	**Point of Rocks**	**14.80**	**3**	⇑P	**Pn**	**10 12 22.8**	**-1.7**
	baz=15						
Y16A	**Circle Bar Ran**	**14.85**	**351**	⇑P	**Pn**	**10 12 23.7**	**-1.5**
	baz=15,SNR=5.4						
Y23A	**Lovelace Mesa,**	**14.88**	**9**	⇑P	**Pn**	**10 12 25.3**	**-0.4**
	baz=15						
Z27A	**Tatum**	**14.91**	**18**	⇓P	**Pn**	**10 12 26.6**	**+0.6**
	baz=15						
BNM	**Barren Site**	**15.03**	**7**	*e*Pn	**Pn**	**10 12 28.1**	**+0.6**
	2.6nm,1.1s						
Y15A	**Casa Rosa Ranc**	**15.06**	**348**	⇑P	**Pn**	**10 12 27.0**	**-1.0**
	baz=15						
X17A	**Forest Lakes**	**15.21**	**353**	⇑P	**Pn**	**10 12 28.6**	**-1.4**
	baz=16						
BAR	**Barrett**	**15.22**	**334**	*e*Pn	**Pn**	**10 12 28.5**	**-1.6**
	2.1nm,0.7s						
X21A	**Alamocita Cree**	**15.23**	**3**	⇑P	**Pn**	**10 12 30.3**	**+0.1**
	baz=16,SNR=9.0						
Y13A	**Salome**	**15.27**	**344**	⇓P	**Pn**	**10 12 30.1**	**-0.7**
	baz=16						
X20A	**Quemado**	**15.30**	**1**	⇑P	**Pn**	**10 12 31.4**	**+0.2**
	baz=16,SNR=5.1						
X18A	**Snowflake**	**15.33**	**356**	⇓P	**Pn**	**10 12 30.9**	**-0.6**
	baz=16,SNR=9.0						
X16A	**Lo Mia Camp, P**	**15.37**	**351**	⇑P	**Pn**	**10 12 30.8**	**-1.3**
	baz=16						
Y12C	**Blythe**	**15.41**	**341**	⇑P	**Pn**	**10 12 31.1**	**-1.4**
	baz=16						
Y27A	**Causey**	**15.46**	**18**	⇓P	**Pn**	**10 12 34.3**	**+1.2**
	baz=16						
X15A	**Humboldt**	**15.56**	**349**	⇑P	**Pn**	**10 12 34.5**	**-0.1**
	baz=16,SNR=9.1						
BC3	**Big Chuckw Mtn**	**15.62**	**339**	⇑P	**Pn**	**10 12 33.8**	**-1.5**
	baz=16,SNR=5.1						
PDMCI	**Parker Dam,Lak**	**15.82**	**343**	⇑P	**Pn**	**10 12 37.6**	**-0.2**
	baz=16						
ANMO	**Albuquerque**	**15.84**	**7**	Pn	**Pn**	**10 12 37.9**	**-0.2**
	0.0nm,0.3s,baz=188,slow=11,SNR=3.2						
ANMO				LR	LR	10 19 36.7	
	comp=Z,40nm,20.8s,baz=184,slow=40						
IRM	**Iron Mountain**	**15.98**	**340**	⇓P	**Pn**	**10 12 38.4**	**-1.6**
	baz=16						
X13A	**Yucca**	**16.01**	**345**	⇑P	**Pn**	**10 12 39.2**	**-1.1**
	baz=16						
W23A	**Werner Place,**	**16.08**	**8**	⇑P	**Pn**	**10 12 40.9**	**-0.3**
	baz=16						
BELC	**Belle Mtn.**	**16.13**	**338**	⇓P	**Pn**	**10 12 42.7**	**+0.9**
	baz=16,SNR=5.4						
W24A	**Lazy 6 Ranch,**	**16.23**	**10**	⇑P	**Pn**	**10 12 43.8**	**+0.7**
	baz=16						
W15A	**Williams**	**16.25**	**350**	⇓P	**Pn**	**10 12 43.6**	**+0.3**
	baz=16						
W14A	**Seligman**	**16.43**	**347**	⇑P	**Pn**	**10 12 45.1**	**-0.6**
	baz=17						
WUAZ	**Wupatki**	**16.44**	**352**	⇓P	**Pn**	**10 12 46.2**	**+0.4**
	baz=17,SNR=5.3						
V17A	**Tonalea, Kykot**	**16.48**	**354**	⇑P	**Pn**	**10 12 45.1**	**-1.2**
	baz=17						
V18A	**Ganado**	**16.50**	**356**	⇑P	**Pn**	**10 12 45.4**	**-1.2**
	baz=17						
V20A	**Brimhall**	**16.56**	**1**	⇑P	**Pn**	**10 12 47.5**	**+0.3**
	baz=17						
GMRC	**Granite Mounta**	**16.72**	**340**	⇓P	**Pn**	**10 12 49.4**	**+0.1**
	baz=17,SNR=5.1						
V14A	**Boquillas Ranc**	**16.84**	**348**	⇑P	**Pn**	**10 12 51.2**	**+0.3**
	baz=17						
V15A	**Kaibab Nationa**	**16.86**	**350**	⇓P	**Pn**	**10 12 51.1**	**+0.1**
	baz=17,SNR=7.0						
W12A	**Cal Nev Ari**	**16.96**	**342**	⇓P	**Pn**	**10 12 52.5**	**+0.1**
	baz=17						
V25A	**Rancho No Teng**	**16.98**	**11**	⇑P	**Pn**	**10 12 52.8**	**+0.2**
	baz=17						
U19A	**Dine' College,**	**17.05**	**359**	⇑P	**Pn**	**10 12 53.7**	**+0.2**
	baz=17,SNR=6.5						
V26A	**Tequesquite Ra**	**17.11**	**14**	⇓P	**Pn**	**10 12 54.9**	**+0.7**
	baz=17						
U18A	**Rough Rock, Ch**	**17.21**	**357**	⇓P	**Pn**	**10 12 54.9**	**-0.5**
	baz=18						
V13A	**Grand Canyon W**	**17.25**	**345**	⇓P	**Pn**	**10 12 56.2**	**+0.3**
	baz=18,SNR=6.5						
V12A	**Nelson**	**17.35**	**343**	⇑P	**Pn**	**10 12 57.3**	**+0.1**
	baz=18,SNR=8.3						
TUQ	**Turquoise Moun**	**17.41**	**340**	⇓P	**Pn**	**10 12 57.9**	**+0.1**
	baz=18						
U15A	**North Rim**	**17.47**	**350**	⇓P	**Pn**	**10 12 58.5**	**-0.1**
	baz=18						
GSC	**Goldstone**	**17.59**	**338**	⇑P	**Pn**	**10 13 00.8**	**+0.7**
	baz=18						
T19A	**Beclabito**	**17.59**	**359**	⇓P	**Pn**	**10 13 00.4**	**+0.3**
	baz=18						
U14A	**Mt Trumbull**	**17.62**	**348**	⇑P	**Pn**	**10 13 00.4**	**-0.1**
	baz=18,SNR=7.2						
V11A	**Goodsprings**	**17.62**	**342**	⇓P	**Pn**	**10 13 01.1**	**+0.5**
	baz=18						
BSC	**Santa Cruz Isl**	**17.68**	**329**	⇓P	**Pn**	**10 13 02.9

P19A	Cripple Cowboy baz=21	20.39 359	⇓P	P	10 13 31.5 0.0
P18A	Preston Nutter baz=21,SNR=8.1	20.42 357	⇑P	P	10 13 32.8 +0.9
Q12A	Willow Creek R baz=21	20.49 346	⇑P	P	10 13 33.4 +0.8
Q11A	Duckwater baz=21	20.50 344	⇑P	P	10 13 33.7 +0.9
P16A	Fountain Green baz=21	20.52 353	⇑P	P	10 13 34.5 +1.5
Q10A	Clear Creek Ra baz=21	20.68 343	⇓P	P	10 13 35.5 +0.8
P14A	Drum Mountains baz=21,SNR=6.7	20.69 350	⇑P	P	10 13 35.9 +1.1
P13A	Bates Ranch, G baz=21	20.72 348	⇓P	P	10 13 35.4 +0.3
O20A	White River Ci baz=21,SNR=6.0	20.89 1	⇑P	P	10 13 37.5 +0.5
NVAR	Mina Array Bea 3.0nm,0.9s,baz=173,slow=14,SNR=13	20.92 338	P	P	10 13 36.6 -0.7
P12A	McGill baz=21	20.92 346	⇓P	P	10 13 37.6 +0.3
O17A	Robinson Place baz=21,SNR=5.2	21.02 356	⇑P	P	10 13 39.0 +0.7
O18A	Roosevelt baz=21,SNR=5.3	21.05 357	⇓P	P	10 13 39.5 +0.8
O19A	Miners Draw (B baz=21	21.05 359	⇑P	P	10 13 39.4 +0.7
TGUH	Tegucigalpa,Un 5.7nm,0.6s,mb4.1	21.16 101	eP	P	10 13 37.5 -2.5
DUG	Dugway baz=22	21.24 351	⇑P	P	10 13 41.6 +0.8
DUG	Dugway 7.9nm,1.3s,mb3.9	21.24 351	eP	P	10 13 41.2 +0.5
DAU	Daniels Canyon 4.3nm,0.9s,mb3.8	21.27 355	eP	P	10 13 41.4 +0.3
N21A	Black Mountain baz=22,SNR=5.2	21.53 2	⇑P	P	10 13 44.8 +1.0
N20A	Spence Gulch, baz=22,SNR=11	21.59 1	⇑P	P	10 13 45.2 +0.7
N19A	John Jarvie Ra baz=22	21.65 359	⇓P	P	10 13 45.5 +0.4
O12A	Currie baz=22	21.65 347	⇑P	P	10 13 45.5 +0.3
O11A	Cowboy Ranch, baz=22	21.72 345	⇓P	P	10 13 46.1 +0.2
N18A	Larsen Ranch, baz=22	21.74 358	⇑P	P	10 13 45.8 -0.3
ELK	Elko 1.5nm,0.8s,mb3.5,baz=165,slow=8.6,SNR=7.5	22.21 347 P		P	10 13 51.2 +0.1
ELK	Elko	22.21 347 P		P	10 13 51.2 0.0
WCN	Washoe City baz=22	22.21 337	⇑P	P	10 13 52.1 +0.9
M15A	Larsen Ranch, baz=23,SNR=6.2	22.44 353	⇓P	P	10 13 55.6 +2.1
HWUT	Hardware Ranch 3.9nm,1.1s,mb3.8	22.49 354	eP	P	10 13 54.2 +0.2
M13A	Montello baz=23	22.59 349	⇑P	P	10 13 56.1 +0.9
M14A	Sheep Mountain baz=23	22.60 351	⇓P	P	10 13 56.1 +0.9
L18A	Fontenelle, Gr baz=23	22.70 357	⇓P	P	10 13 56.6 +0.3
L21A	Rawlins baz=23	22.74 3	⇓P	P	10 13 57.2 +0.4
L20A	Wamsutter baz=23	22.76 1	⇑P	P	10 13 57.2 +0.3
M12A	Wells baz=23,SNR=5.1	22.79 348	⇑P	P	10 13 57.8 +0.6
L16A	Fish Haven baz=23	22.88 355	⇑P	P	10 13 58.1 -0.1
L17A	Cokeville baz=23	22.92 356	⇓P	P	10 13 58.1 -0.6
BEKR	Beckwourth baz=23	22.93 336	⇑P	P	10 13 59.4 +0.6
L15A	Malad City baz=23	22.97 353	⇑P	P	10 13 59.0 -0.1
M11A	Holland Ranch, baz=23	22.99 346	⇓P	P	10 13 59.6 +0.3
L14A	Malta baz=23,SNR=9.9	23.11 351	⇓P	P	10 14 00.9 +0.3
M10A	I.L. Ranch, Tu baz=24	23.25 345	⇑P	P	10 14 00.8 -1.3
L13A	Double Diamond baz=24	23.27 350	⇓P	P	10 14 02.4 +0.1
K20A	Yellowstone Ra baz=24	23.41 1	⇓P	P	10 14 02.2 -1.5
K18A	Toltan Ranch, baz=24	23.41 358	⇓P	P	10 14 02.2 -1.6
L12A	House Creek Ra baz=24	23.51 348	⇑P	P	10 14 03.8 -0.9
PDAR	Pinedale Array 0.9nm,0.8s,mb3.3,baz=160,slow=8.3,SNR=8.9	23.52 358 P		P	10 14 04.2 -0.6
K15A	Arbon baz=24	23.66 353	⇑P	P	10 14 06.2 +0.2
K16A	Soda Springs baz=24	23.70 355	⇓P	P	10 14 06.6 +0.2
K13A	Stover Farm, H baz=24	23.84 350	⇑P	P	10 14 07.6 0.0
J18A	Kendall Valley baz=24,SNR=6.7	23.98 358 P		P	10 14 09.4 +0.4
J17A	Brown Place, J baz=24	24.17 356	⇑P	P	10 14 11.3 +0.7
TPAW	Teton Pass 3.4nm,0.8s,mb3.8	24.31 356	eP	P	10 14 13.2 +1.3
K11A	Parker Ranch, baz=25	24.32 347	⇓P	P	10 14 12.2 +0.2
J15A	Blackfoot baz=25	24.35 353	⇓P	P	10 14 11.6 -0.8
J14A	Carey baz=25	24.41 351	⇑P	P	10 14 13.0 +0.1
LOHW	Long Hollow 9.2nm,1.5s,mb4.0	24.41 357	eP	P	10 14 12.1 -0.8
K10A	MacKenzie Ranc baz=25	24.52 345	⇓P	P	10 14 12.9 -1.0
J13A	Cove Ranch, Pi baz=25	24.58 350	⇑P	P	10 14 14.0 -0.4
J12A	Stokes Ranch, baz=25	24.59 349	⇓P	P	10 14 14.7 +0.1
MOD	Modoc 2.4nm,1.0s,mb3.7	24.70 339	eP	P	10 14 16.0 +0.4
IMW	Indian Meadow 4.4nm,1.1s,mb3.9	24.71 356	eP	P	10 14 14.8 -0.8
I16A	Newdale baz=25	24.73 355	⇑P	P	10 14 16.1 +0.3
HLID	Hailey baz=25,SNR=7.6	24.78 350 P		P	10 14 17.4 +1.1
HLID	Hailey 2.3nm,0.9s,mb3.7	24.78 350	eP	P	10 14 17.2 +1.0
I15A	Monteview baz=25	24.95 354	⇑P	P	10 14 18.0 +0.2
I14A	Mackay baz=25,SNR=5.0	24.99 352	⇑P	P	10 14 19.0 +0.8
I13A	Wildhorse Cree baz=25,SNR=11	25.08 351	⇑P	P	10 14 19.6 +0.7
I12A	Atlanta baz=25	25.13 349	⇓P	P	10 14 20.3 +0.9
J09A	Fry Pan Ranch, baz=26	25.27 344	⇑P	P	10 14 21.0 +0.3
I11A	Placerville baz=26	25.40 348	⇑P	P	10 14 22.1 +0.3
YBH	Yreka Blue Hor comp=Z,49nm,19.9s,MS3.0,baz=163,slow=36	25.45 335 LR		LR	10 24 05.2
J08A	Circle Bar Ran baz=26	25.47 343	⇑P	P	10 14 22.6 +0.1
H16A	Russell Place, baz=26,SNR=5.4	25.54 356	⇓P	P	10 14 23.7 +0.5
K05A	Summer Lake baz=26	25.64 339	⇑P	P	10 14 24.6 +0.5
H14A	Leadore baz=26	25.66 352	⇓P	P	10 14 24.5 +0.3
H13A	Challis baz=26	25.73 351	⇓P	P	10 14 25.3 +0.4
MCMT	McKenzie Canyo 1.8nm,1.2s,mb3.5	25.81 353	eP	P	10 14 26.9 +1.4
H12A	Diamond D Ranc baz=26	25.81 350	⇑P	P	10 14 26.6 +1.0
G18A	Lazy EL Ranch, baz=26,SNR=5.7	26.07 359	⇑P	P	10 14 28.5 +0.5
H11A	Donnelly baz=26	26.17 348	⇑P	P	10 14 28.6 -0.2
H10A	Noah's Angus R baz=26,SNR=6.0	26.21 347	⇓P	P	10 14 28.4 -0.8
F12A	Elk City baz=27	27.05 350	⇑P	P	10 14 36.8 0.0
F11A	Grangeville baz=28	27.34 349	⇓P	P	10 14 38.8 -0.5
E16A	East Helena	27.39 356	⇓P	P	10 14 40.6 +0.8
D14A	Greenough baz=28	28.11 353	⇑P	P	10 14 46.3 +0.1
CBYP	Canovanas 25nm,1.1s,mb4.8	40.52 84	eP	P	10 16 33.6 -0.2
YKA	Yellowknife Ar 0.6nm,0.8s,mb3.4,baz=168,slow=8.3,SNR=9.7	43.47 356 P		P	10 16 56.5 -0.7
YKA			LR	LR	10 35 36.9
	comp=Z,6.0nm,20.0s,MS2.5,baz=190,slow=37				
YKA	Yellowknife Ar	43.47 356 P		P	10 16 56.5 -0.7
YKA			LR	LR	10 35 36.9

MEX 31 10:12:08.7±0.6, 16°.12N×90°.53W, h20km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CCIG	Comitan	1.56	276	i P			Pn	10 12 32.2	-3.0
CCIG				i S			Sn	10 12 51.3	-3.5
THIG		2.07	234	i P			Pn	10 12 39.3	-3.0
THIG				i S			Sn	10 13 04.9	-2.5
SCX	San Cristobal	2.11	287	i P			Pn	10 12 41.3	-1.6
SCX				i S			Sn	10 13 04.7	-3.9
TGIG		2.58	285	eP			Pn	10 12 47.9	-1.3
TGIG				i S			Sn	10 13 15.6	-4.5
PCIG		2.62	261	i P			Pn	10 12 46.7	-3.2
PCIG				i S			Sn	10 13 17.3	-4.0

*NEIC **31** 10:22:02.8, 18°.80N×70°.11W, h142km, MD4.0(RSPR), After RSPR.*

RSPR 31 10:22:02.8, 18°.80N×70°.11W, h142km±3km, MD4.0/4, MD4.0/4, 2C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.13	279	⇓eP			Pn	10 22 27.4	-0.6
SDDR				eS			Sn	10 22 46.3	-0.9
PCDR	Punta Cana, DR	1.66	100	⇓eP			Pn	10 22 34.9	+1.3
PCDR	Punta Cana, DR	1.66	100	eS			Sn	10 22 59.4	+2.3
CRPR	Cabo Rojo, PR	2.96	105	⇓eP			Pn	10 22 49.6	+0.3
AOPR	Arecibo Observ	3.21	98	⇑eP			Pn	10 22 53.4	+0.8
AOPR				eS			Sn	10 23 31.7	+0.5
CPD	Cerro la Pandu	4.05	100	⇑eP			Pn	10 23 04.5	+1.0
HUMP	Col San Antoni	4.10	99	⇓eP			Pn	10 23 04.6	+0.5
MTP	Monte Pirata	4.38	98	⇓eP			Pn	10 23 08.3	+0.4

*DJA **31** 10:27:17, 0°.69N×99°.18E, h65km, MLv3.5/4*

IDC 31 10:27:00.1±1.9, 0°.21S×98°.13E, h0km, mb4.0/4, mb1 4.0/6, mb1mx3.6/23, mbtmp3.9/6, ML3.9/2, Error ellipse: s-maj=68.8km s-min=26.6km az=65.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSI	Prapat 12nm,0.3s,baz=186,slow=10,SNR=46	3.09	15	Pn			Pn	10 27 49.8	-0.4
PSI				Sn			Sn	10 28 10.2	-18
CMAR	Chiang Mai Arr 6.0nm,0.3s,baz=167,slow=9.9,SNR=9.5	18.56	2	P			Pn	10 31 17.2	-1.6
ASAR	Alice Springs 0.2nm,0.3s,baz=196,slow=12,SNR=5.1	41.81	126	P			P	10 34 51.7	-0.2
MKAR	Makanchi Array 0.6nm,0.6s,baz=298,slow=7.2,SNR=5.5	48.82	346	P			P	10 35 47.7	+0.5
ZALV	Zalesovo Beam 0.6nm,0.3s,baz=152,slow=8.0,SNR=5.8	55.09	350	P			P	10 36 33.2	-0.5
	1.1nm,0.4s,baz=178,slow=7.4,SNR=6.0								
ARCES	ARCESS Array B 1.3nm,0.9s,baz=106,slow=4.8,SNR=4.3	84.17	340	P			P	10 39 33.3	+0.4

IDC 31 10:39:38.3±1.8, 16°.37S×178°.51W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/15, mbtmp4.0/4, Error ellipse: s-maj=202.7km s-min=26.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	Stephens Creek 1.9nm,0.8s,baz=64,slow=8.8,SNR=4.0	39.30	239	P			P	10 47 09.6	+0.4
ASAR	Alice Springs 9.1nm,0.6s,baz=87,slow=8.1,SNR=152	45.13	253	P			P	10 47 56.4	-0.4
NVAR	Mina Array Bea 0.4nm,0.7s,baz=232,slow=6.7,SNR=4.4	78.39	44	P			P	10 51 41.4	+0.6
TXAR	Lajitas Array 0.3nm,0.8s,baz=202,slow=4.6,SNR=4.0	85.26	58	P			P	10 52 17.3	0.0

CASC 31 10:42:07.7±0.9, 8°.41N×83°.04W, h3km, MD3.5, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.28	333	⇓eP			Pg	10 42 14.2	+1.2
ACR				eS			Sg	10 42 18.5	+1.9
BAR1		0.87	342	eP			Pg	10 42 24.9	+0.4
BUS	Buena Vista	1.34	328	eP			Pn	10 42 32.9	-0.5
BUS				eS			Sg	10 42 52.4	+1.4
URSC	Urasca	1.60	333	eP			Pn	10 42 37.1	+0.3

*ISCJB **31** 11:05:12.6±0.5, 23°.20N±0°.01×121°.91E±0°.02, h7km±3km, Error ellipse: s-maj=3.0km s-min=2.1km az=39.0*

*NEIC **31** 11:05:12.3±3.9, 23°.20N×121°.93E, h4km±20km, MG3.0(JMA), Error ellipse: s-maj=36.2km s-min=11.8km az=114.0*

*TAP **31** 11:05:14.6, 23°.21N×121°.85E, h14km, ML3.7, C*

*JMA **31** 11:05:15.4±0.3, 23°.26N×122°.11E, h0km, M3.0*

ISC 31 11:05:13.3±0.5, 23°.20N±0°.02×121°.89E±0°.02, h10km±2km, n63, σ0°82/118, 6C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHKT	Chengkung baz=246	0.49	258	⇑iP			Pg	11 05 23.4	+0.6
CHKT				i S			Sg	11 05 29.5	+0.2
TWF1	Yuli baz=284	0.56	285	⇑iP			Pg	11 05 24.8	+0.6
TWF1				S			Sg	11 05 31.8	+0.2
YULB	Yu-li baz=301	0.57	289	⇓iPg			Pg	11 05 24.6	+0.2
EHY	Hungye baz=301	0.60	300	⇑iP			Pg	11 05 25.4	+0.5
EHY				eS			Sg	11 05 33.3	+0.5
ESL	Shilin baz=327	0.74	326	P			Pg	11 05 27.8	+0.3
ESL				i S			Sg	11 05 37.8	+0.7
ELDTW	Lidau baz=267	0.80	269	⇑iP			Pg	11 05 28.4	-0.3
ELDTW				eS			Sg	11 05 38.3	-0.9
HWA	Hwalien baz=343	0.81	342	eP			Pg	11 05 29.4	+0.4
HWA				eS			Sg	11 05 40.3	+0.8
TTN	Taitung baz=234	0.81	237	eP			Pg	11 05 29.2	+0.2
TTN				eS			Sg	11 05 39.9	+0.2
TWG	Pinlang baz=230	0.84	243	ePg			Pg	11 05 29.1	-0.4
TWG				eSg			Sg	11 05 40.1	-0.3
TWG	Pinlang baz=230	0.84	243	P			Pg	11 05 29.4	0.0
TWG				eS			Sg	11 05 39.9	-0.5
YUS	Yu-Shan baz=288	0.90	289	⇑iP			Pg	11 05 31.0	+0.3
YUS				S			Sg	11 05 42.8	+0.3
TWD	Chiawan baz=344	0.91	343	P			Pg	11 05 30.7	-0.1
TWD				eS			Sg	11 05 43.3	+0.5
NACB	Ninganchiao baz=344	1.00	345	⇓iPg			Pg	11 05 31.9	-0.7
NACB				eSg			Sg	11 05 44.4	-1.2
SSLB	Suanglung baz=274	1.03	304	⇓iPg			Pg	11 05 32.4	-0.8
SSLB				eSg			Sg	11 05 43.3	-3.3
ALS	Alishan baz=274	1.04	287	i P			Pg	11 05 33.3	+0.1
ALS				eS			Sg	11 05 46.6	-0.2
ECL	Taimali baz=233	1.05	235	eP			Pg	11 05 32.1	-1.4
ECL				eS			Sg	11 05 44.4	-2.8
WHF	Hehuan Shan baz=329	1.10	329	eP			Pb	11 05 33.4	-0.9
WHF				eS			Sb	11 05 47.8	-0.9
SMLT	Sun Moon Lake baz=306	1.13	307	i P			Pb	11 05 34.6	-0.3
SMLT				eS			Sb	11 05 50.0	+0.4
TPUB	Ta-pu baz=306	1.16	275	⇓iPg			Pg	11 05 35.2	-0.4
TPUB				eSg			Sg	11 05 50.4	-0.3
WTP	Ta-pu baz=271	1.17	272	⇑iP			Pb	11 05 35.6	0.0
WTP				S			Sb	11 05 50.5	-0.3
TYC	Yuchr baz=306	1.17	307	i P			Pb	11 05 35.2	-0.4
TYC				eS			Sb	11 05 51.2	+0.3
CHN5	Tsauling baz=288	1.18	290	P			Pb	11 05 35.9	+0.2
CHN5				S			Sb	11 05 51.6	+0.6
LAY	Lan-yu baz=193	1.20	195	eP			Pn	11 05 33.8	-2.3
SGST	Jiashian baz=256	1.21	264	eP			Pn	11 05 36.2	0.0
SGST				eS			Sb	11 05 52.2	+0.5
ENA	Nanau baz=354	1.23	354	eP			Pn	11 05 35.8	-0.7
ENA				eS			Sb	11 05 51.9	-0.5
TWT	Tachien baz=327	1.23	328	eP			Pn	11 05 36.6	+0.1
TWT				eS			Sb	11 05 51.1	-1.5
SSD	Sandimen baz=248	1.24	249	eP			Pn	11 05 35.6	-1.0
TAW	Tawu baz=239	1.24	228	eP			Pn	11 05 35.6	-1.1
TAW				eS			Sb	11 05 50.1	-2.8
CHN1	Nanshi baz=268	1.25	269	i P			Pn	11 05 37.1	+0.3
CHN1				eS			Sb	11 05 53.6	+0.5
EAST	Anshuo baz=229	1.26	230	eP			Pn	11 05 35.6	-1.3
TWK	Hsinying baz=271	1.29	273	P			Pn	11 05 37.5	+0.2
TWK				eS			Sb	11 05 53.8	-0.3
WNT	Mingjian baz=300	1.29	302	P			Pn	11 05 37.9	+0.5
WNT				eS			Sb	11 05 53.6	-0.6
WGK	Gukeng baz=290	1.31	292	eP			Pn	11 05 38.1	+0.6
WGK				eS			Sb	11 05 55.2	+0.4
NNS	Nan Shan baz=339	1.32	339	P			Pn	11 05 37.5	-0.2
NNS				eS			Sb	11 05 53.5	-1.6
SGLT	Jiouru baz=243	1.37	250	eP			Pn	11 05 39.4	+1.0
SGLT				eS			Sb	11 05 57.5	+0.9
CHY	Chiayi baz=281	1.38	283	eP			Pn	11 05 39.4	+0.9
CHY				eS			Sb	11 05 56.1	-0.5
TWC	Suao baz=359	1.40	359	i P			Pn	11 05 39.1	+0.2
TWC				eS			Sn	11 05 56.8	-0.6
TWM1	Shoushan baz=254	1.40	255	eP			Pn	11 05 40.0	+1.2
CHN3	Shinhua baz=264	1.41	265	eP			Pn	11 05 40.4	+1.5
CHN3				eS			Sn	11 05 59.9	+2.4
SCZT	Fangliau baz=225	1.43	235	eP			Pn	11 05 39.7	+0.4
SCZT				eS			Sn	11 05 57.6	-0.5
TCU	Taichung baz=309	1.45	311	eP			Pn	11 05 40.3	+0.7
TCU				eS			Sn	11 05 58.4	-0.3
ENTT	Nioudou baz=348	1.46	349	eP			Pn	11 05 39.4	-0.3
ENTT				eS			Sn	11 05 58.0	-0.8
TWE	Neicheng baz=353	1.52	353	eP			Pn	11 05 40.9	+0.4
TWE				eS			Sn	11 06 00.3	-0.1
TWQ1	Liyutan baz=331	1.53	318	P			Pn	11 05 41.4	+0.8
TWQ1				eS			Sn	11 06 01.5	+1.0
YHNB	Yeheng baz=341	1.53	342	⇓iPn			Pn	11 05 40.8	+0.1
YHNB				eSn			Sn	11 05 59.2	-1.5
NSK	Sanguang baz=341	1.54	342	P			Pn	11 05 41.0	+0.2
NSK				S			Sn	11 05 59.8	-1.1
CHN8	Yiju baz=274	1.55	276	eP			Pn	11 05 40.6	-0.3
CHN8				eS			Sn	11 06 02.0	+1.0
TSEB	Hengchuen, Pin baz=215	1.58	215	eP			Pn	11 05 41.7	+0.3
TSEB				eS			Sn	11 06 01.9	-0.1
NSY	Sanyi baz=318	1.59	320	eP			Pn	11 05 42.6	+1.2
NSY				eS			Sn	11 06 03.4	+1.4
HEN	Hengchun baz=220	1.59	222	eP			Pn	11 05 41.9	+0.4
HEN				eS			Sn	11 06 02.1	-0.1
TWK1	Hengchun baz=217	1.60	219	eP			Pn	11 05 41.9	+0.2
TWK1				eS			Sn	11 06 02.1	-0.3
WTCT	Ta-ch'eng baz=294	1.61	294	eP			Pn	11 05 42.1	+0.3
YOJ	Yonaguni jima	1.62	39	P			Pn	11 05 42.7	+0.8
YOJ				eS			Sn	11 06 02.4	-0.5
NSTT	Nanjuang baz=329	1.64	331	eP			Pn	11 05 43.0	+1.0
NSTT				eS			Sn	11 06 02.5	-0.6
TWA	Mucha baz=351	1.79	351	eP			Pn	11 05 44.3	+0.1
TWA				eS			Sn	11 06 07.1	+0.1
TWB1	Santiao Chiao baz=3.0	1.80	3	eP			Pn	11 05 45.1	+0.7
TWB1				eS			Sn	11 06 06.6	-0.6
NWF	Wu-fen Shan baz=356	1.86	357	P			Pn	11 05 46.9	+1.7
NWF				eS			Sn	11 06 09.4	+0.6
HATJ	Hateruma jima	1.96	64	S			Sn	11 06 09.7	-1.4
IRIF	Iriomote-Funau	2.03	56	P			Pn	11 05 48.8	+1.3
IRIF				S			Sn	11 06 13.5	+0.6
PNG	Penghu baz=263	2.17	280	eP			Pn	11 05 49.7	+0.3
PNG				eS			Sn	11 06 14.8	-1.6
JKRS	Kuro-shima baz=263	2.20	62	P			Pn	11 05 51.1	+1.2
JKRS				S			Sn	11 06 15.9	-1.3
JIJ	Ishigaki jima	2.37	60	P			Pn	11 05 53.2	+1.0
JIJ				S			Sn	11 06 20.6	-0.7
JTJ	Tarama	2.95	60	S			Sn	11 06 36.0	+0.4

*ATH **31** 11:36:08.8, 34°.20N×25°.42E, h21km±1km, MD3.4/10*
*HLW **31** 11:36:08.7, 34°.51N×25°.62E, h33km±28km, Ml2.8*
*NEIC **31** 11:36:08.8, 34°.20N×25°.42E, h21km, MD3.4(ATH), After ATH.*
*ISCJB **31** 11:36:10.8±2.6, 34°.19N±0°.04×25°.51E±0°.08, h33km±27km, Error ellipse: s-maj=11.2km s-min=5.7km az=168.3*
*CSEM **31** 11:36:11.6±0.3, 34°.28N×25°.52E, h40km, MD3.4, Error ellipse: s-maj=11.4km s-min=7.1km az=72.0*

ISC 31 11:36:10.3±2.7,**34°.24N**±0°.04×**25°.52E**±0°.08,**h21**km±26km, **n28**,σ1¶**15**/38,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.65**	**13**	*e*PN	**Pn**	**11 36 22.7**	**-1.5**
XRY	**Khrisi**	**0.65**	**13**	*e*Pn	**Pn**	**11 36 22.7**	**-1.5**
LAST	**Lasithi**	**0.92**	**358**	*e*PN	**Pn**	**11 36 26.9**	**-1.0**
LAST	**Lasithi**	**0.92**	**358**	*e*Pn	**Pn**	**11 36 26.9**	**-1.0**
SIVA	**Sivas**	**0.97**	**323**	*e*PN	**Pn**	**11 36 27.8**	**-0.8**
SIVA				*e*SN	**Sn**	**11 36 40.0**	**-1.8**
SIVA	**Sivas**	**0.97**	**323**	*e*Pn	**Pn**	**11 36 27.8**	**-0.8**
SIVA				*e*Sn	**Sn**	**11 36 40.0**	**-1.8**
NPS	**Neapolis**	**1.02**	**4**	*e*PN	**Pn**	**11 36 28.7**	**-0.6**
NPS				*e*SN	**Sn**	**11 36 44.0**	**+1.0**
NPS	**Neapolis**	**1.02**	**4**	*e*Pn	**Pn**	**11 36 28.7**	**-0.6**
NPS				*e*Sn	**Sn**	**11 36 44.0**	**+1.0**
ZKR	**Zakros**	**1.04**	**33**	*e*PN	**Pn**	**11 36 30.1**	**+0.5**
ZKR	**Zakros**	**1.04**	**33**	*e*Pn	**Pn**	**11 36 30.1**	**+0.5**
IDI	**Anoyia**	**1.17**	**334**	*e*PN	**Pn**	**11 36 30.8**	**-0.5**
IDI				*e*SN	**Sn**	**11 36 47.0**	**+0.4**
IDI	**Anoyia**	**1.17**	**334**	*e*Pn	**Pn**	**11 36 30.8**	**-0.5**
IDI				*e*Sn	**Sn**	**11 36 47.0**	**+0.4**
GVD	**Gavdhos**	**1.33**	**297**	*e*PN	**Pn**	**11 36 33.2**	**-0.3**
GVD	**Gavdhos**	**1.33**	**297**	*e*Pn	**Pn**	**11 36 33.2**	**-0.3**
VAM	**Vamos**	**1.59**	**317**	*e*PN	**Pn**	**11 36 38.2**	**+1.0**
VAM				*e*SN	**Sn**	**11 36 59.0**	**+1.9**
VAM	**Vamos**	**1.59**	**317**	*e*Pn	**Pn**	**11 36 38.2**	**+1.0**
VAM				*e*Sn	**Sn**	**11 36 59.0**	**+1.9**
KARN	**Karanos**	**1.76**	**312**	*e*PN	**Pn**	**11 36 39.2**	**-0.2**
KARN	**Karanos**	**1.76**	**312**	*e*Pn	**Pn**	**11 36 39.2**	**-0.2**
KARP	**Karpathos**	**1.88**	**46**	*e*PN	**Pn**	**11 36 42.9**	**+1.8**
KARP	**Karpathos**	**1.88**	**46**	*e*Pn	**Pn**	**11 36 42.9**	**+1.8**
SLUM		**2.75**	**186**	P	**Pn**	**11 36 54.5**	**+1.4**
	baz=187						
SLUM				AMP		11 37 00.0	
	comp=N,20μm,0.1s,logA/T=5.1,baz=187						
SLUM		**2.75**	**186**	P	**Pn**	**11 36 54.5**	**+1.3**
HMAT	**Matruh**	**3.41**	**157**	P	**Pn**	**11 37 02.6**	**+0.5**
	baz=159						
HMAT	**Matruh**	**3.41**	**157**	P	**Pn**	**11 37 02.6**	**+0.5**
SWA2		**4.98**	**181**	P	**Pn**	**11 37 25.4**	**+1.5**
	baz=182						
SWA2				AMP		11 38 00.0	
	comp=E,10μm,0.2s,logA/T=4.7,baz=182						
SWA2				S	**Sn**	**11 38 19.3**	**-1.5**
	baz=182						
SWA2		**4.98**	**181**	P	**Pn**	**11 37 25.3**	**+1.5**
SWA2				S	**Sn**	**11 38 19.3**	**-1.5**
AMAG	**Maghara**	**7.42**	**117**	P	**Pn**	**11 37 55.9**	**-1.4**
	baz=119						
AMAG	**Maghara**	**7.42**	**117**	P	**Pn**	**11 37 55.9**	**-1.4**

*ISCJB **31** 11:39:55.8±0.5, 39°.56N±0°.03×36°.81E±0°.04, h11km±7km, Error ellipse: s-maj=5.0km s-min=4.7km az=23.0*
*CSEM **31** 11:39:55.7±0.2, 39°.58N×36°.77E, h2km, MD2.8, Error ellipse: s-maj=5.4km s-min=4.7km az=71.0*
*ISK **31** 11:39:56.0, 39°.59N×36°.84E, h16km, MD2.8*
*DDA **31** 11:39:56.2, 39°.54N×36°.91E, h17km±2km, Md2.8*

ISC 31 11:39:56.5±0.5,**39°.57N**±0°.03×**36°.84E**±0°.04,**h17**km±6km, **n21**,σ1¶**13**/36,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVSK	**Karacayir**	**0.37**	**20**	*e*PG	**Pg**	**11 40 03.0**	**-1.1**
SVSK				*e*SG	**Sg**	**11 40 09.5**	**+0.2**
SVSK	**Karacayir**	**0.37**	**20**	*e*Pg	**Pg**	**11 40 03.0**	**-1.2**
SVSK				*e*Sg	**Sg**	**11 40 09.5**	**+0.2**
SARI	**SarD1z-Kayseri**	**0.90**	**187**	*e*PN	**Pg**	**11 40 19.4**	**+5.4**
SARI				*e*SN	**Sg**	**11 40 36.0**	**+10**
PINB	**Pinarbasi**	**0.95**	**201**	*e*P	**Pg**	**11 40 14.5**	**-0.6**
PINB				*i* S	**Sg**	**11 40 28.0**	**+0.4**
PINB	**Pinarbasi**	**0.95**	**201**	*e*P	**Pg**	**11 40 14.5**	**-0.6**
PINB				*i* S	**Sg**	**11 40 28.0**	**+0.4**
DARE	**Darende-Malaty**	**0.97**	**129**	*e*PN	**Pg**	**11 40 17.8**	**+2.4**
DARE				*e*SN	**Sg**	**11 40 33.6**	**+5.4**
DARE	**Darende-Malaty**	**0.97**	**129**	*e*Pn	**Pg**	**11 40 17.8**	**+2.4**
DARE				*e*Sn	**Sg**	**11 40 33.6**	**+5.4**
ERBA	**Erbaa**	**1.11**	**357**	*i* P	**Pg**	**11 40 17.1**	**-0.9**
ERBA				*i* S	**Sg**	**11 40 34.9**	**+2.3**
ERBA	**Erbaa**	**1.11**	**357**	*i* P	**Pg**	**11 40 17.1**	**-0.9**
ERBA				*i* S	**Sg**	**11 40 34.9**	**+2.3**
YOZ	**Yozgat**	**1.17**	**274**	*e*PN	**Pn**	**11 40 18.4**	**+0.2**
YOZ	**Yozgat**	**1.17**	**274**	*e*Pn	**Pn**	**11 40 18.4**	**+0.2**
KEMA	**Kemaliye**	**1.32**	**103**	*i* P	**Pn**	**11 40 20.2**	**+0.1**
KEMA				*i* S	**Sn**	**11 40 37.3**	**0.0**
KEMA	**Kemaliye**	**1.32**	**103**	*i* P	**Pn**	**11 40 20.2**	**+0.1**
KEMA				*i* S	**Sn**	**11 40 37.3**	**0.0**
AKCD	**Akcadag**	**1.53**	**146**	*i* P	**Pg**	**11 40 24.2**	**-1.8**
AKCD				*i* S	**Sg**	**11 40 46.2**	**+0.3**
AKCD	**Akcadag**	**1.53**	**146**	*i* P	**Pg**	**11 40 24.2**	**-1.8**
AKCD				*i* S	**Sg**	**11 40 46.2**	**+0.3**
AVNT	**Avonos**	**1.73**	**243**	*i* P	**Pg**	**11 40 29.1**	**-0.7**
AVNT				*i* S	**Sg**	**11 40 55.5**	**+3.1**
AVNT	**Avonos**	**1.73**	**243**	*i* P	**Pg**	**11 40 29.1**	**-0.7**
CORM	**Corum**	**1.80**	**290**	*e*PN	**Pn**	**11 40 26.8**	**-0.1**
CORM	**Corum**	**1.80**	**290**	*e*Pn	**Pn**	**11 40 26.8**	**0.0**
CDAG	**Cicekdag**	**1.91**	**272**	*i* P	**Pg**	**11 40 31.7**	**-1.4**
CDAG				*i* S	**Sg**	**11 40 58.2**	**+0.3**
CDAG	**Cicekdag**	**1.91**	**272**	*i* P	**Pg**	**11 40 31.7**	**-1.4**

*CSEM **31** 11:42:45.5±0.2, 41°.59N×20°.08E, h2km, ML3.0, Error ellipse: s-maj=4.3km s-min=2.2km az=42.0*
*ISCJB **31** 11:42:45.6±0.3, 41°.62N±0°.02×20°.10E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=2.0km az=42.2*
*SKO **31** 11:42:46.5, 41°.59N×20°.08E, h16km, M2.1, ML2.6*
*THE **31** 11:42:46.1, 41°.61N×20°.16E, h0km±3km, ML3.5/1, Error ellipse: s-maj=3.4km s-min=1.2km az=185.0*
*BEO **31** 11:42:46.3±0.9, 41°.59N×20°.04E, h9km±4km*
*PDG **31** 11:42:47.2±0.2, 41°.67N×20°.01E, h2km±1km, MD2.9/2, ML2.9/9, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*
*NEIC **31** 11:42:47.2, 41°.67N×20°.01E, h2km, ML2.9(PDG), After PDG.*

ISC 31 11:42:46.1±0.4,**41°.61N**±0°.02×**20°.10E**±0°.03,**h1**km±4km, **n59**,σ1¶**15**/110,**14C-11D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**214**	P	**Pg**	**11 42 52.3**	**+0.2**
TIR				S	**Sg**	**11 42 57.8**	**+1.7**
TIR	**Tirane**	**0.31**	**214**	P	**Pg**	**11 42 52.3**	**+0.2**
TIR				S	**Sg**	**11 42 57.8**	**+1.7**
OHR	**Ohrid**	**0.72**	**133**	*i* Pg	**Pg**	**11 42 59.5**	**-0.4**
OHR				*i* Sg	**Sg**	**11 43 10.4**	**+1.2**
OHR				*e*Lg		11 43 10.7	
	comp=N,143nm,0.6s						
OHR				*e*Lg		11 43 10.8	
	comp=E,125nm,0.6s						
OHR	**Ohrid**	**0.72**	**133**	P	**Pg**	**11 42 59.0**	**-0.9**
OHR				S	**Sg**	**11 43 10.6**	**+1.3**
OHR	**Ohrid**	**0.72**	**133**	P	**Pg**	**11 42 59.0**	**-0.9**
OHR	**Ohrid**	**0.72**	**133**	*i* Pg	**Pg**	**11 42 59.4**	**-0.5**
OHR				S	**Sg**	**11 43 10.6**	**+1.3**
OHR				*e*Lg		11 43 10.7	
	comp=E,125nm,0.6s						
ULC	**Ulcinj**	**0.73**	**300**	⇑*i*Pg	**Pg**	**11 42 58.9**	**-1.2**
ULC				*e*Sg	**Sg**	**11 43 09.3**	**-0.2**
ULC	**Ulcinj**	**0.73**	**300**	⇑*i*Pg	**Pg**	**11 42 58.9**	**-1.2**
ULC				*e*Sg	**Sg**	**11 43 09.3**	**-0.2**
BCI	**Bajram Curri**	**0.76**	**358**	*e*Pg	**Pg**	**11 42 55.0**	**-5.7**
KRUS	**Krusevo**	**0.90**	**105**	*i* Pg	**Pg**	**11 43 02.3**	**-0.9**
KRUS				*i* Sg	**Sg**	**11 43 15.0**	**+0.2**
KRUS				*e*Lg		11 43 15.5	
	comp=E,65nm,0.3s						
KRUS				*e*Lg		11 43 15.8	
	comp=N,75nm,0.4s						
KRUS	**Krusevo**	**0.90**	**105**	*i* Pg	**Pg**	**11 43 02.3**	**-0.9**
KRUS				*i* Sg	**Sg**	**11 43 15.0**	**+0.2**
KRUS				*e*Lg		11 43 15.5	
	comp=N,65nm,0.3s						
PVY	**Plav**	**0.99**	**355**	⇑*i*Pg	**Pg**	**11 43 04.8**	**-0.3**
PVY				*e*Sg	**Sg**	**11 43 18.5**	**+0.5**
PVY	**Plav**	**0.99**	**355**	⇑*i*Pg	**Pg**	**11 43 04.8**	**-0.3**
PVY				*e*Sg	**Sg**	**11 43 18.5**	**+0.5**
PDG	**Podgorica**	**1.03**	**323**	⇑*i*Pg	**Pg**	**11 43 04.7**	**-1.2**
PDG				*e*Sg	**Sg**	**11 43 19.8**	**+0.5**
TTG	**Podgorica**	**1.03**	**323**	⇑*i*Pg	**Pg**	**11 43 04.7**	**-1.2**
TTG				*e*Sg	**Sg**	**11 43 19.8**	**+0.5**
TTG	**Podgorica**	**1.03**	**323**	⇑*i*Pg	**Pg**	**11 43 04.7**	**-1.2**
TTG				*e*Sg	**Sg**	**11 43 19.8**	**+0.5**
SKO	**Skopje**	**1.07**	**70**	*i* Pg	**Pg**	**11 43 07.3**	**+0.8**
SKO				*i* Sg	**Sg**	**11 43 20.9**	**+0.6**
SKO				*e*Lg		11 43 21.1	
	comp=E,126nm,0.4s						
SKO				*e*Lg		11 43 21.3	
	comp=N,296nm,0.8s						
SKO	**Skopje**	**1.07**	**70**	P	**Pg**	**11 43 07.4**	**+0.9**
SKO				S	**Sg**	**11 43 21.6**	**+1.2**
SKO	**Skopje**	**1.07**	**70**	*i* Pg	**Pg**	**11 43 07.3**	**+0.8**
SKO				*i* Sg	**Sg**	**11 43 20.9**	**+0.5**
SKO				*e*Lg		11 43 21.1	
	comp=N,126nm,0.4s						
SKO				S	**Sg**	**11 43 21.6**	**+1.2**
BIA	**Bitola**	**1.09**	**122**	*i* Pg	**Pg**	**11 43 05.8**	**-1.2**
BIA				*i* Sg	**Sg**	**11 43 22.6**	**+1.5**
BIA				*e*Lg		11 43 23.3	
	comp=E,75nm,0.3s						
BIA				*e*Lg		11 43 23.4	
	comp=N,87nm,0.5s						
BIA	**Bitola**	**1.09**	**122**	P	**Pg**	**11 43 05.7**	**-1.3**
BIA				S	**Sg**	**11 43 21.2**	**0.0**
BIA	**Bitola**	**1.09**	**122**	P	**Pg**	**11 43 05.7**	**-1.3**
BIA				S	**Sg**	**11 43 21.2**	**0.0**
BIA				*i* Sg	**Sg**	**11 43 22.6**	**+1.4**
BIA				*e*Lg		11 43 23.3	
	comp=N,87nm,0.5s						
BUM	**Brajici-Budva**	**1.13**	**308**	⇓*i*Pg	**Pg**	**11 43 06.5**	**-1.3**
BUM				*e*Sg	**Sg**	**11 43 23.0**	**+0.5**
BUM	**Brajici-Budva**	**1.13**	**308**	⇓*i*Pg	**Pg**	**11 43 06.5**	**-1.3**
BUM				*e*Sg	**Sg**	**11 43 23.0**	**+0.5**
FNA	**Florina**	**1.27**	**130**	P	**Pn**	**11 43 09.4**	**-1.5**
FNA				S	**Sg**	**11 43 27.9**	**+1.2**
FNA	**Florina**	**1.27**	**130**	P	**Pn**	**11 43 09.4**	**-1.5**
FNA				S	**Sg**	**11 43 27.9**	**+1.2**
BEY	**Berane**	**1.27**	**353**	⇓*i*Pg	**Pg**	**11 43 10.6**	**+0.1**
BEY				*e*Sg	**Sg**	**11 43 27.9**	**+0.9**
IVA	**Berane**	**1.27**	**353**	⇓*i*Pg	**Pg**	**11 43 10.6**	**+0.1**
IVA				*e*Sg	**Sg**	**11 43 27.9**	**+0.9**
IVA	**Berane**	**1.27**	**353**	⇓*i*Pg	**Pg**	**11 43 10.6**	**+0.1**
IVA				*e*Sg	**Sg**	**11 43 27.9**	**+0.9**
NKY	**Niksic**	**1.46**	**326**	⇓*i*Pg	**Pn**	**11 43 11.7**	**-1.8**
NKY				*e*Sg	**Sg**	**11 43 33.7**	**+0.8**
NKY	**Niksic**	**1.46**	**326**	⇓*i*Pg	**Pn**	**11 43 11.7**	**-1.8**
HCY	**Herceg Novi**	**1.46**	**306**	⇑*i*Pg	**Pn**	**11 43 12.4**	**-1.2**
HCY				*e*Sg	**Sg**	**11 43 33.9**	**+0.9**
HCY	**Herceg Novi**	**1.46**	**306**	⇑*i*Pg	**Pn**	**11 43 12.4**	**-1.2**
HCY				*e*Sg	**Sg**	**11 43 33.9**	**+0.9**
STIP	**Stip**	**1.57**	**86**	*i* Pg	**Pn**	**11 43 13.9**	**-1.1**
STIP	**Stip**	**1.57**	**86**	*i* Pg	**Pn**	**11 43 13.9**	**-1.1**
SJES	**Sjenica**	**1.66**	**357**	⇑*e*Pg	**Pg**	**11 43 16.9**	**-0.9**
SJES				*i* Sg	**Sg**	**11 43 38.7**	**-0.6**
TREB	**Trebinje**	**1.71**	**311**	⇑*i*Pn	**Pn**	**11 43 15.5**	**-1.5**
TREB				*i* Sg	**Sg**	**11 43 40.2**	**-0.8**
TREB	**Trebinje**	**1.71**	**311**	⇑*i*Pn	**Pn**	**11 43 15.5**	**-1.5**
TREB				*i* Sg	**Sg**	**11 43 40.2**	**-0.8**
BRY	**Bratogost**	**1.73**	**319**	⇓*i*Pn	**Pn**	**11 43 17.0**	**-0.3**
BRY				*e*Sn	**Sn**	**11 43 42.7**	**+2.6**
BRY	**Bratogost**	**1.73**	**319**	⇓*i*Pn	**Pn**	**11 43 17.0**	**-0.3**
BARS	**Barje**	**1.76**	**46**	*i* Pn	**Pn**	**11 43 16.3**	**-1.4**
BARS				*e*Sg	**Sg**	**11 43 44.4**	**+1.9**
BARS	**Barje**	**1.76**	**46**	*i* Pn	**Pn**	**11 43 16.3**	**-1.4**
BARS				*e*Sg	**Sg**	**11 43 44.4**	**+1.9**
PLE	**Pljevlja**	**1.80**	**343**	⇓*i*Pn	**Pn**	**11 43 19.0**	**+0.8**
PLE				*e*Sn	**Sn**	**11 43 44.4**	**+2.7**
PLE	**Pljevlja**	**1.80**	**343**	⇓*i*Pn	**Pn**	**11 43 19.0**	**+0.8**
PLE				*e*Sn	**Sn**	**11 43 44.4**	**+2.7**
UPM	**Unac-Piva**	**1.82**	**331**	⇑*i*Pn	**Pn**	**11 43 19.3**	**+0.7**
UPM				*e*Sn	**Sn**	**11 43 45.3**	**+3.0**
UPM	**Unac-Piva**	**1.82**	**331**	⇑*i*Pn	**Pn**	**11 43 19.3**	**+0.7**
UPM				*e*Sn	**Sn**	**11 43 45.3**	**+3.0**
VAY	**Valandovo**	**1.88**	**98**	*e*Pn	**Pn**	**11 43 20.1**	**+0.7**
VAY				*i* Sn	**Sn**	**11 43 40.1**	**-3.5**
VAY				*e*Lg		11 43 43.7	
	comp=E,29nm,0.6s						
VAY				*e*Lg		11 43 44.1	
	comp=N,54nm,0.8s						
VAY	**Valandovo**	**1.88**	**98**	*e*Pn	**Pn**	**11 43 20.0**	**+0.7**
VAY				*i* Sn	**Sn**	**11 43 40.0**	**-3.6**
VAY				*e*Lg		11 43 43.7	
	comp=N,29nm,0.6s						
STON	**Ston**	**2.19**	**306**	*e*Pn	**Pn**	**11 43 25.1**	**+1.5**
STON				Sn	**Sn**	**11 43 55.4**	**+4.2**
STON	**Ston**	**2.19**	**306**	*e*Pn	**Pn**	**11 43 25.1**	**+1.6**
NISS		**2.26**	**37**	*e*Pg	**Pg**	**11 43 27.2**	**-2.1**
NISS		**2.26**	**37**	*e*Pg	**Pg**	**11 43 27.2**	**-2.1**
BBLS	**Lazići**	**2.32**	**347**	*e*Pn	**Pn**	**11 43 25.5**	**+0.2**
BBLS				*e*Sn	**Sn**	**11 43 53.2**	**-1.2**
BBLS	**Lazići**	**2.32**	**347**	*e*Pn	**Pn**	**11 43 25.5**	**+0.2**
BBLS				*e*Sn	**Sn**	**11 43 53.2**	**-1.2**
GRUS	**Gruza**	**2.33**	**11**	*e*Pn	**Pn**	**11 43 25.3**	**-0.2**
GRUS	**Gruza**	**2.33**	**11**	*e*Pn	**Pn**	**11 43 25.3**	**-0.2**
DIVS	**Divibare**	**2.49**	**358**	*e*Pn	**Pn**	**11 43 27.7**	**-0.1**
DIVS				*e*Sn	**Sn**	**11 43 58.3**	**-0.5**
DIVS	**Divibare**	**2.49**	**358**	P	**Pn**	**11 43 27.9**	**+0.1**
DIVS				S	**Sn**	**11 43 59.4**	**+0.6**
DIVS	**Divibare**	**2.49**	**358**	*e*Pn	**Pn**	**11 43 27.7**	**-0.1**
DIVS				*e*Sn	**Sn**	**11 43 58.3**	**-0.5**
DIVS				S	**Sn**	**11 43 59.4**	**+0.6**

*CASC **31** 11:53:42.7±3.8, 8°.41N×82°.97W, h3km±19km, MD4.4, mb4.5(NEIC)*
*IDC **31** 11:53:42.2±0.9, 8°.41N×83°.05W, h0km, mb3.9/12, mb1 4.2/14, mb1mx4.1/22, mbtmp4.0/14, ML3.8/2, MS3.4/12, Ms1 3.3/12, ms1mx3.2/33, Error ellipse: s-maj=32.6km s-min=13.5km az=41.0*
*ISCJB **31** 11:53:43.6±1.1, 8°.38N±0°.06×83°.01W±0°.04, h15km±5km, mb4.2/19, MS3.3/10, Error ellipse: s-maj=10.8km s-min=4.7km az=24.3*
*NEIC **31** 11:53:48.1±0.9, 8°.40N×83°.06W, h39km±8km, mb4.5/8, Error ellipse: s-maj=12.5km s-min=7.5km az=215.0*

ISC 31 11:53:45.0±1.1,**8°.44N**±0°.07×**82°.99W**±0°.03,**h13**km±5km, **n62**,σ1¶**33**/65,**mb4.2**/19,**MS3.3**/10,**2C-3D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**319**	⇑*i*P	**Pg**	**11 53 48.9**	**-1.9**
ACR				*e*S	**Sg**	**11 53 55.3**	**+0.6**
BAR1		**0.86**	**338**	⇓*i*P	**Pg**	**11 53 59.5**	**-2.2**
BAR1				*e*S	**Sg**	**11 54 14.9**	**+2.0**
BUS	**Buena Vista**	**1.34**	**325**	*e*P	**Pn**	**11 54 07.5**	**-1.9**
BUS				⇓*i*P		11 54 07.6	
QCR	**Quepos**	**1.52**	**310**	⇓*e*P	**Pn**	**11 54 09.9**	**-1.9**
QCR				*e*S	**Sn**	**11 54 31.1**	**-0.4**
LIO	**Limon**	**1.55**	**358**	*e*P	**Pn**	**11 54 10.4**	**-1.9**
URSC	**Urasca**	**1.59**	**331**	⇑*i*P	**Pn**	**11 54 11.0**	**-1.9**
LAJ	**Bijagual**	**1.80**	**322**	*e*P	**Pn**	**11 54 15.8**	**0.0**
LAJ				*e*S	**Sn**	**11 54 44.8**	**+6.3**
SJS	**Escuela Geolog**	**1.82**	**325**	*e*P	**Pn**	**11 54 14.4**	**-1.6**
CGA2	**Cerro Gallo 2**	**2.14**	**317**	*e*P	**Pn**	**11 54 19.6**	**-0.8**
JCR	**Jicaral**	**2.52**	**304**	*e*P	**Pn**	**11 54 24.7**	**-1.0**
FORC	**Fortuna**	**2.61**	**321**	*e*P	**Pn**	**11 54 25.7**	**-1.1**
JTS	**JuntasAbangare**	**2.67**	**314**	Pn	**Pn**	**11 54 27.3**	**-0.5**
	26nm,0.3s,baz=124,slow=23,SNR=159						
JTS				Pg	**Pg**	**11 54 30.1**	**-6.2**
	80nm,0.3s,baz=135,slow=10.0,SNR=183						
JTS				Sn	**Sn**	**11 54 59.7**	**-0.3**
	30nm,0.3s,baz=320,slow=21,SNR=8.4						
JTS				Lg		11 55 04.0	
	45nm,0.3s,baz=324,slow=22,SNR=10.0						
JTS	**JuntasAbangare**	**2.67**	**314**	Pn	**Pn**	**11 54 27.2**	**-0.5**
JTS				Sn	**Sn**	**11 54 59.7**	**-0.3**
JTS				Lg		11 55 04.0	
CHPA	**Chiripa**	**2.75**	**317**	*i* P	**Pn**	**11 54 30.4**	**+1.7**
CHPA				*i* S	**Sn**	**11 55 08.5**	**+6.7**
VCR	**Vista de Mar**	**3.10**	**303**	*e*P	**Pn**	**11 54 31.1**	**-2.5**
LIM1	**Limonal**	**3.17**	**315**	*i* P	**Pn**	**11 54 36.5**	**+2.0**
BCIP	**Isla Barro Col**	**3.19**	**77**	*e*Pn	**Pn**	**11 54 36.0**	**+1.1**
BCIP				*e*Sg	**Sg**	**11 55 27.1**	**-0.6**
NY14	**Universidad de**	**3.33**	**311**	*i* P	**Pn**	**11 54 38.4**	**+1.5**
LAPC	**Finca la Perla**	**3.34**	**314**	*i* P	**Pn**	**11 54 38.4**	**+1.5**
BUEV	**Buena Vista**	**3.34**	**315**	*i* P	**Pn**	**11 54 38.5**	**+1.6**
GB1A	**Borinquen Arri**	**3.35**	**315**	*i* P	**Pn**	**11 54 38.7**	**+1.6**
UPIG		**3.46**	**81**	*e*P	**Pn**	**11 54 39.1**	**+0.6**
UPIG				*e*S	**Sn**	**11 55 17.9**	**-1.4**
TGUH	**Tegucigalpa,Un**	**6.99**	**323**	*e*Pn	**Pn**	**11 55 27.3**	**+0.2**
	61nm,1.0s						
OTAV	**Otavalo**	**9.32**	**151**	Pn	**Pn**	**11 56 01.2**	**+2.1**
	3.0nm,0.8s						
APG	**El Apazote**	**9.80**	**312**	Pn	**Pn**	**11 56 08.3**	**+2.5**
	0.8nm,0.3s,baz=148,slow=15,SNR=15						
APG				LR	LR	12 00 10.9	
	comp=Z,235nm,20.0s,baz=244,slow=40						
MTDJ	**Mount Denham**	**11.08**	**28**	*e*Pn	**Pn**	**11 56 23.4**	**+0.2**
SDV	**Santo Domingo**	**12.22**	**87**	Pn	**Pn**	**11 56 42.9**	**+4.0**
	0.3nm,0.3s,baz=281,slow=4.2,SNR=5.8						
SDV				Sn	**Sn**	**11 59 00.1**	**+5.0**
	0.3nm,0.3s,baz=231,slow=23,SNR=2.1						
CMIG	**Matias Romero**	**14.43**	**308**	Pn	**Pn**	**11 57 11.0**	**+1.9**
	0.4nm,0.3s,baz=73,slow=6.5,SNR=4.7						
SDDR	**Presa de Saban**	**15.45**	**46**	*e*Pn	**Pn**	**11 57 24.3**	**+1.7**
ATAH	**Atahualpa**	**16.01**	**163**	LR	LR	12 03 01.0	
	comp=Z,254nm,21.8s,baz=189,slow=35						
PCRV	**Puerto La Cruz**	**18.19**	**83**	P	**Pn**	**11 57 58.8**	**+1.4**
	0.2nm,0.3s,baz=115,slow=6.9,SNR=3.1						
LRAL	**Lakeview Retre**	**24.75**	**352**	*e*P	**P**	**11 59 08.5**	**+2.2**
	45nm,1.6s,mb4.8						
GOGA	**Godfrey**	**24.85**	**359**	*e*P	**P**	**11 59 08.1**	**+0.9**
	24nm,1.2s,mb4.6						
CPCT	**Cooper Cave**	**26.92**	**357**	P	**P**	**11 59 27.4**	**+1.5**
TKL	**Tuckaleechee C**	**27.10**	**359**	P	**P**	**11 59 27.4**	**-0.1**
	2.9nm,0.8s,mb3.9,baz=147,slow=7.7,SNR=3.9						
TKL				LR	LR	12 10 46.4	
	comp=Z,130nm,18.9s,MS3.5,baz=286,slow=38						
MIAR	**Mount Ida**	**27.74**	**341**	*e*P	**P**	**11 59 33.7**	**+0.3**
	13nm,1.5s,mb4.3						
TXAR	**Lajitas Array**	**28.45**	**320**	P	**P**	**11 59 39.7**	**0.0**
	0.1nm,0.6s,baz=135,slow=9.0,SNR=2.9						
TXAR				PcP	PcP	12 02 52.6	+0.8
	0.4nm,0.6s,baz=146,slow=7.0,SNR=5.7						
TXAR				LR	LR	12 12 04.5	
	comp=Z,56nm,19.8s,MS3.2,baz=5.0,slow=39						
AGMN	**Agassiz Refuge**	**41.19**	**347**	*e*P	**P**	**12 01 28.6**	**-0.5**
	15nm,1.4s,mb4.4						
PDAR	**Pinedale Array**	**41.39**	**330**	P	**P**	**12 01 30.4**	**-0.5**
	0.3nm,0.5s,mb3.2,baz=126,slow=7.5,SNR=3.8						
PDAR				PcP	PcP	12 03 29.2	+0.2
	0.2nm,0.5s,baz=134,slow=3.9,SNR=3.9						
CFAA	**Coronel Fontan**	**42.25**	**161**	LR	LR	12 17 29.4	
	comp=Z,7.1nm,20.5s,MS2.5,baz=6.8,slow=34						
CPUP	**Villa Florida**	**42.61**	**145**	LR	LR	12 23 03.1	
	comp=Z,76nm,18.2s,MS3.6,baz=120,slow=41						
ULM	**Lac du Bonnet**	**43.03**	**348**	P	**P**	**12 01 42.0**	**-2.2**
	6.6nm,0.8s,mb4.4,baz=167,slow=6.9,SNR=5.5						
ULM				LR	LR	12 20 50.0	
	comp=Z,51nm,20.7s,MS3.4,baz=292,slow=38						
NVAR	**Mina Array Bea**	**43.59**	**319**	P	**P**	**12 01 49.9**	**+1.0**
	1.1nm,0.7s,mb3.7,baz=121,slow=6.7,SNR=10						
NVAR	**Mina Array Bea**

ATAL			S		Sg	12 15 04.3	+0.6
ATAL	**Atalanti**	**0.48 298**	P		Pg	12 14 57.0	-0.4
ATAL			S		Sg	12 15 04.3	+0.6
PTL	**Penteli**	**0.48 150**	*e*PB		Pg	12 14 57.3	-0.1
PTL			*e*SB		Sg	12 15 04.5	+0.8
PTL	**Penteli**	**0.48 150**	*e*Pb		Pg	12 14 57.3	-0.1
PTL			*e*Sb		Sg	12 15 04.5	+0.8
ATH	**Athens Observa**	**0.51 166**	*e*PN		Pg	12 14 57.8	-0.2
ATH			*e*SN		Sg	12 15 05.5	+0.9
ATH	**Athens Observa**	**0.51 166**	*e*Pn		Pg	12 14 57.8	-0.2
ATHU	**Athens Univers**	**0.53 160**	P		Pg	12 14 58.5	+0.1
ATHU			S		Sg	12 15 05.7	+0.5
ATHU	**Athens Univers**	**0.53 160**	P		Pg	12 14 58.5	+0.1
ATHU			S		Sg	12 15 05.7	+0.5
VLY	**Voula,Athens**	**0.64 163**	*e*PN		Pg	12 15 00.5	0.0
VLY	**Voula,Athens**	**0.64 163**	*e*Pn		Pg	12 15 00.5	0.0
LTK	**Loutraki**	**0.64 227**	*e*PN		Pg	12 14 59.9	-0.6
LTK			*e*SN		Sg	12 15 08.5	-0.4
LTK	**Loutraki**	**0.64 227**	P		Pg	12 14 59.8	-0.7
LTK			S		Sg	12 15 09.8	+0.9
LTK	**Loutraki**	**0.64 227**	P		Pg	12 14 59.8	-0.7
LTK			S		Sg	12 15 09.8	+0.9
NAIG	**Nisos Aigina**	**0.71 185**	*e*PN		Pg	12 15 01.6	-0.2
NAIG	**Nisos Aigina**	**0.71 185**	*e*Pn		Pg	12 15 01.6	-0.2
AOS	**Alonnisos**	**0.75 19**	P		Pg	12 15 02.7	+0.2
AOS			S		Sg	12 15 14.2	+2.0
AOS	**Alonnisos**	**0.75 19**	P		Pg	12 15 02.7	+0.2
AOS			S		Sg	12 15 14.2	+2.0
DSF	**Desfina**	**0.81 266**	P		Pg	12 15 02.9	-0.9
DSF			S		Sg	12 15 16.1	+1.7
DSF	**Desfina**	**0.81 266**	P		Pg	12 15 02.9	-0.9
DSF			S		Sg	12 15 16.1	+1.7
NEO	**Neokhori**	**0.88 343**	*e*PN		Pg	12 15 04.6	-0.5
NEO	**Neokhori**	**0.88 343**	*e*Pn		Pg	12 15 04.6	-0.5
XOR	**Xorichti**	**0.94 342**	P		Pg	12 15 06.3	0.0
XOR			S		Sg	12 15 19.4	+0.8
XOR	**Xorichti**	**0.94 342**	P		Pg	12 15 06.3	0.0
XOR			S		Sg	12 15 19.4	+0.8
GUR	**Goura**	**1.10 242**	*e*PN		Pg	12 15 08.3	-0.9
GUR			*e*SN		Sg	12 15 22.6	-0.8
GUR	**Goura**	**1.10 242**	P		Pg	12 15 08.4	-0.8
GUR			S		Sg	12 15 23.9	+0.5
GUR	**Goura**	**1.10 242**	P		Pg	12 15 08.4	-0.8
GUR			*e*Sn		Sg	12 15 22.6	-0.8
GUR			S		Sg	12 15 23.9	+0.5
AGG	**Agios Georgios**	**1.11 300**	P		Pg	12 15 08.6	-0.9
AGG			S		Sg	12 15 24.7	+0.8
AGG	**Agios Georgios**	**1.11 300**	P		Pg	12 15 08.6	-0.9
AGG			S		Sg	12 15 24.7	+0.8
KALE	**Kalithea**	**1.12 267**	P		Pg	12 15 08.4	-1.2
KALE			S		Sg	12 15 24.2	+0.1
KALE	**Kalithea**	**1.12 267**	P		Pg	12 15 08.4	-1.2
KALE			S		Sg	12 15 24.2	+0.1
LAKA	**Lakka**	**1.26 260**	P		Pn	12 15 11.6	-0.6
LAKA			S		Sb	12 15 29.8	+1.1
LAKA	**Lakka**	**1.26 260**	P		Pn	12 15 11.6	-0.6
LAKA			S		Sb	12 15 29.8	+1.1
EFP	**Efpalio**	**1.30 269**	*e*PN		Pn	12 15 12.0	-0.7
EFP			*e*SN		Sn	12 15 29.4	-0.9
EFP	**Efpalio**	**1.30 269**	P		Pn	12 15 12.4	-0.3
EFP			S		Sb	12 15 31.4	+1.6
EFP	**Efpalio**	**1.30 269**	*e*Pn		Pn	12 15 12.0	-0.7
EFP	**Efpalio**	**1.30 269**	P		Pn	12 15 12.4	-0.3
EFP			*e*Sn		Sn	12 15 29.4	-0.9
EFP			S		Sb	12 15 31.4	+1.6
VLX	**Vlachokerasia**	**1.44 221**	*e*PN		Pn	12 15 13.8	-0.8
VLX			*e*SN		Sn	12 15 33.1	-0.6
VLX	**Vlachokerasia**	**1.44 221**	P		Pn	12 15 14.0	-0.6
VLX			S		Sn	12 15 34.8	+1.1
VLX	**Vlachokerasia**	**1.44 221**	P		Pn	12 15 14.0	-0.6
VLX			*e*Sn		Sn	12 15 33.1	-0.6
VLX			S		Sn	12 15 34.8	+1.1
EVR	**Evrytania**	**1.44 289**	*e*PN		Pn	12 15 14.0	-0.7
EVR	**Evrytania**	**1.44 289**	*e*Pn		Pn	12 15 14.0	-0.7
PAIG	**Paliouri**	**1.46 4**	P		Pn	12 15 13.9	-1.0
PAIG	**Paliouri**	**1.46 4**	P		Pn	12 15 13.9	-1.0
THL	**Klokotos Trika**	**1.63 313**	P		Pn	12 15 16.7	-0.5
THL	**Klokotos Trika**	**1.63 313**	P		Pn	12 15 16.7	-0.5
VLI	**Veliai**	**1.81 196**	*e*PN		Pn	12 15 19.5	-0.2
VLI			*e*SN		Sn	12 15 42.4	-0.5
VLI	**Veliai**	**1.81 196**	*e*Pn		Pn	12 15 19.5	-0.2
VLI			*e*Sn		Sn	12 15 42.4	-0.5
ITM	**Ithomi**	**1.82 226**	*e*PN		Pn	12 15 19.5	-0.4
ITM	**Ithomi**	**1.82 226**	P		Pn	12 15 19.8	-0.1
ITM			S		Sn	12 15 44.4	+1.2
ITM	**Ithomi**	**1.82 226**	*e*Pn		Pn	12 15 19.5	-0.4
ITM	**Ithomi**	**1.82 226**	P		Pn	12 15 19.8	-0.1
ITM			S		Sn	12 15 44.4	+1.2
LIT	**Litokhoron**	**1.83 333**	P		Pn	12 15 19.4	-0.6
LIT			S		Sn	12 15 44.5	+1.1
LIT	**Litokhoron**	**1.83 333**	P		Pn	12 15 19.4	-0.6
LIT			S		Sn	12 15 44.5	+1.1
OUR	**Ouranopolis**	**1.90 10**	P		Pn	12 15 20.1	-0.8
OUR	**Ouranopolis**	**1.90 10**	P		Pn	12 15 20.1	-0.8
LIA	**Limnos Island**	**1.91 41**	*e*PN		Pn	12 15 21.6	+0.6
LIA	**Limnos Island**	**1.91 41**	P		Pn	12 15 20.4	-0.6
LIA			S		Sn	12 15 45.8	+0.5
LIA	**Limnos Island**	**1.91 41**	P		Pn	12 15 20.4	-0.6
LIA	**Limnos Island**	**1.91 41**	*e*Pn		Pn	12 15 21.6	+0.6
LIA			S		Sn	12 15 45.8	+0.5
PLG	**Polygyros**	**1.91 357**	*e*PN		Pn	12 15 21.6	+0.5
PLG	**Polygyros**	**1.91 357**	P		Pn	12 15 20.4	-0.7
PLG	**Polygyros**	**1.91 357**	P		Pn	12 15 20.4	-0.7
PLG	**Polygyros**	**1.91 357**	*e*Pn		Pn	12 15 21.6	+0.5
CHOS	**Chios Island**	**1.96 92**	P		Pn	12 15 21.5	-0.3
CHOS			S		Sn	12 15 46.9	+0.3
CHOS	**Chios island**	**1.96 92**	P		Pn	12 15 21.5	-0.3
CHOS			S		Sn	12 15 46.9	+0.3
APE	**Apeiranthos**	**2.09 131**	*e*PB		Pb	12 15 22.9	-3.5
APE	**Apeiranthos**	**2.09 131**	P		Pn	12 15 22.7	-0.9
APE			S		Sn	12 15 51.7	+1.9
APE	**Apeiranthos**	**2.09 131**	P		Pn	12 15 22.7	-0.9
APE			S		Sn	12 15 51.7	+1.9
PYL	**PYLOS**	**2.13 223**	P		Pn	12 15 24.0	-0.1
PYL	**PYLOS**	**2.13 223**	P		Pn	12 15 24.0	-0.1
KYTH	**Kithira**	**2.22 191**	*e*PN		Pn	12 15 24.6	-0.7
KYTH	**Kithira**	**2.22 191**	*e*Pn		Pn	12 15 24.6	-0.7
PRK	**Paraskevi**	**2.25 69**	*e*PB		Pb	12 15 27.0	-2.2
VLS	**Valsamata**	**2.35 264**	*e*PB		Pb	12 15 27.6	-3.3
NVR	**Nevrokopi**	**2.89 4**	*e*PN		Pn	12 15 36.0	+1.4
NVR	**Nevrokopi**	**2.89 4**	*e*Pn		Pn	12 15 36.0	+1.4
KARN	**Karanos**	**3.07 175**	P		Pn	12 15 36.8	-0.2
KARN	**Karanos**	**3.07 175**	P		Pn	12 15 36.8	-0.2
VAM	**Vamos**	**3.10 170**	*e*PN		Pn	12 15 38.5	+1.1
VAM	**Vamos**	**3.10 170**	*e*Pn		Pn	12 15 38.5	+1.1
GVD	**Gavdhos**	**3.64 173**	*e*Pn		Pn	12 15 44.2	-0.7
GVD			*e*Sn		Sn	12 16 29.2	+1.0
GVD	**Gavdhos**	**3.64 173**	*e*Pn		Pn	12 15 44.2	-0.7
GVD			*e*Sn		Sn	12 16 29.2	+1.1

*ISCJB **31** 12:29:30.6±0.4, 38°.96N±0°.04×35°.78E±0°.04, h10km, Error ellipse: s-maj=6.2km s-min=3.4km az=31.4*
*CSEM **31** 12:29:30.4±0.2, 38°.93N×35°.76E, h2km, MD3.1, Error ellipse: s-maj=6.6km s-min=4.2km az=35.0*
*ISK **31** 12:29:30.0, 38°.97N×35°.76E, h6km, MD3.3*
*DDA **31** 12:29:30.3, 38°.93N×35°.73E, h7km±1km, Md3.1*

ISC 31 12:29:30.7±0.6, 38°.95N±0°.04×35°.76E±0°.04, h3km±6km, n31, σ0s92/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.57**	**118**	*i* P	**Pg**	**12 29 41.5**	**-0.2**
PINB				*i* S	**Sg**	**12 29 50.4**	**+1.3**
PINB	**Pinarbasi**	**0.57**	**118**	*i* P	**Pg**	**12 29 41.5**	**-0.2**
PINB				*i* S	**Sg**	**12 29 50.4**	**+1.3**
AVNT	**Avonos**	**0.72**	**257**	*i* P	**Pg**	**12 29 44.1**	**-0.4**
AVNT				*i* S	**Sg**	**12 29 54.3**	**+0.4**
AVNT	**Avonos**	**0.72**	**257**	*i* P	**Pg**	**12 29 44.1**	**-0.5**
AVNT				*i* S	**Sg**	**12 29 54.3**	**+0.3**
YOZ	**Yozgat**	**0.77**	**334**	*e*PG	**Pg**	**12 29 45.0**	**-0.5**
YOZ				*e*SG	**Sg**	**12 29 56.0**	**+0.4**
YOZ	**Yozgat**	**0.77**	**334**	*e*Pg	**Pg**	**12 29 45.0**	**-0.5**
YOZ				*e*Sg	**Sg**	**12 29 56.0**	**+0.5**
SARI	**SarD1z-Kayseri**	**0.78**	**110**	*e*PG	**Pg**	**12 29 44.7**	**-0.9**
SARI				*e*SG	**Sg**	**12 29 56.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**0.78**	**110**	*e*Pg	**Pg**	**12 29 44.7**	**-1.0**
SARI				*e*Sg	**Sg**	**12 29 56.4**	**+0.6**
CDAG	**Cicekdag**	**1.27**	**303**	*i* P	**Pg**	**12 29 54.2**	**-0.9**
CDAG				*i* S	**Sg**	**12 30 11.7**	**+0.2**
CDAG	**Cicekdag**	**1.27**	**303**	*i* P	**Pg**	**12 29 54.2**	**-0.8**
CDAG				*i* S	**Sg**	**12 30 11.7**	**+0.2**
SVSK	**Karacayir**	**1.36**	**44**	*e*PN	**Pn**	**12 29 55.3**	**-1.3**
SVSK	**Karacayir**	**1.36**	**44**	*e*Pn	**Pn**	**12 29 55.3**	**-1.4**
KOZT	**Kozan**	**1.47**	**178**	*e*PN	**Pn**	**12 29 57.4**	**-0.6**
CORM	**Corum**	**1.51**	**325**	*e*PN	**Pn**	**12 29 58.0**	**-0.6**
CORM	**Corum**	**1.51**	**325**	*e*Pn	**Pn**	**12 29 58.1**	**-0.5**
DARE	**Darende-Malaty**	**1.60**	**89**	*e*PN	**Pn**	**12 29 57.2**	**-2.6**
DARE	**Darende-Malaty**	**1.60**	**89**	*e*Pn	**Pn**	**12 29 57.2**	**-2.6**
KMRS	**Kahramanmaras**	**1.70**	**148**	*e*PN	**Pn**	**12 30 01.1**	**-0.1**
KMRS	**Kahramanmaras**	**1.70**	**148**	*e*Pn	**Pn**	**12 30 01.1**	**-0.1**
KARA	**Karaisali**	**1.77**	**198**	*e*PN	**Pn**	**12 30 02.6**	**+0.4**
KARA	**Karaisali**	**1.77**	**198**	*e*Pn	**Pn**	**12 30 02.6**	**+0.4**
CTKT	**Corum**	**1.83**	**336**	*i* P	**Pn**	**12 30 05.6**	**+2.5**
CTKT				*i* S	**Sn**	**12 30 31.0**	**+4.2**
CTKT	**Corum**	**1.83**	**336**	*i* P	**Pn**	**12 30 05.6**	**+2.5**
SULT	**Sultanhani-AKS**	**1.91**	**248**	*e*PN	**Pn**	**12 30 04.3**	**+0.1**
SULT	**Sultanhani-AKS**	**1.91**	**248**	*e*Pn	**Pn**	**12 30 04.3**	**+0.2**
MYA	**Malataya**	**2.18**	**106**	*e*PN	**Pn**	**12 30 08.7**	**+0.8**
MYA	**Malataya**	**2.18**	**106**	*e*Pn	**Pn**	**12 30 08.7**	**+0.9**
TOS	**Tosya**	**2.48**	**328**	*e*PN	**Pn**	**12 30 12.3**	**+0.4**
TOS	**Tosya**	**2.48**	**328**	*e*Pn	**Pn**	**12 30 12.3**	**+0.4**
DIKM	**Dikmen**	**2.73**	**352**	*e*PN	**Pn**	**12 30 15.8**	**+0.4**
DIKM	**Dikmen**	**2.73**	**352**	*e*Pn	**Pn**	**12 30 15.8**	**+0.4**

*ISCJB **31** 12:59:28.0±0.6, 33°.49N±0°.05×125°.49E±0°.05, h10km, mb3.6/7, Error ellipse: s-maj=7.6km s-min=5.8km az=6.3*
*IDC **31** 12:59:29.9±1.4, 33°.74N×125°.27E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/25, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=31.5km s-min=23.3km az=125.0*
*KMA **31** 12:59:30.8, 33°.49N×125°.69E, ML4.2*
*NEIC **31** 12:59:31.6±0.9, 33°.70N×125°.19E, h10km, mb3.8/3, Error ellipse: s-maj=24.2km s-min=14.0km az=63.0*
NEIC Felt at Cheju, South Korea.
*BJI **31** 12:59:34.2, 33°.45N×125°.32E, h15km, mB4.4/1, mb3.8/2, ML4.3/8, Ms3.8/3, Ms7 3.7/2*

ISC 31 12:59:30.3±0.5, 33°.57N±0°.04×125°.68E±0°.05, h10km, n27, σ1s32/37, mb3.6/7, 1C, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSGOS	**Gosan**	**0.49**	**124**	P	**Pg**	**12 59 39.8**	**0.0**
KSJJU	**Jeju**	**0.74**	**101**	P	**Pg**	**12 59 44.8**	**+0.3**
KSSGP	**Seogwipo**	**0.75**	**114**	P	**Pg**	**12 59 44.6**	**-0.2**
KSHUK	**Heuksando**	**1.13**	**350**	P	**Pb**	**12 59 52.6**	**+0.7**
KSWAN	**Wando**	**1.18**	**46**	P	**Pn**	**12 59 52.6**	**-0.2**
KSHAN	**Haenam**	**1.24**	**36**	P	**Pn**	**12 59 53.5**	**-0.2**
KSKWJ	**Gwangju**	**1.92**	**34**	P	**Pn**	**13 00 03.3**	**+0.3**
KSJEU	**Jeongeup**	**2.18**	**28**	P	**Pn**	**13 00 07.0**	**+0.4**
INCN	**Inchon**	**3.98**	**11**	*e*Pn	**Pn**	**13 00 32.2**	**+0.9**
INCN				*e*Sg	**Sg**	**13 01 37.9**	**-0.3**
KSRS	**Korea Array**	**4.29**	**25**	Pn	**Pn**	**13 00 36.2**	**+0.7**
	2.2nm,0.3s,baz=202,slow=14,SNR=28						
KSRS				Pg	**Pg**	**13 00 50.8**	**-1.6**
	12nm,0.3s,baz=202,slow=17,SNR=27						
KSRS				Sn	**Sn**	**13 01 24.0**	**-1.6**
	32nm,0.3s,baz=206,slow=22,SNR=12						
KSRS				Lg		13 01 45.0	
	142nm,0.3s,baz=204,slow=31,SNR=35						
SSE	**Sheshan**	**4.53**	**238**	Pn	**Pn**	**13 00 40.5**	**+1.6**
SSE				smax			
	comp=N,370nm,0.6s						
SSE				smax			
	comp=E,300nm,0.6s						
SSE				LR	LR		
	comp=N,190nm,10.3s						
SSE				LR	LR		
	comp=E,260nm,10.3s						
SSE				LR	LR		
	comp=Z,370nm,9.8s						
NJ2	**Nanjing**	**5.94**	**257**	*e*Pn	**Pn**	**13 00 57.5**	**-0.8**
NJ2				Pg	**Pg**	**13 01 18.3**	**-5.8**
NJ2				Sn	**Sn**	**13 02 01.3**	**-5.1**
NJ2				Sg	**Sg**	**13 02 34.5**	**-6.5**
NJ2				smax			
	comp=N,310nm,0.8s						
NJ2				smax			
	comp=E,320nm,0.4s						
DL2	**Dalian**	**6.25**	**330**	Pn	**Pn**	**13 01 03.5**	**+1.0**
DL2				Pg	**Pg**	**13 01 26.0**	**-4.0**
DL2				Sn	**Sn**	**13 02 24.3**	**+10**
DL2				Sg	**Sg**	**13 02 46.5**	**-4.4**
DL2				smax			
	comp=N,110nm,0.6s						
DL2				smax			
	comp=E,160nm,0.6s						
JOW	**Kunigami**	**7.08**	**161**	Pn	**Pn**	**13 01 19.5**	**+5.5**
	comp=E,2.6nm,0.3s,baz=352,slow=18,SNR=4.9						
SNY	**Shenyang**	**8.41**	**349**	⇑P	**Pn**	**13 01 40.3**	**+8.1**
SNY				S	**Sn**	**13 03 09.3**	**+2.2**
SNY				smax			
	comp=N,89nm,0.7s						
SNY				smax			
	comp=E,130nm,0.9s						
BJT	**Baijiatuan**	**9.98**	**313**	Pn	**Pn**	**13 01 51.8**	**-1.8**
HIA	**Hailar**	**16.29**	**346**	Pn	**Pn**	**13 03 21.0**	**+1.9**
	comp=E,3.0nm,0.6s						
ULN	**Ulaanbaatar**	**20.01**	**321**	*e*P	**Pn**	**13 04 01.2**	**-3.5**
	comp=E,7.3nm,1.2s						
ULN				*e*		13 04 05.8	
SONM	**Songino Array**	**20.34**	**320**	P	**P**	**13 04 08.4**	**+1.9**
	comp=E,0.3nm,0.3s,baz=129,slow=11,SNR=24						
GTA	**Gaotai**	**21.56**	**293**	*e*P	**P**	**13 04 22.8**	**+3.0**
GTA				pP		13 04 26.8	
GTA				sP	sP	13 04 30.0	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
CMAR	**Chiang Mai Arr**	**28.24**	**444**	P	**P**	**13 05 27.2**	**+3.6**
	comp=Z,0.3nm,0.4s,mb3.2,baz=37,slow=9.2,SNR=4.4						
KURK	**Kurchatov**	**38.15**	**311**	P	**P**	**13 06 49.0**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.6,baz=99,slow=9.1,SNR=3.7						
KURK	**Kurchatov**	**38.15**	**311**	*e*P	**P**	**13 06 45.3**	**-4.2**
	comp=Z,1.3nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**65.44**	**329**	P	**P**	**13 10 11.7**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=67,slow=6.4,SNR=5.0						
AKASG	**Malin Array Be**	**68.59**	**317**	P	**P**	**13 10 31.5**	**-1.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=55,slow=7.5,SNR=3.4						
BRTR	**Keskin Array B**	**70.89**	**305**	P	**P**	**13 10 46.3**	**-1.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=50,slow=7.7,SNR=2.6						
YKA	**Yellowknife Ar**	**72.83**	**25**	P	**P**	**13 11 01.1**	**+2.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=311,slow=5.6,SNR=3.6						

CASC 31 13:10:17.9±3.8, 8°.43N×82°.96W, h5km, MD4.0, 2C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.30**	**317⇑**	*e*P	Pg	13 10 23.2	-0.5
ACR				*e*S	Sg	13 10 26.8	-0.9
BRU2	**Volcan**	**0.45**	**37⇓**	*i*P	Pg	13 10 27.1	+0.5
BRU2				*e*S	Sg	13 10 35.2	+2.7
BAR1		**0.88**	**337⇓**	*e*P	Pg	13 10 33.6	-1.2
CNI	**Changuinola**	**1.07**	**24⇑**	*i*P	Pg	13 10 37.5	-1.0
BUS	**Buena Vista**	**1.37**	**325**	*e*P	Pn	13 10 41.7	-1.9
BUS				*e*S	Sb	13 11 01.6	-0.2
QCR	**Quepos**	**1.54**	**310⇓**	*e*P	Pn	13 10 44.9	-1.2
QCR				*e*S	Sn	13 11 06.3	-0.2
LIO	**Limon**	**1.57**	**357**	*e*P	Pn	13 10 45.3	-1.1
LIO				*e*S	Sn	13 11 09.4	+2.3
URSC	**Urasca**	**1.61**	**330**	*e*P	Pn	13 10 45.0	-2.0
URSC				*e*S	Sn	13 11 08.6	+0.4
LAJ	**Bijagual**	**1.83**	**321**	*e*P	Pn	13 10 51.2	+1.3
LAJ				*e*S	Sn	13 11 19.0	+5.5
CGA2	**Cerro Gallo 2**	**2.16**	**317**	*e*P	Pn	13 10 53.7	-0.9
CGA2				*e*S	Sn	13 11 23.4	+1.6
FORC	**Fortuna**	**2.63**	**320**	*e*P	Pn	13 11 02.4	+1.3
CHPA	**Chiripa**	**2.77**	**316**	*i* P	Pn	13 11 06.1	+3.1
CHPA				*i* S	Sn	13 11 39.2	+2.4
AMAS	**Alto Masis**	**2.95**	**317**	*i* P	Pn	13 11 08.2	+2.7
PTEN	**Parque Tenorio**	**3.02**	**319**	*i* P	Pn	13 11 09.3	+2.9
CUI	**Cuipilapa**	**3.10**	**316**	*i* P	Pn	13 11 09.7	+2.2
CUI				*i* S	Sn	13 11 48.0	+3.1
VCR	**Vista de Mar**	**3.13**	**303**	*e*P	Pn	13 11 07.8	-0.1
BCIP	**Isla Barro Col**	**3.17**	**76**	*e*P	Pn	13 11 08.1	-0.5
BCIP				*e*S	Sn	13 11 46.3	-0.5
LIM1	**Limonal**	**3.19**	**315**	*i* P	Pn	13 11 10.5	+1.8
NY14	**Universidad de**	**3.36**	**311**	*i* P	Pn	13 11 12.5	+1.4
LAPC	**Finca la Perla**	**3.37**	**314**	*i* P	Pn	13 11 12.9	+1.8
GB1A	**Borinquen Arri**	**3.38**	**315**	*i* P	Pn	13 11 13.3	+2.0

*ISCJB **31** 13:11:56.0±0.8, 38°.26N±0°.02×25°.94E±0°.04, h3km±5km, Error ellipse: s-maj=5.8km s-min=3.5km az=170.2*
*NEIC **31** 13:11:55.8, 38°.27N×25°.93E, h18km, MD3.2(ATH), After ATH.*
*ATH **31** 13:11:55.8, 38°.27N×25°.93E, h18km±2km, MD3.2/5*
*THE **31** 13:11:56.8, 38°.25N×26°.01E, h9km±1km, ML3.6/3, Error ellipse: s-maj=2.5km s-min=0.6km az=80.0*
*CSEM **31** 13:11:56.3±0.3, 38°.25N×25°.95E, h8km, ML3.6/3, Error ellipse: s-maj=6.8km s-min=4.3km az=74.0*
*DDA **31** 13:11:58.1, 38°.28N×26°.11E, h14km±2km, Md3.2*

ISC 31 13:11:56.5±0.7, 38°.26N±0°.02×25°.94E±0°.05, h8km±4km, n38, σ1s03/66, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.15**	**35**	*e*PB	**Pg**	**13 12 00.1**	**+0.3**
CHOS				*e*SB	**Sg**	**13 12 02.3**	**+0.3**
CHOS	**Chios island**	**0.15**	**35**	P	**Pg**	**13 12 00.0**	**+0.2**
CHOS				S	**Sg**	**13 12 02.1**	**+0.1**
CHOS	**Chios island**	**0.15**	**35**	P	**Pg**	**13 12 00.0**	**+0.2**
CHOS				*e*Sb	**Sg**	**13 12 02.3**	**+0.3**
URLA	**Izmir**	**0.52**	**79**	*i* P	**Pg**	**13 12 06.1**	**-0.5**
URLA				*i* S	**Sg**	**13 12 13.0**	**-0.5**
URLA	**Izmir**	**0.52**	**79**	*i* S	**Sg**	**13 12 13.0**	**-0.5**
URLA	**Izmir**	**0.52**	**79**	*i* P	**Pg**	**13 12 06.1**	**-0.5**
BLCB	**Balcova**	**0.87**	**82**	P	**Pg**	**13 12 12.4**	**-0.9**
BLCB	**Balcova**	**0.87**	**82**	P	**Pg**	**13 12 12.4**	**-0.9**
SMG	**Samos**	**0.90**	**128**	*e*PN	**Pg**	**13 12 13.5**	**-0.3**
SMG				*e*SN	**Sg**	**13 12 25.7**	**+0.2**
SMG	**Samos**	**0.90**	**128**	*e*Pn	**Pg**	**13 12 13.5**	**-0.3**
SMG				*e*Sn	**Sg**	**13 12 25.7**	**+0.2**
SIGR	**SIGRI**	**0.95**	**356**	P	**Pg**	**13 12 14.9**	**+0.1**
SIGR				S	**Sg**	**13 12 28.9**	**+1.8**
SIGR	**SIGRI**	**0.95**	**356**	P	**Pg**	**13 12 14.9**	**+0.1**
SIGR				S	**Sg**	**13 12 28.9**	**+1.8**
PRK	**Paraskevi**	**1.01**	**15**	*e*PN	**Pg**	**13 12 15.8**	**-0.2**
PRK				*e*SN	**Sg**	**13 12 29.4**	**+0.2**
PRK	**Paraskevi**	**1.01**	**15**	P	**Pg**	**13 12 15.9**	**-0.1**
PRK				S	**Sg**	**13 12 30.3**	**+1.1**
PRK	**Paraskevi**	**1.01**	**15**	P	**Pg**	**13 12 15.9**	**-0.1**
PRK				*e*Sn	**Sg**	**13 12 29.4**	**+0.2**
PRK				S	**Sg**	**13 12 30.3**	**+1.1**
GCAM	**G?zelcaml?**	**1.16**	**119**	*i* P	**Pg**	**13 12 18.2**	**-0.7**
GCAM				*i* S	**Sg**	**13 12 33.5**	**-0.5**
GCAM	**G?zelcaml?**	**1.16**	**119**	*i* P	**Pg**	**13 12 18.2**	**-0.7**
GCAM				*i* S	**Sg**	**13 12 33.5**	**-0.5**
AYVA	**Ayvalik**	**1.20**	**29**	*i* P	**Pb**	**13 12 20.1**	**+0.6**
AYVA				*i* S	**Sg**	**13 12 34.8**	**-0.2**
AYVA	**Ayvalik**	**1.20**	**29**	*i* P	**Pb**	**13 12 20.0**	**+0.6**
AYVA				*i* S	**Sg**	**13 12 34.8**	**-0.2**
APE	**Apeiranthos**	**1.24**	**195**	*e*PN	**Pn**	**13 12 19.5**	**-0.6**
APE	**Apeiranthos**	**1.24**	**195**	P	**Pn**	**13 12 19.6**	**-0.5**
APE				S	**Sb**	**13 12 35.8**	**-0.4**
APE	**Apeiranthos**	**1.24**	**195**	P	**Pn**	**13 12 19.6**	**-0.5**
APE				S	**Sb**	**13 12 35.8**	**-0.4**
BOZC	**Bozcaada**	**1.58**	**3**	*i* P	**Pn**	**13 12 23.6**	**-1.2**
BOZC				*i* S	**Sn**	**13 12 42.9**	**-2.5**
AKHS	**Akhisar**	**1.59**	**67**	*i* P	**Pn**	**13 12 24.2**	**-0.8**
AKHS				*i* S	**Sn**	**13 12 44.2**	**-1.4**
AKHS	**Akhisar**	**1.59**	**67**	*i* P	**Pn**	**13 12 24.2**	**-0.7**
AKHS				*i* S	**Sn**	**13 12 44.2**	**-1.4**
**AYD

BPAW	**Bear Paw Mtn.**	**152.82**	**308**	*e*PKPbc	PKPbc	13 40 34.4 -1.5

*UPA **31** 13:34:35.3, 8°.42N×83°.03W, h8km, MW4.0*
*UCR **31** 13:34:36.7, 8°.46N×83°.04W, h4km, MD3.6*
CASC 31 13:34:35.1±1.6, 8°.41N×83°.02W, h4km, MD3.6, 4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.28**	**329**	⇓*e*P	Pg	13 34 41.4	+0.8
ACR				*e*S	Sg	13 34 45.9	+1.6
BRU2	**Volcan**	**0.50**	**40**	⇓*i*P	Pg	13 34 46.1	+1.3
BRU2				*e*S	Sg	13 34 54.2	+2.9
BAR1		**0.88**	**341**	⇓*e*P	Pg	13 34 51.9	0.0
BAR1				*e*S	Sg	13 35 04.1	+0.7
BUS	**Buena Vista**	**1.35**	**327**	⇓*e*P	Pn	13 35 00.2	-0.6
URSC	**Urasca**	**1.60**	**332**	*e*P	Pn	13 35 04.3	+0.1
CGA2	**Cerro Gallo 2**	**2.14**	**318**	*e*P	Pn	13 35 13.6	+1.9

*ISCJB **31** 13:48:56.9±0.7, 28°.04S±0°.09×178°.1W±0°.1, h178km±7km, mb4.2/17, Error ellipse: s-maj=18.1km s-min=14.0km az=7.6*
*NEIC **31** 13:48:57.0±0.9, 27°.89S×177°.97W, h171km±8km, mb4.4/9, Error ellipse: s-maj=14.8km s-min=10.9km az=122.0*
*IDC **31** 13:48:57.6±1.1, 27°.96S×178°.08W, h170km±12km, mb3.9/10, mb1 4.1/10, mb1mx4.0/14, mbtmp3.9/10, Error ellipse: s-maj=26.6km s-min=17.6km az=166.0*
ISC 31 13:48:57.7±0.7, 27°.99S±0°.09×178°.1W±0°.1, h173km±7km, n55, σ1°01/29, mb4.2/17, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.26**	**174**	P	**Pn**	**13 49 26.4**	**-0.4**
	295nm,0.3s,baz=78,slow=6.7,SNR=45						
RAO				S	**Sn**	**13 49 49.4**	**0.0**
	247nm,0.3s,baz=250,slow=23,SNR=5.3						
MSVF	**Nonsavu**	**10.82**	**340**	*e*Pn	**Pn**	**13 51 28.8**	**+0.7**
	210nm,1.4s						
URZ	**Urewera**	**11.00**	**200**	P	**Pn**	**13 51 25.6**	**-4.7**
	0.1nm,0.3s,baz=306,slow=18,SNR=3.3						
URZ				S	**Sn**	**13 53 21.1**	**-11**
	0.5nm,0.3s,baz=336,slow=20,SNR=3.3						
AFI	**Afiamalu**	**15.19**	**24**	P	**Pn**	**13 52 18.9**	**-4.7**
	1.4nm,0.3s,baz=204,slow=10.0,SNR=3.1						
AFI				S	S	13 54 50.1	-23
	4.0nm,0.3s,baz=37,slow=23,SNR=6.2						
AFI	**Afiamalu**	**15.19**	**24**	P	**Pn**	**13 52 18.9**	**-4.7**
AFI				S	S	13 54 50.1	-23
CTA	**Charters Tower**	**33.42**	**276**	P	**P**	**13 55 20.8**	**+0.6**
	3.5nm,0.6s,mb4.3,baz=108,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**33.42**	**276**	*e*P	**P**	**13 55 21.1**	**+0.9**
	2.9nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**35.03**	**254**	P	**P**	**13 55 34.8**	**+0.9**
	1.6nm,1.0s,mb3.6,baz=194,slow=11,SNR=3.4						
STKA				PcP	PcP	13 58 03.0	+1.0
	2.0nm,0.7s,baz=128,slow=4.6,SNR=4.3						
ASAR	**Alice Springs**	**43.23**	**264**	P	**P**	**13 56 41.2**	**-0.8**
	2.3nm,0.8s,mb3.9,baz=106,slow=7.4,SNR=17						
ASAR				PcP	PcP	13 58 27.9	-0.2
	0.6nm,0.7s,baz=116,slow=3.7,SNR=4.1						
WRAB	**Tennant Creek**	**43.99**	**270**	*e*P	**P**	**13 56 47.9**	**-0.2**
	8.0nm,1.0s,mb4.3						
SBA	**Scott Base**	**50.42**	**184**	*e*P	**P**	**13 57 39.2**	**+2.2**
	3.6nm,0.9s,mb4.0						
NWAO	**Narrogin (SRO)**	**55.22**	**248**	*e*P	**P**	**13 58 12.8**	**0.0**
	49nm,1.6s,mb5.0						
MBWA	**Marble Bar**	**56.46**	**262**	*e*P	**P**	**13 58 20.3**	**-1.6**
	5.3nm,0.8s,mb4.4						
CASY	**Casey**	**57.24**	**207**	*e*P	**P**	**13 58 26.4**	**-0.1**
	6.7nm,1.0s,mb4.4						
MJAR	**Matsushiro Arr**	**76.23**	**325**	P	**P**	**14 00 26.8**	**-0.2**
	7.3nm,0.8s,mb4.4,baz=153,slow=5.5,SNR=20						
MAT	**Matsushiro**	**76.24**	**325**	P	**P**	**14 00 26.9**	**-0.1**
SYO	**Syowa Base**	**79.44**	**193**	⇑*e*P	**P**	**14 00 43.0**	**-1.3**
KSRS	**Korea Array**	**82.48**	**320**	P	**P**	**14 01 01.9**	**+1.1**
	3.2nm,0.9s,mb4.0,baz=140,slow=5.6,SNR=8.8						
PEA0B	**Petropavlovsk-**	**83.47**	**346**	*e*P	**P**	**14 01 03.4**	**-2.1**
PETK	**Petropavlovsk-**	**83.47**	**346**	P	**P**	**14 01 05.5**	**+0.1**
	4.1nm,0.5s,mb4.4,baz=122,slow=6.2,SNR=18						
SDPT	**Sand Point**	**84.36**	**10**	*e*P	**P**	**14 01 03.1**	**-6.8**
	102nm,1.0s						
NVAR	**Mina Array Bea**	**86.52**	**43**	P	**P**	**14 01 22.2**	**+1.2**
	2.6nm,0.8s,mb4.1,baz=221,slow=7.9,SNR=20						
ENH	**Enshi**	**90.19**	**304**	*e*P	**P**	**14 01 38.5**	**-0.1**
	6.2nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**91.14**	**57**	P	**P**	**14 01 43.8**	**+0.8**
	0.6nm,0.8s,mb3.6,baz=201,slow=6.7,SNR=6.3						
CMAR	**Chiang Mai Arr**	**92.55**	**289**	P	**P**	**14 01 51.4**	**+1.6**
	0.3nm,0.4s,mb3.8,baz=140,slow=4.2,SNR=4.2						
KTH	**Kantishna Hill**	**93.73**	**12**	*e*P	**P**	**14 01 52.3**	**-1.9**
	2.2nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**94.44**	**43**	P	**P**	**14 01 57.7**	**-0.2**
	1.1nm,0.9s,mb4.0,baz=251,slow=2.7,SNR=7.5						
MKAR	**Makanchi Array**	**116.17**	**311**	PKP	PKPdf	14 07 19.2	-0.8
	0.6nm,0.4s,baz=89,slow=1.3,SNR=6.0						
ZALV	**Zalesovo Beam**	**116.19**	**319**	PKP	PKPdf	14 07 18.5	-1.4
	0.6nm,0.5s,baz=129,slow=2.0,SNR=3.4						
BVAR	**Borovoye Array**	**124.62**	**317**	PKP	PKPdf	14 07 35.9	-0.3
	2.8nm,0.5s,baz=161,slow=2.0,SNR=22						
ARCES	**ARCESS Array B**	**136.23**	**348**	PKhKP		14 07 53.6	
	2.0nm,0.7s,baz=48,slow=1.8,SNR=7.1						
JOF	**Joensuu**	**140.16**	**339**	*e*p	PKPdf	14 08 06.3	+1.3
KAF	**Kangasniemi**	**142.26**	**342**	*e*pkp		14 08 03.0	
	baz=27,slow=2.3						
FINES	**FINESS Array B**	**142.86**	**341**	PKhKP		14 08 05.7	
	4.2nm,0.5s,baz=49,slow=3.5,SNR=45						
KIV	**Kislovodsk**	**143.78**	**307**	*e*PKPdf	PKPdf	14 08 10.9	-1.2
NOA	**NORSAR Array B**	**146.37**	**352**	PKPbc	PKPbc	14 08 16.7	-0.8
	3.8nm,0.6s,baz=13,slow=4.5,SNR=21						
NAO01	**NORSAR Array S**	**146.60**	**352**	*e*PKPdf	PKPdf	14 08 15.2	-1.1
KONO	**Kongsberg**	**147.92**	**353**	*e*PKPbc	PKPbc	14 08 20.2	-1.6
AKASG	**Malin Array Be**	**149.32**	**325**	PKPbc	PKPbc	14 08 25.2	-0.5
	6.5nm,0.5s,baz=44,slow=3.3,SNR=30						
AKBB	**Malin Array Si**	**149.32**	**325**	*e*PKPbc	PKPbc	14 08 24.9	-0.8
KIEV	**Kiev**	**149.34**	**325**	*e*PKPbc	PKPbc	14 08 23.8	-1.9
MMAI	**Mount Meron Ar**	**150.80**	**288**	PKPbc	PKPbc	14 08 31.0	+1.1
	31nm,0.8s,baz=90,slow=5.8,SNR=32						
BR131	**Keskin Array S**	**151.33**	**302**	*e*PKPbc	PKPbc	14 08 29.5	-1.4
BR131				*e*PKPab	PKPab	14 08 39.2	-0.5
BRTR	**Keskin Array B**	**151.33**	**302**	PKPbc	PKPbc	14 08 30.8	-0.1
	8.4nm,1.1s,baz=126,slow=2.1,SNR=22						
BUR08	**Bucovina Ar. S**	**153.29**	**324**	*e*PKPbc	PKPbc	14 08 35.1	+0.2
BUR08				*e*PKPab	PKPab	14 08 48.3	+0.7
KOLS	**Kolonicke sedl**	**153.87**	**329**	*e*P	PKPab	14 08 50.1	+0.1
KOLS	**Kolonicke sedl**	**153.87**	**329**	*e*PKP	PKPab	14 08 50.1	+0.1
STHS	**Stebnicka Huta**	**153.97**	**331**	*e*P	PKPab	14 08 51.8	+1.4
STHS	**Stebnicka Huta**	**153.97**	**331**	*e*PKP	PKPab	14 08 51.8	+1.4
KECS	**Kecovo**	**155.00**	**330**	*e*PKP	PKPab	14 08 55.7	+0.9
CLL	**Collm**	**155.26**	**343**	*i* PKPab	PKPab	14 08 56.1	+0.3
BRG	**Berggiesshubel**	**155.40**	**342**	*e*P	PKPab	14 08 56.7	+0.3
	3.0nm,1.0s						
VYHS	**Vyhne**	**155.70**	**332**	*e*PKP	PKPab	14 08 58.2	+0.4
GERES	**GERESS Array B**	**157.28**	**340**	PKPbc	PKPdf	14 08 44.1	+12
	0.2nm,0.2s,baz=228,slow=1.2,SNR=2.5						
GERES				PKPab	PKPab	14 09 04.0	-0.6
	0.2nm,0.2s,baz=41,slow=7.1,SNR=5.1						
TORD	**Torodi Ar. Bea**	**165.23**	**179**	PKP	PKPdf	14 08 41.8	-0.2
	0.5nm,0.7s,baz=268,slow=0.9,SNR=3.8						
TORD				PKPab	PKPab	14 09 39.9	-0.2
	1.2nm,0.7s,baz=172,slow=5.2,SNR=6.4						

*ISCJB **31** 13:57:22.2±1.0, 30°.59S±0°.05×177°.96W±0°.07, h68km±8km, mb4.5/24, Error ellipse: s-maj=12.7km s-min=5.7km az=38.0*
*NEIC **31** 13:57:24.3±1.2, 30°.48S×177°.99W, h80km±10km, mb4.7/13, Error ellipse: s-maj=15.2km s-min=10.5km az=121.0*
*IDC **31** 13:57:26.3±1.0, 30°.25S×177°.94W, h96km±8km, mb4.2/10, mb1 4.4/10, mb1mx4.2/15, mbtmp4.2/10, MS3.6/2, Ms1 3.5/2, ms1mx3.3/17, Error ellipse: s-maj=17.8km s-min=15.9km az=126.0*
ISC 31 13:57:23.8±0.9, 30°.53S±0°.05×177°.93W±0°.07, h68km±7km, n129, σ0°77/120, mb4.5/24, 31C-44D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.28**	**0**	P	**Pn**	**13 57 46.7**	**+1.0**
	1μm,0.3s,baz=202,slow=1.1,SNR=41						
RAO				S	**Sn**	**13 58 01.8**	**-0.4**
	7μm,0.3s,baz=229,slow=19,SNR=25						
OUZ	**Omahuta**	**8.53**	**235**	*e*Pn	**Pn**	**13 59 30.9**	**+6.4**
	15nm,0.5s						
URZ	**Urewera**	**8.73**	**207**	P	**Pn**	**13 59 25.5**	**-1.7**
	1.6nm,0.3s,baz=306,slow=3.7,SNR=29						
URZ				S	**Sn**	**14 01 03.9**	**-0.1**
	27nm,0.3s,baz=184,slow=21,SNR=26						
KHZ	**Kahutara**	**13.69**	**208**	*e*Pn	**Pn**	**14 00 28.4**	**-6.3**
	12nm,0.5s						
RPZ	**Rata Peaks**	**15.80**	**211**	P	**Pn**	**14 00 58.0**	**-3.9**
	0.5nm,0.3s,baz=86,slow=19,SNR=5.7						
RPZ				S	**Sn**	**14 03 41.7**	**-14**
	2.1nm,0.3s,baz=0.4,slow=19,SNR=14						
RPZ	**Rata Peaks**	**15.80**	**211**	*e*Pn	**Pn**	**14 01 02.2**	**+0.2**
	24nm,1.0s						
RPZ				*e*Sn	**Sn**	**14 03 42.4**	**-14**
AFI	**Afiamalu**	**17.49**	**20**	S	Sx	14 04 14.6	
	2.3nm,0.3s,baz=13,slow=23,SNR=3.0						
ARMA	**Armidale**	**26.20**	**262**	*e*P	**P**	**14 02 53.8**	**+1.7**
CNB	**Canberra Magne**	**27.80**	**251**	*e*P	**P**	**14 03 08.2**	**+1.8**
TAU	**Tasmania Unive**	**30.26**	**236**	*e*P	**P**	**14 03 28.5**	**+0.3**
	6.1nm,0.7s,mb4.3						
TOO	**Toolangi**	**30.97**	**247**	*e*P	**P**	**14 03 35.7**	**+1.2**
CMSA	**Cobar Meteorol**	**31.10**	**259**	*e*P	**P**	**14 03 37.0**	**+1.3**
ARPS	**Mount Arapiles**	**33.88**	**248**	*e*P	**P**	**14 04 01.2**	**+1.2**
	14nm,0.7s,mb4.9						
CTA	**Charters Tower**	**33.88**	**279**	P	**P**	**14 04 00.8**	**+0.7**
	15nm,0.8s,mb4.9,baz=97,slow=11,SNR=20						
CTAO	**Charters Tower**	**33.88**	**279**	*e*P	**P**	**14 04 00.5**	**+0.3**
	14nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**34.51**	**257**	*e*P	**P**	**14 04 07.0**	**+1.5**
	11nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**34.51**	**257**	P	**P**	**14 04 07.0**	**+1.6**
	13nm,0.5s,mb5.0,baz=100,slow=10,SNR=46						
STKA				LR	LR	14 17 15.3	
	comp=Z,55nm,20.1s,baz=188,slow=34						
STKA	**Stephens Creek**	**34.51**	**257**	*e*P	**P**	**14 04 06.5**	**+1.0**
	2.5nm,0.5s,mb4.3						
BBOO	**Buckleboo**	**38.99**	**254**	*e*P	**P**	**14 04 43.3**	**-0.3**
	12nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**43.17**	**267**	P	**P**	**14 05 16.6**	**-1.3**
	6.7nm,0.8s,mb4.4,baz=102,slow=6.7,SNR=66						
ASAR				ScP	ScP	14 10 46.2	-5.6
	0.8nm,0.6s,baz=117,slow=3.9,SNR=6.4						
ASAR	**Alice Springs**	**43.17**	**267**	P	**P**	**14 05 16.6**	**-1.3**
ASAR				ScP	ScP	14 10 46.1	-5.6
WRAB	**Tennant Creek**	**44.16**	**272**	*e*P	**P**	**14 05 24.9**	**-1.0**
	11nm,0.6s,mb4.8						
FORT	**Forrest**	**46.08**	**255**	*e*P	**P**	**14 05 39.8**	**-1.2**
	11nm,0.6s,mb4.8						
SBA	**Scott Base**	**47.91**	**184**	*e*P	**P**	**14 05 54.7**	**+0.1**
	6.4nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.42**	**270**	*e*P	**P**	**14 06 28.1**	**-1.5**
	23nm,0.9s,mb5.2						
CASY	**Casey**	**55.05**	**208**	*e*P	**P**	**14 06 47.7**	**-0.4**
CASY	**Casey**	**55.05**	**208**	*e*P	**P**	**14 06 47.4**	**-0.6**
	15nm,0.7s,mb5.1						
MBWA	**Marble Bar**	**56.27**	**264**	*e*P	**P**	**14 06 55.0**	**-2.6**
	9.1nm,0.9s,mb4.8						
QSPA	**South Pole Qui**	**59.58**	**180**	P	**P**	**14 07 21.9**	**+2.1**
	4.1nm,0.7s,mb4.6,baz=53,slow=2.8,SNR=27						
MAW	**Mawson**	**72.21**	**201**	P	**P**	**14 08 41.5**	**+0.5**
	4.5nm,0.9s,mb4.3,baz=140,slow=7.8,SNR=8.3						
MAW				LR	LR	14 36 28.7	
	comp=Z,59nm,18.8s,baz=270,slow=32						
MAW	**Mawson**	**72.21**	**201**	*e*P	**P**	**14 08 40.8**	**-0.2**
	1.1nm,0.8s,mb3.7						
SYO	**Syowa Base**	**77.00**	**193**	⇓*e*P	**P**	**14 09 07.0**	**-1.7**
PLCA	**Paso Flores**	**82.37**	**133**	P	**P**	**14 09 38.7**	**+0.4**
	3.6nm,0.9s,mb4.2,baz=219,slow=7.8,SNR=7.0						
PLCA	**Paso Flores**	**82.37**	**133**	P	**P**	**14 09 38.7**	**+0.4**
ISA	**Isabella**	**86.35**	**45**	⇓P	**P**	**14 09 58.9**	**+0.6**
	baz=87						
ISA	**Isabella**	**86.35**	**45**	*e*P	**P**	**14 09 58.4**	**+0.1**
	5.7nm,1.0s,mb4.5						
BELC	**Belle Mtn.**	**86.79**	**47**	⇓P	**P**	**14 10 01.0**	**+0.5**
	baz=87						
BC3	**Big Chuckw Mtn**	**86.92**	**48**	⇑P	**P**	**14 10 01.3**	**+0.1**
	baz=87						
GSC	**Goldstone**	**87.13**	**46**	⇑P	**P**	**14 10 01.5**	**-0.6**
	baz=87						
GSC	**Goldstone**	**87.13**	**46**	*e*P	**P**	**14 10 02.1**	**-0.1**
	13nm,1.4s,mb4.7						
MPMC	**Manual Prospec**	**87.21**	**45**	⇑P	**P**	**14 10 03.0**	**+0.5**
	baz=88						
IRM	**Iron Mountain**	**87.43**	**48**	⇓P	**P**	**14 10 03.2**	**-0.4**
	baz=88						
Z13A	**Yuma Proving G**	**87.79**	**49**	⇓P	**P**	**14 10 04.5**	**-0.8**
	baz=88						
BEKR	**Beckwourth**	**88.08**	**41**	⇓P	**P**	**14 10 06.2**	**-0.4**
	baz=88						
NVAR	**Mina Array Bea**	**88.29**	**43**	P	**P**	**14 10 07.7**	**+0.1**
	3.0nm,0.8s,mb4.4,baz=223,slow=8.8,SNR=26						
X13A	**Yucca**	**88.55**	**48**	⇓P	**P**	**14 10 09.4**	**+0.5**
	baz=89,SNR=5.5						
Y14A	**Wickenburg**	**88.67**	**49**	⇓P	**P**	**14 10 10.3**	**+0.8**
	baz=89						
217A	**Green Valley**	**88.80**	**52**	⇓P	**P**	**14 10 10.8**	**+0.6**
	baz=89						
W13A	**Hualapai Mount**	**88.83**	**48**	⇓P	**P**	**14 10 10.5**	**+0.3**
	baz=89						
S10A	**Tonopah Range,**	**88.97**	**44**	⇓P	**P**	**14 10 11.0**	**+0.2**
	baz=89,SNR=7.6						
CFAA	**Coronel Fontan**	**89.11**	**127**	P	**P**	**14 10 12.2**	**+0.3**
	0.2nm,0.5s,mb3.5,baz=201,slow=3.9,SNR=4.9						
Y15A	**Casa Rosa Banc**	**89.12**	**49**	⇑P	**P**	**14 10 12.1**	**+0.5**
	baz=89						
318A	**Bisbee**	**89.16**	**52**	⇓P	**P**	**14 10 12.2**	**+0.3**
	baz=89,SNR=7.8						
V13A	**Grand Canyon W**	**89.25**	**47**	⇓P	**P**	**14 10 12.6**	**+0.4**
	baz=90						
U12A	**Valley of Fire**	**89.27**	**46**	⇑P	**P**	**14 10 12.3**	**0.0**
	baz=90						
117A	**Oracle**	**89.33**	**51**	⇓P	**P**	**14 10 12.8**	**+0.2**
	baz=90,SNR=5.3						
T11A	**Corn Creek, Al**	**89.36**	**45**	⇓P	**P**	**14 10 13.1**	**+0.5**
	baz=90						
W14A	**Seligman**	**89.42**	**48**	⇓P	**P**	**14 10 14.0**	**+1.0**
	baz=90,SNR=5.1						
218A	**Dragoon**	**89.44**	**52**	⇑P	**P**	**14 10 13.5**	**+0.3**
	baz=90,SNR=9.9						
X15A	**Humboldt**	**89.51**	**49**	⇑P	**P**	**14 10 14.2**	**+0.8**
	baz=90						
319A	**Douglas**	**89.61**	**53**	⇑P	**P**	**14 10 15.1**	**+1.1**
	baz=90						
U13A	**Pakoon Wash**	**89.61**	**46**	⇓P	**P**	**14 10 13.9**	**+0.1**
	baz=90						
Y16A	**Circle Bar Ran**	**89.64**	**50**	⇑P	**P**	**14 10 14.6**	**+0.6**
	baz=90,SNR=12						
V14A	**Boquillas Ranc**	**89.66**	**47**	⇓P	**P**	**14 10 14.8**	**+0.6**
	baz=90,SNR=5.1						
K05A	**Summer Lake**	**89.76**	**38**	⇑P	**P**	**14 10 14.6**	**+0.3**
	baz=90						
S12A	**Delamar Landin**	**89.82**	**45**	⇑P	**P**	**14 10 15.1**	**+0.3**
	baz=90						
118A	**Homack Ranch,**	**89.89**	**51**	⇓P	**P**	**14 10 14.7**	**-0.6**
	baz=90						
Y17A	**Roosevelt**	**89.94**	**50**	⇑P	**P**	**14 10 15.8**	**+0.3**
	baz=90						
X16A	**Lo Mia Camp, P**	**89.99**	**49**	⇓P	**P**	**14 10 15.8**	**+0.1**
	baz=90						
219A	**White Tail Can**	**89.99**	**52**	⇑P	**P**	**14 10 15.8**	**+0.1**
	baz=90						
T13A	**Saint George**	**90.03**	**46**	⇓P	**P**	**14 10 16.3**	**+0.5**
	baz=90						
320A	**Kipp Ranch, An**	**90.10**	**53**	⇑P	**P**	**14 10 17.1**	**+0.8**
	baz=90						
U14A	**Mt Trumbull**	**90.11**	**47**	⇓P	**P**	**14 10 16.7**	**+0.5**
	baz=90,SNR=5.5						
W16A	**Flagstaff**	**90.34**	**49**	⇓P	**P**	**14 10 17.7**	**+0.4**
	baz=91						
V15A	**Kaibab Nationa**	**90.37**	**48**	⇓P	**P**	**14 10 17.9**	**+0.5**
	baz=91						
220A	**Payas Peak, P**	**90.44**	**53**	⇑P	**P**	**14 10 17.0**	**-0.9**
	baz=91						
Y18A	**Canyon Day Jun**	**90.53**	**51**	⇓P	**P**	**14 10 18.1**	**-0.1**
	baz=91,SNR=8.7						
U15A	**North Rim**	**90.67**	**47**	⇓P	**P**	**14 10 19.5**	**+0.7**
	baz=91,SNR=7.0						
WUAZ	**Wupatki**	**90.70**	**48**	⇑P	**P**	**14 10 19.0**	**0.0**
	baz=91						
120A	**U Bar Ranch, L**	**90.74**	**52**	⇓P	**P**	**14 10 20.1**	**+0.9**
	baz=91						
O11A	**Cowboy Ranch,**	**90.96**	**43**	⇑P	**P**	**14 10 19.9**	**-0.2**
	baz=91						
Z20A	**Nine Sixteen R**	**91.10**	**52**	⇓P	**P**	**14 10 21.0**	**+0.1**
	baz=91,SNR=5.9						
V17A	**Tonalea, Kykot**	**91.14**	**49**	⇑P	**P**	**14 10 21.2**	**+0.2**
	baz=91						
Y19A	**Nutrioso**	**91.16**	**51**	⇓P	**P**	**14 10 20.9**	**-0.2**
	baz=91,SNR=6.1						
M10A	**I.L. Ranch, Tu**	**91.35**	**41**	⇓P	**P**	**14 10 21.4**	**-0.4**
	baz=92						
I07A	**Izee**	**91.42**	**38**	⇑P	**P**	**14 10 21.2**	**-0.9**
	baz=92						
P13A	**Bates Ranch, G**	**91.50**	**44**	⇑P	**P**	**14 10 22.0**	**-0.5**
	baz=92						
Q14A	**Sevier Lake (B**	**91.65**	**45**	⇑P	**P**	**14 10 23.5**	**+0.2**
	baz=92						
Y20A	**Horse Springs,**	**91.72**	**51**	⇑P	**P**	**14 10 23.2**	**-0.5**
	baz=92						
ENH	**Enshi**	**91.73**	**304**	*e*P	**P**	**14 10 22.2**	**-1.7**
	4.6nm,0.4s,mb5.1						
L10A	**Juniper Basin**	**91.75**	**41**	⇓P	**P**	**14 10 23.6**	**-0.1**
	baz=92						
U17A	**Shonto**	**91.82**	**48**	⇓P	**P**	**14 10 24.1**	**0.0**
	baz=92						
K10A	**MacKenzie Ranc**	**91.98**	**40**	⇓P	**P**	**14 10 24.9**	**+0.2**
	baz=92						
X20A	**Quemado**	**92.01**	**51**	⇑P	**P**	**14 10 24.9**	**-0.2**
	baz=92						
626A	**Big Bend Ranch**	**92.19**	**57**	⇑P	**P**	**14 10 24.8**	**-1.2**
	baz=92						
Y21A	**Point of Rocks**	**92.25**	**51**	⇓P	**P**	**14 10 26.2**	**0.0**
	baz=92						
425A	**Indio Mountain**	**92.27**	**55**	⇓P	**P**	**14 10 25.7**	**-0.6**
	baz=92						
Z22A	**Elephant Butte**	**92.30**	**52**	⇓P	**P**	**14 10 26.6**	**+0.2**
	baz=92						
TXAR	**Lajitas Array**	**92.41**	**57**	P	**P**	**14 10 27.2**	**+0.2**
	1.1nm,1.0s,mb4.0,baz=205,slow=5.5,SNR=8.6						
X21A	**Alamocita Cree**	**92.43**	**51**	⇑P	**P**	**14 10 27.5**	**+0.5**
	baz=93						
526A	**Mary Lane Ranc**	**92.50**	**56**	⇑P	**P**	**14 10 26.6**	**-0.9**
	baz=93						
G08A	**Pilot Rock**	**92.52**	**37**	⇓P	**P**	**14 10 27.2**	**0.0**
	baz=93						
M13A	**Montello**	**92.61**	**43**	⇓P	**P**	**14 10 26.8**	**-0.8**
	baz=93						
M13A	**Montello**	**92.61**	**43**	*e*P	**P**	**14 10 27.5**	**-0.2**
	5.5nm,1.0s,mb4.8						
T18A	**Mexican Hat**	**92.64**	**48**	⇑P	**P**	**14 10 28.0**	**+0.1**
	baz=93						
627A	**Terlingua Ranc**	**92.67**	**57**	⇓P	**P**	**14 10 28.3**	**+0.1**
	baz=93						
527A	**Woodward Ranch**	**92.89**	**57**	⇑P	**P**	**14 10 28.0**	**-1.2**
	baz=93						
M14A	**Sheep Mountain**	**93.18**	**43**	⇓P	**P**	**14 10 29.7**	**-0.6**
	baz=93						
J12A	**Stokes Ranch,**	**93.28**	**41**	⇑P	**P**	**14 10 30.7**	**0.0**
	baz=94						
427A	**Hayter Ranch,**	**93.43**	**56**	⇑P	**P**	**14 10 30.8**	**-0.9**
	baz=94						
CMAR	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**14 10 32.5**	**+0.1**
	0.4nm,0.7s,mb3.9,baz=146,slow=4.6,SNR=4.3						
H11A	**Donnelly**	**93.71**	**39**	⇓P	**P**	**14 10 31.7**	**-0.9**
	baz=94						
HLID	**Hailey**	**93.86**	**41**	⇓P	**P**	**14 10 31.9**	**-1.5**
	baz=94						
J13A	**Cove Ranch, Pi**	**93.89**	**41**	⇓P	**P**	**14 10 33.1**	**-0.4**
	baz=94						
G11A	**Walters Elk Ra**	**94.02**	**38**	⇑P	**P**	**14 10 33.3**	**-0.7**
	baz=94						
L15A	**Malad City**	**94.06**	**43**	⇓P	**P**	**14 10 33.3**	**-1.0**
	baz=94						
PDAR	**Pinedale Array**	**96.19**	**44**	P	**P**	**14 10 43.0**	**-1.0**
	0.2nm,0.4s,mb3.9,baz=208,slow=3.1,SNR=2.6						
PDAR				PKKPbc	PKKPbc	14 27 29.9	-1.6
	0.3nm,0.6s,baz=70,slow=4.9,SNR=3.6						
MKAR	**Makanchi Array**	**117.91**	**310**	PKP	PKPdf	14 15 59.2	-3.0
	0.4nm,0.6s,baz=69,slow=2.1,SNR=3

200nm,0.4s
KIS *i* S **Sn** **14 00 21.5 -3.4**
700nm,0.5s
KIS Kishinev 1.91 46 ⇓*i*P **Pn** **13 59 59.9 -0.3**
KIS *i* S **Sn** **14 00 23.9 -1.0**
KIS Kishinev 1.91 46 ⇓*i*P **Pn** **13 59 59.9 -0.3**
KIS Kishinev 1.91 46 ⇓*i*P **Pn** **13 59 59.9 -0.3**
KIS *i* S **Sn** **14 00 23.9 -1.0**
BURAR Bucovina Array 2.20 331 ⇓*i*P **Pn** **14 00 04.6 +0.7**
BURAR Bucovina Array 2.20 331 ⇓*i*P **Pn** **14 00 04.6 +0.7**
BURAR Bucovina Array 2.20 331 ⇓*i*P **Pn** **14 00 04.6 +0.7**
BUR08 Bucovina Ar. S 2.23 331 *e*Pn **Pn** **14 00 04.4 +0.2**
BUR08 Bucovina Ar. S 2.23 331 *e*Pn **Pn** **14 00 04.4 +0.1**
PSN Preselentsi 2.25 153 P **Pn** **14 00 05.4 +0.9**
PSN Preselentsi 2.25 153 P **Pn** **14 00 05.4 +0.9**
ZIMR 2.28 207 S **Sn** **14 00 31.7 -1.6**
SZH Strazhica 2.51 195 P **Pn** **14 00 07.4 -0.4**
SZH Strazhica 2.51 195 P **Pn** **14 00 07.4 -0.4**
PRD Provadia 2.54 170 P **Pn** **14 00 08.8 +0.6**
PRD Provadia 2.54 170 P **Pn** **14 00 08.8 +0.6**
GZR Gura Zlata 2.84 265 P **Pn** **14 00 12.1 0.0**
GZR Gura Zlata 2.84 265 ⇓*i*P **Pn** **14 00 12.1 0.0**
GZR *i* S **Sn** **14 00 46.4 +0.3**
GZR Gura Zlata 2.84 265 ⇓*i*P **Pn** **14 00 12.1 0.0**
GZR Gura Zlata 2.84 265 ⇓*i*P **Pn** **14 00 12.1 0.0**
GZR *i* S **Sn** **14 00 46.4 +0.3**
MPEP Malo Peshtene 3.21 224 P **Pn** **14 00 16.1 -0.8**
VTS Vitosha 4.04 221 P **Pn** **14 00 27.4 -0.6**
VTS Vitosha 4.04 221 P **Pn** **14 00 27.4 -0.6**

NIED ***31*** *14:28:00, 40.°10N×142.°80E, h35km, Mw5.0 Best double couple: M0 3.02000×10^16 NP1:*ϕ_s*22.00000°,* δ*75.00000°,* λ*96.00000°. NP2:*ϕ_s*178.00000°,* δ*16.00000°,* λ*67.00000°.*
BGS ***31*** *14:28:30.5±1.6, 39.°16N×143.°09E, h33km, mb5.0*
BJI ***31*** *14:28:33.1, 40.°03N×142.°72E, h38km, mB5.1/29, mb5.2/52, Ms4.5/49, Ms7 4.4/47*
JMA ***31*** *14:28:34.2±0.1, 40.°06N×142.°72E, h28km±1km, M5.0 Broadband fault plane solution: P waves. NP1:* ϕ_s*186.00000°,* δ*34.00000°,* λ*93.00000°. NP2:*ϕ_s*3.00000°,* δ*56.00000°,* λ*88.00000°. Principal axes: T Plg79.0000°, Azm265.0000°; N Plg2.0000°, Azm4.0000°; P Plg11.0000°, Azm94.0000°;*
JMA Felt III J1.
ISCJB ***31*** *14:28:34.1±0.1, 40.°10N±0.°02×142.°74E±0.°02, h34km, mb5.0/242, MS4.5/66 Error ellipse: s-maj=3.0km s-min=1.7km az=147.5*
NEIC ***31*** *14:28:35.1±0.2, 39.°98N×142.°60E, mb5.0/136, MW4.9(NIED), Error ellipse: s-maj=4.9km s-min=3.2km az=157.0*
NEIC Felt at Misawa. Recorded [3 JMA] in Iwate, [2 JMA] in Aomori and [1 JMA] in Akita and Miyagi. Also recorded [1 JMA] in southwestern and south-central Hokkaido.
MOS ***31*** *14:28:35.3±0.8, 40.°21N×142.°61E, h39km, mb5.3/96, MS4.5/26, Error ellipse: s-maj=7.7km s-min=3.8km az=107.7*
GCMT ***31*** *14:28:35.1±0.3, 40.°14N×142.°82E, h37km±1km, MW5.0/73, Moment Tensor Solution. s45,c60; s73,c119; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.73±.15; Mθθ0.06±.10; Mφφ-2.79±.10; Mrθ1.05±.09; Mφθ-0.84±.06; Mφr2.16±.09; Best double couple: M0 3.74900×10^16 NP1:*ϕ_s*187.00000°,* δ*26.00000°,* λ*76.00000°. NP2:* ϕ_s*22.00000°,* δ*65.00000°,* λ*97.00000°. Principal axes: T 3.6270, Plg69.0000°, Azm306.0000°; N 0.2430, Plg6.0000°, Azm200.0000°; P -3.8710, Plg20.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
SZGRF ***31*** *14:28:37.7, 40.°66N×143.°65E, h33km, mb5.1, MS4.4, Off east coast of Honshu, Japan*
IDC ***31*** *14:28:38.4±1.8, 40.°12N×142.°66E, h58km±14km, mb4.5/32, mb1 4.6/35, mb1mx4.6/37, mbtmp4.6/35, MS4.3/31, Ms1 4.2/31, ms1mx4.2/35, Error ellipse: s-maj=14.3km s-min=9.1km az=116.0*
DJA ***31*** *14:29:10, 39.°58N×139.°99E, h250km, mb4.8/22*
ISC 31 14:28:35.9±0.1, 40.°10N±0.°02×142.°71E±0.°02, h36km, h36km±1.6km:pP-P, n752, σ_0**=88/752, mb5.0/242, MS4.5/66, 205C-82D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.67**	**257**	⇓P	**Pn**	**14 28 47.3**	**-1.5**
JTH				S	**Sn**	**14 28 56.4**	**-1.6**
MIYJ	**Miyakonagasawa**	**0.86**	**233**	⇓P	**Pn**	**14 28 49.7**	**-1.7**
MIYJ				S	**Sn**	**14 29 00.7**	**-2.0**
JANG	**Nango**	**0.95**	**287**	⇓P	**Pn**	**14 28 51.6**	**-1.2**
JKZ	**Kuzumaki**	**1.06**	**264**	⇓P	**Pn**	**14 28 53.4**	**-0.9**
JKZ				*e*S	**Sn**	**14 29 07.7**	**-0.1**
JOM	**Ohasama**	**1.25**	**241**	⇓P	**Pn**	**14 28 56.1**	**-0.8**
JOM				*e*S	**Sn**	**14 29 12.3**	**-0.2**
OFUJ	**Ofunato**	**1.29**	**219**	P	**Pn**	**14 28 56.6**	**-0.8**
OFUJ				S	**Sn**	**14 29 13.1**	**-0.4**
JTM	**Tenmabayashi**	**1.43**	**299**	⇓P	**Pn**	**14 28 59.4**	**+0.1**
JTM				*e*S	**Sn**	**14 29 18.0**	**+1.2**
JAH	**Hinai**	**1.59**	**274**	⇓P	**Pn**	**14 29 01.9**	**+0.4**
JAH				S	**Sn**	**14 29 22.0**	**+1.2**
JMK	**Ichinoseki**	**1.62**	**226**	⇓P	**Pn**	**14 29 01.7**	**-0.3**
JMK				S	**Sn**	**14 29 22.1**	**+0.5**
JRG	**Rokugo**	**1.74**	**247**	⇓P	**Pn**	**14 29 03.7**	**+0.1**
JOT	**Ohata**	**1.80**	**316**	⇓P	**Pn**	**14 29 04.9**	**+0.5**
ERM	**Erimo**	**1.95**	**10**	*e*P	**Pn**	**14 29 06.5**	**0.0**
JIO	**Ouri**	**1.95**	**213**	⇑P	**Pn**	**14 29 05.9**	**-0.6**
JSI2	**Shiura 2**	**1.99**	**300**	⇓P	**Pn**	**14 29 08.0**	**+0.9**
JYW	**Yuwa**	**2.00**	**255**	⇓P	**Pn**	**14 29 08.1**	**+0.9**
JIW	**Iwasaki**	**2.12**	**284**	⇓P	**Pn**	**14 29 10.0**	**+1.2**
JYK	**Kaneyama**	**2.16**	**238**	P	**Pn**	**14 29 09.6**	**+0.2**
JOG2	**Oga 2**	**2.24**	**266**	P	**Pn**	**14 29 11.3**	**+0.8**
JOU	**Okura**	**2.34**	**223**	⇑P	**Pn**	**14 29 12.1**	**+0.2**
JMM	**Marumori**	**2.68**	**214**	⇑P	**Pn**	**14 29 15.6**	**-0.9**
JYS	**Shirataka**	**2.78**	**228**	P	**Pn**	**14 29 18.9**	**+1.0**
JFK	**Kawauchi**	**3.08**	**208**	P	**Pn**	**14 29 21.1**	**-0.9**
JAW	**Awa shima**	**3.14**	**240**	P	**Pn**	**14 29 23.9**	**+1.0**
JFT	**Otama**	**3.17**	**216**	P	**Pn**	**14 29 23.8**	**+0.5**
JNS	**Sasagawa**	**3.48**	**230**	⇑P	**Pn**	**14 29 28.7**	**+1.1**
JFY	**Yanaizu**	**3.56**	**222**	P	**Pn**	**14 29 29.7**	**+1.0**
ASAJ	**Asahikawa**	**4.02**	**359**	P	**Pn**	**14 29 35.6**	**+0.7**
	26nm,0.3s,baz=216,slow=9.9,SNR=237						
ASAJ				S	**Sn**	**14 30 23.6**	**+2.8**
	74nm,0.3s,baz=209,slow=30,SNR=6.4						
ASAJ				LR	LR	14 31 46.8	
	comp=Z,5μm,21.1s,baz=195,slow=47						
ASAJ	**Asahikawa**	**4.02**	**359**	P	**Pn**	**14 29 35.6**	**+0.7**
ASAJ				S	**Sn**	**14 30 23.6**	**+2.9**
ASAJ				pmax	pmax		
	comp=Z,27nm,0.3s						
ASAJ				smax			
	comp=N,74nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,5μm,21.1s						
JSD	**Sado**	**4.02**	**241**	⇑P	**Pn**	**14 29 35.8**	**+0.8**
JIZZ	**Izumozaki**	**4.04**	**232**	⇑P	**Pn**	**14 29 37.3**	**+2.1**
JAG	**Ashikaga**	**4.47**	**216**	⇑P	**Pn**	**14 29 41.6**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**4.58**	**30**	*e*P	**Pn**	**14 29 41.0**	**-1.7**
YUK				*i* S	**Sn**	**14 30 30.5**	**-4.2**
YUK				pmax	pmax		
	comp=Z,740nm,0.5s						
YUK				pmax	pmax		
	comp=N,370nm,0.5s						
YUK				smax			
	comp=N,10μm,1.5s						
YUK				smax			
	comp=E,10μm,1.5s						
YUK				smax			
	comp=N,4μm,0.5s						
YUK				smax			
	comp=E,2μm,0.5s						
JJN	**Nakama**	**4.65**	**231**	P	**Pn**	**14 29 45.4**	**+1.8**
MJAR	**Matsushiro Arr**	**5.01**	**226**	P	**Pn**	**14 29 50.1**	**+1.6**
	comp=E,20nm,0.3s,baz=31,slow=13,SNR=456						
MJAR				S	**Sn**	**14 30 49.1**	**+4.0**
	comp=E,1.2nm,0.3s,baz=45,slow=14,SNR=4.2						
MJAR				LR	LR	14 31 59.7	
	comp=E,3μm,19.8s,baz=35,slow=40						
MJAR	**Matsushiro Arr**	**5.01**	**226**	P	**Pn**	**14 29 50.1**	**+1.6**
MJAR				S	**Sn**	**14 30 49.1**	**+3.9**
MAJO	**Matsushiro**	**5.01**	**226**	*e*P	**Pn**	**14 29 50.0**	**+1.5**
MAT	**Matsushiro**	**5.01**	**226**	P	**Pn**	**14 29 50.3**	**+1.8**
MAT				S	**Sn**	**14 30 45.3**	**+0.1**
MAT	**Matsushiro**	**5.01**	**226**	P	**Pn**	**14 29 50.2**	**+1.7**
JNG	**Nsakai**	**5.17**	**226**	P	**Pn**	**14 29 52.5**	**+1.8**
JJH	**Hakui**	**5.62**	**238**	P	**Pn**	**14 29 58.9**	**+2.0**
JGN	**Niukaw**	**5.74**	**229**	P	**Pn**	**14 30 00.9**	**+2.3**
JGF	**Kuroka**	**6.17**	**225**	P	**Pn**	**14 30 06.2**	**+1.8**
KUR	**Kuril'sk**	**6.39**	**35**	⇑*i*P	**Pn**	**14 30 06.0**	**-1.5**
KUR				*i* S	**Sn**	**14 31 15.5**	**-3.6**
KUR				pmax	pmax		
	comp=N,90nm,0.7s						
KUR				pmax	pmax		
	comp=E,110nm,0.7s						
KUR				pmax	pmax		
	comp=Z,310nm,0.7s						
KUR				smax			
	comp=N,1μm,1.0s						
KUR				smax			
	comp=E,2μm,1.0s						
KUR				smax			
	comp=N,4μm,1.5s						
KUR				smax			
	comp=E,2μm,1.5s						
JAO	**Obara**	**6.47**	**224**	P	**Pn**	**14 30 09.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.86**	**0**	*eαe*P	**Pn**	**14 30 14.0**	**+0.1**
YSS				*e*S	**Sn**	**14 31 31.2**	**+0.6**
YSS				pmax	pmax		
	comp=N,80nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				smax			
	comp=N,190nm,1.0s						
YSS				MLR	MLR		
	comp=N,1μm,14.0s						
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS	**Yuzh-Sakhalins**	**6.86**	**0**	*e*Pn	**Pn**	**14 30 14.4**	**+0.6**
JHJ	**Hachijo jima 2**	**7.35**	**200**	P	**Pn**	**14 30 20.6**	**-0.1**
	comp=Z,28nm,0.3s,baz=74,slow=16,SNR=2.8						
JHJ				S	**Sn**	**14 31 35.2**	**-7.5**
	comp=Z,48nm,0.3s,baz=268,slow=19,SNR=2.9						
JKY	**Yasaka**	**7.48**	**236**	P	**Pn**	**14 30 24.8**	**+2.3**
VLA	**Vladivostok**	**8.64**	**294**	*e*P	**Pn**	**14 30 41.0**	**+2.6**
VLA				*e*		14 32 06.9	
VLA				pmax	pmax		
	comp=Z,49nm,0.6s						
VLA				MLR	MLR		
	comp=Z,2μm,16.0s						
UGL	**Uglegorsk**	**8.99**	**357**	*e*P	**Pn**	**14 30 44.0**	**+0.9**
UGL				*e*		14 32 22.0	
UGL				pmax	pmax		
	comp=Z,41nm,0.9s						
UGL				MLR	MLR		
	comp=N,2μm,20.0s						
UGL				MLR	MLR		
	comp=E,2μm,20.0s						
HABR	**Khabarovsk**	**10.01**	**329**	*e*P	**Pn**	**14 30 54.0**	**-3.0**
HABR				*e*		14 32 43.6	
HABR				pmax	pmax		
	comp=E,112nm,3.6s						
HABR				pmax	pmax		
	comp=Z,37nm,1.9s						
HABR				pmax	pmax		
	comp=N,77nm,3.8s						
HABR				MLR	MLR		
	comp=Z,2μm,15.0s						
MDJ	**Mudanjiang**	**10.70**	**299**	P	**Pn**	**14 31 03.0**	**-3.6**
MDJ				pP		14 31 09.8	
MDJ				S	**Sn**	**14 32 59.0**	**-6.0**
MDJ				ScS	ScS	14 44 13.0	+1.6
MDJ				pmax	pmax		
	comp=Z,96nm,4.1s						
MDJ				LR	LR		
	comp=N,1μm,15.9s						
MDJ				LR	LR		
	comp=E,1μm,21.6s						
MDJ				LR	LR		
	comp=Z,3μm,17.9s						
MDJ	**Mudanjiang**	**10.70**	**299**	*e*Pn	**Pn**	**14 31 09.9**	**+3.4**
JFA	**Akaike**	**11.46**	**240**	P	**Pn**	**14 31 18.7**	**+1.7**
KSRS	**Korea Array**	**11.84**	**262**	P	**Pn**	**14 31 24.2**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=80,slow=11,SNR=32						
KSRS				LR	LR	14 35 31.2	
	comp=Z,2μm,20.1s,baz=71,slow=35						
KS15	**Wonju Array Si**	**11.87**	**262**	*e*Pn	**Pn**	**14 31 25.9**	**+3.3**
KS15				*e*Sn	**Sn**	**14 33 42.6**	**+8.9**
JFI	**Itaya**	**11.90**	**240**	P	**Pn**	**14 31 23.9**	**+0.8**
KLR	**Kul'dur**	**12.00**	**323**	*e*P	**Pn**	**14 31 21.3**	**-3.0**
KLR				*e*		14 33 43.5	
KLR				MLR	MLR		
	comp=E,1μm,13.5s						
KLR				MLR	MLR		
	comp=Z,2μm,13.5s						
INCN	**Inchon**	**12.81**	**263**	*e*Pn	**Pn**	**14 31 39.1**	**+3.6**
CN2	**Changchun**	**13.37**	**292**	*e*P	**Pn**	**14 31 45.8**	**+2.8**
CN2				*e*pP		14 31 53.0	
CN2				*e*sP		14 31 57.8	
CN2				*e*S	**Sn**	**14 34 12.3**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,730nm,17.0s						
CN2				LR	LR		
	comp=E,1μm,17.0s						
CN2				LR	LR		
	comp=Z,2μm,19.0s						
SKR	**Severo-Kuril's**	**14.15**	**37**	*e*P	**Pn**	**14 31 49.2**	**-4.4**
SNY	**Shenyang**	**14.56**	**283**	⇓P	**Pn**	**14 32 01.3**	**+2.1**
SNY				S	**Sn**	**14 34 47.0**	**+7.7**
SNY				pmax	pmax		
	comp=Z,23nm,1.0s						
SNY				pmax	pmax		
	comp=Z,360nm,4.7s						
SNY				LR	LR		
	comp=N,620nm,13.1s						
SNY				LR	LR		
	comp=E,1μm,16.5s						
SNY				LR	LR		
	comp=Z,1μm,16.5s						
DL2	**Dalian**	**16.31**	**273**	P	**Pn**	**14 32 24.3**	**+2.2**
DL2				*e*S	**S**	**14 35 24.0**	**-10**
DL2				pmax	pmax		
	comp=Z,20nm,0.8s						
DL2				pmax	pmax		
	comp=Z,260nm,6.3s						
DL2				LR	LR		
	comp=N,280nm,16.3s						
DL2				LR	LR		
	comp=E,450nm,17.7s						
DL2				LR	LR		
	comp=Z,420nm,18.3s						
PEA0B	**Petropavlovsk-**	**16.55**	**33**	*e*Pn	**Pn**	**14 32 22.2**	**-2.9**
PETK	**Petropavlovsk-**	**16.55**	**33**	P	**Pn**	**14 32 21.2**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=236,slow=8.7,SNR=6.8						
PETK				LR	LR	14 39 54.7	
	comp=Z,252nm,19.0s,baz=222,slow=41						
HIA	**Hailar**	**18.67**	**307**	*e*P	**Pn**	**14 32 48.4**	**-2.8**
HIA				pmax	pmax		
	comp=Z,38nm,0.7s						
HIA	**Hailar**	**18.67**	**307**	*e*P	**Pn**	**14 32 48.4**	**-2.7**
	comp=Z,38nm,0.7s						
BJI	**Beijing**	**20.28**	**278**	P	**P**	**14 33 06.3**	**-2.1**
BJI				pP		14 33 15.3	
BJI				sP	sP	14 33 19.5	-2.8
BJI				S	**S**	**14 36 52.0**	**-1.8**
BJI				sS	sS	14 37 05.5	-3.2
BJI				pmax	pmax		
	comp=Z,26nm,0.8s						
BJI				LR	LR		
	comp=N,390nm,14.8s,MS4.3						
BJI				LR	LR		
	comp=E,980nm,17.5s,MS4.3						
BJI				LR	LR		
	comp=Z,640nm,19.2s,MS4.0						
BJT	**Baijiatuau**	**20.29**	**278**	*e*P	**P**	**14 33 06.3**	**-2.2**
BJT				pmax	pmax		
	comp=Z,65nm,1.0s						
BJT	**Baijiatuau**	**20.29**	**278**	*e*P	**P**	**14 33 06.2**	**-2.2**
	comp=Z,65nm,1.0s						
NRGR	**Nerungri**	**20.32**	**331**	*e*P	**P**	**14 33 09.5**	**+0.9**
CLNS	**Chul'man**	**20.39**	**331**	*e*P	**P**	**14 33 08.6**	**-0.8**
CLNS				*e*		14 33 20.0	
CLNS				*e*S	**S**	**14 36 50.0**	**-5.6**
CLNS				*e*SS		14 37 20.8	
CLNS				*e*		14 37 26.0	
CLNS				pmax	pmax		
	comp=E,14nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,95nm,0.8s						
CLNS				pmax	pmax		
	comp=N,53nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,49nm,1.0s						
CLNS				pmax	pmax		
	comp=N,54nm,1.1s						
CLNS				pmax	pmax		
	comp=E,33nm,0.8s						
CLNS				smax			
	comp=E,115nm,14.6s						
CLNS				smax			
	comp=N,145nm,12.6s						
CLNS				MLR	MLR		
	comp=E,540nm,15.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,688nm,16.0s,MS4.2						
CLNS				MLR	MLR		
	comp=Z,697nm,14.0s,MS4.2						
NJ2	**Nanjing**	**20.84**	**255**	*e*P	**P**	**14 33 12.3**	**-2.2**
NJ2				pP		14 33 21.5	
NJ2				sP	sP	14 33 25.3	-3.1
NJ2				PP		14 33 31.8	
NJ2				pmax	pmax		
	comp=Z,110nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.6s						
NJ2				LR	LR		
	comp=N,510nm,12.4s,MS4.3						
NJ2				LR	LR		
	comp=E,530nm,11.8s,MS4.3						
TATO	**Taipei**	**23.31**	**236**	*e*P	**P**	**14 33 38.0**	**-2.8**
	comp=E,48nm,0.8s,mb5.0						
CIT	**Chita**	**23.31**	**310**	*e*P	**P**	**14 33 37.8**	**-2.8**
CIT				*e*		14 33 51.5	
CIT				*e*		14 34 09.9	
CIT				*e*		14 34 14.2	
CIT				pmax	pmax		
	comp=Z,168nm,1.4s,mb5.3						
YAK	**Yakutsk**	**23.35**	**344**	*c i*P	**P**	**14 33 37.8**	**-3.1**
YAK				*e**PP		14 33 44.9	
YAK				*e*PPP		14 34 10.0	
YAK				*e*		14 37 25.7	
YAK				*e*S	**S**	**14 37 46.8**	**-3.8**
YAK				*e**SS	sS	14 38 03.0	-4.3
YAK				*e*		14 44 47.7	
YAK				pmax	pmax		
	comp=E,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.0s						
YAK				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.0						
YAK				smax			
	comp=N,424nm,2.2s						
YAK				smax			
	comp=E,318nm,2.3s						
YAK				MLR	MLR		
	comp=N,372nm,15.0s,MS4.1						
YAK				MLR	MLR		
	comp=Z,306nm,13.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,292nm,14.0s,MS4.1						
YAK	**Yakutsk**	**23.35**	**344**	*e*P	**P**	**14 33 38.0**	**-2.9**
	comp=E,106nm,0.6s,mb5.5						
YHNB	**Yeheng**	**23.60**	**236**	*e*P	**P**	**14 33 38.7**	**-4.8**
	comp=E,33nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**23.64**	**282**	*e*P	**P**	**14 33 41.5**	**-2.3**
HHC				pP		14 33 52.0	
HHC				sP	sP	14 33 56.0	-2.3
HHC				PP		14 34 14.5	
HHC				PcP	PcP	14 37 23.3	-4.2
HHC				S	**S**	**14 37 51.0**	**-4.8**
HHC				sS	sS	14 38 12.8	+0.3
HHC				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.5						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
HHC				LR	LR		
	comp=N,340nm,7.6s						
HHC				LR	LR		
	comp=E,1μm,9.3s						
HHC				LR	LR		
	comp=Z,1μm,15.7s,MS4.5						
NACB	**Ninganchiao**	**23.82**	**235**	*e*P	**P**	**14 33 41.5**	**-4.0**
	comp=Z,17nm,0.6s,mb4.7						
SSLB	**Suanglung**	**24.50**	**235**	*e*P	**P**	**14 33 48.1**	**-3.7**
	comp=Z,11nm,0.4s,mb4.7						
YULB	**Yu-li**	**24.57**	**234**	*e*P	**P**	**14 33 48.3**	**-4.2**
	comp=Z,19nm,0.5s,mb4.9						
BTO	**Baotou**	**24.84**	**282**	*e*P	**P**	**14 33 52.8**	**-2.0**
WHN	**Wuhan**	**24.93**	**256**	P	**P**	**14 33 54.0**	**-1.7**
WHN				S	**S**	**14 38 13.0**	**-3.8**
WHN				pmax	pmax		
	comp=Z,240nm,1.0s,mb5.7						
WHN				LR	LR		
	comp=N,10μm,30.7s						
WHN				LR	LR		
	comp=E,2μm,16.3s						
WHN				LR	LR		
	comp=Z,2μm,18.1s						
TPUB	**Ta-pu**	**25.06**	**235**	*e*P	**P**	**14 33 54.1**	**-2.7**
	comp=Z,24nm,0.6s,mb4.9						
TWG	**Pinlang**	**25.14**	**233**	*e*P	**P**	**14 33 56.3**	**-1.3**
	comp=Z,34nm,0.5s,mb5.1						
BOD	**Bodaibo**	**25.58**	**323**	*e*P	**P**	**14 34 01.1**	**-0.1**
BOD				pmax	pmax		
	comp=Z,122nm,0.9s,mb5.4						
GUMO	**Guam**	**26.47**	**175**	LR	LR	14 43 49.0	
	comp=Z,361nm,19.5s,MS3.9,baz=16,slow=34						
ULN	**Ulaanbaatar**	**26.62**	**299**	*e*P	**P**	**14 34 10.4**	**-0.4**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**26.62**	**299**	*e*P	**P**	**14 34 10.4**	**-0.4**
	comp=Z,14nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**26.62**	**299**	P	**P**	**14 34 10.8**	**+0.1**
	SNR=7.7						
ULN				P		14 34 10.8	
	SNR=7.7						
SONM	**Songino Array**	**27.06**	**299**	P	**P**	**14 34 14.6**	**-0.2**
	comp=Z,16nm,0.6s,mb4.7,baz=100,slow=7.7,SNR=64						
SONM				LR	LR	14 45 31.2	
	comp=Z,1μm,18.7s,MS4.5,baz=99,slow=38						
XAN	**Xi'an**	**27.52**	**268**	P	**P**	**14 34 17.0**	**-2.0**
XAN				pP	pP	14 34 24.5	-4.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
ENH	**Enshi**	**28.72**	**260**	*e*P	**P**	**14 34 28.1**	**-1.7**
	comp=Z,81nm,1.0s,mb5.4						
IRK	**Irkutsk**	**28.91**	**308**	*e*P	**P**	**14 34 30.5**	**-0.7**
IRK				*e*		14 34 48.4	
IRK				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.9						
TLY	**Talaya**	**29.21**	**306**	*i* P	**P**	**14 34 33.8**	**-0.1**
TLY				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.8						
TLY	**Talaya**	**29.21**	**306**	*e*P	**P**	**14 34 33.9**	**0.0**
	comp=Z,42nm,1.5s,mb5.0						
TLY	**Talaya**	**29.21**	**306**	P	**P**	**14 34 34.3**	**+0.4**
	SNR=8.4						
TLY				P		14 34 34.3	
	SNR=8.4						
ZAK	**Zakamensk**	**29.29**	**304**	⇓*i*P	**P**	**14 34 34.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.8						
LZH	**Lanzhou**	**30.68**	**275**	*e*P	**P**	**14 34 47.0**	**-0.1**
LZH				pP	pP	14 34 55.0	-2.3
LZH				sP	sP	14 35 00.0	-1.6
LZH				PP	PP	14 35 50.0	-6.6
LZH				*e*S	**S**	**14 39 48.3**	**+1.1**
LZH				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.0						
LZH				pmax	pmax		
	comp=Z,120nm,5.0s						
LZH				LR	LR		
	comp=E,1μm,14.8s						
LZH				LR	LR		
	comp=Z,2μm,16.0s,MS4.8						
MOY	**Mondy**	**30.84**	**306**	*e*P	**P**	**14 34 47.9**	**-0.4**
TIXI	**Tiksi**	**32.39**	**352**	*e*P	**P**	**14 35 00.5**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.9						

TIXI MLR MLR
comp=Z,215nm,14.0s,MS4.0
TIXI Tiksi 32.39 352 *eP* **P 14 35 00.3 -1.4**
comp=Z,15nm,0.8s,mb4.9
GTA Gaotai 32.75 283 P **P 14 35 05.0 -0.2**
GTA pP pP 14 35 14.5 -1.0
GTA sP sP 14 35 19.0 -0.8
GTA PcP PcP 14 37 50.5 +0.6
GTA S **S 14 40 17.5 -1.9**
GTA sS sS 14 40 34.0 -2.4
GTA PcS PcS 14 41 35.5 +0.4
GTA SS SS 14 42 15.5 -25
GTA pmax pmax
comp=Z,27nm,1.1s,mb5.1
GTA pmax pmax
comp=Z,110nm,6.5s
GTA LR LR
comp=N,340nm,17.8s,MS4.6
GTA LR LR
comp=E,1μm,19.3s,MS4.6
GTA LR LR
comp=Z,1μm,18.7s,MS4.7
CD2 Chengdu 32.79 266 P **P 14 35 03.0 -2.6**
CD2 pP pP 14 35 12.8 -3.1
CD2 sP sP 14 35 16.8 -3.4
CD2 PP PP 14 36 12.3 -7.7
CD2 S **S 14 40 15.5 -4.7**
CD2 sS sS 14 40 31.5 -5.7
CD2 SS SS 14 42 13.5 -28
CD2 pmax pmax
comp=Z,30nm,0.7s,mb5.3
CD2 pmax pmax
comp=Z,110nm,3.9s
CD2 LR LR
comp=N,650nm,13.7s
CD2 LR LR
comp=Z,620nm,14.9s,MS4.4
GYA Guiyang 32.82 257⇑ *iP* **P 14 35 05.0 -1.0**
GYA pP pP 14 35 16.0 -0.3
GYA sP sP 14 35 21.8 +1.2
GYA PP PP 14 36 17.0 -3.5
GYA PcP PcP 14 37 52.8 +2.4
GYA S **S 14 40 20.0 -0.8**
GYA sS sS 14 40 37.0 -0.8
GYA ScP ScP 14 41 32.5 +1.0
GYA PcS PcS 14 41 36.0 +0.2
GYA SS SS 14 42 18.0 -25
GYA pmax pmax
comp=Z,110nm,0.8s,mb5.8
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,770nm,16.8s,MS4.7
GYA LR LR
comp=E,860nm,17.2s,MS4.7
GYA LR LR
comp=Z,690nm,17.6s,MS4.4
QIZ Qiongzhong 35.17 243 P **P 14 35 26.5 +0.1**
QIZ pP pP 14 35 34.3 -2.4
QIZ sP sP 14 35 44.3 +3.3
QIZ S **S 14 40 57.5 +0.4**
QIZ pmax pmax
comp=Z,180nm,3.4s
QIZ LR LR
comp=N,390nm,21.7s
QIZ LR LR
comp=Z,390nm,20.0s,MS4.2
KMI Kunming 36.50 258⇑P **P 14 35 37.8 0.0**
KMI pP pP 14 35 48.3 +0.2
KMI sP sP 14 35 52.5 0.0
KMI PP PP 14 37 03.3 +2.1
KMI PcP PcP 14 38 03.0 +2.0
KMI S **S 14 41 16.3 -1.2**
KMI sS sS 14 41 33.3 -1.3
KMI ScP ScP 14 41 45.5 +0.8
KMI PcS PcS 14 41 49.5 +0.5
KMI SS SS 14 43 40.8 -17
KMI ScS ScS 14 45 50.0 -1.3
KMI pmax pmax
comp=Z,67nm,0.8s,mb5.5
KMI LR LR
comp=N,430nm,13.7s,MS4.6
KMI LR LR
comp=E,660nm,14.6s,MS4.6
KMI LR LR
comp=Z,810nm,15.0s,MS4.6
TNA Tin City 37.70 31 *eP* **P 14 35 47.9 +0.4**
comp=Z,35nm,1.2s,mb5.0
WMQ Urumqi 40.44 294 P **P 14 36 11.3 +0.6**
WMQ sP sP 14 36 28.5 +3.1
WMQ PP PP 14 37 49.0 +5.0
WMQ S **S 14 42 16.5 -0.2**
WMQ sS sS 14 42 31.3 -2.6
WMQ SS SS 14 45 09.5 -6.9
WMQ ScS ScS 14 46 12.8 -0.7
WMQ pmax pmax
comp=Z,61nm,1.0s,mb5.3
WMQ LR LR
comp=N,150nm,16.0s,MS4.1
WMQ LR LR
comp=E,170nm,18.5s,MS4.1
WMQ LR LR
comp=Z,220nm,20.0s,MS4.0
ZAA0 Zalesovo Array 40.67 310⇑ *eP* **P 14 36 11.8 -0.6**
ZALV Zalesovo Beam 40.67 310 P **P 14 36 12.1 -0.3**
comp=Z,52nm,0.5s,mb5.4,baz=89,slow=8.0,SNR=233
ZALV PcP PcP 14 38 12.5 -1.0
comp=Z,8.1nm,0.7s,baz=102,slow=3.5,SNR=4.8
ZALV LR LR 14 54 03.2
comp=Z,671nm,18.1s,MS4.5,baz=68,slow=38
ZALV Zalesovo Beam 40.67 310 P **P 14 36 12.1 -0.3**
ZALV 14 38 12.5
SDKM Sandakan 41.27 221 P **P 14 36 17.9 +0.1**
NVS Novosibirsk 41.52 311⇑ *iP* **P 14 36 19.3 -0.1**
NVS *eS* **S 14 42 33.5 +1.1**
NVS pmax pmax
comp=Z,43nm,1.0s,mb5.0
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=E,38nm,1.2s
NVS smax
comp=N,9.0nm,1.9s
NVS smax
comp=E,15nm,1.6s
TTA Tatalina 42.35 37 *eP* **P 14 36 29.2 +3.2**
SVW2 Sparrevohn 42.50 39 *eP* **P 14 36 28.2 +0.9**
LSA Lhasa 43.01 273 P **P 14 36 32.0 +0.1**
LSA LR LR
comp=E,540nm,20.1s
LSA LR LR
comp=Z,750nm,24.4s,MS4.5
LSA Lhasa 43.01 273 *eP* **P 14 36 30.4 -1.5**
LSA pmax pmax
comp=Z,23nm,0.8s,mb5.0
LSA Lhasa 43.01 273 *eP* **P 14 36 30.4 -1.5**
comp=Z,23nm,0.8s,mb5.0
CM31 Chiang Mai Arr 43.30 253 *eP* **P 14 36 33.1 -1.2**
CMAR Chiang Mai Arr 43.30 253 P **P 14 36 34.2 -0.1**
comp=Z,5.8nm,0.7s,mb4.4,baz=43,slow=7.3,SNR=60
CMAR PcP PcP 14 38 22.8 -0.1
comp=Z,2.0nm,0.7s,baz=4.8,slow=2.5,SNR=4.8
CMAR LR LR 14 54 19.8
comp=Z,89nm,19.9s,MS3.7,baz=60,slow=36
CMAR Chiang Mai Arr 43.30 253 P **P 14 36 34.2 -0.1**
CMAR 14 38 22.8
MKAR Makanchi Array 43.42 300 P **P 14 36 34.9 -0.1**
comp=Z,25nm,0.8s,mb5.0,baz=78,slow=11,SNR=156
MKAR LR LR 14 55 29.0
comp=Z,674nm,19.9s,MS4.5,baz=89,slow=37
RSO Redoubt South 43.89 40 *eP* **P 14 36 39.7 +1.2**
CHUM Lake Minchumin 44.04 35 *eP* **P 14 36 40.1 +0.5**
comp=Z,15nm,1.0s,mb4.7
SHL Shillong 44.52 267 *eP* **P 14 36 44.0 0.0**
BPAW Bear Paw Mtn. 44.63 35 *eP* **P 14 36 44.1 -0.2**
comp=Z,14nm,1.2s,mb4.7
KTH Kantishna Hill 44.66 36 *eP* **P 14 36 45.1 +0.4**
comp=Z,27nm,1.0s,mb5.0
KURK Kurchatov 44.90 306 P **P 14 36 46.4 -0.4**
comp=Z,119nm,0.7s,mb5.8,baz=80,slow=8.3,SNR=193
KURK LR LR 14 56 37.3
comp=Z,250nm,18.4s,MS4.2,baz=40,slow=37
KURK Kurchatov 44.90 306 P **P 14 36 46.4 -0.3**
KURK pmax pmax
comp=Z,119nm,0.7s,mb5.8
KURK MLR MLR
comp=Z,250nm,18.4s,MS4.2
KURK Kurchatov 44.90 306 *eP* **P 14 36 46.5 -0.2**
comp=Z,103nm,0.7s,mb5.8
KURK Kurchatov 44.90 306 P **P 14 36 46.8 0.0**
SNR=46
KURK P 14 36 46.8
SNR=46
COLD Coldfoot 45.00 30 *eP* **P 14 36 46.8 -0.4**
comp=Z,7.5nm,0.8s,mb4.6
PMR Palmer 45.59 38 *eP* **P 14 36 51.1 -0.9**
PMR pmax pmax
comp=Z,11nm,0.8s,mb4.8
PMR Palmer 45.59 38 *eP* **P 14 36 51.1 -0.9**
comp=Z,11nm,0.8s,mb4.8
COLA College 45.96 34 *eP* **P 14 36 54.9 -0.1**
COLA pmax pmax
comp=Z,13nm,0.8s,mb4.9
COLA College 45.96 34 *eP* **P 14 36 54.9 0.0**
comp=Z,13nm,0.8s,mb4.9
TAPN Taplejung 46.80 272 *eP* **P 14 37 02.0 0.0**
DIV Divide 47.24 39 *eP* **P 14 37 06.0 +1.0**
comp=Z,20nm,0.9s,mb5.0
BMRM Bremner River 47.83 39 *eP* **P 14 37 10.4 +0.9**
comp=Z,43nm,1.4s,mb5.3
RAMN Ramite 47.85 272 *eP* **P 14 37 09.9 -0.3**
GUN Gumba 47.92 274 *eP* **P 14 37 10.7 0.0**
comp=Z,195nm,0.6s,mb6.3
MENT Mentasta 47.96 36 *eP* **P 14 37 11.4 +0.9**
KKN Kakani 48.44 274 *eP* **P 14 37 14.4 -0.3**
comp=Z,176nm,0.7s,mb6.2
KKN Kakani 48.44 274 *eP* **P 14 37 14.4 -0.3**
KKN pmax pmax
comp=Z,176nm,0.7s,mb6.2
PKI Pulchoki 48.45 273 *eP* **P 14 37 14.1 -0.7**
comp=Z,59nm,0.8s,mb5.7
PKI Pulchoki 48.45 273 *eP* **P 14 37 14.7 -0.1**
PKI pmax pmax
comp=Z,59nm,0.7s,mb5.7
PKI Pulchoki 48.45 273 *eP* **P 14 37 14.7 -0.1**
comp=Z,59nm,0.7s,mb5.7
PKIN Phulchoki 48.46 273 *eP* **P 14 37 14.7 -0.2**
comp=Z,59nm,0.7s,mb5.8
DMN Daman 48.66 274 *eP* **P 14 37 16.3 -0.2**
comp=Z,79nm,0.7s,mb5.8
EGAK Eagle 48.82 34 *eP* **P 14 37 17.5 +0.3**
comp=Z,8.5nm,0.8s,mb4.8
TKM2 Tokmak 2 49.12 296 P **P 14 37 20.7 +0.9**
SNR=105
BVAR Borovoye Array 49.31 311 P **P 14 37 21.2 +0.1**
comp=Z,42nm,0.5s,mb5.7,baz=81,slow=8.2,SNR=217
BVAR PcP PcP 14 38 41.3 -2.0
comp=Z,7.0nm,0.8s,baz=108,slow=9.3,SNR=2.7
BVAR LR LR 14 59 38.0
comp=Z,735nm,18.0s,MS4.7,baz=75,slow=38
BVAR Borovoye Array 49.31 311 P **P 14 37 21.2 +0.2**
BVAR 14 38 41.3
BRVK Borovoye 49.36 311 *eP* **P 14 37 21.6 +0.2**
BRVK pmax pmax
comp=Z,67nm,1.0s,mb5.6
BRVK Borovoye 49.36 311 *eP* **P 14 37 21.6 +0.1**
comp=Z,67nm,1.0s,mb5.6
BRVK Borovoye 49.36 311 P **P 14 37 21.9 +0.5**
SNR=25
BRVK P 14 37 21.9
SNR=25
KTGM Kuala Trenggan 49.61 236 P **P 14 37 24.4 +0.6**
KBK Karagaybulak 49.66 296 P **P 14 37 24.5 +0.6**
SNR=90
KZA Kyzart 49.66 296 P **P 14 37 25.5 +1.6**
SNR=20
CHMS Chumysh 49.67 297 P **P 14 37 24.0 +0.1**
SNR=12
USP Ospenovka 49.75 297 P **P 14 37 24.7 +0.1**
SNR=19
AAK Ala-Archa 49.98 297 P **P 14 37 26.6 +0.3**
SNR=15
AAK Ala-Archa 49.98 297 LR LR 14 59 36.0
comp=Z,665nm,20.3s,MS4.6,baz=71,slow=37
AAK Ala-Archa 49.98 297 *eP* **P 14 37 26.5 +0.2**
AAK pmax pmax
comp=Z,27nm,0.5s,mb5.5
AAK Ala-Archa 49.98 297 *eP* **P 14 37 26.5 +0.2**
comp=Z,27nm,0.5s,mb5.5
AAK Ala-Archa 49.98 297 P **P 14 37 26.8 +0.5**
SNR=8.8
AAK P 14 37 26.8
SNR=8.8
UCH Uchtor 50.12 296 P **P 14 37 28.3 +0.9**
SNR=15
KSH Kashi 50.14 292 *eP* **P 14 37 31.5 +3.9**
KSH *ep*P pP 14 37 40.3 +2.1
KSH *es*P sP 14 37 44.5 +2.0
KSH *e*PP PP 14 39 27.5 +4.8
KSH *e*ScP ScP 14 42 41.5 +2.0
KSH *e*PcS PcS 14 42 44.3 +0.7
KSH *e*S **S 14 44 39.5 +2.9**
KSH *es*S sS 14 44 56.5 +2.3
KSH *e*ScS ScS 14 47 16.3 +0.5
KSH *e*SS SS 14 48 09.5 -0.3
KSH pmax pmax
comp=Z,18nm,0.7s,mb5.2
KSH LR LR
comp=N,640nm,9.6s
KSH LR LR
comp=E,340nm,8.5s
KSH LR LR
comp=Z,83nm,5.7s
EKS2 Erkin-Say 50.46 297 P **P 14 37 30.2 +0.2**
SNR=40
AML Almayashu 50.72 296 P **P 14 37 33.0 +1.1**
SNR=49
INK Inuvik 51.21 28 P **P 14 37 36.1 +0.8**
comp=Z,7.3nm,0.7s,mb4.7,baz=295,slow=6.2,SNR=22
INK Inuvik 51.21 28 P **P 14 37 36.1 +0.9**
INK pmax pmax
comp=Z,7.0nm,0.7s
INK Inuvik 51.21 28 *eP* **P 14 37 36.0 +0.8**
comp=Z,11nm,0.9s,mb4.8
KULM Kulim 51.25 239 P **P 14 37 35.9 -0.3**
KULM Kulim 51.25 239 *eP* **P 14 37 35.1 -1.1**
comp=Z,23nm,0.9s,mb5.1
HYT Haines Junctio 51.26 38 *eP* **P 14 37 40.0 +4.3**
IPM Ipoh 51.61 238 P **P 14 37 38.7 -0.2**
KGM Kluang 52.05 234 P **P 14 37 42.8 +0.6**
SMLA Simla 52.96 282 *eP* **P 14 37 47.0 -1.8**
KAKA Kakadu 53.39 193 *eP* **P 14 37 51.4 -0.6**
comp=Z,31nm,0.8s,mb5.3
SVE Sverdlovsk 53.55 317⇓ *eP* **P 14 37 53.3 +0.5**
SVE *e*SS SS 14 49 04.8 +1.7
SVE pmax pmax
comp=Z,87nm,1.0s,mb5.6
SVE MLR MLR
comp=Z,2μm,16.0s,MS5.2
COEN Coen 53.77 179 *eP* **P 14 37 54.3 -0.5**
COEN Coen 53.77 179 *eP* **P 14 37 54.1 -0.6**
comp=Z,46nm,0.7s,mb5.5
COEN *e* pP 14 38 05.5 0.0
PSI Prapat 54.24 238 LR LR 15 01 39.3
comp=Z,139nm,18.3s,MS4.1,baz=121,slow=36
SOKR Solikamsk 54.55 321 *c iP* **P 14 38 00.1 +0.1**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.4
SOKR MLR MLR
comp=Z,480nm,19.0s,MS4.6
ARU Arti 54.77 317 *c iP* **P 14 38 01.6 0.0**
ARU *e**PP pP 14 38 12.2 -0.2
ARU *e* 14 39 00.7
ARU *e* 14 40 05.4
ARU *e*PPP 14 41 15.9
ARU S **S 14 45 41.6 +2.1**
ARU SS SS 14 49 18.2 -4.1
ARU pmax pmax
comp=Z,75nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,1μm,16.0s,MS5.1
ARU Arti 54.77 317 *eP* **P 14 38 01.1 -0.5**
comp=Z,77nm,1.1s,mb5.6
DLBC Dease Lake 55.61 40 *eP* **P 14 38 09.5 +1.9**
DLBC *ep*P pP 14 38 17.7 -0.7
ABKAR Akbulak array 56.77 309⇑ *iP* **P 14 38 15.8 -0.3**
comp=Z,25nm,0.6s,mb5.4
NGP Nagpur 56.78 271 *eP* **P 14 38 13.0 -3.5**
NGP AMb AMB 14 38 14.1
comp=Z,69nm,1.9s,mb5.4
BHPL Bhopal 56.85 274 *eP* **P 14 38 16.1 -0.9**
BHPL AMb AMB 14 38 18.6
comp=Z,25nm,1.2s,mb5.1
AKTK Aktyubinsk 57.41 311 P **P 14 38 20.7 +0.1**
AKTO Aktyubinsk 57.41 311 P **P 14 38 20.7 +0.1**
comp=Z,24nm,0.8s,mb5.3,baz=71,slow=13,SNR=42
SPITS Spitsbergen Ar 57.72 349 P **P 14 38 22.0 -0.4**
comp=Z,2.7nm,0.6s,mb4.5,baz=84,slow=11,SNR=11
SPB4 Spitsbergen Ar 57.73 349 *eP* **P 14 38 21.7 -0.7**
KBS Kingsbay 57.82 350 *c iP* **P 14 38 23.6 +0.5**
KBS pmax pmax
comp=Z,46nm,2.5s,mb5.1
HYB Hyderabad 59.33 267 *i P* **P 14 38 34.0 -0.4**
RES Resolute Bay 59.39 15 *eP* **P 14 38 33.5 -0.5**
RES pmax pmax
comp=Z,16nm,0.8s,mb5.1
RES Resolute Bay 59.39 15 *eP* **P 14 38 33.5 -0.5**
comp=Z,16nm,0.8s,mb5.1
LVZ Lovozero 59.75 335 *i P* **P 14 38 36.3 -0.3**
LVZ pmax pmax
comp=Z,13nm,0.9s,mb5.0
LVZ MLR MLR
comp=Z,175nm,19.0s,MS4.2
CTA Charters Tower 59.96 176 LR LR 15 01 45.6
comp=Z,110nm,20.4s,MS4.0,baz=6.6,slow=33
CTAO Charters Tower 59.96 176 *eP* **P 14 38 38.5 0.0**
CTAO pmax pmax
comp=Z,15nm,1.3s,mb4.9
CTAO Charters Tower 59.96 176 *eP* **P 14 38 38.5 -0.1**
comp=Z,15nm,1.3s,mb4.8
FITZ Fitzroy Crossi 60.04 199 *eP* **P 14 38 38.5 -0.6**
comp=Z,20nm,0.9s,mb5.2
WRAB Tennant Creek 60.22 189 *eP* **P 14 38 39.8 -0.5**
WRAB pmax pmax
comp=Z,34nm,0.8s,mb5.4
WRAB Tennant Creek 60.22 189 *eP* **P 14 38 39.8 -0.5**
comp=Z,34nm,0.8s,mb5.4
APA Apatity 60.32 335⇓ *iP* **P 14 38 40.0 -0.5**
APA pmax pmax
comp=Z,36nm,0.8s,mb5.5
APA MLR MLR
comp=Z,300nm,16.0s,MS4.5
YKA Yellowknife Ar 60.66 31 P **P 14 38 42.8 -0.1**
comp=Z,2.3nm,0.7s,mb4.4,baz=302,slow=6.6,SNR=10
YKA LR LR 15 06 10.7
comp=Z,7.6nm,20.6s,baz=40,slow=37
YKA Yellowknife Ar 60.66 31 P **P 14 38 42.8 -0.1**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA MLR MLR
comp=Z,8.0nm,20.7s
MDRS Chennai 60.67 262 *eP* **P 14 38 43.2 -0.5**
KEV Kevo 60.95 339 *eP* **P 14 38 42.8 -1.9**
KEV *e* 14 38 56.4
KEV pmax pmax
comp=Z,14nm,0.8s,mb5.1
KEV Kevo 60.95 339 *eP* **P 14 38 42.8 -1.9**
comp=Z,14nm,0.8s,mb5.2
KEV *e* 14 38 56.4
KEV Kevo 60.95 339 *ep* **P 14 38 44.4 -0.3**
comp=Z,14nm,0.7s,mb5.2
ARCES ARCESS Array B 61.50 339 P **P 14 38 48.4 0.0**
comp=Z,6.0nm,0.6s,mb4.9,baz=49,slow=8.0,SNR=49
ARCES PP PP 14 41 12.9 +9.3
comp=Z,4.9nm,0.9s,baz=47,slow=12,SNR=3.7
ARCES ARCESS Array B 61.50 339 P **P 14 38 48.4 0.0**
ARCES PP PP 14 41 12.9 +9.3
POO Poona 62.28 271 *eP* **P 14 38 52.3 -2.2**
POO AMb AMB 14 38 55.3
comp=Z,41nm,1.2s,mb5.4
KTK1 Kautokeino 62.45 339 *i P* pP 14 39 09.0 +3.2
KAD Karad 62.74 270 *eP* **P 14 38 56.3 -1.3**
KAD AMb AMB 14 38 58.2
comp=Z,68nm,0.8s,mb5.8
BHJ Bhuj 62.77 278 *eP* **P 14 38 56.0 -1.8**
DAG Danmarks Havn 62.81 355⇓ *iP* **P 14 38 57.2 0.0**
DAG pmax pmax
comp=Z,11nm,0.8s,mb5.0
DAG Danmarks Havn 62.81 355⇓ *iP* **P 14 38 57.2 0.0**
comp=Z,11nm,0.8s,mb5.0
JOF Joensuu 63.75 332 *eP* **P 14 39 03.3 -0.3**
JOF pmax pmax
comp=Z,30nm,0.7s,mb5.4
JOF Joensuu 63.75 332 *ep* **P 14 39 03.3 -0.3**
comp=Z,30nm,0.7s,mb5.4
ASAR Alice Springs 63.96 189 P **P 14 39 04.3 -1.0**
comp=Z,2.7nm,0.7s,mb4.4,baz=359,slow=4.7,SNR=41
PALK Pallekele 64.03 257 LR LR 15 10 07.1
comp=Z,187nm,19.5s,MS4.3,baz=54,slow=39
MBWA Marble Bar 64.59 204 *eP* **P 14 39 08.6 -1.0**
MBWA Marble Bar 64.59 204 *eP* **P 14 39 08.5 -1.1**
comp=Z,9.3nm,0.8s,mb4.9
MBWA *e* pP 14 39 17.7 -2.8
JCW Jim Creek 64.61 48 *eP* **P 14 39 10.6 +1.1**
MOS Moscow 65.41 323 *eP* pP 14 39 25.3 -0.2
MOS pmax pmax
comp=Z,60nm,1.0s,mb5.6
MOS pmax pmax
comp=Z,100nm,1.2s,mb5.7
LON Longmire 65.46 49 *eP* **P 14 39 12.7 -2.3**
LON pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LON Longmire 65.46 49 *eP* **P 14 39 12.7 -2.3**
comp=Z,4.0nm,0.9s,mb4.5
EIDS Eidsvold 65.59 172 *eP* **P 14 39 16.2 +0.3**
DZM Mont Dzumac 65.69 156 *eS* S 14 48 01.1 +1.0
comp=Z,76nm,24.6s
DZM *e*LR LR 14 59 13.4
comp=Z,312nm,22.3s
ETW Entiat 65.83 47 *eP* **P 14 39 18.9 +1.5**
KAF Kangasniemi 66.06 333 *eP* **P 14 39 18.1 -0.5**
KAF pmax pmax
comp=Z,27nm,0.7s,mb5.4
KAF Kangasniemi 66.06 333 *ep* **P 14 39 18.1 -0.5**
comp=Z,27nm,0.7s,mb5.4,baz=46,slow=6.1
PUL Pulkovo 66.08 329 *i P* **P 14 39 19.2 +0.4**
PUL pmax pmax
comp=Z,50nm,0.7s,mb5.7
PUL MLR MLR
comp=Z,378nm,18.0s,MS4.6
VRHR Novokhopersk 66.11 317 *eP* **P 14 39 18.6 -0.5**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.5
VRHR MLR MLR
comp=N,610nm,18.0s,MS5.0
VRHR MLR MLR
comp=Z,1μm,18.0s,MS5.1
VRHR MLR MLR
comp=E,620nm,17.0s,MS5.0
OBN Obninsk 66.26 323 *c iP* **P 14 39 19.7 -0.3**
OBN *e* pP 14 39 32.1 +1.1
OBN *e* 14 39 46.7
OBN *e*SS SS 14 52 17.5 -4.6
OBN pmax pmax
comp=Z,54nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,500nm,16.0s,MS4.8
FINES FINESS Array B 66.58 332 P **P 14 39 21.6 -0.3**
comp=Z,32nm,0.7s,mb5.5,baz=46,slow=8.2,SNR=139
FINES LR LR 15 11 30.0
comp=Z,483nm,18.4s,MS4.8,baz=271,slow=39
VSR Storozhevoye 67.31 318 *eP* **P 14 39 26.5 -0.2**
VSR *e**SP sP 14 39 39.0 -2.9
VSR pmax pmax
comp=Z,40nm,0.6s,mb5.6
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,20nm,0.6s
VSR MLR MLR
comp=Z,540nm,17.0s,MS4.8
VSR MLR MLR
comp=N,880nm,23.0s
VSR MLR MLR
comp=E,460nm,18.0s
VORD Divnogorie 67.39 318 *eP* **P 14 39 26.8 -0.5**
VORD pmax pmax
comp=Z,20nm,0.8s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,40nm,0.6s
VORD MLR MLR

comp=Z,550nm,19.0s,MS4.8
VORD MLR MLR
comp=N,170nm,14.0s
VORD MLR MLR
comp=E,450nm,22.0s
SUMG Summit 67.63 0 *e*P **P 14 39 29.5 +1.1**
comp=E,32nm,0.8s,mb5.4
VSU Vasula 68.33 329*c i*P **P 14 39 32.9 -0.2**
VSU pmax pmax
comp=Z,35nm,0.9s,mb5.4
VSU MLR MLR
comp=Z,485nm,19.0s,MS4.8
AFI Afiamalu 68.36 132 LR LR 15 03 53.1
comp=Z,179nm,20.4s,MS4.3,baz=308,slow=31
H08A Prairie City 68.53 49 ⇑P **P 14 39 34.8 +0.2**
baz=68
B13A Whitefish 68.62 44 ⇑P **P 14 39 35.6 +0.6**
baz=68,SNR=6.8
A14A Double T Ranch 68.82 43 ⇓P **P 14 39 36.8 +0.5**
baz=69
MOD Modoc 69.08 52 *e*pP pP 14 39 47.2 -1.9
SCO Scoresbysund 69.17 355 *i* P PcP 14 40 03.7 +1.9
comp=Z,10nm,1.1s
SCO
comp=Z,120nm,21.0s
F11A Grangeville 69.17 47 ⇑P **P 14 39 38.5 0.0**
baz=69
A15A Johnson Ranch, 69.18 43 ⇑P **P 14 39 38.0 -0.5**
baz=69,SNR=5.3
E12A Beaver Dam Sad 69.19 46 ⇓P **P 14 39 38.6 0.0**
baz=69
J08A Circle Bar Ran 69.33 50 ⇓P **P 14 39 39.0 -0.5**
baz=69
C14A Swan Lake 69.37 44 ⇑P **P 14 39 39.9 +0.2**
baz=69
SWMT Swartz Lake 69.39 45 *e*P **P 14 39 40.9 +1.1**
D13A Huson 69.39 45 ⇓P **P 14 39 38.7 -1.2**
baz=69
G11A Walters Elk Ra 69.40 48 ⇓P **P 14 39 39.6 -0.3**
baz=69,SNR=6.1
H10A Noah's Angus R 69.61 49 ⇑P **P 14 39 41.0 -0.2**
baz=69
ZEI Tsey 69.66 309 *e*P **P 14 39 40.5 -1.1**
ZEI pmax pmax
comp=Z,21nm,0.9s,mb5.1
B15A Bradely Ranch, 69.67 44 ⇑P **P 14 39 41.3 -0.3**
baz=70,SNR=9.0
KIV Kislovodsk 69.68 311 *e*P **P 14 39 42.2 +0.5**
KIV *e* 14 39 57.9
KIV *e* 14 42 12.6
KIV pmax pmax
comp=Z,74nm,1.0s,mb5.6
KIV Kislovodsk 69.68 311 *e*P **P 14 39 42.1 +0.4**
comp=Z,81nm,0.9s,mb5.7
J09A Fry Pan Ranch, 69.76 50 ⇓P **P 14 39 41.5 -0.7**
baz=70
WVOR Wild Horse Val 69.77 51 *e*P **P 14 39 40.6 -1.7**
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WVOR Wild Horse Val 69.77 51 *e*P **P 14 39 40.6 -1.7**
comp=Z,6.8nm,1.0s,mb4.5
A16A West Butte Ran 69.79 43 ⇓P **P 14 39 42.0 -0.3**
baz=70
SLMT Seeley Lake 69.83 45 *e*P **P 14 39 43.4 +0.8**
MSO Missoula 69.83 45 *e*P **P 14 39 43.8 +1.2**
comp=Z,5.1nm,1.0s,mb4.4
KEH Kehvi 69.91 309 P **P 14 39 42.7 -0.4**
D14A Greenough 69.92 45 ⇓P **P 14 39 42.4 -0.7**
baz=70,SNR=6.1
H11A Donnelly 69.96 48 ⇓P **P 14 39 42.8 -0.6**
baz=70
C15A Salmond Ranch, 69.98 44 ⇓P **P 14 39 42.9 -0.5**
baz=70,SNR=10
G12A Big Creek, Yel 70.09 47 ⇓P **P 14 39 43.5 -0.7**
baz=70
CHMT Chamberlain Mo 70.16 45 *e*P **P 14 39 44.3 -0.3**
comp=Z,0.8nm,0.8s,mb3.7
BEKR Beckwourth 70.23 54 ⇑P **P 14 39 44.8 -0.4**
baz=70
A17A Triple J Farms 70.25 42 ⇑P **P 14 39 45.1 0.0**
baz=70,SNR=5.9
IZAR Zarasai 70.37 327 *e*P **P 14 39 45.5 -0.3**
MICGM Minsk 70.54 326 *e*P **P 14 39 45.0 -1.8**
ISAL Salakas 70.55 327 *e*P **P 14 39 47.1 +0.3**
MNK Minsk 70.56 326 *e*P **P 14 39 45.0 -1.9**
FFC Flin Flon 70.59 34 *e*P **P 14 39 46.9 -0.2**
FFC pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
FFC Flin Flon 70.59 34 *e*P **P 14 39 46.9 -0.2**
comp=Z,10nm,0.8s,mb4.8
IIGN Ignalina 70.66 327 *e*P **P 14 39 47.8 +0.3**
GNI Garni 70.70 306 P **P 14 39 48.7 +0.7**
comp=Z,6.4nm,0.5s,mb4.8,baz=176,slow=21,SNR=6.6
GNI LR LR 15 13 47.7
comp=Z,294nm,19.2s,MS4.5,baz=247,slow=38
GNI Garni 70.70 306*c i*P **P 14 39 49.2 +1.2**
GNI pmax pmax
comp=Z,27nm,1.2s
GNI Garni 70.70 306 P **P 14 39 49.6 +1.6**
SNR=7.1
GNI P 14 39 49.6
SNR=7.1
A18A Metzger Ranch, 70.70 42 ⇑P **P 14 39 47.7 -0.2**
baz=70,SNR=6.2
H12A Diamond D Ranc 70.71 48 ⇓P **P 14 39 47.6 -0.4**
baz=70
G13A Cobalt 70.73 47 ⇓P **P 14 39 47.6 -0.5**
baz=71
NACGM Naroch 70.73 327 *e* **P 14 39 45.0 -2.9**
E15A Deer Lodge 70.79 45 ⇑P **P 14 39 47.7 -0.7**
baz=71,SNR=5.4
FCC Fort Churchill 70.82 27 *e*P **P 14 39 48.3 -0.1**
comp=Z,0.5nm,1.0s
PAHR Pah Rah Range 70.93 54 *e*P **P 14 39 54.9 +5.5**
comp=Z,6.7nm,1.0s,mb4.5
PAHR *e*pP pP 14 40 00.9 +0.4
D16A Dana Ranch, Ca 71.00 44 ⇑P **P 14 39 50.2 +0.4**
baz=71
I12A Atlanta 71.01 48 ⇑P **P 14 39 49.5 -0.4**
baz=71
C17A Wharram Farm, 71.04 43 ⇑P **P 14 39 50.1 +0.2**
baz=71
H13A Challis 71.04 47 ⇑P **P 14 39 50.0 0.0**
baz=71,SNR=6.4
B18A Beardsley Farm 71.07 42 ⇑P **P 14 39 50.5 +0.3**
baz=71
K11A Parker Ranch, 71.11 50 ⇓P **P 14 39 50.5 0.0**
baz=71
F15A Butte 71.23 46 ⇑P **P 14 39 51.1 -0.1**
baz=71,SNR=6.9
E16A East Helena 71.25 45 ⇑P **P 14 39 51.3 +0.1**
baz=71
LRM Limekiln Ridge 71.27 46 *e*P **P 14 39 52.5 +1.1**
CMB Columbia Colle 71.29 56 *e*P **P 14 39 52.9 +1.2**
CMB pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CMB Columbia Colle 71.29 56 *e*P **P 14 39 52.9 +1.3**
comp=Z,6.0nm,1.1s,mb4.4
EGMT Eagleton 71.32 43 ⇑P **P 14 39 52.2 +0.5**
baz=71,SNR=6.8
EGMT Eagleton 71.32 43 *e*P **P 14 39 52.4 +0.8**
comp=Z,14nm,1.0s,mb4.9
D17A Six Diamond Ra 71.38 44 ⇑P **P 14 39 51.6 -0.5**
baz=71
DLMT Dillon 71.47 46 *e*P **P 14 39 53.7 +1.1**
comp=Z,9.7nm,1.0s,mb4.7
I13A Wildhorse Cree 71.52 48 ⇑P **P 14 39 52.1 -0.9**
baz=71
HLID Hailey 71.57 48 ⇓P **P 14 39 52.7 -0.5**
baz=71
HLID Hailey 71.57 48 *e*P **P 14 39 54.5 +1.2**
comp=Z,2.0nm,0.8s,mb4.1
SOC Sochi 71.61 312*c i*P **P 14 39 53.3 -0.2**
SOC *e*'PP pP 14 40 04.4 -0.2
SOC *e* 14 42 30.8
SOC *e*S S 14 49 05.8 -4.4
SOC *e* 14 49 48.2
SOC *e*SS SS 14 53 50.8 +5.7
SOC pmax pmax
comp=Z,1μm,0.9s
SOC MLR MLR
comp=Z,10μm,18.0s
STKA Stephens Creek 71.62 181 *e*P **P 14 39 52.6 -0.8**
comp=Z,2.8nm,0.7s,mb4.3
STKA Stephens Creek 71.62 181 P **P 14 39 54.9 +1.5**
comp=Z,1.6nm,0.8s,mb4.0,baz=359,slow=16,SNR=3.8
STKA LR LR 15 10 20.6
comp=Z,89nm,18.4s,MS4.1,baz=25,slow=35
STKA Stephens Creek 71.62 181 *e*P **P 14 39 52.0 -1.4**
comp=Z,1.5nm,1.1s,mb3.8
L11A Cat Creek Ranc 71.64 50 ⇑P **P 14 39 53.6 -0.1**
baz=72
G15A Dillon 71.66 46 ⇑P **P 14 39 52.9 -0.8**
baz=72
MCMT McKenzie Canyo 71.67 47 *e*P **P 14 39 53.1 -0.7**
HFS Hagfors 71.72 336 P **P 14 39 53.5 -0.3**
comp=Z,34nm,0.6s,mb5.4,baz=43,slow=6.7,SNR=129
E17A Martinsdale 71.73 44 ⇓P **P 14 39 53.7 -0.4**
baz=72,SNR=5.4
NB2 NORSAR Subarra 71.76 337 P **P 14 39 53.6 -0.4**
comp=Z,30nm,0.7s,mb5.3,baz=38,slow=6.2
NOA NORSAR Array B 71.76 337 P **P 14 39 53.9 -0.1**
comp=Z,29nm,0.7s,mb5.3,baz=39,slow=6.0,SNR=126
NOA PP PP 14 42 46.6 +14
comp=Z,1.9nm,0.8s,baz=46,slow=8.6,SNR=3.6
NOA LR LR 15 14 37.2
comp=Z,186nm,19.5s,MS4.4,baz=20,slow=38
J13A Cove Ranch, Pi 71.81 48 ⇑P **P 14 39 54.7 0.0**
baz=72
BOZ Bozeman (W) 71.83 45 ⇓P **P 14 39 55.5 +0.7**
baz=72,SNR=8.8
BOZ Bozeman (W) 71.83 45 *e*P **P 14 39 56.0 +1.3**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BOZ Bozeman (W) 71.83 45 *e*P **P 14 39 56.0 +1.3**
comp=Z,5.4nm,0.8s,mb4.5
I14A Mackay 71.89 48 ⇑P **P 14 39 55.2 +0.1**
baz=72
NAO01 NORSAR Array S 72.01 337 *e*P **P 14 39 55.5 0.0**
M11A Holland Ranch, 72.07 51 ⇓P **P 14 39 56.9 +0.7**
baz=72
E18A Harlowton 72.17 44 ⇑P **P 14 39 56.0 -0.7**
baz=72
F17A Fitzpatrick Pl 72.19 45 ⇑P **P 14 39 56.4 -0.5**
baz=72
J14A Carey 72.23 48 ⇑P **P 14 39 56.9 -0.3**
baz=72
NVAR Mina Array Bea 72.37 54 P **P 14 39 59.5 +1.4**
comp=Z,1.4nm,0.8s,mb3.9,baz=284,slow=6.3,SNR=11
QLMT Earthquake Lak 72.45 46 *e*P **P 14 40 00.3 +1.8**
comp=Z,4.5nm,1.3s,mb4.2
AKASG Malin Array Be 72.50 322 P **P 14 39 58.3 -0.4**
comp=Z,20nm,0.6s,mb5.2,baz=44,slow=5.9,SNR=85
AKASG LR LR 15 15 25.6
comp=Z,121nm,18.3s,MS4.2,baz=35,slow=39
AKASG Malin Array Be 72.50 322 *i* P **P 14 39 58.2 -0.5**
AKASG pmax pmax
comp=Z,20nm,0.6s
AKBB Malin Array Si 72.50 322 *e*P **P 14 39 58.0 -0.7**
KIEV Kiev 72.51 322 *e*P **P 14 39 57.4 -1.3**
KIEV pmax pmax
comp=Z,27nm,0.8s,mb5.2
KIEV Kiev 72.51 322 *e*P **P 14 39 57.4 -1.4**
comp=Z,27nm,0.8s,mb5.2
F18A Big Timber 72.70 44 ⇓P **P 14 39 59.6 -0.3**
baz=72,SNR=5.1
SFJD Kangerlussuaq 72.75 5 P **P 14 39 58.4 -1.5**
comp=Z,12nm,0.8s,mb4.9,baz=330,slow=6.4,SNR=7.8
SFJD Kangerlussuaq 72.75 5 *i* P **P 14 39 58.6 -1.3**
SFJD pmax pmax
comp=Z,12nm,0.8s,mb4.9
SFJD MLR MLR
comp=Z,250nm,22.0s,MS4.5
SFJD Kangerlussuaq 72.75 5 *i* P **P 14 39 58.6 -1.3**
comp=Z,12nm,0.8s,mb4.9
SFJD
comp=Z,250nm,22.0s
OSL Oslo 72.79 337 *i* P **P 14 40 01.8 +1.6**
SUW Suwalki 72.86 327 *e*P pP 14 40 13.5 +1.7
N12A Clover Valley, 72.87 51 *e*P **P 14 40 03.2 +2.1**
comp=Z,8.4nm,1.1s,mb4.6
M13A Montello 73.08 50 *e*P **P 14 40 03.6 +1.3**
comp=Z,4.2nm,1.1s,mb4.3
H17A Grant Village 73.20 46 ⇑P **P 14 40 02.5 -0.4**
baz=73
O12A Currie 73.41 51 ⇓P **P 14 40 03.9 -0.4**
baz=73,SNR=5.4
RLMT Red Lodge 73.44 45 *e*pP pP 14 40 15.3 -0.1
M14A Sheep Mountain 73.46 50 ⇓P **P 14 40 04.4 -0.2**
baz=73
TPAW Teton Pass 73.57 47 *e*pP pP 14 40 16.7 +0.5
S10A Tonopah Range, 73.74 54 ⇑P **P 14 40 05.6 -0.7**
baz=74
P12A McGill 73.81 52 ⇑P **P 14 40 06.6 -0.1**
baz=74
DGMT Dagmar 73.83 40 *e*P **P 14 40 07.9 +1.4**
comp=Z,14nm,0.8s,mb5.0
SIM Simferopol' 73.86 316 *e*P **P 14 40 07.7 +0.9**
SIM *e*S S 14 49 43.0 +7.3
SIM pmax pmax
comp=Z,40nm,0.9s,mb5.3
SIM MLR MLR
comp=Z,400nm,18.0s,MS4.8
M15A Larsen Ranch, 74.01 49 ⇓P **P 14 40 07.3 -0.5**
baz=74
R11A Troy Canyon, C 74.10 53 ⇑P **P 14 40 07.5 -0.8**
baz=74
HWUT Hardware Ranch 74.43 49 *e*P **P 14 40 10.8 +0.6**
comp=Z,22nm,1.6s,mb4.8
FURC Furnace Creek, 74.47 55 ⇑P **P 14 40 10.6 0.0**
baz=74
L17A Cokeville 74.51 48 ⇓P **P 14 40 10.7 +0.1**
baz=74
R12A Pony Springs, 74.71 53 ⇑P **P 14 40 12.6 +0.7**
baz=75
BORG Borgarnes 74.74 353 P **P 14 40 13.3 +1.8**
comp=Z,14nm,0.8s,mb4.9,baz=17,slow=6.5,SNR=5.4
BORG Borgarnes 74.74 353 P **P 14 40 13.3 +1.7**
BORG pmax pmax
comp=Z,14nm,0.8s
BW06 Boulder Array 74.82 47 ⇓P **P 14 40 12.3 -0.2**
baz=75
BW06 Boulder Array 74.82 47 *e*P **P 14 40 13.1 +0.7**
comp=Z,10nm,1.5s,mb4.5
PDAR Pinedale Array 74.82 47 P **P 14 40 12.9 +0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=303,slow=2.1,SNR=15
PDAR LR LR 15 12 50.4
comp=Z,56nm,20.6s,MS3.8,baz=333,slow=35
P14A Drum Mountains 74.84 51 ⇑P **P 14 40 12.5 -0.1**
baz=75
S12A Delamar Landin 75.02 53 ⇓P **P 14 40 14.2 +0.5**
baz=75
T11A Corn Creek, Al 75.02 54 ⇓P **P 14 40 13.9 +0.2**
baz=75
M17A Scullys Gap (B 75.03 48 ⇓P **P 14 40 14.2 +0.5**
baz=75
Q14A Sevier Lake (B 75.10 51 ⇓P **P 14 40 14.6 +0.5**
baz=75,SNR=5.4
KIS Kishinev 75.22 320 *e*PcP pP 14 40 24.0 -1.8
KIS LRM 15 16 16.0
comp=Z,500nm,16.0s
KIS Kishinev 75.22 320 *e*P **P 14 40 13.0 -1.7**
KIS *e* pP 14 40 24.0 -1.8
KIS *e* 14 43 10.0
KIS *e* 14 50 30.0
KIS MLR MLR
comp=Z,500nm,15.0s,MS4.9
KIS MLR MLR
comp=Z,500nm,16.0s
MIB Mutribah 75.23 297 *e*P **P 14 40 13.7 -1.4**
MIB AMb AMB 14 40 15.1
comp=Z,65nm,0.9s,mb5.5
L19A Farson 75.36 47 ⇑P **P 14 40 15.1 -0.5**
baz=75
O16A Springville 75.37 50 ⇓P **P 14 40 15.3 -0.3**
baz=75
QRN Al-Qurain 75.48 295 *e*P **P 14 40 15.2 -1.3**
QRN AMb AMB 14 40 16.3
comp=Z,88nm,0.8s,mb5.7
SHPR Sheep Range 75.52 54 *e*pP pP 14 40 26.0 -1.7
RDF Al-Radifah 75.62 296 *e*P **P 14 40 16.1 -1.3**
RDF AMb AMB 14 40 17.5
comp=Z,79nm,0.8s,mb5.7
NAY Al-Naaiem 75.64 296 *e*P **P 14 40 15.9 -1.4**
NAY AMb AMB 14 40 17.0
comp=Z,26nm,0.7s,mb5.2
CCUT Cedar City 75.97 53 *e*P **P 14 40 21.1 +2.0**
comp=Z,4.6nm,1.1s,mb4.3
T13A Saint George 75.97 53 ⇑P **P 14 40 18.7 -0.5**
baz=76
MSU Marysvale 76.06 51 *e*P PcP 14 40 30.7 -1.1
MSU Marysvale 76.06 51 *e*pP pP 14 40 30.7 -0.1
MUD Monsted U'grnd 76.10 336 ⇑*i*P **P 14 40 19.7 +0.2**
MUD pmax pmax
comp=Z,14nm,0.8s,mb4.9
MUD MLR MLR
comp=Z,190nm,19.0s,MS4.4
MUD Monsted U'grnd 76.10 336 ⇑*i*P **P 14 40 19.7 +0.2**
comp=Z,14nm,0.8s,mb4.9
MUD
comp=Z,190nm,19.0s
KWP Kalwaria Pacla 76.23 325 *e*P **P 14 40 21.0 +0.7**
KWP Kalwaria Pacla 76.23 325 *e*P **P 14 40 20.7 +0.3**
KWP pmax pmax
comp=Z,55nm,0.9s,mb5.5
KWP Kalwaria Pacla 76.23 325 *e*P **P 14 40 20.7 +0.3**
comp=Z,55nm,0.9s,mb5.5
KWP Kalwaria Pacla 76.23 325 ⇑*i*P **P 14 40 21.1 +0.7**
U13A Pakoon Wash 76.32 54 ⇓P **P 14 40 21.0 -0.1**
baz=76,SNR=6.4
ULM Lac du Bonnet 76.40 34 P **P 14 40 20.6 -0.7**
comp=Z,1.2nm,0.4s,mb4.2,baz=320,slow=9.0,SNR=3.9
LDFC Landfair 76.45 56 *e*pP pP 14 40 31.8 -1.3
TLCR 76.47 318 ⇑P **P 14 40 22.4 +0.6**
TLCR 76.47 318 ⇑*i*P **P 14 40 22.4 +0.6**
BUR08 Bucovina Ar. S 76.52 322 *e*P **P 14 40 22.5 +0.4**
BUR01 Bucovina Ar. S 76.54 322 P **P 14 40 22.9 +0.7**
BURAR Bucovina Array 76.54 322 ⇓P **P 14 40 22.5 +0.4**
BURAR Bucovina Array 76.54 322 ⇓*i*P **P 14 40 22.5 +0.4**
SRU San Rafael 76.65 50 ⇓P **P 14 40 23.3 +0.3**
baz=76
SRU San Rafael 76.65 50 *e*P **P 14 40 24.1 +1.1**
SRU pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SRU San Rafael 76.65 50 *e*P **P 14 40 24.1 +1.2**
comp=Z,5.9nm,0.7s,mb4.6
V13A Grand Canyon W 76.67 54 ⇑P **P 14 40 22.7 -0.5**
baz=76
U14A Mt Trumbull 76.80 53 ⇓P **P 14 40 24.5 +0.6**
baz=77,SNR=5.1
CFR Carcaliu 76.83 319 ⇓P **P 14 40 23.9 +0.1**
CFR Carcaliu 76.83 319 ⇓*i*P **P 14 40 23.9 +0.1**
RSSD Black Hills 76.89 43 *e*P **P 14 40 24.5 +0.3**
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
RSSD Black Hills 76.89 43 *e*P **P 14 40 24.5 +0.3**
comp=Z,3.8nm,0.8s,mb4.4
KOLS Kolonicke sedl 76.94 324 *e*P **P 14 40 24.9 +0.5**
KOLS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KOLS Kolonicke sedl 76.94 324 *e*P **P 14 40 24.9 +0.5**
comp=Z,9.2nm,0.9s,mb4.7
KOLS Kolonicke sedl 76.94 324 *e*P **P 14 40 24.9 +0.5**
R17A Hanksville Air 77.00 51 ⇓P **P 14 40 25.1 +0.2**
baz=77
STHS Stebnicka Huta 77.04 325 *e*P **P 14 40 25.8 +0.9**
STHS pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
STHS Stebnicka Huta 77.04 325 *e*P **P 14 40 25.8 +0.9**
comp=Z,10nm,0.7s,mb4.9
STHS Stebnicka Huta 77.04 325 *e*P **P 14 40 25.8 +0.9**
VRI Vrincioaia 77.05 320 P **P 14 40 25.7 +0.7**
VRI Vrincioaia 77.05 320 ⇓*i*P **P 14 40 25.9 +0.8**
OJC Ojcow 77.06 326 *i* P **P 14 40 24.9 -0.1**
TIRR Tirgusor 77.19 318 ⇑P **P 14 40 26.2 +0.3**
TIRR Tirgusor 77.19 318 ⇑*i*P **P 14 40 26.2 +0.3**
P19A Cripple Cowboy 77.21 49 ⇓P **P 14 40 25.9 -0.2**
baz=77
O20A White River Ci 77.30 48 ⇑P **P 14 40 26.2 -0.4**
baz=77
U15A North Rim 77.34 53 ⇑P **P 14 40 28.0 +1.1**
baz=77,SNR=5.6
V14A Boquillas Ranc 77.36 54 ⇑P **P 14 40 27.6 +0.6**
baz=77,SNR=7.5
TRPA Tarpa 77.41 324 ⇑*i*P **P 14 40 27.7 +0.7**
S17A Black Ridge (B 77.46 51 ⇓P **P 14 40 27.7 +0.2**
baz=77
R18A Canyonlands Na 77.50 50 ⇓P **P 14 40 27.9 +0.1**
baz=77
X13A Yucca 77.57 55 ⇓P **P 14 40 28.4 +0.2**
baz=77
BR131 Keskin Array S 77.58 312 *e*P **P 14 40 28.5 +0.3**
BRTR Keskin Array B 77.58 312 P **P 14 40 28.4 +0.3**
comp=Z,5.9nm,0.6s,mb4.7,baz=70,slow=4.1,SNR=36
BRTR PP PP 14 43 27.4 +4.5
comp=Z,1.6nm,1.0s,baz=54,slow=6.3,SNR=3.8
BRTR LR LR 15 19 12.7
comp=Z,128nm,19.9s,MS4.2,baz=44,slow=39
BRTR Keskin Array B 77.58 312 P **P 14 40 28.5 +0.3**
BRTR 14 43 27.4
W14A Seligman 77.64 54 ⇑P **P 14 40 29.5 +0.9**
baz=78,SNR=5.7
MLR Muntele Rosu 77.70 320 P **P 14 40 28.4 -0.4**
comp=Z,2.8nm,0.5s,mb4.4,baz=134,slow=18,SNR=9.8
MLR Muntele Rosu 77.70 320 ⇑*i*P **P 14 40 29.4 +0.7**
RUE Ruedersdorf 77.72 331 *e*P **P 14 40 29.0 +0.3**
comp=Z,57nm,1.7s,mb5.2
BSEG Bad Segeberg 77.78 333 *e*P **P 14 40 29.3 +0.3**
comp=Z,23nm,0.8s,mb5.2
V15A Kaibab Nationa 77.81 53 ⇓P **P 14 40 29.3 -0.2**
baz=78
AGMN Agassiz Refuge 77.85 36 *e*P **P 14 40 29.1 -0.4**
comp=Z,5.0nm,0.9s,mb4.4
AGMN *e*pP pP 14 40 40.4 -0.3
T17A Navajo Res., N 77.88 52 ⇓P **P 14 40 29.2 -0.7**
baz=78
S18A Hurst Farm, Bl 77.90 51 ⇑P **P 14 40 29.3 -0.7**
baz=78
KSP Ksiaz 78.03 329 *e*P **P 14 40 31.0 +0.6**
KSP Ksiaz 78.03 329 ⇑*i*P **P 14 40 30.9 +0.5**
KSP *e*pP pP 14 40 43.1 +1.5
OKC Ostrava-Krasne 78.05 327 *e*P **P 14 40 31.0 +0.4**
OKC MLR MLR
comp=Z,300nm,19.5s,MS4.6
OKC Ostrava-Krasne 78.05 327 ⇑*e*P **P 14 40 31.0 +0.4**
OKC AMS AMS 15 17 00.0
comp=Z,300nm,19.5s
KECS Kecovo 78.06 325 *e*P **P 14 40 30.8 +0.1**
KECS *e* 14 40 45.0
KECS *e* 14 43 28.8
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 78.06 325 *e*P **P 14 40 30.8 +0.1**
comp=Z,2.9nm,0.8s,mb4.3
KECS *e* 14 40 45.0
KECS *e*PP PP 14 43 28.8 +2.2
KECS Kecovo 78.06 325 *e*P **P 14 40 30.8 +0.1**
KECS *e*pP pP 14 40 45.0 +3.1
KECS *e*PP PP 14 43 28.8 +2.2
DRGR 78.31 323 P **P 14 40 32.7 +0.6**
DRGR 78.31 323 ⇑*i*P **P 14 40 32.5 +0.4**
T18A Mexican Hat 78.34 51 ⇑P **P 14 40 31.9 -0.5**
baz=78
MORC Moravsky Berou 78.34 327 *e*P **P 14 40 32.8 +0.6**
MORC pmax pmax
comp=Z,21nm,0.9s,mb5.1
MORC Moravsky Berou 78.34 327 *e*P **P 14 40 32.8 +0.6**
comp=Z,21nm,0.9s,mb5.1
MORC Moravsky Berou 78.34 327 ⇑*i*P **P 14 40 32.7 +0.5**
S19A Harvey Farm, M 78.37 50 ⇑P **P 14 40 32.5 -0.1**
baz=78,SNR=5.9
DPC Dobruska-Polom 78.40 328 ⇑*i*P **P 14 40 33.2 +0.7**
DPC *e*pP pP 14 40 44.9 +1.2
DPC AMS AMS 15 17 50.0
comp=Z,400nm,19.8s
UPC Upice 78.40 328 ⇑*i*P **P 14 40 32.9 +0.4**
UPC *e*pP pP 14 40 39.6 -4.1
PV01 Paradox Valley 78.45 50 *e*P **P 14 40 32.5 -0.5**
comp=Z,454nm,1.1s,mb6.3
WUAZ Wupatki 78.50 53 *e*P **P 14 40 35.4 +2.0**
comp=Z,5.5nm,0.9s,mb4.5
R20A Redvale 78.52 50 ⇑P **P 14 40 33.1 -0.3**
baz=78
SMCO Snowmass 78.67 48 *e*P **P 14 40 33.7 -0.5**
comp=Z,1.7nm,0.7s,mb4.1
PSZ Piszkesteto 78.75 325 *e*P **P 14 40 35.3 +0.8**
PSZ pmax pmax
comp=Z,21nm,1.0s,mb5.0
PSZ Piszkesteto 78.75 325 *e*P **P 14 40 35.3 +0.8**
comp=Z,21nm,1.0s,mb5.0
PSZ Piszkesteto 78.75 325 ⇑*e*P **P 14 40 35.1 +0.6**
PSZ Piszkesteto 78.75 325 ⇑*i*P **P 14 40 35.2 +0.7**
VYHS Vyhne 78.78 326 *e*P **P 14 40 35.4 +0.8**
VYHS *e* 14 43 33.3
VYHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VYHS Vyhne 78.78 326 *e*P **P 14 40 35.4 +0.8**
comp=Z,6.2nm,0.8s,mb4.6
VYHS *e*PP PP 14 43 33.3 +0.8

VYHS Vyhne 78.78 326 *e*P **P 14 40 35.4 +0.8**
VYHS *e*PP PP 14 43 33.3 +0.8
V17A Tonalea, Kykot 78.79 53 ⇊P **P 14 40 35.4 +0.5**
baz=79,SNR=9.1
KOLL Kolacno 78.90 326 *e*P **P 14 40 36.2 +0.9**
KOLL Kolacno 78.90 326 *e*P **P 14 40 36.2 +0.9**
BRG Berggiesshubel 78.93 330 *e*P **P 14 40 35.4 0.0**
comp=Z,12nm,0.9s,mb4.8
BRG Berggiesshubel 78.93 330 *i* PKP **P 14 40 35.5 +0.1**
comp=Z,12nm,0.9s,mb4.8
BRG *e* PP 14 43 34.0 +0.3
comp=Z,5.2nm,1.0s
Y15A Casa Rosa Ranc 78.93 55 ⇑P **P 14 40 35.5 -0.2**
baz=79
CLL Collm 78.94 331 *e*P **P 14 40 35.1 -0.4**
comp=Z,19nm,0.9s,mb5.0
CLL Collm 78.94 331 ⇑*i*P **P 14 40 35.3 -0.2**
CLL *i* pP 14 40 47.8 +1.1
CLL pmax pmax
comp=Z,19nm,0.9s,mb5.0
CLL Collm 78.94 331 ⇑*i*P **P 14 40 35.3 -0.2**
comp=Z,19nm,0.9s,mb5.0
CLL *i* pP 14 40 47.8 +1.1
CLL Collm 78.94 331 ⇑*i*P **P 14 40 35.3 -0.2**
comp=Z,19nm,0.9s,mb5.0
CLL *e*(PcP) PcP 14 40 41.0 -3.0
CLL *i* pP pP 14 40 47.8 +1.1
CLL *e*S S 14 50 36.0 +4.8
CLL *e*(SS) 14 56 06.0
PVCC Panska Ves 78.96 329 *e*P **P 14 40 36.0 +0.4**
PVCC MLR MLR
comp=Z,400nm,18.9s,MS4.8
PVCC Panska Ves 78.96 329⇑*e*P **P 14 40 36.0 +0.4**
PVCC AMS AMS 15 18 20.0
comp=Z,400nm,18.9s
ISCO Idaho Springs 79.01 47 *e*P **P 14 40 40.8 +4.7**
ISCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ISCO Idaho Springs 79.01 47 *e*P **P 14 40 40.8 +4.8**
comp=Z,5.0nm,1.0s,mb4.4
NRDL Niedersach Rie 79.04 333 *e*P **P 14 40 35.8 -0.2**
comp=Z,11nm,1.0s,mb4.7
VRAC Vranov 79.10 327 P **P 14 40 37.3 +0.9**
VRAC Vranov 79.10 327⇑*i*P **P 14 40 37.1 +0.7**
KAC Achnashellach 79.12 343⇑*e*P **P 14 40 36.6 +0.2**
V18A Ganado 79.25 52 ⇑P **P 14 40 38.1 +0.6**
baz=79
U19A Dine' College, 79.30 51 ⇊P **P 14 40 37.1 -0.6**
baz=79,SNR=5.5
GZR Gura Zlata 79.31 322 P **P 14 40 38.0 +0.4**
GZR Gura Zlata 79.31 322⇊*i*P **P 14 40 37.3 -0.3**
KPL Plockton 79.34 343⇑*e*P **P 14 40 38.0 +0.5**
KPL AMb AMB 14 40 38.5
comp=Z,31nm,1.0s,mb5.2
PRU Pruhonice 79.40 329⇑*i*P **P 14 40 38.9 +0.9**
PRU *e*pP pP 14 40 49.5 +0.3
PRU AMS AMS 15 18 30.0
comp=Z,400nm,24.5s
R22A Saguache, Gunn 79.44 49 ⇊P **P 14 40 38.4 0.0**
baz=79
CLZ Clausthal 79.48 332 *e*P **P 14 40 38.7 +0.3**
comp=Z,28nm,1.1s,mb5.1
CLZ Clausthal 79.48 332 *e*P **P 14 40 38.7 +0.3**
CLZ pmax pmax
comp=Z,28nm,1.1s,mb5.1
TREC Trest 79.56 328 *e*P **P 14 40 39.3 +0.4**
TREC MLR MLR
comp=Z,400nm,16.0s,MS4.8
TREC Trest 79.56 328⇑*e*P **P 14 40 39.3 +0.4**
TREC AMS AMS 15 18 20.0
comp=Z,400nm,16.0s
BZS Buzias 79.69 322 P **P 14 40 39.9 +0.2**
BZS Buzias 79.69 322⇑*i*P **P 14 40 39.2 -0.5**
ZST Bratislava 79.75 326 *e*P **P 14 40 41.3 +1.4**
ZST pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ZST Bratislava 79.75 326 *e*P **P 14 40 41.3 +1.4**
comp=Z,8.4nm,1.0s,mb4.6
ZST Bratislava 79.75 326 *e*P **P 14 40 41.3 +1.4**
GUNZ Gunzen 79.95 330 *e*P **P 14 40 41.1 +0.1**
comp=Z,12nm,0.8s,mb4.9
MOX Moxa 80.00 331 *e*P **P 14 40 41.2 0.0**
MOX *e* pP 14 40 53.9 +1.5
MOX pmax pmax
comp=Z,15nm,1.2s,mb4.8
MOX MLR MLR
comp=Z,200nm,18.0s,MS4.5
MOX Moxa 80.00 331 *e*P **P 14 40 41.2 0.0**
comp=Z,15nm,1.2s,mb4.8
MOX *e* pP 14 40 53.9 +1.5
MOX LR LR
comp=Z,200nm,18.0s,MS4.5
WERN Wernitzgruen 80.00 330 *e*P **P 14 40 41.5 +0.3**
comp=Z,13nm,0.9s,mb4.9
IBBN Ibbenburen 80.00 334 *e*P **P 14 40 41.2 0.0**
comp=Z,25nm,0.8s,mb5.2
EAB Aberfoyle 80.09 342⇑*e*P **P 14 40 41.7 0.0**
EAU Auchinoon 80.19 341 *e*P **P 14 40 42.6 +0.5**
116A Eloy 80.24 56 ⇑P **P 14 40 43.6 +0.7**
baz=80
UBBA Unterbreizbach 80.45 332 *e*P **P 14 40 43.4 -0.3**
KHC Kasperske Hory 80.46 329 *e*P **P 14 40 43.4 -0.3**
KHC pmax pmax
comp=Z,21nm,0.8s,mb5.1
KHC Kasperske Hory 80.46 329 *e*P **P 14 40 43.4 -0.4**
comp=Z,21nm,0.8s,mb5.1
KHC Kasperske Hory 80.46 329⇑*i*P **P 14 40 44.1 +0.4**
KHC *e*pP pP 14 40 54.8 -0.2
KHC AMS AMS 15 19 10.0
comp=Z,400nm,20.2s
PGBU Glenifferbraes 80.47 342 *e*P **P 14 40 44.1 +0.4**
PGBU AMb AMB 14 40 44.7
comp=Z,50nm,1.2s,mb5.3
Y18A Canyon Day Jun 80.48 54 ⇑P **P 14 40 44.9 +0.8**
baz=80
CONA Conrad Observa 80.48 327⇑*i*P **P 14 40 44.8 +0.9**
comp=Z,19nm,1.0s,mb5.0,SNR=16
ROTZ Rotzenmuhle 80.48 330 *e*P **P 14 40 44.4 +0.5**
comp=Z,12nm,1.0s,mb4.8
SDCO Great Sand Dun 80.49 48 *e*P **P 14 40 45.4 +1.3**
comp=Z,2.7nm,1.1s,mb4.1
X19A St. Johns 80.50 53 ⇑P **P 14 40 44.9 +0.7**
baz=80
EKA Eskdalemuir Ar 80.58 341 P **P 14 40 44.5 +0.2**
comp=Z,9.3nm,0.8s,mb4.7,baz=27,slow=4.7,SNR=34
EKA PP PP 14 43 57.9 +11
comp=Z,3.8nm,1.0s,baz=27,slow=9.8,SNR=5.8
ESK Eskdalemuir 80.61 341⇑*e*P **P 14 40 44.4 0.0**
ESK Eskdalemuir 80.61 341 *i* P **P 14 40 45.4 +1.0**
WTSB Winterswijk 80.61 334⇑*e*P **P 14 40 44.2 -0.3**
comp=Z,23nm,1.3s,mb4.9
GEC2 GERESS Array S 80.64 329 *e*P **P 14 40 44.6 -0.1**
comp=Z,11nm,1.0s,mb4.7
GEC2 GERESS Array S 80.64 329 *e*P **P 14 40 44.6 -0.1**
GEC2 pmax pmax
comp=Z,11nm,1.0s,mb4.7
GERES GERESS Array B 80.64 329 P **P 14 40 44.8 +0.1**
comp=Z,6.5nm,0.7s,mb4.6,baz=35,slow=4.9,SNR=57
GERES PP PP 14 43 43.6 -4.3
comp=Z,1.1nm,0.7s,baz=57,slow=9.7,SNR=3.5
GERES LR LR 15 19 36.9
comp=Z,284nm,20.1s,MS4.6,baz=30,slow=38
GERES GERESS Array B 80.64 329 P **P 14 40 44.8 +0.1**
GERES 14 43 43.6
ECK Cauldkaine Hil 80.71 341⇑*e*P **P 14 40 45.0 0.0**
WET Wettzell 80.72 329 *e*P **P 14 40 45.6 +0.4**
comp=Z,17nm,1.0s,mb4.9
WET Wettzell 80.72 329 *e*P **P 14 40 45.6 +0.4**
WET pmax pmax
comp=Z,17nm,1.0s,mb4.9
BUG Bochum--Univer 80.89 334 *e*P **P 14 40 45.7 -0.3**
comp=Z,17nm,1.0s,mb4.9
ECSD EROS Data Cent 80.90 39 *e*P **P 14 40 46.0 -0.3**
comp=Z,6.2nm,0.9s,mb4.5
ECSD *e*pP pP 14 40 55.2 -2.2
X20A Quemado 80.91 52 ⇑P **P 14 40 46.0 -0.5**
baz=81
GRA1 Grafenberg Arr 80.92 330 *e*P **P 14 40 46.7 +0.5**
comp=Z,44nm,0.9s,mb5.4
GRA1 LR LR
comp=Z,200nm,18.0s,MS4.5
GRF Grafenberg Arr 80.92 330 *e*P **P 14 40 46.7 +0.5**
comp=Z,44nm,0.9s,mb5.4
GRF *e*L 15 20 32.9
comp=Z,166nm,18.0s
GRF Grafenberg Arr 80.92 330 *e*P **P 14 40 46.7 +0.5**
GRF pmax pmax
comp=Z,44nm,0.9s,mb5.4
GRF MLR MLR
comp=Z,200nm,18.0s,MS4.5
GRF Grafenberg Arr 80.92 330 *e*P **P 14 40 46.7 +0.5**
GRF pmax pmax
comp=Z,44nm,0.9s,mb5.4
GRF MLR MLR
comp=Z,200nm,18.0s,MS4.5
MMAI Mount Meron Ar 81.01 306 P **P 14 40 47.6 +0.6**
comp=Z,18nm,0.9s,mb5.0,baz=44,slow=6.1,SNR=17
MMAI LR LR 15 20 40.3
comp=Z,265nm,20.1s,MS4.6,baz=65,slow=39
ARSA Arzberg 81.15 327⇑*i*P **P 14 40 47.9 +0.4**
comp=Z,8.5nm,0.8s,mb4.7,SNR=6.1
MOA Molln 81.20 328⇑*i*P **P 14 40 48.1 +0.3**
comp=Z,6.3nm,0.8s,mb4.6
118A Homack Ranch, 81.28 55 ⇑P **P 14 40 49.4 +0.9**
baz=81
217A Green Valley 81.33 56 ⇑P **P 14 40 49.8 +1.1**
baz=81
GAL1 Galloway 81.38 342⇑*e*P **P 14 40 48.6 0.0**
GAL1 AMb AMB 14 40 54.2
comp=Z,30nm,3.0s
Y20A Horse Springs, 81.41 53 ⇊P **P 14 40 49.7 +0.6**
baz=81
HPK Haverah Park 81.42 340 *e*P **P 14 40 49.0 +0.3**
HPK AMb AMB 14 40 49.6
comp=Z,29nm,1.9s,mb4.9
TNS Taunus Mts 81.50 332 *e*P **P 14 40 49.2 -0.1**
comp=Z,21nm,1.1s,mb5.0
TNS Taunus Mts 81.50 332 *e*P **P 14 40 49.2 -0.1**
TNS pmax pmax
comp=Z,21nm,1.1s,mb5.0
Y21A Point of Rocks 81.77 52 ⇊P **P 14 40 51.5 +0.5**
baz=82
GROS Grobnik 81.78 326 *i* P **P 14 40 50.8 -0.1**
GROS *e* pP 14 41 03.2 +1.2
SOKA Soboth 81.81 327⇊*i*P **P 14 40 51.1 +0.1**
comp=Z,25nm,0.8s,mb5.2
Z20A Nine Sixteen R 81.82 53 ⇑P **P 14 40 51.9 +0.7**
baz=82
LAZ Ladron 81.82 52 *e*P **P 14 40 52.3 +1.0**
comp=Z,2.6nm,1.3s,mb4.0
LHO Holmfirth 81.85 340⇑*e*P **P 14 40 51.1 +0.1**
ANMO Albuquerque 81.85 51 *e*P **P 14 40 53.1 +1.7**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 81.85 51 *e*P **P 14 40 53.1 +1.7**
comp=Z,4.4nm,1.1s,mb4.3
RJOB Jochberg 81.89 328 *e*P **P 14 40 51.9 +0.5**
comp=Z,21nm,1.0s,mb5.0
HGN Heimansgroeve 81.92 334⇑*e*P **P 14 40 50.9 -0.6**
comp=Z,15nm,0.9s,mb4.9
BEBN Eben Emael 81.98 334 P **P 14 40 52.0 +0.2**
MEM Membach 82.03 334 P **P 14 40 52.0 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
318A Bisbee 82.07 55 ⇑P **P 14 40 52.6 0.0**
baz=82
SCHQ Schefferville 82.12 17 P **P 14 40 52.3 -0.1**
comp=Z,4.8nm,0.7s,mb4.5,baz=1.8,slow=6.2,SNR=9.5
SCHQ LR LR 15 22 59.9
comp=Z,128nm,18.2s,MS4.3,baz=279,slow=40
FUR Furstenfeldbru 82.14 330 *e*P **P 14 40 52.9 +0.2**
comp=Z,42nm,0.9s,mb5.4
FUR Furstenfeldbru 82.14 330 *e*P **P 14 40 52.9 +0.2**
FUR pmax pmax
comp=Z,42nm,0.9s,mb5.4
OBKA Obir 82.15 327⇑*i*P **P 14 40 52.5 -0.3**
comp=Z,13nm,0.8s,mb4.9
GMM Mts of Mourne 82.25 342⇑*e*P **P 14 40 52.9 -0.3**
LEGS Legarje 82.27 326 *i* P **P 14 40 53.0 -0.4**
W24A Lazy 6 Ranch, 82.30 50 ⇊P **P 14 40 53.2 -0.5**
baz=82
BNM Barren Site 82.30 52 *e*P **P 14 40 54.4 +0.6**
comp=Z,3.0nm,1.1s,mb4.1
STIP Stip 82.34 319 *i* P **P 14 40 51.5 -2.4**
CWF Charnwood Fore 82.42 339⇑*e*P **P 14 40 53.6 -0.4**
CWF AMb AMB 14 40 55.6
comp=Z,17nm,1.4s,mb4.8
VAY Valandovo 82.42 319 *i* P **P 14 40 54.0 -0.3**
BCLA Clavier 82.42 334 P **P 14 40 53.9 -0.2**
comp=Z,6.8nm,1.2s,mb4.5
MYKA Terra Mystica 82.43 327⇑*i*P **P 14 40 53.8 -0.4**
comp=Z,8.8nm,0.6s,mb4.9
STU Stuttgart 82.43 331 *e*P **P 14 40 54.1 -0.1**
comp=Z,31nm,1.0s,mb5.2
STU Stuttgart 82.43 331 *e*P **P 14 40 54.6 +0.4**
STU pmax pmax
comp=Z,31nm,1.0s,mb5.2
STU Stuttgart 82.43 331 *e*P **P 14 40 54.6 +0.4**
comp=Z,31nm,1.0s,mb5.2
SKO Skopje 82.50 320 *i* P **P 14 40 55.8 +1.1**
LJU Ljubljana 82.53 326 *i* P **P 14 40 54.3 -0.4**
LJU *i* pP 14 41 03.5 -2.5
SNF Seneffe 82.69 335 P **P 14 40 54.8 -0.7**
PTCC Patocco-Chiusa 82.73 327 P **P 14 40 55.1 -0.7**
comp=Z,12nm,0.6s,mb5.1
WTTA Wattenberg 82.73 329⇑*i*P **P 14 40 56.1 +0.3**
comp=Z,11nm,0.7s,mb5.0
Y23A Lovelace Mesa, 82.80 51 ⇑P **P 14 40 55.5 -0.9**
baz=83
GIVF Givet 82.86 334 *e*P **P 14 40 55.8 -0.6**
MOTA Moosalm 82.88 329⇊*i*P **P 14 40 56.8 +0.2**
comp=Z,28nm,0.9s,mb5.3
RETA Reutte 82.90 329 *i* P **P 14 40 57.0 +0.4**
SNR=12
DOU Dourbes 82.94 334 P **P 14 40 56.8 0.0**
comp=Z,3.6nm,1.1s,mb4.3
HLM1 Long Mynd 83.05 340 *e*P **P 14 40 57.0 -0.3**
KRUS Krusevo 83.05 320 *i* P **P 14 40 57.1 -0.4**
BAIF Baives 83.10 335⇑*i*P **P 14 40 57.2 -0.4**
comp=Z,12nm,1.0s,mb4.6
BAIF Baives 83.10 335⇑*i*P **P 14 40 57.2 -0.4**
BAIF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BAIF Baives 83.10 335⇑*i*P **P 14 40 57.2 -0.4**
comp=Z,5.9nm,1.0s,mb4.6
BFO Black Forest 83.12 331 *e*P **P 14 40 57.6 -0.2**
comp=Z,13nm,0.9s,mb5.0
BFO Black Forest 83.12 331 *e*P **P 14 40 57.6 -0.2**
BFO pmax pmax
comp=Z,13nm,0.9s,mb5.0
DSB Dublin 83.27 342 *e*P **P 14 40 58.0 -0.4**
comp=Z,28nm,1.5s,mb5.1
BIA Bitola 83.27 319 *i* P **P 14 40 58.2 -0.5**
FETA Feichten 83.29 329⇑*i*P **P 14 40 58.9 +0.2**
comp=Z,16nm,0.9s,mb5.0,SNR=8.8
DAVA Damuels 83.40 330⇑*i*P **P 14 40 59.5 +0.3**
comp=Z,27nm,1.1s,mb5.2
CDF Champ du Feu 83.44 332⇑*i*P **P 14 40 59.3 -0.1**
comp=Z,28nm,0.9s,mb5.0
CDF Champ du Feu 83.44 332⇑*i*P **P 14 40 59.3 -0.1**
CDF pmax pmax
comp=Z,14nm,0.9s,mb5.0
CDF Champ du Feu 83.44 332⇑*i*P **P 14 40 59.3 -0.1**
comp=Z,14nm,0.9s,mb5.0
OHR Ohrid 83.46 320 *i* P **P 14 40 59.0 -0.6**
HTR Trewern Hill 83.55 340⇑*e*P **P 14 41 00.2 +0.3**
Y25A Mesa, Roswell 83.61 51 ⇊P **P 14 41 00.2 -0.4**
baz=83
ECH Echery 83.64 332 *e*P **P 14 40 59.5 -1.0**
ECH pmax pmax
comp=Z,11nm,0.8s,mb5.0
ECH Echery 83.64 332 *e*P **P 14 40 59.5 -1.0**
comp=Z,11nm,0.8s,mb5.0
X26A CR and CF Fran 83.69 50 ⇊P **P 14 41 00.0 -1.0**
baz=84
HGH Gray Hill 83.82 339 *e*P **P 14 41 01.2 -0.1**
DAVOX Davos/Dischmat 83.82 330 P **P 14 41 01.6 +0.2**
comp=Z,14nm,0.8s,mb5.2,baz=350,slow=2.8,SNR=14
BRMO Bormio 83.88 329 P **P 14 41 02.1 +0.4**
comp=Z,11nm,1.0s,mb5.0
124A Stringfield Ra 84.01 52 ⇑P **P 14 41 02.1 -0.6**
baz=84
X27A F and S Farms, 84.04 49 ⇊P **P 14 41 02.4 -0.3**
baz=84
HINF Hinteralfeld 84.09 332⇑*i*P **P 14 41 02.2 -0.6**
comp=Z,11nm,0.9s,mb4.7
HINF Hinteralfeld 84.09 332⇑*i*P **P 14 41 02.2 -0.6**
HINF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
HINF Hinteralfeld 84.09 332⇑*i*P **P 14 41 02.2 -0.6**
comp=Z,5.4nm,0.9s,mb4.7
HAU Haudompre 84.11 332⇑*i*P **P 14 41 02.4 -0.5**
comp=Z,22nm,0.8s,mb5.0
HAU *e*MLR MLR
comp=Z,291nm,19.8s,MS4.4
HAU Haudompre 84.11 332⇑*i*P **P 14 41 02.4 -0.5**
HAU pmax pmax
comp=Z,11nm,0.8s,mb5.0
HAU MLR MLR
comp=Z,290nm,19.8s,MS4.7
HAU Haudompre 84.11 332⇑*i*P **P 14 41 02.4 -0.5**
comp=Z,11nm,0.8s,mb5.0
HAU LR LR
comp=Z,290nm,19.8s,MS4.7
MEZF Maizieres J'vi 84.15 333⇑*i*P **P 14 41 03.1 +0.1**
comp=Z,34nm,1.0s,mb5.2
MEZF Maizieres J'vi 84.15 333⇑*i*P **P 14 41 03.1 +0.1**
comp=Z,34nm,1.0s,mb5.4
224A Corundas Mount 84.41 52 ⇑P **P 14 41 04.3 -0.3**
baz=84
PMOR Pomariorio Ree 84.50 115 *e*T 16 14 09.9
comp=Z,13nm,0.2s
125A Gardner Draw, 84.52 51 ⇊P **P 14 41 05.1 -0.1**
baz=84
MNTX Cornudas Mount 84.75 53 *e*P **P 14 41 06.5 +0.1**
comp=Z,2.6nm,0.9s,mb4.4
324A Moseley Ranch, 84.87 53 ⇑P **P 14 41 06.6 -0.5**
baz=85
Z27A Tatum 84.92 50 ⇑P **P 14 41 06.8 -0.5**
baz=85
VAI Varese 85.01 330 P **P 14 41 06.9 -0.5**
VAI pmax pmax
comp=Z,35nm,0.6s,mb5.7
VAI Varese 85.01 330 P **P 14 41 06.9 -0.5**
comp=Z,35nm,0.6s,mb5.7
GDL2 Guadalupe Moun 85.02 52 *e*P **P 14 41 08.8 +1.1**
PPT Papeete 85.12 118 *e*LR LR 15 08 12.1
comp=Z,433nm,22.2s
PPT *e*T 16 14 58.3
comp=Z,7.7nm,0.3s
PPT Papeete 85.12 118 LR LR 15 19 54.7
comp=Z,85nm,18.1s,MS4.2,baz=316,slow=36
DYA Yadsworthy 85.21 339 *e*P **P 14 41 07.9 -0.4**
DYA AMb AMB 14 41 09.5
comp=Z,26nm,1.4s,mb5.2
CABF La Chapelle 85.39 332⇑*i*P **P 14 41 09.2 -0.1**
comp=Z,36nm,1.3s,mb5.0
CABF La Chapelle 85.39 332⇑*i*P **P 14 41 09.2 -0.1**
CABF pmax pmax
comp=Z,18nm,1.3s,mb5.0
CABF La Chapelle 85.39 332⇑*i*P **P 14 41 09.2 -0.1**
comp=Z,18nm,1.3s,mb5.0
SNTG Esanatoglia 85.44 326 P **P 14 41 09.9 +0.3**
comp=Z,17nm,0.9s,mb5.2
ORO Oropa 85.51 330 P **P 14 41 09.5 -0.5**
ORO pmax pmax
comp=Z,7.0nm,0.2s,mb5.5
ORO Oropa 85.51 330 P **P 14 41 09.5 -0.5**
comp=Z,7.2nm,0.2s,mb5.6
RGNG Rignano Grg 85.52 323 P **P 14 41 09.7 -0.4**
LOR Lormes 85.62 333⇑*i*P **P 14 41 10.3 -0.2**
comp=Z,65nm,0.9s,mb5.6
LOR *e*MLR MLR
comp=Z,337nm,21.5s,MS4.4
LOR Lormes 85.62 333⇑*i*P **P 14 41 10.3 -0.2**
LOR pmax pmax
comp=Z,32nm,0.9s,mb5.5
LOR MLR MLR
comp=Z,340nm,21.5s,MS4.7
LOR Lormes 85.62 333⇑*i*P **P 14 41 10.3 -0.2**
comp=Z,32nm,0.9s,mb5.5
LOR LR LR
comp=Z,340nm,21.5s,MS4.7
425A Indio Mountain 85.64 53 ⇑P **P 14 41 10.3 -0.6**
baz=86
TRAV Traversella 85.70 330 P **P 14 41 10.0 -0.9**
comp=Z,17nm,0.9s,mb5.3
NRCA Norcia 85.70 325 P **P 14 41 11.1 +0.1**
comp=Z,21nm,1.0s,mb5.3
FLN La Foliniere 85.72 337⇑*i*P **P 14 41 10.6 -0.3**
comp=Z,47nm,1.2s,mb5.3
FLN *e*MLR MLR
comp=Z,177nm,20.2s,MS4.2
FLN La Foliniere 85.72 337⇑*i*P **P 14 41 10.6 -0.3**
FLN pmax pmax
comp=Z,23nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,180nm,20.3s,MS4.5
FLN La Foliniere 85.72 337⇑*i*P **P 14 41 10.6 -0.3**
comp=Z,24nm,1.2s,mb5.3
FLN LR LR
comp=Z,180nm,20.3s,MS4.5
LDF La Druitiere 85.76 336⇑*i*P **P 14 41 10.8 -0.3**
comp=Z,14nm,0.8s,mb4.9
LDF La Druitiere 85.76 336⇑*i*P **P 14 41 10.8 -0.3**
LDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
LDF La Druitiere 85.76 336⇑*i*P **P 14 41 10.8 -0.3**
comp=Z,7.0nm,0.8s,mb4.9
JLP Les Platons 85.78 338 *e*P **P 14 41 11.1 -0.1**
JSA Saint Aubin 85.84 338 *e*P **P 14 41 11.3 -0.2**
JSA AMb AMB 14 41 12.1
comp=Z,33nm,1.0s,mb5.5
326A Caldwell Ranch 85.88 52 ⇊P **P 14 41 11.9 -0.1**
baz=86
SSF Saint Saulge 85.92 333⇑*i*P **P 14 41 11.8 -0.1**
comp=Z,38nm,0.9s,mb5.3
SSF Saint Saulge 85.92 333⇑*i*P **P 14 41 11.8 -0.1**
SSF pmax pmax
comp=Z,19nm,0.9s,mb5.3
SSF Saint Saulge 85.92 333⇑*i*P **P 14 41 11.8 -0.1**
comp=Z,19nm,0.9s,mb5.3
TAOE Nuku Hiva Isla 85.95 105 *e*LR LR 15 08 45.7
comp=Z,380nm,21.8s
HYF Humbligny 86.03 334 *e*P **P 14 41 12.8 +0.3**
LPL La Plagne 86.08 331⇑*i*P **P 14 41 13.0 +0.2**
comp=Z,37nm,0.9s,mb5.3
LPL La Plagne 86.08 331⇑*i*P **P 14 41 13.0 +0.2**
LPL pmax pmax
comp=Z,19nm,0.9s,mb5.3
LPL La Plagne 86.08 331⇑*i*P **P 14 41 13.0 +0.2**
comp=Z,18nm,0.9s,mb5.3
LPG La Plagne 86.09 331⇑*i*P **P 14 41 13.2 +0.4**
comp=Z,43nm,0.9s,mb5.4
LPG La Plagne 86.09 331⇑*i*P **P 14 41 13.2 +0.4**
LPG pmax pmax
comp=Z,22nm,0.9s,mb5.4
LPG La Plagne 86.09 331⇑*i*P **P 14 41 13.2 +0.4**
comp=Z,22nm,0.9s,mb5.4
SMF Signal de Mont 86.16 333⇑*i*P **P 14 41 13.1 -0.1**
comp=Z,62nm,1.1s,mb5.4
SMF Signal de Mont 86.16 333⇑*i*P **P 14 41 13.1 -0.1**
SMF pmax pmax
comp=Z,31nm,1.1s,mb5.5
SMF Signal de Mont 86.16 333⇑*i*P **P 14 41 13.1 -0.1**
comp=Z,31nm,1.1s,mb5.5
GRR Gorron 86.17 337⇑*i*P **P 14 41 13.2 0.0**
comp=Z,52nm,1.0s,mb5.4
GRR Gorron 86.17 337⇑*i*P **P 14 41 13.2 0.0**
GRR pmax pmax
comp=Z,26nm,1.0s,mb5.4
GRR Gorron 86.17 337⇑*i*P **P 14 41 13.2 0.0**
comp=Z,26nm,1.0s,mb5.4
AVF Avril sur Loir 86.21 333⇑*i*P **P 14 41 13.3 -0.1**
comp=Z,93nm,0.8s,mb5.8
AVF Avril sur Loir 86.21 333⇑*i*P **P 14 41 13.3 -0.1**
AVF pmax pmax
comp=Z,47nm,0.8s,mb5.8
AVF Avril sur Loir 86.21 333⇑*i*P **P 14 41 13.3 -0.1**
comp=Z,47nm,0.8s,mb5.8
426A McDonald Obser 86.30 52 ⇊P **P 14 41 14.0 -0.1**
baz=86
MEH Mehetia 86.37 117 *e*T 16 16 31.0
comp=Z,121nm,0.3s
WMOK Wichita Mounta 86.43 46 *e*P **P 14 41 15.0 +0.3**
WMOK pmax pmax
comp=Z,11nm,1.5s,mb4.9
WMOK Wichita Mounta 86.43 46 *e*P **P 14 41 15.0 +0.3**
comp=Z,11nm,1.5s,mb4.9
BNI Bardonecchia 86.49 330 *e*P **P 14 41 14.3 -0.5**
BNI pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
BNI Bardonecchia 86.49 330 *e*P **P 14 41 14.3 -0.6**
comp=Z,9.4nm,0.9s,mb5.0
328A Wristen Ranch, 86.53 51 ⇊P **P 14 41 15.0 -0.3**
baz=86
427A Hayter Ranch, 86.55 52 ⇊P **P 14 41 14.6 -0.8**
baz=86
BGF Bois d'Agland 86.58 334⇑*i*P **P 14 41 15.2 0.0**

comp=Z,18nm,0.8s,mb5.0
BGF Bois d'Agland 86.58 334⇑iP P 14 41 15.2 0.0
BGF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
BGF Bois d'Agland 86.58 334⇑iP P 14 41 15.2 0.0
comp=Z,9.2nm,0.8s,mb5.1
526A Mary Lane Ranc 86.69 53 ⇓P P 14 41 15.4 -0.7
baz=86
SGMF Saint Gilles 86.80 338⇑iP P 14 41 16.4 +0.2
comp=Z,51nm,1.0s,mb5.4
SGMF Saint Gilles 86.80 338⇑iP P 14 41 16.4 +0.2
SGMF pmax pmax
comp=Z,25nm,1.0s,mb5.4
SGMF Saint Gilles 86.80 338⇑iP P 14 41 16.4 +0.2
comp=Z,25nm,1.0s,mb5.4
ORIF Oris-en-Rattie 86.91 331 eP P 14 41 16.9 +0.1
comp=Z,21nm,1.0s,mb5.0
ORIF eMLR MLR
comp=Z,261nm,22.5s,MS4.3
ORIF Oris-en-Rattie 86.91 331 eP P 14 41 16.9 +0.1
ORIF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
ORIF Oris-en-Rattie 86.91 331 eP P 14 41 16.9 +0.1
comp=Z,10nm,1.0s,mb5.0
ROSF Rostrenen 86.93 338⇑iP P 14 41 17.1 +0.2
comp=Z,49nm,1.0s,mb5.4
ROSF Rostrenen 86.93 338⇑iP P 14 41 17.1 +0.2
ROSF pmax pmax
comp=Z,25nm,1.0s,mb5.4
ROSF Rostrenen 86.93 338⇑iP P 14 41 17.1 +0.2
comp=Z,24nm,1.0s,mb5.4
TCF Toulx Ste Croi 87.03 334⇑iP P 14 41 17.6 +0.2
comp=Z,25nm,0.9s,mb5.1
TCF Toulx Ste Croi 87.03 334⇑iP P 14 41 17.6 +0.2
TCF pmax pmax
comp=Z,12nm,0.9s,mb5.1
TCF Toulx Ste Croi 87.03 334⇑iP P 14 41 17.6 +0.2
comp=Z,12nm,0.9s,mb5.1
SSB Saint Sauveur 87.09 332 eP P 14 41 16.0 -1.7
SSB pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
SSB Saint Sauveur 87.09 332 eP P 14 41 16.0 -1.7
comp=Z,5.2nm,0.8s,mb4.8
RPZ Rata Peaks 87.26 160 LR LR 15 14 14.1
comp=Z,189nm,21.9s,MS4.5,baz=169,slow=31
QUIF Quistinic 87.28 338⇑iP P 14 41 18.6 0.0
comp=Z,23nm,1.0s,mb5.1
QUIF Quistinic 87.28 338⇑iP P 14 41 18.6 0.0
QUIF pmax pmax
comp=Z,12nm,1.0s,mb5.1
QUIF Quistinic 87.28 338⇑iP P 14 41 18.6 0.0
comp=Z,12nm,1.0s,mb5.1
VIVF Saint-Julien-l 87.41 332 eP P 14 41 19.3 0.0
comp=Z,36nm,1.1s,mb5.2
VIVF Saint-Julien-l 87.41 332 eP P 14 41 19.3 0.0
VIVF pmax pmax
comp=Z,18nm,1.1s,mb5.2
VIVF Saint-Julien-l 87.41 332 eP P 14 41 19.3 0.0
comp=Z,18nm,1.1s,mb5.2
TXAR Lajitas Array 87.47 53 P **P 14 41 20.2 +0.3**
comp=Z,0.5nm,0.6s,mb3.9,baz=280,slow=3.3,SNR=9.2
TXAR LR LR 15 16 08.5
comp=Z,67nm,19.3s,MS4.1,baz=35,slow=33
MFF Saint Martin d 87.53 335⇑iP P 14 41 20.1 +0.3
comp=Z,52nm,1.0s,mb5.4
MFF Saint Martin d 87.53 335⇑iP P 14 41 20.1 +0.3
MFF pmax pmax
comp=Z,26nm,1.0s,mb5.4
MFF Saint Martin d 87.53 335⇑iP P 14 41 20.1 +0.3
comp=Z,26nm,1.0s,mb5.4
627A Terlingua Ranc 87.55 53 ⇓P P 14 41 19.4 -0.9
baz=87
CCM Cathedral Cave 87.86 40 eP P 14 41 21.7 +0.1
CCM pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CCM Cathedral Cave 87.86 40 eP P 14 41 21.7 +0.1
comp=Z,8.5nm,0.8s,mb5.0
LMR La Mourre 88.01 330 eP P 14 41 21.1 -1.1
comp=Z,9.9nm,0.6s,mb4.9
LMR La Mourre 88.01 330 eP P 14 41 21.1 -1.1
LMR pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
LMR La Mourre 88.01 330 eP P 14 41 21.1 -1.1
comp=Z,4.9nm,0.6s,mb4.9
RJF Les Rejaudoux 88.13 334⇑iP P 14 41 23.0 +0.3
comp=Z,29nm,1.0s,mb5.2
RJF eMLR MLR
comp=Z,316nm,23.0s,MS4.4
RJF Les Rejaudoux 88.13 334⇑iP P 14 41 23.0 +0.3
RJF pmax pmax
comp=Z,15nm,1.0s,mb5.2
RJF MLR MLR
comp=Z,320nm,23.0s,MS4.7
RJF Les Rejaudoux 88.13 334⇑iP P 14 41 23.0 +0.3
comp=Z,15nm,1.0s,mb5.2
RJF LR LR
comp=Z,320nm,23.0s,MS4.7
SOI Samo 88.14 321 P **P 14 41 22.5 -0.4**
SOI pmax pmax
comp=Z,9.0nm,0.5s,mb5.3
SOI Samo 88.14 321 P **P 14 41 22.5 -0.4**
comp=Z,8.5nm,0.5s,mb5.2
CAF Calviac 88.27 333 eP P 14 41 24.0 +0.6
LFF La Frestale 88.71 334⇑iP P 14 41 26.0 +0.5
comp=Z,24nm,0.8s,mb5.2
LFF La Frestale 88.71 334⇑iP P 14 41 26.0 +0.5
LFF pmax pmax
comp=Z,12nm,0.8s,mb5.3
LFF La Frestale 88.71 334⇑iP P 14 41 26.0 +0.5
comp=Z,12nm,0.8s,mb5.3
MIAR Mount Ida 89.39 43 eP P 14 41 29.3 +0.4
MIAR pmax pmax
comp=Z,16nm,1.5s,mb5.1
MIAR Mount Ida 89.39 43 eP P 14 41 29.3 +0.4
comp=Z,16nm,1.5s,mb5.1
MTLF Montolieu 89.60 332⇑iP P 14 41 29.9 +0.2
comp=Z,14nm,1.0s,mb4.9
MTLF Montolieu 89.60 332⇑iP P 14 41 29.9 +0.2
MTLF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
MTLF Montolieu 89.60 332⇑iP P 14 41 29.9 +0.2
comp=Z,6.8nm,1.0s,mb4.9
ETSF Etsaut 90.95 334⇑iP P 14 41 36.6 +0.6
comp=Z,13nm,1.0s,mb4.9
ETSF Etsaut 90.95 334⇑iP P 14 41 36.6 +0.6
ETSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
ETSF Etsaut 90.95 334⇑iP P 14 41 36.6 +0.6
comp=Z,6.3nm,1.0s,mb4.9
SSPA Standing Stone 91.56 30 eP P 14 41 36.5 -2.4
comp=Z,8.4nm,1.3s,mb4.9
KEST Kesra 93.18 324 LR LR 15 28 31.5
comp=Z,102nm,19.6s,MS4.3,baz=272,slow=39
ESDC Sonseca Array 94.98 335 P **P 14 41 54.1 -0.5**
comp=Z,2.4nm,0.7s,mb4.7,baz=19,slow=4.2,SNR=15
ESDC PP PP 14 45 42.9 -0.1
comp=Z,0.8nm,0.7s,baz=19,slow=7.3,SNR=5.5
ESDC LR LR 15 30 22.7
comp=Z,120nm,18.1s,MS4.4,baz=20,slow=39
RKT Rikitea 98.98 113 eLR LR 15 14 32.9
comp=Z,265nm,25.2s
TORD Torodi Ar. Bea 115.84 317 PKP PKPdf 14 47 14.0 -1.1
comp=Z,1.0nm,0.6s,baz=20,slow=1.4,SNR=11
TORD PP PP 14 48 07.8 -10
comp=Z,1.5nm,0.8s,baz=26,slow=7.0,SNR=4.6
LSZ Lusaka 118.37 274 PKP PKPdf 14 47 19.6 -0.2
comp=Z,1.2nm,0.4s,baz=354,slow=5.4,SNR=3.2
LSZ Lusaka 118.37 274 PKIKP PKPdf 14 47 19.6 -0.2
LSZ pmax pmax
comp=Z,1.0nm,0.4s
DBIC Dimbokro 124.69 320 PKP PKPdf 14 47 31.4 -0.8
comp=Z,3.0nm,0.6s,baz=356,slow=4.5,SNR=4.4
DBIC PP PP 14 49 13.4 -5.2
comp=Z,3.8nm,0.9s,baz=25,slow=3.8,SNR=3.1
LBTB Lobatse 125.94 266 PKP PKPdf 14 47 34.1 0.0
comp=Z,10nm,0.8s,baz=117,slow=1.5,SNR=13
BOSA Boshof 128.06 262 PKP PKPdf 14 47 37.8 -0.3
comp=Z,3.2nm,0.8s,baz=351,slow=11,SNR=4.6
TSUM Tsumeb 128.81 277 PKP PKPdf 14 47 40.1 +0.3
comp=Z,2.5nm,0.8s,baz=350,slow=6.1,SNR=3.9
TSUM Tsumeb 128.81 277 PKP PKPdf 14 47 40.1 +0.3
LPAZ La Paz 144.23 57 PKP PKPdf 14 48 07.2 -1.1
comp=Z,2.3nm,0.8s,baz=270,slow=3.0,SNR=8.5
VNA1 Neumayer--Stat 145.94 197 ePKPdf PKPdf 14 48 08.9 -0.7

*KISR **31** 14:47:52.5±0.8, 29°.04N×50°.42E, h34km±63km, ML3.1*

*IDC **31** 14:47:56.5±1.8, 29°.07N×50°.34E, h0km, mb3.8/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.8/8, Error ellipse: s-maj=50.9km s-min=20.3km az=148.0*
*CSEM **31** 14:47:59.0±0.2, 29°.29N×50°.17E, h10km, ML3.1, Error ellipse: s-maj=11.2km s-min=4.6km az=165.0*
*NEIC **31** 14:47:59.1±0.7, 29°.30N×50°.17E, h10km, mb3.4/1, MN3.3(TEH), Error ellipse: s-maj=12.7km s-min=8.1km az=177.0*
*TEH **31** 14:48:04.6, 29°.63N×50°.54E, h2km*
ISC 31 14:47:59.0±1.8, 29°.24N±0°.08×50°.17E±0°.03, h10km±12km, n50, σ0°.76/63, mb3.8/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRN	**Al-Qurain**	**2.04**	**257**	*eP*	**Pn**	**14 48 32.7**	**-0.6**
UMR	**Umm Al-Rimmam**	**2.17**	**279**	*eP*	**Pn**	**14 48 35.4**	**+0.3**
UMR				*eS*	**Sg**	**14 49 08.2**	**-0.4**
UMR	**Umm Al-Rimmam**	**2.17**	**279**	*eP*	**Pn**	**14 48 35.3**	**+0.2**
UMR				*eS*	**Sg**	**14 49 08.2**	**-0.4**
IMOK	**Mouk**	**2.23**	**94**	Pn	**Pn**	**14 48 35.8**	**-0.2**
IMOK				Sg	**Sb**	**14 49 06.2**	**-0.9**
IMOK	**Mouk**	**2.23**	**94**	*ePn*	**Pn**	**14 48 35.8**	**-0.2**
IMOK				*eSg*	**Sb**	**14 49 06.3**	**-0.8**
IMOK				*e*		14 49 13.0	
comp=Z,3μm,0.4s							
IMOK	**Mouk**	**2.23**	**94**	Pn	**Pn**	**14 48 35.8**	**-0.2**
IMOK				Sg	**Sb**	**14 49 06.2**	**-0.9**
RDF	**Al-Radifah**	**2.32**	**263**	*eP*	**Pn**	**14 48 36.9**	**-0.3**
RDF				AML	AML	14 49 20.9	
comp=Z,74nm,0.5s							
RDF	**Al-Radifah**	**2.32**	**263**	*eP*	**Pn**	**14 48 36.9**	**-0.3**
MIB	**Mutribah**	**2.53**	**284**	*eP*	**Pn**	**14 48 40.5**	**+0.4**
MIB				*eS*	**Sb**	**14 49 15.9**	**+0.2**
MIB				AML	AML	14 49 23.5	
comp=Z,63nm,0.5s							
MIB	**Mutribah**	**2.53**	**284**	*eP*	**Pn**	**14 48 40.5**	**+0.4**
MIB				*eS*	**Sb**	**14 49 15.9**	**+0.2**
NAY	**Al-Naaiem**	**2.56**	**271**	*eP*	**Pn**	**14 48 40.6**	**+0.1**
NAY				AML	AML	14 49 28.6	
comp=Z,31nm,0.6s							
NAY	**Al-Naaiem**	**2.56**	**271**	*eP*	**Pn**	**14 48 40.6**	**+0.1**
ISRV	**Sarvestan**	**2.57**	**86**	Pn	**Pn**	**14 48 42.6**	**+1.9**
ISRV	**Sarvestan**	**2.57**	**86**	*ePn*	**Pn**	**14 48 42.7**	**+2.0**
ISRV				*e*		14 49 36.5	
comp=Z,1μm,0.3s							
ISRV	**Sarvestan**	**2.57**	**86**	Pn	**Pn**	**14 48 42.6**	**+1.9**
IPAR	**Pars**	**2.58**	**76**	Pn	**Pn**	**14 48 42.1**	**+1.3**
IPAR	**Pars**	**2.58**	**76**	*ePn*	**Pn**	**14 48 42.1**	**+1.3**
IPAR				*e*		14 49 54.0	
comp=Z,1μm,0.4s							
IPAR	**Pars**	**2.58**	**76**	Pn	**Pn**	**14 48 42.1**	**+1.3**
IPIR	**Pirpir**	**3.49**	**10**	*ePn*	**Pn**	**14 48 54.2**	**+0.9**
IPIR				*e*		14 50 01.4	
comp=Z,735nm,0.3s							
IGAR	**Gharneh**	**3.54**	**27**	*ePn*	**Pn**	**14 48 54.3**	**+0.3**
IGAR				*eSn*	**Sn**	**14 49 30.0**	**-5.9**
IGAR				*e*		14 49 43.9	
comp=Z,495nm,0.1s							
ISAD	**Sadrabad**	**4.04**	**48**	Pn	**Pn**	**14 49 00.9**	**+0.1**
ISAD	**Sadrabad**	**4.04**	**48**	*ePn*	**Pn**	**14 49 01.0**	**+0.2**
ISAD				*e*		14 49 54.1	
comp=Z,733nm,0.3s							
ISAD	**Sadrabad**	**4.04**	**48**	Pn	**Pn**	**14 49 00.9**	**+0.1**
IZEF	**Zefreh**	**4.09**	**26**	Pn	**Pn**	**14 49 00.7**	**-0.8**
IZEF				Sn	**Sn**	**14 49 43.5**	**-5.9**
IZEF	**Zefreh**	**4.09**	**26**	*ePn*	**Pn**	**14 49 00.8**	**-0.7**
IZEF				*e*		14 49 04.2	
comp=Z,474nm,0.1s							
IZEF				*eSn*	**Sn**	**14 49 43.6**	**-5.8**
IZEF	**Zefreh**	**4.09**	**26**	Pn	**Pn**	**14 49 00.7**	**-0.8**
IKLH	**Kolahrood**	**4.24**	**16**	Pn	**Pn**	**14 49 03.0**	**-0.6**
IKLH				Sn	**Sn**	**14 49 46.7**	**-6.5**
IKLH	**Kolahrood**	**4.24**	**16**	*ePn*	**Pn**	**14 49 03.1**	**-0.5**
IKLH				*eSn*	**Sn**	**14 49 46.8**	**-6.4**
IKLH				*e*		14 50 00.1	
comp=Z,388nm,0.2s							
IKLH	**Kolahrood**	**4.24**	**16**	Pn	**Pn**	**14 49 03.0**	**-0.6**
IMEH	**Mehriz**	**4.40**	**60**	Pn	**Pn**	**14 49 04.9**	**-0.9**
IMEH	**Mehriz**	**4.40**	**60**	*e*	**Pn**	**14 49 08.3**	**+2.5**
comp=Z,954nm,0.2s							
IMEH				*ePn*	**Pn**	**14 49 04.9**	**-0.9**
IBAF	**Bafgh**	**5.22**	**62**	Pn	**Pn**	**14 49 17.2**	**+0.2**
IBAF	**Bafgh**	**5.22**	**62**	*ePn*	**Pn**	**14 49 17.2**	**+0.2**
IBAF	**Bafgh**	**5.22**	**62**	Pn	**Pn**	**14 49 17.2**	**+0.2**
ABKAR	**Akbulak array**	**21.34**	**18**	*eP*	**P**	**14 52 45.2**	**-0.8**
comp=Z,0.7nm,0.4s,mb3.3							
ABKAR	**Akbulak array**	**21.34**	**18**	*eP*	**P**	**14 52 45.2**	**-0.9**
comp=Z,0.7nm,0.4s,mb3.3							
AKASG	**Malin Array Be**	**26.61**	**329**	P	**P**	**14 53 38.5**	**+1.1**
comp=Z,0.5nm,0.4s,mb3.4,baz=130,slow=9.9,SNR=4.8							
AKASG	**Malin Array Be**	**26.61**	**329**	P	**P**	**14 53 38.5**	**+1.2**
BVAR	**Borovoye Array**	**28.03**	**26**	P	**P**	**14 53 49.9**	**-0.2**
comp=Z,1.0nm,0.6s,mb3.6,baz=223,slow=7.6,SNR=5.6							
BVAR	**Borovoye Array**	**28.03**	**26**	P	**P**	**14 53 49.9**	**-0.2**
KURK	**Kurchatov**	**30.27**	**37**	P	**P**	**14 54 08.9**	**-1.1**
comp=Z,0.4nm,0.4s,mb3.5,baz=236,slow=8.9,SNR=3.0							
KURK	**Kurchatov**	**30.27**	**37**	P	**P**	**14 54 08.9**	**-1.1**
ZALV	**Zalesovo Beam**	**35.22**	**36**	P	**P**	**14 54 52.6**	**-0.6**
comp=Z,0.8nm,0.4s,mb4.0,baz=249,slow=8.9,SNR=5.1							
FINES	**FINESS Array B**	**35.95**	**340**	P	**P**	**14 55 00.2**	**+0.8**
comp=Z,0.9nm,0.8s,mb3.8,baz=147,slow=7.8,SNR=4.1							
FINES	**FINESS Array B**	**35.95**	**340**	P	**P**	**14 55 00.2**	**+0.8**
SONM	**Songino Array**	**46.65**	**50**	P	**P**	**14 56 26.6**	**-0.9**
comp=Z,0.2nm,0.4s,mb3.4,baz=264,slow=14,SNR=2.0							
SONM	**Songino Array**	**46.65**	**50**	P	**P**	**14 56 26.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**47.61**	**261**	P	**P**	**14 56 35.3**	**0.0**
comp=Z,1.8nm,0.7s,mb4.2,baz=54,slow=7.5,SNR=14							
DBIC	**Dimbokro**	**56.38**	**258**	P	**P**	**14 57 40.8**	**0.0**
comp=Z,3.9nm,0.7s,mb4.5,baz=49,slow=10.0,SNR=5.7							
DBIC	**Dimbokro**	**56.38**	**258**	P	**P**	**14 57 40.8**	**0.0**

IDC 31 14:49:47.8±7.5, 9°.02S×160°.76E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=207.6km s-min=40.9km az=114.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**29.52**	**237**	P	P	14 55 54.5	+0.3
0.3nm,0.5s,baz=63,slow=10,SNR=12							
CMAR	**Chiang Mai Arr**	**66.81**	**294**	P	P	15 00 41.5	-0.4
0.3nm,0.5s,baz=119,slow=5.4,SNR=4.5							
SONM	**Songino Array**	**74.18**	**325**	P	P	15 01 26.9	+0.6
0.4nm,0.6s,baz=140,slow=7.0,SNR=2.9							
MKAR	**Makanchi Array**	**88.72**	**318**	P	P	15 02 43.2	0.0
0.4nm,0.6s,baz=87,slow=6.1,SNR=4.1							

*ISCJB **31** 14:52:20.0±1.3, 25°.00S±0°.06×179°.05W±0°.06, h383km±13km, mb4.4/35, Error ellipse: s-maj=10.2km s-min=7.1km az=44.8*
*NEIC **31** 14:52:22.9±0.9, 24°.91S×179°.09W, h406km±9km, mb4.6/20, Error ellipse: s-maj=11.3km s-min=9.1km az=154.0*
*IDC **31** 14:52:24.7±1.8, 25°.00S×179°.12W, h424km±18km, mb3.8/10, mb1 4.1/11, mb1mx3.9/15, mbtmp3.9/11, Error ellipse: s-maj=19.8km s-min=12.3km az=162.0*
ISC 31 14:52:21.3±1.3, 25°.00S±0°.06×179°.01W±0°.06, h384km±14km, h399km±5.2km; pP-P, n225, σ0°.66/214, mb4.4/35, 67C-76D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.34**	**167**	P	**Pn**	**14 53 40.4**	**+4.8**
217nm,0.3s,baz=305,slow=8.1,SNR=13							
RAO				S	**S**	**14 54 28.2**	**-7.8**
191nm,0.3s,baz=77,slow=22,SNR=3.6							
RAO	**Raoul Island**	**4.34**	**167**	*ePn*	**Pn**	**14 53 39.8**	**+4.1**
MSVF	**Nonsavu**	**7.73**	**339**	*ePn*	**Pn**	**14 54 12.4**	**-0.6**
99nm,0.9s							
AFI	**Afiamalu**	**12.97**	**33**	P	**P**	**14 55 07.8**	**-4.6**
3.1nm,0.3s,baz=291,slow=13,SNR=8.7							
AFI				S	**S**	**14 57 20.2**	**-14**
1.7nm,0.3s,baz=256,slow=20,SNR=3.6							
URZ	**Urewera**	**13.62**	**193**	P	**P**	**14 55 18.6**	**-0.7**
10nm,0.3s,baz=360,slow=2.5,SNR=56							
URZ				S	**S**	**14 57 44.9**	**-1.6**
4.4nm,0.3s,baz=90,slow=23,SNR=18							
DZM	**Mont Dzumac**	**13.66**	**279**	*eP*	**P**	**14 55 22.2**	**+2.4**
121nm,0.8s							
NOUC	**Port Laguerre**	**13.78**	**279**	*eP*	**P**	**14 55 24.0**	**+2.9**
RPZ	**Rata Peaks**	**20.36**	**201**	P	**P**	**14 56 29.6**	**-0.3**
10nm,0.5s,baz=304,slow=2.2,SNR=18							
HNR	**Honiara**	**25.31**	**304**	*eP*	**P**	**14 57 12.7**	**-2.3**
63nm,0.9s,mb5.0							
ARMA	**Armidale**	**26.50**	**252**	*eP*	**P**	**14 57 27.3**	**+1.9**
ARMA	**Armidale**	**26.50**	**252**	*eP*	**P**	**14 57 27.2**	**+1.8**
23nm,0.8s,mb4.7							
EIDS	**Eidsvold**	**27.04**	**263**	*eP*	**P**	**14 57 30.9**	**+0.6**
EIDS	**Eidsvold**	**27.04**	**263**	*eP*	**P**	**14 57 31.0**	**+0.8**
35nm,0.9s,mb4.8							
RMQ	**Roma**	**29.03**	**260**	*eP*	**P**	**14 57 48.7**	**+0.9**
80nm,1.0s,mb5.0							
CTA	**Charters Tower**	**32.40**	**272**	*eP*	**P**	**14 58 17.2**	**+0.1**
50nm,0.4s,mb5.2							
CTA	**Charters Tower**	**32.40**	**272**	P	**P**	**14 58 17.3**	**+0.2**
83nm,0.5s,mb5.3,baz=100,slow=9.9,SNR=157							
CTA	**Charters Tower**	**32.40**	**272**	P	**P**	**14 58 17.3**	**+0.2**
CTAO	**Charters Tower**	**32.40**	**272**	*eP*	**P**	**14 58 17.2**	**+0.1**
84nm,0.6s,mb5.2							
TOO	**Toolangi**	**32.63**	**239**	*eP*	**P**	**14 58 20.1**	**+1.2**
STKA	**Stephens Creek**	**35.17**	**250**	*eP*	**P**	**14 58 40.5**	**-0.1**
4.5nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**35.17**	**250**	P	**P**	**14 58 40.4**	**-0.2**
3.9nm,0.5s,mb4.0,baz=89,slow=9.3,SNR=24							
STKA				PcP	PcP	15 01 01.6	-0.3
1.1nm,0.6s,baz=0.0,slow=5.1,SNR=3.2							
STKA	**Stephens Creek**	**35.17**	**250**	*eP*	**P**	**14 58 40.8**	**+0.2**
2.4nm,1.1s,mb3.4							
ASAR	**Alice Springs**	**42.76**	**262**	P	**P**	**14 59 42.1**	**-0.7**
11nm,0.3s,mb4.7,baz=93,slow=7.3,SNR=626							
ASAR				S	**S**	**15 05 32.9**	**-4.6**
1.8nm,0.7s,baz=100,slow=14,SNR=12							
WRAB	**Tennant Creek**	**43.23**	**267**	*eP*	**P**	**14 59 46.4**	**-0.3**
41nm,0.7s,mb4.9							
FORT	**Forrest**	**46.78**	**250**	*eP*	**P**	**15 00 12.3**	**-1.8**
31nm,0.6s,mb4.8							
KAKA	**Kakadu**	**47.31**	**276**	*eP*	**P**	**15 00 17.0**	**-1.3**
26nm,0.8s,mb4.6							
KAKA	**Kakadu**	**47.31**	**276**	*eP*	**P**	**15 00 16.6**	**-1.8**
96nm,0.6s,mb5.3							
FITZ	**Fitzroy Crossi**	**51.65**	**266**	*eP*	**P**	**15 00 50.3**	**-0.4**
44nm,0.6s,mb4.9							
FITZ	**Fitzroy Crossi**	**51.65**	**266**	*eP*	**P**	**15 00 49.9**	**-0.8**
26nm,0.8s,mb4.5							
GUMO	**Guam**	**52.08**	**313**	*eP*	**P**	**15 00 52.3**	**-1.5**
10nm,0.5s,mb4.3							
SBA	**Scott Base**	**53.34**	**184**	*eP*	**P**	**15 01 04.4**	**+2.4**
39nm,1.5s,mb4.4							
NWAO	**Narrogin (SRO)**	**55.61**	**246**	*eP*	**P**	**15 01 18.9**	**0.0**
53nm,1.6s,mb4.6							
MBWA	**Marble Bar**	**56.08**	**260**	*eP*	**P**	**15 01 20.9**	**-1.4**
MBWA	**Marble Bar**	**56.08**	**260**	*eP*	**P**	**15 01 20.3**	**-2.0**
4.6nm,0.4s,mb4.2							
CASY	**Casey**	**59.52**	**206**	*eP*	**P**	**15 01 44.4**	**-0.8**
1.4nm,0.4s,mb3.7							
MAW	**Mawson**	**77.03**	**200**	P	**P**	**15 03 33.3**	**+0.7**
3.5nm,0.7s,mb4.1,baz=103,slow=9.2,SNR=3.7							
MAW	**Mawson**	**77.03**	**200**	*eP*	**P**	**15 03 33.6**	**+1.0**
PETK	**Petropavlovsk-**	**80.38**	**346**	P	**P**	**15 03 51.1**	**+0.6**
2.7nm,0.8s,mb3.9,baz=122,slow=5.8,SNR=4.8							
NJ2	**Nanjing**	**82.06**	**311**	*eP*	**P**	**15 03 58.0**	**-1.8**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.6s,mb4.7							
MONP	**Monument Peak**	**82.86**	**49**	⇑P	**P**	**15 04 04.8**	**+0.9**
baz=83							
EDW2	**Edwards Air Fo**	**82.98**	**46**	⇑P	**P**	**15 04 04.5**	**0.0**
baz=83							
ISA	**Isabella**	**83.14**	**46**	⇑P	**P**	**15 04 05.0**	**-0.3**
baz=83							
ISA	**Isabella**	**83.14**	**46**	*eP*	**P**	**15 04 05.2**	**-0.1**
CMB	**Columbia Colle**	**83.39**	**43**	*eP*	**P**	**15 04 05.7**	**-0.7**
comp=Z,7.7nm,1.1s,mb4.3							
MDJ	**Mudanjiang**	**83.68**	**326**	P	**P**	**15 04 08.8**	**+1.1**
MDJ				pP	pP	15 05 37.3	+1.7
MDJ				sP	sP	15 06 18.5	+2.9
MDJ				PP	PP	15 07 27.5	+0.2
MDJ				S	S	15 13 58.0	+0.9
MDJ				sS	sS	15 16 36.5	+3.3
MDJ				SS	SS	15 19 35.8	+0.9
MDJ				pmax	pmax		
comp=Z,3.0nm,1.4s,mb3.8							
MDJ				pmax	pmax		
comp=Z,130nm,4.5s							
BELC	**Belle Mtn.**	**83.79**	**48**	⇑P	**P**	**15 04 08.4**	**-0.2**
baz=84							
CWC	**Cottonwood Cre**	**83.86**	**45**	⇑P	**P**	**15 04 08.2**	**-0.7**
baz=84							
GSC	**Goldstone**	**84.01**	**47**	⇑P	**P**	**15 04 09.6**	**-0.1**
baz=84							
HEC	**Hector,Ludlow**	**84.05**	**47**	⇓P	**P**	**15 04 09.8**	**-0.1**
baz=84							
WAKR	**Walker**	**84.26**	**43**	*eP*	**P**	**15 04 11.2**	**+0.3**
VNA1	**Neumayer--Stat**	**84.39**	**177**	*eP*	**P**	**15 04 11.2**	**+0.2**
IRM	**Iron Mountain**	**84.46**	**48**	⇓P	**P**	**15 04 12.1**	**+0.2**
baz=85							
BEKR	**Beckwourth**	**84.55**	**41**	⇑P	**P**	**15 04 12.2**	**0.0**
baz=85							
TUQ	**Turquoise Moun**	**84.68**	**47**	⇓P	**P**	**15 04 12.6**	**-0.4**
baz=85							
214A	**Organ Pipe Nat**	**84.84**	**51**	⇓P	**P**	**15 04 13.4**	**-0.5**
baz=85							
NVAR	**Mina Array Bea**	**84.92**	**43**	P	**P**	**15 04 13.9**	**-0.2**
comp=Z,3.6nm,1.1s,mb4.0,baz=219,slow=7.8,SNR=15							
Z13A	**Yuma Proving G**	**84.94**	**50**	⇑P	**P**	**15 04 14.1**	**-0.2**
baz=85							
LDFC	**Landfair**	**85.01**	**48**	*eP*	**P**	**15 04 15.2**	**+0.6**
Y13A	**Salome**	**85.17**	**49**	⇓P	**P**	**15 04 15.7**	**+0.3**
baz=85							
114A	**Black Gap (USA**	**85.23**	**51**	⇓P	**P**	**15 04 15.9**	**+0.1**
baz=85							
W12A	**Cal Nev Ari**	**85.30**	**48**	⇓P	**P**	**15 04 15.5**	**-0.6**
baz=86							
CN2	**Changchun**	**85.31**	**323**	*eP*	**P**	**15 04 16.0**	**+0.2**
Z14A	**Wintersburg**	**85.53**	**50**	⇓P	**P**	**15 04 17.4**	**+0.3**
baz=86							
V12A	**Nelson**	**85.56**	**47**	⇑P	**P**	**15 04 17.3**	**0.0**
baz=86							
X13A	**Yucca**	**85.60**	**49**	⇑P	**P**	**15 04 17.7**	**+0.2**
baz=86							
S10A	**Tonopah Range,**	**85.70**	**45**	⇓P	**P**	**15 04 17.2**	**-0.7**
baz=86							
Y14A	**Wickenburg**	**85.80**	**50**	⇓P	**P**	**15 04 18.0**	**-0.5**
baz=86							
S11A	**Rachel**	**86.08**	**45**	⇓P	**P**	**15 04 19.4**	**-0.4**
baz=86							
R10A	**Warm Springs**	**86.10**	**45**	⇑P	**P**	**15 04 19.0**	**-0.8**
ba

X16A	Lo Mia Camp, P	87.15	50	⇑P	P	15 04 25.3	+0.4
	baz=87						
Y17A	Roosevelt	87.18	51	⇓P	P	15 04 24.6	-0.5
	baz=87						
P11A	Circle Ranch,	87.19	44	⇑P	P	15 04 24.5	-0.4
	baz=87						
R12A	Pony Springs,	87.21	45	⇓P	P	15 04 25.3	+0.2
	baz=87						
118A	Homack Ranch,	87.24	52	⇑P	P	15 04 26.2	+0.8
	baz=87						
S13A	Holt Ranch, En	87.27	46	⇓P	P	15 04 26.1	+0.7
	baz=87						
V15A	Kaibab Nationa	87.41	48	⇑P	P	15 04 26.6	+0.5
	baz=88						
219A	White Tail Can	87.41	53	⇓P	P	15 04 26.8	+0.5
	baz=88						
W16A	Flagstaff	87.45	49	⇑P	P	15 04 27.0	+0.7
	baz=88						
T14A	Hurricane	87.49	47	⇓P	P	15 04 26.7	+0.3
	baz=88						
CCUT	Cedar City	87.58	46	eP	P	15 04 26.9	0.0
O11A	Cowboy Ranch,	87.58	43	⇓P	P	15 04 26.7	-0.2
	baz=88						
320A	Kipp Ranch, An	87.60	54	⇑P	P	15 04 28.2	+1.1
	baz=88,SNR=5.9						
U15A	North Rim	87.67	48	⇑P	P	15 04 27.8	+0.5
	baz=88,SNR=8.8						
I07A	Izee	87.68	38	P	P	15 04 27.4	+0.2
	baz=88,SNR=5.5						
119A	Ashpeak Ranch,	87.78	52	⇓P	P	15 04 28.4	+0.4
	baz=88						
WUAZ	Wupatki	87.79	49	⇑P	P	15 04 28.1	+0.2
	baz=88						
Y18A	Canyon Day Jun	87.79	51	⇑P	P	15 04 28.4	+0.4
	baz=88,SNR=5.7						
J08A	Circle Bar Ran	87.82	39	⇓P	P	15 04 28.4	+0.5
	baz=88						
M10A	I.L. Ranch, Tu	87.86	42	⇓P	P	15 04 28.1	0.0
	baz=88						
220A	Playas Peak, P	87.89	53	⇓P	P	15 04 29.2	+0.7
	baz=88,SNR=5.9						
T15A	Red Dirt Ranch	87.93	47	⇑P	P	15 04 29.1	+0.5
	baz=88,SNR=5.0						
Q13A	Wheeler Ranch,	87.94	45	⇓P	P	15 04 28.6	+0.1
	baz=88						
GYA	Guiyang	88.08	300	P	P	15 04 30.0	+0.5
GYA				pP	pP	15 06 01.8	+3.4
GYA				sP	sP	15 06 42.5	+4.3
GYA				PP	PP	15 08 04.8	+1.8
GYA				SKS		15 14 19.0	
GYA				S	S	15 14 39.5	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
P13A	Bates Ranch, G	88.23	45	⇑P	P	15 04 30.7	+0.8
	baz=88						
L10A	Juniper Basin	88.23	41	P	P	15 04 29.9	+0.1
	baz=88,SNR=5.1						
O12A	Currie	88.23	44	⇑P	P	15 04 30.0	+0.1
	baz=88						
J09A	Fry Pan Ranch,	88.23	40	⇓P	P	15 04 29.8	0.0
	baz=88,SNR=5.8						
V17A	Tonalea, Kykot	88.25	49	⇑P	P	15 04 30.5	+0.5
	baz=88,SNR=5.3						
N12A	Clover Valley,	88.39	43	⇓P	P	15 04 30.7	+0.1
	baz=89						
K10A	MacKenzie Ranc	88.41	41	⇑P	P	15 04 31.0	+0.3
	baz=89						
H08A	Prairie City	88.42	38	⇓P	P	15 04 30.6	-0.1
	baz=89						
Y19A	Nutrioso	88.44	51	⇓P	P	15 04 31.2	+0.2
	baz=89,SNR=5.3						
Q14A	Sevier Lake (B	88.44	45	⇓P	P	15 04 30.8	0.0
	baz=89,SNR=6.8						
L11A	Cat Creek Ranc	88.71	42	⇑P	P	15 04 31.9	-0.2
	baz=89						
G08A	Pilot Rock	88.74	38	⇓P	P	15 04 32.4	+0.3
	baz=89						
121A	Cookes Peak, D	88.75	53	⇑P	P	15 04 33.2	+0.7
	baz=89						
K11A	Parker Ranch,	88.90	41	⇑P	P	15 04 33.0	+0.1
	baz=89						
T17A	Navajo Res., N	88.98	48	⇓P	P	15 04 33.5	0.0
	baz=89						
Y20A	Horse Springs,	89.03	52	⇑P	P	15 04 34.3	+0.6
	baz=89,SNR=7.1						
M13A	Montello	89.22	43	⇑P	P	15 04 34.4	0.0
	baz=89,SNR=5.1						
R16A	Teasdale	89.22	47	⇑P	P	15 04 34.7	+0.2
	baz=89						
Z21A	St. Cloud Mine	89.23	53	⇓P	P	15 04 35.1	+0.4
	baz=89						
X20A	Quemado	89.28	51	⇓P	P	15 04 35.0	+0.1
	baz=89,SNR=5.8						
S17A	Black Ridge (B	89.32	47	⇓P	P	15 04 34.3	-0.7
	baz=90						
G09A	Cove	89.39	38	⇓P	P	15 04 34.9	-0.2
	baz=90						
MFID	Camas Ranch	89.40	41	⇓P	P	15 04 34.8	-0.5
	baz=90,SNR=5.1						
H10A	Noah's Angus R	89.56	39	⇑P	P	15 04 35.4	-0.5
	baz=90						
Y21A	Point of Rocks	89.59	52	⇓P	P	15 04 37.2	+0.8
	baz=90,SNR=9.4						
I11A	Placerville	89.62	40	⇑P	P	15 04 35.7	-0.5
	baz=90						
T18A	Mexican Hat	89.68	48	P	P	15 04 37.0	+0.3
	baz=90,SNR=6.9						
U19A	Dine' College,	89.69	49	⇑P	P	15 04 36.8	0.0
	baz=90						
Z22A	Elephant Butte	89.72	53	⇓P	P	15 04 36.8	-0.1
	baz=90						
X21A	Alamocita Cree	89.73	51	P	P	15 04 37.9	+0.9
	baz=90,SNR=8.0						
J12A	Stokes Ranch,	89.74	41	⇑P	P	15 04 37.2	+0.4
	baz=90,SNR=8.2						
Q16A	Castle Valley	89.77	46	⇑P	P	15 04 37.5	+0.4
	baz=90						
R17A	Hanksville Air	89.80	47	⇓P	P	15 04 36.7	-0.5
	baz=90						
M14A	Sheep Mountain	89.81	43	⇓P	P	15 04 36.9	-0.3
	baz=90						
324A	Moseley Ranch,	89.90	55	⇓P	P	15 04 37.7	-0.1
	baz=90						
425A	Indio Mountain	89.95	56	⇓P	P	15 04 38.4	+0.3
	baz=90						
626A	Big Bend Ranch	90.00	57	⇓P	P	15 04 38.9	+0.5
	baz=90						
I12A	Atlanta	90.03	41	P	P	15 04 38.5	+0.3
	baz=90,SNR=5.6						
H11A	Donnelly	90.05	39	⇓P	P	15 04 38.1	-0.1
	baz=90,SNR=10.0						
224A	Corundas Mount	90.18	54	⇓P	P	15 04 39.5	+0.3
	baz=90						
325A	Bean Ranch, Si	90.25	55	⇑P	P	15 04 39.2	-0.3
	baz=90						
Z23A	Rita Site, Whi	90.25	53	⇓P	P	15 04 39.7	+0.2
	baz=90						
TXAR	Lajitas Array	90.25	58	P	P	15 04 39.5	0.0
	comp=Z,2.8nm,0.9s,mb4.1,baz=216,slow=6.2,SNR=16						
O16A	Springville	90.25	45	⇓P	P	15 04 39.6	+0.3
	baz=90						
526A	Mary Lane Ranc	90.28	57	⇓P	P	15 04 39.2	-0.4
	baz=90						
SRU	San Rafael	90.30	46	eP	P	15 04 39.6	0.0
G11A	Walters Elk Ra	90.31	39	P	P	15 04 39.0	-0.5
	baz=90,SNR=6.6						
HLID	Hailey	90.33	41	⇑P	P	15 04 39.6	+0.1
	baz=90,SNR=8.0						
HLID	Hailey	90.33	41	eP	P	15 04 39.5	-0.1
	comp=Z,4.0nm,1.0s,mb4.2						
R18A	Canyonlands Na	90.33	47	⇑P	P	15 04 38.5	-1.2
	baz=90						
P17A	Butcher Ranch,	90.35	46	⇑P	P	15 04 40.0	+0.3
	baz=90						
J13A	Cove Ranch, Pi	90.37	41	⇑P	P	15 04 39.2	-0.6
	baz=90						
627A	Terlingua Ranc	90.52	58	⇑P	P	15 04 40.3	-0.5
	baz=91						
KMI	Kunming	90.57	297	P	P	15 04 42.5	+1.4
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
H12A	Diamond D Ranc	90.63	40	⇓P	P	15 04 39.7	-1.2
	baz=91,SNR=6.1						
L15A	Malad City	90.68	43	⇓P	P	15 04 41.4	+0.1
	baz=91						
R19A	Curley Farm, L	90.70	48	⇓P	P	15 04 40.8	-0.6
	baz=91						
I13A	Wildhorse Cree	90.70	41	⇑P	P	15 04 40.9	-0.4
	baz=91						
Y23A	Lovelace Mesa,	90.71	53	⇑P	P	15 04 41.2	-0.3
	baz=91						
225A	Deer Hill, Car	90.72	55	⇓P	P	15 04 41.8	+0.1
	baz=91						
J14A	Carey	90.73	42	⇓P	P	15 04 42.0	+0.6
	baz=91,SNR=8.3						
O17A	Robinson Place	90.74	45	⇓P	P	15 04 42.3	+0.8
	baz=91,SNR=9.5						
CMAR	Chiang Mai Arr	90.75	290	P	P	15 04 43.0	+0.9
	comp=Z,1.4nm,0.9s,mb3.8,baz=140,slow=3.7,SNR=9.5						
628A	Black Gap, Mar	90.92	58	⇑P	P	15 04 41.9	-0.7
	baz=91						
ANMO	Albuquerque	90.93	52	eP	P	15 04 42.3	-0.2
	comp=Z,4.0nm,1.2s,mb4.1						
H13A	Challis	90.99	40	⇓P	P	15 04 42.7	+0.1
	baz=91						
F12A	Elk City	91.10	39	⇓P	P	15 04 42.3	-0.7
	baz=91						
GDL2	Guadalupe Moun	91.10	55	eP	P	15 04 43.8	+0.3
125A	Gardner Draw,	91.11	54	⇑P	P	15 04 43.2	-0.2
	baz=91						
I14A	Mackay	91.11	41	⇓P	P	15 04 43.6	+0.5
	baz=91,SNR=5.1						
Y24A	Capitan	91.16	53	⇑P	P	15 04 43.3	-0.4
	baz=91						
427A	Hayter Ranch,	91.17	56	⇑P	P	15 04 43.8	0.0
	baz=91						
L16A	Fish Haven	91.28	44	⇓P	P	15 04 43.8	-0.2
	baz=91,SNR=6.6						
J15A	Blackfoot	91.42	42	⇑P	P	15 04 44.8	+0.2
	baz=92						
H14A	Leadore	91.54	41	⇓P	P	15 04 45.0	-0.2
	baz=92						
M18A	Lyman	91.83	45	⇑P	P	15 04 47.2	+0.6
	baz=92						
HHC	Hu-ho-hao-te	91.83	315	eP	P	15 04 47.5	+0.9
HHC				pP	pP	15 06 23.3	+7.5
HHC				sP	sP	15 07 05.0	+9.5
HHC				PP	PP	15 08 35.8	+3.6
HHC				SKS		15 14 39.5	
HHC				S	S	15 15 11.0	-2.7
HHC				sS	sS	15 17 57.5	+4.4
HHC				SS	SS	15 21 34.5	+1.5
HHC				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
N18A	Larsen Ranch,	91.84	45	⇑P	P	15 04 46.3	-0.3
	baz=92						
O19A	Miners Draw (B	91.84	46	⇑P	P	15 04 46.4	-0.3
	baz=92						
J16A	Bone	91.86	42	⇓P	P	15 04 46.8	+0.2
	baz=92						
MCMT	McKenzie Canyo	91.97	41	eP	P	15 04 45.7	-1.4
	comp=Z,0.3nm,0.4s,mb3.6						
G15A	Dillon	92.37	40	⇑P	P	15 04 48.7	-0.2
	baz=92						
CD2	Chengdu	92.43	303	P	P	15 04 49.5	-0.1
CD2				pP	pP	15 06 22.0	+3.1
CD2				sP	sP	15 07 02.3	+3.7
CD2				PP	PP	15 08 39.5	+2.4
CD2				SKS		15 14 42.0	
CD2				S	S	15 15 16.0	-3.5
CD2				sS	sS	15 17 59.3	+0.3
CD2				SS	SS	15 21 41.3	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,140nm,4.7s						
K18A	Toltan Ranch,	92.48	44	⇓P	P	15 04 49.0	-0.6
	baz=93,SNR=5.4						
L19A	Farson	92.63	44	⇓P	P	15 04 50.0	-0.3
	baz=93						
N20A	Spence Gulch,	92.68	46	⇓P	P	15 04 49.1	-1.4
	baz=93						
SMCO	Snowmass	92.69	48	eP	P	15 04 50.4	-0.2
	comp=Z,3.6nm,1.0s,mb4.3						
J18A	Kendall Valley	92.80	43	⇑P	P	15 04 51.2	+0.2
	baz=93,SNR=9.0						
BW06	Boulder Array	92.86	44	⇓P	P	15 04 50.6	-0.7
	baz=93						
PDAR	Pinedale Array	92.86	44	P	P	15 04 50.7	-0.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=228,slow=1.8,SNR=13						
M20A	Sweetwater, Wa	93.07	45	⇑P	P	15 04 52.1	-0.1
	baz=93						
N21A	Black Mountain	93.13	46	⇓P	P	15 04 52.3	-0.2
	baz=93						
L20A	Wamsutter	93.23	45	⇓P	P	15 04 53.1	+0.1
	baz=93						
M21A	Separation Pea	93.66	46	⇓P	P	15 04 53.8	-1.2
	baz=94						
B14A	Marquette Ranc	93.70	38	⇓P	P	15 04 54.3	-0.7
	baz=94						
A16A	West Butte Ran	94.95	38	⇑P	P	15 04 59.7	-0.9
	baz=95						
MKAR	Makanchi Array	113.56	312	PKiKP	PKiKP	15 10 11.1	-3.1
	comp=Z,0.2nm,0.5s,baz=224,slow=2.3,SNR=4.3						
BVAR	Borovoye Array	121.86	318	PKP	PKPdf	15 10 27.8	-2.1
	comp=Z,0.8nm,0.5s,baz=101,slow=2.0,SNR=6.5						
ARCES	ARCESS Array B	133.14	348	PKP	PKPdf	15 10 48.5	-2.5
	comp=Z,1.0nm,0.6s,baz=4.4,slow=1.6,SNR=7.1						
FINES	FINESS Array B	139.77	342	PP	PP	15 13 59.0	-5.0
	comp=Z,2.5nm,1.0s,baz=79,slow=9.9,SNR=5.4						
NOA	NORSAR Array B	143.30	352	PKhKP		15 11 05.6	
	comp=Z,1.6nm,0.8s,baz=18,slow=2.8,SNR=9.8						
NOA	NORSAR Array B	143.30	352	PKP		15 11 05.6	
AKASG	Malin Array Be	146.38	327	PKPbc	PKPdf	15 11 14.7	-0.7
	comp=Z,1.4nm,0.5s,baz=42,slow=3.7,SNR=6.8						
BRTR	Keskin Array B	148.96	306	PKPbc	PKPdf	15 11 21.9	+1.9
	comp=Z,1.0nm,0.6s,baz=140,slow=4.7,SNR=6.2						
MMAI	Mount Meron Ar	148.97	293	PKPbc	PKPbc	15 11 24.3	-0.5
	comp=Z,3.0nm,0.5s,baz=85,slow=5.2,SNR=15						
CLL	Collm	152.16	344	⇑iP	PKPbc	15 11 30.2	-1.4
CLL				i		15 11 33.4	
CLL	Collm	152.16	344	⇑iPKPbc	PKPbc	15 11 30.2	-1.4
	comp=Z,5.0nm,0.8s						
CLL				i PKPbc(2)		15 11 33.4	
	comp=Z,4.0nm,0.8s						
BRG	Berggiesshubel	152.31	342	eP	PKPbc	15 11 30.4	-1.5
	comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	154.19	340	PKPbc	PKPbc	15 11 34.4	-1.7
	comp=Z,0.4nm,0.7s,baz=298,slow=3.1,SNR=3.9						
TORD	Torodi Ar. Bea	168.19	183	PKP	PKPdf	15 11 41.2	-1.9
	comp=Z,1.7nm,0.9s,baz=283,slow=0.2,SNR=8.0						
TORD				PKPab	PKPab	15 12 53.3	-0.2
	comp=Z,1.2nm,0.7s,baz=188,slow=4.5,SNR=9.8						
TORD	Torodi Ar. Bea	168.19	183	PKP	PKPdf	15 11 41.2	-1.9
TORD				PKPab	PKPab	15 12 53.3	-0.2

CASC 31 15:03:35.6±3.2, 8°.40N×83°.01W, h6km±20km, MD3.6, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.29	328	⇓eP	Pg	15 03 41.2	-0.1
ACR				⇓iP		15 03 41.3	
ACR				eS	Sg	15 03 44.7	-0.6
ACR				eS	Sg	15 03 44.9	-0.3
BRU2	Volcan	0.50	39	eP	Pg	15 03 45.5	+0.3
BRU2				eS	Sg	15 03 53.7	+1.9
BAR1		0.89	340	eP	Pg	15 03 51.8	-0.9
BAR1				eP		15 03 51.8	
BAR1				eS	Sg	15 04 03.4	-0.7
BAR1				eS	Sg	15 04 03.7	-0.4
CNI	Changuinola	1.12	26	eP	Pg	15 03 56.6	-0.5
BUS	Buena Vista	1.36	327	eP	Pn	15 04 00.0	-1.2
BUS				⇑iP		15 04 00.0	
QCR	Quepos	1.53	312	eP	Pn	15 04 01.9	-1.5
URSC	Urasca	1.61	332	eP	Pn	15 04 06.4	+1.8
CGA2	Cerro Gallo 2	2.15	318	eP	Pn	15 04 13.9	+1.9

*ISCJB **31** 15:06:50.7±0.4, 31°.80N±0°.04×104°.15E±0°.06, h10km, mb3.8/14, Error ellipse: s-maj=6.7km s-min=5.2km az=1.1*
*IDC **31** 15:06:50.2±0.8, 31°.71N×104°.13E, h0km, mb3.7/13, mb1 3.8/14, mb1mx3.7/27, mbtmp3.7/14, ML3.2/1, Error ellipse: s-maj=34.2km s-min=16.6km az=50.0*
*NEIC **31** 15:06:52.3±0.5, 31°.82N×104°.19E, h10km, mb4.6/3, Error ellipse: s-maj=13.4km s-min=9.1km az=57.0*
*BJI **31** 15:06:52.1, 31°.86N×104°.28E, h12km, ML3.6/10, Ms3.4/1, Ms7 3.4/2*
ISC 31 15:06:52.6±0.4, 31°.81N±0°.03×104°.12E±0°.05, h10km, n31, σ1§16/39, mb3.8/14, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.95	199	Pg	Pg	15 07 10.3	-0.5
CD2				Sg	Sg	15 07 22.5	-0.7
CD2				smax			
	comp=N,2μm,0.4s						
LZH	Lanzhou	4.27	357	Pn	Pn	15 07 59.8	+2.2
LZH				Pg	Pg	15 08 10.0	-4.4
LZH				Sn	Sn	15 08 50.8	+3.2
LZH				Sg	Sg	15 09 07.0	-2.8
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,120nm,0.9s						
LZH				LR	LR		
	comp=N,330nm,5.5s						
LZH				LR	LR		
	comp=Z,510nm,8.6s						
XAN	Xi'an	4.61	60	Pn	Pn	15 08 01.0	-1.3
XAN				Pg	Pb	15 08 14.5	+1.0
XAN				Sn	Sn	15 09 03.3	+7.5
XAN				Sg	Sg	15 09 15.3	-5.3
XAN				smax			
	comp=N,110nm,0.5s						
XAN				smax			
	comp=E,54nm,0.7s						
ENH	Enshi	4.85	107	ePn	Pn	15 08 05.6	-0.1
ENH				Sn	Sn	15 09 02.3	+0.4
GYA	Guiyang	5.78	157	⇑iPn	Pn	15 08 20.0	+1.7
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,90nm,0.9s						
KMI	Kunming	6.77	191	Pg	Pb	15 08 54.5	+4.1
WHN	Wuhan	8.85	96	S	Sn	15 10 33.0	-7.4
CMAR	Chiang Mai Arr	14.09	201	Pn	Pn	15 10 14.1	+1.8
	baz=8.3,slow=8.8,SNR=2.7						
SONM	Songino Array	16.10	6	Pn	Pn	15 10 40.5	+1.7
	comp=E,0.1nm,0.3s,baz=184,slow=14,SNR=5.0						
KSRS	Korea Array	20.36	67	P	P	15 11 28.7	-0.4
	comp=E,1.7nm,0.8s,baz=255,slow=10,SNR=5.2						
MK31	Makanchi Array	22.46	318	eP	P	15 11 52.4	+0.7
MKAR	Makanchi Array	22.46	318	P	P	15 11 52.7	+1.0
	comp=E,0.9nm,0.6s,mb3.4,baz=111,slow=13,SNR=12						
MKAR	Makanchi Array	22.46	318	P	P	15 11 52.7	+1.0
NIL	Nilore	25.99	282	eP	P	15 12 25.9	+0.4
	comp=E,15nm,0.8s,mb4.6						
ZALV	Zalesovo Beam	26.10	334	P	P	15 12 26.1	-0.1
	comp=E,0.8nm,0.4s,mb3.6,baz=129,slow=10,SNR=4.6						
KURK	Kurchatov	26.70	322	P	P	15 12 32.0	+0.3
	comp=E,0.4nm,0.3s,mb3.4,baz=135,slow=8.3,SNR=3.6						
KURK	Kurchatov	26.70	322	eP	P	15 12 31.3	-0.4
	comp=E,5.5nm,1.2s,mb4.0						
BVAR	Borovoye Array	32.25	321	P	P	15 13 22.2	+1.2
	comp=E,0.2nm,0.3s,mb3.4,baz=119,slow=8.4,SNR=3.2						
BRTR	Keskin Array B	56.41	299	P	P	15 16 34.2	0.0
	comp=E,0.3nm,0.5s,mb3.6,baz=64,slow=3.4,SNR=3.7						
ARCES	ARCESS Array B	56.62	336	P	P	15 16 34.7	-0.6
	comp=E,1.6nm,0.7s,mb4.2,baz=72,slow=7.8,SNR=7.2						
ARCES	ARCESS Array B	56.62	336	P	P	15 16 34.7	-0.6
AKASG	Malin Array Be	56.92	313	P	P	15 16 36.5	-1.2
	comp=E,0.3nm,0.3s,mb3.8,baz=89,slow=5.1,SNR=5.5						
AKASG	Malin Array Be	56.92	313	P	P	15 16 36.5	-1.2
FINES	FINESS Array B	56.99	326	P	P	15 16 37.5	-0.5
	comp=E,1.1nm,0.6s,mb4.1,baz=82,slow=7.1,SNR=11						
ASAR	Alice Springs	62.09	149	P	P	15 17 12.5	-1.0
	comp=E,0.3nm,0.5s,mb3.7,baz=335,slow=6.4,SNR=17						
NOA	NORSAR Array B	64.08	327	P	P	15 17 24.7	-1.7
	comp=E,0.4nm,0.6s,mb3.7,baz=62,slow=6.1,SNR=3.3						
NOA	NORSAR Array B	64.08	327	P	P	15 17 24.7	-1.7
BLS5	Blasjo	66.88	327	iP	P	15 17 53.0	+8.5
STKA	Stephens Creek	72.59	147	P	P	15 18 18.8	-1.1
	comp=E,0.7nm,0.6s,mb3.8,baz=333,slow=4.5,SNR=2.9						
PNL	Peninsula	74.97	28	eP	P	15 18 32.5	-1.2
	comp=E,16nm,1.3s,mb4.8						
YKA	Yellowknife Ar	81.02	17	P	P	15 19 06.6	-0.6
	comp=E,0.6nm,0.7s,mb3.6,baz=341,slow=6.7,SNR=3.2						

*CSEM **31** 15:11:22.4±0.9, 35°.71N×30°.25E, h20km, MD3.1, Error ellipse: s-maj=23.4km s-min=11.0km az=18.0*
*DDA **31** 15:11:24.7, 35°.95N×30°.45E, h28km, Md3.1*
ISK 31 15:11:20.4, 35°.68N×30°.16E, h15km, MD3.3, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.71	321	iP	Pg	15 11 38.9	+4.5
AKAS				iS	Sg	15 11 51.5	+7.7
AKAS	Kas	0.71	321	iP	Pg	15 11 38.9	+4.6
AKAS				iS	Sg	15 11 51.5	+7.7
ELL	Elmali	1.09	349	ePN	Pn	15 11 41.5	+0.5
ELL				eSN	Sn	15 11 57.3	+1.4
ELL	Elmali	1.09	349	ePn	Pn	15 11 41.6	+0.5
ELL				eSn	Sn	15 11 57.3	+1.4
KORT	Korkueli	1.33	7	iP	Pn	15 11 43.6	-0.8
KORT				iS	Sn	15 12 03.4	+1.5
KORT	Korkueli	1.33	7	iP	Pn	15 11 43.6	-0.8
KORT				iS	Sn	15 12 03.3	+1.4
GLHS	Glhisar (BURDU	1.57	340	ePN	Pn	15 11 49.3	+1.6
GLHS				eSN	Sn	15 12 08.9	+1.1
GLHS	Glhisar (BURDU	1.57	340	ePn	Pn	15 11 49.3	+1.6
GLHS				eSn	Sn	15 12 08.9	+1.2
GAZI	Gazipasa	1.84	72	iP	Pn	15 11 51.5	+0.1
GAZI				iS	Sn	15 12 11.5	-2.9
GAZI	Gazipasa	1.84	72	iP	Pn	15 11 51.5	+0.1
GAZI				iS	Sn	15 12 11.5	-2.9
SUTC	Sutluce-Ispart	1.92	20	ePN	Pn	15 11 53.4	+0.9
SUTC	Sutluce-Ispart	1.92	20	ePn	Pn	15 11 53.4	+0.9
HDMB	Hadim	2.28	55	ePN	Pn	15 11 58.7	+1.3
HDMB	Hadim	2.28	55	ePn	Pn	15 11 58.7	+1.3
DAT	Datca	2.33	297	ePN	Pn	15 11 59.3	+1.1
DAT	Datca	2.33	297	ePn	Pn	15 11 59.3	+1.1
IKL	Isikli	2.92	78	ePN	Pn	15 12 07.7	+1.5
IKL	Isikli	2.92	78	ePn	Pn	15 12 07.7	+1.5

*DDA **31** 15:20:28.9, 39°.31N×30°.39E, h27km, Md2.9*
*ISK **31** 15:20:30.0, 39°.53N×30°.00E, h6km, MD2.9*
*ISCJB **31** 15:20:31.7±0.7, 39°.48N±0°.04×30°.09E±0°.05, h7km±9km, Error ellipse: s-maj=8.4km s-min=4.9km az=138.6*
*CSEM **31** 15:20:31.4±0.3, 39°.48N×30°.03E, h8km, MD2.9, Error ellipse: s-maj=7.7km s-min=4.7km az=146.0*
**ISC 31 15:20:32.2±0.6, 39°.48N±0°.

mb1 3.6/10,mb1mx3.5/28,mbtmp3.5/10,ML3.6/3,Error ellipse: s-maj=36.4km s-min=20.1km az=55.0
*NEIC **31** 15:26:37.5±0.8,32°.42N×105°.12E,h10km,Error ellipse: s-maj=19.2km s-min=12.4km az=69.0*
*BJI **31** 15:26:37.6,32°.60N×105°.26E,h12km,ML3.5/9,Ms7 3.0/1*
ISC 31 15:26:38.2±0.5,32°.51N±0°.04×105°.14E±0°.07,h10km,n17,σ1§01/23,mb3.6/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.98**	**217**	Pn	**Pn**	**15 27 12.5**	**+0.8**
CD2				Pg	**Pg**	**15 27 14.8**	**-1.3**
CD2				Sg	**Sg**	**15 27 42.0**	**+0.3**
CD2				smax			
	comp=N,3μm,0.5s						
XAN	**Xi'an**	**3.52**	**63**	Pg	**Pn**	**15 27 32.3**	**-0.6**
XAN				Sn	**Sn**	**15 28 06.5**	**-8.1**
XAN				Sg	**Sg**	**15 28 21.5**	**-10**
XAN				smax			
	comp=N,200nm,0.6s						
XAN				smax			
	comp=E,110nm,1.0s						
XAN				LR	LR		
	comp=N,340nm,6.8s						
XAN				LR	LR		
	comp=E,77nm,7.1s						
XAN				LR	LR		
	comp=Z,76nm,5.1s						
ENH	**Enshi**	**4.34**	**120**	*e*Pn	**Pn**	**15 27 43.8**	**-0.4**
ENH				*e*Sn	**Sn**	**15 28 37.3**	**+2.5**
GYA	**Guiyang**	**6.17**	**167**	Pn	**Pn**	**15 28 11.0**	**+1.6**
GYA				smax			
	comp=N,30nm,1.0s						
GYA				smax			
	comp=E,40nm,0.7s						
WHN	**Wuhan**	**8.11**	**102**	P	**Pb**	**15 28 53.5**	**-5.2**
WHN				S	**Sn**	**15 29 56.3**	**-11**
GTA	**Gaotai**	**8.13**	**329**	*e*P	**Pn**	**15 28 37.0**	**+0.8**
GTA				pP		15 28 41.5	
GTA				sP		15 28 44.8	
CMAR	**Chiang Mai Arr**	**15.06**	**203**	Pn	**Pn**	**15 30 08.5**	**-2.6**
	comp=E,0.2nm,0.3s,baz=20,slow=8.9,SNR=2.9						
SONM	**Songino Array**	**15.34**	**3**	Pn	**Pn**	**15 30 13.8**	**-0.8**
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=3.1						
KSRS	**Korea Array**	**19.30**	**69**	P	**Pn**	**15 31 04.0**	**-0.3**
	comp=E,0.1nm,0.3s,baz=254,slow=10,SNR=6.1						
MKAR	**Makanchi Array**	**22.54**	**316**	P	**P**	**15 31 39.3**	**+1.1**
	comp=E,0.7nm,0.6s,mb3.3,baz=112,slow=12,SNR=7.2						
ZALV	**Zalesovo Beam**	**25.87**	**332**	P	**P**	**15 32 10.3**	**+0.5**
	comp=E,0.5nm,0.5s,mb3.3,baz=153,slow=9.7,SNR=3.3						
KURK	**Kurchatov**	**26.68**	**321**	P	**P**	**15 32 17.2**	**0.0**
	comp=E,0.3nm,0.3s,mb3.4,baz=131,slow=9.6,SNR=5.4						
KURK	**Kurchatov**	**26.68**	**321**	P	**P**	**15 32 17.2**	**0.0**
ARCES	**ARCESS Array B**	**56.35**	**335**	P	**P**	**15 36 18.8**	**-0.2**
	comp=E,0.7nm,0.7s,mb3.8,baz=74,slow=9.1,SNR=6.5						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**15 36 22.6**	**-0.4**
	comp=E,0.7nm,0.7s,mb3.8,baz=84,slow=5.7,SNR=4.6						
AKASG	**Malin Array Be**	**57.08**	**313**	P	**P**	**15 36 24.1**	**-0.3**
	comp=E,0.8nm,0.4s,mb4.1,baz=73,slow=3.8,SNR=8.2						
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**15 37 00.9**	**+0.7**
	comp=E,0.2nm,0.5s,mb3.5,baz=329,slow=6.7,SNR=7.8						

*BJI **31** 15:36:41.5,35°.12N×81°.57E,h8km,ML3.7/5*
*IDC **31** 15:36:41.6±1.1,35°.11N×81°.21E,h0km,mb3.3/5, mb1 3.5/9,mb1mx3.3/27,mbtmp3.4/9,ML3.4/4,Error ellipse: s-maj=29.2km s-min=20.4km az=69.0*
*ISCJB **31** 15:36:42.1±0.8,35°.28N±0°.07×81°.3E±0°.1,h10km,mb3.2/6, Error ellipse: s-maj=14.2km s-min=8.9km az=150.7*
*NEIC **31** 15:36:44.6±1.1,35°.26N×81°.50E,h10km,mb3.3/1,Error ellipse: s-maj=21.2km s-min=12.6km az=50.0*
ISC 31 15:36:43.7±0.8,35°.19N±0°.07×81°.3E±0°.1,h10km,n15,σ1§13/17,mb3.2/6,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.06**	**317**	Pn	**Pn**	**15 38 17.0**	**+3.6**
KSH				Sn	**Sn**	**15 39 21.8**	**-1.0**
KSH				smax			
	comp=N,29nm,0.9s						
KSH				smax			
	comp=E,29nm,0.7s						
UCH	**Uchtor**	**8.81**	**325**	*e*Pn	**Pn**	**15 38 54.1**	**+3.1**
	comp=E,4.2nm,0.9s						
AAK	**Ala-Archa**	**9.14**	**326**	Pg	Px	15 39 29.7	
	comp=E,0.0nm,0.3s,baz=175,slow=15,SNR=4.7						
AAK				Lg		15 41 28.1	
	comp=E,0.0nm,0.3s,baz=209,slow=19,SNR=3.6						
MK31	**Makanchi Array**	**11.62**	**3**	*e*Pn	**Pn**	**15 39 28.7**	**-0.7**
MKAR	**Makanchi Array**	**11.62**	**3**	Pn	**Pn**	**15 39 28.3**	**-1.2**
	comp=E,0.3nm,0.3s,baz=175,slow=11,SNR=12						
MKAR				Sn	**Sn**	**15 41 39.5**	**+0.3**
	comp=E,0.2nm,0.3s,baz=186,slow=24,SNR=2.6						
MKAR	**Makanchi Array**	**11.62**	**3**	Pn	**Pn**	**15 39 28.3**	**-1.2**
MKAR				Sn	**Sn**	**15 41 39.5**	**+0.3**
KURK	**Kurchatov**	**15.64**	**354**	Pn	**Pn**	**15 40 20.0**	**-4.0**
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam**	**18.92**	**6**	P	**Pn**	**15 41 04.5**	**-0.5**
	comp=E,0.1nm,0.3s,baz=204,slow=9.8,SNR=5.1						
BVAR	**Borovoye Array**	**19.44**	**340**	P	**Pn**	**15 41 10.8**	**-0.5**
	comp=E,0.2nm,0.3s,baz=141,slow=7.4,SNR=3.3						
ABKAR	**Akbulak array**	**21.07**	**318**	*e*P	**P**	**15 41 29.3**	**+1.5**
	comp=E,1.0nm,0.7s,mb3.2						
SONM	**Songino Array**	**22.52**	**48**	P	**P**	**15 41 44.5**	**+1.1**
	comp=E,0.3nm,0.5s,mb3.0,baz=238,slow=9.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**22.85**	**132**	P	**P**	**15 41 46.9**	**-0.3**
	comp=E,0.3nm,0.6s,mb2.9,baz=311,slow=10,SNR=3.3						
FINES	**FINESS Array B**	**43.32**	**325**	P	**P**	**15 44 46.5**	**+1.1**
	comp=E,1.0nm,0.7s,mb3.7,baz=121,slow=10,SNR=3.4						
TORD	**Torodi Ar. Bea**	**74.13**	**275**	P	**P**	**15 48 19.1**	**-1.5**
	comp=E,0.4nm,0.7s,mb3.5,baz=85,slow=3.5,SNR=2.6						
ASAR	**Alice Springs**	**76.86**	**132**	P	**P**	**15 48 35.8**	**-0.1**
	comp=E,0.2nm,0.8s,mb3.1,baz=324,slow=9.2,SNR=3.1						

*IDC **31** 15:47:21.9±1.7,2°.91S×138°.45E,h0km,mb3.6/4, mb1 3.8/6,mb1mx3.6/14,mbtmp3.7/6,ML3.4/2,Error ellipse: s-maj=47.1km s-min=15.6km az=82.0*
*NEIC **31** 15:47:26.9±0.9,2°.87S×138°.49E,h35km,mb3.4/3,Error ellipse: s-maj=21.4km s-min=11.2km az=74.0*
ISC 31 15:47:30.8±2.2,3°.04S±0°.10×138°.4E±0°.1,h71km±22km, n11,σ0§69/13,mb3.2/3,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.26**	**211**	*e*P	**Pn**	**15 50 08.8**	**-0.1**
	52nm,0.6s						
WRAB	**Tennant Creek**	**17.24**	**193**	*e*P	**Pn**	**15 51 26.9**	**-0.1**
	15nm,0.9s						
CTA	**Charters Tower**	**18.62**	**156**	P	**Pn**	**15 51 43.5**	**-0.2**
	0.1nm,0.3s,baz=327,slow=17,SNR=1.9						
CTAO	**Charters Tower**	**18.62**	**156**	*e*P	**Pn**	**15 51 43.4**	**-0.3**
	1.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.48**	**219**	P	**Pn**	**15 51 53.4**	**-0.6**
	0.1nm,0.3s,baz=42,slow=13,SNR=4.2						
FITZ				S	**S**	**15 55 28.4**	**-0.2**
	0.1nm,0.3s,baz=113,slow=9.8,SNR=4.0						
ASAR	**Alice Springs**	**20.96**	**191**	P	**P**	**15 52 09.2**	**+1.2**
	4.9nm,0.8s,baz=20,slow=10,SNR=43						
ASAR				S	**S**	**15 56 04.2**	**+6.5**
	1.2nm,0.9s,baz=14,slow=23,SNR=4.4						
STKA	**Stephens Creek**	**28.85**	**174**	P	**P**	**15 53 23.4**	**+0.8**
	0.8nm,0.7s,mb3.5,baz=351,slow=12,SNR=1.7						
STKA	**Stephens Creek**	**28.85**	**174**	*e*P	**P**	**15 53 22.0**	**-0.6**
	0.2nm,1.0s,mb2.7						
CMAR	**Chiang Mai Arr**	**44.29**	**300**	P	**P**	**15 55 35.1**	**+1.2**
	0.3nm,0.6s,mb3.2,baz=120,slow=5.5,SNR=3.6						
MK31	**Makanchi Array**	**69.83**	**323**	*e*P	**P**	**15 58 33.6**	**-0.2**
MKAR	**Makanchi Array**	**69.83**	**323**	P	**P**	**15 58 32.9**	**-0.9**
	0.3nm,0.6s,mb3.3,baz=109,slow=8.4,SNR=3.1						

*KISR **31** 16:11:35.2±0.8,29°.37N×50°.41E,h29km±257km,ML2.9*
*ISCJB **31** 16:11:37.7±0.6,29°.23N±0°.07×50°.31E±0°.03,h10km,Error ellipse: s-maj=10.7km s-min=4.0km az=171.2*
*TEH **31** 16:11:41.6,29°.26N×50°.37E,h26km*
ISC 31 16:11:38.7±0.6,29°.23N±0°.07×50°.29E±0°.03,h10km,n15,σ0§96/20,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mouk**	**2.13**	**94**	*e*Pn	**Pn**	**16 12 14.3**	**0.0**
IMOK				*e*Sg	**Sg**	**16 12 46.5**	**-0.6**
IMOK				*e*		16 12 52.8	
	comp=Z,1μm,0.3s						
QRN	**Al-Qurain**	**2.13**	**258**	*e*P	**Pn**	**16 12 13.4**	**-1.1**
QRN				*e*S	**Sn**	**16 12 42.6**	**+1.6**
KBD	**Kabd**	**2.27**	**269**	*e*P	**Pn**	**16 12 15.6**	**-0.7**
RDF	**Al-Radifah**	**2.42**	**263**	*e*P	**Pn**	**16 12 17.1**	**-1.2**
RDF				*e*S	**Sn**	**16 12 49.0**	**+1.0**
RDF				AML	AML	16 12 56.0	
	comp=Z,64nm,0.4s						
ISRV	**Sarvestan**	**2.47**	**86**	*e*Pn	**Pn**	**16 12 19.5**	**+0.5**
ISRV				*e*		16 13 03.8	
	comp=Z,666nm,0.2s						
IPAR	**Pars**	**2.48**	**75**	*e*Pn	**Pn**	**16 12 19.9**	**+0.7**
IPAR				*e*		16 13 05.1	
	comp=Z,508nm,0.3s						
MIB	**Mutribah**	**2.64**	**283**	*e*P	**Pn**	**16 12 20.0**	**-1.3**
MIB				*e*S	**Sn**	**16 12 53.2**	**-0.1**
MIB				AML	AML	16 13 00.9	
	comp=Z,47nm,0.5s						
IPIR	**Pirpir**	**3.48**	**8**	*e*Pn	**Pn**	**16 12 33.8**	**+0.8**
IPIR				*e*		16 13 39.1	
	comp=Z,434nm,0.3s						
IGAR	**Gharneh**	**3.50**	**25**	*e*Pn	**Pn**	**16 12 33.2**	**-0.1**
IGAR				*e*		16 12 35.3	
	comp=Z,560nm,0.1s						
ISAD	**Sadrabad**	**3.97**	**47**	*e*Pn	**Pn**	**16 12 39.7**	**+0.1**
ISAD				*e*		16 13 31.9	
	comp=Z,338nm,0.2s						
IZEF	**Zefreh**	**4.05**	**25**	*e*Pn	**Pn**	**16 12 40.8**	**0.0**
IZEF				*e*		16 12 42.0	
	comp=Z,248nm,0.1s						
IZEF				*e*Sn	**Sn**	**16 13 24.9**	**-3.4**
IKLH	**Kolahrood**	**4.22**	**15**	*e*Pn	**Pn**	**16 12 43.3**	**+0.2**
IKLH				*e*		16 12 46.1	
	comp=Z,255nm,0.2s						
IMEH	**Mehriz**	**4.31**	**59**	*e*Pn	**Pn**	**16 12 44.6**	**+0.2**
IMEH				*e*		16 12 46.0	
	comp=Z,855nm,0.2s						
ICHK	**Chekchek**	**4.65**	**49**	*e*	**Pn**	**16 12 51.8**	**+2.8**
	comp=Z,209nm,0.2s						
IBAF	**Bafgh**	**5.13**	**61**	*e*Pn	**Pn**	**16 12 55.0**	**-0.6**
IBAF				*e*		16 12 55.5	
	comp=Z,139nm,0.2s						

*SKHL **31** 16:55:06.6±2.8,46°.89N×156°.58E,h39km±3km,mb4.9/2*
*IDC **31** 16:55:07.0±1.2,46°.58N×156°.68E,h0km,mb3.7/12, mb1 3.8/13,mb1mx3.7/25,mbtmp3.7/13,ML3.8/1,MS2.9/4, Ms1 2.9/4,ms1mx2.6/38,Error ellipse: s-maj=29.6km s-min=20.2km az=160.0*
*MOS **31** 16:55:10.6±2.3,46°.92N×156°.34E,h33km,mb4.3/4,Error ellipse: s-maj=13.8km s-min=9.3km az=84.6*
*ISCJB **31** 16:55:12.7±0.6,47°.22N±0°.05×156°.50E±0°.09,h33km, mb3.9/20,MS3.6/3,Error ellipse: s-maj=10.4km s-min=5.5km az=35.2*
*NEIC **31** 16:55:15.0±0.8,47°.20N×156°.60E,h35km,mb4.2/6,Error ellipse: s-maj=16.9km s-min=13.2km az=136.0*
ISC 31 16:55:14.9±0.6,47°.18N±0°.05×156°.5E±0°.1,h35km,n49,σ1§19/56,mb3.9/20,MS3.6/3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.51**	**356**	*e*P	**Pn**	**16 56 02.5**	**-4.4**
SKR				*e*S	**Sn**	**16 56 46.5**	**-0.7**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,900nm,0.4s						
SKR				smax			
	comp=E,460nm,0.4s						
SKR	**Severo-Kuril's**	**3.51**	**356**	*e*P	**Pn**	**16 56 02.5**	**-4.4**
SKR				AMB	AMB	16 56 03.0	
	comp=E,50nm,0.5s						
SKR				*e*S	**Sn**	**16 56 46.5**	**-0.7**
SKR				A		16 56 48.5	
	comp=E,1μm,0.2s						
SKR				A		16 56 48.5	
	comp=E,450nm,0.2s						
SKR				A		16 56 48.5	
	comp=E,170nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.98**	**7**	*e*Pn	**Pn**	**16 56 40.2**	**-0.6**
PEA0B				*e*Sn	**Sn**	**16 57 46.8**	**-1.1**
PETK	**Petropavlovsk-**	**5.98**	**7**	Pn	**Pn**	**16 56 40.8**	**0.0**
	comp=E,2.9nm,0.3s,baz=174,slow=14,SNR=70						
PETK				Sn	**Sn**	**16 57 54.4**	**+6.4**
	comp=E,3.2nm,0.3s,baz=177,slow=35,SNR=7.1						
PETK				LR	LR	16 59 47.4	
	comp=E,60nm,18.5s,baz=180,slow=43						
PETK	**Petropavlovsk-**	**5.98**	**7**	P	**Pn**	**16 56 40.8**	**0.0**
PETK						16 57 54.4	
PET	**Petropavlovsk**	**6.00**	**12**	*e*P	**Pn**	**16 56 40.2**	**-0.9**
PET				*e*S	**Sn**	**16 57 49.9**	**+1.4**
PET				smax			
	comp=E,232nm,0.5s						
PET				smax			
	comp=N,239nm,0.4s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	**Petropavlovsk**	**6.00**	**12**	*e*Pn	**Pn**	**16 56 39.8**	**-1.3**
	comp=Z,34nm,0.3s						
PET	**Petropavlovsk**	**6.00**	**12**	*e*P	**Pn**	**16 56 40.0**	**-1.1**
KUR	**Kuril'sk**	**6.32**	**255**	*e*P	**Pn**	**16 56 38.3**	**-7.2**
KUR				*e*S	**Sn**	**16 57 45.0**	**-11**
KUR				pmax	pmax		
	comp=N,130nm,0.4s						
KUR				pmax	pmax		
	comp=Z,250nm,0.4s						
KUR				smax			
	comp=N,110nm,0.6s						
KUR				smax			
	comp=E,140nm,0.6s						
KUR	**Kuril'sk**	**6.32**	**255**	*e*P	**Pn**	**16 56 38.3**	**-7.2**
KUR				AMB	AMB	16 56 47.0	
	comp=E,130nm,0.4s						
KUR				AMB	AMB	16 56 47.0	
	comp=E,250nm,0.4s						
KUR				*e*S	**Sn**	**16 57 45.0**	**-11**
KUR				A		16 57 49.5	
	comp=E,110nm,0.6s						
KUR				A		16 57 49.5	
	comp=E,140nm,0.6s						
YSS	**Yuzh-Sakhalins**	**9.41**	**274**	*e*P	**Pn**	**16 57 31.2**	**+3.4**
YSS	**Yuzh-Sakhalins**	**9.41**	**274**	*e*rx	rx	16 57 31.2	
ASAJ	**Asahikawa**	**10.23**	**258**	Pn	**Pn**	**16 57 32.9**	**-6.1**
	comp=E,0.9nm,0.3s,baz=106,slow=15,SNR=10						
ASAJ				Sn	**Sn**	**16 59 33.5**	**+1.1**
	comp=E,0.3nm,0.3s,baz=0.0,slow=20,SNR=1.6						
ASAJ				LR	LR	17 01 06.3	
	comp=E,62nm,21.0s,baz=130,slow=35						
ASAJ	**Asahikawa**	**10.23**	**258**	P	**Pn**	**16 57 32.9**	**-6.1**
ASAJ						16 59 33.5	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,62nm,21.0s						
ERM	**Erimo**	**10.84**	**246**	*i* P	**Pn**	**16 57 40.7**	**-6.8**
ERM	**Erimo**	**10.84**	**246**	*e*P	**Pn**	**16 57 40.7**	**-6.8**
MJAR	**Matsushiro Arr**	**17.26**	**239**	Pn	**Pn**	**16 59 04.0**	**-8.9**
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=7.1						
YAK	**Yakutsk**	**21.29**	**324**	*e*P	**P**	**16 59 58.5**	**+0.5**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
KSRS	**Korea Array**	**23.17**	**256**	P	**P**	**17 00 15.0**	**-3.2**
	comp=Z,1.3nm,0.7s,mb3.5,baz=55,slow=11,SNR=7.4						
KSRS	**Korea Array**	**23.17**	**256**	P	**P**	**17 00 15.0**	**-3.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
TIXI	**Tiksi**	**27.75**	**342**	*e*P	**P**	**17 00 59.9**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.2						
TIXI	**Tiksi**	**27.75**	**342**	*e*P	**P**	**17 01 00.7**	**+1.0**
	comp=Z,3.6nm,0.8s,mb4.0						
NJ2	**Nanjing**	**32.37**	**256**	*e*P	**P**	**17 01 35.8**	**-5.1**
NJ2				pP	pP	17 01 44.5	-6.5
NJ2				sP	sP	17 01 50.3	-4.9
NJ2				PP	PP	17 02 45.5	-8.8
NJ2				S	**S**	**17 06 49.5**	**-3.1**
NJ2				sS	sS	17 07 15.5	+6.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,210nm,3.8s						
NJ2				LR	LR		
	comp=N,210nm,15.4s,MS4.2						
NJ2				LR	LR		
	comp=E,320nm,16.7s,MS4.2						
NJ2				LR	LR		
	comp=Z,3μm,14.0s,MS5.2						
SONM	**Songino Array**	**33.39**	**290**	P	**P**	**17 01 51.4**	**+1.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=79,slow=7.6,SNR=2.9						
PAX	**Paxson**	**35.35**	**42**	*e*P	**P**	**17 02 14.5**	**+8.0**
PAX				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
PAX	**Paxson**	**35.35**	**42**	*e*P	**P**	**17 02 14.5**	**+8.0**
	comp=Z,2.0nm,0.6s,mb4.2						
EGAK	**Eagle**	**37.20**	**39**	*e*P	**P**	**17 02 21.7**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.1						
ZALV	**Zalesovo Beam**	**44.25**	**306**	P	**P**	**17 03 21.3**	**+0.8**
	comp=Z,0.3nm,0.3s,mb3.5,baz=72,slow=4.7,SNR=2.5						
DAV	**Davao City (W)**	**47.93**	**223**	LR	LR	17 21 22.5	
	comp=Z,67nm,21.1s,MS3.6,baz=236,slow=33						
MKAR	**Makanchi Array**	**48.81**	**299**	P	**P**	**17 03 55.9**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.7,baz=67,slow=10,SNR=6.3						
MKAR	**Makanchi Array**	**48.81**	**299**	*e*P	**P**	**17 03 56.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**49.06**	**305**	P	**P**	**17 03 59.2**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.2,baz=70,slow=9.0,SNR=3.9						
KURK	**Kurchatov**	**49.06**	**305**	*e*P	**P**	**17 03 56.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KURK	**Kurchatov**	**49.06**	**305**	*e*P	**P**	**17 03 56.6**	**-1.6**
	comp=Z,3.4nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**49.16**	**38**	P	**P**	**17 03 59.4**	**+0.6**
	comp=Z,0.4nm,0.7s,mb3.6,baz=297,slow=6.9,SNR=3.5						
YKA				LR	LR	17 24 20.6	
	comp=Z,5.7nm,19.5s,MS2.6,baz=65,slow=35						
BVAR	**Borovoye Array**	**52.38**	**310**	P	**P**	**17 04 23.4**	**+0.3**
	comp=Z,0.9nm,0.4s,mb4.1,baz=58,slow=7.8,SNR=9.2						
CMAR	**Chiang Mai Arr**	**54.75**	**259**	P	**P**	**17 04 41.1**	**+0.2**
	comp=Z,0.5nm,1.0s,mb3.5,baz=41,slow=8.4,SNR=2.5						
ARU	**Arti**	**56.26**	**319**	P	**P**	**17 04 52.3**	**+1.0**
ARCES	**ARCESS Array B**	**58.20**	**342**	P	**P**	**17 05 06.8**	**+2.1**
	comp=Z,1.5nm,0.9s,mb4.0,baz=41,slow=8.1,SNR=5.4						
ARCES	**ARCESS Array B**	**58.20**	**342**	P	**P**	**17 05 06.8**	**+2.1**
ABKAR	**Akbulak array**	**59.93**	**311**	*e*P	**P**	**17 05 15.9**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.9						
GCMT	**Greycliff**	**60.61**	**53**	*e*P	**P**	**17 05 23.0**	**+1.2**
	comp=Z,2.8nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**64.62**	**336**	P	**P**	**17 05 49.2**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=29,slow=7.5,SNR=10						
MSVF	**Nonsavu**	**67.45**	**158**	*e*P	**P**	**17 06 07.1**	**+0.2**
	comp=Z,47nm,0.4s						
BORG	**Borgarnes**	**68.40**	**359**	*e*P	**P**	**17 06 11.0**	**-1.3**
BORG				pmax	pmax		
	comp=Z,16nm,0.6s						
BORG	**Borgarnes**	**68.40**	**359**	*e*P	**P**	**17 06 11.0**	**-1.4**
	comp=Z,16nm,0.6s						
NOA	**NORSAR Array B**	**68.55**	**343**	P	**P**	**17 06 16.3**	**+3.0**
	comp=Z,0.4nm,0.8s,mb3.4,baz=47,slow=6.0,SNR=2.4						
ASAR	**Alice Springs**	**73.42**	**202**	P	**P**	**17 06 38.1**	**-5.1**
	comp=Z,0.6nm,1.0s,mb3.5,baz=25,slow=6.0,SNR=4.1						
TXAR	**Lajitas Array**	**75.23**	**63**	P	**P**	**17 06 52.5**	**-1.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=316,slow=7.7,SNR=5.6						

*NEIC **31** 16:55:38.5,17°.79N×99°.43W,h54km,MD3.9(MEX),After MEX.*
MEX 31 16:55:38.5±0.7,17°.79N×99°.43W,h54km±10km,MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.60**	**353**	*e*P	Pn	16 55 50.1	-1.0
PLIG				*i* S	Sn	16 55 58.3	-2.1
PLIG	**Platanillo**	**0.60**	**353**	*e*P	Pn	16 55 50.1	-1.0
PLIG				*i* S	Sn	16 55 58.3	-2.1
ACX	**Acapulco**	**1.03**	**207**	*i* P	Pn	16 55 54.7	-2.1
ACX				*i* S	Sn	16 56 08.8	-1.5
ACX	**Acapulco**	**1.03**	**207**	*i* P	Pn	16 55 54.7	-2.1
ACX				*i* S	Sn	16 56 08.8	-1.5
CAIG	**El Cayaco**	**1.09**	**227**	*e*P	Pn	16 55 55.8	-1.8
CAIG				*i* S	Sn	16 56 09.7	-2.0
CAIG	**El Cayaco**	**1.09**	**227**	*e*P	Pn	16 55 55.8	-1.8
CAIG				*i* S	Sn	16 56 09.7	-2.0
YAIG	**Yautepec**	**1.12**	**18**	*e*P	Pn	16 55 56.4	-1.5
YAIG				*i* S	Sn	16 56 10.7	-1.5
YAIG	**Yautepec**	**1.12**	**18**	*e*P	Pn	16 55 56.4	-1.5
YAIG				*i* S	Sn	16 56 10.7	-1.5
PNIG	**Pinotepa**	**1.87**	**138**	*e*P	Pn	16 56 06.7	-1.4
PNIG				*i* S	Sn	16 56 28.7	-1.8
PNIG	**Pinotepa**	**1.87**	**138**	*e*P	Pn	16 56 06.7	-1.4
PNIG				*i* S	Sn	16 56 28.7	-1.8
ZIIG	**Zihuatanejo**	**1.95**	**265**	*i* P	Pn	16 56 08.4	-0.8
ZIIG				*i* S	Sn	16 56 30.6	-2.0
ZIIG	**Zihuatanejo**	**1.95**	**265**	*i* P	Pn	16 56 08.4	-0.8
ZIIG				*i* S	Sn	16 56 30.6	-2.0
TPIG	**Tehuac#an**	**2.06**	**72**	*i* P	Pn	16 56 08.0	-2.7
TPIG				*i* S	Sn	16 56 33.3	-1.9
VHO	**Vista Hermosa**	**2.67**	**105**	*e*P	Pn	16 56 18.6	-0.4
VHO				*i* S	Sn	16 56 48.8	-1.4
VHO	**Vista Hermosa**	**2.67**	**105**	*e*P	Pn	16 56 18.6	-0.4
VHO				*i* S	Sn	16 56 48.8	-1.4
HUIG	**Huatulco**	**3.76**	**122**	*i* P	Pn	16 56 34.4	+0.3
HUIG				*i* S	Sn	16 57 15.0	-2.2
HUIG	**Huatulco**	**3.76**	**122**	*i* P	Pn	16 56 34.4	+0.3

CM31 Chiang Mai Arr 13.00 199 Pn Pn 17 06 02.6 +1.1
comp=Z,2.3nm,0.7s
CMAR Chiang Mai Arr 13.00 199 Pn Pn 17 06 03.2 +1.7
comp=Z,0.1nm,0.3s,baz=10,slow=12,SNR=14
SONM Songino Array 17.10 7 Pn Pn 17 06 56.1 +0.5
comp=Z,0.1nm,0.3s,baz=202,slow=7.3,SNR=3.5
ZAK Zakamensk 19.49 360 *e*P **Pn 17 07 25.8 +0.9**
ZAK pmax pmax
comp=Z,2.0nm,1.1s
KSRS Korea Array 21.30 65 P P 17 07 40.9 -2.5
comp=Z,3.0nm,0.8s,mb3.7,baz=240,slow=9.2,SNR=11
KSRS Korea Array 21.30 65 P P 17 07 40.9 -2.5
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb3.7
MKAR Makanchi Array 22.77 320 P P 17 07 59.6 +0.5
comp=Z,1.9nm,1.1s,mb3.5,baz=114,slow=12,SNR=8.5
TGY Tagaytay City 23.20 132 LR LR 17 16 31.1
TKM2 Tokmak 2 25.16 306 P **P 17 08 16.6 -5.4**
TKM2 pmax pmax
comp=Z,9.0nm,1.4s,mb4.1
TKM2 Tokmak 2 25.16 306 P **P 17 08 16.6 -5.4**
comp=Z,9.3nm,1.4s,mb4.1
ZAA0 Zalesovo Array 26.67 335 *e*P **P 17 08 36.0 +0.5**
ZALV Zalesovo Beam 26.67 335 P **P 17 08 35.0 -0.6**
comp=Z,1.1nm,0.6s,mb3.6,baz=134,slow=9.4,SNR=4.8
KURK Kurchatov 27.08 324 P **P 17 08 39.0 -0.3**
comp=Z,0.8nm,0.6s,mb3.5,baz=132,slow=9.1,SNR=3.3
BRTR Keskin Array B 56.33 300 P **P 17 12 36.9 -0.8**
comp=Z,0.2nm,0.4s,mb3.5,baz=74,slow=5.1,SNR=2.5
FINES FINESS Array B 57.42 326 P **P 17 12 45.4 +0.2**
comp=Z,1.5nm,1.0s,mb4.0,baz=81,slow=8.9,SNR=3.0
WRAB Tennant Creek 58.62 145 *e*P **P 17 12 53.3 -0.7**
comp=Z,5.2nm,0.9s,mb4.6
ASAR Alice Springs 61.61 148 P **P 17 13 14.1 -0.4**
comp=Z,0.6nm,0.6s,mb3.9,baz=334,slow=6.9,SNR=18
NOA NORSAR Array B 64.53 327 P **P 17 13 32.8 -0.6**
comp=Z,0.4nm,0.7s,mb3.6,baz=82,slow=7.9,SNR=2.6
STKA Stephens Creek 72.14 146 P **P 17 14 20.7 -0.7**
comp=Z,1.1nm,0.5s,mb4.0,baz=310,slow=8.4,SNR=7.4
YKA Yellowknife Ar 82.09 17 P **P 17 15 16.1 -0.9**
comp=Z,0.7nm,0.7s,mb3.7,baz=330,slow=5.1,SNR=4.6

GUC 31 17:04:57.8±0.6, 22°.21S×70°.23W, h51km±2km, MD3.9, ML3.4, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**0.69**	**95**	↑*i*P		Pn	17 05 05.7	-5.8
PB04				*i*S		Sn	17 05 11.2	-10
PB04				AML		AML	17 05 11.8	
	comp=E,6μm,0.4s						
PB01	**Plate Boundary**	**1.35**	**31**	↓↓*i*P		Pn	17 05 21.1	+0.8
PB01				*i*S		Sn	17 05 38.4	+1.3
ANCH	**Antofagasta**	**1.48**	**186**	↓↓*i*P		Pn	17 05 22.5	+0.5
ANCH				*i*S		Sn	17 05 41.3	+1.2
HMBC	**Humberston**	**1.95**	**10**	*e*P		Pn	17 05 29.0	+0.5
HMBC				*i*S		Sn	17 05 52.9	+1.2
HMBC				AML		AML	17 06 01.8	
	comp=N,276nm,0.5s						
PSGC	**Pisagua**	**2.60**	**2**	*i*P		Pn	17 05 36.6	-0.8
PSGC				*i*S		Sn	17 06 07.2	-0.6
MNMC	**Miæe Miæ**	**3.12**	**11**	*e*P		Pn	17 05 46.2	+1.6
MNMC				*i*S		Sn	17 06 23.0	+2.5
MNMC				AML		AML	17 06 46.3	
	comp=N,160nm,0.6s						

*ISCJB **31** 17:15:04.8±0.4, 13°.80N±0°.06×120°.65E±0°.06, h135km±4km, mb4.1/32, Error ellipse: s-maj=11.2km s-min=7.3km az=139.2*
*IDC **31** 17:15:04.9±0.5, 13°.78N×120°.66E, h120km±3km, mb3.8/17, mb1 3.8/17, mb1mx3.7/25, mbtmp3.8/17, MS3.2/3, Ms1 3.2/3, ms1mx2.7/34, Error ellipse: s-maj=17.9km s-min=10.9km az=66.0*
*NEIC **31** 17:15:05.4±0.7, 13°.85N×120°.79E, h129km±6km, mb4.4/19, Error ellipse: s-maj=11.7km s-min=6.2km az=61.0*
*MAN **31** 17:15:06, 13°.73N×120°.54E, h97km, mb4.4, ML3.3, MS3.1*
ISC 31 17:15:05.9±0.4, 13°.80N±0°.06×120°.66E±0°.06, h128km±4km, h125km±.0km: pP-P, n56, σ1°.12/55, mb4.1/32, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.40**	**261**	*e*P	**Pn**	**17 15 22.5**	**-1.8**
LUBP				*e*S	**Sn**	**17 15 29.3**	**-8.8**
TGY	**Tagaytay City**	**0.41**	**42**	P	**Pn**	**17 15 23.3**	**-1.0**
	990nm,0.3s,baz=209,slow=3.0,SNR=66						
TGY				S	**Sn**	**17 15 37.4**	**-0.9**
	3μm,0.3s,baz=105,slow=16,SNR=56						
TGY	**Tagaytay City**	**0.41**	**42**	↓↓*i*P	**Pn**	**17 15 23.4**	**-0.9**
BOAC	**Boac**	**1.20**	**106**	*e*P	**Pn**	**17 15 30.9**	**+0.2**
GQP	**Guinayangan**	**1.74**	**86**	*e*P	**Pn**	**17 15 37.0**	**+0.3**
OTRP	**Odiongan**	**1.95**	**137**	*e*P	**Pn**	**17 15 39.3**	**+0.1**
OTRP				*e*S	**Sn**	**17 16 03.6**	**-1.1**
AUQP	**San Andres**	**2.02**	**103**	*e*P	**Pn**	**17 15 42.3**	**+2.3**
AUQP				*e*S	**Sn**	**17 16 07.8**	**+1.7**
PVCP	**Virac**	**3.41**	**93**	*e*P	**Pn**	**17 15 59.2**	**+1.5**
PVCP				*e*S	Sn	17 16 16.2	-22
QIZ	**Qiongzhong**	**11.60**	**298**	*e*P	**Pn**	**17 17 48.5**	**+0.8**
	12nm,1.0s						
KSM	**Kuching**	**15.96**	**221**	*e*Pn	**Pn**	**17 18 46.8**	**+3.4**
	13nm,0.9s						
KAPI	**Kappang**	**18.71**	**183**	P	**P**	**17 19 16.3**	**+1.7**
	1.2nm,0.3s,baz=318,slow=11,SNR=6.2						
ENH	**Enshi**	**19.37**	**330**	P	**P**	**17 19 21.5**	**-0.1**
	4.0nm,0.5s						
CM31	**Chiang Mai Arr**	**21.36**	**285**	*e*P	**P**	**17 19 42.8**	**-0.4**
	7.4nm,1.0s,mb4.0						
CMAR	**Chiang Mai Arr**	**21.36**	**285**	P	**P**	**17 19 44.7**	**+1.6**
	3.0nm,0.8s,mb3.7,baz=102,slow=7.6,SNR=29						
GUMO	**Guam**	**23.52**	**88**	LR	LR	17 28 06.3	
	comp=Z,32nm,21.1s,baz=181,slow=33						
PSI	**Prapat**	**24.09**	**245**	P	**P**	**17 20 10.6**	**+0.8**
	2.8nm,0.4s,mb4.2,baz=48,slow=5.7,SNR=4.1						
PSI	**Prapat**	**24.09**	**245**	P	**P**	**17 20 10.6**	**+0.8**
KSRS	**Korea Array**	**24.43**	**14**	P	**P**	**17 20 12.2**	**-0.4**
	1.1nm,0.9s,mb3.4,baz=201,slow=11,SNR=3.6						
KSRS				LR	LR	17 31 22.1	
	comp=Z,33nm,18.4s,baz=225,slow=40						
GTA	**Gaotai**	**31.43**	**328**	*e*P	**P**	**17 21 16.3**	**+1.3**
GTA				pP	pP	17 21 21.0	-22
GTA				sP	sP	17 21 24.0	-34
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.2						
LSA	**Lhasa**	**31.52**	**305**	*e*P	**P**	**17 21 17.6**	**+1.7**
	comp=Z,3.2nm,0.4s,mb4.4						
MBWA	**Marble Bar**	**34.75**	**182**	*e*P	**P**	**17 21 43.0**	**-0.9**
	comp=Z,10nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**35.80**	**344**	*e*P	**P**	**17 21 51.7**	**-1.0**
	comp=Z,1.6nm,0.5s,mb3.9						
SONM	**Songino Array**	**35.95**	**344**	P	**P**	**17 21 54.2**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.1,baz=163,slow=11,SNR=33						
SONM				ScP	ScP	17 27 54.4	+1.9
	comp=Z,0.5nm,1.0s,baz=184,slow=3.9,SNR=3.7						
WRAB	**Tennant Creek**	**36.12**	**158**	*e*P	**P**	**17 21 53.6**	**-2.1**
	comp=Z,4.2nm,0.9s,mb4.1						
ASAR	**Alice Springs**	**39.42**	**161**	P	**P**	**17 22 22.4**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.7,baz=334,slow=8.2,SNR=27						
ASAR				pP	pP	17 22 50.2	-1.8
	comp=Z,1.1nm,0.5s,baz=340,slow=7.3,SNR=5.2						
TLY	**Talaya**	**40.20**	**344**	*e*P	**P**	**17 22 28.8**	**-0.7**
	comp=Z,2.5nm,0.9s,mb3.8						
CTA	**Charters Tower**	**42.05**	**143**	P	**P**	**17 22 45.2**	**+0.2**
	comp=Z,2.3nm,0.5s,mb4.0,baz=290,slow=10,SNR=5.8						
CTAO	**Charters Tower**	**42.05**	**143**	*e*P	**P**	**17 22 44.8**	**-0.3**
	comp=Z,12nm,1.1s,mb4.5						
MKAR	**Makanchi Array**	**45.93**	**324**	P	**P**	**17 23 16.7**	**+0.9**
	comp=Z,2.8nm,0.6s,mb4.1,baz=118,slow=9.3,SNR=28						
TKM2	**Tokmak 2**	**48.33**	**316**	*e*P	**P**	**17 23 34.9**	**+0.5**
	comp=Z,4.0nm,0.6s,mb4.2						
UCH	**Uchtor**	**48.80**	**315**	*e*P	**P**	**17 23 39.5**	**+1.5**
	comp=Z,7.0nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**48.95**	**333**	*e*P	**P**	**17 23 38.0**	**-1.0**
ZALV	**Zalesovo Beam**	**48.95**	**333**	P	**P**	**17 23 38.4**	**-0.6**
	comp=Z,3.6nm,0.3s,mb4.4,baz=121,slow=6.9,SNR=23						
PETK	**Petropavlovsk-**	**48.96**	**29**	P	**P**	**17 23 40.2**	**+1.1**
	comp=Z,2.7nm,0.8s,mb3.9,baz=228,slow=5.9,SNR=4.2						
PETK	**Petropavlovsk-**	**48.96**	**29**	P	**P**	**17 23 40.2**	**+1.1**
AML	**Almayashu**	**49.34**	**314**	*e*P	**P**	**17 23 43.4**	**+1.3**
	comp=Z,6.2nm,0.7s,mb4.3						
EKS2	**Erkin-Say**	**49.47**	**315**	*e*P	**P**	**17 23 41.3**	**-1.8**
STKA	**Stephens Creek**	**49.65**	**156**	P	**P**	**17 23 42.9**	**-1.7**
	comp=Z,0.4nm,0.3s,mb3.5,baz=342,slow=13,SNR=3.3						
STKA	**Stephens Creek**	**49.65**	**156**	P	**P**	**17 23 40.4**	**-4.2**
	comp=Z,1.4nm,1.4s,mb3.4						
KURK	**Kurchatov**	**50.09**	**326**	P	**P**	**17 23 47.6**	**0.0**
	comp=Z,7.6nm,0.5s,mb4.6,baz=131,slow=8.0,SNR=23						
BVAR	**Borovoye Array**	**55.67**	**326**	P	**P**	**17 24 28.8**	**+0.2**
	comp=Z,2.9nm,0.5s,mb4.3,baz=115,slow=9.2,SNR=30						
BRVK	**Borovoye**	**55.74**	**326**	*e*P	**P**	**17 24 29.0**	**-0.1**
	comp=Z,15nm,1.1s,mb4.7						
TIXI	**Tiksi**	**58.04**	**3**	*e*P	**P**	**17 24 43.4**	**-1.6**
	comp=Z,5.3nm,1.0s,mb4.3						
ABKAR	**Abkulak array**	**60.63**	**319**	*e*P	**P**	**17 25 02.4**	**-0.8**
	comp=Z,3.3nm,0.4s,mb4.5						
KIV	**Kislovodsk**	**71.93**	**312**	*e*P	**P**	**17 26 15.9**	**+0.6**
	comp=Z,4.9nm,0.6s,mb4.4						
ATD	**Arta Tunnel**	**75.63**	**279**	LR	LR	17 59 25.6	
	comp=Z,48nm,20.1s,baz=203,slow=35						
BPAW	**Bear Paw Mtn.**	**76.99**	**27**	*e*P	**P**	**17 26 44.2**	**0.0**
	comp=Z,6.8nm,0.9s,mb4.3						
MMAI	**Mount Meron Ar**	**78.69**	**301**	P	**P**	**17 26 55.7**	**+1.5**
	comp=Z,1.2nm,0.5s,mb3.8,baz=32,slow=8.5,SNR=4.2						
ARCES	**ARCESS Array B**	**78.98**	**339**	P	**P**	**17 26 54.3**	**-0.8**
	comp=Z,1.7nm,0.6s,mb3.9,baz=77,slow=7.1,SNR=32						
BRTR	**Keskin Array B**	**79.06**	**308**	P	**P**	**17 26 55.7**	**-0.4**
	comp=Z,1.0nm,0.7s,mb3.5,baz=138,slow=5.2,SNR=6.6						
FINES	**FINESS Array B**	**80.18**	**331**	P	**P**	**17 27 00.6**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.6,baz=46,slow=6.0,SNR=12						
FINES				pP	pP	17 27 31.9	-2.2
	comp=Z,0.8nm,0.8s,baz=71,slow=9.0,SNR=2.4						
NB2	**NORSAR Subarra**	**87.16**	**333**	P	**P**	**17 27 35.8**	**-1.5**
	comp=Z,1.2nm,0.7s,mb3.8,baz=69,slow=4.4						
NOA	**NORSAR Array B**	**87.16**	**333**	P	**P**	**17 27 35.6**	**-1.7**
	comp=Z,0.8nm,0.6s,mb3.7,baz=69,slow=4.6,SNR=6.1						
NOA				pP	pP	17 28 07.4	-2.7
	comp=Z,0.6nm,0.6s,baz=68,slow=4.6,SNR=4.0						
TXAR	**Lajitas Array**	**119.43**	**44**	PKP	PKPdf	17 33 41.0	+0.1
	comp=Z,0.1nm,0.5s,baz=172,slow=0.4,SNR=4.9						
PLCA	**Paso Flores**	**151.43**	**162**	PKPbc	PKPbc	17 34 45.1	+0.2
	comp=Z,1.5nm,0.5s,baz=218,slow=3.0,SNR=5.3						
LPAZ	**La Paz**	**171.16**	**107**	PKPab	PKPab	17 36 22.8	+2.5
	comp=Z,0.6nm,0.5s,baz=257,slow=5.0,SNR=4.2						

*DJA **31** 17:17:46, 0°.31N×97°.75E, h20km, MLv3.2/3*
IDC 31 17:17:41.5±2.4, 0°.20N×97°.50E, h0km, mb3.5/3, mb1 3.4/5, mb1mx3.2/24, mbtmp3.3/5, ML2.9/2, Error ellipse: s-maj=68.0km s-min=30.6km az=66.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.95**	**29**	Pn	Pn	17 18 28.8	-0.9
	0.5nm,0.3s,baz=252,slow=6.4,SNR=2.9						
CMAR	**Chiang Mai Arr**	**18.20**	**4**	P	Pn	17 21 55.5	-0.3
	0.0nm,0.3s,baz=196,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**42.55**	**126**	P	P	17 25 39.3	0.0
	0.3nm,0.8s,baz=298,slow=8.0,SNR=2.8						
MKAR	**Makanchi Array**	**48.28**	**346**	P	P	17 26 24.9	+0.5
	0.2nm,0.2s,baz=141,slow=7.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**54.59**	**351**	P	P	17 27 11.1	-0.5
	0.3nm,0.3s,baz=179,slow=5.8,SNR=3.5						

IDC 31 17:31:13.4±1.4, 30°.69N×103°.37E, h0km, mb3.3/4, mb1 3.4/6, mb1mx3.2/25, mbtmp3.3/6, ML3.0/2, Error ellipse: s-maj=36.5km s-min=25.6km az=67.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.83**	**199**	Pn	Pn	17 34 18.2	+1.1
	0.0nm,0.3s,baz=6.1,slow=9.2,SNR=3.1						
SONM	**Songino Array**	**17.27**	**7**	P	Pn	17 35 17.0	+1.1
	0.1nm,0.3s,baz=182,slow=8.7,SNR=3.1						
KSRS	**Korea Array**	**21.39**	**65**	P	P	17 36 02.6	0.0
	1.0nm,0.7s,baz=244,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**22.89**	**321**	P	P	17 36 20.3	+1.8
	0.2nm,0.2s,baz=121,slow=11,SNR=2.8						
FINES	**FINESS Array B**	**57.56**	**326**	P	P	17 41 02.7	-1.8
	0.7nm,0.9s,baz=77,slow=6.3,SNR=2.8						
ASAR	**Alice Springs**	**61.47**	**148**	P	P	17 41 31.9	0.0
	0.3nm,0.8s,baz=323,slow=6.5,SNR=4.8						

*ISCJB **31** 17:35:56.6±0.5, 60°.22N±0°.04×152°.96W±0°.09, h125km±5km, mb3.7/6, Error ellipse: s-maj=7.5km s-min=6.8km az=11.3*
*IDC **31** 17:35:56.3±7.7, 60°.25N×153°.38W, h107km±63km, mb3.3/5, mb1 3.7/8, mb1mx3.3/28, mbtmp3.4/8, Error ellipse: s-maj=59.1km s-min=22.9km az=51.0*
*NEIC **31** 17:35:58.7, 60°.15N×152°.86W, h123km, MG3.5(AEIC), After AEIC.*
ISC 31 17:35:57.8±0.5, 60°.22N±0°.04×152°.98W±0°.09, h117km±5km, n40, σ1°.02/43, mb3.7/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSO	**Redoubt South**	**0.26**	**25**	*e*Pg	**Pn**	**17 36 14.8**	**+0.6**
AUL	**Augustine Lava**	**0.88**	**195**	P	**Pn**	**17 36 19.1**	**+0.8**
AUL				S	**Sn**	**17 36 34.4**	**+0.6**
SLKM	**Skilak Lake**	**1.40**	**77**	P	**Pn**	**17 36 24.4**	**+0.7**
SVW2	**Sparrevohn**	**1.55**	**306**	*e*P	**Pn**	**17 36 25.7**	**+0.1**
FIB	**Fire Island**	**1.67**	**54**	P	**Pn**	**17 36 28.8**	**+1.8**
SEW	**Seward**	**1.77**	**92**	P	**Pn**	**17 36 28.2**	**0.0**
RC01	**Rabbit Creek A**	**1.82**	**60**	*e*Pn	**Pn**	**17 36 28.5**	**-0.2**
RC01				*e*Sn	**Sn**	**17 36 51.0**	**-1.4**
PMR	**Palmer**	**2.33**	**52**	*e*P	**Pn**	**17 36 34.3**	**-0.8**
KDAK	**Kodiak Island**	**2.46**	**175**	P	**Pn**	**17 36 35.2**	**-1.6**
PPLA	**Purkeypile**	**2.71**	**8**	P	**Pn**	**17 36 41.5**	**+1.5**
SML	**Sawmill**	**2.77**	**53**	P	**Pn**	**17 36 40.3**	**-0.5**
OHAK	**Old Harbor**	**3.02**	**183**	*e*P	**Pn**	**17 36 41.8**	**-2.3**
TT01	**Tatalina**	**3.06**	**333**	P	**Pn**	**17 36 45.4**	**+0.7**
TTA	**Tatalina**	**3.08**	**333**	*e*P	**Pn**	**17 36 45.5**	**+0.6**
MID	**Middleton Isla**	**3.45**	**101**	*e*P	**Pn**	**17 36 49.2**	**-0.6**
KTH	**Kantishna Hill**	**3.48**	**15**	P	**Pn**	**17 36 50.7**	**+0.5**
EYAK	**Cordova Ski Ar**	**3.60**	**82**	P	**Pn**	**17 36 51.8**	**0.0**
DIV	**Divide**	**3.66**	**73**	P	**Pn**	**17 36 52.0**	**-0.6**
CHUM	**Lake Minchumin**	**3.69**	**5**	P	**Pn**	**17 36 53.8**	**+0.9**
BPAW	**Bear Paw Mtn.**	**4.00**	**13**	P	**Pn**	**17 36 57.1**	**0.0**
BMRM	**Bremner River**	**4.20**	**76**	P	**Pn**	**17 36 59.2**	**-0.6**
PAX	**Paxson**	**4.52**	**49**	P	**Pn**	**17 37 04.2**	**+0.1**
MENT	**Mentasta**	**5.19**	**54**	*e*Pn	**Pn**	**17 37 12.9**	**-0.2**
COLA	**College**	**5.23**	**25**	P	**Pn**	**17 37 13.0**	**-0.7**
DOT	**Dot Lake**	**5.43**	**47**	P	**Pn**	**17 37 15.7**	**-0.6**
IM3	**Indian Mountai**	**5.79**	**357**	P	**Pn**	**17 37 20.7**	**-0.5**
PNL	**Peninsula**	**6.85**	**89**	*e*Pn	**Pn**	**17 37 34.9**	**-0.6**
PNL				*e*Sn	**Sn**	**17 38 42.9**	**-8.9**
EGAK	**Eagle**	**7.12**	**45**	*e*P	**Pn**	**17 37 38.0**	**-1.2**
COLD	**Coldfoot**	**7.14**	**9**	*e*Pn	**Pn**	**17 37 39.6**	**+0.2**
DAWY	**Dawson**	**7.43**	**53**	*e*Pn	**Pn**	**17 37 42.3**	**-1.1**
SKAG	**Skagway**	**8.92**	**87**	*e*P	**Pn**	**17 38 05.2**	**+1.7**
INK	**Inuvik**	**11.65**	**38**	P	**Pn**	**17 38 39.5**	**-0.6**
	0.4nm,0.3s,baz=227,slow=16,SNR=5.8						
DLBC	**Dease Lake**	**11.84**	**89**	P	**Pn**	**17 38 45.3**	**+2.7**
	0.5nm,0.3s,baz=278,slow=7.1,SNR=6.8						
YKA	**Yellowknife Ar**	**18.35**	**66**	P	**P**	**17 40 02.9**	**+0.1**
	0.4nm,0.3s,baz=277,slow=9.9,SNR=14						
RES	**Resolute Bay**	**25.11**	**32**	P	**P**	**17 41 11.7**	**+0.6**
	3.1nm,1.1s,mb3.6,baz=254,slow=7.4,SNR=3.6						
NVAR	**Mina Array Bea**	**30.82**	**119**	P	**P**	**17 42 04.2**	**+1.9**
	0.7nm,0.7s,mb3.5,baz=310,slow=9.0,SNR=5.9						
PDAR	**Pinedale Array**	**31.44**	**104**	P	**P**	**17 42 09.2**	**+1.5**
	0.5nm,0.8s,mb3.3,baz=345,slow=5.1,SNR=4.3						
TXAR	**Lajitas Array**	**45.05**	**111**	P	**P**	**17 44 02.5**	**+0.9**
	0.6nm,0.7s,mb3.4,baz=320,slow=6.5,SNR=8.3						
MDJ	**Mudanjiang**	**46.84**	**287**	P	**P**	**17 44 13.5**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,54nm,3.1s						
ZALV	**Zalesovo Beam**	**57.20**	**323**	P	**P**	**17 45 30.4**	**-1.7**
	comp=Z,0.4nm,0.3s,mb4.0,baz=47,slow=8.5,SNR=2.7						

*THE **31** 17:56:05.1, 36°.00N×21°.17E, h69km±14km, ML4.1/1, Error ellipse: s-maj=15.5km s-min=1.9km az=32.0*
*NEIC **31** 17:56:07.0, 36°.05N×21°.82E, h5km, MD3.5(ATH), After ATH.*
*ATH **31** 17:56:07.0, 36°.05N×21°.82E, h5km, MD3.5/9*
*CSEM **31** 17:56:10.1±0.8, 36°.23N×22°.04E, h2km, MD3.5, Error ellipse: s-maj=18.9km s-min=7.8km az=51.0*
ISC 31 17:56:06.8±2.0, 36°.02N±0°.08×21°.8E±0°.1, h0km±9km, n28, σ0°.90/40, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.87**	**357**	*e*PB	**Pg**	**17 56 23.6**	**0.0**
PYL				*e*SB	**Sg**	**17 56 35.0**	**+0.1**
PYL	**PYLOS**	**0.87**	**357**	P	**Pg**	**17 56 23.0**	**-0.6**
PYL				S	**Sg**	**17 56 37.5**	**+2.6**
PYL	**PYLOS**	**0.87**	**357**	P	**Pg**	**17 56 23.0**	**-0.6**
PYL	**PYLOS**	**0.87**	**357**	*e*Pb	**Pg**	**17 56 23.6**	**0.0**
PYL				*e*Sb	**Sg**	**17 56 35.0**	**+0.1**
PYL				S	**Sg**	**17 56 37.5**	**+2.6**
KYTH	**Kithira**	**1.03**	**75**	*e*PB	**Pg**	**17 56 26.5**	**-0.1**
KYTH	**Kithira**	**1.03**	**75**	*e*Pb	**Pg**	**17 56 26.5**	**-0.1**
VLI	**Veliai**	**1.15**	**53**	*e*PB	**Pg**	**17 56 28.5**	**-0.4**
VLI	**Veliai**	**1.15**	**53**	*e*Pb	**Pg**	**17 56 28.5**	**-0.4**
ITM	**Ithomi**	**1.16**	**5**	*e*PB	**Pg**	**17 56 28.7**	**-0.4**
ITM	**Ithomi**	**1.16**	**5**	P	**Pg**	**17 56 28.4**	**-0.7**
ITM				S	**Sg**	**17 56 45.3**	**+1.2**
ITM	**Ithomi**	**1.16**	**5**	P	**Pg**	**17 56 28.4**	**-0.7**
ITM	**Ithomi**	**1.16**	**5**	*e*Pb	**Pg**	**17 56 28.7**	**-0.4**
ITM				S	**Sg**	**17 56 45.3**	**+1.2**
VLX	**Vlachokerasia**	**1.42**	**19**	*e*PG	**Pn**	**17 56 32.6**	**-1.3**
VLX				*e*SB	**Sn**	**17 56 53.7**	**+0.3**
VLX	**Vlachokerasia**	**1.42**	**19**	P	**Pn**	**17 56 32.9**	**-1.0**
VLX				S	**Sn**	**17 56 53.5**	**+0.1**
VLX	**Vlachokerasia**	**1.42**	**19**	*e*Pg	**Pn**	**17 56 32.6**	**-1.3**
VLX	**Vlachokerasia**	**1.42**	**19**	P	**Pn**	**17 56 32.9**	**-1.0**
KARN	**Karanos**	**1.83**	**109**	P	**Pn**	**17 56 41.3**	**+1.8**
KARN				S	**Sg**	**17 57 10.5**	**+4.8**
KARN	**Karanos**	**1.83**	**109**	P	**Pn**	**17 56 41.3**	**+1.8**
KARN				S	**Sg**	**17 57 10.5**	**+4.8**
GUR	**Goura**	**1.96**	**13**	*e*PG	**Pb**	**17 56 43.0**	**-0.4**
GUR	**Goura**	**1.96**	**13**	*e*Pg	**Pb**	**17 56 43.0**	**-0.4**
RLS	**Riolos of Patr**	**2.05**	**353**	*e*PN	**Pb**	**17 56 44.9**	**0.0**
RLS	**Riolos of Patr**	**2.05**	**353**	*e*Pn	**Pb**	**17 56 44.9**	**0.0**
LTK	**Loutraki**	**2.20**	**25**	*e*PG	**Pb**	**17 56 47.3**	**-0.3**
LTK	**Loutraki**	**2.20**	**25**	*e*Pg	**Pb**	**17 56 47.3**	**-0.3**
EFP	**Efpalio**	**2.40**	**2**	*e*PN	**Pb**	**17 56 49.8**	**-1.1**
EFP	**Efpalio**	**2.40**	**2**	*e*Pn	**Pb**	**17 56 49.8**	**-1.1**
LAST	**Lasithi**	**3.12**	**105**	P	**Pn**	**17 56 58.4**	**+1.2**
LAST				S	**Sb**	**17 57 40.9**	**-0.8**
LAST	**Lasithi**	**3.12**	**105**	P	**Pn**	**17 56 58.4**	**+1.2**
LAST				S	**Sb**	**17 57 40.9**	**-0.8**

*NIED **31** 18:17:00, 34°.90N×135°.00E, h17km, Mw3.2 Best double couple: M0:6.54000×10^13 NP1:φs:53.00000°, δ83.00000°, λ-143.00000°. NP2:φs:318.00000°, δ53.00000°, λ-8.00000°.*
*ISCJB **31** 18:17:36.4±0.7, 34°.86N±0°.03×134°.97E±0°.04, h14km±5km, Error ellipse: s-maj=6.2km s-min=4.6km az=166.4*
*JMA **31** 18:17:36.6, 34°.86N×134°.97E, h14km, M3.7 Broadband fault plane solution: P waves. NP1:φs:308.00000°, δ55.00000°, λ-2.00000°. NP2:φs:39.00000°, δ89.00000°, λ-145.00000°. Principal axes: T Plg23.0000°, Azm168.0000°; N Plg55.0000°, Azm41.0000°; P Plg25.0000°, Azm270.0000°;*
JMA Felt II J1.
ISC 31 18:17:36.5±0.6, 34°.86N±0°.03×134°.97E±0°.04, h12km±5km, n9, σ0°.40/18, 6C-2D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIK	**Miki**	**0.09**	**125**	↓↓P	**Pg**	**18 17 39.5**	**+0.3**
JMIK				S	**Sg**	**18 17 41.5**	**+0.4**
JKS	**Kasai**	**0.16**	**321**	↑↑P	**Pg**	**18 17 40.6**	**+0.4**
JKS				S	**Sg**	**18 17 43.1**	**+0.3**
JAJ2	**Tsuna**	**0.44**	**189**	↑↑P	**Pg**	**18 17 45.3**	**+0.1**
JAJ2				S	**Sg**	**18 17 51.5**	**+0.4**
JWT	**Wachi**	**0.55**	**40**	↑↑P	**Pg**	**18 17 47.3**	**0.0**

0.3nm,0.4s,mb3.5,baz=353,slow=7.0,SNR=25
ULN Ulaanbaatar 41.05 340 *eP* **P 19 03 39.9 +0.8**
0.8nm,0.6s,mb3.7
SONM Songino Array 41.25 340 P **P 19 03 41.9 +1.2**
0.4nm,0.6s,mb3.4,baz=155,slow=6.8,SNR=4.3
STKA Stephens Creek 44.17 161 P **P 19 04 04.1 -0.4**
1.1nm,0.5s,mb3.8,baz=20,slow=16,SNR=5.1
STKA Stephens Creek 44.17 161 *eP* **P 19 04 04.1 -0.4**
0.8nm,1.0s,mb3.4
MK31 Makanchi Array 52.20 323 *eP* **P 19 05 05.2 -1.2**
MKAR Makanchi Array 52.20 323 P **P 19 05 06.4 +0.1**
0.8nm,0.7s,mb3.9,baz=117,slow=8.8,SNR=11
ZALV Zalesovo Beam 54.83 331 P **P 19 05 25.0 -0.4**
0.3nm,0.2s,mb3.9,baz=117,slow=5.3,SNR=2.4
KURK Kurchatov 56.25 326 P **P 19 05 35.1 -0.6**
0.7nm,0.6s,mb3.9,baz=125,slow=6.8,SNR=6.6
FINES FINESS Array B 86.10 332 P **P 19 08 35.6 0.0**
0.3nm,0.3s,mb3.7,baz=70,slow=4.9,SNR=8.5

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*ISCJB **31** 19:17:41.6±0.6, 38°.27N±0°.02×25°.97E±0°.03, h9km±4km, Error ellipse: s-maj=4.3km s-min=3.8km az=8.7*
*CSEM **31** 19:17:41.8±0.2, 38°.26N×25°.97E, h10km, ML3.1/6, Error ellipse: s-maj=3.9km s-min=3.8km az=162.0*
*ATH **31** 19:17:41.2, 38°.27N×25°.93E, h16km±3km, MD3.1/8*
*DDA **31** 19:17:41.7, 38°.26N×26°.03E, h7km±6km, Md3.2*
*NEIC **31** 19:17:42.0, 38°.35N×26°.05E, h21km, MD3.1(ISK), MD3.1(ATH), After ISK.*
*ISK **31** 19:17:42.1, 38°.36N×26°.02E, h18km, MD3.1*
*THE **31** 19:17:42.5, 38°.27N×26°.02E, h10km±1km, ML3.1/6, Error ellipse: s-maj=1.9km s-min=0.7km az=85.0*
ISC 31 19:17:42.2±0.6, 38°.27N±0°.02×25°.97E±0°.03, h12km±3km, n57, σ0°.84/86, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.13**	**30**	*eP*		**Pg**		**19 17 45.4**	**-0.1**
CHOS				*eS*	B		**Sg**	**19 17 47.8**	**0.0**
CHOS	**Chios island**	**0.13**	**30**	P		**Pg**		**19 17 45.4**	**-0.1**
CHOS				S			**Sg**	**19 17 47.5**	**-0.3**
CHOS	**Chios island**	**0.13**	**30**	P		**Pg**		**19 17 45.4**	**-0.1**
CHOS				S			**Sg**	**19 17 47.5**	**-0.3**
CHOS				*eS*	b		**Sg**	**19 17 47.8**	**0.0**
URLA	**Izmir**	**0.50**	**79**	*i P*		**Pg**		**19 17 51.1**	**-0.9**
URLA				*i S*		**Sg**		**19 17 59.0**	**+0.4**
URLA	**Izmir**	**0.50**	**79**	*i P*		**Pg**		**19 17 51.1**	**-0.9**
URLA				*i S*		**Sg**		**19 17 59.0**	**+0.4**
BLCB	**Balcova**	**0.85**	**82**	*eP*	G	**Pg**		**19 17 58.3**	**-0.3**
BLCB				*eS*	G	**Sg**		**19 18 09.8**	**0.0**
BLCB	**Balcova**	**0.85**	**82**	P		**Pg**		**19 17 58.1**	**-0.5**
BLCB	**Balcova**	**0.85**	**82**	*eP*	g	**Pg**		**19 17 58.3**	**-0.3**
BLCB				*eS*	g	**Sg**		**19 18 09.8**	**+0.1**
SMG	**Samos**	**0.89**	**129**	*eP*	N	**Pg**		**19 17 58.8**	**-0.5**
SMG	**Samos**	**0.89**	**129**	*eP*	n	**Pg**		**19 17 58.8**	**-0.5**
SIGR	**SIGRI**	**0.94**	**355**	P		**Pg**		**19 18 00.3**	**-0.1**
SIGR				S		**Sg**		**19 18 14.6**	**+1.9**
SIGR	**SIGRI**	**0.94**	**355**	P		**Pg**		**19 18 00.3**	**-0.1**
SIGR				S		**Sg**		**19 18 14.6**	**+1.9**
PRK	**Paraskevi**	**1.00**	**13**	*eP*	N	**Pg**		**19 18 01.3**	**-0.2**
PRK	**Paraskevi**	**1.00**	**13**	P		**Pb**		**19 18 01.2**	**-0.3**
PRK				S		**Sg**		**19 18 15.2**	**+0.6**
PRK	**Paraskevi**	**1.00**	**13**	P		**Pb**		**19 18 01.2**	**-0.3**
PRK				S		**Sg**		**19 18 15.2**	**+0.6**
IZM	**Izmir**	**1.02**	**82**	*eP*	G	**Pg**		**19 18 02.4**	**+0.5**
IZM				*eS*	G	**Sg**		**19 18 15.6**	**+0.4**
AYVA	**Ayvalik**	**1.18**	**28**	*i P*		**Pb**		**19 18 03.5**	**-1.1**
AYVA				*i S*		**Sb**		**19 18 20.6**	**+0.8**
AYVA	**Ayvalik**	**1.18**	**28**	*i P*		**Pb**		**19 18 03.5**	**-1.0**
AYVA				*i S*		**Sb**		**19 18 20.6**	**+0.8**
APE	**Apeiranthos**	**1.25**	**196**	*eP*	N	**Pn**		**19 18 04.7**	**-0.8**
APE	**Apeiranthos**	**1.25**	**196**	P		**Pn**		**19 18 05.0**	**-0.5**
APE				S		**Sb**		**19 18 22.0**	**+0.3**
APE	**Apeiranthos**	**1.25**	**196**	*eP*	n	**Pn**		**19 18 04.7**	**-0.8**
APE	**Apeiranthos**	**1.25**	**196**	P		**Pn**		**19 18 05.0**	**-0.5**
APE				S		**Sb**		**19 18 22.0**	**+0.3**
AKHS	**Akhisar**	**1.57**	**67**	*i P*		**Pn**		**19 18 10.4**	**+0.6**
AKHS				*i S*		**Sn**		**19 18 31.0**	**+1.0**
AKHS	**Akhisar**	**1.57**	**67**	*i P*		**Pn**		**19 18 10.4**	**+0.5**
AKHS				*i S*		**Sn**		**19 18 31.0**	**+0.9**
AKS	**Akhisar**	**1.57**	**67**	*eP*	N	**Pn**		**19 18 08.5**	**-1.4**
AKS	**Akhisar**	**1.57**	**67**	*eP*	n	**Pn**		**19 18 08.5**	**-1.3**
BOZC	**Bozcaada**	**1.57**	**2**	*i P*		**Pn**		**19 18 08.2**	**-1.7**
BOZC				*i S*		**Sn**		**19 18 29.4**	**-0.7**
EZN	**Ezine**	**1.58**	**10**	*eP*	N	**Pn**		**19 18 08.6**	**-1.4**
EZN	**Ezine**	**1.58**	**10**	*eP*	n	**Pn**		**19 18 08.6**	**-1.4**
AYDN	**Tasoluk**	**1.63**	**111**	*i P*		**Pn**		**19 18 12.7**	**+2.0**
AYDN				*i S*		**Sn**		**19 18 31.7**	**+0.1**
AYDN	**Tasoluk**	**1.63**	**111**	*i P*		**Pn**		**19 18 12.6**	**+1.9**
AYDN				*i S*		**Sn**		**19 18 31.7**	**+0.2**
PTL	**Penteli**	**1.68**	**263**	*eP*	N	**Pn**		**19 18 11.5**	**+0.2**
PTL	**Penteli**	**1.68**	**263**	*eP*	n	**Pn**		**19 18 11.5**	**+0.2**
LIA	**Limnos Island**	**1.74**	**340**	P		**Pn**		**19 18 11.9**	**-0.3**
LIA				S		**Sn**		**19 18 33.8**	**-0.5**
LIA	**Limnos Island**	**1.74**	**340**	P		**Pn**		**19 18 11.9**	**-0.3**
LIA				S		**Sn**		**19 18 33.8**	**-0.5**
VLY	**Voula,Athens**	**1.77**	**257**	*eP*	N	**Pn**		**19 18 12.8**	**+0.2**
VLY	**Voula,Athens**	**1.77**	**257**	*eP*	n	**Pn**		**19 18 12.8**	**+0.2**
AOS	**Alonnisos**	**1.87**	**299**	P		**Pn**		**19 18 14.1**	**+0.1**
AOS				S		**Sn**		**19 18 39.2**	**+1.7**
AOS	**Alonnisos**	**1.87**	**299**	P		**Pn**		**19 18 14.1**	**+0.1**
AOS				S		**Sn**		**19 18 39.2**	**+1.7**
GADA	**Gvkgeada**	**1.92**	**358**	*eP*	N	**Pn**		**19 18 13.7**	**-1.0**
GADA	**Gvkgeada**	**1.92**	**358**	*eP*	n	**Pn**		**19 18 13.7**	**-1.0**
BALY	**Balya**	**1.95**	**41**	*i P*		**Pn**		**19 18 17.1**	**+2.0**
BALY				*i S*		**Sn**		**19 18 46.0**	**+6.4**
BALY	**Balya**	**1.95**	**41**	*i P*		**Pn**		**19 18 17.1**	**+2.0**
DAT	**Datca**	**2.00**	**140**	*eP*	N	**Pn**		**19 18 16.3**	**+0.5**
DAT	**Datca**	**2.00**	**140**	*eP*	n	**Pn**		**19 18 16.3**	**+0.5**
KULA	**Kula-Manisa**	**2.13**	**83**	*eP*	N	**Pn**		**19 18 16.7**	**-0.8**
KULA	**Kula-Manisa**	**2.13**	**83**	*eP*	n	**Pn**		**19 18 16.7**	**-0.9**
OUR	**Ouranopolis**	**2.58**	**324**	P		**Pn**		**19 18 23.7**	**0.0**
OUR	**Ouranopolis**	**2.58**	**324**	P		**Pn**		**19 18 23.7**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.59**	**21**	*eP*	N	**Pn**		**19 18 22.9**	**-1.0**
RKY	**Sarkoy-Tekirda**	**2.59**	**21**	*eP*	n	**Pn**		**19 18 22.9**	**-1.0**
ALN	**Alexandroupoli**	**2.62**	**1**	P		**Pn**		**19 18 24.1**	**-0.3**
ALN				S		**Sn**		**19 18 56.5**	**+0.3**
ALN	**Alexandroupoli**	**2.62**	**1**	P		**Pn**		**19 18 24.1**	**-0.3**
ALN				S		**Sn**		**19 18 56.5**	**+0.3**
VLI	**Veliai**	**2.87**	**238**	*eP*	N	**Pn**		**19 18 28.0**	**+0.3**
VLI	**Veliai**	**2.87**	**238**	*eP*	n	**Pn**		**19 18 28.0**	**+0.3**
RDO	**Rodhopi**	**2.89**	**354**	*eP*	N	**Pn**		**19 18 28.2**	**+0.1**
RDO	**Rodhopi**	**2.89**	**354**	*eP*	n	**Pn**		**19 18 28.2**	**+0.1**

CASC 31 19:35:48.5±2.4, 8°.49N×82°.99W, h4km, MD3.6, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.24**	**312**	⇓*eP*			Pg	19 35 53.8	+0.6
ACR				⇓*iP*				19 35 53.8	
ACR				*eS*			Sg	19 35 57.7	+1.3
ACR				*eS*			Sg	19 35 58.6	+2.2
BRU2	**Volcan**	**0.42**	**44**	⇑*iP*			Pg	19 35 58.2	+1.6
BAR1		**0.81**	**337**	*eP*			Pg	19 36 03.8	-0.4
BAR1				*eP*				19 36 04.3	
BAR1				*eS*			Sg	19 36 16.8	+2.1
BUS	**Buena Vista**	**1.30**	**324**	*eP*			Pn	19 36 12.2	-1.3
BUS				⇑*iP*				19 36 12.4	
BUS				*eS*			Sg	19 36 30.7	+0.2
BUS				*eS*			Sg	19 36 31.0	+0.5
LAJ	**Bijagual**	**1.77**	**321**	*eP*			Pn	19 36 24.5	+4.6
CGA2	**Cerro Gallo 2**	**2.10**	**316**	*eP*			Pn	19 36 25.8	+1.3

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*NIED **31** 19:38:00, 24°.00N×123°.60E, h23km, Mw3.9 Best double couple: Mo9.09000×10^14 NP1:φ=50.00000°, δ71.00000°, λ82.00000°. NP2:φ=253.00000°, δ21.00000°, λ112.00000°.*
*IDC **31** 19:38:34.7±1.3, 24°.12N×123°.77E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.7/23, mbtmp3.7/11, MS3.0/3, Ms1 3.0/3, ms1mx2.4/35, Error ellipse: s-maj=50.7km s-min=23.1km az=70.0*
*NEIC **31** 19:38:36.2±0.6, 24°.02N×123°.73E, h10km, mb4.2/5, Error ellipse: s-maj=10.6km s-min=9.7km az=140.0*
*ISCJB **31** 19:38:39.6±0.5, 23°.93N±0°.06×123°.56E±0°.04, h42km±4km, mb3.7/16, MS3.0/2, Error ellipse: s-maj=10.3km s-min=4.6km az=161.2*
*JMA **31** 19:38:40.5±0.1, 23°.97N×123°.58E, h32km±1km, M3.9*
JMA Felt I J1.
ISC 31 19:38:40.0±0.6, 23°.94N±0°.06×123°.55E±0°.03, h30km±4km, n34, σ0°.88/41, mb3.7/16, MS3.0/2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.26**	**63**	P			**Pb**	**19 38 46.9**	**+0.1**
HATJ				S			**Sb**	**19 38 51.7**	**+0.2**
IRIF	**Iriomote-Funau**	**0.43**	**22**	P			**Pb**	**19 38 49.0**	**-0.2**
IRIF				S			**Sb**	**19 38 55.2**	**-0.4**
JKRS	**Kuro-shima**	**0.51**	**54**	P			**Pb**	**19 38 50.5**	**-0.1**
JKRS				S			**Sb**	**19 38 57.7**	**-0.2**
JIJ	**Ishigaki jima**	**0.69**	**52**	P			**Pb**	**19 38 52.7**	**-0.8**
JIJ				S			**Sb**	**19 39 01.4**	**-1.2**
YOJ	**Yonaguni jima**	**0.72**	**317**	P			**Pb**	**19 38 54.1**	**+0.1**
YOJ				S			**Sb**	**19 39 04.4**	**+0.8**
JTJ	**Tarama**	**1.26**	**56**	P			**Pn**	**19 39 02.5**	**+0.9**
JTJ				S			**Sn**	**19 39 18.1**	**+0.5**
NACB	**Ninganchiao**	**1.81**	**278**	*eP*			**Pn**	**19 39 09.1**	**0.0**
JMJ	**Miyako jima 2**	**1.81**	**61**	P			**Pn**	**19 39 10.8**	**+1.6**
JOGS	**Gusukube**	**1.88**	**64**	P			**Pn**	**19 39 11.7**	**+1.6**
YHNB	**Yeheng**	**2.12**	**291**	*eP*			**Pn**	**19 39 14.7**	**+1.4**
YULB	**Yu-li**	**2.14**	**256**	*eP*			**Pn**	**19 39 13.2**	**-0.5**
YULB				*eS*			**Sn**	**19 39 37.8**	**-1.4**
TATO	**Taipei**	**2.15**	**299**	*eP*			**Pn**	**19 39 14.4**	**+0.6**
SSLB	**Suanglung**	**2.38**	**267**	*eP*			**Pn**	**19 39 17.5**	**+0.4**
TWG	**Pinlang**	**2.54**	**244**	*eP*			**Pn**	**19 39 18.6**	**-0.6**
TWG				*eS*			**Sn**	**19 39 45.5**	**-3.6**
TPUB	**Ta-pu**	**2.75**	**257**	*eP*			**Pn**	**19 39 23.8**	**+1.7**
TPUB				*eS*			**Sn**	**19 39 54.8**	**+0.3**
KSRS	**Korea Array**	**13.98**	**15**	LR			LR	19 47 06.0	
	comp=Z,30nm,18.2s,baz=185,slow=37								
GUMO	**Guam**	**22.63**	**113**	LR			LR	19 50 32.9	
	comp=Z,50nm,19.4s,MS3.0,baz=261,slow=32								
CMAR	**Chiang Mai Arr**	**23.57**	**261**	P			**P**	**19 43 49.4**	**+1.1**
	0.2nm,0.5s,mb2.8,baz=66,slow=7.7,SNR=4.4								
SONM	**Songino Array**	**27.48**	**334**	P			**P**	**19 44 23.4**	**0.0**
	0.3nm,0.5s,mb3.1,baz=152,slow=11,SNR=4.5								
SONM							LR	19 55 51.2	
	comp=Z,38nm,19.3s,MS3.0,baz=174,slow=38								
MKAR	**Makanchi Array**	**40.03**	**315**	P			**P**	**19 46 11.5**	**-0.7**
	0.7nm,0.6s,mb3.6,baz=100,slow=12,SNR=5.1								
ZALV	**Zalesovo Beam**	**41.64**	**326**	P			**P**	**19 46 22.3**	**-3.1**
	0.7nm,0.4s,mb3.6,baz=120,slow=7.4,SNR=4.6								
KURK	**Kurchatov**	**43.68**	**319**	*eP*			**P**	**19 46 41.0**	**-1.1**
	2.2nm,0.8s,mb3.9								
UCH	**Uchtor**	**44.30**	**307**	*eP*			**P**	**19 46 47.6**	**+0.5**
	2.3nm,1.0s,mb3.9								
WRAB	**Tennant Creek**	**44.86**	**166**	*eP*			**P**	**19 46 51.3**	**-0.4**
	5.5nm,1.0s,mb4.3								
KBL	**Kabul**	**48.22**	**296**	P			**P**	**19 47 19.5**	**+1.4**
	2.9nm,0.7s,mb4.4								
ASAR	**Alice Springs**	**48.38**	**167**	P			**P**	**19 47 19.4**	**+0.2**
	0.3nm,0.6s,mb3.5,baz=352,slow=7.5,SNR=12								
BVAR	**Borovoye Array**	**49.24**	**320**	P			**P**	**19 47 25.0**	**-0.6**
	0.4nm,0.4s,mb3.8,baz=96,slow=8.9,SNR=3.2								
ARU	**Arti**	**56.61**	**323**	*eP*			**P**	**19 48 19.5**	**-0.4**
	2.0nm,0.6s,mb4.3								
FINES	**FINESS Array B**	**72.74**	**330**	P			**P**	**19 50 04.2**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=69,slow=5.6,SNR=7.3								
AKASG	**Malin Array Be**	**74.49**	**319**	P			**P**	**19 50 14.8**	**-0.8**
	0.5nm,0.5s,mb3.8,baz=67,slow=4.1,SNR=2.7								
BRTR	**Keskin Array B**	**75.06**	**307**	P			**P**	**19 50 19.3**	**+0.2**
	0.7nm,0.7s,mb3.7,baz=122,slow=5.6,SNR=5.8								
NB2	**NORSAR Subarra**	**79.44**	**333**	P			**P**	**19 50 42.3**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.8,baz=54,slow=5.9								
NOA	**NORSAR Array B**	**79.44**	**333**	P			**P**	**19 50 42.2**	**-1.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=57,slow=5.8,SNR=5.0								
GERES	**GERESS Array B**	**84.40**	**321**	P			**P**	**19 51 09.2**	**-0.3**
	comp=Z,0.1nm,0.3s,mb3.5,baz=58,slow=10.0,SNR=4.1								

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*ISCJB **31** 19:51:50.6±0.7, 36°.59N±0°.03×22°.65E±0°.04, h8km±5km, Error ellipse: s-maj=6.4km s-min=4.0km az=37.4*
*THE **31** 19:51:50.7, 36°.61N×22°.68E, h1km±2km, ML3.5/2, Error ellipse: s-maj=2.7km s-min=1.0km az=229.0*
*NEIC **31** 19:51:50.7, 36°.62N×22°.68E, h19km, MD3.4(ATH), After ATH.*
*CSEM **31** 19:51:50.6±0.2, 36°.61N×22°.63E, h5km, MD3.4, Error ellipse: s-maj=6.1km s-min=3.0km az=49.0*
*ATH **31** 19:51:50.7, 36°.62N×22°.68E, h19km±1km, MD3.4/13*
ISC 31 19:51:51.2±0.7, 36°.60N±0°.04×22°.65E±0°.04, h8km±5km, n47, σ0°.80/63, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.26**	**62**	*eP*			**Pg**	**19 51 56.3**	**0.0**
VLI				*eS*	B		**Sg**	**19 52 00.6**	**+0.8**
VLI	**Veliai**	**0.26**	**62**	*eP*	b		**Pg**	**19 51 56.3**	**0.0**
VLI				*eS*	b		**Sg**	**19 52 00.6**	**+0.8**
KYTH	**Kithira**	**0.44**	**135**	*eP*	B		**Pg**	**19 51 59.7**	**-0.1**
KYTH	**Kithira**	**0.44**	**135**	*eP*	b		**Pg**	**19 51 59.7**	**-0.1**
PYL	**PYLOS**	**0.79**	**292**	*eP*	N		**Pg**	**19 52 05.2**	**-1.1**
PYL				*eS*	N		**Sg**	**19 52 18.2**	**+1.6**
PYL	**PYLOS**	**0.79**	**292**	P			**Pg**	**19 52 05.0**	**-1.3**
PYL				S			**Sg**	**19 52 18.1**	**+1.5**
PYL	**PYLOS**	**0.79**	**292**	P			**Pg**	**19 52 05.0**	**-1.3**
PYL				S			**Sg**	**19 52 18.1**	**+1.5**
VLX	**Vlachokerasia**	**0.80**	**344**	*eP*	N		**Pg**	**19 52 05.6**	**-1.0**
VLX				*eS*	N		**Sg**	**19 52 16.5**	**-0.5**
VLX	**Vlachokerasia**	**0.80**	**344**	P			**Pg**	**19 52 05.6**	**-1.0**
VLX				S			**Sg**	**19 52 16.5**	**-0.5**
VLX	**Vlachokerasia**	**0.80**	**344**	P			**Pg**	**19 52 05.6**	**-1.0**
VLX				S			**Sg**	**19 52 16.5**	**-0.5**
ITM	**Ithomi**	**0.82**	**315**	*eP*	B		**Pg**	**19 52 05.8**	**-1.2**
ITM	**Ithomi**	**0.82**	**315**	P			**Pg**	**19 52 05.8**	**-1.2**
ITM				S			**Sg**	**19 52 19.1**	**+1.4**
ITM	**Ithomi**	**0.82**	**315**	P			**Pg**	**19 52 05.8**	**-1.2**
ITM				S			**Sg**	**19 52 19.1**	**+1.4**
GUR	**Goura**	**1.36**	**350**	*eP*	N		**Pn**	**19 52 15.7**	**-0.7**
GUR	**Goura**	**1.36**	**350**	P			**Pn**	**19 52 15.2**	**-1.2**
GUR				S			**Sb**	**19 52 35.7**	**+1.4**
GUR	**Goura**	**1.36**	**350**	P			**Pn**	**19 52 15.2**	**-1.2**
GUR	**Goura**	**1.36**	**350**	*eP*	n		**Pn**	**19 52 15.7**	**-0.7**
GUR				S			**Sb**	**19 52 35.7**	**+1.4**
LTK	**Loutraki**	**1.44**	**10**	*eP*	N		**Pn**	**19 52 17.6**	**0.0**
LTK	**Loutraki**	**1.44**	**10**	P			**Pn**	**19 52 17.2**	**-0.4**
LTK				S			**Sn**	**19 52 36.8**	**+0.1**
LTK	**Loutraki**	**1.44**	**10**	P			**Pn**	**19 52 17.2**	**-0.4**
LTK	**Loutraki**	**1.44**	**10**	*eP*	n		**Pn**	**19 52 17.6**	**0.0**
LTK				S			**Sn**	**19 52 36.8**	**+0.1**
VLY	**Voula,Athens**	**1.55**	**36**	*eP*	N		**Pn**	**19 52 19.1**	**+0.1**
VLY	**Voula,Athens**	**1.55**	**36**	*eP*	n		**Pn**	**19 52 19.1**	**+0.1**
KARN	**Karanos**	**1.57**	**139**	P			**Pn**	**19 52 19.6**	**+0.3**
KARN				S			**Sn**	**19 52 39.7**	**-0.2**
KARN	**Karanos**	**1.57**	**139**	P			**Pn**	**19 52 19.6**	**+0.3**
KARN				S			**Sn**	**19 52 39.7**	**-0.2**
LAKA	**Lakka**	**1.72**	**342**	P			**Pn**	**19 52 20.8**	**-0.6**
LAKA	**Lakka**	**1.72**	**342**	P			**Pn**	**19 52 20.8**	**-0.6**
VAM	**Vamos**	**1.73**	**133**	*eP*	N		**Pn**	**19 52 22.2**	**+0.7**
VAM	**Vamos**	**1.73**	**133**	*eP*	n		**Pn**	**19 52 22.2**	**+0.7**
PTL	**Penteli**	**1.74**	**33**	*eP*	N		**Pn**	**19 52 21.6**	**0.0**
PTL	**Penteli**	**1.74**	**33**	*eP*	n		**Pn**	**19 52 21.6**	**0.0**
DSF	**Desfina**	**1.81**	**357**	P			**Pn**	**19 52 22.0**	**-0.6**
DSF	**Desfina**	**1.81**	**357**	P			**Pn**	**19 52 22.0**	**-0.6**
KALE	**Kalithea**	**1.83**	**347**	P			**Pn**	**19 52 22.8**	**-0.1**
KALE	**Kalithea**	**1.83**	**347**	P			**Pn**	**19 52 22.8**	**-0.1**
EFP	**Efpalio**	**1.92**	**342**	P			**Pn**	**19 52 23.8**	**-0.3**
EFP	**Efpalio**	**1.92**	**342**	P			**Pn**	**19 52 23.8**	**-0.3**
VLS	**Valsamata**	**2.28**	**314**	*eP*	N		**Pn**	**19 52 30.0**	**+1.0**
VLS	**Valsamata**	**2.28**	**314**	*eP*	n		**Pn**	**19 52 30.0**	**+1.0**
APE	**Apeiranthos**	**2.36**	**78**	P			**Pn**	**19 52 29.9**	**-0.2**
APE	**Apeiranthos**	**2.36**	**78**	P			**Pn**	**19 52 29.9**	**-0.2**
LAST	**Lasithi**	**2.71**	**121**	P			**Pn**	**19 52 34.3**	**-0.6**
LAST	**Lasithi**	**2.71**	**121**	P			**Pn**	**19 52 34.3**	**-0.6**
THL	**Klokotos Trika**	**3.00**	**351**	*eP*	N		**Pn**	**19 52 38.3**	**-0.7**
THL	**Klokotos Trika**	**3.00**	**351**	*eP*	n		**Pn**	**19 52 38.3**	**-0.7**
KARP	**Karpathos**	**3.80**	**105**	*eP*	N		**Pn**	**19 52 51.4**	**+1.4**
KARP	**Karpathos**	**3.80**	**105**	*eP*	n		**Pn**	**19 52 51.4**	**+1.4**

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*HLW **31** 20:12:48.4, 37°.33N×31°.11E, h31km±26km, Ml3.4*
*ISCJB **31** 20:12:52.1±0.3, 37°.05N±0°.03×31°.07E±0°.04, h128km±4km, mb3.4/4, Error ellipse: s-maj=4.8km s-min=4.4km az=161.1*
*IDC **31** 20:12:52.6±1.2, 37°.06N×30°.91E, h114km±14km, mb3.1/4, mb1 3.0/8, mb1mx2.9/26, mbtmp3.0/8, Error ellipse: s-maj=19.6km s-min=10.6km az=144.0*
*ISK **31** 20:12:53.8, 37°.14N×31°.08E, h106km, MD3.2*
*NEIC **31** 20:12:53.2±0.4, 37°.06N×31°.03E, h118km±6km, MD3.1(ISK), Error ellipse: s-maj=7.7km s-min=6.9km az=168.0*
*CSEM **31** 20:12:53.1±0.1, 37°.07N×31°.06E, h122km±1km, MD3.2, Error ellipse: s-maj=3.8km s-min=3.5km az=106.0*
*DDA **31** 20:12:54.3, 37.21N×31°.16E, h7km±4km, Md3.1*
ISC 31 20:12:53.2±0.3, 37°.05N±0°.03×31°.07E±0°.04, h121km±4km, n80, σ1°.05/108, mb3.4/4, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.37**	**246**	*eP*	G		**Pn**	**20 13 09.9**	**-0.6**
ANTB	**Antalya**	**0.37**	**246**	*eP*	g		**Pn**	**20 13 09.9**	**-0.6**
SUTC	**Sutluce-Ispart**	**0.43**	**352**	*eP*	G		**Pn**	**20 13 10.0**	**-0.8**
SUTC				*eS*	G		**Sn**	**20 13 21.4**	**-2.8**
SUTC	**Sutluce-Ispart**	**0.43**	**352**	*eP*	g		**Pn**	**20 13 10.0**	**-0.8**
SUTC				*eS*	g		**Sn**	**20 13 21.4**	**-2.7**
BCK	**Bucak**	**0.56**	**317**	*eP*	G		**Pn**	**20 13 10.8**	**-0.7**
BCK	**Bucak**	**0.56**	**317**	*eP*	g		**Pn**	**20 13 10.8**	**-0.8**
KORT	**Korkueli**	**0.58**	**265**	*i P*			**Pn**	**20 13 12.2**	**+0.5**
KORT				*i S*			**Sn**	**20 13 27.3**	**+1.6**
KORT	**Korkueli**	**0.58**	**265**	*i P*			**Pn**	**20 13 12.2**	**+0.5**
KORT				*i S*			**Sn**	**20 13 27.3**	**+1.6**
ISP	**Isparta**	**0.91**	**331**	*eP*	G		**Pn**	**20 13 13.7**	**-0.7**
ISP	**Isparta**	**0.91**	**331**	*eP*	n		**Pn**	**20 13 14.2**	**-0.2**
ISP				*eS*	n		**Sn**	**20 13 29.4**	**-1.1**
ELL	**Elmali**	**0.98**	**252**	*eP*	G		**Pn**	**20 13 16.1**	**+1.0**
ELL	**Elmali**	**0.98**	**252**	*eP*	g		**Pn**	**20 13 16.1**	**+1.0**
HDMB	**Hadim**	**1.13**	**94**	*eP*	N		**Pn**	**20 13 17.6**	**+1.0**
HDMB	**Hadim**	**1.13**	**94**	*eP*	n		**Pn**	**20 13 17.6**	**+1.0**
GOLH	**Golhisar**	**1.22**	**279**	*i P*			**Pn**	**20 13 17.7**	**+0.2**
GOLH				*i S*			**Sn**	**20 13 37.4**	**+1.3**
GOLH	**Golhisar**	**1.22**	**279**	*i P*			**Pn**	**20 13 17.7**	**+0.2**
GOLH				*i S*			**Sn**	**20 13 37.3**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.26**	**275**	*eP*	N		**Pn**	**20 13 18.2**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.26**	**275**	*eP*	n		**Pn**	**20 13 18.2**	**+0.2**
GAZI	**Gazipasa**	**1.29**	**129**	*i P*			**Pn**	**20 13 19.5**	**+1.2**
GAZI				*i S*			**Sn**	**20 13 38.9**	**+1.5**
GAZI	**Gazipasa**	**1.29**	**129**	*i P*			**Pn**	**20 13 19.5**	**+1.2**
GAZI				*i S*			**Sn**	**20 13 38.9**	**+1.6**
KONT	**Konya--Tatoy**	**1.36**	**49**	*eP*	N		**Pn**	**20 13 18.8**	**-0.2**
KONT	**Konya--Tatoy**	**1.36**	**49**	*eP*	n		**Pn**	**20 13 18.8**	**-0.2**
AKAS	**Kas**	**1.44**	**236**	*i P*			**Pn**	**20 13 20.8**	**+0.8**
AKA

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	SNR=55						
KMY	**Karmoy**	**2.38**	**331**	*e*P	**Pn**	**20 14 31.8**	**-2.8**
KMY				*e*S	**Sn**	**20 14 58.5**	**-5.3**
KMY	**Karmoy**	**2.38**	**331**	*e*P	**Pn**	**20 14 31.8**	**-2.7**
	SNR=55						
KMY				*e*S	**Sn**	**20 14 58.5**	**-5.2**
	SNR=55						
STRU	**Stroemstad**	**2.70**	**45**	P	**Pn**	**20 14 39.8**	**+0.9**
KONO	**Kongsberg**	**2.72**	**23**	*e*S	**Sn**	**20 15 16.1**	**+4.1**
KONO	**Kongsberg**	**2.72**	**23**	*e*S	**Sn**	**20 15 16.1**	**+4.0**
	SNR=55						
NASU	**Vaermlandsnaes**	**3.49**	**57**	P	**Pn**	**20 14 51.2**	**+1.4**
VXJU	**Vaexsjoe**	**4.06**	**90**	P	**Pn**	**20 14 58.5**	**+0.9**
VXJU				S	**Sn**	**20 15 43.8**	**-1.3**
NB2	**NORSAR Subarra**	**4.33**	**25**	Pn	**Pn**	**20 15 02.2**	**+1.0**
	baz=205,slow=16						
NB2				Sn	**Sn**	**20 15 53.4**	**+1.7**
	baz=208,slow=28						
NB2				Lg		20 16 14.9	
NB2	**NORSAR Subarra**	**4.33**	**25**	Pn	**Pn**	**20 15 02.2**	**+0.9**
	baz=205,slow=14,SNR=7.8						
NB2				Sn	**Sn**	**20 15 53.3**	**+1.6**
	baz=208,slow=24,SNR=3.3						
NB2				Lg		20 16 14.9	
HFS	**Hagfors**	**4.38**	**45**	Pn	**Pn**	**20 15 03.1**	**+1.0**
	baz=231,slow=14						
HFS				Sn	**Sn**	**20 15 52.0**	**-1.1**
	baz=231,slow=28						
HFS				Lg		20 16 17.5	
	baz=230,slow=28						
HFS	**Hagfors**	**4.38**	**45**	Pn	**Pn**	**20 15 03.1**	**+1.0**
	baz=231,slow=14,SNR=6.8						
HFS				Sn	**Sn**	**20 15 52.0**	**-1.2**
	baz=231,slow=25,SNR=4.2						
HFS				Lg		20 16 17.5	
	baz=230,slow=27,SNR=3.4						
BSD	**Bornholm Skovb**	**4.62**	**113**	*i* P	**Pn**	**20 15 04.0**	**-1.3**
BSD				*i* S	**Sn**	**20 15 54.0**	**-4.9**
BSD				*i* LG		20 16 18.2	
BSD	**Bornholm Skovb**	**4.62**	**113**	*i* P	**Pn**	**20 15 04.0**	**-1.3**
	SNR=49						
BSD				*i* S	**Sn**	**20 15 54.0**	**-4.9**
OSKU	**Oskarshamn**	**4.67**	**86**	P	**Pn**	**20 15 06.9**	**+0.9**
OSKU				S	**Sn**	**20 16 00.0**	**-0.1**
ESKU	**Eskilstuna**	**5.13**	**62**	S	**Sn**	**20 16 12.8**	**+1.4**
NYNU	**Nynaeshamn**	**5.86**	**67**	S	**Sn**	**20 16 28.8**	**-0.6**
OSTU	**Oestervaala**	**5.88**	**54**	S	**Sn**	**20 16 29.3**	**-0.5**
RAF	**Rauma**	**8.28**	**56**	*e*P	**Pn**	**20 16 02.3**	**+6.8**
RAF				*e*S	**Sn**	**20 17 23.9**	**-5.1**
RAF				MSN		20 17 35.1	
	comp=Z,0.8nm,0.1s						
RAF	**Rauma**	**8.28**	**56**	P	**Pn**	**20 16 02.3**	**+6.8**
RAF				S	**Sn**	**20 17 23.9**	**-5.1**
	comp=Z,0.8nm,0.1s						
MTSE	**Matsula**	**8.80**	**73**	*e*P	**Pn**	**20 16 08.3**	**+5.6**
MTSE				*e*S	**Sn**	**20 17 35.8**	**-6.0**
MTSE	**Matsula**	**8.80**	**73**	P	**Pn**	**20 16 08.2**	**+5.5**
MTSE				S	**Sn**	**20 17 35.7**	**-6.1**
MEF	**Metsahovi**	**9.30**	**64**	*e*P	**Pn**	**20 16 15.8**	**+6.3**
MEF				*e*S	**Sn**	**20 17 47.8**	**-6.1**
MEF				MSN		20 17 58.9	
	comp=Z,0.7nm,0.2s						
MEF	**Metsahovi**	**9.30**	**64**	P	**Pn**	**20 16 15.7**	**+6.3**
MEF				S	**Sn**	**20 17 47.7**	**-6.2**
	comp=Z,0.7nm,0.2s						
VAF	**Ylistaro**	**9.57**	**46**	*e*P	**Pn**	**20 16 21.8**	**+8.6**
VAF				*e*S	**Sn**	**20 17 58.3**	**-2.3**
VAF				MSN		20 18 10.8	
	comp=Z,0.4nm,0.2s						
VAF	**Ylistaro**	**9.57**	**46**	P	**Pn**	**20 16 21.7**	**+8.5**
VAF				S	**Sn**	**20 17 58.3**	**-2.3**
	comp=Z,0.4nm,0.2s						
KEF	**Keuruu**	**10.09**	**53**	*e*P	**Pn**	**20 16 27.1**	**+6.8**
KEF				*e*S	**Sn**	**20 18 07.4**	**-5.9**
KEF				MSN		20 18 13.1	
	comp=Z,0.5nm,0.2s						
KEF	**Keuruu**	**10.09**	**53**	P	**Pn**	**20 16 27.1**	**+6.8**
KEF				S	**Sn**	**20 18 07.4**	**-5.9**
	comp=Z,0.5nm,0.2s						
FIA0	**FINESS Array S**	**10.39**	**58**	Pn	**Pn**	**20 16 24.8**	**+0.3**
	baz=259,slow=14						
FIA0				Sn	**Sn**	**20 18 15.1**	**-5.7**
	baz=241,slow=22						
FIA0	**FINESS Array S**	**10.39**	**58**	*e*P	**Pn**	**20 16 30.5**	**+6.1**
FIA0				*e*S	**Sn**	**20 18 14.4**	**-6.4**
FIA0				MSN		20 18 25.2	
	comp=Z,0.3nm,0.2s						
FIA0	**FINESS Array S**	**10.39**	**58**	Pn	**Pn**	**20 16 24.8**	**+0.4**
	baz=259,slow=13						
FIA0	**FINESS Array S**	**10.39**	**58**	P	**Pn**	**20 16 30.5**	**+6.1**
FIA0				S	**Sn**	**20 18 14.4**	**-6.4**
	comp=Z,0.3nm,0.2s						
KAF	**Kangasniemi**	**10.70**	**55**	*e*P	**Pn**	**20 16 35.8**	**+7.1**
KAF				*e*S	**Sn**	**20 18 22.5**	**-5.8**
KAF				MSN		20 18 26.6	
	comp=Z,0.4nm,0.2s						
KAF	**Kangasniemi**	**10.70**	**55**	P	**Pn**	**20 16 35.7**	**+7.1**
KAF				S	**Sn**	**20 18 22.5**	**-5.8**
	comp=Z,0.4nm,0.2s						
SUF	**Sumiainen**	**10.85**	**51**	*e*P	**Pn**	**20 16 38.1**	**+7.4**
SUF				*e*S	**Sn**	**20 18 24.9**	**-7.1**
SUF				MSN		20 18 33.7	
	comp=Z,0.4nm,0.2s						
SUF	**Sumiainen**	**10.85**	**51**	P	**Pn**	**20 16 38.0**	**+7.3**
SUF				S	**Sn**	**20 18 24.8**	**-7.1**
	comp=Z,0.4nm,0.2s						
ARA0	**ARCESS Array S**	**14.70**	**25**	Pn	**Pn**	**20 17 19.1**	**-4.1**

KRSC ***31*** *21:10:02.9±0.3, 51˚.47N×159˚.90E, h33km±33km, ML5.2*
BJI ***31*** *21:10:05.3, 51˚.83N×159˚.08E, h30km, mB4.9/26, mb4.8/39, Ms4.6/33, Ms7.4/33*
ISCJB ***31*** *21:10:06.4±0.6, 51˚.56N±0˚.04×159˚.29E±0˚.06, h44km±3km, mb4.8/164, MS4.2/43, Error ellipse: s-maj=8.1km s-min=4.1km az=135.7*
MOS ***31*** *21:10:06.2±1.0, 51˚.60N×159˚.16E, h40km, mb5.0/78, MS4.4/22, Error ellipse: s-maj=9.1km s-min=3.9km az=99.4*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
NEIC ***31*** *21:10:07.6±0.9, 51˚.59N×159˚.24E, h40km±6km, mb4.8/79, Error ellipse: s-maj=8.0km s-min=5.2km az=144.0*
IDC ***31*** *21:10:08.9±2.5, 51˚.68N×159˚.30E, h52km±21km, mb4.4/33, mb1 4.5/34, mb1mx4.5/37, mbtmp4.4/34, ML4.3/1, MS4.1/15, Ms1 4.1/15, ms1mx3.9/27, Error ellipse: s-maj=16.5km s-min=11.5km az=151.0*
SZGRF ***31*** *21:10:14.0, 52˚.77N×160˚.04E, h33km, mb4.8, Off east coast of Kamchatka Peninsula, Russia*
ISC 31 21:10:08.9±0.6, 51˚.63N±0˚.04×159˚.25E±0˚.06, h48km±3km, h40km±2.6km:pP-P, n434, σ1§00/451, mb4.8/164, MS4.2/43, 42C-17D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.19**	**246**	*e*PN	**Pn**	**21 10 39.1**	**-3.6**
SKR				*e*S	**Sn**	**21 11 02.5**	**-6.1**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				smax			
	comp=N,5μm,0.5s						
SKR				smax			
	comp=E,5μm,0.5s						
SKR				smax			
	comp=N,10μm,2.0s						
SKR				smax			
	comp=E,10μm,2.0s						
SKR				MLR	MLR		
	comp=E,11μm,12.0s						
SKR				MLR	MLR		
	comp=Z,10μm,12.0s						
GNL	**Ganaly**	**2.22**	**339**	*e*P	**Pn**	**21 10 43.9**	**+0.8**
KII	**Karymskiy**	**2.41**	**3**	*e*P	**Pn**	**21 10 45.5**	**-0.3**
KII				*i* S	**Sn**	**21 11 15.6**	**+1.5**
ALID	**Alaid**	**2.45**	**253**	*e*P	**Pn**	**21 10 47.2**	**+0.9**
ALID				*i* S	**Sn**	**21 11 18.6**	**+3.7**
MKZ	**Mys Kozlova**	**3.29**	**26**	*e*P	**Pn**	**21 10 53.8**	**-4.0**
MKZ				*i* S	**Sn**	**21 11 30.4**	**-5.2**
TUMR	**Tumrok**	**3.70**	**8**	*e*P	**Pn**	**21 11 02.8**	**-0.6**
KMNR	**Kamenistaya**	**4.18**	**8**	*e*P	**Pn**	**21 11 09.5**	**-0.4**
BZMR	**Bezymyannaya**	**4.38**	**9**	*e*P	**Pn**	**21 11 12.5**	**-0.2**
KIRR	**Kirishev**	**4.38**	**8**	*e*P	**Pn**	**21 11 12.8**	**+0.1**
KPT	**Kopyto**	**4.38**	**7**	*e*P	**Pn**	**21 11 12.8**	**0.0**
KOZ	**Kozyrevsk**	**4.45**	**4**	*e*P	**Pn**	**21 11 14.4**	**+0.7**
KOZR	**Kozyr**	**4.46**	**5**	PN	**Pn**	**21 11 14.4**	**+0.6**
ZLN	**Zelenaya**	**4.49**	**11**	*e*P	**Pn**	**21 11 13.9**	**-0.3**
CIRR	**Tsirk**	**4.58**	**11**	*e*P	**Pn**	**21 11 15.9**	**+0.4**
SRDR	**Sredinnyy**	**4.71**	**3**	*e*P	**Pn**	**21 11 17.2**	**0.0**
KLY	**Klyuchi**	**4.76**	**9**	*e*P	**Pn**	**21 11 16.9**	**-1.1**
KBTR	**Krutoberegovo**	**5.05**	**23**	*e*P	**Pn**	**21 11 18.7**	**-3.2**
KBTR				*i* S	**Sn**	**21 12 13.8**	**-5.0**
BDR	**Baidarnaya**	**5.08**	**12**	*e*P	**Pn**	**21 11 19.9**	**-2.4**
SMKR	**Semkarok**	**5.13**	**14**	*e*P	**Pn**	**21 11 22.3**	**-0.7**
SRKR	**Sorokina**	**5.16**	**12**	*e*P	**Pn**	**21 11 23.2**	**-0.2**
UGL	**Uglegorsk**	**11.27**	**264**	*e*PN	**Pn**	**21 12 52.5**	**+5.4**
UGL				pmax	pmax		
	comp=Z,57nm,0.9s						
UGL				MLR	MLR		
	comp=N,2μm,18.0s						
UGL				MLR	MLR		
	comp=E,800nm,18.0s						
YSS	**Yuzh-Sakhalins**	**11.74**	**253**	*e*PN	**Pn**	**21 12 56.2**	**+2.7**
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
ASAJ	**Asahikawa**	**13.45**	**243**	P	**Pn**	**21 13 16.8**	**-0.1**
	comp=E,2.0nm,0.3s,baz=67,slow=12,SNR=17						
ASAJ	**Asahikawa**	**13.45**	**243**	PN	**Pn**	**21 13 16.8**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**14.59**	**235**	⇑*e*P	**Pn**	**21 13 29.6**	**-2.6**
ERM	**Erimo**	**14.59**	**235**	*e*Pn	**Pn**	**21 13 29.4**	**-2.9**
HABR	**Khabarovsk**	**15.84**	**268**	P	Px	21 14 00.3	
HABR				MLR	MLR		
	comp=N,543nm,14.0s						
HABR				MLR	MLR		
	comp=Z,1μm,17.0s						
HABR				MLR	MLR		
	comp=E,996nm,16.0s						
BILL	**Bilibino**	**16.82**	**9**	*e*P	**Pn**	**21 13 59.7**	**-0.8**
BILL				pmax	pmax		
	comp=N,7.0nm,1.0s						
KLR	**Kul'dur**	**17.65**	**273**	*e*P	**Pn**	**21 14 09.4**	**-1.5**
KLR				pmax	pmax		
	comp=E,68nm,1.2s						
KLR				pmax	pmax		
	comp=Z,56nm,1.2s						
KLR				MLR	MLR		
	comp=E,700nm,13.5s						
KLR				MLR	MLR		
	comp=Z,2μm,13.5s						
YAK	**Yakutsk**	**19.06**	**315**	*c i*P	**Pn**	**21 14 25.2**	**-2.7**
YAK				pmax	pmax		
	comp=E,54nm,1.1s						
YAK				pmax	pmax		
	comp=Z,125nm,0.8s						
YAK				pmax	pmax		
	comp=N,25nm,1.3s						
YAK				MLR	MLR		
	comp=N,490nm,13.0s						
YAK				MLR	MLR		
	comp=Z,630nm,13.0s						
YAK				MLR	MLR		
	comp=N,391nm,13.0s						
YAK	**Yakutsk**	**19.06**	**315**	*e*Pn	**Pn**	**21 14 25.4**	**-2.5**
	comp=N,162nm,0.8s						
VLA	**Vladivostok**	**20.29**	**256**	⇓*e*P	**P**	**21 14 38.4**	**-1.9**
VLA				pmax	pmax		
	comp=Z,138nm,3.5s						
CLNS	**Chul'man**	**20.60**	**298**	*e*P	**P**	**21 14 44.5**	**+1.0**
CLNS				pmax	pmax		
	comp=Z,18nm,1.0s						
CLNS				pmax	pmax		
	comp=E,22nm,0.9s						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
CLNS				MLR	MLR		
	comp=N,176nm,14.0s,MS3.9						
CLNS				MLR	MLR		
	comp=E,336nm,13.0s,MS3.9						
CLNS				MLR	MLR		
	comp=Z,386nm,13.0s,MS4.0						
MDJ	**Mudanjiang**	**20.90**	**262**	P	**P**	**21 14 44.3**	**-2.6**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,95nm,4.5s						
MDJ	**Mudanjiang**	**20.90**	**262**	*e*P	**P**	**21 14 45.1**	**-1.8**
	comp=Z,17nm,0.7s						
MAJO	**Matsushiro**	**21.24**	**233**	*e*P	**P**	**21 14 51.2**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,41nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**21.24**	**233**	*e*P	**P**	**21 14 51.2**	**+0.6**
	comp=Z,41nm,0.9s,mb4.8						
MAT	**Matsushiro**	**21.24**	**233**	P	**P**	**21 14 50.9**	**+0.3**
MAT				S	**S**	**21 18 36.0**	**-7.8**
MJAR	**Matsushiro Arr**	**21.24**	**233**	P	**P**	**21 14 51.1**	**+0.5**
	comp=Z,22nm,1.0s,mb4.5,baz=29,slow=10.0,SNR=59						
MJAR				LR	LR	21 23 32.1	
	comp=Z,433nm,21.0s,MS3.8,baz=60,slow=38						
MJAR	**Matsushiro Arr**	**21.24**	**233**	P	**P**	**21 14 51.1**	**+0.5**
MJAR				LR	LR	21 23 32.1	
CN2	**Changchun**	**23.88**	**264**	*e*P	**P**	**21 15 15.8**	**-1.9**
CN2				*e*pP		21 15 30.0	
CN2				*e*S	**S**	**21 19 22.5**	**-7.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,730nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=E,460nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=Z,580nm,16.0s,MS4.2						
TIXI	**Tiksi**	**24.21**	**337**	*e*P	**P**	**21 15 19.1**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,550nm,16.0s,MS4.1						
TIXI	**Tiksi**	**24.21**	**337**	*e*P	**P**	**21 15 19.3**	**-1.2**
	comp=Z,58nm,1.0s,mb5.0						
HIA	**Hailar**	**25.06**	**280**	*e*P	**P**	**21 15 27.6**	**-0.7**
HIA				pmax	pmax		
	comp=Z,76nm,0.9s						
HIA	**Hailar**	**25.06**	**280**	*e*P	**P**	**21 15 27.6**	**-0.7**
	comp=Z,76nm,0.9s,mb5.2						
TTA	**Tatalina**	**26.12**	**47**	*e*P	**P**	**21 15 37.8**	**0.0**
KSRS	**Korea Array**	**26.20**	**250**	P	**P**	**21 15 39.8**	**+1.0**
	comp=Z,10nm,0.8s,mb4.4,baz=45,slow=9.6,SNR=5.7						
KSRS				LR	LR	21 25 06.6	
	comp=Z,160nm,19.5s,MS3.6,baz=50,slow=34						
KSRS	**Korea Array**	**26.20**	**250**	P	**P**	**21 15 39.8**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
KSRS				MLR	MLR		
	comp=Z,160nm,19.5s,MS3.6						
BPAW	**Bear Paw Mtn.**	**28.44**	**45**	*e*P	**P**	**21 16 00.7**	**+2.1**
	comp=Z,2.8nm,0.9s,mb3.9						
BJI	**Beijing**	**31.72**	**266**	P	**P**	**21 16 27.3**	**-0.5**
BJI				S	**S**	**21 21 31.5**	**-2.5**
BJI				sS	sS	21 21 54.0	-1.2
BJI				pmax	pmax		
	comp=Z,16nm,0.4s,mb5.2						
BJI				LR	LR		
	comp=N,390nm,15.3s,MS4.3						
BJI				LR	LR		
	comp=E,340nm,17.5s,MS4.3						
BJI				LR	LR		
	comp=Z,210nm,16.2s,MS3.9						
EGAK	**Eagle**	**32.68**	**43**	*e*P	**P**	**21 16 33.4**	**-2.5**
	comp=Z,6.9nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**33.35**	**285**	*e*P	**P**	**21 16 41.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**33.35**	**285**	*e*P	**P**	**21 16 41.8**	**-0.2**
	comp=Z,6.2nm,0.8s,mb4.6						
SONM	**Songino Array**	**33.76**	**285**	P	**P**	**21 16 44.6**	**-0.9**
	comp=Z,3.3nm,0.7s,mb4.4,baz=45,slow=7.0,SNR=27						
SONM				PcP	PcP	21 19 23.9	+0.1
	comp=Z,1.4nm,0.7s,baz=122,slow=2.2,SNR=5.6						
SONM				LR	LR	21 32 04.1	
	comp=Z,706nm,18.3s,MS4.4,baz=53,slow=39						
SONM	**Songino Array**	**33.76**	**285**	P	**P**	**21 16 44.6**	**-0.9**
SONM						21 19 23.9	
TLY	**Talaya**	**33.79**	**292**	*e*P	**P**	**21 16 46.1**	**+0.4**
TLY				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
TLY				MLR	MLR		
	comp=Z,145nm,14.0s,MS3.9						
HHC	**Hu-ho-hao-te**	**34.13**	**271**	*e*P	**P**	**21 16 49.5**	**+0.7**
HHC				pP	pP	21 17 01.5	0.0
HHC				sP	sP	21 17 07.0	-0.2
HHC				PP	PP	21 18 03.8	-2.8
HHC				PcP	PcP	21 19 26.8	+1.8
HHC				S	**S**	**21 22 11.5**	**+0.2**
HHC				sS	sS	21 22 30.8	-1.8
HHC				ScP	ScP	21 23 07.8	+2.2
HHC				SS	SS	21 24 20.3	-20
HHC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
HHC				LR	LR		
	comp=N,500nm,14.9s,MS4.5						
HHC				LR	LR		
	comp=E,410nm,12.2s,MS4.5						
HHC				LR	LR		
	comp=Z,620nm,12.2s,MS4.5						
ZAK	**Zakamensk**	**34.51**	**291**	*e*P	**P**	**21 16 51.4**	**-0.6**
ZAK				*e*		21 19 26.1	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HYT	**Haines Junctio**	**35.00**	**50**	*e*P	**P**	**21 16 56.5**	**+0.4**
NJ2	**Nanjing**	**35.31**	**252**	*e*P	**P**	**21 17 00.5**	**+1.4**
NJ2				S	**S**	**21 22 28.0**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				pmax	pmax		
	comp=Z,130nm,4.1s						
NJ2				LR	LR		
	comp=N,280nm,13.2s,MS4.2						
NJ2				LR	LR		
	comp=E,90nm,12.1s,MS4.2						
MOY	**Mondy**	**35.31**	**294**	*e*P	**P**	**21 16 59.2**	**+0.3**
INK	**Inuvik**	**35.35**	**36**	P	**P**	**21 16 57.8**	**-1.3**
	comp=E,3.9nm,0.7s,mb4.4,baz=264,slow=7.4,SNR=9.7						
LZH	**Lanzhou**	**41.82**	**271**	*e*P	**P**	**21 17 54.5**	**+0.8**
LZH				pP	pP	21 18 08.5	+1.9
LZH				PP	PP	21 19 35.0	+4.1
LZH				*e*S	**S**	**21 24 08.0**	**+0.2**
LZH				*e*SS	SS	21 27 07.0	-8.0
LZH				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.6						
LZH				pmax	pmax		
	comp=Z,96nm,5.3s						
LZH				LR	LR		
	comp=N,350nm,15.2s						
LZH				LR	LR		
	comp=Z,520nm,16.8s,MS4.5						
ENH	**Enshi**	**42.22**	**259**	*e*P	**P**	**21 17 56.8**	**-0.2**
	comp=Z,32nm,0.9s,mb5.0						
GTA	**Gaotai**	**42.27**	**277**	*e*P	**P**	**21 17 57.5**	**+0.2**
GTA				pP	pP	21 18 01.8	-8.4
GTA				sP	sP	21 18 05.0	-11
GTA				PP	PP	21 19 40.0	+4.4
GTA				S	**S**	**21 24 13.0**	**-1.3**
GTA				SS	SS	21 27 16.5	-7.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,360nm,16.1s,MS4.5						
GTA				LR	LR		
	comp=E,410nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=Z,520nm,14.6s,MS4.5						
ZAA0	**Zalesovo Array**	**43.15**	**304**	*e*P	**P**	**21 18 02.2**	**-1.9**
ZALV	**Zalesovo Beam**	**43.15**	**304**	P	**P**	**21 18 01.9**	**-2.3**
	comp=Z,6.3nm,0.8s,mb4.4,baz=56,slow=6.8,SNR=23						
ZALV				PcP	PcP	21 19 51.3	-1.6
	comp=Z,2.4nm,0.7s,baz=66,slow=3.6,SNR=6.8						
ZALV				LR	LR	21 37 26.3	
	comp=Z,309nm,18.8s,MS4.2,baz=183,slow=38						
ZALV	**Zalesovo Beam**	**43.15**	**304**	P	**P**	**21 18 01.9**	**-2.3**
ZALV						21 19 51.3	
NVS	**Novosibirsk**	**43.53**	**305**	⇑*i*P	**P**	**21 18 05.5**	**-1.8**
NVS				*e*		21 19 51.9	
NVS				pmax	pmax		
	comp=E,24nm,0.9s						
NVS				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.0						
NVS				pmax	pmax		
	comp=N,11nm,1.0s						
YKA	**Yellowknife Ar**	**44.60**	**41**	P	**P**	**21 18 14.8**	**-0.9**
	comp=N,1.9nm,0.8s,mb4.0,baz=298,slow=7.7,SNR=6.6						
YKA				LR	LR	21 39 56.4	
	comp=N,16nm,18.9s,MS3.0,baz=5.0,slow=40						
RES	**Resolute Bay**	**44.88**	**21**	P	**P**	**21 18 17.1**	**-0.7**
	comp=N,3.3nm,0.7s,mb4.3,baz=310,slow=9.0,SNR=10						
RES	**Resolute Bay**	**44.88**	**21**	P	**P**	**21 18 17.1**	**-0.7**
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
RES	**Resolute Bay**	**44.88**	**21**	*e*P	**P**	**21 18 17.0**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.3						
CD2	**Chengdu**	**45.32**	**265**	P	**P**	**21 18 21.8**	**0.0**
CD2				PP	PP	21 20 09.0	+0.7
CD2				S	**S**	**21 24 56.0**	**-2.9**
CD2				SS	SS	21 28 11.3	-11
CD2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
CD2				pmax	pmax		
	comp=Z,110nm,5.3s						
CD2				LR	LR		
	comp=N,260nm,7.1s						
CD2				LR	LR		
	comp=Z,320nm,8.3s						
GYA	**Guiyang**	**46.69**	**258**	⇑*i*P	**P**	**21 18 33.3**	**+0.7**
GYA				PcP	PcP	21 20 06.5	+0.9
GYA				PP	PP	21 20 23.0	+0.2
GYA				ScP	ScP	21 23 55.0	+0.1
GYA				PcS	PcS	21 24 01.5	+0.9
GYA				S	**S**	**21 25 16.0**	**-2.6**
GYA				SS	SS	21 28 36.0	-9.0
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				LR	LR		
	comp=N,540nm,16.9s,MS4.7						
GYA				LR	LR		
	comp=E,460nm,17.6s,MS4.7						
GYA				LR	LR		
	comp=Z,480nm,16.9s,MS4.5						
WMQ	**Urumqi**	**46.98**	**290**	*e*P	**P**	**21 18 35.3**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,180nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=E,53nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,230nm,15.0s,MS4.3						
KURK	**Kurchatov**	**48.08**	**303**	*e*P	**P**	**21 18 41.7**	**-1.4**

KBS Kingsbay 48.26 352 *c iP* **P 21 18 44.4 +0.2**
KBS pmax pmax
comp=Z,25nm,0.7s,mb5.3
KBS Kingsbay 48.26 352 *eP* **P 21 18 44.7 +0.5**
comp=Z,29nm,0.8s,mb5.4
MK31 Makanchi Array 48.34 296 *eP* **P 21 18 44.0 -1.2**
MKAR Makanchi Array 48.34 296 P **P 21 18 43.8 -1.4**
comp=Z,2.4nm,0.6s,mb4.4,baz=54,slow=8.2,SNR=31
MKAR LR LR 21 40 11.4
comp=Z,197nm,18.6s,MS4.1,baz=234,slow=37
MKAR Makanchi Array 48.34 296 *i P* **P 21 18 44.0 -1.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
SPB4 Spitsbergen Ar 48.50 350 *eP* **P 21 18 45.8 -0.2**
KMI Kunming 50.06 260 ⇑P **P 21 18 59.5 +0.8**
KMI PP PP 21 20 54.0 +0.1
KMI S **S 21 26 01.5 -4.8**
KMI SS SS 21 29 31.0 -8.6
KMI pmax pmax
comp=Z,12nm,1.3s,mb4.8
KMI pmax pmax
comp=Z,68nm,3.7s
KMI LR LR
comp=N,250nm,16.0s,MS4.6
KMI LR LR
comp=E,360nm,11.0s,MS4.6
KMI LR LR
comp=Z,200nm,13.5s,MS4.3
QIZ Qiongzhong 50.42 249 P **P 21 19 00.3 -1.1**
QIZ S **S 21 26 10.3 -1.1**
QIZ pmax pmax
comp=Z,22nm,1.0s,mb5.1
QIZ LR LR
comp=Z,170nm,15.7s,MS4.2
BVAR Borovoye Array 50.90 309 P **P 21 19 02.9 -1.8**
comp=Z,19nm,0.7s,mb5.1,baz=55,slow=7.8,SNR=132
BVAR PcP PcP 21 20 20.2 -0.2
comp=Z,1.8nm,0.6s,baz=98,slow=2.1,SNR=4.2
BVAR LR LR 21 42 51.0
comp=Z,637nm,18.3s,MS4.7,baz=62,slow=39
BVAR Borovoye Array 50.90 309 P **P 21 19 02.9 -1.7**
BVAR 21 20 20.2
BRVK Borovoye 50.93 309 *c iP* **P 21 19 03.1 -1.7**
BRVK pmax pmax
comp=Z,26nm,0.8s,mb5.2
BRVK MLR MLR
comp=Z,632nm,16.0s,MS4.7
BRVK Borovoye 50.93 309 *eP* **P 21 19 03.5 -1.4**
DAG Danmarks Havn 51.87 359 ⇓*iP* **P 21 19 11.1 -0.4**
DAG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
DAG Danmarks Havn 51.87 359 ⇓*iP* **P 21 19 11.1 -0.4**
comp=Z,9.0nm,0.8s,mb4.8
SVE Sverdlovsk 53.00 317⇑*eP* **P 21 19 19.4 -0.7**
SVE *e*PPP 21 22 28.1
SVE pmax pmax
comp=Z,22nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,538nm,15.0s,MS4.7
LVZ Lovozero 53.85 337 *c iP* **P 21 19 25.2 -1.1**
LVZ pmax pmax
comp=Z,11nm,1.0s,mb4.7
LVZ MLR MLR
comp=Z,350nm,20.0s,MS4.4
LSA Lhasa 54.00 274 P **P 21 19 29.3 +1.4**
LSA Lhasa 54.00 274 *eP* **P 21 19 29.4 +1.5**
LSA pmax pmax
comp=Z,11nm,0.8s,mb4.8
LSA Lhasa 54.00 274 *eP* **P 21 19 29.4 +1.5**
comp=Z,11nm,0.8s,mb4.8
KEV Kevo 54.04 341 *eP* **P 21 19 25.2 -2.4**
KEV pmax pmax
comp=Z,12nm,0.8s,mb4.9
KEV Kevo 54.04 341 *ep* **P 21 19 25.2 -2.4**
comp=Z,12nm,0.8s,mb4.9
ARU Arti 54.13 318 *c iP* **P 21 19 26.9 -1.5**
ARU *e* 21 21 26.1
ARU S **S 21 26 59.0 -2.2**
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU MLR MLR
comp=Z,381nm,16.0s,MS4.5
ARU Arti 54.13 318 *eP* **P 21 19 27.1 -1.4**
comp=Z,8.9nm,0.6s,mb4.9
ARCES ARCESS Array B 54.52 342 P **P 21 19 30.2 -0.9**
comp=Z,19nm,0.8s,mb5.2,baz=32,slow=7.7,SNR=42
AAK Ala-Archa 55.27 297 *eP* **P 21 19 36.6 -0.3**
AAK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
AAK Ala-Archa 55.27 297 *eP* **P 21 19 36.6 -0.3**
comp=Z,3.5nm,0.6s,mb4.6
SUMG Summit 55.48 6 *eP* **P 21 19 38.0 0.0**
comp=Z,16nm,1.0s,mb5.0
EKS2 Erkin-Say 55.65 297 *eP* **P 21 19 39.0 -0.6**
comp=Z,6.0nm,0.8s,mb4.7
SHL Shillong 56.48 270 *eP* **P 21 19 47.0 +1.2**
KSH Kashi 56.50 293 *eP* **P 21 19 48.5 +2.8**
KSH *ep*P pP 21 20 03.5 +4.4
KSH *e*PcP PcP 21 20 44.0 +2.0
KSH *e*PP PP 21 21 55.5 +4.0
KSH *e*ScP ScP 21 24 36.5 -0.5
KSH *e*PcS PcS 21 24 43.5 +0.9
KSH *e*S **S 21 27 31.8 -1.5**
KSH *es*S sS 21 27 59.3 +3.6
KSH *e*ScS ScS 21 29 28.5 -2.0
KSH pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KSH pmax pmax
comp=Z,72nm,4.1s
KSH LR LR
comp=N,96nm,5.0s
KSH LR LR
comp=E,130nm,6.5s
KSH LR LR
comp=Z,100nm,5.3s
KKTK Khon Kaen 56.66 253 P **P 21 19 49.0 +1.8**
NVAR Mina Array Bea 56.74 69 P **P 21 19 47.4 -0.1**
comp=Z,0.6nm,0.8s,mb3.8,baz=299,slow=7.0,SNR=4.6
CM31 Chiang Mai Arr 57.38 258 *eP* **P 21 19 54.0 +1.8**
comp=Z,4.4nm,0.6s,mb4.7
CMAR Chiang Mai Arr 57.38 258 P **P 21 19 53.5 +1.4**
comp=Z,7.1nm,0.8s,mb4.8,baz=27,slow=7.2,SNR=66
CMAR LR LR 21 46 54.6
comp=Z,73nm,18.1s,MS3.8,baz=190,slow=38
ABKAR Akbulak array 58.35 311 *eP* **P 21 19 57.3 -1.3**
comp=Z,18nm,1.0s,mb5.1
AKTK Aktyubinsk 58.43 313 P **P 21 19 57.6 -1.5**
AKTO Aktyubinsk 58.43 313 P **P 21 19 57.6 -1.5**
comp=Z,3.3nm,0.5s,mb4.6,baz=64,slow=7.5,SNR=12
JOF Joensuu 58.68 335 *eP* **P 21 19 58.4 -2.3**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
JOF Joensuu 58.68 335 *ep* **P 21 19 58.4 -2.3**
comp=Z,5.9nm,0.4s,mb5.0
PDAR Pinedale Array 58.70 60 P **P 21 20 01.0 -0.1**
comp=Z,1.6nm,0.9s,mb4.0,baz=322,slow=4.5,SNR=9.8
NST Nakhon Sawan 58.80 255 P **P 21 19 55.0 -7.1**
KAF Kangasniemi 60.63 337 *ep* **P 21 20 12.1 -2.0**
comp=Z,12nm,0.6s,mb5.2,baz=31,slow=6.5
KLP Kalpa 60.65 285 *eP* **P 21 20 14.3 -0.4**
KLP AMb AMB 21 20 14.6
comp=Z,7.7nm,0.4s,mb5.1
RSSD Black Hills 60.66 55 *eP* **P 21 20 14.2 -0.4**
RSSD pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
RSSD Black Hills 60.66 55 *eP* **P 21 20 14.2 -0.4**
comp=Z,5.7nm,0.9s,mb4.7
SRU San Rafael 60.70 63 *eP* **P 21 20 15.0 0.0**
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SRU San Rafael 60.70 63 *eP* **P 21 20 14.9 0.0**
comp=Z,4.1nm,0.8s,mb4.6
FINES FINESS Array B 61.26 336 P **P 21 20 17.8 -0.6**
comp=Z,16nm,0.8s,mb5.2,baz=38,slow=7.4,SNR=65
FINES LR LR 21 50 55.6
comp=Z,269nm,18.6s,MS4.4,baz=21,slow=40
SMLA Simla 61.59 285 *ex* **P 21 20 19.0 -2.1**
MOS Moscow 62.61 327 *eP* **P 21 20 26.5 -1.0**
MOS pmax pmax
comp=Z,29nm,0.9s,mb5.4
BISR Bishrakh 63.25 283 *ex* x 21 20 19.1
OBN Obninsk 63.47 327⇓*eP* **P 21 20 32.5 -0.8**
OBN *e* 21 21 06.1
OBN *e* 21 22 50.1
OBN pmax pmax
comp=Z,24nm,1.7s,mb5.0
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.6
VSU Vasula 63.65 334 *c iP* **P 21 20 34.1 -0.3**
VSU pmax pmax
comp=Z,34nm,0.7s,mb5.5
SONA Sohna 63.70 283 *eP* **P 21 20 34.4 -0.8**
SONA AMb AMB 21 20 39.9
comp=Z,6.3nm,0.4s,mb5.0
KBL Kabul 63.93 293 *eP* **P 21 20 35.0 -1.6**
KBL pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KBL Kabul 63.93 293 *eP* **P 21 20 35.0 -1.6**
comp=Z,8.1nm,0.9s,mb4.8
KHET Khetri 64.60 284 *eP* **P 21 20 42.5 +1.4**
NB2 NORSAR Subarra 64.80 343 P **P 21 20 41.5 -0.4**
comp=Z,14nm,0.7s,mb5.1,baz=21,slow=6.9
NOA NORSAR Array B 64.80 343 P **P 21 20 41.4 -0.5**
comp=Z,14nm,0.8s,mb5.1,baz=21,slow=6.6,SNR=25
NOA LR LR 21 51 47.0
comp=Z,54nm,19.1s,MS3.8,baz=355,slow=39
VRHR Novokhopersk 64.87 322 *eP* **P 21 20 39.2 -3.3**
VRHR pmax pmax
comp=E,30nm,0.5s
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.6
VRHR pmax pmax
comp=N,50nm,0.6s
NAO01 NORSAR Array S 65.05 344 *eP* **P 21 20 42.9 -0.5**
comp=N,4.8nm,0.6s,mb4.7
HFS Hagfors 65.19 342 P **P 21 20 43.7 -0.6**
comp=N,5.0nm,0.4s,mb4.9,baz=56,slow=5.6,SNR=24
VSR Storozhevoye 65.71 323 *eP* **P 21 20 47.0 -0.9**
VSR pmax pmax
comp=Z,20nm,1.0s,mb5.1
VSR pmax pmax
comp=N,20nm,2.0s
VSR pmax pmax
comp=E,10.0nm,1.9s
VORD Divnogorie 65.86 323 *eP* **P 21 20 48.1 -0.8**
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.8s
IZAR Zarasai 66.13 333 *eP* **P 21 20 50.5 -0.1**
ISAL Salakas 66.32 333 *eP* **P 21 20 51.7 -0.1**
KONO Kongsberg 66.39 344 *eP* **P 21 20 52.1 -0.1**
KONO pmax pmax
comp=Z,29nm,1.4s,mb5.1
KONO Kongsberg 66.39 344 *eP* **P 21 20 52.1 0.0**
comp=Z,29nm,1.4s,mb5.1
IIGN Ignalina 66.49 333 *eP* **P 21 20 53.0 +0.1**
NACGM Naroch 66.72 332 *e* **P 21 20 52.0 -2.3**
BHPL Bhopal 67.15 279 *eP* **P 21 20 57.1 -0.4**
BHPL AMb AMB 21 20 58.2
comp=Z,29nm,0.7s,mb5.4
SCHQ Schefferville 67.19 27 P **P 21 20 56.0 -1.4**
comp=Z,3.5nm,0.8s,mb4.4,baz=354,slow=6.8,SNR=6.7
SCHQ LR LR 21 52 30.5
comp=Z,54nm,20.2s,MS3.8,baz=355,slow=38
SUW Suwalki 68.51 334 *eP* **P 21 21 04.9 -0.7**
SUW pmax pmax
comp=Z,45nm,1.1s,mb5.3
SUW Suwalki 68.51 334 *eP* **P 21 21 04.9 -0.7**
comp=Z,45nm,1.1s,mb5.3
MUD Monsted U'grnd 69.48 343 *i P* **P 21 21 11.1 -0.5**
MUD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MUD Monsted U'grnd 69.48 343 *i P* **P 21 21 11.1 -0.5**
comp=Z,10nm,0.9s,mb4.8
AKASG Malin Array Be 69.60 329 P **P 21 21 11.6 -0.9**
comp=Z,43nm,0.8s,mb5.5,baz=30,slow=6.1,SNR=95
AKASG Malin Array Be 69.60 329 *i P* **P 21 21 11.8 -0.6**
AKASG pmax pmax
comp=Z,43nm,0.8s
AKBB Malin Array Si 69.60 329 *eP* **P 21 21 11.7 -0.7**
AFI Afiamalu 69.95 150 LR LR 21 46 21.1
comp=Z,95nm,19.5s,MS4.0,baz=343,slow=31
KIV Kislovodsk 70.15 317⇑*eP* **P 21 21 17.3 +1.4**
KIV *e* 21 21 37.4
KIV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KIV MLR MLR
comp=Z,300nm,19.0s,MS4.6
ZEI Tsey 70.58 315 *eP* **P 21 21 16.9 -1.7**
ZEI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HYB Hyderabad 70.80 274 *i P* **P 21 21 20.0 -0.3**
TXAR Lajitas Array 71.70 66 P **P 21 21 24.3 -1.3**
comp=Z,1.5nm,0.8s,mb4.0,baz=300,slow=4.5,SNR=16
LVV L'vov 71.99 331 *eP* **P 21 21 24.3 -2.7**
GNI Garni 72.30 313 P **P 21 21 30.0 +1.0**
comp=Z,3.0nm,0.6s,mb4.4,baz=233,slow=22,SNR=4.5
GNI Garni 72.30 313 *i P* **P 21 21 31.1 +2.1**
GNI pmax pmax
comp=Z,14nm,1.2s
EKA Eskdalemuir Ar 72.41 350 P **P 21 21 29.2 -0.2**
comp=Z,5.7nm,0.6s,mb4.7,baz=18,slow=4.9,SNR=30
ESK Eskdalemuir 72.43 350 *i P* **P 21 21 32.6 +3.1**
KWP Kalwaria Pacla 72.55 332 ⇓P **P 21 21 30.1 -0.2**
KWP Kalwaria Pacla 72.55 332 ⇓*iP* **P 21 21 30.1 -0.2**
SIM Simferopol' 72.79 323 *eP* **P 21 21 33.1 +1.3**
SIM pmax pmax
comp=Z,19nm,0.8s,mb5.1
SIM MLR MLR
comp=Z,500nm,16.0s,MS4.9
OJC Ojcow 72.84 334 *i P* **P 21 21 31.8 -0.2**
OJC *e*PcP PcP 21 21 42.4 -6.6
POO Poona 72.88 278 *eP* **P 21 21 33.4 +0.7**
KIS Kishinev 72.94 327 *eP* **P 21 21 30.0 -2.7**
KIS MLR MLR
comp=Z,300nm,15.0s,MS4.7
KIS MLR MLR
comp=Z,300nm,16.0s
STHS Stebnicka Huta 73.17 333 *eP* **P 21 21 34.7 +0.7**
STHS pmax pmax
comp=Z,13nm,1.0s,mb4.8
STHS Stebnicka Huta 73.17 333 *eP* **P 21 21 34.7 +0.7**
comp=Z,13nm,1.0s,mb4.8
STHS Stebnicka Huta 73.17 333 *eP* **P 21 21 34.7 +0.7**
KSP Ksiaz 73.19 336 *eP* **P 21 21 34.2 +0.2**
KSP *e**PP pP 21 21 45.4 -2.5
KOLS Kolonicke sedl 73.30 332 *eP* **P 21 21 35.2 +0.4**
KOLS pmax pmax
comp=Z,16nm,1.2s,mb4.8
KOLS Kolonicke sedl 73.30 332 *eP* **P 21 21 35.2 +0.4**
comp=Z,16nm,1.2s,mb4.8
KOLS Kolonicke sedl 73.30 332 *eP* **P 21 21 35.2 +0.4**
CLL Collm 73.54 339⇑*iP* **P 21 21 35.9 -0.2**
CLL *e**PP pP 21 21 47.0 -3.0
CLL pmax pmax
comp=Z,15nm,1.0s,mb4.9
CLL MLR MLR
comp=Z,200nm,17.4s,MS4.5
CLL Collm 73.54 339⇑*iP* **P 21 21 35.9 -0.2**
comp=Z,15nm,1.0s,mb4.9
CLL *ep*P pP 21 21 47.0 -3.0
CLL LR LR
comp=Z,200nm,17.4s,MS4.5
CLL Collm 73.54 339⇑*iP* **P 21 21 35.9 -0.2**
comp=Z,15nm,1.0s,mb4.9
CLL *ep*P pP 21 21 47.0 -3.0
CLL *e*(PP) 21 24 48.0
CLL *e* 21 38 00.0
CLL Lm 21 58 00.0
comp=N,100nm,18.1s
CLL Lm 21 58 00.0
comp=E,100nm,19.8s
BUR08 Bucovina Ar. S 73.56 330 *eP* **P 21 21 36.5 +0.2**
BURAR Bucovina Array 73.58 330⇑P **P 21 21 36.6 +0.2**
BURAR Bucovina Array 73.58 330⇑*iP* **P 21 21 36.6 +0.2**
LEOM Leova 73.59 327 ⇓P **P 21 21 36.8 +0.3**
LEOM Leova 73.59 327 ⇓*iP* **P 21 21 36.8 +0.3**
KAD Karad 73.60 277 *eP* **P 21 21 37.3 +0.3**
DPC Dobruska-Polom 73.63 336 *eP* **P 21 21 36.9 +0.2**
DPC *ep*P pP 21 21 48.1 -2.5
DPC AMS AMS 21 59 40.0
comp=E,200nm,13.0s
OKC Ostrava-Krasne 73.63 335⇑*iP* **P 21 21 37.2 +0.5**
OKC *ep*P pP 21 21 48.9 -1.7
OKC AMS AMS 21 58 50.0
comp=E,200nm,14.6s
DZM Mont Dzumac 73.65 173 *e*LR LR 21 44 54.0
comp=E,99nm,22.9s
BRG Berggiesshubel 73.72 338 *eP* **P 21 21 37.3 0.0**
comp=E,4.3nm,0.9s,mb4.4
BRG *e* pP 21 21 48.4 -2.7
BRG
comp=E,3.2nm,0.8s
BRG
comp=N,144nm,13.7s
BRG
comp=E,95nm,13.9s
BRG
comp=Z,307nm,15.0s
BRG Berggiesshubel 73.72 338 *eP* **P 21 21 37.3 0.0**
BRG *e* pP 21 21 48.4 -2.7
MORC Moravsky Berou 73.85 335 *eP* **P 21 21 38.4 +0.4**
comp=Z,11nm,0.8s,mb4.8
MORC Moravsky Berou 73.85 335⇑*iP* **P 21 21 38.3 +0.3**
PVCC Panska Ves 73.90 337 ⇑AMS AMS 21 59 30.0
comp=Z,400nm,15.2s
TRPA Tarpa 73.94 331⇑*iP* **P 21 21 39.3 +0.8**
WTSB Winterswijk 74.19 343⇑*eP* **P 21 21 39.9 -0.1**
comp=Z,17nm,0.8s,mb5.0
KECS Kecovo 74.22 333 *eP* **P 21 21 40.7 +0.5**
KECS *e* pP 21 21 50.7 -3.4
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 74.22 333 *eP* **P 21 21 40.7 +0.5**
comp=Z,3.6nm,0.9s,mb4.3
KECS *e* pP 21 21 50.7 -3.4
KECS Kecovo 74.22 333 *eP* **P 21 21 40.7 +0.5**
KECS *ep*P pP 21 21 50.6 -3.5
PRU Pruhonice 74.41 337⇑*iP* **P 21 21 42.1 +0.9**
PRU *ep*P pP 21 21 54.0 -1.1
PRU AMS AMS 21 59 40.0
comp=Z,300nm,13.9s
MOX Moxa 74.47 339 *eP* **P 21 21 41.6 0.0**
MOX pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MOX Moxa 74.47 339 *eP* **P 21 21 41.6 0.0**
comp=Z,9.0nm,1.1s,mb4.6
TLCR 74.52 326⇑P **P 21 21 42.5 +0.6**
TLCR 74.52 326⇑*iP* **P 21 21 42.5 +0.6**
WRAB Tennant Creek 74.52 204 *eP* **P 21 21 41.7 -0.4**
WRAB pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
WRAB Tennant Creek 74.52 204 *eP* **P 21 21 41.7 -0.3**
comp=Z,6.6nm,0.8s,mb4.6
VRAC Vranov 74.52 336 P **P 21 21 42.6 +0.7**
comp=Z,12nm,0.8s,mb4.9,baz=24,slow=6.9,SNR=20
VRAC Vranov 74.52 336⇑*iP* **P 21 21 42.6 +0.7**
VRI Vrincioaia 74.63 328⇑P **P 21 21 42.8 +0.2**
VRI Vrincioaia 74.63 328⇑*iP* **P 21 21 42.8 +0.2**
VYHS Vyhne 74.67 334 *eP* **P 21 21 43.6 +0.8**
VYHS *e* pP 21 21 53.1 -3.6
VYHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VYHS Vyhne 74.67 334 *eP* **P 21 21 43.6 +0.8**
comp=Z,5.2nm,0.8s,mb4.5
VYHS *e* pP 21 21 53.1 -3.6
VYHS Vyhne 74.67 334 *eP* **P 21 21 43.6 +0.8**
VYHS *ep*P pP 21 21 53.1 -3.6
KOLL Kolacno 74.72 334 *eP* **P 21 21 43.9 +0.9**
KOLL Kolacno 74.72 334 *eP* **P 21 21 43.9 +0.9**
CFR Carcaliu 74.76 326 ⇓P **P 21 21 43.4 +0.1**
CFR Carcaliu 74.76 326 ⇓*iP* **P 21 21 43.4 +0.1**
TREC Trest 74.82 336⇑*iP* **P 21 21 44.1 +0.5**
TREC *ep*P pP 21 21 54.9 -2.6
TREC AMS AMS 21 59 00.0
comp=Z,200nm,19.3s
PSZ Piszkesteto 74.90 333 *eP* **P 21 21 45.0 +0.9**
comp=Z,7.9nm,0.8s,mb4.7
PSZ Piszkesteto 74.90 333⇑*iP* **P 21 21 44.9 +0.8**
DRGR 75.09 331⇑P **P 21 21 45.6 +0.4**
DRGR 75.09 331⇑*iP* **P 21 21 45.6 +0.4**
MLR Muntele Rosu 75.22 328 P **P 21 21 46.6 +0.6**
comp=Z,12nm,0.8s,mb4.9,baz=333,slow=3.4,SNR=8.1
MLR Muntele Rosu 75.22 328⇑*iP* **P 21 21 46.4 +0.4**
TIRR Tirgusor 75.29 326 *eP* **P 21 21 46.1 -0.3**
TIRR pmax pmax
comp=Z,29nm,0.8s,mb5.3
TIRR Tirgusor 75.29 326 *eP* **P 21 21 46.1 -0.3**
comp=Z,29nm,0.8s,mb5.3
TIRR Tirgusor 75.29 326 ⇓*iP* **P 21 21 46.8 +0.4**
ZST Bratislava 75.41 335 *eP* **P 21 21 48.5 +1.4**
ZST pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ZST Bratislava 75.41 335 *eP* **P 21 21 48.5 +1.4**
comp=Z,7.8nm,0.7s,mb4.8
ZST Bratislava 75.41 335 *eP* **P 21 21 48.5 +1.4**
KHC Kasperske Hory 75.43 337 *eP* **P 21 21 47.7 +0.5**
KHC pmax pmax
comp=Z,13nm,0.9s,mb4.9
KHC Kasperske Hory 75.43 337 *eP* **P 21 21 47.7 +0.5**
comp=Z,13nm,0.9s,mb4.9
KHC Kasperske Hory 75.43 337 *eP* **P 21 21 47.7 +0.5**
KHC AMS AMS 22 00 30.0
comp=Z,400nm,15.5s
GRA1 Grafenberg Arr 75.45 339 *eP* **P 21 21 47.9 +0.7**
comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 75.45 339 *eP* **P 21 21 47.9 +0.7**
comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 75.45 339 *eP* **P 21 21 47.9 +0.7**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.7
GRF Grafenberg Arr 75.45 339 *eP* **P 21 21 47.9 +0.7**
GRF pmax pmax
comp=Z,12nm,1.1s,mb4.7
HGN Heimansgroeve 75.50 343 *eP* **P 21 21 47.6 0.0**
comp=Z,16nm,1.2s,mb4.8
CVD Cernavoda 75.55 326 ⇓P **P 21 21 48.0 +0.1**
CVD Cernavoda 75.55 326 ⇓*iP* **P 21 21 48.0 +0.1**
MEM Membach 75.64 343 P **P 21 21 48.6 +0.3**
comp=Z,12nm,1.0s,mb4.8
GEC2 GERESS Array S 75.67 337 *eP* **P 21 21 48.8 +0.3**
comp=Z,933nm,0.8s
GERES GERESS Array B 75.67 337 P **P 21 21 48.5 0.0**
comp=Z,3.5nm,0.7s,mb4.4,baz=35,slow=5.0,SNR=37
GERES LR LR 21 59 48.1
comp=Z,136nm,20.1s,MS4.2,baz=117,slow=39
BCLA Clavier 75.95 343 P **P 21 21 50.3 +0.2**
CONA Conrad Observa 75.98 336 *i P* **P 21 21 51.3 +1.0**
comp=Z,11nm,1.0s,mb4.8,SNR=12
SNF Seneffe 76.04 344 P **P 21 21 51.0 +0.4**
TOD Tromm 76.05 341 *eP* **P 21 21 50.9 +0.2**
PSN Preselentsi 76.05 326 *i P* **P 21 21 51.5 +0.7**
GIVF Givet 76.34 343 *eP* **P 21 21 52.8 +0.5**
comp=Z,26nm,1.0s,mb4.8
GIVF Givet 76.34 343 *eP* **P 21 21 52.8 +0.5**
GIVF pmax pmax
comp=Z,13nm,1.0s,mb4.8
GIVF Givet 76.34 343 *eP* **P 21 21 52.8 +0.5**
comp=Z,13nm,1.0s,mb4.8
MENF Mencas 76.35 345 *eP* **P 21 21 54.7 +2.4**
DOU Dourbes 76.39 344 P **P 21 21 52.7 +0.1**
MOA Molln 76.46 337⇑*iP* **P 21 21 53.5 +0.5**
comp=Z,5.0nm,0.9s,mb4.5,SNR=6.9
BZS Buzias 76.48 331⇑P **P 21 21 53.3 +0.1**
BZS Buzias 76.48 331⇑*iP* **P 21 21 53.3 +0.1**
BAIF Baives 76.49 344 *eP* **P 21 21 53.2 +0.1**
comp=Z,14nm,0.8s,mb4.6
BAIF Baives 76.49 344 *eP* **P 21 21 53.2 +0.1**
BAIF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BAIF Baives 76.49 344 *eP* **P 21 21 53.2 +0.1**
comp=Z,6.8nm,0.8s,mb4.6
WLF Walferdange 76.52 342 P **P 21 21 54.2 +0.9**
ARSA Arzberg 76.70 336⇑*iP* **P 21 21 55.3 +0.9**
comp=Z,7.3nm,0.9s,mb4.6
PRD Provadia 76.75 326 *i P* **P 21 21 55.0 +0.3**
PKSM Moragy 76.81 333 ⇓P **P 21 21 55.0 0.0**
PKSM Moragy 76.81 333 ⇓*iP* **P 21 21 55.0 0.0**
LANF Langenberg 76.85 341 *eP* **P 21 21 55.1 -0.1**
SZH Strazhica 77.19 327 *i P* **P 21 21 56.8 -0.4**
SOKA Soboth 77.36 336⇑*iP* **P 21 21 58.8 +0.7**
comp=Z,12nm,1.1s,mb4.8
BFO Black Forest 77.36 341 *eP* **P 21 21 58.2 +0.1**
BFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BFO Black Forest 77.36 341 *eP* **P 21 21 58.2 +0.1**
comp=Z,6.0nm,0.9s,mb4.5
KBA Koelnbreinsper 77.41 337 *i P* **P 21 21 59.8 +1.4**
comp=Z,47nm,0.9s,mb5.4,SNR=22
BR131 Keskin Array S 77.42 320 *eP* **P 21 21 58.9 +0.3**
comp=Z,14nm,0.8s,mb5.0
BRTR Keskin Array B 77.42 320 P **P 21 21 58.5 -0.1**
comp=Z,16nm,0.9s,mb4.9,baz=43,slow=3.7,SNR=84
BRTR LR LR 22 04 46.1

comp=Z,62nm,18.5s,MS4.0,baz=229,slow=42
SPAK Spaichingen-Ko 77.48 340 *eP* **P 21 21 58.2 -0.5**
CDF Champ du Feu 77.50 341 *eP* **P 21 21 58.9 +0.1**
comp=Z,23nm,1.0s,mb4.8
CDF Champ du Feu 77.50 341 *eP* **P 21 21 58.9 +0.1**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 77.50 341 *eP* **P 21 21 58.9 +0.1**
comp=Z,11nm,1.0s,mb4.8
WTTA Wattenberg 77.64 338 ⇑ *iP* **P 21 22 00.6 +1.0**
comp=Z,19nm,1.2s,mb4.9
JMB Yambol 77.68 326 *iP* **P 21 22 00.6 +0.6**
MOTA Moosalm 77.69 338 ⇓ *iP* **P 21 22 00.8 +0.9**
comp=Z,19nm,1.2s,mb4.9,SNR=8.8
ECH Echery 77.71 341 *eP* **P 21 21 59.8 -0.2**
ECH Echery 77.71 341 *eP* **P 21 22 00.3 +0.3**
ECH pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
ECH Echery 77.71 341 *eP* **P 21 22 00.3 +0.3**
comp=Z,7.8nm,1.0s,mb4.6
MEZF Maizieres J'vi 77.84 343 *eP* **P 21 22 01.1 +0.4**
comp=Z,22nm,1.0s,mb4.8
MEZF Maizieres J'vi 77.84 343 *eP* **P 21 22 01.1 +0.4**
comp=Z,22nm,1.0s,mb5.0
FELD Feldberg im Sc 77.86 341 *eP* **P 21 22 01.0 +0.1**
ABTA Abfaltersbach 77.92 337 ⇑ *iP* **P 21 22 01.6 +0.4**
comp=Z,15nm,1.0s,mb4.8,SNR=7.8
THEF They Montfort 77.93 342 *eP* **P 21 22 01.2 0.0**
SEST Monte Rota 77.99 338 P **P 21 22 08.2 +6.6**
MOF Molkenrain 78.06 341 *eP* **P 21 22 02.0 0.0**
HAU Haudompre 78.07 342 *eP* **P 21 22 02.0 0.0**
comp=Z,24nm,1.1s,mb4.7
HAU *e*MLR MLR
comp=Z,150nm,17.5s,MS4.1
HAU Haudompre 78.07 342 *eP* **P 21 22 02.0 0.0**
HAU pmax pmax
comp=Z,12nm,1.1s,mb4.7
HAU MLR MLR
comp=Z,150nm,17.5s,MS4.4
HAU Haudompre 78.07 342 *eP* **P 21 22 02.0 0.0**
comp=Z,12nm,1.1s,mb4.7
HAU LR LR
comp=Z,150nm,17.5s,MS4.4
FETA Feichten 78.08 339 ⇑ *iP* **P 21 22 03.1 +1.0**
comp=Z,7.6nm,0.8s,mb4.7
HINF Hinteralfeld 78.15 341 *eP* **P 21 22 02.2 -0.3**
comp=Z,6.7nm,0.8s,mb4.3
HINF Hinteralfeld 78.15 341 *eP* **P 21 22 02.2 -0.3**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HINF Hinteralfeld 78.15 341 *eP* **P 21 22 02.2 -0.3**
comp=Z,3.3nm,0.8s,mb4.3
ASAR Alice Springs 78.21 204 P **P 21 22 02.8 -0.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=16,slow=5.6,SNR=27
BBS Basel-Blauen 78.35 341 *eP* **P 21 22 03.6 0.0**
DIM Dimitrovgrad 78.41 327 P **P 21 22 04.3 +0.3**
PGB Panagyurishte 78.42 328 *iP* **P 21 21 59.5 -4.6**
APPI Appiano 78.47 338 P **P 21 22 04.6 +0.3**
DAVOX Davos/Dischmat 78.50 339 P **P 21 22 05.6 +1.1**
comp=Z,7.7nm,0.8s,mb4.7,baz=351,slow=11,SNR=8.8
FLN La Foliniere 78.50 346 *eP* **P 21 22 05.3 +0.9**
comp=Z,22nm,0.9s,mb4.8
FLN *e*MLR MLR
comp=Z,132nm,17.2s,MS4.0
FLN La Foliniere 78.50 346 *eP* **P 21 22 05.3 +0.9**
FLN pmax pmax
comp=Z,11nm,0.9s,mb4.8
FLN MLR MLR
comp=Z,130nm,17.3s,MS4.3
FLN La Foliniere 78.50 346 *eP* **P 21 22 05.3 +0.9**
comp=Z,11nm,0.9s,mb4.8
FLN LR LR
comp=Z,130nm,17.3s,MS4.3
LDF La Druitiere 78.61 346 *eP* **P 21 22 05.8 +0.8**
comp=Z,16nm,1.1s,mb4.6
LDF La Druitiere 78.61 346 *eP* **P 21 22 05.8 +0.8**
LDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
LDF La Druitiere 78.61 346 *eP* **P 21 22 05.8 +0.8**
comp=Z,8.3nm,1.1s,mb4.6
VTS Vitosha 78.70 328 *iP* **P 21 22 05.6 0.0**
KDZ Kurdzhali 78.80 327 *iP* **P 21 22 06.5 +0.3**
GRR Gorron 78.92 347 *eP* **P 21 22 06.6 -0.1**
comp=Z,30nm,0.9s,mb4.9
GRR Gorron 78.92 347 *eP* **P 21 22 06.6 -0.1**
GRR pmax pmax
comp=Z,15nm,0.9s,mb4.9
GRR Gorron 78.92 347 *eP* **P 21 22 06.6 -0.1**
comp=Z,15nm,0.9s,mb4.9
LOR Lormes 79.24 343 *eP* **P 21 22 08.5 0.0**
comp=Z,18nm,0.8s,mb4.8
LOR *e*MLR MLR
comp=Z,134nm,18.0s,MS4.0
LOR Lormes 79.24 343 *eP* **P 21 22 08.5 0.0**
LOR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LOR MLR MLR
comp=Z,130nm,18.0s,MS4.3
LOR Lormes 79.24 343 *eP* **P 21 22 08.5 0.0**
comp=Z,9.0nm,0.8s,mb4.8
LOR LR LR
comp=Z,130nm,18.0s,MS4.3
SGMF Saint Gilles 79.28 348 *eP* **P 21 22 09.9 +1.2**
comp=Z,17nm,0.9s,mb4.7
SGMF Saint Gilles 79.28 348 *eP* **P 21 22 09.9 +1.2**
SGMF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SGMF Saint Gilles 79.28 348 *eP* **P 21 22 09.9 +1.2**
comp=Z,8.7nm,0.9s,mb4.7
ROSF Rostrenen 79.30 348 *eP* **P 21 22 08.9 +0.1**
comp=Z,20nm,1.1s,mb4.7
ROSF Rostrenen 79.30 348 *eP* **P 21 22 08.9 +0.1**
ROSF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ROSF Rostrenen 79.30 348 *eP* **P 21 22 08.9 +0.1**
comp=Z,9.8nm,1.1s,mb4.7
MIB Mutribah 79.37 305 *eP* **P 21 22 09.2 -0.3**
MIB AMb AMB 21 22 10.2
comp=Z,116nm,1.1s,mb5.7
UMR Umm Al-Rimmam 79.38 304 *eP* **P 21 22 08.8 -0.7**
UMR AMb AMB 21 22 09.8
comp=Z,58nm,0.7s,mb5.6
KKB Krupnik 79.39 328 *iP* **P 21 22 10.1 +0.7**
MMB Musomiste 79.43 328 *iP* **P 21 22 09.8 +0.2**
CABF La Chapelle 79.45 342 *eP* **P 21 22 10.0 +0.3**
comp=Z,22nm,1.1s,mb4.7
CABF La Chapelle 79.45 342 *eP* **P 21 22 10.0 +0.3**
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.7
CABF La Chapelle 79.45 342 *eP* **P 21 22 10.0 +0.3**
comp=Z,11nm,1.1s,mb4.7
HYF Humbligny 79.46 344 *eP* **P 21 22 10.1 +0.4**
SSF Saint Saulge 79.51 343 *eP* **P 21 22 09.9 0.0**
comp=Z,9.5nm,0.7s,mb4.5
SSF Saint Saulge 79.51 343 *eP* **P 21 22 09.9 0.0**
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SSF Saint Saulge 79.51 343 *eP* **P 21 22 09.9 0.0**
comp=Z,4.8nm,0.7s,mb4.5
KBD Kabd 79.69 304 *eP* **P 21 22 10.9 -0.4**
KBD AMb AMB 21 22 12.2
comp=Z,42nm,1.1s,mb5.3
QUIF Quistinic 79.70 348 *eP* **P 21 22 10.9 0.0**
AVF Avril sur Loir 79.80 343 *eP* **P 21 22 11.7 +0.2**
comp=Z,17nm,0.8s,mb4.7
AVF Avril sur Loir 79.80 343 *eP* **P 21 22 11.7 +0.2**
AVF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
AVF Avril sur Loir 79.80 343 *eP* **P 21 22 11.7 +0.2**
comp=Z,8.6nm,0.8s,mb4.7
SMF Signal de Mont 79.85 343 *eP* **P 21 22 11.9 +0.1**
comp=Z,30nm,1.3s,mb4.7
SMF Signal de Mont 79.85 343 *eP* **P 21 22 11.9 +0.1**
SMF pmax pmax
comp=Z,15nm,1.3s,mb4.8
SMF Signal de Mont 79.85 343 *eP* **P 21 22 11.9 +0.1**
comp=Z,15nm,1.3s,mb4.8
NAY Al-Naaiem 79.86 305 *eP* **P 21 22 11.4 -0.8**
NAY AMb AMB 21 22 12.9
comp=Z,42nm,1.1s,mb5.3
RDF Al-Radifah 79.97 304 *eP* **P 21 22 12.4 -0.4**
RDF AMb AMB 21 22 13.9
comp=Z,141nm,1.1s,mb5.8
BGF Bois d'Agland 80.11 344 *eP* **P 21 22 13.4 +0.2**
LPL La Plagne 80.37 341 *eP* **P 21 22 15.6 +1.0**
comp=Z,11nm,0.7s,mb4.6
LPL La Plagne 80.37 341 *eP* **P 21 22 15.6 +1.0**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
LPL La Plagne 80.37 341 *eP* **P 21 22 15.6 +1.0**
comp=Z,5.7nm,0.7s,mb4.6
LPG La Plagne 80.39 341 *eP* **P 21 22 16.0 +1.3**
comp=Z,20nm,0.9s,mb4.8
LPG La Plagne 80.39 341 *eP* **P 21 22 16.0 +1.3**
LPG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LPG La Plagne 80.39 341 *eP* **P 21 22 16.0 +1.3**
comp=Z,9.8nm,0.9s,mb4.7
TCF Toulx Ste Croi 80.48 344 *eP* **P 21 22 15.5 +0.3**
comp=Z,19nm,0.8s,mb4.8
TCF Toulx Ste Croi 80.48 344 *eP* **P 21 22 15.5 +0.3**
TCF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TCF Toulx Ste Croi 80.48 344 *eP* **P 21 22 15.5 +0.3**
comp=Z,9.6nm,0.8s,mb4.8
PLDF La Plantade 80.54 343 *eP* **P 21 22 17.1 +1.6**
AGO Saint Agoulin 80.55 343 *eP* **P 21 22 16.4 +0.8**
MFF Saint Martin d 80.56 346 *eP* **P 21 22 17.0 +1.4**
comp=Z,8.8nm,0.7s,mb4.5
MFF Saint Martin d 80.56 346 *eP* **P 21 22 17.0 +1.4**
MFF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
MFF Saint Martin d 80.56 346 *eP* **P 21 22 17.0 +1.4**
comp=Z,4.4nm,0.7s,mb4.5
GSCL Gusciola 80.63 338 P **P 21 22 19.3 +3.3**
FSSB Fossombrone 80.72 336 P **P 21 22 17.6 +1.1**
comp=Z,14nm,0.8s,mb5.0
BNI Bardonecchia 80.83 341 *eP* **P 21 22 17.9 +0.8**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BNI Bardonecchia 80.83 341 *eP* **P 21 22 17.9 +0.8**
comp=Z,4.9nm,0.8s,mb4.5
PYM Petit Puy Mans 80.86 343 *eP* **P 21 22 17.7 +0.4**
SSB Saint Sauveur 81.03 342 *eP* **P 21 22 16.9 -1.3**
SSB pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SSB Saint Sauveur 81.03 342 *eP* **P 21 22 16.9 -1.3**
comp=Z,3.9nm,0.7s,mb4.5
SNTG Esanatoglia 81.08 336 P **P 21 22 19.5 +1.0**
comp=Z,23nm,0.1s,mb6.1
ORIF Oris-en-Rattie 81.12 341 *eP* **P 21 22 18.5 -0.1**
comp=Z,13nm,0.9s,mb4.6
ORIF *e*MLR MLR
comp=Z,110nm,17.2s,MS4.0
ORIF Oris-en-Rattie 81.12 341 *eP* **P 21 22 18.5 -0.1**
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ORIF Oris-en-Rattie 81.12 341 *eP* **P 21 22 18.5 -0.1**
comp=Z,6.6nm,0.9s,mb4.6
MURB Monte Urbino 81.18 336 P **P 21 22 21.1 +2.1**
comp=Z,30nm,0.8s,mb5.3
ASS Assisi 81.34 336 P **P 21 22 21.0 +1.2**
comp=Z,25nm,0.1s,mb6.1
VIVF Saint-Julien-I 81.42 342 *eP* **P 21 22 20.9 +0.7**
comp=Z,13nm,0.9s,mb4.6
VIVF Saint-Julien-I 81.42 342 *eP* **P 21 22 20.9 +0.7**
VIVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VIVF Saint-Julien-I 81.42 342 *eP* **P 21 22 20.9 +0.7**
comp=Z,6.7nm,0.9s,mb4.6
NRCA Norcia 81.43 336 P **P 21 22 21.3 +1.0**
comp=Z,35nm,0.9s,mb5.3
TERO Teramo 81.50 335 P **P 21 22 21.1 +0.4**
comp=Z,16nm,0.9s,mb5.0
RJF Les Rejaudoux 81.55 344 *eP* **P 21 22 21.4 +0.5**
comp=Z,16nm,0.9s,mb4.6
RJF *e*MLR MLR
comp=Z,145nm,17.2s,MS4.1
RJF Les Rejaudoux 81.55 344 *eP* **P 21 22 21.4 +0.5**
RJF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
RJF MLR MLR
comp=Z,140nm,17.3s,MS4.4
RJF Les Rejaudoux 81.55 344 *eP* **P 21 22 21.4 +0.5**
comp=Z,8.1nm,0.9s,mb4.7
RJF LR LR
comp=Z,140nm,17.3s,MS4.4
MGAB Montegabbione 81.61 336 P **P 21 22 21.6 +0.3**
comp=Z,12nm,0.9s,mb4.8
SBF Sospel 81.81 340 *eP* **P 21 22 22.3 0.0**
comp=Z,17nm,0.7s,mb4.8
SBF Sospel 81.81 340 *eP* **P 21 22 22.3 0.0**
SBF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
SBF Sospel 81.81 340 *eP* **P 21 22 22.3 0.0**
comp=Z,8.3nm,0.7s,mb4.8
AQU L'Aquila 81.81 335 P **P 21 22 21.3 -1.0**
AQU pmax pmax
comp=Z,38nm,0.9s,mb5.3
AQU L'Aquila 81.81 335 P **P 21 22 21.3 -1.0**
comp=Z,38nm,0.9s,mb5.3
AQU L'Aquila 81.81 335 ⇓ *iP* **P 21 22 21.6 -0.7**
CAF Calviac 81.83 344 *eP* **P 21 22 23.3 +0.9**
comp=Z,18nm,0.8s,mb4.7
CAF Calviac 81.83 344 *eP* **P 21 22 23.3 +0.9**
CAF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CAF Calviac 81.83 344 *eP* **P 21 22 23.3 +0.9**
comp=Z,9.3nm,0.8s,mb4.8
FIAM Fiamignano 81.96 335 P **P 21 22 23.7 +0.6**
LFF La Frestale 82.04 345 *eP* **P 21 22 24.2 +0.7**
comp=Z,22nm,0.9s,mb4.8
LFF La Frestale 82.04 345 *eP* **P 21 22 24.2 +0.7**
LFF pmax pmax
comp=Z,11nm,0.9s,mb4.8
LFF La Frestale 82.04 345 *eP* **P 21 22 24.2 +0.7**
comp=Z,11nm,0.9s,mb4.8
PPT Papeete 82.06 131 *e*LR LR 21 48 49.8
comp=Z,116nm,23.2s
PPT Papeete 82.06 131 LR LR 21 55 57.7
comp=Z,250nm,19.3s,MS4.6,baz=69,slow=34
SMRF Simiane la Rot 82.08 341 *eP* **P 21 22 23.7 -0.1**
FRF La Foret Royal 82.26 340 *eP* **P 21 22 25.0 +0.3**
SDI San Donato 82.30 335 P **P 21 22 25.1 +0.2**
SDI pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SDI San Donato 82.30 335 P **P 21 22 25.1 +0.2**
comp=Z,10nm,0.7s,mb4.9
LASF Ste Croix 82.32 342 *eP* **P 21 22 25.2 +0.2**
comp=Z,12nm,1.0s,mb4.5
MMAI Mount Meron Ar 82.40 315 P **P 21 22 25.9 +0.3**
comp=Z,26nm,0.8s,mb5.2,baz=34,slow=6.5,SNR=37
ASF Jabal al Asfar 82.45 314 P **P 21 22 26.3 +0.4**
comp=Z,14nm,0.9s,mb4.9,baz=359,slow=0.3,SNR=22
LMR La Mourre 82.51 340 *eP* **P 21 22 25.9 -0.1**
PGF Pioggiola 82.71 338 *eP* **P 21 22 26.9 -0.1**
comp=Z,19nm,1.1s,mb4.7
PGF Pioggiola 82.71 338 *eP* **P 21 22 26.9 -0.1**
PGF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
PGF Pioggiola 82.71 338 *eP* **P 21 22 26.9 -0.1**
comp=Z,9.5nm,1.1s,mb4.7
TIP Timpagrande 83.82 332 *eP* **P 21 22 33.7 +0.9**
EPF Esparros 83.96 345 *eP* **P 21 22 33.7 +0.2**
comp=Z,7.8nm,0.8s,mb4.6
EPF Esparros 83.96 345 *eP* **P 21 22 33.7 +0.2**
EPF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
EPF Esparros 83.96 345 *eP* **P 21 22 33.7 +0.2**
comp=Z,3.9nm,0.8s,mb4.6
SJPF Ste Jean 84.13 346 *eP* **P 21 22 34.2 -0.1**
ETSF Etsaut 84.23 345 *eP* **P 21 22 34.6 -0.3**
comp=Z,13nm,1.0s,mb4.7
ETSF Etsaut 84.23 345 *eP* **P 21 22 34.6 -0.3**
ETSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ETSF Etsaut 84.23 345 *eP* **P 21 22 34.6 -0.3**
comp=Z,6.5nm,1.0s,mb4.7
IDI Anoyia 84.66 324 P **P 21 22 36.3 -0.9**
comp=Z,8.5nm,0.8s,mb4.9,baz=90,slow=2.0,SNR=4.1
CEL Celeste 84.92 332 *eP* **P 21 22 37.3 -1.1**
EIL Elat 85.45 314 P **P 21 22 41.2 +0.1**
comp=Z,13nm,0.9s,mb5.1,baz=328,slow=5.2,SNR=13
ESDC Sonseca Array 87.90 347 P **P 21 22 51.8 -1.1**
comp=Z,0.7nm,0.6s,mb4.1,baz=346,slow=4.8,SNR=6.9
KEST Kesra 89.09 336 P **P 21 23 01.5 +2.8**
comp=Z,5.4nm,0.8s,mb4.9,baz=336,slow=1.6,SNR=17
KEST LR LR 22 10 51.9
comp=Z,32nm,20.3s,MS3.7,baz=292,slow=41
TORD Torodi Ar. Bea 112.61 336 PP PP 21 29 15.3 -11
comp=Z,0.5nm,0.6s,baz=14,slow=7.6,SNR=3.6
PLCA Paso Flores 144.49 92 PKP PKPdf 21 29 37.8 -1.2
comp=Z,1.5nm,0.7s,baz=327,slow=4.5,SNR=4.3

CRAAG ***31*** *21:10:19.0,36.˚48N×4.˚83E,Ml3.3*
ISCJB ***31*** *21:10:21.1±0.7,36.˚66N±0.˚07×4.˚83E±0.˚05,h15km±13km,*
Error ellipse: s-maj=12.0km s-min=6.4km az=10.3
MDD ***31*** *21:10:21.8±0.4,36.˚55N×4.˚81E,h0km,mb3.9/10,Error*
ellipse: s-maj=7.9km s-min=4.1km az=26.0,PRIMO
CSEM ***31*** *21:10:21.0±0.2,36.˚57N×4.˚84E,h2km,ML3.3,Error*
ellipse: s-maj=6.9km s-min=4.5km az=24.0
NEIC ***31*** *21:10:27.0,36.˚86N×4.˚55E,h0km,MG3.8(MDD),After*
MDD.
ISC 31 21:10:21.6±0.7,36.˚54N±0.˚07×4.˚84E±0.˚05,h10km±8km,
n93,σ0.98/116,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.24**	**293**	P	**Pg**	**21 10 25.5**	**-0.9**
AKF	**Akfadou**	**0.24**	**293**	P	**Pg**	**21 10 25.5**	**-0.9**
AKF	**Akfadou**	**0.24**	**293**	P	**Pg**	**21 10 25.5**	**-0.9**
AKF	**Akfadou**	**0.24**	**293**	P	**Pg**	**21 10 25.5**	**-0.9**
SET	**Setif**	**0.57**	**127**	P	**Pg**	**21 10 32.0**	**-0.6**
SET	**Setif**	**0.57**	**127**	P	**Pg**	**21 10 32.0**	**-0.6**
SET	**Setif**	**0.57**	**127**	P	**Pg**	**21 10 32.0**	**-0.6**
SET	**Setif**	**0.57**	**127**	P	**Pg**	**21 10 32.0**	**-0.6**
CKHR	**Kef el Ahmar**	**0.76**	**134**	P	**Pg**	**21 10 36.0**	**-0.1**
CKHR	**Kef el Ahmar**	**0.76**	**134**	P	**Pg**	**21 10 36.0**	**-0.1**
CKHR	**Kef el Ahmar**	**0.76**	**134**	P	**Pg**	**21 10 36.0**	**-0.1**
CKHR	**Kef el Ahmar**	**0.76**	**134**	P	**Pg**	**21 10 36.0**	**-0.1**
DFRA	**Djebel Bou Aff**	**0.84**	**89**	P	**Pg**	**21 10 38.5**	**+0.8**
DFRA	**Djebel Bou Aff**	**0.84**	**89**	P	**Pg**	**21 10 38.5**	**+0.8**
DFRA	**Djebel Bou Aff**	**0.84**	**89**	P	**Pg**	**21 10 38.5**	**+0.8**
DFRA	**Djebel Bou Aff**	**0.84**	**89**	P	**Pg**	**21 10 38.5**	**+0.8**
AKET	**Djebel Ketaf**	**0.92**	**238**	P	**Pg**	**21 10 39.0**	**-0.2**
AKET	**Djebel Ketaf**	**0.92**	**238**	P	**Pg**	**21 10 39.0**	**-0.2**
AKET	**Djebel Ketaf**	**0.92**	**238**	P	**Pg**	**21 10 39.0**	**-0.2**
AKET	**Djebel Ketaf**	**0.92**	**238**	P	**Pg**	**21 10 39.0**	**-0.2**
ADJB	**Djebel Djouab**	**1.19**	**252**	P	**Pn**	**21 10 43.3**	**-1.0**
ADJB	**Djebel Djouab**	**1.19**	**252**	P	**Pn**	**21 10 43.3**	**-1.0**
ADJB	**Djebel Djouab**	**1.19**	**252**	P	**Pn**	**21 10 43.3**	**-1.0**
ADJB	**Djebel Djouab**	**1.19**	**252**	P	**Pn**	**21 10 43.3**	**-1.0**
CASM	**Ain Smara**	**1.36**	**101**	P	**Pn**	**21 10 46.0**	**-0.6**
CASM	**Ain Smara**	**1.36**	**101**	P	**Pn**	**21 10 46.0**	**-0.6**
CASM	**Ain Smara**	**1.36**	**101**	P	**Pn**	**21 10 46.0**	**-0.6**
CASM	**Ain Smara**	**1.36**	**101**	P	**Pn**	**21 10 46.0**	**-0.6**
ETOS	**Mallorca**	**3.59**	**334**	P	**Pn**	**21 11 17.4**	**0.0**
ETOS				S	**Sn**	**21 11 54.9**	**-5.0**
ETOS	**Mallorca**	**3.59**	**334**	P	**Pn**	**21 11 17.4**	**0.0**
	11nm,0.3s,SNR=19						
ETOS				S	**Sn**	**21 11 54.9**	**-5.0**
	2.3nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.59**	**334**	P	**Pn**	**21 11 17.4**	**0.0**
	11nm,0.3s,SNR=19						
ETOS				S	**Sn**	**21 11 54.9**	**-5.0**
	2.3nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.59**	**334**	P	**Pn**	**21 11 17.4**	**+0.1**
	11nm,0.3s,SNR=19						
ETOS				S	**Sn**	**21 11 54.9**	**-4.9**
	2.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.72**	**313**	P	**Pn**	**21 11 19.0**	**-0.1**
EIBI				S	**Sn**	**21 11 57.6**	**-5.3**
EIBI	**Ibiza**	**3.72**	**313**	P	**Pn**	**21 11 19.0**	**-0.1**
	1.6nm,0.1s,SNR=9.4						
EIBI				S	**Sn**	**21 12 00.3**	**-2.5**
	1.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.72**	**313**	P	**Pn**	**21 11 19.0**	**-0.1**
	1.6nm,0.1s,SNR=9.4						
EIBI				S	**Sn**	**21 12 00.3**	**-2.5**
	1.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.72**	**313**	P	**Pn**	**21 11 19.0**	**0.0**
	1.6nm,0.1s,SNR=9.4						
EBEN	**Beniarda**	**4.56**	**300**	P	**Pn**	**21 11 30.7**	**+0.1**
EBEN	**Beniarda**	**4.56**	**300**	P	**Pn**	**21 11 30.7**	**+0.1**
	1.3nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	**4.56**	**300**	P	**Pn**	**21 11 30.7**	**+0.1**
	1.3nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	**4.56**	**300**	P	**Pn**	**21 11 30.7**	**+0.1**
	1.3nm,0.5s,SNR=7.9						
VSL	**Villasalto**	**4.64**	**49**	*e*Pn	**Pn**	**21 11 30.9**	**-0.8**
VSL				*e*S	**Sn**	**21 12 19.7**	**-6.0**
VSL	**Villasalto**	**4.64**	**49**	*e*Pn	**Pn**	**21 11 31.0**	**-0.7**
EMUR	**La Murta**	**5.02**	**287**	P	**Pn**	**21 11 37.3**	**+0.3**
EMUR	**La Murta**	**5.02**	**287**	P	**Pn**	**21 11 37.3**	**+0.3**
	2.1nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.02**	**287**	P	**Pn**	**21 11 37.3**	**+0.3**
	2.1nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.02**	**287**	P	**Pn**	**21 11 37.3**	**+0.3**
	2.1nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	**5.49**	**294**	P	**Pn**	**21 11 43.9**	**+0.5**
ETOB				S	**Sn**	**21 12 43.7**	**-2.8**
ETOB	**Tobarra**	**5.49**	**294**	P	**Pn**	**21 11 43.8**	**+0.5**
	2.9nm,0.4s,SNR=11						
ETOB				S	**Sn**	**21 12 41.9**	**-4.6**
	1.0nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.49**	**294**	P	**Pn**	**21 11 43.8**	**+0.5**
	2.9nm,0.4s,SNR=11						
ETOB				S	**Sn**	**21 12 41.9**	**-4.6**
	1.0nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.49**	**294**	P	**Pn**	**21 11 43.8**	**+0.4**
	2.9nm,0.4s,SNR=11						
CFON	**Fontmartina**	**5.54**	**341**	P	**Pn**	**21 11 44.1**	**0.0**
CFON				S	**Sn**	**21 12 41.4**	**-6.4**
CFON	**Fontmartina**	**5.54**	**341**	P	**Pn**	**21 11 44.1**	**0.0**
	14nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**21 12 42.7**	**-5.0**
	5.1nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.54**	**341**	P	**Pn**	**21 11 44.1**	**0.0**
	14nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**21 12 42.7**	**-5.0**
	5.1nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.54**	**341**	P	**Pn**	**21 11 44.1**	**+0.1**
	14nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**5.63**	**330**	P	**Pn**	**21 11 44.5**	**-0.7**
EPOB				S	**Sn**	**21 12 42.4**	**-7.6**
EPOB	**Poblet**	**5.63**	**330**	P	**Pn**	**21 11 44.5**	**-0.7**
	1.1nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**21 12 44.2**	**-5.7**
	1.2nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.63**	**330**	P	**Pn**	**21 11 44.5**	**-0.7**
	1.1nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**21 12 44.2**	**-5.7**
	1.2nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.63**	**330**	P	**Pn**	**21 11 44.5**	**-0.8**
	1.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**5.64**	**323**	P	**Pn**	**21 11 44.9**	**-0.6**
ERTA	**Horta de San J**	**5.64**	**323**	P	**Pn**	**21 11 44.9**	**-0.6**
EMOS	**Mosqueruela**	**5.65**	**314**	P	**Pn**	**21 11 45.5**	**-0.1**
EMOS	**Mosqueruela**	**5.65**	**314**	P	**Pn**	**21 11 45.5**	**-0.1**
	1.5nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.65**	**314**	P	**Pn**	**21 11 45.5**	**-0.1**
	1.5nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.65**	**314**	P	**Pn**	**21 11 45.5**	**-0.1**
	1.5nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**6.07**	**284**	P	**Pn**	**21 11 53.8**	**+2.5**
EHUE	**Huescar**	**6.07**	**284**	P	**Pn**	**21 11 53.0**	**+1.7**
	0.4nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.07**	**284**	P	**Pn**	**21 11 53.0**	**+1.7**
	0.4nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.07**	**284**	P	**Pn**	**21 11 53.8**	**+2.5**
	0.4nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**6.09**	**346**	P	**Pn**	**21 11 51.2**	**-0.4**
EJON	**La Jonquera**	**6.09**	**346**	P	**Pn**	**21 11 51.2**	**-0.5**
	0.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**6.09**	**346**	P	**Pn**	**21 11 51.2**	**-0.5**
	0.3nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**6.09**	**346**	P	**Pn**	**21 11 51.2**	**-0.4**
	0.3nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**6.19**	**292**	P	**Pn**	**21 11 53.0**	**0.0**
EVIA	**Vianos**	**6.19**	**292**	P	**Pn**	**21 11 53.0**	**-0.1**
CLLI	**Llivia**	**6.33**	**340**	P	**Pn**	**21 11 56.4**	**+1.4**
CLLI				S	**Sn**	**21 12 59.8**	**-7.5**
CLLI	**Llivia**	**6.33**	**340**	P	**Pn**	**21 11 56.3**	**+1.4**
	6.1nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**21 13 03.1**	**-4.1**
	1.6nm,0.4s,SNR=7.9						
CLLI	**Llivia**	**6.33**	**340**	P	**Pn**	**21 11 56.3**	**+1.4**
	6.1nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**21 13 03.1**	**-4.1**
	1.6nm,0.4s,SNR=7.9						
CLLI	**Llivia**	**6.33**	**340**	P

EQES	Quesada	6.44 284	P	Pn	21 11 58.5 +2.1
	1.0nm,0.4s,SNR=7.9				
CSOR	Sort	6.49 335	P	Pn	21 11 58.4 +1.3
CSOR			S	Sn	21 13 04.5 -6.8
CSOR	Sort	6.49 335	P	Pn	21 11 58.4 +1.3
	5.3nm,0.4s,SNR=7.9				
CSOR			S	Sn	21 13 06.8 -4.5
	3.6nm,0.3s,SNR=7.9				
CSOR	Sort	6.49 335	P	Pn	21 11 58.4 +1.3
	5.3nm,0.4s,SNR=7.9				
CSOR			S	Sn	21 13 06.8 -4.5
	3.6nm,0.3s,SNR=7.9				
CSOR	Sort	6.49 335	P	Pn	21 11 58.4 +1.3
	5.3nm,0.4s,SNR=7.9				
ESAC	San Caprasio	6.62 323	P	Pn	21 11 59.6 +0.7
ESAC	San Caprasio	6.62 323	P	Pn	21 11 59.6 +0.7
	2.5nm,0.2s,SNR=7.9				
ESAC	San Caprasio	6.62 323	P	Pn	21 11 59.6 +0.7
	2.5nm,0.2s,SNR=7.9				
ESAC	San Caprasio	6.62 323	P	Pn	21 11 59.6 +0.8
	2.5nm,0.2s,SNR=7.9				
ETOR	Torete	6.88 310	P	Pn	21 12 05.1 +2.7
ETOR	Torete	6.88 310	P	Pn	21 12 05.1 +2.7
	1.7nm,0.4s,SNR=7.9				
ETOR	Torete	6.88 310	P	Pn	21 12 05.1 +2.7
	1.7nm,0.4s,SNR=7.9				

ROM ***31*** *21:15:08.5±0.1,39°.86N×23°.78E,h10km,Ml3.7/3,Error ellipse: s-maj=6.1km s-min=0.0km az=2.0*
SOF ***31*** *21:15:15.8,39°.92N×22°.96E,h5km,MD3.9*
ISCJB ***31*** *21:15:16.5±0.3,39°.86N±0°.01×22°.89E±0°.02,h11km±2km, mb3.8/9,Error ellipse: s-maj=2.0km s-min=1.9km az=12.1*
ATH ***31*** *21:15:17.0,39°.84N×22°.84E,h20km±1km,MD3.7/18, ML3.4*
CSEM ***31*** *21:15:17.4±0.1,39°.86N×22°.94E,h10km,mb3.6/4,Error ellipse: s-maj=1.8km s-min=1.7km az=14.0*
THE ***31*** *21:15:17.5,39°.86N×22°.93E,h8km±1km,ML4.3/19,Error ellipse: s-maj=1.2km s-min=0.6km az=53.0*
PDG ***31*** *21:15:17.1±0.6,39°.90N×22°.91E,h9km±1km,ML3.5/10, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
MOS ***31*** *21:15:17.4±0.9,39°.91N×22°.89E,h17km,mb4.0/4,Error ellipse: s-maj=7.2km s-min=4.9km az=104.2*
NEIC ***31*** *21:15:17.0,39°.84N×22°.84E,h20km,ML3.7(ROM), ML3.4(ATH),ML3.5(PDG),After ATH.*
IDC ***31*** *21:15:20.5±2.7,39°.89N×22°.82E,h35km±24km,mb3.6/10, mb1 3.7/13,mb1mx3.5/29,mbtmp3.6/13,ML3.7/4,MS2.5/1, Ms1 2.6/1,ms1mx1.9/31,Error ellipse: s-maj=16.9km s-min=16.0km az=135.0*

ISC 31 21:15:17.5±0.3,39°.86N±0°.01×22°.94E±0°.02,h10km±2km, n404,σ0°94/488,mb3.9/9,22C-16D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	Litokhoron	0.42	306	*e*PB	Pg	21 15 24.9	-0.9
LIT				*e*SB	Sg	21 15 30.6	-0.7
LIT	Litokhoron	0.42	306	P	Pg	21 15 24.8	-1.0
LIT				S	Sg	21 15 31.2	-0.1
LIT	Litokhoron	0.42	306	*e*Pb	Pg	21 15 24.9	-0.9
LIT				*e*Sb	Sg	21 15 30.6	-0.7
LIT				S	Sg	21 15 31.2	-0.1
XOR	Xorichti	0.53	158	P	Pg	21 15 27.6	-0.2
XOR				S	Sg	21 15 35.8	+1.1
XOR	Xorichti	0.53	158	P	Pg	21 15 27.6	-0.2
XOR				S	Sg	21 15 35.8	+1.1
PAIG	Paliouri	0.58	83	P	Pg	21 15 29.3	+0.6
PAIG				S	Sg	21 15 38.2	+1.9
PAIG	Paliouri	0.58	83	P	Pg	21 15 29.3	+0.6
PAIG				S	Sg	21 15 38.2	+1.9
NEO	Neokhori	0.59	158	*e*PB	Pg	21 15 28.8	-0.2
NEO				*e*SN	Sg	21 15 37.8	+1.1
NEO	Neokhori	0.59	158	*e*Pb	Pg	21 15 28.8	-0.2
PLG	Polygyros	0.65	37	*e*PN	Pg	21 15 30.5	+0.4
PLG				*e*SN	Sg	21 15 40.2	+1.7
PLG	Polygyros	0.65	37	P	Pg	21 15 30.3	+0.2
PLG				S	Sg	21 15 40.1	+1.6
PLG	Polygyros	0.65	37	P	Pg	21 15 30.3	+0.2
PLG				S	Sg	21 15 40.1	+1.6
HORT	Hortiatis	0.75	10	P	Pg	21 15 32.0	0.0
HORT				S	Sg	21 15 42.6	+0.8
HORT	Hortiatis	0.75	10	P	Pg	21 15 32.0	0.0
HORT				S	Sg	21 15 42.6	+0.8
THL	Klokotos Trika	0.77	248	*e*PN	Pg	21 15 30.9	-1.4
THL				*e*SN	Sg	21 15 40.8	-1.5
THL	Klokotos Trika	0.77	248	P	Pg	21 15 30.9	-1.4
THL				S	Sg	21 15 41.4	-0.9
THL	Klokotos Trika	0.77	248	P	Pg	21 15 30.9	-1.4
THL				*e*Sn	Sg	21 15 40.8	-1.5
THL				S	Sg	21 15 41.4	-0.9
THE	Thessaloniki	0.78	2	P	Pg	21 15 32.1	-0.4
THE				S	Sg	21 15 43.0	+0.4
THE	Thessaloniki	0.78	2	P	Pg	21 15 32.1	-0.4
THE				S	Sg	21 15 43.0	+0.4
OUR	Ouranopolis	0.93	59	P	Pg	21 15 35.5	0.0
OUR				S	Sg	21 15 49.2	+1.6
OUR	Ouranopolis	0.93	59	P	Pg	21 15 35.5	0.0
OUR				S	Sg	21 15 49.2	+1.6
AGG	Agios Georgios	0.96	210	*e*PN	Pg	21 15 34.9	-1.0
AGG	Agios Georgios	0.96	210	P	Pg	21 15 34.8	-1.1
AGG				S	Sg	21 15 50.5	+2.2
AGG	Agios Georgios	0.96	210	P	Pg	21 15 34.8	-1.1
AGG				S	Sg	21 15 50.5	+2.2
AOS	Alonnisos	1.00	133	P	Pg	21 15 36.1	-0.7
AOS				S	Sg	21 15 50.2	+0.4
AOS	Alonnisos	1.00	133	P	Pg	21 15 36.1	-0.7
AOS				S	Sg	21 15 50.2	+0.4
KZN	Kozani	1.00	297	*e*PN	Pg	21 15 35.0	-1.8
KZN	Kozani	1.00	297	P	Pg	21 15 35.0	-1.8
KZN				S	Sg	21 15 50.9	+1.1
KZN	Kozani	1.00	297	P	Pg	21 15 35.0	-1.8
KZN				S	Sg	21 15 50.9	+1.1
SOH	Sokhos	1.02	18	*e*PN	Pg	21 15 36.7	-0.4
SOH	Sokhos	1.02	18	P	Pg	21 15 36.6	-0.5
SOH				S	Sg	21 15 51.0	+0.7
SOH	Sokhos	1.02	18	P	Pg	21 15 36.6	-0.5
SOH				S	Sg	21 15 51.0	+0.7
ATAL	Atalanti	1.16	177	P	Pb	21 15 39.0	-0.7
ATAL				S	Sb	21 15 55.4	+0.5
ATAL	Atalanti	1.16	177	P	Pb	21 15 39.0	-0.7
ATAL				S	Sb	21 15 55.4	+0.5
LKR	Lokris	1.21	178	*e*PN	Pn	21 15 39.6	-0.8
LKR	Lokris	1.21	178	P	Pb	21 15 39.5	-0.9
LKR	Lokris	1.21	178	*e*Pn	Pn	21 15 39.6	-0.8
EVR	Evrytania	1.28	223	*e*PN	Pn	21 15 40.9	-0.6
EVR	Evrytania	1.28	223	*e*Pn	Pn	21 15 40.9	-0.6
KNT	Kendrikon	1.30	359	P	Pn	21 15 40.8	-1.0
KNT				S	Sb	21 15 58.6	-0.3
KNT	Kendrikon	1.30	359	P	Pn	21 15 40.8	-1.0
KNT				S	Sb	21 15 58.6	-0.3
MEV	Metsovon	1.32	267	P	Pn	21 15 42.1	+0.1
MEV	Metsovon	1.32	267	P	Pn	21 15 42.1	+0.1
SRS	Serrai	1.35	21	P	Pn	21 15 41.7	-0.8
SRS				S	Sb	21 16 00.9	+0.5
SRS	Serrai	1.35	21	P	Pn	21 15 41.7	-0.8
SRS				S	Sb	21 16 00.9	+0.5
DSF	Desfina	1.48	193	P	Pn	21 15 43.3	-0.9
DSF				S	Sn	21 16 03.0	-0.6
DSF	Desfina	1.48	193	P	Pn	21 15 43.3	-0.9
DSF				S	Sn	21 16 03.0	-0.6
VAY	Valandovo	1.49	349	*i* Pn	Pn	21 15 42.9	-1.5
VAY				*i* Sn	Sn	21 16 03.3	-0.5
VAY	Valandovo	1.49	349	P	Pn	21 15 42.4	-2.0
VAY	Valandovo	1.49	349	P	Pn	21 15 42.4	-2.0
VAY	Valandovo	1.49	349	*i* Pn	Pn	21 15 42.9	-1.5
VAY				*i* Sn	Sn	21 16 03.3	-0.6
FNA	Florina	1.51	308	P	Pn	21 15 44.2	-0.4
FNA				S	Sn	21 16 04.6	+0.2
FNA	Florina	1.51	308	P	Pn	21 15 44.2	-0.4
KALE	Kalithea	1.59	203	P	Pn	21 15 45.2	-0.5
KALE	Kalithea	1.59	203	P	Pn	21 15 45.2	-0.5
JAN	Janina	1.62	264	*e*PN	Pn	21 15 45.1	-1.0
JAN	Janina	1.62	264	*e*Pn	Pn	21 15 45.1	-1.0
EFP	Efpalio	1.64	210	*e*PN	Pn	21 15 46.4	0.0
EFP	Efpalio	1.64	210	P	Pn	21 15 46.1	-0.3
EFP				S	Sn	21 16 07.6	+0.1
EFP	Efpalio	1.64	210	P	Pn	21 15 46.1	-0.3
EFP	Efpalio	1.64	210	*e*Pn	Pn	21 15 46.4	0.0
NVR	Nevrokopi	1.65	25	P	Pn	21 15 46.7	+0.1
NVR	Nevrokopi	1.65	25	P	Pn	21 15 46.7	+0.1
KAVA	Kavala	1.66	46	P	Pn	21 15 45.3	-1.4
KAVA				S	Sn	21 16 09.5	+1.5
KAVA	Kavala	1.66	46	P	Pn	21 15 45.3	-1.4
KAVA				S	Sn	21 16 09.5	+1.5
BIA	Bitola	1.69	314	*i* Pn	Pn	21 15 46.5	-0.6
BIA				*i* Sn	Sn	21 16 12.6	+3.7
BIA	Bitola	1.69	314	P	Pn	21 15 46.0	-1.1
BIA	Bitola	1.69	314	P	Pn	21 15 46.0	-1.1
BIA	Bitola	1.69	314	*i* Pn	Pn	21 15 46.5	-0.6
BIA				*i* Sn	Sn	21 16 12.6	+3.7
LIA	Limnos Island	1.73	88	P	Pn	21 15 47.3	-0.4
LIA	Limnos Island	1.73	88	P	Pn	21 15 46.5	-1.2
LIA	Limnos Island	1.73	88	P	Pn	21 15 47.3	-0.4
LAKA	Lakka	1.78	205	P	Pn	21 15 48.1	-0.2
LAKA	Lakka	1.78	205	P	Pn	21 15 48.1	-0.2
LTK	Loutraki	1.83	179	P	Pn	21 15 48.4	-0.6
LTK	Loutraki	1.83	179	P	Pn	21 15 48.4	-0.6
MMB	Musomiste	1.83	19	P	Pn	21 15 48.1	-1.0
MMB	Musomiste	1.83	19	P	Pn	21 15 48.1	-1.0
STIP	Stip	1.92	343	*i* Pn	Pn	21 15 50.1	-0.2
STIP	Stip	1.92	343	P	Pn	21 15 50.1	-0.2
STIP	Stip	1.92	343	P	Pn	21 15 50.1	-0.2
PTL	Penteli	1.94	158	*e*PN	Pn	21 15 51.3	+0.7
PTL	Penteli	1.94	158	*e*Pn	Pn	21 15 51.3	+0.7
GUR	Goura	1.97	194	*e*PN	Pn	21 15 50.8	-0.2
GUR	Goura	1.97	194	P	Pn	21 15 50.7	-0.3
GUR				S	Sn	21 16 15.4	-0.4
GUR	Goura	1.97	194	*e*Pn	Pn	21 15 50.8	-0.2
GUR				S	Sn	21 16 15.4	-0.4
ATH	Athens Observa	1.98	162	*e*PB	Pb	21 15 51.0	-2.6
KRUS	Krusevo	1.98	320	*i* Pn	Pn	21 15 50.5	-0.7
KRUS	Krusevo	1.98	320	*i* Pn	Pn	21 15 50.4	-0.7
ATHU	Athens Univers	2.00	160	P	Pn	21 15 51.3	-0.4
ATHU	Athens Univers	2.00	160	P	Pn	21 15 51.0	-0.4
KKB	Krupnik	2.01	3	P	Pn	21 15 51.1	-0.4
KKB	Krupnik	2.01	3	P	Pn	21 15 51.1	-0.4
IGT	Igoumenitsa	2.04	262	P	Pn	21 15 53.5	+1.7
IGT	Igoumenitsa	2.04	262	P	Pn	21 15 53.5	+1.7
OHR	Ohrid	2.06	308	*i* Pn	Pn	21 15 51.7	-0.4
OHR				*i* Sn	Sn	21 16 18.4	+0.5
OHR	Ohrid	2.06	308	*i* Pn	Pn	21 15 51.5	-0.6
OHR				S	Sn	21 16 18.6	+0.7
OHR	Ohrid	2.06	308	*i* Pn	Pn	21 15 51.7	-0.4
OHR				*i* Sn	Sn	21 16 18.4	+0.5
VLY	Voula,Athens	2.11	161	*e*PB	Pb	21 15 52.7	-3.2
RLS	Riolos of Patr	2.13	213	P	Pn	21 15 56.1	+2.9
RLS	Riolos of Patr	2.13	213	P	Pn	21 15 56.1	+2.9
GADA	Gvkgeada	2.30	81	*e*PN	Pn	21 15 54.1	-1.4
GADA	Gvkgeada	2.30	81	*e*Pn	Pn	21 15 54.1	-1.4
RDO	Rodhopi	2.37	56	P	Pn	21 15 55.6	-0.8
RDO	Rodhopi	2.37	56	P	Pn	21 15 55.4	-1.0
RDO	Rodhopi	2.37	56	P	Pn	21 15 55.6	-0.8
SKO	Skopje	2.40	332	*i* Pn	Pn	21 15 57.5	+0.6
SKO	Skopje	2.40	332	P	Pn	21 15 56.6	-0.3
SKO	Skopje	2.40	332	P	Pn	21 15 56.6	-0.3
SKO	Skopje	2.40	332	*i* Pn	Pn	21 15 57.4	+0.5
KEK	Kerkira	2.42	268	*e*PB	Pn	21 15 58.5	+1.3
KEK	Kerkira	2.42	268	P	Pn	21 15 58.5	+1.3
KEK	Kerkira	2.42	268	P	Pn	21 15 58.5	+1.3
VLS	Valsamata	2.48	228	*e*PB	Pb	21 15 59.7	-2.5
VLS	Valsamata	2.48	228	P	Pn	21 15 58.2	+0.2
VLS	Valsamata	2.48	228	P	Pn	21 15 58.2	+0.2
VLX	Vlachokerasia	2.52	190	P	Pn	21 15 58.9	+0.4
VLX	Vlachokerasia	2.52	190	P	Pn	21 15 58.9	+0.4
ALN	Alexandroupoli	2.59	65	P	Pn	21 15 58.5	-1.0
ALN	Alexandroupoli	2.59	65	P	Pn	21 15 58.5	-1.0
KDZ	Kurdzhali	2.60	46	P	Pn	21 15 58.9	-0.7
KDZ				Pg	Pg	21 16 05.5	-1.8
KDZ	Kurdzhali	2.60	46	P	Pn	21 15 58.9	-0.7
EZN	Ezine	2.61	90	*e*PN	Pn	21 15 59.8	0.0
EZN	Ezine	2.61	90	*e*Pn	Pn	21 15 59.8	0.0
ENEZ	Enez	2.61	69	*e*PN	Pn	21 15 59.4	-0.4
ENEZ	Enez	2.61	69	*e*Pn	Pn	21 15 59.4	-0.4
PLD	Plovdiv	2.61	30	P	Pn	21 16 00.3	+0.5
PLD	Plovdiv	2.61	30	P	Pn	21 16 05.6	+5.8
PLD	Plovdiv	2.61	30	P	Pn	21 16 00.3	+0.5
PRK	Paraskevi	2.65	102	*e*PB	Pb	21 16 03.1	-2.0
PRK	Paraskevi	2.65	102	P	Pn	21 16 01.0	+0.7
PRK	Paraskevi	2.65	102	P	Pn	21 16 01.0	+0.7
VTS	Vitosha	2.74	4	P	Pn	21 16 01.8	+0.2
VTS	Vitosha	2.74	4	P	Pn	21 16 01.9	+0.3
VTS	Vitosha	2.74	4	P	Pn	21 16 01.5	-0.1
VTS	Vitosha	2.74	4	P	Pn	21 16 01.8	+0.2
TIR	Tirane	2.77	303	*e*P	Pn	21 16 03.9	+1.9
TIR	Tirane	2.77	303	*e*P	Pn	21 16 03.9	+1.9
ITM	Ithomi	2.79	197	P	Pn	21 16 03.1	+0.9
ITM	Ithomi	2.79	197	P	Pn	21 16 03.1	+0.9
CHOS	Chios island	2.83	120	P	Pn	21 16 03.0	+0.1
CHOS	Chios island	2.83	120	P	Pn	21 16 03.0	+0.1
PGB	Panagyurishte	2.85	19	*e*P	Pn	21 16 02.5	-0.5
PGB	Panagyurishte	2.85	19	*e*P	Pn	21 16 02.5	-0.5
DIM	Dimitrovgrad	2.94	41	P	Pg	21 16 12.5	-1.4
LPK	Lapseki	2.98	79	*e*PN	Pn	21 16 04.6	-0.2
LPK	Lapseki	2.98	79	*e*Pn	Pn	21 16 04.6	-0.2
BARS	Barje	3.08	344	⇓*i*Pn	Pn	21 16 05.8	-0.4
PYL	PYLOS	3.10	198	P	Pn	21 16 06.9	+0.4
PYL	PYLOS	3.10	198	P	Pn	21 16 06.9	+0.4
VLI	Veliai	3.13	180	*e*PN	Pn	21 16 06.8	-0.2
VLI	Veliai	3.13	180	*e*Pn	Pn	21 16 06.8	-0.2
RKY	Sarkoy-Tekirda	3.35	74	*e*PN	Pn	21 16 09.9	0.0
RKY	Sarkoy-Tekirda	3.35	74	*e*Pn	Pn	21 16 09.9	0.0
SCTE	Santa Cesarea	3.44	275	Pn	Pn	21 16 11.5	+0.3
	158nm,1.0s						
SCTE	Santa Cesarea	3.44	275	Pn	Pn	21 16 11.5	+0.3
	158nm,1.0s						
APE	Apeiranthos	3.45	143	⇑*i*P	Pn	21 16 10.9	-0.4
APE	Apeiranthos	3.45	143	P	Pn	21 16 11.0	-0.3
APE	Apeiranthos	3.45	143	P	Pn	21 16 11.0	-0.3
ULC	Ulcinj	3.50	308	⇑*i*Pn	Pn	21 16 12.6	+0.6
	158nm,1.0s						
ULC				*e*Sn	Sn	21 16 54.7	+1.3
ULC	Ulcinj	3.50	308	⇑*i*Pn	Pn	21 16 12.6	+0.6
ULC				*e*Sn	Sn	21 16 54.7	+1.3
EDRB	Edirne	3.51	54	*e*PN	Pn	21 16 11.1	-1.0
EDRB	Edirne	3.51	54	*e*Pn	Pn	21 16 11.1	-1.0
PVY	Plav	3.53	322	⇑*i*Pn	Pn	21 16 13.0	+0.6
PVY				*e*Sn	Sn	21 16 55.3	+1.0
PVY	Plav	3.53	322	⇑*i*Pn	Pn	21 16 13.0	+0.6
PVY				*e*Sn	Sn	21 16 55.3	+1.0
NISS		3.62	349	*i* Pn	Pn	21 16 13.1	-0.6
TKR	Tekirdag	3.69	71	*e*PN	Pn	21 16 14.5	-0.1
TKR	Tekirdag	3.69	71	*e*Pn	Pn	21 16 14.5	-0.1
SMG	Samos	3.73	124	P	Pn	21 16 16.2	+1.1
SMG	Samos	3.73	124	P	Pn	21 16 16.2	+1.1
BEY	Berane	3.78	324	⇓*i*Pn	Pn	21 16 16.7	+0.8
BEY				*e*Sn	Sn	21 17 00.7	+0.3
IVA	Berane	3.78	324	⇓*i*Pn	Pn	21 16 16.7	+0.8
IVA				*e*Sn	Sn	21 17 00.7	+0.3
IVA	Berane	3.78	324	⇓*i*Pn	Pn	21 16 16.7	+0.8
IVA				*e*Sn	Sn	21 17 00.7	+0.3
PDG	Podgorica	3.78	314	⇓*i*Pn	Pn	21 16 17.0	+1.1
PDG				*e*Sn	Sn	21 17 01.6	+1.2
TTG	Podgorica	3.78	314	⇓*i*Pn	Pn	21 16 17.0	+1.1
TTG				*e*Sn	Sn	21 17 01.6	+1.2
TTG	Podgorica	3.78	314	*i* P	Pn	21 16 17.0	+1.1
TTG				*e*S	Sn	21 17 01.6	+1.2
JMB	Yambol	3.79	45	P	Pn	21 16 15.2	-0.8
JMB	Yambol	3.79	45	P	Pn	21 16 15.2	-0.8
BALB	Balikesir	3.82	92	*e*PN	Pn	21 16 17.7	+1.4
BALB	Balikesir	3.82	92	*e*Pn	Pn	21 16 17.7	+1.3
CRLT	Corlu	3.88	69	*e*PN	Pn	21 16 17.3	+0.1
CRLT	Corlu	3.88	69	*e*Pn	Pn	21 16 17.3	+0.2
BUM	Brajici-Budva	3.91	310	⇓*i*Pn	Pn	21 16 18.7	+1.1
BUM				*e*Sn	Sn	21 17 04.6	+1.1
BUM	Brajici-Budva	3.91	310	⇓*i*Pn	Pn	21 16 18.7	+1.1
BUM				*e*Sn	Sn	21 17 04.6	+1.1
THR5	Thira Island,	3.92	150	P	Pn	21 16 18.4	+0.6
THR5	Thira Island,	3.92	150	P	Pn	21 16 18.4	+0.6
SZH	Strazhica	4.08	32	P	Pn	21 16 19.9	-0.1
SZH	Strazhica	4.08	32	P	Pn	21 16 19.9	-0.1
NKY	Niksic	4.18	316	⇓*i*Pn	Pn	21 16 22.5	+1.1
NKY				*e*Sn	Sn	21 17 11.2	+0.9
NKY	Niksic	4.18	316	⇓*i*Pn	Pn	21 16 22.5	+1.1
NKY				*e*Sn	Sn	21 17 11.2	+0.9
ZIMR		4.21	25	⇓*i*P	Pg	21 16 44.8	+6.7
HCY	Herceg Novi	4.23	309	⇑*i*Pn	Pn	21 16 22.1	0.0
HCY				*e*Sn	Sn	21 17 12.4	+0.9
HCY	Herceg Novi	4.23	309	⇑*i*Pn	Pn	21 16 22.1	0.0
HCY				*e*Sn	Sn	21 17 12.4	+0.9
GRUS	Gruza	4.36	338	*e*Pn	Pn	21 16 23.4	-0.4
PLE	Pljevlja	4.37	324	⇓*i*Pn	Pn	21 16 24.4	+0.5
PLE				*e*Sn	Sn	21 17 15.3	+0.4
PLE	Pljevlja	4.37	324	⇓*i*Pn	Pn	21 16 24.4	+0.5
PLE				*e*Sn	Sn	21 17 15.3	+0.4
TAR1	Taranto	4.38	281	*e*Pn	Pn	21 16 24.0	-0.1
TAR1				*e*Sn	Sn	21 17 11.9	-3.3
CTKS	Kestanelik-??a	4.46	70	*e*PN	Pn	21 16 25.8	+0.6
CTKS	Kestanelik-??a	4.46	70	*e*Pn	Pn	21 16 25.8	+0.6
BRY	Bratogost	4.49	314	⇑*i*Pn	Pn	21 16 26.1	+0.5
BRY				*e*Sn	Sn	21 17 18.9	+1.0
BRY	Bratogost	4.49	314	⇑*i*Pn	Pn	21 16 26.1	+0.5
BRY				*e*Sn	Sn	21 17 18.9	+1.0
UPM	Unac-Piva	4.51	319	⇑*i*Pn	Pn	21 16 26.4	+0.6
UPM				*e*Sn	Sn	21 17 18.7	+0.4
UPM	Unac-Piva	4.51	319	⇑*i*Pn	Pn	21 16 26.4	+0.6
UPM				*e*Sn	Sn	21 17 18.7	+0.4
KARN	Karanos	4.51	170	P	Pn	21 16 26.7	+0.8
KARN	Karanos	4.51	170	P	Pn	21 16 26.7	+0.8
NOCI	Noci	4.58	284	Pn	Pn	21 16 26.3	-0.6
	49nm,0.4s						
NOCI	Noci	4.58	284	Pn	Pn	21 16 26.3	-0.6
	49nm,0.4s						
LTRZ	Laterza	4.74	281	Pn	Pn	21 16 28.6	-0.4
LTRZ	Laterza	4.74	281	Pn	Pn	21 16 28.6	-0.4
	50nm,1.1s						
LTRZ	Laterza	4.74	281	Pn	Pn	21 16 28.6	-0.4
	50nm,1.1s						
TRUS	Trudelj	4.75	337	⇓*i*Pn	Pn	21 16 27.7	-1.5
DIVS	Divibare	4.77	334	⇓*i*Pn	Pn	21 16 29.0	-0.5
BAI	Bari	4.79	287	*e*Pn	Pn	21 16 29.0	-0.6
BBLS	Lazići	4.80	328	⇓*i*Pn	Pn	21 16 29.9	+0.1
IDI	Anoyia	4.82	161	Pn	Pn	21 16 31.8	+1.7
	1.5nm,0.3s,baz=328,slow=16,SNR=18						
IDI	Anoyia	4.82	161	*e*Pn	Pn	21 16 31.2	+1.1
IDI	Anoyia	4.82	161	*e*Pn	Pn	21 16 31.2	+1.1
TIP	Timpagrande	4.83	264	*e*Pn	Pn	21 16 30.3	+0.1
TIP	Timpagrande	4.83	264	Pn	Pn	21 16 30.5	+0.3
	70nm,1.6s						
TIP	Timpagrande	4.83	264	Pn	Pn	21 16 30.5	+0.3
	70nm,1.6s						
MATE	Matera	4.83	281	Pn	Pn	21 16 30.4	+0.1
	29nm,0.5s						
MATE	Matera	4.83	281	Pn	Pn	21 16 30.4	+0.1
	29nm,0.5s						
SG1	Sgolgore (BA)	4.88	284	*e*Pn	Pn	21 16 30.5	-0.5
SG1				*e*Sn	Sn	21 17 24.8	-2.7
SERS	Sersale	4.91	262	Pn	Pn	21 16 31.1	-0.2
	198nm,1.4s						
SERS	Sersale	4.91	262	Pn	Pn	21 16 31.1	-0.2
	198nm,1.4s						
AMUR	Altamura	4.95	284	Pn	Pn	21 16 31.9	0.0
	135nm,1.2s						
AMUR	Altamura	4.95	284	Pn	Pn	21 16 31.9	0.0
	135nm,1.2s						
STON	Ston	4.96	309	*e*Pn	Pn	21 16 31.4	-0.6
STON				Sn	Sn	21 17 27.9	-1.6
STON	Ston	4.96	309	*e*Pn	Pn	21 16 31.4	-0.6
STON				Sn	Sn	21 17 27.9	-1.5
CRAC	Craco	5.01	278	Pn	Pn	21 16 33.2	+0.5
	97nm,0.9s						
CRAC	Craco	5.01	278	Pn	Pn	21 16 33.2	+0.5
	97nm,0.9s						
MIGL	Miglionico	5.03	281	Pn	Pn	21 16 32.8	-0.2
	262nm,1.1s						
MIGL	Miglionico	5.03	281	Pn	Pn	21 16 32.8	-0.2
	262nm,1.1s						
LAST	Lasithi	5.10	156	P	Pn	21 16 34.9	+0.9
LAST	Lasithi	5.10	156	P	Pn	21 16 34.9	+0.9
GRI	Girifalco	5.16	261	P	Pn	21 16 36.4	+1.6
GRI				pm

FG5	Orsara di Pugl	6.01	286	Pn	Pn	21 16 46.7	+0.2
	comp=Z,44nm,0.1s						
MLR	Muntele Rosu	6.05	21	Pn	Pn	21 16 48.4	+1.4
	comp=Z,5.1nm,0.3s,baz=239,slow=5.3,SNR=40						
MLR				Lg		21 18 33.4	
	baz=280,slow=19,SNR=1.7						
MLR	Muntele Rosu	6.05	21	P	Pn	21 16 48.5	+1.5
MLR	Muntele Rosu	6.05	21⇑	*i*P	Pn	21 16 48.5	+1.5
MLR	Muntele Rosu	6.05	21	P	Pn	21 16 48.5	+1.5
MOCO	Biccari - m.te	6.11	287	Pn	Pn	21 16 47.9	+0.1
	comp=Z,14nm,0.5s						
CSSN	Cassano Irpino	6.13	282	Pn	Pn	21 16 49.7	+1.6
	comp=Z,18nm,0.6s						
CSSN	Cassano Irpino	6.13	282	Pn	Pn	21 16 49.7	+1.6
	comp=Z,18nm,0.6s						
CSSN	Cassano Irpino	6.13	282	Pn	Pn	21 16 49.7	+1.6
	comp=Z,18nm,0.6s						
TIRR	Tirgusor	6.14	40⇑	*i*P	Pg	21 17 10.4	-4.7
MRB1	Monte Rocchett	6.20	284	Pn	Pn	21 16 50.0	+0.9
	comp=Z,43nm,0.7s						
MRB1	Monte Rocchett	6.20	284	Pn	Pn	21 16 50.0	+0.9
	comp=Z,43nm,0.7s						
MRB1	Monte Rocchett	6.20	284	Pn	Pn	21 16 50.0	+0.9
	comp=Z,43nm,0.7s						
MELA	Melanico ??? S	6.21	290	Pn	Pn	21 16 49.2	0.0
	comp=Z,28nm,0.8s						
MELA	Melanico ??? S	6.21	290	Pn	Pn	21 16 49.2	0.0
	comp=Z,28nm,0.8s						
LLI	Lipari	6.37	260	Pn	Pn	21 16 51.5	+0.1
	comp=Z,77nm,0.4s						
LLI	Lipari	6.37	260	Pn	Pn	21 16 51.5	+0.1
	comp=Z,77nm,0.4s						
SACR	S. Croce Del S	6.45	286	Pn	Pn	21 16 52.8	+0.3
SACR	S. Croce Del S	6.45	286	Pn	Pn	21 16 52.8	+0.3
CFR	Carcaliu	6.56	34⇑	P	Pn	21 17 01.6	+7.6
CFR	Carcaliu	6.56	34⇑	*i*P	Pn	21 17 01.6	+7.6
BSSO	Busso	6.56	288	Pn	Pn	21 16 54.6	+0.6
	comp=Z,18nm,0.8s						
BSSO	Busso	6.56	288	Pn	Pn	21 16 54.6	+0.6
	comp=Z,18nm,0.8s						
PLOR	Plostina	6.58	23	P	Pn	21 16 56.1	+1.8
PLOR	Plostina	6.58	23⇑	*i*P	Pn	21 16 55.8	+1.5
PLOR	Plostina	6.58	23	P	Pn	21 16 56.1	+1.8
VRI	Vrincioaia	6.62	24	P	Pn	21 16 56.7	+1.9
VRI	Vrincioaia	6.62	24⇑	*i*P	Pn	21 16 56.2	+1.4
VRI	Vrincioaia	6.62	24	P	Pn	21 16 56.7	+1.9
IFIL	Filicudi I Eol	6.63	261	Pn	Pn	21 16 54.1	-0.9
	comp=Z,29nm,0.6s						
IFIL	Filicudi I Eol	6.63	261	Pn	Pn	21 16 54.1	-0.9
	comp=Z,29nm,0.6s						
SGG	Gregorio Mates	6.69	286	Pn	Pn	21 16 56.4	+0.6
SGG	Gregorio Mates	6.69	286	Pn	Pn	21 16 56.4	+0.6
SGG	Gregorio Mates	6.69	286	Pn	Pn	21 16 56.4	+0.6
VAGA	Valle Agricola	6.80	286	Pn	Pn	21 16 58.0	+0.7
	comp=Z,24nm,0.7s						
VAGA	Valle Agricola	6.80	286	Pn	Pn	21 16 58.0	+0.7
	comp=Z,24nm,0.7s						
MIDA	Miranda	6.83	288	Pn	Pn	21 16 58.0	+0.3
	comp=Z,13nm,0.8s						
MIDA	Miranda	6.83	288	Pn	Pn	21 16 58.0	+0.3
	comp=Z,13nm,0.8s						
MIDA	Miranda	6.83	288	Pn	Pn	21 16 58.0	+0.3
	comp=Z,13nm,0.8s						
DRGR		6.93	359	⇑P	Pn	21 17 07.0	+7.9
DRGR		6.93	359⇑	*i*P	Pn	21 17 07.0	+7.9
CERA	Filignano	6.99	287	Pn	Pn	21 17 01.1	+1.1
	comp=Z,21nm,0.7s						
CERA	Filignano	6.99	287	Pn	Pn	21 17 01.1	+1.1
	comp=Z,21nm,0.7s						
VAE	Valguarnera	7.08	253	Sn	Sn	21 18 22.6	+0.9
	comp=Z,0.5nm,0.3s,baz=270,slow=18,SNR=1.8						
PKSM	Moragy	7.09	335⇑	*i*P	Pn	21 17 01.2	0.0
PKSM	Moragy	7.09	335	P	Pn	21 17 01.2	0.0
SDI	San Donato	7.17	288	P	Pn	21 17 03.5	+1.1
SDI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SDI	San Donato	7.17	288	Pn	Pn	21 17 03.5	+1.1
	comp=Z,3.0nm,0.3s						
SDI	San Donato	7.17	288	Pn	Pn	21 17 03.5	+1.1
	comp=Z,3.0nm,0.3s						
SDI	San Donato	7.17	288	Pn	Pn	21 17 03.5	+1.1
	comp=Z,3.0nm,0.3s						
VVLD	Villa Vallelon	7.34	289	Pn	Pn	21 17 05.6	+0.9
	comp=Z,38nm,1.1s						
VVLD	Villa Vallelon	7.34	289	Pn	Pn	21 17 05.6	+0.9
	comp=Z,38nm,1.1s						
VVLD	Villa Vallelon	7.34	289	Pn	Pn	21 17 05.6	+0.9
	comp=Z,38nm,1.1s						
NVLJ	Novalja	7.61	311	*e*Pn	Pn	21 17 07.2	-1.2
NVLJ				Sn	Sn	21 18 30.9	-3.8
NVLJ	Novalja	7.61	311	*e*Pn	Pn	21 17 07.2	-1.2
NRCA	Norcia	7.96	295	Pn	Pn	21 17 13.8	+0.5
	comp=Z,1.0nm,0.2s						
NRCA	Norcia	7.96	295	Pn	Pn	21 17 13.8	+0.5
	comp=Z,1.0nm,0.2s						
NRCA	Norcia	7.96	295	Pn	Pn	21 17 13.8	+0.5
	comp=Z,1.0nm,0.2s						
BRTR	Keskin Array B	8.24	87	Pn	Pn	21 17 17.8	+0.7
	comp=Z,0.3nm,0.3s,baz=263,slow=10.0,SNR=9.8						
BRTR	Keskin Array B	8.24	87	*e*P	Pn	21 17 18.4	+1.3
BRTR	Keskin Array B	8.24	87	Pn	Pn	21 17 17.9	+0.8
BRTR	Keskin Array B	8.24	87	*e*P	Pn	21 17 18.4	+1.3
DOBS	Dobrina	8.33	321	*e*P	Pn	21 17 18.0	-0.4
DOBS	Dobrina	8.33	321	*e*P	Pn	21 17 18.0	-0.3
FSSB	Fossombrone	8.50	300	Pn	Pn	21 17 19.6	-1.1
	comp=Z,3.0nm,0.3s						
FSSB	Fossombrone	8.50	300	Pn	Pn	21 17 19.6	-1.1
	comp=Z,3.0nm,0.3s						
FSSB	Fossombrone	8.50	300	Pn	Pn	21 17 19.6	-1.1
	comp=Z,3.0nm,0.3s						
PDKS	Podkum	8.50	319	*e*P	Pn	21 17 20.5	-0.1
GROS	Grobnik	8.55	323	*i*P	Pn	21 17 20.5	-0.8
GROS	Grobnik	8.55	323	*i*P	Pn	21 17 20.5	-0.8
PIEI	Pieia	8.61	299	Pn	Pn	21 17 21.0	-1.1
	comp=Z,9.0nm,1.2s						
PIEI	Pieia	8.61	299	Pn	Pn	21 17 21.0	-1.1
	comp=Z,9.0nm,1.2s						
PIEI	Pieia	8.61	299	Pn	Pn	21 17 21.0	-1.1
	comp=Z,9.0nm,1.2s						
KECS	Kecovo	8.80	349	*e*P	Pn	21 17 22.0	-2.8
KECS	Kecovo	8.80	349	*e*PN	Pn	21 17 22.0	-2.8
KOLS	Kolonicke sedl	9.09	357	*e*Pn	Pn	21 17 22.1	-6.6
KOLS				*e*Sn	Sn	21 18 54.5	-16
KOLS				*e*Sg	Sx	21 20 10.2	
KOLS	Kolonicke sedl	9.09	357	*e*PN	Pn	21 17 22.0	-6.7
KOLS				*e*SN	Sn	21 18 54.5	-16
KOLS				*e*SG	Sx	21 20 10.2	
VYHS	Vyhne	9.12	343	*e*P	Pn	21 17 29.7	+0.6
VYHS				*e*		21 19 10.9	
VYHS	Vyhne	9.12	343	*e*PN	Pn	21 17 29.7	+0.6
VYHS				*e*		21 19 10.9	
VYHS	Vyhne	9.12	343	*e*P	Pn	21 17 29.7	+0.6
VYHS				*e*S	Sn	21 19 10.9	-0.9
PTCC	Patocco-Chiusa	9.58	316	Pn	Pn	21 17 33.9	-1.6
	comp=Z,1.0nm,0.3s						
PTCC	Patocco-Chiusa	9.58	316	Pn	Pn	21 17 33.9	-1.6
	comp=Z,1.0nm,0.3s						
PTCC	Patocco-Chiusa	9.58	316	Pn	Pn	21 17 33.9	-1.6
	comp=Z,1.0nm,0.3s						
SIM	Simferopol'	9.71	55	S	Sn	21 19 26.0	-0.2
SIM				pmax	pmax		
	comp=Z,22nm,0.7s						
GERES	GERESS Array B	11.15	327	Pn	Pn	21 17 57.3	+0.4
	comp=Z,0.1nm,0.3s,baz=138,slow=14,SNR=6.4						
GERES	GERESS Array B	11.15	327	P	Pn	21 17 57.3	+0.4
KHC	Kasperske Hory	11.42	327	*e*P	Pn	21 18 00.8	+0.2
AKASG	Malin Array Be	11.71	20	*i*P	Pn	21 18 06.8	+2.3
AKASG	Malin Array Be	11.71	20	*i*P	Pn	21 18 06.8	+2.3
ESDC	Sonseca Array	20.66	278	P	P	21 19 55.5	-1.8
	comp=Z,1.0nm,0.8s,baz=79,slow=9.3,SNR=2.9						
ESDC				pP		21 20 00.4	
	comp=Z,1.8nm,0.6s,baz=69,slow=9.8,SNR=18						
ESDC	Sonseca Array	20.66	278	P	P	21 19 55.5	-1.8
HFS	Hagfors	21.11	347	P	P	21 20 00.8	-1.2
	comp=Z,1.6nm,0.7s,mb3.5,baz=151,slow=13,SNR=6.9						
HFS	Hagfors	21.11	347	P	P	21 20 00.8	-1.2
FINES	FINESS Array B	21.70	4	P	P	21 20 07.3	-1.1
	comp=Z,2.8nm,1.1s,mb3.6,baz=187,slow=14,SNR=7.4						
FINES	FINESS Array B	21.70	4	P	P	21 20 07.3	-1.1
	comp=Z,3.0nm,1.1s,mb3.6						
NB2	NORSAR Subarra	22.41	345	P	P	21 20 15.4	-0.6
	comp=Z,2.5nm,0.7s,mb3.8,baz=153,slow=11						
NB2	NORSAR Subarra	22.41	345	P	P	21 20 15.4	-0.6
	comp=Z,2.5nm,0.7s,mb3.8,SNR=2.7						
NOA	NORSAR Array B	22.41	345	P	P	21 20 15.4	-0.6
	comp=Z,1.6nm,0.8s,mb3.5,baz=153,slow=11,SNR=6.6						
NOA				LR	LR	21 30 03.3	
	comp=Z,12nm,19.2s,baz=165,slow=40						
NOA	NORSAR Array B	22.41	345	P	P	21 20 15.4	-0.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,12nm,19.2s						
NOA	NORSAR Array B	22.41	345	P	P	21 20 15.4	-0.6
	comp=Z,12nm,19.2s						
EKA	Eskdalemuir Ar	23.24	320	P	P	21 20 22.6	-2.2
	comp=Z,2.8nm,0.9s,mb3.7,baz=114,slow=9.4,SNR=8.5						
EKA	Eskdalemuir Ar	23.24	320	P	P	21 20 22.6	-2.2
TORD	Torodi Ar. Bea	32.52	221	P	P	21 21 48.0	-0.7
	comp=Z,1.4nm,0.4s,mb4.3,baz=32,slow=9.1,SNR=59						
MKAR	Makanchi Array	42.83	60	P	P	21 23 15.6	+0.1
	comp=Z,0.9nm,0.5s,mb3.7,baz=278,slow=6.2,SNR=6.9						
MKAR	Makanchi Array	42.83	60	*e*P	P	21 23 15.7	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	42.83	60	P	P	21 23 15.6	+0.1
ZALV	Zalesovo Beam	43.17	50	P	P	21 23 17.8	-0.4
	comp=Z,1.7nm,0.5s,mb4.1,baz=276,slow=9.2,SNR=7.1						
ZALV	Zalesovo Beam	43.17	50	*e*P	P	21 23 18.2	0.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ZALV	Zalesovo Beam	43.17	50	P	P	21 23 17.8	-0.4
ZALV	Zalesovo Beam	43.17	50	*e*P	P	21 23 18.2	0.0
	comp=Z,2.0nm,0.5s,mb4.1						
SCHQ	Schefferville	58.51	317	P	P	21 25 12.9	-0.7
	comp=Z,3.2nm,0.6s,mb4.5,baz=40,slow=7.0,SNR=6.0						
SCHQ	Schefferville	58.51	317	P	P	21 25 12.9	-0.7
YKA	Yellowknife Ar	72.44	341	P	P	21 26 43.0	-0.7
	comp=Z,0.5nm,0.7s,mb3.5,baz=46,slow=5.3,SNR=2.7						
YKA	Yellowknife Ar	72.44	341	P	P	21 26 43.0	-0.7

IDC 31 21:34:06.4±2.2, 31°.48N×103°.59E, h0km, mb3.3/3, mb1 3.3/5, mb1mx3.1/25, mbtmp3.2/5, ML3.1/2, Error ellipse: s-maj=38.3km s-min=34.8km az=28.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.63	199	Pn	Pn	21 37 21.2	+0.2
	0.0nm,0.3s,baz=9.0,slow=8.7,SNR=2.6						
SONM	Songino Array	16.47	7	Pn	Pn	21 37 59.2	+0.5
	0.1nm,0.3s,baz=188,slow=13,SNR=2.4						
KSRS	Korea Array	20.90	67	P	P	21 38 49.8	-0.5
	1.0nm,0.6s,baz=256,slow=9.3,SNR=5.4						
MKAR	Makanchi Array	22.41	319	P	P	21 39 06.0	-0.4
	0.4nm,0.5s,baz=119,slow=12,SNR=6.6						
ZALV	Zalesovo Beam	26.20	334	P	P	21 39 42.9	+0.4
	0.6nm,0.5s,baz=140,slow=9.1,SNR=5.2						

KRSC 31 21:36:33.6±0.7, 51°.51N×159°.84E, h10km±10km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.51	314	*e*P	Pn	21 37 01.6	+0.9
GRL				*i* S	Sn	21 37 21.7	+1.3
SPN	Mys Shipunski	1.59	4	*e*P	Pn	21 37 04.6	+2.8
SPN				*i* S	Sn	21 37 27.6	+5.1
PET	Petropavlovsk	1.68	335	*e*P	Pn	21 37 03.5	+0.5
PET				*i* S	Sn	21 37 25.8	+1.2
NLC	Nalytchevo	1.69	350	*e*P	Pn	21 37 03.7	+0.5
AVH	Avacha	1.88	339	*e*P	Pn	21 37 07.8	+2.0
MIPR	Malaya Ipel'ka	2.06	293	*e*P	Pn	21 37 08.7	+0.5
MIPR				*i* S	Sn	21 37 34.4	+0.5
GNL	Ganaly	2.48	333	*e*P	Pn	21 37 15.3	+1.4
MKZ	Mys Kozlova	3.26	20	*e*P	Pn	21 37 25.0	+0.3
MKZ				*i* S	Sn	21 38 02.6	-0.8
KBTR	Krutoberegovo	5.03	19	*e*P	Pn	21 37 50.7	+1.8

MAN 31 22:03:51, 17°.82N×118°.28E, h36km, mb4.5, ML3.4, MS3.3, Philippine Islands region

KRSC ***31*** *22:28:11.1±0.3, 51°.51N×159°.84E, h33km±32km, ML4.7*
ISCJB ***31*** *22:28:12.8±0.9, 51°.51N±0°.05×159°.67E±0°.08, h57km±5km, mb4.2/29, MS3.9/10, Error ellipse: s-maj=11.2km s-min=5.2km az=136.5*
MOS ***31*** *22:28:12.9±1.5, 51°.60N×159°.26E, h46km, mb4.5/9, MS4.0/5, Error ellipse: s-maj=11.9km s-min=6.2km az=93.3*
BJI ***31*** *22:28:13.2, 52°.57N×159°.75E, h76km, mB4.7/5, mb4.7/8, Ms4.9/1, Ms7 4.4/1*
NEIC ***31*** *22:28:16.9±1.8, 51°.70N×159°.26E, h63km±11km, mb4.4/3, Error ellipse: s-maj=20.9km s-min=14.3km az=123.0*
IDC ***31*** *22:28:17.0±3.2, 51°.74N×159°.26E, h62km±23km, mb3.7/17, mb1 3.8/18, mb1mx3.7/27, mbtmp3.7/18, ML3.4/1, MS3.7/6, Ms1 3.7/6, ms1mx3.2/30, Error ellipse: s-maj=28.6km s-min=17.3km az=113.0*

ISC 31 22:28:14.9±0.8, 51°.56N±0°.05×159°.56E±0°.09, h55km±5km, n77, σ1°19/88, mb4.2/29, MS3.9/10, 2C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	Gorelyy	1.35	318	*e*P	Pn	22 28 38.0	+0.6
GRL				*i* S	Sn	22 28 57.2	+2.9
SPN	Mys Shipunski	1.57	10	*e*P	Pn	22 28 38.7	-1.6
SPN				*i* S	Sn	22 28 58.3	-1.2
PET	Petropavlovsk	1.57	340⇑	*i*PN	Pn	22 28 39.0	-1.3
PET				*e*S	Sn	22 29 01.3	+1.7
PET				pmax	pmax		
	comp=Z,450nm,0.4s						
PET				smax			
	comp=N,2μm,0.6s						
PET				smax			
	comp=N,3μm,0.5s						
PET	Petropavlovsk	1.57	340	*e*Pn	Pn	22 28 39.1	-1.3
INSR	Institute	1.62	339	*e*P	Pn	22 28 40.1	-0.9
INSR				*i* S	Sn	22 29 01.1	+0.3
NLC	Nalytchevo	1.62	355	*e*P	Pn	22 28 39.6	-1.4
NLC				*i* S	Sn	22 28 59.7	-1.1
AVH	Avacha	1.78	344	*e*P	Pn	22 28 42.9	-0.3
MIPR	Malaya Ipel'ka	1.88	294	*e*P	Pn	22 28 44.9	+0.4
MIPR				*i* S	Sn	22 29 10.4	+3.3
PEA0B	Petropavlovsk-	1.93	324	*e*Pn	Pn	22 28 45.4	+0.2
PETK	Petropavlovsk-	1.93	324	P	Pn	22 28 44.9	-0.3
	comp=N,66nm,0.3s,baz=125,slow=16,SNR=228						
PETK				S	Sn	22 29 13.5	+5.3
	comp=N,32nm,0.3s,baz=134,slow=17,SNR=5.6						
SKR	Severo-Kuril's	2.34	249	*e*PN	Pn	22 28 46.9	-3.9
SKR				*e*S	Sn	22 29 18.1	-0.2
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,1μm,0.5s						
SKR				smax			
	comp=E,460nm,0.5s						
SKR				smax			
	comp=N,2μm,2.0s						
SKR				smax			
	comp=E,2μm,2.0s						
SKR				MLR	MLR		
	comp=N,3μm,14.0s						
SKR				MLR	MLR		
	comp=E,3μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
GNL	Ganaly	2.36	336	*e*P	Pn	22 28 51.0	-0.1
KII	Karymskiy	2.48	358	*e*P	Pn	22 28 52.5	-0.3
ALID	Alaid	2.62	256	*e*P	Pn	22 28 54.2	-0.4
ALID				*i* S	Sn	22 29 25.4	+0.3
MKZ	Mys Kozlova	3.28	23	*e*P	Pn	22 29 01.3	-2.3
MKZ				*i* S	Sn	22 29 37.4	-3.9
KMNR	Kamenistaya	4.23	5	*e*P	Pn	22 29 17.8	+1.2
BZMR	Bezymyannaya	4.42	7	P	Pn	22 29 20.6	+1.3
KIRR	Kirishev	4.43	6	*e*P	Pn	22 29 20.6	+1.2
KOZ	Kozyrevsk	4.51	2	P	Pn	22 29 21.3	+0.8
KOZR	Kozyr	4.52	2	PN	Pn	22 29 21.3	+0.6
ZLN	Zelenaya	4.53	9	*e*P	Pn	22 29 22.2	+1.4
CIRR	Tsirk	4.62	8	*e*P	Pn	22 29 23.4	+1.4
SRDR	Sredinnyy	4.77	1	*e*P	Pn	22 29 24.4	+0.3
KBTR	Krutoberegovo	5.04	21	*e*P	Pn	22 29 26.2	-1.6
KBTR				*i* S	Sn	22 30 21.2	-3.4
BDR	Baidarnaya	5.11	10	P	Pn	22 29 29.0	+0.2
SMKR	Semkarok	5.16	12	*e*P	Pn	22 29 29.8	+0.4
SRKR	Sorokina	5.19	10	P	Pn	22 29 31.1	+1.2
YSS	Yuzh-Sakhalins	11.90	254	*i*PN	Pn	22 30 57.1	-4.5
ASAJ	Asahikawa	13.59	243	P	Pn	22 31 23.7	-0.9
	comp=Z,0.3nm,0.3s,baz=5.2,slow=11,SNR=1.2						
KLR	Kul'dur	17.84	273	*e*P	Pn	22 32 17.2	-1.7
KLR				MLR	MLR		
	comp=Z,900nm,14.0s						
YAK	Yakutsk	19.24	315	*e*P	Pn	22 32 31.9	-3.8
YAK				pmax	pmax		
	comp=E,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				MLR	MLR		
	comp=Z,224nm,12.0s						
YAK				MLR	MLR		
	comp=E,207nm,17.0s						
YAK				MLR	MLR		
	comp=N,152nm,13.0s						
MJAR	Matsushiro Arr	21.35	234	P	P	22 32 57.7	+0.5
	comp=N,1.4nm,0.5s,mb3.6,baz=25,slow=11,SNR=9.3						
MJAR				LR	LR	22 41 39.7	
	comp=N,166nm,20.1s,MS3.4,baz=50,slow=38						
TIXI	Tiksi	24.36	337	*e*P	P	22 33 26.8	-0.3
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,218nm,16.0s,MS3.7						
HIA	Hailar	25.26	281	*e*P	P	22 33 34.8	-0.8
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HIA	Hailar	25.26	281	*e*P	P	22 33 34.8	-0.8
	comp=Z,16nm,0.8s,mb4.6						
KSRS	Korea Array	26.36	250	P	P	22 33 47.7	+2.1
	comp=Z,1.1nm,0.8s,mb3.4,baz=70,slow=14,SNR=2.7						
KSRS				LR	LR	22 43 14.1	
	comp=Z,62nm,18.7s,MS3.2,baz=45,slow=34						
KSRS	Korea Array	26.36	250	P	P	22 33 47.7	+2.1
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
KSRS				MLR	MLR		
	comp=Z,62nm,18.7s,MS3.2						
SONM	Songino Array	33.96	285	P	P	22 34 52.3	-0.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=60,slow=7.7,SNR=4.5						
SONM				PcP	PcP	22 37 31.2	+1.7
	comp=Z,0.1nm,0.5s,baz=123,slow=5.3,SNR=2.3						
SONM				LR	LR	22 50 02.4	
	comp=Z,203nm,19.2s,MS3.9,baz=264,slow=39						
SONM	Songino Array	33.96	285	P	P	22 34 52.3	-0.3
SONM						22 37 31.2	
ZALV	Zalesovo Beam	43.35	304	P	P	22 36 09.5	-1.6
	comp=Z,0.4nm,0.3s,mb3.7,baz=64,slow=6.9,SNR=4.1						
ZALV				LR	LR	22 55 42.6	
	comp=Z,118nm,18.1s,MS3.8,baz=65,slow=38						
NVS	Novosibirsk	43.73	306	*i*P	P	22 36 12.4	-1.8
NVS				pmax	pmax		
	comp=Z,112nm,2.4s,mb5.2						
NVS				pmax	pmax		
	comp=N,38nm,1.8s						
NVS				pmax	pmax		
	comp=E,63nm,2.5s						
KURK	Kurchatov	48.28	303	P	P	22 36 49.4	-0.6
	comp=E,5.0nm,0.9s,mb4.5,baz=61,slow=7.7,SNR=36						
KURK	Kurchatov	48.28	303	*c*P	P	22 36 48.9	-1.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
MK31	Makanchi Array	48.54	297	*e*P	P	22 36 51.7	-0.4
MKAR	Makanchi Array	48.54	297	P	P	22 36 50.0	-2.0
	comp=Z,0.2nm,0.4s,mb3.5,baz=54,slow=6.6,SNR=7.2						
BVAR	Borovoye Array	51.10	309	P	P	22 37 09.7	-1.6
	comp=Z,1.9nm,0.5s,mb4.3,baz=61,slow=9.3,SNR=11						
BVAR				LR	LR	23 00 49.6	
	comp=Z,193nm,20.6s,MS4.1,baz=60,slow=38						
ARU	Arti	54.31	318	*d*P	P	22 37 34.4	-0.7
ARU				*e*		22 39 33.6	
ARU				S	S	22 45 08.4	0.0
ARU				SS	SS	22 48 47.0	-3.3
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
ARU				MLR	MLR		
	comp=Z,151nm,15.0s,MS4.2						
ARCES	ARCESS Array B	54.65	342	P	P	22 37 35.1	-2.2
	comp=Z,3.9nm,0.9s,mb4.4,baz=354,slow=4.7,SNR=9.0						
AAK	Ala-Archa	55.47	297	*i*P	P	22 37 41.3	-2.4
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
CMAR	Chiang Mai Arr	57.55	259	P	P	22 38 00.9	+2.2
	comp=Z,0.8nm,0.3s,mb4.2,baz=31,slow=7.0,SNR=7.7						
ABKAR	Akbulak array	58.55	311	*e*P	P	22 38 04.6	-0.6
	comp=Z,2.7nm,0.9s,mb4.3						
JOF	Joensuu	58.83	335	*e*P	P	22 38 06.9	-0.1
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
JOF	Joensuu	58.83	335	*e*p	P	22 38 06.9	-0.1
	comp=Z,2.1nm,0.6s,mb4.3						
KAF	Kangasniemi	60.77	337	*e*P	P	22 38 20.5	+0.1
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
KAF	Kangasniemi	60.77	337	*e*p	P	22 38 20.5	+0.1
	comp=Z,1.8nm,0.5s,mb4.5,baz=34,slow=6.0						
FINES	FINESS Array B	61.40	337	P	P	22 38 25.0

*ISCJB **31** 22:44:12.6±0.4, 39.°47N±0.°02×21.°59E±0.°03, h6km±5km, Error ellipse: s-maj=4.3km s-min=3.3km az=149.5*
*NEIC **31** 22:44:12.6, 39.°48N×21.°59E, h12km, MD3.0(ATH), After ATH.*
*ATH **31** 22:44:12.6, 39.°48N×21.°59E, h12km±7km, MD3.0/8*
*CSEM **31** 22:44:12.9±0.2, 39.°49N×21.°59E, h20km, ML2.5/8, Error ellipse: s-maj=4.5km s-min=3.2km az=51.0*
*THE **31** 22:44:13.3, 39.°47N×21.°62E, h12km±1km, ML2.5/8, Error ellipse: s-maj=1.9km s-min=1.0km az=31.0*

ISC 31 22:44:13.0±0.4, 39.°46N±0.°02×21.°58E±0.°03, h14km±5km, n33, σ0°89/59, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.35**	**73**	*e*PB	**Pg**	**22 44 19.7**	**-0.4**
THL				*e*SB	**Sg**	**22 44 24.3**	**-0.6**
THL	**Klokotos Trika**	**0.35**	**73**	P	**Pg**	**22 44 19.7**	**-0.4**
THL				S	**Sg**	**22 44 25.2**	**+0.3**
THL	**Klokotos Trika**	**0.35**	**73**	P	**Pg**	**22 44 19.7**	**-0.4**
THL				*e*Sb	**Sg**	**22 44 24.3**	**-0.6**
THL				S	**Sg**	**22 44 25.2**	**+0.3**
MEV	**Metsovon**	**0.42**	**320**	P	**Pg**	**22 44 21.3**	**-0.1**
MEV				S	**Sg**	**22 44 28.5**	**+1.4**
MEV	**Metsovon**	**0.42**	**320**	P	**Pg**	**22 44 21.3**	**-0.1**
MEV				S	**Sg**	**22 44 28.5**	**+1.4**
EVR	**Evrytania**	**0.57**	**162**	*e*PG	**Pg**	**22 44 23.6**	**-0.6**
EVR				*e*SB	**Sg**	**22 44 31.7**	**-0.1**
EVR	**Evrytania**	**0.57**	**162**	*e*Pg	**Pg**	**22 44 23.6**	**-0.6**
EVR				*e*Sb	**Sg**	**22 44 31.7**	**-0.1**
JAN	**Janina**	**0.60**	**289**	*e*PB	**Pg**	**22 44 24.1**	**-0.6**
JAN				*e*SB	**Sg**	**22 44 32.3**	**-0.3**
JAN	**Janina**	**0.60**	**289**	*e*Pb	**Pg**	**22 44 24.1**	**-0.6**
JAN				*e*Sb	**Sg**	**22 44 32.3**	**-0.3**
AGG	**Agios Georgios**	**0.73**	**127**	*e*PB	**Pg**	**22 44 27.2**	**+0.1**
AGG				*e*SB	**Sg**	**22 44 37.3**	**+0.6**
AGG	**Agios Georgios**	**0.73**	**127**	P	**Pg**	**22 44 26.8**	**-0.3**
AGG				S	**Sg**	**22 44 38.9**	**+2.2**
AGG	**Agios Georgios**	**0.73**	**127**	P	**Pg**	**22 44 26.8**	**-0.3**
AGG	**Agios Georgios**	**0.73**	**127**	*e*Pb	**Pg**	**22 44 27.2**	**+0.1**
AGG				*e*Sb	**Sg**	**22 44 37.3**	**+0.6**
AGG				S	**Sg**	**22 44 38.9**	**+2.2**
KZN	**Kozani**	**0.85**	**10**	*e*PG	**Pg**	**22 44 28.2**	**-1.3**
KZN	**Kozani**	**0.85**	**10**	P	**Pg**	**22 44 28.3**	**-1.2**
KZN				S	**Sg**	**22 44 41.3**	**+0.6**
KZN	**Kozani**	**0.85**	**10**	P	**Pg**	**22 44 28.3**	**-1.2**
KZN				S	**Sg**	**22 44 41.3**	**+0.6**
LIT	**Litokhoron**	**0.95**	**47**	*e*PB	**Pg**	**22 44 30.0**	**-1.3**
LIT	**Litokhoron**	**0.95**	**47**	P	**Pg**	**22 44 29.8**	**-1.5**
LIT				S	**Sg**	**22 44 45.3**	**+1.7**
LIT	**Litokhoron**	**0.95**	**47**	P	**Pg**	**22 44 29.8**	**-1.5**
IGT	**Igoumenitsa**	**0.97**	**274**	P	**Pb**	**22 44 31.5**	**0.0**
IGT				S	**Sg**	**22 44 48.3**	**+3.9**
IGT	**Igoumenitsa**	**0.97**	**274**	P	**Pb**	**22 44 31.5**	**0.0**
EFP	**Efpalio**	**1.07**	**166**	P	**Pg**	**22 44 32.1**	**-1.4**
EFP				S	**Sg**	**22 44 48.0**	**+0.6**
EFP	**Efpalio**	**1.07**	**166**	P	**Pg**	**22 44 32.1**	**-1.4**
EFP				S	**Sg**	**22 44 48.0**	**+0.6**
KALE	**Kalithea**	**1.16**	**158**	P	**Pn**	**22 44 34.6**	**-0.1**
KALE				S	**Sb**	**22 44 50.5**	**+0.9**
KALE	**Kalithea**	**1.16**	**158**	P	**Pn**	**22 44 34.6**	**-0.1**
KALE				S	**Sb**	**22 44 50.5**	**+0.9**
XOR	**Xorichti**	**1.25**	**94**	P	**Pn**	**22 44 35.2**	**-0.8**
XOR				S	**Sb**	**22 44 52.5**	**+0.2**
XOR	**Xorichti**	**1.25**	**94**	P	**Pn**	**22 44 35.2**	**-0.8**
XOR				S	**Sb**	**22 44 52.5**	**+0.2**
NEO	**Neokhori**	**1.28**	**97**	*e*PB	**Pb**	**22 44 36.6**	**-0.3**
NEO	**Neokhori**	**1.28**	**97**	*e*Pb	**Pb**	**22 44 36.6**	**-0.3**
FNA	**Florina**	**1.33**	**353**	P	**Pn**	**22 44 36.1**	**-1.0**
FNA				S	**Sb**	**22 44 55.2**	**+0.7**
FNA	**Florina**	**1.33**	**353**	P	**Pn**	**22 44 36.1**	**-1.0**
FNA				S	**Sb**	**22 44 55.2**	**+0.7**
VLS	**Valsamata**	**1.50**	**211**	*e*PB	**Pb**	**22 44 41.9**	**+1.3**
VLS	**Valsamata**	**1.50**	**211**	*e*Pb	**Pb**	**22 44 41.9**	**+1.3**

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*KRSC **31** 22:44:43.9±0.1, 51.°41N×159.°94E, h33km±33km, ML4.3*
*ISCJB **31** 22:44:44.3±1.1, 51.°31N±0.°06×159.°83E±0.°09, h45km±7km, mb3.9/20, Error ellipse: s-maj=12.6km s-min=6.7km az=139.8*
*MOS **31** 22:44:47.2±1.5, 51.°59N×159.°39E, h49km, mb4.3/6, Error ellipse: s-maj=14.4km s-min=7.2km az=96.7*
*IDC **31** 22:44:52.8±3.6, 51.°72N×159.°11E, h67km±25km, mb3.5/13, mb1 3.7/13, mb1mx3.5/25, mbtmp3.5/13, Error ellipse: s-maj=36.7km s-min=23.6km az=129.0*
*NEIC **31** 22:44:53.1±1.8, 51.°78N×158.°97E, h68km±11km, mb4.0/6, Error ellipse: s-maj=22.5km s-min=13.9km az=133.0*

ISC 31 22:44:45.8±1.1, 51.°32N±0.°06×159.°76E±0.°09, h38km±7km, n61, σ1°20/72, mb3.9/20, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.61**	**320**	*e*P	**Pn**	**22 45 12.5**	**+0.7**
GRL				*i* S	**Sn**	**22 45 32.7**	**+1.4**
SPN	**Mys Shipunski**	**1.79**	**5**	PN	**Pn**	**22 45 13.9**	**-0.2**
SPN				S	**Sn**	**22 45 36.6**	**+1.0**
SPN	**Mys Shipunski**	**1.79**	**5**	*e*P	**Pn**	**22 45 13.9**	**-0.2**
SPN				*i* S	**Sn**	**22 45 36.6**	**+1.0**
PET	**Petropavlovsk**	**1.84**	**339**	PN	**Pn**	**22 45 13.7**	**-1.1**
PET				S	**Sn**	**22 45 36.2**	**-0.6**
PET	**Petropavlovsk**	**1.84**	**339**	*e*P	**Pn**	**22 45 13.7**	**-1.1**
PET				*i* S	**Sn**	**22 45 36.2**	**-0.6**
PET	**Petropavlovsk**	**1.84**	**339**	*e*Pn	**Pn**	**22 45 13.4**	**-1.4**
NLC	**Nalytchevo**	**1.87**	**352**	PN	**Pn**	**22 45 14.2**	**-1.1**
NLC				S	**Sn**	**22 45 36.4**	**-1.2**
NLC	**Nalytchevo**	**1.87**	**352**	*e*P	**Pn**	**22 45 14.2**	**-1.1**
NLC				*i* S	**Sn**	**22 45 36.4**	**-1.2**
AVH	**Avacha**	**2.04**	**343**	*e*P	**Pn**	**22 45 17.5**	**-0.2**
MIPR	**Malaya Ipel'ka**	**2.10**	**298**	*e*P	**Pn**	**22 45 19.3**	**+0.9**
MIPR				*i* S	**Sn**	**22 45 44.1**	**+0.9**
PEA0B	**Petropavlovsk-**	**2.19**	**325**	*e*Pn	**Pn**	**22 45 19.6**	**-0.1**
PETK	**Petropavlovsk-**	**2.19**	**325**	P	**Pn**	**22 45 19.3**	**-0.4**
	77nm,0.3s,baz=120,slow=18,SNR=107						
SKR	**Severo-Kuril's**	**2.39**	**256**	*e*PN	**Pn**	**22 45 20.9**	**-1.5**
SKR				*e*S	**Sn**	**22 45 49.0**	**-1.4**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=N,490nm,0.5s						
SKR				smax			
	comp=E,350nm,0.5s						
GNL	**Ganaly**	**2.62**	**336**	*e*P	**Pn**	**22 45 25.5**	**-0.1**
ALID	**Alaid**	**2.69**	**262**	*e*P	**Pn**	**22 45 28.5**	**+1.9**
KII	**Karymskiy**	**2.73**	**356**	PN	**Pn**	**22 45 26.4**	**-0.6**
KII	**Karymskiy**	**2.73**	**356**	*e*P	**Pn**	**22 45 26.4**	**-0.6**
MKZ	**Mys Kozlova**	**3.45**	**19**	PN	**Pn**	**22 45 35.4**	**-1.6**
MKZ				S	**Sn**	**22 46 12.6**	**-4.0**
MKZ	**Mys Kozlova**	**3.45**	**19**	*e*P	**Pn**	**22 45 35.4**	**-1.6**
MKZ				*i* S	**Sn**	**22 46 12.6**	**-4.0**
KMNR	**Kamenistaya**	**4.45**	**3**	*e*P	**Pn**	**22 45 53.6**	**+2.9**
ZLN	**Zelenaya**	**4.75**	**7**	P	**Pn**	**22 45 54.6**	**-0.1**
CIRR	**Tsirk**	**4.84**	**7**	*e*P	**Pn**	**22 45 56.0**	**0.0**
SRDR	**Sredinnyy**	**5.00**	**360**	P	**Pn**	**22 46 00.2**	**+1.9**
KBTR	**Krutoberegovo**	**5.22**	**19**	PN	**Pn**	**22 46 00.7**	**-0.6**
KBTR	**Krutoberegovo**	**5.22**	**19**	*e*P	**Pn**	**22 46 00.7**	**-0.6**
SMKR	**Semkarok**	**5.37**	**10**	*e*P	**Pn**	**22 46 04.2**	**+0.9**
SRKR	**Sorokina**	**5.41**	**8**	*e*P	**Pn**	**22 46 04.7**	**+0.9**
KLR	**Kul'dur**	**17.98**	**274**	*e*P	**Pn**	**22 48 53.0**	**+0.4**
YAK	**Yakutsk**	**19.50**	**315**	*e*P	**Pn**	**22 49 07.9**	**-2.9**
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK	**Yakutsk**	**19.50**	**315**	*e*P	**Pn**	**22 49 04.8**	**-5.9**
	comp=Z,17nm,0.5s						
MJAR	**Matsushiro Arr**	**21.32**	**234**	P	**P**	**22 49 32.9**	**+3.7**
	comp=Z,1.3nm,0.8s,mb3.3,baz=38,slow=8.3,SNR=5.1						
TIXI	**Tiksi**	**24.62**	**337**	*e*P	**P**	**22 49 59.9**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
TIXI	**Tiksi**	**24.62**	**337**	*e*P	**P**	**22 50 01.3**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.0						
HIA	**Hailar**	**25.43**	**281**	P	**P**	**22 50 09.0**	**-0.7**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HIA	**Hailar**	**25.43**	**281**	P	**P**	**22 50 09.0**	**-0.7**
	comp=Z,5.5nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	**33.73**	**285**	P	**P**	**22 51 22.3**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.5						
SONM	**Songino Array**	**34.14**	**286**	P	**P**	**22 51 28.5**	**+1.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=69,slow=7.9,SNR=1.9						
TLY	**Talaya**	**34.20**	**293**	*e*P	**P**	**22 51 29.8**	**+2.5**
KURK	**Kurchatov**	**48.51**	**303**	*e*P	**P**	**22 53 23.1**	**-1.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**48.51**	**303**	*e*P	**P**	**22 53 23.1**	**-1.4**
	comp=Z,2.3nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**48.76**	**297**	*e*P	**P**	**22 53 24.5**	**-2.0**
MKAR	**Makanchi Array**	**48.76**	**297**	P	**P**	**22 53 24.6**	**-1.8**
	comp=Z,0.2nm,0.5s,mb3.4,baz=60,slow=6.6,SNR=2.6						
BVAR	**Borovoye Array**	**51.34**	**309**	P	**P**	**22 53 44.4**	**-1.6**
	comp=Z,1.3nm,0.5s,mb4.1,baz=54,slow=7.9,SNR=7.2						
BRVK	**Borovoye**	**51.37**	**309**	*e*P	**P**	**22 53 44.7**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**54.91**	**342**	P	**P**	**22 54 11.9**	**-0.1**
	comp=Z,2.7nm,0.9s,mb4.3,baz=43,slow=9.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**57.63**	**259**	P	**P**	**22 54 33.4**	**+1.4**
	comp=Z,0.5nm,0.4s,mb3.9,baz=27,slow=8.1,SNR=3.9						
JOF	**Joensuu**	**59.09**	**335**	*e*P	**P**	**22 54 41.5**	**-0.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
JOF	**Joensuu**	**59.09**	**335**	*e*p	**P**	**22 54 41.5**	**-0.1**
	comp=Z,0.5nm,0.3s,mb4.0						
KAF	**Kangasniemi**	**61.04**	**337**	*e*P	**P**	**22 54 54.3**	**-0.7**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
KAF	**Kangasniemi**	**61.04**	**337**	*e*p	**P**	**22 54 54.3**	**-0.7**
	comp=Z,0.8nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**61.67**	**337**	P	**P**	**22 54 59.5**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.2,baz=37,slow=7.4,SNR=12						
NB2	**NORSAR Subarra**	**65.19**	**344**	P	**P**	**22 55 23.0**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**65.19**	**344**	P	**P**	**22 55 23.3**	**+0.8**
	comp=Z,1.2nm,0.8s,mb4.0,baz=21,slow=6.6,SNR=6.4						
AKASG	**Malin Array Be**	**70.03**	**329**	P	**P**	**22 55 53.2**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.3,baz=31,slow=5.1,SNR=5.9						
AKASG	**Malin Array Be**	**70.03**	**329**	P	**P**	**22 55 53.2**	**0.0**
TXAR	**Lajitas Array**	**71.53**	**66**	P	**P**	**22 56 07.6**	**+4.9**
	comp=Z,0.1nm,0.5s,mb3.0,baz=309,slow=4.5,SNR=2.1						
BUR08	**Bucovina Ar. S**	**73.99**	**330**	*e*P	**P**	**22 56 18.0**	**+1.0**
BUR08				*e*	pP	22 56 28.4	-0.1
GERES	**GERESS Array B**	**76.08**	**338**	P	**P**	**22 56 30.5**	**+1.5**
	comp=Z,0.3nm,0.6s,mb3.4,baz=359,slow=5.1,SNR=2.2						
BR131	**Keskin Array S**	**77.86**	**320**	*e*P	**P**	**22 56 40.5**	**+1.3**
	comp=Z,0.5nm,0.6s,mb3.6						
BRTR	**Keskin Array B**	**77.86**	**320**	P	**P**	**22 56 40.2**	**+1.1**
	comp=Z,1.1nm,0.9s,mb3.8,baz=46,slow=3.5,SNR=7.0						
MMAI	**Mount Meron Ar**	**82.84**	**316**	P	**P**	**22 57 07.8**	**+1.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=51,slow=8.7,SNR=5.4						

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*KRSC **31** 22:45:03.2±0.9, 51.°18N×159.°83E, h5km±5km, ML4.7*
*MOS **31** 22:45:11.9±1.7, 51.°56N×159.°41E, h33km, mb4.3/4, Error ellipse: s-maj=16.5km s-min=8.2km az=100.1*
*NEIC **31** 22:45:20.0±1.8, 51.°82N×159.°01E, h74km±10km, mb4.1/7, Error ellipse: s-maj=21.8km s-min=13.2km az=144.0*
*IDC **31** 22:45:20.0±3.2, 51.°77N×159.°11E, h75km±22km, mb3.7/15, mb1 3.8/15, mb1mx3.6/26, mbtmp3.7/15, MS3.5/1, Ms1 3.5/1, ms1mx2.7/30, Error ellipse: s-maj=33.1km s-min=20.7km az=147.0*

ISC 31 22:45:14.2±2.1, 51.°4N±0.°1×159.°4E±0.°2, h45km±13km, n46, σ1°22/53, mb4.0/21, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.43**	**325**	P	**Pn**	**22 45 34.8**	**-2.8**
GRL				*i* S	**Sn**	**22 45 57.5**	**+2.4**
PET	**Petropavlovsk**	**1.70**	**344**	PN	**Pn**	**22 45 37.3**	**-4.0**
PET				S	**Sn**	**22 46 02.0**	**+0.1**
PET	**Petropavlovsk**	**1.70**	**344**	P	**Pn**	**22 45 37.3**	**-4.0**
PET				*i* S	**Sn**	**22 46 02.0**	**+0.1**
PET	**Petropavlovsk**	**1.70**	**344**	*e*Pn	**Pn**	**22 45 39.9**	**-1.4**
SPN	**Mys Shipunski**	**1.75**	**12**	PN	**Pn**	**22 45 37.9**	**-4.1**
SPN				S	**Sn**	**22 46 03.5**	**+0.4**
SPN	**Mys Shipunski**	**1.75**	**12**	P	**Pn**	**22 45 37.9**	**-4.1**
SPN				*i* S	**Sn**	**22 46 03.5**	**+0.4**
NLC	**Nalytchevo**	**1.78**	**359**	P	**Pn**	**22 45 40.2**	**-2.3**
MIPR	**Malaya Ipel'ka**	**1.87**	**299**	P	**Pn**	**22 45 43.3**	**-0.3**
PEA0B	**Petropavlovsk-**	**2.02**	**329**	*e*Pn	**Pn**	**22 45 46.8**	**+1.1**
PETK	**Petropavlovsk-**	**2.02**	**329**	P	**Pn**	**22 45 47.0**	**+1.3**
	89nm,0.3s,baz=126,slow=20,SNR=18						
PETK				S	**Sn**	**22 46 14.8**	**+5.2**
	77nm,0.3s,baz=300,slow=20,SNR=8.9						
PETK	**Petropavlovsk-**	**2.02**	**329**	P	**Pn**	**22 45 47.0**	**+1.3**
PETK				S	**Sn**	**22 46 14.8**	**+5.2**
MKZ	**Mys Kozlova**	**3.47**	**23**	P	**Pn**	**22 46 00.8**	**-4.8**
KLR	**Kul'dur**	**17.76**	**274**	*e*P	**Pn**	**22 49 19.2**	**+1.4**
YAK	**Yakutsk**	**19.29**	**315**	*e*P	**Pn**	**22 49 32.9**	**-3.4**
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK	**Yakutsk**	**19.29**	**315**	*e*P	**Pn**	**22 49 30.6**	**-5.6**
	comp=N,22nm,0.5s						
MJAR	**Matsushiro Arr**	**21.18**	**234**	P	**P**	**22 49 59.1**	**+3.6**
	comp=N,1.8nm,0.8s,mb3.4,baz=24,slow=11,SNR=4.2						
MJAR				LR	LR	22 58 26.6	
	comp=N,127nm,18.2s,baz=245,slow=37						
TIXI	**Tiksi**	**24.47**	**337**	*e*P	**P**	**22 50 27.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
TIXI	**Tiksi**	**24.47**	**337**	*e*P	**P**	**22 50 27.3**	**-1.2**
	comp=Z,5.5nm,0.6s,mb4.2						
HIA	**Hailar**	**25.20**	**281**	*e*P	**P**	**22 50 35.4**	**+0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**25.20**	**281**	*e*P	**P**	**22 50 35.4**	**+0.1**
	comp=Z,10nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**33.50**	**285**	*e*P	**P**	**22 51 48.7**	**-0.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ULN	**Ulaanbaatar**	**33.50**	**285**	*e*P	**P**	**22 51 48.7**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.8						
SONM	**Songino Array**	**33.91**	**285**	P	**P**	**22 51 52.7**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=109,slow=7.8,SNR=2.0						
INK	**Inuvik**	**35.49**	**36**	P	**P**	**22 52 06.3**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.7,baz=280,slow=11,SNR=3.8						
INK	**Inuvik**	**35.49**	**36**	P	**P**	**22 52 06.3**	**+0.4**
ZALV	**Zalesovo Beam**	**43.36**	**304**	P	**P**	**22 53 10.0**	**-1.6**
	comp=Z,0.4nm,0.3s,mb3.6,baz=30,slow=6.7,SNR=3.3						
KURK	**Kurchatov**	**48.29**	**303**	*e*P	**P**	**22 53 49.3**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
KURK	**Kurchatov**	**48.29**	**303**	*e*P	**P**	**22 53 49.3**	**-1.3**
	comp=Z,2.3nm,0.8s,mb4.3						
MK31	**Makanchi Array**	**48.53**	**297**	*e*P	**P**	**22 53 51.7**	**-0.7**
MKAR	**Makanchi Array**	**48.53**	**297**	P	**P**	**22 53 51.6**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.7,baz=53,slow=7.0,SNR=3.4						
BVAR	**Borovoye Array**	**51.13**	**309**	P	**P**	**22 54 10.7**	**-1.4**
	comp=Z,2.4nm,0.6s,mb4.3,baz=50,slow=7.9,SNR=9.2						
ARCES	**ARCESS Array B**	**54.78**	**342**	P	**P**	**22 54 38.1**	**-0.6**
	comp=Z,1.2nm,0.7s,mb4.0,baz=31,slow=9.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**57.42**	**259**	P	**P**	**22 55 01.7**	**+3.5**
	comp=Z,0.8nm,0.3s,mb4.2,baz=20,slow=7.8,SNR=2.7						
ABKAR	**Akbulak array**	**58.58**	**311**	*e*P	**P**	**22 55 04.9**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.7						
FINES	**FINESS Array B**	**61.52**	**337**	P	**P**	**22 55 25.5**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.4,baz=36,slow=7.4,SNR=5.2						
NB2	**NORSAR Subarra**	**65.06**	**344**	P	**P**	**22 55 49.5**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**65.06**	**344**	P	**P**	**22 55 49.6**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=21,slow=6.6,SNR=8.1						
AKASG	**Malin Array Be**	**69.86**	**329**	P	**P**	**22 56 19.7**	**-0.1**
	comp=Z,2.5nm,0.4s,mb4.5,baz=30,slow=6.1,SNR=5.4						
AKASG	**Malin Array Be**	**69.86**	**329**	P	**P**	**22 56 19.7**	**-0.1**
TXAR	**Lajitas Array**	**71.71**	**66**	P	**P**	**22 56 33.6**	**+2.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=323,slow=5.8,SNR=2.9						
CLL	**Collm**	**73.79**	**339**	*e*P	**P**	**22 56 44.0**	**+0.6**
	comp=Z,4.0nm,1.1s,mb4.3						
CLL				*e*(pP)	pP	22 57 01.0	+4.6
BUR08	**Bucovina Ar. S**	**73.81**	**330**	*e*P	**P**	**22 56 44.4**	**+0.8**
BUR08				*e*	pP	22 56 55.1	-1.5
GERES	**GERESS Array B**	**75.93**	**337**	P	**P**	**22 56 56.7**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=50,slow=4.2,SNR=4.0						
BR131	**Keskin Array S**	**77.66**	**320**	*e*P	**P**	**22 57 06.8**	**+1.1**
	comp=Z,1.0nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**77.66**	**320**	P	**P**	**22 57 07.0**	**+1.2**
	comp=Z,2.1nm,0.9s,mb4.1,baz=43,slow=4.6,SNR=9.0						
MMAI	**Mount Meron Ar**	**82.63**	**315**	P	**P**	**22 57 34.2**	**+1.6**
	comp=Z,1.9nm,0.5s,mb4.3,baz=40,slow=6.6,SNR=6.1						

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*ISCJB **31** 23:06:43.5±0.6, 50.°11N±0.°04×19.°09E±0.°03, h0km, Error ellipse: s-maj=6.1km s-min=2.9km az=3.3*
*IPEC **31** 23:06:44.4±0.1, 50.°10N×19.°13E, h0km, ML1.6/3, Error ellipse: s-maj=1.4km s-min=0.7km az=166.0*
*CSEM **31** 23:06:44.6±0.3, 50.°15N×19.°07E, h2km, ML2.5/6, Error ellipse: s-maj=7.4km s-min=3.4km az=179.0*
*WAR **31** 23:06:44.0, 50.°08N×19.°15E*
*PRU **31** 23:06:45.0, 50.°15N×19.°03E, h0km*

ISC 31 23:06:44.3±0.5, 50.°10N±0.°04×19.°09E±0.°03, h0km, n27, σ1°08/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**75**	*e*Pg	**Pg**	**23 06 52.7**	**-0.7**
OJC				*e*Sg	**Sg**	**23 06 59.1**	**-0.5**
OJC	**Ojcow**	**0.47**	**75**	*e*Pg	**Pg**	**23 06 52.5**	**-0.9**
	baz=255						
OJC				*e*Sg	**Sg**	**23 06 58.6**	**-1.0**
	baz=255						
OKC	**Ostrava-Krasne**	**0.66**	**247**	*e*PG	**Pg**	**23 06 58.1**	**+1.1**
OKC				*e*SG	**Sg**	**23 07 06.4**	**+0.9**
	comp=Z,10nm,0.3s						
OKC	**Ostrava-Krasne**	**0.66**	**247**	*e*Pg	**Pg**	**23 06 58.0**	**+1.0**
	baz=67						
OKC				Sg	**Sg**	**23 07 06.4**	**+0.9**
	comp=Z,10nm,0.3s						
MORC	**Moravsky Berou**	**1.05**	**253**	*e*Pg	**Pg**	**23 07 04.9**	**+0.5**
	baz=72						
MORC				*e*Sg	**Sg**	**23 07 18.9**	**+0.9**
	comp=Z,11nm,0.3s,baz=72						
JAVC	**Velka Javorina**	**1.55**	**217**	*e*Pn	**Pg**	**23 07 14.4**	**+0.4**
	baz=37						
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*PN	**Pg**	**23 07 14.4**	**+0.2**
STHS				*e*SN	**Sg**	**23 07 36.6**	**+2.2**
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*Pn	**Pg**	**23 07 14.4**	**+0.2**
STHS				*e*Sn	**Sg**	**23 07 36.6**	**+2.2**
KOLL	**Kolacno**	**1.59**	**197**	*e*PN	**Pg**	**23 07 15.0**	**+0.3**
KOLL				*e*SN	**Sn**	**23 07 35.1**	**+0.2**
KOLL	**Kolacno**	**1.59**	**197**	*e*Pn	**Pg**	**23 07 15.0**	**+0.3**
KOLL				*e*Sn	**Sn**	**23 07 35.1**	**+0.2**
VYHS	**Vyhne**	**1.62**	**186**	*e*PN	**Pn**	**23 07 13.7**	**-0.4**
VYHS				*e*SN	**Sn**	**23 07 34.3**	**-1.3**
VYHS	**Vyhne**	**1.62**	**186**	*e*Pn	**Pn**	**23 07 13.4**	**-0.7**
	baz=6.8						
VYHS				*e*Sn	**Sn**	**23 07 34.3**	**-1.3**
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*PG	**Pn**	**23 07 16.7**	**+0.2**
DPC				*e*SG	**Sn**	**23 07 40.6**	**+0.7**
	comp=Z,6.3nm,0.3s						
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*Pn	**Pn**	**23 07 16.6**	**+0.1**
	baz=97						
DPC				Sg	**Sn**	**23 07 40.6**	**+0.7**
	comp=Z,6.3nm,0.3s						
VRAC	**Vranov**	**1.80**	**245**	*e*Pn	**Pn**	**23 07 17.6**	**+1.0**
	baz=63						
VRAC				*e*Sg	**Sn**	**23 07 40.8**	**+0.7**
	comp=Z,3.5nm,0.2s,baz=63						
KECS	**Kecovo**	**1.86**	**150**	*e*PN	**Pb**	**23 07 17.5**	**-1.7**
KECS		

0.5nm,0.8s,mb3.5,baz=48,slow=5.3,SNR=2.7
BRTR Keskin Array B 78.90 310 P **P 23 25 23.7 +1.8**
1.0nm,0.8s,mb3.8,baz=77,slow=3.1,SNR=5.7
NVAR Mina Array Bea 80.21 51 P **P 23 25 30.9 +1.8**
0.4nm,0.7s,mb3.5,baz=293,slow=7.8,SNR=3.5

IDC ***31*** *23:16:02.9±0.5,28°.73S×112°.34W,h0km,mb4.6/12, mb1 4.8/13,mb1mx4.7/14,mbtmp4.6/13,MS5.4/18, Ms1 5.4/18,ms1mx5.3/19,Error ellipse: s-maj=20.9km s-min=18.8km az=57.0*

ISCJB ***31*** *23:16:03.1±0.3,28°.73S±0°.05×112°.23W±0°.07,h10km, mb5.2/134,MS5.5/204,Error ellipse: s-maj=8.4km s-min=6.6km az=171.2*

GCMT ***31*** *23:16:04.6±0.1,28°.90S×112°.40W,h12km,MW5.8/107, Moment Tensor Solution. s95,c197; s107,c336; Duration: 1±9 Moment tensor: Scale 10^17^Nm; Mrr=0.44±.04; Mθθ=2.80±.04; Mφφ=3.25±.05; Mrθ=0.27±.11; Mθφ=-5.00±.04; Mφr=0.70±.12; Best double couple: M0=5.88600×10^17^ NP1:φs=105.00000°,δ85.00000°, λ176.00000°. NP2:φs=196.00000°,δ86.00000°,λ5.00000°. Principal axes: T 6.1510, Plg6.0000°, Azm61.0000°; N -0.5230, Plg83.0000°, Azm230.0000°; P -5.6210, Plg1.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***31*** *23:16:04.2±1.1,28°.67S×112°.04W,h10km,mb5.5/40, MS5.4/35 Error ellipse: s-maj=17.1km s-min=6.9km az=82.1*

NEIC ***31*** *23:16:04.5±0.3,28°.92S×112°.26W,h10km,mb5.4/120, MS5.5/180,MW5.8,Error ellipse: s-maj=9.4km s-min=6.8km az=69.0,Moment Tensor Solution. s43 Moment tensor: Scale 10^17^Nm; Mrr=0.06; Mθθ=2.43; Mφφ=2.37; Mrθ=0.01; Mθφ=-5.15; Mφr=1.08; Best double couple: M0=5.80000×10^17^ NP1:φs=102.00000°,δ80.00000°, λ178.00000°. NP2:φs=193.00000°,δ88.00000°,λ11.00000°. Principal axes: T 5.8000, Plg9.0000°, Azm57.0000°; N -0.0300, Plg79.0000°, Azm205.0000°; P -5.7700, Plg5.0000°, Azm327.0000°;*

BJI ***31*** *23:16:07.3,28°.90S×112°.30W,h10km,mB5.6/14, Ms5.8/15,Ms7 5.5/17*

ISC 31 23:16:04.6±0.3,28°.85S±0°.05×112°.30W±0°.07,h10km, n756,σ0°94/502,mb5.2/134,MS5.5/204,150C-147D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.13**	**58**	**Pn**		**Pn**		**23 16 50.9**	**-3.2**
	138nm,0.3s,baz=246,slow=7.6,SNR=90								
RPN				LR		LR		23 17 31.3	
	comp=Z,45μm,20.2s,baz=163,slow=28								
RPN	**Rapa Nui**	**3.13**	**58**	*e*Pn		**Pn**		**23 16 50.5**	**-3.6**
RKT	**Rikitea**	**21.15**	**280**	*e*P		**P**		**23 20 57.3**	**+7.4**
	3μm,2.2s,mb6.2								
RKT				*e*LQ				23 24 48.7	
	60μm,28.0s								
RKT				*e*LR		LR		23 25 42.2	
	14μm,27.5s								
RKT	**Rikitea**	**21.15**	**280**	*e*P		**P**		**23 20 57.3**	**+7.4**
	3μm,2.2s,mb6.2								
RKT				*e*LQ				23 24 48.7	
TAOE	**Nuku Hiva Isla**	**32.86**	**302**	*e*S		**S**		**23 28 03.0**	**+6.5**
	1μm,29.8s								
TAOE				*e*LQ				23 29 54.0	
	8μm,32.2s								
TAOE				*e*LQ				23 31 25.4	
	8μm,26.8s,baz=137								
PAYG	**Puerto Ayora**	**35.03**	**41**	PFAKE				23 23 10.0	+12
PAYG				LR		LR			
	comp=Z,11μm,19.0s,MS5.6								
PPT	**Papeete**	**35.91**	**280**	*e*S		**S**		**23 28 41.2**	**-2.4**
	comp=Z,3μm,26.0s								
PPT				*e*LQ				23 31 18.2	
	comp=Z,16μm,26.5s								
PPT				*e*LR		LR		23 32 25.4	
	comp=Z,15μm,28.0s,baz=110								
PPT	**Papeete**	**35.91**	**280**	LR		LR		23 33 19.1	
	comp=Z,5μm,20.0s,MS5.3,baz=113,slow=29								
PLCA	**Paso Flores**	**35.97**	**121**	P		**P**		**23 23 06.6**	**+1.1**
	comp=Z,6.7nm,0.9s,mb4.6,baz=276,slow=11,SNR=9.8								
PLCA				LR		LR		23 34 04.3	
	comp=Z,4μm,19.1s,MS5.2,baz=275,slow=30								
PLCA	**Paso Flores**	**35.97**	**121**	*e*P		**P**		**23 23 07.2**	**+1.7**
PLCA				pmax		pmax			
	comp=Z,82nm,1.7s								
PLCA				MLR		MLR			
	comp=Z,5μm,22.0s								
PLCA	**Paso Flores**	**35.97**	**121**	*e*P		**P**		**23 23 07.2**	**+1.7**
	comp=Z,82nm,1.7s,mb5.4								
PLCA				LR		LR			
	comp=Z,5μm,22.0s,MS5.3								
FCH	**Farellones**	**36.08**	**108**	*e*P		**P**		**23 23 10.6**	**+4.1**
LCO	**Las Campanas**	**36.27**	**101**	*e*P		**P**		**23 23 09.0**	**+0.7**
	comp=Z,37nm,1.2s,mb5.2								
LCO				LR		LR			
	comp=Z,5μm,19.0s,MS5.3								
NNA	**Nana**	**37.04**	**70**	LR		LR		23 34 22.8	
	comp=Z,13μm,21.2s,MS5.7,baz=246,slow=30								
NNA	**Nana**	**37.04**	**70**	*e*P		**P**		**23 23 15.3**	**+0.4**
	comp=Z,63nm,1.4s,mb5.2								
NNA				LR		LR			
	comp=Z,329nm,19.0s,MS4.1								
CFAA	**Coronel Fontan**	**37.98**	**105**	LR		LR		23 36 01.9	
	comp=Z,295nm,19.5s,MS4.1,baz=261,slow=32								
ATAH	**Atahualpa**	**38.58**	**63**	LR		LR		23 35 23.9	
	comp=Z,14μm,18.6s,MS5.8,baz=246,slow=30								
USHA	**Ushuaia**	**40.76**	**142**	LR		LR		23 36 57.2	
	comp=Z,14μm,18.2s,MS5.8,baz=268,slow=31								
LPAZ	**La Paz**	**42.43**	**83**	P		**P**		**23 24 00.9**	**+1.1**
	comp=Z,28nm,1.3s,mb4.7,baz=248,slow=7.6,SNR=30								
LPAZ				LR		LR		23 37 41.3	
	comp=Z,5μm,20.7s,MS5.4,baz=244,slow=31								
LPAZ	**La Paz**	**42.43**	**83**	*e*P		**P**		**23 24 02.0**	**+2.2**
LPAZ				pmax		pmax			
	comp=Z,65nm,1.4s								
LPAZ				MLR		MLR			
	comp=Z,5μm,22.0s								
LPAZ	**La Paz**	**42.43**	**83**	*e*P		**P**		**23 24 01.9**	**+2.1**
	comp=Z,65nm,1.4s,mb5.1								
LPAZ				LR		LR			
	comp=Z,5μm,22.0s,MS5.4								
TRQA	**Tornquist**	**42.54**	**116**	*e*P		**P**		**23 24 01.6**	**+1.1**
	comp=Z,84nm,1.6s,mb5.2								
OTAV	**Otavalo**	**43.40**	**54**	*e*P		**P**		**23 24 08.9**	**+1.3**
	comp=Z,122nm,1.7s,mb5.4								
OTAV				LR		LR			
	comp=Z,3μm,20.0s,MS5.2								
RAR	**Rarotonga**	**43.45**	**269**	PFAKE				23 24 20.0	+12
RAR				LR		LR			
	comp=Z,6μm,21.0s,MS5.5								
PMSA	**Palmer Station**	**46.84**	**154**	LR		LR		23 39 06.2	
	comp=Z,5μm,19.7s,MS5.5,baz=284,slow=30								
PMSA	**Palmer Station**	**46.84**	**154**	PFAKE				23 24 50.0	+16
PMSA				LR		LR			
	comp=Z,8μm,21.0s,MS5.7								
JTS	**JuntasAbangare**	**47.02**	**38**	*e*P		**P**		**23 24 37.7**	**+1.3**
JTS				pmax		pmax			
	comp=Z,82nm,1.3s								
JTS				MLR		MLR			
	comp=Z,7μm,20.0s								
JTS	**JuntasAbangare**	**47.02**	**38**	*e*P		**P**		**23 24 37.7**	**+1.3**
	comp=Z,82nm,1.3s,mb5.5								
JTS				LR		LR			
	comp=Z,7μm,20.0s,MS5.6								
CPUP	**Villa Florida**	**48.42**	**101**	P		**P**		**23 24 47.5**	**+0.2**
	comp=Z,6.7nm,1.1s,mb4.6,baz=238,slow=6.2,SNR=7.6								
CPUP				LR		LR		23 40 25.1	
	comp=Z,1μm,18.6s,MS5.0,baz=66,slow=30								
CPUP	**Villa Florida**	**48.42**	**101**	P		**P**		**23 24 47.5**	**+0.2**
CPUP				LR		LR		23 40 25.1	
BCIP	**Isla Barro Col**	**49.09**	**45**	PFAKE				23 25 00.0	+7.6
BCIP				LR		LR			
	comp=Z,8μm,20.0s,MS5.7								
ROSC	**El Rosal**	**49.55**	**54**	P		**P**		**23 24 58.1**	**+2.1**
	comp=Z,8.8nm,0.7s,mb4.9,baz=258,slow=9.3,SNR=31								
ROSC				LR		LR		23 42 05.9	
	comp=Z,4μm,20.1s,MS5.5,baz=194,slow=32								
ROSC	**El Rosal**	**49.55**	**54**	*e*P		**P**		**23 24 58.1**	**+2.1**
SDV	**Santo Domingo**	**54.97**	**53**	*e*P		**P**		**23 25 35.3**	**-0.9**
	comp=Z,76nm,1.5s,mb5.5								
RAO	**Raoul Island**	**56.65**	**252**	PFAKE				23 26 00.0	+12
RAO				LR		LR			
	comp=Z,6μm,22.0s,MS5.7								
AFI	**Afiamalu**	**56.82**	**272**	PFAKE				23 26 00.0	+10
AFI				LR		LR			
	comp=Z,3μm,22.0s,MS5.3								
MTDJ	**Mount Denham**	**57.60**	**40**	PFAKE				23 26 10.0	+15
MTDJ				LR		LR			
	comp=Z,6μm,22.0s,MS5.7								
KVTX	**Kingsville**	**57.74**	**15**	PFAKE				23 26 10.0	+14
KVTX				LR		LR			
	comp=Z,3μm,21.0s,MS5.4								
URZ	**Urewera**	**58.30**	**241**	P		**P**		**23 25 56.1**	**-3.6**
	comp=Z,7.9nm,1.1s,mb4.7,baz=76,slow=7.2,SNR=3.9								
TXAR	**Lajitas Array**	**58.44**	**9**	P		**P**		**23 26 00.4**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.0,baz=191,slow=7.4,SNR=15								
627A	**Terlingua Ranc**	**58.59**	**9**	⇓P		**P**		**23 26 01.5**	**-0.2**
	baz=59,SNR=29								
626A	**Big Bend Ranch**	**58.59**	**8**	⇓P		**P**		**23 25 59.6**	**-2.0**
	baz=59,SNR=19								
628A	**Black Gap, Mar**	**58.70**	**10**	⇓P		**P**		**23 26 01.3**	**-1.0**
	baz=59								
526A	**Mary Lane Ranc**	**59.10**	**8**	⇑P		**P**		**23 26 04.2**	**-1.0**
	baz=60,SNR=11								
527A	**Woodward Ranch**	**59.24**	**9**	⇓P		**P**		**23 26 06.0**	**-0.1**
	baz=60,SNR=18								
426A	**McDonald Obser**	**59.70**	**8**	⇑P		**P**		**23 26 08.8**	**-0.6**
	baz=60								
425A	**Indio Mountain**	**59.71**	**7**	⇓P		**P**		**23 26 09.3**	**-0.1**
	baz=60,SNR=14								
428A	**Kincaid Ranch,**	**59.94**	**10**	⇑P		**P**		**23 26 11.1**	**+0.1**
	baz=60,SNR=16								
319A	**Douglas**	**59.95**	**3**	⇓P		**P**		**23 26 12.0**	**+0.9**
	baz=60,SNR=8.2								
320A	**Kipp Ranch, An**	**59.95**	**4**	⇑P		**P**		**23 26 11.7**	**+0.7**
	baz=60								
427A	**Hayter Ranch,**	**59.97**	**9**	⇓P		**P**		**23 26 11.1**	**0.0**
	baz=60,SNR=17								
318A	**Bisbee**	**59.99**	**2**	⇓P		**P**		**23 26 11.3**	**0.0**
	baz=60,SNR=20								
SBA	**Scott Base**	**60.11**	**194**	PFAKE				23 26 20.0	+8.3
SBA				LR		LR			
	comp=Z,3μm,20.0s,MS5.4								
JCT	**Junction City**	**60.19**	**12**	*e*P		**P**		**23 26 12.5**	**-0.1**
JCT				pmax		pmax			
	comp=Z,12nm,0.7s,mb5.0								
JCT				MLR		MLR			
	comp=Z,3μm,21.0s,MS5.4								
JCT	**Junction City**	**60.19**	**12**	*e*P		**P**		**23 26 12.5**	**-0.2**
	comp=Z,12nm,0.7s,mb5.0								
JCT				LR		LR			
	comp=Z,3μm,21.0s,MS5.4								
325A	**Bean Ranch, Si**	**60.29**	**7**	⇓P		**P**		**23 26 12.5**	**-0.9**
	baz=61,SNR=21								
217A	**Green Valley**	**60.30**	**1**	⇓P		**P**		**23 26 13.2**	**-0.2**
	baz=61,SNR=13								
324A	**Moseley Ranch,**	**60.30**	**7**	⇑P		**P**		**23 26 12.9**	**-0.5**
	baz=61,SNR=13								
GTBY	**Guantanamo Bay**	**60.33**	**41**	PFAKE				23 26 30.0	+16
GTBY				LR		LR			
	comp=Z,2μm,21.0s,MS5.3								
326A	**Caldwell Ranch**	**60.35**	**8**	⇓P		**P**		**23 26 13.9**	**+0.2**
	baz=61								
214A	**Organ Pipe Nat**	**60.47**	**360**	⇓P		**P**		**23 26 12.0**	**-2.5**
	baz=61,SNR=8.6								
216A	**Three Points,**	**60.52**	**1**	⇑P		**P**		**23 26 15.1**	**+0.2**
	baz=61								
220A	**Playas Peak, P**	**60.52**	**4**	⇑P		**P**		**23 26 14.0**	**-0.9**
	baz=61								
218A	**Dragoon**	**60.52**	**2**	⇑P		**P**		**23 26 14.7**	**-0.2**
	baz=61,SNR=6.4								
HKT	**Hockley**	**60.54**	**16**	*e*P		**P**		**23 26 15.0**	**-0.1**
HKT				pmax		pmax			
	comp=Z,107nm,1.7s,mb5.7								
HKT				MLR		MLR			
	comp=Z,1μm,19.0s,MS5.2								
HKT	**Hockley**	**60.54**	**16**	*e*P		**P**		**23 26 15.0**	**-0.1**
	comp=Z,107nm,1.7s,mb5.7								
HKT				LR		LR			
	comp=Z,1μm,19.0s,MS5.2								
MNTX	**Cornudas Mount**	**60.57**	**7**	*e*P		**P**		**23 26 14.7**	**-0.6**
	comp=Z,87nm,2.1s,mb5.5								
MNTX				LR		LR			
	comp=Z,721nm,19.0s,MS4.8								
328A	**Wristen Ranch,**	**60.57**	**9**	⇑P		**P**		**23 26 14.6**	**-0.7**
	baz=61								
219A	**White Tail Can**	**60.58**	**3**	⇑P		**P**		**23 26 15.4**	**+0.1**
	baz=61,SNR=13								
TUC	**Tucson**	**60.84**	**1**	*e*P		**P**		**23 26 18.4**	**+1.4**
TUC				pmax		pmax			
	comp=Z,211nm,2.6s,mb5.8								
TUC	**Tucson**	**60.84**	**1**	*e*P		**P**		**23 26 18.4**	**+1.4**
	comp=Z,211nm,2.6s,mb5.8								
224A	**Corundas Mount**	**60.93**	**7**	⇓P		**P**		**23 26 17.3**	**-0.3**
	baz=61,SNR=18								
225A	**Deer Hill, Car**	**61.03**	**7**	⇓P		**P**		**23 26 17.6**	**-0.8**
	baz=61,SNR=6.5								
226A	**Malaga, Loving**	**61.07**	**8**	⇑P		**P**		**23 26 17.4**	**-1.2**
	baz=62								
116A	**Eloy**	**61.07**	**1**	⇑P		**P**		**23 26 18.7**	**0.0**
	baz=62								
117A	**Oracle**	**61.10**	**2**	⇓P		**P**		**23 26 18.3**	**-0.5**
	baz=62,SNR=7.7								
120A	**U Bar Ranch, L**	**61.15**	**4**	⇑P		**P**		**23 26 20.3**	**+1.1**
	baz=62								
GDL2	**Guadalupe Moun**	**61.17**	**8**	*e*P		**P**		**23 26 18.8**	**-0.6**
118A	**Homack Ranch,**	**61.19**	**2**	⇑P		**P**		**23 26 20.0**	**+0.5**
	baz=62								
121A	**Cookes Peak, D**	**61.19**	**4**	⇑P		**P**		**23 26 19.8**	**+0.3**
	baz=62								
115A	**Sonoran Desert**	**61.21**	**0**	⇓P		**P**		**23 26 20.5**	**+1.0**
	baz=62								
114A	**Black Gap (USA**	**61.26**	**359**	⇑P		**P**		**23 26 20.5**	**+0.5**
	baz=62								
DVTC	**Desert V Tower**	**61.27**	**356**	⇓P		**P**		**23 26 21.3**	**+1.3**
	baz=62								
113A	**Mohawk Valley,**	**61.29**	**359**	⇑P		**P**		**23 26 20.8**	**+0.7**
	baz=62								
BAR	**Barrett**	**61.33**	**356**	*e*P		**P**		**23 26 20.0**	**-0.4**
	comp=Z,135nm,2.2s,mb5.7								
QSPA	**South Pole Qui**	**61.33**	**180**	PFAKE				23 26 30.0	+10
QSPA				LR		LR			
	comp=Z,4μm,20.0s,MS5.5								
119A	**Ashpeak Ranch,**	**61.34**	**3**	⇑P		**P**		**23 26 20.4**	**-0.1**
	baz=62								
124A	**Stringfield Ra**	**61.55**	**7**	⇑P		**P**		**23 26 21.0**	**-0.9**
	baz=62,SNR=17								
125A	**Gardner Draw,**	**61.59**	**7**	⇓P		**P**		**23 26 21.0**	**-1.2**
	baz=62,SNR=22								
GLA	**Glamis**	**61.60**	**358**	*e*P		**P**		**23 26 24.5**	**+2.3**
GLA				pmax		pmax			
	comp=Z,78nm,1.9s,mb5.5								
GLA	**Glamis**	**61.60**	**358**	*e*P		**P**		**23 26 24.5**	**+2.3**
	comp=Z,78nm,1.9s,mb5.5								
126A	**Clayton Basin,**	**61.66**	**8**	⇑P		**P**		**23 26 22.0**	**-0.6**
	baz=62								
Z13A	**Yuma Proving G**	**61.72**	**359**	⇑P		**P**		**23 26 23.3**	**+0.3**
	baz=62,SNR=8.9								
Z20A	**Nine Sixteen R**	**61.72**	**4**	⇑P		**P**		**23 26 22.4**	**-0.7**
	baz=62,SNR=7.2								
127A	**Arkansas Junct**	**61.77**	**9**	⇑P		**P**		**23 26 23.2**	**-0.2**
	baz=62,SNR=5.1								
Z15A	**Gila River Ind**	**61.80**	**0**	⇓P		**P**		**23 26 27.1**	**+3.6**
	baz=62								
Z16A	**Peralta Trail,**	**61.85**	**1**	⇓P		**P**		**23 26 24.3**	**+0.4**
	baz=62								
Z19A	**T-Link Ranch,**	**61.86**	**3**	⇑P		**P**		**23 26 24.3**	**+0.3**
	baz=62								
SDDR	**Presa de Saban**	**61.88**	**45**	*e*P		**P**		**23 26 20.8**	**-3.7**
	comp=Z,66nm,2.2s,mb5.4								
Z22A	**Elephant Butte**	**61.97**	**5**	⇑P		**P**		**23 26 24.7**	**0.0**
	baz=62								
Z21A	**St. Cloud Mine**	**61.97**	**4**	⇑P		**P**		**23 26 24.1**	**-0.6**
	baz=62,SNR=17								
Z23A	**Rita Site, Whi**	**62.03**	**6**	⇓P		**P**		**23 26 25.3**	**+0.2**
	baz=62								
Z24A	**Sheeppen Canyo**	**62.18**	**7**	⇓P		**P**		**23 26 26.2**	**+0.1**
	baz=63								
Z25A	**Roswell**	**62.20**	**7**	⇑P		**P**		**23 26 24.1**	**-2.2**
	baz=63								
BC3	**Big Chuckw Mtn**	**62.23**	**357**	⇓P		**P**		**23 26 26.7**	**+0.3**
	baz=63,SNR=16								
PFO	**Pinyon Flat Ob**	**62.24**	**356**	*e*P		**P**		**23 26 28.9**	**+2.4**
PFO				pmax		pmax			
	comp=Z,71nm,1.8s,mb5.5								
PFO				MLR		MLR			
	comp=Z,1μm,20.0s,MS5.0								
PFO	**Pinyon Flat Ob**	**62.24**	**356**	*e*P		**P**		**23 26 28.9**	**+2.4**
	comp=Z,71nm,1.8s,mb5.5								
PFO				LR		LR			
	comp=Z,1μm,20.0s,MS5.0								
Z26A	**Caprock**	**62.28**	**8**	⇓P		**P**		**23 26 25.6**	**-1.2**
	baz=63,SNR=16								
Y12C	**Blythe**	**62.29**	**358**	⇑P		**P**		**23 26 27.8**	**+1.0**
	baz=63								
Y18A	**Canyon Day Jun**	**62.32**	**2**	⇓P		**P**		**23 26 28.9**	**+1.9**
	baz=63								
Y13A	**Salome**	**62.34**	**359**	⇓P		**P**		**23 26 29.1**	**+2.0**
	baz=63								
Z27A	**Tatum**	**62.42**	**9**	⇑P		**P**		**23 26 27.2**	**-0.5**
	baz=63,SNR=6.9								
Y14A	**Wickenburg**	**62.45**	**359**	⇑P		**P**		**23 26 28.6**	**+0.7**
	baz=63,SNR=7.2								
Y15A	**Casa Rosa Ranc**	**62.46**	**360**	⇓P		**P**		**23 26 28.6**	**+0.7**
	baz=63								
Y20A	**Horse Springs,**	**62.52**	**4**	⇓P		**P**		**23 26 28.2**	**-0.2**
	baz=63								
Y19A	**Nutrioso**	**62.53**	**3**	⇑P		**P**		**23 26 29.1**	**+0.7**
	baz=63,SNR=7.9								
BELC	**Belle Mtn.**	**62.60**	**357**	⇓P		**P**		**23 26 28.4**	**-0.5**
	baz=63,SNR=11								
Y22A	**Socorro**	**62.64**	**5**	⇑P		**P**		**23 26 29.2**	**0.0**
	baz=63,SNR=5.7								
Y21A	**Point of Rocks**	**62.66**	**4**	⇓P		**P**		**23 26 29.3**	**-0.1**
	baz=63,SNR=12								
Y23A	**Lovelace Mesa,**	**62.71**	**6**	⇑P		**P**		**23 26 29.5**	**-0.1**
	baz=63,SNR=20								
IRM	**Iron Mountain**	**62.72**	**357**	⇓P		**P**		**23 26 29.3**	**-0.4**
	baz=63,SNR=18								
Y24A	**Capitan**	**62.77**	**6**	⇓P		**P**		**23 26 28.6**	**-1.4**
	baz=63,SNR=21								
Y25A	**Mesa, Roswell**	**62.84**	**7**	⇑P		**P**		**23 26 30.5**	**-0.1**
	baz=63,SNR=15								
LENM	**Lemitar**	**62.87**	**5**	*e*P		**P**		**23 26 32.0**	**+1.3**
BNM	**Barren Site**	**62.88**	**5**	*e*P		**P**		**23 26 31.0**	**+0.2**
	comp=Z,17nm,1.3s,mb5.0								
Y26A	**Elida**	**62.94**	**8**	⇑P		**P**		**23 26 31.0**	**-0.2**
	baz=63								
MWC	**Mount Wilson**	**62.96**	**355**	*e*P		**P**		**23 26 33.4**	**+2.1**
MWC				pmax		pmax			
	comp=Z,213nm,2.3s,mb5.9								
MWC	**Mount Wilson**	**62.96**	**355**	*e*P		**P**		**23 26 33.4**	**+2.0**
	comp=Z,213nm,2.3s,mb5.9								
X14A	**Yava**	**62.97**	**359**	⇓P		**P**		**23 26 32.7**	**+1.3**
	baz=63,SNR=8.3								
Y27A	**Causey**	**62.98**	**9**	⇓P		**P**		**23 26 30.7**	**-0.8**
	baz=63								
X15A	**Humboldt**	**62.99**	**0**	⇑P		**P**		**23 26 32.3**	**+0.8**
	baz=63,SNR=8.7								
LPM	**Los Pinos Moun**	**63.04**	**5**	*e*P		**P**		**23 26 33.5**	**+1.7**
X18A	**Snowflake**	**63.07**	**2**	⇓P		**P**		**23 26 31.9**	**-0.1**
	baz=64,SNR=5.1								
LAZ	**Ladron**	**63.09**	**5**	*e*P		**P**		**23 26 33.2**	**+1.1**
	comp=Z,133nm,2.5s,mb5.6								
X21A	**Alamocita Cree**	**63.09**	**4**	⇓P		**P**		**23 26 31.9**	**-0.3**
	baz=64,SNR=16								
X13A	**Yucca**	**63.11**	**359**	⇑P		**P**		**23 26 32.7**	**+0.4**
	baz=64,SNR=7.3								
MSTX	**Muleshoe**	**63.12**	**9**	⇑P		**P**		**23 26 31.3**	**-1.1**
	baz=64,SNR=14								
X20A	**Quemado**	**63.15**	**4**	⇓P		**P**		**23 26 32.4**	**-0.1**
	baz=64,SNR=5.3								
X23A	**Hourglass Bar**	**63.35**	**6**	⇑P		**P**		**23 26 35.5**	**+1.7**
	baz=64								
GMRC	**Granite Mounta**	**63.36**	**357**	⇓P		**P**		**23 26 34.4**	**+0.5**
	baz=64,SNR=15								
OSI	**Osito Adit**	**63.41**	**354**	*e*P		**P**		**23 26 35.9**	**+1.6**
	comp=Z,20nm,1.4s,mb5.0								
X26A	**CR and CF Fran**	**63.56**	**8**	⇓P		**P**		**23 26 34.9**	**-0.4**
	baz=64								
W16A	**Flagstaff**	**63.60**	**1**	⇓P		**P**		**23 26 37.3**	**+1.7**
	baz=64								
EDW2	**Edwards Air Fo**	**63.61**	**355**	⇓P		**P**		**23 26 36.5**	**+0.9**
	baz=64								
LDFC	**Landfair**	**63.63**	**357**	*e*P		**P**		**23 26 39.2**	**+3.4**
GRGR	**Grenville**	**63.65**	**58**	PFAKE				23 26 50.0	+14
GRGR				LR		LR			
	comp=Z,3μm,20.0s,MS5.4								
ANMO	**Albuquerque**	**63.69**	**5**	*e*P		**P**		**23 26 36.1**	**0.0**
ANMO				pmax		pmax			
	comp=Z,100nm,2.4s								
ANMO				MLR		MLR			
	comp=Z,1μm,19.0s								
ANMO	**Albuquerque**	**63.69**	**5**	*e*P		**P**		**23 26 36.1**	**-0.1**
	comp=Z,100nm,2.4s,mb5.4								
ANMO				LR		LR			
	comp=Z,1μm,19.0s,MS5.2								
W14A	**Seligman**	**63.72**	**359**	⇓P		**P**		**23 26 36.9**	**+0.6**
	baz=64,SNR=15								
X27A	**F and S Farms,**	**63.74**	**8**	⇑P		**P**		**23 26 35.6**	**-0.9**
	baz=64								
POHA	**Pohakuloa**	**63.85**	**314**	PFAKE				23 26 50.0	+12
POHA				LR		LR			
	comp=Z,6μm,20.0s,MS5.8								
DWPF	**Disney**	**63.88**	**30**	*e*P		**P**		**23 26 37.7**	**+0.2**
	comp=Z,149nm,1.4s,mb5.8								
DWPF				LR		LR			
	comp=Z,2μm,19.0s,MS5.2				

V26A Tequesquite Ra 64.79 8 ⇑P P 23 26 42.4 -1.0
baz=65,SNR=6.6
U14A Mt Trumbull 64.92 359 ⇓P P 23 26 43.3 -0.9
baz=65,SNR=5.3
U15A North Rim 64.93 0 ⇑P P 23 26 43.9 -0.3
baz=65,SNR=9.5
U13A Pakoon Wash 64.93 359 ⇑P P 23 26 44.1 -0.1
baz=65,SNR=6.9
U18A Rough Rock, Ch 64.96 2 ⇑P P 23 26 43.9 -0.5
baz=65,SNR=15
DAC Darwin (Calif) 64.97 355 PFAKE 23 27 00.0 +16
DAC LR LR
comp=Z,3μm,20.0s,MS5.5
U10A Ash Meadows, A 65.03 356 ⇓P P 23 26 44.5 -0.3
baz=66
SHPR Sheep Range 65.06 357 *eP* **P 23 26 46.2 +1.1**
U21A Nageezi 65.07 4 ⇑P P 23 26 44.7 -0.5
baz=66
U22A Llaves 65.08 5 ⇓P P 23 26 44.8 -0.4
baz=66
U23A El Rito 65.08 5 ⇓P P 23 26 45.4 +0.2
baz=66
FURC Furnace Creek, 65.11 356 ⇑P P 23 26 45.7 +0.3
baz=66
U17A Shonto 65.11 1 ⇑P P 23 26 45.1 -0.4
baz=66
U24A Moreno Valley 65.24 6 ⇓P P 23 26 47.2 +1.0
baz=66
U25A Circle Dot Ran 65.32 7 ⇓P P 23 26 46.0 -0.8
baz=66
U26A Atchley Ranch, 65.39 8 ⇑P P 23 26 47.1 -0.1
baz=66,SNR=7.4
T19A Beclabito 65.40 3 ⇑P P 23 26 46.2 -1.1
baz=66,SNR=15
MIAR Mount Ida 65.49 17 *eP* **P 23 26 47.2 -0.7**
MIAR pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MIAR MLR MLR
comp=Z,1μm,20.0s,MS5.1
MIAR Mount Ida 65.49 17 *eP* **P 23 26 47.2 -0.7**
comp=Z,7.0nm,0.7s,mb4.8
MIAR LR LR
comp=Z,1μm,20.0s,MS5.1
T17A Navajo Res., N 65.51 1 ⇑P P 23 26 47.7 -0.3
baz=66,SNR=9.1
T15A Red Dirt Ranch 65.52 360 ⇓P P 23 26 46.9 -1.1
baz=66,SNR=7.2
T13A Saint George 65.53 359 ⇑P P 23 26 48.1 0.0
baz=66,SNR=9.8
T14A Hurricane 65.56 359 ⇓P P 23 26 49.2 +0.9
baz=66
T21A Navajo Lake 65.64 4 ⇓P P 23 26 49.6 +0.7
baz=66
T18A Mexican Hat 65.67 2 ⇓P P 23 26 48.1 -1.0
baz=66,SNR=9.8
T22A Edith 65.71 5 ⇓P P 23 26 46.8 -2.5
baz=66
FDF Fort de France 65.72 56 PFAKE 23 27 00.0 +10
FDF LR LR
comp=Z,2μm,19.0s,MS5.4
T11A Corn Creek, Al 65.79 357 ⇓P P 23 26 50.1 +0.3
baz=66
MVCO Mesa Verde 65.80 3 ⇑P P 23 26 48.1 -1.8
baz=66,SNR=7.4
MVCO Mesa Verde 65.80 3 *eP* **P 23 26 50.4 +0.5**
comp=Z,208nm,2.4s,mb5.7
MVCO LR LR
comp=Z,2μm,19.0s,MS5.3
SAO San Andreas Ge 65.83 352 *eP* **P 23 26 51.8 +1.8**
SAO pmax pmax
comp=Z,24nm,1.4s,mb5.0
SAO MLR MLR
comp=Z,6μm,19.0s,MS5.8
SAO San Andreas Ge 65.83 352 *eP* **P 23 26 51.8 +1.8**
comp=Z,24nm,1.4s,mb5.0
SAO LR LR
comp=Z,6μm,19.0s,MS5.8
BBGH Gun Hill 65.86 58 PFAKE 23 27 00.0 +9.3
BBGH LR LR
comp=Z,5μm,19.0s,MS5.7
UALR University of 66.03 18 *eP* **P 23 26 51.6 +0.3**
comp=Z,55nm,1.6s,mb5.3
T25A Trinidad 66.05 7 ⇑P P 23 26 51.4 -0.1
baz=66
CCUT Cedar City 66.05 359 *eP* **P 23 26 52.8 +1.3**
comp=Z,84nm,2.1s,mb5.4
LRAL Lakeview Retre 66.06 23 *eP* **P 23 26 51.3 -0.3**
LRAL LR LR
comp=Z,1μm,19.0s,MS5.2
S13A Holt Ranch, En 66.09 359 ⇑P P 23 26 51.6 -0.1
baz=66,SNR=10
MTUM Tungsten Hills 66.11 355 *eP* **P 23 26 54.1 +2.3**
S17A Black Ridge (B 66.15 1 ⇑P P 23 26 52.2 +0.1
baz=67
S12A Delamar Landin 66.15 358 ⇓P P 23 26 52.2 +0.1
baz=67,SNR=6.5
S11A Rachel 66.22 357 ⇑P P 23 26 53.6 +1.1
baz=67
S18A Hurst Farm, Bl 66.22 2 ⇓P P 23 26 52.9 +0.4
baz=67,SNR=10
S14A Cedar City 66.26 359 ⇓P P 23 26 54.5 +1.7
baz=67
ARUT Antelope Range 66.29 359 *eP* **P 23 26 54.5 +1.5**
ARUT pmax pmax
comp=Z,66nm,1.7s,mb5.4
ARUT Antelope Range 66.29 359 *eP* **P 23 26 54.5 +1.5**
comp=Z,66nm,1.7s,mb5.4
S21A Coal Bank Pass 66.29 4 ⇑P P 23 26 52.9 -0.1
baz=67
S19A Harvey Farm, M 66.31 3 ⇓P P 23 26 51.8 -1.3
baz=67,SNR=6.1
S10A Tonopah Range, 66.54 356 ⇓P P 23 26 53.8 -0.7
baz=67,SNR=12
SDCO Great Sand Dun 66.55 6 *eP* **P 23 26 55.1 +0.5**
comp=Z,16nm,1.4s,mb4.9
SDCO LR LR
comp=Z,1μm,19.0s,MS5.1
KIP Kipapa 66.64 313 PFAKE 23 27 10.0 +14
KIP LR LR
comp=Z,4μm,19.0s,MS5.7
R13A O'Grain Ranch, 66.69 359 ⇑P P 23 26 54.3 -1.3
baz=67,SNR=6.0
PV01 Paradox Valley 66.72 3 *eP* **P 23 26 56.3 +0.6**
comp=Z,2μm,1.5s
TPH Tonopah 66.73 356 PFAKE 23 27 10.0 +14
TPH LR LR
comp=Z,2μm,20.0s,MS5.3
R16A Teasdale 66.78 1 ⇓P P 23 26 55.4 -0.8
baz=67
R20A Redvale 66.78 3 ⇑P P 23 26 54.9 -1.2
baz=67,SNR=6.3
R19A Curley Farm, L 66.85 3 ⇑P P 23 26 55.8 -0.7
baz=67,SNR=12
R12A Pony Springs, 66.86 358 ⇑P P 23 26 56.9 +0.3
baz=67
R11A Troy Canyon, C 66.91 357 ⇑P P 23 26 54.2 -2.8
baz=67,SNR=6.7
R18A Canyonlands Na 66.92 2 ⇓P P 23 26 54.3 -2.7
baz=67,SNR=6.6
R17A Hanksville Air 66.93 1 ⇑P P 23 26 55.7 -1.4
baz=67,SNR=6.1
CMB Columbia Colle 66.96 353 *eP* **P 23 26 57.8 +0.5**
CMB pmax pmax
comp=Z,240nm,2.6s,mb5.8
CMB MLR MLR
comp=Z,7μm,20.0s,MS5.8
CMB Columbia Colle 66.96 353 *eP* **P 23 26 57.8 +0.5**
comp=Z,240nm,2.6s,mb5.8
CMB LR LR
comp=Z,7μm,20.0s,MS5.8
PV04 Paradox Valley 66.96 3 *eP* **P 23 26 57.8 +0.5**
MVU Marysvale 67.00 0 PFAKE 23 27 10.0 +13
MVU LR LR
comp=Z,2μm,19.0s,MS5.4
MSU Marysvale 67.01 0 *eP* **P 23 26 58.5 +1.0**
FUNA Funafuti 67.13 273 PFAKE 23 27 10.0 +11
FUNA LR LR
comp=Z,9μm,22.0s,MS5.9
NVAR Mina Array Bea 67.16 355 P **P 23 26 58.8 +0.3**
comp=Z,7.0nm,0.9s,mb4.7,baz=183,slow=7.8,SNR=36
ANWB Willy Bob 67.23 53 PFAKE 23 27 10.0 +11
ANWB LR LR
comp=Z,2μm,21.0s,MS5.3
WAKR Walker 67.33 354 *eP* **P 23 27 02.4 +2.8**
MCCM Marconi Confer 67.37 351 PFAKE 23 27 10.0 +10
MCCM LR LR
comp=Z,5μm,20.0s,MS5.7
Q11A Duckwater 67.41 357 ⇓P P 23 27 00.5 +0.4
baz=68,SNR=18
Q16A Castle Valley 67.42 1 ⇑P P 23 26 60.0 -0.2
baz=68,SNR=8.0
Q10A Clear Creek Ra 67.43 357 ⇓P P 23 27 00.9 +0.7
baz=68
Q13A Wheeler Ranch, 67.47 359 ⇓P P 23 27 00.5 0.0
baz=68,SNR=13
Q21A Lamborn Mesa, 67.47 4 ⇑P P 23 27 01.5 +1.0
baz=68
PLAL Pickwick Lake 67.48 21 *eP* **P 23 26 59.2 -1.5**
comp=Z,20nm,1.1s,mb5.0
PLAL LR LR
comp=Z,1μm,20.0s,MS5.1
Q14A Sevier Lake (B 67.49 359 ⇑P P 23 27 00.5 -0.1
baz=68,SNR=19
Q15A Fillmore 67.49 360 ⇑P P 23 27 00.6 0.0
baz=68
Q19A Hogan Spring (67.51 3 ⇓P P 23 26 59.9 -0.8
baz=68
VNA1 Neumayer--Stat 67.57 160 *eP* **P 23 27 01.2 +0.4**
SRU San Rafael 67.62 1 ⇑P P 23 26 59.7 -1.7
baz=68,SNR=7.1
SRU San Rafael 67.62 1 *eP* **P 23 27 01.0 -0.5**
Q18A Rafter H Ranch 67.63 2 ⇓P P 23 26 58.7 -2.8
baz=68,SNR=5.5
GOGA Godfrey 67.68 26 *eP* **P 23 27 01.4 -0.5**
GOGA pmax pmax
comp=Z,66nm,1.8s,mb5.4
GOGA MLR MLR
comp=Z,2μm,21.0s,MS5.3
GOGA Godfrey 67.68 26 *eP* **P 23 27 01.4 -0.5**
comp=Z,66nm,1.8s,mb5.4
GOGA LR LR
comp=Z,2μm,21.0s,MS5.3
GNAR Gosnell 67.79 19 *eP* **P 23 27 03.2 +0.6**
comp=Z,2μm,1.7s
TMUT Trail Mountain 67.80 1 *eP* **P 23 27 03.6 +1.0**
comp=Z,55nm,1.6s,mb5.3
SMCO Snowmass 67.85 4 *eP* **P 23 27 04.1 +1.2**
comp=Z,8.4nm,1.0s,mb4.7
P13A Bates Ranch, G 67.97 359 ⇑P P 23 27 04.2 +0.6
baz=68,SNR=23
P17A Butcher Ranch, 67.98 1 ⇓P P 23 27 02.8 -0.9
baz=68,SNR=6.2
P12A McGill 68.01 358 ⇓P P 23 27 03.8 -0.1
baz=68
P15A Leamington 68.06 0 ⇑P P 23 27 04.4 +0.2
baz=68,SNR=5.8
P14A Drum Mountains 68.09 359 ⇑P P 23 27 04.6 +0.3
baz=68,SNR=7.5
P18A Preston Nutter 68.15 2 ⇑P P 23 27 03.4 -1.3
baz=69
P19A Cripple Cowboy 68.20 3 ⇓P P 23 27 03.8 -1.3
baz=69
HOPS Hopland 68.23 351 *eP* **P 23 27 12.1 +6.8**
HOPS LR LR
comp=Z,6μm,20.0s,MS5.8
CBKS Cedar Bluff 68.32 11 PFAKE 23 27 20.0 +14
CBKS LR LR
comp=Z,730nm,20.0s,MS4.9
OHCM Honcut 68.37 352 *eP* Px 23 27 18.9
NLU North Lily Min 68.45 0 *eP* **P 23 27 07.9 +1.3**
comp=Z,16nm,1.3s,mb4.9
UTMT University of 68.49 20 *eP* **P 23 27 07.2 +0.3**
comp=Z,228nm,1.8s,mb5.9
MPU Maple Canyon 68.51 1 *eP* **P 23 27 08.2 +1.2**
comp=Z,24nm,1.5s,mb4.9
PAHR Pah Rah Range 68.52 354 *eP* **P 23 27 10.1 +3.0**
ISCO Idaho Springs 68.58 6 *eP* **P 23 27 07.8 +0.4**
ISCO MLR MLR
comp=Z,2μm,19.0s,MS5.4
WVT Waverly 68.61 21 *eP* **P 23 27 06.3 -1.4**
WVT pmax pmax
comp=Z,78nm,1.8s,mb5.3
WVT Waverly 68.61 21 *eP* **P 23 27 06.3 -1.4**
comp=Z,78nm,1.8s,mb5.3
DUG Dugway 68.69 360 ⇑P P 23 27 07.8 -0.3
baz=69,SNR=6.4
DUG Dugway 68.69 360 *eP* **P 23 27 08.7 +0.6**
DUG pmax pmax
comp=Z,38nm,1.7s,mb5.0
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.2
DUG Dugway 68.69 360 *eP* **P 23 27 08.7 +0.6**
comp=Z,38nm,1.7s,mb5.0
DUG LR LR
comp=Z,2μm,20.0s,MS5.2
O11A Cowboy Ranch, 68.69 357 ⇓P P 23 27 07.1 -1.1
baz=69,SNR=6.7
O17A Robinson Place 68.70 1 ⇑P P 23 27 07.8 -0.4
baz=69
O20A White River Ci 68.73 3 ⇓P P 23 27 06.3 -2.1
baz=69
NHSC New Hope 68.73 29 PFAKE 23 27 20.0 +11
NHSC LR LR
comp=Z,1μm,20.0s,MS5.2
O19A Miners Draw (B 68.85 3 ⇓P P 23 27 08.6 -0.5
baz=69
O21A Pagoda 68.85 4 ⇑P P 23 27 09.4 +0.2
baz=69
DAU Daniels Canyon 68.91 1 *eP* **P 23 27 11.2 +1.7**
BMN Battle Mountai 69.08 356 *eP* **P 23 27 12.8 +2.3**
BMN pmax pmax
comp=Z,87nm,1.4s,mb5.5
BMN MLR MLR
comp=Z,2μm,19.0s,MS5.5
BMN Battle Mountai 69.08 356 *eP* **P 23 27 12.8 +2.3**
comp=Z,87nm,1.4s,mb5.5
BMN LR LR
comp=Z,2μm,19.0s,MS5.5
JLU Jordanelle 69.10 1 *eP* **P 23 27 11.1 +0.5**
comp=Z,70nm,1.7s,mb5.3
CPCT Cooper Cave 69.11 24 *eP* **P 23 27 10.5 -0.4**
KSU1 Kansas State U 69.16 13 *eP* **P 23 27 11.4 +0.3**
comp=Z,7.9nm,0.6s,mb4.8
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.4
ELK Elko 69.29 358 PFAKE 23 27 20.0 +8.2
ELK LR LR
comp=Z,4μm,20.0s,MS5.7
JSC Jenkinsville 69.31 27 *eP* **P 23 27 12.1 0.0**
N14A Grayback Hills 69.35 359 ⇓P P 23 27 12.8 +0.6
baz=70
N13A Wendover, West 69.37 358 *eP* **P 23 27 13.3 +1.0**
comp=Z,59nm,1.4s,mb5.3
N12A Clover Valley, 69.39 358 ⇑P P 23 27 13.2 +0.8
baz=70,SNR=7.9
N12A Clover Valley, 69.39 358 *eP* **P 23 27 13.1 +0.6**
comp=Z,152nm,2.4s,mb5.5
N21A Black Mountain 69.39 4 ⇓P P 23 27 11.7 -0.8
baz=70
CCM Cathedral Cave 69.41 18 *eP* **P 23 27 11.6 -1.0**
CCM MLR MLR
comp=Z,1μm,19.0s,MS5.2
BGU Big Grassy Mou 69.42 359 *eP* **P 23 27 12.8 +0.1**
comp=Z,60nm,1.7s,mb5.2
N20A Spence Gulch, 69.43 3 ⇑P P 23 27 11.8 -0.9
baz=70,SNR=8.3
N17A Moffit Pass 69.45 1 ⇓P P 23 27 13.6 +0.8
baz=70
N22A Wattenberg Ran 69.50 5 ⇑P P 23 27 13.6 +0.5
baz=70
N18A Larsen Ranch, 69.51 2 ⇓P P 23 27 13.1 0.0
baz=70
FVM French Village 69.56 18 *eP* **P 23 27 12.9 -0.7**
FVM pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
FVM French Village 69.56 18 *eP* **P 23 27 12.9 -0.7**
comp=Z,6.6nm,0.7s,mb4.7
TKL Tuckaleechee C 69.56 25 *eP* **P 23 27 11.9 -1.8**
SIUC Southern Illin 69.66 19 *eP* **P 23 27 13.4 -0.7**
comp=Z,22nm,1.0s,mb5.0
WDC Whiskeytown Da 69.72 352 *eP* **P 23 27 15.5 +1.0**
WDC pmax pmax
comp=Z,56nm,1.4s,mb5.3
WDC MLR MLR
comp=Z,5μm,22.0s,MS5.7
WDC Whiskeytown Da 69.72 352 *eP* **P 23 27 15.5 +1.0**
comp=Z,56nm,1.4s,mb5.3
WDC LR LR
comp=Z,5μm,22.0s,MS5.7
SPUT South Promonto 69.80 360 *eP* **P 23 27 14.9 0.0**
comp=Z,76nm,2.2s,mb5.2
M16A Huntsville 69.81 1 ⇑P P 23 27 15.2 +0.1
baz=70
M13A Montello 69.87 359 ⇑P P 23 27 15.4 0.0
baz=70
M13A Montello 69.87 359 *eP* **P 23 27 15.6 +0.2**
comp=Z,58nm,1.5s,mb5.3
M12A Wells 69.95 358 ⇑P P 23 27 15.9 0.0
baz=70,SNR=6.7
M18A Lyman 69.95 2 ⇓P P 23 27 13.9 -2.0
baz=70
M15A Larsen Ranch, 69.95 360 ⇓P P 23 27 15.4 -0.5
baz=70,SNR=6.0
M11A Holland Ranch, 70.00 357 ⇓P P 23 27 17.2 +1.1
baz=70
M14A Sheep Mountain 70.00 359 ⇓P P 23 27 17.4 +1.2
baz=70,SNR=6.1
PHWY Pilot Hill 70.08 5 *eP* **P 23 27 17.1 +0.4**
comp=Z,91nm,2.3s,mb5.3
M20A Sweetwater, Wa 70.08 3 ⇓P P 23 27 17.2 +0.5
baz=70,SNR=6.3
OGNE Ogallala 70.09 8 PFAKE 23 27 30.0 +13
OGNE LR LR
comp=Z,685nm,21.0s,MS4.9
HWUT Hardware Ranch 70.10 1 *eP* **P 23 27 17.4 +0.6**
comp=Z,102nm,2.6s,mb5.3
HWUT LR LR
comp=Z,2μm,20.0s,MS5.4
M10A I.L. Ranch, Tu 70.12 357 ⇑P P 23 27 18.1 +1.2
baz=71,SNR=6.7
KHMM Horse Mountain 70.17 351 *eP* **P 23 27 20.4 +3.1**
M21A Separation Pea 70.25 4 ⇑P P 23 27 17.6 -0.1
baz=71
HVU Hansel Valley 70.27 360 *eP* **P 23 27 18.1 +0.2**
HVU pmax pmax
comp=Z,39nm,1.9s,mb5.0
HVU Hansel Valley 70.27 360 *eP* **P 23 27 18.1 +0.2**
comp=Z,39nm,1.9s,mb5.0
RWWY Rawlins 70.34 4 *eP* **P 23 27 18.1 -0.2**
comp=Z,86nm,2.4s,mb5.2
USIN University of 70.35 20 *eP* **P 23 27 18.1 -0.3**
comp=Z,136nm,1.8s,mb5.6
TZTN Tazewell 70.44 24 *eP* **P 23 27 19.0 0.0**
L18A Fontenelle, Gr 70.45 2 ⇓P P 23 27 19.3 +0.3
baz=71
L15A Malad City 70.49 360 ⇑P P 23 27 18.8 -0.4
baz=71
L16A Fish Haven 70.51 1 ⇓P P 23 27 18.6 -0.7
baz=71
L14A Malta 70.53 359 ⇑P P 23 27 19.6 +0.2
baz=71,SNR=6.0
L17A Cokeville 70.60 1 ⇑P P 23 27 19.4 -0.5
baz=71
L19A Farson 70.64 2 ⇑P P 23 27 19.0 -1.1
baz=71
L10A Juniper Basin 70.67 357 ⇓P P 23 27 19.7 -0.6
baz=71,SNR=8.7
L12A House Creek Ra 70.68 358 ⇑P P 23 27 17.8 -2.6
baz=71,SNR=6.7
L11A Cat Creek Ranc 70.73 357 ⇑P P 23 27 20.3 -0.3
baz=71,SNR=11
L22A Ellis Ranch, M 70.73 5 ⇓P P 23 27 20.4 -0.2
baz=71
MOD Modoc 70.78 354 *eP* **P 23 27 22.1 +1.2**
comp=Z,27nm,1.4s,mb5.0
MOD LR LR
comp=Z,6μm,19.0s,MS5.9
YBH Yreka Blue Hor 70.88 352 *eP* **P 23 27 23.1 +1.5**
YBH pmax pmax
comp=Z,40nm,2.2s
YBH MLR MLR
comp=Z,5μm,20.0s
YBH Yreka Blue Hor 70.88 352 *eP* **P 23 27 23.1 +1.5**
comp=Z,40nm,2.2s,mb5.0
YBH LR LR
comp=Z,5μm,20.0s,MS5.8
OLIL Olney 70.93 20 *eP* **P 23 27 22.0 +0.1**
WCI Wyandotte Cave 71.02 21 *eP* **P 23 27 21.6 -0.9**
WCI pmax pmax
comp=Z,20nm,1.2s,mb4.9
WCI Wyandotte Cave 71.02 21 *eP* **P 23 27 21.6 -0.9**
comp=Z,20nm,1.2s,mb4.9
K14A Jones Ranch, D 71.04 359 ⇓P P 23 27 21.8 -0.7
baz=72
K13A Stover Farm, H 71.16 359 ⇑P P 23 27 22.3 -1.0
baz=72
WVOR Wild Horse Val 71.16 355 *eP* **P 23 27 24.1 +0.8**
WVOR pmax pmax
comp=Z,112nm,1.5s,mb5.6
WVOR Wild Horse Val 71.16 355 *eP* **P 23 27 24.1 +0.8**
comp=Z,112nm,1.5s,mb5.6
K12A Draper Farm, C 71.17 358 ⇑P P 23 27 23.1 -0.2
baz=72
K20A Yellowstone Ra 71.24 3 ⇑P P 23 27 22.3 -1.4
baz=72
AHID Auburn Hatcher 71.26 1 *eP* **P 23 27 23.3 -0.5**
comp=Z,36nm,1.9s,mb5.0
AHID LR LR
comp=Z,2μm,20.0s,MS5.4
BW06 Boulder Array 71.30 2 ⇓P P 23 27 22.9 -1.2
baz=72,SNR=5.8
BW06 Boulder Array 71.30 2 PFAKE 23 27 40.0 +16
BW06 LR LR
comp=Z,1μm,22.0s,MS5.1
PDAR Pinedale Array 71.30 2 P **P 23 27 23.0 -1.1**
comp=Z,1.6nm,0.5s,mb4.2,baz=170,slow=6.4,SNR=17
PDAR LR LR 23 52 52.5
comp=Z,942nm,21.5s,MS5.0,baz=197,slow=31
K11A Parker Ranch, 71.34 357 ⇑P P 23 27 24.4 0.0
baz=72,SNR=7.2
K19A Absolon Red Bu 71.39 3 ⇓P P 23 27 23.4 -1.2
baz=72
K10A MacKenzie Ranc 71.39 356 ⇑P P 23 27 24.3 -0.3
baz=72,SNR=8.2
JOHN Johnston Islan 71.48 302 PFAKE 23 27 40.0 +14
JOHN LR LR
comp=Z,3μm,19.0s,MS5.5
CNNC Cliffs of the 71.53 29 PFAKE 23 27 40.0 +14
CNNC LR LR
comp=Z,1μm,19.0s,MS5.3
K05A Summer Lake 71.65 353 ⇓P P 23 27 25.8 -0.5
baz=72,SNR=7.7
J18A Kendall Valley 71.73 2 ⇑P P 23 27 25.3 -1.4
baz=72
J16A Bone 71.77 1 ⇑P P 23 27 25.2 -1.7
baz=72,SNR=7.4
HUMO Hull Mountain 71.77 352 *eP* **P 23 27 27.7 +0.7**
HUMO LR LR
comp=Z,5μm,21.0s,MS5.8
J12A Stokes Ranch, 71.79 358 P **P 23 27 27.2 +0.2**
baz=72,SNR=18
BLO Bloomington 71.81 21 *eP* **P 23 27 26.8 -0.5**
BLO pmax pmax
comp=Z,11nm,0.8s,mb4.8
BLO Bloomington 71.81 21 *eP* **P 23 27 26.8 -0.4**
comp=Z,11nm,0.8s,mb4.8
J14A Carey 71.82 359 ⇓P P 23 27 26.7 -0.5
baz=72,SNR=16
RRI2 Red Ridge 71.84 1 *eP* **P 23 27 28.3 +1.0**
comp=Z,54nm,1.5s,mb5.2
REDW Red Top Meadow 71.86 1 *eP* **P 23 27 28.4 +0.9**
comp=Z,98nm,2.3s,mb5.3
J15A Blackfoot 71.89 360 ⇑P P 23 27 27.8 +0.2
baz=72
J13A Cove Ranch, Pi 71.91 359 ⇑P P 23 27 27.3 -0.5
baz=72
MFID Camas Ranch 71.98 357 ⇑P P 23 27 27.1 -1.0
baz=72
TPAW Teton Pass 71.99 1 *eP* **P 23 27 28.2 0.0**
J09A Fry Pan Ranch, 72.01 356 ⇓P P 23 27 27.4 -1.0
baz=72,SNR=12
J08A Circle Bar Ran 72.07 355 ⇓P P 23 27 28.2 -0.5
baz=72,SNR=11
HLID Hailey 72.08 358 ⇑P P 23 27 28.3 -0.5
baz=72,SNR=29
HLID Hailey 72.08 358 *eP* **P 23 27 28.9 +0.1**
comp=Z,147nm,2.4s,mb5.5
HLID LR LR
comp=Z,3μm,19.0s,MS5.5
ELN Prospectdale 72.08 26 *eP* **P 23 27 28.6 -0.3**
DCID1 Drake Creek 72.09 1 *eP* **P 23 27 29.8 +1.0**
comp=Z,27nm,1.4s,mb5.0
LOHW Long Hollow 72.12 1 *eP* **P 23 27 28.9 -0.1**
comp=Z,7.0nm,0.5s,mb4.8
BLA Blacksburg 72.20 26 *eP* **P 23 27 29.6 0.0**
BLA pmax pmax
comp=Z,51nm,1.3s,mb5.3
BLA MLR MLR
comp=Z,2μm,21.0s,MS5.3
BLA Blacksburg 72.20 26 *eP* **P 23 27 29.6 0.0**
comp=Z,52nm,1.3s,mb5.3

BLA LR LR
comp=Z,2µm,21.0s,MS5.3
KEBM Edson Butte 72.22 351 *e*P **P 23 27 31.3 +1.7**
I18A Diamond G Ranc 72.23 2 ⇑P **P 23 27 29.8 +0.1**
baz=73
HDIL Hopedale 72.28 18 *e*P **P 23 27 29.7 -0.3**
comp=Z,9.3nm,0.6s,mb4.9
HDIL LR LR
comp=Z,758nm,19.0s,MS5.0
I12A Atlanta 72.33 358 ⇓P **P 23 27 30.5 +0.3**
baz=73,SNR=7.2
DZM Mont Dzumac 72.36 254 *e*S S 23 36 53.2 -1.8
comp=Z,1µm,26.0s
DZM *e*LR LR 23 49 41.9
comp=Z,10µm,27.7s,baz=117
IMW Indian Meadow 72.40 1 *e*P **P 23 27 30.8 +0.2**
comp=Z,94nm,2.4s,mb5.3
VWCC Virginia Weste 72.40 27 *e*P **P 23 27 31.2 +0.4**
I13A Wildhorse Cree 72.42 359 ⇑P **P 23 27 30.8 0.0**
baz=73,SNR=7.8
I14A Mackay 72.42 359 ⇓P **P 23 27 31.2 +0.3**
baz=73,SNR=9.7
I11A Placerville 72.48 357 ⇓P **P 23 27 33.5 +2.4**
baz=73
I15A Monteview 72.49 360 ⇓P **P 23 27 32.1 +0.9**
baz=73
I09A Lost Marbles R 72.63 356 ⇓P **P 23 27 31.9 -0.2**
baz=73,SNR=6.5
I07A Izee 72.87 355 ⇓P **P 23 27 33.4 -0.1**
baz=73,SNR=16
RSSD Black Hills 73.00 6 PFAKE 23 27 50.0 +16
RSSD LR LR
comp=Z,1µm,19.0s,MS5.2
H13A Challis 73.08 359 ⇓P **P 23 27 33.6 -1.0**
baz=74
LKWY Lake 73.08 1 PFAKE 23 27 50.0 +15
LKWY LR LR
comp=Z,2µm,19.0s,MS5.5
H14A Leadore 73.11 359 ⇓P **P 23 27 35.4 +0.5**
baz=74
NVL N'lazarevskaya 73.16 163*d*/P **P 23 27 34.0 -1.0**
NVL *e**PP pP 23 27 40.2 +1.9
NVL *e* 23 27 47.8
NVL pmax pmax
comp=Z,45nm,1.5s,mb5.2
YMR Madison River 73.17 1 *e*P **P 23 27 35.5 +0.2**
comp=Z,54nm,1.4s,mb5.3
H10A Noah's Angus R 73.19 357 ⇓P **P 23 27 35.3 -0.1**
baz=74
H16A Russell Place, 73.20 1 ⇓P **P 23 27 35.4 -0.1**
baz=74
H08A Prairie City 73.24 355 ⇑P **P 23 27 35.8 +0.1**
baz=74,SNR=13
MCMT McKenzie Canyo 73.32 360 *e*P **P 23 27 36.7 +0.6**
comp=Z,14nm,1.4s,mb4.7
QLMT Earthquake Lak 73.32 1 *e*P **P 23 27 37.0 +0.9**
comp=Z,14nm,1.7s,mb4.6
G13A Cobalt 73.60 359 ⇑P **P 23 27 37.8 0.0**
baz=74
JSRW J. Sargeant Re 73.63 28 *e*P **P 23 27 38.4 +0.2**
ECSD EROS Data Cent 73.64 12 *e*P **P 23 27 37.2 -0.8**
comp=Z,61nm,2.0s,mb5.2
ECSD LR LR
comp=Z,1µm,22.0s,MS5.1
G15A Dillon 73.66 360 ⇓P **P 23 27 37.8 -0.3**
baz=74
RLMT Red Lodge 73.66 2 ⇑P **P 23 27 38.2 0.0**
baz=74
RLMT Red Lodge 73.66 2 *e*P **P 23 27 37.6 -0.6**
comp=Z,28nm,1.5s,mb5.0
RLMT LR LR
comp=Z,994nm,20.0s,MS5.1
G12A Big Creek, Yel 73.67 358 ⇑P **P 23 27 36.9 -1.3**
baz=74
COR Corvallis 73.76 352 *e*P **P 23 27 41.5 +2.8**
COR MLR MLR
comp=Z,3µm,22.0s,MS5.5
G17A Pierce Place, 73.82 1 ⇓P **P 23 27 37.7 -1.3**
baz=74
G18A Lazy EL Ranch, 73.85 2 ⇑P **P 23 27 37.6 -1.6**
baz=74,SNR=13
DLMT Dillon 73.85 360 *e*P **P 23 27 40.0 +0.8**
G10A Bishop Farm, J 73.91 356 ⇓P **P 23 27 39.2 -0.4**
baz=74,SNR=9.6
ACSO Alum Creek Sta 73.93 23 PFAKE 23 27 50.0 +10
ACSO LR LR
comp=Z,1µm,20.0s,MS5.3
G11A Walters Elk Ra 73.98 357 ⇑P **P 23 27 38.9 -1.1**
baz=74,SNR=7.7
G08A Pilot Rock 74.03 355 ⇓P **P 23 27 40.9 +0.6**
baz=74,SNR=8.7
BOZ Bozeman (W) 74.14 0 ⇓P **P 23 27 39.3 -1.6**
baz=75,SNR=5.1
BOZ Bozeman (W) 74.14 0 PFAKE 23 27 50.0 +9.1
BOZ LR LR
comp=Z,742nm,20.0s,MS5.0
JFWS Jewell Farm 74.23 17 *e*P **P 23 27 42.4 +0.9**
JFWS pmax pmax
comp=Z,31nm,1.9s,mb4.9
JFWS MLR MLR
comp=Z,2µm,20.0s,MS5.3
JFWS Jewell Farm 74.23 17 *e*P **P 23 27 42.4 +0.9**
comp=Z,31nm,1.9s,mb4.9
JFWS LR LR
comp=Z,2µm,20.0s,MS5.3
CBN Corbin 74.27 28 PFAKE 23 27 50.0 +8.1
CBN LR LR
comp=Z,1µm,19.0s,MS5.2
F16A Kennard Place, 74.28 0 ⇓P **P 23 27 41.1 -0.6**
baz=75
F12A Elk City 74.29 358 ⇓P **P 23 27 41.1 -0.7**
baz=75,SNR=7.0
F13A Darby 74.30 359 ⇓P **P 23 27 42.2 +0.4**
baz=75,SNR=6.7
LRM Limekiln Ridge 74.31 360 *e*P **P 23 27 44.9 +3.0**
comp=Z,190nm,2.2s,mb5.6
F17A Fitzpatrick Pl 74.41 1 ⇓P **P 23 27 40.7 -1.8**
baz=75
F18A Big Timber 74.43 2 ⇑P **P 23 27 39.0 -3.6**
baz=75,SNR=5.0
F11A Grangeville 74.46 357 ⇓P **P 23 27 42.1 -0.6**
baz=75,SNR=9.7
MCWV Mont Chateau 74.55 25 *e*P **P 23 27 43.2 -0.2**
comp=Z,59nm,1.6s,mb5.3
MCWV LR LR
comp=Z,2µm,19.0s,MS5.5
E15A Deer Lodge 74.91 360 ⇓P **P 23 27 45.3 -0.1**
baz=75
E11A Bogner Ranch, 74.93 357 ⇓P **P 23 27 43.7 -1.8**
baz=75,SNR=18
E13A Victor 74.95 359 ⇑P **P 23 27 45.0 -0.6**
baz=75
E12A Beaver Dam Sad 74.96 358 ⇑P **P 23 27 45.5 -0.2**
baz=75
E17A Martinsdale 74.96 1 ⇓P **P 23 27 44.8 -0.9**
baz=75,SNR=6.7
F04A Amboy 74.99 353 ⇑P **P 23 27 45.9 +0.1**
baz=75
E16A East Helena 75.03 0 ⇑P **P 23 27 45.0 -1.1**
baz=76,SNR=7.8
E18A Harlowton 75.09 2 ⇑P **P 23 27 44.5 -1.9**
baz=76,SNR=13
HAWA Hanford 75.17 355 *e*P **P 23 27 49.0 +2.2**
comp=Z,36nm,1.4s,mb5.1
HAWA LR LR
comp=Z,3µm,21.0s,MS5.6
RSW Rattlesnake Hi 75.17 355 *e*P **P 23 27 48.6 +1.8**
comp=Z,4.3nm,0.8s,mb4.4
RCBR Riachuelo 75.31 89 PFAKE 23 28 00.0 +11
RCBR LR LR
comp=Z,3µm,20.0s,MS5.5
MSO Missoula 75.33 359 *e*P **P 23 27 48.5 +0.7**
comp=Z,30nm,1.6s,mb5.0
MSO LR LR
comp=Z,1µm,19.0s,MS5.3
LAO LASA Array 75.38 4 *e*P **P 23 27 47.4 -0.7**
comp=Z,222nm,2.3s,mb5.7
LAO LR LR
comp=Z,1µm,22.0s,MS5.1
CHMT Chamberlain Mo 75.41 359 *e*P **P 23 27 48.6 +0.3**
D16A Dana Ranch, Ca 75.52 1 ⇑P **P 23 27 46.5 -2.4**
baz=76,SNR=6.9
D15A Lincoln 75.53 360 ⇓P **P 23 27 48.8 -0.1**
baz=76
AAM Ann Arbor 75.56 22 PFAKE 23 28 00.0 +11
AAM LR LR
comp=Z,2µm,20.0s,MS5.3

D14A Greenough 75.58 359 ⇓P **P 23 27 47.8 -1.4**
baz=76,SNR=5.8
D12A Red Ives Fores 75.59 358 ⇑P **P 23 27 48.8 -0.5**
baz=76
D11A Klaveano Farm, 75.62 357 ⇑P **P 23 27 49.1 -0.4**
baz=76,SNR=7.7
D17A Six Diamond Ra 75.66 1 ⇓P **P 23 27 49.4 -0.3**
baz=76,SNR=7.1
E03A Lebam 75.73 352 ⇑P **P 23 27 50.6 +0.5**
baz=76
LON Longmire 75.73 353 *e*P **P 23 27 50.4 +0.3**
LON pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LON Longmire 75.73 353 *e*P **P 23 27 50.4 +0.3**
comp=Z,5.3nm,0.9s,mb4.5
SLMT Seeley Lake 75.74 359 *e*P **P 23 27 50.6 +0.5**
comp=Z,20nm,1.4s,mb4.8
BBSR BB Station 75.83 40 PFAKE 23 28 00.0 +9.0
BBSR LR LR
comp=Z,2µm,21.0s,MS5.5
SWMT Swartz Lake 76.01 359 *e*P **P 23 27 52.7 +1.0**
comp=Z,8.1nm,1.2s,mb4.5
SSPA Standing Stone 76.15 26 *e*P **P 23 27 52.3 -0.3**
comp=Z,157nm,2.4s,mb5.5
D05A Enumclaw 76.18 353 ⇑P **P 23 27 51.8 -0.9**
baz=77
C13A Hot Springs 76.20 358 ⇓P **P 23 27 52.2 -0.5**
baz=77,SNR=7.3
JTMT Jette 76.26 359 *e*P **P 23 27 54.1 +1.0**
comp=Z,53nm,1.7s,mb5.2
C15A Salmond Ranch, 76.27 360 ⇓P **P 23 27 53.7 +0.6**
baz=77
C14A Swan Lake 76.27 359 ⇓P **P 23 27 52.5 -0.7**
baz=77
C16A Fuhringer Ranc 76.29 0 ⇓P **P 23 27 53.3 0.0**
baz=77
YBMT Yellow Bay 76.37 359 *e*P **P 23 27 54.5 +0.8**
comp=Z,12nm,1.5s,mb4.6
BSMT Bassoo Peak 76.37 358 *e*P **P 23 27 54.0 +0.3**
comp=Z,23nm,1.2s,mb5.0
ETW Entiat 76.44 354 *e*P **P 23 27 54.7 +0.6**
comp=Z,6.1nm,1.1s,mb4.4
EGMT Eagleton 76.55 2 *e*P **P 23 27 55.6 +0.9**
comp=Z,62nm,1.4s,mb5.3
EGMT LR LR
comp=Z,2µm,21.0s,MS5.3
NLWA Neilton Lookou 76.60 352 ⇑P **P 23 27 54.4 -0.6**
baz=77
NLWA Neilton Lookou 76.60 352 *e*P **P 23 27 55.6 +0.6**
comp=Z,38nm,1.1s,mb5.2
NLWA LR LR
comp=Z,3µm,21.0s,MS5.6
GNW Green Mountain 76.64 353 *e*P **P 23 27 55.8 +0.5**
comp=Z,36nm,1.6s,mb5.1
ERPA Erie 76.65 24 PFAKE 23 28 10.0 +15
ERPA LR LR
comp=Z,2µm,22.0s,MS5.4
B17A L&G Farms, Che 76.79 1 ⇓P **P 23 27 55.8 -0.3**
baz=77
B15A Bradely Ranch, 76.80 360 ⇓P **P 23 27 55.1 -1.0**
baz=77,SNR=5.3
B14A Marquette Ranc 76.86 359 ⇓P **P 23 27 56.0 -0.4**
baz=77,SNR=8.0
NEW Newport 76.88 357 *e*P **P 23 27 56.9 +0.3**
NEW pmax pmax
comp=Z,79nm,1.5s
NEW MLR MLR
comp=Z,5µm,20.0s
NEW Newport 76.88 357 *e*P **P 23 27 56.9 +0.3**
comp=Z,79nm,1.5s,mb5.4
NEW LR LR
comp=Z,5µm,20.0s,MS5.8
B13A Whitefish 76.89 359 ⇓P **P 23 27 56.8 +0.2**
baz=77,SNR=6.4
B18A Beardsley Farm 76.92 2 ⇑P **P 23 27 55.7 -1.1**
baz=77,SNR=5.5
B09A Rice 77.09 356 ⇑P **P 23 27 58.3 +0.6**
baz=78
JCW Jim Creek 77.17 353 *e*P **P 23 27 59.2 +0.9**
DGMT Dagmar 77.30 6 *e*P **P 23 27 59.0 +0.1**
comp=Z,218nm,1.8s,mb5.8
DGMT LR LR
comp=Z,1µm,19.0s,MS5.2
RPW Rockport 77.38 354 *e*P **P 23 28 01.0 +1.6**
comp=Z,2.9nm,1.0s,mb4.2
A13A Flathead Natio 77.45 359 ⇑P **P 23 27 58.9 -0.9**
baz=78
A17A Triple J Farms 77.45 1 ⇓P **P 23 27 58.8 -1.0**
baz=78,SNR=5.7
A15A Johnson Ranch, 77.47 360 ⇓P **P 23 27 59.4 -0.5**
baz=78
A14A Double T Ranch 77.47 359 ⇓P **P 23 27 59.8 -0.1**
baz=78,SNR=7.8
COWI Conover 77.50 16 *e*P **P 23 28 00.1 0.0**
comp=Z,42nm,1.4s,mb5.2
A11A Hall Mountain, 77.53 357 ⇑P **P 23 28 00.2 0.0**
baz=78
GLMI Grayling 77.55 20 PFAKE 23 28 10.0 +10
GLMI LR LR
comp=Z,2µm,19.0s,MS5.4
WALA Waterton Lakes 77.56 359 *e*P **P 23 28 00.5 +0.1**
PGC Sidney 77.78 352 *e*P **P 23 28 02.5 +0.8**
comp=Z,4.6nm,1.3s,mb4.2
A07A Ashnola River, 77.88 355 ⇓P **P 23 28 02.4 +0.3**
baz=78,SNR=6.6
TAU Tasmania Unive 77.91 228 PFAKE 23 28 10.0 +7.2
TAU LR LR
comp=Z,4µm,20.0s,MS5.7
AGMN Agassiz Refuge 78.19 11 *e*P **P 23 28 03.9 0.0**
comp=Z,107nm,1.9s,mb5.5
AGMN LR LR
comp=Z,845nm,20.0s,MS5.1
BINY Binghamton 78.22 27 PFAKE 23 28 20.0 +16
BINY LR LR
comp=Z,1µm,21.0s,MS5.1
EYMN Ely 78.69 14 *e*P **P 23 28 05.5 -1.2**
comp=Z,62nm,1.8s,mb5.2
EYMN LR LR
comp=Z,2µm,19.0s,MS5.5
CASY Casey 79.71 196 *e*P **P 23 28 11.5 -0.7**
CASY Casey 79.71 196 PFAKE 23 28 20.0 +7.8
CASY LR LR
comp=Z,3µm,20.0s,MS5.6
ULM Lac du Bonnet 80.08 11 P **P 23 28 13.4 -0.8**
comp=Z,5.0nm,0.8s,mb4.5,baz=223,slow=4.5,SNR=9.3
ULM LR LR 00 00 01.8
comp=Z,1µm,20.9s,MS5.2,baz=196,slow=33
ULM Lac du Bonnet 80.08 11 *e*P **P 23 28 14.0 -0.2**
comp=Z,90nm,1.9s,mb5.4
SYO Syowa Base 80.28 170⇑*i*P **P 23 28 14.5 -0.8**
NCB Newcomb 80.41 27 *e*P **P 23 28 16.0 -0.2**
comp=Z,54nm,1.5s,mb5.2
NCB LR LR
comp=Z,2µm,22.0s,MS5.3
LONY Lake Ozonia 80.81 26 *e*P **P 23 28 18.5 +0.2**
comp=Z,22nm,1.1s,mb5.0
LONY LR LR
comp=Z,1µm,19.0s,MS5.2
YNG Young 81.27 236 *e*P **P 23 28 18.4 -2.8**
comp=Z,7.0nm,0.9s,mb4.6
LBNH Lisbon 81.56 28 PFAKE 23 28 30.0 +7.7
LBNH LR LR
comp=Z,948nm,19.0s,MS5.2
TOO Toolangi 81.72 232 *e*P **P 23 28 23.6 0.0**
EDM Edmonton 81.72 359 *e*P **P 23 28 22.4 -0.5**
MIR Mirnyy 82.97 190⇑*i*P **P 23 28 30.4 +0.9**
MIR *e*S S 23 38 51.0 +2.8
MIR pmax pmax
comp=Z,180nm,2.4s,mb5.7
MIR pmax pmax
comp=Z,510nm,4.0s
MIR smax
comp=N,790nm,8.0s
MIR smax
comp=E,1µm,12.0s
MIR MLR MLR
comp=N,1µm,16.0s,MS5.6
MIR MLR MLR
comp=E,2µm,16.0s,MS5.6
MIR MLR MLR
comp=Z,2µm,16.0s,MS5.6
PKME Peaks-Kenny Pk 83.50 29 PFAKE 23 28 40.0 +7.6
PKME LR LR
comp=Z,971nm,20.0s,MS5.2
HNR Honiara 83.56 263 PFAKE 23 28 40.0 +6.5
HNR LR LR
comp=Z,1µm,22.0s,MS5.3

FFC Flin Flon 83.70 6 *e*P **P 23 28 33.0 -0.1**
FFC pmax pmax
comp=Z,100nm,1.9s,mb5.6
FFC MLR MLR
comp=Z,1µm,19.0s,MS5.3
FFC Flin Flon 83.70 6 *e*P **P 23 28 33.0 -0.2**
comp=Z,100nm,1.9s,mb5.6
FFC LR LR
comp=Z,1µm,19.0s,MS5.3
MAW Mawson 83.78 178 *e*P **P 23 28 35.0 +1.3**
comp=Z,14nm,1.4s,mb4.9
MAW Mawson 83.78 178 P **P 23 28 34.4 +0.7**
comp=Z,15nm,1.2s,mb5.0,baz=182,slow=5.3,SNR=9.1
MAW LR LR 00 05 09.1
comp=Z,2µm,18.4s,MS5.6,baz=180,slow=35
MAW Mawson 83.78 178 *e*P **P 23 28 35.1 +1.4**
MAW pmax pmax
comp=Z,30nm,1.9s
MAW MLR MLR
comp=Z,3µm,19.0s
MAW Mawson 83.78 178 *e*P **P 23 28 35.0 +1.4**
comp=Z,30nm,1.9s,mb5.1
MAW LR LR
comp=Z,3µm,19.0s,MS5.7
MIDW Midway 84.23 306 PFAKE 23 28 50.0 +13
MIDW LR LR
comp=Z,1µm,19.0s,MS5.3
CMSA Cobar Meteorol 84.61 237 *e*P **P 23 28 38.3 -0.3**
ARPS Mount Arapiles 84.63 231 *e*P **P 23 28 37.6 -1.0**
comp=Z,28nm,1.1s,mb5.3
CRAG Craig 85.85 348 *e*P **P 23 28 45.4 +1.5**
comp=Z,186nm,2.4s,mb5.9
STKA Stephens Creek 87.41 235 *e*P **P 23 28 52.1 -0.4**
comp=Z,5.6nm,1.1s,mb4.7
STKA Stephens Creek 87.41 235 P **P 23 28 51.8 -0.7**
comp=Z,4.6nm,1.1s,mb4.6,baz=128,slow=5.4,SNR=5.9
STKA LR LR 00 00 31.5
comp=Z,2µm,21.4s,MS5.6,baz=74,slow=30
SIT Sitka 87.75 348 *e*P **P 23 28 54.0 +0.8**
SIT pmax pmax
comp=Z,27nm,1.4s,mb5.3
SIT Sitka 87.75 348 *e*P **P 23 28 54.0 +0.7**
comp=Z,27nm,1.4s,mb5.3
DLBC Dease Lake 88.20 351 LR LR 00 02 11.3
comp=Z,2µm,18.8s,MS5.5,baz=157,slow=31
DLBC Dease Lake 88.20 351 *e*P **P 23 28 56.0 +0.6**
CTA Charters Tower 89.99 247 LR LR 00 02 33.9
comp=Z,2µm,21.8s,MS5.5,baz=145,slow=31
CTAO Charters Tower 89.99 247 PFAKE 23 29 20.0 +15
CTAO LR LR
comp=Z,2µm,22.0s,MS5.5
SKAG Skagway 90.02 348 *e*P **P 23 29 05.2 +1.4**
comp=Z,44nm,2.2s,mb5.4
YKA Yellowknife Ar 91.04 359 P **P 23 29 07.1 -1.4**
comp=Z,1.7nm,0.9s,mb4.4,baz=170,slow=4.8,SNR=9.4
YKA Yellowknife Ar 91.04 359 P **P 23 29 07.1 -1.4**
SCHQ Schefferville 92.03 24 P **P 23 29 12.2 -1.1**
comp=Z,6.5nm,1.1s,mb4.9,baz=267,slow=5.3,SNR=5.3
SCHQ LR LR 00 09 06.1
comp=Z,773nm,19.4s,MS5.2,baz=217,slow=35
SCHQ Schefferville 92.03 24 *e*P **P 23 29 11.1 -2.2**
comp=Z,20nm,1.2s,mb5.3
SCHQ LR LR
comp=Z,1µm,20.0s,MS5.3
KDAK Kodiak Island 92.68 340 PFAKE 23 29 30.0 +14
KDAK LR LR
comp=Z,3µm,20.0s,MS5.8
PAX Paxson 95.25 345 *e*P **P 23 29 29.5 +1.6**
PAX pmax pmax
comp=Z,19nm,1.5s,mb5.3
PAX Paxson 95.25 345 *e*P **P 23 29 29.5 +1.6**
comp=Z,19nm,1.5s,mb5.3
EGAK Eagle 95.99 348 PFAKE 23 29 40.0 +8.7
EGAK LR LR
comp=Z,2µm,19.0s,MS5.6
SHEL Horse Pasture 96.28 112 PFAKE 23 29 40.0 +6.1
SHEL LR LR
comp=Z,2µm,19.0s,MS5.5
PPLA Purkeypile 96.80 343 *e*P **P 23 29 36.1 +1.1**
comp=Z,17nm,1.5s,mb5.2
KTH Kantishna Hill 97.02 344 *e*P **P 23 29 35.8 -0.2**
comp=Z,43nm,1.1s,mb5.8
COLA College 97.43 346 PFAKE 23 29 50.0 +12
COLA LR LR
comp=Z,1µm,20.0s,MS5.4
BPAW Bear Paw Mtn. 97.49 344 *e*P **P 23 29 37.3 -0.8**
comp=Z,46nm,1.5s,mb5.7
ASAR Alice Springs 97.64 238 P **P 23 29 39.4 -0.6**
comp=Z,0.9nm,1.1s,mb4.2,baz=139,slow=7.2,SNR=4.6
INK Inuvik 98.13 352 LR LR 00 06 40.3
comp=Z,2µm,21.3s,MS5.6,baz=150,slow=31
INK Inuvik 98.13 352 *e*P **P 23 29 42.7 +1.8**
INK pmax pmax
comp=Z,3.0nm,1.2s
INK Inuvik 98.13 352 *e*P **P 23 29 42.7 +1.8**
comp=Z,3.4nm,1.2s,mb4.8
WRAB Tennant Creek 99.47 241 PFAKE 23 30 00.0 +12
WRAB LR LR
comp=Z,7µm,20.0s,MS6.2
NWAO Narrogin (SRO) 102.66 221 PFAKE 23 30 10.0 +8.2
NWAO LR LR
comp=Z,2µm,21.0s,MS5.7
SUR Sutherland 104.57 140 PFAKE 23 30 20.0 +10
SUR LR LR
comp=Z,2µm,21.0s,MS5.7
CMLA Cha da Macela 104.69 55 PFAKE 23 30 20.0 +9.1
CMLA LR LR
comp=Z,1µm,19.0s,MS5.4
GUMO Guam 107.55 276 PFAKE 23 34 40.0 +7.6
GUMO LR LR
comp=Z,1µm,19.0s,MS5.5
DBIC Dimbokro 108.46 93 PFAKE 23 34 50.0 +16
DBIC LR LR
comp=Z,2µm,19.0s,MS5.8
MBWA Marble Bar 109.36 231 PFAKE 23 34 50.0 +14
MBWA LR LR
comp=Z,5µm,20.0s,MS6.1
BOSA Boshof 109.91 141 PFAKE 23 34 50.0 +13
BOSA LR LR
comp=Z,2µm,19.0s,MS5.6
PET Petropavlovsk 111.94 319 PFAKE 23 34 50.0 +10
PET LR LR
comp=Z,3µm,21.0s,MS5.8
LBTB Lobatse 112.88 139 PFAKE 23 34 50.0 +7.7
LBTB LR LR
comp=Z,1µm,21.0s,MS5.5
BORG Borgarnes 116.10 29 PFAKE 23 35 00.0 +13
BORG LR LR
comp=Z,1µm,21.0s,MS5.5
TORD Torodi Ar. Bea 117.13 89 PKP PKPdf 23 34 49.6 -1.1
comp=Z,1.3nm,1.1s,baz=222,slow=2.9,SNR=3.3
TORD PP PP 23 35 59.4 -1.5
comp=Z,5.6nm,1.3s,baz=233,slow=7.1,SNR=6.9
RTC Rabat Centre 117.46 65 PFAKE 23 35 00.0 +9.2
RTC LR LR
comp=Z,2µm,22.0s,MS5.8
SFS San Fernando 118.69 62 PFAKE 23 35 00.0 +7.0
SFS LR LR
comp=Z,2µm,21.0s,MS5.8
MTE Manteigas 118.72 57 PFAKE 23 35 00.0 +7.0
MTE LR LR
comp=Z,1µm,20.0s,MS5.6
ERM Erimo 118.96 304 PFAKE 23 35 10.0 +17
ERM LR LR
comp=Z,978nm,20.0s,MS5.4
PAB San Pablo 120.89 59 PFAKE 23 35 10.0 +13
PAB LR LR
comp=Z,2µm,20.0s,MS5.6
ESDC Sonseca Array 121.21 59 PKP PKPdf 23 34 57.9 +0.1
comp=Z,0.1nm,0.3s,baz=198,slow=4.1,SNR=3.4
ESLA Sonseca Array 121.21 59 PFAKE 23 35 10.0 +12
ESLA LR LR
comp=Z,9µm,20.0s,MS6.4
MAJO Matsushiro 121.35 297 PFAKE 23 35 10.0 +12
MAJO LR LR
comp=Z,758nm,21.0s,MS5.3
MAT Matsushiro 121.35 297 PKKP PKKPbc 23 45 05.2 +6.0
DAV Davao City (W) 121.44 260 PFAKE 23 35 10.0 +11
DAV LR LR
comp=Z,925nm,22.0s,MS5.4
LSZ Lusaka 121.84 134 PFAKE 23 35 10.0 +10
LSZ LR LR
comp=Z,2µm,21.0s,MS5.7
ESK Eskdalemuir 123.91 41 PFAKE 23 35 10.0 +7.6
ESK LR LR
comp=Z,664nm,20.0s,MS5.3

TAM	**Tamanrasset**	**124.25**	**81**	*e*PKIKP	PKPdf	23 35 04.4	+0.3
TAM				MLR	MLR		
comp=Z,3μm,22.0s,MS5.9							
KBS	**Kingsbay**	**124.50**	**11**	PFAKE		23 35 10.0	+7.0
KBS				LR	LR		
comp=Z,2μm,19.0s,MS5.7							
TIXI	**Tiksi**	**126.10**	**340**	*i* PKIKP	PKPdf	23 35 05.5	-0.7
TIXI				pmax	pmax		
comp=Z,9.0nm,2.1s							
TIXI	**Tiksi**	**126.10**	**340**	*e*PKPdf	PKPdf	23 35 05.2	-1.0
KLR	**Kul'dur**	**127.89**	**312**	*e*PKIKP	PKPdf	23 35 10.8	+0.5
SSB	**Saint Sauveur**	**128.28**	**53**	PFAKE		23 35 20.0	+8.8
SSB				LR	LR		
comp=Z,772nm,19.0s,MS5.4							
KKM	**Kota Kinabalu**	**128.91**	**253**	PFAKE		23 35 30.0	+17
KKM				LR	LR		
comp=Z,692nm,19.0s,MS5.4							
MDJ	**Mudanjiang**	**129.13**	**306**	PKP	PKPdf	23 35 13.5	+0.7
MDJ	**Mudanjiang**	**129.13**	**306**	PFAKE		23 35 20.0	+7.2
MDJ				LR	LR		
comp=Z,817nm,20.0s,MS5.4							
WLF	**Walferdange**	**129.53**	**48**	PFAKE		23 35 20.0	+6.6
WLF				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
KSRS	**Korea Array**	**129.59**	**296**	PKP	PKPdf	23 35 13.2	-0.7
comp=Z,0.7nm,0.8s,baz=50,slow=1.9,SNR=3.3							
BNI	**Bardonecchia**	**129.78**	**54**	PFAKE		23 35 30.0	+16
BNI				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
ECH	**Echery**	**130.19**	**50**	PFAKE		23 35 30.0	+15
ECH				LR	LR		
comp=Z,671nm,19.0s,MS5.4							
COCO	**West Island**	**130.43**	**219**	PFAKE		23 35 30.0	+14
COCO				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
KONO	**Kongsberg**	**130.46**	**35**	PFAKE		23 35 30.0	+15
KONO				LR	LR		
comp=Z,582nm,22.0s,MS5.2							
INCN	**Inchon**	**130.61**	**296**	PFAKE		23 35 30.0	+14
INCN				LR	LR		
comp=Z,739nm,22.0s,MS5.3							
NAO01	**NORSAR Array S**	**130.81**	**33**	PFAKE		23 35 30.0	+15
NAO01				LR	LR		
comp=Z,1μm,22.0s,MS5.5							
NOA	**NORSAR Array B**	**130.92**	**32**	PKP	PKPdf	23 35 15.1	-0.6
comp=Z,0.6nm,0.9s,baz=289,slow=2.1,SNR=2.1							
BFO	**Black Forest**	**130.97**	**50**	PFAKE		23 35 30.0	+14
BFO				LR	LR		
comp=Z,624nm,20.0s,MS5.3							
KSM	**Kuching**	**131.13**	**244**	PFAKE		23 35 30.0	+12
KSM				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
VSL	**Villasalto**	**131.34**	**61**	PFAKE		23 35 30.0	+13
VSL				LR	LR		
comp=Z,606nm,20.0s,MS5.3							
CN2	**Changchun**	**132.07**	**304**	*e*PKP	PKPdf	23 35 23.3	+4.9
CN2				PP	PP	23 37 49.3	+8.8
CN2				LR	LR		
comp=N,500nm,20.0s,MS5.5							
CN2				LR	LR		
comp=E,820nm,20.0s,MS5.5							
CN2				LR	LR		
comp=Z,850nm,22.0s,MS5.4							
YHNB	**Yeheng**	**132.22**	**278**	PFAKE		23 35 30.0	+11
YHNB				LR	LR		
comp=Z,703nm,20.0s,MS5.4							
VLC	**Villacollemand**	**132.39**	**55**	PFAKE		23 35 30.0	+11
VLC				LR	LR		
comp=Z,1μm,22.0s,MS5.5							
ARCES	**ARCESS Array B**	**132.68**	**19**	PKP	PKPdf	23 35 16.7	-2.0
comp=Z,1.2nm,0.9s,baz=31,slow=18,SNR=2.7							
GRA1	**Grafenberg Arr**	**132.81**	**48**	*e*PKP	PKPdf	23 35 19.3	-0.3
GRF	**Grafenberg Arr**	**132.81**	**48**	*e*PKPdf	PKPdf	23 35 19.3	-0.3
GRF				*e*L		00 26 12.2	
comp=Z,850nm,20.8s							
KEV	**Kevo**	**132.96**	**18**	PFAKE		23 35 30.0	+11
KEV				LR	LR		
comp=Z,947nm,19.0s,MS5.5							
MOX	**Moxa**	**132.98**	**46**	*e*PKIKP	PKPdf	23 35 21.1	+1.2
CLL	**Collm**	**133.78**	**45**	*e*PKIKP	PKPdf	23 35 21.0	-0.4
CLL				*e*		23 37 46.0	
CLL				MLR	MLR		
comp=Z,1μm,19.1s,MS5.5							
CLL	**Collm**	**133.78**	**45**	*e*PKP	PKPdf	23 35 21.0	-0.4
CLL				*i*		23 35 41.7	
CLL				*e*PP	PP	23 37 46.0	-5.1
CLL				*e*SKP		23 38 54.0	
CLL				*e*SKKS	SKKSac	23 44 53.0	+6.6
CLL				LR	LR		
comp=Z,1μm,19.1s,MS5.5							
CLL	**Collm**	**133.78**	**45**	*e*PKPdf	PKPdf	23 35 21.0	-0.4
comp=Z,21nm,1.9s							
CLL				*i*		23 35 41.7	
comp=Z,23nm,1.8s							
CLL				*e*		23 36 21.0	
CLL				*e*		23 37 41.0	
CLL				*e*PP	PP	23 37 46.0	-5.1
CLL				*e*SKPdf	SKPdf	23 38 54.0	-2.6
CLL				*e*SKKSac	SKKSac	23 44 53.0	+6.6
CLL				*e*SKSP		23 47 48.0	
CLL				*e*		23 48 37.0	
CLL				*e*PPS		23 49 48.0	
CLL				*e*SKKSacre		23 52 00.0	
CLL				*e*(SS)		23 55 18.0	
CLL				*e*PSS		23 56 03.0	
CLL				*e*SKSSKSac		23 57 36.0	
CLL				*e*SSS		00 00 48.0	
CLL				*e*(SSSS)		00 04 48.0	
CLL				Lm		00 32 00.0	
comp=N,400nm,19.4s							
CLL				Lm		00 32 00.0	
comp=E,600nm,19.2s							
CLL				Lm		00 32 00.0	
comp=Z,1μm,19.1s							
KHC	**Kasperske Hory**	**134.40**	**48**	*e*PKIKP	PKPdf	23 35 21.9	-0.7
KHC				MLR	MLR		
comp=Z,700nm,18.4s,MS5.4							
KHC	**Kasperske Hory**	**134.40**	**48**	*e*PKPdf	PKPdf	23 35 23.1	+0.5
KHC	**Kasperske Hory**	**134.40**	**48**	*e*PKPdf	PKPdf	23 35 21.9	-0.7
KHC				*ex*	x	23 35 34.6	
KHC				*e*SKP		23 38 58.1	
KHC				AMS	AMS	00 34 10.0	
comp=Z,700nm,18.4s							
BRG	**Berggiesshubel**	**134.42**	**46**	*e*PKP	PKPdf	23 35 22.8	+0.2
comp=Z,3.3nm,1.0s							
BRG				SKP		23 38 58.0	
BRG				*i*		23 56 15.0	
GEC2	**GERESS Array S**	**134.51**	**49**	*e*PKIKP	PKPdf	23 35 23.1	+0.3
GERES	**GERESS Array B**	**134.51**	**49**	PKP	PKPdf	23 35 22.0	-0.8
comp=Z,0.3nm,0.7s,baz=297,slow=0.2,SNR=4.3							
GERES				PP	PP	23 37 54.1	-1.7
comp=Z,0.6nm,0.9s,baz=280,slow=5.9,SNR=4.0							
AQU	**L'Aquila**	**134.56**	**58**	PFAKE		23 35 30.0	+6.9
AQU				LR	LR		
comp=Z,1μm,22.0s,MS5.5							
TRI	**Trieste**	**134.77**	**53**	PFAKE		23 35 40.0	+17
TRI				LR	LR		
comp=Z,926nm,21.0s,MS5.5							
PRA	**Prague**	**134.84**	**47**	PKPdf	PKPdf	23 35 25.0	+1.6
PRA				AMS	AMS	00 26 45.0	
PVCC	**Panska Ves**	**134.87**	**46**	*e*PKPdf	PKPdf	23 35 22.6	-0.8
PVCC				*e*SKP		23 38 58.4	
PVCC				AMS	AMS	00 36 40.0	
comp=Z,1μm,17.6s							
PRU	**Pruhonice**	**134.92**	**47**	*e*PKIKP	PKPdf	23 35 23.6	+0.1
PRU				MLR	MLR		
comp=Z,800nm,19.8s,MS5.4							
PRU	**Pruhonice**	**134.92**	**47**	*e*PKPdf	PKPdf	23 35 23.6	+0.1
PRU				*ex*	x	23 35 39.1	
PRU				*e*SKP		23 39 00.8	
PRU				AMS	AMS	00 27 20.0	
comp=Z,800nm,19.8s							
WDD	**Wield Dalam**	**135.00**	**67**	PFAKE		23 35 40.0	+16
WDD				LR	LR		
comp=Z,3μm,20.0s,MS6.0							
TREC	**Trest**	**135.62**	**48**	*e*PKIKP	PKPdf	23 35 23.2	-1.7
TREC				MLR	MLR		
comp=Z,800nm,21.4s,MS5.4							
TREC	**Trest**	**135.62**	**48**	*e*PKPdf	PKPdf	23 35 23.2	-1.7
TREC				*ex*	x	23 35 35.6	
TREC				*e*SKP		23 39 08.5	
TREC				AMS	AMS	00 34 40.0	
comp=Z,800nm,21.4s							
HIA	**Hailar**	**135.74**	**312**	PFAKE		23 35 40.0	+15
HIA				LR	LR		
comp=Z,1μm,19.0s,MS5.6							
DPC	**Dobruska-Polom**	**136.00**	**46**	*e*PKIKP	PKPdf	23 35 25.5	0.0
DPC				*e*		23 35 30.8	
DPC				MLR	MLR		
comp=Z,700nm,19.9s,MS5.4							
DPC	**Dobruska-Polom**	**136.00**	**46**	*e*PKPdf	PKPdf	23 35 25.5	0.0
DPC				*e*pPKP	pPKPdf	23 35 30.8	+1.8
DPC				*ex*	x	23 35 37.0	
DPC				*e*SKP		23 38 59.8	
DPC				AMS	AMS	00 31 00.0	
comp=Z,700nm,19.9s							
NJ2	**Nanjing**	**136.12**	**287**	*e*PKP	PKPdf	23 35 25.5	-0.9
LVZ	**Lovozero**	**136.26**	**17**	PFAKE		23 35 40.0	+14
LVZ				LR	LR		
comp=Z,736nm,19.0s,MS5.4							
CEL	**Celeste**	**136.30**	**64**	PFAKE		23 35 40.0	+13
CEL				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
TIP	**Timpagrande**	**137.02**	**62**	PFAKE		23 35 40.0	+12
TIP				LR	LR		
comp=Z,1μm,20.0s,MS5.7							
OKC	**Ostrava-Krasne**	**137.25**	**47**	*e*PKIKP	PKPdf	23 35 26.5	-1.4
OKC				MLR	MLR		
comp=Z,700nm,23.9s,MS5.3							
OKC	**Ostrava-Krasne**	**137.25**	**47**	*e*PKPdf	PKPdf	23 35 26.5	-1.4
OKC				*ex*	x	23 35 38.9	
OKC				*e*SKP		23 39 09.5	
OKC				AMS	AMS	00 26 40.0	
comp=Z,700nm,23.9s							
FINES	**FINESS Array B**	**137.40**	**28**	PKP	PKPdf	23 35 28.2	+0.5
comp=Z,0.7nm,0.6s,baz=318,slow=1.9,SNR=7.4							
FINES				PP	PP	23 38 10.2	-3.2
comp=Z,3.9nm,1.2s,baz=280,slow=4.1,SNR=4.5							
VYHS	**Vyhne**	**137.93**	**48**	*e*PKP	PKPdf	23 35 28.9	-0.3
VYHS				*e*		23 35 53.7	
VYHS				*e*		23 38 35.6	
VYHS	**Vyhne**	**137.93**	**48**	*e*PKP	PKPdf	23 35 28.9	-0.3
VYHS				*e*		23 35 53.7	
VYHS				*e*		23 38 35.6	
KMBO	**Kilima Mbogo**	**138.31**	**130**	PFAKE		23 35 40.0	+9.0
KMBO				LR	LR		
comp=Z,987nm,19.0s,MS5.6							
PSZ	**Piszkesteto**	**138.72**	**49**	PFAKE		23 35 40.0	+9.3
PSZ				LR	LR		
comp=Z,720nm,19.0s,MS5.4							
BJT	**Baijiatuau**	**138.95**	**299**	PFAKE		23 35 40.0	+8.7
BJT				LR	LR		
comp=Z,1μm,20.0s,MS5.6							
VSU	**Vasula**	**139.16**	**32**	*i* PKIKP	PKPdf	23 35 36.2	+5.1
VSU				MLR	MLR		
comp=Z,912nm,18.0s,MS5.6							
TIR	**Tirane**	**139.40**	**59**	PFAKE		23 35 40.0	+7.9
TIR				LR	LR		
comp=Z,852nm,21.0s,MS5.5							
KOLS	**Kolonicke sedl**	**140.07**	**47**	*e*PKP	PKPdf	23 35 46.5	+13
KWP	**Kalwaria Pacla**	**140.18**	**46**	PFAKE		23 35 50.0	+17
KWP				LR	LR		
comp=Z,888nm,21.0s,MS5.5							
BZS	**Buzias**	**140.26**	**52**	⇓PKIKP	PKPdf	23 35 33.6	+0.1
BZS	**Buzias**	**140.26**	**52**	⇓*i*P	PKPdf	23 35 33.6	+0.1
QIZ	**Qiongzhong**	**140.44**	**265**	PFAKE		23 35 50.0	+15
QIZ				LR	LR		
comp=Z,544nm,21.0s,MS5.3							
KULM	**Kulim**	**140.99**	**239**	PFAKE		23 35 50.0	+14
KULM				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
BMR	**Baia Mare**	**141.15**	**49**	⇑PKIKP	PKPdf	23 35 34.8	-0.3
BMR	**Baia Mare**	**141.15**	**49**	⇑*i*P	PKPdf	23 35 34.8	-0.3
BURAR	**Bucovina Array**	**142.29**	**48**	⇑PKIKP	PKPdf	23 35 40.2	+3.1
BURAR	**Bucovina Array**	**142.29**	**48**	⇑*i*P	PKPdf	23 35 40.2	+3.1
PLD	**Plovdiv**	**142.95**	**57**	P	PKPdf	23 35 39.0	+0.5
MLR	**Muntele Rosu**	**143.27**	**52**	⇑PKIKP	PKPdf	23 35 35.0	-3.9
MLR	**Muntele Rosu**	**143.27**	**52**	⇑*i*P	PKPdf	23 35 35.0	-3.9
KDZ	**Kurdzhali**	**143.53**	**58**	*i* P	PKPdf	23 35 36.8	-2.7
DIM	**Dimitrovgrad**	**143.57**	**57**	P	PKPdf	23 35 38.0	-1.6
DGAR	**Diego Garcia**	**143.66**	**188**	PFAKE		23 35 50.0	+9.3
DGAR				LR	LR		
comp=Z,2μm,22.0s,MS5.8							
SZH	**Strazhica**	**143.68**	**55**	*i* P	PKPdf	23 35 38.1	-1.6
VRI	**Vrincioaia**	**143.72**	**51**	⇑PKIKP	PKPdf	23 35 39.0	-0.7
VRI	**Vrincioaia**	**143.72**	**51**	⇑*i*P	PKPdf	23 35 39.0	-0.7
ENH	**Enshi**	**143.77**	**283**	PFAKE		23 35 50.0	+10
ENH				LR	LR		
comp=Z,750nm,20.0s,MS5.5							
AKASG	**Malin Array Be**	**143.82**	**42**	PKhKP		23 35 35.8	
comp=Z,6.5nm,1.1s,baz=281,slow=4.4,SNR=16							
AKBB	**Malin Array Si**	**143.82**	**42**	*e*PKIKP	PKPdf	23 35 36.6	-3.1
APE	**Apeiranthos**	**143.91**	**66**	⇓PKHKP	PKPdf	23 35 36.3	-4.0
APE	**Apeiranthos**	**143.91**	**66**	⇓*i*P	PKPdf	23 35 36.3	-4.0
ULN	**Ulaanbaatar**	**144.25**	**313**	*e*PKIKP	PKPdf	23 35 38.3	-2.3
IRK	**Irkutsk**	**144.26**	**321**	*e*PKIKP	PKPdf	23 35 39.7	-0.7
IRK				pmax	pmax		
comp=Z,73nm,2.2s							
JMB	**Yambol**	**144.28**	**56**	*i* P	PKPdf	23 35 39.1	-1.7
LEOM	**Leova**	**144.59**	**49**	⇑PKIKP	PKPdf	23 35 40.7	-0.5
LEOM	**Leova**	**144.59**	**49**	⇑*i*P	PKPdf	23 35 40.7	-0.5
XAN	**Xi'an**	**144.62**	**289**	PKP	PKPdf	23 35 39.3	-2.4
MSEY	**Mahe Island**	**144.66**	**159**	PFAKE		23 35 50.0	+7.6
MSEY				LR	LR		
comp=Z,1μm,22.0s,MS5.6							
SONM	**Songino Array**	**144.69**	**313**	PKP	PKPdf	23 35 39.6	-1.7
comp=Z,15nm,1.0s,baz=92,slow=1.8,SNR=47							
PRD	**Provadia**	**144.75**	**55**	*i* P	PKPdf	23 35 40.3	-1.3
KIS	**Kishinev**	**144.82**	**48**	M	PKPdf	23 35 40.0	-1.6
comp=Z,200nm,2.0s							
KIS	**Kishinev**	**144.82**	**48**	⇑*i*PKIKP	PKPdf	23 35 39.0	-2.6
KIS				pmax	pmax		
comp=Z,200nm,2.0s							
CFR	**Carcaliu**	**144.85**	**51**	⇓PKIKP	PKPdf	23 35 41.9	+0.2
CFR	**Carcaliu**	**144.85**	**51**	⇓*i*P	PKPdf	23 35 41.9	+0.2
TLY	**Talaya**	**144.86**	**321**	*i* PKIKP	PKPdf	23 35 39.9	-1.6
TLY				pmax	pmax		
comp=Z,46nm,1.2s							
TLY	**Talaya**	**144.86**	**321**	*e*PKPdf	PKPdf	23 35 40.9	-0.7
TLY				LR	LR		
comp=Z,2μm,21.0s,MS5.9							
WNDE	**Wendo Genet**	**145.08**	**123**	*e*P	PKPbc	23 35 44.9	+2.4
WNDE				S		23 39 56.1	
TIRR	**Tirgusor**	**145.21**	**53**	*e*PKIKP	PKPdf	23 35 42.6	+0.3
TIRR	**Tirgusor**	**145.21**	**53**	⇓*i*P	PKPbc	23 35 42.4	+0.4
PSN	**Preselentsi**	**145.22**	**54**	*i* P	PKPbc	23 35 41.9	-0.2
KKTK	**Khon Kaen**	**145.40**	**257**	P	PKPbc	23 35 43.5	+0.1
GYA	**Guiyang**	**145.51**	**275**	*i* PKPbc	PKPbc	23 35 43.5	0.0
GYA				PKPab	PKPab	23 35 50.3	+6.6
GYA				PP	PP	23 39 11.0	+6.8
GYA				PKS		23 39 20.0	
GYA				SKKS	SKKSac	23 45 59.0	+2.5
GYA				SS	SS	23 58 02.5	+5.1
GYA				AMB	AMB		
comp=Z,180nm,8.4s							
GYA				LR	LR		
comp=N,780nm,21.4s,MS5.5							
GYA				LR	LR		
comp=E,540nm,22.8s,MS5.5							
GYA				LR	LR		
comp=Z,690nm,21.6s,MS5.4							
OBN	**Obninsk**	**145.52**	**32**	*c i* PKIKP	PKPdf	23 35 42.1	-0.4
OBN				*i*		23 35 42.1	
OBN				pmax	pmax		
comp=Z,260nm,2.5s							
OBN				pmax	pmax		
comp=Z,51nm,1.4s							
OBN				MLR	MLR		
comp=Z,800nm,18.0s,MS5.5							
OBN	**Obninsk**	**145.52**	**32**	*e*PKPbc	PKPbc	23 35 43.0	+0.3
OBN				LR	LR		
comp=Z,996nm,21.0s,MS5.6							
MOS	**Moscow**	**145.61**	**30**	*e*PKHKP		23 35 39.0	
MOS				pmax	pmax		
comp=Z,59nm,0.9s							
MOS				pmax	pmax		
comp=Z,500nm,2.5s							
ZAK	**Zakamensk**	**145.64**	**319**	⇑*i*PKP2	PKPab	23 35 42.3	-1.2
ZAK				pmax	pmax		
comp=Z,47nm,1.4s							
MOY	**Mondy**	**146.33**	**322**	*e*PKP2	PKPab	23 35 46.1	+0.1
MOY				pmax	pmax		
comp=Z,161nm,2.8s							
NST	**Nakhon Sawan**	**147.36**	**253**	P	PKPdf	23 35 47.5	+0.7
ISP	**Isparta**	**147.85**	**64**	PFAKE		23 36 00.0	+13
ISP				LR	LR		
comp=Z,567nm,20.0s,MS5.3							
SOKR	**Solikamsk**	**148.39**	**11**	*d i* PKP2	PKPab	23 35 50.8	-3.1
SOKR				pmax	pmax		
comp=Z,60nm,2.3s							
DESE	**Dese**	**148.40**	**118**	*e*P	PKPbc	23 35 53.5	+1.4
KMI	**Kunming**	**148.62**	**272**	PKPbc	PKPbc	23 35 51.3	-1.1
KMI				pPKP	pPKPdf	23 35 54.5	+2.4
KMI				sPKP		23 35 56.3	
KMI				PKPab	PKPab	23 36 01.5	+5.5
KMI				PP	PP	23 39 28.5	+5.9
KMI				SKS	SKSdf	23 42 56.5	-0.8
KMI				SKKS	SKKSac	23 46 16.0	+2.0
KMI				SS	SS	23 58 38.0	+5.3
KMI				AMB	AMB		
comp=Z,260nm,6.3s							
KMI				LR	LR		
comp=N,490nm,18.8s,MS5.6							
KMI				LR	LR		
comp=E,860nm,21.6s,MS5.6							
KMI				LR	LR		
comp=Z,730nm,25.4s,MS5.4							
CD2	**Chengdu**	**148.75**	**283**	PKPbc	PKPbc	23 35 52.0	-0.6
CD2				PKPab	PKPab	23 36 02.5	+6.2
CD2				PKS		23 39 25.5	
CD2				PP	PP	23 39 31.0	+7.8
CD2				SKS	SKSdf	23 42 58.5	+1.3
CD2				SKKS	SKKSac	23 46 20.0	+5.5
CD2				AMB	AMB		
comp=Z,330nm,8.3s							
CD2				LR	LR		
comp=N,650nm,17.8s							
CD2				LR	LR		
comp=Z,650nm,16.7s,MS5.5							
LZH	**Lanzhou**	**148.79**	**293**	*e*PKPbc	PKPbc	23 35 48.0	-4.5
LZH				pPKP	pPKPdf	23 35 58.5	+6.4
LZH				PP	PP	23 39 30.0	+6.7
LZH				SKS	SKSdf	23 42 52.0	-5.0
LZH				AMB	AMB		
comp=Z,510nm,7.6s							
LZH				LR	LR		
comp=E,1μm,18.1s							
LZH				LR	LR		
comp=Z,2μm,19.3s,MS5.9							
VOR	**Voronezh**	**148.80**	**35**	*e*PKIKP	PKPdf	23 35 48.0	-0.1
VOR				pmax	pmax		
comp=Z,240nm,2.4s							
SIM	**Simferopol'**	**148.97**	**50**	*i* PKP2	PKPbc	23 35 53.7	+1.0
SIM				pmax	pmax		
comp=Z,23nm,1.2s							
VSR	**Storozhevoye**	**149.08**	**36**	*e*PKP2	PKPbc	23 35 52.0	-0.7
VSR				pmax	pmax		
comp=Z,20nm,1.1s							
VSR				pmax	pmax		
comp=N,8.0nm,1.2s							
VSR				pmax	pmax		
comp=E,7.0nm,0.8s							
VORD	**Divnogorie**	**149.29**	**36**	*e*PKP2	PKPbc	23 35 52.2	-1.0
VORD				pmax	pmax		
comp=Z,20nm,1.1s							
VORD				pmax	pmax		
comp=N,7.0nm,0.6s							
VORD				pmax	pmax		
comp=E,6.0nm,0.4s							
CM31	**Chiang Mai Arr**	**149.65**	**257**	*e*PKPbc	PKPbc	23 35 55.9	+0.7
CM31				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
CMAR	**Chiang Mai Arr**	**149.65**	**257**	PKPbc	PKPbc	23 35 55.3	+0.2
comp=Z,7.0nm,1.0s,baz=164,slow=1.0,SNR=46							
CHG	**Chiang Mai**	**149.81**	**258**	⇑P	PKPbc	23 35 54.9	-0.6
comp=Z,30nm,1.7s							
CHTO	**Chiang Mai**	**149.81**	**258**	PFAKE		23 36 00.0	+9.3
CHTO				LR	LR		
comp=Z,1μm,21.0s,MS5.6							
BR131	**Keskin Array S**	**150.00**	**60**	*e*PKPbc	PKPbc	23 35 55.6	+0.2
BR131				LR	LR		
comp=Z,447nm,19.0s,MS5.3							
BRTR	**Keskin Array B**	**150.00**	**60**	PKPbc	PKPbc	23 35 55.2	-0.2
comp=Z,5.0nm,1.0s,baz=212,slow=2.1,SNR=26							
BRTR				PP	PP	23 39 28.9	-1.2
comp=Z,2.3nm,1.2s,baz=270,slow=4.9,SNR=4.2							
CSS	**Prodhromos**	**150.29**	**69**	PFAKE		23 36 00.0	+8.9
CSS				LR	LR		
comp=Z,742nm,21.0s,MS5.5							
VRHR	**Novokhopersk**	**150.39**	**34**	*e*PKIKP	PKPdf	23 35 53.7	+3.0
VRHR				pmax	pmax		
comp=Z,10.0nm,0.6s							
VRHR				pmax	pmax		
comp=N,2.0nm,0.4s							
VRHR				pmax	pmax		
comp=E,9.0nm,0.7s							
GTA	**Gaotai**	**151.54**	**300**	PKPbc	PKPbc	23 35 59.3	+0.3
GTA				PKS		23 39 32.3	
GTA				PP	PP	23 39 46.5	+7.6
GTA				SKS	SKSdf	23 43 05.5	+5.1
GTA				SKKS	SKKSac	23 46 34.3	+4.8
GTA				SS	SS	23 59 08.5	+4.2
GTA				AMB	AMB		
comp=Z,120nm,6.5s							
GTA				LR	LR		
comp=N,330nm,22.9s,MS5.6							
GTA				LR	LR		
comp=E,930nm,22.0s,MS5.6							
GTA				LR	LR		
comp=Z,1μm,21.4s,MS5.7							
SVE	**Sverdlovsk**	**151.59**	**8**	*i* PKIKP	PKPdf	23 35 55.7	+3.4
SVE				*e*SS	SS	23 59 03.1	+0.9
SVE				pmax	pmax		
comp=Z,50nm,1.6s							
ARU	**Arti**	**151.67**	**11**	*i* PKIKP	PKPdf	23 35 52.7	+0.2
ARU	**Arti**	**151.67**	**11**	*e*PKPbc	PKPbc	23 35 57.0	-1.7
ARU				LR	LR		
comp=Z,1μm,22.0s,MS5.6							
ZAA0	**Zalesovo Array**	**151.97**	**338**	*e*PKPbc	PKPbc	23 35 59.5	0.0
ZALV	**Zalesovo Beam**	**151.97**	**338**	PKP	PKPdf	23 35 52.2	-0.8
comp=Z,0.4nm,0.4s,baz=8.7,slow=2.0,SNR=5.9							
ZALV				PKPbc	PKPbc	23 35 59.6	+0.1
comp=Z,5.2nm,0.7s,baz=29,slow=2.9,SNR=19							
ZALV	**Zalesovo Beam**	**151.97**	**338**	PKP	PKPdf	23 35 52.2	-0.8
ZALV				PKPbc	PKPbc	23 35 59.6	+0.1
MMAI	**Mount Meron Ar**	**152.05**	**73**	PKP	PKPdf	23 35 53.5	-0.3
comp=Z,3.0nm,1.0s,baz=253,slow=8.9,SNR=5.0							
MMAI				PKPbc	PKPbc	23 36 00.1	-0.3
comp=Z,7.4nm,1.1s,baz=266,slow=5.8,SNR=7.0							
SOC	**Sochi**	**153.21**	**49**	*i* PKIKP	PKPbc	23 36 04.

comp=Z,1.6nm,1.1s,baz=48,slow=2.1,SNR=6.7
MKAR PKPab PKPab 23 36 37.5 -0.5
comp=Z,1.0nm,0.9s,baz=46,slow=6.8,SNR=3.9
ABKAR **Akbulak array** 158.77 14 *e*PKPdf PKPdf 23 36 03.1 +0.8
LSA Lhasa 159.53 278 PFAKE 23 36 20.0 +16
LSA LR LR
comp=Z,770nm,20.0s,MS5.5
TKM2 Tokmak 2 164.58 338 PFAKE 23 36 20.0 +11
TKM2 LR LR
comp=Z,2μm,22.0s
AAK Ala-Archa 165.19 340 PFAKE 23 36 20.0 +11
AAK LR LR
comp=Z,1μm,20.0s
EKS2 Erkin-Say 165.36 342 *e*PKPdf PKPdf 23 36 07.5 -1.8
EKS2 LR LR
comp=Z,2μm,21.0s
UCH Uchtor 165.55 339 PFAKE 23 36 20.0 +11
UCH LR LR
comp=Z,2μm,21.0s
AML Almayashu 165.88 341 PFAKE 23 36 20.0 +10
AML LR LR
comp=Z,2μm,22.0s
KSH Kashi 167.35 329 *e*PKP PKPdf 23 36 12.8 +1.9
KSH *e*PKS 23 39 43.8
KSH *e*SKS SKSdf 23 43 10.5 -4.3
KSH AMB AMB
comp=Z,85nm,4.7s
KSH LR LR
comp=N,130nm,6.3s
KSH LR LR
comp=E,140nm,6.6s
KSH LR LR
comp=Z,230nm,6.9s
DDI Dehra Dun 170.86 282 *ex* PKPdf 23 36 15.5 +2.1
NIL Nilore 173.25 317 PFAKE 23 36 20.0 +5.6
NIL LR LR
comp=Z,99nm,21.0s

IDC ***31*** *23:16:16.0±1.0,31°.17N×103°.68E,h0km,mb3.9/8, mb1 4.0/9,mb1mx3.7/25,mbtmp3.9/9,ML3.6/1,MS3.0/3, Ms1 3.0/3,ms1mx2.5/35,Error ellipse: s-maj=37.1km s-min=17.9km az=55.0*
ISCJB ***31*** *23:16:18.5±0.8,31°.20N±0°.05×103°.76E±0°.05,h27km±7km, mb3.9/8,MS2.8/2,Error ellipse: s-maj=9.0km s-min=6.6km az=141.5*
NEIC ***31*** *23:16:18.1±0.5,31°.26N×103°.75E,h10km,mb4.3/2,Error ellipse: s-maj=9.3km s-min=8.0km az=171.0*
BJI ***31*** *23:16:19.2,31°.21N×103°.88E,h20km,mB4.8/2,mb4.4/6, ML4.0/17,Ms3.9/6,Ms7 3.8/6*
ISC 31 23:16:18.9±0.7,31°.23N±0°.03×103°.74E±0°.05,h14km±5km, n28,σ0°85/33,mb3.9/8,MS2.8/2,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.32**	**177**	Pg	**Pg**	**23 16 24.8**	**-0.7**
CD2				Sg	**Sg**	**23 16 30.3**	**+0.3**
CD2				smax			
comp=N,21μm,0.8s							
LZH	**Lanzhou**	**4.84**	**1**	*e*Pg	**Pg**	**23 17 49.5**	**-2.1**
LZH				Sg	**Sg**	**23 18 55.5**	**+1.2**
LZH				smax			
comp=N,170nm,0.9s							
LZH				smax			
comp=E,120nm,0.7s							
LZH				LR	LR		
comp=N,1μm,5.5s							
LZH				LR	LR		
comp=Z,2μm,8.3s							
ENH	**Enshi**	**5.04**	**99**	*e*Pn	**Pn**	**23 17 34.7**	**+0.6**
comp=Z,63nm,0.5s							
XAN	**Xi'an**	**5.19**	**56**	Pn	**Pn**	**23 17 36.0**	**-0.1**
XAN				Sn	**Sn**	**23 18 35.5**	**-0.3**
XAN				Sg	**Sg**	**23 18 58.5**	**-7.0**
XAN				smax			
comp=N,220nm,0.8s							
XAN				smax			
comp=E,97nm,0.9s							
XAN				LR	LR		
comp=Z,170nm,8.3s							
GYA	**Guiyang**	**5.41**	**151**	Pn	**Pn**	**23 17 42.5**	**+3.4**
GYA				smax			
comp=N,250nm,0.9s							
GYA				smax			
comp=E,220nm,1.0s							
KMI	**Kunming**	**6.15**	**188**	Pn	**Pn**	**23 17 49.5**	**+0.2**
KMI				Sn	**Sn**	**23 18 59.0**	**-0.5**
KMI				Sg	**Sg**	**23 19 31.5**	**-4.8**
KMI				smax			
comp=N,55nm,1.9s							
KMI				smax			
comp=E,55nm,1.5s							
KMI				LR	LR		
comp=N,530nm,7.9s							
KMI				LR	LR		
comp=E,680nm,6.4s							
GTA	**Gaotai**	**8.76**	**340**	*e*P	Px	23 19 10.0	
GTA				pP		23 19 14.0	
GTA				sP		23 19 17.3	
GTA				pmax	pmax		
comp=Z,3.0nm,0.9s							
WHN	**Wuhan**	**9.15**	**92**	*e*P	**Pn**	**23 18 34.0**	**+3.6**
WHN				S	**Sn**	**23 20 05.8**	**-7.3**
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**23 19 29.6**	**+0.3**
comp=Z,0.3nm,0.3s,baz=14,slow=11,SNR=3.2							
GUN	**Gumba**	**15.89**	**262**	*e*P	**Pn**	**23 20 03.7**	**+1.6**
PKI	**Pulchoki**	**16.38**	**262**	*e*P	**Pn**	**23 20 08.6**	**+0.1**
comp=Z,23nm,0.9s							
PKIN	**Phulchoki**	**16.39**	**262**	*e*P	**Pn**	**23 20 08.1**	**-0.5**
KKN	**Kakani**	**16.43**	**263**	*e*P	**Pn**	**23 20 09.9**	**+0.9**
DMN	**Daman**	**16.63**	**262**	*e*P	**Pn**	**23 20 11.3**	**-0.3**
comp=Z,29nm,0.9s							
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**23 20 12.8**	**+0.4**
comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=11							
SONM				LR	LR	23 27 25.7	
comp=Z,84nm,19.9s,baz=188,slow=40							
KSRS	**Korea Array**	**20.88**	**66**	P	**P**	**23 21 00.3**	**-0.3**
comp=Z,5.3nm,0.7s,baz=261,slow=10,SNR=27							
KSRS				LR	LR	23 30 50.3	
comp=Z,17nm,18.6s,MS2.4,baz=290,slow=42							
CN2	**Changchun**	**21.23**	**48**	*e*P	**P**	**23 21 05.5**	**+1.2**
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s,mb4.2							
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**23 21 19.7**	**0.0**
comp=Z,5.2nm,0.9s,mb3.9,baz=124,slow=12,SNR=20							
MKAR	**Makanchi Array**	**22.68**	**319**	P	**P**	**23 21 19.8**	**0.0**
AAK	**Ala-Archa**	**25.87**	**304**	LR	LR	23 33 57.6	
comp=Z,55nm,21.1s,MS3.1,baz=211,slow=41							
ZALV	**Zalesovo Beam**	**26.47**	**335**	P	**P**	**23 21 54.9**	**-0.4**
comp=Z,0.6nm,0.4s,mb3.4,baz=134,slow=11,SNR=5.8							
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**23 21 59.2**	**-0.5**
comp=Z,2.4nm,0.8s,mb3.8,baz=128,slow=9.5,SNR=8.7							
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**23 21 59.2**	**-0.5**
FINES	**FINESS Array B**	**57.28**	**326**	P	**P**	**23 26 04.7**	**-1.0**
comp=Z,1.0nm,0.8s,mb3.9,baz=98,slow=7.2,SNR=4.3							
TRO	**Tromso**	**59.31**	**336**	*i* P	**P**	**23 26 13.0**	**-6.8**
ASAR	**Alice Springs**	**61.76**	**148**	P	**P**	**23 26 36.5**	**-0.5**
comp=Z,1.6nm,0.8s,mb4.2,baz=338,slow=6.9,SNR=15							
STKA	**Stephens Creek**	**72.29**	**147**	P	**P**	**23 27 43.1**	**-0.7**
comp=Z,2.4nm,0.9s,mb4.1,baz=3.3,slow=6.5,SNR=4.1							
YKA	**Yellowknife Ar**	**81.66**	**17**	P	**P**	**23 28 36.0**	**-0.2**
comp=Z,0.5nm,0.6s,mb3.6,baz=328,slow=5.1,SNR=3.4							

ISCJB ***31*** *23:33:26.7±0.8,23°.89S±0°.04×66°.60W±0°.06,h196km±7km, mb4.4/51,Error ellipse: s-maj=10.1km s-min=6.1km az=151.5*
NEIC ***31*** *23:33:27.4±0.7,23°.92S×66°.59W,h188km±7km,mb4.5/40, Error ellipse: s-maj=9.0km s-min=5.4km az=63.0*
BJI ***31*** *23:33:27.3,24°.46S×66°.26W,h197km,mB4.8/2*
IDC ***31*** *23:33:27.9±1.3,23°.87S×66°.62W,h194km±11km,mb4.0/13, mb1 4.1/18,mb1mx4.1/21,mbtmp4.0/18,MS5.2/3, Ms1 5.2/3,ms1mx4.1/20,Error ellipse: s-maj=16.4km s-min=10.1km az=61.0*
ISC 31 23:33:26.6±0.8,23°.90S±0°.04×66°.52W±0°.07,h181km±7km, n376,σ0°64/362,mb4.5/51,139C-114D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**6.32**	**215**	*e*Pn	**Pn**	**23 34 57.3**	**-0.5**
LCO				*e*Sn	**Sn**	**23 35 57.7**	**-12**
LPAZ	**La Paz**	**7.72**	**348**	P	**Pn**	**23 35 18.6**	**+2.3**
9.0nm,0.3s,baz=161,slow=7.2,SNR=179							
LPAZ				S	**Sn**	**23 36 43.4**	**+0.4**
0.9nm,0.3s,baz=197,slow=19,SNR=3.0							
LPAZ	**La Paz**	**7.72**	**348**	*e*Pn	**Pn**	**23 35 18.4**	**+2.1**
LPAZ				*e*Sn	**Sn**	**23 36 42.5**	**-0.5**
CFAA	**Coronel Fontan**	**7.83**	**191**	P	**Pn**	**23 35 17.6**	**+0.1**
1.8nm,0.3s,baz=23,slow=13,SNR=138							
CFAA				S	**Sn**	**23 36 39.8**	**-5.4**
3.2nm,0.3s,baz=116,slow=23,SNR=15							
CPUP	**Villa Florida**	**8.67**	**108**	P	**Pn**	**23 35 32.3**	**+3.6**
2.2nm,0.3s,baz=271,slow=11,SNR=64							
CPUP	**Villa Florida**	**8.67**	**108**	*e*Pn	**Pn**	**23 35 32.2**	**+3.6**
TRQA	**Tornquist**	**14.63**	**166**	*e*Pn	**Pn**	**23 36 44.9**	**-0.1**
TRQA				*e*S	**Sn**	**23 39 27.1**	**-1.1**
NNA	**Nana**	**15.38**	**319**	P	**Pn**	**23 36 55.3**	**+0.9**
2.3nm,0.3s,baz=161,slow=11,SNR=16							
NNA	**Nana**	**15.38**	**319**	*e*Pn	**Pn**	**23 36 54.9**	**+0.5**
44nm,0.8s							
PLCA	**Paso Flores**	**17.12**	**190**	P	**Pn**	**23 37 14.6**	**-0.6**
0.6nm,0.3s,baz=15,slow=14,SNR=15							
PLCA	**Paso Flores**	**17.12**	**190**	*e*Pn	**Pn**	**23 37 15.1**	**-0.1**
8.8nm,0.6s							
ATAH	**Atahualpa**	**20.31**	**324**	P	**P**	**23 37 48.3**	**-0.4**
14nm,0.8s,baz=168,slow=4.9,SNR=8.9							
CAM4	**Nova Friburgo**	**22.08**	**91**	⇓*i*P	**P**	**23 38 08.8**	**+1.5**
CAM4				*i*		23 38 09.1	
CAM4				*i*		23 38 12.3	
CAM4				*i*		23 38 19.7	
OTAV	**Otavalo**	**26.64**	**333**	*e*P	**P**	**23 38 49.4**	**+0.7**
5.6nm,0.8s,mb4.2							
USHA	**Ushuaia**	**30.93**	**182**	P	**P**	**23 39 26.1**	**-0.1**
7.4nm,0.8s,mb4.5,baz=348,slow=12,SNR=4.2							
SDV	**Santo Domingo**	**32.83**	**352**	*e*P	**P**	**23 39 41.9**	**-1.3**
9.5nm,1.0s,mb4.5							
JTS	**JuntasAbangare**	**38.47**	**330**	*e*P	**P**	**23 40 32.5**	**+1.3**
18nm,0.9s,mb4.7							
FDF	**Fort de France**	**38.75**	**8**	*e*P	**P**	**23 40 32.7**	**-0.9**
23nm,0.5s,mb5.1							
CELP	**Cerrillos**	**41.72**	**360**	*e*P	**P**	**23 40 56.9**	**-1.0**
TGUH	**Tegucigalpa,Un**	**42.84**	**330**	*e*P	**P**	**23 41 07.0**	**0.0**
18nm,0.6s,mb4.9							
TEIG	**Tepich**	**48.72**	**332**	*e*P	**P**	**23 41 52.1**	**-0.8**
BRAL	**Brewton**	**58.04**	**339**	*e*P	**P**	**23 43 00.9**	**+0.2**
52nm,0.9s,mb5.4							
NHSC	**New Hope**	**58.17**	**347**	*e*P	**P**	**23 43 02.0**	**+0.5**
83nm,1.3s,mb5.4							
LRAL	**Lakeview Retre**	**59.89**	**340**	*e*P	**P**	**23 43 11.8**	**-1.6**
13nm,1.1s,mb4.7							
CPCT	**Cooper Cave**	**61.44**	**343**	*e*P	**P**	**23 43 22.9**	**-0.9**
PLAL	**Pickwick Lake**	**62.03**	**340**	*e*P	**P**	**23 43 26.0**	**-1.7**
4.4nm,0.6s,mb4.5							
JCT	**Junction City**	**62.79**	**328**	*e*P	**P**	**23 43 32.5**	**-0.4**
14nm,0.8s,mb4.8							
WVT	**Waverly**	**63.01**	**341**	*e*P	**P**	**23 43 32.7**	**-1.6**
18nm,0.8s,mb4.9							
MIAR	**Mount Ida**	**63.55**	**335**	*e*P	**P**	**23 43 36.7**	**-1.1**
15nm,1.1s,mb4.8							
628A	**Black Gap, Mar**	**63.56**	**325**	⇓P	**P**	**23 43 37.6**	**-0.3**
baz=64							
627A	**Terlingua Ranc**	**63.80**	**324**	⇓P	**P**	**23 43 39.1**	**-0.4**
baz=64,SNR=14							
TXAR	**Lajitas Array**	**63.86**	**324**	P	**P**	**23 43 39.2**	**-0.7**
2.0nm,0.7s,mb4.0,baz=150,slow=8.5,SNR=33							
528A	**Cox Ranch, San**	**64.04**	**325**	⇑P	**P**	**23 43 40.6**	**-0.5**
baz=64,SNR=5.6							
626A	**Big Bend Ranch**	**64.28**	**324**	P	**P**	**23 43 42.9**	**+0.2**
baz=64,SNR=38							
428A	**Kincaid Ranch,**	**64.44**	**326**	⇑P	**P**	**23 43 43.2**	**-0.4**
baz=65							
527A	**Woodward Ranch**	**64.47**	**325**	⇓P	**P**	**23 43 43.3**	**-0.5**
baz=65,SNR=11							
526A	**Mary Lane Ranc**	**64.65**	**324**	P	**P**	**23 43 45.2**	**+0.2**
baz=65,SNR=26							
427A	**Hayter Ranch,**	**64.91**	**325**	⇑P	**P**	**23 43 46.1**	**-0.6**
baz=65,SNR=8.6							
328A	**Wristen Ranch,**	**65.03**	**326**	⇓P	**P**	**23 43 46.9**	**-0.6**
baz=65,SNR=11							
426A	**McDonald Obser**	**65.10**	**325**	⇑P	**P**	**23 43 47.9**	**-0.1**
baz=65							
FVM	**French Village**	**65.53**	**339**	*e*P	**P**	**23 43 49.1**	**-1.4**
32nm,1.3s,mb5.0							
326A	**Caldwell Ranch**	**65.58**	**325**	P	**P**	**23 43 50.8**	**-0.2**
baz=66,SNR=7.7							
425A	**Indio Mountain**	**65.70**	**324**	⇓P	**P**	**23 43 51.3**	**-0.5**
baz=66,SNR=20							
227A	**Bennet, Jal**	**65.78**	**326**	⇑P	**P**	**23 43 52.4**	**+0.2**
baz=66							
CCM	**Cathedral Cave**	**65.86**	**339**	*e*P	**P**	**23 43 51.3**	**-1.3**
8.6nm,0.6s,mb4.8							
325A	**Bean Ranch, Si**	**66.15**	**324**	P	**P**	**23 43 54.3**	**-0.3**
baz=66,SNR=39							
226A	**Malaga, Loving**	**66.23**	**326**	⇑P	**P**	**23 43 55.2**	**0.0**
baz=66,SNR=6.6							
127A	**Arkansas Junct**	**66.34**	**326**	⇑P	**P**	**23 43 55.3**	**-0.5**
baz=67							
324A	**Moseley Ranch,**	**66.48**	**324**	⇓P	**P**	**23 43 55.6**	**-1.2**
baz=67,SNR=11							
GDL2	**Guadalupe Moun**	**66.48**	**325**	*e*P	**P**	**23 43 57.0**	**+0.2**
MNTX	**Cornudas Mount**	**66.62**	**324**	*e*P	**P**	**23 43 56.3**	**-1.4**
7.9nm,1.2s,mb4.4							
225A	**Deer Hill, Car**	**66.65**	**325**	⇑P	**P**	**23 43 57.5**	**-0.3**
baz=67,SNR=11							
126A	**Clayton Basin,**	**66.65**	**326**	⇑P	**P**	**23 43 57.5**	**-0.4**
baz=67,SNR=5.9							
Z27A	**Tatum**	**66.78**	**327**	⇓P	**P**	**23 43 57.5**	**-1.1**
baz=67,SNR=8.0							
LIC	**Lamto**	**66.98**	**72**	*e*P	**P**	**23 43 59.8**	**-0.6**
25nm,0.8s,mb5.1							
224A	**Corundas Mount**	**66.99**	**325**	⇑P	**P**	**23 43 59.0**	**-0.9**
baz=67,SNR=16							
125A	**Gardner Draw,**	**66.99**	**326**	⇓P	**P**	**23 43 58.9**	**-1.1**
baz=67							
MSTX	**Muleshoe**	**67.09**	**328**	⇓P	**P**	**23 43 59.6**	**-0.9**
baz=67,SNR=12							
Z26A	**Caprock**	**67.13**	**326**	⇑P	**P**	**23 44 00.0**	**-0.8**
baz=67,SNR=13							
TIC	**Toumodi**	**67.20**	**71**	*e*P	**P**	**23 44 01.2**	**-0.5**
35nm,1.2s,mb5.1							
Y27A	**Causey**	**67.21**	**327**	⇑P	**P**	**23 44 00.2**	**-1.1**
baz=68							
KIC	**Kosan Boka**	**67.30**	**72**	*e*P	**P**	**23 44 01.7**	**-0.6**
34nm,0.9s,mb5.2							
AMTX	**Amarillo**	**67.31**	**329**	*e*P	**P**	**23 44 01.4**	**-0.5**
DBIC	**Dimbokro**	**67.35**	**71**	P	**P**	**23 44 02.5**	**-0.2**
5.6nm,0.6s,mb4.6,baz=202,slow=9.3,SNR=14							
DBIC	**Dimbokro**	**67.35**	**71**	*e*P	**P**	**23 44 02.5**	**-0.2**
6.0nm,0.6s,mb4.6							
124A	**Stringfield Ra**	**67.44**	**325**	⇓P	**P**	**23 44 02.4**	**-0.4**
baz=68,SNR=13							
Z25A	**Roswell**	**67.51**	**326**	⇑P	**P**	**23 44 01.7**	**-1.6**
baz=68,SNR=7.5							
Y26A	**Elida**	**67.57**	**327**	⇓P	**P**	**23 44 03.5**	**-0.1**
baz=68							
Z24A	**Sheppen Canyo**	**67.89**	**325**	⇑P	**P**	**23 44 05.2**	**-0.3**
baz=68,SNR=11							
Y25A	**Mesa, Roswell**	**68.01**	**326**	⇑P	**P**	**23 44 05.4**	**-0.9**
baz=68,SNR=6.6							
X26A	**CR and CF Fran**	**68.06**	**327**	⇓P	**P**	**23 44 05.4**	**-1.2**
baz=68							
320A	**Kipp Ranch, An**	**68.08**	**322**	⇑P	**P**	**23 44 06.9**	**+0.1**
baz=68,SNR=6.0							
W27A	**Bowe Ranch, En**	**68.11**	**328**	⇑P	**P**	**23 44 05.7**	**-1.2**
baz=68							
122A	**Conniff Cattle**	**68.26**	**324**	⇑P	**P**	**23 44 08.4**	**+0.5**
baz=68							
Z23A	**Rita Site, Whi**	**68.29**	**325**	⇓P	**P**	**23 44 08.2**	**+0.2**
baz=68,SNR=7.4							
W26A	**Owens Ranch, T**	**68.47**	**328**	⇓P	**P**	**23 44 09.4**	**+0.2**
baz=69							
220A	**Playas Peak, P**	**68.50**	**322**	⇑P	**P**	**23 44 09.4**	**0.0**
baz=69,SNR=7.6							
319A	**Douglas**	**68.53**	**321**	⇓P	**P**	**23 44 10.1**	**+0.5**
baz=69							
121A	**Cookes Peak, D**	**68.56**	**323**	⇑P	**P**	**23 44 10.0**	**+0.2**
baz=69,SNR=9.3							
Z22A	**Elephant Butte**	**68.67**	**324**	⇑P	**P**	**23 44 11.3**	**+0.9**
baz=69							
Y23A	**Lovelace Mesa,**	**68.71**	**325**	⇑P	**P**	**23 44 10.0**	**-0.7**
baz=69							
W25A	**X Bar L Ranch,**	**68.92**	**327**	⇓P	**P**	**23 44 10.5**	**-1.4**
baz=69							
219A	**White Tail Can**	**68.98**	**322**	⇓P	**P**	**23 44 12.7**	**+0.3**
baz=69,SNR=8.2							
318A	**Bisbee**	**68.98**	**321**	⇓P	**P**	**23 44 12.6**	**+0.2**
baz=69,SNR=16							
120A	**U Bar Ranch, L**	**69.04**	**323**	⇓P	**P**	**23 44 13.1**	**+0.4**
baz=69,SNR=5.4							
V26A	**Tequesquite Ra**	**69.05**	**328**	⇑P	**P**	**23 44 11.8**	**-0.9**
baz=69							
Z21A	**St. Cloud Mine**	**69.09**	**324**	⇑P	**P**	**23 44 13.6**	**+0.6**
baz=69,SNR=9.0							
BNM	**Barren Site**	**69.18**	**325**	*e*P	**P**	**23 44 14.2**	**+0.6**
9.0nm,1.2s,mb4.4							
LPM	**Los Pinos Moun**	**69.31**	**325**	*e*P	**P**	**23 44 15.8**	**+1.5**
W24A	**Lazy 6 Ranch,**	**69.38**	**327**	⇑P	**P**	**23 44 14.4**	**-0.4**
baz=70,SNR=5.1							
218A	**Dragoon**	**69.41**	**321**	⇑P	**P**	**23 44 14.7**	**-0.3**
baz=70,SNR=7.4							
Z20A	**Nine Sixteen R**	**69.44**	**323**	⇑P	**P**	**23 44 15.5**	**+0.3**
baz=70,SNR=5.9							
V25A	**Rancho No Teng**	**69.49**	**328**	⇑P	**P**	**23 44 15.2**	**-0.2**
baz=70							
U26A	**Atchley Ranch,**	**69.51**	**329**	⇑P	**P**	**23 44 15.2**	**-0.4**
baz=70,SNR=8.4							
Y21A	**Point of Rocks**	**69.63**	**324**	⇑P	**P**	**23 44 16.4**	**+0.1**
baz=70,SNR=8.9							
CBKS	**Cedar Bluff**	**69.72**	**333**	*e*P	**P**	**23 44 18.1**	**+1.4**
ANMO	**Albuquerque**	**69.72**	**326**	*e*P	**P**	**23 44 17.2**	**+0.4**
5.0nm,0.9s,mb4.2							
W23A	**Werner Place,**	**69.72**	**326**	⇑P	**P**	**23 44 16.8**	**0.0**
baz=70							
U25A	**Circle Dot Ran**	**69.83**	**328**	⇓P	**P**	**23 44 17.5**	**0.0**
baz=70							
118A	**Homack Ranch,**	**69.86**	**322**	⇓P	**P**	**23 44 18.1**	**+0.3**
baz=70,SNR=7.3							
Y20A	**Horse Springs,**	**69.93**	**324**	⇓P	**P**	**23 44 18.1**	**0.0**
baz=70							
X21A	**Alamocita Cree**	**70.02**	**325**	⇑P	**P**	**23 44 19.2**	**+0.5**
baz=70,SNR=8.7							
117A	**Oracle**	**70.25**	**321**	⇑P	**P**	**23 44 20.5**	**+0.3**
baz=70,SNR=7.6							
216A	**Three Points,**	**70.25**	**320**	⇓P	**P**	**23 44 20.7**	**+0.6**
baz=70							
T25A	**Trinidad**	**70.43**	**329**	⇓P	**P**	**23 44 21.2**	**+0.1**
baz=71							
Y19A	**Nutrioso**	**70.44**	**323**	⇑P	**P**	**23 44 21.5**	**+0.2**
baz=71,SNR=10.0							
X20A	**Quemado**	**70.47**	**324**	⇑P	**P**	**23 44 21.8**	**+0.3**
baz=71							
U23A	**El Rito**	**70.66**	**327**	⇓P	**P**	**23 44 23.1**	**+0.6**
baz=71							
V22A	**San Miguel Ran**	**70.69**	**326**	⇓P	**P**	**23 44 23.0**	**+0.2**
baz=71							
Y18A	**Canyon Day Jun**	**70.74**	**323**	⇓P	**P**	**23 44 22.8**	**-0.2**
baz=71							
116A	**Eloy**	**70.80**	**321**	⇑P	**P**	**23 44 23.8**	**+0.3**
baz=71							
214A	**Organ Pipe Nat**	**71.01**	**319**	⇓P	**P**	**23 44 25.0**	**+0.2**
baz=71,SNR=5.5							
U22A	**Llaves**	**71.03**	**326**	⇑P	**P**	**23 44 25.2**	**+0.5**
baz=71							
Y17A	**Roosevelt**	**71.13**	**322**	P	**P**	**23 44 26.3**	**+0.9**
baz=71,SNR=6.0							
115A	**Sonoran Desert**	**71.20**	**320**	⇑P	**P**	**23 44 26.4**	**+0.5**
baz=71							
Z16A	**Peralta Trail,**	**71.20**	**321**	⇓P	**P**	**23 44 25.7**	**-0.2**
baz=71							
X18A	**Snowflake**	**71.25**	**323**	⇑P	**P**	**23 44 26.4**	**+0.2**
baz=72							
W19A	**Sanders**	**71.38**	**324**	⇓P	**P**	**23 44 27.2**	**+0.3**
baz=72							
V20A	**Brimhall**	**71.41**	**325**	⇑P	**P**	**23 44 27.2**	**+0.1**
baz=72							
SDCO	**Great Sand Dun**	**71.43**	**328**	*e*P	**P**	**23 44 27.8**	**+0.6**
U21A	**Nageezi**	**71.47**	**326**	⇓P	**P**	**23 44 28.0**	**+0.6**
baz=72							
T22A	**Edith**	**71.55**	**327**	⇓P	**P**	**23 44 28.1**	**+0.3**
baz=72							
X17A	**Forest Lakes**	**71.58**	**322**	⇑P	**P**	**23 44 28.6**	**+0.5**
baz=72							
Z15A	**Gila River Ind**	**71.58**	**321**	⇓P	**P**	**23 44 28.3**	**+0.1**
baz=72							
114A	**Black Gap (USA**	**71.62**	**320**	⇓P	**P**	**23 44 28.0**	**-0.4**
baz=72							
Y16A	**Circle Bar Ran**	**71.62**	**322**	⇓P	**P**	**23 44 28.1**	**-0.3**
baz=72							
X16A	**Lo Mia Camp, P**	**72.00**	**322**	⇑P	**P**	**23 44 30.3**	**-0.3**
baz=72							
Z13A	**Yuma Proving G**	**72.40**	**320**	⇑P	**P**	**23 44 32.4**	**-0.6**
baz=73							
T19A	**Beclabito**	**72.49**	**325**	⇑P	**P**	**23 44 34.0**	**+0.6**
baz=73,SNR=7.7							
S21A	**Coal Bank Pass**	**72.50**	**327**	⇓P	**P**	**23 44 33.8**	**+0.3**
baz=73							
X15A	**Humboldt**	**72.50**	**322**	⇓P	**P**	**23 44 33.6**	**+0.1**
baz=73,SNR=5.5							
MVCO	**Mesa Verde**	**72.51**	**326**	⇑P	**P**	**23 44 33.8**	**+0.2**
baz=73,SNR=5.2							
MVCO	**Mesa Verde**	**72.51**	**326**	*e*P	**P**	**23 44 34.2**	**+0.6**
4.3nm,0.8s,mb4.2							
V17A	**Tonalea, Kykot**	**72.53**	**323**	⇑P	**P**	**23 44 33.7**	**0.0**
baz=73,SNR=8.5							
Y14A	**Wickenburg**	**72.54**	**321**	⇑P	**P**	**23 44 33.7**	**-0.1**
baz=73							
W16A	**Flagstaff**	**72.54**	**323**	⇓P	**P**	**23 44 34.4**	**+0.6**
baz=73,SNR=8.5							
U18A	**Rough Rock, Ch**	**72.62**	**325**	⇑P	**P**	**23 44 34.8**	**+0.5**
baz=73,SNR=5.6							
ECSD	**EROS Data Cent**	**72.75**	**338**	*e*P	**P**	**23 44 33.9**	**-1.0**
WUAZ	**Wupatki**	**72.77**	**323**	⇓P	**P**	**23 44 35.3**	**+0.1**
baz=73							
WUAZ	**Wupatki**	**72.77**	**323**	*e*P	**P**	**23 44 36.1**	**+1.0**
X14A	**Yava**	**72.86**	**321**	⇑P	**P**	**23 44 36.3**	**+0.6**
baz=73							
Y13A	**Salome**	**72.93**	**320**	⇑P	**P**	**23 44 36.3**	**+0.2**
baz=73							
ISCO	**Idaho Springs**	**73.12**	**329**	*e*P	**P**	**23 44 37.7**	**+0.6**
3.7nm,1.0s,mb4.1				

baz=75
N20A Spence Gulch, 75.18 328 ⇊P **P 23 44 49.1 0.0**
baz=75
O19A Miners Draw (B 75.19 328 ⇑P **P 23 44 48.9 -0.1**
baz=75
P18A Preston Nutter 75.23 326 ⇑P **P 23 44 49.8 +0.5**
baz=76,SNR=8.1
T13A Saint George 75.26 322 ⇊P **P 23 44 50.3 +0.7**
baz=76
V11A Goodsprings 75.29 321 ⇊P **P 23 44 50.5 +0.8**
baz=76
TUQ Turquoise Moun 75.30 320 ⇑P **P 23 44 50.1 +0.3**
baz=76
CCUT Cedar City 75.34 323 *e*P **P 23 44 51.5 +1.4**
5.7nm,0.9s,mb4.2
RWWY Rawlins 75.36 330 *e*P **P 23 44 51.0 +1.1**
M21A Separation Pea 75.36 330 ⇊P **P 23 44 50.2 +0.2**
baz=76
P17A Butcher Ranch, 75.37 326 ⇑P **P 23 44 50.3 +0.2**
baz=76
MSU Marysvale 75.40 325 *e*P **P 23 44 51.1 +0.8**
ARUT Antelope Range 75.56 323 *e*P **P 23 44 52.9 +1.6**
3.6nm,0.8s,mb4.0
SHPR Sheep Range 75.60 321 *e*P **P 23 44 52.3 +0.8**
S13A Holt Ranch, En 75.64 323 ⇑P **P 23 44 52.6 +0.9**
baz=76,SNR=7.1
L21A Rawlins 75.64 330 ⇑P **P 23 44 51.7 +0.1**
baz=76,SNR=10.0
M20A Sweetwater, Wa 75.66 329 ⇊P **P 23 44 52.2 +0.5**
baz=76
N19A John Jarvie Ra 75.67 328 ⇊P **P 23 44 52.0 +0.2**
baz=76
GSC Goldstone 75.73 320 ⇊P **P 23 44 52.8 +0.5**
baz=76
GSC Goldstone 75.73 320 *e*P **P 23 44 53.3 +1.1**
O17A Robinson Place 75.91 327 ⇊P **P 23 44 54.1 +0.9**
baz=76,SNR=13
RSSD Black Hills 75.92 333 *e*P **P 23 44 53.4 +0.3**
6.5nm,0.9s,mb4.3
TOA0 Torodi Ar. Sit 76.12 69 *e*P **P 23 44 54.7 -0.2**
TORD Torodi Ar. Bea 76.12 69 P **P 23 44 54.8 -0.1**
6.9nm,0.6s,mb4.5,baz=260,slow=6.1,SNR=147
TORD LR LR 00 20 15.0
comp=Z,2μm,20.6s,baz=255,slow=37
R13A O'Grain Ranch, 76.13 323 ⇑P **P 23 44 55.4 +0.9**
baz=76
L20A Wamsutter 76.13 329 ⇑P **P 23 44 54.7 +0.3**
baz=76
T11A Corn Creek, Al 76.16 322 ⇊P **P 23 44 54.7 +0.1**
baz=76
Q14A Sevier Lake (B 76.34 324 ⇑P **P 23 44 56.5 +0.9**
baz=77,SNR=10.0
M18A Lyman 76.51 328 ⇊P **P 23 44 56.5 0.0**
baz=77
N17A Moffit Pass 76.52 327 ⇑P **P 23 44 56.9 +0.3**
baz=77
AGMN Agassiz Refuge 76.53 340 *e*P **P 23 44 55.6 -0.9**
3.4nm,0.7s,mb4.1
FURC Furnace Creek, 76.56 320 ⇊P **P 23 44 56.8 -0.1**
baz=77
JLU Jordanelle 76.58 326 *e*P **P 23 44 58.1 +1.2**
R12A Pony Springs, 76.58 323 ⇑P **P 23 44 57.1 +0.1**
baz=77
K20A Yellowstone Ra 76.64 330 ⇑P **P 23 44 56.9 -0.3**
baz=77,SNR=6.2
MPMC Manual Prospec 76.65 320 ⇊P **P 23 44 56.9 -0.5**
baz=77
P14A Drum Mountains 76.67 325 ⇊P **P 23 44 57.9 +0.5**
baz=77,SNR=9.0
L19A Farson 76.68 329 ⇑P **P 23 44 57.5 0.0**
baz=77,SNR=6.7
Q13A Wheeler Ranch, 76.71 324 ⇊P **P 23 44 58.0 +0.3**
baz=77,SNR=5.8
M17A Scullys Gap (B 76.84 327 ⇊P **P 23 44 58.0 -0.3**
baz=77
L18A Fontenelle, Gr 76.87 328 ⇊P **P 23 44 58.8 +0.2**
baz=77,SNR=8.0
DUG Dugway 76.97 325 ⇑P **P 23 44 59.2 +0.1**
baz=77
DUG Dugway 76.97 325 *e*P **P 23 45 00.0 +0.9**
K19A Absolon Red Bu 77.00 329 ⇑P **P 23 44 59.0 -0.2**
baz=77,SNR=5.5
P13A Bates Ranch, G 77.07 324 ⇊P **P 23 44 59.8 0.0**
baz=77
R11A Troy Canyon, C 77.14 322 ⇊P **P 23 45 00.1 0.0**
baz=77,SNR=9.7
Q12A Willow Creek R 77.21 323 ⇑P **P 23 45 00.7 +0.2**
baz=77
PKM Peak Mountain 77.28 317 ⇑P **P 23 45 01.2 +0.2**
baz=78
BW06 Boulder Array 77.29 329 ⇑P **P 23 44 59.9 -0.9**
baz=78
BW06 Boulder Array 77.29 329 *e*P **P 23 45 00.6 -0.2**
PDAR Pinedale Array 77.29 329 P **P 23 45 00.5 -0.4**
1.3nm,0.8s,mb3.6,baz=151,slow=6.8,SNR=10
HWUT Hardware Ranch 77.38 327 *e*P **P 23 45 01.9 +0.5**
4.0nm,0.7s,mb4.2
L17A Cokeville 77.41 328 ⇑P **P 23 45 01.5 0.0**
baz=78
S10A Tonopah Range, 77.41 322 ⇑P **P 23 45 01.8 +0.1**
baz=78,SNR=6.2
K18A Toltan Ranch, 77.42 329 ⇑P **P 23 45 01.2 -0.4**
baz=78
VES Vestal, Richgr 77.46 319 ⇊P **P 23 45 01.8 -0.2**
baz=78
R10A Warm Springs 77.50 322 ⇑P **P 23 45 02.8 +0.7**
baz=78
Q11A Duckwater 77.53 323 ⇑P **P 23 45 02.6 +0.3**
baz=78,SNR=8.8
SPUT South Promonto 77.61 326 *e*P **P 23 45 03.5 +0.8**
L16A Fish Haven 77.62 327 ⇊P **P 23 45 02.5 -0.2**
baz=78,SNR=6.6
N14A Grayback Hills 77.65 326 ⇊P **P 23 45 01.4 -1.5**
baz=78,SNR=6.2
M15A Larsen Ranch, 77.72 326 ⇑P **P 23 45 03.1 -0.2**
baz=78,SNR=8.0
J18A Kendall Valley 77.85 329 ⇑P **P 23 45 04.0 +0.1**
baz=78,SNR=16
L15A Malad City 78.09 327 ⇑P **P 23 45 05.3 0.0**
baz=78,SNR=7.5
I18A Diamond G Ranc 78.13 329 ⇊P **P 23 45 04.9 -0.5**
baz=78,SNR=9.7
M14A Sheep Mountain 78.21 326 ⇊P **P 23 45 05.6 -0.4**
baz=78,SNR=8.9
ULM Lac du Bonnet 78.27 341 P **P 23 45 04.9 -1.2**
2.6nm,0.4s,mb4.2,baz=132,slow=6.9,SNR=4.7
K16A Soda Springs 78.31 328 ⇑P **P 23 45 06.7 +0.2**
baz=79,SNR=9.2
SCHQ Schefferville 78.41 360 P **P 23 45 06.2 -0.6**
1.7nm,0.6s,mb3.9,baz=228,slow=7.3,SNR=6.4
TPAW Teton Pass 78.50 329 *e*P **P 23 45 07.4 -0.1**
3.8nm,1.0s,mb4.0
M13A Montello 78.53 325 ⇊P **P 23 45 06.6 -1.1**
baz=79
L14A Malta 78.54 326 ⇊P **P 23 45 08.0 +0.2**
baz=79,SNR=6.6
K15A Arbon 78.67 327 ⇑P **P 23 45 08.4 0.0**
baz=79
NVAR Mina Array Bea 78.74 321 P **P 23 45 09.0 0.0**
2.2nm,1.0s,mb3.8,baz=156,slow=6.3,SNR=14
IMW Indian Meadow 78.80 329 *e*P **P 23 45 09.8 +0.7**
9.4nm,0.9s,mb4.4
K14A Jones Ranch, D 78.88 327 ⇊P **P 23 45 09.2 -0.4**
baz=79
LAO LASA Array 78.90 333 *e*P **P 23 45 10.0 +0.4**
12nm,1.0s,mb4.5
L13A Double Diamond 78.94 326 ⇊P **P 23 45 10.2 +0.3**
baz=79
M12A Wells 78.96 325 ⇊P **P 23 45 09.5 -0.5**
baz=79,SNR=6.8
RLMT Red Lodge 78.97 331 ⇊P **P 23 45 10.1 +0.1**
baz=79,SNR=6.7
RLMT Red Lodge 78.97 331 *e*P **P 23 45 10.6 +0.6**
2.5nm,0.8s,mb3.9
H17A Grant Village 79.01 329 ⇑P **P 23 45 10.3 0.0**
baz=79
I16A Newdale 79.05 329 ⇑P **P 23 45 10.9 +0.5**
baz=79
J15A Blackfoot 79.15 328 ⇊P **P 23 45 09.9 -1.1**
baz=79,SNR=6.1
G18A Lazy EL Ranch, 79.25 331 ⇑P **P 23 45 11.3 -0.3**
baz=80,SNR=11
YMR Madison River 79.40 329 *e*P **P 23 45 13.8 +1.4**
12nm,1.0s,mb4.5
K13A Stover Farm, H 79.42 326 ⇑P **P 23 45 12.6 +0.1**
baz=80,SNR=5.1
M11A Holland Ranch, 79.43 325 ⇊P **P 23 45 12.6 0.0**
baz=80,SNR=9.1

L12A House Creek Ra 79.53 325 ⇑P **P 23 45 13.7 +0.5**
baz=80,SNR=5.6
DGMT Dagmar 79.55 336 ⇑P **P 23 45 13.2 +0.1**
baz=80
DGMT Dagmar 79.55 336 *e*P **P 23 45 13.6 +0.5**
30nm,1.1s,mb4.8
I15A Monteview 79.62 328 ⇑P **P 23 45 13.3 -0.2**
baz=80
J14A Carey 79.62 327 ⇊P **P 23 45 13.3 -0.3**
baz=80
F18A Big Timber 79.78 331 ⇑P **P 23 45 14.2 -0.2**
baz=80,SNR=17
K12A Draper Farm, C 79.83 326 ⇑P **P 23 45 14.7 0.0**
baz=80,SNR=7.3
M10A I.L. Ranch, Tu 79.89 324 ⇊P **P 23 45 14.2 -0.9**
baz=80
L11A Cat Creek Ranc 79.93 325 ⇊P **P 23 45 15.4 +0.1**
baz=80
J13A Cove Ranch, Pi 80.01 327 ⇑P **P 23 45 15.9 +0.2**
baz=80,SNR=6.6
I14A Mackay 80.04 328 ⇊P **P 23 45 15.7 -0.2**
baz=80,SNR=8.0
F17A Fitzpatrick Pl 80.20 330 ⇑P **P 23 45 17.0 +0.4**
baz=80,SNR=7.6
G16A Moss Hill, Enn 80.21 329 ⇊P **P 23 45 16.9 +0.1**
baz=80
HLID Hailey 80.25 327 ⇑P **P 23 45 17.7 +0.8**
baz=80,SNR=22
HLID Hailey 80.25 327 *e*P **P 23 45 18.0 +1.0**
13nm,1.0s,mb4.5
L10A Juniper Basin 80.25 325 ⇑P **P 23 45 17.0 0.0**
baz=80,SNR=8.4
I13A Wildhorse Cree 80.35 327 ⇑P **P 23 45 18.3 +0.7**
baz=81,SNR=13
J12A Stokes Ranch, 80.37 326 ⇑P **P 23 45 17.4 -0.2**
baz=81,SNR=12
E18A Harlowton 80.37 331 ⇊P **P 23 45 16.8 -0.8**
baz=81,SNR=6.1
BOSA Boshof 80.38 117 P **P 23 45 18.4 +0.2**
6.8nm,0.6s,mb4.5,baz=274,slow=3.7,SNR=32
BOZ Bozeman (W) 80.45 330 ⇊P **P 23 45 17.2 -0.8**
baz=81
G15A Dillon 80.49 329 ⇊P **P 23 45 18.0 -0.2**
baz=81,SNR=6.0
H14A Leadore 80.50 328 P **P 23 45 19.4 +1.1**
baz=81,SNR=5.4
K11A Parker Ranch, 80.50 325 ⇑P **P 23 45 18.1 -0.2**
baz=81,SNR=7.1
DLMT Dillon 80.68 329 *e*P **P 23 45 19.9 +0.6**
17nm,1.3s,mb4.5
E17A Martinsdale 80.71 331 ⇊P **P 23 45 19.2 -0.1**
baz=81,SNR=11
I12A Atlanta 80.77 327 ⇑P **P 23 45 20.0 +0.3**
baz=81,SNR=7.3
D18A Linhart Farms, 80.81 332 ⇑P **P 23 45 20.0 +0.1**
baz=81
MFID Camas Ranch 80.86 326 ⇑P **P 23 45 19.7 -0.5**
baz=81
H13A Challis 80.89 328 ⇑P **P 23 45 20.9 +0.6**
baz=81,SNR=20
K10A MacKenzie Ranc 80.95 325 ⇑P **P 23 45 19.7 -1.0**
baz=81
LRM Limekiln Ridge 80.96 329 *e*P **P 23 45 21.4 +0.7**
F15A Butte 80.99 329 ⇑P **P 23 45 20.9 0.0**
baz=81,SNR=5.7
E16A East Helena 81.14 330 ⇊P **P 23 45 21.7 +0.1**
baz=81
D17A Six Diamond Ra 81.16 331 ⇊P **P 23 45 21.5 -0.2**
baz=81,SNR=14
H12A Diamond D Ranc 81.18 327 ⇊P **P 23 45 22.5 +0.7**
baz=81,SNR=5.8
G13A Cobalt 81.27 328 ⇊P **P 23 45 22.8 +0.5**
baz=82,SNR=27
I11A Placerville 81.28 326 ⇊P **P 23 45 22.5 +0.1**
baz=82
F14A Wisdom 81.38 329 ⇊P **P 23 45 23.4 +0.5**
baz=82
MAW Mawson 81.40 163 P **P 23 45 23.9 +1.1**
7.8nm,0.8s,mb4.4,baz=212,slow=7.6,SNR=13
MAW Mawson 81.40 163 *e*P **P 23 45 23.7 +0.9**
1.1nm,0.7s,mb3.6
EGMT Eagleton 81.43 332 *e*P **P 23 45 23.0 -0.1**
12nm,0.9s,mb4.5
D16A Dana Ranch, Ca 81.45 331 ⇑P **P 23 45 23.3 +0.1**
baz=82,SNR=22
E15A Deer Lodge 81.50 330 ⇊P **P 23 45 24.0 +0.5**
baz=82,SNR=5.1
C17A Wharram Farm, 81.56 332 ⇊P **P 23 45 22.4 -1.4**
baz=82
B18A Beardsley Farm 81.73 333 ⇊P **P 23 45 24.2 -0.4**
baz=82,SNR=8.6
F13A Darby 81.82 328 ⇊P **P 23 45 25.2 0.0**
baz=82,SNR=16
G12A Big Creek, Yel 81.83 327 ⇑P **P 23 45 25.1 -0.2**
baz=82
H11A Donnelly 81.87 327 ⇑P **P 23 45 25.0 -0.4**
baz=82,SNR=5.4
E14A Clinton 81.89 329 P **P 23 45 26.3 +0.8**
baz=82,SNR=5.3
D15A Lincoln 81.90 330 ⇊P **P 23 45 26.4 +0.8**
baz=82,SNR=6.6
LBTB Lobatse 82.02 114 *e*P **P 23 45 27.6 +0.7**
5.2nm,0.7s,mb4.3
B17A L&G Farms, Che 82.08 332 ⇑P **P 23 45 25.9 -0.6**
baz=82
C16A Fuhringer Ranc 82.12 331 ⇑P **P 23 45 26.1 -0.7**
baz=82,SNR=5.7
CHMT Chamberlain Mo 82.14 330 *e*P **P 23 45 27.5 +0.6**
H10A Noah's Angus R 82.16 326 ⇊P **P 23 45 27.0 0.0**
baz=82,SNR=6.9
A18A Metzger Ranch, 82.16 333 ⇑P **P 23 45 26.5 -0.4**
baz=82
J08A Circle Bar Ran 82.20 325 P **P 23 45 27.8 +0.6**
baz=82,SNR=8.7
E13A Victor 82.23 329 ⇑P **P 23 45 27.8 +0.4**
baz=82,SNR=11
I09A Lost Marbles R 82.24 325 ⇑P **P 23 45 27.4 0.0**
baz=82,SNR=5.9
F12A Elk City 82.25 328 ⇊P **P 23 45 27.3 -0.1**
baz=82
C15A Salmond Ranch, 82.49 331 ⇊P **P 23 45 28.1 -0.5**
baz=83,SNR=7.7
G11A Walters Elk Ra 82.49 327 ⇑P **P 23 45 28.7 0.0**
baz=83,SNR=8.0
SLMT Seeley Lake 82.50 330 *e*P **P 23 45 28.7 0.0**
B16A M & M Farms, S 82.57 332 ⇑P **P 23 45 28.7 -0.4**
baz=83
F11A Grangeville 82.78 328 ⇑P **P 23 45 29.7 -0.5**
baz=83,SNR=5.2
D13A Huson 82.83 329 ⇊P **P 23 45 29.8 -0.6**
baz=83,SNR=6.6
G10A Bishop Farm, J 82.84 327 ⇑P **P 23 45 30.4 -0.1**
baz=83
B15A Bradely Ranch, 82.87 331 ⇑P **P 23 45 29.4 -1.2**
baz=83
E12A Beaver Dam Sad 82.87 328 ⇑P **P 23 45 30.3 -0.4**
baz=83
SWMT Swartz Lake 82.92 330 *e*P **P 23 45 31.4 +0.5**
C14A Swan Lake 83.00 330 ⇑P **P 23 45 31.1 -0.2**
baz=83
K05A Summer Lake 83.08 323 ⇊P **P 23 45 31.9 +0.1**
baz=83,SNR=7.4
E11A Bogner Ranch, 83.14 328 ⇑P **P 23 45 31.1 -1.0**
baz=83
YBMT Yellow Bay 83.19 330 *e*P **P 23 45 33.1 +0.9**
B14A Marquette Ranc 83.22 331 ⇑P **P 23 45 31.4 -1.0**
baz=84
D12A Red Ives Fores 83.23 329 ⇑P **P 23 45 32.0 -0.4**
baz=84
C13A Hot Springs 83.31 330 ⇑P **P 23 45 32.4 -0.5**
baz=84
BSMT Bassoo Peak 83.54 330 *e*P **P 23 45 34.6 +0.6**
D11A Klaveano Farm, 83.69 328 ⇊P **P 23 45 33.9 -0.9**
baz=84
A14A Double T Ranch 83.74 331 ⇑P **P 23 45 34.6 -0.5**
baz=84
B13A Whitefish 83.77 330 ⇑P **P 23 45 34.9 -0.3**
baz=84
TAM Tamanrasset 83.96 62 *e*P **P 23 45 38.0 +1.2**
12nm,1.0s,mb4.6
WALA Waterton Lakes 84.02 331 *e*P **P 23 45 35.8 -0.7**
A11A Hall Mountain, 85.06 330 ⇊P **P 23 45 41.6 0.0**
baz=85
OD2 Odessa Site #2 85.09 327 *e*P **P 23 45 42.1 +0.3**
C09A Chrisman Ranch 85.16 328 ⇑P **P 23 45 41.8 -0.4**
baz=85
FCC Fort Churchill 85.47 346 *e*P **P 23 45 43.1 -0.3**
B09A Rice 85.53 328 ⇊P **P 23 45 43.0 -0.9**

baz=86
ESDC Sonseca Array 86.02 43 P **P 23 45 47.7 +1.1**
1.3nm,0.7s,mb3.8,baz=240,slow=4.5,SNR=11
ESDC LR LR 00 22 32.6
comp=Z,1μm,20.2s,baz=275,slow=34
ETW Entiat 86.04 327 *e*P **P 23 45 46.8 +0.3**
B08A Colville Reser 86.06 328 ⇊P **P 23 45 45.4 -1.1**
baz=86
A07A Ashnola River, 87.04 328 ⇊P **P 23 45 50.5 -0.8**
baz=87,SNR=5.4
NLWA Neilton Lookou 87.71 325 ⇊P **P 23 45 54.0 -0.6**
baz=88
LSZ Lusaka 88.11 106 *e*P **P 23 45 59.2 +1.9**
24nm,1.2s,mb4.9
KEST Kesra 93.00 52 LR LR 00 26 57.6
comp=Z,814nm,21.8s,baz=320,slow=34
YKA Yellowknife Ar 94.18 340 P **P 23 46 23.2 -1.1**
1.6nm,0.7s,mb4.2,baz=133,slow=4.4,SNR=10
ASAR Alice Springs 128.73 204 PKP PKPdf 23 52 12.5 -0.5
0.8nm,0.7s,baz=152,slow=1.9,SNR=11
ASAR SKPbc 23 55 12.6
0.7nm,0.8s,baz=153,slow=4.5,SNR=5.1
BVAR Borovoye Array 136.45 37 PKP PKPdf 23 52 27.6 +1.1
0.6nm,0.6s,baz=222,slow=1.9,SNR=4.1
BVAR SKPbc SKPbc 23 55 39.9 -2.0
0.3nm,0.5s,baz=291,slow=4.5,SNR=2.8
KURK Kurchatov 142.04 36 PKP PKPdf 23 52 36.6 -0.2
0.6nm,0.4s,baz=305,slow=2.2,SNR=4.5
ZALV Zalesovo Beam 143.10 28 PKP PKPdf 23 52 35.6 -2.9
1.0nm,0.4s,baz=298,slow=4.1,SNR=7.1
ZALV SKPbc SKPbc 23 55 56.9 -2.9
1.1nm,0.6s,baz=308,slow=4.1,SNR=4.4
MK31 Makanchi Array 146.16 40 *e*PKPbc PKPbc 23 52 45.9 +0.5
MKAR Makanchi Array 146.16 40 PKPbc PKPbc 23 52 44.8 -0.6
4.5nm,0.7s,baz=326,slow=3.0,SNR=33
HYB Hyderabad 146.75 95 *i* PKP PKPdf 23 52 48.5 +2.6
MJAR Matsushiro Arr 155.28 306 PKPab PKPab 23 53 23.5 -1.0
1.0nm,0.9s,baz=89,slow=2.8,SNR=4.9
MJAR Matsushiro Arr 155.28 306 PKPab PKPab 23 53 23.5 -1.0
SONM Songino Array 155.46 12 PKP PKPdf 23 52 58.8 +0.5
0.2nm,0.3s,baz=316,slow=4.0,SNR=2.7
SONM PKPab PKPab 23 53 26.2 +1.5
0.3nm,0.3s,baz=313,slow=2.8,SNR=4.0
CN2 Changchun 157.85 337 *e*PKP PKPdf 23 53 03.0 +1.5
HHC Hu-ho-hao-te 163.02 5 *e*PKP PKPdf 23 53 00.5 -6.8
HHC pPKP pPKPdf 23 53 59.0 +4.3
HHC sPKP 23 54 22.5
HHC LR LR
comp=N,140nm,22.3s
HHC LR LR
comp=E,160nm,23.5s
HHC LR LR
comp=Z,210nm,22.7s
LZH Lanzhou 165.27 32 *e*PKP PKPdf 23 53 12.0 +2.5
LZH pPKP pPKPdf 23 53 54.8 -2.1
CMAR Chiang Mai Arr 165.40 109 PKPab PKPab 23 54 09.6 +0.5
comp=Z,4.7nm,0.8s,baz=253,slow=5.0,SNR=22
CD2 Chengdu 168.90 49 PKP PKPdf 23 53 13.3 +1.0
KMI Kunming 170.14 81 PKP PKPdf 23 53 13.5 +0.3
NJ2 Nanjing 170.60 331 *e*PKP PKPdf 23 53 14.5 +1.3
GYA Guiyang 173.32 66 *e*PKP PKPdf 23 53 13.0 -1.7
GYA pPKP pPKPdf 23 54 01.3 -0.9
GYA PKPab PKPab 23 54 44.0 0.0
GYA PKS 23 56 45.0
GYA PP PP 23 58 37.0 +0.7
GYA AMB AMB
comp=Z,90nm,8.0s

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*KRSC **31** 23:51:13.4±0.6,51°.45N×159°.97E,h34km±34km,ML4.4*
*ISCJB **31** 23:51:15.0±1.2,51°.40N±0°.07×159°.7E±0°.1,h51km±7km,*
mb4.1/26,Error ellipse: s-maj=15.8km s-min=6.8km
az=43.7
*MOS **31** 23:51:15.4±1.2,51°.55N×159°.41E,h47km,mb4.5/10,Error*
ellipse: s-maj=14.2km s-min=7.4km az=91.7
*SZGRF **31** 23:51:22.4,52°.35N×159°.45E,h33km,mb4.1,Off east*
coast of Kamchatka Peninsula, Russia
*IDC **31** 23:51:23.9±2.4,51°.72N×158°.52E,h78km±18km,mb3.7/17,*
mb1 3.8/18,mb1mx3.7/26,mbtmp3.7/18,Error ellipse:
s-maj=23.8km s-min=15.5km az=120.0
*NEIC **31** 23:51:23.2±1.7,51°.76N×158°.49E,h67km±11km,mb4.1/4,*
Error ellipse: s-maj=20.2km s-min=14.6km az=137.0
ISC 31 23:51:18.4±1.2,51°.52N±0°.08×159°.4E±0°.1,h54km±7km,
n73,σ0°96/74,mb4.1/26,2C,Off east coast of
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.33**	**321**	*e*P		**Pn**		**23 51 41.2**	**+0.6**
GRL				*i* S		**Sn**		**23 52 01.5**	**+4.3**
PET	**Petropavlovsk**	**1.58**	**342**	⇑pN		**Pn**		**23 51 42.3**	**-1.6**
PET				*e*S		**Sn**		**23 52 04.9**	**+1.7**
PET				pmax		pmax			
comp=Z,381nm,0.4s									
PET				smax					
comp=N,2μm,0.5s									
PET				smax					
comp=N,2μm,0.5s									
PET	**Petropavlovsk**	**1.58**	**342**	*e*P		**Pn**		**23 51 42.6**	**-1.3**
PET				*i* S		**Sn**		**23 52 04.4**	**+1.2**
PET	**Petropavlovsk**	**1.58**	**342**	*e*Pn		**Pn**		**23 51 42.4**	**-1.6**
SPN	**Mys Shipunski**	**1.62**	**12**	*e*P		x		23 51 42.4	
NLC	**Nalytchevo**	**1.65**	**358**	*e*P		**Pn**		**23 51 42.9**	**-2.0**
AVH	**Avacha**	**1.80**	**346**	*e*P		**Pn**		**23 51 47.3**	**+0.4**
MIPR	**Malaya Ipel'ka**	**1.83**	**295**	*e*P		**Pn**		**23 51 48.2**	**+0.9**
MIPR				*i* S		x		23 52 13.6	
PEA0B	**Petropavlovsk-**	**1.91**	**327**	*e*Pn		**Pn**		**23 51 48.5**	**+0.1**
PETK	**Petropavlovsk-**	**1.91**	**327**	P		**Pn**		**23 51 48.5**	**0.0**
comp=N,109nm,0.3s,baz=135,slow=15,SNR=69									
PETK				S		**Sn**		**23 52 16.3**	**+4.9**
comp=N,41nm,0.3s,baz=125,slow=18,SNR=4.6									
SKR	**Severo-Kuril's**	**2.26**	**249**	*e*PN		**Pn**		**23 51 49.2**	**-4.0**
SKR				*e*S		**Sn**		**23 52 16.0**	**-3.9**
SKR				pmax		pmax			
comp=N,60nm,0.5s									
SKR				pmax		pmax			
comp=E,80nm,0.5s									
SKR				pmax		pmax			
comp=Z,120nm,0.5s									
SKR				smax					
comp=N,1μm,0.5s									
SKR				smax					
comp=E,520nm,0.5s									
SKR				smax					
comp=E,2μm,2.0s									
GNL	**Ganaly**	**2.36**	**338**	*e*P		**Pn**		**23 51 54.9**	**+0.3**
KII	**Karymskiy**	**2.52**	**0**	*e*P		x		23 51 54.5	
ALID	**Alaid**	**2.54**	**257**	*e*P		**Pn**		**23 51 57.4**	**+0.4**
ALID				*i* S		**Sn**		**23 52 28.5**	**+1.9**
MKZ	**Mys Kozlova**	**3.34**	**24**	*e*P		x		23 52 04.5	
MKZ				*i* S		x		23 52 41.2	
KMNR	**Kamenistaya**	**4.27**	**6**	*e*P		**Pn**		**23 52 20.8**	**+0.1**
BZMR	**Bezymyannaya**	**4.46**	**8**	*e*P		**Pn**		**23 52 24.3**	**+1.0**
KPT	**Kopyto**	**4.47**	**6**	*e*P		**Pn**		**23 52 24.3**	**+0.8**
ZLN	**Zelenaya**	**4.57**	**10**	*e*P		**Pn**		**23 52 24.8**	**-0.1**
CIRR	**Tsirk**	**4.67**	**9**	*e*P		**Pn**		**23 52 26.6**	**+0.5**
SRDR	**Sredinnyy**	**4.80**	**2**	*e*P		**Pn**		**23 52 27.6**	**-0.4**
KBTR	**Krutoberegovo**	**5.10**	**22**	*e*P		x		23 52 29.4	
KBTR				*i* S		x		23 53 25.0	
SMKR	**Semkarok**	**5.21**	**12**	*e*P		**Pn**		**23 52 33.0**	**-0.5**
SRKR	**Sorokina**	**5.24**	**10**	*e*P		**Pn**		**23 52 32.8**	**-1.2**
BKI	**Bering**	**5.37**	**44**	*e*P		x		23 52 31.8	
BKI				*i* S		x		23 53 27.9	
ASAJ	**Asahikawa**	**13.51**	**243**	P		**Pn**		**23 54 26.3**	**-0.7**
comp=E,0.4nm,0.3s,baz=50,slow=17,SNR=3.9									
KLR	**Kul'dur**	**17.77**	**273**	*e*P		**Pn**		**23 55 21.0**	**-0.6**
YAK	**Yakutsk**	**19.21**	**315**	*e*P		**Pn**		**23 55 35.4**	**-3.5**
YAK				pmax		pmax			
comp=Z,21nm,0.9s									
YAK				pmax		pmax			
comp=E,6.0nm,1.0s									
YAK				pmax		pmax			
comp=N,5.0nm,1.1s									
MJAR	**Matsushiro Arr**	**21.27**	**234**	P		**P**		**23 56 00.4**	**+0.4**
comp=N,2.7nm,0.9s,mb3.6,baz=29,slow=9.0,SNR=7.9									
TIXI	**Tiksi**	**24.36**	**337**	*e*P		**P**		**23 56 30.4**	**-0.3**
TIXI				pmax		pmax			
comp=Z,4.0nm,0.5s,mb4.1									
TIXI	**Tiksi**	**24.36**	**337**	*e*P		**P**		**23 56 29.9**	**-0.8**
comp=Z,4.6nm,0.5s,mb4.2									
HIA	**Hailar**	**25.20**	**281**	*e*P		**P**		**23 56 38.2**	**-0.4**
HIA				pmax		pmax			
comp=Z,5.0nm,0.4s									

HIA	**Hailar**	**25.20 281**	*e*P	**P**	**23 56 38.2**	**-0.3**
	comp=Z,4.9nm,0.4s,mb4.4					
KSRS	**Korea Array**	**26.28 250**	P	**P**	**23 56 49.4**	**+1.0**
	comp=Z,1.5nm,0.8s,mb3.6,baz=48,slow=8.4,SNR=4.3					
KSRS	**Korea Array**	**26.28 250**	P	**P**	**23 56 49.4**	**+0.9**
KSRS			pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7					
SONM	**Songino Array**	**33.90 285**	P	**P**	**23 57 55.2**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=74,slow=6.2,SNR=4.1					
ZALV	**Zalesovo Beam**	**43.30 304**	P	**P**	**23 59 11.6**	**-2.8**
	comp=Z,0.6nm,0.5s,mb3.5,baz=59,slow=6.9,SNR=3.4					
KURK	**Kurchatov**	**48.24 303**	P	**P**	**23 59 53.0**	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.4,baz=62,slow=7.6,SNR=20					
KURK	**Kurchatov**	**48.24 303**	*ce*P	**P**	**23 59 52.4**	**-0.9**
KURK			pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6					
MKAR	**Makanchi Array**	**48.49 297**	P	**P**	**23 59 54.4**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.7,baz=51,slow=7.0,SNR=4.6					
BVAR	**Borovoye Array**	**51.06 309**	P	**P**	**00 00 13.4**	**-1.4**
	comp=Z,2.7nm,0.5s,mb4.4,baz=53,slow=6.7,SNR=15					
BVAR	**Borovoye Array**	**51.06 309**	P	**P**	**00 00 13.4**	**-1.3**
BVAR			pmax	pmax		
	comp=Z,3.0nm,0.5s					
ARCES	**ARCESS Array B**	**54.66 342**	P	**P**	**00 00 40.6**	**-0.4**
	comp=Z,2.7nm,0.9s,mb4.3,baz=52,slow=8.5,SNR=9.0					
ARCES	**ARCESS Array B**	**54.66 342**	P	**P**	**00 00 40.6**	**-0.4**
ARCES			pmax	pmax		
	comp=Z,3.0nm,0.9s					
CMAR	**Chiang Mai Arr**	**57.47 258**	P	**P**	**00 01 00.1**	**-1.7**
	comp=Z,1.0nm,0.4s,mb4.2,baz=37,slow=8.0,SNR=3.0					
CMAR	**Chiang Mai Arr**	**57.47 258**	P	**P**	**00 01 00.1**	**-1.7**
CMAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
PDAR	**Pinedale Array**	**58.65 60**	P	**P**	**00 01 16.6**	**+6.8**
	comp=Z,0.6nm,0.9s,mb3.6,baz=330,slow=5.2,SNR=2.9					
JOF	**Joensuu**	**58.82 335**	*e*p	**P**	**00 01 10.4**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.2					
JOF	**Joensuu**	**58.82 335**	*e*p	**P**	**00 01 10.4**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.2					
KAF	**Kangasniemi**	**60.77 337**	*e*p	**P**	**00 01 23.1**	**-0.9**
	comp=Z,1.7nm,0.4s,mb4.5					
KAF	**Kangasniemi**	**60.77 337**	*e*p	**P**	**00 01 23.1**	**-0.9**
	comp=Z,1.7nm,0.4s,mb4.5					
FINES	**FINESS Array B**	**61.40 337**	P	**P**	**00 01 28.4**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.5,baz=40,slow=7.0,SNR=24					
FINES	**FINESS Array B**	**61.40 337**	P	**P**	**00 01 28.4**	**+0.1**
FINES			pmax	pmax		
	comp=Z,2.0nm,0.5s					
NB2	**NORSAR Subarra**	**64.94 344**	P	**P**	**00 01 51.9**	**+0.2**
	comp=Z,1.4nm,0.7s,mb4.1,baz=21,slow=6.9					
NOA	**NORSAR Array B**	**64.94 344**	P	**P**	**00 01 52.0**	**+0.3**
	comp=Z,1.9nm,0.8s,mb4.2,baz=21,slow=6.7,SNR=11					
NOA	**NORSAR Array B**	**64.94 344**	P	**P**	**00 01 52.0**	**+0.3**
NOA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
AKASG	**Malin Array Be**	**69.75 329**	P	**P**	**00 02 22.0**	**-0.2**
	comp=Z,3.0nm,0.5s,mb4.5,baz=30,slow=6.2,SNR=15					
AKASG	**Malin Array Be**	**69.75 329**	P	**P**	**00 02 22.0**	**-0.3**
AKASG			pmax	pmax		
	comp=Z,3.0nm,0.5s					
TXAR	**Lajitas Array**	**71.63 66**	P	**P**	**00 02 43.2**	**+9.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=324,slow=5.9,SNR=3.9					
TXAR	**Lajitas Array**	**71.63 66**	P	**P**	**00 02 43.1**	**+9.1**
CLL	**Collm**	**73.68 339**	*e*P	**P**	**00 02 47.0**	**+1.2**
BUR08	**Bucovina Ar. S**	**73.71 330**	*e*P	**P**	**00 02 46.5**	**+0.5**
GRF	**Grafenberg Arr**	**75.59 339**	*e*P	**P**	**00 02 57.8**	**+0.9**
	comp=Z,2.0nm,1.2s,mb3.9					
GRF	**Grafenberg Arr**	**75.59 339**	*e*P	**P**	**00 02 57.8**	**+0.9**
	comp=Z,2.0nm,1.2s,mb3.9					
GERES	**GERESS Array B**	**75.81 337**	P	**P**	**00 02 59.2**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=32,slow=5.8,SNR=6.8					
BR131	**Keskin Array S**	**77.58 320**	*e*P	**P**	**00 03 09.3**	**+1.0**
	comp=Z,0.3nm,0.4s,mb3.6					
BRTR	**Keskin Array B**	**77.58 320**	P	**P**	**00 03 09.2**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.1,baz=35,slow=4.5,SNR=12					
BRTR	**Keskin Array B**	**77.58 320**	P	**P**	**00 03 09.2**	**+0.9**
BRTR			pmax	pmax		
	comp=Z,2.0nm,0.9s					
ASAR	**Alice Springs**	**78.16 204**	P	**P**	**00 03 13.4**	**+1.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=16,slow=5.6,SNR=3.3					
MIB	**Mutribah**	**79.53 305**	*e*P	**P**	**00 03 19.2**	**0.0**
MIB			AMb	AMB	00 03 20.2	
	comp=Z,17nm,0.6s,mb5.2					
NAY	**Al-Naaiem**	**80.02 305**	*e*P	**P**	**00 03 21.9**	**0.0**
NAY			AMb	AMB	00 03 22.7	
	comp=Z,5.0nm,0.8s,mb4.5					
RDF	**Al-Radifah**	**80.12 304**	*e*P	**P**	**00 03 23.2**	**+0.7**
RDF			AMb	AMB	00 03 24.2	
	comp=Z,17nm,1.1s,mb4.9					
MMAI	**Mount Meron Ar**	**82.55 315**	P	**P**	**00 03 36.3**	**+1.0**
	comp=Z,1.9nm,0.5s,mb4.4,baz=38,slow=6.9,SNR=12					

*ISCJB **31** 23:53:11.5±1.4,6.°81S±0.°07×126.°1E±0.°1,h483km±20km, mb3.7/12,Error ellipse: s-maj=20.2km s-min=10.2km az=162.9*

*NEIC **31** 23:53:13.3±1.0,6.°85S×126.°11E,h493km±16km,mb3.9/4, Error ellipse: s-maj=13.9km s-min=10.5km az=70.0*

*IDC **31** 23:53:14.5±2.3,6.°91S×126.°12E,h511km±30km,mb3.3/11, mb1 3.3/13,mb1mx3.2/21,mbtmp3.2/13,Error ellipse: s-maj=25.6km s-min=9.9km az=69.0*

ISC 31 23:53:13.5±1.1,6.°92S±0.°07×126.°1E±0.°1,h496km±16km, n21,σ0.°68/24,mb3.7/12,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.51**	**133**	*e*Pn	**P**	**23 55 15.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**11.12**	**182**	P	**P**	**23 55 43.4**	**+0.7**
	0.8nm,0.3s,baz=3.4,slow=7.0,SNR=32						
FITZ				S	**S**	**23 57 43.8**	**-1.8**
	0.1nm,0.3s,baz=35,slow=12,SNR=5.9						
FITZ	**Fitzroy Crossi**	**11.12**	**182**	*e*Pn	**P**	**23 55 43.5**	**+0.8**
FITZ				S	**S**	**23 57 43.8**	**-1.8**
WRAB	**Tennant Creek**	**15.22**	**149**	*e*P	**P**	**23 56 25.9**	**-0.3**
	3.1nm,0.5s						
MBWA	**Marble Bar**	**15.42**	**203**	*e*P	**P**	**23 56 28.3**	**+0.1**
	28nm,1.4s						
ASAR	**Alice Springs**	**18.27**	**157**	P	**P**	**23 56 57.6**	**+1.1**
	0.9nm,0.3s,baz=342,slow=12,SNR=48						
ASAR				S	**S**	**23 59 58.2**	**-0.3**
	baz=348,slow=21,SNR=6.9						
NWAO	**Narrogin (SRO)**	**27.14**	**196**	P	**P**	**23 58 16.8**	**+0.7**
	2.7nm,0.5s,mb3.9,baz=4.8,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**28.75**	**152**	P	**P**	**23 58 30.8**	**+0.7**
	1.9nm,0.6s,mb3.7,baz=308,slow=9.8,SNR=4.2						
PSI	**Prapat**	**28.77**	**289**	P	**P**	**23 58 30.6**	**0.0**
	1.7nm,0.4s,mb3.9,baz=150,slow=8.1,SNR=4.3						
CMAR	**Chiang Mai Arr**	**36.77**	**314**	P	**P**	**23 59 38.8**	**+0.3**
	1.1nm,0.6s,mb3.5,baz=142,slow=6.8,SNR=7.5						
KSRS	**Korea Array**	**44.18**	**2**	P	**P**	**00 00 37.7**	**+0.1**
	1.0nm,0.6s,mb3.4,baz=184,slow=9.3,SNR=4.4						
MJAR	**Matsushiro Arr**	**44.71**	**14**	P	**P**	**00 00 40.1**	**-1.6**
	1.0nm,0.6s,mb3.5,baz=192,slow=9.5,SNR=5.6						
ULN	**Ulaanbaatar**	**57.08**	**345**	*e*P	**P**	**00 02 12.1**	**+0.4**
	2.7nm,0.9s,mb3.6						
SONM	**Songino Array**	**57.22**	**344**	P	**P**	**00 02 13.0**	**+0.3**
	1.7nm,0.6s,mb3.6,baz=162,slow=6.5,SNR=11						
MK31	**Makanchi Array**	**66.08**	**329**	*e*P	**P**	**00 03 11.1**	**+0.4**
MKAR	**Makanchi Array**	**66.08**	**329**	P	**P**	**00 03 10.5**	**-0.1**
	1.1nm,0.6s,mb3.7,baz=118,slow=8.1,SNR=14						
MKAR	**Makanchi Array**	**66.08**	**329**	P	**P**	**00 03 10.5**	**-0.1**
ZALV	**Zalesovo Beam**	**69.84**	**335**	P	**P**	**00 03 32.6**	**-0.9**
	2.6nm,0.4s,mb4.1,baz=136,slow=5.0,SNR=15						
KURK	**Kurchatov**	**70.47**	**330**	P	**P**	**00 03 37.1**	**-0.2**
	1.8nm,0.6s,mb3.8,baz=137,slow=5.1,SNR=11						
KURK	**Kurchatov**	**70.47**	**330**	*e*P	**P**	**00 03 37.0**	**-0.3**
	1.9nm,0.9s,mb3.6						
BVAR	**Borovoye Array**	**75.96**	**329**	P	**P**	**00 04 08.7**	**-0.1**
	0.8nm,0.6s,mb3.4,baz=111,slow=7.9,SNR=5.0						

*NEIC **31** 23:53:36.0,14.°92N×94.°86W,h16km,MD4.1(MEX),After MEX.*

MEX 31 23:53:36.0±1.1,14.°92N×94.°86W,h16km±12km,MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.47**	**305**	*e*P	Pn	23 53 57.8	-4.0
HUIG				*i* S	Sn	23 54 15.0	-5.7
HUIG	**Huatulco**	**1.47**	**305**	*e*P	Pn	23 53 57.8	-4.0
HUIG				*i* S	Sn	23 54 15.0	-5.7
PCIG		**1.77**	**64**	*i* P	Pn	23 54 01.6	-4.3
PCIG				*i* S	Sn	23 54 23.0	-5.1
TGIG		**2.49**	**42**	*e*P	Pn	23 54 13.0	-2.9
TGIG				*i* S	Sn	23 54 41.9	-4.1
THIG		**2.51**	**90**	*e*P	Pn	23 54 13.8	-2.4
THIG				*i* S	Sn	23 54 42.4	-4.1
VHO	**Vista Hermosa**	**2.79**	**320**	*i* P	Pn	23 54 18.2	-1.9
VHO				*i* S	Sn	23 54 50.1	-3.3
VHO	**Vista Hermosa**	**2.79**	**320**	*i* P	Pn	23 54 18.2	-1.9
VHO				*i* S	Sn	23 54 50.1	-3.3
SCX	**San Cristobal**	**2.80**	**50**	*e*P	Pn	23 54 17.5	-2.6
SCX				*i* S	Sn	23 54 50.6	-3.0
SCX	**San Cristobal**	**2.80**	**50**	*e*P	Pn	23 54 17.5	-2.6
SCX				*i* S	Sn	23 54 50.6	-3.0
CCIG	**Comitan**	**2.95**	**62**	*e*P	Pn	23 54 20.8	-1.5
CCIG				*i* S	Sn	23 54 53.4	-4.0
CCIG	**Comitan**	**2.95**	**62**	*e*P	Pn	23 54 20.8	-1.5
CCIG				*i* S	Sn	23 54 53.4	-4.0
PNIG	**Pinotepa**	**3.47**	**295**	*e*P	Pn	23 54 26.9	-2.4
PNIG				*i* S	Sn	23 55 07.1	-3.0
PNIG	**Pinotepa**	**3.47**	**295**	*e*P	Pn	23 54 26.9	-2.4
PNIG				*i* S	Sn	23 55 07.1	-3.0
TEIG	**Tepich**	**8.20**	**49**	*e*Pn	Pn	23 55 31.1	-3.3
TEIG				*e*S	Sn	23 56 59.1	-7.7

ISC Computed Locations for May 2008

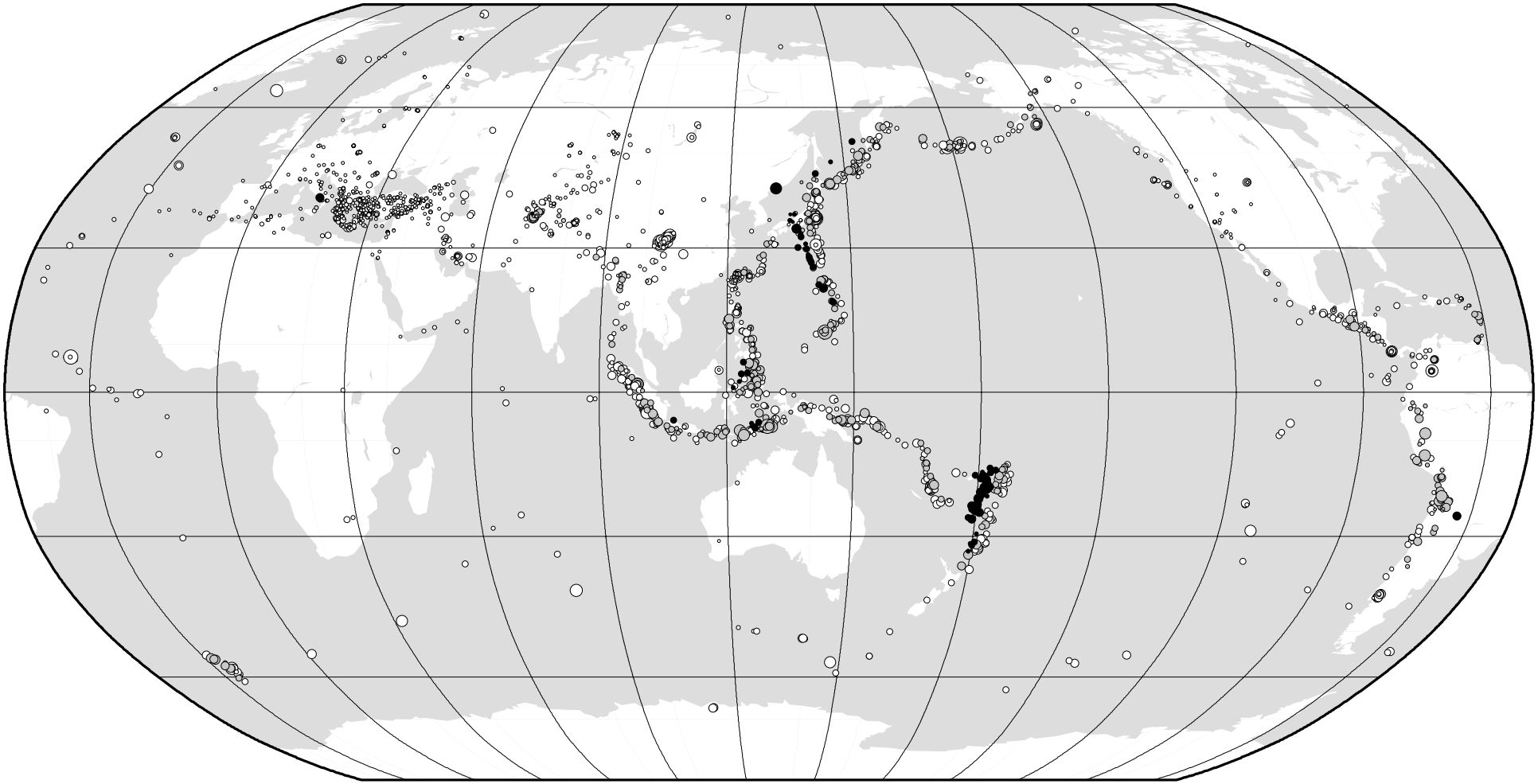

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

3424 Events